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Addendum

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

From data-month October 2002, a new location program ISCloc has been used in operations. Also, the IASPEI standard seismic phase list has been adopted by the ISC (Storchak,D.A., J.Schweitzer, P.Bormann (2003) The IASPEI Standard Seismic Phase List, Seismological Research Letters 74, 6, 761-772).

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

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

The following example illustrates the changes :-

September 2002

```
    NEIC 01 18:45:41.7±1.7,21.70S×179.55W,h600km,mb4.6/6,
            Error ellipse: s-maj=75.5km s-min=25.7km az=151.0
     IDC 01 18:45:46.3±2.6,21.76S×179.70W,h627km±37km,mb3.5/4,
            mb1 3.7/4,mb1mx3.2/14,Error ellipse: s-maj=83.2km
            s-min=20.6km az=159.0
     ISC 01 18:45:43.1±2.7,22.3S±0.2×179.6W±0.3,h613km±42km,
            n22,σ1§15/21,mb4.4/9,1C,South of Fiji Islands
Code   Station Name       Δ°    AZ°    Phase ID             Time     Res
                                      Op       ISC        h  m  s    ISC
HBZ    Hicks Bay          15.41 186  eP        P          18 48 53.1 -1.7
URZ    Urewera            16.21 189   P        P          18 49 01.5 -0.9
MRZ    Mangatainoka R     18.81 192  eP        P          18 49 26.7  0.0
DIW    D'Urville Isla     19.30 195  eP        P          18 49 27.3 -3.9
CAW    Cannon Point       19.34 192  eP        P          18 49 31.7 +0.1
OTW    Orongorongo Tu     19.52 192  eP        P          18 49 33.0 -0.2
MOW    Moikau             19.61 192  eP        P          18 49 35.5 +1.5
THZ    Tophouse           20.46 196  eP        P          18 49 42.0 +0.2
KHZ    Kahutara           20.93 194   P        P          18 49 46.2 +0.2
ARMA   Armidale           27.03 246  eP        P          18 50 42.4 +2.3
       4.9nm,0.5s,mb4.4
CTA    Charters Tower     31.93 267⇑iP        P          18 51 22.3 +0.4
       13nm,0.5s,mb4.8
STKA   Stephens Creek     35.75 246  eP        P          18 51 55.3 +1.8
       3.1nm,0.4s,mb4.2
ASAR   Alice Springs      42.74 259   P        P          18 52 50.1 +0.3
       9.8nm,0.5s,mb4.6,baz=92,slow=8.2,SNR=47
ASAR                                  S        S          18 58 31.3 -0.1
       1.0nm,0.8s,baz=95,slow=15,SNR=5.7
ASPA   Alice Springs      42.74 259  eP        P          18 52 50.1 +0.2
WRA    Warramunga Arr     42.96 264   P        P          18 52 51.0 -0.7
       1.8nm,0.3s,mb4.0,baz=96,slow=7.8,SNR=93
WRA                                   S        S          18 58 33.0 -1.5
       0.3nm,0.9s,baz=99,slow=14,SNR=3.0
KAKA   Kakadu             46.64 273  eP        P          18 53 18.2 -1.8
       14nm,0.4s,mb4.8
FITZ   Fitzroy Crossi     51.39 264  eP        P          18 53 54.3 -0.7
       12nm,0.3s,mb4.8
MBWA   Marble Bar         56.08 259  eP        P          18 54 27.1 -0.7
       11nm,0.6s,mb4.2
CMAR   Chiang Mai Arr     89.35 290   P        P          18 57 38.1 +1.0
       1.3nm,0.8s,mb3.8,baz=135,slow=3.1,SNR=8.1
ARCES  ARCESS Array B    130.36 349   PKP      PKP        19 03 43.7 -0.5
       0.7nm,0.6s,baz=282,slow=4.2,SNR=3.5
FINES  FINESS Array B    137.02 342   PKP      PKP        19 03 57.3 +0.5
       3.7nm,1.1s,baz=158,slow=3.2,SNR=3.4
MLR    Muntele Rosu      148.85 324   PKPbc    PKP        19 04 22.7 +5.2
       0.2nm,0.7s,baz=1.2,slow=23,SNR=2.3
```

Epicentral Estimates

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

Observational Data

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

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

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

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

*BGR **01** 00:03:28.9±0.6, 51.60N×16.23E, h1^{km}, ML3.0/9, Error ellipse: s-maj=5.6km s-min=3.3km az=14.0*

*CSEM **01** 00:03:29.3±0.2, 51.62N×16.18E, h2^{km}, ML3.2/6, Error ellipse: s-maj=3.3km s-min=3.1km az=22.0*

*IPEC **01** 00:03:29.7±0.3, 51.54N×16.18E, ML2.6/3, Error ellipse: s-maj=1.9km s-min=1.5km az=40.0*

*NEIC **01** 00:03:30.5±0.9, 51.51N×16.14E, h5^{km}, ML3.0(SZGRF), Error ellipse: s-maj=10.7km s-min=4.7km az=13.0*

*PRU **01** 00:03:31.2, 51.47N×16.13E, Felt In Harrachov*

*WAR **01** 00:03:31.0, 51.51N×16.12E, h1^{km}, ML3.0, Mining Induced*

*LDG **01** 00:03:31.0±0.8, 51.60N×16.14E, h1^{km}, Ml3.4/1, Error ellipse: s-maj=18.9km s-min=6.0km az=8.0, Suspected Mining induced.*

*VIE **01** 00:03:34.0±0.6, 51.22N×16.12E, mb2.4/4, ML2.6/6, Error ellipse: s-maj=3.7km s-min=3.4km az=169.0, Suspected Mining induced.*

*UPP **01** 00:03:34.2, 51.82N×15.56E, ML2.6, Suspected Mining explosion.*

ISC 01 00:03:27.9±0.4**, 51.53N**±0.02×**16.16E**±0.03**, n67, σ1^{s}38**/124**, 6C-5D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.69	173	⇓*i*PG	Pg	00 03 43.4	+1.7
KSP				⇓*e*SG	Sg	00 03 53.4	+2.5
KSP	**Ksiaz**	0.69	173	*e*Pg	Pg	00 03 43.4	+1.7
KSP				*e*Sg	Sg	00 03 52.9	+2.0
KSP	**Ksiaz**	0.69	173	*e*Pg	Pg	00 03 43.4	+1.8
KSP				*e*Sg	Sg	00 03 52.7	+1.8
KSP	**Ksiaz**	0.69	173	⇓*i*Pg	Pg	00 03 43.4	+1.7
KSP				*e*Sg	Sg	00 03 52.7	+1.8
UPC	**Upice**	1.03	185	*e*PG	Pg	00 03 49.5	+1.1
DPC	**Dobruska-Polom**	1.18	175	*e*PG	Pg	00 03 52.2	+0.7
DPC				*e*SG	Sg	00 04 07.4	+0.1
	39nm,0.3s						
PVCC	**Panska Ves**	1.42	226	*e*Pn	Pn	00 03 56.3	+1.3
PVCC				*e*Sg	Sg	00 04 17.0	+1.9
PVCC	**Panska Ves**	1.42	226	*e*Pg	Pg	00 03 56.7	+0.5
PVCC				Sg	Sg	00 04 17.0	+1.9
BRG	**Berggiesshubel**	1.54	246	*e*Pn	Pn	00 03 58.1	+1.4
BRG				*e*Pg	Pg	00 03 58.8	+0.1
BRG				*e*Sg	Sg	00 04 19.5	+0.3
BRG	**Berggiesshubel**	1.54	246	Pn	Pn	00 03 58.1	+1.4
BRG				Pg	Pg	00 03 59.1	+0.4
BRG				Sg	Sg	00 04 19.4	+0.2
BRG	**Berggiesshubel**	1.54	246	Pg	Pg	00 03 59.1	+0.5
BRG				Sg	Sg	00 04 19.5	+0.3
PRU	**Pruhonice**	1.85	214	*e*PN	Pn	00 04 02.5	+1.3
PRU				*e*PG	Pg	00 04 04.2	-0.7
PRU				*e*SG	Sg	00 04 28.7	-0.9
PRU	**Pruhonice**	1.85	214	*e*Pn	Pn	00 04 02.5	+1.4
PRU	**Pruhonice**	1.85	214	*e*Pg	Pg	00 04 04.2	-0.7
PRU				*e*Sg	Sg	00 04 28.7	-0.9
RAC	**Raciborz**	1.94	137	*e*PN	Pn	00 04 03.0	+0.6
RAC				*e*PN	Pn	00 04 07.0	+4.6
RAC				*e*SG	Sg	00 04 33.0	+0.6
RAC	**Raciborz**	1.94	137	*e*Pg	Pg	00 04 07.2	+0.6
RAC				*e*Sg	Sg	00 04 32.8	+0.4
MORC	**Moravsky Berou**	1.96	153	*e*Pn	Pn	00 04 03.8	+1.1
MORC				*e*Sg	Sg	00 04 31.3	-1.9
	35nm,0.5s						
CLL	**Collm**	1.99	265	*i* PN	Pn	00 04 03.4	+0.3
	logA/T=1.2						
CLL				*e*PG	Pg	00 04 07.0	-0.6
CLL				*e*		00 04 11.0	
CLL				*e*SG	Sg	00 04 33.0	-1.1
CLL	**Collm**	1.99	265	*e*Pn	Pn	00 04 03.4	+0.3
CLL				*e*Sg	Sg	00 04 33.8	-0.3
CLL	**Collm**	1.99	265	*i* Pn	Pn	00 04 03.4	+0.3
CLL				*e*Pg	Pg	00 04 07.0	-0.6
CLL				*e*Sg	Sg	00 04 33.0	-1.1
CLL	**Collm**	1.99	265	*e*Pg	Pg	00 04 07.0	-0.6
CLL				Sg	Sg	00 04 33.8	-0.3
OKC	**Ostrava-Krasne**	2.11	142	*e*PN	Pn	00 04 05.9	+1.0
OKC				*e*PG	Pg	00 04 10.4	+0.4
OKC				*e*SG	Sg	00 04 35.8	-2.4
OKC	**Ostrava-Krasne**	2.11	142	*e*Pn	Pn	00 04 05.7	+0.8
OKC				*e*Sg	Sg	00 04 37.1	-1.1
OKC	**Ostrava-Krasne**	2.11	142	*e*Pg	Pg	00 04 10.4	+0.4
OKC				Sg	Sg	00 04 37.1	-1.1
VRAC	**Vranov**	2.24	173	*e*Pn	Pn	00 04 08.3	+1.6
VRAC				*e*Sg	Sg	00 04 39.8	-2.6
	35nm,0.5s						
TREC	**Trest**	2.28	191	*e*PN	Pn	00 04 09.4	+2.2
TREC				*e*PG	Pg	00 04 11.1	-2.2
KRUC	**Moravsky**	2.47	176	*e*Pn	Pn	00 04 11.7	+1.6
KRUC				*e*Sg	Sg	00 04 47.7	-2.5
	24nm,0.6s						
TANN	**Tannenbergstha**	2.59	246	*e*Pn	Pn	00 04 12.8	+1.1
TANN				*e*Sg	Sg	00 04 52.1	-2.0
OJC	**Ojcow**	2.65	118	*e*PG	Pg	00 04 20.0	-0.8
OJC				*e*SG	Sg	00 04 56.0	-0.1
NKC	**Novy Kostel**	2.69	243	*e*PN	Pn	00 04 14.0	+0.9
NKC				*e*PG	Pg	00 04 20.2	-1.3
NKC				*e*SG	Sg	00 04 56.1	-1.2
NKC	**Novy Kostel**	2.69	243	*e*Pn	Pn	00 04 14.0	+0.9
NKC				*e*Sg	Sg	00 04 56.9	-0.4
NKC	**Novy Kostel**	2.69	243	*e*Pg	Pg	00 04 20.2	-1.3
NKC				*e*Sg	Sg	00 04 56.1	-1.2
KHC	**Kasperske Hory**	2.92	216	*e*PN	Pn	00 04 17.1	+0.7
KHC				*e*PG	Pg	00 04 23.2	-2.9
KHC				*e*SN	Sn	00 04 53.6	+1.0
KHC				*e*SG	Sg	00 05 01.6	-3.3
MOX	**Moxa**	3.00	255	*i* P	Pn	00 04 19.2	+1.6
MOX				Pg	Pg	00 04 27.0	-0.7
MOX				Sg	Sg	00 05 06.0	-1.7
MOX	**Moxa**	3.00	255	*e*Pn	Pn	00 04 19.2	+1.6
MOX				*e*Pg	Pg	00 04 26.6	-1.1
MOX				*e*Sg	Sg	00 05 06.2	-1.5
MOX	**Moxa**	3.00	255	*e*Pg	Pg	00 04 26.6	-1.1
MOX				Sg	Sg	00 05 06.8	-0.9
ROTZ	**Rotzenmuhle**	3.07	237	*e*Pn	Pn	00 04 19.6	+1.0
NOTT	**Nottersdorf**	3.09	238	*e*Pn	Pn	00 04 19.8	+0.9
GEC2	**GERESS Array S**	3.12	211	*e*Pn	Pn	00 04 20.8	+1.5
GEC2	**GERESS Array S**	3.12	211	*e*Pn	Pn	00 04 20.8	+1.6
WET	**Wettzell**	3.18	223	*e*Pn	Pn	00 04 20.6	+0.5
WET	**Wettzell**	3.18	223	*e*Pn	Pn	00 04 20.6	+0.5
NIE	**Niedzica**	3.39	127	*e*P	Pg	00 04 33.0	-2.5
NIE				*e*S	Sg	00 05 19.0	-1.7
ZST	**Bratislava**	3.39	169	*e*SG	Sg	00 05 17.5	-3.3
VYHS	**Vyhne**	3.49	149	*e*PN	Pn	00 04 25.0	+0.4
GRA1	**Grafenberg Arr**	3.64	242	Sg	Sg	00 05 26.4	-2.8
GRF	**Grafenberg Arr**	3.64	242	*e*Sg	Sg	00 05 26.4	-2.8
STHS	**Stebnicka Huta**	3.87	121	*e*PN	Pn	00 04 32.4	+2.4
STHS				*e*SG	Sg	00 05 34.0	-2.8
MOA	**Molln**	3.88	199	⇑*i*Pn	Pn	00 04 30.7	+0.6
MOA	**Molln**	3.88	199	⇑Pn	Pn	00 04 30.7	+0.6
MOA				Sg	Sg	00 05 33.5	-3.6
MOA	**Molln**	3.88	199	Pn	Pn	00 04 30.7	+0.6
MOA				Sg	Sg	00 05 33.5	-3.6
	16nm,0.5s						
ARSA	**Arzberg**	4.30	186	⇑*i*Pn	Pn	00 04 37.4	+1.3
ARSA	**Arzberg**	4.30	186	⇑Pn	Pn	00 04 37.4	+1.3
ARSA				Sg	Sg	00 05 45.9	-5.1
ARSA	**Arzberg**	4.30	186	Pn	Pn	00 04 37.4	+1.3
ARSA				Sg	Sg	00 05 45.9	-5.2
	10nm,0.5s						
BLEU	**Blekinge**	4.79	358	P	Pn	00 04 41.2	-1.8
WTTA	**Wattenberg**	5.19	216	⇑*i*Pn	Pn	00 04 49.2	+0.5
WTTA	**Wattenberg**	5.19	216	⇑Pn	Pn	00 04 49.2	+0.5
	3.2nm,0.4s						
WTTA				Sg	Sg	00 06 16.5	-4.2
WTTA	**Wattenberg**	5.19	216	Pn	Pn	00 04 49.2	+0.6
WTTA				Sg	Sg	00 06 16.5	-4.1
	3.2nm,0.4s						
SQTA	**Sankt Quirin**	5.39	219	⇓*i*Pn	Pn	00 04 52.7	+1.3
SQTA	**Sankt Quirin**	5.39	219	⇓Pn	Pn	00 04 52.7	+1.3
	2.8nm,0.3s						
SQTA				Sg	Sg	00 06 23.3	-4.0
SQTA	**Sankt Quirin**	5.39	219	Pn	Pn	00 04 52.7	+1.3
SQTA				Sg	Sg	00 06 23.3	-4.0
	2.8nm,0.3s						
VXJU	**Vaexsjoe**	5.45	353	P	Pn	00 04 51.3	-1.0
OSKU	**Oskarshamn**	5.68	360	P	Pn	00 04 54.5	-1.0
EKSU	**Eksjoe**	6.08	356	P	Pn	00 05 00.2	-1.0
VSTU	**Vaestervik**	6.15	2	P	Pn	00 05 01.5	-0.7
CDF	**Champ du Feu**	6.52	245	*e*Pn	Pn	00 05 06.4	-1.1
CDF				*e*Sg	Sg	00 06 54.3	-11
	9.4nm,0.7s						
ESKU	**Eskilstuna**	7.72	1	P	Pn	00 05 23.8	-0.5

*IDC **01** 00:26:40.4±1.0, 0.86N×97.33E, mb4.4/12, mb1 4.5/12, mb1mx4.3/17, mbtmp4.4/12, MS3.3/1, Ms1 3.3/1, ms1mx2.7/17, Error ellipse: s-maj=37.3km s-min=17.7km az=49.0*

*MOS **01** 00:26:43.6±1.7, 0.87N×97.42E, h33^{km}, mb4.6/8, Error ellipse: s-maj=27.8km s-min=11.8km az=105.8*

*BJI **01** 00:26:45.2, 0.79N×97.50E, h46^{km}, mB5.1, mb4.8, Ms4.5, Msz4.1*

*NEIC **01** 00:26:46.6±2.8, 0.89N×97.40E, h41^{km}±23^{km}, mb4.4/8, Error ellipse: s-maj=22.8km s-min=7.8km az=51.0*

ISC 01 00:26:45.1±1.5**, 0.85N**±0.07×**97.44E**±0.08**, h43^{km}**±12^{km}**, h46^{km}**±.6^{km}**:pP-P, n52, σ1^{s}07**/54**, mb4.5**/30**, MS3.9**/5**, 3C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	5.15	44	P	P	00 28 01.6	-0.2
KULM	**Kulim**	5.45	36	⇑*i*P	P	00 28 04.9	-1.0
KULM				*e*Sn	S	00 29 36.7	+28
KGM	**Kluang**	5.99	79	P	P	00 28 13.9	+0.3
KKM	**Kota Kinabalu**	19.43	74	*e*P	P	00 31 10.9	0.0
KMI	**Kunming**	24.67	12	P	P	00 32 05.2	+1.7
KMI				AP		00 32 13.8	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.2						
SHL	**Shillong**	25.15	348	*e*P	P	00 32 08.5	+0.4
PKI	**Pulchoki**	28.96	338	*e*P	P	00 32 47.2	+4.3
GUN	**Gumba**	29.09	339	*e*P	P	00 32 45.1	+1.0
	comp=Z,15nm,0.5s,mb5.0						
DMN	**Daman**	29.11	337	*e*P	P	00 32 47.2	+2.9
	comp=Z,12nm,0.8s,mb4.7						
KKN	**Kakani**	29.21	338	*e*P	P	00 32 47.3	+2.2
LSA	**Lhasa**	29.30	349	*e*P	P	00 32 46.9	+0.9
	comp=Z,4.1nm,0.5s,mb4.4						
LSA	**Lhasa**	29.30	349	*e*P	P	00 32 46.9	+1.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
GKN	**Gorkha**	29.65	337	*e*P	P	00 32 48.5	-0.5
	comp=Z,13nm,0.8s,mb4.7						
KOLN	**Koldanda**	29.87	335	*e*P	P	00 32 50.2	-0.8
	comp=Z,16nm,0.8s,mb4.8						
CD2	**Chengdu**	30.49	11	*e*P	P	00 32 58.0	+1.5
CD2				S	S	00 37 55.0	+1.5
CD2				LR	LR		
	comp=Z,210nm,12.0s,MS4.0						
ENH	**Enshi**	31.42	20	*e*P	P	00 33 02.8	-1.8
	comp=Z,14nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	33.54	126	P	P	00 33 22.3	-0.9
	comp=Z,3.2nm,0.6s,mb4.4,baz=342,slow=8.6,SNR=5.9						
XAN	**Xi'an**	34.72	17	P	P	00 33 31.7	-1.6
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
LZH	**Lanzhou**	35.56	9	*e*P	P	00 33 41.6	+1.2
LZH				AP	pP	00 33 54.2	+2.1
LZH				XP	sP	00 33 59.7	+2.1
LZH				PP	PP	00 35 02.7	+1.3
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,50nm,5.6s						
LZH				LR	LR		
	comp=N,310nm,13.2s						
LZH				LR	LR		
	comp=Z,680nm,17.5s,MS4.5						
GTA	**Gaotai**	38.44	3	*e*P	P	00 34 04.4	-0.1
JOW	**Kunigami**	39.31	46	P	P	00 34 12.2	+0.3
	comp=Z,16nm,0.6s,mb4.9,baz=187,slow=3.2,SNR=4.5						
WRA	**Warramunga Arr**	41.65	122	P	P	00 34 31.4	0.0
	comp=Z,2.7nm,0.6s,mb4.0,baz=300,slow=9.1,SNR=8.6						
WRAB	**Tennant Creek**	41.66	122	*e*P	P	00 34 32.2	+0.7
	comp=Z,12nm,1.1s,mb4.4						
WRAB	**Tennant Creek**	41.66	122	*e*P	P	00 34 32.2	+0.8
WRAB				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
WB2	**Warramunga Arr**	41.66	122	*e*P	P	00 34 31.7	+0.2
HHC	**Hu-ho-hao-te**	41.82	16	*e*P	P	00 34 33.2	+0.7
HHC				AP	pP	00 34 45.5	+1.1
HHC				XP	sP	00 34 51.5	+1.8
HHC				PP	PP	00 36 13.0	+0.4
HHC				PCP	PcP	00 36 31.0	+2.4
HHC				SCP		00 40 17.6	
HHC				PCS		00 40 20.0	
HHC				S	S	00 40 46.4	-0.5
HHC				XS		00 41 06.7	
HHC				SS	SS	00 43 45.0	-3.7
HHC				SCS	ScS	00 44 30.5	+1.0
HHC				AMB	AMB		
	comp=Z,170nm,4.8s						
HHC				LR	LR		
	comp=N,220nm,13.2s,MS4.4						
HHC				LR	LR		
	comp=E,240nm,12.0s,MS4.4						
HHC				LR	LR		
	comp=Z,140nm,13.2s,MS4.0						
WMQ	**Urumqi**	43.65	350	*e*P	P	00 34 48.2	+0.8
WMQ				AP	pP	00 35 00.7	+1.3
WMQ				XP	sP	00 35 06.2	+1.6
WMQ				PP	PP	00 36 31.7	+0.7
WMQ				*e*S	S	00 41 13.2	-0.5
WMQ				AMB	AMB		
	comp=Z,90nm,3.2s						
WMQ				LR	LR		
	comp=Z,30nm,16.7s,MS3.3						
AAK	**Ala-Archa**	46.41	337	*e*P	P	00 35 09.2	-0.3
	comp=Z,1.6nm,0.6s,mb4.1						
AAK	**Ala-Archa**	46.41	337	*e*P	P	00 35 09.2	-0.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SONM	**Songino Array**	47.44	8	P	P	00 35 17.1	-0.4
	comp=Z,2.2nm,0.4s,mb4.4,baz=190,slow=9.9,SNR=29						
SONM				PcP	PcP	00 36 47.8	0.0
	comp=Z,0.7nm,0.6s,baz=191,slow=4.6,SNR=3.9						
MKAR	**Makanchi Array**	47.63	346	P	P	00 35 19.1	0.0
	comp=Z,8.5nm,0.5s,mb5.0,baz=160,slow=8.5,SNR=93						
MKAR				LR	LR	00 57 10.1	
	comp=Z,34nm,19.8s,MS3.3,baz=258,slow=38						
CN2	**Changchun**	49.51	27	*e*P	P	00 35 33.3	-0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
ZAK	**Zakamensk**	49.59	5	*e*P	P	00 35 34.1	0.0
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
MJAR	**Matsushiro Arr**	51.79	42	P	P	00 35 49.8	-1.1
	comp=Z,1.6nm,0.6s,mb4.2,baz=216,slow=6.7,SNR=4.5						
MDJ	**Mudanjiang**	52.05	29	P	P	00 35 54.8	+2.0
MDJ				AMB	AMB		
	comp=Z,80nm,3.5s						
KURK	**Kurchatov**	52.19	345	*e*P	P	00 35 53.1	-0.7
	comp=Z,7.0nm,1.0s,mb4.5						
KURK	**Kurchatov**	52.19	345	*e*P	P	00 35 53.1	-0.6
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
STKA	**Stephens Creek**	52.95	132	*e*P	P	00 36 00.8	+1.1
	comp=Z,3.9nm,1.3s,mb4.2						
STKA	**Stephens Creek**	52.95	132	P	P	00 36 00.7	+1.0
	comp=Z,1.8nm,0.6s,mb4.2,baz=316,slow=6.0,SNR=5.1						
BRVK	**Borovoye**	56.72	341	*e*P	P	00 36 25.0	-1.8
	comp=Z,1.1nm,0.6s,mb4.1						
BRVK	**Borovoye**	56.72	341	*e*P	P	00 36 25.0	-1.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
CHKZ	**Chkalovo**	57.13	341	*e*P	P	00 36 28.6	-1.1
	comp=Z,5.2nm,0.8s,mb4.6						
CHKZ	**Chkalovo**	57.13	341	*e*P	P	00 36 28.7	-1.1
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BOD	**Bodaibo**	58.30	10	*e*P	P	00 36 36.8	-1.1
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
TIXI	**Tiksi**	73.48	10	⇑*i*P	P	00 38 12.5	-2.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
AKASG	**Malin Array Be**	75.67	322	P	P	00 38 25.7	-2.0
	comp=Z,1.4nm,0.6s,mb4.1,baz=89,slow=5.3,SNR=4.9						
SYO	**Syowa Base**	79.75	198	⇑X		00 38 49.2	
FINES	**FINESS Array B**	80.41	332	P	P	00 38 53.1	-0.5
	comp=Z,2.6nm,1.0s,mb4.1,baz=108,slow=6.0,SNR=9.4						
ARCES	**ARCESS Array B**	82.94	340	P	P	00 39 06.5	-0.1
	comp=Z,3.6nm,0.9s,mb4.4,baz=90,slow=1.2,SNR=5.4						
GERES	**GERESS Array B**	85.23	319	P	P	00 39 19.2	+0.7
	comp=Z,1.2nm,0.9s,mb4.0,baz=90,slow=5.3,SNR=8.7						
NB2	**NORSAR Subarra**	87.42	331	P	P	00 39 29.3	+0.4
	comp=Z,2.3nm,0.9s,mb4.4,baz=97,slow=4.6						
NOA	**NORSAR Array B**	87.42	331	P	P	00 39 29.7	+0.7
	comp=Z,1.6nm,0.7s,mb4.3,baz=97,slow=4.7,SNR=3.5						

*ISK **01** 00:48:28.4, 38.15N×26.63E, h10^{km}, MD3.1*

*ATH **01** 00:48:29.3, 38.19N×26.64E, h10^{km}, MD2.9/3*

*CSEM **01** 00:48:29.5±0.1, 38.15N×26.73E, h12^{km}, MD3.1, Error ellipse: s-maj=2.1km s-min=1.3km az=89.0*

ISC 01 00:48:29.0±0.8**, 38.18N**±0.04×**26.64E**±0.05**, h7^{km}**±8^{km}**, n17, σ0^{s}73**/23**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	0.19	348	*i* P	Pg	00 48 32.4	-0.6
URLA				*i* S	Sg	00 48 36.3	+0.7
BLCB	**Balcova**	0.38	56	*i* PG	Pg	00 48 36.7	+0.1
SMG	**Samos**	0.49	162	*e*PB	Pb	00 48 39.0	-0.5
IZM	**Izmir**	0.54	65	*i* PG	Pg	00 48 39.9	+0.2
IZM				SG	Sg	00 48 47.9	+1.0
KDAG	**Bornova**	0.54	65	*i* P	Pg	00 48 38.8	-1.1
KDAG				*i* S	Sg	00 48 46.4	-0.7
AYDN	**Tasoluk**	1.10	117	*i* P	Pb	00 48 50.4	+0.4
AYDN				*i* S	Sb	00 49 04.1	-0.3
PRK	**Paraskevi**	1.11	345	*e*PB	Pb	00 48 50.0	-0.1
AKS	**Akhisar**	1.16	52	PN	Pn	00 48 51.7	+0.2
BODT	**Bodrum**	1.23	154	*e*PN	Pn	00 48 51.9	-0.7
MLSB	**Milas**	1.26	134	*e*PN	Pn	00 48 52.5	-0.5
BDRM	**Kayabasi**	1.28	150	*i* P	Pb	00 48 54.2	+1.3
BDRM				*i* S	Sb	00 49 10.3	+0.9
APE	**Apeiranthos**	1.42	219	*e*PN	Pn	00 48 54.0	-1.2
APE	**Apeiranthos**	1.42	219	*e*Pb	Pb	00 48 56.2	+0.9
MANT	**Manisa**	1.54	78	*i* P	Pn	00 48 58.5	+1.5
MANT				*i* S	Sb	00 49 16.3	-0.7
DAT	**Datca**	1.62	152	*e*PN	Pn	00 48 58.1	-0.1
YER	**Yerkesik**	1.67	128	*e*PN	Pn	00 48 58.4	-0.4
DST	**Dursunbey**	2.11	47	*e*PN	Pn	00 49 05.2	0.0

*BJI **01** 00:55:38.0, 19.00N×121.40E, h34^{km}, mB4.6, mb4.3, Ms4.2, Msz4.2*

*NEIC **01** 00:55:42.0±3.8, 18.99N×121.42E, h34^{km}±28^{km}, mb4.6/2, Error ellipse: s-maj=20.1km s-min=9.2km az=81.0*

*IDC **01** 00:55:43.0±4.3, 19.03N×121.49E, h43^{km}±41^{km}, mb3.8/9, mb1 4.0/11, mb1mx3.8/20, mbtmp4.0/11, ML3.9/2, MS3.7/8, Ms1 3.7/8, ms1mx3.6/16, Error ellipse: s-maj=37.1km s-min=15.8km az=84.0*

*MAN **01** 00:55:43.5, 19.14N×121.21E, h22^{km}, mb4.9, ML3.8, MS3.8*

ISC 01 00:55:43.9±0.5**, 19.13N**±0.03×**121.25E**±0.08**, h73^{km}**±6^{km}**, n41, σ1^{s}26**/40**, mb4.0**/12**, 3C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	0.99	217	⇑*i*P	P	00 56 00.9	-1.8
SGCP	**Mt. Cagua**	1.16	139	*e*P	P	00 56 04.7	-0.2
SGCP				*e*S	S	00 56 21.1	+0.6
APYP	**Conner**	1.26	180	*e*P	P	00 56 05.5	-0.7
APYP				*e*S	S	00 56 22.7	0.0
BBP	**Basco**	1.47	27	*e*P	P	00 56 08.5	-0.6
BBP				*e*S	S	00 56 27.9	+0.2
CVP	**Callao Caves**	1.52	159	⇓*i*P	P	00 56 10.0	+0.3
CVP				*e*S	S	00 56 30.0	+1.3
ABRA	**Dolores**	1.55	199	*e*P	P	00 56 09.2	-1.0
CAUP	**Cauayan**	2.24	166	*e*P	P	00 56 21.7	+2.2
BOLP	**Bolinao**	3.01	205	*e*P	P	00 56 31.0	+0.6
BALP	**Baler**	3.38	175	*e*P	P	00 56 37.3	+1.7
TGY	**Tagaytay City**	5.00	183	P	P	00 57 03.4	+5.2
	baz=52,slow=19,SNR=2.7						
TGY				S	S	00 57 51.1	-4.1
	50nm,0.3s,baz=143,slow=15,SNR=2.6						
NACB	**Ninganchiao**	5.03	4	*e*Pn	P	00 56 55.8	-2.8
NACB				*e*Sn	S	00 57 43.2	-13
YHNB	**Yeheng**	5.52	1	*e*Pn	P	00 57 04.3	-0.9
YHNB				*e*Sn	S	00 58 03.2	-4.9
GZH	**Guangzhou**	8.36	299	P	P	00 57 38.3	-6.2
JOW	**Kunigami**	10.03	39	P	P	00 58 03.6	-3.8
	2.7nm,0.3s,baz=153,slow=9.0,SNR=4.8						
JOW				LR	LR	01 02 03.8	
	comp=Z,341nm,20.1s,baz=114,slow=38						
QIZ	**Qiongzhong**	10.79	271	*e*P	P	00 58 12.4	-5.1
JNU	**Nakatsue**	16.39	30	P	P	00 59 30.9	+0.3
	0.3nm,0.3s,baz=208,slow=14,SNR=2.2						
JNU				LR	LR	01 06 06.2	
	comp=Z,61nm,20.2s,baz=272,slow=38						
CD2	**Chengdu**	19.69	310	P	P	01 00 10.0	+0.2
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
JHJ	**Hachijo jima 2**	21.66	46	LR	LR	01 07 34.6	
	comp=Z,176nm,20.4s,baz=2.2,slow=33						
LZH	**Lanzhou**	22.81	321	*e*P	P	01 00 43.2	+1.9
LZH				AP		01 00 49.1	
LZH				XP		01 00 53.7	
LZH				PP	PP	01 01 09.3	-3.2
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.3						
LZH				AMB	AMB		
	comp=Z,60nm,4.6s						
LZH				LR	LR		
	comp=N,370nm,10.2s						
LZH				LR	LR		
	comp=Z,690nm,13.5s						
MJAR	**Matsushiro Arr**	22.87	37	P	P	01 00 43.0	+1.2
	comp=Z,1.4nm,0.4s,mb3.6,baz=213,slow=7.6,SNR=3.4						
SONM	**Songino Array**	31.09	340	P	P	01 01 59.0	+1.7
	comp=Z,0.4nm,0.8s,mb3.2,baz=166,slow=5.9,SNR=3.4						
SONM				LR	LR	01 15 43.3	
	comp=Z,194nm,18.6s,baz=8.7,slow=38						
FITZ	**Fitzroy Crossi**	37.24	173	P	P	01 02 49.7	-0.6
	comp=Z,4.5nm,0.9s,mb4.4,baz=53,slow=5.1,SNR=4.9						
WRAB	**Tennant Creek**	40.89	161	*e*P	P	01 03 19.6	-1.0
WRA	**Warramunga Arr**	40.89	161	P	P	01 03 19.2	-1.4
	comp=Z,0.9nm,0.5s,mb3.9,baz=343,slow=8.9,SNR=4.1						
WB2	**Warramunga Arr**	40.90	161	*e*P	P	01 03 19.2	-1.4
MKAR	**Makanchi Array**	42.12	320	P	P	01 03 32.5	+2.2
	comp=Z,0.6nm,0.6s,mb3.5,baz=108,slow=9.1,SNR=5.4						
MKAR				LR	LR	01 22 54.5	
	comp=Z,89nm,18.2s,baz=95,slow=38						
KURK	**Kurchatov**	46.08	323	*e*P	P	01 04 06.7	+4.4
	comp=Z,4.5nm,0.9s,mb4.2						
CHKZ	**Chkalovo**	51.79	324	*e*P	P	01 04 53.3	+7.1
	comp=Z,18nm,1.9s,mb4.8						
NWAO	**Narrogin (SRO)**	51.90	184	P	P	01 04 47.3	0.0
	comp=Z,8.9nm,1.1s,mb4.7,baz=18,slow=13,SNR=3.5						
STKA	**Stephens Creek**	54.33	159	P	P	01 05 02.7	-2.6
	comp=Z,1.3nm,0.7s,mb4.1,baz=339,slow=16,SNR=3.2						
STKA				LR	LR	01 31 44.3	
	comp=Z,73nm,18.7s,baz=220,slow=40						
STKA	**Stephens Creek**	54.33	159	P	P	01 05 02.7	-2.6
STKA				LR	LR	01 31 44.3	
ILAR	**Eielson Array**	73.68	27	P	P	01 07 10.6	-0.5
	comp=Z,0.5nm,0.6s,mb3.5,baz=291,slow=6.2,SNR=5.6						
ARCES	**ARCESS Array B**	74.24	339	P	P	01 07 15.3	+1.0
	comp=Z,2.7nm,0.9s,mb4.0,baz=63,slow=8.1,SNR=4.7						
ARCES				LR	LR	01 40 04.7	
	comp=Z,58nm,19.8s,baz=290,slow=36						
ARCES	**ARCESS Array B**	74.24	339	P	P	01 07 15.3	+1.0
ARCES				LR	LR	01 40 04.7	
NOA	**NORSAR Array B**	82.71	333	LR	LR	01 47 45.0	
	comp=Z,100nm,19.0s,baz=65,slow=38						
TXAR	**Lajitas Array**	115.21	43	PKP	PKPdf	01 14 21.1	+3.7
	comp=Z,0.3nm,0.5s,baz=199,slow=2.1,SNR=4.8						
VNA2	**Neumayer--Watz**	120.11	197	⇑*i*	PKPdf	01 14 28.8	+2.9
VNA2	**Neumayer--Watz**	120.11	197	*e*	PKPdf	01 14 37.4	+12
VNA3	**Neumayer Olymp**	120.56	196	⇑*i*	PKPdf	01 14 29.0	+2.2
VNA3	**Neumayer Olymp**	120.56	196	*e*	PKPdf	01 14 37.9	+11
SDV	**Santo Domingo**	149.80	24	PKPbc	PKPdf	01 15 31.2	+10
	comp=Z,4.2nm,0.6s,baz=15,slow=3.7,SNR=3.3						

*ISK **01** 01:17:09.4, 38.13N×26.68E, h10^{km}, MD3.2*

*ATH **01** 01:17:09.8, 38.11N×27.06E, h35^{km}±4^{km}, MD2.9/3*

*NEIC **01** 01:17:09.0, 38.13N×26.66E, h6^{km}, MD3.2(ISK), MD2.9(ATH), After ISK.*

*CSEM **01** 01:17:11.2±0.2, 38.15N×26.82E, h15^{km}, MD3.2, Error ellipse: s-maj=5.5km s-min=3.2km az=99.0*

ISC 01 01:17:10.0±0.8**, 38.13N**±0.03×**26.71E**±0.04**, h2^{km}**±6^{km}**, n21, σ0^{s}85**/32**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.25**	**339**	*i* P	**Pg**	**01 17 14.6**	**-0.5**
URLA				*i* S	**Sg**	**01 17 18.6**	**+0.2**
BLCB	**Balcova**	**0.37**	**45**	*i* PG	**Pg**	**01 17 17.2**	**-0.2**
SMG	**Samos**	**0.43**	**167**	*e*PB	**Pb**	**01 17 20.0**	**+0.1**
SMG				*e*SB	**Sb**	**01 17 27.0**	**+0.5**
IZM	**Izmir**	**0.51**	**58**	*i* PG	**Pg**	**01 17 20.3**	**+0.1**
IZM				*i* SG	**Sg**	**01 17 28.1**	**+1.0**
KDAG	**Bornova**	**0.52**	**57**	*i* P	**Pg**	**01 17 19.3**	**-1.0**
KDAG				*i* S	**Sg**	**01 17 27.0**	**-0.2**
AYDN	**Tasoluk**	**1.03**	**116**	*i* P	**Pb**	**01 17 31.0**	**+0.7**
AYDN				*i* S	**Sb**	**01 17 43.8**	**-0.4**
AKS	**Akhisar**	**1.15**	**49**	PN	**Pn**	**01 17 32.7**	**-0.3**
BODT	**Bodrum**	**1.16**	**156**	*e*PN	**Pn**	**01 17 32.8**	**-0.4**
PRK	**Paraskevi**	**1.17**	**343**	*e*PN	**Pn**	**01 17 33.1**	**-0.3**
PRK				*e*SN	**Sn**	**01 17 50.5**	**+0.4**
AYVA	**Ayvalik**	**1.18**	**359**	*i* P	**Pb**	**01 17 33.1**	**+0.2**
AYVA				*i* S	**Sb**	**01 17 49.9**	**+1.4**
MLSB	**Milas**	**1.18**	**134**	PN	**Pn**	**01 17 33.2**	**-0.3**
BDRM	**Kayabasi**	**1.21**	**151**	*i* P	**Pb**	**01 17 33.8**	**+0.5**
BDRM				*i* S	**Sb**	**01 17 52.5**	**+3.3**
APE	**Apeiranthos**	**1.41**	**222**	PN	**Pn**	**01 17 35.2**	**-1.6**
APE				SN	**Sn**	**01 17 54.7**	**-1.5**
APE	**Apeiranthos**	**1.41**	**222**	*e*Pn	**Pn**	**01 17 37.6**	**+0.8**
APE				*e*Sn	**Sn**	**01 17 54.7**	**-1.5**
MANT	**Manisa**	**1.50**	**75**	*i* P	**Pn**	**01 17 39.1**	**+1.1**
MANT				*i* S	**Sb**	**01 17 56.6**	**-1.1**
YER	**Yerkesik**	**1.59**	**128**	PN	**Pn**	**01 17 38.9**	**-0.5**
EZN	**Ezine**	**1.73**	**350**	*e*PN	**Pn**	**01 17 40.7**	**-0.6**
BALB	**Balikesir**	**1.77**	**31**	*e*PN	**Pn**	**01 17 41.8**	**-0.1**
SANT	**Santorini**	**2.02**	**210**	*e*Pn	**Pn**	**01 17 47.5**	**+2.1**
SANT	**Santorini**	**2.02**	**210**	*e*Pn	**Pn**	**01 17 47.5**	**+2.1**
DST	**Dursunbey**	**2.10**	**45**	*e*PN	**Pn**	**01 17 45.5**	**-1.2**

KRSC 01 01:40:53.7±1.5**,49.79N**×**157.45E,h16**^{km}±67^{km}**,ML3.8,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.24**	**317**	*e*P	Pb	01 41 16.7	+0.5
SKR				*i* S	Sb	01 41 34.3	+2.5
PAU	**Pauzhetka**	**1.73**	**347**	*e*P	Pn	01 41 24.2	+0.8
PAU				*e*S	Sn	01 41 45.4	+0.2
PAU				Smax			
	170nm,0.3s						
MIPR	**Malaya Ipel'ka**	**2.53**	**350**	*e*P	Pn	01 41 34.2	-0.7
RUS	**Russkaya**	**2.73**	**14**	*e*P	Pn	01 41 38.6	+0.8
RUS				*e*S	Sn	01 42 10.4	-0.3
GRL	**Gorelyy**	**2.79**	**8**	*e*P	Pn	01 41 39.6	+0.9
GRL				*e*S	Sn	01 42 12.0	-0.3
APC	**Apacha**	**3.15**	**357**	*e*P	Pn	01 41 43.9	+0.2
AVH	**Avacha**	**3.57**	**13**	*e*P	Pn	01 41 51.0	+1.3
SDLR	**Sedlovina**	**3.61**	**14**	*e*P	Pn	01 41 50.0	-0.2
GNL	**Ganaly**	**3.92**	**4**	*e*P	Pn	01 41 55.3	+0.6
KBTR	**Krutoberegovo**	**7.20**	**25**	*e*P	Pn	01 42 39.5	-1.4

*NIED **01** 02:01:00,39.10N×140.80E,h5^{km},Mw4.5 Best double couple: M$_0$5.44×10^{15} NP1:ϕ_s27°,δ76°,λ108°. NP2:ϕ_s153°, δ22°,λ38°.*

*BJI **01** 02:01:07.9,38.99N×141.28E,h46^{km},mB4.8,mb4.7, Ms4.2,Msz3.9*

*JMA **01** 02:01:09.0,39.07N×140.81E,h9^{km}±1^{km},M4.6 Broadband fault plane solution: P waves. NP1:ϕ_s146°, δ15°,λ42°. NP2:ϕ_s15°,δ80°,λ102°. Principal axes: T Plg54°, Azm299°; N Plg11°, Azm193°; P Plg34°, Azm95°;*

JMA Felt III J1.

*IDC **01** 02:01:10.5±3.4,39.13N×140.62E,h18^{km}±21^{km},mb4.3/18, mb1 4.4/23,mb1mx4.4/27,mbtmp4.4/23,ML3.8/5,MS3.6/9, Ms1 3.6/9,ms1mx3.4/27 Error ellipse: s-maj=16.3km s-min=12.2km az=116.0*

*MOS **01** 02:01:11.5±1.1,39.13N×140.66E,h38^{km},mb4.9/34,Error ellipse: s-maj=9.2km s-min=5.2km az=100.5*

*NEIC **01** 02:01:14.1±0.9,39.08N×140.68E,h47^{km}±8^{km},mb4.8/33, MW4.4(NIED),Error ellipse: s-maj=7.1km s-min=6.4km az=150.0*

NEIC Recorded [3 JMA] in Iwate and Miyagi; [2 JMA] in Akita; [1 JMA] in Fukushima and Yamagata Prefectures.

ISC 01 02:01:09.1±0.5**,39.10N**±0.03×**140.79E**±0.03**,h21**^{km}±3^{km}**,**
h46^{km}±2.8^{km}**:pP-P,n209,**σ1^{s}**10**/205**,mb4.7**/70**,MS4.0**/14**,**
12C-10D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.32**	**337**	⇑P	**Pb**	**02 01 16.2**	**+0.1**
JRG				*e*S	**Sb**	**02 01 21.4**	**+0.6**
JMK	**Ichinoseki**	**0.36**	**114**	⇓P	**Pb**	**02 01 15.5**	**-1.3**
JMK				*e*S	**Sb**	**02 01 19.9**	**-2.2**
JYK	**Kaneyama**	**0.38**	**242**	⇓P	**Pb**	**02 01 16.7**	**-0.4**
JYK				*e*S	**Sb**	**02 01 21.7**	**-0.9**
MAJO	**Matsushiro**	**3.27**	**220**	⇑*i*P	**Pn**	**02 02 01.7**	**+1.3**
MAT	**Matsushiro**	**3.27**	**220**	P	**Pn**	**02 02 01.6**	**+1.1**
MAT				S	**Sn**	**02 02 42.0**	**+2.8**
MAT	**Matsushiro**	**3.27**	**220**	*e*P	**Pn**	**02 02 02.0**	**+1.5**
MAT				*e*S	**Sn**	**02 02 42.0**	**+2.8**
MJAR	**Matsushiro Arr**	**3.27**	**219**	Pn	**Pn**	**02 02 01.4**	**+0.9**
	8.6nm,0.3s,baz=28,slow=13,SNR=83						
MJAR				Lg		02 02 51.9	
	13nm,0.3s,baz=11,slow=27,SNR=5.9						
ASAJ	**Asahikawa**	**5.19**	**15**	Pn	**Pn**	**02 02 29.1**	**+1.5**
	3.2nm,0.3s,baz=22,slow=33,SNR=6.7						
ASAJ				Sn	**Sn**	**02 03 30.1**	**+2.4**
	2.7nm,0.3s,baz=174,slow=23,SNR=2.4						
ASAJ	**Asahikawa**	**5.19**	**15**	P	**Pn**	**02 02 29.2**	**+1.6**
ASAJ						02 03 30.1	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.03**	**188**	Pn	**Pn**	**02 02 40.4**	**+1.0**
	comp=Z,15nm,0.3s,baz=79,slow=23,SNR=3.8						
JHJ				Sn	**Sn**	**02 03 50.1**	**+1.6**
	comp=Z,37nm,0.3s,baz=251,slow=23,SNR=4.0						
JHJ				LR	LR	02 04 57.1	
	comp=Z,176nm,20.6s,baz=317,slow=38						
YUK	**Yuzh-Kuril'sk**	**6.22**	**36**	P	**Pn**	**02 02 41.2**	**-1.0**
YUK				*e*S	**Sn**	**02 03 51.0**	**-2.5**
YUK				smax			
	comp=N,280nm,0.5s						
YUK				smax			
	comp=E,280nm,0.5s						
YUK				smax			
	comp=N,2µm,0.8s						
YUK				smax			
	comp=E,2µm,0.8s						
YUK				smax			
	comp=N,190nm,0.5s						
YUK				smax			
	comp=E,190nm,0.5s						
VLA	**Vladivostok**	**7.83**	**304**	P	**Pn**	**02 03 04.8**	**+0.1**
VLA				pmax	pmax		
	comp=Z,26nm,0.6s						
VLA				pmax	pmax		
	comp=Z,500nm,13.9s						
YSS	**Yuzh-Sakhalins**	**7.98**	**10**	⇓*e*P	**Pn**	**02 03 07.8**	**+1.0**
YSS				*e*		02 04 40.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,500nm,12.0s						
YSS				MLR	MLR		
	comp=N,500nm,14.0s						
JNU	**Nakatsue**	**9.99**	**236**	Pn	**P**	**02 03 33.3**	**-1.3**
	comp=N,0.2nm,0.3s,baz=18,slow=9.8,SNR=2.6						
JNU				LR	LR	02 07 24.0	
	comp=N,259nm,20.3s,baz=43,slow=38						
MDJ	**Mudanjiang**	**10.01**	**307**	P	**P**	**02 03 35.8**	**+1.0**
MDJ				XP		02 03 55.5	
MDJ				S	**S**	**02 05 25.4**	**-2.1**
MDJ				PCP	PcP	02 09 43.0	-1.6
MDJ				AMB	AMB		
	comp=Z,40nm,3.9s						
MDJ				LR	LR		
	comp=N,560nm,13.1s						
MDJ				LR	LR		
	comp=E,280nm,12.9s						
MDJ				LR	LR		
	comp=Z,550nm,12.6s						
KS15	**Wonju Array Si**	**10.29**	**265**	⇓*i*P	**P**	**02 03 40.2**	**+1.6**
KS15				*e*Sn	**S**	**02 05 36.2**	**+1.8**
KLR	**Kul'dur**	**12.02**	**330**	*e*P	**P**	**02 04 04.4**	**+2.2**
KLR				MLR	MLR		
	comp=Z,2µm,13.5s						
CBIJ	**Chichi jima**	**12.03**	**174**	Pn	**P**	**02 03 57.7**	**-4.7**
	comp=Z,7.2nm,0.3s,baz=319,slow=20,SNR=3.7						
CBIJ				Sn	**S**	**02 06 09.3**	**-7.8**
	comp=Z,4.9nm,0.3s,baz=319,slow=20,SNR=3.0						
CN2	**Changchun**	**12.43**	**297**	*e*P	**P**	**02 04 10.4**	**+2.7**
CN2				*e*XP		02 04 28.0	
CN2				*e*S	**S**	**02 06 26.9**	**+0.2**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,660nm,10.0s						
CN2				LR	LR		
	comp=E,370nm,10.0s						
CN2				LR	LR		
	comp=Z,390nm,15.0s						
SNY	**Shenyang**	**13.39**	**287**	⇓P	**P**	**02 04 24.9**	**+4.4**
SNY				S	**S**	**02 06 53.7**	**+4.0**
SNY				AMB	AMB		
	comp=Z,100nm,14.7s						
SNY				LR	LR		
	comp=E,490nm,18.5s						
SNY				LR	LR		
	comp=Z,410nm,17.6s						
JOW	**Kunigami**	**16.11**	**224**	Pn	**P**	**02 04 55.2**	**-0.7**
	comp=Z,2.0nm,0.3s,baz=72,slow=9.6,SNR=3.1						
SSE	**Sheshan**	**17.90**	**249**	P	**P**	**02 05 20.1**	**+1.6**
SSE				S	**S**	**02 08 33.8**	**-1.1**
SSE				AMB	AMB		
	comp=Z,40nm,0.8s						
SSE				AMB	AMB		
	comp=Z,230nm,5.5s						
SSE				LR	LR		
	comp=N,60nm,15.1s						
SSE				LR	LR		
	comp=E,30nm,15.1s						
SSE				LR	LR		
	comp=Z,90nm,13.0s						
PET	**Petropavlovsk**	**18.57**	**36**	*e*P	**P**	**02 05 27.6**	**+1.0**
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
NJ2	**Nanjing**	**19.16**	**255**	*e*P	**P**	**02 05 34.1**	**+0.3**
NJ2				S	**S**	**02 09 05.0**	**+1.6**
NJ2				PCP	PcP	02 09 54.0	-3.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,230nm,5.0s						
NJ2				LR	LR		
	comp=N,850nm,26.5s						
NJ2				LR	LR		
	comp=E,860nm,16.3s						
NJ2				LR	LR		
	comp=Z,430nm,27.0s						
CLNS	**Chul'man**	**20.60**	**335**	*e*P	**P**	**02 05 46.7**	**-2.6**
CLNS				*e*		02 05 56.4	
CLNS				*e*PPP	PPP	02 06 06.4	-13
CLNS				*e*S	**S**	**02 09 21.8**	**-12**
CLNS				*e*		02 10 05.6	
CLNS				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CLNS				pmax	pmax		
	comp=N,12nm,1.0s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CLNS				pmax	pmax		
	comp=N,17nm,1.0s						
CLNS				pmax	pmax		
	comp=E,22nm,1.0s						
CLNS				smax			
	comp=E,4.0nm,0.7s						
CLNS				smax			
	comp=N,6.0nm,0.9s						
CLNS				smax			
	comp=Z,4.0nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,400nm,14.0s,MS3.9						
CLNS				MLR	MLR		
	comp=N,200nm,15.0s,MS3.8						
CLNS				MLR	MLR		
	comp=E,200nm,12.0s,MS3.8						
MA2	**Magadan**	**21.45**	**14**	*e*P	**P**	**02 05 57.5**	**-0.5**
	comp=E,18nm,0.7s,mb4.5						
MA2	**Magadan**	**21.45**	**14**	*e*P	**P**	**02 05 57.5**	**-0.5**
MA2				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.5						
HHC	**Hu-ho-hao-te**	**22.43**	**284**	⇑P	**P**	**02 06 06.2**	**-1.6**
HHC				AP		02 06 20.3	
HHC				PP	PP	02 06 35.9	+0.5
HHC				PCP	PcP	02 09 58.5	-4.8
HHC				S	**S**	**02 10 05.7**	**-2.4**
HHC				SCP		02 13 29.5	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
HHC				AMB	AMB		
	comp=Z,160nm,9.6s						
HHC				LR	LR		
	comp=N,410nm,14.4s,MS4.1						
HHC				LR	LR		
	comp=E,410nm,16.8s,MS4.1						
HHC				LR	LR		
	comp=Z,480nm,15.3s,MS4.0						
YAK	**Yakutsk**	**23.95**	**347**	*e*P	**P**	**02 06 21.8**	**-0.7**
	comp=Z,24nm,0.4s,mb5.0						
YAK	**Yakutsk**	**23.95**	**347**	*e*P	**P**	**02 06 21.8**	**-0.6**
YAK				pmax	pmax		
	comp=Z,24nm,0.4s,mb5.0						
BOD	**Bodaibo**	**25.53**	**326**	*e*P	**P**	**02 06 36.4**	**-1.3**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.3						
GUMO	**Guam**	**25.67**	**171**	LR	LR	02 16 19.6	
	comp=Z,36nm,18.6s,baz=70,slow=35						
SONM	**Songino Array**	**26.27**	**301**	P	**P**	**02 06 42.6**	**-1.9**
	comp=Z,1.6nm,0.8s,mb3.6,baz=94,slow=7.8,SNR=10						
SONM				ScP		02 13 49.9	
	comp=Z,0.3nm,0.4s,baz=108,slow=4.7,SNR=4.2						
SONM				LR	LR	02 17 18.3	
	comp=Z,123nm,20.6s,MS3.4,baz=71,slow=37						
SONM	**Songino Array**	**26.27**	**301**	P	**P**	**02 06 42.6**	**-1.9**
SONM				ScP		02 13 49.9	
SONM				LR	LR	02 17 18.3	
ZAK	**Zakamensk**	**28.64**	**306**	*e*P	**P**	**02 07 05.1**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
LZH	**Lanzhou**	**29.30**	**276**	*e*P	**P**	**02 07 12.9**	**+0.6**
LZH				AP	pP	02 07 26.5	+8.2
LZH				PP	PP	02 08 08.2	+0.7
LZH				*e*S	**S**	**02 12 00.5**	**-2.5**
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,80nm,5.2s						
LZH				LR	LR		
	comp=N,760nm,13.2s						
LZH				LR	LR		
	comp=Z,1µm,17.3s,MS4.6						
GYA	**Guiyang**	**31.16**	**256**	⇑*i*P	**P**	**02 07 27.8**	**-1.0**
GYA				AP	pP	02 07 42.6	+7.8
GYA				XP	sP	02 07 49.9	+12
GYA				PP	PP	02 08 30.7	-0.9
GYA				S	**S**	**02 12 25.6**	**-6.7**
GYA				SCP		02 13 59.6	
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GYA				AMB	AMB		
	comp=Z,80nm,2.6s,mb5.1						
GYA				LR	LR		
	comp=N,370nm,16.7s,MS4.3						
GYA				LR	LR		
	comp=E,410nm,15.9s,MS4.3						
GYA				LR	LR		
	comp=Z,420nm,16.0s,MS4.2						
CD2	**Chengdu**	**31.25**	**266**	*e*P	**P**	**02 07 30.0**	**+0.5**
BILL	**Bilibino**	**32.20**	**18**	*e*P	**P**	**02 07 37.4**	**-0.1**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.4						
BILL				MLR	MLR		
	comp=Z,200nm,21.0s,MS3.8						
TIXI	**Tiksi**	**33.18**	**353**	*e*P	**P**	**02 07 43.7**	**-2.3**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
KMI	**Kunming**	**34.85**	**258**	P	**P**	**02 08 02.9**	**+2.0**
KMI				AP	pP	02 08 15.7	+8.7
KMI				PP	PP	02 09 18.5	-0.2
KMI				S	**S**	**02 13 27.5**	**-2.3**
KMI				XS		02 13 52.9	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
KMI				LR	LR		
	comp=N,230nm,14.9s,MS4.5						
KMI				LR	LR		
	comp=E,520nm,12.2s,MS4.5						
KMI				LR	LR		
	comp=Z,330nm,12.7s,MS4.3						
WMQ	**Urumqi**	**39.50**	**295**	⇓P	**P**	**02 08 40.4**	**+0.5**
WMQ				AP	pP	02 08 53.9	+7.9
WMQ				PP	PP	02 10 15.8	+1.3
WMQ				*e*S	**S**	**02 14 37.9**	**-2.8**
WMQ				AMB	AMB		
	comp=Z,60nm,3.6s						
WMQ				LR	LR		
	comp=N,70nm,21.1s,MS3.5						
WMQ				LR	LR		
	comp=E,30nm,23.6s,MS3.5						
WMQ				LR	LR		
	comp=Z,50nm,16.5s						
NVS	**Novosibirsk**	**41.08**	**312**	*i* P	**P**	**02 08 51.6**	**-1.1**
MKAR	**Makanchi Array**	**42.63**	**300**	P	**P**	**02 09 05.0**	**-0.5**
	comp=Z,7.5nm,0.8s,mb4.5,baz=86,slow=9.5,SNR=58						
MKAR				LR	LR	02 27 15.2	
	comp=Z,84nm,18.8s,MS3.7,baz=359,slow=37						
MKAR	**Makanchi Array**	**42.63**	**300**	P	**P**	**02 09 05.0**	**-0.5**
MKAR				LR	LR	02 27 15.2	
MKAR	**Makanchi Array**	**42.63**	**300**	*i* P	**P**	**02 09 05.1**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	**Kurchatov**	**44.29**	**306**	*e*P	**P**	**02 09 18.1**	**-0.8**
	comp=Z,30nm,0.9s,mb5.0						
KURK	**Kurchatov**	**44.29**	**306**	*e*P	**P**	**02 09 18.1**	**-0.8**
KURK				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
KDAK	**Kodiak Island**	**45.91**	**43**	P	**P**	**02 09 32.6**	**+0.9**
	comp=Z,4.4nm,0.6s,mb4.6,baz=310,slow=14,SNR=5.8						
JIRN	**Jiri**	**46.38**	**273**	*e*P	**P**	**02 09 36.3**	**+0.5**
GUN	**Gumba**	**46.50**	**273**	*e*P	**P**	**02 09 36.7**	**-0.1**
	comp=Z,76nm,0.9s,mb5.7						
KKN	**Kakani**	**47.03**	**274**	*e*P	**P**	**02 09 40.9**	**0.0**
	comp=Z,58nm,0.7s,mb5.6						
PKI	**Pulchoki**	**47.03**	**273**	*e*P	**P**	**02 09 40.5**	**-0.5**
MCK	**McKinley**	**47.20**	**35**	*e*P	**P**	**02 09 42.4**	**+0.5**
	comp=Z,3.0nm,0.8s,mb4.3						
MCK	**McKinley**	**47.20**	**35**	*e*P	**P**	**02 09 42.4**	**+0.6**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
DMN	**Daman**	**47.25**	**273**	*e*P	**P**	**02 09 42.7**	**0.0**
	comp=Z,29nm,1.0s,mb5.2						
GKN	**Gorkha**	**47.42**	**274**	*e*P	**P**	**02 09 43.7**	**-0.4**
	comp=Z,49nm,0.9s,mb5.5						
COLA	**College**	**47.61**	**33**	*e*P	**P**	**02 09 47.1**	**+2.1**
ILAR	**Eielson Array**	**48.03**	**33**	P	**P**	**02 09 48.8**	**+0.5**
	comp=Z,5.6nm,0.7s,mb4.7,baz=272,slow=6.6,SNR=60						
TKM2	**Tokmak 2**	**48.24**	**297**	P	**P**	**02 09 50.9**	**+0.7**
	SNR=16						
KOLN	**Koldanda**	**48.34**	**275**	*e*P	**P**	**02 09 50.9**	**-0.3**
	comp=Z,46nm,1.1s,mb5.4						
CHKZ	**Chkalovo**	**48.56**	**312**	*e*P	**P**	**02 09 51.5**	**-1.0**
	comp=Z,3.4nm,0.7s,mb4.5						
CHKZ				*e*PcP	PcP	02 11 15.2	-3.4
CHKZ	**Chkalovo**	**48.56**	**312**	*e*P	**P**	**02 09 51.6**	**-0.9**
CHKZ				*e*		02 11 15.2	
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KBK	**Karagaybulak**	**48.78**	**297**	P	**P**	**02 09 54.9**	**+0.5**
	SNR=12						
BVA0	**Borovoye Array**	**48.84**	**311**	*i* P	**P**	**02 09 54.0**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.7s,mb4.0						
BVAR	**Borovoye Array**	**48.84**	**311**	P	**P**	**02 09 54.0**	**-0.6**
	comp=Z,2.4nm,0.6s,mb4.4,baz=80,slow=8.4,SNR=15						
BVAR				PcP	PcP	02 11 18.4	-1.1
	comp=Z,3.8nm,0.7s,baz=97,slow=2.6,SNR=9.3						
BRVK	**Borovoye**	**48.89**	**311**	*e*P	**P**	**02 09 54.8**	**-0.3**
	comp=Z,44nm,2.3s,mb5.1						
BRVK	**Borovoye**	**48.89**	**311**	*e*P	**P**	**02 09 54.8**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,44nm,2.3s,mb5.1						
USP	**Ospenovka**	**48.89**	**297**	P	**P**	**02 09 55.5**	**+0.3**
	SNR=5.5						
AAK	**Ala-Archa**	**49.10**	**297**	P	**P**	**02 09 57.3**	**+0.5**
	SNR=5.8						
AAK	**Ala-Archa**	**49.10**	**297**	*e*P	**P**	**02 09 55.5**	**-1.4**
	comp=Z,6.4nm,1.0s,mb4.6						
AAK	**Ala-Archa**	**49.10**	**297**	*e*P	**P**	**02 09 55.5**	**-1.4**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
AML	**Almayashu**	**49.83**	**296**	P	**P**	**02 10 03.7**	**+1.2**
	SNR=6.9						
DAWY	**Dawson**	**51.34**	**34**	*e*P	**P**	**02 10 14.0**	**+0.3**
KKAR	**Karatay Array**	**51.69**	**299**	*i* P	**P**	**02 10 15.9**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
KAKA	**Kakadu**	**52.13**	**190**	*e*P	**P**	**02 10 37.2**	**+17**
	comp=Z,6.8nm,0.6s,mb4.8						
INK	**Inuvik**	**52.78**	**28**	P	**P**	**02 10 24.5**	**0.0**
	comp=Z,10nm,0.7s,mb4.8,baz=293,slow=6.3,SNR=60						
INK	**Inuvik**	**52.78**	**28**	*e*P	**P**	**02 10 24.9**	**+0.4**
	comp=Z,8.8nm,0.8s,mb4.7						
INK	**Inuvik**	**52.78**	**28**	*e*P	**P**	**02 10 24.9**	**+0.4**
INK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ARU	**Arti**	**54.50**	**317**	*e*P	**P**	**02 10 36.5**	**-0.7**
	comp=Z,22nm,1.1s,mb5.0						
ARU	**Arti**	**54.50**	**317**	⇑*i*P	**P**	**02 10 36.4**	**-0.8**
ARU				*e*		02 12 36.0	
ARU				*e*PPP	PPP	02 13 47.2	-5.0
ARU				*e*S	**S**	**02 18 03.8**	**-10**
ARU				*e*SS	SS	02 21 46.6	-9.1
ARU				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
AB31	**Akbulak array**	**56.25**	**309**	*i* P	**P**	**02 10 49.0**	**-1.0**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
AKTO	**Aktyubinsk**	**56.94**	**311**	LR	LR	02 39 23.6	
	comp=Z,41nm,18.4s,MS3.6,slow=40						
FITZ	**Fitzroy Crossi**	**58.64**	**197**	*e*P	**P**	**02 11 06.5**	**-0.8**
	comp=Z,13nm,1.5s,mb4.8						
WRAB	**Tennant Creek**	**59.03**	**187**	*e*P	**P**	**02 11 08.3**	**-1.7**
	comp=Z,21nm,1.1s,mb5.1						
WRAB	**Tennant Creek**	**59.03**	**187**	*e*P	**P**	**02 11 08.3**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
WB2	**Warramunga Arr**	**59.04**	**187**	*e*P	**P**	**02 11 08.3**	**-1.8**
WRA	**Warramunga Arr**	**59.04**	**187**	P	**P**	**02 11 08.1**	**-2.0**
	comp=Z,5.5nm,0.5s,mb4.8,baz=4.3,slow=7.3,SNR=30						
ARCES	**ARCESS Array B**	**61.89**	**339**	P	**P**	**02 11 28.6**	**-0.3**
	comp=Z,6.0nm,1.0s,mb4.7,baz=39,slow=7.8,SNR=4.3						
ASPA	**Alice Springs**	**62.77**	**187**	*e*P	**P**	**02 11 33.9**	**-1.4**
DAG	**Danmarks Havn**	**63.68**	**355**	⇑*i*P	**P**	**02 11 40.1**	**-0.4**
	comp=Z,5.5nm,0.7s,mb4.7						
DAG	**Danmarks Havn**	**63.68**	**355**	⇑*i*P	**P**	**02 11 40.1**	**-0.4**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
VRHR	**Novokhopersk**	**65.84**	**317**	*e*P	**P**	**02 11 52.1**	**-2.7**
VRHR				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
VRHR				pmax	pmax		
	comp=N,8.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.7s						
OBN	**Obninsk**	**66.16**	**322**	⇓*e*P	**P**	**02 11 56.1**	**-0.7**
OBN				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.1						
FINES	**FINESS Array B**	**66.76**	**332**	P	**P**	**02 12 00.1**	**-0.5**
	comp=Z,6.5nm,0.7s,mb4.8,baz=56,slow=6.9,SNR=16						
GOF	**Gofitskoye**	**68.37**	**311**	*e*P	**P**	**02 12 10.4**	**-0.6**
SUMG	**Summit**	**68.62**	**360**	*e*P	**P**	**02 12 12.7**	**+0.6**
	comp=Z,24nm,1.3s,mb5.0						
KIV	**Kislovodsk**	**69.19**	**310**	*e*P	**P**	**02 12 16.3**	**+0.2**
	comp=Z,60nm,1.0s,mb5.5						
KIV	**Kislovodsk**	**69.19**	**310**	*e*P	**P**	**02 12 16.3**	**+0.2**
KIV				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
GNI	**Garni**	**70.09**	**306**	LR	LR	02 46 02.3	
	comp=Z,66nm,18.6s,MS3.9,baz=150,slow=38						
GNI	**Garni**	**70.09**	**306**	*e*P	**P**	**02 12 20.4**	**-1.2**

GNI				pmax	pmax		
	comp=Z,14nm,1.7s						
STKA	Stephens Creek	70.62	179	P	P	02 12 25.6	+0.7
	comp=Z,2.0nm,0.7s,mb4.2,baz=306,slow=4.1,SNR=5.0						
ANN	Anapa	71.75	313	*e*P	P	02 12 41.1	+9.5
NB2	NORSAR Subarra	72.10	337	P	P	02 12 32.9	-0.4
	comp=Z,12nm,1.0s,mb4.8,baz=39,slow=6.2						
NOA	NORSAR Array B	72.10	337	P	P	02 12 33.0	-0.3
	comp=Z,6.0nm,0.9s,mb4.5,baz=39,slow=6.0,SNR=14						
NOA				LR	LR	02 45 27.3	
	comp=Z,64nm,18.4s,MS3.9,baz=15,slow=37						
AKASG	Malin Array Be	72.37	322	P	P	02 12 33.7	-1.5
	comp=Z,3.5nm,0.6s,mb4.5,baz=44,slow=6.1,SNR=16						
AKASG	Malin Array Be	72.37	322	P	P	02 12 33.7	-1.5
NAO	NORSAR Subarra	72.38	337	P	P	02 12 32.9	-2.1
	comp=Z,12nm,1.0s,mb4.8						
NAO	NORSAR Subarra	72.38	337	P	P	02 12 32.9	-2.1
NAO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
SUW	Suwalki	72.89	327	*e*P	P	02 12 36.4	-1.6
DLMT	Dillon	73.22	45	*e*P	P	02 12 41.2	+1.0
	comp=Z,2.8nm,0.5s,mb4.5						
NVAR	Mina Array Bea	74.14	53	P	P	02 12 47.2	+1.6
	comp=Z,1.3nm,0.7s,mb4.0,baz=295,slow=4.0,SNR=12						
MIB	Mutribah	74.34	296	*e*P	P	02 12 46.3	-0.7
MIB				AMb	AMB	02 12 47.5	
	comp=Z,30nm,0.8s,mb5.3						
RDF	Al-Radifah	74.71	295	*e*P	P	02 12 48.8	-0.4
RDF				AMb	AMB	02 12 49.9	
	comp=Z,44nm,0.9s,mb5.4						
NAY	Al-Naaiem	74.74	295	*e*P	P	02 12 48.5	-0.9
NAY				AMb	AMB	02 12 49.7	
	comp=Z,14nm,1.2s,mb4.8						
KWP	Kalwaria	76.17	324	*e*P	P	02 12 58.1	+1.0
HWUT	Hardware Ranch	76.19	47	*e*P	P	02 12 58.5	+1.1
	comp=Z,3.5nm,1.1s,mb4.2						
TPNV	Topopah Spring	76.34	53	*e*P	P	02 12 59.5	+1.2
	comp=Z,6.5nm,1.2s,mb4.4						
TPNV	Topopah Spring	76.34	53	*e*P	P	02 12 59.5	+1.2
TPNV				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
DUG	Dugway	76.38	49	*e*P	P	02 12 59.4	+1.0
	comp=Z,2.1nm,0.8s,mb4.1						
DUG	Dugway	76.38	49	*e*P	P	02 12 59.4	+1.0
DUG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
BURAR	Bucovina Array	76.39	321	⇑*i*P	P	02 12 58.9	+0.5
BW06	Boulder Array	76.57	45	*e*P	P	02 12 59.8	+0.4
	comp=Z,11nm,1.6s,mb4.5						
PDAR	Pinedale Array	76.57	45	P	P	02 12 59.9	+0.4
	comp=Z,1.4nm,0.7s,mb4.0,baz=293,slow=2.1,SNR=15						
KOLS	Kolonicke sedl	76.87	323	*e*P	P	02 13 00.8	-0.2
STHS	Stebnicka Huta	76.99	324	*i* P	P	02 13 03.3	+1.6
OJC	Ojcow	77.06	326	*e*P	P	02 13 02.5	+0.5
BRTR	Keskin Array B	77.12	311	P	P	02 13 02.1	-0.4
	comp=Z,4.8nm,1.1s,mb4.4,baz=90,slow=3.7,SNR=9.7						
CRVS	Cervenica-Dubn	77.26	324	*e*P	P	02 13 00.4	-2.8
NIE	Niedzica	77.41	325	*e*P	P	02 13 05.0	+1.0
ULM	Lac du Bonnet	78.05	33	P	P	02 13 07.1	-0.3
	comp=Z,1.7nm,0.7s,mb4.1,baz=335,slow=15,SNR=3.3						
OKC	Ostrava-Krasne	78.06	326	*e*P	P	02 13 08.1	+0.6
KSP	Ksiaz	78.09	328	*e*P	P	02 13 08.3	+0.6
KSP	Ksiaz	78.09	328	*e*P	P	02 13 08.0	+0.3
MORC	Moravsky Berou	78.37	326	*e*P	P	02 13 09.8	+0.6
	comp=Z,6.7nm,1.0s,mb4.5						
MORC	Moravsky Berou	78.37	326	*e*P	P	02 13 09.8	+0.6
MORC				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
DPC	Dobruska-Polom	78.45	327	*e*P	P	02 13 11.0	+1.3
UPC	Upice	78.46	328	*e*P	P	02 13 10.9	+1.2
PSZ	Piszkesteto	78.70	324	*e*P	P	02 13 11.1	0.0
	comp=Z,5.5nm,0.9s,mb4.5						
PSZ	Piszkesteto	78.70	324	*e*P	P	02 13 11.1	0.0
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
VYHS	Vyhne	78.75	325	*i* P	P	02 13 12.1	+0.8
BRG	Berggiesshubel	79.03	329	*e*P	P	02 13 13.9	+1.0
	comp=Z,6.3nm,1.3s,mb4.4						
BRG	Berggiesshubel	79.03	329	*e*P	P	02 13 13.9	+1.1
BRG				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
PVCC	Panska Ves	79.04	328	*e*P	P	02 13 13.4	+0.5
CLL	Collm	79.07	330	⇓P	P	02 13 13.4	+0.4
	comp=Z,logA/T=1.2,mb4.9						
CLL	Collm	79.07	330	⇓*i*P	P	02 13 13.4	+0.4
	comp=Z,21nm,1.3s,mb4.9						
CLL	Collm	79.07	330	⇓*i*P	P	02 13 13.4	+0.4
CLL				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.9						
MZLS	Mizel	79.33	292	P	P	02 13 15.3	+0.2
PRU	Pruhonice	79.47	328	*e*P	P	02 13 16.1	+0.9
HILS	Ha’il	79.68	297	P	P	02 13 17.4	+0.6
NKC	Novy Kostel	80.13	329	*e*P	P	02 13 19.3	+0.6
KHC	Kasperske Hory	80.53	328	*e*P	P	02 13 21.9	+1.0
GERES	GERESS Array B	80.70	328	P	P	02 13 21.8	-0.1
	comp=Z,2.0nm,0.8s,mb4.1,baz=34,slow=4.8,SNR=18						
AFFS	‘Afif	80.98	293	P	P	02 13 24.4	+0.6
GRA1	Grafenberg Arr	81.04	330	*e*P	P	02 13 24.1	+0.5
	comp=Z,15nm,1.2s,mb4.8						
GRF	Grafenberg Arr	81.04	330	*e*P	P	02 13 24.1	+0.5
	comp=Z,15nm,1.2s,mb4.8						
GRF	Grafenberg Arr	81.04	330	*e*P	P	02 13 24.1	+0.5
GRF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
GRF	Grafenberg Arr	81.04	330	*e*P	P	02 13 24.1	+0.5
GRF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
GRUS	Gruza	81.26	321	*i* P	P	02 13 25.2	+0.4
GROS	Grobnik	81.77	325	*i* P	P	02 13 27.9	+0.5
PERS	Pernice	81.81	326	*e*P	P	02 13 28.3	+0.6
KAMS	Al Khamasin	82.09	290	P	P	02 13 28.3	-1.3
VAY	Valandovo	82.18	318	*e*P	P	02 13 26.9	-2.8
PDKS	Podkum	82.30	325	*e*P	P	02 13 30.7	+0.4
JAVS	Javornik	82.84	326	*e*P	P	02 13 33.1	0.0
BIA	Bitola	83.05	318	*e*P	P	02 13 26.8	-7.5
BAIF	Baives	83.34	334	*e*P	P	02 13 34.5	-1.0
CDF	Champ du Feu	83.60	331	*e*P	P	02 13 37.2	+0.4
ANMO	Albuquerque	83.62	50	*e*P	P	02 13 38.7	+1.5
	comp=Z,2.2nm,0.9s,mb4.3						
ANMO	Albuquerque	83.62	50	*e*P	P	02 13 38.7	+1.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HINF	Hinteralfeld	84.25	331	*e*P	P	02 13 39.4	-0.7
HAU	Haudompre	84.29	331	*e*P	P	02 13 40.0	-0.3
DJNS	Zahran al Janu	84.47	288	P	P	02 13 42.2	+0.3
BLJS	Baljurashi	84.53	291	P	P	02 13 43.2	+1.0
LOR	Lormes	85.82	332	*e*P	P	02 13 48.4	+0.4
	comp=Z,41nm,1.3s,mb5.2						
LOR	Lormes	85.82	332	*e*P	P	02 13 48.4	+0.4
LOR				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.2						
PPT	Papeete	85.99	116	LR	LR	02 44 38.8	
	comp=Z,132nm,20.3s,MS4.3,baz=284,slow=30						
SSF	Saint Saulge	86.13	332	*e*P	P	02 13 48.7	-0.8
	comp=Z,27nm,1.1s,mb5.1						
SSF	Saint Saulge	86.13	332	*e*P	P	02 13 48.7	-0.8
SSF				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.1						
LPL	La Plagne	86.20	330	*e*P	P	02 13 49.5	-0.4
	comp=Z,11nm,0.8s,mb4.8						
LPL	La Plagne	86.20	330	*e*P	P	02 13 49.5	-0.4
LPL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.8						
LPG	La Plagne	86.21	330	*e*P	P	02 13 49.6	-0.3
	comp=Z,13nm,0.8s,mb4.9						
LPG	La Plagne	86.21	330	*e*P	P	02 13 49.6	-0.3
LPG				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
SMF	Signal de Mont	86.36	332	*e*P	P	02 13 49.8	-0.8
AVF	Avril sur Loir	86.41	332	*e*P	P	02 13 50.2	-0.7
	comp=Z,33nm,0.9s,mb5.3						
AVF	Avril sur Loir	86.41	332	*e*P	P	02 13 50.2	-0.7
AVF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
TXAR	Lajitas Array	89.24	52	P	P	02 14 05.7	+0.7
	comp=Z,0.7nm,0.7s,mb4.1,baz=262,slow=2.6,SNR=6.2						
SNAA	Sanae	142.57	198	⇑*i*P	PKPdf	02 20 37.3	-6.3
SNAA	Sanae	142.57	198	*e*	PKPdf	02 20 39.7	-3.9
SNAA	Sanae	142.57	198	*e*	PKPdf	02 20 51.9	+8.3
SNAA	Sanae	142.57	198	*e*	PKPdf	02 20 55.0	+11
SNAA	Sanae	142.57	198	*e*	PKPdf	02 20 57.4	+14
VNA2	Neumayer--Watz	144.16	197	⇑*i*P	PKPbc	02 20 41.4	-0.1
VNA2	Neumayer--Watz	144.16	197	*e*	PKPbc	02 20 44.4	+2.9
VNA2	Neumayer--Watz	144.16	197	*e*	PKPbc	02 20 55.0	+14
VNA2	Neumayer--Watz	144.16	197	*e*	PKPbc	02 20 59.8	+18
VNA2	Neumayer--Watz	144.16	197	*e*	PKPbc	02 21 02.7	+21
VNA3	Neumayer Olymp	144.43	196	⇑*i*P	PKPbc	02 20 42.4	+0.2
VNA3	Neumayer Olymp	144.43	196	*e*	PKPbc	02 20 45.0	+2.8
VNA3	Neumayer Olymp	144.43	196	*e*	PKPbc	02 20 56.7	+14
VNA3	Neumayer Olymp	144.43	196	*e*	PKPbc	02 21 01.7	+19
VNA3	Neumayer Olymp	144.43	196	*e*	PKPbc	02 21 04.5	+22
VNA1	Neumayer--Stat	144.55	197	⇑*i*P	PKPbc	02 20 43.4	+0.8
VNA1	Neumayer--Stat	144.55	197	*e*	PKPbc	02 20 45.9	+3.3
VNA1	Neumayer--Stat	144.55	197	*e*	PKPbc	02 20 57.9	+15
VNA1	Neumayer--Stat	144.55	197	*e*	PKPbc	02 21 02.2	+20
VNA1	Neumayer--Stat	144.55	197	*e*	PKPbc	02 21 05.2	+23
LPAZ	La Paz	146.01	56	PKPbc	PKPbc	02 20 50.0	+2.0
	comp=Z,3.3nm,0.7s,baz=351,slow=4.5,SNR=16						
LPAZ	La Paz	146.01	56	*e*PKP2	PKPbc	02 20 49.5	+1.5

NEIC ***01*** *02:08:49.0, 38.12N×26.63E, h5^{km}, MD3.6(ISK), MD3.4(ATH), After ISK.*
ISK ***01*** *02:08:50.2, 38.11N×26.63E, h4^{km}, MD3.6*
CSEM ***01*** *02:08:50.4±0.1, 38.11N×26.59E, h5^{km}, MD3.6, Error ellipse: s-maj=3.4km s-min=1.8km az=81.0*
ATH ***01*** *02:08:51.1, 38.18N×26.49E, h10^{km}, MD3.4/3*
ISC 01 02:08:50.4±0.4**, 38.15N**±0.02×**26.56E**±0.04**, h5^{km}, n39, $\sigma 0\overset{s}{.}95$**/47**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.21	8	*i* P	Pg	02 08 53.4	-1.5
URLA				*i* S	Sg	02 08 57.5	-0.2
SMG	Samos	0.49	153	⇑*i*PB	Pg	02 09 01.6	+1.3
IZM	Izmir	0.61	66	*i* PG	Pg	02 09 01.8	-0.8
IZM				*i* SG	Sg	02 09 10.3	-0.5
KDAG	Bornova	0.61	65	*i* P	Pg	02 09 01.0	-1.7
KDAG				*i* S	Sg	02 09 09.2	-1.8
PRK	Paraskevi	1.12	349	*e*PB	Pb	02 09 11.5	-0.4
AYDN	Tasoluk	1.15	115	*i* P	Pb	02 09 13.1	+0.6
AYVA	Ayvalik	1.16	5	*i* P	Pb	02 09 11.6	-1.1
AYVA				*i* S	Sb	02 09 29.1	+1.2
AKS	Akhisar	1.23	53	PN	Pn	02 09 13.3	-1.0
BODT	Bodrum	1.24	151	PN	Pn	02 09 13.5	-0.9
MLSB	Milas	1.29	131	PN	Pn	02 09 13.6	-1.5
BDRM	Kayabasi	1.29	147	*i* P	Pb	02 09 16.4	+1.6
APE	Apeiranthos	1.35	217	PN	Pn	02 09 15.9	-0.1
APE	Apeiranthos	1.35	217	*e*Pb	Pb	02 09 16.5	+0.6
MANT	Manisa	1.61	77	*i* P	Pn	02 09 20.2	+0.5
MANT				*i* S	Sb	02 09 41.3	+0.5
DAT	Datca	1.63	150	PN	Pn	02 09 19.6	-0.5
EZN	Ezine	1.69	354	PN	Pn	02 09 21.2	+0.5
YER	Yerkesik	1.70	126	PN	Pn	02 09 20.9	-0.1
BALB	Balikesir	1.81	34	PN	Pn	02 09 22.9	+0.3
SANT	Santorini	1.98	207	*e*Pn	Pg	02 09 29.8	-0.2
SANT				*e*Sn	Sg	02 10 00.4	+4.1
DENT	Denizli	2.00	101	*e*PN	Pn	02 09 25.4	+0.2
DNZL	Cakiroluk	2.02	102	*i* P	Pn	02 09 25.6	0.0
DNZL				*i* S	Sg	02 09 58.2	+0.4
DALT	Dalyan (Mudla)	2.15	129	*e*PN	Pn	02 09 27.2	-0.3
DST	Dursunbey	2.17	47	PN	Pn	02 09 27.9	+0.1
LPK	Lapseki	2.23	4	*e*PN	Pn	02 09 29.2	+0.6
EDC	Edincik	2.42	24	*e*PN	Pn	02 09 32.4	+1.1
BNT	Bandirma	2.45	25	*e*PN	Pn	02 09 32.0	+0.4
FETY	Fethiye	2.52	126	*e*PN	Pn	02 09 32.8	+0.1
MRMT	Marmara Adasi	2.58	18	*e*PN	Pn	02 09 34.6	+1.1
ORLT	Orhaneli	2.63	43	*e*PN	Pn	02 09 35.2	+0.9
MFT	Murefte	2.69	12	*e*PN	Pn	02 09 36.4	+1.2
ULDT	Uludag	2.83	44	*i* P	Pb	02 09 40.1	-1.0
ULDT				*i* S	Sb	02 10 18.6	+2.5
ELL	Elmali	3.01	117	*e*PN	Pn	02 09 38.4	-1.3
YLV	Yalova	3.25	41	*e*PN	Pn	02 09 44.2	+1.0
CTT	Catalca	3.33	25	*e*PN	Pn	02 09 45.2	+1.0
ESKT	Eskisehir	3.62	66	*e*PN	Pn	02 09 49.0	+0.6
RZN	Rozhen	3.81	339	*i* P	Pn	02 09 50.0	-1.1
MMB	Musomiste	4.07	329	*i* P	Pn	02 09 53.0	-1.7
KKB	Krupnik	4.57	325	*e*P	Pn	02 10 02.0	+0.1
VTS	Vitosha	5.12	331	*e*P	Pn	02 10 09.0	-0.7

IDC ***01*** *02:29:13.4±10.0, 34.60N×72.98E, mb4.3/2, mb1 3.9/5, mb1mx3.5/20, mbtmp3.8/5, ML3.5/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/19, Error ellipse: s-maj=163.0km s-min=58.8km az=154.0*
NNC ***01*** *02:29:23.8±10.0, 35.06N×72.30E, h19^{km}±271^{km}, mpv3.5, Error ellipse: s-maj=277.1km s-min=48.1km az=169.0*
ISC 01 02:29:17.0±0.9**, 34.69N**±0.07×**72.9E**±0.1**, h33^{km}, n14, $\sigma 0\overset{s}{.}92$**/15**, mb4.1**/2**, MS3.5**/1**, 3C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.24	133	*e*P	P	02 30 08.0	+1.3
THN				*e*S	S	02 30 55.0	+10
BHK	Bhakra	4.39	137	*e*x	x	02 31 16.2	
SDNR	Sundarnagar	4.65	132	*e*P	P	02 30 25.0	-1.7
SDNR				*e*x	x	02 31 17.2	
KLP	Kalpa	5.46	124	AML	AML	02 28 59.5	
	comp=E,10nm,0.3s						
KLP				AML	AML	02 29 20.6	
	comp=N,7.6nm,0.1s						
AAK	Ala-Archa	8.03	8	⇓P	P	02 31 14.7	+0.6
	comp=N,1.6nm,0.7s						
AAK				⇓S	S	02 32 44.6	0.0
	comp=N,1.5nm,0.7s						
AJM	Ajmer	8.31	169	*e*P	P	02 31 14.3	-3.7
AJM				*e*S	rx	02 32 27.1	
KK31	Karatay Array	8.61	348	⇓P	P	02 31 21.6	-0.6
	comp=N,0.9nm,0.3s,baz=152,slow=11,SNR=48						
KK31				⇑S	S	02 32 53.8	-5.4
	comp=N,2.1nm,0.6s,baz=161,slow=22,SNR=3.9						
MKAR	Makanchi Array	14.01	28	Pn	P	02 32 35.6	+0.5
	comp=N,0.1nm,0.3s,baz=204,slow=11,SNR=3.8						
AB31	Akbulak array	17.43	331	⇑P	P	02 33 19.5	+0.6
	comp=N,0.2nm,0.3s,baz=136,slow=14,SNR=5.6						
AB31				⇑S	S	02 36 24.8	-5.1
	comp=N,0.4nm,0.6s						
BVAR	Borovoye Array	18.42	355	P	P	02 33 29.8	-1.5
	comp=N,0.2nm,0.3s,baz=169,slow=7.3,SNR=3.9						
AKTO	Aktyubinsk	19.13	330	P	P	02 33 39.9	0.0
	comp=N,0.5nm,0.3s,baz=132,slow=8.0,SNR=9.9						
FINES	FINESS Array B	39.86	327	P	P	02 36 49.1	+0.4
	comp=N,3.2nm,1.0s,mb4.0,baz=108,slow=8.8,SNR=2.3						
ARCES	ARCESS Array B	43.41	338	P	P	02 37 17.9	+0.2
	comp=N,4.6nm,1.0s,mb4.2,baz=124,slow=8.7,SNR=5.1						
JNU	Nakatsue	47.55	75	LR	LR	03 00 06.7	
	comp=N,45nm,19.1s,MS3.5,baz=301,slow=39						

NEIC ***01*** *02:32:12.3±4.9, 6.71N×123.36E, h598^{km}±72^{km}, mb4.0/2, Error ellipse: s-maj=42.6km s-min=15.0km az=55.0*
IDC ***01*** *02:32:14.8±1.9, 6.54N×123.24E, h635^{km}±27^{km}, mb3.3/9, mb1 3.3/9, mb1mx3.1/20, mbtmp4.3/9, Error ellipse: s-maj=39.3km s-min=9.3km az=62.0*
ISC 01 02:32:10.9±0.6**, 6.7N**±0.2×**123.4E**±0.3**, h600^{km}, n15, $\sigma 0\overset{s}{.}54$**/17**, mb3.9**/10**, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	24.77	175	P	P	02 36 49.1	+0.1
	1.7nm,0.3s,mb4.1,baz=329,slow=3.1,SNR=9.2						
WRA	Warramunga Arr	28.62	158	P	P	02 37 21.4	-1.0
	6.5nm,0.3s,mb4.7,baz=331,slow=11,SNR=51						
WRA				S	S	02 41 25.5	-5.6
	1.1nm,0.8s,baz=340,slow=17,SNR=6.3						
WRA				ScP		02 42 55.8	
	0.4nm,0.5s,baz=344,slow=3.1,SNR=6.0						
WB2	Warramunga Arr	28.62	158	⇑*i*P	P	02 37 22.0	-0.4
WB2				*e*S	S	02 41 25.5	-5.7
ASPA	Alice Springs	31.91	161	*e*P	P	02 37 51.1	+0.8
CTA	Charters Tower	34.89	140	P	P	02 38 15.7	+0.5
	2.6nm,0.6s,mb4.1,baz=316,slow=12,SNR=3.8						
STKA	Stephens Creek	42.15	157	*e*P	P	02 39 14.0	+0.2
	2.1nm,0.3s,mb4.2						
STKA	Stephens Creek	42.15	157	P	P	02 39 14.1	+0.2
	3.6nm,0.5s,mb4.2,baz=339,slow=8.7,SNR=6.9						
SONM	Songino Array	43.45	343	P	P	02 39 23.9	+0.1
	1.4nm,0.6s,mb3.7,baz=159,slow=8.2,SNR=9.6						
DZM	Mont Dzumac	50.99	125	P	P	02 40 20.8	-0.1
	4.7nm,0.8s,mb4.0,baz=342,slow=19,SNR=7.2						
MKAR	Makanchi Array	53.20	326	P	P	02 40 36.9	+0.7
	4.0nm,0.5s,mb4.0,baz=120,slow=8.0,SNR=52						
MKAR	Makanchi Array	53.20	326	P	P	02 40 36.9	+0.7
BVAR	Borovoye Array	63.00	327	P	P	02 41 41.8	-0.1
	0.6nm,0.4s,mb3.2,baz=90,slow=4.3,SNR=6.4						
CHKZ	Chkalovo	63.18	328	*e*P	P	02 41 42.0	-1.1
	0.9nm,0.6s,mb3.3						
AKTK	Aktyubinsk	69.24	322	P	P	02 42 20.5	+0.2
AKTO	Aktyubinsk	69.24	322	P	P	02 42 20.5	+0.2
	0.5nm,0.4s,mb3.3,baz=90,slow=8.7,SNR=7.3						

NEIC ***01*** *03:04:45.9±0.6, 6.82N×73.02W, h165^{km}±7^{km}, mb3.9/4, Error ellipse: s-maj=10.3km s-min=8.6km az=126.0*
IDC ***01*** *03:04:45.6±0.8, 6.77N×73.01W, h164^{km}±12^{km}, mb3.4/7, mb1 3.8/11, mb1mx3.5/23, mbtmp4.0/11, Error ellipse: s-maj=32.9km s-min=7.8km az=133.0*
ISC 01 03:04:44.9±0.6**, 6.80N**±0.09×**72.99W**±0.09**, h173^{km}**±8^{km}**, n18, $\sigma 0\overset{s}{.}65$**/20**, mb3.7**/10**, 1C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	El Rosal	2.34	215	P	P	03 05 26.6	+0.8
	116nm,0.3s,baz=91,slow=18,SNR=522						
ROSC				S	S	03 05 56.8	-0.5
	146nm,0.3s,baz=105,slow=18,SNR=7.3						
SDV	Santo Domingo	3.13	48	P	P	03 05 36.1	+0.7
	87nm,0.3s,baz=262,slow=6.9,SNR=302						
SDV				S	S	03 06 14.8	+0.5
	63nm,0.3s,baz=106,slow=23,SNR=16						
SDV	Santo Domingo	3.13	48	⇑*i*P	P	03 05 36.0	+0.6
SDV				*e*Sn	S	03 06 11.3	-2.9
JTS	JuntasAbangare	12.33	287	P	P	03 07 35.5	-0.1
	0.3nm,0.3s,baz=78,slow=11,SNR=2.5						
SJG	San Juan	13.08	30	P	P	03 07 44.8	-0.3
	1.4nm,0.3s,baz=217,slow=15,SNR=3.1						
SAML	Samuel	18.44	148	*e*P	P	03 08 49.5	-0.4
	2.6nm,0.5s						
WVT	Waverly	32.21	337	*e*P	P	03 10 58.7	-0.1
	2.0nm,0.4s,mb4.2						
TXAR	Lajitas Array	36.58	312	P	P	03 11 36.0	+0.2
	0.7nm,0.4s,mb3.6,baz=130,slow=9.8,SNR=7.1						
WMOK	Wichita Mounta	36.58	323	*e*P	P	03 11 34.6	-1.2
	1.5nm,0.7s,mb3.7						
ULM	Lac du Bonnet	47.35	340	P	P	03 13 02.5	-0.5
	1.9nm,0.4s,mb4.0,baz=148,slow=6.0,SNR=10						
ULM	Lac du Bonnet	47.35	340	P	P	03 13 02.5	-0.5
SCHQ	Schefferville	48.16	5	P	P	03 13 09.8	+0.6
	2.1nm,0.6s,mb3.9,baz=180,slow=7.1,SNR=4.2						
PDAR	Pinedale Array	48.17	324	P	P	03 13 09.8	+0.3
	0.6nm,0.5s,mb3.5,baz=124,slow=9.1,SNR=5.6						
NVAR	Mina Array Bea	51.59	315	P	P	03 13 36.1	+0.6
	0.3nm,0.7s,mb3.0,baz=126,slow=7.3,SNR=5.7						
YKA	Yellowknife Ar	63.33	340	P	P	03 14 56.7	-0.7
	1.6nm,0.5s,mb4.1,baz=132,slow=6.6,SNR=8.4						
INK	Inuvik	73.10	340	*e*P	P	03 15 58.0	+0.5
	5.0nm,1.5s,mb4.0						
ILAR	Eielson Array	77.04	335	P	P	03 16 20.5	+0.6
	0.4nm,0.7s,mb3.2,baz=96,slow=5.6,SNR=4.2						
WRA	Warramunga Arr	150.44	241	PKPbc	PKPdf	03 24 18.2	+7.2
	0.3nm,0.3s,baz=107,slow=2.8,SNR=6.4						

NIED ***01*** *03:47:00, 33.80N×135.10E, h41^{km}, Mw4.3 Best double couple: M$_0$3.35×10^{15} NP1:ϕ_s55°, δ73°, λ-86°. NP2:ϕ_s221°, δ17°, λ-104°.*
BJI ***01*** *03:47:34.5, 33.57N×135.42E, h48^{km}, mB4.7, mb4.5, Ms4.0, Msz3.7*
MOS ***01*** *03:47:36.6±0.8, 33.79N×134.97E, h45^{km}, mb4.8/9, Error ellipse: s-maj=14.0km s-min=10.2km az=92.3*
NEIC ***01*** *03:47:38.9±0.5, 33.82N×135.02E, mb4.5/6, MW4.3(NIED), Error ellipse: s-maj=11.5km s-min=5.7km az=163.0*
NEIC Felt in Tanabe. Recorded [3 JMA] in Wakayama; [2 JMA] in Mie, Nara, Okayama and Osaka; [1 JMA] in Hyogo Prefectures. Also recorded [2 JMA] in Kagawa and Tokushima; [1 JMA] in Ehime and Kochi Prefectures, Shikoku.
IDC ***01*** *03:47:38.2±0.6, 33.74N×135.11E, h47^{km}±5^{km}, mb4.0/17, mb1 4.2/20, mb1mx4.1/25, mbtmp4.3/20, MS3.5/10, Ms1 3.5/10, ms1mx3.2/27, Error ellipse: s-maj=11.9km s-min=7.9km az=166.0*
JMA ***01*** *03:47:38.3, 33.82N×135.08E, h45^{km}±1^{km}, M4.3*
JMA Felt IV J1.
ISC 01 03:47:37.3±0.4**, 33.80N**±0.04×**135.08E**±0.04**, h51^{km}**±3^{km}**, h46^{km}**±1.5^{km}**:pP-P, n58, $\sigma 0\overset{s}{.}85$**/70**, mb4.3**/31**, MS3.6**/11**, 8C-4D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWM	Minabe	0.24	77	⇑P	P	03 47 46.2	+0.2
JWM				S	S	03 47 51.8	-0.4
JAI	Aioi	0.52	270	⇑P	P	03 47 49.4	+0.5
JAI				S	S	03 47 57.2	0.0
JWZ	Kozaga	0.59	116	⇑P	P	03 47 50.3	+0.6
JWZ				S	S	03 47 59.3	+0.4
JWY	Kouya	0.60	45	⇓P	P	03 47 50.3	+0.5
JWY				S	S	03 47 58.6	-0.4
JAJ2	Tsuna	0.64	346	⇑P	P	03 47 50.8	+0.5
JAJ2				S	S	03 47 59.8	-0.1
JHE	Heguri	0.99	30	⇓P	P	03 47 55.3	+0.2
JHE				S	S	03 48 08.1	-0.2
JNU	Nakatsue	3.57	260	P	P	03 48 32.0	+0.3
	4.0nm,0.3s,baz=127,slow=10.0,SNR=15						
JNU				S	S	03 49 11.8	-1.3
	16nm,0.3s,baz=189,slow=30,SNR=3.8						
MAJO	Matsushiro	3.75	42	⇓*i*P	P	03 48 34.5	+0.4
MAT	Matsushiro	3.75	42	P	P	03 48 34.5	+0.3
MAT				*e*S	S	03 49 17.3	-0.2
MAT	Matsushiro	3.75	42	*e*P	P	03 48 35.0	+0.8
MAT				*e*S	S	03 49 30.0	+12
MJAR	Matsushiro Arr	3.75	42	P	P	03 48 34.6	+0.5
	12nm,0.3s,baz=317,slow=22,SNR=71						
MJAR				S	S	03 49 17.5	0.0
	10nm,0.3s,baz=180,slow=31,SNR=5.0						
JHJ	Hachijo jima 2	3.99	98	P	P	03 48 37.1	-0.4
	23nm,0.3s,baz=287,slow=14,SNR=4.4						
JHJ				S	S	03 49 20.1	-3.5
	20nm,0.3s,baz=58,slow=19,SNR=3.5						
JHJ				LR	LR	03 49 26.1	
	comp=Z,309nm,19.9s,baz=2.6,slow=27						
KS15	Wonju Array Si	6.89	304	*e*Pn	P	03 49 16.8	-1.4
KS15				*e*Sn	S	03 50 30.4	-5.7
JOW	Kunigami	9.09	222	LR	LR	03 53 33.5	
	comp=Z,98nm,20.0s,baz=249,slow=39						
ASAJ	Asahikawa	11.84	27	LR	LR	03 54 52.8	
	comp=Z,159nm,18.2s,baz=175,slow=37						
HHC	Hu-ho-hao-te	19.95	297	*e*P	P	03 52 09.5	+1.8
HHC				AP		03 52 20.5	
HHC				XP		03 52 26.5	
HHC				PP	PP	03 52 32.5	+4.8
HHC				S	S	03 55 53.9	+10
HHC				XS		03 56 10.7	
HHC				PCP	PcP	03 56 16.7	-5.8
HHC				AMB	AMB		
	comp=Z,30nm,0.8s						
HHC				AMB	AMB		
	comp=Z,180nm,7.2s						
HHC				LR	LR		
	comp=N,120nm,10.8s						
HHC				LR	LR		
	comp=E,200nm,10.8s						
HHC				LR	LR		
	comp=Z,230nm,15.6s						
GUMO	Guam	22.00	154	LR	LR	04 00 36.0	
	comp=Z,42nm,18.3s,MS2.9,baz=76,slow=36						
LZH	Lanzhou	25.65	284	*e*P	P	03 53 03.9	0.0
LZH				AP	pP	03 53 14.5	-2.1
LZH				XP	sP	03 53 19.6	-3.2
LZH				*e*PP	PP	03 53 45.0	+0.1
LZH				*e*S	S	03 57 27.9	+1.6
LZH				XS		03 57 45.8	
LZH				*e*SS	SS	03 58 34.5	+1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,60nm,4.6s						
LZH				LR	LR		
	comp=N,470nm,10.2s						
LZH				LR	LR		
	comp=Z,950nm,13.3s,MS4.5						
SONM	Songino Array	25.66	312	P	P	03 53 04.1	+0.2
	comp=Z,4.9nm,0.5s,mb4.3,baz=130,slow=9.9,SNR=41						
SONM				pP	pP	03 53 17.8	+1.2
	comp=Z,4.4nm,0.9s,baz=118,slow=10,SNR=7.5						
SONM				LR	LR	04 03 43.1	
	comp=Z,101nm,18.8s,MS3.4,baz=9.2,slow=38						
ZAK	Zakamensk	28.55	315	*e*P	P	03 53 24.4	-5.8
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						

KMI	**Kunming**	**29.36**	**262**	P	**P**	**03 53 39.3**	**+1.6**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
KMI				LR	LR		
	comp=Z,40nm,16.7s,MS3.1						
WMQ	**Urumqi**	**37.80**	**300**	⇑P	**P**	**03 54 51.5**	**+1.2**
WMQ				AP	pP	03 55 03.5	-0.2
WMQ				XP	sP	03 55 08.7	-1.2
WMQ				PP	PP	03 56 22.0	+1.8
WMQ				PPP	PPP	03 56 44.0	+1.6
WMQ				PCP	PcP	03 57 07.3	+0.6
WMQ				*e*S	**S**	**04 00 39.7**	**+2.6**
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,90nm,2.6s,mb5.0						
WMQ				LR	LR		
	comp=N,50nm,22.0s,MS3.4						
WMQ				LR	LR		
	comp=E,40nm,19.6s,MS3.4						
WMQ				LR	LR		
	comp=Z,40nm,23.2s,MS3.2						
TIXI	**Tiksi**	**38.06**	**357**	⇓*i*P	**P**	**03 54 50.2**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,120nm,15.0s,MS3.8						
MKAR	**Makanchi Array**	**41.56**	**304**	P	**P**	**03 55 21.6**	**+0.3**
	comp=Z,5.4nm,0.7s,mb4.3,baz=91,slow=10,SNR=42						
MKAR				LR	LR	04 13 47.8	
	comp=Z,74nm,18.7s,MS3.6,baz=360,slow=38						
KURK	**Kurchatov**	**43.95**	**310**	*e*P	**P**	**03 55 40.7**	**-0.2**
	comp=Z,11nm,0.8s,mb4.6						
KURK	**Kurchatov**	**43.95**	**310**	*e*P	**P**	**03 55 40.7**	**-0.2**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
VOSK	**Vostochnaya**	**48.65**	**313**	P	**P**	**03 56 17.3**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
CHKZ	**Chkalovo**	**48.81**	**314**	*e*P	**P**	**03 56 18.4**	**-0.7**
	comp=Z,10.0nm,0.6s,mb5.0						
CHKZ	**Chkalovo**	**48.81**	**314**	*e*P	**P**	**03 56 18.4**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
BVA0	**Borovoye Array**	**48.98**	**314**	*i* P	**P**	**03 56 20.2**	**-0.2**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
BRVK	**Borovoye**	**49.04**	**314**	*e*P	**P**	**03 56 20.9**	**-0.1**
	comp=Z,2.4nm,0.6s,mb4.4						
BRVK	**Borovoye**	**49.04**	**314**	*e*P	**P**	**03 56 20.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KKAR	**Karatay Array**	**50.29**	**301**	*i* P	**P**	**03 56 31.0**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
KDAK	**Kodiak Island**	**52.92**	**40**	P	**P**	**03 56 50.0**	**-0.3**
	comp=Z,8.0nm,0.8s,mb4.7,baz=218,slow=3.1,SNR=4.9						
KDAK	**Kodiak Island**	**52.92**	**40**	P	**P**	**03 56 50.0**	**-0.3**
WRA	**Warramunga Arr**	**53.44**	**181**	P	**P**	**03 56 53.8**	**-0.8**
	comp=Z,4.4nm,0.6s,mb4.5,baz=357,slow=7.9,SNR=13						
WRA				pP	pP	03 57 06.5	-2.0
	comp=Z,7.7nm,0.7s,baz=357,slow=7.7,SNR=19						
ILAR	**Eielson Array**	**54.95**	**31**	P	**P**	**03 57 04.5**	**-0.5**
	comp=Z,1.3nm,0.7s,mb4.1,baz=263,slow=5.8,SNR=23						
ILAR				pP	pP	03 57 18.1	-0.9
	comp=Z,0.6nm,0.5s,baz=266,slow=5.8,SNR=4.1						
AB31	**Akbulak array**	**56.07**	**310**	*i* P	**P**	**03 57 12.7**	**-0.6**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
INK	**Inuvik**	**59.58**	**26**	P	**P**	**03 57 37.5**	**-0.2**
	comp=Z,3.0nm,0.6s,mb4.5,baz=291,slow=5.4,SNR=34						
INK				pP	pP	03 57 50.8	-1.0
	comp=Z,1.0nm,0.5s,baz=317,slow=6.7,SNR=2.6						
ARCES	**ARCESS Array B**	**65.16**	**339**	P	**P**	**03 58 13.9**	**-0.8**
	comp=Z,2.3nm,0.7s,mb4.3,baz=40,slow=9.5,SNR=5.5						
ARCES				LR	LR	04 29 17.2	
	comp=Z,72nm,18.6s,MS3.9,baz=121,slow=38						
STKA	**Stephens Creek**	**65.61**	**174**	P	**P**	**03 58 16.9**	**-1.4**
	comp=Z,2.5nm,1.0s,mb4.2,baz=280,slow=17,SNR=2.8						
STKA				pP	pP	03 58 30.3	-2.2
	comp=Z,2.1nm,0.7s,baz=342,slow=11,SNR=2.9						
YKA	**Yellowknife Ar**	**69.14**	**28**	P	**P**	**03 58 39.8**	**0.0**
	comp=Z,4.1nm,0.9s,mb4.3,baz=298,slow=5.9,SNR=5.2						
YKA	**Yellowknife Ar**	**69.14**	**28**	P	**P**	**03 58 39.9**	**+0.1**
FINES	**FINESS Array B**	**69.19**	**331**	P	**P**	**03 58 39.3**	**-0.8**
	comp=Z,3.0nm,0.7s,mb4.3,baz=69,slow=6.5,SNR=14						
FINES				pP	pP	03 58 52.3	-2.2
	comp=Z,3.9nm,1.0s,baz=56,slow=6.9,SNR=2.4						
FINES				LR	LR	04 33 21.6	
	comp=Z,44nm,19.9s,MS3.7,baz=157,slow=40						
AKASG	**Malin Array Be**	**73.58**	**320**	P	**P**	**03 59 05.7**	**-0.8**
	comp=Z,2.6nm,0.6s,mb4.4,baz=53,slow=6.1,SNR=14						
NB2	**NORSAR Subarra**	**75.06**	**335**	P	**P**	**03 59 14.8**	**-0.1**
	comp=Z,4.2nm,1.2s,mb4.2,baz=44,slow=5.8						
NOA	**NORSAR Array B**	**75.06**	**335**	P	**P**	**03 59 13.7**	**-1.2**
	comp=Z,0.9nm,0.6s,mb3.9,baz=45,slow=5.1,SNR=3.8						
NOA				LR	LR	04 31 56.0	
	comp=Z,25nm,18.6s,MS3.5,baz=210,slow=35						
NAO	**NORSAR Subarra**	**75.34**	**335**	P	**P**	**03 59 14.8**	**-1.7**
	comp=Z,4.2nm,1.2s,mb4.2						
NAO	**NORSAR Subarra**	**75.34**	**335**	P	**P**	**03 59 14.8**	**-1.7**
NAO				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BR131	**Keskin Array S**	**76.99**	**309**	*e*P	**P**	**03 59 26.9**	**+0.6**
	comp=Z,3.5nm,0.8s,mb4.3						
BRTR	**Keskin Array B**	**76.99**	**309**	P	**P**	**03 59 26.6**	**+0.2**
	comp=Z,4.0nm,0.8s,mb4.4,baz=98,slow=5.1,SNR=20						
NVAR	**Mina Array Bea**	**81.05**	**50**	P	**P**	**03 59 50.1**	**+1.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=307,slow=4.3,SNR=4.5						
CLL	**Collm**	**81.17**	**327**	⇑P	**P**	**03 59 49.1**	**+0.4**
	comp=Z,logA/T=1.0,mb4.7						
CLL	**Collm**	**81.17**	**327**	⇑*i*P	**P**	**03 59 49.1**	**+0.4**
	comp=Z,10.0nm,1.0s,mb4.7						
CLL	**Collm**	**81.17**	**327**	⇑*i*P	**P**	**03 59 49.1**	**+0.4**
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
GERES	**GERESS Array B**	**82.58**	**325**	P	**P**	**03 59 56.5**	**+0.5**
	comp=Z,1.5nm,0.9s,mb4.0,baz=56,slow=4.8,SNR=9.5						
GERES				LR	LR	04 38 48.5	
	comp=Z,88nm,20.7s,MS4.1,baz=100,slow=37						
PDAR	**Pinedale Array**	**83.58**	**42**	P	**P**	**04 00 01.9**	**+0.7**
	comp=Z,0.7nm,0.8s,mb3.8,baz=315,slow=2.1,SNR=5.4						
TXAR	**Lajitas Array**	**96.17**	**49**	P	**P**	**04 01 02.5**	**+1.6**
	comp=Z,0.3nm,0.7s,mb3.9,baz=293,slow=2.4,SNR=4.6						

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*IDC **01** 03:47:50.4±1.6,7.55S×130.18E,mb3.9/2,mb1 4.0/3,mb1mx3.7/11,mbtmp3.9/3,ML4.0/1,MS3.3/1,Ms1 3.3/1,ms1mx2.6/9,Error ellipse: s-maj=80.4km s-min=27.3km az=64.0*

ISC 01 03:47:53.0±1.4,**7.6S**±0.1×**130.4E**±0.2,**h33**^{km},**n8,**σ**1^{s}42**/6,**mb3.8**/2,**MS3.2**/1,**Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**5.49**	**159**	*e*P	Px	03 49 35.2	
	26nm,0.5s						
KAKA				*e*S	Sx	03 50 35.1	
FITZ	**Fitzroy Crossi**	**11.46**	**204**	*e*P	**P**	**03 50 37.5**	**+0.1**
	4.1nm,0.3s						
FITZ				*e*S	Sx	03 52 39.9	
WRA	**Warramunga Arr**	**12.88**	**163**	Pn	**P**	**03 50 55.3**	**-1.1**
	0.8nm,0.3s,baz=342,slow=14,SNR=30						
WRA				Sn	Sx	03 53 11.2	
	1.7nm,0.3s,baz=343,slow=23,SNR=9.8						
WB2	**Warramunga Arr**	**12.88**	**163**	*e*P	**P**	**03 50 55.4**	**-1.1**
WB2				*e*S	Sx	03 53 11.4	
ASPA	**Alice Springs**	**16.36**	**169**	*e*P	**P**	**03 51 42.9**	**+1.1**
ASPA				*e*S	Sx	03 54 37.0	
STKA	**Stephens Creek**	**26.34**	**158**	P	**P**	**03 53 29.4**	**+1.5**
	1.3nm,0.7s,mb3.6,baz=343,slow=11,SNR=4.7						
MJAR	**Matsushiro Arr**	**44.48**	**9**	LR	LR	04 14 08.4	
	comp=Z,32nm,19.5s,MS3.2,baz=190,slow=36						
MKAR	**Makanchi Array**	**68.92**	**327**	P	**P**	**03 58 56.4**	**-0.4**
	1.0nm,0.6s,mb3.9,baz=121,slow=7.9,SNR=9.5						

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*ISK **01** 03:55:31.2,38.17N×26.63E,h5^{km},MD3.1*
*ATH **01** 03:55:32.5,38.17N×26.63E,h39^{km}±12^{km},MD3.0/3*
*CSEM **01** 03:55:32.8±0.1,38.21N×26.70E,h10^{km},MD3.1,Error ellipse: s-maj=4.0km s-min=3.1km az=101.0*

ISC 01 03:55:32.1±0.8,**38.23N**±0.03×**26.59E**±0.05,**h3**^{km}±6^{km},**n15,**σ**0^{s}73**/23,**1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.13**	**3**	*i* P	**Pg**	**03 55 34.4**	**-0.4**
URLA				*i* S	**Sg**	**03 55 37.5**	**+0.9**
BLCB	**Balcova**	**0.39**	**66**	*i* PG	**Pg**	**03 55 39.5**	**-0.4**
SMG	**Samos**	**0.55**	**159**	⇑*i*PB	**Pg**	**03 55 43.2**	**+0.1**
SMG				*e*SB	**Sg**	**03 55 51.8**	**+1.3**
IZM	**Izmir**	**0.56**	**72**	*i* PG	**Pg**	**03 55 42.9**	**-0.3**
IZM				*i* SG	**Sg**	**03 55 51.5**	**+0.9**
KDAG	**Bornova**	**0.56**	**72**	*i* P	**Pg**	**03 55 41.9**	**-1.4**
KDAG				*i* S	**Sg**	**03 55 50.2**	**-0.6**
PRK	**Paraskevi**	**1.05**	**346**	*e*PB	**Pb**	**03 55 52.7**	**+0.2**
PRK				*e*SN	**Sn**	**03 56 08.5**	**-0.3**
AKS	**Akhisar**	**1.16**	**56**	PN	**Pn**	**03 55 54.4**	**-0.7**
AYDN	**Tasoluk**	**1.17**	**119**	*i* P	**Pb**	**03 55 54.6**	**+0.1**
AYDN				*i* S	**Sb**	**03 56 09.8**	**-0.1**
APE	**Apeiranthos**	**1.43**	**216**	*e*PN	**Pn**	**03 55 59.1**	**+0.1**
APE				*e*SN	**Sn**	**03 56 19.0**	**+0.5**
APE	**Apeiranthos**	**1.43**	**216**	*e*PN	**Pn**	**03 55 57.2**	**-1.8**
MANT	**Manisa**	**1.57**	**80**	*i* P	**Pn**	**03 56 01.5**	**+0.5**
MANT				*i* S	**Sb**	**03 56 22.8**	**+1.1**
EZN	**Ezine**	**1.61**	**353**	PN	**Pn**	**03 56 02.7**	**+1.1**
DAT	**Datca**	**1.69**	**152**	*e*PN	**Pn**	**03 56 02.0**	**-0.7**
YER	**Yerkesik**	**1.73**	**129**	*e*PN	**Pn**	**03 56 02.9**	**-0.4**
FETY	**Fethiye**	**2.54**	**128**	*e*PN	**Pn**	**03 56 14.5**	**-0.4**

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*ATH **01** 04:07:27.5,38.11N×27.26E,h53^{km},MD3.2/3*
*NEIC **01** 04:07:29.0,38.11N×26.69E,h3^{km},MD3.3(ISK),MD3.2(ATH),After ISK.*
*ISK **01** 04:07:30.0,38.11N×26.69E,h5^{km},MD3.3*
*CSEM **01** 04:07:30.4±0.1,38.12N×26.74E,h8^{km},MD3.3,Error ellipse: s-maj=3.2km s-min=1.9km az=116.0*

ISC 01 04:07:30.5±0.4,**38.14N**±0.02×**26.66E**±0.04,**h5**^{km},**n24,**σ**0^{s}87**/34,**1D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.23**	**347**	*i* P	**Pg**	**04 07 33.8**	**-1.4**
URLA				*i* S	**Sg**	**04 07 37.9**	**-0.3**
BLCB	**Balcova**	**0.39**	**51**	*i* PG	**Pg**	**04 07 37.9**	**-0.4**
SMG	**Samos**	**0.45**	**162**	*e*P	**Pg**	**04 07 39.8**	**+0.2**
IZM	**Izmir**	**0.54**	**61**	*i* PG	**Pg**	**04 07 40.8**	**-0.5**
IZM				*i* SG	**Sg**	**04 07 49.0**	**+0.5**
KDAG	**Bornova**	**0.54**	**61**	*i* P	**Pg**	**04 07 39.9**	**-1.6**
KDAG				*i* S	**Sg**	**04 07 47.7**	**-1.0**
AYDN	**Tasoluk**	**1.07**	**116**	*i* P	**Pb**	**04 07 51.7**	**+0.4**
AYDN				*i* S	**Sb**	**04 08 05.1**	**-0.4**
PRK	**Paraskevi**	**1.15**	**345**	⇓*i*P	**Pb**	**04 07 51.5**	**-1.0**
PRK				*e*S	**Sb**	**04 08 09.0**	**+1.5**
AKS	**Akhisar**	**1.17**	**50**	PN	**Pn**	**04 07 52.9**	**-0.6**
AYVA	**Ayvalik**	**1.17**	**1**	*i* P	**Pb**	**04 07 52.5**	**-0.3**
AYVA				*i* S	**Sb**	**04 08 07.8**	**-0.3**
BODT	**Bodrum**	**1.19**	**154**	PN	**Pn**	**04 07 52.4**	**-1.4**
MLSB	**Milas**	**1.22**	**133**	PN	**Pn**	**04 07 53.5**	**-0.7**
BDRM	**Kayabasi**	**1.24**	**150**	*i* P	**Pb**	**04 07 55.5**	**+1.4**
BDRM				*i* S	**Sb**	**04 08 09.9**	**-0.3**
APE	**Apeiranthos**	**1.40**	**220**	PN	**Pn**	**04 07 56.4**	**-0.3**
APE				SN	**Sn**	**04 08 15.9**	**+0.2**
APE	**Apeiranthos**	**1.40**	**220**	*e*P	**Pb**	**04 07 56.5**	**-0.2**
MANT	**Manisa**	**1.53**	**76**	*i* P	**Pn**	**04 07 59.8**	**+1.1**
MANT				*i* S	**Sb**	**04 08 19.4**	**+0.7**
YER	**Yerkesik**	**1.63**	**127**	PN	**Pn**	**04 07 59.6**	**-0.5**
EZN	**Ezine**	**1.70**	**351**	*e*PN	**Pn**	**04 08 01.7**	**+0.6**
BALB	**Balikesir**	**1.77**	**32**	*e*PN	**Pn**	**04 08 02.8**	**+0.7**
DNZL	**Cakiroluk**	**1.94**	**103**	*i* P	**Pn**	**04 07 58.8**	**-5.7**
DNZL				*i* S	**Sn**	**04 08 32.9**	**+3.4**
SANT	**Santorini**	**2.01**	**209**	*e*Pn	**Pn**	**04 08 08.8**	**+3.3**
DST	**Dursunbey**	**2.12**	**46**	*e*PN	**Pn**	**04 08 07.6**	**+0.5**
EDC	**Edincik**	**2.39**	**23**	*e*PN	**Pn**	**04 08 11.7**	**+0.7**
BNT	**Bandirma**	**2.42**	**23**	*e*PN	**Pn**	**04 08 11.8**	**+0.4**
ORLT	**Orhaneli**	**2.58**	**42**	*e*PN	**Pn**	**04 08 14.4**	**+0.8**

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*ISK **01** 04:15:31.7,38.27N×26.58E,h13^{km},MD3.1*
*ATH **01** 04:15:32.6,38.12N×26.46E,h35^{km}±29^{km},MD2.9/3*
*CSEM **01** 04:15:32.9±0.2,38.23N×26.69E,h14^{km}±1^{km},MD3.1,Error ellipse: s-maj=4.1km s-min=2.4km az=102.0*

ISC 01 04:15:32.2±0.7,**38.21N**±0.03×**26.59E**±0.05,**h4**^{km}±5^{km},**n15,**σ**0^{s}98**/25,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.15**	**3**	*i* P	**Pg**	**04 15 35.0**	**-0.3**
URLA				*i* S	**Sg**	**04 15 37.6**	**+0.4**
BLCB	**Balcova**	**0.40**	**64**	PG	**Pg**	**04 15 39.7**	**-0.5**
BLCB				SG	**Sg**	**04 15 45.7**	**+0.2**
SMG	**Samos**	**0.54**	**159**	*e*PN	**Pg**	**04 15 43.4**	**+0.4**
SMG				*e*SN	**Sg**	**04 15 52.0**	**+1.8**
IZM	**Izmir**	**0.56**	**71**	PG	**Pg**	**04 15 43.2**	**-0.2**
KDAG	**Bornova**	**0.57**	**70**	*i* P	**Pg**	**04 15 42.1**	**-1.5**
KDAG				*i* S	**Sg**	**04 15 50.6**	**-0.5**
PRK	**Paraskevi**	**1.06**	**347**	*e*PN	**Pn**	**04 15 53.6**	**-0.1**
PRK				*e*SN	**Sn**	**04 16 09.5**	**+0.5**
AYVA	**Ayvalik**	**1.10**	**4**	*i* P	**Pb**	**04 15 58.9**	**+5.5**
AYVA				*i* S	**Sb**	**04 16 09.8**	**+2.0**
AYDN	**Tasoluk**	**1.16**	**118**	*i* P	**Pb**	**04 15 54.8**	**+0.3**
AYDN				*i* S	**Sb**	**04 16 09.9**	**+0.2**
AKS	**Akhisar**	**1.17**	**55**	*e*PN	**Pn**	**04 15 53.8**	**-1.4**
AKS				*e*SN	**Sn**	**04 16 10.3**	**-1.5**
BODT	**Bodrum**	**1.28**	**153**	*e*PN	**Pn**	**04 15 56.6**	**-0.3**
MLSB	**Milas**	**1.31**	**134**	*e*PN	**Pn**	**04 15 56.8**	**-0.5**
APE	**Apeiranthos**	**1.42**	**217**	*e*PN	**Pn**	**04 15 58.3**	**-0.5**
APE				*e*SN	**Sn**	**04 16 17.8**	**-0.3**
APE	**Apeiranthos**	**1.42**	**217**	*e*PN	**Pn**	**04 15 56.0**	**-2.8**
MANT	**Manisa**	**1.57**	**79**	*i* P	**Pn**	**04 16 03.2**	**+2.2**
MANT				*i* S	**Sb**	**04 16 22.7**	**+1.0**
YER	**Yerkesik**	**1.72**	**128**	*e*PN	**Pn**	**04 16 02.8**	**-0.4**

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*MAN **01** 04:18:33.8,17.98N×120.39E,h29^{km},mb4.8,ML3.7,MS3.7*
MAN PASUQUIN ILOCOS NORTE - INTENSITY III SANTA ILOCOS SUR - INTENSITY II STO. DOMINGO ILOCOS SUR - INTENSITY II.
*NEIC **01** 04:18:36.3±0.8,17.86N×120.75E,h91^{km}±9^{km},mb4.6/3,Error ellipse: s-maj=10.6km s-min=6.5km az=83.0*
NEIC Felt [II PIVS] at Pasuquin, Santo Domingo and Sinait.
*MOS **01** 04:18:37.7±0.7,17.70N×120.60E,h120^{km},mb4.3/2,Error ellipse: s-maj=29.7km s-min=12.1km az=120.3*
*IDC **01** 04:18:38.3±1.9,17.81N×120.80E,h110^{km}±19^{km},mb3.6/11,mb1 3.7/14,mb1mx3.7/21,mbtmp4.0/14,MS3.4/6,Ms1 3.5/6,ms1mx3.1/21,Error ellipse: s-maj=27.6km s-min=12.5km az=80.0*
*BJI **01** 04:18:44.3,18.63N×120.12E,h90^{km},mB4.4,mb4.4,Ms4.1,Msz3.7*

ISC 01 04:18:34.1±0.3,**17.98N**±0.02×**120.55E**±0.05,**h66**^{km}±4^{km},**n63,**σ**1^{s}19**/69,**mb4.1**/19,**4C-2D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.35**	**11**	⇑*i*P	**P**	**04 18 44.5**	**-0.8**
PIP				*e*S	**S**	**04 18 52.9**	**-0.6**
ABRA	**Dolores**	**0.37**	**155**	*e*P	**P**	**04 18 44.4**	**-1.0**
ABRA				*e*S	**S**	**04 18 53.8**	**0.0**
APYP	**Conner**	**0.67**	**100**	*e*P	**P**	**04 18 48.6**	**+0.1**
CVP	**Callao Caves**	**1.24**	**103**	*i* P	**P**	**04 18 56.0**	**+0.1**
SGCP	**Mt. Cagua**	**1.45**	**79**	*e*P	**P**	**04 18 59.7**	**+1.0**
BCPH	**Baguio City Da**	**1.59**	**179**	⇑*i*P	**P**	**04 18 59.1**	**-1.6**
BCPH				*i* S	**S**	**04 19 19.2**	**-1.2**
CAUP	**Cauayan**	**1.59**	**130**	*e*P	**P**	**04 19 03.0**	**+2.3**
BOLP	**Bolinao**	**1.70**	**201**	*e*P	**P**	**04 19 01.3**	**-0.9**
BOLP				*e*S	**S**	**04 19 25.6**	**+2.6**
SCZP	**Santa Cruz**	**2.28**	**196**	*e*P	**P**	**04 19 09.2**	**-1.0**
BALP	**Baler**	**2.44**	**156**	*e*P	**P**	**04 19 13.6**	**+1.2**
PCPH	**Palayan**	**2.46**	**168**	*e*P	**P**	**04 19 13.3**	**+0.5**
PCPH				*e*S	**S**	**04 19 45.1**	**+3.3**
BBP	**Basco**	**2.79**	**28**	*e*P	**P**	**04 19 17.9**	**+0.5**
POLP	**Polilio Island**	**3.50**	**157**	*e*P	**P**	**04 19 27.3**	**-0.1**
TGY	**Tagaytay City**	**3.88**	**174**	P	**P**	**04 19 33.2**	**+0.5**
	79nm,0.3s,baz=24,slow=4.5,SNR=12						
TGY				S	**S**	**04 20 17.7**	**+0.4**
	98nm,0.3s,baz=180,slow=9.6,SNR=3.8						
TGY	**Tagaytay City**	**3.88**	**174**	⇓*e*P	**P**	**04 19 34.1**	**+1.4**
LUBP	**Lubang**	**4.23**	**184**	*e*P	**P**	**04 19 39.0**	**+1.3**
GQP	**Guinayangan**	**4.45**	**155**	⇓*e*P	**P**	**04 19 40.3**	**-0.3**
GQP				*e*S	**S**	**04 20 27.5**	**-4.1**
BOAC	**Boac**	**4.67**	**164**	*e*P	**P**	**04 19 47.3**	**+3.6**
SJMP	**San Jose**	**5.52**	**174**	*e*P	**P**	**04 19 56.6**	**+1.2**
PVCP	**Virac**	**5.57**	**141**	*e*P	**P**	**04 19 55.9**	**-0.3**
BUSP	**Coron**	**5.95**	**183**	*e*P	**P**	**04 20 01.8**	**+0.3**
NACB	**Ninganchiao**	**6.24**	**9**	*e*Pn	**P**	**04 20 05.3**	**-0.2**
NACB				*e*Sn	**S**	**04 21 14.6**	**-1.5**
YHNB	**Yeheng**	**6.70**	**6**	*e*Pn	**P**	**04 20 13.6**	**+1.6**
YHNB				*e*Sn	**S**	**04 21 27.4**	**-0.2**
ENPP	**El Nido**	**6.82**	**189**	*e*P	**P**	**04 20 11.2**	**-2.4**
GZH	**Guangzhou**	**8.45**	**308**	P	**P**	**04 20 32.7**	**-3.3**
GZH				Smax			
	comp=N,60nm,0.6s						
GZH				Smax			
	comp=E,110nm,0.6s						
JOW	**Kunigami**	**11.34**	**38**	P	**P**	**04 21 15.4**	**+0.1**
	comp=E,1.6nm,0.3s,baz=183,slow=17,SNR=3.1						
JOW				LR	LR	04 25 28.9	
	comp=E,307nm,21.7s,baz=143,slow=36						
JNU	**Nakatsue**	**17.70**	**30**	P	**P**	**04 22 36.8**	**-0.9**
	comp=E,0.4nm,0.3s,baz=222,slow=14,SNR=2.4						
JNU				LR	LR	04 29 35.3	
	comp=E,101nm,20.7s,baz=281,slow=37						
KMI	**Kunming**	**18.02**	**296**	P	**P**	**04 22 41.0**	**-0.5**
KMI				S	**S**	**04 25 58.2**	**+1.2**
KMI				LR	LR		
	comp=N,230nm,14.3s						
KMI				LR	LR		
	comp=E,310nm,14.3s						
KMI				LR	LR		
	comp=Z,310nm,20.4s						
KSM	**Kuching**	**19.24**	**213**	*e*P	**P**	**04 22 54.0**	**-1.9**
CD2	**Chengdu**	**19.95**	**313**	P	**P**	**04 23 05.2**	**+1.9**
JHJ	**Hachijo jima 2**	**22.93**	**45**	LR	LR	04 30 36.4	
	comp=Z,128nm,20.1s,baz=304,slow=31						
LZH	**Lanzhou**	**23.32**	**324**	*e*P	**P**	**04 23 39.4**	**+2.5**
LZH				AP		04 23 55.1	
LZH				XP		04 24 03.8	
LZH				PP	PP	04 24 12.5	+2.5
LZH				XS		04 28 11.5	
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.3						
LZH				AMB	AMB		
	comp=Z,80nm,4.3s						
LZH				LR	LR		
	comp=N,450nm,9.2s						
LZH				LR	LR		
	comp=Z,980nm,12.9s						
GUMO	**Guam**	**23.80**	**97**	LR	LR	04 31 04.2	
	comp=Z,106nm,20.7s,baz=274,slow=32						
HHC	**Hu-ho-hao-te**	**24.07**	**343**	*e*P	**P**	**04 23 46.2**	**+2.1**
HHC				AP		04 24 00.4	
HHC				PCS		04 31 07.5	
HHC				AMB	AMB		
	comp=Z,120nm,9.6s						
HHC				LR	LR		
	comp=N,130nm,16.8s						
HHC				LR	LR		
	comp=E,210nm,14.4s						
HHC				LR	LR		
	comp=Z,140nm,12.0s						
MJAR	**Matsushiro Arr**	**24.18**	**37**	LR	LR	04 34 24.1	
	comp=Z,60nm,19.1s,baz=260,slow=39						
LSA	**Lhasa**	**29.23**	**299**	*e*P	**P**	**04 24 32.9**	**+1.1**
	comp=Z,14nm,0.9s,mb4.6						
SONM	**Songino Array**	**31.95**	**342**	P	**P**	**04 24 56.4**	**+0.8**
	comp=Z,0.4nm,0.6s,mb3.3,baz=156,slow=10,SNR=4.9						
KLR	**Kul’dur**	**32.46**	**14**	*e*P	**P**	**04 25 06.8**	**+6.7**
JIRN	**Jiri**	**33.01**	**293**	*e*P	**P**	**04 25 05.4**	**+0.3**
	comp=Z,18nm,0.8s,mb4.9						
GUN	**Gumba**	**33.32**	**294**	*e*P	**P**	**04 25 08.1**	**+0.3**
	comp=Z,37nm,0.9s,mb5.2						
PKI	**Pulchoki**	**33.68**	**293**	*e*P	**P**	**04 25 10.4**	**-0.5**
KKN	**Kakani**	**33.82**	**293**	*e*P	**P**	**04 25 11.8**	**-0.3**
DMN	**Daman**	**33.95**	**293**	*e*P	**P**	**04 25 13.1**	**-0.1**
GKN	**Gorkha**	**34.42**	**293**	*e*P	**P**	**04 25 16.7**	**-0.5**
ZAK	**Zakamensk**	**35.16**	**341**	*e*P	**P**	**04 25 23.9**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
KOLN	**Koldanda**	**35.29**	**293**	*e*P	**P**	**04 25 24.0**	**-0.7**
	comp=Z,11nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**36.20**	**172**	P	**P**	**04 25 28.1**	**-4.4**
	comp=Z,3.1nm,0.6s,mb4.4,baz=354,slow=8.2,SNR=7.6						
WMQ	**Urumqi**	**37.77**	**320**	⇑P	**P**	**04 25 49.2**	**+3.8**
WMQ				AP	pP	04 26 05.7	+3.8
WMQ				XP	sP	04 26 14.4	+4.5
WMQ				PCP	PcP	04 28 05.2	+3.7
WMQ				AMB	AMB		
	comp=Z,50nm,3.2s						
WMQ				LR	LR		
	comp=N,40nm,14.5s						
WMQ				LR	LR		
	comp=E,10.0nm,15.4s						
WMQ				LR	LR		
	comp=Z,40nm,20.3s						
WRA	**Warramunga Arr**	**40.05**	**160**	P	**P**	**04 26 00.1**	**-4.4**
	comp=Z,3.1nm,0.8s,mb4.2,baz=340,slow=9.3,SNR=20						
WB2	**Warramunga Arr**	**40.05**	**160**	*e*P	**P**	**04 26 01.0**	**-3.5**
MKAR	**Makanchi Array**	**42.57**	**321**	P	**P**	**04 26 25.7**	**+0.7**
	comp=Z,3.5nm,0.9s,mb4.1,baz=111,slow=9.2,SNR=21						
MKAR				PcP	PcP	04 28 15.0	-1.9
	comp=Z,1.1nm,0.7s,baz=90,slow=4.9,SNR=3.6						
ASPA	**Alice Springs**	**43.40**	**162**	*e*P	**P**	**04 26 29.5**	**-2.5**
KURK	**Kurchatov**	**46.61**	**324**	*e*P	**P**	**04 26 57.5**	**+0.3**
	comp=Z,5.1nm,0.9s,mb4.2						
KURK	**Kurchatov**	**46.61**	**324**	*e*P	**P**	**04 26 57.5**	**+0.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
BVAR	**Borovoye Array**	**52.20**	**324**	P	**P**	**04 27 40.5**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.7,baz=135,slow=8.4,SNR=4.0						
BVAR				PcP	PcP	04 28 49.6	-1.5
	comp=Z,0.8nm,0.5s,baz=125,slow=3.5,SNR=3.7						
STKA	**Stephens Creek**	**53.53**	**158**	P	**P**	**04 27 46.3**	**-4.0**
	comp=Z,1.7nm,0.5s,mb4.4,baz=328,slow=21,SNR=4.2						
TIXI	**Tiksi**	**53.89**	**3**	⇑*i*P	**P**	**04 28 04.1**	**+12**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
ILAR	**Eielson Array**	**74.99**	**26**	P	**P**	**04 30 09.2**	**-0.4**
	comp=Z,0.4nm,0.6s,mb3.3,baz=281,slow=4.9,SNR=4.5						
BRTR	**Keskin Array B**	**76.42**	**308**	P	**P**	**04 30 17.7**	**-0.6**
	comp=Z,0.5nm,0.5s,mb3.5,baz=170,slow=5.0,SNR=4.4						
FINES	**FINESS Array B**	**76.50**	**330**	P	**P**	**04 30 16.5**	**-1.8**
	comp=Z,2.4nm,1.0s,mb3.9,baz=18,slow=6.0,SNR=3.7						
AKASG	**Malin Array Be**	**77.12**	**319**	P	**P**	**04 30 19.9**	**-2.1**
	comp=Z,0.9nm,0.6s,mb3.7,baz=64,slow=5.8,SNR=5.5						
NOA	**NORSAR Array B**	**83.42**	**332**	LR	LR	05 12 33.1	
	comp=Z,26nm,19.2s,baz=290,slow=39						
GERES	**GERESS Array B**	**87.24**	**321**	P	**P**	**04 31 14.0**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.4,baz=72,slow=4.2,SNR=4.6						

MAN 01 04:22:50.8,13.48N×120.99E,h11^{km},mb4.3,ML3.1,MS2.8,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.77**	**289**	*e*P	Pb	04 23 05.5	-0.1
LUBP				*e*S	Sb	04 23 19.1	+3.4
BOAC	**Boac**	**0.83**	**91**	*e*P	Pb	04 23 02.8	-3.9
SJMP	**San Jose**	**1.02**	**173**	*e*P	Pb	04 23 10.2	+0.3
SJMP				*e*S	Sb	04 23 22.5	-0.7
OTRP	**Odiongan**	**1.50**	**138**	*e*P	Pn	04 23 16.3	-1.5
POLP	**Polilio Island**	**1.54**	**37**	*e*P	Pn	04 23 17.8	-0.6
BUSP	**Coron**	**1.66**	**208**	*e*P	Pn	04 23 19.2	-0.9

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*MAN **01** 04:55:26.4,11.82N×126.15E,h3^{km},mb4.9,ML3.8,MS3.8*
*IDC **01** 04:55:26.4±1.2,11.72N×126.06E,mb4.1/9,mb1 4.2/9,mb1mx4.0/18,mbtmp4.1/9,MS3.5/2,Ms1 3.6/2,ms1mx2.7/21,Error ellipse: s-maj=111.9km s-min=16.6km az=71.0*
*NEIC **01** 04:55:28.1±0.6,11.64N×125.91E,h10^{km},mb4.6/1,Error ellipse: s-maj=23.6km s-min=8.2km az=62.0*

ISC 01 04:55:29.1±0.6,**11.82N**±0.04×**126.21E**±0.05,**h33**^{km},**n31,**σ**0^{s}94**/37,**mb4.2**/14,**MS3.5**/2,**1D,Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.79**	**254**	*e*P	**P**	**04 55 40.6**	**-3.1**
BESP				*e*S	**S**	**04 55 49.8**	**-4.6**
PLP	**Palo**	**1.37**	**242**	*i* P	**P**	**04 55 48.7**	**-3.3**
PLP				*i* S	**S**	**04 56 03.0**	**-6.3**
CNP	**Catarman**	**1.66**	**295**	*e*P	**P**	**04 55 56.6**	**+0.4**
CNP				*e*S	**S**	**04 56 16.6**	**+0.1**
MSLP	**Maasin**	**2.14**	**218**	*e*P	**P**	**04 56 03.5**	**+0.5**
LLP	**Lapu-Lapu**	**2.66**	**236**	*e*P	**P**	**04 56 09.5**	**-1.0**
LLP				*e*S	**S**	**04 56 42.9**	**+0.9**

PVCP	Virac	2.67	312	*e*P	P	04 56 09.9	-0.8
BUTP	Butuan	2.89	192	*e*P	P	04 56 14.4	+0.5
BUTP				*e*S	S	04 56 48.7	+0.8
TBP	Tagbilaran	3.13	228	*e*P	P	04 56 16.9	-0.3
TBP				*e*S	S	04 56 57.6	+3.7
RCP	Roxas	3.40	266	⇓*e*P	P	04 56 21.2	+0.1
GUIM	Jordan	3.75	252	*e*P	P	04 56 24.8	-1.1
GUIM				*e*S	S	04 57 10.6	+1.1
BUKP	Musuan	4.08	196	*e*P	P	04 56 30.9	+0.2
KAKA	Kakadu	25.15	166	*e*P	P	05 01 11.6	+19
	4.8nm,0.4s,mb4.4						
FITZ	Fitzroy Crossi	29.74	181	P	P	05 01 33.7	-1.1
	5.7nm,0.8s,mb4.4,baz=50,slow=7.9,SNR=4.8						
FITZ				LR	LR	05 14 23.5	
	comp=Z,106nm,18.9s,MS3.5,baz=96,slow=38						
WRA	Warramunga Arr	32.56	166	P	P	05 01 58.2	-1.5
	0.2nm,0.6s,mb3.3,baz=350,slow=9.3,SNR=4.6						
SONM	Songino Array	39.55	339	P	P	05 02 59.4	+0.8
	0.4nm,0.7s,mb3.2,baz=157,slow=11,SNR=3.7						
JIRN	Jiri	40.62	299	*e*P	P	05 03 07.6	-0.1
	9.1nm,0.4s,mb4.8						
GUN	Gumba	40.95	299	*e*P	P	05 03 10.2	-0.2
	9.0nm,0.4s,mb4.8						
PKI	Pulchoki	41.27	298	*e*P	P	05 03 12.2	-0.8
KKN	Kakani	41.43	299	*e*P	P	05 03 14.4	0.0
DMN	Daman	41.54	298	*e*P	P	05 03 15.1	-0.2
GKN	Gorkha	42.03	299	*e*P	P	05 03 18.6	-0.8
	2.8nm,0.2s,mb4.5						
KOLN	Koldanda	42.87	298	*e*P	P	05 03 25.7	-0.6
STKA	Stephens Creek	45.88	162	P	P	05 03 51.2	+0.8
	2.3nm,0.7s,mb4.2,baz=335,slow=4.8,SNR=8.8						
STKA	Stephens Creek	45.88	162	*e*P	P	05 03 50.4	0.0
MKAR	Makanchi Array	50.77	322	P	P	05 04 29.2	+1.1
	3.8nm,0.9s,mb4.3,baz=114,slow=8.5,SNR=21						
KURK	Kurchatov	54.77	325	*e*P	P	05 04 58.2	+0.4
	7.3nm,1.0s,mb4.7						
BVAR	Borovoye Array	60.37	325	P	P	05 05 37.8	+0.5
	1.2nm,0.7s,mb4.1,baz=108,slow=4.7,SNR=4.4						
ARCES	ARCESS Array B	82.73	340	P	P	05 07 52.4	+1.8
	4.5nm,0.9s,mb4.5,baz=90,slow=6.1,SNR=4.5						
FINES	FINESS Array B	84.50	332	P	P	05 08 00.9	+1.3
	2.1nm,0.8s,mb4.3,baz=315,slow=2.7,SNR=4.4						
AKASG	Malin Array Be	85.33	321	P	P	05 08 03.7	-0.3
	0.3nm,0.4s,mb3.8,baz=66,slow=5.0,SNR=6.0						
NOA	NORSAR Array B	91.35	334	LR	LR	05 55 40.8	
	comp=Z,20nm,21.0s,MS3.5,baz=30,slow=40						

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*ISK **01** 04:57:06.8, 38.02N×26.71E, h15^{km}, MD3.3*
*ATH **01** 04:57:06.3, 38.08N×26.49E, h29^{km}±5^{km}, MD3.1/3*
*NEIC **01** 04:57:06.0, 38.03N×26.70E, h14^{km}, MD3.3(ISK), MD3.1(ATH), After ISK.*
*CSEM **01** 04:57:07.2±0.1, 38.11N×26.72E, h25^{km}, MD3.3, Error ellipse: s-maj=2.3km s-min=1.9km az=85.0*
ISC 01 04:57:05.6±0.8**, 38.10N**±0.03×**26.53E**±0.04**, h3**^{km}±5^{km}**, n25, σ1^{s}14**/35**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.27	11	*i* P	Pg	04 57 11.2	+0.2
URLA				*i* S	Sg	04 57 15.6	+1.0
SMG	Samos	0.46	148	*e*PB	Pb	04 57 16.5	+0.7
SMG				*e*SB	Sb	04 57 23.6	+0.9
BLCB	Balcova	0.50	54	*i* PG	Pg	04 57 16.1	+0.6
IZM	Izmir	0.65	62	*i* PG	Pg	04 57 18.6	0.0
IZM				*i* SG	Sg	04 57 27.3	0.0
KDAG	Bornova	0.66	62	*i* P	Pg	04 57 17.8	-0.9
KDAG				*i* S	Sg	04 57 27.9	+0.4
AYDN	Tasoluk	1.15	112	*i* P	Pb	04 57 28.8	+1.0
AYDN				*i* S	Sb	04 57 43.0	+0.1
PRK	Paraskevi	1.17	350	*e*PN	Pn	04 57 28.5	-0.2
PRK				*e*SN	Sn	04 57 44.5	-0.8
BODT	Bodrum	1.20	149	PG	Pg	04 57 28.1	-1.5
AYVA	Ayvalik	1.22	6	*i* P	Pb	04 57 27.6	-1.3
AYVA				*i* S	Sb	04 57 46.9	+2.0
BDRM	Kayabasi	1.26	145	*i* P	Pb	04 57 31.6	+2.1
BDRM				*i* S	Sb	04 57 47.8	+1.8
MLSB	Milas	1.27	129	PN	Pn	04 57 28.2	-2.0
AKS	Akhisar	1.27	52	PN	Pn	04 57 30.2	0.0
APE	Apeiranthos	1.30	218	PN	Pn	04 57 31.5	+0.9
APE				SN	Sn	04 57 50.0	+1.4
APE	Apeiranthos	1.30	218	*e*PN	Pn	04 57 30.0	-0.6
DAT	Datca	1.60	148	*e*PN	Pn	04 57 33.2	-1.7
MANT	Manisa	1.64	75	*i* P	Pn	04 57 37.0	+1.5
MANT				*i* S	Sb	04 57 57.0	-0.2
YER	Yerkesik	1.69	124	*e*PN	Pn	04 57 34.6	-1.6
EZN	Ezine	1.74	355	*e*PN	Pn	04 57 38.4	+1.6
BALB	Balikesir	1.87	34	*e*PN	Pn	04 57 39.0	+0.3
LIA	Limnos Island	2.08	330	*e*PN	Pn	04 57 41.3	-0.5
DALT	Dalyan (Mudla)	2.14	128	*e*PN	Pn	04 57 40.6	-2.0
DST	Dursunbey	2.23	47	*e*PN	Pn	04 57 43.5	-0.4
FETY	Fethiye	2.50	125	*e*PN	Pn	04 57 46.3	-1.5
ORLT	Orhaneli	2.68	43	*e*PN	Pn	04 57 50.0	-0.3
RDO	Rodhopi	3.14	346	*e*PN	Pn	04 57 55.9	-1.0

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*NIED **01** 04:57:00, 33.80N×135.10E, h50^{km}, Mw3.6 Best double couple: $M_0$2.41×10^{14} NP1:ϕ_s241°, δ77°, λ46°. NP2:ϕ_s138°, δ45°, λ162°.*
*JMA **01** 04:57:26.9, 33.83N×135.09E, h44^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1:ϕ_s148°, δ40°, λ-178°. NP2:ϕ_s56°, δ89°, λ-50°. Principal axes: T Plg32°, Azm114°; N Plg40°, Azm235°; P Plg34°, Azm359°;*
JMA Felt II J1.
ISC 01 04:57:26.5±0.9**, 33.83N**±0.05×**135.07E**±0.04**, h46**^{km}±9^{km}**, n10, σ0^{s}31**/20**, 5C-4D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
JWM	Minabe	0.24	86	⇓P	P	04 57 34.8	+0.1
JWM				S	S	04 57 40.2	-0.2
JAI	Aioi	0.52	266	⇑P	P	04 57 38.1	+0.4
JAI				S	S	04 57 45.9	+0.1
JWY	Kouya	0.58	48	⇓P	P	04 57 38.9	+0.4
JWY				S	S	04 57 47.1	-0.1
JAJ2	Tsuna	0.61	345	⇑P	P	04 57 39.3	+0.4
JAJ2				S	S	04 57 48.3	+0.4
JWZ	Kozaga	0.61	119	⇑P	P	04 57 38.9	-0.1
JWZ				S	S	04 57 47.8	-0.2
JHE	Heguri	0.96	32	⇓P	P	04 57 43.9	+0.1
JHE				S	S	04 57 56.3	-0.3
JMN	Monobe	1.00	264	⇑P	P	04 57 44.4	+0.1
JMN				S	S	04 57 56.9	-0.6
JJS	Sakaide	1.09	300	⇑P	P	04 57 45.6	+0.1
JJS				S	S	04 57 59.2	-0.5
JKS	Kasai	1.16	351	⇓P	P	04 57 46.8	+0.3
JKS				S	S	04 58 01.1	-0.4
MAT	Matsushiro	3.73	43	P	P	04 58 23.1	+0.1
MAT				*e*S	S	04 59 06.0	-0.2

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*NEIC **01** 05:11:42.1, 58.26N×151.54W, h5^{km}, ML3.7(PMR), ML3.6(AEIC), After AEIC.*
*IDC **01** 05:11:45.9±5.1, 58.51N×151.75W, h40^{km}±42^{km}, mb3.6/11, mb1 3.8/15, mb1mx3.7/26, mbtmp3.8/15, ML3.6/4, Error ellipse: s-maj=38.8km s-min=14.6km az=51.0*
ISC 01 05:11:39.8±1.1**, 58.25N**±0.03×**151.51W**±0.05**, h12**^{km}±8^{km}**, n73, σ1^{s}01**/81**, mb3.8**/11**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
SYI	Shuyak Island	0.59	308	P	Pg	05 11 51.0	-0.8
SYI				S	Sg	05 11 58.2	-1.4
KDAK	Kodiak Island	0.74	231	P	Pb	05 11 54.2	+0.1
	110nm,0.3s,baz=39,slow=14,SNR=2285						
KDAK				S	Sb	05 12 03.4	-0.5
	254nm,0.3s,baz=294,slow=20,SNR=26						
KDAK	Kodiak Island	0.74	231	P	Pb	05 11 54.2	+0.1
KDAK				S	Sb	05 12 03.1	-0.8
XLV	Seldovia	1.22	355	P	Pb	05 12 03.1	+0.8
XLV				S	Sb	05 12 19.1	+1.4
CNPM	China Poot	1.29	6	P	Pb	05 12 04.7	+1.2
HOM	Homer	1.42	357	P	Pn	05 12 07.3	+1.8
AUI	Augustine Isla	1.48	318	P	Pn	05 12 06.4	0.0
AUI				S	Sb	05 12 26.1	+0.8
AUP	Augustine Pinn	1.50	319	P	Pn	05 12 06.9	+0.3
AGU	Augustine-Summ	1.50	319	P	Pn	05 12 07.0	+0.3
AUL	Augustine Lava	1.52	319	P	Pn	05 12 07.7	+0.8
OPT	Oil Point	1.67	328	P	Pn	05 12 10.1	+1.0
KABR	Katmai Barrier	1.84	268	P	Pn	05 12 12.1	+0.6
INE	Iliamna NE	1.99	337	P	Pn	05 12 15.0	+1.4
ILW	Iliamna West	2.00	336	P	Pn	05 12 15.3	+1.4
MGLS	Mageik LS	2.02	271	P	Pn	05 12 13.8	-0.3
CAHL	Cahill	2.02	266	P	Pn	05 12 15.2	+1.1
SEW	Seward	2.14	29	P	Pn	05 12 16.4	+0.5
KJL	Kejulik	2.16	267	P	Pn	05 12 17.2	+1.1
REF	Redoubt East F	2.33	345	P	Pn	05 12 19.3	+0.8
REF				S	Sn	05 12 51.8	+4.4
SLKM	Skilak Lake	2.36	16	P	Pn	05 12 19.7	+0.7
MPA	Moose Pass	2.50	25	P	Pn	05 12 21.5	+0.5
NKA	Nikishka	2.51	3	P	Pn	05 12 23.7	+2.6
RC01	Rabbit Creek A	2.99	17	P	Pn	05 12 28.5	+0.5
HIN	Hinchinbrook I	3.35	48	P	Pn	05 12 33.6	+0.5
GLI	Glacier Island	3.46	39	P	Pn	05 12 34.3	-0.5
SVW2	Sparrevohn	3.53	326	P	Pn	05 12 35.4	-0.2
KNK	Knik Glacier	3.53	25	P	Pn	05 12 35.5	-0.1
PMR	Palmer	3.56	19	P	Pn	05 12 35.8	-0.3
FID	Port Fidalgo	3.59	43	P	Pn	05 12 35.8	-0.7
EYAK	Cordova Ski Ar	3.74	49	P	Pn	05 12 38.7	+0.1
GHO	Glory Hole Cre	3.77	19	P	Pn	05 12 39.4	+0.4
ANPK	Aniakchak Peak	3.83	251	P	Pn	05 12 40.2	+0.2
VLZ	Valdez	3.90	40	P	Pn	05 12 41.3	+0.3
VLZ				S	Sn	05 13 23.2	-4.0
SML	Sawmill	3.91	23	P	Pn	05 12 41.2	+0.2
DIV	Divide	4.10	43	P	Pn	05 12 43.9	+0.2
RAGM	Ragged Mountai	4.11	56	P	Pn	05 12 43.8	0.0
SCM	Sheep Creek Mo	4.16	28	P	Pn	05 12 45.1	+0.5
KLU	Klutina	4.30	39	P	Pn	05 12 46.7	+0.1
BMRM	Bremner River	4.44	49	P	Pn	05 12 48.4	-0.3
GLB	Gilahina Butte	5.03	47	P	Pn	05 12 56.8	-0.1
TT01	Tatalina	5.17	336	P	Pn	05 12 58.6	-0.4
DHY	Denali Highway	5.25	21	P	Pn	05 13 00.1	+0.1
TRF	Thorofare Moun	5.25	6	P	Pn	05 12 59.3	-0.8
KTH	Kantishna Hill	5.33	3	P	Pn	05 13 01.1	-0.1
BALM	Baldy	5.42	55	P	Pn	05 13 02.0	-0.4
PAX	Paxson	5.59	30	P	Pn	05 13 04.5	-0.3
MCK	McKinley	5.64	12	P	Pn	05 13 06.2	+0.6
CTGM	Chitina Glacie	5.84	58	P	Pn	05 13 08.7	+0.4
PNL	Peninsula	6.43	72	P	Pn	05 13 16.1	-0.5
WRH	Wood River Hil	6.46	13	P	Pn	05 13 16.2	-0.9
CCB	Clear Creek Bu	6.66	14	P	Pn	05 13 17.9	-2.1
COLA	College	6.87	13	P	Pn	05 13 21.8	-1.1
ILAR	Eielson Array	6.91	17	P	Pn	05 13 21.8	-1.6
	1.4nm,0.3s,baz=206,slow=13,SNR=76						
ILAR				S	Sn	05 14 37.9	-4.8
	0.9nm,0.3s,baz=203,slow=23,SNR=7.1						
IL1	Eielson Array	6.91	17	P	Pn	05 13 22.6	-0.7
MDM	Murphy Dome	6.91	12	P	Pn	05 13 22.8	-0.7
GCSA	Galena City Sc	7.01	341	P	Pn	05 13 24.8	0.0
IM3	Indian Mountai	7.83	353	P	Pn	05 13 35.3	-1.1
DAWY	Dawson	8.26	40	P	P	05 13 41.9	-0.4
DLBC	Dease Lake	11.28	80	P	P	05 14 23.9	+0.2
	0.3nm,0.3s,baz=264,slow=12,SNR=8.8						
INK	Inuvik	12.87	31	P	P	05 14 43.9	-1.1
	0.0nm,0.3s,baz=200,slow=12,SNR=3.3						
YKA	Yellowknife Ar	18.55	61	P	P	05 15 58.0	+0.1
	0.1nm,0.3s,baz=272,slow=9.7,SNR=3.2						
YBH	Yreka Blue Hor	24.54	120	P	P	05 17 04.7	+4.6
	1.4nm,0.8s,mb3.5,baz=270,slow=6.1,SNR=3.3						
NVAR	Mina Array Bea	29.21	118	P	P	05 17 45.4	+2.4
	0.1nm,0.3s,mb3.0,baz=314,slow=6.7,SNR=4.3						
PDAR	Pinedale Array	30.25	102	P	P	05 17 54.4	+2.1
	0.9nm,0.6s,mb3.7,baz=318,slow=5.5,SNR=8.9						
TXAR	Lajitas Array	43.65	110	P	P	05 19 47.8	+2.2
	0.5nm,0.8s,mb3.3,baz=321,slow=8.0,SNR=6.3						
SONM	Songino Array	56.46	308	P	P	05 21 21.7	-1.5
	2.6nm,0.8s,mb4.3,baz=56,slow=5.3,SNR=4.3						
NOA	NORSAR Array B	60.29	10	P	P	05 21 48.3	-1.5
	1.3nm,0.9s,mb4.0,baz=352,slow=6.6,SNR=3.2						
FINES	FINESS Array B	60.63	1	P	P	05 21 49.9	-2.3
	2.5nm,0.9s,mb4.3,slow=11,SNR=3.2						
HFS	Hagfors	61.39	8	P	P	05 21 55.5	-1.8
	1.0nm,0.6s,mb4.1,baz=346,slow=5.9,SNR=3.0						
BVAR	Borovoye Array	63.98	333	P	P	05 22 12.7	-1.8
	0.9nm,0.6s,mb4.0,baz=32,slow=5.8,SNR=4.4						
MKAR	Makanchi Array	66.29	323	P	P	05 22 27.5	-2.0
	0.2nm,0.5s,mb3.4,baz=27,slow=6.4,SNR=2.2						
AKASG	Malin Array Be	71.41	360	P	P	05 22 59.5	-1.6
	1.2nm,0.6s,mb4.0,baz=1.9,slow=6.0,SNR=5.0						
AKASG	Malin Array Be	71.41	360	P	P	05 22 59.5	-1.6

CASC 01 05:39:24.0±2.3**, 9.97N**×**86.29W, h13**^{km}±9^{km}**, MD3.7, ML3.3, 10C-7D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
VCR	Vista de Mar	0.67	76	⇑*i*P	Pb	05 39 36.9	-0.2
VCR				*e*S	Sb	05 39 47.6	+1.6
LIM1	Limonal	1.26	54	⇑*i*P	Pb	05 39 45.6	-1.5
LIM1				*e*S	Sb	05 40 03.6	+0.7
SSNN	San Juan del S	1.38	18	⇓*e*P	Pn	05 39 48.6	-0.5
SSNN				*e*S	Sb	05 40 08.1	+1.4
MADN	Villa Maderas	1.62	27	⇑*e*P	Pn	05 39 52.4	0.0
FORC	Fortuna	1.68	72	⇓*e*P	Pn	05 39 52.5	-0.8
CONN	Concepcion	1.72	22	⇑*e*P	Pn	05 39 53.5	-0.4
CGA2	Cerro Gallo 2	1.80	88	⇑*e*P	Pn	05 39 55.3	+0.2
CGA2				*e*S	Sn	05 40 18.4	+0.5
APON	Apoyo	1.95	7	*e*P	Pn	05 40 00.2	+3.0
APON				*e*S	Sn	05 40 23.7	+2.0
PRS1	Puriscal	1.95	89	*e*P	Pn	05 39 55.8	-1.5
PRS1				*e*S	Sn	05 40 22.0	+0.2
VPS2	Volcan Poas 2	2.04	84	⇑*e*P	Pn	05 39 58.3	-0.2
LAJ	Bijagual	2.14	93	⇓*e*P	Pn	05 39 53.0	-7.0
MGAN	Managua	2.17	1	*e*P	Pn	05 39 59.5	-0.8
MGAN				*e*S	Sn	05 40 25.9	-1.3
MGAN				*i*		05 40 27.9	
	comp=N,213nm,0.3s						
MGAN				*i*		05 40 28.3	
	comp=E,276nm,0.3s						
SJS	Escuela Geolog	2.21	90	*e*S	Sn	05 40 28.6	+0.3
COPN	Copaltepe	2.22	352	⇓*e*P	Pn	05 40 00.2	-0.9
LCR2	La Lucha 2	2.27	95	⇓*e*P	Pn	05 40 00.9	-0.8
LCR2				*e*S	Sn	05 40 30.6	+0.7
URSC	Urasca	2.48	93	⇑*e*P	Pn	05 40 04.9	+0.1
URSC				*e*S	Sn	05 40 34.8	-0.4
MIRN	Miramar	2.49	351	⇑*e*P	Pn	05 40 03.7	-1.2
LEON	Leon	2.50	346	⇓*e*P	Pn	05 40 03.9	-1.3
BUS	Buena Vista	2.53	99	⇓*i*P	Pn	05 40 04.7	-0.9
BUS				*e*S	Sn	05 40 37.0	+0.4
TEL3	Telica 3	2.65	348	⇑*e*P	Pn	05 40 06.1	-1.0
TEL3				*e*S	Sn	05 40 37.8	-1.6
TELN	Telica	2.67	349	*e*P	Pn	05 40 07.0	-0.5
CRIN	San Cristobal	2.82	345	⇑*e*P	Pn	05 40 08.5	-1.1
CRIN				*e*S	Sn	05 40 41.6	-2.1

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*BJI **01** 05:39:46.4, 41.62S×174.51E, h5^{km}, mb4.8, Ms4.7, Msz4.2*
*IDC **01** 05:39:50.8±1.4, 41.44S×174.01E, mb4.5/2, mb1 4.5/4, mb1mx4.1/10, mbtmp4.3/4, ML3.9/2, MS3.9/6, Ms1 3.9/6, ms1mx3.7/11, Error ellipse: s-maj=41.3km s-min=14.3km az=130.0*
*NEIC **01** 05:39:51.7, 41.64S×174.18E, h5^{km}, mb4.7/2, ML4.8(WEL), After WEL.*
NEIC Felt in the Marlborough-Wellington area.
*WEL **01** 05:39:51.8±0.1, 41.66S×174.19E, h5^{km}, ML4.9/55, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0*
WEL Felt from Wellington to Marlborough, maximum reported intensity MM 6.
ISC 01 05:39:51.2±0.4**, 41.73S**±0.03×**174.17E**±0.04**, h13**^{km}±3^{km}**, h11**^{km}±.2^{km}**:pP-P, n127, σ1^{s}25**/121**, mb4.6**/5**, MS4.0**/9**, 13C-11D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.04	118	⇓P	Pg	05 39 54.1	+0.4
CMWZ				S	Sg	05 39 57.3	+1.9
CMWZ	Cape Campbell	0.04	118	⇓P*	Pb	05 39 54.1	+0.6
CMWZ				SG	Sg	05 39 57.3	+1.9
BSWZ	Blackbirch Sta	0.22	274	⇑P	Pg	05 39 56.6	+0.4
BSWZ	Blackbirch Sta	0.22	274	⇑P*	Pb	05 39 56.6	+0.1
TUWZ	Tuamarina	0.34	331	⇓PG	Pg	05 39 57.9	-0.5
TCW	Tory Channel	0.52	9	⇑P	Pg	05 40 00.8	-1.1
TCW	Tory Channel	0.52	9	⇑PG	Pg	05 40 00.8	-1.1
SNZO	South Karori	0.58	44	P	Pb	05 40 02.4	-0.4
SNZO	South Karori	0.58	44	PG	Pg	05 40 02.4	-0.7
SNZO				SG	Sg	05 40 10.5	-0.5
BHW	Baring Head	0.62	59	⇓P	Pb	05 40 03.4	0.0
BHW	Baring Head	0.62	59	⇓PG	Pg	05 40 03.4	-0.4
WEL	Wellington	0.63	46	P	Pb	05 40 03.4	-0.2
WEL	Wellington	0.63	46	PG	Pg	05 40 03.4	-0.7
MRW	Makara Radio	0.64	39	⇑P	Pb	05 40 03.2	-0.6
MRW	Makara Radio	0.64	39	⇑PG	Pg	05 40 03.2	-1.0
NNZ	Nelson	0.78	311	P	Pb	05 40 05.9	-0.3
NNZ	Nelson	0.78	311	P*	Pb	05 40 05.9	-0.2
KHZ	Kahutara	0.83	214	⇓P	Pb	05 40 09.2	+2.2
KHZ	Kahutara	0.83	214	⇑PG	Pg	05 40 09.2	+1.2
MSWZ	Moikau Station	0.87	69	⇓P	Pb	05 40 08.4	+0.7
MSWZ	Moikau Station	0.87	69	⇓PG	Pg	05 40 08.4	-0.4
CAW	Cannon Point	0.92	48	P	Pb	05 40 08.2	-0.3
CAW	Cannon Point	0.92	48	PG	Pg	05 40 08.2	-1.5
DUWZ	D'Urville Isla	0.94	349	PG	Pg	05 40 08.3	-1.9
THZ	Tophouse	0.94	268	P	Pb	05 40 09.7	+0.7
THZ	Tophouse	0.94	268	P*	Pb	05 40 09.7	+0.7
PAWZ	Paruwai Farm	1.01	70	P	Pb	05 40 10.7	+0.7
PAWZ	Paruwai Farm	1.01	70	P*	Pb	05 40 10.7	+0.6
KIW	Kapiti Island	1.03	33	⇑P*	Pb	05 40 10.0	-0.5
MTW	Mount Morrison	1.16	61	⇓P	Pb	05 40 12.8	+0.2
MTW	Mount Morrison	1.16	61	⇓P*	Pb	05 40 12.9	+0.3
TRWZ	Traveller	1.19	74	⇓P*	Pb	05 40 13.2	0.0
MRZ	Mangatainoka R	1.51	45	P	Pn	05 40 17.9	-0.2
MRZ	Mangatainoka R	1.51	45	P*	Pb	05 40 17.9	-0.7
QRZ	Quartz Range	1.53	306	PN	Pn	05 40 19.2	+0.8
LTZ	Lake Taylor	1.76	233	PN	Pn	05 40 22.8	+1.1
DSZ	Denniston Nort	1.77	269	PN	Pn	05 40 23.6	+1.7
TSZ	Takapari Road	2.15	40	PN	Pn	05 40 26.4	-0.9
MQZ	McQueen's Vall	2.27	209	P	Pn	05 40 27.7	-1.3
MQZ	McQueen's Vall	2.27	209	PN	Pn	05 40 27.7	-1.4
NRZ	Ngariki Road	2.40	356	*e*PN	Pn	05 40 33.3	+2.5
NEZ	North Egmont	2.46	359	*e*PN	Pn	05 40 34.2	+2.5
PKE	Pukeiti	2.54	357	P	Pn	05 40 34.9	+2.1
PKVZ	Pokaka	2.60	21	*e*PN	Pn	05 40 34.7	+1.0
MOVZ	Moawhango	2.62	28	*e*PN	Pn	05 40 33.3	-0.6
WNVZ	Wahianoa	2.63	25	P	Pn	05 40 35.7	+1.4
VRZ	Vera Road	2.64	10	*e*PN	Pn	05 40 35.3	+1.0
TRVZ	Turoa	2.65	24	*e*PN	Pn	05 40 35.3	+0.9
DRZ	Dome Shelter	2.67	24	P	Pn	05 40 38.5	+3.7
FWVZ	Far West T-bar	2.69	24	P	Pn	05 40 36.4	+1.4
FWVZ	Far West T-bar	2.69	24	*e*PN	Pn	05 40 35.9	+0.9
TUVZ	Tukino	2.71	25	P	Pn	05 40 35.8	+0.5
TUVZ	Tukino	2.71	25	*e*PN	Pn	05 40 35.7	+0.4
WPVZ	Whakapapa	2.73	23	P	Pn	05 40 37.5	+1.9
NGZ	Ngauruhoe	2.77	24	*e*P	Pn	05 40 37.4	+1.1
NGZ	Ngauruhoe	2.77	24	*e*PN	Pn	05 40 36.8	+0.6
OTVZ	Oturere	2.81	25	*e*PN	Pn	05 40 37.2	+0.5
TWVZ	Taurewa	2.83	20	P	Pn	05 40 37.6	+0.6
TWVZ	Taurewa	2.83	20	*e*PN	Pn	05 40 37.4	+0.5
WTVZ	West Tongariro	2.83	23	P	Pn	05 40 37.8	+0.8
WTVZ	West Tongariro	2.83	23	*e*PN	Pn	05 40 37.5	+0.5
WVZ	Waitaha Valley	2.88	241	*e*PN	Pn	05 40 37.9	+0.2
KATZ	Kakaramea	2.99	23	P	Pn	05 40 44.0	+4.7
KATZ	Kakaramea	2.99	23	*e*PN	Pn	05 40 43.9	+4.6
RPZ	Rata Peaks	3.03	228	Pn	Pn	05 40 39.9	0.0
	19nm,0.3s,baz=66,slow=3.9,SNR=52						
RPZ				Pg	Pg	05 40 48.0	-3.9
	180nm,0.3s,baz=277,slow=2.1,SNR=90						
RPZ				Sn	Sn	05 41 16.0	-0.5
	60nm,0.3s,baz=345,slow=12,SNR=18						
RPZ				Lg		05 41 31.5	
	37nm,0.3s,baz=114,slow=15,SNR=5.1						
RPZ	Rata Peaks	3.03	228	P	Pn	05 40 39.2	-0.7
RPZ	Rata Peaks	3.03	228	*e*PN	Pn	05 40 39.1	-0.8
RITZ	Rihia Road	3.04	26	P	Pn	05 40 45.1	+5.1
RATZ	Rangitukua	3.11	24	P	Pn	05 40 46.3	+5.3
BKZ	Black Stump Fm	3.12	35	*e*PN	Pn	05 40 39.1	-2.0
HATZ	Hinemaiaia	3.19	28	P	Pn	05 40 47.1	+4.9
HATZ	Hinemaiaia	3.19	28	*e*PN	Pn	05 40 47.0	+4.8
WATZ	Wairara	3.25	22	P	Pn	05 40 48.8	+5.8
HIZ	Hauiti	3.25	10	PN	Pn	05 40 44.0	+1.0
WHTZ	Whakaora	3.35	25	P	Pn	05 40 52.5	+8.1
PATZ	Paeroa	3.71	26	P	Pn	05 40 59.4	+10
UTU	Utuhina	3.88	24	P	Pn	05 41 01.9	+10
TAZ	Tarawera	3.93	28	P	Pn	05 41 00.6	+8.0
LBZ	Lake Benmore	3.94	226	*e*P	Pn	05 40 52.3	-0.6
LBZ	Lake Benmore	3.94	226	*e*PN	Pn	05 40 52.5	-0.4
LIRZ	Lichensteins R	4.09	25	P	Pn	05 41 07.2	+12
EDRZ	Edgecumbe	4.12	29	P	Pn	05 41 05.6	+10
TOZ	Tahuroa Road	4.12	15	P	Pn	05 40 55.9	+0.5
TOZ	Tahuroa Road	4.12	15	*e*PN	Pn	05 40 56.1	+0.7
URZ	Urewera	4.14	34	Pn	Pn	05 40 52.0	-3.6
	4.7nm,0.3s,baz=256,slow=7.0,SNR=18						
URZ				Lg		05 41 55.5	
	12nm,0.3s,baz=97,slow=4.2,SNR=3.7						
URZ	Urewera	4.14	34	*e*PN	Pn	05 40 52.5	-3.1
ODZ	Otahua Downs	4.19	217	PN	Pn	05 40 54.3	-2.1
MWZ	Matawai	4.26	38	P	Pn	05 40 54.9	-2.5
JCZ	Jackson Bay	4.61	238	*e*P	Pn	05 41 01.9	-0.5
WKZ	Wanaka	4.87	229	*e*P	Pn	05 41 04.6	-1.4
EAZ	Earnscleugh	4.97	224	*e*P	Pn	05 41 06.0	-1.5
MXZ	Matakaoa Point	5.25	39	P	Pn	05 41 10.2	-1.1
TUZ	Tuapeka	5.35	216	*e*PN	Pn	05 41 10.1	-2.6
MSZ	Milford Sound	5.43	235	*e*P	Pn	05 41 17.4	+3.6
WCZ	Waipu Caves	5.78	1	*e*PN	Pn	05 41 19.1	+0.3
OUZ	Omahuta	6.51	356	*e*SN	Sn	05 42 40.8	-3.3
DZM	Mont Dzumac	20.65	339	LR	LR	05 51 14.5	
	comp=Z,141nm,20.0s,MS3.3,baz=201,slow=34						
STKA	Stephens Creek	27.73	280	LR	LR	05 55 01.3	
	comp=Z,230nm,20.1s,MS3.8,baz=106,slow=33						
RAR	Rarotonga	30.01	55	LR	LR	05 56 17.6	
	comp=Z,167nm,19.6s,MS3.7,baz=224,slow=33						
WB2	Warramunga Arr	40.03	291	*e*P	P	05 47 25.8	-1.8
WRAB	Tennant Creek	40.04	291	*e*P	P	05 47 25.8	-1.9
	10nm,0.7s,mb4.7						
WRA	Warramunga Arr	40.04	291	P	P	05 47 25.3	-2.4
	5.2nm,0.7s,mb4.4,baz=133,slow=8.5,SNR=26						
KAKA	Kakadu	46.36	296	*e*P	P	05 48 35.3	+16
	6.8nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	47.45	285	P	P	05 48 25.8	-1.8
	3.7nm,0.5s,mb4.5,baz=130,slow=9.3,SNR=5.5						
QSPA	South Pole Qui	48.40	180	*e*P	P	05 48 36.2	+2.0
	9.8nm,0.9s,mb4.8						
MAW	Mawson	59.45	204	LR	LR	06 14 09.7	
	comp=Z,253nm,18.0s,MS4.4,baz=78,slow=34						
SYO	Syowa Base	64.58	197	⇑P	P	05 50 21.9	-7.8
SNAA	Sanae	66.89	181	*e*	P	05 50 47.9	+3.4
SNAA	Sanae	66.89	181	*e*	P	05 50 57.9	+13
SNAA	Sanae	66.89	181	⇑*i*P	P	05 50 44.5	0.0
SNAA				*e*	pP	05 50 47.9	-0.7
SNAA				*e*		05 50 57.9	
VNA3	Neumayer Olymp	67.30	179	*e*	P	05 50 51.1	+4.0
VNA3	Neumayer Olymp	67.30	179	*e*	P	05 50 58.7	+12
VNA3	Neumayer Olymp	67.30	179	⇑*i*P	P	05 50 47.4	+0.3
VNA3				*e*	pP	05 50 51.1	-0.1
VNA3				*e*		05 50 58.7	
VNA2	Neumayer--Watz	67.65	179	*e*	P	05 50 52.9	+3.6
VNA2	Neumayer--Watz	67.65	179	*e*	P	05 50 59.7	+10
VNA2	Neumayer--Watz	67.65	179	⇑*i*P	P	05 50 49.3	0.0
VNA2				*e*	pP	05 50 52.9	-0.5
VNA2				*e*		05 50 59.7	
VNA1	Neumayer--Stat	67.92	179	*e*	P	05 50 55.2	+4.2
VNA1	Neumayer--Stat	67.92	179	*e*	P	05 51 05.4	+14
VNA1	Neumayer--Stat	67.92	179	⇑*i*P	P	05 50 51.8	+0.8
VNA1				*e*	pP	05 50 55.2	+0.1
VNA1				*e*		05 51 05.4	
PLCA	Paso Flores	79.16	136	LR	LR	06 18 30.1	
	comp=Z,138nm,18.9s,MS4.3,baz=200,slow=29						
KMI	Kunming	93.66	301	P	P	05 53 06.6	-2.1
KMI				LR	LR		
	comp=Z,30nm,18.6s,MS3.8						
LPAZ	La Paz	98.59	121	LR	LR	06 31 40.0	
	comp=Z,32nm,18.1s,MS3.9,baz=29,slow=32						
LZH	Lanzhou	100.64	309	*e*P	P	05 53 37.5	-2.7
LZH				*e*PP	PP	05 57 49.3	-0.9
LZH				SKS	SKS	06 04 11.5	-12
LZH				*e*SS	SS	06 12 13.8	-0.1
LZH				LR	LR		
	comp=N,210nm,18.1s						
LZH				LR	LR		
	comp=Z,390nm,19.7s,MS4.9						
WMQ	Urumqi	115.10	307	PKP	PKPdf	05 58 30.2	-5.0
WMQ				PP	PP	05 59 35.2	-1.4
WMQ				LR	LR		
	comp=N,30nm,29.8s,MS4.0						
WMQ				LR	LR		
	comp=E,40nm,27.6s,MS4.0						
WMQ				LR	LR		
	comp=Z,20nm,17.3s						
DBIC	Dimbokro	145.08	182	PKPbc	PKPbc	05 59 29.5	+0.4
	comp=Z,2.4nm,0.6s,baz=192,slow=5.8,SNR=3.7						
ARCES	ARCESS Array B	147.74	340	PKPbc	PKPdf	05 59 35.9	+1.0
	comp=Z,3.2nm,0.9s,baz=27,slow=2.7,SNR=4.7						
FINES	FINESS Array B	152.48	327	PKPbc	PKPdf	05 59 48.2	+5.8
	comp=Z,4.6nm,1.1s,baz=45,slow=5.9,SNR=5.0						

*ISK **01** 05:42:29.6, 38.12N×26.70E, h5^{km}, MD3.5*
*ATH **01** 05:42:29.1, 38.15N×26.68E, h35^{km}±5^{km}, MD3.5/3*
*CSEM **01** 05:42:29.3±0.1, 38.08N×26.62E, h8^{km}, MD3.5, Error ellipse: s-maj=2.3km s-min=1.2km az=85.0*
ISC 01 05:42:29.0±0.7**, 38.15N**±0.02×**26.59E**±0.04**, h3**^{km}±5^{km}**, n39, σ1**^{s}**01**/51**, 1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.21	2	*i* P	Pg	05 42 32.9	-0.4
URLA				*i* S	Sg	05 42 36.8	+0.5
BLCB	Balcova	0.43	56	*i* PG	Pg	05 42 37.2	-0.4
SMG	Samos	0.48	155	⇓*i*PB	Pg	05 42 39.4	+0.8
SMG				*e*SB	Sg	05 42 46.8	+1.8
IZM	Izmir	0.59	64	*i* PG	Pg	05 42 40.4	-0.4
IZM				*i* SG	Sg	05 42 47.7	-0.9
KDAG	Bornova	0.59	64	*i* P	Pg	05 42 39.3	-1.6
KDAG				*i* S	Sg	05 42 47.3	-1.5
PRK	Paraskevi	1.13	347	*e*PN	Pn	05 42 50.6	-0.9
PRK				*e*SN	Sn	05 43 06.0	-1.6
AYDN	Tasoluk	1.13	115	*i* P	Pb	05 42 50.8	-0.1
AYDN				*i* S	Sb	05 43 05.4	-0.3
AYVA	Ayvalik	1.16	4	*i* P	Pb	05 42 51.6	+0.2
AYVA				*i* S	Sb	05 43 09.0	+2.3
AKS	Akhisar	1.21	52	PN	Pn	05 42 51.5	-1.2
BODT	Bodrum	1.23	152	PN	Pn	05 42 52.3	-0.6
BODT				SN	Sn	05 43 09.1	-1.0
MLSB	Milas	1.27	132	PN	Pn	05 42 52.9	-0.7
BDRM	Kayabasi	1.27	147	*i* P	Pb	05 42 53.7	+0.4
BDRM				*i* S	Sb	05 43 11.0	+1.1
APE	Apeiranthos	1.36	218	PN	Pn	05 42 55.8	+0.9
APE	Apeiranthos	1.36	218	*e*PN	Pn	05 42 54.2	-0.7
APE				*e*SN	Sn	05 43 12.8	-0.8
MANT	Manisa	1.59	77	*i* P	Pn	05 42 58.6	+0.4
MANT				*i* S	Sb	05 43 17.7	-1.3
DAT	Datca	1.62	151	PN	Pn	05 42 58.3	-0.3
YER	Yerkesik	1.68	126	PN	Pn	05 42 58.7	-0.8
EZN	Ezine	1.69	353	PN	Pn	05 43 00.5	+0.9
BALB	Balikesir	1.80	34	PN	Pn	05 43 02.1	+0.9
DENT	Denizli	1.97	101	*e*PN	Pn	05 43 04.1	+0.5
DNZL	Cakiroluk	2.00	102	*i* P	Pn	05 43 07.0	+3.0
DNZL				*i* S	Sn	05 43 29.7	-0.1
DALT	Dalyan (Mudla)	2.13	129	*e*PN	Pn	05 43 05.6	-0.3
DST	Dursunbey	2.16	47	*e*PN	Pn	05 43 06.7	+0.4
LPK	Lapseki	2.23	3	*e*PN	Pn	05 43 08.5	+1.2
KHL	Karahalli	2.32	85	*e*PN	Pn	05 43 09.1	+0.5
EDC	Edincik	2.41	24	PN	Pn	05 43 11.1	+1.2
BNT	Bandirma	2.44	25	*e*PN	Pn	05 43 11.3	+1.0
FETY	Fethiye	2.50	126	*e*PN	Pn	05 43 10.4	-0.7
MRMT	Marmara Adasi	2.58	17	*e*PN	Pn	05 43 13.2	+0.9
ORLT	Orhaneli	2.61	43	*e*PN	Pn	05 43 13.8	+1.0
MFT	Murefte	2.69	11	*e*PN	Pn	05 43 15.1	+1.2
ALT	Altintas	2.91	71	*e*PN	Pn	05 43 17.2	+0.2
ELL	Elmali	2.99	117	*e*PN	Pn	05 43 18.2	+0.1
YLV	Yalova	3.24	41	*e*PN	Pn	05 43 22.7	+1.0
BADT	Buyukada	3.34	35	*e*PN	Pn	05 43 24.1	+1.0
RZN	Rozhen	3.82	338	*i* P	Pn	05 43 29.0	-0.9
MMB	Musomiste	4.08	328	*i* P	Pn	05 43 31.0	-2.7
KKB	Krupnik	4.59	325	*i* P	Pn	05 43 40.0	-0.9
VTS	Vitosha	5.14	331	*i* P	Pn	05 43 47.0	-1.6

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*THR **01** 05:46:29.4±1.3, 31.77N×50.91E, h16^{km}±9^{km}, ML3.2*
*CSEM **01** 05:46:31.6±0.1, 31.87N×50.89E, h20^{km}, ML3.3, Error ellipse: s-maj=3.2km s-min=2.1km az=45.0*
*TEH **01** 05:46:33.7, 31.89N×50.98E, h10^{km}, Mn3.3*
ISC 01 05:46:31.5±0.5**, 31.96N**±0.05×**50.96E**±0.04**, h10**^{km}**, n22, σ1**^{s}**27**/24**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIR	Pirpir	0.73	355	Pg	Pg	05 46 43.1	-3.0
IGAR	Garneh	1.09	74	Pg	Pg	05 46 48.5	-4.8
IKLH	Kalahroud	1.46	21	Pn	Pn	05 46 56.6	-1.4
IZEF	Zefreh	1.49	51	Pn	Pn	05 46 57.0	-1.5
NASN	Na'in	1.77	61	*e*Pg	Pg	05 47 03.8	-3.1
NASN				*e*Sg	Sg	05 47 30.3	-0.3
SHGR	Shooshtar-Gavs	1.84	275	*e*Pg	Pn	05 47 02.5	-1.0
SHGR				*e*Sg	Sn	05 47 27.2	+0.2
ASAO	Ashtian	2.70	343	*e*Pn	Pn	05 47 17.2	+1.5
ASAO				AML	AML	05 48 05.7	
	comp=N,84nm,0.5s						
ASAO	Ashtian	2.70	343	*e*Pn	Pn	05 47 17.2	+1.4
	SNR=52						
IPAR	Pars	2.77	139	Pn	Pn	05 47 16.9	+0.1
IQOM	Qom	2.88	2	Pn	Pn	05 47 20.0	+1.7
ICHK	Chekchek	2.94	83	Pn	Pn	05 47 19.7	+0.5
IVRN	Varamin	3.10	12	Pn	Pn	05 47 23.3	+1.8
IMEH	Mehriz	3.17	99	Pn	Pn	05 47 23.0	+0.6
ISRV	Sarvestan	3.17	144	Pn	Pn	05 47 22.3	-0.1
IMOK	Mook	3.27	152	Pn	Pn	05 47 25.5	+1.6
IDMV	Damavand	3.72	14	Pn	Pn	05 47 31.5	+1.2
DAMV	Damavand	3.76	13	*e*Pn	Pn	05 47 31.6	+0.7
IBAF	Bafgh	3.94	94	Pn	Pn	05 47 33.6	+0.2
IFIR	Firoozkooh	3.97	22	Pn	Pn	05 47 34.8	+1.0
SNGE	Sanandaj	4.35	317	*e*Pn	Pn	05 47 37.7	-1.5
SNGE				AML	AML	05 49 03.8	
	comp=N,22nm,0.5s						
IDHR	Dehrash	4.71	307	Pn	Pn	05 47 43.5	-0.8
KRBR	Kerman	5.36	110	*e*Pn	Pn	05 47 51.3	-2.1

NNC 01 05:48:56.9±4.7**, 38.15N×71.98E, h246**^{km}±60^{km}**, mpv3.2, 6C, Error ellipse: s-maj=54.3km s-min=31.1km az=24.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.87	22	⇑P	P	05 50 10.1	-1.4
	4.6nm,0.6s						
AAK				⇑S	S	05 51 10.9	+1.3
	2.6nm,0.6s						
KK31	Karatay Array	5.07	348	⇑P	P	05 50 13.6	-0.3
	0.5nm,0.2s,baz=157,slow=10,SNR=38						
KK31				⇑S	S	05 51 14.5	+0.5
	3.7nm,0.3s,baz=172,slow=24,SNR=5.4						
AB31	Akbulak array	14.08	326	⇑P	P	05 52 07.8	+0.7
	0.2nm,0.3s,baz=126,slow=12,SNR=6.9						
AB31				⇑S	S	05 54 40.6	+2.9
	1.7nm,0.9s,baz=130,slow=26,SNR=5.2						

NNC 01 06:49:46.7±2.7**, 38.09N×71.86E, h264**^{km}±35^{km}**, mpv3.1, 4C-1D, Error ellipse: s-maj=32.9km s-min=18.4km az=25.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.96	23	⇓P	P	06 51 02.3	-0.8
	2.7nm,0.8s						
AAK				⇑S	S	06 52 03.8	+1.2
	4.0nm,0.8s						
KK31	Karatay Array	5.11	349	P	P	06 51 04.6	-0.2
	0.6nm,0.2s,baz=159,slow=11,SNR=26						
KK31				⇑S	S	06 52 06.4	+0.5
	2.3nm,0.6s,baz=172,slow=22,SNR=7.2						
AB31	Akbulak array	14.08	326	⇑P	P	06 52 54.8	-1.6
	0.6nm,0.7s,baz=22,slow=4.4,SNR=4.8						
AB31				⇑S	S	06 55 31.5	+4.7
	1.9nm,1.1s,baz=325,slow=24,SNR=2.8						

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*NEIC **01** 06:56:11.2±2.1, 12.05N×143.91E, h37^{km}±20^{km}, mb4.2/2, Error ellipse: s-maj=29.1km s-min=13.7km az=100.0*
*IDC **01** 06:56:11.6±3.5, 12.05N×143.94E, h41^{km}±32^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.8/19, mbtmp4.1/7, Error ellipse: s-maj=39.2km s-min=18.7km az=110.0*
ISC 01 06:56:09.2±2.7**, 12.0N**±0.1×**143.8E**±0.2**, h34**^{km}±25^{km}**, n12, σ0**^{s}**85**/14**, mb4.1**/9**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	1.87	33	P	P	06 56 39.7	+0.4
	31nm,0.3s,baz=179,slow=10,SNR=12						
GUMO				S	S	06 57 01.5	-0.5
	81nm,0.3s,baz=351,slow=22,SNR=18						
GUMO	Guam	1.87	33	*e*Pn	P	06 56 39.7	+0.4
GUMO				*e*Sn	S	06 57 02.0	0.0
WRAB	Tennant Creek	33.09	196	*e*P	P	07 02 44.1	-0.2
	1.9nm,0.7s,mb4.1						
WRA	Warramunga Arr	33.10	196	P	P	07 02 44.2	-0.2
	0.7nm,0.6s,mb3.8,baz=20,slow=9.8,SNR=15						
SONM	Songino Array	47.44	326	P	P	07 04 42.4	0.0
	0.5nm,0.5s,mb3.7,baz=144,slow=6.5,SNR=4.5						
KURK	Kurchatov	65.13	320	*e*P	P	07 06 48.7	-0.1
	2.0nm,0.7s,mb4.3						
ILAR	Eielson Array	70.42	25	P	P	07 07 19.4	-2.2
	0.4nm,0.6s,mb3.5,baz=249,slow=5.5,SNR=6.7						
BVAR	Borovoye Array	70.53	322	P	P	07 07 22.7	+0.2
	1.2nm,0.3s,mb4.3,baz=106,slow=7.1,SNR=11						
ARCES	ARCESS Array B	88.26	342	P	P	07 08 59.0	+1.1
	7.8nm,1.0s,mb4.9,baz=50,slow=7.0,SNR=3.7						
NVAR	Mina Array Bea	88.70	51	P	P	07 09 02.1	+1.4
	0.4nm,0.5s,mb4.0,baz=261,slow=4.6,SNR=4.8						
FINES	FINESS Array B	92.15	335	P	P	07 09 15.8	-0.4
	1.6nm,0.8s,mb4.4,baz=45,slow=3.9,SNR=4.2						
FINES	FINESS Array B	92.15	335	P	P	07 09 15.8	-0.4

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*BJI **01** 07:03:17.5, 34.87N×73.33E, h10^{km}, mB5.1, mb4.7, Ms4.4, Msz4.2*
*NEIC **01** 07:03:17.6±0.2, 34.71N×73.18E, h10^{km}, mb4.9/16, Error ellipse: s-maj=7.6km s-min=4.1km az=217.0*
*MOS **01** 07:03:17.4±1.4, 34.70N×73.25E, h23^{km}, mb5.0/18, Error ellipse: s-maj=8.8km s-min=5.1km az=104.4*
*IDC **01** 07:03:22.0±6.0, 34.81N×73.09E, h35^{km}±46^{km}, mb4.3/20, mb1 4.4/23, mb1mx4.3/27, mbtmp4.5/23, ML4.7/3, MS3.6/4, Ms1 3.6/4, ms1mx3.1/23, Error ellipse: s-maj=21.5km s-min=13.1km az=3.0*
*NNC **01** 07:03:26.1±8.8, 34.97N×72.61E, h73^{km}±82^{km}, mpv4.7, Error ellipse: s-maj=70.0km s-min=54.1km az=42.0*
ISC 01 07:03:18.5±0.8**, 34.69N**±0.02×**73.25E**±0.03**, h27**^{km}±6^{km}**, n185, σ1**^{s}**39**/214**, mb4.6**/58**, MS3.9**/10**, 16C-7D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	Chirah Chowk	1.03	179	⇓P	Pn	07 03 38.6	+1.3
CEP	Cherat	1.40	233	⇓P	Pn	07 03 41.5	-1.2
SRNI	Srinagar	1.45	113	*e*x	x	07 08 48.5	
SRNI				*e*x	x	07 09 25.5	
THW	Thamme Wali	2.27	214	⇑P	Pn	07 03 57.2	+2.2
JMU	Jammu	2.40	144	*e*PB	Pb	07 04 03.5	+2.6
JMU				*e*x	x	07 04 37.0	
SARP	Sargodha	2.80	190	P	Pn	07 04 04.6	+2.0
DLH	Dalhousie	3.12	133	*e*P	Pn	07 04 12.0	+4.8
DLH				*e*x	x	07 05 53.0	
SBDP	Sheikh Budin	3.13	221	⇑P	Pn	07 04 08.5	+1.1
DRP	Derazinda	3.89	222	⇑P	Pn	07 04 19.4	+1.3
BHK	Bhakra	4.21	140	*e*P	Pn	07 04 32.5	+10
BHK				*e*S	Sn	07 05 20.9	+9.3
SDNR	Sundarnagar	4.46	134	*e*P	Pn	07 04 29.0	+2.8
SDNR				*e*S	Sn	07 05 22.4	+4.6
SMLA	Simla	4.84	136	*e*P	Pn	07 04 31.3	-0.3
SMLA				*e*P		07 04 33.7	
SMLA				*e*S	Sn	07 05 28.9	+1.3
SMLA				*e*S	Sn	07 05 29.7	+2.1
SMLA				AML	AML	07 05 55.2	
	comp=N,2µm,0.6s						
SMLA				AML	AML	07 05 55.8	
	comp=E,2µm,0.6s						
KLP	Kalpa	5.25	125	*e*P	Pn	07 04 41.1	+3.8
KLP				*e*x	x	07 05 45.2	
KLP				AML	AML	07 06 10.7	
	comp=N,2µm,0.4s						
KLP				AML	AML	07 06 15.0	
	comp=E,2µm,0.6s						
KKR	Kurukshetra	5.60	146	*e*P	Pn	07 04 42.6	+0.3
KKR				*e*x	x	07 06 07.2	
DDI	Dehra Dun	5.95	136	*e*P	Pn	07 04 47.6	+0.3
DDI				*e*x	x	07 06 01.8	
NDI	New Delhi	6.87	149	*e*P	Pn	07 05 01.6	+1.3
NDI				*e*P		07 05 03.0	
NDI				*e*S	Sn	07 06 17.3	-1.1
NDI				*e*S	Sn	07 06 18.5	+0.1
NDI				AML	AML	07 06 22.8	
	comp=E,351nm,0.4s						
NDI				AML	AML	07 06 25.1	
	comp=N,380nm,0.8s						
KHET	Khetri	6.95	161	*e*P	Pn	07 05 01.7	+0.4
KHET				*e*S	Sn	07 06 18.3	-1.8
KALG	Kalgarh	6.96	136	*e*P	Pn	07 05 04.1	+2.6
KALG				*e*S	Sn	07 06 20.3	-0.3
KUDL	Kundal	7.09	156	*e*P	Pn	07 05 03.1	-0.1
KUDL				*e*S	Sn	07 06 22.5	-1.2
SONA	Sohna	7.20	152	*e*P	Pn	07 05 04.6	-0.3
SONA				*e*S	Sn	07 06 25.7	-0.9
AML	Almayashu	7.44	3	P	Pn	07 05 10.0	+1.8
	SNR=14						
UCH	Uchtor	7.59	7	P	Pn	07 05 11.3	+1.0
	SNR=112						
PTH	Pithoragarh	7.82	129	*e*x	x	07 05 17.3	
PTH				*e*x	x	07 06 44.9	
ULHL	Ulahol	7.90	16	P	Pn	07 05 16.4	+1.7
	SNR=10						
EKS2	Erkin-Say	7.97	3	P	Pn	07 05 17.4	+1.8
	SNR=31						
AAK	Ala-Archa	8.00	7	P	Pn	07 05 18.9	+3.0
	SNR=8.2						
AAK	Ala-Archa	8.00	7	⇑P	Pn	07 05 17.1	+1.2
	comp=N,9.3nm,0.3s						
AAK				⇑S	Sn	07 06 45.5	-0.9
	comp=N,104nm,1.1s						
AAK	Ala-Archa	8.00	7	*e*P	Pn	07 05 14.4	-1.5
	comp=N,46nm,0.9s						
AAK	Ala-Archa	8.00	7	*e*P	Pn	07 05 14.4	-1.5
AAK				pmax	pmax		
	comp=Z,46nm,0.9s						
JASL	Jaisalmer	8.00	195	*e*P	Pn	07 05 14.5	-1.4
KBK	Karagaybulak	8.07	9	P	P	07 05 17.9	+1.0
	SNR=15						
FRU	Bishkek	8.21	7	*e*P	P	07 05 21.0	+2.2
FRU				*e*S	Sn	07 06 54.0	+2.4
FRU				pmax	pmax		
	comp=Z,60nm,2.0s						
FRU				smax			
	comp=N,100nm,1.8s						
FRU				pmax	pmax		
	comp=E,280nm,2.0s						
AJM	Ajmer	8.27	171	*e*P	P	07 05 19.0	-0.8
AJM				*e*S	Sn	07 06 50.7	-2.5
TKM2	Tokmak 2	8.42	12	P	P	07 05 22.5	+0.6
	SNR=24						
AGRA	Agra	8.45	150	*e*P	P	07 05 22.7	+0.4
AGRA				*e*S	Sn	07 06 55.8	-2.0
USP	Ospenovka	8.62	6	P	P	07 05 25.0	+0.4
	SNR=6.0						
KK31	Karatay Array	8.67	347	P	P	07 05 24.0	-1.3
	comp=E,35nm,0.6s,baz=165,slow=12,SNR=228						
KK31				⇑S	Sn	07 06 58.0	-5.2
	comp=E,100nm,0.7s,baz=173,slow=23,SNR=14						
KKAR	Karatay Array	8.67	347	*e*P	P	07 05 24.0	-1.3
KKAR						07 06 57.9	
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
KOLN	Koldanda	11.22	125	*e*Pn	P	07 05 59.2	-1.2
KOLN				*e*Sn	S	07 08 02.3	-3.6
	comp=Z,88nm,0.5s						
GKN	Gorkha	11.79	121	*e*Pn	P	07 06 06.7	-1.4
GKN				*e*Sn	S	07 08 15.4	-4.4
	comp=Z,198nm,0.4s						
BHJ	Bhuj	11.82	196	*e*P	P	07 06 04.6	-3.9
BHJ				*e*S	S	07 08 10.0	-10
ALBI	Allahabad	11.93	139	*e*P	P	07 06 09.0	-0.9
DMN	Daman	12.36	122	*e*Pn	P	07 06 13.0	-2.7
DMN				*e*Sn	S	07 08 30.2	-3.4
	comp=Z,227nm,0.9s						
KKN	Kakani	12.38	120	*e*Pn	P	07 06 14.1	-1.8
KKN				*e*Sn	S	07 08 29.9	-4.0
	comp=Z,182nm,0.6s						
PKI	Pulchoki	12.60	121	*e*Pn	P	07 06 17.1	-1.8
PKI				*e*Sn	S	07 08 34.3	-5.0
	comp=Z,268nm,1.0s						
GUN	Gumba	12.73	119	*e*Pn	P	07 06 19.5	-1.2
GUN				*e*Sn	S	07 08 37.3	-5.3
	comp=Z,87nm,0.5s						
JIRN	Jiri	13.10	119	*e*Pn	P	07 06 24.2	-1.4
JIRN				*e*Sn	S	07 08 46.6	-4.8
	comp=Z,230nm,0.6s						
MK31	Makanchi Array	13.89	27	P	P	07 06 34.7	-1.1
	comp=Z,1.9nm,0.4s,baz=204,slow=15,SNR=42						
MKAR	Makanchi Array	13.89	27	Pn	P	07 06 34.9	-0.9
	comp=Z,0.5nm,0.3s,baz=207,slow=14,SNR=18						
MKAR	Makanchi Array	13.89	27	Pn	P	07 06 34.9	-0.9
MKAR	Makanchi Array	13.89	27	*i* P	P	07 06 34.7	-1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NGP	Nagpur	14.42	158	*e*P	P	07 06 40.7	-2.3
NGP				AMb	AMB	07 06 41.5	
	comp=Z,36nm,0.7s						
NGP				*e*x	x	07 09 13.7	
WMQ	Urumqi	14.42	46	⇑P	P	07 06 40.8	-2.0
WMQ				PP	PP	07 06 52.3	-1.8
WMQ				*e*S	S	07 09 21.3	-1.4
WMQ				AMB	AMB		
	comp=Z,20nm,0.7s						
WMQ				AMB	AMB		
	comp=Z,120nm,3.5s						
WMQ				LR	LR		
	comp=Z,210nm,18.5s						
BLSP	Bilaspur	14.74	146	*e*P	P	07 06 47.7	+0.6
BLSP				AMb	AMB	07 06 49.3	
	comp=Z,11nm,0.7s						
BLSP				*e*x	x	07 09 18.9	
BOM	Bombay	15.73	182	*e*x	x	07 07 09.0	
BOM				*e*S	S	07 10 00.2	+6.5
LSA	Lhasa	15.95	103	P	P	07 07 01.2	-1.6
LSA	Lhasa	15.95	103	*e*P	P	07 07 00.1	-2.7
	comp=Z,28nm,1.0s						
LSA	Lhasa	15.95	103	*e*P	P	07 07 00.1	-2.7
LSA				pmax	pmax		
	comp=Z,27nm,1.0s						
POO	Poona	16.10	178	*e*P	P	07 07 03.0	-1.8
POO				*e*x	x	07 09 56.0	
LATR	Latur	16.47	169	*e*x	x	07 10 04.3	
KURK	Kurchatov	16.49	12	⇓P	P	07 07 09.6	+0.1
	comp=Z,12nm,1.3s						
KURK	Kurchatov	16.49	12	*e*P	P	07 07 05.8	-3.7
	comp=Z,16nm,0.9s						
KURK	Kurchatov	16.49	12	*e*P	P	07 07 05.9	-3.6
KURK				pmax	pmax		
	comp=Z,16nm,0.9s						
BIDO	Bidbid	17.25	234	⇑P	P	07 07 22.9	+3.6
KAD	Karad	17.33	177	*e*P	P	07 07 20.5	+0.3
KAD				*e*x	x	07 10 20.5	
WBK	Wadi Bani Khal	17.35	230	⇓P	P	07 07 20.4	0.0
AB31	Akbulak array	17.56	330	P	P	07 07 19.4	-3.5
	comp=Z,16nm,0.7s,baz=142,slow=13,SNR=163						
AB31				⇑S	S	07 10 24.2	-11
	comp=Z,12nm,0.9s						
AB31	Akbulak array	17.56	330	P	P	07 07 20.3	-2.6
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HYB	Hyderabad	17.84	163	*i* P	P	07 07 23.5	-3.1
HYB				*e*		07 10 33.0	
HYB				*e*S	S	07 10 47.0	+5.0
HYB	Hyderabad	17.84	163	*e*P	P	07 07 23.5	-3.1
HYB				*e*S	S	07 10 33.0	-9.0
JMDO	Jabal Madar	18.07	231	P	P	07 07 31.5	+2.0
	SNR=6.2						
VOSK	Vostochnaya	18.10	356	⇑P	P	07 07 27.7	-2.0
	comp=Z,9.4nm,0.7s						
BSY	Bisya	18.40	234	⇑P	P	07 07 35.2	+1.6
BVA0	Borovoye Array	18.45	355	⇑P	P	07 07 32.2	-1.7
	comp=Z,3.0nm,0.7s,baz=160,slow=9.2,SNR=85						
BVA0	Borovoye Array	18.45	355	*i* P	P	07 07 32.1	-1.8
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	Borovoye Array	18.45	355	P	P	07 07 33.2	-0.7
	comp=Z,3.5nm,0.3s,baz=168,slow=9.5,SNR=68						
SHL	Shillong	18.48	114	*e*P	P	07 07 31.5	-3.1
SHL				*e*x	x	07 10 48.0	
BRVK	Borovoye	18.49	354	*e*P	P	07 07 33.3	-1.1
	comp=Z,18nm,0.8s						
BRVK	Borovoye	18.49	354	*e*P	P	07 07 33.3	-1.1
BRVK				pmax	pmax		
	comp=Z,18nm,0.8s						
VIS	Vishakhapatnam	19.14	149	*e*P	P	07 07 45.1	+2.6
VIS				*e*x	x	07 11 05.2	
AKTK	Aktyubinsk	19.27	329	P	P	07 07 41.9	-1.8
AKTK				LR	LR	07 15 34.9	
AKTO	Aktyubinsk	19.27	329	⇑P	P	07 07 41.7	-2.0
	comp=Z,9.5nm,0.9s						
AKTO	Aktyubinsk	19.27	329	P	P	07 07 41.9	-1.8
	comp=Z,11nm,0.3s,baz=134,slow=9.6,SNR=137						
AKTO				LR	LR	07 15 34.9	
	comp=Z,75nm,18.5s,slow=38						
AKTO	Aktyubinsk	19.27	329	P	P	07 07 41.9	-1.8
AKTO				pmax	pmax		
	comp=Z,11nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,75nm,18.5s						
NVS	Novosibirsk	21.32	16	*e*P	P	07 08 02.6	-2.8
NVS				pmax	pmax		
	comp=N,31nm,1.1s						
NVS				pmax	pmax		
	comp=E,19nm,1.1s						
NVS				pmax	pmax		
	comp=Z,44nm,1.1s,mb4.7						
GTA	Gaotai	21.69	70	*e*P	P	07 08 10.8	+1.6
GTA				AP		07 08 15.1	
GTA				XP		07 08 17.7	
GTA				PP	PP	07 08 36.0	+1.8
GTA				S	S	07 12 04.7	+1.9
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
GTA				AMB	AMB		
	comp=Z,180nm,4.6s						
GTA				LR	LR		
	comp=N,190nm,15.6s,MS3.7						
GTA				LR	LR		
	comp=E,130nm,14.1s,MS3.7						
GTA				LR	LR		
	comp=Z,190nm,11.0s,MS3.8						
UMR	Umm Al-Rimmam	22.20	264	*e*P	P	07 08 14.2	0.0
UMR				AMb	AMB	07 08 20.0	
	comp=Z,73nm,0.6s,mb5.3						
RDF	Al-Radifah	22.55	262	*e*P	P	07 08 17.4	-0.4
RDF				AMb	AMB	07 08 20.8	
	comp=Z,149nm,1.0s,mb5.4						
NAY	Al-Naaiem	22.69	263	*e*P	P	07 08 18.9	-0.3
NAY				AMb	AMB	07 08 21.2	
	comp=Z,64nm,1.0s,mb5.0						
GNI	Garni	23.23	292	P	P	07 08 27.9	+3.6
	comp=Z,9.8nm,0.7s,mb4.4,baz=4.9,slow=10,SNR=5.2						
GNI	Garni	23.23	292	*e*P	P	07 08 26.9	+2.5
	comp=Z,30nm,1.0s,mb4.7						
GNI	Garni	23.23	292	*e*P	P	07 08 26.9	+2.5
GNI				pmax	pmax		
	comp=Z,30nm,1.0s						
ARU	Arti	23.95	340	*e*P	P	07 08 31.4	+0.3
	comp=Z,27nm,0.6s,mb4.8						
ARU	Arti	23.95	340	⇓*i*P	P	07 08 32.0	+0.8
ARU				*e*		07 09 00.1	
ARU				*e*S	S	07 12 42.1	-0.9
ARU				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.7						
WHFO	Wadi Hawf	24.09	231	P	P	07 08 35.4	+2.6
	SNR=11						
RBK	Rabkut	24.12	230	⇑P	P	07 08 34.4	+1.1
ZEI	Tsey	24.19	298	*e*P	P	07 08 35.3	+1.7
ZEI				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
ABTO	Aybut	24.81	231	P	P	07 08 41.1	+1.3
	SNR=22						
LZH	Lanzhou	24.94	78	*e*P	P	07 08 43.0	+2.0
LZH				AP		07 08 45.8	
LZH				XP		07 08 49.5	
LZH				PP	PP	07 09 20.5	+2.1
LZH				*e*S	S	07 13 03.6	+3.7
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,150nm,4.7s						
LZH				LR	LR		
	comp=N,900nm,10.2s						
LZH				LR	LR		
	comp=Z,2µm,13.3s,MS4.7						
KIV	Kislovodsk	25.27	301	*i* P	P	07 08 45.6	+1.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.2						
CD2	Chengdu	25.87	90	P	P	07 08 52.4	+2.6
CD2				PP	PP	07 09 32.8	+2.2
CD2				PPP	PPP	07 09 44.6	+2.1
CD2				S	S	07 13 19.0	+3.4
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
ZAK	Zakamensk	26.89	45	*e*P	P	07 08 59.4	+0.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						

KMI	Kunming	27.20	103	P	P	07 09 04.1	+2.1
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
SOC	Sochi	27.33	299	eP	P	07 09 03.3	+0.3
SOC				eS	S	07 13 37.7	-1.6
SOC				eSS	SS	07 14 51.5	-5.0
SOC				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.7						
SONM	Songino Array	27.94	52	P	P	07 09 09.7	+1.2
	comp=Z,1.8nm,0.5s,mb4.0,baz=252,slow=8.7,SNR=16						
SONM				LR	LR	07 21 41.8	
	comp=Z,235nm,19.9s,MS3.8,baz=80,slow=39						
GYA	Guiyang	29.82	97	P	P	07 09 27.8	+2.2
GYA				AP	pP	07 09 32.1	-1.5
GYA				XP	sP	07 09 35.8	-1.3
GYA				PP	PP	07 10 25.7	+2.8
GYA				PCP	PcP	07 12 30.0	+1.3
GYA				S	S	07 14 24.0	+4.8
GYA				SCP		07 16 10.4	
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,120nm,3.2s						
GYA				LR	LR		
	comp=N,460nm,16.2s,MS4.3						
GYA				LR	LR		
	comp=E,450nm,15.9s,MS4.3						
GYA				LR	LR		
	comp=Z,430nm,16.7s,MS4.2						
HHC	Hu-ho-hao-te	30.73	67	eP	P	07 09 33.6	+0.1
HHC				AP	pP	07 09 37.9	-3.6
HHC				XP	sP	07 09 40.3	-4.7
HHC				PP	PP	07 10 35.5	+0.8
HHC				PCP	PcP	07 12 30.6	-0.3
HHC				S	S	07 14 35.2	+1.6
HHC				SCP		07 16 13.5	
HHC				SCS	ScS	07 20 07.3	+1.8
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
HHC				AMB	AMB		
	comp=Z,180nm,6.0s						
HHC				LR	LR		
	comp=N,150nm,9.6s						
HHC				LR	LR		
	comp=E,150nm,10.8s						
HHC				LR	LR		
	comp=Z,120nm,10.8s,MS3.8						
ENH	Enshi	30.78	88	eP	P	07 09 34.9	+0.9
	comp=Z,29nm,1.2s,mb5.0						
BRTR	Keskin Array B	31.76	291	P	P	07 09 42.8	+0.2
	comp=Z,1.7nm,0.8s,mb3.9,baz=101,slow=9.5,SNR=5.5						
KLMR	Klimovskoe	33.95	331	eP	P	07 09 58.5	-2.9
KLMR				pmax	pmax		
	comp=Z,40nm,2.2s,mb5.0						
AKASG	Malin Array Be	35.51	310	P	P	07 10 12.0	-2.8
	comp=Z,0.9nm,0.4s,mb4.0,baz=82,slow=8.1,SNR=5.0						
AKASG	Malin Array Be	35.51	310	P	P	07 10 12.0	-2.9
BOD	Bodaibo	35.65	37	eP	P	07 10 15.8	-0.2
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
MLR	Muntele Rosu	37.27	301	P	P	07 10 29.3	-0.5
	comp=Z,4.7nm,0.8s,mb4.3,baz=90,slow=13,SNR=4.0						
JOF	Joensuu	38.35	330	ep	P	07 10 37.5	-1.1
	comp=Z,10nm,0.4s,mb4.9						
IDI	Anoyia	39.31	285	P	P	07 10 47.5	+0.5
	comp=Z,2.8nm,0.6s,mb4.2,baz=246,slow=23,SNR=4.0						
SNY	Shenyang	39.69	64	⇑P	P	07 10 51.3	+1.3
SNY				S	S	07 16 53.2	+1.7
SNY				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
SNY				AMB	AMB		
	comp=Z,70nm,4.3s						
SNY				LR	LR		
	comp=N,340nm,18.7s						
SNY				LR	LR		
	comp=Z,290nm,17.1s,MS4.2						
FINES	FINESS Array B	40.00	327	P	P	07 10 51.4	-1.0
	comp=Z,2.8nm,0.5s,mb4.2,baz=118,slow=8.8,SNR=27						
FINES				LR	LR	07 28 34.4	
	comp=Z,43nm,21.7s,MS3.2,baz=278,slow=38						
FINES	FINESS Array B	40.00	327	P	P	07 10 51.4	-1.0
FINES				LR	LR	07 28 34.4	
FINES	FINESS Array B	40.00	327	i P	P	07 10 51.7	-0.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
APA	Apatity	40.01	338	eP	P	07 10 53.2	+0.8
SSE	Sheshan	40.12	81	P	P	07 10 53.8	+0.1
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,30nm,3.8s						
KAF	Kangasniemi	40.14	328	ep	P	07 10 52.6	-0.9
	comp=Z,0.7nm,0.3s,mb3.9,baz=111,slow=8.2						
KAF	Kangasniemi	40.14	328	eP	P	07 10 52.6	-0.9
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
CN2	Changchun	40.85	61	eP	P	07 11 01.0	+1.5
CN2				eS	S	07 17 11.8	+3.0
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
PSZ	Piszkesteto	41.41	305	P	P	07 11 05.0	+0.9
MORC	Moravsky Berou	42.92	308	P	P	07 11 16.6	+0.3
KEV	Kevo	43.16	338	ep	P	07 11 15.4	-2.7
	comp=Z,1.7nm,0.4s,mb4.1						
KEV	Kevo	43.16	338	eP	P	07 11 15.4	-2.7
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
ARCES	ARCESS Array B	43.51	338	P	P	07 11 21.0	0.0
	comp=Z,13nm,0.4s,mb5.0,baz=118,slow=8.4,SNR=150						
ARCES				LR	LR	07 30 26.1	
	comp=Z,147nm,22.0s,MS3.8,baz=140,slow=38						
MDJ	Mudanjiang	43.73	59	P	P	07 11 22.5	-0.5
MDJ				PP	PP	07 13 09.7	+3.2
MDJ				S	S	07 17 51.8	+0.8
MDJ				AMB	AMB		
	comp=Z,30nm,3.1s						
MDJ				LR	LR		
	comp=N,120nm,24.2s,MS3.8						
MDJ				LR	LR		
	comp=E,50nm,21.9s,MS3.8						
MDJ				LR	LR		
	comp=Z,160nm,21.9s,MS3.9						
KTK1	Kautokeino	44.01	337	eP	P	07 11 25.2	+0.2
YAK	Yakutsk	44.41	34	P	P	07 11 27.8	-0.5
YAK	Yakutsk	44.41	34	i P	P	07 11 28.5	+0.2
YAK				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.0						
GERES	GERESS Array B	45.48	307	P	P	07 11 35.9	-1.1
	comp=Z,0.3nm,0.6s,baz=72,slow=4.2,SNR=3.6						
VLA	Vladivostok	45.59	61	eP	P	07 11 39.4	+1.4
VLA				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.3						
HFS	Hagfors	45.62	323	P	P	07 11 36.9	-1.0
	comp=Z,9.6nm,0.5s,mb5.0,baz=98,slow=10,SNR=25						
MOR8	Moi Rana	46.29	331	eP	P	07 11 41.7	-1.5
MOR8				AMb	AMB	07 11 43.9	
	comp=Z,33nm,1.7s,mb5.0						
MOR8	Moi Rana	46.29	331	eP	P	07 11 41.7	-1.5
	comp=Z,33nm,1.7s,mb5.0						
TIXI	Tiksi	46.79	21	eP	P	07 11 45.6	-1.5
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,127nm,14.0s,MS4.0						
NB2	NORSAR Subarra	46.92	324	P	P	07 11 46.7	-1.6
	comp=Z,4.3nm,0.6s,mb4.6,baz=93,slow=7.4						
NB2	NORSAR Subarra	46.92	324	P	P	07 11 46.7	-1.6
	baz=93,slow=7.9						
NOA	NORSAR Array B	46.92	324	P	P	07 11 47.0	-1.2
	comp=Z,4.1nm,0.6s,mb4.5,baz=96,slow=7.6,SNR=22						
NAO	NORSAR Subarra	47.09	324	P	P	07 11 46.7	-2.9
	comp=Z,4.3nm,0.6s,mb4.6						
NAO	NORSAR Subarra	47.09	324	P	P	07 11 46.7	-2.9
NAO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
JNU	Nakatsue	47.29	75	P	P	07 11 53.5	+2.0
	comp=Z,5.0nm,0.5s,mb4.7,baz=204,slow=14,SNR=4.5						
MAJO	Matsushiro	51.92	68	eP	P	07 12 26.7	-0.4
	comp=Z,21nm,0.6s,mb5.2						
MAJO	Matsushiro	51.92	68	eP	P	07 12 26.7	-0.4
MAJO				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2						
MAT	Matsushiro	51.92	68	P	P	07 12 27.1	0.0
MAT	Matsushiro	51.92	68	eP	P	07 12 27.0	-0.1
	comp=Z,22nm,0.8s,mb5.1						
MAT	Matsushiro	51.92	68	eP	P	07 12 27.0	-0.1
MAT				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
MJAR	Matsushiro Arr	51.93	68	P	P	07 12 28.1	+1.0
	comp=Z,13nm,0.7s,mb5.0,baz=293,slow=9.8,SNR=26						
YSS	Yuzh-Sakhalins	52.39	54	P	P	07 12 30.8	+0.4
YSS	Yuzh-Sakhalins	52.39	54	⇑eP	P	07 12 31.5	+1.1
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
EKA	Eskdalemuir Ar	54.86	317	P	P	07 12 47.3	-1.2
	comp=Z,1.3nm,0.7s,mb4.0,baz=97,slow=6.7,SNR=5.2						
BILL	Bilibino	59.43	26	i P	P	07 13 21.4	+0.6
BILL				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
MDT	Midelt	63.16	293	P	P	07 13 45.0	-1.4
	comp=Z,1.0nm,0.8s,mb4.0,baz=54,slow=12,SNR=2.6						
SUMG	Summit	63.36	342	eP	P	07 13 46.3	-0.9
	comp=Z,41nm,1.1s,mb5.5						
LSZ	Lusaka	65.58	229	eP	P	07 14 03.2	+0.9
KAKA	Kakadu	73.26	119	eP	P	07 15 07.7	+18
	comp=Z,4.1nm,0.8s,mb4.4						
INK	Inuvik	75.39	10	eP	P	07 15 01.0	+0.2
	comp=Z,40nm,1.1s,mb5.3						
INK	Inuvik	75.39	10	eP	P	07 15 01.0	+0.2
INK				pmax	pmax		
	comp=Z,40nm,1.1s						
COLA	College	75.69	17	eP	P	07 15 02.5	-0.1
	comp=Z,8.3nm,1.0s,mb4.6						
COLA	College	75.69	17	eP	P	07 15 02.5	-0.1
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
ILAR	Eielson Array	76.01	17	P	P	07 15 04.4	0.0
	comp=Z,1.7nm,0.4s,mb4.3,baz=304,slow=4.7,SNR=31						
DBIC	Dimbokro	76.46	269	P	P	07 15 07.5	-0.5
	comp=Z,6.4nm,0.9s,mb4.6,baz=42,slow=7.3,SNR=5.5						
DBIC	Dimbokro	76.46	269	eP	P	07 15 07.1	-0.9
	comp=Z,7.5nm,0.8s,mb4.7						
DBIC	Dimbokro	76.46	269	eP	P	07 15 07.1	-0.9
DBIC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BOSA	Boshof	77.58	222	P	P	07 15 14.3	+0.3
	comp=Z,7.8nm,0.7s,mb4.8,baz=62,slow=5.8,SNR=16						
BOSA	Boshof	77.58	222	eP	P	07 15 14.0	+0.1
	comp=Z,15nm,1.3s,mb4.8						
BOSA	Boshof	77.58	222	eP	P	07 15 14.0	+0.1
BOSA				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
DAWY	Dawson	78.25	14	eP	P	07 15 17.1	+0.3
WRA	Warramunga Arr	79.47	123	P	P	07 15 25.6	+1.2
	comp=Z,1.3nm,0.4s,mb4.2,baz=324,slow=4.9,SNR=54						
WRAB	Tennant Creek	79.47	123	eP	P	07 15 25.1	+0.6
WB2	Warramunga Arr	79.48	123	eP	P	07 15 25.6	+1.1
KDAK	Kodiak Island	80.17	23	P	P	07 15 28.3	+0.9
	comp=Z,7.0nm,0.7s,mb4.7,baz=226,slow=9.2,SNR=6.1						
YKA	Yellowknife Ar	82.95	4	P	P	07 15 42.0	+0.2
	comp=Z,3.7nm,0.4s,mb4.8,baz=347,slow=5.4,SNR=36						
YKA	Yellowknife Ar	82.95	4	i P	P	07 15 42.2	+0.4
YKA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SCHQ	Schefferville	84.47	338	P	P	07 15 49.7	+0.1
	comp=Z,6.1nm,0.8s,mb4.8,baz=54,slow=8.5,SNR=4.9						
SCHQ	Schefferville	84.47	338	P	P	07 15 49.7	+0.1
VNA2	Neumayer--Watz	119.40	202	e	PKPdf	07 22 10.6	+1.0
VNA2	Neumayer--Watz	119.40	202	⇓iPKPdf	PKPdf	07 22 06.1	-3.5
VNA2				e		07 22 10.6	
VNA3	Neumayer Olymp	120.21	202	e	PKPdf	07 22 12.5	+1.3
VNA3	Neumayer Olymp	120.21	202	⇓iPKPdf	PKPdf	07 22 07.3	-3.9
VNA3				e		07 22 12.5	
PLCA	Paso Flores	150.87	247	PKPbc	PKPdf	07 23 10.9	+3.4
	comp=Z,2.8nm,1.0s,baz=180,slow=5.1,SNR=4.9						
PLCA				PKPab	PKPab	07 23 18.1	+0.2
	comp=Z,2.3nm,1.1s,baz=357,slow=2.0,SNR=3.2						

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*CSEM **01** 07:09:28.6±0.1, 36.36N×3.72W, h2^{km}, ML2.7/7, Error ellipse: s-maj=2.3km s-min=1.7km az=134.0*

*SFS **01** 07:09:29.0, 36.45N×3.78W, ML2.3*

*MDD **01** 07:09:30.2±0.5, 36.46N×3.77W, mbLg2.4/11, Error ellipse: s-maj=3.8km s-min=2.7km az=149.0, PRXIMO*

ISC 01 07:09:28.1±0.5**, 36.45N**±0.03×**3.76W**±0.04**, h10**^{km}±3^{km}**, n51, σ1^{s}10**/69**, 1C-2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGUA	Guajares	0.42	22	⇓Pg	Pg	07 09 37.7	+1.1
	31nm,0.2s,SNR=18						
EGUA				Lg		07 09 43.2	
	49nm,0.2s,SNR=7.9						
ERON	Agron	0.57	356	⇑Pg	Pg	07 09 40.6	+0.9
	71nm,0.2s,SNR=18						
ERON				Lg		07 09 47.8	
	108nm,0.3s,SNR=23						
ELOJ	Sierra Loja	0.77	336	Pg	Pg	07 09 44.0	+0.5
	3.2nm,0.2s,SNR=16						
ELOJ				Lg		07 09 53.1	
	44nm,0.3s,SNR=21						
EQUE	Quentar	0.80	19	⇓Pg	Pg	07 09 44.4	+0.2
	26nm,0.2s,SNR=18						
EQUE				Lg		07 09 54.8	
	19nm,0.2s,SNR=4.0						
EMIJ	Mijas	0.82	279	Pg	Pg	07 09 44.5	-0.1
	15nm,0.1s,SNR=7.9						
EMIJ				Lg		07 09 55.4	
	409nm,0.4s,SNR=7.9						
EMIJ	Mijas	0.82	279	Pg	Pg	07 09 44.5	-0.1
	15nm,0.1s,SNR=7.9						
EMIJ				Lg		07 09 55.4	
	409nm,0.4s,SNR=7.9						
ECOG	Cogollos-Vega	0.84	11	Pg	Pg	07 09 45.7	+0.6
	9.1nm,0.2s,SNR=11						
ECOG				Lg		07 09 57.3	
	29nm,0.2s,SNR=10						
REAL	Reales	1.17	272	Pg	Pg	07 09 58.2	+6.8
REAL	Reales	1.17	272	eP	Pb	07 09 58.2	+8.3
ELUQ	Luque	1.19	340	Pg	Pg	07 09 53.2	+1.4
	10nm,0.2s,SNR=16						
ELUQ				Lg		07 10 07.8	
	22nm,0.2s,SNR=6.6						
EMEL	Melilla	1.32	150	Lg		07 10 08.0	
	64nm,0.3s,SNR=4.0						
EMLI	Melilla	1.32	150	Lg		07 10 08.0	
	64nm,0.3s,SNR=4.0						
ENIJ	Nijar	1.35	67	Pg	Pg	07 09 55.1	-0.1
	0.3nm,0.2s,SNR=7.9						
ENIJ				Lg		07 10 13.4	
	0.4nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	1.38	271	Pg	Pg	07 09 54.9	-0.8
	1.9nm,0.3s,SNR=9.3						
EJIF				Lg		07 10 13.4	
	20nm,0.4s,SNR=7.5						
LIJA	Lijar	1.40	290	Pg	Pg	07 09 56.8	+0.7
LIJA				Lg		07 10 17.0	
LIJA	Lijar	1.40	290	i P	Pn	07 09 56.8	+3.0
LIJA				eS	Sb	07 10 17.0	+5.3
EQES	Quesada	1.46	22	Pg	Pg	07 09 56.8	-0.5
	6.1nm,0.1s,SNR=7.9						
EQES				Lg		07 10 17.1	
	70nm,0.3s,SNR=7.9						
EQES	Quesada	1.46	22	Pg	Pg	07 09 56.8	-0.6
	6.1nm,0.1s,SNR=7.9						
EQES				Lg		07 10 17.1	
	70nm,0.3s,SNR=7.9						
EHUE	Huescar	1.66	34	Pn	Pn	07 09 59.3	+1.8
	0.6nm,0.2s,SNR=7.9						
EHUE				Pg	Pg	07 10 02.8	+1.6
	4.4nm,0.2s,SNR=35						
EHUE				Lg		07 10 22.3	
	14nm,0.4s,SNR=5.3						
EBAN	Banos Encina	1.72	359	Pg	Pg	07 10 01.3	-1.1
	12nm,0.4s,SNR=12						
EBAN				Lg		07 10 25.9	
	28nm,0.4s,SNR=8.1						
ESPR	Espera	1.74	285	Pg	Pg	07 10 03.4	+0.6
	2.9nm,0.2s,SNR=7.9						
ESPR	Espera	1.74	285	Pg	Pg	07 10 03.4	+0.6
	2.9nm,0.2s,SNR=7.9						
EADA	Adamuz	1.84	340	Pg	Pg	07 10 03.8	-1.0
	19nm,0.4s,SNR=7.9						
EADA				Sn	Sn	07 10 24.8	+1.2
	4.4nm,0.2s,SNR=7.9						
EADA				Lg		07 10 29.3	
	43nm,0.4s,SNR=7.9						
EADA	Adamuz	1.84	340	Pg	Pg	07 10 03.8	-1.0
	19nm,0.4s,SNR=7.9						
EADA				Sn	Sn	07 10 24.8	+1.2
	4.4nm,0.2s,SNR=7.9						
EADA				Lg		07 10 29.3	
	43nm,0.4s,SNR=7.9						
ECAB	El Cabril	2.10	321	Pg	Pg	07 10 07.8	-2.2
	5.3nm,0.3s,SNR=14						
ECAB				Sn	Sn	07 10 31.0	+0.9
	1.8nm,0.4s,SNR=6.9						
ECAB				Lg		07 10 37.2	
	17nm,0.3s,SNR=4.5						
ECAB	El Cabril	2.10	321	Pg	Pg	07 10 07.8	-2.2
	5.3nm,0.3s,SNR=14						
ECAB				Sn	Sn	07 10 31.0	+0.8
	1.8nm,0.4s,SNR=6.9						
ECAB				Lg		07 10 37.2	
	17nm,0.3s,SNR=4.5						
TZK	Tazeka	2.38	189	i P	Pn	07 10 08.0	+0.2
TZK				i S	Sn	07 10 36.0	-1.3
EVIA	Vianos	2.41	24	Pg	Pg	07 10 14.2	-1.9
	8.2nm,0.4s,SNR=6.5						
EMUR	La Murta	2.45	55	Pn	Pn	07 10 08.7	-0.1
	3.7nm,0.3s,SNR=7.9						
EMUR				Pg	Pg	07 10 14.8	-2.3
	2.7nm,0.3s,SNR=7.9						
EMUR				Lg		07 10 47.6	
	17nm,0.6s,SNR=7.9						
EMUR	La Murta	2.45	55	Pn	Pn	07 10 08.7	-0.1
	3.7nm,0.3s,SNR=7.9						
EMUR	La Murta	2.45	55	Pg	Pg	07 10 14.8	-2.2
	2.7nm,0.3s,SNR=7.9						
EMUR				Lg		07 10 47.6	
	17nm,0.6s,SNR=7.9						
EMIN	Mina Concepcio	2.68	300	Pn	Pn	07 10 13.3	+1.2
	1.4nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	07 10 44.4	-0.5
	3.7nm,0.2s,SNR=4.0						
EMIN				Lg		07 10 54.4	
	4.0nm,0.2s,SNR=4.0						
EMIN	Mina Concepcio	2.68	300	Pn	Pn	07 10 13.3	+1.2
	1.4nm,0.1s,SNR=7.9						
EMIN				Sn	Sn	07 10 44.4	-0.5
	3.7nm,0.2s,SNR=4.0						
EMIN				Lg		07 10 54.4	
	4.0nm,0.2s,SNR=4.0						
ETOB	Tobarra	2.81	38	Pn	Pn	07 10 14.9	+0.9
	0.8nm,0.2s,SNR=7.9						
ETOB				Pg	Pg	07 10 20.7	-3.6
	3.2nm,0.3s,SNR=9.1						
ETOB				Lg		07 10 59.9	
	18nm,0.6s,SNR=7.9						
ETOB	Tobarra	2.81	38	Pn	Pn	07 10 14.9	+0.9
	0.8nm,0.2s,SNR=7.9						
ETOB	Tobarra	2.81	38	Pg	Pg	07 10 20.7	-3.6
	3.2nm,0.3s,SNR=9.1						
ETOB				Lg		07 10 59.9	
	18nm,0.6s,SNR=7.9						
EGRO	El Granado	3.17	291	Pn	Pn	07 10 19.3	+0.2
	1.4nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	07 10 56.6	-0.8
	2.2nm,0.2s,SNR=7.9						
EGRO	El Granado	3.17	291	Pn	Pn	07 10 19.3	+0.2
	1.4nm,0.2s,SNR=7.9						
EGRO				Sn	Sn	07 10 56.6	-0.8
	2.2nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	3.23	357	Pn	Pn	07 10 20.9	+0.9
	0.4nm,0.2s,baz=176,slow=12,SNR=6.3						
ESDC				Pg	Pg	07 10 30.9	-1.7
	0.4nm,0.2s,baz=178,slow=12,SNR=7.4						
ESDC				Sn	Sn	07 10 58.0	-0.8
	1.0nm,0.8s,baz=186,slow=15,SNR=7.9						
ESDC				Lg		07 11 12.5	
	4.5nm,0.5s,baz=174,slow=28,SNR=7.9						
ESDC	Sonseca Array	3.23	357	Pn	Pn	07 10 20.9	+1.0
	0.4nm,0.2s,SNR=6.3						
ESDC	Sonseca Array	3.23	357	Pg	Pg	07 10 30.9	-1.7
	0.4nm,0.2s,SNR=7.4						
ESDC				Sn	Sn	07 10 58.0	-0.8
	1.0nm,0.8s,SNR=7.9						
ESDC				Lg		07 11 12.5	
	4.5nm,0.5s,SNR=7.9						
EBAD	Badajoz	3.46	313	Pn	Pn	07 10 24.0	+0.7
	1.4nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	07 11 04.2	-0.6
	9.6nm,0.2s,SNR=7.9						
EBAD	Badajoz	3.46	313	Pn	Pn	07 10 24.0	+0.7
	1.4nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	07 11 04.2	-0.6
	9.6nm,0.2s,SNR=7.9						
CZD	Col de Zad	3.56	198	Pn	Pn	07 10 25.0	+0.3
CZD				Sn	Sn	07 11 00.0	-7.3
CZD	Col de Zad	3.56	198	i P	Pn	07 10 25.0	+0.3
PBEJ	Beja	3.64	297	ePn	Pn	07 10 26.1	+0.4
PBEJ				eSn	Sn	07 11 08.3	-0.9
	2.9nm,0.3s						
PBEJ	Beja	3.64	297	Sn	Sn	07 11 08.3	-0.9
	1.4nm,0.3s						
PBEJ	Beja	3.64	297	ePn	Pn	07 10 26.1	+0.4
PBEJ				eSn	Sn	07 11 08.3	-0.9
	2.9nm,0.3s						
ECHE	Chera	3.84	34	Lg		07 11 32.2	
	2.9nm,0.5s,SNR=7.9						
ECHE	Chera	3.84	34	Lg		07 11 32.2	
	2.9nm,0.5s,SNR=7.9						
GUD	Guadarrama	4.20	356	Pn	Pn	07 10 34.1	+0.3
	0.2nm,0.2s,SNR=4.0						
GUD				Sn	Sn	07 11 21.9	-1.7
	2.0nm,0.5s,SNR=7.9						
GUD				Lg		07 11 44.9	
	3.6nm,0.5s,SNR=7.9						

WEL 01 07:22:41.7±0.1**, 42.19S**×**173.47E, h33**^{km}**, ML3.7**/24**, 8C, Error ellipse: s-maj=1.7km s-min=1.4km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHZ	Kahutara	0.23	167	⇑P*	Pb	07 22 48.7	+0.1
KHZ				S*	Sb	07 22 54.0	+0.6
KHZ				S*	Sb	07 22 54.1	+0.8
BSWZ	Blackbirch Sta	0.57	33	P*	Pb	07 22 53.3	-0.1
BSWZ				S*	Sb	07 23 02.2	+0.8
BSWZ				S*	Sb	07 23 02.4	+1.1
THZ	Tophouse	0.60	315	⇑P*	Pb	07 22 52.9	-1.0
THZ				S*	Sb	07 23 01.0	-1.3
THZ				S*	Sb	07 23 01.1	-1.2
CMWZ	Cape Campbell	0.71	52	P*	Pb	07 22 56.1	+0.4
TUWZ	Tuamarina	0.84	25	⇑P*	Pb	07 22 57.1	-0.6
TUWZ				S*	Sb	07 23 08.9	+0.1
NNZ	Nelson	0.98	356	⇑PN	Pn	07 22 58.7	-0.5
LTZ	Lake Taylor	1.06	236	⇑PN	Pn	07 22 59.9	-0.6
LTZ				SN	Sn	07 23 13.1	-1.1
TCW	Tory Channel	1.15	32	P*	Pb	07 23 01.0	-2.0
TCW				S*	Sb	07 23 16.1	-1.5
SNZO	South Karori	1.28	47	PN	Pn	07 23 02.6	-0.9
BHW	Baring Head	1.31	54	PN	Pn	07 23 02.9	-1.1
DSZ	Denniston Nort	1.32	289	⇑PN	Pn	07 23 03.7	-0.5
WEL	Wellington	1.33	47	PN	Pn	07 23 03.5	-0.8
MRW	Makara Radio	1.33	44	PN	Pn	07 23 03.3	-1.0
MRW				S*	Sb	07 23 19.4	-3.4
DUWZ	D’Urville Isla	1.43	14	PN	Pn	07 23 05.2	-0.6
CRLZ	Canterbury Las	1.52	204	ePN	Pn	07 23 03.8	-3.2
QRZ	Quartz Range	1.54	332	⇑PN	Pn	07 23 07.3	+0.1
MSWZ	Moikau Station	1.54	60	PN	Pn	07 23 05.7	-1.7
MSWZ				S*	Sb	07 23 24.1	-4.7
CAW	Cannon Point	1.62	48	PN	Pn	07 23 07.0	-1.4
MQZ	McQueen’s Vall	1.63	201	⇑PN	Pn	07 23 05.6	-2.9
MQZ				SN	Sn	07 23 24.2	-4.4
PAWZ	Paruwai Farm	1.67	62	PN	Pn	07 23 07.3	-1.9
KIW	Kapiti Island	1.71	40	PN	Pn	07 23 08.8	-1.0
TRWZ	Traveller	1.84	65	ePN	Pn	07 23 09.3	-2.3
TRWZ				S*	Sb	07 23 32.0	-5.4
MTW	Mount Morrison	1.84	57	PN	Pn	07 23 09.3	-2.3
MRZ	Mangatainoka R	2.21	47	PN	Pn	07 23 14.4	-2.4
MRZ				S*	Sb	07 23 40.0	-7.9
RPZ	Rata Peaks	2.34	229	ePN	Pn	07 23 16.3	-2.4
RPZ				SN	Sn	07 23 42.7	-3.8
TSZ	Takapari Road	2.84	42	ePN	Pn	07 23 23.1	-2.9
VRZ	Vera Road	3.22	18	ePN	Pn	07 23 31.0	-0.2
PKVZ	Pokaka	3.23	27	ePN	Pn	07 23 31.7	+0.3
LBZ	Lake Benmore	3.25	226	ePN	Pn	07 23 28.8	-2.9
FWVZ	Far West T-bar	3.33	29	ePN	Pn	07 23 31.8	-1.1
ODZ	Otahua Downs	3.51	215	PN	Pn	07 23 31.5	-3.9
HIZ	Hauiti	3.82	17	PN	Pn	07 23 39.1	-0.8
MKAZ	Moumakai	5.24	15	PN	Pn	07 23 58.2	-1.7
OTAZ	Otara	5.36	13	PN	Pn	07 23 59.9	-1.6

*NIED **01** 07:23:00,30.00N×130.40E,h53^{km},Mw4.5 Best double couple: M₀5.39×10^{15} NP1:φs83°,δ79°,λ114°. NP2:φs196°, δ26°,λ25°.*
*MOS **01** 07:23:35.7±1.1,29.99N×130.33E,h37^{km},mb4.5/14,Error ellipse: s-maj=13.9km s-min=9.4km az=103.1*
*JMA **01** 07:23:38.6,29.99N×130.43E,h51^{km}±1^{km},M4.5*
JMA Felt I J1.
*BJI **01** 07:23:40.4,29.94N×130.55E,h83^{km},mB4.5,mb4.2*
*IDC **01** 07:23:40.2±1.2,29.98N×130.20E,h67^{km}±11^{km},mb4.0/15, mb1 4.2/18,mb1mx4.1/24,mbtmp4.3/18,MS3.5/8, Ms1 3.5/8,ms1mx3.4/26,Error ellipse: s-maj=18.1km s-min=7.9km az=106.0*
*NEIC **01** 07:23:40.2±1.0,29.99N×130.35E,h62^{km}±9^{km},mb4.5/16, MW4.4(NIED),Error ellipse: s-maj=9.6km s-min=7.6km az=128.0*
ISC 01 07:23:37.9±0.5,**29.96N**±0.04×**130.42E**±0.06,**h56**^{km}±4^{km}, **n75**,σ**1**^{s}**15**/75,**mb4.4**/37,**MS3.6**/5,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	**Nakanoshima**	**0.49**	**257**	P	**P**	**07 23 50.0**	**+0.5**
JNN				S	**S**	**07 23 58.1**	**+0.1**
JKC	**Kuchinoerabu**	**0.54**	**339**	P	**P**	**07 23 50.1**	**0.0**
JKC				S	**S**	**07 23 58.6**	**-0.4**
JTN	**Tanegashima 3**	**0.85**	**34**	P	**P**	**07 23 54.1**	**+0.2**
JTSR	**Tashiro 2**	**1.28**	**19**	P	**P**	**07 24 00.0**	**0.0**
JTSR				S	**S**	**07 24 15.8**	**-0.6**
JSU	**Suzuyama**	**1.55**	**1**	P	**P**	**07 24 03.7**	**0.0**
JSU				S	**S**	**07 24 22.0**	**-0.8**
JNU	**Nakatsue**	**3.18**	**7**	P	**P**	**07 24 27.8**	**+1.0**
	16nm,0.3s,baz=201,slow=13,SNR=110						
JNU				S	**S**	**07 25 05.8**	**+2.1**
	10nm,0.3s,baz=226,slow=30,SNR=7.5						
JOW	**Kunigami**	**3.64**	**212**	P	**P**	**07 24 33.0**	**-0.3**
	13nm,0.3s,baz=78,slow=12,SNR=23						
JOW				S	**S**	**07 25 14.3**	**-1.0**
	29nm,0.3s,baz=138,slow=29,SNR=7.0						
JHJ	**Hachijo jima 2**	**8.59**	**66**	LR	LR	07 28 40.8	
	comp=Z,135nm,19.6s,baz=307,slow=34						
MJAR	**Matsushiro Arr**	**9.25**	**43**	P	**P**	**07 25 51.5**	**+0.2**
	0.8nm,0.3s,baz=242,slow=13,SNR=6.1						
CBIJ	**Chichi jima**	**10.73**	**103**	LR	LR	07 29 45.6	
	comp=Z,141nm,21.1s,baz=26,slow=34						
CN2	**Changchun**	**14.38**	**345**	*e*P	**P**	**07 27 04.9**	**+5.1**
CN2				AMB	AMB		
	comp=Z,40nm,0.9s						
CN2				AMB	AMB		
	comp=Z,120nm,3.0s						
ASAJ	**Asahikawa**	**17.12**	**31**	LR	LR	07 34 11.9	
	comp=Z,154nm,20.5s,baz=249,slow=37						
ENH	**Enshi**	**18.12**	**276**	*e*P	**P**	**07 27 50.1**	**+2.8**
	comp=Z,12nm,0.6s						
XAN	**Xi’an**	**18.68**	**288**	P	**P**	**07 27 53.7**	**-0.3**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**19.49**	**26**	*e*P	**P**	**07 28 02.0**	**-0.9**
GUMO	**Guam**	**21.06**	**138**	LR	LR	07 34 44.0	
	comp=Z,81nm,21.5s,MS3.1,baz=76,slow=31						
CD2	**Chengdu**	**23.00**	**279**	P	**P**	**07 28 40.6**	**+1.9**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
SONM	**Songino Array**	**25.69**	**321**	P	**P**	**07 29 03.5**	**-0.8**
	comp=Z,6.3nm,0.8s,mb4.2,baz=136,slow=9.3,SNR=27						
SONM				LR	LR	07 40 26.0	
	comp=Z,176nm,19.3s,MS3.6,baz=98,slow=39						
ZAK	**Zakamensk**	**28.83**	**323**	*e*P	**P**	**07 29 32.4**	**-0.5**
JIRN	**Jiri**	**38.65**	**278**	*e*P	**P**	**07 30 59.2**	**+1.5**
	comp=Z,5.8nm,0.6s,mb4.5						
GUN	**Gumba**	**38.86**	**278**	*e*P	**P**	**07 31 00.7**	**+1.3**
	comp=Z,21nm,0.6s,mb5.0						
PKI	**Pulchoki**	**39.34**	**278**	*e*P	**P**	**07 31 03.8**	**+0.3**
	comp=Z,10nm,0.9s,mb4.6						
KKN	**Kakani**	**39.40**	**278**	*e*P	**P**	**07 31 05.7**	**+1.8**
DMN	**Daman**	**39.60**	**278**	*e*P	**P**	**07 31 07.0**	**+1.4**
	comp=Z,17nm,1.1s,mb4.7						
MKAR	**Makanchi Array**	**40.63**	**308**	P	**P**	**07 31 12.9**	**-1.0**
	comp=Z,2.8nm,0.6s,mb4.0,baz=91,slow=11,SNR=16						
MKAR				PcP	PcP	07 33 14.4	-1.3
	comp=Z,1.0nm,0.6s,baz=70,slow=3.4,SNR=6.6						
MKAR				LR	LR	07 48 14.6	
	comp=Z,57nm,20.1s,MS3.4,baz=211,slow=36						
MKAR	**Makanchi Array**	**40.63**	**308**	P	**P**	**07 31 14.3**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	**Tiksi**	**41.75**	**359**	*e*P	**P**	**07 31 19.8**	**-3.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
KURK	**Kurchatov**	**43.56**	**314**	*e*P	**P**	**07 31 37.3**	**-0.5**
	comp=Z,4.7nm,0.8s,mb4.3						
KURK	**Kurchatov**	**43.56**	**314**	*e*P	**P**	**07 31 37.3**	**-0.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
BVA0	**Borovoye Array**	**48.87**	**316**	*i* P	**P**	**07 32 19.3**	**-0.4**
KKAR	**Karatay Array**	**48.94**	**303**	*e*P	**P**	**07 32 20.7**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
BRVK	**Borovoye**	**48.94**	**316**	*e*P	**P**	**07 32 19.3**	**-0.9**
	comp=Z,3.4nm,0.6s,mb4.5						
BRVK	**Borovoye**	**48.94**	**316**	*e*P	**P**	**07 32 19.3**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
WRAB	**Tennant Creek**	**49.74**	**175**	*e*P	**P**	**07 32 26.2**	**-0.7**
	comp=Z,4.4nm,0.7s,mb4.6						
WRAB	**Tennant Creek**	**49.74**	**175**	*e*P	**P**	**07 32 26.2**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
WRA	**Warramunga Arr**	**49.75**	**175**	P	**P**	**07 32 25.9**	**-1.1**
	comp=Z,1.9nm,0.6s,mb4.3,baz=354,slow=8.4,SNR=35						
CTAO	**Charters Tower**	**52.04**	**161**	*e*P	**P**	**07 32 44.6**	**+0.4**
	comp=Z,1.8nm,0.6s,mb4.2						
CTAO	**Charters Tower**	**52.04**	**161**	*e*P	**P**	**07 32 44.6**	**+0.3**
CTAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
AB31	**Akbulak array**	**55.58**	**312**	*i* P	**P**	**07 33 09.1**	**-0.8**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
KDAK	**Kodiak Island**	**58.39**	**38**	P	**P**	**07 33 28.0**	**-1.7**
	comp=Z,7.7nm,0.9s,mb4.7,baz=298,slow=11,SNR=5.7						
MCK	**McKinley**	**59.49**	**31**	*e*P	**P**	**07 33 36.9**	**-0.4**
	comp=Z,4.4nm,0.9s,mb4.5						
MCK	**McKinley**	**59.49**	**31**	*e*P	**P**	**07 33 36.9**	**-0.3**
MCK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
PMR	**Palmer**	**59.66**	**33**	*e*P	**P**	**07 33 38.1**	**-0.3**
	comp=Z,16nm,1.5s,mb4.8						
PMR	**Palmer**	**59.66**	**33**	*e*P	**P**	**07 33 38.1**	**-0.3**
PMR				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.8						
COLA	**College**	**59.83**	**29**	*e*P	**P**	**07 33 40.1**	**+0.6**
	comp=Z,1.7nm,0.6s,mb4.2						
COLA	**College**	**59.83**	**29**	*e*P	**P**	**07 33 40.2**	**+0.6**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ILAR	**Eielson Array**	**60.25**	**29**	P	**P**	**07 33 41.0**	**-1.5**
	comp=Z,1.3nm,0.7s,mb4.1,baz=272,slow=5.7,SNR=19						
STKA	**Stephens Creek**	**62.40**	**169**	P	**P**	**07 33 56.9**	**-0.6**
	comp=Z,2.7nm,0.6s,mb4.6,baz=337,slow=5.3,SNR=15						
STKA	**Stephens Creek**	**62.40**	**169**	*e*P	**P**	**07 33 56.9**	**-0.5**
INK	**Inuvik**	**64.71**	**24**	*e*P	**P**	**07 34 11.2**	**-0.7**
	comp=Z,1.6nm,0.6s,mb4.2						
INK	**Inuvik**	**64.71**	**24**	*e*P	**P**	**07 34 11.2**	**-0.8**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	**67.27**	**338**	P	**P**	**07 34 26.4**	**-1.8**
	comp=Z,3.8nm,0.8s,mb4.5,baz=37,slow=9.0,SNR=2.9						
ARCES				LR	LR	08 07 09.3	
	comp=Z,105nm,19.3s,MS4.1,baz=45,slow=39						
FINES	**FINESS Array B**	**70.59**	**330**	P	**P**	**07 34 46.5**	**-2.3**
	comp=Z,1.3nm,0.6s,mb4.1,baz=74,slow=6.5,SNR=10						
FINES				LR	LR	08 06 12.5	
	comp=Z,52nm,18.8s,MS3.8,baz=350,slow=36						
FINES	**FINESS Array B**	**70.59**	**330**	P	**P**	**07 34 46.5**	**-2.3**
FINES				LR	LR	08 06 12.5	
AKASG	**Malin Array Be**	**73.97**	**320**	P	**P**	**07 35 07.1**	**-1.8**
	comp=Z,0.5nm,0.4s,mb3.8,baz=58,slow=6.2,SNR=4.2						
AKASG	**Malin Array Be**	**73.97**	**320**	P	**P**	**07 35 07.1**	**-1.8**
HFS	**Hagfors**	**76.43**	**333**	P	**P**	**07 35 21.0**	**-1.7**
	comp=Z,1.8nm,0.6s,mb4.2,baz=135,slow=4.2,SNR=5.8						
HFS	**Hagfors**	**76.43**	**333**	P	**P**	**07 35 21.1**	**-1.7**
NB2	**NORSAR Subarra**	**76.83**	**334**	P	**P**	**07 35 23.0**	**-2.1**
	comp=Z,2.1nm,0.6s,mb4.2,baz=49,slow=5.3						
NOA	**NORSAR Array B**	**76.83**	**334**	P	**P**	**07 35 22.4**	**-2.7**
	comp=Z,2.7nm,0.6s,mb4.4,baz=49,slow=5.4,SNR=8.7						
SUMG	**Summit**	**77.46**	**357**	*e*P	**P**	**07 35 28.4**	**+0.1**
	comp=Z,5.5nm,0.7s,mb4.6						
GERES	**GERESS Array B**	**83.39**	**324**	P	**P**	**07 36 00.1**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.3,baz=27,slow=6.0,SNR=5.6						
CMB	**Columbia Colle**	**85.44**	**48**	*e*P	**P**	**07 36 11.8**	**+1.0**
	comp=Z,4.5nm,0.9s,mb4.6						
CMB	**Columbia Colle**	**85.44**	**48**	*e*P	**P**	**07 36 11.8**	**+1.1**
CMB				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
HLID	**Hailey**	**85.82**	**41**	*e*P	**P**	**07 36 13.6**	**+1.1**
	comp=Z,3.3nm,0.9s,mb4.6						
NVAR	**Mina Array Bea**	**86.55**	**47**	P	**P**	**07 36 18.1**	**+1.9**
	comp=Z,1.5nm,0.7s,mb4.3,baz=286,slow=6.7,SNR=18						
HWUT	**Hardware Ranch**	**88.68**	**41**	*e*P	**P**	**07 36 26.9**	**+0.6**
	comp=Z,7.6nm,1.3s,mb4.9						
TPNV	**Topopah Spring**	**88.74**	**47**	*e*P	**P**	**07 36 28.2**	**+1.5**
	comp=Z,1.7nm,0.7s,mb4.5						
TPNV	**Topopah Spring**	**88.74**	**47**	*e*P	**P**	**07 36 28.3**	**+1.6**
TPNV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
BW06	**Boulder Array**	**89.06**	**40**	*e*P	**P**	**07 36 29.1**	**+1.0**
	comp=Z,1.7nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	**89.06**	**40**	P	**P**	**07 36 29.6**	**+1.4**
	comp=Z,1.2nm,0.8s,mb4.3,baz=19,slow=1.4,SNR=11						
ULM	**Lac du Bonnet**	**90.23**	**28**	P	**P**	**07 36 34.5**	**+1.1**
	comp=Z,7.7nm,0.8s,mb5.1,baz=312,slow=7.2,SNR=15						
PV10	**Paradox Valley**	**92.26**	**43**	*e*P	**P**	**07 36 45.4**	**+2.2**
TXAR	**Lajitas Array**	**101.67**	**46**	P	P	07 37 26.3	+0.3
	comp=Z,0.3nm,0.7s,baz=297,slow=2.4,SNR=5.2						
DBIC	**Dimbokro**	**123.73**	**303**	PKP	PKPdf	07 42 30.4	+0.1
	comp=Z,1.6nm,0.5s,baz=14,slow=7.1,SNR=5.0						

MEX 01 07:45:57.1±0.9,**16.02N**×**99.03W**,**h16**^{km}±24^{km},**MD4.1**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.94**	**67**	*i* P	Pb	07 46 11.5	-3.1
PNIG				*i* S	Sb	07 46 22.2	-4.3
ACX	**Acapulco**	**1.20**	**315**	*i* P	Pb	07 46 15.0	-4.0
ACX				*i* S	Sb	07 46 29.0	-5.1
CAIG	**El Cayaco**	**1.57**	**311**	*i* P	Pn	07 46 22.1	-2.5
CAIG				*i* S	Sn	07 46 38.1	-6.5
PLIG	**Platanillo**	**2.40**	**349**	*i* P	Pn	07 46 30.9	-5.6
PLIG				*i* S	Sn	07 47 02.3	-3.5
VHO	**Vista Hermosa**	**2.44**	**64**	*i* P	Pn	07 46 34.0	-2.9
VHO				*i* S	Sn	07 47 01.9	-4.7
OXX	**Oaxaca**	**2.45**	**64**	*e*P	Pn	07 46 34.0	-3.1
OXX				*i* S	Sn	07 47 02.5	-4.4
YAIG	**Yautepec**	**2.83**	**359**	*i* P	Pn	07 46 38.8	-3.8
YAIG				*i* S	Sn	07 47 11.2	-5.4
CMIG	**Matias Romero**	**4.11**	**74**	*i* P	Pn	07 46 56.8	-4.0
CMIG				*i* S	Sn	07 47 43.1	-6.0

MEX 01 07:49:48.9±0.8,**16.04N**×**97.19W**,**h40**^{km}±17^{km},**MD4.2**, **Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.97**	**291**	*i* P	P	07 50 04.9	-1.3
PNIG				*i* S	S	07 50 16.7	-2.2
HUIG	**Huatulco**	**1.07**	**104**	*i* P	P	07 50 05.7	-2.0
HUIG				*i* S	S	07 50 19.2	-2.4
VHO	**Vista Hermosa**	**1.12**	**23**	*i* P	P	07 50 06.4	-1.8
VHO				*i* S	S	07 50 20.2	-2.4
OXX	**Oaxaca**	**1.13**	**23**	*i* P	P	07 50 06.2	-2.2
OXX				*i* S	S	07 50 20.5	-2.5
CMIG	**Matias Romero**	**2.45**	**64**	*e*P	P	07 50 24.9	-2.4
CMIG				*i* S	S	07 50 53.3	-2.9
ACX	**Acapulco**	**2.74**	**288**	*i* P	P	07 50 29.0	-2.5
CAIG	**El Cayaco**	**3.12**	**289**	*i* P	P	07 50 35.8	-1.0
CAIG				*i* S	S	07 51 07.9	-5.4
PLIG	**Platanillo**	**3.22**	**317**	*i* P	P	07 50 37.4	-0.9
PLIG				*i* S	S	07 51 11.8	-4.1
TUIG	**Tuzandepetl**	**3.31**	**53**	*i* P	P	07 50 37.5	-2.1
TUIG				*i* S	S	07 51 15.7	-2.4
PPM	**Popocatepetl**	**3.31**	**336**	*i* P	P	07 50 37.2	-2.4
YAIG	**Yautepec**	**3.33**	**328**	*i* P	P	07 50 36.5	-3.3
YAIG				*i* S	S	07 51 16.1	-2.6
UNM	**Universidad Na**	**3.78**	**330**	*i* P	P	07 50 42.9	-3.4
UNM				*i* S	S	07 51 28.1	-2.0
SCX	**San Cristobal**	**4.43**	**80**	*e*P	P	07 50 52.5	-2.9
MOIG	**Morelia**	**5.25**	**314**	*i* S	S	07 52 04.1	-3.1

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*IDC **01** 08:04:03.4±2.3,34.56S×178.91W,mb4.2/2,mb1 4.5/4, mb1mx4.2/12,mbtmp4.5/4,ML4.7/2,MS3.8/6,Ms1 3.8/6, ms1mx3.4/20,Error ellipse: s-maj=64.6km s-min=26.2km az=122.0*
*NEIC **01** 08:04:04.8±0.9,34.71S×178.96W,h10^{km},mb4.7/4,Error ellipse: s-maj=21.3km s-min=10.7km az=108.0*
ISC 01 08:04:02.6±2.1,**34.81S**±0.09×**178.5W**±0.2,**h31**^{km}±21^{km}, **n51**,σ**1**^{s}**03**/53,**mb4.5**/6,**MS3.7**/5,**3C**,**South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.77**	**222**	*e*PN	**Pn**	**08 05 01.2**	**+1.0**
MXZ				SN	**Sn**	**08 05 43.9**	**-0.1**
MXZ	**Matakaoa Point**	**3.77**	**222**	*e*P	**Pn**	**08 05 01.2**	**+1.0**
PUZ	**Puketiti**	**4.17**	**218**	*e*PN	**Pn**	**08 05 06.0**	**+0.1**
PUZ				SN	**Sn**	**08 05 54.8**	**+0.5**
PUZ	**Puketiti**	**4.17**	**218**	*e*P	**Pn**	**08 05 04.9**	**-1.1**
MWZ	**Matawai**	**4.75**	**221**	*e*PN	**Pn**	**08 05 15.3**	**+1.1**
MWZ				SN	**Sn**	**08 06 09.1**	**+0.2**
MWZ	**Matawai**	**4.75**	**221**	*e*P	**Pn**	**08 05 15.3**	**+1.1**
MWZ				S	**Sn**	**08 06 09.1**	**+0.2**
URZ	**Urewera**	**4.93**	**224**	Pn	**Pn**	**08 05 18.0**	**+1.3**
	7.3nm,0.3s,baz=42,slow=7.2,SNR=26						
URZ				Sn	**Sn**	**08 06 12.8**	**-0.6**
	10.0nm,0.3s,baz=155,slow=20,SNR=11						
URZ	**Urewera**	**4.93**	**224**	*e*PN	**Pn**	**08 05 17.1**	**+0.4**
URZ				SN	**Sn**	**08 06 13.2**	**-0.3**
URZ	**Urewera**	**4.93**	**224**	*e*P	**Pn**	**08 05 17.1**	**+0.4**
KUZ	**Kuaotunu**	**5.07**	**246**	*e*PN	**Pn**	**08 05 19.3**	**+0.6**
KUZ	**Kuaotunu**	**5.07**	**246**	*e*P	**Pn**	**08 05 19.3**	**+0.6**
KNZ	**Kokohu**	**5.20**	**215**	*e*PN	**Pn**	**08 05 21.4**	**+0.9**
KNZ	**Kokohu**	**5.20**	**215**	*e*P	**Pn**	**08 05 21.4**	**+0.9**
RAO	**Raoul Island**	**5.56**	**5**	Pn	**Pn**	**08 05 25.8**	**+0.2**
	96nm,0.3s,baz=288,slow=23,SNR=3.8						
RAO				Sn	**Sn**	**08 06 27.5**	**-1.6**
	48nm,0.3s,baz=84,slow=22,SNR=2.4						
BKZ	**Black Stump Fm**	**5.91**	**221**	*e*PN	**Pn**	**08 05 29.6**	**-0.9**
BKZ				SN	**Sn**	**08 06 36.7**	**-1.2**
BKZ	**Black Stump Fm**	**5.91**	**221**	*e*P	**Pn**	**08 05 29.6**	**-0.9**
BKZ				S	**Sn**	**08 06 36.7**	**-1.3**
PXZ	**Pawanui**	**6.38**	**214**	*e*PN	**Pn**	**08 05 36.8**	**-0.4**
PXZ				SN	**Sn**	**08 06 46.5**	**-3.3**
MRZ	**Mangatainoka R**	**7.49**	**217**	*e*PN	**Pn**	**08 05 50.4**	**-2.3**
MRZ				SN	**Sn**	**08 07 09.8**	**-7.6**
MRZ	**Mangatainoka R**	**7.49**	**217**	*e*P	**Pn**	**08 05 50.4**	**-2.3**
MRZ				S	**Sn**	**08 07 09.8**	**-7.6**
TCW	**Tory Channel**	**8.56**	**220**	SN	**Sn**	**08 07 35.6**	**-8.5**
KHZ	**Kahutara**	**9.82**	**217**	SN	**Sn**	**08 08 03.2**	**-12**
KHZ	**Kahutara**	**9.82**	**217**	*e*P	**P**	**08 06 21.7**	**-3.2**
MQZ	**McQueen’s Vall**	**11.21**	**215**	SN	**S**	**08 08 36.0**	**-13**
DZM	**Mont Dzumac**	**18.30**	**310**	LR	LR	08 13 54.2	
	comp=Z,250nm,18.1s,baz=27,slow=33						
TBI	**Tubuai**	**27.74**	**73**	*e*LR	LR	08 16 42.2	
	110nm,29.5s						
PPT	**Papeete**	**30.97**	**64**	*e*LR	LR	08 18 07.9	
	114nm,27.2s,baz=232						
PPT	**Papeete**	**30.97**	**64**	LR	LR	08 21 50.4	
	comp=Z,221nm,18.3s,MS3.9,baz=244,slow=34						
HNR	**Honiara**	**32.04**	**317**	LR	LR	08 20 54.8	
	comp=Z,53nm,19.6s,MS3.2,baz=206,slow=32						
STKA	**Stephens Creek**	**33.31**	**264**	P	**P**	**08 10 41.6**	**+1.8**
	1.8nm,0.8s,mb4.0,baz=113,slow=11,SNR=3.8						
STKA				LR	LR	08 23 47.2	
	comp=Z,150nm,18.2s,MS3.7,baz=24,slow=36						
STKA	**Stephens Creek**	**33.31**	**264**	P	**P**	**08 10 40.5**	**+0.7**
STKA				LR	LR	08 23 47.2	
CTA	**Charters Tower**	**34.34**	**286**	LR	LR	08 22 40.1	
	comp=Z,60nm,18.8s,MS3.4,baz=47,slow=33						
CTAO	**Charters Tower**	**34.34**	**286**	*e*P	**P**	**08 10 47.5**	**-1.3**
	11nm,1.0s,mb4.7						
ASPA	**Alice Springs**	**42.63**	**272**	*e*P	**P**	**08 11 59.2**	**+1.1**
WB2	**Warramunga Arr**	**44.01**	**277**	*e*P	**P**	**08 12 09.6**	**+0.4**
WRAB	**Tennant Creek**	**44.01**	**277**	*e*P	**P**	**08 12 09.8**	**+0.5**
	7.4nm,0.7s,mb4.5						
WRA	**Warramunga Arr**	**44.02**	**277**	P	**P**	**08 12 09.7**	**+0.4**
	4.0nm,0.6s,mb4.3,baz=118,slow=7.7,SNR=63						
FITZ	**Fitzroy Crossi**	**52.06**	**274**	*e*P	**P**	**08 13 12.6**	**+0.6**
	6.3nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**52.06**	**274**	LR	LR	08 35 36.3	
	comp=Z,340nm,18.8s,MS4.4,baz=112,slow=37						
MBWA	**Marble Bar**	**55.43**	**267**	*e*P	**P**	**08 13 36.6**	**-0.2**
	20nm,1.4s,mb5.0						
VNA3	**Neumayer Olymp**	**73.95**	**176**	*e*	**P**	**08 15 47.0**	**+11**
VNA3	**Neumayer Olymp**	**73.95**	**176**	*e*	**P**	**08 15 54.5**	**+18**
VNA3	**Neumayer Olymp**	**73.95**	**176**	⇑*i*P	**P**	**08 15 42.8**	**+6.7**
VNA3				*e*		08 15 47.0	
VNA3				*e*		08 15 54.5	
VNA2	**Neumayer--Watz**	**74.38**	**177**	*e*	**P**	**08 15 50.0**	**+11**
VNA2	**Neumayer--Watz**	**74.38**	**177**	*e*	**P**	**08 15 57.2**	**+19**
VNA2	**Neumayer--Watz**	**74.38**	**177**	⇑*i*P	**P**	**08 15 45.7**	**+7.1**
VNA2				*e*		08 15 50.0	
VNA2				*e*	pP	08 15 57.2	+8.9
VNA1	**Neumayer--Stat**	**74.61**	**177**	*e*	**P**	**08 15 47.3**	**+7.3**
VNA1	**Neumayer--Stat**	**74.61**	**177**	*e*	**P**	**08 15 54.3**	**+14**
VNA1	**Neumayer--Stat**	**74.61**	**177**	⇑*i*P	**P**	**08 15 41.6**	**+1.6**
VNA1				*e*		08 15 47.3	
VNA1				*e*		08 15 54.3	
FINES	**FINESS Array B**	**149.08**	**337**	PKPbc	PKPdf	08 23 51.9	+4.0
	1.9nm,0.7s,baz=27,slow=3.1,SNR=4.7						
FINES	**FINESS Array B**	**149.08**	**337**	PKPbc	PKPdf	08 23 51.9	+4.0
BRTR	**Keskin Array B**	**154.03**	**290**	PKPbc	PKPdf	08 24 04.3	+8.4
	0.4nm,0.5s,baz=72,slow=4.6,SNR=2.4						
BRTR				PKPab	PKPab	08 24 14.4	-0.3
	0.8nm,0.8s,baz=90,slow=2.9,SNR=4.1						

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*NEIC **01** 08:14:32.8±1.7,5.45S×147.36E,h176^{km}±16^{km},mb4.6/2, Error ellipse: s-maj=17.0km s-min=13.9km az=138.0*
*IDC **01** 08:14:34.8±2.3,5.55S×147.28E,h195^{km}±23^{km},mb3.6/6, mb1 3.8/8,mb1mx3.7/14,mbtmp4.1/8,Error ellipse: s-maj=21.4km s-min=13.3km az=119.0*
ISC 01 08:14:30.4±1.7,**5.4S**±0.1×**147.4E**±0.1,**h166**^{km}±16^{km},**n14**, σ**0**^{s}**82**/17,**mb3.9**/6,**1D**,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.94**	**183**	P	**P**	**08 15 33.0**	**+1.8**
	6.7nm,0.3s,baz=4.8,slow=12,SNR=13						
PMG				S	**S**	**08 16 16.4**	**-1.6**
	12nm,0.3s,baz=180,slow=22,SNR=12						
KAKA	**Kakadu**	**16.40**	**243**	*e*P	**P**	**08 18 31.2**	**+19**
	24nm,0.5s						
WRAB	**Tennant Creek**	**19.17**	**220**	⇓*e*P	**P**	**08 18 43.3**	**-0.3**
	9.2nm,0.6s						
WB2	**Warramunga Arr**	**19.18**	**220**	*e*P	**P**	**08 18 43.4**	**-0.3**
WB2				*e*S	**S**	**08 22 07.3**	**0.0**
WRA	**Warramunga Arr**	**19.19**	**220**	P	**P**	**08 18 43.4**	**-0.3**
	2.2nm,0.3s,baz=38,slow=11,SNR=107						
WRA				S	**S**	**08 22 07.8**	**+0.4**
	0.1nm,0.3s,baz=42,slow=21,SNR=4.8						
ASPA	**Alice Springs**	**22.28**	**214**	*e*P	**P**	**08 19 16.0**	**+1.4**
FITZ	**Fitzroy Crossi**	**24.66**	**237**	*e*P	**P**	**08 19 37.4**	**-0.1**
	14nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**24.66**	**237**	P	**P**	**08 19 37.4**	**-0.1**
	20nm,0.5s,mb4.9,baz=65,slow=9.2,SNR=30						
DZM	**Mont Dzumac**	**24.79**	**134**	P	**P**	**08 19 39.2**	**+0.6**
	4.8nm,0.9s,mb4.0,baz=325,slow=16,SNR=5.0						
STKA	**Stephens Creek**	**26.85**	**191**	P	**P**	**08 19 56.7**	**-0.9**
	1.6nm,1.1s,mb3.6,baz=16,slow=8.7,SNR=1.9						
STKA	**Stephens Creek**	**26.85**	**191**	P	**P**	**08 19 56.7**	**-0.9**
SONM	**Songino Array**	**64.09**	**331**	P	**P**	**08 24 48.6**	**-0.4**
	1.4nm,0.8s,mb3.8,baz=143,slow=7.4,SNR=5.7						
MKAR	**Makanchi Array**	**77.30**	**320**	P	**P**	**08 26 08.2**	**+0.1**
	0.4nm,0.4s,mb3.4,baz=101,slow=7.9,SNR=9.5						
ILAR	**Eielson Array**	**84.83**	**23**	P	**P**	**08 26 46.7**	**-0.5**
	0.6nm,0.7s,mb3.4,baz=255,slow=4.6,SNR=7.0						

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*NEIC **01** 09:19:09.9,32.47S×71.65W,h28^{km},MD3.7(GUC),After GUC.*
GUC 01 09:19:09.9±0.7,**32.47S**×**71.65W**,**h28**^{km}±15^{km},**MD3.7**, **ML2.5**,**4C-3D**,**Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.60**	**12**	⇓*i*P	Pb	09 19 21.4	-0.4
CHNG				*i* S	Sb	09 19 30.0	+0.1
CHNG				AMP		09 19 30.8	
	comp=E,215nm,0.4s						
ROCH	**El Roble**	**0.73**	**133**	⇓*i*P	Pb	09 19 23.9	-0.1
ROCH				*i* S	Sb	09 19 34.4	+0.7
JACH	**Jahuel**	**0.92**	**104**	⇑*i*P	Pn	09 19 27.0	0.0
JACH				*i* S	Sb	09 19 39.7	+0.8
RCDM	**Rinconada Maip**	**1.24**	**145**	*e*P	Pn	09 19 31.3	-0.3
RCDM				*i* S	Sn	09 19 48.1	+0.6
RCDM				AMP		09 19 50.8	
	comp=E,223nm,0.1s						
TACH	**Talagante**	**1.32**	**153**	⇑*i*P	Pn	09 19 33.0	+0.2
TACH				*i* S	Sn	09 19 49.9	+0.2
CMCH	**Combarbala**	**1.41**	**23**	⇑*i*P	Pn	09 19 34.0	0.0
CMCH				*i* S	Sn	09 19 52.7	+1.0
CMCH				AMP		09 19 57.4	
	comp=N,297nm,0.9s						
FCH	**Farellones**	**1.43**	**127**	⇓*i*P	Pn	09 19 34.8	+0.4
FCH				*i* S	Sn	09 19 54.0	+1.7
FCH				AMP		09 19 58.0	
	comp=E,105nm,0.1s						
PCH	**Pirque**	**1.49**	**141**	*i* P	Pn	09 19 35.7	+0.4
CHCH	**Chadas Angostu**	**1.68**	**150**	⇑*i*P	Pn	09 19 38.8	+0.8

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*NIED **01** 09:20:00,47.10N×153.10E,h35^{km},Mw3.9 Best double couple: M₀7.67×10^{14} NP1:φs318°,δ88°,λ33°. NP2:φs227°, δ57°,λ177°.*
*BJI **01** 09:20:13.4,47.39N×153.16E,h71^{km},mB4.8,mb4.2, Ms4.1,Msz3.8*
*NEIC **01** 09:20:14.6±0.8,46.88N×152.96E,mb4.2/4,Error ellipse: s-maj=21.0km s-min=11.1km az=147.0*
*IDC **01** 09:20:14.8±0.9,47.03N×152.68E,h66^{km}±6^{km},mb3.5/12, mb1 3.8/13,mb1mx3.7/22,mbtmp3.8/13,MS3.2/3, Ms1 3.2/3,ms1mx2.9/29,Error ellipse: s-maj=24.6km s-min=16.5km az=161.0*
*MOS **01** 09:20:19.3±1.3,47.25N×152.67E,h118^{km},mb4.5/2,Error ellipse: s-maj=19.9km s-min=11.1km az=69.7*
ISC 01 09:20:12.7±0.5,**46.84N**±0.09×**153.0E**±0.1,**h64**^{km}, **h64**^{km}±1.2^{km}**:pP-P**,**n48**,σ**1**^{s}**42**/56,**mb3.9**/15,**1C**,**Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**6.18**	**238**	P	**P**	**09 21 43.5**	**+0.2**
NEM2				*e*S	**S**	**09 22 49.9**	**-3.4**
JNK	**Nakash**	**6.67**	**244**	P	**P**	**09 21 51.9**	**+1.7**
JNK				*e*S	**S**	**09 23 06.4**	**+0.9**
JTKR	**Abashiri--Toko**	**6.99**	**249**	P	**P**	**09 21 57.3**	**+2.7**
YSS	**Yuzh-Sakhalins**	**6.99**	**275**	*e*P	**P**	**09 21 57.5**	**+2.8**
	22nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.99**	**275**	*e*PN	**P**	**09 21 57.0**	**+2.3**
YSS				*e*		09 23 13.0	
JAK	**Akkeshi**	**7.01**	**240**	P	**P**	**09 21 54.8**	**-0.2**
JAK				*e*S	**S**	**09 23 11.0**	**-3.0**
PET	**Petropavlovsk**	**7.19**	**29**	Pn	**P**	**09 21 59.2**	**+1.7**
	88nm,1.1s						
PET				*e*		09 22 13.8	
PET	**Petropavlovsk**	**7.19**	**29**	*e*PN	**P**	**09 21 58.8**	**+1.3**
JAR	**Ashorobuto**	**7.41**	**245**	P	**P**	**09 22 02.6**	**+2.2**
JAR				*e*S	**S**	**09 23 25.2**	**+1.4**
JOB	**Onbets**	**7.58**	**242**	P	**P**	**09 22 03.6**	**+0.8**
JOB				*e*S	**S**	**09 23 26.1**	**-2.0**
ASAJ	**Asahikawa**	**7.78**	**253**	P	**P**	**09 22 09.8**	**+4.4**
	0.8nm,0.3s,baz=36,slow=9.2,SNR=7.1						
ASAJ				LR	LR	09 24 56.9	
	comp=Z,76nm,21.6s,baz=24,slow=37						
ASAJ	**Asahikawa**	**7.78**	**253**	PN	**P**	**09 22 09.9**	**+4.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,77nm,21.6s						
JKK2	**Kamakawa 2**	**7.78**	**251**	P	**P**	**09 22 08.7**	**+3.2**
JCH	**Churui**	**8.03**	**242**	P	**P**	**09 22 09.2**	**+0.2**
JBT2	**Biratori 2**	**8.56**	**245**	P	**P**	**09 22 17.9**	**+1.7**
JNBK	**Urakawa-nobuka**	**8.60**	**242**	P	**P**	**09 22 15.9**	**-0.8**
JNBK				*e*S	**S**	**09 23 49.5**	**-3.6**
JNB	**Noboribetsu**	**9.55**	**247**	P	**P**	**09 22 30.5**	**+0.8**
JKB	**Kayabe**	**9.87**	**244**	P	**P**	**09 22 33.1**	**-1.0**
JKB				*e*S	**S**	**09 24 17.4**	**-6.9**
JANG	**Nango**	**10.52**	**236**	P	**P**	**09 22 40.1**	**-2.7**
JANG				*e*S	**S**	**09 24 31.4**	**-8.5**

JRG	Rokugo	11.68	235	P	P	09 22 56.8	-1.7
MA2	Magadan	12.82	355	*e*P	P	09 23 12.2	-1.5
	comp=Z,10nm,0.4s						
MA2	Magadan	12.82	355	*e*PN	P	09 23 12.2	-1.5
MA2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MJAR	Matsushiro Arr	15.05	232	P	P	09 23 42.3	-0.5
	comp=Z,0.2nm,0.3s,baz=34,slow=8.4,SNR=2.9						
MAJO	Matsushiro	15.05	232	*e*P	P	09 23 50.6	+7.8
	comp=Z,6.0nm,0.5s						
MAJO	Matsushiro	15.05	232	*e*P	P	09 23 50.6	+7.8
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MDJ	Mudanjiang	16.46	271	P	P	09 24 02.5	+2.0
MDJ				AMB	AMB		
	comp=Z,50nm,3.0s						
MDJ	Mudanjiang	16.46	271	*e*P	P	09 24 03.3	+2.8
	comp=Z,4.1nm,0.5s						
BILL	Bilibino	22.32	13	P	P	09 25 05.8	+0.2
	comp=Z,3.8nm,0.3s,mb4.3						
BILL	Bilibino	22.32	13	P	P	09 25 05.8	+0.2
BILL				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.3						
HHC	Hu-ho-hao-te	30.18	274	*e*P	P	09 26 24.3	+5.5
HHC				AP	pP	09 26 38.7	+4.3
HHC				XP	sP	09 26 47.0	+4.9
HHC				PP	PP	09 27 24.2	+4.9
HHC				PCP	PcP	09 29 24.1	+5.5
HHC				S	S	09 31 18.0	+6.0
HHC				XS		09 31 43.1	
HHC				SS	SS	09 32 59.9	+5.7
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,110nm,6.0s						
HHC				LR	LR		
	comp=N,140nm,10.8s						
HHC				LR	LR		
	comp=E,140nm,12.0s						
HHC				LR	LR		
	comp=Z,130nm,12.0s						
SONM	Songino Array	31.20	289	P	P	09 26 26.8	-0.9
	comp=Z,0.2nm,0.3s,mb3.4,baz=104,slow=5.9,SNR=3.0						
SONM				LR	LR	09 38 51.7	
	comp=Z,58nm,18.3s,baz=228,slow=36						
COLA	College	36.13	38	*e*P	P	09 27 09.7	-0.3
	comp=Z,5.4nm,0.8s,mb4.5						
COLA	College	36.13	38	*e*P	P	09 27 09.7	-0.2
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ILAR	Eielson Array	36.54	39	P	P	09 27 12.9	-0.5
	comp=Z,1.2nm,0.9s,mb3.7,baz=281,slow=10.0,SNR=7.8						
ILAR				pP	pP	09 27 29.1	-0.4
	comp=Z,0.6nm,0.6s,baz=254,slow=6.1,SNR=3.5						
INK	Inuvik	41.63	32	P	P	09 27 55.7	+0.3
	comp=Z,2.0nm,0.7s,mb3.9,baz=269,slow=7.0,SNR=18						
WMQ	Urumqi	44.79	291	⇑P	P	09 28 22.5	+1.0
WMQ				PCP	PcP	09 30 05.0	+2.0
WMQ				PP	PP	09 30 09.0	+1.1
WMQ				*e*S	S	09 34 48.0	-5.3
WMQ				AMB	AMB		
	comp=Z,80nm,3.7s						
WMQ				LR	LR		
	comp=N,20nm,16.0s						
WMQ				LR	LR		
	comp=Z,20nm,15.0s						
MKAR	Makanchi Array	46.80	297	P	P	09 28 35.9	-1.5
	comp=Z,0.2nm,0.4s,mb3.4,baz=63,slow=8.6,SNR=2.1						
MKAR				PcP	PcP	09 30 09.5	-0.5
	comp=Z,0.9nm,0.6s,baz=54,slow=1.3,SNR=5.7						
MKAR				LR	LR	09 49 21.7	
	comp=Z,44nm,18.4s,baz=238,slow=38						
YKA	Yellowknife Ar	50.91	37	P	P	09 29 08.4	-0.4
	comp=Z,0.6nm,0.5s,mb3.8,baz=305,slow=7.3,SNR=4.5						
YKA				pP	pP	09 29 24.7	-0.7
	comp=Z,1.7nm,0.7s,baz=301,slow=6.9,SNR=4.6						
NVAR	Mina Array Bea	62.48	62	P	P	09 30 32.5	+1.0
	comp=Z,0.6nm,0.6s,mb3.9,baz=307,slow=6.2,SNR=7.2						
NVAR				pP	pP	09 30 49.7	+1.1
	comp=Z,0.9nm,0.7s,baz=300,slow=5.1,SNR=5.3						
NVAR	Mina Array Bea	62.48	62	P	P	09 30 32.5	+1.0
NVAR				pP	pP	09 30 49.7	+1.1
FINES	FINESS Array B	63.91	335	P	P	09 30 38.0	-2.4
	comp=Z,1.6nm,0.6s,mb4.2,baz=38,slow=5.9,SNR=8.8						
PDAR	Pinedale Array	64.78	54	P	P	09 30 46.9	+0.5
	comp=Z,0.8nm,0.6s,mb3.9,baz=264,slow=0.6,SNR=8.6						
PDAR				pP	pP	09 31 04.7	+1.1
	comp=Z,0.9nm,0.8s,baz=315,slow=2.1,SNR=5.7						
NOA	NORSAR Array B	68.11	341	P	P	09 31 05.1	-2.0
	comp=Z,0.6nm,0.6s,mb3.8,baz=25,slow=6.4,SNR=2.6						
WRA	Warramunga Arr	68.57	199	P	P	09 31 10.4	-0.2
	comp=Z,0.3nm,0.8s,mb3.3,baz=17,slow=6.9,SNR=4.7						
TXAR	Lajitas Array	77.54	60	P	P	09 32 03.8	+0.7
	comp=Z,2.9nm,0.5s,mb4.4,baz=297,slow=4.3,SNR=50						
TXAR				pP	pP	09 32 22.1	+1.3
	comp=Z,1.3nm,0.7s,baz=295,slow=4.6,SNR=5.8						
GERES	GERESS Array B	78.33	334	P	P	09 32 06.0	-1.0
	comp=Z,0.4nm,0.5s,mb3.6,baz=37,slow=6.7,SNR=5.2						
PLCA	Paso Flores	148.32	95	PKPbc	PKPdf	09 39 54.1	+6.7
	comp=Z,0.9nm,0.7s,baz=262,slow=2.6,SNR=3.8						
PLCA	Paso Flores	148.32	95	PKP2	PKPdf	09 39 54.1	+6.6
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

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*NEIC **01** 09:38:60.0±3.5,14.01N×91.78W,h15^{km},Error ellipse: s-maj=173.0km s-min=13.7km az=220.0*

*IDC **01** 09:38:59.9±7.6,14.27N×91.86W,mb3.7/3,mb1 4.0/4, mb1mx3.7/19,mbtmp3.7/4,Error ellipse: s-maj=204.4km s-min=94.2km az=27.0*

*MEX **01** 09:39:21.3±1.0,15.18N×92.95W,h50^{km}±183^{km},MD4.1*

ISC 01 09:39:19.5±1.7,**15.3N**±0.1×**92.89W**±0.06,**h96**^{km}±11^{km}, **n10**,σ**1^{s}03**/15,**mb3.7**/3,**Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	1.19	37	*i* P	P	09 39 41.9	-0.4
CCIG				*i* S	S	09 39 58.8	-0.3
SCX	San Cristobal	1.42	10	*i* P	P	09 39 46.8	+1.9
SCX				*i* S	S	09 40 03.5	-0.3
CMIG	Matias Romero	2.59	313	*e*P	P	09 39 59.9	-0.7
CMIG				*i* S	S	09 40 31.2	-0.1
TUIG	Tuzandepetl	3.06	332	*i* P	P	09 40 07.1	0.0
TUIG				*i* S	S	09 40 43.0	+0.2
OXX	Oaxaca	4.07	296	*e*P	P	09 40 22.5	+1.6
VHO	Vista Hermosa	4.08	296	*i* P	P	09 40 19.8	-1.2
VHO				*i* S	S	09 41 07.4	-0.4
TXAR	Lajitas Array	17.11	326	P	P	09 43 18.3	+4.2
	0.1nm,0.3s,baz=154,slow=13,SNR=13						
NVAR	Mina Array Bea	32.10	321	P	P	09 45 41.8	+2.1
	0.8nm,0.7s,mb3.5,baz=130,slow=9.3,SNR=7.4						
INK	Inuvik	58.92	344	P	P	09 49 09.1	-1.6
	1.5nm,1.1s,mb3.9,baz=135,slow=8.6,SNR=2.7						
ILAR	Eielson Array	61.28	337	P	P	09 49 26.4	-0.4
	0.6nm,0.7s,mb3.7,baz=117,slow=6.0,SNR=6.9						

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*MOS **01** 09:39:24.2±1.6,46.70N×150.70E,h191^{km},mb4.3/2,Error ellipse: s-maj=23.3km s-min=15.8km az=52.2*

*NEIC **01** 09:39:27.4±1.8,46.77N×150.54E,h202^{km}±18^{km},mb4.3/3, Error ellipse: s-maj=21.0km s-min=15.7km az=163.0*

*IDC **01** 09:39:28.1±3.0,46.75N×150.53E,h208^{km}±30^{km},mb3.3/9, mb1 3.6/10,mb1mx3.4/22,mbtmp3.9/10,Error ellipse: s-maj=23.8km s-min=16.8km az=133.0*

*JMA **01** 09:39:28.2±0.5,45.81N×150.92E,h144^{km},M4.0*

ISC 01 09:39:27.4±0.9,**46.3N**±0.1×**150.4E**±0.1,**h238**^{km}±10^{km}, **n41**,σ**1^{s}36**/53,**mb3.6**/10,**1C-1D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.05	241	⇑*i*PN	P	09 40 05.5	-4.2
KUR				*i* S	S	09 40 38.3	-4.0
KUR				pmax	pmax		
	comp=N,50nm,0.5s						
KUR				pmax	pmax		
	comp=Z,170nm,0.5s						
KUR				smax			
	comp=N,210nm,0.5s						
KUR				smax			
	comp=E,160nm,0.5s						
YUK	Yuzh-Kuril'sk	3.91	237	⇓*i*PN	P	09 40 30.3	+0.2
YUK				*i* S	S	09 41 22.7	+3.9
YUK				pmax	pmax		
	comp=Z,380nm,0.5s						
YUK				smax			
	comp=N,350nm,0.4s						
YUK				smax			
	comp=E,350nm,0.4s						
NEM2	Nemuro 2	4.40	231	P	P	09 40 34.7	-1.3
NEM2				*e*S	S	09 41 26.3	-3.1
JNK	Nakash	4.84	239	P	P	09 40 42.0	+0.6
JTKR	Abashiri--Toko	5.13	246	P	P	09 40 46.8	+1.7
JAK	Akkeshi	5.22	233	P	P	09 40 45.7	-0.4
JAK				*e*S	S	09 41 46.2	-1.2
YSS	Yuzh-Sakhalins	5.32	280	P	P	09 40 45.9	-1.5
	comp=E,25nm,1.0s						
YSS	Yuzh-Sakhalins	5.32	280	PN	P	09 40 45.9	-1.5
YSS				pmax	pmax		
	comp=Z,25nm,1.0s						
JAR	Ashorobuto	5.57	240	P	P	09 40 52.4	+1.9
JOB	Onbets	5.76	237	P	P	09 40 53.7	+0.7
JOB				*e*S	S	09 41 59.9	+0.2
ASAJ	Asahikawa	5.92	252	P	P	09 40 57.7	+2.8
	comp=Z,0.9nm,0.3s,baz=359,slow=31,SNR=6.4						
ASAJ	Asahikawa	5.92	252	PN	P	09 40 57.7	+2.8
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JCH	Churui	6.22	237	P	P	09 40 59.0	+0.3
JCH				*e*S	S	09 42 09.5	-0.5
JFR	Furan	6.37	244	P	P	09 41 03.3	+2.7
JBT2	Biratori 2	6.72	242	*e*S	S	09 42 21.9	+0.6
JEM	Erimo	6.72	233	P	P	09 41 07.8	+2.8
JNBK	Urakawa-nobuka	6.78	237	P	P	09 41 05.8	0.0
JNB	Noboribetsu	7.70	244	P	P	09 41 19.2	+1.6
JNB				*e*S	S	09 42 45.2	+1.3
JKB	Kayabe	8.04	240	P	P	09 41 22.1	+0.2
JKB				*e*S	S	09 42 49.7	-1.8
JYM2	Yakumo 2	8.31	244	P	P	09 41 26.5	+1.1
JSR	Shiriuchi	8.62	240	P	P	09 41 30.0	+0.7
JSR				*e*S	S	09 43 03.0	-1.8
JTM	Tenmabayashi	8.71	234	P	P	09 41 30.0	-0.5
JTM				*e*S	S	09 43 04.1	-2.8
JANG	Nango	8.74	231	P	P	09 41 29.9	-1.1
JANG				*e*S	S	09 43 04.4	-3.3
OFUJ	Ofunato	9.63	225	P	P	09 41 42.8	+0.7
JRG	Rokugo	9.92	230	P	P	09 41 46.5	+0.7
JRG				*e*S	S	09 43 34.9	+0.4
JIO	Ouri	10.27	224	*e*S	S	09 43 42.3	-0.4
HIA	Hailar	20.76	290	P	P	09 43 52.5	+2.0
	comp=Z,5.3nm,0.3s						
HIA	Hailar	20.76	290	P	P	09 43 52.5	+2.0
HIA				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ILAR	Eielson Array	38.10	38	P	P	09 46 22.1	-2.4
	comp=Z,0.9nm,0.5s,mb3.6,baz=267,slow=7.4,SNR=28						
INK	Inuvik	43.07	32	P	P	09 47 03.5	-1.3
	comp=Z,1.6nm,0.4s,mb3.9,baz=299,slow=6.3,SNR=43						
FINES	FINESS Array B	63.67	334	P	P	09 49 33.5	-1.1
	comp=Z,2.0nm,0.8s,mb3.8,baz=45,slow=5.4,SNR=10						
NVAR	Mina Array Bea	64.31	61	P	P	09 49 39.4	+0.2
	comp=Z,0.3nm,0.5s,mb3.2,baz=295,slow=4.8,SNR=3.9						
NVAR	Mina Array Bea	64.31	61	P	P	09 49 39.4	+0.2
PDAR	Pinedale Array	66.54	52	P	P	09 49 53.2	0.0
	comp=Z,0.8nm,0.6s,mb3.5,baz=335,slow=2.0,SNR=8.1						
WRA	Warramunga Arr	67.47	196	P	P	09 50 04.5	+5.0
	comp=Z,0.6nm,0.8s,mb3.2,baz=16,slow=7.0,SNR=4.2						
NB2	NORSAR Subarra	68.07	340	P	P	09 50 01.9	-0.6
	comp=Z,4.0nm,0.8s,mb4.1,baz=30,slow=6.2						
NOA	NORSAR Array B	68.07	340	P	P	09 50 01.9	-0.5
	comp=Z,1.2nm,0.6s,mb3.7,baz=28,slow=6.3,SNR=5.0						
NAO	NORSAR Subarra	68.35	340	P	P	09 50 01.9	-2.3
	comp=Z,4.0nm,0.8s,mb4.1						
NAO	NORSAR Subarra	68.35	340	P	P	09 50 01.9	-2.3
NAO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
GERES	GERESS Array B	78.06	332	P	P	09 51 02.1	+1.4
	comp=Z,0.4nm,0.5s,mb3.3,baz=14,slow=5.5,SNR=4.2						
TXAR	Lajitas Array	79.36	59	P	P	09 51 09.2	+1.1
	comp=Z,0.4nm,0.5s,mb3.3,baz=299,slow=3.7,SNR=12						

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*NEIC **01** 09:44:41.8±1.1,1.15N×95.98E,mb4.5/2,Error ellipse: s-maj=23.5km s-min=15.7km az=29.0*

*IDC **01** 09:44:41.0±1.4,1.00N×95.71E,h26^{km}±5^{km},mb3.8/6, mb1 4.0/6,mb1mx3.8/15,mbtmp4.0/6,Error ellipse: s-maj=47.7km s-min=23.6km az=47.0*

ISC 01 09:44:41.6±1.1,**1.4N**±0.1×**96.23E**±0.09,**h27**^{km}, **h27**^{km}±1.8^{km}**:pP-P**,**n14**,σ**0^{s}82**/13,**mb4.2**/9,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.87	49	*e*Pn	Pn	09 46 11.0	+1.8
KULM				*e*Sn	Sn	09 47 15.3	-1.1
JIRN	Jiri	27.83	341	*e*P	P	09 50 30.8	-0.2
	13nm,0.6s,mb4.7						
PKI	Pulchoki	28.02	339	*e*P	P	09 50 33.5	+0.8
KKN	Kakani	28.26	339	*e*P	P	09 50 35.0	+0.1
LSA	Lhasa	28.56	351	*e*P	P	09 50 38.4	+0.8
	10nm,1.1s,mb4.5						
KOLN	Koldanda	28.88	336	*e*P	P	09 50 39.5	-0.9
	13nm,0.7s,mb4.7						
WRA	Warramunga Arr	42.96	122	P	P	09 52 40.3	-0.2
	2.3nm,0.8s,mb4.0,baz=301,slow=8.5,SNR=17						
MKAR	Makanchi Array	46.83	347	P	P	09 53 10.7	-0.3
	1.9nm,0.6s,mb4.2,baz=163,slow=7.7,SNR=14						
MKAR				pP	pP	09 53 19.5	+0.3
	3.5nm,0.6s,baz=160,slow=8.2,SNR=13						
SONM	Songino Array	47.09	9	P	P	09 53 13.7	+0.6
	0.7nm,0.5s,mb3.9,baz=189,slow=10,SNR=4.8						
SONM				pP	pP	09 53 21.6	+0.3
	1.6nm,0.7s,baz=189,slow=8.9,SNR=7.5						
BVAR	Borovoye Array	55.75	341	P	P	09 54 18.0	-0.4
	1.1nm,0.6s,mb4.1,baz=149,slow=8.6,SNR=6.4						
BVAR				pP	pP	09 54 24.7	-2.0
	2.3nm,0.7s,baz=141,slow=9.5,SNR=8.8						
BRTR	Keskin Array B	68.26	313	P	P	09 55 38.4	-4.1
	1.3nm,1.1s,mb3.9,baz=131,slow=13,SNR=3.2						
BRTR				pP	pP	09 55 48.0	-2.8
	1.2nm,0.7s,baz=100,slow=7.5,SNR=4.0						
ARCES	ARCESS Array B	82.03	340	P	P	09 56 59.7	-0.7
	2.3nm,0.9s,mb4.1,baz=141,slow=5.8,SNR=2.4						
GERES	GERESS Array B	84.03	319	pP	pP	09 57 18.5	-1.3
	0.5nm,0.7s,baz=104,slow=5.5,SNR=3.1						
TXAR	Lajitas Array	144.00	30	PKP	PKPdf	10 04 14.4	-5.8
	0.2nm,0.6s,baz=90,slow=2.5,SNR=3.7						

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*CSEM **01** 09:48:12.6±0.2,35.50N×3.79W,h10^{km},MD2.7,Error ellipse: s-maj=9.7km s-min=4.4km az=89.0*

*MDD **01** 09:48:13.9±0.4,35.51N×3.81W,mbLg2.1/7,Error ellipse: s-maj=5.1km s-min=3.0km az=89.0,PRXIMO*

*CNRM **01** 09:48:15.2,35.43N×4.07W,h2^{km},MD2.7*

ISC 01 09:48:13.5±0.8,**35.49N**±0.03×**3.82W**±0.04,**h13**^{km}±6^{km}, **n24**,σ**1^{s}16**/38,**Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	Palemas	0.28	201	P	Pg	09 48 19.0	-0.6
MPAL				S	Sg	09 48 23.0	-0.6
MPAL	Palemas	0.28	201	*i* P	Pg	09 48 19.0	-0.6
TOU	Touzarine	0.53	174	P	Pb	09 48 25.0	+0.9
TOU				S	Sb	09 48 32.5	+1.2
TOU	Touzarine	0.53	174	*i* P	Pb	09 48 25.0	+0.9
EMEL	Melilla	0.73	105	P	Pb	09 48 27.2	-0.3
	78nm,0.1s,SNR=13						
EMEL				S	Sb	09 48 36.5	-0.6
	324nm,0.2s,SNR=5.1						
EMLI	Melilla	0.73	105	P	Pb	09 48 27.2	-0.4
	78nm,0.1s,SNR=13						
EMLI				S	Sb	09 48 36.5	-0.8
	324nm,0.2s,SNR=5.1						
EMIJ	Mijas	1.32	325	P	Pb	09 48 37.2	-0.6
	0.4nm,0.2s,SNR=4.8						
EMIJ				S	Sb	09 48 56.0	+1.5
	23nm,0.5s,SNR=8.3						
EMIJ	Mijas	1.32	325	P	Pb	09 48 37.2	-0.5
	0.4nm,0.2s,SNR=4.8						
EMIJ				S	Sb	09 48 53.9	-0.6
	23nm,0.5s,SNR=8.3						
EGUA	Guajares	1.36	9	S	Sb	09 48 55.4	0.0
	2.6nm,0.2s,SNR=7.9						
TZK	Tazeka	1.43	192	*i* P	Pn	09 48 40.0	+0.7
TZK				*i* S	Sb	09 48 57.0	-0.4
ERON	Agron	1.53	0	S	Sb	09 49 01.2	+0.9
	12nm,0.7s,SNR=7.9						
EJIF	Jimena Fronter	1.65	306	S	Sn	09 49 05.2	+1.6
	2.6nm,0.4s,SNR=7.9						
ELOJ	Sierra Loja	1.68	351	P	Pn	09 48 46.2	+3.3
	SNR=4.0						
ELOJ				S	Sn	09 49 03.1	-1.3
	3.3nm,0.3s,SNR=7.9						
ELOJ	Sierra Loja	1.68	351	S	Sn	09 49 02.3	-2.0
	3.3nm,0.3s,SNR=7.9						
EQUE	Quentar	1.74	10	S	Sn	09 49 05.8	-0.1
	4.4nm,0.3s,SNR=6.8						
ECOG	Cogollos-Vega	1.80	6	P	Pn	09 48 44.3	-0.2
	0.1nm,0.2s,SNR=7.9						
ECOG				S	Sn	09 49 06.3	-1.0
	2.1nm,0.1s,SNR=7.9						
EQES	Quesada	2.39	14	P	Pn	09 48 54.6	+1.6
	0.7nm,0.2s,SNR=5.6						
EQES				S	Sn	09 49 23.6	+1.3
	12nm,0.5s,SNR=7.9						
EQES	Quesada	2.39	14	P	Pn	09 48 54.6	+1.6
	0.7nm,0.2s,SNR=5.6						
EQES				S	Sn	09 49 23.6	+1.2
	12nm,0.5s,SNR=7.9						
EADA	Adamuz	2.74	347	P	Pn	09 49 01.0	+2.9
	0.2nm,0.3s,SNR=4.0						
EADA				S	Sn	09 49 32.7	+1.4
	3.3nm,0.5s,SNR=7.9						
ECAB	El Cabril	2.88	334	S	Sn	09 49 33.6	-1.4
	1.8nm,0.6s,SNR=7.9						
EMIN	Mina Concepcio	3.23	316	P	Pn	09 49 06.1	+1.0
	2.0nm,0.3s,SNR=7.9						
EMIN				S	Sn	09 49 41.6	-2.2
	0.2nm,0.2s,SNR=7.9						
EGRO	El Granado	3.59	306	P	Pn	09 49 10.0	-0.1
	3.1nm,0.5s,SNR=7.9						
EGRO				S	Sn	09 49 50.1	-2.7
	0.1nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.64	29	P	Pn	09 49 10.0	-0.7
	0.2nm,0.5s,SNR=7.9						
EBAD	Badajoz	4.14	323	S	Sn	09 50 02.7	-4.1
	1.2nm,0.2s,SNR=7.9						

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*NEIC **01** 10:26:31.0±0.4,28.45S×177.09W,h35^{km},mb4.8/14, Error ellipse: s-maj=15.7km s-min=11.3km az=131.0*

*BJI **01** 10:26:32.4,29.12S×176.74W,h55^{km},mB5.4,mb5.1, Ms4.9,Msz4.4*

*IDC **01** 10:26:32.8±0.5,28.53S×177.21W,h47^{km}±4^{km},mb4.1/10, mb1 4.4/10,mb1mx4.3/12,mbtmp4.4/10,MS3.8/6, Ms1 3.8/6,ms1mx3.7/12,Error ellipse: s-maj=22.5km s-min=5.8km az=128.0*

ISC 01 10:26:29.1±0.4,**28.81S**±0.06×**177.25W**±0.10,**h33**^{km}, **(h38**^{km}±4.2^{km}**:pP-P)**,**n86**,σ**1^{s}27**/80,**mb4.7**/24,**MS4.1**/7,**5C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.73	233	P	P	10 26 49.6	+6.7
	1µm,0.3s,baz=65,slow=4.6,SNR=63						
RAO				S	S	10 27 02.7	+10
	4µm,0.3s,baz=253,slow=19,SNR=43						
RAO	Raoul Island	0.73	233	*e*Pn	Pn	10 26 49.5	+6.4
RAO				*e*Sn	Sn	10 27 02.4	+9.2
MWZ	Matawai	10.45	203	*e*PN	P	10 28 54.0	-5.6
URZ	Urewera	10.53	205	P	P	10 28 55.2	-5.6
	0.7nm,0.3s,baz=285,slow=12,SNR=8.1						
URZ				S	S	10 30 56.7	-1.9
	2.3nm,0.3s,baz=347,slow=23,SNR=9.2						
URZ	Urewera	10.53	205	*e*PN	P	10 28 55.5	-5.3
URZ				SN	S	10 30 52.5	-6.1
URZ	Urewera	10.53	205	*e*P	P	10 28 56.0	-4.8
MRZ	Mangatainoka R	13.20	205	*e*PN	P	10 29 30.3	-6.5
MRZ				SN	S	10 31 53.7	-10
MRZ	Mangatainoka R	13.20	205	*e*P	P	10 29 30.3	-6.5
MRZ				S	S	10 31 53.7	-10
SNZO	South Karori	14.09	206	P	P	10 29 54.5	+6.1
	117nm,1.3s						
THZ	Tophouse	15.20	209	*e*PN	P	10 30 01.1	-1.8
THZ				SN	S	10 32 41.9	-8.8
THZ	Tophouse	15.20	209	*e*P	P	10 30 01.1	-1.8
THZ				S	S	10 32 39.6	-11
AFI	Afiamalu	15.68	20	P	P	10 29 59.3	-10
	0.8nm,0.3s,baz=70,slow=18,SNR=2.7						
AFI				S	S	10 32 41.1	-21
	2.4nm,0.3s,baz=58,slow=19,SNR=4.5						
AFI	Afiamalu	15.68	20	P	P	10 29 59.3	-10
AFI				*e*Pn	P	10 30 03.1	-6.1
AFI				S	S	10 32 41.1	-21
AFI				*e*Sn	S	10 32 42.7	-19
DSZ	Denniston Nort	15.68	212	*e*PN	P	10 30 07.9	-1.2
DSZ	Denniston Nort	15.68	212	*e*P	P	10 30 07.9	-1.2
DZM	Mont Dzumac	16.18	291	pP		10 30 25.6	
	0.3nm,0.3s,baz=127,slow=18,SNR=2.4						
DZM				LR	LR	10 35 25.9	
	comp=Z,439nm,18.2s,baz=202,slow=33						
LTZ	Lake Taylor	16.31	208	*e*PN	P	10 30 15.5	-1.6
LTZ	Lake Taylor	16.31	208	*e*P	P	10 30 15.5	-1.6
RAR	Rarotonga	17.55	68	P	P	10 30 26.9	-5.9
	2.1nm,0.3s,baz=169,slow=16,SNR=11						
RAR				S	S	10 33 19.5	-25
	1.2nm,0.3s,baz=82,slow=15,SNR=2.9						
RPZ	Rata Peaks	17.58	209	P	P	10 30 32.4	-0.7
	3.0nm,0.3s,baz=101,slow=3.5,SNR=15						
RPZ				S	S	10 33 35.6	-10
	0.4nm,0.3s,baz=51,slow=14,SNR=2.5						
HNR	Honiara	28.81	307	LR	LR	10 42 06.5	
	comp=Z,87nm,18.6s,MS3.4,baz=175,slow=33						
CTA	Charters Tower	34.23	276	P	P	10 33 15.9	+1.9
	7.1nm,0.8s,mb4.6,baz=111,slow=14,SNR=7.6						
CTA				LR	LR	10 45 38.6	
	comp=Z,246nm,19.4s,MS4.0,baz=51,slow=34						
CTAO	Charters Tower	34.23	276	*e*P	P	10 33 16.0	+2.0
	4.5nm,0.5s,mb4.7						
STKA	Stephens Creek	35.50	255	P	P	10 33 26.3	+1.5
	2.2nm,0.4s,mb4.5,baz=108,slow=9.7,SNR=8.3						
STKA				LR	LR	10 46 41.8	
	comp=Z,168nm,19.8s,MS3.8,baz=153,slow=34						
STKA	Stephens Creek	35.50	255	*e*P	P	10 33 26.4	+1.6
ASPA	Alice Springs	43.87	265	*e*P	P	10 34 35.0	+0.7
WB2	Warramunga Arr	44.70	270	*e*P	P	10 34 41.0	0.0
WRAB	Tennant Creek	44.71	270	*e*P	P	10 34 40.9	-0.2
	5.7nm,0.6s,mb4.6						
WRA	Warramunga Arr	44.72	270	P	P	10 34 41.1	-0.1
	4.0nm,0.5s,mb4.5,baz=106,slow=8.0,SNR=48						
WRA				PcP	PcP	10 36 22.2	-1.4
	1.7nm,0.9s,baz=135,slow=3.5,SNR=3.0						
SBA	Scott Base	49.66	184	*e*P	P	10 35 24.1	+4.9
	8.8nm,0.8s,mb4.8						
VNDA	Vanda	49.73	186	*e*P	P	10 35 21.6	+1.8
FITZ	Fitzroy Crossi	53.03	268	*e*P	P	10 35 44.8	-0.6
	7.0nm,1.0s,mb4.5						
MIDW	Midway	56.70	360	P	P	10 36 10.5	-1.5
	228nm,1.0s						
CASY	Casey	56.84	207	*e*P	P	10 36 12.7	+0.3
	11nm,0.5s,mb5.1						
QSPA	South Pole Qui	61.29	180	⇑*i*P	P	10 36 45.9	+2.8
	17nm,0.8s,mb5.2						
PMSA	Palmer Station	73.44	156	P	P	10 38 04.2	+4.8
	83nm,1.3s,mb5.5						
MAW	Mawson	74.02	200	P	P	10 38 04.9	+2.2
	5.0nm,0.6s,mb4.6,baz=140,slow=8.3,SNR=18						
MJAR	Matsushiro Arr	77.32	325	P	P	10 38 21.1	-1.0
	4.8nm,0.8s,mb4.5,baz=159,slow=4.7,SNR=12						
MAJO	Matsushiro	77.32	325	P	P	10 38 22.6	+0.4
	6.5nm,0.7s,mb4.7						
MAJO				*e*	pP	10 38 34.0	+1.5
SNAA	Sanae	79.72	178	*e*	P	10 38 37.7	+3.1
SNAA	Sanae	79.72	178	*e*	P	10 38 45.8	+11
SNAA	Sanae	79.72	178	*e*	P	10 38 50.5	+16
SNAA	Sanae	79.72	178	⇑*i*P	P	10 38 36.0	+1.4
SNAA				*e*	pP	10 38 45.8	+0.8
SNAA				*e*		10 38 50.5	
VNA3	Neumayer Olymp	79.84	176	*e*	P	10 38 38.3	+3.0
VNA3	Neumayer Olymp	79.84	176	*e*	P	10 38 45.3	+10
VNA3	Neumayer Olymp	79.84	176	*e*	P	10 38 49.8	+15
VNA3	Neumayer Olymp	79.84	176	⇑*i*P	P	10 38 36.6	+1.3
VNA3				*e*	pP	10 38 45.3	-0.3
VNA3				*e*		10 38 49.8	
VNA2	Neumayer--Watz	80.28	177	*e*	P	10 38 41.2	+3.6
VNA2	Neumayer--Watz	80.28	177	*e*	P	10 38 48.2	+11
VNA2	Neumayer--Watz	80.28	177	*e*	P	10 38 53.0	+15
VNA2	Neumayer--Watz	80.28	177	⇑*i*P	P	10 38 39.5	+1.9
VNA2				*e*	pP	10 38 48.2	+0.2
VNA2				*e*		10 38 53.0	
VNA1	Neumayer--Stat	80.51	176	*e*	P	10 38 42.4	+3.6
VNA1	Neumayer--Stat	80.51	176	*e*	P	10 38 49.4	+11

VNA1	**Neumayer--Stat**	**80.51**	**176**	⇑*i*P	**P**	**10 38 40.8**	**+2.0**
VNA1				*e*	pP	10 38 49.4	+0.2
PLCA	**Paso Flores**	**83.11**	**133**	P	**P**	**10 38 54.4**	**+1.5**
	2.6nm,0.8s,mb4.3,baz=211,slow=4.8,SNR=6.6						
PLCA	**Paso Flores**	**83.11**	**133**	P	**P**	**10 38 54.5**	**+1.6**
	2.3nm,0.7s,mb4.3						
KS15	**Wonju Array Si**	**83.58**	**319**	P	**P**	**10 38 50.4**	**-5.0**
YSS	**Yuzh-Sakhalins**	**83.61**	**334**	P	**P**	**10 38 56.2**	**+0.9**
	15nm,0.8s,mb5.2						
CMB	**Columbia Colle**	**85.15**	**42**	*e*P	**P**	**10 39 02.9**	**-0.4**
	4.8nm,1.0s,mb4.6						
NVAR	**Mina Array Bea**	**86.63**	**42**	P	**P**	**10 39 10.7**	**+0.2**
	2.7nm,0.8s,mb4.5,baz=223,slow=9.3,SNR=18						
NVAR				pP	pP	10 39 25.4	+4.4
	3.3nm,1.0s,baz=210,slow=6.9,SNR=8.6						
NVAR	**Mina Array Bea**	**86.63**	**42**	P	**P**	**10 39 10.7**	**+0.2**
NVAR				pP	pP	10 39 25.4	+4.4
TPH	**Tonopah**	**87.05**	**43**	*e*P	**P**	**10 39 12.7**	**+0.2**
	8.1nm,1.0s,mb4.9						
TXAR	**Lajitas Array**	**90.98**	**57**	P	**P**	**10 39 31.1**	**-0.3**
	0.6nm,0.9s,mb3.9,baz=219,slow=8.0,SNR=5.1						
TXAR				pP	pP	10 39 45.5	+3.4
	0.5nm,0.9s,baz=233,slow=6.3,SNR=4.0						
TXAR				LR	LR	11 15 31.2	
	comp=Z,50nm,18.2s,MS4.0,baz=345,slow=32						
TXAR	**Lajitas Array**	**90.98**	**57**	P	**P**	**10 39 31.1**	**-0.3**
TXAR				pP	pP	10 39 45.5	+3.4
TXAR				LR	LR	11 15 31.2	
ANMO	**Albuquerque**	**92.08**	**51**	P	**P**	**10 39 33.3**	**-3.0**
	3.4nm,1.3s,mb4.5						
PV01	**Paradox Valley**	**92.48**	**47**	*e*P	**P**	**10 39 37.3**	**-0.8**
PDAR	**Pinedale Array**	**94.54**	**43**	P	**P**	**10 39 47.0**	**-0.4**
	0.7nm,0.8s,mb4.2,baz=225,slow=2.1,SNR=6.8						
PDAR				pP	pP	10 40 01.3	+3.4
	1.1nm,1.0s,baz=243,slow=3.3,SNR=6.1						
HHC	**Hu-ho-hao-te**	**95.60**	**314**	*e*P	**P**	**10 39 56.0**	**+3.7**
HHC				PP	PP	10 43 49.1	+3.1
HHC				SKS	SKS	10 50 23.9	-0.5
HHC				S	S	10 51 03.5	-0.1
HHC				XS		10 51 39.4	
HHC				PS	PS	10 52 35.8	+4.2
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.3						
HHC				AMB	AMB		
	comp=Z,190nm,7.2s						
HHC				LR	LR		
	comp=N,100nm,10.8s,MS4.7						
HHC				LR	LR		
	comp=E,100nm,12.0s,MS4.7						
HHC				LR	LR		
	comp=Z,70nm,13.2s,MS4.3						
COLA	**College**	**96.15**	**12**	*e*P	**P**	**10 39 53.4**	**-0.7**
	comp=Z,5.0nm,1.0s,mb4.9						
ILAR	**Eielson Array**	**96.24**	**13**	P	**P**	**10 39 53.4**	**-1.2**
	comp=Z,0.3nm,0.7s,mb3.9,baz=227,slow=5.2,SNR=6.5						
ILAR				pP	pP	10 40 07.5	+2.4
	comp=Z,1.0nm,0.9s,baz=204,slow=6.1,SNR=5.2						
LPAZ	**La Paz**	**98.19**	**114**	LR	LR	11 13 34.8	
	comp=Z,46nm,20.5s,MS4.0,baz=49,slow=29						
LZH	**Lanzhou**	**98.30**	**307**	*e*P	**P**	**10 40 08.9**	**+4.3**
LZH				AP	pP	10 40 29.2	+14
LZH				PP	PP	10 44 12.3	+5.0
LZH				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,50nm,7.6s						
LZH				LR	LR		
	comp=N,210nm,16.5s						
LZH				LR	LR		
	comp=Z,440nm,18.5s,MS5.0						
WMQ	**Urumqi**	**112.75**	**309**	PKP	PKPdf	10 45 05.2	+2.9
WMQ				XPKP		10 45 23.8	
WMQ				PP	PP	10 45 59.2	+4.1
WMQ				PP	PP		
	comp=Z,140nm,3.8s						
WMQ				LR	LR		
	comp=N,20nm,15.7s						
WMQ				LR	LR		
	comp=E,10.0nm,26.6s						
WMQ				LR	LR		
	comp=Z,30nm,22.2s						
MCWV	**Mont Chateau**	**113.09**	**56**	*e*PKPdf	PKPdf	10 45 04.0	+1.0
MKAR	**Makanchi Array**	**117.25**	**311**	PKP	PKPdf	10 45 14.6	+3.7
	comp=Z,0.7nm,0.6s,baz=105,slow=0.8,SNR=5.3						
KURK	**Kurchatov**	**120.42**	**314**	P	PKPdf	10 45 21.1	+4.0
ARCES	**ARCESS Array B**	**137.18**	**348**	PKP	PKPdf	10 45 51.1	+2.7
	comp=Z,2.8nm,0.9s,baz=27,slow=2.0,SNR=4.0						
FINES	**FINESS Array B**	**143.87**	**341**	PKhKP		10 45 58.0	
	comp=Z,1.7nm,0.7s,baz=58,slow=4.6,SNR=8.2						
FINES				PKP	PKPdf	10 46 02.6	+2.4
	comp=Z,2.1nm,0.6s,baz=31,slow=4.5,SNR=7.7						
GNI	**Garni**	**143.88**	**300**	*e*PKPdf	PKPdf	10 46 00.0	-0.9
NB2	**NORSAR Subarra**	**147.28**	**352**	PKPbc	PKPdf	10 46 15.2	+9.1
	comp=Z,1.5nm,0.7s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**147.28**	**352**	PKPbc	PKPdf	10 46 09.0	+2.9
	comp=Z,1.3nm,0.6s,baz=14,slow=4.4,SNR=3.9						
NOA				pPKPbc		10 46 23.4	
	comp=Z,4.9nm,0.8s,baz=17,slow=2.7,SNR=8.5						
HFS	**Hagfors**	**147.81**	**350**	PKPbc	PKPdf	10 46 10.1	+3.1
	comp=Z,3.6nm,0.7s,baz=27,slow=3.3,SNR=7.5						
AKASG	**Malin Array Be**	**150.41**	**325**	PKPbc	PKPdf	10 46 17.4	+6.0
	comp=Z,2.1nm,0.5s,baz=46,slow=3.2,SNR=10						
AKASG				PKPab	PKPab	10 46 22.9	-2.5
	comp=Z,12nm,0.7s,baz=49,slow=3.4,SNR=28						
AKASG				pPKPbc		10 46 31.5	
	comp=Z,7.2nm,0.6s,baz=46,slow=3.7,SNR=9.1						
AKASG	**Malin Array Be**	**150.41**	**325**	PKPbc	PKPdf	10 46 17.4	+6.0
AKASG				PKPab	PKPab	10 46 22.9	-2.5
AKASG				pPKPbc		10 46 31.5	
BRTR	**Keskin Array B**	**152.37**	**301**	PKPbc	PKPdf	10 46 22.2	+7.5
	comp=Z,0.6nm,0.5s,baz=90,slow=4.9,SNR=4.0						
BRTR				pPKP		10 46 29.1	
	comp=Z,3.7nm,0.6s,baz=138,slow=4.3,SNR=12						
BRTR				PKPab	PKPab	10 46 33.6	-0.4
	comp=Z,2.2nm,0.7s,baz=79,slow=3.3,SNR=7.3						
EKA	**Eskdalemuir Ar**	**153.16**	**7**	pPKPab		10 46 49.0	
	comp=Z,6.2nm,1.0s,baz=14,slow=2.9,SNR=4.5						

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*IDC **01** 10:35:41.5±4.2,3.56N×96.27E,mb3.7/3,mb1 3.9/3, mb1mx3.6/16,mbtmp3.7/3,Error ellipse: s-maj=158.9km s-min=29.5km az=59.0*

*NEIC **01** 10:35:46.4±1.1,3.53N×96.28E,h30^{km},mb4.4/3,Error ellipse: s-maj=26.0km s-min=17.9km az=39.0*

ISC 01 10:35:44.5±1.2**,3.6N**±0.2×**96.3E**±0.2**,h30**^{km}**,n7,**σ**0**^{s}**86**/7**, mb4.1**/6**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**4.69**	**68**	*e*Pn	**Pn**	**10 36 54.3**	**-0.9**
ENH	**Enshi**	**29.37**	**24**	P	**P**	**10 41 49.2**	**+1.9**
	4.2nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**44.08**	**124**	P	**P**	**10 43 51.7**	**-0.3**
	0.6nm,0.5s,mb3.5,baz=303,slow=9.2,SNR=6.8						
WRAB	**Tennant Creek**	**44.08**	**123**	P	**P**	**10 43 52.7**	**+0.7**
	1.6nm,0.6s,mb3.9						
MKAR	**Makanchi Array**	**44.75**	**346**	P	**P**	**10 43 56.4**	**-0.7**
	1.5nm,0.8s,mb3.9,baz=162,slow=8.5,SNR=11						
SONM	**Songino Array**	**44.97**	**10**	P	**P**	**10 43 58.8**	**-0.1**
	0.5nm,0.4s,mb3.7,baz=189,slow=9.2,SNR=5.5						
CSS	**Prodhromos**	**65.92**	**307**	*e*P	**P**	**10 46 29.8**	**-0.3**
	15nm,1.1s,mb4.9						

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*CSEM **01** 10:45:38.0±0.1,32.70N×57.17E,h10^{km},ML3.9,Error ellipse: s-maj=5.5km s-min=2.1km az=140.0*

*TEH **01** 10:45:40.3,32.66N×57.18E,h10^{km},Mn3.9*

*THR **01** 10:45:42.1±0.3,32.48N×57.42E,h15^{km},ML3.7*

ISC 01 10:45:38.9±0.6**,32.76N**±0.06×**57.16E**±0.07**,h10**^{km}**,n18,** σ**1**^{s}**12**/18**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBAF	**Bafgh**	**1.78**	**229**	Pn	**Pn**	**10 46 10.6**	**+0.5**
ICHK	**Chekchek**	**2.38**	**258**	Pn	**Pn**	**10 46 18.4**	**-0.2**
IMEH	**Mehriz**	**2.56**	**238**	Pn	**Pn**	**10 46 20.9**	**-0.3**
KRBR	**Kerman**	**2.79**	**187**	*e*Pn	**Pn**	**10 46 25.3**	**+0.8**
KRBR				AML	AML	10 47 08.9	
	comp=N,386nm,0.4s						
NASN	**Na’in**	**3.66**	**272**	*e*Pn	**Pn**	**10 46 43.9**	**+7.0**
NASN				AML	AML	10 47 37.8	
	comp=N,135nm,0.4s						
IMOG	**Moghan**	**3.79**	**28**	Pn	**Pn**	**10 46 39.5**	**+0.7**
IPAY	**Payeh**	**3.98**	**22**	Pn	**Pn**	**10 46 42.0**	**+0.6**
IZEF	**Zefreh**	**4.07**	**273**	Pn	**Pn**	**10 46 42.1**	**-0.5**
IGAR	**Garneh**	**4.22**	**264**	Pn	**Pn**	**10 46 47.2**	**+2.3**
IMYA	**Miamay**	**4.32**	**33**	Pn	**Pn**	**10 46 46.3**	**+0.1**
ZHSF	**Zahedan**	**4.41**	**134**	*e*Pn	**Pn**	**10 46 45.9**	**-1.6**
ZHSF				AML	AML	10 48 04.5	
	comp=N,49nm,0.6s						
IPAR	**Pars**	**4.56**	**231**	Pn	**Pn**	**10 46 52.5**	**+2.8**
IKLH	**Kalahroud**	**4.72**	**278**	Pn	**Pn**	**10 46 49.5**	**-2.4**
ISRV	**Sarvestan**	**4.83**	**227**	Pn	**Pn**	**10 46 57.9**	**+4.3**
IVRN	**Varamin**	**5.04**	**298**	Pn	**Pn**	**10 46 56.2**	**-0.2**
IDMV	**Damavand**	**5.09**	**305**	Pn	**Pn**	**10 46 56.8**	**-0.4**
IPIR	**Pirpir**	**5.28**	**271**	Pn	**Pn**	**10 46 59.0**	**-0.8**
BNDS	**Bandar-Abbas**	**5.41**	**189**	*e*Pn	**Pn**	**10 47 01.3**	**-0.4**

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*NIED **01** 10:48:00,39.00N×144.30E,h41^{km},Mw3.5 Best double couple: M$_0$2.02×10^{14} NP1:ϕ_s162°,δ83°,λ-173°. NP2: ϕ_s72°,δ83°,λ-7°.*

JMA 01 10:48:43.2±0.2**,38.96N×144.30E,h60**^{km}**,M3.9,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**2.02**	**289**	P	P	10 49 15.8	+0.2
MIYJ				*e*S	S	10 49 40.2	+0.6
OFUJ	**Ofunato**	**2.05**	**274**	P	P	10 49 16.4	+0.3
OFUJ				S	S	10 49 40.7	+0.3
JTH	**Tanohata**	**2.12**	**298**	P	P	10 49 17.1	0.0
JOM	**Ohasama**	**2.39**	**283**	P	P	10 49 21.4	+0.5
JOM				*e*S	S	10 49 49.5	+0.5
JMK	**Ichinoseki**	**2.40**	**271**	P	P	10 49 21.4	+0.4
JMK				S	S	10 49 49.6	+0.3
JANG	**Nango**	**2.57**	**304**	P	P	10 49 22.7	-0.7
JMM	**Marumori**	**2.96**	**249**	P	P	10 49 28.1	-0.9
JMM				*e*S	S	10 50 01.5	-2.0
JYK	**Kaneyama**	**3.07**	**270**	P	P	10 49 31.0	+0.5
JYK				*e*S	S	10 50 06.8	+0.5
JOT	**Ohata**	**3.47**	**315**	P	P	10 49 35.5	-0.6
JOT				*e*S	S	10 50 13.4	-2.9
JNBK	**Urakawa-nobuka**	**3.52**	**341**	*e*S	S	10 50 15.1	-2.4
JCH	**Churui**	**3.72**	**349**	P	P	10 49 36.9	-2.7
JCH				*e*S	S	10 50 17.2	-5.3
JKB	**Kayabe**	**3.84**	**321**	P	P	10 49 40.4	-0.9
JKB				*e*S	S	10 50 22.4	-3.2
NEM2	**Nemuro 2**	**4.53**	**13**	P	P	10 49 45.8	-5.2
NEM2				*e*S	S	10 50 33.5	-9.5
JTKR	**Abashiri--Toko**	**5.01**	**357**	P	P	10 49 54.7	-3.0
JTKR				*e*S	S	10 50 48.2	-6.8
JHR	**Hokuryu**	**5.16**	**339**	*e*S	S	10 50 56.4	-2.2
JRY	**Ryogami san**	**5.20**	**237**	P	P	10 49 59.0	-1.3
JRY				*e*S	S	10 50 56.1	-3.6
MAT	**Matsushiro**	**5.40**	**245**	P	P	10 50 01.5	-1.5
MAT				*e*S	S	10 51 02.0	-2.6
JOD2	**Odawara 2**	**5.56**	**230**	*e*S	S	10 51 02.9	-5.8

OTT 01 11:06:02.2±1.1**,78.91N×94.46W,h18**^{km}**,ML2.8**/1**, Sverdrup Seismic Zone. 196km east from Isachsen, Nu, Queen Elizabeth Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EUNU	**Eureka**	**1.87**	**48**	PN	Pn	11 06 34.2	+0.4
EUNU				SN	Sn	11 06 55.6	-1.5
EUNU				Trac		11 07 02.2	
	comp=E,32nm,0.9s						
RES	**Resolute Bay**	**4.25**	**182**	PN	Pn	11 07 05.4	-2.4
RES				SN	Sn	11 07 53.2	-4.3
RES				Trac		11 08 02.8	
	comp=Z,4.4nm,0.2s						
TULEG	**Thule**	**5.92**	**101**	PN	Pn	11 07 28.4	-2.8
TULEG				SN	Sn	11 08 34.1	-5.3
PINU	**Pond Inlet**	**7.40**	**139**	PN	Pn	11 07 47.2	-4.9
PINU				SN	Sn	11 09 05.0	-11
GIFN	**Gifford Fjord,**	**9.56**	**153**	PN	P	11 08 17.0	-4.9
GIFN				SN	Sn	11 09 57.0	-13
GIFN				Trac		11 10 00.7	
	comp=Z,1.8nm,0.3s						
ILON	**Igloolik, Nuna**	**10.15**	**154**	PN	P	11 08 24.9	-5.1
ILON				SN	S	11 10 10.7	-14
ILON				Trac		11 10 15.6	
	comp=Z,5.1nm,1.0s						
LAIN	**Lailor River,**	**10.27**	**158**	PN	P	11 08 27.2	-4.5
LAIN				SN	S	11 10 14.2	-13
SRLN	**Sarcpa Lake, N**	**10.84**	**158**	PN	P	11 08 33.5	-5.8
SRLN				SN	S	11 10 26.2	-15
INK	**Inuvik**	**14.84**	**246**	PN	P	11 09 25.5	-7.0
INK				SN	S	11 12 06.7	-11
CTLN	**Castor Lake**	**15.85**	**216**	PN	P	11 09 49.0	+3.4
CTLN				SN	S	11 12 34.4	-6.5
GALN	**Gameti Lake**	**16.30**	**217**	PN	P	11 09 45.4	-5.9
GALN				SN	S	11 12 34.7	-17

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*NNC **01** 11:26:37.3±10.0,37.26N×71.39E,h253^{km}±134^{km},mpv3.9, Error ellipse: s-maj=113.7km s-min=76.6km az=37.0*

ISC 01 11:26:36.4±1.4**,37.15N**±0.10×**71.2E**±0.3**,h227**^{km}±47^{km}**, n8,**σ**2**^{s}**02**/8**,5D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.97**	**355**	P	**P**	**11 28 04.0**	**-0.3**
	6.9nm,0.3s,baz=182,slow=13,SNR=79						
KK31				⇓S	**S**	**11 29 13.8**	**+0.9**
	7.4nm,0.4s,baz=180,slow=19,SNR=16						
THN	**Thein Dam**	**6.01**	**140**	*e*P	**P**	**11 28 03.6**	**-1.4**
THN				*e*S	Sx	11 28 52.9	
AAK	**Ala-Archa**	**6.04**	**24**	⇓P	**P**	**11 28 02.1**	**-3.3**
	2.9nm,0.5s						
AAK				⇓S	**S**	**11 29 14.6**	**-0.1**
	10nm,1.1s						
KLP	**Kalpa**	**8.11**	**132**	*e*P	**P**	**11 28 34.5**	**+2.7**
KLP				*e*S	Sx	11 29 40.9	
KLP				AML	AML	11 29 43.9	
	comp=N,27nm,0.6s						
KLP				AML	AML	11 29 44.1	
	comp=E,18nm,0.6s						
KKR	**Kurukshetra**	**8.58**	**145**	*e*x	x	11 29 07.4	
JOSI	**Joshimath**	**9.59**	**131**	*e*x	x	11 29 33.2	
KHET	**Khetri**	**9.86**	**155**	*e*x	x	11 29 23.6	
KHET				*e*S	Sx	11 30 15.2	
KHET				AML	AML	11 30 20.8	
	comp=E,9.1nm,0.5s						
KHET				AML	AML	11 30 21.1	
	comp=N,8.8nm,0.5s						
AB31	**Akbulak array**	**14.58**	**330**	⇓P	**P**	**11 29 57.0**	**+3.6**
	comp=N,0.8nm,0.8s,baz=130,slow=12,SNR=7.8						
AB31				⇓S	**S**	**11 32 28.9**	**-0.5**
	comp=N,0.5nm,0.5s,baz=156,slow=22,SNR=2.6						

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*ATH **01** 11:48:41.7,38.22N×26.82E,h35^{km}±4^{km},MD3.2/3*

*NEIC **01** 11:48:41.7,38.22N×26.82E,h35^{km},MD3.2(ATH),After ATH.*

*ISK **01** 11:48:42.1,38.24N×26.67E,h30^{km},MD2.8*

*CSEM **01** 11:48:42.6±0.2,38.20N×26.73E,h30^{km},MD2.8,Error ellipse: s-maj=6.6km s-min=4.7km az=116.0*

ISC 01 11:48:41.5±0.9**,38.19N**±0.03×**26.53E**±0.05**,h3**^{km}±6^{km}**, n13,**σ**0**^{s}**98**/23**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.17**	**17**	*i* P	**Pg**	**11 48 45.1**	**+0.1**
URLA				*i* S	**Sg**	**11 48 48.3**	**+0.9**
BLCB	**Balcova**	**0.45**	**64**	PG	**Pg**	**11 48 50.4**	**0.0**
BLCB				SG	**Sg**	**11 48 55.7**	**-0.7**
SMG	**Samos**	**0.54**	**153**	*e*PN	**Pg**	**11 48 53.0**	**+0.7**
SMG				*e*SN	**Sg**	**11 49 00.9**	**+1.4**
SMG	**Samos**	**0.54**	**153**	*e*Sn	**Sg**	**11 49 00.9**	**+1.4**
IZM	**Izmir**	**0.61**	**70**	PG	**Pg**	**11 48 53.5**	**-0.2**
IZM				SG	**Sg**	**11 49 01.5**	**-0.4**
KDAG	**Bornova**	**0.61**	**70**	*i* P	**Pg**	**11 48 52.8**	**-1.0**
KDAG				*i* S	**Sg**	**11 49 01.0**	**-1.1**
PRK	**Paraskevi**	**1.07**	**349**	*e*PN	**Pn**	**11 49 02.5**	**-0.8**
PRK				*e*SN	**Sn**	**11 49 17.8**	**-1.0**
AYVA	**Ayvalik**	**1.12**	**6**	*i* P	**Pb**	**11 49 03.6**	**+0.5**
AYVA				*i* S	**Sb**	**11 49 20.7**	**+2.7**
AYDN	**Tasoluk**	**1.19**	**116**	*i* P	**Pb**	**11 49 04.5**	**+0.1**
AYDN				*i* S	**Sb**	**11 49 19.9**	**0.0**
BODT	**Bodrum**	**1.29**	**151**	*e*PN	**Pn**	**11 49 04.4**	**-1.9**
APE	**Apeiranthos**	**1.38**	**216**	*e*PN	**Pn**	**11 49 07.0**	**-0.6**
MANT	**Manisa**	**1.62**	**79**	*i* P	**Pn**	**11 49 12.7**	**+1.6**
MANT				*i* S	**Sb**	**11 49 33.3**	**+0.8**
SANT	**Santorini**	**2.01**	**206**	P	**Pn**	**11 49 12.3**	**-4.3**
SANT				*e*Sn	**Sn**	**11 49 48.7**	**+6.2**

NNC 01 12:00:53.3±4.9**,36.99N×70.86E,h15**^{km}±118^{km}**,mpv3.3, 4D,Error ellipse: s-maj=131.1km s-min=22.1km az=2.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.11**	**358**	⇓P	Pn	12 02 23.7	-1.6
	0.7nm,0.4s,baz=177,slow=12,SNR=8.8						
KK31				S	Sn	12 03 33.4	-2.3
	0.7nm,0.3s,baz=176,slow=12,SNR=4.2						
AAK	**Ala-Archa**	**6.29**	**25**	P	Pn	12 02 25.0	-2.9
	1.3nm,0.3s						
AAK				⇓S	Sn	12 03 38.7	-1.5
	8.4nm,0.8s						
AB31	**Akbulak array**	**14.60**	**331**	⇓P	P	12 04 19.2	-1.9
	0.4nm,0.6s,baz=135,slow=11,SNR=6.1						
AB31				⇓S	S	12 07 01.8	-1.7
	1.7nm,0.8s,baz=2.7,slow=24,SNR=3.8						

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*BER **01** 12:30:00.8±3.4,59.27N×24.80E,h10^{km},ML2.9*

*CSEM **01** 12:30:01.4±0.3,59.57N×24.45E,h2^{km},ML2.5,Error ellipse: s-maj=7.5km s-min=3.5km az=158.0,Mining explosion.*

*NAO **01** 12:30:02.1±1.2,59.73N×24.20E,ML2.7*

*HEL **01** 12:30:02.4±0.3,59.60N×24.47E,ML2.6,ML2.9(BER), Explosion*

*IDC **01** 12:30:03.5±0.9,59.76N×24.23E,mb1 3.6/4, mb1mx3.3/21,mbtmp3.5/4,ML3.7/4,Error ellipse: s-maj=10.1km s-min=6.4km az=139.0*

ISC 01 12:29:59.0±0.7**,59.68N**±0.05×**24.05E**±0.06**,n31,**σ**1**^{s}**64**/55**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVF	**Pernaja**	**1.25**	**45**	*e*P	**Pb**	**12 30 23.1**	**-0.1**
PVF				*e*S	**Sb**	**12 30 38.4**	**-1.4**
PVF	**Pernaja**	**1.25**	**45**	P	**Pb**	**12 30 23.1**	**-0.1**
VSU	**Vasula**	**1.85**	**130**	Pn	**Pn**	**12 30 33.0**	**+0.8**
VSU				Lg		12 30 59.1	
VJF	**Virojoki**	**1.95**	**62**	*e*P	**Pn**	**12 30 34.4**	**+0.6**
VJF				*e*S	**Sn**	**12 30 58.0**	**-1.4**
VJF	**Virojoki**	**1.95**	**62**	P	**Pn**	**12 30 34.4**	**+0.6**
VJF				S	**Sn**	**12 30 57.9**	**-1.4**
FIA0	**FINESS Array S**	**2.03**	**29**	Pn	**Pn**	**12 30 37.0**	**+2.1**
	baz=203,slow=16						
FIA0				Lg		12 31 03.3	
	baz=210,slow=28						
FIA0	**FINESS Array S**	**2.03**	**29**	*e*P	**Pn**	**12 30 37.5**	**+2.7**
FIA0				*e*S	**Sn**	**12 31 02.7**	**+1.3**
FIA0				*e*SB	**Sb**	**12 31 03.5**	**+1.1**
FIA0				MSG		12 31 05.8	
	comp=Z,52nm,0.3s						
FIA0	**FINESS Array S**	**2.03**	**29**	P	**Pn**	**12 30 37.5**	**+2.6**
FIA0				S	**Sn**	**12 31 02.6**	**+1.3**
FINES	**FINESS Array B**	**2.03**	**29**	Pn	**Pn**	**12 30 37.0**	**+2.2**
	comp=Z,8.3nm,0.3s,baz=207,slow=14,SNR=188						
FINES				Sn	**Sn**	**12 31 03.0**	**+1.7**
	comp=Z,24nm,0.3s,baz=205,slow=21,SNR=9.3						
FINES				Lg		12 31 05.1	
	comp=Z,28nm,0.3s,baz=211,slow=29,SNR=27						
KEF	**Keuruu**	**2.53**	**9**	*e*P	**Pn**	**12 30 45.7**	**+3.7**
KEF				*e*S	**Sn**	**12 31 17.5**	**+3.6**
KEF				*e*SB	**Sb**	**12 31 19.9**	**+3.1**
KEF				MSG		12 31 20.0	
	comp=Z,17nm,0.2s						
KEF	**Keuruu**	**2.53**	**9**	P	**Pn**	**12 30 45.6**	**+3.6**
KEF				S	**Sn**	**12 31 17.4**	**+3.5**
KAF	**Kangasniemi**	**2.68**	**23**	P	**Pn**	**12 30 46.7**	**+2.6**
KAF				S	**Sn**	**12 31 20.8**	**+3.1**
SUF	**Sumiainen**	**3.21**	**18**	*e*P	**Pn**	**12 30 53.9**	**+2.2**
SUF				*e*S	**Sn**	**12 31 32.6**	**+1.3**
VAF	**Ylistaro**	**3.44**	**349**	*e*P	**Pn**	**12 30 59.1**	**+4.1**
JOF	**Joensuu**	**4.77**	**44**	*e*P	**Pn**	**12 31 13.0**	**-0.9**
JOF				*e*S	**Sn**	**12 32 07.3**	**-3.5**
HFS	**Hagfors**	**5.24**	**279**	Pn	**Pn**	**12 31 22.6**	**+2.1**
	baz=99,slow=12						
HFS				Sn	**Sn**	**12 32 22.8**	**+0.4**
	baz=103,slow=22						
HFS				Lg		12 32 44.4	
	baz=79,slow=28						
HFS	**Hagfors**	**5.24**	**279**	Pn	**Pn**	**12 31 22.6**	**+2.2**
	comp=Z,0.4nm,0.3s,baz=90,slow=12,SNR=28						
HFS				Sn	**Sn**	**12 32 23.7**	**+1.2**
	comp=Z,0.7nm,0.3s,baz=103,slow=25,SNR=11						
HFS				Lg		12 32 46.8	
	comp=Z,1.2nm,0.3s,baz=90,slow=30,SNR=8.7						
NB2	**NORSAR Subarra**	**6.51**	**288**	Pn	**Pn**	**12 31 38.7**	**+0.2**
	baz=96,slow=14						
NB2				Sn	**Sn**	**12 32 54.1**	**-0.3**
	baz=96,slow=22						
NB2				Lg		12 33 28.8	
NOA	**NORSAR Array B**	**6.51**	**288**	Pn	**Pn**	**12 31 38.6**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=97,slow=14,SNR=6.3						
NOA				Sn	**Sn**	**12 32 52.5**	**-2.0**
	comp=Z,1.0nm,0.3s,baz=119,slow=20,SNR=4.2						
NOA				Lg		12 33 23.4	
	comp=Z,2.5nm,0.3s,baz=317,slow=20,SNR=7.1						
MOR8	**Moi Rana**	**7.84**	**330**	*e*P	**Pn**	**12 31 58.5**	**+1.4**
MOR8				*e*S	**Sn**	**12 33 24.6**	**-3.1**
MOR8				AML	AML	12 34 18.7	
	comp=Z,5.2nm,0.6s						
MOR8	**Moi Rana**	**7.84**	**330**	*e*P	**Pn**	**12 31 58.5**	**+1.4**
	SNR=47						
MOR8				*e*S	**Sn**	**12 33 24.6**	**-3.1**
	comp=Z,5.2nm,0.6s,SNR=47						
STOK	**Stokkvaagen**	**8.34**	**328**	*e*P	**P**	**12 32 04.0**	**-0.1**
MELSS	**Ber_school_2**	**8.57**	**332**	*e*S	**Sn**	**12 33 44.2**	**-1.5**
MELSS				AML	AML	12 33 46.1	
	comp=Z,37nm,0.5s						
APA0	**Apatity Array**	**8.88**	**23**	Pn	**P**	**12 32 09.2**	**-2.4**
	baz=218,slow=12						
KTK1	**Kautokeino**	**9.38**	**358**	*e*P	**P**	**12 32 18.3**	**-0.1**
KTK1				*e*S	**Sn**	**12 33 57.0**	**-8.9**
KTK1				AML	AML	12 34 57.9	
	comp=Z,4.2nm,0.5s						
KTK1	**Kautokeino**	**9.38**	**358**	*e*P	**P**	**12 32 18.3**	**-0.1**
	SNR=47						
KTK1				*e*S	**Sn**	**12 33 57.0**	**-8.9**
	comp=Z,4.2nm,0.5s,SNR=47						
AKASG	**Malin Array Be**	**9.47**	**160**	Pn	**P**	**12 32 16.8**	**-2.9**
	comp=Z,1.4nm,0.3s,baz=338,slow=13,SNR=3.5						
ARA0	**ARCESS Array S**	**9.91**	**3**	Pn	**P**	**12 32 23.3**	**-2.4**
	baz=176,slow=16						
ARA0				Sn	**Sn**	**12 34 09.9**	**-9.0**
	baz=184,slow=28						
ARA0				Lg		12 35 03.1	
	baz=165,slow=37						
ARA0	**ARCESS Array S**	**9.91**	**3**	Pn	**P**	**12 32 23.3**	**-2.4**
	SNR=4.9						
ARA0				Sn	**Sn**	**12 34 09.9**	**-9.0**
	SNR=4.8						
ARCES	**ARCESS Array B**	**9.91**	**3**	Pn	**P**	**12 32 23.6**	**-2.0**
	comp=Z,1.3nm,0.3s,baz=183,slow=12,SNR=39						
ARCES				Sn	**Sn**	**12 34 11.5**	**-7.5**
	comp=Z,0.6nm,0.3s,baz=182,slow=23,SNR=4.3						
ARCES				Lg		12 35 09.6	
	comp=Z,0.8nm,0.3s,baz=188,slow=27,SNR=4.2						
SPA0	**Spitsbergen Ar**	**18.76**	**355**	P	**P**	**12 34 20.3**	**-0.8**
	baz=177,slow=16						

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*BJI **01** 12:34:22.1,51.51N×178.47W,h30^{km},mB5.2,mb4.7, Ms4.5,Msz4.5*

*NEIC **01** 12:34:24.7±0.4,51.30N×178.43W,mb4.2/11, ML4.4(AEIC),Error ellipse: s-maj=14.5km s-min=5.7km az=171.0*

*IDC **01** 12:34:25.3±0.7,51.55N×178.42W,h40^{km}±5^{km},mb3.8/22, mb1 4.0/24,mb1mx4.0/30,mbtmp4.0/24,ML3.8/2,MS3.3/3, Ms1 3.3/3,ms1mx3.0/30,Error ellipse: s-maj=18.0km s-min=9.3km az=178.0*

*MOS **01** 12:34:25.9±1.0,51.63N×178.44W,h56^{km},mb4.4/11, Error ellipse: s-maj=11.5km s-min=10.8km az=47.9*

ISC 01 12:34:25.6±0.8**,51.51N**±0.09×**178.44W**±0.05**,h57**^{km}±6^{km}**, h47**^{km}±6.0^{km}**:pP-P,n86,**σ**0**^{s}**89**/88**,mb4.2**/34**,MS3.6**/5**,1C, Andreanof Islands**

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

ADK	Adak	1.16	70	P	P	12 34 45.5	-0.3
ADK				S	S	12 35 00.9	0.0
ATKA	Atka Island	2.72	74	P	P	12 35 07.2	-0.8
ATKA				S	S	12 35 40.4	+0.6
SMY	Shemya	4.76	288	P	P	12 35 36.8	+0.3
FX1	Attu Island--F	5.34	288	P	P	12 35 43.8	-0.9
	4.1nm,0.3s,baz=281,slow=21,SNR=33						
FX1				S	S	12 36 45.3	-0.3
	3.7nm,0.3s,baz=119,slow=19,SNR=2.2						
FX1	Attu Island--F	5.34	288	*e*P	P	12 35 44.9	+0.2
FX1	Attu Island--F	5.34	288	P	P	12 35 43.8	-0.9
FX1				S	S	12 36 45.3	-0.4
FX1				pmax	pmax		
	comp=Z,4.0nm,0.3s						
NIKO	Nikolski	6.07	72	P	P	12 35 55.3	+0.5
MSOM	Makushin Julie	7.36	67	P	P	12 36 13.4	+0.6
SPIA	Saint Paul Isl	7.43	37	P	P	12 36 14.8	+1.1
UNV	Unalaska Valle	7.63	67	P	P	12 36 16.6	+0.2
PET	Petropavlovsk	14.10	285	*e*P	P	12 37 43.5	0.0
PET				*e*		12 40 24.5	
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
KDAK	Kodiak Island	16.16	57	P	P	12 38 08.2	-1.8
	comp=Z,2.2nm,0.3s,baz=276,slow=5.2,SNR=40						
KDAK				S	S	12 41 08.0	+0.9
	comp=Z,0.3nm,0.3s,baz=305,slow=16,SNR=5.9						
SLKM	Skilak Lake	18.03	49	P	P	12 38 36.4	+3.0
MCK	McKinley	19.76	40	*e*P	P	12 38 53.1	0.0
	comp=Z,1.7nm,0.6s						
MCK	McKinley	19.76	40	*e*P	P	12 38 53.1	0.0
MCK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
COLA	College	20.67	38	*e*P	P	12 39 03.6	+0.9
	comp=Z,5.0nm,0.6s						
COLA	College	20.67	38	*e*P	P	12 39 03.6	+1.0
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
THY	Trims Highway	20.96	43	P	P	12 39 06.4	+0.8
ILAR	Eielson Array	21.00	39	P	P	12 39 04.4	-1.6
	comp=Z,1.1nm,0.5s,mb3.5,baz=237,slow=8.8,SNR=27						
ILAR				PcP	PcP	12 43 09.4	-2.3
	comp=Z,1.0nm,0.5s,baz=287,slow=3.2,SNR=13						
ILAR				ScP		12 46 43.4	
	comp=Z,0.3nm,0.6s,baz=275,slow=3.7,SNR=5.6						
DAWY	Dawson	23.86	43	*e*P	P	12 39 34.8	+0.9
YSS	Yuzh-Sakhalins	25.53	275	*e*P	P	12 39 51.5	+1.3
ASAJ	Asahikawa	26.93	270	LR	LR	12 49 11.4	
	comp=Z,35nm,19.3s,MS2.9,baz=171,slow=33						
INK	Inuvik	27.22	35	P	P	12 40 04.8	-0.8
	comp=Z,0.6nm,0.3s,mb3.6,baz=277,slow=12,SNR=13						
INK				PcP	PcP	12 43 23.6	-1.1
	comp=Z,1.7nm,0.6s,baz=285,slow=4.5,SNR=11						
DLBC	Dease Lake	28.10	57	P	P	12 40 11.8	-1.8
	comp=Z,0.9nm,0.7s,mb3.5,baz=216,slow=14,SNR=2.4						
MJAR	Matsushiro Arr	34.03	261	P	P	12 41 04.6	-1.3
	comp=Z,2.5nm,0.7s,mb4.2,baz=46,slow=7.3,SNR=6.8						
YKA	Yellowknife Ar	34.98	47	P	P	12 41 12.8	-0.9
	comp=Z,1.0nm,0.5s,mb4.0,baz=282,slow=7.4,SNR=7.2						
YKA				PcP	PcP	12 43 44.8	-0.5
	comp=Z,0.8nm,0.8s,baz=285,slow=2.9,SNR=5.0						
YKA				LR	LR	12 54 51.3	
	comp=Z,88nm,19.7s,MS3.5,baz=235,slow=35						
YKA	Yellowknife Ar	34.98	47	P	P	12 41 12.8	-0.9
YKA				PcP	PcP	12 43 44.8	-0.5
YKA				LR	LR	12 54 51.3	
CN2	Changchun	37.74	281	*e*P	P	12 41 37.2	-0.1
NEW	Newport	38.63	70	P	P	12 41 44.9	+0.4
	comp=Z,4.5nm,0.6s,mb4.4,baz=293,slow=7.1,SNR=7.9						
NEW	Newport	38.63	70	*e*P	P	12 41 44.3	-0.2
	comp=Z,3.1nm,0.4s,mb4.4						
NEW	Newport	38.63	70	P	P	12 41 44.9	+0.3
NEW				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YBH	Yreka Blue Hor	38.64	82	P	P	12 41 45.4	+0.7
	comp=Z,1.9nm,0.9s,mb3.8,baz=299,slow=12,SNR=3.8						
WVOR	Wild Horse Val	40.76	79	*e*P	P	12 42 02.5	+0.2
	comp=Z,2.0nm,0.6s,mb3.9						
WVOR	Wild Horse Val	40.76	79	*e*P	P	12 42 02.5	+0.2
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
HLID	Hailey	42.69	75	*e*P	P	12 42 18.4	+0.4
	comp=Z,1.6nm,0.8s,mb3.8						
BOZ	Bozeman (W)	43.20	70	*e*P	P	12 42 22.3	+0.1
	comp=Z,4.3nm,0.6s,mb4.4						
BOZ	Bozeman (W)	43.20	70	*e*P	P	12 42 22.3	+0.1
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
NVAR	Mina Array Bea	43.31	83	P	P	12 42 24.0	+0.8
	comp=Z,0.9nm,0.8s,mb3.6,baz=300,slow=7.3,SNR=4.7						
ELK	Elko	43.81	78	*e*P	P	12 42 27.2	0.0
	comp=Z,1.6nm,0.8s,mb3.8						
ELK	Elko	43.81	78	*e*P	P	12 42 27.2	0.0
ELK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BW06	Boulder Array	46.06	73	*e*P	P	12 42 44.7	-0.4
	comp=Z,7.6nm,1.0s,mb4.6						
PDAR	Pinedale Array	46.06	73	P	P	12 42 45.1	+0.1
	comp=Z,3.8nm,0.7s,mb4.4,baz=324,slow=3.8,SNR=23						
PDAR				pP	pP	12 42 55.6	-4.4
	comp=Z,2.8nm,0.6s,baz=314,slow=5.1,SNR=9.8						
SONM	Songino Array	46.79	297	P	P	12 42 50.9	+0.1
	comp=Z,0.5nm,0.4s,mb3.8,baz=61,slow=5.6,SNR=6.1						
SONM				pP	pP	12 43 01.8	-3.9
	comp=Z,0.4nm,0.5s,baz=52,slow=6.6,SNR=3.4						
SONM				PcP	PcP	12 44 23.3	-0.4
	comp=Z,0.7nm,0.4s,baz=61,slow=2.9,SNR=5.9						
SONM				pPcP		12 44 33.9	
	comp=Z,1.2nm,0.6s,baz=177,slow=7.9,SNR=7.3						
SONM				LR	LR	13 03 06.4	
	comp=Z,44nm,20.8s,MS3.4,baz=238,slow=37						
SONM	Songino Array	46.79	297	P	P	12 42 50.9	+0.1
SONM				pP	pP	12 43 01.8	-3.9
SONM				PcP	PcP	12 44 23.3	-0.4
SONM				pPcP		12 44 33.9	
SONM				LR	LR	13 03 06.4	
SRU	San Rafael	47.68	77	*e*P	P	12 42 57.8	-0.2
	comp=Z,3.6nm,0.8s,mb4.5						
SRU	San Rafael	47.68	77	*e*P	P	12 42 57.8	-0.1
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
SSE	Sheshan	48.22	269	P	P	12 43 02.3	0.0
SSE				AMB	AMB		
	comp=Z,220nm,5.4s						
PV10	Paradox Valley	49.05	77	*e*P	P	12 43 08.5	0.0
ULM	Lac du Bonnet	49.42	57	P	P	12 43 10.3	-0.9
	comp=Z,0.7nm,0.4s,mb4.0,baz=323,slow=10,SNR=3.4						
PV01	Paradox Valley	49.48	77	*e*P	P	12 43 11.5	-0.4
SDCO	Great Sand Dun	51.59	75	*e*P	P	12 43 27.9	0.0
	comp=Z,1.3nm,0.7s,mb4.0						
LZH	Lanzhou	55.56	286	*e*P	P	12 43 57.3	+0.1
LZH				AP	pP	12 44 12.8	+0.3
LZH				PP	PP	12 46 03.4	+0.3
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,50nm,6.6s						
LZH				LR	LR		
	comp=N,280nm,13.2s						
LZH				LR	LR		
	comp=Z,390nm,17.5s,MS4.5						
GTA	Gaotai	55.73	292	*e*P	P	12 43 58.7	+0.4
ARCES	ARCESS Array B	58.00	350	P	P	12 44 12.4	-1.6
	comp=Z,3.7nm,0.9s,mb4.4,baz=29,slow=7.5,SNR=14						
ARCES	ARCESS Array B	58.00	350	P	P	12 44 12.4	-1.7
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TXAR	Lajitas Array	58.41	82	P	P	12 44 16.1	-1.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=294,slow=5.0,SNR=10						
KURK	Kurchatov	59.09	314	*e*P	P	12 44 23.1	+1.2
WMQ	Urumqi	59.46	303	⇑P	P	12 44 25.4	+0.9
WMQ				PCP	PcP	12 45 11.9	+0.5
WMQ				PP	PP	12 46 39.4	+1.3
WMQ				*e*S	S	12 52 29.4	+1.7
WMQ				LR	LR		
	comp=N,20nm,17.2s,MS3.6						
WMQ				LR	LR		
	comp=E,40nm,18.7s,MS3.6						
MKAR	Makanchi Array	60.13	309	P	P	12 44 27.4	-1.7
	comp=E,0.6nm,0.4s,mb4.0,baz=44,slow=6.3,SNR=9.7						
MKAR	Makanchi Array	60.13	309	P	P	12 44 27.4	-1.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	Borovoye Array	60.94	320	P	P	12 44 33.3	-1.2
	comp=Z,1.0nm,0.4s,mb4.3,baz=47,slow=6.3,SNR=11						
BVAR				PcP	PcP	12 45 16.5	-0.7
	comp=Z,0.9nm,0.6s,baz=44,slow=3.6,SNR=4.8						
BVAR	Borovoye Array	60.94	320	P	P	12 44 33.3	-1.2
BVAR						12 45 16.5	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	65.71	347	P	P	12 45 04.2	-1.4
	comp=Z,2.2nm,0.9s,mb4.2,baz=11,slow=9.7,SNR=6.0						
FINES	FINESS Array B	65.71	347	P	P	12 45 04.2	-1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AAK	Ala-Archa	66.95	310	P	P	12 45 14.4	+0.6
NOA	NORSAR Array B	67.54	355	P	P	12 45 16.4	-0.7
	comp=Z,0.6nm,0.5s,mb3.9,baz=7.1,slow=7.2,SNR=2.7						
LSA	Lhasa	67.61	290	P	P	12 45 19.3	+1.2
LSA	Lhasa	67.61	290	*e*P	P	12 45 19.7	+1.6
	comp=Z,10nm,0.6s,mb5.0						
LSA	Lhasa	67.61	290	*e*P	P	12 45 19.7	+1.6
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
AKTK	Aktyubinsk	67.71	325	P	P	12 45 17.5	-0.9
AKTO	Aktyubinsk	67.71	325	P	P	12 45 17.5	-0.8
	comp=Z,0.5nm,0.3s,mb4.0,baz=54,slow=8.7,SNR=3.5						
AKTO	Aktyubinsk	67.71	325	P	P	12 45 17.5	-0.9
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
GUN	Gumba	72.02	292	*e*P	P	12 45 46.1	+1.1
	comp=Z,82nm,0.4s						
KKN	Kakani	72.45	293	*e*P	P	12 45 48.7	+1.1
	comp=Z,31nm,0.5s						
PKI	Pulchoki	72.54	292	*e*P	P	12 45 48.9	+0.8
	comp=Z,26nm,0.7s,mb5.3						
GKN	Gorkha	72.66	293	*e*P	P	12 45 49.4	+0.6
	comp=Z,27nm,0.5s						
DMN	Daman	72.69	293	*e*P	P	12 45 50.1	+1.1
	comp=Z,18nm,0.6s,mb5.2						
KOLN	Koldanda	73.43	294	*e*P	P	12 45 52.2	-1.1
	comp=Z,12nm,0.9s,mb4.8						
GERES	GERESS Array B	79.49	352	P	P	12 46 26.8	-0.1
	comp=Z,0.4nm,0.5s,mb3.6,baz=14,slow=5.5,SNR=5.0						
WRA	Warramunga Arr	82.26	224	P	P	12 46 41.0	-1.1
	comp=Z,0.9nm,0.8s,mb3.8,baz=31,slow=5.9,SNR=6.4						
WRA				pP	pP	12 46 56.2	-2.0
	comp=Z,0.3nm,0.7s,baz=32,slow=5.5,SNR=1.6						
WRA	Warramunga Arr	82.26	224	P	P	12 46 41.0	-1.1
WRA				*PP	pP	12 46 56.3	-2.0
BRTR	Keskin Array B	84.92	336	P	P	12 46 55.7	+0.6
	comp=Z,1.1nm,0.7s,mb4.1,baz=19,slow=4.5,SNR=4.2						
STKA	Stephens Creek	90.16	213	P	P	12 47 21.2	+0.8
	comp=Z,1.3nm,0.7s,mb4.4,baz=129,slow=22,SNR=3.9						
DBIC	Dimbokro	121.79	8	PKP	PKPdf	12 53 14.0	+0.6
	comp=Z,1.6nm,0.4s,baz=46,slow=23,SNR=12						
MAW	Mawson	146.72	218	PKPbc	PKPbc	12 54 00.8	+1.6
	comp=Z,2.6nm,0.6s,baz=58,slow=3.7,SNR=6.5						
BOSA	Boshof	151.05	313	PKPbc	PKPdf	12 54 13.2	+7.4
	comp=Z,5.1nm,0.6s,baz=52,slow=2.5,SNR=17						
BOSA				pPKPbc		12 54 25.0	
	comp=Z,1.6nm,0.5s,baz=350,slow=1.5,SNR=1.8						

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*CSEM **01** 12:53:00.4±0.2, 59.58N×24.65E, h2^{km}, ML2.2, Error ellipse: s-maj=5.6km s-min=2.3km az=151.0, Mining explosion.*
*NAO **01** 12:53:01.9±1.2, 59.72N×24.50E, ML2.6*
*HEL **01** 12:53:01.3±0.2, 59.61N×24.72E, ML2.2, ML1.5(UPP), Explosion*
*IDC **01** 12:53:03.6±1.0, 59.82N×24.61E, mb1 3.5/4, mb1mx3.2/21, mbtmp3.4/4, ML3.7/4, Error ellipse: s-maj=11.0km s-min=6.9km az=137.0*
*UPP **01** 12:53:11.4, 59.76N×23.25E, h0^{km}, ML1.5, Mining explosion.*
ISC 01 12:53:00.5±0.6**, 59.86N**±0.05×**24.54E**±0.07**, n26,** σ**1.^{s}33**/41**,**
Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	Pernaja	0.95	43	*e*P	Pg	12 53 21.0	+1.4
PVF				*e*S	Sg	12 53 33.1	+0.8
VJF	Virojoki	1.66	64	*e*P	Pn	12 53 31.7	+0.7
VJF				*e*S	Sb	12 53 53.1	+0.1
VJF	Virojoki	1.66	64	P	Pn	12 53 31.7	+0.7
VJF				S	Sb	12 53 53.0	0.0
FIA0	FINESS Array S	1.76	25	Pn	Pn	12 53 36.0	+3.5
	baz=201,slow=16						
FIA0				Lg		12 54 00.3	
	baz=201,slow=37						
FIA0	FINESS Array S	1.76	25	*e*P	Pn	12 53 36.0	+3.5
FIA0				*e*SB	Sb	12 54 01.2	+5.2
FINES	FINESS Array B	1.76	25	Pn	Pn	12 53 36.0	+3.5
	15nm,0.3s,baz=202,slow=15,SNR=261						
FINES				Lg		12 53 59.9	
	18nm,0.3s,baz=202,slow=30,SNR=15						
VSU	Vasula	1.80	140	Pn	Pn	12 53 31.6	-1.5
VSU				Lg		12 53 52.9	
AAL	Aland	2.30	280	*e*P	Pn	12 53 43.0	+2.8
KEF	Keuruu	2.32	4	*e*P	Pn	12 53 45.3	+4.7
KEF				*e*SB	Sb	12 54 18.5	+6.2
KEF				MSG		12 54 19.6	
KEF	Keuruu	2.32	4	P	Pn	12 53 45.2	+4.7
KEF				Sg	Sg	12 54 18.4	+0.6
KAF	Kangasniemi	2.42	20	P	Pn	12 53 45.4	+3.5
KAF				Sg	Sg	12 54 19.9	-1.2
SUF	Sumiainen	2.97	15	*e*P	Pn	12 53 53.3	+3.5
SUF				*e*S	Sn	12 54 30.7	+4.0
NRTU	Norrtaelje	2.99	269	*e*P	Pn	12 53 51.0	+0.9
GRAU	Graesoe	3.04	282	*e*P	Pn	12 53 51.4	+0.6
OSTU	Oestervaala	3.73	279	*e*P	Pn	12 54 01.8	+1.2
BACU	Backbrunna	3.75	273	*e*P	Pn	12 54 01.8	+0.9
JOF	Joensuu	4.47	44	*e*P	Pn	12 54 11.7	+0.5
JOF				*e*S	Sn	12 55 03.4	-1.3
HFS	Hagfors	5.45	278	Pn	Pn	12 54 24.6	-0.3
	baz=102,slow=16						
HFS				Sn	Sn	12 55 27.6	-1.7
	baz=74,slow=28						
HFS				Lg		12 55 50.9	
	baz=107,slow=37						
HFS	Hagfors	5.45	278	Pn	Pn	12 54 24.6	-0.4
	0.3nm,0.3s,baz=90,slow=16,SNR=26						
HFS				Sn	Sn	12 55 27.3	-2.0
	0.3nm,0.3s,baz=87,slow=27,SNR=6.4						
HFS				Lg		12 55 55.4	
	0.6nm,0.3s,baz=84,slow=29,SNR=6.0						
NB2	NORSAR Subarra	6.70	286	Pn	Pn	12 54 41.2	-1.3
	baz=98,slow=14						
NB2				Sn	Sn	12 55 54.1	-6.4
	baz=97,slow=22						
NB2				Lg		12 56 28.8	
	baz=96,slow=37						
NOA	NORSAR Array B	6.70	286	Pn	Pn	12 54 41.2	-1.4
	0.9nm,0.3s,baz=99,slow=12,SNR=3.3						
NOA				Sn	Sn	12 55 55.3	-5.3
	1.0nm,0.3s,baz=128,slow=23,SNR=3.3						
NOA				Lg		12 56 30.2	
	1.6nm,0.3s,baz=104,slow=16,SNR=4.4						
APA0	Apatity Array	8.62	22	Pn	P	12 55 07.7	-1.8
	baz=209,slow=14						
AKASG	Malin Array Be	9.56	162	Pn	P	12 55 16.9	-5.4
	1.8nm,0.3s,baz=341,slow=13,SNR=5.0						
ARA0	ARCESS Array S	9.72	2	Pn	P	12 55 23.0	-1.6
	baz=174,slow=16						
ARA0				Sn	Sn	12 57 08.8	-6.9
	baz=180,slow=28						
ARCES	ARCESS Array B	9.72	2	Pn	P	12 55 23.3	-1.2
	1.3nm,0.3s,baz=180,slow=12,SNR=53						
ARCES				Sn	Sn	12 57 08.4	-7.3
	0.3nm,0.3s,baz=180,slow=23,SNR=3.0						
ARCES				Lg		12 58 05.0	
	0.4nm,0.3s,baz=180,slow=28,SNR=3.0						
SPA0	Spitsbergen Ar	18.60	355	P	P	12 57 20.4	-0.3
	baz=184,slow=12						

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*NDI **01** 13:19:59.2±4.2, 34.87N×73.31E, h10^{km}, ML3.1*
*NNC **01** 13:20:09.4±5.8, 35.71N×74.80E, mpv3.2, Error ellipse: s-maj=67.8km s-min=52.5km az=67.0*
ISC 01 13:19:55.0±1.2**, 34.61N**±0.08×**72.7E**±0.1**, h10^{km}, n7,**
σ**0.^{s}84**/13**, 1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.31	130	*e*PB	Pb	13 20 54.6	+1.0
THN				*e*SB	Sb	13 21 33.0	-1.2
DLH	Dalhousie	3.41	126	*e*PB	Pb	13 20 55.0	-0.2
DLH				*e*SB	Sb	13 21 36.0	-0.9
SDNR	Sundarnagar	4.73	130	*e*PB	Pb	13 21 18.0	+0.2
SDNR				*e*SB	Sb	13 22 17.6	+2.4
SMLA	Simla	5.11	132	*e*P	Pn	13 21 13.6	+0.2
SMLA				*e*x	x	13 22 05.7	
KLP	Kalpa	5.57	122	*e*P	Pn	13 21 19.8	-0.2
KLP				*e*S	Sn	13 22 18.7	-6.0
KLP				AML	AML	13 22 43.3	
	comp=E,101nm,0.6s						
KLP				AML	AML	13 22 43.8	
	comp=N,92nm,0.3s						
KHET	Khetri	7.03	157	*e*P	Pn	13 21 40.6	0.0
KHET				*e*S	Sn	13 23 00.9	-0.5
KHET				AML	AML	13 23 49.3	
	comp=E,6.4nm,0.4s						
KHET				AML	AML	13 23 50.4	
	comp=N,4.7nm,0.3s						
KK31	Karatay Array	8.65	349	P	P	13 22 08.2	+5.0
	comp=N,0.5nm,0.3s,baz=154,slow=11,SNR=16						
KK31				⇓S	Sn	13 23 41.7	-0.2
	comp=N,0.9nm,0.4s,baz=154,slow=22,SNR=6.9						

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*ATH **01** 13:20:02.2, 38.11N×26.70E, h39^{km}±2^{km}, MD3.4/3*
*ISK **01** 13:20:03.4, 38.14N×26.70E, h9^{km}, MD3.3*
*NEIC **01** 13:20:03.0, 38.14N×26.72E, h11^{km}, MD3.4(ATH), MD3.2(ISK), After ISK.*
*CSEM **01** 13:20:03.8±0.1, 38.14N×26.77E, h10^{km}, MD3.3, Error ellipse: s-maj=2.8km s-min=1.4km az=102.0*
ISC 01 13:20:02.9±0.7**, 38.16N**±0.02×**26.65E**±0.04**, h2^{km}**±5^{km}**,**
n35, σ**0.^{s}87**/48**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.20	348	*i* P	Pg	13 20 06.1	-0.8
URLA				*i* S	Sg	13 20 09.6	0.0
BLCB	Balcova	0.38	54	*i* PG	Pg	13 20 10.5	0.0
SMG	Samos	0.48	162	*e*PB	Pg	13 20 12.3	-0.1
SMG				*e*SB	Sg	13 20 19.7	+0.9
IZM	Izmir	0.54	64	*i* PG	Pg	13 20 13.8	+0.2
IZM				*i* SG	Sg	13 20 21.7	+0.9
KDAG	Bornova	0.54	64	*i* P	Pg	13 20 12.2	-1.5
KDAG				*i* S	Sg	13 20 20.5	-0.4
AYDN	Tasoluk	1.09	117	*i* P	Pb	13 20 23.7	-0.5
AYDN				*i* S	Sb	13 20 38.6	-0.2
PRK	Paraskevi	1.12	345	*e*PN	Pn	13 20 23.7	-1.8
PRK				*e*SN	Sn	13 20 39.5	-2.1
AYVA	Ayvalik	1.14	2	*i* P	Pb	13 20 24.9	-0.2
AYVA				*i* S	Sb	13 20 42.5	+2.3
AKS	Akhisar	1.16	52	PN	Pn	13 20 25.2	-0.8
AKS				SN	Sn	13 20 42.0	-0.6
BODT	Bodrum	1.22	154	PN	Pn	13 20 26.1	-0.8
BODT				SN	Sn	13 20 43.2	-0.9
MLSB	Milas	1.25	134	*e*PN	Pn	13 20 26.6	-0.6
BDRM	Kayabasi	1.27	150	*i* P	Pb	13 20 28.2	+1.1
BDRM				*i* S	Sb	13 20 43.8	+0.1
APE	Apeiranthos	1.41	219	*e*PN	Pn	13 20 30.3	+0.7
APE				*e*SN	Sn	13 20 49.8	+0.9
APE	Apeiranthos	1.41	219	*e*PN	Pn	13 20 27.0	-2.6
MANT	Manisa	1.54	77	*i* P	Pn	13 20 31.6	+0.1
MANT				*i* S	Sb	13 20 52.8	+1.3
DAT	Datca	1.61	152	*e*PN	Pn	13 20 31.9	-0.6
YER	Yerkesik	1.65	128	*e*PN	Pn	13 20 32.3	-0.8
EZN	Ezine	1.68	351	*e*PN	Pn	13 20 33.9	+0.4
BALB	Balikesir	1.76	33	*e*PN	Pn	13 20 35.4	+0.8
DENT	Denizli	1.93	102	*e*PN	Pn	13 20 37.3	+0.3
SANT	Santorini	2.02	208	*e*Pn	Pn	13 20 41.4	+2.9
SANT	Santorini	2.02	208	*e*Pn	Pn	13 20 41.3	+2.9
DALT	Dalyan (Mudla)	2.11	131	*e*PN	Pn	13 20 39.3	-0.3
DST	Dursunbey	2.11	46	*e*PN	Pn	13 20 39.8	+0.2
LPK	Lapseki	2.21	2	*e*PN	Pn	13 20 41.7	+0.7
EDC	Edincik	2.38	23	*e*PN	Pn	13 20 44.2	+0.8
BNT	Bandirma	2.40	24	*e*PN	Pn	13 20 44.2	+0.4
FETY	Fethiye	2.47	127	*e*PN	Pn	13 20 44.7	0.0
KCT	Karacabey	2.48	32	*e*PN	Pn	13 20 45.6	+0.6
ORLT	Orhaneli	2.57	42	*e*PN	Pn	13 20 46.0	-0.2
MFT	Murefte	2.67	10	*e*PN	Pn	13 20 48.2	+0.6
ULDT	Uludag	2.77	44	*i* P	Pn	13 20 48.9	-0.1
ULDT				*i* S	Sn	13 21 29.1	+5.7
ALT	Altintas	2.85	71	*e*PN	Pn	13 20 50.0	-0.3
YLV	Yalova	3.20	40	*e*PN	Pn	13 20 55.4	+0.3
ESKT	Eskisehir	3.55	66	*e*PN	Pn	13 20 59.8	-0.3

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*NEIC **01** 13:42:47.0, 38.11N×26.70E, h20^{km}, MD3.3(ATH), MD3.3(ISK), After ISK.*
*ISK **01** 13:42:48.3, 38.13N×26.75E, h23^{km}, MD3.4*
*CSEM **01** 13:42:48.6±0.1, 38.15N×26.76E, h25^{km}, MD3.4, Error ellipse: s-maj=2.2km s-min=1.6km az=92.0*
*ATH **01** 13:42:48.0, 38.15N×26.62E, h28^{km}±6^{km}, MD3.3/3*
ISC 01 13:42:47.3±0.7**, 38.17N**±0.03×**26.59E**±0.04**, h9^{km}**±5^{km}**,**
n33, σ**1.^{s}04**/43**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.20	0	*i* P	Pg	13 42 51.7	+0.2
URLA				*i* S	Sg	13 42 55.0	+0.7
BLCB	Balcova	0.41	58	*i* PG	Pg	13 42 56.1	+0.4
BLCB				*i* SG	Sg	13 43 01.8	+0.5
SMG	Samos	0.49	157	*e*PB	Pb	13 42 58.1	+0.4
SMG				*e*SB	Sb	13 43 05.6	+0.9
IZM	Izmir	0.57	66	*i* PG	Pg	13 42 59.4	+0.6
KDAG	Bornova	0.58	66	*i* P	Pg	13 42 58.0	-1.0
KDAG				*i* S	Sg	13 43 06.0	-0.8
PRK	Paraskevi	1.11	347	*e*PN	Pn	13 43 09.5	+0.6
PRK				*e*SN	Sn	13 43 24.8	+0.4
AYDN	Tasoluk	1.13	116	*i* P	Pb	13 43 11.1	+2.4
AYDN				*i* S	Sb	13 43 24.6	+1.3
AYVA	Ayvalik	1.14	4	*i* P	Pb	13 43 10.1	+1.3
AYVA				*i* S	Sb	13 43 27.2	+3.7
AKS	Akhisar	1.19	53	PN	Pn	13 43 08.9	-1.2
BODT	Bodrum	1.24	152	PN	Pn	13 43 09.0	-1.8
MLSB	Milas	1.28	132	*e*PN	Pn	13 43 10.0	-1.3
BDRM	Kayabasi	1.29	148	*i* P	Pb	13 43 11.4	+0.1
BDRM				*i* S	Sb	13 43 29.8	+2.0
APE	Apeiranthos	1.38	218	*e*PN	Pn	13 43 13.8	+1.0
APE				*e*SN	Sn	13 43 31.7	+0.3
APE	Apeiranthos	1.38	218	*e*PN	Pn	13 43 13.4	+0.6
MANT	Manisa	1.58	78	*i* P	Pn	13 43 17.4	+1.8
MANT				*i* S	Sb	13 43 37.7	+1.5
DAT	Datca	1.63	151	*e*PN	Pn	13 43 14.9	-1.5
YER	Yerkesik	1.69	127	*e*PN	Pn	13 43 15.9	-1.3
BALB	Balikesir	1.78	34	*e*PN	Pn	13 43 18.4	-0.1
DENT	Denizli	1.97	101	*e*PN	Pn	13 43 19.8	-1.4
DST	Dursunbey	2.14	47	*e*PN	Pn	13 43 22.3	-1.4
LPK	Lapseki	2.21	3	*e*PN	Pn	13 43 25.0	+0.4
EDC	Edincik	2.39	24	*e*PN	Pn	13 43 26.7	-0.6
BNT	Bandirma	2.42	25	*e*PN	Pn	13 43 27.2	-0.4
FETY	Fethiye	2.50	127	*e*PN	Pn	13 43 27.2	-1.7
KCT	Karacabey	2.50	33	*e*PN	Pn	13 43 28.7	-0.2
ORLT	Orhaneli	2.59	43	*e*PN	Pn	13 43 29.2	-1.0
MFT	Murefte	2.67	11	*e*PN	Pn	13 43 31.7	+0.4
RDO	Rodhopi	3.09	345	*e*PN	Pn	13 43 37.6	+0.4
YLV	Yalova	3.22	41	*e*PN	Pn	13 43 38.1	-1.0
KDZ	Kurdzhali	3.60	346	*i* P	Pn	13 43 44.0	-0.4
RZN	Rozhen	3.80	338	*i* P	Pn	13 43 47.0	-0.4
MMB	Musomiste	4.07	328	*i* P	Pn	13 43 50.5	-0.6
VTS	Vitosha	5.12	331	*e*P	Pn	13 44 07.0	+0.9

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*LDG **01** 13:58:08.6±0.2, 51.52N×6.78E, h1^{km}, Md2.6/3, Ml2.7/8, Error ellipse: s-maj=4.3km s-min=3.5km az=134.0, Suspected Mining induced.*
*BUG **01** 13:58:16.9, 51.52N×6.58E, h1^{km}, ML1.5*
*BNS **01** 13:58:18.9±1.1, 51.50N×6.65E, h1^{km}, ML1.7, GESPUERT IN ANNABERG INTENSITAET IV; RHEINBERG III*
BGR 01 13:58:17.6, 51.48N×6.53E, h1^{km}, ML2.0/4**, 1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	Hlnxe	0.26	57	Pg	Pg	13 58 21.9	-0.8
BZER				Sg	Sg	13 58 25.5	-0.6
LAUG	Laupendahl	0.29	116	*e*Pg	Pg	13 58 23.1	-0.3
LAUG				*e*Sg	Sg	13 58 27.0	-0.4
	57nm,0.5s						
BUG	Bochum--Univer	0.47	95	⇓*e*Pg	Pg	13 58 26.1	-0.8
BUG				Sg	Sg	13 58 32.7	-0.4
HOBG	Hohbusch	0.71	134	*e*Pg	Pg	13 58 31.6	-0.2
HGN	Heimansgroeve	0.81	208	*e*Pg	Pg	13 58 35.2	+1.4
	9.0nm,0.1s						

HGN				*e*Sg	Sg	13 58 48.1	+3.5
KLL	**Kalltalsperre**	**0.85**	**189**	*e*Pg	Pg	13 58 35.3	+0.8
KLL				*e*Sg	Sg	13 58 47.8	+2.0
	37nm,0.1s						
STB	**Steinbach**	**0.91**	**167**	*e*Pg	Pg	13 58 36.3	+0.5
STB				*e*Sg	Sg	13 58 48.8	+0.8
	44nm,0.7s						
IBBN	**Ibbenburen**	**1.12**	**42**	*e*Pg	Pg	13 58 38.6	-1.5
	SNR=2.0						
IBBN				*e*Sg	Sg	13 58 53.3	-1.8
	SNR=2.7						
HILG	**Hillesheim**	**1.20**	**175**	*e*Sg	Sg	13 58 58.3	+0.9
KOE	**Koeppel**	**1.30**	**144**	*e*Pg	Pg	13 58 42.5	-1.1
KOE				*e*Sg	Sg	13 59 00.5	-0.5
BGG	**Burgeitz**	**1.38**	**158**	*e*Pg	Pg	13 58 44.0	-1.1
BGG				*e*Sg	Sg	13 59 02.5	-1.0
TNS	**Taunus Mts**	**1.75**	**135**	*e*Pg	Pg	13 58 50.4	-2.2
	SNR=1.8						
TNS				*e*Sg	Sg	13 59 12.7	-3.2
	SNR=2.6						
GIVF	**Givet**	**1.75**	**219**	*e*Sg	Sg	13 59 08.5	-7.5
	13nm,0.3s						
WLF	**Walferdange**	**1.83**	**188**	*e*Pg	Pg	13 58 52.2	-2.1
	SNR=1.3						
WLF				*e*Sg	Sg	13 59 16.2	-2.5
	SNR=5.6						
BAIF	**Baives**	**2.05**	**227**	*e*Pn	Pn	13 58 44.3	-9.3
BAIF				*e*Sg	Sg	13 59 17.6	-8.2
	5.8nm,0.3s						
RFYF	**Reffroy**	**2.94**	**194**	*e*Sg	Sg	13 59 43.4	-12
	12nm,0.3s						
CDF	**Champ du Feu**	**3.11**	**171**	*e*Pn	Pn	13 58 57.3	-11
CDF				*e*Pg	Pg	13 59 06.7	-13
CDF				*e*Sg	Sg	13 59 46.9	-14
	2.6nm,0.3s						
MEZF	**Maizieres J'vi**	**3.13**	**198**	*e*Sg	Sg	13 59 50.6	-11
	3.2nm,0.3s						
SFTF	**Sexfontaines**	**3.42**	**197**	*e*Sg	Sg	13 59 58.3	-13
	3.1nm,0.3s						
LOR	**Lormes**	**4.56**	**203**	*e*Sg	Sg	14 00 33.9	-16
	4.4nm,0.6s						
SSF	**Saint Saulge**	**4.84**	**205**	*e*Pn	Pn	13 59 22.0	-11
SSF				*e*Sg	Sg	14 00 43.7	-15
	2.5nm,0.5s						
BGF	**Bois d'Agland**	**5.49**	**208**	*e*Pn	Pn	13 59 27.6	-15

MAN 01 14:16:28.1, 11.89N×125.82E, h7^{km}, mb4.3, ML3.1, MS2.9, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.47**	**232**	*e*P	Pg	14 16 37.7	+0.1
BESP				*e*S	Sg	14 16 43.8	-0.1
PLP	**Palo**	**1.09**	**229**	*e*P	Pb	14 16 46.2	-2.7
PLP				*e*S	Sb	14 16 58.7	-4.5
CNP	**Catarman**	**1.28**	**299**	*e*P	Pb	14 16 51.4	-0.8
CNP				*e*S	Sb	14 17 10.5	+1.8
MSLP	**Maasin**	**1.98**	**208**	*e*P	Pn	14 17 03.2	+0.8
MSLP				*e*S	Sn	14 17 28.4	+0.5
PVCP	**Virac**	**2.34**	**316**	*e*P	Pn	14 17 07.1	-0.6

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*IDC **01** 14:25:51.8±2.2, 21.41N×142.92E, h260^{km}±20^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.2/22, mbtmp3.9/9, Error ellipse: s-maj=29.4km s-min=16.3km az=83.0*

*NEIC **01** 14:25:53.2±3.8, 21.47N×142.97E, h273^{km}±37^{km}, mb3.7/1, Error ellipse: s-maj=29.0km s-min=14.0km az=87.0*

ISC 01 14:25:52.3±1.8, **21.5N**±0.1×**142.9E**±0.3, **h278**^{km}±16^{km}, **n14**, σ**0^{s}.70**/11, **mb3.5**/8, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.64**	**354**	P	**P**	**14 27 18.0**	**+0.7**
	6.3nm,0.3s,baz=162,slow=20,SNR=5.7						
CBIJ				S	**S**	**14 28 23.6**	**-0.2**
	11nm,0.3s,baz=84,slow=23,SNR=6.5						
MJAR	**Matsushiro Arr**	**15.56**	**346**	P	**P**	**14 29 18.3**	**-1.0**
	0.4nm,0.3s,baz=149,slow=14,SNR=4.1						
WRAB	**Tennant Creek**	**41.98**	**192**	*e*P	**P**	**14 33 19.3**	**+1.0**
	2.5nm,0.6s,mb3.6						
WRA	**Warramunga Arr**	**41.99**	**192**	P	**P**	**14 33 16.9**	**-1.4**
	0.7nm,0.4s,mb3.3,baz=17,slow=8.7,SNR=29						
MKAR	**Makanchi Array**	**54.65**	**313**	P	**P**	**14 34 55.0**	**+0.6**
	0.2nm,0.4s,mb2.9,baz=95,slow=8.9,SNR=3.8						
MKAR				PcP	PcP	14 35 53.6	-0.2
	0.1nm,0.3s,baz=66,slow=4.0,SNR=4.4						
BVAR	**Borovoye Array**	**62.66**	**320**	P	**P**	**14 35 49.4**	**+0.1**
	1.1nm,0.4s,mb3.9,baz=98,slow=7.5,SNR=11						
PPT	**Papeete**	**76.69**	**115**	*e*LR	LR	14 37 21.5	
	72nm,24.5s						
ARCES	**ARCESS Array B**	**79.05**	**341**	P	**P**	**14 37 27.1**	**+0.4**
	3.5nm,0.9s,mb4.1,baz=63,slow=8.1,SNR=5.0						
FINES	**FINESS Array B**	**83.27**	**334**	P	**P**	**14 37 48.4**	**-0.3**
	1.5nm,0.8s,mb3.9,baz=72,slow=6.0,SNR=7.9						
NVAR	**Mina Array Bea**	**83.51**	**51**	P	**P**	**14 37 50.6**	**+0.2**
	0.3nm,0.7s,mb3.2,baz=262,slow=6.7,SNR=3.7						
PDAR	**Pinedale Array**	**87.76**	**45**	P	**P**	**14 38 11.0**	**0.0**
	0.2nm,0.3s,mb3.4,baz=9.5,slow=5.5,SNR=4.6						
PLCA	**Paso Flores**	**145.81**	**132**	PKPbc	PKPbc	14 45 01.3	+2.3
	0.5nm,0.4s,baz=264,slow=4.4,SNR=3.5						
PLCA	**Paso Flores**	**145.81**	**132**	PKPbc	PKPbc	14 45 01.3	+2.3
LPAZ	**La Paz**	**150.24**	**85**	PKPbc	PKPdf	14 45 13.9	+8.4
	0.6nm,0.5s,baz=350,slow=6.1,SNR=4.7						

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*IDC **01** 14:35:04.0±2.5, 9.01S×112.22E, mb3.6/3, mb1 3.9/4, mb1mx3.7/14, mbtmp3.8/4, ML3.7/1, MS3.4/1, Ms1 3.3/1, ms1mx2.3/14, Error ellipse: s-maj=111.8km s-min=24.8km az=48.0*

*NEIC **01** 14:35:07.6±0.8, 9.26S×112.11E, h35^{km}, mb4.7/3, Error ellipse: s-maj=22.1km s-min=12.9km az=222.0*

ISC 01 14:35:09.1±3.7, **9.4S**±0.2×**112.1E**±0.1, **h79**^{km}±40^{km}, **n9**, σ**0^{s}.65**/9, **mb3.9**/5, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	**Marble Bar**	**13.80**	**149**	*e*Pn	**P**	**14 38 21.4**	**-1.2**
	14nm,1.0s						
MBWA				*e*Sn	**S**	**14 40 38.8**	**-15**
COCO	**West Island**	**15.29**	**258**	*e*Pn	**P**	**14 38 42.2**	**+0.3**
	112nm,1.0s						
FITZ	**Fitzroy Crossi**	**15.71**	**125**	Pn	**P**	**14 38 48.0**	**+0.9**
	0.2nm,0.3s,baz=258,slow=9.3,SNR=4.4						
WRA	**Warramunga Arr**	**23.87**	**119**	P	**P**	**14 40 20.9**	**+4.7**
	0.3nm,0.6s,mb2.8,baz=292,slow=12,SNR=10						
STKA	**Stephens Creek**	**35.30**	**134**	LR	LR	14 55 51.5	
	comp=Z,54nm,19.4s,baz=286,slow=35						
CASY	**Casey**	**56.83**	**181**	P	**P**	**14 44 47.8**	**+0.3**
	12nm,1.4s,mb4.7						
SONM	**Songino Array**	**57.19**	**355**	P	**P**	**14 44 50.4**	**+0.1**
	0.5nm,0.7s,mb3.7,baz=180,slow=8.3,SNR=5.5						
SONM				PcP	PcP	14 45 46.6	+2.8
	0.2nm,0.4s,baz=180,slow=1.4,SNR=2.7						
MKAR	**Makanchi Array**	**61.94**	**337**	P	**P**	**14 45 23.0**	**+0.1**
	0.9nm,0.4s,mb4.2,baz=151,slow=7.3,SNR=24						
AAK	**Ala-Archa**	**62.14**	**329**	P	**P**	**14 45 23.6**	**-0.6**
	1.5nm,0.7s,mb4.1						

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*ISK **01** 15:07:49.7, 38.27N×26.63E, h20^{km}, MD2.9*

*ATH **01** 15:07:49.6, 38.15N×26.55E, h31^{km}±6^{km}, MD3.3/3*

*NEIC **01** 15:07:49.0, 38.29N×26.64E, h21^{km}, MD3.3(ATH), MD2.9(ISK), After ISK.*

*CSEM **01** 15:07:49.9±0.1, 38.27N×26.66E, h20^{km}, MD2.9, Error ellipse: s-maj=3.0km s-min=1.9km az=117.0*

ISC 01 15:07:49.5±1.1, **38.22N**±0.03×**26.60E**±0.07, **h12**^{km}±7^{km}, **n12**, σ**0^{s}.69**/19, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.39**	**65**	*i* PG	**Pg**	**15 07 57.2**	**-0.3**
BLCB				*i* SG	**Sg**	**15 08 02.7**	**-0.1**
SMG	**Samos**	**0.54**	**160**	*e*PB	**Pb**	**15 08 00.3**	**-0.1**
SMG				*e*SB	**Sb**	**15 08 08.2**	**+0.4**
IZM	**Izmir**	**0.55**	**71**	*i* PG	**Pg**	**15 08 00.5**	**-0.2**
IZM				*i* SG	**Sg**	**15 08 08.9**	**+0.7**
PRK	**Paraskevi**	**1.06**	**346**	*e*PN	**Pn**	**15 08 10.6**	**+0.6**
PRK				*e*SN	**Sn**	**15 08 25.7**	**+1.1**
AKS	**Akhisar**	**1.16**	**55**	PN	**Pn**	**15 08 11.1**	**-0.3**
AKS				SN	**Sn**	**15 08 25.9**	**-1.2**
BODT	**Bodrum**	**1.29**	**154**	*e*PN	**Pn**	**15 08 14.0**	**+0.7**
BODT				*e*SN	**Sn**	**15 08 30.7**	**+0.3**
MLSB	**Milas**	**1.31**	**134**	*e*PN	**Pn**	**15 08 14.1**	**+0.5**
APE	**Apeiranthos**	**1.43**	**217**	*e*PN	**Pn**	**15 08 15.9**	**+0.6**
APE	**Apeiranthos**	**1.43**	**217**	*e*PN	**Pn**	**15 08 14.2**	**-1.1**
EZN	**Ezine**	**1.62**	**353**	*e*PN	**Pn**	**15 08 17.4**	**-0.6**
SANT	**Santorini**	**2.06**	**207**	*e*Pn	**Pn**	**15 08 23.0**	**-1.3**
SANT				Sn	**Sn**	**15 08 57.0**	**+7.0**
SANT	**Santorini**	**2.06**	**207**	*e*Pn	**Pn**	**15 08 23.0**	**-1.3**

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*NNC **01** 15:27:18.2±4.5, 42.67N×85.93E, mpv3.6, Error ellipse: s-maj=46.0km s-min=27.4km az=131.0*

BJI 01 15:27:21.2, 42.20N×84.87E, h14^{km}, ML3.6, 4C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.63**	**51**	P	Pn	15 28 05.2	+1.2
WMQ				Smax			
	comp=N,180nm,0.6s						
WMQ				Smax			
	comp=E,180nm,0.6s						
MK31	**Makanchi Array**	**4.95**	**339**	Pn	Pn	15 28 35.1	-1.9
	comp=E,3.2nm,0.4s,baz=150,slow=16,SNR=57						
MK31				⇑Lg		15 29 53.1	
	comp=E,18nm,0.5s,baz=147,slow=26						
AAK	**Ala-Archa**	**7.69**	**277**	⇑Pn	Pn	15 29 23.0	+7.4
	comp=E,4.0nm,1.2s						
KURK	**Kurchatov**	**9.54**	**335**	⇑Pn	P	15 29 36.0	-5.1
	comp=E,7.6nm,3.3s						
KURK				⇑Lg		15 32 17.8	
	comp=E,3.4nm,0.7s						
KK31	**Karatay Array**	**10.62**	**280**	⇓Lg		15 33 15.8	
	comp=E,1.0nm,0.6s,baz=96,slow=25,SNR=3.7						

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*NAO **01** 15:49:41.6±1.2, 59.71N×24.51E, ML2.8*

*HEL **01** 15:49:41.1±0.4, 59.63N×24.69E, ML2.4, ML1.6(UPP), Explosion*

*CSEM **01** 15:49:41.7±0.3, 59.70N×24.54E, h2^{km}, ML2.4, Error ellipse: s-maj=9.2km s-min=5.7km az=144.0, Mining explosion.*

*IDC **01** 15:49:42.7±0.8, 59.78N×24.65E, mb3.2/1, mb1 3.5/6, mb1mx3.3/22, mbtmp3.4/6, ML3.7/4, Error ellipse: s-maj=9.5km s-min=6.2km az=130.0*

*UPP **01** 15:49:50.9, 59.74N×23.24E, h0^{km}, ML1.6, Mining explosion.*

ISC 01 15:49:39.8±0.6, **59.87N**±0.05×**24.50E**±0.07, **n26**, σ**1^{s}.27**/43, **mb3.3**/1, **Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	**Pernaja**	**0.96**	**44**	*e*P	**Pg**	**15 50 00.4**	**+1.4**
PVF				*e*S	**Sg**	**15 50 11.0**	**-0.7**
VJF	**Virojoki**	**1.67**	**65**	*e*P	**Pn**	**15 50 11.5**	**+1.1**
VJF				*e*S	**Sb**	**15 50 33.8**	**+1.2**
VJF	**Virojoki**	**1.67**	**65**	P	**Pn**	**15 50 11.4**	**+1.0**
VJF				S	**Sb**	**15 50 33.7**	**+1.1**
FIA0	**FINESS Array S**	**1.76**	**25**	Pn	**Pn**	**15 50 15.6**	**+3.8**
	baz=197,slow=16						
FIA0				Lg		15 50 40.0	
	baz=193,slow=37						
FIA0	**FINESS Array S**	**1.76**	**25**	*e*P	**Pn**	**15 50 15.5**	**+3.8**
FIA0				*e*S	**Sn**	**15 50 39.2**	**+4.0**
FINES	**FINESS Array B**	**1.76**	**25**	Pn	**Pn**	**15 50 15.4**	**+3.6**
	21nm,0.3s,baz=199,slow=15,SNR=697						
FINES				Lg		15 50 40.2	
	28nm,0.3s,baz=202,slow=29,SNR=20						
VSU	**Vasula**	**1.82**	**140**	Pn	**Pn**	**15 50 11.1**	**-1.5**
VSU				Lg		15 50 32.5	
AAL	**Aland**	**2.29**	**280**	*e*P	**Pn**	**15 50 22.6**	**+3.3**
KEF	**Keuruu**	**2.31**	**4**	*e*P	**Pn**	**15 50 24.6**	**+4.9**
KEF				*e*S	**Sn**	**15 50 55.5**	**+6.2**
KEF	**Keuruu**	**2.31**	**4**	P	**Pn**	**15 50 24.6**	**+4.9**
KEF				S	**Sn**	**15 50 55.4**	**+6.1**
KAF	**Kangasniemi**	**2.42**	**21**	P	**Pn**	**15 50 25.2**	**+4.0**
KAF				S	**Sn**	**15 50 56.2**	**+4.3**
KAF				Sg	**Sg**	**15 51 00.0**	**-0.3**
NRTU	**Norrtaelje**	**2.98**	**269**	*e*P	**Pn**	**15 50 30.6**	**+1.4**
GRAU	**Graesoe**	**3.02**	**281**	*e*P	**Pn**	**15 50 31.1**	**+1.2**
NYNU	**Nynaeshamn**	**3.43**	**258**	*e*P	**Pn**	**15 50 36.8**	**+1.1**
JOF	**Joensuu**	**4.48**	**44**	*e*P	**Pn**	**15 50 51.2**	**+0.7**
JOF				*e*S	**Sn**	**15 51 43.4**	**-0.8**
HFS	**Hagfors**	**5.43**	**277**	Pn	**Pn**	**15 51 04.2**	**+0.2**
	baz=94,slow=12						
HFS				Sn	**Sn**	**15 52 06.4**	**-1.8**
	baz=91,slow=28						
HFS				Lg		15 52 28.8	
	baz=86,slow=37						
HFS	**Hagfors**	**5.43**	**277**	Pn	**Pn**	**15 51 04.5**	**+0.4**
	0.3nm,0.3s,baz=107,slow=14,SNR=32						
HFS				Sn	**Sn**	**15 52 06.9**	**-1.2**
	0.4nm,0.3s,baz=111,slow=25,SNR=7.9						
HFS				Lg		15 52 33.1	
	0.9nm,0.3s,baz=90,slow=27,SNR=7.5						
NB2	**NORSAR Subarra**	**6.68**	**286**	Pn	**Pn**	**15 51 20.8**	**-0.8**
	baz=95,slow=14						
NB2				Sn	**Sn**	**15 52 35.2**	**-4.1**
	baz=97,slow=22						
NB2				Lg		15 53 10.2	
	baz=91,slow=28						
NB2	**NORSAR Subarra**	**6.68**	**286**	Pn	**Pn**	**15 51 20.8**	**-0.8**
	SNR=3.9						
NB2				Sn	**Sn**	**15 52 35.2**	**-4.2**
	SNR=3.8						
NOA	**NORSAR Array B**	**6.68**	**286**	Pn	**Pn**	**15 51 20.2**	**-1.4**
	1.0nm,0.3s,baz=66,slow=7.9,SNR=4.8						
NOA				Sn	**Sn**	**15 52 35.6**	**-3.8**
	1.3nm,0.3s,baz=116,slow=15,SNR=3.8						
NOA				Lg		15 53 10.6	
	2.1nm,0.3s,baz=29,slow=14,SNR=5.5						
APA0	**Apatity Array**	**8.62**	**22**	Pn	**P**	**15 51 48.6**	**-0.1**
	baz=217,slow=12						
APA0				Sn	**Sn**	**15 53 23.0**	**-4.9**
	baz=184,slow=28						
AKASG	**Malin Array Be**	**9.57**	**162**	Pn	**P**	**15 51 56.0**	**-5.8**
	1.9nm,0.3s,baz=339,slow=12,SNR=5.8						
ARA0	**ARCESS Array S**	**9.72**	**2**	Pn	**P**	**15 52 02.7**	**-1.0**
	baz=177,slow=14						
ARA0				Sn	**Sn**	**15 53 49.0**	**-5.8**
	baz=183,slow=28						
ARCES	**ARCESS Array B**	**9.72**	**2**	Pn	**P**	**15 52 02.5**	**-1.2**
	1.4nm,0.3s,baz=181,slow=13,SNR=58						
ARCES				Sn	**Sn**	**15 53 48.4**	**-6.4**
	0.5nm,0.3s,baz=182,slow=22,SNR=4.7						
GERES	**GERESS Array B**	**12.69**	**214**	Pn	**P**	**15 52 40.4**	**-3.9**
	0.1nm,0.3s,baz=32,slow=13,SNR=4.2						
MKAR	**Makanchi Array**	**35.70**	**85**	P	**P**	**15 56 39.9**	**-1.6**
	0.5nm,0.9s,mb3.3,baz=316,slow=6.2,SNR=7.9						

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*NEIC **01** 16:08:59.6±2.1, 37.56N×144.83E, h18^{km}±12^{km}, mb4.9/73, MW4.7(NIED), Error ellipse: s-maj=5.7km s-min=4.3km az=153.0*

*BJI **01** 16:09:00.1, 37.91N×145.01E, h39^{km}, mB4.7, mb4.6, Ms4.4, Msz4.1*

*NIED **01** 16:09:00, 37.70N×144.60E, h8^{km}, Mw4.7 Best double couple: M$_0$1.39×10^{16} NP1:ϕ_s159°, δ58°, λ-94°. NP2: ϕ_s347°, δ32°, λ-84°.*

*JMA **01** 16:09:00.4±0.2, 37.70N×144.63E, h61^{km}, M5.2*

JMA Felt I J1.

*IDC **01** 16:09:01.7±0.5, 37.61N×144.87E, h34^{km}±4^{km}, mb4.3/20, mb1 4.5/23, mb1mx4.5/26, mbtmp4.5/23, ML4.5/3, MS3.7/13, Ms1 3.7/13, ms1mx3.6/22, Error ellipse: s-maj=14.6km s-min=11.0km az=121.0*

*HRVD **01** 16:09:02.1±0.4, 37.69N×144.96E, h16^{km}±1^{km}, MW4.9/60, Centroid moment Tensor Solution. LP body waves: s20,c20;Mantle waves: s60,c97; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.41±.19; M$_{\theta\theta}$0.43±.11; M$_{\phi\phi}$1.98±.13; M$_{r\theta}$-0.52±.38; M$_{\theta\phi}$-0.47±.07; M$_{\phi r}$-0.84±.32; Best double couple: M$_0$2.448×10^{16} NP1:ϕ_s153°, δ38°, λ-111°. NP2:ϕ_s359°, δ55°, λ-74°. Principal axes: T 2.215, Plg9°, Azm78°; N .469, Plg13°, Azm170°; P -2.681, Plg74°, Azm314°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **01** 16:09:02.0±1.0, 37.61N×144.68E, h43^{km}, mb5.1/46 Error ellipse: s-maj=8.7km s-min=5.5km az=110.6*

ISC 01 16:09:00.7±0.2, **37.53N**±0.03×**144.67E**±0.03, **h35**^{km}, **h35**^{km}±.8^{km}**:pP-P**, **n302**, σ**1^{s}.11**/313, **mb4.8**/100, **MS4.0**/25, **30C-11D**, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	**2.78**	**290**	⇑P	**P**	**16 09 42.6**	**-1.3**
JIO				*e*S	**S**	**16 10 14.2**	**-2.4**
OFUJ	**Ofunato**	**2.82**	**304**	⇑P	**P**	**16 09 42.6**	**-1.9**
JMK	**Ichinoseki**	**3.06**	**299**	P	**P**	**16 09 46.3**	**-1.6**
JMK				*e*S	**S**	**16 10 21.3**	**-2.5**
JMM	**Marumori**	**3.09**	**277**	⇑P	**P**	**16 09 47.3**	**-1.0**
ONAJ	**Iwakimizuishiy**	**3.12**	**263**	⇑P	**P**	**16 09 47.9**	**-0.7**
JOM	**Ohasama**	**3.28**	**307**	⇑P	**P**	**16 09 49.2**	**-1.8**
JKZ	**Kuzumaki**	**3.58**	**314**	⇑P	**P**	**16 09 53.2**	**-2.0**
JYK	**Kaneyama**	**3.67**	**294**	P	**P**	**16 09 55.5**	**-1.0**
JRG	**Rokugo**	**3.67**	**302**	⇓P	**P**	**16 09 55.4**	**-1.2**
JSB	**Shiboa**	**3.83**	**263**	P	**P**	**16 09 59.4**	**+0.6**
JYW	**Yuwa**	**4.03**	**301**	P	**P**	**16 10 00.7**	**-1.0**
BSO1	**Boso 1**	**4.14**	**227**	P	**P**	**16 10 01.7**	**-1.6**
BSO1				*e*S	**S**	**16 10 51.0**	**-0.2**
JAG	**Ashikaga**	**4.32**	**257**	⇑P	**P**	**16 10 05.0**	**-0.8**
BSO3	**Boso 3**	**4.33**	**232**	⇓P	**P**	**16 10 04.7**	**-1.2**
JHK	**Hiroka**	**4.51**	**268**	P	**P**	**16 10 08.0**	**-0.5**
JOT	**Ohata**	**4.76**	**325**	P	**P**	**16 10 09.2**	**-2.8**
JOT				*e*S	**S**	**16 10 58.8**	**-7.9**
JRY	**Ryogami san**	**4.87**	**254**	P	**P**	**16 10 12.3**	**-1.3**
JRY				*e*S	**S**	**16 11 06.8**	**-2.7**
JCH	**Churui**	**5.17**	**349**	P	**P**	**16 10 12.1**	**-5.7**
JCH				*e*S	**S**	**16 11 06.5**	**-11**
JKB	**Kayabe**	**5.18**	**328**	P	**P**	**16 10 14.0**	**-3.8**
JKB				*e*S	**S**	**16 11 08.4**	**-8.8**
JJN	**Nakama**	**5.20**	**267**	P	**P**	**16 10 19.0**	**+0.8**
MJAR	**Matsushiro Arr**	**5.26**	**261**	Pn	**P**	**16 10 18.9**	**-0.1**
	37nm,0.3s,baz=91,slow=15,SNR=434						
MJAR				Sn	**S**	**16 11 19.7**	**+0.3**
	10nm,0.3s,baz=94,slow=27,SNR=11						
MAJO	**Matsushiro**	**5.26**	**261**	⇑*e*Pn	**P**	**16 10 19.2**	**+0.1**
	288nm,0.5s						
MAJO				*e*Sn	**S**	**16 11 20.0**	**+0.6**
MAJO	**Matsushiro**	**5.26**	**261**	⇑*e*P	**P**	**16 10 19.2**	**+0.1**
MAJO				*e*		16 11 20.0	
MAJO				pmax	pmax		
	comp=Z,279nm,0.5s						
MAT	**Matsushiro**	**5.26**	**261**	P	**P**	**16 10 18.9**	**-0.2**
MAT				*e*S	**S**	**16 11 19.2**	**-0.2**
MAT	**Matsushiro**	**5.26**	**261**	P	**P**	**16 10 19.3**	**+0.2**
MAT	**Matsushiro**	**5.26**	**261**	*e*P	**P**	**16 10 19.0**	**-0.1**
	comp=Z,24nm,0.5s						
MAT				S	**S**	**16 11 19.0**	**-0.4**
MAT	**Matsushiro**	**5.26**	**261**	*e*P	**P**	**16 10 19.0**	**-0.1**
MAT				S	**S**	**16 11 19.0**	**-0.4**
MAT				pmax	pmax		
	comp=Z,24nm,0.5s						
NEM2	**Nemuro 2**	**5.88**	**8**	P	**P**	**16 10 19.9**	**-7.8**
NEM2				*e*S	**S**	**16 11 19.8**	**-15**
JHJ	**Hachijo jima 2**	**5.94**	**224**	Pn	**P**	**16 10 26.5**	**-2.1**
	comp=Z,68nm,0.3s,baz=222,slow=22,SNR=28						
JHJ				Sn	**S**	**16 11 31.3**	**-5.1**
	comp=Z,238nm,0.3s,baz=300,slow=24,SNR=13						
YUK	**Yuzh-Kuril'sk**	**6.56**	**8**	*e*P	**P**	**16 10 28.7**	**-8.6**
	comp=Z,930nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**6.56**	**8**	*e*P	**P**	**16 10 28.7**	**-8.6**
YUK				pmax	pmax		
	comp=N,280nm,0.5s						
YUK				pmax	pmax		
	comp=E,370nm,0.5s						
YUK				pmax	pmax		
	comp=Z,930nm,0.5s						
YUK				MLR	MLR		
	comp=N,3μm,9.0s						
YUK				MLR	MLR		
	comp=E,3μm,9.0s						
JGM	**Miyama**	**6.65**	**256**	P	**P**	**16 10 39.2**	**+0.6**
ASAJ	**Asahikawa**	**6.76**	**347**	Pn	**P**	**16 10 36.0**	**-4.1**
	comp=E,13nm,0.3s,baz=197,slow=12,SNR=41						
ASAJ				Sn	**S**	**16 11 47.2**	**-10**
	comp=E,7.6nm,0.3s,baz=102,slow=30,SNR=7.5						
ASAJ				LR	LR	16 13 14.0	
	comp=E,279nm,21.5s,baz=93,slow=38						
ASAJ	**Asahikawa**	**6.76**	**347**	P	**P**	**16 10 36.1**	**-4.1**
ASAJ						16 11 47.2	
ASAJ				pmax	pmax		
	comp=Z,13nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,279nm,21.5s						
JKN2	**Miekihoku**	**7.56**	**247**	⇑P	**P**	**16 10 50.0**	**-1.3**
YSS	**Yuzh-Sakhalins**	**9.52**	**352**	⇓*e*P	**P**	**16 11 15.2**	**-3.2**
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**9.52**	**352**	⇓*e*P	**P**	**16 11 15.2**	**-3.2**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,12.0s						
CBIJ	**Chichi jima**	**10.62**	**192**	Pn	**P**	**16 11 26.9**	**-6.6**
	comp=Z,15nm,0.3s,baz=281,slow=19,SNR=10						
CBIJ				Sn	**S**	**16 13 21.2**	**-11**
	comp=Z,21nm,0.3s,baz=292,slow=23,SNR=7.4						
VLA	**Vladivostok**	**11.23**	**304**	*i* P	**P**	**16 11 40.0**	**-1.8**
	comp=Z,90nm,2.0s						
VLA				*i*		16 13 48.3	
VLA	**Vladivostok**	**11.23**	**304**	*i* P	**P**	**16 11 40.0**	**-1.8**
VLA				*i*		16 13 48.3	
VLA				pmax	pmax		
	comp=Z,90nm,2.0s						
VLA				MLR	MLR		
	comp=N,400nm,14.5s						
JNU	**Nakatsue**	**12.09**	**253**	Pn	**P**	**16 11 53.1**	**-0.3**
	comp=N,0.8nm,0.3s,baz=99,slow=20,SNR=14						
JNU				LR	LR	16 16 52.7	
	comp=N,240nm,18.1s,baz=8.7,slow=38						
JSU	**Suzuyama**	**13.17**	**247**	P	**P**	**16 12 08.4**	**+0.6**
KS15	**Wonju Array Si**	**13.34**	**275**	*e*P	**P**	**16 12 10.9**	**+0.9**
MDJ	**Mudanjiang**	**13.39**	**307**	P	**P**	**16 12 09.7**	**-0.9**
MDJ				AP		16 12 17.2	
MDJ				PP	PP	16 12 21.4	+0.4
MDJ				S	**S**	**16 14 40.0**	**+0.8**
MDJ				XS		16 14 51.0	
MDJ				PCS		16 21 07.0	
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s						
MDJ				AMB	AMB		
	comp=Z,40nm,3.3s						
MDJ				LR	LR		
	comp=N,610nm,17.4s						
MDJ				LR	LR		
	comp=E,310nm,15.0s						
MDJ				LR	LR		
	comp=Z,650nm,15.0s						
MDJ	**Mudanjiang**	**13.39**	**307**	*e*Pn	**P**	**16 12 08.7**	**-1.9**
	comp=Z,28nm,1.1s						
KLR	**Kul'dur**	**14.97**	**325**	*e*P	**P**	**16 12 35.7**	**+4.4**
CN2	**Changchun**	**15.86**	**299**	*e*P	**P**	**16 12 46.4**	**+3.6**
CN2				*e*XP		16 12 59.0	
CN2				*e*S	**S**	**16 15 41.0**	**+3.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
CN2				LR	LR		
	comp=N,480nm,13.0s						
CN2				LR	LR		
	comp=E,390nm,13.0s						
CN2				LR	LR		
	comp=Z,400nm,11.0s						
SNY	**Shenyang**	**16.79**	**291**	⇓P	**P**	**16 12 56.8**	**+2.3**
SNY				S	**S**	**16 16 08.4**	**+10**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.4s						
SNY				AMB	AMB		
	comp=Z,140nm,11.4s						
SNY				LR	LR		
	comp=N,910nm,16.7s						
SNY				LR	LR		
	comp=Z,670nm,15.5s						
JOW	**Kunigami**	**17.48**	**237**	LR	LR	16 20 13.7	
	comp=Z,152nm,19.4s,baz=3.8,slow=38						
DL2	**Dalian**	**18.15**	**281**	*e*P	**P**	**16 13 14.5**	**+2.8**
DL2				S	**S**	**16 16 33.2**	**+3.2**
DL2				AMB	AMB		
	comp=Z,20nm,1.0s						
DL2				LR	LR		
	comp=N,220nm,12.5s						
DL2				LR	LR		
	comp=E,140nm,11.8s						
DL2				LR	LR		
	comp=Z,270nm,11.1s						
PET	**Petropavlovsk**	**18.30**	**28**	*e*P	**P**	**16 13 13.9**	**+0.4**
PET				*e*S	**S**	**16 16 33.2**	**+0.1**

PET				pmax	pmax		
	comp=Z,100nm,14.4s						
PET				MLR	MLR		
	comp=Z,400nm,15.0s						
SSE	**Sheshan**	**20.41**	**259**	P	**P**	**16 13 36.5**	**-0.8**
SSE				S	**S**	**16 17 18.6**	**-0.4**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s						
SSE				AMB	AMB		
	comp=Z,100nm,5.9s						
SSE				LR	LR		
	comp=N,210nm,23.3s,MS3.6						
SSE				LR	LR		
	comp=E,210nm,23.3s,MS3.6						
SSE				LR	LR		
	comp=Z,280nm,20.2s,MS3.6						
SSE	**Sheshan**	**20.41**	**259**	P	**P**	**16 13 36.5**	**-0.8**
	comp=Z,27nm,0.7s						
SSE				pP		16 13 44.6	
SSE				sP		16 13 48.4	
SSE				S	**S**	**16 17 18.6**	**-0.4**
SSE				sS		16 17 32.1	
SSE				LR	LR		
	comp=Z,280nm,20.2s,MS3.6						
HIA	**Hailar**	**21.47**	**311**	*e*P	**P**	**16 13 48.0**	**-0.1**
	comp=Z,10nm,0.8s,mb4.2						
HIA	**Hailar**	**21.47**	**311**	*e*P	**P**	**16 13 48.0**	**-0.1**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**21.86**	**263**	*e*P	**P**	**16 13 57.0**	**+4.9**
NJ2				AP		16 14 06.0	
NJ2				XP		16 14 10.6	
NJ2				PP	PP	16 14 22.9	+5.0
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,220nm,5.3s						
NJ2				LR	LR		
	comp=N,830nm,16.4s,MS4.5						
NJ2				LR	LR		
	comp=E,960nm,12.8s,MS4.5						
NJ2				LR	LR		
	comp=Z,450nm,14.4s,MS4.0						
MA2	**Magadan**	**22.41**	**8**	P	**P**	**16 13 58.3**	**+1.0**
MA2				*e*		16 14 28.0	
MA2				*e*S	**S**	**16 17 56.1**	**-0.3**
MA2				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.4						
MA2				MLR	MLR		
	comp=Z,180nm,18.5s,MS3.5						
GUMO	**Guam**	**23.84**	**180**	LR	LR	16 21 25.1	
	comp=Z,102nm,21.8s,MS3.3,baz=87,slow=31						
HHC	**Hu-ho-hao-te**	**25.79**	**288**	*e*P	**P**	**16 14 32.5**	**+2.4**
HHC				AP	pP	16 14 42.1	+2.3
HHC				XP	sP	16 14 46.4	+2.5
HHC				PP	PP	16 15 14.7	+3.9
HHC				PCP	PcP	16 17 58.9	-0.9
HHC				S	**S**	**16 19 01.3**	**+6.7**
HHC				XS		16 19 15.6	
HHC				SCP		16 21 33.5	
HHC				PCS		16 21 38.3	
HHC				AMB	AMB		
	comp=Z,130nm,8.4s						
HHC				LR	LR		
	comp=N,670nm,14.4s,MS4.4						
HHC				LR	LR		
	comp=E,470nm,15.6s,MS4.4						
HHC				LR	LR		
	comp=Z,650nm,14.4s,MS4.3						
SEY	**Seymchan**	**25.87**	**8**	*i* P	**P**	**16 14 29.9**	**-0.7**
CIT	**Chita**	**26.17**	**314**	*e*P	**P**	**16 14 34.3**	**+0.8**
	comp=Z,41nm,1.2s,mb4.8						
CIT				*e*		16 15 21.9	
CIT	**Chita**	**26.17**	**314**	*e*P	**P**	**16 14 34.3**	**+0.8**
CIT				*e*		16 15 21.9	
CIT				pmax	pmax		
	comp=Z,41nm,1.2s,mb4.8						
YAK	**Yakutsk**	**26.23**	**344**	*e*P	**P**	**16 14 31.4**	**-2.6**
	comp=Z,6.0nm,0.7s,mb4.2						
YAK	**Yakutsk**	**26.23**	**344**	*e*P	**P**	**16 14 31.4**	**-2.6**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.2						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
BOD	**Bodaibo**	**28.55**	**325**	*e*P	**P**	**16 14 53.1**	**-2.0**
	comp=N,9.0nm,1.1s,mb4.4						
BOD	**Bodaibo**	**28.55**	**325**	*e*P	**P**	**16 14 53.1**	**-2.0**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
SONM	**Songino Array**	**29.69**	**303**	P	**P**	**16 15 06.2**	**+0.9**
	comp=Z,1.7nm,0.6s,mb3.9,baz=91,slow=8.7,SNR=17						
SONM				LR	LR	16 27 52.2	
	comp=Z,113nm,18.5s,MS3.5,baz=5.7,slow=38						
ENH	**Enshi**	**29.96**	**267**	*e*P	**P**	**16 15 08.2**	**+0.3**
	comp=Z,10nm,0.6s,mb4.7						
TGY	**Tagaytay City**	**31.46**	**228**	P	**P**	**16 15 22.7**	**+1.4**
	comp=Z,43nm,0.3s,mb5.8,baz=122,slow=10,SNR=3.4						
ZAK	**Zakamensk**	**32.02**	**307**	*e*P	**P**	**16 15 25.3**	**-0.6**
	comp=Z,2.0nm,1.0s,mb3.9						
ZAK	**Zakamensk**	**32.02**	**307**	*e*P	**P**	**16 15 25.3**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
LZH	**Lanzhou**	**32.54**	**280**	*e*P	**P**	**16 15 33.4**	**+2.8**
LZH				AP	pP	16 15 43.5	+2.9
LZH				XP	sP	16 15 47.8	+2.6
LZH				PP	PP	16 16 42.5	+2.9
LZH				*e*S	**S**	**16 20 45.3**	**+2.9**
LZH				*e*SS	SS	16 22 41.6	+1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,90nm,4.9s						
LZH				LR	LR		
	comp=N,830nm,13.4s						
LZH				LR	LR		
	comp=Z,1µm,17.2s,MS4.6						
LZH	**Lanzhou**	**32.54**	**280**	*e*P	**P**	**16 15 33.4**	**+2.8**
	comp=Z,29nm,1.3s,mb5.0						
LZH				pP	pP	16 15 43.5	+2.9
LZH				sP	sP	16 15 47.8	+2.6
LZH				PP	PP	16 16 42.5	+2.9
LZH				*e*S	**S**	**16 20 45.3**	**+2.9**
LZH				sS		16 21 01.5	
LZH				*e*SS	SS	16 22 41.6	+1.7
LZH				LR	LR		
	comp=Z,1µm,17.2s,MS4.6						
GYA	**Guiyang**	**33.86**	**262**	⇑*i*P	**P**	**16 15 43.0**	**+0.9**
GYA				AP	pP	16 15 52.5	+0.3
GYA				PP	PP	16 16 56.6	+0.6
GYA				S	**S**	**16 21 03.6**	**+0.6**
GYA				XS		16 21 26.5	
GYA				SCP		16 21 57.7	
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
GYA				AMB	AMB		
	comp=Z,80nm,2.9s,mb5.1						
GYA				LR	LR		
	comp=N,390nm,17.0s,MS4.3						
GYA				LR	LR		
	comp=E,340nm,17.4s,MS4.3						
GYA				LR	LR		
	comp=Z,360nm,17.8s,MS4.2						
CD2	**Chengdu**	**34.27**	**271**	*e*P	**P**	**16 15 48.0**	**+2.5**
GTA	**Gaotai**	**34.90**	**287**	*e*P	**P**	**16 15 54.4**	**+3.5**
GTA				AP	pP	16 16 04.2	+3.2
GTA				XP	sP	16 16 08.2	+2.7
GTA				PP	PP	16 17 13.7	+4.5
GTA				PCP	PcP	16 18 24.2	+0.8
GTA				S	**S**	**16 21 25.0**	**+6.1**
GTA				XS		16 21 41.0	
GTA				SS	SS	16 23 41.1	+7.0
GTA				AMB	AMB		
	comp=Z,110nm,5.3s						
GTA				LR	LR		
	comp=N,480nm,18.6s,MS4.4						
GTA				LR	LR		
	comp=E,310nm,16.7s,MS4.4						
GTA				LR	LR		
	comp=Z,460nm,17.5s,MS4.3						
TIXI	**Tiksi**	**35.15**	**351**	*e*P	**P**	**16 15 49.0**	**-3.7**
	comp=Z,2.0nm,0.8s,mb4.1						
TIXI				LR	LR		
	comp=Z,110nm,14.0s,MS3.8						
TIXI	**Tiksi**	**35.15**	**351**	*e*P	**P**	**16 15 49.0**	**-3.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,114nm,14.0s,MS3.8						
KMI	**Kunming**	**37.60**	**263**	P	**P**	**16 16 14.6**	**+0.7**
KMI				AP	pP	16 16 25.2	+1.2
KMI				XP	sP	16 16 29.6	+1.2
KMI				PP	PP	16 17 43.5	+0.7
KMI				S	**S**	**16 22 01.5**	**+0.9**
KMI				SS	SS	16 24 36.1	+0.7
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
KMI				LR	LR		
	comp=N,370nm,4.3s						
KMI				LR	LR		
	comp=E,560nm,4.7s						
KMI				LR	LR		
	comp=Z,390nm,12.6s,MS4.4						
KMI	**Kunming**	**37.60**	**263**	P	**P**	**16 16 14.6**	**+0.7**
	comp=Z,13nm,0.9s,mb4.7						
KMI				pP	pP	16 16 25.2	+1.2
KMI				sP	sP	16 16 29.6	+1.2
KMI				PP	PP	16 17 43.5	+0.7
KMI				PPP	PPP	16 18 05.3	+1.2
KMI				S	**S**	**16 22 01.5**	**+0.9**
KMI				sS		16 22 19.6	
KMI				SS	SS	16 24 36.1	+0.7
KMI				LR	LR		
	comp=Z,400nm,12.6s,MS4.4						
WMQ	**Urumqi**	**42.93**	**297**	*e*P	**P**	**16 16 59.3**	**+1.6**
WMQ				AP	pP	16 17 09.8	+1.9
WMQ				XP	sP	16 17 14.1	+1.8
WMQ				PP	PP	16 18 41.8	+2.1
WMQ				PCP	PcP	16 18 49.8	+1.3
WMQ				*e*S	**S**	**16 23 22.0**	**+2.1**
WMQ				AMB	AMB		
	comp=Z,120nm,4.2s						
WMQ				LR	LR		
	comp=N,200nm,23.0s,MS4.0						
WMQ				LR	LR		
	comp=E,100nm,20.0s,MS4.0						
WMQ				LR	LR		
	comp=Z,100nm,28.0s						
NVS	**Novosibirsk**	**44.38**	**313**	*e*P	**P**	**16 17 08.1**	**-1.1**
KDAK	**Kodiak Island**	**44.99**	**42**	P	**P**	**16 17 11.4**	**-2.7**
	comp=Z,6.8nm,0.5s,mb4.7,baz=271,slow=5.7,SNR=16						
MKAR	**Makanchi Array**	**46.05**	**302**	P	**P**	**16 17 22.8**	**0.0**
	comp=Z,3.1nm,0.6s,mb4.4,baz=84,slow=9.7,SNR=31						
MKAR				LR	LR	16 35 31.6	
	comp=Z,89nm,19.6s,MS3.7,baz=292,slow=34						
MKAR	**Makanchi Array**	**46.05**	**302**	*i* P	**P**	**16 17 22.7**	**0.0**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MCK	**McKinley**	**46.77**	**34**	*e*P	**P**	**16 17 26.3**	**-1.8**
	comp=Z,8.5nm,1.2s,mb4.5						
MCK	**McKinley**	**46.77**	**34**	*e*P	**P**	**16 17 26.3**	**-1.8**
MCK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
COLA	**College**	**47.27**	**32**	*e*P	**P**	**16 17 31.0**	**-1.0**
	comp=Z,3.1nm,0.6s,mb4.4						
COLA	**College**	**47.27**	**32**	*e*P	**P**	**16 17 31.0**	**-1.0**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KURK	**Kurchatov**	**47.67**	**308**	⇓*e*P	**P**	**16 17 35.2**	**-0.2**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.1						
ILAR	**Eielson Array**	**47.68**	**33**	P	**P**	**16 17 33.0**	**-2.3**
	comp=Z,7.6nm,0.8s,mb4.8,baz=259,slow=6.6,SNR=98						
ILAR				LR	LR	16 36 45.8	
	comp=Z,64nm,18.3s,MS3.6,baz=180,slow=35						
GUN	**Gumba**	**49.68**	**277**	*e*P	**P**	**16 17 52.8**	**+1.5**
	comp=Z,17nm,0.5s,mb5.3						
KKN	**Kakani**	**50.21**	**277**	*e*P	**P**	**16 17 56.3**	**+1.0**
	comp=Z,18nm,0.7s,mb5.2						
GKN	**Gorkha**	**50.62**	**278**	*e*P	**P**	**16 17 59.1**	**+0.7**
	comp=Z,12nm,0.5s,mb5.0						
KAKA	**Kakadu**	**51.28**	**195**	*e*P	**P**	**16 18 20.1**	**+17**
	comp=Z,8.5nm,0.6s,mb4.8						
KAKA				*e*pP	pP	16 18 31.1	+17
KOLN	**Koldanda**	**51.54**	**278**	*e*P	**P**	**16 18 01.5**	**-3.9**
	comp=Z,39nm,1.3s,mb5.2						
CHKZ	**Chkalovo**	**51.87**	**313**	⇓*e*P	**P**	**16 18 07.0**	**-0.4**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
BRVK	**Borovoye**	**52.21**	**313**	*e*P	**P**	**16 18 10.1**	**+0.1**
	comp=Z,2.0nm,0.5s,mb4.3						
BRVK	**Borovoye**	**52.21**	**313**	*e*P	**P**	**16 18 10.1**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
AAK	**Ala-Archa**	**52.53**	**299**	*e*P	**P**	**16 18 12.1**	**-0.5**
	comp=Z,5.0nm,0.9s,mb4.4						
AAK	**Ala-Archa**	**52.53**	**299**	*e*P	**P**	**16 18 12.1**	**-0.5**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
INK	**Inuvik**	**52.76**	**28**	P	**P**	**16 18 12.1**	**-1.8**
	comp=Z,8.1nm,0.6s,mb4.9,baz=306,slow=6.2,SNR=38						
INK	**Inuvik**	**52.76**	**28**	*e*P	**P**	**16 18 12.2**	**-1.7**
	comp=Z,441nm,0.9s						
INK				*e*	pP	16 18 23.1	-1.2
INK	**Inuvik**	**52.76**	**28**	*e*P	**P**	**16 18 12.2**	**-1.7**
INK				*e*	pP	16 18 23.1	-1.2
INK				pmax	pmax		
	comp=Z,14nm,0.9s						
NDI	**New Delhi**	**56.12**	**282**	*e*x	**P**	**16 18 38.0**	**-1.0**
ARU	**Arti**	**57.70**	**319**	⇓*i*P	**P**	**16 18 49.4**	**-0.5**
	comp=Z,22nm,1.3s,mb5.0						
ARU				*e*		16 19 43.1	
ARU				*e*		16 20 55.1	
ARU				*e*S	**S**	**16 26 47.4**	**+3.1**
ARU				*e*SS	SS	16 30 36.4	+0.2
ARU	**Arti**	**57.70**	**319**	⇓*i*P	**P**	**16 18 49.4**	**-0.5**
ARU				*e*		16 19 43.1	
ARU				*e*		16 20 55.1	
ARU				*e*S	**S**	**16 26 47.4**	**+3.1**
ARU				*e*SS	SS	16 30 36.4	+0.2
ARU				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.0						
WRAB	**Tennant Creek**	**57.98**	**191**	*e*P	**P**	**16 18 50.6**	**-1.7**
	comp=Z,22nm,1.0s,mb5.1						
WRAB				*e*	pP	16 19 01.5	-1.4
WRAB	**Tennant Creek**	**57.98**	**191**	*i* P	**P**	**16 18 51.6**	**-0.7**
WB2	**Warramunga Arr**	**57.98**	**191**	*e*P	**P**	**16 18 50.4**	**-2.0**
WB2				*e*pP	pP	16 19 01.6	-1.3
WRA	**Warramunga Arr**	**57.99**	**191**	P	**P**	**16 18 50.4**	**-1.9**
	comp=Z,17nm,1.0s,mb5.0,baz=8.4,slow=6.9,SNR=40						
WRA				pP	pP	16 19 01.4	-1.5
	comp=Z,9.5nm,0.6s,baz=12,slow=7.3,SNR=15						
FITZ	**Fitzroy Crossi**	**58.16**	**201**	*e*P	**P**	**16 18 53.3**	**-0.3**
	comp=Z,12nm,0.9s,mb4.9						
FITZ				*e*pP	pP	16 19 03.7	-0.5
FITZ	**Fitzroy Crossi**	**58.16**	**201**	P	**P**	**16 18 53.5**	**-0.2**
	comp=Z,12nm,0.7s,mb5.0,baz=33,slow=7.0,SNR=12						
FITZ				pP	pP	16 19 03.5	-0.7
	comp=Z,14nm,0.5s,baz=10,slow=9.3,SNR=5.5						
ASPA	**Alice Springs**	**61.71**	**191**	*e*P	**P**	**16 19 16.9**	**-1.0**
ASPA				*e*pP	pP	16 19 27.2	-1.2
YKW3	**Yellowknife Ar**	**62.02**	**31**	*e*P	**P**	**16 19 17.5**	**-2.0**
YKA	**Yellowknife Ar**	**62.06**	**31**	P	**P**	**16 19 17.5**	**-2.1**
	comp=Z,3.5nm,0.7s,mb4.6,baz=300,slow=6.4,SNR=13						
YKA				LR	LR	16 47 40.3	
	comp=Z,50nm,18.5s,MS3.7,baz=195,slow=37						
ARCES	**ARCESS Array B**	**64.43**	**340**	P	**P**	**16 19 33.2**	**-1.9**
	comp=Z,3.4nm,0.9s,mb4.4,baz=37,slow=6.1,SNR=4.5						
EDM	**Edmonton**	**67.33**	**40**	*e*P	**P**	**16 19 51.8**	**-2.0**
NEW	**Newport**	**67.95**	**46**	*e*P	**P**	**16 19 56.7**	**-1.1**
	comp=Z,6.4nm,0.9s,mb4.7						
NEW	**Newport**	**67.95**	**46**	*e*P	**P**	**16 19 56.7**	**-1.1**
NEW				pmax	pmax		
	comp=Z,7.0nm,0.9s						
STKA	**Stephens Creek**	**69.11**	**183**	P	**P**	**16 20 05.0**	**-0.3**
	comp=Z,1.1nm,0.9s,mb3.8,baz=352,slow=14,SNR=2.5						
STKA	**Stephens Creek**	**69.11**	**183**	P	**P**	**16 20 05.0**	**-0.3**
OBN	**Obninsk**	**69.23**	**324**	*e*P	**P**	**16 20 05.7**	**+0.1**
	comp=Z,8.0nm,0.6s,mb4.8						
OBN				LR	LR		
	comp=Z,100nm,13.0s,MS4.2						
OBN	**Obninsk**	**69.23**	**324**	*e*P	**P**	**16 20 05.7**	**+0.1**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.2						
FINES	**FINESS Array B**	**69.56**	**333**	P	**P**	**16 20 06.8**	**-0.7**
	comp=Z,4.3nm,0.6s,mb4.6,baz=45,slow=8.1,SNR=20						
VSU	**Vasula**	**71.32**	**331**	*i* P	**P**	**16 20 17.7**	**-0.6**
HRY	**Holter Researc**	**71.79**	**45**	*e*P	**P**	**16 20 20.5**	**-0.7**
FFC	**Flin Flon**	**71.86**	**34**	*e*P	**P**	**16 20 20.0**	**-1.5**
	comp=Z,10nm,1.0s,mb4.7						
FFC	**Flin Flon**	**71.86**	**34**	*e*P	**P**	**16 20 20.0**	**-1.5**
FFC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
HLID	**Hailey**	**72.11**	**49**	*e*P	**P**	**16 20 23.0**	**-0.2**
	comp=Z,1.4nm,0.5s,mb4.2						
DLMT	**Dillon**	**72.14**	**46**	*e*P	**P**	**16 20 22.7**	**-0.6**
	comp=Z,16nm,1.1s,mb4.9						
DLMT				*e*	pP	16 20 34.0	-0.1
ZEI	**Tsey**	**72.48**	**311**	*e*P	**P**	**16 20 24.6**	**-0.8**
ZEI				*i* *PP	pP	16 20 34.5	-1.6
ZEI				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
KIV	**Kislovodsk**	**72.52**	**312**	*e*P	**P**	**16 20 26.1**	**+0.5**
	comp=Z,28nm,0.9s,mb5.2						
KIV				*e*PPP	PPP	16 24 51.4	-0.1
KIV				*e*S	S	16 29 43.7	-2.6
KIV				LR	LR		
	comp=Z,70nm,16.0s,MS4.0						
KIV	**Kislovodsk**	**72.52**	**312**	*e*P	**P**	**16 20 26.1**	**+0.5**
KIV				*e*PPP	PPP	16 24 51.4	-0.1
KIV				*e*S	S	16 29 43.7	-2.6
KIV				pmax	pmax		
	comp=N,11nm,0.9s						
KIV				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.2						
KIV				MLR	MLR		
	comp=Z,66nm,16.0s,MS4.0						
NVAR	**Mina Array Bea**	**72.60**	**55**	P	**P**	**16 20 25.1**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=288,slow=6.3,SNR=11						
QLMT	**Earthquake Lak**	**73.12**	**46**	*e*P	**P**	**16 20 29.8**	**+0.6**
ELK	**Elko**	**73.23**	**51**	*e*P	**P**	**16 20 29.9**	**0.0**
	comp=Z,14nm,1.7s,mb4.6						
ELK	**Elko**	**73.23**	**51**	*e*P	**P**	**16 20 29.9**	**0.0**
ELK				pmax	pmax		
	comp=Z,14nm,1.7s						
GNI	**Garni**	**73.47**	**308**	*i* P	**P**	**16 20 32.6**	**+1.3**
	comp=Z,26nm,2.2s,mb4.8						
GNI				LR	LR		
	comp=Z,100nm,20.0s,MS4.1						
GNI	**Garni**	**73.47**	**308**	*i* P	**P**	**16 20 32.6**	**+1.3**
GNI				pmax	pmax		
	comp=Z,26nm,2.2s						
GNI				MLR	MLR		
	comp=Z,100nm,20.0s						
GCMT	**Greycliff**	**73.55**	**45**	*e*P	**P**	**16 20 31.6**	**0.0**
IMW	**Indian Meadow**	**73.96**	**47**	*e*P	**P**	**16 20 34.5**	**+0.4**
	comp=Z,12nm,0.8s,mb4.9						
IMW				*e*		16 20 52.6	
RRI2	**Red Ridge**	**74.07**	**47**	*e*P	**P**	**16 20 35.4**	**+0.7**
	comp=Z,8.0nm,0.9s,mb4.7						
MOOW	**Moose Ponds**	**74.16**	**47**	*e*P	**P**	**16 20 35.4**	**+0.2**
	comp=Z,9.4nm,1.1s,mb4.6						
TPAW	**Teton Pass**	**74.20**	**47**	*e*P	**P**	**16 20 35.6**	**+0.2**
	comp=Z,17nm,1.2s,mb4.9						
LOHW	**Long Hollow**	**74.33**	**47**	*e*P	**P**	**16 20 36.3**	**+0.2**
	comp=Z,2.0nm,0.5s,mb4.3						
SOC	**Sochi**	**74.48**	**313**	⇑*i*P	**P**	**16 20 40.2**	**+3.2**
	comp=Z,52nm,1.1s,mb5.4						
SOC				*e*pP	pP	16 20 45.5	-2.3
SOC				*e*		16 23 22.5	
SOC				*e*S	S	16 30 09.0	+0.8
SOC	**Sochi**	**74.48**	**313**	*c* *i*P	**P**	**16 20 40.2**	**+3.2**
SOC				*e**PP	pP	16 20 45.5	-2.3
SOC				*e*		16 23 22.5	
SOC				*e*S	S	16 30 09.0	+0.8
SOC				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.4						
NB2	**NORSAR Subarra**	**74.70**	**339**	P	**P**	**16 20 37.0**	**-1.0**
	comp=Z,16nm,1.1s,mb4.8,baz=38,slow=5.6						
NOA	**NORSAR Array B**	**74.70**	**339**	P	**P**	**16 20 37.4**	**-0.6**
	comp=Z,5.4nm,0.8s,mb4.5,baz=37,slow=5.8,SNR=13						
NOA				LR	LR	16 55 26.2	
	comp=Z,49nm,19.9s,MS3.8,baz=5.0,slow=37						
HWUT	**Hardware Ranch**	**74.97**	**49**	*e*P	**P**	**16 20 40.1**	**+0.1**
	comp=Z,9.3nm,1.2s,mb4.6						
NAO	**NORSAR Subarra**	**74.99**	**339**	P	**P**	**16 20 37.0**	**-2.6**
	comp=Z,16nm,1.1s,mb4.8						
NAO	**NORSAR Subarra**	**74.99**	**339**	P	**P**	**16 20 37.0**	**-2.6**
NAO				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
BW06	**Boulder Array**	**75.45**	**47**	*e*P	**P**	**16 20 41.5**	**-1.1**
	comp=Z,4.7nm,0.8s,mb4.5						
PDAR	**Pinedale Array**	**75.45**	**47**	P	**P**	**16 20 41.8**	**-0.9**
	comp=Z,3.7nm,0.6s,mb4.5,baz=287,slow=1.9,SNR=34						
PDAR				pP	pP	16 20 52.6	-0.8
	comp=Z,1.4nm,0.7s,baz=237,slow=1.3,SNR=5.5						
AKASG	**Malin Array Be**	**75.47**	**324**	P	**P**	**16 20 42.1**	**-0.4**
	comp=Z,7.0nm,0.5s,mb4.8,baz=44,slow=6.2,SNR=52						
AKASG				pP	pP	16 20 52.8	-0.5
	comp=Z,1.9nm,0.5s,baz=44,slow=6.2,SNR=5.4						
DAU	**Daniels Canyon**	**75.87**	**50**	*e*P	**P**	**16 20 45.5**	**+0.3**
ARUT	**Antelope Range**	**76.09**	**53**	*e*P	**P**	**16 20 46.7**	**+0.3**
KONO	**Kongsberg**	**76.31**	**338**	*i* P	**P**	**16 20 47.4**	**+0.2**
MSU	**Marysvale**	**76.45**	**52**	*e*P	**P**	**16 20 49.1**	**+0.7**
SRU	**San Rafael**	**77.11**	**50**	*e*P	**P**	**16 20 51.5**	**-0.7**
	comp=Z,11nm,0.7s,mb4.9						
SRU				*e*	pP	16 21 02.3	-0.7
SRU	**San Rafael**	**77.11**	**50**	*e*P	**P**	**16 20 51.5**	**-0.7**
SRU				*e*	pP	16 21 02.3	-0.7
SRU				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
ULM	**Lac du Bonnet**	**77.64**	**35**	P	**P**	**16 20 52.6**	**-2.2**
	comp=Z,3.3nm,0.9s,mb4.2,baz=338,slow=3.4,SNR=4.3						
ULM				LR	LR	16 52 00.4	
	comp=Z,82nm,21.8s,MS4.0,baz=342,slow=33						
PV10	**Paradox Valley**	**78.48**	**50**	*e*P	**P**	**16 20 59.7**	**0.0**
PV01	**Paradox Valley**	**78.92**	**50**	*e*P	**P**	**16 21 02.4**	**+0.2**
KWP	**Kalwaria**	**79.21**	**326**	*e*P	**P**	**16 21 04.4**	**+0.9**
SMCO	**Snowmass**	**79.22**	**49**	*e*P	**P**	**16 21 03.5**	**-0.3**
	comp=Z,10nm,1.2s,mb4.6						
RW3	**Ridgway**	**79.38**	**50**	*e*P	**P**	**16 21 04.8**	**+0.1**
BURAR	**Bucovina Array**	**79.50**	**323**	⇓P	**P**	**16 21 05.9**	**+0.8**
BURAR	**Bucovina Array**	**79.50**	**323**	⇓P	**P**	**16 21 05.9**	**+0.8**
ISCO	**Idaho Springs**	**79.62**	**48**	*e*P	**P**	**16 21 06.5**	**+0.5**
	comp=Z,11nm,1.4s,mb4.6						
ISCO	**Idaho Springs**	**79.62**	**48**	*e*P	**P**	**16 21 06.5**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
CFR	**Carcaliu**	**79.77**	**320**	⇑P	**P**	**16 21 05.7**	**-0.9**
KOLS	**Kolonicke sedl**	**79.91**	**326**	*i* P	**P**	**16 21 08.0**	**+0.7**
VRI	**Vrincioaia**	**80.00**	**321**	⇑P	**P**	**16 21 09.0**	**+1.2**
STHS	**Stebnicka Huta**	**80.02**	**326**	*i* P	**P**	**16 21 09.3**	**+1.5**
OJC	**Ojcow**	**80.04**	**328**	*e*P	**P**	**16 21 08.7**	**+0.7**
HARR	**Harsova**	**80.21**	**320**	⇑P	**P**	**16 21 07.6**	**-1.4**
CRVS	**Cervenica-Dubn**	**80.30**	**326**	*i* P	**P**	**16 21 10.1**	**+0.7**
NIE	**Niedzica**	**80.42**	**327**	*e*P	**P**	**16 21 11.1**	**+1.1**
BR131	**Keskin Array S**	**80.44**	**313**	*e*P	**P**	**16 21 11.3**	**+1.0**
	comp=Z,5.8nm,1.1s,mb4.4						
BRTR	**Keskin Array B**	**80.44**	**313**	P	**P**	**16 21 11.3**	**+1.1**
	comp=Z,1.7nm,0.6s,mb4.2,baz=90,slow=4.9,SNR=11						
BSEG	**Bad Segeberg**	**80.76**	**335**	*e*P	**P**	**16 21 12.5**	**+0.8**
KSP	**Ksiaz**	**81.02**	**330**	*e*P	**P**	**16 21 13.4**	**+0.3**
KSP	**Ksiaz**	**81.02**	**330**	*e*P	**P**	**16 21 13.1**	**0.0**
SDCO	**Great Sand Dun**	**81.03**	**49**	*e*P	**P**	**16 21 13.0**	**-0.4**
	comp=Z,4.2nm,1.1s,mb4.3						
OKC	**Ostrava-Krasne**	**81.03**	**328**	*e*P	**P**	**16 21 14.5**	**+1.3**
KECS	**Kecovo**	**81.05**	**326**	*i* P	**P**	**16 21 14.6**	**+1.3**
MORC	**Moravsky Berou**	**81.33**	**328**	*e*P	**P**	**16 21 15.6**	**+0.9**
	comp=Z,12nm,1.3s,mb4.7						
MORC	**Moravsky Berou**	**81.33**	**328**	*e*P	**P**	**16 21 15.6**	**+0.8**
MORC				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
DPC	**Dobruska-Polom**	**81.39**	**329**	*e*P	**P**	**16 21 16.4**	**+1.4**
DPC				*e*pP	pP	16 21 26.3	+0.4
UPC	**Upice**	**81.39**	**330**	*e*P	**P**	**16 21 16.3**	**+1.3**
PSZ	**Piszkesteto**	**81.73**	**326**	*e*P	**P**	**16 21 17.9**	**+1.0**
	comp=Z,4.2nm,0.8s,mb4.4						
PSZ	**Piszkesteto**	**81.73**	**326**	*e*P	**P**	**16 21 17.9**	**+1.0**
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
VYHS	**Vyhne**	**81.76**	**327**	*i* P	**P**	**16 21 18.3**	**+1.3**
BRG	**Berggiesshubel**	**81.91**	**331**	*e*P	**P**	**16 21 18.1**	**+0.4**
	comp=Z,8.3nm,0.9s,mb4.7						
BRG	**Berggiesshubel**	**81.91**	**331**	*e*P	**P**	**16 21 18.1**	**+0.3**
BRG				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
CLL	**Collm**	**81.93**	**332**	P	**P**	**16 21 18.0**	**+0.2**
	comp=Z,logA/T=1.3,mb5.0						
CLL				*e**PP	pP	16 21 29.0	+0.3
CLL	**Collm**	**81.93**	**332**	*i* P	**P**	**16 21 18.0**	**+0.2**
	comp=Z,22nm,1.0s,mb5.0						
CLL				*e*pP	pP	16 21 29.0	+0.3
CLL	**Collm**	**81.93**	**332**	*i* P	**P**	**16 21 18.0**	**+0.2**
CLL				*e**PP	pP	16 21 29.0	+0.3

CLL				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
PVCC	Panska Ves	81.94	330	eP	P	16 21 18.8	+0.9
ANMO	Albuquerque	82.26	52	eP	P	16 21 20.8	+0.9
	comp=Z,4.1nm,1.1s,mb4.3						
ANMO	Albuquerque	82.26	52	eP	P	16 21 20.8	+0.9
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PRU	Pruhonice	82.38	330	eP	P	16 21 21.2	+1.0
PRU				epP	pP	16 21 31.1	0.0
SRO2	Moca	82.51	327	eP	P	16 21 22.0	+1.1
TREC	Trest	82.55	329	eP	P	16 21 22.2	+1.1
PPT	Papeete	82.56	119	LR	LR	16 58 13.1	
	comp=Z,155nm,18.7s,MS4.4,baz=331,slow=36						
MOX	Moxa	82.98	332	i P	P	16 21 23.8	+0.6
MOX	Moxa	82.98	332	eP	P	16 21 23.8	+0.6
NKC	Novy Kostel	83.00	331	eP	P	16 21 24.1	+0.8
NKC				epP	pP	16 21 36.0	+1.8
KHC	Kasperske Hory	83.44	330	eP	P	16 21 26.2	+0.6
KHC				epP	pP	16 21 37.0	+0.5
GERES	GERESS Array B	83.62	330	P	P	16 21 26.7	+0.2
	comp=Z,2.9nm,0.8s,mb4.5,baz=36,slow=5.2,SNR=20						
GERES				pP	pP	16 21 37.4	0.0
	comp=Z,0.7nm,0.6s,baz=45,slow=5.7,SNR=3.5						
WET	Wettzell	83.71	330	eP	P	16 21 28.2	+1.3
	comp=Z,9.0nm,1.2s,mb4.8						
WET	Wettzell	83.71	330	eP	P	16 21 28.2	+1.3
WET				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.8						
GRA1	Grafenberg Arr	83.90	332	eP	P	16 21 29.2	+1.3
	comp=Z,18nm,1.0s,mb5.2						
GRF	Grafenberg Arr	83.90	332	eP	P	16 21 29.2	+1.3
	comp=Z,18nm,1.0s,mb5.2						
GRF	Grafenberg Arr	83.90	332	eP	P	16 21 29.2	+1.3
GRF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
GRF	Grafenberg Arr	83.90	332	eP	P	16 21 29.2	+1.3
GRF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
RZN	Rozhen	84.00	319	eP	P	16 21 30.0	+1.4
SCHQ	Schefferville	84.11	18	P	P	16 21 28.5	-0.3
	comp=Z,2.0nm,1.0s,mb4.2,baz=73,slow=11,SNR=3.5						
SCHQ				LR	LR	16 59 27.0	
	comp=Z,88nm,22.0s,MS4.1,baz=278,slow=36						
SCHQ	Schefferville	84.11	18	P	P	16 21 28.5	-0.3
SCHQ				LR	LR	16 59 27.0	
MOA	Molln	84.19	329	⇑iP	P	16 21 30.4	+1.0
	comp=Z,5.2nm,1.0s,mb4.6						
MMB	Musomiste	84.58	320	eP	P	16 21 32.0	+0.5
KKB	Krupnik	84.70	320	eP	P	16 21 32.0	-0.1
GROS	Grobnik	84.77	327	i P	P	16 21 32.4	+0.1
PERS	Pernice	84.79	328	eP	P	16 21 32.8	+0.4
MNTX	Cornudas Mount	85.07	54	eP	P	16 21 33.5	-0.7
	comp=Z,16nm,1.8s,mb4.8						
FUR	Furstenfeldbru	85.13	331	eP	P	16 21 35.2	+1.2
	comp=Z,32nm,0.8s,mb5.5						
FUR	Furstenfeldbru	85.13	331	eP	P	16 21 35.2	+1.2
FUR				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.5						
LEGS	Legarje	85.25	327	eP	P	16 21 34.6	-0.1
GDL2	Guadalupe Moun	85.38	53	eP	P	16 21 35.7	0.0
GIVF	Givet	85.83	335	eP	P	16 21 37.5	+0.1
MOTA	Moosalm	85.86	330	⇑iP	P	16 21 38.6	+0.9
	comp=Z,10nm,1.1s,mb5.0						
MOTA	Moosalm	85.86	330	⇑P	P	16 21 38.6	+0.9
	comp=Z,10nm,1.1s,mb5.0						
MOTA	Moosalm	85.86	330	⇑P	P	16 21 38.6	+0.9
MOTA				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
SQTA	Sankt Quirin	85.92	330	⇑iP	P	16 21 39.0	+1.1
	comp=Z,12nm,1.3s,mb5.0						
SQTA	Sankt Quirin	85.92	330	⇑P	P	16 21 39.0	+1.1
	comp=Z,12nm,1.3s,mb5.0						
SQTA	Sankt Quirin	85.92	330	⇑P	P	16 21 39.0	+1.0
SQTA				pmax	pmax		
	comp=Z,12nm,1.3s,mb5.0						
BAIF	Baives	86.06	336	eP	P	16 21 38.8	+0.2
	comp=Z,12nm,0.8s,mb4.9						
BAIF	Baives	86.06	336	eP	P	16 21 38.8	+0.2
BAIF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
BFO	Black Forest	86.10	332	eP	P	16 21 39.6	+0.8
	comp=Z,19nm,1.0s,mb5.3						
BFO	Black Forest	86.10	332	eP	P	16 21 39.6	+0.8
BFO				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.3						
DAVA	Damuels	86.39	331	⇑iP	P	16 21 40.9	+0.7
	comp=Z,15nm,1.0s,mb5.2						
CDF	Champ du Feu	86.42	333	eP	P	16 21 40.8	+0.5
	comp=Z,30nm,0.9s,mb5.2						
CDF	Champ du Feu	86.42	333	eP	P	16 21 40.8	+0.5
CDF				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.2						
WMOK	Wichita Mounta	87.05	48	eP	P	16 21 44.0	+0.2
	comp=Z,13nm,1.7s,mb4.9						
WMOK	Wichita Mounta	87.05	48	eP	P	16 21 44.0	+0.2
WMOK				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.9						
HINF	Hinteralfeld	87.07	333	eP	P	16 21 43.4	-0.2
	comp=Z,18nm,1.1s,mb4.9						
HINF	Hinteralfeld	87.07	333	eP	P	16 21 43.4	-0.2
HINF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.9						
HAU	Haudompre	87.09	333	eP	P	16 21 43.8	+0.1
	comp=Z,13nm,0.7s,mb5.0						
HAU				eR			
	comp=Z,75nm,22.3s						
HAU	Haudompre	87.09	333	eP	P	16 21 43.8	+0.1
HAU				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.9						
HAU				MLR	MLR		
	comp=Z,70nm,22.3s,MS4.0						
MEZF	Maizieres J’vi	87.12	334	eP	P	16 21 44.3	+0.5
	comp=Z,23nm,0.8s,mb5.2						
TXAR	Lajitas Array	87.74	54	P	P	16 21 46.5	-0.8
	comp=Z,1.2nm,0.7s,mb4.2,baz=301,slow=3.7,SNR=8.1						
TXAR				pP	pP	16 21 58.1	-0.1
	comp=Z,0.6nm,0.7s,baz=304,slow=3.7,SNR=3.7						
TXAR				LR	LR	16 58 39.3	
	comp=Z,70nm,20.4s,MS4.1,baz=235,slow=34						
CABF	La Chapelle	88.37	333	eP	P	16 21 50.5	+0.7
LOR	Lormes	88.59	335	eP	P	16 21 52.1	+1.2
	comp=Z,55nm,1.5s,mb5.4						
LOR				eR			
	comp=Z,88nm,17.0s						
LOR	Lormes	88.59	335	eP	P	16 21 52.1	+1.2
LOR				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.4						
LOR				MLR	MLR		
	comp=Z,90nm,17.0s,MS4.3						
SSF	Saint Saulge	88.89	335	eP	P	16 21 52.6	+0.3
	comp=Z,24nm,1.2s,mb5.1						
SSF	Saint Saulge	88.89	335	eP	P	16 21 52.6	+0.3
SSF				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.1						
LPL	La Plagne	89.06	332	eP	P	16 21 54.2	+1.0
	comp=Z,5.2nm,0.7s,mb4.7						
LPL	La Plagne	89.06	332	eP	P	16 21 54.2	+1.0
LPL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
LPG	La Plagne	89.07	332	eP	P	16 21 54.3	+1.1
	comp=Z,14nm,0.7s,mb5.1						
LPG	La Plagne	89.07	332	eP	P	16 21 54.3	+1.1
LPG				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.1						
SMF	Signal de Mont	89.14	334	eP	P	16 21 54.7	+1.2
AVF	Avril sur Loir	89.18	335	eP	P	16 21 54.0	+0.3
	comp=Z,17nm,0.6s,mb5.2						
AVF	Avril sur Loir	89.18	335	eP	P	16 21 54.0	+0.3
AVF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.2						
MBDF	Montbardon	89.72	331	eP	P	16 21 56.8	+0.5
	comp=Z,6.9nm,0.8s,mb4.7						
MBDF	Montbardon	89.72	331	eP	P	16 21 56.8	+0.5
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.7						
ORIF	Oris-en-Rattie	89.89	332	eP	P	16 21 57.5	+0.4
	comp=Z,9.9nm,0.8s,mb4.9						
ORIF				eR			
	comp=Z,110nm,17.2s						
TCF	Toulx Ste Croi	90.00	335	eP	P	16 21 58.0	+0.4
VIVF	Saint-Julien-l	90.39	333	eP	P	16 21 59.7	+0.3
	comp=Z,6.4nm,0.7s,mb4.8						
VIVF	Saint-Julien-l	90.39	333	eP	P	16 21 59.7	+0.3
VIVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
MFF	Saint Martin d	90.50	337	eP	P	16 22 00.3	+0.4
	comp=Z,18nm,0.8s,mb5.2						
MFF	Saint Martin d	90.50	337	eP	P	16 22 00.3	+0.4
MFF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
PGF	Pioggiola	90.66	329	eP	P	16 22 00.9	+0.1
	comp=Z,125nm,1.5s,mb5.7						
PGF	Pioggiola	90.66	329	eP	P	16 22 00.9	+0.1
PGF				pmax	pmax		
	comp=Z,63nm,1.5s,mb5.7						
RJF	Les Rejaudoux	91.10	335	eP	P	16 22 03.2	+0.4
RJF				eR			
	comp=Z,114nm,22.8s						
CAF	Calviac	91.25	334	eP	P	16 22 04.3	+0.9
	comp=Z,34nm,1.0s,mb5.3						
CAF	Calviac	91.25	334	eP	P	16 22 04.3	+0.9
CAF				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.3						
LASF	Ste Croix	91.35	333	eP	P	16 22 04.3	+0.3
LFF	La Frestale	91.68	335	eP	P	16 22 05.5	+0.1
WVT	Waverly	92.05	40	eP	P	16 22 06.0	-1.3
	comp=Z,2.0nm,0.5s,mb4.7						
WVT	Waverly	92.05	40	eP	P	16 22 06.0	-1.3
WVT				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.7						
LSZ	Lusaka	120.06	274	PKP	PKPdf	16 27 50.0	+1.7
	comp=Z,1.2nm,0.6s,baz=72,slow=5.3						
MAW	Mawson	121.12	206	PKP	PKPdf	16 27 49.6	+0.4
	comp=Z,1.2nm,0.7s,baz=45,slow=1.4,SNR=3.9						
TSUM	Tsumeb	130.65	276	ePKPdf	PKPdf	16 28 10.9	+2.2
SNAA	Sanae	141.96	196	P	PKPdf	16 28 24.2	-3.7
SNAA	Sanae	141.96	196		PKPdf	16 28 35.9	+8.0
SNAA	Sanae	141.96	196		PKPdf	16 28 47.3	+19
SNAA	Sanae	141.96	196	ePKPpre		16 28 23.9	
SNAA				PKPdf	PKPdf	16 28 24.2	-3.7
VNA2	Neumayer--Watz	143.50	195	⇑iP	PKPbc	16 28 30.0	+1.0
VNA2	Neumayer--Watz	143.50	195	⇑i	PKPbc	16 28 31.4	+2.4
VNA2	Neumayer--Watz	143.50	195	⇑i	PKPbc	16 28 37.1	+8.1
VNA2	Neumayer--Watz	143.50	195	⇑i	PKPbc	16 28 42.0	+13
VNA3	Neumayer Olymp	143.69	194	⇑iP	PKPbc	16 28 30.5	+0.9
VNA3	Neumayer Olymp	143.69	194	⇑i	PKPbc	16 28 36.3	+6.7
VNA3	Neumayer Olymp	143.69	194		PKPbc	16 28 41.8	+12
VNA1	Neumayer--Stat	143.89	195		PKPbc	16 28 42.0	+12
VNA1	Neumayer--Stat	143.89	195	PKPdf	PKPdf	16 28 31.9	+0.8
VNA1				P		16 28 42.0	
LPAZ	La Paz	144.18	63	PKP	PKPdf	16 28 33.2	-0.1
	comp=Z,0.7nm,0.5s,baz=360,slow=6.4,SNR=5.8						
LPAZ	La Paz	144.18	63	ePKPdf	PKPdf	16 28 33.0	-0.2
LPAZ	La Paz	144.18	63	PKIKP	PKPdf	16 28 33.2	0.0
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PLCA	Paso Flores	152.60	108	PKPbc	PKPdf	16 28 55.2	+9.1
	comp=Z,2.1nm,0.7s,baz=311,slow=0.9,SNR=4.7						

ISC 01 16:13:07.1±4.0**,24.3N**±0.1×**92.3E**±0.3**,h118**^{km}±12^{km}**,n8,**
σ**0**^{s}**87**/10**,1D,India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGT	Agartala	1.01	247	⇓iP	P	16 13 31.0	+1.7
AGT				i S	S	16 13 45.0	-0.9
SHL	Shillong	1.32	345	eP	P	16 13 31.0	-1.7
SHL				eS	S	16 13 53.0	+0.8
GUN	Gumba	6.78	304	eP	P	16 14 45.5	+0.1
	3.7nm,0.3s						
PKI	Pulchoki	6.98	299	eP	P	16 14 48.3	+0.1
	4.5nm,0.5s						
KKN	Kakani	7.18	301	eP	P	16 14 50.6	-0.3
DMN	Daman	7.24	299	eP	P	16 14 52.2	+0.5
GKN	Gorkha	7.78	300	eP	P	16 14 58.9	-0.1
	14nm,0.4s						
KOLN	Koldanda	8.53	296	eP	P	16 15 08.7	-0.3
	12nm,0.7s						

IDC ***01*** *16:22:18.4±1.6, 2.19N×96.13E, mb4.0/6, mb1 4.2/6, mb1mx3.9/16, mbtmp4.0/6, MS3.6/2, Ms1 3.5/2, ms1mx3.0/16, Error ellipse: s-maj=66.8km s-min=26.4km az=51.0*

BJI ***01*** *16:22:20.5, 2.26N×96.36E, h26*^{km}*, mB4.6, mb4.7*

MOS ***01*** *16:22:21.7±0.7, 2.27N×96.26E, h33*^{km}*, mb4.6/6, Error ellipse: s-maj=42.2km s-min=14.4km az=114.0*

NEIC ***01*** *16:22:23.0±0.6, 2.22N×96.24E, h30*^{km}*, mb4.5/6, Error ellipse: s-maj=15.9km s-min=9.7km az=221.0*

ISC 01 16:22:21.3±0.9**,2.3N**±0.1×**96.3E**±0.1**,h30**^{km}**,n31,**
σ**0**^{s}**88**/29**,mb4.3**/15**,MS3.6**/2**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	5.26	56	ePn	Pn	16 23 41.0	+1.0
SHL	Shillong	23.51	350	eP	P	16 27 29.0	-0.9
LSA	Lhasa	27.68	350	P	P	16 28 10.3	+1.3
LSA	Lhasa	27.68	350	eP	P	16 28 09.9	+0.9
	16nm,0.8s,mb4.7						
LSA	Lhasa	27.68	350	eP	P	16 28 09.9	+0.9
LSA				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
CD2	Chengdu	29.31	13	P	P	16 28 23.0	-0.7
XAN	Xi’an	33.70	19	P	P	16 29 01.2	-1.0
XAN				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
GTA	Gaotai	37.07	5	eP	P	16 29 32.1	+1.4
GTA				AP	pP	16 29 40.0	+0.3
GTA				XP	sP	16 29 42.9	-0.6
WRA	Warramunga Arr	43.38	122	P	P	16 30 23.7	+0.4
	comp=Z,1.2nm,0.8s,mb3.7,baz=302,slow=8.8,SNR=11						
WRAB	Tennant Creek	43.39	122	P	P	16 30 22.9	-0.4
	comp=Z,1.3nm,0.6s,mb3.8						
WRAB	Tennant Creek	43.39	122	P	P	16 30 22.9	-0.4
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
AAK	Ala-Archa	44.63	337	eP	P	16 30 33.9	+0.8
	comp=Z,4.9nm,1.1s,mb4.2						
AAK	Ala-Archa	44.63	337	eP	P	16 30 33.9	+0.8
AAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
MKAR	Makanchi Array	45.96	347	P	P	16 30 44.0	+0.5
	comp=Z,6.8nm,0.8s,mb4.6,baz=162,slow=8.0,SNR=40						
MKAR	Makanchi Array	45.96	347	i P	P	16 30 43.4	-0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SONM	Songino Array	46.19	9	P	P	16 30 46.0	+0.7
	comp=Z,1.7nm,0.4s,mb4.3,baz=190,slow=9.3,SNR=23						
KKAR	Karatay Array	46.67	334	i P	P	16 30 49.8	+0.6
KURK	Kurchatov	50.50	346	eP	P	16 31 19.0	+0.2
	comp=Z,2.7nm,0.8s,mb4.2						
KURK	Kurchatov	50.50	346	eP	P	16 31 19.0	+0.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MJAR	Matsushiro Arr	51.50	43	LR	LR	16 56 16.4	
	comp=Z,35nm,18.5s,MS3.4,baz=235,slow=39						
STKA	Stephens Creek	54.76	132	LR	LR	16 54 16.8	
	comp=Z,71nm,19.0s,MS3.8,baz=24,slow=35						
CHKZ	Chkalovo	55.40	342	eP	P	16 31 54.4	-0.8
	comp=Z,5.4nm,0.8s,mb4.6						
CHKZ	Chkalovo	55.40	342	eP	P	16 31 54.4	-0.7
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
AB31	Akbulak array	56.12	332	P	P	16 31 59.7	-0.7
AB31				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
BOD	Bodaibo	57.10	11	eP	P	16 32 06.2	-1.1
YAK	Yakutsk	64.62	17	eP	P	16 32 57.6	-0.6
	comp=Z,6.6nm,0.4s,mb5.0						
YAK	Yakutsk	64.62	17	eP	P	16 32 57.6	-0.6
YAK				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb5.0						
TIXI	Tiksi	72.26	10	eP	P	16 33 43.2	-2.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
FINES	FINESS Array B	78.61	333	P	P	16 34 21.5	-0.2
	comp=Z,1.3nm,0.9s,mb3.9,baz=108,slow=4.4,SNR=4.2						
ARCES	ARCESS Array B	81.20	340	P	P	16 34 36.3	+0.9
	comp=Z,5.7nm,1.0s,mb4.5,baz=94,slow=5.4,SNR=9.4						
GERES	GERESS Array B	83.39	319	P	P	16 34 47.9	+0.7
	comp=Z,0.2nm,0.5s,mb3.5,baz=108,slow=6.2,SNR=3.2						

IDC ***01*** *16:45:21.8±4.9, 36.81N×75.55E, mb3.5/2, mb1 3.4/3, mb1mx3.2/18, mbtmp3.3/3, ML2.8/1, Error ellipse: s-maj=90.7km s-min=41.3km az=177.0*

BJI ***01*** *16:45:42.2, 37.91N×76.30E, h23*^{km}*, ML3.6*

NNC ***01*** *16:45:48.9±13.0, 38.47N×75.16E, mpv3.0, Error ellipse: s-maj=109.5km s-min=89.3km az=128.0*

ISC 01 16:45:34.3±0.5**,37.48N**±0.03×**76.11E**±0.10**,h33**^{km}**,n17,**
σ**1**^{s}**52**/26**,mb3.4**/2**,2C-3D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.04	357	ePG	Pb	16 46 11.2	+0.6
KSH				SG	Sb	16 46 35.8	0.0
KSH				Smax			
	comp=N,360nm,0.4s						
KSH				Smax			
	comp=E,470nm,0.3s						
CHCP	Chirah Chowk	4.46	212	P	P	16 46 46.0	+4.7
DLH	Dalhousie	4.92	181	eP	P	16 46 47.0	-0.9
CEP	Cherat	5.00	224	P	P	16 46 51.8	+2.9
CEP				S	S	16 47 44.0	-2.3
THN	Thein Dam	5.04	184	eP	P	16 46 55.4	+5.9
THN				eS	S	16 47 49.5	+2.1
AAK	Ala-Archa	5.30	347	⇓P	P	16 46 54.7	+1.5
	comp=E,2.6nm,0.9s						
AAK				⇓S	S	16 47 45.2	-8.8
	comp=E,3.7nm,0.5s						
THW	Thamme Wali	5.88	219	P	P	16 47 03.0	+1.7
KLP	Kalpa	6.18	163	eP	P	16 47 10.4	+4.8
KLP				eS	S	16 48 15.6	-0.5
KLP				AML	AML	16 48 19.1	
	comp=E,20nm,0.2s						
KLP				AML	AML	16 48 19.2	
	comp=N,20nm,0.2s						
SARP	Sargodha	6.22	208	P	P	16 47 08.0	+1.9
SBDP	Sheikh Budin	6.75	222	⇓P	P	16 47 14.0	+0.4
KK31	Karatay Array	7.06	324	⇑P	P	16 47 15.4	-2.6
	comp=N,0.5nm,0.3s,baz=129,slow=12,SNR=50						
KK31				⇑S	S	16 48 25.0	-13
	comp=N,1.2nm,0.3s,baz=143,slow=24,SNR=4.8						
SONA	Sohna	9.23	175	eP	P	16 47 51.3	+3.2
SONA				eS	S	16 49 23.1	-9.0
SONA				AML	AML	16 49 30.8	
	comp=E,18nm,0.5s						
SONA				AML	AML	16 49 33.7	
	comp=N,10nm,0.5s						
KUDL	Kundal	9.31	178	eP	P	16 47 48.5	-0.7
KUDL				eS	S	16 49 24.5	-9.4
KHET	Khetri	9.38	182	eP	P	16 47 48.9	-1.2
KHET				eS	S	16 49 28.6	-7.0
KHET				AML	AML	16 49 30.1	
	comp=N,13nm,0.4s						
KHET				AML	AML	16 49 30.8	
	comp=E,8.0nm,0.3s						
MKAR	Makanchi Array	10.38	24	Pn	P	16 48 04.5	+0.6
	comp=E,0.1nm,0.3s,baz=204,slow=17,SNR=4.1						
SONM	Songino Array	24.42	55	P	P	16 50 48.9	-1.9
	comp=E,0.3nm,0.4s,mb3.1,baz=253,slow=9.8,SNR=4.4						
FINES	FINESS Array B	39.02	324	P	P	16 52 52.0	-7.1
	comp=E,0.5nm,0.4s,mb3.6,baz=90,slow=9.5,SNR=4.9						

HLW ***01*** *17:20:34.6, 35.21N×22.32E, h15*^{km}*, Mb3.4*

CSEM ***01*** *17:20:34.9±0.2, 35.18N×22.38E, h40*^{km}*, MD3.4, Error ellipse: s-maj=9.8km s-min=2.3km az=77.0*

ATH ***01*** *17:20:40.2, 35.64N×22.69E, h32*^{km}*±4*^{km}*, MD3.4/3*

NEIC ***01*** *17:20:40.2, 35.64N×22.69E, h32*^{km}*, MD3.4(ATH), After ATH.*

ISC 01 17:20:34.1±1.2**,35.22N**±0.07×**22.4E**±0.2**,h32**^{km}**,n12,**
σ**0**^{s}**93**/16**,6D,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	Kithira	1.17	25	ePN	Pn	17 20 54.5	0.0
VAM	Vamos	1.47	82	ePN	Pn	17 21 03.5	+4.8
VLI	Veliai	1.55	15	ePN	Pn	17 21 00.6	+0.7
VLI				eSN	Sn	17 21 15.5	-3.6
ITM	Ithomi	2.00	349	ePB	Pb	17 21 08.8	-0.8
ITM				eSN	Sn	17 21 30.3	-0.1
SLUM		4.39	147	⇓P	Pn	17 21 41.5	+1.2
HMAT	Matruh	5.68	135	⇓P	Pn	17 21 59.3	+0.7
HMAT				S	Sn	17 23 00.8	-2.8
DABA	Dabaa	6.46	129	⇓P	Pn	17 22 10.3	+0.7
SWA2		6.49	156	P	Pn	17 22 10.1	+0.1
SWA1		6.56	154	P	Pn	17 22 11.0	0.0
SWA1				S	Sn	17 23 21.6	-3.8
HBRG	Burj al ‘Arab	7.77	125	⇓P	Pn	17 22 28.6	+0.7
AWBH		8.82	140	⇓P	P	17 22 41.9	-0.5
HFRF	Wahat Farafira	9.49	146	⇓P	P	17 22 50.8	-1.0

IDC 01 17:23:49.1±1.5**,28.41S**×**177.88W,mb3.7**/1**,mb1 4.0**/1**,**
mb1mx3.7/11**,mbtmp3.7**/1**,Error ellipse: s-maj=54.3km s-min=17.7km az=83.0,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.84	182	Pn	Pn	17 24 07.8	0.0
	544nm,0.3s,baz=320,slow=5.9,SNR=29						
RAO				Sn	Sn	17 24 22.1	+1.1
	1µm,0.3s,baz=79,slow=23,SNR=30						
WRA	Warramunga Arr	44.16	270	P	P	17 31 59.4	-2.1
	0.4nm,0.3s,baz=105,slow=7.8,SNR=24						
MKAR	Makanchi Array	116.56	311	PKP	PKPdf	17 42 34.4	-2.4
	1.0nm,1.1s,baz=81,slow=0.4,SNR=4.9						
FINES	FINESS Array B	143.31	341	PKhKP		17 43 16.3	
	0.7nm,0.6s,baz=72,slow=4.4,SNR=3.8						
FINES				PKP	PKPdf	17 43 22.5	-3.9
	2.4nm,0.9s,baz=45,slow=5.9,SNR=3.6						
AKASG	Malin Array Be	149.76	325	PKPbc	PKPdf	17 43 39.7	+2.1
	0.4nm,0.3s,baz=46,slow=3.3,SNR=4.8						
AKASG				PKPab	PKPab	17 43 46.8	-1.2
	1.0nm,0.5s,baz=40,slow=3.7,SNR=4.6						
BRTR	Keskin Array B	151.69	302	PKPbc	PKPdf	17 43 46.4	+5.5
	0.6nm,0.5s,baz=134,slow=5.2,SNR=3.9						

ISK ***01*** *17:51:57.3, 38.12N×26.54E, h5*^{km}*, MD3.3*

ATH ***01*** *17:51:58.7, 38.08N×26.60E, h34*^{km}*±5*^{km}*, MD3.1/3*

CSEM ***01*** *17:51:58.2±0.1, 38.12N×26.56E, h5*^{km}*, MD3.3, Error ellipse: s-maj=3.3km s-min=2.1km az=91.0*

ISC 01 17:51:58.5±1.3**,38.12N**±0.03×**26.53E**±0.06**,h5**^{km}±8^{km}**,**
n20,σ**0**^{s}**70**/27**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.47	149	ePB	Pb	17 52 08.2	-0.7
SMG				eSB	Sb	17 52 15.5	-0.4
BLCB	Balcova	0.49	56	i PG	Pg	17 52 07.6	-0.7
IZM	Izmir	0.64	64	PG	Pg	17 52 10.6	-0.8
IZM				SG	Sg	17 52 20.8	+0.8
PRK	Paraskevi	1.15	350	ePN	Pn	17 52 20.6	-0.5
PRK				eSN	Sn	17 52 37.1	-0.2
AYDN	Tasoluk	1.16	113	i P	Pb	17 52 20.2	-0.4
AYDN				i S	Sb	17 52 35.2	-0.7
BODT	Bodrum	1.22	149	PN	Pn	17 52 21.8	-0.4
AKS	Akhisar	1.27	53	PN	Pn	17 52 22.7	-0.1
BDRM	Kayabasi	1.28	145	i P	Pb	17 52 24.3	+1.7
BDRM				i S	Sb	17 52 39.4	+0.2
MLSB	Milas	1.28	129	ePN	Pn	17 52 22.8	-0.3
APE	Apeiranthos	1.31	217	PN	Pn	17 52 23.4	0.0
APE	Apeiranthos	1.31	217	ePN	Pn	17 52 22.7	-0.7
DAT	Datca	1.62	149	ePN	Pn	17 52 28.3	+0.5
MANT	Manisa	1.64	76	i P	Pn	17 52 28.5	+0.4
MANT				i S	Sb	17 52 49.1	-0.7
YER	Yerkesik	1.70	125	ePN	Pn	17 52 29.3	+0.2
EZN	Ezine	1.71	355	ePN	Pn	17 52 29.4	+0.2
BALB	Balikesir	1.85	34	ePN	Pn	17 52 31.7	+0.5
DNZL	Cakiroluk	2.04	101	i P	Pn	17 52 36.6	+2.8
DNZL				i S	Sn	17 53 07.0	+7.1
DST	Dursunbey	2.21	47	ePN	Pn	17 52 36.1	-0.3
BNT	Bandirma	2.49	25	ePN	Pn	17 52 40.6	+0.3
KCT	Karacabey	2.58	33	ePN	Pn	17 52 41.9	+0.4

IDC 01 18:03:33.7±2.6**,22.81N**×**12.03W,mb4.0**/5**,mb1 3.9**/8**,**
mb1mx3.6/25**,mbtmp3.8**/8**,ML3.7**/2**,Error ellipse: s-maj=82.0km s-min=30.4km az=92.0,Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDT	Midelt	11.93	32	Pn	P	18 06 25.7	-2.4
	0.0nm,0.3s,baz=209,slow=19,SNR=1.9						
DBIC	Dimbokro	17.47	156	P	P	18 07 37.7	-2.8
	0.3nm,0.3s,baz=323,slow=11,SNR=3.9						
ESDC	Sonseca Array	18.16	20	P	P	18 07 46.7	-2.2
	0.1nm,0.3s,baz=214,slow=12,SNR=2.7						
VAE	Valguarnera	27.02	51	P	P	18 09 17.4	-2.0

	2.2nm,0.4s,baz=270,slow=14,SNR=2.4						
GERES	GERESS Array B	33.02	32	P	P	18 10 10.1	-2.6
	0.7nm,0.6s,baz=225,slow=9.4,SNR=6.5						
FINES	FINESS Array B	46.61	24	P	P	18 12 03.1	-2.0
	2.8nm,0.9s,baz=236,slow=5.0,SNR=7.3						
ARCES	ARCESS Array B	51.82	16	P	P	18 12 42.8	-2.4
	2.0nm,0.9s,baz=225,slow=7.7,SNR=3.7						
MKAR	Makanchi Array	76.57	45	P	P	18 15 26.4	-1.2
	0.5nm,0.5s,baz=299,slow=5.6,SNR=9.6						
WRA	Warramunga Arr	148.59	91	PKPbc	PKPdf	18 23 23.4	+2.0
	0.5nm,0.7s,baz=290,slow=2.5,SNR=7.1						

MEX 01 18:13:13.5±0.9,16.96N×100.19W,h14^{km}±6^{km},MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.12	322	*i* P	Pg	18 13 16.1	-0.8
CAIG				*i* S	Sg	18 13 18.4	-0.8
ACX	Acapulco	0.28	109	*i* P	Pg	18 13 18.6	-1.0
ACX				*i* S	Sg	18 13 23.5	-0.1
PLIG	Platanillo	1.57	25	*i* P	Pn	18 13 38.3	-2.9
PLIG				*i* S	Sn	18 13 56.6	-4.9
PPM	Popocatepetl	2.57	35	*e*P	Pn	18 13 53.0	-2.6
PPM				*i* S	Sn	18 14 23.6	-3.4

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*ISK **01** 18:40:50.5,38.16N×26.61E,h7^{km},MD3.1*
*ATH **01** 18:40:50.3,38.13N×26.98E,h44^{km},MD3.2/3*
*CSEM **01** 18:40:50.7±0.1,38.16N×26.64E,h8^{km},MD3.1,Error ellipse: s-maj=2.7km s-min=1.7km az=118.0*
ISC 01 18:40:51.5±0.4,38.19N±0.02×26.62E±0.04,h10^{km},n25, σ1^{s}05/41,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.17	353	*i* P	Pg	18 40 54.1	-1.2
URLA				*i* S	Sg	18 40 57.5	-0.4
BLCB	Balcova	0.38	60	PG	Pg	18 40 59.1	-0.3
SMG	Samos	0.51	160	*e*P	Pg	18 41 01.0	-0.9
SMG				*e*S	Sg	18 41 09.0	+0.2
IZM	Izmir	0.55	68	*i* PG	Pg	18 41 02.0	-0.5
IZM				*i* SG	Sg	18 41 10.5	+0.6
KDAG	Bornova	0.55	67	*i* P	Pg	18 41 01.2	-1.5
KDAG				*i* S	Sg	18 41 09.3	-0.8
PRK	Paraskevi	1.09	346	*e*P	Pb	18 41 12.4	+0.4
AYVA	Ayvalik	1.12	3	*i* P	Pb	18 41 12.4	0.0
AYVA				*i* S	Sb	18 41 29.7	+2.8
AYDN	Tasoluk	1.13	118	*i* P	Pb	18 41 12.5	-0.1
AYDN				*i* S	Sb	18 41 27.8	+0.6
AKS	Akhisar	1.16	53	PN	Pn	18 41 13.5	-0.3
BODT	Bodrum	1.25	154	PN	Pn	18 41 14.4	-0.7
MLSB	Milas	1.28	134	*e*PN	Pn	18 41 15.3	-0.2
BDRM	Kayabasi	1.30	150	*i* P	Pb	18 41 14.5	-1.1
BDRM				*i* S	Sb	18 41 33.5	+1.4
APE	Apeiranthos	1.42	218	*e*PN	Pn	18 41 16.3	-1.1
APE				*e*SN	Sn	18 41 36.3	+0.1
APE	Apeiranthos	1.42	218	*e*P	Pn	18 41 17.0	-0.4
APE				*e*S	Sb	18 41 36.6	+1.1
APE	Apeiranthos	1.42	218	*e*P	Pn	18 41 17.0	-0.4
APE				*e*Sn	Sn	18 41 36.3	+0.1
APE				*e*S	Sb	18 41 36.6	+1.1
MANT	Manisa	1.55	78	*i* P	Pn	18 41 20.8	+1.5
MANT				*i* S	Sb	18 41 40.9	+1.4
DAT	Datca	1.65	152	*e*PN	Pn	18 41 20.3	-0.4
EZN	Ezine	1.65	352	*e*PN	Pn	18 41 21.3	+0.6
YER	Yerkesik	1.69	128	*e*PN	Pn	18 41 21.0	-0.3
BALB	Balikesir	1.75	34	*e*PN	Pn	18 41 22.7	+0.5
BTOK	Tokmak	1.92	35	*i* P	Pn	18 41 27.3	+2.8
BTOK				*i* S	Sn	18 41 53.9	+5.0
DNZL	Cakiroluk	1.98	104	*i* P	Pn	18 41 25.5	-0.1
DNZL				*i* S	Sg	18 41 58.2	+0.7
DST	Dursunbey	2.11	47	*e*PN	Pn	18 41 27.7	+0.4
ULDT	Uludag	2.76	44	*i* P	Pg	18 41 43.2	-3.5
ULDT				*i* S	Sg	18 42 20.2	-3.3
TKTP	Tekketepe	2.92	92	*i* P	Pg	18 41 47.2	-2.7
TKTP				*i* S	Sg	18 42 32.9	+4.1

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*NEIC **01** 18:43:42.8,37.77S×176.40E,h185^{km},MG4.3(WEL), After WEL.*
WEL 01 18:43:42.7±0.3,37.78S×176.41E,h187^{km}±2^{km},ML4.2/19, 1C-3D,Error ellipse: s-maj=3.8km s-min=3.4km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.73	132	P	P	18 44 09.3	-0.3
URZ	Urewera	0.73	132	PN	P	18 44 09.3	-0.3
URZ				SN	S	18 44 29.4	-1.1
URZ				SN	S	18 44 29.7	-0.7
MWZ	Matawai	1.04	123	P	P	18 44 11.7	+0.2
MWZ				S	S	18 44 32.6	-1.3
MWZ	Matawai	1.04	123	PN	P	18 44 11.7	+0.2
MWZ				SN	S	18 44 33.3	-0.6
MWZ				SN	S	18 44 33.8	-0.1
RATZ	Rangitukua	1.20	205	P	P	18 44 13.1	+0.2
RATZ	Rangitukua	1.20	205	PN	P	18 44 13.1	+0.2
KATZ	Kakaramea	1.33	205	P	P	18 44 14.1	+0.1
KATZ	Kakaramea	1.33	205	PN	P	18 44 14.1	+0.1
BKZ	Black Stump Fm	1.39	177	⇑P	P	18 44 14.3	-0.3
BKZ	Black Stump Fm	1.39	177	⇓PN	P	18 44 14.3	-0.3
KRVZ	Karewarewa	1.45	204	PN	P	18 44 15.2	+0.1
WTVZ	West Tongariro	1.49	205	*e*P	P	18 44 15.2	-0.3
WTVZ	West Tongariro	1.49	205	*e*PN	P	18 44 15.2	-0.3
PUZ	Puketiti	1.49	102	*e*P	P	18 44 14.3	-1.2
PUZ	Puketiti	1.49	102	*e*PN	P	18 44 14.3	-1.2
TWVZ	Taurewa	1.50	210	P	P	18 44 15.5	-0.1
TWVZ	Taurewa	1.50	210	PN	P	18 44 15.5	-0.1
OTVZ	Oturere	1.51	203	PN	P	18 44 15.8	+0.1
OTVZ				SN	S	18 44 40.5	-0.6
MXZ	Matakaoa Point	1.52	83	P	P	18 44 15.3	-0.4
MXZ	Matakaoa Point	1.52	83	PN	P	18 44 15.3	-0.4
MXZ				SN	S	18 44 39.8	-1.5
NGZ	Ngauruhoe	1.54	204	*e*P	P	18 44 16.1	+0.2
NGZ	Ngauruhoe	1.54	204	*e*PN	P	18 44 16.1	+0.1
CNZ	Chateau	1.58	205	P	P	18 44 16.1	-0.2
CNZ	Chateau	1.58	205	PN	P	18 44 16.1	-0.2
WPVZ	Whakapapa	1.58	205	*e*P	P	18 44 15.6	-0.8
WPVZ	Whakapapa	1.58	205	*e*PN	P	18 44 15.6	-0.8
KNZ	Kokohu	1.59	142	P	P	18 44 16.5	+0.1
KNZ	Kokohu	1.59	142	PN	P	18 44 16.5	0.0
TUVZ	Tukino	1.61	201	P	P	18 44 16.6	0.0
TUVZ	Tukino	1.61	201	PN	P	18 44 16.6	0.0
FWVZ	Far West T-bar	1.63	204	*e*P	P	18 44 16.3	-0.5
FWVZ	Far West T-bar	1.63	204	*e*PN	P	18 44 16.3	-0.5
TRVZ	Turoa	1.67	204	PN	P	18 44 17.2	0.0
WNVZ	Wahianoa	1.68	202	P	P	18 44 17.0	-0.3
WNVZ	Wahianoa	1.68	202	PN	P	18 44 17.0	-0.3
MOVZ	Moawhango	1.71	197	P	P	18 44 16.7	-0.9
MOVZ	Moawhango	1.71	197	PN	P	18 44 16.7	-0.9
PKVZ	Pokaka	1.73	209	PN	P	18 44 17.5	-0.3
MTVZ	Mangateitei	1.77	204	PN	P	18 44 17.8	-0.4
VRZ	Vera Road	1.87	223	P	P	18 44 19.1	-0.1
VRZ	Vera Road	1.87	223	PN	P	18 44 19.1	-0.1
WAZ	Wanganui	2.27	209	P	P	18 44 23.0	-0.6
WAZ	Wanganui	2.27	209	PN	P	18 44 22.7	-0.9
PXZ	Pawanui	2.28	171	PN	P	18 44 23.1	-0.7
TSZ	Takapari Road	2.31	189	P	P	18 44 22.9	-1.1
TSZ	Takapari Road	2.31	189	PN	P	18 44 22.8	-1.2
NEZ	North Egmont	2.35	230	PN	P	18 44 25.0	+0.5
PKE	Pukeiti	2.37	233	PN	P	18 44 24.6	-0.2
BFZ	Birch Farm	2.91	182	P	P	18 44 29.3	-1.7
BFZ	Birch Farm	2.91	182	PN	P	18 44 29.3	-1.8
MRZ	Mangatainoka R	2.96	192	⇓P	P	18 44 29.5	-2.1
MRZ	Mangatainoka R	2.96	192	⇓PN	P	18 44 29.5	-2.2
KIW	Kapiti Island	3.30	200	P	P	18 44 33.0	-2.8
KIW	Kapiti Island	3.30	200	PN	P	18 44 33.0	-2.9
MTW	Mount Morrison	3.45	191	PN	P	18 44 34.7	-3.1
CAW	Cannon Point	3.49	197	P	P	18 44 35.3	-2.9
CAW	Cannon Point	3.49	197	PN	P	18 44 35.3	-3.0
DUWZ	D'Urville Isla	3.59	212	PN	P	18 44 36.2	-3.3
TRWZ	Traveller	3.66	189	PN	P	18 44 37.4	-3.0
PAWZ	Paruwai Farm	3.68	192	PN	P	18 44 37.3	-3.3
MRW	Makara Radio	3.70	200	PN	P	18 44 37.5	-3.3
WEL	Wellington	3.73	199	*e*PN	P	18 44 38.2	-3.1
MSWZ	Moikau Station	3.75	194	*e*PN	P	18 44 37.9	-3.5
TCW	Tory Channel	3.81	205	*e*PN	P	18 44 38.5	-3.7
BHW	Baring Head	3.82	198	PN	P	18 44 38.7	-3.7
TUWZ	Tuamarina	4.12	207	*e*PN	P	18 44 42.5	-3.7
NNZ	Nelson	4.16	213	*e*P	P	18 44 42.8	-3.9
NNZ	Nelson	4.16	213	*e*PN	P	18 44 42.8	-3.9
QRZ	Quartz Range	4.29	223	*e*P	P	18 44 43.7	-4.6
QRZ	Quartz Range	4.29	223	*e*PN	P	18 44 43.7	-4.6
BSWZ	Blackbirch Sta	4.39	206	*e*PN	P	18 44 46.8	-2.9
THZ	Tophouse	4.81	213	*e*P	P	18 44 50.9	-4.2
THZ	Tophouse	4.81	213	*e*PN	P	18 44 50.9	-4.2
KHZ	Kahutara	5.13	204	P	P	18 44 55.1	-4.1
KHZ	Kahutara	5.13	204	PN	P	18 44 55.1	-4.1
DSZ	Denniston Nort	5.32	220	*e*PN	P	18 44 56.7	-5.0
LTZ	Lake Taylor	5.92	211	*e*PN	P	18 45 04.4	-5.1
MQZ	McQueen's Vall	6.58	205	*e*PN	P	18 45 11.7	-6.4
RPZ	Rata Peaks	7.19	213	*e*PN	P	18 45 21.2	-5.0
LBZ	Lake Benmore	8.11	213	*e*PN	P	18 45 32.6	-5.6
ODZ	Otahua Downs	8.46	209	*e*PN	P	18 45 37.8	-4.9
JCZ	Jackson Bay	8.55	220	*e*PN	P	18 45 37.6	-6.4

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*NEIC **01** 18:46:00.6±4.2,36.22N×70.85E,h177^{km}±34^{km},mb3.7/3, Error ellipse: s-maj=39.7km s-min=16.1km az=217.0*
*MOS **01** 18:46:00.7±0.6,36.30N×70.72E,h193^{km},mb3.7/1,Error ellipse: s-maj=33.1km s-min=11.0km az=91.3*
*IDC **01** 18:46:03.4±14.0,36.36N×70.93E,h202^{km}±130^{km}, mb3.3/4,mb1 3.3/7,mb1mx3.0/21,mbtmp3.8/7,Error ellipse: s-maj=114.3km s-min=22.5km az=36.0*
*NNC **01** 18:46:09.7±7.7,36.96N×70.80E,h200^{km}±89^{km},mpv4.2, Error ellipse: s-maj=75.6km s-min=48.5km az=11.0*
ISC 01 18:45:59.3±1.1,36.17N±0.05×70.7E±0.1,h185^{km}±14^{km}, n33,σ0^{s}52/38,mb3.5/4,2C-4D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.56	131	*e*P	P	18 47 31.0	+10
THN				*e*S	S	18 48 32.1	+7.1
AML	Almayashu	6.38	20	P	P	18 47 32.4	+0.4
	SNR=44						
UCH	Uchtor	6.72	25	P	P	18 47 37.2	+0.6
	SNR=17						
EKS2	Erkin-Say	6.89	19	P	P	18 47 39.0	+0.2
	SNR=10						
KK31	Karatay Array	6.92	359	P	P	18 47 39.2	0.0
	6.1nm,0.5s,baz=179,slow=12,SNR=109						
KK31				⇓S	S	18 48 49.4	-7.7
	13nm,0.5s						
KKAR	Karatay Array	6.92	359	*e*PN	P	18 47 39.2	0.0
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	Ala-Archa	7.08	23	P	P	18 47 41.7	+0.4
	SNR=26						
AAK	Ala-Archa	7.08	23	⇓P	P	18 47 41.5	+0.3
	comp=Z,15nm,0.5s						
AAK				⇑S	S	18 48 55.0	-5.7
	comp=Z,18nm,0.8s						
AAK	Ala-Archa	7.08	23	*e*Pn	P	18 47 40.7	-0.6
	comp=Z,22nm,0.6s						
AAK	Ala-Archa	7.08	23	*e*PN	P	18 47 40.7	-0.5
AAK				pmax	pmax		
	comp=Z,22nm,0.6s						
KBK	Karagaybulak	7.25	25	P	P	18 47 44.1	+0.6
	SNR=11						
ULHL	Ulahol	7.42	33	P	P	18 47 46.0	+0.2
	SNR=7.1						
USP	Ospenovka	7.66	21	P	P	18 47 48.7	-0.2
	SNR=8.9						
TKM2	Tokmak 2	7.71	28	P	P	18 47 49.7	+0.1
	SNR=5.8						
KLP	Kalpa	7.77	124	*e*P	P	18 47 51.0	+0.7
KLP				*e*S	S	18 49 11.0	-6.1
KLP				AML	AML	18 49 25.8	
	comp=N,45nm,0.6s						
KLP				AML	AML	18 49 27.0	
	comp=E,33nm,0.4s						
KHET	Khetri	9.14	151	*e*P	P	18 48 08.3	-0.1
KHET				*e*S	S	18 49 48.9	-0.4
KHET				AML	AML	18 49 58.3	
	comp=N,6.8nm,0.5s						
KHET				AML	AML	18 49 59.4	
	comp=E,8.2nm,0.4s						
KUDL	Kundal	9.37	147	*i* P	P	18 48 16.5	+5.2
KUDL				*e*S	S	18 49 54.2	-0.3
KUDL				*e*x	x	18 50 00.5	
AYAN	Aya Nagar	9.38	143	*e*x	x	18 48 07.3	
MK31	Makanchi Array	13.68	36	⇓P	P	18 49 05.6	-0.9
	comp=E,0.2nm,0.4s,baz=223,slow=16,SNR=9.2						
MKAR	Makanchi Array	13.68	36	P	P	18 49 05.7	-0.8
	comp=E,0.2nm,0.3s,baz=210,slow=12,SNR=7.6						
AB31	Akbulak array	15.27	332	⇑P	P	18 49 25.8	-0.5
	comp=E,1.1nm,0.5s,baz=147,slow=12,SNR=20						
BVA0	Borovoye Array	16.85	359	⇓P	P	18 49 46.5	+0.9
	comp=E,0.8nm,1.1s,baz=160,slow=5.5,SNR=6.3						
BVAR	Borovoye Array	16.85	359	P	P	18 49 44.9	-0.7
	comp=E,0.4nm,0.3s,baz=160,slow=12,SNR=7.7						
BRVK	Borovoye	16.89	359	*e*P	P	18 49 45.1	-0.9
	comp=E,1.4nm,0.6s						
BRVK	Borovoye	16.89	359	*e*P	P	18 49 45.1	-0.9
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTK	Aktyubinsk	16.96	331	P	P	18 49 47.0	+0.2
AKTO	Aktyubinsk	16.96	331	P	P	18 49 47.0	+0.2
	comp=Z,0.2nm,0.3s,baz=143,slow=8.0,SNR=8.1						
CHKZ	Chkalovo	17.50	360	*e*P	P	18 49 52.4	-0.5
	comp=Z,0.6nm,0.5s						
CHKZ	Chkalovo	17.50	360	*e*P	P	18 49 52.4	-0.6
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	FINESS Array B	37.64	326	P	P	18 52 57.5	0.0
	comp=Z,2.4nm,0.9s,mb3.8,baz=124,slow=14,SNR=4.5						
ARCES	ARCESS Array B	41.37	338	P	P	18 53 28.3	+0.1
	comp=Z,1.1nm,0.6s,mb3.7,baz=112,slow=6.5,SNR=8.9						
NOA	NORSAR Array B	44.52	323	P	P	18 53 53.9	+0.4
	comp=Z,0.8nm,0.8s,mb3.4,baz=98,slow=7.8,SNR=2.4						
WRA	Warramunga Arr	82.00	122	P	P	18 58 01.0	+1.0
	comp=Z,0.3nm,0.4s,mb3.2,baz=323,slow=4.9,SNR=12						

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*ISK **01** 18:51:39.5,38.21N×26.60E,h9^{km},MD3.0*
*ATH **01** 18:51:40.4,38.18N×26.57E,h30^{km}±3^{km},MD3.0/3*
*CSEM **01** 18:51:40.5±0.1,38.23N×26.67E,h15^{km},MD3.0,Error ellipse: s-maj=2.8km s-min=2.5km az=126.0*
ISC 01 18:51:39.8±0.8,38.24N±0.03×26.57E±0.05,h4^{km}±5^{km}, n15,σ0^{s}69/23,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.12	10	*i* P	Pg	18 51 42.5	+0.1
URLA				*i* S	Sg	18 51 45.0	+0.9
BLCB	Balcova	0.40	68	*i* PG	Pg	18 51 47.5	-0.3
SMG	Samos	0.57	158	*e*PN	Pg	18 51 51.5	+0.3
SMG				*e*SN	Sg	18 51 59.5	+0.7
IZM	Izmir	0.57	73	*i* PG	Pg	18 51 50.7	-0.5
IZM				*i* SG	Sg	18 51 59.0	+0.2
KDAG	Bornova	0.57	73	*i* P	Pg	18 51 50.0	-1.2
KDAG				*i* S	Sg	18 51 58.1	-0.8
PRK	Paraskevi	1.03	347	*e*PN	Pn	18 52 01.0	+0.1
PRK				*e*SN	Sn	18 52 16.1	+0.2
AKS	Akhisar	1.17	56	PN	Pn	18 52 02.2	-0.6
BODT	Bodrum	1.31	153	*e*PN	Pn	18 52 03.7	-1.2
MLSB	Milas	1.34	134	*e*PN	Pn	18 52 04.9	-0.4
BDRM	Kayabasi	1.36	149	*i* P	Pb	18 52 06.9	+1.4
BDRM				*i* S	Sb	18 52 23.5	+0.5
APE	Apeiranthos	1.43	216	*e*PN	Pn	18 52 06.3	-0.2
APE				*e*SN	Sn	18 52 25.6	-0.3
APE	Apeiranthos	1.43	216	*e*PN	Pn	18 52 05.7	-0.8
MANT	Manisa	1.58	80	*i* P	Pn	18 52 09.7	+0.9
MANT				*i* S	Sb	18 52 30.3	+0.8
EZN	Ezine	1.60	353	*e*PN	Pn	18 52 09.1	+0.2
YER	Yerkesik	1.75	128	*e*PN	Pn	18 52 10.5	-0.6

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*NEIC **01** 19:10:29.8±0.7,2.41N×95.76E,mb4.3/3,Error ellipse: s-maj=18.8km s-min=9.5km az=43.0*
*IDC **01** 19:10:30.3±2.3,2.52N×95.87E,h21^{km}±6^{km},mb3.7/5, mb1 3.8/5,mb1mx3.5/17,mbtmp3.8/5,Error ellipse: s-maj=89.2km s-min=18.1km az=59.0*
ISC 01 19:10:27.8±1.1,2.4N±0.1×95.8E±0.1,h21^{km}, h21^{km}±.7^{km}:pP-P,n13,σ0^{s}68/13,mb4.1/9,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.66	59	*e*Pn	Pn	19 11 52.7	-0.1
PKI	Pulchoki	26.92	339	*e*P	P	19 16 10.5	+0.8
GUN	Gumba	27.07	340	*e*P	P	19 16 11.7	+0.7
	16nm,0.8s,mb4.6						
KKN	Kakani	27.17	339	*e*P	P	19 16 12.1	+0.2
LSA	Lhasa	27.50	351	*e*P	P	19 16 15.2	+0.2
	5.1nm,0.9s,mb4.2						
GKN	Gorkha	27.59	338	*e*P	P	19 16 16.2	+0.4
	5.3nm,0.6s,mb4.3						
KOLN	Koldanda	27.78	336	*e*P	P	19 16 16.9	-0.6
WRA	Warramunga Arr	43.88	122	P	P	19 18 36.2	+1.3
	0.7nm,0.5s,mb3.6,baz=300,slow=9.2,SNR=11						
WRA				pP	pP	19 18 41.9	+0.7
	0.4nm,0.5s,baz=300,slow=9.2,SNR=2.8						
MKAR	Makanchi Array	45.75	347	P	P	19 18 49.8	+0.2
	1.0nm,0.5s,mb4.0,baz=157,slow=8.6,SNR=22						
MKAR				pP	pP	19 18 56.2	+0.3
	1.0nm,0.7s,baz=159,slow=8.5,SNR=6.3						
SONM	Songino Array	46.18	10	P	P	19 18 52.5	-0.5
	1.0nm,0.7s,mb3.9,baz=189,slow=9.6,SNR=13						
SONM				pP	pP	19 18 58.9	-0.5
	1.9nm,0.9s,baz=189,slow=8.3,SNR=11						
BVAR	Borovoye Array	54.66	341	P	P	19 19 56.5	-0.9
	1.0nm,0.7s,mb4.0,baz=149,slow=8.4,SNR=6.0						
CHKZ	Chkalovo	55.15	342	*e*P	P	19 20 00.2	-0.8
	4.1nm,1.2s,mb4.3						
CHKZ				*e*pP	pP	19 20 07.2	-0.3
STKA	Stephens Creek	55.22	132	P	P	19 20 00.9	-0.9
	1.0nm,0.7s,mb4.0,baz=295,slow=17,SNR=2.5						

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*NNC **01** 19:29:27.4±2.8,36.74N×67.40E,h107^{km}±73^{km},mpv3.7, Error ellipse: s-maj=35.0km s-min=21.2km az=115.0*
ISC 01 19:29:22.9±2.1,36.6N±0.2×67.4E±0.2,h33^{km},n10, σ1^{s}04/13,5C-3D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.88	19	⇑Pn	Pn	19 31 05.6	+1.3
	0.5nm,0.2s,baz=209,slow=16,SNR=23						
KK31				⇑Sn	Sn	19 32 23.1	+0.9
	4.8nm,0.6s,baz=209,slow=17,SNR=4.8						
KK31				⇓Lg		19 33 05.6	
	6.3nm,0.5s,baz=197,slow=25,SNR=5.6						
AML	Almayashu	7.32	39	P	P	19 31 10.6	+0.3
	SNR=10						
EKS2	Erkin-Say	7.76	37	P	P	19 31 16.8	+0.6
	SNR=5.6						
UCH	Uchtor	7.82	42	P	P	19 31 17.5	+0.3
	SNR=10						
AAK	Ala-Archa	8.10	40	P	P	19 31 21.5	+0.5
	SNR=8.2						
AAK	Ala-Archa	8.10	40	⇑Pn	P	19 31 20.3	-0.6
	4.1nm,0.4s						
AAK				⇓Sn	Sn	19 32 51.3	-1.2
	6.4nm,0.8s						
KBK	Karagaybulak	8.35	42	P	P	19 31 24.7	+0.2
	SNR=8.4						
USP	Ospenovka	8.56	37	P	P	19 31 26.9	-0.5
	SNR=5.2						
AB31	Akbulak array	13.75	339	⇑Pn	P	19 32 37.7	0.0
	0.3nm,0.3s,baz=157,slow=14,SNR=7.8						
AB31				⇓Sn	S	19 35 04.6	-5.6
	0.9nm,0.3s,baz=161,slow=24,SNR=3.6						
BVA0	Borovoye Array	16.52	6	⇑Pn	P	19 33 10.4	-3.1
	0.6nm,1.2s,baz=168,slow=11,SNR=7.1						

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*ISK **01** 19:36:17.6,38.17N×26.58E,h5^{km},MD3.4*
*ATH **01** 19:36:18.2,38.19N×27.08E,h52^{km}±2^{km},MD2.9/3*
*CSEM **01** 19:36:19.2±0.2,38.18N×26.64E,h8^{km}±1^{km},MD3.4,Error ellipse: s-maj=4.4km s-min=2.2km az=105.0*
ISC 01 19:36:20.0±0.4,38.24N±0.02×26.65E±0.03,h10^{km},n28, σ1^{s}25/46,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.13	341	*i* P	Pg	19 36 21.5	-1.6
URLA				*i* S	Sg	19 36 24.5	-0.8
BLCB	Balcova	0.34	64	PG	Pg	19 36 26.9	-0.2
IZM	Izmir	0.51	71	PG	Pg	19 36 30.1	-0.2
KDAG	Bornova	0.51	71	*i* P	Pg	19 36 29.5	-0.9
KDAG				*i* S	Sg	19 36 37.6	+0.2
SMG	Samos	0.55	164	*e*P	Pg	19 36 30.4	-0.7
SMG				*e*S	Sg	19 36 39.2	+0.7
PRK	Paraskevi	1.05	344	*e*P	Pb	19 36 40.0	+0.2
PRK				*e*S	Sb	19 36 56.2	+2.8
AYVA	Ayvalik	1.07	2	*i* P	Pb	19 36 40.7	+0.5
AYVA				*i* S	Sb	19 36 57.8	+3.7
AKS	Akhisar	1.11	55	PN	Pn	19 36 41.5	-0.1
AKS				SN	Sn	19 36 59.4	+2.3
AYDN	Tasoluk	1.13	120	*i* P	Pb	19 36 41.5	+0.3
AYDN				*i* S	Sb	19 36 57.2	+1.4
BODT	Bodrum	1.28	156	PN	Pn	19 36 42.5	-1.6
MLSB	Milas	1.30	136	*e*PN	Pn	19 36 43.6	-0.7
BDRM	Kayabasi	1.33	151	*i* P	Pb	19 36 45.6	+1.0
BDRM				*i* S	Sb	19 37 03.2	+1.6
APE	Apeiranthos	1.47	218	*e*PN	Pn	19 36 45.1	-1.6
APE				*e*SN	Sn	19 37 05.5	-0.5
APE	Apeiranthos	1.47	218	*e*P	Pn	19 36 46.5	-0.2
APE				*e*S	Sb	19 37 06.6	+1.1
APE	Apeiranthos	1.47	218	*e*P	Pn	19 36 46.5	-0.2
APE				*e*Sn	Sn	19 37 05.5	-0.5
APE				*e*S	Sb	19 37 06.6	+1.1
MANT	Manisa	1.52	80	*i* P	Pn	19 36 49.9	+2.4
MANT				*i* S	Sb	19 37 10.0	+2.8
EZN	Ezine	1.61	351	*e*PN	Pn	19 36 48.6	-0.1
DAT	Datca	1.68	154	*e*PN	Pn	19 36 48.7	-1.0
BALB	Balikesir	1.70	34	*e*PN	Pn	19 36 50.8	+0.8
YER	Yerkesik	1.70	130	*e*PN	Pn	19 36 49.7	-0.3
BTOK	Tokmak	1.86	35	*i* P	Pn	19 36 52.8	+0.4
BTOK				*i* S	Sn	19 37 24.0	+7.9
DNZL	Cakiroluk	1.97	105	*i* P	Pg	19 36 57.7	-1.8
DNZL				*i* S	Sg	19 37 24.7	-1.0
BNT	Bandirma	2.33	25	*e*PN	Pn	19 36 59.8	+0.7
KCT	Karacabey	2.42	33	*e*PN	Pn	19 37 00.9	+0.6
ORLT	Orhaneli	2.51	43	*e*PN	Pn	19 37 02.5	+0.8
ULDT	Uludag	2.71	45	*i* P	Pn	19 37 02.3	-2.2
ULDT				*i* S	Sg	19 37 47.3	-3.0
TKTP	Tekketepe	2.90	93	*i* P	Pg	19 37 16.1	-1.8
TKTP				*i* S	Sg	19 37 57.6	+0.9
ESKT	Eskisehir	3.52	67	*i* P	Pg	19 37 26.4	-3.9
ESKT				*i* S	Sg	19 38 15.3	-2.0

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*NEIC **01** 19:40:18.3,31.83N×115.83W,h4^{km},MD3.7(ECX), ML3.6(PAS),After ECX.*
ECX 01 19:40:18.3±0.4,31.83N×115.83W,h4^{km}±1^{km},MD3.6, ML3.7,1C-8D,Baja California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDX	Rancho Dowling	0.14	316	⇓*e*P	Pg	19 40 21.2	0.0
RDX				*i* S	Sg	19 40 23.9	+0.7
ECNX	Esteban Cantu	0.68	255	⇓*e*P	Pg	19 40 30.2	-1.5
ECNX				⇓*e*P		19 40 31.0	
ECNX				*e*S	Sg	19 40 39.8	-1.0
ECNX				*i* S	Sg	19 40 40.6	-0.2
ENX	Ensenada	0.71	274	⇓*e*P	Pg	19 40 31.0	-1.5
ENX				*e*S	Sg	19 40 40.6	-1.4
ENX				*e*		19 40 41.6	
	comp=N,5µm,0.3s						
PBX	Punta Banda	0.77	264	⇓*e*P	Pg	19 40 31.9	-1.7
PBX				*e*S	Sg	19 40 42.4	-1.4
PBX				*e*		19 40 42.9	
	comp=N,3µm,0.3s						
RMX	La Rumorosa	0.80	345	⇑*e*P	Pg	19 40 32.3	-2.0
YUH	Yuha Desert	0.82	355	⇓*i*P	Pg	19 40 32.7	-2.0
CBX	Cerro Bola	0.85	305	⇓*e*P	Pb	19 40 33.7	-1.7
CBX				*e*S	Sg	19 40 45.2	-1.6
BAR	Barrett	1.11	320	⇓*i*P	Pb	19 40 37.4	-2.3
BAR	Barrett	1.11	320	*e*P	Pb	19 40 37.4	-2.3
MWC	Mount Wilson	3.03	323	*e*Pn	Pn	19 41 07.1	-0.9
LDFC	Landfair	3.29	10	*e*Pn	Pn	19 41 09.9	-1.9
NEN	Nelson	3.90	12	*e*Pn	Pn	19 41 18.4	-2.0
TUC	Tucson	4.31	82	Pn	Pn	19 41 22.8	-3.5
DAC	Darwin (Calif)	4.67	342	*e*Pn	Pn	19 41 29.0	-2.4
TPNV	Topopah Spring	5.12	356	*e*Pn	Pn	19 41 35.7	-2.0
WUAZ	Wupatki	5.23	44	*e*Pn	Pn	19 41 36.9	-2.4

ISC 01 19:49:30.6±5.5,45.2S±0.3×9 7E± ,h10^{km},n6,σ0^{s}52/5, mb4.5/2,1D,Southeast Indian Ridge

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

KLBR	**Kellerberrin**	**20.98**	**57**	eP	**P**	**19 54 15.7**	**-0.6**
	11nm,0.9s						
CASY	**Casey**	**22.28**	**166**	eP	**P**	**19 54 29.0**	**-0.1**
FITZ	**Fitzroy Crossi**	**35.92**	**50**	eP	**P**	**19 56 33.4**	**+0.4**
	11nm,1.0s,mb4.7						
STKA	**Stephens Creek**	**36.70**	**84**	⇓iP	**P**	**19 56 39.8**	**+0.4**
	4.1nm,1.0s,mb4.2						
WB2	**Warramunga Arr**	**39.63**	**63**	eP	**P**	**19 57 04.1**	**0.0**
KAKA	**Kakadu**	**44.09**	**54**	eP	Px	19 57 58.9	
	8.1nm,0.9s						

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*PRU **01** 19:53:03.0, 40.71N×20.44E, M3.8*
*ATH **01** 19:53:05.6, 41.18N×20.41E, h7^{km}±1^{km}, MD4.2/13, ML4.4*
*TIR **01** 19:53:05.1, 41.09N×20.34E, h7^{km}, Ml3.8*
*NEIC **01** 19:53:06.6, 41.10N×20.40E, mb3.8/2, ML4.4(SKO), ML4.4(ATH), ML4.3(THE), ML4.1(PDG), ML4.1(TIR), After SKO.*
NEIC Felt [IV] in the Ohrid-Struga area, Macedonia.
*CSEM **01** 19:53:06.8±0.0, 41.20N×20.38E, h5^{km}, mb4.0/1, ML3.7/7, Ms3.9, Error ellipse: s-maj=1.4km s-min=0.8km az=38.0*
*LDG **01** 19:53:07.3±0.2, 41.09N×20.19E, h10^{km}, Ml3.9/14, Error ellipse: s-maj=4.7km s-min=3.0km az=98.0*
*MOS **01** 19:53:07.0±1.0, 41.08N×20.27E, h17^{km}, mb3.9/2, Error ellipse: s-maj=5.6km s-min=3.6km az=110.6*
*IDC **01** 19:53:07.2±1.2, 41.11N×20.38E, mb3.8/11, mb1 4.0/18, mb1mx3.9/29, mbtmp3.8/18, ML3.8/7, MS3.5/1, Ms1 3.5/1, ms1mx2.7/24, Error ellipse: s-maj=20.0km s-min=11.9km az=31.0*
*VIE **01** 19:53:07.1±0.6, 40.98N×20.32E, h10^{km}, mb3.6/5, Ms3.9/5, Error ellipse: s-maj=7.9km s-min=4.5km az=54.0*
*THE **01** 19:53:08.4, 41.13N×20.31E, h12^{km}, ML4.2*
*PDG **01** 19:53:09.6±0.6, 41.16N×20.03E, h13^{km}±1^{km}*
ISC 01 19:53:05.5±0.3, **41.09N**±0.01×**20.33E**±0.02, **h5**^{km}±2^{km}, **n243**, σ**1^{s}25**/328, **mb3.8**/10, **MS3.6**/1, **28C-21D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.43**	**306**	i Pg	**Pg**	**19 53 13.7**	**-0.5**
TIR				i Sg	**Sg**	**19 53 21.0**	**+1.0**
TIR	**Tirane**	**0.43**	**306**	P	**Pg**	**19 53 15.3**	**+1.1**
TIR				i Sg	**Sg**	**19 53 21.0**	**+1.0**
KBN	**Korca**	**0.58**	**143**	i Pg	**Pg**	**19 53 17.3**	**+0.1**
KBN				i Sg	**Sg**	**19 53 27.0**	**+2.1**
PRZA	**Preza**	**0.60**	**305**	i pg?	**Pg**	**19 53 18.5**	**+1.0**
LACI	**Lac**	**0.72**	**320**	i Pg	**Pg**	**19 53 19.9**	**+0.1**
LACI				i Sg	**Sg**	**19 53 30.8**	**+1.4**
BIA	**Bitola**	**0.76**	**95**	⇑iPg	**Pg**	**19 53 19.6**	**-1.0**
BIA				i Sg	**Sg**	**19 53 30.4**	**-0.3**
FNA	**Florina**	**0.85**	**111**	ePg	**Pg**	**19 53 21.9**	**-0.6**
PUK	**Puka**	**1.01**	**341**	i Pg	**Pg**	**19 53 25.9**	**+0.3**
PUK				i Sg	**Sg**	**19 53 43.0**	**+4.0**
SDA	**Shkodra**	**1.14**	**327**	i Pg	**Pg**	**19 53 28.2**	**-0.2**
SDA				i Sg	**Sg**	**19 53 46.5**	**+2.9**
ULC	**Ulcinj**	**1.19**	**317**	⇑iPg	**Pg**	**19 53 28.6**	**-0.7**
ULC				eSg	**Sg**	**19 53 44.1**	**-1.1**
SKO	**Skopje**	**1.21**	**43**	i Pn	**Pn**	**19 53 29.3**	**+0.2**
SKO				eSn	**Sn**	**19 53 47.0**	**+1.0**
SKO				Lg		19 53 48.0	
SKO				Lg		19 53 49.0	
SRN	**Sarande**	**1.23**	**192**	i Pn	**Pn**	**19 53 29.6**	**+0.2**
SRN				i Sn	**Sn**	**19 53 48.8**	**+2.2**
BCI	**Bajram Curri**	**1.29**	**351**	i Pn	**Pn**	**19 53 31.3**	**+1.1**
KZN	**Kozani**	**1.35**	**125**	ePB	**Pb**	**19 53 31.2**	**+0.3**
KZN				eSB	**Sb**	**19 53 49.7**	**+1.4**
KEK	**Kerkira**	**1.44**	**197**	ePB	**Pb**	**19 53 34.5**	**+2.1**
KEK				eSB	**Sb**	**19 53 55.8**	**+5.0**
KEK	**Kerkira**	**1.44**	**197**	Pn	**Pn**	**19 53 33.1**	**+0.8**
KEK				Sn	**Sn**	**19 53 55.9**	**+4.2**
KEK	**Kerkira**	**1.44**	**197**	ePb	**Pb**	**19 53 34.5**	**+2.1**
KEK				Sn	**Sn**	**19 53 55.9**	**+4.2**
MEV	**Metsovon**	**1.47**	**152**	ePg	**Pg**	**19 53 32.9**	**-2.0**
MEV				eSg	**Sg**	**19 53 52.3**	**-2.3**
JAN	**Janina**	**1.49**	**164**	ePB	**Pb**	**19 53 35.2**	**+1.9**
JAN				eSB	**Sb**	**19 53 56.3**	**+4.0**
PVY	**Plav**	**1.53**	**350**	⇓iPg	**Pg**	**19 53 35.0**	**-0.9**
PVY				eSg	**Sg**	**19 53 58.2**	**+1.8**
PVY	**Plav**	**1.53**	**350**	⇓iPg	**Pg**	**19 53 35.0**	**-1.0**
IGT	**Igoumenitsa**	**1.56**	**180**	ePg	**Pg**	**19 53 34.9**	**-1.7**
IGT				eSg	**Sg**	**19 53 53.9**	**-3.4**
TTG	**Podgorica**	**1.56**	**330**	⇓iPg	**Pg**	**19 53 35.4**	**-1.2**
TTG				eSg	**Sg**	**19 53 57.8**	**+0.4**
GRG	**Griva**	**1.57**	**94**	ePg	**Pg**	**19 53 34.3**	**-2.6**
GRG				eSg	**Sg**	**19 53 54.5**	**-3.4**
BUM	**Brajici-Budva**	**1.61**	**319**	⇑iPg	**Pg**	**19 53 36.6**	**-1.2**
BUM				eSg	**Sg**	**19 53 57.1**	**-2.2**
VAY	**Valandovo**	**1.71**	**82**	i Pn	**Pn**	**19 53 36.1**	**0.0**
VAY				eSn	**Sn**	**19 53 57.8**	**-0.8**
IVA	**Berane**	**1.81**	**350**	⇓iPn	**Pn**	**19 53 40.4**	**+2.8**
IVA				eSn	**Sn**	**19 54 05.2**	**+4.0**
LCI	**Lecce**	**1.85**	**247**	Pn	**Pn**	**19 53 38.7**	**+0.6**
LIT	**Litokhoron**	**1.92**	**120**	ePb	**Pb**	**19 53 39.9**	**-0.8**
LIT				eSb	**Sb**	**19 54 02.9**	**-2.0**
HCY	**Herceg Novi**	**1.93**	**315**	⇑iPn	**Pn**	**19 53 41.0**	**+1.8**
HCY				eSn	**Sn**	**19 54 04.1**	**-0.1**
KNT	**Kendrikon**	**1.94**	**87**	ePb	**Pb**	**19 53 39.8**	**-1.2**
	comp=Z,37nm,0.2s						
KNT				eSb	**Sb**	**19 54 02.9**	**-2.6**
NKY	**Niksic**	**1.99**	**330**	⇓iPn	**Pn**	**19 53 42.6**	**+2.5**
NKY				eSn	**Sn**	**19 54 07.1**	**+1.4**
THE	**Thessaloniki**	**2.05**	**102**	ePn	**Pn**	**19 53 40.8**	**-0.3**
	comp=Z,8.2nm,0.8s						
THE				eSn	**Sn**	**19 54 05.7**	**-1.7**
BARS	**Barje**	**2.06**	**32**	⇑iPn	**Pn**	**19 53 42.2**	**+1.0**
BARS				Sn	**Sn**	**19 54 14.4**	**+6.9**
BRY	**Bratogost**	**2.25**	**324**	⇓iPn	**Pn**	**19 53 46.0**	**+2.2**
BRY				eSn	**Sn**	**19 54 12.9**	**+0.6**
SOH	**Sokhos**	**2.31**	**96**	ePn	**Pn**	**19 53 44.1**	**-0.7**
SOH				eSn	**Sn**	**19 54 11.1**	**-2.7**
PLE	**Pljevlja**	**2.34**	**343**	⇓iPn	**Pn**	**19 53 48.3**	**+3.1**
PLE				eSn	**Sn**	**19 54 16.9**	**+2.1**
PLE	**Pljevlja**	**2.34**	**343**	eS	**Sn**	**19 54 16.9**	**+2.1**
UPM	**Unac-Piva**	**2.36**	**334**	⇓iPn	**Pn**	**19 53 48.2**	**+2.7**
UPM				eSn	**Sn**	**19 54 16.4**	**+1.2**
BRT	**Bari-Castellan**	**2.38**	**266**	Pn	**Pn**	**19 53 46.5**	**+0.8**
EVR	**Evrytania**	**2.45**	**152**	ePN	**Pn**	**19 53 49.3**	**+2.5**
NVSS	**Nova Varos 2**	**2.46**	**349**	⇑iPn	**Pn**	**19 53 49.1**	**+2.1**
NVSS				Sn	**Sn**	**19 54 18.1**	**+0.4**
PLG	**Polygyros**	**2.48**	**106**	ePN	**Pn**	**19 53 47.9**	**+0.8**
PLG				eSN	**Sn**	**19 54 19.1**	**+1.0**
AGG	**Agios Georgios**	**2.58**	**143**	ePn	**Pn**	**19 53 49.2**	**+0.6**
	comp=Z,11nm,0.2s						
AGG				eSn	**Sn**	**19 54 18.7**	**-1.9**
BAI	**Bari**	**2.61**	**271**	⇓iPn	**Pn**	**19 53 49.1**	**+0.1**
STON	**Ston**	**2.65**	**313**	i Pn	**Pn**	**19 53 50.1**	**+0.5**
STON				i Sn	**Sn**	**19 54 21.0**	**-1.5**
STON				i Sg	**Sg**	**19 54 28.2**	**-5.4**
STON	**Ston**	**2.65**	**313**	i Pn	**Pn**	**19 53 50.1**	**+0.5**
STON				i Sn	**Sn**	**19 54 20.9**	**-1.6**
STON				i Sg	**Sg**	**19 54 28.2**	**-5.4**
NVR	**Nevrokopi**	**2.68**	**83**	ePN	**Pn**	**19 53 50.9**	**+0.9**
XOR	**Xorichti**	**2.79**	**127**	ePn	**Pn**	**19 53 51.4**	**-0.2**
PAIG	**Paliouri**	**2.81**	**113**	ePn	**Pn**	**19 53 51.3**	**-0.6**
PAIG				eSn	**Sn**	**19 54 23.3**	**-3.2**
NEO	**Neokhori**	**2.84**	**128**	ePN	**Pn**	**19 53 53.9**	**+1.5**
OUR	**Ouranopolis**	**2.88**	**104**	ePn	**Pn**	**19 53 52.8**	**-0.1**
	comp=Z,9.8nm,0.5s						
VLS	**Valsamata**	**2.92**	**176**	ePB	**Pb**	**19 53 55.9**	**-1.8**
BOLS	**Boljevac**	**2.99**	**23**	⇓iPn	**Pn**	**19 53 55.8**	**+1.3**
BOLS				Sn	**Sn**	**19 54 31.1**	**-0.1**
DIVS	**Divcibare**	**3.02**	**355**	⇓iPn	**Pn**	**19 53 56.7**	**+1.9**
DIVS				Sn	**Sn**	**19 54 32.5**	**+0.6**
CDT	**Castel del Mon**	**3.06**	**271**	⇓iPn	**Pn**	**19 53 55.7**	**+0.2**
ORI	**Oriolo Calabro**	**3.13**	**252**	Pn	**Pn**	**19 53 56.6**	**+0.2**
RLS	**Riolos of Patr**	**3.15**	**163**	ePN	**Pn**	**19 53 59.5**	**+2.7**
LKR	**Lokris**	**3.19**	**139**	ePN	**Pn**	**19 53 58.6**	**+1.3**
SVIS	**Svilajnac**	**3.27**	**11**	⇑iPn	**Pn**	**19 54 00.8**	**+2.3**
SVIS				Sn	**Sn**	**19 54 39.8**	**+1.5**
TIP	**Timpagrande**	**3.34**	**236**	Pn	**Pn**	**19 54 00.3**	**+0.9**
MS1	**Monte Sant'Ang**	**3.36**	**282**	⇑iPn	**Pn**	**19 53 59.3**	**-0.4**
TDS	**Terranova Siba**	**3.37**	**246**	Pn	**Pn**	**19 54 00.4**	**+0.6**
CUC	**Castrocucco**	**3.61**	**254**	Pn	**Pn**	**19 54 04.1**	**+0.8**
RGNG	**Rignano Grg**	**3.62**	**281**	Pn	**Pn**	**19 54 02.7**	**-0.7**
FG4	**Candela**	**3.63**	**272**	Pn	**Pn**	**19 54 04.0**	**+0.4**
SLCN	**Sala Consilina**	**3.63**	**260**	Pn	**Pn**	**19 54 04.1**	**+0.4**
MRLC	**Muro Lucano**	**3.68**	**266**	Pn	**Pn**	**19 54 05.7**	**+1.4**
BEO	**Belgrade**	**3.73**	**1**	⇑iPn	**Pn**	**19 54 04.3**	**-0.7**
BEO				Sn	**Sn**	**19 54 49.2**	**-0.7**
MGR	**Morigerati**	**3.76**	**257**	Pn	**Pn**	**19 54 05.9**	**+0.5**
GRI	**Girifalco**	**3.76**	**234**	Pn	**Pn**	**19 54 05.9**	**+0.4**
LOS	**Limnos**	**3.80**	**106**	ePn	**Pn**	**19 54 05.8**	**-0.2**
MGER	**Gerania Oros**	**3.84**	**143**	ePN	**Pn**	**19 54 08.0**	**+1.4**
SGO	**Sicignano**	**3.85**	**264**	Pn	**Pn**	**19 54 06.7**	**0.0**
RDO	**Rodhopi**	**3.94**	**87**	ePN	**Pn**	**19 54 08.1**	**+0.2**
FG2	**Serracapriola**	**3.95**	**282**	Pn	**Pn**	**19 54 07.9**	**-0.2**
ATH	**Athens Observa**	**4.07**	**139**	ePN	**Pn**	**19 54 10.7**	**+0.9**
PTL	**Penteli**	**4.09**	**137**	ePN	**Pn**	**19 54 11.5**	**+1.4**
ITM	**Ithomi**	**4.10**	**162**	ePN	**Pn**	**19 54 12.6**	**+2.4**
CIGN	**Sant'Elia a Pi**	**4.12**	**280**	Pn	**Pn**	**19 54 10.8**	**+0.3**
PSB1	**Pescosannita**	**4.17**	**274**	Pn	**Pn**	**19 54 11.5**	**+0.3**
ALN	**Alexandroupoli**	**4.33**	**91**	ePn	**Pn**	**19 54 12.7**	**-0.8**
CEL	**Celeste**	**4.44**	**232**	Pn	**Pn**	**19 54 14.5**	**-0.6**
SOI	**Samo**	**4.47**	**229**	Pn	**Pn**	**19 54 15.0**	**-0.5**
SGG	**Gregorio Mates**	**4.50**	**276**	Pn	**Pn**	**19 54 16.4**	**+0.5**
CII	**Carovilli**	**4.57**	**280**	Pn	**Pn**	**19 54 17.4**	**+0.4**
MIDA	**Miranda**	**4.60**	**279**	Pn	**Pn**	**19 54 17.5**	**+0.1**
RNI2	**Rionero Sannit**	**4.69**	**280**	Pn	**Pn**	**19 54 19.0**	**+0.4**
MTTG	**Motta San Giov**	**4.73**	**231**	Pn	**Pn**	**19 54 20.7**	**+1.5**
RFI	**Roccamonfina**	**4.79**	**275**	Pn	**Pn**	**19 54 20.8**	**+0.7**
VLI	**Veliai**	**4.82**	**154**	ePN	**Pn**	**19 54 22.7**	**+2.3**
INTR	**Introdacqua**	**4.91**	**283**	Pn	**Pn**	**19 54 21.5**	**-0.2**
VVLD	**Villa Vallelon**	**5.10**	**281**	Pn	**Pn**	**19 54 24.5**	**+0.1**
	143nm,0.6s						
TERO	**Teramo**	**5.25**	**289**	Pn	**Pn**	**19 54 26.1**	**-0.4**
	77nm,0.5s						
PKSM	**Moragy**	**5.26**	**347**	⇑eP	**Pn**	**19 54 27.9**	**+1.2**
PTQR	**Pietraquaria**	**5.28**	**282**	Pn	**Pn**	**19 54 27.8**	**+0.8**
NVLJ	**Novalja**	**5.30**	**313**	i Pn	**Pn**	**19 54 26.9**	**-0.4**
NVLJ				i Sn	**Sn**	**19 55 26.8**	**-2.9**
NVLJ	**Novalja**	**5.30**	**313**	i Pn	**Pn**	**19 54 26.9**	**-0.4**
NVLJ				i Sn	**Sn**	**19 55 26.7**	**-3.0**
AQU	**L'Aquila**	**5.33**	**286**	P	**Pn**	**19 54 27.4**	**-0.3**
	86nm,0.9s						
AQU	**L'Aquila**	**5.33**	**286**	P	**Pn**	**19 54 27.4**	**-0.3**
AQU				pmax	pmax		
	comp=Z,86nm,0.9s						
AQU	**L'Aquila**	**5.33**	**286**	P	**Pn**	**19 54 27.4**	**-0.3**
	comp=Z,86nm,0.9s						
FIAM	**Fiamignano**	**5.53**	**285**	Pn	**Pn**	**19 54 30.9**	**+0.4**
	comp=Z,90nm,0.6s						
AOI	**Ancona**	**5.56**	**298**	Pn	**Pn**	**19 54 30.5**	**-0.4**
CERT	**Cerreto**	**5.58**	**281**	Pn	**Pn**	**19 54 31.0**	**-0.2**
	comp=Z,73nm,0.8s						
NRCA	**Norcia**	**5.65**	**290**	Pn	**Pn**	**19 54 31.7**	**-0.5**
CING	**Cingoli**	**5.77**	**296**	Pn	**Pn**	**19 54 32.8**	**-1.0**
	comp=Z,32nm,0.7s						
VAE	**Valguarnera**	**5.84**	**234**	Pn	**Pn**	**19 54 39.8**	**+5.0**
	comp=Z,0.7nm,0.3s,baz=79,slow=16,SNR=2.7						
SNTG	**Esanatoglia**	**5.90**	**294**	Pn	**Pn**	**19 54 34.5**	**-1.2**
ARV	**Arcevia**	**5.98**	**296**	Pn	**Pn**	**19 54 35.6**	**-1.3**
	comp=Z,14nm,0.4s						
MLR	**Muntele Rosu**	**6.01**	**41**	Pn	**Pn**	**19 54 38.1**	**+0.9**
	comp=Z,1.7nm,0.3s,baz=274,slow=11,SNR=14						
MLR	**Muntele Rosu**	**6.01**	**41**	⇓P	**Pn**	**19 54 39.4**	**+2.1**
MLR	**Muntele Rosu**	**6.01**	**41**	⇓P	**Pn**	**19 54 39.4**	**+2.2**
MLR	**Muntele Rosu**	**6.01**	**41**	P	**Pn**	**19 54 38.1**	**+0.8**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FSSB	**Fossombrone**	**6.17**	**297**	Pn	**Pn**	**19 54 38.1**	**-1.4**
MURB	**Monte Urbino**	**6.19**	**293**	Pn	**Pn**	**19 54 39.3**	**-0.5**
	comp=Z,74nm,0.5s						
BADI	**Badiali**	**6.46**	**295**	Pn	**Pn**	**19 54 44.1**	**+0.4**
LJU	**Ljubljana**	**6.50**	**322**	ePn	**Pn**	**19 54 44.1**	**-0.1**
HARR	**Harsova**	**6.64**	**55**	⇓P	**Pn**	**19 54 43.3**	**-2.9**
TRI	**Trieste**	**6.64**	**316**	P	**Pn**	**19 54 45.1**	**-1.1**
TRI				pmax	pmax		
	comp=Z,149nm,0.7s						
TRI	**Trieste**	**6.64**	**316**	Pn	**Pn**	**19 54 45.1**	**-1.1**
	comp=Z,149nm,0.7s						
VRI	**Vrincioaia**	**6.67**	**42**	⇑P	**Pn**	**19 54 47.4**	**+0.9**
CRE	**Caprese Michel**	**6.70**	**295**	P	**Pn**	**19 54 46.3**	**-0.7**
CRE				pmax	pmax		
	comp=Z,39nm,1.0s						
CRE	**Caprese Michel**	**6.70**	**295**	Pn	**Pn**	**19 54 46.3**	**-0.7**
	comp=Z,39nm,1.0s						
VOY	**Vojsko**	**6.80**	**319**	ePn	**Pn**	**19 54 47.7**	**-0.7**
VOY				eSn	**Sn**	**19 56 04.5**	**-2.6**
VOJS	**Vojsko**	**6.80**	**319**	i Pn	**Pn**	**19 54 47.5**	**-1.0**
SRO2	**Moca**	**6.81**	**349**	eSN	**Sn**	**19 56 13.3**	**+5.9**
SRO2	**Moca**	**6.81**	**349**	eP	**Pn**	**19 54 53.1**	**+4.5**
SRO2				e		19 56 13.3	
IDI	**Anoyia**	**6.82**	**147**	Pn	**Pn**	**19 54 47.2**	**-1.5**
	comp=Z,1.6nm,0.3s,baz=292,slow=7.9,SNR=7.5						
IDI				Sn	**Sn**	**19 56 06.7**	**-0.8**
	comp=Z,2.4nm,0.3s,baz=304,slow=18,SNR=3.1						
PSZ	**Piszkesteto**	**6.83**	**358**	⇓iPn	**Pn**	**19 54 48.7**	**-0.2**
PSZ				eSn	**Sn**	**19 56 10.1**	**+2.1**
PSZ	**Piszkesteto**	**6.83**	**358**	ePn	**Pn**	**19 54 50.4**	**+1.5**
	comp=Z,34nm,0.8s						
PSZ				eSn	**Sn**	**19 56 00.3**	**-7.6**
PSZ	**Piszkesteto**	**6.83**	**358**	eP	**Pn**	**19 54 50.4**	**+1.5**
PSZ				e		19 56 00.3	
PSZ				pmax	pmax		
	comp=Z,34nm,0.8s						
PSZ	**Piszkesteto**	**6.83**	**358**	eP	**Pn**	**19 54 50.4**	**+1.5**
	comp=Z,34nm,0.8s						
PSZ				eSn	**Sn**	**19 56 00.3**	**-7.7**
OBKA	**Obir**	**6.84**	**324**	⇑iPn	**Pn**	**19 54 48.4**	**-0.6**
	SNR=13						
OBKA	**Obir**	**6.84**	**324**	⇑iSn	**Sn**	**19 56 09.7**	**+1.6**
OBKA	**Obir**	**6.84**	**324**	⇑iPn	**Pn**	**19 54 48.4**	**-0.6**
OBKA				Sn	**Sn**	**19 56 09.7**	**+1.6**
SFI	**Santa Sofia**	**6.87**	**297**	P	**Pn**	**19 54 50.7**	**+1.3**
SRO	**Srobarova**	**6.87**	**349**	eSN	**Sn**	**19 56 15.1**	**+6.1**
CFR	**Carcaliu**	**7.02**	**52**	⇑P	**Pn**	**19 54 50.2**	**-1.3**
ARSA	**Arzberg**	**7.06**	**332**	⇑iSn	**Sn**	**19 56 15.5**	**+1.9**
ARSA	**Arzberg**	**7.06**	**332**	i Pn	**Pn**	**19 54 52.0**	**-0.1**
ARSA				Sn	**Sn**	**19 56 15.5**	**+1.9**
ARSA	**Arzberg**	**7.06**	**332**	Pn	**Pn**	**19 54 52.0**	**-0.1**
	SNR=11						
VMG	**Vicchio**	**7.09**	**297**	Pn	**Pn**	**19 54 52.4**	**-0.2**
CSNT	**Castellina Chi**	**7.11**	**293**	Pn	**Pn**	**19 54 51.7**	**-1.1**
PTCC	**Patocco-Chiusa**	**7.33**	**319**	Pn	**Pn**	**19 54 55.0**	**-0.8**
KECS	**Kecovo**	**7.39**	**1**	ePN	**Pn**	**19 54 56.7**	**0.0**
BURAR	**Bucovina Array**	**7.40**	**27**	⇑P	**Pn**	**19 54 57.8**	**+0.9**
BURAR	**Bucovina Array**	**7.40**	**27**	⇑P	**Pn**	**19 54 57.8**	**+1.0**
ZST	**Bratislava**	**7.47**	**343**	e	**Pn**	**19 55 03.1**	**+5.3**
VYHS	**Vyhne**	**7.48**	**352**	i PN	**Pn**	**19 55 00.6**	**+2.7**
VYHS				e		19 56 21.8	
VYHS	**Vyhne**	**7.48**	**352**	eS	**Sn**	**19 56 21.8**	**-2.3**
CRVS	**Cervenica-Dubn**	**7.85**	**5**	ePN	**Pn**	**19 55 04.9**	**+1.7**
CRVS				eSN	**Sn**	**19 56 32.2**	**-1.2**
GSCL	**Gusciola**	**7.88**	**298**	Pn	**Pn**	**19 55 06.0**	**+2.5**
KOLS	**Kolonicke sedl**	**7.96**	**9**	i PN	**Pn**	**19 55 06.3**	**+1.6**
CTI	**Castel Tesino**	**8.01**	**311**	Pn	**P**	**19 55 03.2**	**-2.2**
MOA	**Molln**	**8.03**	**329**	⇑iPn	**P**	**19 55 05.7**	**+0.2**
MOA	**Molln**	**8.03**	**329**	⇑iSn	**Sn**	**19 56 37.1**	**-0.6**
SEST	**Monte Rota**	**8.14**	**317**	Pn	**P**	**19 55 06.9**	**-0.2**
STHS	**Stebnicka Huta**	**8.35**	**4**	i PN	**P**	**19 55 11.0**	**+0.9**
SAL	**Salo**	**8.45**	**306**	Pn	**P**	**19 55 09.6**	**-1.8**
APPI	**Appiano**	**8.50**	**312**	Pn	**P**	**19 55 10.2**	**-2.0**
PGF	**Pioggiola**	**8.59**	**283**	ePn	**P**	**19 55 07.8**	**-5.6**
WTTA	**Wattenberg**	**8.78**	**318**	⇑iSn	**Sn**	**19 56 55.6**	**-0.8**
WTTA	**Wattenberg**	**8.78**	**318**	⇑iPn	**P**	**19 55 15.2**	**-0.8**
WTTA				Sn	**Sn**	**19 56 55.6**	**-0.8**
WTTA	**Wattenberg**	**8.78**	**318**	Pn	**P**	**19 55 15.2**	**-0.8**
	SNR=9.9						
WTTA				S	**Sn**	**19 56 55.6**	**-0.9**
BOB	**Bobbio (Coli)**	**8.79**	**298**	Pn	**P**	**19 55 15.1**	**-1.1**
WATA	**Walderalm**	**8.86**	**318**	⇑iSn	**Sn**	**19 56 57.0**	**-1.4**
WATA	**Walderalm**	**8.86**	**318**	⇓iPn	**P**	**19 55 16.4**	**-0.7**
WATA				Sn	**Sn**	**19 56 57.0**	**-1.4**
WATA	**Walderalm**	**8.86**	**318**	Pn	**P**	**19 55 16.5**	**-0.6**
	SNR=21						
WATA				S	**Sn**	**19 56 57.0**	**-1.4**
MORC	**Moravsky Berou**	**8.90**	**348**	ePn	**P**	**19 55 20.8**	**+3.1**
	comp=Z,6.1nm,0.8s						
MORC				eSn	**Sn**	**19 56 55.5**	**-4.1**
MORC	**Moravsky Berou**	**8.90**	**348**	eP	**P**	**19 55 20.8**	**+3.0**
MORC				e		19 56 55.5	
MORC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SQTA	**Sankt Quirin**	**8.97**	**316**	⇓iSn	**Sn**	**19 57 01.0**	**-0.3**
SQTA	**Sankt Quirin**	**8.97**	**316**	⇑iPn	**P**	**19 55 18.0**	**-0.7**
SQTA				Sn	**Sn**	**19 57 01.0**	**-0.3**
SQTA	**Sankt Quirin**	**8.97**	**316**	⇑iP	**P**	**19 55 18.0**	**-0.7**
SQTA						19 57 01.0	
SQTA	**Sankt Quirin**	**8.97**	**316**	Pn	**P**	**19 55 18.0**	**-0.7**
	SNR=23						
SQTA				S	**Sn**	**19 57 01.0**	**-0.2**
GERES	**GERESS Array B**	**9.06**	**331**	Pn	**P**	**19 55 18.9**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=156,slow=13,SNR=19						
GERES				Sn	**Sn**	**19 57 02.4**	**-1.2**
	baz=154,slow=23,SNR=1.8						
MOTA	**Moosalm**	**9.10**	**316**	⇓iSn	**Sn**	**19 57 03.8**	**-0.8**
MOTA	**Moosalm**	**9.10**	**316**	⇓iPn	**P**	**19 55 19.4**	**-1.2**
MOTA				Sn	**Sn**	**19 57 03.8**	**-0.8**
MOTA	**Moosalm**	**9.10**	**316**	⇓iP	**P**	**19 55 19.4**	**-1.1**
MOTA						19 57 03.8	
MOTA	**Moosalm**	**9.10**	**316**	Pn	**P**	**19 55 19.4**	**-1.1**
	SNR=20						
MOTA				S	**Sn**	**19 57 03.8**	**-0.8**
KHC	**Kasperske Hory**	**9.35**	**332**	ePN	**P**	**19 55 23.1**	**-0.8**
KHC				ex	x	19 55 37.9	
KHC				eSN	**Sn**	**19 57 10.0**	**-0.5**
KHC	**Kasperske Hory**	**9.35**	**332**	eP	**P**	**19 55 23.1**	**-0.8**
KHC				eS	**Sn**	**19 57 10.0**	**-0.5**
DAVOX	**Davos**	**9.44**	**311**	Pn	**P**	**19 55 23.8**	**-1.4**
	comp=Z,3.3nm,0.3s,baz=131,slow=10,SNR=23						
DAVOX				Sn	**Sn**	**19 57 09.3**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=292,slow=19,SNR=1.7						
DPC	**Dobruska-Polom**	**9.67**	**345**	ePN	**P**	**19 55 28.2**	**-0.1**
DPC				eSN	**Sn**	**19 57 19.8**	**+1.2**
DAVA	**Damuels**	**9.72**	**313**	⇑iPn	**P**	**19 55 27.8**	**-1.3**
DAVA	**Damuels**	**9.72**	**313**	⇑iSn	**Sn**	**19 57 19.7**	**-0.2**
DAVA	**Damuels**	**9.72**	**313**	⇑Pn	**P**	**19 55 27.8**	**-1.3**
DAVA				Sn	**Sn**	**19 57 19.7**	**-0.2**
PRU	**Pruhonice**	**9.78**	**337**	ePN	**P**	**19 55 29.8**	**0.0**
PRU				eSN	**Sn**	**19 57 20.9**	**-0.2**
SBF	**Sospel**	**9.92**	**290**	eP	**P**	**19 55 31.0**	**-0.8**
SBF				eSn	**Sn**	**19 57 10.4**	**-14**
	comp=Z,18nm,0.8s						
BRTR	**Keskin Array B**	**10.24**	**93**	Pn	**P**	**19 55 36.2**	**0.0**
	comp=Z,0.2nm,0.3s,baz=268,slow=13,SNR=5.0						
FRF	**La Foret Royal**	**10.43**	**288**	eP	**P**	**19 55 38.2**	**-0.5**
LMR	**La Mourre**	**10.49**	**287**	ePn	**P**	**19 55 35.3**	**-4.4**
MBDF	**Montbardon**	**10.59**	**295**	eP	**P**	**19 55 39.3**	**-1.6**
MBDF				eSn	**S**	**19 57 27.3**	**-14**
	comp=Z,6.4nm,0.7s						
LPG	**La Plagne**	**10.83**	**299**	ePn	**P**	**19 55 40.7**	**-3.5**
LPG				eSn	**S**	**19 57 32.5**	**-14**
	comp=Z,27nm,0.8s						
LPL	**La Plagne**	**10.85**	**299**	ePn	**P**	**19 55 39.5**	**-5.0**
LPL				eSn	**S**	**19 57 32.2**	**-15**
	comp=Z,17nm,0.6s						
STU	**Stuttgart**	**11.00**	**318**	ePn	**P**	**19 55 44.3**	**-2.3**
	comp=Z,20nm,0.7s						
STU	**Stuttgart**	**11.00**	**318**	eP	**P**	**19 55 44.3**	**-2.3**
STU				pmax	pmax		
	comp=Z,20nm,0.7s						
STU	**Stuttgart**	**11.00**	**318**	ePn	**P**	**19 55 44.3**	**-2.3**
	comp=Z,20nm,0.7s						
ORIF	**Oris-en-Rattie**	**11.25**	**295**	eP	**P**	**19 55 49.6**	**-0.4**
ORIF				eSn	**S**	**19 57 42.5**	**-15**
	comp=Z,7.7nm,0.7s						
MOX	**Moxa**	**11.31**	**331**	i P	**P**	**19 56 01.2**	**+10**
MOX				L		19 59 48.0	
MOX	**Moxa**	**11.31**	**331**	eP	**P**	**19 56 01.2**	**+10**
CLL	**Collm**	**11.40**	**336**	eP	**P**	**19 56 01.2**	**+9.2**
AKASG	**Malin Array Be**	**11.43**	**30**	Pn	**P**	**19 55 51.3**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=219,slow=13,SNR=2.7						
CABF	**La Chapelle**	**11.66**	**303**	ePn	**P**	**19 55 50.4**	**-5.2**
CABF				eSn	**S**	**19 57 52.4**	**-15**
	comp=Z,3.1nm,0.6s						
HINF	**Hinteralfeld**	**11.74**	**309**	ePn	**P**	**19 55 51.3**	**-5.3**
HINF				eSn	**S**	**19 57 54.3**	**-15**
	comp=Z,1.6nm,0.4s						
CDF	**Champ du Feu**	**11.81**	**313**	ePn	**P**	**19 55 52.4**	**-5.1**
VIVF	**Saint-Julien-l**	**12.07**	**293**	eP	**P**	**19 56 00.1**	**-1.0**
HAU	**Haudompre**	**12.12**	**309**	ePn	**P**	**19 55 56.5**	**-5.3**
HAU				eSn	**S**	**19 58 01.7**	**-17**
	comp=Z,2.0nm,0.5s						
LASF	**Ste Croix**	**12.50**	**289**	ePn	**P**	**19 56 00.1**	**-6.8**
SMF	**Signal de Mont**	**13.12**	**301**	ePn	**P**	**19 56 10.4**	**-4.7**
SMF				eSn	**S**	**19 58 26.7**	**-16**
	comp=Z,5.3nm,0.6s						
MEZF	**Maizieres J'vi**	**13.12**	**309**	ePn	**P**	**19 56 10.3**	**-4.8**
LOR	**Lormes**	**13.33**	**303**	ePn	**P**	**19 56 13.8**	**-4.0**
LOR				eSn	**S**	**19 58 32.5**	**-15**
	comp=Z,4.5nm,0.5s						
SSF	**Saint Saulge**	**13.48**	**302**	ePn	**P**	**19 56 16.7**	**-3.1**
SSF				eSn	**S**	**19 58 35.5**	**-16**
	comp=Z,1.0nm,0.4s						
AVF	**Avril sur Loir**	**13.48**	**301**	ePn	**P**	**19 56 15.1**	**-4.8**
BGF	**Bois d'Agland**	**13.74**	**299**	ePn	**P**	**19 56 18.6**	**-4.7**
BGF				eSn	**S**	**19 58 39.5**	**-18**
	comp=Z,6.7nm,0.5s						
GIVF	**Givet**	**14.08**	**315**	ePn	**P**	**19 56 23.5**	**-4.2**
TCF	**Toulx Ste Croi**	**14.09**	**298**	ePn	**P**	**19 56 23.1**	**-4.8**
BAIF	**Baives**	**14.39**	**314**	ePn	**P**	**19 56 27.5**	**-4.3**
BAIF				eSn	**S**	**19 58 58.4**	**-14**
	comp=Z,1.8nm,0.7s						
MFF	**Saint Martin d**	**15.75**	**297**	ePn	**P**	**19 56 44.4**	**-5.1**
MFF				eSn	**S**	**19 59 30.3**	**-15**
	comp=Z,1.5nm,0.3s						
ZEI	**Tsey**	**17.61**	**77**	eP	**P**	**19 57 09.9**	**-3.2**
OBN	**Obninsk**	**17.67**	**32**	eP	**P**	**19 57 15.6**	**+1.9**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN	**Obninsk**	**17.67**	**32**	eP	**P**	**19 57 15.6**	**+1.9**
	comp=Z,5.0nm,0.7s						
HFS	**Hagfors**	**19.51**	**350**	P	**P**	**19 57 36.1**	**0.0**
	comp=Z,0.3nm,0.3s,baz=166,slow=12,SNR=20						
NAO	**NORSAR Subarra**	**20.60**	**347**	P	**P**	**19 57 48.4**	**+0.5**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NAO	**NORSAR Subarra**	**20.60**	**347**	P	**P**	**19 57 48.4**	**+0.5**
	comp=Z,2.3nm,0.6s						
FINES	**FINESS Array B**	**20.68**	**8**	P	**P**	**19 57 47.1**	**-1.6**
	comp=Z,2.0nm,0.6s,baz=183,slow=10,SNR=12						
NB2	**NORSAR Subarra**	**20.74**	**347**	P	**P**	**19 57 48.4**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=164,slow=10						
NOA	**NORSAR Array B**	**20.74**	**347**	P	**P**	**19 57 48.9**	**-0.4**
	comp=Z,2.7nm,0.6s,baz=153,slow=10.0,SNR=8.3						
EKA	**Eskdalemuir Ar**	**21.02**	**321**	P	**P**	**19 57 51.1**	**-1.1**
	comp=Z,1.4nm,0.7s,mb3.4,baz=98,slow=10.0,SNR=4.5						
AKTK	**Aktyubinsk**	**27.64**	**57**	P	**P**	**19 58 55.8**	**0.0**
AKTK	**Aktyubinsk**	**27.64**	**57**	P	**P**	**19 58 55.8**	**0.0**
AKTO	**Aktyubinsk**	**27.64**	**57**	P	**P**	**19 58 55.8**	**0.0**
	comp=Z,0.6nm,0.4s,mb3.6,baz=225,slow=8.6,SNR=2.7						
AKTO	**Aktyubinsk**	**27.64**	**57**	P	**P**	**19 58 55.8**	**0.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
ARCES	**ARCESS Array B**	**28.64**	**4**	P	**P**	**19 59 04.0**	**-0.6**
	comp=Z,12nm,1.3s,mb4.5,baz=187,slow=9.8,SNR=7.4						
BRVK	**Borovoye**	**35.36**	**53**	eP	**P**	**20 00 04.3**	**+0.7**
	comp=Z,1.5nm,0.7s,mb4.0						
BRVK	**Borovoye**	**35.36**	**53**	eP	**P**	**20 00 04.3**	**+0.7**
	comp=Z,1.5nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	**35.42**	**53**	P	**P**	**20 00 04.4**	**+0.2**
	comp=Z,1.3nm,0.7s,mb4.0,baz=270,slow=5.9,SNR=6.1						
MKAR	**Makanchi Array**	**43.96**	**61**	P	**P**	**20 01 13.9**	**-1.1**
	comp=Z,0.4nm,0.4s,mb3.5,baz=281,slow=7.7,SNR=8.9						
SONM	**Songino Array**	**58.75**	**52**	P	**P**	**20 03 05.9**	**-0.6**
	comp=Z,1.1nm,0.9s,mb3.9,baz=281,slow=8.3,SNR=3.9						
YKA	**Yellowknife Ar**	**70.61**	**340**	P	**P**	**20 04 24.7**	**+1.5**
	comp=Z,0.9nm,0.8s,mb3.8,baz=37,slow=5.9,SNR=5.5						
YKA				LR	LR	20 33 41.1	
	comp=Z,37nm,20.7s,MS3.6,baz=65,slow=34						
YKA	**Yellowknife Ar**	**70.61**	**340**	P	**P**	**20 04 24.8**	**+1.6**
ULM	**Lac du Bonnet**	**73.28**	**323**	P	**P**	**20 04 42.2**	**+2.9**
	comp=Z,0.8nm,0.3s,mb4.1,baz=56,slow=3.6,SNR=2.5						
ULM	**Lac du Bonnet**	**73.28**	**323**	P	**P**	**20 04 42.2**	**+2.9**
ILAR	**Eielson Array**	**74.00**	**354**	P	**P**	**20 04 45.4**	**+2.3**
	comp=Z,0.3nm,0.7s,mb3.3,baz=5.9,slow=4.4,SNR=6.0						

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*ISK **01** 19:53:11.8, 38.23N×26.58E, h11^{km}, MD3.1*
*NEIC **01** 19:53:11.0, 38.18N×26.60E, h2^{km}, MD3.1(ISK), MD3.0(ATH), After ISK.*
*ATH **01** 19:53:12.9, 38.16N×26.66E, h38^{km}±3^{km}, MD3.0/3*
*CSEM **01** 19:53:12.6±0.2, 38.24N×26.63E, h12^{km}, MD3.1, Error ellipse: s-maj=4.0km s-min=2.9km az=109.0*
ISC 01 19:53:12.7±0.5, **38.24N**±0.02×**26.59E**±0.04, **h10**^{km}, **n17**, σ**0^{s}83**/29, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.12**	**1**	i P	**Pg**	**19 53 15.0**	**-0.8**
URLA				i S	**Sg**	**19 53 17.5**	**-0.3**
BLCB	**Balcova**	**0.38**	**67**	PG	**Pg**	**19 53 20.1**	**-0.4**
IZM	**Izmir**	**0.55**	**73**	PG	**Pg**	**19 53 23.2**	**-0.6**
IZM				SG	**Sg**	**19 53 31.7**	**+0.4**
KDAG	**Bornova**	**0.56**	**72**	i P	**Pg**	**19 53 22.5**	**-1.4**

KDAG				*i* S	Sg	19 53 30.4	-1.0
SMG	**Samos**	0.56	160	*e*PB	Pg	19 53 23.4	-0.6
SMG				*e*SB	Sg	19 53 31.8	+0.2
PRK	**Paraskevi**	1.04	346	*e*PN	Pn	19 53 33.5	+0.3
PRK				*e*SN	Sn	19 53 49.2	+1.3
AYVA	**Ayvalik**	1.07	4	*i* P	Pb	19 53 34.3	+1.4
AYVA				*i* S	Sb	19 53 53.5	+6.7
AKS	**Akhisar**	1.15	56	PN	Pn	19 53 34.6	-0.2
BODT	**Bodrum**	1.30	154	*e*PN	Pn	19 53 36.6	-0.4
BODT				*e*SN	Sn	19 53 55.0	+0.5
MLSB	**Milas**	1.33	135	PN	Pn	19 53 36.8	-0.5
BDRM	**Kayabasi**	1.35	150	*i* P	Pb	19 53 38.5	+0.9
BDRM				*i* S	Sb	19 53 56.5	+1.7
APE	**Apeiranthos**	1.44	216	*e*PN	Pn	19 53 38.3	-0.6
APE				*e*SN	Sn	19 53 57.6	-0.4
APE	**Apeiranthos**	1.44	216	*e*PN	Pn	19 53 38.0	-0.9
MANT	**Manisa**	1.56	80	*i* P	Pn	19 53 42.1	+1.4
MANT				*i* S	Sb	19 54 02.4	+1.3
YER	**Yerkesik**	1.73	129	*e*PN	Pn	19 53 42.8	-0.3
BTOK	**Tokmak**	1.89	36	*i* P	Pn	19 53 45.3	-0.1
BTOK				*i* S	Sg	19 54 15.7	0.0
DNZL	**Cakiroluk**	2.01	105	*i* P	Pg	19 53 51.6	-1.3
DNZL				*i* S	Sg	19 54 19.9	+0.1

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*SKO **01** 19:53:33.9, 41.07N×20.40E, h22^{km}*
*TIR **01** 19:53:34.8, 41.14N×20.39E, h5^{km}*
*NEIC **01** 19:53:34.8, 41.10N×20.40E, ML4.2(SKO), After SKO.*
NEIC Felt [IV] in the Ohrid-Struga area, Macedonia.
*IDC **01** 19:53:34.3±1.7, 40.89N×20.36E, mb3.8/8, mb1 4.0/14, mb1mx4.0/26, mbtmp3.9/14, ML3.9/5, MS3.3/4, Ms1 3.3/4, ms1mx3.0/25, Error ellipse: s-maj=27.2km s-min=21.7km az=45.0*
ISC 01 19:53:32.9±0.8**, 40.99N**±0.05×**20.31E**±0.05**, h4**^{km}±5^{km}**, n30, σ0^{s}97**/40**, mb3.8**/6**, MS3.6**/1**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	**Tirane**	0.49	317	*i* Pg	Pg	19 53 41.2	-1.5
TIR				*i* Sg	Sg	19 53 47.4	-1.9
KBN	**Korca**	0.52	135	*i* Pg	Pg	19 53 44.8	+1.5
KBN				*i* Sg	Sg	19 53 54.9	+4.8
PRZA	**Preza**	0.65	313	*i* Pg	Pg	19 53 46.0	0.0
BIA	**Bitola**	0.77	87	*e*Pg	Pg	19 53 47.8	-0.6
BIA				*e*Sg	Sg	19 53 58.7	+0.1
LACI	**Lac**	0.79	325	*i* Pg	Pg	19 53 48.0	-0.7
LACI				*i* Sg	Sg	19 53 59.0	-0.2
PUK	**Puka**	1.10	344	*i* Pg	Pg	19 53 55.7	+0.8
PUK				*i* Sg	Sg	19 54 10.7	+1.2
SRN	**Sarande**	1.13	192	*i* Pn	Pn	19 54 02.6	+7.1
SRN				*i* Sn	Sn	19 54 20.8	+9.2
SDA	**Shkodra**	1.22	331	*i* pg?	Pg	19 54 01.6	+4.2
SDA				*i* Sg	Sg	19 54 14.7	+1.0
SKO	**Skopje**	1.30	41	*e*Pn	Pn	19 53 58.1	+0.2
SKO				*e*Sn	Sn	19 54 15.2	-0.8
SKO	**Skopje**	1.30	41	*e*Pn	Pn	19 53 58.1	+0.2
SKO				*e*Sn	Sn	19 54 15.2	-0.7
SKO				Lg		19 54 18.0	
	9µm,0.4s						
SKO				Lg		19 54 22.0	
	7µm,0.5s						
VAY	**Valandovo**	1.74	78	*e*Pn	Pn	19 54 03.0	-1.2
VAY				*e*Sn	Sn	19 54 26.8	-0.3
VAY	**Valandovo**	1.74	78	*e*P	Pn	19 54 00.0	-4.2
VAY				*e*Pn	Pn	19 54 03.0	-1.2
VAY				*e*Sn	Sn	19 54 26.8	-0.3
MLR	**Muntele Rosu**	6.10	41	Pn	Pn	19 55 06.9	+0.8
	2.6nm,0.3s,baz=220,slow=8.4,SNR=5.2						
IDI	**Anoyia**	6.74	146	Pn	Pn	19 55 14.9	-0.2
	1.8nm,0.3s,baz=12,slow=20,SNR=4.9						
IDI				LR	LR	19 58 02.3	
	comp=Z,279nm,19.1s,baz=324,slow=40						
VRAC	**Vranov**	8.72	344	LR	LR	19 59 20.9	
	comp=Z,225nm,20.6s,baz=166,slow=39						
DAVOX	**Davos**	9.49	311	Pn	P	19 55 53.7	+0.2
	2.8nm,0.3s,baz=125,slow=12,SNR=6.3						
BRTR	**Keskin Array B**	10.26	93	Pn	P	19 56 02.9	-1.1
	0.1nm,0.3s,baz=291,slow=12,SNR=2.8						
AKASG	**Malin Array Be**	11.52	30	Pn	P	19 56 21.6	+0.3
	0.8nm,0.3s,baz=219,slow=13,SNR=3.2						
GNI	**Garni**	18.57	85	LR	LR	20 05 21.4	
	comp=Z,32nm,20.4s,baz=324,slow=38						
HFS	**Hagfors**	19.60	350	P	P	19 58 04.4	-0.3
	0.2nm,0.3s,baz=166,slow=12,SNR=5.3						
FINES	**FINESS Array B**	20.78	8	P	P	19 58 17.9	+0.6
	3.0nm,0.6s,baz=180,slow=9.5,SNR=5.0						
FINES	**FINESS Array B**	20.78	8	P	P	19 58 17.9	+0.6
NB2	**NORSAR Subarra**	20.84	348	P	P	19 58 17.2	-0.7
	3.6nm,0.7s,baz=154,slow=10						
NOA	**NORSAR Array B**	20.84	348	P	P	19 58 18.1	+0.2
	3.5nm,0.7s,baz=153,slow=10,SNR=5.4						
ARCES	**ARCESS Array B**	28.74	4	P	P	19 59 34.0	+0.9
	1.7nm,0.7s,mb3.9,baz=192,slow=11,SNR=5.4						
BVAR	**Borovoye Array**	35.50	53	P	P	20 00 32.6	+0.1
	2.1nm,0.8s,mb4.1,baz=243,slow=3.3,SNR=6.3						
MKAR	**Makanchi Array**	44.02	61	P	P	20 01 42.1	-1.0
	1.0nm,0.8s,mb3.6,baz=287,slow=5.4,SNR=4.3						
SONM	**Songino Array**	58.83	52	P	P	20 03 33.2	-1.5
	0.8nm,1.0s,mb3.7,baz=297,slow=9.9,SNR=3.7						
SONM				LR	LR	20 32 40.7	
	comp=Z,40nm,19.3s,MS3.6,baz=115,slow=40						
ILAR	**Eielson Array**	74.10	354	P	P	20 05 12.6	+1.2
	0.4nm,0.7s,mb3.5,baz=359,slow=4.9,SNR=5.0						
MJAR	**Matsushiro Arr**	84.14	46	P	P	20 06 08.9	+2.5
	1.3nm,0.8s,mb4.1,baz=270,slow=6.3,SNR=4.7						

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*ISK **01** 20:15:59.2, 38.15N×26.61E, h5^{km}, MD3.3*
*CSEM **01** 20:15:59.6±0.1, 38.18N×26.62E, h10^{km}, MD3.3, Error ellipse: s-maj=2.5km s-min=2.3km az=106.0*
*ATH **01** 20:16:00.3, 38.17N×26.63E, h38^{km}±3^{km}, MD3.3/3*
ISC 01 20:15:59.8±0.8**, 38.21N**±0.02×**26.57E**±0.05**, h3**^{km}±6^{km}**, n18, σ0^{s}87**/28**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.15	9	*i* P	Pg	20 16 02.8	-0.1
URLA				*i* S	Sg	20 16 05.3	+0.4
BLCB	**Balcova**	0.41	65	*i* PG	Pg	20 16 07.8	-0.3
SMG	**Samos**	0.55	157	*e*PB	Pg	20 16 11.1	+0.4
SMG				*e*SB	Sg	20 16 19.6	+1.6
IZM	**Izmir**	0.58	71	*i* PG	Pg	20 16 11.0	-0.4
IZM				*i* SG	Sg	20 16 19.4	+0.3
KDAG	**Bornova**	0.58	71	*i* P	Pg	20 16 10.3	-1.2
KDAG				*i* S	Sg	20 16 18.4	-0.9
PRK	**Paraskevi**	1.06	348	*e*PN	Pn	20 16 20.8	-0.6
PRK				*e*SN	Sn	20 16 36.2	-0.6
AYVA	**Ayvalik**	1.10	5	*i* P	Pb	20 16 21.7	+0.6
AYVA				*i* S	Sb	20 16 37.5	+1.8
AKS	**Akhisar**	1.18	55	PN	Pn	20 16 22.6	-0.6
BODT	**Bodrum**	1.29	152	*e*PN	Pn	20 16 23.0	-1.7
MLSB	**Milas**	1.33	133	*e*PN	Pn	20 16 24.2	-1.0
BDRM	**Kayabasi**	1.34	148	*i* P	Pb	20 16 26.2	+1.0
BDRM				*i* S	Sb	20 16 43.9	+1.2
APE	**Apeiranthos**	1.41	216	PN	Pn	20 16 25.2	-1.2
APE				SN	Sn	20 16 45.6	0.0
APE	**Apeiranthos**	1.41	216	*e*Pn	Pn	20 16 25.3	-1.1
APE				*e*Sn	Sn	20 16 45.6	0.0
MANT	**Manisa**	1.59	79	*i* P	Pn	20 16 29.9	+0.8
MANT				*i* S	Sb	20 16 49.9	-0.1
EZN	**Ezine**	1.62	353	*e*PN	Pn	20 16 30.0	+0.5
YER	**Yerkesik**	1.74	128	*e*PN	Pn	20 16 30.0	-1.1
DST	**Dursunbey**	2.13	49	*e*PN	Pn	20 16 37.1	+0.4
BNT	**Bandirma**	2.39	26	*e*PN	Pn	20 16 40.9	+0.5

OTT 01 20:44:36.2±0.1**, 66.37N×91.71W, h18**^{km}**, MN3.1**/4**, Wager Bay region, Nu 245km west from Repulse Bay, Nu Boothia Ungava Seismic Zone., Northwest Territories**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QILN	**Qililugaq Expl**	2.16	80	PN	Pn	20 45 11.2	-0.7
QILN				PG	Pn	20 45 14.0	+2.1
QILN				SN	Sn	20 45 36.6	-1.8
QILN				SG	Sn	20 45 41.5	+3.0
QILN				Trac		20 45 45.2	
	comp=Z,40nm,0.1s						
YRTN	**Rankin Inlet**	3.58	183	PN	Pn	20 45 32.5	+0.2
YRTN				SN	Sn	20 46 09.0	-5.6
YRTN				SG	Sn	20 46 22.8	+8.2
YRTN				Trac		20 46 27.3	
	comp=Z,67nm,0.3s						
SRLN	**Sarcpa Lake, N**	3.90	52	PN	Pn	20 45 34.1	-2.6
SRLN				SN	Sn	20 46 18.0	-4.5
SRLN				SG	Sn	20 46 34.1	+12
SRLN				Trac		20 46 47.2	
	comp=Z,17nm,0.2s						
LAIN	**Lailor River,**	4.15	45	PN	Pn	20 45 38.5	-1.8
LAIN				SN	Sn	20 46 23.6	-5.2
LAIN				SG	Sn	20 46 41.8	+13
LAIN				Trac		20 46 52.8	
	comp=Z,14nm,0.1s						
ILON	**Igloolik, Nuna**	4.80	47	PN	Pn	20 45 46.8	-2.6
ILON				PG	Pn	20 45 58.1	+8.7
ILON				SN	Sn	20 46 39.2	-6.1
ILON				SG	Sn	20 47 04.6	+19
ILON				Trac		20 47 08.4	
	comp=Z,22nm,0.3s						
GIFN	**Gifford Fjord,**	5.22	41	PN	Pn	20 45 52.8	-2.7
GIFN				SN	Sn	20 46 49.1	-6.9
GIFN				SG	Sn	20 47 17.4	+21
GIFN				Trac		20 47 23.3	
	comp=Z,12nm,0.3s						
GLWN	**Glow Worm Lake**	7.49	265	PN	Pn	20 46 24.7	-2.7
GLWN				SN	Sn	20 47 43.3	-9.5
GLWN				LG		20 48 23.6	
GLWN				Trac		20 48 28.6	
	comp=Z,15nm,0.4s						
FCC	**Fort Churchill**	7.72	189	SN	Sn	20 47 40.4	-18
FCC				LG		20 48 31.9	
FCC				Trac		20 48 33.8	
	comp=Z,7.1nm,0.3s						
PINU	**Pond Inlet**	7.94	31	SN	Sn	20 47 53.9	-10
PINU				LG		20 48 44.0	
LGSN	**Lac de Gras So**	7.96	264	PN	Pn	20 46 29.9	-4.0
LUPN	**Lupin Mine**	7.97	274	PN	Pn	20 46 30.4	-3.8
LUPN				Trac		20 48 47.1	
	comp=Z,3.5nm,0.2s						
LDGN	**Lac de Gras No**	7.99	266	PN	Pn	20 46 30.4	-3.9
LDGN				SN	Sn	20 47 55.9	-9.3
LDGN				Trac		20 48 42.0	
	comp=Z,6.0nm,0.2s						
BOXN	**Box Lake**	8.00	260	PN	Pn	20 46 30.7	-3.8
BOXN				SN	Sn	20 47 54.1	-11
BOXN				LG		20 48 38.0	
BOXN				Trac		20 48 44.1	
	comp=Z,6.6nm,0.5s						
KNDN	**Kennady Lake**	8.00	256	PN	Pn	20 46 30.6	-3.9
KNDN				SN	Sn	20 47 54.4	-11
KNDN				LG		20 48 39.1	
KNDN				Trac		20 48 49.5	
	comp=Z,2.9nm,0.4s						
MLON	**Marlo Lake**	8.02	261	PN	P	20 46 31.1	-3.7
MLON				SN	Sn	20 47 55.4	-11
MLON				LG		20 48 38.4	
MLON				Trac		20 48 44.3	
	comp=Z,4.2nm,0.5s						
ACKN	**Achilles Lake**	8.02	269	PN	P	20 46 33.4	-1.5
ACKN				Trac		20 48 48.9	
	comp=Z,4.2nm,0.2s						
MCKN	**MacKay Lake No**	8.05	263	PN	P	20 46 30.6	-4.6
MCKN				SN	Sn	20 47 56.8	-10
MCKN				LG		20 48 39.9	
MCKN				Trac		20 48 49.2	
	comp=Z,6.3nm,0.8s						
YNEN	**Yamba Lake Nor**	8.07	270	PN	P	20 46 31.9	-3.6
YNEN				SN	Sn	20 47 56.7	-10
YNEN				Trac		20 48 53.1	
	comp=Z,3.2nm,0.2s						
COWN	**Contwyoto Lake**	8.07	271	PN	P	20 46 30.4	-5.1
COWN				SN	Sn	20 47 57.6	-10
COWN				LG		20 48 39.4	
COWN				Trac		20 48 43.6	
	comp=Z,6.1nm,0.2s						
RES	**Resolute Bay**	8.42	354	PN	P	20 46 38.3	-2.1
RES				SN	Sn	20 48 04.6	-11
RES				LG		20 48 54.9	
RES				Trac		20 49 03.8	
	comp=Z,12nm,1.3s						
SNPN	**Snap Lake**	8.62	260	PN	P	20 46 38.4	-4.8
SNPN				SN	Sn	20 48 08.7	-12
SNPN				Trac		20 48 20.9	
	comp=Z,10nm,0.1s						
GBLN	**Grizzly Bear L**	9.16	266	PN	P	20 46 46.8	-3.9
GBLN				SN	Sn	20 48 20.6	-14
GBLN				LG		20 49 18.2	
GBLN				Trac		20 49 23.5	
	comp=Z,9.8nm,0.4s						
ILKN	**Indian Lake**	10.01	268	PN	P	20 46 56.7	-5.5
ILKN				SN	S	20 48 39.9	-15
ILKN				LG		20 49 41.7	
ILKN				Trac		20 49 45.6	
	comp=Z,17nm,0.7s						
FRB	**Frobisher Bay**	10.10	94	SN	S	20 48 42.0	-15
FRB				LG		20 49 43.8	
CTLN	**Castor Lake**	10.29	270	PN	P	20 47 01.4	-4.7
CTLN				SN	S	20 48 48.7	-13
CTLN				LG		20 49 53.6	
YKW3	**Yellowknife Ar**	10.57	260	PN	P	20 47 04.1	-5.6
YKW3				SN	S	20 48 54.1	-15
YKW3				LG		20 49 59.9	
YKW3				Trac		20 50 10.4	
	comp=Z,7.0nm,0.4s						
GALN	**Gameti Lake**	10.94	270	PN	P	20 47 10.7	-4.1
GALN				SN	S	20 49 02.4	-15
GALN				LG		20 50 06.8	
SILO	**Sutton Inlier**	12.38	161	PN	P	20 47 30.0	-4.5
SILO				SN	S	20 49 41.0	-12
SILO				LG		20 50 50.5	
VIMO	**Victor Mine**	14.16	160	PN	P	20 47 51.3	-6.5
VIMO				SN	S	20 50 15.1	-20
VIMO				LG		20 51 49.2	
WEMQ	**Wemindji, Queb**	14.99	146	PN	P	20 47 59.7	-8.9
WEMQ				SN	S	20 50 41.6	-13
WEMQ				LG		20 52 06.8	

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*MOS **01** 21:13:31.2±1.4, 3.52S×127.35E, h33^{km}, mb5.6/36, MS5.2/21, Error ellipse: s-maj=10.7km s-min=5.3km az=110.7*
*BJI **01** 21:13:32.5, 3.60S×127.30E, h12^{km}, mB6.0, mb5.5, Ms5.3, Msz5.1*
*HRVD **01** 21:13:32.5±0.2, 3.41S×127.27E, h15^{km}, MW5.7/77, Centroid moment Tensor Solution. LP body waves: s63,c131;Mantle waves: s77,c174; Half duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}1.26±.06; $M_{\theta\theta}$0.63±.05; $M_{\phi\phi}$-1.89±.06; $M_{r\theta}$-2.45±.18; $M_{\theta\phi}$3.57±.04; $M_{\phi r}$-1.55±.19; Best double couple: $M_0$4.838×10^{17} NP1:ϕ_s184°, δ64°, λ154°. NP2:ϕ_s286°, δ67°, λ28°. Principal axes: T 5.256, Plg36°, Azm145°; N -.834, Plg54°, Azm321°; P -4.42, Plg2°, Azm54°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **01** 21:13:32.5±0.1, 3.59S×127.33E, mb5.5/43, MS5.3/14, MW5.7 Error ellipse: s-maj=6.2km s-min=3.5km az=72.0, Moment Tensor Solution. s14 Moment tensor: Scale 10^{17} Nm; M_{rr}3.29; $M_{\theta\theta}$-0.60; $M_{\phi\phi}$-2.69; $M_{r\theta}$-1.60; $M_{\theta\phi}$2.39; $M_{\phi r}$-0.91; Best double couple: $M_0$4.3×10^{17} NP1:ϕ_s173°, δ51°, λ128°. NP2:ϕ_s301°, δ53°, λ53°. Principal axes: T 4.3, Plg61°, Azm148°; N -.04, Plg29°, Azm326°; P -4.26, Plg1°, Azm56°;*
NEIC Felt [IV] at Namlea, Buru and [III] on Ambon.
*IDC **01** 21:13:33.1±3.3, 3.54S×127.19E, h13^{km}±20^{km}, mb5.1/24, mb1 5.1/25, mb1mx5.1/25, mbtmp5.2/25, ML5.4/1, MS5.2/17, Ms1 5.2/17, ms1mx5.0/22 Error ellipse: s-maj=18.2km s-min=11.2km az=73.0*
*CSEM **01** 21:13:34.2, 3.63S×127.33E, h40^{km}, mb5.5*
ISC 01 21:13:31.3±0.7**, 3.59S**±0.02×**127.36E**±0.04**, h15**^{km}±5^{km}**, h22**^{km}±3.2^{km}**:pP-P, n485, σ1^{s}24**/358**, mb5.5**/113**, MS5.2**/55**, 55C-19D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	9.91	346⇑	*e*P	P	21 15 54.0	-2.4
KAKA	**Kakadu**	10.36	151	*e*P	P	21 16 20.6	+18
	440nm,0.6s						
MATI	**Mati**	10.52	354	*e*P	P	21 16 02.3	-2.6
DAV	**Davao City (W)**	10.74	350⇑	*e*P	P	21 16 07.0	-0.8
DAV	**Davao City (W)**	10.74	350	*e*P	P	21 16 06.7	-1.1
KCP	**Kidapawan**	10.77	348⇓	*e*P	P	21 16 09.2	+1.0
BUKP	**Musuan**	11.62	349	*e*P	P	21 16 18.0	-1.9
BIPH	**Bislig**	11.74	355⇑	*e*P	P	21 16 20.5	-0.9
PAGZ	**Pagadian**	12.04	341	*e*P	P	21 16 23.4	-2.0
CGP	**Cagayan de Oro**	12.26	347⇓	*e*P	P	21 16 27.7	-0.7
IPIL	**Ipil**	12.27	337	*e*P	P	21 16 27.5	-1.1
TSM	**Tawau**	12.30	309	P	P	21 16 27.7	-1.2
BUTP	**Butuan**	12.60	352	*e*P	P	21 16 32.1	-0.8
TBP	**Tagbilaran**	13.65	345	*e*P	P	21 16 43.7	-3.3
MSLP	**Maasin**	13.86	350	*e*P	P	21 16 47.5	-2.2
LLP	**Lapu-Lapu**	14.22	346	*e*P	P	21 16 52.7	-1.8
FITZ	**Fitzroy Crossi**	14.52	187	*e*P	P	21 16 57.5	-0.9
	227nm,0.9s						
FITZ	**Fitzroy Crossi**	14.52	187	Pn	P	21 16 56.6	-1.9
	1.3nm,0.3s,baz=30,slow=13,SNR=17						
FITZ				Sn	S	21 19 58.3	+18
	1.2nm,0.3s,baz=318,slow=16,SNR=2.2						
FITZ				LR	LR	21 23 20.9	
	comp=Z,24µm,18.3s,baz=6.5,slow=40						
KKM	**Kota Kinabalu**	14.68	311	*e*P	P	21 17 00.9	+0.4
KKM	**Kota Kinabalu**	14.68	311	P	P	21 17 01.8	+1.2
PLP	**Palo**	14.85	351	*e*P	P	21 17 01.9	-0.8
GUIM	**Jordan**	14.90	341	*e*P	P	21 17 06.5	+3.0
BATP	**Bataraza**	15.56	322	*e*P	P	21 17 11.9	-0.1
CUYO	**Cuyo Island**	15.67	336	*e*P	P	21 17 16.4	+3.0
RCP	**Roxas**	15.73	343⇓	*e*P	P	21 17 14.0	-0.3
CNP	**Catarman**	16.22	351	*e*P	P	21 17 20.7	+0.2
OTRP	**Odiongan**	16.71	342	*e*P	P	21 17 34.0	+7.3
BUSP	**Coron**	17.05	335	*e*P	P	21 17 31.1	+0.2
SJMP	**San Jose**	17.11	339	*e*P	P	21 17 33.4	+1.7
PVCP	**Virac**	17.37	349	*e*P	P	21 17 35.5	+0.5
AUQP	**San Andres**	17.43	345	*e*P	P	21 17 52.4	+17
WRAB	**Tennant Creek**	17.62	158⇑	*i*P	P	21 17 36.8	-1.3
	727nm,0.9s						
WRAB	**Tennant Creek**	17.62	158⇑	*i*P	P	21 17 36.8	-1.2
WRAB				pmax	pmax		
	comp=Z,727nm,0.9s						
WRA	**Warramunga Arr**	17.62	158	P	P	21 17 36.8	-1.3
	comp=Z,8.8nm,0.3s,baz=347,slow=13,SNR=122						
WRA				S	S	21 21 04.1	+12
	baz=341,slow=22,SNR=3.7						
WB2	**Warramunga Arr**	17.62	158	*e*P	P	21 17 36.7	-1.4
WB2				*e*S	S	21 21 02.4	+10
WB2				*e*SCS	ScS	21 29 30.5	+0.4
KSM	**Kuching**	17.77	286	*e*P	P	21 17 42.5	+2.5
KSM				*e*S	S	21 21 03.2	+7.9
BOAC	**Boac**	17.80	342	*e*P	P	21 17 44.7	+4.3
LUBP	**Lubang**	18.60	338	*e*P	P	21 17 50.6	+0.3
TGY	**Tagaytay City**	18.70	340	P	P	21 17 49.8	-1.7
	comp=Z,12nm,0.3s,baz=198,slow=9.6,SNR=2.8						
MBWA	**Marble Bar**	18.98	202	*e*P	P	21 17 55.2	+0.4
	comp=Z,147nm,1.3s						
POLP	**Polilio Island**	18.98	344	*e*P	P	21 17 57.0	+2.3
BALP	**Baler**	20.04	344	*e*P	P	21 18 08.8	+2.0
PMG	**Port Moresby**	20.49	107	P	P	21 18 12.9	+1.3
	comp=Z,67nm,0.7s,baz=280,slow=5.8,SNR=14						
PMG	**Port Moresby**	20.49	107	*e*P	P	21 18 09.5	-2.1
	comp=Z,122nm,0.8s						
PMG				LR	LR		
	comp=Z,13µm,21.0s,MS5.3						
PMG	**Port Moresby**	20.49	107	*e*P	P	21 18 09.5	-2.1
PMG				pmax	pmax		
	comp=Z,122nm,0.8s						
PMG				MLR	MLR		
	comp=Z,13µm,21.0s						
SCZP	**Santa Cruz**	20.61	339	*e*P	P	21 18 12.8	+0.1
ASPA	**Alice Springs**	20.94	163⇑	*i*P	P	21 18 17.8	+1.7
ASPA				*e*S	S	21 22 16.0	+12
ASPA				*e*SCS	ScS	21 29 39.0	-1.8
BCPH	**Baguio City Da**	20.95	342⇓	*i*P	P	21 18 17.3	+1.1
CAUP	**Cauayan**	21.12	345	*e*P	P	21 18 19.4	+1.4
BOLP	**Bolinao**	21.16	340	*e*P	P	21 18 21.2	+2.7
CVP	**Callao Caves**	21.85	346	*e*P	P	21 18 26.0	+0.6
ABRA	**Dolores**	22.10	343	*e*P	P	21 18 29.8	+1.9
APYP	**Conner**	22.15	344	*e*P	P	21 18 29.0	+0.6
SGCP	**Mt. Cagua**	22.32	347	*e*P	P	21 18 32.7	+2.7
BBP	**Basco**	24.46	348	*e*P	P	21 18 50.0	-1.1
CTA	**Charters Tower**	24.66	133	*e*P	P	21 18 54.9	+1.9
	comp=Z,56nm,0.8s,mb5.2						
CTA	**Charters Tower**	24.66	133	P	P	21 18 54.5	+1.6
	comp=Z,73nm,0.8s,mb5.2,baz=317,slow=11,SNR=52						
CTA				LR	LR	21 29 37.5	
	comp=Z,7µm,18.2s,MS5.2,baz=325,slow=39						
CTA	**Charters Tower**	24.66	133	*e*P	P	21 18 54.9	+1.9
CTA				pmax	pmax		
	comp=Z,57nm,0.8s						
CTAO	**Charters Tower**	24.66	133⇑	*e*P	P	21 18 54.4	+1.4
	comp=Z,77nm,0.8s,mb5.3						
CTAO				LR	LR		
	comp=Z,9µm,19.0s,MS5.3						
CTAO	**Charters Tower**	24.66	133⇑	*e*P	P	21 18 54.4	+1.4
CTAO				pmax	pmax		
	comp=Z,77nm,0.8s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,9µm,19.0s,MS5.3						
KGM	**Kluang**	24.67	283	P	P	21 18 55.9	+2.8
FORT	**Forrest**	27.05	179	*e*P	P	21 19 13.7	-1.5
	comp=Z,111nm,1.0s,mb5.3						
IPM	**Ipoh**	27.54	287	P	P	21 19 21.2	+1.4
KULM	**Kulim**	28.10	288	*e*P	P	21 19 25.5	+0.6
NACB	**Ninganchiao**	28.16	349	*e*P	P	21 19 24.9	-0.4
QIZ	**Qiongzhong**	28.33	323	P	P	21 19 29.4	+2.6
QIZ				S	S	21 24 09.4	-1.8
QIZ				LR	LR		
	comp=N,4µm,15.8s,MS5.3						
QIZ				LR	LR		
	comp=E,4µm,15.0s,MS5.3						
QIZ				LR	LR		
	comp=Z,4µm,19.5s,MS5.0						
QIZ	**Qiongzhong**	28.33	323	P	P	21 19 23.7	-3.2
	comp=Z,169nm,1.2s,mb5.5						
YHNB	**Yeheng**	28.69	349	*e*P	P	21 19 29.2	-0.8
SNG	**Songkhla**	28.75	292	P	P	21 19 34.0	+3.3
	comp=Z,148nm,1.0s,mb5.7						
HKC	**Hong Kong**	28.79	334⇑	*i*P	P	21 19 34.0	+3.1
HKC				*i* S	S	21 24 24.0	+5.5
TATO	**Taipei**	28.96	349	*e*P	P	21 19 31.7	-0.8
	comp=Z,124nm,1.1s,mb5.5						
TATO				LR	LR		
	comp=Z,3µm,21.0s,MS4.8						
UBT	**Ubonrachathani**	28.98	311	P	P	21 19 33.5	+0.8
KLBR	**Kellerberrin**	29.28	197	*e*P	P	21 19 34.9	-0.5
	comp=Z,62nm,1.1s,mb5.2						
QZH	**Quanzhou**	29.61	344⇑	*i*P	P	21 19 39.5	+1.1
QZH				S	S	21 24 27.8	-3.9
QZH				AMB	AMB		
	comp=Z,310nm,0.8s,mb6.1						
QZH				AMB	AMB		
	comp=Z,4µm,4.6s						
QZH				LR	LR		
	comp=Z,9µm,30.0s,MS5.2						
GZH	**Guangzhou**	29.84	333	P	P	21 19 43.3	+2.9
GZH				S	S	21 24 43.0	+7.8
GZH				LR	LR		
	comp=N,3µm,18.5s,MS5.1						
GZH				LR	LR		
	comp=E,3µm,18.5s,MS5.1						
GZH				LR	LR		
	comp=Z,4µm,17.9s,MS5.1						
MUN	**Mundaring**	30.12	199	*e*P	P	21 19 43.3	+0.5
JOW	**Kunigami**	30.26	2	P	P	21 19 45.0	+0.9
	comp=Z,109nm,0.8s,mb5.7,baz=190,slow=7.6,SNR=22						
JOW				LR	LR	21 30 19.3	
	comp=Z,6µm,21.1s,MS5.2,baz=175,slow=33						
NWAO	**Narrogin (SRO)**	30.69	197	P	P	21 19 48.0	+0.2
	comp=Z,12nm,0.5s,mb5.0,baz=40,slow=11,SNR=23						
NWAO				LR	LR	21 33 29.1	
	comp=Z,5µm,18.2s,MS5.2,baz=10,slow=39						
NWAO	**Narrogin (SRO)**	30.69	197	*e*P	P	21 19 47.0	-0.8
	comp=Z,29nm,0.8s,mb5.2						
NWAO				LR	LR		
	comp=Z,4µm,19.0s,MS5.1						
NWAO	**Narrogin (SRO)**	30.69	197	*e*P	P	21 19 47.0	-0.8
NWAO				pmax	pmax		
	comp=Z,29nm,0.8s						
NWAO				MLR	MLR		
	comp=Z,4µm,19.0s						
STKA	**Stephens Creek**	31.16	156	*e*P	P	21 19 51.7	-0.3
	comp=Z,23nm,0.6s,mb5.2						
STKA	**Stephens Creek**	31.16	156	P	P	21 19 52.9	+1.0
	comp=Z,21nm,0.8s,mb5.0,baz=327,slow=9.8,SNR=20						
STKA				LR	LR	21 33 34.5	
	comp=Z,8µm,20.7s,MS5.4,baz=333,slow=38						
KKTK	**Khon Kaen**	31.31	310	P	P	21 19 55.0	+1.5
	comp=Z,2µm,5.0s						

NNT	**Nongplab**	**31.81**	**301**	P	**P**	**21 20 02.0**	**+4.2**
ADE	**Adelaide**	**32.95**	**163**	P	**P**	**21 20 07.2**	**-0.4**
NST	**Nakhon Sawan**	**33.05**	**306**	P	**P**	**21 20 10.5**	**+1.9**
CBIJ	**Chichi jima**	**33.70**	**24**	P	**P**	**21 20 14.7**	**+0.5**
	comp=Z,201nm,0.9s,mb6.0,baz=268,slow=7.2,SNR=4.5						
CBIJ				LR	LR	21 31 57.1	
	comp=Z,3µm,21.4s,MS5.0,baz=35,slow=33						
SSE	**Sheshan**	**34.99**	**351**	P	**P**	**21 20 27.3**	**+2.0**
SSE				AP	pP	21 20 38.5	+8.7
SSE				S	**S**	**21 25 57.1**	**+1.5**
SSE				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4						
SSE				AMB	AMB		
	comp=Z,930nm,6.5s						
SSE				LR	LR		
	comp=N,550nm,25.0s,MS5.0						
SSE				LR	LR		
	comp=E,3µm,25.0s,MS5.0						
SSE				LR	LR		
	comp=Z,1µm,22.5s,MS4.7						
CHG	**Chiang Mai**	**35.75**	**310**	P	**P**	**21 20 35.4**	**+3.5**
	comp=Z,144nm,1.1s,mb5.8						
GYA	**Guiyang**	**35.96**	**327**	⇑*i*P	**P**	**21 20 36.9**	**+3.3**
GYA				AP	pP	21 20 46.2	+8.0
GYA				PP	PP	21 21 59.1	+3.8
GYA				PCP	PcP	21 23 03.2	+2.6
GYA				S	**S**	**21 26 12.8**	**+2.1**
GYA				XS		21 26 28.7	
GYA				SCP		21 26 45.8	
GYA				SS	SS	21 28 38.6	+5.6
GYA				SCS	ScS	21 30 49.1	+0.1
GYA				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.7						
GYA				AMB	AMB		
	comp=Z,1µm,6.6s						
GYA				LR	LR		
	comp=N,2µm,15.6s,MS5.1						
GYA				LR	LR		
	comp=E,2µm,17.2s,MS5.1						
GYA				LR	LR		
	comp=Z,2µm,17.9s,MS4.9						
WHN	**Wuhan**	**36.15**	**341**	⇓P	**P**	**21 20 37.0**	**+1.9**
WHN				S	**S**	**21 26 09.0**	**-4.5**
WHN				LR	LR		
	comp=Z,7µm,25.5s,MS5.3						
NJ2	**Nanjing**	**36.35**	**348**	*e*P	**P**	**21 20 38.2**	**+1.4**
NJ2				AP	pP	21 20 47.6	+6.2
NJ2				XP	sP	21 20 52.3	+8.9
NJ2				PP	PP	21 22 02.4	+2.1
NJ2				S	**S**	**21 26 16.0**	**-0.6**
NJ2				XS		21 26 33.0	
NJ2				AMB	AMB		
	comp=Z,150nm,0.9s,mb5.9						
NJ2				AMB	AMB		
	comp=Z,1µm,5.0s						
NJ2				LR	LR		
	comp=N,4µm,26.2s,MS5.3						
NJ2				LR	LR		
	comp=E,5µm,27.5s,MS5.3						
NJ2				LR	LR		
	comp=Z,1µm,18.2s						
JNU	**Nakatsue**	**36.66**	**5**	P	**P**	**21 20 38.9**	**-0.5**
	comp=Z,24nm,0.9s,mb5.0,baz=188,slow=13,SNR=11						
JNU				LR	LR	21 34 09.1	
	comp=Z,4µm,21.4s,MS5.2,baz=182,slow=34						
JNU	**Nakatsue**	**36.66**	**5**	P	**P**	**21 20 38.9**	**-0.5**
JNU				LR	LR	21 34 09.1	
KMI	**Kunming**	**37.23**	**321**	P	**P**	**21 20 48.3**	**+4.1**
KMI				PP	PP	21 22 15.0	+3.5
KMI				PCP	PcP	21 23 08.8	+4.4
KMI				S	**S**	**21 26 31.4**	**+1.3**
KMI				AMB	AMB		
	comp=Z,80nm,1.8s,mb5.2						
KMI				AMB	AMB		
	comp=Z,2µm,5.9s						
KMI				LR	LR		
	comp=N,2µm,17.8s,MS5.1						
KMI				LR	LR		
	comp=E,2µm,19.9s,MS5.1						
KMI				LR	LR		
	comp=Z,3µm,19.9s,MS5.0						
CNB	**Canberra Magne**	**37.57**	**150**	*e*P	**P**	**21 20 49.0**	**+2.0**
	comp=Z,33nm,0.9s,mb5.1						
TOO	**Toolangi**	**37.68**	**156**	*e*P	**P**	**21 20 49.7**	**+1.8**
	comp=Z,15nm,0.7s,mb4.8						
TOO	**Toolangi**	**37.68**	**156**	*e*P	**P**	**21 20 49.7**	**+1.8**
TOO				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.8						
ENH	**Enshi**	**37.76**	**334**	⇑*e*P	**P**	**21 20 49.0**	**+0.4**
	comp=Z,77nm,0.8s,mb5.5						
ENH				*e*ScP		21 26 52.7	
JHJ	**Hachijo jima 2**	**38.36**	**17**	LR	LR	21 34 23.8	
	comp=Z,3µm,21.5s,MS5.0,baz=107,slow=33						
TIA	**Tai'an**	**40.73**	**347**	⇓P	**P**	**21 21 13.5**	**+0.2**
TIA				LR	LR		
	comp=N,2µm,20.0s						
KS15	**Wonju Array Si**	**40.83**	**1**	*e*P	**P**	**21 21 14.7**	**+0.6**
INCN	**Inchon**	**40.87**	**359**	*e*P	**P**	**21 21 14.6**	**+0.2**
	comp=N,172nm,1.1s,mb5.6						
INCN				LR	LR		
	comp=Z,4µm,21.0s,MS5.3						
CD2	**Chengdu**	**41.04**	**328**	P	**P**	**21 21 17.1**	**+1.3**
CD2				XP	sP	21 21 31.4	+9.0
CD2				PP	PP	21 22 54.7	+1.0
CD2				PPP	PPP	21 23 24.1	+0.9
CD2				PCS		21 27 08.0	
CD2				S	**S**	**21 27 24.4**	**-3.1**
CD2				SS	SS	21 30 21.6	-3.7
CD2				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.4						
CD2				AMB	AMB		
	comp=Z,930nm,6.6s						
CD2				LR	LR		
	comp=N,2µm,20.4s						
CD2				LR	LR		
	comp=Z,2µm,18.6s,MS5.0						
MAJO	**Matsushiro**	**41.19**	**13**	⇑*e*P	**P**	**21 21 16.0**	**-1.0**
	comp=Z,76nm,0.9s,mb5.3						
MAJO				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
MAJO	**Matsushiro**	**41.19**	**13**	⇑*e*P	**P**	**21 21 16.0**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,76nm,0.9s,mb5.3						
MAJO				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.2						
MAT	**Matsushiro**	**41.19**	**13**	P	**P**	**21 21 16.3**	**-0.7**
MAT				S	**S**	**21 27 29.0**	**-0.6**
MAT	**Matsushiro**	**41.19**	**13**	*e*P	**P**	**21 21 16.0**	**-1.0**
	comp=Z,25nm,0.9s,mb4.8						
MAT				*e*S	**S**	**21 27 26.0**	**-3.6**
MAT				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
MAT	**Matsushiro**	**41.19**	**13**	*e*P	**P**	**21 21 16.0**	**-1.0**
MAT				*e*S	**S**	**21 27 26.0**	**-3.6**
MAT				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.8						
MAT				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.1						
MJAR	**Matsushiro Arr**	**41.19**	**13**	P	**P**	**21 21 16.4**	**-0.7**
	comp=Z,32nm,0.8s,mb5.0,baz=185,slow=9.9,SNR=56						
MJAR				LR	LR	21 39 22.1	
	comp=Z,2µm,18.4s,MS5.0,baz=215,slow=38						
XAN	**Xi'an**	**41.27**	**337**	P	**P**	**21 21 17.7**	**0.0**
XAN				S	**S**	**21 27 28.5**	**-2.4**
XAN				SS	SS	21 30 29.7	0.0
XAN				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.5						
XAN				AMB	AMB		
	comp=Z,1µm,6.5s						
XAN				LR	LR		
	comp=N,800nm,18.9s,MS5.0						
XAN				LR	LR		
	comp=E,2µm,20.1s,MS5.0						
XAN				LR	LR		
	comp=Z,3µm,20.1s,MS5.2						
NOUC	**Port Laguerre**	**42.00**	**119**	*e*P	**P**	**21 21 23.6**	**-0.2**
DZM	**Mont Dzumac**	**42.11**	**119**	P	**P**	**21 21 25.2**	**+0.4**
	comp=Z,16nm,0.9s,mb4.6,baz=292,slow=19,SNR=9.6						
DL2	**Dalian**	**42.61**	**353**	P	**P**	**21 21 29.2**	**+0.4**
DL2				PP	PP	21 23 13.3	+2.9
DL2				PPP	PPP	21 23 59.5	+16
DL2				S	**S**	**21 27 50.6**	**-0.1**
DL2				SS	SS	21 30 57.5	+2.5
DL2				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.2						
DL2				AMB	AMB		
	comp=Z,440nm,6.3s						
DL2				LR	LR		
	comp=N,780nm,15.2s,MS5.0						
DL2				LR	LR		
	comp=E,1µm,18.2s,MS5.0						
DL2				LR	LR		
	comp=Z,1µm,14.7s,MS4.9						
AGT	**Agartala**	**44.52**	**310**	⇑*i*x	x	21 21 52.0	
AGT				*i* x	x	21 23 11.0	
SHL	**Shillong**	**44.98**	**312**	⇓*i*P	**P**	**21 21 49.5**	**+1.4**
SHL				*e*x	x	21 28 33.0	
LZH	**Lanzhou**	**45.19**	**333**	⇑P	**P**	**21 21 50.0**	**+0.4**
LZH				AP	pP	21 22 00.5	+6.3
LZH				XP	sP	21 22 04.6	+8.5
LZH				PCP	PcP	21 23 31.8	+1.5
LZH				PP	PP	21 23 37.2	+1.1
LZH				SCP		21 27 18.7	
LZH				S	**S**	**21 28 28.1**	**+0.1**
LZH				XS		21 28 45.6	
LZH				SCS	ScS	21 31 41.2	-2.5
LZH				SS	SS	21 31 43.5	+1.3
LZH				AMB	AMB		
	comp=Z,110nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,380nm,6.7s						
LZH				LR	LR		
	comp=N,2µm,15.3s						
LZH				LR	LR		
	comp=Z,4µm,17.9s,MS5.4						
SNY	**Shenyang**	**45.33**	**356**	⇑P	**P**	**21 21 50.1**	**-0.6**
SNY				AP	pP	21 21 55.3	0.0
SNY				XP	sP	21 21 59.0	+1.8
SNY				PP	PP	21 23 36.2	-1.3
SNY				S	**S**	**21 28 27.9**	**-2.1**
SNY				SS	SS	21 31 48.1	+3.3
SNY				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.9						
SNY				AMB	AMB		
	comp=Z,980nm,6.3s						
SNY				LR	LR		
	comp=E,4µm,22.4s						
SNY				LR	LR		
	comp=Z,2µm,22.4s,MS5.1						
CAL	**Calcutta**	**46.12**	**306**	*e*P	**P**	**21 21 58.7**	**+1.5**
CAL				*e*S	**S**	**21 28 46.1**	**+4.5**
HHC	**Hu-ho-hao-te**	**46.53**	**343**	*e*P	**P**	**21 21 59.2**	**-0.9**
HHC				AP	pP	21 22 03.6	-1.2
HHC				PCP	PcP	21 23 33.2	-1.7
HHC				PP	PP	21 23 48.0	-1.5
HHC				SCP		21 27 24.5	
HHC				PCS		21 27 26.9	
HHC				S	**S**	**21 28 48.1**	**+1.0**
HHC				SCS	ScS	21 31 50.4	-1.8
HHC				SS	SS	21 32 04.8	-1.0
HHC				AMB	AMB		
	comp=Z,20nm,2.7s,mb4.6						
HHC				AMB	AMB		
	comp=Z,2µm,6.4s						
HHC				LR	LR		
	comp=N,2µm,15.2s,MS5.5						
HHC				LR	LR		
	comp=E,3µm,17.2s,MS5.5						
HHC				LR	LR		
	comp=Z,2µm,37.2s						
VLA	**Vladivostok**	**46.67**	**5**	*i* P	**P**	**21 22 02.2**	**+1.0**
VLA	**Vladivostok**	**46.67**	**5**	*d i*P	**P**	**21 22 02.0**	**+0.8**
VLA				*e*		21 23 41.5	
VLA				*i* S	**S**	**21 28 49.3**	**+0.1**
VLA				*e*SS	SS	21 31 57.4	-11
VLA				pmax	pmax		
	comp=Z,329nm,1.6s,mb6.0						
VLA				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.2						
BTO	**Baotou**	**46.76**	**342**	*e*P	**P**	**21 22 02.4**	**+0.4**
CN2	**Changchun**	**47.21**	**358**	*e*P	**P**	**21 22 06.3**	**+0.8**
CN2				*e*XP	sP	21 22 18.8	+6.8
CN2				PCP	PcP	21 23 37.3	0.0
CN2				PP	PP	21 23 56.6	+0.6
CN2				*e*S	**S**	**21 28 58.0**	**+1.3**
CN2				SCS	ScS	21 32 00.0	+3.4
CN2				SS	SS	21 32 16.5	-1.0
CN2				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.0						
CN2				AMB	AMB		
	comp=Z,1µm,6.0s						
CN2				LR	LR		
	comp=N,2µm,19.0s,MS5.2						
CN2				LR	LR		
	comp=E,1µm,19.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2µm,21.0s,MS5.1						
LSA	**Lhasa**	**47.93**	**316**	P	**P**	**21 22 13.3**	**+1.9**
LSA				SCP		21 27 34.4	
LSA				S	**S**	**21 28 59.9**	**-7.3**
LSA				XS		21 29 24.2	
LSA				AMB	AMB		
	comp=Z,9µm,5.0s						
LSA				LR	LR		
	comp=E,2µm,22.5s						
LSA				LR	LR		
	comp=Z,1µm,35.4s						
LSA	**Lhasa**	**47.93**	**316**	⇑*e*P	**P**	**21 22 13.0**	**+1.6**
	comp=Z,60nm,0.6s,mb5.8						
LSA				*e*pP	pP	21 22 16.6	+0.5
LSA				*e*sP	sP	21 22 18.3	+0.3
LSA	**Lhasa**	**47.93**	**316**	⇑*e*P	**P**	**21 22 13.0**	**+1.6**
LSA				*e**PP	pP	21 22 16.6	+0.5
LSA				*e**SP	sP	21 22 18.3	+0.4
LSA				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.8						
MDJ	**Mudanjiang**	**48.03**	**2**	P	**P**	**21 22 12.5**	**+0.6**
MDJ				AP	pP	21 22 15.5	-1.1
MDJ				PCP	PcP	21 23 39.1	-1.1
MDJ				PP	PP	21 24 03.5	0.0
MDJ				SCP		21 27 33.9	
MDJ				S	**S**	**21 29 09.3**	**+0.9**
MDJ				SS	SS	21 32 37.3	+5.0
MDJ				AMB	AMB		
	comp=Z,200nm,1.0s,mb6.1						
MDJ				AMB	AMB		
	comp=Z,1µm,3.1s						
MDJ				LR	LR		
	comp=N,2µm,19.6s,MS5.1						
MDJ				LR	LR		
	comp=E,670nm,21.4s,MS5.1						
MDJ				LR	LR		
	comp=Z,3µm,20.2s,MS5.3						
MDJ	**Mudanjiang**	**48.03**	**2**	⇑*e*P	**P**	**21 22 12.1**	**+0.2**
	comp=Z,201nm,1.1s,mb6.1						
MDJ				*e*	pP	21 22 17.3	+0.7
VIS	**Vishakhapatnam**	**48.31**	**297**	*e*P	**P**	**21 22 15.7**	**+1.2**
VIS				AMb	AMB	21 22 24.4	
	comp=Z,146nm,1.7s,mb5.7						
VIS				*e*S	**S**	**21 29 12.1**	**-0.6**
BOK	**Bokaro**	**48.70**	**306**	*e*P	**P**	**21 22 17.8**	**+0.5**
BOK				AMb	AMB	21 22 27.3	
	comp=Z,116nm,1.6s,mb5.7						
BOK				*e*S	**S**	**21 29 17.3**	**-0.8**
ASAJ	**Asahikawa**	**49.42**	**14**	P	**P**	**21 22 23.5**	**+0.8**
	comp=Z,49nm,0.7s,mb5.7,baz=193,slow=4.8,SNR=13						
ASAJ				LR	LR	21 42 16.0	
	comp=Z,3µm,20.5s,MS5.2,baz=200,slow=35						
MDRS	**Chennai**	**49.62**	**290**	*e*P	**P**	**21 22 25.4**	**+0.9**
MDRS				AMb	AMB	21 22 33.6	
	comp=Z,119nm,2.4s,mb5.5						
GTA	**Gaotai**	**49.74**	**332**	⇑P	**P**	**21 22 25.6**	**+0.4**
GTA				AP	pP	21 22 35.6	+5.7
GTA				XP	sP	21 22 39.4	+7.7
GTA				PCP	PcP	21 23 45.4	-1.1
GTA				PP	PP	21 24 21.4	+0.7
GTA				S	**S**	**21 29 32.5**	**+0.1**
GTA				XS		21 29 48.8	
GTA				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.4						
GTA				AMB	AMB		
	comp=Z,1µm,6.5s						
GTA				LR	LR		
	comp=N,1µm,22.1s,MS5.1						
GTA				LR	LR		
	comp=E,2µm,19.4s,MS5.1						
GTA				LR	LR		
	comp=Z,2µm,21.7s,MS5.1						
GUN	**Gumba**	**50.75**	**311**	*e*P	**P**	**21 22 33.3**	**+0.3**
	comp=Z,192nm,0.7s,mb6.2						
PKI	**Pulchoki**	**50.93**	**310**	*e*P	**P**	**21 22 34.1**	**-0.3**
	comp=Z,720nm,2.0s,mb6.2						
BLSP	**Bilaspur**	**51.06**	**302**	*e*P	**P**	**21 22 35.2**	**-0.3**
BLSP				AMb	AMB	21 22 38.6	
	comp=Z,80nm,1.0s,mb5.6						
BLSP				*e*x	x	21 29 40.4	
KKN	**Kakani**	**51.14**	**310**	*e*P	**P**	**21 22 36.0**	**0.0**
	comp=Z,109nm,0.8s,mb5.8						
DMN	**Daman**	**51.18**	**310**	*e*P	**P**	**21 22 36.4**	**+0.1**
	comp=Z,433nm,1.5s,mb6.2						
TRD	**Trivandrum**	**51.68**	**284**	*e*P	**P**	**21 22 39.5**	**-0.7**
TRD				AMb	AMB	21 22 41.6	
	comp=Z,51nm,0.8s,mb5.5						
TRD				*e*x	x	21 29 52.0	
GKN	**Gorkha**	**51.74**	**310**	*e*P	**P**	**21 22 40.2**	**-0.3**
	comp=Z,331nm,1.1s,mb6.2						
YSS	**Yuzh-Sakhalins**	**52.13**	**13**	*e*P	**P**	**21 22 43.0**	**-0.2**
	comp=Z,68nm,0.8s,mb5.6						
YSS				*e*	pP	21 22 48.4	+0.5
YSS				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						
YSS	**Yuzh-Sakhalins**	**52.13**	**13**	⇑*e*P	**P**	**21 22 42.0**	**-1.2**
YSS				*e*		21 23 51.0	
YSS				*e*		21 24 44.0	
YSS				*e*S	**S**	**21 30 04.0**	**-1.2**
YSS				*e*PS	PS	21 30 14.0	-2.9
YSS				*e*		21 32 32.0	
YSS				*e*SS	SS	21 33 44.0	+3.1
YSS				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
YSS				pmax	pmax		
	comp=N,500nm,5.0s						
YSS				pmax	pmax		
	comp=Z,1µm,5.0s						
YSS				MLR	MLR		
	comp=Z,1µm,17.0s,MS4.9						
YSS				MLR	MLR		
	comp=N,1µm,20.0s,MS5.1						
YSS				MLR	MLR		
	comp=E,1µm,16.0s,MS5.1						
KOLN	**Koldanda**	**52.42**	**309**	*e*P	**P**	**21 22 45.6**	**-0.1**
	comp=E,268nm,0.8s,mb6.2						
HYB	**Hyderabad**	**52.48**	**295**	⇑*i*P	**P**	**21 22 45.0**	**-1.2**
	comp=E,70nm,1.0s,mb5.5						
HYB				*e*PcP	sP	21 22 57.5	+4.7
HYB				*e*S	**S**	**21 30 10.0**	**-0.4**
HYB	**Hyderabad**	**52.48**	**295**	⇑*e*P	**P**	**21 22 45.0**	**-1.2**
	comp=E,70nm,1.0s,mb5.5						
HYB				*e*S	**S**	**21 30 08.0**	**-2.4**
HYB	**Hyderabad**	**52.48**	**295**	⇑*e*P	**P**	**21 22 45.0**	**-1.2**
HYB				*e*S	**S**	**21 30 08.0**	**-2.4**
HYB				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
ALBI	**Allahabad**	**52.69**	**306**	*e*P	**P**	**21 22 46.5**	**-1.2**
KLR	**Kul'dur**	**52.74**	**4**	*e*P	**P**	**21 22 46.0**	**-1.8**
KLR				*e*		21 24 03.0	
KLR				*e*S	**S**	**21 30 09.5**	**-4.0**
KLR				pmax	pmax		
	comp=E,50nm,1.6s						
KLR				pmax	pmax		
	comp=Z,100nm,1.6s,mb5.5						
KLR				pmax	pmax		
	comp=Z,2µm,6.0s						
HIA	**Hailar**	**53.06**	**354**	⇑*e*P	**P**	**21 22 49.6**	**-0.5**
	comp=Z,57nm,1.3s,mb5.3						
HIA				*e*pP	pP	21 22 53.5	-1.4
HIA				*e*sP	sP	21 22 55.2	-1.5
HIA	**Hailar**	**53.06**	**354**	⇑*e*P	**P**	**21 22 49.6**	**-0.5**
HIA				*e**PP	pP	21 22 53.5	-1.3
HIA				*e**SP	sP	21 22 55.2	-1.5
HIA				pmax	pmax		
	comp=Z,57nm,1.3s						
SONM	**Songino Array**	**54.41**	**343**	P	**P**	**21 22 59.8**	**-0.2**
	comp=Z,56nm,0.9s,mb5.5,baz=157,slow=6.5,SNR=65						
SONM				LR	LR	21 47 47.2	
	comp=Z,1µm,19.2s,MS5.0,baz=158,slow=38						
MNGI	**Mangalore**	**54.69**	**289**	*e*x	x	21 22 53.2	
MNGI				*e*S	**S**	**21 30 41.3**	**+1.0**
KAD	**Karad**	**56.42**	**293**	*e*P	**P**	**21 23 13.3**	**-1.8**
KAD				*e*x	x	21 30 48.5	
CIT	**Chita**	**56.63**	**350**	*e*P	**P**	**21 23 15.3**	**-0.8**
CIT				pmax	pmax		
	comp=Z,198nm,2.9s,mb5.6						
POO	**Poona**	**57.08**	**295**	*e*P	**P**	**21 23 17.6**	**-2.2**
POO				AMb	AMB	21 23 26.3	
	comp=Z,64nm,1.3s,mb5.5						
POO				*e*x	x	21 31 07.0	
ZAK	**Zakamensk**	**57.62**	**342**	*e*P	**P**	**21 23 22.2**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
NDI	**New Delhi**	**57.84**	**307**	*e*P	**P**	**21 23 21.4**	**-3.6**
NDI				*e*S	**S**	**21 31 27.0**	**+5.0**
DDI	**Dehra Dun**	**57.90**	**309**	*e*P	**P**	**21 23 21.8**	**-3.5**
SMLA	**Simla**	**58.94**	**310**	*e*P	**P**	**21 23 31.0**	**-1.6**
SMLA				*e*x	x	21 31 31.0	
IRK	**Irkutsk**	**58.97**	**344**	*e*P	**P**	**21 23 32.2**	**-0.3**
IRK				pmax	pmax		
	comp=Z,136nm,5.1s						
AJM	**Ajmer**	**59.05**	**304**	*e*P	**P**	**21 23 31.7**	**-1.7**
AJM				AMb	AMB	21 23 38.5	
	comp=Z,68nm,1.3s,mb5.5						
AJM				*e*x	x	21 31 35.5	
WMQ	**Urumqi**	**59.12**	**327**	⇑*i*P	**P**	**21 23 33.3**	**-0.4**
WMQ				AP	pP	21 23 43.8	+5.3
WMQ				XP	sP	21 23 48.1	+7.9
WMQ				AMB	AMB		
	comp=Z,140nm,1.0s,mb6.0						
WMQ				AMB	AMB		
	comp=Z,1µm,4.0s						
WMQ				LR	LR		
	comp=N,2µm,23.4s,MS5.3						
WMQ				LR	LR		
	comp=E,2µm,25.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,2µm,23.6s,MS5.1						
SDNR	**Sundarnagar**	**59.26**	**310**	*e*P	**P**	**21 23 35.2**	**+0.4**
MOY	**Mondy**	**59.45**	**341**	*e*P	**P**	**21 23 35.6**	**-0.3**
MOY				pmax	pmax		
	comp=Z,197nm,3.4s						
BHK	**Bhakra**	**59.64**	**310**	*e*x	x	21 23 43.2	
CLNS	**Chul'man**	**60.26**	**358**	*e*P	**P**	**21 23 40.0**	**-1.3**
CLNS				*e**PP	pP	21 23 49.1	+3.0
CLNS				*e*		21 24 23.0	
CLNS				*e*S	**S**	**21 31 50.8**	**-2.2**
CLNS				*e*SSS	SSS	21 38 16.8	-8.0
CLNS				pmax	pmax		
	comp=Z,80nm,1.0s,mb5.7						
CLNS				pmax	pmax		
	comp=N,29nm,1.1s						
CLNS				pmax	pmax		
	comp=E,16nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
CLNS				pmax	pmax		
	comp=N,28nm,1.1s						
CLNS				pmax	pmax		
	comp=E,13nm,0.9s						
CLNS				smax			
	comp=E,1µm,13.2s						
CLNS				smax			
	comp=Z,200nm,11.7s						
CLNS				smax			
	comp=N,200nm,10.9s						
THN	**Thein Dam**	**60.62**	**310**	*e*P	**P**	**21 23 44.0**	**-0.2**
THN				*e*x	x	21 29 45.0	
AFI	**Afiamalu**	**60.87**	**104**	P	**P**	**21 23 45.1**	**-0.9**
BOD	**Bodaibo**	**62.15**	**352**	*e*P	**P**	**21 23 53.1**	**-1.0**
BOD				pmax	pmax		
	comp=Z,99nm,1.5s,mb5.7						
BHJ	**Bhuj**	**62.23**	**299**	*e*P	**P**	**21 23 53.7**	**-1.5**
BHJ				*e*x	x	21 32 16.3	
PET	**Petropavlovsk**	**62.25**	**21**	*e*P	**P**	**21 23 55.5**	**+0.6**
	comp=Z,108nm,1.1s,mb5.9						
PET	**Petropavlovsk**	**62.25**	**21**	*d i*P	**P**	**21 23 56.6**	**+1.7**
PET				*e*		21 24 34.8	
PET				*e*S	**S**	**21 32 20.6**	**+2.2**
PET				*i* SS	SS	21 36 28.7	+5.1
PET				*e*SSS	SSS	21 39 10.6	+4.8
PET				pmax	pmax		
	comp=Z,700nm,5.6s						
PET				pmax	pmax		
	comp=Z,103nm,1.2s,mb5.8						
PET				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.6						

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PET                                  smax
       comp=N,500nm,19.3s
PET                                  smax
       comp=E,800nm,16.9s
DRV    Dumont d’Urvil     63.58 174   P        P       21 24 01.0 -2.4
DRV                                   SP       SP      21 32 49.0 -4.5
DRV                                   L                21 40 00.0
CASY   Casey              63.68 188  eP        P       21 24 03.2 -0.9
KSH    Kashi              63.74 318  eP        P       21 24 04.0 -1.0
KSH                                  ePCP      PcP     21 24 40.0 -0.9
KSH                                  ePP       PP      21 26 25.0 -2.0
KSH                                  eSCP              21 28 40.5
KSH                                  ePCS              21 28 42.0
KSH                                   S        S       21 32 35.0 -2.4
KSH                                   SCS      ScS     21 33 53.2 -1.1
KSH                                  eSS       SS      21 36 44.0 -3.1
KSH                                   AMB      AMB
       comp=Z,2µm,6.9s
KSH                                   LR       LR
       comp=N,2µm,17.1s,MS5.6
KSH                                   LR       LR
       comp=E,2µm,17.0s,MS5.6
MKAR   Makanchi Array     63.95 327   P        P       21 24 04.8 -1.4
       comp=E,22nm,0.7s,mb5.3,baz=121,slow=6.3,SNR=79
MKAR                                  PKPPKP           21 53 02.4
       comp=E,0.9nm,1.0s,baz=243,slow=3.2,SNR=4.1
MKAR                                  LR       LR      21 54 13.5
       comp=E,1µm,20.5s,MS5.1,baz=248,slow=38
MKAR   Makanchi Array     63.95 327   P        P       21 24 04.8 -1.4
MKAR                                  P’P’             21 53 02.4
MKAR                                  LR       LR      21 54 13.5
YAK    Yakutsk            65.46   1  eP        P       21 24 15.2 -0.5
       comp=E,178nm,0.8s,mb6.2
YAK    Yakutsk            65.46   1c iP        P       21 24 15.3 -0.4
YAK                                   pmax     pmax
       comp=Z,186nm,0.9s,mb6.1
KZA    Kyzart             65.49 320   P        P       21 24 20.0 +3.7
       SNR=8.3
MA2    Magadan            65.63  13⇑iP        P       21 24 18.2 +1.4
MA2    Magadan            65.63  13   P        P       21 24 18.6 +1.8
MA2                                  i S       S       21 33 01.8 +1.6
MA2                                  ePS       PS      21 33 33.1  +10
MA2                                   pmax     pmax
       comp=Z,40nm,1.0s,mb5.4
MA2                                   MLR      MLR
       comp=Z,6µm,27.4s,MS5.6
TKM2   Tokmak 2           65.70 321   P        P       21 24 17.9 +0.3
       SNR=24
KBK    Karagaybulak       65.98 320   P        P       21 24 20.1 +0.7
       SNR=12
UCH    Uchtor             66.04 320   P        P       21 24 20.8 +1.0
       SNR=23
AAK    Ala-Archa          66.26 320   P        P       21 24 21.1  0.0
       SNR=15
AAK    Ala-Archa          66.26 320⇑eP        P       21 24 19.8 -1.3
       comp=Z,45nm,1.0s,mb5.5
AAK                                  ePP       PP      21 26 45.3 -4.0
AAK    Ala-Archa          66.26 320⇑eP        P       21 24 19.8 -1.3
AAK                                  e                 21 26 45.3
AAK                                   pmax     pmax
       comp=Z,45nm,1.0s,mb5.5
CHMS   Chumysh            66.27 320   P        P       21 24 20.4 -0.8
       SNR=8.7
FRU    Bishkek            66.28 320  eP        P       21 24 22.0 +0.7
FRU                                  i                 21 24 48.0
FRU                                  e                 21 33 12.0
FRU                                   pmax     pmax
       comp=Z,160nm,2.0s,mb5.7
FRU                                   MLR      MLR
       comp=Z,2µm,20.0s,MS5.2
AML    Almayashu          66.53 319   P        P       21 24 23.7 +0.8
       SNR=21
USP    Ospenovka          66.57 321   P        P       21 24 22.7 -0.4
       SNR=26
EKS2   Erkin-Say          66.73 320   P        P       21 24 24.7 +0.5
       SNR=28
MIR    Mirnyy             67.25 194  eP        P       21 24 26.0 -1.0
MIR                                   pmax     pmax
       comp=Z,54nm,2.0s,mb5.2
MIR                                   pmax     pmax
       comp=Z,594µm,8.0s
MIR                                   MLR      MLR
       comp=N,820nm,18.0s,MS5.1
MIR                                   MLR      MLR
       comp=E,520nm,18.0s,MS5.1
MIR                                   MLR      MLR
       comp=Z,2µm,18.0s,MS5.5
KURK   Kurchatov          68.26 329⇑eP        P       21 24 32.4 -1.3
       comp=Z,89nm,0.9s,mb5.8
KURK                                 epP       pP      21 24 36.3 -2.1
KURK                                 esP       sP      21 24 38.1 -2.1
KURK   Kurchatov          68.26 329⇑eP        P       21 24 32.4 -1.2
KURK                                 e*PP      pP      21 24 36.3 -2.2
KURK                                 e*SP      sP      21 24 38.1 -2.1
KURK                                  pmax     pmax
       comp=Z,89nm,0.9s,mb5.8
NVS    Novosibirsk        68.67 334⇑iP        P       21 24 33.5 -2.6
NVS                                  e                 21 27 11.6
NVS                                  eS        S       21 33 34.5 -2.5
NVS                                  i                 21 34 27.0
NVS                                   pmax     pmax
       comp=Z,135nm,1.7s,mb5.6
NVS                                   pmax     pmax
       comp=N,92nm,1.8s
NVS                                   pmax     pmax
       comp=E,89nm,1.7s
NVS                                   pmax     pmax
       comp=N,26nm,1.9s
NVS                                   pmax     pmax
       comp=Z,30nm,1.9s,mb4.9
NVS                                   pmax     pmax
       comp=E,44nm,2.1s
NVS                                   smax
       comp=N,43nm,2.0s
NVS                                   smax
       comp=E,71nm,2.0s
SEY    Seymchan           69.00  12⇑eP        P       21 24 39.1 +1.1
SEY    Seymchan           69.00  12⇑eP        P       21 24 39.0 +1.0
KKAR   Karatay Array      69.06 319  i P       P       21 24 37.5 -1.2
KKAR                                  pmax     pmax
       comp=Z,131nm,1.4s,mb5.7
JMDO   Jabal Madar        72.32 295  ⇓P        P       21 24 58.6 -0.2
       SNR=17
SMDO   Samad              72.51 295   P        P       21 24 60.0  0.0
       SNR=23
BIDO   Bidbid             72.53 296   P        P       21 25 00.4 +0.2
       SNR=29
HOQ    Hoqain             73.28 296  ⇓P        P       21 25 05.6 +1.1
       SNR=6.9
BVA0   Borovoye Array     73.80 328  i P       P       21 25 05.9 -1.0
BVA0                                  pmax     pmax
       comp=Z,34nm,1.7s,mb5.0
BVAR   Borovoye Array     73.80 328   P        P       21 25 06.3 -0.6
       comp=Z,19nm,0.8s,mb5.1,baz=132,slow=8.8,SNR=28
BRVK   Borovoye           73.87 328  eP        P       21 25 05.8 -1.5
       comp=Z,85nm,1.4s,mb5.5
BRVK   Borovoye           73.87 328  eP        P       21 25 05.8 -1.5
BRVK                                  pmax     pmax
       comp=Z,85nm,1.4s,mb5.5
ARQ    Araqi              73.94 295   P        P       21 25 10.4 +2.1
       SNR=14
CHKZ   Chkalovo           74.00 329  eP        P       21 25 06.2 -1.9
       comp=Z,26nm,0.9s,mb5.2
CHKZ                                 epP       pP      21 25 10.3 -2.6
CHKZ                                 esP       sP      21 25 12.5 -2.1
CHKZ   Chkalovo           74.00 329  eP        P       21 25 06.2 -1.9
CHKZ                                 e*PP      pP      21 25 10.4 -2.5
CHKZ                                 e*SP      sP      21 25 12.5 -2.1
CHKZ                                  pmax     pmax
       comp=Z,26nm,0.9s,mb5.2
ASHO   Ashiyiah           74.62 297  ⇑P        P       21 25 16.1 +3.8
       SNR=36
BANOM  Banah              74.65 298  ⇑P        P       21 25 17.4 +5.0
       SNR=5.7
TIXI   Tiksi              75.11   0⇑iP        P       21 25 13.3 -0.8
TIXI   Tiksi              75.11   0  eP        P       21 25 10.3 -3.8
TIXI                                 e                 21 28 01.4
TIXI                                 eSS       SS      21 39 40.6 -1.4
TIXI                                 eSSS      SSS     21 43 01.3 +5.2
TIXI                                  pmax     pmax
       comp=Z,70nm,1.6s,mb5.3
TIXI                                  MLR      MLR
       comp=Z,948nm,17.0s,MS5.2
WHFO   Wadi Hawf          75.56 289   P        P       21 25 16.8 -1.0
       SNR=15
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ABTO   Aybut              75.92 289   P        P       21 25 19.3 -0.5
       SNR=12
VNDA   Vanda              76.13 173  eP        P       21 25 18.3 -1.6
       comp=Z,17nm,0.9s,mb5.0
VNDA                                  LR       LR
       comp=Z,3µm,19.0s,MS5.5
VNDA   Vanda              76.13 173  eP        P       21 25 18.3 -1.6
VNDA                                  pmax     pmax
       comp=Z,17nm,0.9s
VNDA                                  MLR      MLR
       comp=Z,3µm,19.0s
BILL   Bilibino           76.44  14  i P       P       21 25 22.8 +1.1
SBA    Scott Base         77.05 172  eP        P       21 25 24.7 -0.3
       comp=Z,33nm,1.1s,mb5.2
SBA    Scott Base         77.05 172  eP        P       21 25 24.7 -0.3
SBA                                   pmax     pmax
       comp=Z,33nm,1.1s,mb5.2
MAW    Mawson             77.16 201  eP        P       21 25 26.9 +1.1
       comp=Z,7.4nm,1.0s,mb4.6
MAW    Mawson             77.16 201   P        P       21 25 26.7 +0.9
       comp=Z,2.8nm,0.6s,baz=111,slow=8.8,SNR=7.4
MAW                                   LR       LR      21 56 24.4
       comp=Z,1µm,19.4s,MS5.3,baz=60,slow=33
MAW    Mawson             77.16 201  eP        P       21 25 26.9 +1.1
MAW                                   pmax     pmax
       comp=Z,7.0nm,1.0s
AB31   Akbulak array      78.22 322  i P       P       21 25 30.9 -1.1
AB31                                  pmax     pmax
       comp=Z,174nm,1.5s,mb5.8
OPO    Ambohidratompo     79.56 252   P        P       21 25 39.3 -0.5
       comp=Z,8.9nm,0.9s,mb4.7,baz=87,slow=5.6,SNR=8.0
AKTK   Aktyubinsk         79.79 323   P        P       21 25 40.4 -0.1
AKTO   Aktyubinsk         79.79 323   P        P       21 25 40.4 -0.1
       comp=Z,28nm,1.1s,mb5.1,baz=114,slow=6.7,SNR=28
HASS   Wahat al Ahsa’     80.40 296   P        P       21 25 44.4 +0.2
ARU    Arti               81.44 328  eP        P       21 25 47.8 -1.3
       comp=Z,108nm,1.4s,mb5.6
ARU    Arti               81.44 328⇑iP        P       21 25 49.2 +0.1
ARU                                  e                 21 28 56.4
ARU                                  eS        S       21 36 00.6 +2.2
ARU                                  eSS       SS      21 41 18.0 -0.2
ARU                                  eSSS      SSS     21 44 46.0 +5.3
ARU                                   pmax     pmax
       comp=Z,62nm,1.6s,mb5.3
ARU                                   MLR      MLR
       comp=Z,900nm,22.0s,MS5.1
ARU                                   MLR      MLR
       comp=N,600nm,20.0s,MS5.2
ARU                                   MLR      MLR
       comp=E,900nm,21.0s,MS5.2
PAE    Paea               82.31 107  eP        P       21 25 57.4 +3.0
       comp=E,58nm,1.0s,mb5.5
PPT    Papeete            82.32 107  eP        P       21 25 57.4 +3.0
       comp=E,24nm,1.0s,mb5.1
PPT    Papeete            82.32 107  ePP       PP      21 28 53.3  -12
PPT    Papeete            82.32 107  eS        S       21 36 09.8 +1.6
PPT                                  eSS       SS      21 41 33.1 +1.0
PPT                                  eLR       LR      21 51 46.2
       comp=E,3µm,32.5s
PPT    Papeete            82.32 107   P        P       21 25 57.4 +3.0
       comp=E,11nm,0.5s,mb5.1,baz=28,slow=4.3,SNR=4.8
PPT                                   LR       LR      21 59 44.1
       comp=E,677nm,18.2s,MS5.0,baz=262,slow=34
TBI    Tubuai             82.33 113  eP        P       21 25 57.7 +3.3
       comp=E,148nm,1.0s,mb5.9
TBI    Tubuai             82.33 113  eS        S       21 36 09.8 +1.6
TBI                                  eLR       LR      21 51 48.8
       comp=E,2µm,35.8s
TVO    Taravao            82.62 107  eP        P       21 25 59.4 +3.4
       comp=E,66nm,1.1s,mb5.6
UMR    Umm Al-Rimmam      82.77 300  eP        P       21 25 55.4 -1.2
RDF    Al-Radifah         82.83 300  eP        P       21 25 55.7 -1.2
RDF                                   AMb      AMB     21 26 05.2
       comp=Z,136nm,0.8s,mb6.0
MIB    Mutribah           83.13 300  eP        P       21 25 57.5 -1.0
MIB                                   AMb      AMB     21 26 07.7
       comp=Z,115nm,0.9s,mb5.9
NAY    Al-Naaiem          83.14 300  eP        P       21 25 57.1 -1.3
NAY                                   AMb      AMB     21 26 05.4
       comp=Z,69nm,0.7s,mb5.8
PMOR   Pomariorio Ree     84.01 105  eP        P       21 26 06.1 +2.8
       comp=Z,43nm,1.0s,mb5.5
VAH    Vaihoa             84.26 105  eP        P       21 26 07.2 +2.7
       comp=Z,37nm,0.9s,mb5.5
MZLS   Mizel              84.30 294   P        P       21 26 04.6 +0.1
KAMS   Al Khamasin        84.48 291   P        P       21 26 04.9 -0.6
MAK    Makhachkala        85.02 314  eP        P       21 26 13.0 +5.3
MAK                                   pmax     pmax
       comp=Z,2µm,6.0s
DJNS   Zahran al Janu     85.20 288   P        P       21 26 10.4 +1.2
SYO    Syowa Base         85.87 201  ⇑P        P       21 26 10.0 -1.3
SYO    Syowa Base         85.87 201  ⇑pP       pP      21 26 17.8 +1.5
BHD    Baghdad            86.09 304  ex        x       21 26 10.0
AFFS   ‘Afif              86.29 294   P        P       21 26 14.8 +0.3
DGRG   David-gareji       86.36 312   P        P       21 26 13.8 -0.6
DGRG                                  S        S       21 36 42.6 -5.1
QSPA   South Pole Qui     86.36 180  eP        P       21 26 12.8 -0.8
       comp=Z,87nm,1.1s,mb5.9
FRSS   Farasan al Kab     86.48 287   P        P       21 26 17.0 +1.5
GNI    Garni              86.66 310⇑iP        P       21 26 14.8 -1.1
MTA    Mtatsminda         86.82 312   P        P       21 26 17.6 +0.9
MTA                                   S        S       21 36 41.7  -10
TI2    Plekhanov          86.86 312⇑iP        P       21 26 17.2 +0.4
TI2                                  eS        S       21 36 43.2 -9.3
TBLG   Delisi             86.87 312   P        P       21 26 17.9 +1.0
HAKT   HAKKARI            87.14 308  i P       P       21 26 20.3 +2.0
BLJS   Baljurashi         87.23 290   P        P       21 26 20.3 +1.2
TVAN   Van                87.49 309  i P       P       21 26 19.6 -0.4
MSL    Mosul              87.49 306  ex        x       21 26 25.5
MSL                                  ex        x       21 26 39.5
MSL    Mosul              87.49 306  ex        x       21 36 45.5
MSL                                  ex        x       21 37 13.0
ZEI    Tsey               87.62 313  eP        P       21 26 17.2 -3.3
ZEI                                  i                 21 29 45.0
ZEI                                   pmax     pmax
       comp=Z,36nm,1.4s,mb5.4
HILS   Ha’il              87.70 297   P        P       21 26 22.1 +0.9
KDAK   Kodiak Island      87.72  32   P        P       21 26 21.9 +1.3
       comp=Z,13nm,0.8s,mb5.2,baz=49,slow=4.4,SNR=6.6
KDAK   Kodiak Island      87.72  32   P        P       21 26 21.9 +1.3
DIGO   Kars               87.73 311  i P       P       21 26 20.3 -0.7
AKH    Akhalkalaki        87.75 312   P        P       21 26 20.7 -0.5
ONI    Oni                87.92 313   P        P       21 26 23.4 +1.5
LTHS   Al Lith            88.37 290   P        P       21 26 25.6 +1.0
KIV    Kislovodsk         88.63 314  eP        P       21 26 25.1 -0.2
       comp=Z,37nm,1.3s,mb5.6
KIV    Kislovodsk         88.63 314  eP        P       21 26 25.1 -0.2
KIV                                   pmax     pmax
       comp=Z,37nm,1.3s,mb5.5
ARTV   Artvin             88.90 311  i P       P       21 26 19.6 -7.1
ARTV   Artvin             88.90 311  i P       P       21 26 21.1 -5.6
BEST   Besiri             89.10 308  i P       P       21 26 26.4 -1.3
ERZM   Erzurum            89.21 310  i P       P       21 26 27.2 -1.0
BNGL   BINGOL             89.28 309  i P       P       21 26 27.9 -0.6
SLKM   Skilak Lake        89.36  29  eP        P       21 26 28.6 +0.3
MARD   Mardin             89.43 307  i P       P       21 26 28.7 -0.6
KBRS   Khaybar            89.83 296   P        P       21 26 32.6 +1.1
MCK    McKinley           90.40  26⇑eP        P       21 26 32.4 -0.7
       comp=Z,12nm,1.0s,mb5.2
MCK    McKinley           90.40  26⇑eP        P       21 26 32.4 -0.7
MCK                                   pmax     pmax
       comp=Z,11nm,1.0s,mb5.1
SML    Sawmill            90.44  28   P        P       21 26 34.0 +0.6
SOC    Sochi              90.74 313c iP        P       21 26 34.6 -0.6
SOC                                  e                 21 30 18.9
SOC                                  i S               21 37 03.4
SOC                                  e                 21 37 31.5
SOC                                  ePS       PS      21 38 36.0 -5.7
SOC                                   pmax     pmax
       comp=Z,34nm,1.1s,mb5.6
SOC                                   MLR      MLR
       comp=Z,969nm,25.0s,MS5.1
YNBS   Yanbu‘ al Bahr     90.89 294   P        P       21 26 37.4 +1.1
ELZG   Elazig             90.94 308  i P       P       21 26 34.8 -1.5
COLA   College            91.00  25  eP        P       21 26 35.8 -0.1
       comp=Z,8.7nm,0.9s,mb5.1
COLA   College            91.00  25  eP        P       21 26 35.8 -0.1
COLA                                  pmax     pmax
       comp=Z,9.0nm,0.9s,mb5.1
ILAR   Eielson Array      91.40  25   P        P       21 26 36.1 -1.6
       comp=Z,3.7nm,0.8s,mb4.7,baz=280,slow=4.1,SNR=35
ILAR                                  PP       PP      21 30 16.1 -1.9
       comp=Z,3.5nm,1.0s,baz=259,slow=7.1,SNR=9.7
ILAR                                  PKKPbc           21 43 58.2
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       comp=Z,0.8nm,0.9s,baz=38,slow=2.4,SNR=6.7
ILAR                                  LR       LR      22 05 52.8
       comp=Z,528nm,21.4s,MS5.0,baz=39,slow=34
DIV    Divide             91.60  29  eP        P       21 26 39.8 +1.1
       comp=Z,237nm,1.3s,mb6.4
QURS   Qurayyt al Mil     91.88 301   P        P       21 26 41.9 +1.2
TAOE   Nuku Hiva Isla     91.91  99  eLR       LR      21 56 12.5
       comp=Z,3µm,21.8s
KLMR   Klimovskoe         92.05 331  eP        P       21 26 37.8 -3.0
KLMR                                 e                 21 30 17.7
KLMR                                  pmax     pmax
       comp=Z,90nm,1.8s,mb5.8
KLMR                                  pmax     pmax
       comp=Z,140nm,3.9s
ANN    Anapa              92.45 315⇑iP        P       21 26 47.2 +4.2
ANN                                  e                 21 37 19.1
ANN                                  e                 21 37 54.2
ANN                                   pmax     pmax
       comp=Z,115nm,1.1s,mb6.1
MOS    Moscow             92.79 326  eP        P       21 26 49.0 +4.7
MOS                                  e                 21 30 34.8
MOS                                   pmax     pmax
       comp=Z,57nm,1.2s,mb5.9
OBN    Obninsk            93.37 325  eP        P       21 26 46.8 -0.2
       comp=Z,152nm,1.4s,mb6.2
OBN    Obninsk            93.37 325deP        P       21 26 46.2 -0.8
OBN                                  eS                21 37 24.0
OBN                                   pmax     pmax
       comp=Z,73nm,1.4s,mb5.9
OBN                                   MLR      MLR
       comp=Z,800nm,20.0s,MS5.2
BDAS   Al Bad‘            93.68 298   P        P       21 26 49.9 +0.8
BOYT   Boyabat            94.20 311  i P       P       21 26 50.0 -1.2
LVZ    Lovozero           94.33 338  eP        P       21 26 50.6 -0.5
LVZ                                   pmax     pmax
       comp=Z,90nm,1.5s,mb6.0
MEST   Erdemli            94.70 306  i P       P       21 26 50.0 -3.6
APA    Apatity            94.81 337  eP        P       21 26 54.0 +0.7
APA                                   MLR      MLR
       comp=Z,2µm,18.0s,MS5.5
SIM    Simferopol’        94.81 315deP        P       21 26 58.2 +4.3
SIM                                  e                 21 37 32.0
SIM                                  eS        S       21 38 11.0 +7.2
SIM                                  ePS       PS      21 39 22.0 -5.7
SIM                                  ePPS      PPS     21 40 02.0 -2.3
SIM                                   pmax     pmax
       comp=Z,24nm,0.9s,mb5.6
BR131  Keskin Array S     95.14 309  eP        P       21 26 54.4 -1.2
       comp=Z,4.7nm,0.8s,mb5.0
BRTR   Keskin Array B     95.14 309   P        P       21 26 54.0 -1.6
       comp=Z,1.1nm,0.7s,mb4.4,baz=128,slow=5.6,SNR=7.0
BRTR                                  PP       PP      21 30 43.4 -4.1
       comp=Z,1.2nm,0.7s,baz=109,slow=9.4,SNR=3.9
RKT    Rikitea            95.64 114  eLR       LR      21 57 55.1
       comp=Z,1µm,32.2s
INK    Inuvik             96.69  22   P        P       21 27 01.8 -0.2
       comp=Z,4.0nm,0.8s,mb4.9,baz=281,slow=4.1,SNR=14
INK                                   PKKPbc           21 43 45.0
       comp=Z,1.0nm,0.7s,baz=68,slow=5.6,SNR=4.1
INK    Inuvik             96.69  22   P        P       21 27 01.8 -0.2
INK                                   PKKPbc           21 43 45.0
ARCES  ARCESS Array B     97.49 340   P        P       21 27 05.6 +0.2
       comp=Z,12nm,0.8s,mb5.4,baz=80,slow=4.6,SNR=26
ARCES                                 PKiKP            21 31 41.7
       comp=Z,4.4nm,1.1s,baz=122,slow=0.9,SNR=10
ARCES                                 LR       LR      22 17 17.6
       comp=Z,998nm,20.6s,MS5.3,baz=80,slow=39
LSZ    Lusaka             97.89 254  eP        P       21 27 08.0 -0.5
       comp=Z,5.9nm,0.9s,mb5.1
LSZ    Lusaka             97.89 254  eP        P       21 27 08.0 -0.5
LSZ                                   pmax     pmax
       comp=Z,6.0nm,0.9s,mb5.1
AKASG  Malin Array Be     97.92 321   P        P       21 27 08.1 +0.2
       comp=Z,3.7nm,0.8s,mb5.0,baz=78,slow=4.6,SNR=4.4
AKASG  Malin Array Be     97.92 321   P        P       21 27 08.1 +0.2
SNAA   Sanae              98.33 194   P        P       21 27 08.9 -0.3
SNAA   Sanae              98.33 194            P       21 27 12.7 +3.5
SNAA   Sanae              98.33 194            P       21 27 19.6  +10
SNAA   Sanae              98.33 194            P       21 27 22.7  +13
KIS    Kishinev           98.44 317  eP        P       21 27 14.0 +3.7
KIS                                  ePPP      PPP     21 33 18.0 -3.2
KIS                                  e                 21 37 48.0
KIS                                  eS        S       21 38 31.0 -3.4
KIS                                  ePS       PS      21 40 05.0 -1.2
KIS                                  ePPS      PPS     21 40 50.0  0.0
KIS                                   MLR      MLR
       comp=E,600nm,22.0s
KIS                                   MLR      MLR
       comp=Z,700nm,22.0s,MS5.1
FINES  FINESS Array B     98.53 332   P        P       21 27 10.1 -0.2
       comp=Z,5.2nm,0.9s,mb5.0,baz=146,slow=6.9,SNR=6.6
FINES                                 PKiKP            21 31 44.2
       comp=Z,2.4nm,0.8s,baz=77,slow=2.4,SNR=5.7
BOSA   Boshof             98.88 240   P        P       21 27 14.1 +1.4
       comp=Z,3.9nm,1.1s,mb4.9,baz=29,slow=9.0,SNR=4.5
BOSA                                  LR       LR      22 07 51.3
       comp=Z,854nm,19.9s,MS5.2,baz=105,slow=33
CFR    Carcaliu           99.04 315  ⇑P        P       21 27 07.5 -5.5
VNA2   Neumayer--Watz     99.92 194   P        P       21 27 18.3 +1.8
VNA2   Neumayer--Watz     99.92 194            P       21 27 26.8  +10
VNA2   Neumayer--Watz     99.92 194            P       21 27 31.0  +15
VRI    Vrincioaia         99.97 316  ⇓P        P       21 27 18.0 +0.7
VNA3   Neumayer Olymp    100.22 193   P        P       21 27 23.8 +6.0
VNA3   Neumayer Olymp    100.22 193            P       21 27 28.2  +10
VNA3   Neumayer Olymp    100.22 193            P       21 27 30.8  +13
MLR    Muntele Rosu      100.56 315  ⇓P        P       21 27 19.9  0.0
BURAR  Bucovina Array    100.83 318  ⇓P        P       21 27 21.5 +0.4
BURAR  Bucovina Array    100.83 318  ⇓P        P       21 27 21.6 +0.4
KOLS   Kolonicke sedl    102.60 319  ePDIFF            21 27 30.7
CRVS   Cervenica-Dubn    103.13 319  ePDIFF            21 27 32.4
STHS   Stebnicka Huta    103.18 320  ePDIFF            21 27 33.9
KECS   Kecovo            103.84 319  ePDIFF            21 27 35.5
OJC    Ojcow             103.95 321  eP        Pdif    21 27 36.5 +1.5
PSZ    Piszkesteto       104.33 319  ePdif     Pdif    21 27 39.1 +2.4
       comp=Z,6.7nm,1.0s
PSZ    Piszkesteto       104.33 319  eP        Pdif    21 27 39.1 +2.4
PSZ                                   pmax     pmax
       comp=Z,7.0nm,1.0s
VYHS   Vyhne             104.92 319  e         Pdif    21 27 44.7 +5.4
OKC    Ostrava-Krasne    105.08 321  ePP       PP      21 32 08.0 +4.3
OKC                                   AMS      AMS     22 19 10.0
       comp=Z,900nm,21.0s
MORC   Moravsky Berou    105.47 321  ePKP              21 31 55.1
NB2    NORSAR Subarra    105.57 333   P        Pdif    21 27 45.0 +3.2
       comp=Z,10nm,1.1s,baz=70,slow=4.5
NB2    NORSAR Subarra    105.57 333   P        Pdif    21 27 45.0 +3.2
       baz=70,slow=4.6
NOA    NORSAR Array B    105.57 333   Pdiff    Pdif    21 27 44.9 +3.1
       comp=Z,5.0nm,1.0s,baz=72,slow=4.2,SNR=6.8
NOA                                   PKiKP            21 31 56.0
       comp=Z,2.3nm,0.8s,baz=77,slow=1.8,SNR=6.0
NAO    NORSAR Subarra    105.82 333   P        Pdif    21 27 45.0 +2.1
       comp=Z,10nm,1.1s
NAO    NORSAR Subarra    105.82 333   P        Pdif    21 27 45.0 +2.1
NAO                                   pmax     pmax
       comp=Z,11nm,1.1s
DPC    Dobruska-Polom    106.10 322  ePKP              21 31 57.3
DPC                                  ex        x       21 47 35.4
DPC                                   AMS      AMS     22 18 40.0
       comp=Z,1µm,23.4s
UPC    Upice             106.25 322  ePP       PP      21 32 13.2 +1.1
TREC   Trest             106.89 321  ePP       PP      21 32 17.9 +0.7
TREC                                  AMS      AMS     22 21 50.0
       comp=Z,1µm,15.6s
PVCC   Panska Ves        107.14 322  ePP       PP      21 32 19.7 +0.6
PVCC                                  AMS      AMS     22 20 40.0
       comp=Z,1µm,24.3s
PRU    Pruhonice         107.30 321  ePP       PP      21 32 19.0 -1.2
PRU                                  eSS       SS      21 47 35.0  +10
PRU                                   AMS      AMS     22 17 40.0
       comp=Z,1µm,25.2s
BRG    Berggiesshubel    107.42 322  ePKP      PP      21 32 27.0 +5.9
BRG                                  e                 21 38 30.0
BRG                                  e                 21 40 05.0
BRG                                  i                 21 41 58.0
BRG                                  e                 21 47 47.0
BRG                                   LR       LR
       comp=Z,2µm,23.4s,MS5.5
GOLS   Golise            107.59 317  ePKiKP            21 32 00.3
CLL    Collm             107.87 323  e                 21 32 01.0
CLL                                  ePP       PP      21 32 30.0 +5.8
CLL                                  e                 21 38 36.0
CLL                                  ePS       PS      21 41 48.0 +5.2
CLL                                  eSS       SS      21 47 42.0 +9.2
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CLL	**Collm**	107.87	323	*e*PKP		21 32 01.0	
CLL				LR	LR		
	comp=Z,1µm,21.5s,MS5.4						
GERES	**GERESS Array B**	108.14	320	Pdiff	Pdif	21 27 56.4	+3.0
	comp=Z,0.4nm,0.7s,baz=69,slow=11,SNR=5.3						
GERES				PKiKP		21 32 00.5	
	comp=Z,3.0nm,0.6s,baz=73,slow=1.4,SNR=24						
KHC	**Kasperske Hory**	108.14	321	*e*PKP	Px	21 31 47.0	
KHC				*e*SS	SS	21 47 57.5	+21
KHC				AMS	AMS	22 23 10.0	
	comp=Z,1µm,19.9s						
LJU	**Ljubljana**	108.33	317	*e*PKiKP		21 32 01.9	
NKC	**Novy Kostel**	108.52	322	*e*PP	PP	21 32 33.4	+4.1
NKC				AMS	AMS	22 21 10.0	
	comp=Z,2µm,21.9s						
GRA1	**Grafenberg Arr**	109.44	322	*e*PKP		21 32 02.5	
GRF	**Grafenberg Arr**	109.44	322	*e*PKP		21 32 02.5	
WTTA	**Wattenberg**	109.91	319	⇓*i*P		21 32 03.7	
	comp=Z,17nm,0.8s						
WATA	**Walderalm**	109.93	319	⇑*i*P		21 32 04.1	
	comp=Z,8.5nm,1.1s						
SQTA	**Sankt Quirin**	110.20	319	⇑*i*P	PKPdf	21 32 04.8	-1.4
	comp=Z,5.7nm,1.1s						
MOTA	**Moosalm**	110.24	319	⇓*i*P	PKPdf	21 32 04.1	-2.2
	comp=Z,5.8nm,1.0s						
DAVA	**Damuels**	111.05	320	⇑*i*P	PKPdf	21 32 06.6	-1.2
	comp=Z,13nm,0.9s						
DAVA	**Damuels**	111.05	320	⇑P	PKPdf	21 32 06.6	-1.2
NVAR	**Mina Array Bea**	111.19	50	PKiKP		21 32 07.8	
	comp=Z,0.3nm,0.6s,baz=207,slow=2.0,SNR=2.3						
NVAR				PP	PP	21 32 49.7	+0.9
	comp=Z,2.9nm,1.0s,baz=256,slow=6.0,SNR=5.5						
NVAR				PKKPab		21 43 14.4	
	comp=Z,0.8nm,0.9s,baz=131,slow=5.2,SNR=3.6						
MNV	**Mina**	111.31	50	*e*PKP	PKPdf	21 32 07.1	-1.5
DAC	**Darwin (Calif)**	112.21	52	PKP	PKPdf	21 32 08.9	-1.4
CDF	**Champ du Feu**	112.32	321	*e*PKIKP	PKPdf	21 32 09.0	-1.2
HINF	**Hinteralfeld**	112.80	321	*e*PKIKP	PKPdf	21 32 09.4	-1.8
	comp=Z,13nm,0.8s						
ELK	**Elko**	112.92	47	PKiKP		21 32 11.0	
	comp=Z,0.6nm,0.4s,baz=243,slow=4.5,SNR=3.8						
HAU	**Haudompre**	113.04	321	*e*PKIKP	PKPdf	21 32 09.2	-2.5
	comp=Z,13nm,0.8s						
HAU				*e*R			
	comp=Z,919nm,21.2s						
PGF	**Pioggiola**	113.10	315	*e*PKIKP	PKPdf	21 32 10.4	-1.6
	comp=Z,27nm,0.9s						
GIVF	**Givet**	113.16	324	*e*PKIKP	PKPdf	21 32 10.6	-1.3
BAIF	**Baives**	113.54	324	*e*PKIKP	PKPdf	21 32 10.7	-2.0
	comp=Z,14nm,0.9s						
LPG	**La Plagne**	113.68	319	*e*PKIKP	PKPdf	21 32 11.9	-1.2
	comp=Z,14nm,0.8s						
LPL	**La Plagne**	113.69	319	*e*PKIKP	PKPdf	21 32 11.8	-1.3
	comp=Z,21nm,0.8s						
CABF	**La Chapelle**	113.72	320	*e*PKIKP	PKPdf	21 32 11.9	-1.2
	comp=Z,19nm,0.7s						
SBF	**Sospel**	113.77	317	*e*PKIKP	PKPdf	21 32 11.5	-1.8
	comp=Z,16nm,0.7s						
BNI	**Bardonecchia**	113.88	318	*e*PKP	PKPdf	21 32 11.4	-2.1
MBDF	**Montbardon**	113.93	318	*e*PKIKP	PKPdf	21 32 11.7	-1.9
	comp=Z,19nm,0.8s						
FRF	**La Foret Royal**	114.41	317	*e*PKIKP	PKPdf	21 32 13.0	-1.5
	comp=Z,6.5nm,0.8s						
ORIF	**Oris-en-Rattie**	114.46	318	*e*PKIKP	PKPdf	21 32 13.0	-1.6
	comp=Z,17nm,0.9s						
ORIF				*e*R			
	comp=Z,878nm,22.5s						
NEN	**Nelson**	114.53	52	*e*PKPdf	PKPdf	21 32 12.2	-2.7
LMR	**La Mourre**	114.58	316	*e*PKIKP	PKPdf	21 32 13.3	-1.5
	comp=Z,17nm,1.0s						
LOR	**Lormes**	114.88	321	*e*PKIKP	PKPdf	21 32 13.7	-1.6
	comp=Z,9.3nm,0.8s						
LOR				*e*R			
	comp=Z,641nm,22.5s						
SMRF	**Simiane la Rot**	115.00	317	*e*PKIKP	PKPdf	21 32 14.5	-1.1
	comp=Z,70nm,1.4s						
SMF	**Signal de Mont**	115.14	321	*e*PKIKP	PKPdf	21 32 14.2	-1.6
SSF	**Saint Saulge**	115.18	321	*e*PKIKP	PKPdf	21 32 14.5	-1.4
	comp=Z,22nm,0.8s						
REDW	**Red Top Meadow**	115.21	43	*e*PKP	PKPdf	21 32 13.9	-2.2
VIVF	**Saint-Julien-l**	115.28	319	*e*PKIKP	PKPdf	21 32 13.8	-2.4
	comp=Z,13nm,0.9s						
AVF	**Avril sur Loir**	115.39	321	*e*PKIKP	PKPdf	21 32 14.5	-1.9
	comp=Z,23nm,0.9s						
MVU	**Marysvale**	115.79	49	*e*PKPdf	PKPdf	21 32 16.6	-0.7
BGF	**Bois d'Agland**	115.80	321	*e*PKIKP	PKPdf	21 32 15.8	-1.4
	comp=Z,40nm,0.7s						
MSU	**Marysvale**	115.82	49	*e*PKPdf	PKPdf	21 32 16.2	-1.3
LASF	**Ste Croix**	116.12	318	*e*PKIKP	PKPdf	21 32 16.3	-1.6
PDAR	**Pinedale Array**	116.31	43	PKKPab		21 42 50.8	
	comp=Z,0.5nm,0.8s,baz=104,slow=3.7,SNR=3.3						
TCF	**Toulx Ste Croi**	116.31	321	*e*PKIKP	PKPdf	21 32 16.6	-1.6
	comp=Z,31nm,0.9s						
FLN	**La Foliniere**	116.86	324	*e*PKIKP	PKPdf	21 32 18.0	-1.2
FLN				*e*R			
	comp=Z,1µm,22.8s						
SRU	**San Rafael**	116.86	48	*e*PKP	PKPdf	21 32 18.0	-1.4
LAO	**LASA Array**	116.94	38	*e*PKP	PKPdf	21 32 17.4	-1.9
CAF	**Calviac**	116.97	319	*e*PKIKP	PKPdf	21 32 18.3	-1.2
	comp=Z,23nm,1.0s						
RJF	**Les Rejaudoux**	117.16	320	*e*PKIKP	PKPdf	21 32 18.6	-1.2
RJF				*e*R			
	comp=Z,858nm,23.0s						
GRR	**Gorron**	117.26	324	*e*PKIKP	PKPdf	21 32 17.6	-2.3
MTLF	**Montolieu**	117.50	318	*e*PKIKP	PKPdf	21 32 18.9	-1.6
	comp=Z,13nm,0.8s						
MFF	**Saint Martin d**	117.65	322	*e*PKIKP	PKPdf	21 32 19.0	-1.7
	comp=Z,34nm,0.7s						
LFF	**La Frestale**	117.82	320	*e*PKIKP	PKPdf	21 32 19.8	-1.3
	comp=Z,25nm,0.8s						
SGMF	**Saint Gilles**	118.31	324	*e*PKIKP	PKPdf	21 32 20.2	-1.8
ETOS	**Mallorca**	118.42	314	PKP	PKPdf	21 32 20.9	-1.5
EMIR	**Miracle**	118.52	316	PKP	PKPdf	21 32 20.3	-2.3
PV01	**Paradox Valley**	118.63	48	*e*PKPdf	PKPdf	21 32 21.6	-1.3
QUIF	**Quistinic**	118.84	324	*e*PKIKP	PKPdf	21 32 21.4	-1.6
EPF	**Esparros**	118.88	318	*e*PKIKP	PKPdf	21 32 21.7	-1.5
EPOB	**Poblet**	119.05	316	PKP	PKPdf	21 32 20.3	-3.3
RW3	**Ridgway**	119.24	48	*e*PKPdf	PKPdf	21 32 23.2	-0.8
ETSF	**Etsaut**	119.53	318	*e*PKIKP	PKPdf	21 32 23.7	-0.7
	comp=Z,32nm,0.9s						
EMOS	**Mosqueruela**	120.52	316	PKP	PKPdf	21 32 23.8	-2.7
ULM	**Lac du Bonnet**	120.96	31	PKP	PKPdf	21 32 24.6	-2.5
	comp=Z,3.0nm,0.7s,baz=338,slow=3.0,SNR=7.1						
SDCO	**Great Sand Dun**	121.04	48	*e*PKPdf	PKPdf	21 32 26.1	-1.5
SDCO				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
ECHE	**Chera**	121.18	315	PKP	PKPdf	21 32 26.2	-1.6
ANMO	**Albuquerque**	121.30	51	PKP	PKPdf	21 32 27.0	-1.1
	comp=Z,3.0nm,0.8s,baz=205,slow=4.0,SNR=4.8						
ANMO	**Albuquerque**	121.30	51	*e*PKIKP	PKPdf	21 32 26.9	-1.3
LPM	**Los Pinos Moun**	121.37	52	*e*PKPdf	PKPdf	21 32 27.1	-1.2
BNM	**Barren Site**	121.43	52	*e*PKPdf	PKPdf	21 32 27.0	-1.5
ETOB	**Tobarra**	121.98	314	PKP	PKPdf	21 32 26.8	-2.5
EVIA	**Vianos**	122.66	314	PKP	PKPdf	21 32 28.4	-2.2
GUD	**Guadarrama**	122.94	317	PKP	PKPdf	21 32 29.2	-1.9
MNTX	**Cornudas Mount**	123.20	54	*e*PKPdf	PKPdf	21 32 30.1	-1.7
MNTX				*e*pPKPdf		21 32 36.4	
ESDC	**Sonseca Array**	123.24	316	PKP	PKPdf	21 32 29.8	-1.9
	comp=Z,1.9nm,0.7s,baz=27,slow=2.2,SNR=10						
ESDC	**Sonseca Array**	123.24	316	PKP	PKPdf	21 32 28.3	-3.4
EQES	**Quesada**	123.42	314	PKP	PKPdf	21 32 29.5	-2.6
EPON	**Pontenova**	123.58	321	PKP	PKPdf	21 32 27.7	-4.7
ECOG	**Cogollos-Vega**	123.99	313	PKP	PKPdf	21 32 30.6	-2.8
PBRG	**Braganca**	124.10	320	*e*PKPdf	PKPdf	21 32 32.0	-1.4
ERON	**Agron**	124.27	313	PKP	PKPdf	21 32 31.0	-2.9
EADA	**Adamuz**	124.34	315	PKP	PKPdf	21 32 31.8	-2.2
ELUQ	**Luque**	124.38	314	PKP	PKPdf	21 32 31.7	-2.4
ELOJ	**Sierra Loja**	124.47	313	PKP	PKPdf	21 32 30.9	-3.3
PCAB	**Cabril**	124.97	320	*e*PKPdf	PKPdf	21 32 33.6	-1.5
PVRL	**Vila Real**	125.00	319	*e*PKPdf	PKPdf	21 32 33.6	-1.6
EMIJ	**Mijas**	125.17	313	PKP	PKPdf	21 32 32.2	-3.4
MTE	**Manteigas**	125.33	318	*e*PKPdf	PKPdf	21 32 34.2	-1.6
TXAR	**Lajitas Array**	125.34	56	PKP	PKPdf	21 32 35.2	-0.9
	comp=Z,1.9nm,0.8s,baz=270,slow=1.3,SNR=8.3						
PCBR	**Castelo Branco**	125.56	318	*e*PKPdf	PKPdf	21 32 34.5	-1.8
EJIF	**Jimena Fronter**	125.72	313	PKP	PKPdf	21 32 34.1	-2.6
EBAD	**Badajoz**	125.77	316	PKP	PKPdf	21 32 34.5	-2.3
ESPR	**Espera**	125.82	314	PKP	PKPdf	21 32 34.6	-2.3
EMIN	**Mina Concepcio**	126.00	315	PKP	PKPdf	21 32 35.1	-2.0
EVO	**Evora**	126.56	317	*e*PKIKP	PKPdf	21 32 36.5	-1.7
	comp=Z,27nm,1.0s						
EVO				*e*R			
	comp=Z,874nm,22.2s						
EGRO	**El Granado**	126.67	315	PKP	PKPdf	21 32 35.3	-3.1
PBEJ	**Beja**	126.71	316	*e*PKPdf	PKPdf	21 32 37.8	-0.6
KSU1	**Kansas State U**	126.73	42	PKP	PKPdf	21 32 36.0	-2.5
PLOU	**Loures**	127.16	318	*e*PKPdf	PKPdf	21 32 39.1	-0.2
WMOK	**Wichita Mounta**	127.21	48	*e*PKPdf	PKPdf	21 32 36.6	-3.0
PTEO	**Sao Teotonio**	127.53	316	*e*PKPdf	PKPdf	21 32 38.3	-1.8
SCHQ	**Schefferville**	127.63	10	PKP	PKPdf	21 32 38.0	-1.9
	comp=Z,2.7nm,0.5s,baz=330,slow=3.5,SNR=9.0						
JCT	**Junction City**	128.11	54	*e*PKPdf	PKPdf	21 32 39.1	-2.4
JCT				*e*pPKPdf		21 32 46.1	
CCM	**Cathedral Cave**	130.84	41	*e*PKP	PKPdf	21 32 42.0	-4.5
DBIC	**Dimbokro**	132.33	276	PKP	PKPdf	21 32 48.8	-1.2
	comp=Z,10nm,0.8s,baz=105,slow=2.2,SNR=11						
DBIC				SKPbc		21 36 13.1	
	comp=Z,16nm,1.0s,baz=30,slow=6.6,SNR=6.6						
DBIC	**Dimbokro**	132.33	276	*e*PKIKP	PKPdf	21 32 47.7	-2.2
LIC	**Lamto**	132.50	275	⇑*i*PKIKP	PKPdf	21 32 48.7	-1.6
	comp=Z,26nm,0.8s						
LIC				*e*R			
	comp=Z,141nm,18.5s						
PLCA	**Paso Flores**	132.94	161	PKP	PKPdf	21 32 49.8	-0.6
	comp=Z,3.8nm,0.8s,baz=199,slow=3.9,SNR=8.1						
OXF	**Oxford**	134.05	43	PKPdf	PKPdf	21 32 49.2	-3.4
LRAL	**Lakeview Retre**	136.54	44	*e*PKP	PKPdf	21 32 55.6	-1.5
CPCT	**Cooper Cave**	136.71	39	PKPdf	PKPdf	21 32 54.0	-3.4
BLA	**Blacksburg**	137.94	34	*e*PKPdf	PKPdf	21 32 56.6	-3.1
JTS	**JuntasAbangare**	147.26	77	*e*PKPdf	PKPdf	21 33 13.6	-3.0
JTS				*i* PKPbc	PKPdf	21 33 17.7	+1.0
CPUP	**Villa Florida**	149.91	172	*e*PKPbc	PKPdf	21 33 23.0	+2.5
NNA	**Nana**	151.39	123	*e*PKPbc	PKPdf	21 33 27.7	+4.7
HLGC	**Holguin**	151.45	51	*e*P	PKPdf	21 33 26.2	+3.2
CAM4	**Nova Friburgo**	152.40	200	*e*P	PKPdf	21 33 29.1	+4.7
CAM4				*i*		21 33 34.1	
CAM4				*i*		21 33 40.3	
CAM4				*i*		21 33 52.2	
ARE	**Arequipa**	152.72	137	*e*P	PKPdf	21 33 29.0	+4.1
LPAZ	**La Paz**	155.00	143	PKP	PKPdf	21 33 28.2	+0.2
	comp=Z,3.1nm,0.9s,baz=46,slow=2.3,SNR=12						
LPAZ				PKPab	PKPab	21 33 51.9	+0.7
	comp=Z,17nm,0.8s,baz=187,slow=3.3,SNR=9.5						
LPAZ	**La Paz**	155.00	143	*e*PKPdf	PKPdf	21 33 27.5	-0.6
LPAZ				*e*PKPbc	PKPdf	21 33 36.3	+8.3
ROSC	**El Rosal**	158.33	86	PKPab	PKPab	21 34 08.1	+2.4
	comp=Z,8.0nm,0.6s,baz=279,slow=23,SNR=4.1						
BDFB	**Brasilia**	160.35	193	PKPab	PKPab	21 34 13.7	-0.5
	comp=Z,3.9nm,0.7s,baz=228,slow=1.1,SNR=3.8						
SDV	**Santo Domingo**	161.36	73	*e*PKPdf	PKPdf	21 33 33.8	-2.0
SAML	**Samuel**	163.70	140	*e*PKPdf	PKPdf	21 33 36.2	-1.9

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*NEIC **01** 21:16:59.3,32.35S×71.40W,h47^{km},MD3.8(GUC),After GUC.*

GUC 01 21:16:59.3±0.6**,32.35S×71.40W,h47^{km}**±1^{km}**,MD3.8, ML2.7,3C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	0.48	349	⇑*i*P	P	21 17 10.4	+0.4
CHNG				*i* S	S	21 17 18.3	+0.6
CHNG				AMP		21 17 18.9	
	comp=E,426nm,0.4s						
ROCH	**El Roble**	0.70	152	⇑*i*P	P	21 17 13.7	+0.8
IHA	**Instituto Hidr**	0.70	197	⇓*i*P	P	21 17 13.1	+0.2
IHA				*i* S	S	21 17 23.9	+0.9
IHA				AMP		21 17 24.9	
	comp=Z,180nm,0.2s						
JACH	**Jahuel**	0.75	116	⇑*i*P	P	21 17 14.4	+0.7
JACH				*i* S	S	21 17 25.9	+1.7
CMCH	**Combarbala**	1.22	16	*i* P	P	21 17 20.7	+0.4
CMCH				*i* S	S	21 17 36.9	+1.0
CMCH				AMP		21 17 39.9	
	comp=N,942nm,0.8s						
RCDM	**Rinconada Maip**	1.24	157	*e*P	P	21 17 20.8	+0.3
RCDM				*i* S	S	21 17 36.8	+0.5
RCDM				AMP		21 17 43.0	
	comp=E,472nm,0.1s						
FCH	**Farellones**	1.35	137	*e*P	P	21 17 22.7	+0.6
FCH				*i* S	S	21 17 40.6	+1.5
FCH				AMP		21 17 41.6	
	comp=E,158nm,0.2s						
TACH	**Talagante**	1.35	164	*e*P	P	21 17 22.7	+0.5
TACH				*i* S	S	21 17 39.9	+0.7
LNV	**Longovilo**	1.60	180	*e*P	P	21 17 25.4	-0.2
CHCH	**Chadas Angostu**	1.69	159	*e*P	P	21 17 27.2	+0.2
LMEL	**Las Melosas**	1.79	146	⇓*i*P	P	21 17 28.9	+0.5
LMEL				*i* S	S	21 17 51.4	+1.3
LMEL				AMP		21 17 57.1	
	comp=N,252nm,0.1s						
SFDO	**San Fernando**	2.28	172	*e*P	P	21 17 35.4	+0.1

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*IDC **01** 21:59:20.6±1.1,9.39S×122.14E,mb4.2/5,mb1 4.2/7, mb1mx4.1/14,mbtmp4.2/7,ML4.1/2,Error ellipse: s-maj=107.0km s-min=20.8km az=60.0*

*NEIC **01** 21:59:22.2±5.1,9.50S×122.05E,h12^{km}±34^{km},mb4.5/8, Error ellipse: s-maj=20.1km s-min=8.4km az=223.0*

ISC 01 21:59:20.9±0.4**,9.72S**±0.07×**122.4E**±0.1**,h33^{km},n25, σ0^{s}.88**/31**,mb4.5**/15**,Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	8.90	160	*e*P	**P**	**22 01 37.3**	**+7.2**
	8.5nm,0.4s						
FITZ				*e*S	**S**	**22 03 10.1**	**-0.2**
FITZ	**Fitzroy Crossi**	8.90	160	Pn	**P**	**22 01 36.6**	**+6.5**
	2.0nm,0.3s,baz=342,slow=8.7,SNR=20						
FITZ				Sn	**Sn**	**22 03 10.4**	**0.0**
	5.2nm,0.3s,baz=199,slow=9.3,SNR=8.7						
MBWA	**Marble Bar**	11.66	192	*e*Pn	**P**	**22 02 09.2**	**+1.2**
MBWA				*e*Sn	**S**	**22 04 08.7**	**-9.4**
WRA	**Warramunga Arr**	15.36	133	Pn	**P**	**22 03 02.3**	**+5.3**
	0.6nm,0.3s,baz=308,slow=13,SNR=6.7						
WRA				Sn	**S**	**22 05 46.7**	**+0.4**
	0.9nm,0.3s,baz=306,slow=23,SNR=8.9						
WRAB	**Tennant Creek**	15.36	133	*e*Pn	**P**	**22 03 05.0**	**+8.0**
	11nm,0.8s						
WRAB				*e*Sn	**S**	**22 05 46.1**	**-0.3**
WB2	**Warramunga Arr**	15.37	133	*e*P	**P**	**22 03 03.9**	**+6.8**
WB2				*e*S	**S**	**22 05 44.9**	**-1.7**
KSM	**Kuching**	16.40	312	*e*P	**P**	**22 03 07.5**	**-2.8**
KSM				*e*pP		22 03 13.7	
STKA	**Stephens Creek**	28.32	144	P	**P**	**22 05 20.4**	**+6.6**
	1.5nm,0.8s,mb3.7,baz=315,slow=8.6,SNR=3.6						
LSA	**Lhasa**	49.42	324	*e*P	**P**	**22 08 10.6**	**+0.7**
	3.7nm,0.3s,mb4.9						
GUN	**Gumba**	51.47	318	*e*P	**P**	**22 08 25.5**	**0.0**
	20nm,0.7s,mb5.2						
PKI	**Pulchoki**	51.56	317	*e*P	**P**	**22 08 25.3**	**-0.9**
	8.9nm,0.6s,mb4.9						
DMN	**Daman**	51.79	317	*e*P	**P**	**22 08 27.6**	**-0.3**
KKN	**Kakani**	51.79	317	*e*P	**P**	**22 08 27.8**	**-0.1**
GKN	**Gorkha**	52.36	317	*e*P	**P**	**22 08 31.3**	**-0.9**
	7.0nm,0.4s,mb4.9						
KOLN	**Koldanda**	52.92	316	*e*P	**P**	**22 08 35.7**	**-0.7**
	6.4nm,0.6s,mb4.8						
SONM	**Songino Array**	59.04	347	P	**P**	**22 09 19.9**	**-0.1**
	1.0nm,0.5s,mb4.1,baz=161,slow=8.1,SNR=16						
MKAR	**Makanchi Array**	66.67	331	P	**P**	**22 10 10.9**	**+0.4**
	8.0nm,0.6s,mb4.9,baz=139,slow=7.4,SNR=82						
AAK	**Ala-Archa**	68.02	324	*e*P	**P**	**22 10 19.2**	**+0.2**
	1.0nm,0.4s,mb4.2						
KURK	**Kurchatov**	71.16	332	*e*P	**P**	**22 10 38.5**	**+0.2**
	2.4nm,0.4s,mb4.5						
YAK	**Yakutsk**	71.75	4	P	**P**	**22 10 43.0**	**+1.5**
	18nm,0.6s,mb5.2						
BVAR	**Borovoye Array**	76.54	331	P	**P**	**22 11 10.2**	**+0.7**
	0.6nm,0.3s,mb4.0,baz=140,slow=8.0,SNR=10						
BRVK	**Borovoye**	76.61	331	*e*P	**P**	**22 11 10.4**	**+0.5**
	1.0nm,0.6s,mb3.9						
CHKZ	**Chkalovo**	76.83	331	*e*P	**P**	**22 11 11.2**	**+0.1**
	1.3nm,0.4s,mb4.2						
AKTK	**Aktyubinsk**	81.75	324	P	**P**	**22 11 38.3**	**+0.5**
AKTO	**Aktyubinsk**	81.75	324	P	**P**	**22 11 38.3**	**+0.5**
	1.3nm,0.5s,mb4.1,baz=117,slow=8.5,SNR=7.8						

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*NEIC **01** 22:06:16.0,35.40N×27.61E,h27^{km},MD3.4(ISK), MD3.3(ATH),After ISK.*

*ISK **01** 22:06:17.0,35.41N×27.60E,h27^{km},MD3.4*

*CSEM **01** 22:06:20.9±0.1,35.59N×27.81E,h30^{km},MD3.3,Error ellipse: s-maj=3.3km s-min=1.5km az=152.0*

*ATH **01** 22:06:21.3,35.67N×27.73E,h30^{km}±1^{km},MD3.3/5*

ISC 01 22:06:21.5±0.9**,35.63N**±0.07×**27.74E**±0.07**,h42^{km}**±21^{km}**, n17,σ1^{s}.16**/22**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	0.47	261	*e*PB	**P**	**22 06 31.4**	**-0.5**
KARP				*e*SB	**S**	**22 06 39.3**	**0.0**
ARG	**Arkhangelos**	0.67	28	*e*PN	**P**	**22 06 34.4**	**-0.1**
ARG				*e*SN	**S**	**22 06 44.1**	**0.0**
DAT	**Datca**	1.11	353	PN	**P**	**22 06 40.2**	**-0.5**
DALT	**Dalyan (Mudla)**	1.35	32	PN	**P**	**22 06 44.1**	**-0.3**
DALT				SN	**S**	**22 07 03.9**	**+2.5**
BDRM	**Kayabasi**	1.46	351	*i* P	**P**	**22 06 45.1**	**-0.6**
BDRM				*i* S	**S**	**22 07 03.1**	**-0.8**
BODT	**Bodrum**	1.48	347	PN	**P**	**22 06 45.0**	**-1.0**
FETY	**Fethiye**	1.49	47	PN	**P**	**22 06 45.7**	**-0.5**
FETY				SN	**S**	**22 07 07.2**	**+2.6**
YER	**Yerkesik**	1.57	16	PN	**P**	**22 06 47.7**	**+0.3**
MLSB	**Milas**	1.67	1	*e*PN	**P**	**22 06 48.2**	**-0.6**
NPS	**Neapolis**	1.77	259	*e*PB	**P**	**22 06 52.0**	**+1.8**
SANT	**Santorini**	1.99	293	*e*Pn	**P**	**22 06 48.2**	**-5.2**
SANT	**Santorini**	1.99	293	*e*Pn	**P**	**22 06 48.2**	**-5.1**
APE	**Apeiranthos**	2.29	310	*e*PN	**P**	**22 06 55.1**	**-2.5**
APE	**Apeiranthos**	2.29	310	*e*Pn	**P**	**22 06 58.7**	**+1.1**
DENT	**Denizli**	2.37	26	*e*PN	**P**	**22 06 59.0**	**+0.3**
VAM	**Vamos**	2.89	267	*e*PN	**P**	**22 07 07.8**	**+1.6**
LEF	**Lefka**	4.24	95	*e*PN	**P**	**22 07 23.2**	**-2.1**

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*MOS **01** 22:17:18.3±0.8,37.23N×140.06E,h33^{km},mb4.6/3,Error ellipse: s-maj=17.2km s-min=15.0km az=15.7*

*IDC **01** 22:17:19.2±3.7,36.10N×140.05E,h74^{km}±31^{km},mb3.7/9, mb1 3.8/10,mb1mx3.6/21,mbtmp4.0/10,Error ellipse: s-maj=50.9km s-min=9.0km az=60.0*

*JMA **01** 22:17:19.7±0.1,36.09N×140.01E,h66^{km}±1^{km},M3.7 Broadband fault plane solution: P waves. NP1:ϕ_s194°, δ28°,λ102°. NP2:ϕ_s0°,δ62°,λ83°. Principal axes: T Plg72°, Azm255°; N Plg6°, Azm3°; P Plg17°, Azm95°;*

JMA Felt I J1.

*NEIC **01** 22:17:21.5±3.4,36.62N×139.95E,h68^{km}±28^{km},mb4.3/3 Error ellipse: s-maj=79.8km s-min=42.5km az=179.0*

ISC 01 22:17:18.3±0.4**,36.07N**±0.03×**140.02E**±0.05**,h79^{km}**±3^{km}**, n35,σ0^{s}.71**/47**,mb3.9**/12**,4C-7D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	0.21	43	⇑P	**P**	**22 17 30.0**	**0.0**
JYT				S	**S**	**22 17 37.6**	**-1.2**
JAG	**Ashikaga**	0.57	308	⇓P	**P**	**22 17 33.1**	**+0.3**
JAG				S	**S**	**22 17 42.9**	**-0.6**
JRY	**Ryogami san**	0.91	267	⇓P	**P**	**22 17 37.0**	**+0.7**
JRY				S	**S**	**22 17 49.1**	**-0.8**
JKT	**Katashina**	0.93	318	⇓P	**P**	**22 17 37.0**	**+0.4**
JKT				S	**S**	**22 17 49.7**	**-0.7**
JOD2	**Odawara 2**	1.11	223	⇓P	**P**	**22 17 39.4**	**+0.6**
JOD2				S	**S**	**22 17 53.3**	**-0.9**
JYN	**Shimob**	1.33	245	⇓P	**P**	**22 17 42.8**	**+1.0**
JYN				S	**S**	**22 17 59.7**	**+0.4**
BSO3	**Boso 3**	1.33	162	⇑P	**P**	**22 17 41.9**	**0.0**
JFY	**Yanaizu**	1.35	349	P	**P**	**22 17 43.1**	**+0.9**
JHK	**Hiroka**	1.42	326	⇓P	**P**	**22 17 43.6**	**+0.5**
JIM2	**Oshima 3**	1.43	200	P	**P**	**22 17 43.0**	**-0.2**
JIM2				S	**S**	**22 18 00.6**	**-1.0**
JFK	**Kawauchi**	1.46	28	⇑P	**P**	**22 17 43.8**	**+0.2**
JFK				S	**S**	**22 18 02.5**	**+0.2**
JFT	**Otama**	1.47	10	⇑P	**P**	**22 17 44.2**	**+0.6**
MJAR	**Matsushiro Arr**	1.53	288	P	**P**	**22 17 44.9**	**+0.4**
	60nm,0.3s,baz=97,slow=8.7,SNR=377						
MJAR				S	**S**	**22 18 03.7**	**-0.2**
	31nm,0.3s,baz=28,slow=44,SNR=15						
MAJO	**Matsushiro**	1.53	288	⇓*i*Pn	**P**	**22 17 45.4**	**+0.9**
MAT	**Matsushiro**	1.53	288	P	**P**	**22 17 45.4**	**+0.9**
MAT				S	**S**	**22 18 04.2**	**+0.3**
MAT	**Matsushiro**	1.53	288	P	**P**	**22 17 45.5**	**+1.0**
MAT	**Matsushiro**	1.53	288	*e*P	**P**	**22 17 45.0**	**+0.5**
MAT				*e*S	**S**	**22 18 04.0**	**+0.1**
JHJ	**Hachijo jima 2**	2.95	184	P	**P**	**22 18 04.5**	**+0.4**
	34nm,0.3s,baz=75,slow=20,SNR=11						
JHJ				S	**S**	**22 18 39.1**	**+0.7**
	58nm,0.3s,baz=126,slow=23,SNR=7.1						
SONM	**Songino Array**	27.41	306	P	**P**	**22 22 56.9**	**-1.4**
	0.5nm,0.5s,mb3.3,baz=105,slow=8.7,SNR=7.0						
MKAR	**Makanchi Array**	43.68	303	P	**P**	**22 25 16.9**	**+0.2**
	1.9nm,0.6s,mb4.0,baz=83,slow=9.3,SNR=23						
KURK	**Kurchatov**	45.65	309	*e*P	**P**	**22 25 31.8**	**-0.6**
	4.2nm,0.8s,mb4.2						
KURK	**Kurchatov**	45.65	309	*e*P	**P**	**22 25 31.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
CHKZ	**Chkalovo**	50.15	313	*e*P	**P**	**22 26 06.5**	**-0.9**
	comp=Z,1.1nm,0.5s,mb4.0						
CHKZ	**Chkalovo**	50.15	313	*e*P	**P**	**22 26 06.5**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
BVAR	**Borovoye Array**	50.39	313	P	**P**	**22 26 09.7**	**+0.5**
	comp=Z,0.4nm,0.4s,mb3.7,baz=117,slow=11,SNR=3.3						
ARU	**Arti**	56.34	319	*e*P	**P**	**22 26 51.8**	**-1.2**
	comp=Z,3.2nm,0.5s,mb4.6						
ARU	**Arti**	56.34	319	*e*P	**P**	**22 26 51.8**	**-1.2**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
ARCES	**ARCESS Array B**	64.50	339	P	**P**	**22 27 47.5**	**-0.7**
	comp=Z,3.2nm,0.9s,mb4.2,baz=56,slow=6.5,SNR=4.1						
FINES	**FINESS Array B**	69.14	332	P	**P**	**22 28 16.9**	**-0.7**
	comp=Z,7.2nm,1.1s,mb4.4,baz=72,slow=6.0,SNR=7.7						
AKASG	**Malin Array Be**	74.36	322	P	**P**	**22 28 48.2**	**-0.6**
	comp=Z,0.5nm,0.4s,mb3.6,baz=49,slow=6.1,SNR=4.7						
AKASG	**Malin Array Be**	74.36	322	P	**P**	**22 28 48.2**	**-0.6**
NB2	**NORSAR Subarra**	74.63	337	P	**P**	**22 28 49.9**	**-0.2**
	comp=Z,0.8nm,0.4s,mb3.8,baz=42,slow=5.8						
NOA	**NORSAR Array B**	74.63	337	P	**P**	**22 28 50.0**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.7,baz=39,slow=5.6,SNR=4.2						
BRTR	**Keskin Array B**	78.64	311	P	**P**	**22 29 14.8**	**+1.8**
	comp=Z,0.8nm,0.8s,mb3.6,baz=90,slow=6.2,SNR=3.8						
GERES	**GERESS Array B**	82.93	328	P	**P**	**22 29 35.7**	**+0.3**
	comp=Z,0.2nm,0.3s,mb3.4,baz=45,slow=5.7,SNR=4.1						

MAN 01 22:28:58.4,13.56N×120.79E,h31^{km},mb3.9,ML2.7, MS2.3,1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	0.17	109	⇓*e*P	Pb	22 29 04.3	-0.1
PGP				*e*S	Sn	22 29 07.6	-0.9
LUBP	**Lubang**	0.56	288	*e*P	Pb	22 29 11.0	+1.2
LUBP				*e*S	Sb	22 29 19.3	+1.7
BOAC	**Boac**	1.03	95	*e*P	Pn	22 29 17.9	+1.0
SJMP	**San Jose**	1.14	164	*e*P	Pn	22 29 18.7	+0.2
SJMP				*e*S	Sn	22 29 32.8	-0.3

TRN 01 22:29:28.6,17.56N×61.67W,h24^{km},M3.7(FDF)**,2C-2D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPB	**Codrington**	0.17	300	⇑*i*P	Pb	22 29 34.8	+1.1
CPB				*e*S	Sb	22 29 39.6	+2.4
BPA	**Boggy Peak**	0.54	199	⇑*i*P	Pb	22 29 41.3	+2.0
BPA				*e*S	Sb	22 29 50.6	+4.0
STAT	**Sint Eustatius**	1.25	267	*e*P	Pn	22 29 51.9	+1.2
STAT				*e*S	Sn	22 30 09.4	+2.6
DEG	**La Desirade**	1.37	155	⇓*e*P	Pn	22 29 53.1	+0.6
DEG				*e*S	Sn	22 30 15.2	+5.2
LZG	**Guadaloupe-1**	1.41	184	⇓*e*P	Pn	22 29 54.6	+1.5
LZG				*e*S	Sn	22 30 16.6	+5.5
BCG	**Bois Riant Cap**	1.47	178	*e*P	Pn	22 29 55.3	+1.5
MGG	**Marie-Galante**	1.67	168	*e*P	Pn	22 29 58.5	+1.8
TBG	**Guadaloupe-3**	1.69	179	*e*P	Pn	22 29 58.5	+1.4

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*NDI **01** 22:50:06.5±2.5,34.95N×72.78E,h33^{km},MD3.4,ML3.2*

*NNC **01** 22:50:16.7±26.0,35.09N×71.59E,mpv3.3,Error ellipse: s-maj=279.3km s-min=237.2km az=84.0*

ISC 01 22:50:08.1±1.3**,34.51N**±0.10×**72.9E**±0.2**,h33^{km},n7, σ1^{s}.12**/10**,1C,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	3.12	131	*e*P	**P**	**22 51 04.1**	**+7.9**
THN				*e*S	**S**	**22 51 43.4**	**+11**
KLP	**Kalpa**	5.37	122	*e*P	**P**	**22 51 29.3**	**+1.3**
KLP				*e*S	**S**	**22 52 29.2**	**-0.4**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLP				AML	AML	22 52 33.1	
	comp=N,36nm,0.4s						
KLP				AML	AML	22 52 34.1	
	comp=E,34nm,0.3s						
KKR	Kurukshetra	5.61	143	*e*x	x	22 51 35.1	
AYAN	Aya Nagar	7.00	148	*e*P	P	22 51 50.8	-0.1
AYAN				*e*S	S	22 53 09.9	-0.3
KUDL	Kundal	7.04	153	*e*P	P	22 51 53.5	+2.0
KUDL				*e*S	S	22 53 09.8	-1.5
SONA	Sohna	7.18	149	*e*x	x	22 53 15.0	
KK31	Karatay Array	8.78	348	P	P	22 52 14.8	-0.9
	comp=E,0.5nm,0.3s,baz=172,slow=12,SNR=21						
KK31				⇑S	S	22 53 47.8	-6.8
	comp=E,0.3nm,0.3s,baz=174,slow=23,SNR=5.8						

THR 01 22:50:55.4±0.4, 34.16N×52.06E, h18^{km}±15^{km}, ML2.6
CSEM 01 22:50:55.4±0.1, 34.17N×52.07E, h18^{km}, ML3.0, Error ellipse: s-maj=2.5km s-min=1.2km az=77.0
TEH 01 22:50:56.3, 34.16N×52.06E, h7^{km}, Mn3.0
ISC 01 22:50:56.9±0.6, 34.16N±0.03×52.07E±0.07, h18^{km}, n12, σ0.^{s}84/18, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IVRN	Varamin	0.88	341	Pg	Pb	22 51 12.6	-0.7
IVRN				Sg	Sb	22 51 24.3	-0.3
IKLH	Kalahroud	0.93	206	Pg	Pb	22 51 12.8	-1.4
IQOM	Qom	1.07	310	Pg	Pb	22 51 15.3	-1.2
IQOM				Sg	Sb	22 51 29.3	-0.7
IZEF	Zefreh	1.28	170	Pg	Pn	22 51 19.3	-0.8
IDMV	Damavand	1.41	359	Pg	Pn	22 51 21.5	-0.5
IDMV				Sg	Sb	22 51 40.8	+0.8
DAMV	Damavand	1.47	357	*e*Pg	Pn	22 51 22.4	-0.3
DAMV				*e*Sg	Sn	22 51 42.6	+1.0
NASN	Na'in	1.49	155	*e*Pg	Pn	22 51 23.2	+0.1
NASN				*e*Sg	Sn	22 51 43.3	+1.1
NASN				AML	AML	22 51 44.8	
	comp=N,109nm,0.2s						
IFIR	Firoozkooh	1.58	21	Pn	Pn	22 51 24.1	-0.3
IAFJ	Afjeh	1.72	350	Pn	Pn	22 51 26.4	+0.1
ASAO	Ashtian	1.73	283	*e*Pg	Pn	22 51 27.2	+0.6
ASAO				*e*Sg	Sn	22 51 50.4	+2.0
ASAO				AML	AML	22 51 55.6	
	comp=N,53nm,0.4s						
IPIR	Pirpir	1.77	214	Pn	Pn	22 51 27.6	+0.5
IMHD	Mahdasht	1.91	323	Pn	Pn	22 51 29.2	+0.2

IDC 01 22:56:58.0±2.1, 5.70S×148.23E, mb3.7/1, mb1 4.5/2, mb1mx3.9/9, mbtmp4.1/2, ML4.6/1, Error ellipse: s-maj=78.9km s-min=28.0km az=126.0
NEIC 01 22:57:10.1±3.1, 6.05S×148.30E, h106^{km}±39^{km}, mb4.0/1, Error ellipse: s-maj=76.8km s-min=19.3km az=132.0
ISC 01 22:57:09.2±3.8, 6.2S±0.4×148.3E±0.4, h110^{km}±44^{km}, n10, σ1.^{s}13/11, mb3.8/3, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.39	200	*e*Pn	P	22 58 03.0	+1.5
PMG				*e*Sn	S	22 58 39.8	-1.4
WRAB	Tennant Creek	19.25	223	*e*P	P	23 01 27.1	-0.5
	4.5nm,0.6s						
WB2	Warramunga Arr	19.25	223	*e*P	P	23 01 27.2	-0.4
WB2				*e*		23 01 32.4	
WRA	Warramunga Arr	19.26	223	P	P	23 01 27.4	-0.3
	2.0nm,0.3s,baz=48,slow=11,SNR=28						
ASPA	Alice Springs	22.23	217	*e*P	P	23 02 00.4	+2.8
ASPA				*e*		23 02 03.6	
FITZ	Fitzroy Crossi	25.09	240	*e*P	P	23 02 26.2	+0.9
	27nm,0.9s,mb4.7						
FITZ	Fitzroy Crossi	25.09	240	P	P	23 02 26.4	+1.0
	24nm,0.5s,mb4.9,baz=63,slow=7.2,SNR=40						
MKAR	Makanchi Array	78.47	320	P	P	23 08 58.7	-1.0
	0.1nm,0.4s,mb2.9,baz=96,slow=8.3,SNR=6.0						
MKAR	Makanchi Array	78.47	320	P	P	23 08 58.7	-1.0
ILAR	Eielson Array	85.15	23	P	P	23 09 33.6	-0.3
	0.4nm,0.6s,mb3.5,baz=263,slow=4.6,SNR=7.7						

ATH 01 23:01:52.8, 38.16N×26.62E, h36^{km}±6^{km}, MD3.3/3
ISK 01 23:01:53.3, 38.21N×26.67E, h16^{km}, MD2.9
CSEM 01 23:01:53.6±0.2, 38.22N×26.71E, h17^{km}±1^{km}, MD2.9, Error ellipse: s-maj=3.9km s-min=2.4km az=102.0
ISC 01 23:01:51.7±1.0, 38.18N±0.03×26.58E±0.05, h2^{km}±7^{km}, n13, σ0.^{s}75/22, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.18	4	*i* P	Pg	23 01 54.8	-0.5
URLA				*i* S	Sg	23 01 58.2	+0.5
BLCB	Balcova	0.42	61	PG	Pg	23 02 00.6	+0.6
SMG	Samos	0.51	156	*e*PB	Pb	23 02 03.3	+0.2
SMG				*e*SB	Sb	23 02 11.5	+0.8
IZM	Izmir	0.58	68	PG	Pg	23 02 03.6	+0.3
IZM				SG	Sg	23 02 11.7	+0.7
KDAG	Bornova	0.58	68	*i* P	Pg	23 02 02.2	-1.2
KDAG				*i* S	Sg	23 02 09.8	-1.3
PRK	Paraskevi	1.09	347	*e*PN	Pn	23 02 13.8	-0.1
PRK				*e*SN	Sn	23 02 29.3	-0.4
AYVA	Ayvalik	1.13	4	*i* P	Pb	23 02 13.6	0.0
AYVA				*i* S	Sb	23 02 29.5	+0.9
AKS	Akhisar	1.19	54	PN	Pn	23 02 14.8	-0.5
BODT	Bodrum	1.26	152	*e*PN	Pn	23 02 16.8	+0.5
APE	Apeiranthos	1.39	217	*e*PN	Pn	23 02 17.4	-0.7
APE				*e*SN	Sn	23 02 36.0	-1.3
APE	Apeiranthos	1.39	217	*e*Pn	Pn	23 02 20.0	+1.9
APE				*e*Sn	Sn	23 02 36.0	-1.3
MANT	Manisa	1.59	78	*i* P	Pn	23 02 21.9	+0.9
MANT				*i* S	Sb	23 02 41.4	-0.5
YER	Yerkesik	1.71	127	*e*PN	Pn	23 02 22.6	-0.1

ISK 01 23:13:36.3, 38.12N×38.58E, h6^{km}, MD3.5
CSEM 01 23:13:36.3, 38.12N×38.58E, h6^{km}, MD3.5, After ISK
ISC 01 23:13:36.8±0.4, 38.11N±0.03×38.60E±0.04, h6^{km}, n18, σ0.^{s}90/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYA	Malataya	0.26	327	*i* PG	Pg	23 13 41.9	-0.1
MYA				*i* SG	Sg	23 13 45.4	-0.1
ELZG	Elazig	0.49	38	*i* P	Pg	23 13 46.0	-0.6
ELZG				*i* S	Sg	23 13 54.2	+1.0
ATAB	Bozova	0.69	201	*i* P	Pg	23 13 49.2	-1.3
ATAB				*i* S	Sg	23 13 58.9	-0.8
URFA	Urfa	0.69	165	PG	Pg	23 13 50.1	-0.5
URFA				SG	Sg	23 14 00.7	+0.9
PTK	Pertek	1.00	38	PG	Pg	23 13 55.4	-1.3
PTK				SG	Sg	23 14 10.2	+0.2
GZT	Gaziantep	1.12	228	*i* P	Pb	23 13 57.8	-0.3
GZT				*i* S	Sb	23 14 12.6	-0.1
DIY	Diyarbakir	1.30	99	PN	Pn	23 14 01.8	+0.3
GAZ	Gaziantep	1.45	230	PN	Pn	23 14 03.2	-0.4
KAHT	Ahir Dag	1.45	251	*i* P	Pn	23 14 04.9	+1.3
KAHT				*i* S	Sb	23 14 25.2	+2.8
BINT	Bingol	1.67	62	*e*PN	Pn	23 14 07.2	+0.5
MARD	Mardin	1.90	114	*i* P	Pn	23 14 12.7	+2.6
MARD				*i* S	Sn	23 14 39.0	+4.5
BTMT	Batman	2.28	87	*e*PN	Pn	23 14 13.9	-1.6
BNN	Bunyan	2.29	290	*e*PN	Pn	23 14 15.4	-0.2
KOZT	Kozan	2.29	255	*e*PN	Pn	23 14 15.6	0.0
GUMT	Gumushane	2.44	16	*e*PN	Pn	23 14 17.5	-0.3
HTY	Hatay	2.80	226	*e*PN	Pn	23 14 23.1	+0.2
EZM	Erzurum	2.80	49	*e*PN	Pn	23 14 23.1	+0.2
KAMT	Kaman	4.02	290	*e*PN	Pn	23 14 40.1	-0.2

IDC 01 23:27:27.8±4.2, 35.01N×23.25E, mb3.9/2, mb1 3.7/4, mb1mx3.5/21, mbtmp3.7/4, ML3.3/2, Error ellipse: s-maj=75.3km s-min=18.0km az=9.0
ATH 01 23:27:33.0, 35.51N×23.53E, h5^{km}±1^{km}, MD3.7/16, ML3.7
NEIC 01 23:27:33.0, 35.51N×23.53E, h5^{km}, ML3.7(ATH), After ATH.
HLW 01 23:27:34.8, 35.48N×23.51E, h15^{km}, Mb3.3
CSEM 01 23:27:35.4±0.1, 35.38N×23.68E, h30^{km}, ML3.7, Error ellipse: s-maj=4.1km s-min=1.8km az=71.0
ISC 01 23:27:31.7±0.5, 35.35N±0.03×23.49E±0.05, h5^{km}, n41, σ1.^{s}47/48, mb3.5/2, 1C-2D, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAM	Vamos	0.58	84	*e*PB	Pb	23 27 44.1	+0.1
VAM				*e*SB	Sb	23 27 52.5	+0.2
GVD	Gavdhos	0.71	136	*e*PB	Pb	23 27 48.5	+2.4
KYTH	Kithira	1.00	338	*e*PB	Pb	23 27 49.5	-1.6
IDI	Anoyia	1.15	93	Pg	Pg	23 27 54.3	-0.3
	31nm,0.3s,baz=282,slow=15,SNR=472						
IDI				Lg		23 28 11.3	
	132nm,0.3s,baz=43,slow=19,SNR=20						
VLI	Veliai	1.44	342	⇑*i*PG	Pg	23 27 57.2	-3.2
VLI				*e*SB	Sb	23 28 14.4	-2.7
NPS	Neapolis	1.74	92	*e*PN	Pn	23 28 04.8	+2.0
NPS				*e*SN	Sn	23 28 28.0	+2.4
XRY	Khrisi	1.87	104	*e*PN	Pn	23 28 08.0	+3.4
SANT	Santorini	1.90	57	*e*Pn	Pn	23 28 04.3	-0.8
SANT				*e*Pg	Pg	23 28 08.1	-1.5
SANT				*e*Sg	Sg	23 28 30.8	-4.1
SANT	Santorini	1.90	57	*e*Pn	Pn	23 28 04.3	-0.8
SANT	Santorini	1.90	57	*e*Pg	Pg	23 28 08.1	-1.5
ITM	Ithomi	2.22	326	*e*PN	Pn	23 28 11.2	+1.5
APE	Apeiranthos	2.38	43	*e*PN	Pn	23 28 13.3	+1.3
ATH	Athens Observa	2.62	4	*e*PN	Pn	23 28 16.0	+0.5
MGER	Gerania Oros	2.64	356	*e*PN	Pn	23 28 16.0	+0.3
PTL	Penteli	2.71	6	*e*PN	Pn	23 28 17.0	+0.3
MPAR	Parnis Oros	2.80	4	*e*PN	Pn	23 28 19.0	+1.0
KARP	Karpathos	3.00	85	*e*PB	Pb	23 28 23.0	-2.4
RLS	Riolos of Patr	3.15	330	*e*PB	Pb	23 28 23.5	-4.5
LKR	Lokris	3.32	353	*e*PN	Pn	23 28 25.3	-0.1
EVR	Evrytania	3.81	340	*e*PN	Pn	23 28 33.3	+1.0
ARG	Arkhangelos	3.87	76	*e*PN	Pn	23 28 34.7	+1.6
NEO	Neokhori	3.96	357	*e*PN	Pn	23 28 35.0	+0.6
SLUM		4.11	159	⇓P	Pn	23 28 37.9	+1.3
SLUM				S	Sn	23 29 25.0	-0.7
HMAT	Matruh	5.21	144	P	Pn	23 28 52.9	+0.7
HMAT				S	Sn	23 29 51.1	-2.3
DABA	Dabaa	5.90	136	P	Pn	23 29 01.8	-0.1
MMB	Musomiste	6.23	2	*e*P	Pn	23 29 10.0	+3.4
SWA2		6.31	164	P	Pn	23 29 08.3	+0.6
SWA1		6.35	162	P	Pn	23 29 09.1	+0.8
KKB	Krupnik	6.52	357	*e*P	Pn	23 29 13.0	+2.4
DIM	Dimitrovgrad	6.88	13	*e*P	Pn	23 29 30.0	+14
HBRG	Burj al 'Arab	7.15	130	P	Pn	23 29 19.3	-0.2
AWBH		8.38	145	P	P	23 29 35.8	-1.0
HFRF	Wahat Farafira	9.15	152	⇓P	P	23 29 46.8	-0.7
BR131	Keskin Array S	9.17	59	*e*Pn	P	23 29 44.7	-2.9
	3.3nm,0.8s						
BRTR	Keskin Array B	9.17	59	Pn	P	23 29 48.1	+0.5
	0.1nm,0.3s,baz=244,slow=16,SNR=17						
AMAG	Maghara	9.41	117	P	P	23 29 49.2	-1.8
HNKL	Nakhl	10.36	119	P	P	23 30 01.6	-2.5
GERES	GERESS Array B	15.30	335	Pn	P	23 31 10.2	+0.3
	0.1nm,0.3s,baz=156,slow=12,SNR=3.0						
HFS	Hagfors	25.60	349	P	P	23 33 00.1	-3.0
	1.0nm,0.6s,mb3.5,baz=149,slow=8.4,SNR=4.1						
MKAR	Makanchi Array	44.81	57	P	P	23 35 45.7	-2.5
	0.5nm,0.5s,mb3.6,baz=278,slow=7.6,SNR=7.0						
MKAR	Makanchi Array	44.81	57	P	P	23 35 45.7	-2.5

IDC 01 23:49:58.4±3.3, 2.26N×96.34E, mb3.6/4, mb1 3.7/4, mb1mx3.5/16, mbtmp3.6/4, Error ellipse: s-maj=129.3km s-min=27.3km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	43.32	122	P	P	23 58 02.4	-1.8
	0.5nm,0.8s,baz=306,slow=8.6,SNR=2.6						
MKAR	Makanchi Array	46.01	347	P	P	23 58 23.8	-1.6
	0.8nm,0.5s,baz=156,slow=8.8,SNR=15						
SONM	Songino Array	46.22	9	P	P	23 58 25.5	-1.5
	0.4nm,0.5s,baz=189,slow=8.9,SNR=8.2						
BVAR	Borovoye Array	54.97	341	P	P	23 59 30.5	-3.1
	0.5nm,0.6s,baz=135,slow=8.2,SNR=4.3						

BER 01 23:51:06.7±4.7, 59.37N×24.96E, h0^{km}±125^{km}, ML2.6
HEL 01 23:51:07.1±0.4, 59.44N×24.39E, ML2.5, ML1.7(UPP), ML2.6(BER), Explosion
NAO 01 23:51:09.0±1.3, 59.71N×24.19E, ML2.7
IDC 01 23:51:10.1±0.8, 59.76N×24.34E, mb3.1/1, mb1 3.5/6, mb1mx3.3/21, mbtmp3.4/6, ML3.7/5, Error ellipse: s-maj=10.5km s-min=6.3km az=131.0
CSEM 01 23:51:12.3±0.1, 59.97N×23.67E, h2^{km}, ML2.5, Error ellipse: s-maj=2.7km s-min=2.0km az=54.0, Mining explosion.
UPP 01 23:51:15.4, 59.80N×23.29E, h0^{km}, ML1.7, Mining explosion.
ISC 01 23:51:09.8±0.4, 59.99N±0.03×23.95E±0.05, n57, σ1.^{s}34/92, mb3.3/2, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVF	Pernaja	1.10	59	*e*P	Pb	23 51 30.3	-1.2
PVF				*e*S	Sb	23 51 49.2	+2.9
FIA0	FINESS Array S	1.79	35	Pn	Pn	23 51 44.0	+1.8
	baz=202,slow=16						
FIA0				Lg		23 52 10.7	
	baz=200,slow=28						
FIA0	FINESS Array S	1.79	35	*e*P	Pn	23 51 44.6	+2.3
FIA0				*e*S	Sn	23 52 10.3	+4.2
FIA0	FINESS Array S	1.79	35	P	Pn	23 51 44.5	+2.2
FIA0				S	Sn	23 52 10.3	+4.2
FINES	FINESS Array B	1.79	35	Pn	Pn	23 51 43.9	+1.6
	15nm,0.3s,baz=206,slow=14,SNR=209						
FINES				Lg		23 52 10.5	
	32nm,0.3s,baz=212,slow=34,SNR=33						
VJF	Virojoki	1.88	72	*e*P	Pn	23 51 41.3	-2.2
VJF				*e*S	Sn	23 52 05.1	-3.2
VSU	Vasula	2.10	136	Pn	Pn	23 51 40.3	-6.4
VSU				Lg		23 52 06.1	
KEF	Keuruu	2.23	11	*e*P	Pn	23 51 52.6	+4.1
KEF				*e*S	Sn	23 52 26.9	+10
KEF	Keuruu	2.23	11	P	Pn	23 51 52.5	+4.0
NRTU	Norrtaelje	2.70	266	*e*P	Pn	23 51 55.3	0.0
GRAU	Graesoe	2.73	280	*e*P	Pn	23 51 56.3	+0.7
SUF	Sumiainen	2.93	20	*e*P	Pn	23 52 01.0	+2.4
SUF				*e*S	Sn	23 52 41.5	+6.4
SUF				*e*SG	Sg	23 52 52.9	+5.4
SUF				MSG		23 52 55.7	
	comp=Z,12nm,0.3s						
VAF	Ylistaro	3.12	349	*e*P	Pn	23 52 06.2	+4.9
VAF				*e*S	Sn	23 52 48.2	+8.4
UPP	Uppsala	3.19	270	*e*P	Pn	23 52 02.1	-0.1
NYNU	Nynaeshamn	3.19	254	*e*P	Pn	23 52 01.5	-0.8
IGGU	Iggoen	3.40	288	*e*P	Pn	23 52 06.6	+1.3
OSTU	Oestervaala	3.42	277	*e*P	Pn	23 52 06.0	+0.5
BACU	Backbrunna	3.45	271	*e*P	Pn	23 52 05.8	-0.1
ESKU	Eskilstuna	3.91	262	*e*P	Pn	23 52 12.4	-0.1
FALU	Falun	4.08	281	*e*P	Pn	23 52 15.0	+0.2
ROTU	Roteberg	4.25	293	*e*P	Pn	23 52 17.5	+0.3
IZAR	Zarasai	4.43	163	*e*P	Pn	23 52 21.9	+2.1
IZAR				*e*S	Sn	23 53 13.0	+0.1
IZAR				AML	AML	23 53 18.3	
	comp=Z,8.2nm,0.3s						
IZAR	Zarasai	4.43	163	*e*P	Pn	23 52 22.0	+2.2
	SNR=34						
IZAR				*e*S	Sn	23 53 13.0	+0.1
	comp=Z,8.2nm,0.3s,SNR=34						
IIGN	Ignalina	4.81	164	*e*P	Pn	23 52 28.1	+2.8
IIGN				*e*S	Sn	23 53 25.4	+2.8
IIGN				AML	AML	23 53 32.7	
	comp=Z,14nm,0.3s						
IIGN	Ignalina	4.81	164	*e*P	Pn	23 52 28.1	+2.8
	SNR=32						
IIGN				*e*S	Sn	23 53 25.4	+2.8
	comp=Z,14nm,0.3s,SNR=32						
IDID	Didziasalis	4.92	161	*e*P	Pn	23 52 29.9	+3.0
IDID				*e*S	Sn	23 53 24.4	-1.0
HFS	Hagfors	5.14	276	Pn	Pn	23 52 29.0	-0.9
	baz=64,slow=8.6						
HFS				Sn	Sn	23 53 29.6	-1.3
	baz=101,slow=37						
HFS				Lg		23 53 53.4	
	baz=87,slow=28						
HFS	Hagfors	5.14	276	Pn	Pn	23 52 29.6	-0.3
	comp=Z,0.5nm,0.3s,baz=101,slow=15,SNR=48						
HFS				Sn	Sn	23 53 30.7	-0.1
	comp=Z,0.6nm,0.3s,baz=106,slow=28,SNR=9.3						
HFS				Lg		23 53 51.1	
	comp=Z,0.7nm,0.3s,baz=84,slow=27,SNR=5.0						
NB2	NORSAR Subarra	6.38	285	Pn	Pn	23 52 45.8	-1.5
	baz=96,slow=14						
NB2				Sn	Sn	23 54 01.4	-0.5
	baz=99,slow=22						
NB2				Lg		23 54 34.2	
	baz=95,slow=37						
NOA	NORSAR Array B	6.38	285	Pn	Pn	23 52 45.6	-1.7
	comp=Z,1.9nm,0.3s,baz=98,slow=14,SNR=10						
NOA				Sn	Sn	23 53 59.1	-2.7
	comp=Z,1.1nm,0.3s,baz=137,slow=17,SNR=3.6						
NOA				Lg		23 54 31.1	
	comp=Z,3.0nm,0.3s,baz=164,slow=12,SNR=6.8						
KU4	Liikasenvaara	6.88	19	*e*P	Pn	23 52 55.6	+1.1
BSD	Bornholm Skovb	6.89	229	*i* P	Pg	23 53 15.9	-12
BSD				*e*S	Sn	23 54 22.4	+7.7
NSS	Namsos	7.20	314	*e*P	Pn	23 52 58.0	-1.0
NSS				*e*S	Sn	23 54 22.2	-0.3
NSS				AML	AML	23 55 06.4	
	comp=Z,4.8nm,0.6s						
NSS	Namsos	7.20	314	*e*P	Pn	23 52 58.0	-1.0
	SNR=47						
NSS				*e*S	Sn	23 54 22.2	-0.3
	comp=Z,4.8nm,0.6s,SNR=47						
DOMB	Dombas	7.52	292	*e*P	Pn	23 53 02.8	-0.6
DOMB				*e*S	Sn	23 54 30.1	-0.3
DOMB				AML	AML	23 55 15.0	
	comp=Z,7.3nm,0.3s						
DOMB	Dombas	7.52	292	*e*P	Pn	23 53 02.8	-0.6
	SNR=47						
DOMB				*e*S	Sn	23 54 30.1	-0.3
	comp=Z,7.3nm,0.3s,SNR=47						
MOR8	Moi Rana	7.54	329	*e*P	Pn	23 53 04.5	+0.7
MOR8				*e*S	Sn	23 54 32.6	+1.5
MOR8				AML	AML	23 55 22.9	
	comp=Z,4.2nm,0.7s						
MOR8	Moi Rana	7.54	329	*e*P	Pn	23 53 04.5	+0.7
	SNR=47						
MOR8				*e*S	Sn	23 54 32.6	+1.5
	comp=Z,4.2nm,0.7s,SNR=47						
SGF	Sodankyl	7.56	8	*e*P	Pn	23 53 02.8	-1.2
SGF				*e*S	Sn	23 54 34.1	+2.5
STOK	Stokkvaagen	8.05	327	*e*P	P	23 53 11.2	+0.4
STOK				*e*S	Sn	23 54 44.8	+1.2
STOK				AML	AML	23 55 39.0	
	comp=Z,6.6nm,1.0s						
STOK	Stokkvaagen	8.05	327	*e*P	P	23 53 11.2	+0.4
	SNR=47						
STOK				*e*S	Sn	23 54 44.8	+1.2
	comp=Z,6.6nm,1.0s,SNR=47						
MELSS	Ber_school_2	8.27	331	*e*P	P	23 53 13.4	-0.5
MELSS				*e*S	Sn	23 54 49.3	+0.2
MOL	Molde	8.31	295	*e*P	P	23 53 16.4	+2.0
MOL				*e*S	Sn	23 54 50.6	+0.5
MOL				AML	AML	23 55 42.8	
	comp=Z,5.9nm,0.4s						
MOL	Molde	8.31	295	*e*P	P	23 53 16.5	+2.1
	SNR=47						
MOL				*e*S	Sn	23 54 50.6	+0.5
	comp=Z,5.9nm,0.4s,SNR=47						
MUD	Monsted U'grnd	8.56	252	*i* P	P	23 53 12.9	-5.1
MUD				*i* S	Sn	23 54 49.9	-6.5
APA0	Apatity Array	8.62	24	Pn	P	23 53 16.4	-2.3
	baz=217,slow=16						
KTK1	Kautokeino	9.06	358	*e*P	P	23 53 24.9	0.0
KTK1				*e*S	Sn	23 55 04.8	-4.1
KTK1				AML	AML	23 56 05.3	
	comp=Z,4.4nm,0.5s						
ARA0	ARCESS Array S	9.61	3	Pn	P	23 53 30.2	-1.9
	baz=173,slow=16						
ARA0				Sn	Sn	23 55 16.6	-5.5
	baz=183,slow=22						
ARA0	ARCESS Array S	9.61	3	Pn	P	23 53 30.2	-2.0
	SNR=137						
ARCES	ARCESS Array B	9.61	3	Pn	P	23 53 30.8	-1.4
	comp=Z,1.5nm,0.3s,baz=181,slow=13,SNR=67						
ARCES				Sn	Sn	23 55 15.7	-6.4
	comp=Z,0.6nm,0.3s,baz=187,slow=23,SNR=4.2						
AKASG	Malin Array Be	9.78	160	Pn	P	23 53 23.6	-11
	comp=Z,1.3nm,0.3s,baz=339,slow=13,SNR=5.0						
TRO	Tromso	9.91	350	*e*P	P	23 53 34.3	-2.1
TRO				AML	AML	23 55 26.1	
	comp=Z,2.3nm,0.9s						
TRO	Tromso	9.91	350	*e*P	P	23 53 34.3	-2.1
TRO				*e*S	Sn	23 55 23.4	-6.2
TRO				AML	AML	23 55 26.1	
	comp=Z,2.3nm,0.9s						
GERES	GERESS Array B	12.64	212	Pn	P	23 54 06.0	-7.7
	comp=Z,0.1nm,0.3s,baz=22,slow=13,SNR=4.7						
SPA0	Spitsbergen Ar	18.44	355	P	P	23 55 27.4	-0.7
	baz=163,slow=16						
AKTO	Aktyubinsk	21.43	101	P	P	23 55 53.2	-8.1
	comp=Z,0.7nm,0.3s,mb3.4,baz=296,slow=5.0,SNR=4.4						
MKAR	Makanchi Array	35.96	85	P	P	23 58 08.6	-5.2
	comp=Z,0.1nm,0.3s,mb3.1,baz=316,slow=5.8,SNR=6.2						

RSPR 01 23:55:15.8, 21.87N×61.56W, h7^{km}±9^{km}
TRN 01 23:55:21.9, 16.21N×61.10W, h31^{km}, MD3.6, M3.3(FDF), Md3.3(FDF)
NEIC 01 23:55:22.6, 16.17N×61.24W, h27^{km}, MD3.5(TRN), After TRN.
ISC 01 23:55:21.7±0.8, 16.26N±0.03×60.95W±0.06, h37^{km}±14^{km}, n29, σ0.^{s}94/45, 12C-5D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEG	La Desirade	0.12	297	⇓*i*P	P	23 55 27.9	-0.1
MGG	Marie-Galante	0.49	226	⇑*i*P	P	23 55 32.1	0.0
BCG	Bois Riant Cap	0.67	255	⇓*i*P	P	23 55 34.7	+0.1
DOG	Dongo Capester	0.68	251	*e*P	P	23 55 35.1	+0.3
DWS	Wesley	0.77	207	⇓*i*P	P	23 55 36.6	+0.5
DWS				*e*S	S	23 55 47.3	+0.7
TBG	Guadaloupe-3	0.78	239	⇓*e*P	P	23 55 36.3	0.0
TBG				*e*S	S	23 55 46.9	-0.1
LZG	Guadaloupe-1	0.80	262	⇓*i*P	P	23 55 36.4	-0.1
BBL	Barber's Block	0.89	214	⇑*i*P	P	23 55 37.3	-0.4
BBL				*i* S	S	23 55 48.9	-0.6
MDN	Morne-Daniel	1.03	204	⇑*i*P	P	23 55 40.3	+0.5
MDN				*e*S	S	23 55 53.5	+0.3
DBCT	Belle View Cho	1.05	201	*e*P	P	23 55 41.6	+1.5
DBCT				*e*S	S	23 55 52.4	-1.4
DBCT				*e*S	S	23 55 54.2	+0.3
DSHT	Scott's Head	1.12	201	*e*P	P	23 55 41.8	+0.7
DSHT				*e*S	S	23 55 55.1	-0.4
BPA	Boggy Peak	1.17	312	⇑*e*P	P	23 55 43.0	+1.3
BPA				*e*S	S	23 55 58.0	+1.2
CRM	Caravelle	1.50	179	⇑*e*P	P	23 55 45.5	-1.0
CRM				*e*S	S	23 56 03.8	-1.3
FDF	Fort de France	1.53	187	⇑*e*P	P	23 55 45.8	-1.2
FDF				*e*S	S	23 56 04.9	-1.0
CPB	Codrington	1.61	329	*e*P	P	23 55 48.7	+0.6
CPB				*e*S	S	23 56 12.1	+4.3
MVM	Montagne Vaucl	1.70	178	⇑*e*P	P	23 55 48.8	-0.5
SLB	Belfond	2.42	182	*e*P	P	23 56 00.7	+1.0
SLB				*e*S	S	23 56 29.7	+1.3
BHS	Barnard House	2.95	183	*e*P	P	23 56 07.9	+0.6
BHS				*e*S	S	23 56 43.0	+1.1
SVB	Belmont	2.98	186	*e*P	P	23 56 08.4	+0.6
SVB				*e*S	S	23 56 47.0	+4.2
GRW	Mount Saint Ca	4.13	190	*e*P	P	23 56 24.0	0.0
MTP	Monte Pirata	4.76	293	*e*S	S	23 57 34.6	+6.8
MTP	Monte Pirata	4.76	293	⇑*e*P	P	23 56 32.1	-0.9
MTP				*e*S	S	23 57 34.6	+6.8
HUMP	Col San Antoni	5.04	292	⇑*e*P	P	23 56 35.9	-1.0
CPD	Cerro la Pandu	5.07	291	*e*Pn	P	23 56 32.4	-4.8
SJG	San Juan	5.30	291	*e*Pn	P	23 56 40.4	-0.1
	38nm,0.3s						
CELP	Cerrillos	5.67	289	⇑*e*P	P	23 56 44.2	-1.5
MGP	Maguayo	6.12	287	⇑*e*P	P	23 56 50.1	-1.9
CRPR	Cabo Rojo, PR	6.14	287	*e*S	S	23 58 03.9	+1.7
CRPR	Cabo Rojo, PR	6.14	287	⇑*e*P	P	23 56 50.5	-1.8
CRPR				*e*S	S	23 58 03.9	+1.7

MEX 01 23:56:57.6±1.0, 15.19N×95.95W, h6^{km}, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.59	345	*i* P	Pg	23 57 07.6	-1.9
HUIG				*i* S	Sg	23 57 16.6	-0.7
VHO	Vista Hermosa	2.01	338	*i* P	Pn	23 57 29.8	-2.8
VHO				*i* S	Sn	23 57 53.5	-4.8
OXX	Oaxaca	2.02	339	*e*P	Pn	23 57 30.0	-2.6

CMIG	**Matias Romero**	**2.15**	**28**	*e*P	Pn	23 57 30.8	-3.6
CMIG				*i* S	Sn	23 57 57.6	-4.0

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*CSEM **02** 00:30:42.2, 17.15S×177.61W, h33^{km}, mb5.7*
*IDC **02** 00:31:29.9±1.2, 17.19S×178.47W, h447^{km}±12^{km}, mb4.1/12, mb1 4.3/14, mb1mx4.2/17, mbtmp4.8/14, Error ellipse: s-maj=16.9km s-min=10.6km az=143.0*
*BJI **02** 00:31:30.8, 17.20S×178.50W, h458^{km}, mB4.7, mb4.4*
*NEIC **02** 00:31:30.9±1.1, 17.20S×178.55W, h458^{km}±12^{km}, mb4.6/17, Error ellipse: s-maj=12.8km s-min=8.1km az=143.0*
*MOS **02** 00:31:31.7±1.5, 16.96S×178.72W, h463^{km}, mb4.8/5, Error ellipse: s-maj=32.5km s-min=15.9km az=82.9*
ISC 02 00:31:28.9±0.9**, 17.16S**±0.08×**178.60W**±0.07**, h444^{km}**±10^{km}**, n182,** σ**1^{s}04**/70**, mb4.5**/39**, 17C-11D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.33**	**65**	P	**P**	**00 33 17.8**	**-0.2**
	28nm,0.3s,baz=94,slow=1.1,SNR=27						
AFI				S	**S**	**00 34 44.2**	**-0.2**
	8.3nm,0.3s,baz=18,slow=19,SNR=3.8						
AFI	**Afiamalu**	**7.33**	**65**	*e*P	**P**	**00 33 18.2**	**+0.1**
	114nm,0.5s						
DZM	**Mont Dzumac**	**14.91**	**248**	P	**P**	**00 34 43.3**	**+2.6**
	0.8nm,0.3s,baz=59,slow=20,SNR=8.9						
URZ	**Urewera**	**21.36**	**189**	P	**P**	**00 35 42.0**	**-1.9**
	25nm,0.6s,mb4.8,baz=15,slow=3.9,SNR=12						
CNB	**Canberra Magne**	**33.74**	**231**	⇑*i*P	**P**	**00 37 33.6**	**+0.6**
	40nm,0.7s,mb4.9						
PMG	**Port Moresby**	**34.16**	**279**	P	**P**	**00 37 39.1**	**+2.4**
	32nm,0.9s,mb4.7,baz=78,slow=9.1,SNR=8.0						
PMG	**Port Moresby**	**34.16**	**279**	P	**P**	**00 37 39.1**	**+2.4**
STKA	**Stephens Creek**	**38.84**	**240**	⇑*i*P	**P**	**00 38 15.8**	**+0.4**
	12nm,0.6s,mb4.4						
STKA	**Stephens Creek**	**38.84**	**240**	P	**P**	**00 38 15.9**	**+0.5**
	14nm,0.5s,mb4.5,baz=93,slow=9.5,SNR=43						
WRAB	**Tennant Creek**	**44.58**	**259**	*e*P	**P**	**00 38 58.8**	**-2.8**
WRA	**Warramunga Arr**	**44.59**	**259**	P	**P**	**00 39 00.9**	**-0.8**
	1.2nm,0.3s,mb3.7,baz=94,slow=6.9,SNR=9.7						
ASPA	**Alice Springs**	**44.83**	**254**	*e*P	**P**	**00 39 02.9**	**-0.6**
KAKA	**Kakadu**	**47.42**	**268**	*e*P	**P**	**00 39 40.9**	**+17**
	10nm,0.5s,mb4.4						
FITZ	**Fitzroy Crossi**	**52.98**	**260**	*e*P	**P**	**00 40 04.4**	**-0.4**
	9.9nm,0.7s,mb4.2						
MJAR	**Matsushiro Arr**	**67.20**	**323**	P	**P**	**00 41 38.2**	**-1.0**
	16nm,0.7s,mb4.8,baz=159,slow=5.6,SNR=35						
MAJO	**Matsushiro**	**67.20**	**323**	*e*P	**P**	**00 41 38.2**	**-1.0**
	19nm,0.8s,mb4.8						
MAT	**Matsushiro**	**67.20**	**323**	P	**P**	**00 41 38.3**	**-0.9**
MAT	**Matsushiro**	**67.20**	**323**	*e*P	**P**	**00 41 38.0**	**-1.2**
	14nm,0.7s,mb4.7						
KSM	**Kuching**	**72.41**	**277**	*e*P	**P**	**00 42 11.2**	**+0.5**
PET	**Petropavlovsk**	**72.60**	**346**	*e*P	**P**	**00 42 10.2**	**-0.9**
PET				pmax	pmax		
	comp=Z,27nm,0.5s,mb5.0						
QSPA	**South Pole Qui**	**72.89**	**180**	*e*P	**P**	**00 42 12.5**	**+0.2**
	comp=Z,33nm,0.9s,mb4.9						
MIR	**Mirnyy**	**73.77**	**205**	*d i*P	**P**	**00 42 18.0**	**+0.5**
MIR				pmax	pmax		
	comp=Z,42nm,1.8s,mb4.8						
SSE	**Sheshan**	**75.12**	**310**	P	**P**	**00 42 27.6**	**+1.7**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,100nm,4.4s						
NJ2	**Nanjing**	**77.32**	**309**	*e*P	**P**	**00 42 44.5**	**+6.5**
NJ2				PP	PP	00 45 44.8	+4.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,620nm,4.5s						
MDJ	**Mudanjiang**	**77.47**	**325**	P	**P**	**00 42 38.9**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,50nm,3.6s						
MDJ	**Mudanjiang**	**77.47**	**325**	*e*P	**P**	**00 42 39.4**	**+0.9**
NVAR	**Mina Array Bea**	**79.01**	**44**	P	**P**	**00 42 46.8**	**-0.1**
	comp=Z,6.3nm,0.7s,mb4.3,baz=216,slow=7.6,SNR=59						
CN2	**Changchun**	**79.32**	**322**	*e*P	**P**	**00 42 49.0**	**+0.7**
LDFC	**Landfair**	**79.50**	**48**	*e*P	**P**	**00 42 50.4**	**+0.9**
TUC	**Tucson**	**81.39**	**52**	*e*P	**P**	**00 43 00.7**	**+1.3**
	comp=Z,14nm,1.4s,mb4.5						
ARUT	**Antelope Range**	**81.99**	**47**	*e*P	**P**	**00 43 03.1**	**+0.8**
MSU	**Marysvale**	**83.21**	**46**	*e*P	**P**	**00 43 09.9**	**+1.5**
ENH	**Enshi**	**83.70**	**304**	*e*P	**P**	**00 43 12.4**	**+1.3**
	comp=Z,42nm,1.3s,mb5.0						
MCK	**McKinley**	**83.85**	**13**	*e*P	**P**	**00 43 09.8**	**-1.2**
	comp=Z,13nm,1.1s,mb4.6						
MCK	**McKinley**	**83.85**	**13**	*e*P	**P**	**00 43 09.8**	**-1.2**
MCK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
THY	**Trims Highway**	**84.29**	**14**	*e*P	**P**	**00 43 12.6**	**-0.6**
MAW	**Mawson**	**84.50**	**200**	P	**P**	**00 43 14.6**	**+0.5**
	comp=Z,11nm,0.8s,mb4.7,baz=122,slow=5.4,SNR=26						
SRU	**San Rafael**	**84.63**	**46**	*e*P	**P**	**00 43 15.6**	**+0.1**
	comp=Z,12nm,1.5s,mb4.4						
COLA	**College**	**85.08**	**13**	*e*P	**P**	**00 43 15.3**	**-1.7**
	comp=Z,14nm,0.9s,mb4.7						
COLA	**College**	**85.08**	**13**	*e*P	**P**	**00 43 15.3**	**-1.8**
COLA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
ILAR	**Eielson Array**	**85.20**	**13**	P	**P**	**00 43 16.1**	**-1.6**
	comp=Z,4.6nm,0.5s,mb4.5,baz=221,slow=5.2,SNR=69						
XAN	**Xi'an**	**85.66**	**307**	P	**P**	**00 43 21.4**	**+0.8**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.3						
BILL	**Bilibino**	**85.67**	**354**	*de*P	**P**	**00 43 19.3**	**-0.5**
BILL				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.0						
TXAR	**Lajitas Array**	**85.75**	**58**	P	**P**	**00 43 22.5**	**+1.3**
	comp=Z,3.0nm,0.8s,mb4.1,baz=218,slow=6.5,SNR=33						
ANMO	**Albuquerque**	**85.78**	**52**	*e*P	**P**	**00 43 21.7**	**+0.5**
	comp=Z,2.1nm,1.0s,mb3.8						
ANMO	**Albuquerque**	**85.78**	**52**	*e*P	**P**	**00 43 21.7**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RRI2	**Red Ridge**	**86.05**	**42**	*e*P	**P**	**00 43 22.7**	**+0.5**
	comp=Z,14nm,0.8s,mb4.8						
TPAW	**Teton Pass**	**86.36**	**42**	*e*P	**P**	**00 43 24.2**	**+0.5**
	comp=Z,16nm,1.3s,mb4.6						
DAWY	**Dawson**	**86.42**	**16**	*e*P	**P**	**00 43 23.0**	**-0.4**
IMW	**Indian Meadow**	**86.55**	**42**	*e*P	**P**	**00 43 25.4**	**+0.8**
	comp=Z,13nm,0.8s,mb4.7						
HHC	**Hu-ho-hao-te**	**86.62**	**314**	*e*P	**P**	**00 43 25.4**	**+0.4**
HHC				AP	pP	00 45 05.8	-0.2
HHC				XP	sP	00 45 50.8	-0.3
HHC				PP	PP	00 46 56.0	+0.4
HHC				SKS	SKS	00 53 07.7	+0.4
HHC				S	S	00 53 22.7	-0.2
HHC				PS	PS	00 55 29.1	-0.2
HHC				SS	SS	00 59 20.2	+0.3
HHC				AMB	AMB		
	comp=Z,90nm,4.9s						
LOHW	**Long Hollow**	**86.64**	**42**	*e*P	**P**	**00 43 25.6**	**+0.5**
	comp=Z,4.4nm,0.6s,mb4.4						
PDAR	**Pinedale Array**	**86.93**	**44**	P	**P**	**00 43 26.4**	**-0.1**
	comp=Z,4.6nm,0.6s,mb4.4,baz=224,slow=2.6,SNR=46						
KMI	**Kunming**	**87.33**	**297**	P	**P**	**00 43 27.3**	**-1.5**
KMI				AMB	AMB		
	comp=Z,10.0nm,2.0s,mb4.2						
CLNS	**Chul'man**	**87.42**	**333**	*e*P	**P**	**00 43 27.6**	**-0.8**
CLNS				pmax	pmax		
	comp=N,11nm,0.9s						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.9						
SYO	**Syowa Base**	**89.84**	**193**	⇑P	**P**	**00 43 38.5**	**-1.0**
LZH	**Lanzhou**	**90.29**	**308**	⇓P	**P**	**00 43 43.2**	**+0.9**
LZH				AP	pP	00 45 25.0	+0.9
LZH				XP	sP	00 46 09.6	+0.7
LZH				*e*PP	PP	00 47 27.3	+2.2
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,50nm,7.5s						
SNAA	**Sanae**	**91.35**	**179**	⇑*i*P	**P**	**00 43 45.4**	**-1.0**
SNAA	**Sanae**	**91.35**	**179**	⇑*i*P	**P**	**00 43 45.4**	**-1.0**
SNAA	**Sanae**	**91.35**	**179**	*e*	**P**	**00 43 51.5**	**+5.1**
VNA3	**Neumayer Olymp**	**91.50**	**176**	*e*	**P**	**00 43 52.7**	**+5.7**
VNA3	**Neumayer Olymp**	**91.50**	**176**	⇑*i*P	**P**	**00 43 46.4**	**-0.6**
VNA3				*e*		00 43 52.7	
VNA2	**Neumayer--Watz**	**91.94**	**177**	*e*	**P**	**00 43 55.2**	**+6.1**
VNA2	**Neumayer--Watz**	**91.94**	**177**	⇑*i*P	**P**	**00 43 48.7**	**-0.4**
VNA2				*e*		00 43 55.2	
VNA1	**Neumayer--Stat**	**92.16**	**177**	*e*	**P**	**00 43 56.5**	**+6.4**
VNA1	**Neumayer--Stat**	**92.16**	**177**	⇑*i*P	**P**	**00 43 50.0**	**-0.1**
VNA1				*e*		00 43 56.5	
SONM	**Songino Array**	**92.86**	**319**	P	**P**	**00 43 53.8**	**0.0**
	comp=Z,1.1nm,0.8s,mb3.9,baz=124,slow=4.2,SNR=8.9						
SONM				PP	PP	00 47 48.9	+3.7
	comp=Z,0.7nm,0.8s,baz=123,slow=6.3,SNR=4.7						
YKA	**Yellowknife Ar**	**93.73**	**25**	P	**P**	**00 43 56.6**	**-0.9**
	comp=Z,2.7nm,0.5s,mb4.5,baz=237,slow=4.6,SNR=17						
TIXI	**Tiksi**	**95.39**	**345**	*e*P	**P**	**00 44 01.7**	**-3.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
MKAR	**Makanchi Array**	**108.48**	**314**	PKiKP		00 49 05.2	
	comp=Z,0.4nm,0.5s,baz=208,slow=0.6,SNR=12						
CHKZ	**Chkalovo**	**115.94**	**322**	*e*PKPdf	PKPdf	00 49 19.1	-0.7
ARCES	**ARCESS Array B**	**125.55**	**350**	PKP	PKPdf	00 49 38.1	+0.2
	comp=Z,5.7nm,0.8s,baz=114,slow=0.7,SNR=18						
BOSA	**Boshof**	**128.98**	**207**	SKPbc		00 52 23.8	
	comp=Z,1.9nm,0.7s,baz=126,slow=5.6,SNR=4.4						
FINES	**FINESS Array B**	**132.42**	**344**	PKhKP		00 49 43.2	
	comp=Z,2.1nm,0.9s,baz=27,slow=4.3,SNR=4.5						
FINES				PKP	PKPdf	00 49 51.3	+0.1
	comp=Z,0.6nm,0.5s,SNR=6.2						
FINES				SKPbc		00 52 35.5	
	comp=Z,6.2nm,1.1s,baz=315,slow=2.7,SNR=4.2						
MATP	**Matopo**	**134.15**	**217**	PKP	PKPdf	00 49 56.1	+0.5
	comp=Z,1.3nm,0.6s,baz=302,slow=4.1,SNR=7.4						
MATP				SKPbc		00 52 43.0	
	comp=Z,3.8nm,0.7s,baz=152,slow=2.9,SNR=13						
NB2	**NORSAR Subarra**	**135.61**	**353**	PKPabc	PKPdf	00 49 58.6	+1.5
	comp=Z,0.4nm,0.4s,baz=13,slow=2.5						
NOA	**NORSAR Array B**	**135.61**	**353**	PKP	PKPdf	00 49 57.9	+0.8
	comp=Z,0.7nm,0.7s,baz=18,slow=5.0,SNR=3.0						
LSZ	**Lusaka**	**138.32**	**221**	PKhKP		00 49 54.4	
	comp=Z,0.9nm,0.6s,baz=217,slow=3.4,SNR=3.1						
LSZ				SKPbc		00 52 55.9	
	comp=Z,2.4nm,0.8s,baz=138,slow=4.6,SNR=6.5						
AKASG	**Malin Array Be**	**139.81**	**333**	PKP	PKPdf	00 50 07.0	+2.0
	comp=Z,0.3nm,0.3s,baz=53,slow=4.0,SNR=5.2						
TSUM	**Tsumeb**	**140.52**	**204**	PKhKP		00 50 02.7	
	comp=Z,1.8nm,0.8s,baz=161,slow=2.7,SNR=5.1						
BOYT	**Boyabat**	**142.45**	**317**	*i* P	PKPdf	00 50 07.6	-2.4
BALT	**Daday**	**143.37**	**318**	*i* P	PKPbc	00 50 10.1	-0.3
OJC	**Ojcow**	**143.85**	**340**	*e*PKP	PKPdf	00 50 11.7	-0.3
BURAR	**Bucovina Array**	**143.87**	**332**	⇑P	PKPbc	00 50 12.3	+0.6
ELDT	**Eldivan**	**143.88**	**317**	*i* P	PKPbc	00 50 11.9	-0.1
STHS	**Stebnicka Huta**	**144.03**	**338**	*i* PKP	PKPdf	00 50 12.9	+0.5
KOLS	**Kolonicke sedl**	**144.05**	**336**	*i* PKP	PKPdf	00 50 12.8	+0.4
BR131	**Keskin Array S**	**144.12**	**315**	*e*PKPdf	PKPdf	00 50 13.4	+0.5
BRTR	**Keskin Array B**	**144.12**	**315**	PKP	PKPdf	00 50 13.0	+0.1
	comp=Z,6.6nm,0.8s,baz=127,slow=4.4,SNR=33						
CFR	**Carcaliu**	**144.21**	**327**	⇑P	PKPbc	00 50 12.6	-0.2
KSP	**Ksiaz**	**144.34**	**344**	⇓*e*PKP	PKPdf	00 50 13.7	+0.8
KSP	**Ksiaz**	**144.34**	**344**	*e*PKIKP	PKPdf	00 50 13.4	+0.5
NIE	**Niedzica**	**144.36**	**339**	⇓*e*PKP	PKPdf	00 50 14.0	+1.0
CRVS	**Cervenica-Dubn**	**144.38**	**337**	*i* PKP	PKPdf	00 50 14.0	+1.0
VRI	**Vrincioaia**	**144.44**	**329**	⇑P	PKPdf	00 50 14.3	+1.1
ANTO	**Ankara**	**144.62**	**316**	*e*PKPdf	PKPdf	00 50 15.2	+1.4
HARR	**Harsova**	**144.65**	**327**	⇑P	PKPdf	00 50 14.4	+0.8
CLZ	**Clausthal**	**144.67**	**350**	*e*PKIKP	PKPdf	00 50 14.5	+1.1
CLL	**Collm**	**144.69**	**347**	*i* PKIKP	PKPdf	00 50 14.2	+0.7
CLL				pmax	pmax		
	comp=Z,62nm,1.0s						
OKC	**Ostrava-Krasne**	**144.71**	**341**	*e*PKP	PKPdf	00 50 14.6	+1.0
UPC	**Upice**	**144.72**	**344**	*e*PKP	PKPdf	00 50 14.5	+0.9
SGKT	**Sivrigoynuk**	**144.73**	**318**	*i* P	PKPdf	00 50 13.8	-0.1
DPC	**Dobruska-Polom**	**144.78**	**343**	*e*PKP	PKPdf	00 50 15.2	+1.5
BRG	**Berggiesshubel**	**144.90**	**346**	*i* PKIKP	PKPdf	00 50 15.1	+1.2
BRG				pmax	pmax		
	comp=Z,36nm,1.1s						
MORC	**Moravsky Berou**	**144.94**	**342**	*e*PKPdf	PKPdf	00 50 15.1	+1.1
ISR	**Istrita**	**145.07**	**328**	⇑P	PKPdf	00 50 16.1	+1.7
PVCC	**Panska Ves**	**145.07**	**345**	*e*PKP	PKPdf	00 50 16.0	+1.8
KECS	**Kecovo**	**145.09**	**338**	*i* PKP	PKPdf	00 50 16.0	+1.7
MLR	**Muntele Rosu**	**145.10**	**329**	⇓P	PKPdf	00 50 16.6	+2.2
PRU	**Pruhonice**	**145.58**	**345**	*e*PKP	PKPdf	00 50 17.2	+2.1
MOX	**Moxa**	**145.60**	**348**	*i* P	PKPdf	00 50 17.1	+2.0
	comp=Z,logA/T=1.3						
UMJS	**Umm Lajj**	**145.65**	**290**	P	PKPdf	00 50 18.8	+2.8
VYHS	**Vyhne**	**145.66**	**339**	*i* PKP	PKPdf	00 50 17.8	+2.6
NKC	**Novy Kostel**	**145.83**	**347**	*e*PKP	PKPdf	00 50 17.2	+1.7
TREC	**Trest**	**145.97**	**343**	*e*PKP	PKPdf	00 50 18.0	+2.3
ESKT	**Eskisehir**	**146.07**	**317**	*i* P	PKPdf	00 50 16.9	+0.7
SRO	**Srobarova**	**146.42**	**339**	*e*PKP	PKPdf	00 50 20.5	+4.0
SRO2	**Moca**	**146.44**	**339**	*i* PKP	PKPdf	00 50 20.1	+3.5
ZST	**Bratislava**	**146.48**	**341**	*i* PKP	PKPdf	00 50 20.5	+3.9
TNS	**Taunus Mts**	**146.53**	**352**	*e*PKP2	PKPab	00 50 19.8	-3.9
GRF	**Grafenberg Arr**	**146.59**	**348**	*e*PKP2	PKPab	00 50 22.3	-1.6
KHC	**Kasperske Hory**	**146.61**	**345**	*e*PKP	PKPdf	00 50 20.2	+3.4
ULDT	**Uludag**	**146.82**	**319**	*i* P	PKPdf	00 50 20.0	+2.5
GEC2	**GERESS Array S**	**146.84**	**345**	*e*PKP2	PKPab	00 50 20.8	-4.1
GERES	**GERESS Array B**	**146.84**	**345**	PKPbc	PKPbc	00 50 20.7	+1.5
	comp=Z,6.0nm,0.8s,baz=24,slow=3.1,SNR=40						
JMOS	**Jabal al Moall**	**146.90**	**297**	P	PKPdf	00 50 21.8	+3.9
GIVF	**Givet**	**147.02**	**356**	*e*PKP1	PKPdf	00 50 20.6	+3.2
	comp=Z,24nm,0.7s						
BDAS	**Al Bad'**	**147.07**	**296**	P	PKPdf	00 50 22.2	+4.0
HAQS	**Haql**	**147.08**	**297**	P	PKPdf	00 50 22.4	+4.1
BAIF	**Baives**	**147.10**	**357**	*e*PKP1	PKPdf	00 50 20.5	+2.9
	comp=Z,48nm,1.2s						
MOA	**Molln**	**147.62**	**344**	⇓*i*P	PKPdf	00 50 22.8	+4.3
	comp=Z,16nm,1.2s,SNR=9.6						
ARSA	**Arzberg**	**147.81**	**342**	⇑*i*P	PKPdf	00 50 22.6	+3.8
	comp=Z,9.4nm,1.2s						
FUR	**Furstenfeldbru**	**148.03**	**347**	*e*PKP2	PKPab	00 50 23.9	-5.7
KDZ	**Kurdzhali**	**148.06**	**325**	*e*P	PKPdf	00 50 23.0	+3.6
BFO	**Black Forest**	**148.40**	**351**	*e*PKP2	PKPab	00 50 24.8	-6.3
FLN	**La Foliniere**	**148.44**	**2**	*e*PKP1	PKPdf	00 50 24.0	+4.2
	comp=Z,54nm,0.8s						
CDF	**Champ du Feu**	**148.46**	**353**	*e*PKP1	PKPdf	00 50 24.5	+4.7
	comp=Z,29nm,0.9s						
VTS	**Vitosha**	**148.56**	**328**	*e*P	PKPdf	00 50 25.0	+4.8
KBA	**Koelnbreinsper**	**148.57**	**344**	⇑*i*P	PKPdf	00 50 24.5	+4.4
	comp=Z,7.5nm,0.6s						
MEZF	**Maizieres J'vi**	**148.60**	**355**	*e*PKP1	PKPdf	00 50 25.0	+5.0
ROSF	**Rostrenen**	**148.67**	**6**	*e*PKP1	PKPdf	00 50 24.4	+4.3
WATA	**Walderalm**	**148.76**	**347**	⇓*i*P	PKPdf	00 50 25.4	+5.1
	comp=Z,8.5nm,1.0s						
GRR	**Gorron**	**148.80**	**3**	*e*PKP1	PKPdf	00 50 25.1	+4.8
	comp=Z,36nm,0.6s						
WTTA	**Wattenberg**	**148.81**	**346**	⇓*i*P	PKPdf	00 50 25.9	+5.5
	comp=Z,20nm,0.7s						
SGMF	**Saint Gilles**	**148.82**	**5**	*e*PKP1	PKPdf	00 50 24.8	+4.4
	comp=Z,24nm,0.6s						
MOTA	**Moosalm**	**148.85**	**347**	⇓*i*P	PKPdf	00 50 25.7	+5.2
	comp=Z,16nm,1.3s,SNR=9.5						
DIVS	**Divcibare**	**148.89**	**334**	⇑*i*PKP	PKPdf	00 50 26.1	+5.4
SQTA	**Sankt Quirin**	**148.94**	**347**	⇓*i*P	PKPdf	00 50 26.2	+5.6
	comp=Z,6.3nm,0.8s						
HAU	**Haudompre**	**148.97**	**354**	*e*PKP1	PKPdf	00 50 25.6	+5.0
	comp=Z,21nm,0.9s						
MMB	**Musomiste**	**149.01**	**326**	*e*P	PKPdf	00 50 26.0	+5.1
PDKS	**Podkum**	**149.03**	**341**	*i* PKPbc	PKPdf	00 50 26.1	+5.3
LEGS	**Legarje**	**149.04**	**341**	*e*PKPbc	PKPdf	00 50 25.9	+5.1
LEGS				*e*PKPab	PKPab	00 50 31.9	-1.9
HINF	**Hinteralfeld**	**149.10**	**353**	*e*PKP1	PKPdf	00 50 25.8	+5.0
	comp=Z,6.5nm,0.7s						
DAVA	**Damuels**	**149.15**	**349**	⇑*i*P	PKPdf	00 50 27.1	+6.1
	comp=Z,22nm,1.0s						
KKB	**Krupnik**	**149.15**	**327**	*e*P	PKPdf	00 50 27.0	+5.9
LJU	**Ljubljana**	**149.19**	**342**	*i* PKPbc	PKPdf	00 50 26.5	+5.4
VOJS	**Vojsko**	**149.39**	**343**	*i* PKPbc	PKPdf	00 50 26.6	+5.2
LOR	**Lormes**	**149.90**	**357**	*e*PKP1	PKPdf	00 50 28.1	+5.9
	comp=Z,40nm,0.9s						
HYF	**Humbligny**	**149.96**	**358**	*e*PKP1	PKPdf	00 50 28.5	+6.3
SSF	**Saint Saulge**	**150.13**	**357**	*e*PKP1	PKPdf	00 50 28.6	+6.1
	comp=Z,66nm,1.1s						
CABF	**La Chapelle**	**150.37**	**353**	*e*PKP1	PKPdf	00 50 29.7	+6.8
	comp=Z,65nm,1.0s						
AVF	**Avril sur Loir**	**150.41**	**357**	*e*PKP1	PKPdf	00 50 28.9	+6.0
SMF	**Signal de Mont**	**150.53**	**357**	*e*PKP1	PKPdf	00 50 29.1	+6.0
MFF	**Saint Martin d**	**150.61**	**2**	*e*PKP1	PKPdf	00 50 29.4	+6.1
	comp=Z,51nm,1.0s						
BGF	**Bois d'Agland**	**150.66**	**358**	*e*PKP1	PKPdf	00 50 29.8	+6.5
	comp=Z,39nm,1.0s						
TCF	**Toulx Ste Croi**	**150.94**	**359**	*e*PKP1	PKPdf	00 50 30.3	+6.5
	comp=Z,32nm,1.1s						
LPL	**La Plagne**	**151.38**	**352**	*e*PKP1	PKPdf	00 50 32.3	+7.9
	comp=Z,14nm,0.7s						
LPG	**La Plagne**	**151.39**	**352**	*e*PKP1	PKPdf	00 50 32.4	+8.0
	comp=Z,17nm,0.9s						
RJF	**Les Rejaudoux**	**151.94**	**360**	*e*PKP1	PKPdf	00 50 32.5	+7.3
ORIF	**Oris-en-Rattie**	**152.07**	**353**	*e*PKP1	PKPdf	00 50 33.3	+7.9
	comp=Z,14nm,0.9s						
MBDF	**Montbardon**	**152.15**	**352**	*e*PKP1	PKPdf	00 50 33.4	+7.9
	comp=Z,16nm,0.7s						
VIVF	**Saint-Julien-l**	**152.25**	**355**	*e*PKP1	PKPdf	00 50 33.6	+8.0
LFF	**La Frestale**	**152.30**	**1**	*e*PKP1	PKPdf	00 50 33.3	+7.6
CAF	**Calviac**	**152.31**	**359**	*e*PKP1	PKPdf	00 50 33.4	+7.7
	comp=Z,13nm,0.8s						
SBF	**Sospel**	**152.89**	**350**	*e*PKP1	PKPdf	00 50 34.9	+8.3
	comp=Z,24nm,0.8s						
SMRF	**Simiane la Rot**	**153.03**	**353**	*e*PKP1	PKPdf	00 50 36.4	+10
	comp=Z,9.8nm,0.9s						
LASF	**Ste Croix**	**153.09**	**356**	*e*PKP1	PKPdf	00 50 35.5	+8.7
	comp=Z,7.3nm,0.8s						
FRF	**La Foret Royal**	**153.31**	**351**	*e*PKP1	PKPdf	00 50 36.2	+9.1
EPF	**Esparros**	**154.19**	**2**	*e*PKP1	PKPdf	00 50 38.3	+10
ESDC	**Sonseca Array**	**157.08**	**11**	PKPab	PKPab	00 51 06.2	-1.7
	comp=Z,0.8nm,0.6s,baz=347,slow=4.8,SNR=6.1						
EVO	**Evora**	**157.16**	**19**	*e*PKIKP	PKPdf	00 50 37.6	+5.2
	comp=Z,26nm,1.2s						
DBIC	**Dimbokro**	**167.92**	**149**	PKPab	PKPab	00 51 55.2	-0.4
	comp=Z,4.6nm,1.0s,baz=177,slow=12,SNR=3.1						

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*IDC **02** 00:46:43.5±0.7, 54.33S×5.25E, mb4.5/9, mb1 4.6/10, mb1mx4.3/15, mbtmp4.5/10, ML3.7/1, MS4.2/10, Ms1 4.2/10, ms1mx4.1/15, Error ellipse: s-maj=22.4km s-min=18.3km az=139.0*
*HRVD **02** 00:46:44.7±0.4, 54.55S×5.58E, h12^{km}, MW5.0/51, Centroid moment Tensor Solution. LP body waves: s15,c17;Mantle waves: s51,c77; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.18±.14; M$_{\theta\theta}$3.11±.14; M$_{\phi\phi}$0.06±.17; M$_{r\theta}$-0.42±.53; M$_{\theta\phi}$-1.04±.12; M$_{\phi r}$-1.48±.60; Best double couple: M$_0$3.635×10^{16} NP1:φ$_s$86°, δ49°, λ-121°. NP2:φ$_s$309°, δ50°, λ-59°. Principal axes: T 3.432, Plg0°, Azm17°; N .405, Plg23°, Azm108°; P -3.839, Plg67°, Azm286°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **02** 00:46:44.7±0.3, 54.39S×5.24E, h10^{km}, mb5.1/5, MS4.6/6 Error ellipse: s-maj=12.1km s-min=7.1km az=101.0*
ISC 02 00:46:43.0±0.5**, 54.37S**±0.06×**5.2E**±0.2**, h10^{km}, n42,** σ**0^{s}67**/26**, mb4.6**/15**, MS4.4**/15**, 5C, Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.40**	**195**	⇑*i*P	**P**	**00 50 46.8**	**-0.2**
VNA1				*e*		00 50 58.1	
VNA1				*e*		00 53 44.3	
VNA2	**Neumayer--Watz**	**17.52**	**194**	⇑*i*P	**P**	**00 50 48.0**	**-0.6**
VNA2				*e*		00 50 59.0	
VNA2				*e*		00 53 45.5	
VNA2				*e*		00 55 28.6	
VNA2				*e*		00 55 34.2	
SNAA	**Sanae**	**17.71**	**188**	*e*	**P**	**00 51 04.3**	**+13**
SNAA	**Sanae**	**17.71**	**188**	P	**P**	**00 50 51.3**	**+0.3**
	0.3nm,0.3s,baz=13,slow=13,SNR=54						
SNAA				S	**S**	**00 53 51.0**	**-15**
	0.1nm,0.3s,baz=11,slow=16,SNR=5.1						
SNAA				LR	LR	00 55 60.0	
	comp=Z,761nm,21.6s,baz=357,slow=31						
SNAA	**Sanae**	**17.71**	**188**	⇑*i*P	**P**	**00 50 50.5**	**-0.5**
SNAA				*e*		00 51 04.3	
SNAA				*e*		00 53 49.7	
SNAA				*e*		00 55 28.6	
SNAA				*e*		00 55 34.2	
VNA3	**Neumayer Olymp**	**18.14**	**195**	⇑*i*P	**P**	**00 50 55.4**	**-0.9**
VNA3				*e*		00 51 07.6	
VNA3				*e*		00 53 54.1	
VNA3				*e*		00 55 29.4	
VNA3				*e*		00 55 35.0	
SUR	**Sutherland**	**24.64**	**33**	LR	LR	00 59 08.0	
	comp=Z,946nm,20.6s,MS4.3,baz=1.8,slow=30						
BOSA	**Boshof**	**29.60**	**38**	P	**P**	**00 52 49.7**	**-0.6**
	8.1nm,0.9s,mb4.5,baz=208,slow=8.1,SNR=7.4						
BOSA				LR	LR	01 02 31.1	
	comp=Z,953nm,19.1s,MS4.4,baz=199,slow=32						
BOSA	**Boshof**	**29.60**	**38**	P	**P**	**00 52 49.7**	**-0.6**
BOSA				LR	LR	01 02 31.1	
MAW	**Mawson**	**29.68**	**139**	P	**P**	**00 52 51.9**	**+1.3**
	10nm,1.0s,mb4.5,baz=271,slow=7.5,SNR=4.9						
MAW				LR	LR	01 04 19.5	
	comp=Z,258nm,18.4s,MS3.9,baz=271,slow=36						
QSPA	**South Pole Qui**	**35.87**	**180**	⇑*i*P	**P**	**00 53 44.5**	**+0.1**
	68nm,1.8s,mb5.3						
QSPA				LR	LR		
	comp=Z,1µm,19.0s,MS4.7						
TSUM	**Tsumeb**	**36.37**	**20**	P	**P**	**00 53 48.8**	**-0.3**
	comp=Z,7.4nm,1.0s,mb4.6,baz=193,slow=9.1,SNR=6.2						
MATP	**Matopo**	**38.25**	**37**	P	**P**	**00 54 04.8**	**-0.2**
	comp=Z,6.0nm,1.0s,mb4.3,baz=216,slow=10,SNR=6.0						
LSZ	**Lusaka**	**42.94**	**34**	P	**P**	**00 54 44.0**	**+0.4**
	comp=Z,1.4nm,0.8s,mb3.8,baz=209,slow=13,SNR=2.6						
LSZ	**Lusaka**	**42.94**	**34**	P	**P**	**00 54 44.0**	**+0.4**
LSZ				LR	LR		
	comp=Z,879nm,21.0s,MS4.6						
SBA	**Scott Base**	**47.55**	**175**	*e*P	**P**	**00 55 20.4**	**+0.6**
	comp=Z,30nm,1.6s,mb5.1						
SBA				LR	LR		
	comp=Z,717nm,19.0s,MS4.7						
VNDA	**Vanda**	**47.58**	**173**	*e*P	**P**	**00 55 20.1**	**+0.2**
	comp=Z,7.3nm,1.0s,mb4.7						
VNDA				LR	LR		
	comp=Z,544nm,19.0s,MS4.5						
PLCA	**Paso Flores**	**50.45**	**253**	LR	LR	01 16 29.4	
	comp=Z,105nm,18.1s,MS3.9,baz=127,slow=35						
CPUP	**Villa Florida**	**53.11**	**276**	*e*P	**P**	**00 56 02.8**	**0.0**
	comp=Z,93nm,1.4s,mb5.5						
CFAA	**Coronel Fontan**	**55.56**	**263**	P	**P**	**00 56 20.4**	**-0.2**
	comp=Z,0.5nm,0.9s,mb3.5,baz=168,slow=3.9,SNR=5.5						
BAO	**Brasilia Array**	**56.27**	**292**	P	**P**	**00 56 21.5**	**-4.4**
BDFB	**Brasilia**	**56.28**	**292**	P	**P**	**00 56 26.3**	**+0.3**
	comp=Z,8.0nm,0.7s,mb4.9,baz=118,slow=6.1,SNR=13						
BDFB				LR	LR	01 15 30.3	
	comp=Z,181nm,20.2s,MS4.2,baz=337,slow=31						
DBIC	**Dimbokro**	**61.39**	**349**	P	**P**	**00 57 00.8**	**-0.7**
	comp=Z,4.1nm,0.9s,mb4.5,baz=141,slow=7.1,SNR=4.2						
DBIC				LR	LR	01 16 48.1	
	comp=Z,308nm,21.8s,MS4.4,baz=95,slow=29						
LPAZ	**La Paz**	**67.20**	**274**	P	**P**	**00 57 41.1**	**+1.7**
	comp=Z,4.2nm,0.8s,mb4.5,baz=128,slow=6.4,SNR=17						
LPAZ				LR	LR	01 23 08.1	
	comp=Z,192nm,20.8s,MS4.3,baz=123,slow=32						
SAML	**Samuel**	**70.21**	**283**	*e*P	**P**	**00 57 58.0**	**-0.1**
	comp=Z,15nm,1.0s,mb4.9						
SAML				LR	LR		
	comp=Z,282nm,19.0s,MS4.5						
STKA	**Stephens Creek**	**86.25**	**144**	P	**P**	**00 59 25.6**	**-0.1**
	comp=Z,2.4nm,0.8s,mb4.5,baz=189,slow=2.7,SNR=3.4						
STKA	**Stephens Creek**	**86.25**	**144**	*e*P	**P**	**00 59 24.4**	**-1.3**
STKA				P	pP	00 59 25.6	-3.3
ROSC	**El Rosal**	**87.82**	**281**	LR	LR	01 36 44.3	
	comp=Z,160nm,18.9s,MS4.5,baz=204,slow=34						
FITZ	**Fitzroy Crossi**	**91.82**	**125**	LR	LR	01 33 05.6	
	comp=Z,167nm,19.0s,MS4.5,baz=46,slow=30						
RKT	**Rikitea**	**95.56**	**216**	*e*LR	LR	01 31 09.1	
	comp=Z,182nm,33.5s						
TBI	**Tubuai**	**99.58**	**204**	*e*LR	LR	01 33 01.4	
	comp=Z,251nm,38.0s						
MOX	**Moxa**	**104.78**	**4**	PP2		01 00 48.0	
PPT	**Papeete**	**105.16**	**205**	*e*SS	SS	01 20 16.6	+7.8
PPT				*e*LR	LR	01 35 37.1	
	comp=Z,217nm,24.2s						
MKAR	**Makanchi Array**	**119.97**	**51**	PKP	PKPdf	01 05 34.4	-1.7
	comp=Z,0.4nm,1.0s,baz=207,slow=3.2,SNR=2.6						
LTX	**Lajitas**	**124.07**	**274**	PFAKE		01 05 50.0	+5.4
LTX				LR	LR		
	comp=Z,194nm,20.0s,MS4.8						
TXAR	**Lajitas Array**	**124.07**	**274**	PKP	PKPdf	01 05 43.2	-1.4
	comp=Z,0.6nm,1.0s,baz=162,slow=4.0,SNR=4.6						
SONM	**Songino Array**	**132.53**	**64**	PKP	PKPdf	01 05 58.2	-2.0
	comp=Z,0.5nm,0.9s,baz=225,slow=2.0,SNR=2.6						
PDAR	**Pinedale Array**	**136.79**	**282**	PKP	PKPdf	01 06 06.5	-1.5
	comp=Z,0.7nm,0.8s,baz=108,slow=4.7,SNR=5.7						
LAO	**LASA Array**	**137.31**	**289**	*e*P	PKPdf	01 06 09.2	+0.2
NVAR	**Mina Array Bea**	**139.06**	**271**	PKP	PKPdf	01 06 10.9	-1.6
	comp=Z,0.7nm,0.9s,baz=153,slow=2.0,SNR=3.4						
YKA	**Yellowknife Ar**	**148.55**	**309**	PKPbc	PKPdf	01 06 30.1	+2.2
	comp=Z,2.9nm,0.6s,baz=107,slow=3.0,SNR=13						
ILAR	**Eielson Array**	**162.59**	**318**	PKPab	PKPab	01 07 34.1	+0.3
	comp=Z,0.6nm,0.6s,baz=51,slow=6.0,SNR=7.2						

IDC 02 00:47:15.6±6.6, 19.88S×179.16W, h613^{km}±80^{km}, mb3.1/5, mb1 3.5/5, mb1mx3.2/12, mbtmp4.0/5, Error ellipse: s-maj=117.5km s-min=27.8km az=161.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.61**	**262**	P	P	00 54 27.7	-1.6
	0.6nm,0.3s,baz=97,slow=7.1,SNR=4.8						
NVAR	**Mina Array Bea**	**81.33**	**44**	P	P	00 58 30.2	-0.5
	0.6nm,0.5s,baz=228,slow=9.6,SNR=6.9						
TXAR	**Lajitas Array**	**87.65**	**58**	P	P	00 59 00.6	-1.1
	1.0nm,0.8s,baz=206,slow=5.8,SNR=9.8						
ILAR	**Eielson Array**	**87.96**	**13**	P	P	00 59 01.0	-1.3
	0.6nm,0.4s,baz=209,slow=5.3,SNR=9.5						
PDAR	**Pinedale Array**	**89.27**	**44**	P	P	00 59 07.7	-1.2
	0.8nm,0.6s,baz=218,slow=3.0,SNR=7.9						
ARCES	**ARCESS Array B**	**128.12**	**349**	PKP	PKPdf	01 05 12.2	-0.5
	3.5nm,0.9s,baz=34,slow=4.4,SNR=5.9						
FINES	**FINESS Array B**	**134.87**	**343**	PKP	PKPdf	01 05 25.4	-0.2
	2.8nm,1.0s,baz=90,slow=1.4,SNR=3.7						
AKASG	**Malin Array Be**	**141.95**	**331**	PKhKP		01 05 34.8	
	1.4nm,0.4s,baz=43,slow=4.0,SNR=8.7						
BRTR	**Keskin Array B**	**145.62**	**312**	PKPbc	PKPbc	01 05 46.8	+0.2
	0.6nm,0.6s,baz=112,slow=2.0,SNR=6.1						
GERES	**GERESS Array B**	**149.31**	**343**	PKPbc	PKPdf	01 05 56.1	+5.2
	0.4nm,0.6s,slow=1.3,SNR=5.1						

*NEIC **02** 01:25:06.0±0.8, 20.93S×178.76W, h597^{km}±10^{km}, mb4.5/15, Error ellipse: s-maj=10.1km s-min=6.8km az=121.0*

*IDC **02** 01:25:06.9±1.4, 20.89S×178.77W, h605^{km}±16^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.9/21, mbtmp4.9/16, Error ellipse: s-maj=18.8km s-min=11.1km az=146.0*

ISC 02 01:25:03.8±0.8, 20.94S±0.06×178.78W±0.08, h579^{km}±11^{km}, n113, σ0^{s}98/81, mb4.5/25, 13C-9D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.67**	**45**	P	**P**	**01 27 20.4**	**+1.0**
	22nm,0.3s,baz=20,slow=2.8,SNR=29						
AFI				S	**S**	**01 29 06.8**	**-1.2**
	5.3nm,0.3s,baz=38,slow=19,SNR=8.9						
AFI	**Afiamalu**	**9.67**	**45**	P	**P**	**01 27 20.4**	**+1.0**
AFI				S	**S**	**01 29 06.8**	**-1.2**
DZM	**Mont Dzumac**	**13.80**	**263**	P	**P**	**01 28 03.7**	**+3.1**
	1.5nm,0.3s,baz=85,slow=21,SNR=8.9						
URZ	**Urewera**	**17.62**	**191**	P	**P**	**01 28 37.3**	**0.0**
	9.8nm,0.3s,baz=301,slow=2.5,SNR=58						
URZ				S	**S**	**01 31 24.5**	**-4.9**
	0.5nm,0.3s,baz=300,slow=20,SNR=4.2						
URZ	**Urewera**	**17.62**	**191**	PN	**P**	**01 28 36.6**	**-0.7**
URZ	**Urewera**	**17.62**	**191**	P	**P**	**01 28 36.6**	**-0.8**
KIW	**Kapiti Island**	**20.57**	**194**	*e*PN	**P**	**01 29 04.5**	**-0.3**
KIW	**Kapiti Island**	**20.57**	**194**	*e*P	**P**	**01 29 04.5**	**-0.3**
QRZ	**Quartz Range**	**21.16**	**199**	*e*PN	**P**	**01 29 11.1**	**+1.0**
QRZ	**Quartz Range**	**21.16**	**199**	*e*P	**P**	**01 29 11.1**	**+0.9**
DSZ	**Denniston Nort**	**22.22**	**199**	*e*PN	**P**	**01 29 19.6**	**-0.2**
DSZ	**Denniston Nort**	**22.22**	**199**	*e*P	**P**	**01 29 19.6**	**-0.2**
KHZ	**Kahutara**	**22.37**	**195**	*e*PN	**P**	**01 29 20.3**	**-0.9**
KHZ	**Kahutara**	**22.37**	**195**	*e*P	**P**	**01 29 20.3**	**-0.8**
LTZ	**Lake Taylor**	**23.04**	**197**	PN	**P**	**01 29 25.9**	**-1.3**
LTZ	**Lake Taylor**	**23.04**	**197**	P	**P**	**01 29 25.9**	**-1.2**
WVZ	**Waitaha Valley**	**23.76**	**199**	*e*PN	**P**	**01 29 32.7**	**-0.9**
WVZ	**Waitaha Valley**	**23.76**	**199**	*e*P	**P**	**01 29 32.7**	**-0.8**
RPZ	**Rata Peaks**	**24.24**	**198**	P	**P**	**01 29 39.3**	**+1.4**
	9.9nm,0.5s,mb4.7,baz=3.0,slow=0.9,SNR=8.1						
FOZ	**Fox Glacier**	**24.53**	**200**	*e*PN	**P**	**01 29 39.1**	**-1.3**
FOZ	**Fox Glacier**	**24.53**	**200**	*e*P	**P**	**01 29 39.1**	**-1.3**
LBZ	**Lake Benmore**	**25.11**	**199**	*e*PN	**P**	**01 29 44.4**	**-1.1**
LBZ	**Lake Benmore**	**25.11**	**199**	*e*P	**P**	**01 29 44.4**	**-1.1**
JCZ	**Jackson Bay**	**25.29**	**201**	*e*PN	**P**	**01 29 47.3**	**+0.2**
JCZ	**Jackson Bay**	**25.29**	**201**	*e*P	**P**	**01 29 47.3**	**+0.2**
CNB	**Canberra Magne**	**31.38**	**236**	⇑*i*P	**P**	**01 30 41.3**	**+1.6**
	31nm,0.7s,mb5.0						
CTA	**Charters Tower**	**32.72**	**265**	⇑*i*P	**P**	**01 30 52.2**	**+1.0**
	11nm,0.4s,mb4.8						
CTA	**Charters Tower**	**32.72**	**265**	P	**P**	**01 30 52.4**	**+1.2**
	12nm,0.4s,mb4.9,baz=91,slow=11,SNR=30						
CTAO	**Charters Tower**	**32.72**	**265**	*e*P	**P**	**01 30 52.1**	**+0.9**
PMG	**Port Moresby**	**34.73**	**284**	P	**P**	**01 31 08.6**	**+0.6**
	7.4nm,0.6s,mb4.5,baz=99,slow=9.1,SNR=4.4						
STKA	**Stephens Creek**	**36.94**	**245**	⇑*i*P	**P**	**01 31 27.4**	**+1.4**
	14nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**36.94**	**245**	P	**P**	**01 31 27.4**	**+1.4**
	16nm,0.5s,mb4.8,baz=88,slow=9.3,SNR=64						
ASPA	**Alice Springs**	**43.71**	**257**	⇑*i*P	**P**	**01 32 20.4**	**+0.1**
ASPA				*e*S	**S**	**01 38 05.6**	**-4.0**
WRAB	**Tennant Creek**	**43.81**	**263**	*e*P	**P**	**01 32 20.5**	**-0.6**
WRA	**Warramunga Arr**	**43.82**	**263**	P	**P**	**01 32 20.7**	**-0.4**
	17nm,0.5s,mb4.8,baz=98,slow=8.1,SNR=620						
WRA				S	**S**	**01 38 06.0**	**-5.2**
	2.4nm,0.7s,baz=96,slow=14,SNR=10						
KAKA	**Kakadu**	**47.26**	**272**	⇓*i*P	**P**	**01 33 05.1**	**+18**
	9.9nm,0.3s,mb4.8						
KAKA				*e*S	**S**	**01 39 13.6**	**+15**
FORT	**Forrest**	**48.45**	**247**	⇑*i*P	**P**	**01 32 55.5**	**-0.8**
	51nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**52.25**	**263**	⇓*i*P	**P**	**01 33 23.9**	**-0.2**
	7.6nm,0.4s,mb4.4						
FITZ	**Fitzroy Crossi**	**52.25**	**263**	P	**P**	**01 33 23.9**	**-0.2**
	11nm,0.5s,mb4.4,baz=148,slow=8.8,SNR=29						
MBWA	**Marble Bar**	**57.05**	**258**	*e*P	**P**	**01 33 56.3**	**-1.3**
KLBR	**Kellerberrin**	**57.21**	**245**	⇑*i*P	**P**	**01 33 57.5**	**-1.0**
	18nm,0.7s,mb4.4						
SBA	**Scott Base**	**57.39**	**184**	*e*P	**P**	**01 34 01.0**	**+1.9**
	37nm,1.4s,mb4.4						
VNDA	**Vanda**	**57.41**	**185**	*e*P	**P**	**01 34 00.2**	**+0.9**
	19nm,1.4s,mb4.1						
MUN	**Mundaring**	**58.48**	**245**	⇓*i*P	**P**	**01 34 06.8**	**-0.3**
CASY	**Casey**	**63.26**	**205**	⇑*i*P	**P**	**01 34 37.5**	**-0.3**
QSPA	**South Pole Qui**	**69.13**	**180**	*e*P	**P**	**01 35 14.4**	**+0.7**
	48nm,1.0s,mb4.9						
QSPA				⇑*i*P		01 35 14.6	
OHCM	**Honcut**	**80.36**	**41**	*e*P	**P**	**01 36 16.4**	**-0.2**
MAW	**Mawson**	**80.91**	**200**	*e*P	**P**	**01 36 16.6**	**-2.3**
	2.5nm,0.6s,mb3.8						
MAW	**Mawson**	**80.91**	**200**	P	**P**	**01 36 19.0**	**+0.2**
	5.6nm,0.9s,mb4.0,baz=106,slow=5.4,SNR=9.3						
MTUM	**Tungsten Hills**	**81.06**	**44**	*e*P	**P**	**01 36 21.0**	**+0.7**
YBH	**Yreka Blue Hor**	**81.09**	**39**	P	**P**	**01 36 21.2**	**+0.9**
	7.4nm,0.7s,mb4.2,baz=164,slow=2.3,SNR=18						
KDAK	**Kodiak Island**	**81.41**	**14**	P	**P**	**01 36 22.3**	**+0.7**
	5.5nm,0.7s,mb4.1,baz=262,slow=7.1,SNR=4.5						
NVAR	**Mina Array Bea**	**81.84**	**44**	P	**P**	**01 36 24.7**	**+0.5**
	7.6nm,0.9s,mb4.2,baz=229,slow=9.9,SNR=30						
LDFC	**Landfair**	**82.14**	**48**	*e*P	**P**	**01 36 26.3**	**+0.5**
TPNV	**Topopah Spring**	**82.37**	**46**	*e*P	**P**	**01 36 27.6**	**+0.7**
	7.2nm,0.9s,mb4.2						
ENH	**Enshi**	**85.68**	**305**	*e*P	**P**	**01 36 43.7**	**+0.3**
	4.7nm,0.5s,mb4.4						
MCK	**McKinley**	**87.56**	**13**	*e*P	**P**	**01 36 49.9**	**-1.5**
	4.2nm,0.9s,mb4.2						
SNAA	**Sanae**	**87.59**	**179**	*e*	**P**	**01 36 51.8**	**+0.4**
SNAA	**Sanae**	**87.59**	**179**	*e*	**P**	**01 36 55.9**	**+4.5**
SNAA	**Sanae**	**87.59**	**179**	⇑*i*P	**P**	**01 36 50.4**	**-1.0**
SNAA				*e*		01 36 51.8	
SNAA				*e*		01 36 55.9	
SNAA				*e*		01 39 06.7	
VNA3	**Neumayer Olymp**	**87.75**	**176**	*e*	**P**	**01 36 53.0**	**+0.8**
VNA3	**Neumayer Olymp**	**87.75**	**176**	*e*	**P**	**01 36 57.3**	**+5.1**
VNA3	**Neumayer Olymp**	**87.75**	**176**	⇑*i*P	**P**	**01 36 51.6**	**-0.6**
VNA3				*e*		01 36 53.0	
VNA3				*e*		01 36 57.3	
VNA3				*e*		01 39 07.6	
TXAR	**Lajitas Array**	**87.91**	**58**	P	**P**	**01 36 54.8**	**+0.9**
	3.2nm,0.8s,mb4.1,baz=216,slow=5.6,SNR=35						
VNA2	**Neumayer--Watz**	**88.19**	**177**	*e*	**P**	**01 36 59.6**	**+5.4**
VNA2	**Neumayer--Watz**	**88.19**	**177**	⇑*i*P	**P**	**01 36 53.8**	**-0.4**
VNA2				*e*		01 36 59.6	
VNA2				*e*		01 39 09.8	
ANMO	**Albuquerque**	**88.25**	**52**	*e*P	**P**	**01 36 55.7**	**+0.4**
	3.6nm,1.1s,mb4.0						
VNA1	**Neumayer--Stat**	**88.42**	**177**	*e*	**P**	**01 36 56.8**	**+1.5**
VNA1	**Neumayer--Stat**	**88.42**	**177**	*e*	**P**	**01 37 01.0**	**+5.7**
VNA1	**Neumayer--Stat**	**88.42**	**177**	⇑*i*P	**P**	**01 36 55.3**	**0.0**
VNA1				*e*		01 36 56.8	
VNA1				*e*		01 37 01.0	
VNA1				*e*		01 39 11.1	
GDL2	**Guadalupe Moun**	**88.59**	**55**	*e*P	**P**	**01 36 57.5**	**+0.5**
COLA	**College**	**88.79**	**13**	*e*P	**P**	**01 36 55.3**	**-1.9**
	15nm,1.2s,mb4.7						
ILAR	**Eielson Array**	**88.90**	**13**	P	**P**	**01 36 55.9**	**-1.9**
	2.7nm,0.7s,mb4.2,baz=216,slow=5.2,SNR=38						
PDAR	**Pinedale Array**	**89.78**	**44**	P	**P**	**01 37 02.1**	**-0.2**
	2.7nm,0.7s,mb4.2,baz=207,slow=3.1,SNR=26						
DAWY	**Dawson**	**90.08**	**16**	*e*P	**P**	**01 37 02.6**	**-0.5**
MKAR	**Makanchi Array**	**110.97**	**313**	PKiKP		01 42 30.8	
	0.2nm,0.3s,baz=87,slow=1.5,SNR=9.3						
BVAR	**Borovoye Array**	**118.94**	**320**	PKP	PKPdf	01 42 46.0	-0.8
	1.4nm,0.4s,baz=125,slow=2.1,SNR=17						
ARCES	**ARCESS Array B**	**129.22**	**349**	PKP	PKPdf	01 43 05.6	-0.6
	2.4nm,0.7s,baz=25,slow=1.8,SNR=20						
FINES	**FINESS Array B**	**135.98**	**343**	PKhKP		01 43 10.2	
	2.9nm,1.0s,baz=45,slow=2.0,SNR=3.9						
FINES				PKP	PKPdf	01 43 20.2	+1.3
	3.9nm,0.9s,baz=58,slow=2.4,SNR=7.8						
FINES				SKPbc		01 45 54.4	
	4.4nm,0.8s,baz=180,slow=5.7,SNR=8.0						
NOA	**NORSAR Array B**	**139.32**	**353**	SKPbc		01 46 04.6	
	2.2nm,0.8s,baz=14,slow=4.4,SNR=4.9						
SUW	**Suwalki**	**142.98**	**338**	*e*PKPpre		01 43 29.6	
AKASG	**Malin Array Be**	**143.04**	**330**	PKhKP		01 43 28.9	
	6.4nm,0.4s,baz=43,slow=4.4,SNR=5.5						
AKASG				SKPbc		01 46 14.2	
	0.2nm,0.3s,baz=21,slow=1.6,SNR=7.3						
BSEG	**Bad Segeberg**	**146.33**	**350**	*e*PKPbc	PKPbc	01 43 40.2	+1.0
BR131	**Keskin Array S**	**146.59**	**311**	*e*PKPdf	PKPdf	01 43 41.0	+2.8
BRTR	**Keskin Array B**	**146.59**	**311**	PKPbc	PKPbc	01 43 41.1	+0.8
	1.3nm,0.4s,baz=137,slow=3.3,SNR=18						
BURAR	**Bucovina Array**	**147.08**	**330**	⇓P	PKPdf	01 43 43.9	+5.1
CFR	**Carcaliu**	**147.21**	**324**	⇓P	PKPdf	01 43 42.2	+3.1
KOLS	**Kolonicke sedl**	**147.39**	**334**	*e*PKP	PKPdf	01 43 40.1	+0.9
STHS	**Stebnicka Huta**	**147.42**	**335**	*i* PKP	PKPdf	01 43 43.6	+4.4
HARR	**Harsova**	**147.63**	**323**	⇓P	PKPdf	01 43 42.8	+3.1
CRVS	**Cervenica-Dubn**	**147.74**	**335**	*i* PKP	PKPdf	01 43 44.4	+4.6
CRVS				*i*		01 43 49.0	
KSP	**Ksiaz**	**147.89**	**342**	*e*PKP	PKPdf	01 43 44.3	+4.4
KSP				*e*		01 43 49.4	
OKC	**Ostrava-Krasne**	**148.19**	**339**	*e*PKPbc	PKPdf	01 43 44.8	+4.4
OKC				*e*PKPab	PKPab	01 43 51.2	-1.1
UPC	**Upice**	**148.27**	**342**	*e*PKPbc	PKPdf	01 43 45.2	+4.7
UPC				*e*PKPab	PKPab	01 43 51.0	-1.6
CLL	**Collm**	**148.32**	**346**	⇓P	PKPdf	01 43 45.1	+4.5
	logA/T=1.2						
CLL				*i*		01 43 50.5	
CLL	**Collm**	**148.32**	**346**	⇓*i*PKP	PKPdf	01 43 45.1	+4.5
DPC	**Dobruska-Polom**	**148.32**	**341**	*e*PKPbc	PKPdf	01 43 45.6	+5.0
DPC				*e*PKPab	PKPab	01 43 51.5	-1.3
CLZ	**Clausthal**	**148.34**	**349**	*e*PKPbc	PKPdf	01 43 45.6	+5.0
KECS	**Kecovo**	**148.47**	**335**	*i* PKP	PKPdf	01 43 46.4	+5.5
BRG	**Berggiesshubel**	**148.49**	**345**	*e*P	PKPdf	01 43 45.9	+5.0
PVCC	**Panska Ves**	**148.65**	**344**	*e*PKPbc	PKPdf	01 43 46.4	+5.3
VYHS	**Vyhne**	**149.08**	**337**	*i* PKP	PKPdf	01 43 47.2	+5.3
VYHS				*i*		01 43 54.1	
PRU	**Pruhonice**	**149.15**	**343**	*e*PKPbc	PKPdf	01 43 47.0	+5.1
PRU				*e*PKPab	PKPab	01 43 54.8	-1.4
NKC	**Novy Kostel**	**149.45**	**346**	*e*PKPbc	PKPdf	01 43 48.3	+5.9
NKC				*e*PKPab	PKPab	01 43 55.7	-1.8
TREC	**Trest**	**149.50**	**341**	*e*PKPbc	PKPdf	01 43 47.5	+5.0
KHC	**Kasperske Hory**	**150.19**	**344**	*e*PKPbc	PKPdf	01 43 49.9	+6.3
KHC				*e*PKPab	PKPab	01 43 58.8	-1.7
TNS	**Taunus Mts**	**150.22**	**351**	*e*PKPbc	PKPdf	01 43 50.3	+6.7
GRA1	**Grafenberg Arr**	**150.23**	**347**	*e*PKPbc	PKPdf	01 43 50.0	+6.4
GEC2	**GERESS Array S**	**150.42**	**343**	*e*PKPbc	PKPdf	01 43 50.5	+6.5
GERES	**GERESS Array B**	**150.42**	**343**	PKPbc	PKPdf	01 43 49.9	+6.0
	2.9nm,0.9s,baz=45,slow=1.9,SNR=21						
GERES				PKPab	PKPab	01 43 59.5	-2.0
	1.0nm,0.8s,slow=4.0,SNR=5.1						
WTTA	**Wattenberg**	**152.41**	**345**	⇓*i*P	PKPdf	01 43 54.6	+7.8
	comp=Z,8.3nm,1.3s						
MOTA	**Moosalm**	**152.47**	**345**	⇑*i*P	PKPdf	01 43 54.9	+7.9
	comp=Z,2.2nm,1.0s						
ESDC	**Sonseca Array**	**160.81**	**12**	PKPab	PKPab	01 44 44.7	-1.3
	1.7nm,0.9s,baz=348,slow=3.0,SNR=5.7						

*ISK **02** 01:30:24.5, 38.16N×26.68E, h14^{km}, MD3.4*

*NEIC **02** 01:30:24.0, 38.15N×26.67E, h13^{km}, MD3.4(ISK), MD3.3(ATH), After ISK.*

*ATH **02** 01:30:25.5, 38.11N×26.59E, h28^{km}±6^{km}, MD3.3/3*

*CSEM **02** 01:30:26.0±0.1, 38.16N×26.82E, h20^{km}, MD3.4, Error ellipse: s-maj=3.4km s-min=2.2km az=90.0*

ISC 02 01:30:24.5±0.8, 38.16N±0.03×26.67E±0.04, h5^{km}±5^{km}, n29, σ0^{s}72/37, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.21**	**343**	*i* P	**Pg**	**01 30 28.9**	**0.0**
URLA				*i* S	**Sg**	**01 30 32.2**	**+0.5**
BLCB	**Balcova**	**0.37**	**52**	*i* PG	**Pg**	**01 30 32.4**	**+0.4**
SMG	**Samos**	**0.47**	**164**	⇑*i*PB	**Pb**	**01 30 35.1**	**+0.3**
SMG				*e*SB	**Sb**	**01 30 42.4**	**+0.7**
IZM	**Izmir**	**0.52**	**62**	*i* PG	**Pg**	**01 30 35.3**	**+0.3**
IZM				SG	**Sg**	**01 30 42.9**	**+0.9**
KDAG	**Bornova**	**0.53**	**62**	*i* P	**Pg**	**01 30 34.4**	**-0.7**
KDAG				*i* S	**Sg**	**01 30 41.1**	**-1.1**
AYDN	**Tasoluk**	**1.07**	**117**	*i* P	**Pb**	**01 30 46.0**	**+0.8**
AYDN				*i* S	**Sb**	**01 30 59.7**	**+0.3**
PRK	**Paraskevi**	**1.13**	**344**	*e*PN	**Pn**	**01 30 47.6**	**+0.6**
PRK				*e*SN	**Sn**	**01 31 03.8**	**+0.7**
AKS	**Akhisar**	**1.15**	**51**	PN	**Pn**	**01 30 46.8**	**-0.4**
AYVA	**Ayvalik**	**1.15**	**1**	*i* P	**Pb**	**01 30 47.0**	**+0.5**
AYVA				*i* S	**Sb**	**01 31 02.0**	**+0.4**
BODT	**Bodrum**	**1.20**	**155**	PN	**Pn**	**01 30 47.3**	**-0.7**
MLSB	**Milas**	**1.23**	**134**	PN	**Pn**	**01 30 47.8**	**-0.5**
APE	**Apeiranthos**	**1.42**	**220**	*e*PN	**Pn**	**01 30 50.4**	**-0.7**
APE	**Apeiranthos**	**1.42**	**220**	*e*PN	**Pn**	**01 30 50.3**	**-0.7**
MANT	**Manisa**	**1.52**	**77**	*i* P	**Pn**	**01 30 53.4**	**+0.9**
MANT				*i* S	**Sb**	**01 31 12.1**	**-0.3**
DAT	**Datca**	**1.60**	**153**	*e*PN	**Pn**	**01 30 53.1**	**-0.6**
YER	**Yerkesik**	**1.64**	**128**	*e*PN	**Pn**	**01 30 54.0**	**-0.1**
EZN	**Ezine**	**1.69**	**351**	*e*PN	**Pn**	**01 30 54.4**	**-0.5**
BALB	**Balikesir**	**1.76**	**32**	*e*PN	**Pn**	**01 30 55.2**	**-0.7**
DENT	**Denizli**	**1.91**	**101**	*e*PN	**Pn**	**01 30 58.0**	**-0.1**
DNZL	**Cakiroluk**	**1.93**	**103**	*i* P	**Pn**	**01 31 00.4**	**+1.9**
LIA	**Limnos Island**	**2.09**	**327**	*e*PN	**Pn**	**01 31 00.8**	**+0.1**
DST	**Dursunbey**	**2.10**	**46**	*e*PN	**Pn**	**01 31 00.2**	**-0.7**
EDC	**Edincik**	**2.38**	**23**	*e*PN	**Pn**	**01 31 04.1**	**-0.6**
BNT	**Bandirma**	**2.40**	**23**	*e*PN	**Pn**	**01 31 04.6**	**-0.5**
KCT	**Karacabey**	**2.48**	**31**	*e*PN	**Pn**	**01 31 05.6**	**-0.7**
ORLT	**Orhaneli**	**2.56**	**42**	*e*PN	**Pn**	**01 31 07.0**	**-0.4**
RDO	**Rodhopi**	**3.11**	**344**	*e*PN	**Pn**	**01 31 15.3**	**0.0**
ANTO	**Ankara**	**5.07**	**68**	*e*P	**Pn**	**01 31 41.7**	**-1.3**
	88nm,0.6s						
BR131	**Keskin Array S**	**5.65**	**72**	*e*P	**Pn**	**01 31 53.2**	**+2.0**
	77nm,0.3s						

*ISK **02** 01:32:27.3, 38.13N×26.58E, h5^{km}, MD3.2*

*ATH **02** 01:32:27.8, 38.15N×26.44E, h23^{km}±3^{km}, MD3.2/3*

*NEIC **02** 01:32:27.0, 38.13N×26.61E, h3^{km}, MD3.2(ISK), MD3.2(ATH), After ISK.*

*CSEM **02** 01:32:27.8±0.1, 38.20N×26.59E, h10^{km}, MD3.2, Error ellipse: s-maj=3.6km s-min=2.9km az=151.0*

ISC 02 01:32:27.5±0.8, 38.19N±0.03×26.54E±0.05, h4^{km}±6^{km}, n18, σ0^{s}76/25, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.17**	**15**	*i* P	**Pg**	**01 32 31.1**	**0.0**
URLA				*i* S	**Sg**	**01 32 33.8**	**+0.4**
BLCB	**Balcova**	**0.44**	**64**	PG	**Pg**	**01 32 36.2**	**-0.1**
SMG	**Samos**	**0.54**	**154**	⇑*i*PN	**Pg**	**01 32 38.4**	**+0.1**
SMG				*e*SN	**Sg**	**01 32 46.9**	**+1.5**
IZM	**Izmir**	**0.60**	**70**	*i* PG	**Pg**	**01 32 39.2**	**-0.4**
IZM				*i* SG	**Sg**	**01 32 48.1**	**+0.4**
KDAG	**Bornova**	**0.61**	**70**	*i* P	**Pg**	**01 32 38.5**	**-1.2**
KDAG				*i* S	**Sg**	**01 32 46.8**	**-1.0**
PRK	**Paraskevi**	**1.07**	**349**	*e*PN	**Pn**	**01 32 48.6**	**-0.6**
PRK				*e*SN	**Sn**	**01 33 04.3**	**-0.4**
AKS	**Akhisar**	**1.21**	**55**	PN	**Pn**	**01 32 51.2**	**0.0**
BODT	**Bodrum**	**1.28**	**151**	*e*PN	**Pn**	**01 32 51.1**	**-1.2**
MLSB	**Milas**	**1.33**	**132**	*e*PN	**Pn**	**01 32 51.8**	**-1.1**
BDRM	**Kayabasi**	**1.33**	**147**	*i* P	**Pb**	**01 32 57.3**	**+4.5**
APE	**Apeiranthos**	**1.38**	**216**	*e*PN	**Pn**	**01 32 53.2**	**-0.4**
APE				*e*SN	**Sn**	**01 33 12.7**	**+0.2**
APE	**Apeiranthos**	**1.38**	**216**	*e*PN	**Pn**	**01 32 52.6**	**-1.0**
MANT	**Manisa**	**1.61**	**79**	*i* P	**Pn**	**01 32 58.0**	**+1.0**
MANT				*i* S	**Sb**	**01 33 18.4**	**+0.2**
EZN	**Ezine**	**1.64**	**354**	*e*PN	**Pn**	**01 32 58.7**	**+1.4**
YER	**Yerkesik**	**1.74**	**127**	*e*PN	**Pn**	**01 32 58.7**	**-0.1**
BALB	**Balikesir**	**1.78**	**35**	*e*PN	**Pn**	**01 33 00.5**	**+1.1**
LIA	**Limnos Island**	**2.00**	**329**	*e*PN	**Pn**	**01 33 02.4**	**-0.1**
DST	**Dursunbey**	**2.15**	**48**	*e*PN	**Pn**	**01 33 05.4**	**+0.7**

MAN 02 01:36:20.1, 13.94N×123.60E, h74^{km}, mb3.9, ML2.7, MS2.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.64**	**122**	*e*P	P	01 36 36.2	+1.4
PVCP				*e*S	S	01 36 48.0	+2.4
GQP	**Guinayangan**	**1.12**	**268**	⇑*i*P	P	01 36 41.5	+0.9
GQP				*i* S	S	01 36 56.8	+1.0
CNP	**Catarman**	**1.76**	**144**	*e*P	P	01 36 49.5	+0.3
POLP	**Polilio Island**	**1.79**	**296**	*e*P	S	01 37 13.2	+1.9
BALP	**Baler**	**2.65**	**313**	*e*P	P	01 37 00.1	-1.5
BALP				*e*S	S	01 37 24.7	-8.0
CAUP	**Cauayan**	**3.44**	**330**	*e*P	P	01 37 12.7	+0.1

*NIED **02** 01:37:00, 39.40N×141.20E, h89^{km}, Mw4.2 Best double couple: M$_0$2.2×10^{15} NP1:ϕ_s170°, δ79°, λ96°. NP2:ϕ_s323°, δ13°, λ63°.*

*BJI **02** 01:37:54.1, 39.24N×141.08E, h132^{km}, mB4.6, mb4.7*

*IDC **02** 01:37:55.2±0.5, 39.38N×141.04E, h96^{km}±3^{km}, mb3.9/20, mb1 4.0/23, mb1mx4.0/27, mbtmp4.2/23, MS2.6/1, Ms1 2.6/1, ms1mx2.1/21, Error ellipse: s-maj=14.3km s-min=11.5km az=153.0*

*MOS **02** 01:37:55.6±0.8, 39.54N×140.94E, h107^{km}, mb4.5/8, Error ellipse: s-maj=12.0km s-min=8.9km az=103.9*

*JMA **02** 01:37:55.5, 39.40N×141.18E, h94^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1:ϕ_s273°, δ23°, λ30°. NP2:ϕ_s155°, δ79°, λ110°. Principal axes: T Plg52°, Azm88°; N Plg19°, Azm331°; P Plg31°, Azm229°;*

JMA Felt II J1.

*NEIC **02** 01:37:57.0±0.8, 39.40N×141.05E, h114^{km}±7^{km}, mb4.6/4, MW4.2(NIED) Error ellipse: s-maj=7.9km s-min=6.9km az=163.0*

NEIC Recorded [2 JMA] in Iwate and Miyagi; [1 JMA] in Aomori Prefectures.

ISC 02 01:37:54.2±0.3, 39.41N±0.03×141.17E±0.06, h104^{km}±2^{km}, h97^{km}±1.7^{km}:pP-P, n88, σ0^{s}90/86, mb4.2/34, 9C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOM	**Ohasama**	**0.11**	**57**	⇑P	**P**	**01 38 08.6**	**-0.2**
JOM				S	**S**	**01 38 18.6**	**-1.1**
JRG	**Rokugo**	**0.42**	**268**	⇑P	**P**	**01 38 10.2**	**+0.2**
JRG				*e*S	**S**	**01 38 21.6**	**-0.3**
JMK	**Ichinoseki**	**0.46**	**175**	⇑P	**P**	**01 38 10.2**	**-0.1**
JMK				S	**S**	**01 38 21.0**	**-1.4**
JYK	**Kaneyama**	**0.80**	**232**	⇑P	**P**	**01 38 13.5**	**+0.3**
JYK				S	**S**	**01 38 27.3**	**0.0**
JAH	**Hinai**	**0.88**	**332**	P	**P**	**01 38 14.5**	**+0.6**
JAH				S	**S**	**01 38 29.1**	**+0.4**
JIO	**Ouri**	**0.97**	**172**	⇑P	**P**	**01 38 14.9**	**+0.1**
JIO				S	**S**	**01 38 29.2**	**-1.1**
JANG	**Nango**	**1.00**	**15**	⇓P	**P**	**01 38 15.4**	**+0.3**
JANG				S	**S**	**01 38 30.6**	**-0.3**
JOU	**Okura**	**1.12**	**201**	⇑P	**P**	**01 38 17.3**	**+0.8**
JTM	**Tenmabayashi**	**1.38**	**357**	⇓P	**P**	**01 38 20.3**	**+0.7**
JTM				S	**S**	**01 38 38.6**	**0.0**
JYA	**Atsumi**	**1.40**	**235**	⇑P	**P**	**01 38 20.5**	**+0.6**
JYA				S	**S**	**01 38 39.3**	**+0.2**
JMM	**Marumori**	**1.57**	**191**	P	**P**	**01 38 22.3**	**+0.3**
JMM				S	**S**	**01 38 43.3**	**+0.6**
MAJO	**Matsushiro**	**3.70**	**220**	*e*P	**P**	**01 38 51.5**	**+0.9**
MAT	**Matsushiro**	**3.70**	**220**	P	**P**	**01 38 51.8**	**+1.3**
MAT				S	**S**	**01 39 34.6**	**+1.2**
MAT	**Matsushiro**	**3.70**	**220**	*e*P	**P**	**01 38 52.0**	**+1.5**
MAT				*e*S	**S**	**01 39 35.0**	**+1.6**
MJAR	**Matsushiro Arr**	**3.70**	**220**	P	**P**	**01 38 50.9**	**+0.4**
	23nm,0.3s,baz=322,slow=17,SNR=124						
MJAR	**Matsushiro Arr**	**3.70**	**220**	P	**P**	**01 38 50.9**	**+0.4**
MJAR				pmax	pmax		
	comp=Z,23nm,0.3s						
ASAJ	**Asahikawa**	**4.82**	**12**	P	**P**	**01 39 04.8**	**-1.0**
	comp=Z,7.2nm,0.3s,baz=230,slow=14,SNR=13						
ASAJ	**Asahikawa**	**4.82**	**12**	P	**P**	**01 39 04.8**	**-1.0**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.38**	**191**	P	**P**	**01 39 24.8**	**-2.3**
	comp=Z,35nm,0.3s,baz=90,slow=13,SNR=4.6						
JHJ				S	**S**	**01 40 32.7**	**-6.4**
	comp=Z,53nm,0.3s,baz=89,slow=22,SNR=9.6						
JHJ				LR	LR	01 41 46.9	
	comp=Z,54nm,20.4s,baz=96,slow=37						
KUR	**Kuril'sk**	**7.64**	**38**	P	**P**	**01 39 40.0**	**-4.4**
KUR				*e*S	**S**	**01 41 03.0**	**-6.9**
KUR				smax			
	comp=N,90nm,0.6s						
KUR				smax			
	comp=E,100nm,0.6s						
VLA	**Vladivostok**	**7.91**	**301**	⇓*i*P	**P**	**01 39 48.7**	**+0.7**
VLA				pmax	pmax		
	comp=Z,91nm,1.1s						
MDJ	**Mudanjiang**	**10.06**	**305**	P	**P**	**01 40 19.0**	**+2.1**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,30nm,4.1s						
KS15	**Wonju Array Si**	**10.61**	**264**	*e*P	**P**	**01 40 28.4**	**+4.1**
FX1	**Attu Island--F**	**25.69**	**48**	P	**P**	**01 43 18.2**	**+2.5**
	comp=Z,21nm,0.8s,mb4.6,baz=257,slow=14,SNR=4.2						
FX1	**Attu Island--F**	**25.69**	**48**	P	**P**	**01 43 18.2**	**+2.4**
FX1				pmax	pmax		
	comp=Z,21nm,0.8s						
SONM	**Songino Array**	**26.36**	**300**	P	**P**	**01 43 21.0**	**-1.1**
	comp=Z,0.9nm,0.5s,mb3.5,baz=102,slow=9.1,SNR=12						
SONM				pP	pP	01 43 42.1	-2.8
	comp=Z,0.8nm,0.8s,baz=97,slow=9.7,SNR=4.6						
SONM				ScP		01 50 15.7	
	comp=Z,0.7nm,1.0s,baz=90,slow=3.0,SNR=3.8						
SONM	**Songino Array**	**26.36**	**300**	P	**P**	**01 43 21.0**	**-1.1**
SONM				*PP	pP	01 43 42.1	-2.8
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ENH	**Enshi**	**27.44**	**260**	*e*P	**P**	**01 43 30.0**	**-2.2**
	comp=Z,18nm,0.7s,mb4.7						
ZAK	**Zakamensk**	**28.70**	**305**	*e*P	**P**	**01 43 41.9**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.4						
NVS	**Novosibirsk**	**41.09**	**312**	*e*P	**P**	**01 45 27.3**	**-1.5**
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**01 45 42.2**	**-0.1**
	comp=Z,3.2nm,0.5s,mb4.3,baz=84,slow=11,SNR=53						
MKAR	**Makanchi Array**	**42.73**	**300**	P	**P**	**01 45 42.2**	**-0.1**
MKAR	**Makanchi Array**	**42.73**	**300**	*i* P	**P**	**01 45 42.1**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**01 45 54.9**	**-0.4**
	comp=Z,6.3nm,0.5s,mb4.6						
KURK	**Kurchatov**	**44.35**	**306**	*e*P	**P**	**01 45 54.9**	**-0.4**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
KDAK	**Kodiak Island**	**45.48**	**43**	P	**P**	**01 46 04.6**	**+0.5**
	comp=Z,3.1nm,0.5s,mb4.3,baz=270,slow=7.3,SNR=9.5						
JIRN	**Jiri**	**46.66**	**273**	*e*P	**P**	**01 46 14.3**	**+0.4**
	comp=Z,10.0nm,0.3s,mb5.0						
GUN	**Gumba**	**46.78**	**273**	*e*P	**P**	**01 46 15.3**	**+0.4**
	comp=Z,28nm,0.4s,mb5.3						
KKN	**Kakani**	**47.30**	**274**	*e*P	**P**	**01 46 19.4**	**+0.4**
	comp=Z,29nm,0.6s,mb5.2						
PKI	**Pulchoki**	**47.31**	**273**	*e*P	**P**	**01 46 18.4**	**-0.6**
	comp=Z,6.2nm,0.5s,mb4.6						
DMN	**Daman**	**47.53**	**273**	*e*P	**P**	**01 46 20.5**	**-0.2**
ILAR	**Eielson Array**	**47.60**	**33**	P	**P**	**01 46 20.9**	**+0.2**
	comp=Z,4.8nm,0.7s,mb4.4,baz=268,slow=6.1,SNR=67						
ILAR				pP	pP	01 46 44.5	-1.0
	comp=Z,1.2nm,0.7s,baz=281,slow=6.8,SNR=2.9						
ILAR				sP	sP	01 46 55.2	-2.0
	comp=Z,0.8nm,0.5s,baz=278,slow=6.6,SNR=2.3						
GKN	**Gorkha**	**47.70**	**274**	*e*P	**P**	**01 46 22.0**	**0.0**
	comp=Z,16nm,0.6s,mb5.1						
CHKZ	**Chkalovo**	**48.57**	**312**	*e*P	**P**	**01 46 27.8**	**-0.7**
	comp=Z,3.4nm,0.4s,mb4.6						
CHKZ	**Chkalovo**	**48.57**	**312**	*e*P	**P**	**01 46 27.8**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						

VOSK	**Vostochnaya**	**48.58**	**310**	P	**P**	**01 46 27.9**	**-0.6**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
KOLN	**Koldanda**	**48.61**	**274**	*e*P	**P**	**01 46 29.2**	**+0.1**
BVA0	**Borovoye Array**	**48.86**	**311**	*i* P	**P**	**01 46 30.2**	**-0.4**
BVAR	**Borovoye Array**	**48.86**	**311**	P	**P**	**01 46 30.3**	**-0.4**
	comp=Z,2.4nm,0.5s,mb4.4,baz=68,slow=8.9,SNR=20						
BRVK	**Borovoye**	**48.91**	**311**	*e*P	**P**	**01 46 30.8**	**-0.2**
KKAR	**Karatay Array**	**51.80**	**298**	*i* P	**P**	**01 46 52.3**	**-0.9**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
INK	**Inuvik**	**52.37**	**28**	P	**P**	**01 46 57.8**	**+0.7**
	comp=Z,5.5nm,0.4s,mb5.0,baz=287,slow=6.2,SNR=99						
INK				pP	pP	01 47 19.9	-2.3
	comp=Z,4.3nm,0.8s,baz=272,slow=8.0,SNR=6.0						
AB31	**Akbulak array**	**56.28**	**309**	*i* P	**P**	**01 47 25.0**	**-0.9**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
AKTO	**Aktyubinsk**	**56.96**	**311**	P	**P**	**01 47 29.9**	**-0.7**
	comp=Z,1.5nm,0.4s,mb4.4,baz=41,slow=8.1,SNR=9.6						
AKTO	**Aktyubinsk**	**56.96**	**311**	P	**P**	**01 47 29.9**	**-0.8**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
WRAB	**Tennant Creek**	**59.38**	**187**	P	**P**	**01 47 46.9**	**-0.9**
WRA	**Warramunga Arr**	**59.39**	**187**	P	**P**	**01 47 47.0**	**-0.9**
	comp=Z,0.7nm,0.4s,mb4.0,baz=3.8,slow=7.1,SNR=23						
WRA				sP	sP	01 48 20.2	-5.1
	comp=Z,2.2nm,0.7s,baz=6.7,slow=7.0,SNR=3.7						
ARCES	**ARCESS Array B**	**61.71**	**339**	P	**P**	**01 48 02.6**	**-0.4**
	comp=Z,1.2nm,0.8s,mb4.0,baz=40,slow=7.0,SNR=3.5						
FINES	**FINESS Array B**	**66.63**	**332**	P	**P**	**01 48 35.0**	**0.0**
	comp=Z,0.7nm,0.6s,mb3.7,baz=34,slow=6.9,SNR=5.5						
KIV	**Kislovodsk**	**69.22**	**310**	*e*P	**P**	**01 48 52.5**	**+1.1**
KIV				pmax	pmax		
	comp=N,3.0nm,1.2s						
KIV				pmax	pmax		
	comp=E,6.0nm,1.2s						
KIV				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.4						
NB2	**NORSAR Subarra**	**71.93**	**337**	P	**P**	**01 49 07.5**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.7,baz=40,slow=5.8						
NOA	**NORSAR Array B**	**71.93**	**337**	P	**P**	**01 49 07.6**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.8,baz=40,slow=6.0,SNR=3.7						
NAO	**NORSAR Subarra**	**72.21**	**337**	P	**P**	**01 49 07.5**	**-1.6**
	comp=Z,0.8nm,0.6s,mb3.7						
AKASG	**Malin Array Be**	**72.31**	**322**	P	**P**	**01 49 09.5**	**-0.3**
	comp=Z,0.5nm,0.3s,mb3.8,baz=45,slow=6.6,SNR=7.7						
AKASG				pP	pP	01 49 36.2	-0.3
	comp=Z,1.2nm,0.6s,baz=46,slow=6.0,SNR=2.5						
NVAR	**Mina Array Bea**	**73.72**	**54**	P	**P**	**01 49 20.3**	**+2.0**
	comp=Z,2.2nm,0.8s,mb4.0,baz=308,slow=4.3,SNR=15						
NVAR				pP	pP	01 49 44.6	-0.5
	comp=Z,1.9nm,1.0s,baz=279,slow=10,SNR=4.7						
NVAR				sP	sP	01 49 54.7	-1.6
	comp=Z,1.1nm,0.9s,baz=279,slow=9.1,SNR=3.1						
NVAR	**Mina Array Bea**	**73.72**	**54**	P	**P**	**01 49 20.3**	**+2.0**
NVAR				pP	pP	01 49 44.6	-0.5
NVAR				sP	sP	01 49 54.7	-1.6
PDAR	**Pinedale Array**	**76.14**	**46**	P	**P**	**01 49 33.0**	**+1.0**
	comp=Z,2.2nm,0.5s,mb4.1,baz=294,slow=1.2,SNR=28						
PDAR				pP	pP	01 49 57.9	-1.1
	comp=Z,1.2nm,0.6s,baz=285,slow=2.3,SNR=6.0						
BRTR	**Keskin Array B**	**77.14**	**311**	P	**P**	**01 49 37.6**	**0.0**
	comp=Z,0.3nm,0.5s,mb3.3,baz=103,slow=2.9,SNR=5.2						
ULM	**Lac du Bonnet**	**77.63**	**33**	P	**P**	**01 49 39.6**	**-0.5**
	comp=Z,1.4nm,0.5s,mb4.0,baz=318,slow=8.5,SNR=3.6						
GERES	**GERESS Array B**	**80.60**	**328**	P	**P**	**01 49 57.4**	**+1.2**
	comp=Z,0.2nm,0.6s,mb3.1,slow=12,SNR=3.6						
GERES				pP	pP	01 50 23.7	+0.3
	comp=Z,0.7nm,0.8s,baz=14,slow=5.5,SNR=3.2						
SCHQ	**Schefferville**	**83.11**	**16**	P	**P**	**01 50 09.9**	**+0.9**
	comp=Z,2.9nm,1.0s,mb4.0,baz=251,slow=3.3,SNR=5.0						
TXAR	**Lajitas Array**	**88.82**	**52**	P	**P**	**01 50 39.4**	**+1.9**
	comp=Z,0.4nm,0.4s,mb3.8,baz=292,slow=3.1,SNR=7.9						
TXAR				pP	pP	01 51 05.0	-0.2
	comp=Z,0.6nm,0.8s,baz=291,slow=2.4,SNR=3.5						
SNAA	**Sanae**	**142.96**	**198**	*e*	PKPdf	01 57 14.7	+0.5
SNAA	**Sanae**	**142.96**	**198**	*e*	PKPdf	01 57 39.8	+26
SNAA	**Sanae**	**142.96**	**198**	P	PKPdf	01 57 12.8	-1.4
SNAA				*e*		01 57 14.7	
SNAA				*e*		01 57 39.8	
SNAA	**Sanae**	**142.96**	**198**	PKIKP	PKPdf	01 57 12.8	-1.4
SNAA				*e*		01 57 39.8	
VNA2	**Neumayer--Watz**	**144.54**	**197**	*e*	PKPbc	01 57 21.7	+4.9
VNA2	**Neumayer--Watz**	**144.54**	**197**	*e*	PKPbc	01 57 43.2	+26
VNA2	**Neumayer--Watz**	**144.54**	**197**	⇑*i*P	PKPbc	01 57 17.9	+1.1
VNA2				*e*		01 57 21.7	
VNA2				*e*		01 57 43.2	
VNA3	**Neumayer Olymp**	**144.81**	**196**	*e*	PKPdf	01 57 19.8	+2.4
VNA3	**Neumayer Olymp**	**144.81**	**196**	*e*	PKPdf	01 57 22.4	+5.0
VNA3	**Neumayer Olymp**	**144.81**	**196**	*e*	PKPdf	01 57 43.8	+26
VNA3	**Neumayer Olymp**	**144.81**	**196**	P	PKPdf	01 57 18.3	+0.9
VNA3				*e*		01 57 19.8	
VNA3				*e*		01 57 22.4	
VNA3				*e*		01 57 43.8	
VNA1	**Neumayer--Stat**	**144.94**	**197**	*e*	PKPdf	01 57 20.3	+2.6
VNA1	**Neumayer--Stat**	**144.94**	**197**	*e*	PKPdf	01 57 23.3	+5.6
VNA1	**Neumayer--Stat**	**144.94**	**197**	*e*	PKPdf	01 57 45.3	+28
VNA1	**Neumayer--Stat**	**144.94**	**197**	⇑*i*P	PKPdf	01 57 18.9	+1.2
VNA1				*e*		01 57 20.3	
VNA1				*e*		01 57 23.3	
VNA1				*e*		01 57 45.3	
LPAZ	**La Paz**	**145.59**	**56**	PKPbc	PKPbc	01 57 23.7	+2.6
	comp=Z,2.6nm,0.6s,baz=11,slow=5.2,SNR=17						

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*ATH **02** 02:11:05.1, 38.11N×23.94E, h7^{km}±3^{km}, MD2.8/7, ML2.8*
*NEIC **02** 02:11:05.1, 38.11N×23.94E, h7^{km}, ML2.8(ATH), After ATH.*
*CSEM **02** 02:11:06.0±0.2, 38.12N×23.89E, ML2.8, Error ellipse: s-maj=3.4km s-min=2.0km az=98.0*
*THE **02** 02:11:09.9, 38.20N×23.99E, h20^{km}*
ISC 02 02:11:05.6±0.5**, 38.13N**±0.02×**23.89E**±0.04**, h7**^{km}**, n20, σ0^{s}96**/30**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.09**	**194**	*e*PG	**Pg**	**02 11 06.5**	**-1.3**
MPAR	**Parnis Oros**	**0.12**	**278**	*e*PG	**Pg**	**02 11 09.0**	**+0.6**
ATH	**Athens Observa**	**0.21**	**221**	*e*PG	**Pg**	**02 11 09.8**	**-0.3**
ATH				*e*SG	**Sg**	**02 11 12.6**	**-0.4**
NAIG	**Nisos Aigina**	**0.49**	**220**	*e*PB	**Pg**	**02 11 15.3**	**-0.3**
NAIG				*e*SB	**Sg**	**02 11 21.5**	**-0.7**
MGER	**Gerania Oros**	**0.52**	**254**	*e*PB	**Pg**	**02 11 16.1**	**0.0**
MGER				*e*SB	**Sg**	**02 11 23.5**	**+0.4**
LKR	**Lokris**	**0.87**	**307**	*e*PB	**Pb**	**02 11 22.8**	**+0.1**
LKR				*e*SB	**Sb**	**02 11 35.5**	**+1.2**
AOS	**Alonnisos**	**1.03**	**359**	*e*Pg	**Pg**	**02 11 26.5**	**+0.2**
AOS				*e*Sg	**Sg**	**02 11 39.4**	**-0.7**
NEO	**Neokhori**	**1.28**	**336**	*e*PB	**Pb**	**02 11 30.5**	**+0.8**
NEO				*e*SB	**Sb**	**02 11 47.7**	**+1.5**
XOR	**Xorichti**	**1.35**	**336**	*e*Pg	**Pg**	**02 11 31.5**	**-1.0**
XOR				*e*Sg	**Sg**	**02 11 48.6**	**-1.9**
AGG	**Agios Georgios**	**1.51**	**306**	*e*Pg	**Pg**	**02 11 34.2**	**-1.6**
AGG				*e*Sg	**Sg**	**02 11 53.9**	**-2.1**
AGG	**Agios Georgios**	**1.51**	**306**	*e*Pg	**Pn**	**02 11 34.2**	**+0.9**
AGG				*e*Sg	**Sb**	**02 11 53.9**	**+1.0**
VLI	**Veliai**	**1.60**	**209**	*e*PG	**Pn**	**02 11 34.5**	**-0.1**
APE	**Apeiranthos**	**1.68**	**129**	*e*PG	**Pn**	**02 11 35.1**	**-0.6**
APE				*e*SB	**Sb**	**02 11 58.8**	**+1.0**
PAIG	**Paliouri**	**1.80**	**355**	*e*Pb	**Pb**	**02 11 37.5**	**-1.0**
EVR	**Evrytania**	**1.81**	**296**	*e*PN	**Pn**	**02 11 39.3**	**+1.7**
RLS	**Riolos of Patr**	**1.92**	**268**	*e*PN	**Pn**	**02 11 40.5**	**+1.5**
OUR	**Ouranopolis**	**2.20**	**2**	*e*Pn	**Pn**	**02 11 43.1**	**0.0**
LIT	**Litokhoron**	**2.25**	**331**	*e*Pn	**Pn**	**02 11 44.1**	**+0.3**
GRG	**Griva**	**3.04**	**338**	*e*Pn	**Pn**	**02 11 55.4**	**+0.2**
KNT	**Kendrikon**	**3.12**	**346**	*e*Pn	**Pn**	**02 11 56.5**	**+0.3**

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*IDC **02** 02:26:11.0±1.2, 41.06S×91.67W, mb4.0/9, mb1 4.2/9, mb1mx4.1/16, mbtmp4.0/9, MS3.9/9, Ms1 3.9/9, ms1mx3.7/25, Error ellipse: s-maj=31.2km s-min=29.8km az=128.0*
*NEIC **02** 02:26:13.3±0.5, 41.00S×91.58W, h10^{km}, mb4.6/2, Error ellipse: s-maj=17.7km s-min=10.7km az=80.0*
ISC 02 02:26:11.6±0.7**, 41.1S**±0.1×**91.5W**±0.2**, h10**^{km}**, n37, σ0^{s}98**/29**, mb4.1**/11**, MS3.8**/8**, 4C, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**15.86**	**96**	LR	LR	02 34 41.1	
	comp=Z,940nm,20.9s,baz=316,slow=32						
USHA	**Ushuaia**	**20.59**	**140**	LR	LR	02 37 24.7	
	comp=Z,367nm,19.9s,MS3.8,baz=273,slow=33						
CFAA	**Coronel Fontan**	**20.94**	**71**	P	**P**	**02 30 57.4**	**+0.4**
	0.4nm,0.7s,baz=232,slow=12,SNR=7.7						
CFAA				LR	LR	02 37 16.6	
	comp=Z,76nm,21.0s,MS3.0,baz=247,slow=32						
LPAZ	**La Paz**	**31.89**	**46**	P	**P**	**02 32 40.7**	**+1.3**
	0.5nm,0.7s,mb3.5,baz=201,slow=8.6,SNR=3.4						
LPAZ				LR	LR	02 42 45.1	
	comp=Z,160nm,19.9s,MS3.7,baz=244,slow=31						
LPAZ	**La Paz**	**31.89**	**46**	P	**P**	**02 32 40.7**	**+1.3**
LPAZ				LR	LR	02 42 45.1	
SIV	**San Ignacio**	**36.27**	**55**	P	**P**	**02 33 16.5**	**-0.6**
	0.7nm,0.7s,mb3.7,baz=229,slow=13,SNR=3.9						
RKT	**Rikitea**	**40.46**	**283**	*e*LR	LR	02 44 47.5	
	469nm,27.0s,baz=138						
BDFB	**Brasilia**	**45.27**	**69**	LR	LR	02 52 54.3	
	comp=Z,425nm,18.3s,MS4.4,baz=265,slow=35						
ROSC	**El Rosal**	**48.32**	**23**	P	**P**	**02 34 54.5**	**-0.8**
	2.5nm,0.3s,mb4.7,baz=123,slow=9.1,SNR=4.8						
VNA3	**Neumayer Olymp**	**49.18**	**155**	*e*	**P**	**02 35 07.5**	**+6.3**
VNA3	**Neumayer Olymp**	**49.18**	**155**	*e*	**P**	**02 35 13.3**	**+12**
VNA3	**Neumayer Olymp**	**49.18**	**155**	⇑*i*P	**P**	**02 35 01.7**	**+0.5**
VNA3				*e*		02 35 07.5	
VNA3				*e*		02 35 13.3	
VNA1	**Neumayer--Stat**	**49.73**	**154**	*e*	**P**	**02 35 11.8**	**+6.4**
VNA1	**Neumayer--Stat**	**49.73**	**154**	*e*	**P**	**02 35 18.3**	**+13**
VNA1	**Neumayer--Stat**	**49.73**	**154**	⇑*i*P	**P**	**02 35 06.2**	**+0.8**
VNA1				*e*		02 35 11.8	
VNA1				*e*		02 35 18.3	
VNA2	**Neumayer--Watz**	**49.96**	**155**	*e*	**P**	**02 35 13.2**	**+6.0**
VNA2	**Neumayer--Watz**	**49.96**	**155**	*e*	**P**	**02 35 19.2**	**+12**
VNA2	**Neumayer--Watz**	**49.96**	**155**	⇑*i*P	**P**	**02 35 07.8**	**+0.6**
VNA2				*e*		02 35 13.2	
VNA2				*e*		02 35 19.2	
TBI	**Tubuai**	**51.19**	**272**	*e*S	**S**	**02 42 29.8**	**-4.2**
TBI				*e*LR	LR	02 49 51.5	
	613nm,28.2s,baz=126						
SNAA	**Sanae**	**51.24**	**156**	*e*	**P**	**02 35 22.3**	**+5.4**
SNAA	**Sanae**	**51.24**	**156**	*e*	**P**	**02 35 28.3**	**+11**
SNAA	**Sanae**	**51.24**	**156**	LR	LR	02 53 42.2	
	comp=Z,37nm,18.5s,MS3.4,baz=250,slow=32						
SNAA	**Sanae**	**51.24**	**156**	⇑*i*P	**P**	**02 35 16.9**	**0.0**
SNAA				*e*		02 35 22.3	
SNAA				*e*		02 35 28.3	
JTS	**JuntasAbangare**	**51.44**	**8**	LR	LR	02 51 31.4	
	comp=Z,160nm,20.6s,MS4.0,baz=186,slow=30						
SDV	**Santo Domingo**	**53.28**	**26**	P	**P**	**02 35 30.4**	**-2.6**
	1.4nm,0.3s,mb4.3,baz=270,slow=8.1,SNR=3.5						
PPT	**Papeete**	**54.69**	**277**	*e*S	**S**	**02 43 17.6**	**-4.1**
PPT				*e*LR	LR	02 51 24.2	
	408nm,27.5s,baz=130						
PPT	**Papeete**	**54.69**	**277**	LR	LR	02 53 02.6	
	comp=Z,142nm,20.7s,MS4.0,baz=290,slow=30						
SJG	**San Juan**	**63.40**	**27**	LR	LR	03 00 44.2	
	comp=Z,88nm,21.9s,MS3.9,baz=98,slow=33						
MAW	**Mawson**	**69.95**	**170**	P	**P**	**02 37 23.4**	**-1.0**
	1.4nm,0.7s,mb4.0,baz=173,slow=10,SNR=4.1						
TXAR	**Lajitas Array**	**70.93**	**349**	P	**P**	**02 37 30.2**	**-0.8**
	2.0nm,1.1s,mb3.9,baz=169,slow=4.6,SNR=6.5						
TUC	**Tucson**	**75.13**	**343**	*e*P	**P**	**02 37 56.7**	**+1.0**
	3.2nm,1.0s,mb4.2						
PV01	**Paradox Valley**	**80.33**	**346**	*e*P	**P**	**02 38 25.6**	**+1.4**
NVAR	**Mina Array Bea**	**82.80**	**339**	P	**P**	**02 38 37.4**	**+0.3**
	0.6nm,0.7s,mb3.8,baz=162,slow=5.7,SNR=6.3						
DUG	**Dugway**	**83.15**	**344**	*e*P	**P**	**02 38 39.1**	**+0.2**
	11nm,1.4s,mb4.7						
ELK	**Elko**	**84.22**	**342**	P	**P**	**02 38 44.2**	**-0.1**
	1.2nm,0.7s,mb4.1,baz=160,slow=7.1,SNR=3.7						
ELK	**Elko**	**84.22**	**342**	P	**P**	**02 38 44.2**	**-0.1**
PDAR	**Pinedale Array**	**85.01**	**347**	P	**P**	**02 38 48.0**	**-0.1**
	2.8nm,0.9s,mb4.4,baz=153,slow=4.0,SNR=14						

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*SKO **02** 03:09:15.4, 28.75S×176.26W*
*BJI **02** 03:09:16.6, 30.01S×177.55W, h41^{km}, mB5.9, mb5.4, Ms5.5, Msz5.1*
*MOS **02** 03:09:17.3±1.0, 30.11S×177.92W, h33^{km}, mb5.8/24, MS5.2/23, Error ellipse: s-maj=11.5km s-min=10.5km az=141.6*
*CRAAG **02** 03:09:18.6, 30.23S×178.08W, Mb5.8*
*NEIC **02** 03:09:18.1±0.1, 30.39S×178.17W, h36^{km}, mb5.8/69, ME5.2, MS5.3/135, MW5.7, Error ellipse: s-maj=6.4km s-min=3.2km az=124.0, Moment Tensor Solution. s18 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.86; M$_{\theta\theta}$-0.18; M$_{\phi\phi}$-4.68; M$_{r\theta}$0.48; M$_{\theta\phi}$0.65; M$_{\phi r}$2.23; Best double couple: M$_0$5.3×10^{17} NP1:φ$_s$164°, δ34°, λ77°. NP2:φ$_s$0°, δ58°, λ99°. Principal axes: T 5.42, Plg76°, Azm296°; N -.19, Plg7°, Azm175°; P -5.23, Plg12°, Azm84°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
*HRVD **02** 03:09:18.1±0.2, 30.12S×177.57W, h45^{km}, MW5.7/70, Centroid moment Tensor Solution. LP body waves: s70,c149;Mantle waves: s39,c42; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.72±.07; M$_{\theta\theta}$0.38±.10; M$_{\phi\phi}$-4.09±.10; M$_{r\theta}$0.32±.12; M$_{\theta\phi}$-0.59±.08; M$_{\phi r}$2.41±.14; Best double couple: M$_0$4.632×10^{17} NP1:φ$_s$187°, δ29°, λ90°. NP2:φ$_s$8°, δ61°, λ90°. Principal axes: T 4.409, Plg74°, Azm278°; N .452, Plg0°, Azm187°; P -4.855, Plg16°, Azm97°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*
*IDC **02** 03:09:21.3±0.5, 30.16S×177.97W, h56^{km}±3^{km}, mb4.9/18, mb1 5.0/18, mb1mx5.0/18, mbtmp5.1/18, MS5.1/18, Ms1 5.1/18, ms1mx5.1/19 Error ellipse: s-maj=14.7km s-min=11.1km az=174.0*
*BGS **02** 03:09:23.6, 30.39S×178.17W, h33^{km}*
ISC 02 03:09:17.0±0.1**, 30.76S**±0.03×**178.00W**±0.05**, h43**^{km}**, h43**^{km}±1.5^{km}**:pP-P, n788, σ1^{s}22**/339**, mb5.6**/97**, MS5.2**/161, **68C-11D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.50**	**3**	P	**P**	**03 09 36.4**	**-5.6**
	7μm,0.3s,baz=244,slow=24,SNR=370						
RAO				LR	LR	03 10 03.2	
	comp=Z,390μm,20.0s,baz=141,slow=46						
RAO	**Raoul Island**	**1.50**	**3**	*e*P	**P**	**03 09 36.3**	**-5.7**
MXZ	**Matakaoa Point**	**7.45**	**203**	*e*PN	**P**	**03 11 07.2**	**+1.5**
MXZ				SN	**S**	**03 12 36.7**	**+7.0**
MXZ				T		03 18 54.8	
MXZ	**Matakaoa Point**	**7.45**	**203**	*e*P	**P**	**03 11 07.2**	**+1.5**
MXZ				S	**S**	**03 12 36.7**	**+7.0**
PUZ	**Puketiti**	**7.92**	**202**	*e*PN	**P**	**03 11 13.6**	**+1.2**
PUZ	**Puketiti**	**7.92**	**202**	*e*P	**P**	**03 11 13.6**	**+1.3**
KUZ	**Kuaotunu**	**7.94**	**220**	*e*PN	**P**	**03 11 20.2**	**+7.6**
KUZ	**Kuaotunu**	**7.94**	**220**	*e*P	**P**	**03 11 20.2**	**+7.7**
WCZ	**Waipu Caves**	**8.23**	**229**	*e*PN	**P**	**03 11 26.6**	**+10**
WCZ	**Waipu Caves**	**8.23**	**229**	*e*P	**P**	**03 11 26.8**	**+10**
OUZ	**Omahuta**	**8.35**	**236**	*e*PN	**P**	**03 11 28.1**	**+10**
OUZ	**Omahuta**	**8.35**	**236**	*e*P	**P**	**03 11 29.3**	**+11**
MWZ	**Matawai**	**8.41**	**205**	PN	**P**	**03 11 20.2**	**+1.1**
MWZ				SN	**S**	**03 12 55.5**	**+1.8**
MWZ	**Matawai**	**8.41**	**205**	P	**P**	**03 11 20.2**	**+1.1**
MWZ				S	**S**	**03 12 55.5**	**+1.8**
URZ	**Urewera**	**8.50**	**207**	P	**P**	**03 11 21.9**	**+1.5**
	8.8nm,0.3s,baz=9.8,slow=3.2,SNR=41						
URZ				S	**S**	**03 13 03.1**	**+7.2**
	176nm,0.3s,baz=215,slow=20,SNR=28						
URZ	**Urewera**	**8.50**	**207**	PN	**P**	**03 11 21.5**	**+1.1**
URZ				SN	**S**	**03 13 00.7**	**+4.7**
URZ	**Urewera**	**8.50**	**207**	P	**P**	**03 11 21.5**	**+1.2**
KNZ	**Kokohu**	**8.97**	**202**	*e*PN	**P**	**03 11 27.3**	**+0.4**
KNZ				*e*SN	**S**	**03 13 08.7**	**+1.0**
KNZ	**Kokohu**	**8.97**	**202**	*e*P	**P**	**03 11 27.3**	**+0.4**
KNZ				S	**S**	**03 13 12.6**	**+4.9**
BKZ	**Black Stump Fm**	**9.53**	**207**	*e*PN	**P**	**03 11 34.4**	**-0.1**
BKZ				SN	**S**	**03 13 26.4**	**+5.1**
BKZ	**Black Stump Fm**	**9.53**	**207**	*e*P	**P**	**03 11 34.4**	**-0.1**
BKZ				S	**S**	**03 13 26.4**	**+5.1**
KRVZ	**Karewarewa**	**9.82**	**210**	*e*PN	**P**	**03 11 42.2**	**+3.7**
KRVZ				SN	**S**	**03 13 34.0**	**+5.5**
TUVZ	**Tukino**	**9.96**	**210**	*e*PN	**P**	**03 11 42.4**	**+2.1**
TUVZ	**Tukino**	**9.96**	**210**	*e*P	**P**	**03 11 42.4**	**+2.0**
FWVZ	**Far West T-bar**	**9.99**	**210**	*e*PN	**P**	**03 11 42.4**	**+1.6**
FWVZ	**Far West T-bar**	**9.99**	**210**	*e*P	**P**	**03 11 42.4**	**+1.6**
WNVZ	**Wahianoa**	**10.03**	**210**	*e*PN	**P**	**03 11 43.4**	**+2.0**
WNVZ	**Wahianoa**	**10.03**	**210**	*e*P	**P**	**03 11 43.4**	**+2.0**
MOVZ	**Moawhango**	**10.03**	**209**	PN	**P**	**03 11 42.4**	**+1.0**
MOVZ				SN	**S**	**03 13 36.8**	**+3.1**
MOVZ	**Moawhango**	**10.03**	**209**	P	**P**	**03 11 42.4**	**+1.0**
MOVZ				S	**S**	**03 13 36.8**	**+3.1**
PXZ	**Pawanui**	**10.16**	**203**	*e*PN	**P**	**03 11 43.0**	**-0.1**
PXZ				SN	**S**	**03 13 37.3**	**+0.5**
TSZ	**Takapari Road**	**10.50**	**206**	*e*PN	**P**	**03 11 46.2**	**-1.7**
TSZ				SN	**S**	**03 13 46.8**	**+1.6**
TSZ	**Takapari Road**	**10.50**	**206**	*e*P	**P**	**03 11 46.2**	**-1.7**
TSZ				S	**S**	**03 13 46.8**	**+1.6**
BFZ	**Birch Farm**	**10.95**	**204**	*e*PN	**P**	**03 11 51.5**	**-2.4**
BFZ	**Birch Farm**	**10.95**	**204**	*e*P	**P**	**03 11 51.5**	**-2.4**
MRZ	**Mangatainoka R**	**11.17**	**206**	*e*PN	**P**	**03 11 54.0**	**-2.9**
MRZ				SN	**S**	**03 13 57.8**	**-3.7**
MRZ	**Mangatainoka R**	**11.17**	**206**	*e*P	**P**	**03 11 54.0**	**-2.9**
MRZ				S	**S**	**03 13 57.8**	**-3.7**
KIW	**Kapiti Island**	**11.60**	**208**	*e*PN	**P**	**03 11 60.0**	**-2.8**
KIW				SN	**S**	**03 14 11.1**	**-0.9**
KIW	**Kapiti Island**	**11.60**	**208**	*e*P	**P**	**03 12 00.0**	**-2.8**
KIW				S	**S**	**03 14 11.1**	**-0.8**
MTW	**Mount Morrison**	**11.63**	**205**	*e*PN	**P**	**03 12 00.6**	**-2.5**
MTW				SN	**S**	**03 14 09.4**	**-3.2**
MTW	**Mount Morrison**	**11.63**	**205**	*e*P	**P**	**03 12 00.6**	**-2.6**
MTW				S	**S**	**03 14 09.4**	**-3.2**
TRWZ	**Traveller**	**11.78**	**204**	*e*PN	**P**	**03 12 03.5**	**-1.6**
TRWZ				SN	**S**	**03 14 16.0**	**-0.1**
PAWZ	**Paruwai Farm**	**11.86**	**205**	*e*PN	**P**	**03 12 04.2**	**-2.0**
PAWZ				SN	**S**	**03 14 16.6**	**-1.5**
PAWZ	**Paruwai Farm**	**11.86**	**205**	*e*P	**P**	**03 12 04.2**	**-1.9**
PAWZ				S	**S**	**03 14 16.6**	**-1.4**
MSWZ	**Moikau Station**	**11.95**	**205**	*e*PN	**P**	**03 12 05.3**	**-2.1**
MSWZ	**Moikau Station**	**11.95**	**205**	*e*P	**P**	**03 12 05.3**	**-2.1**
DUWZ	**D'Urville Isla**	**11.97**	**211**	*e*PN	**P**	**03 12 06.1**	**-1.6**
DUWZ				SN	**S**	**03 14 20.2**	**-0.7**
MRW	**Makara Radio**	**12.00**	**207**	*e*PN	**P**	**03 12 06.8**	**-1.3**
MRW				SN	**S**	**03 14 19.7**	**-1.8**
TCW	**Tory Channel**	**12.16**	**209**	*e*PN	**P**	**03 12 07.1**	**-3.1**
TCW				SN	**S**	**03 14 23.0**	**-2.3**
TCW	**Tory Channel**	**12.16**	**209**	*e*P	**P**	**03 12 07.1**	**-3.1**
TCW				S	**S**	**03 14 23.0**	**-2.3**
TUWZ	**Tuamarina**	**12.48**	**209**	SN	**S**	**03 14 30.7**	**-2.3**
NNZ	**Nelson**	**12.55**	**211**	*e*PN	**P**	**03 12 12.5**	**-3.0**
NNZ				SN	**S**	**03 14 34.4**	**-0.3**
BSWZ	**Blackbirch Sta**	**12.74**	**209**	SN	**S**	**03 14 38.3**	**-1.1**
KHZ	**Kahutara**	**13.47**	**208**	*e*PN	**P**	**03 12 24.5**	**-3.0**
KHZ				SN	**S**	**03 14 51.7**	**-5.0**
LTZ	**Lake Taylor**	**14.30**	**210**	SN	**S**	**03 15 11.8**	**-4.7**
MQZ	**McQueen's Vall**	**14.90**	**207**	*e*PN	**P**	**03 12 42.5**	**-3.9**
MQZ				SN	**S**	**03 15 23.8**	**-6.9**
MQZ	**McQueen's Vall**	**14.90**	**207**	*e*P	**P**	**03 12 42.5**	**-3.8**
MQZ				S	**S**	**03 15 23.8**	**-6.9**
WVZ	**Waitaha Valley**	**15.22**	**213**	SN	**S**	**03 15 32.5**	**-5.7**
RPZ	**Rata Peaks**	**15.58**	**211**	P	**P**	**03 12 57.5**	**+2.5**
	5.9nm,0.3s,baz=322,slow=2.8,SNR=11						
RPZ				S	**S**	**03 15 41.3**	**-5.1**
	24nm,0.3s,baz=227,slow=18,SNR=9.9						
RPZ	**Rata Peaks**	**15.58**	**211**	SN	**S**	**03 15 39.9**	**-6.5**
RPZ	**Rata Peaks**	**15.58**	**211**	P	**P**	**03 12 57.5**	**+2.5**
RPZ				S	**S**	**03 15 41.3**	**-5.1**
FOZ	**Fox Glacier**	**16.09**	**214**	*e*PN	**P**	**03 12 57.3**	**-4.3**
FOZ				SN	**S**	**03 15 49.5**	**-8.8**
FOZ	**Fox Glacier**	**16.09**	**214**	*e*P	**P**	**03 12 57.3**	**-4.3**
FOZ				S	**S**	**03 15 49.5**	**-8.8**
DZM	**Mont Dzumac**	**16.39**	**298**	*e*P	**P**	**03 13 07.4**	**+1.8**
DZM	**Mont Dzumac**	**16.39**	**298**	P	**P**	**03 13 09.8**	**+4.2**
	3.8nm,0.3s,baz=98,slow=15,SNR=28						
DZM				LR	LR	03 18 01.5	
	comp=Z,21μm,20.6s,baz=122,slow=32						
DZM	**Mont Dzumac**	**16.39**	**298**	*e*P	**P**	**03 13 07.3**	**+1.8**
NOUC	**Port Laguerre**	**16.48**	**298**	*e*P	**P**	**03 13 10.8**	**+4.1**
LBZ	**Lake Benmore**	**16.49**	**211**	*e*PN	**P**	**03 13 04.8**	**-1.8**
LBZ				SN	**S**	**03 16 01.8**	**-5.7**
JCZ	**Jackson Bay**	**16.92**	**215**	*e*PN	**P**	**03 13 10.1**	**-1.9**
JCZ				PcP	PcP	03 17 59.8	+1.8
JCZ	**Jackson Bay**	**16.92**	**215**	*e*P	**P**	**03 13 10.7**	**-1.3**
WKZ	**Wanaka**	**17.36**	**212**	*e*PN	**P**	**03 13 18.4**	**+0.9**
WKZ	**Wanaka**	**17.36**	**212**	*e*P	**P**	**03 13 18.4**	**+0.8**
AFI	**Afiamalu**	**17.72**	**20**	P	**P**	**03 13 08.7**	**-14**
	7.8nm,0.3s,baz=21,slow=6.0,SNR=7.5						
AFI				S	S	03 16 10.1	-26
	18nm,0.3s,baz=55,slow=22,SNR=6.4						
AFI	**Afiamalu**	**17.72**	**20**	*e*P	**P**	**03 13 07.8**	**-14**
RAR	**Rarotonga**	**18.92**	**64**	P	**P**	**03 13 32.3**	**-4.5**
	8.2nm,0.3s,baz=225,slow=5.4,SNR=20						
RAR				S	**S**	**03 16 42.9**	**-20**
	4.3nm,0.3s,baz=83,slow=19,SNR=5.2						
RAR				LR	LR	03 19 21.2	
	comp=Z,3μm,19.3s,baz=160,slow=32						
RIV	**Riverview**	**26.21**	**255**	⇑*i*P	**P**	**03 14 55.3**	**+5.8**
TBI	**Tubuai**	**26.41**	**81**	*e*LQ		03 20 02.2	
TBI	**Tubuai**	**26.41**	**81**	*e*P	**P**	**03 14 50.5**	**-1.0**
	106nm,0.9s,mb5.4						
TBI				*e*LR	LR	03 20 59.0	
	18μm,27.5s,baz=248						
CNB	**Canberra Magne**	**27.67**	**252**	*e*P	**P**	**03 15 08.1**	**+5.2**
	165nm,1.2s,mb5.5						
PAE	**Paea**	**28.92**	**70**	*e*P	**P**	**03 15 12.1**	**-2.1**
	154nm,1.1s,mb5.6						
PAE				*e*pP	pP	03 15 26.9	+1.1
	402nm,1.4s						
PPT	**Papeete**	**28.97**	**70**	*e*P	**P**	**03 15 12.6**	**-2.1**
	58nm,1.3s,mb5.2						
PPT	**Papeete**	**28.97**	**70**	*e*LQ		03 20 56.8	
PPT				*e*LR	LR	03 22 06.9	
	18μm,26.5s,baz=238						
PPT	**Papeete**	**28.97**	**70**	P	**P**	**03 15 13.2**	**-1.5**
	74nm,1.0s,mb5.4,baz=200,slow=21,SNR=6.2						
PPT				LR	LR	03 23 50.6	
	comp=Z,3μm,21.6s,MS4.9,baz=235,slow=30						
TVO	**Taravao**	**29.12**	**70**	*e*P	**P**	**03 15 14.0**	**-2.0**
	68nm,0.8s,mb5.5						
HNR	**Honiara**	**29.54**	**311**	LR	LR	03 24 58.5	
	comp=Z,4μm,21.8s,MS5.0,baz=138,slow=32						
HNR	**Honiara**	**29.54**	**311**	PFAKE		03 15 30.0	+10
HNR				LR	LR		
	comp=Z,4μm,21.0s,MS5.0						
TAU	**Tasmania Unive**	**30.08**	**237**	*e*P	**P**	**03 15 28.5**	**+4.1**
	comp=Z,74nm,1.0s,mb5.4						
TAU				*e*		03 15 43.6	
TAU				LR	LR		
	comp=Z,2μm,20.0s,MS4.7						
TAU	**Tasmania Unive**	**30.08**	**237**	*e*P	**P**	**03 15 28.5**	**+4.1**
TAU				*e*		03 15 43.6	
TAU				pmax	pmax		
	comp=Z,74nm,1.0s,mb5.4						
TAU				MLR	MLR		
	comp=Z,2μm,20.0s,MS4.7						
TOO	**Toolangi**	**30.83**	**247**	*e*P	**P**	**03 15 35.3**	**+4.3**
	comp=Z,42nm,0.7s,mb5.4						
TOO	**Toolangi**	**30.83**	**247**	*e*P	**P**	**03 15 35.3**	**+4.3**
TOO				pmax	pmax		
	comp=Z,42nm,0.7s,mb5.4						
PMOR	**Pomariorio Ree**	**31.73**	**67**	*e*P	**P**	**03 15 37.0**	**-2.1**
	comp=Z,68nm,1.3s,mb5.3						
PMOR				*e*pP	pP	03 15 51.7	+0.9
	comp=Z,153nm,1.4s						
VAH	**Vaihoa**	**31.80**	**68**	*e*P	**P**	**03 15 37.5**	**-2.3**
	comp=Z,84nm,1.0s,mb5.5						
VAH				*e*pP	pP	03 15 52.4	+0.9
	comp=Z,256nm,1.3s						
CTA	**Charters Tower**	**33.86**	**280**	*e*P	**P**	**03 15 59.9**	**+2.3**
	comp=Z,293nm,0.6s,mb6.4						
CTA	**Charters Tower**	**33.86**	**280**	P	**P**	**03 15 59.9**	**+2.2**
	comp=Z,486nm,0.9s,mb6.4,baz=104,slow=10,SNR=269						
CTA	**Charters Tower**	**33.86**	**280**	*e*P	**P**	**03 15 59.9**	**+2.3**
CTA				pmax	pmax		
	comp=Z,293nm,0.6s						
CTAO	**Charters Tower**	**33.86**	**280**	⇑*i*P	**P**	**03 15 59.5**	**+1.9**
	comp=Z,376nm,0.8s,mb6.4						
CTAO				LR	LR		
	comp=Z,9μm,21.0s,MS5.5						
CTAO	**Charters Tower**	**33.86**	**280**	⇑*i*P	**P**	**03 15 59.6**	**+2.0**
CTAO				pmax	pmax		
	comp=Z,376nm,0.8s,mb6.4						
CTAO				MLR	MLR		
	comp=Z,9μm,21.0s,MS5.5						
STKA	**Stephens Creek**	**34.40**	**257**	⇑*i*P	**P**	**03 16 05.9**	**+3.7**
	comp=Z,268nm,0.9s,mb6.2						
STKA	**Stephens Creek**	**34.40**	**257**	P	**P**	**03 16 06.0**	**+3.8**
	comp=Z,280nm,0.8s,mb6.2,baz=97,slow=9.6,SNR=337						
STKA				PKiKP		03 25 58.2	
	comp=Z,2.6nm,0.6s,baz=90,slow=5.1,SNR=4.7						
STKA				LR	LR	03 29 30.9	
	comp=Z,7μm,18.1s,MS5.5,baz=86,slow=35						
ADE	**Adelaide**	**36.40**	**252**	⇑*i*P	**P**	**03 16 22.8**	**+3.7**
PMG	**Port Moresby**	**38.77**	**296**	P	**P**	**03 16 39.7**	**+0.6**

	comp=Z,70nm,1.1s,mb5.3,baz=128,slow=4.5,SNR=15						
PMG				ScP		03 22 37.3	
	comp=Z,11nm,0.9s,baz=72,slow=6.4,SNR=2.8						
PMG	**Port Moresby**	**38.77**	**296**	*e*P	**P**	**03 16 39.0**	**0.0**
	comp=Z,93nm,1.1s,mb5.4						
PMG				LR	LR		
	comp=Z,5µm,22.0s,MS5.3						
PMG	**Port Moresby**	**38.77**	**296**	⇑*i*P	**P**	**03 16 39.3**	**+0.2**
RKT	**Rikitea**	**38.91**	**89**	*e*S	**S**	**03 22 26.2**	**-9.1**
RKT				*e*LQ		03 25 23.8	
RKT				*e*LR	LR	03 26 52.2	
	comp=Z,10µm,30.0s,baz=257						
TAOE	**Nuku Hiva Isla**	**41.45**	**66**	*e*LR	LR	03 27 50.0	
	comp=Z,25µm,26.9s,baz=240						
KWAJ	**Kwajalein Atol**	**41.69**	**338**	PFAKE		03 17 10.0	+6.6
KWAJ				LR	LR		
	comp=Z,921nm,21.0s,MS4.6						
PTCN	**Pitcairn Islan**	**42.45**	**95**	PFAKE		03 17 20.0	+11
PTCN				LR	LR		
	comp=Z,4µm,21.0s,MS5.3						
ASPA	**Alice Springs**	**43.10**	**267**	⇑*i*P	**P**	**03 17 16.0**	**+1.2**
ASPA				*e*SCP		03 23 01.4	
ASPA				*e*S	**S**	**03 23 41.6**	**+4.2**
DRV	**Dumont d'Urvil**	**43.81**	**203**	P	**P**	**03 17 29.0**	**+9.0**
DRV				SP		03 24 07.0	
DRV				L		03 27 00.0	
WRAB	**Tennant Creek**	**44.11**	**273**	⇑*i*P	**P**	**03 17 23.8**	**+0.8**
	comp=Z,190nm,0.6s,mb6.0						
WRAB				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
WRAB	**Tennant Creek**	**44.11**	**273**	⇑*i*P	**P**	**03 17 23.8**	**+0.8**
WRAB				pmax	pmax		
	comp=Z,190nm,0.6s,mb6.0						
WRAB				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.9						
WRA	**Warramunga Arr**	**44.12**	**273**	P	**P**	**03 17 24.0**	**+0.9**
	comp=Z,195nm,0.6s,mb6.0,baz=111,slow=7.9,SNR=834						
WRA				ScP		03 22 57.8	
	comp=Z,6.9nm,0.9s,baz=114,slow=4.1,SNR=6.4						
WRA				S	**S**	**03 23 53.5**	**+1.2**
	comp=Z,8.0nm,1.0s,baz=110,slow=15,SNR=3.8						
WRA				PKiKP		03 26 08.2	
	comp=Z,1.7nm,0.6s,baz=100,slow=0.5,SNR=10						
WRA	**Warramunga Arr**	**44.12**	**273**	P	**P**	**03 17 24.0**	**+0.9**
WRA				S	**S**	**03 23 53.5**	**+1.2**
FORT	**Forrest**	**45.96**	**255**	*e*P	**P**	**03 17 38.9**	**+1.2**
	comp=Z,89nm,0.6s,mb5.9						
SBA	**Scott Base**	**47.68**	**184**	⇑*e*P	**P**	**03 17 58.3**	**+7.7**
	comp=Z,101nm,1.0s,mb5.8						
SBA				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
SBA	**Scott Base**	**47.68**	**184**	⇑*e*P	**P**	**03 17 58.3**	**+7.7**
SBA				pmax	pmax		
	comp=Z,101nm,1.0s,mb5.8						
SBA				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.8						
KAKA	**Kakadu**	**49.00**	**280**	⇑*i*P	**P**	**03 18 18.8**	**+17**
	comp=Z,62nm,0.8s,mb5.7						
WAKE	**Wake Island**	**51.90**	**341**	PFAKE		03 18 30.0	+6.4
WAKE				LR	LR		
	comp=Z,4µm,19.0s,MS5.4						
FITZ	**Fitzroy Crossi**	**52.36**	**270**	⇑*i*P	**P**	**03 18 27.4**	**+0.3**
	comp=Z,104nm,1.1s,mb5.7						
FITZ				*e*sP	sP	03 18 47.0	+2.6
FITZ				*e*sS		03 26 11.4	
FITZ	**Fitzroy Crossi**	**52.36**	**270**	P	**P**	**03 18 27.6**	**+0.5**
	comp=Z,174nm,1.0s,mb6.0,baz=148,slow=6.0,SNR=62						
KLBR	**Kellerberrin**	**54.24**	**251**	*e*P	**P**	**03 18 41.0**	**+0.2**
	comp=Z,173nm,1.1s,mb5.9						
NWAO	**Narrogin (SRO)**	**54.27**	**250**	*e*P	**P**	**03 18 41.2**	**+0.2**
	comp=Z,54nm,1.4s,mb5.3						
NWAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
NWAO	**Narrogin (SRO)**	**54.27**	**250**	*e*P	**P**	**03 18 41.2**	**+0.1**
NWAO				pmax	pmax		
	comp=Z,54nm,1.4s						
NWAO				MLR	MLR		
	comp=Z,2µm,20.0s						
CASY	**Casey**	**54.83**	**208**	*e*P	**P**	**03 18 47.2**	**+2.6**
MUN	**Mundaring**	**55.38**	**250**	*e*P	**P**	**03 18 49.7**	**+0.6**
MBWA	**Marble Bar**	**56.19**	**264**	*e*P	**P**	**03 18 54.0**	**-1.1**
	comp=Z,83nm,1.1s,mb5.7						
MBWA				LR	LR		
	comp=Z,6µm,19.0s,MS5.7						
MIDW	**Midway**	**58.65**	**1**	PFAKE		03 19 20.0	+7.7
MIDW				LR	LR		
	comp=Z,3µm,22.0s,MS5.4						
MIR	**Mirnyy**	**61.81**	**207**	*c i*P	**P**	**03 19 39.0**	**+5.6**
MIR				*i*	pP	03 19 53.0	+7.2
MIR				*e*	pP	03 19 53.0	+7.2
MIR				*e*S	**S**	**03 27 56.0**	**+4.2**
MIR				*e*S	**S**	**03 27 58.0**	**+6.2**
MIR				pmax	pmax		
	comp=E,404µm,4.0s						
MIR				smax			
	comp=E,396nm,8.0s						
MIR				smax			
	comp=N,400nm,6.0s						
DAV	**Davao City (W)**	**65.78**	**295**	PFAKE		03 20 10.0	+10
DAV				LR	LR		
	comp=Z,428nm,22.0s,MS4.6						
TBP	**Tagbilaran**	**68.73**	**296**	*e*P	**P**	**03 20 17.4**	**-1.2**
TSM	**Tawau**	**70.33**	**288**	P	**P**	**03 20 28.1**	**-0.3**
MAW	**Mawson**	**71.97**	**201**	⇑*i*P	**P**	**03 20 41.4**	**+4.0**
	comp=Z,33nm,0.8s,mb5.3						
MAW	**Mawson**	**71.97**	**201**	P	**P**	**03 20 41.5**	**+4.1**
	comp=Z,28nm,0.9s,mb5.2,baz=126,slow=7.8,SNR=31						
MAW				LR	LR	03 51 07.0	
	comp=Z,2µm,20.6s,MS5.4,baz=118,slow=34						
MAW	**Mawson**	**71.97**	**201**	⇑*i*P	**P**	**03 20 41.4**	**+4.0**
MAW				pmax	pmax		
	comp=Z,33nm,0.8s						
KKM	**Kota Kinabalu**	**72.67**	**288**	*e*P	**P**	**03 20 41.6**	**-0.9**
KKM	**Kota Kinabalu**	**72.67**	**288**	P	**P**	**03 20 41.5**	**-1.0**
JHJ	**Hachijo jima 2**	**75.03**	**324**	LR	LR	03 49 37.5	
	comp=Z,656nm,21.3s,MS4.9,baz=145,slow=32						
KSM	**Kuching**	**75.09**	**281**	*e*P	**P**	**03 20 56.1**	**-0.5**
USHA	**Ushuaia**	**75.62**	**146**	P	**P**	**03 21 02.2**	**+3.4**
	comp=Z,12nm,1.0s,mb4.8,baz=196,slow=13,SNR=3.6						
USHA				pP	pP	03 21 17.8	+6.2
	comp=Z,20nm,0.9s,baz=299,slow=9.3,SNR=6.3						
SYO	**Syowa Base**	**76.77**	**193**	⇑P	**P**	**03 21 08.8**	**+3.8**
JOW	**Kunigami**	**76.91**	**312**	LR	LR	03 50 12.8	
	comp=Z,1µm,21.3s,MS5.1,baz=143,slow=32						
SNAA	**Sanae**	**77.80**	**178**	*e*	**P**	**03 21 20.9**	**+10**
SNAA	**Sanae**	**77.80**	**178**	*e*	**P**	**03 21 24.0**	**+13**
SNAA	**Sanae**	**77.80**	**178**	*e*	**P**	**03 21 27.0**	**+16**
SNAA	**Sanae**	**77.80**	**178**	*e*S	S	03 31 11.2	+13
SNAA	**Sanae**	**77.80**	**178**	⇑*i*P	**P**	**03 21 14.6**	**+3.9**
SNAA				*e*		03 21 20.9	
SNAA				*e*		03 21 24.0	
SNAA				*e*	pP	03 21 27.0	+3.5
SNAA				*e*		03 21 31.4	
SNAA				*e*		03 24 09.0	
SNAA				*e*		03 26 53.5	
SNAA				*e*		03 27 06.9	
SNAA				*e*		03 27 12.3	
SNAA				*e*S	S	03 31 11.2	+13
SNAA				*e*		03 31 25.9	
SNAA				*e*		03 31 32.1	
SNAA				*e*		03 40 15.5	
SNAA	**Sanae**	**77.80**	**178**	⇑*i*P	**P**	**03 21 14.6**	**+3.9**
SNAA				*e*		03 21 24.0	
SNAA				*e*	pP	03 21 27.0	+3.5
SNAA				*e*		03 21 31.4	
SNAA				*e*		03 24 09.0	
SNAA				*e*S	S	03 31 11.2	+13
SNAA				*e*		03 31 25.9	
SNAA				*e*		03 31 32.1	
VNA3	**Neumayer Olymp**	**77.95**	**176**	*e*	**P**	**03 21 21.5**	**+10**
VNA3	**Neumayer Olymp**	**77.95**	**176**	*e*	**P**	**03 21 24.7**	**+13**
VNA3	**Neumayer Olymp**	**77.95**	**176**	*e*	**P**	**03 21 28.6**	**+17**
VNA3	**Neumayer Olymp**	**77.95**	**176**	*e*S	S	03 31 08.7	+8.4
VNA3	**Neumayer Olymp**	**77.95**	**176**	⇑*i*P	**P**	**03 21 15.5**	**+4.0**
VNA3				*e*		03 21 21.5	
VNA3				*e*		03 21 24.7	
VNA3				*e*	pP	03 21 28.6	+4.3
VNA3				*e*		03 21 31.9	
VNA3				*e*		03 24 15.5	
VNA3				*e*		03 26 50.2	
VNA3				*e*		03 27 00.6	
VNA3				*e*		03 27 07.4	
VNA3				*e*S	S	03 31 08.7	+8.4
VNA3				*e*		03 31 20.9	
VNA3				*e*		03 31 27.3	
VNA3				*e*		03 40 12.4	
VNA2	**Neumayer--Watz**	**78.38**	**177**	*e*	**P**	**03 21 24.2**	**+10**
VNA2	**Neumayer--Watz**	**78.38**	**177**	*e*	**P**	**03 21 27.2**	**+13**
VNA2	**Neumayer--Watz**	**78.38**	**177**	*e*	**P**	**03 21 30.6**	**+17**
VNA2	**Neumayer--Watz**	**78.38**	**177**	*e*	**P**	**03 21 34.0**	**+20**
VNA2	**Neumayer--Watz**	**78.38**	**177**	*e*S	S	03 31 12.4	+7.5
VNA2	**Neumayer--Watz**	**78.38**	**177**	⇑*i*P	**P**	**03 21 18.3**	**+4.4**
VNA2				*e*		03 21 24.2	
VNA2				*e*		03 21 27.2	
VNA2				*e*	pP	03 21 30.6	+3.9
VNA2				*e*	pP	03 21 34.0	+7.3
VNA2				*e*		03 24 20.7	
VNA2				*e*		03 26 57.2	
VNA2				*e*		03 27 06.2	
VNA2				*e*		03 27 12.1	
VNA2				*e*S	S	03 31 12.4	+7.5
VNA2				*e*		03 31 25.4	
VNA2				*e*		03 31 31.1	
VNA2				*e*		03 40 13.3	
MAIT	**Maitri**	**78.51**	**183**	*e*P	**P**	**03 21 17.7**	**+3.1**
NVL	**N'lazarevskaya**	**78.52**	**183**	⇑*i*P	**P**	**03 21 17.8**	**+3.1**
NVL				*e**PP	pP	03 21 26.6	-0.9
NVL				*e**SP	sP	03 21 30.1	-2.2
NVL				*e*	pP	03 21 31.0	+3.5
NVL				*i* S	S	03 31 06.3	-0.1
NVL				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NVL				MLR	MLR		
	comp=Z,47nm,18.6s						
MJAR	**Matsushiro Arr**	**78.54**	**325**	P	**P**	**03 21 12.9**	**-2.6**
	comp=Z,20nm,0.8s,mb5.1,baz=158,slow=4.7,SNR=39						
MJAR				LR	LR	03 52 27.2	
	comp=Z,503nm,21.4s,MS4.8,baz=115,slow=33						
MAJO	**Matsushiro**	**78.54**	**325**	*e*P	**P**	**03 21 12.4**	**-3.0**
	comp=Z,97nm,1.2s,mb5.6						
MAJO				*e*	pP	03 21 25.7	-2.6
MAJO				LR	LR		
	comp=Z,403nm,19.0s,MS4.8						
MAJO	**Matsushiro**	**78.54**	**325**	*e*P	**P**	**03 21 12.5**	**-3.0**
MAJO				*e*	pP	03 21 25.7	-2.6
MAJO				pmax	pmax		
	comp=Z,97nm,1.2s,mb5.6						
MAJO				MLR	MLR		
	comp=Z,403nm,19.0s,MS4.8						
MAT	**Matsushiro**	**78.54**	**325**	P	**P**	**03 21 12.8**	**-2.7**
MAT				S	S	03 31 06.2	-1.1
MAT	**Matsushiro**	**78.54**	**325**	*e*P	**P**	**03 21 13.0**	**-2.5**
	comp=Z,27nm,0.9s,mb5.2						
MAT				*e*S	S	03 31 06.0	-1.3
MAT				LR	LR		
	comp=Z,720nm,21.0s,MS5.0						
MAT	**Matsushiro**	**78.54**	**325**	*e*P	**P**	**03 21 13.0**	**-2.5**
MAT				*e*S	S	03 31 06.0	-1.3
MAT				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
MAT				MLR	MLR		
	comp=Z,720nm,21.0s,MS5.0						
VNA1	**Neumayer--Stat**	**78.61**	**177**	*e*	**P**	**03 21 25.5**	**+10**
VNA1	**Neumayer--Stat**	**78.61**	**177**	*e*	**P**	**03 21 29.0**	**+14**
VNA1	**Neumayer--Stat**	**78.61**	**177**	*e*	**P**	**03 21 32.2**	**+17**
VNA1	**Neumayer--Stat**	**78.61**	**177**	*e*S	S	03 31 08.8	+1.4
VNA1	**Neumayer--Stat**	**78.61**	**177**	⇑*i*P	**P**	**03 21 19.7**	**+4.5**
VNA1				*e*		03 21 25.5	
VNA1				*e*		03 21 29.0	
VNA1				*e*	pP	03 21 32.2	+4.2
VNA1				*e*		03 21 35.8	
VNA1				*e*		03 24 22.2	
VNA1				*e*		03 26 59.6	
VNA1				*e*		03 27 19.6	
VNA1				*e*S	S	03 31 08.8	+1.4
VNA1				*e*		03 40 12.0	
COCO	**West Island**	**79.77**	**262**	PFAKE		03 21 30.0	+7.4
COCO				LR	LR		
	comp=Z,692nm,19.0s,MS5.0						
JNU	**Nakatsue**	**79.83**	**318**	LR	LR	03 53 40.9	
	comp=Z,320nm,21.1s,MS4.6,baz=273,slow=34						
TATO	**Taipei**	**80.16**	**307**	PFAKE		03 21 30.0	+5.5
TATO				LR	LR		
	comp=Z,1µm,22.0s,MS5.2						
KGM	**Kluang**	**81.31**	**278**	P	**P**	**03 21 31.2**	**+0.4**
QZH	**Quanzhou**	**82.17**	**305**	⇑*i*P	**P**	**03 21 33.4**	**-1.6**
QZH				LR	LR		
	comp=Z,1µm,16.3s,MS5.3						
PLCA	**Paso Flores**	**82.26**	**133**	P	**P**	**03 21 39.3**	**+4.1**
	comp=Z,28nm,1.1s,mb5.1,baz=238,slow=5.2,SNR=25						
PLCA				pP	pP	03 21 55.5	+7.4
	comp=Z,22nm,1.0s,baz=231,slow=5.4,SNR=8.2						
PLCA				LR	LR	03 49 29.6	
	comp=Z,1µm,21.8s,MS5.3,baz=255,slow=29						
PLCA	**Paso Flores**	**82.26**	**133**	*e*P	**P**	**03 21 38.6**	**+3.4**
	comp=Z,190nm,1.7s,mb5.8						
PLCA				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
PLCA	**Paso Flores**	**82.26**	**133**	*e*P	**P**	**03 21 38.6**	**+3.4**
PLCA				pmax	pmax		
	comp=Z,190nm,1.7s						
PLCA				MLR	MLR		
	comp=Z,2µm,21.0s						
ASAJ	**Asahikawa**	**82.76**	**333**	LR	LR	03 53 54.8	
	comp=Z,2µm,21.1s,MS5.5,baz=355,slow=32						
SMY	**Shemya**	**83.42**	**355**	PFAKE		03 21 50.0	+9.2
SMY				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
FX1	**Attu Island--F**	**83.64**	**355**	*e*P	**P**	**03 21 38.2**	**-3.7**
SNCC	**San Nicolas Is**	**84.29**	**46**	PFAKE		03 22 00.0	+14
SNCC				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
SSE	**Sheshan**	**84.35**	**311**	P	**P**	**03 21 45.0**	**-1.0**
SSE				XP	sP	03 22 05.4	+1.8
SSE				PP	PP	03 24 57.6	-5.2
SSE				S	S	03 32 05.8	-1.3
SSE				XS		03 32 30.5	
SSE				SS	SS	03 37 35.7	-4.7
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,260nm,8.3s						
SSE				LR	LR		
	comp=N,500nm,22.9s,MS5.0						
SSE				LR	LR		
	comp=E,500nm,23.0s,MS5.0						
SSE				LR	LR		
	comp=Z,880nm,21.6s,MS5.1						
IPM	**Ipoh**	**84.60**	**279**	P	**P**	**03 21 47.9**	**+0.3**
KS15	**Wonju Array Si**	**84.64**	**320**	*e*P	**P**	**03 21 47.4**	**+0.1**
UNV	**Unalaska Valle**	**84.84**	**7**	*e*P	**P**	**03 21 46.2**	**-1.7**
	comp=Z,389nm,0.9s,mb6.5						
UNV				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
YSS	**Yuzh-Sakhalins**	**85.07**	**334**	*e*P	**P**	**03 21 48.6**	**-0.6**
	comp=Z,30nm,0.6s,mb5.6						
YSS				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
YSS	**Yuzh-Sakhalins**	**85.07**	**334**	⇑*i*P	**P**	**03 21 49.0**	**-0.2**
YSS				*i* *SP	sP	03 22 06.0	-0.8
YSS				*e*S	S	03 32 08.0	-5.8
YSS				pmax	pmax		
	comp=E,40nm,1.0s						
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.8						
YSS				MLR	MLR		
	comp=Z,800nm,19.0s,MS5.1						
YSS				MLR	MLR		
	comp=N,700nm,17.0s						
KULM	**Kulim**	**85.28**	**279**	*e*P	**P**	**03 21 51.0**	**0.0**
INCN	**Inchon**	**85.37**	**319**	PFAKE		03 22 00.0	+9.1
INCN				LR	LR		
	comp=Z,404nm,20.0s,MS4.8						
PTRM	**Twissleman Ran**	**85.50**	**44**	*e*P	**P**	**03 21 52.0**	**+0.4**
SAO	**San Andreas Ge**	**85.54**	**42**	*e*P	**P**	**03 21 51.3**	**-0.4**
	comp=Z,182nm,1.7s,mb6.0						
SAO				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
LRV	**Little Rabbit**	**85.55**	**43**	*e*P	**P**	**03 21 52.5**	**+0.7**
BAR	**Barrett**	**85.70**	**48**	*e*P	**P**	**03 21 52.8**	**+0.1**
MWC	**Mount Wilson**	**85.85**	**46**	*e*P	**P**	**03 21 53.6**	**+0.3**
PET	**Petropavlovsk**	**85.88**	**346**	*e*P	**P**	**03 21 51.0**	**-2.0**
	comp=Z,20nm,0.4s,mb5.7						
PET				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
PET	**Petropavlovsk**	**85.88**	**346**	*c i*P	**P**	**03 21 51.3**	**-1.7**
PET				*e*		03 25 13.3	
PET				*e*		03 32 08.4	
PET				*e*S	S	03 32 19.9	-1.6
PET				*e*PS	PS	03 33 18.7	-7.7
PET				*e*SS	SS	03 38 00.7	-2.2
PET				*e*SSS	SSS	03 41 27.3	-4.6
PET				pmax	pmax		
	comp=Z,500nm,16.8s						
PET				pmax	pmax		
	comp=Z,31nm,0.5s,mb5.8						
PET				pmax	pmax		
	comp=Z,100nm,20.1s						
PET				MLR	MLR		
	comp=Z,800nm,20.0s,MS5.1						
PET				smax			
	comp=N,13nm,0.4s						
PET				smax			
	comp=E,31nm,0.6s						
HOPS	**Hopland**	**86.18**	**40**	*e*P	**P**	**03 21 55.1**	**+0.3**
	comp=E,174nm,1.4s,mb6.1						
HOPS				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
KCPM	**Cahto Peak**	**86.39**	**39**	*e*P	**P**	**03 21 56.1**	**+0.3**
KCPM				*e*pP	pP	03 22 07.9	-1.0
KCPM				*e*sP	sP	03 22 13.3	-0.1
NJ2	**Nanjing**	**86.48**	**311**	*e*P	**P**	**03 21 55.0**	**-1.5**
NJ2				AP	pP	03 22 05.5	-4.0
NJ2				XP	sP	03 22 09.4	-4.7
NJ2				PP	PP	03 25 16.8	-3.6
NJ2				S	S	03 32 22.0	-5.8
NJ2				AMB	AMB		
	comp=Z,30nm,0.5s,mb5.8						
NJ2				AMB	AMB		
	comp=Z,600nm,3.5s						
NJ2				LR	LR		
	comp=N,2µm,28.0s,MS5.5						
NJ2				LR	LR		
	comp=E,2µm,25.0s,MS5.5						
NJ2				LR	LR		
	comp=Z,920nm,27.0s,MS5.0						
KIPM	**Iron Peak**	**86.54**	**39**	*e*P	**P**	**03 21 57.0**	**+0.4**
ISA	**Isabella**	**86.55**	**45**	⇑*i*P	**P**	**03 21 57.1**	**+0.4**
	comp=Z,578nm,3.0s						
ISA				LR	LR		
	comp=Z,319nm,19.0s,MS4.7						
FCH	**Farellones**	**86.61**	**127**	⇑*e*P	**P**	**03 22 00.8**	**+3.7**
VLA	**Vladivostok**	**86.70**	**326**	*e*P	**P**	**03 21 56.2**	**-1.1**
VLA				pmax	pmax		
	comp=Z,27nm,0.5s,mb5.7						
CMB	**Columbia Colle**	**87.03**	**42**	*e*P	**P**	**03 21 59.0**	**0.0**
	comp=Z,163nm,1.6s,mb6.0						
CMB				*e*pP	pP	03 22 10.4	-1.7
CMB				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
SDPT	**Sand Point**	**87.07**	**10**	*e*P	**P**	**03 21 57.9**	**-0.9**
	comp=Z,501nm,1.1s,mb6.7						
SDPT				LR	LR		
	comp=Z,700nm,19.0s,MS5.1						
KHMM	**Horse Mountain**	**87.16**	**38**	*e*P	**P**	**03 22 00.6**	**+1.0**
OHCM	**Honcut**	**87.30**	**40**	*e*P	**P**	**03 22 00.4**	**+0.1**
OHCM				*e*pP	pP	03 22 12.3	-1.1
DAC	**Darwin (Calif)**	**87.49**	**45**	*e*P	**P**	**03 22 01.7**	**+0.4**
	comp=Z,157nm,1.8s,mb5.9						
DAC				*e*PP	PP	03 25 35.8	+7.0
DAC				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
WDC	**Whiskeytown Da**	**87.59**	**39**	*e*P	**P**	**03 22 02.0**	**+0.4**
	comp=Z,231nm,1.8s,mb6.1						
WDC				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
MTUM	**Tungsten Hills**	**87.63**	**43**	*e*P	**P**	**03 22 02.5**	**+0.6**
PAYG	**Puerto Ayora**	**87.69**	**89**	PFAKE		03 22 20.0	+17
PAYG				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
LDFC	**Landfair**	**88.24**	**47**	⇑*i*P	**P**	**03 22 06.4**	**+1.4**
LDFC				*e*sP	sP	03 22 22.7	+0.2
YBH	**Yreka Blue Hor**	**88.31**	**38**	P	**P**	**03 22 05.7**	**+0.7**
	comp=Z,7.4nm,0.8s,mb5.0,baz=180,slow=3.3,SNR=16						
YBH	**Yreka Blue Hor**	**88.31**	**38**	P	**P**	**03 22 05.7**	**+0.7**
YBH				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
NVAR	**Mina Array Bea**	**88.50**	**43**	P	**P**	**03 22 06.4**	**+0.4**
	comp=Z,16nm,0.8s,mb5.3,baz=208,slow=6.2,SNR=89						
NVAR				PKKPbc		03 39 50.8	
	comp=Z,1.0nm,0.5s,baz=63,slow=4.6,SNR=12						
NVAR				PKPPKP		03 47 57.3	
	comp=Z,0.7nm,0.7s,baz=80,slow=4.6,SNR=5.1						
NVAR				LR	LR	03 58 35.4	
	comp=Z,2µm,18.3s,MS5.6,baz=175,slow=34						
WHN	**Wuhan**	**88.57**	**307**	P	**P**	**03 22 06.5**	**-0.1**
MNV	**Mina**	**88.59**	**43**	*e*P	**P**	**03 22 06.4**	**-0.1**
	comp=Z,149nm,1.8s,mb6.0						
MNV				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
TPNV	**Topopah Spring**	**88.75**	**45**	*e*P	**P**	**03 22 08.0**	**+0.7**
	comp=Z,239nm,1.7s,mb6.2						
TPNV				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
TPNV	**Topopah Spring**	**88.75**	**45**	*e*P	**P**	**03 22 08.0**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,239nm,1.7s,mb6.2						
TPNV				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
NEN	**Nelson**	**88.78**	**47**	*e*P	**P**	**03 22 08.1**	**+0.7**
NEN				*e*pP	pP	03 22 19.9	-0.6
HUMO	**Hull Mountain**	**88.80**	**37**	PFAKE		03 22 20.0	+13
HUMO				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
TPH	**Tonopah**	**88.90**	**44**	*e*P	**P**	**03 22 08.3**	**+0.3**
	comp=Z,189nm,1.6s,mb6.2						
TPH				*e*pP	pP	03 22 20.4	-0.7
TPH				*e*sP	sP	03 22 24.4	-1.2
TPH				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
MDJ	**Mudanjiang**	**88.92**	**326**	P	**P**	**03 22 07.3**	**-0.6**
MDJ				AP	pP	03 22 19.1	-1.9
MDJ				XP	sP	03 22 24.3	-1.2
MDJ				PP	PP	03 25 36.7	-3.4
MDJ				XS		03 33 11.1	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb5.1						
MDJ				AMB	AMB		
	comp=Z,410nm,7.8s						
MDJ				LR	LR		
	comp=N,440nm,30.7s,MS4.9						
MDJ				LR	LR		
	comp=E,500nm,27.6s,MS4.9						
MDJ				LR	LR		
	comp=Z,950nm,28.4s,MS5.1						
MDJ	**Mudanjiang**	**88.92**	**326**	*e*P	**P**	**03 22 07.5**	**-0.5**
	comp=Z,12nm,0.8s,mb5.3						
TRQA	**Tornquist**	**89.18**	**135**	*e*P	**P**	**03 22 11.8**	**+2.5**
	comp=Z,115nm,1.6s,mb6.0						
TRQA				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
DL2	**Dalian**	**89.22**	**317**	P	**P**	**03 22 09.4**	**-0.1**
DL2				SKS	SKS	03 32 31.7	-2.0
DL2				S	S	03 32 52.9	-0.4
DL2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.6						
DL2				AMB	AMB		
	comp=Z,220nm,5.6s						
DL2				LR	LR		
	comp=N,280nm,18.8s,MS4.9						
DL2				LR	LR		
	comp=E,320nm,19.1s,MS4.9						
DL2				LR	LR		
	comp=Z,700nm,19.4s,MS5.1						
KKTK	**Khon Kaen**	**89.26**	**289**	P	**P**	**03 22 11.0**	**+0.8**
TUC	**Tucson**	**89.33**	**51**	*e*P	**P**	**03 22 11.4**	**+1.2**
	comp=Z,222nm,1.5s,mb6.3						
TUC				*e*pP	pP	03 22 23.4	+0.1
TUC				*e*sP	sP	03 22 28.2	+0.4
TUC				LR	LR		
	comp=Z,644nm,20.0s,MS5.0						
MOD	**Modoc**	**89.72**	**39**	*e*P	**P**	**03 22 11.8**	**0.0**
	comp=Z,100nm,1.5s,mb5.9						
MOD				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
COR	**Corvallis**	**90.03**	**36**	PFAKE		03 22 20.0	+6.9
COR				LR	LR		
	comp=Z,613nm,22.0s,MS5.0						
SNY	**Shenyang**	**90.07**	**320**	⇑P	**P**	**03 22 12.7**	**-0.7**
SNY				S	S	03 33 04.5	+3.4
SNY				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.5						
SNY				AMB	AMB		
	comp=Z,330nm,12.9s						

SNY				LR	LR		
	comp=E,570nm,25.1s						
SNY				LR	LR		
	comp=Z,700nm,27.5s,MS5.0						
TIA	**Tai’an**	**90.22**	**313**	*e*P	**P**	**03 22 14.0**	**-0.2**
CN2	**Changchun**	**90.43**	**323**	*e*P	**P**	**03 22 14.1**	**-0.9**
CN2				*e*XP	sP	03 22 31.0	-1.6
CN2				*e*S	S	03 33 02.0	-2.2
CN2				AMB	AMB		
	comp=Z,70nm,1.0s,mb6.0						
CN2				AMB	AMB		
	comp=Z,440nm,4.0s						
CN2				LR	LR		
	comp=N,870nm,19.0s,MS5.3						
CN2				LR	LR		
	comp=E,570nm,19.0s,MS5.3						
CN2				LR	LR		
	comp=Z,960nm,25.0s						
BKCOR	**Black Crater**	**90.64**	**37**	P	**P**	**03 22 16.6**	**+0.6**
KDAK	**Kodiak Island**	**90.76**	**13**	P	**P**	**03 22 15.9**	**-0.3**
	comp=Z,30nm,1.0s,mb5.6,baz=220,slow=7.1,SNR=7.3						
WUAZ	**Wupatki**	**90.90**	**48**	*e*P	**P**	**03 22 18.4**	**+1.0**
	comp=Z,222nm,1.5s,mb6.3						
WUAZ				*e*pP	pP	03 22 29.9	-0.7
WUAZ				*e*sP	sP	03 22 35.1	+0.1
WUAZ				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
WVOR	**Wild Horse Val**	**90.99**	**40**	*e*P	**P**	**03 22 17.5**	**-0.2**
	comp=Z,166nm,1.6s,mb6.1						
WVOR				*e*pP	pP	03 22 29.7	-1.1
WVOR				*e*sP	sP	03 22 34.7	-0.6
WVOR				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
ARUT	**Antelope Range**	**91.00**	**46**	*e*P	**P**	**03 22 19.1**	**+1.2**
NST	**Nakhon Sawan**	**91.11**	**287**	P	**P**	**03 22 20.0**	**+1.2**
VIPM	**Ingram Point**	**91.34**	**37**	P	**P**	**03 22 19.4**	**+0.1**
KLR	**Kul’dur**	**91.35**	**330**	*e*P	**P**	**03 22 18.0**	**-1.2**
KLR				*e*S	S	03 33 08.0	-4.2
KLR				pmax	pmax		
	comp=Z,600nm,8.0s						
BMW	**Boistfort Moun**	**91.41**	**34**	P	**P**	**03 22 20.3**	**+0.7**
GYA	**Guiyang**	**91.73**	**300⇑**	*i*P	**P**	**03 22 21.7**	**+0.2**
GYA				AP	pP	03 22 35.2	+0.5
GYA				XP	sP	03 22 40.3	+1.2
GYA				PP	PP	03 26 02.4	-0.6
GYA				SKS	SKS	03 32 48.2	-0.6
GYA				S	S	03 33 13.9	-2.2
GYA				XS		03 33 36.7	
GYA				PS	PS	03 34 31.8	-4.5
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.7						
GYA				AMB	AMB		
	comp=Z,290nm,4.5s						
GYA				LR	LR		
	comp=N,640nm,19.4s,MS5.3						
GYA				LR	LR		
	comp=E,810nm,19.6s,MS5.3						
GYA				LR	LR		
	comp=Z,870nm,18.4s,MS5.2						
ELK	**Elko**	**91.80**	**43**	P	**P**	**03 22 21.7**	**+0.2**
	comp=Z,8.2nm,0.9s,mb5.1,baz=228,slow=5.1,SNR=42						
ELK				PKKP	PKKP	03 39 42.7	+15
	comp=Z,0.5nm,0.4s,baz=262,slow=3.3,SNR=5.6						
ELK	**Elko**	**91.80**	**43⇑**	*e*P	**P**	**03 22 21.7**	**+0.2**
	comp=Z,82nm,1.7s,mb5.8						
ELK				*e*	pP	03 22 36.4	+1.8
ELK				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
ENH	**Enshi**	**91.81**	**304**	*e*P	**P**	**03 22 21.6**	**-0.1**
	comp=Z,307nm,1.6s,mb6.4						
OCWA	**Octopus Mounta**	**91.87**	**33**	PFAKE		03 22 30.0	+8.4
OCWA				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
MVU	**Marysvale**	**92.20**	**46**	*e*P	**P**	**03 22 24.5**	**+1.1**
	comp=Z,44nm,1.4s,mb5.6						
MVU				LR	LR		
	comp=Z,907nm,19.0s,MS5.2						
MSU	**Marysvale**	**92.23**	**46**	*e*P	**P**	**03 22 24.8**	**+1.3**
LTX	**Lajitas**	**92.58**	**57**	*e*P	**P**	**03 22 25.9**	**+0.6**
	comp=Z,66nm,1.5s,mb5.8						
LTX				LR	LR		
	comp=Z,711nm,22.0s,MS5.1						
LTX	**Lajitas**	**92.58**	**57**	*e*P	**P**	**03 22 25.9**	**+0.6**
LTX				pmax	pmax		
	comp=Z,66nm,1.5s,mb5.8						
LTX				MLR	MLR		
	comp=Z,711nm,22.0s,MS5.1						
TXAR	**Lajitas Array**	**92.58**	**57**	P	**P**	**03 22 26.0**	**+0.7**
	comp=Z,2.8nm,0.9s,mb4.7,baz=211,slow=7.3,SNR=28						
TXAR				pP	pP	03 22 42.5	+4.0
	comp=Z,20nm,1.1s,baz=214,slow=4.5,SNR=14						
TXAR				PKKP	PKKP	03 39 35.6	+8.8
	comp=Z,0.3nm,0.7s,baz=124,slow=3.3,SNR=2.5						
TXAR				LR	LR	03 59 30.6	
	comp=Z,450nm,18.2s,MS5.0,baz=190,slow=33						
MNTX	**Cornudas Mount**	**92.68**	**55**	*e*P	**P**	**03 22 25.9**	**+0.1**
	comp=Z,98nm,1.8s,mb5.9						
MNTX				*e*pP	pP	03 22 37.5	-1.4
MNTX				*e*sP	sP	03 22 42.7	-0.6
MNTX				LR	LR		
	comp=Z,532nm,19.0s,MS5.0						
DUG	**Dugway**	**92.89**	**44**	*e*P	**P**	**03 22 26.4**	**-0.1**
	comp=Z,24nm,1.3s,mb5.5						
DUG				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
DUG	**Dugway**	**92.89**	**44**	*e*P	**P**	**03 22 26.4**	**-0.1**
DUG				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.5						
DUG				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
LENM	**Lemitar**	**93.00**	**52**	*e*P	**P**	**03 22 28.2**	**+1.0**
NLU	**North Lily Min**	**93.18**	**45**	*e*P	**P**	**03 22 28.4**	**+0.6**
NLU				*e*sP	sP	03 22 44.8	-0.7
HAWA	**Hanford**	**93.19**	**36**	*e*P	**P**	**03 22 27.9**	**+0.2**
	comp=Z,8.2nm,1.6s,mb4.9						
HAWA				LR	LR		
	comp=Z,151nm,22.0s,MS4.4						
BGU	**Big Grassy Mou**	**93.21**	**43**	*e*P	**P**	**03 22 27.4**	**-0.5**
BNM	**Barren Site**	**93.22**	**52**	*e*P	**P**	**03 22 29.1**	**+0.9**
BNM				*e*pP	pP	03 22 42.3	+1.0
TMUT	**Trail Mountain**	**93.31**	**46**	*e*P	**P**	**03 22 29.7**	**+1.2**
LPM	**Los Pinos Moun**	**93.32**	**52**	*e*P	**P**	**03 22 29.8**	**+1.2**
LPM				*e*pP	pP	03 22 41.5	-0.2
LPM				*e*sP	sP	03 22 46.1	0.0
NNA	**Nana**	**93.32**	**106**	PFAKE		03 22 40.0	+11
NNA				LR	LR		
	comp=Z,331nm,22.0s,MS4.8						
BMO	**Blue Mountains**	**93.32**	**38**	*e*P	**P**	**03 22 27.9**	**-0.5**
	comp=Z,61nm,1.7s,mb5.8						
BMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
SVW2	**Sparrevohn**	**93.34**	**11**	*e*P	**P**	**03 22 26.7**	**-1.3**
MPU	**Maple Canyon**	**93.49**	**45**	*e*P	**P**	**03 22 29.6**	**+0.4**
	comp=Z,4.9nm,0.8s,mb5.0						
MPU				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
SRU	**San Rafael**	**93.62**	**46**	*e*P	**P**	**03 22 29.8**	**-0.1**
	comp=Z,116nm,1.7s,mb6.0						
MA2	**Magadan**	**93.64**	**345**	PFAKE		03 22 40.0	+11
MA2				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
MA2	**Magadan**	**93.64**	**345**	*e*P	**P**	**03 22 37.6**	**+8.2**
MA2				*e*		03 39 52.2	
GDL2	**Guadalupe Moun**	**93.68**	**55**	*e*P	**P**	**03 22 30.6**	**+0.3**
CHG	**Chiang Mai**	**93.70**	**290**	P	**P**	**03 22 32.5**	**+1.8**
	comp=Z,20nm,1.1s,mb5.5						
SLKM	**Skilak Lake**	**93.75**	**13**	*e*P	**P**	**03 22 28.7**	**-1.2**
SPUT	**South Promonto**	**93.80**	**43**	*e*P	**P**	**03 22 30.9**	**+0.4**
ANMO	**Albuquerque**	**93.80**	**51**	P	**P**	**03 22 31.6**	**+0.9**
	comp=Z,4.2nm,0.8s,mb4.9,baz=204,slow=5.1,SNR=5.8						
ANMO				pP	pP	03 22 48.2	+4.3
	comp=Z,12nm,1.0s,baz=222,slow=5.0,SNR=7.6						
ANMO	**Albuquerque**	**93.80**	**51**	*e*P	**P**	**03 22 31.4**	**+0.6**
	comp=Z,64nm,1.5s,mb5.8						
ANMO				*e*pP	pP	03 22 44.5	+0.6
ANMO				LR	LR		
	comp=Z,999nm,19.0s,MS5.3						
CTU	**Camp Tracy**	**93.83**	**44**	*e*P	**P**	**03 22 30.8**	**0.0**
	comp=Z,5.7nm,0.8s,mb5.0						
HVU	**Hansel Valley**	**93.89**	**43**	*e*P	**P**	**03 22 31.2**	**+0.2**
	comp=Z,147nm,1.6s,mb6.2						
HVU				*e*pP	pP	03 22 43.2	-1.0
HVU				*e*sP	sP	03 22 47.5	-1.1
DAU	**Daniels Canyon**	**93.96**	**45**	*e*P	**P**	**03 22 30.6**	**-0.8**
KMI	**Kunming**	**93.99**	**297**	P	**P**	**03 22 34.4**	**+2.6**
KMI				AP	pP	03 22 47.5	+2.5
KMI				XP	sP	03 22 52.4	+3.0
KMI				PP	PP	03 26 21.8	+0.7
KMI				PPP	PPP	03 28 25.0	+0.8
KMI				SKS	SKS	03 33 03.8	+2.3
KMI				S	S	03 33 36.7	+0.9
KMI				XS		03 33 58.3	
KMI				PS	PS	03 35 00.5	-0.9
KMI				SS	SS	03 39 58.5	-1.7
KMI				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.4						
KMI				LR	LR		
	comp=N,440nm,18.7s,MS5.0						
KMI				LR	LR		
	comp=E,350nm,20.0s,MS5.0						
KMI				LR	LR		
	comp=Z,430nm,25.2s						
HLID	**Hailey**	**94.07**	**41**	*e*P	**P**	**03 22 32.1**	**+0.4**
	comp=Z,35nm,1.3s,mb5.6						
HLID				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
PV01	**Paradox Valley**	**94.27**	**48**	*e*P	**P**	**03 22 33.0**	**+0.2**
OD2	**Odessa Site #2**	**94.28**	**36**	P	**P**	**03 22 32.5**	**-0.1**
TCUT	**Toone Canyon**	**94.30**	**44**	*e*P	**P**	**03 22 34.1**	**+1.2**
FIB	**Fire Island**	**94.36**	**13**	PFAKE		03 22 40.0	+7.4
FIB				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
CPRX	**Cap Rock**	**94.49**	**54**	*e*P	**P**	**03 22 33.6**	**-0.3**
HWUT	**Hardware Ranch**	**94.50**	**44**	*e*P	**P**	**03 22 33.5**	**-0.3**
	comp=Z,59nm,1.7s,mb5.7						
HWUT				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SIT	**Sitka**	**94.61**	**22**	PFAKE		03 22 40.0	+6.1
SIT				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
PMR	**Palmer**	**94.96**	**13**	*e*P	**P**	**03 22 34.3**	**-1.1**
	comp=Z,22nm,0.9s,mb5.6						
PMR				LR	LR		
	comp=Z,500nm,18.0s,MS5.0						
DIV	**Divide**	**95.25**	**15**	*e*P	**P**	**03 22 35.8**	**-0.9**
	comp=Z,118nm,1.2s,mb6.2						
DIV				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
AHID	**Auburn Hatcher**	**95.48**	**43**	*e*P	**P**	**03 22 38.6**	**+0.4**
	comp=Z,82nm,1.5s,mb5.9						
AHID				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
NEW	**Newport**	**95.66**	**36**	P	**P**	**03 22 38.5**	**-0.4**
	comp=Z,2.3nm,0.8s,mb4.6,baz=190,slow=6.1,SNR=2.8						
NEW	**Newport**	**95.66**	**36**	P	**P**	**03 22 38.5**	**-0.4**
NEW				MLR	MLR		
	comp=Z,1µm,20.0s						
RRI2	**Red Ridge**	**95.71**	**42**	*e*P	**P**	**03 22 39.7**	**+0.5**
	comp=Z,77nm,1.6s,mb5.9						
MCMT	**McKenzie Canyo**	**95.74**	**40**	*e*P	**P**	**03 22 36.6**	**-2.7**
SMCO	**Snowmass**	**95.89**	**48**	*e*P	**P**	**03 22 40.6**	**+0.5**
	comp=Z,34nm,1.6s,mb5.5						
REDW	**Red Top Meadow**	**95.99**	**43**	*e*P	**P**	**03 22 40.5**	**0.0**
	comp=Z,80nm,1.5s,mb5.9						
TPAW	**Teton Pass**	**96.01**	**42**	*e*P	**P**	**03 22 41.3**	**+0.7**
	comp=Z,61nm,1.5s,mb5.8						
JCT	**Junction City**	**96.01**	**58**	*e*P	**P**	**03 22 40.9**	**0.0**
	comp=Z,43nm,1.4s,mb5.7						
JCT				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SDCO	**Great Sand Dun**	**96.02**	**49**	*e*P	**P**	**03 22 40.6**	**-0.2**
	comp=Z,45nm,1.7s,mb5.6						
SDCO				LR	LR		
	comp=Z,704nm,20.0s,MS5.1						
SNOW	**Snow King Moun**	**96.10**	**42**	*e*P	**P**	**03 22 41.5**	**+0.5**
	comp=Z,76nm,1.5s,mb5.9						
DLMT	**Dillon**	**96.22**	**40**	*e*P	**P**	**03 22 42.2**	**+0.8**
	comp=Z,20nm,1.1s,mb5.5						
IMW	**Indian Meadow**	**96.26**	**42**	*e*P	**P**	**03 22 42.1**	**+0.4**
	comp=Z,59nm,1.5s,mb5.8						
LOHW	**Long Hollow**	**96.28**	**42**	*e*P	**P**	**03 22 42.1**	**+0.3**
	comp=Z,81nm,1.7s,mb5.9						
CD2	**Chengdu**	**96.28**	**302**	P	**P**	**03 22 43.8**	**+1.7**
CD2				PP	PP	03 26 40.9	+2.6
CD2				SKS	SKS	03 33 15.2	+1.4
CD2				S	S	03 33 50.5	-4.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.3						
CD2				LR	LR		
	comp=N,290nm,4.2s						
MOOW	**Moose Ponds**	**96.28**	**42**	*e*P	**P**	**03 22 41.1**	**-0.7**
	comp=N,57nm,1.8s,mb5.7						
TNA	**Tin City**	**96.32**	**4**	PFAKE		03 22 50.0	+8.5
TNA				LR	LR		
	comp=Z,840nm,20.0s,MS5.2						
SEY	**Seymchan**	**96.33**	**347⇑**	*i*P	**P**	**03 22 40.3**	**-1.2**
SEY	**Seymchan**	**96.33**	**347⇑**	*i*P	**P**	**03 22 40.2**	**-1.3**
BW06	**Boulder Array**	**96.39**	**44**	PFAKE		03 22 50.0	+7.7
BW06				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
PDAR	**Pinedale Array**	**96.39**	**44**	P	**P**	**03 22 41.8**	**-0.5**
	comp=Z,3.3nm,0.8s,mb4.8,baz=224,slow=2.6,SNR=24						
PDAR				PP	PP	03 26 34.0	-4.9
	comp=Z,2.7nm,1.2s,baz=214,slow=5.3,SNR=4.9						
PDAR				PKKPbc		03 39 29.6	
	comp=Z,1.7nm,0.7s,baz=69,slow=4.3,SNR=16						
PDAR				LR	LR	04 04 09.1	
	comp=Z,1µm,18.1s,MS5.5,baz=234,slow=34						
MSO	**Missoula**	**96.39**	**38**	PFAKE		03 22 50.0	+7.8
MSO				LR	LR		
	comp=Z,868nm,20.0s,MS5.2						
HHC	**Hu-ho-hao-te**	**96.49**	**314**	*e*P	**P**	**03 22 42.2**	**-0.6**
HHC				LR	LR		
	comp=N,750nm,6.7s						
HHC				LR	LR		
	comp=E,570nm,11.8s						
HHC				LR	LR		
	comp=Z,400nm,21.6s						
YMR	**Madison River**	**96.71**	**41**	PFAKE		03 23 00.0	+16
YMR				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
BOZ	**Bozeman (W)**	**96.93**	**40**	PFAKE		03 23 00.0	+15
BOZ				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
MCK	**McKinley**	**96.95**	**13**	*e*P	**P**	**03 22 43.0**	**-1.4**
	comp=Z,9.1nm,0.8s,mb5.3						
MCK				LR	LR		
	comp=Z,572nm,20.0s,MS5.0						
MCK	**McKinley**	**96.95**	**13**	*e*P	**P**	**03 22 43.0**	**-1.4**
MCK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
MCK				MLR	MLR		
	comp=Z,572nm,20.0s,MS5.0						
LKWY	**Lake**	**96.97**	**42**	PFAKE		03 23 00.0	+15
LKWY				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
ISCO	**Idaho Springs**	**97.11**	**48**	PFAKE		03 23 00.0	+14
ISCO				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
THY	**Trims Highway**	**97.29**	**14**	*e*P	**P**	**03 22 45.2**	**-0.7**
DLBC	**Dease Lake**	**97.45**	**23**	P	**P**	**03 22 46.4**	**-0.4**
	comp=Z,2.6nm,0.9s,mb4.7,baz=252,slow=6.4,SNR=4.6						
DLBC	**Dease Lake**	**97.45**	**23**	P	**P**	**03 22 46.4**	**-0.4**
JTS	**JuntasAbangare**	**97.78**	**83**	LR	LR	03 57 07.2	
	comp=Z,623nm,19.1s,MS5.1,baz=327,slow=29						
JTS	**JuntasAbangare**	**97.78**	**83**	PFAKE		03 23 00.0	+11
JTS				LR	LR		
	comp=Z,255nm,20.0s,MS4.7						
LPAZ	**La Paz**	**97.99**	**114**	P	**P**	**03 22 54.5**	**+4.3**
	comp=Z,1.9nm,0.7s,mb4.8,baz=247,slow=2.7,SNR=11						
LPAZ				LR	LR	03 58 37.5	
	comp=Z,462nm,21.1s,MS5.0,baz=220,slow=30						
LPAZ	**La Paz**	**97.99**	**114**	*e*P	**P**	**03 22 54.2**	**+4.0**
	comp=Z,12nm,1.5s,mb5.2						
LPAZ				LR	LR		
	comp=Z,523nm,22.0s,MS5.0						
LPAZ	**La Paz**	**97.99**	**114**	*e*P	**P**	**03 22 54.2**	**+4.0**
LPAZ				pmax	pmax		
	comp=Z,12nm,1.5s						
LPAZ				MLR	MLR		
	comp=Z,523nm,22.0s						
COLA	**College**	**98.18**	**13**	*e*P	**P**	**03 22 47.9**	**-2.1**
	comp=Z,19nm,0.8s,mb5.7						
COLA				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
COLA	**College**	**98.18**	**13**	*i* P	**P**	**03 22 48.4**	**-1.5**
ILAR	**Eielson Array**	**98.27**	**13**	P	**P**	**03 22 48.7**	**-1.6**
	comp=Z,4.5nm,0.8s,mb5.0,baz=225,slow=5.7,SNR=30						
ILAR				PKKPbc		03 39 21.6	
	comp=Z,0.9nm,0.7s,baz=344,slow=3.2,SNR=9.6						
ILAR				LR	LR	04 05 48.3	
	comp=Z,400nm,19.1s,MS4.9,baz=52,slow=35						
LZH	**Lanzhou**	**98.94**	**307**	*e*P	**P**	**03 22 55.0**	**+0.9**
LZH				AP	pP	03 23 07.1	-0.1
LZH				XP	sP	03 23 12.5	+0.9
LZH				PP	PP	03 26 58.5	0.0
LZH				SKS	SKS	03 33 28.1	+0.6
LZH				*e*S	S	03 34 17.0	-0.4
LZH				XS		03 34 38.4	
LZH				PS	PS	03 35 52.2	-1.6
LZH				SS	SS	03 41 06.5	-2.8
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,200nm,7.6s						
LZH				LR	LR		
	comp=N,1µm,15.6s						
LZH				LR	LR		
	comp=Z,2µm,18.7s,MS5.7						
WMOK	**Wichita Mounta**	**98.97**	**55**	PFAKE		03 23 10.0	+16
WMOK				LR	LR		
	comp=Z,918nm,19.0s,MS5.3						
BILL	**Bilibino**	**99.20**	**354⇑**	*i*P	**P**	**03 22 53.5**	**-1.0**
BILL				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
BILL	**Bilibino**	**99.20**	**354⇓**	*e*P	**P**	**03 22 53.7**	**-0.8**
BILL				*e*		03 23 00.8	
BILL						03 26 59.0	
BILL				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb5.2						
BILL				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.3						
DAWY	**Dawson**	**99.28**	**16**	*e*P	**P**	**03 22 53.9**	**-1.0**
CPUP	**Villa Florida**	**99.76**	**128**	PFAKE		03 23 10.0	+12
CPUP				LR	LR		
	comp=Z,170nm,20.0s,MS4.5						
CBKS	**Cedar Bluff**	**100.42**	**51**	PFAKE		03 23 10.0	+9.3
CBKS				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
NATX	**Nacogdoches**	**100.45**	**59**	PFAKE		03 23 10.0	+8.9
NATX				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
LAO	**LASA Array**	**100.59**	**42**	PFAKE		03 23 10.0	+8.7
LAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
YAK	**Yakutsk**	**101.58**	**338**	PFAKE		03 23 20.0	+15
YAK				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
MIAR	**Mount Ida**	**102.60**	**57**	PFAKE		03 23 20.0	+9.4
MIAR				LR	LR		
	comp=Z,524nm,19.0s,MS5.1						
DGMT	**Dagmar**	**102.71**	**41**	PFAKE		03 23 20.0	+9.3
DGMT				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
SHL	**Shillong**	**102.71**	**292**	*e*P	Pdif	03 23 17.0	+5.7
DGAR	**Diego Garcia**	**102.74**	**253**	PFAKE		03 23 20.0	+8.3
DGAR				LR	LR		
	comp=Z,272nm,19.0s,MS4.8						
PALK	**Pallekele**	**103.38**	**271**	PFAKE		03 23 30.0	+16
PALK				LR	LR		
	comp=Z,419nm,19.0s,MS5.0						
SONM	**Songino Array**	**103.41**	**318**	Pdiff	Pdif	03 23 14.8	+0.9
	comp=Z,1.1nm,0.6s,baz=140,slow=6.6,SNR=4.8						
SONM				PP	PP	03 27 22.7	-10
	comp=Z,3.2nm,1.1s,baz=117,slow=6.4,SNR=5.7						
SIV	**San Ignacio**	**103.62**	**118**	PKKPbc		03 39 06.7	
	comp=Z,0.7nm,0.7s,baz=31,slow=5.9,SNR=3.0						
INK	**Inuvik**	**104.13**	**16**	Pdiff	Pdif	03 23 16.0	-0.5
	comp=Z,3.0nm,0.9s,baz=229,slow=5.4,SNR=7.8						
INK				PP	PP	03 27 30.0	-7.1
	comp=Z,2.7nm,0.8s,baz=197,slow=5.5,SNR=3.4						
OXF	**Oxford**	**105.63**	**59**	PFAKE		03 27 50.0	
OXF				LR	LR		
	comp=Z,959nm,19.0s,MS5.4						
YKA	**Yellowknife Ar**	**105.77**	**26**	PKiKP		03 27 35.4	
	comp=Z,1.3nm,0.5s,baz=246,slow=1.8,SNR=9.8						
YKA				PKKPbc		03 39 02.3	
	comp=Z,2.5nm,0.6s,baz=34,slow=3.3,SNR=7.6						
YKA				PKKPab		03 39 18.1	
	comp=Z,5.8nm,0.9s,baz=45,slow=3.3,SNR=6.4						
YKA	**Yellowknife Ar**	**105.77**	**26**	PKPdf		03 27 35.4	
YKA				PKKPbc		03 39 02.4	
YKA				PKKPab		03 39 18.1	
CCM	**Cathedral Cave**	**105.89**	**55**	PFAKE		03 27 50.0	
CCM				LR	LR		
	comp=Z,189nm,22.0s,MS4.6						
SAML	**Samuel**	**106.16**	**111**	PFAKE		03 27 50.0	
SAML				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
ZAK	**Zakamensk**	**106.45**	**319**	*e*P	Pdif	03 23 28.9	+1.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FFC	**Flin Flon**	**107.09**	**36**	PFAKE		03 27 50.0	
FFC				LR	LR		
	comp=Z,273nm,21.0s,MS4.8						
WVT	**Waverly**	**107.50**	**58**	PFAKE		03 27 50.0	
WVT				LR	LR		
	comp=Z,602nm,22.0s,MS5.1						
ULM	**Lac du Bonnet**	**108.33**	**42**	PKiKP		03 27 40.3	
	comp=Z,1.0nm,0.5s,baz=290,slow=4.5,SNR=4.2						
ULM				PKKPab		03 39 07.5	
	comp=Z,2.6nm,0.8s,baz=72,slow=5.2,SNR=6.2						
TIXI	**Tiksi**	**108.61**	**344**	PFAKE		03 27 50.0	
TIXI				LR	LR		
	comp=Z,581nm,20.0s,MS5.1						
TIXI	**Tiksi**	**108.61**	**344**	*e*P	Pdif	03 23 33.9	-2.3
TIXI				*e*		03 34 05.5	
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DWPF	**Disney**	**108.99**	**68**	PFAKE		03 28 00.0	
DWPF				LR	LR		
	comp=Z,138nm,20.0s,MS4.5						
SDV	**Santo Domingo**	**109.39**	**91**	PFAKE		03 28 00.0	
SDV				LR	LR		
	comp=Z,892nm,22.0s,MS5.3						
WCI	**Wyandotte Cave**	**109.50**	**57**	PFAKE		03 28 00.0	
WCI				LR	LR		
	comp=Z,239nm,19.0s,MS4.8						
GOGA	**Godfrey**	**109.62**	**62**	PFAKE		03 28 00.0	
GOGA				LR	LR		
	comp=Z,724nm,22.0s,MS5.2						
EYMN	**Ely**	**109.96**	**46**	PFAKE		03 28 00.0	
EYMN				LR	LR		
	comp=Z,6µm,21.0s,MS6.1						
NHSC	**New Hope**	**112.02**	**64**	PFAKE		03 28 00.0	+12
NHSC				LR	LR		
	comp=Z,553nm,20.0s,MS5.1						
ACSO	**Alum Creek Sta**	**112.64**	**56**	PFAKE		03 28 00.0	+11
ACSO				LR	LR		
	comp=Z,726nm,22.0s,MS5.2						
BLA	**Blacksburg**	**113.39**	**60**	PFAKE		03 28 00.0	+10
BLA				LR	LR		
	comp=Z,718nm,19.0s,MS5.3						
WMQ	**Urumqi**	**113.45**	**308**	PKP	PKPdf	03 27 51.4	+1.2
WMQ				XPKP		03 28 07.4	
WMQ				PP	PP	03 28 45.9	-1.0
WMQ				PP	PP		
	comp=Z,200nm,8.5s						
WMQ				LR	LR		
	comp=N,260nm,22.6s,MS5.2						
WMQ				LR	LR		
	comp=E,570nm,20.4s,MS5.2						
WMQ				LR	LR		
	comp=Z,580nm,26.8s						
JOSI	**Joshimath**	**114.67**	**292**	*e*x	x	03 27 11.7	
JOSI				AMb	AMB	03 27 13.3	
	comp=Z,107nm,1.0s						
MCWV	**Mont Chateau**	**114.69**	**57**	PFAKE		03 28 10.0	+17
MCWV				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
AGRA	**Agra**	**114.70**	**288**	*e*P	PKPdf	03 27 53.4	+0.3
AGRA				AMb	AMB	03 27 55.8	
	comp=Z,42nm,0.3s						
ERPA	**Erie**	**115.42**	**55**	PFAKE		03 28 10.0	+16
ERPA				LR	LR		
	comp=Z,842nm,19.0s,MS5.4						
SONA	**Sohna**	**115.80**	**289**	*e*P	PKPdf	03 27 55.5	+0.4
SONA				AMb	AMB	03 27 56.9	
	comp=Z,20nm,1.3s						
AYAN	**Aya Nagar**	**115.85**	**289**	*e*P	PKPdf	03 27 55.7	+0.5
AYAN				AMb	AMB	03 27 57.7	
	comp=Z,14nm,0.5s						

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CBN   Corbin            116.00  59   PFAKE              03 28 10.0  +15
CBN                                  LR        LR
      comp=Z,729nm,19.0s,MS5.3
BHGR  Bahadurgarh       116.08 289  eP         PKPdf    03 27 56.1 +0.5
KLP   Kalpa             116.08 293  eP         PKPdf    03 27 56.2 +0.6
KLP                                  AMb       AMB      03 27 59.9
      comp=Z,36nm,1.0s
KUDL  Kundal            116.24 288  eP         PKPdf    03 27 56.6 +0.7
KUDL                                 AMb       AMB      03 27 59.4
      comp=Z,11nm,0.7s
RTK   Rohtak            116.64 289  eP         PKPdf    03 27 57.8 +1.1
KKR   Kurukshetra       116.65 290  eP         PKPdf    03 27 54.8 -2.0
KHET  Khetri            116.77 288  eP         PKPdf    03 27 57.7 +0.7
KHET                                 AMb       AMB      03 27 59.6
      comp=Z,24nm,1.3s
BOSA  Boshof            116.93 203   PKP       PKPdf    03 28 00.7 +3.4
      comp=Z,10nm,0.9s,baz=98,slow=1.6,SNR=6.5
BOSA                                 pPKP               03 28 17.8
      comp=Z,14nm,1.0s,baz=135,slow=3.2,SNR=5.3
BOSA                                 PKKPab             03 38 28.3
      comp=Z,3.9nm,0.9s,baz=287,slow=11,SNR=3.9
BOSA  Boshof            116.93 203   PKP       PKPdf    03 28 00.7 +3.4
BOSA                                 pPKP               03 28 17.8
BOSA                                 PKKPab             03 38 28.3
BOSA                                 LR        LR
      comp=Z,743nm,20.0s,MS5.3
SJG   San Juan          117.51  84   PKP       PKPdf    03 28 00.0 +1.4
      comp=Z,14nm,0.9s,baz=270,slow=2.0,SNR=2.6
SJG   San Juan          117.51  84   PKP       PKPdf    03 28 00.0 +1.4
SJG                                  LR        LR
      comp=Z,695nm,22.0s,MS5.2
MSEY  Mahe Island       118.00 245   PFAKE              03 28 10.0  +10
MSEY                                 LR        LR
      comp=Z,227nm,20.0s,MS4.8
MKAR  Makanchi Array    118.01 310   Pdiff     Pdif     03 24 20.9 +2.8
      comp=Z,0.4nm,0.6s,baz=108,slow=4.6,SNR=3.8
MKAR                                 PKP       PKPdf    03 27 59.4 +0.5
      comp=Z,9.8nm,0.7s,baz=90,slow=1.2,SNR=40
MKAR                                 PKKPab             03 38 23.2
      comp=Z,0.9nm,0.7s,baz=259,slow=2.6,SNR=5.3
MKAR  Makanchi Array    118.01 310   Pdif      Pdif     03 24 20.9 +2.8
MKAR                                 PKP       PKPdf    03 27 59.4 +0.5
MKAR                                 PKKPab             03 38 23.2
NCB   Newcomb           120.00  54   PFAKE              03 28 20.0  +17
NCB                                  LR        LR
      comp=Z,853nm,19.0s,MS5.4
LSCT  Lakeside          120.10  57   PFAKE              03 28 20.0  +17
LSCT                                 LR        LR
      comp=Z,1µm,19.0s,MS5.6
JASL  Jaisalmer         120.39 285  eP         PKPdf    03 28 05.0 +0.9
JASL                                 AMb       AMB      03 28 07.4
      comp=Z,24nm,0.6s
KSH   Kashi             120.43 300  ePKP       PKPdf    03 28 04.1 +0.2
KSH                                 eXPKP               03 28 18.3
KSH                                 ePKS       PKS      03 31 39.2 -0.4
KSH                                 ePPP       PPP      03 32 03.1 -5.7
KSH                                 eSKS       SKS      03 35 11.2  +14
KSH                                 eSKKS               03 36 18.9
KSH                                  PP        PP
      comp=Z,260nm,3.8s
KSH                                  LR        LR
      comp=N,490nm,5.2s
KSH                                  LR        LR
      comp=E,520nm,7.1s
ULHL  Ulahol            120.97 304   P         PKPdf    03 28 07.0 +2.1
      SNR=7.7
KURK  Kurchatov         121.30 314  ePKPdf     PKPdf    03 28 05.4 +0.2
KURK                                 LR        LR
      comp=Z,117nm,20.0s,MS4.5
KURK  Kurchatov         121.30 314c iPKIKP     PKPdf    03 28 05.5 +0.3
HRV   Harvard--Oak R    121.51  56   PFAKE              03 28 20.0  +14
HRV                                  LR        LR
      comp=Z,1µm,19.0s,MS5.6
TKM2  Tokmak 2          121.60 304   P         PKPdf    03 28 07.2 +1.2
      SNR=28
KZA   Kyzart            121.64 303   P         PKPdf    03 28 08.7 +2.6
      SNR=16
WES   Weston            121.65  56   PFAKE              03 28 20.0  +14
WES                                  LR        LR
      comp=Z,1µm,20.0s,MS5.5
LBNH  Lisbon            121.67  54   PFAKE              03 28 20.0  +14
LBNH                                 LR        LR
      comp=Z,880nm,22.0s,MS5.4
KBK   Karagaybulak      122.00 304   P         PKPdf    03 28 08.2 +1.4
      SNR=14
UCH   Uchtor            122.20 303   P         PKPdf    03 28 09.4 +2.2
      SNR=42
CHMS  Chumysh           122.22 304   P         PKPdf    03 28 08.1 +0.9
      SNR=20
FRU   Bishkek           122.27 304⇑iPKIKP      PKPdf    03 28 10.0 +2.7
FRU                                 e                   03 28 26.0
FRU                                  pmax      pmax
      comp=Z,80nm,1.2s
AAK   Ala-Archa         122.31 304   P         PKPdf    03 28 08.8 +1.4
      SNR=14
AAK   Ala-Archa         122.31 304  ePKPdf     PKPdf    03 28 07.5 +0.1
AAK                                  LR        LR
      comp=Z,119nm,21.0s,MS4.5
USP   Ospenovka         122.46 304   P         PKPdf    03 28 08.6 +0.9
      SNR=18
AML   Almayashu         122.77 303   P         PKPdf    03 28 09.8 +1.5
      SNR=36
EKS2  Erkin-Say         122.84 304   P         PKPdf    03 28 10.0 +1.6
      SNR=17
WVL   Waterville        123.33  54   PFAKE              03 28 20.0  +11
WVL                                  LR        LR
      comp=Z,4µm,20.0s,MS6.1
BBSR  BB Station        124.01  70   PFAKE              03 28 20.0 +9.0
BBSR                                 LR        LR
      comp=Z,820nm,22.0s,MS5.3
PQI   Presque Isle      124.86  52   PFAKE              03 28 30.0  +18
PQI                                  LR        LR
      comp=Z,4µm,20.0s,MS6.0
EMMW  East Machias      124.90  55   PFAKE              03 28 30.0  +18
EMMW                                 LR        LR
      comp=Z,6µm,19.0s,MS6.3
KKAR  Karatay Array     125.28 303  i PKIKP    PKPdf    03 28 13.9 +0.8
KKAR                                 pmax      pmax
      comp=Z,31nm,0.9s
VOSK  Vostochnaya       126.28 315   PKIKP     PKPdf    03 28 14.9 +0.2
VOSK                                 pmax      pmax
      comp=Z,56nm,0.9s
SCHQ  Schefferville     126.50  42   PKP       PKPdf    03 28 15.6 +0.4
      comp=Z,9.0nm,0.8s,baz=351,slow=1.8,SNR=15
SCHQ                                 pPKP               03 28 32.2
      comp=Z,12nm,0.9s,baz=278,slow=2.3,SNR=6.3
SCHQ  Schefferville     126.50  42  ePKPdf     PKPdf    03 28 15.2  0.0
SCHQ                                 LR        LR
      comp=Z,2µm,21.0s,MS5.7
CHKZ  Chkalovo          126.57 316  ePKPdf     PKPdf    03 28 15.2 -0.1
BVA0  Borovoye Array    126.67 316  i PKIKP    PKPdf    03 28 16.2 +0.7
BVA0                                 pmax      pmax
      comp=Z,16nm,1.2s
BRVK  Borovoye          126.73 316  ePKPdf     PKPdf    03 28 16.2 +0.6
BRVK                                 LR        LR
      comp=Z,79nm,20.0s,MS4.4
LSZ   Lusaka            127.76 213  ePKPdf     PKPdf    03 28 22.1 +3.6
LSZ                                 e                   03 28 39.2
LSZ                                  LR        LR
      comp=Z,710nm,21.0s,MS5.3
TSUM  Tsumeb            128.12 199   PFAKE              03 28 30.0  +11
TSUM                                 LR        LR
      comp=Z,1µm,20.0s,MS5.5
RCBR  Riachuelo         128.64 129   PFAKE              03 28 30.0  +10
RCBR                                 LR        LR
      comp=Z,697nm,19.0s,MS5.4
KBS   Kingsbay          131.55 357   PFAKE              03 28 40.0  +16
KBS                                  LR        LR
      comp=Z,695nm,22.0s,MS5.3
DAG   Danmarks Havn     132.90   6⇓iP          PKPdf    03 28 26.2 -0.6
      comp=Z,4.2nm,0.9s
SUMG  Summit            133.05  16  ePKPdf     PKPdf    03 28 29.2 +2.1
ARU   Arti              133.37 320  ePKPdf     PKPdf    03 28 28.8 +0.6
ARU                                  LR        LR
      comp=Z,294nm,21.0s,MS5.0
ARU   Arti              133.37 320  i PKIKP    PKPdf    03 28 29.5 +1.3
ARU                                 e                   03 30 54.3
ARU                                  MLR       MLR
      comp=Z,1µm,22.5s,MS5.5
ARU                                  MLR       MLR
      comp=N,500nm,23.0s,MS5.4
ARU                                  MLR       MLR
      comp=E,700nm,23.0s,MS5.4
SCO   Scoresbysund      138.05  12  i P        PKPdf    03 28 39.2 +2.8
      comp=E,10nm,1.1s
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SCO   Scoresbysund      138.05  12  i PKIKP    PKPdf    03 28 39.2 +2.8
SCO                                  pmax      pmax
      comp=Z,10.0nm,1.1s
KEV   Kevo              138.47 347  epkp       PKPdf    03 28 48.0  +11
KEV   Kevo              138.47 347   PFAKE              03 28 50.0  +13
KEV                                  LR        LR
      comp=Z,1µm,20.0s,MS5.6
APA   Apatity           138.76 342  i PKIKP    PKPdf    03 28 42.0 +4.2
ARCES ARCESS Array B    138.94 348   PKhKP              03 28 30.0
      comp=Z,7.1nm,0.6s,baz=36,slow=2.1,SNR=38
KTK1  Kautokeino        139.80 348  eP         PKPdf    03 28 33.8 -5.8
KTK1                                 AMb       AMB      03 28 48.0
      comp=Z,61nm,1.8s
TRO   Tromso            139.91 351  eP         PKPdf    03 28 33.9 -5.9
TRO                                  AMb       AMB      03 29 01.9
      comp=Z,80nm,1.8s
FRSS  Farasan al Kab    140.94 258   P         PKPdf    03 28 49.0 +5.9
KLMR  Klimovskoe        141.08 332  ePKHKP              03 28 36.3
KLMR                                 pmax      pmax
      comp=Z,90nm,1.5s
LOF   Lofoten           141.98 353  eP         PKPdf    03 28 39.5 -3.9
LOF                                  AMb       AMB      03 28 41.9
      comp=Z,86nm,1.7s
JOF   Joensuu           142.75 338  epkp       PKPdf    03 28 48.5 +3.7
MELSS Ber_school_2      143.18 352  eP         PKPbc    03 28 42.6 -1.0
MOR8  Moi Rana          143.76 351  eP         PKPbc    03 28 43.7 -1.6
MOR8                                 AMb       AMB      03 29 13.4
      comp=Z,44nm,1.6s
MOR8  Moi Rana          143.76 351  eP         PKPbc    03 28 43.1 -2.2
MTA   Mtatsminda        144.13 300   P         PKPbc    03 28 48.1 +0.9
BHD   Baghdad           144.16 285  ex         x        03 28 44.0
TI2   Plekhanov         144.16 300⇑iPKIKP      PKPdf    03 28 48.0 +0.1
TBLG  Delisi            144.17 300   P         PKPbc    03 28 48.0 +0.7
GNI   Garni             144.24 297   P         PKPbc    03 28 48.3 +0.8
GNI   Garni             144.24 297  ePKPdf     PKPdf    03 28 48.3 +0.2
GNI                                  LR        LR
      comp=Z,504nm,21.0s,MS5.3
GNI   Garni             144.24 297c iPKIKP     PKPdf    03 28 47.9 -0.2
VRHR  Novokhopersk      144.40 316  ePKIKP     PKPdf    03 28 47.6 -0.4
VRHR                                 pmax      pmax
      comp=Z,40nm,0.6s
VRHR                                 pmax      pmax
      comp=N,10.0nm,0.7s
VRHR                                 pmax      pmax
      comp=E,20nm,0.6s
MOS   Moscow            144.63 325  ePKHKP              03 28 46.3
MOS                                  pmax      pmax
      comp=Z,102nm,1.3s
ZEI   Tsey              144.70 302  i PKIKP    PKPdf    03 28 49.3 +0.5
KAF   Kangasniemi       144.89 340  epkp       PKPdf    03 28 46.8 -1.7
      comp=Z,72nm,0.6s,baz=37,slow=3.2
CLDR  Caldiran          144.90 295   P         PKPdf    03 28 49.3  0.0
GOF   Gofitskoye        145.01 306  ePKIKP     PKPdf    03 28 49.1 -0.2
GOF                                  pmax      pmax
      comp=Z,154nm,0.8s
HKR   Hakkari           145.03 293   P         PKPdf    03 28 50.9 +1.3
HAKT  HAKKARI           145.05 293  i P        PKPdf    03 28 49.9 +0.3
ONI   Oni               145.05 301   P         PKPdf    03 28 51.0 +1.5
AKH   Akhalkalaki       145.12 299   P         PKPdf    03 28 51.0 +1.4
DIGO  Kars              145.28 298  i P        PKPdf    03 28 49.8 -0.1
TVAN  Van               145.30 294  i P        PKPdf    03 28 50.5 +0.5
VANB  Van               145.31 294   P         PKPdf    03 28 51.4 +1.3
VANT  Van               145.31 294   P         PKPdf    03 28 53.0 +3.0
PUL   Pulkovo           145.33 335  i PKIKP    PKPdf    03 28 49.9 +0.5
PUL                                  pmax      pmax
      comp=N,448nm,0.9s
PUL                                  pmax      pmax
      comp=Z,506nm,0.9s
PUL                                  pmax      pmax
      comp=E,376nm,1.1s
KIV   Kislovodsk        145.43 304  ePKPdf     PKPdf    03 28 51.2 +1.1
KIV                                  LR        LR
      comp=Z,177nm,22.0s,MS4.8
KIV   Kislovodsk        145.43 304  i PKP2     PKPab    03 28 50.7 -1.6
KIV                                 eSS        SS       03 50 54.7 -4.9
KIV                                  pmax      pmax
      comp=N,80nm,1.1s
KIV                                  pmax      pmax
      comp=E,16nm,1.1s
KIV                                  pmax      pmax
      comp=Z,74nm,1.1s
OBN   Obninsk           145.47 325  ePKPdf     PKPdf    03 28 50.2 +0.5
OBN                                  LR        LR
      comp=Z,244nm,21.0s,MS5.0
OBN   Obninsk           145.47 325α iPKIKP     PKPdf    03 28 50.2 +0.5
OBN                                  pmax      pmax
      comp=Z,375nm,1.4s
KARS  Kars              145.48 298   P         PKPdf    03 28 52.2 +1.9
FINES FINESS Array B    145.48 340   PKP       PKPdf    03 28 49.9 +0.3
      comp=Z,255nm,0.7s,baz=61,slow=4.3,SNR=1242
MSL   Mosul             145.50 290  i x        x        03 28 57.5
ARTV  Artvin            146.32 299  i P        PKPdf    03 28 52.8 +1.1
BTMT  Batman            146.81 294   P         PKPdf    03 28 54.8 +2.2
ERZM  Erzurum           146.84 297  i P        PKPdf    03 28 54.9 +2.3
EZM   Erzurum           146.84 297   P         PKPdf    03 28 55.4 +2.8
KBRS  Khaybar           146.92 271   P         PKPdf    03 28 58.4 +5.2
BEST  Besiri            146.99 293  i P        PKPdf    03 28 55.4 +2.5
BNGL  BINGOL            147.06 295  i P        PKPdf    03 28 54.8 +1.8
MARD  Mardin            147.38 292  i P        PKPdf    03 28 56.6 +3.1
YNBS  Yanbu‘ al Bahr    147.56 268   P         PKPdf    03 29 00.3 +6.1
BINT  Bingol            147.57 295   P         PKPdf    03 28 56.7 +2.9
SOC   Sochi             147.62 304d iPKP2      PKPab    03 28 57.6 -3.2
SOC                                 e                   03 32 24.2
SOC                                 ePPP       PPP      03 35 44.5 -2.1
SOC                                 e                   03 45 02.1
SOC                                 eSS        SS       03 51 59.6  +35
SOC                                  pmax      pmax
      comp=Z,74nm,0.8s
SOC                                  MLR       MLR
      comp=Z,504nm,19.0s,MS5.3
DIY   Diyarbakir        147.81 293   P         PKPdf    03 28 56.6 +2.4
MACK  Trabzon           147.97 299  i P        PKPdf    03 28 59.3 +5.0
MOL   Molde             147.98 355⇑iP          PKPdf    03 29 02.6 +9.0
MOL                                  AMb       AMB      03 29 06.0
      comp=Z,204nm,1.6s
GUMT  Gumushane         148.24 298   P         PKPdf    03 28 57.4 +2.6
DOMB  Dombas            148.37 354⇑iP          PKPdf    03 28 58.2 +3.9
DOMB                                 AMb       AMB      03 29 00.0
      comp=Z,141nm,1.5s
PTK   Pertek            148.43 295   P         PKPdf    03 28 55.2  0.0
UMJS  Umm Lajj          148.43 269   P         PKPdf    03 29 02.3 +6.7
KELT  Kelkit            148.44 298  i P        PKPdf    03 29 01.0 +5.8
ELZG  Elazig            148.77 294  i P        PKPdf    03 29 01.4 +5.7
URFA  Urfa              148.94 292   P         PKPdf    03 29 00.8 +4.7
ANN   Anapa             148.95 307  i PKIKP    PKPdf    03 28 59.3 +3.5
ANN                                 e                   03 35 53.1
ANN                                  pmax      pmax
      comp=Z,218nm,0.9s
ANN                                  MLR       MLR
      comp=N,1µm,23.0s,MS5.6
ANN                                  MLR       MLR
      comp=E,388nm,23.0s,MS5.6
ANN                                  MLR       MLR
      comp=Z,661nm,23.0s,MS5.4
GRSN  GIRESUNGRSN       149.10 299  i P        PKPdf    03 29 00.2 +4.1
NB2   NORSAR Subarra149.11 351       PKPabc    PKPdf    03 29 00.3 +4.8
      comp=Z,3.9nm,0.6s,baz=27,slow=2.9
NB2   NORSAR Subarra149.11 351       PKPa               03 29 00.3
      baz=27,slow=3.0
NOA   NORSAR Array B 149.11 351      PKP       PKPdf    03 28 56.5 +1.0
      comp=Z,63nm,0.9s,baz=15,slow=4.2,SNR=23
NOA                                  PKPbc     PKPdf    03 29 00.5 +5.0
      comp=Z,74nm,0.9s,baz=15,slow=4.2,SNR=80
NOA                                  pPKPbc             03 29 16.9
      comp=Z,51nm,0.8s,baz=14,slow=4.3,SNR=7.9
NOA   NORSAR Array B 149.11 351      PKP       PKPdf    03 28 56.5 +1.0
NOA                                  PKPbc     PKPdf    03 29 00.5 +5.0
NOA                                  pPKPbc             03 29 16.9
NAO01 NORSAR Array S 149.34 351     ePKPbc     PKPdf    03 29 01.2 +5.2
NAO   NORSAR Subarra149.37 352       PKPab     PKPab    03 29 00.3 -7.1
SUE   Sulen             149.64 357  eP         PKPdf    03 29 01.9 +5.5
SUE                                  AMb       AMB      03 29 04.2
      comp=Z,208nm,1.6s
IZAR  Zarasai           149.72 333  eP         PKPdf    03 29 02.6 +6.0
IZAR                                 AMb       AMB      03 29 04.7
      comp=Z,80nm,1.2s
QURS  Qurayyt al Mil    149.82 280   P         PKPdf    03 29 05.9 +8.2
IDID  Didziasalis       149.83 332  eP         PKPdf    03 29 02.8 +5.9
ISAL  Salakas           149.89 332  eP         PKPdf    03 29 02.9 +5.9
TBKS  Tabuk             149.90 274   P         PKPdf    03 29 05.7 +7.9
GZT   Gaziantep         149.94 292  i P        PKPdf    03 29 03.9 +6.2
ASK   Askoy             150.20 357  eP         PKPdf    03 29 03.5 +6.3
ASK                                  AMb       AMB      03 29 22.6
      comp=Z,429nm,1.7s
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GAZ   Gaziantep         150.23 292   P         PKPdf    03 29 00.2 +2.1
SVST  Sivas             150.24 297  i P        PKPdf    03 29 05.8 +7.8
OSL   Oslo              150.24 351  eP         PKPdf    03 29 03.4 +6.0
OSL                                  AMb       AMB      03 29 06.1
      comp=Z,137nm,1.4s
RUND  Rundenannen       150.26 357  eP         PKPdf    03 29 03.6 +6.2
RUND                                 AMb       AMB      03 29 05.3
      comp=Z,296nm,1.5s
BER   Bergen            150.29 357  eP         PKPdf    03 29 04.0 +6.5
BER                                  AMb       AMB      03 29 19.4
      comp=Z,191nm,1.8s
WAL1  Walls             150.40   4⇑eP          PKPdf    03 29 04.2 +6.6
WAL1                                 AMb       AMB      03 29 06.1
      comp=Z,185nm,1.5s
EGD   Espegrend         150.41 357  eP         PKPdf    03 29 05.5 +7.9
EGD                                  AMb       AMB      03 29 25.4
      comp=Z,279nm,1.6s
KAHT  Ahir Dag          150.48 293  i P        PKPdf    03 29 05.3 +6.8
TOKT  Tokat             150.48 298  eP         PKPdf    03 29 05.8 +7.4
LRW   Lerwick           150.54   3⇑eP          PKPdf    03 29 04.6 +6.8
LRW                                  AMb       AMB      03 29 05.7
      comp=Z,241nm,2.0s
KONO  Kongsberg         150.66 352  ePKPbc     PKPdf    03 29 04.2 +6.2
KONO                                 LR        LR
      comp=Z,941nm,19.0s,MS5.6
KONO  Kongsberg         150.66 352c iPKIKP     PKPdf    03 29 04.3 +6.3
KVT   Kavak             150.74 300  eP         PKPdf    03 29 05.2 +6.5
COBT  Iskenderun        151.01 291  i P        PKPdf    03 29 06.5 +7.2
HTY   Hatay             151.12 290   P         PKPdf    03 29 00.3 +0.8
SIM   Simferopol’       151.17 308c iPKIKP     PKPdf    03 29 07.1 +7.8
SIM                                  pmax      pmax
      comp=Z,100nm,12.0s
BLS5  Blasjo            151.18 355⇑iP          PKPdf    03 29 07.0 +8.2
BLS5                                 AMb       AMB      03 29 24.4
      comp=Z,77nm,1.2s
BDAS  Al Bad‘           151.18 274   P         PKPdf    03 29 08.2 +8.4
BNN   Bunyan            151.19 296   P         PKPdf    03 29 01.7 +2.3
MKRJ  Makawir           151.27 280   P         PKPdf    03 29 02.0 +2.2
KOZT  Kozan             151.32 293   P         PKPdf    03 29 01.0 +1.2
JMOS  Jabal al Moall    151.33 275   P         PKPdf    03 29 08.7 +8.7
ALWS  Ilw as Safayha    151.40 276   P         PKPdf    03 29 08.9 +8.8
CEYT  Ceyhan            151.40 292  eP         PKPdf    03 29 08.0 +8.2
KSDI  Kefar Szold       151.42 284   P         PKPdf    03 29 02.5 +2.5
KSDI  Kefar Szold       151.42 284   P         PKPdf    03 29 02.6 +2.6
HAQS  Haql              151.46 275   P         PKPdf    03 29 08.9 +8.8
BHL   Bhannes           151.47 285  eP         PKPdf    03 29 08.7 +8.6
MZDA  Masada            151.47 280   P         PKPdf    03 29 02.3 +2.2
AQBJ  Aqaba             151.49 276   P         PKPdf    03 29 02.2 +2.0
OST   Stronsay          151.51   5⇑eP          PKPdf    03 29 06.2 +6.9
BOYT  Boyabat           151.52 301  i P        PKPdf    03 29 07.2 +7.3
MMLI  Mount Malkishu    151.55 282   P         PKPdf    03 29 02.9 +2.7
EIL   Elat              151.56 276   P         PKPdf    03 29 02.7 +2.4
AKASG Malin Array Be    151.59 322   PKP       PKPdf    03 29 00.1 +0.4
      comp=Z,175nm,0.9s,baz=48,slow=2.6,SNR=47
AKASG                                PKPbc     PKPdf    03 29 07.0 +7.4
      comp=Z,152nm,0.8s,baz=47,slow=3.0,SNR=235
BYBT  Boyabat           151.61 301  eP         PKPdf    03 29 05.8 +5.8
MBH   Mount Berech      151.62 277   P         PKPdf    03 29 02.8 +2.4
PRNI  Paran             151.63 278   P         PKPdf    03 29 02.8 +2.4
OHO   Hoy               151.70   6⇑eP          PKPdf    03 29 07.0 +7.4
CTKT  Corum             151.75 299  i P        PKPdf    03 29 07.8 +7.5
HNTI  Hanita            151.81 283   P         PKPdf    03 29 02.8 +2.2
RTO   Tolsta            151.82   9⇑eP          PKPdf    03 29 06.9 +7.2
SLTI  Sal’it            151.85 282   P         PKPdf    03 29 03.3 +2.6
OTO   Tongue            151.92   7⇑eP          PKPdf    03 29 07.8 +7.8
OTO                                  AMb       AMB      03 29 10.6
      comp=Z,222nm,1.4s
OBR   Brabster          151.93   6⇑eP          PKPdf    03 29 07.8 +7.8
ORE   Reay              151.94   6⇑eP          PKPdf    03 29 07.9 +7.9
ORE                                  AMb       AMB      03 29 10.6
      comp=Z,123nm,2.4s
KARA  Karaisali         151.94 292  eP         PKPdf    03 29 09.4 +8.7
CORM  Corum             151.95 299   P         PKPdf    03 29 03.5 +3.0
AVNT  Avonos            151.97 296  i P        PKPdf    03 29 08.9 +8.3
RSC   Scourie           151.98   8⇑eP          PKPdf    03 29 07.8 +7.8
RSC                                  AMb       AMB      03 29 09.7
      comp=Z,108nm,1.9s
REB   Eisghbrachaidh    152.19   8⇑eP          PKPdf    03 29 08.0 +7.7
REB                                  AMb       AMB      03 29 09.6
      comp=Z,103nm,1.3s
RRH   Rhenigidale       152.19  10⇑eP          PKPdf    03 29 08.1 +7.7
SNART Snartemo          152.19 354  eP         PKPdf    03 29 08.4 +8.0
SNART                                AMb       AMB      03 29 10.6
      comp=Z,150nm,1.7s
SUW   Suwalki           152.20 333  ePKP       PKPdf    03 29 08.6 +8.1
SUW                                 e                   03 29 16.8
SUW                                 e                   03 29 24.9
SUW   Suwalki           152.20 333  ePKPdf     PKPdf    03 29 01.9 +1.4
SUW                                 ePKPbc     PKPdf    03 29 08.5 +8.0
SUW   Suwalki           152.20 333  ePKIKP     PKPdf    03 29 08.6 +8.1
SUW                                 e                   03 29 16.8
SUW                                 e                   03 29 24.9
NIG   Nigde             152.23 294  eP         PKPdf    03 29 09.3 +8.3
CDAG  Cicekdag          152.23 297  i P        PKPdf    03 29 07.8 +6.8
KZIT  Kziot             152.24 279   P         PKPdf    03 29 03.9 +2.6
TOS   Tosya             152.25 301  eP         PKPdf    03 29 07.3 +6.4
RRR   Rubha Reidh       152.38   9⇑eP          PKPdf    03 29 08.4 +7.8
RRR                                  AMb       AMB      03 29 10.4
      comp=Z,130nm,1.6s
BALT  Daday             152.61 302  i P        PKPdf    03 29 09.5 +8.0
CANT  Cankiri           152.63 300  eP         PKPdf    03 29 10.8 +9.2
MEST  Erdemli           152.71 291  i P        PKPdf    03 29 07.1 +5.3
KAMT  Kaman             152.77 297   P         PKPdf    03 29 03.0 +1.2
BR131 Keskin Array S    152.77 298  ePKPdf     PKPdf    03 29 02.8 +1.0
BR131                               ePKPbc     PKPdf    03 29 10.4 +8.6
BR131                                LR        LR
      comp=Z,394nm,19.0s,MS5.2
BRTR  Keskin Array B    152.77 298   PKP       PKPdf    03 29 02.5 +0.8
      comp=Z,3.0nm,0.9s,baz=117,slow=2.8,SNR=17
BRTR                                 PKPbc     PKPdf    03 29 10.2 +8.4
      comp=Z,14nm,0.5s,baz=140,slow=4.2,SNR=58
ELDT  Eldivan           152.80 300  i P        PKPdf    03 29 09.8 +8.1
PHNC  Paralimni         152.84 288   P         PKPdf    03 29 11.5  +10
IKL   Isikli            153.09 290  eP         PKPdf    03 29 08.9 +6.6
SAFT  Safranbolu        153.19 301  eP         PKPdf    03 29 09.2 +6.9
ANTO  Ankara            153.39 298  eP         PKPdf    03 29 06.0 +3.4
ANTO  Ankara            153.39 298  ePKPdf     PKPdf    03 29 03.7 +1.1
ANTO                                ePKPbc     PKPdf    03 29 12.2  +10
ANTO                                 LR        LR
      comp=Z,488nm,21.0s,MS5.3
LOD   Lodumlu           153.41 298   P         PKPdf    03 29 04.2 +1.6
CSS   Prodhromos        153.41 287   P         PKPdf    03 29 12.4  +10
CSS   Prodhromos        153.41 287  ePKPbc     PKPdf    03 29 12.3 +9.5
MAMC  Mammari           153.50 288   P         PKPdf    03 29 13.8  +11
ERMK  Ermenek           153.69 291  i P        PKPdf    03 29 13.5  +10
KIS   Kishinev          153.75 316  ePKIKP     PKPdf    03 29 10.0 +7.1
KIS                                 e                   03 29 18.0
KIS                                 e                   03 29 24.0
KIS                                 ePPP       PPP      03 36 36.0 +3.2
LEF   Lefka             153.77 288  eP         PKPdf    03 29 12.5 +9.2
SGKT  Sivrigoynuk       153.80 300  i P        PKPdf    03 29 11.7 +8.5
MUD   Monsted U’grnd    153.82 351⇑iP          PKPdf    03 29 12.0 +9.4
      comp=Z,90nm,1.4s
      comp=Z,450nm,22.0s
MUD   Monsted U’grnd    153.82 351⇑iPKIKP      PKPdf    03 29 12.0 +9.4
MUD                                  pmax      pmax
      comp=Z,90nm,1.4s
MUD                                  MLR       MLR
      comp=Z,450nm,22.0s,MS5.2
BSD   Bornholm Skovb 153.97 343⇑iP             PKPdf    03 29 12.2 +9.3
      comp=Z,83nm,0.7s
BSD   Bornholm Skovb 153.97 343⇑iPKIKP         PKPdf    03 29 12.2 +9.3
BSD                                  pmax      pmax
      comp=Z,83nm,0.7s
ALFC  Alevga            154.01 288   P         PKPdf    03 29 13.9  +10
      comp=Z,1.7nm,0.9s
COP   Copenhagen        154.01 346  i P        PKPdf    03 29 07.9 +5.0
      comp=Z,47nm,1.0s
COP                                 e                   03 33 07.4
COP                                 i                   03 45 50.7
      comp=Z,410nm,23.0s
COP   Copenhagen        154.01 346  ePKIKP     PKPdf    03 29 07.9 +5.0
COP                                 e                   03 33 07.4
COP                                 i                   03 45 50.7
COP                                  pmax      pmax
      comp=Z,47nm,1.0s
COP                                  MLR       MLR
      comp=Z,420nm,23.0s,MS5.2
KDHN  Kadinhani         154.13 296  i P        PKPdf    03 29 10.0 +6.4
PPCY  Paphos            154.22 287   P         PKPdf    03 29 14.1  +10
KIZT  Kizilcal          154.25 296  eP         PKPdf    03 29 05.3 +1.5
MDU   Mudurnu           154.45 300  eP         PKPdf    03 29 12.9 +8.9
HENT  Hendek            154.60 301  i P        PKPdf    03 29 04.3 +0.1
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LIC	**Lamto**	**154.71**	**163**	*e*PKIKP	PKPdf	03 29 08.7	+3.5
ESKT	**Eskisehir**	**154.93**	**298**	*e*P	PKPdf	03 29 11.4	+6.7
ESKT	**Eskisehir**	**154.93**	**298**	*i* P	PKPdf	03 29 04.5	-0.2
ESK	**Eskdalemuir**	**155.18**	**7**	PFAKE		03 29 20.0	+16
ESK				LR	LR		
	comp=Z,275nm,22.0s,MS5.0						
DBIC	**Dimbokro**	**155.19**	**164**	PKP	PKPdf	03 29 09.2	+3.5
	comp=Z,3.5nm,0.6s,baz=180,slow=5.9,SNR=9.8						
DBIC	**Dimbokro**	**155.19**	**164**	*e*PKIKP	PKPdf	03 29 09.1	+3.3
DBIC				MLR	MLR		
	comp=Z,670nm,19.0s						
HARR	**Harsova**	**155.35**	**312**	⇓P	PKPdf	03 29 07.4	+2.3
HARR	**Harsova**	**155.35**	**312**	⇓P	PKPdf	03 29 07.4	+2.3
ISP	**Isparta**	**155.48**	**294**	*e*PKPdf	PKPdf	03 29 05.9	+0.4
BURAR	**Bucovina Array**	**155.51**	**320**	⇑P	PKPdf	03 29 16.9	+12
VRI	**Vrincioaia**	**155.56**	**315**	⇑P	PKPdf	03 29 16.5	+11
TKTP	**Tekketepe**	**155.60**	**295**	*i* P	PKPdf	03 29 04.5	-1.1
BSEG	**Bad Segeberg**	**156.07**	**348**	*e*PKPdf	PKPdf	03 29 07.7	+2.0
BSEG				*e*PKPab	PKPab	03 29 33.8	-2.0
BSEG	**Bad Segeberg**	**156.07**	**348**	*e*PKP2	PKPab	03 29 33.8	-2.0
ULDT	**Uludag**	**156.07**	**300**	*i* P	PKPdf	03 29 06.2	+0.1
ELL	**Elmali**	**156.09**	**292**	*e*P	PKPdf	03 29 08.1	+1.8
KOLS	**Kolonicke sedl**	**156.22**	**325**	*e*PKP	PKPdf	03 29 07.2	+1.1
MLR	**Muntele Rosu**	**156.23**	**315**	⇓P	PKPdf	03 29 09.0	+2.8
MLR	**Muntele Rosu**	**156.23**	**315**	⇓P	PKPdf	03 29 09.0	+2.8
STHS	**Stebnicka Huta**	**156.37**	**328**	*e*PKP	PKPdf	03 29 08.6	+2.4
OJC	**Ojcow**	**156.43**	**331**	*e*PKP	PKPdf	03 29 08.2	+1.9
OJC				*e*		03 29 18.1	
OJC	**Ojcow**	**156.43**	**331**	*e*PKIKP	PKPdf	03 29 08.2	+1.9
OJC				*i*		03 29 18.1	
CRVS	**Cervenica-Dubn**	**156.63**	**326**	*e*PKP	PKPdf	03 29 08.5	+1.9
CRVS				*e*		03 29 36.6	
NIE	**Niedzica**	**156.80**	**329**	*e*PKP	PKPdf	03 29 09.5	+2.7
KSP	**Ksiaz**	**157.28**	**336**	*e*PKP	PKPdf	03 29 09.4	+2.0
KSP				*e*		03 29 20.2	
KSP				*e*		03 29 39.4	
KSP	**Ksiaz**	**157.28**	**336**	*e*PKIKP	PKPdf	03 29 09.4	+2.0
KSP				*e*		03 29 19.9	
KSP	**Ksiaz**	**157.28**	**336**	*e*PKP2	PKPab	03 29 39.4	-1.7
KSP				*e*		03 33 17.0	
KSP				*e*PPS	PPS	03 46 31.0	-3.2
KECS	**Kecovo**	**157.39**	**327**	*e*PKP	PKPdf	03 29 08.6	+0.9
KECS				*e*		03 29 39.7	
OKC	**Ostrava-Krasne**	**157.40**	**332**	*e*PKPDF	PKPdf	03 29 08.5	+0.9
OKC	**Ostrava-Krasne**	**157.40**	**332**	*e*PKP	PKPdf	03 29 08.5	+0.9
UPC	**Upice**	**157.66**	**336**	*e*PKPDF	PKPdf	03 29 09.7	+1.8
UPC				*e*pPKP		03 29 19.7	
UPC				*e*PKPAB	PKPab	03 29 40.6	-2.1
DPC	**Dobruska-Polom**	**157.69**	**335**	*e*PKPDF	PKPdf	03 29 09.9	+1.9
DPC				*e*pPKP		03 29 20.6	
DPC				*e*PKPAB	PKPab	03 29 41.2	-1.6
MORC	**Moravsky Berou**	**157.69**	**333**	*e*PKPdf	PKPdf	03 29 09.8	+1.8
CLL	**Collm**	**157.91**	**341**	*e*PKIKP	PKPdf	03 29 09.0	+0.8
	comp=Z,logA/T=1.3						
CLL				*e*		03 29 21.0	
CLL				*i* PKP2	PKPab	03 29 41.4	-2.4
CLL				*e*PP	PP	03 33 18.0	-6.7
CLL				*e*PPP	PPP	03 37 00.0	-4.7
CLL				*e*PPS	PPS	03 46 36.0	-3.8
CLL				*e*SS	SS	03 53 18.0	+1.5
CLL				*e*SSS	SSS	03 59 24.0	+2.7
CLL	**Collm**	**157.91**	**341**	*e*PKIKP	PKPdf	03 29 09.0	+0.8
CLL				*e*		03 29 21.0	
CLL				pmax	pmax		
	comp=Z,37nm,1.8s						
CLL				pmax	pmax		
	comp=Z,28nm,1.2s						
CLL				pmax	pmax		
	comp=Z,69nm,1.0s						
CLL				MLR	MLR		
	comp=Z,600nm,22.1s,MS5.4						
BRG	**Berggiesshubel**	**158.02**	**340**	*e*PKP	PKPdf	03 29 09.8	+1.4
BRG				*i*		03 29 21.6	
BRG	**Berggiesshubel**	**158.02**	**340**	*e*PKIKP	PKPdf	03 29 09.8	+1.4
BRG				*i*		03 29 21.5	
BRG				pmax	pmax		
	comp=Z,33nm,1.5s						
DIM	**Dimitrovgrad**	**158.04**	**307**	*e*P	PKPdf	03 29 11.0	+2.3
CLZ	**Clausthal**	**158.05**	**346**	*e*PKPdf	PKPdf	03 29 10.5	+2.1
CLZ				*e*PKPab	PKPab	03 29 42.7	-1.6
CLZ	**Clausthal**	**158.05**	**346**	*e*PKP2	PKPab	03 29 42.7	-1.6
PSZ	**Piszkesteto**	**158.07**	**326**	⇓*i*PPP	PKPdf	03 29 10.2	+1.7
PSZ	**Piszkesteto**	**158.07**	**326**	*e*PKPbc	PKPdf	03 29 08.7	+0.2
PVCC	**Panska Ves**	**158.13**	**338**	*e*PKPDF	PKPdf	03 29 10.1	+1.6
PVCC				*e*PKPAB	PKPab	03 29 43.2	-1.5
VYHS	**Vyhne**	**158.14**	**329**	*e*PKP	PKPdf	03 29 10.0	+1.4
VYHS				*i*		03 29 43.7	
KDZ	**Kurdzhali**	**158.27**	**306**	*e*P	PKPdf	03 29 10.0	+1.0
WTSB	**Winterswijk**	**158.52**	**352**	*e*PKiKP		03 29 43.8	
	comp=Z,66nm,0.9s						
PRU	**Pruhonice**	**158.60**	**337**	*e*PKPDF	PKPdf	03 29 10.5	+1.4
PRU				*e*PKPAB	PKPab	03 29 45.1	-1.7
RZN	**Rozhen**	**158.74**	**307**	*e*P	PKPdf	03 29 10.0	+0.4
TREC	**Trest**	**158.86**	**335**	*e*PKPDF	PKPdf	03 29 10.4	+0.9
TREC				*e*PKPAB	PKPab	03 29 45.6	-2.3
MOX	**Moxa**	**158.88**	**343**	PP2		03 29 12.0	
MOX				PKP2	PKPab	03 29 46.0	-1.9
MOX				QM		03 51 52.0	
MOX				RM		03 53 13.0	
MOX	**Moxa**	**158.88**	**343**	*e*PKP	PKPdf	03 29 11.6	+2.2
MOX				*e*PKPab	PKPab	03 29 45.9	-2.0
MOX				LR	LR		
	comp=Z,500nm,21.0s,MS5.3						
NKC	**Novy Kostel**	**159.03**	**341**	*e*PKPDF	PKPdf	03 29 10.8	+1.2
NKC				*e*PKPAB	PKPab	03 29 46.5	-2.1
ZST	**Bratislava**	**159.11**	**331**	*i* PKP	PKPdf	03 29 12.0	+2.2
VTS	**Vitosha**	**159.36**	**311**	*e*P	PKPdf	03 29 11.0	+0.8
MMB	**Musomiste**	**159.46**	**308**	*e*P	PKPdf	03 29 11.0	+0.6
KHC	**Kasperske Hory**	**159.66**	**338**	*e*PKPDF	PKPdf	03 29 11.3	+0.9
KHC				*e*pPKP		03 29 24.9	
KHC				*e*PKPAB	PKPab	03 29 49.5	-1.9
HGN	**Heimansgroeve**	**159.80**	**353**	*e*PKiKP		03 29 49.6	
	comp=Z,78nm,0.8s						
GRA1	**Grafenberg Arr**	**159.85**	**342**	*e*PKPdf	PKPdf	03 29 11.8	+1.3
GRA1				*e*PKPab	PKPab	03 29 51.2	-1.0
GRA1				*e*PP	PP	03 33 28.6	-6.0
GRA1				*e*SPP	SPP	03 46 47.1	-4.2
GRA1				*e*SS	SS	03 53 44.3	+7.2
GRF	**Grafenberg Arr**	**159.85**	**342**	*e*PKP	PKPdf	03 29 11.8	+1.3
GRF	**Grafenberg Arr**	**159.85**	**342**	*e*PKP2	PKPab	03 29 51.2	-1.0
GRF				*e*		03 33 28.6	
GRF				*e*		03 46 47.1	
GEC2	**GERESS Array S**	**159.87**	**337**	*e*PKPdf	PKPdf	03 29 11.8	+1.2
GERES	**GERESS Array B**	**159.87**	**337**	PKP	PKPdf	03 29 11.5	+0.9
	comp=Z,4.2nm,1.0s,SNR=14						
GERES				pPKP		03 29 29.2	
	comp=Z,4.6nm,0.8s,baz=45,slow=2.8,SNR=9.7						
GERES				PKPab	PKPab	03 29 50.5	-1.8
	comp=Z,5.3nm,0.7s,baz=34,slow=4.8,SNR=5.8						
GERES	**GERESS Array B**	**159.87**	**337**	PKIKP	PKPdf	03 29 11.5	+0.9
GERES						03 29 50.5	
WET	**Wettzell**	**159.87**	**339**	*e*PKPdf	PKPdf	03 29 12.4	+1.8
WET				*e*PKPab	PKPab	03 29 51.5	-0.8
WET	**Wettzell**	**159.87**	**339**	*e*PKP2	PKPab	03 29 51.5	-0.8
TNS	**Taunus Mts**	**159.97**	**348**	*e*PKP2	PKPab	03 29 50.6	-2.0
VAY	**Valandovo**	**160.36**	**308**	*i* PKP	PKPdf	03 29 11.6	+0.2
VAY	**Valandovo**	**160.36**	**308**	*i* PKPdf	PKPdf	03 29 11.6	+0.2
ARSA	**Arzberg**	**160.52**	**331**	⇓*i*P	PKPdf	03 29 12.7	+1.4
	comp=Z,9.3nm,1.1s						
ARSA	**Arzberg**	**160.52**	**331**	⇓P	PKPdf	03 29 12.7	+1.3
DIVS	**Divcibare**	**160.53**	**318**	⇑*i*PKP	PKPdf	03 29 13.1	+1.7
GIVF	**Givet**	**160.56**	**355**	*e*PKIKP	PKPdf	03 29 12.9	+1.6
BAIF	**Baives**	**160.65**	**356**	*e*PKIKP	PKPdf	03 29 12.8	+1.4
	comp=Z,68nm,1.4s						
SKO	**Skopje**	**160.81**	**311**	*i* PKP	PKPdf	03 29 13.3	+1.5
SKO	**Skopje**	**160.81**	**311**	*i* PKPdf	PKPdf	03 29 13.3	+1.5
SKO				*i* PKPab	PKPab	03 29 56.0	-0.5
GROS	**Grobnik**	**161.15**	**330**	*e*PKPdf	PKPdf	03 29 13.6	+1.6
GROS				*e*PKPab	PKPab	03 29 56.6	-1.3
STU	**Stuttgart**	**161.20**	**345**	*e*PKPdf	PKPdf	03 29 13.5	+1.6
FUR	**Furstenfeldbru**	**161.23**	**340**	*e*PKP2	PKPab	03 29 56.8	-1.4
LANF	**Langenberg**	**161.28**	**348**	PKP	PKPab	03 29 56.0	-2.3
BIA	**Bitola**	**161.34**	**309**	*i* PKP	PKPdf	03 29 12.3	0.0
BIA	**Bitola**	**161.34**	**309**	*i* PKPdf	PKPdf	03 29 12.3	0.0
GOLS	**Golise**	**161.45**	**329**	*e*PKPdf	PKPdf	03 29 13.9	+1.6
KBA	**Koelnbreinsper**	**161.50**	**335**	⇑*i*P	PKPdf	03 29 14.1	+1.8
	comp=Z,23nm,2.0s						
KBA	**Koelnbreinsper**	**161.50**	**335**	⇑P	PKPdf	03 29 14.1	+1.8
LJU	**Ljubljana**	**161.89**	**331**	*e*PKPdf	PKPdf	03 29 14.3	+1.6
LJU				*e*pPKPdf		03 29 26.7	
WLS	**Welschbruch**	**161.90**	**348**	PKP	PKPab	03 29 58.4	-2.7
FLN	**La Foliniere**	**161.92**	**5**	*e*PKIKP	PKPdf	03 29 14.3	+1.6
	comp=Z,226nm,1.6s						
FLN				*e*R			
	comp=Z,922nm,23.0s						
WTTA	**Wattenberg**	**161.93**	**338**	⇑*i*P	PKPdf	03 29 13.8	+1.1
	comp=Z,28nm,1.8s						
MOTA	**Moosalm**	**162.02**	**340**	⇑*i*P	PKPdf	03 29 13.8	+1.0
	comp=Z,56nm,1.8s,SNR=12						
SQTA	**Sankt Quirin**	**162.10**	**339**	⇓*i*P	PKPdf	03 29 14.1	+1.3
	comp=Z,39nm,1.7s,SNR=7.8						
ECH	**Echery**	**162.13**	**349**	PKP	PKPab	03 30 02.2	+0.1
MEZF	**Maizieres J'vi**	**162.13**	**353**	*e*PKIKP	PKPdf	03 29 14.8	+1.9
	comp=Z,167nm,1.6s						
VOY	**Vojsko**	**162.16**	**332**	*e*PKPdf	PKPdf	03 29 15.1	+2.1
VOY				*e*		03 29 32.4	
VOY				*e*		03 29 59.3	
SGMF	**Saint Gilles**	**162.18**	**10**	*e*PKIKP	PKPdf	03 29 14.4	+1.5
	comp=Z,140nm,1.4s						
GRR	**Gorron**	**162.26**	**6**	*e*PKIKP	PKPdf	03 29 14.6	+1.6
THEF	**They Montfort**	**162.29**	**351**	PKP	PKPab	03 30 00.1	-2.7
HAU	**Haudompre**	**162.46**	**350**	*e*PKIKP	PKPdf	03 29 14.6	+1.4
	comp=Z,125nm,1.6s						
HAU				*e*R			
	comp=Z,1µm,23.0s						
MOF	**Molkenrain**	**162.48**	**348**	PKP	PKPab	03 30 01.2	-2.4
HINF	**Hinteralfeld**	**162.56**	**349**	*e*PKIKP	PKPdf	03 29 14.6	+1.3
	comp=Z,84nm,1.7s						
LOMF	**Lomont**	**163.02**	**349**	PKP	PKPab	03 30 03.1	-2.9
LOR	**Lormes**	**163.45**	**356**	*e*PKIKP	PKPdf	03 29 15.9	+1.7
	comp=Z,110nm,1.5s						
LOR				*e*R			
	comp=Z,2µm,22.5s						
SSF	**Saint Saulge**	**163.68**	**356**	*e*PKIKP	PKPdf	03 29 16.2	+1.7
	comp=Z,54nm,1.3s						
CABF	**La Chapelle**	**163.86**	**350**	*e*PKIKP	PKPdf	03 29 16.7	+2.0
	comp=Z,141nm,1.5s						
AVF	**Avril sur Loir**	**163.96**	**357**	*e*PKIKP	PKPdf	03 29 16.0	+1.2
	comp=Z,64nm,1.5s						
SMF	**Signal de Mont**	**164.07**	**355**	*e*PKIKP	PKPdf	03 29 16.3	+1.4
	comp=Z,154nm,1.8s						
MFF	**Saint Martin d**	**164.09**	**5**	*e*PKIKP	PKPdf	03 29 16.9	+2.0
	comp=Z,32nm,1.1s						
BGF	**Bois d'Agland**	**164.21**	**358**	*e*PKIKP	PKPdf	03 29 16.7	+1.7
	comp=Z,154nm,1.6s						
TCF	**Toulx Ste Croi**	**164.50**	**359**	*e*PKIKP	PKPdf	03 29 16.9	+1.6
AGO	**Saint Agoulin**	**164.71**	**357**	PKP	PKPab	03 30 10.9	-2.5
PLDF	**La Plantade**	**164.76**	**356**	PKP	PKPab	03 30 11.6	-2.0
LPL	**La Plagne**	**164.81**	**347**	*e*PKIKP	PKPdf	03 29 17.5	+1.8
LPG	**La Plagne**	**164.82**	**347**	*e*PKIKP	PKPdf	03 29 17.7	+2.0
PYM	**Petit Puy Mans**	**165.01**	**357**	PKP	PKPab	03 30 12.3	-2.4
CII	**Carovilli**	**165.25**	**321**	*e*PKPdf	PKPdf	03 29 18.2	+2.0
GRN	**Grenoble**	**165.25**	**350**	PKP	PKPab	03 30 14.4	-1.3
BNI	**Bardonecchia**	**165.27**	**347**	*e*PKPdf	PKPdf	03 29 18.3	+2.2
TIP	**Timpagrande**	**165.29**	**309**	*e*PKPdf	PKPdf	03 29 17.4	+1.0
RJF	**Les Rejaudoux**	**165.47**	**1**	*e*PKIKP	PKPdf	03 29 17.9	+1.6
	comp=Z,169nm,1.7s						
RJF				*e*R			
	comp=Z,941nm,19.5s						
LBL	**Lubilhac**	**165.52**	**356**	PKP	PKPab	03 30 15.2	-1.7
ORIF	**Oris-en-Rattie**	**165.54**	**349**	*e*PKIKP	PKPdf	03 29 18.1	+1.7
	comp=Z,40nm,1.2s						
ORIF				*e*R			
	comp=Z,903nm,21.8s						
MBDF	**Montbardon**	**165.56**	**346**	*e*PKIKP	PKPdf	03 29 18.0	+1.6
	comp=Z,27nm,1.1s						
VIVF	**Saint-Julien-l**	**165.77**	**352**	*e*PKIKP	PKPdf	03 29 18.4	+1.8
	comp=Z,90nm,1.6s						
SURF	**Saint Ours**	**165.79**	**346**	PKP	PKPab	03 30 16.8	-1.3
LFF	**La Frestale**	**165.81**	**4**	*e*PKIKP	PKPdf	03 29 18.3	+1.7
CAF	**Calviac**	**165.86**	**360**	*e*PKIKP	PKPdf	03 29 18.6	+2.0
	comp=Z,41nm,1.3s						
SAOF	**Saorge**	**166.09**	**343**	PKP	PKPab	03 30 17.2	-2.3
AUTN	**L'Aution**	**166.11**	**343**	PKP	PKPab	03 30 18.5	-1.1
TOUF	**Mont Tournerai**	**166.13**	**344**	PKP	PKPab	03 30 17.6	-2.1
SBF	**Sospel**	**166.23**	**343**	*e*PKIKP	PKPdf	03 29 18.1	+1.1
MVIF	**Mont Vial**	**166.27**	**344**	PKP	PKPab	03 30 18.2	-2.1
REVF	**Revere**	**166.36**	**343**	PKP	PKPab	03 30 19.2	-1.5
PCAB	**Cabril**	**166.41**	**34**	*e*PKPdf	PKPdf	03 29 20.5	+3.3
CALN	**Calern**	**166.47**	**345**	PKP	PKPab	03 30 18.9	-2.2
SMRF	**Simiane la Rot**	**166.51**	**349**	*e*PKIKP	PKPdf	03 29 19.2	+2.0
	comp=Z,27nm,1.3s						
LASF	**Ste Croix**	**166.63**	**354**	*e*PKIKP	PKPdf	03 29 19.1	+1.8
	comp=Z,115nm,1.7s						
FRF	**La Foret Royal**	**166.70**	**345**	*e*PKIKP	PKPdf	03 29 18.5	+1.2
	comp=Z,45nm,1.2s						
PVRL	**Vila Real**	**166.90**	**34**	*e*PKPdf	PKPdf	03 29 21.3	+3.8
PBRG	**Braganca**	**166.92**	**30**	*e*PKPab	PKPab	03 30 21.6	-1.5
LMR	**La Mourre**	**166.95**	**345**	*e*PKIKP	PKPdf	03 29 18.8	+1.3
	comp=Z,101nm,1.8s						
PGF	**Pioggiola**	**166.97**	**336**	*e*PKIKP	PKPdf	03 29 18.9	+1.4
	comp=Z,38nm,1.1s						
PVIS	**Viseu**	**167.23**	**36**	*e*PKPdf	PKPdf	03 29 20.9	+3.1
PVIS	**Viseu**	**167.23**	**36**	*e*PKPab	PKPab	03 30 25.4	+0.9
MTLF	**Montolieu**	**167.44**	**359**	*e*PKIKP	PKPdf	03 29 19.6	+1.8
	comp=Z,58nm,1.6s						
MTE	**Manteigas**	**167.64**	**36**	*e*PKPdf	PKPdf	03 29 20.8	+2.8
EPF	**Esparros**	**167.68**	**6**	*e*PKIKP	PKPdf	03 29 20.3	+2.4
	comp=Z,100nm,1.6s						
ETSF	**Etsaut**	**167.71**	**9**	*e*PKIKP	PKPdf	03 29 20.8	+2.8
PTOM	**Tomar**	**167.73**	**41**	*e*PKPdf	PKPdf	03 29 21.9	+3.8
PTOM	**Tomar**	**167.73**	**41**	*e*PKPab	PKPab	03 30 26.8	0.0
MLS	**Moulis**	**167.80**	**3**	PKP	PKPab	03 30 25.0	-2.0
RESF	**Ens**	**167.90**	**6**	PKP	PKPab	03 30 26.2	-1.2
EBIE	**Bielsa**	**168.00**	**7**	PKP	PKPdf	03 29 20.6	+2.4
EBIE				PKPab	PKPab	03 30 27.1	-0.8
PCBR	**Castelo Branco**	**168.09**	**38**	*e*PKPdf	PKPdf	03 29 21.5	+3.2
EGRA	**Graus**	**168.51**	**6**	PKP	PKPdf	03 29 21.5	+3.0
EGRA				PKPab	PKPab	03 30 29.1	-1.0
EVO	**Evora**	**168.69**	**44**	*e*PKIKP	PKPdf	03 29 21.4	+2.7
	comp=Z,71nm,1.2s						
EVO				*e*R			
	comp=Z,1µm,22.2s						
ESAC	**San Caprasio**	**168.88**	**10**	PKP	PKPdf	03 29 21.5	+2.8
ESAC				PKPab	PKPab	03 30 30.2	-1.5
GUD	**Guadarrama**	**168.94**	**25**	PKP	PKPdf	03 29 22.8	+4.0
PBEJ	**Beja**	**169.09**	**46**	*e*PKPdf	PKPdf	03 29 22.5	+3.6
PBEJ	**Beja**	**169.09**	**46**	*e*PKPab	PKPab	03 30 32.9	+0.1
EBAD	**Badajoz**	**169.11**	**40**	PKP	PKPdf	03 29 22.6	+3.7
EPOB	**Poblet**	**169.40**	**4**	PKP	PKPdf	03 29 21.7	+2.6
EPOB				PKPab	PKPab	03 30 32.8	-1.3
ESDC	**Sonseca Array**	**169.86**	**27**	PKP	PKPdf	03 29 22.3	+2.9
	comp=Z,4.4nm,0.9s,baz=346,slow=2.4,SNR=22						
ESDC				PKPab	PKPab	03 30 34.7	-1.4
	comp=Z,4.7nm,0.9s,baz=323,slow=3.6,SNR=5.7						
ESDC	**Sonseca Array**	**169.86**	**27**	PKP	PKPdf	03 29 22.1	+2.8
ESDC				PKPab	PKPab	03 30 34.5	-1.6
ESLA	**Sonseca Array**	**169.86**	**27**	PFAKE		03 29 30.0	+11
ESLA				LR	LR		
	comp=Z,6µm,21.0s						
EMIN	**Mina Concepcio**	**169.98**	**43**	PKP	PKPdf	03 29 23.1	+3.6
EMOS	**Mosqueruela**	**170.21**	**11**	PKP	PKPdf	03 29 23.6	+4.0
EMOS				PKPab	PKPab	03 30 36.4	-1.3
EADA	**Adamuz**	**170.83**	**35**	PKP	PKPdf	03 29 23.8	+3.8
EADA				PKPab	PKPab	03 30 40.0	-0.5
ECHE	**Chera**	**170.86**	**15**	PKP	PKPdf	03 29 23.8	+3.9
ECHE				PKPab	PKPab	03 30 40.8	+0.2
ESPR	**Espera**	**171.06**	**45**	PKP	PKPdf	03 29 23.5	+3.3
EBAN	**Banos Encina**	**171.20**	**31**	PKP	PKPdf	03 29 23.5	+3.3
EBAN				PKPab	PKPab	03 30 41.3	-0.9
EVIA	**Vianos**	**171.31**	**24**	PKP	PKPdf	03 29 24.3	+4.1
EVIA				PKPab	PKPab	03 30 41.7	-1.0
ELUQ	**Luque**	**171.46**	**36**	PKP	PKPdf	03 29 24.1	+3.7
ETOB	**Tobarra**	**171.61**	**19**	PKP	PKPdf	03 29 23.9	+3.5
EQES	**Quesada**	**171.82**	**30**	PKP	PKPdf	03 29 23.8	+3.2
ELOJ	**Sierra Loja**	**171.83**	**37**	PKP	PKPdf	03 29 23.9	+3.3
ELOJ				PKPab	PKPab	03 30 45.0	0.0
EMIJ	**Mijas**	**171.91**	**42**	PKP	PKPdf	03 29 23.0	+2.3
EMIJ				PKPab	PKPab	03 30 44.7	-0.7
EHUE	**Huescar**	**172.00**	**27**	PKP	PKPdf	03 29 24.1	+3.4
ECOG	**Cogollos-Vega**	**172.02**	**34**	PKP	PKPdf	03 29 23.0	+2.3
ECOG				PKPab	PKPab	03 30 47.6	+1.8
ERON	**Agron**	**172.11**	**36**	PKP	PKPdf	03 29 24.7	+3.9
ERON				PKPab	PKPab	03 30 46.3	+0.1
EGUA	**Guajares**	**172.37**	**36**	PKP	PKPdf	03 29 23.7	+2.8
EMUR	**La Murta**	**172.44**	**20**	PKP	PKPdf	03 29 22.6	+1.7
EMUR				PKPab	PKPab	03 30 48.4	+0.7
EBNR	**Beni Rached**	**174.47**	**4**	P	PKPab	03 30 56.0	-0.7
EMHD	**Djebel Mahouad**	**174.52**	**352**	P	PKPab	03 30 55.0	-1.9
ECHA	**Ech Chlef**	**174.60**	**5**	P	PKPab	03 30 56.5	-0.8
EANR	**'Ain N'Sour**	**174.77**	**8**	P	PKPab	03 30 57.0	-1.0
ETRT	**Tiaret**	**175.34**	**7**	P	PKPab	03 31 02.0	+1.4

JMA 02 03:19:13.2±0.3,46.18N×141.08E,h6^{km}±3^{km},M3.5, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JWK2	**Keihoku**	**1.04**	**146**	P	Pb	03 19 32.8	-0.3
JWK2				*e*S	Sb	03 19 46.3	-0.5
JRR	**Rishiri**	**1.05**	**171**	P	Pb	03 19 33.2	-0.3
JRR				*e*S	Sb	03 19 47.6	+0.3
JSE	**Soyaes**	**1.61**	**139**	P	Pn	03 19 41.6	-0.8
JSE				*e*S	Sb	03 20 01.3	-2.3
JYG	**Yagishiri**	**1.77**	**172**	*e*S	Sn	03 20 06.7	-1.0
JSS	**Shosan**	**1.86**	**163**	P	Pn	03 19 46.5	+0.5
JSS				*e*S	Sn	03 20 10.7	+0.7

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*THR **02** 03:20:33.3±1.3,35.65N×48.99E,h14^{km}±10^{km},ML2.6*

*CSEM **02** 03:20:33.2±0.1,35.63N×49.11E,h2^{km},ML2.6,Error ellipse: s-maj=3.5km s-min=2.1km az=167.0*

*TEH **02** 03:20:36.5,35.67N×49.09E,h10^{km},Mn3.2*

ISC 02 03:20:36.3±0.8,35.53N±0.07×49.16E±0.06,h10^{km},n18, σ0^{s}98/18,Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAO	**Ashtian**	**1.21**	**144**	*e*Pg	**Pg**	**03 20 59.0**	**-1.6**
ASAO				*e*Sg	**Sg**	**03 21 17.7**	**+0.9**
ASAO				AML	AML	03 21 21.6	
	comp=N,90nm,0.4s						
IMHD	**Mahdasht**	**1.24**	**82**	Lg		03 21 14.3	
THKV	**Tehran--Karaj**	**1.45**	**74**	*e*Pg	**Pg**	**03 21 01.2**	**-4.1**
SNGE	**Sanandaj**	**1.54**	**254**	*e*Pg	**Pg**	**03 21 00.3**	**-6.8**
SNGE				*e*Sg	**Sg**	**03 21 19.8**	**-7.9**
IQOM	**Qom**	**1.71**	**113**	Pn	**Pn**	**03 21 07.2**	**+0.8**
IKOM	**Komasi**	**1.91**	**225**	Pn	**Pn**	**03 21 09.6**	**+0.4**
IAFJ	**Afjeh**	**2.11**	**80**	Pn	**Pn**	**03 21 12.1**	**0.0**
IVRN	**Varamin**	**2.17**	**103**	Pn	**Pn**	**03 21 14.0**	**+1.0**
IVRN	**Varamin**	**2.17**	**103**	Lg		03 21 44.8	
DAMV	**Damavand**	**2.30**	**87**	*e*Pn	**Pn**	**03 21 15.5**	**+0.7**
IDMV	**Damavand**	**2.35**	**88**	Pn	**Pn**	**03 21 15.6**	**+0.1**
IDHR	**Dehrash**	**2.42**	**251**	Pn	**Pn**	**03 21 17.0**	**+0.5**
IGHG	**Ghaleghazi**	**2.44**	**241**	Pn	**Pn**	**03 21 16.5**	**-0.3**
IFIR	**Firoozkooh**	**2.94**	**87**	Pn	**Pn**	**03 21 23.2**	**-0.7**
IKLH	**Kalahroud**	**2.98**	**137**	Pn	**Pn**	**03 21 23.1**	**-1.4**
IPIR	**Pirpir**	**3.18**	**153**	Pn	**Pn**	**03 21 28.4**	**+1.0**
IZEF	**Zefreh**	**3.72**	**134**	Pn	**Pn**	**03 21 32.3**	**-2.7**
NASN	**Na'in**	**4.07**	**131**	*e*Pn	**Pn**	**03 21 40.4**	**+0.3**
NASN				AML	AML	03 22 55.3	
	comp=N,6.4nm,0.7s						

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*IPEC **02** 03:25:44.6±0.4,51.47N×16.41E,ML2.2/4,Error ellipse: s-maj=3.9km s-min=2.7km az=76.0*

*PRU **02** 03:25:45.1,51.42N×16.10E*

*WAR **02** 03:25:45.0,51.48N×16.10E,h1^{km},ML2.6,Mining Induced*

*CSEM **02** 03:25:45.8±0.4,51.41N×16.13E,h2^{km},ML2.9/2,Error ellipse: s-maj=5.9km s-min=3.3km az=17.0*

*VIE **02** 03:25:47.2±0.6,51.24N×16.16E,mb2.0/2,ML2.5/3,Error ellipse: s-maj=4.4km s-min=3.8km az=80.0,Suspected Mining induced.*

ISC 02 03:25:43.2±0.9,51.41N±0.04×16.07E±0.04,n18,σ1^{s}37/37, 2C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.58**	**166**	⇓*i*PG	**Pg**	**03 25 56.9**	**+2.1**
KSP				⇓*e*SG	**Sg**	**03 26 05.9**	**+3.3**
KSP	**Ksiaz**	**0.58**	**166**	*e*Pg	**Pg**	**03 25 56.9**	**+2.1**
KSP				*e*Sg	**Sg**	**03 26 05.6**	**+3.0**
KSP	**Ksiaz**	**0.58**	**166**	*e*Pg	**Pg**	**03 25 56.8**	**+2.0**
KSP				*e*Sg	**Sg**	**03 26 05.5**	**+2.9**
UPC	**Upice**	**0.90**	**182**	*e*PG	**Pg**	**03 26 02.7**	**+1.6**
DPC	**Dobruska-Polom**	**1.07**	**171**	*e*PG	**Pg**	**03 26 05.6**	**+1.1**
DPC				*e*SG	**Sg**	**03 26 19.9**	**+1.1**
	9.2nm,0.2s						
DPC	**Dobruska-Polom**	**1.07**	**171**	*e*Pg	**Pg**	**03 26 05.6**	**+1.1**
DPC				*e*Sg	**Sg**	**03 26 20.1**	**+1.3**
PVCC	**Panska Ves**	**1.29**	**228**	*e*PG	**Pg**	**03 26 09.9**	**+1.0**
PRU	**Pruhonice**	**1.72**	**215**	*e*PG	**Pg**	**03 26 17.4**	**-0.1**
PRU				*e*SG	**Sg**	**03 26 40.2**	**-0.2**
MORC	**Moravsky Berou**	**1.88**	**149**	*e*Pn	**Pn**	**03 26 17.6**	**+0.7**
MORC				*e*Sg	**Sg**	**03 26 42.3**	**-3.6**
	15nm,0.5s						
CLL	**Collm**	**1.92**	**268**	*i* PG	**Pg**	**03 26 19.9**	**-1.6**
CLL				*e*		03 26 22.0	
CLL				*e*SG	**Sg**	**03 26 47.0**	**-0.2**
OKC	**Ostrava-Krasne**	**2.06**	**139**	*e*PG	**Pg**	**03 26 23.1**	**-1.1**
OKC				*e*SG	**Sg**	**03 26 49.3**	**-2.3**
VRAC	**Vranov**	**2.13**	**171**	*e*Pn	**Pn**	**03 26 22.3**	**+1.9**
VRAC				*e*Sg	**Sg**	**03 26 53.9**	**-0.1**
TREC	**Trest**	**2.15**	**190**	*e*PN	**Pn**	**03 26 23.1**	**+2.4**
TREC				*e*PG	**Pg**	**03 26 25.6**	**-0.4**
NKC	**Novy Kostel**	**2.58**	**244**	*e*PN	**Pn**	**03 26 27.8**	**+1.0**
NKC				*e*PG	**Pg**	**03 26 34.6**	**0.0**
NKC				*e*SG	**Sg**	**03 27 07.6**	**-1.4**
NKC	**Novy Kostel**	**2.58**	**244**	*e*Pg	**Pg**	**03 26 34.6**	**0.0**
NKC				*e*Sg	**Sg**	**03 27 07.6**	**-1.4**
OJC	**Ojcow**	**2.65**	**115**	*e*PG	**Pg**	**03 26 35.0**	**-1.1**
OJC				*e*SG	**Sg**	**03 27 09.0**	**-2.4**
KHC	**Kasperske Hory**	**2.78**	**216**	*e*PN	**Pn**	**03 26 30.7**	**+1.0**
KHC				*e*PG	**Pg**	**03 26 36.6**	**-2.1**
KHC				*e*SN	**Sn**	**03 27 04.5**	**0.0**
KHC				*e*SG	**Sg**	**03 27 13.7**	**-2.1**
MOA	**Molln**	**3.75**	**199**	⇑*i*Pn	**Pn**	**03 26 44.4**	**+0.9**
MOA				⇑*i*Sg	**Sg**	**03 27 47.0**	**-0.9**
	comp=Z,3.4nm,0.3s						

WEL 02 03:27:44.6±0.1,41.67S×174.19E,h5^{km},ML3.7/30,7C-2D, Error ellipse: s-maj=1.0km s-min=0.8km az=90.0,Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.08**	**167**	⇑*i*P*	Pb	03 27 46.8	-1.5
CMWZ				S*	Sb	03 27 48.8	-1.7
CMWZ				S*	Sb	03 27 48.9	-1.7
BSWZ	**Blackbirch Sta**	**0.24**	**260**	⇓P*	Pb	03 27 49.7	-1.4
BSWZ				SG	Sg	03 27 53.8	+1.1
BSWZ				SG	Sg	03 27 54.0	+1.3
TUWZ	**Tuamarina**	**0.30**	**322**	⇓PG	Pg	03 27 50.9	+0.2
TUWZ				SG	Sg	03 27 55.2	+0.4
TCW	**Tory Channel**	**0.46**	**8**	⇑PG	Pg	03 27 53.6	-0.3
TCW				SG	Sg	03 28 00.6	+0.5
SNZO	**South Karori**	**0.53**	**47**	⇑PG	Pg	03 27 55.1	-0.1
SNZO				SG	Sg	03 28 03.2	+0.9
BHW	**Baring Head**	**0.57**	**63**	⇑PG	Pg	03 27 56.0	-0.1
BHW				SG	Sg	03 28 04.3	+0.5
WEL	**Wellington**	**0.58**	**49**	⇑PG	Pg	03 27 56.1	-0.2
WEL				SG	Sg	03 28 04.6	+0.6
MRW	**Makara Radio**	**0.58**	**41**	⇑PG	Pg	03 27 55.9	-0.4
MRW				SG	Sg	03 28 04.3	+0.1
NNZ	**Nelson**	**0.76**	**306**	P*	Pb	03 27 58.9	-1.0
MSWZ	**Moikau Station**	**0.84**	**73**	PG	Pg	03 28 01.0	-0.4
CAW	**Cannon Point**	**0.87**	**50**	PG	Pg	03 28 00.9	-1.0
KHZ	**Kahutara**	**0.89**	**213**	PG	Pg	03 28 02.3	-0.1
KHZ				SG	Sg	03 28 17.2	+3.0
DUWZ	**D'Urville Isla**	**0.89**	**347**	PG	Pg	03 28 01.1	-1.3
THZ	**Tophouse**	**0.97**	**264**	*e*P*	Pb	03 28 01.9	-1.5
PAWZ	**Paruwai Farm**	**0.97**	**73**	P*	Pb	03 28 03.3	-0.3
KIW	**Kapiti Island**	**0.97**	**34**	⇑P*	Pb	03 28 02.7	-0.9
MTW	**Mount Morrison**	**1.11**	**63**	P*	Pb	03 28 05.5	-0.4
TRWZ	**Traveller**	**1.16**	**77**	*e*P*	Pb	03 28 06.1	-0.6
MRZ	**Mangatainoka R**	**1.46**	**47**	P*	Pb	03 28 10.7	-1.1
QRZ	**Quartz Range**	**1.51**	**303**	PN	Pn	03 28 12.0	-0.5
DSZ	**Denniston Nort**	**1.79**	**267**	*e*PN	Pn	03 28 16.6	+0.2
TSZ	**Takapari Road**	**2.10**	**40**	*e*PN	Pn	03 28 19.3	-1.5
MQZ	**McQueen's Vall**	**2.33**	**209**	*e*PN	Pn	03 28 20.6	-3.5

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*MOS **02** 03:29:20.0±2.5,49.22N×110.18E,h17^{km},mb3.9/4,Error ellipse: s-maj=10.1km s-min=6.6km az=99.2*

*IDC **02** 03:29:27.3±1.9,49.42N×109.06E,mb3.6/3,mb1 3.7/5, mb1mx3.5/21,mbtmp3.5/5,ML3.3/2,Error ellipse: s-maj=56.5km s-min=18.7km az=138.0*

BYKL 02 03:29:20.3±0.6,49.25N×110.14E,h18^{km}±13^{km},1C-2D, FELT I=III-IV MSK at Menza, II at Khapcheranga, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KPC	**Khapcheranga**	**1.53**	**72**	⇓*i*Pg	Pn	03 29 47.1	+0.1
KPC				*e*		03 29 55.4	
KPC				max		03 29 56.0	
	2μm,0.7s						
KPC				*e*Sg	Sn	03 30 07.3	+0.7
KPC				Smax		03 30 09.0	
	8μm,1.3s						
KPC				*e*		03 30 14.5	
KPC	**Khapcheranga**	**1.53**	**72**	*e*PN	Pn	03 29 47.7	+0.7
KPC				*e*		03 30 08.1	
KPC				pmax	pmax		
	comp=Z,2μm,0.3s						
KPC				smax			
	comp=N,3μm,0.1s						
SONM	**Songino Array**	**2.86**	**242**	Pn	Pn	03 30 06.2	+0.1
	comp=N,21nm,0.3s,baz=57,slow=12,SNR=324						
SONM				Pg	Pn	03 30 12.1	+6.0
	comp=N,54nm,0.3s,baz=58,slow=17,SNR=92						
SONM				Lg		03 30 49.3	
	comp=N,193nm,0.3s,baz=51,slow=28,SNR=23						
SONM	**Songino Array**	**2.86**	**242**	PN	Pn	03 30 06.2	+0.1
SONM						03 30 12.1	
SONM				pmax	pmax		
	comp=Z,21nm,0.3s						
SONM				pmax	pmax		
	comp=Z,54nm,0.3s						
HRMR	**Khuramsha**	**3.13**	**321**	*e*Pn	Pn	03 30 09.1	-0.8
HRMR				*e*Pg	Pn	03 30 15.9	+6.0
HRMR				Pmax		03 30 19.2	
	comp=Z,1μm,1.1s						
HRMR				*e*Sg	Sn	03 30 56.6	+9.4
HRMR				Smax		03 31 01.6	
	comp=Z,20μm,0.8s						
TRTB	**Turuntaevo**	**3.38**	**333**	*e*Pn	Pn	03 30 13.4	-0.1
TRTB				*e*Pg	Pn	03 30 19.4	+5.9
TRTB				*e*		03 30 21.7	
TRTB				max		03 30 22.3	
	comp=Z,1μm,0.7s						
TRTB				*e*Sg	Sn	03 31 03.8	+10
TRTB				Smax		03 31 09.4	
	comp=Z,3μm,1.4s						
CIT	**Chita**	**3.52**	**37**	*e*Pn	Pn	03 30 14.9	-0.6
CIT				*e*Pg	Pn	03 30 22.8	+7.3
CIT				Pmax		03 30 37.0	
	comp=Z,275nm,0.9s						
CIT				*e*Sn	Sn	03 30 54.7	-2.4
CIT				*e*Sg	Sn	03 31 08.1	+11
CIT				Smax		03 31 13.4	
	comp=Z,6μm,1.1s						
CIT	**Chita**	**3.52**	**37**	*e*PN	Pn	03 30 23.0	+7.5
CIT				*e*		03 31 08.3	
CIT				pmax	pmax		
	comp=Z,255nm,0.8s						
CIT				smax			
	comp=E,6μm,0.9s						
FFNB	**Fofonovo**	**3.53**	**324**	*e*Pn	Pn	03 30 15.1	-0.5
FFNB				*e*Pg	Pn	03 30 23.6	+8.0
FFNB				Pmax		03 30 24.5	
	comp=E,28nm,0.1s						
FFNB				*e*Sg	Sn	03 31 08.8	+12
FFNB				Smax		03 31 15.5	
	comp=E,11μm,0.6s						
KAB	**Kabansk**	**3.58**	**323**	*e*PN	Pn	03 30 25.5	+9.3
KAB				*e*		03 31 13.5	
KAB				pmax	pmax		
	comp=Z,749nm,0.7s						
KAB				smax			
	comp=N,22μm,1.4s						
BTMB	**Babushkin**	**3.69**	**313**	*e*Pn	Pn	03 30 17.4	-0.4
BTMB				*e*Pg	Pn	03 30 26.5	+8.7
BTMB				Pmax		03 30 28.2	
	comp=N,133nm,0.2s						
BTMB				*e*		03 30 56.9	
BTMB				*e*Sg	Sn	03 31 13.8	+13
BTMB				Smax		03 31 18.5	
	comp=N,5μm,0.9s						
STDB	**Stepnoy Dvoret**	**3.78**	**322**	*e*	Pn	03 30 19.4	+0.3
STDB				*e*Pg	Pn	03 30 29.3	+10
STDB				Pmax		03 30 38.6	
	comp=N,722nm,1.0s						
STDB				*e*Sg	Sn	03 31 19.7	+16
STDB				Smax		03 31 40.6	
	comp=N,2μm,1.3s						
ZRHB	**Zarechye**	**3.81**	**331**	*e*	Pn	03 30 20.8	+1.3
ZRHB				*e*Pg	Pn	03 30 28.7	+9.2
ZRHB				Pmax		03 30 42.0	
	comp=N,939nm,1.0s						
ZRHB				*e*Sg	Sn	03 31 18.2	+14
ZRHB				Smax		03 31 38.0	
	comp=N,12μm,1.1s						
MXMB	**Maximikha**	**4.11**	**348**	*e*Pn	Pn	03 30 23.9	0.0
MXMB				*e*Pg	Pn	03 30 35.5	+12
MXMB				Pmax		03 30 36.0	
	comp=N,479nm,0.8s						
MXMB				*e*Sg	Sn	03 31 30.1	+18
MXMB				Smax		03 31 42.5	
	comp=N,4μm,1.0s						
TRG	**Tyrgan**	**4.25**	**327**	*e*Pn	Pn	03 30 24.2	-1.6
TRG				*e*Pg	Pn	03 30 35.7	+10
TRG				Pmax		03 30 52.2	
	comp=N,223nm,1.3s						
TRG				*e*Sg	Sn	03 31 30.7	+15
TRG				Smax		03 31 34.7	
	comp=N,3μm,1.6s						
TRG	**Tyrgan**	**4.25**	**327**	*e*PN	Pn	03 30 35.3	+9.5
TRG				*e*		03 31 31.9	
TRG				pmax	pmax		
	comp=Z,181nm,0.9s						
TRG				smax			
	comp=E,3μm,1.1s						
LSTR	**Listvyanka**	**4.28**	**310**	*e*Pg	Pn	03 30 37.8	+12
LSTR				Pmax		03 30 45.8	
	comp=E,144nm,0.9s						
LSTR				*e*Sg	Sn	03 31 33.6	+17
LSTR				Smax		03 31 37.4	
	comp=E,2μm,1.0s						
LSTR	**Listvyanka**	**4.28**	**310**	*e*PN	Pn	03 30 38.1	+12
LSTR				*e*		03 31 33.9	
LSTR				pmax	pmax		
	comp=Z,144nm,0.9s						
LSTR				smax			
	comp=N,2μm,1.1s						
ZAK	**Zakamensk**	**4.58**	**287**	*e*	Pn	03 30 36.6	+6.1
ZAK				*e*Pg	Pn	03 30 42.9	+12
ZAK				*e*		03 30 49.5	
ZAK				max		03 30 51.0	
	comp=N,230nm,0.8s						
ZAK				*e*Sg	Sn	03 31 42.1	+18
ZAK				Smax		03 31 45.7	
	comp=N,2μm,1.5s						
ZAK	**Zakamensk**	**4.58**	**287**	*e*PN	Pn	03 30 28.4	-2.1
ZAK				*e*		03 30 43.2	
ZAK				*e*S	Sn	03 31 20.3	-3.7
ZAK				*e*		03 31 42.6	
ZAK				pmax	pmax		
	comp=Z,230nm,0.8s						
ZAK				smax			
	comp=N,2μm,1.2s						
OGRR	**Ongureny**	**4.68**	**341**	*e*	Pn	03 30 30.8	-1.1
OGRR				*e*Pg	Pn	03 30 43.8	+12
OGRR				Pmax		03 30 47.6	
	comp=N,30nm,1.7s						
OGRR				*e*Sg	Sn	03 31 44.3	+18
OGRR				Smax		03 31 50.7	
	comp=N,548nm,0.8s						
OGRR	**Ongureny**	**4.68**	**341**	*e*PN	Pn	03 30 30.8	-1.1
OGRR				*e*		03 30 44.4	
OGRR				*e*		03 31 47.0	
OGRR				pmax	pmax		
	comp=Z,127nm,1.2s						
OGRR				smax			
	comp=N,548nm,1.5s						
IRK	**Irkutsk**	**4.78**	**311**	*e*	Pn	03 31 23.3	+50
IRK				*e*Sg	Sn	03 31 46.4	+17
IRK				Smax		03 31 53.8	
	comp=N,779nm,1.0s						
IRK	**Irkutsk**	**4.78**	**311**	*e*PN	Pn	03 30 33.2	-0.1
IRK				*e*		03 30 47.5	
IRK				*e*		03 31 47.0	
IRK				pmax	pmax		
	comp=Z,172nm,0.1s						
IRK				smax			
	comp=N,4μm,1.0s						
ARS	**Arshan**	**5.59**	**301**	*e*	Pn	03 30 51.0	+6.2
ARS				*e*Pg	Pn	03 31 00.2	+15
ARS				*e*		03 31 11.5	
ARS				max		03 31 14.0	
	comp=N,159nm,0.4s						
ARS				*e*Sg	Sn	03 32 13.3	+24
ARS				Smax		03 32 24.8	
	comp=N,2μm,0.9s						
YLYR	**Ulyunkhan**	**5.67**	**6**	⇓*i*Pn	Pn	03 30 44.0	-1.9
YLYR				*e*		03 30 51.7	
YLYR				*e*Pg	Pn	03 31 02.5	+17
YLYR				Pmax		03 31 04.6	
	comp=N,221nm,1.5s						
YLYR				*e*Sg	Sn	03 32 16.6	+25
YLYR				Smax		03 32 28.5	
	comp=N,1μm,1.4s						
YLYR	**Ulyunkhan**	**5.67**	**6**	*e*PN	Pn	03 31 02.3	+16
YLYR				*e*		03 32 15.9	
YLYR				pmax	pmax		
	comp=Z,153nm,0.6s						
YLYR				smax			
	comp=E,1μm,1.4s						
TTS	**Tsetserleg**	**6.06**	**256**	*e*	Pn	03 30 50.7	-0.7
TTS				*e*		03 31 11.2	
TTS				*e*Sg	Sn	03 32 30.7	+30
HIA	**Hailar**	**6.29**	**86**	⇑*i*PN	Pn	03 30 49.0	-5.6
MOY	**Mondy**	**6.32**	**296**	*e*	Pn	03 31 15.1	+20
MOY				max		03 31 17.7	
	comp=E,50nm,1.1s						
MOY				*e*Sg	Sn	03 32 35.5	+28
MOY				Smax		03 32 43.7	
	comp=E,2μm,1.3s						
MOY	**Mondy**	**6.32**	**296**	*e*PG	Pn	03 31 15.3	+20
MOY				*e*		03 32 35.1	
MOY				pmax	pmax		
	comp=Z,37nm,0.7s						
MOY				smax			
	comp=N,2μm,1.6s						
NIZ	**Nizh Angarsk**	**6.55**	**357**	*e*Pn	Pn	03 30 57.3	-0.9
NIZ				*e*Pg	Pn	03 31 18.5	+20
NIZ				Pmax		03 31 26.5	
	comp=N,64nm,0.8s						
NIZ				*e*Sg	Sn	03 32 43.9	+31
NIZ				Smax		03 32 51.9	
	comp=N,517nm,1.3s						
NIZ	**Nizh Angarsk**	**6.55**	**357**	*e*PG	Pn	03 31 18.9	+21
NIZ				*e*		03 32 44.3	
NIZ				pmax	pmax		
	comp=Z,41nm,1.0s						
NIZ				smax			
	comp=N,333nm,0.9s						
UKT	**Uakit**	**6.60**	**18**	*e*	Pn	03 31 03.2	+4.2
UKT				*e*Pg	Pn	03 31 19.4	+20
UKT				Pmax		03 31 28.0	
	comp=N,64nm,1.4s						
UKT				*e*		03 32 22.5	
UKT				*e*Sg	Sn	03 32 45.9	+31
UKT				Smax		03 32 50.4	
	comp=N,1μm,1.1s						
KMO	**Kumora**	**6.68**	**5**	*e*Pg	Pn	03 31 21.3	+21
KMO				Pmax		03 31 31.2	
	comp=N,106nm,1.1s						
KMO				*e*Sg	Sn	03 32 49.6	+33
KMO				Smax		03 32 53.9	
	comp=N,3μm,1.0s						
KMO	**Kumora**	**6.68**	**5**	*e*PN	Pn	03 31 00.2	+0.1
KMO				*e*		03 31 21.5	
KMO				*e*		03 32 48.3	
KMO				pmax	pmax		
	comp=Z,88nm,0.8s						
KMO				smax			
	comp=N,3μm,1.2s						
ORL	**Orlik**	**7.32**	**301**	*e*	Pn	03 31 18.2	+9.2
ORL				*e*Pg	Pn	03 31 30.7	+22
ORL				Pmax		03 31 42.2	
	comp=N,27nm,1.0s						
ORL				*e*Sg	Sn	03 33 05.7	+33
ORL				Smax		03 33 13.8	
	comp=N,1μm,1.2s						
ORL	**Orlik**	**7.32**	**301**	*e*PG	Pn	03 31 32.5	+23
TUP	**Tupik**	**7.98**	**46**	*e*	Pn	03 31 20.0	+1.6
TUP				max		03 31 55.0	
	comp=N,25nm,0.7s						
TUP				*e*Sg	Sn	03 33 26.2	+37
TUP				Smax		03 33 34.3	
	comp=N,2μm,1.2s						
TUP	**Tupik**	**7.98**	**46**	*e*PN	Pn	03 31 15.0	-3.4
TUP				*e*		03 31 41.8	
TUP				*e*		03 33 24.6	
TUP				pmax	pmax		
	comp=Z,15nm,0.5s						
TUP				smax			
	comp=N,2μm,1.5s						
NLYR	**Nelyaty**	**7.99**	**23**	*e*	Pn	03 31 20.7	+2.2
NLYR				*e*Pg	Pn	03 31 45.1	+27
NLYR				Pmax		03 31 51.3	
	comp=N,24nm,0.9s						
NLYR				*e*Sg	Sn	03 33 30.2	+41
NLYR				Smax		03 33 38.9	
	comp=N,2μm,1.2s						
NLYR	**Nelyaty**	**7.99**	**23**	*e*PG	Pn	03 31 44.7	+26
NLYR				*e*		03 33 29.6	
NLYR				pmax	pmax		
	comp=Z,18nm,0.5s						
NLYR				smax			
	comp=N,3μm,1.1s						
BOD	**Bodaibo**	**8.89**	**14**	*e*	P	03 32 06.3	+35
BOD				*e*		03 33 33.6	
BOD				*e*Sg	Sn	03 33 54.7	+43
BOD				Smax		03 34 12.3	
	comp=N,447nm,1.3s						
BOD	**Bodaibo**	**8.89**	**14**	*e*PG	P	03 31 58.8	+28
BOD				*e*		03 33 54.7	
BOD				pmax	pmax		
	comp=Z,24nm,0.5s						
BOD				smax			
	comp=E,511nm,1.0s						
KRAR	**Krasnoyarsk**	**12.46**	**309**	*e*P	P	03 32 19.3	-0.3
KRAR				*e*		03 34 39.4	
YAK	**Yakutsk**	**16.80**	**33**	*i* P	P	03 33 18.4	+2.4
MKAR	**Makanchi Array**	**18.75**	**273**	P	P	03 33 39.0	-1.3
	comp=E,0.0nm,0.3s,baz=78,slow=13,SNR=2.2						
TIXI	**Tiksi**	**24.07**	**14**	*e*P	P	03 34 40.5	+5.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,46nm,10.0s						
BVAR	**Borovoye Array**	**25.00**	**294**	P	P	03 34 45.9	+1.7
	comp=Z,1.2nm,0.7s,baz=90,slow=12,SNR=4.1						
BVAR	**Borovoye Array**	**25.00**	**294**	P	P	03 34 45.9	+1.8
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SEY	**Seymchan**	**26.67**	**43**	*i* P	P	03 35 01.3	+1.7
ARU	**Arti**	**31.32**	**303**	*e*P	P	03 35 30.1	-11
ILAR	**Eielson Array**	**51.73**	**32**	P	P	03 38 36.0	+8.0
	comp=Z,0.6nm,0.9s,baz=300,slow=5.5,SNR=4.9						
ILAR	**Eielson Array**	**51.73**	**32**	P	P	03 38 36.1	+8.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
INK	**Inuvik**	**53.62**	**24**	P	P	03 38 51.9	+10
	comp=Z,0.7nm,0.8s,baz=337,slow=7.7,SNR=2.9						
INK	**Inuvik**	**53.62**	**24**	P	P	03 38 51.9	+10
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						

IDC 02 04:05:02.7±1.2**,1.03N**×**125.17E,mb4.3**/4**,mb1 4.5**/4**,mb1mx4.0**/14**,mbtmp4.3**/4**,Error ellipse: s-maj=171.5km s-min=20.6km az=64.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.70**	**157**	P	P	04 10 07.1	-0.4
	2.7nm,0.5s,baz=338,slow=10,SNR=45						
STKA	**Stephens Creek**	**36.24**	**156**	P	P	04 12 06.3	-3.2
	2.6nm,0.7s,baz=327,slow=16,SNR=4.0						
MKAR	**Makanchi Array**	**58.91**	**327**	P	P	04 15 01.8	-4.2
	1.3nm,0.3s,baz=113,slow=7.8,SNR=31						
ZAL	**Zalesovo**	**62.30**	**334**	P	P	04 15 28.5	-0.5
	10nm,0.7s,baz=151,slow=16,SNR=34						

IDC ***02*** *04:13:40.0±7.1,34.80N×22.55E,h64^{km}±39^{km},mb3.7/4, mb1 3.8/6,mb1mx3.5/22,mbtmp3.9/6,ML3.3/2,Error ellipse: s-maj=78.2km s-min=26.2km az=20.0*

HLW ***02*** *04:13:41.5,35.52N×23.13E,h20^{km},Mb3.4*

CSEM ***02*** *04:13:42.3±0.2,35.21N×22.82E,h30^{km},MD3.8,Error ellipse: s-maj=5.6km s-min=2.5km az=74.0*

ATH ***02*** *04:13:44.4,35.42N×23.06E,h28^{km},MD3.8/13*

NEIC ***02*** *04:13:44.4,35.42N×23.06E,h28^{km},MD3.8(ATH),After ATH.*

THE ***02*** *04:13:46.0,35.47N×22.90E,h20^{km}*

ISC 02 04:13:43.1±0.5**,35.27N**±0.03×**22.98E**±0.06**,h80**^{km}±7^{km}**, n50,**$\sigma 1^{s}$**37**/60**,mb3.9**/4**,3D,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**1.01**	**115**	*e*PN	**P**	**04 14 04.0**	**+1.6**
VAM	**Vamos**	**1.01**	**82**	*e*PN	**P**	**04 14 02.6**	**+0.1**
VAM				*e*SN	**S**	**04 14 16.1**	**-1.0**
KYTH	**Kithira**	**1.01**	**3**	*e*PN	**P**	**04 14 01.0**	**-1.5**
VLI	**Veliai**	**1.45**	**359**	*e*PN	**P**	**04 14 08.6**	**+0.4**
VLI				*e*SN	**S**	**04 14 26.4**	**-0.4**
IDI	**Anoyia**	**1.57**	**89**	P	**P**	**04 14 11.3**	**+1.6**
	21nm,0.3s,baz=276,slow=15,SNR=103						
IDI				S	**S**	**04 14 35.8**	**+6.4**
	44nm,0.3s,baz=9.6,slow=22,SNR=7.0						
ITM	**Ithomi**	**2.09**	**336**	*e*PB	**P**	**04 14 18.4**	**+1.6**
NPS	**Neapolis**	**2.16**	**89**	*e*PN	**P**	**04 14 19.5**	**+1.8**
NPS				*e*SN	**S**	**04 14 44.5**	**+1.1**
XRY	**Khrisi**	**2.26**	**99**	*e*PB	**P**	**04 14 22.0**	**+2.8**
SANT	**Santorini**	**2.30**	**61**	*e*P	**P**	**04 14 19.5**	**-0.2**
SANT	**Santorini**	**2.30**	**61**	*e*P	**P**	**04 14 19.5**	**-0.2**
APE	**Apeiranthos**	**2.74**	**48**	*e*PN	**P**	**04 14 26.7**	**+0.8**
RLS	**Riolos of Patr**	**3.04**	**337**	*e*PN	**P**	**04 14 31.7**	**+1.6**
LKR	**Lokris**	**3.38**	**0**	*e*PN	**P**	**04 14 35.7**	**+0.9**
KARP	**Karpathos**	**3.43**	**84**	*e*PN	**P**	**04 14 36.9**	**+1.4**
VLS	**Valsamata**	**3.48**	**327**	*e*PN	**P**	**04 14 37.8**	**+1.6**
EVR	**Evrytania**	**3.76**	**346**	*e*PN	**P**	**04 14 41.9**	**+1.8**
AGG	**Agios Georgios**	**3.78**	**352**	*e*Pn	**P**	**04 14 39.9**	**-0.5**
AGG				*e*Sn	**S**	**04 15 20.7**	**-3.2**
AOS	**Alonnisos**	**3.96**	**10**	*e*Pn	**P**	**04 14 42.6**	**-0.3**
XOR	**Xorichti**	**4.09**	**2**	*e*Pn	**P**	**04 14 44.5**	**-0.2**
SLUM		**4.21**	**153**	P	**P**	**04 14 45.5**	**-0.7**
SLUM		**4.21**	**153**	P	**P**	**04 14 45.5**	**-0.7**
PAIG	**Paliouri**	**4.69**	**7**	*e*Pn	**P**	**04 14 52.0**	**-0.8**
MEV	**Metsovon**	**4.72**	**343**	*e*Pn	**P**	**04 14 53.2**	**-0.2**
LIT	**Litokhoron**	**4.84**	**356**	*e*Pn	**P**	**04 14 54.1**	**-0.9**
LIT				*e*Sn	**S**	**04 15 48.0**	**-2.3**
OUR	**Ouranopolis**	**5.12**	**9**	*e*Pn	**P**	**04 14 57.9**	**-0.9**
SRN	**Sarande**	**5.17**	**334**	*i* Sg	**S**	**04 15 55.9**	**-2.7**
HMAT	**Matruh**	**5.41**	**139**	P	**P**	**04 15 02.1**	**-0.6**
HMAT				S	**S**	**04 16 01.0**	**-3.4**
FNA	**Florina**	**5.65**	**348**	*e*Pn	**P**	**04 15 05.0**	**-1.1**
FNA				*e*Sn	**S**	**04 16 07.2**	**-3.2**
GRG	**Griva**	**5.70**	**356**	*e*Pn	**P**	**04 15 05.5**	**-1.2**
KNT	**Kendrikon**	**5.88**	**359**	*e*Pn	**P**	**04 15 08.4**	**-1.0**
SWA2		**6.36**	**160**	⇓P	**P**	**04 15 16.4**	**+0.3**
SWA1		**6.42**	**158**	⇓P	**P**	**04 15 17.4**	**+0.6**
SWA1				S	**S**	**04 16 26.8**	**-2.5**
VAE	**Valguarnera**	**7.25**	**290**	S	**S**	**04 16 52.6**	**+2.8**
	0.6nm,0.3s,baz=275,slow=19,SNR=2.3						
HBRG	**Burj al ‘Arab**	**7.43**	**127**	P	**P**	**04 15 29.4**	**-1.3**
HBRG				S	**S**	**04 16 48.6**	**-5.5**
HNAT	**Natroun**	**8.56**	**129**	P	**P**	**04 15 45.1**	**-1.0**
AWBH		**8.57**	**142**	P	**P**	**04 15 45.3**	**-0.9**
HFRF	**Wahat Farafira**	**9.29**	**149**	⇓P	**P**	**04 15 55.7**	**-0.5**
BR131	**Keskin Array S**	**9.57**	**59**	*e*P	**P**	**04 16 00.7**	**+0.8**
	2.4nm,0.8s						
BR131	**Keskin Array S**	**9.57**	**59**	*e*P	**P**	**04 16 00.7**	**+0.8**
	2.4nm,0.8s						
BRTR	**Keskin Array B**	**9.57**	**59**	P	**P**	**04 16 00.9**	**+1.1**
	0.1nm,0.3s,baz=231,slow=13,SNR=11						
BRTR	**Keskin Array B**	**9.57**	**59**	P	**P**	**04 16 00.9**	**+1.0**
AMAG	**Maghara**	**9.75**	**115**	P	**P**	**04 16 00.2**	**-2.2**
MLR	**Muntele Rosu**	**10.46**	**12**	P	**P**	**04 16 13.8**	**+1.9**
	0.1nm,0.3s,baz=157,slow=13,SNR=4.5						
DAVOX	**Davos**	**15.14**	**323**	P	**P**	**04 17 16.4**	**+2.9**
	0.1nm,0.3s,baz=154,slow=12,SNR=3.8						
GERES	**GERESS Array B**	**15.20**	**336**	P	**P**	**04 17 19.7**	**+5.5**
	0.1nm,0.3s,baz=156,slow=13,SNR=7.4						
AKASG	**Malin Array Be**	**16.08**	**14**	P	**P**	**04 17 23.4**	**-1.9**
	0.3nm,0.3s,baz=204,slow=12,SNR=3.9						
HFS	**Hagfors**	**25.60**	**349**	P	**P**	**04 19 07.6**	**+1.5**
	0.6nm,0.3s,mb3.5,baz=155,slow=10,SNR=10						
FINES	**FINESS Array B**	**26.27**	**3**	P	**P**	**04 19 13.2**	**+0.9**
	5.5nm,1.1s,mb3.9,baz=196,slow=14,SNR=4.2						
ARCES	**ARCESS Array B**	**34.35**	**2**	P	**P**	**04 20 23.4**	**-0.3**
	5.0nm,1.0s,mb4.3,baz=194,slow=5.0,SNR=5.1						
MKAR	**Makanchi Array**	**45.21**	**56**	P	**P**	**04 21 54.7**	**+1.1**
	1.2nm,0.5s,mb3.9,baz=268,slow=7.7,SNR=16						

ATH ***02*** *04:19:42.2,37.58N×20.93E,h15^{km}±1^{km},MD3.6/12, ML3.7*

NEIC ***02*** *04:19:42.2,37.58N×20.93E,h15^{km},ML3.7(ATH),After ATH.*

CSEM ***02*** *04:19:43.2±0.2,37.61N×20.96E,h5^{km},ML3.7,Error ellipse: s-maj=4.9km s-min=2.3km az=42.0*

THE ***02*** *04:19:45.8,37.51N×21.19E,h20^{km}*

ISC 02 04:19:43.0±1.0**,37.63N**±0.04×**21.01E**±0.06**,h4**^{km}±6^{km}**, n27,**$\sigma 1^{s}$**01**/41**,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.56**	**40**	*e*PB	**Pg**	**04 19 54.2**	**0.0**
RLS				*e*SN	**Sg**	**04 20 03.5**	**+1.8**
VLS	**Valsamata**	**0.64**	**329**	*e*PN	**Pg**	**04 19 54.9**	**-0.9**
VLS				*e*SN	**Sg**	**04 20 04.9**	**+0.6**
VLS	**Valsamata**	**0.64**	**329**	*e*PB	**Pg**	**04 19 54.4**	**-1.4**
VLS				*e*SN	**Sg**	**04 20 04.6**	**+0.3**
VLS	**Valsamata**	**0.64**	**329**	*e*Pb	**Pg**	**04 19 54.4**	**-1.4**
VLS				*e*Pn	**Pg**	**04 19 54.9**	**-0.9**
VLS				*e*Sn	**Sg**	**04 20 04.6**	**+0.3**
VLS				*e*Sn	**Sg**	**04 20 04.9**	**+0.6**
VLS	**Valsamata**	**0.64**	**329**	*e*Pn	**Pg**	**04 19 54.9**	**-0.9**
VLS				*e*Sn	**Sg**	**04 20 04.6**	**+0.3**
ITM	**Ithomi**	**0.86**	**121**	*e*PN	**Pb**	**04 19 59.0**	**-1.0**
ITM				*e*SN	**Sb**	**04 20 12.1**	**+0.5**
EVR	**Evrytania**	**1.43**	**26**	*e*PN	**Pn**	**04 20 10.8**	**+1.0**
EVR				*e*SN	**Sn**	**04 20 31.4**	**+2.2**
AGG	**Agios Georgios**	**1.74**	**36**	*e*Pb	**Pb**	**04 20 14.1**	**-1.0**
AGG				*e*Sb	**Sb**	**04 20 34.8**	**-2.4**
VLI	**Veliai**	**1.79**	**120**	*e*Pn	**Pn**	**04 20 15.2**	**+0.3**
VLI				*e*Sn	**Sn**	**04 20 44.5**	**+6.2**
MGER	**Gerania Oros**	**1.82**	**78**	*e*PN	**Pn**	**04 20 16.0**	**+0.7**
LKR	**Lokris**	**1.87**	**56**	*e*PN	**Pn**	**04 20 16.7**	**+0.6**
IGT	**Igoumenitsa**	**1.97**	**345**	*e*Pn	**Pn**	**04 20 19.1**	**+1.6**
IGT				*e*Sn	**Sn**	**04 20 45.8**	**+2.9**
KYTH	**Kithira**	**2.11**	**129**	*e*PN	**Pn**	**04 20 20.0**	**+0.5**
ATH	**Athens Observa**	**2.17**	**80**	*e*PN	**Pn**	**04 20 21.7**	**+1.3**
KEK	**Kerkira**	**2.29**	**336**	*e*PN	**Pn**	**04 20 22.0**	**0.0**
SRN	**Sarande**	**2.38**	**341**	*i* Sg	**Sn**	**04 20 53.4**	**0.0**
NEO	**Neokhori**	**2.41**	**45**	*e*PB	**Pn**	**04 20 24.0**	**+0.2**
XOR	**Xorichti**	**2.44**	**44**	*e*Pn	**Pn**	**04 20 24.1**	**0.0**
XOR	**Xorichti**	**2.44**	**44**	*e*Pn	**Pn**	**04 20 24.1**	**-0.1**
LIT	**Litokhoron**	**2.73**	**25**	*e*Pn	**Pn**	**04 20 27.5**	**-0.8**
AOS	**Alonnisos**	**2.73**	**55**	*e*Pn	**Pn**	**04 20 27.7**	**-0.6**
PAIG	**Paliouri**	**3.10**	**41**	*e*Pn	**Pn**	**04 20 32.6**	**-1.0**
FNA	**Florina**	**3.16**	**5**	*e*Pn	**Pn**	**04 20 34.2**	**-0.4**
FNA				*e*Sn	**Sn**	**04 21 13.2**	**0.0**
GRG	**Griva**	**3.49**	**18**	*e*Pn	**Pn**	**04 20 38.4**	**-0.8**
OUR	**Ouranopolis**	**3.56**	**40**	*e*Pn	**Pn**	**04 20 39.3**	**-0.8**
SOH	**Sokhos**	**3.67**	**29**	*e*Pn	**Pn**	**04 20 40.8**	**-0.9**
SOH				*e*Sn	**Sn**	**04 21 25.1**	**-0.9**
KNT	**Kendrikon**	**3.82**	**22**	*e*Pn	**Pn**	**04 20 43.1**	**-0.7**

NEIC ***02*** *04:27:10.0,38.16N×26.50E,h10^{km},ML3.9(ISK), ML3.8(ATH),After ISK.*

ISK ***02*** *04:27:11.1,38.17N×26.52E,h16^{km},ML4.0*

IDC ***02*** *04:27:11.5±1.2,38.22N×26.37E,mb3.8/4,mb1 3.8/7, mb1mx3.6/23,mbtmp3.7/7,ML3.5/3,Error ellipse: s-maj=23.7km s-min=18.3km az=131.0*

ATH ***02*** *04:27:12.5,38.16N×26.61E,h26^{km}±1^{km},MD4.0/16, ML3.8*

CSEM ***02*** *04:27:13.6±0.1,38.20N×26.72E,h20^{km},ML3.8,Error ellipse: s-maj=1.5km s-min=1.2km az=3.0*

THE ***02*** *04:27:18.9,38.25N×26.31E,h20^{km},ML3.5*

ISC 02 04:27:12.0±0.5**,38.19N**±0.02×**26.59E**±0.02**,h11**^{km}±4^{km},

n106,σ0ˢ88/123,mb3.7/4,5C-2D,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.17	2	*i* P	Pg	04 27 16.0	0.0
URLA				*i* S	Sg	04 27 19.2	+0.6
BLCB	Balcova	0.41	61	*i* PG	Pg	04 27 20.6	+0.2
SMG	Samos	0.52	158	*e*PB	Pb	04 27 22.6	-0.1
SMG				*e*SB	Sb	04 27 30.4	+0.5
IZM	Izmir	0.57	69	*i* PG	Pg	04 27 24.0	+0.4
KDAG	Bornova	0.57	68	*i* P	Pb	04 27 22.9	-0.6
KDAG				*i* S	Sg	04 27 31.2	-0.3
PRK	Paraskevi	1.08	347	*e*PN	Pn	04 27 33.7	+0.7
PRK				*e*SN	Sn	04 27 49.8	+1.8
AYVA	Ayvalik	1.12	4	*i* P	Pb	04 27 34.0	+1.2
AYVA				*i* S	Sb	04 27 51.4	+4.2
AYDN	Tasoluk	1.15	117	*i* P	Pb	04 27 34.1	+0.7
AYDN				*i* S	Sb	04 27 49.0	+0.8
AKS	Akhisar	1.18	54	*i* PN	Pn	04 27 34.7	+0.3
AKS				*i* SN	Sn	04 27 51.1	+0.6
BODT	Bodrum	1.27	153	PN	Pn	04 27 34.9	-0.7
MLSB	Milas	1.30	133	PN	Pn	04 27 35.7	-0.4
BDRM	Kayabasi	1.31	149	*i* P	Pb	04 27 36.3	+0.1
BDRM				*i* S	Sb	04 27 55.4	+2.5
APE	Apeiranthos	1.40	217	PN	Pn	04 27 35.9	-1.7
APE				SN	Sn	04 27 54.1	-2.0
APE	Apeiranthos	1.40	217	*e*Pn	Pn	04 27 38.2	+0.6
APE				*e*Sn	Sn	04 27 56.8	+0.7
MANT	Manisa	1.58	78	*i* P	Pn	04 27 42.9	+2.8
MANT				*i* S	Sb	04 28 01.8	+1.3
EZN	Ezine	1.65	353	PN	Pn	04 27 40.8	-0.3
DAT	Datca	1.66	151	PN	Pn	04 27 40.5	-0.8
YER	Yerkesik	1.71	128	PN	Pn	04 27 41.8	-0.2
BALB	Balikesir	1.76	34	PN	Pn	04 27 42.8	+0.1
DENT	Denizli	1.98	102	PN	Pn	04 27 45.5	-0.4
LIA	Limnos Island	2.02	328	*e*PN	Pn	04 27 47.3	+0.8
SANT	Santorini	2.03	207	*e*P	Pn	04 27 45.1	-1.5
SANT	Santorini	2.03	207	*e*P	Pn	04 27 45.1	-1.5
LOS	Limnos	2.10	326	*e*Pb	Pb	04 27 48.8	-0.8
	comp=Z,7.5nm,0.5s						
LOS				*e*Sb	Sb	04 28 12.9	-2.8
DST	Dursunbey	2.13	48	PN	Pn	04 27 48.4	+0.4
PTL	Penteli	2.15	267	*e*PN	Pn	04 27 48.9	+0.6
DALT	Dalyan (Mudla)	2.16	130	*e*PN	Pn	04 27 48.1	-0.4
LPK	Lapseki	2.18	3	PN	Pn	04 27 47.5	-1.3
ATH	Athens Observa	2.28	265	*e*PN	Pn	04 27 50.5	+0.4
KHL	Karahalli	2.31	86	*e*PN	Pn	04 27 50.8	+0.2
ARG	Arkhangelos	2.32	148	*e*PN	Pn	04 27 51.0	+0.2
AOS	Alonnisos	2.33	296	*e*Pn	Pn	04 27 51.6	+0.7
	comp=Z,8.6nm,0.2s						
EDC	Edincik	2.37	24	PN	Pn	04 27 51.1	-0.3
BNT	Bandirma	2.40	25	*e*PN	Pn	04 27 51.4	-0.4
KCT	Karacabey	2.48	33	*e*PN	Pn	04 27 52.5	-0.6
FETY	Fethiye	2.52	127	*e*PN	Pn	04 27 52.8	-0.8
ORLT	Orhaneli	2.58	43	*e*PN	Pn	04 27 54.1	-0.3
MFT	Murefte	2.65	11	*e*PN	Pn	04 27 54.1	-1.3
KARP	Karpathos	2.68	170	*e*PN	Pn	04 27 56.2	+0.3
PAIG	Paliouri	2.85	308	*e*Pn	Pn	04 27 58.9	+0.5
NEO	Neokhori	2.86	294	*e*PN	Pn	04 27 59.5	+1.1
NEO	Neokhori	2.86	294	*e*PN	Pn	04 27 58.9	+0.5
NEO	Neokhori	2.86	294	*e*Pn	Pn	04 27 58.9	+0.5
NEO				*e*Pn	Pn	04 27 59.5	+1.1
ALT	Altintas	2.89	72	*e*PN	Pn	04 27 58.7	-0.2
XOR	Xorichti	2.90	295	*e*Pn	Pn	04 27 59.2	+0.2
OUR	Ouranopolis	2.94	317	*e*Pn	Pn	04 28 00.1	+0.5
	comp=Z,3.3nm,0.4s						
ELL	Elmali	3.01	118	*e*PN	Pn	04 27 59.5	-1.1
NPS	Neapolis	3.03	195	*e*PN	Pn	04 28 00.0	-0.8
RDO	Rodhopi	3.06	345	*e*PN	Pn	04 28 01.6	+0.3
ISP	Isparta	3.12	95	*e*PN	Pn	04 28 02.4	+0.3
ISP	Isparta	3.12	95	*e*P	Pn	04 28 01.7	-0.4
ISP	Isparta	3.12	95	*e*P	Pn	04 28 01.7	-0.4
ISP	Isparta	3.12	95	*e*Pn	Pn	04 28 02.4	+0.3
IDI	Anoyia	3.20	206	Pn	Pn	04 28 01.2	-2.1
	3.6nm,0.3s,baz=26,slow=12,SNR=31						
IDI				Pg	Pg	04 28 12.2	-3.8
	9.3nm,0.3s,baz=30,slow=16,SNR=25						
IDI				Lg		04 28 56.5	
	13nm,0.3s,baz=284,slow=12,SNR=3.7						
IDI	Anoyia	3.20	206	Pg	Pg	04 28 12.2	-3.8
YLV	Yalova	3.21	41	*e*PN	Pn	04 28 03.1	-0.3
BCK	Bucak	3.25	102	*e*PN	Pn	04 28 03.4	-0.6
VLI	Veliai	3.26	244	*e*PN	Pn	04 28 03.7	-0.4
CTT	Catalca	3.28	25	*e*PN	Pn	04 28 03.5	-0.9
BADT	Buyukada	3.30	36	*e*PN	Pn	04 28 04.6	-0.1
VAM	Vamos	3.38	215	*e*PN	Pn	04 28 06.5	+0.7
XRY	Khrisi	3.39	193	*e*PN	Pn	04 28 06.5	+0.6
KYTH	Kithira	3.42	237	*e*PN	Pn	04 28 07.0	+0.6
ISK	Istanbul-Kandi	3.45	33	*e*PN	Pn	04 28 06.2	-0.6
HRT	Hereke	3.54	41	*e*PN	Pn	04 28 08.0	-0.2
ESKT	Eskisehir	3.58	67	*e*PN	Pn	04 28 08.8	+0.1
SOH	Sokhos	3.63	317	*e*Pn	Pn	04 28 09.7	+0.3
EDRB	Edirne	3.65	2	*e*PN	Pn	04 28 09.0	-0.7
LIT	Litokhoron	3.71	302	*e*Pn	Pn	04 28 11.2	+0.6
LIT				*e*Sn	Sn	04 28 51.2	-3.5
LIT	Litokhoron	3.71	302	*e*Pn	Pn	04 28 11.1	+0.5
LIT				*e*Sn	Sn	04 28 51.2	-3.5
EVR	Evrytania	3.82	282	*e*PN	Pn	04 28 13.0	+1.0
ITM	Ithomi	3.83	256	*e*PN	Pn	04 28 13.4	+1.1
GVD	Gavdhos	3.91	212	*e*PN	Pn	04 28 13.5	+0.2
KNT	Kendrikon	4.11	317	*e*Pn	Pn	04 28 16.9	+0.6
KIZT	Kizilcal	4.21	79	*e*PN	Pn	04 28 18.2	+0.6
MDU	Mudurnu	4.25	56	*e*PN	Pn	04 28 18.2	+0.1
GRG	Griva	4.25	312	*e*Pn	Pn	04 28 19.3	+1.1
FNA	Florina	4.79	304	*e*Pn	Pn	04 28 26.6	+0.8
FNA	Florina	4.79	304	*e*Pn	Pn	04 28 26.6	+0.7
ANTO	Ankara	5.11	69	*e*PN	Pn	04 28 30.7	+0.3
BR131	Keskin Array S	5.70	72	*e*P	Pn	04 28 39.2	+0.5
	16nm,0.8s						
BR131	Keskin Array S	5.70	72	*e*P	Pn	04 28 39.2	+0.4
	16nm,0.8s						
BRTR	Keskin Array B	5.70	72	Pn	Pn	04 28 39.3	+0.5
	0.5nm,0.3s,baz=253,slow=15,SNR=19						
BRTR				Pg	Pg	04 29 02.0	-3.9
	0.7nm,0.3s,baz=256,slow=19,SNR=12						
BRTR				Lg		04 30 20.4	
	baz=263,slow=25,SNR=2.8						
BRTR	Keskin Array B	5.70	72	Pg	Pg	04 29 02.0	-3.9
HARR	Harsova	6.57	8	⇑P	Pn	04 28 48.8	-2.2
HARR	Harsova	6.57	8	⇑P	Pn	04 28 48.8	-2.2
CFR	Carcaliu	7.08	9	⇑P	Pn	04 28 54.9	-3.2
CFR	Carcaliu	7.08	9	⇑P	Pn	04 28 54.9	-3.2
MLR	Muntele Rosu	7.31	356	Pn	Pn	04 29 00.7	-0.6
	0.5nm,0.3s,baz=201,slow=6.0,SNR=9.1						
MLR				Lg		04 31 16.3	
	0.3nm,0.3s,baz=116,slow=20,SNR=3.4						
MLR	Muntele Rosu	7.31	356	⇓P	Pn	04 29 01.1	-0.2
MLR	Muntele Rosu	7.31	356	⇓P	Pn	04 29 01.1	-0.3
VRI	Vrincioaia	7.67	1	⇑P	Pn	04 29 06.3	-0.1
MTTG	Motta San Giov	8.59	272	Pn	P	04 29 18.1	-1.2
SLCN	Sala Consilina	8.77	288	Pn	P	04 29 22.4	+0.6
STR5	Stromboli 5	8.95	277	Pn	P	04 29 26.6	+2.4
SGO	Sicignano	9.05	289	Pn	P	04 29 25.8	+0.2
	6.2nm,0.5s						
SLNA	Salina	9.24	276	Pn	P	04 29 27.1	-1.1
VAE	Valguarnera	9.66	270	Pn	P	04 29 33.6	-0.4
	0.5nm,0.3s,baz=256,slow=12,SNR=2.8						
VAE	Valguarnera	9.66	270	Pn	P	04 29 33.7	-0.3
GERES	GERESS Array B	14.15	323	Pn	P	04 30 40.7	+6.3
	0.1nm,0.3s,baz=130,slow=10,SNR=15						
KHC	Kasperske Hory	14.41	324	*e*P	P	04 30 45.2	+7.5
HFS	Hagfors	23.44	344	P	P	04 32 20.7	-1.0
	2.3nm,0.8s,mb3.7,baz=153,slow=3.2,SNR=4.9						
NB2	NORSAR Subarra	24.82	342	P	P	04 32 34.8	-0.3
	1.6nm,0.8s,mb3.6,baz=146,slow=9.3						
NOA	NORSAR Array B	24.82	342	P	P	04 32 34.4	-0.7
	1.0nm,0.7s,mb3.5,baz=148,slow=8.9,SNR=4.3						
MKAR	Makanchi Array	41.20	60	P	P	04 34 57.9	-0.1
	1.3nm,0.7s,mb3.7,baz=274,slow=7.7,SNR=9.9						
DBIC	Dimbokro	42.37	230	P	P	04 35 07.9	-0.2
	2.7nm,0.9s,mb3.9,baz=342,slow=11,SNR=4.2						

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*IDC **02** 04:35:48.1±1.2, 14.73N×123.68E, mb4.1/5, mb1 4.2/6, mb1mx3.9/18, mbtmp4.2/6, ML4.9/1, MS3.7/2, Ms1 3.7/2, ms1mx3.2/20, Error ellipse: s-maj=32.8km s-min=21.0km az=73.0*

*NEIC **02** 04:35:49.6±0.7, 14.71N×123.66E, h10^{km}, mb4.6/3, Error ellipse: s-maj=19.9km s-min=11.0km az=69.0*

*MAN **02** 04:35:50.7, 14.76N×123.26E, h12^{km}, mb4.6, ML3.4, MS3.3*

ISC 02 04:35:51.4±0.7,**14.82N**±0.06×**123.52E**±0.08,**h33**^{km},**n24**,
σ**1ˢ48**/26,**mb4.3**/8,**MS3.6**/2,**3D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	Virac	1.36	153	*e*P	P	04 36 14.8	+0.4
GQP	Guinayangan	1.38	229	⇓*e*P	P	04 36 11.1	-3.5
GQP				*e*S	S	04 36 37.3	+5.5
POLP	Polilio Island	1.53	267	*e*P	P	04 36 13.8	-2.9
POLP				*e*S	S	04 36 31.9	-3.7
AUQP	San Andres	1.70	209	*e*P	P	04 36 19.7	+0.6
BALP	Baler	2.08	296	*e*P	P	04 36 21.9	-2.7
BOAC	Boac	2.11	230	*e*P	P	04 36 24.3	-0.7
PCPH	Palayan	2.45	288	⇓*e*P	P	04 36 27.3	-2.5
CNP	Catarman	2.55	154	*e*P	P	04 36 34.4	+3.1
TGY	Tagaytay City	2.60	254	Pn	Pn	04 36 33.2	+1.0
	208nm,0.3s,baz=306,slow=2.0,SNR=13						
TGY				Sn	Sn	04 37 07.7	+4.7
	356nm,0.3s,baz=90,slow=23,SNR=11						
CAUP	Cauayan	2.67	323	*e*P	P	04 36 32.5	-0.5
SJMP	San Jose	3.31	225	*e*P	P	04 36 44.4	+2.4
RCP	Roxas	3.33	193	⇓*e*P	P	04 36 52.5	+10
LUBP	Lubang	3.35	252	*e*P	P	04 36 43.3	+0.6
APYP	Conner	3.73	324	*e*P	P	04 36 48.3	+0.2
JHJ	Hachijo jima 2	23.45	36	LR	LR	04 48 02.6	
	comp=Z,145nm,19.7s,MS3.4,baz=259,slow=31						
SONM	Songino Array	35.85	340	P	P	04 42 51.6	+1.7
	2.8nm,0.6s,mb4.3,baz=158,slow=9.4,SNR=17						
SONM				LR	LR	04 58 30.0	
	comp=Z,137nm,20.7s,MS3.7,baz=350,slow=38						
MBWA	Marble Bar	35.95	186	P	P	04 42 49.2	-1.8
	7.6nm,0.7s,mb4.7						
WRAB	Tennant Creek	36.14	163	P	P	04 42 51.0	-1.7
	2.2nm,0.8s,mb4.1						
WRA	Warramunga Arr	36.15	163	P	P	04 42 50.6	-2.1
	1.3nm,0.7s,mb4.0,baz=343,slow=9.8,SNR=6.9						
MKAR	Makanchi Array	46.81	322	P	P	04 44 20.7	+0.9
	0.7nm,0.7s,mb3.7,baz=100,slow=7.4,SNR=5.7						
MKAR	Makanchi Array	46.81	322	P	P	04 44 20.7	+0.9
NWAO	Narrogin (SRO)	47.85	187	P	P	04 44 28.4	+0.1
	7.5nm,0.7s,mb4.8,baz=331,slow=7.5,SNR=4.3						
KURK	Kurchatov	50.82	325	*e*P	P	04 44 51.8	+1.0
	13nm,1.5s,mb4.7						
FINES	FINESS Array B	80.63	331	P	P	04 48 02.4	+0.2
	4.0nm,1.0s,mb4.3,baz=180,slow=3.8,SNR=4.3						

GUC 02 04:37:13.4±0.8,**34.09S**×**70.33W**,**h10**^{km}±2^{km},**MD3.6**,
ML2.2,3C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACH	El Canelo	0.22	262	⇓*i*P	Pg	04 37 18.8	+0.5
CACH				*i* S	Sg	04 37 21.7	+0.3
CICH	Cipreses	0.24	197	*e*P	Pg	04 37 18.9	+0.3
CICH				*i* S	Sg	04 37 23.1	+1.0
LMEL	Las Melosas	0.26	24	⇑*i*P	Pg	04 37 19.7	+0.7
LMEL				*i* S	Sg	04 37 23.6	+0.9
LMEL				AMP		04 37 23.9	
	comp=N,540nm,0.3s						
CHCH	Chadas Angostu	0.31	300	⇑*i*P	Pg	04 37 20.4	+0.6
CHCH				*i* S	Sg	04 37 25.1	+1.0
RCDM	Rinconada Maip	0.71	326	*e*P	Pb	04 37 26.9	-0.5
RCDM				*i* S	Sb	04 37 37.4	+0.5
FCH	Farellones	0.76	3	⇑*e*P	Pb	04 37 28.6	+0.4
FCH				*i* S	Sb	04 37 38.8	+0.6
LNV	Longovilo	0.91	278	*i* P	Pb	04 37 30.7	0.0

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*MOS **02** 04:59:27.7±1.4, 34.19N×24.10E, h22^{km}, mb4.4/12, Error ellipse: s-maj=6.1km s-min=3.6km az=105.9*

*HLW **02** 04:59:30.1, 34.79N×24.47E, h33^{km}, Mb4.0*

*CSEM **02** 04:59:32.7±0.1, 34.45N×24.39E, h80^{km}, mb4.3/4, Error ellipse: s-maj=1.7km s-min=1.2km az=44.0*

*ATH **02** 04:59:34.2, 34.65N×24.31E, h27^{km}±1^{km}, MD4.1/19, ML4.2*

*BJI **02** 04:59:34.2, 34.70N×24.30E, h27^{km}, mB4.9*

*NEIC **02** 04:59:34.2, 34.65N×24.31E, h27^{km}, mb4.2/16, ML4.2(ATH), After ATH.*

*IDC **02** 04:59:36.9±1.6, 34.83N×24.31E, h52^{km}±12^{km}, mb3.8/14, mb1 3.9/20, mb1mx3.8/29, mbtmp4.0/20, MS3.8/1, Ms1 3.8/1, ms1mx3.0/35, Error ellipse: s-maj=22.6km s-min=14.1km az=172.0*

*SKO **02** 04:59:42.2, 34.66N×23.76E, h60^{km}*

ISC 02 04:59:31.6±0.3,**34.41N**±0.02×**24.26E**±0.02,**h46**^{km}±4^{km},
n211,σ**1ˢ41**/221,**mb4.3**/29,**MS3.8**/2,**1C-8D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.45	342	*e*PB	P	04 59 41.0	-0.9
VAM	Vamos	0.99	357	⇓*i*PN	P	04 59 49.8	+0.6
VAM				*e*SN	S	05 00 00.2	-2.2
IDI	Anoyia	1.01	31	P	P	04 59 50.8	+1.3
	173nm,0.3s,baz=205,slow=15,SNR=353						
XRY	Khrisi	1.27	68	*e*PN	P	04 59 56.0	+2.8
NPS	Neapolis	1.40	52	⇑*i*PN	P	04 59 57.2	+2.1
NPS				*e*SN	S	05 00 14.0	+1.4
KYTH	Kithira	2.11	332	*e*PB	P	05 00 08.0	+2.8
SANT	Santorini	2.19	26	*e*P	P	05 00 06.9	+0.7
SANT	Santorini	2.19	26	*e*P	P	05 00 06.9	+0.7
VLI	Veliai	2.54	335	*e*PN	P	05 00 13.2	+1.9
KARP	Karpathos	2.64	64	*e*PN	P	05 00 15.8	+3.1
APE	Apeiranthos	2.84	21	P	P	05 00 15.4	-0.2
APE	Apeiranthos	2.84	21	*e*PN	P	05 00 16.5	+0.9
APE				*e*SN	S	05 00 48.4	-0.5
SLUM		3.02	164	⇓*e*P	P	05 00 20.6	+2.5
ITM	Ithomi	3.35	326	*e*PN	P	05 00 25.0	+2.2
DAT	Datca	3.56	49	*e*P	P	05 00 23.3	-2.4
ATH	Athens Observa	3.58	353	*e*PN	P	05 00 27.5	+1.5
BODT	Bodrum	3.62	42	*e*P	P	05 00 24.9	-1.8
ARG	Arkhangelos	3.64	59	*e*PN	P	05 00 29.0	+2.2
PTL	Penteli	3.64	355	*e*PN	P	05 00 27.5	+0.6
MGER	Gerania Oros	3.66	348	*e*PN	P	05 00 28.0	+0.9
MPAR	Parnis Oros	3.75	354	*e*PN	P	05 00 30.0	+1.5
SMG	Samos	3.89	32	*e*PN	P	05 00 31.4	+0.9
MLSB	Milas	4.05	44	*e*P	P	05 00 32.2	-0.5
HMAT	Matruh	4.08	143	P	P	05 00 33.1	0.0
HMAT				S	S	05 01 20.6	+0.3
YER	Yerkesik	4.25	49	*e*P	P	05 00 36.7	+1.2
DALT	Dalyan (Mudla)	4.27	55	*e*P	P	05 00 36.7	+0.9
FETY	Fethiye	4.51	59	*e*P	P	05 00 37.4	-1.9
BLCB	Balcova	4.55	29	*e*P	P	05 00 37.8	-2.0
IZM	Izmir	4.66	30	*e*P	P	05 00 41.4	+0.2
KDAG	Bornova	4.66	30	*i* P	P	05 00 39.5	-1.8
AKAS	Kas	4.73	66	*i* P	P	05 00 41.8	-0.5
VLS	Valsamata	4.78	323	*e*PN	P	05 00 45.4	+2.4
DABA	Dabaa	4.80	134	⇓P	P	05 00 42.9	-0.3
EVR	Evrytania	4.91	337	*e*PN	P	05 00 46.0	+1.2
NEO	Neokhori	4.95	351	*e*PN	P	05 00 47.2	+1.8
DNZL	Cakiroluk	5.07	48	*i* P	P	05 00 47.1	+0.1
DENT	Denizli	5.10	48	*e*P	P	05 00 48.5	+1.0
GOLH	Golhisar	5.15	55	*i* P	P	05 00 44.9	-3.2
ELL	Elmali	5.16	62	*e*P	P	05 00 48.3	0.0
SWA2		5.25	169	⇓*e*P	P	05 00 50.9	+1.3
SWA1		5.28	166	⇓*e*P	P	05 00 51.3	+1.4
SWA1				S	S	05 01 51.0	+0.6
AKS	Akhisar	5.29	32	*e*P	P	05 00 50.0	-0.1
EZN	Ezine	5.65	16	*e*P	P	05 01 00.7	+5.6
KHL	Karahalli	5.77	46	*e*P	P	05 00 57.2	+0.5
BCK	Bucak	5.97	58	*e*P	P	05 00 57.7	-1.8
PLG	Polygyros	5.98	354	*e*PN	P	05 01 01.5	+1.7
HBRG	Burj al ‘Arab	6.07	128	⇓*e*P	P	05 00 59.6	-1.4
HBRG				S	S	05 02 04.3	-5.8
TKTP	Tekketepe	6.09	52	*i* P	P	05 00 59.3	-2.0
ISP	Isparta	6.11	54	*e*P	P	05 01 00.4	-1.1
ISP	Isparta	6.11	54	*e*P	P	05 01 01.2	-0.2
	14nm,0.6s						
ISP	Isparta	6.11	54	*i* P	P	05 01 01.2	-0.3
ISP	Isparta	6.11	54	*e*P	P	05 01 01.2	-0.3
	14nm,0.6s						
DST	Dursunbey	6.25	33	*e*P	P	05 01 02.7	-0.8
KEK	Kerkira	6.38	327	*e*PN	P	05 01 07.7	+2.4
KEK	Kerkira	6.38	327	Pn	P	05 01 05.6	+0.3
SRN	Sarande	6.43	329	*i* Pg	P	05 01 05.3	-0.8
ULDT	Uludag	6.91	33	*i* P	P	05 01 09.9	-2.9
BIA	Bitola	6.99	341	*i* Pn	P	05 01 13.2	-0.7
BIA				*e*Sn	S	05 02 23.6	-9.3
BIA	Bitola	6.99	341	*i* Pn	P	05 01 13.3	-0.7
BIA				*e*Sn	S	05 02 23.6	-9.4
VAY	Valandovo	7.02	350	*e*Pn	P	05 01 17.3	+2.9
VAY				*e*Sn	S	05 02 26.3	-7.5
MMB	Musomiste	7.18	357	*e*P	P	05 01 17.0	+0.5
AWBH		7.25	146	P	P	05 01 17.4	-0.2
RZN	Rozhen	7.27	3	*e*P	P	05 01 22.0	+4.2
ESKT	Eskisehir	7.33	44	*e*P	P	05 01 16.9	-1.7
ERMK	Ermenek	7.40	70	*i* P	P	05 01 17.5	-2.0
CSS	Prodhromos	7.49	83	*e*P	P	05 01 18.9	-2.0
	22nm,0.8s						
CSS	Prodhromos	7.49	83	*e*P	P	05 01 18.9	-2.0
	22nm,0.8s						
KKB	Krupnik	7.50	353	*e*P	P	05 01 23.0	+2.0
SOI	Samo	7.57	301	Pn	P	05 01 21.8	-0.1
KIZT	Kizilcal	7.57	52	*e*P	P	05 01 21.7	-0.3
TIP	Timpagrande	7.67	310	Pn	P	05 01 22.7	-0.6
	24nm,1.2s						
LCI	Lecce	7.67	322	Pn	P	05 01 23.1	-0.3
MTTG	Motta San Giov	7.79	300	Pn	P	05 01 25.2	+0.1
AGST	Augusta-Monte	7.87	294	Pn	P	05 01 24.7	-1.3
SKO	Skopje	7.87	344	*e*Pn	P	05 01 29.0	+3.0
IKL	Isikli	7.92	74	*e*P	P	05 01 25.3	-1.4
SSY	Sortino	7.95	293	Pn	P	05 01 26.4	-0.8
	153nm,0.4s						
HFRF	Wahat Farafira	8.04	153	P	P	05 01 28.2	-0.2
HBNS	Bani Suwayf	8.04	131	P	P	05 01 27.2	-1.3
PGB	Panagyurishte	8.12	360	*e*P	P	05 01 31.0	+1.4
VTS	Vitosha	8.21	355	P	P	05 01 34.0	+3.2
TDS	Terranova Siba	8.22	312	P	P	05 01 30.9	0.0
TDS				pmax	pmax		
	comp=Z,12nm,0.4s						
TDS	Terranova Siba	8.22	312	Pn	P	05 01 30.9	0.0
	comp=Z,12nm,0.4s						
AMAG	Maghara	8.44	114	⇓P	P	05 01 31.0	-2.9
BRT	Bari-Castellan	8.54	321	Pn	P	05 01 34.6	-0.8
VAE	Valguarnera	8.55	294	P	P	05 01 37.0	+1.5
	comp=Z,0.5nm,0.3s,baz=98,slow=15,SNR=3.1						
VAE				S	S	05 03 08.5	-3.2
	comp=Z,3.4nm,0.3s,baz=283,slow=18,SNR=2.2						
SUZ		8.58	120	⇓*e*P	P	05 01 33.6	-2.3
ANTO	Ankara	8.72	49	*e*P	P	05 01 38.7	+0.9
	comp=Z,12nm,0.6s						
ANTO	Ankara	8.72	49	*e*P	P	05 01 38.7	+0.8
ANTO				pmax	pmax		
	comp=Z,12nm,0.6s						
ANTO	Ankara	8.72	49	*e*P	P	05 01 38.7	+0.8
	comp=Z,12nm,0.6s						
CUC	Castrocucco	8.74	312	Pn	P	05 01 38.8	+0.7
	comp=Z,36nm,0.7s						
GIB	Gibilmanna	9.01	296	Pn	P	05 01 42.6	+0.8
KAMT	Kaman	9.04	54	*e*P	P	05 01 40.6	-1.7
FAVR	Favara	9.06	291	Pn	P	05 01 44.6	+2.1
SLCN	Sala Consilina	9.09	314	Pn	P	05 01 43.7	+0.7
BRTR	Keskin Array B	9.18	52	P	P	05 01 43.5	-0.7
	comp=Z,0.3nm,0.3s,baz=230,slow=13,SNR=22						
BR131	Keskin Array S	9.18	52	*e*P	P	05 01 44.0	-0.2
	comp=Z,5.9nm,0.9s						
BR131	Keskin Array S	9.18	52	*e*P	P	05 01 44.0	-0.2
	comp=Z,5.9nm,0.9s						
KARA	Karaisali	9.21	69	*e*P	P	05 01 44.2	-0.5
HNKL	Nakhl	9.37	116	P	P	05 01 43.9	-3.0
SGO	Sicignano	9.39	313	P	P	05 01 47.1	0.0
SGO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SGO	Sicignano	9.39	313	Pn	P	05 01 47.1	0.0
	comp=Z,2.6nm,0.7s						
MRLC	Muro Lucano	9.41	315	Pn	P	05 01 47.0	-0.3
KOZT	Kozan	9.86	69	*e*P	P	05 01 51.6	-2.0
STON	Ston	9.88	331	*i* Pn	P	05 01 49.3	-4.4
STON				*i* Sn	S	05 03 29.7	-15
HDK1	Dakhla	9.90	152	P	P	05 01 54.9	+0.7
BALT	Daday	10.12	43	*i* P	P	05 01 54.0	-3.0
HKAT	Jabal Katrina	10.17	123	P	P	05 01 57.0	-0.9
HHRG	Al Ghardaqah	10.74	129	P	P	05 02 04.7	-1.0
HDK2	Wahat Dakhilah	10.86	157	P	P	05 02 07.8	+0.5
MLR	Muntele Rosu	11.14	6	P	P	05 02 16.1	+5.1
	comp=Z,0.2nm,0.3s,baz=215,slow=13,SNR=5.5						
HSFG		11.43	131	P	P	05 02 14.1	-0.8
NRCA	Norcia	12.10	317	Pn	P	05 02 25.6	+1.7
VRAC	Vranov	15.93	341	P	P	05 03 14.3	+0.4
	comp=Z,0.4nm,0.3s,baz=90,slow=20,SNR=2.2						
SBF	Sospel	16.08	311	*e*P	P	05 03 13.2	-2.7
	comp=Z,56nm,1.1s						
SBF	Sospel	16.08	311	*e*P	P	05 03 13.2	-2.7
SBF				pmax	pmax		
	comp=Z,28nm,1.1s						
GERES	GERESS Array B	16.41	335	P	P	05 03 19.6	-0.4
	comp=Z,0.1nm,0.3s,baz=145,slow=16,SNR=3.1						
LMR	La Mourre	16.42	308	*e*P	P	05 03 17.8	-2.3
FRF	La Foret Royal	16.43	309	*e*P	P	05 03 18.2	-2.1
DAVOX	Davos	16.45	323	P	P	05 03 22.2	+1.6
	comp=Z,0.1nm,0.3s,baz=263,slow=10,SNR=2.0						
DAVOX	Davos	16.45	323	P	P	05 03 22.2	+1.6
AKASG	Malin Array Be	16.68	11	P	P	05 03 22.8	-0.5
	comp=Z,2.4nm,0.3s,baz=200,slow=9.9,SNR=9.9						
AKASG	Malin Array Be	16.68	11	P	P	05 03 22.8	-0.5
KHC	Kasperske Hory	16.70	335	*e*P	P	05 03 27.2	+3.6
KHC				pP		05 03 34.5	
KHC	Kasperske Hory	16.70	335	*e*P	P	05 03 27.2	+3.6
KHC				*e*		05 03 34.5	
BHD	Baghdad	16.76	88	*e*x	x	05 03 43.0	
MBDF	Montbardon	16.93	313	*e*P	P	05 03 23.4	-3.2
	comp=Z,53nm,1.5s						
MBDF	Montbardon	16.93	313	*e*P	P	05 03 23.4	-3.2
MBDF				pmax	pmax		
	comp=Z,26nm,1.5s						
DPC	Dobruska-Polom	16.95	342	*e*P	P	05 03 32.3	+5.5
PRU	Pruhonice	17.12	338	*e*P	P	05 03 30.5	+1.6
KIV	Kislovodsk	17.14	51	*e*P	P	05 03 32.3	+3.1
KIV				pmax	pmax		
	comp=Z,17nm,1.2s						
KIV				pmax	pmax		
	comp=N,5.0nm,1.0s						
KIV				pmax	pmax		
	comp=E,13nm,1.5s						
LPG	La Plagne	17.36	315	*e*P	P	05 03 29.5	-2.4
	comp=E,23nm,1.2s						
LPG	La Plagne	17.36	315	*e*P	P	05 03 29.5	-2.4
LPG				pmax	pmax		
	comp=Z,12nm,1.2s						
LPL	La Plagne	17.38	315	*e*P	P	05 03 29.8	-2.4
ZEI	Tsey	17.45	56	*e*P	P	05 03 33.5	+0.5
GOF	Gofitskoye	17.89	48	*e*P	P	05 03 39.5	+1.0
VIVF	Saint-Julien-l	18.30	311	*e*P	P	05 03 41.5	-2.1
	comp=Z,16nm,1.0s						
VIVF	Saint-Julien-l	18.30	311	*e*P	P	05 03 41.5	-2.1
VIVF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CABF	La Chapelle	18.37	317	*e*P	P	05 03 42.2	-2.3
LASF	Ste Croix	18.47	308	*e*P	P	05 03 44.1	-1.7
HINF	Hinteralfeld	18.68	321	*e*P	P	05 03 45.3	-3.0
CDF	Champ du Feu	18.86	323	*e*P	P	05 03 48.6	-1.7
HAU	Haudompre	19.07	321	*e*P	P	05 03 50.4	-2.3
	comp=Z,4.8nm,0.5s						
HAU	Haudompre	19.07	321	*e*P	P	05 03 50.4	-2.3
HAU				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SUW	Suwalki	19.61	358	*e*P	P	05 03 58.6	-0.1
	comp=Z,22nm,0.3s						
SUW	Suwalki	19.61	358	*e*P	P	05 03 58.6	0.0
SUW				pmax	pmax		
	comp=Z,22nm,0.3s						
SUW	Suwalki	19.61	358	*e*P	P	05 03 58.6	0.0
	comp=Z,22nm,0.3s						
SMF	Signal de Mont	19.68	314	*e*P	P	05 03 58.1	-1.4
LOR	Lormes	20.00	316	*e*P	P	05 04 01.5	-1.4
AVF	Avril sur Loir	20.05	314	*e*P	P	05 04 02.2	-1.2
MEZF	Maizieres J’vi	20.05	320	*e*P	P	05 04 01.8	-1.7
	comp=Z,16nm,0.7s						
SSF	Saint Saulge	20.10	315	*e*P	P	05 04 02.2	-1.7
SSF				pmax	pmax		
	comp=Z,27nm,1.5s						
SSF	Saint Saulge	20.10	315	*e*P	P	05 04 02.2	-1.7
	comp=Z,27nm,1.5s						
BGF	Bois d’Agland	20.23	313	*e*P	P	05 04 04.4	-0.9
TCF	Toulx Ste Croi	20.49	312	*e*P	P	05 04 07.4	-0.6
EPF	Esparros	20.50	302	*e*P	P	05 04 08.7	+0.6
	comp=Z,11nm,0.8s						
EPF	Esparros	20.50	302	*e*P	P	05 04 08.7	+0.6
EPF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ETSF	Etsaut	21.10	301	*e*P	P	05 04 15.6	+1.4
	comp=Z,6.6nm,0.6s,mb3.9						
ETSF	Etsaut	21.10	301	*e*P	P	05 04 15.6	+1.4
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.8						
GIVF	Givet	21.18	324	*e*P	P	05 04 13.7	-1.3

BAIF	Baives	21.46	323	eP	P	05 04 16.9	-0.9
OBN	Obninsk	22.40	19	P	P	05 04 30.1	+3.0
OBN				e		05 04 42.3	
OBN				S	S	05 08 26.0	+0.6
ESDC	Sonseca Array	23.08	291	P	P	05 04 36.5	+2.6
	comp=Z,1.1nm,0.5s,mb3.5,baz=76,slow=9.5,SNR=8.1						
FLN	La Foliniere	23.27	315	eP	P	05 04 36.0	+0.4
	comp=Z,28nm,0.9s,mb4.4						
FLN	La Foliniere	23.27	315	eP	P	05 04 36.0	+0.4
FLN				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.4						
GRR	Gorron	23.32	314	eP	P	05 04 36.6	+0.5
MDT	Midelt	24.07	274	P	P	05 04 47.2	+3.7
	comp=Z,1.0nm,0.6s,mb3.4,baz=323,slow=5.0,SNR=4.4						
SGMF	Saint Gilles	24.27	313	eP	P	05 04 45.9	+0.5
QUIF	Quistinic	24.51	312	eP	P	05 04 48.3	+0.6
ROSF	Rostrenen	24.74	313	eP	P	05 04 50.5	+0.5
	comp=Z,185nm,1.5s,mb5.1						
ROSF	Rostrenen	24.74	313	eP	P	05 04 50.5	+0.5
ROSF				pmax	pmax		
	comp=Z,93nm,1.5s,mb5.1						
EVO	Evora	26.20	288	eP	P	05 05 07.5	+3.8
	comp=Z,20nm,1.1s,mb4.3						
HFS	Hagfors	26.64	348	P	P	05 05 05.9	-1.7
	comp=Z,1.8nm,0.4s,mb3.9,baz=163,slow=9.9,SNR=14						
FINES	FINESS Array B	27.07	2	P	P	05 05 10.1	-1.4
	comp=Z,2.3nm,0.7s,mb3.8,baz=166,slow=7.9,SNR=4.7						
NAO	NORSAR Subarra	27.82	346	P	P	05 05 19.2	+0.9
	comp=Z,1.4nm,0.6s,mb3.8						
NAO	NORSAR Subarra	27.82	346	P	P	05 05 19.2	+0.9
NAO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
NB2	NORSAR Subarra	27.94	346	P	P	05 05 19.2	-0.2
	comp=Z,1.4nm,0.6s,mb3.8,baz=156,slow=9.3						
NOA	NORSAR Array B	27.94	346	P	P	05 05 18.9	-0.6
	comp=Z,1.7nm,0.6s,mb3.8,baz=153,slow=8.8,SNR=7.0						
EKA	Eskdalemuir Ar	28.23	326	P	P	05 05 20.6	-1.6
	comp=Z,2.2nm,1.1s,mb3.7,baz=193,slow=31,SNR=3.1						
AKTO	Aktyubinsk	29.30	47	P	P	05 05 31.7	0.0
	comp=Z,3.8nm,0.5s,mb4.4,baz=254,slow=8.5,SNR=16						
AKTO	Aktyubinsk	29.30	47	P	P	05 05 31.7	+0.1
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
AB31	Akbulak array	30.12	50	i P	P	05 05 38.8	-0.1
ARU	Arti	32.09	36	eP	P	05 05 48.6	-7.7
ARCES	ARCESS Array B	35.18	1	P	P	05 06 22.4	-0.3
	comp=Z,3.2nm,0.9s,mb4.2,baz=187,slow=9.8,SNR=5.0						
ARCES				LR	LR	05 20 39.8	
	comp=Z,152nm,19.3s,MS3.8,baz=186,slow=36						
ARCES	ARCESS Array B	35.18	1	P	P	05 06 22.4	-0.3
ARCES				LR	LR	05 20 39.9	
KKAR	Karatay Array	36.70	62	i P	P	05 06 37.2	+1.3
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	37.66	45	eP	P	05 06 44.6	+0.8
	comp=Z,3.0nm,0.6s,mb4.2						
CHKZ	Chkalovo	37.66	45	eP	P	05 06 44.6	+0.8
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
DBIC	Dimbokro	38.52	231	P	P	05 06 58.0	+6.6
	comp=Z,6.9nm,1.0s,mb4.3,baz=46,slow=4.8,SNR=4.4						
AAK	Ala-Archa	39.66	63	eP	P	05 07 02.4	+1.8
	comp=Z,3.0nm,0.8s,mb4.1						
AAK	Ala-Archa	39.66	63	eP	P	05 07 02.4	+1.9
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
KURK	Kurchatov	42.23	50	P	P	05 07 22.4	+0.8
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.8						
MKAR	Makanchi Array	44.80	56	P	P	05 07 43.7	+1.2
	comp=Z,5.1nm,0.5s,mb4.6,baz=271,slow=8.1,SNR=103						
MKAR	Makanchi Array	44.80	56	eP	P	05 07 43.6	+1.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVS	Novosibirsk	45.14	44	eP	P	05 07 45.9	+0.8
KOLN	Koldanda	50.63	80	eP	P	05 08 29.7	+1.5
	comp=Z,8.6nm,0.7s,mb4.8						
GKN	Gorkha	51.38	80	eP	P	05 08 34.7	+0.8
	comp=Z,25nm,0.6s,mb5.3						
DMN	Daman	51.92	80	eP	P	05 08 39.2	+1.3
	comp=Z,29nm,0.7s,mb5.3						
KKN	Kakani	51.99	80	eP	P	05 08 39.7	+1.2
	comp=Z,18nm,0.6s,mb5.2						
PKI	Pulchoki	52.18	80	eP	P	05 08 41.2	+1.3
	comp=Z,20nm,0.8s,mb5.1						
GUN	Gumba	52.43	79	eP	P	05 08 43.4	+1.6
	comp=Z,25nm,0.5s						
JIRN	Jiri	52.78	79	eP	P	05 08 45.8	+1.4
	comp=Z,16nm,0.7s,mb5.1						
ZAK	Zakamensk	57.79	48	eP	P	05 09 15.6	-4.7
SONM	Songino Array	60.53	50	P	P	05 09 39.8	+0.5
	comp=Z,1.1nm,0.5s,mb4.2,baz=286,slow=7.9,SNR=12						
BOD	Bodaibo	61.50	38	eP	P	05 09 44.6	-1.1
TIXI	Tiksi	62.12	20	eP	P	05 09 48.3	-1.4
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,41nm,14.0s,MS3.7						
SCHQ	Schefferville	63.27	320	P	P	05 09 58.5	+0.9
	comp=Z,2.1nm,0.7s,mb4.4,baz=146,slow=3.6,SNR=3.7						
NJ2	Nanjing	76.06	61	eP	P	05 11 21.4	+5.4
ILAR	Eielson Array	80.90	356	P	P	05 11 43.4	+1.6
	comp=Z,0.2nm,0.8s,baz=254,slow=10,SNR=3.7						
MJAR	Matsushiro Arr	86.38	48	P	P	05 12 12.4	+2.3
	comp=Z,1.0nm,0.5s,mb4.3,baz=315,slow=7.1,SNR=4.1						
WRA	Warramunga Arr	117.24	96	PKP	PKPdf	05 18 14.5	+2.2
	comp=Z,0.3nm,0.5s,baz=315,slow=2.1,SNR=5.6						

SOF ***02*** *06:28:40.8, 40.04N×21.03E, h2^{km}, MD3.2*
TIR ***02*** *06:28:46.9, 40.45N×21.18E, h5^{km}*
ATH ***02*** *06:28:47.9, 40.50N×21.14E, h21^{km}±1^{km}, MD3.7/7*
SKO ***02*** *06:28:47.0, 40.35N×21.25E*
NEIC ***02*** *06:28:47.9, 40.50N×21.14E, h21^{km}, MD3.7(ATH), MD3.2(PDG), After ATH.*
CSEM ***02*** *06:28:48.5±0.1, 40.49N×21.16E, h8^{km}, ML3.3, Error ellipse: s-maj=1.5km s-min=1.1km az=131.0*
THE ***02*** *06:28:49.0, 40.43N×21.19E, h9^{km}, ML3.3*
PDG ***02*** *06:28:52.5±0.4, 40.43N×20.82E, h11^{km}±1^{km}*
ISC 02 06:28:48.0±0.4**, 40.41N**±0.02×**21.23E**±0.02**, h2**^{km}±3^{km}**, n58,** σ1^{s}**19**/95**, 2C-3D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.39	16	ePg	Pg	06 28 56.4	+0.5
FNA				eSg	Sg	06 29 02.3	+1.2
KZN	Kozani	0.42	103	ePN	Pg	06 28 58.3	+1.9
KZN				eSN	Sg	06 29 06.3	+4.2
LSK	Leskovik	0.55	242	i Pg	Pg	06 28 57.3	-1.6
LSK				i Sg	Sg	06 29 05.4	-0.7
BIA	Bitola	0.62	7	i Pg	Pg	06 28 59.1	-1.2
BIA				eSg	Sg	06 29 08.3	-0.3
MEV	Metsovon	0.62	180	ePg	Pg	06 29 00.3	0.0
MEV				eSg	Sg	06 29 10.7	+2.1
JAN	Janina	0.80	201	ePB	Pb	06 29 04.1	-0.2
JAN				eSN	Sn	06 29 16.7	-2.0
LIT	Litokhoron	1.01	107	ePg	Pg	06 29 08.6	+0.5
LIT				eSg	Sg	06 29 24.1	+2.5
GRG	Griva	1.05	58	ePg	Pg	06 29 08.7	-0.1
GRG				eSg	Sg	06 29 24.9	+2.1
SRN	Sarande	1.08	241	i Pg	Pg	06 29 08.9	-0.6
SRN				i Sg	Sg	06 29 26.5	+2.6
IGT	Igoumenitsa	1.11	219	ePg	Pg	06 29 09.8	-0.3
IGT				eSg	Sg	06 29 25.8	+0.8
KEK	Kerkira	1.30	238	ePN	Pn	06 29 12.9	-0.2
THE	Thessaloniki	1.34	80	ePg	Pg	06 29 13.4	-1.4
	comp=Z,3.0nm,0.2s						
THE				eSg	Sg	06 29 32.9	+0.3
VAY	Valandovo	1.37	48	i Pn	Pn	06 29 13.1	-1.0
VAY				eSn	Sn	06 29 33.8	+0.8
TIR	Tirane	1.40	313	i Pn	Pn	06 29 13.2	-1.4
TIR				i Sn	Sn	06 29 33.5	-0.3
TIR	Tirane	1.40	313	Pn	Pn	06 29 13.9	-0.7
TIR				Sn	Sn	06 29 36.6	+2.8
TIR	Tirane	1.40	313	Pn	Pn	06 29 13.9	-0.7
TIR				i Sn	Sn	06 29 33.5	-0.3
KNT	Kendrikon	1.47	59	ePg	Pg	06 29 15.1	-2.3
	comp=Z,12nm,0.2s						
KNT				eSg	Sg	06 29 35.7	-1.4
EVR	Evrytania	1.55	163	ePN	Pn	06 29 17.8	+1.1
SKO	Skopje	1.57	6	i Pn	Pn	06 29 17.6	+0.6
SKO				eSn	Sn	06 29 37.8	-0.5
SKO	Skopje	1.57	6	i Pn	Pn	06 29 17.6	+0.6
SKO				eSn	Sn	06 29 37.8	-0.5
SKO				Lg		06 29 43.0	
AGG	Agios Georgios	1.62	148	ePb	Pb	06 29 18.1	-0.2
	comp=Z,6.0nm,0.3s						
AGG				eSb	Sb	06 29 40.0	+0.9
AGG	Agios Georgios	1.62	148	ePb	Pb	06 29 18.0	-0.3
	6.0nm,0.3s						
AGG				eSb	Sb	06 29 40.0	+0.9
SOH	Sokhos	1.67	75	ePb	Pb	06 29 18.0	-1.1
SOH				eSb	Sb	06 29 40.2	-0.3
PLG	Polygyros	1.69	90	ePN	Pn	06 29 19.4	+0.7
PLG				eSN	Sn	06 29 42.2	+1.0
XOR	Xorichti	1.83	124	ePb	Pb	06 29 21.0	-0.8
XOR				eSb	Sb	06 29 44.7	-0.5
NEO	Neokhori	1.89	125	ePB	Pb	06 29 22.0	-0.8
NEO				eSN	Sn	06 29 47.8	+1.6
PAIG	Paliouri	1.94	103	ePb	Pb	06 29 21.8	-1.9
PAIG				eSb	Sb	06 29 47.4	-0.9
PAIG	Paliouri	1.94	103	ePb	Pb	06 29 21.8	-1.9
PAIG				eSb	Sb	06 29 47.3	-1.0
KKB	Krupnik	2.02	43	P	Pn	06 29 23.0	-0.5
OUR	Ouranopolis	2.10	91	ePn	Pn	06 29 24.6	0.0
	comp=Z,3.0nm,0.2s						
ULC	Ulcinj	2.16	317	ePn	Pn	06 29 25.9	+0.5
ULC				eSn	Sn	06 29 53.4	+0.2
NVR	Nevrokopi	2.21	64	ePN	Pn	06 29 25.5	-0.6
LKR	Lokris	2.22	141	ePN	Pn	06 29 26.7	+0.4
MMB	Musomiste	2.23	57	eP	Pn	06 29 25.0	-1.4
VLS	Valsamata	2.28	193	ePN	Pn	06 29 27.6	+0.5
RLS	Riolos of Patr	2.35	175	ePB	Pb	06 29 29.6	-1.2
PVY	Plav	2.38	337	ePn	Pn	06 29 30.6	+1.9
PVY				eSn	Sn	06 30 00.5	+1.6
AOS	Alonnisos	2.38	120	ePn	Pn	06 29 28.3	-0.3
	comp=Z,4.5nm,0.2s						
BARS	Barje	2.45	10	⇑iPn	Pn	06 29 28.2	-1.5
BARS				Sn	Sn	06 30 05.1	+4.5
TTG	Podgorica	2.51	324	ePn	Pn	06 29 31.2	+0.8
TTG				eSn	Sn	06 30 02.1	+0.1
BUM	Brajici-Budva	2.58	318	ePn	Pn	06 29 31.6	+0.1
BUM				eSn	Sn	06 30 03.1	-0.8
VTS	Vitosha	2.64	34	P	Pn	06 29 32.0	-0.3
IVA	Berane	2.66	338	ePn	Pn	06 29 35.0	+2.4
IVA				eSn	Sn	06 30 07.4	+1.5
NKY	Niksic	2.93	326	ePn	Pn	06 29 38.2	+1.7
NKY				eSn	Sn	06 30 13.0	+0.3
RZN	Rozhen	2.93	63	P	Pn	06 29 35.0	-1.5
BRY	Bratogost	3.21	322	ePn	Pn	06 29 41.8	+1.5
BRY				eSn	Sn	06 30 18.9	-0.8
PLE	Pljevlja	3.23	335	ePn	Pn	06 29 43.1	+2.4
PLE				eSn	Sn	06 30 20.4	+0.1
UPM	Unac-Piva	3.29	329	ePn	Pn	06 29 42.9	+1.3
UPM				eSn	Sn	06 30 20.6	-1.2
NVSS	Nova Varos 2	3.30	340	⇓iPn	Pn	06 29 40.6	-1.1
NVSS				Sn	Sn	06 30 23.3	+1.1
TIP	Timpagrande	3.66	252	eP	Pn	06 29 46.3	-0.5
TIP	Timpagrande	3.66	252	eP	Pn	06 29 46.3	-0.5
DIVS	Divcibare	3.80	346	⇓iPn	Pn	06 29 46.9	-2.0
VLI	Veliai	3.92	160	ePN	Pn	06 29 52.0	+1.6
RGNG	Rignano Grg	4.45	288	Pn	Pn	06 29 55.5	-2.6
SGG	Gregorio Mates	5.29	283	Pn	Pn	06 30 08.9	-1.0
MLR	Muntele Rosu	6.15	33	⇓P	Pn	06 30 23.2	+1.2
NRCA	Norcia	6.55	294	Pn	Pn	06 30 24.6	-3.1
VRI	Vrincioaia	6.78	35	⇑P	Pn	06 30 30.1	-0.8

IDC ***02*** *06:35:35.8±0.6, 16.66S×172.81W, mb4.3/10, mb1 4.6/10, mb1mx4.4/17, mbtmp4.3/10, MS4.8/22, Ms1 4.8/22, ms1mx4.7/24, Error ellipse: s-maj=27.4km s-min=13.6km az=123.0*
HRVD ***02*** *06:35:39.3±0.2, 16.49S×172.20W, h14^{km}, MW5.3/70, Centroid moment Tensor Solution. LP body waves: s57,c108;Mantle waves: s70,c132; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.69±.02; $M_{\theta\theta}$-0.04±.01; $M_{\phi\phi}$-0.65±.02; $M_{r\theta}$0.25±.04; $M_{\theta\phi}$-0.23±.01; $M_{\phi r}$0.68±.03; Best double couple: $M_0$1.011×10^{17} NP1: ϕ_s196°, δ22°, λ87°. NP2:ϕ_s20°, δ68°, λ91°. Principal axes: T .995, Plg67°, Azm292°; N .032, Plg1°, Azm199°; P -1.027, Plg23°, Azm109°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***02*** *06:35:39.3±0.2, 16.44S×173.01W, h15^{km}, mb5.2/24, MS4.8/6 Error ellipse: s-maj=14.1km s-min=7.3km az=135.0*
MOS ***02*** *06:35:41.3±1.6, 16.50S×173.05W, h33^{km}, mb5.3/8, Error ellipse: s-maj=21.6km s-min=17.3km az=85.6*
BJI ***02*** *06:35:42.4, 15.48S×173.33W, h15^{km}, mB5.5, mb4.9, Ms5.2, Msz4.8*
ISC 02 06:35:40.3±0.3**, 16.59S**±0.06×**172.73W**±0.06**, h33**^{km}**, (h12**^{km}±7.4^{km}**:pP-P), n168,** σ1^{s}**37**/105**, mb4.9**/46**, MS4.8**/35**, 5C-8D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.82	19	Pn	Pn	06 36 15.4	-8.8
	88nm,0.3s,baz=134,slow=1.8,SNR=79						
AFI				Sn	Sn	06 36 44.1	-13
	267nm,0.3s,baz=14,slow=22,SNR=15						
AFI	Afiamalu	2.82	19	eP	P	06 36 15.0	-9.1
RAR	Rarotonga	13.09	113	Pn	P	06 38 37.0	-10
	3.3nm,0.3s,baz=263,slow=10,SNR=6.8						
RAR				Sn	S	06 40 50.5	-22
	0.8nm,0.3s,baz=338,slow=23,SNR=2.1						
RAR				LR	LR	06 43 07.5	
	comp=Z,5µm,18.1s,baz=343,slow=34						
RAO	Raoul Island	13.48	200	LR	LR	06 43 18.8	
	comp=Z,2µm,19.1s,baz=16,slow=35						
DZM	Mont Dzumac	20.39	251	P	P	06 40 12.4	-4.8
	11nm,1.1s,baz=269,slow=23,SNR=7.4						
DZM				LR	LR	06 46 23.5	
	comp=Z,3µm,19.2s,MS4.7,baz=237,slow=32						
PAE	Paea	22.14	96	eP	P	06 40 32.5	-2.4
	60nm,1.2s,mb4.9						
PPT	Papeete	22.15	96	eP	P	06 40 32.8	-2.2
	48nm,1.5s,mb4.7						
PPT	Papeete	22.15	96	eLQ		06 44 31.2	
PPT				eLR	LR	06 45 26.4	
	4µm,27.0s,baz=264						
PPT	Papeete	22.15	96	LR	LR	06 47 53.9	
	comp=Z,2µm,19.4s,MS4.5,baz=268,slow=33						
TVO	Taravao	22.46	96	eP	P	06 40 35.6	-2.4
	113nm,1.3s,mb5.1						
TBI	Tubuai	22.86	111	eLQ		06 44 52.4	
TBI	Tubuai	22.86	111	eP	P	06 40 39.7	-2.3
	399nm,1.4s,mb5.7						
TBI				eLR	LR	06 45 54.0	
	4µm,26.8s,baz=288						
URZ	Urewera	23.36	201	P	P	06 40 46.5	-0.3
	21nm,0.5s,mb4.8,baz=19,slow=4.9,SNR=26						
URZ				S	S	06 44 59.2	+5.5
	6.2nm,0.8s,baz=121,slow=20,SNR=4.5						
URZ				LR	LR	06 49 18.0	
	comp=Z,2µm,18.2s,MS4.5,baz=343,slow=35						
URZ	Urewera	23.36	201	P	P	06 40 46.5	-0.3
URZ				S	S	06 44 59.2	+5.5
URZ				LR	LR	06 49 18.0	
PMOR	Pomariorio Ree	23.94	90	eP	P	06 40 49.7	-2.9
	133nm,1.4s,mb5.2						
VAH	Vaihoa	24.17	90	eP	P	06 40 52.5	-2.4
	76nm,1.2s,mb5.0						
HNR	Honiara	27.54	282	LR	LR	06 50 52.0	
	comp=Z,7µm,18.6s,MS5.3,baz=121,slow=33						
RPZ	Rata Peaks	30.34	204	P	P	06 41 54.1	+2.9
	5.1nm,0.4s,mb4.6,baz=43,slow=12,SNR=2.0						
RPZ				LR	LR	06 51 42.8	
	comp=Z,895nm,21.0s,MS4.4,baz=18,slow=32						
TAOE	Nuku Hiva Isla	32.66	80	eLR	LR	06 50 12.9	
	4µm,28.8s,baz=258						
ARMA	Armidale	35.31	241	eP	P	06 42 32.3	-2.2
RKT	Rikitea	36.02	107	eLR	LR	06 51 56.9	
	2µm,27.0s,baz=280						
STKA	Stephens Creek	44.02	241	eP	P	06 43 44.6	-2.2
	6.8nm,0.8s,mb4.4						
STKA	Stephens Creek	44.02	241	P	P	06 43 43.8	-3.0
	6.5nm,0.8s,mb4.4,baz=79,slow=9.9,SNR=6.1						
STKA				LR	LR	06 59 04.1	
	comp=Z,1µm,18.8s,MS4.8,baz=66,slow=32						
WB2	Warramunga Arr	50.20	258	eP	P	06 44 32.9	-2.5
WRAB	Tennant Creek	50.20	258	eP	P	06 44 35.1	-0.3
WRA	Warramunga Arr	50.21	258	P	P	06 44 31.8	-3.7
	2.8nm,1.0s,mb4.3,baz=96,slow=6.9,SNR=18						
ASPA	Alice Springs	50.37	253	eP	P	06 44 33.5	-3.2
GUMO	Guam	51.52	303	LR	LR	07 05 15.2	
	comp=Z,654nm,18.3s,MS4.7,baz=80,slow=35						
FITZ	Fitzroy Crossi	58.61	259	LR	LR	07 10 19.9	
	comp=Z,5µm,18.2s,MS5.7,baz=101,slow=36						
SBA	Scott Base	62.12	185	eP	P	06 46 01.4	+1.3
	59nm,1.6s,mb5.5						
SBA	Scott Base	62.12	185	eP	P	06 46 01.4	+1.3
SBA				pmax	pmax		
	comp=Z,59nm,1.6s,mb5.5						
VNDA	Vanda	62.27	186	eP	P	06 46 01.7	+0.7
	comp=Z,15nm,1.3s,mb5.0						
VNDA				LR	LR		
	comp=Z,751nm,19.0s,MS4.9						
VNDA	Vanda	62.27	186	eP	P	06 46 01.7	+0.7
VNDA				pmax	pmax		
	comp=Z,15nm,1.3s						
VNDA				MLR	MLR		
	comp=Z,751nm,19.0s						
NWAO	Narrogin (SRO)	64.61	241	LR	LR	07 11 21.6	
	comp=Z,552nm,19.7s,MS4.8,baz=270,slow=33						
MJAR	Matsushiro Arr	70.26	320	P	P	06 46 52.1	-0.3
	comp=Z,0.8nm,0.3s,mb4.1,baz=165,slow=4.7,SNR=4.5						
MJAR				LR	LR	07 11 10.4	
	comp=Z,412nm,21.3s,MS4.7,baz=150,slow=30						
PTRM	Twissleman Ran	71.91	43	eP	P	06 47 03.8	+1.6
MWC	Mount Wilson	72.50	45	eP	P	06 47 05.2	-0.7
BAR	Barrett	72.60	47	P	P	06 47 08.7	+2.2
CMB	Columbia Colle	73.23	41	eP	P	06 47 10.7	+0.6
	comp=Z,35nm,1.7s,mb5.0						
CMB	Columbia Colle	73.23	41	eP	P	06 47 10.7	+0.5
CMB				pmax	pmax		
	comp=Z,35nm,1.7s,mb5.0						
OHCM	Honcut	73.36	39	eP	P	06 47 10.6	-0.3
QSPA	South Pole Qui	73.46	180	eP	P	06 47 11.8	+1.1
	comp=Z,13nm,0.8s,mb4.9						
PET	Petropavlovsk	73.60	342	eP	P	06 47 09.5	-2.5
PET				eS	S	06 56 43.3	+4.7
PET				eSS	SS	07 01 28.2	+3.9
PET				pmax	pmax		
	comp=Z,300nm,11.6s						
PET				pmax	pmax		
	comp=Z,100nm,15.0s						
PET				smax			
	comp=N,500nm,15.5s						
PET				smax			
	comp=E,400nm,15.2s						
PET				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.8						
MTUM	Tungsten Hills	73.98	42	eP	P	06 47 13.7	-0.8
NVAR	Mina Array Bea	74.78	41	P	P	06 47 18.0	-1.2
	comp=Z,3.9nm,0.9s,mb4.3,baz=228,slow=10,SNR=16						
NVAR				LR	LR	07 16 31.5	
	comp=Z,400nm,18.7s,MS4.7,baz=260,slow=33						
YSS	Yuzh-Sakhalins	74.83	330	P	P	06 47 16.0	-3.2
YSS				e		06 56 58.0	
YSS				e		06 57 38.0	
MNV	Mina	74.88	42	eP	P	06 47 18.9	-0.7
	comp=Z,58nm,1.7s,mb5.2						
MNV				LR	LR		
	comp=Z,887nm,19.0s,MS5.1						
LDFC	Landfair	75.00	46	eP	P	06 47 19.8	-0.6
TPH	Tonopah	75.27	42	eP	P	06 47 21.5	-0.4
	comp=Z,50nm,1.5s,mb5.2						
MIR	Mirnyy	76.61	204	eP	P	06 47 28.0	-1.0
MIR				pmax	pmax		
	comp=Z,54nm,2.0s,mb5.1						
TUC	Tucson	76.64	50	eP	P	06 47 29.2	-0.7
	comp=Z,36nm,1.6s,mb5.0						
TUC	Tucson	76.64	50	eP	P	06 47 29.2	-0.7
TUC				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0						
ARUT	Antelope Range	77.59	44	eP	P	06 47 34.7	-0.4
WUAZ	Wupatki	77.82	47	eP	P	06 47 38.4	+2.0
	comp=Z,41nm,1.7s,mb5.1						
MVU	Marysvale	78.79	44	eP	P	06 47 43.4	+1.7
	comp=Z,16nm,1.3s,mb4.8						
MSU	Marysvale	78.82	44	eP	P	06 47 41.5	-0.3
SSE	Sheshan	79.19	307	P	P	06 47 39.2	-4.8
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,100nm,6.4s						
SSE				LR	LR		
	comp=N,100nm,24.5s,MS4.3						
SSE				LR	LR		
	comp=E,160nm,24.7s,MS4.3						
SSE				LR	LR		
	comp=Z,210nm,24.9s,MS4.4						
BGU	Big Grassy Mou	79.54	42	eP	P	06 47 47.7	+2.0
TMUT	Trail Mountain	79.87	44	eP	P	06 47 49.2	+1.7
SPUT	South Promonto	80.12	42	eP	P	06 47 52.7	+3.9
HLID	Hailey	80.14	39	eP	P	06 47 48.7	-0.1
	comp=Z,29nm,1.7s,mb4.9						
SRU	San Rafael	80.23	44	eP	P	06 47 50.3	+0.9
	comp=Z,18nm,1.4s,mb4.8						
CTU	Camp Tracy	80.24	42	P	P	06 47 48.2	-1.3
	comp=Z,14nm,0.5s,mb5.1						
LENM	Lemitar	80.33	50	eP	P	06 47 53.4	+3.3
MDJ	Mudanjiang	80.36	322	P	P	06 47 49.1	-0.9
MDJ				PP	PP	06 50 50.9	-3.8
MDJ				XS		06 58 02.2	
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.5s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,340nm,8.9s						
MDJ				LR	LR		
	comp=N,290nm,28.7s,MS4.6						
MDJ				LR	LR		
	comp=E,280nm,27.9s,MS4.6						
MDJ				LR	LR		
	comp=Z,310nm,23.1s,MS4.6						
DIV	Divide	80.40	13	eP	P	06 47 50.8	+0.9
MNTX	Cornudas Mount	80.42	53	eP	P	06 47 47.9	-2.7
	comp=Z,40nm,1.7s,mb5.1						
MNTX				LR	LR		
	comp=Z,412nm,19.0s,MS4.8						
BNM	Barren Site	80.58	50	eP	P	06 47 52.4	+1.0
LPM	Los Pinos Moun	80.65	50	eP	P	06 47 54.3	+2.5
TCUT	Toone Canyon	80.69	42	P	P	06 47 53.1	+1.3
LTX	Lajitas	80.74	56	eP	P	06 47 54.3	+2.0
	comp=Z,50nm,1.7s,mb5.2						
LTX				LR	LR		
	comp=Z,422nm,20.0s,MS4.8						
LTX	Lajitas	80.74	56	eP	P	06 47 54.3	+2.0
LTX				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.2						
LTX				MLR	MLR		
	comp=Z,422nm,20.0s,MS4.8						
TXAR	Lajitas Array	80.74	56	P	P	06 47 51.3	-1.0
	comp=Z,1.1nm,0.9s,mb3.8,baz=220,slow=7.8,SNR=9.5						
TXAR				LR	LR	07 17 45.5	
	comp=Z,335nm,18.4s,MS4.7,baz=295,slow=31						
ANMO	Albuquerque	81.07	50	eP	P	06 47 55.3	+1.4
	comp=Z,23nm,1.6s,mb4.9						
ANMO	Albuquerque	81.07	50	⇓iP	P	06 47 54.8	+0.9
PV01	Paradox Valley	81.08	46	eP	P	06 47 55.0	+1.1
GDL2	Guadalupe Moun	81.41	53	eP	P	06 47 55.4	-0.4
MCMT	McKenzie Canyo	81.77	38	eP	P	06 47 56.8	-0.6
KLR	Kul'dur	81.86	327	eP	P	06 47 56.5	-1.3
KLR				eS	S	06 58 16.5	+9.0
KLR				pmax	pmax		
	comp=Z,900nm,13.0s						
RRI2	Red Ridge	81.91	40	eP	P	06 48 00.0	+1.9
	comp=Z,6.8nm,0.8s,mb4.6						
CPRX	Cap Rock	82.15	52	eP	P	06 47 54.9	-4.7
MCK	McKinley	82.17	10	eP	P	06 47 59.8	+0.7
	comp=Z,10nm,1.1s,mb4.7						
MCK				LR	LR		
	comp=Z,231nm,20.0s,MS4.5						
MCK	McKinley	82.17	10	eP	P	06 47 59.8	+0.8
MCK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
MCK				MLR	MLR		
	comp=Z,231nm,20.0s,MS4.5						
REDW	Red Top Meadow	82.21	40	eP	P	06 47 59.1	-0.5
	comp=Z,53nm,1.7s,mb5.2						
CN2	Changchun	82.41	320	eP	P	06 47 59.8	-0.9
CN2				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=N,470nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=E,380nm,19.0s,MS5.0						
CN2				LR	LR		
	comp=Z,360nm,16.0s,MS4.8						

DL2	**Dalian**	**82.47**	**314**	P	**P**	**06 48 01.0**	**-0.1**
DL2				AMB	AMB		
	comp=Z,210nm,6.0s						
DL2				LR	LR		
	comp=N,140nm,14.7s,MS4.6						
DL2				LR	LR		
	comp=E,90nm,12.6s,MS4.6						
DL2				LR	LR		
	comp=Z,250nm,17.7s						
SMCO	**Snowmass**	**82.67**	**46**	*e*P	**P**	**06 48 02.4**	**+0.3**
	comp=Z,28nm,1.5s,mb5.1						
PDAR	**Pinedale Array**	**82.72**	**41**	P	**P**	**06 48 01.9**	**-0.4**
	comp=Z,2.2nm,0.7s,mb4.3,baz=223,slow=2.5,SNR=18						
PDAR				LR	LR	07 19 45.2	
	comp=Z,342nm,20.1s,MS4.7,baz=252,slow=32						
BOZ	**Bozeman (W)**	**82.94**	**38**	*e*P	**P**	**06 48 04.0**	**+0.7**
	comp=Z,27nm,1.5s,mb5.0						
HRY	**Holter Researc**	**83.39**	**37**	*e*P	**P**	**06 48 05.5**	**-0.1**
COLA	**College**	**83.41**	**10**	*e*P	**P**	**06 48 03.4**	**-1.9**
	comp=Z,29nm,1.2s,mb5.2						
COLA	**College**	**83.41**	**10**	⇓*i*P	**P**	**06 48 04.1**	**-1.2**
ILAR	**Eielson Array**	**83.48**	**11**	P	**P**	**06 48 04.8**	**-0.9**
	comp=Z,2.0nm,0.8s,mb4.2,baz=219,slow=5.1,SNR=15						
ILAR				LR	LR	07 22 49.1	
	comp=Z,261nm,18.3s,MS4.6,baz=352,slow=34						
DAWY	**Dawson**	**84.41**	**14**	*e*P	**P**	**06 48 09.8**	**-0.5**
BILL	**Bilibino**	**85.77**	**352**	P	**P**	**06 48 18.0**	**+1.0**
BILL				*e*	pP	06 48 29.4	+1.9
BILL				*e*		06 58 52.1	
BILL				pmax	pmax		
	comp=Z,12nm,1.3s,mb5.0						
EDM	**Edmonton**	**86.16**	**31**	*e*P	**P**	**06 48 19.8**	**+0.5**
LAO	**LASA Array**	**86.71**	**39**	*e*P	**P**	**06 48 26.5**	**+4.4**
	comp=Z,26nm,1.4s,mb5.3						
MAW	**Mawson**	**86.88**	**198**	LR	LR	07 25 48.4	
	comp=Z,1µm,18.6s,MS5.4,baz=110,slow=35						
ENH	**Enshi**	**88.10**	**302**	*e*P	**P**	**06 48 29.6**	**+0.4**
PLCA	**Paso Flores**	**88.24**	**132**	P	**P**	**06 48 30.4**	**+0.7**
	comp=Z,2.4nm,0.9s,mb4.4,baz=11,slow=4.7,SNR=3.3						
PLCA				LR	LR	07 19 20.2	
	comp=Z,620nm,19.9s,MS5.0,baz=182,slow=30						
GYA	**Guiyang**	**89.17**	**298**	⇑*i*P	**P**	**06 48 35.0**	**+0.6**
GYA				AP	pP	06 48 39.7	-5.3
GYA				XP	sP	06 48 42.5	-5.9
GYA				PP	PP	06 52 07.8	+0.5
GYA				SKS	SKS	06 59 02.3	+2.7
GYA				S	S	06 59 21.6	+2.6
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.5						
GYA				AMB	AMB		
	comp=Z,120nm,3.4s						
GYA				LR	LR		
	comp=N,460nm,18.7s,MS5.1						
GYA				LR	LR		
	comp=E,530nm,19.2s,MS5.1						
GYA				LR	LR		
	comp=Z,540nm,19.0s,MS5.0						
JTS	**JuntasAbangare**	**90.78**	**80**	*e*P	**P**	**06 48 44.3**	**+2.0**
	comp=Z,94nm,1.6s,mb5.9						
JTS	**JuntasAbangare**	**90.78**	**80**	⇓*i*P	**P**	**06 48 44.0**	**+1.7**
SYO	**Syowa Base**	**91.56**	**191**	⇓P	**P**	**06 48 45.4**	**+0.8**
SYO	**Syowa Base**	**91.56**	**191**	⇓pP	pP	06 48 50.5	-4.7
VNA3	**Neumayer Olymp**	**91.62**	**175**	*e*	**P**	**06 48 54.3**	**+9.5**
VNA3	**Neumayer Olymp**	**91.62**	**175**	*e*	tx	06 49 07.0	
VNA3	**Neumayer Olymp**	**91.62**	**175**	*e*	tx	06 49 20.0	
VNA3	**Neumayer Olymp**	**91.62**	**175**	⇑*i*P	**P**	**06 48 46.7**	**+1.9**
VNA3				*e*		06 48 54.3	
VNA3				*e*		06 49 07.0	
VNA3				*e*		06 49 20.0	
KMI	**Kunming**	**92.12**	**295**	P	**P**	**06 48 52.0**	**+3.8**
KMI				PP	PP	06 52 28.6	-2.3
KMI				PPP	PPP	06 54 37.5	+5.5
KMI				SKS	SKS	06 59 21.2	+4.2
KMI				S	S	06 59 50.4	+5.0
KMI				LR	LR		
	comp=Z,280nm,18.9s,MS4.7						
VNA2	**Neumayer--Watz**	**92.12**	**175**	*e*	**P**	**06 48 56.9**	**+10**
VNA2	**Neumayer--Watz**	**92.12**	**175**	*e*	tx	06 49 10.0	
VNA2	**Neumayer--Watz**	**92.12**	**175**	*e*	tx	06 49 23.0	
VNA2	**Neumayer--Watz**	**92.12**	**175**	⇑*i*P	**P**	**06 48 48.9**	**+1.8**
VNA2				*e*		06 48 56.9	
VNA2				*e*		06 49 10.0	
VNA2				*e*		06 49 23.0	
VNA1	**Neumayer--Stat**	**92.32**	**175**	*e*	**P**	**06 48 58.3**	**+10**
VNA1	**Neumayer--Stat**	**92.32**	**175**	*e*	tx	06 49 10.8	
VNA1	**Neumayer--Stat**	**92.32**	**175**	*e*	tx	06 49 24.0	
VNA1	**Neumayer--Stat**	**92.32**	**175**	⇑*i*P	**P**	**06 48 50.7**	**+2.7**
VNA1				*e*		06 48 58.3	
VNA1				*e*		06 49 10.8	
VNA1				*e*		06 49 24.0	
CD2	**Chengdu**	**92.98**	**301**	*e*P	**P**	**06 48 52.0**	**0.0**
ULM	**Lac du Bonnet**	**94.45**	**39**	LR	LR	07 28 17.7	
	comp=Z,694nm,18.0s,MS5.2,baz=267,slow=33						
LZH	**Lanzhou**	**94.45**	**306**	*e*P	**P**	**06 48 59.0**	**+0.4**
LZH				AP	pP	06 49 03.8	-5.4
LZH				XP	sP	06 49 06.1	-6.5
LZH				*e*PP	PP	06 52 48.5	-0.3
LZH				SKS	SKS	06 59 32.1	+2.4
LZH				*e*S	S	07 00 07.2	+1.9
LZH				XS		07 00 15.3	
LZH				PS	PS	07 01 28.7	-1.9
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,100nm,7.4s						
LZH				LR	LR		
	comp=N,490nm,16.9s						
LZH				LR	LR		
	comp=Z,640nm,19.2s,MS5.1						
SONM	**Songino Array**	**96.16**	**318**	LR	LR	07 26 26.2	
	comp=Z,250nm,19.2s,MS4.7,baz=279,slow=32						
LPAZ	**La Paz**	**98.80**	**110**	LR	LR	07 29 23.9	
	comp=Z,242nm,18.0s,MS4.7,baz=289,slow=33						
ROSC	**El Rosal**	**99.40**	**88**	LR	LR	07 25 24.5	
	comp=Z,195nm,19.3s,MS4.6,baz=71,slow=30						
WMQ	**Urumqi**	**108.14**	**311**	⇑PDIF	Pdif	06 49 58.8	-0.8
WMQ				*e*PP	PP	06 54 30.8	-1.8
WMQ				PP	PP		
	comp=Z,10.0nm,5.1s						
WMQ				LR	LR		
	comp=N,120nm,19.3s						
WMQ				LR	LR		
	comp=E,130nm,27.9s						
WMQ				LR	LR		
	comp=Z,80nm,19.3s,MS4.3						
BVAR	**Borovoye Array**	**119.21**	**322**	PKP	PKPdf	06 54 26.9	+0.8
	comp=Z,0.5nm,0.6s,baz=90,slow=7.4,SNR=3.1						
ARCES	**ARCESS Array B**	**125.87**	**352**	PKP	PKPdf	06 54 40.9	+2.4
	comp=Z,4.3nm,1.0s,baz=18,slow=3.8,SNR=3.6						
AKASG	**Malin Array Be**	**141.68**	**337**	PKP	PKPdf	06 55 08.0	-0.4
	comp=Z,0.2nm,0.2s,baz=45,slow=4.1,SNR=3.9						
CLL	**Collm**	**145.06**	**354**	PKP	PKPdf	06 55 12.0	-2.2
STHS	**Stebnicka Huta**	**145.35**	**344**	*e*PKP	PKPdf	06 55 16.7	+1.9
UPC	**Upice**	**145.44**	**350**	*e*PKP	PKPdf	06 55 15.4	+0.5
KOLS	**Kolonicke sedl**	**145.50**	**342**	*e*PKP	PKPdf	06 55 16.4	+1.4
DPC	**Dobruska-Polom**	**145.54**	**350**	*e*PKP	PKPdf	06 55 16.3	+1.2
DPC				*e*x	x	06 55 28.4	
PVCC	**Panska Ves**	**145.64**	**352**	*e*PKP	PKPdf	06 55 17.1	+1.9
OKC	**Ostrava-Krasne**	**145.69**	**347**	*e*PKP	PKPdf	06 55 16.8	+1.5
OKC				*e*x	x	06 55 28.7	
BURAR	**Bucovina Array**	**145.71**	**338**	⇓P	PKPdf	06 55 18.3	+2.9
CRVS	**Cervenica-Dubn**	**145.76**	**343**	*e*PKP	PKPdf	06 55 15.8	+0.3
MOX	**Moxa**	**145.85**	**355**	*i* P	PKPdf	06 55 17.9	+2.3
	comp=Z,logA/T=1.4						
MOX	**Moxa**	**145.85**	**355**	*e*PKP2	PKPab	06 55 17.9	-0.8
MOX				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.9						
MORC	**Moravsky Berou**	**145.87**	**348**	*e*PKPdf	PKPdf	06 55 16.8	+1.2
PRU	**Pruhonice**	**146.17**	**352**	*e*PKP	PKPdf	06 55 18.1	+2.0
PRU				*e*x	x	06 55 30.3	
KECS	**Kecovo**	**146.40**	**344**	*e*PKP	PKPdf	06 55 18.2	+1.6
BAIF	**Baives**	**146.52**	**4**	*e*PKP1	PKPbc	06 55 25.7	+7.6
TREC	**Trest**	**146.70**	**350**	*e*PKP	PKPdf	06 55 19.9	+2.8
TREC				*e*x	x	06 55 30.3	
VYHS	**Vyhne**	**146.80**	**346**	*e*PKP	PKPdf	06 55 19.2	+1.9
GRA1	**Grafenberg Arr**	**146.83**	**355**	*e*PKP	PKPdf	06 55 20.6	+3.3
GRF	**Grafenberg Arr**	**146.83**	**355**	*e*PKP	PKPdf	06 55 20.6	+3.3
KHC	**Kasperske Hory**	**147.14**	**352**	*e*PKP	PKPdf	06 55 20.2	+2.4
KHC				*e*x	x	06 55 35.8	
ROSF	**Rostrenen**	**147.18**	**13**	*e*PKP1	PKPdf	06 55 27.4	+10
MLR	**Muntele Rosu**	**147.21**	**335**	⇓P	PKPdf	06 55 23.6	+5.6
GERES	**GERESS Array B**	**147.41**	**352**	PKPbc	PKPdf	06 55 22.7	+4.5
	comp=Z,0.5nm,0.5s,baz=18,slow=4.2,SNR=6.0						
SGMF	**Saint Gilles**	**147.41**	**12**	*e*PKP1	PKPdf	06 55 28.0	+10
	comp=Z,139nm,1.3s						
BR131	**Keskin Array S**	**147.48**	**320**	*e*PKPbc	PKPdf	06 55 23.1	+4.4
BRTR	**Keskin Array B**	**147.48**	**320**	PKPbc	PKPdf	06 55 23.2	+4.6
	comp=Z,4.1nm,0.9s,baz=90,slow=2.5,SNR=12						
LOR	**Lormes**	**149.28**	**5**	*e*PKP1	PKPdf	06 55 33.1	+12
LOR				*e*R			
	comp=Z,418nm,20.2s						
SSF	**Saint Saulge**	**149.46**	**5**	*e*PKP1	PKPdf	06 55 33.9	+12
CABF	**La Chapelle**	**150.05**	**2**	*e*PKP1	PKPdf	06 55 35.5	+13
TCF	**Toulx Ste Croi**	**150.09**	**7**	*e*PKP1	PKPdf	06 55 34.8	+12
DIVS	**Divcibare**	**150.54**	**341**	⇓*i*P	PKPdf	06 55 29.7	+6.3
RJF	**Les Rejaudoux**	**150.97**	**8**	*e*PKP1	PKPdf	06 55 37.4	+13
	comp=Z,44nm,1.3s						
RJF				*e*R			
	comp=Z,426nm,18.2s						
LPG	**La Plagne**	**151.18**	**1**	*e*PKP1	PKPdf	06 55 38.4	+14
LFF	**La Frestale**	**151.21**	**10**	*e*PKP1	PKPdf	06 55 37.0	+13
ORIF	**Oris-en-Rattie**	**151.74**	**2**	*e*PKP1	PKPdf	06 55 39.1	+14
	comp=Z,40nm,1.3s						
ORIF				*e*R			
	comp=Z,310nm,19.0s						
VIVF	**Saint-Julien-l**	**151.74**	**4**	*e*PKP1	PKPdf	06 55 39.3	+14
MBDF	**Montbardon**	**151.95**	**1**	*e*PKP1	PKPdf	06 55 39.8	+14
SMRF	**Simiane la Rot**	**152.66**	**3**	*e*PKP1	PKPdf	06 55 41.5	+15
PGF	**Pioggiola**	**154.09**	**357**	*e*PKP1	PKPdf	06 55 45.0	+16
	comp=Z,92nm,1.5s						
EVO	**Evora**	**154.35**	**29**	*e*PKP2	PKPab	06 55 58.6	+4.7
	comp=Z,60nm,1.4s						
EVO				*e*R			
	comp=Z,284nm,19.0s						

*IDC **02** 06:51:41.8±0.6,9.54N×93.08E,mb4.3/14,mb1 4.4/14, mb1mx4.3/20,mbtmp4.3/14,Error ellipse: s-maj=36.3km s-min=13.3km az=56.0*

*BJI **02** 06:51:44.2,9.22N×93.02E,h41^{km},mB5.0,mb4.7,Ms4.0, Msz4.3*

*MOS **02** 06:51:45.0±1.1,9.46N×93.20E,h33^{km},mb4.9/12,Error ellipse: s-maj=20.6km s-min=7.9km az=109.6*

*NEIC **02** 06:51:46.7±0.5,9.43N×93.16E,h30^{km},mb4.7/10,Error ellipse: s-maj=25.1km s-min=8.2km az=59.0*

ISC 02 06:51:45.0±0.5,**9.39N**±0.07×**93.15E**±0.07,**h33**^{km}**,n72,** σ**1§11**/73,**mb4.5**/33,**MS4.2**/2,**4C-2D,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**2.29**	**350**	*e*P	**P**	**06 52 26.1**	**+4.9**
PBA				*e*S	**S**	**06 52 52.6**	**+4.2**
VIS	**Vishakhapatnam**	**12.63**	**312**	*e*P	**P**	**06 54 43.2**	**-2.0**
VIS				*e*S	**S**	**06 56 50.1**	**-16**
VIS				AML	AML	06 56 56.3	
	comp=N,69nm,0.2s						
VIS				AML	AML	06 56 56.5	
	comp=E,60nm,0.8s						
SHL	**Shillong**	**16.13**	**356**	*e*P	**P**	**06 55 33.0**	**+2.0**
HYB	**Hyderabad**	**16.28**	**301**	*e*S	**S**	**06 58 31.5**	**-0.5**
JIRN	**Jiri**	**19.32**	**341**	*e*P	**P**	**06 56 11.8**	**+1.5**
	comp=E,32nm,0.7s						
PKI	**Pulchoki**	**19.50**	**339**	*e*P	**P**	**06 56 13.3**	**+0.9**
	comp=E,9.7nm,0.4s						
GUN	**Gumba**	**19.66**	**341**	*e*P	**P**	**06 56 14.6**	**+0.6**
	comp=E,18nm,0.4s						
KKN	**Kakani**	**19.75**	**339**	*e*P	**P**	**06 56 16.6**	**+1.6**
GKN	**Gorkha**	**20.18**	**338**	*e*P	**P**	**06 56 19.9**	**+0.3**
	comp=E,16nm,0.4s						
LSA	**Lhasa**	**20.29**	**355**	P	**P**	**06 56 20.3**	**-0.5**
LSA	**Lhasa**	**20.29**	**355**	*e*P	**P**	**06 56 19.7**	**-1.1**
	comp=E,14nm,0.4s						
LSA	**Lhasa**	**20.29**	**355**	*e*P	**P**	**06 56 19.7**	**-1.1**
LSA				pmax	pmax		
	comp=Z,14nm,0.4s						
KOLN	**Koldanda**	**20.38**	**335**	*e*P	**P**	**06 56 22.2**	**+0.5**
	comp=Z,18nm,0.7s						
ENH	**Enshi**	**25.77**	**34**	*e*P	**P**	**06 57 13.8**	**-1.0**
	comp=Z,8.8nm,0.5s,mb4.5						
GTA	**Gaotai**	**30.48**	**10**	P	**P**	**06 57 57.3**	**+0.1**
GTA				AP	pP	06 58 07.1	+0.3
GTA				XP	sP	06 58 10.9	-0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
NJ2	**Nanjing**	**32.79**	**43**	*e*P	**P**	**06 58 18.6**	**+1.0**
NJ2				PP	PP	06 59 33.6	+6.0
NJ2				S	**S**	**07 03 24.0**	**-7.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				LR	LR		
	comp=N,140nm,16.0s						
NJ2				LR	LR		
	comp=E,290nm,30.0s						
NJ2				LR	LR		
	comp=Z,390nm,16.0s,MS4.2						
SSE	**Sheshan**	**33.85**	**46**	P	**P**	**06 58 26.2**	**-0.5**
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,120nm,4.0s						
UCH	**Uchtor**	**36.58**	**337**	P	**P**	**06 58 51.2**	**+1.4**
	SNR=7.1						
KBK	**Karagaybulak**	**36.78**	**337**	P	**P**	**06 58 53.1**	**+1.6**
	SNR=8.6						
AML	**Almayashu**	**36.83**	**336**	P	**P**	**06 58 53.7**	**+1.8**
	SNR=12						
AAK	**Ala-Archa**	**36.93**	**337**	P	**P**	**06 58 54.2**	**+1.4**
	SNR=6.9						
AAK	**Ala-Archa**	**36.93**	**337**	*e*P	**P**	**06 58 53.1**	**+0.3**
	comp=Z,6.9nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**36.93**	**337**	*e*P	**P**	**06 58 53.1**	**+0.3**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
CHMS	**Chumysh**	**37.15**	**337**	P	**P**	**06 58 55.6**	**+1.0**
	SNR=5.7						
EKS2	**Erkin-Say**	**37.24**	**336**	P	**P**	**06 58 56.6**	**+1.2**
	SNR=11						
USP	**Ospenovka**	**37.47**	**337**	P	**P**	**06 58 58.2**	**+0.9**
	SNR=12						
MKAR	**Makanchi Array**	**38.41**	**348**	P	**P**	**06 59 03.8**	**-1.3**
	comp=Z,3.2nm,0.7s,mb4.2,baz=170,slow=8.3,SNR=31						
SONM	**Songino Array**	**39.92**	**14**	P	**P**	**06 59 17.3**	**-0.4**
	comp=Z,3.1nm,0.4s,mb4.4,baz=202,slow=6.8,SNR=28						
SONM				PcP	PcP	07 01 23.1	-0.4
	comp=Z,1.6nm,0.5s,baz=199,slow=3.3,SNR=8.0						
ZAK	**Zakamensk**	**41.72**	**10**	*e*P	**P**	**06 59 31.6**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
FITZ	**Fitzroy Crossi**	**42.13**	**130**	P	**P**	**06 59 38.2**	**+1.9**
	comp=Z,3.7nm,0.6s,mb4.2,baz=248,slow=15,SNR=6.3						
FITZ				PcP	PcP	07 01 30.8	-0.2
	comp=Z,4.6nm,0.4s,baz=296,slow=7.0,SNR=6.1						
KURK	**Kurchatov**	**42.91**	**346**	P	**P**	**06 59 41.3**	**-0.9**
	comp=Z,6.7nm,1.3s,mb4.2						
KURK	**Kurchatov**	**42.91**	**346**	⇓*e*P	**P**	**06 59 42.3**	**0.0**
CN2	**Changchun**	**44.30**	**34**	*e*P	**P**	**06 59 52.9**	**-0.6**
CN2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
CN2				LR	LR		
	comp=Z,320nm,18.0s,MS4.3						
ZAL	**Zalesovo**	**44.93**	**353**	P	**P**	**07 00 00.4**	**+1.9**
	comp=Z,2.9nm,0.3s,mb4.6,baz=324,slow=25,SNR=12						
BVAR	**Borovoye Array**	**47.25**	**341**	P	**P**	**07 00 16.0**	**-0.8**
	comp=Z,1.7nm,0.5s,mb4.2,baz=141,slow=9.5,SNR=14						
BVAR				PcP	PcP	07 01 47.6	-0.5
	comp=Z,1.1nm,0.7s,baz=202,slow=4.0,SNR=3.9						
BRVK	**Borovoye**	**47.31**	**341**	P	**P**	**07 00 16.4**	**-0.9**
CHKZ	**Chkalovo**	**47.74**	**342**	*e*P	**P**	**07 00 20.2**	**-0.4**
	comp=Z,9.4nm,0.6s,mb5.0						
CHKZ	**Chkalovo**	**47.74**	**342**	*e*P	**P**	**07 00 20.2**	**-0.5**
CHKZ				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
NWAO	**Narrogin (SRO)**	**47.94**	**152**	P	**P**	**07 00 23.4**	**+0.9**
	comp=Z,4.5nm,0.8s,mb4.5,baz=305,slow=11,SNR=7.3						
WRA	**Warramunga Arr**	**49.94**	**126**	P	**P**	**07 00 37.7**	**-0.4**
	comp=Z,4.8nm,0.5s,mb4.8,baz=303,slow=8.9,SNR=56						
WRA				PcP	PcP	07 01 58.3	0.0
	comp=Z,1.3nm,0.6s,baz=319,slow=2.9,SNR=8.0						
WRAB	**Tennant Creek**	**49.94**	**126**	*e*P	**P**	**07 00 38.1**	**-0.1**
	comp=Z,12nm,0.6s,mb5.1						
WRAB	**Tennant Creek**	**49.94**	**126**	*e*P	**P**	**07 00 38.1**	**0.0**
WRAB				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
WB2	**Warramunga Arr**	**49.95**	**126**	*e*P	**P**	**07 00 32.1**	**-6.1**
AKTO	**Aktyubinsk**	**50.16**	**331**	P	**P**	**07 00 38.7**	**-0.7**
	comp=Z,1.9nm,0.5s,mb4.3,baz=120,slow=9.0,SNR=7.6						
BOD	**Bodaibo**	**50.92**	**14**	*e*P	**P**	**07 00 43.4**	**-1.7**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
GNI	**Garni**	**52.68**	**314**	⇑*i*P	**P**	**07 00 59.7**	**+1.1**
GNI				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU	**Arti**	**54.12**	**337**	⇑*i*P	**P**	**07 01 07.9**	**-1.1**
ARU				*e*		07 03 17.5	
ARU				*e*S	**S**	**07 08 33.7**	**-8.0**
ARU				*e*SS	SS	07 12 20.9	-2.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KIV	**Kislovodsk**	**55.54**	**318**	*e*P	**P**	**07 01 20.2**	**+0.7**
KIV				*e*S	**S**	**07 08 55.7**	**-5.3**
KIV				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
YAK	**Yakutsk**	**58.88**	**19**	⇑*e*P	**P**	**07 01 41.6**	**-1.3**
YAK				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2						
CTA	**Charters Tower**	**59.90**	**120**	*e*P	**P**	**07 01 51.1**	**+0.6**
	comp=Z,5.1nm,0.9s,mb4.5						
CTA	**Charters Tower**	**59.90**	**120**	*e*P	**P**	**07 01 51.1**	**+0.6**
CTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CTAO	**Charters Tower**	**59.90**	**120**	*e*P	**P**	**07 01 51.1**	**+0.6**
	comp=Z,6.7nm,0.9s,mb4.7						
CTAO	**Charters Tower**	**59.90**	**120**	*e*P	**P**	**07 01 51.1**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
BRTR	**Keskin Array B**	**60.70**	**310**	P	**P**	**07 01 54.5**	**-1.3**
	comp=Z,2.2nm,0.8s,mb4.4,baz=122,slow=7.4,SNR=12						
STKA	**Stephens Creek**	**61.85**	**134**	*e*P	**P**	**07 02 03.7**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**61.85**	**134**	P	**P**	**07 02 03.8**	**+0.2**
	comp=Z,4.1nm,0.9s,mb4.5,baz=324,slow=9.7,SNR=5.1						
STKA	**Stephens Creek**	**61.85**	**134**	*e*P	**P**	**07 02 03.4**	**-0.2**
STKA				*e*P		07 02 03.7	
OBN	**Obninsk**	**63.58**	**328**	P	**P**	**07 02 30.0**	**+15**
TIXI	**Tiksi**	**65.95**	**12**	⇓*i*P	**P**	**07 02 28.0**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.3						
AKASG	**Malin Array Be**	**66.36**	**321**	P	**P**	**07 02 30.1**	**-2.6**
	comp=Z,1.4nm,0.6s,mb4.2,baz=88,slow=5.6,SNR=11						
FINES	**FINESS Array B**	**70.92**	**332**	P	**P**	**07 02 59.0**	**-1.7**
	comp=Z,0.9nm,0.6s,mb3.9,baz=117,slow=4.3,SNR=8.5						
FINES	**FINESS Array B**	**70.92**	**332**	⇑*e*P	**P**	**07 03 00.0**	**-0.7**
ARCES	**ARCESS Array B**	**73.52**	**340**	P	**P**	**07 03 14.9**	**-1.1**
	comp=Z,4.8nm,1.1s,mb4.3,baz=101,slow=6.2,SNR=7.3						
BILL	**Bilibino**	**75.05**	**22**	P	**P**	**07 03 34.0**	**+9.1**
BILL				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
GERES	**GERESS Array B**	**76.05**	**318**	P	**P**	**07 03 30.5**	**-0.5**
	comp=Z,2.0nm,0.6s,mb4.2,baz=90,slow=5.3,SNR=11						
ILAR	**Eielson Array**	**93.71**	**22**	P	**P**	**07 04 58.9**	**-0.5**
	comp=Z,1.9nm,0.7s,mb4.6,baz=302,slow=4.1,SNR=23						
INK	**Inuvik**	**95.81**	**16**	*e*P	**P**	**07 05 09.0**	**+0.3**
	comp=Z,2.1nm,0.8s,mb4.6						
INK	**Inuvik**	**95.81**	**16**	*e*P	**P**	**07 05 09.0**	**+0.2**
INK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PDAR	**Pinedale Array**	**124.10**	**20**	PKP	PKPdf	07 10 42.6	+2.0
	comp=Z,1.0nm,0.8s,baz=333,slow=3.3,SNR=6.9						
NVAR	**Mina Array Bea**	**124.11**	**30**	PKP	PKPdf	07 10 43.6	+2.9
	comp=Z,1.0nm,0.8s,baz=263,slow=3.0,SNR=5.9						
TXAR	**Lajitas Array**	**138.23**	**22**	PKP	PKPdf	07 11 11.0	+3.3
	comp=Z,0.3nm,0.5s,baz=338,slow=0.2,SNR=8.0						
PLCA	**Paso Flores**	**145.60**	**202**	PKPbc	PKPbc	07 11 24.1	+3.1
	comp=Z,3.2nm,0.9s,baz=181,slow=1.2,SNR=6.0						

*NEIC **02** 07:31:43.3±2.0,33.54S×179.27W,h31^{km}±14^{km},mb4.9/7, Error ellipse: s-maj=10.7km s-min=7.0km az=103.0*

*IDC **02** 07:31:45.9±2.4,33.47S×179.63W,h63^{km}±19^{km},mb4.3/8, mb1 4.6/9,mb1mx4.5/11,mbtmp4.6/9,MS4.1/14, Ms1 4.0/14,ms1mx4.0/18,Error ellipse: s-maj=21.4km s-min=14.2km az=146.0*

ISC 02 07:31:41.7±1.7,**33.62S**±0.04×**179.36W**±0.09, **h30**^{km}±12^{km}**,n157,**σ**1§37**/151,**mb4.6**/14,**MS4.1**/12,**3C-5D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**4.37**	**205**	PN	**Pn**	**07 32 48.3**	**+0.5**
MXZ				SN	**Sn**	**07 33 38.5**	**+0.1**
MXZ	**Matakaoa Point**	**4.37**	**205**	P	**Pn**	**07 32 48.3**	**+0.4**
MXZ				S	**Sn**	**07 33 38.5**	**+0.1**
RAO	**Raoul Island**	**4.53**	**16**	P	**Pn**	**07 32 46.1**	**-4.0**
	85nm,0.3s,baz=222,slow=24,SNR=4.2						
RAO				S	**Sn**	**07 33 34.5**	**-7.8**
	88nm,0.3s,baz=287,slow=20,SNR=3.0						
WIZ	**White Island**	**4.81**	**215**	PN	**Pn**	**07 32 56.6**	**+2.6**
WIZ	**White Island**	**4.81**	**215**	P	**Pn**	**07 32 56.6**	**+2.6**
PUZ	**Puketiti**	**4.85**	**203**	PN	**Pn**	**07 32 55.0**	**+0.4**
PUZ				SN	**Sn**	**07 33 51.1**	**+0.7**
PUZ	**Puketiti**	**4.85**	**203**	P	**Pn**	**07 32 55.0**	**+0.4**
PUZ				S	**Sn**	**07 33 51.1**	**+0.7**
KUZ	**Kuaotunu**	**5.09**	**231**	*e*PN	**Pn**	**07 33 02.6**	**+4.5**
KUZ	**Kuaotunu**	**5.09**	**231**	*e*P	**Pn**	**07 33 02.6**	**+4.5**
MYRZ	**Mayor Island**	**5.12**	**223**	PN	**Pn**	**07 33 02.7**	**+4.2**
MWZ	**Matawai**	**5.34**	**207**	*e*PN	**Pn**	**07 33 01.6**	**+0.1**
MWZ				SN	**Sn**	**07 34 01.1**	**-1.6**
MWZ	**Matawai**	**5.34**	**207**	*e*P	**Pn**	**07 33 01.6**	**+0.1**
MWZ				S	**Sn**	**07 34 01.1**	**-1.6**
MARZ	**Manawahe**	**5.42**	**215**	PN	**Pn**	**07 33 05.7**	**+3.0**
MARZ	**Manawahe**	**5.42**	**215**	P	**Pn**	**07 33 05.7**	**+3.1**
URZ	**Urewera**	**5.44**	**211**	P	**Pn**	**07 33 03.4**	**+0.4**
	35nm,0.3s,baz=321,slow=2.4,SNR=112						
URZ				S	**Sn**	**07 34 06.2**	**+0.8**
	52nm,0.3s,baz=138,slow=20,SNR=8.2						
URZ				LR	LR	07 35 27.6	
	comp=Z,581nm,19.1s,baz=32,slow=41						
URZ	**Urewera**	**5.44**	**211**	*e*PN	**Pn**	**07 33 03.1**	**+0.1**
URZ	**Urewera**	**5.44**	**211**	*e*P	**Pn**	**07 33 03.1**	**+0.1**
LIRZ	**Lichensteins R**	**5.58**	**217**	*e*P	**Pn**	**07 33 06.0**	**+1.1**
WCZ	**Waipu Caves**	**5.67**	**244**	⇑PN	**Pn**	**07 33 10.5**	**+4.2**
WCZ	**Waipu Caves**	**5.67**	**244**	⇑*e*P	**Pn**	**07 33 10.5**	**+4.3**
TAZ	**Tarawera**	**5.69**	**215**	*e*PN	**Pn**	**07 33 08.3**	**+1.8**
TAZ	**Tarawera**	**5.69**	**215**	*e*P	**Pn**	**07 33 08.3**	**+1.8**
UTU	**Utuhina**	**5.80**	**217**	*e*P	**Pn**	**07 33 11.9**	**+3.8**
KNZ	**Kokohu**	**5.90**	**203**	*e*PN	**Pn**	**07 33 06.9**	**-2.5**
KNZ				SN	**Sn**	**07 34 15.9**	**-0.9**
KNZ	**Kokohu**	**5.90**	**203**	*e*P	**Pn**	**07 33 06.9**	**-2.5**
KNZ				S	**Sn**	**07 34 15.9**	**-0.8**
PATZ	**Paeroa**	**5.93**	**216**	*e*PN	**Pn**	**07 33 11.9**	**+2.1**
OUZ	**Omahuta**	**6.03**	**253**	⇑PN	**Pn**	**07 33 14.7**	**+3.3**
OUZ	**Omahuta**	**6.03**	**253**	⇓*e*P	**Pn**	**07 33 14.7**	**+3.4**
BKZ	**Black Stump Fm**	**6.47**	**210**	*e*PN	**Pn**	**07 33 16.8**	**-0.7**
BKZ				SN	**Sn**	**07 34 31.4**	**+0.4**
BKZ	**Black Stump Fm**	**6.47**	**210**	*e*P	**Pn**	**07 33 16.8**	**-0.6**
BKZ				S	**Sn**	**07 34 31.4**	**+0.4**
HIZ	**Hauiti**	**6.76**	**222**	*e*PN	**Pn**	**07 33 24.3**	**+2.6**
HIZ	**Hauiti**	**6.76**	**222**	*e*P	**Pn**	**07 33 24.3**	**+2.7**
KRVZ	**Karewarewa**	**6.79**	**215**	*e*PN	**Pn**	**07 33 21.6**	**-0.3**
OTVZ	**Oturere**	**6.83**	**214**	*e*PN	**Pn**	**07 33 22.4**	**-0.2**
NGZ	**Ngauruhoe**	**6.87**	**215**	*e*PN	**Pn**	**07 33 23.6**	**+0.5**
NGZ	**Ngauruhoe**	**6.87**	**215**	*e*P	**Pn**	**07 33 23.6**	**+0.5**
CNZ	**Chateau**	**6.92**	**215**	*e*PN	**Pn**	**07 33 24.2**	**+0.4**
CNZ	**Chateau**	**6.92**	**215**	*e*P	**Pn**	**07 33 24.2**	**+0.4**
TUVZ	**Tukino**	**6.92**	**214**	*e*PN	**Pn**	**07 33 25.0**	**+1.2**
TUVZ	**Tukino**	**6.92**	**214**	*e*P	**Pn**	**07 33 25.0**	**+1.2**
WPVZ	**Whakapapa**	**6.92**	**215**	*e*PN	**Pn**	**07 33 24.3**	**+0.4**
WPVZ	**Whakapapa**	**6.92**	**215**	*e*P	**Pn**	**07 33 24.3**	**+0.5**
FWVZ	**Far West T-bar**	**6.96**	**215**	*e*PN	**Pn**	**07 33 24.3**	**-0.1**
FWVZ	**Far West T-bar**	**6.96**	**215**	*e*P	**Pn**	**07 33 24.3**	**-0.1**
MOVZ	**Moawhango**	**6.99**	**213**	*e*PN	**Pn**	**07 33 22.5**	**-2.2**
MOVZ	**Moawhango**	**6.99**	**213**	*e*P	**Pn**	**07 33 22.5**	**-2.3**
WNVZ	**Wahianoa**	**6.99**	**214**	*e*PN	**Pn**	**07 33 24.4**	**-0.5**
WNVZ	**Wahianoa**	**6.99**	**214**	*e*P	**Pn**	**07 33 24.4**	**-0.5**
TRVZ	**Turoa**	**7.00**	**214**	*e*PN	**Pn**	**07 33 25.5**	**+0.6**
PXZ	**Pawanui**	**7.08**	**204**	*e*PN	**Pn**	**07 33 23.1**	**-3.0**
PXZ				SN	**Sn**	**07 34 40.5**	**-5.8**
TSZ	**Takapari Road**	**7.44**	**209**	*e*PN	**Pn**	**07 33 27.2**	**-3.9**
TSZ	**Takapari Road**	**7.44**	**209**	*e*P	**Pn**	**07 33 27.2**	**-3.9**
BFZ	**Birch Farm**	**7.87**	**205**	*e*PN	**Pn**	**07 33 33.1**	**-4.0**
BFZ	**Birch Farm**	**7.87**	**205**	*e*P	**Pn**	**07 33 33.1**	**-4.0**
MRZ	**Mangatainoka R**	**8.11**	**208**	*e*PN	**P**	**07 33 36.3**	**-4.1**
MRZ				SN	**Sn**	**07 35 06.2**	**-5.7**
MRZ	**Mangatainoka R**	**8.11**	**208**	*e*P	**P**	**07 33 36.3**	**-4.1**
KIW	**Kapiti Island**	**8.55**	**211**	*e*PN	**P**	**07 33 41.7**	**-4.8**
KIW	**Kapiti Island**	**8.55**	**211**	*e*P	**P**	**07 33 41.7**	**-4.8**
MTW	**Mount Morrison**	**8.56**	**207**	*e*PN	**P**	**07 33 43.5**	**-3.2**
MTW	**Mount Morrison**	**8.56**	**207**	*e*P	**P**	**07 33 43.5**	**-3.2**
CAW	**Cannon Point**	**8.69**	**209**	*e*PN	**P**	**07 33 44.5**	**-3.9**
CAW	**Cannon Point**	**8.69**	**209**	*e*P	**P**	**07 33 44.5**	**-4.0**

TRWZ	**Traveller**	**8.70**	**205**	*e*PN	**P**	**07 33 44.8**	**-3.8**
DUWZ	**D'Urville Isla**	**8.95**	**215**	*e*PN	**P**	**07 33 48.0**	**-4.0**
SNZO	**South Karori**	**9.01**	**210**	*e*P	**P**	**07 33 48.2**	**-4.6**
TCW	**Tory Channel**	**9.11**	**212**	*e*PN	**P**	**07 33 48.9**	**-5.4**
TCW	**Tory Channel**	**9.11**	**212**	*e*P	**P**	**07 33 48.9**	**-5.4**
TUWZ	**Tuamarina**	**9.43**	**212**	*e*PN	**P**	**07 33 53.7**	**-5.0**
NNZ	**Nelson**	**9.53**	**215**	*e*PN	**P**	**07 33 54.7**	**-5.4**
NNZ	**Nelson**	**9.53**	**215**	*e*P	**P**	**07 33 54.7**	**-5.3**
QRZ	**Quartz Range**	**9.67**	**220**	*e*PN	**P**	**07 33 58.1**	**-3.9**
QRZ	**Quartz Range**	**9.67**	**220**	*e*P	**P**	**07 33 58.1**	**-3.9**
BSWZ	**Blackbirch Sta**	**9.69**	**212**	*e*PN	**P**	**07 33 57.4**	**-4.9**
BSWZ	**Blackbirch Sta**	**9.69**	**212**	*e*P	**P**	**07 33 57.4**	**-4.9**
KHZ	**Kahutara**	**10.41**	**210**	*e*PN	**P**	**07 34 06.8**	**-5.4**
KHZ				SN	**S**	**07 35 59.8**	**-9.0**
KHZ	**Kahutara**	**10.41**	**210**	*e*P	**P**	**07 34 06.8**	**-5.3**
KHZ				S	**S**	**07 35 59.8**	**-9.0**
DSZ	**Denniston Nort**	**10.71**	**218**	PN	**P**	**07 34 12.5**	**-3.8**
LTZ	**Lake Taylor**	**11.26**	**213**	*e*PN	**P**	**07 34 19.8**	**-4.0**
LTZ				SN	**S**	**07 36 19.2**	**-10**
LTZ	**Lake Taylor**	**11.26**	**213**	*e*P	**P**	**07 34 19.8**	**-4.0**
LTZ				S	**S**	**07 36 19.2**	**-10**
MQZ	**McQueen's Vall**	**11.84**	**209**	*e*PN	**P**	**07 34 25.6**	**-6.0**
MQZ				SN	**S**	**07 36 30.3**	**-13**
RPZ	**Rata Peaks**	**12.55**	**214**	P	**P**	**07 34 35.0**	**-6.0**
	2.8nm,0.3s,baz=66,slow=4.3,SNR=12						
RPZ				S	**S**	**07 36 48.7**	**-12**
	4.9nm,0.3s,baz=3.5,slow=15,SNR=9.7						
RPZ	**Rata Peaks**	**12.55**	**214**	*e*PN	**P**	**07 34 35.3**	**-5.8**
RPZ	**Rata Peaks**	**12.55**	**214**	*e*P	**P**	**07 34 35.3**	**-5.8**
ODZ	**Otahua Downs**	**13.77**	**211**	*e*PN	**P**	**07 34 50.1**	**-7.0**
ODZ	**Otahua Downs**	**13.77**	**211**	*e*P	**P**	**07 34 50.1**	**-7.1**
JCZ	**Jackson Bay**	**13.94**	**218**	*e*PN	**P**	**07 34 52.9**	**-6.5**
JCZ	**Jackson Bay**	**13.94**	**218**	*e*P	**P**	**07 34 52.9**	**-6.5**
DZM	**Mont Dzumac**	**17.00**	**309**	P	**P**	**07 35 41.2**	**+2.1**
	0.2nm,0.3s,baz=124,slow=13,SNR=4.4						
DZM				LR	LR	07 40 38.2	
	comp=Z,816nm,21.7s,baz=22,slow=32						
AFI	**Afiamalu**	**20.80**	**21**	P	**P**	**07 36 21.6**	**-1.5**
	18nm,0.9s,baz=148,slow=18,SNR=3.6						
AFI	**Afiamalu**	**20.80**	**21**	P	**P**	**07 36 21.6**	**-1.5**
RAR	**Rarotonga**	**21.29**	**60**	LR	LR	07 41 48.6	
	comp=Z,343nm,19.6s,MS3.8,baz=268,slow=28						
TBI	**Tubuai**	**28.12**	**76**	*e*LR	LR	07 44 25.4	
	526nm,28.0s						
HNR	**Honiara**	**30.69**	**317**	LR	LR	07 47 53.7	
	comp=Z,161nm,18.1s,MS3.7,baz=115,slow=32						
PPT	**Papeete**	**31.11**	**67**	*e*LR	LR	07 45 45.5	
	481nm,27.0s,baz=225						
PPT	**Papeete**	**31.11**	**67**	LR	LR	07 46 46.3	
	comp=Z,220nm,19.3s,MS3.8,baz=240,slow=29						
STKA	**Stephens Creek**	**32.75**	**262**	P	**P**	**07 38 15.7**	**+1.6**
	1.0nm,0.5s,mb4.0,baz=109,slow=13,SNR=3.8						
STKA				LR	LR	07 49 14.8	
	comp=Z,465nm,19.1s,MS4.2,baz=190,slow=32						
CTA	**Charters Tower**	**33.34**	**285**	*e*P	**P**	**07 38 20.6**	**+1.3**
	9.8nm,0.6s,mb4.9						
CTA	**Charters Tower**	**33.34**	**285**	P	**P**	**07 38 19.9**	**+0.6**
	13nm,0.6s,mb5.0,baz=104,slow=8.9,SNR=16						
CTA				LR	LR	07 48 18.6	
	comp=Z,269nm,19.4s,MS4.0,baz=49,slow=30						
CTAO	**Charters Tower**	**33.34**	**285**	*e*P	**P**	**07 38 20.4**	**+1.1**
	10nm,0.6s,mb4.9						
RKT	**Rikitea**	**40.17**	**87**	*e*LR	LR	07 50 04.0	
	491nm,28.2s						
ASPA	**Alice Springs**	**41.90**	**271**	*e*P	**P**	**07 39 30.6**	**-0.5**
WB2	**Warramunga Arr**	**43.17**	**276**	*e*P	**P**	**07 39 40.9**	**-0.7**
WRAB	**Tennant Creek**	**43.17**	**276**	*e*P	**P**	**07 39 40.9**	**-0.8**
	9.6nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**43.18**	**276**	P	**P**	**07 39 40.6**	**-1.1**
	7.2nm,0.4s,mb4.8,baz=117,slow=7.6,SNR=234						
WRA				ScP		07 45 13.6	
	1.9nm,0.8s,baz=118,slow=4.0,SNR=7.2						
WRA				S	**S**	**07 45 59.8**	**-6.0**
	1.0nm,0.7s,baz=116,slow=14,SNR=3.4						
WRA				PKiKP		07 48 31.0	
	0.3nm,0.5s,baz=66,slow=0.2,SNR=5.5						
KAKA	**Kakadu**	**48.45**	**284**	*e*P	**P**	**07 40 39.3**	**+16**
	3.5nm,0.5s,mb4.7						
FITZ	**Fitzroy Crossi**	**51.29**	**273**	*e*P	**P**	**07 40 43.9**	**-1.3**
	10nm,0.6s,mb4.9						
MBWA	**Marble Bar**	**54.80**	**267**	*e*P	**P**	**07 41 09.6**	**-1.7**
QSPA	**South Pole Qui**	**56.50**	**180**	*e*P	**P**	**07 41 24.4**	**+1.6**
	17nm,0.9s,mb5.1						
MAW	**Mawson**	**68.90**	**201**	*e*P	**P**	**07 42 44.4**	**-0.8**
	2.1nm,0.3s,mb4.5						
MAW	**Mawson**	**68.90**	**201**	P	**P**	**07 42 44.2**	**-1.0**
	2.7nm,0.4s,mb4.5,baz=138,slow=5.1,SNR=25						
MAW				LR	LR	08 12 47.0	
	comp=Z,162nm,18.0s,MS4.3,baz=242,slow=36						
SNAA	**Sanae**	**74.97**	**179**	*e*	**P**	**07 43 23.6**	**+2.4**
SNAA	**Sanae**	**74.97**	**179**	*e*	**P**	**07 43 26.5**	**+5.3**
SNAA	**Sanae**	**74.97**	**179**	*e*	**P**	**07 43 35.4**	**+14**
SNAA	**Sanae**	**74.97**	**179**	⇓*i*P	**P**	**07 43 21.1**	**-0.1**
SNAA				*e*		07 43 23.6	
SNAA				*e*		07 43 26.5	
SNAA				*e*		07 43 35.4	
VNA3	**Neumayer Olymp**	**75.18**	**177**	*e*	**P**	**07 43 24.9**	**+2.6**
VNA3	**Neumayer Olymp**	**75.18**	**177**	*e*	**P**	**07 43 28.1**	**+5.8**
VNA3	**Neumayer Olymp**	**75.18**	**177**	*e*	**P**	**07 43 36.7**	**+14**
VNA3	**Neumayer Olymp**	**75.18**	**177**	*e*	tx	07 43 49.5	
VNA3	**Neumayer Olymp**	**75.18**	**177**	⇓*i*P	**P**	**07 43 22.4**	**+0.1**
VNA3				*e*		07 43 24.9	
VNA3				*e*		07 43 28.1	
VNA3				*e*		07 43 36.7	
VNA3				*e*		07 43 49.5	
VNA3				*e*		07 45 17.3	
VNA2	**Neumayer--Watz**	**75.59**	**177**	*e*	**P**	**07 43 27.9**	**+3.2**
VNA2	**Neumayer--Watz**	**75.59**	**177**	*e*	**P**	**07 43 31.0**	**+6.3**
VNA2	**Neumayer--Watz**	**75.59**	**177**	*e*	**P**	**07 43 39.3**	**+15**
VNA2	**Neumayer--Watz**	**75.59**	**177**	*e*	tx	07 43 52.0	
VNA2	**Neumayer--Watz**	**75.59**	**177**	⇓*i*P	**P**	**07 43 25.2**	**+0.5**
VNA2				*e*		07 43 27.9	
VNA2				*e*		07 43 31.0	
VNA2				*e*		07 43 39.3	
VNA2				*e*		07 43 52.0	
VNA2				*e*		07 45 20.4	
VNA1	**Neumayer--Stat**	**75.83**	**177**	*e*	**P**	**07 43 29.4**	**+3.3**
VNA1	**Neumayer--Stat**	**75.83**	**177**	*e*	**P**	**07 43 32.5**	**+6.4**
VNA1	**Neumayer--Stat**	**75.83**	**177**	*e*	**P**	**07 43 39.1**	**+13**
VNA1	**Neumayer--Stat**	**75.83**	**177**	*e*	tx	07 43 53.5	
VNA1	**Neumayer--Stat**	**75.83**	**177**	⇓*i*P	**P**	**07 43 26.8**	**+0.7**
VNA1				*e*		07 43 29.4	
VNA1				*e*		07 43 32.5	
VNA1				*e*		07 43 39.1	
VNA1				*e*		07 43 53.5	
MJAR	**Matsushiro Arr**	**80.25**	**327**	LR	LR	08 13 32.4	
	comp=Z,121nm,19.4s,MS4.3,baz=185,slow=31						
PLCA	**Paso Flores**	**81.16**	**133**	P	**P**	**07 43 56.9**	**+1.2**
	7.3nm,0.8s,mb4.7,baz=223,slow=5.7,SNR=14						
PLCA				LR	LR	08 11 29.4	
	comp=Z,104nm,19.6s,MS4.2,baz=74,slow=29						
PLCA	**Paso Flores**	**81.16**	**133**	P	**P**	**07 43 56.9**	**+1.2**
PLCA				LR	LR	08 11 29.4	
PTRM	**Twissleman Ran**	**88.36**	**44**	*e*P	**P**	**07 44 32.4**	**+0.5**
ISA	**Isabella**	**89.39**	**45**	*e*P	**P**	**07 44 37.1**	**+0.3**
	2.0nm,0.8s,mb4.5						
LDFC	**Landfair**	**91.03**	**48**	*e*P	**P**	**07 44 45.3**	**+0.9**
YBH	**Yreka Blue Hor**	**91.27**	**39**	LR	LR	08 15 17.0	
	comp=Z,170nm,20.3s,MS4.5,baz=187,slow=29						
NVAR	**Mina Array Bea**	**91.37**	**43**	P	**P**	**07 44 45.5**	**-0.5**
	3.1nm,0.9s,mb4.7,baz=223,slow=9.9,SNR=17						
NVAR				LR	LR	08 17 37.9	
	comp=Z,57nm,19.9s,MS4.0,baz=280,slow=30						
TXAR	**Lajitas Array**	**95.08**	**58**	P	**P**	**07 45 02.8**	**-0.4**
	0.9nm,0.9s,mb4.2,baz=211,slow=7.3,SNR=8.3						
TXAR				LR	LR	08 18 44.3	
	comp=Z,81nm,19.8s,MS4.2,baz=145,slow=30						
LPAZ	**La Paz**	**97.85**	**115**	P	**P**	**07 45 16.7**	**+0.7**
	0.8nm,0.6s,mb4.4,baz=136,slow=4.5,SNR=5.5						
LPAZ	**La Paz**	**97.85**	**115**	P	**P**	**07 45 16.7**	**+0.7**
PDAR	**Pinedale Array**	**99.25**	**44**	P	**P**	**07 45 21.3**	**-0.4**
	0.4nm,0.8s,mb4.0,baz=225,slow=4.2,SNR=3.8						
PDAR				LR	LR	08 22 03.0	
	comp=Z,85nm,19.1s,MS4.3,baz=272,slow=30						
ILAR	**Eielson Array**	**101.31**	**14**	PKiKP		07 49 53.2	
	0.3nm,0.6s,baz=275,slow=3.0,SNR=5.0						
BOSA	**Boshof**	**113.86**	**204**	PKP	PKPdf	07 50 18.8	-4.1
	7.0nm,1.0s,baz=135,slow=5.7,SNR=3.3						
MKAR	**Makanchi Array**	**118.92**	**309**	PKP	PKPdf	07 50 25.2	-7.1
	0.6nm,0.6s,baz=141,slow=0.5,SNR=7.1						
MKAR				PKKPbc		08 00 42.7	
	0.2nm,0.5s,baz=258,slow=4.8,SNR=4.3						
MKAR	**Makanchi Array**	**118.92**	**309**	PKP	PKPdf	07 50 25.2	-7.1
MKAR				PKKPbc		08 00 42.7	
ZAL	**Zalesovo**	**119.64**	**317**	PKP	PKPdf	07 50 28.8	-4.7
	2.5nm,0.3s,baz=101,slow=5.2,SNR=3.4						
KEV	**Kevo**	**140.97**	**346**	*e*pkp	PKPdf	07 51 22.1	+9.0
ARCES	**ARCESS Array B**	**141.46**	**346**	PKhKP		07 51 03.4	
	3.8nm,0.8s,baz=45,slow=3.4,SNR=6.3						
JOF	**Joensuu**	**144.93**	**336**	*e*pkp	PKPdf	07 51 19.4	-0.7
KAF	**Kangasniemi**	**147.14**	**338**	*e*pkp	PKPdf	07 51 19.0	-4.9
	baz=40,slow=2.5						
FINES	**FINESS Array B**	**147.71**	**337**	PKPbc	PKPdf	07 51 20.4	-4.4
	5.6nm,0.5s,baz=37,slow=3.9,SNR=39						
FINES	**FINESS Array B**	**147.71**	**337**	PKPbc	PKPdf	07 51 20.4	-4.4
NB2	**NORSAR Subarra**	**151.72**	**349**	PKPabc	PKPdf	07 51 31.7	+0.6
	2.5nm,0.6s,baz=15,slow=2.6						
NOA	**NORSAR Array B**	**151.72**	**349**	PKPbc	PKPdf	07 51 30.8	-0.3
	1.2nm,0.7s,baz=351,slow=3.8,SNR=11						
DBIC	**Dimbokro**	**152.71**	**168**	PKP	PKPdf	07 51 29.8	-4.2
	4.2nm,1.0s,baz=271,slow=21,SNR=3.5						
DBIC				PKPbc	PKPdf	07 51 36.3	+2.4
	3.3nm,0.5s,baz=234,slow=3.1,SNR=9.5						
BRTR	**Keskin Array B**	**152.94**	**293**	PKPbc	PKPdf	07 51 33.9	+0.3
	0.9nm,0.7s,baz=123,slow=3.1,SNR=5.0						
AKASG	**Malin Array Be**	**153.03**	**318**	PKPbc	PKPdf	07 51 34.0	+0.7
	3.1nm,0.7s,baz=61,slow=2.3,SNR=12						

CSEM ***02*** *07:47:00.7±0.5,38.29N×26.52E,h20^{km},MD2.7,Error ellipse: s-maj=13.8km s-min=5.9km az=136.0*
ISK ***02*** *07:47:01.2,38.09N×26.70E,h23^{km},MD2.7*
ATH ***02*** *07:47:01.2,38.29N×27.05E,h11^{km}±4^{km},MD2.9/3*
ISC 02 07:47:00.6±0.8,**38.23N**±0.04×**26.51E**±0.06,**h15**^{km}±5^{km},**n10,**σ**1^{s}10**/17,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.14**	**26**	*i* P	**Pg**	**07 47 03.9**	**-0.6**
URLA				*i* S	**Sb**	**07 47 06.9**	**-0.1**
BLCB	**Balcova**	**0.44**	**69**	PG	**Pg**	**07 47 09.9**	**+0.1**
SMG	**Samos**	**0.58**	**154**	*e*PB	**Pg**	**07 47 13.1**	**+0.6**
SMG				*e*SB	**Sg**	**07 47 21.0**	**+0.6**
IZM	**Izmir**	**0.61**	**74**	*i* PG	**Pg**	**07 47 12.8**	**-0.3**
IZM				*i* SG	**Sg**	**07 47 21.2**	**-0.3**
KDAG	**Bornova**	**0.62**	**74**	*i* P	**Pb**	**07 47 11.0**	**-1.6**
KDAG				*i* S	**Sb**	**07 47 19.9**	**-0.9**
PRK	**Paraskevi**	**1.03**	**350**	*e*PG	**Pg**	**07 47 22.4**	**+1.0**
PRK				*e*SB	**Sb**	**07 47 38.4**	**+5.6**
AKS	**Akhisar**	**1.21**	**57**	*e*PN	**Pn**	**07 47 23.1**	**+0.1**
BODT	**Bodrum**	**1.33**	**151**	*e*PN	**Pn**	**07 47 22.1**	**-2.6**
APE	**Apeiranthos**	**1.40**	**214**	*e*PN	**Pn**	**07 47 26.0**	**+0.3**
APE				*e*SN	**Sn**	**07 47 43.5**	**-0.4**
MANT	**Manisa**	**1.63**	**80**	*i* P	**Pn**	**07 47 32.1**	**+3.1**
MANT				*i* S	**Sn**	**07 47 52.0**	**+2.2**

CASC 02 08:10:09.6±1.4,**8.31N**×**82.71W**,**h20**^{km}±15^{km},**MD3.6, MW3.6,1D,Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.48**	**2**	⇓*i*P	Pb	08 10 19.4	+0.1
BRU2				*e*S	Sb	08 10 26.5	+0.7
LCR2	**La Lucha 2**	**1.91**	**318**	*e*P	Pn	08 10 40.8	-0.8
LCR2				*e*S	Sn	08 11 06.6	+1.2
LAJ	**Bijagual**	**2.08**	**318**	*e*P	Pn	08 10 46.0	+2.0
LAJ				*e*S	Sn	08 11 14.6	+4.9
PRS1	**Puriscal**	**2.30**	**317**	*e*P	Pn	08 10 46.5	-0.6
PRS1				*e*S	Sn	08 11 15.2	+0.1

SKO ***02*** *08:20:14.8,38.93N×20.61E,h5^{km}*
ATH ***02*** *08:20:23.0,39.43N×20.32E,h20^{km}±3^{km},MD3.3/4*
NEIC ***02*** *08:20:23.0,39.43N×20.32E,h20^{km},MD3.3(ATH),After ATH.*
CSEM ***02*** *08:20:23.4±0.4,39.44N×20.26E,h2^{km},ML3.1,Error ellipse: s-maj=7.6km s-min=7.0km az=91.0*
THE ***02*** *08:20:24.1,39.48N×20.26E,h10^{km},ML3.1*
ISC 02 08:20:23.2±0.6,**39.47N**±0.03×**20.27E**±0.05,**h10**^{km},**n15,**σ**1^{s}24**/26,**Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.08**	**36**	*e*Pg	**Pg**	**08 20 25.0**	**-0.6**
IGT				*e*Sg	**Sg**	**08 20 27.1**	**-0.2**
KEK	**Kerkira**	**0.44**	**304**	*e*PB	**Pb**	**08 20 32.3**	**-0.3**
KEK				*e*SB	**Sb**	**08 20 40.7**	**+1.7**
JAN	**Janina**	**0.49**	**67**	*e*PB	**Pb**	**08 20 31.9**	**-1.5**
JAN				*e*SB	**Sb**	**08 20 39.5**	**-0.8**
LSK	**Leskovik**	**0.73**	**20**	*e*Pg	**Pg**	**08 20 36.9**	**-1.0**
LSK				*i* Sg	**Sg**	**08 20 49.7**	**+2.1**
MEV	**Metsovon**	**0.80**	**66**	*e*Pg	**Pg**	**08 20 37.9**	**-1.5**
MEV				*e*Sg	**Sg**	**08 20 51.1**	**+0.9**
VLS	**Valsamata**	**1.31**	**169**	*e*PN	**Pn**	**08 20 47.0**	**-0.7**
VLS				*e*SN	**Sn**	**08 21 05.8**	**+0.5**
KZN	**Kozani**	**1.43**	**54**	*e*PN	**Pn**	**08 20 50.0**	**+0.7**
FNA	**Florina**	**1.56**	**32**	*e*Pg	**Pg**	**08 20 52.5**	**-2.0**
FNA				*e*Sg	**Sg**	**08 21 15.1**	**-0.3**
AGG	**Agios Georgios**	**1.66**	**105**	*e*Pb	**Pb**	**08 20 53.6**	**+0.1**
AGG				*e*Sb	**Sb**	**08 21 17.9**	**+3.6**
BIA	**Bitola**	**1.75**	**27**	*e*Pn	**Pn**	**08 20 51.9**	**-2.0**
BIA				*e*Sn	**Sn**	**08 21 20.1**	**+3.8**
LIT	**Litokhoron**	**1.82**	**69**	*e*Pb	**Pb**	**08 20 56.1**	**-0.1**
	comp=Z,3.5nm,0.7s						
LIT				*e*Sb	**Sb**	**08 21 20.7**	**+1.7**
GRG	**Griva**	**2.21**	**47**	*e*Pn	**Pn**	**08 21 01.9**	**+1.4**
XOR	**Xorichti**	**2.26**	**92**	*e*Pn	**Pn**	**08 21 02.6**	**+1.3**
VAY	**Valandovo**	**2.55**	**43**	*e*Pn	**Pn**	**08 21 00.9**	**-4.5**
VAY				*e*Sn	**Sn**	**08 21 33.3**	**-3.6**
PAIG	**Paliouri**	**2.67**	**79**	*e*Pn	**Pn**	**08 21 07.4**	**+0.3**

NEIC ***02*** *08:29:58.2,34.15S×70.46W,h12^{km},ML3.0(GUC),After GUC.*
GUC 02 08:29:58.2±0.6,**34.15S**×**70.46W**,**h12**^{km}±1^{km},**MD3.9, ML3.0,3C-6D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CACH	**El Canelo**	**0.12**	**285**	⇑*i*P	Pg	08 30 01.8	+0.4
CACH				*i* S	Sg	08 30 03.9	+0.3
CICH	**Cipreses**	**0.17**	**170**	⇓*i*P	Pg	08 30 02.4	+0.1
CHCH	**Chadas Angostu**	**0.27**	**323**	⇓*i*P	Pg	08 30 04.5	+0.5
CHCH				*i* S	Sg	08 30 08.6	+0.8
LMEL	**Las Melosas**	**0.37**	**35**	⇓*i*P	Pg	08 30 06.0	+0.2
LMEL				*i* S	Sg	08 30 11.4	+0.5
SJCH	**San Jose de Ma**	**0.51**	**10**	⇓*i*P	Pg	08 30 07.8	-0.8
SJCH				*i* S	Sg	08 30 15.5	-0.2
SJCH				AMP		08 30 15.9	
	comp=E,796nm,0.2s						
ANTU	**Antumapu**	**0.60**	**346**	*e*P	Pb	08 30 10.0	0.0
ANTU				*i* S	Sb	08 30 18.7	+0.5
ANTU				AMP		08 30 19.1	
	comp=E,1µm,0.3s						
TACH	**Talagante**	**0.64**	**321**	⇓*i*P	Pb	08 30 10.5	-0.2
TACH				*i* S	Sb	08 30 20.0	+0.7
SFDO	**San Fernando**	**0.65**	**225**	⇑*i*P	Pb	08 30 10.8	-0.3
SAN	**Santiago**	**0.71**	**346**	*e*P	Pb	08 30 11.6	-0.5
SAN				*i* S	Sb	08 30 22.0	+0.4
RCDM	**Rinconada Maip**	**0.72**	**336**	*e*P	Pb	08 30 11.9	-0.3
RCDM				*i* S	Sb	08 30 21.8	+0.1
RCDM				AMP		08 30 22.5	
	comp=E,2µm,0.1s						
LNV	**Longovilo**	**0.81**	**283**	⇑*i*P	Pb	08 30 13.3	-0.5
LNV				*i* S	Sb	08 30 24.1	-0.3
FCH	**Farellones**	**0.83**	**10**	⇓*i*P	Pb	08 30 14.2	+0.1
FCH				*i* S	Sb	08 30 25.6	+0.6
FCH				AMP		08 30 26.0	
	comp=E,2µm,0.2s						
LCCH	**Las Cruces**	**1.14**	**306**	*i* P	Pb	08 30 18.9	-0.5
LCCH				*i* S	Sb	08 30 34.5	+0.4
JACH	**Jahuel**	**1.47**	**356**	*e*P	Pn	08 30 24.2	-0.5

NDI ***02*** *08:53:02.7±3.5,31.14N×76.02E,h10^{km},ML3.0*
NNC ***02*** *08:53:13.7±365.0,31.69N×73.99E,Error ellipse: s-maj=4084.1km s-min=3456.6km az=77.0*
ISC 02 08:53:01.7±0.9,**31.10N**±0.03×**76.05E**±0.05,**h3**^{km}±6^{km},**n17,**σ**1^{s}39**/29,**2C,Northern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHK	**Bhakra**	**0.44**	**44**	*e*P	**Pg**	**08 53 11.0**	**+0.4**
SDNR	**Sundarnagar**	**0.88**	**63**	*e*P	**Pb**	**08 53 18.0**	**-1.3**
SDNR				*e*x	x	08 53 28.6	
SMLA	**Simla**	**0.95**	**88**	*e*P	**Pb**	**08 53 18.4**	**-2.1**
SMLA				*e*S	**Sb**	**08 53 31.0**	**-2.4**
THN	**Thein Dam**	**1.36**	**348**	*e*P	**Pb**	**08 53 27.5**	**0.0**
THN				*e*S	**Sb**	**08 53 46.4**	**+1.3**
DLH	**Dalhousie**	**1.44**	**357**	*e*P	**Pn**	**08 53 28.0**	**-0.7**
DLH				*e*S	**Sb**	**08 53 46.0**	**-1.4**
DDI	**Dehra Dun**	**1.89**	**114**	*e*P	**Pn**	**08 53 37.0**	**+1.8**
DDI				*e*S	**Sn**	**08 54 01.6**	**+1.8**
KLP	**Kalpa**	**1.93**	**76**	*e*P	**Pn**	**08 53 37.2**	**+1.4**
KLP				*e*S	**Sn**	**08 54 02.3**	**+1.6**
RTK	**Rohtak**	**2.08**	**171**	*e*P	**Pn**	**08 53 43.3**	**+5.3**
RTK				*e*S	**Sn**	**08 54 08.4**	**+3.7**
RTK				AML	AML	08 54 10.7	
	comp=Z,281nm,0.1s						
BHGR	**Bahadurgarh**	**2.52**	**162**	*e*PG	**Pg**	**08 53 50.8**	**-1.3**
BHGR				*e*SB	**Sb**	**08 54 19.9**	**+1.0**
BHGR				AML	AML	08 54 28.7	
	comp=Z,143nm,0.2s						
NDI	**New Delhi**	**2.61**	**157**	*e*PG	**Pg**	**08 53 54.3**	**+0.4**
NDI				*i* S	**Sn**	**08 54 16.3**	**-1.8**
NDI				AML	AML	08 54 25.9	
	comp=E,97nm,0.3s						
NDI				AML	AML	08 54 26.1	
	comp=N,65nm,0.2s						
AYAN	**Aya Nagar**	**2.77**	**160**	*e*x	x	08 53 52.2	
KALG	**Kalgarh**	**2.82**	**124**	*e*P	**Pn**	**08 53 50.3**	**+1.8**
KALG				*e*S	**Sn**	**08 54 22.2**	**-1.3**
KUDL	**Kundal**	**2.97**	**173**	*e*P	**Pn**	**08 53 51.7**	**+1.1**
KUDL				*e*S	**Sn**	**08 54 27.3**	**+0.1**
SONA	**Sohna**	**2.98**	**162**	*e*S	**Sn**	**08 54 27.2**	**-0.2**
SONA				AML	AML	08 54 40.8	
	comp=N,53nm,0.2s						
SONA				AML	AML	08 54 41.9	
	comp=E,88nm,0.4s						
KHET	**Khetri**	**3.02**	**184**	*e*P	**Pn**	**08 53 52.9**	**+1.5**
KHET				*e*S	**Sn**	**08 54 25.3**	**-3.3**
KHET				AML	AML	08 54 40.3	
	comp=N,44nm,0.2s						
KHET				AML	AML	08 54 40.6	
	comp=E,50nm,0.3s						
AJM	**Ajmer**	**4.77**	**195**	*e*P	**Pn**	**08 54 15.3**	**-0.9**
AJM				*e*S	**Sn**	**08 55 07.0**	**-5.7**
AJM				AML	AML	08 55 44.3	
	comp=N,46nm,0.5s						
AJM				AML	AML	08 55 46.6	
	comp=E,50nm,0.2s						
KK31	**Karatay Array**	**12.77**	**341**	⇑P	**P**	**08 56 02.2**	**-4.7**
	comp=E,0.2nm,0.3s,baz=144,slow=11,SNR=11						
KK31				⇑S	**S**	**08 58 15.1**	**-16**
	comp=E,0.9nm,0.4s,baz=169,slow=25,SNR=7.8						

ISK ***02*** *09:01:37.8,38.21N×26.63E,h16^{km},MD3.0*
CSEM ***02*** *09:01:37.3±0.4,38.27N×26.56E,h14^{km}±2^{km},MD3.0, Error ellipse: s-maj=9.1km s-min=3.6km az=123.0*
ATH ***02*** *09:01:38.0,38.21N×26.83E,h38^{km}±9^{km},MD3.1/3*
ISC 02 09:01:37.9±0.8,**38.23N**±0.03×**26.58E**±0.05,**h4**^{km}±5^{km},**n15,**σ**0^{s}89**/25,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.13**	**7**	*i* P	**Pg**	**09 01 40.6**	**0.0**
URLA				*i* S	**Sg**	**09 01 43.5**	**+1.1**
BLCB	**Balcova**	**0.40**	**67**	PG	**Pg**	**09 01 45.9**	**0.0**
BLCB				SG	**Sg**	**09 01 51.3**	**+0.1**
SMG	**Samos**	**0.56**	**158**	*e*PN	**Pg**	**09 01 49.0**	**-0.1**
SMG				*e*SN	**Sg**	**09 01 57.6**	**+1.0**
IZM	**Izmir**	**0.56**	**73**	PG	**Pg**	**09 01 49.2**	**0.0**
IZM				SG	**Sg**	**09 01 57.1**	**+0.4**
KDAG	**Bornova**	**0.57**	**72**	*i* P	**Pg**	**09 01 48.3**	**-1.0**
KDAG				*i* S	**Sg**	**09 01 56.3**	**-0.6**
PRK	**Paraskevi**	**1.04**	**347**	*e*PN	**Pn**	**09 01 58.8**	**-0.3**
PRK				*e*SN	**Sn**	**09 02 14.1**	**-0.1**
AYVA	**Ayvalik**	**1.08**	**5**	*i* P	**Pb**	**09 01 59.5**	**+0.7**
AYVA				*i* S	**Sb**	**09 02 18.6**	**+5.6**
AKS	**Akhisar**	**1.17**	**56**	PN	**Pn**	**09 02 00.0**	**-0.9**
BODT	**Bodrum**	**1.30**	**153**	*e*PN	**Pn**	**09 02 01.3**	**-1.6**
BDRM	**Kayabasi**	**1.35**	**149**	*i* P	**Pb**	**09 02 05.9**	**+2.5**
BDRM				*i* S	**Sb**	**09 02 21.8**	**+0.9**
APE	**Apeiranthos**	**1.43**	**216**	*e*PN	**Pn**	**09 02 02.9**	**-1.7**
APE	**Apeiranthos**	**1.43**	**216**	*e*PN	**Pn**	**09 02 04.8**	**+0.2**
MANT	**Manisa**	**1.58**	**80**	*i* P	**Pn**	**09 02 07.8**	**+1.0**
MANT				*i* S	**Sb**	**09 02 28.0**	**+0.5**
YER	**Yerkesik**	**1.74**	**128**	*e*PN	**Pn**	**09 02 08.4**	**-0.7**
DNZL	**Cakiroluk**	**2.03**	**105**	*i* P	**Pg**	**09 02 16.9**	**-1.5**
DNZL				*i* S	**Sg**	**09 02 45.1**	**-0.3**

IDC ***02*** *09:08:30.9±7.9,23.96N×123.37E,mb3.9/3,mb1 3.9/3, mb1mx3.6/18,mbtmp3.9/3,Error ellipse: s-maj=168.8km s-min=150.5km az=53.0*
JMA ***02*** *09:08:58.0±0.3,24.98N×122.58E,h133^{km}±4^{km},M3.5*
ISC 02 09:08:55.8±0.7,**25.0N**±0.2×**122.55E**±0.09,**h144**^{km}±16^{km},**n16,**σ**0^{s}88**/24,**mb3.6**/3,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.69**	**143**	P	**P**	**09 09 18.3**	**+0.3**
YOJ				S	**S**	**09 09 34.4**	**-0.6**
IRIF	**Iriomote-Funau**	**1.27**	**122**	P	**P**	**09 09 23.2**	**+0.4**
IRIF				*e*S	**S**	**09 09 42.7**	**-0.8**
HATJ	**Hateruma jima**	**1.48**	**130**	P	**P**	**09 09 25.9**	**+0.8**
HATJ				*e*S	**S**	**09 09 47.7**	**+0.1**
JKRS	**Kuro-shima**	**1.53**	**120**	P	**P**	**09 09 26.6**	**+1.0**
JKRS				*e*S	**S**	**09 09 48.0**	**-0.5**
JIJ	**Ishigaki jima**	**1.58**	**114**	P	**P**	**09 09 26.8**	**+0.7**
JIJ				*e*S	**S**	**09 09 47.8**	**-1.7**
JTJ	**Tarama**	**1.99**	**100**	P	**P**	**09 09 32.0**	**+1.3**
JTJ				*e*S	**S**	**09 09 57.2**	**-0.3**
JMJ	**Miyako jima 2**	**2.50**	**94**	*e*S	**S**	**09 10 08.2**	**-0.6**
JOGS	**Gusukube**	**2.60**	**95**	P	**P**	**09 09 40.3**	**+1.8**
JOGS				*e*S	**S**	**09 10 11.0**	**-0.2**
JKE	**Kume jima 2**	**4.04**	**70**	P	**P**	**09 09 58.0**	**+0.7**
JKE				*e*S	**S**	**09 10 45.5**	**+1.0**
JAGN	**Aguni-jima**	**4.51**	**69**	P	**P**	**09 10 04.1**	**+0.6**
JIH	**Iheya**	**5.27**	**66**	P	**P**	**09 10 13.5**	**-0.1**
JTK	**Tokunoshima**	**6.37**	**63**	P	**P**	**09 10 27.2**	**-1.1**
JAM	**Amami Oshima**	**7.16**	**60**	P	**P**	**09 10 37.5**	**-1.5**
SONM	**Songino Array**	**26.12**	**335**	P	**P**	**09 14 18.1**	**+0.1**
	1.1nm,0.8s,mb3.6,baz=149,slow=8.1,SNR=8.2						
MKAR	**Makanchi Array**	**38.63**	**315**	P	**P**	**09 16 06.4**	**-0.1**
	0.5nm,0.8s,mb3.2,baz=104,slow=7.2,SNR=5.6						
FINES	**FINESS Array B**	**71.36**	**330**	P	**P**	**09 20 00.1**	**-1.4**
	2.3nm,0.8s,mb3.9,baz=76,slow=7.9,SNR=6.4						

THE ***02*** *09:09:30.8,40.44N×21.04E,h5^{km},ML2.8*
SKO ***02*** *09:09:30.1,40.39N×21.11E,h4^{km}*
CSEM ***02*** *09:09:30.9±0.1,40.53N×20.97E,h20^{km},ML2.8,Error ellipse: s-maj=3.5km s-min=1.6km az=107.0*
ATH ***02*** *09:09:32.5,40.41N×21.22E,h23^{km}±4^{km},MD3.1/4*
NEIC ***02*** *09:09:32.5,40.41N×21.22E,h23^{km},MD3.1(ATH),After ATH.*
ISC 02 09:09:29.8±0.8,**40.44N**±0.03×**21.07E**±0.05,**h4**^{km}±5^{km},**n22,**σ**1^{s}21**/35,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	**Florina**	**0.41**	**34**	*e*Pg	**Pg**	**09 09 39.2**	**+1.1**
FNA				*e*Sg	**Sg**	**09 09 45.4**	**+1.8**
KZN	**Kozani**	**0.55**	**104**	*e*PB	**Pb**	**09 09 41.3**	**-0.4**
KZN				*e*SB	**Sb**	**09 09 48.8**	**-0.8**
BIA	**Bitola**	**0.61**	**18**	*i* Pn	**Pn**	**09 09 42.2**	**-2.7**
BIA				*e*Sn	**Sn**	**09 09 51.0**	**-4.3**
MEV	**Metsovon**	**0.67**	**170**	*e*Pg	**Pg**	**09 09 43.4**	**+0.2**
MEV				*e*Sg	**Sg**	**09 09 53.2**	**+1.2**
MEV	**Metsovon**	**0.67**	**170**	*e*Pg	**Pg**	**09 09 43.4**	**+0.2**
MEV				*e*Sg	**Sg**	**09 09 53.2**	**+1.2**
JAN	**Janina**	**0.80**	**192**	*e*PN	**Pn**	**09 09 47.9**	**+0.2**
IGT	**Igoumenitsa**	**1.07**	**212**	*e*Pg	**Pg**	**09 09 50.0**	**-1.2**
IGT	**Igoumenitsa**	**1.07**	**212**	*e*Pg	**Pg**	**09 09 50.0**	**-1.2**
GRG	**Griva**	**1.13**	**63**	*e*Pg	**Pg**	**09 09 52.0**	**-0.5**
GRG				*e*Sg	**Sg**	**09 10 09.3**	**+1.7**
LIT	**Litokhoron**	**1.14**	**107**	*e*Pg	**Pg**	**09 09 52.4**	**-0.1**
	comp=Z,11nm,0.2s						
LIT				*e*Sg	**Sg**	**09 10 08.9**	**+1.2**
KEK	**Kerkira**	**1.22**	**234**	*e*PN	**Pn**	**09 09 57.2**	**+3.6**
VAY	**Valandovo**	**1.44**	**52**	*i* Pn	**Pn**	**09 09 57.0**	**+0.2**
VAY				*e*Sn	**Sn**	**09 10 16.4**	**+0.1**
THE	**Thessaloniki**	**1.46**	**82**	*e*Pg	**Pg**	**09 09 56.7**	**-2.2**
SKO	**Skopje**	**1.56**	**10**	*e*Pn	**Pn**	**09 10 00.7**	**+2.3**

SKO				*e*Sn	Sn	09 10 19.8	+0.5
SKO	**Skopje**	1.56	10	*e*Pn	Pn	09 10 00.7	+2.3
SKO				*e*Sn	Sn	09 10 19.8	+0.5
KNT	**Kendrikon**	1.56	62	*e*Pg	Pg	09 09 58.4	-2.6
	comp=Z,2.2nm,0.4s						
KNT				*e*Sg	Sg	09 10 20.2	-1.7
EVR	**Evrytania**	1.62	159	*e*PN	Pn	09 10 00.7	+1.3
AGG	**Agios Georgios**	1.72	145	*e*Pb	Pb	09 10 00.9	-0.7
AGG				*e*Sb	Sb	09 10 23.2	-0.3
SOH	**Sokhos**	1.78	77	*e*Pb	Pb	09 10 01.5	-1.2
XOR	**Xorichti**	1.95	123	*e*Pb	Pb	09 10 06.3	+0.7
PAIG	**Paliouri**	2.06	104	*e*Pn	Pn	09 10 05.4	-0.3
PAIG				*e*Sn	Sn	09 10 33.2	+1.0
OUR	**Ouranopolis**	2.23	92	*e*Pn	Pn	09 10 07.5	-0.5

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*ISK **02** 09:51:25.0,38.16N×26.64E,h7^{km},MD3.1*

*ATH **02** 09:51:25.0,38.16N×26.61E,h37^{km},MD3.2/3*

*CSEM **02** 09:51:25.5±0.1,38.16N×26.69E,h10^{km},MD3.1,Error ellipse: s-maj=4.1km s-min=1.9km az=120.0*

ISC 02 09:51:24.7±0.8**,38.21N**±0.02×**26.56E**±0.04**,h2**^{km}±5^{km}**,n21,**σ**0**^{s}**.87**/34**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	0.15	11	*i* P	Pg	09 51 27.6	-0.2
URLA				*i* S	Sg	09 51 32.0	+2.2
BLCB	**Balcova**	0.42	65	*i* PG	Pg	09 51 32.9	-0.1
BLCB				*i* SG	Sg	09 51 38.6	0.0
SMG	**Samos**	0.55	156	*e*PB	Pg	09 51 35.6	0.0
SMG				*e*SB	Sg	09 51 44.0	+1.1
IZM	**Izmir**	0.58	71	*i* PG	Pg	09 51 36.1	-0.2
IZM				*i* SG	Sg	09 51 44.6	+0.5
KDAG	**Bornova**	0.59	71	*i* P	Pg	09 51 35.0	-1.4
KDAG				*i* S	Sg	09 51 43.4	-0.9
PRK	**Paraskevi**	1.06	348	*e*PN	Pn	09 51 45.5	-0.8
PRK				*e*SN	Sn	09 52 01.3	-0.5
AYVA	**Ayvalik**	1.10	5	*i* P	Pb	09 51 46.1	0.0
AYVA				*i* S	Sb	09 52 05.7	+5.0
AYDN	**Tasoluk**	1.18	117	*i* P	Pb	09 51 47.1	-0.3
AYDN				*i* S	Sb	09 52 02.3	-0.6
AKS	**Akhisar**	1.19	55	PN	Pn	09 51 47.8	-0.4
AKS				SN	Sn	09 52 05.0	-0.1
BODT	**Bodrum**	1.29	152	*e*PN	Pn	09 51 48.6	-1.1
MLSB	**Milas**	1.33	133	*e*PN	Pn	09 51 49.0	-1.2
BDRM	**Kayabasi**	1.34	148	*i* P	Pb	09 51 50.8	+0.7
BDRM				*i* S	Sb	09 52 08.7	+1.0
APE	**Apeiranthos**	1.40	216	*e*PN	Pn	09 51 51.5	+0.3
APE				*e*SN	Sn	09 52 11.4	+0.9
APE	**Apeiranthos**	1.40	216	*e*PN	Pn	09 51 49.7	-1.5
MANT	**Manisa**	1.60	79	*i* P	Pn	09 51 54.9	+0.9
MANT				*i* S	Sb	09 52 15.9	+0.8
DAT	**Datca**	1.69	151	*e*PN	Pn	09 51 54.5	-0.8
YER	**Yerkesik**	1.74	128	*e*PN	Pn	09 51 55.5	-0.6
BALB	**Balikesir**	1.76	35	*e*PN	Pn	09 51 57.5	+1.1
DNZL	**Cakiroluk**	2.04	104	*i* P	Pn	09 52 04.2	+3.9
DNZL				*i* S	Sn	09 52 30.2	+3.6
DST	**Dursunbey**	2.13	49	*e*PN	Pn	09 52 01.4	-0.3
BNT	**Bandirma**	2.39	26	*e*PN	Pn	09 52 05.8	+0.4

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*NIED **02** 10:05:00,28.10N×130.20E,h5^{km},Mw4.6 Best double couple: M$_0$1.03×10^{16} NP1:φ$_s$20°,δ89°,λ85°. NP2:φ$_s$283°,δ5°,λ174°.*

*JMA **02** 10:05:41.3±0.1,28.13N×130.22E,h26^{km}±1^{km},M4.0*

JMA Felt II J1.

*NEIC **02** 10:05:44.5±1.1,28.17N×130.05E,h40^{km}±9^{km},mb4.7/2,MW4.6(NIED),Error ellipse: s-maj=14.8km s-min=8.8km az=119.0*

*IDC **02** 10:05:44.5±3.2,28.20N×130.05E,h38^{km}±27^{km},mb3.8/9,mb1 3.9/11,mb1mx3.8/22,mbtmp4.0/11,ML3.4/2,MS3.9/6,Ms1 3.9/6,ms1mx3.3/21,Error ellipse: s-maj=28.6km s-min=18.0km az=99.0*

*BJI **02** 10:05:55.0,28.68N×129.22E,h39^{km},mB4.1,mb4.6,Ms3.9,Msz3.6*

ISC 02 10:05:41.6±0.8**,28.13N**±0.03×**130.17E**±0.06**,h30**^{km}±4^{km}**,n39,**σ**0**^{s}**.90**/42**,mb4.2**/17**,MS4.0**/5**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	**Kikaishima**	0.25	317	P	Pb	10 05 48.0	-0.5
JZK				S	Sb	10 05 52.9	-0.3
JAM	**Amami Oshima**	0.57	299	P	Pb	10 05 53.1	-0.1
JAM				S	Sb	10 06 01.0	-0.1
JTK	**Tokunoshima**	1.13	253	P	Pn	10 06 02.5	+0.9
JTK				S	Sn	10 06 18.4	+2.2
JNN	**Nakanoshima**	1.72	352	P	Pn	10 06 10.6	+0.5
JNN				S	Sn	10 06 32.8	+1.6
JOW	**Kunigami**	2.12	233	Pn	Pn	10 06 16.1	+0.3
	14nm,0.3s,baz=99,slow=18,SNR=56						
JOW				Sn	Sn	10 06 42.2	+0.8
	55nm,0.3s,baz=70,slow=29,SNR=13						
JIH	**Iheya**	2.24	241	P	Pn	10 06 17.6	+0.1
JKC	**Kuchinoerabu**	2.32	1	P	Pn	10 06 19.4	+0.7
JKC				*e*S	Sn	10 06 47.4	+0.9
JMZ	**Minamidaito 2**	2.49	158	*e*S	Sn	10 06 51.6	+0.9
JTN	**Tanegashima 3**	2.61	16	P	Pn	10 06 23.1	+0.3
JTN				S	Sn	10 06 55.0	+1.2
NAH1	**Naha**	2.93	230	S	Sn	10 07 01.5	-0.3
JAGN	**Aguni-jima**	3.02	240	P	Pn	10 06 28.5	-0.1
JKE	**Kume jima 2**	3.51	240	P	Pn	10 06 35.2	-0.3
JNU	**Nakatsue**	5.01	7	Pn	Pn	10 06 57.5	+0.7
	2.7nm,0.3s,baz=205,slow=16,SNR=32						
JNU				Sn	Sn	10 07 53.4	-1.1
	5.4nm,0.3s,baz=103,slow=39,SNR=9.1						
SSE	**Sheshan**	8.36	293	P	P	10 07 40.6	-3.2
SSE				AMB	AMB		
	comp=Z,40nm,0.7s						
SSE				AMB	AMB		
	comp=Z,60nm,6.6s						
SSE				LR	LR		
	comp=N,230nm,18.2s						
SSE				LR	LR		
	comp=E,290nm,18.2s						
SSE				LR	LR		
	comp=Z,440nm,18.8s						
JHJ	**Hachijo jima 2**	9.66	57	LR	LR	10 11 13.3	
	comp=Z,248nm,21.1s,baz=256,slow=34						
CN2	**Changchun**	16.09	348	*e*P	P	10 09 28.6	+1.3
CN2				AMB	AMB		
	comp=Z,100nm,3.0s						
CN2				LR	LR		
	comp=N,920nm,12.0s						
CN2				LR	LR		
	comp=E,370nm,12.0s						
CN2				LR	LR		
	comp=Z,660nm,14.0s						
LZH	**Lanzhou**	23.62	296	*e*P	P	10 10 55.2	+4.3
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.3						
SONM	**Songino Array**	26.98	323	LR	LR	10 23 12.8	
	comp=Z,245nm,18.6s,MS3.8,baz=336,slow=39						
GUN	**Gumba**	38.93	280	*e*P	P	10 13 06.6	0.0
	comp=Z,11nm,0.5s,mb4.8						
PKI	**Pulchoki**	39.41	280	*e*P	P	10 13 10.1	-0.5
	comp=Z,9.2nm,0.6s,mb4.7						
KKN	**Kakani**	39.48	280	*e*P	P	10 13 11.3	+0.1
	comp=Z,7.7nm,0.5s,mb4.7						
GKN	**Gorkha**	39.99	281	*e*P	P	10 13 15.2	-0.2
	comp=Z,8.7nm,0.6s,mb4.7						
KOLN	**Koldanda**	40.94	281	*e*P	P	10 13 22.9	-0.3
	comp=Z,10nm,1.0s,mb4.4						
MKAR	**Makanchi Array**	41.60	310	P	P	10 13 27.3	-1.1
	comp=Z,0.4nm,0.5s,mb3.3,baz=91,slow=10,SNR=6.4						
MKAR	**Makanchi Array**	41.60	310	P	P	10 13 27.3	-1.1
KURK	**Kurchatov**	44.67	315	P	P	10 13 51.8	-1.5
	comp=Z,5.9nm,0.4s,mb4.8						
WRA	**Warramunga Arr**	47.96	175	P	P	10 14 20.2	+0.4
	comp=Z,2.1nm,0.7s,mb4.3,baz=354,slow=8.3,SNR=28						
BVAR	**Borovoye Array**	50.04	317	P	P	10 14 33.2	-2.0
	comp=Z,0.9nm,0.5s,mb4.1,baz=84,slow=13,SNR=4.3						
AKTO	**Aktyubinsk**	57.74	314	P	P	10 15 30.7	-1.3
	comp=Z,8.1nm,0.9s,mb4.8,baz=22,slow=6.3,SNR=15						
ILAR	**Eielson Array**	61.95	29	P	P	10 15 59.2	-1.4
	comp=Z,0.3nm,0.8s,mb3.5,baz=287,slow=8.4,SNR=6.3						
ARCES	**ARCESS Array B**	68.87	339	LR	LR	10 54 19.1	
	comp=Z,111nm,18.6s,MS4.1,baz=64,slow=42						
GNI	**Garni**	69.19	305	LR	LR	10 52 12.2	
	comp=Z,43nm,18.1s,MS3.7,baz=175,slow=40						
FINES	**FINESS Array B**	72.06	331	P	P	10 17 04.2	-0.3
	comp=Z,2.3nm,0.7s,mb4.2,baz=72,slow=6.0,SNR=6.2						
FINES				LR	LR	10 52 26.8	
	comp=Z,107nm,18.1s,MS4.2,baz=354,slow=39						
AKASG	**Malin Array Be**	75.21	320	P	P	10 17 22.7	-0.2
	comp=Z,2.2nm,0.5s,mb4.3,baz=59,slow=6.6,SNR=5.2						
BRTR	**Keskin Array B**	77.22	308	P	P	10 17 34.4	-0.1
	comp=Z,0.6nm,0.7s,mb3.6,baz=82,slow=6.3,SNR=2.7						
NB2	**NORSAR Subarra**	78.37	334	P	P	10 17 41.4	+1.1
	comp=Z,0.2nm,0.6s,mb3.2,baz=56,slow=5.8						
NOA	**NORSAR Array B**	78.37	334	P	P	10 17 40.1	-0.2
	comp=Z,1.4nm,0.7s,mb4.0,baz=50,slow=5.5,SNR=4.6						
NAO	**NORSAR Subarra**	78.65	334	P	P	10 17 41.4	-0.5
	comp=Z,0.2nm,0.6s,mb3.2						
GERES	**GERESS Array B**	84.72	324	LR	LR	11 00 11.2	
	comp=Z,131nm,18.2s,MS4.4,baz=223,slow=39						

MAN 02 10:24:49.9,11.14N×124.76E,h15^{km},mb4.5,ML3.3,MS3.1,1C-1D,Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	0.21	83	*e*P	Pb	10 24 55.5	+0.6
PLP				*e*S	Sb	10 25 00.5	+2.3
BESP	**Borongan**	0.81	55	*e*P	Pb	10 25 05.5	+0.4
MSLP	**Maasin**	1.00	175	*e*P	Pb	10 25 08.6	+0.2
LLP	**Lapu-Lapu**	1.13	224	⇓*e*P	Pb	10 25 08.8	-1.8
LLP				*e*S	Sb	10 25 22.6	-2.3
CNP	**Catarman**	1.37	356	*e*P	Pn	10 25 13.4	-1.1
TBP	**Tagbilaran**	1.69	212	*e*P	Pn	10 25 18.2	-0.9
TBP				*e*S	Sn	10 25 41.0	+0.5
GUIM	**Jordan**	2.19	257	*e*P	Pn	10 25 25.7	-0.7
GUIM				*e*S	Sn	10 25 54.2	+0.8
SNPH	**Sibulan**	2.33	220	⇑*e*P	Pn	10 25 29.2	+0.9
SNPH				*e*S	Sn	10 26 01.7	+4.8
PVCP	**Virac**	2.51	346	*e*P	Pn	10 25 32.6	+1.7

IGQ 02 10:26:13.0,1.96S×79.88W,h7^{km}±2^{km},mb4.1,5C-7D,Error ellipse: s-maj=3.9km s-min=1.5km az=106.9,Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGUA	**Igualata**	1.33	69	⇓P	Pb	10 26 39.1	+1.2
CUSU	**Cusua**	1.49	70	⇓P	Pn	10 26 41.5	+1.1
CUSU				S	Sb	10 27 00.8	+1.1
JUIV	**Juive**	1.51	69	⇑P	Pn	10 26 41.5	+0.8
JUIV				S	Sb	10 27 00.7	+0.4
RUN5	**Runtun**	1.55	70	⇑P	Pn	10 26 42.4	+1.1
RUN5				S	Sb	10 27 02.9	+1.4
JAMA	**Jama**	1.72	349	P	Pn	10 26 44.7	+1.1
PISA	**Pisayambo**	1.74	59	⇑P	Pn	10 26 46.2	+2.2
MAG1	**Magdalena**	1.88	3	⇓P	Pn	10 26 47.7	+1.7
TAMB	**Tambo**	1.97	50	P	Pn	10 26 49.8	+2.6
VC1	**Cotopaxi 1**	1.98	48	⇑P	Pn	10 26 50.0	+2.7
JUA2	**San Juan 2**	2.15	36	⇑P	Pn	10 26 52.6	+2.7
JUA2				S	Sn	10 27 20.8	+3.7
TERV	**Terraza Guagua**	2.19	36	⇓P	Pn	10 26 53.0	+2.6
TERV				S	Sn	10 27 21.8	+3.9
GGP	**Refugio Guagua**	2.19	36	⇓P	Pn	10 26 53.0	+2.6
PINO	**Pino**	2.20	35	⇓P	Pn	10 26 53.0	+2.5
PINO				S	Sn	10 27 21.4	+3.1
YANA	**Yana**	2.25	36	P	Pn	10 26 53.6	+2.3
ANTI	**Antisana**	2.28	49	⇓P	Pn	10 26 53.6	+1.9
CAYR	**Refugio Cayamb**	2.71	44	P	Pn	10 27 00.9	+3.0
ANGU	**Angureal**	2.73	43	P	Pn	10 26 59.9	+1.7
COTA	**Cotacachi**	2.75	34	P	Pn	10 27 00.6	+2.2

IDC 02 10:44:45.9±1.8**,1.53N×126.16E,mb4.1**/3**,mb1 4.3**/3**,mb1mx3.8**/13**,mbtmp4.1**/3**,Error ellipse: s-maj=189.5km s-min=24.1km az=63.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	15.46	156	*e*P	P	10 48 52.8	+26
	3.1nm,0.6s						
WRA	**Warramunga Arr**	22.80	160	P	P	10 49 52.0	+0.2
	1.2nm,0.3s,baz=338,slow=11,SNR=46						
WB2	**Warramunga Arr**	22.81	160	*e*P	P	10 49 52.1	+0.3
STKA	**Stephens Creek**	36.31	158	P	P	10 51 50.1	-3.3
	1.6nm,0.3s,baz=339,slow=8.0,SNR=6.9						
MKAR	**Makanchi Array**	59.04	326	P	P	10 54 47.9	-2.2
	0.8nm,0.5s,baz=124,slow=8.0,SNR=10						

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*ATH **02** 10:54:45.4,39.32N×23.17E,h8^{km}±2^{km},MD3.1/5*

*THE **02** 10:54:45.7,39.35N×23.11E,h4^{km},ML2.9*

*NEIC **02** 10:54:45.4,39.32N×23.17E,h8^{km},MD3.1(ATH),After ATH.*

*CSEM **02** 10:54:45.4±0.1,39.33N×23.13E,h2^{km},ML2.9,Error ellipse: s-maj=1.9km s-min=1.7km az=87.0*

ISC 02 10:54:44.6±0.5**,39.36N**±0.03×**23.10E**±0.04**,h6**^{km}±5^{km}**,n16,**σ**0**^{s}**.87**/24**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XOR	**Xorichti**	0.07	81	*e*Pg	Pg	10 54 46.8	+0.4
NEO	**Neokhori**	0.10	117	*e*PG	Pg	10 54 47.0	+0.1
NEO				*e*SG	Sg	10 54 48.3	-0.2
AGG	**Agios Georgios**	0.69	241	*e*Pg	Pg	10 54 58.4	+0.1
	comp=Z,4.8nm,0.2s						
AGG				*e*Sg	Sg	10 55 09.1	+1.6
LKR	**Lokris**	0.71	187	*e*PG	Pg	10 54 58.3	-0.5
LKR				*e*SB	Sb	10 55 08.2	-0.5
PAIG	**Paliouri**	0.72	38	*e*Pg	Pg	10 54 59.6	+0.5
PAIG				*e*Sg	Sg	10 55 10.1	+1.3
LIT	**Litokhoron**	0.88	328	*e*Pg	Pg	10 55 02.7	+0.4
	comp=Z,10nm,0.2s						
LIT				*e*Sg	Sg	10 55 15.0	+1.0
PLG	**Polygyros**	1.05	14	*e*PB	Pb	10 55 05.3	+0.4
EVR	**Evrytania**	1.10	247	*e*PB	Pb	10 55 07.2	+1.5
OUR	**Ouranopolis**	1.19	34	*e*Pg	Pg	10 55 07.4	-1.0
	comp=Z,9.2nm,0.2s						
THE	**Thessaloniki**	1.28	355	*e*Pg	Pg	10 55 09.4	-0.8
KZN	**Kozani**	1.40	313	*e*PG	Pg	10 55 12.6	0.0
MEV	**Metsovon**	1.51	287	*e*Pg	Pg	10 55 12.8	-2.0
MEV				*e*Sg	Sg	10 55 33.8	-1.1
GRG	**Griva**	1.69	342	*e*Pb	Pb	10 55 15.0	-0.7
KNT	**Kendrikon**	1.81	355	*e*Pb	Pb	10 55 17.2	-0.7
KNT				*e*Sb	Sb	10 55 41.1	+0.3
FNA	**Florina**	1.95	318	*e*Pb	Pb	10 55 19.0	-1.2
IGT	**Igoumenitsa**	2.15	276	*e*Pn	Pn	10 55 21.7	+0.2
IGT				*e*Sn	Sn	10 55 49.7	+0.8

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*ATH **02** 11:00:49.6,39.33N×24.14E,h26^{km},MD2.9/4,ML3.2*

*NEIC **02** 11:00:49.6,39.33N×24.14E,h26^{km},ML3.2(ATH),After ATH.*

*CSEM **02** 11:00:49.2±0.2,39.25N×24.18E,h2^{km},ML2.8,Error ellipse: s-maj=4.2km s-min=3.0km az=142.0*

*THE **02** 11:00:50.0,39.29N×24.15E,h8^{km},ML2.8*

ISC 02 11:00:48.7±0.8**,39.29N**±0.04×**24.13E**±0.04**,h8**^{km}±5^{km}**,n15,**σ**1**^{s}**.09**/24**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEO	**Neokhori**	0.70	272	*e*PN	Pn	11 01 03.9	-0.7
NEO				*e*SN	Sn	11 01 13.9	-1.7
PAIG	**Paliouri**	0.73	332	*e*Pg	Pg	11 01 03.6	+0.3
PAIG				*e*Sg	Sg	11 01 14.9	+1.8
XOR	**Xorichti**	0.73	277	*e*Pg	Pg	11 01 04.4	+1.0
XOR				*e*Sg	Sg	11 01 14.5	+1.4
LOS	**Limnos**	0.98	48	*e*Pg	Pg	11 01 08.1	-0.3
	comp=Z,8.0nm,0.1s						
LOS				*e*Sg	Sg	11 01 21.8	+0.3
LIA	**Limnos Island**	1.02	53	*e*PN	Pn	11 01 08.7	-0.5
LIA				*e*SN	Sn	11 01 22.4	-1.3
OUR	**Ouranopolis**	1.05	354	*e*Pg	Pg	11 01 09.7	-0.1
	comp=Z,12nm,0.2s						
LKR	**Lokris**	1.08	235	*e*PN	Pn	11 01 11.0	+0.9
PLG	**Polygyros**	1.21	334	*e*PN	Pn	11 01 11.5	-0.3
PTL	**Penteli**	1.25	190	*e*PN	Pn	11 01 13.3	+0.8
ATH	**Athens Observa**	1.35	194	*e*PN	Pn	11 01 15.3	+1.4
AGG	**Agios Georgios**	1.42	260	*e*Pg	Pg	11 01 15.7	-1.5
AGG				*e*Sg	Sg	11 01 35.6	-0.5
LIT	**Litokhoron**	1.50	303	*e*Pg	Pg	11 01 16.4	-2.4
	comp=Z,2.1nm,0.2s						
LIT				*e*Sg	Sg	11 01 36.3	-2.5
SOH	**Sokhos**	1.65	339	*e*Pb	Pb	11 01 18.4	-0.4
KNT	**Kendrikon**	2.10	334	*e*Pn	Pn	11 01 24.9	+0.4
KNT				*e*Sn	Sn	11 01 52.0	+0.9
GRG	**Griva**	2.13	322	*e*Pn	Pn	11 01 25.5	+0.5
GRG				*e*Sn	Sn	11 01 52.9	+1.0

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*IDC **02** 11:17:12.9±13.0,23.67S×179.68W,h144^{km}±126^{km},mb4.0/5,mb1 4.1/5,mb1mx3.8/13,mbtmp4.5/5,MS3.3/1,Ms1 3.2/1,ms1mx2.4/23,Error ellipse: s-maj=44.0km s-min=30.3km az=42.0*

ISC 02 11:17:22.6±1.2**,23.8S**±0.1×**179.9W**±0.2**,h250**^{km}**,n13,**σ**0**^{s}**.75**/13**,mb4.2**/7**,1C-1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	18.17	199	PN	P	11 21 19.7	+0.7
NNZ	**Nelson**	18.30	196	*e*PN	P	11 21 20.9	+0.6
DSZ	**Denniston Nort**	19.23	199	PN	P	11 21 29.9	+0.2
KHZ	**Kahutara**	19.39	195	*e*PN	P	11 21 30.3	-1.0
RPZ	**Rata Peaks**	21.26	198	P	P	11 21 49.1	-0.7
	4.4nm,0.4s,mb4.3,baz=8.5,slow=5.7,SNR=5.0						
HNR	**Honiara**	23.96	303	P	P	11 22 15.4	-0.4
	25nm,0.3s,mb5.3,baz=196,slow=6.9,SNR=3.5						
CTA	**Charters Tower**	31.57	270	⇑*i*P	P	11 23 27.3	+3.3
	3.5nm,0.3s,mb4.4						
STKA	**Stephens Creek**	34.87	248	*e*P	P	11 23 52.2	+0.2
	1.5nm,0.3s,mb4.0						
STKA	**Stephens Creek**	34.87	248	P	P	11 23 52.3	+0.2
	2.2nm,0.4s,mb4.1,baz=89,slow=9.7,SNR=8.3						
STKA				LR	LR	11 36 49.4	
	comp=Z,48nm,21.1s,baz=22,slow=34						
WB2	**Warramunga Arr**	42.50	266	⇓*i*P	P	11 24 55.2	-0.1
WRA	**Warramunga Arr**	42.52	266	P	P	11 24 55.6	+0.2
	2.2nm,0.3s,mb4.0,baz=99,slow=7.1,SNR=120						
FITZ	**Fitzroy Crossi**	50.94	265	*e*P	P	11 25 59.9	-0.8
	4.1nm,0.7s,mb4.0						
TXAR	**Lajitas Array**	90.27	58	P	P	11 29 56.7	+0.2
	0.4nm,0.7s,mb3.4,baz=219,slow=5.8,SNR=4.6						

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*ISK **02** 11:25:54.0,38.28N×26.53E,h14^{km},MD3.0*

*ATH **02** 11:25:54.3,38.13N×26.32E,h30^{km}±6^{km},MD3.0/3*

*CSEM **02** 11:25:54.3±0.2,38.30N×26.55E,h15^{km},MD3.0,Error ellipse: s-maj=4.4km s-min=2.0km az=133.0*

ISC 02 11:25:54.2±0.9**,38.20N**±0.03×**26.54E**±0.05**,h4**^{km}±6^{km}**,n16,**σ**1**^{s}**.10**/27**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	0.17	16	*i* P	Pg	11 25 57.6	0.0
URLA				*i* S	Sg	11 26 00.5	+0.5
BLCB	**Balcova**	0.44	65	*i* PG	Pg	11 26 02.6	-0.4
SMG	**Samos**	0.54	154	*e*PN	Pn	11 26 06.5	-1.7
SMG				*e*SN	Sn	11 26 15.2	-2.6
IZM	**Izmir**	0.61	71	*i* PG	Pg	11 26 06.4	+0.1
IZM				*i* SG	Sg	11 26 14.9	+0.5
KDAG	**Bornova**	0.61	70	*i* P	Pg	11 26 05.4	-1.0
KDAG				*i* S	Sg	11 26 13.8	-0.8
PRK	**Paraskevi**	1.07	349	*e*PN	Pn	11 26 15.3	-0.4
PRK				*e*SN	Sn	11 26 30.9	-0.2
AYVA	**Ayvalik**	1.12	6	*i* P	Pb	11 26 15.8	+0.1
AYVA				*i* S	Sb	11 26 32.1	+1.8
AKS	**Akhisar**	1.21	55	PN	Pn	11 26 16.5	-1.3
AKS				SN	Sn	11 26 33.2	-1.6
BODT	**Bodrum**	1.29	151	*e*PN	Pn	11 26 19.1	+0.2
MLSB	**Milas**	1.33	132	*e*PN	Pn	11 26 19.7	+0.1
BDRM	**Kayabasi**	1.34	147	*i* P	Pb	11 26 20.9	+1.4
BDRM				*i* S	Sb	11 26 39.4	+2.6
APE	**Apeiranthos**	1.38	216	*e*PN	Pn	11 26 20.4	+0.2
APE				*e*SN	Sn	11 26 39.4	+0.3
APE	**Apeiranthos**	1.38	216	*e*PN	Pn	11 26 17.3	-2.9
MANT	**Manisa**	1.62	79	*i* P	Pn	11 26 24.9	+1.3
MANT				*i* S	Sb	11 26 45.6	+0.7
YER	**Yerkesik**	1.75	127	*e*PN	Pn	11 26 25.7	+0.3
DNZL	**Cakiroluk**	2.05	104	*i* P	Pn	11 26 34.0	+4.2
DNZL				*i* S	Sn	11 27 02.7	+6.6

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*NIED **02** 11:33:00,42.00N×142.50E,h71^{km},Mw3.9 Best double couple: M$_0$8.21×10^{14} NP1:φ$_s$54°,δ85°,λ108°. NP2:φ$_s$158°,δ18°,λ15°.*

*JMA **02** 11:33:08.5±0.2,42.00N×142.50E,h63^{km}±2^{km},M3.7 Broadband fault plane solution: P waves. NP1:φ$_s$157°,δ26°,λ4°. NP2:φ$_s$64°,δ88°,λ116°. Principal axes: T Plg41°, Azm358°; N Plg26°, Azm243°; P Plg38°, Azm131°;*

JMA Felt I J1.

*IDC **02** 11:33:09.9±2.0,42.01N×142.37E,h73^{km}±15^{km},mb3.5/11,mb1 3.7/13,mb1mx3.6/24,mbtmp3.8/13,MS2.7/1,Ms1 2.7/1,ms1mx2.3/21 Error ellipse: s-maj=20.5km s-min=14.1km az=117.0*

*MOS **02** 11:33:09.3±0.9,42.03N×142.33E,h85^{km},mb4.0/5,Error ellipse: s-maj=19.0km s-min=9.9km az=85.3*

*NEIC **02** 11:33:10.6±0.4,42.02N×142.40E,mb4.0/5,Error ellipse: s-maj=10.4km s-min=6.7km az=121.0*

NEIC Recorded [1 JMA] in the Chitose and Shizunai areas.

ISC 02 11:33:08.0±0.4**,41.98N**±0.04×**142.47E**±0.05**,h70**^{km}±3^{km}**,n48,**σ**0**^{s}**.81**/54**,mb3.7**/15**,5C-7D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	0.36	35	⇓P	P	11 33 19.0	-0.7
JNBK				*e*S	S	11 33 27.2	-1.2
JEM	**Erimo**	0.51	86	⇑P	P	11 33 20.8	-0.2
JEM				*e*S	S	11 33 29.8	-0.8
JBT2	**Biratori 2**	0.80	354	⇓P	P	11 33 24.0	-0.2
JCH	**Churui**	0.92	46	P	P	11 33 25.7	+0.1
JCH				*e*S	S	11 33 38.2	-0.5
JKB	**Kayabe**	1.08	266	⇓P	P	11 33 27.9	+0.1
JKB				*e*S	S	11 33 42.3	-0.1
JEW	**Eniwo**	1.15	319	⇓P	P	11 33 28.9	+0.3
JNB	**Noboribetsu**	1.17	295	⇓P	P	11 33 28.6	-0.4
JFR	**Furan**	1.19	4	⇓P	P	11 33 28.9	-0.3
JOT	**Ohata**	1.22	241	⇑P	P	11 33 30.0	+0.3
JOT				*e*S	S	11 33 45.7	-0.1
JOB	**Onbets**	1.37	47	⇑P	P	11 33 32.5	+0.8
JOB				*e*S	S	11 33 49.6	+0.3
JAB	**Ashibetsu**	1.54	353	P	P	11 33 34.3	+0.3
JYM2	**Yakumo 2**	1.57	276	⇓P	P	11 33 34.5	0.0
JTM	**Tenmabayashi**	1.59	222	⇑P	P	11 33 35.6	+0.9
JSR	**Shiriuchi**	1.60	254	P	P	11 33 35.4	+0.5
JAR	**Ashorobuto**	1.63	36	P	P	11 33 35.3	+0.1
ASAJ	**Asahikawa**	2.14	2	P	P	11 33 42.8	+0.5
	50nm,0.3s,baz=198,slow=13,SNR=228						
ASAJ				S	S	11 34 09.2	+1.6
	35nm,0.3s,baz=78,slow=26,SNR=18						
ASAJ	**Asahikawa**	2.14	2	PN	P	11 33 42.8	+0.6
ASAJ				S	S	11 34 09.2	+1.7
ASAJ				pmax	pmax		
	comp=Z,50nm,0.3s						
YSS	**Yuzh-Sakhalins**	4.98	2	*e*P	P	11 34 23.5	+1.6
YSS	**Yuzh-Sakhalins**	4.98	2	⇑*i*PN	P	11 34 23.2	+1.3
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
MAJO	**Matsushiro**	6.36	213	*e*P	P	11 34 42.9	+1.8
	comp=Z,5.4nm,0.6s						
MAJO	**Matsushiro**	6.36	213	*e*PN	P	11 34 42.9	+1.9
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MJAR	**Matsushiro Arr**	6.36	213	P	P	11 34 41.3	+0.2
	comp=Z,0.6nm,0.3s,baz=29,slow=14,SNR=5.3						
JNU	**Nakatsue**	12.75	230	LR	LR	11 40 33.4	
	comp=Z,34nm,18.6s,baz=102,slow=35						
SONM	**Songino Array**	26.05	295	P	P	11 38 36.2	0.0
	comp=Z,0.7nm,0.6s,mb3.3,baz=81,slow=8.3,SNR=7.5						
ZAK	**Zakamensk**	28.13	301	*e*P	P	11 38 53.4	-1.8
MKAR	**Makanchi Array**	42.36	298	P	P	11 40 56.0	-0.5
	comp=Z,1.3nm,0.8s,mb3.7,baz=88,slow=8.9,SNR=7.1						
KURK	**Kurchatov**	43.67	304	*e*P	P	11 41 06.9	-0.3
	comp=Z,2.9nm,0.9s,mb4.0						
KURK	**Kurchatov**	43.67	304	*e*P	P	11 41 06.9	-0.3
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
COLA	**College**	44.51	35	*e*P	P	11 41 13.7	0.0
	comp=Z,1.4nm,0.7s,mb3.8						
COLA	**College**	44.51	35	*e*P	P	11 41 13.7	0.0
COLA				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ILAR	**Eielson Array**	44.93	35	P	P	11 41 16.9	-0.2
	comp=Z,0.9nm,0.5s,mb3.8,baz=258,slow=5.4,SNR=19						
CHKZ	**Chkalovo**	47.64	310	*e*P	P	11 41 38.2	-0.4
	comp=Z,1.4nm,0.6s,mb4.0						
CHKZ	**Chkalovo**	47.64	310	*e*P	P	11 41 38.2	-0.4
CHKZ				pmax	pmax		

	comp=Z,1.0nm,0.6s,mb3.8						
BVAR	Borovoye Array	47.96	309	P	P	11 41 40.3	-0.8
	comp=Z,1.6nm,0.5s,mb4.1,baz=69,slow=8.7,SNR=6.9						
INK	Inuvik	49.64	29	P	P	11 41 53.3	-0.6
	comp=Z,0.8nm,0.4s,mb4.0,baz=237,slow=3.2,SNR=25						
INK	Inuvik	49.64	29	eP	P	11 41 52.8	-1.1
	comp=Z,1.0nm,0.6s,mb3.9						
INK	Inuvik	49.64	29	eP	P	11 41 52.8	-1.1
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	62.06	189	P	P	11 43 22.5	-1.1
	comp=Z,0.2nm,0.7s,mb3.3,baz=6.5,slow=6.9,SNR=4.1						
WRA				pP	pP	11 43 42.2	+0.1
	comp=Z,0.3nm,0.6s,baz=6.1,slow=6.5,SNR=3.2						
FINES	FINESS Array B	64.84	332	P	P	11 43 39.9	-1.3
	comp=Z,1.7nm,0.6s,mb4.0,baz=56,slow=6.9,SNR=7.8						
FINES				pP	pP	11 44 00.6	+0.8
	comp=Z,0.9nm,0.6s,baz=34,slow=6.9,SNR=1.4						
NB2	NORSAR Subarra	69.95	337	P	P	11 44 12.6	-0.6
	comp=Z,0.9nm,0.6s,mb3.8,baz=36,slow=6.2						
NOA	NORSAR Array B	69.95	337	P	P	11 44 12.6	-0.5
	comp=Z,1.2nm,0.7s,mb3.9,baz=37,slow=6.2,SNR=4.5						
AKASG	Malin Array Be	70.91	322	P	P	11 44 18.1	-1.0
	comp=Z,0.5nm,0.4s,mb3.7,baz=48,slow=5.7,SNR=4.8						
DUG	Dugway	73.54	51	eP	P	11 44 35.2	+0.3
	comp=Z,1.4nm,0.8s,mb3.7						
DUG	Dugway	73.54	51	eP	P	11 44 35.2	+0.4
DUG				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
PDAR	Pinedale Array	73.65	47	P	P	11 44 36.5	+1.0
	comp=Z,0.5nm,0.7s,mb3.4,baz=302,slow=1.7,SNR=6.1						
PV10	Paradox Valley	76.93	50	eP	P	11 44 55.5	+1.2
TXAR	Lajitas Array	86.48	53	P	P	11 45 45.8	+1.7
	comp=Z,0.3nm,0.7s,mb3.4,baz=270,slow=1.3,SNR=5.7						
SIV	San Ignacio	147.13	45	PKPbc	PKPdf	11 52 44.7	+3.8
	comp=Z,0.7nm,0.6s,baz=308,slow=10,SNR=3.9						

MAN 02 11:38:52.9, 9.26N×125.38E, h1^{km}, mb4.2, ML3.0, MS2.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.37	141	eP	Pg	11 38 59.4	-0.9
MSLP	Maasin	1.01	329	eP	Pb	11 39 11.7	-1.1
CGP	Cagayan de Oro	1.05	220	⇑eP	Pb	11 39 13.1	-0.3
CGP				i S	Sb	11 39 30.4	+2.9
BUKP	Musuan	1.41	193	eP	Pb	11 39 19.5	-0.2
BUKP				eS	Sb	11 39 42.0	+4.0
PAGZ	Pagadian	2.42	235	eP	Pn	11 39 35.2	+1.0

MAN 02 12:08:54.2, 14.72N×123.33E, h21^{km}, mb4.1, ML3.0, MS2.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	Guinayangan	1.17	227	eP	Pn	12 09 14.5	-1.1
GQP				eS	Sb	12 09 31.0	+0.6
POLP	Polilio Island	1.34	271	eP	Pn	12 09 16.9	-1.1
POLP				eS	Sb	12 09 35.6	+0.3
PVCP	Virac	1.37	144	eP	Pn	12 09 17.7	-0.8
BOAC	Boac	1.91	229	eP	Pn	12 09 26.9	+0.8

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*CSEM **02** 12:13:00.8±0.1, 35.18N×3.92W, h2^{km}, MD3.3, Error ellipse: s-maj=2.4km s-min=1.9km az=55.0*

*CNRM **02** 12:13:03.4, 35.12N×3.96W, h2^{km}, MD3.3*

MDD 02 12:13:00.6±0.8, 35.05N×4.04W, mbLg2.2/8, Error ellipse: s-maj=10.2km s-min=3.6km az=36.0, PRXIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOU	Touzarine	0.25	111	P	Pg	12 13 05.0	-0.5
TOU				S	Sg	12 13 07.0	-1.8
TOU	Touzarine	0.25	111	i P	Pg	12 13 05.0	-0.5
EMEL	Melilla	0.92	74	P	Pg	12 13 18.6	-0.3
	165nm,0.1s,SNR=7.9						
EMEL				S	Sg	12 13 31.7	+0.5
	186nm,0.2s,SNR=7.9						
EMLI	Melilla	0.92	74	P	Pg	12 13 18.6	-0.4
	165nm,0.1s,SNR=7.9						
EMLI				S	Sg	12 13 31.7	+0.4
	186nm,0.2s,SNR=7.9						
ZAI	Zaio	1.06	94	i P	Pb	12 13 21.5	0.0
ZAI				i S	Sb	12 13 36.0	+0.2
EMIJ	Mijas	1.62	339	P	Pn	12 13 29.5	-1.1
	4.0nm,0.1s,SNR=4.0						
EMIJ				S	Sb	12 13 48.7	-3.4
	7.1nm,0.1s,SNR=7.9						
EJIF	Jimena Fronter	1.82	321	P	Pn	12 13 32.9	-0.4
	1.4nm,0.2s,SNR=7.9						
ERON	Agron	1.97	5	S	Sn	12 13 57.9	-3.5
	5.9nm,0.4s,SNR=7.9						
ELOJ	Sierra Loja	2.09	357	P	Pn	12 13 36.0	-1.4
	1.6nm,0.2s,SNR=7.9						
ELOJ				S	Sn	12 14 00.8	-3.6
	3.8nm,0.1s,SNR=5.2						
CZD	Col de Zad	2.18	203	i P	Pn	12 13 41.0	+2.5
EQUE	Quentar	2.20	12	P	Pn	12 13 37.2	-1.7
	1.9nm,0.3s,SNR=5.9						
EQUE				S	Sn	12 14 03.0	-4.3
	9.6nm,0.6s,SNR=7.9						
ESPR	Espera	2.34	321	P	Pn	12 13 40.6	-0.2
	0.7nm,0.1s,SNR=4.0						
ESPR	Espera	2.34	321	P	Pn	12 13 40.6	-0.2
	0.7nm,0.1s,SNR=4.0						
EQES	Quesada	2.85	16	P	Pn	12 13 46.7	-1.5
	2.5nm,0.3s,SNR=9.2						
EQES				S	Sn	12 14 18.3	-5.5
	3.4nm,0.4s,SNR=6.1						
EQES	Quesada	2.85	16	P	Pn	12 13 46.7	-1.5
	2.5nm,0.3s,SNR=9.2						
EQES				S	Sn	12 14 18.3	-5.5
	3.4nm,0.4s,SNR=6.1						
EADA	Adamuz	3.14	352	P	Pn	12 13 50.0	-2.3
	1.7nm,0.3s,SNR=5.1						
EADA				S	Sn	12 14 25.4	-5.6
	6.2nm,0.6s,SNR=7.9						
EADA	Adamuz	3.14	352	P	Pn	12 13 50.0	-2.3
	1.7nm,0.3s,SNR=5.1						
EADA				S	Sn	12 14 25.4	-5.6
	6.2nm,0.6s,SNR=7.9						
ECAB	El Cabril	3.22	340	P	Pn	12 13 51.5	-1.8
	0.4nm,0.2s,SNR=7.9						
ECAB				S	Sn	12 14 26.3	-6.7
	3.0nm,0.2s,SNR=5.6						
ECAB	El Cabril	3.22	340	P	Pn	12 13 51.5	-1.8
	0.4nm,0.2s,SNR=7.9						
ECAB				S	Sn	12 14 26.3	-6.6
	3.0nm,0.2s,SNR=5.6						
EMIN	Mina Concepcio	3.44	323	P	Pn	12 13 53.1	-3.5
	1.0nm,0.1s,SNR=7.9						
EMIN				S	Sn	12 14 32.2	-6.6
	3.5nm,0.5s,SNR=8.3						
EMIN	Mina Concepcio	3.44	323	P	Pn	12 13 53.1	-3.5
	1.0nm,0.1s,SNR=7.9						
EGRO	El Granado	3.73	313	P	Pn	12 13 57.5	-3.1
	0.9nm,0.1s,SNR=7.9						
EGRO				S	Sn	12 14 37.7	-8.1
	7.5nm,0.5s,SNR=7.9						
EGRO	El Granado	3.73	313	P	Pn	12 13 57.5	-3.1
	0.9nm,0.1s,SNR=7.9						
ETOB	Tobarra	4.11	28	P	Pn	12 14 03.7	-2.3
	3.0nm,0.2s,SNR=7.5						
ETOB				S	Sn	12 14 48.4	-7.0
	1.6nm,0.6s,SNR=7.9						
ETOB	Tobarra	4.11	28	P	Pn	12 14 03.7	-2.2
	3.0nm,0.2s,SNR=7.5						
ETOB				S	Sn	12 14 48.4	-7.0
	1.6nm,0.6s,SNR=7.9						
EBAD	Badajoz	4.40	328	P	Pn	12 14 06.8	-3.4
	0.9nm,0.1s,SNR=7.9						
EBAD				S	Sn	12 14 54.3	-8.6
	5.5nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.40	328	P	Pn	12 14 06.8	-3.4
	0.9nm,0.1s,SNR=7.9						
EIBI	Ibiza	5.85	46	P	Pn	12 14 26.3	-4.3
	0.5nm,0.1s,SNR=7.9						

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*CSEM **02** 12:15:19.9±0.2, 38.19N×26.65E, h25^{km}, MD3.0, Error ellipse: s-maj=4.8km s-min=2.0km az=126.0*

*ISK **02** 12:15:20.5, 38.19N×26.68E, h27^{km}, MD3.0*

*ATH **02** 12:15:21.0, 38.05N×26.65E, h33^{km}±6^{km}, MD2.9/3*

ISC 02 12:15:19.7±1.1, 38.09N±0.04×26.63E±0.06, h2^{km}±8^{km}, n12, σ0ˢ85/19, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.27	355	i P	Pg	12 15 25.3	+0.1
URLA				i S	Sg	12 15 29.3	+0.5
SMG	Samos	0.41	156	ePB	Pb	12 15 29.8	+0.4
SMG				eSB	Sb	12 15 36.8	+0.9
BLCB	Balcova	0.44	48	PG	Pg	12 15 29.3	+0.7
BLCB				SG	Sg	12 15 34.7	+0.3
IZM	Izmir	0.59	58	PG	Pg	12 15 31.5	0.0
IZM				SG	Sg	12 15 39.6	+0.3
KDAG	Bornova	0.59	58	i P	Pg	12 15 30.6	-1.0
KDAG				i S	Sg	12 15 38.9	-0.7
BODT	Bodrum	1.16	152	ePN	Pn	12 15 42.2	-0.7
PRK	Paraskevi	1.19	347	ePN	Pn	12 15 43.3	0.0
PRK				eSN	Sn	12 16 00.5	+0.3
AKS	Akhisar	1.22	49	ePN	Pn	12 15 41.2	-2.6
APE	Apeiranthos	1.34	221	ePN	Pn	12 15 44.4	-1.1
APE	Apeiranthos	1.34	221	ePN	Pn	12 15 45.2	-0.3
MANT	Manisa	1.57	75	i P	Pn	12 15 50.9	+2.1
MANT				i S	Sb	12 16 09.3	-0.2
YER	Yerkesik	1.62	125	ePN	Pn	12 15 49.2	-0.3

IDC 02 12:18:29.5±1.1, 21.21N×120.33E, mb3.6/4, mb1 3.8/4, mb1mx3.6/17, mbtmp3.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.4/26, Error ellipse: s-maj=59.4km s-min=25.1km az=73.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	Matsushiro Arr	21.82	42	LR	LR	12 31 20.1	
	comp=Z,26nm,21.6s,baz=95,slow=35						
MKAR	Makanchi Array	39.99	319	P	P	12 26 05.5	-2.0
	0.3nm,0.5s,baz=118,slow=8.0,SNR=5.0						
WRA	Warramunga Arr	43.13	161	P	P	12 26 33.0	-0.6
	0.4nm,0.7s,baz=343,slow=9.1,SNR=5.5						
WRA				PcP	PcP	12 28 22.0	-2.0
	0.4nm,0.5s,baz=347,slow=3.5,SNR=5.5						
STKA	Stephens Creek	56.58	158	P	P	12 28 12.1	-4.4
	2.8nm,1.1s,baz=329,slow=18,SNR=3.2						
ILAR	Eielson Array	72.21	27	P	P	12 29 56.3	-1.7
	0.2nm,0.5s,baz=272,slow=5.0,SNR=8.9						

IDC 02 12:45:16.8±3.5, 4.27N×95.42E, mb3.6/4, mb1 3.8/4, mb1mx3.6/17, mbtmp3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx2.6/25, Error ellipse: s-maj=143.7km s-min=24.9km az=62.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	43.86	347	P	P	12 53 24.1	-2.4
	0.3nm,0.7s,baz=155,slow=6.7,SNR=3.5						
SONM	Songino Array	44.41	11	P	P	12 53 30.1	-0.9
	0.5nm,0.6s,baz=189,slow=9.2,SNR=4.5						
SONM				LR	LR	13 13 17.0	
	comp=Z,19nm,20.7s,baz=41,slow=38						
WRA	Warramunga Arr	45.19	124	P	P	12 53 35.1	-2.5
	0.6nm,0.4s,baz=303,slow=9.1,SNR=11						
STKA	Stephens Creek	56.73	133	P	P	12 55 03.4	-1.6
	1.3nm,0.7s,baz=308,slow=17,SNR=3.5						

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*IDC **02** 12:55:26.1±3.0, 13.34S×171.99E, mb4.0/3, mb1 4.3/3, mb1mx3.8/13, mbtmp4.0/3, Error ellipse: s-maj=139.0km s-min=32.1km az=136.0*

ISC 02 12:55:29.3±2.6, 13.5S±0.6×172.0E±0.5, h33^{km}, n7, σ0ˢ24/7, mb4.2/5, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	33.31	232	P	P	13 02 06.3	0.0
	1.0nm,0.4s,mb4.1,baz=68,slow=10,SNR=5.5						
WB2	Warramunga Arr	36.55	255	eP	P	13 02 34.0	-0.1
WRA	Warramunga Arr	36.56	255	P	P	13 02 34.6	+0.4
	2.3nm,0.5s,mb4.3,baz=86,slow=8.8,SNR=33						
ASPA	Alice Springs	37.38	249	eP	P	13 02 41.1	0.0
KAKA	Kakadu	38.49	266	eP	P	13 03 10.6	+20
	5.3nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	44.74	258	eP	P	13 03 41.3	-0.4
	2.6nm,0.5s,mb4.3						
ILAR	Eielson Array	83.99	16	P	P	13 07 57.3	0.0
	0.4nm,0.6s,mb3.8,baz=236,slow=4.9,SNR=7.5						

MAN 02 12:59:28.0, 14.61N×123.27E, h86^{km}, mb4.1, ML2.9, MS2.6, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	Guinayangan	1.06	229	⇓iP	P	12 59 49.1	+0.8
GQP				eS	S	13 00 04.4	+0.7
POLP	Polilio Island	1.29	275	eP	P	12 59 50.8	-0.5
POLP				eS	S	13 00 09.5	+0.7
PVCP	Virac	1.33	139	eP	P	12 59 52.0	+0.2
BOAC	Boac	1.79	231	eP	P	13 00 01.3	+3.5
CAUP	Cauayan	2.70	329	eP	P	13 00 10.2	-0.2

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*NNC **02** 13:10:13.9±2.0, 35.21N×72.58E, mpv3.5, Error ellipse: s-maj=21.9km s-min=11.2km az=119.0*

ISC 02 13:10:08.6±1.3, 34.84N±0.08×73.0E±0.2, h33^{km}, n11, σ1ˢ27/9, 1C-3D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.29	136	eP	P	13 11 00.0	+0.9
THN				eS	S	13 11 45.0	+7.4
DLH	Dalhousie	3.37	132	eP	P	13 10 59.0	-1.1
DLH				ex	x	13 11 26.0	
KLP	Kalpa	5.49	125	i P	P	13 11 26.9	-3.2
KLP				eP		13 11 29.6	
KLP				eS	S	13 12 33.4	+0.3
KLP				AML	AML	13 13 04.1	
	comp=E,80nm,0.5s						
KLP				AML	AML	13 13 05.9	
	comp=N,105nm,0.5s						
KLP	Kalpa	5.49	125	ex	x	13 12 31.7	
JOSI	Joshimath	6.98	126	ex	x	13 11 36.3	
JOSI	Joshimath	6.98	126	ex	x	13 12 00.6	
KHET	Khetri	7.16	160	ex	x	13 13 06.5	
KALG	Kalgarh	7.21	136	ex	x	13 11 25.7	
AAK	Ala-Archa	7.86	8	⇓S	S	13 13 33.2	+0.9
	comp=N,4.5nm,1.2s						
KK31	Karatay Array	8.47	347	⇓P	P	13 12 12.3	+0.3
	comp=N,0.7nm,0.3s,baz=167,slow=12,SNR=16						
KK31				⇑S	S	13 13 45.1	-2.4
	comp=N,1.1nm,0.3s,baz=171,slow=23,SNR=5.9						
AB31	Akbulak array	17.33	330	⇓P	P	13 14 10.5	+1.1
	comp=N,1.7nm,1.1s,baz=142,slow=12,SNR=3.6						

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*IDC **02** 13:14:18.6±2.4, 17.70S×178.91W, h506^{km}±33^{km}, mb3.1/4, mb1 3.3/5, mb1mx3.1/15, mbtmp4.0/5, Error ellipse: s-maj=36.6km s-min=21.4km az=117.0*

ISC 02 13:14:17.9±2.1, 17.7S±0.2×178.9W±0.3, h513^{km}±39^{km}, n8, σ0ˢ62/6, mb3.4/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.80	62	P	P	13 16 13.6	0.0
	1.4nm,0.3s,baz=234,slow=17,SNR=3.9						
URZ	Urewera	20.80	189	P	P	13 18 23.7	-0.2
	4.6nm,0.6s,baz=233,slow=7.3,SNR=5.8						
WRA	Warramunga Arr	44.23	259	P	P	13 21 42.4	-0.3
	0.5nm,0.8s,mb3.1,baz=95,slow=7.7,SNR=5.5						
ASPA	Alice Springs	44.42	254	eP	P	13 21 44.8	+0.6
MJAR	Matsushiro Arr	67.46	324	P	P	13 24 23.4	-0.4
	2.2nm,0.7s,mb3.8,baz=139,slow=5.8,SNR=5.8						
ILAR	Eielson Array	85.77	13	P	P	13 26 03.1	+0.2
	0.4nm,0.5s,mb3.3,baz=210,slow=7.3,SNR=5.9						
BRTR	Keskin Array B	144.31	315	PKP	PKPdf	13 32 56.6	+1.6
	0.7nm,0.6s,baz=94,slow=3.2,SNR=4.8						
GERES	GERESS Array B	147.28	345	PKPbc	PKPdf	13 33 04.7	+5.0
	0.8nm,0.5s,baz=27,slow=2.2,SNR=4.4						

MAN 02 13:17:36.3, 13.25N×120.49E, h11^{km}, mb3.8, ML2.5, MS2.1, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.52	61	eP	Pg	13 17 46.6	-0.2
LUBP	Lubang	0.53	334	eP	Pg	13 17 46.9	-0.1
SJMP	San Jose	1.00	142	eP	Pb	13 17 55.0	-0.1
SJMP				eS	Sb	13 18 02.1	-5.9
BUSP	Coron	1.27	193	eP	Pb	13 17 58.7	-1.1
BUSP				eS	Sb	13 18 12.2	-3.8

MEX 02 13:29:18.5±1.0, 16.40N×96.17W, h62^{km}±13^{km}, MD4.2, 1D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.63	174	i P	P	13 29 30.6	-1.4
HUIG				i S	S	13 29 40.3	-1.8
VHO	Vista Hermosa	0.86	321	⇓iP	P	13 29 33.6	-1.3
VHO				i S	S	13 29 44.9	-2.3
OXX	Oaxaca	0.86	322	i P	P	13 29 34.2	-0.8
OXX				i S	S	13 29 45.0	-2.2
CMIG	Matias Romero	1.42	61	i P	P	13 29 41.0	-1.6
CMIG				eS	S	13 29 57.0	-3.4
PNIG	Pinotepa	1.88	270	i P	P	13 29 46.4	-2.6
PNIG				i S	S	13 30 08.8	-2.6
PPM	Popocatepetl	3.54	319	eP	P	13 30 11.4	-1.0
PPM				i S	S	13 30 52.8	-0.5
ACX	Acapulco	3.62	278	i P	P	13 30 09.0	-4.5
YAIG	Yautepec	3.69	312	i S	S	13 30 55.8	-1.3
PLIG	Platanillo	3.75	302	i P	P	13 30 15.3	0.0
PLIG				i S	S	13 30 57.2	-1.3
CCIG	Comitan	3.88	91	i P	P	13 30 15.6	-1.5
CCIG				i S	S	13 30 58.2	-3.6

MAN 02 13:32:15.6, 13.34N×120.48E, h29^{km}, mb3.6, ML2.3, MS1.8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.46	330	eP	Pb	13 32 26.6	+1.3
LUBP				eS	Sb	13 32 34.8	+2.9
PGP	Puerto Galera	0.49	70	eP	Pb	13 32 26.2	+0.5
SJMP	San Jose	1.07	144	eP	Pn	13 32 34.8	0.0
BUSP	Coron	1.35	192	eP	Pn	13 32 38.3	-0.6

MAN 02 13:45:12.3, 13.23N×120.47E, h11^{km}, mb3.7, ML2.4, MS1.9, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.54	337	eP	Pg	13 45 23.1	-0.2
LUBP				eS	Sg	13 45 28.6	-2.1
PGP	Puerto Galera	0.54	61	eP	Pg	13 45 23.0	-0.3
SJMP	San Jose	1.00	140	eP	Pb	13 45 31.3	+0.2
BUSP	Coron	1.25	192	eP	Pb	13 45 34.4	-1.1

MEX 02 14:01:20.4±0.6, 17.76N×101.43W, h42^{km}±8^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.16	192	i P	P	14 01 25.9	-1.6
ZIIG				i S	S	14 01 30.8	-1.6
CAIG	El Cayaco	1.32	122	i P	P	14 01 40.6	-2.1
CAIG				i S	S	14 01 56.1	-3.3
ACX	Acapulco	1.70	121	i P	P	14 01 46.5	-1.6
ACX				i S	S	14 02 06.5	-2.3
PLIG	Platanillo	1.94	71	eP	P	14 01 49.0	-2.6
PLIG				i S	S	14 02 11.4	-3.4

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*IDC **02** 14:04:31.8±1.4, 26.22N×124.94E, mb3.5/3, mb1 3.7/3, mb1mx3.5/19, mbtmp3.5/3, ML2.0/1, Error ellipse: s-maj=41.6km s-min=24.9km az=51.0*

*JMA **02** 14:04:31.3±0.3, 26.17N×124.72E, h7^{km}, M3.0*

ISC 02 14:04:34.7±0.8, 26.13N±0.05×124.72E±0.08, h33^{km}, n11, σ0ˢ96/15, mb3.4/3, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMJ	Miyako jima 2	1.41	158	P	P	14 04 57.6	-0.6
JMJ				eS	S	14 05 17.0	+1.2
JTJ	Tarama	1.48	181	P	P	14 04 59.1	-0.2
JOGS	Gusukube	1.50	155	P	P	14 04 59.1	-0.4
JOGS				eS	S	14 05 19.3	+1.2
JIJ	Ishigaki jima	1.84	197	P	P	14 05 03.4	-0.9
JIJ				eS	S	14 05 24.5	-2.1
JKE	Kume jima 2	1.86	84	P	P	14 05 04.2	-0.5
JKRS	Kuro-shima	1.99	199	P	P	14 05 06.7	+0.1
JKRS				eS	S	14 05 31.0	+0.4
IRIF	Iriomote-Funau	2.00	207	P	P	14 05 07.3	+0.6
JOW	Kunigami	3.26	77	Pn	Pn	14 05 21.2	-3.6
	0.3nm,0.3s,baz=199,slow=20,SNR=2.2						
SONM	Songino Array	26.02	331	P	P	14 10 07.1	+0.7
	0.4nm,0.8s,mb3.0,baz=153,slow=6.4,SNR=3.4						
MKAR	Makanchi Array	39.27	313	P	P	14 12 02.5	+0.7
	0.6nm,0.5s,mb3.5,baz=99,slow=10.0,SNR=8.9						
WRA	Warramunga Arr	46.74	168	P	P	14 13 03.2	+0.4
	0.5nm,0.6s,mb3.6,baz=349,slow=8.8,SNR=7.1						

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*IDC **02** 14:14:59.3±0.7, 27.30N×140.31E, h455^{km}±10^{km}, mb3.2/6, mb1 3.3/7, mb1mx3.0/22, mbtmp4.0/7, Error ellipse: s-maj=29.9km s-min=15.9km az=83.0*

*JMA **02** 14:15:00.5±0.1, 27.51N×140.78E, h473^{km}, M3.7*

ISC 02 14:14:59.3±0.6, 27.39N±0.06×140.5E±0.3, h472^{km}±8^{km}, n20, σ0ˢ75/27, mb3.5/8, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.55	101	P	P	14 16 00.1	-0.1
	13nm,0.3s,baz=293,slow=19,SNR=17						
CBIJ				S	S	14 16 46.6	-1.7
	24nm,0.3s,baz=280,slow=21,SNR=7.8						
CBIJ	Chichi jima	1.55	101	P	P	14 16 00.2	+0.1
CBIJ				S	S	14 16 47.9	-0.4
JHHJ	Haha-jima-NKT	1.70	116	P	P	14 16 01.5	+0.7
JHHJ				S	S	14 16 49.6	+0.1
JHJ2	Mitsune	5.73	354	P	P	14 16 32.9	+0.2
JHJ	Hachijo jima 2	5.74	354	P	P	14 16 33.0	+0.2
	8.4nm,0.3s,baz=53,slow=20,SNR=13						
BSO1	Boso 1	7.25	3	P	P	14 16 48.7	+0.4
BSO1				S	S	14 18 14.3	-0.4
JIM2	Oshima 3	7.36	353	P	P	14 16 49.7	+0.3
BSO3	Boso 3	7.39	0	P	P	14 16 50.3	+0.6
BSO3				S	S	14 18 16.5	-0.8
BSO4	Boso 4	7.58	359	P	P	14 16 52.4	+0.6
BSO4				S	S	14 18 20.2	-0.7
JIE	Ise	7.69	336	P	P	14 16 54.7	+1.7
JHO	Hitachi	9.19	0	P	P	14 17 09.8	+0.6
JHO				eS	S	14 18 51.4	-1.0
WRA	Warramunga Arr	47.43	188	P	P	14 22 50.3	-1.4
	0.6nm,0.3s,mb3.5,baz=5.5,slow=7.6,SNR=16						
MKAR	Makanchi Array	49.11	309	P	P	14 23 03.4	-0.7
	0.3nm,0.4s,mb3.0,baz=93,slow=9.6,SNR=8.4						
BVAR	Borovoye Array	56.79	317	P	P	14 23 58.6	-0.5
	2.8nm,0.4s,mb3.9,baz=87,slow=6.8,SNR=33						
INK	Inuvik	63.40	25	P	P	14 24 44.1	+1.3
	0.8nm,1.0s,mb3.2,baz=297,slow=2.3,SNR=3.2						
KEV	Kevo	72.20	340	ep	P	14 25 43.7	+7.5
JOF	Joensuu	74.14	333	ep	P	14 25 46.6	-0.8
	0.7nm,0.4s,mb3.5						
KAF	Kangasniemi	76.54	334	ep	P	14 26 00.7	0.0
	0.8nm,0.3s,mb3.7						
FINES	FINESS Array B	77.00	333	P	P	14 26 03.5	+0.2
	1.6nm,0.5s,mb3.9,baz=76,slow=5.2,SNR=16						
NOA	NORSAR Array B	82.77	338	P	P	14 26 33.6	+0.4
	0.5nm,0.4s,mb3.4,baz=45,slow=5.0,SNR=2.2						

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*IDC **02** 14:22:06.8±10.0, 0.19N×123.89E, h102^{km}±109^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.8/16, mbtmp4.2/8, ML4.6/1, Error ellipse: s-maj=40.6km s-min=19.9km az=82.0*

*NEIC **02** 14:22:07.5±4.8, 0.13N×123.78E, h112^{km}±48^{km}, mb4.7/3, Error ellipse: s-maj=21.0km s-min=12.0km az=87.0*

ISC 02 14:22:04.7±0.6, 0.14N±0.08×123.6E±0.2, h100^{km}, n17, σ0ˢ53/16, mb4.2/9, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	15.49	146	eP	Px	14 25 57.1	
	7.2nm,0.6s						
FITZ	Fitzroy Crossi	18.24	174	eP	P	14 26 12.6	0.0

	3.9nm,0.3s						
FITZ	Fitzroy Crossi	18.24	174	P	P	14 26 12.5	-0.2
	1.4nm,0.3s,baz=356,slow=7.4,SNR=41						
MBWA	Marble Bar	21.50	190	*e*P	P	14 26 47.5	+0.6
WRAB	Tennant Creek	22.56	153	*e*P	P	14 26 57.4	+0.1
WRA	Warramunga Arr	22.57	153	P	P	14 26 57.9	+0.5
	3.9nm,0.5s,mb4.0,baz=337,slow=10,SNR=39						
WB2	Warramunga Arr	22.57	153	*e*P	P	14 26 58.0	+0.6
FORT	Forrest	31.04	173	*e*P	P	14 28 14.7	-0.6
	17nm,0.6s,mb5.0						
KLBR	Kellerberrin	32.04	189	*e*P	P	14 28 23.2	-0.8
	21nm,1.4s,mb4.7						
NWAO	Narrogin (SRO)	33.43	190	P	P	14 28 35.6	-0.5
	3.7nm,0.8s,mb4.2,baz=20,slow=9.0,SNR=4.5						
STKA	Stephens Creek	36.11	154	P	P	14 28 59.1	+0.2
	3.1nm,0.6s,mb4.4,baz=322,slow=7.0,SNR=11						
STKA	Stephens Creek	36.11	154	*e*P	P	14 28 59.3	+0.4
MJAR	Matsushiro Arr	38.67	19	P	P	14 29 19.3	-0.9
	2.1nm,0.7s,mb4.1,baz=191,slow=8.2,SNR=6.8						
SONM	Songino Array	49.80	345	P	P	14 30 50.0	+0.7
	0.6nm,0.7s,mb3.6,baz=162,slow=9.3,SNR=5.2						
MKAR	Makanchi Array	58.81	328	P	P	14 31 55.3	+0.4
	1.3nm,0.7s,mb4.1,baz=124,slow=8.5,SNR=16						
KURK	Kurchatov	63.15	330	*e*P	P	14 32 24.2	0.0
INK	Inuvik	94.63	21	P	P	14 35 14.7	-0.3
	0.8nm,0.9s,mb4.2,baz=225,slow=1.4,SNR=4.7						

MDD 02 14:26:18.7±3.5, 37.36N×13.24W, mb3.7/7, Error ellipse: s-maj=33.8km s-min=20.4km az=38.0, PRXIMO SOLUCIN POBRE, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBEJ	Beja	4.31	79	*e*Sn	Sn	14 28 12.8	-6.0
	4.4nm,0.1s						
PBEJ	Beja	4.31	79	S	Sn	14 28 12.8	-6.0
	2.2nm,0.1s						
EGRO	El Granado	4.58	86	P	Pn	14 27 27.9	-3.0
	0.3nm,0.1s,SNR=4.0						
EGRO				S	Sn	14 28 18.0	-7.7
	3.3nm,0.2s,SNR=7.9						
EBAD	Badajoz	5.11	72	P	Pn	14 27 35.2	-3.1
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	14 28 31.8	-7.1
	2.7nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	5.23	84	P	Pn	14 27 38.0	-2.1
	0.2nm,0.1s,SNR=7.0						
EMIN				S	Sn	14 28 34.3	-7.7
	1.3nm,0.1s,SNR=7.9						
ESPR	Espera	5.92	92	S	Sn	14 28 50.8	-8.5
	5.1nm,0.2s,SNR=7.9						
PCAB	Cabril	5.92	41	*e*Pn	Pn	14 27 46.6	-3.3
PCAB				*e*Sn	Sn	14 28 51.3	-8.1
	4.3nm,0.1s						
PCAB	Cabril	5.92	41	P	Pn	14 27 46.6	-3.3
PCAB				S	Sn	14 28 51.3	-8.1
	2.2nm,0.1s						
ELOB	Lobios	6.02	40	P	Pn	14 27 47.3	-3.9
	0.7nm,0.1s,SNR=7.9						
ELOB				S	Sn	14 28 53.7	-8.1
	1.5nm,0.1s,SNR=7.9						
ECAB	El Cabril	6.24	81	P	Pn	14 27 50.5	-3.8
	0.3nm,0.1s,SNR=4.0						
ECAB				S	Sn	14 28 58.6	-8.6
	0.8nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	6.47	29	P	Pn	14 27 54.0	-3.5
	1.1nm,0.1s,SNR=7.9						
EMAZ				S	Sn	14 29 01.3	-12
	2.1nm,0.1s,SNR=7.9						
EADA	Adamuz	6.91	81	P	Pn	14 28 03.3	-0.4
	0.4nm,0.2s,SNR=4.0						
EADA				S	Sn	14 29 14.5	-9.5
	0.5nm,0.1s,SNR=7.9						

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*BJI **02** 14:26:26.4, 18.02S×178.41W, h575^{km}, mB4.5, mb4.6*
*MOS **02** 14:26:26.8±1.0, 17.79S×178.62W, h568^{km}, mb4.7/11, Error ellipse: s-maj=19.1km s-min=12.4km az=161.8*
*NEIC **02** 14:26:27.7±0.7, 17.82S×178.58W, h563^{km}±9^{km}, mb4.6/26, Error ellipse: s-maj=12.2km s-min=5.3km az=152.0*
*IDC **02** 14:26:28.8±1.2, 17.86S×178.60W, h575^{km}±15^{km}, mb4.0/16, mb1 4.1/18, mb1mx4.0/22, mbtmp4.9/18, Error ellipse: s-maj=16.2km s-min=9.6km az=151.0*
ISC 02 14:26:27.1±0.8, 17.79S±0.08×178.66W±0.06, h564^{km}±9^{km}, n107, σ0^{s}97/95, mb4.5/44, 8C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.66	61	P	P	14 28 23.6	+1.0
	3.5nm,0.3s,baz=88,slow=21,SNR=8.0						
AFI				S	S	14 29 54.5	-0.3
	2.1nm,0.3s,baz=90,slow=20,SNR=2.6						
AFI	Afiamalu	7.66	61	*e*P	P	14 28 21.7	-0.9
DZM	Mont Dzumac	14.64	251	P	P	14 29 35.2	+2.8
	1.0nm,0.3s,baz=79,slow=17,SNR=12						
URZ	Urewera	20.73	189	P	P	14 30 28.5	-1.6
	5.2nm,0.6s,baz=120,slow=6.2,SNR=5.8						
HNR	Honiara	22.38	289	P	P	14 30 45.7	+0.4
	53nm,0.7s,mb5.3,baz=176,slow=2.1,SNR=7.1						
HNR	Honiara	22.38	289	*e*P	P	14 30 45.2	-0.1
	34nm,0.8s,mb5.0						
HNR	Honiara	22.38	289	*e*P	P	14 30 45.2	-0.1
HNR				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.0						
CTA	Charters Tower	33.23	260	*e*P	P	14 32 19.8	+0.3
	comp=Z,16nm,0.7s,mb4.7						
CTA	Charters Tower	33.23	260	*e*P	P	14 32 19.8	+0.3
CTA				pmax	pmax		
	comp=Z,16nm,0.7s						
CTAO	Charters Tower	33.23	260	*e*P	P	14 32 19.3	-0.2
	comp=Z,12nm,0.6s,mb4.6						
CTAO	Charters Tower	33.23	260	*e*P	P	14 32 19.3	-0.2
CTAO				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.6						
CNB	Canberra Magne	33.31	232	*e*P	P	14 32 21.0	+1.0
	comp=Z,35nm,0.6s,mb5.1						
PMG	Port Moresby	34.21	280	P	P	14 32 29.3	+1.6
	comp=Z,107nm,0.8s,mb5.4,baz=74,slow=5.6,SNR=32						
PMG	Port Moresby	34.21	280	*e*P	P	14 32 28.6	+0.9
	comp=Z,108nm,0.8s,mb5.4						
PMG	Port Moresby	34.21	280	*i* P	P	14 32 29.0	+1.3
TOO	Toolangi	37.06	231	*e*P	P	14 32 51.8	+0.8
	comp=Z,29nm,0.9s,mb4.8						
TOO	Toolangi	37.06	231	*e*P	P	14 32 51.8	+0.8
TOO				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.8						
STKA	Stephens Creek	38.48	241	*e*P	P	14 33 03.6	+0.9
	comp=Z,22nm,0.6s,mb4.9						
STKA	Stephens Creek	38.48	241	P	P	14 33 03.6	+1.0
	comp=Z,28nm,0.6s,mb5.0,baz=91,slow=9.2,SNR=77						
WB2	Warramunga Arr	44.41	259	*e*P	P	14 33 49.1	-0.8
WB2				*e*S	S	14 39 40.4	-4.0
WRAB	Tennant Creek	44.41	259	*e*P	P	14 33 48.9	-1.0
	comp=Z,27nm,0.6s,mb5.0						
WRAB	Tennant Creek	44.41	259	*e*P	P	14 33 48.9	-1.0
WRAB				pmax	pmax		
	comp=Z,27nm,0.6s,mb5.0						
WRA	Warramunga Arr	44.42	259	P	P	14 33 49.1	-1.0
	comp=Z,18nm,0.5s,mb4.9,baz=94,slow=7.0,SNR=426						
WRA				PcP	PcP	14 35 20.7	-1.0
	comp=Z,2.9nm,0.5s,baz=92,slow=3.3,SNR=6.0						
WRA				S	S	14 39 40.7	-3.9
	comp=Z,0.8nm,0.7s,baz=96,slow=13,SNR=4.8						
ASPA	Alice Springs	44.60	254	*e*P	P	14 33 51.2	-0.2
ASPA				*e*S	S	14 39 43.5	-3.5
KAKA	Kakadu	47.35	269	*e*P	P	14 34 29.6	+17
	comp=Z,50nm,0.4s,mb5.4						
GUMO	Guam	47.62	309	P	P	14 34 14.9	+0.4
	comp=Z,82nm,0.6s,mb5.5,baz=186,slow=9.1,SNR=5.7						
GUMO	Guam	47.62	309	P	P	14 34 14.8	+0.4
FORT	Forrest	49.85	245	*e*P	P	14 34 29.6	-1.3
	comp=Z,41nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	52.82	260	*e*P	P	14 34 52.0	-0.5
	comp=Z,11nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	52.82	260	P	P	14 34 52.0	-0.5
	comp=Z,14nm,0.6s,mb4.5,baz=160,slow=5.7,SNR=38						
KLBR	Kellerberrin	58.67	243	*e*P	P	14 35 31.4	-1.4
	comp=Z,23nm,0.6s,mb4.6						
NWAO	Narrogin (SRO)	59.06	242	P	P	14 35 34.5	-0.9
	comp=Z,4.6nm,0.6s,mb3.9,baz=103,slow=6.1,SNR=16						
NWAO	Narrogin (SRO)	59.06	242	P	P	14 35 34.5	-0.9
MUN	Mundaring	59.97	243	*e*P	P	14 35 40.5	-0.9
MJAR	Matsushiro Arr	67.67	323	P	P	14 36 29.3	-0.8
	comp=Z,6.8nm,0.5s,mb4.4,baz=157,slow=5.7,SNR=22						
MAT	Matsushiro	67.67	323	P	P	14 36 29.4	-0.7
MAT	Matsushiro	67.67	323	*e*P	P	14 36 29.0	-1.1
JOW	Kunigami	67.97	310	P	P	14 36 32.3	+0.3
	comp=Z,7.9nm,0.7s,mb4.4,baz=128,slow=17,SNR=3.9						
KSM	Kuching	72.44	277	*e*P	P	14 36 58.8	+0.3
YSS	Yuzh-Sakhalins	73.21	333	*i* P	P	14 37 10.6	+8.3
YSS				pmax	pmax		
	comp=Z,41nm,2.4s,mb4.4						
SSE	Sheshan	75.48	310	P	P	14 37 15.8	+0.4
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,30nm,5.2s						
SAO	San Andreas Ge	76.50	44	*e*P	P	14 37 18.9	-2.0
	comp=Z,14nm,0.8s,mb4.5						
MDJ	Mudanjiang	77.95	325	*e*P	P	14 37 29.6	+1.1
	comp=Z,8.8nm,0.8s,mb4.1						
MTUM	Tungsten Hills	78.75	45	*e*P	P	14 37 33.4	+0.6
NVAR	Mina Array Bea	79.50	44	P	P	14 37 37.2	+0.4
	comp=Z,6.8nm,0.7s,mb4.1,baz=215,slow=7.5,SNR=51						
NVAR	Mina Array Bea	79.50	44	P	P	14 37 37.2	+0.4
CN2	Changchun	79.78	322	*e*P	P	14 37 41.6	+3.5
LDFC	Landfair	79.96	48	*e*P	P	14 37 39.8	+0.6
MOD	Modoc	80.15	40	*e*P	P	14 37 40.3	+0.3
	comp=Z,8.6nm,0.6s,mb4.3						
SLKM	Skilak Lake	81.33	14	*e*P	P	14 37 44.4	-1.3
WVOR	Wild Horse Val	81.47	40	*e*P	P	14 37 47.3	+0.5
	comp=Z,15nm,1.0s,mb4.4						
WVOR	Wild Horse Val	81.47	40	*e*P	P	14 37 47.3	+0.5
WVOR				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.4						
TUC	Tucson	81.81	52	*e*P	P	14 37 49.9	+1.2
	comp=Z,14nm,1.3s,mb4.2						
TUC	Tucson	81.81	52	*e*P	P	14 37 49.9	+1.2
TUC				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.2						
DIV	Divide	82.95	15	*e*P	P	14 37 53.1	-0.8
HAWA	Hanford	83.15	37	*e*P	P	14 37 55.0	-0.2
	comp=Z,0.8nm,0.7s,mb3.4						
MAW	Mawson	83.89	200	*e*P	P	14 37 58.3	0.0
	comp=Z,3.4nm,0.8s,mb3.9						
MAW	Mawson	83.89	200	P	P	14 37 58.3	0.0
	comp=Z,3.7nm,0.7s,mb4.0,baz=161,slow=8.3,SNR=14						
ENH	Enshi	84.01	304	*e*P	P	14 38 00.9	+1.1
	comp=Z,19nm,0.8s,mb4.7						
MCK	McKinley	84.48	13	*e*P	P	14 37 59.9	-1.4
	comp=Z,3.2nm,0.8s,mb3.9						
MCK	McKinley	84.48	13	*e*P	P	14 37 59.9	-1.4
MCK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
THY	Trims Highway	84.91	14	*e*P	P	14 38 02.6	-0.8
SRU	San Rafael	85.11	46	*e*P	P	14 38 05.1	+0.1
	comp=Z,5.2nm,0.7s,mb4.2						
NEW	Newport	85.55	36	*e*P	P	14 38 07.1	+0.2
	comp=Z,8.2nm,0.9s,mb4.4						
NEW	Newport	85.55	36	*e*P	P	14 38 07.1	+0.2
NEW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
COLA	College	85.71	13	*i* P	P	14 38 05.5	-1.7
BNM	Barren Site	85.75	52	*e*P	P	14 38 08.3	+0.1
ILAR	Eielson Array	85.83	13	P	P	14 38 06.3	-1.4
	comp=Z,2.2nm,0.4s,mb4.1,baz=220,slow=4.9,SNR=80						
ILAR				PP	PP	14 41 40.6	+2.5
	comp=Z,0.6nm,0.8s,baz=216,slow=8.3,SNR=4.1						
TXAR	Lajitas Array	86.13	58	P	P	14 38 11.3	+1.2
	comp=Z,7.3nm,0.7s,mb4.4,baz=220,slow=5.8,SNR=34						
ANMO	Albuquerque	86.21	52	*e*P	P	14 38 10.5	+0.1
	comp=Z,2.8nm,1.0s,mb3.9						
ANMO	Albuquerque	86.21	52	⇓*i*P	P	14 38 10.1	-0.2
MCMT	McKenzie Canyo	86.30	41	*e*P	P	14 38 11.4	+0.8
RRI2	Red Ridge	86.55	42	*e*P	P	14 38 12.4	+0.7
	comp=Z,17nm,0.8s,mb4.7						
DLMT	Dillon	86.72	40	*e*P	P	14 38 12.9	+0.4
REDW	Red Top Meadow	86.86	43	*e*P	P	14 38 13.2	0.0
	comp=Z,13nm,1.0s,mb4.5						
HHC	Hu-ho-hao-te	87.02	315	*e*P	P	14 38 15.7	+1.7
HHC				AP	pP	14 40 15.5	-1.6
HHC				PP	PP	14 41 54.5	+5.3
HHC				SKS	SKS	14 47 52.1	+5.4
HHC				S	S	14 48 11.2	+6.4
HHC				XS		14 51 42.3	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
HHC				AMB	AMB		
	comp=Z,50nm,6.4s						
IMW	Indian Meadow	87.06	42	*e*P	P	14 38 14.6	+0.5
	comp=Z,14nm,1.0s,mb4.6						
CHMT	Chamberlain Mo	87.09	39	*e*P	P	14 38 13.9	-0.2
LOHW	Long Hollow	87.14	42	*e*P	P	14 38 14.2	-0.3
	comp=Z,3.7nm,0.6s,mb4.2						
PDAR	Pinedale Array	87.43	44	P	P	14 38 15.7	-0.2
	comp=Z,4.8nm,0.6s,mb4.3,baz=222,slow=3.1,SNR=51						
PDAR				PP	PP	14 41 49.1	-3.3
	comp=Z,0.8nm,0.9s,baz=233,slow=7.4,SNR=5.8						
KMI	Kunming	87.57	297	P	P	14 38 18.5	+1.6
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
YAK	Yakutsk	89.38	338	⇓*e*P	P	14 38 32.6	+8.1
YAK				pmax	pmax		
	comp=Z,12nm,1.7s,mb4.5						
LZH	Lanzhou	90.63	308	*e*P	P	14 38 32.0	+1.0
LZH				AP	pP	14 40 35.2	+0.2
LZH				XP	sP	14 41 30.3	-0.5
LZH				*e*PP	PP	14 42 20.6	+2.8
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,50nm,7.0s						
SNAA	Sanae	90.72	179	⇑*i*P	P	14 38 29.6	-0.9
SNAA	Sanae	90.72	179	⇑*i*P	P	14 38 28.8	-1.7
VNA3	Neumayer Olymp	90.87	176	⇑*i*P	P	14 38 32.2	+1.0
VNA2	Neumayer--Watz	91.31	177	⇑*i*P	P	14 38 34.1	+0.9
VNA1	Neumayer--Stat	91.54	177	⇑*i*P	P	14 38 35.7	+1.4
INK	Inuvik	91.83	15	*e*P	P	14 38 34.4	-1.3
	comp=Z,4.9nm,1.0s,mb4.5						
INK	Inuvik	91.83	15	*e*P	P	14 38 34.4	-1.2
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONM	Songino Array	93.31	319	P	P	14 38 42.7	-0.2
	comp=Z,0.5nm,0.5s,mb3.8,baz=130,slow=4.5,SNR=5.5						
MKAR	Makanchi Array	108.89	314	PKiKP		14 43 52.1	
	comp=Z,0.8nm,0.5s,baz=178,slow=0.7,SNR=20						
ARU	Arti	122.62	326	*e*PKP	PKPdf	14 44 18.6	0.0
ARU	Arti	122.62	326	*e*PKIKP	PKPdf	14 44 18.6	0.0
FINES	FINESS Array B	133.01	344	PKP	PKPdf	14 44 39.7	+1.5
	comp=Z,3.2nm,1.0s,baz=270,slow=1.9,SNR=5.2						
GNI	Garni	136.53	310	*i* PKIKP	PKPdf	14 44 53.9	+8.6
ANN	Anapa	139.59	320	*i* PKHKP		14 44 43.5	
ANN				pmax	pmax		
	comp=Z,76nm,1.2s						
AKASG	Malin Array Be	140.35	332	PKhKP		14 44 45.4	
	comp=Z,0.7nm,0.4s,baz=45,slow=3.8,SNR=5.4						
AKASG				PKP	PKPdf	14 44 54.5	+2.5
	comp=Z,0.7nm,0.4s,baz=43,slow=3.1,SNR=5.4						
BURAR	Bucovina Array	144.40	332	⇑P	PKPdf	14 45 01.1	+2.1
BR131	Keskin Array S	144.53	315	*e*PKPdf	PKPdf	14 45 00.8	+1.3
BRTR	Keskin Array B	144.53	315	PKP	PKPdf	14 45 00.3	+0.9
	comp=Z,3.9nm,0.5s,baz=94,slow=2.2,SNR=32						
CFR	Carcaliu	144.71	327	⇑P	PKPdf	14 45 01.5	+1.9
ANTO	Ankara	145.03	316	*e*PKPdf	PKPdf	14 45 02.8	+2.5
TIRR	Tirgusor	145.04	325	⇓P	PKPdf	14 45 02.9	+2.7
HARR	Harsova	145.14	326	⇑P	PKPdf	14 45 02.0	+1.6
MLR	Muntele Rosu	145.61	329	⇓P	PKPdf	14 45 04.3	+3.2
GERES	GERESS Array B	147.44	345	PKPbc	PKPdf	14 45 08.9	+4.8
	comp=Z,1.9nm,0.5s,baz=16,slow=3.1,SNR=11						

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*ISK **02** 14:30:18.6, 39.19N×44.11E, h5^{km}, MD3.6*
*CSEM **02** 14:30:18.6, 39.19N×44.11E, h5^{km}, MD3.6, After ISK*
ISC 02 14:30:20.8±1.0, 39.15N±0.03×44.10E±0.09, h5^{km}, n18, σ1^{s}23/23, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	Caldiran	0.14	269	*i* PG	Pg	14 30 22.4	-1.3
VANB	Van	0.78	225	PG	Pg	14 30 35.8	-0.6
VANB				SG	Sg	14 30 47.9	+1.1
TVAN	Van	0.82	221	*i* P	Pb	14 30 35.6	-1.5
TVAN				*i* S	Sg	14 30 48.4	+0.4
VANT	Van	0.89	219	PG	Pg	14 30 38.9	+0.3
DIGO	Kars	1.38	337	*i* P	Pb	14 30 46.8	0.0
DIGO				*i* S	Sb	14 31 05.8	+1.2
HKR	Hakkari	1.59	190	*e*PN	Pn	14 30 49.5	-0.2
HAKT	HAKKARI	1.61	191	*i* P	Pn	14 30 49.5	-0.6
HAKT				*i* S	Sb	14 31 13.2	+1.9
KARS	Kars	1.66	332	*e*PN	Pn	14 30 50.0	-0.7
SIRT	Sirnak	2.10	219	PN	Pn	14 30 56.2	-0.8
ERZM	Erzurum	2.24	291	*i* P	Pn	14 30 58.6	-0.5
ERZM				*i* S	Sn	14 31 28.9	+1.4
EZM	Erzurum	2.25	291	*e*PN	Pn	14 30 58.5	-0.6
BTMT	Batman	2.25	246	*e*PN	Pn	14 31 00.9	+1.7
BNGL	BINGOL	2.30	266	*i* P	Pn	14 30 59.5	-0.4
BNGL				*i* S	Sn	14 31 26.3	-2.7
BEST	Besiri	2.55	241	*i* P	Pn	14 31 06.1	+2.7
ARTV	Artvin	2.63	321	*i* P	Pn	14 31 07.4	+2.8
BINT	Bingol	2.82	266	*e*PN	Pn	14 31 06.7	-0.7
MSL	Mosul	2.96	196	*e*x	x	14 31 14.0	
MSL				*e*x	x	14 31 44.0	
MARD	Mardin	3.19	236	*i* P	Pn	14 31 11.3	-1.3

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*ISK **02** 15:25:39.8, 38.09N×26.75E, h12^{km}, MD2.8*
*ATH **02** 15:25:41.2, 38.20N×26.72E, h19^{km}±2^{km}, MD2.8/3*
*CSEM **02** 15:25:42.5±0.4, 38.10N×27.02E, h12^{km}, MD2.8, Error ellipse: s-maj=18.4km s-min=6.8km az=105.0*
ISC 02 15:25:40.8±1.2, 38.17N±0.04×26.70E±0.08, h10^{km}±8^{km}, n8, σ1^{s}04/13, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.34	52	*i* PG	Pg	15 25 47.9	0.0
BLCB				*i* SG	Sg	15 25 52.8	+0.1
SMG	Samos	0.48	167	*e*PB	Pb	15 25 51.3	+0.5
SMG				*e*SB	Sb	15 25 58.2	+0.6
IZM	Izmir	0.50	63	*i* PG	Pg	15 25 50.4	-0.5
IZM				*i* SG	Sg	15 25 58.2	+0.6
AKS	Akhisar	1.12	51	PN	Pn	15 26 03.0	+0.4
AKS				SN	Sn	15 26 18.8	+0.8
PRK	Paraskevi	1.12	343	*e*PN	Pn	15 26 02.3	-0.3
PRK				*e*SN	Sn	15 26 17.6	-0.5
BODT	Bodrum	1.21	156	*e*PN	Pn	15 26 01.1	-2.7
APE	Apeiranthos	1.44	220	*e*PN	Pn	15 26 08.8	+1.7
YER	Yerkesik	1.63	129	*e*PN	Pn	15 26 07.4	-2.3

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*NIED **02** 15:37:00, 21.30N×120.80E, h14^{km}, Mw4.1 Best double couple: M$_0$1.41×10^{15} NP1: ϕ_s313°, δ71°, λ-91°. NP2: ϕ_s137°, δ19°, λ-86°.*
*NEIC **02** 15:37:05.3±0.6, 21.29N×120.19E, mb4.4/1, Error ellipse: s-maj=17.3km s-min=9.1km az=89.0*
*IDC **02** 15:37:05.1±0.8, 21.26N×120.19E, h21^{km}±5^{km}, mb3.6/7, mb1 3.9/7, mb1mx3.7/17, mbtmp3.8/7, MS3.2/2, Ms1 3.2/2, ms1mx2.9/15, Error ellipse: s-maj=31.9km s-min=15.2km az=72.0*
*JMA **02** 15:37:06.3±0.5, 21.29N×120.75E, M4.0*
*BJI **02** 15:37:07.2, 21.45N×119.80E, h22^{km}, mB4.0, mb4.2, Ms3.9, Msz3.8*
ISC 02 15:37:06.2±1.5, 21.34N±0.08×120.33E±0.07, h44^{km}±15^{km}, h19^{km}±3.5^{km}:pP-P, n22, σ0^{s}90/26, mb3.8/8, MS3.2/3, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	3.06	22	*e*P	P	15 37 53.2	0.0
YHNB	Yeheng	3.46	16	*e*P	P	15 37 58.3	-0.6
YOJ	Yonaguni jima	3.97	38	P	P	15 38 07.7	+1.5
YOJ				*e*S	S	15 38 53.3	+1.2
HATJ	Hateruma jima	4.20	49	*e*S	S	15 38 57.0	-0.8
IRIF	Iriomote-Funau	4.33	46	P	P	15 38 11.8	+0.5
IRIF				*e*S	S	15 38 59.4	-1.7
JKRS	Kuro-shima	4.46	49	P	P	15 38 14.0	+0.9
JKRS				*e*S	S	15 39 03.8	-0.5
JIJ	Ishigaki jima	4.63	49	P	P	15 38 15.3	-0.2
JIJ				*e*S	S	15 39 07.6	-1.1
JTJ	Tarama	5.20	50	P	P	15 38 23.9	+0.4
JTJ				*e*S	S	15 39 23.2	+0.2
JOGS	Gusukube	5.78	53	*e*S	S	15 39 37.7	+0.1
CD2	Chengdu	17.66	306	P	P	15 41 07.8	-2.8
CD2				XP		15 41 21.1	
CD2				LR	LR		
	comp=N,190nm,4.9s						
CD2				LR	LR		
	comp=Z,110nm,5.1s						
LZH	Lanzhou	20.57	319	*e*P	P	15 41 44.0	+0.2
LZH				AP		15 41 52.1	
LZH				XP		15 41 55.3	
LZH				AMB	AMB		
	comp=Z,20nm,1.2s						
LZH				AMB	AMB		
	comp=Z,40nm,6.3s						
LZH				LR	LR		
	comp=E,190nm,13.2s						
LZH				LR	LR		
	comp=Z,290nm,17.5s,MS3.7						
JHJ	Hachijo jima 2	20.86	52	LR	LR	15 49 28.3	
	comp=Z,58nm,18.0s,MS3.0,baz=220,slow=35						
MJAR	Matsushiro Arr	21.72	42	P	P	15 41 57.6	+2.2
	comp=Z,1.6nm,0.8s,mb3.5,baz=222,slow=7.3,SNR=3.4						
MJAR				LR	LR	15 50 31.3	
	comp=Z,61nm,20.4s,MS3.0,baz=225,slow=37						
MJAR	Matsushiro Arr	21.72	42	P	P	15 41 57.6	+2.2
MJAR				LR	LR	15 50 31.3	
GTA	Gaotai	25.16	320	*e*P	P	15 42 29.8	+0.9
GTA				AP	pP	15 42 37.7	-2.6
GTA				XP	sP	15 42 41.2	-4.3
SONM	Songino Array	28.73	340	P	P	15 43 00.9	-0.6
	comp=Z,0.5nm,0.8s,mb3.3,baz=162,slow=9.1,SNR=3.6						
MKAR	Makanchi Array	39.89	319	P	P	15 44 37.4	0.0
	comp=Z,0.9nm,0.8s,mb3.5,baz=113,slow=9.2,SNR=6.4						
MKAR				pP	pP	15 44 43.9	-5.5
	comp=Z,0.5nm,0.8s,baz=102,slow=11,SNR=3.9						
ZAL	Zalesovo	42.24	329	P	P	15 44 56.6	0.0
	comp=Z,0.7nm,0.3s,mb3.7,baz=332,slow=0.4,SNR=3.8						
WRAB	Tennant Creek	43.25	161	*e*P	P	15 45 04.8	-0.5
	comp=Z,6.6nm,0.9s,mb4.4						
WRA	Warramunga Arr	43.25	161	P	P	15 45 04.9	-0.4
	comp=Z,0.9nm,0.5s,mb3.8,baz=343,slow=8.9,SNR=9.4						
WRA				pP	pP	15 45 11.0	-6.5
	comp=Z,3.4nm,0.8s,baz=342,slow=9.0,SNR=16						
WRA				PcP	PcP	15 46 53.3	-1.2
	comp=Z,0.7nm,0.6s,baz=344,slow=3.3,SNR=5.7						
STKA	Stephens Creek	56.70	158	P	P	15 46 47.7	-0.1
	comp=Z,1.4nm,0.6s,mb4.2,baz=343,slow=11,SNR=3.0						
ILAR	Eielson Array	72.10	27	P	P	15 48 27.8	+0.3
	comp=Z,0.6nm,0.8s,mb3.6,baz=269,slow=4.5,SNR=9.1						
ILAR				pP	pP	15 48 35.4	-4.9
	comp=Z,0.7nm,0.7s,baz=294,slow=7.7,SNR=5.2						

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*BJI **02** 16:16:52.2, 40.59N×77.73E, h13^{km}, ML3.4*
*NNC **02** 16:16:59.0±8.5, 41.11N×77.83E, mpv3.4, Error ellipse: s-maj=101.6km s-min=45.5km az=175.0*
ISC 02 16:16:50.1±2.4, 40.2N±0.1×78.5E±0.2, h33^{km}, n14, σ0^{s}80/15, 2C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	2.07	252	PG	P	16 17 23.2	+0.1
KSH				SG	S	16 17 47.7	-0.3
KSH				Smax			
	comp=N,580nm,0.3s						
KSH				Smax			
	comp=E,820nm,0.6s						
ULHL	Ulahol	2.67	321	P	P	16 17 27.4	-4.3
	SNR=122						
KZA	Kyzart	3.10	308	P	P	16 17 34.0	-3.8
	SNR=14						
TKM2	Tokmak 2	3.49	322	P	P	16 17 43.0	-0.4
	SNR=31						
UCH	Uchtor	3.64	305	P	P	16 17 40.0	-5.5
	SNR=23						
KBK	Karagaybulak	3.64	314	P	P	16 17 44.5	-1.0
	SNR=80						
AAK	Ala-Archa	3.88	310	P	P	16 17 48.6	-0.4
	SNR=50						
AAK	Ala-Archa	3.88	310	⇑Pn	Pn	16 17 48.2	-0.9
	comp=E,20nm,0.3s						
AAK				⇓Lg		16 18 28.8	
	comp=E,94nm,0.9s						
CHMS	Chumysh	3.98	316	P	P	16 17 50.5	+0.3
	SNR=28						
AML	Almayashu	4.12	300	P	P	16 17 53.8	+1.5
	SNR=7.9						
USP	Ospenovka	4.29	317	P	P	16 17 55.8	+1.0
	SNR=65						
EKS2	Erkin-Say	4.33	306	P	P	16 17 55.9	+0.6
	SNR=33						

KK31	Karatay Array	6.66	298	⇑Pg	P	16 18 42.8	+15
	comp=E,1.9nm,0.5s,baz=111,slow=16,SNR=29						
KK31				Lg		16 20 01.7	
	comp=E,3.0nm,0.5s,baz=108,slow=27,SNR=6.1						
MK31	Makanchi Array	7.14	21	Pn	Pn	16 18 35.0	-0.1
	comp=E,0.3nm,0.3s,baz=202,slow=15,SNR=18						
MK31				⇓Lg		16 20 27.5	
	comp=E,1.8nm,0.7s,baz=190,slow=29,SNR=3.6						

NDI 02 16:33:30.4±2.7,30.98N×71.57E,h15^{km},MD3.5,ML3.3, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.82	67	eP	Pn	16 34 27.3	-2.8
THN				eS	Sn	16 35 11.8	-3.3
RTK	Rohtak	4.63	114	eP	Pn	16 34 40.6	-0.9
RTK				eS	Sn	16 35 29.4	-6.1
KHET	Khetri	4.69	127	ex	x	16 36 13.6	
KLP	Kalpa	5.75	83	eP	Pn	16 34 56.0	-1.3
KLP				eS	Sn	16 35 57.7	-6.0
KLP				AML	AML	16 36 22.8	
	comp=E,45nm,0.6s						
KLP				AML	AML	16 36 23.5	
	comp=N,41nm,0.7s						
KALG	Kalgarh	6.39	101	ex	x	16 37 07.5	
KALG				ex	x	16 37 14.3	
JOSI	Joshimath	6.89	91	ex	x	16 35 57.2	

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*NEIC **02** 17:04:06.0±2.4,1.75S×149.80E,h108^{km}±21^{km},mb4.5/1, Error ellipse: s-maj=19.1km s-min=15.3km az=89.0*

*IDC **02** 17:04:05.3±5.6,1.71S×149.83E,h101^{km}±53^{km},mb3.7/6, mb1 3.9/8,mb1mx3.7/15,mbtmp4.1/8,MS3.2/2,Ms1 3.2/2, ms1mx2.7/16,Error ellipse: s-maj=29.7km s-min=26.9km az=64.0*

ISC 02 17:04:04.2±4.1**,1.7S**±0.2×**149.8E**±0.2**,h108^{km}**±39^{km}**,n11, σ0^{s}50**/11**,mb3.9**/7**,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	8.06	199	P	P	17 06 00.2	+0.1
	0.6nm,0.3s,baz=48,slow=8.4,SNR=7.0						
CTA	Charters Tower	18.57	191	P	P	17 08 14.6	-0.8
	0.1nm,0.3s,baz=329,slow=11,SNR=3.9						
CTA				LR	LR	17 15 10.6	
	comp=Z,42nm,19.9s,baz=230,slow=36						
CTAO	Charters Tower	18.57	191	P	P	17 08 14.3	-1.0
WRAB	Tennant Creek	23.57	219	eP	P	17 09 05.8	-0.1
	12nm,0.5s,mb4.5						
WRA	Warramunga Arr	23.58	219	P	P	17 09 07.1	+1.0
	5.2nm,0.5s,mb4.2,baz=45,slow=9.6,SNR=29						
DZM	Mont Dzumac	25.89	143	P	P	17 09 28.5	+0.5
	11nm,0.9s,mb4.2,baz=134,slow=14,SNR=6.3						
ASPA	Alice Springs	26.70	214	eP	P	17 09 34.9	-0.5
FITZ	Fitzroy Crossi	28.76	234	P	P	17 09 54.2	+0.1
	3.4nm,0.8s,mb4.0,baz=59,slow=17,SNR=3.9						
FITZ				LR	LR	17 21 32.5	
	comp=Z,80nm,19.4s,baz=314,slow=36						
SONM	Songino Array	62.16	328	P	P	17 14 16.1	-0.3
	0.6nm,0.8s,mb3.7,baz=146,slow=5.7,SNR=5.6						
MKAR	Makanchi Array	76.07	319	P	P	17 15 42.1	+0.4
	0.7nm,0.8s,mb3.5,baz=101,slow=7.9,SNR=7.1						
ILAR	Eielson Array	80.49	23	P	P	17 16 05.3	-0.2
	0.3nm,0.9s,mb3.1,baz=254,slow=5.2,SNR=4.0						

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*CSEM **02** 17:19:05.6±0.1,44.57N×17.55E,h2^{km},ML2.7/3,Error ellipse: s-maj=2.8km s-min=2.0km az=88.0*

*PRU **02** 17:19:07.4,44.61N×17.88E*

*VIE **02** 17:19:09.7±0.5,44.79N×17.49E,h8^{km},mb2.4/2,ML2.7/3, Error ellipse: s-maj=4.2km s-min=2.6km az=175.0*

ISC 02 17:19:07.8±0.5**,44.65N**±0.03×**17.50E**±0.05**,h10^{km},n27, σ1^{s}15**/42**,10C-3D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RHK3	Tenkes	1.35	23	⇑iP	Pn	17 19 32.7	0.0
RHK3				eS	Sb	17 19 53.4	+3.6
	3.0nm,0.2s						
RHK1	Bakonya	1.50	15	⇑iP	Pn	17 19 34.9	0.0
RHK1				eS	Sb	17 19 54.9	+0.6
PKSM	Moragy	1.76	27	⇓eP	Pn	17 19 38.1	-0.5
PKSM				eS	Sn	17 20 06.0	+4.8
STON	Ston	1.78	175	i Pn	Pn	17 19 37.4	-1.6
STON				i Pg	Pg	17 19 39.3	-4.1
STON				i Sn	Sn	17 20 00.9	-0.9
STON				i Sg	Sg	17 20 02.8	-4.4
STON	Ston	1.78	175	i Pn	Pn	17 19 37.3	-1.6
CRES	Cresnjev	1.86	310	i Pn	Pn	17 19 40.3	+0.1
DIVS	Divcibare	1.87	106	⇑iPn	Pn	17 19 39.3	-0.9
DIVS				Sn	Sn	17 20 05.9	+1.9
NVLJ	Novalja	1.88	268	i Pn	Pn	17 19 41.0	+0.7
NVLJ				i Sn	Sn	17 20 05.9	+1.6
GOLS	Golise	1.90	316	i Pn	Pn	17 19 41.6	+1.0
NVSS	Nova Varos 2	1.95	125	⇓iPn	Pn	17 19 43.1	+1.7
NVSS				Sn	Sn	17 20 12.9	+6.8
KOGS	Kog	2.00	334	i Pn	Pn	17 19 42.4	+0.2
PKS9	Tamasi	2.01	15	eP	Pn	17 19 42.3	+0.1
PKS8	Sarbogard	2.38	20	⇑iP	Pn	17 19 46.9	-0.6
PKS8				eS	Sn	17 20 16.1	-0.8
	0.3nm,0.2s						
OBKA	Obir	2.79	313	⇓iPn	Pn	17 19 53.5	+0.1
OBKA	Obir	2.79	313	⇑iSn	Sn	17 20 26.8	-0.6
OBKA	Obir	2.79	313	Pn	Pn	17 19 53.5	+0.2
OBKA				Sn	Sn	17 20 26.8	-0.5
PKSG		2.81	12	⇑iP	Pn	17 19 53.9	+0.2
VOY	Vojsko	2.90	300	ePn	Pn	17 20 01.5	+6.6
VOY				eSn	Sn	17 20 32.2	+2.1
ARSA	Arzberg	2.95	333	⇑iPn	Pn	17 19 55.2	-0.4
ARSA	Arzberg	2.95	333	⇑iSn	Sn	17 20 30.3	-1.0
ARSA	Arzberg	2.95	333	Pn	Pn	17 19 55.2	-0.4
ARSA				Sn	Sn	17 20 30.3	-1.1
MOA	Molln	3.91	326	⇑iPn	Pn	17 20 08.8	-0.5
MOA	Molln	3.91	326	⇑iSn	Sn	17 20 54.1	-1.6
MOA	Molln	3.91	326	Pn	Pn	17 20 08.8	-0.5
MOA				Sn	Sn	17 20 54.1	-1.7
VRAC	Vranov	4.70	353	ePn	Pn	17 20 20.2	-0.3
MORC	Moravsky Berou	5.13	0	ePn	Pn	17 20 26.0	-0.6
KHC	Kasperske Hory	5.23	330	ePN	Pn	17 20 29.8	+1.8
KHC				ex	Sn	17 21 26.2	-2.9

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*ATH **02** 17:24:41.3,36.44N×21.63E,h12^{km}±3^{km},MD3.7/7,ML3.7*

*NEIC **02** 17:24:41.3,36.44N×21.63E,h12^{km},ML3.7(ATH),After ATH.*

*CSEM **02** 17:24:41.5±0.1,36.27N×21.59E,h20^{km},ML3.7,Error ellipse: s-maj=4.4km s-min=2.4km az=86.0*

*HLW **02** 17:24:44.6,36.48N×22.06E,h33^{km},Mb3.4*

ISC 02 17:24:39.9±0.8**,36.27N**±0.05×**21.59E**±0.08**,h10^{km},n14, σ1^{s}08**/18**,1D,Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITM	Ithomi	0.95	16	ePB	Pb	17 24 56.2	-1.8
ITM				eSB	Sb	17 25 06.4	-4.0
KYTH	Kithira	1.17	89	ePB	Pb	17 25 03.2	+1.5
VLI	Veliai	1.17	67	ePG	Pg	17 25 01.8	-1.6
VLI				eSB	Sb	17 25 17.4	+0.5
RLS	Riolos of Patr	1.79	357	ePB	Pb	17 25 12.0	-0.4
VLS	Valsamata	2.07	338	ePN	Pn	17 25 16.1	+1.0
MGER	Gerania Oros	2.17	37	ePG	Pn	17 25 18.2	+1.6
VAM	Vamos	2.29	111	ePB	Pb	17 25 21.1	+0.3
ATH	Athens Observa	2.41	44	ePN	Pn	17 25 20.3	+0.4
EVR	Evrytania	2.65	4	ePN	Pn	17 25 23.6	+0.1
SLUM		5.63	147	P	Pn	17 26 05.6	-0.2
SLUM				S	Sn	17 27 05.5	-5.8
HMAT	Matruh	6.90	137	P	Pn	17 26 22.7	-0.9
SWA2		7.72	154	⇓P	Pn	17 26 35.8	+0.7
SWA1		7.79	152	P	Pn	17 26 36.8	+0.7
SWA1				S	Sn	17 27 58.8	-6.5
HBRG	Burj al ‘Arab	8.93	127	P	P	17 26 49.9	-2.0

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*ATH **02** 17:35:43.8,39.33N×24.12E,h39^{km}±2^{km},MD2.9/4*

*NEIC **02** 17:35:43.8,39.33N×24.12E,h39^{km},MD2.9(ATH),After ATH.*

*CSEM **02** 17:35:44.2±0.1,39.28N×24.17E,h25^{km},ML2.5,Error ellipse: s-maj=3.4km s-min=1.9km az=142.0*

*THE **02** 17:35:45.1,39.36N×24.14E,h9^{km},ML2.5*

ISC 02 17:35:42.8±0.9**,39.29N**±0.05×**24.13E**±0.04**,h11^{km}**±5^{km}**, n14,σ1^{s}03**/23**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEO	Neokhori	0.71	272	ePN	Pn	17 35 58.1	-0.4
NEO				eSN	Sn	17 36 08.2	-1.1
PAIG	Paliouri	0.73	331	ePg	Pg	17 35 58.1	+0.7
PAIG				eSg	Sg	17 36 08.3	+1.1
XOR	Xorichti	0.73	276	ePg	Pg	17 35 58.7	+1.1
XOR				eSg	Sg	17 36 09.4	+1.9
LOS	Limnos	0.97	48	ePg	Pg	17 36 02.6	+0.2
	comp=Z,3.4nm,0.4s						
LOS				eSg	Sg	17 36 15.5	+0.1
LIA	Limnos Island	1.01	53	ePN	Pn	17 36 02.7	-0.2
OUR	Ouranopolis	1.05	354	ePg	Pg	17 36 03.5	-0.3
	comp=Z,4.5nm,0.2s						
OUR				eSg	Sg	17 36 17.1	-0.8
LKR	Lokris	1.09	234	ePN	Pn	17 36 04.2	+0.2
PLG	Polygyros	1.21	334	ePN	Pn	17 36 04.7	-0.9
AGG	Agios Georgios	1.43	260	ePg	Pg	17 36 10.4	-0.9
AGG				eSg	Sg	17 36 30.8	+0.4
LIT	Litokhoron	1.50	303	ePg	Pg	17 36 10.4	-2.4
LIT				eSg	Sg	17 36 29.7	-3.3
SOH	Sokhos	1.64	339	ePg	Pg	17 36 12.3	-3.3
KNT	Kendrikon	2.10	334	ePn	Pn	17 36 18.9	+0.5
GRG	Griva	2.13	322	ePn	Pn	17 36 19.6	+0.8
GRG				eSn	Sn	17 36 46.3	+0.8
ALN	Alexandroupoli	2.17	42	ePn	Pn	17 36 19.8	+0.3
ALN				eSn	Sn	17 36 47.1	+0.5

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*ATH **02** 18:06:54.6,39.28N×26.03E,h16^{km},MD3.0/3*

*CSEM **02** 18:06:54.7±0.3,39.39N×26.19E,h8^{km},MD3.1,Error ellipse: s-maj=7.7km s-min=2.1km az=76.0*

*ISK **02** 18:06:55.1,39.40N×26.26E,h6^{km},MD3.1*

*NEIC **02** 18:06:55.0,39.40N×26.24E,h5^{km},MD3.1(ISK), MD3.0(ATH),After ISK.*

ISC 02 18:06:53.9±1.6**,39.36N**±0.05×**26.13E**±0.09**,h2^{km}**±12^{km}**, n14,σ0^{s}64**/17**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	Paraskevi	0.16	136	ePB	Pb	18 06 59.3	+0.1
PRK				eSB	Sb	18 07 02.4	-0.2
EZN	Ezine	0.49	18	i PG	Pg	18 07 03.8	+0.2
EZN				i SG	Sg	18 07 10.1	0.0
LIA	Limnos Island	0.91	307	ePN	Pn	18 07 11.8	-1.7
LPK	Lapseki	1.12	25	PG	Pg	18 07 15.6	-0.6
IZM	Izmir	1.31	137	PN	Pn	18 07 19.9	+0.7
AKS	Akhisar	1.39	110	PN	Pn	18 07 20.4	0.0
AKS				SN	Sn	18 07 39.2	-0.5
EDC	Edincik	1.66	53	PN	Pn	18 07 23.9	-0.3
MFT	Murefte	1.68	31	ePN	Pn	18 07 24.6	+0.2
BNT	Bandirma	1.70	54	ePN	Pn	18 07 24.7	-0.1
SMG	Samos	1.74	161	ePN	Pn	18 07 25.6	+0.2
RDO	Rodhopi	1.84	346	ePN	Pn	18 07 28.6	+1.8
KCT	Karacabey	1.94	62	ePN	Pn	18 07 28.3	+0.1
DST	Dursunbey	1.95	82	ePN	Pn	18 07 28.3	0.0
CTT	Catalca	2.51	44	ePN	Pn	18 07 36.4	+0.1

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*IDC **02** 18:06:56.0±1.3,22.32S×170.35E,mb3.9/4,mb1 4.1/5, mb1mx4.0/12,mbtmp4.0/5,ML4.2/1,MS3.3/6,Ms1 3.3/6, ms1mx3.2/17,Error ellipse: s-maj=36.2km s-min=32.6km az=166.0*

ISC 02 18:07:01.6±4.5**,22.3S**±0.2×**170.2E**±0.2**,h51^{km}**±34^{km}**,n20, σ1^{s}08**/8**,mb4.0**/4**,MS3.3**/3**,1D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.51	273	⇓eP	P	18 07 54.7	-0.4
DZM				eS	S	18 08 35.7	-0.2
DZM	Mont Dzumac	3.51	273	Pn	P	18 07 55.6	+0.5
	18nm,0.3s,baz=280,slow=22,SNR=448						
DZM				Sn	S	18 08 36.3	+0.5
	16nm,0.3s,baz=132,slow=22,SNR=10						
RAO	Raoul Island	12.73	125	LR	LR	18 13 40.9	
	comp=Z,138nm,18.2s,baz=60,slow=32						
HNR	Honiara	16.15	321	LR	LR	18 15 12.7	
	comp=Z,72nm,21.9s,baz=186,slow=31						
AFI	Afiamalu	19.01	67	LR	LR	18 16 58.9	
	comp=Z,72nm,18.1s,baz=118,slow=32						
CTA	Charters Tower	22.46	271	LR	LR	18 19 23.6	
	comp=Z,41nm,20.9s,MS2.8,baz=62,slow=33						
PMG	Port Moresby	25.57	296	LR	LR	18 20 56.2	
	comp=Z,85nm,21.3s,MS3.2,baz=329,slow=33						
WRA	Warramunga Arr	33.51	267	P	P	18 13 37.9	-0.7
	1.1nm,1.0s,mb3.7,baz=92,slow=8.4,SNR=4.3						
MJAR	Matsushiro Arr	65.86	332	P	P	18 17 43.3	-0.9
	1.1nm,0.5s,mb4.2,baz=166,slow=5.0,SNR=5.3						
MAW	Mawson	75.97	202	P	P	18 18 44.5	+0.1
	1.0nm,0.7s,mb3.9,baz=122,slow=11,SNR=3.8						
SONM	Songino Array	90.20	323	P	P	18 19 59.1	+1.4
	0.9nm,0.9s,mb4.1,baz=140,slow=5.4,SNR=6.0						
TXAR	Lajitas Array	97.40	61	LR	LR	18 56 08.6	
	comp=Z,36nm,21.8s,MS3.8,baz=310,slow=30						
ARCES	ARCESS Array B	128.24	345	PKP	PKPdf	18 26 03.4	+1.5
	1.8nm,0.7s,baz=56,slow=4.4,SNR=4.1						
OKC	Ostrava-Krasne	144.81	328	eP	PKPdf	18 26 38.1	+5.5
DPC	Dobruska-Polom	145.32	330	eP	PKPdf	18 26 36.5	+3.0
UPC	Upice	145.36	331	eP	PKPdf	18 26 34.3	+0.8
PVCC	Panska Ves	145.98	332	eP	PKPdf	18 26 39.1	+4.5
PRU	Pruhonice	146.39	331	eP	PKPdf	18 26 39.4	+4.1
KHC	Kasperske Hory	147.44	331	eP	PKPdf	18 26 44.1	+7.0
GERES	GERESS Array B	147.59	331	PKPbc	PKPdf	18 26 42.6	+5.2
	1.8nm,0.8s,baz=27,slow=3.0,SNR=8.9						

MAN 02 18:12:06.1,6.67N×126.69E,h95^{km},mb4.2,ML3.0,MS2.7, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.51	302	eP	P	18 12 23.2	+1.5
MATI				eS	S	18 12 34.1	+0.9
BUKP	Musuan	2.02	307	eP	P	18 12 39.1	-0.1
BUTP	Butuan	2.52	335	eP	P	18 12 46.2	0.0
PAGZ	Pagadian	3.49	290	eP	P	18 12 59.5	0.0
IPIL	Ipil	4.24	285	eP	P	18 13 01.2	-8.5

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*NDI **02** 18:14:55.3±3.3,12.95N×78.32E,h15^{km},ML3.9*

ISC 02 18:14:51.9±1.0**,13.09N**±0.07×**78.29E**±0.07**,h10^{km},n15, σ0^{s}96**/16**,1D,Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDRS	Chennai	1.90	90	ex	x	18 15 55.9	
MDRS				AML	AML	18 15 58.5	
	comp=N,1µm,0.2s						
MDRS				AML	AML	18 15 58.5	
	comp=E,1µm,0.2s						
MNGI	Mangalore	3.38	268	eP	Pn	18 15 46.7	+0.7
MNGI				eS	Sn	18 16 27.0	+0.4
MNGI				AML	AML	18 16 43.4	
	comp=N,2µm,0.1s						
MNGI				AML	AML	18 16 44.5	
	comp=E,1µm,0.4s						
TRD	Trivandrum	4.74	196	eP	Pn	18 16 04.2	-1.0
TRD				eS	Sn	18 16 55.9	-5.0
TRD				ex	x	18 16 58.1	
TRD				AML	AML	18 17 21.6	
	comp=E,422nm,0.3s						
TRD				AML	AML	18 17 21.8	
	comp=N,480nm,0.3s						
LATR	Latur	5.55	343	ex	x	18 17 00.0	
LATR				ex	x	18 17 45.7	
KAD	Karad	5.77	317	eP	Pn	18 16 21.1	+1.3
KAD				eS	Sn	18 17 25.1	-1.7
KAD				AML	AML	18 17 55.3	
	comp=E,104nm,0.5s						
KAD				AML	AML	18 17 57.2	
	comp=N,105nm,0.5s						
POO	Poona	6.89	322	ex	x	18 17 42.5	
POO				ex	x	18 18 19.5	
AKL	Akola	7.67	351	⇓ix	x	18 17 59.8	
	comp=N,56nm,0.4s						
AKL				i x	x	18 18 29.6	
BOM	Bombay	7.81	318	eS	Sn	18 18 12.9	-5.0
	comp=N,69nm,0.7s						
NGP	Nagpur	8.05	5	eP	P	18 16 52.4	+0.7
NGP				eS	Sn	18 18 17.2	-6.5
NGP				AML	AML	18 19 16.1	
	comp=E,61nm,0.6s						
NGP				AML	AML	18 19 17.4	
	comp=N,34nm,0.7s						
BHPL	Bhopal	10.13	355	eP	P	18 17 20.1	-0.5
BHPL				eS	S	18 19 09.9	-5.5
KOLN	Koldanda	15.42	18	eP	P	18 18 32.2	+0.8
	comp=N,6.8nm,0.7s						
DMN	Daman	15.79	23	eP	P	18 18 42.4	+6.3
	comp=N,7.9nm,0.7s						
PKI	Pulchoki	15.87	24	eP	P	18 18 45.6	+8.4
	comp=N,11nm,0.7s						
GKN	Gorkha	15.97	21	eP	P	18 18 37.7	-0.8
	comp=N,5.5nm,0.4s						
KKN	Kakani	16.02	23	eP	P	18 18 44.8	+5.8
	comp=N,11nm,1.0s						

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*LDG **02** 18:59:36.8±0.1,48.29N×7.41E,h7^{km},Md2.5/3,Ml2.5/10, Error ellipse: s-maj=1.7km s-min=1.3km az=92.0*

*BGR **02** 18:59:36.8±0.3,48.30N×7.46E,h5^{km},ML1.7/2,Error ellipse: s-maj=5.6km s-min=3.3km az=146.0*

*NEIC **02** 18:59:36.8,48.29N×7.41E,h7^{km},ML2.5(LDG), ML2.0(STR),After LDG.*

*CSEM **02** 18:59:36.4±0.1,48.31N×7.43E,h10^{km},ML2.4/10,Error ellipse: s-maj=1.7km s-min=1.5km az=17.0*

STR 02 18:59:36.8±0.1**,48.28N×7.43E,h5^{km}**±1^{km}**,Ml2.0,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0,France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	Welschbruch	0.14	339	Pg	Pg	18 59 39.7	-0.1
WLS	Welschbruch	0.14	339	ePg	Pg	18 59 39.8	0.0
CDF	Champ du Feu	0.17	322	ePg	Pg	18 59 40.0	-0.3
CDF				eSg	Sg	18 59 42.3	-0.3
	48nm,0.2s						
LIBD	Limburg	0.17	138	ePg	Pg	18 59 40.3	-0.1
LIBD	Limburg	0.17	138	Pg	Pg	18 59 40.2	-0.2
LIBD				Sg	Sg	18 59 43.4	+0.6
LIBD	Limburg	0.17	138	Pg	Pg	18 59 40.3	-0.1
LIBD				Sg	Sg	18 59 43.4	+0.6
ECH	Echery	0.19	251	Pg	Pg	18 59 40.8	+0.1
ECH				Sg	Sg	18 59 43.9	+0.5
ECH	Echery	0.19	251	ePg	Pg	18 59 40.9	+0.1
ECH	Echery	0.19	251	Pg	Pg	18 59 40.9	+0.2
ECH				Sg	Sg	18 59 43.9	+0.5
MOF	Molkenrain	0.47	205	ePg	Pg	18 59 46.0	-0.2
BFO	Black Forest	0.60	85	ePg	Pg	18 59 47.8	-1.1
BFO				eSg	Sg	18 59 55.0	-1.9
HINF	Hinteralfeld	0.60	220	ePg	Pg	18 59 48.0	-0.9
HINF				eSg	Sg	18 59 56.6	-0.4
	21nm,0.2s						
LANF	Langenberg	0.74	19	Pg	Pg	18 59 51.3	-0.4
HAU	Haudompre	0.78	250	ePg	Pg	18 59 51.6	-0.7
HAU				eSg	Sg	19 00 01.7	-0.9
	24nm,0.3s						
BBS	Basel-Blauen	0.82	176	Pg	Pg	18 59 53.2	0.0
BBS				Sg	Sg	19 00 03.9	-0.2
THEF	They Montfort	0.97	267	Pg	Pg	18 59 55.1	-1.0
THEF	They Montfort	0.97	267	ePg	Pg	18 59 55.5	-0.7
LOMF	Lomont	1.01	204	Pg	Pg	18 59 56.2	-0.9
LOMF				Sg	Sg	19 00 10.2	-0.4
LOMF	Lomont	1.01	204	ePg	Pg	18 59 56.4	-0.7
STU	Stuttgart	1.27	67	eSg	Sg	19 00 16.7	-2.4
RFYF	Reffroy	1.35	286	ePg	Pg	19 00 01.9	-1.8
	baz=103						
RFYF				eSg	Sg	19 00 18.7	-3.0
	16nm,0.2s						
SFTF	Sexfontaines	1.60	268	ePg	Pg	19 00 06.0	-2.8
SFTF				eSg	Sg	19 00 27.3	-2.8
	12nm,0.2s						
MEZF	Maizieres J’vi	1.60	279	ePg	Pg	19 00 05.5	-3.3
MEZF				eSg	Sg	19 00 26.9	-3.2
	8.7nm,0.3s						
CABF	La Chapelle	1.90	209	ePg	Pg	19 00 13.1	-1.7
CABF				eSg	Sg	19 00 36.1	-4.0
	2.0nm,0.3s						
TNS	Taunus Mts	2.06	19	eSg	Sg	19 00 41.0	-4.3
LOR	Lormes	2.61	249	ePg	Pg	19 00 24.8	-4.2
	baz=69						
LOR				eSg	Sg	19 00 58.4	-5.4
	3.9nm,0.2s						
GRF	Grafenberg Arr	2.87	59	eSg	Sg	19 01 07.3	-5.1
SSF	Saint Saulge	2.92	247	ePg	Pg	19 00 30.6	-4.5
SSF				eSg	Sg	19 01 08.1	-5.9
	0.9nm,0.3s						
SMF	Signal de Mont	2.93	237	ePg	Pg	19 00 31.0	-4.4
SMF				eSg	Sg	19 01 08.8	-5.7
	3.3nm,0.4s						
AVF	Avril sur Loir	3.14	243	ePg	Pg	19 00 35.0	-4.5
AVF				eSg	Sg	19 01 15.1	-6.2
	1.3nm,0.3s						
BGF	Bois d’Agland	3.56	243	ePg	Pg	19 00 42.8	-5.0
BGF				eSg	Sg	19 01 28.0	-7.2
	1.5nm,0.3s						

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*ISK **02** 19:06:45.1,37.14N×27.55E,h11^{km},MD3.2*

*NEIC **02** 19:06:45.0,37.17N×27.58E,h9^{km},MD3.2(ISK), MD3.1(ATH),After ISK.*

*CSEM **02** 19:06:45.1±0.1,37.15N×27.56E,h8^{km},MD3.2,Error ellipse: s-maj=2.5km s-min=2.0km az=140.0*

*ATH **02** 19:06:47.2,37.14N×27.60E,h32^{km}±2^{km},MD3.1/3*

ISC 02 19:06:46.0±0.4**,37.13N**±0.03×**27.58E**±0.04**,h10^{km}**±3^{km}**, n20,σ0^{s}68**/27**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDRM	Kayabasi	0.13	238	i P	Pg	19 06 47.5	-1.6
BDRM				i S	Sg	19 06 52.7	+1.6
BODT	Bodrum	0.23	252	PG	Pg	19 06 50.2	-0.6
MLSB	Milas	0.23	44	PG	Pg	19 06 50.0	-0.9
MLSB				SG	Sg	19 06 54.7	+0.6
DAT	Datca	0.40	180	PG	Pg	19 06 53.9	-0.3
DAT				SG	Sg	19 06 59.9	+0.2
YER	Yerkesik	0.56	90	PG	Pg	19 06 56.9	-0.5
AYDN	Tasoluk	0.58	24	i P	Pg	19 06 58.1	+0.4
AYDN				i S	Sg	19 07 06.5	+0.9
NISR	Nisiros	0.63	215	ePN	Pn	19 07 00.6	-0.1
SMG	Samos	0.82	315	ePN	Pn	19 07 03.5	+0.1
SMG				eSN	Sn	19 07 15.7	+0.1
DALT	Dalyan (Mudla)	0.92	113	ePG	Pg	19 07 03.9	-0.6
ARG	Arkhangelos	1.01	154	ePN	Pn	19 07 06.3	+0.2
ARG				eSN	Sn	19 07 20.7	+0.2
IZM	Izmir	1.29	349	ePN	Pn	19 07 09.2	-0.8
FETY	Fethiye	1.30	112	ePN	Pn	19 07 10.6	+0.3
DENT	Denizli	1.31	61	ePN	Pn	19 07 10.2	-0.2
MANT	Manisa	1.56	29	i P	Pn	19 07 14.2	+0.2
MANT				i S	Sb	19 07 40.0	+5.7
KARP	Karpathos	1.62	192	ePN	Pn	19 07 16.0	+1.3
APE	Apeiranthos	1.64	268	ePN	Pn	19 07 14.4	-0.6
APE	Apeiranthos	1.64	268	ePb	Pb	19 07 15.8	0.0
AKS	Akhisar	1.75	6	ePN	Pn	19 07 16.0	-0.7
ELL	Elmali	1.91	101	ePN	Pn	19 07 18.8	-0.1
PRK	Paraskevi	2.35	334	ePN	Pn	19 07 26.0	+0.8

WEL 02 19:13:32.5±0.9**,36.50S×178.18E,h123^{km}**±15^{km}**,ML3.6**/4**, 1C,Error ellipse: s-maj=16.2km s-min=12.3km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.07	175	⇑PN	P	19 13 55.3	-0.5
MXZ				SN	S	19 14 12.5	-0.8
PUZ	Puketiti	1.58	178	PN	P	19 14 01.0	-0.4
PUZ				SN	S	19 14 22.7	-0.7
MWZ	Matawai	1.91	196	PN	P	19 14 05.5	+0.1
MWZ				SN	S	19 14 30.4	0.0
URZ	Urewera	1.96	205	PN	P	19 14 05.9	0.0
URZ				SN	S	19 14 31.9	+0.5
TCW	Tory Channel	5.61	212	eSN	S	19 15 52.1	-6.4
MQZ	McQueen’s Vall	8.35	209	eSN	S	19 16 52.6	-12

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*ISK **02** 19:15:24.6,38.19N×26.72E,h15^{km},MD3.2*

*ATH **02** 19:15:24.6,38.15N×26.52E,h15^{km}±6^{km},MD3.0/3*

*CSEM **02** 19:15:24.9±0.1,38.19N×26.76E,h15^{km},MD3.2,Error ellipse: s-maj=4.4km s-min=1.9km az=111.0*

ISC 02 19:15:24.5±1.0**,38.20N**±0.04×**26.69E**±0.08**,h11^{km}**±7^{km}**, n13,σ0^{s}32**/17**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.34	56	i PG	Pg	19 15 31.5	0.0
IZM	Izmir	0.49	66	i PG	Pg	19 15 34.7	+0.1
SMG	Samos	0.50	166	ePN	Pg	19 15 34.6	-0.1
SMG				eSN	Sg	19 15 41.8	+0.3
PRK	Paraskevi	1.10	343	ePN	Pn	19 15 45.6	-0.2
PRK				eSN	Sn	19 16 01.0	0.0
AKS	Akhisar	1.11	52	PN	Pn	19 15 46.0	-0.1
AKS				SN	Sn	19 16 01.7	+0.2
BODT	Bodrum	1.24	156	ePN	Pn	19 15 47.8	0.0
MLSB	Milas	1.25	136	ePN	Pn	19 15 47.6	-0.3
APE	Apeiranthos	1.45	220	ePN	Pn	19 15 50.9	0.0
APE				eSN	Sn	19 16 10.7	+0.6
APE	Apeiranthos	1.45	220	ePN	Pn	19 15 49.8	-1.1
DAT	Datca	1.63	154	ePN	Pn	19 15 53.1	-0.3
YER	Yerkesik	1.65	129	ePN	Pn	19 15 53.5	-0.2
BALB	Balikesir	1.71	32	ePN	Pn	19 15 55.1	+0.4
BNT	Bandirma	2.36	24	ePN	Pn	19 16 03.9	0.0

*IDC **02** 19:17:00.6±2.0, 54.13S×57.98W, mb4.0/3, mb1 4.1/5, mb1mx3.9/12, mbtmp3.9/5, ML3.9/2, MS3.6/4, Ms1 3.6/4, ms1mx3.3/12, Error ellipse: s-maj=48.6km s-min=29.5km az=151.0*

*NEIC **02** 19:17:04.1±0.5, 54.03S×58.10W, h10^{km}, mb4.5/4, Error ellipse: s-maj=16.8km s-min=8.8km az=82.0*

ISC 02 19:17:02.5±0.6**, 54.07S**±0.06×**58.3W**±0.1**, h10^{km}, n32, σ1^{s}23**/20**, mb4.2**/6**, MS3.7**/3**, 6C, Falkland Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFI	East Falkland	2.40	3	eP	Pn	19 17 43.7	+1.2
USHA	Ushuaia	5.98	259	Pn	Pn	19 18 32.8	-0.5
	2.7nm,0.3s,baz=80,slow=11,SNR=14						
USHA				Sn	Sn	19 19 42.1	-0.5
	5.5nm,0.3s,baz=90,slow=13,SNR=3.3						
PMSA	Palmer Station	11.13	193	eP	P	19 19 45.1	+0.6
	58nm,1.2s						
PLCA	Paso Flores	15.69	323	Pn	P	19 20 46.5	+1.5
	0.1nm,0.3s,baz=175,slow=4.3,SNR=2.3						
PLCA				LR	LR	19 27 57.6	
	comp=Z,152nm,18.2s,baz=347,slow=42						
TRQA	Tornquist	16.22	349	eP	P	19 20 53.9	+2.0
	27nm,1.3s						
VNA3	Neumayer Olymp	27.06	148	⇑i	P	19 22 53.4	+7.0
VNA3	Neumayer Olymp	27.06	148	⇑iP	P	19 22 46.8	+0.4
VNA3				⇑iP		19 22 53.4	
CPUP	Villa Florida	27.72	2	eP	P	19 22 52.6	-0.2
VNA2	Neumayer--Watz	27.72	147	⇑i	P	19 22 58.9	+6.5
VNA2	Neumayer--Watz	27.72	147	⇑iP	P	19 22 53.8	+1.4
VNA2				⇑iP		19 22 58.9	
SNAA	Sanae	29.29	148		P	19 23 05.0	-1.5
SNAA	Sanae	29.29	148		P	19 23 11.9	+5.4
SNAA	Sanae	29.29	148	eP	P	19 23 04.4	-2.1
QSPA	South Pole Qui	36.18	180	eP	P	19 24 06.3	-0.1
	12nm,1.0s,mb4.8						
SIV	San Ignacio	38.06	356	P	P	19 24 21.2	-1.6
	1.1nm,0.9s,mb3.6,baz=13,slow=23,SNR=5.0						
LPAZ	La Paz	38.48	345	LR	LR	19 40 37.9	
	comp=Z,76nm,18.6s,MS3.5,baz=235,slow=37						
BDFB	Brasilia	39.18	16	P	P	19 24 29.9	-2.3
	3.5nm,0.7s,mb4.2,baz=204,slow=10.0,SNR=7.0						
BDFB				LR	LR	19 42 39.1	
	comp=Z,96nm,18.9s,MS3.6,baz=127,slow=39						
SAML	Samuel	45.17	353	P	P	19 25 19.9	-1.2
	4.8nm,1.1s,mb4.2						
SBA	Scott Base	45.47	192	P	P	19 25 24.3	+1.6
	13nm,1.1s,mb4.7						
DBIC	Dimbokro	75.18	56	LR	LR	19 55 28.2	
	comp=Z,48nm,18.5s,MS3.8,baz=121,slow=31						
TXAR	Lajitas Array	91.86	322	P	P	19 30 11.2	-0.5
	0.2nm,0.4s,mb3.8,baz=149,slow=5.3,SNR=2.4						
KOLN	Koldanda	141.74	118	eP	PKPdf	19 36 26.5	-10
DMN	Daman	142.39	120	eP	PKPdf	19 36 29.2	-8.9
	28nm,1.4s						
GKN	Gorkha	142.47	119	eP	PKPdf	19 36 30.3	-7.9
PKI	Pulchoki	142.51	120	eP	PKPdf	19 36 29.5	-8.8
KKN	Kakani	142.62	120	eP	PKPdf	19 36 30.7	-7.8
	3.5nm,0.5s						
GUN	Gumba	143.03	120	eP	PKPbc	19 36 32.2	-1.9
LSA	Lhasa	147.11	125	ePKPdf	PKPdf	19 36 46.1	0.0
AAK	Ala-Archa	147.19	91	ePKPdf	PKPdf	19 36 44.8	-1.1
CHKZ	Chkalovo	150.39	70	ePKPbc	PKPdf	19 36 53.8	+3.2
MKAR	Makanchi Array	154.12	90	PKPbc	PKPdf	19 37 01.3	+5.1
	0.3nm,0.5s,baz=243,slow=3.8,SNR=4.6						
MKAR	Makanchi Array	154.12	90	PKPbc	PKPdf	19 37 01.3	+5.1

*NNC **02** 19:21:18.0±8.2, 34.79N×73.11E, mpv3.6, Error ellipse: s-maj=419.2km s-min=74.8km az=77.0*

*NDI **02** 19:21:18.7±2.4, 33.63N×72.97E, h5^{km}, MD3.5*

ISC 02 19:21:15.4±3.0**, 34.8N**±0.3×**73.7E**±0.6**, h24^{km}**±18^{km}**, n4, σ1^{s}03**/7**, 1C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.85	144	eP	Pn	19 22 01.0	+0.5
THN				ex	x	19 23 40.1	
DLH	Dalhousie	2.89	139	eP	Pn	19 22 05.0	+3.9
DLH				eS	Sn	19 22 35.0	-0.5
SDNR	Sundarnagar	4.24	139	ePB	Pb	19 22 28.0	-1.1
SDNR				eSB	Sb	19 23 21.0	+0.8
KK31	Karatay Array	8.70	344	P	P	19 23 23.0	0.0
	1.2nm,0.4s,baz=163,slow=12,SNR=23						
KK31				⇑S	Sn	19 25 01.4	0.0
	0.6nm,0.4s,baz=166,slow=24,SNR=8.4						

*ISK **02** 19:22:20.7, 37.09N×27.60E, h14^{km}, MD3.2*

*CSEM **02** 19:22:20.7±0.1, 37.10N×27.60E, h10^{km}, MD3.2, Error ellipse: s-maj=3.0km s-min=1.8km az=173.0*

*ATH **02** 19:22:22.0, 37.18N×27.61E, h33^{km}±3^{km}, MD3.1/3*

ISC 02 19:22:21.6±0.4**, 37.11N**±0.03×**27.58E**±0.04**, h9^{km}**±4^{km}**, n19, σ1^{s}00**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.11	250	i P	Pg	19 22 25.2	+0.7
BDRM				i S	Sg	19 22 27.7	+1.3
BODT	Bodrum	0.22	259	i PG	Pg	19 22 26.0	-0.3
BODT				i SG	Sg	19 22 30.4	+1.0
MLSB	Milas	0.25	40	i PG	Pg	19 22 26.4	-0.5
MLSB				i SG	Sg	19 22 30.6	+0.2
DAT	Datca	0.38	180	PG	Pg	19 22 28.3	-1.0
YER	Yerkesik	0.56	87	PG	Pg	19 22 32.1	-0.9
AYDN	Tasoluk	0.60	23	i P	Pg	19 22 33.4	-0.4
AYDN				i S	Sg	19 22 42.0	0.0
NISR	Nisiros	0.61	216	ePN	Pn	19 22 36.0	-0.1
SMG	Samos	0.84	316	ePN	Pn	19 22 38.0	-1.4
DALT	Dalyan (Mudla)	0.91	111	ePG	Pg	19 22 38.3	-1.6
ARG	Arkhangelos	0.99	153	ePN	Pn	19 22 41.9	+0.4
ARG				eSN	Sn	19 22 56.4	+0.7
DNZL	Cakiroluk	1.31	63	i P	Pb	19 22 46.3	+0.4
DNZL				i S	Sb	19 23 05.3	+2.7
IZM	Izmir	1.31	349	PN	Pn	19 22 45.5	-0.7
DENT	Denizli	1.33	60	PN	Pn	19 22 45.5	-0.9
BLCB	Balcova	1.35	342	PN	Pn	19 22 45.7	-0.9
MANT	Manisa	1.59	29	i P	Pn	19 22 52.5	+2.5
MANT				i S	Sb	19 23 12.4	+1.7
KARP	Karpathos	1.59	192	ePB	Pb	19 22 51.4	+0.7
APE	Apeiranthos	1.64	269	ePN	Pn	19 22 50.3	-0.5
APE	Apeiranthos	1.64	269	ePB	Pb	19 22 50.9	-0.6
AKS	Akhisar	1.78	6	ePN	Pn	19 22 52.4	-0.4

*ISK **02** 20:05:31.2, 38.54N×25.18E, h30^{km}, MD3.5*

*ATH **02** 20:05:32.8, 38.62N×25.45E, h38^{km}±4^{km}, MD3.2/4*

*NEIC **02** 20:05:32.8, 38.62N×25.45E, h38^{km}, MD3.4(ISK), MD3.2(ATH), After ATH.*

*CSEM **02** 20:05:33.6±0.1, 38.56N×25.45E, h40^{km}, MD3.2, Error ellipse: s-maj=1.6km s-min=1.4km az=119.0*

ISC 02 20:05:32.6±1.0**, 38.57N**±0.04×**25.35E**±0.06**, h27^{km}**±11^{km}**, n25, σ0^{s}89**/36**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.99	46	ePN	Pn	20 05 50.1	-0.7
PRK				eSN	Sn	20 06 02.8	-1.2
URLA	Izmir	1.00	102	i P	Pn	20 05 50.4	-0.6
URLA				i S	Sb	20 06 02.8	-1.2
PTL	Penteli	1.28	247	ePB	Pb	20 05 56.8	+0.9
AYVA	Ayvalik	1.28	54	i P	Pn	20 05 56.2	+1.2
AYVA				i S	Sn	20 06 09.7	-1.7
LIA	Limnos Island	1.34	354	ePN	Pn	20 05 56.0	+0.2
BLCB	Balcova	1.34	97	PN	Pn	20 05 56.7	+0.8
BLCB				SN	Sn	20 06 14.3	+1.4
SMG	Samos	1.45	126	ePN	Pn	20 05 58.1	+0.6
EZN	Ezine	1.47	31	PN	Pn	20 05 57.2	-0.5
EZN				SN	Sn	20 06 16.7	+0.5
APE	Apeiranthos	1.50	174	PN	Pn	20 05 56.2	-2.0
APE				SN	Sn	20 06 15.3	-1.7
APE	Apeiranthos	1.50	174	ePn	Pn	20 05 59.4	+1.2
APE				eSn	Sn	20 06 15.3	-1.7
IZM	Izmir	1.51	96	PN	Pn	20 05 58.6	+0.3
KDAG	Bornova	1.51	96	i P	Pn	20 05 57.9	-0.5
KDAG				i S	Sn	20 06 18.7	+1.4
AKS	Akhisar	1.95	80	ePN	Pn	20 06 04.8	+0.2
BODT	Bodrum	2.16	133	ePN	Pn	20 06 07.4	-0.2
AYDN	Tasoluk	2.19	114	i P	Pn	20 06 14.5	+6.4
BALB	Balikesir	2.24	61	ePN	Pn	20 06 09.5	+0.7
BTOK	Tokmak	2.40	59	i P	Pn	20 06 17.2	+6.1
BTOK				i S	Sn	20 06 45.9	+6.0
MANT	Manisa	2.52	91	i P	Pn	20 06 20.5	+7.8
MANT				i S	Sn	20 06 52.0	+9.2
RDO	Rodhopi	2.58	3	ePN	Pn	20 06 12.8	-0.8
EDC	Edincik	2.64	47	ePN	Pn	20 06 14.5	+0.1
MFT	Murefte	2.67	33	ePN	Pn	20 06 14.9	0.0
BNT	Bandirma	2.67	47	ePN	Pn	20 06 14.9	-0.1
YER	Yerkesik	2.73	121	ePN	Pn	20 06 15.8	+0.1
ORLT	Orhaneli	3.12	61	ePN	Pn	20 06 22.2	+0.9
ULDT	Uludag	3.33	61	eP	Pn	20 06 33.1	+8.8
ULDT				i S	Sn	20 07 12.7	+9.3

*NIED **02** 20:06:00, 37.40N×139.70E, h5^{km}, Mw3.6 Best double couple: $M_0$2.77×10^{14} NP1:ϕ_s77°, δ66°, λ134°. NP2:ϕ_s190°, δ49°, λ32°.*

*IDC **02** 20:06:04.6±1.4, 37.24N×139.92E, mb3.6/2, mb1 3.9/4, mb1mx3.5/22, mbtmp3.8/4, ML3.2/2, Error ellipse: s-maj=33.9km s-min=14.4km az=143.0*

*JMA **02** 20:06:05.2, 37.40N×139.75E, h4^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1:ϕ_s76°, δ61°, λ147°. NP2:ϕ_s184°, δ61°, λ33°. Principal axes: T Plg43°, Azm40°; N Plg47°, Azm220°; P Plg0°, Azm310°;*

JMA Felt II J1.

ISC 02 20:06:04.6±0.6**, 37.40N**±0.04×**139.75E**±0.05**, h9^{km}**±4^{km}**, n12, σ1^{s}08**/16**, mb3.7**/2**, 4C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFY	Yanaizu	0.04	274	⇓P	Pg	20 06 06.3	0.0
JFY				S	Sg	20 06 07.2	-0.3
JSB	Shiboa	0.46	162	⇓P	Pg	20 06 14.3	+0.4
JSB				S	Sg	20 06 20.7	+0.7
JFT	Otama	0.48	76	⇑P	Pg	20 06 14.6	+0.2
JFT				S	Sg	20 06 21.2	+0.3
JYS	Shirataka	0.85	17	⇑P	Pb	20 06 21.6	+0.4
JFK	Kawauchi	0.90	92	⇑P	Pb	20 06 21.9	0.0
JMM	Marumori	0.95	61	⇑P	Pb	20 06 23.0	+0.2
MAT	Matsushiro	1.50	236	P	Pn	20 06 33.0	+1.1
MAT				S	Sb	20 06 53.7	+2.3
MJAR	Matsushiro Arr	1.50	236	Pg	Pg	20 06 33.1	-1.6
	35nm,0.3s,baz=33,slow=12,SNR=277						
MJAR				Lg		20 06 52.3	
	9.8nm,0.3s,baz=85,slow=27,SNR=8.5						
JHJ	Hachijo jima 2	4.28	180	Pn	Pn	20 07 08.8	-2.6
	3.2nm,0.3s,baz=52,slow=19,SNR=2.5						
ASAJ	Asahikawa	7.04	17	Pn	Pn	20 07 51.2	+0.6
	0.4nm,0.3s,baz=195,slow=12,SNR=3.7						
ILAR	Eielson Array	49.90	32	P	P	20 14 59.5	-0.6
	0.4nm,0.5s,mb3.7,baz=260,slow=5.7,SNR=6.0						
WRA	Warramunga Arr	57.26	186	P	P	20 15 52.7	-2.4
	0.6nm,0.8s,mb3.7,baz=1.5,slow=7.4,SNR=4.8						

MAN 02 20:28:37.7, 13.21N×120.11E, h1^{km}, mb4.2, ML3.0, MS2.7, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.54	14	eP	Pg	20 28 48.3	-0.2
LUBP				eS	Sg	20 28 54.8	-0.9
PGP	Puerto Galera	0.87	70	eP	Pg	20 28 53.8	-1.4
BUSP	Coron	1.20	176	eP	Pb	20 29 02.4	+1.5
BUSP				eS	Sb	20 29 18.5	+1.7
SJMP	San Jose	1.23	127	eP	Pb	20 29 01.5	-0.1
BOAC	Boac	1.71	81	eP	Pn	20 29 08.7	-0.2
CUYO	Cuyo Island	2.51	159	eP	Pn	20 29 20.0	-0.2

*ISK **02** 20:38:17.8, 38.20N×26.56E, h7^{km}, MD3.1*

*ATH **02** 20:38:19.1, 38.17N×26.53E, h30^{km}±2^{km}, MD3.0/3*

*CSEM **02** 20:38:19.3±0.1, 38.21N×26.66E, h15^{km}, MD3.1, Error ellipse: s-maj=3.3km s-min=2.5km az=96.0*

ISC 02 20:38:18.3±0.8**, 38.22N**±0.03×**26.59E**±0.05**, h5^{km}**±6^{km}**, n15, σ0^{s}82**/24**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.14	3	i P	Pg	20 38 21.1	-0.1
URLA				i S	Sg	20 38 23.9	+0.7
BLCB	Balcova	0.40	65	PG	Pg	20 38 26.6	+0.4
SMG	Samos	0.55	159	ePN	Pg	20 38 30.0	+0.7
SMG				eSN	Sg	20 38 38.2	+1.6
IZM	Izmir	0.56	71	PG	Pg	20 38 29.6	+0.1
IZM				SG	Sg	20 38 38.3	+1.3
KDAG	Bornova	0.57	71	i P	Pg	20 38 28.9	-0.7
KDAG				i S	Sg	20 38 37.3	+0.1
PRK	Paraskevi	1.05	347	ePN	Pn	20 38 39.8	+0.1
PRK				eSN	Sn	20 38 55.1	+0.2
AYDN	Tasoluk	1.17	118	i P	Pb	20 38 41.0	+0.4
AYDN				i S	Sb	20 38 57.1	+1.3
AKS	Akhisar	1.17	55	PN	Pn	20 38 41.2	-0.1
BODT	Bodrum	1.29	153	ePN	Pn	20 38 42.9	-0.2
APE	Apeiranthos	1.42	216	ePN	Pn	20 38 44.1	-0.8
APE				eSN	Sn	20 39 03.8	-0.5
APE	Apeiranthos	1.42	216	ePN	Pn	20 38 44.0	-0.9
MANT	Manisa	1.57	79	i P	Pg	20 38 48.5	-1.3
MANT				i S	Sg	20 39 10.4	-0.4
YER	Yerkesik	1.73	128	ePN	Pn	20 38 49.3	0.0
BALB	Balikesir	1.74	35	ePN	Pn	20 38 49.9	+0.4
DNZL	Cakiroluk	2.02	104	i P	Pg	20 38 57.4	-1.2
DNZL				i S	Sg	20 39 23.3	-2.1

*KRSC **02** 20:39:09.7±1.9, 52.09N×153.19E, h555^{km}±11^{km}, ML4.9*

*SKHL **02** 20:39:13.5±1.9, 52.27N×152.90E, h515^{km}±30^{km}, mb5.4/1, Ms3.9/1, msh4.9/2*

*BJI **02** 20:39:15.4, 52.59N×152.91E, h471^{km}, mB4.6, mb4.7*

*MOS **02** 20:39:15.6±0.8, 52.70N×153.21E, h490^{km}, mb4.2/11, Error ellipse: s-maj=11.0km s-min=8.0km az=110.9*

*NEIC **02** 20:39:16.7±0.5, 52.78N×152.91E, h471^{km}±7^{km}, mb4.5/18, Error ellipse: s-maj=8.2km s-min=4.3km az=150.0*

*IDC **02** 20:39:17.7±1.5, 52.71N×152.93E, h486^{km}±19^{km}, mb3.6/23, mb1 3.8/26, mb1mx3.8/29, mbtmp4.5/26, Error ellipse: s-maj=12.3km s-min=7.9km az=154.0*

ISC 02 20:39:15.9±0.2**, 52.72N**±0.05×**153.02E**±0.06**, h477^{km}**±3^{km}**, n154, σ0^{s}96**/172**, mb4.2**/49**, 3C-7D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	2.33	99	i P	P	20 40 21.1	-0.1
ALID	Alaid	2.43	139	eP	P	20 40 19.7	-2.1
APC	Apacha	2.52	84	i P	P	20 40 21.9	-0.4
APC				Smax			
	80nm,0.8s						
PAU	Pauzhetka	2.65	117	i P	P	20 40 23.2	0.0
PAU				i S	S	20 41 16.1	-0.3
PAU				Smax			
	290nm,1.0s						
PAU	Pauzhetka	2.65	117	i P	P	20 40 23.5	+0.3
PAU				eS	S	20 41 08.4	-8.0
SKR	Severo-Kuril's	2.80	135	i P	P	20 40 20.3	-3.9
SKR				i S	S	20 41 13.4	-4.8
SKR	Severo-Kuril's	2.80	135	⇑iP	P	20 40 20.3	-3.9
SKR				AMB	AMB	20 40 20.8	
	80nm,0.5s						
SKR				AMB	AMB	20 40 20.8	
	60nm,0.5s						
SKR				AMB	AMB	20 40 20.8	
	230nm,0.5s						
SKR				i S	S	20 41 13.4	-4.8
SKR				A		20 41 14.2	
	2µm,4.0s						
SKR				A		20 41 14.2	
	2µm,4.0s						
SKR				A		20 41 14.2	
	460nm,0.5s						
SKR				A		20 41 14.2	
	230nm,0.5s						
SKR				A		20 41 14.2	
	80nm,0.5s						
SKR				AMS	AMS	20 43 18.0	
	3µm,14.0s						
GRL	Gorelyy	3.08	91	i P	P	20 40 26.8	+0.6
KRMR	Karymshinskiy	3.11	86	eP	P	20 40 26.6	+0.3
GNL	Ganaly	3.12	70	eP	P	20 40 26.4	0.0
RUS	Russkaya	3.36	93	P	P	20 40 27.6	-0.7
RUS				S	S	20 41 22.3	-3.2
RUS	Russkaya	3.36	93	i P	P	20 40 27.4	-0.9
RUS				i S	S	20 41 23.3	-2.2
PET	Petropavlovsk	3.43	83	P	P	20 40 28.9	+0.2
PET				S	S	20 41 25.0	-1.4
PET	Petropavlovsk	3.43	83	i P	P	20 40 28.7	0.0
PET	Petropavlovsk	3.43	83	⇓iP	P	20 40 28.6	-0.1
PET				⇓iP		20 40 29.0	
PET				AMB	AMB	20 40 29.0	
	700nm,1.1s						
PET				AMB	AMB	20 40 29.2	
	840nm,1.1s						
PET				i S	S	20 41 25.5	-0.9
PET				A		20 41 26.9	
	230nm,1.2s						
PET				A		20 41 27.3	
	700nm,3.4s						
PET	Petropavlovsk	3.43	83	eP	P	20 40 28.5	-0.3
PET	Petropavlovsk	3.43	83	⇓iPN	P	20 40 28.6	-0.1
PET				i S	S	20 41 25.5	-0.9
PET				pmax	pmax		
	comp=Z,800nm,1.1s						
PET				pmax	pmax		
	comp=Z,729nm,1.1s						
PET				smax			
	comp=E,226nm,1.2s						
PET				smax			
	comp=E,700nm,3.4s						
PET				smax			
	comp=N,37nm,0.5s						
PET				smax			
	comp=E,32nm,0.4s						
KOK	Koryaka	3.44	78	i P	P	20 40 29.6	+0.7
AVH	Avacha	3.50	79	i P	P	20 40 29.8	+0.5
SMAR	Somma	3.54	79	i P	P	20 40 30.0	+0.4
UGLR	Uglovaya	3.54	80	i P	P	20 40 30.5	+0.8
SDLR	Sedlovina	3.59	79	i P	P	20 40 30.2	+0.2
NLC	Nalytchevo	3.85	81	P	P	20 40 32.1	0.0
NLC				S	S	20 41 30.0	-2.5
NLC	Nalytchevo	3.85	81	i P	P	20 40 31.7	-0.4
KII	Karymskiy	4.07	68	eP	P	20 40 34.8	+0.8
SPN	Mys Shipunski	4.26	82	P	P	20 40 33.9	-1.7
SPN				S	S	20 41 33.3	-5.4
SPN	Mys Shipunski	4.26	82	i P	P	20 40 33.9	-1.7
ESO	Esso	4.62	44	eP	P	20 40 40.8	+1.9
ESO				Smax			
	comp=E,110nm,1.0s						
TUMR	Tumrok	4.93	56	eP	P	20 40 43.8	+2.1
KMNR	Kamenistaya	5.21	51	eP	P	20 40 45.5	+1.1
KOZ	Kozyrevsk	5.22	47	i P	P	20 40 46.2	+1.7
KOZR	Kozyr	5.24	47	PN	P	20 40 46.2	+1.6
SRDR	Sredinnyy	5.31	45	eP	P	20 40 46.4	+1.0
KPT	Kopyto	5.32	49	eP	P	20 40 45.0	-0.5
MKZ	Mys Kozlova	5.50	67	P	P	20 40 46.0	-1.2
MKZ				S	S	20 41 53.4	-6.0
MKZ	Mys Kozlova	5.50	67	i P	P	20 40 45.9	-1.3
LGNR	Loginova	5.61	50	eP	P	20 40 49.1	+0.8
ZLN	Zelenaya	5.62	51	i P	P	20 40 49.3	+0.9
KRSR	Krestovskiy	5.63	48	eP	P	20 40 48.3	-0.1
CIRR	Tsirk	5.65	50	eP	P	20 40 49.4	+0.7
SRKR	Sorokina	6.16	47	eP	P	20 40 54.4	+0.7
SMKR	Semkarok	6.25	48	i P	P	20 40 54.1	-0.5
KBG	Krutoberegovo	6.66	54	eS	S	20 42 16.7	-3.8
KBG				Smax			
	comp=E,940nm,0.6s						
KBTR	Krutoberegovo	6.70	55	P	P	20 40 57.8	-1.4
KBTR				S	S	20 42 14.0	-7.1
KBTR	Krutoberegovo	6.70	55	i P	P	20 40 56.7	-2.5
BKI	Bering	8.04	67	eP	P	20 41 10.9	-2.4
OSSR	Ossora	8.63	37	i P	P	20 41 17.5	-2.2
YSS	Yuzh-Sakhalins	8.79	233	i P	P	20 41 22.0	+0.6
YSS				AMB	AMB	20 41 22.6	
	comp=E,40nm,0.6s						
YSS				AMB	AMB	20 41 22.6	
	comp=E,30nm,0.6s						
YSS				AMB	AMB	20 41 22.6	
	comp=E,50nm,0.6s						
YSS				eS	S	20 43 03.0	+1.9
YSS				A		20 43 07.0	
	comp=E,50nm,1.3s						
YSS	Yuzh-Sakhalins	8.79	233	eP	P	20 41 21.9	+0.5
	comp=E,33nm,0.6s						
YSS	Yuzh-Sakhalins	8.79	233	⇑iPN	P	20 41 22.0	+0.6
YSS				eS	S	20 43 03.0	+1.9
YSS				pmax	pmax		
	comp=N,40nm,0.6s						
YSS				pmax	pmax		
	comp=E,30nm,0.6s						
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS				smax			
	comp=N,50nm,1.3s						
SEY	Seymchan	10.25	358	⇑iPN	P	20 41 38.3	+1.3
ASAJ	Asahikawa	11.04	223	P	P	20 41 44.8	-0.6
	comp=N,1.3nm,0.3s,baz=46,slow=9.0,SNR=14						
ASAJ	Asahikawa	11.04	223	PN	P	20 41 44.8	-0.6
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KAMR	Kamenskoye	12.03	31	i P	P	20 41 56.6	+0.7
FX1	Attu Island--F	12.19	81	P	P	20 41 58.6	+1.0
	comp=Z,6.2nm,0.3s,baz=308,slow=3.6,SNR=29						
FX1	Attu Island--F	12.19	81	PN	P	20 41 58.6	+0.9
FX1				pmax	pmax		
	comp=Z,6.0nm,0.3s						
KLR	Kul'dur	13.84	264	eP	P	20 42 15.8	+1.0
ZEA	Zeya	15.44	284	eP	P	20 42 28.2	-3.0
ZEA				AMB	AMB	20 42 30.2	
	comp=Z,29nm,1.2s						
ZEA				AMB	AMB	20 42 30.2	
	comp=Z,43nm,1.2s						
YAK	Yakutsk	15.58	316	eP	P	20 42 27.1	-5.3
	comp=Z,10.0nm,0.6s						
YAK	Yakutsk	15.58	316	eP	P	20 42 31.8	-0.7
YAK				eS	S	20 45 13.4	+1.6
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,11nm,1.1s						
YAK				smax			
	comp=N,7.0nm,0.9s						
YAK				smax			
	comp=E,12nm,0.9s						
YAK				smax			
	comp=Z,7.0nm,0.9s						
BILL	Bilibino	16.64	18	eP	P	20 42 42.5	-0.6
	comp=Z,6.9nm,0.5s						
BILL	Bilibino	16.64	18	⇓iP	P	20 42 44.0	+0.9
BILL				pmax	pmax		
	comp=Z,11nm,0.8s						
CLNS	Chul'man	16.68	295	eP	P	20 42 44.3	+0.7
CLNS				pmax	pmax		
	comp=Z,47nm,1.0s						
CLNS				pmax	pmax		
	comp=N,23nm,1.3s						
CLNS				pmax	pmax		
	comp=E,33nm,1.0s						
MAJO	Matsushiro	19.24	219	eP	P	20 43 09.4	+0.6
	comp=E,17nm,0.5s						
MAJO	Matsushiro	19.24	219	eP	P	20 43 09.4	+0.6
MAJO				pmax	pmax		
	comp=Z,17nm,0.5s						
MAT	Matsushiro	19.24	219	P	P	20 43 09.3	+0.5
MAT	Matsushiro	19.24	219	eP	P	20 43 09.0	+0.2

	comp=Z,14nm,0.6s						
MAT	Matsushiro	19.24	219	eP	P	20 43 09.0	+0.2
MAT				pmax	pmax		
	comp=Z,14nm,0.6s						
MJAR	Matsushiro Arr	19.24	219	P	P	20 43 09.3	+0.5
	comp=Z,2.9nm,0.3s,baz=16,slow=10,SNR=46						
CN2	Changchun	20.30	255	eP	P	20 43 15.6	-3.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
HIA	Hailar	21.12	274	eP	P	20 43 26.1	-0.4
	comp=Z,35nm,0.8s,mb4.9						
HIA	Hailar	21.12	274	eP	P	20 43 26.1	-0.3
HIA				pmax	pmax		
	comp=Z,35nm,0.8s						
TIXI	Tiksi	21.78	340	eP	P	20 43 32.1	-0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
BOD	Bodaibo	22.57	299	eP	P	20 43 38.6	-1.0
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.2						
TNA	Tin City	23.33	41	eP	P	20 43 47.1	+0.7
CIT	Chita	23.91	284	eP	P	20 43 46.2	-5.5
CIT				pmax	pmax		
	comp=Z,28nm,3.2s						
SONM	Songino Array	29.77	280	P	P	20 44 43.9	+0.3
	comp=Z,1.6nm,0.5s,mb3.7,baz=65,slow=8.4,SNR=26						
SONM				PcP	PcP	20 47 31.7	-1.4
	comp=Z,1.2nm,0.6s,baz=97,slow=1.4,SNR=9.5						
ZAK	Zakamensk	30.53	286	⇓eP	P	20 44 51.0	+1.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
KDAK	Kodiak Island	30.70	59	P	P	20 44 51.2	-0.1
	comp=Z,13nm,0.4s,mb4.8,baz=258,slow=2.4,SNR=40						
MOY	Mondy	31.34	289	eP	P	20 44 58.2	+1.2
MCK	McKinley	31.35	47	eP	P	20 44 57.5	+0.5
	comp=Z,7.5nm,0.7s,mb4.2						
COLA	College	31.68	44	eP	P	20 44 59.7	-0.1
	comp=Z,28nm,0.9s,mb4.7						
JOW	Kunigami	31.79	225	P	P	20 45 00.6	-0.5
	comp=Z,13nm,0.4s,mb4.7,baz=34,slow=8.9,SNR=14						
SML	Sawmill	31.92	50	eP	P	20 45 02.0	+0.2
ILAR	Eielson Array	32.10	44	P	P	20 45 03.4	+0.1
	comp=Z,7.1nm,0.5s,mb4.3,baz=258,slow=5.4,SNR=136						
ILAR				ScP		20 50 34.2	
	comp=Z,0.3nm,0.8s,baz=247,slow=2.4,SNR=4.1						
NJ2	Nanjing	32.16	244	eP	P	20 45 03.8	-0.3
NJ2				AP	pP	20 46 28.6	-0.3
NJ2				PP	PP	20 46 33.9	+4.5
NJ2				XP	sP	20 47 22.8	-0.2
NJ2				S	S	20 49 44.0	+1.0
NJ2				XS		20 52 14.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
NJ2				AMB	AMB		
	comp=Z,620nm,3.5s						
THY	Trims Highway	32.80	47	eP	P	20 45 09.7	+0.5
DIV	Divide	33.27	51	eP	P	20 45 13.1	0.0
KRAR	Krasnoyarsk	34.23	300	eP	P	20 45 20.8	-0.5
KRAR				e		20 46 58.4	
KRAR				e		20 47 43.6	
DAWY	Dawson	35.43	45	eP	P	20 45 31.6	+0.3
INK	Inuvik	36.76	37	P	P	20 45 43.0	+0.8
	comp=Z,13nm,0.3s,mb4.8,baz=307,slow=5.0,SNR=134						
INK	Inuvik	36.76	37	eP	P	20 45 42.9	+0.6
INK				P		20 45 43.0	
LZH	Lanzhou	38.04	264	eP	P	20 45 53.6	+0.5
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
LZH				AMB	AMB		
	comp=Z,80nm,4.5s						
GTA	Gaotai	38.36	272	eP	P	20 45 56.9	+1.2
ZAL	Zalesovo	39.33	300	P	P	20 46 03.2	-0.2
	comp=Z,2.5nm,0.5s,mb3.9,baz=54,slow=6.5,SNR=14						
NVS	Novosibirsk	39.73	302	i P	P	20 46 06.2	-0.5
NVS				i		20 47 51.1	
NVS				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.7						
NVS				pmax	pmax		
	comp=N,5.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,13nm,0.8s						
KURK	Kurchatov	44.22	299	eP	P	20 46 42.4	0.0
	comp=E,29nm,0.4s,mb5.1						
KURK	Kurchatov	44.22	299	d iP	P	20 46 42.6	+0.2
MKAR	Makanchi Array	44.39	292	P	P	20 46 43.9	+0.1
	comp=E,5.9nm,0.5s,mb4.3,baz=60,slow=6.7,SNR=186						
MKAR	Makanchi Array	44.39	292	eP	P	20 46 43.6	-0.2
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
YKA	Yellowknife Ar	46.27	40	P	P	20 46 58.3	+0.2
	comp=Z,9.1nm,0.5s,mb4.5,baz=304,slow=7.0,SNR=30						
YKA	Yellowknife Ar	46.27	40	P	P	20 46 58.3	+0.2
CHKZ	Chkalovo	46.70	306	eP	P	20 47 00.7	-0.9
	comp=Z,86nm,1.1s,mb5.1						
CHKZ	Chkalovo	46.70	306	eP	P	20 47 00.7	-0.9
CHKZ				pmax	pmax		
	comp=Z,86nm,1.1s,mb5.1						
VOSK	Vostochnaya	47.06	305	P	P	20 47 02.9	-1.4
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
BVA0	Borovoye Array	47.18	305	eP	P	20 47 04.9	-0.3
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
BVAR	Borovoye Array	47.18	305	P	P	20 47 05.1	-0.1
	comp=Z,9.7nm,0.5s,mb4.5,baz=58,slow=7.6,SNR=61						
BVAR				PcP	PcP	20 48 26.4	-1.4
	comp=Z,1.3nm,0.4s,baz=79,slow=3.3,SNR=6.4						
BRVK	Borovoye	47.22	305	eP	P	20 47 05.2	-0.3
	comp=Z,8.3nm,0.8s,mb4.2						
BRVK	Borovoye	47.22	305	eP	P	20 47 05.2	-0.3
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
LSA	Lhasa	50.15	268	eP	P	20 47 29.0	+1.1
	comp=Z,3.7nm,0.6s,mb3.9						
LSA	Lhasa	50.15	268	eP	P	20 47 29.0	+1.1
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
TKM2	Tokmak 2	50.52	292	P	P	20 47 30.9	+0.4
	SNR=6.9						
ARU	Arti	50.68	314	⇓iP	P	20 47 30.7	-0.7
ARU				e		20 48 38.8	
ARU				e		20 49 30.8	
ARU				eS	S	20 54 10.3	+0.6
ARU				eSS	SS	20 57 49.7	-2.9
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
USP	Ospenovka	50.91	293	P	P	20 47 33.7	+0.3
	SNR=7.8						
KBK	Karagaybulak	51.05	292	P	P	20 47 34.5	+0.1
	SNR=6.9						
AAK	Ala-Archa	51.33	292	P	P	20 47 36.7	+0.3
	SNR=13						
AAK	Ala-Archa	51.33	292	eP	P	20 47 35.5	-0.9
	comp=Z,5.9nm,0.5s,mb4.2						
AAK	Ala-Archa	51.33	292	eP	P	20 47 35.5	-0.9
AAK				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.2						
EKS2	Erkin-Say	51.71	293	P	P	20 47 39.6	+0.4
	SNR=12						
KEV	Kevo	51.72	339	ep	P	20 47 37.6	-1.3
	comp=Z,15nm,0.9s,mb4.3						
KEV	Kevo	51.72	339	eP	P	20 47 37.6	-1.3
KEV				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.3						
ARCES	ARCESS Array B	52.22	339	P	P	20 47 41.5	-1.0
	comp=Z,2.5nm,1.0s,mb3.5,baz=47,slow=7.7,SNR=5.9						
SHL	Shillong	52.71	264	eP	P	20 47 41.0	-5.6
GUN	Gumba	54.64	271	eP	P	20 48 00.1	-0.2
	comp=Z,15nm,0.4s,mb4.7						
AB31	Akbulak array	54.68	307	i P	P	20 47 59.6	-0.7
AB31				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.0						
AKTO	Aktyubinsk	54.81	309	P	P	20 48 00.6	-0.7
	comp=Z,2.5nm,0.5s,mb3.8,baz=73,slow=13,SNR=5.7						
AKTO	Aktyubinsk	54.81	309	P	P	20 48 00.2	-1.1
KKN	Kakani	55.09	271	eP	P	20 48 03.4	-0.1
	comp=Z,31nm,0.5s,mb4.9						
PKI	Pulchoki	55.17	271	eP	P	20 48 03.7	-0.4
DMN	Daman	55.33	271	eP	P	20 48 05.3	+0.1
	comp=Z,40nm,0.8s,mb4.8						
GKN	Gorkha	55.33	272	eP	P	20 48 04.9	-0.3
JOF	Joensuu	55.99	332	ep	P	20 48 05.7	-3.6
	comp=Z,3.1nm,0.8s,mb3.7						
KOLN	Koldanda	56.13	272	eP	P	20 48 10.3	-0.5
KAF	Kangasniemi	58.03	334	ep	P	20 48 21.2	-2.0
	comp=Z,4.7nm,0.8s,mb3.9,baz=34,slow=6.2						
KAF	Kangasniemi	58.03	334	eP	P	20 48 21.2	-2.0
KAF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.9						
BOZ	Bozeman (W)	58.28	55	eP	P	20 48 26.0	+0.9
	comp=Z,4.6nm,0.7s,mb3.9						
FINES	FINESS Array B	58.64	333	P	P	20 48 26.6	-0.8
	comp=Z,1.3nm,0.4s,mb3.6,baz=39,slow=7.4,SNR=18						
NVAR	Mina Array Bea	59.85	65	P	P	20 48 36.9	+1.2
	comp=Z,1.5nm,0.3s,mb3.9,baz=337,slow=3.8,SNR=4.6						
RRI2	Red Ridge	60.06	57	eP	P	20 48 38.6	+1.5
	comp=Z,7.7nm,0.7s,mb4.2						
PDAR	Pinedale Array	61.38	56	P	P	20 48 46.4	+0.6
	comp=Z,4.6nm,0.7s,mb4.0,baz=331,slow=2.4,SNR=23						
ULM	Lac du Bonnet	62.10	43	P	P	20 48 49.5	-0.9
	comp=Z,1.6nm,0.3s,mb3.9,baz=344,slow=9.2,SNR=4.7						
NOA	NORSAR Array B	62.57	340	P	P	20 48 52.4	-1.0
	comp=Z,0.5nm,0.8s,mb3.1,baz=16,slow=6.5,SNR=2.4						
GOF	Gofitskoye	65.64	313	eP	P	20 49 12.1	-0.8
AKASG	Malin Array Be	66.59	325	P	P	20 49 17.6	-1.1
	comp=Z,1.5nm,0.5s,mb3.9,baz=33,slow=6.6,SNR=6.0						
SCHQ	Schefferville	67.84	24	P	P	20 49 25.4	-1.0
	comp=Z,4.5nm,0.4s,mb4.4,baz=321,slow=4.7,SNR=13						
GERES	GERESS Array B	73.08	333	P	P	20 49 57.5	+0.3
	comp=Z,0.6nm,0.4s,mb3.5,baz=35,slow=5.7,SNR=8.3						
BRTR	Keskin Array B	74.04	316	P	P	20 50 02.5	-0.4
	comp=Z,0.8nm,0.7s,mb3.4,baz=63,slow=4.3,SNR=5.7						
WB2	Warramunga Arr	74.15	198	eP	P	20 49 59.0	-4.9
WRA	Warramunga Arr	74.15	198	P	P	20 50 03.7	-0.2
	comp=Z,1.3nm,0.7s,mb3.6,baz=15,slow=6.2,SNR=4.7						
WRA	Warramunga Arr	74.15	198	P	P	20 50 03.7	-0.2
FITZ	Fitzroy Crossi	74.41	207	eP	P	20 50 05.3	-0.1
	comp=Z,3.9nm,0.6s,mb4.1						
FITZ	Fitzroy Crossi	74.41	207	P	P	20 50 05.3	-0.1
	comp=Z,6.2nm,0.6s,mb4.3,baz=13,slow=8.0,SNR=6.5						
TXAR	Lajitas Array	74.66	62	P	P	20 50 08.0	+1.3
	comp=Z,2.0nm,0.6s,mb3.9,baz=298,slow=4.1,SNR=13						
ASPA	Alice Springs	77.86	198	eP	P	20 50 24.7	+0.4

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*IDC **02** 20:42:13.7±0.7, 6.80N×72.93W, h159^{km}±8^{km}, mb3.5/6, mb1 3.9/9, mb1mx3.6/22, mbtmp4.1/9, MS3.6/1, Ms1 3.5/1, ms1mx2.5/27, Error ellipse: s-maj=21.7km s-min=7.3km az=130.0*

*NEIC **02** 20:42:14.3±0.7, 6.82N×72.93W, h165^{km}±8^{km}, mb4.1/1, Error ellipse: s-maj=12.5km s-min=10.5km az=83.0*

ISC 02 20:42:13.5±0.6, **6.77N**±0.06×**72.88W**±0.07, **h171**^{km}±7^{km}, **n20,** σ0^{s}.**93**/21, **mb3.8**/6, **4C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.39	217	P	P	20 42 54.5	-0.4
	126nm,0.3s,baz=316,slow=3.6,SNR=145						
ROSC				S	S	20 43 26.0	-0.7
	300nm,0.3s,baz=94,slow=17,SNR=20						
SDV	Santo Domingo	3.06	46	P	P	20 43 03.2	+0.1
	90nm,0.3s,baz=235,slow=6.3,SNR=242						
SDV				S	S	20 43 40.6	-0.6
	105nm,0.3s,baz=73,slow=20,SNR=23						
SDV	Santo Domingo	3.06	46	P	P	20 43 03.2	+0.1
SDV				S	S	20 43 40.6	-0.6
STH	Stony Hill	11.87	342	eP	P	20 44 58.4	0.0
STH				⇑eS	S	20 46 55.8	-12
BNJ	Bonny Gate	12.15	341	⇑eP	P	20 45 02.7	+0.8
CVJ	Coleyville	12.26	339	⇑eP	P	20 45 04.0	+0.7
BBJ	Bamboo Saint A	12.31	340	⇑eP	P	20 45 05.1	+1.2
JTS	JuntasAbangare	12.44	287	P	P	20 45 06.5	+0.8
	0.5nm,0.3s,baz=48,slow=17,SNR=2.7						
JTS	JuntasAbangare	12.44	287	P	P	20 45 06.5	+0.8
SAML	Samuel	18.36	148	eP	P	20 46 18.0	+0.2
	5.1nm,0.5s						
LPAZ	La Paz	23.39	168	P	P	20 47 10.1	+2.1
	0.5nm,0.4s,mb3.3,baz=332,slow=12,SNR=4.2						
LPAZ	La Paz	23.39	168	P	P	20 47 10.1	+2.1
LPAZ				epP		20 47 39.3	
BDFB	Brasilia	33.20	132	LR	LR	21 03 09.2	
	comp=Z,115nm,20.9s,baz=109,slow=38						
TXAR	Lajitas Array	36.67	312	P	P	20 49 04.7	-0.9
	0.8nm,0.5s,mb3.6,baz=126,slow=9.0,SNR=6.3						
ULM	Lac du Bonnet	47.41	340	P	P	20 50 30.7	-1.6
	2.1nm,0.4s,mb4.1,baz=150,slow=8.1,SNR=3.0						
SCHQ	Schefferville	48.17	5	P	P	20 50 38.4	+0.3
	4.2nm,0.5s,mb4.3,baz=208,slow=7.9,SNR=7.9						
YKA	Yellowknife Ar	63.39	340	P	P	20 52 25.0	-1.6
	1.4nm,0.5s,mb4.1,baz=130,slow=6.5,SNR=5.6						
ILAR	Eielson Array	77.11	335	P	P	20 53 48.9	-0.3
	0.3nm,0.6s,mb3.1,baz=105,slow=3.0,SNR=4.5						
MKAR	Makanchi Array	122.29	20	PKP	PKPdf	21 00 49.6	+1.4
	0.2nm,0.4s,baz=293,slow=2.7,SNR=13						
WRA	Warramunga Arr	150.52	241	PKPbc	PKPdf	21 01 46.7	+6.7
	0.5nm,0.4s,baz=108,slow=2.6,SNR=8.4						

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*MAN **02** 20:42:57.9, 13.19N×120.05E, mb4.4, ML3.3, MS3.1*

*IDC **02** 20:42:57.3±1.1, 13.43N×120.69E, mb4.2/8, mb1 4.3/8, mb1mx4.0/19, mbtmp4.2/8, MS3.1/2, Ms1 3.1/2, ms1mx2.9/22, Error ellipse: s-maj=49.1km s-min=21.7km az=66.0*

*NEIC **02** 20:42:59.3±0.4, 13.30N×120.36E, h10^{km}, mb4.6/3, Error ellipse: s-maj=21.3km s-min=7.3km az=56.0*

*BJI **02** 20:43:02.9, 13.50N×119.81E, h10^{km}, mb4.2*

ISC 02 20:43:00.1±1.0, **13.21N**±0.04×**120.12E**±0.04, **h20**^{km}±8^{km}, **n43,** σ1^{s}.**01**/46, **mb4.5**/15, **MS3.1**/1, **2C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.53	13	eP	Pb	20 43 09.8	-0.8
LUBP				eS	Sb	20 43 16.1	-1.7
PGP	Puerto Galera	0.86	70	eP	Pb	20 43 15.0	-1.1
PGP				eS	Sb	20 43 26.3	-0.9
TGY	Tagaytay City	1.19	42	⇑eP	Pn	20 43 22.2	+0.5
TGY				eS	Sb	20 43 38.6	+1.9
BUSP	Coron	1.21	176	eP	Pn	20 43 23.6	+1.6
SJMP	San Jose	1.23	127	eP	Pn	20 43 22.3	0.0
BOAC	Boac	1.70	82	eP	Pn	20 43 29.4	+0.4
BOAC				eS	Sn	20 43 49.2	-1.1
OTRP	Odiongan	2.04	114	eP	Pn	20 43 34.2	+0.3
POLP	Polilio Island	2.32	49	eP	Pn	20 43 38.3	+0.3
GQP	Guinayangan	2.36	73	⇓eP	Pn	20 43 39.0	+0.4
GQP				i S	Sn	20 44 07.3	+0.1
AUQP	San Andres	2.49	87	eP	Pn	20 43 43.9	+3.5
CUYO	Cuyo Island	2.51	159	eP	Pn	20 43 40.9	+0.3
SCZP	Santa Cruz	2.56	355	eP	Pn	20 43 41.2	-0.1
KALP	Kalibo	2.65	125	eP	Pn	20 43 56.9	+14
BALP	Baler	2.88	29	eP	Pn	20 43 47.4	+1.5
RCP	Roxas	3.05	122	⇑eP	Pn	20 43 55.0	+6.8
BOLP	Bolinao	3.15	356	eP	Pn	20 43 48.9	-0.9
GUIM	Jordan	3.53	137	eP	Pn	20 43 55.4	+0.3
CAUP	Cauayan	4.06	24	eP	Pn	20 44 03.7	+1.1
ABRA	Dolores	4.45	7	eP	Pn	20 44 09.5	+1.3
APYP	Conner	4.75	13	eP	Pn	20 44 15.4	+2.9
MSLP	Maasin	5.56	123	eP	Pn	20 44 24.6	+0.7
IPIL	Ipil	5.91	156	eP	Pn	20 44 28.2	-0.6
JOW	Kunigami	15.55	28	LR	LR	20 52 42.3	
	comp=Z,49nm,18.5s,baz=128,slow=39						
CD2	Chengdu	23.19	322	eP	P	20 48 07.6	+0.9
CD2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
GUMO	Guam	24.08	86	LR	LR	20 55 49.8	
	comp=Z,64nm,18.4s,MS3.1,baz=316,slow=33						
GUN	Gumba	35.09	300	eP	P	20 49 55.3	+1.1
PKI	Pulchoki	35.39	299	eP	P	20 49 57.3	+0.5
	comp=Z,15nm,0.8s,mb5.0						
KKN	Kakani	35.56	300	eP	P	20 49 58.6	+0.3
	comp=Z,14nm,0.9s,mb4.9						
DMN	Daman	35.66	299	eP	P	20 49 59.3	+0.2
WRAB	Tennant Creek	35.79	157	eP	P	20 49 58.9	-1.4
	comp=Z,4.2nm,0.6s,mb4.5						
WRAB				e	pP	20 50 03.8	-2.4
WRA	Warramunga Arr	35.80	157	P	P	20 49 58.7	-1.6
	comp=Z,2.1nm,0.5s,mb4.4,baz=336,slow=9.5,SNR=27						
WRA	Warramunga Arr	35.80	157	P	P	20 49 58.7	-1.6
GKN	Gorkha	36.17	300	eP	P	20 50 03.4	0.0
	comp=Z,11nm,0.8s,mb4.8						
ASAJ	Asahikawa	36.32	28	P	P	20 49 58.5	-6.0
	comp=Z,2.9nm,0.4s,mb4.5,baz=263,slow=16,SNR=4.9						
SONM	Songino Array	36.37	344	P	P	20 50 03.7	-1.1
	comp=Z,4.2nm,0.7s,mb4.5,baz=161,slow=10,SNR=43						
KOLN	Koldanda	36.99	299	eP	P	20 50 10.7	+0.5
	comp=Z,14nm,0.9s,mb4.8						
MKAR	Makanchi Array	46.09	324	P	P	20 51 24.9	+0.3
	comp=Z,1.9nm,0.8s,mb4.1,baz=136,slow=9.1,SNR=13						
MKAR				PcP	PcP	20 52 58.4	-2.8
	comp=Z,0.7nm,0.9s,baz=124,slow=5.2,SNR=3.6						
MKAR	Makanchi Array	46.09	324	P	P	20 51 24.9	+0.3
MKAR				PcP	PcP	20 52 58.4	-2.8
ZAL	Zalesovo	49.23	333	P	P	20 51 47.6	-1.4
	comp=Z,0.7nm,0.7s,mb3.8,baz=314,slow=6.3,SNR=3.6						
KURK	Kurchatov	50.28	327	eP	P	20 51 56.8	-0.3
	comp=Z,8.4nm,0.7s,mb4.9						
BVAR	Borovoye Array	55.86	326	P	P	20 52 37.4	-1.2
	comp=Z,1.4nm,0.8s,mb4.0,baz=127,slow=7.4,SNR=6.2						
AKTO	Aktyubinsk	62.23	320	P	P	20 53 21.8	-0.9
	comp=Z,0.5nm,0.4s,mb4.0,baz=118,slow=8.1,SNR=3.7						
ARCES	ARCESS Array B	79.33	339	P	P	20 55 04.4	-1.3
	comp=Z,6.7nm,1.1s,mb4.5,baz=90,slow=6.3,SNR=2.8						

KRSC 02 21:05:42.0±0.5, **56.32N**×**162.60E, h25**^{km}±2^{km}, **ML4.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	0.09	138	i P	Pb	21 05 47.1	+0.6
KBG				i S	Sb	21 05 51.0	+1.4
KBG				Smax			
	31µm,0.6s						
KBTR	Krutoberegovo	0.17	132	i P	Pb	21 05 47.7	+0.5
KBTR				i S	Sb	21 05 51.8	+1.0
ZLN	Zelenaya	1.05	254	i P	Pn	21 06 01.6	+0.3
ZLN				eS	Sb	21 06 16.2	+1.5
CIRR	Tsirk	1.05	260	i P	Pn	21 06 01.6	+0.3
CIRR				i S	Sb	21 06 15.6	+0.7
KLY	Klyuchi	1.08	270	i P	Pn	21 05 59.9	-1.9
KLY				eS	Sb	21 06 12.9	-2.9
LGNR	Loginova	1.09	258	i P	Pn	21 06 02.3	+0.4
LGNR				i S	Sb	21 06 17.1	+1.1
KRSR	Krestovskiy	1.14	266	eP	Pn	21 06 02.3	-0.3
KRSR				eS	Sb	21 06 17.1	-0.2
KPT	Kopyto	1.38	256	eP	Pn	21 06 06.2	+0.2
KMNR	Kamenistaya	1.44	248	i P	Pn	21 06 07.5	+0.6
SRDR	Sredinnyy	1.61	271	i P	Pn	21 06 10.2	+1.0
SRDR				i S	Sn	21 06 30.5	+1.2
TUMR	Tumrok	1.73	234	i P	Pn	21 06 12.0	+1.0
MKZ	Mys Kozlova	1.84	196	eP	Pn	21 06 12.7	+0.2
MKZ				eS	Sn	21 06 34.8	-0.4
BKI	Bering	2.21	119	eS	Sn	21 06 43.4	-1.3
ESO	Esso	2.22	261	eP	Pn	21 06 19.1	+1.1
ESO				Smax			
	60nm,0.5s						
SPN	Mys Shipunski	3.56	206	eP	Pn	21 06 36.3	-0.8
SPN				eS	Sn	21 07 17.6	-1.2
NLC	Nalytchevo	3.68	212	eP	Pn	21 06 38.5	-0.2
NLC				eS	Sn	21 07 20.4	-1.4
SDLR	Sedlovina	3.73	217	eP	Pn	21 06 40.2	+0.7
GNL	Ganaly	3.76	227	eP	Pn	21 06 40.2	+0.3
SMAR	Somma	3.77	217	eP	Pn	21 06 40.8	+0.7
AVH	Avacha	3.79	218	eP	Pn	21 06 41.1	+0.7
AVH				eS	Sn	21 07 24.0	-0.7
RUS	Russkaya	4.57	213	eP	Pn	21 06 51.8	+0.4
KAMR	Kamenskoye	6.42	15	eP	Pn	21 07 17.8	+0.2

MAN 02 21:06:51.1, 14.72N×**123.31E, h20**^{km}, **mb3.9, ML2.6, MS2.3, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POLP	Polilio Island	1.33	271	eP	Pn	21 07 13.7	-1.1
POLP				eS	Sb	21 07 32.5	+0.6
PVCP	Virac	1.38	144	eP	Pn	21 07 14.8	-0.8
BOAC	Boac	1.90	229	eP	Pn	21 07 25.2	+2.2

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*ISK **02** 21:15:23.4, 37.14N×36.27E, h11^{km}, MD3.9*

*CSEM **02** 21:15:23.3±0.1, 37.14N×36.27E, h12^{km}, MD3.9, Error ellipse: s-maj=1.2km s-min=1.1km az=80.0*

ISC 02 21:15:23.5±0.5, **37.13N**±0.02×**36.31E**±0.03, **h8**^{km}±4^{km}, **n41,** σ0^{s}.**98**/58, **4D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.46	256	i PG	Pg	21 15 32.4	-0.5
KOZT	Kozan	0.52	313	i PG	Pg	21 15 33.4	-0.7
DRWC	Darouich	0.58	150	⇓iP	Pg	21 15 36.0	+0.8
DRWC				⇑iS	Sg	21 15 43.3	+0.2
COBT	Iskenderun	0.61	184	i P	Pg	21 15 34.8	-0.9
COBT				i S	Sg	21 15 44.2	+0.3
KAHT	Ahir Dag	0.68	42	i P	Pg	21 15 37.3	+0.1
KAHT				i S	Sg	21 15 46.7	+0.5
GAZ	Gaziantep	0.72	86	i PG	Pg	21 15 38.2	+0.1
KARA	Karaisali	1.01	278	PG	Pg	21 15 42.7	-1.0
HTY	Hatay	1.01	188	PG	Pg	21 15 43.3	-0.5
HTY				SG	Sg	21 15 58.3	+1.0
GZT	Gaziantep	1.03	77	i P	Pb	21 15 43.4	+0.2
GZT				i S	Sb	21 15 58.7	+2.1
BTCH	Batrach	1.09	173	⇓iP	Pb	21 15 45.3	+1.0
BTCH				⇓iS	Sb	21 15 59.6	+1.1
SLNF	Slenfeh	1.53	183	⇑iP	Pn	21 15 51.9	+0.6
SLNF				⇑iS	Sb	21 16 11.2	+0.1
WRDH	Warideh	1.62	177	⇑iP	Pn	21 15 52.5	0.0
WRDH				⇑iS	Sb	21 16 13.1	-0.6
ATAB	Bozova	1.62	77	eP	Pn	21 15 52.2	-0.4
ATAB				i S	Sb	21 16 11.3	-2.5
NIG	Nigde	1.67	307	PN	Pn	21 15 52.7	-0.5
BNN	Bunyan	1.76	348	PN	Pn	21 15 54.5	-0.1
MEST	Erdemli	1.81	253	i P	Pn	21 15 51.7	-3.7
KFRA	Kufra	1.95	168	⇑iP	Pn	21 15 57.9	+0.6
KFRA				⇑iS	Sn	21 16 22.4	+0.2
AVNT	Avonos	2.01	326	eP	Pn	21 15 58.9	+0.8
AVNT				i S	Sg	21 16 34.0	+3.4
URFA	Urfa	2.03	80	PN	Pn	21 15 58.6	+0.2
MYA	Malataya	2.06	54	PN	Pn	21 15 59.2	+0.3
BIDA	Albida	2.11	180	⇑iP	Pn	21 15 59.9	+0.3
BIDA				⇓iS	Sn	21 16 24.2	-2.0
IKL	Isikli	2.29	248	PN	Pn	21 16 01.5	-0.6
ELZG	Elazig	2.52	56	eP	Pn	21 16 05.8	+0.3
ELZG				i S	Sb	21 16 43.9	+3.9
SVST	Sivas	2.69	11	eP	Pn	21 16 09.2	+1.3
SVST				i S	Sb	21 16 49.0	+4.2
ERMK	Ermenek	2.76	261	eP	Pn	21 16 10.4	+1.5
ERMK				i S	Sb	21 16 51.4	+4.5
HWQ	Hawqa	2.86	186	ePn	Pn	21 16 10.4	+0.2
FKH	Fakeheh	2.88	178	ePn	Pn	21 16 10.5	-0.2
CDAG	Cicekdag	2.92	329	i P	Pn	21 16 11.0	-0.2
PTK	Pertek	3.01	53	ePN	Pn	21 16 12.6	+0.2
KAMT	Kaman	3.03	318	ePN	Pn	21 16 12.4	-0.3
DIY	Diyarbakir	3.21	75	ePN	Pn	21 16 15.8	+0.5
BHL	Bhannes	3.26	190	ePn	Pn	21 16 12.5	-3.4
CORM	Corum	3.32	337	ePN	Pn	21 16 16.3	-0.5
MARD	Mardin	3.58	86	i P	Pn	21 16 17.8	-2.7
CTKT	Corum	3.69	342	eP	Pb	21 16 29.3	+0.7
KELT	Kelkit	3.80	37	i P	Pn	21 16 23.7	0.0
ANTO	Ankara	3.88	316	ePN	Pn	21 16 24.5	-0.4
BEST	Besiri	4.02	78	i P	Pg	21 16 39.6	-4.2
BEST				i S	Sg	21 17 34.1	-3.3
GUMT	Gumushane	4.15	36	ePN	Pn	21 16 29.0	+0.4
BTMT	Batman	4.25	74	ePN	Pn	21 16 28.2	-1.8
HAKT	HAKKARI	5.91	84	i P	Pg	21 17 14.6	-7.0
HAKT				i S	Sg	21 18 35.4	-5.0

MAN 02 21:25:36.8, 14.67N×**123.30E, h12**^{km}, **mb4.0, ML2.8, MS2.4, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	1.12	227	eP	Pb	21 25 57.1	-0.6
GQP				eS	Sb	21 26 13.6	+1.6
POLP	Polilio Island	1.31	273	eP	Pb	21 25 59.6	-1.3
POLP				eS	Sb	21 26 18.9	+1.3
PVCP	Virac	1.35	142	eP	Pn	21 26 00.4	-1.1
BOAC	Boac	1.85	230	eP	Pn	21 26 10.9	+2.1

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*IDC **02** 22:53:26.0±1.5, 34.82N×72.99E, mb3.9/7, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML4.0/3, Error ellipse: s-maj=36.4km s-min=23.8km az=45.0*

*NEIC **02** 22:53:26.9±0.6, 34.84N×73.10E, h10^{km}, mb3.9/8, Error ellipse: s-maj=14.8km s-min=6.2km az=52.0*

*MOS **02** 22:53:26.9±1.5, 34.87N×73.14E, h22^{km}, mb4.2/4, Error ellipse: s-maj=16.2km s-min=7.8km az=98.1*

*BJI **02** 22:53:27.8, 34.79N×73.20E, h4^{km}, mb3.8, ML4.0*

*NNC **02** 22:53:31.0±4.4, 35.15N×72.67E, mpv4.1, Error ellipse: s-maj=54.5km s-min=34.9km az=109.0*

ISC 02 22:53:26.1±1.2**,34.76N**±0.03×**73.06E**±0.08**,h21**^{km}±10^{km}**,n66,**σ**1**^{s}**29**/76**,mb3.9**/10**,3C-3D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	Srinagar	1.62	114	*e*x	x	22 54 50.0	
JMU	Jammu	2.55	143	*e*SB	Sb	22 54 50.0	+7.8
THN	Thein Dam	3.21	136	*e*PB	Pb	22 54 22.6	+0.3
THN				*e*SB	Sb	22 55 10.3	+9.0
DLH	Dalhousie	3.28	132	*e*PB	Pb	22 54 23.0	-0.5
DLH				*e*x	x	22 55 04.0	
BHK	Bhakra	4.37	139	*e*S	Sn	22 55 27.5	+3.5
BHK				*e*x	x	22 55 45.9	
SDNR	Sundarnagar	4.62	134	*e*x	x	22 54 41.5	
SDNR				*e*x	x	22 55 55.8	
KSH	Kashi	5.28	25	*e*P	Pn	22 54 51.3	+5.3
KSH				S	Sn	22 55 48.9	+1.9
KSH				Smax			
	comp=N,170nm,0.3s						
KSH				Smax			
	comp=E,200nm,0.4s						
KKR	Kurukshetra	5.75	145	*e*P	Pn	22 54 52.9	+0.3
KKR				AML	AML	22 56 36.2	
	comp=Z,112nm,0.4s						
DDI	Dehra Dun	6.11	135	*e*x	x	22 55 07.1	
DDI				*e*x	x	22 56 46.0	
BHGR	Bahadurgarh	6.90	150	*e*x	x	22 56 52.0	
NDI	New Delhi	7.02	149	*e*x	x	22 55 15.5	
NDI				*e*S	Sn	22 56 27.5	-3.0
KHET	Khetri	7.07	160	*e*P	Pn	22 55 12.9	+1.8
KHET				*e*S	Sn	22 56 31.1	-0.7
KHET				AML	AML	22 56 34.5	
	comp=N,42nm,0.5s						
KHET				AML	AML	22 56 35.4	
	comp=E,45nm,0.3s						
KALG	Kalgarh	7.12	136	*e*P	Pn	22 55 12.8	+0.9
KALG				*e*x	x	22 56 32.3	
KALG				AML	AML	22 56 59.9	
	comp=E,49nm,0.5s						
AYAN	Aya Nagar	7.16	150	*e*P	Pn	22 55 14.3	+1.9
KUDL	Kundal	7.22	155	*e*P	Pn	22 55 13.8	+0.5
KUDL				*e*S	Sn	22 56 33.7	-1.8
KUDL				AML	AML	22 56 39.2	
	comp=Z,18nm,0.5s						
SONA	Sohna	7.34	151	*e*P	Pn	22 55 16.9	+1.9
SONA				*e*S	Sn	22 56 37.9	-0.8
SONA				AML	AML	22 56 41.5	
	comp=E,41nm,0.6s						
SONA				AML	AML	22 56 43.6	
	comp=N,21nm,0.4s						
AAK	Ala-Archa	7.94	8	⇓P	Pn	22 55 26.2	+2.9
	comp=N,2.2nm,0.5s						
AAK				⇓S	Sn	22 56 50.6	-2.8
	comp=N,17nm,0.8s						
AAK	Ala-Archa	7.94	8	*e*P	Pn	22 55 19.5	-3.8
	comp=N,4.3nm,0.5s						
AAK	Ala-Archa	7.94	8	*e*P	Pn	22 55 19.5	-3.8
AAK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
AJM	Ajmer	8.37	170	*e*P	P	22 55 30.8	+1.5
AJM				*e*S	Sn	22 57 01.9	-2.3
KK31	Karatay Array	8.56	347	P	P	22 55 32.0	0.0
	comp=Z,6.7nm,0.3s,baz=165,slow=11,SNR=338						
KK31				⇓S	Sn	22 57 03.7	-5.2
	comp=Z,13nm,0.7s,baz=148,slow=23,SNR=9.5						
AGRA	Agra	8.60	150	*e*P	P	22 55 33.9	+1.4
AGRA				*e*S	Sn	22 57 05.2	-4.6
AGRA				AML	AML	22 58 17.8	
	comp=N,80nm,0.5s						
AGRA				AML	AML	22 58 18.5	
	comp=E,64nm,0.7s						
KOLN	Koldanda	11.39	125	*e*Pn	P	22 56 10.9	0.0
KOLN				*e*Sn	S	22 58 12.6	-6.0
	comp=E,27nm,0.6s						
GKN	Gorkha	11.96	121	*e*Pn	P	22 56 18.0	-0.6
GKN				*e*Sn	S	22 58 24.8	-7.7
	comp=E,41nm,0.5s						
BHPL	Bhopal	12.10	160	*e*P	P	22 56 19.9	-0.5
BHPL				*e*S	S	22 58 29.6	-6.1
DMN	Daman	12.53	121	*e*Pn	P	22 56 25.1	-1.1
DMN				*e*Sn	S	22 58 37.6	-8.6
	comp=E,22nm,0.7s						
KKN	Kakani	12.54	120	*e*Pn	P	22 56 25.0	-1.4
KKN				*e*Sn	S	22 58 37.8	-8.8
	comp=E,28nm,0.7s						
PKI	Pulchoki	12.77	121	*e*Pn	P	22 56 28.8	-0.6
PKI				*e*Sn	S	22 58 44.4	-7.5
	comp=E,26nm,0.8s						
GUN	Gumba	12.90	118	*e*Pn	P	22 56 29.8	-1.4
MK31	Makanchi Array	13.89	27	P	P	22 56 44.5	+0.4
	comp=E,0.8nm,0.7s,baz=205,slow=14,SNR=4.7						
MKAR	Makanchi Array	13.89	27	Pn	P	22 56 43.7	-0.3
	comp=E,0.1nm,0.3s,baz=207,slow=15,SNR=5.6						
LSA	Lhasa	16.11	103	P	P	22 57 17.8	+4.7
LSA	Lhasa	16.11	103	P	P	22 57 17.6	+4.4
	comp=E,7.1nm,0.7s						
LSA	Lhasa	16.11	103	P	P	22 57 17.6	+4.5
LSA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
POO	Poona	16.18	177	*e*x	x	23 00 45.0	
KURK	Kurchatov	16.45	13	*e*P	P	22 57 16.6	-0.6
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	16.45	13	*e*P	P	22 57 16.6	-0.6
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AB31	Akbulak array	17.42	330	⇑P	P	22 57 27.9	-1.5
	comp=Z,2.1nm,0.5s,baz=141,slow=13,SNR=52						
BVA0	Borovoye Array	18.36	355	P	P	22 57 39.9	-1.2
	comp=Z,0.7nm,0.8s,baz=201,slow=17,SNR=19						
BVAR	Borovoye Array	18.36	355	P	P	22 57 39.4	-1.7
	comp=Z,0.8nm,0.3s,baz=156,slow=9.5,SNR=22						
BRVK	Borovoye	18.40	355	*e*P	P	22 57 41.9	+0.2
	comp=Z,5.0nm,0.9s						
BRVK	Borovoye	18.40	355	*e*P	P	22 57 41.9	+0.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHKZ	Chkalovo	18.99	356	⇑P	P	22 57 47.5	-1.2
	comp=Z,2.4nm,0.7s						
CHKZ	Chkalovo	18.99	356	*e*P	P	22 57 47.1	-1.6
	comp=Z,3.3nm,0.7s						
CHKZ	Chkalovo	18.99	356	*e*P	P	22 57 47.2	-1.5
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKTO	Aktyubinsk	19.12	330	⇑P	P	22 57 49.4	-0.9
	comp=Z,1.8nm,0.7s						
AKTO	Aktyubinsk	19.12	330	P	P	22 57 50.0	-0.4
	comp=Z,2.3nm,0.3s,baz=130,slow=11,SNR=49						
AKTO	Aktyubinsk	19.12	330	P	P	22 57 50.0	-0.4
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	Zalesovo	20.87	20	P	P	22 58 09.3	+0.1
	comp=Z,3.5nm,0.4s,baz=245,slow=6.6,SNR=16						
NVS	Novosibirsk	21.29	16	*e*P	P	22 58 13.4	-0.1
GTA	Gaotai	21.80	70	*e*P	P	22 58 20.3	+1.5
GTA				AP		22 58 28.2	
GTA				XP		22 58 31.2	
GNI	Garni	23.06	292	P	P	22 58 33.9	+2.8
	comp=Z,6.5nm,1.0s,mb4.0						
GNI	Garni	23.06	292	P	P	22 58 33.9	+2.7
GNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU	Arti	23.83	340	*e*P	P	22 58 37.5	-0.9
	comp=Z,2.9nm,0.7s,mb3.8						
ARU	Arti	23.83	340	*e*P	P	22 58 37.5	-0.9
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.8						
SONM	Songino Array	28.01	52	P	P	22 59 19.3	+1.7
	comp=Z,0.5nm,0.6s,mb3.3,baz=256,slow=7.8,SNR=4.5						
FINES	FINESS Array B	39.86	327	P	P	23 01 00.3	+0.6
	comp=Z,3.3nm,1.0s,mb4.0,baz=113,slow=11,SNR=7.2						
ARCES	ARCESS Array B	43.38	338	P	P	23 01 29.1	+0.7
	comp=Z,1.6nm,0.6s,mb3.9,baz=116,slow=7.6,SNR=11						
NB2	NORSAR Subarra	46.77	324	P	P	23 01 55.5	-0.1
	comp=Z,0.6nm,0.5s,mb3.8,baz=99,slow=7.4						
NOA	NORSAR Array B	46.77	324	P	P	23 01 55.7	+0.1
	comp=Z,1.0nm,0.7s,mb3.8,baz=96,slow=7.7,SNR=3.3						
NAO	NORSAR Subarra	46.94	324	P	P	23 01 55.5	-1.4
	comp=Z,0.6nm,0.5s,mb3.8						
NAO	NORSAR Subarra	46.94	324	P	P	23 01 55.5	-1.4
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
INK	Inuvik	75.33	10	P	P	23 05 10.6	+1.5
	comp=Z,0.5nm,0.4s,mb3.8,baz=304,slow=3.6,SNR=3.1						
WRA	Warramunga Arr	79.64	123	P	P	23 05 35.7	+1.8
	comp=Z,0.6nm,0.4s,mb3.9,baz=323,slow=5.1,SNR=3.0						
WRAB	Tennant Creek	79.64	123	*e*P	P	23 05 35.6	+1.7
	comp=Z,2.0nm,0.5s,mb4.3						
WRAB	Tennant Creek	79.64	123	*e*P	P	23 05 35.6	+1.7
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						

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*IDC **02** 22:53:59.7±4.1,7.00S×147.79E,h74^{km}±37^{km},mb3.8/4, mb1 4.0/7,mb1mx3.8/14,mbtmp4.1/7,ML3.8/3,MS3.1/2, Ms1 3.1/2,ms1mx2.5/18,Error ellipse: s-maj=46.0km s-min=30.9km az=117.0*

*NEIC **02** 22:54:00.8±2.3,7.03S×147.71E,h85^{km}±21^{km},mb3.8/1, Error ellipse: s-maj=27.0km s-min=19.0km az=125.0*

ISC 02 22:54:00.2±3.2**,7.0S**±0.2×**147.6E**±0.2**,h94**^{km}±29^{km}**,n13,**σ**0**^{s}**97**/11**,mb3.8**/4**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.46	191	P	P	22 54 38.4	-1.1
	100nm,0.3s,baz=31,slow=7.2,SNR=56						
PMG				S	S	22 55 10.4	+1.8
	40nm,0.3s,baz=252,slow=21,SNR=5.6						
CTA	Charters Tower	13.11	186	P	P	22 57 02.7	-1.2
	0.3nm,0.3s,baz=5.2,slow=14,SNR=5.1						
CTA				LR	LR	23 02 10.9	
	comp=Z,43nm,18.5s,baz=59,slow=38						
CTAO	Charters Tower	13.11	186	*e*P	P	22 57 04.2	+0.3
WRAB	Tennant Creek	18.22	224	*e*P	P	22 58 07.5	-0.8
	3.9nm,0.6s						
WRA	Warramunga Arr	18.23	224	P	P	22 58 07.7	-0.8
	0.6nm,0.3s,baz=54,slow=11,SNR=5.5						
FITZ	Fitzroy Crossi	24.11	241	P	P	22 59 09.2	+0.9
	7.0nm,0.4s,mb4.4,baz=53,slow=8.0,SNR=36						
STKA	Stephens Creek	25.41	192	P	P	22 59 21.1	+0.4
	4.0nm,0.8s,mb3.9,baz=5.8,slow=9.8,SNR=9.5						
STKA	Stephens Creek	25.41	192	*e*P	P	22 59 19.5	-1.2
STKA				P		22 59 21.1	
AFI	Afiamalu	40.48	103	LR	LR	23 14 07.9	
	comp=Z,42nm,20.0s,baz=46,slow=30						
MKAR	Makanchi Array	78.63	320	P	P	23 05 54.3	+0.8
	0.6nm,0.9s,mb3.4,baz=101,slow=7.3,SNR=3.6						
ILAR	Eielson Array	86.13	23	P	P	23 06 31.8	+0.2
	0.4nm,0.7s,mb3.5,baz=247,slow=4.7,SNR=4.3						
DBIC	Dimbokro	152.67	271	PKPbc	PKPdf	23 13 50.0	+10
	2.2nm,1.0s,baz=101,slow=1.7,SNR=5.0						
DBIC	Dimbokro	152.67	271	PKPbc	PKPdf	23 13 50.0	+10

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*ISK **02** 23:14:57.8,38.14N×26.63E,h14^{km},MD3.2*

*ATH **02** 23:14:57.5,38.14N×26.97E,h40^{km}±3^{km},MD3.0/3*

*CSEM **02** 23:14:58.0±0.1,38.14N×26.66E,h13^{km},MD3.2,Error ellipse: s-maj=2.2km s-min=1.1km az=110.0*

ISC 02 23:14:58.1±0.6**,38.14N**±0.02×**26.61E**±0.04**,h6**^{km}±5^{km}**,n19,**σ**0**^{s}**80**/29**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.22	357	*i* P	Pg	23 15 01.4	-1.1
URLA				*i* S	Sg	23 15 04.8	-0.8
BLCB	Balcova	0.42	54	*i* PG	Pg	23 15 06.2	-0.3
SMG	Samos	0.47	157	*e*P	Pg	23 15 08.1	+0.6
SMG				*e*S	Sg	23 15 15.6	+1.9
IZM	Izmir	0.57	63	*i* PG	Pg	23 15 09.4	-0.2
IZM				*i* SG	Sg	23 15 17.8	+0.5
KDAG	Bornova	0.58	63	*i* P	Pg	23 15 08.5	-1.2
KDAG				*i* S	Sg	23 15 17.0	-0.5
AYDN	Tasoluk	1.11	115	*i* P	Pb	23 15 19.6	+0.3
AYDN				*i* S	Sb	23 15 34.3	+0.5
PRK	Paraskevi	1.14	347	*e*P	Pb	23 15 19.5	-0.2
PRK				*e*S	Sb	23 15 36.0	+1.5
AYVA	Ayvalik	1.17	3	*i* P	Pg	23 15 22.0	+0.6
AYVA				*i* S	Sg	23 15 38.4	+1.4
AKS	Akhisar	1.20	52	PN	Pn	23 15 20.6	-0.7
BODT	Bodrum	1.21	152	PN	Pn	23 15 20.9	-0.6
BODT				SN	Sn	23 15 37.6	-0.7
MLSB	Milas	1.25	132	*e*PN	Pn	23 15 21.4	-0.7
APE	Apeiranthos	1.37	219	*e*PN	Pn	23 15 23.4	-0.3
APE	Apeiranthos	1.37	219	*e*P	Pb	23 15 24.5	+0.8
MANT	Manisa	1.57	77	*i* P	Pb	23 15 27.6	+0.5
MANT				*i* S	Sb	23 15 48.2	+1.1
YER	Yerkesik	1.67	127	*e*PN	Pn	23 15 27.3	-0.7
BTOK	Tokmak	1.96	34	*e*P	Pg	23 15 37.2	0.0
BTOK				*i* S	Sg	23 16 04.0	+0.6
DNZL	Cakiroluk	1.98	102	*i* P	Pg	23 15 36.8	-0.8
DST	Dursunbey	2.15	47	*e*PN	Pn	23 15 34.4	-0.5
BNT	Bandirma	2.44	24	*e*PN	Pn	23 15 38.1	-0.9

MAN 02 23:57:22.0,18.12N×120.76E,h10^{km}**,mb3.8,ML2.5, MS2.1,1C-1D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	Pasuquin	0.25	327	⇓*e*P	Pg	23 57 28.2	+0.9
PIP				*e*S	Sg	23 57 33.9	+3.0
ABRA	Dolores	0.47	186	*e*P	Pg	23 57 31.1	-0.5
APYP	Conner	0.52	119	*e*P	Pg	23 57 32.6	0.0
APYP				*e*S	Sg	23 57 41.0	+1.3
CVP	Callao Caves	1.09	112	⇑*e*P	Pb	23 57 42.0	-0.5
SGCP	Mt. Cagua	1.23	84	*e*P	Pb	23 57 43.5	-1.3
CAUP	Cauayan	1.54	139	*e*P	Pn	23 57 50.2	+0.5
BOLP	Bolinao	1.91	205	*e*P	Pn	23 57 54.4	-0.6
BALP	Baler	2.49	162	*e*P	Pn	23 58 02.9	-0.4

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*ATH **02** 23:58:39.8,38.11N×27.00E,h44^{km}±7^{km},MD3.1/3*

*ISK **02** 23:58:40.9,38.10N×26.68E,h11^{km},MD3.3*

*CSEM **02** 23:58:41.2±0.1,38.10N×26.72E,h12^{km},MD3.3,Error ellipse: s-maj=2.4km s-min=1.3km az=99.0*

ISC 02 23:58:40.7±0.7**,38.12N**±0.02×**26.64E**±0.04**,h2**^{km}±6^{km}**,n25,**σ**0**^{s}**90**/36**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.25	353	*i* P	Pg	23 58 44.7	-0.9
URLA				*i* S	Sg	23 58 48.9	0.0
BLCB	Balcova	0.42	50	*i* PG	Pg	23 58 49.1	+0.1
SMG	Samos	0.44	159	*e*P	Pg	23 58 50.8	+1.4
SMG				*e*S	Sg	23 58 57.9	+2.7
IZM	Izmir	0.57	60	*i* PG	Pg	23 58 52.1	+0.1
IZM				*i* SG	Sg	23 59 00.3	+0.7
KDAG	Bornova	0.57	60	*i* P	Pg	23 58 51.3	-0.9
KDAG				*i* S	Sg	23 58 59.1	-0.6
AYDN	Tasoluk	1.08	114	*i* P	Pb	23 59 02.1	+0.4
AYDN				*i* S	Sb	23 59 16.8	+0.6
PRK	Paraskevi	1.16	346	*e*P	Pb	23 59 02.0	-1.1
PRK				*e*S	Sb	23 59 19.0	+0.5
BODT	Bodrum	1.18	153	PN	Pn	23 59 03.4	-0.7
BODT				SN	Sn	23 59 19.6	-1.3
AYVA	Ayvalik	1.19	2	*i* P	Pb	23 59 03.4	-0.3
AYVA				*i* S	Sb	23 59 21.3	+1.9
AKS	Akhisar	1.20	50	PN	Pn	23 59 04.2	-0.1
MLSB	Milas	1.22	132	PN	Pn	23 59 04.0	-0.7
APE	Apeiranthos	1.36	220	PN	Pn	23 59 06.8	+0.1
APE	Apeiranthos	1.36	220	*e*P	Pb	23 59 05.3	-1.3
APE				*e*S	Sb	23 59 26.3	+2.0
MANT	Manisa	1.56	75	*i* P	Pn	23 59 10.3	+0.9
MANT				*i* S	Sb	23 59 30.6	+0.6
DAT	Datca	1.57	151	PN	Pn	23 59 09.1	-0.6
YER	Yerkesik	1.63	126	PN	Pn	23 59 09.6	-1.0
EZN	Ezine	1.73	352	*e*PN	Pn	23 59 12.0	+0.1
BALB	Balikesir	1.81	32	*e*PN	Pn	23 59 12.8	-0.2
DENT	Denizli	1.93	100	*e*PN	Pn	23 59 14.1	-0.7
DNZL	Cakiroluk	1.95	102	*i* P	Pn	23 59 14.8	-0.4
BTOK	Tokmak	1.97	33	*i* P	Pn	23 59 16.9	+1.5
BTOK				*i* S	Sn	23 59 45.0	+4.0
DST	Dursunbey	2.15	46	*e*PN	Pn	23 59 17.7	-0.3
EDC	Edincik	2.42	23	*e*PN	Pn	23 59 21.6	-0.3
BNT	Bandirma	2.45	24	*e*PN	Pn	23 59 21.9	-0.3
ORLT	Orhaneli	2.61	42	*e*PN	Pn	23 59 24.2	-0.3

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*BJI **03** 00:09:41.8,44.52S×167.49E,h58^{km},mB5.5,mb5.1, Ms4.8,Msz4.7*

*NEIC **03** 00:09:41.6,45.21S×167.37E,h73^{km},ML3.8(WEL),After WEL.*

*WEL **03** 00:09:41.5±0.2,45.21S×167.36E,h74^{km}±1^{km},ML3.7/9, Error ellipse: s-maj=1.7km s-min=1.0km az=90.0*

ISC 03 00:09:41.9±0.6**,45.20S**±0.05×**167.50E**±0.07**,h70**^{km}±5^{km}**,n25,**σ**0**^{s}**91**/36**,4C,South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	Deep Cove	0.37	222	P	P	00 09 52.8	-0.8
DCZ				S	S	00 10 01.5	-0.8
DCZ	Deep Cove	0.37	222	PN	P	00 09 52.8	-0.9
DCZ				SN	S	00 10 01.5	-0.8
MLZ	Mavora Lakes	0.50	107	P	P	00 09 55.0	+0.2
MLZ				S	S	00 10 05.1	+0.9
MLZ	Mavora Lakes	0.50	107	⇑PN	P	00 09 55.0	+0.3
MLZ				SN	S	00 10 05.1	+0.8
MSZ	Milford Sound	0.61	30	P	P	00 09 56.0	0.0
MSZ				S	S	00 10 07.9	+1.5
MSZ	Milford Sound	0.61	30	PN	P	00 09 56.0	0.0
MSZ				SN	S	00 10 07.9	+1.5
WHZ	Wether Hill Ro	0.76	156	PN	P	00 09 57.7	+0.1
WHZ				SN	S	00 10 09.4	+0.1
WKZ	Wanaka	1.14	71	⇑P	P	00 10 03.1	+0.6
WKZ	Wanaka	1.14	71	⇑PN	P	00 10 03.1	+0.6
WKZ				SN	S	00 10 18.8	+1.0
EAZ	Earnscleugh	1.28	92	⇑PN	P	00 10 04.9	+0.5
EAZ				SN	S	00 10 21.4	+0.4
JCZ	Jackson Bay	1.44	39	PN	P	00 10 06.5	-0.2
TUZ	Tuapeka	1.68	117	*e*P	P	00 10 09.8	0.0
TUZ				S	S	00 10 30.2	-0.1
TUZ	Tuapeka	1.68	117	PN	P	00 10 09.8	+0.1
TUZ				SN	S	00 10 30.2	-0.1
LBZ	Lake Benmore	2.08	68	*e*P	P	00 10 14.0	-1.3
LBZ	Lake Benmore	2.08	68	PN	P	00 10 14.0	-1.3
LBZ				SN	S	00 10 38.5	-1.5
ODZ	Otahua Downs	2.23	87	*e*P	P	00 10 16.5	-0.9
ODZ	Otahua Downs	2.23	87	PN	P	00 10 16.5	-1.0
FOZ	Fox Glacier	2.27	45	*e*P	P	00 10 17.4	-0.6
FOZ	Fox Glacier	2.27	45	PN	P	00 10 17.4	-0.6
WVZ	Waitaha Valley	3.15	49	*e*PN	P	00 10 27.3	-3.2
CASY	Casey	36.61	215	*e*P	P	00 16 43.6	+0.9
NJ2	Nanjing	88.67	320	*e*P	P	00 22 28.8	+0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
KMI	Kunming	91.45	305	P	P	00 22 43.4	+1.8
CD2	Chengdu	95.32	309	*e*P	P	00 22 58.2	-1.0
CD2				AP	pP	00 23 18.0	-0.8
CD2				PP	PP	00 26 52.0	-0.2
CD2				PPP	PPP	00 28 57.5	-0.3
CD2				SKS	SKS	00 33 26.0	-1.3
CD2				S	S	00 34 05.0	-0.8
CD2				SS	SS	00 40 39.0	+0.8
CD2				LR	LR		
	comp=E,160nm,16.2s						
CD2				LR	LR		
	comp=Z,140nm,20.4s						
WMQ	Urumqi	113.42	309	*e*PKP	PKPdf	00 28 10.4	-0.9
WMQ				PP	PP	00 29 05.9	-2.4
WMQ				PP	PP		
	comp=Z,150nm,4.5s						
WMQ				LR	LR		
	comp=N,50nm,17.6s						
WMQ				LR	LR		
	comp=E,90nm,28.2s						
WMQ				LR	LR		
	comp=Z,20nm,17.3s						

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*CSEM **03** 00:18:06.9±0.0,48.29N×7.45E,h12^{km},ML3.9/42,Error ellipse: s-maj=0.8km s-min=0.5km az=154.0*

*LDG **03** 00:18:07.2±0.1,48.30N×7.43E,h3^{km},Md3.7/3,Ml3.8/37, Error ellipse: s-maj=1.5km s-min=1.3km az=172.0*

*ZUR **03** 00:18:07.2,48.26N×7.46E,h10^{km},ML3.3/29*

*NEIC **03** 00:18:07.1,48.29N×7.44E,h5^{km},ML3.8(LDG), ML3.3(STR),After STR.*

*BGR **03** 00:18:07.4±0.2,48.28N×7.46E,h5^{km},ML3.4/5,Error ellipse: s-maj=2.2km s-min=1.1km az=141.0*

*LEDBW **03** 00:18:07.2±0.1,48.28N×7.47E,h6^{km}±2^{km},ML3.5,Error ellipse: s-maj=2.2km s-min=2.0km az=44.0*

*BNS **03** 00:18:08.9±0.7,48.29N×7.52E,h10^{km},ML3.4*

*PRU **03** 00:18:10.8,48.23N×7.84E*

STR 03 00:18:07.1±0.1**,48.29N×7.44E,h5**^{km}±1^{km}**,Ml3.3, 22C-33D,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0,France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	Welschbruch	0.14	335	Pg	Pg	00 18 10.1	+0.1
WLS				Sg	Sg	00 18 12.4	+0.5
WLS	Welschbruch	0.14	335	⇓*i*P	Pg	00 18 10.3	+0.4
WLS	Welschbruch	0.14	335	*e*Pg	Pg	00 18 10.2	+0.2
WLS				*e*Sg	Sg	00 18 12.5	+0.6
CDF	Champ du Feu	0.16	318	*e*Pg	Pg	00 18 10.5	0.0
CDF				*e*Sg	Sg	00 18 13.2	+0.4
	3µm,0.2s						
LIBD	Limburg	0.18	142	⇓*i*P	Pg	00 18 10.9	+0.1
LIBD	Limburg	0.18	142	*e*Pg	Pg	00 18 10.8	0.0
LIBD				*e*Sg	Sg	00 18 13.9	+0.7
LIBD	Limburg	0.18	142	Pg	Pg	00 18 10.8	+0.1
LIBD				Sg	Sg	00 18 13.6	+0.4
ECH	Echery	0.20	249	Pg	Pg	00 18 11.3	+0.1
ECH				Sg	Sg	00 18 14.1	+0.1
ECH	Echery	0.20	249	⇑*i*P	Pg	00 18 11.4	+0.2
ECH				S	Sg	00 18 14.6	+0.6
ECH	Echery	0.20	249	*e*Pg	Pg	00 18 11.3	+0.1
ECH				*e*Sg	Sg	00 18 14.4	+0.4
STR	Strasbourg	0.37	36	Pg	Pg	00 18 14.5	0.0
STR	Strasbourg	0.37	36	*e*Pg	Pg	00 18 14.6	+0.2
STR				*e*Sg	Sg	00 18 20.3	+0.9
FBB	Freiburg	0.40	136	⇓*i*P	Pg	00 18 14.6	-0.5
KIZ	Kirchzarten	0.46	136	⇓*i*P	Pg	00 18 15.6	-0.8
KIZ				⇓*e*P		00 18 15.6	
KIZ				P		00 18 16.8	
KIZ				S	Sg	00 18 21.4	-1.2
KIZ	Kirchzarten	0.46	136	P	Pg	00 18 16.8	+0.4
KIZ	Kirchzarten	0.46	136	⇓*i*Pg	Pg	00 18 15.6	-0.8
KIZ				P*	Pb	00 18 16.8	-0.6
MOF	Molkenrain	0.48	205	Pg	Pg	00 18 16.4	-0.4
MOF				Sg	Sg	00 18 23.3	0.0
MOF	Molkenrain	0.48	205	⇑*i*P	Pg	00 18 16.6	-0.2
MOF	Molkenrain	0.48	205	*e*Pg	Pg	00 18 16.5	-0.3
MOF				*e*Sg	Sg	00 18 22.9	-0.4
FELD	Feldberg	0.56	137	⇓*e*P	Pg	00 18 17.5	-0.9
FELD				⇓*i*P		00 18 17.5	
FELD				*e*S	Sg	00 18 25.2	-0.6
FELD	Feldberg	0.56	137	⇓*i*P	Pg	00 18 17.5	-0.8
FELD	Feldberg	0.56	137	*e*Pg	Pg	00 18 17.4	-0.9
FELD				*e*Sg	Sg	00 18 24.5	-1.4
FELD	Feldberg	0.56	137	Pg	Pg	00 18 17.4	-0.9
FELD				Sg	Sg	00 18 25.2	-0.6
BFO	Black Forest	0.59	86	⇑*i*P	Pg	00 18 18.1	-0.9
BFO				S	Sg	00 18 25.9	-1.1
BFO				S	Sg	00 18 29.1	+2.2
BFO	Black Forest	0.59	86	*e*Pg	Pg	00 18 18.1	-0.9
BFO				*e*Sg	Sg	00 18 25.6	-1.4
BFO				SmS		00 18 29.1	
BFO	Black Forest	0.59	86	*e*Pg	Pg	00 18 18.1	-0.9
BFO				*e*Sg	Sg	00 18 25.6	-1.4
HINF	Hinteralfeld	0.62	220	*e*Pg	Pg	00 18 18.7	-0.7
HINF				*e*Pn	Pn	00 18 20.0	-2.1
HINF				*e*Sg	Sg	00 18 26.5	-1.2
	1µm,0.2s						
LANF	Langenberg	0.73	19	⇑*e*P	Pg	00 18 21.2	-0.6
LANF	Langenberg	0.73	19	*e*Pg	Pg	00 18 21.1	-0.7
LANF				*e*(Sg)	Sg	00 18 33.4	+1.9
LANF	Langenberg	0.73	19	Pg	Pg	00 18 21.0	-0.7
LANF				Sg	Sg	00 18 33.4	+1.9
HAU	Haudompre	0.79	249	*e*Pg	Pg	00 18 22.1	-0.7
HAU				*e*Pn	Pn	00 18 23.1	-1.5
HAU				*e*Sg	Sg	00 18 32.3	-1.0
	2µm,0.3s						
BBS	Basel-Blauen	0.83	177	⇓*e*P	Pb	00 18 22.8	-0.7
BBS	Basel-Blauen	0.83	177	*e*Pg	Pg	00 18 22.8	-0.8
BBS	Basel-Blauen	0.83	177	Pg	Pg	00 18 23.6	0.0
SLE	Schleitheim	0.88	126	⇓*i*Pg	Pg	00 18 23.3	-1.4
SULZ	Sulz-Cheisache	0.89	149	⇓*i*P	Pb	00 18 23.7	-0.9
SULZ	Sulz-Cheisache	0.89	149	⇓*i*Pg	Pg	00 18 23.6	-1.2
SULZ				*e*Sg	Sg	00 18 36.1	-0.6
BOURR	Bourrignon	0.91	189	⇑*i*Pg	Pg	00 18 24.5	-0.7
SPAK	Spaichingen	0.92	101	P	Pb	00 18 24.2	-0.9
SPAK	Spaichingen	0.92	101	*e*Pg	Pg	00 18 24.7	-0.8
SPAK				*e*Sg	Sg	00 18 36.0	-1.8
SPAK	Spaichingen	0.92	101	Pg	Pg	00 18 24.8	-0.7
SPAK				Sg	Sg	00 18 38.1	+0.3
SPAK	Spaichingen	0.92	101	Pg	Pg	00 18 24.7	-0.8

SPAK				Sg	Sg	00 18 38.1	+0.3
BALST	**Balsthal**	**0.97**	**170**	⇓*i*Pn	Pn	00 18 25.3	-1.9
BALST				*e*Sn	Sn	00 18 37.9	-3.6
THEF	**They Montfort**	**0.97**	**267**	Pg	Pg	00 18 25.9	-0.7
THEF				Sg	Sg	00 18 39.3	-0.2
THEF	**They Montfort**	**0.97**	**267**	*e*Pg	Pg	00 18 25.3	-1.3
THEF				*e*Sg	Sg	00 18 38.9	-0.6
THEF	**They Montfort**	**0.97**	**267**	Pg	Pg	00 18 25.3	-1.3
THEF				Sg	Sg	00 18 39.3	-0.2
LBG	**Lerchenberg**	**0.98**	**67**	⇑*i*PG	Pg	00 18 25.8	-0.8
LBG				SG	Sg	00 18 39.0	-0.7
LBG	**Lerchenberg**	**0.98**	**67**	⇑*i*Pn	Pn	00 18 25.1	-2.2
LBG				⇑*i*Pg	Pg	00 18 25.8	-0.9
LBG				Sg	Sg	00 18 39.0	-0.7
LBG	**Lerchenberg**	**0.98**	**67**	Pg	Pg	00 18 25.8	-0.8
LBG				Sg	Sg	00 18 39.0	-0.7
LOMF	**Lomont**	**1.03**	**204**	Pg	Pg	00 18 26.8	-0.8
LOMF				Sg	Sg	00 18 40.7	-0.6
LOMF	**Lomont**	**1.03**	**204**	P	Pb	00 18 26.3	-0.7
LOMF	**Lomont**	**1.03**	**204**	*e*Pg	Pg	00 18 26.7	-0.9
LOMF				*e*Sg	Sg	00 18 40.6	-0.7
LOMF	**Lomont**	**1.03**	**204**	Pg	Pg	00 18 26.7	-0.9
LOMF				Sg	Sg	00 18 40.7	-0.6
FLACH	**Flaach**	**1.04**	**133**	⇓*i*P	Pb	00 18 26.5	-0.8
TRULL	**Truellikon**	**1.05**	**127**	*e*Pn	Pn	00 18 26.6	-1.8
KTD	**Kalmit**	**1.11**	**22**	P	Pb	00 18 28.7	+0.2
KTD	**Kalmit**	**1.11**	**22**	*e*Pg	Pg	00 18 28.4	-1.0
KTD	**Kalmit**	**1.11**	**22**	Pg	Pg	00 18 28.5	-0.9
TUBL	**Tuebingen Lnz**	**1.12**	**77**	⇑*e*P	Pb	00 18 27.4	-1.2
TUBL				P		00 18 28.4	
TUBL				S	Sb	00 18 43.2	0.0
TUBL	**Tuebingen Lnz**	**1.12**	**77**	Pg	Pg	00 18 28.4	-1.1
TUBL				Sg	Sg	00 18 43.2	-1.2
GUT	**Gutenstein**	**1.14**	**100**	⇓*e*P	Pb	00 18 27.9	-1.1
GUT				S	Sb	00 18 43.6	-0.3
STEIN	**Stein am Rhein**	**1.14**	**122**	⇓*i*Pn	Pn	00 18 28.0	-1.7
SISB	**Singen-Sch Ber**	**1.19**	**120**	⇓*e*P	Pb	00 18 29.3	-0.4
ZUR	**Zurich**	**1.20**	**140**	*e*Pn	Pn	00 18 28.8	-1.7
STU	**Stuttgart**	**1.26**	**67**	*e*Pn	Pn	00 18 30.9	-0.5
	SNR=8.8						
STU				*e*Sg	Sg	00 18 47.0	-2.1
STU	**Stuttgart**	**1.26**	**67**	*e*Pn	Pn	00 18 30.9	-0.5
STU				*e*Sg	Sg	00 18 47.0	-2.2
BUCH	**Bad Urach**	**1.29**	**82**	⇑*i*P	Pb	00 18 29.7	-1.7
BUCH				S	Sb	00 18 48.4	+0.3
WEIN	**Weingarten**	**1.29**	**126**	⇓*i*Pn	Pn	00 18 30.1	-1.7
WEIN	**Weingarten**	**1.29**	**126**	⇓*i*P	Pb	00 18 30.2	-1.3
WILA	**Wila**	**1.32**	**131**	⇓*i*Pn	Pn	00 18 30.7	-1.5
RFYF	**Reffroy**	**1.35**	**285**	*e*Pg	Pg	00 18 32.4	-1.7
	baz=105						
RFYF				*e*Sg	Sg	00 18 49.4	-2.7
	1µm,0.2s						
SWS	**Schriesheim**	**1.46**	**34**	P	Pn	00 18 34.8	+0.6
SWS				S	Sb	00 18 54.5	+1.4
BRANT	**Les Verrieres**	**1.50**	**206**	⇑*i*Pn	Pn	00 18 32.9	-1.9
MUO	**Muotathal**	**1.55**	**148**	⇓*i*Pn	Pn	00 18 34.4	-1.1
TORNY	**Torny**	**1.55**	**192**	*e*Pn	Pn	00 18 33.9	-1.6
BNALP	**Bannalp**	**1.57**	**154**	⇓*i*Pn	Pn	00 18 34.6	-1.2
TOD	**Tromm**	**1.59**	**34**	S	Sb	00 18 58.3	+1.3
TOD	**Tromm**	**1.59**	**34**	*e*(Pn)	Pn	00 18 33.4	-2.7
	SNR=16						
TOD				*e*Pg	Pg	00 18 37.6	-1.3
TOD				*e*Sg	Sg	00 18 58.0	-2.2
TOD	**Tromm**	**1.59**	**34**	Pg	Pg	00 18 37.2	-1.7
TOD				Sg	Sg	00 18 58.5	-1.7
ABH	**Alteburg**	**1.59**	**2**	*e*Pn	Pn	00 18 36.3	+0.2
	SNR=2.1						
ABH				*e*Pg	Pg	00 18 37.2	-1.7
MEZF	**Maizieres J'vi**	**1.61**	**278**	*e*Pn	Pn	00 18 35.2	-1.1
	baz=101						
MEZF				*e*Pg	Pg	00 18 37.7	-1.5
	baz=95						
MEZF				*e*Sg	Sg	00 18 58.3	-2.3
	263nm,0.2s						
MEZF	**Maizieres J'vi**	**1.61**	**278**	*e*Pg	Pg	00 18 37.7	-1.5
MEZF				*e*Sg	Sg	00 18 58.3	-2.3
	131nm,0.2s						
SFTF	**Sexfontaines**	**1.61**	**268**	*e*Pn	Pn	00 18 34.5	-1.8
	baz=100						
SFTF				*e*Sg	Sg	00 18 58.3	-2.3
	642nm,0.2s						
HASLI	**Hasliberg**	**1.61**	**162**	*e*Pn	Pn	00 18 34.8	-1.5
WLF	**Walferdange**	**1.62**	**329**	*e*Pn	Pn	00 18 37.0	+0.6
WLF	**Walferdange**	**1.62**	**329**	*e*Pn	Pn	00 18 37.0	+0.6
WLF				Sg	Sg	00 18 59.5	-1.4
WIMIS	**Wimmis**	**1.63**	**176**	*e*Pn	Pn	00 18 35.2	-1.5
LIENZ	**Alp Oberkamor**	**1.71**	**125**	⇓*i*Pn	Pn	00 18 36.7	-1.0
SIND	**Sindeldorf**	**1.78**	**53**	P	Pn	00 18 36.1	-2.7
LLS	**Linth-Limmern**	**1.79**	**143**	*e*Pn	Pn	00 18 38.0	-1.0
PLONS	**Plons**	**1.81**	**133**	⇓*i*Pn	Pn	00 18 38.1	-1.1
HDH	**Heidenheim**	**1.87**	**80**	P	Pn	00 18 42.1	+2.0
UBR	**Uberruh**	**1.89**	**108**	⇑*e*P	Pn	00 18 39.3	-1.1
UBR				⇑*i*P		00 18 43.1	
UBR				S	Sn	00 19 06.8	+1.9
UBR	**Uberruh**	**1.89**	**108**	⇑*i*PG	Pg	00 18 43.1	-1.8
UBR				SG	Sg	00 19 06.8	-3.3
LKBD	**Leukerbad**	**1.91**	**176**	⇑*i*Pn	Pn	00 18 39.3	-1.3
CABF	**La Chapelle**	**1.91**	**209**	*e*Pn	Pn	00 18 38.8	-1.9
CABF				*e*Pg	Pg	00 18 43.1	-2.2
CABF				*e*Sg	Sg	00 19 06.6	-4.2
	500nm,0.5s						
BGG	**Burgeitz**	**1.92**	**358**	*e*Pg	Pg	00 18 40.6	-4.9
BGG				*e*Sg	Sg	00 19 03.8	-7.2
	166nm,1.0s						
DAVA	**Damuels**	**1.93**	**120**	*e*Pn	Pn	00 18 40.0	-1.0
	SNR=27						
DAVA				⇑*i*Pg	Pg	00 18 44.2	-1.4
DAVA	**Damuels**	**1.93**	**120**	*e*Pn	Pn	00 18 40.0	-1.0
DAVA				Pg	Pg	00 18 44.2	-1.4
DAVA				Sg	Sg	00 19 10.8	-0.4
DAVA	**Damuels**	**1.93**	**120**	Pg	Pg	00 18 44.2	-1.4
DAVA				Sg	Sg	00 19 10.9	-0.4
	70nm,0.4s						
GIMEL	**Gimel**	**1.93**	**205**	⇑*i*Pn	Pn	00 18 38.9	-2.0
SENIN	**Lac Senin**	**1.93**	**183**	*e*Pn	Pn	00 18 39.5	-1.4
FUSIO	**Fusio**	**2.02**	**155**	⇓*i*Pn	Pn	00 18 41.3	-0.9
TNS	**Taunus Mts**	**2.04**	**18**	*e*Pn	Pn	00 18 40.8	-1.7
	SNR=3.5						
TNS				*e*Sg	Sg	00 19 11.6	-3.6
OBER	**Oberstdorf**	**2.12**	**114**	⇓*i*Pn	Pn	00 18 42.9	-0.7
KOE	**Koeppel**	**2.15**	**5**	*e*Pg	Pg	00 18 43.3	-6.7
KOE				*e*Sg	Sg	00 19 09.7	-8.8
	729nm,0.6s						
NORI	**Noerdlinger Ri**	**2.16**	**77**	⇓*i*Pn	Pn	00 18 42.4	-1.9
DIX	**Grande Dixence**	**2.21**	**181**	*e*Pn	Pn	00 18 43.9	-1.1
TUE	**Stuetta**	**2.23**	**144**	Pn	Pn	00 18 45.1	-0.2
TUE				Sn	Sn	00 19 10.9	-2.7
DAVOX	**Davos**	**2.24**	**132**	⇓*i*Pn	Pn	00 18 44.8	-0.6
MMK	**Mattmark**	**2.27**	**171**	*e*Pn	Pn	00 18 44.8	-1.0
VDL	**Val di Lei**	**2.27**	**142**	⇓*i*Pn	Pn	00 18 45.5	-0.3
STB	**Steinbach**	**2.34**	**351**	*e*Pg	Pg	00 18 46.2	-7.6
GIVF	**Givet**	**2.50**	**318**	*e*Pn	Pn	00 18 47.5	-1.6
GIVF				*e*Pg	Pg	00 18 53.0	-4.0
GIVF				*e*Sg	Sg	00 19 25.2	-5.0
	120nm,0.4s						
FUR	**Furstenfeldbru**	**2.57**	**91**	*e*Pg	Pg	00 18 55.7	-2.6
FUR				*e*Sg	Sg	00 19 28.0	-4.6
BERNI	**Berninapass**	**2.57**	**136**	*e*Pn	Pn	00 18 49.9	-0.2
VAI	**Varese**	**2.59**	**159**	Pn	Pn	00 18 49.3	-1.1
MUGIO	**Muggio**	**2.61**	**155**	⇑*i*Pn	Pn	00 18 49.4	-1.3
LOR	**Lormes**	**2.62**	**248**	*e*Pn	Pn	00 18 47.7	-3.1
	baz=68						
LOR				*e*Pg	Pg	00 18 56.3	-3.2
	baz=70						
LOR				*e*Sg	Sg	00 19 28.8	-5.6
	220nm,0.2s						
LOR	**Lormes**	**2.62**	**248**	*e*Pg	Pg	00 18 56.3	-3.2
LOR				*e*Sg	Sg	00 19 28.8	-5.6
	110nm,0.2s						
MOTA	**Moosalm**	**2.64**	**110**	⇑*e*Pn	Pn	00 18 50.5	-0.7
	SNR=14						
MOTA	**Moosalm**	**2.64**	**110**	⇑*e*Pn	Pn	00 18 50.5	-0.7
MOTA				Sg	Sg	00 19 31.6	-3.6
MOTA	**Moosalm**	**2.64**	**110**	Pn	Pn	00 18 50.5	-0.7
	13nm,8.0s						
MOTA				Sg	Sg	00 19 31.6	-3.5
	46nm,0.2s						
HGN	**Heimansgroeve**	**2.66**	**339**	*e*Pn	Pn	00 18 51.3	-0.2
	1.0nm,0.2s						
HGN				*e*Pb	Pb	00 18 55.7	+0.8
	3.7nm,0.1s						
HGN				*e*Pg	Pg	00 18 59.3	-1.0
	40nm,0.4s						
HGN				*e*Sg	Sg	00 19 30.2	-5.7
HGN	**Heimansgroeve**	**2.66**	**339**	*e*Pg	Pg	00 18 59.3	-1.0
	40nm,0.4s						
HGN				*e*Sg	Sg	00 19 30.2	-5.6
ORX	**Oropa**	**2.68**	**172**	P	Pn	00 18 51.5	-0.2
ORX				S	Sn	00 19 22.6	-2.4
ORX	**Oropa**	**2.68**	**172**	P	Pn	00 18 51.5	-0.2
ORX				S	Sn	00 19 22.6	-2.4
ORO	**Oropa**	**2.69**	**172**	Pn	Pn	00 18 51.5	-0.3
BRMO	**Bormio**	**2.69**	**131**	Pn	Pn	00 18 53.5	+1.6
HOBG	**Hohbusch**	**2.70**	**359**	*e*Pg	Pg	00 18 50.6	-10
SQTA	**Sankt Quirin**	**2.76**	**111**	⇓*e*Pn	Pn	00 18 51.9	-0.9
SQTA				Sg	Sg	00 19 34.9	-4.1
SQTA	**Sankt Quirin**	**2.76**	**111**	Pn	Pn	00 18 51.9	-0.9
	21nm,2.0s						
SQTA				Sg	Sg	00 19 34.9	-4.1
	57nm,0.2s						
BAIF	**Baives**	**2.76**	**311**	*e*Pn	Pn	00 18 51.6	-1.3
BAIF				*e*Pg	Pg	00 18 57.9	-4.4
BAIF				*e*Sg	Sg	00 19 32.3	-6.8
	70nm,0.5s						
TRAV		**2.79**	**176**	P	Pn	00 18 52.5	-0.7
TRAV				S	Sn	00 19 23.8	-3.8
TRAV		**2.79**	**176**	P	Pn	00 18 52.5	-0.7
TRAV				S	Sn	00 19 23.8	-3.8
LPL	**La Plagne**	**2.82**	**190**	*e*Pn	Pn	00 18 52.1	-1.5
LPL				*e*Pg	Pg	00 18 59.0	-4.3
LPL				*e*Sg	Sg	00 19 35.7	-5.2
	60nm,0.5s						
LPG	**La Plagne**	**2.83**	**190**	*e*Pn	Pn	00 18 52.4	-1.5
LPG				*e*Pg	Pg	00 19 00.9	-2.8
LPG				*e*Sg	Sg	00 19 36.8	-4.6
	73nm,0.4s						
LSD	**Ceresole Reale**	**2.84**	**184**	P	Pn	00 18 53.2	-0.8
LSD				S	Sn	00 19 25.1	-3.9
LSD	**Ceresole Reale**	**2.84**	**184**	P	Pn	00 18 53.2	-0.8
LSD				S	Sn	00 19 25.1	-3.9
GRA1	**Grafenberg Arr**	**2.86**	**59**	*e*Pg	Pg	00 19 00.7	-3.5
GRA1				*e*Sg	Sg	00 19 36.7	-5.6
SSF	**Saint Saulge**	**2.93**	**247**	*e*Pn	Pn	00 18 51.9	-3.3
SSF				*e*Pg	Pg	00 19 01.9	-3.7
SSF				*e*Sg	Sg	00 19 37.6	-7.0
	135nm,0.4s						
SMF	**Signal de Mont**	**2.94**	**237**	*e*Pn	Pn	00 18 51.6	-3.8
SMF				*e*Pg	Pg	00 19 02.1	-3.8
SMF				*e*Sg	Sg	00 19 39.0	-6.1
	236nm,0.4s						
WATA	**Walderalm**	**2.95**	**107**	⇑*i*Pn	Pn	00 18 54.5	-1.0
WATA	**Walderalm**	**2.95**	**107**	⇑*i*Sg	Sg	00 19 43.1	-2.1
	comp=Z,47nm,0.3s						
WATA	**Walderalm**	**2.95**	**107**	⇑Pn	Pn	00 18 54.5	-1.0
WATA				Sg	Sg	00 19 43.1	-2.1
WATA	**Walderalm**	**2.95**	**107**	Pn	Pn	00 18 54.5	-1.0
WATA				Sg	Sg	00 19 43.1	-2.1
WTTA	**Wattenberg**	**3.01**	**108**	⇑*i*Sg	Sg	00 19 45.0	-2.3
	comp=Z,58nm,0.5s						
WTTA	**Wattenberg**	**3.01**	**108**	⇑*e*Pn	Pn	00 18 56.3	-0.1
WTTA				Sg	Sg	00 19 45.0	-2.3
WTTA	**Wattenberg**	**3.01**	**108**	Pn	Pn	00 18 56.3	-0.1
	21nm,9.0s						
WTTA				Sg	Sg	00 19 45.0	-2.3
MABI	**Malga Bissina**	**3.06**	**136**	Pn	Pn	00 18 58.0	+0.8
RSP	**Reno Superiore**	**3.14**	**182**	P	Pn	00 18 55.6	-2.7
RSP	**Reno Superiore**	**3.14**	**182**	P	Pn	00 18 55.6	-2.6
SCE	**Schlegeis**	**3.15**	**112**	⇓*i*Pn	Pn	00 18 58.1	-0.2
APPI	**Appiano**	**3.15**	**124**	Pn	Pn	00 18 58.9	+0.6
AVF	**Avril sur Loir**	**3.15**	**243**	*e*Pn	Pn	00 18 54.6	-3.7
AVF				*e*Pg	Pg	00 19 05.9	-4.1
AVF				*e*Sg	Sg	00 19 45.9	-6.0
	37nm,0.2s						
BUG	**Bochum--Univer**	**3.16**	**358**	*e*Sg	Sg	00 19 47.8	-4.3
FENE	**Fenestrelle**	**3.27**	**185**	P	Pn	00 18 57.2	-2.9
FENE	**Fenestrelle**	**3.27**	**185**	P	Pn	00 18 57.2	-2.9
BNI	**Bardonecchia**	**3.28**	**189**	*e*Pn	Pn	00 19 00.1	-0.1
BNI				*e*Pg	Pg	00 19 10.2	-2.4
BNI	**Bardonecchia**	**3.28**	**189**	*e*Pn	Pn	00 19 00.1	-0.1
BNI	**Bardonecchia**	**3.28**	**189**	*e*Pg	Pg	00 19 10.2	-2.4
BRES	**Bressanone**	**3.32**	**117**	Pn	Pn	00 19 01.2	+0.5
HYF	**Humbligny**	**3.40**	**254**	*e*Pn	Pn	00 18 58.9	-2.9
HYF				*e*Pg	Pg	00 19 11.5	-3.4
HYF				*e*Sg	Sg	00 19 52.3	-7.8
RRL	**Cesana Torines**	**3.40**	**188**	P	Pn	00 18 59.9	-2.0
RRL	**Cesana Torines**	**3.40**	**188**	P	Pn	00 18 59.9	-2.0
NOTT	**Nottersdorf**	**3.44**	**62**	*e*Pg	Pg	00 19 11.5	-4.2
BHB	**Bricherasio**	**3.45**	**182**	P	Pn	00 18 59.7	-2.9
BHB				S	Sn	00 19 35.7	-8.8
BHB	**Bricherasio**	**3.45**	**182**	P	Pn	00 18 59.7	-2.9
ORIF	**Oris-en-Rattie**	**3.54**	**198**	*e*Pn	Pn	00 19 01.0	-2.9
ORIF				*e*Pg	Pg	00 19 12.7	-5.1
ORIF				*e*Sg	Sg	00 19 58.8	-6.2
	93nm,0.5s						
BGF	**Bois d'Agland**	**3.57**	**243**	*e*Pn	Pn	00 19 00.1	-4.2
BGF				*e*Pg	Pg	00 19 13.5	-4.8
BGF				*e*Sg	Sg	00 19 59.4	-6.5
	169nm,0.4s						
SEST	**Monte Rota**	**3.58**	**114**	Pn	Pn	00 19 04.8	+0.3
MBDF	**Montbardon**	**3.59**	**188**	*e*Pn	Pn	00 19 03.8	-0.9
MBDF				*e*Pg	Pg	00 19 13.6	-5.3
MBDF				*e*Sg	Sg	00 20 00.1	-6.7
	43nm,0.6s						
MOX	**Moxa**	**3.60**	**48**	*i* P	Pn	00 19 03.2	-1.6
MOX				Pg	Pg	00 19 15.0	-4.0
MOX				Sg	Sg	00 20 01.0	-6.0
MOX	**Moxa**	**3.60**	**48**	*e*Pn	Pn	00 19 03.2	-1.5
	SNR=5.3						
MOX				*e*Pg	Pg	00 19 14.8	-4.2
MOX				*e*Sg	Sg	00 20 01.4	-5.6
MOX	**Moxa**	**3.60**	**48**	*e*Pn	Pn	00 19 03.2	-1.6
MOX				*e*Pg	Pg	00 19 14.8	-4.2
MOX				*e*Sg	Sg	00 20 01.3	-5.7
CTI	**Castel Tesino**	**3.64**	**126**	Pn	Pn	00 19 06.0	+0.6
AGO	**Saint Agoulin**	**3.69**	**234**	Pg	Pg	00 19 16.3	-4.6
WET	**Wettzell**	**3.70**	**75**	*e*Pn	Pn	00 19 03.3	-2.9
	SNR=7.0						
WET				*e*Pg	Pg	00 19 16.9	-4.0
WET				*e*Sn	Sn	00 19 45.5	-5.3
	SNR=3.5						
WET				*e*Sg	Sg	00 20 04.6	-5.8
WET	**Wettzell**	**3.70**	**75**	*e*Pn	Pn	00 19 03.3	-2.9
WET				*e*Pg	Pg	00 19 16.9	-4.1
WET				*e*Sn	Sn	00 19 45.5	-5.3
WET				*e*Sg	Sg	00 20 04.6	-5.7
GUNZ	**Gunzen**	**3.81**	**55**	*e*Pg	Pg	00 19 19.4	-3.8
NKC	**Novy Kostel**	**3.81**	**57**	*e*PG	Pg	00 19 17.3	-5.9
NKC				*e*SG	Sg	00 20 05.3	-8.7
WERD	**Werda**	**3.84**	**54**	*e*Pg	Pg	00 19 19.6	-4.3
CFF	**Clermont-Ferra**	**3.89**	**231**	Pg	Pg	00 19 20.3	-4.5
TANN	**Tannenbergstha**	**3.91**	**55**	*e*Pg	Pg	00 19 20.4	-4.8
TANN				*e*Sg	Sg	00 20 09.4	-7.9
VIVF	**Saint-Julien-l**	**3.93**	**210**	*e*Pn	Pn	00 19 04.8	-4.6
VIVF				*e*Pg	Pg	00 19 19.2	-6.3
VIVF				*e*Sg	Sg	00 20 08.9	-9.0
	40nm,0.3s						
PYM	**Petit Puy Mans**	**3.96**	**232**	Pg	Pg	00 19 21.0	-5.1
FVI	**Forni Avoltri**	**4.00**	**113**	Pn	Pn	00 19 11.6	+1.2
ROB	**Roburent**	**4.01**	**176**	P	Pn	00 19 08.6	-2.0
ROB	**Roburent**	**4.01**	**176**	P	Pn	00 19 08.6	-1.9
NEUB	**Neuenburg**	**4.05**	**42**	*e*Pg	Pg	00 19 22.8	-5.3
NEUB				*e*Sg	Sg	00 20 17.3	-4.8
TCF	**Toulx Ste Croi**	**4.08**	**243**	*e*Pn	Pn	00 19 07.5	-4.1
TCF				*e*Pg	Pg	00 19 22.8	-5.8
TCF				*e*Sg	Sg	00 20 14.4	-8.7
	112nm,0.6s						
KHC	**Kasperske Hory**	**4.15**	**76**	*e*PN	Pn	00 19 10.7	-1.9
KHC				*e*SN	Sn	00 19 56.5	-5.7
KHC				*e*SG	Sg	00 20 16.9	-8.4
	42nm,0.5s						
KBA	**Koelnbreinsper**	**4.17**	**105**	⇑*i*Sn	Sn	00 19 59.6	-3.0
KBA				⇑*i*Sg	Sg	00 20 22.5	-3.4
	comp=Z,53nm,0.6s						
KBA	**Koelnbreinsper**	**4.17**	**105**	⇑*i*Pn	Pn	00 19 12.1	-0.8
KBA				Sn	Sn	00 19 59.6	-3.0
KBA				Sg	Sg	00 20 22.5	-3.4
KBA	**Koelnbreinsper**	**4.17**	**105**	Pn	Pn	00 19 12.1	-0.7
	8.0nm,6.0s						
KBA				Sg	Sg	00 20 22.5	-3.4
	53nm,0.6s						
GEC2	**GERESS Array S**	**4.20**	**80**	*e*Pn	Pn	00 19 10.5	-2.7
	SNR=12						
GEC2				*e*Sn	Sn	00 19 56.7	-6.6
	SNR=2.4						
GEC2				*e*Sg	Sg	00 20 19.1	-7.6
GEC2	**GERESS Array S**	**4.20**	**80**	*e*Pn	Pn	00 19 10.5	-2.7
GEC2				*e*Sn	Sn	00 19 56.7	-6.6
GEC2				*e*Sg	Sg	00 20 19.1	-7.7
LBL	**Lubilhac**	**4.20**	**225**	Pg	Pg	00 19 26.4	-4.6
IMI	**Imperia**	**4.39**	**176**	P	Pn	00 19 13.0	-3.0
IMI	**Imperia**	**4.39**	**176**	P	Pn	00 19 13.0	-3.0
SBF	**Sospel**	**4.43**	**180**	*e*Pn	Pn	00 19 15.5	-1.0
SBF				*e*Sn	Sn	00 20 02.6	-6.6
	18nm,0.3s						
SMRF	**Simiane la Rot**	**4.50**	**197**	*e*Pn	Pn	00 19 15.8	-1.8
SMRF				*e*Pg	Pg	00 19 34.0	-3.0
SMRF				*e*Sn	Sn	00 20 04.1	-7.0
SMRF				*e*Sg	Sg	00 20 28.0	-9.1
	20nm,0.6s						
MOA	**Molln**	**4.60**	**93**	⇑*i*Pn	Pn	00 19 17.0	-1.9
MOA	**Molln**	**4.60**	**93**	⇓*i*Pg	Pg	00 19 34.8	-4.1
MOA	**Molln**	**4.60**	**93**	⇑Pn	Pn	00 19 17.0	-1.9
MOA				Pg	Pg	00 19 34.8	-4.1
MOA				Sg	Sg	00 20 34.3	-5.9
MOA	**Molln**	**4.60**	**93**	Pg	Pg	00 19 34.8	-4.1
MOA				Sg	Sg	00 20 34.3	-5.9
	45nm,0.6s						
CLL	**Collm**	**4.70**	**48**	*e*PN	Pn	00 19 24.0	+3.6
CLL				*e*PG	Pg	00 19 36.0	-4.9
CLL				*e*SG	Sg	00 20 36.0	-7.6
FRF	**La Foret Royal**	**4.76**	**187**	*e*Pn	Pn	00 19 17.7	-3.6
FRF				*e*Pg	Pg	00 19 36.9	-5.3
FRF				*e*Sn	Sn	00 20 10.7	-6.9
	5.1nm,0.2s						
LASF	**Ste Croix**	**4.89**	**212**	*e*Pn	Pn	00 19 18.0	-5.1
LASF				*e*Pg	Pg	00 19 38.6	-6.2
LASF				*e*Sg	Sg	00 20 40.9	-9.1
	30nm,0.4s						
VOY	**Vojsko**	**4.95**	**115**	*e*Pn	Pn	00 19 36.4	+13
VOY				*e*Sn	Sn	00 20 46.3	+24
BRG	**Berggiesshubel**	**4.96**	**56**	Pn	Pn	00 19 38.9	+15
BRG				Sg	Sg	00 20 44.1	-8.0
PRU	**Pruhonice**	**4.96**	**67**	*e*PG	Pg	00 19 38.6	-7.6
PRU				*e*SG	Sg	00 20 41.0	-11
LMR	**La Mourre**	**5.00**	**188**	*e*Pn	Pn	00 19 20.9	-3.7
LMR				*e*Pg	Pg	00 19 40.1	-6.8
LMR				*e*Sn	Sn	00 20 15.7	-7.9
	3.0nm,0.2s						
CAF	**Calviac**	**5.00**	**230**	*e*Pn	Pn	00 19 19.7	-5.0
CAF				*e*Pg	Pg	00 19 39.7	-7.3
CAF				*e*Sg	Sg	00 20 44.2	-9.5
	12nm,0.3s						
LDF	**La Druitiere**	**5.04**	**276**	*e*Pn	Pn	00 19 22.1	-3.1
LDF				*e*Pg	Pg	00 19 40.9	-6.9
LDF				*e*Sg	Sg	00 20 45.2	-10
	55nm,0.5s						
RJF	**Les Rejaudoux**	**5.05**	**236**	*e*Pn	Pn	00 19 22.3	-3.0
RJF				*e*Pg	Pg	00 19 40.6	-7.2
RJF				*e*Sg	Sg	00 20 43.7	-11
	22nm,0.3s						
PVCC	**Panska Ves**	**5.17**	**62**	*e*SG	Sg	00 20 50.6	-8.4
FLN	**La Foliniere**	**5.29**	**278**	*e*Pn	Pn	00 19 25.3	-3.3
	baz=96						
FLN				*e*Sg	Sg	00 20 51.4	-12
	71nm,0.6s						
MFF	**Saint Martin d**	**5.42**	**255**	*e*Pn	Pn	00 19 25.8	-4.7
MFF				*e*Pg	Pg	00 19 48.3	-6.9
MFF				*e*Sg	Sg	00 20 56.4	-11
	44nm,0.5s						
GRR	**Gorron**	**5.54**	**274**	*e*Pn	Pn	00 19 26.5	-5.7
GRR				*e*Sg	Sg	00 21 00.8	-11
	20nm,0.2s						
LFF	**La Frestale**	**5.70**	**236**	*e*Pn	Pn	00 19 30.7	-3.8
LFF				*e*Pg	Pg	00 19 52.4	-8.6
LFF				*e*Sg	Sg	00 21 07.2	-10
	58nm,0.6s						
PGF	**Pioggiola**	**5.85**	**169**	*e*Pn	Pn	00 19 32.8	-3.8
PGF				*e*Sn	Sn	00 20 36.3	-8.6
	1.2nm,0.4s						
UPC	**Upice**	**6.02**	**65**	*e*PG	Pg	00 19 59.6	-7.7
VRAC	**Vranov**	**6.13**	**77**	*e*Sg	Sg	00 21 17.1	-14
MTLF	**Montolieu**	**6.15**	**218**	*e*Pn	Pn	00 19 36.1	-4.7
MTLF				*e*Pg	Pg	00 20 00.5	-9.3
MTLF				*e*Sg	Sg	00 21 19.5	-12
	22nm,0.7s						
KSP	**Ksiaz**	**6.30**	**63**	*e*Pg	Pg	00 20 02.9	-10
KSP				*e*Sg	Sg	00 21 25.5	-11
SGMF	**Saint Gilles**	**6.67**	**273**	*e*Pn	Pn	00 19 43.1	-5.1
SGMF				*e*Sn	Sn	00 20 54.5	-11
SGMF				*e*Sg	Sg	00 21 35.2	-14
	27nm,0.5s						
MORC	**Moravsky Berou**	**6.81**	**74**	Pn	Pn	00 19 44.4	-5.7
MORC	**Moravsky Berou**	**6.81**	**74**	Pn	Pn	00 19 44.4	-5.7
QUIF	**Quistinic**	**7.11**	**271**	*e*Pn	Pn	00 19 50.7	-3.7
QUIF				*e*Sg	Sg	00 21 49.0	-15
	23nm,0.6s						
ROSF	**Rostrenen**	**7.15**	**274**	*e*Pn	Pn	00 19 50.8	-4.1
ROSF				*e*Sn	Sn	00 21 05.3	-12
ROSF				*e*Sg	Sg	00 21 51.2	-14
	37nm,0.7s						
OKC	**Ostrava-Krasne**	**7.20**	**74**	*e*SG	Sg	00 21 54.9	-12
EPF	**Esparros**	**7.24**	**226**	*e*Pg	Pg	00 20 21.5	-10
EPF				*e*Sg	Sg	00 21 53.5	-15
	16nm,0.7s						
ETSF	**Etsaut**	**7.78**	**229**	*e*Sg	Sg	00 22 11.2	-15
	7.7nm,0.6s						
EVO	**Evora**	**14.85**	**235**	*e*Pn	P	00 21 33.9	-5.5

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*STR **03** 00:19:11.9±0.4, 48.31N×7.41E, h5^{km}±1^{km}, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*NEIC **03** 00:19:11.9, 48.31N×7.41E, h5^{km}, ML2.6(STR), After STR.*

*BGR **03** 00:19:12.9±0.4, 48.30N×7.44E, h5^{km}±6^{km}, ML2.0/1, Error ellipse: s-maj=4.4km s-min=3.3km az=149.0*

*CSEM **03** 00:19:12.1±0.1, 48.30N×7.43E, h2^{km}, ML2.6, Error ellipse: s-maj=2.5km s-min=2.4km az=154.0*

ISC 03 00:19:11.9±0.6, **48.29N**±0.03×**7.45E**±0.04, **h5**^{km}**, n13, σ0^{s}72**/21**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLS	**Welschbruch**	**0.14**	**334**	*e*Pg	**Pg**	**00 19 15.0**	**+0.3**
LIBD	**Limburg**	**0.17**	**143**	*e*Pg	**Pg**	**00 19 15.5**	**0.0**
	SNR=1.6						
LIBD				*e*Sg	**Sg**	**00 19 18.4**	**+0.6**
	SNR=4.2						
LIBD	**Limburg**	**0.17**	**143**	Pg	**Pg**	**00 19 15.4**	**-0.1**
ECH	**Echery**	**0.21**	**249**	Pg	**Pg**	**00 19 16.0**	**-0.1**
ECH				Sg	**Sg**	**00 19 19.1**	**+0.2**
ECH	**Echery**	**0.21**	**249**	*e*Pg	**Pg**	**00 19 16.0**	**0.0**
	SNR=3.2						
ECH				*e*Sg	**Sg**	**00 19 19.2**	**+0.3**
	SNR=3.0						
STR	**Strasbourg**	**0.36**	**36**	*e*Sg	**Sg**	**00 19 25.2**	**+1.1**
	SNR=2.3						
BFO	**Black Forest**	**0.59**	**86**	*e*Sg	**Sg**	**00 19 32.0**	**+0.3**
	SNR=2.2						
BBS	**Basel-Blauen**	**0.83**	**177**	Pg	**Pg**	**00 19 28.1**	**-0.3**
BBS				Sg	**Sg**	**00 19 40.4**	**+0.9**
THEF	**They Montfort**	**0.98**	**267**	*e*Sg	**Sg**	**00 19 44.4**	**0.0**
	SNR=2.4						
LOMF	**Lomont**	**1.03**	**204**	Pg	**Pg**	**00 19 31.6**	**-0.8**
LOMF				Sg	**Sg**	**00 19 45.0**	**-1.1**
LOMF	**Lomont**	**1.03**	**204**	*e*Pg	**Pg**	**00 19 31.8**	**-0.6**
	SNR=1.4						
LOMF				*e*Sg	**Sg**	**00 19 46.0**	**-0.1**
	SNR=1.4						
STU	**Stuttgart**	**1.26**	**67**	*e*Pg	**Pg**	**00 19 37.0**	**0.0**
STU				*e*Sg	**Sg**	**00 19 51.9**	**-2.0**
	SNR=1.3						
STU	**Stuttgart**	**1.26**	**67**	Pg	**Pg**	**00 19 37.0**	**0.0**
STU				Sg	**Sg**	**00 19 51.9**	**-1.9**
	SNR=1.3						

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*ISK **03** 00:38:36.9, 38.14N×26.60E, h18^{km}, MD3.1*

*ATH **03** 00:38:37.8, 38.18N×26.79E, h23^{km}±1^{km}, MD2.9/3*

*CSEM **03** 00:38:37.1±0.3, 38.17N×26.60E, h21^{km}±2^{km}, MD3.1, Error ellipse: s-maj=5.8km s-min=3.7km az=118.0*

ISC 03 00:38:38.6±1.0, **38.13N**±0.03×**26.67E**±0.09, **h23**^{km}±8^{km}, **n15, σ0^{s}68**/20**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.39**	**49**	PG	**Pb**	**00 38 46.0**	**-0.8**

SMG	**Samos**	**0.44**	**163**	*e*PB	**Pb**	**00 38 47.6**	**-0.2**
SMG				*e*SB	**Sb**	**00 38 54.5**	**+0.5**
IZM	**Izmir**	**0.54**	**60**	PG	**Pb**	**00 38 49.2**	**-0.1**
IZM				SG	**Sb**	**00 38 57.4**	**+0.8**
PRK	**Paraskevi**	**1.15**	**344**	*e*PN	**Pn**	**00 38 59.6**	**0.0**
PRK				*e*SN	**Sn**	**00 39 15.4**	**+0.7**
AKS	**Akhisar**	**1.17**	**50**	PN	**Pn**	**00 38 59.7**	**0.0**
BODT	**Bodrum**	**1.19**	**154**	*e*PN	**Pn**	**00 38 59.2**	**-0.8**
BODT				*e*SN	**Sn**	**00 39 16.1**	**+0.6**
MLSB	**Milas**	**1.21**	**133**	*e*PN	**Pn**	**00 39 00.5**	**+0.1**
APE	**Apeiranthos**	**1.40**	**221**	*e*PN	**Pn**	**00 39 01.5**	**-1.5**
APE	**Apeiranthos**	**1.40**	**221**	*e*PN	**Pn**	**00 39 05.3**	**+2.3**
DAT	**Datca**	**1.58**	**152**	*e*PN	**Pn**	**00 39 05.2**	**-0.4**
YER	**Yerkesik**	**1.62**	**127**	*e*PN	**Pn**	**00 39 06.4**	**+0.1**
DST	**Dursunbey**	**2.12**	**46**	*e*PN	**Pn**	**00 39 12.8**	**-0.6**
ELL	**Elmali**	**2.93**	**117**	PG	**Pn**	**00 39 40.7**	**+16**
ELL				SG	**Sn**	**00 39 54.6**	**-5.1**
ISP	**Isparta**	**3.05**	**94**	*e*PG	**Pn**	**00 39 38.8**	**+12**
BCK	**Bucak**	**3.18**	**101**	*i* PG	**Pn**	**00 39 37.6**	**+9.1**

IDC 03 00:46:10.9±11.0**, 23.19S**×**66.66W, h183**^{km}±77^{km}**, mb1 3.3**/3**, mb1mx3.1**/15**, mbtmp3.8**/3**, Error ellipse: s-maj=114.8km s-min=33.6km az=25.0, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.01**	**348**	P	P	00 47 51.6	-0.4
	0.3nm,0.3s,baz=141,slow=9.8,SNR=7.0						
LPAZ				S	S	00 49 12.2	+1.5
	0.1nm,0.3s,baz=273,slow=22,SNR=4.1						
SIV	**San Ignacio**	**8.89**	**37**	P	P	00 48 15.9	-0.8
	1.5nm,0.3s,baz=249,slow=12,SNR=27						
BDFB	**Brasilia**	**19.11**	**70**	P	P	00 50 20.4	-1.6
	0.3nm,0.3s,baz=231,slow=11,SNR=7.4						
MKAR	**Makanchi Array**	**145.71**	**39**	PKPbc	PKPbc	01 05 27.3	-0.9
	0.8nm,0.8s,baz=315,slow=3.4,SNR=4.2						

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*IDC **03** 00:55:21.4±1.1, 34.56N×73.77E, mb4.1/13, mb1 4.3/16, mb1mx4.2/22, mbtmp4.1/16, ML4.2/3, MS3.6/4, Ms1 3.6/4, ms1mx3.2/21, Error ellipse: s-maj=27.5km s-min=17.3km az=21.0*

*MOS **03** 00:55:21.3±1.1, 34.57N×73.62E, h8^{km}, mb4.5/17, Error ellipse: s-maj=12.9km s-min=5.5km az=98.2*

*BJI **03** 00:55:22.7, 34.74N×73.76E, h10^{km}, mB4.6, mb4.5, ML4.5, Ms4.3, Msz4.1*

*NEIC **03** 00:55:22.0±0.3, 34.43N×73.67E, h10^{km}, mb4.2/12, Error ellipse: s-maj=9.1km s-min=3.9km az=47.0*

*NDI **03** 00:55:25.3±5.3, 34.48N×73.81E, h10^{km}, ML4.1, mb4.2(NEIC)*

*NNC **03** 00:55:33.0±4.0, 34.93N×73.00E, h64^{km}±29^{km}, mpv4.2, Error ellipse: s-maj=40.7km s-min=27.1km az=23.0*

ISC 03 00:55:24.2±0.2**, 34.49N**±0.02×**73.70E**±0.04**, h33**^{km}**, n131,** σ**1**^{s}**40**/156**, mb4.2**/27**, MS3.7**/6**, 18C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**0.91**	**204**	⇓P	**P**	**00 55 43.5**	**+3.0**
CHCP				S	**S**	**00 55 59.0**	**+6.4**
SRNI	**Srinagar**	**1.03**	**112**	*e*P	**P**	**00 55 44.5**	**+2.2**
SRNI				*e*x	x	00 56 03.5	
SRNI				*e*x	x	00 56 08.0	
SRNI				*e*x	x	00 56 33.0	
CEP	**Cherat**	**1.63**	**246**	⇑P	**P**	**00 55 55.3**	**+4.4**
CEP				S	**S**	**00 56 08.0**	**-2.9**
THW	**Thamme Wali**	**2.35**	**225**	P	**P**	**00 56 05.8**	**+4.6**
THN	**Thein Dam**	**2.66**	**140**	*e*PB	**Pb**	**00 56 10.4**	**-0.5**
THN				*e*SG	**S**	**00 56 49.2**	**+12**
SARP	**Sargodha**	**2.71**	**199**	⇓P	**P**	**00 56 10.0**	**+3.7**
SARP				S	**S**	**00 56 49.0**	**+11**
DLH	**Dalhousie**	**2.71**	**135**	*e*PB	**Pb**	**00 56 10.0**	**-1.9**
DLH				*e*SB	**Sb**	**00 56 45.0**	**0.0**
SBDP	**Sheikh Budin**	**3.26**	**229**	⇑P	**P**	**00 56 18.2**	**+4.0**
BHK	**Bhakra**	**3.82**	**143**	*e*PB	**Pb**	**00 56 34.0**	**+3.2**
BHK				*e*SB	**Sb**	**00 57 20.6**	**+3.5**
DRP	**Derazinda**	**4.02**	**228**	P	**P**	**00 56 20.7**	**-4.2**
SDNR	**Sundarnagar**	**4.05**	**136**	*e*P	**P**	**00 56 28.0**	**+2.5**
SDNR				*e*x	x	00 57 14.8	
SMLA	**Simla**	**4.45**	**138**	*e*P	**P**	**00 56 32.2**	**+1.2**
SMLA				*e*S	**S**	**00 57 22.9**	**+0.6**
DDI	**Dehra Dun**	**5.55**	**137**	*e*P	**P**	**00 56 48.5**	**+1.9**
DDI				*e*x	x	00 57 52.0	
JOSI	**Joshimath**	**6.31**	**127**	*e*x	x	00 56 15.7	
JOSI				*e*x	x	00 57 25.7	
JOSI				AML	AML	00 57 43.1	
	comp=N,437nm,0.5s						
JOSI				AML	AML	00 58 11.1	
	comp=E,577nm,0.7s						
NDI	**New Delhi**	**6.52**	**152**	*e*x	x	00 57 03.5	
NDI				*e*S	**S**	**00 58 11.5**	**-2.8**
NDI				*e*x	x	00 58 47.5	
KALG	**Kalgarh**	**6.57**	**138**	*e*P	**P**	**00 57 00.7**	**-0.2**
KALG				*e*S	**S**	**00 58 11.5**	**-4.0**
KHET	**Khetri**	**6.65**	**164**	*e*P	**P**	**00 57 02.1**	**+0.1**
KHET				*e*x	x	00 58 15.0	
KHET				AML	AML	00 59 12.7	
	comp=E,133nm,0.3s						
KHET				AML	AML	00 59 13.0	
	comp=N,114nm,0.1s						
AYAN	**Aya Nagar**	**6.67**	**153**	*e*P	**P**	**00 57 02.5**	**+0.2**
AYAN				*e*x	x	00 58 14.7	
KUDL	**Kundal**	**6.76**	**159**	*e*P	**P**	**00 57 04.2**	**+0.6**
KUDL				*e*x	x	00 58 17.1	
SONA	**Sohna**	**6.86**	**154**	*e*P	**P**	**00 57 05.9**	**+0.9**
SONA				*e*x	x	00 58 21.7	
SONA				AML	AML	00 59 10.5	
	comp=E,177nm,0.5s						
SONA				AML	AML	00 59 18.6	
	comp=N,101nm,0.4s						
PTH	**Pithoragarh**	**7.41**	**130**	*e*P	**P**	**00 57 09.1**	**-3.5**
PTH				*e*x	x	00 58 34.2	
AML	**Almayashu**	**7.63**	**360**	P	**P**	**00 57 16.6**	**+0.9**
	SNR=30						
UCH	**Uchtor**	**7.75**	**4**	P	**P**	**00 57 18.8**	**+1.4**
	SNR=27						
JASL	**Jaisalmer**	**7.92**	**198**	*e*P	**P**	**00 57 20.1**	**+0.4**
JASL				*e*x	x	00 58 56.5	
AJM	**Ajmer**	**8.03**	**174**	*e*P	**P**	**00 57 21.5**	**+0.3**
AJM				AML	AML	00 59 41.9	
	comp=E,177nm,0.0s						
AJM				AML	AML	00 59 58.0	
	comp=N,110nm,0.7s						
AGRA	**Agra**	**8.10**	**152**	*e*x	x	00 57 24.5	
AGRA				*e*x	x	00 58 51.8	
AAK	**Ala-Archa**	**8.15**	**4**	P	**P**	**00 57 23.9**	**+0.9**
	SNR=6.2						
AAK	**Ala-Archa**	**8.15**	**4**	⇑Pn	**P**	**00 57 23.5**	**+0.5**
	comp=N,6.4nm,0.8s						
AAK				⇑Sn	**Sn**	**00 58 56.0**	**+0.8**
	comp=N,19nm,1.1s						
AAK	**Ala-Archa**	**8.15**	**4**	⇑Pn	**P**	**00 57 23.5**	**+0.5**
	comp=N,6.4nm,0.8s						
AAK				Sn	**Sn**	**00 58 56.0**	**+0.8**
AAK	**Ala-Archa**	**8.15**	**4**	P	**P**	**00 57 23.7**	**+0.7**
AAK				S	**S**	**00 58 56.1**	**+1.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AAK				smax			
	comp=Z,26nm,1.4s						
EKS2	**Erkin-Say**	**8.16**	**0**	P	**P**	**00 57 24.0**	**+0.9**
	SNR=18						
KBK	**Karagaybulak**	**8.21**	**6**	P	**P**	**00 57 25.1**	**+1.3**
	SNR=6.4						
FRU	**Bishkek**	**8.36**	**5**	*e*P	**P**	**00 57 28.0**	**+2.1**
FRU				*e*		00 58 55.0	
FRU				pmax	pmax		
	comp=Z,70nm,2.2s						
FRU				pmax	pmax		
	comp=E,200nm,2.0s						
CHMS	**Chumysh**	**8.53**	**5**	P	**P**	**00 57 29.2**	**+0.9**
	SNR=11						
TKM2	**Tokmak 2**	**8.54**	**9**	P	**P**	**00 57 28.7**	**+0.2**
	SNR=9.3						
USP	**Ospenovka**	**8.78**	**4**	P	**P**	**00 57 32.8**	**+1.0**
	SNR=6.2						
KK31	**Karatay Array**	**8.95**	**345**	⇑Pn	**P**	**00 57 33.1**	**-1.0**
	comp=E,6.6nm,0.3s,baz=156,slow=11,SNR=191						
KK31				⇓Sn	**Sn**	**00 59 08.2**	**-6.8**
	comp=E,8.4nm,0.6s,baz=171,slow=23,SNR=6.8						
KK31	**Karatay Array**	**8.95**	**345**	⇑Pn	**P**	**00 57 33.1**	**-1.0**
	comp=E,6.6nm,0.3s						
KK31				Sn	**Sn**	**00 59 08.2**	**-6.8**
KK31	**Karatay Array**	**8.95**	**345**	⇑P	**P**	**00 57 33.1**	**-1.0**
KK31						00 59 08.2	
KK31				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KKAR	**Karatay Array**	**8.95**	**345**	*e*P	**P**	**00 57 33.2**	**-0.9**
KKAR				S	**S**	**00 59 08.8**	**-6.0**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KKAR				smax			
	comp=Z,1.0nm,0.3s						
KOLN	**Koldanda**	**10.80**	**126**	*e*Pn	**P**	**00 57 57.5**	**-2.1**
KOLN				*e*Sn	**S**	**00 59 55.4**	**-5.0**
	comp=Z,87nm,0.6s						
GKN	**Gorkha**	**11.37**	**122**	*e*Pn	**P**	**00 58 04.9**	**-2.4**
GKN				*e*Sn	**S**	**01 00 06.8**	**-7.4**
	comp=Z,131nm,0.4s						
ALBI	**Allahabad**	**11.54**	**140**	*e*P	**P**	**00 58 06.0**	**-3.6**
BHPL	**Bhopal**	**11.67**	**163**	*e*P	**P**	**00 58 09.1**	**-2.3**
BHPL				*e*x	x	01 00 13.8	
BHJ	**Bhuj**	**11.74**	**199**	*e*P	**P**	**00 58 11.6**	**-0.7**
BHJ				*e*x	x	01 00 17.0	
DMN	**Daman**	**11.94**	**122**	*e*Pn	**P**	**00 58 12.6**	**-2.4**
DMN				*e*Sn	**S**	**01 00 20.5**	**-7.5**
	comp=Z,94nm,0.6s						
KKN	**Kakani**	**11.95**	**121**	*e*Pn	**P**	**00 58 12.0**	**-3.2**
KKN				*e*Sn	**S**	**01 00 19.9**	**-8.5**
	comp=Z,110nm,0.7s						
PKI	**Pulchoki**	**12.18**	**121**	*e*Pn	**P**	**00 58 15.2**	**-3.0**
PKI				*e*Sn	**S**	**01 00 25.8**	**-7.9**
	comp=Z,133nm,0.7s						
GUN	**Gumba**	**12.31**	**119**	*e*Pn	**P**	**00 58 17.5**	**-2.5**
GUN				*e*Sn	**S**	**01 00 28.9**	**-8.1**
	comp=Z,72nm,0.6s						
JIRN	**Jiri**	**12.68**	**119**	*e*Pn	**P**	**00 58 22.2**	**-2.7**
JIRN				*e*Sn	**S**	**01 00 37.1**	**-8.8**
	comp=Z,128nm,0.6s						
MK02	**Makanchi Array**	**13.88**	**25**	⇑P	**P**	**00 58 46.2**	**+5.5**
MK02				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MK31	**Makanchi Array**	**13.90**	**25**	⇑P	**P**	**00 58 46.2**	**+5.4**
	comp=Z,5.2nm,0.9s,baz=204,slow=11,SNR=12						
MKAR	**Makanchi Array**	**13.90**	**25**	Pn	**P**	**00 58 40.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=216,slow=16,SNR=6.2						
MKAR	**Makanchi Array**	**13.90**	**25**	Pn	**P**	**00 58 40.4**	**-0.4**
WMQ	**Urumqi**	**14.29**	**45**	⇑P	**P**	**00 58 44.8**	**-1.2**
WMQ				AP		00 58 48.0	
WMQ				XP		00 58 51.8	
WMQ				PP	PP	00 58 56.2	-0.9
WMQ				PPP	PPP	00 59 03.1	-1.0
WMQ				*e*S	**S**	**01 01 25.1**	**+0.9**
WMQ				XS		01 01 29.8	
WMQ				AMB	AMB		
	comp=Z,120nm,4.4s						
WMQ				LR	LR		
	comp=N,180nm,16.5s						
WMQ				LR	LR		
	comp=E,130nm,19.7s						
WMQ				LR	LR		
	comp=Z,240nm,18.1s						
LSA	**Lhasa**	**15.54**	**103**	P	**P**	**00 59 04.8**	**+2.4**
LSA	**Lhasa**	**15.54**	**103**	*e*P	**P**	**00 59 06.1**	**+3.7**
POO	**Poona**	**15.90**	**179**	*e*x	x	00 59 12.0	
POO				*e*x	x	01 02 31.0	
KURK	**Kurchatov**	**16.61**	**11**	⇑P	**P**	**00 59 14.9**	**-0.9**
	comp=Z,12nm,1.5s						
KAD	**Karad**	**17.12**	**178**	*e*P	**P**	**00 59 24.1**	**+1.6**
KAD				*e*x	x	01 02 25.5	
HYB	**Hyderabad**	**17.55**	**164**	*i* P	**P**	**00 59 31.0**	**+3.1**
HYB				*e*S	**S**	**01 02 45.0**	**+4.9**
HYB	**Hyderabad**	**17.55**	**164**	*e*P	**P**	**00 59 31.0**	**+3.1**
HYB				*e*S	**S**	**01 02 46.0**	**+5.9**
AB31	**Akbulak array**	**17.92**	**330**	P	**P**	**00 59 31.1**	**-1.1**
	comp=Z,5.8nm,0.9s,baz=144,slow=12,SNR=23						
AB31				⇑S	**S**	**01 02 39.5**	**-8.6**
	comp=Z,1.8nm,0.8s,baz=141,slow=21,SNR=4.0						
AB31	**Akbulak array**	**17.92**	**330**	P	**P**	**00 59 31.1**	**-1.1**
	comp=Z,5.8nm,0.9s						
AB31				S	**S**	**01 02 39.5**	**-8.6**
AB31	**Akbulak array**	**17.92**	**330**	P	**P**	**00 59 31.1**	**-1.1**
AB31				S	**S**	**01 02 39.5**	**-8.7**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SHL	**Shillong**	**18.06**	**115**	*e*x	x	00 59 29.5	
SHL				*e*x	x	01 02 40.0	
VOSK	**Vostochnaya**	**18.33**	**355**	⇑P	**P**	**00 59 36.8**	**-0.6**
	comp=Z,4.8nm,0.8s						
VOSK	**Vostochnaya**	**18.33**	**355**	⇑P	**P**	**00 59 36.8**	**-0.6**
	comp=Z,4.8nm,0.8s						
VOSK	**Vostochnaya**	**18.33**	**355**	P	**P**	**00 59 36.1**	**-1.3**
VOSK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BVA0	**Borovoye Array**	**18.68**	**354**	P	**P**	**00 59 40.3**	**-1.4**
	comp=Z,3.1nm,0.9s,baz=156,slow=10.0,SNR=96						
BVA0	**Borovoye Array**	**18.68**	**354**	*i* P	**P**	**00 59 40.2**	**-1.5**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVAR	**Borovoye Array**	**18.68**	**354**	P	**P**	**00 59 40.2**	**-1.5**
	comp=Z,3.3nm,0.3s,baz=160,slow=8.8,SNR=98						
BVAR	**Borovoye Array**	**18.68**	**354**	P	**P**	**00 59 40.2**	**-1.5**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BRVK	**Borovoye**	**18.72**	**354**	*e*P	**P**	**00 59 41.4**	**-0.8**
	comp=Z,14nm,0.8s						
BRVK	**Borovoye**	**18.72**	**354**	*e*P	**P**	**00 59 41.4**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,14nm,0.8s						
CHKZ	**Chkalovo**	**19.30**	**354**	⇑P	**P**	**00 59 47.2**	**-1.7**
	comp=Z,7.7nm,1.2s						
AKTO	**Aktyubinsk**	**19.62**	**329**	P	**P**	**00 59 51.5**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=137,slow=9.0,SNR=33						
AKTO	**Aktyubinsk**	**19.62**	**329**	P	**P**	**00 59 51.6**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	**20.95**	**19**	P	**P**	**01 00 04.9**	**-1.6**
	comp=Z,4.5nm,0.5s,baz=265,slow=8.2,SNR=17						
ZAL				LR	LR	01 09 35.4	
	comp=Z,97nm,21.0s,MS3.2,baz=75,slow=41						
ZAL	**Zalesovo**	**20.95**	**19**	P	**P**	**01 00 04.9**	**-1.6**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ZAL				MLR	MLR		
	comp=Z,97nm,21.0s						
GTA	**Gaotai**	**21.41**	**69**	P	**P**	**01 00 11.2**	**+0.1**
GTA				AP		01 00 15.9	
GTA				XP		01 00 18.5	
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
NVS	**Novosibirsk**	**21.41**	**15**	*i* P	**P**	**01 00 07.7**	**-3.3**
GNI	**Garni**	**23.65**	**292**	*e*P	**P**	**01 00 32.8**	**-0.4**
	comp=Z,5.0nm,0.8s,mb4.0						
GNI	**Garni**	**23.65**	**292**	*e*P	**P**	**01 00 32.8**	**-0.5**
GNI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	**Arti**	**24.27**	**339**	*e*P	**P**	**01 00 39.4**	**+0.3**
	comp=Z,15nm,1.0s,mb4.4						
ARU	**Arti**	**24.27**	**339**	⇑*i*P	**P**	**01 00 40.0**	**+1.0**
ARU				*e*PPP	PPP	01 01 14.0	-11
ARU				*e*S	**S**	**01 04 51.5**	**-1.3**
ARU				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.4						
LZH	**Lanzhou**	**24.61**	**78**	*e*P	**P**	**01 00 44.2**	**+1.6**
LZH				AP		01 00 47.5	
LZH				XP		01 00 48.8	
LZH				*e*PP	PP	01 01 20.3	+1.2
LZH				*e*S	**S**	**01 05 03.4**	**+4.5**
LZH				XS		01 05 08.5	
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,50nm,4.5s						
LZH				LR	LR		
	comp=N,370nm,10.1s						
LZH				LR	LR		
	comp=Z,790nm,13.2s,MS4.4						
CD2	**Chengdu**	**25.50**	**90**	*e*P	**P**	**01 00 53.5**	**+2.4**
KIV	**Kislovodsk**	**25.69**	**301**	*e*P	**P**	**01 01 08.1**	**+15**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.0						
ZAK	**Zakamensk**	**26.76**	**45**	*e*P	**P**	**01 01 02.5**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.6						
SONM	**Songino Array**	**27.76**	**51**	P	**P**	**01 01 12.3**	**+0.5**
	comp=Z,3.6nm,0.8s,mb4.0,baz=256,slow=9.6,SNR=26						
HHC	**Hu-ho-hao-te**	**30.46**	**67**	*e*P	**P**	**01 01 38.0**	**+2.1**
HHC				AP	pP	01 01 42.2	-3.3
HHC				XP	sP	01 01 44.6	-5.3
HHC				PP	PP	01 02 38.1	+2.0
HHC				PCP	PcP	01 04 36.0	+1.1
HHC				S	**S**	**01 06 42.6**	**+9.0**
HHC				XS		01 06 45.3	
HHC				SCP		01 08 16.5	
HHC				PCS		01 08 18.4	
HHC				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.9						
HHC				AMB	AMB		
	comp=Z,80nm,6.9s						
HHC				LR	LR		
	comp=N,140nm,7.8s						
HHC				LR	LR		
	comp=E,100nm,6.9s						
HHC				LR	LR		
	comp=Z,110nm,4.9s						
BR131	**Keskin Array S**	**32.18**	**291**	*e*P	**P**	**01 01 51.9**	**+0.7**
	comp=Z,1.3nm,0.8s,mb3.8						
BRTR	**Keskin Array B**	**32.18**	**291**	P	**P**	**01 01 52.9**	**+1.7**
	comp=Z,0.7nm,0.7s,mb3.6,baz=93,slow=8.6,SNR=6.4						
AKASG	**Malin Array Be**	**35.92**	**311**	P	**P**	**01 02 23.3**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=77,slow=7.3,SNR=5.3						
AKASG	**Malin Array Be**	**35.92**	**311**	P	**P**	**01 02 23.3**	**+0.1**
AKASG	**Malin Array Be**	**35.92**	**311**	P	**P**	**01 02 23.3**	**+0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
JOF	**Joensuu**	**38.70**	**330**	*e*p	**P**	**01 02 46.2**	**-0.1**
	comp=Z,1.3nm,0.3s,mb4.1						
JOF	**Joensuu**	**38.70**	**330**	*e*P	**P**	**01 02 46.2**	**-0.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
SSE	**Sheshan**	**39.78**	**81**	*e*P	**P**	**01 02 56.2**	**+0.6**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,30nm,3.8s						
FINES	**FINESS Array B**	**40.37**	**327**	P	**P**	**01 03 00.1**	**0.0**
	comp=Z,2.5nm,1.0s,mb3.9,baz=117,slow=10,SNR=8.6						
FINES	**FINESS Array B**	**40.37**	**327**	P	**P**	**01 03 00.2**	**0.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KAF	**Kangasniemi**	**40.50**	**328**	*e*p	**P**	**01 03 00.9**	**-0.3**
	comp=Z,14nm,1.5s,mb4.4						
KAF	**Kangasniemi**	**40.50**	**328**	*e*P	**P**	**01 03 00.9**	**-0.3**
KAF				pmax	pmax		
	comp=Z,14nm,1.5s,mb4.4						
CN2	**Changchun**	**40.62**	**61**	*e*P	**P**	**01 03 04.8**	**+2.4**
ARCES	**ARCESS Array B**	**43.84**	**338**	P	**P**	**01 03 28.6**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.0,baz=111,slow=7.9,SNR=20						
ARCES				LR	LR	01 22 13.2	
	comp=Z,55nm,18.7s,MS3.5,baz=164,slow=37						
ARCES	**ARCESS Array B**	**43.84**	**338**	P	**P**	**01 03 28.7**	**+0.3**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES				MLR	MLR		
	comp=Z,55nm,18.7s						
GERES	**GERESS Array B**	**45.89**	**307**	P	**P**	**01 03 45.6**	**+0.5**
	comp=Z,0.2nm,0.4s,mb3.4,baz=135,slow=7.5,SNR=4.5						
HFS	**Hagfors**	**46.00**	**323**	P	**P**	**01 03 45.2**	**-0.6**
	comp=Z,3.1nm,0.6s,mb4.4,baz=98,slow=10,SNR=8.0						
HFS	**Hagfors**	**46.00**	**323**	P	**P**	**01 03 45.2**	**-0.6**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TIXI	**Tiksi**	**46.83**	**21**	⇑*i*P	**P**	**01 03 50.6**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,71nm,14.0s,MS3.8						
NB2	**NORSAR Subarra**	**47.30**	**324**	P	**P**	**01 03 54.9**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**47.30**	**324**	P	**P**	**01 03 55.3**	**-0.7**
	comp=Z,4.1nm,1.0s,mb4.3,baz=96,slow=7.7,SNR=6.5						
NOA				LR	LR	01 27 40.7	
	comp=Z,60nm,18.5s,MS3.6,baz=245,slow=41						
NOA	**NORSAR Array B**	**47.30**	**324**	P	**P**	**01 03 55.3**	**-0.7**
NOA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NOA				MLR	MLR		
	comp=Z,60nm,18.5s						
NAO	**NORSAR Subarra**	**47.47**	**324**	P	**P**	**01 03 54.9**	**-2.5**
	comp=Z,1.3nm,0.7s,mb4.0						
MJAR	**Matsushiro Arr**	**51.65**	**68**	P	**P**	**01 04 29.6**	**-0.1**
	comp=Z,0.5nm,0.3s,mb4.0,baz=284,slow=10,SNR=4.1						
MJAR	**Matsushiro Arr**	**51.65**	**68**	P	**P**	**01 04 29.6**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
INK	**Inuvik**	**75.51**	**10**	*e*P	**P**	**01 07 06.1**	**-0.1**
	comp=Z,7.5nm,1.0s,mb4.6						
INK	**Inuvik**	**75.51**	**10**	*e*P	**P**	**01 07 06.1**	**-0.1**
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
COLA	**College**	**75.77**	**17**	*e*P	**P**	**01 07 07.8**	**0.0**
	comp=Z,8.0nm,0.9s,mb4.7						
COLA	**College**	**75.77**	**17**	*e*P	**P**	**01 07 07.8**	**+0.1**
COLA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
ILAR	**Eielson Array**	**76.08**	**17**	P	**P**	**01 07 09.3**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.3,baz=313,slow=4.6,SNR=34						
ILAR	**Eielson Array**	**76.08**	**17**	P	**P**	**01 07 09.4**	**-0.1**
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DBIC	**Dimbokro**	**76.83**	**269**	LR	LR	01 44 11.2	
	comp=Z,60nm,18.0s,MS4.0,baz=342,slow=38						
WRA	**Warramunga Arr**	**79.05**	**123**	P	**P**	**01 07 27.6**	**+0.7**
	comp=Z,3.6nm,0.6s,mb4.5,baz=324,slow=5.4,SNR=22						
WRA	**Warramunga Arr**	**79.05**	**123**	P	**P**	**01 07 27.6**	**+0.6**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRAB	**Tennant Creek**	**79.06**	**123**	*e*P	**P**	**01 07 27.1**	**+0.1**
	comp=Z,6.8nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	**79.06**	**123**	*e*P	**P**	**01 07 27.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
YKA	**Yellowknife Ar**	**83.12**	**4**	P	**P**	**01 07 48.0**	**+0.6**
	comp=Z,1.2nm,0.6s,mb4.1,baz=344,slow=5.4,SNR=6.9						
YKA	**Yellowknife Ar**	**83.12**	**4**	P	**P**	**01 07 48.0**	**+0.6**
YKA	**Yellowknife Ar**	**83.12**	**4**	P	**P**	**01 07 48.0**	**+0.6**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

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*ISK **03** 00:59:32.0, 38.18N×26.62E, h3^{km}, MD3.1*

*ATH **03** 00:59:32.6, 38.18N×26.56E, h30^{km}±6^{km}, MD2.9/3*

*CSEM **03** 00:59:33.5±0.2, 38.20N×26.70E, h15^{km}, MD3.1, Error ellipse: s-maj=6.0km s-min=3.8km az=114.0*

ISC 03 00:59:32.7±1.6**, 38.17N**±0.05×**26.6E**±0.1**, h13**^{km}±11^{km}**, n11,** σ**0**^{s}**98**/14**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.40**	**57**	*i* PG	**Pg**	**00 59 40.3**	**-0.8**
SMG	**Samos**	**0.49**	**159**	*e*PN	**Pn**	**00 59 43.5**	**-1.5**
SMG				*e*SN	**Sn**	**00 59 51.7**	**-1.5**
IZM	**Izmir**	**0.56**	**65**	*i* PG	**Pg**	**00 59 43.5**	**-0.7**
IZM				*i* SG	**Sg**	**00 59 52.2**	**+0.4**
PRK	**Paraskevi**	**1.11**	**346**	*e*PN	**Pn**	**00 59 53.3**	**-0.6**
PRK				*e*SN	**Sn**	**01 00 08.4**	**-0.7**
AKS	**Akhisar**	**1.18**	**52**	PN	**Pn**	**00 59 55.2**	**+0.3**
BODT	**Bodrum**	**1.23**	**153**	*e*PN	**Pn**	**00 59 56.6**	**+1.0**
MLSB	**Milas**	**1.27**	**133**	*e*PN	**Pn**	**00 59 57.1**	**+1.0**
APE	**Apeiranthos**	**1.39**	**218**	*e*PN	**Pn**	**00 59 59.1**	**+1.2**
APE	**Apeiranthos**	**1.39**	**218**	*e*PN	**Pn**	**00 59 57.9**	**0.0**
EZN	**Ezine**	**1.67**	**352**	*e*PN	**Pn**	**01 00 03.2**	**+1.3**
YER	**Yerkesik**	**1.68**	**127**	*e*PN	**Pn**	**01 00 03.3**	**+1.3**

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*ISK **03** 01:05:28.0, 38.11N×26.67E, h13^{km}, MD3.4*

*ATH **03** 01:05:28.0, 38.13N×26.90E, h42^{km}±8^{km}, MD3.3/3*

*CSEM **03** 01:05:28.4±0.1, 38.12N×26.70E, h14^{km}, MD3.4, Error ellipse: s-maj=2.5km s-min=1.4km az=97.0*

ISC 03 01:05:27.8±0.7**, 38.14N**±0.02×**26.60E**±0.03**, h2**^{km}±5^{km}**, n31,** σ**1**^{s}**13**/48**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.22**	**359**	*i* P	**Pg**	**01 05 31.9**	**-0.3**
URLA				*i* S	**Sg**	**01 05 35.4**	**+0.3**
BLCB	**Balcova**	**0.42**	**55**	*i* PG	**Pg**	**01 05 36.3**	**0.0**
SMG	**Samos**	**0.47**	**157**	*e*P	**Pg**	**01 05 38.5**	**+1.2**
SMG				*e*S	**Sg**	**01 05 45.9**	**+2.3**
IZM	**Izmir**	**0.58**	**64**	*i* PG	**Pg**	**01 05 39.3**	**-0.1**
IZM				*i* SG	**Sg**	**01 05 47.3**	**+0.2**
KDAG	**Bornova**	**0.58**	**63**	*i* P	**Pg**	**01 05 38.5**	**-1.0**

KDAG				*i*S	Sg	01 05 46.5	-0.8
AYDN	Tasoluk	1.12	115	*i*P	Pb	01 05 50.1	+0.5
AYDN				*i*S	Sb	01 06 05.2	+0.8
PRK	Paraskevi	1.13	347	*e*P	Pb	01 05 49.7	0.0
PRK				*e*S	Sb	01 06 06.0	+1.3
AYVA	Ayvalik	1.17	3	*i*P	Pb	01 05 50.1	-0.2
AYVA				*i*S	Sb	01 06 08.2	+2.5
AKS	Akhisar	1.20	52	PN	Pn	01 05 50.3	-1.3
BODT	Bodrum	1.22	152	PN	Pn	01 05 50.5	-1.3
BODT				SN	Sn	01 06 07.0	-2.0
MLSB	Milas	1.26	132	PN	Pn	01 05 51.2	-1.2
BDRM	Kayabasi	1.27	148	*i*P	Pb	01 05 53.4	+1.3
BDRM				*i*S	Sb	01 06 10.6	+1.9
APE	Apeiranthos	1.37	219	PN	Pn	01 05 53.7	-0.3
APE				SN	Sn	01 06 12.0	-0.9
APE	Apeiranthos	1.37	219	*e*P	Pb	01 05 53.3	-0.5
APE				*e*S	Sb	01 06 13.5	+1.8
MANT	Manisa	1.58	77	*i*P	Pn	01 05 59.0	+2.1
MANT				*i*S	Sb	01 06 17.6	-0.1
DAT	Datca	1.61	151	PN	Pn	01 05 56.4	-1.0
YER	Yerkesik	1.67	127	PN	Pn	01 05 57.2	-1.1
EZN	Ezine	1.69	353	*e*PN	Pn	01 05 58.6	0.0
BALB	Balikesir	1.80	33	*e*PN	Pn	01 05 59.2	-0.9
DENT	Denizli	1.96	101	*e*PN	Pn	01 06 01.4	-1.0
BTOK	Tokmak	1.96	34	*i*P	Pn	01 06 02.3	-0.1
BTOK				*i*S	Sg	01 06 32.7	-0.5
DNZL	Cakiroluk	1.99	102	*i*P	Pn	01 06 02.2	-0.6
DNZL				*i*S	Sg	01 06 32.8	-1.2
DST	Dursunbey	2.15	47	*e*PN	Pn	01 06 04.5	-0.7
LPK	Lapseki	2.23	3	*e*PN	Pn	01 06 06.5	+0.2
KHL	Karahalli	2.31	85	*e*PN	Pn	01 06 06.3	-1.1
EDC	Edincik	2.41	24	*e*PN	Pn	01 06 08.5	-0.3
BNT	Bandirma	2.44	24	*e*PN	Pn	01 06 09.0	-0.2
GDZ	Gediz	2.44	66	*i*P	Pb	01 06 13.9	+1.7
GDZ				*i*S	Sb	01 06 45.1	+2.3
ORLT	Orhaneli	2.61	43	*e*PN	Pn	01 06 11.2	-0.5
ULDT	Uludag	2.81	44	*i*P	Pb	01 06 19.4	+1.0
ULDT				*i*S	Sb	01 06 57.4	+4.1
TKTP	Tekketepe	2.94	91	*i*P	Pg	01 06 24.2	-2.3
TKTP				*i*S	Sg	01 07 07.5	+1.9

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*JMA **03** 01:12:17.3±0.2,36.31N×141.85E,h72^{km}±5^{km},M3.4*
*IDC **03** 01:12:20.6±8.5,36.13N×141.82E,h49^{km}±52^{km},mb3.6/3,mb1 3.8/5,mb1mx3.4/22,mbtmp3.9/5,ML3.6/2,MS3.1/2,Ms1 3.1/2,ms1mx2.6/27,Error ellipse: s-maj=106.4km s-min=26.0km az=88.0*
ISC 03 01:12:16.1±2.3,**36.25N**±0.05×**142.1E**±0.1,**h32**^{km}±21^{km},**n21,σ0^{s}69**/22,**mb3.6**/3,**MS3.6**/1,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	1.11	241	P	Pn	01 12 36.2	+0.5
CHOJ				S	Sn	01 12 50.3	+0.3
JHO	Hitachi	1.25	287	P	Pn	01 12 36.6	-1.0
ONAJ	Iwakimizuishiy	1.32	310	P	Pn	01 12 37.8	-0.8
JFK	Kawauchi	1.46	320	P	Pn	01 12 40.3	-0.3
BSO1	Boso 1	1.82	209	P	Pn	01 12 46.7	+0.9
JFT	Otama	1.87	313	P	Pn	01 12 46.8	+0.3
JMM	Marumori	1.90	328	P	Pn	01 12 47.0	+0.1
BSO3	Boso 3	1.92	221	P	Pn	01 12 48.1	+0.9
JAG	Ashikaga	2.11	275	P	Pn	01 12 49.4	-0.5
JFY	Yanaizu	2.21	302	P	Pn	01 12 51.8	+0.4
JRY	Ryogami san	2.56	266	P	Pn	01 12 55.7	-0.7
JOD2	Odawara 2	2.61	249	P	Pn	01 12 57.3	+0.3
JIM2	Oshima 3	2.63	235	P	Pn	01 12 56.9	-0.5
MJAR	Matsushiro Arr	3.12	276	P	Pn	01 13 04.2	0.0
	7.2nm,0.3s,baz=106,slow=9.0,SNR=30						
MAT	Matsushiro	3.12	276	P	Pn	01 13 04.8	+0.5
MAT				*e*S	Sn	01 13 41.4	+0.6
JHJ	Hachijo jima 2	3.64	212	P	Pn	01 13 11.7	-0.1
	19nm,0.3s,baz=80,slow=20,SNR=9.5						
JHJ				S	Sn	01 13 51.3	-2.8
	59nm,0.3s,baz=71,slow=23,SNR=13						
ASAJ	Asahikawa	7.87	3	LR	LR	01 17 53.8	
	comp=Z,40nm,19.0s,baz=166,slow=42						
SONM	Songino Array	28.65	305	P	P	01 18 12.4	+0.6
	1.1nm,0.7s,mb3.7,baz=100,slow=8.0,SNR=8.0						
ZAL	Zalesovo	42.83	313	P	P	01 20 11.9	-0.6
	0.5nm,0.4s,mb3.6,baz=125,slow=6.2,SNR=3.1						
MKAR	Makanchi Array	44.97	303	P	P	01 20 30.2	+0.3
	0.8nm,0.7s,mb3.6,baz=87,slow=9.5,SNR=7.4						
STKA	Stephens Creek	67.77	180	LR	LR	01 53 10.0	
	comp=Z,35nm,18.3s,MS3.6,baz=348,slow=36						

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*STR **03** 01:17:52.4±0.0,48.29N×7.42E,h5^{km}±1^{km},Ml1.6,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **03** 01:17:52.3,48.29N×7.43E,h5^{km},ML2.5(LDG),After LDG.*
LDG 03 01:17:52.3±0.1,**48.29N×7.43E,h5**^{km},**Md2.3**/3,**Ml2.5**/9,**Error ellipse: s-maj=2.5km s-min=1.3km az=118.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	Welschbruch	0.14	337	Pg	Pg	01 17 55.5	+0.3
WLS				Sg	Sg	01 17 57.9	+0.7
CDF	Champ du Feu	0.17	320	*e*Pg	Pg	01 17 56.0	+0.3
CDF				*e*Sg	Sg	01 17 58.7	+0.7
	7.3nm,0.2s						
ECH	Echery	0.20	250	Pg	Pg	01 17 56.5	+0.2
ECH				Sg	Sg	01 17 59.6	+0.6
MOF	Molkenrain	0.48	205	Pg	Pg	01 18 01.6	-0.3
HINF	Hinteralfeld	0.61	220	*e*Pg	Pg	01 18 04.0	-0.5
	3.7nm,0.2s						
HINF				*e*Pn	Pn	01 18 05.7	-1.6
HINF				*e*Sg	Sg	01 18 12.0	-0.6
HAU	Haudompre	0.78	249	*e*Pg	Pg	01 18 06.5	-1.4
HAU				*e*Pn	Pn	01 18 08.2	-1.5
HAU				*e*Sg	Sg	01 18 17.5	-0.8
	5.6nm,0.3s						
RFYF	Reffroy	1.35	286	*e*Pg	Pg	01 18 17.7	-1.6
RFYF				*e*Sg	Sg	01 18 35.0	-2.2
	7.7nm,0.2s						
SFTF	Sexfontaines	1.60	268	*e*Pn	Pn	01 18 19.8	-1.7
SFTF				*e*Sg	Sg	01 18 43.4	-2.3
	2.5nm,0.1s						
GIVF	Givet	2.50	318	*e*Pn	Pn	01 18 32.6	-1.7
GIVF				*e*Pg	Pg	01 18 38.2	-4.0
GIVF				*e*Sg	Sg	01 19 10.4	-5.1
	1.9nm,0.2s						
LOR	Lormes	2.62	248	*e*Pn	Pn	01 18 33.3	-2.7
LOR				*e*Pg	Pg	01 18 41.3	-3.2
LOR				*e*Sg	Sg	01 19 14.1	-5.3
	0.9nm,0.2s						
BAIF	Baives	2.76	311	*e*Pn	Pn	01 18 36.3	-1.8
BAIF				*e*Pg	Pg	01 18 42.9	-4.6
BAIF				*e*Sg	Sg	01 19 18.3	-6.0
	1.0nm,0.3s						
SSF	Saint Saulge	2.92	247	*e*Pn	Pn	01 18 36.8	-3.5
SSF				*e*Pg	Pg	01 18 47.1	-3.6
SSF				*e*Sg	Sg	01 19 23.0	-6.6
	0.3nm,0.2s						
SMF	Signal de Mont	2.94	237	*e*Pn	Pn	01 18 38.1	-2.4
SMF				*e*Pg	Pg	01 18 46.9	-4.1
SMF				*e*Sg	Sg	01 19 24.4	-5.7
	1.4nm,0.2s						

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*NIED **03** 01:36:00,42.50N×138.10E,h26^{km},Mw3.7 Best double couple: M$_0$4.5×10^{14} NP1:φ$_s$132°,δ86°,λ-26°. NP2:φ$_s$225°,δ64°,λ-175°.*
*JMA **03** 01:36:14.8±0.2,42.48N×138.11E,h31^{km}±4^{km},M4.2*
*IDC **03** 01:36:17.9±1.6,42.35N×137.73E,mb3.5/3,mb1 3.7/5,mb1mx3.5/23,mbtmp3.5/5,ML3.3/2,Error ellipse: s-maj=36.9km s-min=31.1km az=155.0*
ISC 03 01:36:15.3±1.3,**42.51N**±0.05×**138.22E**±0.07,**h20**^{km}±9^{km},**n17,σ1^{s}01**/28,**mb3.6**/3,**Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	Okushiri--Mats	1.02	114	P	Pb	01 36 34.2	0.0
JOSM				*e*S	Sb	01 36 47.9	+0.7
JSH	Shimam	1.35	84	P	Pn	01 36 39.0	-0.4
JSH				*e*S	Sb	01 36 56.4	-0.4
JYM2	Yakumo 2	1.64	103	P	Pn	01 36 44.5	+1.0
JYM2				*e*S	Sn	01 37 06.0	+1.8
JSK	Shakotan	1.86	62	P	Pn	01 36 45.7	-0.9
JSK				*e*S	Sn	01 37 08.3	-1.4
JSR	Shiriuchi	1.91	120	P	Pn	01 36 47.5	+0.2
JSR				*e*S	Sn	01 37 11.1	+0.1
JNB	Noboribetsu	2.08	90	P	Pn	01 36 49.9	0.0
JNB				*e*S	Sn	01 37 15.7	+0.2
JKB	Kayabe	2.18	106	P	Pn	01 36 51.7	+0.5
JKB				*e*S	Sn	01 37 19.8	+1.9
JIW	Iwasaki	2.34	144	P	Pn	01 36 51.6	-1.9
JIW				*e*S	Sn	01 37 19.3	-2.6
JOT	Ohata	2.39	117	P	Pn	01 36 54.0	-0.3
JOT				*e*S	Sn	01 37 23.2	-0.1
JTM	Tenmabayashi	2.74	128	P	Pn	01 36 59.3	0.0
JTM				S	Sn	01 37 31.6	-0.6
JHR	Hokuryu	2.84	63	P	Pn	01 37 01.2	+0.5
JHR				*e*S	Sn	01 37 35.4	+0.6
JYG	Yagishiri	3.02	50	*e*S	Sn	01 37 37.5	-1.6
ASAJ	Asahikawa	3.57	62	Pn	Pn	01 37 18.9	+7.8
	1.3nm,0.3s,baz=270,slow=21,SNR=6.0						
MJAR	Matsushiro Arr	5.96	180	Pn	Pn	01 37 44.7	-0.2
	0.9nm,0.3s,baz=351,slow=12,SNR=4.6						
SONM	Songino Array	22.96	294	P	P	01 41 21.0	+1.7
	0.3nm,0.3s,mb3.2,baz=82,slow=10,SNR=4.1						
INK	Inuvik	50.70	29	P	P	01 45 19.5	+4.4
	0.7nm,0.5s,mb3.9,baz=305,slow=5.8,SNR=5.9						
PDAR	Pinedale Array	75.55	45	P	P	01 48 08.6	+8.6
	0.6nm,0.7s,mb3.6,baz=315,slow=2.6,SNR=5.1						

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*THR **03** 01:41:18.8±0.7,34.48N×45.35E,h14^{km}±11^{km},ML3.4*
*CSEM **03** 01:41:21.3±0.4,34.26N×45.69E,h8^{km},ML3.6,Error ellipse: s-maj=9.6km s-min=4.4km az=127.0*
*KISR **03** 01:41:23.3±1.1,34.02N×45.09E,h33^{km},ML3.4*
*TEH **03** 01:41:25.8,34.50N×45.78E,h10^{km},Mn3.6*
*OMAN **03** 01:41:27.2,33.40N×45.26E,h20^{km},Error ellipse: s-maj=39.0km s-min=4.1km az=334.0*
ISC 03 01:41:22.6±1.6,**34.25N**±0.05×**45.8E**±0.1,**h13**^{km}±8^{km},**n29,σ1^{s}31**/33,**4C-4D,Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGHG	Ghaleghazi	0.65	83	Pg	Pg	01 41 37.8	+2.0
IDHR	Dehrash	0.67	47	Pg	Pg	01 41 34.1	-2.0
IVIS	Veys	0.92	72	Pg	Pg	01 41 41.6	+0.5
IKOM	Komasi	1.43	92	Pg	Pg	01 41 52.3	+1.0
BHD	Baghdad	1.53	231	*e*x	x	01 41 46.0	
BHD				*e*x	x	01 42 06.5	
SNGE	Sanandaj	1.53	56	*e*Pg	Pg	01 41 50.8	-2.5
SNGE				*e*Sg	Sg	01 42 14.7	+0.8
SNGE				AML	AML	01 42 18.5	
	comp=N,623nm,0.6s						
MSL	Mosul	3.00	313	*e*x	x	01 42 17.5	
MSL				*e*x	x	01 42 48.0	
ASAO	Ashtian	3.51	84	*e*Pn	Pn	01 42 20.6	+2.5
ASAO				*e*Sg	Sg	01 43 18.7	-1.0
ASAO				AML	AML	01 43 26.1	
	comp=N,30nm,0.8s						
IQOM	Qom	4.40	81	Pn	Pn	01 42 32.1	+1.4
THKV	Tehran--Karaj	4.49	67	*e*Pn	Pn	01 42 32.2	+0.2
MIB	Mutribah	4.62	163	*e*P	Pn	01 42 35.3	+1.4
MIB				*e*S	Sn	01 43 28.0	0.0
MIB				AML	AML	01 43 32.0	
	comp=Z,25nm,0.3s						
CHTH	Charan	4.68	68	*e*Pn	Pn	01 42 34.8	+0.1
UMR	Umm Al-Rimmam	4.96	160	*e*P	Pn	01 42 39.4	+0.8
UMR				*e*S	Sn	01 43 38.0	+1.5
UMR				AML	AML	01 43 39.5	
	comp=Z,38nm,0.3s						
IAFJ	Afjeh	5.12	70	Pn	Pn	01 42 42.1	+1.3
NAY	Al-Naaiem	5.14	166	*e*P	Pn	01 42 41.9	+0.8
NAY				*e*S	Sn	01 43 40.1	-0.8
NAY				AML	AML	01 43 42.3	
	comp=Z,11nm,0.4s						
IDMV	Damavand	5.30	74	Pn	Pn	01 42 43.5	+0.1
IDMV	Damavand	5.30	74	Lg		01 44 09.1	
RDF	Al-Radifah	5.51	164	*e*P	Pn	01 42 47.3	+0.9
RDF				*e*S	Sn	01 43 50.5	0.0
RDF				AML	AML	01 43 51.4	
	comp=Z,31nm,0.3s						
QRN	Al-Qurain	5.78	161	*e*P	Pn	01 42 51.0	+0.8
QRN				*e*S	Sn	01 43 57.0	-0.1
IFIR	Firoozkooh	5.88	74	Pn	Pn	01 42 51.2	-0.5
BANOM	Banah	12.31	130	⇓P	P	01 44 17.7	-2.8
	SNR=7.5						
ASHO	Ashiyiah	13.06	134	⇑P	P	01 44 28.5	-2.1
ARQ	Araqi	14.37	136	⇓P	P	01 44 45.7	-2.0
BSY	Bisya	15.21	136	⇑P	P	01 44 57.4	-1.5
	SNR=6.4						
BSYO	Bisya	15.25	136	P	P	01 44 57.4	-1.9
	SNR=6.4						
SMDO	Samad	15.48	133	⇑P	P	01 45 01.7	-0.6
	SNR=5.7						
WHFO	Wadi Hawf	17.76	154	⇑P	P	01 45 26.6	-4.6
	SNR=7.0						
ABTO	Aybut	18.12	156	⇓P	P	01 45 31.5	-4.2
RBK	Rabkut	18.30	154	⇓P	P	01 45 33.7	-4.3

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*MOS **03** 01:44:31.9±1.0,51.67N×16.07E,h10^{km},mb3.8/1,Error ellipse: s-maj=14.3km s-min=5.6km az=79.6*
*NEIC **03** 01:44:33.3±0.4,51.56N×16.10E,h5^{km},ML3.0(SZGRF),ML2.5(BRG),Error ellipse: s-maj=5.3km s-min=4.6km az=90.0*
*BGR **03** 01:44:34.9±0.7,51.51N×16.02E,h1^{km},ML3.0/7,Error ellipse: s-maj=13.3km s-min=5.6km az=173.0*
*IPEC **03** 01:44:34.5±0.2,51.49N×16.10E,h8^{km}±1^{km},ML2.3/2,Error ellipse: s-maj=1.5km s-min=0.7km az=42.0*
*CSEM **03** 01:44:34.5±0.2,51.48N×16.09E,h2^{km},ML3.2/2,Error ellipse: s-maj=3.1km s-min=1.5km az=28.0*
*PRU **03** 01:44:35.4,51.42N×16.03E*
*WAR **03** 01:44:35.1,51.48N×16.04E,h1^{km},ML2.8,Mining Induced*
*IDC **03** 01:44:35.3±0.7,51.47N×15.93E,mb1 3.5/6,mb1mx3.4/22,mbtmp3.4/6,ML3.2/6,Error ellipse: s-maj=14.0km s-min=7.4km az=106.0*
ISC 03 01:44:32.9±0.4,**51.41N**±0.02×**16.04E**±0.02,**n92,σ1^{s}28**/153,**10C-7D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.59	164	⇓*i*PG	Pg	01 44 47.1	+2.4
KSP				⇓*e*SG	Sg	01 44 55.1	+2.5
KSP	Ksiaz	0.59	164	*e*Pg	Pg	01 44 47.1	+2.4
KSP				*e*Sg	Sg	01 44 55.8	+3.2
KSP	Ksiaz	0.59	164	⇓*i*Pg	Pg	01 44 47.1	+2.4
KSP				*e*		01 44 47.9	
KSP				*e*Sg	Sg	01 44 54.7	+2.1
KSP				*e*		01 44 55.7	
KSP	Ksiaz	0.59	164	⇓*i*P	Pg	01 44 47.1	+2.4
KSP				*e*		01 44 55.7	
KSP	Ksiaz	0.59	164	⇓*i*Pg	Pg	01 44 47.1	+2.4
KSP				*e*Sg	Sg	01 44 55.4	+2.8
UPC	Upice	0.90	181	*e*PG	Pg	01 44 52.8	+1.8
DPC	Dobruska-Polom	1.08	170	*e*PG	Pg	01 44 55.6	+1.2
DPC				*e*SG	Sg	01 45 10.4	+1.6
	56nm,0.5s						
DPC	Dobruska-Polom	1.08	170	*e*P	Pg	01 44 55.6	+1.2
DPC				*e*		01 45 10.4	
DPC				smax			
	comp=N,56nm,0.5s						
DPC	Dobruska-Polom	1.08	170	*e*Pg	Pg	01 44 55.8	+1.4
DPC				*e*Sg	Sg	01 45 10.4	+1.6
PVCC	Panska Ves	1.28	227	*e*PG	Pg	01 44 59.3	+0.7
PVCC	Panska Ves	1.28	227	*e*Pn	Pn	01 44 59.7	+1.6
PVCC				*e*Sg	Sg	01 45 16.8	+1.1
BRG	Berggiesshubel	1.43	249	*e*Pg	Pg	01 45 01.7	+0.2
BRG				*e*Sg	Sg	01 45 21.5	+1.0
BRG	Berggiesshubel	1.43	249	Pn	Pn	01 45 00.6	+0.5
BRG				Pg	Pg	01 45 01.9	+0.4
BRG				Pg	Pg	01 45 03.8	+2.3
BRG				Sg	Sg	01 45 21.7	+1.2
BRG				Sg	Sg	01 45 23.4	+2.9
BRG	Berggiesshubel	1.43	249	P	Pb	01 45 00.6	+0.5
BRG						01 45 21.7	
BRG				pmax	pmax		
	comp=Z,52nm,0.3s						
BRG	Berggiesshubel	1.43	249	*e*Pn	Pn	01 45 01.3	+1.1
BRG	Berggiesshubel	1.43	249	Pg	Pg	01 45 01.9	+0.5
BRG				*e*Sg	Sg	01 45 20.4	-0.1
PRU	Pruhonice	1.71	214	*e*PN	Pn	01 45 05.3	+1.1
PRU				*e*PG	Pg	01 45 06.8	-0.3
PRU				*e*SG	Sg	01 45 29.5	-0.5
PRU	Pruhonice	1.71	214	*e*P	Pn	01 45 05.3	+1.1
PRU				*e*		01 45 29.5	
PRU	Pruhonice	1.71	214	*e*Pn	Pn	01 45 05.2	+1.0
PRU	Pruhonice	1.71	214	*e*Pg	Pg	01 45 06.8	-0.3
PRU				*e*S	Sg	01 45 29.5	-0.5
FBE	Freiberg	1.76	255	*e*Pg	Pg	01 45 06.8	-1.3
FBE				*e*Sg	Sg	01 45 31.6	+0.1
FBE	Freiberg	1.76	255	Pg	Pg	01 45 06.8	-1.3
FBE				Sg	Sg	01 45 31.6	0.0
RUE	Ruedersdorf	1.76	308	*e*Pn	Pn	01 45 03.4	-1.5
RUE				*e*Sn	Sn	01 45 30.1	+1.7
RUE	Ruedersdorf	1.76	308	*e*Pn	Pn	01 45 04.1	-0.9
RUE				*e*Sg	Sg	01 45 30.1	-1.6
MORC	Moravsky Berou	1.89	149	*e*Pn	Pn	01 45 07.6	+0.8
MORC				*e*Sn	Sn	01 45 33.5	+1.7
MORC	Moravsky Berou	1.89	149	*e*Pn	Pn	01 45 07.6	+0.8
MORC				*e*Sn	Sn	01 45 33.5	+1.7
MORC				*e*Sg	Sg	01 45 35.4	-0.6
	comp=Z,23nm,0.3s						
RAC	Raciborz	1.91	133	*e*P	Pn	01 45 11.0	+4.0
RAC				*e*S	Sn	01 45 37.0	+4.9
CLL	Collm	1.91	268	*i*PN	Pn	01 45 06.8	-0.2
	comp=Z,logA/T=1.2						
CLL				*e*PG	Pg	01 45 09.0	-2.0
CLL				*e*		01 45 11.0	
CLL				*e*SG	Sg	01 45 36.0	-0.5
CLL	Collm	1.91	268	*e*Pn	Pn	01 45 06.6	-0.4
CLL				*e*Sg	Sg	01 45 36.9	+0.4
CLL	Collm	1.91	268	*i*Pn	Pn	01 45 06.8	-0.2
CLL				*e*Pg	Pg	01 45 09.0	-2.0
CLL				*e*Sg	Sg	01 45 36.0	-0.5
CLL	Collm	1.91	268	*i*P	Pn	01 45 06.8	-0.2
CLL				*e*		01 45 36.0	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
CLL	Collm	1.91	268	*e*Pn	Pn	01 45 06.8	-0.2
CLL	Collm	1.91	268	*e*Pg	Pg	01 45 09.0	-2.0
CLL				*e*S	Sg	01 45 36.0	-0.5
CLL				Sg	Sg	01 45 36.9	+0.4
OKC	Ostrava-Krasne	2.07	139	*e*PG	Pg	01 45 13.4	-0.8
OKC				*e*SG	Sg	01 45 39.8	-2.0
VRAC	Vranov	2.13	170	Pn	Pn	01 45 12.5	+2.3
	comp=Z,2.5nm,0.3s,baz=328,slow=13,SNR=16						
VRAC				Lg		01 45 44.7	
	comp=Z,6.1nm,0.3s,baz=91,slow=20,SNR=14						
VRAC	Vranov	2.13	170	*e*Pn	Pn	01 45 11.8	+1.5
VRAC	Vranov	2.13	170	P	Pn	01 45 12.5	+2.2
	comp=Z,3.0nm,0.3s						
TREC	Trest	2.15	190	*e*PN	Pn	01 45 12.5	+2.0
TREC				*e*PG	Pg	01 45 15.4	-0.4
TREC				*e*SG	Sg	01 45 44.9	+0.5
TREC	Trest	2.15	190	*e*P	Pn	01 45 12.5	+2.0
TREC				*e*		01 45 44.9	
TREC	Trest	2.15	190	*e*Pg	Pg	01 45 15.4	-0.4
TREC				*e*Sg	Sg	01 45 44.8	+0.4
KRUC	Moravsky	2.36	174	*e*Pn	Pn	01 45 15.6	+2.1
KRUC	Moravsky	2.36	174	*e*Pg	Pg	01 45 19.0	-1.1
KRUC				*e*Sg	Sg	01 45 51.0	-0.6
	comp=Z,12nm,0.4s						
TANN	Tannenbergstha	2.48	248	*e*Pn	Pn	01 45 15.7	+0.5
TANN				*e*Sg	Sg	01 45 54.6	-0.7
WERD	Werda	2.55	249	*e*Pn	Pn	01 45 16.7	+0.4
WERD				*e*Sg	Sg	01 45 57.8	-0.2
NKC	Novy Kostel	2.57	244	*e*PN	Pn	01 45 17.4	+1.0
NKC				*e*PG	Pg	01 45 23.5	-0.7
NKC				*e*SG	Sg	01 45 58.1	-0.3
	comp=Z,41nm,0.3s						
NKC	Novy Kostel	2.57	244	*e*P	Pn	01 45 17.4	+1.0
NKC				*e*		01 45 58.1	
NKC				smax			
	comp=N,41nm,0.3s						
OJC	Ojcow	2.66	115	*e*PG	Pg	01 45 26.0	-0.1
OJC				*e*SG	Sg	01 46 01.0	-0.6
NEUB	Neuenburg	2.69	267	*e*Sg	Sg	01 46 01.8	-0.5
KHC	Kasperske Hory	2.77	216	*e*PN	Pn	01 45 20.3	+0.9
KHC				*e*PG	Pg	01 45 26.0	-2.4
KHC				*e*SG	Sg	01 46 04.1	-1.2
KHC	Kasperske Hory	2.77	216	*e*P	Pn	01 45 20.3	+0.9
KHC				*e*		01 46 04.1	
KHC	Kasperske Hory	2.77	216	*e*Pg	Pg	01 45 26.0	-2.4
KHC				*e*Sg	Sg	01 46 04.1	-1.2
MOX	Moxa	2.90	256	*i*P	Pn	01 45 21.7	+0.5
MOX				Pg	Pg	01 45 30.0	-0.8
MOX				Sg	Sg	01 46 09.0	-0.4
MOX	Moxa	2.90	256	*e*Pn	Pn	01 45 21.2	0.0
MOX				*e*Sg	Sg	01 46 08.7	-0.7
MOX	Moxa	2.90	256	*e*Pn	Pn	01 45 21.7	+0.5
MOX				*e*Pg	Pg	01 45 29.5	-1.3
MOX				*e*Sg	Sg	01 46 08.6	-0.8
MOX	Moxa	2.90	256	*e*Pg	Pg	01 45 29.5	-1.3
MOX				Sg	Sg	01 46 08.7	-0.7
ROTZ	Rotzenmuhle	2.95	238	*e*Pn	Pn	01 45 22.7	+0.8
GEC2	GERESS Array S	2.98	211	*e*Pn	Pn	01 45 24.1	+1.8
GEC2	GERESS Array S	2.98	211	*e*Pn	Pn	01 45 24.1	+1.8
GERES	GERESS Array B	2.98	211	Pn	Pn	01 45 24.3	+2.0
	comp=N,0.9nm,0.3s,baz=27,slow=12,SNR=29						
GERES				Pg	Pg	01 45 29.8	-2.5
	comp=N,4.2nm,0.3s,baz=31,slow=17,SNR=45						
GERES				Lg		01 46 10.1	
	comp=N,3.7nm,0.3s,baz=32,slow=28,SNR=9.5						
GERES	GERESS Array B	2.98	211	*e*Pn	Pn	01 45 24.2	+1.9
GERES	GERESS Array B	2.98	211	Pg	Pg	01 45 29.8	-2.6
SMOL	Smolenice	3.03	162	*e*P	Pn	01 45 34.2	+11
SMOL				*e*Sg	Sg	01 46 12.8	-1.2
WET	Wettzell	3.04	223	*e*Pn	Pn	01 45 24.0	+0.7
WET	Wettzell	3.04	223	*e*Pn	Pn	01 45 24.0	+0.7
WET	Wettzell	3.04	223	*e*Pn	Pn	01 45 23.8	+0.5
ZST	Bratislava	3.29	168	*e*SG	Sg	01 46 20.6	-1.9
NIE	Niedzica	3.38	124	*e*P	Pg	01 45 39.0	-1.4
NIE				*e*S	Sg	01 46 24.0	-1.5
VYHS	Vyhne	3.43	147	*e*PG	Pg	01 45 39.5	-1.9
GRA1	Grafenberg Arr	3.52	243	Sg	Sg	01 46 28.8	-1.4
GRF	Grafenberg Arr	3.52	243	*e*Sg	Sg	01 46 28.8	-1.4
MOA	Molln	3.75	199	⇑*i*Pn	Pn	01 45 34.3	+1.0
MOA	Molln	3.75	199	⇓*i*Sg	Sg	01 46 37.5	-0.1
	comp=N,8.0nm,0.4s						
MOA	Molln	3.75	199	⇑Pn	Pn	01 45 34.3	+1.0
MOA				Sg	Sg	01 46 37.5	-0.1
MOA	Molln	3.75	199	⇑Pn	Pn	01 45 34.3	+1.1
MOA				Sg	Sg	01 46 37.5	-0.2
STHS	Stebnicka Huta	3.88	119	*e*PN	Pn	01 45 36.5	+1.4
STHS				*e*PG	Pg	01 45 49.1	-1.3
STHS				*e*SG	Sg	01 46 42.8	+0.7
ARSA	Arzberg	4.18	185	⇑*i*Pn	Pn	01 45 40.7	+1.4
ARSA	Arzberg	4.18	185	⇓*i*Sg	Sg	01 46 49.2	-2.8
	comp=N,7.3nm,0.5s						
ARSA	Arzberg	4.18	185	⇑Pn	Pn	01 45 40.7	+1.3
ARSA				Sg	Sg	01 46 49.2	-2.8
ARSA	Arzberg	4.18	185	⇑Pn	Pn	01 45 40.7	+1.3
ARSA				Sg	Sg	01 46 49.2	-2.8
KBA	Koelnbreinsper	4.68	203	⇑*i*Pn	Pn	01 45 47.5	+1.0
KBA	Koelnbreinsper	4.68	203	⇑*i*Sg	Sg	01 47 07.5	-1.3
	comp=N,3.9nm,0.4s						
KBA	Koelnbreinsper	4.68	203	⇑Pn	Pn	01 45 47.5	+1.0
KBA				Sg	Sg	01 47 07.5	-1.3
KBA	Koelnbreinsper	4.68	203	⇑Pn	Pn	01 45 47.5	+1.0
KBA				Sg	Sg	01 47 07.5	-1.3
AKASG	Malin Array Be	8.34	90	Pn	P	01 46 35.4	-2.6
	comp=N,0.9nm,0.3s,baz=281,slow=13,SNR=4.7						
AKASG	Malin Array Be	8.34	90	P	P	01 46 35.4	-2.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS	Hagfors	8.84	352	Pn	P	01 46 40.5	-4.5
	comp=Z,0.0nm,0.3s,baz=164,slow=13,SNR=8.8						
FINES	FINESS Array B	11.47	25	Pn	P	01 47 15.6	-5.4
	comp=Z,0.4nm,0.3s,baz=213,slow=10,SNR=16						
FINES	FINESS Array B	11.47	25	Pn	P	01 47 15.6	-5.4
KAF	Kangasniemi	12.10	24	*e*p	P	01 47 24.2	-5.2
JOF	Joensuu	14.15	30	*e*p	P	01 47 48.9	-7.6
ARCES	ARCESS Array B	18.73	10	Pn	P	01 48 48.4	-6.4
	comp=Z,0.2nm,0.3s,baz=193,slow=12,SNR=8.1						
ARCES	ARCESS Array B	18.73	10	Pn	P	01 48 48.4	-6.4

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*SKO **03** 02:08:14.2,36.73N×27.10E*
*NEIC **03** 02:08:31.0,38.12N×26.69E,h5^{km},MD3.6(ISK),MD3.6(ATH),After ISK.*
*CSEM **03** 02:08:31.8±0.1,38.11N×26.64E,h5^{km},MD3.6,Error ellipse: s-maj=1.6km s-min=1.2km az=80.0*
*ISK **03** 02:08:32.0,38.12N×26.65E,h5^{km},MD3.6*

*ATH **03** 02:08:32.6,38.17N×26.48E,h26^{km}±1^{km},MD3.6/6*

ISC 03 02:08:32.7±1.0,38.14N±0.02×26.64E±0.05,h7^{km}±7^{km},n41,σ0^{s}78/52,1C,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	Balcova	0.41	52	*i* PG	Pg	02 08 40.2	-0.7
SMG	Samos	0.46	159	⇑*i*PN	Pg	02 08 43.5	+1.6
SMG				*e*SN	Sg	02 08 52.2	+4.1
IZM	Izmir	0.56	62	*i* PG	Pg	02 08 43.3	-0.6
IZM				*i* SG	Sg	02 08 51.5	+0.1
PRK	Paraskevi	1.14	346	*e*PN	Pn	02 08 53.0	-2.0
PRK				*e*SN	Sn	02 09 08.8	-2.2
AKS	Akhisar	1.18	51	PN	Pn	02 08 55.1	-0.5
BODT	Bodrum	1.20	153	PN	Pn	02 08 55.1	-0.8
BODT				SN	Sn	02 09 12.0	-0.5
MLSB	Milas	1.24	133	PN	Pn	02 08 55.9	-0.5
APE	Apeiranthos	1.38	220	PN	Pn	02 08 58.4	0.0
APE				SN	Sn	02 09 17.6	+0.5
APE	Apeiranthos	1.38	220	*e*Pn	Pn	02 08 57.6	-0.8
APE				*e*Sn	Sn	02 09 16.0	-1.1
NISR	Nisiros	1.57	165	*e*PN	Pn	02 09 02.6	+1.4
DAT	Datca	1.59	152	PN	Pn	02 09 01.1	-0.4
YER	Yerkesik	1.65	127	PN	Pn	02 09 02.4	+0.1
EZN	Ezine	1.70	352	PN	Pn	02 09 03.3	+0.3
EZN				SN	Sn	02 09 26.5	+1.2
BALB	Balikesir	1.79	33	PN	Pn	02 09 04.5	+0.3
DENT	Denizli	1.93	101	PN	Pn	02 09 06.5	+0.1
LIA	Limnos Island	2.09	328	*e*PB	Pb	02 09 06.9	-3.7
DALT	Dalyan (Mudla)	2.10	130	*e*PN	Pn	02 09 08.3	-0.4
DST	Dursunbey	2.14	46	*e*PN	Pn	02 09 09.2	-0.1
ARG	Arkhangelos	2.26	148	*e*PN	Pn	02 09 11.9	+0.9
KHL	Karahalli	2.28	84	*e*PN	Pn	02 09 11.3	0.0
EDC	Edincik	2.40	23	*e*PN	Pn	02 09 13.4	+0.3
BNT	Bandirma	2.43	24	*e*PN	Pn	02 09 13.6	+0.2
FETY	Fethiye	2.46	127	*e*PN	Pn	02 09 13.6	-0.3
KCT	Karacabey	2.51	32	*e*PN	Pn	02 09 14.6	0.0
ORLT	Orhaneli	2.59	42	*e*PN	Pn	02 09 16.1	+0.3
KARP	Karpathos	2.62	171	*e*PN	Pn	02 09 15.9	-0.3
MFT	Murefte	2.69	11	*e*PN	Pn	02 09 17.7	+0.5
ALT	Altintas	2.87	70	*e*PN	Pn	02 09 20.0	+0.2
ELL	Elmali	2.95	117	*e*PN	Pn	02 09 20.8	-0.1
ISP	Isparta	3.08	94	*e*PN	Pn	02 09 22.7	0.0
ISP	Isparta	3.08	94	*e*Pn	Pn	02 09 22.8	+0.1
BCK	Bucak	3.20	101	*e*PN	Pn	02 09 24.2	-0.3
YLV	Yalova	3.22	40	*e*PN	Pn	02 09 24.9	+0.1
CTT	Catalca	3.31	24	*e*PN	Pn	02 09 26.6	+0.6
BADT	Buyukada	3.32	35	*e*PN	Pn	02 09 26.4	+0.2
HRT	Hereke	3.56	40	*e*PN	Pn	02 09 29.6	0.0
ESKT	Eskisehir	3.57	66	*e*PN	Pn	02 09 30.2	+0.5
VAY	Valandovo	4.46	317	*e*Pn	Pn	02 09 42.1	-0.3
VAY				*e*Sn	Sn	02 10 50.0	+15
VAY	Valandovo	4.46	317	*e*Pn	Pn	02 09 42.1	-0.3
VAY				*e*Sn	Sn	02 10 50.0	+15
SKO	Skopje	5.53	315	*e*Pn	Pn	02 09 56.7	-0.7
SKO				*e*Sn	Sn	02 11 04.2	+2.2
SKO	Skopje	5.53	315	*e*Pn	Pn	02 09 56.7	-0.7
SKO				*e*Sn	Sn	02 11 04.3	+2.3

MEX 03 02:10:14.9±1.1,16.93N×99.99W,h5^{km}±16^{km},MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	Acapulco	0.09	134	*i* P	Pg	02 10 16.6	-0.4
ACX				*i* S	Sg	02 10 18.0	-0.4
CAIG	El Cayaco	0.29	293	*i* P	Pg	02 10 20.1	-0.6
CAIG				*i* S	Sg	02 10 24.8	0.0
PLIG	Platanillo	1.52	18	*i* P	Pn	02 10 39.8	-3.1
PLIG				*i* S	Sb	02 10 58.7	-4.1
ZIIG	Zihuatanejo	1.56	296	*i* P	Pn	02 10 40.0	-3.4
ZIIG				*i* S	Sb	02 10 58.7	-5.2
YAIG	Yautepec	2.11	24	*i* P	Pn	02 10 48.7	-2.6
YAIG				*i* S	Sn	02 11 13.2	-5.0
PPM	Popocatepetl	2.49	31	*i* P	Pn	02 10 54.3	-2.4
PPM				*i* P		02 10 55.0	
PPM				*i* S	Sn	02 11 24.4	-3.4

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*IDC **03** 02:17:45.5±1.8,17.61S×178.87W,h501^{km}±24^{km},mb3.1/7, mb1 3.4/8,mb1mx3.3/15,mbtmp4.0/8,Error ellipse: s-maj=28.5km s-min=14.4km az=137.0*

ISC 03 02:17:44.6±1.6,17.6S±0.2×179.0W±0.2,h500^{km}±22^{km}, n10,σ0^{s}98/9,mb3.5/6,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.85	63	P	P	02 19 40.9	+0.4
	4.7nm,0.3s,baz=67,slow=22,SNR=6.9						
AFI				S	S	02 21 12.3	-0.2
	2.8nm,0.3s,baz=43,slow=13,SNR=3.0						
URZ	Urewera	20.88	189	P	P	02 21 50.7	-1.3
	3.2nm,0.4s,baz=26,slow=12,SNR=5.0						
STKA	Stephens Creek	38.30	241	P	P	02 24 24.8	+2.0
	2.6nm,0.8s,mb3.7,baz=99,slow=9.5,SNR=9.3						
WRA	Warramunga Arr	44.15	259	P	P	02 25 09.6	-0.2
	0.3nm,0.3s,mb3.2,baz=94,slow=7.5,SNR=2.5						
MJAR	Matsushiro Arr	67.32	324	P	P	02 27 49.7	-1.1
	1.9nm,0.4s,mb4.1,baz=161,slow=5.8,SNR=6.0						
ILAR	Eielson Array	85.70	13	P	P	02 29 29.6	-0.8
	0.5nm,0.5s,mb3.4,baz=224,slow=5.3,SNR=8.8						
TXAR	Lajitas Array	86.29	58	P	P	02 29 35.0	+0.9
	0.3nm,1.0s,mb2.9,baz=226,slow=6.0,SNR=4.1						
PDAR	Pinedale Array	87.50	44	P	P	02 29 40.0	+0.5
	0.4nm,0.5s,mb3.4,baz=225,slow=2.1,SNR=4.4						
BRTR	Keskin Array B	144.17	315	PKP	PKPdf	02 36 23.9	+1.1
	0.9nm,0.6s,baz=106,slow=2.7,SNR=16						
GERES	GERESS Array B	147.16	344	PKPbc	PKPdf	02 36 32.0	+4.4
	0.7nm,0.5s,baz=38,slow=2.4,SNR=9.4						

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*IDC **03** 02:46:06.7±13.0,19.91S×177.84W,h454^{km}±131^{km}, mb3.4/3,mb1 3.6/3,mb1mx3.2/12,mbtmp4.2/3,Error ellipse: s-maj=146.3km s-min=58.7km az=139.0*

*NEIC **03** 02:46:09.4±6.1,20.34S×177.75W,h498^{km}±61^{km}, mb4.3/10,Error ellipse: s-maj=33.6km s-min=21.3km az=74.0*

ISC 03 02:46:08.7±1.0,20.3S±0.2×177.8W±0.2,h500^{km},n24, σ0^{s}81/19,mb4.1/11,3C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.67	264	*e*P	P	02 52 09.7	+1.0
	2.8nm,0.3s,mb4.2						
CTAO	Charters Tower	33.67	264	*e*P	P	02 52 09.6	+0.9
	3.8nm,0.4s,mb4.2						
STKA	Stephens Creek	38.02	244	*e*P	P	02 52 45.9	+1.4
	3.4nm,0.9s,mb3.8						
STKA	Stephens Creek	38.02	244	P	P	02 52 45.8	+1.3
	3.8nm,0.8s,mb3.9,baz=90,slow=12,SNR=5.5						
WB2	Warramunga Arr	44.78	262	*e*P	P	02 53 38.9	+0.1
WRAB	Tennant Creek	44.78	262	*e*P	P	02 53 37.4	-1.4
	4.6nm,0.6s,mb4.1						
WRA	Warramunga Arr	44.79	262	P	P	02 53 39.1	+0.2
	1.9nm,0.3s,mb4.0,baz=98,slow=8.5,SNR=9.5						
FORT	Forrest	49.52	246	*e*P	P	02 54 14.2	-0.5
	12nm,0.5s,mb4.5						
FITZ	Fitzroy Crossi	53.22	262	*e*P	P	02 54 42.2	+0.4
	3.5nm,0.6s,mb3.9						
MBWA	Marble Bar	58.05	257	*e*P	P	02 55 14.7	-0.7
	12nm,0.7s,mb4.3						
KLBR	Kellerberrin	58.28	245	*e*P	P	02 55 16.3	-0.5
	14nm,1.0s,mb4.3						
NWAO	Narrogin (SRO)	58.60	243	P	P	02 55 17.2	-1.7
	13nm,1.1s,mb4.2						
KSM	Kuching	73.55	278	P	P	02 56 52.5	+0.4
KULM	Kulim	83.91	278	*e*P	P	02 57 48.2	+1.2
ENH	Enshi	86.08	304	P	P	02 57 57.2	0.0
	19nm,1.4s,mb4.5						
ILAR	Eielson Array	88.10	13	P	P	02 58 05.4	-0.5
	0.4nm,0.5s,mb3.4,baz=212,slow=5.0,SNR=6.3						
VNA3	Neumayer Olymp	88.31	176	⇑*i*	P	02 58 07.0	+0.3
VNA2	Neumayer--Watz	88.75	177	⇑*i*	P	02 58 09.2	+0.4
VNA1	Neumayer--Stat	88.98	177	⇑*i*	P	02 58 05.3	-4.6
FINES	FINESS Array B	135.65	344	PKP	PKPdf	03 04 33.6	+2.4
	2.4nm,1.0s,baz=90,slow=4.2,SNR=4.1						
AKASG	Malin Array Be	142.94	331	PKhKP		03 04 42.7	
	2.3nm,0.5s,baz=43,slow=4.4,SNR=10.0						
AKASG	Malin Array Be	142.94	331	PKP	PKPdf	03 04 42.7	-1.7
BRTR	Keskin Array B	146.84	313	PKPbc	PKPbc	03 04 55.9	+2.3
	0.9nm,0.6s,baz=154,slow=7.0,SNR=12						
GERES	GERESS Array B	150.07	345	PKPbc	PKPdf	03 05 03.6	+7.3
	0.8nm,0.8s,slow=2.7,SNR=5.5						

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*JMA **03** 03:33:10.4±0.1,28.29N×140.55E,h447^{km},M3.6*

ISC 03 03:33:09.8±1.2,28.3N±0.1×140.6E±0.4,h455^{km}±16^{km},n9, σ0^{s}45/12,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.84	129	P	P	03 34 10.4	0.0
CBIJ				*e*S	S	03 34 57.8	-0.5
JHHJ	Haha-jima-NKT	2.17	139	P	P	03 34 12.3	+0.1
JHHJ				S	S	03 35 01.7	+0.2
JHJ2	Mitsune	4.87	352	P	P	03 34 34.1	+0.2
BSO3	Boso 3	6.51	359	P	P	03 34 51.1	+0.7
JIE	Ise	6.94	332	P	P	03 34 55.1	+0.1
JRY	Ryogami san	7.85	350	P	P	03 35 04.6	-0.3
JAG	Ashikaga	8.18	354	P	P	03 35 07.5	-1.0
JHO	Hitachi	8.31	360	P	P	03 35 10.7	+0.8
JHO				*e*S	S	03 36 44.9	-0.2
JOF	Joensuu	73.40	333	*e*p	P	03 43 55.0	-0.1

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*NEIC **03** 03:33:31.0,38.10N×26.66E,h5^{km},MD3.6(ATH), MD3.5(ISK),After ISK.*

*ISK **03** 03:33:32.3,38.10N×26.63E,h5^{km},MD3.5*

*ATH **03** 03:33:32.9,38.14N×26.66E,h35^{km}±2^{km},MD3.6/5*

*CSEM **03** 03:33:33.1±0.1,38.10N×26.67E,h10^{km},MD3.5,Error ellipse: s-maj=1.5km s-min=1.0km az=96.0*

ISC 03 03:33:32.1±1.1,38.12N±0.02×26.57E±0.05,h4^{km}±8^{km}, n45,σ0^{s}68/51,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.46	152	*e*PB	Pb	03 33 43.3	+0.9
SMG				*e*SB	Sb	03 33 51.2	+1.9
BLCB	Balcova	0.46	54	*i* PG	Pg	03 33 41.2	-0.1
IZM	Izmir	0.62	63	*i* PG	Pg	03 33 43.8	-0.6
IZM				*i* SG	Sg	03 33 52.9	+0.3
PRK	Paraskevi	1.15	349	*e*PN	Pn	03 33 53.8	-1.1
PRK				*e*SN	Sn	03 34 10.2	-1.1
BODT	Bodrum	1.21	150	PN	Pn	03 33 55.2	-0.5
BODT				SN	Sn	03 34 11.9	-0.8
AKS	Akhisar	1.24	52	PN	Pn	03 33 55.7	-0.5
MLSB	Milas	1.26	130	PN	Pn	03 33 56.2	-0.3
APE	Apeiranthos	1.33	218	PN	Pn	03 33 58.2	+0.7
APE	Apeiranthos	1.33	218	*e*PB	Pb	03 33 57.6	+0.3
APE				*e*SN	Sn	03 34 16.6	+0.8
APE	Apeiranthos	1.33	218	*e*Pn	Pn	03 33 58.2	+0.7
APE				*e*Sn	Sn	03 34 16.6	+0.8
DAT	Datca	1.60	150	PN	Pn	03 34 01.5	+0.1
YER	Yerkesik	1.68	125	PN	Pn	03 34 02.6	+0.1
EZN	Ezine	1.72	354	PN	Pn	03 34 04.1	+1.1
BALB	Balikesir	1.83	34	PN	Pn	03 34 05.1	+0.4
DENT	Denizli	1.98	100	PN	Pn	03 34 06.5	-0.3
LIA	Limnos Island	2.08	329	*e*PN	Pn	03 34 07.6	-0.6
DALT	Dalyan (Mudla)	2.13	129	*e*PN	Pn	03 34 08.9	0.0
DST	Dursunbey	2.19	47	*e*PN	Pn	03 34 09.9	+0.1
LPK	Lapseki	2.26	4	*e*PN	Pn	03 34 11.8	+1.0
ARG	Arkhangelos	2.27	146	*e*PN	Pn	03 34 10.0	-0.9
KHL	Karahalli	2.34	84	*e*PN	Pn	03 34 11.8	-0.1
EDC	Edincik	2.44	24	*e*PN	Pn	03 34 13.9	+0.5
BNT	Bandirma	2.47	25	*e*PN	Pn	03 34 14.1	+0.3
FETY	Fethiye	2.49	126	*e*PN	Pn	03 34 14.1	0.0
KCT	Karacabey	2.56	32	*e*PN	Pn	03 34 15.3	+0.2
MRMT	Marmara Adasi	2.61	18	*e*PN	Pn	03 34 16.4	+0.6
KARP	Karpathos	2.61	169	*e*PN	Pn	03 34 15.0	-0.8
ORLT	Orhaneli	2.65	43	*e*PN	Pn	03 34 16.7	+0.4
MFT	Murefte	2.72	12	*e*PN	Pn	03 34 18.0	+0.6
ALT	Altintas	2.93	70	*e*PN	Pn	03 34 20.2	-0.2
NPS	Neapolis	2.95	195	*e*PN	Pn	03 34 19.5	-1.1
ELL	Elmali	2.99	116	*e*PN	Pn	03 34 20.7	-0.5
ISP	Isparta	3.13	94	*e*PN	Pn	03 34 23.0	-0.2
ISP	Isparta	3.13	94	*e*Pn	Pn	03 34 21.7	-1.5
BCK	Bucak	3.25	100	*e*PN	Pn	03 34 24.7	-0.3
YLV	Yalova	3.27	41	*e*PN	Pn	03 34 25.7	+0.4
CTT	Catalca	3.35	25	*e*PN	Pn	03 34 27.0	+0.7
BADT	Buyukada	3.37	35	*e*PN	Pn	03 34 27.3	+0.7
ESKT	Eskisehir	3.63	66	*e*PN	Pn	03 34 30.7	+0.4
KDZ	Kurdzhali	3.64	346	P	Pn	03 34 29.0	-1.4
MMB	Musomiste	4.10	329	*e*P	Pn	03 34 37.0	0.0
KIZT	Kizilcal	4.24	78	*e*PN	Pn	03 34 39.0	0.0
KKB	Krupnik	4.60	326	*e*P	Pn	03 34 44.0	-0.1
VTS	Vitosha	5.15	331	*e*P	Pn	03 34 52.0	+0.1
BR131	Keskin Array S	5.75	72	Pn	Pn	03 34 56.2	-4.0

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*ISK **03** 03:43:35.3,37.12N×27.57E,h18^{km},MD3.4*

*NEIC **03** 03:43:35.0,37.11N×27.57E,h17^{km},MD3.3(ISK), MD3.1(ATH),After ISK.*

*CSEM **03** 03:43:36.0±0.1,37.17N×27.64E,h20^{km},MD3.4,Error ellipse: s-maj=2.1km s-min=1.6km az=64.0*

*ATH **03** 03:43:37.3,37.07N×27.55E,h20^{km}±7^{km},MD3.1/3*

ISC 03 03:43:36.1±0.7,37.12N±0.04×27.60E±0.05,h15^{km}±9^{km}, n16,σ0^{s}85/19,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MLSB	Milas	0.23	40	*i* PG	Pb	03 43 41.1	-0.3
MLSB				*i* SG	Sb	03 43 45.4	+0.5
BODT	Bodrum	0.23	256	*i* PG	Pb	03 43 40.9	-0.6
DAT	Datca	0.39	182	*i* PG	Pb	03 43 43.3	-0.9
YER	Yerkesik	0.55	88	PG	Pb	03 43 47.0	+0.1
NISR	Nisiros	0.63	216	*e*PN	Pn	03 43 48.5	-1.7
SMG	Samos	0.84	314	*e*PB	Pb	03 43 53.2	+1.3
SMG				*e*SN	Sn	03 44 06.3	+1.0
DALT	Dalyan (Mudla)	0.91	113	PG	Pb	03 43 53.7	+0.7
ARG	Arkhangelos	1.00	155	*e*PN	Pn	03 43 55.7	+0.2
ARG				*e*SN	Sn	03 44 10.3	+1.0
FETY	Fethiye	1.29	112	PN	Pn	03 43 59.3	-0.3
IZM	Izmir	1.30	348	PN	Pn	03 43 59.3	-0.5
DENT	Denizli	1.31	61	*e*PN	Pn	03 43 59.8	-0.1
BLCB	Balcova	1.34	341	*e*PN	Pn	03 43 59.6	-0.7
KARP	Karpathos	1.61	193	*e*PN	Pn	03 44 06.2	+2.0
AKS	Akhisar	1.76	6	*e*PN	Pn	03 44 06.0	-0.4
ELL	Elmali	1.89	101	*e*PN	Pn	03 44 07.8	-0.5
BCK	Bucak	2.41	81	*e*PN	Pn	03 44 15.2	-0.5

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*NIED **03** 03:44:00,32.10N×129.50E,h8^{km},Mw3.6 Best double couple: $M_0 2.54\times10^{14}$ NP1:ϕ_s121°,δ85°,λ7°. NP2:ϕ_s30°, δ83°,λ175°.*

JMA 03 03:44:02.5±0.1,32.13N×129.46E,h3^{km}±2^{km},M3.5,4C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSJ	Shimokoshiki	0.50	154	⇑P	Pg	03 44 12.4	-0.1
JSJ				S	Sg	03 44 19.4	+0.2
NGSJ	Nagasakinomoza	0.58	30	⇓P	Pg	03 44 13.9	-0.1
NGSJ				S	Sg	03 44 22.1	+0.4
JHD	Hondo	0.66	60	⇓P	Pg	03 44 15.4	-0.4
JHD				S	Sg	03 44 24.8	+0.2
JFU	Fukue jima 2	0.80	311	⇑P	Pg	03 44 18.2	-0.2
JFU				S	Sg	03 44 28.9	-0.2
JZO	Okuchi	0.97	89	⇓P	Pb	03 44 21.5	0.0
JZO				S	Sb	03 44 34.5	0.0
JUR	Ureshino	1.04	23	⇑P	Pb	03 44 22.7	-0.2
JUR				S	Sb	03 44 36.4	-0.4
JSU	Suzuyama	1.05	126	⇑P	Pb	03 44 22.5	-0.5
JSU				S	Sb	03 44 36.6	-0.4
JTA	Tamana	1.23	47	P	Pb	03 44 25.6	-0.4

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*LDG **03** 03:53:20.6±0.1,48.29N×7.45E,h5^{km},Md2.6/3,Ml2.6/13, Error ellipse: s-maj=1.3km s-min=0.9km az=108.0*

*CSEM **03** 03:53:20.6±0.1,48.29N×7.45E,h5^{km},ML2.6/12,Error ellipse: s-maj=1.3km s-min=1.0km az=80.0*

*BGR **03** 03:53:21.2±0.3,48.28N×7.46E,h5^{km},ML1.8/2,Error ellipse: s-maj=3.3km s-min=2.2km az=120.0*

*NEIC **03** 03:53:21.2,48.28N×7.41E,h5^{km},ML2.6(LDG), ML2.0(STR),After STR.*

STR 03 03:53:21.2±0.2,48.28N×7.41E,h5^{km}±1^{km},Ml2.0,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0,France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	Welschbruch	0.14	344	Pg	Pg	03 53 23.7	-0.4
WLS				Sg	Sg	03 53 25.9	-0.2
WLS	Welschbruch	0.14	344	*e*Pg	Pg	03 53 23.7	-0.4
	SNR=60						
WLS				*e*Sg	Sg	03 53 26.0	-0.1
	SNR=30						
CDF	Champ du Feu	0.16	326	*e*Pg	Pg	03 53 24.2	-0.3
CDF				*e*Sg	Sg	03 53 26.8	+0.1
	40nm,0.2s						
ECH	Echery	0.18	249	Pg	Pg	03 53 24.7	-0.2
ECH				Sg	Sg	03 53 27.8	+0.4
ECH	Echery	0.18	249	*e*Pg	Pg	03 53 24.7	-0.2
	SNR=14						
ECH				*e*Sg	Sg	03 53 27.9	+0.5
	SNR=5.9						
LIBD	Limburg	0.18	135	*e*Pg	Pg	03 53 23.9	-1.0
	SNR=3.3						
LIBD				*e*Sg	Sg	03 53 26.7	-0.7
	SNR=4.1						
LIBD	Limburg	0.18	135	Pg	Pg	03 53 24.1	-0.9
LIBD				Sg	Sg	03 53 26.7	-0.8
	SNR=4.1						
STR	Strasbourg	0.39	38	*e*Sg	Sg	03 53 33.8	-0.4
	SNR=2.2						
MOF	Molkenrain	0.47	204	Pg	Pg	03 53 29.8	-0.8
MOF	Molkenrain	0.47	204	*e*Pg	Pg	03 53 29.9	-0.6
	SNR=4.1						
HINF	Hinteralfeld	0.60	219	*e*Pg	Pg	03 53 32.2	-0.9
HINF				*e*Pn	Pn	03 53 34.3	-1.7
HINF				*e*Sg	Sg	03 53 40.6	-0.5
	51nm,0.5s						
BFO	Black Forest	0.62	85	*e*Sg	Sg	03 53 39.2	-2.6
	SNR=13						
LANF	Langenberg	0.75	20	Pg	Pg	03 53 35.9	-0.3
LANF				Sg	Sg	03 53 46.6	+0.4
LANF	Langenberg	0.75	20	*e*Pg	Pg	03 53 35.9	-0.3
	SNR=5.3						
LANF				*e*Sg	Sg	03 53 45.8	-0.4
	SNR=1.9						
HAU	Haudompre	0.76	249	*e*Pg	Pg	03 53 35.6	-0.8
HAU				*e*Pn	Pn	03 53 36.8	-1.5
HAU				*e*Sg	Sg	03 53 45.8	-0.8
	19nm,0.2s						
BBS	Basel-Blauen	0.82	175	*e*Pg	Pg	03 53 37.2	-0.4
	SNR=1.5						
BBS	Basel-Blauen	0.82	175	Pg	Pg	03 53 37.4	-0.2
BBS				Sg	Sg	03 53 49.1	+0.6
BBS	Basel-Blauen	0.82	175	Pg	Pg	03 53 37.2	-0.4
	SNR=1.5						
BBS				Sg	Sg	03 53 49.1	+0.6
THEF	They Montfort	0.95	267	Pg	Pg	03 53 39.4	-0.8
THEF				Sg	Sg	03 53 53.4	+0.4
THEF	They Montfort	0.95	267	*e*Pg	Pg	03 53 39.5	-0.8
	SNR=1.8						
THEF				*e*Sg	Sg	03 53 53.4	+0.4
	SNR=3.5						
LOMF	Lomont	1.01	203	Pg	Pg	03 53 40.2	-1.2
LOMF				Sg	Sg	03 53 54.1	-0.7
LOMF	Lomont	1.01	203	*e*Pg	Pg	03 53 40.2	-1.2
	SNR=6.7						
LOMF				*e*Sg	Sg	03 53 53.7	-1.1
	SNR=1.0						
RFYF	Reffroy	1.33	286	*e*Pg	Pg	03 53 46.1	-1.8
RFYF				*e*Sg	Sg	03 54 03.2	-2.5
	39nm,0.2s						
MEZF	Maizieres J’vi	1.59	279	*e*Pn	Pn	03 53 48.6	-1.5
MEZF				*e*Pg	Pg	03 53 50.9	-2.0
	baz=100						
MEZF				*e*Sg	Sg	03 54 11.6	-2.5
	5.4nm,0.2s						
MEZF	Maizieres J’vi	1.59	279	*e*Pg	Pg	03 53 50.9	-2.0
MEZF				*e*Sg	Sg	03 54 11.6	-2.5
	2.7nm,0.2s						
SFTF	Sexfontaines	1.59	268	*e*Pn	Pn	03 53 48.1	-2.0
SFTF				*e*Sg	Sg	03 54 11.6	-2.5
	12nm,0.2s						
CABF	La Chapelle	1.90	209	*e*Pn	Pn	03 53 52.4	-2.1
CABF				*e*Pg	Pg	03 53 56.1	-3.0
CABF				*e*Sg	Sg	03 54 20.8	-3.5
	1.7nm,0.2s						
TNS	Taunus Mts	2.06	19	*e*Sg	Sg	03 54 25.1	-4.7
	SNR=2.7						
LOR	Lormes	2.60	248	*e*Pn	Pn	03 54 02.0	-2.6
	baz=66						
LOR				*e*Pg	Pg	03 54 09.6	-3.5
	baz=66						
LOR				*e*Sg	Sg	03 54 42.4	-5.4
	6.6nm,0.3s						
LOR	Lormes	2.60	248	*e*Pg	Pg	03 54 09.6	-3.5
LOR				*e*Sg	Sg	03 54 42.4	-5.4
	3.3nm,0.3s						
BAIF	Baives	2.75	311	*e*Pn	Pn	03 54 04.1	-2.7
BAIF				*e*Pg	Pg	03 54 11.5	-4.7
BAIF				*e*Sg	Sg	03 54 47.2	-5.7
	1.4nm,0.3s						
SSF	Saint Saulge	2.91	247	*e*Pn	Pn	03 54 05.5	-3.5
SSF				*e*Pg	Pg	03 54 15.2	-4.0
SSF				*e*Sg	Sg	03 54 52.4	-5.6
	2.0nm,0.3s						
SMF	Signal de Mont	2.92	237	*e*Pn	Pn	03 54 05.6	-3.6
SMF				*e*Pg	Pg	03 54 15.6	-3.9
SMF				*e*Sg	Sg	03 54 53.1	-5.4
	3.1nm,0.2s						
AVF	Avril sur Loir	3.13	243	*e*Pn	Pn	03 54 09.6	-2.5
AVF				*e*Pg	Pg	03 54 18.8	-4.8
AVF				*e*Sg	Sg	03 54 59.2	-6.1
	1.8nm,0.3s						
HYF	Humbligny	3.37	254	*e*Pn	Pn	03 54 12.3	-3.3
HYF				*e*Pg	Pg	03 54 23.8	-4.7
HYF				*e*Sg	Sg	03 55 06.7	-6.8
	60nm,0.6s						
BGF	Bois d’Agland	3.54	243	*e*Pn	Pn	03 54 14.7	-3.4
BGF				*e*Pg	Pg	03 54 27.3	-4.7
BGF				*e*Sg	Sg	03 55 13.0	-6.2
	3.6nm,0.4s						

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*LDG **03** 04:18:30.8±0.1,48.28N×7.45E,h7^{km},Md2.4/3,Ml2.5/14, Error ellipse: s-maj=1.5km s-min=1.3km az=95.0*

*BGR **03** 04:18:30.9±0.3,48.29N×7.46E,h5^{km},ML1.8/2,Error ellipse: s-maj=4.4km s-min=3.3km az=146.0*

*CSEM **03** 04:18:30.8±0.1,48.29N×7.45E,h12^{km},ML2.5/13,Error ellipse: s-maj=1.8km s-min=1.7km az=111.0*

*NEIC **03** 04:18:31.0,48.30N×7.44E,h5^{km},ML2.5(LDG), ML2.1(STR),After STR.*

STR 03 04:18:31.0±0.3,48.30N×7.44E,h5^{km}±1^{km},Ml2.1,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0,France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	Welschbruch	0.13	333	Pg	Pg	04 18 33.8	+0.1
WLS	Welschbruch	0.13	333	*e*Pg	Pg	04 18 33.9	+0.2
CDF	Champ du Feu	0.16	316	*e*Pg	Pg	04 18 34.3	0.0
CDF				*e*Sg	Sg	04 18 36.8	+0.4
	55nm,0.2s						
LIBD	Limburg	0.18	144	*e*Pg	Pg	04 18 34.3	-0.5
LIBD	Limburg	0.18	144	Pg	Pg	04 18 34.2	-0.6
ECH	Echery	0.21	246	Pg	Pg	04 18 34.9	-0.3
ECH				Sg	Sg	04 18 37.9	-0.1
ECH	Echery	0.21	246	*e*Pg	Pg	04 18 34.9	-0.3
MOF	Molkenrain	0.49	205	Pg	Pg	04 18 40.0	-0.9
MOF	Molkenrain	0.49	205	*e*Pg	Pg	04 18 40.1	-0.8
BFO	Black Forest	0.59	87	*e*Pg	Pg	04 18 42.3	-0.6
BFO				*e*Sg	Sg	04 18 49.2	-1.7
HINF	Hinteralfeld	0.62	219	*e*Pg	Pg	04 18 42.4	-1.1
HINF				*e*Pn	Pn	04 18 43.5	-2.7
HINF				*e*Sg	Sg	04 18 50.2	-1.6
	28nm,0.2s						
LANF	Langenberg	0.72	19	Pg	Pg	04 18 45.3	-0.2
HAU	Haudompre	0.79	248	*e*Pg	Pg	04 18 45.5	-1.3
HAU				*e*Pn	Pn	04 18 46.7	-1.8
HAU				*e*Sg	Sg	04 18 56.0	-1.3
	36nm,0.3s						
BBS	Basel-Blauen	0.84	177	Pg	Pg	04 18 47.3	-0.4
BBS				Sg	Sg	04 18 59.2	+0.3
THEF	They Montfort	0.97	266	Pg	Pg	04 18 49.6	-0.9
THEF				Sg	Sg	04 19 03.9	+0.4
LOMF	Lomont	1.04	204	Pg	Pg	04 18 50.3	-1.4
LOMF				Sg	Sg	04 19 05.1	-0.4
LOMF	Lomont	1.04	204	*e*Pg	Pg	04 18 50.4	-1.3
STU	Stuttgart	1.26	67	*e*Sg	Sg	04 19 10.8	-2.1
RFYF	Reffroy	1.35	285	*e*Pg	Pg	04 18 56.2	-1.7
	baz=110						
RFYF				*e*Sg	Sg	04 19 13.2	-2.7
	41nm,0.2s						
MEZF	Maizieres J’vi	1.60	278	*e*Pn	Pn	04 18 58.8	-1.4
MEZF				*e*Pg	Pg	04 19 01.4	-1.6

MEZF				*e*Sg	Sg	04 19 22.0	-2.4
	8.0nm,0.2s						
SFTF	**Sexfontaines**	**1.61**	**268**	*e*Pn	Pn	04 18 58.1	-2.1
SFTF				*e*Sg	Sg	04 19 22.0	-2.6
	18nm,0.2s						
WLF	**Walferdange**	**1.61**	**329**	*e*Sg	Sg	04 19 22.3	-2.2
CABF	**La Chapelle**	**1.92**	**209**	*e*Pn	Pn	04 19 02.4	-2.3
CABF				*e*Pg	Pg	04 19 06.8	-2.6
CABF				*e*Sg	Sg	04 19 30.4	-4.6
	2.7nm,0.3s						
TNS	**Taunus Mts**	**2.03**	**19**	*e*Sg	Sg	04 19 35.5	-3.2
LOR	**Lormes**	**2.63**	**248**	*e*Pn	Pn	04 19 11.5	-3.3
LOR				*e*Pg	Pg	04 19 20.0	-3.4
	baz=73						
LOR				*e*Sg	Sg	04 19 52.7	-5.7
	4.3nm,0.2s						
LPL	**La Plagne**	**2.83**	**190**	*e*Pn	Pn	04 19 14.6	-3.1
LPL				*e*Pg	Pg	04 19 23.1	-4.3
LPL				*e*Sg	Sg	04 19 58.7	-6.4
	0.9nm,0.4s						
LPG	**La Plagne**	**2.84**	**190**	*e*Pn	Pn	04 19 15.1	-2.8
LPG				*e*Pg	Pg	04 19 23.5	-4.3
LPG				*e*Sg	Sg	04 19 59.9	-5.8
	1.8nm,0.5s						
SSF	**Saint Saulge**	**2.93**	**246**	*e*Pn	Pn	04 19 15.9	-3.3
SSF				*e*Pg	Pg	04 19 25.0	-4.5
SSF				*e*Sg	Sg	04 20 02.3	-6.3
	2.5nm,0.3s						
SMF	**Signal de Mont**	**2.95**	**237**	*e*Pn	Pn	04 19 15.4	-4.0
SMF				*e*Pg	Pg	04 19 25.6	-4.3
SMF				*e*Sg	Sg	04 20 02.6	-6.6
	4.1nm,0.3s						
AVF	**Avril sur Loir**	**3.15**	**243**	*e*Pn	Pn	04 19 18.4	-3.9
AVF				*e*Pg	Pg	04 19 29.5	-4.5
AVF				*e*Sg	Sg	04 20 09.1	-6.9
	1.5nm,0.3s						
HYF	**Humbligny**	**3.40**	**254**	*e*Pn	Pn	04 19 22.0	-3.8
HYF				*e*Pg	Pg	04 19 33.8	-5.0
HYF				*e*Sg	Sg	04 20 16.9	-7.2
ORIF	**Oris-en-Rattie**	**3.55**	**198**	*e*Pn	Pn	04 19 24.5	-3.4
ORIF				*e*Pg	Pg	04 19 35.7	-6.2
ORIF				*e*Sg	Sg	04 20 21.9	-7.3
	1.2nm,0.4s						
BGF	**Bois d'Agland**	**3.57**	**242**	*e*Pn	Pn	04 19 24.9	-3.4
BGF				*e*Pg	Pg	04 19 37.0	-5.3
BGF				*e*Sg	Sg	04 20 23.1	-6.8
	10nm,0.6s						

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*LDG **03** 04:21:06.3±0.1, 48.29N×7.44E, h5^{km}, Md2.5/3, Ml2.5/21, Error ellipse: s-maj=1.4km s-min=1.0km az=85.0*
*BGR **03** 04:21:06.3±0.3, 48.30N×7.48E, h5^{km}, ML1.8/2, Error ellipse: s-maj=4.4km s-min=3.3km az=149.0*
*NEIC **03** 04:21:06.6, 48.27N×7.44E, h5^{km}, ML2.5(LDG), ML2.2(STR), After STR.*
*CSEM **03** 04:21:06.2±0.1, 48.28N×7.46E, h10^{km}, ML2.5/20, Error ellipse: s-maj=1.7km s-min=1.6km az=100.0*
STR 03 04:21:06.6±0.2, 48.27N×7.44E, h5^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	**Welschbruch**	**0.15**	**338**	Pg	Pg	04 21 09.4	-0.4
WLS	**Welschbruch**	**0.15**	**338**	*e*Pg	Pg	04 21 09.5	-0.4
LIBD	**Limburg**	**0.16**	**138**	*e*Pg	Pg	04 21 09.9	-0.1
LIBD	**Limburg**	**0.16**	**138**	Pg	Pg	04 21 09.8	-0.1
LIBD				Sg	Sg	04 21 12.5	+0.3
CDF	**Champ du Feu**	**0.18**	**323**	*e*Pg	Pg	04 21 09.7	-0.6
CDF				*e*Sg	Sg	04 21 12.4	-0.4
	59nm,0.2s						
ECH	**Echery**	**0.20**	**254**	Pg	Pg	04 21 10.4	-0.2
ECH				Sg	Sg	04 21 13.5	+0.2
ECH	**Echery**	**0.20**	**254**	*e*Pg	Pg	04 21 10.4	-0.2
MOF	**Molkenrain**	**0.47**	**206**	Pg	Pg	04 21 15.5	-0.5
MOF	**Molkenrain**	**0.47**	**206**	*e*Pg	Pg	04 21 15.6	-0.4
BFO	**Black Forest**	**0.60**	**84**	*e*Pg	Pg	04 21 17.2	-1.4
BFO				*e*Sg	Sg	04 21 24.7	-1.8
HINF	**Hinteralfeld**	**0.60**	**221**	*e*Pg	Pg	04 21 17.8	-0.8
HINF				*e*Pn	Pn	04 21 19.4	-2.0
HINF				*e*Sg	Sg	04 21 25.9	-0.8
	37nm,0.2s						
LANF	**Langenberg**	**0.75**	**19**	Pg	Pg	04 21 20.8	-0.8
LANF				Sg	Sg	04 21 32.3	+0.6
HAU	**Haudompre**	**0.78**	**251**	*e*Pg	Pg	04 21 21.2	-1.0
HAU				*e*Pn	Pn	04 21 22.3	-1.7
HAU				*e*Sg	Sg	04 21 31.5	-1.0
	45nm,0.3s						
BBS	**Basel-Blauen**	**0.81**	**177**	Pg	Pg	04 21 22.9	+0.2
BBS				Sg	Sg	04 21 33.4	-0.1
THEF	**They Montfort**	**0.97**	**268**	Pg	Pg	04 21 25.0	-1.0
THEF				Sg	Sg	04 21 39.1	+0.1
THEF	**They Montfort**	**0.97**	**268**	*e*Pg	Pg	04 21 25.0	-1.0
LOMF	**Lomont**	**1.01**	**204**	Pg	Pg	04 21 25.7	-1.0
LOMF				Sg	Sg	04 21 39.6	-0.6
LOMF	**Lomont**	**1.01**	**204**	*e*Pg	Pg	04 21 25.9	-0.9
STU	**Stuttgart**	**1.27**	**66**	*e*Sg	Sg	04 21 45.4	-3.6
RFYF	**Reffroy**	**1.36**	**286**	*e*Pg	Pg	04 21 31.8	-1.9
	baz=102						
RFYF				*e*Sg	Sg	04 21 48.8	-3.0
	53nm,0.2s						
SFTF	**Sexfontaines**	**1.61**	**269**	*e*Pn	Pn	04 21 33.8	-2.0
	baz=82						
SFTF				*e*Sg	Sg	04 21 57.7	-2.4
	22nm,0.2s						
MEZF	**Maizieres J'vi**	**1.61**	**279**	*e*Pn	Pn	04 21 34.5	-1.3
MEZF				*e*Pg	Pg	04 21 37.0	-1.7
MEZF				*e*Sg	Sg	04 21 57.6	-2.6
	8.6nm,0.2s						
CABF	**La Chapelle**	**1.90**	**209**	*e*Pn	Pn	04 21 37.9	-2.1
CABF				*e*Pg	Pg	04 21 42.4	-2.1
CABF				*e*Sg	Sg	04 22 05.8	-4.0
	2.6nm,0.2s						
TNS	**Taunus Mts**	**2.06**	**18**	*e*Sg	Sg	04 22 10.8	-4.5
GIVF	**Givet**	**2.51**	**318**	*e*Pn	Pn	04 21 46.2	-2.6
GIVF				*e*Pg	Pg	04 21 52.3	-4.5
GIVF				*e*Sg	Sg	04 22 24.4	-5.8
	2.0nm,0.2s						
LOR	**Lormes**	**2.62**	**249**	*e*Pn	Pn	04 21 46.9	-3.3
LOR				*e*Pg	Pg	04 21 55.5	-3.3
	baz=65						
LOR				*e*Sg	Sg	04 22 27.8	-5.9
	7.1nm,0.3s						
BAIF	**Baives**	**2.78**	**311**	*e*Pn	Pn	04 21 49.7	-2.8
BAIF				*e*Pg	Pg	04 21 57.2	-4.8
BAIF				*e*Sg	Sg	04 22 32.5	-6.5
	2.2nm,0.2s						
LPL	**La Plagne**	**2.80**	**190**	*e*Pn	Pn	04 21 50.7	-2.1
LPL				*e*Pg	Pg	04 21 58.8	-3.6
LPL				*e*Sg	Sg	04 22 35.0	-4.7
	1.3nm,0.4s						
LPG	**La Plagne**	**2.81**	**190**	*e*Pn	Pn	04 21 51.3	-1.8
LPG				*e*Pg	Pg	04 22 00.6	-2.2
LPG				*e*Sg	Sg	04 22 35.9	-4.4
	0.7nm,0.2s						
SSF	**Saint Saulge**	**2.92**	**247**	*e*Pn	Pn	04 21 51.0	-3.6
SSF				*e*Pg	Pg	04 22 01.1	-3.8
SSF				*e*Sg	Sg	04 22 37.1	-6.7
	6.5nm,0.5s						
SMF	**Signal de Mont**	**2.93**	**238**	*e*Pn	Pn	04 21 51.0	-3.8
SMF				*e*Pg	Pg	04 22 01.3	-3.9
SMF				*e*Sg	Sg	04 22 38.0	-6.3
	4.3nm,0.2s						
AVF	**Avril sur Loir**	**3.14**	**243**	*e*Pn	Pn	04 21 53.8	-3.9
AVF				*e*Pg	Pg	04 22 05.2	-4.1
AVF				*e*Sg	Sg	04 22 45.3	-5.8
	1.7nm,0.3s						
HYF	**Humbligny**	**3.39**	**255**	*e*Pn	Pn	04 21 58.1	-3.2
HYF				*e*Pg	Pg	04 22 09.7	-4.6
HYF				*e*Sg	Sg	04 22 52.6	-6.8
	24nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.52**	**198**	*e*Pn	Pn	04 22 00.1	-3.0
ORIF				*e*Pg	Pg	04 22 11.9	-5.0
ORIF				*e*Sg	Sg	04 22 57.6	-6.2
	1.9nm,0.3s						
BGF	**Bois d'Agland**	**3.56**	**243**	*e*Pn	Pn	04 22 00.0	-3.7
BGF				*e*Pg	Pg	04 22 12.4	-5.2
BGF				*e*Sg	Sg	04 22 58.3	-6.8
	7.3nm,0.4s						
MBDF	**Montbardon**	**3.57**	**188**	*e*Pn	Pn	04 22 01.3	-2.6
MBDF				*e*Pg	Pg	04 22 12.6	-5.4
MBDF				*e*Sg	Sg	04 22 59.0	-6.6
	0.4nm,0.3s						
TCF	**Toulx Ste Croi**	**4.08**	**243**	*e*Pn	Pn	04 22 07.8	-3.2
TCF				*e*Pg	Pg	04 22 21.6	-6.3
TCF				*e*Sg	Sg	04 23 13.9	-8.4
	1.4nm,0.3s						
CAF	**Calviac**	**4.99**	**230**	*e*Pn	Pn	04 22 19.7	-4.3
CAF				*e*Pg	Pg	04 22 39.3	-6.9
CAF				*e*Sg	Sg	04 23 43.0	-10
	0.9nm,0.3s						
SGMF	**Saint Gilles**	**6.67**	**274**	*e*Pn	Pn	04 22 42.5	-5.3
SGMF				*e*Sn	Sn	04 23 54.3	-11
	1.9nm,0.3s						

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*ATH **03** 04:42:16.6, 38.16N×26.77E, h33^{km}±5^{km}, MD3.0/3*
*ISK **03** 04:42:17.5, 38.16N×26.74E, h19^{km}, MD3.1*
*CSEM **03** 04:42:17.8±0.1, 38.18N×26.77E, h20^{km}, MD3.1, Error ellipse: s-maj=4.4km s-min=1.9km az=114.0*
ISC 03 04:42:16.6±0.8, 38.18N±0.03×26.61E±0.05, h7^{km}±5^{km}, n16, σ0^{s}84/26, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.18**	**358**	*i* P	**Pg**	**04 42 20.6**	**+0.1**
URLA				*i* S	**Sg**	**04 42 23.9**	**+0.8**
BLCB	**Balcova**	**0.40**	**59**	*i* PG	**Pg**	**04 42 24.8**	**+0.1**
SMG	**Samos**	**0.50**	**158**	*e*PB	**Pb**	**04 42 26.9**	**-0.4**
SMG				*e*SB	**Sb**	**04 42 34.1**	**-0.5**
IZM	**Izmir**	**0.56**	**67**	*i* PG	**Pg**	**04 42 27.6**	**-0.3**
IZM				*i* SG	**Sg**	**04 42 35.2**	**-0.2**
KDAG	**Bornova**	**0.57**	**66**	*i* P	**Pg**	**04 42 26.9**	**-1.0**
KDAG				*i* S	**Sg**	**04 42 35.0**	**-0.5**
PRK	**Paraskevi**	**1.10**	**346**	*e*PN	**Pn**	**04 42 38.1**	**-0.2**
PRK				*e*SN	**Sn**	**04 42 53.9**	**0.0**
AYDN	**Tasoluk**	**1.13**	**117**	*i* P	**Pb**	**04 42 39.2**	**+1.1**
AYDN				*i* S	**Sb**	**04 42 53.4**	**+0.5**
AKS	**Akhisar**	**1.18**	**53**	PN	**Pn**	**04 42 38.7**	**-0.8**
BODT	**Bodrum**	**1.25**	**153**	PN	**Pn**	**04 42 40.2**	**-0.2**
BODT				SN	**Sn**	**04 42 55.8**	**-1.8**
BDRM	**Kayabasi**	**1.29**	**149**	*i* P	**Pb**	**04 42 41.4**	**+0.5**
BDRM				*i* S	**Sb**	**04 42 59.7**	**+2.1**
APE	**Apeiranthos**	**1.40**	**218**	*e*PN	**Pn**	**04 42 43.4**	**+0.8**
APE	**Apeiranthos**	**1.40**	**218**	*e*PN	**Pn**	**04 42 42.8**	**+0.2**
MANT	**Manisa**	**1.57**	**78**	*i* P	**Pn**	**04 42 46.4**	**+1.3**
MANT				*i* S	**Sb**	**04 43 06.3**	**+0.8**
YER	**Yerkesik**	**1.69**	**127**	*e*PN	**Pn**	**04 42 45.5**	**-1.3**
BALB	**Balikesir**	**1.77**	**34**	*e*PN	**Pn**	**04 42 47.4**	**-0.5**
DNZL	**Cakiroluk**	**1.99**	**103**	*i* P	**Pn**	**04 42 55.6**	**+4.5**
DNZL				*i* S	**Sn**	**04 43 16.5**	**0.0**

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*IDC **03** 04:43:58.6±1.8, 24.78N×141.27E, h113^{km}±15^{km}, mb3.6/8, mb1 3.8/10, mb1mx3.6/22, mbtmp4.0/10, MS3.6/1, Ms1 3.6/1, ms1mx2.5/28, Error ellipse: s-maj=24.9km s-min=14.8km az=93.0*
*JMA **03** 04:43:58.4±0.1, 24.81N×141.41E, h123^{km}, M4.4*
ISC 03 04:43:57.6±1.5, 24.80N±0.09×141.3E±0.2, h123^{km}±13^{km}, n23, σ0^{s}82/24, mb4.0/9, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.99**	**24**	P	**P**	**04 44 31.6**	**+0.1**
JHHJ				*e*S	**S**	**04 44 57.2**	**0.0**
CBIJ	**Chichi jima**	**2.42**	**19**	P	**P**	**04 44 37.9**	**+0.6**
	71nm,0.3s,baz=292,slow=15,SNR=119						
CBIJ				S	**S**	**04 45 07.8**	**+0.7**
	309nm,0.3s,baz=252,slow=23,SNR=12						
CBIJ	**Chichi jima**	**2.42**	**19**	P	**P**	**04 44 37.3**	**+0.1**
CBIJ				*e*S	**S**	**04 45 06.9**	**-0.3**
JHJ2	**Mitsune**	**8.38**	**351**	*e*S	**S**	**04 47 29.5**	**-1.4**
BSO1	**Boso 1**	**9.82**	**358**	P	**P**	**04 46 16.5**	**-0.2**
BSO3	**Boso 3**	**9.99**	**356**	P	**P**	**04 46 17.8**	**-1.1**
JOD2	**Odawara 2**	**10.60**	**350**	P	**P**	**04 46 28.3**	**+1.3**
JHU	**Hanno**	**11.15**	**352**	P	**P**	**04 46 33.4**	**-0.9**
JRY	**Ryogami san**	**11.37**	**350**	P	**P**	**04 46 37.3**	**+0.1**
JAG	**Ashikaga**	**11.69**	**353**	P	**P**	**04 46 41.1**	**-0.4**
JAG				*e*S	**S**	**04 48 45.4**	**-4.5**
MJAR	**Matsushiro Arr**	**12.00**	**348**	P	**P**	**04 46 47.5**	**+2.0**
	0.6nm,0.3s,baz=157,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	**44.99**	**189**	P	**P**	**04 52 02.2**	**-0.3**
	8.8nm,0.4s,mb4.9,baz=7.2,slow=8.5,SNR=66						
ZAL	**Zalesovo**	**50.72**	**320**	LR	LR	05 17 16.5	
	comp=Z,62nm,18.8s,baz=273,slow=39						
MKAR	**Makanchi Array**	**51.34**	**311**	P	**P**	**04 52 52.0**	**+0.6**
	0.7nm,0.4s,mb4.0,baz=87,slow=9.5,SNR=10.0						
STKA	**Stephens Creek**	**56.36**	**180**	P	**P**	**04 53 27.1**	**-1.2**
	2.2nm,0.5s,mb4.5,baz=359,slow=9.5,SNR=8.9						
BVAR	**Borovoye Array**	**59.20**	**318**	P	**P**	**04 53 48.3**	**+0.4**
	1.6nm,0.4s,mb4.4,baz=90,slow=6.0,SNR=8.9						
ILAR	**Eielson Array**	**60.10**	**28**	P	**P**	**04 53 53.2**	**-0.6**
	0.8nm,0.9s,mb3.8,baz=256,slow=5.7,SNR=5.9						
INK	**Inuvik**	**65.44**	**24**	P	**P**	**04 54 29.2**	**+0.2**
	0.7nm,0.4s,mb3.8,baz=308,slow=6.8,SNR=18						
YKA	**Yellowknife Ar**	**74.53**	**28**	P	**P**	**04 55 25.0**	**+1.0**
	0.4nm,0.4s,mb3.5,baz=296,slow=6.1,SNR=4.6						
FINES	**FINESS Array B**	**79.64**	**334**	P	**P**	**04 55 52.0**	**-0.4**
	0.6nm,0.4s,mb3.8,baz=84,slow=3.7,SNR=13						
FINES				pP	pP	04 56 20.5	-3.3
	1.6nm,0.6s,baz=56,slow=5.8,SNR=2.0						
NOA	**NORSAR Array B**	**85.43**	**338**	P	**P**	**04 56 22.6**	**+0.5**
	0.3nm,0.5s,mb3.5,baz=34,slow=4.8,SNR=2.5						
PLCA	**Paso Flores**	**149.08**	**129**	PKPbc	PKPdf	05 03 35.2	+8.3
	1.0nm,0.6s,baz=276,slow=2.5,SNR=3.7						
LPAZ	**La Paz**	**151.22**	**79**	PKPbc	PKPdf	05 03 40.9	+10
	0.5nm,0.4s,baz=307,slow=5.1,SNR=7.6						

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*IDC **03** 04:47:24.3±1.6, 34.45N×73.72E, mb3.9/6, mb1 4.0/9, mb1mx3.8/23, mbtmp3.9/9, ML3.9/3, MS4.0/2, Ms1 4.0/2, ms1mx3.0/30, Error ellipse: s-maj=49.7km s-min=25.2km az=52.0*
*MOS **03** 04:47:24.8±1.0, 34.48N×73.60E, h13^{km}, mb4.1/6, Error ellipse: s-maj=32.8km s-min=9.1km az=98.1*
*NEIC **03** 04:47:26.1±1.0, 34.47N×73.64E, h10^{km}, mb3.8/1, Error ellipse: s-maj=23.1km s-min=16.9km az=79.0*
*NDI **03** 04:47:29.4±3.9, 34.40N×73.48E, h10^{km}, MD3.4, ML3.6*
*NNC **03** 04:47:36.7±2.1, 34.95N×73.14E, h46^{km}±22^{km}, mpv3.8, Error ellipse: s-maj=33.8km s-min=24.4km az=27.0*
ISC 03 04:47:25.2±0.5, 34.57N±0.05×73.6E±0.1, h10^{km}, n40, σ1^{s}06/47, mb3.9/6, MS4.0/2, 9C, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**2.76**	**140**	*e*x	x	04 48 16.9	
THN				*e*SB	**Sb**	**04 48 52.8**	**+4.6**
DLH	**Dalhousie**	**2.82**	**135**	*e*PB	**Pb**	**04 48 22.0**	**+6.7**
DLH				*e*S	**Sn**	**04 48 48.0**	**+2.5**
BHK	**Bhakra**	**3.92**	**142**	*e*x	x	04 49 17.6	
SDNR	**Sundarnagar**	**4.16**	**136**	*e*PB	**Pb**	**04 48 38.8**	**+0.6**
SDNR				*e*S	**Sn**	**04 49 18.8**	**-0.7**
KLP	**Kalpa**	**4.93**	**127**	*e*P	**Pn**	**04 48 42.0**	**+0.8**
KLP				*e*S	**Sn**	**04 49 36.9**	**-2.1**
KLP				AML	AML	04 50 10.4	
	comp=E,125nm,0.5s						
KLP				AML	AML	04 50 12.3	
	comp=N,102nm,0.7s						
KALG	**Kalgarh**	**6.67**	**138**	*e*P	**Pn**	**04 49 07.4**	**+1.7**
KALG				*e*S	**Sn**	**04 50 18.3**	**-4.3**
KHET	**Khetri**	**6.74**	**163**	*e*P	**Pn**	**04 49 07.0**	**+0.2**
KHET				*e*S	**Sn**	**04 50 16.9**	**-7.5**
KUDL	**Kundal**	**6.86**	**158**	*e*P	**Pn**	**04 49 08.0**	**-0.4**
SONA	**Sohna**	**6.96**	**154**	*e*S	**Sn**	**04 50 21.9**	**-8.0**
SONA				*e*S	**Sn**	**04 50 27.6**	**-2.3**
AAK	**Ala-Archa**	**8.08**	**5**	⇑Pn	**P**	**04 49 26.7**	**+1.2**
	comp=N,2.8nm,0.9s						
AAK				⇑Sn	**Sn**	**04 50 57.6**	**-0.3**
	comp=N,5.6nm,1.1s						
AAK	**Ala-Archa**	**8.08**	**5**	*e*P	**P**	**04 49 23.4**	**-2.1**
KK31	**Karatay Array**	**8.86**	**345**	⇑Pn	**P**	**04 49 36.9**	**+0.6**
	comp=N,3.2nm,0.3s,baz=157,slow=11,SNR=33						
KK31				⇑Sn	**Sn**	**04 51 13.5**	**-3.7**
	comp=N,3.1nm,0.5s,baz=151,slow=20,SNR=11						
KKAR	**Karatay Array**	**8.86**	**345**	*e*P	**P**	**04 49 37.1**	**+0.8**
KKAR				S	**Sn**	**04 51 13.9**	**-3.3**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KKAR				smax			
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**13.86**	**26**	Pn	**P**	**04 50 44.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=209,slow=13,SNR=4.3						
AB31	**Akbulak array**	**17.82**	**330**	⇑P	**P**	**04 51 34.8**	**0.0**
	comp=Z,0.4nm,0.4s,baz=71,slow=3.6,SNR=17						
AB31				⇑S	**S**	**04 54 44.3**	**-6.8**
	comp=Z,0.3nm,0.5s						
AB31	**Akbulak array**	**17.82**	**330**	P	**P**	**04 51 34.9**	**+0.1**
BVA0	**Borovoye Array**	**18.59**	**354**	⇑P	**P**	**04 51 45.3**	**+0.9**
	comp=Z,0.5nm,0.5s,baz=164,slow=11,SNR=15						
BVA0	**Borovoye Array**	**18.59**	**354**	*i* P	**P**	**04 51 45.4**	**+1.0**
BVAR	**Borovoye Array**	**18.59**	**354**	P	**P**	**04 51 45.0**	**+0.6**
	comp=Z,1.6nm,0.3s,baz=158,slow=10.0,SNR=21						
BVAR	**Borovoye Array**	**18.59**	**354**	P	**P**	**04 51 45.0**	**+0.6**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**18.64**	**354**	*e*P	**P**	**04 51 45.2**	**+0.3**
	comp=Z,4.1nm,0.6s						
BRVK	**Borovoye**	**18.64**	**354**	*e*P	**P**	**04 51 45.2**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CHKZ	**Chkalovo**	**19.22**	**355**	⇑P	**P**	**04 51 50.9**	**-1.0**
	comp=Z,1.8nm,0.7s						
AKTO	**Aktyubinsk**	**19.52**	**329**	⇑P	**P**	**04 51 54.9**	**-0.5**
	comp=Z,0.8nm,0.9s						
AKTO	**Aktyubinsk**	**19.52**	**329**	P	**P**	**04 51 54.6**	**-0.8**
	comp=Z,0.6nm,0.3s,baz=132,slow=11,SNR=11						
AKTO	**Aktyubinsk**	**19.52**	**329**	P	**P**	**04 51 54.7**	**-0.7**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES	**FINESS Array B**	**40.27**	**327**	P	**P**	**04 55 03.9**	**+0.2**
	comp=Z,1.6nm,0.9s,mb3.8,baz=112,slow=7.5,SNR=2.1						
FINES	**FINESS Array B**	**40.27**	**327**	P	**P**	**04 55 03.9**	**+0.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ARCES	**ARCESS Array B**	**43.74**	**338**	P	**P**	**04 55 32.5**	**+0.6**
	comp=Z,1.9nm,0.9s,mb3.8,baz=102,slow=8.3,SNR=5.3						
ARCES	**ARCESS Array B**	**43.74**	**338**	P	**P**	**04 55 32.5**	**+0.6**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	**Hagfors**	**45.90**	**323**	P	**P**	**04 55 48.9**	**-0.4**
	comp=Z,1.1nm,0.5s,mb4.0,baz=111,slow=13,SNR=5.5						
HFS	**Hagfors**	**45.90**	**323**	P	**P**	**04 55 48.9**	**-0.4**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JNU	**Nakatsue**	**47.02**	**75**	LR	LR	05 20 15.4	
	comp=Z,102nm,19.6s,MS3.8,baz=93,slow=42						
INK	**Inuvik**	**75.45**	**10**	P	**P**	**04 59 10.4**	**0.0**
	comp=Z,1.1nm,0.6s,mb4.0,baz=316,slow=5.3,SNR=8.3						
INK	**Inuvik**	**75.45**	**10**	P	**P**	**04 59 10.5**	**0.0**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**76.03**	**17**	P	**P**	**04 59 12.9**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.8,baz=311,slow=5.2,SNR=7.7						
ILAR	**Eielson Array**	**76.03**	**17**	P	**P**	**04 59 13.0**	**-0.9**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NWAO	**Narrogin (SRO)**	**78.64**	**144**	LR	LR	05 39 59.0	
	comp=Z,112nm,18.3s,MS4.2,baz=127,slow=40						
WRA	**Warramunga Arr**	**79.15**	**123**	P	**P**	**04 59 30.8**	**-1.3**
	comp=Z,0.7nm,0.7s,mb3.7,baz=325,slow=5.4,SNR=6.9						
WRA	**Warramunga Arr**	**79.15**	**123**	P	**P**	**04 59 30.8**	**-1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

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*IDC **03** 05:04:10.2±1.9, 34.78S×178.92W, mb4.5/3, mb1 4.6/5, mb1mx4.3/13, mbtmp4.5/5, ML4.4/2, MS4.0/5, Ms1 4.0/5, ms1mx3.4/26, Error ellipse: s-maj=51.9km s-min=29.0km az=128.0*
*NEIC **03** 05:04:15.8±0.6, 34.80S×179.21W, h30^{km}, mb4.8/6, Error ellipse: s-maj=13.9km s-min=9.5km az=96.0*
ISC 03 05:04:09.4±2.5, 34.72S±0.07×179.1W±0.2, h1^{km}±17^{km}, n43, σ0^{s}93/42, mb4.7/8, MS4.0/4, 4C, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.52**	**215**	*e*PN	**Pn**	**05 05 07.1**	**+0.8**
MXZ				SN	**Sn**	**05 05 49.4**	**+0.3**
MXZ	**Matakaoa Point**	**3.52**	**215**	*e*P	**Pn**	**05 05 07.1**	**+0.8**
MXZ				S	**Sn**	**05 05 49.4**	**+0.2**
PUZ	**Puketiti**	**3.96**	**211**	*e*PN	**Pn**	**05 05 12.7**	**+0.2**
PUZ	**Puketiti**	**3.96**	**211**	*e*P	**Pn**	**05 05 12.7**	**+0.1**
MWZ	**Matawai**	**4.50**	**216**	*e*PN	**Pn**	**05 05 20.9**	**+0.6**
MWZ				SN	**Sn**	**05 06 14.3**	**+0.2**
MWZ	**Matawai**	**4.50**	**216**	*e*P	**Pn**	**05 05 20.9**	**+0.6**
MWZ				S	**Sn**	**05 06 14.3**	**+0.2**
URZ	**Urewera**	**4.65**	**219**	Pn	**Pn**	**05 05 23.3**	**+0.8**
	21nm,0.3s,baz=23,slow=4.5,SNR=65						
URZ				Sn	**Sn**	**05 06 18.2**	**+0.2**
	22nm,0.3s,baz=141,slow=22,SNR=11						
URZ	**Urewera**	**4.65**	**219**	*e*PN	**Pn**	**05 05 23.3**	**+0.8**
URZ				SN	**Sn**	**05 06 17.3**	**-0.7**
URZ	**Urewera**	**4.65**	**219**	*e*P	**Pn**	**05 05 23.3**	**+0.8**
KNZ	**Kokohu**	**5.00**	**210**	*e*PN	**Pn**	**05 05 26.4**	**-1.0**
KNZ				SN	**Sn**	**05 06 22.5**	**-4.2**
KNZ	**Kokohu**	**5.00**	**210**	*e*P	**Pn**	**05 05 26.4**	**-1.0**
RPZ	**Rata Peaks**	**11.77**	**217**	Pn	**P**	**05 06 59.0**	**-2.4**
	1.9nm,0.3s,baz=136,slow=21,SNR=7.3						
RPZ				Sn	**S**	**05 08 59.5**	**-15**
	1.4nm,0.3s,baz=305,slow=23,SNR=5.6						
DZM	**Mont Dzumac**	**17.85**	**311**	LR	LR	05 14 01.8	
	comp=Z,344nm,19.5s,baz=94,slow=33						
PPT	**Papeete**	**31.39**	**65**	LR	LR	05 21 39.2	
	comp=Z,255nm,18.8s,MS3.9,baz=136,slow=34						
STKA	**Stephens Creek**	**32.81**	**264**	P	**P**	**05 10 47.5**	**+1.0**
	3.7nm,1.0s,mb4.2,baz=101,slow=12,SNR=2.9						
STKA				LR	LR	05 23 43.7	
	comp=Z,212nm,18.5s,MS3.9,baz=196,slow=36						
CTA	**Charters Tower**	**33.82**	**286**	P	**P**	**05 10 56.5**	**+1.2**
	7.4nm,0.8s,mb4.6,baz=106,slow=10,SNR=4.1						
CTAO	**Charters Tower**	**33.82**	**286**	*e*P	**P**	**05 10 56.2**	**+0.9**
	26nm,1.3s,mb5.0						
PMG	**Port Moresby**	**39.80**	**301**	LR	LR	05 25 55.9	
	comp=Z,164nm,18.6s,MS3.9,baz=188,slow=33						
WB2	**Warramunga Arr**	**43.49**	**277**	⇑*i*P	**P**	**05 12 15.9**	**-0.2**
WRAB	**Tennant Creek**	**43.49**	**277**	*e*P	**P**	**05 12 16.0**	**-0.1**
	8.1nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**43.50**	**277**	P	**P**	**05 12 16.2**	**0.0**
	5.1nm,0.5s,mb4.5,baz=118,slow=7.6,SNR=58						
FITZ	**Fitzroy Crossi**	**51.54**	**274**	*e*P	**P**	**05 13 18.8**	**-0.4**
	8.5nm,1.3s,mb4.5						
FITZ	**Fitzroy Crossi**	**51.54**	**274**	LR	LR	05 35 25.2	
	comp=Z,414nm,18.0s,MS4.5,baz=136,slow=36						
MBWA	**Marble Bar**	**54.92**	**267**	*e*P	**P**	**05 13 41.8**	**-2.5**
	16nm,1.2s,mb4.9						
QSPA	**South Pole Qui**	**55.41**	**180**	*e*P	**P**	**05 13 47.1**	**0.0**
	13nm,1.2s,mb4.8						
SNAA	**Sanae**	**73.88**	**179**	⇑*i*	**P**	**05 15 47.0**	**0.0**
SNAA	**Sanae**	**73.88**	**179**	*e*	**P**	**05 15 54.6**	**+7.6**
SNAA	**Sanae**	**73.88**	**179**	*e*	**P**	**05 15 59.1**	**+12**
SNAA	**Sanae**	**73.88**	**179**	*e*P	**P**	**05 15 46.2**	**-0.8**
	11nm,1.4s,mb4.7						
SNAA				*e*		05 15 54.6	
SNAA				*e*		05 15 59.1	
VNA3	**Neumayer Olymp**	**74.07**	**176**	*e*	**P**	**05 15 54.9**	**+6.7**
VNA3	**Neumayer Olymp**	**74.07**	**176**	*e*	**P**	**05 15 59.4**	**+11**
VNA3	**Neumayer Olymp**	**74.07**	**176**	⇑*i*P	**P**	**05 15 48.1**	**-0.1**
VNA3				*e*		05 15 54.9	
VNA3				*e*		05 15 59.4	
VNA2	**Neumayer--Watz**	**74.49**	**177**	*e*	**P**	**05 15 57.9**	**+7.3**
VNA2	**Neumayer--Watz**	**74.49**	**177**	*e*	**P**	**05 16 02.4**	**+12**
VNA2	**Neumayer--Watz**	**74.49**	**177**	⇑*i*P	**P**	**05 15 51.1**	**+0.5**
VNA2				*e*		05 15 57.9	
VNA2				*e*		05 16 02.4	
VNA1	**Neumayer--Stat**	**74.73**	**177**	*e*	**P**	**05 16 01.9**	**+10**
VNA1	**Neumayer--Stat**	**74.73**	**177**	*e*	**P**	**05 16 06.7**	**+15**
VNA1	**Neumayer--Stat**	**74.73**	**177**	P	**P**	**05 15 53.8**	**+1.8**
VNA1				*e*		05 16 01.9	
VNA1				*e*		05 16 06.7	
MKAR	**Makanchi Array**	**119.75**	**309**	PKP	PKPdf	05 23 01.7	-1.3
	0.7nm,1.0s,baz=124,slow=5.2,SNR=3.8						
MKAR	**Makanchi Array**	**119.75**	**309**	PKP	PKPdf	05 23 01.7	-1.3
BVAR	**Borovoye Array**	**128.75**	**313**	PKP	PKPdf	05 23 19.4	-0.8
	0.7nm,0.7s,baz=27,slow=3.3,SNR=3.6						
JOF	**Joensuu**	**146.01**	**335**	*e*p	PKPbc	05 23 50.6	+0.4
	14nm,1.4s						
FINES	**FINESS Array B**	**148.79**	**337**	PKPbc	PKPdf	05 23 58.5	+2.7
	5.2nm,0.9s,baz=90,slow=1.9,SNR=7.2						

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*IDC **03** 05:22:29.0±0.7, 55.62S×27.19W, mb4.3/9, mb1 4.3/10, mb1mx4.2/14, mbtmp4.3/10, ML3.7/1, MS3.7/6, Ms1 3.6/6, ms1mx3.5/15, Error ellipse: s-maj=29.7km s-min=16.9km az=40.0*
*BJI **03** 05:22:34.8, 55.60S×27.40W, h39^{km}, mB5.0, Ms4.9, Msz4.6*
*NEIC **03** 05:22:34.8±2.0, 55.64S×27.39W, h40^{km}±19^{km}, mb4.7/11, Error ellipse: s-maj=14.0km s-min=7.5km az=46.0*

ISC 03 05:22:29.1±0.5**, 55.60S**±0.08×**27.3W**±0.2**, h10^{km}, n49,** σ1^{s}**00**/33**, mb4.5**/17**, MS4.0**/7**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	17.24	158	*e*	P	05 26 36.1	+4.9
VNA1	Neumayer--Stat	17.24	158	*e*	P	05 26 41.9	+11
VNA1	Neumayer--Stat	17.24	158	P	P	05 26 33.6	+2.4
VNA1				*e*		05 26 36.1	
VNA1				*e*		05 26 41.9	
VNA3	Neumayer Olymp	17.44	161	*e*	P	05 26 37.4	+3.7
VNA3	Neumayer Olymp	17.44	161	*e*	P	05 26 42.6	+8.9
VNA3	Neumayer Olymp	17.44	161	P	P	05 26 34.4	+0.7
VNA3				*e*		05 26 37.4	
VNA3				*e*		05 26 42.6	
VNA2	Neumayer--Watz	17.64	158	*e*	P	05 26 45.1	+9.0
VNA2	Neumayer--Watz	17.64	158	P	P	05 26 36.7	+0.6
VNA2				*e*		05 26 45.1	
EFI	East Falkland	18.55	269	*e*P	P	05 26 47.9	+0.3
SNAA	Sanae	19.19	156	*e*	P	05 26 56.5	+1.4
SNAA	Sanae	19.19	156	*e*	P	05 27 02.2	+7.1
SNAA	Sanae	19.19	156	P	P	05 26 53.2	-1.9
	0.2nm,0.3s,baz=326,slow=10.0,SNR=31						
SNAA				LR	LR	05 32 30.6	
	comp=Z,58nm,20.8s,baz=222,slow=31						
SNAA	Sanae	19.19	156	P	P	05 26 53.3	-1.8
SNAA				*e*		05 26 56.5	
SNAA				*e*		05 27 02.2	
PMSA	Palmer Station	20.13	228	*e*P	P	05 27 02.6	-3.1
	38nm,1.0s						
USHA	Ushuaia	23.22	255	LR	LR	05 34 46.6	
	comp=Z,223nm,21.9s,MS3.6,baz=68,slow=32						
TRQA	Tornquist	29.07	293	*e*P	P	05 28 30.9	-0.6
	9.3nm,0.7s,mb4.6						
PLCA	Paso Flores	31.84	280	LR	LR	05 42 39.5	
	comp=Z,81nm,18.0s,MS3.5,baz=174,slow=38						
QSPA	South Pole Qui	34.65	180	P	P	05 29 19.4	-0.6
	7.7nm,0.6s,mb4.8						
CPUP	Villa Florida	36.45	311	*e*P	P	05 29 35.8	0.0
	48nm,0.9s,mb5.4						
CFAA	Coronel Fontan	37.31	293	P	P	05 29 42.6	-0.3
	1.3nm,0.8s,mb3.8,baz=148,slow=7.5,SNR=29						
MAW	Mawson	40.56	144	P	P	05 30 09.0	-0.7
	2.5nm,0.7s,mb4.0,baz=216,slow=6.2,SNR=7.4						
MAW				LR	LR	05 46 09.4	
	comp=Z,118nm,19.5s,MS3.8,baz=243,slow=35						
BDFB	Brasilia	42.93	330	P	P	05 30 30.2	+0.5
	2.0nm,0.6s,mb4.0,baz=167,slow=12,SNR=3.8						
BDFB				LR	LR	05 45 23.9	
	comp=Z,116nm,19.6s,MS3.8,baz=12,slow=32						
BOSA	Boshof	45.95	76	P	P	05 30 52.3	-1.4
	4.9nm,1.0s,mb4.4,baz=183,slow=6.2,SNR=9.8						
BOSA				LR	LR	05 45 32.4	
	comp=Z,191nm,18.6s,MS4.1,baz=188,slow=30						
BOSA	Boshof	45.95	76	*e*P	P	05 30 52.4	-1.3
	5.0nm,0.8s,mb4.5						
SBA	Scott Base	46.52	184	*e*P	P	05 30 58.0	+0.3
	3.4nm,0.8s,mb4.3						
VNDA	Vanda	47.02	183	*e*P	P	05 31 00.6	-1.0
	2.6nm,0.6s,mb4.3						
SIV	San Ignacio	47.21	313	P	P	05 31 03.8	0.0
	4.3nm,0.6s,mb4.5,baz=155,slow=8.1,SNR=38						
LPAZ	La Paz	50.05	305	P	P	05 31 27.4	+1.6
	7.5nm,0.7s,mb4.8,baz=157,slow=6.7,SNR=53						
LPAZ	La Paz	50.05	305	*e*P	P	05 31 27.2	+1.4
	13nm,0.9s,mb5.0						
CASY	Casey	54.36	160	P	P	05 31 58.2	+0.8
	9.9nm,1.0s,mb4.7						
SAML	Samuel	54.43	315	*e*P	P	05 31 58.1	-0.5
	12nm,0.8s,mb4.9						
DBIC	Dimbokro	64.79	25	P	P	05 33 09.5	-0.6
	8.2nm,1.3s,mb4.6,baz=126,slow=4.0,SNR=4.3						
SDV	Santo Domingo	73.63	315	*e*P	P	05 34 03.8	-0.7
	6.9nm,1.0s,mb4.5						
MDT	Midelt	90.19	19	P	P	05 35 32.0	+1.5
	1.2nm,0.8s,mb4.2,baz=216,slow=5.4,SNR=5.0						
STKA	Stephens Creek	92.36	171	P	P	05 35 42.0	+1.5
	2.1nm,0.8s,mb4.5,baz=259,slow=5.2,SNR=3.8						
FINES	FINESS Array B	124.03	28	PKP	PKPdf	05 41 26.9	-2.8
	2.0nm,0.6s,baz=180,slow=1.4,SNR=9.7						
ARCES	ARCESS Array B	130.56	22	PKP	PKPdf	05 41 39.5	-2.5
	1.3nm,0.5s,baz=220,slow=1.8,SNR=16						
BVAR	Borovoye Array	134.61	57	PKP	PKPdf	05 41 47.4	-2.6
	0.8nm,0.5s,baz=252,slow=4.7,SNR=5.4						
YKA	Yellowknife Ar	135.78	318	PKP	PKPdf	05 41 49.6	-2.2
	0.6nm,0.6s,baz=128,slow=2.3,SNR=4.9						
WMQ	Urumqi	137.90	78	*e*PKP	PKPdf	05 41 55.0	-1.3
WMQ				*e*PP	PP	05 44 46.0	+1.0
WMQ				PP	PP		
	comp=Z,150nm,5.3s						
WMQ				LR	LR		
	comp=N,80nm,19.7s,MS4.5						
WMQ				LR	LR		
	comp=E,50nm,22.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,80nm,21.2s,MS4.4						
LZH	Lanzhou	141.77	100	*e*PKP	PKPdf	05 42 02.1	-1.2
LZH				*e*PP	PP	05 45 10.2	+1.7
LZH				SKKS		05 52 00.3	
LZH				*e*SS	SS	06 03 41.2	+3.3
LZH				PP	PP		
	comp=Z,50nm,7.8s						
LZH				LR	LR		
	comp=E,170nm,18.5s						
LZH				LR	LR		
	comp=Z,210nm,20.0s,MS4.9						
INK	Inuvik	145.40	321	*e*PKPdf	PKPdf	05 42 06.7	-1.9
DAWY	Dawson	146.43	313	*e*PKPdf	PKPdf	05 42 09.5	-1.0
NJ2	Nanjing	146.64	121	*e*PKP	PKPdf	05 42 05.9	-5.9
HHC	Hu-ho-hao-te	149.42	101	*e*PKP	PKPdf	05 42 14.1	-1.9
HHC				PP	PP	05 45 54.7	+1.5
HHC				PP	PP		
	comp=Z,40nm,3.9s						
ILAR	Eielson Array	149.75	312	PKPbc	PKPdf	05 42 18.4	+2.5
	comp=Z,4.1nm,0.9s,baz=151,slow=0.9,SNR=26						
COLA	College	150.18	312	*e*PKPbc	PKPdf	05 42 17.7	+1.2
MCK	McKinley	150.42	310	*e*PKPbc	PKPdf	05 42 19.9	+3.1
SONM	Songino Array	150.78	86	PKP	PKPdf	05 42 16.8	-1.1
	comp=Z,0.7nm,0.4s,baz=142,slow=28,SNR=2.9						
SONM				PKPbc	PKPdf	05 42 21.6	+3.7
	comp=Z,4.8nm,0.6s,baz=219,slow=3.2,SNR=26						

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*LDG **03** 05:29:45.5±0.1, 48.29N×7.45E, h8^{km}, Md2.5/3, Ml2.5/9, Error ellipse: s-maj=1.8km s-min=1.4km az=105.0*

*STR **03** 05:29:45.8±0.3, 48.26N×7.45E, h5^{km}±1^{km}, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*NEIC **03** 05:29:45.8, 48.26N×7.45E, h5^{km}, ML2.5(LDG), ML2.0(STR), After STR.*

*CSEM **03** 05:29:45.5±0.1, 48.29N×7.44E, h10^{km}, ML2.5/9, Error ellipse: s-maj=1.9km s-min=1.6km az=161.0*

BGR 03 05:29:45.7±0.3**, 48.29N×7.46E, h5^{km}, ML1.8**/2**, Error ellipse: s-maj=5.6km s-min=3.3km az=149.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	Welschbruch	0.14	330	*e*Pg	Pg	05 29 48.6	-0.1
LIBD	Limburg	0.17	146	*e*Pg	Pg	05 29 49.0	-0.1
CDF	Champ du Feu	0.18	315	*e*Pg	Pg	05 29 48.9	-0.4
CDF				*e*Sg	Sg	05 29 51.6	-0.1
	28nm,0.2s						
ECH	Echery	0.21	251	Pg	Pg	05 29 49.6	-0.5
ECH				Sg	Sg	05 29 52.7	-0.3
ECH	Echery	0.21	251	*e*Pg	Pg	05 29 49.7	-0.4
ECH	Echery	0.21	251	Pg	Pg	05 29 49.7	-0.4
ECH				Sg	Sg	05 29 52.7	-0.3
MOF	Molkenrain	0.49	207	*e*Pg	Pg	05 29 54.8	-0.8
BFO	Black Forest	0.58	86	*e*Pg	Pg	05 29 57.6	+0.3
BFO				*e*Sg	Sg	05 30 04.0	-1.1
HINF	Hinteralfeld	0.62	221	*e*Pg	Pg	05 29 57.0	-1.2
HINF				*e*Pn	Pn	05 29 58.2	-2.7
HINF				*e*Sg	Sg	05 30 05.4	-1.1
	19nm,0.2s						
LANF	Langenberg	0.73	18	Pg	Pg	05 30 00.9	+0.6
HAU	Haudompre	0.80	250	*e*Pg	Pg	05 30 00.4	-1.3
HAU				*e*Pn	Pn	05 30 01.3	-2.0
HAU				*e*Sg	Sg	05 30 10.8	-1.5
	22nm,0.3s						
BBS	Basel-Blauen	0.82	178	Pg	Pg	05 30 01.8	-0.4
BBS				Sg	Sg	05 30 11.8	-1.4
THEF	They Montfort	0.99	267	Pg	Pg	05 30 04.5	-0.9
THEF				Sg	Sg	05 30 18.7	+0.1
THEF	They Montfort	0.99	267	*e*Pg	Pg	05 30 04.5	-1.0
LOMF	Lomont	1.03	205	Pg	Pg	05 30 05.0	-1.3
LOMF				Sg	Sg	05 30 18.9	-1.1
LOMF	Lomont	1.03	205	*e*Pg	Pg	05 30 05.1	-1.2
STU	Stuttgart	1.25	67	*e*Sg	Sg	05 30 25.2	-2.1
RFYF	Reffroy	1.37	285	*e*Sg	Sg	05 30 28.5	-2.7
	34nm,0.2s,baz=108						
MEZF	Maizieres J'vi	1.62	278	*e*Sg	Sg	05 30 36.2	-3.5
	3.4nm,0.2s						
SFTF	Sexfontaines	1.62	268	*e*Sg	Sg	05 30 36.7	-3.0
	11nm,0.2s						
CABF	La Chapelle	1.92	210	*e*Pn	Pn	05 30 16.5	-2.9
CABF				*e*Pg	Pg	05 30 21.8	-2.2
CABF				*e*Sg	Sg	05 30 45.0	-4.6
	2.8nm,0.3s						
TNS	Taunus Mts	2.04	18	*e*Sg	Sg	05 30 50.4	-3.2
LOR	Lormes	2.63	249	*e*Pg	Pg	05 30 34.5	-3.8
	baz=68						
LOR				*e*Sg	Sg	05 31 07.2	-6.3
	3.5nm,0.2s						
SSF	Saint Saulge	2.94	247	*e*Pg	Pg	05 30 39.8	-4.6
SSF				*e*Sg	Sg	05 31 16.0	-7.6
	1.4nm,0.4s						
SMF	Signal de Mont	2.96	238	*e*Pg	Pg	05 30 40.4	-4.3
SMF				*e*Sg	Sg	05 31 17.4	-6.7
	2.2nm,0.2s						
AVF	Avril sur Loir	3.16	243	*e*Pg	Pg	05 30 43.9	-4.9
AVF				*e*Sg	Sg	05 31 24.6	-6.4
	1.0nm,0.2s						
BGF	Bois d'Agland	3.58	243	*e*Pg	Pg	05 30 52.0	-5.2

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*IDC **03** 05:33:23.9±2.3, 34.86S×178.81W, mb4.5/3, mb1 4.6/5, mb1mx4.3/14, mbtmp4.4/5, ML4.1/2, MS3.8/7, Ms1 3.8/7, ms1mx3.3/30, Error ellipse: s-maj=56.3km s-min=31.0km az=123.0*

*NEIC **03** 05:33:30.2±1.3, 34.83S×179.15W, h30^{km}, mb4.5/4, Error ellipse: s-maj=27.6km s-min=17.8km az=92.0*

ISC 03 05:33:28.7±1.4**, 34.78S**±0.09×**179.1W**±0.2**, h33^{km}, n20,** σ1^{s}**06**/17**, mb4.5**/5**, MS3.8**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MWZ	Matawai	4.45	216	PN	Pn	05 34 35.5	-0.2
MWZ				SN	Sn	05 35 27.7	+0.7
URZ	Urewera	4.60	220	Pn	Pn	05 34 37.4	-0.5
	12nm,0.3s,baz=33,slow=7.6,SNR=40						
URZ				Sn	Sn	05 35 32.5	+1.5
	16nm,0.3s,baz=153,slow=23,SNR=11						
URZ	Urewera	4.60	220	PN	Pn	05 34 38.0	0.0
URZ				SN	Sn	05 35 31.0	+0.1
KNZ	Kokohu	4.94	210	PN	Pn	05 34 41.2	-1.5
RPZ	Rata Peaks	11.71	217	Pn	P	05 36 13.4	-3.1
	1.1nm,0.3s,baz=19,slow=16,SNR=4.2						
RPZ				Sn	S	05 38 15.2	-12
	0.6nm,0.3s,baz=276,slow=15,SNR=3.6						
DZM	Mont Dzumac	17.89	311	LR	LR	05 42 55.9	
	comp=Z,163nm,19.6s,baz=134,slow=32						
STKA	Stephens Creek	32.80	264	LR	LR	05 52 39.7	
	comp=Z,108nm,20.4s,MS3.5,baz=26,slow=35						
CTA	Charters Tower	33.84	287	P	P	05 40 11.6	+1.5
	3.9nm,0.8s,mb4.4,baz=107,slow=14,SNR=3.5						
CTA				LR	LR	05 52 38.0	
	comp=Z,47nm,18.5s,MS3.2,baz=227,slow=34						
CTAO	Charters Tower	33.84	287	P	P	05 40 11.3	+1.2
	26nm,1.4s,mb5.0						
PMG	Port Moresby	39.84	301	LR	LR	05 55 10.9	
	comp=Z,119nm,19.6s,MS3.7,baz=58,slow=33						
WB2	Warramunga Arr	43.49	277	*e*P	P	05 41 30.3	-0.5
WRAB	Tennant Creek	43.50	277	*e*P	P	05 41 30.8	0.0
	5.3nm,0.6s,mb4.5						
WRA	Warramunga Arr	43.50	277	P	P	05 41 31.0	+0.1
	3.8nm,0.7s,mb4.3,baz=120,slow=7.5,SNR=37						
FITZ	Fitzroy Crossi	51.55	274	*e*P	P	05 42 33.2	-0.5
	4.9nm,0.7s,mb4.5						
FITZ	Fitzroy Crossi	51.55	274	P	P	05 42 33.1	-0.7
	5.1nm,0.6s,mb4.6,baz=126,slow=9.9,SNR=7.9						
FITZ				LR	LR	06 04 58.2	
	comp=Z,278nm,18.8s,MS4.3,baz=164,slow=37						
QSPA	South Pole Qui	55.34	180	*e*P	P	05 43 02.7	+1.7
	4.0nm,0.8s,mb4.5						
TXAR	Lajitas Array	95.53	58	LR	LR	06 22 24.2	
	comp=Z,54nm,18.5s,MS4.0,baz=215,slow=31						
NEW	Newport	99.46	37	LR	LR	06 27 50.5	
	comp=Z,66nm,18.2s,MS4.2,baz=128,slow=33						
FINES	FINESS Array B	148.85	337	PKPbc	PKPdf	05 53 12.7	+4.7
	1.4nm,0.7s,baz=27,slow=4.3,SNR=6.2						
BRTR	Keskin Array B	153.54	290	PKPbc	PKPdf	05 53 25.1	+9.3
	0.9nm,1.0s,baz=92,slow=3.5,SNR=5.1						

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*ISK **03** 05:37:44.5, 38.12N×26.61E, h16^{km}, MD3.7*

*ATH **03** 05:37:44.2, 38.12N×26.56E, h28^{km}±1^{km}, MD3.8/7*

*NEIC **03** 05:37:44.0, 38.10N×26.60E, h16^{km}, MD3.8(ATH), MD3.7(ISK), After ISK.*

*CSEM **03** 05:37:44.0±0.1, 38.12N×26.63E, h12^{km}, MD3.7, Error ellipse: s-maj=1.4km s-min=1.0km az=91.0*

ISC 03 05:37:44.0±0.3**, 38.13N**±0.02×**26.53E**±0.03**, h10^{km}, n64,** σ0^{s}**88**/89**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.23	13	*i* P	Pg	05 37 48.9	-0.2
URLA				*i* S	Sg	05 37 53.6	+1.2
BLCB	Balcova	0.48	58	*i* PG	Pg	05 37 53.6	-0.1
SMG	Samos	0.49	150	*e*PB	Pb	05 37 54.2	0.0
SMG				*e*SB	Sb	05 38 01.6	+0.5
IZM	Izmir	0.64	65	*i* PG	Pg	05 37 56.6	-0.3
IZM				*i* SG	Sg	05 38 05.2	-0.3
KDAG	Bornova	0.64	65	*i* P	Pb	05 37 55.4	-1.4
KDAG				*i* S	Sb	05 38 04.3	-1.3
PRK	Paraskevi	1.13	350	*e*PN	Pn	05 38 05.8	-0.1
PRK				*e*SN	Sn	05 38 21.7	+0.2
AYDN	Tasoluk	1.17	113	*i* P	Pb	05 38 05.8	0.0
AYDN				*i* S	Sb	05 38 21.3	+0.4
AYVA	Ayvalik	1.18	6	*i* P	Pb	05 38 07.3	+1.2
AYVA				*i* S	Sb	05 38 25.5	+4.2
BODT	Bodrum	1.23	149	PN	Pn	05 38 07.3	-0.1
BODT				SN	Sn	05 38 23.6	-0.6
AKS	Akhisar	1.26	53	PN	Pn	05 38 06.9	-0.8
BDRM	Kayabasi	1.29	145	*i* P	Pb	05 38 10.3	+2.3
BDRM				*i* S	Sb	05 38 26.8	+2.4
MLSB	Milas	1.29	130	PN	Pn	05 38 07.7	-0.5
APE	Apeiranthos	1.32	217	PN	Pn	05 38 08.9	+0.3
APE				SN	Sn	05 38 27.5	+1.1
APE	Apeiranthos	1.32	217	*e*Pb	Pb	05 38 08.0	-0.5
APE	Apeiranthos	1.32	217	*e*Pn	Pn	05 38 08.9	+0.3
APE				*e*Sn	Sn	05 38 27.5	+1.1
DAT	Datca	1.63	149	PN	Pn	05 38 12.6	-0.4
MANT	Manisa	1.64	77	*i* P	Pn	05 38 14.7	+1.6
MANT				*i* S	Sn	05 38 35.9	+1.6
EZN	Ezine	1.70	355	PN	Pn	05 38 14.7	+0.7
YER	Yerkesik	1.71	125	PN	Pn	05 38 13.7	-0.5
BALB	Balikesir	1.84	35	PN	Pn	05 38 16.1	+0.1
SANT	Santorini	1.95	206	*e*Pn	Pn	05 38 16.8	-0.8
SANT				*e*Pg	Pg	05 38 21.8	-1.2
SANT	Santorini	1.95	206	*e*Pn	Pn	05 38 16.8	-0.8
SANT	Santorini	1.95	206	*e*Pg	Pg	05 38 21.8	-1.2
BTOK	Tokmak	2.01	35	*i* P	Pn	05 38 20.4	+2.0
BTOK				*i* S	Sn	05 38 49.1	+5.3
DENT	Denizli	2.02	100	PN	Pn	05 38 17.7	-0.8
DNZL	Cakiroluk	2.04	102	*i* P	Pn	05 38 18.6	-0.3
DNZL				*i* S	Sn	05 38 51.4	+6.7
LIA	Limnos Island	2.05	330	*e*PN	Pn	05 38 19.3	+0.3
DALT	Dalyan (Mudla)	2.16	128	*e*PN	Pn	05 38 20.2	-0.4
DST	Dursunbey	2.20	47	PN	Pn	05 38 20.8	-0.4
LPK	Lapseki	2.25	5	*e*PN	Pn	05 38 22.3	+0.5
ARG	Arkhangelos	2.30	146	*e*PN	Pn	05 38 22.2	-0.4
EDC	Edincik	2.44	25	*e*PN	Pn	05 38 24.9	+0.2
BNT	Bandirma	2.47	26	*e*PN	Pn	05 38 25.0	-0.1
GDZ	Gediz	2.50	67	*i* P	Pn	05 38 30.2	+4.7
GDZ				*i* S	Sn	05 39 01.3	+4.9
FETY	Fethiye	2.52	125	*e*PN	Pn	05 38 25.2	-0.6
KCT	Karacabey	2.56	33	*e*PN	Pn	05 38 25.8	-0.6
GOLH	Golhisar	2.57	109	*i* P	Pn	05 38 26.8	+0.4
GOLH				*i* S	Sn	05 39 08.7	+11
MRMT	Marmara Adasi	2.60	18	*e*PN	Pn	05 38 27.1	+0.1
SART	Tekirdag	2.60	11	*i* P	Pn	05 38 31.7	+4.8
SART				*i* S	Sn	05 39 06.7	+7.8
KARP	Karpathos	2.63	169	*e*PN	Pn	05 38 26.9	-0.4
ORLT	Orhaneli	2.66	43	*e*PN	Pn	05 38 27.5	-0.2
MFT	Murefte	2.72	12	*e*PN	Pn	05 38 28.8	+0.3
ULDT	Uludag	2.85	44	*i* P	Pn	05 38 37.8	+7.3
ULDT				*i* S	Sn	05 39 14.0	+8.7
ALT	Altintas	2.96	71	*e*PN	Pn	05 38 31.4	-0.6
TKTP	Tekketepe	3.00	91	*i* P	Pn	05 38 31.7	-0.8
TKTP				*i* S	Sn	05 39 25.1	+16
AKAS	Kas	3.10	127	*i* P	Pn	05 38 34.4	+0.3
AKAS				*i* S	Sn	05 39 15.1	+3.5
RDO	Rodhopi	3.11	346	*e*PN	Pn	05 38 33.8	-0.3
ISP	Isparta	3.16	94	*e*Pn	Pn	05 38 34.1	-0.8
ISP				*e*Pb	Pb	05 38 43.1	+3.2
VLI	Veliai	3.19	245	*e*PN	Pn	05 38 35.2	0.0
YLV	Yalova	3.28	41	*e*PN	Pn	05 38 36.0	-0.6
CTT	Catalca	3.35	25	*e*PN	Pn	05 38 37.6	0.0
ELBA	Catalca	3.35	25	*i* P	Pn	05 38 45.2	+7.6
ELBA				*i* S	Sn	05 39 31.3	+13
BADT	Buyukada	3.38	36	*e*PN	Pn	05 38 37.4	-0.5
BORA	Eskisehir	3.52	59	*i* P	Pn	05 38 50.4	+10
BORA				*i* S	Sn	05 39 36.0	+14
ISK	Istanbul-Kandi	3.52	33	*e*PN	Pn	05 38 39.6	-0.4
HRT	Hereke	3.62	41	*e*PN	Pn	05 38 41.0	-0.4
ESKT	Eskisehir	3.65	66	*e*PN	Pn	05 38 40.9	-0.9
ESKT	Eskisehir	3.65	66	*i* P	Pn	05 38 51.5	+10
ESKT				*i* S	Sn	05 39 39.2	+14
EDRB	Edirne	3.71	3	*e*PN	Pn	05 38 43.1	+0.3
KIZT	Kizilcal	4.27	78	*e*PN	Pn	05 38 50.2	-0.4
HENT	Hendek	4.32	50	*i* P	Pn	05 39 02.8	+11
HENT				*i* S	Sn	05 40 04.0	+22
SGKT	Sivrigoynuk	4.93	59	*i* P	Pn	05 39 18.7	+19
SGKT				*i* S	Sn	05 40 19.4	+22
BR131	Keskin Array S	5.77	72	*e*Pn	Pn	05 39 11.0	-0.9
	2.4nm,0.6s						
BR131	Keskin Array S	5.77	72	*e*Pn	Pn	05 39 11.0	-0.8
	2.4nm,0.6s						

MAN 03 05:44:13.1, 13.75N×120.53E, h78^{km}, mb3.6, ML2.4, MS1.9, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.28	267	*e*P	P	05 44 26.4	+1.3
LUBP				*e*S	S	05 44 37.0	+3.0
PGP	Puerto Galera	0.48	121	*i* P	P	05 44 28.2	+1.7
SJMP	San Jose	1.40	156	*e*P	P	05 44 38.8	+1.2
SJMP				*e*S	S	05 44 58.1	+2.5
BUSP	Coron	1.76	191	*e*P	P	05 44 42.2	-0.1
BUSP				*e*S	S	05 45 04.8	+0.9

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*IDC **03** 05:51:28.3±4.9, 58.24N×155.97W, h96^{km}±27^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.3/23, mbtmp3.7/6, Error ellipse: s-maj=48.6km s-min=18.0km az=69.0*

*NEIC **03** 05:51:29.9, 58.00N×155.93W, h117^{km}, MG3.3(AEIC), After AEIC.*

ISC 03 05:51:28.6±0.8**, 58.14N**±0.06×**155.9W**±0.1**, h123^{km}**±5^{km}**, n38,** σ1^{s}**12**/42**, mb3.5**/3**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KJL	Kejulik	0.20	115	P	P	05 51 45.7	0.0
KJL				S	S	05 51 58.6	0.0
MGLS	Mageik LS	0.32	77	P	P	05 51 46.5	+0.4
CAHL	Cahill	0.33	105	P	P	05 51 46.1	0.0
KABR	Katmai Barrier	0.50	90	P	P	05 51 47.0	0.0
KAPH	Katmai Pasha	0.94	60	P	P	05 51 51.6	+1.0
ANPK	Aniakchak Peak	1.77	224	P	P	05 51 58.3	-1.6
AUW	Augustine West	1.77	45	P	P	05 52 01.5	+1.6
KDAK	Kodiak Island	1.81	100	P	P	05 51 59.7	-0.6
	7.9nm,0.3s,baz=294,slow=12,SNR=155						
KDAK				S	S	05 52 22.3	-2.0
	19nm,0.3s,baz=179,slow=22,SNR=69						
KDAK	Kodiak Island	1.81	100	P	P	05 51 59.6	-0.7
KDAK				S	S	05 52 22.5	-1.8
OPT	Oil Point	2.06	41	P	P	05 52 05.2	+1.8
ILW	Iliamna West	2.40	35	P	P	05 52 09.2	+1.2
CNPM	China Poot	2.80	58	P	P	05 52 13.8	+0.6
SVW2	Sparrevohn	2.97	3	P	P	05 52 16.4	+0.9
SEW	Seward	3.87	57	P	P	05 52 28.2	+0.7
STLK	Strandline Lak	3.95	30	P	P	05 52 30.6	+2.0
MPA	Moose Pass	4.10	52	P	P	05 52 31.8	+1.2
RC01	Rabbit Creek A	4.31	44	P	P	05 52 33.7	+0.2
TT01	Tatalina	4.79	359	P	P	05 52 40.7	+0.8
HIN	Hinchinbrook I	5.33	61	P	P	05 52 47.2	0.0
FID	Port Fidalgo	5.48	57	P	P	05 52 48.2	-0.9
SCM	Sheep Creek Mo	5.68	46	P	P	05 52 51.9	+0.1
EYAK	Cordova Ski Ar	5.73	61	P	P	05 52 52.3	-0.3
TRF	Thorofare Moun	6.00	25	P	P	05 52 56.7	+0.6
KLU	Klutina	6.06	52	P	P	05 52 57.2	+0.2
MCK	McKinley	6.56	28	P	P	05 53 03.3	-0.6
WRH	Wood River Hil	7.38	27	P	P	05 53 13.4	-1.6
BALM	Baldy	7.47	61	P	P	05 53 16.1	-0.1
CCB	Clear Creek Bu	7.59	27	P	P	05 53 16.0	-1.9
MDM	Murphy Dome	7.76	25	P	P	05 53 18.4	-1.7
COLA	College	7.77	26	P	P	05 53 18.7	-1.6
IL1	Eielson Array	7.93	29	P	P	05 53 20.6	-1.8
ILAR	Eielson Array	7.93	29	P	P	05 53 20.4	-2.0
	1.2nm,0.3s,baz=221,slow=12,SNR=68						
ILAR				S	S	05 54 46.9	-4.0
	0.7nm,0.3s,baz=220,slow=24,SNR=11						
IM3	Indian Mountai	7.94	6	P	P	05 53 23.6	+1.1
INK	Inuvik	14.23	35	P	P	05 54 43.5	-1.5
	0.2nm,0.3s,baz=219,slow=12,SNR=14						
YKA	Yellowknife Ar	20.64	60	P	P	05 55 59.9	+0.3
	0.8nm,0.6s,baz=274,slow=9.8,SNR=7.0						
YBH	Yreka Blue Hor	26.57	114	P	P	05 56 58.4	+1.9
	1.4nm,0.6s,mb3.7,baz=331,slow=2.8,SNR=4.8						
PDAR	Pinedale Array	32.53	98	P	P	05 57 50.0	+0.5
	0.7nm,0.5s,mb3.8,baz=324,slow=4.9,SNR=6.4						
TXAR	Lajitas Array	45.83	106	P	P	05 59 40.3	+0.6
	0.2nm,0.6s,mb3.0,baz=304,slow=4.5,SNR=4.7						

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*KRSC **03** 06:06:44.5±1.1, 49.45N×157.58E, h45^{km}±21^{km}, ML4.4*

*IDC **03** 06:06:46.1±3.0, 50.04N×157.29E, mb3.9/7, mb1 4.0/7, mb1mx3.7/21, mbtmp3.9/7, MS2.9/1, Ms1 2.9/1, ms1mx2.6/29, Error ellipse: s-maj=89.4km s-min=31.4km az=9.0*

*MOS **03** 06:06:48.1±1.8, 49.80N×157.28E, h37^{km}, mb4.4/5, Error ellipse: s-maj=36.5km s-min=9.9km az=80.1*

ISC 03 06:06:45.9±1.1**, 49.52N**±0.06×**157.7E**±0.1**, h39^{km}**±10^{km}**, n44,** σ0^{s}**91**/55**, mb3.9**/7**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.56	319	*i* P	P	06 07 09.2	-2.4
SKR				*i* S	S	06 07 27.8	-3.0
ALID	Alaid	1.94	315	*e*P	P	06 07 16.8	-0.3
PAU	Pauzhetka	2.03	344	*e*P	P	06 07 19.0	+0.6
PAU				*e*S	S	06 07 43.7	+0.9
PAU				Smax			
	830nm,0.9s						
MIPR	Malaya Ipel'ka	2.83	348	*e*P	P	06 07 30.3	+0.6
RUS	Russkaya	2.96	9	P	P	06 07 30.3	-1.3
RUS				S	S	06 08 04.5	-1.7
RUS	Russkaya	2.96	9	*e*P	P	06 07 32.7	+1.1
RUS				*e*S	S	06 08 06.3	+0.1
GRL	Gorelyy	3.04	4	*e*P	P	06 07 32.7	-0.1
GRL				*e*S	S	06 08 09.0	+0.6
KRMR	Karymshinskiy	3.32	4	*e*P	P	06 07 37.9	+1.1
KRMR				*e*S	S	06 08 16.1	+0.6
APC	Apacha	3.43	354	*e*P	P	06 07 38.3	0.0
PET	Petropavlovsk	3.56	9	*e*PN	P	06 07 43.5	+3.4
PET				*e*S	S	06 08 22.5	+1.1
PET				pmax	pmax		
	comp=Z,34nm,0.5s						
PET				smax			
	comp=N,224nm,0.5s						
PET				smax			
	comp=E,198nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,14.0s						
UGLR	Uglovaya	3.76	10	*e*P	P	06 07 43.6	+0.7
NLC	Nalytchevo	3.79	15	P	P	06 07 43.7	+0.3
NLC				S	S	06 08 26.6	-0.8
NLC	Nalytchevo	3.79	15	*e*P	P	06 07 43.7	+0.3
NLC				*e*S	S	06 08 26.9	-0.5
AVH	Avacha	3.80	9	*e*P	P	06 07 44.1	+0.5
AVH				*e*S	S	06 08 27.2	-0.5
SMAR	Somma	3.81	10	*e*P	P	06 07 44.4	+0.8
KOK	Koryaka	3.82	8	*e*P	P	06 07 44.4	+0.6
SDLR	Sedlovina	3.83	10	*e*P	P	06 07 43.9	-0.1
SPN	Mys Shipunski	3.86	21	P	P	06 07 43.7	-0.7

SPN				S	S	06 08 26.5	-2.6
SPN	Mys Shipunski	3.86	21	eP	P	06 07 44.1	-0.3
GNL	Ganaly	4.18	2	eP	P	06 07 49.6	+0.6
GNL				eS	S	06 08 37.2	-0.1
MKZ	Mys Kozlova	5.62	25	P	P	06 08 07.7	-1.4
MKZ	Mys Kozlova	5.62	25	eP	P	06 08 08.1	-1.0
ZLN	Zelenaya	6.77	15	eP	P	06 08 25.8	+0.5
LGNR	Loginova	6.81	14	eP	P	06 08 26.7	+0.7
KRSR	Krestovskiy	6.92	13	eP	P	06 08 27.4	-0.1
KBTR	Krutoberegovo	7.37	23	P	P	06 08 32.2	-1.5
KBTR	Krutoberegovo	7.37	23	eP	P	06 08 32.3	-1.4
SMKR	Semkarok	7.42	16	eP	P	06 08 34.2	-0.2
SRKR	Sorokina	7.44	15	eP	P	06 08 34.1	-0.6
BKI	Bering	7.60	38	eS	S	06 09 52.5	-10
ASAJ	Asahikawa	11.68	248	LR	LR	06 14 16.0	
	comp=Z,54nm,18.7s,baz=340,slow=39						
MKAR	Makanchi Array	48.42	297	P	P	06 15 25.9	+0.2
	comp=Z,0.4nm,0.3s,mb3.9,baz=56,slow=6.2,SNR=14						
BVAR	Borovoye Array	51.48	310	P	P	06 15 49.0	-0.2
	comp=Z,0.7nm,0.4s,mb3.9,baz=55,slow=8.7,SNR=5.1						
BVAR	Borovoye Array	51.48	310	P	P	06 15 49.0	-0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	56.22	342	P	P	06 16 23.5	-0.3
	comp=Z,3.8nm,0.9s,mb4.4,baz=44,slow=6.8,SNR=5.7						
ARCES	ARCESS Array B	56.22	342	P	P	06 16 23.5	-0.3
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
FINES	FINESS Array B	62.80	336	P	P	06 17 08.5	-0.7
	comp=Z,4.4nm,1.0s,mb4.5,baz=27,slow=4.3,SNR=3.4						
FINES	FINESS Array B	62.80	336	P	P	06 17 08.5	-0.7
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NB2	NORSAR Subarra	66.54	343	P	P	06 17 34.4	+1.2
	comp=Z,0.4nm,0.5s,mb3.7,baz=21,slow=7.0						
NOA	NORSAR Array B	66.54	343	P	P	06 17 33.7	+0.5
	comp=Z,1.6nm,0.8s,mb4.1,baz=25,slow=6.5,SNR=2.9						
NOA	NORSAR Array B	66.54	343	P	P	06 17 33.7	+0.5
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	70.89	328	P	P	06 18 00.8	+0.5
	comp=Z,0.5nm,0.3s,mb3.9,baz=32,slow=6.6,SNR=5.0						
AKASG	Malin Array Be	70.89	328	P	P	06 18 00.8	+0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	Lajitas Array	73.47	64	P	P	06 18 20.8	+4.8
	comp=Z,0.1nm,0.5s,mb3.0,baz=301,slow=5.3,SNR=2.7						

*NNC **03** 06:07:27.5±2.0, 35.06N×72.40E, mpv3.6, Error ellipse: s-maj=30.5km s-min=17.0km az=111.0*

ISC 03 06:07:22.6±1.5**, 35.0N**±0.2×**73.7E**±0.5**, h33**^{km}**, n6, σ0**^{s}**54**/8**, 6C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.04	145	eP	P	06 08 09.5	0.0
THN				eS	S	06 08 45.0	-0.2
NDI	New Delhi	6.94	153	ex	x	06 09 44.3	
NDI				ex	x	06 10 06.4	
KK31	Karatay Array	8.50	344	⇑P	P	06 09 27.2	+1.0
	1.1nm,0.3s,baz=158,slow=11,SNR=21						
KK31				⇑S	S	06 11 01.5	-0.5
	0.9nm,0.4s,baz=170,slow=22,SNR=11						
KK31	Karatay Array	8.50	344	⇑P	P	06 09 27.2	+1.0
	1.1nm,0.3s,baz=158,slow=11,SNR=21						
KK31				⇑S	S	06 11 01.5	-0.5
	0.9nm,0.4s,baz=170,slow=22,SNR=11						
AB31	Akbulak array	17.50	329	⇑P	P	06 11 25.1	-0.4
	0.7nm,0.8s,baz=2.3,slow=26,SNR=6.8						
AB31	Akbulak array	17.50	329	⇑P	P	06 11 25.1	-0.4
	0.7nm,0.8s,baz=2.3,slow=26,SNR=6.8						

MAN 03 06:09:03.1, 8.54N×122.81E, h1^{km}, mb4.7, ML3.6, MS3.6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCPH	Dipolog City	0.54	86	⇑eP	Pg	06 09 13.8	-0.1
DCPH				iS	Sg	06 09 22.1	+1.0
IPIL	Ipil	0.79	197	eP	Pg	06 09 18.6	-0.1
IPIL				eS	Sg	06 09 29.2	0.0
PAGZ	Pagadian	0.90	140	eP	Pg	06 09 20.4	-0.5
PAGZ				eS	Sg	06 09 33.6	+0.7
SNPH	Sibulan	0.90	28	⇑eP	Pg	06 09 20.3	-0.8
SNPH				iS	Sg	06 09 33.9	+0.8
GUIM	Jordan	2.08	354	eP	Pn	06 09 38.1	-1.4
GUIM				eS	Sn	06 10 07.4	+1.0
BUKP	Musuan	2.33	106	eP	Pn	06 09 43.4	+0.3
BUKP				eS	Sn	06 10 23.0	+10

NNC 03 06:09:43.0±4.1**, 36.98N×70.87E, h238**^{km}±57^{km}**, mpv3.4, 3C-3D, Error ellipse: s-maj=52.3km s-min=41.6km az=64.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.12	358	⇑P	P	06 11 12.4	-0.7
	1.3nm,0.3s,baz=178,slow=13,SNR=14						
KK31				⇑S	S	06 12 23.9	+0.4
	1.9nm,0.5s,baz=186,slow=25,SNR=4.2						
AAK	Ala-Archa	6.30	25	⇓P	P	06 11 13.3	-2.1
	2.1nm,0.6s						
AAK				⇓S	S	06 12 30.8	+3.3
	6.5nm,0.9s						
AB31	Akbulak array	14.62	331	⇓P	P	06 12 59.8	-0.2
	0.2nm,0.3s,baz=148,slow=13,SNR=15						
AB31				⇑S	S	06 15 39.4	+3.2
	0.6nm,0.7s,baz=159,slow=24,SNR=4.1						

*BJI **03** 06:09:54.3, 13.38N×92.90E, h53^{km}, mB4.7, mb4.6, Ms4.1, Msz3.7*

*NEIC **03** 06:09:55.0±0.3, 13.70N×92.96E, h30^{km}, mb4.5/9, Error ellipse: s-maj=9.3km s-min=7.6km az=61.0*

*IDC **03** 06:09:55.1±0.7, 13.74N×92.98E, h28^{km}±3^{km}, mb4.1/17, mb1 4.2/17, mb1mx4.2/20, mbtmp4.2/17, MS3.8/4, Ms1 3.8/4, ms1mx3.4/23, Error ellipse: s-maj=22.7km s-min=12.8km az=51.0*

ISC 03 06:09:52.9±0.3**, 13.62N**±0.04×**92.83E**±0.04**, h29**^{km}**, h29**^{km}±1.0^{km}**:pP-P, n62, σ1**^{s}**12**/68**, mb4.4**/29**, MS3.8**/7**, 2C-1D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	Port Blair	1.96	183	ex	x	06 10 39.8	
PBA				eS	Sn	06 10 48.2	-0.4
NNT	Nongplab	6.80	98	P	Pn	06 11 33.8	+0.4
NST	Nakhon Sawan	7.35	73	P	Pn	06 11 40.0	-1.1
CHG	Chiang Mai	7.81	48	P	Pn	06 11 52.0	+4.4
	11nm,0.8s						
VIS	Vishakhapatnam	10.02	295	eP	P	06 12 17.4	-0.7
VIS				AMb	AMB	06 12 20.0	
	comp=Z,59nm,1.2s						
VIS				iS	S	06 13 59.9	-11
SHL	Shillong	11.91	356	eP	P	06 12 37.0	-6.9
SHL				eS	S	06 14 42.7	-14
BOK	Bokaro	12.06	328	ex	x	06 12 49.3	
BOK				eS	S	06 14 48.8	-12
PALK	Pallekele	13.49	243	P	P	06 13 05.6	+0.7
HYB	Hyderabad	14.27	287	iP	P	06 13 25.0	+10
HYB				eS	S	06 15 54.0	+0.7
HYB	Hyderabad	14.27	287	eP	P	06 13 25.0	+10
HYB				eS	S	06 15 54.0	+0.7
KMI	Kunming	14.76	38	P	P	06 13 22.7	+1.1
KMI				AP		06 13 29.9	
KMI				S	S	06 16 06.0	+1.0
KMI				SS	SS	06 16 23.5	+1.3
KMI				AMB	AMB		
	comp=Z,50nm,4.0s						
KMI				LR	LR		
	comp=N,250nm,17.4s						
KMI				LR	LR		
	comp=E,330nm,16.5s						
KMI				LR	LR		
	comp=Z,200nm,14.1s						
JIRN	Jiri	15.28	337	eP	P	06 13 27.4	-1.0
	comp=Z,8.2nm,0.3s						
PKI	Pulchoki	15.51	335	eP	P	06 13 29.3	-2.1
	comp=Z,44nm,0.9s						
DMN	Daman	15.67	334	eP	P	06 13 30.5	-3.0
	comp=Z,41nm,0.7s						
KKN	Kakani	15.76	335	eP	P	06 13 31.8	-2.8
LSA	Lhasa	16.07	355	eP	P	06 13 39.6	+1.0
	comp=Z,11nm,0.6s						
GKN	Gorkha	16.22	333	eP	P	06 13 38.3	-2.1
	comp=Z,52nm,0.9s						
KOLN	Koldanda	16.50	330	eP	P	06 13 42.1	-1.9
	comp=Z,45nm,0.7s						
BHPL	Bhopal	17.45	305	eP	P	06 13 56.9	+0.9
BHPL				AMb	AMB	06 13 59.8	
	comp=Z,15nm,0.9s						
BHPL				ex	x	06 17 03.8	
GYA	Guiyang	18.20	43	⇑iP	P	06 14 06.7	+1.4
GYA				AP		06 14 15.8	
GYA				XP		06 14 18.2	
GYA				PP	PP	06 14 22.0	+1.8
GYA				S	S	06 17 25.2	+1.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				LR	LR		
	comp=N,390nm,16.2s						
GYA				LR	LR		
	comp=E,370nm,15.8s						
GYA				LR	LR		
	comp=Z,320nm,16.0s						
KAD	Karad	18.34	284	eP	P	06 14 08.0	+0.8
KAD				AMb	AMB	06 14 10.1	
	comp=Z,5.0nm,0.6s						
KAD				ex	x	06 17 23.6	
POO	Poona	18.88	287	eP	P	06 14 15.4	+1.8
POO				AMb	AMB	06 14 18.0	
	comp=Z,13nm,0.9s						
POO				ex	x	06 17 36.1	
CD2	Chengdu	19.93	29	P	P	06 14 24.8	-0.7
NDI	New Delhi	20.86	318	ex	x	06 18 22.0	
DDI	Dehra Dun	21.50	323	eP	P	06 14 42.7	+1.2
ENH	Enshi	22.60	40	eP	P	06 14 51.0	-1.5
	comp=Z,20nm,0.9s,mb4.5						
LZH	Lanzhou	24.46	22	eP	P	06 15 12.0	+1.4
LZH				AP		06 15 20.7	
LZH				ePP	PP	06 15 48.1	+1.7
LZH				eS	S	06 19 28.0	+2.2
LZH				eSS	SS	06 20 22.6	+1.5
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
LZH				AMB	AMB		
	comp=Z,50nm,4.7s						
LZH				LR	LR		
	comp=N,470nm,10.3s						
LZH				LR	LR		
	comp=Z,1μm,13.2s,MS4.6						
XAN	Xi'an	25.02	33	P	P	06 15 15.4	-0.6
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
GTA	Gaotai	26.41	12	eP	P	06 15 29.7	+0.8
GTA				AP	pP	06 15 39.3	+1.8
GTA				PP	PP	06 16 11.9	-0.3
GTA				S	S	06 19 58.5	0.0
GTA				SS	SS	06 21 09.6	+1.0
GTA				AMB	AMB		
	comp=Z,110nm,3.8s						
GTA				LR	LR		
	comp=N,130nm,20.5s						
GTA				LR	LR		
	comp=E,90nm,14.4s						
GTA				LR	LR		
	comp=Z,110nm,19.4s,MS3.4						
NJ2	Nanjing	30.06	48	eP	P	06 16 02.4	+0.5
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
WMQ	Urumqi	30.41	353	⇓P	P	06 16 05.3	+0.4
WMQ				PP	PP	06 17 05.3	+0.5
WMQ				eS	S	06 21 02.8	+0.2
WMQ				AMB	AMB		
	comp=Z,60nm,4.3s						
WMQ				LR	LR		
	comp=N,80nm,16.8s,MS3.8						
WMQ				LR	LR		
	comp=E,160nm,20.2s,MS3.8						
WMQ				LR	LR		
	comp=Z,60nm,16.8s,MS3.3						
SSE	Sheshan	31.32	52	P	P	06 16 11.0	-2.1
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,50nm,3.9s						
AAK	Ala-Archa	32.97	335	eP	P	06 16 27.6	+0.3
	comp=Z,9.5nm,1.5s,mb4.5						
MKAR	Makanchi Array	34.23	347	P	P	06 16 38.4	+0.2
	comp=Z,3.7nm,0.8s,mb4.4,baz=158,slow=8.5,SNR=22						
MKAR				pP	pP	06 16 46.3	-0.6
	comp=Z,3.2nm,0.8s,baz=162,slow=7.7,SNR=9.0						
MKAR	Makanchi Array	34.23	347	P	P	06 16 38.4	+0.2
MKAR				pP	pP	06 16 46.3	-0.6
JOW	Kunigami	35.62	63	LR	LR	06 32 51.3	
	comp=Z,145nm,19.4s,MS3.8,baz=286,slow=39						
SONM	Songino Array	35.93	16	P	P	06 16 52.1	-0.6
	comp=Z,1.0nm,0.9s,mb3.7,baz=208,slow=10,SNR=7.0						
SONM				pP	pP	06 17 01.2	-0.3
	comp=Z,1.4nm,0.8s,baz=200,slow=7.0,SNR=6.5						
KURK	Kurchatov	38.76	346	eP	P	06 17 10.3	-6.1
	comp=Z,14nm,1.4s,mb4.5						
ZAL	Zalesovo	40.72	353	P	P	06 17 31.6	-1.0
	comp=Z,2.1nm,0.5s,mb4.0,baz=312,slow=7.1,SNR=9.8						
ZAL				pP	pP	06 17 41.0	-0.4
	comp=Z,1.5nm,0.6s,baz=310,slow=8.6,SNR=3.3						
CN2	Changchun	41.03	36	eP	P	06 17 36.5	+1.3
BVAR	Borovoye Array	43.17	340	P	P	06 17 52.7	+0.1
	comp=Z,1.1nm,0.6s,mb3.8,baz=158,slow=8.0,SNR=7.6						
BRVK	Borovoye	43.23	340	eP	P	06 17 53.2	+0.1
	comp=Z,2.6nm,0.9s,mb4.0						
CHKZ	Chkalovo	43.65	341	eP	P	06 17 56.2	-0.3
	comp=Z,7.9nm,1.0s,mb4.4						
FITZ	Fitzroy Crossi	45.17	133	P	P	06 18 09.3	0.0
	comp=Z,3.5nm,0.4s,mb4.5,baz=308,slow=8.4,SNR=8.2						
FITZ				LR	LR	06 37 32.9	
	comp=Z,183nm,18.7s,MS4.0,baz=137,slow=37						
AKTO	Aktyubinsk	46.34	330	P	P	06 18 18.5	+0.4
	comp=Z,2.5nm,0.8s,mb4.2,baz=139,slow=16,SNR=6.9						
MJAR	Matsushiro Arr	46.47	52	P	P	06 18 18.4	-0.8
	comp=Z,2.4nm,0.8s,mb4.2,baz=264,slow=8.4,SNR=4.4						
GNI	Garni	49.60	311	P	P	06 18 45.6	+1.9
	comp=Z,2.4nm,0.4s,mb4.6,baz=3.4,slow=22,SNR=4.6						
GNI				LR	LR	06 43 11.7	
	comp=Z,57nm,20.8s,MS3.5,baz=266,slow=40						
WRA	Warramunga Arr	52.73	128	P	P	06 19 07.3	-0.3
	comp=Z,4.5nm,0.7s,mb4.5,baz=301,slow=9.7,SNR=46						
WRA				pP	pP	06 19 15.6	-1.1
	comp=Z,1.7nm,0.5s,baz=302,slow=10.0,SNR=6.8						
WRA				PcP	PcP	06 20 17.3	+0.3
	comp=Z,0.8nm,0.5s,baz=322,slow=3.3,SNR=8.5						
WRA				pPcP		06 20 25.7	
	comp=Z,0.5nm,0.7s,baz=322,slow=3.1,SNR=5.2						
WRAB	Tennant Creek	52.73	128	eP	P	06 19 07.1	-0.5
	comp=Z,6.2nm,0.6s,mb4.7						
WB2	Warramunga Arr	52.74	128	⇑iP	P	06 19 07.0	-0.7
BRTR	Keskin Array B	57.79	308	P	P	06 19 44.2	+0.2
	comp=Z,4.3nm,0.8s,mb4.5,baz=120,slow=7.5,SNR=27						
BRTR				pP	pP	06 19 52.8	-0.3
	comp=Z,2.5nm,1.0s,baz=124,slow=4.5,SNR=4.9						
AKASG	Malin Array Be	62.91	320	P	P	06 20 17.6	-1.1
	comp=Z,1.3nm,0.7s,mb4.2,baz=88,slow=5.3,SNR=8.5						
STKA	Stephens Creek	65.02	135	pP	pP	06 20 40.8	-1.3
	comp=Z,1.8nm,0.6s,baz=304,slow=22,SNR=2.0						
FINES	FINESS Array B	67.07	331	P	P	06 20 44.4	-1.1
	comp=Z,2.3nm,0.7s,mb4.3,baz=90,slow=5.7,SNR=5.6						
FINES				pP	pP	06 20 54.2	-0.4
	comp=Z,2.6nm,0.8s,baz=135,slow=8.1,SNR=2.7						
ARCES	ARCESS Array B	69.46	340	P	P	06 20 59.8	-0.4
	comp=Z,4.3nm,0.8s,mb4.4,baz=82,slow=8.6,SNR=4.9						
GERES	GERESS Array B	72.73	317	P	P	06 21 20.5	+0.2
	comp=Z,3.4nm,0.8s,mb4.3,baz=90,slow=6.7,SNR=14						
GERES				pP	pP	06 21 30.3	+0.9
	comp=Z,1.4nm,0.7s,baz=90,slow=2.7,SNR=3.0						
NB2	NORSAR Subarra	74.13	330	P	P	06 21 28.0	-0.1
	comp=Z,6.3nm,1.0s,mb4.5,baz=89,slow=5.3						
NOA	NORSAR Array B	74.13	330	P	P	06 21 28.1	0.0
	comp=Z,2.8nm,0.9s,mb4.2,baz=89,slow=6.2,SNR=5.2						
NOA				pP	pP	06 21 38.0	+0.7
	comp=Z,0.9nm,0.6s,baz=89,slow=5.8,SNR=2.5						
NAO	NORSAR Subarra	74.32	330	P	P	06 21 28.0	-1.2
	comp=Z,6.3nm,1.0s,mb4.5						
BOSA	Boshof	77.61	236	P	P	06 21 51.3	+2.8
	comp=Z,3.3nm,0.9s,mb4.2,baz=80,slow=8.5,SNR=3.6						
BOSA				LR	LR	06 52 45.5	
	comp=Z,58nm,21.6s,MS3.9,baz=157,slow=33						
LPG	La Plagne	77.70	314	eP	P	06 21 50.4	+1.8
	comp=Z,9.5nm,0.7s,mb4.5						
ILAR	Eielson Array	89.92	22	P	P	06 22 50.7	+0.4
	comp=Z,0.2nm,0.7s,mb3.5,baz=297,slow=6.0,SNR=3.6						
ILAR				pP	pP	06 22 58.5	-1.3
	comp=Z,0.6nm,0.8s,baz=305,slow=4.5,SNR=4.2						

*NEIC **03** 06:10:11.3±0.9, 15.89S×71.96W, h102^{km}±9^{km}, mb3.9/2, Error ellipse: s-maj=14.9km s-min=12.7km az=48.0*

NEIC Felt [II] at Arequipa.

*IDC **03** 06:10:17.5±3.8, 16.05S×71.77W, h152^{km}±30^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.4/17, mbtmp4.0/5, Error ellipse: s-maj=36.7km s-min=25.5km az=120.0*

ISC 03 06:10:10.4±0.9**, 15.87S**±0.09×**72.09W**±0.08**, h114**^{km}±8^{km}**, n13, σ1**^{s}**25**/13**, mb3.9**/4**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	Arequipa	0.82	136	⇑iP	P	06 10 30.9	+0.5
ARE				iS	S	06 10 44.8	-0.6
LPAZ	La Paz	3.83	97	P	P	06 11 12.0	+3.4
	1.7nm,0.3s,baz=276,slow=10,SNR=72						
LPAZ				S	S	06 11 54.8	+1.8
	0.9nm,0.3s,baz=329,slow=10.0,SNR=3.8						
NNA	Nana	6.02	309	ePn	P	06 11 38.3	0.0
SIV	San Ignacio	10.60	92	P	P	06 12 37.7	-2.5
	0.4nm,0.3s,baz=268,slow=13,SNR=11						
SAML	Samuel	11.09	53	ePn	P	06 12 45.6	-1.1
	2.1nm,0.6s						
CFAA	Coronel Fontan	16.05	168	P	P	06 13 50.8	0.0
	0.0nm,0.3s,baz=356,slow=11,SNR=5.7						
BDFB	Brasilia	23.17	93	P	P	06 15 07.5	-0.3
	1.6nm,0.3s,mb3.8,baz=255,slow=12,SNR=5.7						
PLCA	Paso Flores	24.81	177	P	P	06 15 24.1	+0.8
	1.4nm,0.7s,mb3.5,baz=2.4,slow=15,SNR=4.1						
PLCA	Paso Flores	24.81	177	eP	P	06 15 22.1	-1.2
	3.0nm,0.9s,mb3.7						
DBIC	Dimbokro	70.21	77	P	P	06 21 12.9	-0.6
	2.5nm,0.7s,mb4.2,baz=287,slow=3.2,SNR=7.3						
YKA	Yellowknife Ar	84.92	342	P	P	06 22 35.6	+2.1
	0.9nm,0.6s,mb3.9,baz=139,slow=5.5,SNR=5.9						
ZAL	Zalesovo	137.95	20	PKP	PKPdf	06 29 25.2	+3.7
	1.6nm,0.3s,baz=121,slow=3.2,SNR=4.0						
SONM	Songino Array	148.10	2	PKPbc	PKPdf	06 29 46.2	+6.9
	0.5nm,0.8s,baz=326,slow=1.8,SNR=4.5						

IGQ 03 06:10:26.0, 1.39S×81.00W, h5^{km}±16^{km}, mb4.1, 1C, Error ellipse: s-maj=16.3km s-min=9.9km az=0.7, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAG1	Magdalena	1.79	43	P	Pn	06 10 58.9	+1.1
QIL1	Quilotoa	2.14	75	P	Pn	06 11 03.3	+0.5
IGUA	Igualata	2.36	92	P	Pn	06 11 07.1	+1.1
IGUA				S	Sn	06 11 38.1	+2.3
ARRY	Arrayan	2.55	93	P	Pn	06 11 09.9	+1.3
ARRY				S	Sn	06 11 43.5	+3.1
PISA	Pisayambo	2.64	83	P	Pn	06 11 12.1	+2.2
JUA2	San Juan 2	2.67	64	P	Pn	06 11 11.9	+1.6
TERV	Terraza Guagua	2.68	63	P	Pn	06 11 13.2	+2.6
PINO	Pino	2.69	63	P	Pn	06 11 11.7	+1.1
GGP	Refugio Guagua	2.69	63	P	Pn	06 11 12.2	+1.4
VC1	Cotopaxi 1	2.70	74	P	Pn	06 11 14.4	+3.5
TAMB	Tambo	2.72	75	P	Pn	06 11 14.6	+3.4
YANA	Yana	2.74	63	P	Pn	06 11 12.2	+0.8
ANTI	Antisana	2.99	72	⇑P	Pn	06 11 18.4	+3.5
COTA	Cotacachi	3.17	57	P	Pn	06 11 20.0	+2.5
CAYR	Refugio Cayamb	3.30	65	P	Pn	06 11 23.6	+4.2
ANGU	Angureal	3.32	65	P	Pn	06 11 24.1	+4.6
CAYA	Cayambe	3.34	64	P	Pn	06 11 23.7	+3.8

*SKO **03** 06:27:03.9, 49.26N×154.62E*

*CSEM **03** 06:27:12.9, 49.79N×155.21E, h118^{km}, mb5.5*

*MOS **03** 06:27:12.9±0.9, 49.82N×155.22E, h114^{km}, mb5.3/109, Error ellipse: s-maj=7.0km s-min=3.3km az=94.2*

*BJI **03** 06:27:13.3, 49.97N×155.27E, h124^{km}, mB4.7, mb5.0*

*SKHL **03** 06:27:13.2±3.8, 49.63N×155.62E, h107^{km}±41^{km}, mb6.0/2, msh5.7/4*

*KRSC **03** 06:27:14.1±1.3, 49.61N×155.97E, h101^{km}±7^{km}, ML5.4*

*HRVD **03** 06:27:15.1±0.3, 49.85N×155.46E, h128^{km}±3^{km}, MW5.0/61, Centroid moment Tensor Solution. LP body waves: s26,c34;Mantle waves: s61,c109; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.31±.18; $M_{\theta\theta}$3.44±.20; $M_{\phi\phi}$-1.13±.16; $M_{r\theta}$2.97±.14; $M_{\theta\phi}$1.30±.18; $M_{\phi r}$0.13±.11; Best double couple: $M_0$4.295×10^{16} NP1: ϕ_s54°,δ26°,λ-122°. NP2:ϕ_s268°,δ68°,λ-76°. Principal axes: T 4.955, Plg22°, Azm347°; N -1.32, Plg13°, Azm83°; P -3.634, Plg64°, Azm202°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **03** 06:27:15.5±0.4, 49.90N×155.22E, h123^{km}±3^{km}, mb4.9/30, mb1 5.0/32, mb1mx5.0/32, mbtmp5.3/32, MS3.8/9, Ms1 3.8/9, ms1mx3.5/22 Error ellipse: s-maj=10.2km s-min=7.8km az=124.0*

*NEIC **03** 06:27:15.1±0.1, 49.85N×155.22E, mb5.2/180, Error ellipse: s-maj=3.3km s-min=2.5km az=166.0*

ISC 03 06:27:13.7±0.1**, 49.79N**±0.02×**155.27E**±0.03**, h120**^{km}**, h120**^{km}±.7^{km}**:pP-P, n758, σ0**^{s}**95**/765**, mb5.2**/241**, 137C-21D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.05	31	iP	P	06 27 34.6	-1.9
SKR				eS	S	06 27 51.6	-2.0
ALID	Alaid	1.10	9	iP	P	06 27 39.7	+2.7
PAU	Pauzhetka	1.95	30	iP	P	06 27 48.3	+1.4
PAU				iS	S	06 28 12.1	+0.1
PAU				Smax			
	32μm,0.7s						
PAU	Pauzhetka	1.95	30	iP	P	06 27 48.4	+1.5
PAU				iS	S	06 28 12.8	+0.8
MIPR	Malaya Ipel'ka	2.66	20	iP	P	06 27 57.9	+1.5
MIPR				eS	S	06 28 30.0	+1.3
GRL	Gorelyy	3.28	31	iP	P	06 28 05.3	+0.6
RUS	Russkaya	3.34	36	P	P	06 28 04.9	-0.6
RUS				S	S	06 28 42.0	-2.9
RUS	Russkaya	3.34	36	iP	P	06 28 05.0	-0.5
RUS				iS	S	06 28 42.5	-2.4
APC	Apacha	3.36	20	iP	P	06 28 06.7	+1.0
APC				Smax			
	2μm,0.9s						
KRMR	Karymshinskiy	3.54	29	eP	P	06 28 09.5	+1.4
PET	Petropavlovsk	3.87	32	P	P	06 28 13.1	+0.5
PET				S	S	06 28 57.0	-0.6
PET	Petropavlovsk	3.87	32	eP	P	06 28 13.1	+0.5
PET				eS	S	06 28 56.4	-1.2
PET	Petropavlovsk	3.87	32	⇑iP	P	06 28 12.9	+0.3
PET				AMB	AMB	06 28 13.9	
	260nm,0.5s						
PET				eS	S	06 28 55.9	-1.7
PET				A		06 28 56.9	
	6μm,3.0s						
PET				A		06 29 02.6	
	2μm,0.6s						
PET				A		06 29 02.6	
	2μm,0.6s						
PET				A		06 29 09.0	
	1μm,12.0s						
PET	Petropavlovsk	3.87	32	ePn	P	06 28 11.8	-0.8
PET				eS	S	06 28 52.8	-4.8
UGLR	Uglovaya	4.08	32	iP	P	06 28 16.7	+1.3
KOK	Koryaka	4.09	30	eP	P	06 28 17.2	+1.7
AVH	Avacha	4.10	31	iP	P	06 28 17.1	+1.5
SMAR	Somma	4.12	31	iP	P	06 28 17.3	+1.4
SDLR	Sedlovina	4.16	31	iP	P	06 28 17.1	+0.6
NLC	Nalytchevo	4.24	35	P	P	06 28 16.2	-1.3
NLC				S	S	06 29 01.6	-4.8
NLC	Nalytchevo	4.24	35	iP	P	06 28 16.4	-1.1
GNL	Ganaly	4.25	22	eP	P	06 28 19.4	+1.7
GNL				eS	S	06 29 07.2	+0.5
SPN	Mys Shipunski	4.45	40	P	P	06 28 19.1	-1.3
SPN				S	S	06 29 06.1	-5.5
SPN	Mys Shipunski	4.45	40	iP	P	06 28 19.5	-0.9
KII	Karymskiy	4.98	30	P	P	06 28 28.8	+1.3
KII	Karymskiy	4.98	30	eP	P	06 28 27.8	+0.3
MKZ	Mys Kozlova	6.21	37	P	P	06 28 42.1	-2.1
MKZ				S	S	06 29 47.0	-7.3
MKZ	Mys Kozlova	6.21	37	iP	P	06 28 42.2	-2.0

TUMR	**Tumrok**	**6.25**	**27**	*i* P	**P**	**06 28 45.9**	**+1.1**
ESO	**Esso**	**6.49**	**17**	*i* P	**P**	**06 28 49.2**	**+1.2**
KMNR	**Kamenistaya**	**6.69**	**25**	*i* P	**P**	**06 28 51.9**	**+1.1**
KUR	**Kuril’sk**	**6.77**	**231**	*e*P	**P**	**06 28 51.2**	**-0.7**
KUR				AMB	AMB	06 29 02.0	
	490nm,1.0s						
KUR				*i* S	**S**	**06 30 08.8**	**+0.8**
KUR				A		06 30 12.0	
	4μm,3.0s						
KUR				A		06 30 12.0	
	4μm,3.0s						
KUR				A		06 30 16.8	
	430nm,0.8s						
KUR	**Kuril’sk**	**6.77**	**231**	*e*PN	**P**	**06 28 51.2**	**-0.7**
KUR				*i* S	**S**	**06 30 08.8**	**+0.8**
KUR				pmax	pmax		
	comp=Z,490nm,1.0s						
KUR				smax			
	comp=N,4μm,3.0s						
KUR				smax			
	comp=E,4μm,3.0s						
KUR				smax			
	comp=N,430nm,0.8s						
KOZ	**Kozyrevsk**	**6.87**	**22**	*i* P	**P**	**06 28 53.7**	**+0.5**
KPT	**Kopyto**	**6.87**	**24**	*i* P	**P**	**06 28 53.5**	**+0.2**
KOZR	**Kozyr**	**6.88**	**22**	PN	**P**	**06 28 53.7**	**+0.4**
SRDR	**Sredinnyy**	**7.07**	**21**	*i* P	**P**	**06 28 57.2**	**+1.3**
ZLN	**Zelenaya**	**7.08**	**26**	*i* P	**P**	**06 28 57.0**	**+1.0**
LGNR	**Loginova**	**7.10**	**25**	*i* P	**P**	**06 28 57.1**	**+0.7**
CIRR	**Tsirk**	**7.15**	**25**	*i* P	**P**	**06 28 57.5**	**+0.5**
KRSR	**Krestovskiy**	**7.19**	**24**	*i* P	**P**	**06 28 57.5**	**0.0**
KLY	**Klyuchi**	**7.29**	**24**	P	**P**	**06 29 00.1**	**+1.1**
KLY	**Klyuchi**	**7.29**	**24**	*i* P	**P**	**06 29 00.2**	**+1.2**
KBG	**Krutoberegovo**	**7.87**	**32**	*i* P	**P**	**06 29 05.5**	**-1.3**
KBTR	**Krutoberegovo**	**7.88**	**32**	P	**P**	**06 29 05.0**	**-1.8**
KBTR				S	**S**	**06 30 28.3**	**-6.5**
KBTR	**Krutoberegovo**	**7.88**	**32**	*i* P	**P**	**06 29 04.9**	**-1.9**
TYV	**Tymovskoe**	**8.14**	**282**	*e*P	**P**	**06 29 11.0**	**+0.6**
TYV				AMB	AMB	06 29 16.0	
	comp=N,300nm,2.0s						
TYV				AMB	AMB	06 29 16.0	
	comp=N,74nm,1.2s						
TYV				*e*S	**S**	**06 30 39.0**	**-2.3**
TYV				A		06 30 44.0	
	comp=N,44nm,1.0s						
TYV				A		06 30 59.0	
	comp=N,400nm,8.0s						
TYV				AMS	AMS	06 33 46.0	
	comp=N,700nm,12.0s						
BKI	**Bering**	**8.48**	**46**	*e*P	**P**	**06 29 10.4**	**-4.6**
BKI				*e*S	**S**	**06 30 34.8**	**-15**
BKI				Smax			
	comp=N,1μm,0.9s						
YUK	**Yuzh-Kuril’sk**	**8.63**	**232**	*e*P	**P**	**06 29 16.5**	**-0.5**
YUK				AMB	AMB	06 29 18.4	
	comp=N,180nm,0.5s						
YUK				AMB	AMB	06 29 18.4	
	comp=N,420nm,0.5s						
YUK				AMB	AMB	06 29 18.4	
	comp=N,1μm,0.5s						
YUK				AMB	AMB	06 29 18.5	
	comp=N,2μm,1.0s						
YUK				*e*S	**S**	**06 30 51.0**	**-2.1**
YUK				A		06 30 56.5	
	comp=N,440nm,0.5s						
YUK				A		06 30 56.5	
	comp=N,390nm,0.5s						
YUK				A		06 31 19.0	
	comp=N,2μm,1.6s						
YUK				A		06 31 19.0	
	comp=N,2μm,3.0s						
YUK	**Yuzh-Kuril’sk**	**8.63**	**232**	*e*PN	**P**	**06 29 16.5**	**-0.5**
YUK				*e*S	**S**	**06 30 51.0**	**-2.1**
YUK				pmax	pmax		
	comp=E,420nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1μm,0.5s						
YUK				pmax	pmax		
	comp=N,180nm,0.4s						
YUK				smax			
	comp=N,440nm,0.5s						
YUK				smax			
	comp=E,390nm,0.5s						
UGL	**Uglegorsk**	**8.64**	**270**	*e*P	**P**	**06 29 20.0**	**+3.0**
YSS	**Yuzh-Sakhalins**	**8.80**	**256**	*e*P	**P**	**06 29 22.9**	**+3.7**
YSS				AMB	AMB	06 29 31.5	
	comp=E,40nm,1.0s						
YSS				AMB	AMB	06 29 31.5	
	comp=E,70nm,1.0s						
YSS				A		06 31 12.8	
	comp=E,60nm,1.0s						
YSS	**Yuzh-Sakhalins**	**8.80**	**256**	*e*P	**P**	**06 29 22.9**	**+3.7**
	comp=E,35nm,0.6s						
YSS	**Yuzh-Sakhalins**	**8.80**	**256**	*d i*PN	**P**	**06 29 22.8**	**+3.6**
NKL	**Nikolayevsk**	**9.71**	**296**	*e*P	**P**	**06 29 31.0**	**-0.1**
NKL				AMB	AMB	06 29 32.3	
	comp=E,70nm,1.2s						
NKL				AMB	AMB	06 29 32.3	
	comp=E,180nm,1.2s						
MA2	**Magadan**	**10.14**	**347**	*e*P	**P**	**06 29 38.0**	**+1.0**
	comp=E,118nm,0.8s						
MA2	**Magadan**	**10.14**	**347**	⇑*e*PN	**P**	**06 29 38.1**	**+1.1**
MA2				pmax	pmax		
	comp=Z,180nm,1.3s						
ASAJ	**Asahikawa**	**10.35**	**242**	P	**P**	**06 29 42.4**	**+2.6**
	comp=Z,29nm,0.3s,baz=76,slow=11,SNR=97						
ASAJ	**Asahikawa**	**10.35**	**242**	PN	**P**	**06 29 42.4**	**+2.6**
ASAJ				pmax	pmax		
	comp=Z,29nm,0.3s						
OSSR	**Ossora**	**10.50**	**22**	P	**P**	**06 29 41.0**	**-0.7**
FX1	**Attu Island--F**	**11.61**	**68**	*e*Pn	**P**	**06 29 56.4**	**0.0**
FX1				*e*Sn	**S**	**06 31 56.6**	**-7.4**
GRNR	**Gornyy**	**12.10**	**282**	*e*P	**P**	**06 30 02.1**	**-0.8**
GRNR				AMB	AMB	06 30 03.2	
	comp=Z,42nm,1.0s						
SMY	**Shemya**	**12.15**	**69**	*e*Pn	**P**	**06 30 03.5**	**-0.1**
	comp=Z,248nm,0.7s						
SMY				*e*Sn	**S**	**06 32 10.2**	**-6.7**
SMY	**Shemya**	**12.15**	**69**	*e*PN	**P**	**06 30 03.5**	**-0.1**
SMY				pmax	pmax		
	comp=Z,248nm,0.7s						
SEY	**Seymchan**	**13.27**	**354**	⇑*e*PN	**P**	**06 30 19.1**	**+1.0**
TEY	**Ternei**	**13.50**	**256**	*e*P	**P**	**06 30 22.0**	**+0.9**
TEY				AMB	AMB	06 30 23.0	
	comp=Z,120nm,1.0s						
TEY				AMB	AMB	06 30 23.0	
	comp=Z,130nm,1.0s						
KAMR	**Kamenskoye**	**14.05**	**21**	*i* P	**P**	**06 30 29.1**	**+1.1**
EKMR	**Ekimchan**	**14.29**	**292**	*e*P	**P**	**06 30 34.7**	**+3.6**
EKMR				AMB	AMB	06 30 39.8	
	comp=Z,23nm,0.6s						
EKMR				AMB	AMB	06 30 39.8	
	comp=Z,40nm,0.6s						
EKMR				AMB	AMB	06 30 39.8	
	comp=Z,74nm,0.6s						
KLR	**Kul’dur**	**15.28**	**277**	*e*P	**P**	**06 30 46.8**	**+3.1**
KLR				AMS	AMS	06 38 30.5	
	comp=Z,1μm,13.0s						
BMKR	**Bomnak**	**16.86**	**297**	*i* P	**P**	**06 31 02.3**	**-1.1**
BMKR				AMB	AMB	06 31 03.4	
	comp=Z,15nm,0.6s						
BMKR				AMB	AMB	06 31 03.4	
	comp=Z,35nm,0.6s						
BMKR				AMB	AMB	06 31 03.4	
	comp=Z,54nm,0.6s						
YASR	**Yasnyy**	**17.29**	**292**	*e*P	**P**	**06 31 06.5**	**-2.2**
YASR				AMB	AMB	06 31 12.0	
	comp=Z,3.0nm,0.6s						
YASR				AMB	AMB	06 31 12.0	
	comp=Z,10.0nm,0.6s						
YASR				AMB	AMB	06 31 12.0	
	comp=Z,18nm,0.6s						
ZEA	**Zeya**	**17.73**	**294**	*e*P	**P**	**06 31 11.1**	**-2.9**
ZEA				AMB	AMB	06 31 13.0	
	comp=Z,30nm,0.7s						
ZEA				AMB	AMB	06 31 20.0	
	comp=Z,200nm,8.0s						
MAJO	**Matsushiro**	**18.11**	**229**	*e*P	**P**	**06 31 17.6**	**-0.9**
	comp=Z,137nm,0.4s						
MAJO				*e*		06 31 25.0	
MAJO	**Matsushiro**	**18.11**	**229**	*e*P	**P**	**06 31 17.6**	**-0.9**
MAJO				pmax	pmax		
	comp=Z,137nm,0.4s						
MAT	**Matsushiro**	**18.11**	**229**	P	**P**	**06 31 18.1**	**-0.4**
MAT				S	**S**	**06 34 39.0**	**+5.6**
MAT	**Matsushiro**	**18.11**	**229**	*e*P	**P**	**06 31 18.0**	**-0.5**
	comp=Z,65nm,0.6s						
MAT				*e*S	**S**	**06 34 39.0**	**+5.6**
MAT	**Matsushiro**	**18.11**	**229**	*e*P	**P**	**06 31 18.0**	**-0.5**
MAT				*e*S	**S**	**06 34 39.0**	**+5.6**
MAT				pmax	pmax		
	comp=Z,65nm,0.6s						
MJAR	**Matsushiro Arr**	**18.11**	**229**	P	**P**	**06 31 18.0**	**-0.6**
	comp=Z,9.7nm,0.3s,baz=23,slow=11,SNR=74						
MJAR				PcP	PcP	06 35 45.4	-1.5
	comp=Z,0.4nm,0.3s,baz=46,slow=0.8,SNR=4.2						
MJAR				LR	LR	06 38 28.9	
	comp=Z,104nm,19.1s,baz=50,slow=37						
MDJ	**Mudanjiang**	**18.16**	**263**	P	**P**	**06 31 17.1**	**-1.8**
MDJ				XP		06 31 51.3	
MDJ				S	**S**	**06 34 38.5**	**+4.2**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.6s						
MDJ				AMB	AMB		
	comp=Z,50nm,4.3s						
MDJ				LR	LR		
	comp=N,130nm,11.8s						
MDJ				LR	LR		
	comp=E,70nm,13.8s						
MDJ				LR	LR		
	comp=Z,130nm,13.8s						
MDJ	**Mudanjiang**	**18.16**	**263**	*e*P	**P**	**06 31 17.2**	**-1.8**
	comp=Z,111nm,0.8s						
MDJ				*e*		06 31 23.2	
MDJ				*e*		06 31 46.6	
YAK	**Yakutsk**	**18.70**	**321**	*e*P	**P**	**06 31 23.6**	**-1.3**
	comp=Z,410nm,0.8s						
YAK	**Yakutsk**	**18.70**	**321**	*c i*P	**P**	**06 31 23.8**	**-1.1**
YAK				pmax	pmax		
	comp=Z,396nm,0.8s						
BILL	**Bilibino**	**19.11**	**13**	*e*P	**P**	**06 31 26.4**	**-2.8**
	comp=Z,178nm,0.6s						
BILL	**Bilibino**	**19.11**	**13**	*c i*P	**P**	**06 31 26.7**	**-2.4**
BILL				pmax	pmax		
	comp=Z,123nm,0.6s						
BILL				MLR	MLR		
	comp=Z,100nm,13.0s						
CLNS	**Chul’man**	**19.35**	**303**	*e*P	**P**	**06 31 32.9**	**+1.1**
CLNS				*e*S	**S**	**06 35 05.9**	**+6.9**
CLNS				pmax	pmax		
	comp=Z,117nm,0.9s						
CLNS				pmax	pmax		
	comp=N,51nm,1.1s						
CLNS				pmax	pmax		
	comp=E,77nm,1.0s						
CLNS				smax			
	comp=N,94nm,1.1s						
CLNS				smax			
	comp=E,54nm,1.1s						
CLNS				smax			
	comp=Z,20nm,1.5s						
CLNS				MLR	MLR		
	comp=N,100nm,13.0s						
CLNS				MLR	MLR		
	comp=E,200nm,14.0s						
CLNS				MLR	MLR		
	comp=Z,200nm,14.0s						
JHJ	**Hachijo jima 2**	**20.23**	**220**	P	**P**	**06 31 41.4**	**+0.3**
	comp=Z,271nm,0.8s,baz=151,slow=4.1,SNR=9.4						
CN2	**Changchun**	**21.19**	**265**	*e*P	**P**	**06 31 47.9**	**-2.7**
CN2				*e*XP		06 32 29.1	
CN2				*e*S	**S**	**06 35 29.7**	**-4.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.1						
HIA	**Hailar**	**22.94**	**282**	*e*P	**P**	**06 32 07.2**	**-0.4**
	comp=Z,18nm,0.7s,mb4.5						
HIA				*e*		06 32 15.3	
HIA				*e*pP		06 32 37.4	
HIA	**Hailar**	**22.94**	**282**	*e*P	**P**	**06 32 07.2**	**-0.4**
HIA				*e**PP		06 32 37.4	
HIA				pmax	pmax		
	comp=Z,18nm,0.7s						
KS15	**Wonju Array Si**	**23.21**	**248**	*e*P	**P**	**06 32 12.0**	**+1.7**
KS15				*e*		06 32 24.6	
JNU	**Nakatsue**	**24.56**	**236**	P	**P**	**06 32 25.2**	**+1.9**
	comp=Z,284nm,0.9s,mb5.7,baz=75,slow=11,SNR=95						
TNA	**Tin City**	**24.72**	**37**	*e*P	**P**	**06 32 24.8**	**+0.3**
	comp=Z,178nm,1.0s,mb5.5						
TIXI	**Tiksi**	**25.02**	**341**	⇑*i*P	**P**	**06 32 25.6**	**-1.7**
TIXI	**Tiksi**	**25.02**	**341**	*e*P	**P**	**06 32 21.3**	**-6.0**
TIXI				*e**SP	sP	06 33 05.7	-1.3
TIXI				*e*S	**S**	**06 36 35.2**	**-4.6**
TIXI				pmax	pmax		
	comp=Z,62nm,0.7s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,100nm,13.0s						
BOD	**Bodaibo**	**25.31**	**304**	*e*P	**P**	**06 32 28.4**	**-1.7**
BOD				*e*		06 35 56.7	
BOD				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
CIT	**Chita**	**26.14**	**291**	*e*P	**P**	**06 32 38.2**	**+0.3**
CIT				*e*		06 37 08.1	
SVW2	**Sparrevohn**	**29.36**	**49**	*e*P	**P**	**06 33 07.2**	**+0.3**
JOW	**Kunigami**	**30.91**	**232**	P	**P**	**06 33 21.4**	**+0.4**
	comp=Z,87nm,0.7s,mb5.6,baz=32,slow=6.8,SNR=21						
SSE	**Sheshan**	**31.59**	**247**	P	**P**	**06 33 26.6**	**-0.2**
SSE				XP	sP	06 34 06.8	-0.6
SSE				PP	PP	06 34 39.7	+4.4
SSE				PCP	PcP	06 36 15.7	-0.7
SSE				S	**S**	**06 38 26.4**	**+0.9**
SSE				XS		06 39 13.4	
SSE				SCP		06 39 47.6	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,50nm,3.7s						
SSE				LR	LR		
	comp=N,100nm,32.0s						
SSE				LR	LR		
	comp=E,80nm,32.1s						
SSE				LR	LR		
	comp=Z,60nm,23.4s						
HHC	**Hu-ho-hao-te**	**31.61**	**271**	*e*P	**P**	**06 33 27.7**	**+0.7**
HHC				AP	pP	06 33 55.9	+2.4
HHC				XP	sP	06 34 10.0	+2.5
HHC				S	**S**	**06 38 29.2**	**+3.4**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.9						
HHC				AMB	AMB		
	comp=Z,110nm,5.4s						
HHC				LR	LR		
	comp=N,250nm,17.2s						
HHC				LR	LR		
	comp=E,350nm,25.2s						
HHC				LR	LR		
	comp=Z,130nm,18.0s						
SONM	**Songino Array**	**31.79**	**286**	PcP	PcP	06 36 15.7	-1.1
	comp=Z,4.3nm,0.6s,baz=95,slow=2.2,SNR=7.1						
SONM				ScP		06 39 47.8	
	comp=Z,7.3nm,0.9s,baz=74,slow=2.7,SNR=17						
SONM				LR	LR	06 46 04.7	
	comp=Z,76nm,18.9s,baz=264,slow=36						
NJ2	**Nanjing**	**32.32**	**251**	*e*P	**P**	**06 33 32.3**	**-0.9**
NJ2				AP	pP	06 33 57.0	-2.9
NJ2				PP	PP	06 34 43.4	-1.2
NJ2				S	**S**	**06 38 38.0**	**+1.1**
NJ2				XS		06 39 22.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,80nm,9.4s						
NJ2				LR	LR		
	comp=N,640nm,40.0s						
NJ2				LR	LR		
	comp=E,870nm,39.8s						
NJ2				LR	LR		
	comp=Z,230nm,30.0s						
MCK	**McKinley**	**32.42**	**43**	⇑*i*P	**P**	**06 33 32.8**	**-1.0**
	comp=Z,45nm,0.9s,mb5.2						
MCK				*e*pP	pP	06 33 58.0	-2.4
MCK	**McKinley**	**32.42**	**43**	*e*P	**P**	**06 33 32.8**	**-1.0**
MCK				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.2						
PMR	**Palmer**	**32.44**	**47**	*e*P	**P**	**06 33 32.2**	**-1.7**
	comp=Z,7.7nm,0.8s,mb4.5						
PMR	**Palmer**	**32.44**	**47**	*e*P	**P**	**06 33 32.2**	**-1.8**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
ZAK	**Zakamensk**	**32.80**	**291**	⇑*i*P	**P**	**06 33 37.0**	**-0.2**
ZAK				*e*	pP	06 34 05.8	+1.9
ZAK				*e*		06 36 25.3	
ZAK				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.0						
SML	**Sawmill**	**32.81**	**47**	*e*P	**P**	**06 33 36.4**	**-0.7**
SML				*e*pP	pP	06 34 01.7	-2.1
COLA	**College**	**32.88**	**41**	⇑*i*P	**P**	**06 33 37.2**	**-0.4**
	comp=Z,152nm,0.8s,mb5.9						
COLA	**College**	**32.88**	**41**	⇑*i*P	**P**	**06 33 37.3**	**-0.4**
COLA				pmax	pmax		
	comp=Z,150nm,0.8s,mb5.9						
ILAR	**Eielson Array**	**33.29**	**41**	P	**P**	**06 33 40.2**	**-1.0**
	comp=Z,54nm,0.9s,mb5.4,baz=263,slow=8.5,SNR=342						
ILAR				pP	pP	06 34 06.0	-2.0
	comp=Z,12nm,0.8s,baz=268,slow=8.9,SNR=3.1						
ILAR	**Eielson Array**	**33.29**	**41**	P	**P**	**06 33 40.3**	**-0.9**
ILAR				*PP	pP	06 34 06.1	-1.9
ILAR				pmax	pmax		
	comp=Z,55nm,0.9s						
THY	**Trims Highway**	**33.86**	**44**	*e*P	**P**	**06 33 43.5**	**-2.6**
DIV	**Divide**	**34.10**	**48**	*e*P	**P**	**06 33 47.8**	**-0.4**
	comp=Z,74nm,0.7s,mb5.6						
DIV				*e*pP	pP	06 34 12.9	-2.2
MENT	**Mentasta**	**34.83**	**44**	*e*P	**P**	**06 33 54.7**	**+0.4**
DAWY	**Dawson**	**36.60**	**42**	*e*P	**P**	**06 34 09.0**	**-0.3**
QZH	**Quanzhou**	**37.70**	**242**	P	**P**	**06 34 20.4**	**+1.5**
QZH				AMB	AMB		
	comp=Z,100nm,0.9s,mb5.7						
INK	**Inuvik**	**38.32**	**35**	⇑*e*P	**P**	**06 34 23.8**	**+0.2**
	comp=Z,72nm,0.7s,mb5.6						
INK				*e*pP	pP	06 34 48.2	-2.7
INK	**Inuvik**	**38.32**	**35**	⇑*e*P	**P**	**06 34 23.8**	**+0.2**
INK				pmax	pmax		
	comp=Z,72nm,0.7s						
LZH	**Lanzhou**	**39.29**	**270**	*e*P	**P**	**06 34 33.5**	**+1.5**
LZH				AP	pP	06 35 01.4	+2.0
LZH				XP	sP	06 35 17.5	+3.8
LZH				PP	PP	06 36 09.7	+2.1
LZH				PCP	PcP	06 36 42.0	+3.0
LZH				SCP		06 40 17.5	
LZH				*e*S	**S**	**06 40 23.6**	**+0.1**
LZH				PCS		06 40 30.5	
LZH				XS		06 41 10.2	
LZH				SS	SS	06 43 13.6	-1.7
LZH				SCS	ScS	06 44 27.8	+2.1
LZH				AMB	AMB		
	comp=Z,50nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,220nm,6.2s						
LZH				LR	LR		
	comp=E,590nm,13.7s						
LZH				LR	LR		
	comp=Z,740nm,17.4s						
ENH	**Enshi**	**39.38**	**258**	*e*P	**P**	**06 34 30.8**	**-2.0**
	comp=Z,8.5nm,0.6s,mb4.8						
GTA	**Gaotai**	**39.98**	**277**	P	**P**	**06 34 38.1**	**+0.4**
GTA				PP	PP	06 36 15.5	+0.5
GTA				PCP	PcP	06 36 41.4	+0.2
GTA				SCP		06 40 18.5	
GTA				S	**S**	**06 40 33.3**	**-0.4**
GTA				SS	SS	06 43 27.4	-2.3
GTA				SCS	ScS	06 44 31.3	+1.6
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,80nm,4.6s						
GTA				LR	LR		
	comp=N,130nm,17.1s						
GTA				LR	LR		
	comp=E,150nm,16.0s						
GTA				LR	LR		
	comp=Z,150nm,19.8s						
ZAL	**Zalesovo**	**42.08**	**304**	P	**P**	**06 34 53.9**	**-0.7**
	comp=Z,10nm,0.4s,mb4.9,baz=42,slow=7.0,SNR=40						
ZAL				PcP	PcP	06 36 48.6	+0.9
	comp=Z,6.5nm,0.7s,baz=77,slow=1.7,SNR=6.3						
ZAL	**Zalesovo**	**42.08**	**304**	P	**P**	**06 34 53.9**	**-0.7**
ZAL						06 36 48.7	
ZAL				pmax	pmax		
	comp=Z,11nm,0.4s						
DLBC	**Dease Lake**	**42.47**	**49**	*e*P	**P**	**06 34 59.7**	**+2.0**
DLBC				*e*pP	pP	06 35 26.4	+1.1
NVS	**Novosibirsk**	**42.54**	**306**	*i* P	**P**	**06 34 56.9**	**-1.4**
NVS				*i* *PP	pP	06 35 28.0	+2.1
NVS				*i*		06 36 37.7	
NVS				*i* SSS	SSS	06 44 40.5	-32
NVS				pmax	pmax		
	comp=N,23nm,1.0s						
NVS				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.3						
NVS				pmax	pmax		
	comp=E,62nm,1.1s						
NVS				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
NVS				pmax	pmax		
	comp=N,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,9.0nm,0.7s						
CD2	**Chengdu**	**42.61**	**264**	*e*P	**P**	**06 34 59.3**	**0.0**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
GYA	**Guiyang**	**43.81**	**256**	⇑*i*P	**P**	**06 35 09.4**	**+0.4**
GYA				AP	pP	06 35 36.0	-0.7
GYA				XP	sP	06 35 48.2	-2.4
GYA				PP	PP	06 36 53.4	-1.0
GYA				SCP		06 40 35.5	
GYA				S	**S**	**06 41 29.9**	**-0.1**
GYA				SCS	ScS	06 44 54.8	+1.8
GYA				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.3						
GYA				AMB	AMB		
	comp=Z,140nm,3.0s						
GYA				LR	LR		
	comp=N,460nm,17.5s						
GYA				LR	LR		
	comp=E,490nm,17.8s						
GYA				LR	LR		
	comp=Z,510nm,17.4s						
WMQ	**Urumqi**	**45.22**	**289**	⇑P	**P**	**06 35 20.3**	**+0.3**
WMQ				AP	pP	06 35 48.3	+0.5
WMQ				XP	sP	06 36 02.9	+1.2
WMQ				PCP	PcP	06 36 58.8	+0.2
WMQ				PP	PP	06 37 08.5	+0.3
WMQ				PPP	PPP	06 37 53.3	+1.2
WMQ				*e*S	**S**	**06 41 49.6**	**-0.4**
WMQ				XS		06 42 40.3	
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,120nm,4.4s						
WMQ				LR	LR		
	comp=N,50nm,19.7s						
WMQ				LR	LR		
	comp=E,20nm,21.4s						
WMQ				LR	LR		
	comp=Z,20nm,19.7s						
MKAR	**Makanchi Array**	**46.87**	**296**	P	**P**	**06 35 32.3**	**-0.7**
	comp=Z,17nm,0.8s,mb4.9,baz=60,slow=6.9,SNR=117						
MKAR				ScP		06 40 46.7	
	comp=Z,2.0nm,0.7s,baz=34,slow=4.4,SNR=4.2						
MKAR				LR	LR	06 57 19.7	
	comp=Z,112nm,18.4s,baz=181,slow=39						
MKAR	**Makanchi Array**	**46.87**	**296**	P	**P**	**06 35 32.3**	**-0.7**
MKAR				ScP		06 40 46.7	
MKAR				LR	LR	06 57 19.7	
MKAR	**Makanchi Array**	**46.87**	**296**	*i* P	**P**	**06 35 32.3**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,17nm,0.8s						
KURK	**Kurchatov**	**46.92**	**302**	⇑*e*P	**P**	**06 35 32.6**	**-0.8**
	comp=Z,55nm,0.6s,mb5.5						
KURK				*e*pP	pP	06 36 03.6	+2.3
KURK				*e*ScP		06 40 52.5	
KURK	**Kurchatov**	**46.92**	**302**	P	**P**	**06 35 32.8**	**-0.6**
KURK				pmax	pmax		
	comp=Z,55nm,0.7s,mb5.4						
KMI	**Kunming**	**47.24**	**259**	P	**P**	**06 35 37.5**	**+1.3**
KMI				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
YKW3	**Yellowknife Ar**	**47.60**	**39**	*e*P	**P**	**06 35 38.6**	**+0.1**
YKW3				*e*pP	pP	06 36 05.9	-0.6
YKA	**Yellowknife Ar**	**47.64**	**39**	P	**P**	**06 35 38.8**	**0.0**
	comp=Z,32nm,0.6s,mb5.3,baz=298,slow=7.4,SNR=94						
YKA				pP	pP	06 36 05.5	-1.3
	comp=Z,11nm,0.7s,baz=300,slow=7.8,SNR=4.5						
YKA	**Yellowknife Ar**	**47.64**	**39**	P	**P**	**06 35 38.8**	**0.0**
YKA				pP	pP	06 36 05.5	-1.3

YKA	Yellowknife Ar	47.64	39	P	P	06 35 38.8	0.0
YKA				*PP	pP	06 36 05.5	-1.3
YKA				pmax	pmax		
	comp=Z,32nm,0.6s						
CHKZ	Chkalovo	49.61	309⇑	eP	P	06 35 52.7	-1.4
	comp=Z,86nm,0.6s,mb5.9						
CHKZ				epP	pP	06 36 23.6	+1.3
CHKZ				ePP	PP	06 37 46.2	-3.9
CHKZ	Chkalovo	49.61	309⇑	eP	P	06 35 52.7	-1.4
CHKZ				pmax	pmax		
	comp=Z,86nm,0.6s,mb5.9						
VOSK	Vostochnaya	49.93	308	P	P	06 35 55.3	-1.3
VOSK				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
BVA0	Borovoye Array	50.07	308	i P	P	06 35 56.4	-1.2
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BVAR	Borovoye Array	50.07	308	P	P	06 35 56.6	-1.0
	comp=Z,30nm,0.5s,mb5.5,baz=60,slow=7.8,SNR=156						
BVAR				PcP	PcP	06 37 16.5	+0.7
	comp=Z,10nm,0.4s,baz=82,slow=4.1,SNR=7.5						
BVAR	Borovoye Array	50.07	308	P	P	06 35 56.6	-1.0
BVAR						06 37 16.5	
BVAR				pmax	pmax		
	comp=Z,30nm,0.5s						
BRVK	Borovoye	50.11	308	eP	P	06 35 56.8	-1.1
	comp=Z,42nm,0.8s,mb5.4						
BRVK				ePcP	PcP	06 37 16.4	+0.4
BRVK				eScP		06 41 06.7	
BRVK	Borovoye	50.11	308	P	P	06 35 57.1	-0.8
BRVK				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.4						
LSA	Lhasa	51.57	272	eP	P	06 36 10.9	+1.6
	comp=Z,6.4nm,0.6s,mb4.8						
LSA	Lhasa	51.57	272	eP	P	06 36 10.9	+1.6
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
TKM2	Tokmak 2	52.98	295	P	P	06 36 19.2	-0.5
	SNR=6.8						
TBM	Table Mountain	52.99	58	P	pP	06 36 48.2	0.0
EDM	Edmonton	53.20	49	eP	P	06 36 20.5	-0.6
EDM				epP	pP	06 36 48.1	-1.6
EDM	Edmonton	53.20	49	P	P	06 36 20.8	-0.3
EDM				e	pP	06 36 48.8	-0.9
VLL	Laurance Lake	53.40	60	P	pP	06 36 51.8	+0.5
USP	Ospenovka	53.41	296	P	P	06 36 22.3	-0.5
	SNR=20						
CHMS	Chumysh	53.43	296	P	P	06 36 22.7	-0.3
	SNR=6.0						
KBK	Karagaybulak	53.52	295	P	P	06 36 23.3	-0.3
	SNR=8.2						
DAG	Danmarks Havn	53.66	358	i P	P	06 36 21.0	-3.2
DAG	Danmarks Havn	53.66	358	eP	P	06 36 21.0	-3.2
KKTK	Khon Kaen	53.69	251	P	P	06 36 25.0	-0.2
	comp=Z,679nm,0.8s						
ARU	Arti	53.76	317⇑	eP	P	06 36 23.3	-1.9
	comp=Z,201nm,1.0s,mb6.1						
ARU				epP	pP	06 36 54.0	+0.2
ARU				ePcP	PcP	06 37 29.9	+0.4
ARU	Arti	53.76	317⇑	iP	P	06 36 23.6	-1.6
ARU				e	pP	06 36 55.5	+1.7
ARU				e		06 37 29.1	
ARU				e		06 38 25.0	
ARU				ePPP	PPP	06 39 35.6	-5.0
ARU				eS	S	06 43 47.1	-1.2
ARU				e		06 45 56.8	
ARU				eSS	SS	06 47 28.1	-2.3
ARU				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.9						
AAK	Ala-Archa	53.80	295	P	P	06 36 25.2	-0.5
	SNR=10.0						
AAK	Ala-Archa	53.80	295	eP	P	06 36 23.6	-2.1
	comp=Z,31nm,1.4s,mb5.2						
AAK				epP	pP	06 36 53.9	-0.4
AAK				ePcP	PcP	06 37 27.4	-2.4
AAK				eScP		06 41 18.5	
AAK	Ala-Archa	53.80	295	eP	P	06 36 23.6	-2.1
AAK				e*PP	pP	06 36 55.2	+0.9
AAK				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.2						
OD2	Odessa Site #2	53.89	57	P	pP	06 36 54.4	-0.5
SHL	Shillong	53.91	268	eP	P	06 36 26.5	-0.2
GBL	Gable Mountain	53.96	58	P	pP	06 36 54.6	-0.8
HAWA	Hanford	54.04	58	eP	P	06 36 27.2	-0.2
	comp=Z,2.3nm,1.6s						
HAWA				epP	pP	06 36 54.5	-1.5
EKS2	Erkin-Say	54.20	296	P	P	06 36 28.3	-0.3
	SNR=12						
CHG	Chiang Mai	54.23	256	P	P	06 36 30.1	+1.0
	comp=Z,86nm,0.8s,mb5.8						
BBOR	Butler Butte	54.39	64	P	pP	06 36 59.4	+0.8
HUMO	Hull Mountain	54.40	64	eP	P	06 36 29.8	-0.3
	comp=Z,8.5nm,1.1s,mb4.7						
HUMO				epP	pP	06 36 57.6	-1.1
KKM	Kota Kinabalu	54.53	230	eP	P	06 36 31.7	+0.3
LVZ	Lovozero	54.55	336	i P	P	06 36 28.3	-2.5
LVZ				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.3						
LVZ				pmax	pmax		
	comp=N,11nm,1.2s						
LVZ				pmax	pmax		
	comp=E,8.0nm,1.3s						
KSH	Kashi	54.85	292	eP	P	06 36 33.0	-0.4
KSH				eAP	pP	06 37 02.0	-0.1
KSH				eXP	sP	06 37 16.0	+0.6
KSH				ePCP	PcP	06 37 34.1	+0.2
KSH				ePP	PP	06 38 38.0	-0.8
KSH				ePPP	PPP	06 39 53.1	-0.4
KSH				eSCP		06 41 19.0	
KSH				ePCS		06 41 32.6	
KSH				eS	S	06 43 59.8	-3.4
KSH				eXS		06 44 52.1	
KSH				eSCS	ScS	06 46 06.1	-0.7
KSH				eSS	SS	06 47 45.3	-2.7
KSH				AMB	AMB		
	comp=Z,230nm,4.8s						
KSH				LR	LR		
	comp=N,450nm,5.3s						
KSH				LR	LR		
	comp=E,460nm,5.2s						
KEV	Kevo	54.96	340	ep	P	06 36 30.1	-3.6
	comp=E,17nm,1.0s,mb5.0						
KEV	Kevo	54.96	340	eP	P	06 36 30.1	-3.6
KEV				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.0						
ARCES	ARCESS Array B	55.45	341	P	P	06 36 34.4	-2.9
	comp=Z,21nm,0.8s,mb5.2,baz=47,slow=7.7,SNR=27						
ARCES				PcP	PcP	06 37 36.6	+0.8
	comp=Z,5.2nm,0.7s,baz=45,slow=5.1,SNR=4.0						
ARCES				LR	LR	07 06 05.2	
	comp=Z,112nm,18.1s,baz=206,slow=42						
KKAR	Karatay Array	55.81	298	i P	P	06 36 38.8	-1.5
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.8						
WDC	Whiskeytown Da	55.91	66	P	P	06 36 40.2	-0.8
	comp=Z,13nm,1.3s,mb4.8						
WDC				epP	pP	06 37 10.1	+0.2
WDC	Whiskeytown Da	55.91	66	P	P	06 36 40.2	-0.8
WDC				e*PP	pP	06 37 10.1	+0.3
WDC				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
JIRN	Jiri	56.16	274	eP	P	06 36 42.9	-0.1
	comp=Z,53nm,0.7s,mb5.7						
GUN	Gumba	56.19	274	eP	P	06 36 43.0	-0.2
	comp=Z,38nm,0.4s,mb5.8						
BMO	Blue Mountains	56.22	59	eP	P	06 36 43.1	-0.1
	comp=Z,6.8nm,1.2s,mb4.5						
BMO				epP	pP	06 37 11.3	-0.8
MOD	Modoc	56.38	63	eP	P	06 36 44.5	+0.1
	comp=Z,81nm,1.1s,mb5.7						
MOD				epP	pP	06 37 13.4	+0.2
KKN	Kakani	56.66	275	eP	P	06 36 46.5	0.0
	comp=Z,47nm,0.6s,mb5.7						
PKI	Pulchoki	56.72	275	eP	P	06 36 47.0	+0.1
	comp=Z,11nm,0.4s,mb5.2						
MSO	Missoula	56.80	55	eP	P	06 36 45.7	-1.5
	comp=Z,7.3nm,1.0s,mb4.7						
MSO				epP	pP	06 37 14.9	-1.3
DMN	Daman	56.89	275	eP	P	06 36 48.1	0.0
	comp=Z,65nm,0.8s,mb5.7						
GKN	Gorkha	56.92	275	eP	P	06 36 48.3	-0.1
	comp=Z,42nm,0.4s,mb5.8						
WVOR	Wild Horse Val	57.00	62	eP	P	06 36 48.0	-0.7
	comp=Z,67nm,1.0s,mb5.6						
WVOR				epP	pP	06 37 17.5	-0.2
WVOR	Wild Horse Val	57.00	62	P	P	06 36 48.3	-0.4
WVOR				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.6						
CHMT	Chamberlain Mo	57.12	55	eP	P	06 36 49.0	-0.4
CHMT				epP	pP	06 37 17.4	-1.0
OHCM	Honcut	57.33	66	eP	P	06 36 50.4	-0.7
OHCM				epP	pP	06 37 19.0	-1.0
SUMG	Summit	57.56	5⇑	eP	P	06 36 51.3	-0.9
	comp=Z,164nm,0.8s,mb6.1						
SUMG				epP	pP	06 37 20.4	-0.8
AB31	Akbulak array	57.60	309	i P	P	06 36 51.4	-1.4
AB31				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.5						
KOLN	Koldanda	57.75	276	eP	P	06 36 53.9	-0.3
	comp=Z,29nm,0.5s,mb5.5						
AKTO	Aktyubinsk	57.78	311	P	P	06 36 52.4	-1.7
	comp=Z,12nm,0.4s,mb5.2,baz=70,slow=7.8,SNR=50						
AKTO				PcP	PcP	06 37 45.5	+0.4
	comp=Z,9.5nm,0.8s,baz=9.8,slow=5.1,SNR=4.1						
AKTO	Aktyubinsk	57.78	311	P	P	06 36 52.4	-1.6
AKTO						06 37 45.5	
AKTO				pmax	pmax		
	comp=Z,12nm,0.4s,mb5.3						
FCC	Fort Churchill	57.94	35	eP	P	06 36 54.0	-1.0
	comp=Z,20nm,0.5s,mb5.4						
FCC				epP	pP	06 37 20.3	-3.8
FCC	Fort Churchill	57.94	35	eP	P	06 36 54.0	-1.0
FCC				pmax	pmax		
	comp=Z,20nm,0.5s,mb5.4						
HRY	Holter Researc	57.99	54	eP	P	06 36 55.4	-0.2
HRY				epP	pP	06 37 23.7	-0.9
KLMR	Klimovskoe	58.25	329c	iP	P	06 36 55.2	-2.0
KLMR				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.1						
DLMT	Dillon	58.46	56	eP	P	06 36 58.9	+0.1
	comp=Z,36nm,1.8s,mb5.1						
DLMT				epP	pP	06 37 28.1	+0.2
HLID	Hailey	58.65	58	eP	P	06 37 00.3	+0.2
	comp=Z,27nm,1.1s,mb5.2						
HLID				epP	pP	06 37 28.9	-0.4
BOZ	Bozeman (W)	58.79	55	eP	P	06 37 01.5	+0.4
	comp=Z,33nm,0.8s,mb5.4						
BOZ				epP	pP	06 37 30.4	+0.1
BOZ	Bozeman (W)	58.79	55	eP	P	06 37 01.5	+0.3
BOZ				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.4						
CMB	Columbia Colle	58.82	67	P	P	06 36 56.6	-4.9
CMB				epP	pP	06 37 30.6	0.0
JOF	Joensuu	59.24	334	ep	P	06 37 01.7	-2.3
	comp=Z,18nm,0.8s,mb5.2						
JOF	Joensuu	59.24	334	eP	P	06 37 01.7	-2.3
JOF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
PMG	Port Moresby	59.37	189	P	P	06 37 04.5	-1.1
	comp=Z,32nm,0.9s,mb5.3,baz=359,slow=6.8,SNR=9.2						
PMG	Port Moresby	59.37	189	eP	P	06 37 03.7	-1.8
	comp=Z,43nm,1.1s,mb5.4						
PMG	Port Moresby	59.37	189	P	P	06 37 04.5	-1.1
PMG				pmax	pmax		
	comp=Z,32nm,0.9s						
SMLA	Simla	59.58	283	eP	P	06 37 02.5	-4.3
GCMT	Greycliff	59.73	54	eP	P	06 37 08.1	+0.5
GCMT				epP	pP	06 37 37.1	+0.3
YMR	Madison River	59.79	55	eP	P	06 37 07.8	-0.2
	comp=Z,54nm,0.8s,mb5.6						
YMR				epP	pP	06 37 37.6	+0.3
NVAR	Mina Array Bea	59.80	65	P	P	06 37 08.4	+0.2
	comp=Z,7.3nm,0.8s,mb4.8,baz=301,slow=6.1,SNR=27						
NVAR				pP	pP	06 37 37.5	+0.1
	comp=Z,21nm,0.8s,baz=298,slow=6.4,SNR=18						
MNV	Mina	59.88	65	eP	P	06 37 08.6	-0.1
	comp=Z,7.3nm,1.0s,mb4.7						
MNV				e		06 37 16.9	
MNV				epP	pP	06 37 38.1	+0.1
MNV	Mina	59.88	65	P	P	06 37 09.1	+0.4
MNV				e	pP	06 37 38.4	+0.4
MNV				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
YFT	Old Faithful	60.01	56	eP	P	06 37 10.9	+1.4
YFT				epP	pP	06 37 40.2	+1.5
SCO	Scoresbysund	60.02	359	i P	P	06 37 07.6	-1.7
	comp=Z,7.8nm,0.8s,mb4.8						
SCO	Scoresbysund	60.02	359	i P	P	06 37 07.6	-1.7
SCO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
ELK	Elko	60.03	61	eP	P	06 37 08.8	-0.9
	comp=Z,4.4nm,0.8s,mb4.5						
ELK				epP	pP	06 37 39.1	+0.1
ELK	Elko	60.03	61	P	P	06 37 10.1	+0.3
ELK				e	pP	06 37 39.5	+0.5
ELK				pmax	pmax		
	comp=Z,17nm,0.8s						
RRI2	Red Ridge	60.48	57	eP	P	06 37 13.7	+1.0
RRI2				epP	pP	06 37 42.8	+0.7
PTRM	Twissleman Ran	60.51	69	eP	P	06 37 10.9	-2.2
PTRM				epP	pP	06 37 42.5	+0.2
MOOW	Moose Ponds	60.52	56	eP	P	06 37 13.4	+0.4
	comp=Z,6.2nm,1.3s,mb4.5						
MOOW				epP	pP	06 37 42.2	-0.2
TPAW	Teton Pass	60.59	56	eP	P	06 37 14.5	+1.0
	comp=Z,32nm,1.2s,mb5.2						
TPAW				epP	pP	06 37 43.6	+0.8
TPH	Tonopah	60.67	65	eP	P	06 37 14.0	-0.1
	comp=Z,13nm,1.0s,mb4.9						
TPH				e		06 37 22.2	
TPH				epP	pP	06 37 43.2	-0.2
LOHW	Long Hollow	60.69	56	eP	P	06 37 14.9	+0.8
	comp=Z,51nm,1.0s,mb5.5						
LOHW				epP	pP	06 37 43.5	0.0
SNOW	Snow King Moun	60.71	56	eP	P	06 37 14.6	+0.3
	comp=Z,12nm,0.9s,mb4.9						
SNOW				epP	pP	06 37 44.3	+0.7
REDW	Red Top Meadow	60.72	57	eP	P	06 37 13.9	-0.6
	comp=Z,18nm,0.6s,mb5.3						
REDW				epP	pP	06 37 44.3	+0.6
LAO	LASA Array	60.90	51	eP	P	06 37 14.4	-1.1
	comp=Z,23nm,1.0s,mb5.2						
LAO				e		06 37 20.8	
LAO				epP	pP	06 37 45.1	+0.3
AHID	Auburn Hatcher	60.99	57	P	P	06 37 15.8	-0.4
AHID				epP	pP	06 37 45.7	+0.2
BGU	Big Grassy Mou	61.16	60	eP	P	06 37 17.1	-0.3
BGU				epP	pP	06 37 46.4	-0.4
NDI	New Delhi	61.22	281	ex	x	06 35 01.6	
KAF	Kangasniemi	61.28	335	ep	P	06 37 15.3	-2.6
	comp=Z,12nm,0.8s,mb5.0,baz=31,slow=6.3						
KAF	Kangasniemi	61.28	335	eP	P	06 37 15.3	-2.6
KAF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
KSM	Kuching	61.45	234	eP	P	06 37 20.2	+0.5
HWUT	Hardware Ranch	61.52	58	eP	P	06 37 20.2	+0.4
	comp=Z,39nm,0.9s,mb5.4						
HWUT				epP	pP	06 37 48.8	-0.4
DAC	Darwin (Calif)	61.66	66	eP	P	06 37 19.7	-1.1
	comp=Z,3.4nm,1.0s,mb4.3						
DAC				epP	pP	06 37 49.6	-0.6
DAC	Darwin (Calif)	61.66	66	P	P	06 37 20.6	-0.2
DAC				e	pP	06 37 50.2	0.0
DAC				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
FRB	Frobisher Bay	61.70	20	P	P	06 37 18.6	-2.1
	comp=Z,31nm,0.6s,mb5.5,baz=330,slow=9.5,SNR=14						
FRB	Frobisher Bay	61.70	20	P	P	06 37 18.6	-2.1
FRB				pmax	pmax		
	comp=Z,31nm,0.6s						
DUG	Dugway	61.78	60	eP	P	06 37 21.4	-0.1
	comp=Z,46nm,1.0s,mb5.5						
DUG				epP	pP	06 37 29.3	-22
DUG				epP	pP	06 37 50.2	-0.8
DUG	Dugway	61.78	60	P	P	06 37 22.1	+0.6
DUG				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.5						
PDAR	Pinedale Array	61.83	56	P	P	06 37 21.9	0.0
	comp=Z,8.9nm,0.8s,mb4.9,baz=326,slow=2.2,SNR=66						
PDAR				pP	pP	06 37 51.0	-0.2
	comp=Z,54nm,0.8s,baz=311,slow=2.6,SNR=35						
SFJD	Kangerlussuaq	61.90	11⇑	iP	P	06 37 20.1	-1.9
	comp=Z,50nm,0.6s,mb5.7						
SFJD	Kangerlussuaq	61.90	11	P	P	06 37 20.3	-1.7
FINES	FINESS Array B	61.90	335	P	P	06 37 19.6	-2.5
	comp=Z,9.7nm,0.5s,mb5.0,baz=40,slow=7.2,SNR=54						
FINES				PcP	PcP	06 38 01.1	-0.3
	comp=Z,19nm,0.7s,baz=63,slow=4.3,SNR=17						
FINES				LR	LR	07 09 42.7	
	comp=Z,92nm,19.0s,baz=334,slow=41						
FINES	FINESS Array B	61.90	335	P	P	06 37 19.6	-2.5
FINES						06 38 01.1	
FINES				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,92nm,19.0s						
TPNV	Topopah Spring	62.00	65	eP	P	06 37 23.1	+0.1
	comp=Z,11nm,0.9s,mb4.9						
TPNV				epP	pP	06 37 52.4	-0.1
TPNV	Topopah Spring	62.00	65	P	P	06 37 23.3	+0.2
TPNV				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
PUL	Pulkovo	62.04	332	i P	P	06 37 21.8	-1.2
PUL	Pulkovo	62.04	332	i P	P	06 37 20.6	-2.4
PUL				i		06 39 42.0	
PUL				pmax	pmax		
	comp=Z,130nm,0.6s,mb6.1						
PUL				pmax	pmax		
	comp=N,211nm,0.8s						
PUL				pmax	pmax		
	comp=E,164nm,0.9s						
NLU	North Lily Min	62.35	60	eP	P	06 37 25.2	-0.2
NLU				epP	pP	06 37 54.3	-0.5
DAU	Daniels Canyon	62.50	59	eP	P	06 37 26.6	+0.2
DAU				epP	pP	06 37 55.5	-0.3
MWC	Mount Wilson	62.77	68	P	P	06 37 27.4	-0.9
MWC				epP	pP	06 37 57.2	-0.6
ARUT	Antelope Range	63.06	63	eP	P	06 37 28.3	-1.8
ARUT				epP	pP	06 37 58.8	-0.8
TMUT	Trail Mountain	63.29	60	eP	P	06 37 31.7	+0.1
TMUT				epP	pP	06 38 00.4	-0.7
ULM	Lac du Bonnet	63.30	43	P	P	06 37 30.5	-1.0
	comp=E,2.9nm,0.5s,mb4.5,baz=317,slow=6.7,SNR=5.4						
OBN	Obninsk	63.61	326⇑	iP	P	06 37 31.2	-2.1
OBN	Obninsk	63.61	326c	iP	P	06 37 31.2	-2.1
OBN				e		06 38 08.2	
OBN				e		06 39 51.9	
OBN				eSS	SS	06 50 01.0	-6.1
OBN				pmax	pmax		
	comp=Z,22nm,0.3s,mb5.5						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
NEN	Nelson	63.71	65	eP	P	06 37 33.7	-0.7
NEN				epP	pP	06 38 03.0	-0.8
SRU	San Rafael	63.80	60	eP	P	06 37 34.8	-0.1
	comp=Z,60nm,0.9s,mb5.4						
SRU				epP	pP	06 38 04.0	-0.4
SRU	San Rafael	63.80	60	eP	P	06 37 34.8	-0.1
SRU				e*PP	pP	06 38 04.0	-0.4
SRU				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.4						
LDFC	Landfair	63.95	66	eP	P	06 37 35.4	-0.5
LDFC				epP	pP	06 38 04.7	-0.7
VSU	Vasula	64.18	333	P	P	06 37 34.5	-2.4
COEN	Coen	64.36	193	P	P	06 37 37.8	-1.0
BHPL	Bhopal	64.89	277	eP	P	06 37 40.3	-1.9
NGP	Nagpur	65.34	274	eP	P	06 37 45.5	+0.4
NGP				AMb	AMB	06 37 46.3	
	comp=Z,19nm,0.7s,mb5.0						
KAKA	Kakadu	65.39	205	eP	P	06 38 02.1	+17
	comp=Z,59nm,1.1s,mb5.3						
BORG	Borgarnes	65.77	358	P	P	06 37 47.7	+0.6
NB2	NORSAR Subarra	65.80	342	P	P	06 37 46.0	-1.4
	comp=Z,26nm,0.7s,mb5.2,baz=24,slow=6.5						
NB2	NORSAR Subarra	65.80	342	P	P	06 37 46.0	-1.4
	baz=24,slow=6.5						
NOA	NORSAR Array B	65.80	342	P	P	06 37 45.2	-2.2
	comp=Z,27nm,0.7s,mb5.2,baz=25,slow=6.5,SNR=81						
NOA				pP	pP	06 38 17.0	-0.1
	comp=Z,6.6nm,0.8s,baz=26,slow=3.3,SNR=5.7						
NOA				LR	LR	07 12 26.3	
	comp=Z,41nm,20.2s,baz=10.0,slow=41						
ISCO	Idaho Springs	66.02	56	eP	P	06 37 49.7	+0.5
	comp=Z,7.2nm,0.8s,mb4.5						
ISCO				epP	pP	06 38 19.1	+0.2
ISCO	Idaho Springs	66.02	56	P	P	06 37 49.6	+0.4
ISCO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
NAO01	NORSAR Array S	66.05	342	eP	P	06 37 46.9	-2.0
	comp=Z,23nm,1.0s,mb5.0						
NAO01				epP	pP	06 38 18.0	-0.6
NAO	NORSAR Subarra	66.08	342	P	P	06 37 46.0	-3.2
	comp=Z,26nm,0.7s,mb5.2						
EYMN	Ely	66.93	42	eP	P	06 37 54.0	-0.8
	comp=Z,30nm,1.1s,mb5.0						
EYMN				epP	pP	06 38 22.1	-2.4
SDCO	Great Sand Dun	67.56	58	eP	P	06 37 59.1	+0.3
	comp=Z,5.8nm,1.0s,mb4.4						
SDCO				epP	pP	06 38 28.4	-0.3
HYB	Hyderabad	68.36	272	i P	P	06 38 05.0	+0.9
HYB	Hyderabad	68.36	272	eP	P	06 38 05.0	+0.9
TUC	Tucson	68.45	65	eP	P	06 38 03.4	-1.1
	comp=Z,5.0nm,1.3s,mb4.2						
TUC				epP	pP	06 38 33.5	-0.8
TUC	Tucson	68.45	65	P	P	06 38 04.6	+0.1
TUC				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.2						
SUW	Suwalki	69.00	332	eP	P	06 38 05.5	-2.0
SUW				e	pP	06 38 30.7	-6.7
SUW	Suwalki	69.00	332	eP	P	06 38 05.5	-1.9
SUW				e	pP	06 38 30.7	-6.7
ANMO	Albuquerque	69.04	61	eP	P	06 38 07.4	-0.6
	comp=Z,3.2nm,0.7s,mb4.3						
ANMO				epP	pP	06 38 37.5	-0.5
ANMO	Albuquerque	69.04	61	eP	P	06 38 07.4	-0.6
ANMO				e*PP	pP	06 38 37.5	-0.5
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LPM	Los Pinos Moun	69.41	61	P	P	06 38 09.3	-1.0
LPM				epP	pP	06 38 40.4	+0.1
KIV	Kislovodsk	69.70	315	eP	P	06 38 11.4	-0.4
	comp=Z,26nm,0.6s,mb5.2						
KIV	Kislovodsk	69.70	315⇑	eP	P	06 38 11.6	-0.3
KIV				e		06 38 33.6	
KIV				e		06 40 45.4	
KIV				eS	S	06 47 07.5	-1.8
KIV				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
AKASG	Malin Array Be	69.81	327	P	P	06 38 10.4	-2.0
	comp=Z,32nm,0.6s,mb5.3,baz=32,slow=6.2,SNR=117						
AKASG	Malin Array Be	69.81	327	P	P	06 38 10.5	-1.9
AKASG				pmax	pmax		
	comp=Z,32nm,0.6s						
KIEV	Kiev	69.82	327	P	P	06 38 11.0	-1.5
SCHQ	Schefferville	69.95	24	P	P	06 38 12.7	-0.5
	comp=Z,24nm,0.5s,mb5.3,baz=349,slow=6.0,SNR=90						
SCHQ	Schefferville	69.95	24	eP	P	06 38 12.3	-0.9
	comp=Z,32nm,0.8s,mb5.2						
CTA	Charters Tower	70.02	189⇓	iP	P	06 38 13.2	-1.0
	comp=Z,19nm,0.9s,mb4.9						
CTA				epP	pP	06 38 43.6	-0.7
CTA	Charters Tower	70.02	189⇓	iP	P	06 38 13.2	-1.0
CTA				e*PP	pP	06 38 43.6	-0.7
CTA				pmax	pmax		
	comp=Z,19nm,0.9s						
CTAO	Charters Tower	70.02	189	eP	P	06 38 13.2	-1.0
	comp=Z,36nm,1.1s,mb5.1						
CTAO				epP	pP	06 38 43.7	-0.5
CTAO	Charters Tower	70.02	189	P	P	06 38 13.8	-0.4
CTAO				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.1						
ZEI	Tsey	70.04	313	i P	P	06 38 11.2	-2.8
ZEI				e*PP	pP	06 38 34.4	-10
ZEI				i		06 40 45.1	
ZEI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
POO	Poona	70.59	276	eP	P	06 38 19.1	+1.4
KAD	Karad	71.27	275	eP	P	06 38 22.3	+0.5
KAD				AMb	AMB	06 38 22.9	
	comp=Z,17nm,0.3s,mb5.3						
ANN	Anapa	71.38	318	eP	P	06 38 29.2	+7.2
ANN				pmax	pmax		
	comp=Z,65nm,0.7s,mb5.6						
GNI	Garni	71.65	311	P	P	06 38 24.2	+0.6
	comp=Z,17nm,0.5s,mb5.1,baz=334,slow=3.0,SNR=13						
GNI	Garni	71.65	311	eP	P	06 38 24.2	+0.5
	comp=Z,21nm,0.6s,mb5.2						
GNI	Garni	71.65	311	P	P	06 38 24.2	+0.6
GNI				pmax	pmax		
	comp=Z,17nm,0.5s						
WRAB	Tennant Creek	71.85	201	eP	P	06 38 24.5	-0.6
	comp=Z,143nm,1.2s,mb5.7						
WRAB				epP	pP	06 38 54.8	-0.6
WRAB	Tennant Creek	71.85	201	eP	P	06 38 24.7	-0.4

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WRAB                               pmax    pmax
      comp=Z,140nm,1.2s,mb5.7
WB2   Warramunga Arr   71.86 201 ⇓iP     P       06 38 24.5 -0.7
WRA   Warramunga Arr   71.86 201  P      P       06 38 24.6 -0.6
      comp=Z,33nm,0.6s,mb5.4,baz=20,slow=6.7,SNR=94
WRA                                pP     pP      06 38 55.0 -0.4
      comp=Z,5.5nm,0.7s,baz=16,slow=6.4,SNR=3.1
WRA   Warramunga Arr   71.86 201  P      P       06 38 24.6 -0.6
WRA                                *PP    pP      06 38 55.0 -0.4
WRA                                pmax   pmax
      comp=Z,33nm,0.6s
MNTX  Cornudas Mount   72.03  62 eP      P       06 38 25.9 -0.2
      comp=Z,19nm,1.2s,mb4.8
MNTX                              epP     pP      06 38 55.3 -0.9
DZM   Mont Dzumac      72.22 169  P      P       06 38 27.8 +0.5
      comp=Z,18nm,0.9s,mb4.9,baz=24,slow=13,SNR=5.0
FITZ  Fitzroy Crossi   72.50 210 ⇓iP     P       06 38 29.2 +0.2
      comp=Z,71nm,0.9s,mb5.5
FITZ  Fitzroy Crossi   72.50 210  P      P       06 38 29.4 +0.4
      comp=Z,88nm,0.8s,mb5.7,baz=25,slow=5.6,SNR=44
FITZ                               pP     pP      06 39 00.0 +0.8
      comp=Z,17nm,0.8s,baz=210,slow=15,SNR=2.3
BSEG  Bad Segeberg     72.52 339 eP      P       06 38 28.0 -0.4
BSEG                               pmax   pmax
      comp=Z,82nm,1.9s,mb5.2
KMPD  K-Podol'skiy     72.58 327  P      P       06 38 27.0 -1.9
KWP   Kalwaria         72.93 330 eP      P       06 38 30.6 -0.3
KWP   Kalwaria         72.93 330 eP      P       06 38 30.6 -0.3
OJC   Ojcow            73.33 332 eP      P       06 38 32.6 -0.6
WMOK  Wichita Mounta   73.42  56 eP      P       06 38 33.9 -0.2
      comp=Z,20nm,0.9s,mb4.9
WMOK                              epP     pP      06 39 03.4 -1.1
WMOK  Wichita Mounta   73.42  56  P      P       06 38 34.1  0.0
WMOK                               pmax   pmax
      comp=Z,20nm,0.9s,mb5.0
STHS  Stebnicka Huta   73.59 331 i P     P       06 38 34.6 -0.1
KOLS  Kolonicke sedl   73.68 330 i P     P       06 38 34.8 -0.5
KSP   Ksiaz            73.81 334 eP      P       06 38 35.5 -0.5
KSP   Ksiaz            73.81 334 eP      P       06 38 35.4 -0.6
BURAR Bucovina Array   73.83 327 ⇑P      P       06 38 35.4 -0.8
BURAR Bucovina Array   73.83 327 ⇑P      P       06 38 35.4 -0.8
NIE   Niedzica         73.88 331 eP      P       06 38 36.5 +0.1
CRVS  Cervenica-Dubn   73.97 330 i P     P       06 38 36.6 -0.4
OKC   Ostrava-Krasne   74.17 333 eP      P       06 38 37.7 -0.4
UPC   Upice            74.19 334 eP      P       06 38 38.0 -0.2
DPC   Dobruska-Polom   74.24 334 eP      P       06 38 38.4 -0.1
CLL   Collm            74.27 336 ⇑P      P       06 38 37.6 -1.1
      comp=Z,logA/T=1.7,mb5.2
CLL                               e               06 38 41.0
CLL                               e*PP    pP      06 39 06.0 -3.1
CLL   Collm            74.27 336⇑iP      P       06 38 37.6 -1.1
      comp=Z,33nm,0.7s,mb5.2
CLL                               epP     pP      06 39 06.0 -3.1
CLL   Collm            74.27 336⇑iP      P       06 38 37.6 -1.1
CLL                               e*PP    pP      06 39 06.0 -3.1
CLL                                pmax   pmax
      comp=Z,33nm,0.7s,mb5.2
MORC  Moravsky Berou   74.40 333 eP      P       06 38 38.7 -0.7
      comp=Z,30nm,0.8s,mb5.1
MORC  Moravsky Berou   74.40 333  P      P       06 38 38.7 -0.7
MORC                               pmax   pmax
      comp=Z,30nm,0.9s,mb5.0
BRG   Berggiesshubel   74.42 336  P      P       06 38 38.8 -0.7
CLZ   Clausthal        74.44 338 eP      P       06 38 39.6  0.0
      comp=Z,59nm,1.4s,mb5.1
CLZ   Clausthal        74.44 338 eP      P       06 38 39.6  0.0
CLZ                                pmax   pmax
      comp=Z,59nm,1.4s,mb5.1
PALK  Pallekele        74.52 263  P      P       06 38 41.6 +0.7
PVCC  Panska Ves       74.57 335 eP      P       06 38 39.9 -0.5
KECS  Kecovo           74.65 331 eP      P       06 38 40.5 -0.4
KECS                              e               06 38 55.4
LTX   Lajitas          74.78  63 eP      P       06 38 42.1 +0.1
      comp=Z,15nm,0.8s,mb4.8
LTX                               epP     pP      06 39 11.5 -1.0
LTX   Lajitas          74.78  63 eP      P       06 38 42.2 +0.2
LTX                               e*PP    pP      06 39 11.5 -1.0
LTX                                pmax   pmax
      comp=Z,15nm,0.8s,mb4.8
TXAR  Lajitas Array    74.78  63  P      P       06 38 42.3 +0.3
      comp=Z,11nm,0.5s,mb4.8,baz=297,slow=4.7,SNR=193
TXAR                               pP     pP      06 39 12.2 -0.3
      comp=Z,6.2nm,0.6s,baz=297,slow=3.9,SNR=5.9
CFR   Carcaliu         74.83 324 ⇓P      P       06 38 40.3 -1.7
PRU   Pruhonice        75.06 335 eP      P       06 38 42.8 -0.4
VRAC  Vranov           75.10 333  P      P       06 38 43.7 +0.3
VYHS  Vyhne            75.16 332 eP      P       06 38 43.7  0.0
FVM   French Village   75.17  48 eP      P       06 38 42.1 -2.0
      comp=Z,8.1nm,0.6s,mb4.6
FVM                               epP     pP      06 39 13.2 -1.4
FVM   French Village   75.17  48 eP      P       06 38 42.1 -2.0
FVM                               e*PP    pP      06 39 13.2 -1.4
FVM                                pmax   pmax
      comp=Z,8.0nm,0.6s,mb4.6
JAVC  Velka Javorina   75.18 333  P      P       06 38 44.2 +0.3
MOX   Moxa             75.23 337 i P     P       06 38 43.4 -0.7
MOX   Moxa             75.23 337 eP      P       06 38 43.4 -0.7
PSZ   Piszkesteto      75.33 331 eP      P       06 38 44.2 -0.6
      comp=Z,44nm,1.4s,mb5.0
PSZ   Piszkesteto      75.33 331 eP      P       06 38 44.2 -0.6
PSZ                                pmax   pmax
      comp=Z,44nm,1.4s,mb5.0
KRUC  Moravsky         75.38 333  P      P       06 38 45.1 +0.1
MLR   Muntele Rosu     75.38 326 ⇓P      P       06 38 45.3 +0.2
MLR   Muntele Rosu     75.38 326  P      P       06 38 45.9 +0.8
DRGR                   75.40 328  P      P       06 38 43.3 -1.9
NKC   Novy Kostel      75.40 336 eP      P       06 38 44.9 -0.2
TREC  Trest            75.43 334 eP      P       06 38 45.1 -0.2
ISR   Istrita          75.48 325 ⇓P      P       06 38 44.9 -0.8
ISR   Istrita          75.48 325 ⇓P      P       06 38 44.9 -0.8
BUG   Bochum--Univer   75.53 340  P      P       06 38 45.9 +0.1
ASPA  Alice Springs    75.56 200 eP      P       06 38 47.0 +0.5
SMOL  Smolenice        75.56 333 eP      P       06 38 47.1 +1.1
VOIR                   75.75 326 ⇑P      P       06 38 47.2  0.0
ZST   Bratislava       75.94 333 eP      P       06 38 48.6 +0.4
BUD   Budapest         75.99 331  P      P       06 38 48.6 +0.1
JCT   Junction City    76.10  59 eP      P       06 38 48.6 -0.9
      comp=Z,19nm,1.2s,mb4.7
JCT                               e               06 38 57.1
JCT                               epP     pP      06 39 18.3 -1.7
JCT   Junction City    76.10  59 eP      P       06 38 48.6 -0.9
JCT                               e               06 38 57.1
JCT                               e*PP    pP      06 39 18.3 -1.7
JCT                                pmax   pmax
      comp=Z,19nm,1.2s,mb4.7
KHC   Kasperske Hory   76.11 335 eP      P       06 38 49.2 +0.1
KHC                               ex      x       06 38 54.6
BANOM Banah            76.11 294 ⇑P      P       06 38 49.7 +0.1
      SNR=17
DLF   Lyons Farm       76.14 349⇓iP      P       06 38 48.3 -0.9
DCN   Croghan          76.19 349⇓iP      P       06 38 48.4 -1.1
GRA1  Grafenberg Arr   76.21 337 eP      P       06 38 49.8 +0.1
      comp=Z,62nm,0.8s,mb5.4
GRF   Grafenberg Arr   76.21 337 eP      P       06 38 49.8 +0.1
      comp=Z,62nm,0.8s,mb5.4
GRF   Grafenberg Arr   76.21 337 eP      P       06 38 49.8 +0.1
GRF                                pmax   pmax
      comp=Z,62nm,0.8s,mb5.4
GRF   Grafenberg Arr   76.21 337 eP      P       06 38 49.8 +0.1
GRF                                pmax   pmax
      comp=Z,62nm,0.8s,mb5.4
WET   Wettzell         76.28 336 eP      P       06 38 50.3 +0.2
      comp=Z,58nm,1.3s,mb5.2
WET   Wettzell         76.28 336 eP      P       06 38 50.3 +0.2
WET                                pmax   pmax
      comp=Z,58nm,1.3s,mb5.2
GEC2  GERESS Array S   76.33 335 eP      P       06 38 50.1 -0.3
      comp=Z,17nm,0.9s,mb4.8
GEC2  GERESS Array S   76.33 335 eP      P       06 38 50.1 -0.3
GEC2                               pmax   pmax
      comp=Z,17nm,0.9s,mb4.8
GERES GERESS Array B   76.33 335  P      P       06 38 50.3 -0.1
      comp=Z,8.4nm,0.7s,mb4.6,baz=34,slow=4.8,SNR=51
GERES                              LR     LR      07 16 46.6
      comp=Z,138nm,19.9s,baz=260,slow=39
GERES GERESS Array B   76.33 335  P      P       06 38 50.3 -0.1
GERES                              LR     LR      07 16 46.6
TNS   Taunus Mts       76.40 339 eP      P       06 38 50.8 +0.1
      comp=Z,39nm,0.7s,mb5.2
TNS   Taunus Mts       76.40 339 eP      P       06 38 50.8 +0.1
TNS                                pmax   pmax
      comp=Z,39nm,0.7s,mb5.2
PARMO Parma            76.55  49 eP      P       06 38 51.4 -0.4
PARMO                             e               06 38 58.9
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PARMO                             epP     pP      06 39 21.1 -1.3
SOP   Sopron           76.57 333  P      P       06 38 52.3 +0.6
SOP                                Pn     P       06 38 53.1 +1.4
BIDO  Bidbid           76.81 291 ⇑P      P       06 38 53.8 +0.3
TOD   Tromm            76.89 338 eP      P       06 38 53.2 -0.3
ABH   Alteburg         76.92 339 eP      P       06 38 53.6 -0.1
WCI   Wyandotte Cave   76.93  45 eP      P       06 38 53.2 -0.7
      comp=Z,22nm,0.9s,mb4.9
WCI                               epP     pP      06 39 23.9 -0.7
WCI   Wyandotte Cave   76.93  45 eP      P       06 38 53.2 -0.7
WCI                               e*PP    pP      06 39 23.9 -0.6
WCI                                pmax   pmax
      comp=Z,22nm,0.9s,mb4.9
WBK   Wadi Bani Khal   76.97 289 ⇓P      P       06 38 55.5 +1.0
MOA   Molln            77.08 334⇑iP      P       06 38 54.7 +0.1
      comp=Z,20nm,0.8s,mb4.9,SNR=8.6
BR131 Keskin Array S   77.14 318 eP      P       06 38 54.7 -0.4
      comp=Z,6.4nm,0.6s,mb4.5
BRTR  Keskin Array B   77.14 318  P      P       06 38 55.1 +0.1
      comp=Z,11nm,0.8s,mb4.6,baz=56,slow=3.3,SNR=42
ASHO  Ashiyiah         77.18 293 ⇓P      P       06 38 55.4 -0.2
      SNR=13
SMDO  Samad            77.20 290 ⇓P      P       06 38 56.2 +0.4
PKSM  Moragy           77.24 331  P      P       06 38 53.9 -1.6
HOQ   Hoqain           77.25 291 ⇑P      P       06 38 56.3 +0.2
      SNR=6.8
ARSA  Arzberg          77.26 333⇑iP      P       06 38 56.0 +0.4
      comp=Z,41nm,1.2s,mb5.0,SNR=9.4
ARSA  Arzberg          77.26 333⇑iP      P       06 38 56.0 +0.4
      comp=Z,41nm,1.2s,mb5.0
GIVF  Givet            77.32 341⇑iP      P       06 38 55.4 -0.4
      comp=Z,70nm,1.0s,mb5.0
GIVF  Givet            77.32 341⇑iP      P       06 38 55.4 -0.4
GIVF                               pmax   pmax
      comp=Z,35nm,1.0s,mb5.0
MBWA  Marble Bar       77.35 214 eP      P       06 38 56.3 -0.3
ANTO  Ankara           77.39 318 eP      P       06 38 56.7 +0.3
      comp=Z,22nm,0.9s,mb4.9
ANTO  Ankara           77.39 318  P      P       06 38 57.0 +0.5
ANTO                               pmax   pmax
      comp=Z,22nm,1.0s,mb4.8
BAIF  Baives           77.49 341⇑iP      P       06 38 56.5 -0.3
      comp=Z,68nm,0.9s,mb5.1
BAIF  Baives           77.49 341⇑iP      P       06 38 56.5 -0.3
BAIF                               pmax   pmax
      comp=Z,34nm,0.9s,mb5.1
STU   Stuttgart        77.57 338  P      P       06 38 56.8 -0.5
FUR   Furstenfeldbru   77.60 336 eP      P       06 38 57.6 +0.1
      comp=Z,55nm,0.9s,mb5.3
FUR   Furstenfeldbru   77.60 336 eP      P       06 38 57.6 +0.1
FUR                                pmax   pmax
      comp=Z,55nm,0.9s,mb5.3
JMDO  Jabal Madar      77.68 290  P      P       06 38 58.9 +0.5
      SNR=16
LANF  Langenberg       77.71 339 eP      P       06 38 57.9 -0.1
WVT   Waverly          77.90  48 eP      P       06 38 59.1 -0.3
      comp=Z,4.5nm,0.6s,mb4.4
WVT                               epP     pP      06 39 29.1 -0.9
WVT   Waverly          77.90  48  P      P       06 38 59.0 -0.3
WVT                               e       pP      06 39 29.9 -0.1
WVT                                pmax   pmax
      comp=Z,5.0nm,0.6s,mb4.4
ARQ   Araqi            77.92 292 ⇓P      P       06 38 59.9 +0.3
      SNR=19
PERS  Pernice          77.94 333 i P     P       06 38 59.5 +0.2
      comp=Z,97nm,0.9s,mb5.5
BSY   Bisya            77.95 291 ⇑P      P       06 39 00.4 +0.5
      SNR=20
KBA   Koelnbreinsper   78.04 334⇑iP      P       06 39 00.7 +0.8
      comp=Z,149nm,1.0s,mb5.7,SNR=130
KBA   Koelnbreinsper   78.04 334⇑iP      P       06 39 00.7 +0.8
KBA                                pmax   pmax
      comp=Z,149nm,1.0s,mb5.7
BFO   Black Forest     78.19 338 eP      P       06 39 00.4 -0.3
      comp=Z,34nm,0.8s,mb5.1
BFO   Black Forest     78.19 338 eP      P       06 39 00.4 -0.3
BFO                                pmax   pmax
      comp=Z,34nm,0.8s,mb5.1
OBKA  Obir             78.22 333⇑iP      P       06 39 01.0 +0.1
      comp=Z,38nm,0.7s,mb5.2,SNR=16
UMR   Umm Al-Rimmam    78.27 302 eP      P       06 39 01.6 +0.1
UMR                                AMb    AMB     06 39 03.7
      comp=Z,153nm,0.5s,mb6.0
MIB   Mutribah         78.28 302 eP      P       06 39 01.6 +0.1
MIB                                AMb    AMB     06 39 03.8
      comp=Z,246nm,0.5s,mb6.2
WATA  Walderalm        78.29 336⇓iP      P       06 39 01.9 +0.6
      comp=Z,81nm,1.4s,mb5.3
WATA  Walderalm        78.29 336 ⇓P      P       06 39 01.9 +0.6
      comp=Z,81nm,1.4s,mb5.3
WATA  Walderalm        78.29 336 ⇓P      P       06 39 01.9 +0.7
WATA                               pmax   pmax
      comp=Z,81nm,1.4s,mb5.3
WTTA  Wattenberg       78.34 336⇑iP      P       06 39 02.3 +0.8
      comp=Z,110nm,1.2s,mb5.5,SNR=19
WTTA  Wattenberg       78.34 336⇑iP      P       06 39 02.3 +0.8
WTTA                               pmax   pmax
      comp=Z,110nm,1.2s,mb5.5
WLS   Welschbruch      78.34 339 eP      P       06 39 01.7 +0.2
CDF   Champ du Feu     78.36 339⇑iP      P       06 39 01.5 -0.1
      comp=Z,110nm,0.9s,mb5.3
CDF   Champ du Feu     78.36 339⇑iP      P       06 39 01.5 -0.1
CDF                                pmax   pmax
      comp=Z,55nm,0.9s,mb5.3
MOTA  Moosalm          78.41 336⇑iP      P       06 39 02.5 +0.6
      comp=Z,62nm,1.1s,mb5.3,SNR=18
MOTA  Moosalm          78.41 336⇑iP      P       06 39 02.5 +0.6
MOTA                               pmax   pmax
      comp=Z,62nm,1.1s,mb5.2
SQTA  Sankt Quirin     78.49 336⇑iP      P       06 39 03.0 +0.7
      comp=Z,70nm,1.2s,mb5.3,SNR=16
SQTA  Sankt Quirin     78.49 336⇑iP      P       06 39 03.0 +0.7
SQTA                               pmax   pmax
      comp=Z,70nm,1.2s,mb5.3
LEGS  Legarje          78.50 333 i P     P       06 39 02.0 -0.4
LIBD  Limburg          78.53 339 eP      P       06 39 02.5  0.0
ECH   Echery           78.58 339 eP      P       06 39 03.0 +0.2
GRUS  Gruza            78.62 328 i P     P       06 39 02.0 -1.1
FVI   Forni Avoltri    78.64 335  P      P       06 39 03.0 -0.2
LJU   Ljubljana        78.65 333 eP      P       06 39 02.8 -0.4
PTCC  Patocco-Chiusa   78.65 334  P      P       06 39 02.7 -0.5
DIVS  Divcibare        78.68 329⇑iP      P       06 39 03.2 -0.3
FELD  Feldberg         78.69 338 eP      P       06 39 03.3 -0.1
NAY   Al-Naaiem        78.76 302 eP      P       06 39 04.1 -0.1
NAY                                AMb    AMB     06 39 06.4
      comp=Z,71nm,0.7s,mb5.6
DAVA  Damuels          78.78 337⇑iP      P       06 39 04.3 +0.4
      comp=Z,65nm,1.2s,mb5.3,SNR=14
DAVA  Damuels          78.78 337⇑iP      P       06 39 04.3 +0.4
      comp=Z,65nm,1.2s,mb5.3
QRN   Al-Qurain        78.78 301 eP      P       06 39 04.3  0.0
QRN                                AMb    AMB     06 39 07.3
      comp=Z,111nm,0.8s,mb5.8
MEZF  Maizieres J'vi   78.78 340⇑iP      P       06 39 04.0 +0.1
      comp=Z,68nm,0.6s,mb5.3
GMNA  Gemona           78.81 334  P      P       06 39 03.7 -0.4
BRES  Bressanone       78.83 335  P      P       06 39 06.0 +1.8
THEF  They Montfort    78.83 340 eP      P       06 39 04.2  0.0
VOY   Vojsko           78.84 334 eP      P       06 39 03.0 -1.3
RDF   Al-Radifah       78.84 302 eP      P       06 39 04.8 +0.2
RDF                                AMb    AMB     06 39 07.1
      comp=Z,165nm,0.8s,mb5.9
VTS   Vitosha          78.88 326  P      P       06 39 03.8 -0.8
VTS                                Pn     P       06 39 04.5 -0.1
WILA  Wila             78.90 337 ⇓P      P       06 39 05.1 +0.5
BOJS  Bojanci          78.92 333 eP      P       06 39 04.5 -0.2
MOF   Molkenrain       78.92 339 eP      P       06 39 04.6 -0.1
HAU   Haudompre        78.96 339⇑iP      P       06 39 04.6 -0.3
      comp=Z,68nm,0.9s,mb5.2
HAU                               eR
      comp=Z,205nm,18.5s
HAU   Haudompre        78.96 339⇑iP      P       06 39 04.6 -0.3
HAU                                pmax   pmax
      comp=Z,34nm,0.9s,mb5.2
HAU                                MLR    MLR
      comp=Z,200nm,18.5s
SULZ  Sulz-Cheisache   78.99 338 ⇓P      P       06 39 05.4 +0.3
HINF  Hinteralfeld     79.02 339⇑iP      P       06 39 04.8 -0.4
      comp=Z,42nm,0.9s,mb5.0
HINF  Hinteralfeld     79.02 339⇑iP      P       06 39 04.8 -0.4
HINF                               pmax   pmax
      comp=Z,21nm,0.9s,mb5.0
BBLS  Bajina Basta -   79.08 329 i P     P       06 39 06.3 +0.7
APPI  Appiano          79.17 336  P      P       06 39 05.7 -0.3
BBS   Basel-Blauen     79.20 338 eP      P       06 39 06.4 +0.2
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RDO   Rodhopi          79.27 324  P      P       06 39 05.0 -1.7
NVSS  Nova Varos 2     79.30 329⇑iP      P       06 39 06.8  0.0
MUO   Muotathal        79.39 337 ⇑P      P       06 39 07.7 +0.5
BRMO  Bormio           79.40 336  P      P       06 39 08.4 +1.1
LLS   Linth-Limmern    79.41 337 ⇑P      P       06 39 07.7 +0.4
CTI   Castel Tesino    79.45 335  P      P       06 39 07.3 -0.3
LOMF  Lomont           79.47 339 eP      P       06 39 07.7 +0.1
SWET  Sewanee          79.54  47 eP      P       06 39 06.1 -2.2
SWET                              epP     pP      06 39 36.6 -2.4
PLE   Pljevlja         79.56 329⇑iP      P       06 39 08.7 +0.5
VDL   Val di Lei       79.62 337 ⇑P      P       06 39 09.4 +0.9
FLN   La Foliniere     79.63 344⇑iP      P       06 39 08.3 -0.2
      comp=Z,206nm,0.9s,mb5.7
FLN                               eR
      comp=Z,295nm,19.0s
FLN   La Foliniere     79.63 344⇑iP      P       06 39 08.3 -0.2
FLN                                pmax   pmax
      comp=Z,103nm,0.9s,mb5.7
FLN                                MLR    MLR
      comp=Z,300nm,19.0s
TUE   Stuetta          79.67 337  P      P       06 39 08.8 +0.1
LDF   La Druitiere     79.73 344⇑iP      P       06 39 08.7 -0.3
      comp=Z,92nm,0.7s,mb5.4
LDF   La Druitiere     79.73 344⇑iP      P       06 39 08.7 -0.3
LDF                                pmax   pmax
      comp=Z,46nm,0.7s,mb5.4
MABI  Malga Bissina    79.75 336  P      P       06 39 08.5 -0.7
IVA   Berane           79.80 328⇑iP      P       06 39 09.5  0.0
UPM   Unac-Piva        79.83 329⇑iP      P       06 39 08.6 -1.1
ARMA  Armidale         79.92 183 eP      P       06 39 11.4 +1.0
ARMA                              epP     pP      06 39 54.9  +14
PVY   Plav             80.02 328⇑iP      P       06 39 10.4 -0.3
ISP   Isparta          80.06 319 eP      P       06 39 10.1 -0.9
      comp=Z,16nm,0.6s,mb5.0
ISP   Isparta          80.06 319 eP      P       06 39 10.1 -0.9
ISP                                pmax   pmax
      comp=Z,16nm,0.6s,mb5.0
SKO   Skopje           80.06 327 eP      P       06 39 10.0 -0.9
SKO   Skopje           80.06 327 eP      P       06 39 10.0 -0.9
GRR   Gorron           80.06 344⇑iP      P       06 39 10.9 +0.1
      comp=Z,272nm,0.8s,mb5.8
GRR   Gorron           80.06 344⇑iP      P       06 39 10.9 +0.1
GRR                                pmax   pmax
      comp=Z,136nm,0.8s,mb5.8
NKY   Niksic           80.15 329⇑iP      P       06 39 10.3 -1.1
LKBD  Leukerbad        80.18 338 ⇓P      P       06 39 12.2 +0.7
LOR   Lormes           80.21 341⇑iP      P       06 39 11.5 -0.1
      comp=Z,117nm,0.9s,mb5.4
LOR                               eR
      comp=Z,279nm,17.2s
LOR   Lormes           80.21 341⇑iP      P       06 39 11.5 -0.1
LOR                                pmax   pmax
      comp=Z,59nm,0.9s,mb5.4
LOR                                MLR    MLR
      comp=Z,280nm,17.2s
VAY   Valandovo        80.22 326 i P     P       06 39 11.4 -0.5
BRY   Bratogost        80.23 329⇑iP      P       06 39 10.9 -0.9
MUGIO Muggio           80.26 337  P      P       06 39 11.9  0.0
CABF  La Chapelle      80.33 339⇑iP      P       06 39 12.5 +0.2
      comp=Z,131nm,1.1s,mb5.4
CABF  La Chapelle      80.33 339⇑iP      P       06 39 12.5 +0.2
CABF                               pmax   pmax
      comp=Z,66nm,1.1s,mb5.4
VAI   Varese           80.38 337  P      P       06 39 12.6  0.0
TTG   Podgorica        80.41 329⇑iP      P       06 39 12.1 -0.7
MMK   Mattmark         80.41 338 ⇑P      P       06 39 13.7 +1.0
HYF   Humbligny        80.47 341 eP      P       06 39 13.3 +0.3
SSF   Saint Saulge     80.48 341⇑iP      P       06 39 12.9 -0.2
      comp=Z,36nm,0.9s,mb5.2
SSF   Saint Saulge     80.48 341⇑iP      P       06 39 12.9 -0.2
SSF                                pmax   pmax
      comp=Z,36nm,0.9s,mb5.2
SGMF  Saint Gilles     80.48 345⇑iP      P       06 39 13.2 +0.1
      comp=Z,199nm,0.7s,mb5.8
SGMF  Saint Gilles     80.48 345⇑iP      P       06 39 13.2 +0.1
SGMF                               pmax   pmax
      comp=Z,99nm,0.7s,mb5.8
MCGN  Macugnaga        80.49 338  P      P       06 39 14.0 +0.8
DIX   Grande Dixence   80.52 338 ⇑P      P       06 39 14.4 +1.1
ROSF  Rostrenen        80.52 346⇑iP      P       06 39 13.4 +0.1
      comp=Z,205nm,0.8s,mb5.7
ROSF  Rostrenen        80.52 346⇑iP      P       06 39 13.4 +0.1
ROSF                               pmax   pmax
      comp=Z,103nm,0.8s,mb5.7
BUM   Brajici-Budva    80.64 329⇑iP      P       06 39 13.2 -0.9
HCY   Herceg Novi      80.65 329⇑iP      P       06 39 13.7 -0.4
AVF   Avril sur Loir   80.77 341⇑iP      P       06 39 14.6  0.0
      comp=Z,204nm,1.1s,mb5.5
AVF   Avril sur Loir   80.77 341⇑iP      P       06 39 14.6  0.0
AVF                                pmax   pmax
      comp=Z,102nm,1.1s,mb5.6
ORX   Oropa            80.80 337  P      P       06 39 14.5 -0.3
ORO   Oropa            80.80 337  P      P       06 39 15.2 +0.4
SMF   Signal de Mont   80.81 341⇑iP      P       06 39 14.8  0.0
      comp=Z,182nm,1.2s,mb5.5
SMF   Signal de Mont   80.81 341⇑iP      P       06 39 14.8  0.0
SMF                                pmax   pmax
      comp=Z,91nm,1.2s,mb5.5
ULC   Ulcinj           80.82 328⇑iP      P       06 39 14.3 -0.7
QUIF  Quistinic        80.91 345⇑iP      P       06 39 15.4 +0.1
      comp=Z,103nm,0.8s,mb5.4
QUIF  Quistinic        80.91 345⇑iP      P       06 39 15.4 +0.1
QUIF                               pmax   pmax
      comp=Z,52nm,0.8s,mb5.4
BIA   Bitola           80.94 327 eP      P       06 39 13.1 -2.5
BIA   Bitola           80.94 327 eP      P       06 39 13.1 -2.5
BGF   Bois d'Agland    81.10 341 eP      P       06 39 16.3 -0.1
      comp=Z,58nm,0.8s,mb5.1
BGF   Bois d'Agland    81.10 341 eP      P       06 39 16.3 -0.1
BGF                                pmax   pmax
      comp=Z,29nm,0.8s,mb5.2
LSD   Ceresole Reale   81.16 338  P      P       06 39 17.4 +0.7
ZCCA  Zocca            81.20 335  P      P       06 39 18.9 +2.0
CSS   Prodhromos       81.21 315 eP      P       06 39 17.2  0.0
      comp=Z,27nm,0.6s,mb5.2
LPL   La Plagne        81.21 338⇑iP      P       06 39 18.0 +1.0
      comp=Z,150nm,0.7s,mb5.7
LPL   La Plagne        81.21 338⇑iP      P       06 39 18.0 +1.0
LPL                                pmax   pmax
      comp=Z,75nm,0.7s,mb5.6
LPG   La Plagne        81.22 338⇑iP      P       06 39 18.2 +1.2
      comp=Z,151nm,0.6s,mb5.7
LPG   La Plagne        81.22 338⇑iP      P       06 39 18.2 +1.2
LPG                                pmax   pmax
      comp=Z,76nm,0.6s,mb5.7
BOB   Bobbio (Coli)    81.23 336  P      P       06 39 16.3 -0.8
ERBM  Eremo            81.29 335  P      P       06 39 18.9 +1.5
FSSB  Fossombrone      81.30 333  P      P       06 39 18.1 +0.6
GSCL  Gusciola         81.31 335  P      P       06 39 18.9 +1.4
GRAM                   81.32 336  P      P       06 39 17.7 +0.1
SEI   Scarperia        81.37 335  P      P       06 39 19.5 +1.7
SFI   Santa Sofia      81.37 334  P      P       06 39 19.0 +1.2
VALM                   81.40 335  P      P       06 39 18.3 +0.3
VMG   Vicchio          81.41 334  P      P       06 39 19.0 +1.0
RSP   Reno Superiore   81.43 338  P      P       06 39 17.4 -0.7
ARV   Arcevia          81.43 333  P      P       06 39 18.7 +0.5
PGD   Poggio Sodo      81.44 334  P      P       06 39 19.7 +1.5
CODM                   81.47 336  P      P       06 39 18.7 +0.3
TCF   Toulx Ste Croi   81.49 341⇑iP      P       06 39 18.6 +0.2
      comp=Z,111nm,1.1s,mb5.3
TCF   Toulx Ste Croi   81.49 341⇑iP      P       06 39 18.6 +0.2
TCF                                pmax   pmax
      comp=Z,56nm,1.1s,mb5.3
PLDF  La Plantade      81.49 340 eP      P       06 39 19.1 +0.7
SARO  Sassorosso       81.51 335  P      P       06 39 19.1 +0.5
BACM                   81.52 336  P      P       06 39 18.7 +0.1
AGO   Saint Agoulin    81.52 341 eP      P       06 39 19.4 +0.8
VLC   Villacollemand   81.54 335 eP      P       06 39 18.6 -0.1
      comp=Z,114nm,0.9s,mb5.7
BDI   Bagni Di Lucca   81.57 335  P      P       06 39 18.8 -0.1
FENE  Fenestrelle      81.59 338  P      P       06 39 19.4 +0.5
CRE   Caprese Michel   81.61 334  P      P       06 39 19.9 +0.8
BADI  Badiali          81.62 334  P      P       06 39 20.7 +1.6
VINC  Vinca            81.62 335  P      P       06 39 18.4 -0.7
GDM   Grand'Maison     81.65 339 eP      P       06 39 20.3 +1.0
MFF   Saint Martin d   81.65 343⇑iP      P       06 39 19.6 +0.4
      comp=Z,128nm,0.9s,mb5.4
MFF   Saint Martin d   81.65 343⇑iP      P       06 39 19.6 +0.4
MFF                                pmax   pmax
      comp=Z,64nm,0.9s,mb5.5
SNTG  Esanatoglia      81.65 333  P      P       06 39 19.8 +0.5
BNI   Bardonecchia     81.66 338 eP      P       06 39 20.1 +0.8
      comp=Z,38nm,0.6s,mb5.4
BNI   Bardonecchia     81.66 338 eP      P       06 39 20.1 +0.8
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BNI				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.4						
PCP	Pian Castagno	81.67	337	P	P	06 39 19.1	-0.3
LCHF	La Chataignera	81.70	344	*e*P	P	06 39 20.6	+1.1
GRN	Grenoble	81.70	339	*e*P	P	06 39 20.5	+1.0
BHB	Bricherasio	81.72	338	P	P	06 39 18.5	-1.1
RRL	Cesana Torines	81.76	338	P	P	06 39 20.7	+0.8
PYM	Petit Puy Mans	81.83	341	*e*P	P	06 39 21.0	+0.8
CSNT	Castellina Chi	81.93	334	P	P	06 39 20.8	+0.1
MBDF	Montbardon	81.94	338	⇑*i*P	P	06 39 21.2	+0.4
	comp=Z,61nm,0.8s,mb5.2						
MBDF	Montbardon	81.94	338	⇑*i*P	P	06 39 21.2	+0.4
MBDF				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.2						
ORIF	Oris-en-Rattie	81.98	339	⇑*i*P	P	06 39 21.8	+0.8
	comp=Z,74nm,0.7s,mb5.3						
ORIF				*e*R			
	comp=Z,183nm,19.0s						
NRCA	Norcia	81.99	333	P	P	06 39 21.8	+0.7
TERO	Teramo	82.04	332	P	P	06 39 21.8	+0.5
FIN	Finale Ligure	82.07	337	P	P	06 39 20.4	-1.0
ROB	Roburent	82.08	337	P	P	06 39 20.8	-0.7
SURF	Saint Ours	82.16	338	*e*P	P	06 39 22.9	+1.0
RORO		82.20	337	P	P	06 39 21.5	-0.6
STKA	Stephens Creek	82.21	192	*e*P	P	06 39 22.6	+0.2
	comp=Z,12nm,0.8s,mb4.8						
STKA	Stephens Creek	82.21	192	P	P	06 39 22.4	0.0
	comp=Z,14nm,0.8s,mb4.8,baz=337,slow=6.4,SNR=9.2						
STKA				LR	LR	07 17 48.5	
	comp=Z,56nm,18.9s,baz=26,slow=37						
QURS	Qurayyt al Mil	82.25	310	P	P	06 39 24.1	+1.5
ENR	Entracque	82.25	337	P	P	06 39 21.0	-1.4
STV2	Anna di Valdie	82.26	337	P	P	06 39 21.0	-1.5
STV	Sta Anna Valdi	82.26	337	P	P	06 39 21.0	-1.4
FRNF	Fournols	82.28	341	*e*P	P	06 39 23.3	+0.8
LBL	Lubilhac	82.28	340	*e*P	P	06 39 23.4	+0.9
GRFL	Gerfalco	82.31	334	P	P	06 39 22.6	-0.1
VIVF	Saint-Julien-l	82.32	339	⇑*i*P	P	06 39 23.4	+0.7
	comp=Z,118nm,1.1s,mb5.3						
VIVF	Saint-Julien-l	82.32	339	⇑*i*P	P	06 39 23.4	+0.7
VIVF				pmax	pmax		
	comp=Z,59nm,1.1s,mb5.3						
AQU	L'Aquila	82.34	332	*e*P	P	06 39 23.9	+1.0
	comp=Z,30nm,0.7s,mb5.2						
AQU	L'Aquila	82.34	332	*e*P	P	06 39 23.9	+1.0
AQU				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.2						
IMI	Imperia	82.43	337	P	P	06 39 23.1	-0.2
SAOF	Saorge	82.44	337	*e*P	P	06 39 23.3	-0.1
AUTN	L'Aution	82.47	337	*e*P	P	06 39 24.0	+0.5
CIGN	Sant'Elia a Pi	82.52	331	P	P	06 39 24.2	+0.4
MNS	Montasola	82.53	333	P	P	06 39 23.7	-0.1
NEGI	Negi	82.54	337	P	P	06 39 23.4	-0.5
RJF	Les Rejaudoux	82.57	342	⇑*i*P	P	06 39 24.6	+0.6
	comp=Z,59nm,1.0s,mb5.1						
RJF				*e*R			
	comp=Z,276nm,17.5s						
RJF	Les Rejaudoux	82.57	342	⇑*i*P	P	06 39 24.6	+0.6
RJF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.1						
RJF				MLR	MLR		
	comp=Z,280nm,17.5s						
SBF	Sospel	82.59	337	⇑*i*P	P	06 39 24.1	0.0
	comp=Z,104nm,0.7s,mb5.5						
SBF	Sospel	82.59	337	⇑*i*P	P	06 39 24.1	0.0
SBF				pmax	pmax		
	comp=Z,52nm,0.7s,mb5.5						
MVIF	Mont Vial	82.63	337	*e*P	P	06 39 24.6	+0.3
PTQR	Pietraquaria	82.65	332	P	P	06 39 25.0	+0.6
REVF	Revere	82.72	337	*e*P	P	06 39 25.0	+0.2
REVF	Revere	82.72	337	*e*P	P	06 39 25.5	+0.7
FG4	Candela	82.80	331	P	P	06 39 25.7	+0.5
CAF	Calviac	82.82	341	⇑*i*P	P	06 39 26.1	+0.8
	comp=Z,60nm,0.8s,mb5.2						
CAF	Calviac	82.82	341	⇑*i*P	P	06 39 26.1	+0.8
CAF				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.2						
CALN	Calern	82.83	337	*e*P	P	06 39 25.5	+0.2
PPT	Papeete	82.83	128	P	P	06 39 27.0	+1.2
	comp=Z,19nm,0.7s,mb5.0,baz=77,slow=1.6,SNR=6.0						
SGG	Gregorio Mates	82.93	331	P	P	06 39 26.3	+0.4
SMRF	Simiane la Rot	82.94	338	*e*P	P	06 39 27.0	+1.1
	comp=Z,113nm,1.2s,mb5.3						
FRF	La Foret Royal	83.07	338	⇑*i*P	P	06 39 26.5	0.0
	comp=Z,67nm,1.0s,mb5.1						
FRF	La Foret Royal	83.07	338	⇑*i*P	P	06 39 26.5	0.0
FRF				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.1						
LFF	La Frestale	83.08	342	⇑*i*P	P	06 39 27.3	+0.7
	comp=Z,92nm,0.8s,mb5.3						
LFF	La Frestale	83.08	342	⇑*i*P	P	06 39 27.3	+0.7
LFF				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.4						
HILS	Ha'il	83.18	305	P	P	06 39 28.6	+1.1
LASF	Ste Croix	83.24	340	⇑*i*P	P	06 39 28.4	+1.0
	comp=Z,32nm,0.9s,mb4.8						
LMR	La Mourre	83.32	338	⇑*i*P	P	06 39 28.1	+0.3
	comp=Z,154nm,1.0s,mb5.5						
LMR	La Mourre	83.32	338	⇑*i*P	P	06 39 28.1	+0.3
LMR				pmax	pmax		
	comp=Z,77nm,1.0s,mb5.5						
SGO	Sicignano	83.39	330	P	P	06 39 28.2	0.0
PGF	Pioggiola	83.41	336	⇑*i*P	P	06 39 28.4	+0.1
	comp=Z,71nm,0.7s,mb5.3						
PGF	Pioggiola	83.41	336	⇑*i*P	P	06 39 28.4	+0.1
PGF				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.3						
ORI	Oriolo Calabro	83.46	329	P	P	06 39 29.6	+1.0
MGR	Morigerati	83.69	330	P	P	06 39 29.6	-0.1
WHFO	Wadi Hawf	83.69	290	⇑P	P	06 39 30.4	+0.2
	SNR=7.7						
CUC	Castrocucco	83.73	330	P	P	06 39 29.3	-0.6
RBK	Rabkut	83.75	290	⇑P	P	06 39 30.3	-0.1
	SNR=20						
FORT	Forrest	83.78	203	*e*P	P	06 39 30.9	+0.6
	comp=Z,71nm,0.8s,mb5.5						
FORT				*e*pP	pP	06 40 02.8	+1.4
MZLS	Mizel	83.97	300	P	P	06 39 32.1	+0.6
TIP	Timpagrande	84.16	329	*e*P	P	06 39 31.9	-0.1
MTLF	Montolieu	84.30	341	⇑*i*P	P	06 39 33.7	+1.1
	comp=Z,105nm,1.2s,mb5.2						
MTLF	Montolieu	84.30	341	⇑*i*P	P	06 39 33.7	+1.1
MTLF				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.2						
ABTO	Aybut	84.41	290	P	P	06 39 34.2	+0.5
	SNR=14						
MLS	Moulis	84.91	341	*e*P	P	06 39 36.5	+0.8
FILF	Fillols	84.97	340	*e*P	P	06 39 37.0	+1.0
EPF	Esparros	84.99	342	*e*P	P	06 39 36.5	+0.4
	comp=Z,20nm,0.5s,mb5.0						
EPF	Esparros	84.99	342	*e*P	P	06 39 36.5	+0.4
EPF				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.0						
EJON	La Jonquera	85.01	340	P	P	06 39 37.7	+1.5
	comp=Z,2.7nm,0.9s,mb4.2						
ALWS	Ilw as Safayha	85.06	311	P	P	06 39 38.0	+1.3
JMOS	Jabal al Moall	85.16	311	P	P	06 39 38.5	+1.3
EALK	Alkurruntz	85.17	343	P	P	06 39 39.4	+2.4
	comp=Z,25nm,1.0s,mb5.1						
TBKS	Tabuk	85.21	309	P	P	06 39 39.0	+1.5
AFFS	'Afif	85.28	302	P	P	06 39 38.8	+0.8
ETSF	Etsaut	85.30	342	*e*P	P	06 39 38.6	+1.0
	comp=Z,42nm,1.1s,mb5.0						
ETSF	Etsaut	85.30	342	*e*P	P	06 39 38.6	+1.0
ETSF				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
HAQS	Haql	85.34	311	P	P	06 39 39.2	+1.1
EBIE	Bielsa	85.36	342	P	P	06 39 39.8	+1.9
	comp=Z,7.9nm,0.6s,mb4.8						
EARI	Arriondas	85.73	346	P	P	06 39 40.5	+0.8
	comp=Z,7.1nm,0.9s,mb4.6						
KBRS	Khaybar	85.80	306	P	P	06 39 42.3	+1.8
EGRA	Graus	85.80	342	P	P	06 39 41.6	+1.5
	comp=Z,3.3nm,0.8s,mb4.3						
EMIR	Miracle	85.81	341	P	P	06 39 42.1	+2.0
	comp=Z,2.7nm,0.4s,mb4.5						
EPON	Pontenova	86.00	347	P	P	06 39 41.5	+0.5
	comp=Z,16nm,0.5s,mb5.2						
VSL	Villasalto	86.15	334	*e*P	P	06 39 41.4	-0.4
	comp=Z,73nm,1.1s,mb5.5						
ESAC	San Caprasio	86.41	342	P	P	06 39 44.5	+1.4
	comp=Z,25nm,0.8s,mb5.2						
EPOB	Poblet	86.45	341	P	P	06 39 45.0	+1.7
	comp=Z,9.9nm,0.8s,mb4.8						
ERC	Erice	86.55	331	P	P	06 39 45.4	+1.6
ERUA	La Rua	86.91	347	P	P	06 39 46.1	+0.6
	comp=Z,25nm,0.8s,mb5.2						
ERUA	La Rua	86.91	347	P	P	06 39 46.1	+0.6
ERUA				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
KAMS	Al Khamasin	87.26	298	P	P	06 39 47.8	+0.2
UMJS	Umm Lajj	87.27	307	P	P	06 39 48.9	+1.3
ECAL	Calabor	87.30	347	P	P	06 39 48.1	+0.8
	comp=Z,46nm,1.2s,mb5.3						
EZAM	Zamans	87.37	348	P	P	06 39 47.9	+0.2
	comp=Z,24nm,0.7s,mb5.2						
EZAM	Zamans	87.37	348	P	P	06 39 47.9	+0.2
EZAM				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.2						
TOO	Toolangi	87.41	188	*e*P	P	06 39 49.4	+1.4
	comp=Z,14nm,0.8s,mb4.9						
TOO	Toolangi	87.41	188	*e*P	P	06 39 49.4	+1.4
TOO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
PBRG	Braganca	87.43	347	*e*P	P	06 39 48.9	+0.9
	comp=Z,29nm,1.8s,mb4.9						
PBRG	Braganca	87.43	347	*e*P	P	06 39 47.0	-1.0
ELOB	Lobios	87.56	348	P	P	06 39 48.9	+0.3
	comp=Z,19nm,1.3s,mb5.0						
ETOS	Mallorca	87.58	339	P	P	06 39 50.2	+1.5
	comp=Z,6.9nm,1.2s,mb4.6						
KLBR	Kellerberrin	87.61	211	*e*P	P	06 39 48.9	-0.2
	comp=Z,34nm,0.9s,mb5.4						
KLBR				*e*pP	pP	06 40 21.5	+1.1
YNBS	Yanbu' al Bahr	87.64	306	P	P	06 39 50.8	+1.4
EMOS	Mosqueruela	87.72	342	P	P	06 39 50.5	+1.1
	comp=Z,9.0nm,0.8s,mb4.8						
PVRL	Vila Real	88.09	347	*e*P	P	06 39 51.7	+0.5
	comp=Z,116nm,1.5s,mb5.7						
PVRL	Vila Real	88.09	347	*e*P	P	06 39 50.7	-0.5
GUD	Guadarrama	88.15	344	P	P	06 39 52.0	+0.5
	comp=Z,5.5nm,0.8s,mb4.6						
GUD	Guadarrama	88.15	344	P	P	06 39 52.0	+0.6
GUD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
EIBI	Ibiza	88.62	340	P	P	06 39 54.5	+0.8
	comp=Z,15nm,1.1s,mb4.9						
PVIS	Viseu	88.67	347	*e*P	P	06 39 54.7	+0.8
	comp=Z,61nm,1.5s,mb5.4						
PVIS	Viseu	88.67	347	*e*P	P	06 39 54.2	+0.3
MTE	Manteigas	88.93	347	*e*P	P	06 39 55.7	+0.6
	comp=Z,75nm,1.1s,mb5.6						
MTE	Manteigas	88.93	347	*e*P	P	06 39 54.9	-0.2
NWAO	Narrogin (SRO)	89.00	211	P	P	06 39 55.6	-0.1
	comp=Z,12nm,0.9s,mb4.9,baz=38,slow=5.1,SNR=6.0						
NWAO				pP	pP	06 40 28.2	+1.1
	comp=Z,8.2nm,0.7s,baz=2.5,slow=3.0,SNR=3.3						
NWAO				LR	LR	07 22 26.5	
	comp=Z,51nm,18.2s,baz=218,slow=37						
ESDC	Sonseca Array	89.05	344	P	P	06 39 55.6	-0.1
	comp=Z,7.3nm,0.5s,mb5.0,baz=3.4,slow=4.1,SNR=34						
ESDC	Sonseca Array	89.05	344	P	P	06 39 55.7	0.0
	comp=Z,16nm,1.2s,mb4.9						
ESLA	Sonseca Array	89.05	344	*e*P	P	06 39 55.3	-0.4
	comp=Z,8.5nm,1.0s,mb4.7						
BLJS	Baljurashi	89.28	300	P	P	06 39 58.3	+1.0
ETOB	Tobarra	89.60	342	P	P	06 39 58.5	+0.2
	comp=Z,3.6nm,0.8s,mb4.5						
EVIA	Vianos	89.79	343	P	P	06 40 00.1	+0.8
	comp=Z,4.6nm,0.6s,mb4.8						
EVIA	Vianos	89.79	343	P	P	06 40 00.1	+0.9
EVIA				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
PTOM	Tomar	89.82	347	*e*P	P	06 40 00.1	+0.8
	comp=Z,58nm,1.1s,mb5.6						
PTOM	Tomar	89.82	347	*e*P	P	06 39 57.7	-1.6
EBAD	Badajoz	90.46	346	P	P	06 40 01.9	-0.4
	comp=Z,3.8nm,0.6s,mb4.7						
EBAN	Banos Encina	90.49	344	P	P	06 40 02.8	+0.2
	comp=Z,8.4nm,0.5s,mb5.1						
EBAN	Banos Encina	90.49	344	P	P	06 40 02.8	+0.3
EBAN				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.1						
EHUE	Huescar	90.60	343	P	P	06 40 03.7	+0.6
	comp=Z,6.6nm,0.8s,mb4.8						
EHUE	Huescar	90.60	343	P	P	06 40 03.7	+0.6
EHUE				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.8						
EADA	Adamuz	90.63	344	P	P	06 40 03.5	+0.3
	comp=Z,18nm,1.1s,mb5.1						
EQES	Quesada	90.71	343	P	P	06 40 03.9	+0.3
	comp=Z,6.3nm,0.7s,mb4.8						
ECAB	El Cabril	90.86	345	P	P	06 40 04.0	-0.3
	comp=Z,5.6nm,0.9s,mb4.7						
ELUQ	Luque	91.16	344	P	P	06 40 06.0	+0.3
	comp=Z,3.9nm,0.4s,mb4.9						
ELUQ	Luque	91.16	344	P	P	06 40 06.0	+0.3
ELUQ				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.9						
PBEJ	Beja	91.30	347	*e*P	P	06 40 07.2	+0.9
	comp=Z,37nm,1.6s,mb5.3						
PBEJ	Beja	91.30	347	*e*P	P	06 40 04.0	-2.3
ECOG	Cogollos-Vega	91.31	343	P	P	06 40 06.3	0.0
	comp=Z,3.5nm,0.4s,mb4.8						
ECOG	Cogollos-Vega	91.31	343	P	P	06 40 06.3	-0.1
ECOG				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.9						
EMIN	Mina Concepcio	91.37	346	P	P	06 40 06.3	-0.3
	comp=Z,11nm,0.9s,mb5.0						
ELOJ	Sierra Loja	91.54	344	P	P	06 40 08.2	+0.7
	comp=Z,4.7nm,0.4s,mb5.1						
ELOJ	Sierra Loja	91.54	344	P	P	06 40 08.2	+0.7
ELOJ				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb5.1						
ERON	Agron	91.61	343	P	P	06 40 08.2	+0.5
	comp=Z,15nm,0.6s,mb5.4						
EGRO	El Granado	91.72	346	P	P	06 40 07.9	-0.4
	comp=Z,10nm,0.8s,mb5.1						
EGUA	Guajares	91.74	343	P	P	06 40 08.8	+0.4
	comp=Z,2.4nm,1.0s,mb4.4						
ESPR	Espera	92.11	345	P	P	06 40 10.1	+0.1
	comp=Z,3.7nm,0.9s,mb4.6						
EMIJ	Mijas	92.22	344	P	P	06 40 10.3	-0.3
	comp=Z,5.6nm,0.6s,mb5.0						
EJIF	Jimena Fronter	92.46	345	P	P	06 40 12.0	+0.3
	comp=Z,23nm,0.5s,mb5.7						
DBIC	Dimbokro	121.17	337	PKP	PKPdf	06 45 53.2	+0.7
	comp=Z,2.6nm,0.8s,baz=124,slow=11,SNR=3.7						
LPAZ	La Paz	131.65	62	PKP	PKPdf	06 46 13.8	+1.3
	comp=Z,1.1nm,0.8s,baz=26,slow=7.0,SNR=6.5						
LPAZ	La Paz	131.65	62	PKP	PKPdf	06 46 13.8	+1.3
MAW	Mawson	135.54	213	*e*P	PKPdf	06 46 19.2	+0.8
	comp=Z,4.0nm,0.6s						
MAW	Mawson	135.54	213	PKP	PKPdf	06 46 19.4	+1.0
	comp=Z,4.5nm,0.6s,baz=24,slow=2.6,SNR=22						
BOSA	Boshof	136.82	280	PKP	PKPdf	06 46 23.2	+1.5
	comp=Z,3.6nm,0.6s,baz=320,slow=8.7,SNR=4.5						
QSPA	South Pole Qui	139.53	180	*e*PKPdf	PKPdf	06 46 16.8	-8.6
QSPA				*e*pPKPdf		06 46 59.1	
BDFB	Brasilia	141.04	37	PKP	PKPdf	06 46 29.5	-0.2
	comp=Z,1.2nm,0.6s,baz=19,slow=6.0,SNR=3.2						
CPUP	Villa Florida	145.69	59	*e*P	PKPdf	06 46 39.1	+1.6
PLCA	Paso Flores	146.96	92	PKPbc	PKPbc	06 46 42.2	+1.4
	comp=Z,12nm,0.8s,baz=284,slow=3.7,SNR=25						
PLCA				pPKPbc		06 47 15.5	
	comp=Z,14nm,0.8s,baz=251,slow=3.3,SNR=7.6						
PLCA	Paso Flores	146.96	92	*e*PKPbc	PKPbc	06 46 41.9	+1.1
TRQA	Tornquist	151.02	80	*e*PKPdf	PKPdf	06 46 52.0	+6.4
TRQA				*e*pPKPdf		06 47 25.4	
NVL	N'lazarevskaya	153.00	206	⇑*i*PKIKP	PKPdf	06 46 56.0	+8.5
NVL				*e*S	SKS	06 53 49.9	+9.1
NVL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MAIT	Maitri	153.02	206	*e*PKPdf	PKPdf	06 46 56.6	+9.1
USHA	Ushuaia	153.15	118	PKPbc	PKPdf	06 46 57.2	+9.1
	comp=Z,7.5nm,0.8s,baz=277,slow=7.8,SNR=5.6						
SNAA	Sanae	155.88	197	*e*	PKPdf	06 47 01.4	+10
SNAA	Sanae	155.88	197	*e*	PKPdf	06 47 08.1	+17
SNAA	Sanae	155.88	197	*e*	PKPdf	06 47 20.6	+29
SNAA	Sanae	155.88	197	*e*	PKPdf	06 47 27.5	+36
SNAA	Sanae	155.88	197	*e*	PKPdf	06 47 38.6	+47
SNAA	Sanae	155.88	197	*e*	PKPdf	06 47 52.1	+61
SNAA	Sanae	155.88	197	PKP	PKPdf	06 46 52.3	+1.0
	comp=Z,0.5nm,1.0s,baz=326,slow=7.9,SNR=6.1						
SNAA				PKPbc	PKPdf	06 47 02.0	+11
	comp=Z,1.7nm,0.7s,baz=182,slow=2.3,SNR=37						
SNAA				PKPab	PKPab	06 47 20.4	-1.0
	comp=Z,6.2nm,1.0s,baz=138,slow=2.3,SNR=19						
SNAA	Sanae	155.88	197	⇑*i*PKPdf	PKPdf	06 46 49.4	-1.9
SNAA				*e*PKPdf	PKPdf	06 46 53.0	+1.7
SNAA				*e*		06 47 01.4	
SNAA				*e*PKPbc	PKPdf	06 47 01.6	+10
SNAA				*e*		06 47 08.1	
SNAA				*e*PKPab	PKPab	06 47 20.5	-0.8
SNAA				*e*		06 47 27.5	
SNAA				*e*		06 47 38.6	
SNAA				*e*		06 47 52.1	
SNAA				*e*		06 48 00.9	
SNAA				*e*		06 50 55.9	
SNAA	Sanae	155.88	197	⇑*i*PKIKP	PKPdf	06 46 49.4	-1.9
SNAA				*e*		06 47 01.4	
SNAA				*e*		06 47 20.5	
SNAA				*e*		06 47 27.5	
SNAA				*e*		06 50 55.9	
VNA2	Neumayer--Watz	157.31	195	⇑*i*PKPdf	PKPdf	06 46 54.5	+1.2
VNA2				*e*		06 47 05.4	
VNA2				*e*		06 47 12.9	
VNA2				*e*		06 47 27.0	
VNA2				*e*		06 47 31.5	
VNA2				*e*		06 47 41.4	
VNA2				*e*		06 48 00.2	
VNA2				*e*		06 48 09.0	
VNA2				*e*		06 51 07.2	
VNA3	Neumayer Olymp	157.38	193	⇑*i*PKPdf	PKPdf	06 46 54.2	+0.9
VNA3				*e*		06 47 05.0	
VNA3				*e*		06 47 11.8	
VNA3				*e*		06 47 27.0	
VNA3				*e*		06 47 31.9	
VNA3				*e*		06 47 42.3	
VNA3				*e*		06 47 59.1	
VNA3				*e*		06 48 07.2	
VNA3				*e*		06 51 05.3	
VNA1	Neumayer--Stat	157.69	194	⇑*i*PKPdf	PKPdf	06 46 55.2	+1.4
VNA1				*e*		06 47 06.2	
VNA1				*e*		06 47 28.9	
VNA1				*e*		06 47 35.1	
VNA1				*e*		06 47 46.3	
VNA1				*e*		06 48 02.7	
VNA1				*e*		06 48 10.6	
VNA1				*e*		06 51 12.2	

BJI ***03*** *06:28:53.5, 17.50S×178.40W, h530^{km}, mB4.3, mb4.5*

NEIC ***03*** *06:28:53.5±0.7, 17.52S×178.44W, h530^{km}±9^{km}, mb4.2/8, Error ellipse: s-maj=13.3km s-min=8.2km az=152.0*

IDC ***03*** *06:28:53.8±1.5, 17.56S×178.40W, h529^{km}±19^{km}, mb3.6/7, mb1 3.7/9, mb1mx3.6/17, mbtmp4.5/9, Error ellipse: s-maj=25.8km s-min=14.8km az=152.0*

ISC 03 06:28:53.3±0.9**, 17.6S**±0.1×**178.49W**±0.10**, h538^{km}**±14^{km}**,**
n38, σ**0^{s}90**/33**, mb4.1**/15**, 1C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.41	62	P	P	06 30 44.5	-1.2
	7.6nm,0.3s,baz=250,slow=8.5,SNR=9.0						
AFI				S	S	06 32 15.6	+0.6
	1.2nm,0.3s,baz=114,slow=23,SNR=2.5						
AFI	Afiamalu	7.41	62	*e*Pn	P	06 30 44.2	-1.5
DZM	Mont Dzumac	14.87	250	P	P	06 32 02.8	+1.3
	0.8nm,0.3s,baz=63,slow=18,SNR=6.8						
HNR	Honiara	22.45	288	*e*P	P	06 33 13.4	0.0
	520nm,1.1s						
ARMA	Armidale	30.05	239	⇑*i*P	P	06 34 21.3	+1.0
CTAO	Charters Tower	33.43	260	*e*P	P	06 34 48.9	0.0
PMG	Port Moresby	34.32	279	P	P	06 34 57.8	+1.4
	23nm,0.8s,mb4.8,baz=99,slow=5.8,SNR=8.2						
STKA	Stephens Creek	38.73	241	*e*P	P	06 35 33.3	+0.8
	6.7nm,0.5s,mb4.4						
STKA	Stephens Creek	38.73	241	P	P	06 35 33.5	+1.1
	8.2nm,0.5s,mb4.5,baz=93,slow=9.6,SNR=32						
STKA	Stephens Creek	38.73	241	*e*P	P	06 35 33.4	+0.9
WB2	Warramunga Arr	44.61	259	*e*P	P	06 36 18.4	-1.0
WRAB	Tennant Creek	44.61	259	*e*P	P	06 36 18.4	-1.0
	5.7nm,0.6s,mb4.3						
WRA	Warramunga Arr	44.62	259	P	P	06 36 19.0	-0.5
	4.9nm,0.5s,mb4.3,baz=94,slow=7.0,SNR=84						
WRA				PcP	PcP	06 37 51.1	0.0
	1.8nm,0.8s,baz=96,slow=3.4,SNR=5.8						
ASPA	Alice Springs	44.81	254	⇓*i*P	P	06 36 20.8	-0.2
KAKA	Kakadu	47.51	269	⇓*i*P	P	06 36 58.9	+17
	11nm,0.3s,mb4.9						
FORT	Forrest	50.09	244	*e*P	P	06 36 59.7	-1.1
	18nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	53.01	260	*e*P	P	06 37 21.9	-0.1
	8.6nm,0.9s,mb4.1						
FITZ	Fitzroy Crossi	53.01	260	P	P	06 37 21.7	-0.3
	7.8nm,0.6s,mb4.2,baz=147,slow=5.3,SNR=17						
MBWA	Marble Bar	58.09	256	*e*P	P	06 37 56.2	-1.1
	26nm,1.1s,mb4.4						
KLBR	Kellerberrin	58.92	243	*e*P	P	06 38 01.7	-1.0
	12nm,0.7s,mb4.2						
VNDA	Vanda	60.79	185	P	P	06 38 14.4	0.0
	1.9nm,1.2s,mb3.3						
MJAR	Matsushiro Arr	67.57	323	P	P	06 38 57.4	-0.5
	2.2nm,0.8s,mb3.7,baz=163,slow=6.7,SNR=4.8						
MJAR	Matsushiro Arr	67.57	323	P	P	06 38 57.4	-0.5
KKM	Kota Kinabalu	68.58	284	*e*P	P	06 39 04.0	-0.4
KSM	Kuching	72.56	277	*e*P	P	06 39 28.6	+0.7
CN2	Changchun	79.69	322	*e*P	P	06 40 09.5	+3.4
PMR	Palmer	82.27	14	*e*P	P	06 40 22.4	+3.5
MAW	Mawson	84.17	200	P	P	06 40 28.7	+0.5
	1.2nm,0.7s,mb3.5,baz=114,slow=8.9,SNR=7.1						
MCK	McKinley	84.21	13	P	P	06 40 28.8	+0.3
	4.8nm,1.2s,mb3.9						
ILAR	Eielson Array	85.56	13	P	P	06 40 34.6	-0.4
	0.6nm,0.6s,mb3.4,baz=233,slow=5.3,SNR=4.7						
SNAA	Sanae	90.96	179	P	P	06 41 00.6	+0.5
	baz=207,slow=9.0						
SNAA	Sanae	90.96	179	*e*P	P	06 41 00.6	+0.4
	4.0nm,1.4s,mb4.2						
SFJD	Kangerlussuaq	120.38	21	*i* S	SKS	06 52 58.1	+7.8
SFJD	Kangerlussuaq	120.38	21	*i* S	SKS	06 52 58.1	+7.8
BR131	Keskin Array S	144.47	315	*e*PKPdf	PKPdf	06 47 29.8	+1.6
BRTR	Keskin Array B	144.47	315	PKP	PKPdf	06 47 29.9	+1.7
	2.4nm,0.8s,baz=101,slow=3.2,SNR=13						
CLL	Collm	145.10	347	*e*PKP1	PKPbc	06 47 31.0	+1.2
GERES	GERESS Array B	147.25	345	PKPbc	PKPdf	06 47 37.9	+5.4
	1.4nm,0.6s,slow=1.3,SNR=9.2						

MAN 03 07:30:00.9, 10.96N×124.89E, h20^{km}, mb4.6, ML3.5, MS3.4, 1C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	Maasin	0.82	182	*e*P	Pb	07 30 16.9	+0.7
MSLP				*e*S	Sb	07 30 32.4	+5.6
BESP	Borongan	0.84	40	*e*P	Pb	07 30 16.5	-0.1
BESP				*e*S	Sb	07 30 29.6	+2.2
LLP	Lapu-Lapu	1.10	235	⇑*e*P	Pb	07 30 19.3	-1.8
LLP				*i* S	Sb	07 30 34.3	-0.8
CNP	Catarman	1.56	352	*e*P	Pn	07 30 27.3	-0.6
CNP				*e*S	Sn	07 30 50.3	+2.7
TBP	Tagbilaran	1.61	219	⇓*e*P	Pn	07 30 28.5	-0.1
TBP				*e*S	Sn	07 30 49.0	0.0
RCP	Roxas	2.18	286	⇓*e*P	Pn	07 30 36.6	-0.2
GUIM	Jordan	2.28	262	*e*P	Pn	07 30 37.6	-0.6
GUIM				*e*S	Sn	07 31 08.4	+2.5
SNPH	Sibulan	2.28	225	⇓*e*P	Pn	07 30 38.4	+0.2
SNPH				*e*S	Sn	07 31 18.6	+13
PVCP	Virac	2.72	345	*e*P	Pn	07 30 45.0	+0.5
BUKP	Musuan	3.06	177	*e*P	Pn	07 30 51.8	+2.4
BUKP				*e*S	Sn	07 31 33.1	+7.3

MAN 03 07:33:54.3, 10.94N×124.89E, h37^{km}, mb4.0, ML2.8, MS2.5, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	Maasin	0.81	182	*e*P	P	07 34 09.9	+0.8
MSLP				*e*S	S	07 34 23.2	+3.1
BESP	Borongan	0.85	39	*e*P	P	07 34 09.6	-0.2
BESP				*e*S	S	07 34 22.5	+1.3
LLP	Lapu-Lapu	1.10	236	⇓*e*P	P	07 34 13.9	+0.5
LLP				*e*S	S	07 34 27.3	-0.4
CNP	Catarman	1.57	352	*e*P	P	07 34 20.4	+0.2
CNP				*e*S	S	07 34 41.6	+2.1
TBP	Tagbilaran	1.60	219	*i* P	P	07 34 20.8	+0.2
TBP				*e*S	S	07 34 41.0	+0.7
GUIM	Jordan	2.28	262	*e*P	P	07 34 25.9	-4.5
GUIM				*e*S	S	07 35 01.2	+3.7

*IDC **03** 07:54:32.3±0.8, 16.14S×172.84W, mb4.1/8, mb1 4.3/9, mb1mx4.2/17, mbtmp4.1/9, MS3.5/7, Ms1 3.5/7, ms1mx3.3/23, Error ellipse: s-maj=44.0km s-min=16.5km az=128.0*

ISC 03 07:54:35.7±0.7**, 16.1S**±0.1×**173.0W**±0.2**, h33^{km}, n21, σ0^{s}67**/11**, mb4.0**/8**, MS3.6**/5**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.43	29	Pn	Pn	07 55 12.3	-1.8
	18nm,0.3s,baz=257,slow=4.5,SNR=10.0						
AFI				Sn	Sn	07 55 43.5	+0.5
	143nm,0.3s,baz=175,slow=22,SNR=12						
AFI				LR	LR	07 56 00.8	
	comp=Z,343nm,18.4s,baz=182,slow=36						
RAR	Rarotonga	13.54	114	LR	LR	08 01 00.5	
	comp=Z,268nm,18.9s,baz=289,slow=29						
DZM	Mont Dzumac	20.33	250	LR	LR	08 05 11.1	
	comp=Z,77nm,20.0s,MS3.1,baz=200,slow=31						
PPT	Papeete	22.47	97	*e*LQ		08 03 23.0	
PPT				*e*LR	LR	08 04 16.2	
	184nm,25.5s,baz=280						
TBI	Tubuai	23.30	112	*e*LR	LR	08 04 40.1	
	242nm,27.5s						
URZ	Urewera	23.78	200	P	P	07 59 45.7	-0.5
	5.0nm,0.7s,mb4.1,baz=13,slow=4.9,SNR=6.5						
HNR	Honiara	27.18	281	LR	LR	08 09 27.9	
	comp=Z,274nm,21.4s,MS3.8,baz=141,slow=33						
RKT	Rikitea	36.43	107	*e*LR	LR	08 10 45.6	
	115nm,26.5s						
STKA	Stephens Creek	44.06	241	P	P	08 02 42.8	+0.3
	3.1nm,0.8s,mb4.1,baz=90,slow=10,SNR=6.4						
WRA	Warramunga Arr	50.08	257	P	P	08 03 30.1	+0.2
	0.9nm,0.7s,mb3.9,baz=94,slow=7.7,SNR=7.6						
ASPA	Alice Springs	50.29	252	*e*P	P	08 03 31.4	0.0
GUMO	Guam	51.01	303	LR	LR	08 21 59.7	
	comp=Z,18nm,18.7s,MS3.1,baz=144,slow=32						
MJAR	Matsushiro Arr	69.68	320	LR	LR	08 31 07.0	
	comp=Z,43nm,20.2s,MS3.7,baz=165,slow=31						
NVAR	Mina Array Bea	74.55	42	P	P	08 06 13.5	+0.3
	2.3nm,0.8s,mb4.2,baz=211,slow=8.9,SNR=14						
TXAR	Lajitas Array	80.65	56	P	P	08 06 48.0	+0.8
	0.8nm,1.1s,mb3.6,baz=225,slow=5.3,SNR=4.0						
PDAR	Pinedale Array	82.48	42	P	P	08 06 57.1	+0.7
	1.1nm,0.8s,mb3.8,baz=236,slow=3.0,SNR=10						
ILAR	Eielson Array	83.00	11	P	P	08 06 58.2	-0.4
	1.0nm,0.8s,mb3.9,baz=231,slow=5.8,SNR=7.6						
MAW	Mawson	87.31	199	P	P	08 07 19.6	-0.3
	1.4nm,0.7s,mb4.3,baz=122,slow=5.2,SNR=5.7						
PLCA	Paso Flores	88.79	132	LR	LR	08 37 04.0	
	comp=Z,81nm,19.4s,MS4.2,baz=184,slow=29						
GERES	GERESS Array B	146.84	352	PKPbc	PKPbc	08 14 17.2	+3.0
	0.4nm,0.2s,slow=2.9,SNR=6.0						
BRTR	Keskin Array B	146.90	321	PKPbc	PKPbc	08 14 18.3	+3.6
	1.9nm,0.9s,baz=120,slow=2.3,SNR=10						

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*ISK **03** 08:02:09.7, 38.19N×26.61E, h16^{km}, MD3.0*
*NEIC **03** 08:02:09.0, 38.23N×26.58E, h15^{km}, MD3.3(ATH), MD3.0(ISK), After ISK.*
*ATH **03** 08:02:10.5, 38.19N×26.53E, h24^{km}±5^{km}, MD3.3/5*
*CSEM **03** 08:02:11.0±0.1, 38.21N×26.72E, h20^{km}, MD3.0, Error ellipse: s-maj=2.7km s-min=2.0km az=71.0*

ISC 03 08:02:08.9±0.9**, 38.17N**±0.03×**26.57E**±0.04**, h3^{km}**±5^{km}**, n21, σ1^{s}06**/33**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.19	5	*i* P	Pg	08 02 12.2	-0.6
URLA				*i* S	Sg	08 02 15.8	+0.4
BLCB	Balcova	0.43	59	PG	Pg	08 02 18.1	+0.6
SMG	Samos	0.50	156	⇑*i*PN	Pn	08 02 21.1	-1.5
SMG				*e*SN	Sn	08 02 29.8	-2.0
IZM	Izmir	0.59	67	PG	Pg	08 02 21.1	+0.4
IZM				SG	Sg	08 02 29.4	+0.9
KDAG	Bornova	0.59	67	*i* P	Pg	08 02 19.2	-1.6
KDAG				*i* S	Sg	08 02 27.8	-0.9
PRK	Paraskevi	1.10	348	*e*PN	Pn	08 02 31.0	-0.1
PRK				*e*SN	Sn	08 02 46.3	-0.7
AYVA	Ayvalik	1.14	5	*i* P	Pb	08 02 31.4	+0.4
AYVA				*i* S	Sb	08 02 48.5	+2.6
AYDN	Tasoluk	1.15	116	*i* P	Pb	08 02 32.2	+1.1
AYDN				*i* S	Sb	08 02 47.9	+1.7
AKS	Akhisar	1.20	53	PN	Pn	08 02 32.2	-0.4
AKS				SN	Sn	08 02 48.0	-1.5
BODT	Bodrum	1.25	152	PN	Pn	08 02 32.9	-0.3
BODT				SN	Sn	08 02 50.1	-0.6
MLSB	Milas	1.29	132	PN	Pn	08 02 33.8	0.0
BDRM	Kayabasi	1.30	148	*i* P	Pb	08 02 37.9	+4.3
BDRM				*i* S	Sb	08 02 53.9	+3.3
APE	Apeiranthos	1.38	217	*e*PN	Pn	08 02 34.9	-0.1
APE	Apeiranthos	1.38	217	*e*PN	Pn	08 02 35.6	+0.6
APE				*e*SN	Sn	08 02 55.6	+1.7
MANT	Manisa	1.59	78	*i* P	Pn	08 02 38.7	+0.6
MANT				*i* S	Sb	08 03 00.8	+1.7
YER	Yerkesik	1.70	127	*e*PN	Pn	08 02 39.6	-0.1
BALB	Balikesir	1.79	34	*e*PN	Pn	08 02 40.3	-0.6
DENT	Denizli	1.99	101	*e*PN	Pn	08 02 43.5	-0.3
LIA	Limnos Island	2.04	328	*e*PN	Pn	08 02 45.1	+0.6
RDO	Rodhopi	3.08	345	*e*PN	Pn	08 02 58.8	-0.6
ISP	Isparta	3.12	95	*e*Pn	Pn	08 02 58.9	-1.2

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*ATH **03** 08:43:02.7, 38.37N×27.59E, h25^{km}, MD3.0/3*
*ISK **03** 08:43:10.5, 38.20N×26.65E, h6^{km}, MD2.8*
*CSEM **03** 08:43:10.2±0.3, 38.24N×26.69E, h2^{km}, MD2.8, Error ellipse: s-maj=8.3km s-min=4.7km az=126.0*

ISC 03 08:43:09.7±1.5**, 38.25N**±0.07×**26.58E**±0.09**, h2^{km}**±11^{km}**, n7, σ0^{s}96**/10**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	Balcova	0.39	70	PG	Pg	08 43 17.9	+0.4
IZM	Izmir	0.56	75	PG	Pg	08 43 21.2	+0.3
IZM				SG	Sg	08 43 28.9	+0.5
SMG	Samos	0.58	159	⇑*i*PN	Pg	08 43 20.0	-1.3
PRK	Paraskevi	1.02	347	*e*PN	Pn	08 43 27.9	-3.0
PRK				*e*SN	Sn	08 43 46.3	+0.4
AKS	Akhisar	1.15	57	*e*PN	Pn	08 43 32.8	0.0
AKS				*e*SN	Sn	08 43 48.9	-0.4
APE	Apeiranthos	1.44	215	*e*PN	Pn	08 43 38.5	+1.6
YER	Yerkesik	1.75	129	*e*PN	Pn	08 43 41.2	-0.1

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*NIED **03** 09:06:00, 30.00N×130.80E, h32^{km}, Mw4.0 Best double couple: M$_0$1.28×10^{15} NP1:φ$_s$28°, δ70°, λ91°. NP2:φ$_s$205°, δ20°, λ87°.*
*IDC **03** 09:06:32.0±5.7, 30.28N×131.42E, mb4.0/4, mb1 4.0/4, mb1mx3.7/19, mbtmp4.0/4, MS3.3/1, Ms1 3.3/1, ms1mx2.7/24, Error ellipse: s-maj=153.8km s-min=110.7km az=30.0*
*JMA **03** 09:06:39.3±0.1, 30.03N×130.82E, h31^{km}±1^{km}, M3.9*

ISC 03 09:06:39.0±1.5**, 30.01N**±0.10×**130.8E**±0.1**, h52^{km}**±8^{km}**, n10, σ0^{s}73**/16**, mb3.9**/4**, MS3.2**/1**, 4D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTN	Tanegashima 3	0.66	13	⇓P	P	09 06 51.7	-0.7
JTN				S	S	09 07 00.7	-1.6
JKC	Kuchinoerabu	0.69	311	⇓P	P	09 06 52.7	-0.1
JKC				S	S	09 07 02.4	-0.6
JNN	Nakanoshima	0.82	259	P	P	09 06 54.9	+0.4
JNN				S	S	09 07 06.3	+0.3
JTSR	Tashiro 2	1.16	5	⇓P	P	09 06 59.7	+0.5
JTSR				S	S	09 07 15.1	+0.9
JSU	Suzuyama	1.52	349	⇓P	P	09 07 04.5	+0.1
JSU				*e*S	S	09 07 23.5	+0.3
JNAR	Kushima--Naru	1.57	15	P	P	09 07 06.0	+1.0
JNAR				*e*S	S	09 07 24.7	+0.4
SONM	Songino Array	25.86	320	P	P	09 12 06.6	-0.7
	2.2nm,0.8s,mb3.7,baz=134,slow=9.3,SNR=9.8						
SONM				LR	LR	09 21 54.9	
	comp=Z,70nm,19.1s,MS3.2,baz=67,slow=36						
MKAR	Makanchi Array	40.86	308	P	P	09 14 17.6	+0.4
	2.3nm,0.5s,mb4.0,baz=93,slow=10,SNR=16						
FINES	FINESS Array B	70.70	331	P	P	09 17 49.6	-1.3
	1.1nm,0.6s,mb4.0,baz=72,slow=6.0,SNR=5.1						
BRTR	Keskin Array B	76.51	308	P	P	09 18 25.8	+0.5
	0.6nm,0.7s,mb3.6,baz=110,slow=5.4,SNR=5.2						

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*BJI **03** 09:11:46.6, 20.77S×177.18W, h473^{km}, mB4.6, mb4.6*
*NEIC **03** 09:11:51.7±1.1, 20.22S×177.77W, h473^{km}±13^{km}, mb4.5/9, Error ellipse: s-maj=17.2km s-min=8.8km az=146.0*
*IDC **03** 09:11:51.3±2.3, 20.27S×177.77W, h470^{km}±28^{km}, mb3.2/7, mb1 3.6/9, mb1mx3.5/14, mbtmp4.2/9, Error ellipse: s-maj=31.1km s-min=16.1km az=143.0*

ISC 03 09:11:49.8±1.2**, 20.2S**±0.1×**177.9W**±0.1**, h458^{km}**±14^{km}**, h474^{km}**±2.8^{km}**:pP-P, n40, σ1^{s}05**/35**, mb4.1**/20**, 1C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.50	44	P	P	09 13 52.9	+0.8
	13nm,0.3s,baz=170,slow=7.6,SNR=17						
AFI				S	S	09 15 28.8	-0.1
	16nm,0.3s,baz=39,slow=20,SNR=7.9						
AFI	Afiamalu	8.50	44	*e*Pn	P	09 13 53.0	+0.9
	50nm,0.6s						
AFI				*e*Sn	S	09 15 26.2	-2.8
URZ	Urewera	18.57	193	P	P	09 15 36.4	-1.0
	2.1nm,0.3s,baz=156,slow=21,SNR=14						
CTA	Charters Tower	33.67	264	⇓*i*P	P	09 17 53.7	+1.3
	7.7nm,0.3s,mb4.6						
CTAO	Charters Tower	33.67	264	*e*P	P	09 17 53.7	+1.2
	12nm,0.4s,mb4.7						
PMG	Port Moresby	35.41	282	*e*P	P	09 18 08.3	+1.2
	17nm,1.0s,mb4.4						
STKA	Stephens Creek	38.07	244	P	P	09 18 29.6	+0.7
	1.3nm,0.5s,mb3.6,baz=78,slow=15,SNR=3.3						
STKA	Stephens Creek	38.07	244	P	P	09 18 29.8	+0.8
ASPA	Alice Springs	44.74	256	*e*P	P	09 19 22.6	0.0
WB2	Warramunga Arr	44.78	262	*e*P	P	09 19 22.4	-0.5
WRAB	Tennant Creek	44.78	262	*e*P	P	09 19 22.4	-0.5
	5.6nm,0.6s,mb4.2						
WRA	Warramunga Arr	44.79	262	P	P	09 19 22.8	-0.2
	2.3nm,0.3s,mb4.1,baz=96,slow=7.8,SNR=62						
KAKA	Kakadu	48.11	271	*e*P	P	09 20 06.0	+17
	2.9nm,0.2s,mb4.3						
FITZ	Fitzroy Crossi	53.22	262	*e*P	P	09 20 25.9	-0.3
	5.1nm,0.6s,mb4.0						
MBWA	Marble Bar	58.07	257	*e*P	P	09 20 58.8	-1.2
	8.6nm,0.7s,mb4.2						
VNDA	Vanda	58.27	185	*e*P	P	09 21 00.0	-0.6
	0.6nm,0.7s,mb3.0						
MJAR	Matsushiro Arr	70.01	324	P	P	09 22 15.8	-0.1
	1.4nm,0.6s,mb3.7,baz=154,slow=4.6,SNR=4.7						
SSE	Sheshan	77.57	310	P	P	09 22 59.9	+1.0
SSE				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
SSE				AMB	AMB		
	comp=Z,50nm,4.0s						
CMB	Columbia Colle	79.11	43	P	P	09 23 06.9	0.0
NJ2	Nanjing	79.77	310	*e*P	P	09 23 10.5	0.0
NVAR	Mina Array Bea	80.67	43	P	P	09 23 15.3	+0.3
	comp=Z,0.8nm,0.9s,mb3.3,baz=214,slow=6.5,SNR=4.2						
NVAR	Mina Array Bea	80.67	43	P	P	09 23 15.3	+0.3
CN2	Changchun	82.11	322	*e*P	P	09 23 23.6	+1.3
GYA	Guiyang	86.60	300	P	P	09 23 43.9	-0.9
GYA				AP	pP	09 25 31.1	+2.6
GYA				XP	sP	09 26 18.9	+4.0
GYA				SKS	SKS	09 33 23.3	-2.5
GYA				S	S	09 33 39.2	-2.3
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
MCK	McKinley	86.60	12	P	P	09 23 43.0	-0.9
TXAR	Lajitas Array	86.75	57	P	P	09 23 46.5	+1.1
	comp=Z,0.5nm,0.7s,mb3.4,baz=213,slow=7.1,SNR=7.6						
SYO	Syowa Base	87.10	193	⇑P	P	09 23 48.7	+2.5
COLA	College	87.84	12	*e*P	P	09 23 48.5	-1.2
	comp=Z,3.6nm,0.7s,mb4.2						
ILAR	Eielson Array	87.94	13	P	P	09 23 48.9	-1.3
	comp=Z,0.6nm,0.6s,mb3.5,baz=226,slow=6.2,SNR=9.6						
PDAR	Pinedale Array	88.61	43	P	P	09 23 54.2	+0.4
	comp=Z,0.2nm,0.6s,mb3.1,baz=225,slow=1.3,SNR=4.0						
YMR	Madison River	88.67	41	*e*P	P	09 23 57.1	+3.1
	comp=Z,40nm,1.0s,mb5.2						
HHC	Hu-ho-hao-te	89.21	314	*e*P	P	09 23 53.7	-3.0
HHC				AP	pP	09 25 39.6	-1.4
HHC				XP	sP	09 26 28.8	+1.5
HHC				PP	PP	09 27 34.7	-1.5
HHC				S	S	09 33 59.5	-5.5
HHC				PS	PS	09 36 16.2	-1.6
HHC				XS		09 37 12.6	
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
HHC				AMB	AMB		
	comp=Z,80nm,7.2s						
LZH	Lanzhou	92.67	307	*e*P	P	09 24 12.5	-0.3
LZH				AP	pP	09 26 00.8	+3.3
LZH				XP	sP	09 26 48.5	+4.9
LZH				*e*PP	PP	09 28 05.3	+1.6
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,40nm,6.8s						
AKASG	Malin Array Be	142.78	331	PKhKP		09 30 26.6	
	comp=Z,3.5nm,0.4s,baz=44,slow=4.4,SNR=39						
BR131	Keskin Array S	146.71	313	*e*PKPdf	PKPdf	09 30 39.0	+2.3
BRTR	Keskin Array B	146.71	313	PKPbc	PKPbc	09 30 39.6	+1.0
	comp=Z,2.2nm,0.5s,baz=144,slow=4.2,SNR=18						
CLL	Collm	147.76	347	*i* PKP1	PKPdf	09 30 42.4	+4.5
CLL				*e*PKP2	PKPab	09 30 46.0	-1.8
PRU	Pruhonice	148.64	345	*e*PKPbc	PKPdf	09 30 44.7	+5.3
KHC	Kasperske Hory	149.67	345	*e*PKPbc	PKPdf	09 30 47.0	+5.9
GERES	GERESS Array B	149.90	345	PKPbc	PKPdf	09 30 47.3	+5.8
	comp=Z,1.7nm,0.8s,slow=1.3,SNR=7.2						

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*ROM **03** 09:19:04.6±0.1, 37.97N×14.25E, h4^{km}, Md3.1/6, Ml3.3/10, Error ellipse: s-maj=2.0km s-min=1.4km az=175.0*
*NEIC **03** 09:19:04.6, 37.97N×14.25E, h4^{km}, ML3.3(ROM), After ROM.*
*CSEM **03** 09:19:05.1±0.2, 37.96N×14.21E, h15^{km}, ML4.3/3, Error ellipse: s-maj=3.5km s-min=2.9km az=168.0*

ISC 03 09:19:05.1±0.5**, 37.94N**±0.03×**14.22E**±0.03**, h11^{km}**±9^{km}**, n25, σ1^{s}19**/31**, 1C-3D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLLN	Pollina	0.08	312	⇓*i*Pg	Pg	09 19 07.0	-0.5
CSLB	Castelbuono	0.13	270	⇑*i*Pg	Pg	09 19 07.9	-0.3
GIB	Gibilmanna	0.16	289	⇓*i*Pg	Pg	09 19 08.5	-0.3
GIB				Sg	Sg	09 19 11.7	+0.5
	9μm,0.3s						
IFIL	Filicudi I Eol	0.68	24	Pg	Pg	09 19 18.4	-0.4
IFIL				Sg	Sg	09 19 29.7	+1.7
VPL	Vulcano Piano	0.75	54	Pg	Pg	09 19 19.4	-0.7
VPL				Sg	Sg	09 19 31.7	+1.6
	2μm,0.4s						
LLI	Lipari	0.77	48	Pg	Pg	09 19 20.6	+0.1
LLI				Sg	Sg	09 19 32.7	+2.0
	6μm,0.4s						
SLNA	Salina	0.79	38	Pg	Pg	09 19 20.1	-0.8
HVZN	Vizzini	0.85	152	⇓*i*Pg	Pg	09 19 22.9	+0.7
	2μm,1.0s						
CLTB	Caltabellotta	0.87	246	Pg	Pg	09 19 25.5	+2.9
	184nm,0.3s						
CRJA	Costa Raja	0.97	262	Pg	Pg	09 19 24.6	+0.1
	220nm,0.4s						
MMGO	Monte Magaggia	1.02	255	Pg	Pg	09 19 26.7	+1.2
	103nm,0.3s						
MFNL	Monte Finestre	1.04	262	Pg	Pg	09 19 26.8	+1.0
	246nm,0.6s						
SSY	Sortino	1.04	139	Pg	Pg	09 19 25.6	-0.2
	721nm,0.4s						
AGST	Augusta-Monte	1.05	130	Pg	Pg	09 19 25.6	-0.5
AGST				Sg	Sg	09 19 42.6	+2.4
	111nm,0.3s						
MSRU	Castanea	1.07	72	Pg	Pg	09 19 25.1	-1.4
	822nm,0.9s						
HMDC	Modica	1.08	155	Pg	Pg	09 19 26.9	+0.3
HMDC				Sg	Sg	09 19 45.5	+4.5
	564nm,0.8s						
MSI	Messina ING	1.09	75	Pg	Pg	09 19 26.2	-0.6
	168nm,0.4s						
USI	Ustica	1.12	314	Pg	Pg	09 19 25.1	-2.4
	330nm,0.2s						
MTTG	Motta San Giov	1.17	86	Pg	Pg	09 19 28.2	-0.2
	171nm,0.6s						
HAVL	Avola	1.21	143	Pg	Pg	09 19 28.5	-0.9
	561nm,0.5s						
ERC	Erice	1.29	275	Pg	Pg	09 19 30.4	-0.5
	297nm,0.7s						
CEL	Celeste	1.36	76	Pg	Pg	09 19 29.4	-2.9
	130nm,0.4s						
SOI	Samo	1.46	84	Pg	Pg	09 19 31.9	-2.3
	146nm,0.5s						
TIP	Timpagrande	2.34	57	P	Pn	09 19 44.9	+0.7
TIP	Timpagrande	2.34	57	P	Pn	09 19 44.9	+0.7

CASC 03 09:35:07.7±1.5**, 7.67N×82.16W, MD4.3, MW4.7, 5C-2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	1.24	335	*e*P	Pb	09 35 30.5	-1.1
ACR	Cerro Adams	1.40	314	⇑*e*P	Pb	09 35 32.6	-1.8
ACR				*e*S	Sb	09 35 54.4	+1.7
AZU2	Pedas	2.12	93	⇓*e*P	Pn	09 35 44.5	-0.3
AZU2				*e*S	Sn	09 36 12.9	+0.7
BUS	Buena Vista	2.45	320	⇑*e*P	Pn	09 35 49.5	-0.1
LCR2	La Lucha 2	2.75	319	⇓*e*P	Pn	09 35 53.4	-0.5
LCR2				*e*S	Sn	09 36 29.3	+1.1
LAJ	Bijagual	2.92	318	*e*P	Pn	09 35 57.7	+1.5
LAJ				*e*S	Sn	09 36 37.7	+5.2
SJS	Escuela Geolog	2.93	320	⇑*e*P	Pn	09 35 56.5	+0.1
SJS				*e*S	Sn	09 36 33.4	+0.5
PRS1	Puriscal	3.13	317	⇑*e*P	Pn	09 35 58.8	-0.5
CGA2	Cerro Gallo 2	3.26	316	⇑*e*P	Pn	09 36 01.2	+0.1

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*LDG **03** 09:37:10.5±0.1, 48.28N×7.46E, h5^{km}, Md3.1/3, Ml3.0/23, Error ellipse: s-maj=1.5km s-min=1.2km az=117.0*
*ZUR **03** 09:37:10.4, 48.28N×7.46E, h10^{km}, ML2.6/6*
*BGR **03** 09:37:11.0±0.2, 48.29N×7.46E, h5^{km}, ML2.6/3, Error ellipse: s-maj=2.2km s-min=2.2km az=134.0*
*LEDBW **03** 09:37:10.5±0.1, 48.28N×7.47E, h6^{km}±4^{km}, ML2.6, Error ellipse: s-maj=2.2km s-min=1.6km az=20.0*
*CSEM **03** 09:37:10.4±0.1, 48.29N×7.46E, h12^{km}, ML3.0/22, Error ellipse: s-maj=1.1km s-min=0.9km az=149.0*
*NEIC **03** 09:37:10.6, 48.30N×7.44E, h5^{km}, ML3.0(LDG), ML2.6(STR), After STR.*
*VIE **03** 09:37:15.6±0.8, 46.06N×8.23E, h8^{km}, mb2.0/1, ML2.5/3, Error ellipse: s-maj=8.2km s-min=4.1km az=143.0*

STR 03 09:37:10.6±0.1**, 48.30N×7.44E, h5^{km}**±1^{km}**, Ml2.6, 3C-6D, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	Welschbruch	0.13	333	Pg	Pg	09 37 13.6	+0.3
WLS				Sg	Sg	09 37 15.8	+0.7
WLS	Welschbruch	0.13	333	⇓*e*P	Pg	09 37 13.8	+0.5
WLS				S	Sg	09 37 15.9	+0.8
WLS	Welschbruch	0.13	333	*e*Pg	Pg	09 37 13.7	+0.4
	SNR=157						
WLS				*e*Sg	Sg	09 37 15.8	+0.7
	SNR=178						
CDF	Champ du Feu	0.16	316	*e*Pg	Pg	09 37 14.0	+0.1
CDF				*e*Sg	Sg	09 37 16.7	+0.7
	314nm,0.2s						
LIBD	Limburg	0.18	144	⇓*i*P	Pg	09 37 14.2	-0.2
LIBD	Limburg	0.18	144	*e*Pg	Pg	09 37 14.1	-0.3
	SNR=15						
ECH	Echery	0.21	246	Pg	Pg	09 37 14.6	-0.2
ECH				Sg	Sg	09 37 17.6	0.0
ECH	Echery	0.21	246	⇑*i*P	Pg	09 37 14.8	0.0
ECH	Echery	0.21	246	*e*Pg	Pg	09 37 14.7	-0.1
	SNR=53						
ECH				*e*Sg	Sg	09 37 17.7	0.0
	SNR=107						
STR	Strasbourg	0.36	37	*e*Sg	Sg	09 37 23.7	+1.1
	SNR=2.7						
KIZ	Kirchzarten	0.47	137	⇓*i*P	Pg	09 37 18.9	-1.1
KIZ				S	Sg	09 37 24.8	-1.5
KIZ	Kirchzarten	0.47	137	⇓*i*Pg	Pg	09 37 18.9	-1.1
KIZ				P*	Pb	09 37 20.1	-0.8
KIZ				Sg	Sg	09 37 24.8	-1.5
MOF	Molkenrain	0.49	205	⇑*i*P	Pg	09 37 19.9	-0.6
MOF	Molkenrain	0.49	205	*e*Pg	Pg	09 37 19.9	-0.6
	SNR=19						
MOF	Molkenrain	0.49	205	Pg	Pg	09 37 19.8	-0.7
MOF				Sg	Sg	09 37 26.6	-0.5
FELD	Feldberg	0.57	138	P	Pg	09 37 20.8	-1.2
BFO	Black Forest	0.59	87	⇑*e*P	Pg	09 37 21.4	-1.1
BFO				S	Sg	09 37 28.9	-1.5
BFO				S	Sg	09 37 32.5	+2.1
BFO	Black Forest	0.59	87	*e*Pg	Pg	09 37 21.6	-0.9
	SNR=28						
BFO				*e*Sg	Sg	09 37 28.9	-1.6
	SNR=10.0						
BFO				SmS		09 37 32.5	
BFO	Black Forest	0.59	87	*e*Pg	Pg	09 37 21.6	-0.9
BFO				*e*Sg	Sg	09 37 28.9	-1.6
HINF	Hinteralfeld	0.62	219	*e*Pg	Pg	09 37 22.1	-1.0
HINF				*e*Pn	Pn	09 37 23.6	-2.2
HINF				*e*Sg	Sg	09 37 30.2	-1.2
	121nm,0.2s						
LANF	Langenberg	0.72	19	Pg	Pg	09 37 24.5	-0.6
LANF	Langenberg	0.72	19	*e*Pg	Pg	09 37 25.7	+0.7
	SNR=8.3						
HAU	Haudompre	0.79	248	*e*Pg	Pg	09 37 25.4	-1.0
HAU				*e*Pn	Pn	09 37 26.7	-1.4
HAU				*e*Sg	Sg	09 37 35.7	-1.2
	161nm,0.3s						
BBS	Basel-Blauen	0.84	177	P	Pb	09 37 27.5	+0.3
BBS	Basel-Blauen	0.84	177	*e*Pg	Pg	09 37 27.3	0.0
	SNR=5.3						
BBS	Basel-Blauen	0.84	177	Pg	Pg	09 37 27.4	+0.1
SLE	Schleitheim	0.89	127	*e*Pg	Pg	09 37 26.6	-1.7
SLE				*e*Sg	Sg	09 37 38.3	-1.8
SULZ	Sulz-Cheisache	0.90	149	*e*Pg	Pg	09 37 27.0	-1.5
SULZ				*e*Sg	Sg	09 37 38.3	-2.2
BOURR	Bourrignon	0.92	189	*e*Pg	Pg	09 37 28.4	-0.5
BOURR				*e*Sg	Sg	09 37 40.8	-0.4
SPAK	Spaichingen	0.92	102	Pg	Pg	09 37 28.1	-0.9
LBG	Lerchenberg	0.97	67	⇑*i*P	Pb	09 37 29.1	-0.4
LBG				S	Sb	09 37 41.3	-1.2
LBG				S	Sb	09 37 42.5	0.0
LBG	Lerchenberg	0.97	67	Pg	Pg	09 37 29.1	-0.9
LBG				Sn	Sn	09 37 41.3	-3.7
THEF	They Montfort	0.97	266	Pg	Pg	09 37 29.4	-0.7
THEF				Sg	Sg	09 37 42.9	-0.2
THEF	They Montfort	0.97	266	*e*Pg	Pg	09 37 29.4	-0.7
	SNR=10						
THEF				*e*Sg	Sg	09 37 42.4	-0.7
	SNR=3.0						
BALST	Balsthal	0.98	170	*e*Pn	Pn	09 37 29.0	-1.9
BALST				*e*Sn	Sn	09 37 41.7	-3.5
LOMF	Lomont	1.04	204	Pg	Pg	09 37 30.1	-1.2
LOMF				Sg	Sg	09 37 44.7	-0.4
LOMF	Lomont	1.04	204	⇓P	Pb	09 37 30.2	-0.5
LOMF	Lomont	1.04	204	*e*Pg	Pg	09 37 30.2	-1.1
	SNR=21						
LOMF				PmP		09 37 32.0	
LOMF				*e*Sg	Sg	09 37 44.3	-0.8
	SNR=0.8						
KTD	Kalmit	1.11	22	*e*Pg	Pg	09 37 31.8	-0.9
	SNR=4.5						
KTD				*e*Sg	Sg	09 37 47.0	-0.4
	SNR=1.4						
KTD	Kalmit	1.11	22	Pg	Pg	09 37 31.8	-0.9
KTD				Sg	Sg	09 37 46.8	-0.7
TUBL	Tuebingen Lnz	1.12	78	S	Sb	09 37 46.7	0.0
GUT	Gutenstein	1.14	101	P	Pb	09 37 31.6	-0.9
GUT				P		09 37 32.2	
GUT				S	Sb	09 37 45.8	-1.7
GUT				S	Sb	09 37 47.3	-0.2
GUT	Gutenstein	1.14	101	PG	Pg	09 37 32.2	-1.3
GUT	Gutenstein	1.14	101	SG	Sg	09 37 47.3	-1.4
STEIN	Stein am Rhein	1.15	123	*e*Pn	Pn	09 37 32.4	-0.9
SISB	Singen-Sch Ber	1.19	120	P	Pb	09 37 32.9	-0.5
SISB				S	Sb	09 37 48.8	-0.1
STU	Stuttgart	1.26	67	*e*Pg	Pg	09 37 35.5	-0.3
	SNR=2.6						
STU				*e*Sg	Sg	09 37 50.5	-2.0
	SNR=3.9						
BUCH	Bad Urach	1.28	83	P	Pb	09 37 34.5	-0.3
BUCH				S	Sb	09 37 49.3	-2.2
BUCH				S	Sb	09 37 51.8	+0.2
BUCH	Bad Urach	1.28	83	SG	Sg	09 37 51.8	-1.6
SWS	Schriesheim	1.45	35	P	Pn	09 37 37.0	-0.5
SWS				S	Sb	09 37 57.5	+1.2
ABH	Alteburg	1.58	3	P	Pn	09 37 40.7	+1.2
ABH	Alteburg	1.58	3	*e*Pg	Pg	09 37 40.7	-1.6
	SNR=3.9						
ABH	Alteburg	1.58	3	Pg	Pg	09 37 40.5	-1.8

TOD	**Tromm**	**1.59**	**34**	*e*Pn	Pn	09 37 39.9	+0.4
TOD				*e*Sg	Sg	09 38 01.2	-2.2
	SNR=4.1						
TOD	**Tromm**	**1.59**	**34**	Pg	Pg	09 37 40.9	-1.4
TOD				Sg	Sg	09 38 01.8	-1.6
MEZF	**Maizieres J'vi**	**1.60**	**278**	*e*Pn	Pn	09 37 38.4	-1.4
MEZF				*e*Pg	Pg	09 37 41.4	-1.2
	baz=93						
MEZF				*e*Sg	Sg	09 38 01.6	-2.4
	40nm,0.2s						
MEZF	**Maizieres J'vi**	**1.60**	**278**	*e*Pg	Pg	09 37 41.4	-1.2
MEZF				*e*Sg	Sg	09 38 01.6	-2.4
	20nm,0.2s						
WLF	**Walferdange**	**1.61**	**329**	*e*Pg	Pg	09 37 41.2	-1.5
	SNR=3.0						
WLF				*e*Sg	Sg	09 38 02.7	-1.4
	SNR=3.7						
SIND	**Sindeldorf**	**1.77**	**53**	P	Pn	09 37 43.4	+1.2
SIND				S	Sn	09 38 07.4	+1.9
HDH	**Heidenheim**	**1.86**	**80**	S	Sn	09 38 08.7	+1.0
UBR	**Uberruh**	**1.90**	**108**	P	Pn	09 37 46.4	+2.5
UBR				S	Sn	09 38 04.7	-3.8
UBR				S	Sn	09 38 10.2	+1.7
UBR	**Uberruh**	**1.90**	**108**	SG	Sg	09 38 10.2	-3.5
CABF	**La Chapelle**	**1.92**	**209**	*e*Pn	Pn	09 37 42.2	-2.1
CABF				*e*Pg	Pg	09 37 46.6	-2.4
CABF				*e*Sg	Sg	09 38 10.0	-4.6
	27nm,0.5s						
DAVA	**Damuels**	**1.93**	**121**	⇑*i*Pg	Pg	09 37 47.8	-1.4
DAVA	**Damuels**	**1.93**	**121**	⇑Pg	Pg	09 37 47.8	-1.4
DAVA				Sg	Sg	09 38 11.4	-3.5
DAVA	**Damuels**	**1.93**	**121**	Pg	Pg	09 37 47.8	-1.4
DAVA				Sg	Sg	09 38 11.5	-3.5
	6.2nm,0.2s						
TNS	**Taunus Mts**	**2.03**	**19**	*e*Pg	Pg	09 37 49.1	-2.1
	SNR=2.4						
TNS				*e*Sg	Sg	09 38 15.0	-3.3
	SNR=5.4						
GIVF	**Givet**	**2.49**	**317**	*e*Pn	Pn	09 37 51.0	-1.5
GIVF				*e*Pg	Pg	09 37 56.6	-3.7
GIVF				*e*Sg	Sg	09 38 28.5	-5.0
	11nm,0.2s						
LOR	**Lormes**	**2.63**	**248**	*e*Pn	Pn	09 37 51.2	-3.2
	baz=64						
LOR				*e*Pg	Pg	09 37 59.8	-3.2
	25nm,0.3s,baz=64						
LOR				*e*Sg	Sg	09 38 32.2	-5.8
LOR	**Lormes**	**2.63**	**248**	*e*Pg	Pg	09 37 59.8	-3.2
	12nm,0.3s						
LOR				*e*Sg	Sg	09 38 32.2	-5.8
MOTA	**Moosalm**	**2.65**	**110**	⇓*i*Pg	Pg	09 38 00.8	-2.6
MOTA	**Moosalm**	**2.65**	**110**	Pg	Pg	09 38 00.8	-2.7
MOTA				Sg	Sg	09 38 33.4	-5.3
	8.3nm,0.4s						
BAIF	**Baives**	**2.76**	**311**	*e*Pn	Pn	09 37 55.0	-1.3
BAIF				*e*Pg	Pg	09 38 01.4	-4.2
BAIF				*e*Sg	Sg	09 38 35.9	-6.5
	5.8nm,0.4s						
SQTA	**Sankt Quirin**	**2.76**	**112**	⇑*i*Pg	Pg	09 38 01.0	-4.7
SQTA	**Sankt Quirin**	**2.76**	**112**	Pg	Pg	09 38 01.0	-4.8
SQTA				Sg	Sg	09 38 34.0	-8.6
	9.8nm,0.3s						
LPL	**La Plagne**	**2.83**	**190**	*e*Pn	Pn	09 37 55.0	-2.3
LPL				*e*Pg	Pg	09 38 02.7	-4.3
LPL				*e*Sg	Sg	09 38 38.8	-5.9
	5.2nm,0.4s						
LPG	**La Plagne**	**2.84**	**190**	*e*Pn	Pn	09 37 55.2	-2.3
LPG				*e*Pg	Pg	09 38 03.0	-4.4
LPG				*e*Sg	Sg	09 38 39.5	-5.8
	13nm,0.5s						
SSF	**Saint Saulge**	**2.93**	**246**	*e*Pn	Pn	09 37 55.4	-3.4
SSF				*e*Pg	Pg	09 38 05.3	-3.9
SSF				*e*Sg	Sg	09 38 41.1	-7.1
	24nm,0.5s						
SMF	**Signal de Mont**	**2.95**	**237**	*e*Pn	Pn	09 37 55.0	-4.0
SMF				*e*Pg	Pg	09 38 05.6	-3.9
SMF				*e*Sg	Sg	09 38 42.6	-6.2
	36nm,0.5s						
UBBA	**Unterbreizbach**	**3.02**	**33**	*e*Sg	Sg	09 38 47.1	-4.1
	SNR=1.1						
AVF	**Avril sur Loir**	**3.15**	**243**	*e*Pn	Pn	09 37 58.2	-3.7
AVF				*e*Pg	Pg	09 38 09.5	-4.1
AVF				*e*Sg	Sg	09 38 49.1	-6.5
	9.1nm,0.3s						
HYF	**Humbligny**	**3.40**	**254**	*e*Pn	Pn	09 38 02.3	-3.1
HYF				*e*Pg	Pg	09 38 15.2	-3.2
HYF				*e*Sg	Sg	09 38 55.8	-7.9
	141nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.55**	**198**	*e*Pn	Pn	09 38 04.6	-2.9
ORIF				*e*Pg	Pg	09 38 16.0	-5.5
ORIF				*e*Sg	Sg	09 39 01.4	-7.4
	8.5nm,0.4s						
MBDF	**Montbardon**	**3.60**	**188**	*e*Pn	Pn	09 38 05.5	-2.8
MBDF				*e*Pg	Pg	09 38 16.9	-5.7
MBDF				*e*Sg	Sg	09 39 02.9	-7.7
	9.1nm,0.7s						
TANN	**Tannenbergstha**	**3.91**	**55**	*e*Pg	Pg	09 38 23.8	-4.8
	SNR=3.4						
VIVF	**Saint-Julien-l**	**3.94**	**210**	*e*Pn	Pn	09 38 09.6	-3.5
VIVF				*e*Pg	Pg	09 38 23.1	-6.1
VIVF				*e*Sg	Sg	09 39 13.2	-8.5
	5.6nm,0.4s						
GEC2	**GERESS Array S**	**4.19**	**80**	*e*Sg	Sg	09 39 22.9	-7.3
	SNR=1.6						
LASF	**Ste Croix**	**4.90**	**212**	*e*Pn	Pn	09 38 22.3	-4.4
LASF				*e*Pg	Pg	09 38 41.5	-7.0
LASF				*e*Sg	Sg	09 39 43.8	-10
	1.4nm,0.2s						
CAF	**Calviac**	**5.01**	**230**	*e*Pn	Pn	09 38 24.6	-3.7
CAF				*e*Pg	Pg	09 38 43.5	-7.1
CAF				*e*Sg	Sg	09 39 47.7	-10
	1.6nm,0.2s						
LDF	**La Druitiere**	**5.04**	**276**	*e*Pn	Pn	09 38 25.6	-3.1
LDF				*e*Pg	Pg	09 38 44.4	-6.8
LDF				*e*Sg	Sg	09 39 48.9	-10
	5.4nm,0.4s						
RJF	**Les Rejaudoux**	**5.05**	**236**	*e*Pn	Pn	09 38 25.2	-3.7
RJF				*e*Pg	Pg	09 38 44.2	-7.2
RJF				*e*Sg	Sg	09 39 48.9	-10
	2.4nm,0.3s						
FLN	**La Foliniere**	**5.28**	**278**	*e*Pn	Pn	09 38 28.2	-3.9
FLN				*e*Sg	Sg	09 39 56.0	-11
	11nm,0.5s						
MFF	**Saint Martin d**	**5.42**	**255**	*e*Pn	Pn	09 38 29.6	-4.4
MFF				*e*Pg	Pg	09 38 51.3	-7.5
MFF				*e*Sg	Sg	09 40 00.5	-11
	2.7nm,0.2s						
LFF	**La Frestale**	**5.71**	**236**	*e*Pn	Pn	09 38 34.0	-4.1
LFF				*e*Pg	Pg	09 38 56.1	-8.5
LFF				*e*Sg	Sg	09 40 09.4	-11
	7.6nm,0.4s						

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*LDG **03** 09:39:52.2±0.1,48.27N×7.46E,h8^{km},Md2.4/3,Ml2.5/7, Error ellipse: s-maj=3.3km s-min=1.8km az=125.0*

*NEIC **03** 09:39:52.2,48.27N×7.46E,h8^{km},ML2.5(LDG),After LDG.*

*CSEM **03** 09:39:52.3±0.1,48.28N×7.44E,h5^{km},ML2.4/7,Error ellipse: s-maj=1.6km s-min=1.2km az=110.0*

STR 03 09:39:52.2±0.1,48.28N×7.42E,h5^{km}±1^{km},Ml1.9,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0,France

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLS	**Welschbruch**	**0.14**	**342**	Pg	Pg	09 39 55.4	+0.3
WLS				Sg	Sg	09 39 57.7	+0.6
CDF	**Champ du Feu**	**0.16**	**324**	*e*Pg	Pg	09 39 55.8	+0.2
CDF				*e*Sg	Sg	09 39 58.4	+0.6
	25nm,0.2s						
LIBD	**Limburg**	**0.18**	**137**	Pg	Pg	09 39 55.8	-0.1
ECH	**Echery**	**0.19**	**250**	Pg	Pg	09 39 56.4	+0.4
ECH				Sg	Sg	09 39 59.4	+0.8
MOF	**Molkenrain**	**0.47**	**204**	Pg	Pg	09 40 01.6	0.0
HINF	**Hinteralfeld**	**0.60**	**220**	*e*Pg	Pg	09 40 03.8	-0.4
HINF				*e*Pn	Pn	09 40 05.4	-1.6
HINF				*e*Sg	Sg	09 40 11.8	-0.4
	13nm,0.2s						
LANF	**Langenberg**	**0.75**	**20**	Pg	Pg	09 40 06.7	-0.4
HAU	**Haudompre**	**0.77**	**249**	*e*Pg	Pg	09 40 07.2	-0.4
HAU				*e*Pn	Pn	09 40 08.3	-1.1
HAU				*e*Sg	Sg	09 40 17.6	-0.2
	18nm,0.3s						
MEZF	**Maizieres J'vi**	**1.59**	**279**	*e*Pn	Pn	09 40 20.4	-0.8
MEZF				*e*Pg	Pg	09 40 23.0	-1.0
MEZF				*e*Sg	Sg	09 40 43.6	-1.7
	12nm,0.3s						
SFTF	**Sexfontaines**	**1.59**	**268**	*e*Pn	Pn	09 40 19.7	-1.5
SFTF				*e*Sg	Sg	09 40 43.5	-1.8
	9.6nm,0.2s						
CABF	**La Chapelle**	**1.90**	**209**	*e*Pn	Pn	09 40 23.7	-1.9
CABF				*e*Pg	Pg	09 40 28.6	-1.5
CABF				*e*Sg	Sg	09 40 51.8	-3.6
	2.4nm,0.3s						
LOR	**Lormes**	**2.61**	**248**	*e*Pn	Pn	09 40 32.9	-2.8
LOR				*e*Pg	Pg	09 40 41.7	-2.5
LOR				*e*Sg	Sg	09 41 14.0	-5.0
	4.7nm,0.3s						
SSF	**Saint Saulge**	**2.91**	**247**	*e*Pn	Pn	09 40 36.9	-3.2
SSF				*e*Pg	Pg	09 40 47.3	-3.0
SSF				*e*Sg	Sg	09 41 23.7	-5.5
	1.5nm,0.2s						
SMF	**Signal de Mont**	**2.93**	**237**	*e*Pg	Pg	09 40 47.2	-3.4
SMF				*e*Sg	Sg	09 41 24.2	-5.5
	2.2nm,0.2s						

NNC 03 10:10:37.1±1.1,48.26N×67.53E,mpv2.7,13C-5D,Error ellipse: s-maj=8.3km s-min=7.4km az=125.0,Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VOSK	**Vostochnaya**	**4.98**	**25**	⇑Sn	Sn	10 12 52.9	-1.3
VOSK				⇑Lg		10 13 12.6	
	7.1nm,0.8s						
BVA0	**Borovoye Array**	**5.11**	**20**	⇓Pg	Pg	10 12 12.4	-6.6
	0.4nm,0.8s,baz=196,slow=15,SNR=4.4						
BVA0				⇑Sn	Sn	10 12 56.4	-0.9
	0.1nm,0.2s,baz=200,slow=75,SNR=4.4						
BVA0				⇑Lg		10 13 18.3	
	1.5nm,0.7s,baz=199,slow=30,SNR=7.1						
AB31	**Akbulak array**	**5.12**	**284**	⇓Pg	Pg	10 12 13.6	-5.6
	0.5nm,0.6s,baz=92,slow=14,SNR=5.9						
AB31				⇑Sn	Sn	10 12 55.3	-2.2
	0.5nm,0.5s						
AB31				⇑Lg		10 13 17.3	
	2.5nm,0.7s,baz=106,slow=28,SNR=4.0						
KK31	**Karatay Array**	**5.56**	**157**	⇓Pg	Pg	10 12 17.4	-11
	0.8nm,0.5s,baz=340,slow=16,SNR=7.4						
KK31				⇑Lg		10 13 34.5	
	4.6nm,0.7s,baz=341,slow=28,SNR=5.6						
CHKZ	**Chkalovo**	**5.76**	**19**	⇓Pg	Pg	10 12 25.7	-6.4
	1.9nm,0.9s						
CHKZ				⇑Sn	Sn	10 13 11.7	-2.0
	1.7nm,0.6s						
CHKZ				⇑Lg		10 13 42.6	
	3.8nm,0.8s						
AKTO	**Aktyubinsk**	**6.59**	**293**	⇑Sn	Sn	10 13 32.6	-1.8
	0.3nm,0.8s						
AKTO				⇑Lg		10 14 03.2	
	0.2nm,0.6s						
AAK	**Ala-Archa**	**7.46**	**136**	⇑Lg		10 14 33.6	
	7.7nm,1.1s						
KURK	**Kurchatov**	**7.63**	**67**	⇑Lg		10 14 36.6	
	4.2nm,1.2s						
MK31	**Makanchi Array**	**10.09**	**93**	⇓Lg		10 15 53.7	
	1.1nm,0.5s,baz=300,slow=27,SNR=3.5						

MAN 03 10:29:41.1,9.91N×126.06E,h55^{km},mb4.5,ML3.3,MS3.2,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.03**	**205**	*e*P	P	10 29 58.5	-1.2
BUTP				*e*S	S	10 30 13.9	+0.5
MSLP	**Maasin**	**1.21**	**281**	*e*P	P	10 30 03.0	+0.9
MSLP				*e*S	S	10 30 19.4	+1.8
PLP	**Palo**	**1.64**	**319**	*e*P	P	10 30 08.7	+0.5
PLP				*e*S	S	10 30 30.2	+2.0
BESP	**Borongan**	**1.79**	**340**	*e*P	P	10 30 10.9	+0.6
BESP				*e*S	S	10 30 37.0	+5.3
BUKP	**Musuan**	**2.25**	**206**	*e*P	P	10 30 16.8	0.0
BUKP				*e*S	S	10 30 45.4	+2.1
CNP	**Catarman**	**2.92**	**332**	*e*P	P	10 30 24.8	-1.6
CNP				*e*S	S	10 31 00.8	+0.3
MATI	**Mati**	**2.95**	**176**	*e*P	P	10 30 27.6	+0.8
MATI				*e*S	S	10 31 08.0	+6.8
PAGZ	**Pagadian**	**3.35**	**232**	*e*P	P	10 30 32.6	+0.3
PAGZ				*e*S	S	10 31 06.2	-5.0
IPIL	**Ipil**	**4.05**	**239**	*e*P	P	10 30 40.3	-1.9
PVCP	**Virac**	**4.11**	**333**	*e*P	P	10 30 47.2	+4.1

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*NIED **03** 10:55:00,31.50N×140.60E,h62^{km},Mw3.8 Best double couple: M$_0$5.29×10^{14} NP1:ϕ_s333°,δ89°,λ-44°. NP2:ϕ_s64°,δ46°,λ-178°.*

*IDC **03** 10:55:01.4±1.5,31.31N×139.82E,h93^{km}±16^{km},mb3.6/4,mb1 3.7/6,mb1mx3.3/22,mbtmp3.9/6,Error ellipse: s-maj=35.8km s-min=11.8km az=74.0*

*JMA **03** 10:55:01.6±0.2,31.53N×140.61E,h91^{km}±4^{km},M3.8*

ISC 03 10:55:00.7±0.6,31.53N±0.06×140.5E±0.1,h115^{km}±9^{km},n18,σ1^{s}14/22,mb4.0/4,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.69**	**340**	P	**P**	**10 55 30.5**	**0.0**
JHJ	**Hachijo jima 2**	**1.71**	**339**	P	**P**	**10 55 30.6**	**-0.1**
	228nm,0.3s,baz=118,slow=8.5,SNR=135						
JKO	**Kozu shima**	**2.90**	**337**	P	**P**	**10 55 47.4**	**+1.0**
BSO1	**Boso 1**	**3.14**	**7**	P	**P**	**10 55 49.9**	**+0.2**
JOD2	**Odawara 2**	**3.91**	**343**	P	**P**	**10 56 01.2**	**+1.1**
JIE	**Ise**	**4.29**	**313**	P	**P**	**10 56 05.3**	**+0.1**
JIE				*e*S	**S**	**10 56 51.7**	**-2.9**
JWZ	**Kozaga**	**4.52**	**298**	P	**P**	**10 56 09.4**	**+1.1**
CBIJ	**Chichi jima**	**4.65**	**161**	P	**P**	**10 56 10.2**	**+0.2**
	12nm,0.3s,baz=322,slow=21,SNR=18						
CBIJ				S	**S**	**10 57 02.8**	**-0.5**
	37nm,0.3s,baz=284,slow=21,SNR=6.8						
CBIJ	**Chichi jima**	**4.65**	**161**	P	**P**	**10 56 10.2**	**+0.2**
JRY	**Ryogami san**	**4.68**	**344**	P	**P**	**10 56 10.9**	**+0.5**
MJAR	**Matsushiro Arr**	**5.36**	**340**	P	**P**	**10 56 19.8**	**+0.2**
	0.7nm,0.3s,baz=180,slow=31,SNR=6.2						
MAT	**Matsushiro**	**5.36**	**340**	P	**P**	**10 56 20.9**	**+1.3**
MAT				S	**S**	**10 57 19.6**	**-1.0**
JMK	**Ichinoseki**	**7.43**	**4**	P	**P**	**10 56 46.0**	**-1.9**
JMK				*e*S	**S**	**10 58 03.0**	**-8.2**
JKB	**Kayabe**	**10.35**	**2**	P	**P**	**10 57 24.8**	**-2.2**
MKAR	**Makanchi Array**	**46.60**	**307**	P	**P**	**11 03 17.9**	**-0.8**
	0.7nm,0.4s,mb3.7,baz=89,slow=9.0,SNR=16						
WRA	**Warramunga Arr**	**51.52**	**187**	P	**P**	**11 03 55.8**	**-1.1**
	0.5nm,0.4s,mb3.9,baz=3.3,slow=7.6,SNR=12						
INK	**Inuvik**	**59.65**	**25**	P	**P**	**11 04 57.1**	**+2.5**
	1.4nm,1.2s,mb3.9,baz=242,slow=6.0,SNR=5.8						
ARCES	**ARCESS Array B**	**68.89**	**340**	P	**P**	**11 05 55.7**	**+1.2**
	5.0nm,1.0s,mb4.3,baz=52,slow=7.1,SNR=9.1						

MEX 03 11:18:11.2±0.6,15.91N×97.60W,h26^{km}±20^{km},MD3.8,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.69**	**313**	*i* P	Pb	11 18 22.6	-2.0
PNIG				*i* S	Sb	11 18 31.2	-2.5
VHO	**Vista Hermosa**	**1.42**	**36**	*e*P	Pn	11 18 32.9	-2.8
VHO				*i* S	Sn	11 18 49.7	-4.0
OXX	**Oaxaca**	**1.44**	**36**	*i* P	Pn	11 18 33.2	-2.7
OXX				*i* S	Sn	11 18 50.7	-3.3
HUIG	**Huatulco**	**1.45**	**96**	*i* P	Pn	11 18 34.7	-1.3
HUIG				*i* S	Sn	11 18 49.8	-4.5
CMIG	**Matias Romero**	**2.86**	**65**	*e*P	Pn	11 18 52.2	-4.1
CMIG				*i* S	Sn	11 19 26.7	-3.5
PLIG	**Platanillo**	**3.06**	**324**	*i* P	Pn	11 18 54.5	-4.6
PLIG				*i* S	Sn	11 19 31.1	-4.1

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*IDC **03** 11:21:05.9±1.6,34.48N×73.68E,mb4.0/6,mb1 4.2/8,mb1mx3.9/19,mbtmp4.0/8,ML3.7/3,Error ellipse: s-maj=42.1km s-min=25.2km az=60.0*

*MOS **03** 11:21:06.0±1.4,34.53N×73.67E,h9^{km},mb4.2/4,Error ellipse: s-maj=30.7km s-min=8.9km az=90.0*

*NEIC **03** 11:21:07.7±1.4,34.52N×73.65E,h10^{km},mb3.6/2,Error ellipse: s-maj=31.5km s-min=19.3km az=77.0*

*NDI **03** 11:21:08.3±3.8,34.57N×73.54E,h10^{km},ML3.5,mb3.6(NEIC)*

*NNC **03** 11:21:18.6±3.7,34.93N×72.97E,h64^{km}±23^{km},mpv3.8,Error ellipse: s-maj=50.1km s-min=26.1km az=65.0*

ISC 03 11:21:06.9±0.6,34.60N±0.05×73.6E±0.1,h10^{km},n42,σ1^{s}13/44,mb3.9/5,6C-2D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**2.77**	**141**	*e*PB	**Pb**	**11 21 57.0**	**+0.8**
THN				*e*SB	**Sb**	**11 22 34.3**	**+4.0**
DLH	**Dalhousie**	**2.83**	**136**	*e*PB	**Pb**	**11 21 57.0**	**-0.1**
DLH				*e*S	**Sn**	**11 22 29.0**	**+1.6**
BHK	**Bhakra**	**3.94**	**143**	*e*x	x	11 22 59.3	
SDNR	**Sundarnagar**	**4.17**	**137**	*e*P	**Pn**	**11 22 13.0**	**+0.9**
SDNR				*e*S	**Sn**	**11 23 00.4**	**-1.0**
SMLA	**Simla**	**4.56**	**138**	*e*P	**Pn**	**11 22 17.1**	**-0.5**
SMLA				*e*S	**Sn**	**11 23 06.9**	**-4.4**
KLP	**Kalpa**	**4.93**	**127**	*e*P	**Pn**	**11 22 24.3**	**+1.4**
KLP				*e*S	**Sn**	**11 23 18.6**	**-2.1**
KLP				AML	AML	11 23 46.3	
	comp=N,184nm,0.7s						
KLP				AML	AML	11 23 46.7	
	comp=E,240nm,0.9s						
DDI	**Dehra Dun**	**5.67**	**138**	*e*x	x	11 22 40.5	
DDI				*e*x	x	11 23 39.0	
NDI	**New Delhi**	**6.64**	**152**	*e*PB	**Pb**	**11 23 05.0**	**+2.7**
NDI				*e*x	x	11 24 09.0	
KALG	**Kalgarh**	**6.68**	**138**	*e*x	x	11 23 11.3	
AYAN	**Aya Nagar**	**6.79**	**153**	*e*x	x	11 22 59.3	
KUDL	**Kundal**	**6.88**	**159**	*e*P	**Pn**	**11 22 48.8**	**-1.6**
SONA	**Sohna**	**6.98**	**154**	*e*x	x	11 22 56.0	
SONA				AML	AML	11 24 47.0	
	comp=E,30nm,0.5s						
SONA				AML	AML	11 24 47.9	
	comp=N,14nm,0.2s						
AAK	**Ala-Archa**	**8.05**	**4**	⇓Pn	**P**	**11 23 09.6**	**+2.9**
	comp=N,1.6nm,0.8s						
AAK				⇑Sn	**Sn**	**11 24 38.7**	**+0.1**
	comp=N,3.9nm,0.7s						
AAK	**Ala-Archa**	**8.05**	**4**	P	**P**	**11 23 03.1**	**-3.6**
AGRA	**Agra**	**8.22**	**152**	*e*x	x	11 23 13.7	
KK31	**Karatay Array**	**8.83**	**345**	⇑Pn	**P**	**11 23 18.1**	**+0.5**
	comp=N,8.4nm,0.7s,baz=163,slow=14,SNR=49						
KK31				⇑Sn	**Sn**	**11 24 53.6**	**-4.6**
	comp=N,1.7nm,0.4s,baz=164,slow=26,SNR=9.1						
KKAR	**Karatay Array**	**8.83**	**345**	*i* P	**P**	**11 23 18.3**	**+0.7**
KKAR				*e*S	**Sn**	**11 24 54.5**	**-3.7**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KKAR				smax			
	comp=Z,2.0nm,0.4s						
MKAR	**Makanchi Array**	**13.82**	**26**	Pn	**P**	**11 24 25.0**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=212,slow=14,SNR=2.7						
KURK	**Kurchatov**	**16.51**	**11**	*e*P	**P**	**11 25 01.4**	**+1.4**
	comp=Z,5.1nm,1.0s						
KURK	**Kurchatov**	**16.51**	**11**	*e*P	**P**	**11 25 01.4**	**+1.4**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AB31	**Akbulak array**	**17.80**	**329**	⇑P	**P**	**11 25 15.9**	**-0.3**
	comp=Z,1.1nm,0.7s,slow=0.1,SNR=8.6						
BVA0	**Borovoye Array**	**18.56**	**354**	⇑P	**P**	**11 25 26.1**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=245,slow=38,SNR=24						
BVA0	**Borovoye Array**	**18.56**	**354**	*e*P	**P**	**11 25 26.0**	**+0.3**
BVAR	**Borovoye Array**	**18.56**	**354**	P	**P**	**11 25 26.7**	**+1.0**
	comp=Z,1.0nm,0.3s,baz=161,slow=11,SNR=24						
BVAR	**Borovoye Array**	**18.56**	**354**	P	**P**	**11 25 26.7**	**+1.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**18.61**	**354**	*e*P	**P**	**11 25 27.1**	**+0.9**
	comp=Z,4.4nm,1.0s						
BRVK	**Borovoye**	**18.61**	**354**	*e*P	**P**	**11 25 27.1**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CHKZ	**Chkalovo**	**19.19**	**355**	⇑P	**P**	**11 25 31.7**	**-1.5**
	comp=Z,6.1nm,1.6s						
AKTO	**Aktyubinsk**	**19.51**	**329**	⇓P	**P**	**11 25 36.7**	**-0.2**
	comp=Z,1.2nm,0.9s						
AKTO	**Aktyubinsk**	**19.51**	**329**	P	**P**	**11 25 36.8**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=133,slow=8.4,SNR=11						
ZAL	**Zalesovo**	**20.87**	**19**	P	**P**	**11 25 49.9**	**-1.5**
	comp=Z,2.3nm,0.4s,baz=255,slow=8.7,SNR=8.8						
ZAL	**Zalesovo**	**20.87**	**19**	P	**P**	**11 25 49.9**	**-1.5**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SONM	**Songino Array**	**27.73**	**52**	P	**P**	**11 26 57.2**	**-0.2**
	comp=Z,0.7nm,0.6s,mb3.5,baz=255,slow=9.3,SNR=7.2						
SONM	**Songino Array**	**27.73**	**52**	P	**P**	**11 26 57.2**	**-0.1**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**43.72**	**338**	P	**P**	**11 29 12.8**	**-0.6**
	comp=Z,5.8nm,1.0s,mb4.2,baz=106,slow=8.8,SNR=5.7						
ARCES	**ARCESS Array B**	**43.72**	**338**	P	**P**	**11 29 12.8**	**-0.6**
ARCES	**ARCESS Array B**	**43.72**	**338**	P	**P**	**11 29 12.8**	**-0.6**
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ILAR	**Eielson Array**	**75.99**	**17**	P	**P**	**11 32 54.5**	**-0.8**
	comp=Z,0.8nm,0.6s,mb3.8,baz=299,slow=5.5,SNR=10						
ILAR	**Eielson Array**	**75.99**	**17**	P	**P**	**11 32 54.5**	**-0.8**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	**Warramunga Arr**	**79.15**	**123**	P	**P**	**11 33 12.5**	**-1.2**
	comp=Z,1.2nm,0.6s,mb4.0,baz=323,slow=5.2,SNR=9.5						
YKA	**Yellowknife Ar**	**83.02**	**4**	P	**P**	**11 33 33.0**	**-0.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=346,slow=5.2,SNR=7.1						
YKA	**Yellowknife Ar**	**83.02**	**4**	P	**P**	**11 33 33.0**	**-0.1**

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*IDC **03** 11:27:30.7±1.7,34.76S×179.11W,mb4.4/3,mb1 4.6/5,mb1mx4.2/13,mbtmp4.5/5,ML4.4/2,MS4.1/6,Ms1 4.0/6,ms1mx3.7/18,Error ellipse: s-maj=41.3km s-min=31.4km az=126.0*

*NEIC **03** 11:27:37.6±0.9,34.94S×179.55W,h30^{km},mb4.8/4,Error ellipse: s-maj=16.8km s-min=11.0km az=88.0*

ISC 03 11:27:36.6±1.9,34.92S±0.08×179.5W±0.1,h40^{km}±14^{km},h39^{km}±.9^{km}:pP-P,n44,σ1^{s}14/49,mb4.6/7,MS4.0/5,4D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.18**	**213**	PN	**P**	**11 28 26.0**	**+0.6**
MXZ				SN	**S**	**11 29 06.8**	**+4.3**
PUZ	**Puketiti**	**3.63**	**209**	PN	**P**	**11 28 32.0**	**+0.3**
PUZ				SN	**S**	**11 29 16.0**	**+2.2**
PUZ	**Puketiti**	**3.63**	**209**	P	**P**	**11 28 32.0**	**+0.3**
PUZ				S	**S**	**11 29 16.0**	**+2.2**
MWZ	**Matawai**	**4.16**	**214**	PN	**P**	**11 28 39.8**	**+0.5**
MWZ				SN	**S**	**11 29 32.8**	**+5.4**
MWZ	**Matawai**	**4.16**	**214**	P	**P**	**11 28 39.8**	**+0.5**
MWZ				S	**S**	**11 29 32.8**	**+5.4**
URZ	**Urewera**	**4.31**	**218**	Pn	**P**	**11 28 42.8**	**+1.4**
	15nm,0.3s,baz=33,slow=5.1,SNR=46						
URZ				Sn	**S**	**11 29 36.6**	**+5.6**
	24nm,0.3s,baz=138,slow=22,SNR=13						
URZ	**Urewera**	**4.31**	**218**	PN	**P**	**11 28 42.3**	**+0.9**
URZ				SN	**S**	**11 29 35.8**	**+4.7**
URZ	**Urewera**	**4.31**	**218**	P	**P**	**11 28 42.3**	**+0.9**
KNZ	**Kokohu**	**4.67**	**208**	*e*PN	**P**	**11 28 45.5**	**-1.1**
BKZ	**Black Stump Fm**	**5.31**	**216**	*e*PN	**P**	**11 28 54.7**	**-0.8**
BKZ				SN	**S**	**11 29 57.5**	**+1.1**
BKZ	**Black Stump Fm**	**5.31**	**216**	*e*P	**P**	**11 28 54.7**	**-0.8**
BKZ				S	**S**	**11 29 57.5**	**+1.2**
HIZ	**Hauiti**	**5.78**	**230**	PN	**P**	**11 29 04.2**	**+2.2**
HIZ	**Hauiti**	**5.78**	**230**	P	**P**	**11 29 04.2**	**+2.2**
TSZ	**Takapari Road**	**6.27**	**214**	*e*PN	**P**	**11 29 06.8**	**-2.2**
TSZ				SN	**S**	**11 30 19.4**	**-0.9**
TSZ	**Takapari Road**	**6.27**	**214**	*e*P	**P**	**11 29 06.8**	**-2.2**
TSZ				S	**S**	**11 30 19.4**	**-0.9**
MRZ	**Mangatainoka R**	**6.93**	**213**	*e*PN	**P**	**11 29 14.5**	**-3.7**
MRZ				SN	**S**	**11 30 34.8**	**-1.9**
MRZ	**Mangatainoka R**	**6.93**	**213**	*e*P	**P**	**11 29 14.5**	**-3.7**
MRZ				S	**S**	**11 30 34.8**	**-1.8**
THZ	**Tophouse**	**9.07**	**219**	*e*PN	**P**	**11 29 44.1**	**-3.7**
THZ				SN	**S**	**11 31 24.6**	**-5.2**
THZ	**Tophouse**	**9.07**	**219**	*e*P	**P**	**11 29 44.1**	**-3.8**
THZ				S	**S**	**11 31 24.6**	**-5.2**
RPZ	**Rata Peaks**	**11.42**	**217**	Pn	**P**	**11 30 17.5**	**-2.5**
	2.4nm,0.3s,baz=219,slow=1.0,SNR=12						
RPZ				Sn	**S**	**11 32 18.5**	**-8.8**
	2.5nm,0.3s,baz=13,slow=11,SNR=9.3						
DZM	**Mont Dzumac**	**17.77**	**312**	LR	LR	11 37 30.4	
	comp=Z,804nm,18.2s,baz=172,slow=34						
TBI	**Tubuai**	**28.55**	**74**	*e*LR	LR	11 34 26.9	
	107nm,27.2s						
PPT	**Papeete**	**31.75**	**65**	*e*LR	LR	11 34 07.0	
	118nm,28.8s						

PPT	Papeete	31.75	65	LR	LR	11 42 42.7	
	comp=Z,159nm,19.4s,MS3.7,baz=321,slow=29						
STKA	Stephens Creek	32.49	264	P	P	11 34 06.7	+1.1
	2.2nm,0.8s,mb4.0,baz=121,slow=14,SNR=2.7						
STKA				LR	LR	11 46 53.7	
	comp=Z,336nm,18.9s,MS4.1,baz=25,slow=35						
CTA	Charters Tower	33.59	287	P	P	11 34 15.8	+0.6
	2.8nm,0.5s,mb4.4,baz=104,slow=9.9,SNR=4.3						
RKT	Rikitea	40.37	85	eLR	LR	11 45 03.7	
	251nm,36.2s						
ASPA	Alice Springs	41.83	273	eP	P	11 35 24.5	+0.2
ASPA				e	pP	11 35 35.3	-0.2
WB2	Warramunga Arr	43.22	278	eP	P	11 35 35.2	-0.5
WB2				e	pP	11 35 46.2	-0.8
WRAB	Tennant Creek	43.23	278	eP	P	11 35 35.4	-0.4
	12nm,0.6s,mb4.8						
WRAB				epP	pP	11 35 46.1	-0.9
WRA	Warramunga Arr	43.23	278	P	P	11 35 35.5	-0.3
	7.8nm,0.6s,mb4.7,baz=119,slow=7.6,SNR=79						
FORT	Forrest	43.84	260	⇓iP	P	11 35 40.4	-0.3
	22nm,0.6s,mb5.1						
CASY	Casey	50.58	209	eP	P	11 36 34.0	+1.1
FITZ	Fitzroy Crossi	51.26	274	eP	P	11 36 38.0	-0.7
	6.9nm,0.6s,mb4.8						
QSPA	South Pole Qui	55.20	180	P	P	11 37 08.2	+1.1
	5.1nm,1.1s,mb4.5						
MAW	Mawson	67.64	202	LR	LR	12 07 36.2	
	comp=Z,94nm,20.4s,MS4.0,baz=109,slow=35						
SNAA	Sanae	73.67	179	⇓iP	P	11 39 07.1	-0.1
SNAA				e	pP	11 39 19.4	+0.3
VNA3	Neumayer Olymp	73.88	177	⇓iP	P	11 39 08.0	-0.4
VNA3				e	pP	11 39 20.2	-0.1
VNA2	Neumayer--Watz	74.30	177	⇓iP	P	11 39 10.9	+0.1
VNA2				e	pP	11 39 22.0	-0.7
PLCA	Paso Flores	80.34	133	LR	LR	12 07 45.8	
	comp=Z,252nm,18.5s,MS4.6,baz=3.0,slow=30						
MJAR	Matsushiro Arr	81.28	327	LR	LR	12 09 48.8	
	comp=Z,54nm,19.7s,MS3.9,baz=225,slow=31						
DBIC	Dimbokro	151.45	169	PKPbc	PKPdf	11 47 28.0	+7.5
	1.1nm,0.5s,baz=184,slow=7.1,SNR=2.9						
BRTR	Keskin Array B	153.31	290	PKPbc	PKPdf	11 47 30.8	+8.3
	1.0nm,0.6s,baz=127,slow=3.7,SNR=7.1						
AKASG	Malin Array Be	153.91	316	PKPbc	PKPdf	11 47 31.4	+8.5
	1.2nm,0.4s,baz=51,slow=2.7,SNR=4.1						

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*BJI **03** 12:02:21.2, 32.80S×70.40W, h14^{km}, mB4.9, Ms4.9, Msz4.6*

*GUC **03** 12:02:21.1±0.5, 32.88S×70.40W, h2^{km}±1^{km}, MD4.5, ML4.6*

*NEIC **03** 12:02:21.3±0.6, 32.82S×70.42W, h14^{km}±4^{km}, mb4.5/13, ML4.6(GUC), Error ellipse: s-maj=5.8km s-min=4.1km az=93.0*

NEIC Felt [IV] at Los Andes; [III] at Limache and San Antonio; [II] at La Cruz, Petorca, Santiago and Villa Alemana.

*IDC **03** 12:02:27.1±2.6, 32.85S×70.35W, h57^{km}±21^{km}, mb3.9/8, mb1 4.1/12, mb1mx4.1/17, mbtmp4.2/12, ML4.2/2, MS3.9/2, Ms1 3.8/2, ms1mx3.2/15, Error ellipse: s-maj=22.1km s-min=14.9km az=104.0*

ISC 03 12:02:20.6±0.6**, 32.77S**±0.03×**70.33W**±0.04**, h20**^{km}±5^{km}**, n69, σ0^{s}89**/68**, mb4.4**/18**, MS3.8**/2**, 10C-14D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	0.24	292	⇑iP	Pb	12 02 26.4	+0.1
FCH	Farellones	0.56	177	⇓iP	Pb	12 02 31.0	-0.5
FCH				iS	Sb	12 02 38.2	-0.8
FCH				AMP		12 02 38.6	
	comp=N,103µm,0.2s						
ROCH	El Roble	0.61	251	⇑iP	Pb	12 02 32.3	-0.1
SAN	Santiago	0.73	202	⇑iP	Pb	12 02 33.9	-0.7
SAN				iS	Sb	12 02 43.1	-1.0
RCDM	Rinconada Maip	0.82	209	⇓iP	Pb	12 02 35.6	-0.4
RCDM				iS	Sb	12 02 46.5	-0.1
RCDM				AMP		12 02 46.8	
	comp=E,170µm,0.2s						
ANTU	Antumapu	0.83	198	⇓iP	Pb	12 02 35.7	-0.5
ANTU				iS	Sb	12 02 46.8	-0.3
ANTU				AMP		12 02 47.2	
	comp=E,32µm,0.5s						
TACH	Talagante	1.02	210	⇑iP	Pb	12 02 38.8	-0.6
TACH				iS	Sb	12 02 52.0	-0.3
LMEL	Las Melosas	1.08	174	⇓iP	Pb	12 02 40.0	-0.4
LMEL				iS	Sb	12 02 55.0	+1.0
LMEL				AMP		12 02 55.9	
	comp=N,48µm,0.2s						
IHA	Instituto Hidr	1.13	257	⇓iP	Pb	12 02 40.9	-0.5
IHA				iS	Sb	12 02 56.0	+0.3
CHCH	Chadas Angostu	1.19	193	⇑iP	Pn	12 02 41.6	-0.8
MDZ	Mendoza	1.25	95	⇓iP	Pn	12 02 44.3	+1.1
MDZ				⇑iP		12 02 45.5	
MDZ				i		12 02 46.5	
MDZ				i		12 02 51.7	
MDZ				iS	Sb	12 03 00.5	+1.5
MDZ				i		12 03 02.1	
MDZ				iS	Sb	12 03 07.7	+8.7
LCCH	Las Cruces	1.25	236	⇑iP	Pn	12 02 42.9	-0.4
CHNG	Los Chungos	1.33	312	⇑iP	Pn	12 02 44.7	+0.4
CHNG				iS	Sb	12 03 02.8	+1.4
CHNG				AMP		12 03 05.6	
	comp=E,10µm,0.4s						
CACH	El Canelo	1.36	190	⇓iP	Pn	12 02 45.1	+0.3
CACH				iS	Sb	12 03 03.1	+0.8
LNV	Longovilo	1.49	217	⇓iP	Pn	12 02 46.3	-0.4
CICH	Cipreses	1.54	183	⇑iP	Pn	12 02 48.2	+0.7
SFDO	San Fernando	1.92	197	⇑iP	Pn	12 02 53.8	+0.9
CFAA	Coronel Fontan	2.12	57	P	Pn	12 02 59.6	+3.9
	comp=E,16nm,0.3s,baz=233,slow=16,SNR=393						
CFAA				S	Sn	12 03 28.2	+6.5
	comp=E,22nm,0.3s,baz=303,slow=18,SNR=6.5						
NICH	Los Niches	2.35	198	⇓iP	Pn	12 02 59.6	+0.7
NICH				iS	Sn	12 03 32.2	+4.7
TALC	Talca	2.83	202	⇓iP	Pn	12 03 07.5	+1.6
TALC				iS	Sn	12 03 41.8	+2.0
PLCA	Paso Flores	7.95	181	P	Pn	12 04 18.6	+0.6
	comp=E,0.9nm,0.3s,baz=340,slow=11,SNR=15						
PLCA	Paso Flores	7.95	181	ePn	Pn	12 04 18.2	+0.2
	comp=E,13nm,0.9s						
TRQA	Tornquist	8.61	130	ePn	P	12 04 27.9	+0.6
	comp=E,54nm,0.7s						
CPUP	Villa Florida	13.00	64	ePn	P	12 05 25.4	-1.7
	comp=E,39nm,0.6s						
ARE	Arequipa	16.27	356	eP	P	12 06 15.0	+5.1
LPAZ	La Paz	16.53	7	P	P	12 06 15.5	+2.3
	comp=E,0.3nm,0.3s,baz=184,slow=9.7,SNR=27						
LPAZ	La Paz	16.53	7	eP	P	12 06 15.1	+2.0
	comp=E,8.1nm,0.8s						
SIV	San Ignacio	18.70	29	P	P	12 06 39.8	-0.3
	comp=E,0.6nm,0.3s,baz=210,slow=11,SNR=20						
EFI	East Falkland	20.91	158	eP	P	12 07 04.5	+0.2
	comp=E,183nm,1.3s						
USHA	Ushuaia	22.09	177	LR	LR	12 16 54.1	
	comp=E,376nm,18.6s,MS3.8,baz=32,slow=39						
SAML	Samuel	24.61	17	eP	P	12 07 41.8	+0.7
	comp=E,11nm,1.1s,mb4.3						
BDFB	Brasilia	26.46	55	P	P	12 07 57.9	-0.5
	comp=E,6.3nm,0.6s,mb4.3,baz=219,slow=9.0,SNR=7.8						
BDFB				LR	LR	12 19 38.8	
	comp=E,196nm,19.0s,MS3.7,baz=306,slow=39						
PMSA	Palmer Station	32.26	175	eP	P	12 08 49.4	-0.4
	comp=E,33nm,1.2s,mb5.0						
SDV	Santo Domingo	41.42	360	eP	P	12 10 06.9	-0.8
	comp=E,5.5nm,0.9s,mb4.2						
SNAA	Sanae	52.19	158	P	P	12 11 31.1	-0.6
	comp=E,0.6nm,0.7s,mb3.6,baz=273,slow=5.3,SNR=11						
SNAA	Sanae	52.19	158	eP	P	12 11 30.9	-0.9
	comp=E,2.8nm,0.8s,mb4.2						
SYO	Syowa Base	66.48	158	⇓P	P	12 13 09.9	-0.6
SYO	Syowa Base	66.48	158	⇓pP	pP	12 13 19.2	+2.6
SYO	Syowa Base	66.48	158	⇓eP	P	12 13 09.9	-0.6
SYO				⇓epP	pP	12 13 19.2	+2.6
SWET	Sewanee	69.20	346	eP	P	12 13 26.1	-2.0
OXF	Oxford	69.29	343	eP	P	12 13 27.5	-1.1
	comp=E,24nm,1.1s,mb5.0						
TXAR	Lajitas Array	69.39	329	P	P	12 13 29.8	+0.5
	comp=E,0.8nm,0.8s,mb3.7,baz=152,slow=7.0,SNR=8.5						
WVT	Waverly	70.47	345	eP	P	12 13 35.0	-0.8
	comp=E,28nm,0.9s,mb5.2						
WMOK	Wichita Mounta	72.28	336	eP	P	12 13 45.7	-1.0
	comp=E,3.4nm,1.1s,mb4.2						
CPRX	Cap Rock	72.68	331	eP	P	12 13 48.3	-0.9
DBIC	Dimbokro	73.43	71	P	P	12 13 53.9	+0.1
	comp=E,4.1nm,0.7s,mb4.5,baz=212,slow=7.4,SNR=14						
DBIC	Dimbokro	73.43	71	eP	P	12 13 53.4	-0.5
ACSO	Alum Creek Sta	73.58	350	eP	P	12 13 53.5	-0.7
MAW	Mawson	73.94	163	P	P	12 13 55.7	0.0
	comp=E,1.7nm,0.7s,mb4.1,baz=218,slow=8.5,SNR=8.7						
ANMO	Albuquerque	75.42	330	eP	P	12 14 05.4	+0.4
	comp=E,4.3nm,1.3s,mb4.2						
SDCO	Great Sand Dun	77.44	332	eP	P	12 14 17.4	+1.2
	comp=E,4.2nm,0.8s,mb4.4						
HWUT	Hardware Ranch	83.18	330	eP	P	12 14 45.0	-1.7
	comp=E,2.4nm,0.7s,mb4.3						
PDAR	Pinedale Array	83.33	332	P	P	12 14 47.8	+0.3
	comp=E,0.9nm,0.7s,mb3.9,baz=133,slow=7.0,SNR=7.4						
NVAR	Mina Array Bea	83.71	324	P	P	12 14 51.3	+1.8
	comp=E,1.5nm,0.8s,mb4.2,baz=143,slow=6.4,SNR=15						
ULM	Lac du Bonnet	85.70	344	P	P	12 14 59.1	-0.1
	comp=E,4.2nm,1.0s,mb4.6,baz=167,slow=10,SNR=4.4						
HLID	Hailey	85.99	330	eP	P	12 15 01.8	+1.1
	comp=E,4.8nm,1.2s,mb4.6						
WRA	Warramunga Arr	122.52	208	PKP	PKPdf	12 21 16.1	-3.3
	comp=E,0.5nm,0.5s,baz=163,slow=1.6,SNR=6.4						
CHKZ	Chkalovo	145.31	41	ePKPdf	PKPdf	12 21 58.6	-2.0
BRVK	Borovoye	145.34	42	ePKPdf	PKPdf	12 21 58.5	-2.2
AAK	Ala-Archa	150.66	60	ePKPbc	PKPdf	12 22 12.8	+3.1
KURK	Kurchatov	151.01	43	ePKPbc	PKPdf	12 22 13.2	+3.3
ZAL	Zalesovo	152.42	32	PKPbc	PKPdf	12 22 16.6	+4.7
	comp=E,5.8nm,0.7s,baz=198,slow=11,SNR=3.3						
MKAR	Makanchi Array	154.88	48	PKPbc	PKPdf	12 22 22.0	+6.5
	comp=E,0.8nm,0.8s,slow=3.6,SNR=5.0						
MKAR				PKPab	PKPab	12 22 36.7	-1.2
	comp=E,1.5nm,0.8s,baz=302,slow=4.6,SNR=6.9						
MKAR	Makanchi Array	154.88	48	PKPbc	PKPdf	12 22 22.0	+6.5
MKAR				PKPab	PKPab	12 22 36.7	-1.2
WMQ	Urumqi	159.59	51	ePKP	PKPdf	12 22 18.5	-3.1
CN2	Changchun	163.46	316	ePKP	PKPdf	12 22 23.9	-1.6
SONM	Songino Array	164.75	8	PKPab	PKPab	12 23 20.9	+0.5
	comp=E,0.3nm,0.6s,baz=319,slow=2.2,SNR=4.5						
NJ2	Nanjing	172.20	267	ePKP	PKPdf	12 22 30.1	-2.0
LZH	Lanzhou	174.16	54	ePKP	PKPdf	12 22 29.5	-3.2
LZH				LR	LR		
	comp=N,180nm,18.3s						
LZH				LR	LR		
	comp=Z,340nm,20.0s						

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*NEIC **03** 12:09:31.5, 32.22S×71.71W, h36^{km}, MD3.5(GUC), After GUC.*

GUC 03 12:09:31.5±0.8**, 32.22S×71.71W, h36**^{km}±3^{km}**, MD3.5, ML2.4, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHNG	Los Chungos	0.38	28	⇓iP	P	12 09 40.7	+0.2
CHNG				iS	S	12 09 46.9	0.0
CHNG				AMP		12 09 47.3	
	comp=N,308nm,0.2s						
JACH	Jahuel	1.05	116	⇑iP	P	12 09 50.7	+0.8
JACH				iS	S	12 10 04.6	+1.0
LCCH	Las Cruces	1.25	175	eP	P	12 09 53.4	+0.6
RCDM	Rinconada Maip	1.48	149	⇓iP	P	12 09 57.1	+1.1
RCDM				iS	S	12 10 16.6	+2.3
RCDM				AMP		12 10 17.9	
	comp=N,115nm,0.1s						
TACH	Talagante	1.57	156	⇑iP	P	12 09 57.8	+0.5
TACH				iS	S	12 10 18.6	+2.0
FCH	Farellones	1.63	133	eP	P	12 09 59.9	+1.7
FCH				iS	S	12 10 21.5	+3.4
FCH				AMP		12 10 23.5	
	comp=E,80nm,0.1s						

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*ATH **03** 12:21:08.7, 38.14N×26.74E, h43^{km}, MD3.1/3*

*CSEM **03** 12:21:08.9±0.1, 38.15N×26.62E, h19^{km}±1^{km}, MD2.7, Error ellipse: s-maj=2.9km s-min=2.0km az=109.0*

*ISK **03** 12:21:10.0, 38.17N×26.68E, h23^{km}, MD2.7*

ISC 03 12:21:09.3±0.7**, 38.18N**±0.03×**26.57E**±0.06**, h15**^{km}±8^{km}**, n13, σ0^{s}66**/21**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.18	6	iP	Pb	12 21 13.4	-0.5
URLA				iS	Sb	12 21 17.4	+0.5
BLCB	Balcova	0.42	60	PG	Pb	12 21 17.9	0.0
SMG	Samos	0.51	156	eP	Pb	12 21 19.6	+0.2
SMG				eS	Sb	12 21 26.8	+0.5
IZM	Izmir	0.59	68	iPG	Pb	12 21 20.9	+0.2
IZM				iSG	Sb	12 21 28.9	+0.4
KDAG	Bornova	0.59	67	iP	Pb	12 21 19.1	-1.6
KDAG				iS	Sb	12 21 27.6	-1.1
PRK	Paraskevi	1.09	348	eP	Pb	12 21 29.7	+0.4
AYDN	Tasoluk	1.16	116	iP	Pb	12 21 30.3	-0.1
AYDN				iS	Sb	12 21 44.8	-0.1
AKS	Akhisar	1.20	54	ePN	Pn	12 21 31.2	-0.3
BODT	Bodrum	1.26	152	ePN	Pn	12 21 32.4	+0.1
BODT				eSN	Sn	12 21 48.2	-0.7
BDRM	Kayabasi	1.31	148	iP	Pb	12 21 33.2	+0.2
BDRM				iS	Sb	12 21 49.8	+0.5
APE	Apeiranthos	1.38	217	eP	Pn	12 21 33.7	-0.4
MANT	Manisa	1.59	78	iP	Pn	12 21 38.6	+1.5
MANT				iS	Sn	12 21 58.3	+0.9
YER	Yerkesik	1.71	127	ePN	Pn	12 21 38.0	-0.8

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*BJI **03** 12:36:14.5, 23.40S×68.60W, h91^{km}, mB5.2*

*GUC **03** 12:36:14.3±1.0, 23.41S×68.80W, h106^{km}±12^{km}, ML4.6*

*NEIC **03** 12:36:14.6±0.6, 23.38S×68.65W, h92^{km}±6^{km}, mb4.4/13, Error ellipse: s-maj=10.4km s-min=7.3km az=91.0*

*IDC **03** 12:36:16.3±0.6, 23.38S×68.57W, h102^{km}±4^{km}, mb4.0/10, mb1 4.1/12, mb1mx4.0/16, mbtmp4.3/12, MS3.6/3, Ms1 3.5/3, ms1mx2.9/20, Error ellipse: s-maj=23.8km s-min=14.3km az=65.0*

ISC 03 12:36:12.7±0.7**, 23.35S**±0.05×**68.55W**±0.06**, h88**^{km}±7^{km}**, h102**^{km}±.7^{km}**:pP-P, n63, σ1^{s}22**/55**, mb4.3**/20**, 2C-7D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	0.54	36	⇓iP	P	12 36 34.1	+6.3
SPCH				iS	S	12 36 48.0	+9.0
SPCH				AMP		12 36 48.5	
	comp=N,40µm,0.5s						
CEN1	Los Morros	1.52	268	⇓iP	P	12 36 42.1	+3.0
CEN1				iS	S	12 37 01.8	+3.3
CEN1				AMP		12 37 03.6	
	comp=N,5µm,0.6s						
ANCH	Antofagasta	1.74	259	⇑iP	P	12 36 41.2	-0.8
ANCH				iS	S	12 37 02.0	-1.5
ANCH				AMP		12 37 06.1	
	comp=N,7µm,0.5s						
CPN1	Cerro Paranal	2.12	233	⇑iP	P	12 36 47.6	+0.5
CPN1				iS	S	12 37 12.6	+0.2
CPN1				AMP		12 37 22.3	
	comp=N,3µm,0.4s						
CRCH	Chaqaral	3.53	212	eP	P	12 37 05.8	-0.8
CRCH				AMP		12 38 07.3	
	comp=E,2µm,0.8s						
LPAZ	La Paz	7.03	3	P	P	12 37 58.5	+3.6
	comp=E,2.2nm,0.3s,baz=194,slow=7.2,SNR=52						
LPAZ	La Paz	7.03	3	ePn	P	12 37 57.1	+2.2
	comp=E,14nm,0.7s						
CFAA	Coronel Fontan	8.23	178	P	P	12 38 09.2	-2.0
	comp=E,0.4nm,0.3s,baz=2.3,slow=13,SNR=15						
CFAA				S	S	12 39 33.9	-9.5
	comp=E,0.3nm,0.3s,baz=242,slow=17,SNR=2.2						
SIV	San Ignacio	10.15	45	P	P	12 38 36.6	-0.7
	comp=E,10nm,0.3s,baz=236,slow=12,SNR=105						
SIV				S	S	12 40 24.2	-5.9
	baz=202,slow=22,SNR=1.8						
CPUP	Villa Florida	10.61	109	ePn	P	12 38 46.8	+3.3
	comp=E,26nm,0.6s						
SAML	Samuel	15.21	21	eP	P	12 39 42.5	-1.5
	comp=E,5.9nm,0.6s						
TRQA	Tornquist	15.70	161	eP	P	12 39 49.4	-0.7
PLCA	Paso Flores	17.42	185	P	P	12 40 10.5	-0.9
	comp=E,0.1nm,0.3s,baz=11,slow=14,SNR=2.3						
PLCA				LR	LR	12 48 04.5	
	comp=E,81nm,19.1s,baz=176,slow=41						
PLCA	Paso Flores	17.42	185	eP	P	12 40 11.2	-0.2
BDFB	Brasilia	20.80	72	P	P	12 40 49.4	+0.5
	comp=E,17nm,0.5s,baz=247,slow=11,SNR=31						
BDFB				LR	LR	12 50 15.0	
	comp=E,65nm,18.2s,baz=31,slow=40						
BAO	Brasilia Array	20.83	72	P	P	12 40 49.0	-0.2
JTS	JuntasAbangare	37.09	333	P	P	12 43 14.7	-1.7
PMSA	Palmer Station	41.52	177	eP	P	12 43 50.7	-1.8
VNA3	Neumayer Olymp	58.23	161	⇓iP	P	12 45 59.4	-0.4
VNA3				e		12 46 37.1	
VNA1	Neumayer--Stat	58.44	160	e	P	12 46 03.0	+1.7
VNA1	Neumayer--Stat	58.44	160	e	tx	12 46 39.0	
VNA1	Neumayer--Stat	58.44	160	⇓iP	P	12 46 01.4	+0.1
VNA1				e		12 46 03.0	
VNA1				e		12 46 39.0	
VNA2	Neumayer--Watz	58.81	160	e	P	12 46 05.1	+1.3
VNA2	Neumayer--Watz	58.81	160	e	tx	12 46 42.0	
VNA2	Neumayer--Watz	58.81	160	⇓iP	P	12 46 03.5	-0.3
VNA2				e		12 46 05.1	
VNA2				e		12 46 42.0	
SNAA	Sanae	60.43	161	e	P	12 46 16.2	+1.2
SNAA	Sanae	60.43	161	e	tx	12 46 51.6	
SNAA	Sanae	60.43	161	P	P	12 46 14.5	-0.5
	comp=E,2.3nm,0.6s,mb4.4,baz=284,slow=7.3,SNR=56						
SNAA	Sanae	60.43	161	⇓iP	P	12 46 14.3	-0.7
SNAA				e		12 46 16.2	
SNAA				e		12 46 51.6	
SWET	Sewanee	60.53	344	eP	P	12 46 13.8	-2.3
SWET				epP	pP	12 46 39.0	+0.6
WVT	Waverly	61.90	342	eP	P	12 46 23.0	-2.3
	comp=E,6.1nm,0.9s,mb4.6						
TXAR	Lajitas Array	62.33	325	P	P	12 46 27.9	-0.4
	comp=E,0.5nm,0.7s,mb3.6,baz=150,slow=8.7,SNR=6.2						
TXAR				sP	sP	12 47 04.9	+4.3
	comp=E,0.3nm,0.6s,baz=124,slow=4.5,SNR=3.1						
FVM	French Village	64.38	341	eP	P	12 46 40.5	-1.1
	comp=E,24nm,1.1s,mb5.0						
CCM	Cathedral Cave	64.69	340	eP	P	12 46 42.3	-1.4
	comp=E,6.2nm,0.7s,mb4.5						
CCM				e		12 46 57.7	
ANMO	Albuquerque	68.23	327	eP	P	12 47 05.5	-0.6
	comp=E,4.4nm,1.0s,mb4.2						
DBIC	Dimbokro	68.95	73	P	P	12 47 11.8	+0.9
	comp=E,3.8nm,0.7s,mb4.3,baz=206,slow=8.0,SNR=5.8						
DBIC	Dimbokro	68.95	73	eP	P	12 47 10.8	-0.1
	comp=E,6.8nm,1.0s,mb4.4						
SDCO	Great Sand Dun	70.00	330	eP	P	12 47 17.6	+0.7
	comp=E,7.9nm,1.1s,mb4.5						
SBA	Scott Base	74.08	190	eP	P	12 47 41.4	+1.0
	comp=E,5.2nm,1.2s,mb4.1						
VNDA	Vanda	75.10	190	eP	P	12 47 47.3	+1.1
	comp=E,6.0nm,1.5s,mb4.1						
PDAR	Pinedale Array	75.87	330	P	P	12 47 51.9	+0.6
	comp=E,0.6nm,0.7s,mb3.4,baz=127,slow=7.7,SNR=5.9						
HWUT	Hardware Ranch	75.92	328	eP	P	12 47 51.9	+0.4
	comp=E,3.5nm,0.8s,mb4.1						
AHID	Auburn Hatcher	76.58	329	eP	P	12 47 55.8	+0.6
	comp=E,5.7nm,0.8s,mb4.3						
NVAR	Mina Array Bea	77.15	322	P	P	12 47 59.4	+0.9
	comp=E,0.9nm,0.8s,mb3.5,baz=138,slow=6.9,SNR=5.6						
ULM	Lac du Bonnet	77.17	342	P	P	12 47 58.1	-0.2
	comp=E,3.1nm,0.5s,mb4.3,baz=160,slow=6.8,SNR=9.8						
HLID	Hailey	78.78	328	eP	P	12 48 09.0	+1.7
BOSA	Boshof	82.29	118	P	P	12 48 27.0	+0.7
	comp=E,1.6nm,0.6s,mb4.0,baz=270,slow=3.0,SNR=3.2						
MAW	Mawson	82.47	163	⇓iP	P	12 48 27.2	+0.8
	comp=E,5.7nm,0.6s,mb4.6						
MAW				e	pP	12 48 54.2	+4.3
MAW	Mawson	82.47	163	P	P	12 48 27.3	+0.9
	comp=E,7.7nm,0.6s,mb4.7,baz=212,slow=5.8,SNR=42						
MAW				pP	pP	12 48 54.2	+4.4
	comp=E,2.2nm,0.6s,baz=186,slow=10.0,SNR=3.0						
LBTB	Lobatse	83.95	114	eP	P	12 48 35.0	+0.3
	comp=E,3.0nm,0.7s,mb4.2						
CASY	Casey	90.65	180	eP	P	12 49 06.4	+0.3
	comp=E,5.3nm,0.8s,mb4.7						
YKA	Yellowknife Ar	93.03	340	P	P	12 49 18.0	+0.9
	comp=E,1.9nm,0.7s,mb4.5,baz=133,slow=4.3,SNR=12						
YKA				pP	pP	12 49 45.2	+4.1
	comp=E,0.7nm,0.7s,baz=135,slow=4.8,SNR=2.7						
URZ	Urewera	93.17	226	LR	LR	13 22 20.8	
	comp=E,172nm,20.9s,baz=40,slow=30						
WRA	Warramunga Arr	131.53	209	PKP	PKPdf	12 55 17.6	+1.6
	comp=E,1.4nm,0.8s,baz=153,slow=1.8,SNR=8.9						
BVAR	Borovoye Array	137.11	36	PKP	PKPdf	12 55 27.7	+2.3
	comp=E,0.6nm,0.7s,baz=333,slow=3.2,SNR=3.3						
BVAR				pPKP		12 55 55.8	
	comp=E,0.7nm,0.7s,baz=225,slow=2.1,SNR=3.0						
ZAL	Zalesovo	143.46	26	PKP	PKPdf	12 55 37.3	+0.7
	comp=E,1.1nm,0.8s,baz=196,slow=4.5,SNR=8.5						
ZAL				pPKP		12 56 05.6	
	comp=E,1.5nm,0.8s,baz=155,slow=4.2,SNR=3.5						
MKAR	Makanchi Array	146.91	38	PKPbc	PKPbc	12 55 44.9	+0.5
	comp=E,4.2nm,0.8s,baz=313,slow=1.1,SNR=20						
MKAR				pPKPbc		12 56 13.4	
	comp=E,6.1nm,0.8s,baz=326,slow=4.4,SNR=11						
ASAJ	Asahikawa	147.13	317	PKPbc	PKPdf	12 55 47.0	+3.8
	comp=E,3.8nm,0.6s,baz=94,slow=26,SNR=5.6						
WMQ	Urumqi	151.74	38	ePKP	PKPdf	12 55 51.0	+0.6
SONM	Songino Array	155.23	8	PKP	PKPdf	12 55 57.6	+2.5
	comp=E,0.4nm,0.6s,baz=232,slow=1.9,SNR=3.9						
SONM				PKPbc	PKPdf	12 56 07.1	+12
	comp=E,0.4nm,0.6s,baz=333,slow=1.8,SNR=3.5						
SONM				PKPab	PKPab	12 56 23.7	+0.8
	comp=E,1.2nm,0.8s,baz=323,slow=4.4,SNR=6.0						
CN2	Changchun	156.57	334	ePKP	PKPdf	12 55 58.0	+1.0
LZH	Lanzhou	165.70	26	ePKP	PKPdf	12 56 04.5	-2.5
LZH				APKP		12 56 31.5	
LZH				XPKP		12 56 42.1	
LZH				LR	LR		
	comp=N,170nm,18.5s						
LZH				LR	LR		
	comp=Z,360nm,20.0s						
NJ2	Nanjing	169.13	325	ePKP	PKPdf	12 56 09.9	+0.5

NNC 03 12:42:34.6±4.5**, 36.82N×70.35E, h203**^{km}±80^{km}**, mpv3.5, 4C-2D, Error ellipse: s-maj=58.9km s-min=32.4km az=43.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.28	1	⇑P	P	12 44 05.3	-0.9
	1.3nm,0.4s,baz=197,slow=16,SNR=20						
KK31				⇓S	S	12 45 18.2	+0.7
	0.7nm,0.3s,baz=189,slow=23,SNR=5.8						
AAK	Ala-Archa	6.62	28	⇑P	P	12 44 09.7	-1.0
	2.9nm,0.6s						
AAK				⇑S	S	12 45 27.3	+1.7
	4.7nm,0.7s						
AB31	Akbulak array	14.55	332	⇑P	P	12 45 52.2	+0.1
	0.3nm,0.5s,baz=156,slow=13,SNR=8.4						
AB31				⇓S	S	12 48 29.8	+1.5
	0.5nm,0.6s						

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*ATH **03** 12:47:48.9, 38.16N×26.89E, h36^{km}, MD2.9/3*

*ISK **03** 12:47:49.6, 38.20N×26.68E, h20^{km}, MD2.9*

*CSEM **03** 12:47:50.1±0.1, 38.19N×26.73E, h20^{km}, MD2.9, Error ellipse: s-maj=1.7km s-min=1.1km az=108.0*

ISC 03 12:47:49.4±0.7**, 38.21N**±0.04×**26.63E**±0.06**, h13**^{km}±6^{km}**, n14, σ0^{s}79**/22**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.16	351	iP	Pg	12 47 52.6	-0.7
URLA				iS	Sg	12 47 56.5	+0.5
BLCB	Balcova	0.37	61	PG	Pg	12 47 57.4	+0.1
SMG	Samos	0.52	161	ePB	Pb	12 47 59.3	-0.6
SMG				eSB	Sb	12 48 06.8	-0.3
IZM	Izmir	0.54	69	PG	Pg	12 48 00.2	-0.2
IZM				SG	Sg	12 48 08.1	+0.4
KDAG	Bornova	0.54	68	iP	Pb	12 47 58.3	-2.0
KDAG				iS	Sb	12 48 06.3	-1.3
PRK	Paraskevi	1.08	345	ePN	Pn	12 48 10.8	+0.7
AYDN	Tasoluk	1.13	118	iP	Pb	12 48 10.7	+0.4
AYDN				iS	Sb	12 48 25.1	+0.4
AKS	Akhisar	1.15	54	ePN	Pn	12 48 10.8	-0.4
BODT	Bodrum	1.26	154	ePN	Pn	12 48 12.6	-0.2
BODT				eSN	Sn	12 48 29.2	-0.5
MLSB	Milas	1.29	135	ePN	Pn	12 48 12.8	-0.4
BDRM	Kayabasi	1.31	150	iP	Pb	12 48 13.2	-0.2
BDRM				iS	Sb	12 48 30.9	+1.0
APE	Apeiranthos	1.43	218	ePN	Pn	12 48 15.9	+0.7
MANT	Manisa	1.55	79	iP	Pn	12 48 18.4	+1.5
MANT				iS	Sb	12 48 38.1	+1.3
YER	Yerkesik	1.69	129	ePN	Pn	12 48 18.5	-0.5

GUC 03 13:03:58.0±0.8**, 23.33S×66.45W, h220**^{km}**, ML4.6, 2C-1D,**

Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEN1	**Los Morros**	**3.45**	**268**	⇓iP	P	13 04 57.7	+3.3
CEN1				iS	S	13 05 43.0	+4.8
CEN1				AMP		13 05 46.2	
	comp=N,404nm,0.4s						
ANCH	**Antofagasta**	**3.65**	**264**	⇑iP	P	13 04 56.9	0.0
ANCH				iS	S	13 05 42.8	+0.2
CPN1	**Cerro Paranal**	**3.84**	**250**	⇑iP	P	13 05 01.9	+2.7
CPN1				iS	S	13 05 50.7	+4.1
CRCH	**Chaqaral**	**4.84**	**231**	iS	S	13 06 12.1	+3.5
CDCH	**Caldera**	**5.45**	**226**	iS	S	13 06 25.5	+3.2

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*ZUR **03** 13:11:02.1, 48.28N×7.46E, h7^{km}, ML2.8/5*
*LDG **03** 13:11:03.6±0.1, 48.29N×7.42E, h3^{km}, Md3.0/3, Ml3.2/19, Error ellipse: s-maj=1.7km s-min=1.5km az=132.0*
*LEDBW **03** 13:11:03.4±0.1, 48.28N×7.47E, h6^{km}±4^{km}, ML2.9, Error ellipse: s-maj=3.0km s-min=2.8km az=11.0*
*NEIC **03** 13:11:03.2, 48.28N×7.41E, h10^{km}, ML3.2(LDG), ML2.7(STR), After STR.*
*CSEM **03** 13:11:03.3±0.1, 48.29N×7.44E, h7^{km}±1^{km}, ML3.2/18, Error ellipse: s-maj=1.0km s-min=0.8km az=5.0*
*PRU **03** 13:11:04.3, 48.32N×7.58E*
*BGR **03** 13:11:04.1±0.2, 48.29N×7.46E, h5^{km}, ML2.8/5, Error ellipse: s-maj=2.2km s-min=1.1km az=140.0*
STR 03 13:11:03.2±0.2**, 48.28N×7.41E, h10**^{km}±1^{km}**, Ml2.7, 11C-9D, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLS	**Welschbruch**	**0.14**	**344**	Pg	Pg	13 11 06.6	+0.1
WLS				Sg	Sg	13 11 08.9	+0.2
WLS	**Welschbruch**	**0.14**	**344**	⇓iP	Pg	13 11 06.7	+0.2
WLS	**Welschbruch**	**0.14**	**344**	ePg	Pg	13 11 06.6	+0.1
WLS				eSg	Sg	13 11 08.7	0.0
CDF	**Champ du Feu**	**0.16**	**326**	ePg	Pg	13 11 06.8	-0.1
CDF				eSg	Sg	13 11 09.4	+0.1
	515nm,0.3s						
ECH	**Echery**	**0.18**	**249**	Pg	Pg	13 11 07.6	+0.4
ECH				Sg	Sg	13 11 10.6	+0.7
ECH	**Echery**	**0.18**	**249**	⇑iP	Pg	13 11 07.7	+0.4
ECH				S	Sg	13 11 10.7	+0.8
ECH	**Echery**	**0.18**	**249**	ePg	Pg	13 11 07.6	+0.4
ECH				eSg	Sg	13 11 10.3	+0.4
LIBD	**Limburg**	**0.18**	**135**	⇓iP	Pg	13 11 07.1	-0.2
LIBD	**Limburg**	**0.18**	**135**	ePg	Pg	13 11 06.9	-0.3
LIBD				eSg	Sg	13 11 09.5	-0.5
LIBD	**Limburg**	**0.18**	**135**	Pg	Pg	13 11 06.9	-0.4
LIBD				Sg	Sg	13 11 10.0	0.0
STR	**Strasbourg**	**0.39**	**38**	eSg	Sg	13 11 16.4	0.0
MOF	**Molkenrain**	**0.47**	**204**	⇑iP	Pg	13 11 12.8	+0.1
MOF	**Molkenrain**	**0.47**	**204**	ePg	Pg	13 11 12.7	0.0
KIZ	**Kirchzarten**	**0.47**	**133**	⇓iP	Pg	13 11 11.8	-0.9
KIZ				P		13 11 13.1	
KIZ				S	Sg	13 11 21.9	+2.7
KIZ	**Kirchzarten**	**0.47**	**133**	P	Pg	13 11 13.1	+0.3
KIZ	**Kirchzarten**	**0.47**	**133**	⇓iPg	Pg	13 11 11.8	-0.9
KIZ				P*	Pb	13 11 13.1	0.0
KIZ				Sg	Sg	13 11 17.5	-1.6
KIZ				SmS		13 11 21.9	
KIZ	**Kirchzarten**	**0.47**	**133**	Pg	Pg	13 11 11.8	-1.0
KIZ				Sg	Sg	13 11 17.5	-1.6
FELD	**Feldberg**	**0.57**	**135**	P	Pg	13 11 13.7	-1.0
FELD	**Feldberg**	**0.57**	**135**	ePg	Pg	13 11 14.7	+0.1
FELD				eSg	Sg	13 11 21.2	-1.1
HINF	**Hinteralfeld**	**0.60**	**219**	ePg	Pg	13 11 14.7	-0.5
HINF				ePn	Pn	13 11 16.4	-1.0
HINF				eSg	Sg	13 11 22.7	-0.6
	212nm,0.2s						
BFO	**Black Forest**	**0.62**	**85**	⇑P	Pb	13 11 14.4	-1.2
BFO				S	Sg	13 11 21.8	-2.1
BFO				S	Sg	13 11 25.2	+1.3
BFO	**Black Forest**	**0.62**	**85**	ePg	Pg	13 11 15.7	+0.1
BFO				eSg	Sg	13 11 21.9	-2.1
BFO				SmS		13 11 25.2	
BFO	**Black Forest**	**0.62**	**85**	ePg	Pg	13 11 15.7	+0.1
BFO				eSg	Sg	13 11 21.9	-2.0
LANF	**Langenberg**	**0.75**	**20**	Pg	Pg	13 11 18.5	+0.2
LANF				Sg	Sg	13 11 28.9	+0.6
LANF	**Langenberg**	**0.75**	**20**	⇓P	Pb	13 11 17.7	-0.2
LANF	**Langenberg**	**0.75**	**20**	ePg	Pg	13 11 18.8	+0.6
HAU	**Haudompre**	**0.76**	**249**	ePg	Pg	13 11 18.3	-0.2
HAU				ePn	Pn	13 11 19.3	-0.5
HAU				eSg	Sg	13 11 28.5	-0.3
	275nm,0.3s						
BBS	**Basel-Blauen**	**0.82**	**175**	P	Pb	13 11 19.1	0.0
BBS	**Basel-Blauen**	**0.82**	**175**	ePg	Pg	13 11 20.0	+0.4
BBS				eSg	Sg	13 11 31.1	+0.5
BBS	**Basel-Blauen**	**0.82**	**175**	Pg	Pg	13 11 19.8	+0.2
BBS				Sg	Sg	13 11 30.6	0.0
SULZ	**Sulz-Cheisache**	**0.89**	**148**	ePg	Pg	13 11 19.9	-1.2
SULZ				eSg	Sg	13 11 31.7	-1.3
SLE	**Schleitheim**	**0.89**	**125**	ePg	Pg	13 11 19.8	-1.3
SLE				eSg	Sg	13 11 31.1	-1.9
BOURR	**Bourrignon**	**0.90**	**188**	ePg	Pg	13 11 21.1	-0.1
BOURR				eSg	Sg	13 11 33.8	+0.6
SPAK	**Spaichingen**	**0.94**	**100**	P	Pb	13 11 21.2	+0.1
SPAK	**Spaichingen**	**0.94**	**100**	ePg	Pg	13 11 21.2	-0.8
SPAK	**Spaichingen**	**0.94**	**100**	Pg	Pg	13 11 21.1	-0.9
THEF	**They Montfort**	**0.95**	**267**	P	Pb	13 11 22.3	+0.9
THEF	**They Montfort**	**0.95**	**267**	ePg	Pg	13 11 22.1	-0.2
THEF				eSg	Sg	13 11 35.5	+0.5
THEF	**They Montfort**	**0.95**	**267**	Pg	Pg	13 11 21.9	-0.4
THEF				Sg	Sg	13 11 35.5	+0.4
BALST	**Balsthal**	**0.96**	**168**	ePn	Pn	13 11 21.5	-1.2
BALST				eSn	Sn	13 11 34.6	-1.8
LBG	**Lerchenberg**	**1.00**	**67**	P	Pb	13 11 22.1	-0.1
LBG				S	Sb	13 11 35.5	+0.4
LOMF	**Lomont**	**1.01**	**203**	Pg	Pg	13 11 22.8	-0.6
LOMF				Sg	Sg	13 11 36.8	-0.1
LOMF	**Lomont**	**1.01**	**203**	⇓iP	Pb	13 11 23.0	+0.7
LOMF	**Lomont**	**1.01**	**203**	ePg	Pg	13 11 23.0	-0.4
LOMF				eSg	Sg	13 11 36.5	-0.4
KTD	**Kalmit**	**1.13**	**23**	ePg	Pg	13 11 25.1	-0.8
KTD	**Kalmit**	**1.13**	**23**	Pg	Pg	13 11 24.9	-1.0
TUBL	**Tuebingen Lnz**	**1.14**	**77**	S	Sb	13 11 39.5	+0.3
GUT	**Gutenstein**	**1.16**	**100**	S	Sb	13 11 38.5	-1.3
GUT	**Gutenstein**	**1.16**	**100**	Pn	Pn	13 11 23.9	-1.6
GUT				Pg	Pg	13 11 25.0	-1.4
GUT				Sn	Sn	13 11 38.5	-2.9
GUT				Sg	Sg	13 11 40.2	-1.8
GUT	**Gutenstein**	**1.16**	**100**	Pg	Pg	13 11 25.0	-1.4
GUT				Sn	Sn	13 11 38.5	-2.9
GUT				Sg	Sg	13 11 40.2	-1.8
SISB	**Singen-Sch Ber**	**1.20**	**119**	P	Pb	13 11 25.8	+0.2
SISB				S	Sb	13 11 41.4	+0.4
STU	**Stuttgart**	**1.28**	**67**	ePg	Pg	13 11 28.6	-0.3
STU				eSg	Sg	13 11 43.5	-2.6
STU	**Stuttgart**	**1.28**	**67**	ePg	Pg	13 11 28.6	-0.3
STU				eSg	Sg	13 11 43.5	-2.6
BUCH	**Bad Urach**	**1.31**	**82**	P	Pb	13 11 26.0	-1.4
BUCH				S	Sb	13 11 42.0	-2.1
BUCH				S	Sb	13 11 44.7	+0.6
BUCH	**Bad Urach**	**1.31**	**82**	Pn	Pn	13 11 26.0	-1.5
BUCH				Pg	Pg	13 11 27.5	-1.8
BUCH				Sn	Sn	13 11 42.0	-3.2
BUCH				Sg	Sg	13 11 44.7	-2.1
SWS	**Schriesheim**	**1.48**	**35**	P	Pn	13 11 31.1	+1.1
SWS				S	Sb	13 11 51.1	+2.1
SWS	**Schriesheim**	**1.48**	**35**	Pg	Pg	13 11 31.1	-1.6
SWS				Sn	Sn	13 11 47.0	-2.4
SWS				Sg	Sg	13 11 51.1	-1.3
MEZF	**Maizieres J'vi**	**1.59**	**279**	ePn	Pn	13 11 31.4	-0.2
MEZF				ePg	Pg	13 11 33.9	-1.0
MEZF				eSg	Sg	13 11 54.4	-1.7
	63nm,0.2s						
SFTF	**Sexfontaines**	**1.59**	**268**	ePn	Pn	13 11 30.7	-0.9
SFTF				eSg	Sg	13 11 54.5	-1.6
	97nm,0.2s						
ABH	**Alteburg**	**1.61**	**3**	P	Pn	13 11 33.6	+1.8
ABH	**Alteburg**	**1.61**	**3**	ePn	Pn	13 11 33.6	+1.7
	SNR=4.2						
ABH	**Alteburg**	**1.61**	**3**	Pg	Pg	13 11 33.2	-2.1
TOD	**Tromm**	**1.61**	**34**	S	Sn	13 11 54.7	+1.7
WLF	**Walferdange**	**1.61**	**330**	ePn	Pn	13 11 34.1	+2.1
	SNR=2.8						
WLF				eSg	Sg	13 11 55.9	-1.1
SIND	**Sindeldorf**	**1.80**	**53**	P	Pn	13 11 35.9	+1.3
SIND				S	Sn	13 12 00.2	+2.5
HDH	**Heidenheim**	**1.89**	**80**	S	Sn	13 12 01.5	+1.6
CABF	**La Chapelle**	**1.90**	**209**	ePg	Pg	13 11 34.7	-6.4
CABF				eSg	Sg	13 12 02.7	-3.7
	86nm,0.6s						
UBR	**Uberruh**	**1.91**	**107**	P	Pn	13 11 39.4	+3.2
UBR				S	Sn	13 12 03.1	+2.6
DAVA	**Damuels**	**1.94**	**120**	⇓Sg	Sg	13 12 04.2	-3.7
	comp=Z,6.5nm,0.3s						
DAVA	**Damuels**	**1.94**	**120**	⇑iPn	Pn	13 11 40.9	+4.3
DAVA	**Damuels**	**1.94**	**120**	⇑iSg	Sg	13 12 05.5	-2.4
	comp=Z,6.5nm,0.3s						
DAVA	**Damuels**	**1.94**	**120**	⇑Pn	Pn	13 11 40.9	+4.3
DAVA				Sg	Sg	13 12 04.2	-3.7
DAVA	**Damuels**	**1.94**	**120**	Pn	Pn	13 11 40.9	+4.3
DAVA				Sg	Sg	13 12 04.2	-3.6
	6.5nm,0.3s						
TNS	**Taunus Mts**	**2.06**	**19**	eSg	Sg	13 12 07.6	-4.2
GIVF	**Givet**	**2.49**	**318**	ePn	Pn	13 11 43.5	-1.0
GIVF				ePg	Pg	13 11 49.3	-3.7
GIVF				eSg	Sg	13 12 21.3	-4.9
	16nm,0.3s						
FUR	**Furstenfeldbru**	**2.59**	**91**	eSg	Sg	13 12 25.2	-4.2
LOR	**Lormes**	**2.60**	**248**	ePn	Pn	13 11 43.9	-2.2
	baz=59						
LOR				ePg	Pg	13 11 52.2	-2.9
	baz=69						
LOR				eSg	Sg	13 12 25.0	-4.8
	26nm,0.2s						
LOR	**Lormes**	**2.60**	**248**	ePg	Pg	13 11 52.2	-2.9
LOR				eSg	Sg	13 12 25.0	-4.8
	13nm,0.2s						
MOTA	**Moosalm**	**2.66**	**109**	⇑Sg	Sg	13 12 26.1	-5.7
	comp=Z,12nm,0.3s						
MOTA	**Moosalm**	**2.66**	**109**	⇑iPn	Pn	13 11 50.5	+3.6
MOTA	**Moosalm**	**2.66**	**109**	⇑iSg	Sg	13 12 27.8	-4.0
	comp=Z,12nm,0.3s						
MOTA	**Moosalm**	**2.66**	**109**	⇑Pn	Pn	13 11 50.5	+3.6
MOTA				Sg	Sg	13 12 26.1	-5.7
MOTA	**Moosalm**	**2.66**	**109**	Pn	Pn	13 11 50.5	+3.6
MOTA				Sg	Sg	13 12 26.1	-5.7
	12nm,0.3s						
BAIF	**Baives**	**2.75**	**311**	ePn	Pn	13 11 48.0	-0.3
BAIF				ePg	Pg	13 11 54.1	-4.1
BAIF				eSg	Sg	13 12 28.4	-6.5
	8.4nm,0.3s						
SQTA	**Sankt Quirin**	**2.77**	**111**	⇓Sg	Sg	13 12 29.6	-6.0
	comp=Z,10nm,0.3s						
SQTA	**Sankt Quirin**	**2.77**	**111**	⇑iPn	Pn	13 11 52.5	+4.0
SQTA	**Sankt Quirin**	**2.77**	**111**	⇓iSg	Sg	13 12 31.1	-4.5
	comp=Z,10nm,0.3s						
SQTA	**Sankt Quirin**	**2.77**	**111**	⇑Pn	Pn	13 11 52.5	+4.0
SQTA				Sg	Sg	13 12 29.6	-6.0
SQTA	**Sankt Quirin**	**2.77**	**111**	Pn	Pn	13 11 52.5	+4.0
SQTA				Sg	Sg	13 12 29.6	-6.0
	10nm,0.3s						
LPL	**La Plagne**	**2.80**	**190**	ePn	Pn	13 11 48.1	-0.9
LPL				ePg	Pg	13 11 55.7	-3.5
LPL				eSg	Sg	13 12 31.8	-4.8
	9.5nm,0.5s						
LPG	**La Plagne**	**2.82**	**189**	ePn	Pn	13 11 48.3	-0.9
LPG				ePg	Pg	13 11 57.4	-2.1
LPG				eSg	Sg	13 12 33.1	-4.0
	16nm,0.6s						
GRF	**Grafenberg Arr**	**2.88**	**59**	eSg	Sg	13 12 33.1	-6.0
SSF	**Saint Saulge**	**2.91**	**247**	ePn	Pn	13 11 48.1	-2.3
SSF				ePg	Pg	13 11 58.2	-3.0
SSF				eSg	Sg	13 12 33.6	-6.4
	31nm,0.4s						
SMF	**Signal de Mont**	**2.92**	**237**	ePg	Pg	13 11 58.2	-3.4
SMF				eSg	Sg	13 12 35.1	-5.4
	24nm,0.2s						
UBBA	**Unterbreizbach**	**3.05**	**33**	eSg	Sg	13 12 40.0	-4.8
AVF	**Avril sur Loir**	**3.13**	**243**	ePn	Pn	13 11 50.9	-2.7
AVF				ePg	Pg	13 12 02.2	-3.4
AVF				eSg	Sg	13 12 41.8	-5.5
	6.4nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.52**	**198**	ePn	Pn	13 11 57.2	-2.0
ORIF				ePg	Pg	13 12 08.9	-4.7
ORIF				eSg	Sg	13 12 54.9	-5.7
	14nm,0.5s						
BGF	**Bois d'Agland**	**3.54**	**243**	ePn	Pn	13 11 56.3	-3.2
BGF				ePg	Pg	13 12 09.8	-4.2
BGF				eSg	Sg	13 12 55.6	-5.7
	16nm,0.2s						
MBDF	**Montbardon**	**3.58**	**187**	ePn	Pn	13 11 59.8	-0.2
MBDF				ePg	Pg	13 12 09.8	-4.9
MBDF				eSg	Sg	13 12 56.1	-6.4
	8.4nm,0.8s						
MOX	**Moxa**	**3.62**	**48**	eSg	Sg	13 12 58.9	-5.0
WET	**Wettzell**	**3.72**	**75**	eSn	Sn	13 12 42.1	-4.4
	SNR=3.3						
GUNZ	**Gunzen**	**3.83**	**55**	eSg	Sg	13 13 03.7	-7.2
NKC	**Novy Kostel**	**3.83**	**57**	ePG	Pg	13 12 13.8	-6.0
NKC				eSG	Sg	13 13 02.3	-8.6
WERD	**Werda**	**3.87**	**54**	ePg	Pg	13 12 15.9	-4.5
VIVF	**Saint-Julien-l**	**3.91**	**210**	ePn	Pn	13 12 01.3	-3.4
VIVF				ePg	Pg	13 12 15.8	-5.5
VIVF				eSg	Sg	13 13 05.1	-8.3
	9.7nm,0.4s						
TCF	**Toulx Ste Croi**	**4.06**	**243**	ePn	Pn	13 12 03.5	-3.3
TCF				ePg	Pg	13 12 18.9	-5.4
TCF				eSg	Sg	13 13 10.6	-7.8
	8.3nm,0.4s						
KHC	**Kasperske Hory**	**4.17**	**76**	eSN	Sn	13 12 52.7	-5.1
KHC				eSG	Sg	13 13 13.8	-8.3
KBA	**Koelnbreinsper**	**4.19**	**104**	⇑iPn	Pn	13 12 11.1	+2.5
KBA	**Koelnbreinsper**	**4.19**	**104**	⇑Pn	Pn	13 12 11.1	+2.5
KBA				Sn	Sn	13 12 55.0	-3.2
KBA				Sg	Sg	13 13 15.7	-6.9
KBA	**Koelnbreinsper**	**4.19**	**104**	Pn	Pn	13 12 11.1	+2.5
KBA				Sn	Sn	13 12 55.0	-3.2
KBA				Sg	Sg	13 13 15.7	-6.9
	6.2nm,0.4s						
GEC2	**GERESS Array S**	**4.22**	**80**	eSn	Sn	13 12 54.1	-4.8
	SNR=1.9						
GEC2				eSg	Sg	13 13 15.8	-7.8
LASF	**Ste Croix**	**4.88**	**212**	ePn	Pn	13 12 14.1	-4.3
LASF				ePg	Pg	13 12 34.9	-5.6
LASF				eSg	Sg	13 13 36.9	-8.6
	8.7nm,0.6s						
PRU	**Pruhonice**	**4.98**	**67**	eSG	Sg	13 13 40.0	-9.2

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*ATH **03** 13:14:23.3, 38.10N×26.54E, h19^{km}±2^{km}, MD3.3/4*
*NEIC **03** 13:14:23.3, 38.10N×26.54E, h19^{km}, MD3.3(ATH), After ATH.*
*CSEM **03** 13:14:23.6±0.1, 38.14N×26.73E, h10^{km}, MD3.1, Error ellipse: s-maj=2.6km s-min=1.5km az=87.0*
*ISK **03** 13:14:24.6, 38.15N×26.78E, h17^{km}, MD3.1*
ISC 03 13:14:23.3±0.8**, 38.13N**±0.03×**26.68E**±0.05**, h8**^{km}±6^{km}**, n21, σ0**^{s}**61**/28**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.24**	**344**	iP	Pg	13 14 27.8	-0.5
URLA				iS	Sg	13 14 32.5	+0.9
BLCB	**Balcova**	**0.38**	**48**	PG	Pg	13 14 31.4	+0.3
BLCB				SG	Sg	13 14 36.5	+0.2
SMG	**Samos**	**0.44**	**164**	⇑iPB	Pb	13 14 32.7	-0.2
SMG				eSB	Sb	13 14 39.4	+0.1
IZM	**Izmir**	**0.53**	**60**	PG	Pg	13 14 34.3	+0.3
IZM				SG	Sg	13 14 41.3	+0.1
KDAG	**Bornova**	**0.54**	**59**	iP	Pg	13 14 33.1	-1.0
KDAG				iS	Sg	13 14 40.4	-1.0
AYDN	**Tasoluk**	**1.06**	**116**	iP	Pb	13 14 44.3	+0.8
PRK	**Paraskevi**	**1.16**	**344**	ePN	Pn	13 14 45.9	0.0
PRK				eSN	Sn	13 15 01.3	-0.7
AKS	**Akhisar**	**1.16**	**50**	PN	Pn	13 14 45.7	-0.2
AYVA	**Ayvalik**	**1.18**	**0**	iP	Pb	13 14 46.6	+1.0
BODT	**Bodrum**	**1.18**	**155**	PN	Pn	13 14 46.6	+0.5
BODT				SN	Sn	13 15 02.8	+0.3
MLSB	**Milas**	**1.20**	**133**	ePN	Pn	13 14 46.9	+0.4
BDRM	**Kayabasi**	**1.22**	**150**	iP	Pb	13 14 45.6	-0.7
APE	**Apeiranthos**	**1.40**	**221**	ePN	Pn	13 14 48.1	-1.2
DAT	**Datca**	**1.57**	**153**	ePN	Pn	13 14 52.3	+0.6
YER	**Yerkesik**	**1.61**	**127**	ePN	Pn	13 14 52.6	+0.2
BALB	**Balikesir**	**1.77**	**31**	ePN	Pn	13 14 54.7	0.0
LIA	**Limnos Island**	**2.12**	**327**	ePN	Pn	13 14 59.4	-0.1
DST	**Dursunbey**	**2.12**	**45**	ePN	Pn	13 14 59.2	-0.4
LPK	**Lapseki**	**2.24**	**2**	ePN	Pn	13 15 01.8	+0.5
ISP	**Isparta**	**3.04**	**94**	ePn	Pn	13 15 08.9	-3.8
ISP	**Isparta**	**3.04**	**94**	ePn	Pn	13 15 08.9	-3.8

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*NEIC **03** 13:16:50.6, 41.73S×174.28E, h16^{km}, mb4.8/2, ML4.8(WEL), After WEL.*
NEIC Felt in parts of Marlborough.
*WEL **03** 13:16:50.4±0.1, 41.74S×174.26E, h18^{km}±1^{km}, ML4.8/50, Error ellipse: s-maj=1.1km s-min=1.0km az=0.0*
WEL Felt from Wellington to Canterbury, maximum reported intensity MM 5.
*IDC **03** 13:16:50.5±0.9, 41.47S×173.97E, h20^{km}±4^{km}, mb3.7/1, mb1 4.2/3, mb1mx3.9/9, mbtmp4.0/3, ML4.1/2, MS3.5/4, Ms1 3.5/4, ms1mx3.3/10, Error ellipse: s-maj=32.5km s-min=17.2km az=133.0*
ISC 03 13:16:48.9±0.4**, 41.88S**±0.03×**174.29E**±0.04**, h24**^{km}±3^{km}**, h20**^{km}±.8^{km}**:pP-P, n108, σ1**^{s}**10**/111**, mb4.7**/3**, MS3.6**/3**, 27C-17D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.14**	**335**	⇓P	Pb	13 16 53.3	-0.4
CMWZ				S	Sb	13 16 56.2	-0.8
CMWZ	**Cape Campbell**	**0.14**	**335**	⇓P*	Pb	13 16 53.3	-0.4
CMWZ				S*	Sb	13 16 56.3	-0.6
BSWZ	**Blackbirch Sta**	**0.35**	**297**	⇓P	Pb	13 16 56.7	+0.1
BSWZ	**Blackbirch Sta**	**0.35**	**297**	⇓P*	Pb	13 16 56.7	+0.1
BSWZ				S*	Sb	13 17 01.4	-0.4
TUWZ	**Tuamarina**	**0.52**	**329**	⇓P*	Pb	13 16 58.4	-0.8
BHW	**Baring Head**	**0.64**	**43**	⇑P	Pb	13 17 01.7	+0.4
BHW	**Baring Head**	**0.64**	**43**	⇑P*	Pb	13 17 01.7	+0.5
SNZO	**South Karori**	**0.65**	**29**	ePg	Pb	13 17 01.0	-0.4
SNZO				⇑P		13 17 01.3	
SNZO				eSg	Sb	13 17 09.8	-0.2
SNZO	**South Karori**	**0.65**	**29**	⇑P*	Pb	13 17 01.3	-0.1
SNZO				eS*	Sb	13 17 08.7	-1.3
TCW	**Tory Channel**	**0.66**	**359**	⇑P	Pb	13 17 00.6	-1.1
TCW	**Tory Channel**	**0.66**	**359**	⇑P*	Pb	13 17 00.6	-1.1
TCW				S*	Sb	13 17 08.1	-2.3
WEL	**Wellington**	**0.69**	**31**	⇑P	Pb	13 17 02.2	0.0
WEL	**Wellington**	**0.69**	**31**	⇑P*	Pb	13 17 02.2	+0.1
MRW	**Makara Radio**	**0.72**	**25**	⇑P	Pb	13 17 02.2	-0.4
MRW	**Makara Radio**	**0.72**	**25**	⇑P*	Pb	13 17 02.2	-0.4
KHZ	**Kahutara**	**0.78**	**226**	⇓P	Pb	13 17 07.2	+3.6
KHZ	**Kahutara**	**0.78**	**226**	⇑P*	Pb	13 17 07.2	+3.6
MSWZ	**Moikau Station**	**0.85**	**58**	⇓P	Pb	13 17 06.3	+1.4
MSWZ	**Moikau Station**	**0.85**	**58**	⇓P*	Pb	13 17 06.3	+1.5
MSWZ				S*	Sb	13 17 17.4	+1.4
CAW	**Cannon Point**	**0.96**	**37**	⇑P*	Pb	13 17 07.0	+0.2
PAWZ	**Paruwai Farm**	**0.98**	**60**	⇓P	Pb	13 17 07.9	+0.8
PAWZ	**Paruwai Farm**	**0.98**	**60**	⇓P*	Pb	13 17 07.9	+0.8
THZ	**Tophouse**	**1.04**	**276**	⇑P	Pb	13 17 09.4	+1.3
THZ	**Tophouse**	**1.04**	**276**	⇑P*	Pb	13 17 09.4	+1.3
THZ				S*	Sb	13 17 23.9	+2.5
DUWZ	**D'Urville Isla**	**1.11**	**345**	⇑P*	Pb	13 17 08.4	-0.9
KIW	**Kapiti Island**	**1.12**	**25**	⇑P	Pn	13 17 09.0	-0.2
KIW	**Kapiti Island**	**1.12**	**25**	⇑P*	Pb	13 17 09.0	-0.3
TRWZ	**Traveller**	**1.15**	**66**	⇓P*	Pb	13 17 10.0	+0.1
MTW	**Mount Morrison**	**1.16**	**52**	⇓P	Pn	13 17 10.0	+0.2
MTW	**Mount Morrison**	**1.16**	**52**	⇓P*	Pb	13 17 10.0	0.0
MRZ	**Mangatainoka R**	**1.55**	**39**	⇓P	Pn	13 17 15.5	0.0
MRZ	**Mangatainoka R**	**1.55**	**39**	⇓PN	Pn	13 17 15.5	0.0
QRZ	**Quartz Range**	**1.69**	**308**	⇑P	Pn	13 17 19.1	+1.7
QRZ	**Quartz Range**	**1.69**	**308**	⇓PN	Pn	13 17 19.1	+1.7
LTZ	**Lake Taylor**	**1.75**	**238**	⇑P	Pn	13 17 20.3	+2.0
LTZ	**Lake Taylor**	**1.75**	**238**	⇑PN	Pn	13 17 20.3	+2.0
DSZ	**Denniston Nort**	**1.86**	**273**	⇑P	Pn	13 17 21.8	+1.9
DSZ	**Denniston Nort**	**1.86**	**273**	⇑PN	Pn	13 17 21.8	+1.9
BFZ	**Birch Farm**	**1.90**	**52**	eP	Pn	13 17 19.3	-1.1
BFZ	**Birch Farm**	**1.90**	**52**	ePN	Pn	13 17 19.3	-1.1
CRLZ	**Canterbury Las**	**2.10**	**215**	eP	Pn	13 17 23.7	+0.5
CRLZ	**Canterbury Las**	**2.10**	**215**	ePN	Pn	13 17 23.7	+0.5
WAZ	**Wanganui**	**2.18**	**14**	PN	Pn	13 17 26.0	+1.6
MQZ	**McQueen's Vall**	**2.19**	**213**	⇑P	Pn	13 17 24.9	+0.3
MQZ	**McQueen's Vall**	**2.19**	**213**	⇑PN	Pn	13 17 24.9	+0.3
TSZ	**Takapari Road**	**2.21**	**35**	⇓PN	Pn	13 17 24.1	-0.8
NRZ	**Ngariki Road**	**2.55**	**354**	PN	Pn	13 17 31.2	+1.5
RAEZ	**Rainy Point**	**2.59**	**2**	PN	Pn	13 17 32.5	+2.3
NWEZ	**Newall Road**	**2.62**	**353**	ePN	Pn	13 17 32.2	+1.5
MTVZ	**Mangateitei**	**2.65**	**20**	PN	Pn	13 17 31.3	+0.3
PXZ	**Pawanui**	**2.68**	**47**	PN	Pn	13 17 29.1	-2.5
PKE	**Pukeiti**	**2.69**	**355**	PN	Pn	13 17 32.9	+1.2
MOVZ	**Moawhango**	**2.71**	**25**	P	Pn	13 17 31.3	-0.6
MOVZ	**Moawhango**	**2.71**	**25**	PN	Pn	13 17 31.3	-0.6
PKVZ	**Pokaka**	**2.71**	**18**	PN	Pn	13 17 32.1	+0.2
WNVZ	**Wahianoa**	**2.73**	**22**	PN	Pn	13 17 32.7	+0.4
TRVZ	**Turoa**	**2.75**	**21**	PN	Pn	13 17 32.7	+0.2
VRZ	**Vera Road**	**2.77**	**8**	PN	Pn	13 17 33.5	+0.6
FWVZ	**Far West T-bar**	**2.79**	**21**	PN	Pn	13 17 33.2	+0.1
TUVZ	**Tukino**	**2.80**	**22**	PN	Pn	13 17 33.5	+0.2
CNZ	**Chateau**	**2.84**	**20**	PN	Pn	13 17 33.9	+0.1
NGZ	**Ngauruhoe**	**2.88**	**21**	PN	Pn	13 17 34.6	+0.3
WVZ	**Waitaha Valley**	**2.89**	**244**	ePN	Pn	13 17 35.0	+0.4
OTVZ	**Oturere**	**2.91**	**22**	PN	Pn	13 17 34.9	+0.1
WTVZ	**West Tongariro**	**2.93**	**20**	P	Pn	13 17 35.6	+0.5
TWVZ	**Taurewa**	**2.94**	**18**	PN	Pn	13 17 35.2	0.0
RPZ	**Rata Peaks**	**3.01**	**231**	Pn	Pn	13 17 36.7	+0.4
	42nm,0.3s,baz=71,slow=18,SNR=221						
RPZ				Pg	Pn	13 17 44.6	+8.4
	53nm,0.3s,baz=171,slow=1.8,SNR=20						
RPZ				Sn	Sn	13 18 10.9	-1.0
	53nm,0.3s,baz=216,slow=8.3,SNR=11						
RPZ				LR	LR	13 18 21.5	
	comp=Z,337nm,20.0s,baz=43,slow=29						
RPZ				Lg		13 18 28.1	
	18nm,0.3s,baz=194,slow=20,SNR=3.8						
RPZ	**Rata Peaks**	**3.01**	**231**	PN	Pn	13 17 36.1	-0.1
BKZ	**Black Stump Fm**	**3.18**	**32**	PN	Pn	13 17 36.4	-2.3
HIZ	**Hauiti**	**3.39**	**8**	PN	Pn	13 17 42.0	+0.4
FOZ	**Fox Glacier**	**3.79**	**242**	ePN	Pn	13 17 46.8	-0.5
KNZ	**Kokohu**	**3.85**	**43**	ePN	Pn	13 17 44.3	-3.8
LBZ	**Lake Benmore**	**3.92**	**229**	ePN	Pn	13 17 48.5	-0.7
ODZ	**Otahua Downs**	**4.13**	**219**	eP	Pn	13 17 51.3	-0.9
ODZ	**Otahua Downs**	**4.13**	**219**	ePN	Pn	13 17 51.3	-0.9
URZ	**Urewera**	**4.21**	**32**	Pn	Pn	13 17 49.5	-3.8
	5.5nm,0.3s,baz=218,slow=19,SNR=33						
URZ				Pg	Pn	13 18 00.3	+7.0
	26nm,0.3s,baz=224,slow=7.7,SNR=27						
URZ				Sn	Sn	13 18 37.7	-4.6
	13nm,0.3s,baz=236,slow=7.9,SNR=4.4						
URZ				Lg		13 19 04.2	
	9.5nm,0.3s,baz=300,slow=22,SNR=3.9						
URZ	**Urewera**	**4.21**	**32**	ePN	Pn	13 17 49.1	-4.2
MWZ	**Matawai**	**4.32**	**36**	ePN	Pn	13 17 50.3	-4.6
JCZ	**Jackson Bay**	**4.62**	**240**	ePN	Pn	13 17 57.8	-1.2
MKAZ	**Moumakai**	**4.81**	**8**	PN	Pn	13 18 00.9	-0.9
WKZ	**Wanaka**	**4.85**	**231**	ePN	Pn	13 18 01.0	-1.3
EAZ	**Earnscleugh**	**4.94**	**226**	ePN	Pn	13 18 02.6	-1.0
WTAZ	**Waiatarua**	**4.94**	**3**	ePN	Pn	13 18 04.1	+0.5
OTAZ	**Otara**	**4.94**	**6**	ePN	Pn	13 18 03.8	+0.1
MTAZ	**Motutapu**	**5.11**	**6**	ePN	Pn	13 18 05.3	-0.6
TUZ	**Tuapeka**	**5.29**	**218**	ePN	Pn	13 18 07.3	-1.2
MXZ	**Matakaoa Point**	**5.30**	**37**	ePN	Pn	13 18 03.2	-5.6
DZM	**Mont Dzumac**	**20.82**	**339**	LR	LR	13 28 18.7	
	comp=Z,85nm,20.0s,MS3.1,baz=322,slow=34						
STKA	**Stephens Creek**	**27.85**	**280**	LR	LR	13 31 58.8	
	comp=Z,153nm,19.7s,MS3.6,baz=205,slow=33						
WB2	**Warramunga Arr**	**40.17**	**291**	eP	P	13 24 23.5	-1.4
WB2				e	pP	13 24 29.0	-3.0
WRAB	**Tennant Creek**	**40.18**	**291**	eP	P	13 24 22.7	-2.3
	13nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	**40.18**	**291**	P	P	13 24 23.1	-1.9
	4.8nm,0.6s,mb4.4,baz=128,slow=7.6,SNR=5.3						
WRA				pP	pP	13 24 29.2	-2.9
	6.0nm,0.6s,baz=127,slow=7.8,SNR=25						
QSPA	**South Pole Qui**	**48.25**	**180**	eP	P	13 25 32.7	+3.5
	10nm,1.1s,mb4.8						
QSPA				e	pP	13 25 39.2	+2.8
MAW	**Mawson**	**59.35**	**204**	LR	LR	13 50 50.7	
	comp=Z,134nm,18.8s,MS4.1,baz=238,slow=34						
SNAA	**Sanae**	**66.74**	**181**		P	13 27 47.5	+7.9
SNAA	**Sanae**	**66.74**	**181**		P	13 27 57.6	+18
VNA3	**Neumayer Olymp**	**67.15**	**179**	⇑i	P	13 27 50.3	+8.1
VNA3	**Neumayer Olymp**	**67.15**	**179**		P	13 27 56.8	+15
VNA2	**Neumayer--Watz**	**67.50**	**179**	⇑i	P	13 27 46.7	+2.3
VNA2	**Neumayer--Watz**	**67.50**	**179**	⇑i	P	13 27 52.7	+8.3
VNA2	**Neumayer--Watz**	**67.50**	**179**		P	13 27 59.5	+15
VNA2	**Neumayer--Watz**	**67.50**	**179**		P	13 28 03.6	+19
YKA	**Yellowknife Ar**	**118.47**	**30**	PKP	PKPdf	13 35 34.7	-3.6

	0.8nm,0.6s,baz=255,slow=1.8,SNR=7.3						
YKA				pPKP		13 35 41.2	
	1.1nm,0.8s,baz=248,slow=1.8,SNR=5.8						
YKA	Yellowknife Ar	118.47	30	PKP	PKPdf	13 35 34.7	-3.6
YKA				pPKP		13 35 41.2	
DBIC	Dimbokro	144.93	181	PKPbc	PKPbc	13 36 27.4	+2.8
	1.2nm,0.7s,baz=135,slow=2.0,SNR=3.6						
DBIC				pPKPbc		13 36 34.5	
	2.5nm,0.5s,baz=163,slow=0.9,SNR=4.2						
ARCES	ARCESS Array B	147.91	340	PKPbc	PKPdf	13 36 30.9	-1.4
	4.6nm,0.9s,baz=45,slow=1.3,SNR=6.0						
BRTR	Keskin Array B	150.31	279	PKPbc	PKPdf	13 36 38.6	+1.7
	0.8nm,0.7s,baz=118,slow=2.8,SNR=5.3						
BRTR				pPKPbc		13 36 44.4	
	1.3nm,0.8s,baz=142,slow=5.6,SNR=6.5						
FINES	FINESS Array B	152.66	327	PKPbc	PKPdf	13 36 43.0	+3.3
	1.6nm,0.6s,baz=45,slow=2.7,SNR=4.8						

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*IDC **03** 13:56:59.7±1.1, 34.65N×73.55E, mb4.0/6, mb1 4.1/9, mb1mx3.9/22, mbtmp4.0/9, ML3.7/3, Error ellipse: s-maj=31.5km s-min=23.1km az=100.0*
*MOS **03** 13:57:00.6±0.6, 34.65N×73.45E, h20^{km}, mb4.3/5, Error ellipse: s-maj=27.3km s-min=7.8km az=94.2*
*BJI **03** 13:57:01.2, 34.60N×73.50E, h10^{km}, mb4.0, ML3.9*
*NEIC **03** 13:57:01.2±0.7, 34.63N×73.50E, h10^{km}, mb3.5/7, Error ellipse: s-maj=13.4km s-min=9.9km az=85.0*
*NNC **03** 13:57:09.4±2.8, 34.83N×73.00E, h68^{km}±18^{km}, mpv4.3, Error ellipse: s-maj=46.4km s-min=24.2km az=73.0*
ISC 03 13:56:59.8±0.6, **34.65N**±0.05×**73.4E**±0.1, **h10**^{km}, **n57**, σ**1**^{s}**24**/64, **mb4.0**/6, **15C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLH	Dalhousie	3.01	134	eP	Pn	13 57 55.0	+6.5
DLH				eS	Sn	13 58 36.0	+11
BHK	Bhakra	4.11	141	ex	x	13 59 14.6	
SDNR	Sundarnagar	4.35	135	eP	Pn	13 58 09.6	+2.1
SDNR				ex	x	13 59 17.0	
SMLA	Simla	4.74	137	eP	Pn	13 58 12.6	-0.5
SMLA				ex	x	13 59 09.7	
DDI	Dehra Dun	5.85	136	ex	x	13 58 53.0	
DDI				eSB	Sb	13 59 45.0	-7.5
NDI	New Delhi	6.79	150	ex	x	13 58 50.0	
NDI				eS	Sn	13 59 57.0	-3.0
AML	Almayashu	7.47	2	P	Pn	13 58 54.1	+2.6
	SNR=18						
KZA	Kyzart	7.56	11	P	Pn	13 58 53.8	+1.0
	SNR=10						
UCH	Uchtor	7.62	6	P	Pn	13 58 55.4	+1.9
	SNR=16						
EKS2	Erkin-Say	8.01	2	P	P	13 59 01.4	+2.4
	SNR=22						
AAK	Ala-Archa	8.02	6	P	P	13 59 00.9	+1.8
	SNR=12						
AAK	Ala-Archa	8.02	6	⇑P	P	13 59 00.4	+1.3
	7.6nm,0.7s						
AAK				⇑S	Sn	14 00 28.7	-2.2
	8.3nm,0.8s						
AAK	Ala-Archa	8.02	6	ePn	P	13 58 59.5	+0.3
	8.1nm,0.6s						
KBK	Karagaybulak	8.09	8	P	P	13 59 01.9	+1.8
	SNR=7.6						
CHMS	Chumysh	8.40	7	P	P	13 59 05.7	+1.1
	SNR=5.8						
TKM2	Tokmak 2	8.44	11	P	P	13 59 06.0	+0.9
	SNR=8.0						
KK31	Karatay Array	8.73	346	⇑P	P	13 59 09.6	+0.5
	12nm,0.6s,baz=166,slow=12,SNR=72						
KK31				⇑S	Sn	14 00 45.3	-3.4
	3.5nm,0.4s,baz=176,slow=24,SNR=7.9						
KK31	Karatay Array	8.73	346	⇑P	P	13 59 09.6	+0.5
KK31				S	Sn	14 00 45.3	-3.3
KK31				pmax	pmax		
	comp=Z,12nm,0.6s						
KKAR	Karatay Array	8.73	346	eP	P	13 59 09.5	+0.4
KKAR				S	Sn	14 00 45.5	-3.1
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KKAR				smax			
	comp=Z,1.0nm,0.3s						
MK02	Makanchi Array	13.86	26	⇑P	P	14 00 24.0	+5.5
MK02				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MK31	Makanchi Array	13.87	26	⇑P	P	14 00 24.0	+5.3
	comp=Z,5.4nm,1.0s,baz=207,slow=13,SNR=6.3						
MKAR	Makanchi Array	13.87	26	Pn	P	14 00 17.6	-1.1
	comp=Z,0.1nm,0.3s,baz=204,slow=14,SNR=5.8						
KURK	Kurchatov	16.50	12	⇓P	P	14 00 52.6	-0.2
	comp=Z,7.2nm,2.8s						
KURK	Kurchatov	16.50	12	eP	P	14 00 52.5	-0.3
	comp=Z,7.6nm,1.2s						
KURK	Kurchatov	16.50	12	eP	P	14 00 52.5	-0.3
KURK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
AB31	Akbulak array	17.65	330	⇑P	P	14 01 07.2	0.0
	comp=Z,0.9nm,0.6s,baz=163,slow=11,SNR=12						
AB31				⇓S	S	14 04 12.8	-9.0
	comp=Z,1.8nm,0.7s,baz=142,slow=24,SNR=4.5						
AB31	Akbulak array	17.65	330	⇑P	P	14 01 07.2	0.0
	comp=Z,0.9nm,0.6s						
AB31				S	S	14 04 12.8	-9.0
AB31	Akbulak array	17.65	330	⇑P	P	14 01 07.2	0.0
AB31				S	S	14 04 12.8	-9.0
AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VOSK	Vostochnaya	18.15	355	⇑P	P	14 01 12.5	-1.0
	comp=Z,2.4nm,0.6s						
VOSK	Vostochnaya	18.15	355	⇑P	P	14 01 12.5	-1.0
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVA0	Borovoye Array	18.49	354	⇓P	P	14 01 17.6	-0.1
	comp=Z,0.9nm,1.1s,baz=187,slow=6.8,SNR=20						
BVA0	Borovoye Array	18.49	354	⇓P	P	14 01 17.6	-0.1
	comp=Z,0.9nm,1.0s						
BVA0	Borovoye Array	18.49	354	i P	P	14 01 17.5	-0.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BVAR	Borovoye Array	18.49	354	P	P	14 01 17.3	-0.4
	comp=Z,0.6nm,0.3s,baz=164,slow=11,SNR=16						
BVAR	Borovoye Array	18.49	354	P	P	14 01 17.3	-0.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	18.54	354	eP	P	14 01 17.7	-0.5
	comp=Z,3.0nm,0.9s						
BRVK	Borovoye	18.54	354	eP	P	14 01 17.7	-0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHKZ	Chkalovo	19.12	355	⇑P	P	14 01 24.8	-0.5
	comp=Z,3.4nm,1.1s						
CHKZ	Chkalovo	19.12	355	eP	P	14 01 24.2	-1.1
	comp=Z,2.3nm,0.7s						
CHKZ	Chkalovo	19.12	355	eP	P	14 01 24.2	-1.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKTK	Aktyubinsk	19.36	329	⇑P	P	14 01 27.5	-0.5
AKTO	Aktyubinsk	19.36	329	⇑P	P	14 01 27.5	-0.5
	comp=Z,1.3nm,1.4s						
AKTO	Aktyubinsk	19.36	329	P	P	14 01 27.7	-0.3
	comp=Z,0.4nm,0.3s,baz=129,slow=14,SNR=7.1						
ZAL	Zalesovo	20.89	19	P	P	14 01 42.6	-1.9
	comp=Z,4.6nm,0.4s,baz=255,slow=8.2,SNR=18						
ZAL	Zalesovo	20.89	19	P	P	14 01 42.6	-1.9
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
GTA	Gaotai	21.60	70	eP	P	14 01 51.2	-0.6
GTA				AP		14 01 57.0	
GTA				XP		14 01 59.8	
SONM	Songino Array	27.87	52	P	P	14 02 51.0	-0.4
	comp=Z,0.8nm,0.7s,mb3.4,baz=261,slow=10,SNR=6.3						
SONM	Songino Array	27.87	52	P	P	14 02 51.0	-0.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ISP	Isparta	34.50	288	P	P	14 03 56.9	+6.9
	comp=Z,5.0nm,0.9s,mb4.4						
ISP	Isparta	34.50	288	P	P	14 03 56.9	+6.8
ISP				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ARCES	ARCESS Array B	43.59	338	P	P	14 05 05.5	+0.2
	comp=Z,9.6nm,1.1s,mb4.4,baz=117,slow=8.1,SNR=3.7						
ARCES	ARCESS Array B	43.59	338	P	P	14 05 05.5	+0.2
ARCES				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MATP	Matopo	69.42	225	P	P	14 08 10.8	+0.5
	comp=Z,1.2nm,0.4s,mb4.2,baz=31,slow=7.1,SNR=4.9						
MATP	Matopo	69.42	225	P	P	14 08 10.8	+0.5
WRA	Warramunga Arr	79.36	123	P	P	14 09 06.6	-1.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=322,slow=5.3,SNR=4.6						
YKA	Yellowknife Ar	82.98	4	P	P	14 09 26.0	+0.1
	comp=Z,0.7nm,0.6s,mb3.8,baz=352,slow=5.4,SNR=4.9						
YKA	Yellowknife Ar	82.98	4	P	P	14 09 26.0	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

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*BJI **03** 13:59:00.9, 37.70N×21.00E, h14^{km}, mB4.9, mb4.7, Ms4.6, Msz4.4*
*MOS **03** 13:59:01.0±1.4, 37.52N×20.95E, h10^{km}, mb4.3/6, Error ellipse: s-maj=10.6km s-min=5.2km az=89.5*
*CSEM **03** 13:59:03.6±0.1, 37.42N×20.90E, h15^{km}, ML4.0*
*ATH **03** 13:59:04.9, 37.66N×20.96E, h14^{km}±1^{km}, MD4.0/16, ML4.0*
*NEIC **03** 13:59:04.9, 37.66N×20.96E, h14^{km}, mb4.3/7, MD4.1(PDG), ML4.0(ATH), After ATH.*
*PDG **03** 13:59:06.6±0.6, 37.78N×20.90E, h22^{km}±1^{km}*
*IDC **03** 13:59:06.8±2.8, 37.71N×21.02E, h37^{km}±28^{km}, mb3.7/10, mb1 3.8/14, mb1mx3.7/28, mbtmp3.8/14, ML3.6/4, MS3.5/4, Ms1 3.5/4, ms1mx3.0/29, Error ellipse: s-maj=25.2km s-min=17.2km az=19.0*
*THE **03** 13:59:06.8, 37.76N×21.08E, h10^{km}, ML4.1*
*SKO **03** 13:59:07.6, 37.66N×20.91E, h25^{km}*
*HLW **03** 13:59:10.3, 37.18N×21.67E, h15^{km}, Mb3.6*
ISC 03 13:59:01.5±0.3, **37.52N**±0.02×**20.81E**±0.03, **h14**^{km}, **n148**, σ**1**^{s}**48**/190, **mb4.0**/19, **MS4.0**/5, **12C-15D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	0.68	345	ePG	Pg	13 59 16.0	+0.7
VLS				eSB	Sb	13 59 25.0	+1.4
RLS	Riolos of Patr	0.75	44	⇓iPB	Pb	13 59 16.0	+0.2
RLS				eSB	Sb	13 59 23.6	-2.0
ITM	Ithomi	0.95	111	ePB	Pb	13 59 22.6	+3.3
EVR	Evrytania	1.60	29	ePB	Pb	13 59 32.1	+1.7
EVR				eSB	Sb	13 59 51.8	+1.4
VLI	Veliai	1.88	115	ePN	Pg	13 59 38.4	-0.7
AGG	Agios Georgios	1.92	38	ePg	Pn	13 59 36.1	+1.9
AGG				eSg	Sn	13 59 58.8	+0.5
MGER	Gerania Oros	2.00	76	ePN	Pn	13 59 37.5	+2.2
IGT	Igoumenitsa	2.04	350	ePb	Pb	13 59 39.4	+1.4
IGT				eSb	Sb	14 00 05.4	+2.1
LKR	Lokris	2.06	56	ePN	Pn	13 59 39.0	+2.7
JAN	Janina	2.13	1	ePN	Pn	13 59 40.9	+3.6
KYTH	Kithira	2.17	124	ePN	Pn	13 59 42.7	+4.9
MEV	Metsovon	2.29	8	ePn	Pn	13 59 42.0	+2.5
KEK	Kerkira	2.33	340	ePN	Pn	13 59 44.4	+4.3
ATH	Athens Observa	2.35	78	ePN	Pn	13 59 43.7	+3.4
MPAR	Parnis Oros	2.40	74	ePB	Pb	13 59 43.0	-1.1
SRN	Sarande	2.44	345	i Pn	Pn	13 59 44.6	+2.9
PTL	Penteli	2.48	77	ePN	Pn	13 59 44.6	+2.4
NEO	Neokhori	2.60	46	ePB	Pb	13 59 46.1	-1.4
XOR	Xorichti	2.63	45	ePn	Pn	13 59 46.0	+1.6
LSK	Leskovik	2.63	356	i Pn	Pg	13 59 54.5	+0.4
KZN	Kozani	2.88	15	ePB	Pb	13 59 51.0	-1.3
LIT	Litokhoron	2.89	26	ePn	Pn	13 59 49.8	+1.7
	comp=Z,15nm,0.2s						
LIT				eSn	Sn	14 00 23.0	+0.1
AOS	Alonnisos	2.92	55	ePn	Pn	13 59 49.8	+1.2
	comp=Z,9.5nm,0.4s						
AOS				eSn	Sn	14 00 23.5	-0.2
PAIG	Paliouri	3.29	42	ePn	Pn	13 59 54.5	+0.8
PAIG				eSn	Sn	14 00 32.8	-0.2
FNA	Florina	3.29	7	ePn	Pn	13 59 55.3	+1.5
	comp=Z,7.2nm,0.7s						
FNA				eSn	Sn	14 00 33.4	+0.4
PLG	Polygyros	3.51	35	ePN	Pn	13 59 58.5	+1.6
BIA	Bitola	3.52	6	i Pn	Pn	13 59 58.5	+1.5
BIA				i Sn	Sn	14 00 38.2	-0.6
BIA	Bitola	3.52	6	i Pn	Pn	13 59 58.5	+1.5
BIA				i Sn	Sn	14 00 38.3	-0.5
THE	Thessaloniki	3.53	28	ePn	Pn	13 59 58.1	+0.9
THE				eSn	Sn	14 00 38.3	-0.8
OHR	Ohrid	3.59	360	i Pn	Pn	14 00 00.3	+2.4
OHR				i Sn	Sn	14 00 40.0	-0.5
OHR	Ohrid	3.59	360	i Pn	Pn	14 00 00.4	+2.4
OHR				i Sn	Sn	14 00 40.0	-0.6
TIP	Timpagrande	3.59	299	Pn	Pn	14 00 00.0	+2.0
TIP				Sn	Sn	14 00 40.9	+0.2
GRG	Griva	3.65	19	ePn	Pn	14 00 00.4	+1.5
GRG				eSn	Sn	14 00 42.0	-0.1
OUR	Ouranopolis	3.74	40	ePn	Pn	14 00 01.0	+0.8
	comp=Z,3.5nm,0.5s						
APE	Apeiranthos	3.79	95	i P	Pn	14 00 02.0	+1.1
SOH	Sokhos	3.84	30	ePn	Pn	14 00 02.1	+0.4
SOH				eSn	Sn	14 00 46.0	-1.1
TIR	Tirane	3.89	349	i Pn	Pn	14 00 01.0	-1.3
TIR	Tirane	3.89	349	Pn	Pn	14 00 04.8	+2.5
IDI	Anoyia	3.97	123	Pn	Pn	14 00 04.5	+1.0
	0.6nm,0.3s,baz=341,slow=18,SNR=3.9						
IDI				Sn	Sn	14 00 51.7	+1.4
	3.4nm,0.3s,baz=323,slow=18,SNR=4.8						
IDI				LR	LR	14 01 40.9	
	comp=Z,196nm,18.6s,baz=89,slow=39						
KNT	Kendrikon	3.98	23	ePn	Pn	14 00 04.8	+1.2
	comp=Z,5.5nm,0.7s						
KNT				eSn	Sn	14 00 49.1	-1.4
VAY	Valandovo	4.03	19	i Pn	Pn	14 00 05.2	+0.8
VAY				i Sn	Sn	14 00 48.1	-3.8
LOS	Limnos	4.12	53	ePn	Pn	14 00 06.5	+1.0
PE1	Pezze di Greco	4.21	322	ePn	Pn	14 00 07.1	+0.3
AGST	Augusta-Monte	4.46	268	Pn	Pn	14 00 11.1	+0.8
SKO	Skopje	4.47	6	ePn	Pn	14 00 12.8	+2.2
SKO				eSn	Sn	14 01 00.6	-2.5
SSY	Sortino	4.59	267	Pn	Pn	14 00 13.1	+0.9
ULC	Ulcinj	4.60	345	⇓iPn	Pn	14 00 12.3	-0.1
ULC				eSn	Sn	14 01 03.0	-3.2
CUC	Castrocucco	4.62	304	Pn	Pn	14 00 16.8	+4.1
BUM	Brajici-Budva	5.00	343	⇓iPn	Pn	14 00 18.4	+0.4
BUM				eSn	Sn	14 01 12.7	-3.6
BUM	Brajici-Budva	5.00	343	⇓iPn	Pn	14 00 18.4	+0.4
BUM				eSn	Sn	14 01 12.6	-3.6
CDT	Castel del Mon	5.00	317	ePn	Pn	14 00 18.6	+0.5
TTG	Podgorica	5.05	347	⇓iPn	Pn	14 00 18.6	-0.1
TTG				eSn	Sn	14 01 14.0	-3.5
VAE	Valguarnera	5.09	271	Pn	Pn	14 00 22.0	+2.8
	4.6nm,0.3s,baz=87,slow=6.7,SNR=2.7						
VAE				Sn	Sn	14 01 18.1	-0.4
	4.1nm,0.3s,baz=50,slow=5.6,SNR=6.3						
PVY	Plav	5.11	353	ePn	Pn	14 00 19.9	+0.4
PVY				eSn	Sn	14 01 15.4	-3.7
HCY	Herceg Novi	5.23	341	⇓iPn	Pn	14 00 21.3	0.0
HCY				eSn	Sn	14 01 18.2	-3.9
SGO	Sicignano	5.25	307	P	Pn	14 00 26.1	+4.5
SGO						14 01 24.2	
SGO				pmax	pmax		
	comp=Z,17nm,0.3s						
SGO	Sicignano	5.25	307	Pn	Pn	14 00 26.1	+4.5
	comp=Z,17nm,0.3s						
SGO				S	Sn	14 01 24.2	+1.6
ALN	Alexandroupoli	5.28	49	ePn	Pn	14 00 22.4	+0.4
IVA	Berane	5.39	353	ePn	Pn	14 00 23.9	+0.3
IVA				eSn	Sn	14 01 22.1	-4.0
NKY	Niksic	5.47	346	⇓iPn	Pn	14 00 24.9	+0.3
NKY				eSn	Sn	14 01 24.0	-4.0
BRY	Bratogost	5.65	343	ePn	Pn	14 00 28.0	+0.8
BRY				eSn	Sn	14 01 28.5	-4.1
STON	Ston	5.85	337	i Pn	Pn	14 00 28.4	-1.7
STON				i Sn	Sn	14 01 31.2	-6.5
UPM	Unac-Piva	5.86	346	ePn	Pn	14 00 30.2	0.0
UPM				eSn	Sn	14 01 33.3	-4.6
NVSS	Nova Varos 2	6.04	352	⇑iPn	Pn	14 00 31.0	-1.7
NVSS				Sn	Sn	14 01 36.1	-6.3
CII	Carovilli	6.54	312	Pn	Pn	14 00 50.6	+11
	comp=Z,40nm,0.7s						
DIVS	Divcibare	6.60	355	⇓iPn	Pn	14 00 39.1	-1.5
DIVS				Sn	Sn	14 01 50.6	-5.8
SLUM		7.02	148	P	Pn	14 00 43.7	-2.8
ISP	Isparta	7.70	85	eP	Pn	14 00 57.3	+1.3
	comp=Z,9.7nm,0.9s						
ISP	Isparta	7.70	85	eP	Pn	14 00 57.3	+1.3
ISP				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HMAT	Matruh	8.25	139	P	P	14 00 59.9	-3.8
HMAT				S	Sn	14 02 20.4	-17
NVLJ	Novalja	8.35	329	i Pn	P	14 01 03.6	-1.4
NVLJ				i Sn	Sn	14 02 32.9	-7.1
VOIR		8.53	21	⇓P	P	14 01 07.7	+0.2
VOIR		8.53	21	⇓P	P	14 01 07.7	+0.1
MLR	Muntele Rosu	8.85	24	Pn	P	14 01 12.8	+0.8
	baz=198,slow=13,SNR=3.0						
MLR	Muntele Rosu	8.85	24	⇓P	P	14 01 15.5	+3.6
MLR	Muntele Rosu	8.85	24	⇓P	P	14 01 15.5	+3.6
BOJS	Bojanci	9.00	334	i Pn	P	14 01 13.2	-0.9
TIRR	Tirgusor	9.00	37	⇑P	P	14 01 10.6	-3.5
TIRR	Tirgusor	9.00	37	⇑P	P	14 01 10.6	-3.6
SWA2		9.12	153	P	P	14 01 13.9	-1.8
SWA2				S	Sn	14 02 44.4	-15
SWA2		9.12	153	P	P	14 01 13.9	-1.8
SWA1		9.19	152	P	P	14 01 14.6	-2.2
VISS	Visnje	9.40	334	ePn	P	14 01 19.0	-0.7
VOY	Vojsko	9.95	331	ePn	P	14 01 26.3	-0.8
VOY				eSn	Sn	14 03 09.3	-10
OBKA	Obir	10.12	335	⇑iPn	P	14 01 28.2	-1.2
OBKA	Obir	10.12	335	⇑iSn	S	14 03 13.7	-10
OBKA	Obir	10.12	335	⇑Pn	P	14 01 28.2	-1.2
OBKA				Sn	S	14 03 13.7	-10
HBRG	Burj al ‘Arab	10.20	130	P	P	14 01 26.8	-3.8
HBRG				S	S	14 03 06.2	-20
BR131	Keskin Array S	10.28	74	P	P	14 01 33.7	+2.0
	comp=Z,0.7nm,0.6s						
BR131	Keskin Array S	10.28	74	P	P	14 01 33.7	+2.0
	comp=Z,0.7nm,0.6s						
BRTR	Keskin Array B	10.28	74	Pn	P	14 01 32.4	+0.8
	comp=Z,0.0nm,0.3s,baz=268,slow=14,SNR=3.0						
KBA	Koelnbreinsper	11.03	332	⇑iPn	P	14 01 40.9	-1.1
KBA	Koelnbreinsper	11.03	332	⇓iSn	S	14 03 35.1	-11
KBA	Koelnbreinsper	11.03	332	⇑Pn	P	14 01 40.9	-1.1
KBA				Sn	S	14 03 35.1	-11
MOA	Molln	11.39	337	⇑Sn	S	14 03 45.1	-10
MOA	Molln	11.39	337	⇑iPn	P	14 01 45.7	-1.1
MOA	Molln	11.39	337	⇑iSn	S	14 03 48.3	-6.5
MOA	Molln	11.39	337	⇑Pn	P	14 01 45.6	-1.1
MOA				Sn	S	14 03 45.1	-10
HFRF	Wahat Farafira	12.12	146	P	P	14 01 54.8	-2.0
AMAG	Maghara	12.35	120	P	P	14 01 56.2	-3.6
GERES	GERESS Array B	12.45	338	Pn	P	14 02 01.2	+0.1
	comp=Z,0.3nm,0.3s,baz=152,slow=17,SNR=3.0						
KHC	Kasperske Hory	12.74	338	eP	P	14 02 10.0	+5.0
KHC				x	x	14 02 17.5	
KHC	Kasperske Hory	12.74	338	eP	P	14 02 10.0	+5.0
KHC				e		14 02 17.5	
AKASG	Malin Array Be	14.48	22	Pn	P	14 02 26.2	-1.8
	comp=Z,0.2nm,0.3s,baz=212,slow=12,SNR=2.4						
SUW	Suwalki	16.58	5	eP	P	14 02 56.7	+1.7
	comp=Z,54nm,0.8s						
SUW	Suwalki	16.58	5	eP	P	14 02 56.7	+1.8
SUW				pmax	pmax		
	comp=Z,54nm,0.8s						
SUW	Suwalki	16.58	5	eP	P	14 02 56.7	+1.8
	comp=Z,54nm,0.8s						
GNI	Garni	18.82	75	LR	LR	14 11 06.6	
	comp=Z,96nm,19.2s,baz=338,slow=39						
MDT	Midelt	21.28	265	P	P	14 03 52.8	+3.0
	comp=Z,1.8nm,0.9s,mb3.4,baz=62,slow=9.3,SNR=4.1						
VSU	Vasula	21.31	9	⇓eP	P	14 03 48.6	-1.3
VSU	Vasula	21.31	9	eP	P	14 03 48.6	-1.3
HFS	Hagfors	23.09	351	P	P	14 04 06.6	-0.8
	comp=Z,3.0nm,0.5s,mb4.0,baz=135,slow=15,SNR=8.2						
EKA	Eskdalemuir Ar	24.10	325	P	P	14 04 18.6	+1.2
	comp=Z,4.0nm,0.8s,mb3.9,baz=127,slow=8.3,SNR=7.5						
EKA	Eskdalemuir Ar	24.10	325	P	P	14 04 18.5	+1.2
NAO	NORSAR Subarra	24.16	348	P	P	14 04 19.1	+1.2
	comp=Z,2.8nm,0.8s,mb3.7						
NAO	NORSAR Subarra	24.16	348	P	P	14 04 19.1	+1.2
NAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
FINES	FINESS Array B	24.18	6	P	P	14 04 17.4	-0.6
	comp=Z,0.8nm,0.3s,mb3.6,baz=186,slow=9.7,SNR=5.3						
FINES				LR	LR	14 14 40.2	
	comp=Z,106nm,21.7s,MS3.3,baz=164,slow=39						
FINES	FINESS Array B	24.18	6	P	P	14 04 17.4	-0.6
FINES				LR	LR	14 14 40.2	
NAO01	NORSAR Array S	24.18	348	eP	P	14 04 17.6	-0.4
	comp=Z,11nm,0.9s,mb4.3						
NAO01	NORSAR Array S	24.18	348	eP	P	14 04 17.6	-0.4
	comp=Z,11nm,0.9s,mb4.3						
NB2	NORSAR Subarra	24.31	349	P	P	14 04 19.1	-0.2
	comp=Z,2.8nm,0.8s,mb3.7,baz=160,slow=9.3						
NOA	NORSAR Array B	24.31	349	P	P	14 04 18.8	-0.5
	comp=Z,2.4nm,0.7s,mb3.7,baz=151,slow=10,SNR=5.7						
NOA	NORSAR Array B	24.31	349	P	P	14 04 18.8	-0.5
AKTK	Aktyubinsk	29.40	52	P	P	14 05 03.9	-2.5
	comp=Z,1.0nm,0.4s,mb3.9						
AKTO	Aktyubinsk	29.40	52	P	P	14 05 03.9	-2.5
	comp=Z,1.0nm,0.4s,mb3.9,baz=246,slow=10.0,SNR=3.7						
AKTO	Aktyubinsk	29.40	52	P	P	14 05 03.9	-2.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
BRVK	Borovoye	37.31	49	eP	P	14 06 11.3	-3.4
	comp=Z,4.2nm,1.1s,mb4.2						
BRVK	Borovoye	37.31	49	eP	P	14 06 11.3	-3.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
BRVK	Borovoye	37.31	49	eP	P	14 06 11.3	-3.5
	comp=Z,4.2nm,1.1s,mb4.2						
BVAR	Borovoye Array	37.37	49	P	P	14 06 13.5	-1.8
	comp=Z,1.6nm,0.5s,mb4.1,baz=262,slow=6.0,SNR=10						
CHKZ	Chkalovo	37.56	48	eP	P	14 06 15.4	-1.5
	comp=Z,3.3nm,0.6s,mb4.2						
CHKZ	Chkalovo	37.56	48	eP	P	14 06 15.4	-1.4
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
CHKZ	Chkalovo	37.56	48	eP	P	14 06 15.4	-1.4
	comp=Z,3.3nm,0.6s,mb4.2						
AAK	Ala-Archa	40.82	65	P	P	14 06 49.2	+5.1
	comp=Z,4.0nm,1.1s,mb4.0						
AAK	Ala-Archa	40.82	65	P	P	14 06 49.2	+5.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.0						
KURK	Kurchatov	42.49	53	P	P	14 06 56.1	-1.5
	comp=Z,9.2nm,1.2s,mb4.3						
KURK	Kurchatov	42.49	53	i P	P	14 07 03.8	+6.2
KURK	Kurchatov	42.49	53	P	P	14 06 56.1	-1.5
	comp=Z,9.2nm,1.2s,mb4.3						
NVS	Novosibirsk	44.96	47	eP	P	14 07 21.2	+3.6
MKAR	Makanchi Array	45.45	58	P	P	14 07 19.8	-1.8
	comp=Z,0.6nm,0.5s,mb3.7,baz=275,slow=7.6,SNR=15						
ZAL	Zalesovo	45.95	48	P	P	14 07 23.6	-1.9
	comp=Z,2.5nm,0.3s,mb4.7,baz=190,slow=7.1,SNR=6.6						
TIXI	Tiksi	60.19	20	⇓eP	P	14 09 09.7	-1.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.0						
TIXI	Tiksi	60.19	20	eP	P	14 09 09.7	-1.1
	comp=Z,100nm,18.0s						
SONM	Songino Array	60.70	50	P	P	14 09 12.6	-2.0
	comp=Z,0.2nm,0.4s,mb3.6,baz=292,slow=7.8,SNR=3.0						
LZH	Lanzhou	64.29	63	eP	P	14 09 34.7	-4.0
LZH				PP	PP	14 11 58.7	-3.3
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,40nm,6.3s						
LZH				LR	LR		
	comp=E,260nm,15.2s						
LZH				LR	LR		
	comp=Z,290nm,17.8s,MS4.5						
HHC	Hu-ho-hao-te	67.22	55	eP	P	14 09 51.8	-5.5
HHC				S	S	14 18 41.2	-8.8
HHC				AMB	AMB		
	comp=Z,70nm,4.3s						
HHC				LR	LR		
	comp=N,90nm,18.0s,MS4.2						
HHC				LR	LR		
	comp=E,110nm,16.8s,MS4.2						
HHC				LR	LR		
	comp=Z,80nm,15.6s,MS4.0						
CN2	Changchun	74.17	47	eP	P	14 10 36.4	-2.8
BDFB	Brasilia	83.44	245	LR	LR	14 50 03.2	
	comp=Z,82nm,19.1s,MS4.1,baz=124,slow=36						

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*ATH **03** 14:10:34.3, 38.09N×26.57E, h34^{km}±5^{km}, MD3.3/3*
*ISK **03** 14:10:35.1, 38.15N×26.67E, h19^{km}, MD3.0*
*CSEM **03** 14:10:35.3±0.1, 38.15N×26.69E, h20^{km}, MD3.0, Error ellipse: s-maj=2.5km s-min=1.6km az=109.0*
ISC 03 14:10:34.2±0.8, **38.14N**±0.03×**26.59E**±0.05, **h6**^{km}±6^{km}, **n16**, σ**0**^{s}**71**/27, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.22	2	*i* P	Pg	14 10 38.8	0.0
URLA				*i* S	Sg	14 10 42.6	+0.8
BLCB	Balcova	0.43	55	PG	Pg	14 10 43.5	+0.5
BLCB				SG	Sg	14 10 49.2	+0.4
SMG	Samos	0.47	155	*e*PB	Pb	14 10 44.1	-0.4
SMG				*e*SB	Sb	14 10 51.4	0.0
IZM	Izmir	0.59	64	PG	Pg	14 10 46.4	+0.3
IZM				SG	Sg	14 10 54.2	+0.2
KDAG	Bornova	0.60	64	*i* P	Pg	14 10 44.7	-1.5
KDAG				*i* S	Sg	14 10 53.2	-1.0
AYDN	Tasoluk	1.13	115	*i* P	Pb	14 10 56.2	+0.5
AYDN				*i* S	Sb	14 11 10.1	-0.4
PRK	Paraskevi	1.13	347	*e*PN	Pn	14 10 56.1	-0.4
PRK				*e*SN	Sn	14 11 12.3	-0.2
AKS	Akhisar	1.21	52	PN	Pn	14 10 57.2	-0.5
BODT	Bodrum	1.22	152	PN	Pn	14 10 57.4	-0.3
BODT				SN	Sn	14 11 13.9	-0.8
MLSB	Milas	1.26	131	*e*PN	Pn	14 10 57.8	-0.6
BDRM	Kayabasi	1.27	147	*i* P	Pb	14 10 59.4	+1.3
BDRM				*i* S	Sb	14 11 15.8	+1.3
APE	Apeiranthos	1.36	218	*e*PN	Pn	14 11 00.2	+0.5
APE				*e*SN	Sn	14 11 19.0	+0.8
APE	Apeiranthos	1.36	218	*e*PN	Pn	14 10 58.2	-1.6
MANT	Manisa	1.59	77	*i* P	Pn	14 11 03.8	+0.7
MANT				*i* S	Sb	14 11 24.7	+0.9
DAT	Datca	1.61	150	*e*PN	Pn	14 11 02.7	-0.7
YER	Yerkesik	1.68	126	*e*PN	Pn	14 11 03.9	-0.4

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*ATH **03** 14:12:33.8, 38.09N×26.56E, h35^{km}±10^{km}, MD3.1/3*

*CSEM **03** 14:12:33.6±0.1, 38.13N×26.46E, h10^{km}, MD3.0, Error ellipse: s-maj=2.9km s-min=2.0km az=89.0*

*ISK **03** 14:12:35.8, 38.11N×26.65E, h12^{km}, MD3.0*

ISC 03 14:12:34.9±0.9, **38.15N**±0.03×**26.55E**±0.05, **h8**^{km}±6^{km}, **n15**, σ**0^{s}.98**/25, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.22	10	*i* P	Pg	14 12 39.5	0.0
URLA				*i* S	Sg	14 12 43.7	+1.2
BLCB	Balcova	0.46	58	PG	Pg	14 12 44.4	+0.3
SMG	Samos	0.49	152	*e*PB	Pb	14 12 43.9	-1.4
SMG				*e*SB	Sb	14 12 51.3	-1.1
IZM	Izmir	0.62	66	PG	Pg	14 12 47.4	+0.2
IZM				SG	Sg	14 12 55.7	+0.2
KDAG	Bornova	0.62	65	*i* P	Pg	14 12 45.8	-1.6
KDAG				*i* S	Sg	14 12 55.2	-0.5
PRK	Paraskevi	1.12	349	*e*PN	Pn	14 12 55.3	-1.5
PRK				*e*SN	Sn	14 13 11.6	-0.9
AYDN	Tasoluk	1.16	114	*i* P	Pb	14 12 56.6	-0.2
AYDN				*i* S	Sb	14 13 11.5	-0.2
AKS	Akhisar	1.23	53	PN	Pn	14 12 59.0	+0.6
BODT	Bodrum	1.24	151	*e*PN	Pn	14 12 58.8	+0.3
BODT				*e*SN	Sn	14 13 15.3	-0.2
BDRM	Kayabasi	1.29	146	*i* P	Pb	14 13 00.5	+1.4
BDRM				*i* S	Sb	14 13 16.4	+0.7
APE	Apeiranthos	1.34	217	*e*PN	Pn	14 13 01.2	+1.2
APE				*e*SN	Sn	14 13 20.1	+1.9
APE	Apeiranthos	1.34	217	*e*Pn	Pn	14 12 57.7	-2.3
MANT	Manisa	1.62	77	*i* P	Pn	14 13 05.3	+1.3
MANT				*i* S	Sb	14 13 26.2	+1.1
DAT	Datca	1.64	150	*e*PN	Pn	14 13 03.7	-0.5
YER	Yerkesik	1.71	126	*e*PN	Pn	14 13 04.6	-0.6

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*NEIC **03** 14:27:17.0, 38.11N×26.60E, h26^{km}, MD3.3(ATH), MD3.0(ISK), After ISK.*

*ISK **03** 14:27:18.8, 38.15N×26.63E, h27^{km}, MD3.1*

*CSEM **03** 14:27:18.7±0.1, 38.17N×26.63E, h28^{km}, MD3.1, Error ellipse: s-maj=2.6km s-min=2.0km az=105.0*

*ATH **03** 14:27:18.4, 38.08N×26.43E, h24^{km}±4^{km}, MD3.3/4*

ISC 03 14:27:18.5±0.6, **38.16N**±0.03×**26.53E**±0.05, **h18**^{km}±6^{km}, **n18**, σ**1^{s}.11**/28, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.20	15	*i* P	Pb	14 27 23.2	-0.3
URLA				*i* S	Sb	14 27 27.1	+0.1
BLCB	Balcova	0.46	61	*i* PG	Pb	14 27 28.0	+0.2
SMG	Samos	0.51	152	*e*PB	Pb	14 27 28.6	0.0
SMG				*e*SB	Sb	14 27 36.1	+0.5
IZM	Izmir	0.62	68	*i* PG	Pb	14 27 30.9	+0.4
IZM				*i* SG	Sb	14 27 39.4	+0.6
KDAG	Bornova	0.63	67	*i* P	Pb	14 27 29.8	-0.8
KDAG				*i* S	Sb	14 27 38.0	-0.8
PRK	Paraskevi	1.10	349	*e*PN	Pn	14 27 40.0	+0.9
PRK				*e*SN	Sn	14 27 57.3	+3.5
AYDN	Tasoluk	1.18	115	*i* P	Pb	14 27 40.5	+0.5
AYDN				*i* S	Sb	14 27 54.2	-0.6
AKS	Akhisar	1.23	54	PN	Pn	14 27 40.1	-0.9
BODT	Bodrum	1.26	150	PN	Pn	14 27 40.2	-1.1
BODT				SN	Sn	14 27 56.5	-1.4
BDRM	Kayabasi	1.31	146	*i* P	Pn	14 27 44.3	+2.2
BDRM				*i* S	Sb	14 28 00.4	+1.6
MLSB	Milas	1.31	131	*e*PN	Pn	14 27 40.9	-1.2
APE	Apeiranthos	1.35	216	*e*PN	Pn	14 27 42.8	+0.2
APE				*e*SN	Sn	14 28 00.8	+0.7
APE	Apeiranthos	1.35	216	*e*PN	Pn	14 27 42.1	-0.5
MANT	Manisa	1.63	78	*i* P	Pn	14 27 49.1	+2.5
MANT				*i* S	Sn	14 28 09.5	+2.3
YER	Yerkesik	1.73	126	*e*PN	Pn	14 27 47.0	-1.0
BALB	Balikesir	1.81	35	*e*PN	Pn	14 27 48.4	-0.8
DENT	Denizli	2.02	101	*e*PN	Pn	14 27 50.6	-1.6
LIA	Limnos Island	2.03	329	*e*PB	Pb	14 27 53.7	-0.8

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*NIED **03** 14:33:00, 44.50N×140.30E, h14^{km}, Mw3.3 Best double couple: M$_0$8.84×10^{13} NP1:φ$_s$255°, δ87°, λ-167°. NP2: φ$_s$165°, δ77°, λ-3°.*

JMA 03 14:33:06.3±0.1, **44.50N×140.33E, M3.6, 1C-2D, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYG	Yagishiri	0.79	95	P	Pg	14 33 21.6	-0.4
JYG				*e*S	Sg	14 33 32.0	-0.6
JRR	Rishiri	0.95	47	P	Pg	14 33 24.9	-0.3
JRR				*e*S	Sg	14 33 37.8	0.0
JSS	Shosan	1.09	95	⇓P	Pb	14 33 27.7	-0.1
JSS				*e*S	Sb	14 33 42.4	-0.1
JSK	Shakotan	1.15	175	P	Pb	14 33 28.7	-0.1
JSK				*e*S	Sb	14 33 44.6	+0.5
JHR	Hokuryu	1.26	127	⇓P	Pb	14 33 30.4	-0.2
JHR				*e*S	Sb	14 33 47.8	+0.6
JWK2	Keihoku	1.38	53	⇑P	Pb	14 33 32.4	-0.3
JWK2				*e*S	Sb	14 33 50.9	+0.1
JSE	Soyaes	1.67	73	P	Pn	14 33 37.0	0.0
JSE				*e*S	Sb	14 33 58.6	-0.6
ASAJ	Asahikawa	1.67	102	P	Pn	14 33 36.4	-0.6
ASAJ				*e*S	Sb	14 33 58.2	-1.0
JAB	Ashibetsu	1.69	125	P	Pn	14 33 36.9	-0.4
JAB				*e*S	Sb	14 33 59.4	-0.4
JEW	Eniwo	1.85	154	*e*S	Sn	14 34 03.6	-0.3
JKK2	Kamakawa 2	1.85	109	P	Pn	14 33 38.9	-0.6
JKK2				*e*S	Sn	14 34 02.5	-1.5
JSH	Shimam	1.87	186	P	Pn	14 33 38.8	-1.0

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*ATH **03** 14:50:51.7, 38.16N×26.63E, h37^{km}±9^{km}, MD3.1/3*

*ISK **03** 14:50:52.1, 38.17N×26.72E, h22^{km}, MD2.9*

*CSEM **03** 14:50:52.4±0.2, 38.23N×26.71E, h20^{km}, MD2.9, Error ellipse: s-maj=3.9km s-min=3.0km az=100.0*

ISC 03 14:50:51.0±1.0, **38.19N**±0.04×**26.57E**±0.05, **h5**^{km}±6^{km}, **n11**, σ**0^{s}.84**/19, **1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.17	7	*i* P	Pg	14 50 54.5	+0.1
URLA				*i* S	Sg	14 50 57.6	+0.9
BLCB	Balcova	0.42	62	PG	Pg	14 50 59.4	0.0
BLCB				SG	Sg	14 51 05.0	0.0
SMG	Samos	0.53	156	⇑*i*PB	Pb	14 51 02.3	0.0
SMG				*e*SB	Sb	14 51 10.4	+0.5
IZM	Izmir	0.58	69	PG	Pg	14 51 02.7	+0.1
IZM				SG	Sg	14 51 10.8	+0.4
KDAG	Bornova	0.59	69	*i* P	Pg	14 51 01.1	-1.6
KDAG				*i* S	Sg	14 51 09.9	-0.6
PRK	Paraskevi	1.08	348	*e*PN	Pn	14 51 12.5	-0.1
PRK				*e*SN	Sn	14 51 28.0	0.0
AYDN	Tasoluk	1.16	117	*i* P	Pb	14 51 14.1	+1.0
AYDN				*i* S	Sb	14 51 27.9	-0.5
AKS	Akhisar	1.19	55	PN	Pn	14 51 12.3	-1.9
APE	Apeiranthos	1.39	217	*e*PN	Pn	14 51 16.6	-0.5
MANT	Manisa	1.59	79	*i* P	Pn	14 51 22.6	+2.7
MANT				*i* S	Sb	14 51 41.2	+0.4
BALB	Balikesir	1.77	35	PN	Pn	14 51 22.4	-0.1

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*IDC **03** 14:59:17.8±14.0, 36.09N×70.43E, h150^{km}±122^{km}, mb3.4/3, mb1 3.5/6, mb1mx3.2/21, mbtmp3.9/6, ML3.9/3, Error ellipse: s-maj=90.3km s-min=31.5km az=35.0*

*MOS **03** 14:59:18.8±1.1, 36.20N×70.18E, h176^{km}, mb3.9/2, Error ellipse: s-maj=37.8km s-min=12.8km az=91.8*

*NNC **03** 14:59:28.7±2.8, 36.94N×70.21E, h183^{km}±21^{km}, mpv3.8, Error ellipse: s-maj=27.5km s-min=17.8km az=8.0*

ISC 03 14:59:22.6±0.5, **36.54N**±0.04×**70.3E**±0.1, **h182**^{km}±13^{km}, **n33**, σ**0^{s}.74**/37, **mb3.6**/2, **8C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.02	153	⇓P	P	15 00 12.9	+0.6
CEP				S	S	15 00 50.0	-0.5
THW	Thamme Wali	3.93	162	P	P	15 00 23.5	-0.1
SBDP	Sheikh Budin	4.25	174	⇑P	P	15 00 27.7	0.0
DRP	Derazinda	4.78	181	P	P	15 00 34.7	+0.1
SARP	Sargodha	5.02	156	⇓P	P	15 00 36.4	-1.2
AML	Almayashu	6.18	24	P	P	15 00 53.5	+0.6
	SNR=128						
KK31	Karatay Array	6.56	2	⇓P	P	15 00 58.2	+0.4
	1.8nm,0.2s,baz=172,slow=8.3,SNR=151						
KK31				⇑S	S	15 02 09.5	-2.4
	4.8nm,0.3s,baz=212,slow=26,SNR=7.5						
KKAR	Karatay Array	6.56	2	PN	P	15 00 58.1	+0.3
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
UCH	Uchtor	6.56	29	P	P	15 00 58.5	+0.7
	SNR=32						
EKS2	Erkin-Say	6.69	23	P	P	15 01 00.2	+0.7
	SNR=29						
KZA	Kyzart	6.75	33	P	P	15 01 00.2	0.0
	SNR=5.6						
AAK	Ala-Archa	6.91	27	P	P	15 01 03.0	+0.6
	SNR=12						
AAK	Ala-Archa	6.91	27	⇓P	P	15 01 02.9	+0.5
	comp=Z,3.8nm,0.4s						
AAK				⇑S	S	15 02 18.3	-1.8
	comp=Z,22nm,0.6s						
KBK	Karagaybulak	7.10	29	P	P	15 01 05.5	+0.6
	SNR=6.8						
CHMS	Chumysh	7.32	27	P	P	15 01 08.0	+0.2
	SNR=7.2						
USP	Ospenovka	7.47	25	P	P	15 01 09.9	+0.2
	SNR=8.0						
TKM2	Tokmak 2	7.58	31	P	P	15 01 11.8	+0.6
	SNR=19						
MK31	Makanchi Array	13.61	37	⇑P	P	15 02 29.7	+0.6
	comp=Z,5.9nm,1.4s,baz=198,slow=9.5,SNR=17						
MKAR	Makanchi Array	13.61	37	P	P	15 02 29.2	+0.1
	comp=Z,0.4nm,0.3s,baz=221,slow=13,SNR=20						
AB31	Akbulak array	14.77	333	⇑P	P	15 02 43.2	-0.4
	comp=Z,1.0nm,0.4s,baz=149,slow=12,SNR=28						
AB31				⇑S	S	15 05 22.4	-0.1
	comp=Z,2.8nm,1.1s,baz=161,slow=23,SNR=5.0						
AB31	Akbulak array	14.77	333	*i* P	P	15 02 43.2	-0.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTO	Aktyubinsk	16.46	331	⇑P	P	15 03 05.1	+0.6
	comp=Z,0.9nm,0.7s						
AKTO	Aktyubinsk	16.46	331	P	P	15 03 04.4	0.0
	comp=Z,0.7nm,0.3s,baz=144,slow=12,SNR=22						
AKTO	Aktyubinsk	16.46	331	P	P	15 03 04.4	0.0
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	Borovoye Array	16.49	0	P	P	15 03 04.4	-0.4
	comp=Z,0.5nm,0.3s,baz=174,slow=13,SNR=8.9						
BVAR	Borovoye Array	16.49	0	P	P	15 03 04.4	-0.3
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CHKZ	Chkalovo	17.14	1	⇑P	P	15 03 11.9	-0.5
	comp=Z,1.9nm,0.9s						
CHKZ	Chkalovo	17.14	1	P	P	15 03 11.8	-0.6
CHKZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAL	Zalesovo	20.11	26	P	P	15 03 43.1	-0.6
	comp=Z,1.8nm,0.4s,baz=244,slow=7.2,SNR=6.3						
ZAL	Zalesovo	20.11	26	P	P	15 03 43.1	-0.6
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES	ARCESS Array B	40.88	338	P	P	15 06 48.6	+0.7
	comp=Z,2.2nm,0.7s,mb3.9,baz=111,slow=7.7,SNR=2.9						
ARCES	ARCESS Array B	40.88	338	P	P	15 06 48.6	+0.8
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRA	Warramunga Arr	82.51	121	P	P	15 11 22.1	-4.3
	comp=Z,0.3nm,0.5s,mb3.3,baz=318,slow=5.2,SNR=5.0						

MAN 03 15:40:37.1, 7.59N×126.92E, h45^{km}, mb4.5, ML3.4, MS3.2, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.81	317	*e*S	S	15 40 57.2	-6.1
MATI	Mati	0.92	226	*e*P	P	15 40 55.8	+2.0
MATI				*e*S	S	15 41 07.2	+1.1
BUKP	Musuan	1.86	279	*e*P	P	15 41 08.2	+1.0
BUKP				*e*S	S	15 41 29.6	0.0
BUTP	Butuan	1.88	317	*e*P	P	15 41 06.8	-0.6
BUTP				*e*S	S	15 41 31.0	+1.1
CGP	Cagayan de Oro	2.37	291	⇓*e*P	P	15 41 12.1	-2.3
CGP				*i* S	S	15 41 42.5	+0.2
MSLP	Maasin	3.24	321	*e*P	P	15 41 26.0	-0.8
MSLP				*e*S	S	15 42 04.4	-0.2

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*ATH **03** 16:00:07.6, 38.10N×26.47E, h27^{km}±9^{km}, MD3.2/3*

*NEIC **03** 16:00:07.0, 38.10N×26.59E, h20^{km}, MD3.6(ISK), MD3.2(ATH), After ISK.*

*ISK **03** 16:00:08.0, 38.11N×26.62E, h22^{km}, MD3.6*

*CSEM **03** 16:00:08.5±0.1, 38.12N×26.66E, h25^{km}, MD3.6, Error ellipse: s-maj=1.8km s-min=1.1km az=78.0*

ISC 03 16:00:08.0±0.6, **38.15N**±0.02×**26.54E**±0.05, **h19**^{km}±5^{km}, **n32**, σ**0^{s}.83**/41, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.22	12	*i* P	Pb	16 00 12.8	-0.6
URLA				*i* S	Sb	16 00 16.7	-0.2
BLCB	Balcova	0.46	59	*i* PG	Pb	16 00 17.5	+0.2
SMG	Samos	0.50	152	*e*PB	Pb	16 00 17.9	0.0
SMG				*e*SB	Sb	16 00 25.2	+0.6
IZM	Izmir	0.62	66	*i* PG	Pb	16 00 20.3	+0.2
IZM				*i* SG	Sb	16 00 29.2	+0.9
KDAG	Bornova	0.63	66	*i* P	Pb	16 00 18.8	-1.3
KDAG				*i* S	Sb	16 00 27.7	-0.7
PRK	Paraskevi	1.12	349	*e*PN	Pn	16 00 29.5	+0.7
AYDN	Tasoluk	1.17	114	*i* P	Pb	16 00 30.0	+0.7
AYDN				*i* S	Sb	16 00 43.9	-0.1
AYVA	Ayvalik	1.17	6	*i* P	Pb	16 00 29.4	+0.1
AYVA				*i* S	Sb	16 00 49.0	+4.9
AKS	Akhisar	1.24	53	PN	Pn	16 00 30.3	-0.2
BODT	Bodrum	1.24	150	*i* PN	Pn	16 00 29.8	-0.8
BDRM	Kayabasi	1.30	146	*i* P	Pn	16 00 33.5	+2.2
BDRM				*i* S	Sb	16 00 49.5	+1.7
MLSB	Milas	1.30	131	PN	Pn	16 00 30.4	-1.0
APE	Apeiranthos	1.34	217	PN	Pn	16 00 31.9	-0.1
APE				SN	Sn	16 00 49.7	+0.3
APE	Apeiranthos	1.34	217	*e*PN	Pn	16 00 31.5	-0.5
MANT	Manisa	1.62	77	*i* P	Pn	16 00 37.7	+1.7
MANT				*i* S	Sn	16 00 58.4	+1.8
DAT	Datca	1.64	149	PN	Pn	16 00 35.0	-1.2
EZN	Ezine	1.69	354	PN	Pn	16 00 37.5	+0.6
YER	Yerkesik	1.71	126	PN	Pn	16 00 36.6	-0.7
BALB	Balikesir	1.82	35	PN	Pn	16 00 38.5	-0.4
DENT	Denizli	2.01	100	PN	Pn	16 00 40.7	-0.9
DALT	Dalyan (Mudla)	2.16	129	PN	Pn	16 00 42.6	-1.1
DST	Dursunbey	2.19	48	PN	Pn	16 00 43.7	-0.4
LPK	Lapseki	2.23	4	PN	Pn	16 00 45.3	+0.6
EDC	Edincik	2.43	25	PN	Pn	16 00 47.8	+0.3
BNT	Bandirma	2.45	25	PN	Pn	16 00 47.7	-0.2
FETY	Fethiye	2.53	126	PN	Pn	16 00 47.9	-1.0
KCT	Karacabey	2.54	33	PN	Pn	16 00 48.9	-0.3
ORLT	Orhaneli	2.64	43	PN	Pn	16 00 50.2	-0.3
MFT	Murefte	2.70	12	PN	Pn	16 00 51.9	+0.5
ALT	Altintas	2.94	71	PN	Pn	16 00 53.9	-1.0
RDO	Rodhopi	3.10	346	*e*PN	Pn	16 00 57.8	+0.8
YLV	Yalova	3.27	41	PN	Pn	16 00 59.2	-0.3

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*JMA **03** 16:01:54.9, 37.44N×138.48E, h28^{km}±1^{km}, M4.8 Broadband fault plane solution: P waves. NP1:φ$_s$215°, δ45°, λ126°. NP2:φ$_s$350°, δ55°, λ60°. Principal axes: T Plg65°, Azm202°; N Plg24°, Azm9°; P Plg5°, Azm101°;*

JMA Felt IV J1.

*BJI **03** 16:01:55.2, 37.40N×138.30E, h24^{km}, mB4.6, mb4.4, Ms4.3, Msz4.0*

*NEIC **03** 16:01:55.2±0.2, 37.36N×138.31E, mb4.8/35, MW4.5(NIED), Error ellipse: s-maj=5.3km s-min=3.8km az=93.0*

NEIC Recorded [3 JMA] in Niigata and Yamagata; [2 JMA] in Fukushima, Gumma, Ishikawa and Nagano; [1 JMA] in Toyama Prefectures.

*MOS **03** 16:01:55.3±1.1, 37.38N×138.22E, h35^{km}, mb4.8/24, Error ellipse: s-maj=12.3km s-min=5.8km az=98.2*

*IDC **03** 16:01:55.1±0.4, 37.41N×138.32E, h24^{km}±2^{km}, mb4.2/18, mb1 4.4/18, mb1mx4.4/21, mbtmp4.3/18, MS3.8/11, Ms1 3.8/11, ms1mx3.6/26, Error ellipse: s-maj=13.7km s-min=8.0km az=91.0*

*NIED **03** 16:02:00, 37.50N×138.50E, h14^{km}, Mw4.5 Best double couple: M$_0$7.28×10^{15} NP1:φ$_s$354°, δ56°, λ61°. NP2:φ$_s$218°, δ44°, λ125°.*

ISC 03 16:01:53.9±0.2, **37.41N**±0.02×**138.41E**±0.03, **h25**^{km}, **h25**^{km}±.6^{km}**:pP-P, n190**, σ**1^{s}.14**/186, **mb4.5**/60, **MS3.9**/18, **12C-10D, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIZZ	Izumozaki	0.27	63	⇑P	Pb	16 02 00.8	+0.3
JIZZ				S	Sb	16 02 05.6	+0.7
JJN	Nakama	0.36	213	⇓P	Pb	16 02 03.7	+1.8
JJN				S	Sb	16 02 10.4	+3.1
JHK	Hiroka	0.51	108	⇓P	Pb	16 02 04.0	-0.2
JHK				S	Sb	16 02 10.5	-0.8
JSD	Sado	0.64	349	⇑P	Pb	16 02 07.0	+0.6
JSD				S	Sb	16 02 15.6	+0.7
JNS	Sasagawa	0.83	60	⇓P	Pb	16 02 09.3	-0.3
JNS				S	Sb	16 02 20.1	-0.2
JSZ	Suzu	0.83	273	⇓P	Pb	16 02 10.9	+1.3
JSZ				S	Sb	16 02 23.1	+2.7
MAJO	Matsushiro	0.88	191	*e*Pg	Pb	16 02 10.4	0.0
MAJO				*e*Sg	Sb	16 02 21.2	-0.6
MAT	Matsushiro	0.88	191	P	Pb	16 02 11.3	+0.9
MAT				S	Sb	16 02 23.1	+1.3
MAT	Matsushiro	0.88	191	*e*P	Pb	16 02 11.0	+0.6
MAT				*e*S	Sb	16 02 23.0	+1.2
MJAR	Matsushiro Arr	0.88	191	Pg	Pb	16 02 11.6	+1.1
	710nm,0.3s,baz=8.2,slow=16,SNR=4322						
MJAR				Lg		16 02 23.6	
	985nm,0.3s,baz=9.5,slow=30,SNR=35						
MJAR				LR	LR	16 02 27.7	
	comp=Z,2μm,21.3s,baz=250,slow=37						
JKT	Katashina	0.93	133	⇓P	Pb	16 02 11.5	+0.3
JKT				S	Sb	16 02 23.7	+0.5
JFY	Yanaizu	1.03	90	⇓P	Pn	16 02 12.6	-0.3
JFY				S	Sb	16 02 25.4	-0.7
JTT	Ttatey	1.18	227	⇑P	Pn	16 02 16.6	+1.6
JAW	Awa shima	1.24	32	⇓P	Pn	16 02 15.7	-0.2
JHJ	Hachijo jima 2	4.42	165	Pn	Pn	16 03 03.5	+2.2
	162nm,0.3s,baz=90,slow=2.2,SNR=36						
JHJ				LR	LR	16 04 48.7	
	comp=Z,966nm,20.4s,baz=306,slow=39						
ASAJ	Asahikawa	7.42	24	Pn	Pn	16 03 45.3	+1.9
	0.6nm,0.3s,baz=130,slow=26,SNR=6.4						
ASAJ				LR	LR	16 06 48.9	
	comp=Z,542nm,19.4s,baz=336,slow=40						
ASAJ	Asahikawa	7.42	24	P	Pn	16 03 45.3	+1.9
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,542nm,19.5s						
JNU	Nakatsue	7.50	237	Pn	Pn	16 03 47.0	+2.5
	comp=Z,0.4nm,0.3s,baz=64,slow=31,SNR=5.8						
JNU				LR	LR	16 06 37.6	
	comp=Z,607nm,18.2s,baz=61,slow=38						
KS15	Wonju Array Si	8.37	273	*e*Pn	P	16 03 57.5	+0.7
KS15				*e*Sn	Sn	16 05 20.1	-11
INCN	Inchon	9.37	274	*e*Pn	P	16 04 11.5	+1.0
MDJ	Mudanjiang	9.80	320	P	P	16 04 17.0	+0.5
MDJ				AMB	AMB		
	comp=Z,40nm,5.5s						
MDJ				LR	LR		
	comp=N,370nm,16.1s						
MDJ				LR	LR		
	comp=E,590nm,17.0s						
MDJ				LR	LR		
	comp=Z,620nm,15.9s						
MDJ	Mudanjiang	9.80	320	*e*Pn	P	16 04 16.7	+0.2
	comp=Z,8.8nm,0.8s						
YSS	Yuzh-Sakhalins	10.07	17	*e*Pn	P	16 04 20.3	+0.2
	comp=Z,22nm,0.4s						
YSS	Yuzh-Sakhalins	10.07	17	*e*P	P	16 04 20.4	+0.3
YSS				MLR	MLR		
	comp=Z,800nm,13.0s						
YSS				MLR	MLR		
	comp=N,600nm,14.0s						
CN2	Changchun	11.73	307	*e*P	P	16 04 44.5	+1.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s						
CN2				AMB	AMB		
	comp=Z,120nm,5.0s						
CN2				LR	LR		
	comp=N,610nm,13.0s						
CN2				LR	LR		
	comp=E,820nm,13.0s						
CN2				LR	LR		
	comp=Z,770nm,15.0s						
KLR	Kul'dur	12.76	340	*e*P	P	16 05 08.0	+11
KLR				*e*		16 07 25.5	
KLR				MLR	MLR		
	comp=Z,1μm,13.5s						
SSE	Sheshan	15.56	251	P	P	16 05 30.1	-3.3
SSE				AMB	AMB		
	comp=Z,40nm,0.6s						
SSE				AMB	AMB		
	comp=Z,50nm,5.4s						
SSE				LR	LR		
	comp=N,340nm,12.9s						
SSE				LR	LR		
	comp=E,570nm,13.0s						
SSE				LR	LR		
	comp=Z,910nm,12.8s						
NJ2	Nanjing	16.93	257	*e*P	P	16 05 48.5	-2.3
NJ2				AP		16 05 56.2	
NJ2				XP		16 06 01.1	
NJ2				PP	PP	16 06 03.0	-1.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,70nm,6.0s						
NJ2				LR	LR		
	comp=N,730nm,12.9s						
NJ2				LR	LR		
	comp=E,1μm,14.1s						
NJ2				LR	LR		
	comp=Z,540nm,14.3s						
TIA	Tai'an	17.09	272	*e*P	P	16 05 58.1	+5.4
HIA	Hailar	17.97	317	P	P	16 06 01.4	-2.2
	comp=Z,8.8nm,0.7s						
HIA	Hailar	17.97	317	P	P	16 06 01.4	-2.2
HIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PET	Petropavlovsk	21.03	36	*e*P	P	16 06 46.7	+8.6
PET				*e*S	S	16 10 36.2	+10
PET				pmax	pmax		
	comp=Z,100nm,16.1s						
PET				smax			
	comp=E,100nm,16.4s						
PET				MLR	MLR		
	comp=Z,200nm,17.0s,MS3.6						
PET				MLR	MLR		
	comp=Z,600nm,14.0s						
WHN	Wuhan	21.06	258	*e*P	P	16 06 40.5	+1.9

HHC	**Hu-ho-hao-te**	21.08	288	*e*P	P	16 06 43.8	+5.2
HHC				PP	PP	16 07 05.7	+3.9
HHC				S	S	16 10 34.3	+7.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.1						
HHC				AMB	AMB		
	comp=Z,70nm,3.6s						
HHC				LR	LR		
	comp=N,280nm,12.0s,MS4.1						
HHC				LR	LR		
	comp=E,350nm,12.0s,MS4.1						
HHC				LR	LR		
	comp=Z,370nm,14.4s,MS3.9						
CIT	**Chita**	22.77	318	*e*P	P	16 06 59.9	+4.5
MA2	**Magadan**	23.57	16	*e*P	P	16 07 04.8	+1.7
	comp=Z,42nm,1.1s,mb4.8						
MA2	**Magadan**	23.57	16	*e*P	P	16 07 04.8	+1.8
MA2				pmax	pmax		
	comp=Z,42nm,1.1s,mb4.8						
GUMO	**Guam**	24.41	165	LR	LR	16 15 31.5	
	comp=Z,166nm,20.2s,MS3.5,baz=326,slow=33						
ENH	**Enshi**	24.99	262	*e*P	P	16 07 16.5	-0.7
	comp=Z,34nm,0.9s,mb4.9						
YAK	**Yakutsk**	25.24	350	*e*P	P	16 07 18.3	-0.9
	comp=Z,28nm,0.5s,mb5.0						
YAK	**Yakutsk**	25.24	350⇓	*e*P	P	16 07 18.6	-0.5
YAK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.3						
YAK				MLR	MLR		
	comp=Z,300nm,15.0s,MS3.9						
SONM	**Songino Array**	25.59	304	P	P	16 07 22.0	-0.5
	comp=Z,5.1nm,0.9s,mb4.0,baz=106,slow=8.9,SNR=26						
SONM	**Songino Array**	25.59	304	P	P	16 07 22.0	-0.6
SONM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BOD	**Bodaibo**	25.96	330	*e*P	P	16 07 23.6	-2.4
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
SEY	**Seymchan**	26.95	14	*i* P	P	16 07 36.9	+1.9
ZAK	**Zakamensk**	28.16	309	*e*P	P	16 07 41.4	-4.7
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
GYA	**Guiyang**	28.94	257⇑	*i*P	P	16 07 51.5	-1.9
GYA				AP	pP	16 08 02.8	+2.1
GYA				XP	sP	16 08 08.0	+4.0
GYA				PP	PP	16 08 43.8	-3.4
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,110nm,3.0s						
GYA				LR	LR		
	comp=N,470nm,17.0s,MS4.3						
GYA				LR	LR		
	comp=E,420nm,16.8s,MS4.3						
GYA				LR	LR		
	comp=Z,390nm,16.5s,MS4.1						
KMI	**Kunming**	32.67	258	P	P	16 08 25.3	-1.0
KMI				AP	pP	16 08 36.3	+2.6
KMI				XP	sP	16 08 41.7	+4.8
KMI				PPP	PPP	16 09 49.5	-1.8
KMI				S	S	16 13 37.6	-2.2
KMI				XS		16 13 56.6	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
KMI				AMB	AMB		
	comp=Z,60nm,3.9s						
KMI				LR	LR		
	comp=N,220nm,11.5s,MS4.3						
KMI				LR	LR		
	comp=E,280nm,11.5s,MS4.3						
KMI				LR	LR		
	comp=Z,230nm,10.9s,MS4.1						
BILL	**Bilibino**	34.38	18	P	P	16 08 41.7	+1.0
	comp=Z,5.0nm,0.9s,mb4.4						
BILL	**Bilibino**	34.38	18	*e*P	P	16 08 42.8	+2.1
BILL				*e*		16 11 15.8	
BILL				*e*S	S	16 14 09.8	+3.8
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.6						
TIXI	**Tiksi**	34.66	355	*i* P	P	16 08 41.9	-1.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.7						
WMQ	**Urumqi**	38.52	296	⇑P	P	16 09 17.0	+1.0
WMQ				AP	pP	16 09 29.0	+5.5
WMQ				PP	PP	16 10 49.8	+1.9
WMQ				*e*S	S	16 15 09.2	-0.6
WMQ				XS		16 15 29.8	
WMQ				AMB	AMB		
	comp=Z,40nm,4.9s						
WMQ				LR	LR		
	comp=N,150nm,18.8s,MS3.9						
WMQ				LR	LR		
	comp=E,100nm,18.8s,MS3.9						
WMQ				LR	LR		
	comp=Z,60nm,18.8s,MS3.4						
ZAL	**Zalesovo**	39.90	312	P	P	16 09 27.0	-0.3
	comp=Z,0.5nm,0.5s,mb3.5,baz=338,slow=11,SNR=3.6						
ZAL				PcP	PcP	16 11 32.1	-1.1
	comp=Z,1.4nm,0.6s,baz=334,slow=2.4,SNR=6.5						
ZAL				LR	LR	16 25 10.0	
	comp=Z,52nm,18.6s,MS3.4,baz=218,slow=35						
ZAL	**Zalesovo**	39.90	312	P	P	16 09 27.0	-0.3
ZAL						16 11 32.1	
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZAL				MLR	MLR		
	comp=Z,53nm,18.6s						
SHL	**Shillong**	41.02	267	*e*P	P	16 09 36.0	-0.8
MKAR	**Makanchi Array**	41.88	301	P	P	16 09 41.8	-1.8
	comp=Z,1.5nm,0.8s,mb3.7,baz=89,slow=12,SNR=11						
MKAR				pP	pP	16 09 49.9	-1.1
	comp=Z,0.7nm,0.7s,baz=90,slow=8.5,SNR=3.8						
MKAR				PcP	PcP	16 11 38.7	-1.0
	comp=Z,1.5nm,0.7s,baz=76,slow=5.0,SNR=6.1						
MKAR				LR	LR	16 26 16.0	
	comp=Z,66nm,18.4s,MS3.5,baz=178,slow=35						
MKAR	**Makanchi Array**	41.88	301	P	P	16 09 41.8	-1.8
MKAR				pP	pP	16 09 49.9	-1.2
MKAR				PcP	PcP	16 11 38.7	-1.0
MKAR				LR	LR	16 26 16.0	
MKAR	**Makanchi Array**	41.88	301	P	P	16 09 41.8	-1.8
MKAR				*PP	pP	16 09 49.9	-1.2
MKAR						16 11 38.7	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				MLR	MLR		
	comp=Z,66nm,18.4s						
KURK	**Kurchatov**	43.81	307	*e*P	P	16 09 54.2	-5.0
	comp=Z,6.9nm,0.9s,mb4.4						
KURK	**Kurchatov**	43.81	307⇓	*e*P	P	16 09 57.8	-1.4
GUN	**Gumba**	44.73	274	*e*P	P	16 10 06.5	-0.6
	comp=Z,24nm,1.0s,mb5.0						
KKN	**Kakani**	45.26	274	*e*P	P	16 10 10.7	-0.6
	comp=Z,9.6nm,0.7s,mb4.7						
GKN	**Gorkha**	45.68	274	*e*P	P	16 10 13.7	-0.8
	comp=Z,45nm,1.3s,mb5.2						
KOLN	**Koldanda**	46.61	275	*e*P	P	16 10 21.3	-0.6
	comp=Z,22nm,1.3s,mb4.9						
CHKZ	**Chkalovo**	48.30	312	*e*P	P	16 10 33.2	-1.5
	comp=Z,8.0nm,1.3s,mb4.6						
CHKZ	**Chkalovo**	48.30	312	*e*P	P	16 10 33.2	-1.6
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
BRVK	**Borovoye**	48.60	312	*e*P	P	16 10 35.7	-1.4
	comp=Z,1.4nm,0.8s,mb4.0						
BRVK	**Borovoye**	48.60	312	*e*P	P	16 10 35.7	-1.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
MCK	**McKinley**	49.66	34	*e*P	P	16 10 44.7	-0.4
	comp=Z,4.7nm,1.0s,mb4.5						
MCK	**McKinley**	49.66	34	*e*P	P	16 10 44.7	-0.4
MCK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
PMR	**Palmer**	49.76	37	P	P	16 10 50.8	+4.9
	comp=Z,5.6nm,0.7s,mb4.7						
PMR	**Palmer**	49.76	37	P	P	16 10 50.8	+4.9
PMR				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
COLA	**College**	50.04	32	P	P	16 10 46.6	-1.5
	comp=Z,6.4nm,0.8s,mb4.7						
COLA	**College**	50.04	32	P	P	16 10 46.6	-1.5
COLA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
ILAR	**Eielson Array**	50.46	32	P	P	16 10 50.6	-0.7
	comp=Z,2.4nm,0.7s,mb4.3,baz=283,slow=7.4,SNR=20						
ILAR				pP	pP	16 10 58.1	-0.8
	comp=Z,4.0nm,0.8s,baz=276,slow=6.3,SNR=16						
ARU	**Arti**	54.48	318	*e*P	P	16 11 20.1	-1.3
	comp=Z,14nm,1.0s,mb4.8						
ARU				*e*	pP	16 11 27.7	-1.3
ARU	**Arti**	54.48	318⇓	*i*P	P	16 11 20.6	-0.8
ARU				*e*		16 13 18.2	
ARU				*e*PPP	PPP	16 14 31.9	-4.4
ARU				*e*S	S	16 18 58.2	+1.2
ARU				*e*SS	SS	16 22 41.2	+2.0
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
INK	**Inuvik**	55.14	27	LR	LR	16 37 22.0	
	comp=Z,83nm,19.9s,MS3.8,baz=319,slow=38						
INK	**Inuvik**	55.14	27	*e*P	P	16 11 25.5	-0.6
	comp=Z,17nm,0.8s,mb5.1						
INK				*e*	pP	16 11 32.9	-0.9
INK	**Inuvik**	55.14	27	*e*P	P	16 11 25.5	-0.6
INK				*e*	pP	16 11 32.9	-0.9
INK				pmax	pmax		
	comp=Z,17nm,0.8s						
HYB	**Hyderabad**	55.82	266	*i* P	P	16 11 30.5	-1.2
HYB	**Hyderabad**	55.82	266	*e*P	P	16 11 30.5	-1.2
FITZ	**Fitzroy Crossi**	56.51	195	*e*P	P	16 11 35.0	-1.6
	comp=Z,9.0nm,1.2s,mb4.7						
AKTO	**Aktyubinsk**	56.63	311	LR	LR	16 36 25.7	
	comp=Z,53nm,18.1s,MS3.7,slow=37						
WRAB	**Tennant Creek**	57.16	185	*e*P	P	16 11 38.9	-2.3
	comp=Z,38nm,1.1s,mb5.3						
WRAB	**Tennant Creek**	57.16	185*c*	*i*P	P	16 11 39.6	-1.6
WB2	**Warramunga Arr**	57.17	185⇑	*i*P	P	16 11 39.5	-1.8
WRA	**Warramunga Arr**	57.17	185	P	P	16 11 39.6	-1.7
	comp=Z,20nm,0.9s,mb5.1,baz=0.2,slow=7.3,SNR=105						
WRA				PcP	PcP	16 12 35.0	-0.6
	comp=Z,2.9nm,0.7s,baz=357,slow=4.1,SNR=5.3						
WRA	**Warramunga Arr**	57.17	185	P	P	16 11 39.6	-1.7
WRA						16 12 35.0	
WRA				pmax	pmax		
	comp=Z,20nm,0.9s						
WRA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CTAO	**Charters Tower**	57.66	171	P	P	16 11 43.2	-1.5
MBWA	**Marble Bar**	60.85	200	*e*P	P	16 12 04.7	-2.1
	comp=Z,17nm,1.2s,mb5.0						
ASPA	**Alice Springs**	60.90	185⇑	*i*P	P	16 12 05.5	-1.5
ARCES	**ARCESS Array B**	62.79	339	P	P	16 12 18.1	-1.0
	comp=Z,5.5nm,0.9s,mb4.7,baz=49,slow=9.6,SNR=2.9						
ARCES				LR	LR	16 42 43.0	
	comp=Z,104nm,19.1s,MS4.0,baz=74,slow=39						
ARCES	**ARCESS Array B**	62.79	339	P	P	16 12 18.1	-1.0
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARCES				MLR	MLR		
	comp=Z,105nm,19.1s						
JOF	**Joensuu**	64.49	331	*e*p	P	16 12 28.7	-1.5
YKA	**Yellowknife Ar**	64.67	29	P	P	16 12 30.2	-1.2
	comp=Z,1.3nm,0.7s,mb4.1,baz=306,slow=7.3,SNR=5.5						
YKA				pP	pP	16 12 38.0	-1.2
	comp=Z,2.2nm,0.7s,baz=306,slow=6.6,SNR=11						
YKA	**Yellowknife Ar**	64.67	29	P	P	16 12 30.2	-1.2
YKA				pP	pP	16 12 38.0	-1.2
YKA	**Yellowknife Ar**	64.67	29	P	P	16 12 30.2	-1.2
YKA				*PP	pP	16 12 38.0	-1.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OBN	**Obninsk**	66.34	322	*e*P	P	16 12 42.4	+0.1
OBN				*e*S	S	16 21 31.0	+2.1
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
OBN				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.5						
KAF	**Kangasniemi**	66.86	332	*e*p	P	16 12 43.8	-1.6
	comp=Z,5.2nm,0.6s,mb4.7						
KAF	**Kangasniemi**	66.86	332	*e*P	P	16 12 43.8	-1.6
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
FINES	**FINESS Array B**	67.35	331	P	P	16 12 47.8	-0.8
	comp=Z,8.4nm,0.9s,mb4.8,baz=27,slow=8.5,SNR=14						
FINES				pP	pP	16 12 55.1	-1.3
	comp=Z,13nm,0.9s,baz=117,slow=4.3,SNR=8.8						
FINES	**FINESS Array B**	67.35	331	P	P	16 12 47.8	-0.8
FINES				*PP	pP	16 12 55.1	-1.3
FINES				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FINES				pmax	pmax		
	comp=Z,13nm,0.9s						
ARMA	**Armidale**	68.60	168	*e*P	P	16 12 57.2	+0.3
KIV	**Kislovodsk**	68.83	310	*e*P	P	16 12 58.7	+0.5
	comp=Z,22nm,1.2s,mb5.0						
KIV	**Kislovodsk**	68.83	310	*i* P	P	16 12 58.8	+0.7
KIV				*e*		16 15 28.6	
KIV				*e*S	S	16 22 01.2	+2.2
KIV				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
KIV				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
STKA	**Stephens Creek**	68.99	177	P	P	16 12 58.9	-0.4
	comp=Z,7.3nm,0.7s,mb4.7,baz=339,slow=6.5,SNR=17						
STKA	**Stephens Creek**	68.99	177	*e*P	P	16 12 58.4	-0.9
GNI	**Garni**	69.55	305	*i* P	P	16 13 02.6	+0.1
GNI				pmax	pmax		
	comp=Z,13nm,1.5s						
SUMG	**Summit**	70.29	359	*e*P	P	16 13 06.6	+0.1
	comp=Z,16nm,0.8s,mb5.0						
SUMG				*e*	pP	16 13 14.5	+0.1
ANN	**Anapa**	71.53	313	*e*P	P	16 13 02.5	-12
ANN				*i* *PP	pP	16 13 12.8	-10
ANN				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.4						
AKASG	**Malin Array Be**	72.52	321	P	P	16 13 18.8	-1.4
	comp=Z,4.6nm,0.7s,mb4.5,baz=44,slow=6.9,SNR=13						
AKASG				pP	pP	16 13 26.9	-1.2
	comp=Z,7.8nm,0.9s,baz=45,slow=6.2,SNR=6.5						
AKASG	**Malin Array Be**	72.52	321	P	P	16 13 18.8	-1.4
AKASG				*PP	pP	16 13 26.9	-1.1
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NB2	**NORSAR Subarra**	72.89	336	P	P	16 13 21.3	-0.9
	comp=Z,3.3nm,0.8s,mb4.3,baz=41,slow=5.8						
NOA	**NORSAR Array B**	72.89	336	P	P	16 13 21.7	-0.5
	comp=Z,4.5nm,0.8s,mb4.5,baz=40,slow=5.9,SNR=12						
NOA				pP	pP	16 13 29.2	-0.9
	comp=Z,7.5nm,0.9s,baz=41,slow=5.9,SNR=11						
NOA				LR	LR	16 49 19.4	
	comp=Z,63nm,18.6s,MS3.9,baz=180,slow=39						
NOA	**NORSAR Array B**	72.89	336	P	P	16 13 21.7	-0.5
NOA				pP	pP	16 13 29.2	-0.9
NOA				LR	LR	16 49 19.4	
NOA	**NORSAR Array B**	72.89	336	P	P	16 13 21.7	-0.5
NOA				*PP	pP	16 13 29.2	-0.8
NOA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NOA				MLR	MLR		
	comp=Z,63nm,18.6s						
NAO	**NORSAR Subarra**	73.18	336	P	P	16 13 21.3	-2.6
	comp=Z,3.3nm,0.8s,mb4.3						
HRY	**Holter Researc**	75.31	42	*e*P	P	16 13 36.8	+0.3
DLMT	**Dillon**	75.74	43	*e*P	P	16 13 39.6	+0.6
	comp=Z,18nm,0.9s,mb5.0						
DLMT				*e*	pP	16 13 46.8	-0.1
HLID	**Hailey**	75.85	46	*e*P	P	16 13 40.7	+1.0
	comp=Z,7.4nm,1.2s,mb4.5						
HLID				*e*	pP	16 13 48.0	+0.5
BOZ	**Bozeman (W)**	76.09	43	*e*P	P	16 13 41.7	+0.8
	comp=Z,18nm,1.2s,mb4.9						
BOZ				*e*	pP	16 13 49.4	+0.5
BOZ	**Bozeman (W)**	76.09	43	*e*P	P	16 13 41.7	+0.8
BOZ				*e*	pP	16 13 49.4	+0.6
BOZ				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.9						
KWP	**Kalwaria**	76.41	323	*e*P	P	16 13 43.5	+0.8
KWP				*e*	pP	16 13 51.0	+0.5
KWP	**Kalwaria**	76.41	323	*e*P	P	16 13 43.5	+0.9
KWP				*e*	pP	16 13 51.0	+0.5
NVAR	**Mina Array Bea**	76.66	52	P	P	16 13 45.2	+0.9
	comp=Z,4.0nm,0.9s,mb4.3,baz=298,slow=4.2,SNR=22						
NVAR				pP	pP	16 13 53.0	+0.8
	comp=Z,7.2nm,1.0s,baz=299,slow=4.3,SNR=11						
BR131	**Keskin Array S**	76.79	310	*e*P	P	16 13 44.9	-0.1
	comp=Z,1.5nm,0.8s,mb4.0						
BRTR	**Keskin Array B**	76.79	310	P	P	16 13 46.0	+1.0
	comp=Z,2.1nm,0.9s,mb4.0,baz=90,slow=4.9,SNR=11						
BRTR				pP	pP	16 13 52.7	-0.2
	comp=Z,3.1nm,1.0s,baz=72,slow=3.9,SNR=8.4						
BRTR	**Keskin Array B**	76.79	310	P	P	16 13 46.0	+1.0
BRTR				*PP	pP	16 13 52.7	-0.2
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KOLS	**Kolonicke sedl**	77.09	323	*e*P	P	16 13 46.6	+0.2
KOLS				*e*pP	pP	16 13 54.8	+0.4
ELK	**Elko**	77.12	48	P	P	16 13 48.1	+1.3
	comp=Z,1.6nm,0.8s,mb4.0,baz=308,slow=5.9,SNR=8.2						
ELK	**Elko**	77.12	48	P	P	16 13 48.1	+1.3
ELK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STHS	**Stebnicka Huta**	77.25	323	*e*P	P	16 13 46.1	-1.2
STHS				*e*		16 13 48.7	
OJC	**Ojcow**	77.37	325	*e*P	P	16 13 48.4	+0.4
CRVS	**Cervenica-Dubn**	77.50	323	*e*P	P	16 13 49.1	+0.4
CRVS				*e*pP	pP	16 13 56.5	-0.1
IMW	**Indian Meadow**	77.59	44	*e*P	P	16 13 49.8	+0.5
	comp=Z,4.7nm,0.8s,mb4.5						
IMW				*e*	pP	16 13 58.9	+1.6
LAO	**LASA Array**	78.23	39	*e*P	P	16 13 48.9	-3.9
	comp=Z,6.6nm,0.8s,mb4.6						
KECS	**Kecovo**	78.26	323	*e*P	P	16 13 53.6	+0.7
OKC	**Ostrava-Krasne**	78.40	325	*e*pP	pP	16 14 01.9	+0.4
KSP	**Ksiaz**	78.50	327	*e*P	P	16 13 54.8	+0.6
KSP				*e*	pP	16 14 02.6	+0.5
KSP	**Ksiaz**	78.50	327	*e*P	P	16 13 53.8	-0.3
KSP				*e*pP	pP	16 14 02.1	0.0
MORC	**Moravsky Berou**	78.71	325	*e*P	P	16 13 54.8	-0.5
	comp=Z,10.0nm,1.0s,mb4.7						
MORC	**Moravsky Berou**	78.71	325	*e*P	P	16 13 54.8	-0.5
MORC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
HWUT	**Hardware Ranch**	78.72	46	*e*P	P	16 13 56.3	+0.8
	comp=Z,6.8nm,1.1s,mb4.5						
HWUT				*e*	pP	16 14 04.0	+0.5
DPC	**Dobruska-Polom**	78.84	326	*e*P	P	16 13 57.0	+1.0
DPC				*e*pP	pP	16 14 04.8	+0.8
UPC	**Upice**	78.86	327	*e*pP	pP	16 14 04.5	+0.4
DUG	**Dugway**	78.90	48	*e*P	P	16 13 57.4	+0.8
	comp=Z,2.4nm,0.9s,mb4.1						
DUG				*e*	pP	16 14 05.2	+0.6
DUG	**Dugway**	78.90	48	*e*P	P	16 13 57.4	+0.8
DUG				*e*	pP	16 14 05.2	+0.7
DUG				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
VYHS	**Vyhne**	79.03	324	*e*P	P	16 13 58.0	+0.9
VYHS				*e*pP	pP	16 14 04.9	-0.2
PDAR	**Pinedale Array**	79.09	44	P	P	16 13 58.0	+0.5
	comp=Z,4.3nm,0.9s,mb4.4,baz=295,slow=1.8,SNR=26						
PDAR				pP	pP	16 14 05.8	+0.3
	comp=Z,4.1nm,0.9s,baz=297,slow=3.3,SNR=10.0						
PVCC	**Panska Ves**	79.47	327	*e*pP	pP	16 14 08.1	+0.7
BRG	**Berggiesshubel**	79.49	328	*e*P	P	16 13 59.8	+0.3
	comp=Z,5.0nm,1.0s,mb4.4						
BRG				*e*	pP	16 14 07.8	+0.3
BRG	**Berggiesshubel**	79.49	328	*e*P	P	16 13 59.8	+0.3
BRG				*e*	pP	16 14 07.8	+0.3
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
CLL	**Collm**	79.55	329	P	P	16 14 00.0	+0.1
	comp=Z,logA/T=0.9,mb4.6						
CLL				*i* *PP	pP	16 14 07.4	-0.4
CLL	**Collm**	79.55	329	*e*P	P	16 14 00.0	+0.1
	comp=Z,7.0nm,0.9s,mb4.6						
CLL				*i* pP	pP	16 14 07.4	-0.4
CLL	**Collm**	79.55	329	*e*P	P	16 14 00.0	+0.1
CLL				*i* *PP	pP	16 14 07.4	-0.4
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
PRU	**Pruhonice**	79.89	327	*e*P	P	16 14 02.3	+0.6
PRU				*e*pP	pP	16 14 10.0	+0.3
MSU	**Marysvale**	80.36	49	*e*P	P	16 14 06.7	+2.2
MSU				*e*	pP	16 14 14.0	+1.5
ULM	**Lac du Bonnet**	80.48	32	P	P	16 14 05.0	+0.1
	comp=Z,2.6nm,1.0s,mb4.1,baz=219,slow=12,SNR=3.3						
ULM				pP	pP	16 14 12.2	-0.6
	comp=Z,5.6nm,0.9s,baz=316,slow=6.0,SNR=5.2						
NKC	**Novy Kostel**	80.60	328	*e*P	P	16 14 05.4	-0.1
NKC				*e*pP	pP	16 14 13.3	-0.1
KHC	**Kasperske Hory**	80.94	327	*e*P	P	16 14 08.2	+0.9
KHC				*e*pP	pP	16 14 15.5	+0.2
SRU	**San Rafael**	80.95	47	*e*P	P	16 14 08.2	+0.7
	comp=Z,5.8nm,0.9s,mb4.5						
SRU	**San Rafael**	80.95	47	*e*P	P	16 14 08.2	+0.6
SRU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
GERES	**GERESS Array B**	81.11	327	P	P	16 14 08.4	+0.2
	comp=Z,1.6nm,0.5s,mb4.2,baz=34,slow=4.8,SNR=11						
GERES				pP	pP	16 14 16.4	+0.2
	comp=Z,2.5nm,0.8s,baz=45,slow=3.8,SNR=6.4						
GRA1	**Grafenberg Arr**	81.52	328	*e*P	P	16 14 11.5	+1.2
	comp=Z,7.0nm,0.8s,mb4.6						
GRA1				*e*pP	pP	16 14 18.8	+0.5
GRF	**Grafenberg Arr**	81.52	328	*e*P	P	16 14 11.5	+1.2
	comp=Z,7.0nm,0.8s,mb4.6						
GRF				*e*pP	pP	16 14 18.8	+0.5
GRF	**Grafenberg Arr**	81.52	328	*e*P	P	16 14 11.5	+1.2
GRF				*e**PP	pP	16 14 18.8	+0.5
GRF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
GRF	**Grafenberg Arr**	81.52	328	*e*P	P	16 14 11.5	+1.2
GRF				*e**PP	pP	16 14 18.8	+0.5
GRF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
GROS	**Grobnik**	82.06	324	*e*P	P	16 14 13.4	+0.2
PERS	**Pernice**	82.11	324	*i* P	P	16 14 13.9	+0.5
GOLS	**Golise**	82.34	324	*i* P	P	16 14 14.8	+0.2
ANMO	**Albuquerque**	86.15	48	*i* P	P	16 14 35.9	+1.8
PPT	**Papeete**	86.96	115	LR	LR	16 55 36.2	
	comp=Z,96nm,18.1s,MS4.2,baz=3.4,slow=37						
GDL2	**Guadalupe Moun**	89.32	49	*e*P	P	16 14 49.6	+0.1
GDL2				*e*	pP	16 14 57.5	0.0
TXAR	**Lajitas Array**	91.76	51	P	P	16 15 01.8	+1.0
	comp=Z,0.7nm,0.6s,mb4.2,baz=306,slow=4.0,SNR=8.0						
TXAR				pP	pP	16 15 09.4	+0.6
	comp=Z,1.0nm,0.6s,baz=288,slow=2.9,SNR=4.9						
DBIC	**Dimbokro**	124.34	314	PKP	PKPdf	16 20 51.9	-4.1
	comp=Z,1.4nm,0.6s,baz=3.9,slow=8.4,SNR=5.7						
SNAA	**Sanae**	140.38	198	P	PKPdf	16 21 15.1	-9.5
SNAA	**Sanae**	140.38	198		PKPdf	16 21 27.6	+3.0
SNAA	**Sanae**	140.38	198		PKPdf	16 21 29.5	+4.9
VNA2	**Neumayer--Watz**	141.98	197⇑	*i*	PKPdf	16 21 21.0	-6.2
VNA2	**Neumayer--Watz**	141.98	197		PKPdf	16 21 23.6	-3.6
VNA2	**Neumayer--Watz**	141.98	197		PKPdf	16 21 27.8	+0.6
VNA2	**Neumayer--Watz**	141.98	197		PKPdf	16 21 34.9	+7.7
VNA2	**Neumayer--Watz**	141.98	197⇑	*i*PKPdf	PKPdf	16 21 18.8	-8.4
VNA2			⇑	*i*PKPdf	PKPdf	16 21 21.0	-6.2
VNA3	**Neumayer Olymp**	142.28	196⇑	*i*P	PKPdf	16 21 19.5	-8.2
VNA1	**Neumayer--Stat**	142.38	197	P	PKPdf	16 21 20.8	-7.1
SAML	**Samuel**	145.59	40	*e*PKPdf	PKPdf	16 21 31.8	-3.3
SAML				*e*		16 21 39.6	
LPAZ	**La Paz**	148.51	55	PKPbc	PKPdf	16 21 38.5	-1.4
	comp=Z,1.9nm,0.8s,baz=350,slow=4.7,SNR=11						
LPAZ	**La Paz**	148.51	55	*e*PKPdf	PKPdf	16 21 36.8	-3.0
LPAZ	**La Paz**	148.51	55	PKIKP	PKPdf	16 21 38.5	-1.4
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						

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*NEIC **03** 16:13:13.8±0.6, 44.05N×105.19W, ML3.2, Error ellipse: s-maj=7.5km s-min=5.8km az=105.0, Suspected Mining explosion.*

NEIC 35 km [25 miles] SE of Gillette.

*IDC **03** 16:13:14.4±1.7, 44.06N×105.54W, mb1 3.7/3, mb1mx3.5/22, mbtmp3.4/3, ML3.1/3, Error ellipse: s-maj=61.1km s-min=8.4km az=148.0*

ISC 03 16:13:11.9±0.8**, 44.07N**±0.05×**105.16W**±0.09**, n26,** σ**$0^{s}93$**/26, **Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHWY	**Pilot Hill**	**2.77**	**185**	*e*P	**Pn**	**16 13 59.5**	**+1.2**
RWWY	**Rawlins**	**2.81**	**213**	*e*P	**Pn**	**16 14 01.3**	**+2.3**
BW06	**Boulder Array**	**3.46**	**249**	*e*P	**Pn**	**16 14 08.7**	**+0.6**
PDAR	**Pinedale Array**	**3.46**	**249**	Pn	**Pn**	**16 14 08.6**	**+0.6**
	1.2nm,0.3s,baz=79,slow=14,SNR=27						
PDAR				Lg		16 14 54.5	
	11nm,0.3s,baz=65,slow=32,SNR=19						
GCMT	**Greycliff**	**3.63**	**300**	*e*P	**Pn**	**16 14 11.1**	**+0.5**
LOHW	**Long Hollow**	**3.96**	**265**	P	**Pn**	**16 14 16.3**	**+1.1**
SNOW	**Snow King Moun**	**4.10**	**263**	P	**Pn**	**16 14 18.2**	**+1.1**
IMW	**Indian Meadow**	**4.17**	**270**	P	**Pn**	**16 14 18.9**	**+0.6**
REDW	**Red Top Meadow**	**4.18**	**262**	P	**Pn**	**16 14 19.9**	**+1.5**
YMR	**Madison River**	**4.20**	**280**	P	**Pn**	**16 14 18.6**	**-0.1**
TPAW	**Teton Pass**	**4.23**	**264**	P	**Pn**	**16 14 19.5**	**+0.4**
ISCO	**Idaho Springs**	**4.28**	**185**	*e*P	**Pn**	**16 14 18.5**	**-1.2**
DGMT	**Dagmar**	**4.45**	**8**	P	**Pn**	**16 14 22.6**	**+0.4**
AHID	**Auburn Hatcher**	**4.52**	**255**	P	**Pn**	**16 14 22.2**	**-0.9**
BOZ	**Bozeman (W)**	**4.86**	**291**	*e*P	**Pn**	**16 14 27.1**	**-0.9**
HWUT	**Hardware Ranch**	**5.31**	**245**	*e*P	**Pn**	**16 14 33.0**	**-1.4**
HRY	**Holter Researc**	**5.39**	**302**	*e*P	**Pn**	**16 14 35.5**	**0.0**
TCUT	**Toone Canyon**	**5.47**	**240**	*e*P	**Pn**	**16 14 36.9**	**+0.3**
MCMT	**McKenzie Canyo**	**5.55**	**281**	*e*P	**Pn**	**16 14 37.6**	**-0.3**
DAU	**Daniels Canyon**	**5.81**	**233**	*e*P	**Pn**	**16 14 40.1**	**-1.4**
HVU	**Hansel Valley**	**6.04**	**250**	*e*P	**Pn**	**16 14 44.5**	**-0.2**
CHMT	**Chamberlain Mo**	**6.36**	**299**	*e*P	**Pn**	**16 14 47.7**	**-1.4**
SRU	**San Rafael**	**6.38**	**221**	*e*P	**Pn**	**16 14 48.5**	**-1.0**
DUG	**Dugway**	**6.88**	**238**	P	**Pn**	**16 14 55.5**	**-0.9**
ULM	**Lac du Bonnet**	**8.84**	**42**	Pn	**P**	**16 15 23.8**	**-0.1**
	0.8nm,0.3s,baz=228,slow=12,SNR=12						
ULM				Lg		16 17 54.6	
	0.2nm,0.3s,baz=307,slow=21,SNR=2.6						
NVAR	**Mina Array Bea**	**11.38**	**245**	Pn	**P**	**16 15 58.6**	**-0.1**
	0.1nm,0.3s,baz=48,slow=12,SNR=4.2						

MOS ***03*** *16:13:50.8±0.9, 34.73N×73.27E, h11^{km}, mb4.5/5, Error ellipse: s-maj=18.4km s-min=8.1km az=92.4*
NDI ***03*** *16:13:51.4±4.7, 34.82N×72.86E, h10^{km}, MD3.8, ML3.7*
IDC ***03*** *16:13:51.2±1.0, 34.70N×73.18E, mb4.1/7, mb1 4.1/10, mb1mx3.8/21, mbtmp4.0/10, ML3.8/3, Error ellipse: s-maj=31.0km s-min=21.9km az=88.0*
NEIC ***03*** *16:13:52.5±0.4, 34.72N×73.21E, h10^{km}, mb3.7/5, Error ellipse: s-maj=9.1km s-min=4.3km az=55.0*
NNC ***03*** *16:13:59.7±4.9, 35.25N×72.89E, h10^{km}±64^{km}, mpv3.9, Error ellipse: s-maj=62.8km s-min=30.6km az=162.0*
BJI ***03*** *16:14:03.6, 35.09N×74.17E, h10^{km}, ML3.6*
ISC 03 16:13:53.8±0.3**, 34.75N**±0.02×**73.35E**±0.05**, h33^{km}, n62, σ1^{s}15**/76**, mb4.1**/9**, 10C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.50**	**233**	⇑P	**P**	**16 14 17.8**	**-0.9**
CEP				S	**S**	**16 14 37.0**	**-0.3**
THW	**Thamme Wali**	**2.36**	**215**	⇓P	**P**	**16 14 32.5**	**+1.5**
JMU	**Jammu**	**2.40**	**147**	*e*S	**S**	**16 15 10.0**	**+10**
SARP	**Sargodha**	**2.87**	**192**	⇑P	**P**	**16 14 39.6**	**+1.3**
SARP				S	**S**	**16 15 16.0**	**+3.9**
DLH	**Dalhousie**	**3.10**	**134**	*e*x	x	16 14 46.0	
SBDP	**Sheikh Budin**	**3.23**	**222**	⇓P	**P**	**16 14 44.6**	**+1.2**
BHK	**Bhakra**	**4.20**	**141**	*e*x	x	16 15 54.2	
BHK				*e*x	x	16 16 13.8	
SDNR	**Sundarnagar**	**4.44**	**136**	*e*P	**P**	**16 15 04.6**	**+4.0**
SDNR				*e*S	**S**	**16 15 56.8**	**+5.0**
SMLA	**Simla**	**4.83**	**137**	*e*P	**P**	**16 15 08.4**	**+2.3**
SMLA				*e*S	**S**	**16 16 06.5**	**+4.8**
KSH	**Kashi**	**5.20**	**23**	P	**P**	**16 15 18.4**	**+7.0**
KSH				S	**S**	**16 16 18.5**	**+7.4**
KSH				Smax			
	comp=N,80nm,0.3s						
KSH				Smax			
	comp=E,100nm,0.2s						
KLP	**Kalpa**	**5.21**	**127**	*e*P	**P**	**16 15 14.9**	**+3.4**
KLP				*e*S	**S**	**16 16 13.8**	**+2.6**
KLP				AML	AML	16 16 47.0	
	comp=N,288nm,0.5s						
KLP				AML	AML	16 16 47.2	
	comp=E,338nm,0.5s						
NDI	**New Delhi**	**6.88**	**150**	*e*P	**P**	**16 15 32.0**	**-3.0**
KALG	**Kalgarh**	**6.95**	**137**	*e*S	**S**	**16 16 54.2**	**-0.5**
KALG				AML	AML	16 17 38.0	
	comp=E,65nm,0.5s						
KHET	**Khetri**	**6.97**	**162**	*e*P	**P**	**16 15 35.2**	**-1.1**
KHET				*e*S	**S**	**16 16 52.6**	**-2.7**
KHET				AML	AML	16 16 57.5	
	comp=E,45nm,0.4s						
KHET				AML	AML	16 16 58.1	
	comp=N,37nm,0.3s						
KUDL	**Kundal**	**7.11**	**157**	*e*P	**P**	**16 15 38.5**	**+0.4**
KUDL				*e*S	**S**	**16 16 56.3**	**-2.3**
SONA	**Sohna**	**7.22**	**153**	*e*P	**P**	**16 15 40.4**	**+0.7**
SONA				*e*S	**S**	**16 16 58.0**	**-3.3**
SONA				AML	AML	16 17 05.2	
	comp=E,59nm,0.4s						
SONA				AML	AML	16 17 05.3	
	comp=N,27nm,0.3s						
AAK	**Ala-Archa**	**7.93**	**6**	⇓Pn	**Pn**	**16 15 52.7**	**+2.9**
	comp=N,1.9nm,0.5s						
AAK				⇓Sn	**Sn**	**16 17 18.5**	**-0.7**
	comp=N,9.3nm,0.8s						
AAK	**Ala-Archa**	**7.93**	**6**	*e*Pn	**Pn**	**16 15 49.0**	**-0.7**
	comp=N,3.0nm,0.5s						
AAK	**Ala-Archa**	**7.93**	**6**	*e*P	**P**	**16 15 49.0**	**-0.5**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KK31	**Karatay Array**	**8.63**	**346**	⇑Pn	**P**	**16 15 59.2**	**-0.1**
	comp=Z,3.2nm,0.3s,baz=156,slow=12,SNR=178						
KK31				Sn	**Sn**	**16 17 33.0**	**-3.8**
	comp=Z,5.9nm,0.5s,baz=165,slow=14,SNR=8.2						
KOLN	**Koldanda**	**11.19**	**126**	*e*Pn	**P**	**16 16 34.9**	**+0.4**
KOLN				*e*Sn	**S**	**16 18 35.8**	**-3.7**
	comp=Z,32nm,0.6s						
GKN	**Gorkha**	**11.75**	**122**	*e*Pn	**P**	**16 16 41.6**	**-0.5**
GKN				*e*Sn	**S**	**16 18 47.6**	**-5.6**
	comp=Z,46nm,0.5s						
DMN	**Daman**	**12.32**	**122**	*e*Pn	**P**	**16 16 49.5**	**-0.3**
DMN				*e*Sn	**S**	**16 19 02.4**	**-4.5**
	comp=Z,30nm,0.6s						
KKN	**Kakani**	**12.34**	**121**	*e*Pn	**P**	**16 16 48.8**	**-1.2**
KKN				*e*Sn	**S**	**16 19 01.5**	**-5.7**
	comp=Z,44nm,0.8s						
PKI	**Pulchoki**	**12.56**	**121**	*e*Pn	**P**	**16 16 52.3**	**-0.7**
PKI				*e*Sn	**S**	**16 19 06.8**	**-5.8**
	comp=Z,33nm,0.7s						
GUN	**Gumba**	**12.69**	**119**	*e*Pn	**P**	**16 16 54.9**	**+0.2**
MK31	**Makanchi Array**	**13.80**	**27**	⇑P	**P**	**16 17 10.3**	**+1.1**
	comp=Z,3.8nm,1.2s,baz=209,slow=12,SNR=5.8						
MKAR	**Makanchi Array**	**13.80**	**27**	Pn	**P**	**16 17 09.9**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=201,slow=12,SNR=4.9						
KURK	**Kurchatov**	**16.42**	**12**	⇑P	**P**	**16 17 43.2**	**+0.2**
	comp=Z,3.8nm,1.9s						
KURK	**Kurchatov**	**16.42**	**12**	*e*P	**P**	**16 17 43.1**	**+0.1**
	comp=Z,2.4nm,1.0s						
KURK	**Kurchatov**	**16.42**	**12**	*e*P	**P**	**16 17 43.1**	**0.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AB31	**Akbulak array**	**17.55**	**330**	⇑P	**P**	**16 17 55.7**	**-1.6**
	comp=Z,1.6nm,0.7s,baz=150,slow=13,SNR=21						
VOSK	**Vostochnaya**	**18.05**	**355**	⇑P	**P**	**16 18 03.1**	**-0.4**
	comp=Z,8.8nm,0.7s						
BVA0	**Borovoye Array**	**18.39**	**354**	⇑P	**P**	**16 18 08.4**	**+0.5**
	comp=Z,0.5nm,1.4s,baz=161,slow=8.2,SNR=11						
BVAR	**Borovoye Array**	**18.39**	**354**	P	**P**	**16 18 08.2**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=158,slow=9.1,SNR=11						
BVAR	**Borovoye Array**	**18.39**	**354**	P	**P**	**16 18 08.2**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**18.44**	**354**	*e*P	**P**	**16 18 08.0**	**-0.4**
	comp=Z,2.2nm,0.9s						
BRVK	**Borovoye**	**18.44**	**354**	*e*P	**P**	**16 18 08.0**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CHKZ	**Chkalovo**	**19.02**	**355**	⇑P	**P**	**16 18 14.8**	**-0.7**
	comp=Z,3.6nm,1.6s						
CHKZ	**Chkalovo**	**19.02**	**355**	*e*P	**P**	**16 18 14.4**	**-1.1**
	comp=Z,1.4nm,0.6s						
CHKZ	**Chkalovo**	**19.02**	**355**	*e*P	**P**	**16 18 14.4**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTO	**Aktyubinsk**	**19.26**	**329**	⇑P	**P**	**16 18 17.8**	**-0.3**
	comp=Z,1.2nm,1.1s						
AKTO	**Aktyubinsk**	**19.26**	**329**	P	**P**	**16 18 17.9**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=134,slow=12,SNR=17						
AKTO	**Aktyubinsk**	**19.26**	**329**	P	**P**	**16 18 17.9**	**-0.2**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	**20.81**	**19**	P	**P**	**16 18 34.3**	**-0.4**
	comp=Z,4.5nm,0.4s,baz=252,slow=5.9,SNR=16						
ZAL	**Zalesovo**	**20.81**	**19**	P	**P**	**16 18 34.3**	**-0.4**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
NVS	**Novosibirsk**	**21.24**	**16**	*e*P	**P**	**16 18 38.3**	**-0.7**
JOF	**Joensuu**	**38.34**	**330**	*e*p	**P**	**16 21 12.8**	**-0.1**
	comp=Z,1.6nm,0.3s,mb4.2						
JOF	**Joensuu**	**38.34**	**330**	*e*P	**P**	**16 21 12.8**	**-0.1**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**40.00**	**327**	P	**P**	**16 21 26.9**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.7,baz=119,slow=11,SNR=6.1						
FINES	**FINESS Array B**	**40.00**	**327**	P	**P**	**16 21 26.9**	**+0.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KAF	**Kangasniemi**	**40.13**	**328**	*e*p	**P**	**16 21 26.8**	**-1.0**
ARCES	**ARCESS Array B**	**43.49**	**338**	P	**P**	**16 21 56.0**	**+0.7**
	comp=Z,2.2nm,0.8s,mb3.9,baz=111,slow=8.0,SNR=6.6						
YAK	**Yakutsk**	**44.31**	**34**	P	**P**	**16 22 02.5**	**+0.6**
	comp=Z,6.4nm,0.7s,mb4.5						
YAK	**Yakutsk**	**44.31**	**34**	P	**P**	**16 22 02.5**	**+0.6**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
MAJO	**Matsushiro**	**51.83**	**68**	P	**P**	**16 23 00.4**	**-0.3**
DBIC	**Dimbokro**	**76.54**	**269**	P	**P**	**16 25 42.3**	**-0.5**
	comp=Z,2.4nm,0.8s,mb4.2,baz=37,slow=4.9,SNR=3.9						
BOSA	**Boshof**	**77.68**	**222**	P	**P**	**16 25 49.3**	**+0.3**
	comp=Z,3.4nm,0.9s,mb4.3,baz=30,slow=8.1,SNR=4.4						
WRA	**Warramunga Arr**	**79.44**	**123**	P	**P**	**16 26 00.5**	**+1.8**
	comp=Z,0.4nm,0.5s,mb3.6,baz=322,slow=4.9,SNR=7.3						
WRAB	**Tennant Creek**	**79.44**	**123**	P	**P**	**16 26 00.1**	**+1.4**
	comp=Z,6.3nm,1.1s,mb4.5						
WRAB	**Tennant Creek**	**79.44**	**123**	P	**P**	**16 26 00.1**	**+1.4**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
YKA	**Yellowknife Ar**	**82.89**	**4**	P	**P**	**16 26 17.5**	**+1.7**
	comp=Z,0.3nm,0.4s,mb3.6,baz=347,slow=5.4,SNR=3.3						

ATH ***03*** *17:12:29.4, 38.10N×26.44E, h21^{km}, MD3.4/3*
ISK ***03*** *17:12:31.0, 38.09N×26.73E, h15^{km}, MD3.2*
CSEM ***03*** *17:12:31.0±0.2, 38.15N×26.74E, h20^{km}, MD3.2, Error ellipse: s-maj=4.4km s-min=2.6km az=110.0*
ISC 03 17:12:29.2±1.0**, 38.12N**±0.03×**26.57E**±0.06**, h6^{km}**±6^{km}**, n18, σ0^{s}77**/25**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.24**	**4**	*i* P	**Pg**	**17 12 34.0**	**-0.1**
URLA				*i* S	**Sg**	**17 12 37.6**	**+0.3**
BLCB	**Balcova**	**0.45**	**54**	*i* PG	**Pg**	**17 12 39.0**	**+0.7**
SMG	**Samos**	**0.46**	**153**	*e*PB	**Pb**	**17 12 39.5**	**+0.1**
SMG				*e*SB	**Sb**	**17 12 46.8**	**+0.6**
IZM	**Izmir**	**0.61**	**63**	*i* PG	**Pg**	**17 12 41.5**	**+0.1**
KDAG	**Bornova**	**0.61**	**63**	*i* P	**Pg**	**17 12 40.3**	**-1.2**
KDAG				*i* S	**Sg**	**17 12 48.9**	**-0.8**
AYDN	**Tasoluk**	**1.13**	**114**	*i* P	**Pb**	**17 12 51.6**	**+0.7**
AYDN				*i* S	**Sb**	**17 13 06.0**	**+0.4**
PRK	**Paraskevi**	**1.15**	**348**	*e*PN	**Pn**	**17 12 51.4**	**-0.4**
PRK				*e*SN	**Sn**	**17 13 07.4**	**-0.5**
BODT	**Bodrum**	**1.21**	**151**	PN	**Pn**	**17 12 53.0**	**+0.3**
BODT				SN	**Sn**	**17 13 08.1**	**-1.5**
AKS	**Akhisar**	**1.23**	**52**	PN	**Pn**	**17 12 53.6**	**+0.6**
MLSB	**Milas**	**1.26**	**131**	PN	**Pn**	**17 12 53.6**	**+0.2**
APE	**Apeiranthos**	**1.34**	**219**	PN	**Pn**	**17 12 56.4**	**+1.9**
APE	**Apeiranthos**	**1.34**	**219**	*e*PN	**Pn**	**17 12 53.3**	**-1.2**
MANT	**Manisa**	**1.60**	**76**	*i* P	**Pn**	**17 12 59.6**	**+1.3**
MANT				*i* S	**Sb**	**17 13 19.9**	**+0.5**
DAT	**Datca**	**1.60**	**150**	*e*PN	**Pn**	**17 12 58.4**	**+0.1**
YER	**Yerkesik**	**1.68**	**125**	PN	**Pn**	**17 12 59.0**	**-0.4**
BALB	**Balikesir**	**1.83**	**34**	*e*PN	**Pn**	**17 13 02.4**	**+0.9**
DENT	**Denizli**	**1.98**	**100**	*e*PN	**Pn**	**17 13 02.4**	**-1.3**
KHL	**Karahalli**	**2.33**	**84**	*e*PN	**Pn**	**17 13 07.9**	**-0.8**

MAN 03 17:19:03.1, 10.03N×126.00E, h12^{km}, mb4.3, ML3.1, MS2.9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.12**	**200**	*e*P	Pb	17 19 22.8	-1.2
BUTP				*e*S	Sb	17 19 38.9	+0.5
MSLP	**Maasin**	**1.13**	**275**	*e*P	Pb	17 19 24.5	+0.4
MSLP				*e*S	Sb	17 19 39.4	+0.8
PLP	**Palo**	**1.51**	**318**	*e*P	Pn	17 19 29.7	-0.5
PLP				*e*S	Sb	17 19 49.5	0.0
BESP	**Borongan**	**1.65**	**340**	*e*P	Pn	17 19 31.9	-0.3
BESP				*e*S	Sn	17 19 54.3	+0.8
BUKP	**Musuan**	**2.33**	**204**	*e*P	Pn	17 19 41.1	-0.9
BUKP				*e*S	Sn	17 20 11.7	+0.9
MATI	**Mati**	**3.08**	**175**	*e*P	Pn	17 19 52.6	0.0
IPIL	**Ipil**	**4.06**	**237**	*e*P	Pn	17 20 06.5	-0.1

BJI ***03*** *17:56:30.4, 51.20N×156.10E, h125^{km}, mB4.5, mb4.5*
KRSC ***03*** *17:56:30.7±1.5, 50.68N×156.89E, h111^{km}±5^{km}, ML4.4*
MOS ***03*** *17:56:31.9±1.1, 51.18N×156.08E, h138^{km}, mb3.9/19, Error ellipse: s-maj=11.8km s-min=6.7km az=73.6*
NEIC ***03*** *17:56:32.4±0.5, 51.19N×156.07E, mb4.3/11, Error ellipse: s-maj=12.2km s-min=7.3km az=142.0*
IDC ***03*** *17:56:32.8±0.9, 51.22N×156.12E, h129^{km}±7^{km}, mb3.6/16, mb1 3.9/19, mb1mx3.8/27, mbtmp4.1/19, Error ellipse: s-maj=17.3km s-min=10.7km az=157.0*
ISC 03 17:56:31.9±0.4**, 51.04N**±0.05×**156.20E**±0.08**, h139^{km}**±3^{km}**, h134^{km}**±6.0^{km}**:pP-P, n120, σ1^{s}25**/135**, mb4.1**/36**, 1C-2D, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.36**	**188**	*i* P	**P**	**17 56 47.1**	**-4.8**
SKR				*i* S	**S**	**17 57 01.2**	**-6.0**
ALID	**Alaid**	**0.44**	**247**	*i* P	**P**	**17 56 52.2**	**-0.1**
ALID				*i* S	**S**	**17 57 06.9**	**-0.9**
PAU	**Pauzhetka**	**0.57**	**42**	*i* P	**P**	**17 56 51.8**	**-1.1**
PAU				*i* S	**S**	**17 57 06.6**	**-2.4**
PAU				Smax			
	5μm,0.8s						
MIPR	**Malaya Ipel'ka**	**1.28**	**16**	*i* P	**P**	**17 56 59.0**	**+0.3**
GRL	**Gorelyy**	**1.91**	**37**	*i* P	**P**	**17 57 06.1**	**+0.5**
GRL				*i* S	**S**	**17 57 31.1**	**-0.4**
APC	**Apacha**	**1.98**	**17**	*i* P	**P**	**17 57 06.9**	**+0.5**
APC				Smax			
	180nm,1.0s						
RUS	**Russkaya**	**2.00**	**45**	P	**P**	**17 57 06.0**	**-0.8**
RUS				S	**S**	**17 57 30.8**	**-2.6**
RUS	**Russkaya**	**2.00**	**45**	*i* P	**P**	**17 57 05.9**	**-0.9**
RUS				*e*S	**S**	**17 57 30.8**	**-2.6**
PET	**Petropavlovsk**	**2.50**	**36**	P	**P**	**17 57 13.0**	**-0.1**
PET				S	**S**	**17 57 44.9**	**+0.4**
PET	**Petropavlovsk**	**2.50**	**36**	*i* P	**P**	**17 57 12.9**	**-0.2**
PET				*i* S	**S**	**17 57 44.4**	**-0.1**
PET	**Petropavlovsk**	**2.50**	**36**	*e*P	**P**	**17 57 12.5**	**-0.6**
UGLR	**Uglovaya**	**2.71**	**36**	*e*P	**P**	**17 57 16.6**	**+0.8**
AVH	**Avacha**	**2.72**	**34**	*i* P	**P**	**17 57 17.2**	**+1.2**
AVH				*e*S	**S**	**17 57 50.5**	**+0.9**
SMAR	**Somma**	**2.74**	**35**	*i* P	**P**	**17 57 17.3**	**+1.1**
SDLR	**Sedlovina**	**2.78**	**35**	*e*P	**P**	**17 57 17.2**	**+0.4**
GNL	**Ganaly**	**2.86**	**21**	*i* P	**P**	**17 57 18.8**	**+1.0**
NLC	**Nalytchevo**	**2.88**	**41**	P	**P**	**17 57 16.8**	**-1.3**
NLC				S	**S**	**17 57 50.4**	**-2.9**
NLC	**Nalytchevo**	**2.88**	**41**	*e*P	**P**	**17 57 16.7**	**-1.4**
SPN	**Mys Shipunski**	**3.13**	**47**	*i* P	**P**	**17 57 20.1**	**-1.2**
SPN				*e*S	**S**	**17 57 55.4**	**-3.7**
KII	**Karymskiy**	**3.60**	**32**	P	**P**	**17 57 28.2**	**+0.8**
KII				S	**S**	**17 58 10.8**	**+0.8**
KII	**Karymskiy**	**3.60**	**32**	*e*P	**P**	**17 57 28.2**	**+0.8**
KII				*e*S	**S**	**17 58 10.2**	**+0.2**
MKZ	**Mys Kozlova**	**4.86**	**42**	P	**P**	**17 57 42.2**	**-2.1**
MKZ				S	**S**	**17 58 34.7**	**-5.4**
MKZ	**Mys Kozlova**	**4.86**	**42**	*e*P	**P**	**17 57 42.2**	**-2.1**
TUMR	**Tumrok**	**4.87**	**28**	*e*P	**P**	**17 57 45.4**	**+1.1**
ESO	**Esso**	**5.11**	**16**	*e*P	**P**	**17 57 48.9**	**+1.3**
KMNR	**Kamenistaya**	**5.30**	**26**	*e*P	**P**	**17 57 52.0**	**+1.9**
KOZ	**Kozyrevsk**	**5.48**	**22**	P	**P**	**17 57 53.6**	**+1.1**
KOZ	**Kozyrevsk**	**5.48**	**22**	*e*P	**P**	**17 57 53.5**	**+1.0**
KPT	**Kopyto**	**5.49**	**24**	*e*P	**P**	**17 57 53.3**	**+0.8**
KOZR	**Kozyr**	**5.49**	**22**	PN	**P**	**17 57 53.6**	**+1.0**
SRDR	**Sredinnyy**	**5.68**	**20**	*e*P	**P**	**17 57 57.3**	**+2.1**
ZLN	**Zelenaya**	**5.69**	**27**	*e*P	**P**	**17 57 56.7**	**+1.4**
LGNR	**Loginova**	**5.71**	**26**	*e*P	**P**	**17 57 57.2**	**+1.6**
CIRR	**Tsirk**	**5.76**	**26**	*e*P	**P**	**17 57 57.3**	**+1.1**
KBG	**Krutoberegovo**	**6.50**	**34**	S	**S**	**17 59 17.3**	**-2.1**
KBTR	**Krutoberegovo**	**6.50**	**35**	P	**P**	**17 58 05.2**	**-1.1**
KBTR	**Krutoberegovo**	**6.50**	**35**	*i* P	**P**	**17 58 05.0**	**-1.3**
BKI	**Bering**	**7.21**	**51**	*e*P	**P**	**17 58 10.3**	**-5.5**
BKI				Smax			
	100nm,0.4s						
FX1	**Attu Island--F**	**10.63**	**73**	P	**P**	**17 59 01.3**	**+0.1**
	2.8nm,0.3s,baz=319,slow=4.2,SNR=49						
FX1				S	**S**	**18 00 51.1**	**-7.2**
	20nm,0.3s,baz=338,slow=23,SNR=16						
ASAJ	**Asahikawa**	**11.49**	**238**	P	**P**	**17 59 14.9**	**+2.4**
	1.7nm,0.3s,baz=61,slow=11,SNR=22						
ASAJ	**Asahikawa**	**11.49**	**238**	PN	**P**	**17 59 15.0**	**+2.5**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KAMR	**Kamenskoye**	**12.67**	**22**	*e*P	**P**	**17 59 30.1**	**+2.3**
BILL	**Bilibino**	**17.75**	**12**	*e*P	**P**	**18 00 31.1**	**-0.1**
BILL	**Bilibino**	**17.75**	**12**	*i* P	**P**	**18 00 32.0**	**+0.8**
BILL				*e*S	**S**	**18 03 47.3**	**+5.5**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YAK	**Yakutsk**	**18.15**	**317**	*e*P	**P**	**18 00 34.9**	**-0.8**
	comp=Z,85nm,0.6s						
YAK	**Yakutsk**	**18.15**	**317**	*e*P	**P**	**18 00 34.2**	**-1.4**
YAK				pmax	pmax		
	comp=Z,44nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,15nm,1.0s						
MDJ	**Mudanjiang**	**18.92**	**261**	*e*P	**P**	**18 00 42.1**	**-2.0**
CLNS	**Chul'man**	**19.20**	**300**	*e*P	**P**	**18 00 48.8**	**+1.9**
CLNS				pmax	pmax		
	comp=N,16nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,37nm,0.8s						
CLNS				pmax	pmax		
	comp=E,19nm,0.9s						
MAJO	**Matsushiro**	**19.38**	**229**	*e*P	**P**	**18 00 48.5**	**-0.5**
	comp=E,14nm,0.6s						
MAJO	**Matsushiro**	**19.38**	**229**	*e*P	**P**	**18 00 48.5**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,14nm,0.6s						
MAT	**Matsushiro**	**19.38**	**229**	P	**P**	**18 00 49.7**	**+0.7**
MAT	**Matsushiro**	**19.38**	**229**	*e*P	**P**	**18 00 50.0**	**+1.0**
	comp=Z,9.9nm,0.5s						
MAT	**Matsushiro**	**19.38**	**229**	*e*P	**P**	**18 00 50.0**	**+1.0**
MAT				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MJAR	**Matsushiro Arr**	**19.38**	**229**	P	**P**	**18 00 49.5**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=15,slow=11,SNR=17						
MJAR	**Matsushiro Arr**	**19.38**	**229**	P	**P**	**18 00 49.6**	**+0.6**
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CN2	**Changchun**	**21.91**	**263**	*e*P	**P**	**18 01 14.4**	**+0.1**
HIA	**Hailar**	**23.28**	**280**	*e*P	**P**	**18 01 27.4**	**0.0**
	comp=Z,6.1nm,0.6s,mb4.2						
HIA	**Hailar**	**23.28**	**280**	*e*P	**P**	**18 01 27.4**	**0.0**
HIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIXI	**Tiksi**	**24.04**	**339**	*i* P	**P**	**18 01 34.6**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.5						
KS15	**Wonju Array Si**	**24.24**	**247**	*e*P	**P**	**18 01 38.0**	**+1.2**
BOD	**Bodaibo**	**25.12**	**302**	*e*P	**P**	**18 01 47.0**	**+2.2**
BOD				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
JNU	**Nakatsue**	**25.75**	**236**	P	**P**	**18 01 52.8**	**+1.7**
	comp=Z,3.9nm,0.4s,mb4.4,baz=180,slow=41,SNR=6.9						
ILAR	**Eielson Array**	**31.96**	**43**	P	**P**	**18 02 45.5**	**-0.7**
	comp=Z,0.7nm,0.6s,mb3.5,baz=263,slow=6.1,SNR=13						
ILAR				pP	pP	18 03 12.2	-4.1
	comp=Z,0.8nm,0.8s,baz=265,slow=8.6,SNR=3.9						
ILAR	**Eielson Array**	**31.96**	**43**	P	**P**	**18 02 45.6**	**-0.6**
ILAR				*PP	pP	18 03 12.2	-4.1
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	**Songino Array**	**32.05**	**284**	P	**P**	**18 02 47.3**	**+0.2**
	comp=Z,0.9nm,0.5s,mb3.8,baz=65,slow=7.9,SNR=8.4						
SONM	**Songino Array**	**32.05**	**284**	P	**P**	**18 02 47.3**	**+0.2**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NJ2	**Nanjing**	**33.30**	**250**	*e*P	**P**	**18 02 56.3**	**-1.8**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
INK	**Inuvik**	**36.95**	**36**	P	**P**	**18 03 28.5**	**-0.1**
	comp=Z,0.9nm,0.6s,mb3.6,baz=281,slow=9.3,SNR=4.7						
INK	**Inuvik**	**36.95**	**36**	*e*P	**P**	**18 03 28.3**	**-0.3**
INK	**Inuvik**	**36.95**	**36**	P	**P**	**18 03 28.5**	**-0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YHNB	**Yeheng**	**37.49**	**239**	P	**P**	**18 03 35.9**	**+2.4**
LZH	**Lanzhou**	**39.90**	**269**	*e*P	**P**	**18 03 52.9**	**-0.5**
LZH				AP	pP	18 04 24.2	-0.3
LZH				XP	sP	18 04 40.3	-0.7
LZH				PP	PP	18 05 30.4	-0.2
LZH				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.2						
LZH				AMB	AMB		
	comp=Z,50nm,6.5s						
LZH				LR	LR		
	comp=E,170nm,13.5s						
LZH				LR	LR		
	comp=Z,260nm,17.6s						
ZAL	**Zalesovo**	**41.88**	**303**	P	**P**	**18 04 09.6**	**+0.3**
	comp=Z,0.5nm,0.3s,mb3.5,baz=116,slow=7.0,SNR=3.3						
ZAL				PcP	PcP	18 06 02.4	-0.6
	comp=Z,1.0nm,0.4s,baz=31,slow=4.3,SNR=4.3						
ZAL	**Zalesovo**	**41.88**	**303**	P	**P**	**18 04 09.6**	**+0.2**
ZAL				PcP	PcP	18 06 02.4	-0.6
ZAL	**Zalesovo**	**41.88**	**303**	P	**P**	**18 04 09.6**	**+0.3**
ZAL						18 06 02.4	
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVS	**Novosibirsk**	**42.30**	**305**	*e*P	**P**	**18 04 11.1**	**-1.6**
NVS				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.3						
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
WMQ	**Urumqi**	**45.37**	**289**	⇑P	**P**	**18 04 37.7**	**+0.2**
WMQ				AP	pP	18 05 09.7	+0.7
WMQ				XP	sP	18 05 25.9	+0.9
WMQ				PCP	PcP	18 06 15.9	+0.9
WMQ				PP	PP	18 06 26.0	-0.1
WMQ				S	**S**	**18 11 06.0**	**-0.9**
WMQ				XS		18 12 01.7	
WMQ				AMB	AMB		
	comp=Z,130nm,4.6s						
WMQ				LR	LR		
	comp=N,20nm,15.0s						
WMQ				LR	LR		
	comp=E,20nm,17.2s						
WMQ				LR	LR		
	comp=Z,10.0nm,17.2s						
KURK	**Kurchatov**	**46.76**	**302**	*e*P	**P**	**18 04 46.7**	**-1.7**
	comp=Z,2.7nm,0.5s,mb4.1						
KURK				*e*	pP	18 05 18.0	-2.1
KURK	**Kurchatov**	**46.76**	**302**	⇓*e*P	**P**	**18 04 46.8**	**-1.6**
MKAR	**Makanchi Array**	**46.86**	**295**	P	**P**	**18 04 48.6**	**-0.6**
	comp=Z,0.7nm,0.3s,mb3.7,baz=66,slow=7.6,SNR=14						
MKAR				pP	pP	18 05 18.9	-2.1
	comp=Z,1.0nm,0.8s,baz=39,slow=7.8,SNR=3.7						
MKAR	**Makanchi Array**	**46.86**	**295**	P	**P**	**18 04 48.7**	**-0.5**
MKAR				*PP	pP	18 05 18.9	-2.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CHKZ	**Chkalovo**	**49.28**	**309**	*e*P	**P**	**18 05 03.9**	**-3.9**
	comp=Z,1.4nm,0.6s,mb3.8						
CHKZ				*e*	pP	18 05 39.5	-0.4
CHKZ	**Chkalovo**	**49.28**	**309**	*e*P	**P**	**18 05 03.9**	**-4.0**
CHKZ				*e*	pP	18 05 39.5	-0.4
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
BVAR	**Borovoye Array**	**49.76**	**308**	P	**P**	**18 05 10.3**	**-1.3**

	comp=Z,0.7nm,0.5s,mb3.5,baz=50,slow=7.8,SNR=6.6						
BVAR				PcP	PcP	18 06 29.6	-1.1
	comp=Z,0.8nm,0.4s,baz=61,slow=2.6,SNR=4.8						
BVAR	Borovoye Array	49.76	308	P	P	18 05 10.3	-1.2
BVAR						18 06 29.6	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BRVK	Borovoye	49.80	308	P	P	18 05 09.5	-2.3
	comp=Z,1.3nm,0.8s,mb3.6						
BRVK	Borovoye	49.80	308	P	P	18 05 09.5	-2.3
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5						
ARU	Arti	53.25	317	eP	P	18 05 35.7	-1.9
	comp=Z,3.5nm,0.9s,mb4.1						
ARU	Arti	53.25	317	eP	P	18 05 35.7	-2.0
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
AAK	Ala-Archa	53.80	295	eP	P	18 05 39.7	-2.1
	comp=Z,3.2nm,0.9s,mb4.0						
AAK	Ala-Archa	53.80	295	eP	P	18 05 39.7	-2.2
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
ARCES	ARCESS Array B	54.46	341	P	P	18 05 44.1	-2.3
	comp=Z,5.2nm,0.9s,mb4.2,baz=38,slow=7.0,SNR=5.8						
FCC	Fort Churchill	56.57	36	P	P	18 06 00.8	-0.9
	comp=Z,45nm,1.5s,mb5.1						
FCC	Fort Churchill	56.57	36	P	P	18 06 00.8	-0.8
FCC				pmax	pmax		
	comp=Z,45nm,1.5s,mb5.1						
GUN	Gumba	56.68	274	eP	P	18 06 03.2	+0.4
	comp=Z,11nm,0.4s,mb5.0						
KKN	Kakani	57.14	275	eP	P	18 06 06.7	+0.6
	comp=Z,13nm,0.5s,mb5.0						
PKI	Pulchoki	57.22	274	eP	P	18 06 06.8	+0.2
	comp=Z,7.4nm,0.6s,mb4.7						
DMN	Daman	57.38	275	eP	P	18 06 08.5	+0.8
	comp=Z,17nm,0.7s,mb5.0						
GKN	Gorkha	57.40	275	eP	P	18 06 08.3	+0.5
	comp=Z,14nm,0.5s,mb5.0						
NVAR	Mina Array Bea	58.74	66	P	P	18 06 17.8	+0.7
	comp=Z,0.9nm,0.5s,mb3.8,baz=292,slow=8.2,SNR=7.8						
NVAR	Mina Array Bea	58.74	66	P	P	18 06 17.8	+0.7
PDAR	Pinedale Array	60.64	57	P	P	18 06 30.5	+0.5
	comp=Z,1.0nm,0.7s,mb3.8,baz=317,slow=4.1,SNR=5.2						
FINES	FINESS Array B	61.01	335	P	P	18 06 29.5	-2.7
	comp=Z,5.1nm,1.1s,mb4.2,baz=18,slow=6.0,SNR=4.6						
FINES	FINESS Array B	61.01	335	P	P	18 06 29.5	-2.7
FINES	FINESS Array B	61.01	335	P	P	18 06 29.5	-2.8
FINES				pmax	pmax		
	comp=Z,5.0nm,1.2s						
OBN	Obninsk	62.91	326	eP	P	18 06 43.6	-1.4
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
NOA	NORSAR Array B	64.80	342	P	P	18 06 55.9	-1.2
	comp=Z,0.7nm,0.6s,mb3.7,baz=25,slow=6.6,SNR=3.4						
KIV	Kislovodsk	69.23	315	i P	P	18 07 26.2	+1.0
KIV				e		18 09 58.6	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.3						
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
EKA	Eskdalemuir Ar	72.61	348	P	P	18 07 44.1	-0.8
	comp=Z,0.7nm,0.4s,mb3.7,baz=17,slow=5.2,SNR=8.4						
EKA	Eskdalemuir Ar	72.61	348	P	P	18 07 44.2	-0.8
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRAB	Tennant Creek	73.23	201	eP	P	18 07 49.0	-0.4
	comp=Z,13nm,1.4s,mb4.5						
WRAB	Tennant Creek	73.23	201	eP	P	18 07 49.0	-0.4
WRAB				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.5						
WRA	Warramunga Arr	73.25	201	P	P	18 07 49.2	-0.2
	comp=Z,0.5nm,0.4s,mb3.6,baz=15,slow=6.2,SNR=9.2						
WRA	Warramunga Arr	73.25	201	P	P	18 07 49.2	-0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	Lajitas Array	73.68	64	P	P	18 07 52.8	+1.0
	comp=Z,1.3nm,0.6s,mb3.9,baz=297,slow=4.8,SNR=15						
TXAR				pP	pP	18 08 23.4	-2.9
	comp=Z,0.6nm,0.6s,baz=302,slow=5.6,SNR=3.1						
TXAR	Lajitas Array	73.68	64	P	P	18 07 52.8	+1.0
TXAR				*PP	pP	18 08 23.4	-2.9
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
APE	Apeiranthos	82.16	322	d iP	P	18 08 41.3	+3.2
ESDC	Sonseca Array	88.00	345	P	P	18 09 06.6	-0.1
	comp=Z,1.3nm,0.5s,mb4.0,baz=6.4,slow=3.0,SNR=6.0						
PLCA	Paso Flores	146.39	91	PKPbc	PKPbc	18 15 57.1	+1.7
	comp=Z,2.3nm,0.8s,baz=338,slow=4.3,SNR=3.5						
PLCA	Paso Flores	146.39	91	PKP2	PKPab	18 15 57.1	-1.9
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.8s						

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*CSEM **03** 18:06:15.6±0.3, 41.55N×22.95E, h2^{km}, ML2.5, Error ellipse: s-maj=5.1km s-min=2.4km az=15.0*

*THE **03** 18:06:16.9, 41.47N×22.96E, h3^{km}, ML2.5*

*ATH **03** 18:06:24.0, 41.08N×23.84E, h10^{km}, MD3.0/3*

ISC 03 18:06:14.0±1.2, **41.57N**±0.06×**22.98E**±0.05, **h7**^{km}±9^{km}, **n12**, σ**0^{s}.78**/20, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	Valandovo	0.40	232	i Pg	Pg	18 06 22.5	+0.6
VAY				i Sg	Sg	18 06 27.7	+0.4
KNT	Kendrikon	0.41	189	ePg	Pg	18 06 23.1	+0.9
KNT				eSg	Sg	18 06 27.7	0.0
NVR	Nevrokopi	0.69	108	ePG	Pg	18 06 29.4	+1.5
GRG	Griva	0.75	216	ePg	Pg	18 06 29.3	+0.3
GRG				eSg	Sg	18 06 38.9	-0.1
SOH	Sokhos	0.79	159	ePg	Pg	18 06 30.3	+0.4
SOH				eSg	Sg	18 06 40.3	-0.2
THE	Thessaloniki	0.93	181	ePg	Pg	18 06 32.5	-0.1
	comp=Z,2.2nm,0.3s						
THE				eSg	Sg	18 06 44.6	-0.4
PLG	Polygyros	1.24	163	ePB	Pb	18 06 38.3	+1.0
FNA	Florina	1.44	238	ePg	Pg	18 06 42.0	-0.8
FNA				eSg	Sg	18 07 01.8	-0.2
OUR	Ouranopolis	1.44	148	ePg	Pg	18 06 41.9	-0.9
OUR				eSg	Sg	18 07 01.9	-0.2
LIT	Litokhoron	1.51	194	ePg	Pg	18 06 42.3	-1.8
PAIG	Paliouri	1.72	162	ePb	Pb	18 06 45.9	+0.4
PAIG				eSb	Sb	18 07 07.7	+0.5
RDO	Rodhopi	1.97	101	ePB	Pb	18 06 48.1	-1.7

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*NEIC **03** 18:08:13.0, 38.09N×26.52E, h5^{km}, MD3.6(ATH), MD3.5(ISK), After ISK.*

*ISK **03** 18:08:15.6, 38.11N×26.60E, h6^{km}, MD3.5*

*ATH **03** 18:08:16.6, 38.14N×26.50E, h21^{km}±3^{km}, MD3.6/4*

*CSEM **03** 18:08:16.7±0.1, 38.11N×26.67E, h12^{km}, MD3.5, Error ellipse: s-maj=1.8km s-min=1.7km az=36.0*

*THE **03** 18:08:21.1, 38.02N×26.30E, h21^{km}, ML3.4*

ISC 03 18:08:15.4±0.9, **38.12N**±0.02×**26.57E**±0.03, **h0**^{km}±6^{km}, **n45**, σ**0^{s}.79**/58, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.24	5	i P	Pg	18 08 20.1	0.0
URLA				i S	Sg	18 08 23.6	+0.3
BLCB	Balcova	0.46	55	i PG	Pg	18 08 24.6	+0.1
SMG	Samos	0.47	153	ePN	Pn	18 08 27.0	-1.8
SMG				eSN	Sn	18 08 34.2	-3.7
IZM	Izmir	0.61	63	i PG	Pg	18 08 27.9	+0.3
IZM				i SG	Sg	18 08 35.7	0.0
KDAG	Bornova	0.62	63	i P	Pg	18 08 26.8	-0.9
KDAG				i S	Sg	18 08 34.3	-1.6
AYDN	Tasoluk	1.14	114	i P	Pb	18 08 38.4	+0.8
AYDN				i S	Sb	18 08 52.9	+0.1
PRK	Paraskevi	1.14	348	ePN	Pn	18 08 38.2	-0.3
PRK				eSN	Sn	18 08 52.3	-2.8
BODT	Bodrum	1.21	151	PN	Pn	18 08 39.1	-0.4
BODT				SN	Sn	18 08 55.8	-1.1
AKS	Akhisar	1.23	52	PN	Pn	18 08 38.9	-0.9
BDRM	Kayabasi	1.27	146	i P	Pb	18 08 42.1	+2.3
BDRM				i S	Sb	18 08 58.4	+1.9
MLSB	Milas	1.27	130	PN	Pn	18 08 39.9	-0.4
APE	Apeiranthos	1.34	218	ePn	Pn	18 08 41.7	+0.4
APE				eSn	Sn	18 09 00.1	+0.1
DAT	Datca	1.61	150	PN	Pn	18 08 44.4	-0.8
MANT	Manisa	1.61	76	i P	Pn	18 08 46.9	+1.8
MANT				i S	Sb	18 09 06.1	-0.3
YER	Yerkesik	1.68	125	PN	Pn	18 08 45.9	-0.3
EZN	Ezine	1.71	354	PN	Pn	18 08 47.4	+0.8
BALB	Balikesir	1.83	34	PN	Pn	18 08 48.4	+0.1
DENT	Denizli	1.98	100	PN	Pn	18 08 50.4	-0.1
LIA	Limnos Island	2.07	329	ePN	Pn	18 08 52.0	+0.2
LOS	Limnos	2.15	328	ePn	Pn	18 08 53.5	+0.6
	comp=Z,2.2nm,0.8s						
LOS				eSn	Sn	18 09 20.0	-0.6
DST	Dursunbey	2.19	47	PN	Pn	18 08 53.3	-0.1
LPK	Lapseki	2.25	4	PN	Pn	18 08 54.4	0.0
KHL	Karahalli	2.34	84	ePN	Pn	18 08 55.9	+0.3
AOS	Alonnisos	2.35	297	ePn	Pn	18 08 55.6	-0.2
AOS				eSn	Sn	18 09 20.9	-4.8
EDC	Edincik	2.44	24	ePN	Pn	18 08 57.1	+0.1
BNT	Bandirma	2.46	25	ePN	Pn	18 08 57.3	-0.1
MRMT	Marmara Adasi	2.60	18	ePN	Pn	18 08 59.1	-0.3
ORLT	Orhaneli	2.64	43	ePN	Pn	18 09 00.2	+0.3
MFT	Murefte	2.72	12	ePN	Pn	18 09 01.2	+0.2
ALN	Alexandroupoli	2.80	352	ePn	Pn	18 09 03.3	+1.1
ALN				eSn	Sn	18 09 38.5	+1.3
PAIG	Paliouri	2.88	310	ePn	Pn	18 09 03.8	+0.4
ALT	Altintas	2.93	70	ePN	Pn	18 09 04.1	+0.1
OUR	Ouranopolis	2.98	319	ePn	Pn	18 09 04.8	0.0
RDO	Rodhopi	3.12	346	ePN	Pn	18 09 06.2	-0.6
YLV	Yalova	3.27	41	ePN	Pn	18 09 09.4	+0.5
BADT	Buyukada	3.36	35	ePN	Pn	18 09 10.4	+0.2
AGG	Agios Georgios	3.44	286	ePn	Pn	18 09 10.0	-1.3
HRT	Hereke	3.61	41	ePN	Pn	18 09 14.1	+0.4
ESKT	Eskisehir	3.62	66	ePN	Pn	18 09 14.3	+0.4
SOH	Sokhos	3.67	318	ePn	Pn	18 09 14.8	+0.3
EDRB	Edirne	3.72	2	ePN	Pn	18 09 15.5	+0.2
LIT	Litokhoron	3.74	303	ePn	Pn	18 09 15.1	-0.4
KNT	Kendrikon	4.15	318	ePn	Pn	18 09 21.6	+0.2
GRG	Griva	4.29	313	ePn	Pn	18 09 23.2	-0.1
GRG	Griva	4.29	313	ePn	Pn	18 09 23.2	-0.1

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*ISK **03** 18:16:06.2, 38.14N×26.58E, h5^{km}, MD3.2*

*ATH **03** 18:16:07.1, 38.18N×26.81E, h32^{km}, MD3.2/3*

*CSEM **03** 18:16:07.3±0.1, 38.16N×26.69E, h8^{km}, MD3.2, Error ellipse: s-maj=4.0km s-min=2.7km az=117.0*

ISC 03 18:16:06.5±0.8, **38.19N**±0.03×**26.55E**±0.05, **h2**^{km}±6^{km}, **n20**, σ**0^{s}.87**/29, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.18	11	i P	Pg	18 16 10.0	-0.1
URLA				i S	Sg	18 16 13.2	+0.7
BLCB	Balcova	0.43	63	i PG	Pg	18 16 14.9	-0.3
SMG	Samos	0.53	155	ePB	Pg	18 16 17.6	+0.5
SMG				eSB	Sg	18 16 25.1	+1.0
IZM	Izmir	0.60	69	i PG	Pg	18 16 18.0	-0.5
IZM				i SG	Sg	18 16 26.8	+0.4
KDAG	Bornova	0.60	69	i P	Pg	18 16 17.2	-1.4
KDAG				i S	Sg	18 16 25.2	-1.4
PRK	Paraskevi	1.08	348	ePN	Pn	18 16 28.4	-0.1
AYDN	Tasoluk	1.17	116	i P	Pb	18 16 29.0	-0.1
AYDN				i S	Sb	18 16 44.5	-0.2
AKS	Akhisar	1.21	55	ePN	Pn	18 16 29.7	-0.6
BODT	Bodrum	1.27	152	PN	Pn	18 16 30.2	-1.1
MLSB	Milas	1.32	132	ePN	Pn	18 16 31.1	-0.8
BDRM	Kayabasi	1.32	147	i P	Pb	18 16 34.6	+2.8
BDRM				i S	Sb	18 16 50.1	+1.1
APE	Apeiranthos	1.38	216	ePN	Pn	18 16 31.9	-0.9
APE				eSN	Sn	18 16 50.6	-1.2
APE	Apeiranthos	1.38	216	ePn	Pn	18 16 33.9	+1.1
APE				eSn	Sn	18 16 50.6	-1.2
MANT	Manisa	1.61	78	i P	Pn	18 16 37.1	+1.1
MANT				i S	Sb	18 16 57.7	+0.4
EZN	Ezine	1.65	354	ePN	Pn	18 16 37.7	+1.1
DAT	Datca	1.67	150	ePN	Pn	18 16 36.4	-0.5
YER	Yerkesik	1.73	127	ePN	Pn	18 16 37.1	-0.7
BALB	Balikesir	1.78	35	ePN	Pn	18 16 39.4	+0.8
DENT	Denizli	2.01	102	ePN	Pn	18 16 41.7	-0.1
DST	Dursunbey	2.15	48	ePN	Pn	18 16 44.3	+0.4

NNC 03 18:18:32.1±3.8, **40.02N**×**68.90E**, **h14**^{km}±19^{km}, **mpv3.3, 6C-2D, Error ellipse: s-maj=22.9km s-min=12.5km az=1.0, Southeastern Uzbekistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	3.31	21	⇑Pn	Pn	18 19 25.1	+0.5
	2.9nm,0.4s,baz=170,slow=8.8,SNR=76						
KK31				⇓Pg	Pg	18 19 32.7	-5.5
	5.2nm,0.5s,baz=213,slow=16,SNR=6.9						
KK31				⇑Lg		18 20 18.1	
	8.8nm,0.4s,baz=202,slow=29,SNR=9.9						
AAK	Ala-Archa	4.96	56	⇓Pn	Pn	18 19 45.6	-2.4
	3.4nm,0.7s						
AAK				⇑Sn	Sn	18 20 45.9	+0.1
	3.4nm,0.5s						
AAK				⇑Lg		18 21 08.7	
	6.6nm,0.7s						
AB31	Akbulak array	11.21	328	⇑Pn	P	18 21 12.9	-2.1
	1.1nm,0.6s,baz=147,slow=13,SNR=23						
AB31				⇑Sn	S	18 23 15.9	-5.3
	0.4nm,0.3s,baz=159,slow=22,SNR=4.2						

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*IDC **03** 18:29:35.5±1.9, 2.41N×94.45E, mb4.1/6, mb1 4.2/6, mb1mx3.9/18, mbtmp4.1/6, Error ellipse: s-maj=68.1km s-min=28.2km az=52.0*

*NEIC **03** 18:29:40.0±1.2, 2.53N×94.44E, h30^{km}, mb4.4/4, Error ellipse: s-maj=27.1km s-min=11.5km az=207.0*

ISC 03 18:29:38.3±1.3, **2.6N**±0.2×**94.5E**±0.1, **h30**^{km}, **n19**, σ**0^{s}.95**/19, **mb4.2**/12, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.72	66	ePn	Pn	18 31 16.7	-0.9
KKM	Kota Kinabalu	21.94	80	eP	P	18 34 32.9	+1.5
SHL	Shillong	22.99	354	eP	P	18 34 41.0	-0.8
PKI	Pulchoki	26.32	342	eP	P	18 35 13.8	+0.2
DMN	Daman	26.45	341	eP	P	18 35 15.0	+0.2
GUN	Gumba	26.50	343	eP	P	18 35 13.7	-1.5
KKN	Kakani	26.57	342	eP	P	18 35 16.3	+0.5
	4.8nm,0.7s,mb4.1						
GKN	Gorkha	26.97	341	eP	P	18 35 19.0	-0.5
	10nm,1.0s,mb4.3						
KOLN	Koldanda	27.12	338	eP	P	18 35 21.7	+0.8
	9.3nm,1.0s,mb4.3						
LSA	Lhasa	27.16	354	eP	P	18 35 25.9	+4.7
	6.5nm,0.6s,mb4.3						
WRA	Warramunga Arr	45.07	122	P	P	18 37 53.0	-0.8
	1.0nm,0.9s,mb3.6,baz=300,slow=9.3,SNR=5.0						
MKAR	Makanchi Array	45.30	348	P	P	18 37 56.4	+1.1
	2.5nm,0.4s,mb4.4,baz=168,slow=8.5,SNR=9.5						
SONM	Songino Array	46.24	11	P	P	18 38 03.9	+1.2
	1.0nm,0.4s,mb4.1,baz=188,slow=9.5,SNR=6.1						
KURK	Kurchatov	49.80	347	P	P	18 38 29.9	-0.5
	4.0nm,0.9s,mb4.5						
ZAL	Zalesovo	51.81	353	P	P	18 38 46.2	+0.6
	3.9nm,0.4s,mb4.7,baz=299,slow=4.6,SNR=8.7						
ZAL	Zalesovo	51.81	353	P	P	18 38 46.2	+0.6
BVAR	Borovoye Array	54.09	342	P	P	18 39 02.8	+0.3
	1.4nm,0.6s,mb4.1,baz=139,slow=9.8,SNR=7.9						
CHKZ	Chkalovo	54.59	343	eP	P	18 39 03.9	-2.3
	5.6nm,1.1s,mb4.5						
CHKZ				e	pP	18 39 14.8	-0.6
BRTR	Keskin Array B	66.18	313	P	P	18 40 25.9	+0.4
	0.4nm,0.7s,mb3.5,baz=63,slow=3.2,SNR=3.5						

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*NNC **03** 18:31:51.7±6.8, 46.31N×90.62E, mpv3.0, Error ellipse: s-maj=65.6km s-min=48.4km az=18.0*

BJI 03 18:31:55.9, 45.92N×90.39E, h15^{km}**, ML3.3, 4C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	2.84	223	PG	Pg	18 32 48.4	-4.3
WMQ				SG	Sg	18 33 26.4	-4.2
WMQ				Smax			
	comp=N,110nm,0.6s						
WMQ				Smax			
	comp=E,90nm,0.6s						
MK31	Makanchi Array	5.67	282	Pn	Pn	18 33 20.0	-1.8
	comp=E,0.6nm,0.3s,baz=99,slow=15,SNR=32						
MK31				⇓Pg	Pg	18 33 33.1	-16
	comp=E,0.3nm,0.2s,baz=96,slow=17,SNR=4.2						
MK31				⇑Lg		18 34 54.9	
	comp=E,5.7nm,0.6s,baz=84,slow=30,SNR=4.8						
KURK	Kurchatov	9.19	306	⇑Pn	P	18 34 06.3	-4.6
	comp=E,3.1nm,1.8s						
KURK				⇑Sn	Sn	18 35 47.8	-7.3
	comp=E,0.6nm,0.6s						
KURK				⇑Lg		18 36 38.6	
	comp=E,5.4nm,0.8s						

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*IDC **03** 18:41:11.7±7.3, 26.98S×176.74W, h35^{km}±56^{km}, mb4.0/5, mb1 4.3/5, mb1mx4.0/12, mbtmp4.3/5, MS3.6/6, Ms1 3.6/6, ms1mx3.2/23, Error ellipse: s-maj=35.0km s-min=31.5km az=75.0*

*NEIC **03** 18:41:13.0±2.7, 27.12S×176.80W, h50^{km}±22^{km}, mb4.4/6, Error ellipse: s-maj=20.8km s-min=15.4km az=223.0*

ISC 03 18:41:13.0±2.9, **27.2S**±0.1×**176.9W**±0.2, **h59**^{km}±23^{km}, **n33**, σ**0^{s}.97**/26, **mb4.3**/11, **MS3.6**/5, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.27	202	Pn	P	18 41 49.5	+0.6
	326nm,0.3s,baz=98,slow=16,SNR=17						
RAO				Sn	S	18 42 19.1	+3.5
	244nm,0.3s,baz=70,slow=23,SNR=3.7						
RAO	Raoul Island	2.27	202	ePn	P	18 41 48.9	0.0
RAO				eSn	S	18 42 14.6	-1.1
URZ	Urewera	12.16	203	Pn	P	18 43 59.6	-6.0
	0.7nm,0.3s,baz=24,slow=3.3,SNR=4.6						
URZ				Sn	S	18 46 13.1	-7.1
	1.6nm,0.3s,baz=72,slow=23,SNR=8.9						
AFI	Afiamalu	14.03	21	Pn	P	18 44 16.9	-13
DZM	Mont Dzumac	15.93	285	LR	LR	18 50 04.7	
	comp=Z,158nm,19.0s,baz=30,slow=33						
PPT	Papeete	26.99	75	LR	LR	18 55 17.9	
	comp=Z,76nm,18.8s,MS3.3,baz=100,slow=32						
HNR	Honiara	28.05	305	LR	LR	18 56 18.4	
	comp=Z,74nm,20.2s,MS3.3,baz=141,slow=32						
CTA	Charters Tower	34.35	274	P	P	18 47 58.1	+1.8
	4.1nm,0.4s,mb4.7,baz=78,slow=10,SNR=8.8						
CTAO	Charters Tower	34.35	274	eP	P	18 47 57.5	+1.2
	11nm,0.9s,mb4.8						
STKA	Stephens Creek	36.23	252	LR	LR	19 01 26.5	
	comp=Z,147nm,19.8s,MS3.8,baz=205,slow=33						
STKA	Stephens Creek	36.23	252	P	P	18 48 10.3	-1.9
ASPA	Alice Springs	44.32	263	eP	P	18 49 19.6	+0.6
WB2	Warramunga Arr	45.00	268	eP	P	18 49 24.5	0.0
WRAB	Tennant Creek	45.01	268	eP	P	18 49 23.9	-0.7
	5.5nm,0.8s,mb4.4						
WRA	Warramunga Arr	45.01	268	P	P	18 49 24.5	-0.1
	1.2nm,0.5s,mb4.0,baz=103,slow=8.6,SNR=28						
KAKA	Kakadu	49.39	277	eP	P	18 50 15.4	+16
	3.3nm,0.6s,mb4.5						
SBA	Scott Base	51.34	184	eP	P	18 50 12.7	-0.4
VNDA	Vanda	51.41	186	eP	P	18 50 15.4	+1.8
	1.8nm,1.2s,mb3.9						
FITZ	Fitzroy Crossi	53.38	267	eP	P	18 50 28.8	-0.2
	4.0nm,0.9s,mb4.3						
QSPA	South Pole Qui	62.95	180	eP	P	18 51 34.8	-0.4
	4.3nm,0.8s,mb4.6						
MAW	Mawson	75.67	200	P	P	18 52 54.3	+1.3
	2.2nm,0.6s,mb4.3,baz=146,slow=8.4,SNR=14						
MJAR	Matsushiro Arr	76.13	324	P	P	18 52 55.5	-0.8
	2.1nm,0.7s,mb4.2,baz=155,slow=4.6,SNR=5.1						
USHA	Ushuaia	78.08	146	LR	LR	19 18 17.0	
	comp=Z,70nm,20.2s,MS4.0,baz=341,slow=28						
SNAA	Sanae	81.37	178	eP	P	18 53 22.9	-1.3
	3.2nm,1.0s,mb4.2						
YSS	Yuzh-Sakhalins	82.25	333	P	P	18 53 29.6	+0.4
PLCA	Paso Flores	84.04	133	LR	LR	19 22 33.4	
	comp=Z,58nm,18.6s,MS4.0,baz=0.5,slow=30						
NVAR	Mina Array Bea	85.22	42	P	P	18 53 43.9	-0.4
	0.2nm,0.5s,mb3.5,baz=226,slow=6.6,SNR=4.4						
NVAR	Mina Array Bea	85.22	42	P	P	18 53 43.9	-0.4
ENH	Enshi	90.55	304	P	P	18 54 11.0	+0.9
ARCES	ARCESS Array B	135.60	349	PKP	PKPdf	19 00 27.5	+1.5
	2.6nm,0.9s,slow=2.4,SNR=5.4						
NOA	NORSAR Array B	145.67	353	PKPbc	PKPbc	19 00 44.5	-0.3
	1.1nm,0.6s,baz=11,slow=4.5,SNR=3.5						
AKASG	Malin Array Be	149.19	327	PKPbc	PKPdf	19 00 54.6	+4.5
	0.5nm,0.4s,baz=41,slow=3.6,SNR=4.6						
BRTR	Keskin Array B	151.71	304	PKPbc	PKPdf	19 01 02.9	+8.5
	0.5nm,0.7s,baz=86,slow=2.2,SNR=6.1						

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*IDC **03** 18:50:56.9±3.7, 19.86S×68.77W, h130^{km}±31^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.4/18, mbtmp4.0/5, Error ellipse: s-maj=47.2km s-min=24.9km az=68.0*

ISC 03 18:50:56.2±3.7, **19.9S**±0.2×**68.6W**±0.3, **h138**^{km}±31^{km}, **n7**, σ**0^{s}.66**/6, **mb3.7**/3, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	3.64	8	P	P	18 51 52.2	-0.1
	4.3nm,0.3s,baz=188,slow=10,SNR=111						
LPAZ				S	S	18 52 35.5	+0.3
	0.3nm,0.3s,baz=80,slow=15,SNR=3.7						
SIV	San Ignacio	8.19	63	P	P	18 52 52.9	-0.4
	3.7nm,0.3s,baz=258,slow=12,SNR=116						
SNAA	Sanae	63.70	161	P	P	19 01 15.1	+0.3
	0.2nm,0.8s,mb3.0,baz=297,slow=9.0,SNR=6.9						
DBIC	Dimbokro	68.05	74	P	P	19 01 43.8	+0.4
	2.1nm,0.6s,mb4.0,baz=240,slow=4.5,SNR=3.0						
YKA	Yellowknife Ar	89.78	341	P	P	19 03 39.2	-0.5
	1.3nm,0.7s,mb4.0,baz=133,slow=4.2,SNR=8.5						
WRA	Warramunga Arr	134.44	211	PKP	PKPdf	19 09 58.5	-0.3
	0.6nm,0.9s,baz=144,slow=1.5,SNR=5.0						
SONM	Songino Array	151.85	7	PKPbc	PKPdf	19 10 37.0	+9.2
	0.7nm,0.5s,baz=341,slow=1.1,SNR=4.7						

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*NEIC **03** 19:05:53.7±0.8, 30.42S×177.67W, h10^{km}, mb4.8/6, Error ellipse: s-maj=21.9km s-min=12.6km az=96.0*

*IDC **03** 19:06:01.2±2.9, 30.30S×177.84W, h56^{km}±23^{km}, mb4.3/4, mb1 4.5/4, mb1mx4.1/12, mbtmp4.6/4, Error ellipse: s-maj=32.0km s-min=21.7km az=139.0*

ISC 03 19:05:57.1±0.9, **30.73S**±0.06×**178.0W**±0.2, **h33**^{km}, **n28**, σ**0^{s}.96**/24, **mb4.5**/9, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.47	1	P	P	19 06 20.0	-1.6
	361nm,0.3s,baz=83,slow=19,SNR=34						
RAO				S	S	19 06 33.6	-6.2
	2µm,0.3s,baz=128,slow=19,SNR=27						
RAO	Raoul Island	1.47	1	ePg	P	19 06 15.2	-6.4
RAO				S	S	19 06 33.6	-6.2
MXZ	Matakaoa Point	7.49	203	PN	Pn	19 07 46.5	-0.4
PUZ	Puketiti	7.96	202	PN	Pn	19 07 53.0	-0.5
PUZ				eSN	Sn	19 09 22.3	-1.2
URZ	Urewera	8.54	207	P	P	19 08 00.7	-0.7
	0.8nm,0.3s,baz=328,slow=19,SNR=6.7						
URZ				S	S	19 09 38.7	+1.1
	4.0nm,0.3s,baz=202,slow=23,SNR=8.5						
URZ	Urewera	8.54	207	PN	P	19 08 00.8	-0.6
CTA	Charters Tower	33.89	280	eP	P	19 12 40.4	+1.4
	6.5nm,0.4s,mb4.9						
CTA	Charters Tower	33.89	280	P	P	19 12 39.9	+0.8
	9.8nm,0.5s,mb5.0,baz=104,slow=9.6,SNR=24						
CTAO	Charters Tower	33.89	280	eP	P	19 12 39.9	+0.9
	9.0nm,0.6s,mb4.9						
STKA	Stephens Creek	34.44	257	P	P	19 12 46.0	+2.3
	10nm,0.5s,mb5.0,baz=98,slow=9.3,SNR=38						
STKA	Stephens Creek	34.44	257	eP	P	19 12 45.5	+1.8
ASPA	Alice Springs	43.13	267	eP	P	19 13 56.6	+0.3
WB2	Warramunga Arr	44.14	272	eP	P	19 14 03.8	-0.6
WRAB	Tennant Creek	44.14	272	eP	P	19 14 03.6	-0.9
	9.1nm,0.6s,mb4.7						
WRA	Warramunga Arr	44.15	272	P	P	19 14 04.1	-0.4
	4.4nm,0.4s,mb4.6,baz=110,slow=8.1,SNR=84						
FITZ	Fitzroy Crossi	52.40	270	eP	P	19 15 08.2	-0.3
	5.4nm,0.9s,mb4.5						
CASY	Casey	54.87	208	eP	P	19 15 26.1	0.0
	5.2nm,0.6s,mb4.7						
QSPA	South Pole Qui	59.38	180	eP	P	19 16 06.6	+8.5
	8.7nm,0.6s,mb5.0						
SNAA	Sanae	77.83	178	P	P	19 17 54.2	+2.0
	0.2nm,0.3s,mb3.5,baz=182,slow=5.2,SNR=6.9						
NVAR	Mina Array Bea	88.45	43	P	P	19 18 47.1	-0.1
	0.3nm,0.6s,mb3.7,baz=207,slow=8.1,SNR=3.4						
MKAR	Makanchi Array	118.01	310	PKP	PKPdf	19 24 40.1	-0.2

	0.8nm,1.0s,baz=138,slow=0.3,SNR=4.6						
JOF	**Joensuu**	**142.74**	**338**	*e*pkp	PKPdf	19 25 28.3	+2.1
KAF	**Kangasniemi**	**144.87**	**340**	*e*pkp	PKPdf	19 25 27.8	-2.2
	baz=54,slow=2.5						
FINES	**FINESS Array B**	**145.47**	**340**	PKPbc	PKPbc	19 25 30.6	-0.9
	4.2nm,0.3s,baz=49,slow=4.3,SNR=87						
NB2	**NORSAR Subarra**	**149.08**	**351**	PKPabc	PKPdf	19 25 41.2	+4.3
	1.1nm,0.5s,baz=15,slow=2.6						
NOA	**NORSAR Array B**	**149.08**	**351**	PKPbc	PKPdf	19 25 41.5	+4.6
	1.6nm,0.6s,baz=12,slow=4.2,SNR=5.0						
AKASG	**Malin Array Be**	**151.58**	**322**	PKPbc	PKPdf	19 25 47.4	+6.3
	0.8nm,0.3s,baz=45,slow=2.7,SNR=9.5						
BRTR	**Keskin Array B**	**152.78**	**298**	PKPbc	PKPdf	19 25 50.9	+7.6
	0.5nm,0.4s,baz=143,slow=4.7,SNR=7.5						

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*NDI **03** 19:09:37.9±5.1,34.60N×73.10E,h10^{km},ML3.3*

*NNC **03** 19:09:43.5±2.0,35.44N×71.88E,mpv3.6,Error ellipse: s-maj=71.8km s-min=19.9km az=86.0*

ISC 03 19:09:32.8±0.6**,34.76N**±0.04×**73.10E**±0.07**,h10^{km},n14, σ1^{s}22**/19**,3C-1D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.36**	**227**	P	**Pb**	**19 09 57.9**	**0.0**
THW	**Thamme Wali**	**2.26**	**210**	P	**Pn**	**19 10 12.2**	**+1.3**
SARP	**Sargodha**	**2.85**	**187**	P	**Pn**	**19 10 19.8**	**+0.5**
SARP				S	**Sn**	**19 11 00.0**	**+6.0**
THN	**Thein Dam**	**3.18**	**136**	*e*P	**Pn**	**19 10 27.9**	**+3.9**
THN				*e*SB	**Sb**	**19 11 09.3**	**+1.1**
DLH	**Dalhousie**	**3.25**	**132**	*e*P	**Pn**	**19 10 30.0**	**+5.0**
DLH				*e*x	x	19 11 08.0	
BHK	**Bhakra**	**4.34**	**139**	*e*x	x	19 11 51.4	
SDNR	**Sundarnagar**	**4.59**	**134**	*e*P	**Pn**	**19 10 44.8**	**+0.8**
SDNR				*e*x	x	19 11 39.2	
KLP	**Kalpa**	**5.38**	**125**	*e*P	**Pn**	**19 10 56.8**	**+1.6**
KLP				*e*S	**Sn**	**19 11 56.4**	**-1.6**
KLP				AML	AML	19 12 28.8	
	comp=N,117nm,0.5s						
KLP				AML	AML	19 12 29.4	
	comp=E,126nm,0.7s						
KHET	**Khetri**	**7.05**	**160**	*e*P	**Pn**	**19 11 17.1**	**-1.7**
KHET				*e*S	**Sn**	**19 12 32.4**	**-7.3**
KHET				AML	AML	19 12 35.3	
	comp=E,20nm,0.3s						
KHET				AML	AML	19 12 35.7	
	comp=N,18nm,0.6s						
KUDL	**Kundal**	**7.20**	**155**	*e*P	**Pn**	**19 11 18.8**	**-2.0**
KUDL				*e*S	**Sn**	**19 12 37.5**	**-5.9**
SONA	**Sohna**	**7.32**	**151**	*e*S	**Sn**	**19 12 40.6**	**-5.9**
SONA				AML	AML	19 12 46.6	
	comp=E,25nm,0.3s						
SONA				AML	AML	19 12 46.8	
	comp=N,11nm,0.3s						
AAK	**Ala-Archa**	**7.94**	**7**	⇑Sn	**Sn**	**19 13 02.6**	**+0.7**
	comp=N,3.2nm,0.8s						
KK31	**Karatay Array**	**8.57**	**347**	⇑Pn	**P**	**19 11 39.8**	**-0.1**
	comp=N,1.5nm,0.4s,baz=153,slow=11,SNR=45						
KK31				⇑Sn	**Sn**	**19 13 11.8**	**-5.9**
	comp=N,2.4nm,0.5s,baz=164,slow=22,SNR=11						
AB31	**Akbulak array**	**17.44**	**330**	⇓P	**P**	**19 13 36.4**	**-1.2**
	comp=N,1.6nm,1.1s,baz=142,slow=12,SNR=5.2						

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*NEIC **03** 19:13:53.8,32.59S×68.93W,h2^{km},ML3.0(GUC),After GUC.*

GUC 03 19:13:53.8±0.7**,32.59S**×**68.93W,h2^{km}**±11^{km}**,MD3.7, ML3.0,4D,Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDZ	**Mendoza**	**0.30**	**168**	⇓*i*P	Pg	19 14 00.3	+0.5
MDZ				*i*		19 14 01.4	
MDZ				*i* S	Sg	19 14 03.4	-0.4
ZON	**Zonda**	**1.06**	**12**	*e*P	Pb	19 14 15.8	+1.2
ZON				*e*S	Sb	19 14 31.1	+2.3
FCH	**Farellones**	**1.36**	**237**	⇓*i*P	Pb	19 14 18.4	-1.3
FCH				*i* S	Sb	19 14 37.4	-0.1
FCH				AMP		19 14 39.0	
	comp=N,255nm,0.1s						
JACH	**Jahuel**	**1.41**	**266**	*e*P	Pb	19 14 19.5	-1.0
JACH				*i* S	Sb	19 14 39.7	+0.9
PCH	**Pirque**	**1.68**	**232**	⇓*i*P	Pn	19 14 24.2	-0.3
PCH				*i* S	Sb	19 14 46.8	0.0
ROCH	**El Roble**	**1.80**	**257**	*e*P	Pn	19 14 26.1	0.0
RCDM	**Rinconada Maip**	**1.82**	**240**	*e*P	Pn	19 14 26.5	+0.2
RCDM				*i* S	Sn	19 14 50.9	+0.6
RCDM				AMP		19 14 54.3	
	comp=E,151nm,0.3s						
TACH	**Talagante**	**1.99**	**237**	⇓*i*P	Pn	19 14 28.6	-0.3
TACH				*i* S	Sn	19 14 55.9	+1.1
LCCH	**Las Cruces**	**2.39**	**248**	*e*P	Pn	19 14 34.9	+0.3
TLL	**Tololo Astrono**	**2.90**	**326**	*e*P	Pn	19 14 42.7	+0.8
TLL				AMP		19 15 28.8	
	comp=E,187nm,0.5s						

MEX 03 19:25:53.1±0.7**,15.27N**×**94.40W,h16^{km}**±11^{km}**,MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.72**	**287**	*i* P	Pn	19 26 19.1	-3.6
HUIG				*i* S	Sn	19 26 38.3	-6.2
CMIG	**Matias Romero**	**1.87**	**346**	*i* P	Pn	19 26 21.4	-3.5
CMIG				*i* S	Sn	19 26 42.8	-5.5
SCX	**San Cristobal**	**2.23**	**49**	*i* P	Pn	19 26 26.7	-3.4
SCX				*i* S	Sn	19 26 52.2	-5.3
CCIG	**Comitan**	**2.40**	**65**	*i* P	Pn	19 26 28.5	-3.9
CCIG				*i* S	Sn	19 26 56.1	-5.5
OXX	**Oaxaca**	**2.87**	**309**	*i* P	Pn	19 26 38.7	-0.5
VHO	**Vista Hermosa**	**2.87**	**309**	*i* P	Pn	19 26 37.4	-1.8
VHO				*i* S	Sn	19 27 09.0	-4.7

CASC 03 19:41:25.2±2.0**,13.01N**×**88.94W,h68^{km}**±38^{km}**,MD3.5, ML3.5,2C-2D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.61**	**9**	*e*P	P	19 41 39.0	-0.1
LCBS	**La Ceiba**	**0.65**	**356**	*e*P	P	19 41 40.0	+0.6
VSM	**San Miguel**	**0.77**	**57**	*e*P	P	19 41 43.0	+2.1
VSM				*e*S	S	19 41 54.0	+1.5
BOQS	**Boqueron**	**0.80**	**335**	*e*P	P	19 41 42.0	+0.8
BOQS				*e*S	S	19 41 53.0	-0.1
CAHU	**Cacacuatique**	**1.04**	**43**	*e*P	P	19 41 45.0	+0.7
CAHU				*e*S	S	19 41 59.0	+0.6
CNCH	**Conchagua**	**1.11**	**76**	*e*P	P	19 41 46.0	+0.8
CNCH				*e*S	S	19 42 00.0	-0.1
CRIN	**San Cristobal**	**1.86**	**99**	⇑*e*P	P	19 41 55.5	0.0
CRIN				*e*S	S	19 42 18.9	+0.9
LEON	**Leon**	**2.08**	**106**	⇑*e*P	P	19 41 58.0	-0.5
TEL3	**Telica 3**	**2.08**	**102**	⇓*e*P	P	19 41 58.2	-0.4
TELN	**Telica**	**2.09**	**101**	*e*P	P	19 41 56.9	-1.8
CNGN	**Cerro Negro**	**2.24**	**103**	*e*P	P	19 41 59.4	-1.4
MIRN	**Miramar**	**2.24**	**104**	⇓*e*P	P	19 42 00.6	-0.3
MOMJ	**Momotombo**	**2.41**	**104**	*e*P	P	19 42 02.9	-0.4
COPN	**Copaltepe**	**2.43**	**110**	*e*P	P	19 42 02.6	-0.9
MGAN	**Managua**	**2.76**	**108**	*i*	S	19 42 44.2	+3.8
	comp=E,288nm,0.4s						

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*ATH **03** 19:58:07.9,38.20N×26.69E,h30^{km},MD3.2/3*

*ISK **03** 19:58:08.3,38.11N×26.67E,h9^{km},MD3.4*

*CSEM **03** 19:58:09.2±0.1,38.11N×26.72E,h15^{km},MD3.4,Error ellipse: s-maj=3.9km s-min=2.5km az=104.0*

ISC 03 19:58:08.0±0.9**,38.15N**±0.04×**26.59E**±0.05**,h4^{km}**±7^{km}**, n20,σ1^{s}05**/30**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.21**	**1**	*i* P	**Pg**	**19 58 12.2**	**-0.1**
URLA				*i* S	**Sg**	**19 58 15.5**	**+0.3**
BLCB	**Balcova**	**0.43**	**56**	*i* PG	**Pg**	**19 58 16.8**	**+0.3**
SMG	**Samos**	**0.48**	**156**	*e*PN	**Pn**	**19 58 18.6**	**-2.6**
SMG				*e*SN	**Sn**	**19 58 26.2**	**-3.9**
IZM	**Izmir**	**0.58**	**64**	*i* PG	**Pg**	**19 58 19.5**	**-0.1**
IZM				*i* SG	**Sg**	**19 58 27.8**	**+0.4**
KDAG	**Bornova**	**0.59**	**64**	*i* P	**Pg**	**19 58 18.8**	**-1.0**
KDAG				*i* S	**Sg**	**19 58 26.5**	**-1.1**
PRK	**Paraskevi**	**1.13**	**347**	*e*PN	**Pn**	**19 58 29.4**	**-1.0**
PRK				*e*SN	**Sn**	**19 58 43.3**	**-3.2**
AYDN	**Tasoluk**	**1.13**	**115**	*i* P	**Pb**	**19 58 30.6**	**+0.9**
AYDN				*i* S	**Sb**	**19 58 44.5**	**0.0**
AKS	**Akhisar**	**1.21**	**52**	PN	**Pn**	**19 58 31.2**	**-0.4**
BODT	**Bodrum**	**1.22**	**152**	PN	**Pn**	**19 58 31.0**	**-0.8**
BODT				SN	**Sn**	**19 58 47.4**	**-1.6**
MLSB	**Milas**	**1.27**	**132**	PN	**Pn**	**19 58 31.5**	**-1.0**
BDRM	**Kayabasi**	**1.27**	**148**	*i* P	**Pb**	**19 58 33.8**	**+1.6**
BDRM				*i* S	**Sb**	**19 58 50.3**	**+1.5**
APE	**Apeiranthos**	**1.37**	**218**	*e*PN	**Pn**	**19 58 34.4**	**+0.5**
APE				*e*SN	**Sn**	**19 58 53.3**	**+0.7**
APE	**Apeiranthos**	**1.37**	**218**	*e*PN	**Pn**	**19 58 34.3**	**+0.4**
MANT	**Manisa**	**1.58**	**77**	*i* P	**Pn**	**19 58 39.1**	**+2.2**
MANT				*i* S	**Sb**	**19 58 58.5**	**+0.7**
YER	**Yerkesik**	**1.68**	**126**	PN	**Pn**	**19 58 38.0**	**-0.4**
EZN	**Ezine**	**1.69**	**353**	PN	**Pn**	**19 58 39.5**	**+1.0**
BALB	**Balikesir**	**1.80**	**34**	PN	**Pn**	**19 58 40.5**	**+0.5**
DENT	**Denizli**	**1.97**	**101**	*e*PN	**Pn**	**19 58 42.0**	**-0.5**
DST	**Dursunbey**	**2.16**	**47**	*e*PN	**Pn**	**19 58 45.5**	**+0.3**
EDC	**Edincik**	**2.41**	**24**	*e*PN	**Pn**	**19 58 49.6**	**+0.8**

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*MOS **03** 20:16:43.8±1.3,36.22N×71.56E,h33^{km},mb4.7/28,Error ellipse: s-maj=8.4km s-min=4.9km az=102.5*

*BJI **03** 20:16:46.7,36.41N×71.36E,h63^{km},mB4.8,mb4.7,ML4.7, Ms4.3,Msz4.5*

*NEIC **03** 20:16:46.1±0.8,36.29N×71.59E,h36^{km}±8^{km},mb4.5/24, Error ellipse: s-maj=8.0km s-min=4.5km az=50.0*

*IDC **03** 20:16:50.0±4.9,36.29N×71.74E,h75^{km}±43^{km},mb4.0/16, mb1 4.2/19,mb1mx4.2/24,mbtmp4.4/19,ML4.7/3,MS3.6/3, Ms1 3.6/3,ms1mx3.1/31,Error ellipse: s-maj=19.4km s-min=15.1km az=176.0*

*NNC **03** 20:16:58.5±2.7,36.96N×71.04E,h131^{km}±32^{km},mpv4.8, Error ellipse: s-maj=29.2km s-min=11.9km az=32.0*

ISC 03 20:16:49.4±0.4**,36.31N**±0.02×**71.66E**±0.03**,h85^{km}**±5^{km}**, n190,σ1^{s}30**/212**,mb4.4**/51**,20C-16D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.48**	**175**	P	**P**	**20 17 31.6**	**+2.9**
CHCP	**Chirah Chowk**	**2.95**	**153**	P	**P**	**20 17 39.9**	**+4.7**
THW	**Thamme Wali**	**3.50**	**179**	P	**P**	**20 17 44.4**	**+1.6**
SBDP	**Sheikh Budin**	**4.06**	**190**	P	**P**	**20 17 52.4**	**+1.9**
SARP	**Sargodha**	**4.45**	**169**	P	**P**	**20 17 56.2**	**+0.2**
SARP				S	**S**	**20 18 44.0**	**-2.9**
JMU	**Jammu**	**4.47**	**142**	*e*S	**S**	**20 18 50.0**	**+2.7**
KSH	**Kashi**	**4.68**	**45**	P	**P**	**20 18 02.9**	**+3.8**
KSH				S	**S**	**20 18 55.2**	**+2.6**
KSH				Smax			
	comp=N,2µm,1.2s						
KSH				Smax			
	comp=E,880nm,0.7s						
DRP	**Derazinda**	**4.71**	**195**	⇑P	**P**	**20 18 00.6**	**+1.1**
THN	**Thein Dam**	**5.11**	**138**	*e*x	x	20 18 07.7	
THN				*e*S	**S**	**20 19 04.2**	**+0.9**
AML	**Almayashu**	**6.03**	**15**	P	**P**	**20 18 18.7**	**+1.1**
	SNR=436						
BHK	**Bhakra**	**6.28**	**140**	*e*x	x	20 18 46.4	
BHK				*e*x	x	20 20 19.2	
UCH	**Uchtor**	**6.31**	**20**	P	**P**	**20 18 22.6**	**+1.0**
	SNR=117						
KZA	**Kyzart**	**6.40**	**25**	P	**P**	**20 18 24.1**	**+1.3**
	SNR=9.1						
SDNR	**Sundarnagar**	**6.51**	**136**	*e*P	**P**	**20 18 25.0**	**+0.6**
SDNR				*e*S	**S**	**20 19 36.2**	**-1.6**
EKS2	**Erkin-Say**	**6.55**	**14**	P	**P**	**20 18 25.9**	**+0.9**
	SNR=114						
AAK	**Ala-Archa**	**6.69**	**18**	P	**P**	**20 18 28.0**	**+1.2**
	SNR=146						
AAK	**Ala-Archa**	**6.69**	**18**	⇓Pn	**P**	**20 18 28.3**	**+1.5**
	comp=E,65nm,0.5s						
AAK				⇓Sn	**S**	**20 19 41.1**	**-1.0**
	comp=E,117nm,1.1s						
KBK	**Karagaybulak**	**6.83**	**21**	P	**P**	**20 18 30.3**	**+1.5**
	SNR=52						
KK31	**Karatay Array**	**6.85**	**353**	⇓Pn	**P**	**20 18 28.4**	**-0.7**
	comp=E,28nm,0.4s,baz=179,slow=12,SNR=836						
KK31				⇓Sn	**S**	**20 19 40.3**	**-5.8**
	comp=E,120nm,0.7s,baz=184,slow=22,SNR=5.7						
KKAR	**Karatay Array**	**6.85**	**353**	*e*PN	**P**	**20 18 28.3**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,11nm,0.3s						
SMLA	**Simla**	**6.90**	**137**	*e*P	**P**	**20 18 28.8**	**-1.0**
SMLA				*e*S	**S**	**20 19 45.5**	**-1.9**
FRU	**Bishkek**	**6.91**	**18**	*e*PN	**P**	**20 18 32.0**	**+2.1**
FRU				*i*		20 19 49.0	
FRU				pmax	pmax		
	comp=Z,200nm,1.8s						
ULHL	**Ulahol**	**6.91**	**30**	P	**P**	**20 18 31.0**	**+1.1**
	SNR=26						
CHMS	**Chumysh**	**7.10**	**19**	P	**P**	**20 18 33.2**	**+0.8**
	SNR=99						
KLP	**Kalpa**	**7.25**	**129**	*e*P	**P**	**20 18 35.0**	**+0.4**
KLP				*e*S	**S**	**20 19 51.7**	**-4.3**
KLP				AML	AML	20 20 01.9	
	comp=N,628nm,0.3s						
KLP				AML	AML	20 20 50.8	
	comp=E,744nm,0.8s						
TKM2	**Tokmak 2**	**7.27**	**23**	P	**P**	**20 18 35.4**	**+0.6**
	SNR=78						
USP	**Ospenovka**	**7.29**	**17**	P	**P**	**20 18 35.2**	**+0.1**
	SNR=40						
DDI	**Dehra Dun**	**8.01**	**136**	*e*P	**P**	**20 18 45.0**	**+0.1**
DDI				*e*x	x	20 20 16.0	
NDI	**New Delhi**	**8.93**	**147**	*e*P	**P**	**20 18 58.0**	**+0.6**
NDI				*e*S	**S**	**20 20 31.0**	**-6.2**
AYAN	**Aya Nagar**	**9.06**	**148**	*e*P	**P**	**20 18 59.4**	**+0.1**
KUDL	**Kundal**	**9.10**	**152**	*e*P	**P**	**20 18 59.1**	**-0.6**
KUDL				*e*x	x	20 20 32.1	
SONA	**Sohna**	**9.25**	**149**	*e*P	**P**	**20 19 01.8**	**+0.1**
PTH	**Pithoragarh**	**9.85**	**131**	*e*x	x	20 19 12.3	
PTH				*e*x	x	20 21 04.9	
AJM	**Ajmer**	**10.12**	**165**	*e*P	**P**	**20 19 08.8**	**-4.8**
AJM				AMb	AMB	20 19 17.3	
	comp=Z,7.8nm,0.5s						
BHJ	**Bhuj**	**13.12**	**188**	*e*P	**P**	**20 19 52.0**	**-1.6**
MK02	**Makanchi Array**	**13.13**	**34**	⇓P	**P**	**20 19 53.2**	**-0.5**
MK02				pmax	pmax		
	comp=Z,18nm,0.9s						
MK31	**Makanchi Array**	**13.14**	**34**	⇓P	**P**	**20 19 53.2**	**-0.6**
	comp=Z,18nm,0.9s,baz=213,slow=13,SNR=90						
MKAR	**Makanchi Array**	**13.14**	**34**	P	**P**	**20 19 52.3**	**-1.5**
	comp=Z,0.8nm,0.3s,baz=217,slow=15,SNR=39						
MKAR	**Makanchi Array**	**13.14**	**34**	*e*P	**P**	**20 19 53.2**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KOLN	**Koldanda**	**13.22**	**127**	*e*Pn	**P**	**20 19 52.6**	**-2.2**
KOLN				*e*Sn	**S**	**20 22 11.9**	**-8.2**
	comp=Z,105nm,0.9s						
GKN	**Gorkha**	**13.75**	**123**	*e*Pn	**P**	**20 19 59.7**	**-2.0**
GKN				*e*Sn	**S**	**20 22 23.4**	**-9.2**
	comp=Z,159nm,0.6s						
BHPL	**Bhopal**	**13.94**	**157**	*e*P	**P**	**20 20 01.6**	**-2.6**
BHPL				AMb	AMB	20 20 21.0	
	comp=Z,16nm,0.9s						
BHPL				*e*x	x	20 22 31.4	
ALBI	**Allahabad**	**13.99**	**139**	*e*x	x	20 22 29.5	
DMN	**Daman**	**14.32**	**123**	*e*Pn	**P**	**20 20 07.4**	**-1.7**
DMN				*e*Sn	**S**	**20 22 38.6**	**-7.6**
	comp=Z,236nm,0.9s						
KKN	**Kakani**	**14.32**	**123**	*e*Pn	**P**	**20 20 07.3**	**-1.8**
KKN				*e*Sn	**S**	**20 22 38.1**	**-8.1**
	comp=Z,137nm,0.8s						
WMQ	**Urumqi**	**14.38**	**54**	⇓P	**P**	**20 20 08.4**	**-1.3**
WMQ				S	**S**	**20 22 43.2**	**-4.2**
WMQ				PCP	PcP	20 25 21.2	-0.2
WMQ				SCP		20 28 43.3	
WMQ				PCS		20 28 54.5	
WMQ				SCS	ScS	20 32 19.4	-3.0
WMQ				AMB	AMB		
	comp=Z,30nm,0.7s						
WMQ				AMB	AMB		
	comp=Z,220nm,5.6s						
PKI	**Pulchoki**	**14.55**	**123**	*e*Pn	**P**	**20 20 09.8**	**-2.3**
PKI				*e*Sn	**S**	**20 22 42.2**	**-9.4**
	comp=Z,153nm,1.0s						
GUN	**Gumba**	**14.66**	**121**	*e*Pn	**P**	**20 20 11.1**	**-2.4**
GUN				*e*Sn	**S**	**20 22 45.9**	**-8.2**
	comp=Z,78nm,0.6s						
KURK	**Kurchatov**	**15.25**	**17**	⇑P	**P**	**20 20 23.7**	**+2.8**
	comp=Z,34nm,0.9s						
KURK	**Kurchatov**	**15.25**	**17**	*e*P	**P**	**20 20 17.8**	**-3.1**
	comp=Z,68nm,0.9s						
KURK				⇑P		20 20 23.7	
KURK				*e*		20 20 24.1	
KURK	**Kurchatov**	**15.25**	**17**	⇓*e*P	**P**	**20 20 18.3**	**-2.6**
AB31	**Akbulak array**	**15.52**	**330**	P	**P**	**20 20 20.8**	**-3.5**
	comp=Z,17nm,0.7s,baz=143,slow=12,SNR=247						
AB31				⇓S	**S**	**20 23 01.9**	**-12**
	comp=Z,14nm,0.7s,baz=125,slow=22,SNR=7.0						
AB31	**Akbulak array**	**15.52**	**330**	P	**P**	**20 20 20.8**	**-3.5**
	comp=Z,17nm,0.6s						
AB31				S	**S**	**20 23 01.9**	**-12**
AB31	**Akbulak array**	**15.52**	**330**	*i* P	**P**	**20 20 20.8**	**-3.5**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VOSK	**Vostochnaya**	**16.42**	**359**	⇑P	**P**	**20 20 33.2**	**-2.4**
	comp=Z,20nm,1.2s						
VOSK	**Vostochnaya**	**16.42**	**359**	⇑P	**P**	**20 20 33.2**	**-2.4**
VOSK				pmax	pmax		
	comp=Z,20nm,1.2s						
BANOM	**Banah**	**16.72**	**236**	⇑P	**P**	**20 20 38.1**	**-1.3**
	SNR=12						
BVA0	**Borovoye Array**	**16.74**	**357**	P	**P**	**20 20 37.8**	**-1.8**
	comp=Z,2.0nm,0.8s,baz=228,slow=36,SNR=72						
BVA0				⇓S	**S**	**20 23 28.8**	**-13**
	comp=Z,2.7nm,1.4s,baz=173,slow=24,SNR=4.3						
BVA0	**Borovoye Array**	**16.74**	**357**	*e*P	**P**	**20 20 37.8**	**-1.8**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**16.74**	**357**	P	**P**	**20 20 37.3**	**-2.2**
	comp=Z,2.6nm,0.3s,baz=159,slow=12,SNR=69						
BVAR				S	**S**	**20 23 33.9**	**-7.9**
	comp=Z,0.3nm,0.3s,baz=167,slow=19,SNR=4.5						
BVAR	**Borovoye Array**	**16.74**	**357**	P	**P**	**20 20 37.3**	**-2.3**
BVAR				S	**S**	**20 23 33.9**	**-7.9**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BRVK	**Borovoye**	**16.78**	**357**	*e*P	**P**	**20 20 37.2**	**-2.8**
	comp=Z,11nm,0.8s						
BRVK	**Borovoye**	**16.78**	**357**	*e*P	**P**	**20 20 37.3**	**-2.8**
BRVK				pmax	pmax		
	comp=Z,11nm,0.8s						
AKTK	**Aktyubinsk**	**17.22**	**329**	⇑P	**P**	**20 20 43.3**	**-2.2**
AKTK				S	**S**	**20 23 43.8**	**-8.6**
AKTO	**Aktyubinsk**	**17.22**	**329**	⇑P	**P**	**20 20 43.3**	**-2.2**
	comp=Z,5.6nm,0.9s						
AKTO				⇑S	**S**	**20 23 43.8**	**-8.6**
	comp=Z,5.6nm,1.1s						
AKTO	**Aktyubinsk**	**17.22**	**329**	P	**P**	**20 20 44.0**	**-1.6**
	comp=Z,4.9nm,0.3s,baz=140,slow=11,SNR=69						
AKTO				S	**S**	**20 23 47.8**	**-4.7**
	comp=Z,1.0nm,0.3s,baz=248,slow=19,SNR=4.0						
AKTO	**Aktyubinsk**	**17.22**	**329**	P	**P**	**20 20 44.0**	**-1.6**
AKTO				S	**S**	**20 23 47.8**	**-4.6**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
CHKZ	**Chkalovo**	**17.39**	**358**	⇑P	**P**	**20 20 45.3**	**-2.3**
	comp=Z,5.2nm,0.7s						
BOK	**Bokaro**	**17.50**	**132**	*e*x	x	20 20 47.2	
BOK				AMb	AMB	20 20 52.7	
	comp=Z,11nm,0.7s						
WBK	**Wadi Bani Khal**	**17.54**	**222**	⇓P	**P**	**20 20 52.4**	**+2.7**
	SNR=5.7						
LSA	**Lhasa**	**17.61**	**106**	P	**P**	**20 20 51.0**	**+0.4**
LSA	**Lhasa**	**17.61**	**106**	*e*P	**P**	**20 20 50.8**	**+0.2**
	comp=Z,19nm,0.9s						
LSA	**Lhasa**	**17.61**	**106**	*e*P	**P**	**20 20 50.8**	**+0.2**
LSA				pmax	pmax		
	comp=Z,19nm,0.9s						
SMDO	**Samad**	**17.70**	**225**	⇑P	**P**	**20 20 52.4**	**+0.7**
ASHO	**Ashiyiah**	**17.72**	**234**	P	**P**	**20 20 52.7**	**+0.7**
	SNR=21						
POO	**Poona**	**17.81**	**173**	*e*x	x	20 21 13.5	
POO				*e*x	x	20 24 30.0	
JMDO	**Jabal Madar**	**18.21**	**224**	⇑P	**P**	**20 20 59.7**	**+1.9**
	SNR=9.8						
ARQ	**Araqi**	**18.40**	**230**	⇓P	**P**	**20 21 00.6**	**+0.6**
	SNR=11						
BSY	**Bisya**	**18.43**	**227**	⇑P	**P**	**20 21 00.8**	**+0.4**
	SNR=17						
KAD	**Karad**	**19.05**	**173**	*e*x	x	20 21 15.6	
KAD				*e*x	x	20 24 23.7	
HYB	**Hyderabad**	**19.78**	**160**	*i* P	**P**	**20 21 11.0**	**-4.2**
HYB				*e*S	**S**	**20 24 58.0**	**+10**
HYB	**Hyderabad**	**19.78**	**160**	*e*P	**P**	**20 21 11.0**	**-4.2**
ZAL	**Zalesovo**	**19.86**	**23**	P	**P**	**20 21 15.0**	**-0.8**
	comp=Z,8.7nm,0.3s,baz=250,slow=9.5,SNR=151						
ZAL				S	**S**	**20 24 51.9**	**+2.2**
	comp=Z,0.0nm,0.3s,baz=163,slow=19,SNR=2.7						
ZAL	**Zalesovo**	**19.86**	**23**	P	**P**	**20 21 15.0**	**-0.8**
ZAL				S	**S**	**20 24 51.9**	**+2.2**
ZAL	**Zalesovo**	**19.86**	**23**	P	**P**	**20 21 15.0**	**-0.8**
ZAL				S	**S**	**20 24 51.9**	**+2.2**
ZAL				pmax	pmax		
	comp=Z,9.0nm,0.3s						
NVS	**Novosibirsk**	**20.18**	**20**	*i* P	**P**	**20 21 17.2**	**-1.9**
NVS				*i* S	**S**	**20 24 56.7**	**+0.8**
NVS				pmax	pmax		
	comp=Z,60nm,1.0s						
NVS				pmax	pmax		
	comp=N,52nm,1.1s						
NVS				pmax	pmax		
	comp=E,12nm,1.0s						
NVS				smax			
	comp=N,19nm,1.6s						
NVS				smax			
	comp=E,14nm,1.8s						
SHL	**Shillong**	**20.34**	**116**	*e*P	**P**	**20 21 22.0**	**+1.0**
SHL				*e*x	x	20 24 56.0	
GNI	**Garni**	**21.46**	**288**	P	**P**	**20 21 35.2**	**+3.0**
	comp=E,31nm,0.6s,mb4.8,baz=5.1,slow=2.2,SNR=44						
GNI	**Garni**	**21.46**	**288**	*e*P	**P**	**20 21 34.6**	**+2.4**
	comp=E,137nm,0.9s,mb5.3						
GNI	**Garni**	**21.46**	**288**	*d* *i*P	**P**	**20 21 34.4**	**+2.2**
GNI				pmax	pmax		
	comp=Z,93nm,1.2s						
GNI				MLR	MLR		
	comp=Z,100nm,10.0s						
TI2	**Plekhanov**	**21.56**	**293**	⇓*i*P	**P**	**20 21 33.6**	**+0.4**
TI2				*e*		20 25 34.0	
TI2				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.7						
TBLG	**Delisi**	**21.57**	**293**	P	**P**	**20 21 34.6**	**+1.4**
HASS	**Wahat al Ahsa'**	**21.84**	**246**	P	**P**	**20 21 34.8**	**-1.3**
ARU	**Arti**	**21.99**	**340**	*e*P	**P**	**20 21 32.2**	**-5.2**
	comp=Z,9.5nm,0.8s,mb4.2						
ARU	**Arti**	**21.99**	**340**	⇑*i*P	**P**	**20 21 33.7**	**-3.7**
ARU				*e*		20 21 58.2	
ARU				*e*PPP	PPP	20 22 10.2	-6.8
ARU				*e*S	**S**	**20 25 25.3**	**-4.3**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
ZEI	**Tsey**	**22.30**	**295**	*e*P	**P**	**20 21 40.1**	**-0.4**
ZEI				*i* *PP		20 21 59.7	
ZEI				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.4						
GTA	**Gaotai**	**22.41**	**74**	P	**P**	**20 21 44.5**	**+3.0**
GTA				AP		20 21 56.8	
GTA				XP		20 22 02.0	
GTA				AMB	AMB		
	comp=Z,50nm,0.8s,mb4.9						
KIV	**Kislovodsk**	**23.35**	**298**	*e*P	**P**	**20 21 50.8**	**+0.3**
	comp=Z,23nm,0.6s,mb4.7						
KIV	**Kislovodsk**	**23.35**	**298**	*i* P	**P**	**20 21 52.9**	**+2.3**
KIV				*i*		20 22 17.1	
KIV				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.3						
KIV				MLR	MLR		
	comp=Z,100nm,21.0s						
WHFO	**Wadi Hawf**	**24.20**	**226**	P	**P**	**20 21 59.5**	**+0.5**
	SNR=24						
RBK	**Rabkut**	**24.28**	**224**	P	**P**	**20 22 00.2**	**+0.4**
	SNR=20						
ABTO	**Aybut**	**24.92**	**226**	P	**P**	**20 22 06.2**	**+0.2**
	SNR=57						
MZLS	**Mizel**	**25.85**	**249**	P	**P**	**20 22 14.4**	**-0.3**
MOY	**Mondy**	**25.87**	**44**	*e*P	**P**	**20 22 16.5**	**+2.0**
MOY				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.4						
LZH	**Lanzhou**	**25.91**	**81**	*e*P	**P**	**20 22 17.4**	**+2.3**
LZH				PP	PP	20 22 59.3	+0.6
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
LZH				AMB	AMB		
	comp=Z,40nm,4.8s						
LZH				LR	LR		

	comp=E,330nm,10.5s						
LZH				LR	LR		
	comp=Z,750nm,13.5s						
ZAK	Zakamensk	26.72	48	eP	P	20 22 23.5	+1.1
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
HILS	Ha’il	26.80	259	P	P	20 22 23.6	+0.1
AFFS	‘Afif	27.58	251	P	P	20 22 29.2	-1.4
SONM	Songino Array	28.01	55	P	P	20 22 35.9	+1.7
	comp=Z,11nm,0.7s,mb4.5,baz=255,slow=10.0,SNR=45						
SONM				LR	LR	20 35 07.0	
	comp=Z,54nm,20.9s,baz=251,slow=39						
SONM	Songino Array	28.01	55	P	P	20 22 35.9	+1.7
SONM				LR	LR	20 35 07.0	
SONM	Songino Array	28.01	55	P	P	20 22 35.9	+1.7
SONM				pmax	pmax		
	comp=Z,11nm,0.7s						
SONM				MLR	MLR		
	comp=Z,54nm,20.9s						
KAMS	Al Khamasin	28.55	243	P	P	20 22 39.5	+0.2
KBRS	Khaybar	29.55	258	P	P	20 22 48.5	+0.4
BR131	Keskin Array S	30.00	288	eP	P	20 22 51.3	-0.8
	comp=Z,0.8nm,0.6s,mb3.5						
BRTR	Keskin Array B	30.00	288	P	P	20 22 52.0	0.0
	comp=Z,1.4nm,0.7s,mb3.7,baz=101,slow=11,SNR=13						
BRTR	Keskin Array B	30.00	288	P	P	20 22 52.0	0.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
XAN	Xi’an	30.42	83	P	P	20 22 57.0	+1.2
OBN	Obninsk	30.43	319	⇓eP	P	20 22 55.8	+0.1
OBN				e		20 24 04.9	
OBN				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,23.0s						
BLJS	Baljurashi	30.99	246	P	P	20 23 00.1	-0.8
BDAS	Al Bad‘	31.72	266	P	P	20 23 06.7	-0.5
KLMR	Klimovskoe	31.91	330	eP	P	20 23 06.3	-2.2
KLMR				pmax	pmax		
	comp=Z,20nm,2.2s,mb4.5						
ENH	Enshi	32.04	90	eP	P	20 23 11.4	+1.4
	comp=Z,22nm,1.1s,mb4.8						
AKASG	Malin Array Be	33.48	309	P	P	20 23 21.9	-0.4
	comp=Z,1.9nm,0.4s,mb4.2,baz=80,slow=7.9,SNR=8.9						
AKASG	Malin Array Be	33.48	309	iP	P	20 23 22.0	-0.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BOD	Bodaibo	35.16	39	eP	P	20 23 32.5	-4.1
BOD				pmax	pmax		
	comp=Z,6.0nm,1.8s,mb4.1						
MLR	Muntele Rosu	35.34	299	P	P	20 23 39.7	+1.5
	comp=Z,10nm,0.8s,mb4.7,baz=45,slow=1.4,SNR=12						
MLR	Muntele Rosu	35.34	299	P	P	20 23 39.7	+1.5
MLR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JOF	Joensuu	36.30	330	ep	P	20 23 45.8	-0.4
	comp=Z,4.0nm,0.5s,mb4.6						
JOF	Joensuu	36.30	330	eP	P	20 23 45.8	-0.4
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
FINES	FINESS Array B	37.94	326	P	P	20 24 00.1	+0.2
	comp=Z,1.3nm,0.4s,mb4.2,baz=120,slow=9.9,SNR=26						
FINES	FINESS Array B	37.94	326	eP	P	20 24 00.0	+0.1
KAF	Kangasniemi	38.08	327	ep	P	20 24 00.8	-0.2
	baz=113,slow=8.8						
NJ2	Nanjing	38.97	82	eP	P	20 24 12.9	+4.2
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
SSE	Sheshan	41.17	82	P	P	20 24 28.9	+2.0
SSE				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.1						
SSE				AMB	AMB		
	comp=Z,30nm,4.3s						
ARCES	ARCESS Array B	41.53	338	P	P	20 24 30.2	+0.9
	comp=Z,2.0nm,0.5s,mb4.1,baz=114,slow=8.4,SNR=12						
ARCES	ARCESS Array B	41.53	338	P	P	20 24 30.2	+0.9
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
VRAC	Vranov	41.55	306	P	P	20 24 31.5	+1.8
	comp=Z,3.0nm,0.5s,mb4.2,baz=91,slow=13,SNR=4.0						
VRAC	Vranov	41.55	306	P	P	20 24 31.5	+1.8
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRG	Berggiesshubel	43.16	308	P	P	20 24 44.0	+1.1
	comp=Z,5.8nm,1.1s,mb4.2						
BRG	Berggiesshubel	43.16	308	eP	P	20 24 44.0	+1.1
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
MOA	Molln	43.21	304	⇑iP	P	20 24 44.7	+1.4
	comp=Z,3.2nm,0.7s,mb4.2						
MOA	Molln	43.21	304	⇑P	P	20 24 44.7	+1.4
	comp=Z,3.2nm,0.7s,mb4.2						
GERES	GERESS Array B	43.48	306	P	P	20 24 46.7	+1.2
	comp=Z,0.5nm,0.6s,mb3.4,baz=72,slow=8.4,SNR=4.8						
GERES	GERESS Array B	43.48	306	P	P	20 24 46.7	+1.2
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	43.55	322	P	P	20 24 46.0	+0.1
	comp=Z,6.2nm,0.5s,mb4.6,baz=98,slow=10,SNR=33						
HFS	Hagfors	43.55	322	P	P	20 24 46.0	+0.1
HFS				pmax	pmax		
	comp=Z,6.0nm,0.5s						
YAK	Yakutsk	43.82	35	eP	P	20 24 47.7	-0.3
	comp=Z,8.8nm,0.8s,mb4.5						
YAK	Yakutsk	43.82	35	⇑eP	P	20 24 47.8	-0.3
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.5						
YHNB	Yeheng	43.96	91	P	P	20 24 52.7	+3.0
NB2	NORSAR Subarra	44.86	323	P	P	20 24 55.9	-0.5
	comp=Z,3.8nm,0.6s,mb4.3,baz=96,slow=7.9						
NOA	NORSAR Array B	44.86	323	P	P	20 24 55.9	-0.6
	comp=Z,4.4nm,0.6s,mb4.3,baz=96,slow=7.7,SNR=19						
NOA				pP	pP	20 25 20.6	+3.6
	comp=Z,3.5nm,0.7s,baz=97,slow=7.9,SNR=3.1						
NOA				LR	LR	20 44 24.1	
	comp=Z,61nm,18.1s,baz=305,slow=37						
NOA	NORSAR Array B	44.86	323	P	P	20 24 55.9	-0.5
NOA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NOA				MLR	MLR		
	comp=Z,61nm,18.1s						
NAO01	NORSAR Array S	45.00	323	eP	P	20 24 56.6	-0.9
	comp=Z,12nm,1.0s,mb4.6						
NAO	NORSAR Subarra	45.03	323	P	P	20 24 55.9	-1.9
	comp=Z,3.8nm,0.6s,mb4.3						
KONO	Kongsberg	45.57	321	eP	P	20 25 01.8	-0.3
TIXI	Tiksi	45.76	22	⇑eP	P	20 25 03.7	+0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
VLA	Vladivostok	45.96	62	⇓iP	P	20 25 06.3	+0.9
VLA				e		20 26 41.9	
VLA				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.1						
DAVA	Damuels	46.23	304	⇑iP	P	20 25 07.3	-0.1
	comp=Z,4.3nm,0.5s,mb4.5						
DAVA	Damuels	46.23	304	⇑P	P	20 25 07.3	-0.2
	comp=Z,4.3nm,0.5s,mb4.4						
PGF	Pioggiola	47.83	298	eP	P	20 25 20.4	+0.2
	comp=Z,7.1nm,0.9s,mb4.2						
PGF	Pioggiola	47.83	298	eP	P	20 25 20.4	+0.2
PGF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
HAU	Haudompre	48.45	305	eP	P	20 25 23.9	-0.9
	comp=Z,6.9nm,0.7s,mb4.3						
HAU	Haudompre	48.45	305	eP	P	20 25 23.9	-0.9
HAU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
LPG	La Plagne	48.70	302	eP	P	20 25 26.4	-0.4
LPL	La Plagne	48.71	302	eP	P	20 25 26.6	-0.3
MBDF	Montbardon	48.87	301	eP	P	20 25 27.0	-1.1
	comp=Z,4.2nm,0.6s,mb4.2						
MBDF	Montbardon	48.87	301	eP	P	20 25 27.0	-1.1
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
LOR	Lormes	50.25	305	eP	P	20 25 37.0	-1.7
SMF	Signal de Mont	50.41	304	eP	P	20 25 38.8	-1.1
	comp=Z,3.7nm,0.5s,mb4.3						
SMF	Signal de Mont	50.41	304	eP	P	20 25 38.8	-1.1
SMF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
AVF	Avril sur Loir	50.70	304	eP	P	20 25 42.9	+0.8
	comp=Z,12nm,0.9s,mb4.7						
AVF	Avril sur Loir	50.70	304	eP	P	20 25 42.9	+0.8
AVF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
MAJO	Matsushiro	52.53	69	eP	P	20 25 55.9	-0.1
	comp=Z,5.8nm,0.8s,mb4.7						
MAJO	Matsushiro	52.53	69	eP	P	20 25 55.9	-0.1
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
MJAR	Matsushiro Arr	52.53	69	P	P	20 25 56.3	+0.3
	comp=Z,5.7nm,0.8s,mb4.6,baz=290,slow=10,SNR=14						
DAG	Danmarks Havn	55.07	344	iP	P	20 26 14.0	-0.1
	comp=Z,1.7nm,0.4s,mb4.4						
DAG	Danmarks Havn	55.07	344	eP	P	20 26 14.0	-0.1
DAG				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
BILL	Bilibino	58.55	26	eP	P	20 26 38.7	-0.1
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
LSZ	Lusaka	65.71	227	P	P	20 27 27.2	-0.2
	comp=Z,3.4nm,0.6s,mb4.4,baz=48,slow=6.4,SNR=10						
INK	Inuvik	74.01	9	P	P	20 28 17.2	+0.4
	comp=Z,2.7nm,0.6s,mb4.2,baz=12,slow=3.8,SNR=9.0						
ILAR	Eielson Array	74.82	16	P	P	20 28 20.8	-0.7
	comp=Z,1.6nm,1.0s,mb3.7,baz=310,slow=7.6,SNR=11						
BOSA	Boshof	77.94	221	P	P	20 28 39.5	-0.3
	comp=Z,3.0nm,0.8s,mb4.1,baz=21,slow=10.0,SNR=6.2						
BOSA				LR	LR	21 03 41.7	
	comp=Z,76nm,20.8s,baz=182,slow=36						
YKA	Yellowknife Ar	81.42	3	P	P	20 28 58.0	+0.3
	comp=Z,2.0nm,0.6s,mb4.1,baz=349,slow=5.4,SNR=15						
WRA	Warramunga Arr	81.43	122	P	P	20 28 58.7	0.0
	comp=Z,1.3nm,0.8s,mb3.8,baz=324,slow=5.0,SNR=12						
WRAB	Tennant Creek	81.44	122	eP	P	20 28 59.0	+0.3
	comp=Z,20nm,1.3s,mb4.8						
WRAB	Tennant Creek	81.44	122	eP	P	20 28 59.0	+0.3
WRAB				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.8						
PMG	Port Moresby	84.04	106	eP	P	20 29 14.1	+2.0
	comp=Z,8.9nm,0.8s,mb4.7						
PMG	Port Moresby	84.04	106	eP	P	20 29 14.1	+2.0
PMG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
VNA2	Neumayer--Watz	120.42	202	P	PKPdf	20 35 35.9	+5.8
VNA3	Neumayer Olymp	121.22	202	P	PKPdf	20 35 35.2	+3.5

*THR **03** 20:22:12.8±0.3, 34.42N×45.59E, h14km±4km, ML3.8*

*MOS **03** 20:22:12.8±1.6, 34.25N×45.48E, h33km, mb4.6/16, Error ellipse: s-maj=12.7km s-min=7.3km az=92.5*

*CSEM **03** 20:22:14.6±0.1, 34.31N×45.54E, h56km±1km, mb4.4/15, Error ellipse: s-maj=3.6km s-min=1.8km az=91.0*

*NEIC **03** 20:22:15.3±0.6, 34.37N×45.49E, h37km±6km, mb4.5/16, Error ellipse: s-maj=7.7km s-min=5.8km az=186.0*

*IDC **03** 20:22:15.8±5.3, 34.50N×45.46E, h36km±42km, mb4.1/14, mb1 4.2/16, mb1mx4.1/21, mbtmp4.3/16, ML3.9/1, MS3.5/5, Ms1 3.5/5, ms1mx3.2/29, Error ellipse: s-maj=25.6km s-min=19.0km az=143.0*

*BJI **03** 20:22:17.1, 34.21N×44.97E, h111km, mB4.9, mb4.7*

*OMAN **03** 20:22:20.6±2.6, 33.14N×45.44E, h12km±18km, Error ellipse: s-maj=31.7km s-min=21.3km az=172.0*

ISC 03 20:22:14.2±0.6**, 34.29N**±0.03×**45.55E**±0.05**, h50**km±6km**, n124,** $\sigma 1^{s}$**24**/122**, mb4.4**/33**, MS3.6**/4**, 8C-7D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHD	Baghdad	1.41	224	P	x	20 22 37.0	
BHD				S	x	20 22 57.0	
BHD	Baghdad	1.41	224	iP	x	20 22 37.0	
BHD				iS	x	20 22 56.0	
SNGE	Sanandaj	1.68	61	ePG	P	20 22 42.3	+0.5
SNGE				eSG	S	20 23 03.7	+1.5
SNGE	Sanandaj	1.68	61	ePg	P	20 22 42.0	+0.2
SNGE				eSg	S	20 23 03.0	+0.8
MSL	Mosul	2.83	315	P	x	20 23 08.0	
MSL				S	x	20 23 37.0	
MSL	Mosul	2.83	315	ex	x	20 23 08.0	
MSL				ex	x	20 23 10.5	
MSL				ix	x	20 23 37.0	
MSL				ix	x	20 23 40.5	
MSL				ix	x	20 23 45.0	
MSL				ix	x	20 23 49.0	
SHGR	Shooshtar-Gavs	3.49	128	ePN	P	20 23 09.3	+1.9
SHGR	Shooshtar-Gavs	3.49	128	ePn	P	20 23 09.0	+1.7
ASAO	Ashtian	3.71	85	ePN	P	20 23 11.6	+1.2
ASAO				AML	AML	20 24 16.9	
	comp=N,144nm,0.7s						
ASAO	Ashtian	3.71	85	ePn	P	20 23 11.0	+0.6
THKV	Tehran--Karaj	4.66	68	ePN	P	20 23 23.9	+0.1
THKV	Tehran--Karaj	4.66	68	ePn	P	20 23 23.0	-0.9
MIB	Mutribah	4.72	161	eP	P	20 23 26.0	+1.2
CHTH	Charan	4.85	69	ePN	P	20 23 26.7	+0.2
CHTH	Charan	4.85	69	ePn	P	20 23 26.0	-0.5
GRMI	Germi	4.89	22	ePN	P	20 23 26.2	-0.9
GRMI	Germi	4.89	22	ePn	P	20 23 26.0	-1.1
UMR	Umm Al-Rimmam	5.07	158	eP	P	20 23 30.2	+0.6
UMR				AML	AML	20 24 30.6	
	comp=Z,215nm,0.3s						
UMR	Umm Al-Rimmam	5.07	158	eP	P	20 23 30.2	+0.6
UMR				eS	S	20 24 29.0	+1.4
MAKU	Maku	5.10	352	ePN	P	20 23 29.4	-0.6
MAKU	Maku	5.10	352	ePn	P	20 23 29.0	-1.1
NAY	Al-Naaiem	5.23	164	eP	P	20 23 32.4	+0.6
NAY				AML	AML	20 24 33.4	
	comp=Z,72nm,0.5s						
DAMV	Damavand	5.44	74	ePN	P	20 23 34.9	+0.2
DAMV				AML	AML	20 25 21.0	
	comp=N,36nm,0.8s						
DAMV	Damavand	5.44	74	ePn	P	20 23 34.0	-0.7
RDF	Al-Radifah	5.61	162	eP	P	20 23 37.9	+0.8
RDF				AML	AML	20 24 42.9	
	comp=Z,216nm,0.3s						
GNI	Garni	5.88	354	Pn	P	20 23 39.6	-1.3
	comp=Z,0.9nm,0.3s,baz=225,slow=5.7,SNR=2.9						
GNI	Garni	5.88	354	eP	P	20 23 40.3	-0.6
QRN	Al-Qurain	5.89	159	eP	P	20 23 41.5	+0.6
QRN				AML	AML	20 24 49.2	
	comp=Z,160nm,0.3s						
NASN	Na’in	6.24	102	ePN	P	20 23 47.0	+1.1
NASN				AML	AML	20 25 04.8	
	comp=N,36nm,0.4s						
NASN	Na’in	6.24	102	ePn	P	20 23 47.0	+1.1
	SNR=52						
HWQ	Hawqa	7.95	273	ePn	P	20 24 01.6	-8.2
BHL	Bhannes	8.22	270	ePn	P	20 24 12.9	-0.6
ZEI	Tsey	8.56	352	eP	P	20 24 21.4	+3.2
ZEI				e		20 25 59.8	
KIV	Kislovodsk	9.90	348	ePn	P	20 24 37.6	+1.0
KIV				S	S	20 26 34.1	+6.7
KIV	Kislovodsk	9.90	348	eP	P	20 24 43.6	+7.0
KIV				S	S	20 26 34.1	+6.7
KIV				pmax	pmax		
	comp=Z,13nm,0.9s						
BR131	Keskin Array S	10.96	303	ePn	P	20 24 56.5	+5.5
BANOM	Banah	12.49	129	⇑P	P	20 25 08.4	-3.2
	SNR=10						
ASHO	Ashiyiah	13.23	134	P	P	20 25 19.1	-2.4
	SNR=32						
ARQ	Araqi	14.53	136	P	P	20 25 36.3	-2.2
	SNR=12						
HOQ	Hoqain	14.81	133	⇓P	P	20 25 40.4	-1.7
	SNR=7.6						
BIDO	Bidbid	15.36	131	⇓P	P	20 25 48.3	-0.9
BSY	Bisya	15.38	135	P	P	20 25 47.2	-2.3
	SNR=19						
SMDO	Samad	15.65	132	P	P	20 25 52.4	-0.6
	SNR=46						
JMDO	Jabal Madar	16.20	134	⇓P	P	20 25 59.2	-0.7
	SNR=13						
WHFO	Wadi Hawf	17.88	154	P	P	20 26 17.7	-3.3
	SNR=34						
ABTO	Aybut	18.24	156	⇑P	P	20 26 21.8	-3.5
	SNR=13						
RBK	Rabkut	18.43	153	⇓P	P	20 26 24.7	-3.0
	SNR=34						
AKTK	Aktyubinsk	18.53	26	P	P	20 26 28.7	-0.1
	comp=Z,48nm,18.2s						
AKTO	Aktyubinsk	18.53	26	P	P	20 26 28.6	-0.1
	comp=Z,0.4nm,0.3s,baz=166,slow=12,SNR=2.7						
AKTO				LR	LR	20 35 39.3	
	comp=Z,48nm,18.2s,slow=44						
AKASG	Malin Array Be	20.27	329	P	P	20 26 41.8	-6.1
	comp=Z,1.6nm,0.6s,baz=144,slow=13,SNR=6.0						
OBN	Obninsk	21.74	346	⇑eP	P	20 27 06.2	+3.4
	comp=Z,17nm,0.8s,mb4.5						
OBN				epP		20 27 26.4	
OBN	Obninsk	21.74	346	⇑eP	P	20 27 06.2	+3.4
OBN				e*PP		20 27 26.4	
OBN				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.5						
KWP	Kalwaria	22.75	319	P	P	20 27 14.5	+1.7
	comp=Z,20nm,1.0s,mb4.5						
KWP	Kalwaria	22.75	319	P	P	20 27 14.5	+1.7
KWP				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.5						
KWP	Kalwaria	22.75	319	P	P	20 27 14.5	+1.7
	comp=Z,20nm,1.0s,mb4.5						
AAK	Ala-Archa	24.06	61	eP	P	20 27 29.4	+3.9
	comp=Z,9.0nm,1.1s,mb4.1						
AAK	Ala-Archa	24.06	61	eP	P	20 27 29.4	+3.9
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.1						
SUW	Suwalki	25.23	328	eP	P	20 27 36.6	-0.1
MORC	Moravsky Berou	25.73	315	eP	P	20 27 40.2	-1.2
	comp=Z,8.3nm,1.0s,mb4.2						
MORC	Moravsky Berou	25.73	315	eP	P	20 27 40.2	-1.2
MORC				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
MORC	Moravsky Berou	25.73	315	eP	P	20 27 40.2	-1.2
	comp=Z,8.3nm,1.0s,mb4.2						
BVAR	Borovoye Array	25.74	36	P	P	20 27 41.5	0.0
	comp=Z,5.1nm,0.6s,mb4.2,baz=244,slow=8.1,SNR=9.6						
BVAR				PcP	PcP	20 31 11.8	+0.7
	comp=Z,1.0nm,0.7s,baz=236,slow=5.2,SNR=3.7						
BVAR	Borovoye Array	25.74	36	P	P	20 27 41.5	0.0
BVAR				e		20 31 11.8	
VRAC	Vranov	26.09	314	LR	LR	20 39 56.9	
	comp=Z,176nm,18.4s,MS3.6,baz=303,slow=41						
MOA	Molln	26.99	310	⇑iP	P	20 27 53.5	+0.4
	comp=Z,7.0nm,1.2s,mb4.1						
MOA	Molln	26.99	310	⇑P	P	20 27 53.5	+0.4
	comp=Z,7.0nm,1.2s,mb4.1						
GERES	GERESS Array B	27.67	311	PcP	PcP	20 31 17.2	+1.6
	comp=Z,0.3nm,0.3s,baz=117,slow=2.2,SNR=4.3						
KURK	Kurchatov	29.07	46	⇓eP	P	20 28 13.0	+1.2
KURK	Kurchatov	29.07	46	eP	P	20 28 10.7	-1.1
	comp=Z,7.6nm,1.0s,mb4.4						
FINES	FINESS Array B	29.90	341	P	P	20 28 17.9	-1.1
	comp=Z,7.2nm,1.1s,mb4.3,baz=147,slow=11,SNR=6.1						
FINES	FINESS Array B	29.90	341	P	P	20 28 17.9	-1.1
FINES	FINESS Array B	29.90	341	eP	P	20 28 22.1	+3.1
JOF	Joensuu	30.01	347	ep	P	20 28 18.1	-1.9
MKAR	Makanchi Array	30.31	55	P	P	20 28 23.0	+0.2
	comp=Z,1.3nm,0.6s,mb3.8,baz=254,slow=10,SNR=9.0						
MKAR	Makanchi Array	30.31	55	⇑eP	P	20 28 23.2	+0.4
KAF	Kangasniemi	30.40	342	ep	P	20 28 21.7	-1.8
SBF	Sospel	30.86	299	eP	P	20 28 27.0	-0.8
	comp=Z,16nm,0.8s,mb4.6						
SBF	Sospel	30.86	299	eP	P	20 28 27.0	-0.8
SBF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
MBDF	Montbardon	31.42	301	eP	P	20 28 28.6	-4.0
	comp=Z,17nm,1.0s,mb4.5						
MBDF	Montbardon	31.42	301	eP	P	20 28 28.6	-4.0
MBDF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
LPG	La Plagne	31.52	303	eP	P	20 28 35.6	+2.1
	comp=Z,13nm,1.0s,mb4.4						
LPG	La Plagne	31.52	303	eP	P	20 28 35.6	+2.1
LPG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
LPL	La Plagne	31.53	303	eP	P	20 28 34.9	+1.3
HFS	Hagfors	33.12	331	P	P	20 28 46.2	-1.2
	comp=Z,4.3nm,0.4s,mb4.7,baz=119,slow=8.5,SNR=16						
SMF	Signal de Mont	33.66	304	eP	P	20 28 50.3	-1.9
ZAL	Zalesovo	33.76	42	P	P	20 28 53.4	+0.5
	comp=Z,1.6nm,0.6s,mb4.2,baz=246,slow=9.5,SNR=3.6						
ZAL				LR	LR	20 43 01.7	
	comp=Z,40nm,21.4s,MS3.1,baz=341,slow=37						
NOA	NORSAR Array B	34.65	331	P	P	20 28 59.5	-1.0
	comp=Z,0.9nm,0.6s,mb3.9,baz=125,slow=8.7,SNR=3.3						
ARCES	ARCESS Array B	37.01	348	P	P	20 29 19.4	-0.9
	comp=Z,4.1nm,0.8s,mb4.3,baz=163,slow=8.2,SNR=8.0						
ARCES				LR	LR	20 45 49.3	
	comp=Z,83nm,18.4s,MS3.6,baz=212,slow=38						
LSA	Lhasa	38.70	84	eP	P	20 29 36.3	+1.5
	comp=Z,27nm,1.9s,mb4.7						
LSA	Lhasa	38.70	84	eP	P	20 29 36.3	+1.5
LSA				pmax	pmax		
	comp=Z,27nm,1.9s,mb4.7						
LSA	Lhasa	38.70	84	eP	P	20 29 36.3	+1.5
	comp=Z,27nm,1.9s,mb4.7						
ESDC	Sonseca Array	39.51	293	P	P	20 29 42.4	+0.8
	comp=Z,1.8nm,0.9s,mb3.8,baz=82,slow=9.1,SNR=4.4						
LZH	Lanzhou	47.05	70	eP	P	20 30 43.5	+0.9
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
LZH	Lanzhou	47.05	70	eP	P	20 30 43.5	+0.9
	comp=Z,18nm,1.2s,mb4.9						
LZH				pP	pP	20 30 46.8	-9.3
LZH				sP	sP	20 30 48.3	-14
BOD	Bodaibo	50.47	40	eP	P	20 31 07.6	-1.1
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
BOD	Bodaibo	50.47	40	eP	P	20 31 07.6	-1.1
	comp=Z,5.0nm,0.9s,mb4.5						
XAN	Xi’an	51.64	71	P	P	20 31 17.8	-0.1
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
DBIC	Dimbokro	53.92	251	P	P	20 31 35.9	+0.7
	comp=Z,1.6nm,0.6s,mb4.1,baz=31,slow=5.9,SNR=4.5						
HIA	Hailar	55.15	50	eP	P	20 31 43.4	-0.2
	comp=Z,7.2nm,1.3s,mb4.5						
HIA	Hailar	55.15	50	eP	P	20 31 43.4	-0.2
HIA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
HIA	Hailar	55.15	50	eP	P	20 31 43.4	-0.2
	comp=Z,7.0nm,1.3s,mb4.5						
TIXI	Tiksi	55.77	22	⇓eP	P	20 31 47.7	-0.1
	comp=Z,4.0nm,0.8s,mb4.5						
TIXI	Tiksi	55.77	22	⇓eP	P	20 31 47.7	-0.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
TIXI	Tiksi	55.77	22	eP	P	20 31 47.7	-0.1
	comp=Z,4.0nm,0.8s,mb4.5						
YAK	Yakutsk	57.69	34	iP	P	20 32 01.1	-0.5
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
YAK	Yakutsk	57.69	34	iP	P	20 32 01.1	-0.5
	comp=Z,6.0nm,0.7s,mb4.7						
NJ2	Nanjing	60.12	70	eP	P	20 32 19.1	+0.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
SSE	Sheshan	62.33	70	P	P	20 32 30.1	-3.6
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,30nm,3.8s						
SSE	Sheshan	62.33	70	P	P	20 32 30.1	-3.6
	comp=Z,21nm,0.8s,mb5.3						
BOSA	Boshof	65.44	200	P	P	20 32 56.0	+1.8
	comp=Z,5.2nm,1.0s,mb4.5,baz=43,slow=5.1,SNR=6.2						
SEY	Seymchan	67.11	28	⇑eP	P	20 33 06.0	+1.9
BILL	Bilibino	68.87	20	eP	P	20 33 15.4	+0.4
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
BILL	Bilibino	68.87	20	eP	P	20 33 15.4	+0.4
	comp=Z,5.0nm,0.9s,mb4.4						
INK	Inuvik	77.71	360	P	P	20 34 06.8	+0.2
	comp=Z,1.3nm,0.6s,mb4.1,baz=355,slow=6.8,SNR=4.5						
INK	Inuvik	77.71	360	P	P	20 34 06.8	+0.2
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
COLA	College	80.61	6	iP	P	20 34 23.6	+1.2
ILAR	Eielson Array	80.78	5	P	P	20 34 23.9	+0.5
	comp=Z,1.5nm,0.8s,mb4.0,baz=315,slow=2.0,SNR=10.0						
ILAR	Eielson Array	80.78	5	P	P	20 34 23.9	+0.6
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YKA	Yellowknife Ar	82.24	351	P	P	20 34 31.2	+0.3
	comp=Z,0.7nm,0.5s,mb3.9,baz=9.3,slow=5.1,SNR=4.5						
YKA	Yellowknife Ar	82.24	351	P	P	20 34 31.2	+0.3
YKA	Yellowknife Ar	82.24	351	P	P	20 34 31.2	+0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KDAK	Kodiak Island	87.02	10	P	P	20 34 56.5	+1.7
	comp=Z,15nm,1.0s,mb5.2,baz=316,slow=7.7,SNR=4.8						
KDAK	Kodiak Island	87.02	10	P	P	20 34 56.5	+1.7
NEW	Newport	96.37	348	LR	LR	21 19 45.2	

comp=Z,56nm,18.6s,MS4.1,baz=358,slow=36

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*ISK **03** 20:31:48.9, 38.08N×26.73E, h5^{km}, MD3.1*
*ATH **03** 20:31:49.7, 38.06N×26.82E, h39^{km}, MD3.1/3*
*CSEM **03** 20:31:49.9±0.1, 38.13N×26.76E, h12^{km}, MD3.1, Error ellipse: s-maj=3.4km s-min=2.2km az=139.0*
ISC 03 20:31:49.4±0.7**, 38.14N**±0.03×**26.67E**±0.04**, h4**^{km}±6^{km}**, n18, σ0^{s}87**/25**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.23	346	*i* P	Pg	20 31 53.8	-0.3
URLA				*i* S	Sg	20 31 57.4	+0.3
BLCB	Balcova	0.39	50	PG	Pg	20 31 56.9	-0.2
SMG	Samos	0.45	162	⇑*i*PB	Pg	20 31 59.3	+1.0
SMG				*e*SB	Sg	20 32 05.3	+1.0
IZM	Izmir	0.54	61	PG	Pg	20 31 59.8	-0.3
IZM				SG	Sg	20 32 07.7	+0.4
KDAG	Bornova	0.54	60	*i* P	Pg	20 31 59.0	-1.3
KDAG				*i* S	Sg	20 32 06.9	-0.6
AYDN	Tasoluk	1.07	116	*i* P	Pb	20 32 11.4	+1.4
AYDN				*i* S	Sb	20 32 24.3	+0.1
PRK	Paraskevi	1.15	345	*e*PN	Pn	20 32 12.4	+0.3
AKS	Akhisar	1.17	50	*e*PN	Pn	20 32 11.8	-0.6
BODT	Bodrum	1.19	154	*e*PN	Pn	20 32 10.7	-2.0
MLSB	Milas	1.22	133	*e*PN	Pn	20 32 11.3	-1.8
APE	Apeiranthos	1.40	221	*e*PN	Pn	20 32 15.8	+0.2
APE				*e*SN	Sn	20 32 34.9	+0.2
APE	Apeiranthos	1.40	221	*e*PN	Pn	20 32 14.8	-0.8
MANT	Manisa	1.53	76	*i* P	Pn	20 32 19.0	+1.4
MANT				*i* S	Sb	20 32 38.3	+0.7
YER	Yerkesik	1.63	127	*e*PN	Pn	20 32 18.1	-0.9
BALB	Balikesir	1.78	32	*e*PN	Pn	20 32 21.5	+0.4
DENT	Denizli	1.91	101	*e*PN	Pn	20 32 22.5	-0.5
DST	Dursunbey	2.12	46	*e*PN	Pn	20 32 26.3	+0.3
EDC	Edincik	2.40	22	*e*PN	Pn	20 32 30.9	+0.9

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*NEIC **03** 20:31:53.2, 40.18S×175.00E, h20^{km}, ML4.0(WEL), After WEL.*
NEIC Felt in the Wanganui area.
WEL 03 20:31:52.9±0.1**, 40.18S**×**174.97E, h18**^{km}±2^{km}**, ML4.1**/37**, 12C-12D, Error ellipse: s-maj=1.5km s-min=0.5km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	Wanganui	0.42	2	⇑P	Pb	20 32 02.0	+0.5
WAZ				S	Sb	20 32 08.2	+0.9
WAZ	Wanganui	0.42	2	⇑P*	Pb	20 32 02.0	+0.5
WAZ				S*	Sb	20 32 07.4	+0.1
MRZ	Mangatainoka R	0.67	136	⇑P	Pb	20 32 06.3	+0.5
MRZ				S	Sb	20 32 15.5	+0.9
MRZ	Mangatainoka R	0.67	136	⇑P*	Pb	20 32 06.3	+0.5
MRZ				S*	Sb	20 32 15.5	+0.8
KIW	Kapiti Island	0.69	184	⇓P	Pb	20 32 05.6	-0.5
KIW				S	Sb	20 32 14.2	-0.9
KIW	Kapiti Island	0.69	184	⇓P*	Pb	20 32 05.6	-0.5
KIW				S*	Sb	20 32 14.2	-0.8
TSZ	Takapari Road	0.77	82	⇓P	Pb	20 32 07.9	+0.4
TSZ				S	Sb	20 32 17.8	+0.4
TSZ	Takapari Road	0.77	82	⇓P*	Pb	20 32 07.9	+0.4
TSZ				S*	Sb	20 32 17.8	+0.3
MTVZ	Mangateitei	0.88	26	⇓P*	Pb	20 32 09.0	-0.3
MTVZ				S*	Sb	20 32 21.5	+0.9
PKVZ	Pokaka	0.93	18	P*	Pb	20 32 09.8	-0.4
CAW	Cannon Point	0.94	175	⇑P	Pb	20 32 10.4	+0.1
CAW				S	Sb	20 32 22.0	-0.3
CAW	Cannon Point	0.94	175	⇑P*	Pb	20 32 10.4	+0.1
CAW				S*	Sb	20 32 22.3	0.0
MOVZ	Moawhango	0.97	38	⇓P	Pb	20 32 10.2	-0.8
MOVZ				S	Sb	20 32 23.5	+0.1
MOVZ	Moawhango	0.97	38	⇓P*	Pb	20 32 10.2	-0.8
MOVZ				S*	Sb	20 32 23.5	+0.1
WNVZ	Wahianoa	0.97	30	P	Pb	20 32 10.6	-0.4
WNVZ	Wahianoa	0.97	30	P*	Pb	20 32 10.6	-0.4
TRVZ	Turoa	0.98	27	⇓P*	Pb	20 32 10.7	-0.4
RAEZ	Rainy Point	0.99	333	⇑P	Pb	20 32 12.2	+0.9
RAEZ	Rainy Point	0.99	333	⇑P*	Pb	20 32 12.2	+0.9
RAEZ				S*	Sb	20 32 27.0	+3.1
DRZ	Dome Shelter	1.01	27	P*	Pb	20 32 11.1	-0.4
DRZ				S*	Sb	20 32 23.8	-0.6
DUWZ	D'Urville Isla	1.02	232	⇓P*	Pb	20 32 10.8	-0.9
FWVZ	Far West T-bar	1.02	26	⇑P	Pb	20 32 11.3	-0.5
FWVZ	Far West T-bar	1.02	26	⇑P*	Pb	20 32 11.3	-0.5
FWVZ				S*	Sb	20 32 24.8	0.0
TUVZ	Tukino	1.05	30	P	Pb	20 32 11.7	-0.5
TUVZ	Tukino	1.05	30	P*	Pb	20 32 11.7	-0.5
TUVZ				S*	Sb	20 32 26.3	+0.7
VRZ	Vera Road	1.06	351	P	Pb	20 32 12.5	+0.1
VRZ	Vera Road	1.06	351	P*	Pb	20 32 12.5	+0.1
VRZ				S*	Sb	20 32 27.1	+1.2
MTW	Mount Morrison	1.06	158	P	Pb	20 32 13.0	+0.5
MTW				S	Sb	20 32 27.2	+1.3
MTW	Mount Morrison	1.06	158	P*	Pb	20 32 13.0	+0.5
MTW				S*	Sb	20 32 27.2	+1.3
WPVZ	Whakapapa	1.07	25	P	Pb	20 32 12.1	-0.4
WPVZ	Whakapapa	1.07	25	P*	Pb	20 32 12.1	-0.5
WPVZ				S*	Sb	20 32 26.6	+0.6
CNZ	Chateau	1.07	25	⇑P	Pb	20 32 12.2	-0.4
CNZ	Chateau	1.07	25	⇑P*	Pb	20 32 12.2	-0.5
MRW	Makara Radio	1.07	191	P*	Pb	20 32 12.2	-0.4
MRW				S*	Sb	20 32 26.4	+0.1
BFZ	Birch Farm	1.10	118	*e*PN	Pn	20 32 13.0	-0.5
NGZ	Ngauruhoe	1.11	26	P	Pb	20 32 12.7	-0.6
NGZ	Ngauruhoe	1.11	26	⇓PN	Pn	20 32 12.7	-0.9
WEL	Wellington	1.12	188	PN	Pn	20 32 13.1	-0.7
NEZ	North Egmont	1.13	323	P	Pb	20 32 13.8	+0.2
NEZ	North Egmont	1.13	323	PN	Pn	20 32 13.8	-0.2
OTVZ	Oturere	1.14	28	PN	Pn	20 32 13.5	-0.7
OTVZ				SN	Sn	20 32 28.9	-0.5
SNZO	South Karori	1.15	190	P	Pb	20 32 13.4	-0.6
SNZO	South Karori	1.15	190	PN	Pn	20 32 13.4	-0.8
NRZ	Ngariki Road	1.16	316	P	Pb	20 32 14.6	+0.5
NRZ	Ngariki Road	1.16	316	PN	Pn	20 32 14.6	+0.2
TWVZ	Taurewa	1.16	18	P	Pb	20 32 13.1	-1.0
TWVZ	Taurewa	1.16	18	PN	Pn	20 32 13.1	-1.3
WTVZ	West Tongariro	1.16	25	P	Pb	20 32 13.3	-0.8
WTVZ	West Tongariro	1.16	25	PN	Pn	20 32 13.3	-1.1
TCW	Tory Channel	1.16	207	⇓P	Pb	20 32 13.0	-1.2
TCW	Tory Channel	1.16	207	⇓PN	Pn	20 32 13.0	-1.4
KRVZ	Karewarewa	1.20	26	PN	Pn	20 32 13.9	-1.0
BHW	Baring Head	1.23	183	P	Pb	20 32 15.0	-0.4
BHW	Baring Head	1.23	183	PN	Pn	20 32 15.0	-0.5
NWEZ	Newall Road	1.24	316	PN	Pn	20 32 15.8	+0.3
PKE	Pukeiti	1.24	322	*e*PN	Pn	20 32 15.8	+0.3
PAWZ	Paruwai Farm	1.25	164	P	Pn	20 32 15.3	-0.5
PAWZ	Paruwai Farm	1.25	164	PN	Pn	20 32 15.3	-0.4
MSWZ	Moikau Station	1.26	170	P	Pn	20 32 15.4	-0.4
MSWZ	Moikau Station	1.26	170	PN	Pn	20 32 15.4	-0.3
KATZ	Kakaramea	1.32	25	PN	Pn	20 32 15.8	-0.9
TRWZ	Traveller	1.34	156	*e*PN	Pn	20 32 17.2	+0.2
RITZ	Rihia Road	1.38	30	*e*PN	Pn	20 32 17.5	-0.1
RATZ	Rangitukua	1.45	26	*e*P	Pn	20 32 18.0	-0.5
RATZ	Rangitukua	1.45	26	*e*PN	Pn	20 32 18.0	-0.5
PXZ	Pawanui	1.46	85	*e*PN	Pn	20 32 18.6	0.0
TUWZ	Tuamarina	1.48	212	PN	Pn	20 32 18.3	-0.7
BKZ	Black Stump Fm	1.55	50	*e*PN	Pn	20 32 19.6	-0.4
HATZ	Hinemaiaia	1.55	34	*e*PN	Pn	20 32 19.5	-0.4
WATZ	Wairara	1.58	22	*e*PN	Pn	20 32 19.7	-0.7
NNZ	Nelson	1.60	229	*e*PN	Pn	20 32 19.9	-0.7
HIZ	Hauiti	1.66	357	P	Pn	20 32 20.9	-0.7
HIZ	Hauiti	1.66	357	PN	Pn	20 32 20.9	-0.7
BSWZ	Blackbirch Sta	1.75	208	P	Pn	20 32 23.0	+0.2
BSWZ	Blackbirch Sta	1.75	208	PN	Pn	20 32 23.0	+0.2
THZ	Tophouse	2.23	224	*e*PN	Pn	20 32 29.2	-0.4
TAZ	Tarawera	2.28	32	*e*PN	Pn	20 32 30.5	+0.1
KHZ	Kahutara	2.49	205	PN	Pn	20 32 32.3	-1.1
URZ	Urewera	2.53	42	*e*P	Pn	20 32 32.7	-1.4
URZ	Urewera	2.53	42	*e*PN	Pn	20 32 32.7	-1.3
MWZ	Matawai	2.71	48	*e*P	Pn	20 32 35.6	-0.9
MWZ	Matawai	2.71	48	*e*PN	Pn	20 32 35.6	-0.9
DSZ	Denniston Nort	2.87	236	*e*PN	Pn	20 32 38.0	-0.8
MQZ	McQueen's Vall	3.93	205	*e*PN	Pn	20 32 49.6	-4.3

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*CSEM **03** 20:44:54.7±0.2, 34.44N×4.71W, h15^{km}, MD3.4, Error ellipse: s-maj=8.1km s-min=5.7km az=83.0*
*MDD **03** 20:44:55.6±0.8, 34.53N×4.76W, mb3.5/2, Error ellipse: s-maj=7.8km s-min=5.7km az=76.0, PRXIMO*
*CNRM **03** 20:45:55.0, 34.55N×4.79W, h8^{km}, MD3.4*
ISC 03 20:44:55.7±0.6**, 34.41N**±0.03×**4.87W**±0.06**, h10**^{km}**, n16, σ1^{s}49**/30**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TZK	Tazeka	0.65	120	*i* P	Pb	20 45 07.5	-1.1
TZK				*i* S	Sb	20 45 17.5	+0.1
TOU	Touzarine	1.07	59	*i* P	Pb	20 45 12.5	-3.3
TOU				*i* S	Sb	20 45 26.5	-3.1
MPAL	Palemas	1.11	43	P	Pb	20 45 12.0	-4.5
MPAL				S	Sb	20 45 25.5	-5.3
MPAL	Palemas	1.11	43	*i* P	Pb	20 45 12.0	-4.5
CZD	Col de Zad	1.38	186	*i* P	Pn	20 45 21.0	-0.1
CZD				*i* S	Sb	20 45 40.0	+1.2
EMIJ	Mijas	2.15	2	P	Pn	20 45 31.1	-1.0
	2.4nm,0.3s,SNR=5.3						
EMIJ				S	Sn	20 46 00.5	+1.5
	6.1nm,0.5s,SNR=7.9						
EQUE	Quentar	3.02	22	P	Pn	20 45 45.2	+0.7
	1.6nm,0.3s,SNR=7.5						
EQUE				S	Sn	20 46 26.1	+5.1
	1.5nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	3.66	337	P	Pn	20 45 53.1	-0.4
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	20 46 35.1	-2.1
	0.6nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	3.66	337	P	Pn	20 45 53.1	-0.4
	0.2nm,0.1s,SNR=7.9						
EMIN				S	Sn	20 46 35.1	-2.1
	0.6nm,0.3s,SNR=7.9						
EQES	Quesada	3.68	23	P	Pn	20 45 56.2	+2.3
	6.3nm,0.7s,SNR=6.4						
EQES				S	Sn	20 46 40.4	+2.5
	3.9nm,0.5s,SNR=7.9						
EADA	Adamuz	3.75	3	P	Pn	20 45 55.3	+0.3
	0.8nm,0.3s,SNR=7.9						
EADA				S	Sn	20 46 39.3	-0.4
	0.7nm,0.2s,SNR=7.9						
EADA	Adamuz	3.75	3	P	Pn	20 45 55.3	+0.4
	0.8nm,0.3s,SNR=7.9						
EADA				S	Sn	20 46 39.3	-0.4
	0.7nm,0.2s,SNR=7.9						
EGRO	El Granado	3.77	326	P	Pn	20 45 53.8	-1.3
	2.5nm,0.2s,SNR=5.6						
EGRO				S	Sn	20 46 35.5	-4.6
	5.7nm,0.6s,SNR=7.9						
EGRO	El Granado	3.77	326	P	Pn	20 45 53.8	-1.4
	2.5nm,0.2s,SNR=5.6						
EGRO				S	Sn	20 46 35.5	-4.6
	5.7nm,0.6s,SNR=7.9						
EHUE	Huescar	3.86	28	P	Pn	20 45 58.4	+1.9
	0.4nm,0.2s,SNR=5.6						
EHUE				S	Sn	20 46 44.5	+2.0
	0.2nm,0.6s,SNR=4.0						
CIA	Chichaoua	4.33	230	*i* P	Pn	20 46 03.0	-0.2

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*SKO **03** 20:54:13.6, 37.35N×20.76E*
*ATH **03** 20:54:15.1, 37.41N×20.33E, h26^{km}±1^{km}, MD3.8/14, ML3.9*
*NEIC **03** 20:54:15.1, 37.41N×20.33E, h26^{km}, ML3.9(ATH), After ATH.*
*CSEM **03** 20:54:15.5±0.2, 37.37N×20.32E, h16^{km}±1^{km}, ML3.9, Error ellipse: s-maj=2.7km s-min=1.7km az=172.0*
*THE **03** 20:54:18.5, 37.43N×20.51E, h22^{km}, ML3.6*
ISC 03 20:54:15.0±0.8**, 37.41N**±0.04×**20.28E**±0.03**, h20**^{km}±9^{km}**, n50, σ1^{s}12**/68**, 3C, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.80	18	*e*PB	Pb	20 54 30.3	+0.2
VLS				*e*SN	Sn	20 54 42.8	+0.3
RLS	Riolos of Patr	1.14	55	⇑*i*PN	Pn	20 54 36.5	+0.6
RLS				*e*SN	Sn	20 54 52.4	+1.3
ITM	Ithomi	1.33	99	⇑*i*PN	Pn	20 54 39.0	+0.3
ITM				*e*SN	Sn	20 54 57.0	+1.1
EVR	Evrytania	1.93	38	*e*PN	Pn	20 54 48.5	+1.3
EVR				*e*SN	Sn	20 55 11.4	+0.4
IGT	Igoumenitsa	2.12	1	*e*Pn	Pn	20 54 51.0	+1.0
IGT				*e*Sn	Sn	20 55 18.1	+2.2
VLI	Veliai	2.23	107	*e*PB	Pb	20 54 52.7	-1.8
AGG	Agios Georgios	2.28	44	*e*Pn	Pn	20 54 53.3	+1.0
	comp=Z,3.1nm,0.4s						
AGG				*e*Sn	Sn	20 55 18.6	-1.4
JAN	Janina	2.29	11	*e*PB	Pb	20 54 54.4	-1.0
KEK	Kerkira	2.33	351	*e*PN	Pn	20 54 54.0	+1.0
MGER	Gerania Oros	2.43	75	*e*PN	Pn	20 54 54.5	+0.1
SRN	Sarande	2.48	355	*e*Pn	Pn	20 54 56.2	+1.1
LKR	Lokris	2.48	59	*e*PN	Pn	20 54 55.5	+0.4
KYTH	Kithira	2.48	116	*e*PN	Pn	20 54 56.0	+0.9
LSK	Leskovik	2.75	5	*i* Pn	Pn	20 55 00.3	+1.4
LSK	Leskovik	2.75	5	*e*Pn	Pn	20 55 00.3	+1.4
ATH	Athens Observa	2.78	77	*e*PN	Pn	20 55 00.0	+0.6
NEO	Neokhori	2.99	50	*e*PN	Pn	20 55 03.0	+0.6
XOR	Xorichti	3.01	49	*e*Pn	Pn	20 55 02.0	-0.6
KZN	Kozani	3.12	21	*e*PN	Pn	20 55 05.2	+1.0
LIT	Litokhoron	3.19	32	*e*Pn	Pn	20 55 05.3	+0.1
	comp=Z,3.8nm,0.4s						
LIT				*e*Sn	Sn	20 55 40.8	-2.4
LIT	Litokhoron	3.19	32	*e*Pn	Pn	20 55 05.3	0.0
	3.8nm,0.4s						
LIT				*e*Sn	Sn	20 55 40.8	-2.4
AOS	Alonnisos	3.33	57	*e*Pn	Pn	20 55 06.4	-0.8
GRI	Girifalco	3.36	296	Pn	Pn	20 55 07.5	-0.1
GRI				Sn	Sn	20 55 46.9	-0.4
LCI	Lecce	3.38	331	Pn	Pn	20 55 08.5	+0.7
SOI	Samo	3.42	282	Pn	Pn	20 55 08.1	-0.3
FNA	Florina	3.48	14	*e*Pn	Pn	20 55 09.7	+0.4
FNA				*e*Sn	Sn	20 55 49.5	-0.8
CEL	Celeste	3.58	285	Pn	Pn	20 55 10.4	-0.3
CEL				Sn	Sn	20 55 50.4	-2.4
PAIG	Paliouri	3.66	46	*e*Pn	Pn	20 55 10.6	-1.2
BIA	Bitola	3.69	12	*e*Pn	Pn	20 55 11.7	-0.7
BIA				*e*Sn	Sn	20 55 55.1	-0.7
OHR	Ohrid	3.72	6	*e*Pn	Pn	20 55 14.0	+1.3
OHR				*e*Sn	Sn	20 55 57.7	+1.2
THE	Thessaloniki	3.84	32	*e*Pn	Pn	20 55 13.8	-0.5
PLG	Polygyros	3.85	39	⇑*i*PN	Pn	20 55 14.5	-0.1
GRG	Griva	3.91	24	*e*Pn	Pn	20 55 14.9	-0.5
GRG				*e*Sn	Sn	20 55 59.3	-1.9
PE1	Pezze di Greco	4.05	328	*e*Pn	Pn	20 55 17.3	-0.2
OUR	Ouranopolis	4.11	44	*e*Pn	Pn	20 55 17.1	-1.2
SOH	Sokhos	4.16	34	*e*Pn	Pn	20 55 19.1	+0.1
SSY	Sortino	4.16	268	Pn	Pn	20 55 17.0	-2.0
BRT	Bari-Castellan	4.21	326	Pn	Pn	20 55 20.0	+0.3
KNT	Kendrikon	4.26	28	*e*Pn	Pn	20 55 20.6	+0.1
	comp=Z,2.2nm,0.2s						
KNT	Kendrikon	4.26	28	*e*Pn	Pn	20 55 20.5	+0.1
	2.2nm,0.2s						
VAY	Valandovo	4.29	24	*e*Pn	Pn	20 55 19.2	-1.6
VAY				*e*Sn	Sn	20 56 07.6	-3.3
CUC	Castrocucco	4.34	308	Pn	Pn	20 55 22.8	+1.2
MGR	Morigerati	4.59	308	Pn	Pn	20 55 26.5	+1.4
SKO	Skopje	4.64	11	*e*Pn	Pn	20 55 22.6	-3.3
SKO				*e*Sn	Sn	20 56 16.2	-3.6
SKO	Skopje	4.64	11	*e*Pn	Pn	20 55 22.5	-3.3
SKO				*e*Sn	Sn	20 56 16.2	-3.6
SLCN	Sala Consilina	4.69	311	Pn	Pn	20 55 28.8	+2.3
CDT	Castel del Mon	4.81	321	*e*Pn	Pn	20 55 27.7	-0.5
WDD	Wield Dalam	4.88	253	Pn	Pn	20 55 28.6	-0.6
WDD				Sn	Sn	20 56 22.3	-3.5
SGO	Sicignano	4.99	311	Pn	Pn	20 55 32.0	+1.2
	11nm,0.2s						
ALN	Alexandroupoli	5.67	50	*e*Pn	Pn	20 55 39.5	-0.9

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*CSEM **03** 20:55:24.0±0.9, 34.30N×44.92E, h20^{km}, ML3.5, Error ellipse: s-maj=24.9km s-min=4.3km az=113.0*
*THR **03** 20:55:29.7±0.4, 34.46N×45.46E, h15^{km}±5^{km}, ML3.5*
*OMAN **03** 20:55:33.8, 33.74N×45.30E, h20^{km}, Error ellipse: s-maj=1045.0km s-min=108.1km az=321.0*
ISC 03 20:55:29.2±0.6**, 34.18N**±0.05×**45.30E**±0.07**, h33**^{km}**, n22, σ0^{s}64**/21**, 3C-1D, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHD	Baghdad	1.19	220	*e*x	x	20 55 30.0	
BHD				*e*x	x	20 55 51.0	
SNGE	Sanandaj	1.91	61	*e*Pg	P	20 56 00.6	+0.5
SNGE				*e*Sg	S	20 56 23.0	-0.1
SNGE				AML	AML	20 56 28.6	
	comp=N,882nm,0.4s						
MSL	Mosul	2.78	320	*e*x	x	20 56 30.5	
MSL				*e*x	x	20 57 02.5	
MSL				*i* x	x	20 57 07.0	
MSL				*i* x	x	20 57 11.0	
SHGR	Shooshtar-Gavs	3.59	124	*e*Pn	Pn	20 56 27.6	+3.6
HKR	Hakkari	3.62	340	*e*PN	Pn	20 56 35.1	+11
ASAO	Ashtian	3.92	83	*e*Pn	Pn	20 56 29.9	+1.1
ASAO				AML	AML	20 57 44.4	
	comp=N,47nm,0.8s						
THKV	Tehran--Karaj	4.89	68	*e*Pn	Pn	20 56 41.9	-0.6
BTMT	Batman	5.05	323	*e*PN	Pn	20 56 44.7	-0.1
CLDR	Caldiran	5.08	348	*e*PN	Pn	20 56 45.2	+0.1
CHTH	Charan	5.08	69	*e*Pn	Pn	20 56 44.8	-0.3
DAMV	Damavand	5.67	73	*e*Pn	Pn	20 56 52.9	-0.5
PTK	Pertek	6.69	316	*e*PN	Pn	20 57 07.9	+0.1
BANOM	Banah	12.58	128	P	P	20 58 27.8	-0.9
	SNR=31						
ASHO	Ashiyiah	13.31	132	P	P	20 58 37.7	-0.6
	SNR=26						
ARQ	Araqi	14.60	135	⇓P	P	20 58 55.3	0.0
BSY	Bisya	15.45	134	⇑P	P	20 59 06.8	+0.4
BSYO	Bisya	15.49	134	P	P	20 59 06.8	-0.1
SMDO	Samad	15.73	131	⇑P	P	20 59 10.8	+0.8
WHFO	Wadi Hawf	17.88	153	P	P	20 59 38.0	+1.0
	SNR=14						
ABTO	Aybut	18.23	155	⇑P	P	20 59 40.7	-0.7
RBK	Rabkut	18.42	152	P	P	20 59 43.2	-0.7
	SNR=13						
SHAO	Shalim	18.55	148	P	P	20 59 45.7	+0.2
	SNR=22						

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*HLW **03** 21:04:45.7, 24.35N×36.52E, h30^{km}, Mb3.0*
*SNSN **03** 21:04:49.1, 25.23N×38.21E, Ml2.2*
ISC 03 21:04:42.5±2.1**, 24.35N**±0.07×**36.51E**±0.09**, h18**^{km}±27^{km}**, n9, σ0^{s}79**/12**, 5C, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UMJS	Umm Lajj	1.14	40	P	Pb	21 05 03.5	+0.1
UMJS				S	Sb	21 05 16.4	-1.3
YNBS	Yanbu' al Bahr	1.35	90	P	Pn	21 05 06.9	+0.3
HAGS	Hagol	1.39	271	⇑*i*P	Pn	21 05 08.0	+0.8
HSHL	Bi'r Shalatayn	1.60	220	⇑P	Pn	21 05 10.8	+0.5
HSHL				S	Sn	21 05 29.3	-1.4
EMRS	Mersa Alam	1.66	294	⇑*e*P	Pn	21 05 11.5	+0.4
EMRS				S	Sn	21 05 30.5	-1.4
HADB		1.98	300	⇑P	Pn	21 05 16.2	+0.5
HQSR		2.38	306	⇑P	Pn	21 05 21.7	+0.3
HSFG		3.21	314	P	Pn	21 05 33.4	+0.2
TBKS	Tabuk	3.86	0	P	Pn	21 05 43.0	+0.7

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*NEIC **03** 21:06:29.9±0.4, 43.78N×105.21W, ML3.4, Error ellipse: s-maj=5.0km s-min=3.5km az=102.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.
*IDC **03** 21:06:30.2±1.9, 44.00N×105.62W, mb4.0/1, mb1 4.1/4, mb1mx3.7/22, mbtmp3.8/4, ML3.7/3, MS2.5/1, Ms1 2.4/1, ms1mx2.2/20, Error ellipse: s-maj=73.0km s-min=8.0km az=147.0*
ISC 03 21:06:27.8±0.7**, 43.79N**±0.04×**105.17W**±0.08**, n38, σ0^{s}91**/38**, mb4.2**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHWY	Pilot Hill	2.50	185	*e*P	Pn	21 07 12.2	+1.9
RWWY	Rawlins	2.58	216	*e*P	Pn	21 07 13.2	+1.7
LAO	LASA Array	2.99	346	*e*P	Pn	21 07 18.6	+1.2
PDAR	Pinedale Array	3.36	254	Pn	Pn	21 07 23.6	+1.0
	6.9nm,0.3s,baz=70,slow=15,SNR=155						
PDAR				Lg		21 08 08.0	
	16nm,0.3s,baz=78,slow=21,SNR=7.0						
BW06	Boulder Array	3.36	254	*e*P	Pn	21 07 23.6	+0.9
GCMT	Greycliff	3.78	304	*e*P	Pn	21 07 28.9	+0.3
LKWY	Lake	3.84	283	P	Pn	21 07 29.8	+0.4
LOHW	Long Hollow	3.94	269	*e*P	Pn	21 07 31.8	+0.9
ISCO	Idaho Springs	4.00	185	*e*P	Pn	21 07 32.8	+1.0
MOOW	Moose Ponds	4.04	271	*e*P	Pn	21 07 32.7	+0.4
SNOW	Snow King Moun	4.07	267	*e*P	Pn	21 07 33.3	+0.6
YFT	Old Faithful	4.13	281	P	Pn	21 07 34.2	+0.6
REDW	Red Top Meadow	4.15	266	*e*P	Pn	21 07 34.9	+1.1
IMW	Indian Meadow	4.17	273	*e*P	Pn	21 07 35.4	+1.1
TPAW	Teton Pass	4.21	268	P	Pn	21 07 34.1	-0.6
YMR	Madison River	4.26	284	*e*P	Pn	21 07 35.5	+0.2
AHID	Auburn Hatcher	4.45	259	P	Pn	21 07 38.3	+0.2
RRI2	Red Ridge	4.49	266	*e*P	Pn	21 07 39.0	+0.3
DGMT	Dagmar	4.73	8	P	Pn	21 07 43.4	+1.3
BOZ	Bozeman (W)	4.96	294	*e*P	Pn	21 07 45.4	0.0
HWUT	Hardware Ranch	5.19	247	*e*P	Pn	21 07 48.2	-0.4
	17nm,0.4s						
TCUT	Toone Canyon	5.33	242	*e*P	Pn	21 07 49.9	-0.7
DLMT	Dillon	5.53	289	P	Pn	21 07 52.6	-0.9
HRY	Holter Researc	5.54	304	*e*P	Pn	21 07 53.2	-0.3
MCMT	McKenzie Canyo	5.61	283	*e*P	Pn	21 07 53.8	-0.7
DAU	Daniels Canyon	5.65	235	*e*P	Pn	21 07 54.7	-0.3
CTU	Camp Tracy	5.78	240	*e*P	Pn	21 07 56.5	-0.4
HVU	Hansel Valley	5.95	253	*e*P	Pn	21 07 59.3	0.0
SRU	San Rafael	6.17	223	*e*P	Pn	21 08 01.1	-1.3
TMUT	Trail Mountain	6.38	227	*e*P	Pn	21 08 04.5	-0.8
BGU	Big Grassy Mou	6.49	247	*e*P	Pn	21 08 06.2	-0.7
CHMT	Chamberlain Mo	6.50	302	*e*P	Pn	21 08 06.5	-0.5
DUG	Dugway	6.73	240	*e*P	Pn	21 08 08.8	-1.6
MSU	Marysvale	7.46	227	*e*P	Pn	21 08 19.8	-0.9
ULM	Lac du Bonnet	9.05	41	Pn	P	21 08 41.0	-1.7
	2.9nm,0.3s,baz=234,slow=13,SNR=23						
ULM				Lg		21 11 11.4	
	0.4nm,0.3s,baz=143,slow=18,SNR=2.9						
ULM				LR	LR	21 11 41.5	
	comp=Z,34nm,21.3s,baz=6.0,slow=34						
WVOR	Wild Horse Val	9.94	267	P	P	21 08 53.7	-1.3
NVAR	Mina Array Bea	11.26	246	Pn	P	21 09 12.3	-0.7
	0.2nm,0.3s,baz=52,slow=12,SNR=4.9						
ARCES	ARCESS Array B	61.35	18	P	P	21 16 46.0	-1.1
	1.4nm,0.7s,mb4.2,baz=330,slow=7.3,SNR=3.5						

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*MOS **03** 21:08:55.9±0.9, 7.40N×92.42E, h33^{km}, mb5.0/7, Error ellipse: s-maj=29.5km s-min=10.1km az=109.2*
*NEIC **03** 21:08:56.7±0.4, 7.42N×92.40E, mb4.7/10, Error ellipse: s-maj=12.7km s-min=6.9km az=60.0*
*IDC **03** 21:08:56.3±0.6, 7.39N×92.32E, h22^{km}±2^{km}, mb4.0/13, mb1 4.1/13, mb1mx4.0/19, mbtmp4.1/13, MS3.7/2, Ms1 3.7/2, ms1mx3.0/23, Error ellipse: s-maj=31.5km s-min=11.5km az=58.0*
*BJI **03** 21:08:57.4, 7.39N×92.10E, h27^{km}, mB5.0, mb4.4, Ms4.0, Msz3.7*
ISC 03 21:08:54.6±0.4**, 7.35N**±0.06×**92.29E**±0.08**, h23**^{km}**, h23**^{km}±.5^{km}**:pP-P, n59, σ1^{s}05**/56**, mb4.4**/35**, MS3.7**/6**, 3C-1D, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	8.55	103	*e*Pn	P	21 11 02.4	+2.2
NNT	Nongplab	8.99	54	P	P	21 11 12.0	+5.7
NNT				P		21 12 09.1	
	665nm,1.0s						
PALK	Pallekele	11.50	270	*e*Pn	P	21 11 41.5	+0.7
HYB	Hyderabad	16.73	308	*i* P	P	21 12 53.0	+3.6
HYB	Hyderabad	16.73	308	*e*P	P	21 12 53.0	+3.6
SHL	Shillong	18.12	359	*e*P	P	21 13 07.5	+0.6
KMI	Kunming	20.30	28	P	P	21 13 38.9	+7.0
KMI				AMB	AMB		
	comp=Z,30nm,1.0s						
KMI				AMB	AMB		
	comp=Z,60nm,3.7s						
KMI				LR	LR		
	comp=N,130nm,15.2s,MS3.5						
KMI				LR	LR		
	comp=E,130nm,16.7s,MS3.5						
KMI				LR	LR		
	comp=Z,190nm,18.2s,MS3.5						
PKI	Pulchoki	21.15	343	*e*P	P	21 13 41.5	+0.9
	comp=Z,66nm,0.9s,mb5.0						
DMN	Daman	21.27	342	*e*P	P	21 13 42.7	+0.8
	comp=Z,17nm,0.4s,mb4.7						
GUN	Gumba	21.34	344	*e*P	P	21 13 40.5	-2.0
KKN	Kakani	21.39	343	*e*P	P	21 13 43.0	-0.1

	comp=Z,34nm,0.8s,mb4.7						
GKN	**Gorkha**	**21.79**	**341**	*e*P	**P**	**21 13 46.7**	**-0.3**
	comp=Z,38nm,0.6s,mb5.0						
KOLN	**Koldanda**	**21.92**	**339**	*e*P	**P**	**21 13 48.9**	**+0.5**
	comp=Z,33nm,0.8s,mb4.8						
LSA	**Lhasa**	**22.26**	**357**	P	**P**	**21 13 55.9**	**+4.1**
LSA	**Lhasa**	**22.26**	**357**	*e*P	**P**	**21 13 53.9**	**+2.2**
	comp=Z,21nm,0.7s,mb4.7						
LSA				*e*pP		21 14 01.1	
GYA	**Guiyang**	**23.41**	**34**	⇑*i*P	**P**	**21 14 04.3**	**+1.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
ENH	**Enshi**	**27.94**	**33**	P	**P**	**21 14 44.3**	**-1.3**
	comp=Z,25nm,1.1s,mb4.8						
LZH	**Lanzhou**	**30.50**	**19**	*e*P	**P**	**21 15 13.0**	**+4.6**
LZH				AP	pP	21 15 20.1	+5.0
LZH				XP	sP	21 15 23.4	+5.3
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
GTA	**Gaotai**	**32.63**	**11**	*e*P	**P**	**21 15 27.6**	**+0.5**
GTA				AP	pP	21 15 33.9	+0.1
GTA				XP	sP	21 15 37.2	+0.4
GTA				AMB	AMB		
	comp=Z,100nm,4.6s						
GTA				LR	LR		
	comp=N,110nm,12.2s,MS3.9						
GTA				LR	LR		
	comp=E,90nm,12.6s,MS3.9						
GTA				LR	LR		
	comp=Z,70nm,14.1s,MS3.5						
WMQ	**Urumqi**	**36.55**	**354**	⇑P	**P**	**21 16 02.3**	**+1.6**
WMQ				AP	pP	21 16 09.8	+2.3
WMQ				XP	sP	21 16 13.3	+3.0
WMQ				PP	PP	21 17 26.5	+1.3
WMQ				*e*S	**S**	**21 21 42.5**	**+1.3**
WMQ				XS		21 21 54.5	
WMQ				AMB	AMB		
	comp=Z,100nm,3.8s						
WMQ				LR	LR		
	comp=N,10.0nm,14.6s,MS3.5						
WMQ				LR	LR		
	comp=E,70nm,19.1s,MS3.5						
WMQ				LR	LR		
	comp=Z,30nm,17.6s,MS3.1						
AAK	**Ala-Archa**	**38.49**	**339**	*e*P	**P**	**21 16 17.0**	**0.0**
	comp=Z,12nm,1.2s,mb4.5						
AAK	**Ala-Archa**	**38.49**	**339**	*e*P	**P**	**21 16 17.0**	**0.0**
AAK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.5						
MKAR	**Makanchi Array**	**40.23**	**349**	P	**P**	**21 16 31.3**	**0.0**
	comp=Z,3.1nm,0.6s,mb4.2,baz=166,slow=8.8,SNR=25						
MKAR				pP	pP	21 16 38.0	-0.2
	comp=Z,4.1nm,0.5s,baz=166,slow=8.7,SNR=19						
KKAR	**Karatay Array**	**40.44**	**335**	*e*P	**P**	**21 16 34.2**	**+1.1**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
FITZ	**Fitzroy Crossi**	**41.51**	**128**	*e*P	**P**	**21 16 42.3**	**+0.1**
	comp=Z,9.0nm,1.1s,mb4.3						
FITZ				*e*	pP	21 16 48.8	-0.2
FITZ	**Fitzroy Crossi**	**41.51**	**128**	P	**P**	**21 16 42.3**	**+0.1**
	comp=Z,16nm,1.1s,mb4.6,baz=285,slow=6.2,SNR=5.0						
FITZ				pP	pP	21 16 48.6	-0.4
	comp=Z,18nm,0.7s,baz=324,slow=5.2,SNR=9.6						
FITZ				LR	LR	21 36 17.6	
	comp=Z,91nm,20.3s,MS3.6,baz=260,slow=40						
SONM	**Songino Array**	**42.10**	**14**	P	**P**	**21 16 46.7**	**+0.1**
	comp=Z,1.2nm,0.6s,mb3.7,baz=207,slow=3.3,SNR=4.5						
SONM				pP	pP	21 16 53.2	-0.3
	comp=Z,2.3nm,0.6s,baz=197,slow=7.0,SNR=9.5						
SONM				LR	LR	21 36 39.4	
	comp=Z,120nm,19.7s,MS3.8,baz=226,slow=40						
ZAK	**Zakamensk**	**43.87**	**10**	*e*P	**P**	**21 17 06.6**	**+5.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
KURK	**Kurchatov**	**44.70**	**348**	*e*P	**P**	**21 17 07.4**	**-0.5**
	comp=Z,12nm,1.0s,mb4.7						
KURK	**Kurchatov**	**44.70**	**348**	⇑*e*P	**P**	**21 17 09.0**	**+1.2**
ZAL	**Zalesovo**	**46.85**	**354**	P	**P**	**21 17 24.1**	**-0.7**
	comp=Z,1.5nm,0.4s,mb4.3,baz=278,slow=7.2,SNR=5.4						
ZAL				pP	pP	21 17 31.1	-0.5
	comp=Z,1.8nm,0.4s,baz=298,slow=6.2,SNR=5.3						
NVS	**Novosibirsk**	**47.92**	**353**	*e*P	**P**	**21 17 30.9**	**-2.3**
BVA0	**Borovoye Array**	**48.92**	**343**	*i* P	**P**	**21 17 40.9**	**0.0**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**48.92**	**343**	P	**P**	**21 17 40.6**	**-0.3**
	comp=Z,1.3nm,0.8s,mb4.0,baz=142,slow=8.7,SNR=9.5						
BVAR				pP	pP	21 17 47.2	-0.7
	comp=Z,3.3nm,0.8s,baz=136,slow=8.7,SNR=14						
CHKZ	**Chkalovo**	**49.42**	**343**	*e*P	**P**	**21 17 44.2**	**-0.6**
	comp=Z,15nm,0.9s,mb5.0						
CHKZ	**Chkalovo**	**49.42**	**343**	*e*P	**P**	**21 17 44.2**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
WRA	**Warramunga Arr**	**49.47**	**124**	P	**P**	**21 17 44.7**	**-0.8**
	comp=Z,4.7nm,0.9s,mb4.5,baz=304,slow=8.8,SNR=17						
WRA				pP	pP	21 17 51.8	-0.7
	comp=Z,8.8nm,0.7s,baz=306,slow=8.5,SNR=26						
WRAB	**Tennant Creek**	**49.47**	**124**	*e*P	**P**	**21 17 44.0**	**-1.6**
	comp=Z,27nm,0.9s,mb5.3						
WRAB				*e*pP	pP	21 17 51.6	-1.0
WRAB	**Tennant Creek**	**49.47**	**124**	*e*P	**P**	**21 17 44.0**	**-1.6**
WRAB				*e**PP	pP	21 17 51.6	-1.0
WRAB				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
WB2	**Warramunga Arr**	**49.48**	**124**	*e*P	**P**	**21 17 45.3**	**-0.4**
WB2				*e*	pP	21 17 51.9	-0.7
AB31	**Akbulak array**	**49.84**	**333**	*e*P	**P**	**21 17 48.2**	**+0.2**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
ARU	**Arti**	**55.68**	**338**	*i* P	**P**	**21 18 30.9**	**-0.5**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
ARU				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.0						
YAK	**Yakutsk**	**61.08**	**19**	*i* P	**P**	**21 19 13.8**	**+4.7**
YAK				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.1						
STKA	**Stephens Creek**	**61.08**	**133**	P	**P**	**21 19 08.2**	**-1.4**
	comp=Z,2.5nm,0.8s,mb4.4,baz=293,slow=9.5,SNR=3.5						
STKA				pP	pP	21 19 16.1	-0.6
	comp=Z,2.6nm,0.6s,baz=331,slow=2.3,SNR=3.6						
STKA	**Stephens Creek**	**61.08**	**133**	*e*P	**P**	**21 19 09.3**	**-0.2**
STKA				*e*pP	pP	21 19 16.1	-0.5
BRTR	**Keskin Array B**	**61.39**	**311**	P	**P**	**21 19 10.4**	**-1.1**
	comp=Z,0.7nm,1.0s,mb3.8,baz=79,slow=7.3,SNR=3.0						
TIXI	**Tiksi**	**68.11**	**12**	⇓*e*P	**P**	**21 19 53.6**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
FINES	**FINESS Array B**	**72.33**	**333**	P	**P**	**21 20 18.8**	**-1.6**
	comp=Z,1.5nm,0.7s,mb4.0,baz=104,slow=7.9,SNR=7.1						
FINES				pP	pP	21 20 26.1	-1.4
	comp=Z,2.5nm,0.6s,baz=90,slow=5.7,SNR=3.9						
CASY	**Casey**	**74.64**	**172**	*e*P	**P**	**21 20 35.4**	**+1.7**
	comp=Z,8.0nm,1.1s,mb4.6						
CASY				*e*pP	pP	21 20 41.5	+0.6
ARCES	**ARCESS Array B**	**75.14**	**340**	P	**P**	**21 20 36.6**	**0.0**
	comp=Z,8.8nm,1.1s,mb4.6,baz=66,slow=15,SNR=2.5						
GERES	**GERESS Array B**	**77.00**	**318**	P	**P**	**21 20 46.9**	**-0.5**
	comp=Z,0.8nm,0.7s,mb3.8,baz=104,slow=5.5,SNR=6.7						
GERES				pP	pP	21 20 54.9	+0.2
	comp=Z,2.0nm,0.8s,baz=90,slow=5.3,SNR=10						
MAW	**Mawson**	**77.66**	**191**	P	**P**	**21 20 52.5**	**+1.8**
	comp=Z,1.6nm,0.5s,mb4.2,baz=56,slow=16,SNR=3.6						
LPG	**La Plagne**	**81.69**	**315**	*e*P	**P**	**21 21 12.5**	**-0.3**
	comp=Z,14nm,1.0s,mb4.6						
LPG	**La Plagne**	**81.69**	**315**	*e*P	**P**	**21 21 12.5**	**-0.3**
LPG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
ILAR	**Eielson Array**	**95.92**	**22**	P	**P**	**21 22 20.3**	**-0.4**
	comp=Z,0.4nm,1.0s,mb3.8,baz=216,slow=12,SNR=2.7						
ILAR				pP	pP	21 22 27.8	-0.2
	comp=Z,0.4nm,0.8s,baz=294,slow=4.9,SNR=3.7						
NVAR	**Mina Array Bea**	**126.30**	**30**	PKP	PKPdf	21 27 59.4	-1.1
	comp=Z,0.4nm,0.6s,baz=270,slow=2.7,SNR=4.0						
NVAR				pPKP		21 28 06.2	
	comp=Z,0.9nm,0.5s,baz=318,slow=1.1,SNR=6.5						
NVAR	**Mina Array Bea**	**126.30**	**30**	PKP	PKPdf	21 27 59.4	-1.1
NVAR				pPKP		21 28 06.2	
PDAR	**Pinedale Array**	**126.30**	**20**	PKP	PKPdf	21 27 57.8	-2.6
	comp=Z,0.6nm,0.7s,baz=225,slow=3.8,SNR=3.5						
TXAR	**Lajitas Array**	**140.43**	**22**	PKiKP		21 28 28.0	
	comp=Z,0.3nm,0.4s,baz=180,slow=0.9,SNR=3.4						
TXAR				pPKiKP		21 28 34.2	
	comp=Z,0.7nm,0.5s,baz=144,slow=1.6,SNR=5.1						

ATH ***03*** *21:15:07.8, 38.15N×26.58E, h28^{km}±3^{km}, MD3.3/4*

NEIC ***03*** *21:15:07.0, 38.07N×26.72E, h5^{km}, MD3.4(ISK), MD3.3(ATH), After ISK.*

ISK ***03*** *21:15:08.6, 38.12N×26.78E, h10^{km}, MD3.3*

CSEM ***03*** *21:15:08.5±0.1, 38.11N×26.80E, h10^{km}, MD3.3, Error ellipse: s-maj=3.0km s-min=1.3km az=82.0*

ISC 03 21:15:07.5±0.9**, 38.15N**±0.03×**26.68E**±0.04**, h2**^{km}±6^{km}**, n31, σ0**^{s}**.89**/41**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.22**	**343**	*i* P	**Pg**	**21 15 11.7**	**-0.2**
URLA				*i* S	**Sg**	**21 15 15.1**	**+0.3**
BLCB	**Balcova**	**0.37**	**51**	*i* PG	**Pg**	**21 15 15.4**	**+0.5**
SMG	**Samos**	**0.46**	**164**	⇑*i*PB	**Pb**	**21 15 18.1**	**+0.1**
SMG				*e*SB	**Sb**	**21 15 25.6**	**+0.5**
IZM	**Izmir**	**0.52**	**62**	*i* PG	**Pg**	**21 15 18.2**	**+0.2**
IZM				*i* SG	**Sg**	**21 15 25.7**	**+0.7**
KDAG	**Bornova**	**0.53**	**62**	*i* P	**Pg**	**21 15 17.2**	**-0.9**
KDAG				*i* S	**Sg**	**21 15 23.4**	**-1.8**
AYDN	**Tasoluk**	**1.07**	**117**	*i* P	**Pb**	**21 15 29.5**	**+1.0**
AYDN				*i* S	**Sb**	**21 15 42.8**	**0.0**
PRK	**Paraskevi**	**1.14**	**344**	*e*PN	**Pn**	**21 15 29.1**	**-1.3**
PRK				*e*SN	**Sn**	**21 15 44.7**	**-2.1**
AKS	**Akhisar**	**1.15**	**51**	PN	**Pn**	**21 15 30.3**	**-0.3**
BODT	**Bodrum**	**1.20**	**155**	PN	**Pn**	**21 15 30.8**	**-0.5**
BODT				SN	**Sn**	**21 15 47.1**	**-1.3**
MLSB	**Milas**	**1.22**	**134**	*e*PN	**Pn**	**21 15 30.9**	**-0.7**
BDRM	**Kayabasi**	**1.25**	**150**	*i* P	**Pb**	**21 15 31.3**	**-0.1**
BDRM				*i* S	**Sb**	**21 15 49.0**	**+1.2**
APE	**Apeiranthos**	**1.41**	**220**	PN	**Pn**	**21 15 35.7**	**+1.4**
APE				SN	**Sn**	**21 15 54.9**	**+1.1**
APE	**Apeiranthos**	**1.41**	**220**	*e*PN	**Pn**	**21 15 33.0**	**-1.3**
MANT	**Manisa**	**1.52**	**77**	*i* P	**Pn**	**21 15 36.6**	**+0.7**
MANT				*i* S	**Sb**	**21 15 56.1**	**+0.3**
DAT	**Datca**	**1.59**	**153**	PN	**Pn**	**21 15 36.5**	**-0.4**
YER	**Yerkesik**	**1.63**	**128**	PN	**Pn**	**21 15 36.3**	**-1.2**
EZN	**Ezine**	**1.69**	**351**	PN	**Pn**	**21 15 39.9**	**+1.6**
BALB	**Balikesir**	**1.76**	**32**	PN	**Pn**	**21 15 40.0**	**+0.7**
DENT	**Denizli**	**1.91**	**101**	PN	**Pn**	**21 15 40.7**	**-0.7**
DALT	**Dalyan (Mudla)**	**2.08**	**131**	*e*PN	**Pn**	**21 15 42.9**	**-1.0**
LIA	**Limnos Island**	**2.10**	**327**	*e*PN	**Pn**	**21 15 42.9**	**-1.2**
LPK	**Lapseki**	**2.22**	**2**	*e*PN	**Pn**	**21 15 46.9**	**+1.0**
EDC	**Edincik**	**2.38**	**22**	*e*PN	**Pn**	**21 15 48.8**	**+0.7**
BNT	**Bandirma**	**2.40**	**23**	*e*PN	**Pn**	**21 15 49.2**	**+0.7**
KCT	**Karacabey**	**2.48**	**31**	*e*PN	**Pn**	**21 15 50.3**	**+0.7**
MRMT	**Marmara Adasi**	**2.55**	**16**	*e*PN	**Pn**	**21 15 51.4**	**+0.8**
ORLT	**Orhaneli**	**2.56**	**42**	*e*PN	**Pn**	**21 15 51.3**	**+0.5**
MFT	**Murefte**	**2.67**	**10**	*e*PN	**Pn**	**21 15 53.1**	**+0.7**
ALT	**Altintas**	**2.84**	**70**	*e*PN	**Pn**	**21 15 54.5**	**-0.2**
RDO	**Rodhopi**	**3.12**	**344**	*e*PN	**Pn**	**21 15 57.4**	**-1.3**
YLV	**Yalova**	**3.19**	**40**	*e*PN	**Pn**	**21 16 00.2**	**+0.5**

NEIC 03 21:24:57.1, 53.35N×**167.35W, h15**^{km}**, ML3.7**(AEIC)**, After AEIC., Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKCD	**Okmok Cone D**	**0.47**	**280**	P	Pb	21 25 06.0	-0.4
OKCD				S	Sb	21 25 13.3	+0.4
OKCE	**Okmok Cone E**	**0.50**	**279**	P	Pb	21 25 06.7	-0.3
MGOD	**Makushin Gods**	**0.52**	**32**	P	Pb	21 25 06.2	-1.3
MCIR	**Makushin Cirqu**	**0.66**	**24**	P	Pb	21 25 09.3	-0.4
MNAT	**Makushin Natee**	**0.66**	**36**	P	Pb	21 25 08.7	-1.1
MNAT				S	Sb	21 25 18.1	-0.4
UNV	**Unalaska Valle**	**0.70**	**45**	P	Pb	21 25 09.2	-1.3
UNV				S	Sb	21 25 19.1	-0.7
MTBL	**Makushin Table**	**0.73**	**32**	P	Pb	21 25 10.2	-0.9
NIKO	**Nikolski**	**0.98**	**248**	P	Pb	21 25 13.1	-2.2
NIKO				S	Sb	21 25 26.8	-1.2
LVA	**Lava Point**	**1.12**	**43**	P	Pb	21 25 16.6	-1.1
AKLV	**Akutan Long Va**	**1.16**	**45**	P	Pb	21 25 16.8	-1.5
AKLV				S	Sb	21 25 32.6	-0.3
AHB	**Akutan Harbor**	**1.19**	**49**	P	Pb	21 25 16.9	-1.9
AKUT	**Akutan**	**1.22**	**49**	P	Pb	21 25 17.4	-2.0
AKUT				S	Sb	21 25 33.7	-1.0
WFAR	**Faris Peak**	**1.93**	**51**	P	Pn	21 25 28.4	-1.4
WPOG	**Pogromni**	**1.98**	**50**	P	Pn	21 25 29.2	-1.3
WESN	**West Dahl Nort**	**2.04**	**52**	P	Pn	21 25 30.1	-1.3
DOL	**Dolgoi Island**	**3.68**	**59**	P	Pn	21 25 52.9	-1.9
SPIA	**Saint Paul Isl**	**4.18**	**338**	P	Pn	21 25 60.0	-1.8
ATKA	**Atka Island**	**4.32**	**257**	P	Pn	21 26 02.4	-1.5
ADK	**Adak**	**5.88**	**259**	P	Pn	21 26 24.6	-1.2

IDC ***03*** *21:30:04.6±0.5, 4.69N×95.09E, mb4.6/20, mb1 4.7/20, mb1mx4.6/24, mbtmp4.6/20, MS4.0/9, Ms1 4.0/9, ms1mx3.8/19, Error ellipse: s-maj=16.5km s-min=13.9km az=62.0*

MOS ***03*** *21:30:09.6±0.9, 4.76N×95.22E, h47^{km}, mb5.1/29, Error ellipse: s-maj=12.1km s-min=5.6km az=115.9*

BJI ***03*** *21:30:11.5, 4.56N×95.09E, h78^{km}, mB4.9, mb4.9, Ms4.4, Msz4.2*

NEIC ***03*** *21:30:13.3±0.2, 4.72N×95.17E, mb4.8/31, Error ellipse: s-maj=6.4km s-min=4.6km az=211.0*

ISC 03 21:30:11.7±0.3**, 4.66N**±0.04×**95.15E**±0.03**, h67**^{km}**, h67**^{km}±1.3^{km}**:pP-P, n211, σ1**^{s}**.02**/211**, mb4.7**/85**, 28C-11D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKT	**Phuket**	**4.55**	**41**	P	**P**	**21 31 31.0**	**+11**
KULM	**Kulim**	**5.52**	**83**	*e*Pn	**P**	**21 31 32.4**	**-0.6**
KULM				*e*Sn	**S**	**21 32 35.0**	**-0.9**
SNG	**Songkhla**	**5.99**	**65**	P	**P**	**21 31 40.0**	**+0.5**
	302nm,0.8s						
NNT	**Nongplab**	**9.09**	**30**	P	**P**	**21 32 23.5**	**+1.1**
NST	**Nakhon Sawan**	**11.99**	**24**	P	**P**	**21 33 03.0**	**+1.2**
KKTK	**Khon Kaen**	**13.84**	**32**	P	**P**	**21 33 30.0**	**+3.8**
CHG	**Chiang Mai**	**14.55**	**14**	P	**P**	**21 33 40.6**	**+5.1**
PALK	**Pallekele**	**14.60**	**281**	*e*Pn	**P**	**21 33 34.6**	**-1.5**
KSM	**Kuching**	**15.46**	**101**	*e*P	**P**	**21 33 51.6**	**+4.4**
VIS	**Vishakhapatnam**	**17.39**	**319**	*e*P	**P**	**21 34 09.4**	**-2.1**
VIS				AMb	AMB	21 34 18.0	
	comp=Z,53nm,1.5s						
VIS				*e*x	x	21 37 05.1	
QIZ	**Qiongzhong**	**20.24**	**44**	P	**P**	**21 34 45.3**	**+1.3**
QIZ				PP	PP	21 35 05.0	-0.7
QIZ				*e*S	**S**	**21 38 24.6**	**+2.3**
QIZ				LR	LR		
	comp=E,500nm,21.3s						
QIZ				LR	LR		
	comp=Z,440nm,17.3s						
HYB	**Hyderabad**	**20.62**	**309**	*i* P	**P**	**21 34 48.0**	**+0.2**
HYB				*e*S	**S**	**21 38 22.0**	**-7.5**
HYB	**Hyderabad**	**20.62**	**309**	*e*P	**P**	**21 34 48.0**	**+0.2**
HYB				*e*S	**S**	**21 38 22.0**	**-7.5**
BOK	**Bokaro**	**21.02**	**336**	*e*P	**P**	**21 34 50.0**	**-1.9**
BOK				AMb	AMB	21 34 53.7	
	comp=Z,33nm,0.3s,mb5.1						
BOK				*e*S	**S**	**21 38 43.9**	**+6.8**
KKM	**Kota Kinabalu**	**21.02**	**85**	*e*P	**P**	**21 34 53.8**	**+1.8**
SHL	**Shillong**	**21.03**	**352**	*e*P	**P**	**21 34 48.0**	**-4.0**
SHL	**Shillong**	**21.03**	**352**	*e*x	x	21 38 32.0	
KMI	**Kunming**	**21.62**	**19**	P	**P**	**21 34 59.6**	**+1.7**
KMI				AP		21 35 13.9	
KMI				XP		21 35 21.9	
KMI				PP	PP	21 35 26.5	+2.2
KMI				PPP	PPP	21 35 36.6	+1.8
KMI				S	**S**	**21 38 49.1**	**+1.0**
KMI				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
KMI				AMB	AMB		
	comp=Z,70nm,5.3s						
KMI				LR	LR		
	comp=N,480nm,17.5s						
KMI				LR	LR		
	comp=E,360nm,15.5s						
KMI				LR	LR		
	comp=Z,560nm,27.2s						
KAD	**Karad**	**24.08**	**303**	*e*P	**P**	**21 35 24.7**	**+2.7**
KAD				AMb	AMB	21 35 28.3	
	comp=Z,22nm,1.4s,mb4.3						
KAD				*e*x	x	21 39 49.1	
ALBI	**Allahabad**	**24.20**	**329**	*e*P	**P**	**21 35 23.0**	**-0.2**
GYA	**Guiyang**	**24.32**	**26**	⇑*i*P	**P**	**21 35 24.7**	**+0.4**
GYA				AP		21 35 41.8	
GYA				XP		21 35 51.2	
GYA				PP	PP	21 36 07.6	+6.1
GYA				S	**S**	**21 39 34.8**	**-1.0**
GYA				SS	SS	21 40 35.3	+1.5
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
GYA				AMB	AMB		
	comp=Z,130nm,3.2s						
GYA				LR	LR		
	comp=N,640nm,17.3s						
GYA				LR	LR		
	comp=E,690nm,17.8s						
GYA				LR	LR		
	comp=Z,590nm,17.4s						
PKI	**Pulchoki**	**24.61**	**339**	*e*P	**P**	**21 35 26.4**	**-0.7**
	comp=Z,18nm,0.6s,mb4.7						
PKI	**Pulchoki**	**24.61**	**339**	*e*P	**P**	**21 35 26.4**	**-0.7**
PKI				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.4						
DMN	**Daman**	**24.75**	**338**	*e*P	**P**	**21 35 28.2**	**-0.3**
	comp=Z,23nm,0.6s,mb4.8						
GUN	**Gumba**	**24.75**	**340**	*e*P	**P**	**21 35 28.4**	**-0.1**
	comp=Z,43nm,0.6s,mb5.0						
KKN	**Kakani**	**24.85**	**339**	*e*P	**P**	**21 35 29.0**	**-0.5**
	comp=Z,46nm,1.0s,mb4.8						
POO	**Poona**	**24.96**	**305**	*e*x	x	21 39 08.0	
BHPL	**Bhopal**	**25.19**	**319**	*e*P	**P**	**21 35 30.3**	**-2.3**
BHPL				AMb	AMB	21 35 37.1	
	comp=Z,25nm,2.8s,mb4.2						
LSA	**Lhasa**	**25.20**	**352**	P	**P**	**21 35 33.6**	**+0.9**
LSA	**Lhasa**	**25.20**	**352**	*e*P	**P**	**21 35 32.4**	**-0.3**
	comp=Z,20nm,0.6s,mb4.7						
LSA	**Lhasa**	**25.20**	**352**	*e*P	**P**	**21 35 32.4**	**-0.3**
LSA				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
GKN	**Gorkha**	**25.28**	**338**	*e*P	**P**	**21 35 33.5**	**0.0**
	comp=Z,42nm,0.6s,mb5.0						
KOLN	**Koldanda**	**25.48**	**336**	*e*P	**P**	**21 35 35.6**	**+0.2**
	comp=Z,87nm,0.7s,mb5.3						
CD2	**Chengdu**	**27.34**	**16**	P	**P**	**21 35 56.3**	**+3.7**
CD2				AP	pP	21 36 10.6	+2.1
CD2				PP	PP	21 36 45.0	+3.2
CD2				S	**S**	**21 40 30.0**	**+4.3**
CD2				SS	SS	21 41 50.0	+3.2
ENH	**Enshi**	**28.85**	**26**	*e*P	**P**	**21 36 04.4**	**-1.6**
	comp=Z,11nm,0.8s,mb4.5						
AJM	**Ajmer**	**29.25**	**320**	*e*P	**P**	**21 36 09.7**	**+0.1**
DAV	**Davao City (W)**	**30.36**	**84**	P	**P**	**21 36 20.4**	**+0.7**
WHN	**Wuhan**	**31.48**	**33**	*e*P	**P**	**21 36 29.0**	**-0.3**
XAN	**Xi’an**	**31.92**	**22**	P	**P**	**21 36 31.7**	**-1.4**
XAN				S	**S**	**21 41 43.0**	**+4.9**
XAN				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.4						
XAN				LR	LR		
	comp=N,150nm,24.0s						
XAN				LR	LR		
	comp=E,210nm,17.4s						
XAN				LR	LR		
	comp=Z,490nm,16.5s						
LZH	**Lanzhou**	**32.29**	**13**	*e*P	**P**	**21 36 34.8**	**-1.5**
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
LZH				AMB	AMB		
	comp=Z,40nm,5.2s						
LZH				LR	LR		
	comp=E,250nm,13.5s						
LZH				LR	LR		
	comp=Z,340nm,17.5s						
GTA	**Gaotai**	**34.85**	**6**	P	**P**	**21 36 57.3**	**-1.1**
GTA				AP	pP	21 37 13.0	-2.0
GTA				PP	PP	21 38 13.9	-3.9
GTA				S	**S**	**21 42 19.2**	**-4.4**
GTA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GTA				AMB	AMB		
	comp=Z,60nm,3.8s						
GTA				LR	LR		
	comp=N,200nm,17.9s						
GTA				LR	LR		
	comp=E,100nm,18.3s						
GTA				LR	LR		
	comp=Z,190nm,21.7s						
NJ2	**Nanjing**	**35.16**	**36**	*e*P	**P**	**21 37 00.1**	**-1.0**
NJ2				AP	pP	21 37 18.1	+0.4
NJ2				XP	sP	21 37 27.1	+1.1
NJ2				PP	PP	21 38 21.0	-0.6
NJ2				S	**S**	**21 42 27.0**	**-1.4**
NJ2				XS		21 42 59.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,60nm,6.0s						
NJ2				LR	LR		
	comp=N,480nm,21.6s						
NJ2				LR	LR		
	comp=E,580nm,21.2s						
NJ2				LR	LR		
	comp=Z,340nm,21.9s						
SSE	**Sheshan**	**35.93**	**40**	P	**P**	**21 37 07.8**	**+0.1**
SSE				XP	sP	21 37 33.1	+0.5
SSE				PP	PP	21 38 30.8	-0.2
SSE				PCP	PcP	21 39 32.3	-1.3
SSE				S	**S**	**21 42 42.1**	**+1.8**
SSE				XS		21 43 12.1	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,40nm,6.9s						
SSE				LR	LR		
	comp=N,70nm,20.2s						
SSE				LR	LR		
	comp=E,110nm,20.2s						
SSE				LR	LR		
	comp=Z,130nm,20.4s						
FITZ	**Fitzroy Crossi**	**37.62**	**128**	*e*P	**P**	**21 37 20.9**	**-1.0**
	comp=Z,11nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**37.62**	**128**	P	**P**	**21 37 20.7**	**-1.3**
	comp=Z,5.0nm,0.7s,mb4.4,baz=284,slow=9.7,SNR=7.2						
JOW	**Kunigami**	**38.55**	**52**	P	**P**	**21 37 30.4**	**+0.9**
	comp=Z,28nm,0.6s,mb5.2,baz=268,slow=2.7,SNR=12						
KSH	**Kashi**	**38.80**	**336**	*e*P	**P**	**21 37 31.1**	**-0.4**
KSH				*e*AP	pP	21 37 46.0	-2.3
KSH				*e*PP	PP	21 39 03.0	-2.0
KSH				*e*PPP	PPP	21 39 26.0	-3.1
KSH				*e*PCP	PcP	21 39 42.0	-0.3
KSH				*e*S	**S**	**21 43 20.3**	**-3.6**
KSH				*e*SCP		21 43 25.0	
KSH				*e*PCS		21 43 32.2	
KSH				*e*SCS	ScS	21 47 34.1	+1.3
KSH				AMB	AMB		
	comp=Z,280nm,2.9s,mb5.6						
KSH				LR	LR		
	comp=N,410nm,4.7s						
KSH				LR	LR		
	comp=E,490nm,5.6s						
HHC	**Hu-ho-hao-te**	**38.94**	**20**	⇑P	**P**	**21 37 33.4**	**+0.8**
HHC				AP	pP	21 37 51.6	+2.2
HHC				XP	sP	21 38 00.5	+3.1
HHC				PP	PP	21 39 08.4	+1.8
HHC				PCP	PcP	21 39 35.9	-6.8
HHC				SCP		21 43 22.9	
HHC				S	**S**	**21 43 26.8**	**+0.9**
HHC				PCS		21 43 30.7	
HHC				XS		21 43 57.4	
HHC				SS	SS	21 46 13.4	+1.0
HHC				SCS	ScS	21 47 32.9	-0.7
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
HHC				AMB	AMB		
	comp=Z,170nm,6.9s						
HHC				LR	LR		
	comp=N,420nm,17.7s						
HHC				LR	LR		
	comp=E,250nm,17.2s						
HHC				LR	LR		
	comp=Z,420nm,22.8s						
WMQ	**Urumqi**	**39.55**	**352**	⇓*i*P	**P**	**21 37 38.4**	**+0.7**
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,130nm,5.6s						
WMQ				LR	LR		
	comp=N,100nm,21.2s						
WMQ				LR	LR		
	comp=E,130nm,27.0s						
WMQ				LR	LR		

	comp=Z,90nm,25.4s						
UCH	**Uchtor**	**41.69**	**337**	P	**P**	**21 37 56.7**	**+1.3**
	SNR=45						
DL2	**Dalian**	**41.71**	**32**	P	**P**	**21 37 56.8**	**+1.2**
DL2				XP	sP	21 38 22.2	+1.8
DL2				*e*S	**S**	**21 44 07.4**	**+0.1**
DL2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.2						
DL2				LR	LR		
	comp=N,90nm,14.4s						
DL2				LR	LR		
	comp=E,110nm,14.6s						
DL2				LR	LR		
	comp=Z,260nm,14.7s						
TKM2	**Tokmak 2**	**41.87**	**338**	P	**P**	**21 37 57.9**	**+1.1**
	SNR=30						
KBK	**Karagaybulak**	**41.88**	**338**	P	**P**	**21 37 58.6**	**+1.7**
	SNR=69						
AML	**Almayashu**	**41.93**	**336**	P	**P**	**21 37 59.0**	**+1.6**
	SNR=68						
AAK	**Ala-Archa**	**42.04**	**337**	P	**P**	**21 37 59.7**	**+1.5**
	SNR=28						
AAK	**Ala-Archa**	**42.04**	**337**	*e*P	**P**	**21 37 58.4**	**+0.2**
	comp=Z,54nm,1.1s,mb5.2						
AAK	**Ala-Archa**	**42.04**	**337**	P	**P**	**21 37 59.3**	**+1.1**
AAK				pmax	pmax		
	comp=Z,99nm,1.3s,mb5.4						
FRU	**Bishkek**	**42.16**	**337**	*e*P	**P**	**21 38 01.0**	**+1.8**
FRU				pmax	pmax		
	comp=Z,110nm,2.0s,mb5.2						
CHMS	**Chumysh**	**42.25**	**338**	P	**P**	**21 38 01.1**	**+1.1**
	SNR=14						
EKS2	**Erkin-Say**	**42.34**	**336**	P	**P**	**21 38 02.1**	**+1.4**
	SNR=25						
USP	**Ospenovka**	**42.58**	**338**	P	**P**	**21 38 03.4**	**+0.8**
	SNR=58						
NWAO	**Narrogin (SRO)**	**42.85**	**152**	P	**P**	**21 38 04.7**	**-0.4**
	comp=Z,14nm,0.2s,mb5.3,baz=111,slow=3.1,SNR=33						
MKAR	**Makanchi Array**	**43.43**	**347**	P	**P**	**21 38 08.9**	**-0.6**
	comp=Z,11nm,0.6s,mb4.8,baz=169,slow=6.9,SNR=82						
MKAR				LR	LR	21 58 39.9	
	comp=Z,135nm,20.4s,baz=1.9,slow=40						
JNU	**Nakatsue**	**43.71**	**45**	P	**P**	**21 38 12.7**	**+0.6**
	comp=Z,8.8nm,0.8s,mb4.5,baz=214,slow=15,SNR=8.1						
KKAR	**Karatay Array**	**44.07**	**334**	*i* P	**P**	**21 38 15.2**	**+0.4**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
SONM	**Songino Array**	**44.09**	**11**	P	**P**	**21 38 13.6**	**-1.3**
	comp=Z,2.8nm,0.8s,mb4.0,baz=195,slow=6.9,SNR=9.3						
SONM				PcP	PcP	21 40 00.0	+0.4
	comp=Z,2.6nm,0.5s,baz=185,slow=4.6,SNR=5.2						
SONM				LR	LR	21 58 16.0	
	comp=Z,210nm,21.7s,baz=77,slow=38						
KS15	**Wonju Array Si**	**44.26**	**38**	*e*P	**P**	**21 38 16.4**	**0.0**
WRA	**Warramunga Arr**	**45.62**	**124**	P	**P**	**21 38 27.3**	**-0.2**
	comp=Z,9.2nm,0.8s,mb4.6,baz=302,slow=9.1,SNR=45						
WRAB	**Tennant Creek**	**45.62**	**124**	*e*P	**P**	**21 38 27.2**	**-0.2**
WB2	**Warramunga Arr**	**45.63**	**124**	*e*P	**P**	**21 38 27.4**	**-0.1**
ZAK	**Zakamensk**	**46.08**	**7**	*e*P	**P**	**21 38 23.3**	**-7.4**
ASPA	**Alice Springs**	**47.12**	**128**	*e*P	**P**	**21 38 38.9**	**-0.3**
CN2	**Changchun**	**47.26**	**30**	*e*P	**P**	**21 38 40.0**	**0.0**
CN2				*e*AP	pP	21 38 55.7	-1.4
CN2				*e*S	**S**	**21 45 28.1**	**+0.9**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
CN2				AMB	AMB		
	comp=Z,70nm,3.0s						
CN2				LR	LR		
	comp=N,180nm,15.0s						
CN2				LR	LR		
	comp=E,190nm,15.0s						
CN2				LR	LR		
	comp=Z,210nm,16.0s						
KURK	**Kurchatov**	**47.95**	**346**	*e*P	**P**	**21 38 45.2**	**-0.2**
	comp=Z,13nm,0.6s,mb4.9						
KURK	**Kurchatov**	**47.95**	**346**	*e*P	**P**	**21 38 45.2**	**-0.2**
KURK				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.9						
HIA	**Hailar**	**49.11**	**21**	*e*P	**P**	**21 38 53.9**	**-0.4**
	comp=Z,9.5nm,0.6s,mb4.9						
HIA	**Hailar**	**49.11**	**21**	*e*P	**P**	**21 38 53.9**	**-0.4**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ZAL	**Zalesovo**	**49.85**	**352**	P	**P**	**21 38 59.4**	**-0.6**
	comp=Z,5.5nm,0.7s,mb4.6,baz=296,slow=7.5,SNR=27						
MDJ	**Mudanjiang**	**49.95**	**32**	P	**P**	**21 38 59.9**	**-1.0**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,10.0nm,3.2s						
MDJ				LR	LR		
	comp=N,100nm,20.0s						
MDJ				LR	LR		
	comp=E,140nm,16.0s						
MDJ				LR	LR		
	comp=Z,190nm,17.1s						
MDJ	**Mudanjiang**	**49.95**	**32**	*e*P	**P**	**21 38 59.7**	**-1.2**
	comp=Z,16nm,0.9s,mb4.9						
VLA	**Vladivostok**	**50.23**	**35**	*i* P	**P**	**21 39 03.6**	**+0.6**
VLA				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
MJAR	**Matsushiro Arr**	**50.63**	**45**	P	**P**	**21 39 06.4**	**+0.2**
	comp=Z,1.2nm,0.6s,mb4.1,baz=241,slow=8.4,SNR=6.7						
MJAR				LR	LR	22 03 47.9	
	comp=Z,125nm,18.9s,baz=220,slow=40						
VOSK	**Vostochnaya**	**51.89**	**342**	P	**P**	**21 39 14.9**	**-0.6**
VOSK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
BVA0	**Borovoye Array**	**52.34**	**341**	*i* P	**P**	**21 39 17.8**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**52.40**	**341**	*e*P	**P**	**21 39 18.2**	**-1.1**
	comp=Z,25nm,0.8s,mb5.3						
BRVK	**Borovoye**	**52.40**	**341**	*e*P	**P**	**21 39 18.2**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
CHKZ	**Chkalovo**	**52.82**	**342**	P	**P**	**21 39 21.8**	**-0.7**
	comp=Z,74nm,0.7s,mb5.8						
CHKZ	**Chkalovo**	**52.82**	**342**	P	**P**	**21 39 21.8**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,74nm,0.7s,mb5.8						
AB31	**Akbulak array**	**53.52**	**332**	*i* P	**P**	**21 39 27.0**	**-0.7**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
KLR	**Kul'dur**	**54.16**	**29**	*e*P	**P**	**21 39 31.6**	**-0.8**
BOD	**Bodaibo**	**55.05**	**12**	*e*P	**P**	**21 39 36.7**	**-2.0**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
AKTO	**Aktyubinsk**	**55.24**	**332**	P	**P**	**21 39 38.6**	**-1.6**
AKTO				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
STKA	**Stephens Creek**	**57.19**	**133**	LR	LR	22 03 22.9	
	comp=Z,100nm,20.8s,baz=25,slow=35						
STKA	**Stephens Creek**	**57.19**	**133**	*e*P	**P**	**21 39 52.5**	**-1.8**
GNI	**Garni**	**57.40**	**315**	P	**P**	**21 39 55.0**	**-0.8**
	comp=Z,5.4nm,0.8s,mb4.6,baz=156,slow=5.2,SNR=6.0						
GNI	**Garni**	**57.40**	**315**	P	**P**	**21 39 53.8**	**-1.9**
	comp=Z,12nm,1.1s,mb4.8						
GNI	**Garni**	**57.40**	**315**	⇑*e*P	**P**	**21 39 55.1**	**-0.7**
GNI				pmax	pmax		
	comp=Z,13nm,1.2s						
YSS	**Yuzh-Sakhalins**	**58.73**	**36**	P	**P**	**21 40 03.5**	**-1.4**
	comp=Z,11nm,0.6s,mb5.0						
YSS	**Yuzh-Sakhalins**	**58.73**	**36**	⇑*e*P	**P**	**21 40 05.0**	**+0.1**
YSS				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.0						
YSS				MLR	MLR		
	comp=Z,100nm,24.0s						
ZEI	**Tsey**	**59.07**	**318**	*e*P	**P**	**21 40 04.4**	**-2.9**
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
ARU	**Arti**	**59.23**	**337**	P	**P**	**21 40 06.8**	**-1.4**
	comp=Z,18nm,1.1s,mb5.0						
ARU				*e*pP	pP	21 40 25.2	-0.6
ARU	**Arti**	**59.23**	**337**	⇑*i*P	**P**	**21 40 07.1**	**-1.1**
ARU				*e*	pP	21 40 24.6	-1.3
ARU				*e*		21 40 49.4	
ARU				*e*S	**S**	**21 48 10.1**	**+1.0**
ARU				*e*SS	SS	21 52 05.4	-0.7
ARU				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
KIV	**Kislovodsk**	**60.37**	**319**	P	**P**	**21 40 14.4**	**-1.8**
	comp=Z,23nm,1.2s,mb5.1						
KIV	**Kislovodsk**	**60.37**	**319**	*c i*P	**P**	**21 40 15.2**	**-1.0**
KIV				*e*S	**S**	**21 48 25.6**	**+1.6**
KIV				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
GOF	**Gofitskoye**	**60.61**	**320**	*e*P	**P**	**21 40 12.9**	**-5.0**
YAK	**Yakutsk**	**62.73**	**17**	⇑*e*P	**P**	**21 40 29.8**	**-2.0**
YAK				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
YAK				MLR	MLR		
	comp=Z,400nm,26.0s						
VRHR	**Novokhopersk**	**64.14**	**326**	*e*P	**P**	**21 40 39.7**	**-1.5**
VRHR				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.4						
VRHR				pmax	pmax		
	comp=N,20nm,0.9s						
VRHR				pmax	pmax		
	comp=E,20nm,0.8s						
BR131	**Keskin Array S**	**65.29**	**312**	P	**P**	**21 40 47.8**	**-1.1**
BR131				*e*pP	pP	21 41 03.2	-3.7
BRTR	**Keskin Array B**	**65.29**	**312**	P	**P**	**21 40 47.8**	**-1.1**
	comp=E,4.4nm,0.5s,mb4.5,baz=140,slow=7.1,SNR=69						
OBN	**Obninsk**	**68.62**	**328**	P	**P**	**21 41 08.6**	**-0.9**
	comp=E,13nm,0.6s,mb4.9						
OBN	**Obninsk**	**68.62**	**328**	*c i*P	**P**	**21 41 08.6**	**-0.9**
OBN				*e*		21 43 41.2	
OBN				*e*S	S	21 50 05.8	+0.2
OBN				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,22.0s						
MA2	**Magadan**	**69.15**	**27**	*i* P	**P**	**21 41 12.5**	**-0.3**
MA2				pmax	pmax		
	comp=Z,99nm,1.3s,mb5.5						
LSZ	**Lusaka**	**69.18**	**252**	P	**P**	**21 41 14.4**	**+0.7**
	comp=Z,1.5nm,0.5s,mb4.1,baz=34,slow=6.6,SNR=5.9						
KLMR	**Klimovskoe**	**69.77**	**334**	*d i*P	**P**	**21 41 15.4**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,60nm,2.8s,mb4.9						
MATP	**Matopo**	**69.97**	**246**	P	**P**	**21 41 19.1**	**+0.7**
	comp=Z,1.2nm,0.5s,mb4.0,baz=94,slow=8.3,SNR=4.5						
TIXI	**Tiksi**	**70.18**	**11**	P	**P**	**21 41 16.7**	**-2.1**
TIXI	**Tiksi**	**70.18**	**11**	⇑*e*P	**P**	**21 41 17.0**	**-1.8**
TIXI				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,100nm,13.0s						
TIRR	**Tirgusor**	**70.23**	**316**	⇑P	**P**	**21 41 19.3**	**-0.3**
PET	**Petropavlovsk**	**70.56**	**35**	*e*P	**P**	**21 41 25.2**	**+3.8**
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
CFR	**Carcaliu**	**70.59**	**316**	⇓P	**P**	**21 41 20.4**	**-1.4**
CFR	**Carcaliu**	**70.59**	**316**	⇓P	**P**	**21 41 20.4**	**-1.4**
HARR	**Harsova**	**70.62**	**316**	⇓P	**P**	**21 41 20.3**	**-1.6**
HARR	**Harsova**	**70.62**	**316**	⇓P	**P**	**21 41 20.3**	**-1.6**
AKASG	**Malin Array Be**	**71.29**	**322**	P	**P**	**21 41 24.4**	**-1.4**
	comp=Z,6.8nm,0.5s,mb4.7,baz=92,slow=5.6,SNR=37						
AKASG	**Malin Array Be**	**71.29**	**322**	*i* P	**P**	**21 41 24.3**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VRI	**Vrincioaia**	**71.71**	**317**	⇑P	**P**	**21 41 28.9**	**+0.5**
BURAR	**Bucovina Array**	**73.10**	**318**	⇑P	**P**	**21 41 37.6**	**+1.0**
BURAR	**Bucovina Array**	**73.10**	**318**	⇑P	**P**	**21 41 37.6**	**+1.0**
LBTB	**Lobatse**	**73.62**	**242**	*e*P	**P**	**21 41 41.0**	**+0.9**
	comp=Z,6.6nm,0.8s,mb4.4						
LBTB	**Lobatse**	**73.62**	**242**	*e*P	**P**	**21 41 41.0**	**+0.9**
LBTB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
JOF	**Joensuu**	**74.17**	**335**	*e*p	**P**	**21 41 42.3**	**-0.2**
	comp=Z,11nm,0.8s,mb4.6						
DZM	**Mont Dzumac**	**74.55**	**114**	LR	LR	22 14 21.8	
	comp=Z,80nm,21.1s,baz=199,slow=36						
BOSA	**Boshof**	**74.76**	**239**	P	**P**	**21 41 47.2**	**+0.6**
	comp=Z,4.5nm,0.7s,mb4.3,baz=62,slow=7.6,SNR=9.6						
BOSA				LR	LR	22 09 19.4	
	comp=Z,135nm,19.0s,baz=262,slow=32						
KWP	**Kalwaria**	**75.12**	**320**	*e*P	**P**	**21 41 49.1**	**+0.9**
KWP	**Kalwaria**	**75.12**	**320**	*e*P	**P**	**21 41 49.1**	**+0.8**
APA	**Apatity**	**75.19**	**340**	⇑*i*P	**P**	**21 41 47.7**	**-0.7**
APA				*i*	pP	21 42 06.6	-0.1
APA				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.8						
KOLS	**Kolonicke sedl**	**75.28**	**319**	*e*P	**P**	**21 41 49.9**	**+0.7**
MAW	**Mawson**	**75.61**	**192**	P	**P**	**21 41 52.0**	**+1.3**
	comp=Z,2.1nm,0.8s,mb3.9,baz=41,slow=12,SNR=3.5						
MAW				LR	LR	22 08 29.6	
	comp=Z,164nm,20.9s,baz=257,slow=30						
SUW	**Suwalki**	**75.69**	**325**	*e*P	**P**	**21 41 51.1**	**-0.3**
SUW				*PP	pP	21 42 09.5	-0.3
CRVS	**Cervenica-Dubn**	**75.80**	**319**	*e*P	**P**	**21 41 52.5**	**+0.3**
FINES	**FINESS Array B**	**76.01**	**332**	P	**P**	**21 41 52.8**	**-0.3**
	comp=Z,3.7nm,0.3s,mb4.5,baz=101,slow=5.6,SNR=52						
STHS	**Stebnicka Huta**	**76.02**	**320**	*e*P	**P**	**21 41 54.7**	**+1.3**
STHS				*e*pP	pP	21 42 13.0	+1.1
KAF	**Kangasniemi**	**76.09**	**333**	*e*p	**P**	**21 41 53.3**	**-0.3**
	comp=Z,9.8nm,0.9s,mb4.5						
KAF	**Kangasniemi**	**76.09**	**333**	*e*P	**P**	**21 41 53.3**	**-0.3**
KAF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
KECS	**Kecovo**	**76.37**	**319**	*e*P	**P**	**21 41 55.1**	**-0.3**
KECS				*e*pP	pP	21 42 14.3	+0.4
PSZ	**Piszkesteto**	**76.68**	**318**	P	**P**	**21 41 57.5**	**+0.3**
	comp=Z,6.5nm,0.8s,mb4.4						
PSZ				pP	pP	21 42 16.9	+1.3
PSZ	**Piszkesteto**	**76.68**	**318**	P	**P**	**21 41 57.5**	**+0.3**
PSZ				*PP	pP	21 42 16.9	+1.3
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
OJC	**Ojcow**	**77.07**	**320**	*e*P	**P**	**21 41 59.7**	**+0.4**
OJC				*e*PcP	PcP	21 42 14.0	+3.7
VYHS	**Vyhne**	**77.46**	**319**	*e*P	**P**	**21 42 01.7**	**+0.2**
OKC	**Ostrava-Krasne**	**78.08**	**320**	*e*P	**P**	**21 42 05.7**	**+0.8**
KEV	**Kevo**	**78.19**	**341**	*e*p	**P**	**21 42 04.8**	**-0.3**
	comp=Z,16nm,0.9s,mb4.7						
KEV	**Kevo**	**78.19**	**341**	*e*P	**P**	**21 42 04.8**	**-0.3**
KEV				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
MORC	**Moravsky Berou**	**78.46**	**320**	P	**P**	**21 42 07.6**	**+0.6**
MORC				pP	pP	21 42 23.8	-1.6
ZST	**Bratislava**	**78.58**	**318**	*e*P	**P**	**21 42 08.3**	**+0.6**
ZST				*e*pP	pP	21 42 26.7	+0.6
ARCES	**ARCESS Array B**	**78.61**	**340**	P	**P**	**21 42 07.3**	**-0.1**
	comp=Z,4.5nm,0.5s,mb4.6,baz=90,slow=5.4,SNR=42						
ARCES				LR	LR	22 20 11.0	
	comp=Z,142nm,18.2s,baz=278,slow=38						
BILL	**Bilibino**	**78.70**	**21**	*i* P	**P**	**21 42 07.8**	**-0.1**
BILL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
BILL				MLR	MLR		
	comp=Z,300nm,23.0s						
DPC	**Dobruska-Polom**	**79.30**	**320**	*e*P	**P**	**21 42 12.5**	**+0.9**
ARSA	**Arzberg**	**79.55**	**317**	⇑*i*P	**P**	**21 42 13.2**	**+0.2**
	comp=Z,9.5nm,1.2s,mb4.5						
ARSA	**Arzberg**	**79.55**	**317**	⇑P	**P**	**21 42 13.2**	**+0.2**
	comp=Z,9.5nm,1.2s,mb4.5						
BOJS	**Bojanci**	**79.61**	**315**	*e*P	**P**	**21 42 13.6**	**+0.2**
BOJS				*e*pP	pP	21 42 31.1	-0.8
PERS	**Pernice**	**79.79**	**316**	*e*P	**P**	**21 42 14.7**	**+0.4**
PDKS	**Podkum**	**79.83**	**316**	*e*P	**P**	**21 42 14.8**	**+0.3**
LJU	**Ljubljana**	**80.16**	**316**	*e*P	**P**	**21 42 16.9**	**+0.6**
PRU	**Pruhonice**	**80.41**	**320**	*e*sP	sP	21 42 43.4	-0.1
VOJS	**Vojsko**	**80.60**	**316**	*e*P	**P**	**21 42 18.5**	**-0.1**
BRG	**Berggiesshubel**	**80.86**	**321**	P	**P**	**21 42 20.5**	**+0.7**
	comp=Z,2.6nm,0.6s,mb4.2						
BRG				*e*	pP	21 42 39.5	+1.1
BRG	**Berggiesshubel**	**80.86**	**321**	P	**P**	**21 42 20.5**	**+0.6**
BRG				*e*	pP	21 42 39.5	+1.1
BRG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
GERES	**GERESS Array B**	**80.88**	**319**	P	**P**	**21 42 21.0**	**+1.0**
	comp=Z,3.1nm,0.7s,mb4.2,baz=104,slow=5.4,SNR=30						
KHC	**Kasperske Hory**	**80.98**	**319**	*e*P	**P**	**21 42 21.0**	**+0.4**
KHC	**Kasperske Hory**	**80.98**	**319**	*e*P	**P**	**21 42 16.0**	**-4.6**
KHC				*e*		21 42 21.0	
PTCC	**Patocco-Chiusa**	**80.99**	**316**	P	**P**	**21 42 21.4**	**+0.7**
ARV	**Arcevia**	**81.16**	**313**	P	**P**	**21 42 22.4**	**+0.8**
	comp=Z,9.9nm,0.7s,mb4.8						
FSSB	**Fossombrone**	**81.29**	**313**	P	**P**	**21 42 23.6**	**+1.3**
CLL	**Collm**	**81.47**	**321**	*e**PP	pP	21 42 44.0	+2.3
CLL				*e**SP	sP	21 42 52.0	+2.9
SFI	**Santa Sofia**	**81.97**	**314**	P	**P**	**21 42 28.2**	**+2.4**
	comp=Z,19nm,0.9s,mb4.9						
SFI	**Santa Sofia**	**81.97**	**314**	P	**P**	**21 42 28.2**	**+2.4**
SFI				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.9						
CTI	**Castel Tesino**	**82.16**	**316**	P	**P**	**21 42 27.9**	**+1.2**
WTTA	**Wattenberg**	**82.20**	**317**	⇑*i*P	**P**	**21 42 26.8**	**-0.1**
	comp=Z,5.8nm,0.6s,mb4.6						
WTTA	**Wattenberg**	**82.20**	**317**	⇑*i*P	pP	21 42 46.4	+0.9
	comp=Z,8.7nm,0.9s						
WTTA	**Wattenberg**	**82.20**	**317**	⇑P	**P**	**21 42 26.8**	**-0.1**
	comp=Z,5.8nm,0.6s,mb4.6						
WTTA				*e*	pP	21 42 46.4	+0.9
WTTA	**Wattenberg**	**82.20**	**317**	⇑P	**P**	**21 42 26.8**	**-0.1**
WTTA				*e*	pP	21 42 46.4	+0.9
WTTA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
WATA	**Walderalm**	**82.24**	**317**	⇓*i*P	**P**	**21 42 27.5**	**+0.4**
	comp=Z,3.6nm,0.6s,mb4.3						
WATA	**Walderalm**	**82.24**	**317**	⇑*i*P	pP	21 42 48.3	+2.5
	comp=Z,6.8nm,0.7s						
WATA	**Walderalm**	**82.24**	**317**	⇓P	**P**	**21 42 27.5**	**+0.4**
	comp=Z,3.6nm,0.6s,mb4.4						
WATA				*e*	pP	21 42 48.3	+2.5
WATA	**Walderalm**	**82.24**	**317**	⇓P	**P**	**21 42 27.5**	**+0.4**
WATA				*e*	pP	21 42 48.3	+2.6
WATA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
SQTA	**Sankt Quirin**	**82.49**	**317**	⇑*i*P	**P**	**21 42 28.4**	**0.0**
	comp=Z,5.5nm,0.5s,mb4.6						
SQTA	**Sankt Quirin**	**82.49**	**317**	⇓*i*P	pP	21 42 47.8	+0.8
	comp=Z,9.5nm,0.6s						
SQTA	**Sankt Quirin**	**82.49**	**317**	⇑P	**P**	**21 42 28.4**	**0.0**
	comp=Z,5.5nm,0.5s,mb4.6						
SQTA				*e*	pP	21 42 47.8	+0.8
SQTA	**Sankt Quirin**	**82.49**	**317**	⇑P	**P**	**21 42 28.4**	**0.0**
SQTA				*e*	pP	21 42 47.8	+0.8
SQTA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.7						
GRA1	**Grafenberg Arr**	**82.54**	**319**	*e*P	**P**	**21 42 29.6**	**+1.0**
	comp=Z,5.0nm,0.8s,mb4.4						
GRA1				*e*pP	pP	21 42 48.2	+1.0
GRF	**Grafenberg Arr**	**82.54**	**319**	*e*P	**P**	**21 42 29.6**	**+1.0**
	comp=Z,5.0nm,0.8s,mb4.4						
GRF				*e*pP	pP	21 42 48.2	+1.0
GRF	**Grafenberg Arr**	**82.54**	**319**	*e*P	**P**	**21 42 29.6**	**+1.0**
GRF				*e**PP	pP	21 42 48.2	+1.0
GRF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
GRF	**Grafenberg Arr**	**82.54**	**319**	*e*P	**P**	**21 42 29.6**	**+1.0**
GRF				*e**PP	pP	21 42 48.2	+1.0
GRF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
MOTA	**Moosalm**	**82.56**	**317**	⇑*i*P	**P**	**21 42 28.5**	**-0.3**
	comp=Z,4.4nm,0.6s,mb4.5						
MOTA	**Moosalm**	**82.56**	**317**	⇑*i*P	pP	21 42 48.2	+0.8
	comp=Z,7.2nm,0.7s						
MOTA	**Moosalm**	**82.56**	**317**	⇑P	**P**	**21 42 28.5**	**-0.3**
	comp=Z,4.4nm,0.6s,mb4.5						
MOTA				*e*	pP	21 42 48.2	+0.8
MOTA	**Moosalm**	**82.56**	**317**	⇑P	**P**	**21 42 28.5**	**-0.3**
MOTA				*e*	pP	21 42 48.2	+0.8
MOTA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
SYO	**Syowa Base**	**82.65**	**197**	⇓pP	pP	21 42 52.1	+4.7
NB2	**NORSAR Subarra**	**83.01**	**331**	P	**P**	**21 42 30.8**	**0.0**
	comp=Z,1.3nm,0.8s,mb3.8,baz=97,slow=5.0						
NOA	**NORSAR Array B**	**83.01**	**331**	P	**P**	**21 42 30.8**	**0.0**
	comp=Z,3.7nm,1.0s,mb4.2,baz=94,slow=5.2,SNR=3.8						
NAO	**NORSAR Subarra**	**83.19**	**331**	P	**P**	**21 42 30.8**	**-0.9**
	comp=Z,1.3nm,0.8s,mb3.8						
NAO	**NORSAR Subarra**	**83.19**	**331**	P	**P**	**21 42 30.8**	**-0.9**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
LPG	**La Plagne**	**85.59**	**315**	*e*P	**P**	**21 42 45.2**	**+1.2**
	comp=Z,15nm,0.8s,mb4.7						
LPG	**La Plagne**	**85.59**	**315**	*e*P	**P**	**21 42 45.2**	**+1.2**
LPG				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
KDAK	**Kodiak Island**	**97.72**	**30**	LR	LR	22 32 14.5	
	comp=Z,76nm,20.8s,baz=285,slow=38						
PDAR	**Pinedale Array**	**127.75**	**23**	PKP	PKPdf	21 49 12.4	+2.4
	comp=Z,0.5nm,0.5s,baz=110,slow=2.9,SNR=6.0						
PHWY	**Pilot Hill**	**130.54**	**20**	PKPdf	PKPdf	21 49 15.8	+0.5
WCI	**Wyandotte Cave**	**137.31**	**2**	PKPdf	PKPdf	21 49 31.6	+3.6
SWET	**Sewanee**	**140.33**	**1**	PKPdf	PKPdf	21 49 43.4	+10
TXAR	**Lajitas Array**	**141.68**	**27**	PKP	PKPdf	21 49 37.5	+1.3
	comp=Z,0.5nm,0.7s,baz=45,slow=1.8,SNR=3.7						
CPUP	**Villa Florida**	**145.98**	**228**	PKPdf	PKPdf	21 49 46.9	+3.2

BJI ***03*** *21:33:21.1, 1.52N×94.47E, h30km, mb4.7*

MOS ***03*** *21:33:29.4±0.7, 2.51N×94.43E, h33km, mb4.8/8, Error ellipse: s-maj=34.8km s-min=13.0km az=99.0*

NEIC ***03*** *21:33:30.8±0.6, 2.50N×94.49E, h30km, mb4.7/6, Error ellipse: s-maj=13.4km s-min=8.9km az=210.0*

IDC ***03*** *21:33:30.4±1.0, 2.42N×94.36E, h28km±5km, mb4.1/7, mb1 4.2/7, mb1mx4.0/17, mbtmp4.3/7, Error ellipse: s-maj=45.9km s-min=17.1km az=51.0*

ISC 03 21:33:28.7±0.9**, 2.5N**±0.1×**94.5E**±0.1**, h29**km**,**
h29km±.1km**:pP-P, n29, σ0**s**85**/26**, mb4.4**/17**, 1C, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.72**	**66**	*e*Pn	**Pn**	**21 35 07.5**	**-0.7**
KKM	**Kota Kinabalu**	**21.94**	**80**	*e*P	**P**	**21 38 23.1**	**+1.2**
QIZ	**Qiongzhong**	**22.24**	**41**	P	**P**	**21 38 25.0**	**+0.1**
LSA	**Lhasa**	**27.21**	**354**	P	**P**	**21 39 14.0**	**+1.8**
LSA	**Lhasa**	**27.21**	**354**	*e*P	**P**	**21 39 13.8**	**+1.6**
	18nm,0.6s,mb4.8						
LSA	**Lhasa**	**27.21**	**354**	*e*P	**P**	**21 39 13.8**	**+1.6**
LSA				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.8						
ENH	**Enshi**	**31.04**	**26**	P	**P**	**21 39 45.4**	**-1.1**
	comp=Z,4.2nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	**45.03**	**122**	P	**P**	**21 41 44.1**	**+0.1**
	comp=Z,1.4nm,0.8s,mb3.9,baz=299,slow=8.6,SNR=5.7						
WRA				pP	pP	21 41 52.8	+0.1
	comp=Z,3.7nm,0.8s,baz=300,slow=8.9,SNR=9.5						
WRAB	**Tennant Creek**	**45.03**	**122**	*e*P	pP	21 41 53.3	+0.5
	comp=Z,9.1nm,0.9s						
WRAB	**Tennant Creek**	**45.03**	**122**	*e*P	pP	21 41 53.3	+0.5
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**45.35**	**348**	P	**P**	**21 41 47.1**	**+0.9**
	comp=Z,6.4nm,0.5s,mb4.7,baz=165,slow=9.2,SNR=35						
MKAR				pP	pP	21 41 55.8	+0.8
	comp=Z,2.5nm,0.5s,baz=166,slow=8.8,SNR=6.5						
SONM	**Songino Array**	**46.29**	**11**	P	**P**	**21 41 54.0**	**+0.4**
	comp=Z,4.1nm,0.6s,mb4.5,baz=190,slow=9.0,SNR=10						
SONM				PcP	PcP	21 43 29.6	+0.4
	comp=Z,1.5nm,0.6s,baz=192,slow=4.4,SNR=4.1						
ZAK	**Zakamensk**	**48.26**	**8**	*e*P	**P**	**21 42 09.6**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KURK	**Kurchatov**	**49.86**	**347**	*e*P	**P**	**21 42 21.9**	**+0.5**
	comp=Z,5.3nm,0.7s,mb4.7						
KURK	**Kurchatov**	**49.86**	**347**	*e*P	**P**	**21 42 21.9**	**+0.5**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
HIA	**Hailar**	**51.32**	**21**	*e*P	**P**	**21 42 32.9**	**+0.4**
	comp=Z,11nm,0.6s,mb5.0						
HIA	**Hailar**	**51.32**	**21**	*e*P	**P**	**21 42 32.9**	**+0.4**
HIA				pmax	pmax		
	comp=Z,11nm,0.6s						
ZAL	**Zalesovo**	**51.86**	**353**	P	**P**	**21 42 36.6**	**0.0**
	comp=Z,7.1nm,0.5s,mb4.8,baz=300,slow=5.8,SNR=20						
NVS	**Novosibirsk**	**52.95**	**352**	*i* P	**P**	**21 42 43.4**	**-1.3**
NVS				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.4						
NVS				pmax	pmax		
	comp=N,11nm,1.4s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
BRVK	**Borovoye**	**54.20**	**342**	*e*P	**P**	**21 42 53.5**	**-0.4**
	comp=E,3.7nm,0.6s,mb4.5						
BRVK	**Borovoye**	**54.20**	**342**	*e*P	**P**	**21 42 53.5**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
CHKZ	**Chkalovo**	**54.64**	**343**	*e*P	**P**	**21 42 56.8**	**-0.3**
STKA	**Stephens Creek**	**56.25**	**131**	P	**P**	**21 43 09.2**	**+0.1**
	comp=Z,2.3nm,0.7s,mb4.3,baz=311,slow=3.3,SNR=3.0						
STKA	**Stephens Creek**	**56.25**	**131**	P	**P**	**21 43 08.7**	**-0.4**
BOD	**Bodaibo**	**57.25**	**12**	*e*P	**P**	**21 43 15.7**	**-0.2**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
BRTR	**Keskin Array B**	**66.23**	**313**	P	**P**	**21 44 15.8**	**-0.6**
	comp=Z,0.9nm,0.7s,mb3.9,baz=121,slow=7.0,SNR=4.5						
BRTR				pP	pP	21 44 24.9	-0.5
	comp=Z,1.6nm,0.7s,baz=122,slow=6.5,SNR=7.4						
TIXI	**Tiksi**	**72.38**	**11**	⇑*i*P	**P**	**21 44 51.0**	**-2.7**
TIXI				pmax	pmax		

	comp=Z,4.0nm,0.9s,mb4.3						
GERES	GERESS Array B	82.04	319	P	P	21 45 48.2	+0.5
	comp=Z,0.6nm,0.6s,mb3.7,baz=117,slow=6.0,SNR=4.4						
TXAR	Lajitas Array	143.86	27	PKP	PKPdf	21 53 03.4	-3.5
	comp=Z,0.3nm,0.5s,baz=339,slow=2.3,SNR=4.8						
TXAR				pPKP		21 53 11.8	
	comp=Z,0.5nm,0.6s,baz=226,slow=2.1,SNR=4.1						

CASC 03 21:59:31.8±1.5**,10.58N×86.51W,h25^{km}**±5^{km}**,MD3.9, ML3.4,12C-6D,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSNN	San Juan del S	0.95	43	⇑eP	Pb	21 59 49.4	-0.2
VCR	Vista de Mar	0.97	118	eP	Pb	21 59 48.5	-1.4
LIM1	Limonal	1.24	85	⇑iP	Pn	21 59 53.3	-0.5
LIM1				i S	Sn	22 00 10.3	+0.5
MADN	Villa Maderas	1.26	49	⇑eP	Pn	21 59 54.2	+0.1
CONN	Concepcion	1.30	42	⇑eP	Pn	21 59 54.1	-0.6
APON	Apoyo	1.39	18	⇓eP	Pn	21 59 55.7	-0.3
TICN	Ticuantepe	1.47	11	⇑eP	Pn	21 59 57.1	+0.1
XAVN	Gruta Xavier	1.56	6	⇑eP	Pn	21 59 58.4	-0.1
MGAN	Managua	1.57	9	⇓eP	Pn	21 59 58.3	-0.3
MGAN				i		22 00 33.3	
	comp=E,463nm,0.4s						
COPN	Copaltepe	1.59	357	⇓eP	Pn	21 59 58.2	-0.6
WILN	Americas 2	1.60	11	⇑eP	Pn	21 59 58.3	-0.6
FORC	Fortuna	1.81	93	⇑eP	Pn	22 00 02.6	+0.6
MOMJ	Momotombo	1.81	359	eP	Pn	22 00 00.9	-1.1
MIRN	Miramar	1.85	354	⇓eP	Pn	22 00 01.9	-0.7
LEON	Leon	1.86	348	⇑eP	Pn	22 00 01.8	-0.9
CNGN	Cerro Negro	1.91	354	⇑eP	Pn	22 00 02.4	-1.0
TEL3	Telica 3	2.00	351	⇓eP	Pn	22 00 04.2	-0.5
TELN	Telica	2.03	351	eP	Pn	22 00 03.6	-1.6
CGA2	Cerro Gallo 2	2.09	106	eP	Pn	22 00 05.7	-0.2
CGA2				eS	Sn	22 00 30.1	-1.3
CRIN	San Cristobal	2.17	346	⇓eP	Pn	22 00 06.5	-0.6
PRS1	Puriscal	2.24	105	eP	Pn	22 00 07.5	-0.7
VPS2	Volcan Poas 2	2.27	100	eP	Pn	22 00 07.9	-0.7
LAJ	Bijagual	2.46	107	⇑eP	Pn	22 00 05.9	-5.3
LCR2	La Lucha 2	2.60	109	eP	Pn	22 00 13.0	-0.3
URSC	Urasca	2.79	105	⇑eP	Pn	22 00 16.6	+0.6
BUS	Buena Vista	2.89	110	eP	Pn	22 00 17.4	-0.1

MAN 03 22:02:35.4,10.00N×121.54E,h4^{km},mb4.2,ML3.1,MS2.8, 1D,Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUYO	Cuyo Island	0.98	329	eP	Pb	22 02 55.4	+0.7
CUYO				eS	Sb	22 03 08.0	+0.1
GUIM	Jordan	1.20	59	eP	Pb	22 02 57.7	-0.7
GUIM				eS	Sb	22 03 13.7	-0.5
RCP	Roxas	1.95	37	⇓eP	Pn	22 03 10.1	+0.4
RCP				eS	Sn	22 03 34.9	0.0
BUSP	Coron	2.38	327	eP	Pn	22 03 15.4	-0.4
OTRP	Odiongan	2.39	11	eP	Pn	22 03 15.5	-0.5
IPIL	Ipil	2.43	155	eP	Pn	22 03 16.3	-0.2
IPIL				eS	Sn	22 03 43.5	-3.5
SJMP	San Jose	2.48	350	eP	Pn	22 03 17.4	+0.1
PAGZ	Pagadian	2.81	139	eP	Pn	22 03 10.8	-11
MSLP	Maasin	3.27	87	eP	Pn	22 03 28.5	0.0
MSLP				eS	Sn	22 04 05.5	-3.0

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*IDC **03** 22:04:24.0±1.5,7.94S×129.28E,mb4.0/2,mb1 4.4/4, mb1mx4.0/12,mbtmp4.3/4,ML4.9/1,MS3.4/1,Ms1 3.4/1, ms1mx2.8/17,Error ellipse: s-maj=71.5km s-min=24.7km az=70.0*

*NEIC **03** 22:04:25.7±1.0,8.12S×129.06E,h10^{km},mb4.2/1,Error ellipse: s-maj=21.6km s-min=10.7km az=56.0*

ISC 03 22:04:28.1±1.2**,8.40S**±0.08×**129.1E**±0.1**,h33^{km},n13,** σ1^{s}**55**/18**,mb3.8**/2**,MS3.4**/1**,Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.20	199	eP	P	22 06 57.3	+1.9
	11nm,0.3s						
FITZ				eS	S	22 08 48.4	-1.3
FITZ	Fitzroy Crossi	10.20	199	Pn	P	22 06 57.4	+2.0
	7.2nm,0.3s,baz=28,slow=10,SNR=67						
FITZ				Sn	S	22 08 50.3	+0.6
	3.4nm,0.3s,baz=48,slow=12,SNR=4.3						
WRAB	Tennant Creek	12.56	156	ePn	P	22 07 27.9	+0.6
	9.7nm,0.6s						
WRA	Warramunga Arr	12.56	157	Pn	P	22 07 27.8	+0.4
	1.5nm,0.3s,baz=343,slow=13,SNR=48						
WRA				Sn	S	22 09 44.7	-2.4
	1.3nm,0.3s,baz=332,slow=22,SNR=6.4						
WB2	Warramunga Arr	12.57	156	eP	P	22 07 28.2	+0.8
WB2				eS	S	22 09 46.0	-1.2
MBWA	Marble Bar	15.55	214	eP	P	22 08 06.9	+0.2
	21nm,1.1s						
MBWA				eS	S	22 10 50.7	-7.5
ASPA	Alice Springs	15.87	164	eP	P	22 08 13.0	+2.2
ASPA				eS	S	22 11 04.6	-1.0
KSM	Kuching	21.11	297	P	P	22 09 09.9	-2.5
STKA	Stephens Creek	26.11	155	P	P	22 10 03.5	+2.6
	1.3nm,0.5s,mb3.7,baz=337,slow=7.7,SNR=4.6						
STKA	Stephens Creek	26.11	155	eP	P	22 10 02.6	+1.7
MJAR	Matsushiro Arr	45.52	10	LR	LR	22 29 21.9	
	comp=Z,47nm,20.3s,MS3.4,baz=5.0,slow=33						
MKAR	Makanchi Array	68.89	328	P	P	22 15 29.0	-2.6
	0.9nm,0.5s,mb3.9,baz=119,slow=6.8,SNR=16						
MKAR	Makanchi Array	68.89	328	P	P	22 15 29.0	-2.6

CASC 03 22:11:12.0±1.8**,10.60N×86.55W,h22^{km}**±8^{km}**,MD3.7, ML2.7,6C-1D,Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSNN	San Juan del S	0.97	45	⇑iP	Pb	22 11 29.7	-0.3
SSNN				eS	Sb	22 11 43.8	+1.4
MADN	Villa Maderas	1.28	51	⇑iP	Pn	22 11 34.5	-0.3
CONN	Concepcion	1.32	44	⇑eP	Pn	22 11 34.6	-0.7
TICN	Ticuantepe	1.46	12	⇑eP	Pn	22 11 37.4	+0.1
COPN	Copaltepe	1.57	359	⇓iP	Pn	22 11 38.5	-0.4
COPN				eS	Sn	22 11 59.7	+1.0
MOMJ	Momotombo	1.79	0	eP	Pn	22 11 41.4	-0.8
MOMJ				eS	Sn	22 12 04.9	+0.4
LEON	Leon	1.83	350	⇑eP	Pn	22 11 42.2	-0.5
LEON				eS	Sn	22 12 05.8	+0.4
CNGN	Cerro Negro	1.89	356	eS	Sn	22 12 06.8	-0.1
CNGN				i		22 12 11.5	
	comp=Z,66nm,0.5s						
CGA2	Cerro Gallo 2	2.14	106	eP	Pn	22 11 46.0	-1.0
CGA2				eS	Sn	22 12 12.9	-0.2
PRS1	Puriscal	2.29	105	⇑eP	Pn	22 11 50.5	+1.3
LAJ	Bijagual	2.50	107	eP	Pn	22 11 47.1	-5.2
BUS	Buena Vista	2.94	110	eP	Pn	22 11 57.9	-0.7

WEL 03 22:28:17.3±0.4**,39.07S×175.05E,h218^{km}**±3^{km}**,ML3.7**/15**, 2C-1D,Error ellipse: s-maj=7.0km s-min=3.8km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUVZ	Tukino	0.51	113	PN	P	22 28 46.5	-0.3
TUVZ				SN	S	22 29 09.0	-0.7
MOVZ	Moawhango	0.64	122	PN	P	22 28 46.8	-0.5
MOVZ				SN	S	22 29 08.9	-1.7
WAZ	Wanganui	0.69	184	PN	P	22 28 47.2	-0.3
WAZ				SN	S	22 29 10.5	-0.5
BKZ	Black Stump Fm	1.13	95	PN	P	22 28 49.5	-0.5
BKZ				SN	S	22 29 13.4	-1.9
TSZ	Takapari Road	1.22	145	PN	P	22 28 50.8	+0.1
TSZ				SN	S	22 29 16.0	-0.5
MRZ	Mangatainoka R	1.64	166	PN	P	22 28 53.6	-0.6
MRZ				SN	S	22 29 20.9	-1.8
KIW	Kapiti Island	1.79	183	PN	P	22 28 54.7	-0.8
KIW				SN	S	22 29 23.4	-1.6
URZ	Urewera	1.81	64	⇓PN	P	22 28 53.6	-2.1
URZ				SN	S	22 29 21.0	-4.3
BFZ	Birch Farm	1.85	151	PN	P	22 28 55.7	-0.4
DUWZ	D'Urville Isla	1.94	206	PN	P	22 28 55.5	-1.3
DUWZ				SN	S	22 29 24.4	-3.0
CAW	Cannon Point	2.04	180	PN	P	22 28 56.8	-1.0
KNZ	Kokohu	2.04	89	PN	P	22 28 57.3	-0.7
MWZ	Matawai	2.07	70	PN	P	22 28 56.6	-1.7
MWZ				SN	S	22 29 25.9	-4.0
MTW	Mount Morrison	2.12	171	PN	P	22 28 57.6	-1.1
MRW	Makara Radio	2.17	187	⇑PN	P	22 28 58.1	-1.2
TCW	Tory Channel	2.22	195	ePN	P	22 28 56.4	-3.4
TCW				SN	S	22 29 29.5	-3.1
SNZO	South Karori	2.25	187	PN	P	22 28 58.8	-1.3
MSWZ	Moikau Station	2.35	176	⇑PN	P	22 28 59.8	-1.3
NNZ	Nelson	2.50	210	PN	P	22 29 00.3	-2.5
NNZ				SN	S	22 29 34.1	-3.9
TUWZ	Tuamarina	2.50	199	ePN	P	22 28 59.4	-3.4
TUWZ				SN	S	22 29 34.4	-3.7

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*IDC **03** 22:45:35.5±0.8,1.36N×97.25E,mb4.3/10,mb1 4.4/10, mb1mx4.2/18,mbtmp4.3/10,Error ellipse: s-maj=31.6km s-min=17.2km az=55.0*

*BJI **03** 22:45:38.2,0.82N×97.39E,h57^{km},mB4.7,mb4.7,Ms4.2, Msz4.0*

*NEIC **03** 22:45:40.0±0.4,1.32N×97.18E,h30^{km},mb4.5/8,Error ellipse: s-maj=10.7km s-min=8.1km az=219.0*

ISC 03 22:45:38.1±0.5**,1.30N**±0.07×**97.16E**±0.06**,h30^{km},n38,** σ0^{s}**88**/38**,mb4.4**/24**,MS4.0**/1**,1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	Ipoh	5.05	50	P	Pn	22 46 54.5	+0.6
KULM	Kulim	5.28	41	ePn	Pn	22 46 57.6	+0.5
KGM	Kluang	6.20	83	P	Pn	22 47 11.5	+1.4
KSM	Kuching	13.14	89	P	P	22 48 40.3	-5.3
PALK	Pallekele	17.45	290	P	P	22 49 40.7	-0.5
KKM	Kota Kinabalu	19.59	76	eP	P	22 50 06.9	-0.1
QIZ	Qiongzhong	21.57	34	eP	P	22 50 27.0	-0.5
	9.5nm,1.0s,mb4.2						
KMI	Kunming	24.29	12	P	P	22 50 56.1	+1.8
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
KMI				AMB	AMB		
	comp=Z,60nm,3.7s						
KMI				LR	LR		
	comp=N,320nm,15.4s,MS4.0						
KMI				LR	LR		
	comp=E,270nm,15.4s,MS4.0						
KMI				LR	LR		
	comp=Z,320nm,13.5s,MS4.0						
SHL	Shillong	24.66	349	eP	P	22 50 58.0	+0.1
GYA	Guiyang	26.64	19	⇑iP	P	22 51 17.0	+0.7
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
PKI	Pulchoki	28.45	338	eP	P	22 51 32.4	-0.3
	comp=Z,8.9nm,0.9s,mb4.4						
GUN	Gumba	28.58	339	eP	P	22 51 34.5	+0.6
	comp=Z,22nm,0.6s,mb5.0						
DMN	Daman	28.60	337	eP	P	22 51 34.3	+0.2
KKN	Kakani	28.70	338	eP	P	22 51 34.6	-0.4
	comp=Z,13nm,0.9s,mb4.7						
LSA	Lhasa	28.82	349	eP	P	22 51 37.1	+1.0
	comp=Z,5.6nm,0.6s,mb4.5						
GKN	Gorkha	29.14	337	eP	P	22 51 39.0	+0.1
	comp=Z,16nm,0.8s,mb4.8						
KOLN	Koldanda	29.35	335	eP	P	22 51 41.2	+0.3
	comp=Z,16nm,0.7s,mb4.8						
ENH	Enshi	31.10	21	eP	P	22 51 54.6	-1.7
	comp=Z,9.4nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	34.02	126	P	P	22 52 20.5	-1.4
	comp=Z,4.8nm,0.8s,mb4.5,baz=183,slow=13,SNR=6.8						
XAN	Xi'an	34.38	17	P	P	22 52 23.6	-1.3
GTA	Gaotai	38.01	3	P	P	22 52 55.6	+0.1
WRA	Warramunga Arr	42.12	122	P	P	22 53 29.5	-0.3
	comp=Z,2.9nm,0.6s,mb4.1,baz=301,slow=9.1,SNR=26						
WRAB	Tennant Creek	42.12	122	eP	P	22 53 29.5	-0.3
	comp=Z,5.1nm,0.6s,mb4.3						
AAK	Ala-Archa	45.90	337	eP	P	22 54 00.4	+0.5
SONM	Songino Array	47.04	8	P	P	22 54 09.2	+0.3
	comp=Z,3.5nm,0.7s,mb4.4,baz=189,slow=9.6,SNR=14						
MKAR	Makanchi Array	47.14	346	P	P	22 54 09.6	-0.1
	comp=Z,1.4nm,0.4s,mb4.2,baz=159,slow=9.0,SNR=48						
KURK	Kurchatov	51.69	345	eP	P	22 54 43.5	-1.1
	comp=Z,2.6nm,0.3s,mb4.6						
OPO	Ambohidratompo	52.93	246	P	P	22 54 55.8	+1.5
	comp=Z,1.5nm,0.6s,mb4.1,baz=80,slow=6.1,SNR=2.4						
ZAL	Zalesovo	53.45	351	P	P	22 54 57.2	-0.4
	comp=Z,6.6nm,0.4s,mb4.9,baz=303,slow=4.7,SNR=27						
STKA	Stephens Creek	53.45	132	P	P	22 54 57.8	-0.3
	comp=Z,1.6nm,0.5s,mb4.2,baz=320,slow=6.9,SNR=5.9						
STKA	Stephens Creek	53.45	132	eP	P	22 54 57.6	-0.4
BRVK	Borovoye	56.21	341	eP	P	22 55 14.3	-3.5
	comp=Z,4.1nm,1.0s,mb4.4						
CHKZ	Chkalovo	56.62	341	eP	P	22 55 19.5	-1.3
	comp=Z,4.0nm,0.6s,mb4.6						
LBTB	Lobatse	73.89	244	P	P	22 57 14.7	+2.0
FINES	FINESS Array B	79.89	333	P	P	22 57 44.9	-0.6
	comp=Z,2.2nm,0.9s,mb4.1,baz=153,slow=4.3,SNR=5.7						
ARCES	ARCESS Array B	82.43	340	P	P	22 57 57.9	-0.7
	comp=Z,3.0nm,0.9s,mb4.2,baz=104,slow=5.0,SNR=6.7						
ARCES	ARCESS Array B	82.43	340	P	P	22 57 57.9	-0.7
GERES	GERESS Array B	84.72	319	P	P	22 58 11.1	+0.4
	comp=Z,0.2nm,0.3s,mb3.7,baz=71,slow=5.3,SNR=3.8						

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*MOS **03** 22:52:31.7±0.8,7.14N×92.50E,h33^{km},mb4.9/20,Error ellipse: s-maj=18.8km s-min=7.5km az=114.9*

*BJI **03** 22:52:32.9,7.10N×92.40E,h30^{km},mB4.8,mb4.7,Ms4.3, Msz4.0*

*NEIC **03** 22:52:33.0±0.3,7.07N×92.42E,h30^{km},mb4.7/15,Error ellipse: s-maj=8.4km s-min=4.9km az=224.0*

*IDC **03** 22:52:32.0±0.6,7.05N×92.41E,h24^{km}±3^{km},mb4.2/16, mb1 4.3/16,mb1mx4.2/23,mbtmp4.3/16,MS3.9/2, Ms1 3.8/2,ms1mx3.2/21,Error ellipse: s-maj=23.4km s-min=11.4km az=54.0*

ISC 03 22:52:30.3±0.3**,7.04N**±0.04×**92.42E**±0.04**,h24^{km}, h24^{km}**±.8^{km}**:pP-P,n105,** σ1^{s}**14**/102**,mb4.6**/52**,MS4.0**/5**,5C, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	8.13	89	P	P	22 54 40.0	+10
KULM	Kulim	8.36	102	ePn	P	22 54 31.9	-1.2
NNT	Nongplab	9.07	52	P	P	22 54 44.5	+1.6
PALK	Pallekele	11.63	272	ePn	P	22 55 16.1	-2.0
CHG	Chiang Mai	13.31	28	P	P	22 55 42.7	+2.2
VIS	Vishakhapatnam	13.84	321	eP	P	22 55 46.0	-1.6
VIS				AMb	AMB	22 55 48.3	
	comp=Z,27nm,0.6s						
VIS				ex	x	22 58 07.8	
CAL	Calcutta	15.91	346	ex	x	23 06 02.6	
HYB	Hyderabad	17.02	309	i P	P	22 56 32.5	+3.9
HYB				e		22 59 36.0	
HYB	Hyderabad	17.02	309	eP	P	22 56 30.5	+1.9
BOK	Bokaro	17.80	340	eP	P	22 56 39.1	+0.7
BOK				AMb	AMB	22 56 49.0	
	comp=Z,22nm,1.3s						
BOK				ex	x	22 59 43.4	
SHL	Shillong	18.43	358	eP	P	22 56 46.0	-0.2
SHL				eS	S	23 00 06.0	-1.8
KSM	Kuching	18.67	106	eP	P	22 56 49.3	+0.2
KMI	Kunming	20.51	28	P	P	22 57 10.1	+0.5
KMI				AP		22 57 17.9	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s						
KAD	Karad	20.52	301	eP	P	22 57 11.7	+2.0
QIZ	Qiongzhong	20.71	53	eP	P	22 57 13.2	+1.5
QIZ				LR	LR		
	comp=N,370nm,12.2s,MS4.2						
QIZ				LR	LR		
	comp=E,540nm,12.0s,MS4.2						
QIZ				LR	LR		
	comp=Z,920nm,12.3s,MS4.4						
QIZ	Qiongzhong	20.71	53	eP	P	22 57 05.9	-5.8
	comp=Z,110nm,1.4s						
POO	Poona	21.39	304	eP	P	22 57 17.0	-1.5
PKI	Pulchoki	21.48	343	eP	P	22 57 19.7	+0.3
	comp=Z,63nm,0.7s,mb5.0						
PKI	Pulchoki	21.48	343	eP	P	22 57 19.7	+0.3
PKI				pmax	pmax		
	comp=Z,31nm,0.7s,mb4.8						
DMN	Daman	21.60	342	eP	P	22 57 21.6	+0.9
	comp=Z,80nm,0.8s,mb5.2						
BHPL	Bhopal	21.62	320	eP	P	22 57 22.1	+1.2
BHPL				AMb	AMB	22 57 30.4	
	comp=Z,20nm,1.0s,mb4.5						
GUN	Gumba	21.67	344	eP	P	22 57 21.2	-0.1
	comp=Z,100nm,0.9s,mb5.3						
KKN	Kakani	21.72	343	eP	P	22 57 22.3	+0.4
	comp=Z,42nm,0.8s,mb4.9						
GKN	Gorkha	22.12	341	eP	P	22 57 26.6	+0.8
	comp=Z,99nm,1.0s,mb5.2						
KOLN	Koldanda	22.25	339	eP	P	22 57 27.8	+0.7
	comp=Z,35nm,0.8s,mb4.8						
BOM	Bombay	22.42	304	ex	x	23 01 47.8	
BOM				ex	x	23 02 06.7	
LSA	Lhasa	22.57	357	P	P	22 57 32.1	+1.7
LSA	Lhasa	22.57	357	eP	P	22 57 33.2	+2.8
	comp=Z,17nm,0.8s,mb4.5						
LSA	Lhasa	22.57	357	eP	P	22 57 33.2	+2.8
LSA				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.5						
KKM	Kota Kinabalu	23.66	91	eP	P	22 57 43.8	+2.7
AJM	Ajmer	25.70	321	eP	P	22 57 59.2	-1.3
AJM				AMb	AMB	22 58 05.2	
	comp=Z,10nm,1.4s,mb4.2						
CD2	Chengdu	26.02	23	eP	P	22 58 03.5	+0.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
DDI	Dehra Dun	26.80	332	eP	P	22 58 14.0	+3.3
ENH	Enshi	28.12	33	eP	P	22 58 21.6	-1.1
	comp=Z,12nm,0.8s,mb4.6						
LZH	Lanzhou	30.75	18	eP	P	22 58 52.5	+6.4
LZH				AP	pP	22 58 57.6	+4.4
LZH				XP	sP	22 59 00.7	+4.4
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
XAN	Xi'an	30.89	27	P	P	22 58 45.8	-1.6
WHN	Wuhan	31.14	39	eP	P	22 58 49.5	-0.1
GTA	Gaotai	32.91	11	P	P	22 59 05.3	+0.3
GTA				AP	pP	22 59 12.7	+0.6
GTA				XP	sP	22 59 16.4	+1.2
GTA				AMB	AMB		
	comp=Z,70nm,3.8s						
GTA				LR	LR		
	comp=N,110nm,14.5s,MS3.8						
GTA				LR	LR		
	comp=E,70nm,13.7s,MS3.8						
GTA				LR	LR		
	comp=Z,120nm,14.1s,MS3.8						
NJ2	Nanjing	35.01	41	eP	P	22 59 22.1	-1.1
NJ2				PP	PP	23 00 39.5	-2.2
NJ2				S	S	23 04 51.0	-1.9
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,70nm,5.8s						
NJ2				LR	LR		
	comp=N,480nm,20.6s,MS4.4						
NJ2				LR	LR		
	comp=E,580nm,21.2s,MS4.4						
NJ2				LR	LR		
	comp=Z,340nm,22.9s,MS4.0						
SSE	Sheshan	36.01	45	P	P	22 59 29.4	-2.3
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,30nm,3.9s						
UCH	Uchtor	38.47	338	P	P	22 59 53.9	+1.7
	SNR=8.4						
KBK	Karagaybulak	38.68	339	P	P	22 59 55.9	+1.8
	SNR=14						
AML	Almayashu	38.69	338	P	P	22 59 55.8	+1.8
	SNR=25						
AAK	Ala-Archa	38.83	339	P	P	22 59 56.6	+1.4
	SNR=7.1						
AAK	Ala-Archa	38.83	339	eP	P	22 59 55.0	-0.2
	comp=Z,13nm,1.1s,mb4.6						
AAK	Ala-Archa	38.83	339	eP	P	22 59 55.0	-0.2
AAK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
EKS2	Erkin-Say	39.11	338	P	P	22 59 59.6	+2.0
	SNR=6.7						
USP	Ospenovka	39.38	339	P	P	23 00 01.1	+1.3
	SNR=8.4						
MKAR	Makanchi Array	40.56	349	P	P	23 00 09.2	-0.2
	comp=Z,7.4nm,0.8s,mb4.4,baz=166,slow=8.0,SNR=48						
MKAR				pP	pP	23 00 16.9	+0.1
	comp=Z,6.7nm,0.8s,baz=166,slow=7.9,SNR=16						
KKAR	Karatay Array	40.77	335	i P	P	23 00 11.9	+0.6
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
FITZ	Fitzroy Crossi	41.22	128	P	P	23 00 14.9	-0.2
	comp=Z,11nm,0.8s,mb4.5,baz=288,slow=5.6,SNR=10						
FITZ				pP	pP	23 00 22.6	+0.1
	comp=Z,15nm,0.7s,baz=333,slow=4.4,SNR=8.7						
SONM	Songino Array	42.36	14	P	P	23 00 24.4	+0.1
	comp=Z,2.7nm,0.9s,mb3.9,baz=201,slow=7.8,SNR=9.2						
SONM				pP	pP	23 00 31.6	+0.1
	comp=Z,4.5nm,1.1s,baz=201,slow=8.4,SNR=5.5						
KURK	Kurchatov	45.03	348	eP	P	23 00 45.8	-0.1
	comp=Z,24nm,1.1s,mb4.9						
KURK	Kurchatov	45.03	348	eP	P	23 00 45.8	-0.1
KURK				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.9						
NWAO	Narrogin (SRO)	46.22	151	P	P	23 00 56.2	+0.7
	comp=Z,8.8nm,0.9s,mb4.7						
NWAO	Narrogin (SRO)	46.22	151	P	P	23 00 56.2	+0.6
NWAO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZAL	Zalesovo	47.17	354	P	P	23 01 02.5	-0.2
	comp=Z,1.6nm,0.6s,mb4.1,baz=280,slow=7.6,SNR=8.7						
ZAL				pP	pP	23 01 09.8	-0.3
	comp=Z,2.1nm,0.8s,baz=288,slow=8.4,SNR=6.7						
NVS	Novosibirsk	48.23	353	eP	P	23 01 07.3	-3.8
NVS				pmax	pmax		
	comp=Z,9.0nm,1.6s,mb4.5						
NVS				pmax	pmax		
	comp=N,6.0nm,1.7s						
VOSK	Vostochnaya	48.81	343	P	P	23 01 04.7	-11
VOSK				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.4						
WRA	Warramunga Arr	49.19	124	P	P	23 01 18.8	-0.1
	comp=Z,7.1nm,0.9s,mb4.7,baz=304,slow=8.8,SNR=30						
WRA				pP	pP	23 01 26.0	-0.3
	comp=Z,6.4nm,0.8s,baz=304,slow=8.7,SNR=15						
WRAB	Tennant Creek	49.19	124	eP	P	23 01 18.8	-0.1
	comp=Z,23nm,0.9s,mb5.2						
WRAB				epP	pP	23 01 26.3	0.0
WRAB				e		23 01 31.2	
WRAB	Tennant Creek	49.19	124	eP	P	23 01 18.8	-0.1
WRAB				e*PP	pP	23 01 26.3	0.0
WRAB				e		23 01 31.2	
WRAB				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
WB2	Warramunga Arr	49.20	124	eP	P	23 01 19.1	+0.1
BVA0	Borovoye Array	49.25	343	i P	P	23 01 17.6	-1.3
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
BVAR	Borovoye Array	49.25	343	P	P	23 01 18.2	-0.8
	comp=Z,2.7nm,0.8s,mb4.3,baz=149,slow=8.6,SNR=18						
BVAR				pP	pP	23 01 25.9	-0.4
	comp=Z,2.8nm,0.8s,baz=153,slow=6.6,SNR=10						
BRVK	Borovoye	49.31	343	eP	P	23 01 17.0	-2.4
	comp=Z,3.2nm,0.8s,mb4.4						
BRVK				epP	pP	23 01 26.1	-0.7
BRVK	Borovoye	49.31	343	eP	P	23 01 17.0	-2.4
BRVK				e*PP	pP	23 01 26.1	-0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CHKZ	Chkalovo	49.75	343	eP	P	23 01 22.1	-0.7
	comp=Z,12nm,0.9s,mb4.9						
CHKZ				epP	pP	23 01 29.6	-0.5
CHKZ	Chkalovo	49.75	343	eP	P	23 01 22.1	-0.7
CHKZ				e*PP	pP	23 01 29.6	-0.6
CHKZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
AB31	Akbulak array	50.17	333	i P	P	23 01 33.3	+7.3
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ASPA	Alice Springs	50.71	128	eP	P	23 01 31.1	+0.6
MJAR	Matsushiro Arr	50.98	48	LR	LR	23 22 40.0	
	comp=Z,75nm,19.8s,MS3.7,baz=260,slow=35						
AKTO	Aktyubinsk	51.88	333	P	P	23 01 38.2	-0.8
AKTO				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.6						
BOD	Bodaibo	53.36	14	eP	P	23 01 49.5	-0.4
BOD				e	pP	23 01 56.8	-0.6
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
BOD				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
GNI	Garni	53.81	315	P	P	23 01 53.6	+0.1
	comp=Z,4.0nm,0.9s,mb4.3,baz=332,slow=16,SNR=4.1						
GNI	Garni	53.81	315	⇑eP	P	23 01 53.9	+0.4

GNI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ZEI	Tsey	55.50	318	eP	P	23 02 04.5	-1.3
ZEI				i		23 02 57.9	
ZEI				i		23 04 11.3	
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ARU	Arti	56.01	338	eP	P	23 02 08.4	-0.8
	comp=Z,3.8nm,0.9s,mb4.4						
ARU				epP	pP	23 02 15.4	-1.3
ARU	Arti	56.01	338	eP	P	23 02 08.4	-0.8
ARU				e*PP	pP	23 02 15.4	-1.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
ARU	Arti	56.01	338⇑	iP	P	23 02 08.5	-0.7
ARU				e		23 03 04.1	
ARU				eS	S	23 09 55.2	+0.9
ARU				eSS	SS	23 13 39.7	-0.8
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
KIV	Kislovodsk	56.80	319c	iP	P	23 02 14.8	-0.4
KIV				e		23 04 20.3	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
YSS	Yuzh-Sakhalins	58.49	38⇑	eP	P	23 02 35.5	+8.6
STKA	Stephens Creek	60.78	132	P	P	23 02 41.9	-1.1
	comp=Z,5.0nm,0.8s,mb4.7,baz=26,slow=2.2,SNR=7.3						
STKA	Stephens Creek	60.78	132	eP	P	23 02 41.8	-1.2
YAK	Yakutsk	61.33	19	i P	P	23 02 46.2	0.0
YAK				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb5.0						
BR131	Keskin Array S	61.69	311	eP	P	23 02 48.1	-0.9
	comp=Z,2.1nm,0.8s,mb4.3						
BRTR	Keskin Array B	61.69	311	P	P	23 02 47.6	-1.4
	comp=Z,1.3nm,0.7s,mb4.2,baz=132,slow=5.6,SNR=11						
OBN	Obninsk	65.18	328	i P	P	23 03 11.6	-0.1
OBN				eSS	SS	23 16 02.3	-3.9
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
AKASG	Malin Array Be	67.76	322	P	P	23 03 25.8	-2.4
	comp=Z,0.2nm,0.3s,mb3.6,baz=91,slow=5.0,SNR=4.3						
TIXI	Tiksi	68.39	12⇑	eP	P	23 03 31.1	-0.7
TIXI				pmax	pmax		
	comp=Z,19nm,1.2s,mb5.0						
MATP	Matopo	68.47	245	P	P	23 03 32.9	-0.3
	comp=Z,2.4nm,1.1s,mb4.2,baz=96,slow=10,SNR=2.7						
MLR	Muntele Rosu	68.58	316	P	P	23 03 33.5	+0.1
	comp=Z,7.4nm,0.9s,mb4.6,baz=230,slow=3.2,SNR=7.7						
LBTB	Lobatse	72.35	241	eP	P	23 03 57.8	+1.2
	comp=Z,7.0nm,1.0s,mb4.5						
LBTB	Lobatse	72.35	241	eP	P	23 03 57.8	+1.2
LBTB				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
FINES	FINESS Array B	72.66	333	P	P	23 03 57.0	-0.8
	comp=Z,1.8nm,0.7s,mb4.1,baz=162,slow=6.0,SNR=5.1						
BOSA	Boshof	73.70	238	P	P	23 04 05.6	+1.0
	comp=Z,2.3nm,0.8s,mb4.2,baz=304,slow=18,SNR=5.0						
BOSA				LR	LR	23 31 36.5	
	comp=Z,91nm,18.4s,MS4.1,baz=39,slow=32						
BOSA	Boshof	73.70	238	P	P	23 04 05.6	+1.0
BOSA				LR	LR	23 31 36.5	
CASY	Casey	74.32	172	eP	P	23 04 15.2	+7.9
	comp=Z,9.2nm,0.8s,mb4.8						
GERES	GERESS Array B	77.31	318	P	P	23 04 25.0	+0.4
	comp=Z,1.5nm,0.7s,mb4.0,baz=90,slow=5.3,SNR=16						
GERES				pP	pP	23 04 32.1	-0.2
	comp=Z,2.6nm,0.8s,baz=90,slow=5.3,SNR=12						
DAVOX	Davos	79.81	316	P	P	23 04 38.8	+0.5
	comp=Z,2.5nm,0.6s,mb4.3,baz=101,slow=12,SNR=6.6						
LPG	La Plagne	82.00	315	eP	P	23 04 49.8	0.0
	comp=Z,43nm,1.5s,mb4.9						
LPG	La Plagne	82.00	315	eP	P	23 04 49.8	0.0
LPG				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
NVAR	Mina Array Bea	126.50	30	PKP	PKPdf	23 11 35.4	-1.1
	comp=Z,0.5nm,0.7s,baz=237,slow=0.5,SNR=5.2						
PDAR	Pinedale Array	126.55	20	PKP	PKPdf	23 11 33.8	-2.7
	comp=Z,1.0nm,0.8s,baz=90,slow=1.5,SNR=7.2						
PDAR				pPKP		23 11 41.5	
	comp=Z,1.4nm,0.9s,slow=1.5,SNR=6.8						
CPUP	Villa Florida	145.41	233	ePKPdf	PKPdf	23 12 08.5	-3.1
CPUP				epPKPdf		23 12 16.6	

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*NEIC **03** 23:04:03.5±1.3, 20.65S×177.95W, h473^{km}±17^{km}, mb4.3/12, Error ellipse: s-maj=14.8km s-min=11.6km az=205.0*

*IDC **03** 23:04:03.4±2.8, 20.72S×177.81W, h480^{km}±28^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.6/15, mbtmp4.7/7, Error ellipse: s-maj=35.4km s-min=18.2km az=141.0*

ISC 03 23:04:00.9±1.7**, 20.6S**±0.1×**177.95W**±0.10**, h457**^{km}±23^{km}**, n43, σ0^{s}82**/38**, mb4.2**/18**, 4C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.92	42	P	P	23 06 09.0	+1.2
	8.6nm,0.3s,baz=226,slow=23,SNR=5.3						
AFI				S	S	23 07 47.2	-1.1
	9.6nm,0.3s,baz=314,slow=20,SNR=4.1						
URZ	Urewera	18.07	193	P	P	23 07 52.4	+8.7
	8.1nm,0.3s,baz=310,slow=2.0,SNR=23						
RPZ	Rata Peaks	24.77	199	P	P	23 08 52.0	+5.7
	6.9nm,0.6s,mb4.2,baz=32,slow=19,SNR=5.0						
CTAO	Charters Tower	33.52	265	eP	P	23 10 03.6	+1.1
	9.2nm,0.8s,mb4.3						
PMG	Port Moresby	35.42	283	P	P	23 10 19.8	+1.4
	10nm,0.6s,mb4.5,baz=277,slow=3.3,SNR=3.6						
PMG	Port Moresby	35.42	283	eP	P	23 10 19.8	+1.4
	22nm,1.0s,mb4.5						
STKA	Stephens Creek	37.77	244	P	P	23 10 38.3	+0.5
	6.0nm,0.6s,mb4.2,baz=87,slow=11,SNR=17						
STKA	Stephens Creek	37.77	244	eP	P	23 10 38.3	+0.6
ASPA	Alice Springs	44.54	257	eP	P	23 11 32.3	+0.1
WB2	Warramunga Arr	44.62	262	eP	P	23 11 32.5	-0.4
WRAB	Tennant Creek	44.62	262	eP	P	23 11 32.1	-0.8
	15nm,1.1s,mb4.3						
WRA	Warramunga Arr	44.63	262	P	P	23 11 32.5	-0.5
	5.3nm,0.6s,mb4.2,baz=96,slow=6.5,SNR=46						
WRA				S	S	23 17 29.6	-5.4
	1.1nm,0.9s,baz=99,slow=14,SNR=4.8						
KAKA	Kakadu	48.03	271	eP	P	23 12 16.8	+18
	7.5nm,0.8s,mb4.1						
FORT	Forrest	49.28	247	eP	P	23 12 07.5	-1.0
	22nm,0.5s,mb4.8						
FITZ	Fitzroy Crossi	53.06	262	eP	P	23 12 36.2	-0.1
	7.9nm,0.5s,mb4.3						
FITZ	Fitzroy Crossi	53.06	262	P	P	23 12 36.2	-0.2
	7.5nm,0.4s,mb4.4,baz=130,slow=4.6,SNR=41						
SBA	Scott Base	57.73	184	eP	P	23 13 09.7	+1.5
	2.7nm,0.7s,mb3.7						
VNDA	Vanda	57.77	185	eP	P	23 13 08.8	+0.3
	1.1nm,0.7s,mb3.3						
MBWA	Marble Bar	57.87	257	eP	P	23 13 08.9	-1.0
	24nm,0.5s,mb4.8						
KLBR	Kellerberrin	58.04	245	eP	P	23 13 10.0	-0.9
	17nm,0.9s,mb4.4						
MUN	Mundaring	59.31	244	eP	P	23 13 19.3	-0.1
CASY	Casey	63.86	205	P	P	23 13 46.1	-2.6
	2.3nm,0.5s,mb4.0						
QSPA	South Pole Qui	69.43	180	eP	P	23 14 23.1	+0.2
	4.2nm,0.6s,mb4.2						
KKM	Kota Kinabalu	69.84	285	eP	P	23 14 26.9	+0.4
MJAR	Matsushiro Arr	70.35	324	P	P	23 14 28.9	-0.2
	2.2nm,0.4s,mb4.0,baz=160,slow=6.6,SNR=9.7						
MJAR	Matsushiro Arr	70.35	324	P	P	23 14 28.9	-0.2
KSM	Kuching	73.48	278	P	P	23 14 47.6	-0.2
MAW	Mawson	81.45	200	P	P	23 15 29.5	-0.2
	1.7nm,0.8s,mb3.6,baz=117,slow=4.5,SNR=2.8						
KULM	Kulim	83.84	278	eP	P	23 15 43.9	+0.9
ENH	Enshi	86.16	304	P	P	23 15 54.3	+0.5
	6.4nm,0.8s,mb4.3						
SYO	Syowa Base	86.60	193	⇑P	P	23 15 54.5	-0.5
SNAA	Sanae	87.87	178		P	23 16 00.1	-0.9
SNAA	Sanae	87.87	178		P	23 16 07.3	+6.3
VNA3	Neumayer Olymp	88.00	176⇑	i	P	23 16 01.9	+0.3
VNA2	Neumayer--Watz	88.44	177⇑	i	P	23 16 04.0	+0.3
VNA1	Neumayer--Stat	88.67	177⇑	i	P	23 16 05.3	+0.5
BVAR	Borovoye Array	119.22	320	PKP	PKPdf	23 21 56.6	-0.3
	0.9nm,0.4s,baz=137,slow=2.4,SNR=7.6						
ARCES	ARCESS Array B	129.07	350	PKP	PKPdf	23 22 15.4	0.0
	3.7nm,1.1s,slow=2.4,SNR=4.5						
AKASG	Malin Array Be	143.16	331	PKP	PKPdf	23 22 40.0	-1.5
	4.8nm,0.5s,baz=44,slow=4.3,SNR=40						
BR131	Keskin Array S	146.97	312	ePKPbc	PKPbc	23 22 52.3	+1.8
BRTR	Keskin Array B	146.97	312	PKPbc	PKPbc	23 22 52.5	+1.9
	1.1nm,0.6s,baz=143,slow=4.6,SNR=11						
CLL	Collm	148.21	347	ePKP1	PKPdf	23 22 55.0	+5.1
GERES	GERESS Array B	150.35	344	PKPbc	PKPdf	23 22 59.9	+6.5
	0.8nm,0.6s,slow=2.7,SNR=9.0						

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*IDC **03** 23:04:59.5±1.7, 5.57N×94.56E, mb3.9/7, mb1 4.1/7, mb1mx3.8/18, mbtmp3.9/7, Error ellipse: s-maj=66.6km s-min=28.0km az=54.0*

*NEIC **03** 23:05:02.7±0.7, 5.35N×94.26E, h30^{km}, mb4.7/4, Error ellipse: s-maj=23.7km s-min=12.0km az=58.0*

ISC 03 23:05:01.2±5.9**, 5.4N**±0.1×**94.44E**±0.09**, h31**^{km}±44^{km}**, n13, σ1^{s}15**/14**, mb4.1**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	6.18	91	ePn	Pn	23 06 35.2	+2.3
KULM				eSn	Sn	23 07 42.0	-1.3
COCO	West Island	17.65	172	P	P	23 09 04.7	-2.1
	92nm,0.6s						
LSA	Lhasa	24.35	353	P	P	23 10 16.4	-1.5
MKAR	Makanchi Array	42.54	348	P	P	23 12 56.1	+0.3
	1.7nm,0.6s,mb4.0,baz=170,slow=7.1,SNR=21						
SONM	Songino Array	43.49	12	P	P	23 13 02.9	-0.7
	0.7nm,0.6s,mb3.6,baz=180,slow=8.6,SNR=3.3						
WRA	Warramunga Arr	46.62	124	P	P	23 13 29.9	+0.9
	1.1nm,0.6s,mb4.0,baz=305,slow=9.3,SNR=4.8						
WRAB	Tennant Creek	46.63	124	eP	P	23 13 29.8	+0.9
	19nm,1.4s,mb4.8						
KURK	Kurchatov	47.05	346	eP	P	23 13 32.1	+0.2
	5.7nm,1.0s,mb4.5						
ZAL	Zalesovo	49.01	352	P	P	23 13 46.5	-0.6
	1.1nm,0.6s,mb4.1,baz=323,slow=4.0,SNR=5.3						
BVAR	Borovoye Array	51.40	342	P	P	23 14 05.0	-0.3
	0.7nm,0.5s,mb3.9,baz=140,slow=10,SNR=8.1						
CHKZ	Chkalovo	51.89	342	eP	P	23 14 08.7	-0.4
	2.4nm,0.5s,mb4.4						
FINES	FINESS Array B	75.01	332	P	P	23 16 43.3	+1.9
	2.4nm,1.0s,mb4.1,baz=162,slow=6.0,SNR=4.6						
GERES	GERESS Array B	79.85	319	P	P	23 17 09.1	+0.6
	0.4nm,0.5s,mb3.6,baz=108,slow=4.2,SNR=4.2						

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*ATH **03** 23:15:14.7, 38.18N×26.65E, h35^{km}±17^{km}, MD3.2/3*

*ISK **03** 23:15:16.0, 38.17N×26.75E, h16^{km}, MD3.3*

*CSEM **03** 23:15:16.6±0.1, 38.18N×26.80E, h20^{km}, MD3.3, Error ellipse: s-maj=2.6km s-min=1.5km az=107.0*

ISC 03 23:15:14.4±0.9**, 38.21N**±0.03×**26.61E**±0.05**, h3**^{km}±6^{km}**, n23, σ0^{s}97**/33**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.15	355	i P	Pg	23 15 17.7	+0.2
URLA				i S	Sg	23 15 18.8	-0.9
BLCB	Balcova	0.38	62	PG	Pg	23 15 22.7	+0.7
BLCB				SG	Sg	23 15 28.1	+0.9
SMG	Samos	0.53	160⇑	iPB	Pb	23 15 25.5	-0.4
SMG				eSB	Sb	23 15 33.6	0.0
IZM	Izmir	0.55	69	PG	Pg	23 15 25.8	+0.5
KDAG	Bornova	0.55	69	i P	Pg	23 15 25.0	-0.4
KDAG				i S	Sg	23 15 30.1	-2.6
PRK	Paraskevi	1.07	346	ePN	Pn	23 15 35.7	-0.5
PRK				eSN	Sn	23 15 50.3	-1.4
AYDN	Tasoluk	1.14	118	i P	Pb	23 15 37.0	+0.6
AYDN				i S	Sb	23 15 51.7	+0.3
AKS	Akhisar	1.16	54	ePN	Pn	23 15 36.8	-0.6
BODT	Bodrum	1.27	154	ePN	Pn	23 15 38.5	-0.5
BODT				eSN	Sn	23 15 55.4	-1.3
MLSB	Milas	1.29	134	ePN	Pn	23 15 38.9	-0.4
BDRM	Kayabasi	1.32	150	i P	Pb	23 15 40.4	+1.0
BDRM				i S	Sb	23 15 56.0	-0.5
APE	Apeiranthos	1.42	217	ePN	Pn	23 15 42.7	+1.5
APE				eSN	Sn	23 16 01.7	+1.1
APE	Apeiranthos	1.42	217	ePN	Pn	23 15 40.1	-1.1
MANT	Manisa	1.56	79	i P	Pn	23 15 45.1	+2.1
MANT				i S	Sb	23 16 05.1	+1.6
EZN	Ezine	1.63	352	ePN	Pn	23 15 45.9	+1.7
YER	Yerkesik	1.70	128	ePN	Pn	23 15 44.3	-0.9
BALB	Balikesir	1.74	34	ePN	Pn	23 15 46.2	+0.5
DENT	Denizli	1.96	103	ePN	Pn	23 15 48.0	-0.9
DST	Dursunbey	2.10	48	ePN	Pn	23 15 50.2	-0.7
KHL	Karahalli	2.29	86	ePN	Pn	23 15 52.5	-1.1
EDC	Edincik	2.35	24	ePN	Pn	23 15 55.4	+1.0
BNT	Bandirma	2.38	25	ePN	Pn	23 15 54.9	+0.1
ORLT	Orhaneli	2.56	43	ePN	Pn	23 15 57.5	+0.1

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*BJI **03** 23:19:11.4, 34.91N×72.94E, h10^{km}, mB4.7, mb4.6, ML4.5, Ms4.2, Msz3.9*

*IDC **03** 23:19:12.0±0.7, 34.78N×73.06E, mb4.4/15, mb1 4.6/18, mb1mx4.5/23, mbtmp4.5/18, ML4.7/3, MS3.6/6, Ms1 3.6/6, ms1mx3.2/31, Error ellipse: s-maj=18.0km s-min=16.0km az=166.0*

*MOS **03** 23:19:11.6±1.2, 34.64N×73.05E, h15^{km}, mb4.7/13, Error ellipse: s-maj=9.8km s-min=5.0km az=97.2*

*NDI **03** 23:19:12.8±3.4, 34.83N×72.72E, h10^{km}, mb4.6, ML4.3, mb4.5(NEIC)*

*NEIC **03** 23:19:13.3±0.3, 34.73N×73.11E, h10^{km}, mb4.5/16, Error ellipse: s-maj=7.3km s-min=4.2km az=45.0*

*NNC **03** 23:19:24.4±5.0, 35.11N×72.58E, h85^{km}±46^{km}, mpv4.6, Error ellipse: s-maj=48.9km s-min=36.8km az=50.0*

ISC 03 23:19:11.9±0.2**, 34.72N**±0.02×**73.11E**±0.03**, h10**^{km}**, (h11**^{km}±1.7^{km}**:pP-P), n146, σ1^{s}35**/175**, mb4.5**/38**, MS3.6**/11**, 18C-5D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.07	173	⇓P	Pb	23 19 35.1	+3.1
CEP	Cherat	1.34	228	⇓P	Pb	23 19 36.4	-0.2
THW	Thamme Wali	2.24	211	⇑P	Pn	23 19 52.3	+2.8
JMU	Jammu	2.50	143	eP	Pn	23 20 00.0	+6.8
JMU				ex	x	23 20 43.0	
SARP	Sargodha	2.82	188	⇓P	Pn	23 20 00.1	+2.3
SARP				S	Sn	23 20 36.0	+3.8
THN	Thein Dam	3.15	136	eP	Pn	23 20 07.8	+5.2
THN				eS	Sn	23 20 46.1	+5.4
DLH	Dalhousie	3.23	132	eP	Pn	23 20 08.0	+4.4
DLH				eS	Sn	23 20 49.0	+6.5
DRP	Derazinda	3.84	220	⇓P	Pn	23 20 14.4	+2.0
BHK	Bhakra	4.31	139	ePB	Pb	23 20 31.1	+3.7
BHK				ex	x	23 21 15.1	
SDNR	Sundarnagar	4.56	134	eP	Pn	23 20 25.6	+3.0
SDNR				eS	Sn	23 21 18.4	+2.0
SMLA	Simla	4.95	135	eP	Pn	23 20 30.0	+1.9
SMLA				ex	x	23 21 27.9	
KSH	Kashi	5.30	25	PG	Pn	23 20 38.2	+5.1
KSH				Smax			
	comp=N,460nm,0.4s						
KSH				Smax			
	comp=E,450nm,0.4s						
KLP	Kalpa	5.36	125	eP	Pn	23 20 36.6	+2.8
KLP				eS	Sn	23 21 41.1	+4.7
KLP				AML	AML	23 22 15.8	
	comp=E,883nm,0.6s						
KLP				AML	AML	23 22 21.8	
	comp=N,945nm,0.7s						
DDI	Dehra Dun	6.06	135	eP	Pn	23 20 45.4	+1.7
DDI				ex	x	23 22 00.0	
NDI	New Delhi	6.96	149	eP	Pn	23 20 59.0	+2.5
NDI				ex	x	23 22 17.0	
KHET	Khetri	7.02	160	eP	Pn	23 20 57.6	+0.4
KHET				eS	Sn	23 22 13.8	-4.1
AYAN	Aya Nagar	7.10	150	eP	Pn	23 20 59.4	+0.9
AYAN				eS	Sn	23 22 18.8	-1.2
KUDL	Kundal	7.17	155	eP	Pn	23 21 00.2	+0.9
KUDL				eS	Sn	23 22 18.9	-2.7
SONA	Sohna	7.29	151	eP	Pn	23 21 02.0	+0.9
SONA				eS	Sn	23 22 21.9	-2.9
SONA				AML	AML	23 22 26.0	
	comp=E,252nm,0.4s						
SONA				AML	AML	23 22 26.5	
	comp=N,73nm,0.2s						
AML	Almayashu	7.41	3	P	Pn	23 21 04.9	+2.2
	SNR=35						
KZA	Kyzart	7.53	12	P	Pn	23 21 06.5	+2.0
	SNR=13						
UCH	Uchtor	7.57	8	P	Pn	23 21 06.9	+1.9
	SNR=80						
ULHL	Ulahol	7.90	17	P	Pn	23 21 12.0	+2.4
	SNR=10						
PTH	Pithoragarh	7.93	129	eP	Pn	23 21 13.9	+3.9
PTH				ex	x	23 22 39.8	
EKS2	Erkin-Say	7.94	4	P	Pn	23 21 11.9	+1.7
	SNR=41						
AAK	Ala-Archa	7.97	7	P	Pn	23 21 14.4	+3.8
	SNR=6.9						
AAK	Ala-Archa	7.97	7	⇑P	Pn	23 21 13.9	+3.3
	comp=N,7.7nm,0.5s						
AAK				⇑S	Sn	23 22 39.4	-2.4
	comp=N,37nm,0.9s						
AAK	Ala-Archa	7.97	7	⇑P	Pn	23 21 13.9	+3.3
	comp=N,7.7nm,0.4s						
AAK				S	Sn	23 22 39.4	-2.4
AAK	Ala-Archa	7.97	7	⇑P	Pn	23 21 13.9	+3.3
AAK				S	Sn	23 22 39.4	-2.4
AAK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KBK	Karagaybulak	8.05	10	P	P	23 21 13.7	+2.0
	SNR=14						
FRU	Bishkek	8.18	8	eP	P	23 21 17.5	+3.9
FRU				pmax	pmax		
	comp=Z,50nm,2.0s						
AJM	Ajmer	8.32	170	eP	P	23 21 14.4	-1.1
AJM				eS	Sn	23 22 45.4	-5.2
CHMS	Chumysh	8.36	8	P	P	23 21 19.2	+3.2
	SNR=6.1						
TKM2	Tokmak 2	8.41	13	P	P	23 21 19.4	+2.7
	SNR=19						
USP	Ospenovka	8.60	7	P	P	23 21 20.7	+1.3
	SNR=15						
KK31	Karatay Array	8.61	347	⇑P	P	23 21 19.6	+0.1
	comp=Z,35nm,0.6s,baz=160,slow=12,SNR=1017						
KK31				S	Sn	23 22 53.0	-4.7
	comp=Z,9.1nm,0.3s,baz=166,slow=18,SNR=13						
KK31	Karatay Array	8.61	347	⇑P	P	23 21 19.6	+0.1
KK31				S	Sn	23 22 53.0	-4.7
KK31				pmax	pmax		
	comp=Z,35nm,0.6s						
KKAR	Karatay Array	8.61	347	eP	P	23 21 19.6	+0.1
KKAR				S	Sn	23 22 53.0	-4.7
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KKAR				smax			
	comp=Z,4.0nm,0.2s						
KOLN	Koldanda	11.34	125	ePn	P	23 21 56.3	-0.7
KOLN				eSn	S	23 24 00.3	-4.5
	comp=Z,61nm,0.7s						
BHJ	Bhuj	11.82	196	eP	P	23 22 01.6	-2.0
BHJ				ex	x	23 24 08.1	
GKN	Gorkha	11.91	121	ePn	P	23 22 03.3	-1.4
GKN				eSn	S	23 24 13.5	-5.2
	comp=Z,46nm,0.3s						
ALBI	Allahabad	12.03	139	ex	x	23 24 17.0	
BHPL	Bhopal	12.04	161	eP	P	23 22 05.2	-1.4
BHPL				AMb	AMB	23 22 09.6	
	comp=Z,21nm,0.9s						
BHPL				eS	S	23 24 13.3	-8.8
DMN	Daman	12.47	121	ePn	P	23 22 10.6	-1.8
DMN				eSn	S	23 24 26.5	-6.0
	comp=Z,168nm,1.0s						
KKN	Kakani	12.49	120	ePn	P	23 22 10.5	-2.1
KKN				eSn	S	23 24 26.5	-6.3
	comp=Z,87nm,0.7s						
PKI	Pulchoki	12.71	121	ePn	P	23 22 13.7	-1.8
PKI				eSn	S	23 24 31.8	-6.4
	comp=Z,114nm,0.9s						
GUN	Gumba	12.85	118	ePn	P	23 22 15.8	-1.6
GUN				eSn	S	23 24 35.1	-6.4
	comp=Z,97nm,0.8s						
MK02	Makanchi Array	13.89	27	⇑P	P	23 22 31.9	+0.9
MK02				pmax	pmax		
	comp=Z,11nm,0.9s						
MK31	Makanchi Array	13.91	27	⇑P	P	23 22 31.9	+0.6
	comp=Z,11nm,0.9s,baz=204,slow=32,SNR=41						
MKAR	Makanchi Array	13.91	27	Pn	P	23 22 31.1	-0.2
	comp=Z,0.5nm,0.3s,baz=207,slow=14,SNR=18						
MKAR				LR	LR	23 28 37.1	
	comp=Z,143nm,18.3s,baz=111,slow=41						
WMQ	Urumqi	14.48	47	eP	P	23 22 39.2	+0.5
BOK	Bokaro	15.57	131	ex	x	23 22 47.9	
BOK				AMb	AMB	23 23 01.7	
	comp=Z,8.8nm,0.7s						
BOK				ex	x	23 25 31.9	
LSA	Lhasa	16.06	103	P	P	23 22 58.2	-1.3
LSA	Lhasa	16.06	103	eP	P	23 22 58.0	-1.5
POO	Poona	16.14	177	ex	x	23 23 05.0	
POO				ex	x	23 26 08.0	
KURK	Kurchatov	16.48	12	⇑P	P	23 23 05.0	+0.4
	comp=Z,5.7nm,1.2s						
KAD	Karad	17.37	177	eP	P	23 23 17.4	+1.4
KAD				AMb	AMB	23 23 50.2	
	comp=Z,20nm,1.4s						
AB31	Akbulak array	17.47	330	⇑P	P	23 23 16.1	-1.1
	comp=Z,6.3nm,0.6s,baz=139,slow=11,SNR=104						
AB31				⇑S	S	23 26 18.7	-11
	comp=Z,6.2nm,0.8s,baz=122,slow=28,SNR=5.6						
AB31	Akbulak array	17.47	330	eP	P	23 23 16.0	-1.1
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
HYB	Hyderabad	17.91	163	i P	P	23 23 20.0	-2.7
HYB				eS	S	23 26 38.0	-2.0
HYB	Hyderabad	17.91	163	eP	P	23 23 20.0	-2.7
HYB				eS	S	23 26 31.0	-9.0
VOSK	Vostochnaya	18.06	356	⇑P	P	23 23 23.5	-0.9
	comp=Z,5.3nm,0.5s						
VOSK	Vostochnaya	18.06	356	⇑P	P	23 23 23.5	-0.9
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BVA0	Borovoye Array	18.40	355	P	P	23 23 28.2	-0.5
	comp=Z,3.3nm,0.7s,baz=236,slow=42,SNR=115						
BVA0	Borovoye Array	18.40	355	P	P	23 23 28.2	-0.5
	comp=Z,3.3nm,0.6s						
BVA0	Borovoye Array	18.40	355	P	P	23 23 28.1	-0.5
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	Borovoye Array	18.40	355	P	P	23 23 27.1	-1.6
	comp=Z,6.1nm,0.3s,baz=156,slow=9.7,SNR=98						
BRVK	Borovoye	18.44	355	ePn	P	23 23 28.8	-0.3
SHL	Shillong	18.60	114	ex	x	23 23 28.0	
SHL				eS	S	23 26 46.0	-10
CHKZ	Chkalovo	19.03	355	⇑P	P	23 23 34.9	-1.4
	comp=Z,9.6nm,0.7s						
AKTK	Aktyubinsk	19.18	330	⇑P	P	23 23 37.0	-1.0
AKTO	Aktyubinsk	19.18	330	⇑P	P	23 23 37.1	-1.0
	comp=Z,7.4nm,0.8s						
AKTO	Aktyubinsk	19.18	330	P	P	23 23 37.3	-0.7
	comp=Z,6.2nm,0.3s,baz=137,slow=10,SNR=123						
ZAL	Zalesovo	20.90	20	P	P	23 23 55.3	-1.4
	comp=Z,20nm,0.5s,baz=257,slow=7.0,SNR=42						
ZAL				S	S	23 27 44.0	-0.7
	comp=Z,1.5nm,0.8s,baz=149,slow=16,SNR=3.4						
ZAL				LR	LR	23 33 07.7	
	comp=Z,110nm,19.1s,MS3.2,baz=120,slow=40						
NVS	Novosibirsk	21.32	16	i P	P	23 23 59.2	-1.7
NVS				e		23 24 33.9	
NVS				eS	S	23 27 47.4	-5.3
NVS				eSS	SS	23 28 31.8	+5.0
NVS				pmax	pmax		
	comp=N,59nm,1.7s						
NVS				pmax	pmax		
	comp=Z,50nm,1.7s,mb4.6						
NVS				pmax	pmax		
	comp=E,16nm,1.3s						
NVS				smax			
	comp=N,15nm,1.8s						
NVS				smax			
	comp=E,12nm,2.0s						
GTA	Gaotai	21.78	70	eP	P	23 24 06.9	+1.2
GTA				AP		23 24 10.9	
GTA				XP		23 24 14.0	
GTA				PP	PP	23 24 30.3	-0.5
GTA				S	S	23 28 01.4	-0.1
GTA				XS		23 28 07.1	
GTA				SS	SS	23 28 37.5	-1.1
GTA				AMB	AMB		
	comp=Z,60nm,3.8s						
GTA				LR	LR		
	comp=N,80nm,12.2s,MS3.4						
GTA				LR	LR		
	comp=E,60nm,12.6s,MS3.4						
GTA				LR	LR		
	comp=Z,120nm,12.5s,MS3.5						
UMR	Umm Al-Rimmam	22.09	264	eP	P	23 24 09.1	+0.3
QRN	Al-Qurain	22.21	261	eP	P	23 24 09.7	-0.4
MIB	Mutribah	22.31	264	eP	P	23 24 11.5	+0.4
RDF	Al-Radifah	22.45	262	eP	P	23 24 12.3	-0.1

NAY	Al-Naaiem	22.58	263	eP	P	23 24 14.2	+0.4
GNI	Garni	23.11	292	P	P	23 24 20.5	+1.6
	comp=Z,15nm,0.8s,mb4.5,baz=3.0,slow=5.9,SNR=17						
GNI	Garni	23.11	292	P	P	23 24 20.9	+2.1
	comp=Z,13nm,0.8s,mb4.4						
GNI	Garni	23.11	292	P	P	23 24 20.5	+1.6
GNI				pmax	pmax		
	comp=Z,15nm,0.8s						
ARU	Arti	23.88	340	P	P	23 24 27.0	+0.9
	comp=Z,18nm,0.6s,mb4.7						
ARU	Arti	23.88	340	⇑iP	P	23 24 27.1	+1.0
ARU				eS	S	23 28 36.2	-2.7
ARU				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.6						
ZEI	Tsey	24.07	298	i P	P	23 24 35.5	+7.4
ZEI				i *PP		23 24 45.9	
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
LZH	Lanzhou	25.04	78	eP	P	23 24 38.0	+0.4
LZH				AP	pP	23 24 41.3	+0.8
LZH				XP	sP	23 24 42.6	+0.8
LZH				ePP	PP	23 25 15.7	+0.5
LZH				eS	S	23 28 58.1	-0.7
LZH				eSS	SS	23 29 57.2	-0.8
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
LZH				AMB	AMB		
	comp=Z,60nm,4.5s						
LZH				LR	LR		
	comp=N,570nm,10.5s						
LZH				LR	LR		
	comp=Z,1μm,13.6s,MS4.6						
KIV	Kislovodsk	25.16	301	eP	P	23 24 40.6	+2.1
	comp=Z,5.4nm,0.7s,mb4.2						
KIV	Kislovodsk	25.16	301	i P	P	23 24 41.4	+2.8
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
CD2	Chengdu	25.98	90	eP	P	23 24 48.1	+1.6
ZAK	Zakamensk	26.94	45	eP	P	23 24 54.2	-0.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
KMI	Kunming	27.32	102	P	P	23 25 03.1	+4.3
KMI				LR	LR		
	comp=Z,30nm,19.5s,MS2.9						
SONM	Songino Array	28.00	52	P	P	23 25 05.5	+0.8
	comp=Z,4.0nm,1.0s,mb4.0,baz=252,slow=8.8,SNR=11						
SONM				LR	LR	23 37 48.5	
	comp=Z,144nm,19.7s,MS3.6,baz=230,slow=40						
PALK	Pallekele	28.20	164	eP	P	23 25 08.1	+1.2
	comp=Z,26nm,1.2s,mb4.7						
GYA	Guiyang	29.93	97	P	P	23 25 21.9	-0.4
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
HHC	Hu-ho-hao-te	30.82	67	eP	P	23 25 29.4	-0.6
HHC				AP	pP	23 25 34.1	+1.1
HHC				XP	sP	23 25 36.3	+2.0
HHC				PP	PP	23 26 30.1	-1.2
HHC				PCP	PcP	23 28 26.8	-0.4
HHC				S	S	23 30 30.2	-2.1
HHC				SCP		23 32 07.3	
HHC				SS	SS	23 32 10.9	-3.9
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,90nm,6.0s						
HHC				LR	LR		
	comp=N,80nm,10.8s,MS3.8						
HHC				LR	LR		
	comp=E,80nm,12.0s,MS3.8						
HHC				LR	LR		
	comp=Z,60nm,15.6s,MS3.4						
ENH	Enshi	30.89	88	eP	P	23 25 30.3	-0.4
	comp=Z,5.1nm,0.6s,mb4.5						
BR131	Keskin Array S	31.64	291	eP	P	23 25 36.8	-0.4
	comp=Z,1.0nm,0.6s,mb3.8						
BRTR	Keskin Array B	31.64	291	P	P	23 25 37.6	+0.3
	comp=Z,1.3nm,0.8s,mb3.8,baz=96,slow=8.5,SNR=8.2						
OBN	Obninsk	32.40	320	eP	P	23 25 43.0	-0.7
OBN				e		23 26 44.9	
OBN				e		23 28 34.1	
OBN				eS	S	23 30 50.3	-6.6
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
AKASG	Malin Array Be	35.40	310	P	P	23 26 07.9	-1.8
	comp=Z,0.9nm,0.4s,mb4.0,baz=82,slow=7.8,SNR=4.5						
BOD	Bodaibo	35.69	37	eP	P	23 26 12.0	0.0
BOD				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
ATD	Arta Tunnel	35.92	237	LR	LR	23 42 12.0	
	comp=Z,66nm,18.6s,MS3.4,baz=74,slow=38						
JOF	Joensuu	38.26	330	ep	P	23 26 33.6	0.0
	comp=Z,4.7nm,0.4s,mb4.6						
FINES	FINESS Array B	39.91	327	P	P	23 26 46.3	-1.1
	comp=Z,2.6nm,0.5s,mb4.2,baz=116,slow=9.1,SNR=26						
FINES	FINESS Array B	39.91	327	eP	P	23 26 46.8	-0.6
KAF	Kangasniemi	40.05	328	ep	P	23 26 48.0	-0.5
	comp=Z,14nm,1.8s,mb4.4						
KAF	Kangasniemi	40.05	328	eP	P	23 26 48.0	-0.5
KAF				pmax	pmax		
	comp=Z,14nm,1.8s,mb4.4						
SSE	Sheshan	40.23	81	P	P	23 26 48.4	-1.9
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,60nm,4.3s						
CN2	Changchun	40.93	61	eP	P	23 26 56.5	+0.5
KEV	Kevo	43.08	338	ep	P	23 27 12.3	-0.9
ARCES	ARCESS Array B	43.44	338	P	P	23 27 16.3	+0.2
	comp=Z,13nm,0.4s,mb5.0,baz=114,slow=8.1,SNR=137						
ARCES				LR	LR	23 46 38.6	
	comp=Z,101nm,19.1s,MS3.7,baz=135,slow=38						
ARCES	ARCESS Array B	43.44	338	P	P	23 27 16.3	+0.2
ARCES				LR	LR	23 46 38.6	
MDJ	Mudanjiang	43.80	59	P	P	23 27 18.4	-1.0
MDJ				AP	pP	23 27 21.5	-0.9
MDJ				SS	SS	23 37 01.0	+3.1
MDJ				AMB	AMB		
	comp=Z,30nm,3.7s						
MDJ				LR	LR		
	comp=N,10.0nm,16.8s						
MDJ				LR	LR		
	comp=E,30nm,22.6s						
MDJ				LR	LR		
	comp=Z,40nm,19.6s,MS3.3						
KTK1	Kautokeino	43.93	337	eP	P	23 27 20.8	+0.7
KTK1				AMb	AMB	23 27 21.5	
	comp=Z,47nm,1.6s,mb5.0						
KTK1				epP	pP	23 27 22.9	-0.2
KTK1	Kautokeino	43.93	337	eP	P	23 27 20.8	+0.7
	comp=Z,47nm,1.6s,mb5.0						
TRO	Tromso	45.58	337	eP	P	23 27 32.0	-1.4
AQU	L’Aquila	46.48	298	P	P	23 27 37.9	-2.9
	comp=Z,4.2nm,0.8s,mb4.4						
AQU	L’Aquila	46.48	298	P	P	23 27 37.9	-2.9
AQU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TIXI	Tiksi	46.79	21	P	P	23 27 42.8	-0.1
TIXI	Tiksi	46.79	21	⇓eP	P	23 27 43.1	+0.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,100nm,22.0s,MS3.7						
NB2	NORSAR Subarra	46.83	324	P	P	23 27 42.1	-1.2
	comp=Z,4.3nm,0.7s,mb4.5,baz=94,slow=7.4						
NB2	NORSAR Subarra	46.83	324	P	P	23 27 42.1	-1.2
	baz=94,slow=7.9						
NOA	NORSAR Array B	46.83	324	P	P	23 27 41.7	-1.6
	comp=Z,4.7nm,0.8s,mb4.5,baz=96,slow=7.7,SNR=14						
NOA	NORSAR Array B	46.83	324	P	P	23 27 41.7	-1.6
NAO	NORSAR Subarra	47.00	324	P	P	23 27 42.1	-2.5
	comp=Z,4.3nm,0.7s,mb4.5						
NAO	NORSAR Subarra	47.00	324	P	P	23 27 42.1	-2.5
NAO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
MAJO	Matsushiro	52.01	68	P	P	23 28 23.6	0.0
	comp=Z,12nm,0.6s,mb5.0						
MAJO	Matsushiro	52.01	68	P	P	23 28 23.6	0.0
MAJO				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
MJAR	Matsushiro Arr	52.02	68	P	P	23 28 24.0	+0.4
	comp=Z,6.7nm,0.6s,mb4.7,baz=292,slow=10.0,SNR=19						
YSS	Yuzh-Sakhalins	52.46	54	i P	P	23 28 27.5	+0.7
YSS				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
BILL	Bilibino	59.45	26	eP	P	23 29 17.9	+1.2
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
SUMG	Summit	63.29	342	P	P	23 29 42.7	+0.1
LSZ	Lusaka	65.52	228	P	P	23 29 57.8	-0.1
	comp=Z,1.1nm,0.5s,mb4.1,baz=36,slow=6.1,SNR=4.0						
LSZ				LR	LR	00 02 37.0	
	comp=Z,37nm,18.7s,MS3.6,baz=342,slow=40						
INK	Inuvik	75.37	10	eP	P	23 30 56.8	+0.1
	comp=Z,15nm,0.7s,mb5.0						
INK	Inuvik	75.37	10	eP	P	23 30 56.8	+0.1
INK				pmax	pmax		
	comp=Z,15nm,0.7s						
ILAR	Eielson Array	76.00	16	P	P	23 30 59.6	-0.7
	comp=Z,1.9nm,0.9s,mb4.0,baz=308,slow=5.5,SNR=12						
DBIC	Dimbokro	76.35	269	P	P	23 31 02.2	-1.2
	comp=Z,4.2nm,0.8s,mb4.4,baz=42,slow=8.6,SNR=5.5						
DBIC	Dimbokro	76.35	269	P	P	23 31 02.2	-1.2
BOSA	Boshof	77.54	222	P	P	23 31 09.9	+0.2
	comp=Z,3.2nm,0.7s,mb4.4,baz=105,slow=7.5,SNR=7.8						
DAWY	Dawson	78.24	14	P	P	23 31 13.0	+0.2
WRA	Warramunga Arr	79.59	123	P	P	23 31 21.6	+0.6
	comp=Z,0.8nm,0.4s,mb4.0,baz=323,slow=5.1,SNR=10						
WRAB	Tennant Creek	79.59	123	eP	P	23 31 21.2	+0.2
	comp=Z,3.5nm,0.6s,mb4.5						
WRAB	Tennant Creek	79.59	123	eP	P	23 31 21.3	+0.3
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
YKA	Yellowknife Ar	82.92	4	P	P	23 31 37.9	+0.2
	comp=Z,2.8nm,0.5s,mb4.6,baz=348,slow=5.3,SNR=34						

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*NDI **03** 23:34:13.1±5.0, 34.94N×72.94E, h10^{km}, ML3.5*
*NNC **03** 23:34:27.8±11.0, 35.32N×73.71E, mpv3.9, Error ellipse: s-maj=1775.4km s-min=99.3km az=73.0*
ISC 03 23:34:17.5±1.5, **34.6N**±0.1×**73.3E**±0.2, **h10**^{km}, **n5**, σ**1**^{s}**62**/8, **2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.92	137	eP	Pn	23 35 08.7	+3.8
THN				eS	Sn	23 35 47.8	+7.5
KLP	Kalpa	5.12	125	eP	Pn	23 35 33.9	-2.2
KLP				eS	Sn	23 36 36.7	+0.7
KLP				AML	AML	23 36 58.0	
	comp=N,55nm,0.5s						
KLP				AML	AML	23 36 58.7	
	comp=E,83nm,0.7s						
KHET	Khetri	6.82	161	ex	x	23 36 03.6	
KHET				ex	x	23 37 10.8	
KUDL	Kundal	6.95	156	eP	Pn	23 36 01.7	-0.3
KUDL				eS	Sn	23 37 18.0	-4.0
KK31	Karatay Array	8.79	346	⇑Pn	P	23 36 30.1	+2.4
	comp=E,4.2nm,0.7s,baz=156,slow=11,SNR=43						
KK31				⇑Sn	Sn	23 38 06.8	-1.2
	comp=E,1.4nm,0.5s,baz=167,slow=23,SNR=12						

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*IDC **03** 23:46:58.9±1.5, 1.07N×96.99E, h22^{km}±4^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.8/17, mbtmp4.0/7, Error ellipse: s-maj=59.2km s-min=16.2km az=53.0*
*NEIC **03** 23:47:00.8±0.6, 1.21N×97.24E, h30^{km}, mb4.4/5, Error ellipse: s-maj=15.3km s-min=7.4km az=224.0*
ISC 03 23:46:57.7±0.7, **1.2N**±0.1×**97.2E**±0.1, **h22**^{km}, **h22**^{km}±.7^{km}**:pP-P, n22**, σ**0**^{s}**87**/21, **mb4.4**/17, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.30	40	ePn	Pn	23 48 18.6	+1.0
KSM	Kuching	13.07	89	P	P	23 50 03.9	-1.0
SHL	Shillong	24.77	348	eP	P	23 52 20.0	+0.6
PKI	Pulchoki	28.57	338	eP	P	23 52 54.7	+0.4
	12nm,1.0s,mb4.6						
GUN	Gumba	28.70	339	eP	P	23 52 56.8	+1.3
	16nm,0.6s,mb4.9						
DMN	Daman	28.72	337	eP	P	23 52 56.5	+0.8
	9.4nm,0.8s,mb4.5						
KKN	Kakani	28.81	338	eP	P	23 52 57.0	+0.5
	18nm,1.1s,mb4.7						
GKN	Gorkha	29.25	337	eP	P	23 53 00.8	+0.3
	13nm,0.8s,mb4.7						
KOLN	Koldanda	29.47	335	eP	P	23 53 03.3	+0.8
	11nm,0.9s,mb4.6						
ENH	Enshi	31.17	21	eP	P	23 53 15.6	-1.8
	12nm,0.7s,mb4.8						
FITZ	Fitzroy Crossi	33.90	126	P	P	23 53 41.6	+0.2
	2.2nm,0.6s,mb4.3,baz=270,slow=20,SNR=4.0						
WRA	Warramunga Arr	42.01	122	P	P	23 54 49.7	+0.3
	1.1nm,0.5s,mb3.7,baz=301,slow=9.1,SNR=6.8						
WRA				pP	pP	23 54 57.0	+0.9
	0.6nm,0.4s,baz=302,slow=9.1,SNR=3.2						
WRAB	Tennant Creek	42.01	122	eP	P	23 54 49.9	+0.4
	12nm,1.2s,mb4.4						
SONM	Songino Array	47.12	8	P	P	23 55 30.6	+0.4
	2.1nm,0.8s,mb4.1,baz=189,slow=8.1,SNR=11						
SONM				pP	pP	23 55 37.6	+0.8
	2.3nm,0.8s,baz=193,slow=8.3,SNR=6.9						
MKAR	Makanchi Array	47.25	346	P	P	23 55 31.2	+0.1
	1.7nm,0.5s,mb4.2,baz=159,slow=9.2,SNR=33						
MKAR				pP	pP	23 55 37.9	0.0
	1.6nm,0.7s,baz=153,slow=8.1,SNR=7.6						
KURK	Kurchatov	51.80	345	eP	P	23 56 05.1	-0.9
	2.5nm,0.9s,mb4.1						
STKA	Stephens Creek	53.33	132	P	P	23 56 18.5	+0.8
ZAL	Zalesovo	53.55	351	P	P	23 56 18.6	-0.4
	2.5nm,0.7s,mb4.2,baz=288,slow=3.8,SNR=13						
ZAL				pP	pP	23 56 25.8	-0.1
	2.4nm,0.5s,baz=326,slow=4.5,SNR=4.7						
BVAR	Borovoye Array	56.26	341	P	P	23 56 37.8	-1.0
	2.0nm,0.7s,mb4.2,baz=137,slow=9.3,SNR=12						
BVAR				pP	pP	23 56 43.9	-1.7
	1.1nm,0.6s,baz=138,slow=7.1,SNR=5.5						
CHKZ	Chkalovo	56.74	341	eP	P	23 56 40.7	-1.5
	3.1nm,0.8s,mb4.4						
CHKZ				epP	pP	23 56 47.1	-1.9
BRTR	Keskin Array B	69.14	312	P	P	23 58 03.1	-1.5
	1.0nm,1.1s,mb3.6,baz=158,slow=6.7,SNR=3.6						
GERES	GERESS Array B	84.83	319	pP	pP	23 59 39.0	-0.1
	1.0nm,1.0s,slow=2.7,SNR=3.1						

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*SNSN **04** 00:23:45.0, 17.07N×43.36E, Ml3.0*
*CSEM **04** 00:23:45.0, 17.07N×43.36E, ML3.0, After SNSN*
*DHMR **04** 00:23:48.5±1.3, 16.89N×43.72E, h2^{km}±10^{km}, ML3.5*
ISC 04 00:23:45.7±0.5, **17.11N**±0.03×**43.38E**±0.05, **h10**^{km}, **n10**, σ**0**^{s}**86**/16, **2C-2D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJNS	Zahran al Janu	0.62	14	P	Pb	00 23 57.1	-1.0
DJNS				S	Sg	00 24 05.9	-0.6
FRSS	Farasan al Kab	1.27	253	P	Pb	00 24 07.8	-1.5
FRSS				S	Sb	00 24 25.3	-0.2
SANA	San‘a	1.88	155	⇑iP	Pn	00 24 18.1	-0.3
SANA				i S	Sn	00 24 41.1	-1.3
SANA				AML	AML	00 24 44.4	
	comp=N,712nm,0.2s						
DHBB	Dhamar BB	2.70	159	⇓iP	Pn	00 24 30.4	+0.3
DHBB				i S	Sn	00 25 03.1	-0.1
BLJS	Baljurashi	3.24	329	P	Pn	00 24 39.5	+1.8
KAMS	Al Khamasin	3.38	19	P	Pn	00 24 39.6	-0.1
LBOS		3.69	151	⇑iP	Pn	00 24 44.7	+0.6
LBOS				i S	Sn	00 25 28.9	+0.8
BDHA	Al Bayda’	3.76	146	⇓iP	Pn	00 24 45.6	+0.6
BDHA				i S	Sn	00 25 29.9	0.0
BDHA				AML	AML	00 25 45.0	
	comp=E,161nm,0.5s						
LTHS	Al Lith	4.23	319	P	Pn	00 24 52.8	+1.0
MUKL	Al Mukalla	6.04	115	i S	Sn	00 26 22.8	-4.5

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*IDC **04** 00:59:19.0±3.1, 34.86N×73.37E, mb3.8/7, mb1 3.9/10, mb1mx3.7/22, mbtmp3.8/10, ML3.7/3, Error ellipse: s-maj=61.8km s-min=31.4km az=162.0*
*NEIC **04** 00:59:19.1±2.2, 34.62N×73.39E, h10^{km}, mb3.5/3, Error ellipse: s-maj=40.3km s-min=16.2km az=144.0*
*MOS **04** 00:59:19.9±1.6, 34.88N×73.19E, h12^{km}, mb4.2/6, Error ellipse: s-maj=26.3km s-min=9.7km az=102.2*
*NDI **04** 00:59:21.6±4.6, 34.78N×73.07E, h10^{km}, ML3.6, mb3.5(NEIC)*
*NNC **04** 00:59:28.8±5.0, 35.00N×72.60E, h60^{km}±41^{km}, mpv3.9, Error ellipse: s-maj=47.2km s-min=33.9km az=83.0*
ISC 04 00:59:18.8±0.5, **34.78N**±0.05×**73.06E**±0.09, **h10**^{km}, **n46**, σ**1**^{s}**08**/54, **mb3.8**/7, **3C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.23	136	eP	Pn	01 00 13.9	+3.4
THN				eSB	Sb	01 00 56.6	+1.3
DLH	Dalhousie	3.30	132	eP	Pn	01 00 13.0	+1.4
DLH				ex	x	01 00 55.0	
BHK	Bhakra	4.38	139	ex	x	01 01 22.6	
SDNR	Sundarnagar	4.63	134	eP	Pn	01 00 32.2	+1.6
SDNR				eS	Sn	01 01 25.5	+0.4
SMLA	Simla	5.02	135	eP	Pn	01 00 34.9	-1.1
SMLA				eS	Sn	01 01 33.3	-1.4
KLP	Kalpa	5.42	125	eP	Pn	01 00 42.4	+0.7
KLP				eS	Sn	01 01 41.6	-3.4
KLP				AML	AML	01 02 17.8	
	comp=E,240nm,0.9s						
KLP				AML	AML	01 02 21.2	
	comp=N,146nm,0.8s						
DDI	Dehra Dun	6.13	135	ex	x	01 02 06.0	
NDI	New Delhi	7.03	149	ex	x	01 01 15.0	
NDI				ex	x	01 02 23.5	
KHET	Khetri	7.09	160	eP	Pn	01 01 03.7	-1.4
KHET				eS	Sn	01 02 20.9	-5.7
KHET				AML	AML	01 02 25.9	
	comp=N,35nm,0.4s						
KHET				AML	AML	01 02 26.0	
	comp=E,57nm,0.4s						
KUDL	Kundal	7.24	155	eP	Pn	01 01 05.9	-1.4
KUDL				eS	Sn	01 02 25.0	-5.3
SONA	Sohna	7.36	151	eP	Pn	01 01 08.6	-0.4
SONA				eS	Sn	01 02 25.9	-7.5
SONA				AML	AML	01 02 31.9	
	comp=E,68nm,0.4s						
SONA				AML	AML	01 02 35.0	
	comp=N,25nm,0.3s						
AAK	Ala-Archa	7.92	8	⇓P	Pn	01 01 19.3	+2.5
	comp=N,1.4nm,0.4s						
AAK				⇓S	Sn	01 02 46.3	-1.1
	comp=N,7.6nm,1.1s						
AAK	Ala-Archa	7.92	8	ePn	Pn	01 01 17.1	+0.3
	comp=N,2.4nm,0.5s						
KK31	Karatay Array	8.54	347	⇑P	P	01 01 25.7	+0.2
	comp=N,3.7nm,0.4s,baz=152,slow=11,SNR=128						
KK31				⇑S	Sn	01 02 58.9	-4.1
	comp=N,5.5nm,0.4s,baz=151,slow=23						
KKAR	Karatay Array	8.54	347	eP	P	01 01 25.6	+0.1
KKAR				S	Sn	01 02 58.8	-4.1
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KKAR				smax			
	comp=Z,2.0nm,0.3s						
MK31	Makanchi Array	13.87	27	P	P	01 02 44.6	+6.9
	comp=Z,0.5nm,0.5s,baz=202,slow=11,SNR=7.5						
MKAR	Makanchi Array	13.87	27	Pn	P	01 02 36.6	-1.1
	comp=Z,0.0nm,0.3s,baz=194,slow=12,SNR=3.4						
AB31	Akbulak array	17.40	330	⇑P	P	01 03 22.0	-1.2
	comp=Z,0.4nm,0.4s,baz=151,slow=9.2,SNR=21						
AB31				⇓S	S	01 06 25.7	-9.5
	comp=Z,1.2nm,0.8s,baz=163,slow=22,SNR=2.8						
AB31	Akbulak array	17.40	330	P	P	01 03 22.7	-0.4
VOSK	Vostochnaya	18.00	356	P	P	01 03 31.1	+0.5
BVA0	Borovoye Array	18.34	355	⇓P	P	01 03 35.7	+0.9
	comp=Z,0.4nm,0.8s,baz=160,slow=9.7,SNR=17						
BVAR	Borovoye Array	18.34	355	P	P	01 03 35.5	+0.7
	comp=Z,0.6nm,0.3s,baz=158,slow=9.2,SNR=16						
BVAR	Borovoye Array	18.34	355	P	P	01 03 35.5	+0.7
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	18.38	355	P	P	01 03 36.0	+0.6
	comp=Z,3.0nm,1.0s						
BRVK	Borovoye	18.38	355	P	P	01 03 36.0	+0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CHKZ	Chkalovo	18.97	356	P	P	01 03 41.1	-1.4
CHKZ	Chkalovo	18.97	356	eP	P	01 03 42.6	+0.1
	comp=Z,2.6nm,1.1s						
CHKZ	Chkalovo	18.97	356	eP	P	01 03 42.6	+0.1
CHKZ				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AKTO	Aktyubinsk	19.11	330	P	P	01 03 43.8	-0.4
	comp=Z,0.8nm,0.3s,baz=127,slow=13,SNR=20						
AKTO	Aktyubinsk	19.11	330	P	P	01 03 43.8	-0.3
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GNI	Garni	23.05	292	P	P	01 04 30.2	+5.0
	comp=Z,1.7nm,0.5s,mb3.7,baz=113,slow=7.7,SNR=3.5						
GNI	Garni	23.05	292	P	P	01 04 29.8	+4.6
	comp=Z,1.8nm,0.6s,mb3.7						
GNI	Garni	23.05	292	P	P	01 04 30.2	+5.0
GNI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRTR	Keskin Array B	31.58	291	P	P	01 05 45.7	+2.0
	comp=Z,0.3nm,0.7s,mb3.2,baz=90,slow=10,SNR=3.5						
FINES	FINESS Array B	39.84	327	P	P	01 06 53.4	-0.4
	comp=Z,2.0nm,0.8s,mb3.9,baz=127,slow=6.9,SNR=4.6						
FINES	FINESS Array B	39.84	327	P	P	01 06 53.4	-0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	ARCESS Array B	43.37	338	P	P	01 07 22.6	+0.1
	comp=Z,2.3nm,0.6s,mb4.1,baz=118,slow=7.6,SNR=16						
ARCES	ARCESS Array B	43.37	338	P	P	01 07 22.6	+0.1
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	NORSAR Subarra	46.76	324	P	P	01 07 48.6	-1.1
	comp=Z,0.3nm,0.6s,mb3.4,baz=84,slow=7.0						
NOA	NORSAR Array B	46.76	324	P	P	01 07 48.5	-1.2
	comp=Z,1.2nm,0.9s,mb3.8,baz=96,slow=7.7,SNR=3.3						
NOA	NORSAR Array B	46.76	324	P	P	01 07 48.5	-1.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
INK	Inuvik	75.32	10	P	P	01 11 03.3	0.0
	comp=Z,0.9nm,0.5s,mb3.9,baz=17,slow=4.3,SNR=10						
INK	Inuvik	75.32	10	P	P	01 11 03.3	0.0
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	82.87	4	P	P	01 11 44.2	-0.1
	comp=Z,0.8nm,0.7s,mb3.8,baz=349,slow=5.4,SNR=7.1						
YKA	Yellowknife Ar	82.87	4	P	P	01 11 44.2	-0.1
YKA	Yellowknife Ar	82.87	4	P	P	01 11 44.2	-0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

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*IDC **04** 01:12:04.2±1.7, 65.88N×175.43W, mb3.7/6, mb1 4.0/8, mb1mx3.8/21, mbtmp3.7/8, Error ellipse: s-maj=60.9km s-min=17.9km az=17.0*
*NEIC **04** 01:12:05.7±1.1, 66.19N×174.68W, h5^{km}, mb3.8/1, Error ellipse: s-maj=33.6km s-min=10.7km az=197.0*
ISC 04 01:12:05.6±1.1, **66.4N**±0.2×**174.2W**±0.2, **h10**^{km}, **n12**, σ**1**^{s}**41**/14, **mb3.6**/6, **Near north coast of eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNA	Tin City	2.72	105	ePn	Pn	01 12 50.3	+0.1
TNA				eSg	Sg	01 13 32.8	-3.4
MCK	McKinley	10.97	92	P	P	01 14 44.5	-1.0
ILAR	Eielson Array	11.39	86	Pn	P	01 14 51.1	-0.1
	0.2nm,0.3s,baz=287,slow=13,SNR=13						
ILAR				Sn	S	01 16 59.2	-0.4
	0.1nm,0.3s,baz=290,slow=21,SNR=5.1						
INK	Inuvik	15.59	65	Pn	P	01 15 49.8	+3.2
	0.3nm,0.3s,baz=302,slow=10,SNR=15						
INK	Inuvik	15.59	65	eP	P	01 15 49.8	+3.3
	5.1nm,0.7s						
PDAR	Pinedale Array	41.75	91	P	P	01 19 58.1	+2.2
	0.6nm,1.0s,mb3.2,baz=329,slow=5.3,SNR=3.1						
NVAR	Mina Array Bea	41.95	103	P	P	01 19 59.7	+2.0
	0.5nm,0.7s,mb3.3,baz=315,slow=5.9,SNR=4.2						
BVAR	Borovoye Array	51.29	316	P	P	01 21 09.8	-1.4
	0.7nm,0.5s,mb3.9,baz=27,slow=9.7,SNR=4.5						
FINES	FINESS Array B	51.58	348	P	P	01 21 13.4	+0.2
	1.6nm,0.8s,mb4.0,baz=27,slow=9.3,SNR=3.5						
MKAR	Makanchi Array	53.08	303	P	P	01 21 23.0	-1.6
	0.5nm,0.6s,mb3.6,baz=52,slow=9.8,SNR=3.8						
MKAR	Makanchi Array	53.08	303	P	P	01 21 23.0	-1.6
TXAR	Lajitas Array	55.73	95	P	P	01 21 44.9	+0.6
	0.4nm,0.7s,mb3.5,baz=332,slow=4.1,SNR=5.9						

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*IDC **04** 01:28:16.2±1.6, 23.49S×66.71W, h182^{km}±16^{km}, mb3.4/5, mb1 3.7/8, mb1mx3.6/15, mbtmp4.0/8, Error ellipse: s-maj=20.4km s-min=14.0km az=84.0*
*NEIC **04** 01:28:18.0±0.5, 23.41S×66.62W, h196^{km}±7^{km}, mb4.0/3,*

Error ellipse: s-maj=9.7km s-min=8.1km az=88.0
*GUC **04** 01:28:19.7±0.4, 23.66S×67.06W, h203^{km}±9^{km}, ML4.6*
ISC 04 01:28:16.3±0.6**, 23.41S**±0.05×**66.71W**±0.07**, h194**^{km}±8^{km}**, n24, σ1^{s}23**/32**, mb3.4**/5**, 2C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.46**	**290**	⇑*i*P	**P**	**01 28 53.4**	**+3.8**
CEN1	**Los Morros**	**3.21**	**270**	*e*P	**P**	**01 29 11.4**	**+2.7**
CEN1				*i* S	**S**	**01 29 50.5**	**+1.3**
CEN1				AMP		01 29 52.8	
	comp=N,588nm,0.6s						
ANCH	**Antofagasta**	**3.41**	**265**	*e*P	**P**	**01 29 12.2**	**+1.0**
ANCH				*i* S	**S**	**01 29 51.8**	**-1.8**
ANCH				AMP		01 29 53.7	
	comp=N,1μm,0.2s						
CPN1	**Cerro Paranal**	**3.59**	**250**	⇑*i*P	**P**	**01 29 14.3**	**+0.8**
CPN1				*i* S	**S**	**01 29 56.2**	**-1.4**
CPN1				AMP		01 29 57.9	
	comp=E,851nm,0.6s						
CDCH	**Caldera**	**5.22**	**225**	*i* P	**P**	**01 29 32.3**	**-1.9**
CDCH				*i* S	**S**	**01 30 29.3**	**-5.3**
LPAZ	**La Paz**	**7.21**	**349**	P	**P**	**01 30 02.4**	**+2.4**
	comp=E,0.7nm,0.3s,baz=157,slow=4.9,SNR=26						
LPAZ				S	**S**	**01 31 20.5**	**-0.4**
	baz=267,slow=22,SNR=3.2						
LPAZ	**La Paz**	**7.21**	**349**	*e*Pn	**P**	**01 30 02.4**	**+2.4**
	comp=E,2.3nm,0.3s						
LPAZ				S	**S**	**01 31 20.5**	**-0.4**
ARE	**Arequipa**	**8.24**	**326**	*e*P	**P**	**01 30 12.0**	**-1.6**
ARE				*e*S	**S**	**01 31 41.0**	**-4.2**
CFAA	**Coronel Fontan**	**8.28**	**189**	P	**P**	**01 30 13.9**	**-0.1**
	comp=E,0.1nm,0.3s,baz=347,slow=8.8,SNR=11						
CFAA				S	**S**	**01 31 41.3**	**-4.7**
	comp=E,0.3nm,0.3s,baz=149,slow=18,SNR=9.2						
CPUP	**Villa Florida**	**9.00**	**111**	*e*Pn	**P**	**01 30 23.4**	**0.0**
SIV	**San Ignacio**	**9.09**	**37**	P	**P**	**01 30 24.5**	**0.0**
	comp=E,1.1nm,0.3s,baz=228,slow=10,SNR=28						
SIV				S	**S**	**01 31 53.8**	**-11**
	baz=220,slow=14,SNR=2.7						
SAML	**Samuel**	**14.77**	**14**	*e*P	**P**	**01 31 37.2**	**+0.2**
	comp=E,4.1nm,0.5s						
TRQA	**Tornquist**	**15.15**	**166**	*e*P	**P**	**01 31 41.5**	**-0.1**
	comp=E,2.2nm,0.4s						
BDFB	**Brasilia**	**19.22**	**70**	P	**P**	**01 32 28.2**	**+0.6**
	comp=E,1.3nm,0.3s,baz=249,slow=10,SNR=37						
BAO	**Brasilia Array**	**19.25**	**70**	P	**P**	**01 32 26.0**	**-1.9**
VNA3	**Neumayer Olymp**	**57.62**	**161**		**P**	**01 37 48.6**	**+0.8**
VNA1	**Neumayer--Stat**	**57.81**	**160**		**P**	**01 37 51.1**	**+2.0**
VNA2	**Neumayer--Watz**	**58.18**	**161**		**P**	**01 37 51.8**	**+0.1**
TXAR	**Lajitas Array**	**63.36**	**324**	P	**P**	**01 38 26.4**	**-0.7**
	comp=E,0.1nm,0.4s,mb2.8,baz=153,slow=7.6,SNR=3.5						
DBIC	**Dimbokro**	**67.36**	**72**	P	**P**	**01 38 51.0**	**-1.9**
	comp=E,1.7nm,0.4s,mb4.0,baz=218,slow=3.0,SNR=7.7						
PDAR	**Pinedale Array**	**76.78**	**329**	P	**P**	**01 39 48.0**	**+0.1**
	comp=E,0.2nm,0.3s,mb3.2,baz=117,slow=6.0,SNR=2.6						
NVAR	**Mina Array Bea**	**78.25**	**321**	P	**P**	**01 39 56.9**	**+0.9**
	comp=E,0.3nm,0.6s,mb3.1,baz=135,slow=5.1,SNR=3.2						
BOSA	**Boshof**	**80.76**	**117**	P	**P**	**01 40 09.6**	**-0.2**
	comp=E,3.0nm,1.0s,mb3.9,baz=252,slow=6.4,SNR=7.7						
MKAR	**Makanchi Array**	**145.90**	**39**	PKPbc	PKPbc	01 47 34.4	+1.7
	comp=E,1.2nm,0.7s,baz=310,slow=3.6,SNR=7.4						

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*STR **04** 02:00:26.1±0.3, 45.08N×6.63E, h5^{km}±1^{km}, Ml2.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **04** 02:00:26.1, 45.05N×6.56E, h6^{km}, ML2.5(GEN), ML2.4(LDG), ML2.3(STR), After GEN.*
*CSEM **04** 02:00:26.3±0.1, 45.05N×6.66E, h8^{km}, ML2.4/14, Error ellipse: s-maj=1.6km s-min=1.0km az=57.0*
*GEN **04** 02:00:26.1, 45.05N×6.56E, h6^{km}, ML2.0*
*LDG **04** 02:00:27.4±0.1, 45.07N×6.59E, h2^{km}, Md2.5/3, Ml2.4/17, Error ellipse: s-maj=2.7km s-min=1.7km az=70.0*
ISC 04 02:00:25.4±0.2**, 45.06N**±0.01×**6.56E**±0.02**, h10**^{km}±2^{km}**, n67, σ1^{s}16**/119**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNI	**Bardonecchia**	**0.09**	**95**	*e*Pg	**Pg**	**02 00 27.8**	**-0.1**
BNI	**Bardonecchia**	**0.09**	**95**	*e*Pg	**Pg**	**02 00 27.8**	**-0.1**
RRL	**Cesana Torines**	**0.21**	**131**	P	**Pg**	**02 00 30.6**	**+0.5**
RRL				S	**Sg**	**02 00 33.6**	**+0.5**
RRL	**Cesana Torines**	**0.21**	**131**	P	**Pg**	**02 00 30.5**	**+0.5**
GDM	**Grand'Maison**	**0.34**	**295**	Pg	**Pg**	**02 00 33.6**	**+1.1**
GDM				Sg	**Sg**	**02 00 38.6**	**+1.3**
FENE	**Fenestrelle**	**0.36**	**94**	P	**Pg**	**02 00 33.0**	**+0.2**
FENE				S	**Sg**	**02 00 37.9**	**+0.1**
FENE	**Fenestrelle**	**0.36**	**94**	P	**Pg**	**02 00 33.0**	**+0.2**
MBDF	**Montbardon**	**0.36**	**155**	*e*Pg	**Pg**	**02 00 32.8**	**-0.1**
MBDF				*e*Sg	**Sg**	**02 00 38.0**	**+0.1**
	50nm,0.3s						
LPG	**La Plagne**	**0.46**	**17**	*e*Pg	**Pg**	**02 00 35.6**	**+0.8**
LPG				*e*Sg	**Sg**	**02 00 41.7**	**+0.7**
	39nm,0.2s						
LPL	**La Plagne**	**0.47**	**15**	*e*Pg	**Pg**	**02 00 35.9**	**+0.9**
LPL				*e*Sg	**Sg**	**02 00 42.6**	**+1.1**
	29nm,0.2s						
ORIF	**Oris-en-Rattie**	**0.50**	**254**	*e*Pg	**Pg**	**02 00 36.2**	**+0.6**
ORIF				*e*Sg	**Sg**	**02 00 41.7**	**-0.7**
	46nm,0.2s						
RSP	**Reno Superiore**	**0.50**	**79**	P	**Pg**	**02 00 36.1**	**+0.4**
RSP				S	**Sg**	**02 00 42.5**	**+0.1**
RSP	**Reno Superiore**	**0.50**	**79**	P	**Pg**	**02 00 36.1**	**+0.5**
RSP				S	**Sg**	**02 00 42.5**	**0.0**
BHB	**Bricherasio**	**0.55**	**113**	P	**Pg**	**02 00 36.5**	**0.0**
BHB				S	**Sg**	**02 00 43.6**	**-0.3**
BHB	**Bricherasio**	**0.55**	**113**	P	**Pg**	**02 00 36.5**	**0.0**
LSD	**Ceresole Reale**	**0.58**	**46**	P	**Pg**	**02 00 37.4**	**+0.2**
LSD				S	**Sg**	**02 00 45.0**	**+0.1**
LSD	**Ceresole Reale**	**0.58**	**46**	P	**Pg**	**02 00 37.4**	**+0.3**
LSD				S	**Sg**	**02 00 45.0**	**0.0**
GRN	**Grenoble**	**0.60**	**288**	Pg	**Pg**	**02 00 38.9**	**+1.3**
GRN				Sg	**Sg**	**02 00 47.7**	**+2.0**
SURF	**Saint Ours**	**0.61**	**162**	Pg	**Pg**	**02 00 37.5**	**-0.1**
SURF				Sg	**Sg**	**02 00 46.4**	**+0.6**
TRAV		**0.95**	**61**	P	**Pb**	**02 00 43.9**	**+0.3**
TRAV				S	**Sb**	**02 00 56.0**	**0.0**
TRAV		**0.95**	**61**	P	**Pb**	**02 00 43.9**	**+0.3**
TRAV				S	**Sb**	**02 00 56.0**	**0.0**
STV2	**Anna di Valdie**	**0.98**	**146**	P	**Pb**	**02 00 44.0**	**0.0**
STV2				S	**Sb**	**02 00 56.2**	**-0.5**
STV2	**Anna di Valdie**	**0.98**	**146**	P	**Pb**	**02 00 44.0**	**0.0**
STV2				S	**Sb**	**02 00 56.2**	**-0.6**
STV	**Sta Anna Valdi**	**0.98**	**146**	P	**Pb**	**02 00 44.0**	**0.0**
STV				S	**Sb**	**02 00 56.3**	**-0.5**
STV	**Sta Anna Valdi**	**0.98**	**146**	P	**Pb**	**02 00 44.0**	**0.0**
STV				S	**Sb**	**02 00 56.3**	**-0.5**
ENR	**Entracque**	**1.03**	**143**	P	**Pb**	**02 00 45.0**	**0.0**
ENR				S	**Sb**	**02 00 57.8**	**-0.6**
ENR	**Entracque**	**1.03**	**143**	P	**Pb**	**02 00 45.0**	**+0.1**
ENR				S	**Sb**	**02 00 57.8**	**-0.6**
TOUF	**Mont Tournerai**	**1.16**	**154**	Pg	**Pg**	**02 00 47.9**	**-0.6**
ORX	**Oropa**	**1.16**	**60**	P	**Pb**	**02 00 47.1**	**0.0**
ORX				S	**Sb**	**02 01 01.5**	**-0.4**
ORX	**Oropa**	**1.16**	**60**	P	**Pb**	**02 00 47.1**	**+0.1**
ORX				S	**Sb**	**02 01 01.5**	**-0.4**
ROB	**Roburent**	**1.21**	**129**	P	**Pb**	**02 00 48.2**	**+0.3**
ROB				S	**Sb**	**02 01 03.2**	**-0.2**
ROB	**Roburent**	**1.21**	**129**	P	**Pb**	**02 00 48.2**	**+0.3**
ROB				S	**Sb**	**02 01 03.2**	**-0.2**
AUTN	**L'Aution**	**1.23**	**149**	Pg	**Pg**	**02 00 48.8**	**-1.3**
MVIF	**Mont Vial**	**1.24**	**160**	Pg	**Pg**	**02 00 52.4**	**+2.2**
SAOF	**Saorge**	**1.29**	**146**	Pg	**Pg**	**02 00 50.4**	**-0.8**
SMRF	**Simiane la Rot**	**1.29**	**213**	*e*Pn	**Pn**	**02 00 51.5**	**+2.0**
SMRF				*e*Pg	**Pg**	**02 00 52.7**	**+1.5**
SMRF				*e*Sg	**Sg**	**02 01 09.3**	**+0.8**
	8.2nm,0.2s						
MONE	**Monesi**	**1.30**	**138**	P	**Pb**	**02 00 49.0**	**-0.5**
MONE	**Monesi**	**1.30**	**138**	P	**Pb**	**02 00 49.0**	**-0.5**
CALN	**Calern**	**1.33**	**170**	Pg	**Pg**	**02 00 51.3**	**-0.7**
SBF	**Sospel**	**1.35**	**152**	*e*Pn	**Pn**	**02 00 52.3**	**+1.9**
SBF				*e*Pg	**Pg**	**02 00 54.2**	**+1.8**
SBF				*e*Sg	**Sg**	**02 01 10.6**	**+0.1**
	14nm,0.3s						
VIVF	**Saint-Julien-l**	**1.35**	**262**	*e*Pg	**Pg**	**02 00 52.9**	**+0.4**
VIVF				*e*Sg	**Sg**	**02 01 10.3**	**-0.3**
	9.6nm,0.3s						
FIN	**Finale Ligure**	**1.45**	**125**	P	**Pn**	**02 00 50.7**	**-1.2**
FIN	**Finale Ligure**	**1.45**	**125**	P	**Pn**	**02 00 50.7**	**-1.1**
NEGI	**Negi**	**1.46**	**145**	P	**Pn**	**02 00 50.8**	**-1.1**
NEGI	**Negi**	**1.46**	**145**	P	**Pn**	**02 00 50.8**	**-1.2**
IMI	**Imperia**	**1.49**	**140**	P	**Pn**	**02 00 51.2**	**-1.2**
IMI	**Imperia**	**1.49**	**140**	P	**Pn**	**02 00 51.2**	**-1.2**
FRF	**La Foret Royal**	**1.50**	**178**	*e*Pn	**Pn**	**02 00 54.1**	**+1.6**
FRF				*e*Pg	**Pg**	**02 00 55.0**	**-0.4**
FRF				*e*Sg	**Sg**	**02 01 14.4**	**-1.0**
	12nm,0.3s						
PCP	**Pian Castagno**	**1.51**	**109**	P	**Pn**	**02 00 52.5**	**-0.1**
PCP	**Pian Castagno**	**1.51**	**109**	P	**Pn**	**02 00 52.5**	**-0.1**
CABF	**La Chapelle**	**1.59**	**348**	*e*Pg	**Pg**	**02 00 57.4**	**+0.3**
CABF				*e*Sg	**Sg**	**02 01 19.2**	**+0.9**
	8.1nm,0.2s						
LMR	**La Mourre**	**1.73**	**181**	*e*Pn	**Pn**	**02 00 57.8**	**+2.1**
LMR				*e*Sg	**Sg**	**02 01 20.6**	**-2.3**
	5.8nm,0.3s						
LASF	**Ste Croix**	**2.17**	**244**	*e*Pn	**Pn**	**02 01 02.7**	**+0.7**
LASF				*e*Pg	**Pg**	**02 01 08.1**	**-0.6**
LASF				*e*Sn	**Sn**	**02 01 28.7**	**-0.4**
	2.2nm,0.2s						
SMF	**Signal de Mont**	**2.47**	**311**	*e*Pn	**Pn**	**02 01 07.6**	**+1.2**
SMF				*e*Pg	**Pg**	**02 01 13.2**	**-1.6**
SMF				*e*Sg	**Sg**	**02 01 44.6**	**-3.2**
	5.0nm,0.3s						
HINF	**Hinteralfeld**	**2.77**	**4**	*e*Sg	**Sg**	**02 01 54.4**	**-3.1**
	2.2nm,0.3s						
AVF	**Avril sur Loir**	**2.83**	**309**	*e*Pn	**Pn**	**02 01 12.8**	**+1.3**
AVF				*e*Pg	**Pg**	**02 01 20.1**	**-1.8**
AVF				*e*Sn	**Sn**	**02 01 44.5**	**-1.5**
AVF				*e*Sg	**Sg**	**02 01 55.2**	**-4.4**
	1.9nm,0.3s						
LOR	**Lormes**	**2.90**	**321**	*e*Pn	**Pn**	**02 01 13.5**	**+1.0**
LOR				*e*Pg	**Pg**	**02 01 21.3**	**-2.0**
LOR				*e*Sg	**Sg**	**02 01 57.5**	**-4.4**
	2.1nm,0.4s						
SSF	**Saint Saulge**	**2.92**	**314**	*e*Pn	**Pn**	**02 01 13.1**	**+0.3**
SSF				*e*Pg	**Pg**	**02 01 21.5**	**-2.2**
SSF				*e*Sg	**Sg**	**02 01 59.1**	**-3.5**
	1.9nm,0.3s						
SSF	**Saint Saulge**	**2.92**	**314**	*e*Pg	**Pg**	**02 01 21.5**	**-2.2**
SSF				*e*Sg	**Sg**	**02 01 59.1**	**-3.5**
	0.9nm,0.3s						
HAU	**Haudompre**	**2.95**	**357**	*e*Pg	**Pg**	**02 01 22.1**	**-2.2**
HAU				*e*Sg	**Sg**	**02 01 59.9**	**-3.8**
	3.1nm,0.2s						
BGF	**Bois d'Agland**	**3.00**	**301**	*e*Pn	**Pn**	**02 01 15.5**	**+1.6**
BGF				*e*Pg	**Pg**	**02 01 23.0**	**-2.3**
BGF				*e*Sg	**Sg**	**02 02 01.8**	**-3.4**
	5.7nm,0.4s						
PGF	**Pioggiola**	**3.07**	**144**	*e*Pn	**Pn**	**02 01 15.5**	**+0.6**
PGF				*e*Sn	**Sn**	**02 01 50.5**	**-1.6**
	1.2nm,0.3s						
CAF	**Calviac**	**3.19**	**269**	*e*Pn	**Pn**	**02 01 17.8**	**+1.2**
CAF				*e*Pg	**Pg**	**02 01 26.2**	**-2.9**
TCF	**Toulx Ste Croi**	**3.29**	**294**	*e*Pn	**Pn**	**02 01 19.1**	**+1.1**
HYF	**Humbligny**	**3.51**	**310**	*e*Pn	**Pn**	**02 01 21.6**	**+0.5**
RJF	**Les Rejaudoux**	**3.57**	**276**	*e*Pg	**Pg**	**02 01 33.7**	**-3.1**
MEZF	**Maizieres J'vi**	**3.60**	**344**	*e*Pg	**Pg**	**02 01 33.8**	**-3.4**

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*IDC **04** 02:04:16.9±8.0, 23.48S×179.86E, h508^{km}±96^{km}, mb3.1/4, mb1 3.5/5, mb1mx3.3/13, mbtmp4.1/5, Error ellipse: s-maj=52.2km s-min=31.1km az=9.0*
*NEIC **04** 02:04:19.1±3.0, 23.70S×179.95E, h542^{km}±33^{km}, mb3.8/1, Error ellipse: s-maj=29.0km s-min=23.3km az=50.0*
ISC 04 02:04:18.2±3.6**, 23.6S**±0.1×**179.9E**±0.2**, h541**^{km}±43^{km}**, n11, σ1^{s}06**/11**, mb3.7**/5**, 2C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.84**	**189**	P	**P**	**02 07 24.3**	**-1.6**
	3.8nm,0.3s,baz=37,slow=3.2,SNR=14						
URZ				S	**S**	**02 09 59.4**	**+2.1**
	0.8nm,0.3s,baz=88,slow=22,SNR=5.8						
RPZ	**Rata Peaks**	**21.38**	**198**	P	**P**	**02 08 29.0**	**+0.8**
	6.3nm,0.7s,mb4.4,baz=72,slow=6.4,SNR=3.0						
CTAO	**Charters Tower**	**31.37**	**270**	*e*P	**P**	**02 09 57.0**	**+0.7**
	0.9nm,0.3s,mb3.8						
WRA	**Warramunga Arr**	**42.33**	**266**	P	**P**	**02 11 25.8**	**-0.5**
	1.5nm,0.5s,mb3.8,baz=103,slow=8.3,SNR=7.6						
NVAR	**Mina Array Bea**	**84.58**	**44**	P	**P**	**02 15 56.0**	**+0.4**
	0.3nm,0.5s,mb3.0,baz=221,slow=8.3,SNR=2.6						
SNAA	**Sanae**	**85.00**	**179**	⇑*i*	**P**	**02 15 55.6**	**-1.2**
VNA3	**Neumayer Olymp**	**85.22**	**177**		**P**	**02 15 56.5**	**-1.3**
VNA2	**Neumayer--Watz**	**85.63**	**178**	⇑*i*	**P**	**02 15 59.6**	**-0.2**
VNA1	**Neumayer--Stat**	**85.87**	**177**		**P**	**02 16 01.2**	**+0.2**
TXAR	**Lajitas Array**	**90.34**	**58**	P	**P**	**02 16 24.1**	**+1.2**
	0.5nm,0.7s,mb3.5,baz=217,slow=6.1,SNR=7.9						
AKASG	**Malin Array Be**	**144.63**	**327**	PKP	PKPdf	02 22 53.2	+0.6
	0.4nm,0.3s,baz=42,slow=3.9,SNR=6.6						

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*NDI **04** 02:22:45.9±4.9, 34.85N×72.86E, h10^{km}, ML3.6, mb3.4(NEIC)*
*MOS **04** 02:22:46.8±1.2, 34.50N×73.21E, h10^{km}, mb4.3/8, Error ellipse: s-maj=18.3km s-min=6.9km az=98.5*
*IDC **04** 02:22:47.8±1.0, 34.60N×73.25E, mb4.0/7, mb1 4.1/10, mb1mx3.9/21, mbtmp4.0/10, ML3.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.5/26, Error ellipse: s-maj=30.6km s-min=20.4km az=76.0*
*NEIC **04** 02:22:48.9±0.6, 34.51N×73.19E, h10^{km}, mb3.4/6, Error ellipse: s-maj=15.0km s-min=5.4km az=54.0*
*NNC **04** 02:22:59.6±1.8, 35.07N×72.37E, h39^{km}±14^{km}, mpv4.0, Error ellipse: s-maj=16.7km s-min=15.0km az=89.0*
ISC 04 02:22:49.7±1.8**, 34.62N**±0.04×**73.36E**±0.09**, h26**^{km}±15^{km}**, n60, σ1^{s}21**/80**, mb3.9**/8**, MS2.9**/1**, 7C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	**Jammu**	**2.29**	**145**	*e*S	**Sn**	**02 24 04.0**	**+10**
THN	**Thein Dam**	**2.94**	**137**	*e*x	x	02 23 31.4	
THN				*e*S	**Sn**	**02 24 21.2**	**+11**
DLH	**Dalhousie**	**3.01**	**133**	*e*P	**Pn**	**02 23 41.0**	**+4.2**
DLH				*e*S	**Sn**	**02 24 20.0**	**+7.6**
BHK	**Bhakra**	**4.10**	**140**	*e*P	**Pn**	**02 24 12.6**	**+20**
BHK				*e*S	Sn	02 25 02.4	+22
SDNR	**Sundarnagar**	**4.34**	**135**	*e*P	**Pn**	**02 23 59.4**	**+3.6**
SDNR				*e*S	**Sn**	**02 24 50.2**	**+3.9**
SMLA	**Simla**	**4.73**	**136**	*e*P	**Pn**	**02 24 03.3**	**+2.0**
SMLA				*e*S	**Sn**	**02 24 58.8**	**+2.8**
KLP	**Kalpa**	**5.13**	**125**	*e*P	**Pn**	**02 24 07.1**	**+0.2**
KLP				*e*S	**Sn**	**02 25 05.7**	**-0.3**
DDI	**Dehra Dun**	**5.84**	**136**	*e*P	**Pn**	**02 24 17.0**	**+0.1**
DDI				*e*S	**Sn**	**02 25 29.0**	**+5.2**
NDI	**New Delhi**	**6.77**	**150**	*e*P	**Pn**	**02 24 30.0**	**0.0**
NDI				*e*S	**Sn**	**02 25 45.0**	**-2.1**
KALG	**Kalgarh**	**6.85**	**137**	*e*S	**Sn**	**02 25 50.9**	**+1.8**
KALG				AML	AML	02 26 27.1	
	comp=E,129nm,0.5s						
KHET	**Khetri**	**6.85**	**162**	*e*P	**Pn**	**02 24 31.6**	**+0.4**
KHET				*e*S	**Sn**	**02 25 44.6**	**-4.5**
KHET				AML	AML	02 25 52.0	
	comp=N,34nm,0.2s						
KHET				AML	AML	02 25 52.0	
	comp=E,40nm,0.3s						
KUDL	**Kundal**	**6.99**	**157**	*e*P	**Pn**	**02 24 33.6**	**+0.5**
KUDL				*e*S	**Sn**	**02 25 51.4**	**-1.1**
SONA	**Sohna**	**7.10**	**152**	*e*P	**Pn**	**02 24 35.5**	**+0.8**
SONA				*e*S	**Sn**	**02 25 54.3**	**-1.1**
SONA				AML	AML	02 26 03.4	
	comp=E,57nm,0.6s						
SONA				AML	AML	02 26 04.0	
	comp=N,26nm,0.6s						
AAK	**Ala-Archa**	**8.05**	**6**	⇑Pn	**P**	**02 24 49.8**	**+1.9**
	comp=N,5.9nm,0.9s						
AAK				⇑Sn	**Sn**	**02 26 17.0**	**-2.1**
	comp=N,13nm,1.1s						
AAK	**Ala-Archa**	**8.05**	**6**	⇑Pn	**P**	**02 24 49.8**	**+1.9**
	comp=N,5.9nm,0.9s						
AAK				Sn	**Sn**	**02 26 17.0**	**-2.1**
AAK	**Ala-Archa**	**8.05**	**6**	⇑P	**P**	**02 24 49.8**	**+1.8**
AAK						02 26 17.0	
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KK31	**Karatay Array**	**8.76**	**346**	Pn	**P**	**02 24 57.7**	**-0.1**
	comp=Z,5.7nm,0.4s,baz=155,slow=11,SNR=115						
KK31				⇓Sn	**Sn**	**02 26 31.0**	**-5.6**
	comp=Z,1.7nm,0.3s,baz=145,slow=25,SNR=7.3						
KK31	**Karatay Array**	**8.76**	**346**	P	**P**	**02 24 57.7**	**-0.1**
KK31						02 26 31.0	
KK31				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KOLN	**Koldanda**	**11.11**	**125**	*e*Pn	**P**	**02 25 29.8**	**-0.3**
KOLN				*e*Sn	**S**	**02 27 29.4**	**-5.1**
	comp=Z,51nm,0.7s						
GKN	**Gorkha**	**11.68**	**121**	*e*Pn	**P**	**02 25 36.6**	**-1.2**
GKN				*e*Sn	**S**	**02 27 41.2**	**-7.2**
	comp=Z,39nm,0.3s						
DMN	**Daman**	**12.25**	**122**	*e*Pn	**P**	**02 25 44.3**	**-1.2**
DMN				*e*Sn	**S**	**02 27 56.3**	**-5.9**
	comp=Z,44nm,0.6s						
KKN	**Kakani**	**12.26**	**120**	*e*Pn	**P**	**02 25 43.0**	**-2.7**
KKN				*e*Sn	**S**	**02 27 55.5**	**-7.0**
	comp=Z,47nm,0.7s						
PKI	**Pulchoki**	**12.48**	**121**	*e*Pn	**P**	**02 25 48.0**	**-0.6**
PKI				*e*Sn	**S**	**02 28 01.6**	**-6.3**
	comp=Z,49nm,0.6s						
GUN	**Gumba**	**12.62**	**119**	*e*Pn	**P**	**02 25 50.3**	**-0.2**
JIRN	**Jiri**	**12.99**	**119**	*e*Pn	**P**	**02 25 54.3**	**-1.1**
JIRN				*e*Sn	**S**	**02 28 11.9**	**-8.1**
	comp=Z,57nm,0.6s						
MKAR	**Makanchi Array**	**13.91**	**26**	Pn	**P**	**02 26 07.5**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=192,slow=8.1,SNR=2.9						
KURK	**Kurchatov**	**16.54**	**12**	*e*P	**P**	**02 26 43.7**	**+2.4**
	comp=Z,2.5nm,1.0s						
KURK	**Kurchatov**	**16.54**	**12**	*e*P	**P**	**02 26 43.7**	**+2.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
AB31	**Akbulak array**	**17.66**	**330**	⇑P	**P**	**02 26 52.8**	**-2.6**
	comp=Z,0.7nm,0.3s						
AB31				⇓S	**S**	**02 29 59.4**	**-10**
	comp=Z,3.8nm,0.9s						
AB31	**Akbulak array**	**17.66**	**330**	⇑P	**P**	**02 26 52.8**	**-2.6**
	comp=Z,0.7nm,0.3s						
AB31				S	**S**	**02 29 59.4**	**-10**
VOSK	**Vostochnaya**	**18.18**	**355**	P	**P**	**02 27 00.7**	**-1.2**
VOSK	**Vostochnaya**	**18.18**	**355**	P	**P**	**02 27 00.7**	**-1.2**
BVA0	**Borovoye Array**	**18.52**	**354**	P	**P**	**02 27 06.6**	**+0.5**
	comp=Z,0.9nm,1.6s,baz=157,slow=9.8,SNR=14						
BVA0	**Borovoye Array**	**18.52**	**354**	P	**P**	**02 27 06.6**	**+0.5**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.6s						
BVAR	**Borovoye Array**	**18.52**	**354**	P	**P**	**02 27 06.6**	**+0.5**
	comp=Z,0.7nm,0.3s,baz=156,slow=9.5,SNR=15						
BVAR	**Borovoye Array**	**18.52**	**354**	P	**P**	**02 27 06.6**	**+0.5**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**18.56**	**354**	*e*P	**P**	**02 27 06.4**	**-0.2**
	comp=Z,1.7nm,0.6s						
BRVK	**Borovoye**	**18.56**	**354**	*e*P	**P**	**02 27 06.4**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHKZ	**Chkalovo**	**19.15**	**355**	⇑P	**P**	**02 27 14.1**	**+0.5**
	comp=Z,3.6nm,1.4s						
AKTO	**Aktyubinsk**	**19.37**	**329**	P	**P**	**02 27 15.2**	**-1.0**
	comp=Z,0.9nm,0.3s,baz=132,slow=10,SNR=22						
AKTO	**Aktyubinsk**	**19.37**	**329**	P	**P**	**02 27 15.2**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	**20.93**	**19**	P	**P**	**02 27 31.8**	**-0.9**
	comp=Z,3.7nm,0.4s,baz=277,slow=4.8,SNR=11						
ZAL				LR	LR	02 36 45.9	
	comp=Z,57nm,20.2s,MS2.9,baz=28,slow=40						
ZAL	**Zalesovo**	**20.93**	**19**	P	**P**	**02 27 31.8**	**-0.9**
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ZAL				MLR	MLR		
	comp=Z,57nm,20.2s						
ARU	**Arti**	**24.05**	**340**	*e*P	**P**	**02 28 04.5**	**+1.1**
	comp=Z,3.0nm,0.6s,mb3.9						
ARU	**Arti**	**24.05**	**340**	*e*P	**P**	**02 28 04.5**	**+1.1**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
FINES	**FINESS Array B**	**40.11**	**327**	P	**P**	**02 30 24.2**	**-0.4**
	comp=Z,3.2nm,1.0s,mb4.0,baz=121,slow=11,SNR=6.8						
FINES	**FINESS Array B**	**40.11**	**327**	P	**P**	**02 30 24.2**	**-0.4**
FINES	**FINESS Array B**	**40.11**	**327**	P	**P**	**02 30 24.2**	**-0.4**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	**ARCESS Array B**	**43.61**	**338**	P	**P**	**02 30 54.0**	**+1.0**
	comp=Z,2.3nm,0.6s,mb4.1,baz=117,slow=8.4,SNR=22						
ARCES	**ARCESS Array B**	**43.61**	**338**	P	**P**	**02 30 54.0**	**+0.9**
ARCES	**ARCESS Array B**	**43.61**	**338**	P	**P**	**02 30 54.0**	**+1.0**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**47.03**	**324**	P	**P**	**02 31 19.5**	**-0.9**
	comp=Z,0.7nm,0.7s,mb3.7,baz=178,slow=12,SNR=2.7						
NOA	**NORSAR Array B**	**47.03**	**324**	P	**P**	**02 31 19.5**	**-0.9**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**75.44**	**10**	P	**P**	**02 34 33.5**	**+1.1**
	comp=Z,0.8nm,0.4s,mb4.0						
INK	**Inuvik**	**75.44**	**10**	P	**P**	**02 34 33.5**	**+1.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ILAR	**Eielson Array**	**76.05**	**17**	P	**P**	**02 34 36.8**	**+0.9**
	comp=Z,0.3nm,0.7s,mb3.3,baz=286,slow=5.2,SNR=4.3						
BOSA	**Boshof**	**77.59**	**222**	P	**P**	**02 34 45.5**	**+0.2**
	comp=Z,2.6nm,0.6s,mb4.3,baz=53,slow=6.5,SNR=7.3						
BOSA	**Boshof**	**77.59**	**222**	P	**P**	**02 34 45.5**	**+0.2**
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
WRA	**Warramunga Arr**	**79.36**	**123**	P	**P**	**02 34 56.3**	**+1.2**
	comp=Z,1.3nm,0.5s,mb4.1,baz=322,slow=5.0,SNR=15						
WRA	**Warramunga Arr**	**79.36**	**123**	P	**P**	**02 34 56.3**	**+1.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

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*ATH **04** 02:23:49.3, 40.15N×19.49E, h17^{km}±5^{km}, MD3.4/6*
*SKO **04** 02:23:49.3, 40.05N×19.56E*
*NEIC **04** 02:23:49.3, 40.15N×19.49E, h17^{km}, MD3.4(ATH), After ATH.*
*CSEM **04** 02:23:50.8±0.3, 40.13N×19.58E, h2^{km}, MD3.4, Error ellipse: s-maj=6.8km s-min=2.9km az=93.0*
*THE **04** 02:23:51.7, 40.03N×19.42E, h21^{km}, ML3.2*
*TIR **04** 02:23:51.8, 40.15N×19.89E, h5^{km}*
ISC 04 02:23:50.7±0.9**, 40.09N**±0.03×**19.58E**±0.07**, h10**^{km}**, n23, σ1^{s}15**/38**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.38**	**123**	*e*Pg	**Pg**	**02 23 57.3**	**-1.2**
SRN				*i* Sg	**Sg**	**02 24 03.9**	**+0.2**
TPE	**Tepelena**	**0.39**	**58**	*i* Pg	**Pg**	**02 23 55.2**	**-3.4**
TPE				*i* Sg	**Sg**	**02 23 59.5**	**-4.4**
KEK	**Kerkira**	**0.41**	**156**	*e*PN	**Pg**	**02 23 59.2**	**+0.1**
KEK				*e*SN	**Sg**	**02 24 06.8**	**+2.1**
LSK	**Leskovik**	**0.78**	**85**	*i* Pg	**Pg**	**02 24 02.7**	**-3.7**
LSK				*i* Sg	**Sg**	**02 24 13.6**	**-3.2**
IGT	**Igoumenitsa**	**0.80**	**134**	*e*Pg	**Pg**	**02 24 06.3**	**-0.5**
IGT				*e*Sg	**Sg**	**02 24 18.8**	**+1.3**
JAN	**Janina**	**1.07**	**114**	*e*PN	**Pn**	**02 24 10.7**	**-0.9**
JAN				*e*SN	**Sn**	**02 24 26.9**	**+0.4**
TIR	**Tirane**	**1.27**	**10**	Pn	**Pn**	**02 24 14.5**	**-0.1**
MEV	**Metsovon**	**1.30**	**103**	*e*Pg	**Pg**	**02 24 14.9**	**-1.8**
MEV				*e*Sg	**Sg**	**02 24 32.5**	**-1.6**
OHR	**Ohrid**	**1.38**	**42**	*e*Pn	**Pn**	**02 24 14.9**	**-1.2**
OHR				*e*Sn	**Sn**	**02 24 37.2**	**+2.8**
FNA	**Florina**	**1.53**	**63**	*e*Pb	**Pb**	**02 24 18.1**	**-0.7**
	comp=Z,3.3nm,0.2s						
FNA				*e*Sb	**Sb**	**02 24 38.8**	**+0.7**
FNA	**Florina**	**1.53**	**63**	*e*Pb	**Pb**	**02 24 18.0**	**-0.7**
	3.3nm,0.2s						
FNA				*e*Sb	**Sb**	**02 24 38.8**	**+0.7**
BIA	**Bitola**	**1.62**	**54**	*e*Pn	**Pn**	**02 24 17.6**	**-1.8**
BIA				*e*Sn	**Sn**	**02 24 40.9**	**+0.4**
KZN	**Kozani**	**1.69**	**82**	*e*PN	**Pn**	**02 24 21.1**	**+0.6**
VLS	**Valsamata**	**2.06**	**157**	*e*PB	**Pb**	**02 24 26.1**	**-1.7**
EVR	**Evrytania**	**2.08**	**124**	*e*PN	**Pn**	**02 24 27.8**	**+1.7**
LIT	**Litokhoron**	**2.23**	**89**	*e*Pn	**Pn**	**02 24 28.3**	**+0.1**
LIT				*e*Sn	**Sn**	**02 24 56.6**	**+0.5**
GRG	**Griva**	**2.32**	**67**	*e*Pn	**Pn**	**02 24 29.5**	**+0.1**
GRG				*e*Sn	**Sn**	**02 24 59.1**	**+0.9**
SKO	**Skopje**	**2.35**	**36**	*e*Pn	**Pn**	**02 24 31.7**	**+1.8**
SKO				*e*Sn	**Sn**	**02 24 58.9**	**-0.1**
VAY	**Valandovo**	**2.58**	**61**	*e*Pn	**Pn**	**02 24 34.6**	**+1.3**
VAY				*e*Sn	**Sn**	**02 25 05.2**	**+0.2**
KNT	**Kendrikon**	**2.74**	**66**	*e*Pn	**Pn**	**02 24 35.4**	**-0.1**
XOR	**Xorichti**	**2.87**	**103**	*e*Pn	**Pn**	**02 24 37.5**	**+0.1**
PLG	**Polygyros**	**2.97**	**83**	*e*PN	**Pn**	**02 24 39.2**	**+0.4**
OUR	**Ouranopolis**	**3.38**	**84**	*e*Pn	**Pn**	**02 24 44.2**	**-0.4**

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*ISK **04** 02:36:56.5, 38.14N×26.66E, h6^{km}, MD3.4*
*ATH **04** 02:36:56.5, 38.12N×26.84E, h42^{km}, MD3.3/3*
*CSEM **04** 02:36:56.7±0.2, 38.15N×26.69E, h6^{km}±1^{km}, MD3.4, Error ellipse: s-maj=2.2km s-min=1.5km az=91.0*

ISC 04 02:36:56.7±0.7**, 38.17N**±0.02×**26.64E**±0.04**, h2**^{km}±5^{km}**, n30, σ0^{s}63**/40**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.20	350	*i* P	Pg	02 37 00.2	-0.5
URLA				*i* S	Sg	02 37 03.2	-0.1
BLCB	Balcova	0.39	55	*i* PG	Pg	02 37 04.4	0.0
SMG	Samos	0.48	161	⇑*i*P	Pg	02 37 07.1	+0.8
SMG				*e*S	Sg	02 37 13.9	+1.2
IZM	Izmir	0.54	64	*i* PG	Pg	02 37 07.5	0.0
IZM				*i* SG	Sg	02 37 15.5	+0.7
KDAG	Bornova	0.55	64	*i* P	Pg	02 37 06.5	-1.1
KDAG				*i* S	Sg	02 37 14.1	-0.9
AYDN	Tasoluk	1.10	117	*i* P	Pb	02 37 19.1	+1.0
AYDN				*i* S	Sb	02 37 33.0	+0.2
PRK	Paraskevi	1.12	345	*e*P	Pb	02 37 18.1	-0.3
AYVA	Ayvalik	1.14	2	*i* P	Pb	02 37 18.8	0.0
AYVA				*i* S	Sb	02 37 36.4	+2.5
AKS	Akhisar	1.17	52	PN	Pn	02 37 19.3	-0.6
BODT	Bodrum	1.22	154	PN	Pn	02 37 19.6	-1.1
MLSB	Milas	1.25	134	PN	Pn	02 37 20.5	-0.6
BDRM	Kayabasi	1.27	149	*i* P	Pb	02 37 21.2	+0.2
BDRM				*i* S	Sb	02 37 38.2	+0.5
APE	Apeiranthos	1.40	219	*e*PN	Pn	02 37 23.0	-0.3
APE				*e*SN	Sn	02 37 42.2	-0.4
APE	Apeiranthos	1.40	219	*e*Pn	Pn	02 37 23.0	-0.3
APE				*e*Sn	Sn	02 37 42.2	-0.4
MANT	Manisa	1.54	77	*i* P	Pn	02 37 25.9	+0.6
MANT				*i* S	Sb	02 37 45.6	-0.1
DAT	Datca	1.62	152	*e*PN	Pn	02 37 26.0	-0.4
YER	Yerkesik	1.66	128	*e*PN	Pn	02 37 26.8	-0.2
EZN	Ezine	1.68	352	*e*PN	Pn	02 37 27.7	+0.5
BALB	Balikesir	1.76	33	*e*PN	Pn	02 37 28.8	+0.3
DENT	Denizli	1.94	101	*e*PN	Pn	02 37 30.4	-0.5
DST	Dursunbey	2.12	47	*e*PN	Pn	02 37 33.7	+0.2
KHL	Karahalli	2.28	85	*e*PN	Pn	02 37 35.4	-0.4
EDC	Edincik	2.38	23	*e*PN	Pn	02 37 37.7	+0.4
KCT	Karacabey	2.49	32	*e*PN	Pn	02 37 38.6	-0.2
MRMT	Marmara Adasi	2.55	17	*e*PN	Pn	02 37 39.8	+0.1
ORLT	Orhaneli	2.57	42	*e*PN	Pn	02 37 39.9	-0.1
MFT	Murefte	2.67	11	*e*PN	Pn	02 37 41.5	+0.1
ALT	Altintas	2.86	71	*e*PN	Pn	02 37 43.7	-0.5
YLV	Yalova	3.20	41	*e*PN	Pn	02 37 49.0	0.0
BCK	Bucak	3.21	101	*e*PN	Pn	02 37 48.6	-0.5

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*IDC **04** 02:39:51.0±3.8, 39.09N×72.79E, mb3.8/2, mb1 3.8/5, mb1mx3.5/21, mbtmp3.7/5, ML3.4/3, Error ellipse: s-maj=53.5km s-min=30.6km az=5.0*

*MOS **04** 02:39:55.8±2.3, 39.41N×72.68E, h33*^{km}*, mb4.0/2, Error ellipse: s-maj=28.5km s-min=13.9km az=96.6*

*NNC **04** 02:39:58.1±6.1, 39.80N×72.08E, mpv3.7, Error ellipse: s-maj=52.8km s-min=30.3km az=4.0*

ISC 04 02:39:54.2±2.1**, 39.2N**±0.1×**72.4E**±0.1**, h61**^{km}±19^{km}**, n25, σ0^{s}96**/28**, mb3.7**/2**, 4C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	3.09	18	P	P	02 40 42.0	+0.2
	SNR=149						
UCH	Uchtor	3.42	27	P	P	02 40 46.3	-0.1
	SNR=26						
EKS2	Erkin-Say	3.61	16	P	P	02 40 49.5	+0.4
	SNR=14						
AAK	Ala-Archa	3.78	24	P	P	02 40 51.7	+0.3
	SNR=67						
AAK	Ala-Archa	3.78	24	⇑Pn	P	02 40 51.5	+0.1
	30nm,0.5s						
AAK				⇓Sn	S	02 41 35.6	+0.6
	46nm,0.5s						
KBK	Karagaybulak	3.95	28	P	P	02 40 54.7	+0.8
	SNR=13						
KK31	Karatay Array	4.16	340	⇓Pn	P	02 40 58.0	+1.2
	3.1nm,0.3s,baz=140,slow=12,SNR=142						
KK31				⇑Sn	S	02 41 44.3	-0.4
	25nm,0.3s,baz=143,slow=23						
KKAR	Karatay Array	4.16	340	PN	P	02 40 58.0	+1.2
KKAR						02 41 47.0	
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KKAR				smax			
	comp=Z,7.0nm,0.3s						
CHMS	Chumysh	4.19	24	P	P	02 40 57.0	-0.2
	SNR=18						
ULHL	Ulahol	4.21	42	P	P	02 40 56.4	-1.1
	SNR=20						
USP	Ospenovka	4.36	20	P	P	02 40 59.4	-0.2
	SNR=12						
TKM2	Tokmak 2	4.43	32	P	P	02 40 60.0	-0.6
	SNR=11						
MKAR	Makanchi Array	10.48	40	Pn	P	02 42 21.1	-2.9
	comp=Z,0.1nm,0.3s,baz=223,slow=14,SNR=6.5						
KURK	Kurchatov	12.32	19	Lg		02 46 13.5	
AB31	Akbulak array	13.44	322	⇑P	P	02 43 02.0	-1.6
	comp=Z,1.2nm,0.4s						
AB31				⇑S	S	02 45 23.4	-8.6
	comp=Z,2.0nm,0.6s						
AB31	Akbulak array	13.44	322	P	P	02 43 02.0	-1.6
AB31				S	S	02 45 26.3	-5.7
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	Borovoye Array	13.90	355	Pn	P	02 43 08.9	-0.6
	comp=Z,0.2nm,0.3s,baz=246,slow=43,SNR=3.3						
AKTO	Aktyubinsk	15.16	323	Pn	P	02 43 32.1	+6.3
	comp=Z,0.6nm,0.3s,baz=118,slow=15,SNR=9.8						
AKTO	Aktyubinsk	15.16	323	P	P	02 43 32.1	+6.2
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	16.98	26	Pn	P	02 43 48.4	-0.4
	comp=Z,0.5nm,0.3s,baz=248,slow=7.6,SNR=6.7						
ZAL	Zalesovo	16.98	26	P	P	02 43 48.4	-0.4
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	Songino Array	25.93	59	P	P	02 45 23.9	+1.6
	comp=Z,0.8nm,0.6s,mb3.4,baz=272,slow=9.1,SNR=5.4						
SONM	Songino Array	25.93	59	P	P	02 45 23.9	+1.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	35.93	324	P	P	02 46 54.3	+4.0
	comp=Z,1.9nm,0.8s,mb4.0,baz=106,slow=14,SNR=4.4						
FINES	FINESS Array B	35.93	324	P	P	02 46 54.3	+4.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						

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*ISK **04** 02:42:51.0, 38.16N×26.52E, h10*^{km}*, MD3.6*

*NEIC **04** 02:42:51.0, 38.16N×26.52E, h11*^{km}*, MD3.6(ISK), MD3.6(ATH), After ISK.*

*ATH **04** 02:42:52.3, 38.14N×26.55E, h27*^{km}*±3*^{km}*, MD3.6/7, ML3.7*

*CSEM **04** 02:42:54.2±0.1, 38.17N×26.76E, h49*^{km}*±2*^{km}*, MD3.6, Error ellipse: s-maj=2.1km s-min=1.5km az=36.0*

*THE **04** 02:42:56.1, 38.26N×26.77E, h20*^{km}*, ML3.4*

ISC 04 02:42:52.2±0.6**, 38.17N**±0.02×**26.61E**±0.03**, h9**^{km}±4^{km}**, n61, σ0^{s}83**/73**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.19	356	*i* P	Pg	02 42 56.5	+0.1
URLA				*i* S	Sg	02 43 00.0	+1.0
BLCB	Balcova	0.40	58	*i* PG	Pg	02 43 00.7	+0.3
SMG	Samos	0.50	159	⇑*i*PB	Pb	02 43 02.7	0.0
SMG				*e*SB	Sb	02 43 10.0	+0.3
IZM	Izmir	0.56	66	*i* PG	Pg	02 43 03.7	+0.2
KDAG	Bornova	0.56	66	*i* P	Pg	02 43 02.9	-0.7
KDAG				*i* S	Sg	02 43 09.9	-1.3
PRK	Paraskevi	1.10	346	*e*PN	Pn	02 43 13.8	0.0
PRK				*e*SN	Sn	02 43 29.5	+0.2
AYDN	Tasoluk	1.12	117	*i* P	Pb	02 43 14.3	+0.8
AYDN				*i* S	Sb	02 43 28.6	+0.6
AYVA	Ayvalik	1.14	3	*i* P	Pb	02 43 14.7	+1.0
AYVA				*i* S	Sb	02 43 32.2	+3.9
AKS	Akhisar	1.18	53	*i* PN	Pn	02 43 14.8	-0.1
AKS				*i* SN	Sn	02 43 32.5	+1.4
BODT	Bodrum	1.24	153	PN	Pn	02 43 15.3	-0.5
MLSB	Milas	1.27	133	PN	Pn	02 43 16.0	-0.2
BDRM	Kayabasi	1.29	149	*i* P	Pb	02 43 18.7	+2.5
BDRM				*i* S	Sb	02 43 33.8	+1.1
APE	Apeiranthos	1.40	218	PN	Pn	02 43 16.1	-1.9
APE				SN	Sn	02 43 34.9	-1.8
APE	Apeiranthos	1.40	218	*e*Pn	Pn	02 43 17.2	-0.8
APE				*e*Sn	Sn	02 43 34.9	-1.8
MANT	Manisa	1.56	78	*i* P	Pn	02 43 22.2	+1.8
MANT				*i* S	Sb	02 43 41.6	+0.9
DAT	Datca	1.63	152	PN	Pn	02 43 20.7	-0.7
EZN	Ezine	1.67	352	PN	Pn	02 43 21.0	-0.9
YER	Yerkesik	1.68	127	PN	Pn	02 43 22.1	0.0
BALB	Balikesir	1.77	34	PN	Pn	02 43 23.1	-0.2
DENT	Denizli	1.96	102	PN	Pn	02 43 26.1	+0.1
LIA	Limnos Island	2.05	328	*e*PB	Pb	02 43 27.6	-1.7
LOS	Limnos	2.12	326	*e*Pn	Pn	02 43 29.1	+0.7
	comp=Z,2.7nm,0.2s						
LOS				*e*Sn	Sn	02 43 54.6	-0.6
DST	Dursunbey	2.13	47	PN	Pn	02 43 28.2	-0.3
DALT	Dalyan (Mudla)	2.13	130	*e*PN	Pn	02 43 28.0	-0.6
LPK	Lapseki	2.20	3	PN	Pn	02 43 28.8	-0.7
ATH	Athens Observa	2.29	266	*e*PN	Pn	02 43 29.6	-1.2
AOS	Alonnisos	2.36	296	*e*Pn	Pn	02 43 33.2	+1.5
AOS	Alonnisos	2.36	296	*e*Pn	Pn	02 43 33.2	+1.4
EDC	Edincik	2.38	24	PN	Pn	02 43 31.8	-0.3
BNT	Bandirma	2.41	25	PN	Pn	02 43 32.2	-0.2
KCT	Karacabey	2.49	32	PN	Pn	02 43 33.2	-0.5
FETY	Fethiye	2.50	127	*e*PN	Pn	02 43 33.2	-0.5
MRMT	Marmara Adasi	2.54	17	*e*PN	Pn	02 43 33.9	-0.5
ORLT	Orhaneli	2.58	43	*e*PN	Pn	02 43 34.7	-0.2
ALT	Altintas	2.88	71	*e*PN	Pn	02 43 39.2	0.0
NEO	Neokhori	2.88	294	*e*PN	Pn	02 43 39.4	+0.2
XOR	Xorichti	2.93	295	*e*Pn	Pn	02 43 40.6	+0.7
OUR	Ouranopolis	2.97	317	*e*Pn	Pn	02 43 40.7	+0.2
ELL	Elmali	2.98	117	*e*PN	Pn	02 43 40.3	-0.4
RDO	Rodhopi	3.08	345	*e*PN	Pn	02 43 41.9	-0.2
ISP	Isparta	3.10	95	*e*PN	Pn	02 43 42.5	+0.2
ISP	Isparta	3.10	95	*e*Pn	Pn	02 43 40.1	-2.2
YLV	Yalova	3.21	41	*e*PN	Pn	02 43 43.6	-0.3
BCK	Bucak	3.23	101	*e*PN	Pn	02 43 44.1	-0.1
CTT	Catalca	3.29	25	*e*PN	Pn	02 43 44.5	-0.5
BADT	Buyukada	3.31	35	*e*PN	Pn	02 43 44.8	-0.4
ISK	Istanbul-Kandi	3.45	32	*e*PN	Pn	02 43 47.1	-0.2
HRT	Hereke	3.55	41	*e*PN	Pn	02 43 48.6	-0.1
KDZ	Kurdzhali	3.59	346	*i* P	Pn	02 43 48.7	-0.6
EDRB	Edirne	3.67	2	*e*PN	Pn	02 43 49.6	-0.9
LIT	Litokhoron	3.74	302	*e*Pn	Pn	02 43 51.7	+0.3
RZN	Rozhen	3.80	338	*i* P	Pn	02 43 49.0	-3.3
MMB	Musomiste	4.07	328	*i* P	Pn	02 43 56.0	-0.1
KNT	Kendrikon	4.14	317	*e*Pn	Pn	02 43 57.7	+0.6
MDU	Mudurnu	4.24	56	*e*PN	Pn	02 43 58.3	-0.3
GRG	Griva	4.28	312	*e*Pn	Pn	02 43 59.8	+0.7
KKB	Krupnik	4.58	325	*i* P	Pn	02 44 03.5	+0.2
FNA	Florina	4.82	304	*e*Pn	Pn	02 44 07.3	+0.6
IGT	Igoumenitsa	5.09	287	*e*Pn	Pn	02 44 12.5	+2.0
VTS	Vitosha	5.12	331	*i* P	Pn	02 44 11.3	+0.3
SRN	Sarande	5.42	290	*i* Pg	Pn	02 44 16.8	+1.5

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*ISK **04** 02:47:52.5, 38.16N×26.58E, h6*^{km}*, MD3.5*

*NEIC **04** 02:47:52.0, 38.14N×26.55E, h5*^{km}*, MD3.5(ISK), MD3.5(ATH), After ISK.*

*ATH **04** 02:47:53.5, 38.14N×26.46E, h21*^{km}*±1*^{km}*, MD3.5/5*

*CSEM **04** 02:47:54.1±0.1, 38.18N×26.64E, h15*^{km}*, MD3.5, Error ellipse: s-maj=2.6km s-min=1.5km az=69.0*

ISC 04 02:47:53.2±0.7**, 38.18N**±0.02×**26.57E**±0.04**, h5**^{km}±5^{km}**, n35, σ0^{s}64**/45**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.18	6	*i* P	Pg	02 47 56.7	-0.2
URLA				*i* S	Sg	02 47 60.0	+0.7
BLCB	Balcova	0.42	61	*i* PG	Pg	02 48 01.5	-0.1
SMG	Samos	0.52	156	⇑*i*PN	Pg	02 48 03.8	+0.3
SMG				*e*SN	Sg	02 48 11.7	+1.3
IZM	Izmir	0.58	68	*i* PG	Pg	02 48 04.6	-0.3
IZM				*i* SG	Sg	02 48 13.1	+0.4
KDAG	Bornova	0.59	68	*i* P	Pg	02 48 03.8	-1.2
KDAG				*i* S	Sg	02 48 11.6	-1.3
PRK	Paraskevi	1.09	348	*e*PN	Pn	02 48 14.6	-0.4
PRK				*e*SN	Sn	02 48 30.3	-0.3
AYVA	Ayvalik	1.13	5	*i* P	Pb	02 48 15.8	+1.0
AYVA				*i* S	Sb	02 48 33.1	+3.5
AYDN	Tasoluk	1.16	116	*i* P	Pb	02 48 15.7	+0.4
AYDN				*i* S	Sb	02 48 30.3	-0.1
AKS	Akhisar	1.20	54	*i* PN	Pn	02 48 15.8	-0.7
BODT	Bodrum	1.26	152	PN	Pn	02 48 16.4	-1.1
MLSB	Milas	1.30	132	PN	Pn	02 48 17.6	-0.4
BDRM	Kayabasi	1.31	148	*i* P	Pb	02 48 19.2	+1.3
BDRM				*i* S	Sb	02 48 35.7	+0.8
APE	Apeiranthos	1.39	217	PN	Pn	02 48 18.7	-0.5
APE				SN	Sn	02 48 37.9	-0.2
APE	Apeiranthos	1.39	217	*e*PN	Pn	02 48 18.2	-1.0
MANT	Manisa	1.59	78	*i* P	Pn	02 48 23.2	+1.0
MANT				*i* S	Sb	02 48 44.0	+0.9
EZN	Ezine	1.65	353	PN	Pn	02 48 23.2	+0.1
YER	Yerkesik	1.71	127	PN	Pn	02 48 23.6	-0.3
BALB	Balikesir	1.78	35	PN	Pn	02 48 25.0	+0.2
DENT	Denizli	1.99	102	PN	Pn	02 48 27.4	-0.5
LIA	Limnos Island	2.03	328	*e*PN	Pn	02 48 28.6	+0.2
DST	Dursunbey	2.14	48	PN	Pn	02 48 30.0	-0.1
KHL	Karahalli	2.33	86	PN	Pn	02 48 32.6	-0.1
EDC	Edincik	2.38	24	PN	Pn	02 48 33.5	0.0
KCT	Karacabey	2.50	33	*e*PN	Pn	02 48 35.5	+0.3
FETY	Fethiye	2.53	127	*e*PN	Pn	02 48 34.7	-0.8
MRMT	Marmara Adasi	2.54	18	*e*PN	Pn	02 48 36.2	+0.4
ORLT	Orhaneli	2.59	43	*e*PN	Pn	02 48 36.6	+0.1
MFT	Murefte	2.66	12	*e*PN	Pn	02 48 37.6	+0.2
ALT	Altintas	2.91	71	*e*PN	Pn	02 48 40.6	-0.4
ELL	Elmali	3.02	117	*e*PN	Pn	02 48 42.1	-0.4
RDO	Rodhopi	3.07	345	*e*PN	Pn	02 48 43.0	-0.3
YLV	Yalova	3.22	41	*e*PN	Pn	02 48 45.4	-0.1
BCK	Bucak	3.26	102	*e*PN	Pn	02 48 45.8	-0.2
BADT	Buyukada	3.31	36	*e*PN	Pn	02 48 46.7	-0.1
EDRB	Edirne	3.66	2	*e*PN	Pn	02 48 51.8	+0.1

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*IDC **04** 02:55:25.3±3.1, 21.17S×169.84E, mb4.0/2, mb1 4.1/3, mb1mx3.9/12, mbtmp4.0/3, ML3.8/1, MS3.2/4, Ms1 3.2/4, ms1mx3.0/21, Error ellipse: s-maj=120.6km s-min=36.4km az=150.0*

*NEIC **04** 02:55:29.2±1.1, 22.12S×170.05E, h35*^{km}*, Error ellipse: s-maj=40.3km s-min=16.9km az=196.0*

ISC 04 02:55:25.7±3.3**, 21.4S**±0.5×**170.2E**±0.2**, h43**^{km}±26^{km}**, n16, σ0^{s}89**/15**, mb3.7**/2**, MS3.0**/2**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.52	257	*e*P	P	02 56 19.1	-0.2
DZM				*e*S	S	02 57 00.3	+0.1
DZM	Mont Dzumac	3.52	257	Pn	P	02 56 19.1	-0.2
	10nm,0.3s,baz=110,slow=20,SNR=206						
DZM				Sn	S	02 57 00.3	0.0
	10nm,0.3s,baz=123,slow=17,SNR=3.9						
DZM	Mont Dzumac	3.52	257	*e*P	P	02 56 19.1	-0.2
DZM				*e*S	S	02 57 00.3	+0.1
NOUC	Port Laguerre	3.66	257	*e*P	P	02 56 21.6	+0.4
NOUC				*e*S	S	02 57 03.0	-0.6
HNR	Honiara	15.39	319	LR	LR	03 04 04.9	
	comp=Z,66nm,20.8s,baz=180,slow=34						
URZ	Urewera	17.90	162	LR	LR	03 04 41.0	
	comp=Z,100nm,20.0s,baz=344,slow=31						
CTA	Charters Tower	22.38	269	LR	LR	03 07 47.6	
	comp=Z,40nm,20.1s,MS2.8,baz=61,slow=34						
STKA	Stephens Creek	27.52	242	P	P	03 01 12.1	+1.6
	1.5nm,0.6s,mb3.8,baz=78,slow=10,SNR=5.0						
STKA				LR	LR	03 10 41.5	
	comp=Z,77nm,21.9s,MS3.2,baz=206,slow=34						
STKA	Stephens Creek	27.52	242	P	P	03 01 12.1	+1.6
STKA				LR	LR	03 10 41.5	
WRA	Warramunga Arr	33.50	266	P	P	03 02 03.0	-0.3
	0.5nm,0.6s,mb3.7,baz=98,slow=8.1,SNR=5.3						
SNAA	Sanae	87.10	182		P	03 08 08.8	+1.2
VNA3	Neumayer Olymp	87.66	180		P	03 08 10.5	+0.3
VNA2	Neumayer--Watz	87.96	181		P	03 08 10.9	-0.8
VNA1	Neumayer--Stat	88.25	181		P	03 08 11.4	-1.7
KHC	Kasperske Hory	146.59	332	*e*PKP	PKPdf	03 15 08.0	+7.1
GERES	GERESS Array B	146.74	331	PKPbc	PKPbc	03 15 08.2	+5.6
	1.5nm,0.9s,baz=18,slow=3.1,SNR=7.4						

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*CNRM **04** 03:54:44.7, 35.54N×4.86W, h1*^{km}*, MD3.3*

*MDD **04** 03:54:46.7±0.7, 34.36N×4.90W, mb3.3/7, Error ellipse: s-maj=8.9km s-min=5.3km az=65.0, PRXIMO*

*CSEM **04** 03:54:47.6±0.3, 34.43N×5.18W, h25*^{km}*, MD3.3, Error ellipse: s-maj=12.0km s-min=6.6km az=87.0*

*NEIC **04** 03:54:48.7, 34.50N×5.13W, MG3.3(MDD), After MDD.*

ISC 04 03:54:46.1±0.6**, 34.42N**±0.03×**4.89W**±0.07**, h10**^{km}**, n17, σ1^{s}47**/32**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TZK	Tazeka	0.67	119	*i* P	Pb	03 54 57.5	-1.9
TZK				*i* S	Sb	03 55 08.0	-0.5
TOU	Touzarine	1.08	60	*e*P	Pb	03 55 04.0	-2.4
TOU				*e*S	Sb	03 55 16.0	-4.3
CZD	Col de Zad	1.39	185	*i* P	Pn	03 55 11.0	-0.6
CZD				*i* S	Sb	03 55 31.0	+1.6
EMIJ	Mijas	2.14	3	P	Pn	03 55 22.1	-0.2
	3.7nm,0.6s,SNR=7.9						
EMIJ				S	Sn	03 55 49.5	+0.4
	3.4nm,0.4s,SNR=7.9						
EQUE	Quentar	3.02	23	P	Pn	03 55 36.9	+2.1
	1.3nm,0.4s,SNR=6.5						
EQUE				S	Sn	03 56 11.8	+0.4
	3.9nm,0.6s,SNR=7.9						
ECOG	Cogollos-Vega	3.04	20	P	Pn	03 55 37.2	+1.9
	3.2nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	3.64	337	P	Pn	03 55 43.5	-0.1
	1.4nm,0.5s,SNR=7.9						
EMIN				S	Sn	03 56 23.5	-3.6
	1.7nm,0.5s,SNR=7.9						
EMIN	Mina Concepcio	3.64	337	P	Pn	03 55 43.5	-0.1
	1.4nm,0.5s,SNR=7.9						
EMIN				S	Sn	03 56 23.5	-3.6
	1.7nm,0.5s,SNR=7.9						
EQES	Quesada	3.68	23	P	Pn	03 55 46.8	+2.6
	3.8nm,0.5s,SNR=6.2						
EQES				S	Sn	03 56 28.9	+0.7
	3.5nm,0.6s,SNR=7.9						
EQES	Quesada	3.68	23	P	Pn	03 55 46.8	+2.5
	3.8nm,0.5s,SNR=6.2						
EQES				S	Sn	03 56 28.9	+0.7
	3.5nm,0.6s,SNR=7.9						
EADA	Adamuz	3.75	4	P	Pn	03 55 45.8	+0.7
	1.6nm,0.7s,SNR=7.9						
EADA				S	Sn	03 56 27.9	-1.9
	2.2nm,0.7s,SNR=7.9						
EADA	Adamuz	3.75	4	P	Pn	03 55 45.8	+0.6
	1.6nm,0.7s,SNR=7.9						
EADA				S	Sn	03 56 27.9	-2.0
	2.2nm,0.7s,SNR=7.9						
EGRO	El Granado	3.75	327	P	Pn	03 55 44.5	-0.7
	2.0nm,0.3s,SNR=7.9						
EGRO				S	Sn	03 56 25.3	-4.7
	1.5nm,0.3s,SNR=7.9						
EGRO	El Granado	3.75	327	P	Pn	03 55 44.5	-0.8
	2.0nm,0.3s,SNR=7.9						
EGRO				S	Sn	03 56 25.3	-4.7
	1.5nm,0.3s,SNR=7.9						
EHUE	Huescar	3.86	28	P	Pn	03 55 48.9	+2.0
	0.5nm,0.3s,SNR=7.9						
EBAD	Badajoz	4.65	339	P	Pn	03 55 56.5	-1.5
	2.4nm,0.5s,SNR=7.9						
EBAD				S	Sn	03 56 47.6	-5.1
	SNR=7.9						
EBAD	Badajoz	4.65	339	P	Pn	03 55 56.5	-1.5
	2.4nm,0.5s,SNR=7.9						
EBAD				S	Sn	03 56 47.6	-5.1
	0.8nm,0.2s,SNR=7.9						

IGQ 04 03:59:31.1, 2.53S×77.14W, h136^{km}±15^{km}**, mb4.0, 2C-5D, Error ellipse: s-maj=11.0km s-min=6.1km az=8.4, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARRY	Arrayan	1.67	308	⇑P	P	04 00 02.5	+0.6
ARRY				S	S	04 00 23.6	-1.8
RUN5	Runtun	1.70	311	P	P	04 00 02.8	+0.5
PISA	Pisayambo	1.92	320	⇑P	P	04 00 05.9	+1.0
TAMB	Tambo	2.20	326	⇓P	P	04 00 09.6	+1.3
TAMB				S	S	04 00 37.1	+0.4
VC1	Cotopaxi 1	2.26	326	⇓P	P	04 00 10.7	+1.5
ANTI	Antisana	2.31	334	⇓P	P	04 00 10.2	+0.5
ANTI				S	S	04 00 37.9	-1.3
CAYR	Refugio Cayamb	2.68	341	P	P	04 00 15.4	+1.0
ANGU	Angureal	2.71	341	⇓P	P	04 00 15.9	+1.0
CAYA	Cayambe	2.72	342	P	P	04 00 16.1	+1.0
GGP	Refugio Guagua	2.76	328	P	P	04 00 15.8	+0.3
TERV	Terraza Guagua	2.76	328	P	P	04 00 16.7	+1.1
PINO	Pino	2.78	328	⇓P	P	04 00 16.9	+1.0
YANA	Yana	2.79	329	P	P	04 00 16.2	+0.2

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*IDC **04** 04:57:15.0±1.6, 24.17S×67.11W, h153*^{km}*±14*^{km}*, mb3.7/8, mb1 3.9/12, mb1mx3.8/17, mbtmp4.1/12, Error ellipse: s-maj=20.0km s-min=10.7km az=86.0*

*NEIC **04** 04:57:17.2±0.7, 24.08S×66.94W, h175*^{km}*±6*^{km}*, mb4.2/22, Error ellipse: s-maj=10.4km s-min=6.7km az=59.0*

*GUC **04** 04:57:18.0±0.8, 24.32S×67.39W, h175*^{km}*±12*^{km}*, ML4.9*

ISC 04 04:57:14.9±0.5**, 24.16S**±0.04×**67.09W**±0.05**, h169**^{km}±5^{km}**, n49, σ1^{s}22**/57**, mb4.0**/23**, 5C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.61	320	⇑*i*P	P	04 57 51.4	+4.0
SPCH				*i* S	S	04 58 17.9	+5.4
SPCH				AMP		04 58 18.7	
	comp=N,2μm,0.5s						
CEN1	Los Morros	2.95	284	⇓*i*P	P	04 58 05.7	+2.6
CEN1				*i* S	S	04 58 41.3	+1.2
CEN1				AMP		04 58 43.8	
	comp=N,3μm,0.4s						
CPN1	Cerro Paranal	3.06	261	⇑*i*P	P	04 58 05.8	+1.4
CPN1				*i* S	S	04 58 41.8	-0.7
CPN1				AMP		04 58 42.7	
	comp=E,3μm,0.3s						
ANCH	Antofagasta	3.08	278	⇑*i*P	P	04 58 06.1	+1.5
ANCH				*i* S	S	04 58 41.9	-0.9
ANCH				AMP		04 58 45.4	
	comp=N,3μm,0.5s						
CRCH	Chaqaral	3.87	235	⇑*i*P	P	04 58 15.0	+0.3
CRCH				*i* S	S	04 58 58.8	-2.0
CRCH				AMP		04 58 59.5	
	comp=E,3μm,0.2s						
CDCH	Caldera	4.45	229	⇑*i*P	P	04 58 21.1	-1.1
CDCH				*i* S	S	04 59 10.3	-4.0
CFAA	Coronel Fontan	7.49	188	P	P	04 59 02.3	0.0
	comp=E,0.1nm,0.3s,baz=39,slow=14,SNR=8.7						
CFAA				S	S	05 00 22.7	-3.4
	comp=E,0.7nm,0.3s,baz=299,slow=18,SNR=12						
CFAA	Coronel Fontan	7.49	188	P	P	04 59 02.3	0.0
CFAA				S	S	05 00 22.7	-3.4
LPAZ	La Paz	7.89	353	P	P	04 59 09.3	+1.7
	comp=E,4.5nm,0.3s,baz=148,slow=5.9,SNR=142						
LPAZ				S	S	05 00 36.7	+1.0
	comp=E,0.9nm,0.3s,baz=127,slow=24,SNR=5.4						
LPAZ	La Paz	7.89	353	*e*Pn	P	04 59 09.2	+1.6
	comp=E,10nm,0.3s						
LPAZ				*e*S	S	05 00 34.6	-1.1
ARE	Arequipa	8.70	331	*e*P	P	04 59 16.0	-2.3
ARE				*e*S	S	05 00 50.0	-4.7
CPUP	Villa Florida	9.10	106	*e*Pn	P	04 59 23.7	+0.2
	comp=E,30nm,0.5s						
SIV	San Ignacio	9.89	36	P	P	04 59 33.5	-0.5
	comp=E,0.7nm,0.3s,baz=243,slow=12,SNR=20						
SIV				S	S	05 01 23.6	+0.6
	comp=E,0.2nm,0.3s,baz=282,slow=19,SNR=2.6						
TRQA	Tornquist	14.53	164	*e*P	P	05 00 32.6	-0.9
	comp=E,15nm,0.6s						
SAML	Samuel	15.58	15	*e*P	P	05 00 45.8	-0.9
	comp=E,6.3nm,0.9s						
PLCA	Paso Flores	16.78	189	P	P	05 01 01.9	+0.6
	comp=E,0.1nm,0.3s,baz=356,slow=14,SNR=2.6						
PLCA	Paso Flores	16.78	189	*e*P	P	05 01 09.1	+7.7
	comp=E,1.9nm,0.6s						
BDFB	Brasilia	19.82	68	P	P	05 01 34.5	+0.2
	comp=E,1.5nm,0.3s,baz=244,slow=10,SNR=26						
BAO	Brasilia Array	19.84	68	P	P	05 01 32.5	-2.1
SDV	Santo Domingo	33.02	354	*e*P	P	05 03 34.3	-2.0
	comp=E,3.1nm,0.7s,mb4.2						
SNAA	Sanae	59.23	161	P	P	05 07 00.3	+0.2
	comp=E,0.5nm,0.8s,mb3.4,baz=285,slow=8.5,SNR=7.3						
SNAA				PcP	PcP	05 07 46.3	0.0
	comp=E,0.3nm,0.4s,baz=259,slow=6.0,SNR=7.1						
SNAA	Sanae	59.23	161	*e*P	P	05 06 59.8	-0.4
	comp=E,0.9nm,0.7s,mb3.7						
JCT	Junction City	62.73	328	*e*P	P	05 07 23.5	-0.8
	comp=E,4.0nm,0.8s,mb4.3						
WVT	Waverly	63.08	341	*e*P	P	05 07 24.5	-2.0

	comp=E,8.5nm,0.9s,mb4.6						
TXAR	**Lajitas Array**	**63.76**	**325**	P	**P**	**05 07 30.7**	**-0.3**
	comp=E,0.4nm,0.5s,mb3.5,baz=152,slow=8.4,SNR=7.2						
WCI	**Wyandotte Cave**	**64.62**	**343**	*e*P	**P**	**05 07 34.1**	**-2.4**
	comp=E,6.4nm,0.6s,mb4.6						
WMOK	**Wichita Mounta**	**65.84**	**332**	*e*P	**P**	**05 07 43.3**	**-1.1**
	comp=E,0.8nm,0.3s,mb4.0						
MNTX	**Cornudas Mount**	**66.53**	**325**	*e*P	**P**	**05 07 47.7**	**-1.1**
	comp=E,2.7nm,0.8s,mb4.1						
ANMO	**Albuquerque**	**69.64**	**326**	*e*P	**P**	**05 08 08.2**	**+0.4**
	comp=E,3.4nm,0.9s,mb4.1						
CBKS	**Cedar Bluff**	**69.71**	**333**	*e*P	**P**	**05 08 08.2**	**-0.1**
	comp=E,11nm,0.7s,mb4.7						
SDCO	**Great Sand Dun**	**71.38**	**329**	*e*P	**P**	**05 08 18.4**	**+0.1**
	comp=E,2.4nm,0.8s,mb4.0						
VNDA	**Vanda**	**74.53**	**190**	*e*P	**P**	**05 08 37.9**	**+1.9**
	comp=E,1.0nm,1.0s,mb3.4						
PDAR	**Pinedale Array**	**77.24**	**329**	P	**P**	**05 08 52.4**	**+0.6**
	comp=E,0.7nm,0.6s,mb3.5,baz=128,slow=6.5,SNR=8.2						
ULM	**Lac du Bonnet**	**78.35**	**342**	P	**P**	**05 08 57.0**	**-0.7**
	comp=E,3.5nm,0.6s,mb4.2,baz=183,slow=5.1,SNR=5.6						
ELK	**Elko**	**78.55**	**325**	*e*P	**P**	**05 08 60.0**	**+1.0**
	comp=E,2.9nm,1.0s,mb3.9						
NVAR	**Mina Array Bea**	**78.61**	**321**	P	**P**	**05 09 00.8**	**+1.5**
	comp=E,0.5nm,0.5s,mb3.4,baz=142,slow=6.8,SNR=6.1						
HLID	**Hailey**	**80.17**	**327**	*e*P	**P**	**05 09 09.1**	**+1.4**
	comp=E,4.4nm,0.9s,mb4.1						
BOSA	**Boshof**	**80.73**	**117**	P	**P**	**05 09 11.6**	**+0.7**
	comp=E,2.4nm,0.5s,mb4.1,baz=315,slow=6.2,SNR=7.1						
BOSA	**Boshof**	**80.73**	**117**	P	**P**	**05 09 11.4**	**+0.5**
	comp=E,2.6nm,0.6s,mb4.0						
MAW	**Mawson**	**81.31**	**163**	P	**P**	**05 09 14.2**	**+1.0**
	comp=E,1.4nm,0.4s,mb3.9,baz=243,slow=4.5,SNR=3.6						
LBTB	**Lobatse**	**82.40**	**114**	*e*P	**P**	**05 09 20.3**	**+0.7**
	comp=E,2.0nm,0.5s,mb4.0						
FCC	**Fort Churchill**	**85.59**	**346**	*e*P	**P**	**05 09 35.2**	**+0.3**
	comp=E,6.7nm,0.5s,mb4.6						
CASY	**Casey**	**89.83**	**179**	*e*P	**P**	**05 09 56.7**	**+1.8**
	comp=E,3.1nm,0.7s,mb4.3						
YKA	**Yellowknife Ar**	**94.24**	**340**	P	**P**	**05 10 15.7**	**+0.5**
	comp=E,1.4nm,0.6s,mb4.3,baz=129,slow=4.8,SNR=12						
YKA	**Yellowknife Ar**	**94.24**	**340**	P	**P**	**05 10 15.7**	**+0.5**
WRA	**Warramunga Arr**	**131.45**	**207**	PKP	PKPdf	05 16 09.6	+1.7
	comp=E,1.3nm,0.5s,baz=158,slow=1.8,SNR=23						
ZAL	**Zalesovo**	**143.57**	**28**	PKP	PKPdf	05 16 29.1	+0.2
	comp=E,2.8nm,0.7s,baz=176,slow=3.7,SNR=14						
MKAR	**Makanchi Array**	**146.70**	**40**	PKP	PKPdf	05 16 36.9	+2.5
	comp=E,6.7nm,0.8s,baz=329,slow=2.3,SNR=38						
MKAR				PKPbc	PKPbc	05 16 38.5	+2.5
	comp=E,6.9nm,0.8s,baz=329,slow=2.3,SNR=39						
SONM	**Songino Array**	**155.81**	**11**	PKPab	PKPab	05 17 17.8	-0.1
	comp=E,0.8nm,0.7s,baz=335,slow=4.7,SNR=4.7						

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*NIED **04** 05:06:00,43.20N×146.00E,h68^{km},Mw4.0 Best double couple: $M_0$1.09×10^{15} NP1:ϕ_s77°,δ89°,λ91°. NP2:ϕ_s214°,δ1°,λ47°.*

*JMA **04** 05:06:15.6±0.1,43.22N×146.01E,h45^{km}±1^{km},M3.6*

ISC 04 05:06:15.7±2.1,**43.20N**±0.08×**146.0E**±0.1,**h42**^{km}±14^{km},**n7**,σ**0^{s}36**/14,**Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.25**	**312**	P	**P**	**05 06 23.6**	**0.0**
NEM2				*e*S	**S**	**05 06 29.3**	**+0.2**
JAK	**Akkeshi**	**0.97**	**258**	P	**P**	**05 06 33.0**	**-0.1**
JAK				*e*S	**S**	**05 06 45.9**	**0.0**
JRA	**Rausu**	**0.98**	**320**	P	**P**	**05 06 33.0**	**-0.1**
JRA				*e*S	**S**	**05 06 45.6**	**-0.4**
JNK	**Nakash**	**1.01**	**293**	P	**P**	**05 06 33.2**	**-0.3**
JNK				*e*S	**S**	**05 06 46.1**	**-0.7**
JOB	**Onbets**	**1.61**	**260**	P	**P**	**05 06 42.1**	**-0.1**
JOB				*e*S	**S**	**05 07 01.8**	**-0.2**
JAR	**Ashorobuto**	**1.63**	**274**	P	**P**	**05 06 42.5**	**0.0**
JAR				*e*S	**S**	**05 07 02.7**	**+0.3**
JTKR	**Abashiri--Toko**	**1.70**	**298**	P	**P**	**05 06 44.0**	**+0.5**
JTKR				*e*S	**S**	**05 07 05.0**	**+0.8**

MEX 04 05:07:12.1±0.7,**17.44N**×**95.21W**,**h128**^{km}±8^{km},**MD3.8**,**Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.47**	**138**	*i* P	P	05 07 29.7	-1.3
CMIG				*i* S	S	05 07 42.9	-2.4
OXX	**Oaxaca**	**1.49**	**256**	*i* P	P	05 07 39.2	-1.2
VHO	**Vista Hermosa**	**1.50**	**256**	*e*P	P	05 07 38.7	-1.8
VHO				*i* S	S	05 07 59.9	-2.2
HUIG	**Huatulco**	**1.87**	**207**	*i* P	P	05 07 42.8	-2.0
HUIG				*i* S	S	05 08 07.6	-2.1

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*IDC **04** 05:27:06.0±4.7,23.66S×179.66W,h364^{km}±53^{km},mb3.6/5, mb1 3.7/6,mb1mx3.5/14,mbtmp4.3/6,Error ellipse: s-maj=32.5km s-min=18.2km az=169.0*

*NEIC **04** 05:27:07.2±3.3,23.73S×179.66W,h382^{km}±39^{km},mb4.4/4, Error ellipse: s-maj=31.3km s-min=13.9km az=169.0*

ISC 04 05:27:10.7±3.6,**23.8S**±0.1×**179.7W**±0.1,**h438**^{km}±45^{km},**n16**,σ**1^{s}17**/16,**mb4.0**/10,**1D**,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.65**	**190**	P	**P**	**05 30 22.4**	**+2.6**
	3.4nm,0.3s,baz=330,slow=1.6,SNR=11						
URZ				S	**S**	**05 32 51.5**	**-0.8**
	0.6nm,0.3s,baz=126,slow=20,SNR=3.7						
RAR	**Rarotonga**	**18.62**	**86**	P	**P**	**05 30 58.0**	**-1.9**
	1.5nm,0.3s,baz=118,slow=20,SNR=3.2						
RPZ	**Rata Peaks**	**21.25**	**199**	P	**P**	**05 31 25.9**	**+0.9**
	8.0nm,0.5s,mb4.4,baz=4.1,slow=13,SNR=6.3						
CTA	**Charters Tower**	**31.73**	**270**	*e*P	**P**	**05 32 59.6**	**+1.3**
	12nm,0.4s,mb4.6						
CTAO	**Charters Tower**	**31.73**	**270**	*e*P	**P**	**05 32 59.3**	**+1.0**
	10nm,0.4s,mb4.5						
PMG	**Port Moresby**	**34.70**	**289**	P	**P**	**05 33 24.6**	**+1.1**
	9.7nm,0.6s,mb4.3,baz=78,slow=9.3,SNR=3.8						
PMG	**Port Moresby**	**34.70**	**289**	*e*P	**P**	**05 33 24.1**	**+0.5**
	12nm,0.7s,mb4.3						
WB2	**Warramunga Arr**	**42.65**	**266**	⇓*i*P	**P**	**05 34 27.9**	**-0.7**
WRAB	**Tennant Creek**	**42.65**	**266**	*e*P	**P**	**05 34 27.7**	**-0.9**
	7.9nm,0.3s,mb4.5						
WRA	**Warramunga Arr**	**42.66**	**266**	P	**P**	**05 34 28.1**	**-0.6**
	6.8nm,0.3s,mb4.4,baz=96,slow=8.4,SNR=173						
KAKA	**Kakadu**	**46.55**	**275**	*e*P	**P**	**05 35 15.7**	**+17**
	4.5nm,0.3s,mb4.3						
FITZ	**Fitzroy Crossi**	**51.08**	**265**	*e*P	**P**	**05 35 33.0**	**-0.3**
	6.7nm,0.8s,mb3.9						
MBWA	**Marble Bar**	**55.63**	**260**	P	**P**	**05 36 04.3**	**-1.6**
	2.5nm,0.5s,mb3.8						
NVAR	**Mina Array Bea**	**84.52**	**44**	P	**P**	**05 38 58.3**	**+1.0**
	0.1nm,0.4s,mb2.9,baz=219,slow=12,SNR=2.5						
TXAR	**Lajitas Array**	**90.18**	**58**	P	**P**	**05 39 25.2**	**+0.9**
	0.4nm,0.7s,mb3.4,baz=222,slow=5.5,SNR=5.0						
BRTR	**Keskin Array B**	**147.73**	**307**	PKPbc	PKPdf	05 46 08.3	+7.0
	0.6nm,0.9s,baz=28,slow=2.7,SNR=4.2						

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*ISK **04** 05:50:07.7,38.07N×26.75E,h4^{km},MD3.5*

*ATH **04** 05:50:07.4,38.09N×26.34E,h13^{km}±1^{km},MD3.3/4*

*NEIC **04** 05:50:07.0,38.05N×26.76E,h5^{km},MD3.5(ISK), MD3.3(ATH),After ISK.*

*CSEM **04** 05:50:08.1±0.1,38.04N×26.70E,h12^{km},MD3.5,Error ellipse: s-maj=3.5km s-min=1.4km az=65.0*

ISC 04 05:50:07.8±0.8,**38.12N**±0.02×**26.66E**±0.04,**h1**^{km}±5^{km},**n41**,σ**1^{s}02**/53,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.24**	**349**	*i* P	**Pg**	**05 50 12.2**	**-0.4**
URLA				*i* S	**Sg**	**05 50 15.6**	**-0.2**
BLCB	**Balcova**	**0.40**	**49**	*i* PG	**Pg**	**05 50 15.8**	**0.0**
SMG	**Samos**	**0.44**	**161**	*e*PB	**Pg**	**05 50 18.2**	**+1.7**
SMG				*e*SB	**Sg**	**05 50 25.7**	**+3.3**
IZM	**Izmir**	**0.55**	**60**	*i* PG	**Pg**	**05 50 18.8**	**0.0**
IZM				*i* SG	**Sg**	**05 50 26.3**	**+0.2**
KDAG	**Bornova**	**0.56**	**60**	*i* P	**Pg**	**05 50 17.9**	**-0.9**
KDAG				*i* S	**Sg**	**05 50 24.9**	**-1.4**
AYDN	**Tasoluk**	**1.07**	**115**	*i* P	**Pb**	**05 50 30.0**	**+1.2**
AYDN				*i* S	**Sb**	**05 50 43.8**	**+0.6**
PRK	**Paraskevi**	**1.16**	**345**	*e*PB	**Pb**	**05 50 29.3**	**-1.0**
PRK				*e*SB	**Sb**	**05 50 45.1**	**-0.6**
AKS	**Akhisar**	**1.18**	**50**	PN	**Pn**	**05 50 30.4**	**-0.9**
BODT	**Bodrum**	**1.18**	**154**	PN	**Pn**	**05 50 29.2**	**-2.1**
BODT				SN	**Sn**	**05 50 45.3**	**-2.9**
AYVA	**Ayvalik**	**1.18**	**1**	*i* P	**Pb**	**05 50 30.3**	**-0.3**
AYVA				*i* S	**Sb**	**05 50 46.8**	**+0.4**
MLSB	**Milas**	**1.21**	**133**	PN	**Pn**	**05 50 29.4**	**-2.4**
BDRM	**Kayabasi**	**1.23**	**149**	*i* P	**Pb**	**05 50 33.2**	**+1.8**
BDRM				*i* S	**Sb**	**05 50 49.3**	**+1.7**
APE	**Apeiranthos**	**1.38**	**221**	*e*PN	**Pn**	**05 50 34.3**	**+0.1**
APE				*e*SN	**Sn**	**05 50 53.7**	**+0.4**
APE	**Apeiranthos**	**1.38**	**221**	*e*Pb	**Pb**	**05 50 30.3**	**-3.7**
APE	**Apeiranthos**	**1.38**	**221**	*e*Pn	**Pn**	**05 50 34.3**	**+0.1**
APE				*e*Sn	**Sn**	**05 50 53.7**	**+0.4**
MANT	**Manisa**	**1.54**	**76**	*i* P	**Pn**	**05 50 37.9**	**+1.4**
MANT				*i* S	**Sb**	**05 50 57.1**	**+0.4**
DAT	**Datca**	**1.57**	**152**	*e*PN	**Pn**	**05 50 35.5**	**-1.4**
YER	**Yerkesik**	**1.63**	**127**	*e*PN	**Pn**	**05 50 36.4**	**-1.3**
EZN	**Ezine**	**1.72**	**352**	*e*PN	**Pn**	**05 50 39.8**	**+0.8**
BALB	**Balikesir**	**1.79**	**32**	*e*PN	**Pn**	**05 50 40.5**	**+0.5**
DENT	**Denizli**	**1.92**	**100**	*e*PN	**Pn**	**05 50 41.2**	**-0.6**
LIA	**Limnos Island**	**2.11**	**328**	*e*PN	**Pn**	**05 50 43.4**	**-1.2**
DST	**Dursunbey**	**2.14**	**46**	*e*PN	**Pn**	**05 50 45.5**	**+0.5**
LPK	**Lapseki**	**2.25**	**2**	*e*PN	**Pn**	**05 50 47.7**	**+1.1**
KHL	**Karahalli**	**2.27**	**84**	*e*PN	**Pn**	**05 50 46.3**	**-0.6**
EDC	**Edincik**	**2.41**	**23**	*e*PN	**Pn**	**05 50 49.5**	**+0.6**
BNT	**Bandirma**	**2.44**	**23**	*e*PN	**Pn**	**05 50 49.4**	**+0.1**
FETY	**Fethiye**	**2.44**	**127**	*e*PN	**Pn**	**05 50 47.9**	**-1.4**
KCT	**Karacabey**	**2.52**	**31**	*e*PN	**Pn**	**05 50 50.8**	**+0.4**
MRMT	**Marmara Adasi**	**2.58**	**16**	*e*PN	**Pn**	**05 50 52.2**	**+0.9**
ORLT	**Orhaneli**	**2.59**	**42**	*e*PN	**Pn**	**05 50 51.6**	**+0.1**
MFT	**Murefte**	**2.70**	**10**	*e*PN	**Pn**	**05 50 54.1**	**+1.0**
ALT	**Altintas**	**2.86**	**70**	*e*PN	**Pn**	**05 50 55.2**	**-0.2**
RDO	**Rodhopi**	**3.14**	**344**	*e*PN	**Pn**	**05 50 58.6**	**-0.7**
BCK	**Bucak**	**3.19**	**101**	*e*PN	**Pn**	**05 50 59.2**	**-0.8**
YLV	**Yalova**	**3.22**	**40**	*e*PN	**Pn**	**05 51 00.7**	**+0.2**
CTT	**Catalca**	**3.32**	**24**	*e*PN	**Pn**	**05 51 02.5**	**+0.7**
BADT	**Buyukada**	**3.33**	**34**	*e*PN	**Pn**	**05 51 02.2**	**+0.3**
ESKT	**Eskisehir**	**3.56**	**66**	*e*PN	**Pn**	**05 51 04.9**	**-0.4**
EDRB	**Edirne**	**3.72**	**1**	*e*PN	**Pn**	**05 51 08.8**	**+1.3**
MDU	**Mudurnu**	**4.24**	**55**	*e*PN	**Pn**	**05 51 15.3**	**+0.4**

MEX 04 05:59:19.7±0.6,**15.79N**×**94.36W**,**h17**^{km}±11^{km},**MD3.9**,**1D**,**Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**1.39**	**339**	⇓*i*P	Pn	05 59 40.9	-3.7
CMIG				*i* S	Sb	05 59 57.4	-4.8
HUIG	**Huatulco**	**1.69**	**270**	*i* P	Pn	05 59 45.2	-3.5
HUIG				*i* S	Sn	06 00 04.4	-5.6
SCX	**San Cristobal**	**1.90**	**60**	*e*P	Pn	05 59 52.0	+0.1
CCIG	**Comitan**	**2.19**	**77**	*e*P	Pn	05 59 52.7	-3.2
CCIG				*i* S	Sn	06 00 17.8	-5.0
OXX	**Oaxaca**	**2.61**	**300**	*e*S	Sn	06 00 30.2	-3.4
VHO	**Vista Hermosa**	**2.62**	**300**	*i* P	Pn	06 00 00.1	-1.9
VHO				*i* S	Sn	06 00 30.4	-3.3

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*ISK **04** 06:39:18.2,38.12N×26.69E,h11^{km},MD3.5*

*ATH **04** 06:39:18.5,38.12N×26.55E,h29^{km}±5^{km},MD3.7/4*

*NEIC **04** 06:39:18.0,38.13N×26.69E,h10^{km},MD3.7(ATH), MD3.5(ISK),After ISK.*

*CSEM **04** 06:39:18.4±0.1,38.13N×26.71E,h12^{km},MD3.5,Error ellipse: s-maj=1.7km s-min=1.3km az=99.0*

ISC 04 06:39:17.2±0.7,**38.13N**±0.02×**26.61E**±0.04,**h2**^{km}±5^{km},**n49**,σ**0^{s}73**/63,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.23**	**358**	*i* P	**Pg**	**06 39 22.2**	**+0.3**
URLA				*i* S	**Sg**	**06 39 25.6**	**+0.6**
BLCB	**Balcova**	**0.43**	**53**	*i* PG	**Pg**	**06 39 26.4**	**+0.6**
BLCB				*i* SG	**Sg**	**06 39 32.0**	**+0.4**
SMG	**Samos**	**0.45**	**156**	*e*PB	**Pb**	**06 39 28.6**	**+1.0**
SMG				*e*SB	**Sb**	**06 39 35.9**	**+1.4**
IZM	**Izmir**	**0.58**	**62**	*i* PG	**Pg**	**06 39 28.9**	**0.0**
IZM				*i* SG	**Sg**	**06 39 37.2**	**+0.5**
KDAG	**Bornova**	**0.59**	**62**	*i* P	**Pg**	**06 39 28.6**	**-0.4**
KDAG				*i* S	**Sg**	**06 39 36.4**	**-0.5**
PRK	**Paraskevi**	**1.15**	**347**	*e*PN	**Pn**	**06 39 40.1**	**-0.1**
PRK				*e*SN	**Sn**	**06 39 56.2**	**-0.5**
BODT	**Bodrum**	**1.20**	**152**	PN	**Pn**	**06 39 41.0**	**+0.1**
BODT				SN	**Sn**	**06 39 57.6**	**-0.3**
AKS	**Akhisar**	**1.21**	**51**	*i* PN	**Pn**	**06 39 40.8**	**-0.3**
MLSB	**Milas**	**1.24**	**131**	PN	**Pn**	**06 39 41.6**	**0.0**
APE	**Apeiranthos**	**1.36**	**219**	PN	**Pn**	**06 39 44.1**	**+0.9**
APE				SN	**Sn**	**06 40 03.2**	**+1.2**
APE	**Apeiranthos**	**1.36**	**219**	*e*PN	**Pn**	**06 39 43.1**	**-0.1**
DAT	**Datca**	**1.59**	**151**	*e*PN	**Pn**	**06 39 47.0**	**+0.4**
YER	**Yerkesik**	**1.66**	**126**	PN	**Pn**	**06 39 47.1**	**-0.4**
EZN	**Ezine**	**1.71**	**353**	PN	**Pn**	**06 39 48.8**	**+0.6**
BALB	**Balikesir**	**1.81**	**33**	PN	**Pn**	**06 39 49.9**	**+0.3**
DENT	**Denizli**	**1.95**	**100**	PN	**Pn**	**06 39 50.9**	**-0.8**
SANT	**Santorini**	**1.98**	**208**	*e*Pg	**Pg**	**06 39 56.2**	**-0.5**
SANT				*e*Sg	**Sg**	**06 40 22.4**	**-0.6**
SANT	**Santorini**	**1.98**	**208**	*e*Pg	**Pg**	**06 39 56.2**	**-0.5**
SANT				*e*Sg	**Sg**	**06 40 22.4**	**-0.6**
LIA	**Limnos Island**	**2.09**	**328**	*e*PN	**Pn**	**06 39 53.4**	**-0.2**
DST	**Dursunbey**	**2.16**	**46**	PN	**Pn**	**06 39 54.5**	**-0.2**
LPK	**Lapseki**	**2.25**	**3**	PN	**Pn**	**06 39 56.5**	**+0.6**
KHL	**Karahalli**	**2.31**	**84**	PN	**Pn**	**06 39 56.4**	**-0.3**
GDZ	**Gediz**	**2.45**	**66**	*i* P	**Pn**	**06 40 03.3**	**+4.5**
GDZ				*i* S	**Sn**	**06 40 33.8**	**+4.2**
BNT	**Bandirma**	**2.45**	**24**	*e*PN	**Pn**	**06 39 59.2**	**+0.4**
FETY	**Fethiye**	**2.47**	**126**	*e*PN	**Pn**	**06 39 58.4**	**-0.7**
MRMT	**Marmara Adasi**	**2.59**	**17**	*e*PN	**Pn**	**06 40 01.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**2.60**	**10**	*e*PN	**Pn**	**06 40 01.8**	**+0.9**
SART	**Tekirdag**	**2.60**	**10**	*i* P	**Pn**	**06 40 03.2**	**+2.3**
SART				*i* S	**Sn**	**06 40 38.7**	**+5.2**
ORLT	**Orhaneli**	**2.62**	**42**	*e*PN	**Pn**	**06 40 00.8**	**-0.4**
MFT	**Murefte**	**2.71**	**11**	*e*PN	**Pn**	**06 40 02.4**	**-0.1**
ULDT	**Uludag**	**2.81**	**44**	*i* P	**Pn**	**06 40 07.2**	**+3.2**
ULDT				*i* S	**Sn**	**06 40 45.3**	**+6.3**
ALT	**Altintas**	**2.90**	**70**	*e*PN	**Pn**	**06 40 04.4**	**-0.8**
ISP	**Isparta**	**3.10**	**94**	*e*Pn	**Pn**	**06 40 06.8**	**-1.2**
RDO	**Rodhopi**	**3.13**	**345**	*e*PN	**Pn**	**06 40 07.9**	**-0.6**
YLV	**Yalova**	**3.25**	**40**	*e*PN	**Pn**	**06 40 10.4**	**+0.2**
BADT	**Buyukada**	**3.34**	**35**	*e*PN	**Pn**	**06 40 11.4**	**-0.2**
ISK	**Istanbul-Kandi**	**3.49**	**32**	*e*PN	**Pn**	**06 40 13.8**	**+0.1**
HRT	**Hereke**	**3.59**	**40**	*e*PN	**Pn**	**06 40 15.2**	**+0.2**
ESKT	**Eskisehir**	**3.59**	**66**	*e*PN	**Pn**	**06 40 14.9**	**-0.2**
EDRB	**Edirne**	**3.72**	**2**	*e*PN	**Pn**	**06 40 17.1**	**+0.2**
MMB	**Musomiste**	**4.11**	**328**	*i* P	**Pn**	**06 40 21.0**	**-1.4**
MDU	**Mudurnu**	**4.27**	**55**	*e*PN	**Pn**	**06 40 24.1**	**-0.6**
KKB	**Krupnik**	**4.61**	**325**	*i* P	**Pn**	**06 40 28.2**	**-1.4**
ANTO	**Ankara**	**5.12**	**68**	*e*Pg	**Pg**	**06 40 54.6**	**-4.9**
	7.4nm,0.7s						
ANTO	**Ankara**	**5.12**	**68**	*e*Pg	**Pg**	**06 40 54.6**	**-4.9**
	7.4nm,0.7s						
VTS	**Vitosha**	**5.16**	**331**	*i* P	**Pn**	**06 40 37.0**	**-0.3**
BR131	**Keskin Array S**	**5.71**	**72**	*e*Pn	**Pn**	**06 40 44.1**	**-0.9**
	1.3nm,0.7s						
BR131				*e*Pg	**Pg**	**06 41 06.1**	**-5.2**
BR131	**Keskin Array S**	**5.71**	**72**	*e*Pn	**Pn**	**06 40 44.2**	**-0.9**
	1.3nm,0.7s						
BR131	**Keskin Array S**	**5.71**	**72**	*e*Pg	**Pg**	**06 41 06.1**	**-5.2**

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*IDC **04** 06:43:59.1±3.1,4.39N×94.69E,mb3.8/4,mb1 3.9/4, mb1mx3.6/18,mbtmp3.8/4,Error ellipse: s-maj=170.8km s-min=27.4km az=52.0*

*NEIC **04** 06:44:03.9±1.2,4.47N×94.80E,h30^{km},mb4.1/1,Error ellipse: s-maj=33.8km s-min=13.3km az=210.0*

ISC 04 06:44:02.1±1.7,**4.5N**±0.3×**94.8E**±0.2,**h30**^{km},**n6**,σ**0^{s}35**/6,**mb3.9**/5,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.85**	**82**	*e*Pn	**Pn**	**06 45 29.1**	**0.0**
MKAR	**Makanchi Array**	**43.49**	**347**	P	**P**	**06 52 04.9**	**+0.4**
	1.3nm,0.7s,mb3.8,baz=168,slow=7.7,SNR=10						
WRA	**Warramunga Arr**	**45.81**	**123**	P	**P**	**06 52 23.4**	**0.0**
	0.3nm,0.4s,mb3.6,baz=301,slow=9.3,SNR=4.7						
BVAR	**Borovoye Array**	**52.37**	**342**	P	**P**	**06 53 13.4**	**-0.2**
	0.8nm,0.6s,mb3.9,baz=140,slow=12,SNR=4.2						
CHKZ	**Chkalovo**	**52.86**	**342**	*e*P	**P**	**06 53 16.8**	**-0.4**
	1.3nm,0.6s,mb4.0						
FINES	**FINESS Array B**	**75.98**	**333**	P	**P**	**06 55 48.0**	**+0.2**
	1.4nm,0.7s,mb4.0,baz=108,slow=4.4,SNR=5.5						

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*NNC **04** 06:47:02.1±3.4,34.90N×71.43E,mpv3.9,Error ellipse: s-maj=1492.5km s-min=36.3km az=85.0*

*NDI **04** 06:47:04.8±4.1,34.54N×74.47E,h10^{km},ML3.1*

ISC 04 06:46:56.8±0.8,**35.10N**±0.07×**74.7E**±0.2,**h33**^{km},**n10**,σ**1^{s}46**/16,**1C**,**Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**2.38**	**175**	*e*S	**S**	**06 48 00.0**	**-2.7**
DLH	**Dalhousie**	**2.77**	**157**	*e*PB	**Pb**	**06 47 46.0**	**+0.4**
DLH				*e*S	**S**	**06 48 15.0**	**+2.4**
THN	**Thein Dam**	**2.80**	**161**	*e*P	**P**	**06 47 42.1**	**+1.8**
THN				*e*SB	**Sb**	**06 48 18.3**	**-1.9**
BHK	**Bhakra**	**3.96**	**158**	*e*S	**S**	**06 48 42.0**	**-0.6**
SMLA	**Simla**	**4.48**	**151**	*e*x	x	06 48 02.9	
SMLA				*e*S	**S**	**06 48 50.7**	**-5.3**
KLP	**Kalpa**	**4.66**	**139**	*e*P	**P**	**06 48 12.5**	**+5.9**
KLP				*e*S	**S**	**06 48 59.0**	**-1.2**
KLP				AML	AML	06 49 04.5	
	comp=E,76nm,0.4s						
KLP				AML	AML	06 49 05.1	
	comp=N,68nm,0.2s						
KHET	**Khetri**	**7.07**	**172**	*e*P	**P**	**06 48 41.3**	**+0.6**
KHET				AML	AML	06 49 48.1	
	comp=N,4.9nm,0.1s						
KHET				*e*S	**S**	**06 49 50.3**	**-10**
KUDL	**Kundal**	**7.11**	**167**	*e*P	**P**	**06 48 42.7**	**+1.6**
SONA	**Sohna**	**7.13**	**163**	*e*P	**P**	**06 48 42.2**	**+0.7**
SONA				*e*S	**S**	**06 49 52.0**	**-10**
SONA				AML	AML	06 49 53.7	
	comp=E,26nm,0.3s						
SONA				AML	AML	06 49 53.8	
	comp=N,11nm,0.4s						
KK31	**Karatay Array**	**8.62**	**339**	P	**P**	**06 49 02.6**	**+0.5**
	comp=N,3.9nm,0.7s,baz=169,slow=13,SNR=23						
KK31				⇑S	**S**	**06 50 37.5**	**-1.7**
	comp=N,2.7nm,0.7s,baz=179,slow=28,SNR=9.7						

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*IDC **04** 07:30:55.0±3.2,24.61S×179.94E,h484^{km}±32^{km},mb3.7/5, mb1 3.8/6,mb1mx3.5/14,mbtmp4.5/6,Error ellipse: s-maj=31.0km s-min=24.8km az=20.0*

*NEIC **04** 07:30:57.9±2.5,24.75S×179.86E,h522^{km}±25^{km},mb4.1/4, Error ellipse: s-maj=25.6km s-min=13.1km az=220.0*

ISC 04 07:30:56.5±3.8,**24.6S**±0.2×**179.8E**±0.2,**h522**^{km}±40^{km},**n16**,σ**0^{s}93**/16,**mb4.1**/7,**3C**,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**13.80**	**189**	P	**P**	**07 33 53.0**	**-1.2**
	1.8nm,0.3s,baz=48,slow=4.1,SNR=6.6						
URZ				S	**S**	**07 36 19.0**	**+1.7**
	0.7nm,0.3s,baz=154,slow=23,SNR=5.8						
RPZ	**Rata Peaks**	**20.37**	**199**	P	**P**	**07 34 57.6**	**-0.4**
	6.9nm,0.6s,baz=51,slow=5.6,SNR=4.4						
CTA	**Charters Tower**	**31.33**	**271**	P	**P**	**07 36 36.4**	**+1.0**
	12nm,0.4s,mb4.8,baz=92,slow=11,SNR=28						
CTAO	**Charters Tower**	**31.33**	**271**	*e*P	**P**	**07 36 36.4**	**+1.0**
	12nm,0.5s,mb4.7						
STKA	**Stephens Creek**	**34.32**	**249**	P	**P**	**07 37 01.3**	**+0.9**
	3.1nm,0.4s,mb4.2,baz=92,slow=11,SNR=19						
WRAB	**Tennant Creek**	**42.20**	**267**	*e*P	**P**	**07 38 04.4**	**-0.3**
	4.8nm,0.4s,mb4.4						
WRA	**Warramunga Arr**	**42.21**	**267**	P	**P**	**07 38 04.8**	**0.0**
	7.2nm,0.5s,mb4.5,baz=104,slow=8.0,SNR=50						
WRA				ScP		07 42 52.7	
	0.8nm,1.1s,baz=100,slow=3.7,SNR=4.5						
VNDA	**Vanda**	**53.66**	**185**	*e*P	**P**	**07 39 30.4**	**+0.1**
MBWA	**Marble Bar**	**55.10**	**261**	P	**P**	**07 39 40.2**	**-0.9**
	1.6nm,0.4s,mb3.6						
CASY	**Casey**	**59.41**	**206**	*e*P	**P**	**07 40 08.7**	**-1.1**
	1.9nm,0.6s,mb3.5						
SNAA	**Sanae**	**83.96**	**179**	⇑*i*	**P**	**07 42 28.3**	**-3.3**
SNAA	**Sanae**	**83.96**	**179**	P	**P**	**07 42 31.2**	**-0.4**
VNA3	**Neumayer Olymp**	**84.18**	**177**	⇑*i*	**P**	**07 42 32.7**	**0.0**
VNA2	**Neumayer--Watz**	**84.59**	**178**	⇑*i*	**P**	**07 42 34.4**	**-0.3**
TXAR	**Lajitas Array**	**90.94**	**58**	P	**P**	**07 43 06.9**	**+1.4**
	0.5nm,0.8s,mb3.5,baz=214,slow=4.5,SNR=5.3						
BRTR	**Keskin Array B**	**147.88**	**306**	PKPbc	PKPdf	07 49 44.2	+5.7
	0.7nm,0.6s,baz=124,slow=5.2,SNR=3.4						

MEX 04 07:32:38.1±1.1,**18.41N**×**102.21W**,**h16**^{km}±16^{km},**MD4.0**,**Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**1.06**	**138**	*i* P	Pb	07 32 54.5	-3.2
ZIIG				*i* S	Sb	07 33 07.8	-3.3
MOIG	**Morelia**	**1.59**	**37**	*i* P	Pn	07 33 03.4	-2.5
MOIG				*i* S	Sn	07 33 20.6	-5.6
SFJM	**Santa Fe**	**2.21**	**339**	*i* P	Pn	07 33 10.5	-4.3
CAIG	**El Cayaco**	**2.29**	**126**	*e*P	Pn	07 33 12.8	-3.1
CAIG				*i* S	Sn	07 33 37.8	-6.2
PLIG	**Platanillo**	**2.57**	**90**	*i* P	Pn	07 33 17.6	-2.3
PLIG				*i* S	Sn	07 33 46.8	-4.2
ACX	**Acapulco**	**2.67**	**125**	*e*P	Pn	07 33 19.0	-2.3
CJM	**Chamela**	**2.90**	**293**	*i* P	Pn	07 33 21.7	-2.9
CJM				*i* S	Sn	07 33 56.5	-2.9
YAIG	**Yautepec**	**3.01**	**81**	*i* P	Pn	07 33 23.3	-2.9
ZAIG	**Zacatecas**	**4.35**	**356**	*i* P	Pn	07 33 41.7	-3.6

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*NNC **04** 07:42:12.4±3.1,35.34N×72.40E,mpv3.3,Error ellipse: s-maj=37.1km s-min=15.9km az=116.0*

*NDI **04** 07:42:17.8±3.1,34.96N×73.86E,h134^{km}±81^{km},ML3.9*

ISC 04 07:42:05.4±0.8,**34.83N**±0.06×**73.2E**±0.1,**h33**^{km},**n10**,σ**0^{s}85**/15,**2C**,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLH	**Dalhousie**	**3.24**	**134**	*e*P	**P**	**07 43 04.0**	**+8.9**
DLH				*e*S	**S**	**07 43 38.0**	**+4.9**
SMLA	**Simla**	**4.97**	**137**	*e*x	x	07 43 18.1	
SMLA				*e*S	**S**	**07 44 17.2**	**+0.5**
KLP	**Kalpa**	**5.36**	**126**	*e*P	**P**	**07 43 29.4**	**+4.3**
KLP				*e*S	**S**	**07 44 26.0**	**-0.5**
KLP				AML	AML	07 45 07.7	
	comp=N,49nm,0.6s						
KLP				AML	AML	07 45 09.2	
	comp=E,67nm,0.5s						
KHET	**Khetri**	**7.09**	**161**	*e*P	**P**	**07 43 59.9**	**+10**
KHET				*e*S	**S**	**07 45 10.4**	**+0.7**
SONA	**Sohna**	**7.34**	**152**	*e*S	**S**	**07 45 15.2**	**-0.9**
AAK	**Ala-Archa**	**7.86**	**7**	Sn	**Sn**	**07 45 29.6**	**+0.5**
KK31	**Karatay Array**	**8.53**	**347**	⇑Pn	**P**	**07 44 10.1**	**+0.7**
	comp=E,0.5nm,0.3s,baz=155,slow=11,SNR=21						
KK31				⇑Sn	**Sn**	**07 45 44.7**	**-1.0**
	comp=E,0.5nm,0.3s,baz=172,slow=24,SNR=9.6						
AGRA	**Agra**	**8.59**	**151**	*e*P	**P**	**07 44 16.8**	**+6.4**
AGRA				*e*S	**S**	**07 45 43.6**	**-3.6**
AGRA				AML	AML	07 45 56.7	
	comp=E,211nm,0.1s						
AGRA				AML	AML	07 45 56.7	
	comp=N,251nm,0.1s						
AB31	**Akbulak array**	**17.42**	**330**	P	**P**	**07 46 07.8**	**+0.5**
	comp=N,0.4nm,0.6s,baz=315,slow=29,SNR=5.1						
AKTO	**Aktyubinsk**	**19.13**	**329**	P	**P**	**07 46 27.8**	**-0.5**

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*OMAN **04** 07:43:10.0,33.86N×46.65E,h35^{km},Error ellipse: s-maj=93.3km s-min=10.6km az=325.0*

*THR **04** 07:43:36.0±1.2,32.69N×48.46E,h36^{km}±8^{km},ML3.6*

*CSEM **04** 07:43:36.5±0.1,32.52N×48.07E,h45^{km},ML3.6,Error ellipse: s-maj=2.7km s-min=1.7km az=111.0*

*TEH **04** 07:43:37.0,32.61N×48.16E,h10^{km},Mn4.1*

*NEIC **04** 07:43:37.0,32.61N×48.16E,h10^{km},ML4.1(TEH),After TEH.*

*IDC **04** 07:43:39.0±11.0,33.48N×48.06E,mb3.6/4,mb1 3.6/5, mb1mx3.5/19,mbtmp3.5/5,MS3.4/1,Ms1 3.4/1, ms1mx2.9/21,Error ellipse: s-maj=215.7km s-min=32.3km az=9.0*

ISC 04 07:43:35.5±0.4,**32.50N**±0.03×**48.15E**±0.04,**h33**^{km},**n51**,σ**1^{s}50**/53,**mb3.5**/4,**MS3.3**/1,**1D**,**Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.68**	**125**	*e*PG	**P**	**07 43 48.9**	**+0.4**
IKOM	**Komasi**	**1.75**	**343**	Pn	**Pn**	**07 44 03.9**	**-0.2**
IVIS	**Veys**	**2.29**	**332**	Pn	**Pn**	**07 44 12.7**	**+0.9**
IPIR	**Pirpir**	**2.33**	**85**	Pn	**Pn**	**07 44 15.0**	**+2.7**
ASAO	**Ashtian**	**2.58**	**37**	*e*Pg	**P**	**07 44 17.4**	**+1.7**
ASAO				*e*Sg	**S**	**07 44 45.5**	**-0.6**

ASAO				AML	AML	07 45 02.0	
	comp=N,436nm,0.6s						
IDHR	**Dehrash**	**2.64**	**327**	Pn	**Pn**	**07 44 18.4**	**+1.6**
SNGE	**Sanandaj**	**2.67**	**346**	*e*PN	**Pn**	**07 44 17.3**	**+0.1**
SNGE				*e*SG	**S**	**07 44 54.8**	**+6.2**
SNGE				AML	AML	07 44 59.1	
	comp=N,199nm,0.7s						
MIB	**Mutribah**	**2.78**	**195**	*e*P	**P**	**07 44 20.4**	**+1.8**
MIB				AML	AML	07 45 04.9	
	comp=Z,332nm,0.5s						
UMR	**Umm Al-Rimmam**	**2.96**	**187**	*e*P	**P**	**07 44 22.5**	**+1.3**
UMR				AML	AML	07 45 08.8	
	comp=Z,280nm,0.4s						
IKLH	**Kalahroud**	**3.00**	**73**	Pn	**Pn**	**07 44 23.7**	**+1.8**
BHD	**Baghdad**	**3.26**	**285**	*e*x	x	07 44 30.0	
BHD				*e*x	x	07 45 02.0	
BHD	**Baghdad**	**3.26**	**285**	*e*Sn	**Sn**	**07 45 02.0**	**-1.7**
NAY	**Al-Naaiem**	**3.33**	**194**	*e*P	**P**	**07 44 27.7**	**+1.2**
NAY				AML	AML	07 45 23.4	
	comp=Z,90nm,0.5s						
IQOM	**Qom**	**3.38**	**45**	Pn	**Pn**	**07 44 28.5**	**+1.3**
IQOM				Sn	**Sn**	**07 45 06.4**	**-0.2**
IZEF	**Zefreh**	**3.55**	**83**	Pn	**Pn**	**07 44 31.7**	**+2.0**
RDF	**Al-Radifah**	**3.60**	**188**	*e*P	**P**	**07 44 31.7**	**+1.4**
RDF				AML	AML	07 45 18.7	
	comp=Z,288nm,0.5s						
QRN	**Al-Qurain**	**3.75**	**183**	*e*P	**P**	**07 44 33.7**	**+1.4**
QRN				AML	AML	07 45 20.4	
	comp=Z,207nm,0.3s						
IMHD	**Mahdasht**	**3.80**	**33**	Pn	**Pn**	**07 44 34.0**	**+0.7**
IMHD				Lg		07 45 32.6	
IVRN	**Varamin**	**3.88**	**49**	Pn	**Pn**	**07 44 35.5**	**+1.0**
IVRN				Lg		07 45 35.0	
IDMV	**Damavand**	**4.45**	**45**	Pn	**Pn**	**07 44 43.0**	**+0.5**
IDMV				Lg		07 45 53.0	
IAFJ	**Afjeh**	**4.46**	**40**	Pn	**Pn**	**07 44 43.3**	**+0.6**
IAFJ				Sn	**Sn**	**07 45 31.9**	**-2.3**
ISAD	**Sadrabad**	**4.73**	**96**	Pn	**Pn**	**07 44 47.7**	**+1.2**
IFIR	**Firoozkooh**	**4.94**	**49**	Pn	**Pn**	**07 44 50.1**	**+0.6**
IFIR				Sn	**Sn**	**07 45 43.3**	**-2.9**
IPAR	**Pars**	**4.97**	**121**	Pn	**Pn**	**07 44 50.2**	**+0.4**
IMOK	**Mook**	**5.22**	**130**	Pn	**Pn**	**07 44 53.4**	**0.0**
ISRV	**Sarvestan**	**5.28**	**125**	Pn	**Pn**	**07 44 53.9**	**-0.3**
ICHK	**Chekchek**	**5.30**	**91**	Pn	**Pn**	**07 44 55.4**	**+0.9**
IMEH	**Mehriz**	**5.61**	**100**	Pn	**Pn**	**07 44 59.2**	**+0.4**
GHIR	**Ghir-Karzin**	**5.93**	**134**	*e*Pn	**Pn**	**07 45 02.3**	**-1.0**
GRMI	**Germi**	**6.30**	**358**	*e*Pn	**Pn**	**07 45 06.5**	**-2.0**
IBAF	**Bafgh**	**6.37**	**96**	Pn	**Pn**	**07 45 09.5**	**0.0**
KRBR	**Kerman**	**7.79**	**107**	*e*Pn	**Pn**	**07 45 27.8**	**-1.7**
BANOM	**Banah**	**9.68**	**131**	P	**P**	**07 45 51.9**	**-3.5**
	SNR=52						
ASHO	**Ashiyiah**	**10.44**	**136**	P	**P**	**07 46 02.7**	**-3.2**
	SNR=24						
ZHSF	**Zahedan**	**11.21**	**102**	*e*Pn	**P**	**07 46 14.1**	**-2.3**
ARQ	**Araqi**	**11.75**	**139**	P	**P**	**07 46 20.6**	**-3.2**
	SNR=41						
BSY	**Bisya**	**12.60**	**138**	P	**P**	**07 46 31.8**	**-3.3**
	SNR=26						
SMDO	**Samad**	**12.85**	**135**	P	**P**	**07 46 35.6**	**-2.9**
	SNR=18						
JMDO	**Jabal Madar**	**13.41**	**136**	⇓P	**P**	**07 46 42.9**	**-2.9**
	SNR=5.5						
BRTR	**Keskin Array B**	**13.76**	**306**	Pn	**P**	**07 46 48.4**	**-1.9**
	baz=104,slow=12,SNR=3.2						
WHFO	**Wadi Hawf**	**15.38**	**159**	P	**P**	**07 47 07.0**	**-4.7**
	SNR=42						
ABTO	**Aybut**	**15.78**	**162**	P	**P**	**07 47 12.7**	**-4.2**
	SNR=23						
RBK	**Rabkut**	**15.90**	**158**	P	**P**	**07 47 13.8**	**-4.6**
	SNR=21						
SHAO	**Shalim**	**15.91**	**153**	P	**P**	**07 47 14.3**	**-4.3**
	SNR=18						
AKASG	**Malin Array Be**	**22.93**	**328**	P	**P**	**07 48 33.4**	**-4.0**
	comp=Z,0.2nm,0.3s,mb3.0,baz=143,slow=9.3,SNR=4.1						
NDI	**New Delhi**	**25.28**	**91**	*e*x	x	07 49 42.0	
BVAR	**Borovoye Array**	**26.02**	**31**	P	**P**	**07 49 06.9**	**-0.2**
	comp=Z,0.6nm,0.6s,mb3.3,baz=202,slow=7.8,SNR=2.9						
MKAR	**Makanchi Array**	**29.65**	**51**	P	**P**	**07 49 41.0**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.5,baz=243,slow=8.1,SNR=6.0						
MKAR	**Makanchi Array**	**29.65**	**51**	P	**P**	**07 49 41.0**	**+1.0**
GERES	**GERESS Array B**	**30.48**	**313**	LR	LR	08 02 39.5	
	comp=Z,66nm,19.0s,MS3.3,baz=28,slow=38						
FINES	**FINESS Array B**	**32.30**	**340**	P	**P**	**07 50 02.4**	**-0.9**
	comp=Z,2.9nm,0.9s,mb4.1,baz=127,slow=6.9,SNR=2.9						

KRSC ***04*** *07:45:21.4±2.7, 49.35N×157.58E, h57^{km}±16^{km}, ML4.7*
MOS ***04*** *07:45:23.8±1.3, 49.82N×157.42E, h13^{km}, mb4.4/13, Error ellipse: s-maj=17.6km s-min=7.3km az=79.8*
IDC ***04*** *07:45:25.4±1.3, 50.08N×157.31E, mb4.0/11, mb1 4.1/14, mb1mx4.0/25, mbtmp4.0/14, ML3.6/3, MS3.5/3, Ms1 3.6/3, ms1mx2.9/31, Error ellipse: s-maj=35.5km s-min=14.1km az=172.0*
NEIC ***04*** *07:45:31.4±1.8, 50.07N×157.24E, h45^{km}±15^{km}, mb4.3/5, Error ellipse: s-maj=19.4km s-min=11.7km az=150.0*
ISC 04 07:45:21.4±1.3**, 49.53N**±0.05×**157.55E**±0.08**, h10**^{km}±9^{km}**, n78,** σ**1**^{s}**14**/88**, mb4.0**/16**, MS3.6**/3**, 1C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.48**	**322**	*i* P	**Pn**	**07 45 48.0**	**-0.3**
SKR				*i* S	**Sb**	**07 46 06.0**	**-1.4**
ALID	**Alaid**	**1.86**	**317**	*e*P	**Pn**	**07 45 54.8**	**+1.1**
PAU	**Pauzhetka**	**2.00**	**347**	*e*P	**Pn**	**07 45 57.6**	**+1.9**
PAU				Smax			
	2µm,1.1s						
MIPR	**Malaya Ipel'ka**	**2.80**	**350**	*e*P	**Pn**	**07 46 08.5**	**+1.4**
RUS	**Russkaya**	**2.97**	**11**	P	**Pn**	**07 46 09.3**	**-0.3**
RUS				S	**Sn**	**07 46 46.4**	**+0.7**
RUS	**Russkaya**	**2.97**	**11**	*e*P	**Pn**	**07 46 09.7**	**+0.1**
RUS				*e*S	**Sn**	**07 46 45.9**	**+0.2**
GRL	**Gorelyy**	**3.04**	**6**	*e*P	**Pn**	**07 46 11.2**	**+0.5**
APC	**Apacha**	**3.41**	**356**	*i* P	**Pn**	**07 46 17.1**	**+1.2**
APC				Smax			
	150nm,0.9s						
PET	**Petropavlovsk**	**3.57**	**11**	P	**Pn**	**07 46 17.8**	**-0.3**
PET				S	**Sn**	**07 47 01.0**	**+0.2**
PET	**Petropavlovsk**	**3.57**	**11**	*e*P	**Pn**	**07 46 17.9**	**-0.2**
PET				*e*S	**Sn**	**07 47 01.4**	**+0.6**
PET	**Petropavlovsk**	**3.57**	**11**	*e*Pn	**Pn**	**07 46 17.7**	**-0.4**
PET				Sn	**Sn**	**07 46 59.5**	**-1.3**
UGLR	**Uglovaya**	**3.77**	**12**	*e*P	**Pn**	**07 46 23.1**	**+2.1**
AVH	**Avacha**	**3.81**	**11**	*e*P	**Pn**	**07 46 22.4**	**+0.8**
NLC	**Nalytchevo**	**3.82**	**16**	P	**Pn**	**07 46 21.1**	**-0.5**
NLC				S	**Sn**	**07 47 07.1**	**0.0**
NLC	**Nalytchevo**	**3.82**	**16**	*e*P	**Pn**	**07 46 21.2**	**-0.4**
SMAR	**Somma**	**3.82**	**11**	*e*P	**Pn**	**07 46 22.9**	**+1.2**
KOK	**Koryaka**	**3.83**	**10**	*e*P	**Pn**	**07 46 23.0**	**+1.2**
SDLR	**Sedlovina**	**3.85**	**12**	*e*P	**Pn**	**07 46 22.0**	**0.0**
SPN	**Mys Shipunski**	**3.90**	**22**	P	**Pn**	**07 46 22.5**	**-0.2**
SPN				S	**Sn**	**07 47 09.5**	**+0.4**
SPN	**Mys Shipunski**	**3.90**	**22**	*e*P	**Pn**	**07 46 23.2**	**+0.5**
GNL	**Ganaly**	**4.18**	**3**	*e*P	**Pn**	**07 46 28.2**	**+1.4**
KII	**Karymskiy**	**4.67**	**14**	*e*P	**Pn**	**07 46 33.2**	**-0.5**
MKZ	**Mys Kozlova**	**5.66**	**25**	P	**Pn**	**07 46 46.1**	**-1.6**
MKZ	**Mys Kozlova**	**5.66**	**25**	*e*P	**Pn**	**07 46 46.5**	**-1.2**
TUMR	**Tumrok**	**5.98**	**14**	*e*P	**Pn**	**07 46 51.6**	**-0.6**
ESO	**Esso**	**6.45**	**6**	*e*P	**Pn**	**07 46 57.6**	**-1.2**
KMNR	**Kamenistaya**	**6.45**	**14**	*e*P	**Pn**	**07 46 59.2**	**+0.4**
KPT	**Kopyto**	**6.65**	**13**	*e*P	**Pn**	**07 47 00.9**	**-0.8**
KOZ	**Kozyrevsk**	**6.69**	**11**	P	**Pn**	**07 47 03.2**	**+0.9**
KOZ				S	**Sn**	**07 48 20.0**	**+0.6**
KOZ	**Kozyrevsk**	**6.69**	**11**	*e*P	**Pn**	**07 47 02.6**	**+0.3**
KOZR	**Kozyr**	**6.70**	**11**	PN	**Pn**	**07 47 03.2**	**+0.8**
KOZR				S	**Sn**	**07 48 20.0**	**+0.4**
ZLN	**Zelenaya**	**6.79**	**16**	*e*P	**Pn**	**07 47 03.1**	**-0.6**
LGNR	**Loginova**	**6.83**	**15**	*e*P	**Pn**	**07 47 03.3**	**-1.0**
CIRR	**Tsirk**	**6.88**	**15**	*e*P	**Pn**	**07 47 04.3**	**-0.6**
SRDR	**Sredinnyy**	**6.92**	**10**	*e*P	**Pn**	**07 47 05.8**	**+0.2**
KRSR	**Krestovskiy**	**6.94**	**14**	*e*P	**Pn**	**07 47 03.5**	**-2.3**
KBTR	**Krutoberegovo**	**7.41**	**23**	P	**Pn**	**07 47 10.8**	**-1.5**
KBTR	**Krutoberegovo**	**7.41**	**23**	*e*P	**Pn**	**07 47 11.2**	**-1.1**
SMKR	**Semkarok**	**7.45**	**17**	*e*P	**Pn**	**07 47 11.4**	**-1.5**
SRKR	**Sorokina**	**7.46**	**16**	*e*P	**Pn**	**07 47 12.9**	**-0.2**
BKI	**Bering**	**7.67**	**39**	*e*S	**Sn**	**07 48 29.4**	**-14**
YSS	**Yuzh-Sakhalins**	**10.20**	**261**	*e*PN	**P**	**07 48 02.8**	**+12**
FX1	**Attu Island--F**	**10.35**	**65**	Pn	**P**	**07 47 52.0**	**-1.0**
	2.3nm,0.3s,baz=201,slow=6.8,SNR=27						
FX1				Sn	**S**	**07 49 36.5**	**-14**
	12nm,0.3s,baz=78,slow=23,SNR=12						
ASAJ	**Asahikawa**	**11.58**	**248**	Pn	**P**	**07 48 13.0**	**+3.2**
	0.3nm,0.3s,baz=243,slow=29,SNR=2.3						
MJAR	**Matsushiro Arr**	**19.12**	**235**	P	**P**	**07 49 52.1**	**+5.1**
	0.4nm,0.3s,baz=12,slow=12,SNR=5.9						
MJAR				LR	LR	07 58 13.3	
	comp=Z,88nm,18.8s,baz=20,slow=40						
TIXI	**Tiksi**	**25.77**	**340**	⇑*i*P	**P**	**07 50 51.6**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.9						
TIXI				MLR	MLR		
	comp=Z,111nm,15.0s,MS3.5						
INK	**Inuvik**	**37.69**	**35**	P	**P**	**07 52 40.1**	**+1.9**
	comp=Z,1.8nm,0.9s,mb3.8,baz=280,slow=5.3,SNR=7.8						
INK	**Inuvik**	**37.69**	**35**	P	**P**	**07 52 39.2**	**+0.9**
	comp=Z,4.7nm,1.1s,mb4.1						
INK	**Inuvik**	**37.69**	**35**	P	**P**	**07 52 39.2**	**+0.9**
INK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURK	**Kurchatov**	**48.31**	**303**	P	**P**	**07 54 03.5**	**-1.0**
	comp=Z,1.9nm,0.5s,mb4.4						
KURK	**Kurchatov**	**48.31**	**303**	P	**P**	**07 54 03.5**	**-1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
MKAR	**Makanchi Array**	**48.31**	**297**	P	**P**	**07 54 05.1**	**+0.5**
	comp=Z,0.7nm,0.3s,mb4.1,baz=54,slow=6.0,SNR=12						
MKAR				LR	LR	08 15 54.8	
	comp=Z,79nm,19.2s,MS3.7,baz=318,slow=38						
MKAR	**Makanchi Array**	**48.31**	**297**	P	**P**	**07 54 05.1**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR				MLR	MLR		
	comp=Z,79nm,19.2s						
CHKZ	**Chkalovo**	**50.92**	**310**	*e*P	**P**	**07 54 23.2**	**-1.2**
	comp=Z,2.1nm,0.5s,mb4.3						
CHKZ	**Chkalovo**	**50.92**	**310**	*e*P	**P**	**07 54 23.2**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
BVAR	**Borovoye Array**	**51.39**	**309**	P	**P**	**07 54 27.6**	**-0.4**
	comp=Z,1.3nm,0.5s,mb4.1,baz=54,slow=7.2,SNR=9.1						
BVAR	**Borovoye Array**	**51.39**	**309**	P	**P**	**07 54 27.6**	**-0.4**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	**Borovoye**	**51.43**	**310**	P	**P**	**07 54 27.9**	**-0.4**
	comp=Z,1.2nm,0.5s,mb4.1						
BRVK	**Borovoye**	**51.43**	**310**	P	**P**	**07 54 27.9**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
ARCES	**ARCESS Array B**	**56.18**	**342**	P	**P**	**07 55 01.2**	**-1.9**
	comp=Z,4.5nm,1.0s,mb4.5,baz=43,slow=8.0,SNR=8.1						
ARCES	**ARCESS Array B**	**56.18**	**342**	P	**P**	**07 55 01.2**	**-1.9**
ARCES	**ARCESS Array B**	**56.18**	**342**	P	**P**	**07 55 01.2**	**-1.9**
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NVAR	**Mina Array Bea**	**58.55**	**66**	LR	LR	08 15 44.2	
	comp=Z,46nm,19.2s,MS3.6,baz=65,slow=31						
PDAR	**Pinedale Array**	**60.72**	**57**	P	**P**	**07 55 37.1**	**+1.9**
	comp=Z,0.1nm,0.6s,mb3.1,baz=342,slow=5.7,SNR=2.2						
FINES	**FINESS Array B**	**62.75**	**336**	P	**P**	**07 55 47.1**	**-1.4**
	comp=Z,1.9nm,1.0s,mb4.2,baz=349,slow=7.1,SNR=3.8						
FINES	**FINESS Array B**	**62.75**	**336**	P	**P**	**07 55 47.1**	**-1.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NB2	**NORSAR Subarra**	**66.50**	**343**	P	**P**	**07 56 12.7**	**-0.1**
	comp=Z,1.2nm,0.5s,mb4.2,baz=24,slow=6.5						
NOA	**NORSAR Array B**	**66.50**	**343**	P	**P**	**07 56 13.1**	**+0.3**
	comp=Z,1.4nm,0.4s,mb4.3,baz=24,slow=6.5,SNR=6.5						
NOA	**NORSAR Array B**	**66.50**	**343**	P	**P**	**07 56 13.1**	**+0.3**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NAO	**NORSAR Subarra**	**66.78**	**343**	P	**P**	**07 56 12.7**	**-1.8**
	comp=Z,1.2nm,0.5s,mb4.2						
AKASG	**Malin Array Be**	**70.83**	**328**	P	**P**	**07 56 39.6**	**-0.1**
	comp=Z,1.3nm,0.4s,mb4.2,baz=30,slow=6.3,SNR=6.5						
AKASG	**Malin Array Be**	**70.83**	**328**	P	**P**	**07 56 39.7**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**73.57**	**64**	P	**P**	**07 56 59.5**	**+3.2**
	comp=Z,0.3nm,0.6s,mb3.4,baz=309,slow=5.5,SNR=4.2						
KHC	**Kasperske Hory**	**76.95**	**337**	*e*P	**P**	**07 57 14.5**	**-0.7**
GERES	**GERESS Array B**	**77.18**	**336**	P	**P**	**07 57 18.5**	**+1.9**
	comp=Z,1.1nm,0.5s,mb4.1,baz=37,slow=6.3,SNR=8.5						
GERES	**GERESS Array B**	**77.18**	**336**	P	**P**	**07 57 18.5**	**+2.0**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**78.32**	**319**	P	**P**	**07 57 25.3**	**+2.3**
	comp=Z,1.5nm,0.9s,mb3.9,baz=56,slow=4.5,SNR=5.5						
BRTR	**Keskin Array B**	**78.32**	**319**	P	**P**	**07 57 25.3**	**+2.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						

IDC ***04*** *07:47:44.6±1.6, 9.90S×118.77E, mb4.1/5, mb1 4.2/7, mb1mx4.1/14, mbtmp4.1/7, ML3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx3.0/14, Error ellipse: s-maj=119.5km s-min=20.3km az=54.0*
NEIC ***04*** *07:47:46.0±0.4, 9.74S×118.99E, h10^{km}, mb4.4/4, Error ellipse: s-maj=21.9km s-min=6.4km az=54.0*
ISC 04 07:47:44.9±0.5**, 10.25S**±0.08×**118.9E**±0.1**, h33**^{km}**, n16,** σ**0**^{s}**73**/19**, mb4.3**/10**, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.15**	**141**	Pn	**P**	**07 50 17.3**	**+5.7**
	1.6nm,0.3s,baz=335,slow=9.3,SNR=16						
FITZ				Sn	**S**	**07 52 06.1**	**+0.8**
	2.5nm,0.3s,baz=187,slow=20,SNR=9.2						
FITZ				LR	LR	07 54 17.9	
	comp=Z,228nm,21.3s,baz=320,slow=37						
MBWA	**Marble Bar**	**10.88**	**176**	*e*Pn	**P**	**07 50 28.9**	**+7.5**
MBWA				*e*Sn	**S**	**07 52 22.7**	**-0.2**
WRA	**Warramunga Arr**	**17.70**	**125**	P	**P**	**07 51 55.3**	**+4.7**
	0.3nm,0.3s,baz=294,slow=12,SNR=11						
WRA				S	**S**	**07 55 03.4**	**-1.0**
	0.3nm,0.3s,baz=302,slow=23,SNR=6.4						
WRAB	**Tennant Creek**	**17.70**	**125**	*e*P	**P**	**07 51 55.4**	**+4.7**
	3.4nm,0.9s						
STKA	**Stephens Creek**	**30.04**	**139**	P	**P**	**07 53 59.5**	**+6.3**
	0.7nm,0.4s,mb3.8,baz=332,slow=15,SNR=3.7						
JIRN	**Jiri**	**49.26**	**321**	*e*P	**P**	**07 56 33.1**	**+0.4**
	7.0nm,0.5s,mb4.9						
GUN	**Gumba**	**49.63**	**321**	*e*P	**P**	**07 56 36.0**	**+0.4**
	17nm,0.8s,mb5.1						
PKI	**Pulchoki**	**49.69**	**320**	*e*P	**P**	**07 56 35.7**	**-0.3**
GKN	**Gorkha**	**50.48**	**320**	*e*P	**P**	**07 56 41.2**	**-0.8**
KOLN	**Koldanda**	**50.99**	**319**	*e*P	**P**	**07 56 45.5**	**-0.4**
	5.4nm,0.7s,mb4.6						
SONM	**Songino Array**	**58.89**	**350**	P	**P**	**07 57 43.3**	**+0.3**
	1.0nm,0.6s,mb4.0,baz=166,slow=9.4,SNR=7.8						
MKAR	**Makanchi Array**	**65.54**	**333**	P	**P**	**07 58 27.6**	**+0.3**
	2.7nm,0.7s,mb4.4,baz=145,slow=7.5,SNR=22						
AAK	**Ala-Archa**	**66.47**	**326**	*e*P	**P**	**07 58 32.6**	**-0.8**
	1.2nm,0.6s,mb4.1						
KURK	**Kurchatov**	**70.09**	**334**	*e*P	**P**	**07 58 55.8**	**+0.1**
	1.4nm,0.3s,mb4.4						
ZAL	**Zalesovo**	**70.18**	**339**	P	**P**	**07 58 55.9**	**-0.3**
	1.6nm,0.5s,mb4.2,baz=6.0,slow=3.7,SNR=4.9						
AKTO	**Aktyubinsk**	**80.21**	**325**	P	**P**	**07 59 54.9**	**+1.1**
	0.7nm,0.5s,mb3.8,baz=126,slow=8.7,SNR=4.0						

ISK ***04*** *07:51:55.8, 38.17N×26.78E, h14^{km}, MD3.0*
ATH ***04*** *07:51:55.5, 38.18N×26.73E, h31^{km}±2^{km}, MD3.1/3*
CSEM ***04*** *07:51:56.6±0.1, 38.20N×26.84E, h20^{km}, MD3.0, Error ellipse: s-maj=3.7km s-min=1.6km az=119.0*
ISC 04 07:51:55.4±0.7**, 38.19N**±0.03×**26.70E**±0.04**, h6**^{km}±5^{km}**, n18,** σ**0**^{s}**77**/30**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.19**	**334**	*i* P	**Pg**	**07 51 59.3**	**-0.1**
URLA				*i* S	**Sg**	**07 52 02.6**	**+0.6**
BLCB	**Balcova**	**0.33**	**53**	*i* PG	**Pg**	**07 52 02.3**	**+0.2**
IZM	**Izmir**	**0.49**	**64**	*i* PG	**Pg**	**07 52 05.2**	**+0.1**
IZM				*i* SG	**Sg**	**07 52 12.0**	**+0.3**
SMG	**Samos**	**0.49**	**167**	*e*PB	**Pb**	**07 52 06.1**	**+0.2**
SMG				*e*SB	**Sb**	**07 52 13.6**	**+0.5**
KDAG	**Bornova**	**0.49**	**64**	*i* P	**Pg**	**07 52 04.7**	**-0.6**
KDAG				*i* S	**Sg**	**07 52 11.1**	**-0.7**
AYDN	**Tasoluk**	**1.07**	**119**	*i* P	**Pb**	**07 52 17.1**	**+1.3**
AYDN				*i* S	**Sb**	**07 52 30.5**	**+0.6**
AKS	**Akhisar**	**1.11**	**51**	PG	**Pg**	**07 52 17.0**	**-0.6**
AKS				SG	**Sg**	**07 52 32.4**	**0.0**
PRK	**Paraskevi**	**1.11**	**342**	*e*PN	**Pn**	**07 52 16.6**	**-0.8**
PRK				*e*SN	**Sn**	**07 52 32.0**	**-1.2**
AYVA	**Ayvalik**	**1.12**	**359**	*i* P	**Pb**	**07 52 17.4**	**+0.6**
AYVA				*i* S	**Sb**	**07 52 33.5**	**+2.1**
BODT	**Bodrum**	**1.22**	**157**	PN	**Pn**	**07 52 17.9**	**-1.1**
BODT				SN	**Sn**	**07 52 34.9**	**-1.1**
MLSB	**Milas**	**1.23**	**136**	*e*PN	**Pn**	**07 52 18.4**	**-0.7**
BDRM	**Kayabasi**	**1.26**	**152**	*i* P	**Pb**	**07 52 19.4**	**+0.2**
BDRM				*i* S	**Sb**	**07 52 36.3**	**+0.7**
APE	**Apeiranthos**	**1.45**	**220**	*e*PN	**Pn**	**07 52 23.1**	**+0.8**
APE				*e*SN	**Sn**	**07 52 42.2**	**+0.3**
APE	**Apeiranthos**	**1.45**	**220**	*e*PN	**Pn**	**07 52 21.8**	**-0.5**
MANT	**Manisa**	**1.49**	**78**	*i* P	**Pn**	**07 52 24.2**	**+1.4**
MANT				*i* S	**Sb**	**07 52 42.4**	**+0.2**
YER	**Yerkesik**	**1.63**	**129**	*e*PN	**Pn**	**07 52 24.1**	**-0.8**
BALB	**Balikesir**	**1.72**	**32**	*e*PN	**Pn**	**07 52 25.6**	**-0.5**
ORLT	**Orhaneli**	**2.52**	**42**	*e*PN	**Pn**	**07 52 36.8**	**-0.8**

IDC ***04*** *08:17:43.9±3.6, 32.71N×100.92E, mb3.8/8, mb1 3.9/9, mb1mx3.8/21, mbtmp3.8/9, ML3.2/1, Error ellipse: s-maj=75.0km s-min=42.7km az=168.0*
MOS ***04*** *08:17:48.2±1.4, 32.95N×100.76E, h33^{km}, mb4.1/6, Error ellipse: s-maj=36.2km s-min=14.5km az=102.4*
BJI ***04*** *08:17:49.3, 33.32N×100.89E, h12^{km}, mB4.5, mb4.2, ML4.1, Ms4.2, Msz3.9*
NEIC ***04*** *08:17:49.6±0.9, 33.30N×100.82E, h10^{km}, Error ellipse: s-maj=17.9km s-min=14.1km az=185.0*
ISC 04 08:17:47.6±0.6**, 33.17N**±0.05×**100.65E**±0.06**, h10**^{km}**, n30,** σ**1**^{s}**44**/36**, mb3.9**/8**, MS3.9**/1**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**3.47**	**130**	PG	**Pb**	**08 18 50.6**	**+1.8**
CD2				SG	**Sb**	**08 19 32.5**	**+1.2**
CD2				Smax			
	comp=N,580nm,1.0s						
CD2				Smax			
	comp=E,590nm,1.0s						
CD2				LR	LR		
	comp=N,2µm,6.1s						
CD2				LR	LR		
	comp=Z,1µm,6.2s						
LZH	**Lanzhou**	**3.92**	**41**	P	**Pn**	**08 18 49.2**	**0.0**
LZH				PG	**Pb**	**08 18 58.4**	**+1.9**
LZH				S	**Sn**	**08 19 36.1**	**+0.2**
LZH				Smax			
	comp=N,600nm,1.0s						
LZH				Smax			
	comp=E,1µm,1.0s						
LZH				LR	LR		
	comp=E,1µm,5.2s						
LZH				LR	LR		
	comp=Z,2µm,10.2s						
GTA	**Gaotai**	**6.26**	**354**	P	**Pn**	**08 19 24.0**	**+1.6**
GTA				S	**Sn**	**08 20 35.8**	**+1.0**
GTA				SG	**Sb**	**08 21 06.2**	**+14**
GTA				Smax			
	comp=N,30nm,1.1s						
GTA				Smax			
	comp=E,40nm,1.5s						
GTA				LR	LR		
	comp=N,530nm,8.0s						
GTA				LR	LR		
	comp=E,530nm,9.1s						
GTA				LR	LR		
	comp=Z,730nm,8.4s						
ENH	**Enshi**	**8.06**	**109**	*e*Pn	**P**	**08 19 46.0**	**-1.6**
	comp=Z,33nm,0.8s						
GYA	**Guiyang**	**8.48**	**140**	P	**P**	**08 19 54.4**	**+0.9**
GYA				S	**Sn**	**08 21 38.7**	**+8.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s						
GYA				LR	LR		
	comp=N,1µm,10.8s						
GYA				LR	LR		
	comp=E,1µm,10.8s						
GYA				LR	LR		
	comp=Z,990nm,10.5s						
LSA	**Lhasa**	**8.82**	**249**	P	**P**	**08 20 03.0**	**+4.8**
LSA	**Lhasa**	**8.82**	**249**	*e*Pn	**P**	**08 20 01.3**	**+3.1**
	comp=Z,16nm,0.6s						
SHL	**Shillong**	**10.76**	**228**	*e*x	x	08 20 27.7	
SONM	**Songino Array**	**15.28**	**15**	Pn	**P**	**08 21 23.9**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=4.1						
SONM				Lg		08 25 50.0	
	comp=Z,0.1nm,0.3s,baz=200,slow=29,SNR=3.3						
NJ2	**Nanjing**	**15.38**	**89**	*e*P	**P**	**08 21 24.0**	**-2.4**
NJ2				AP		08 21 31.9	
NJ2				PP	PP	08 21 36.0	-2.8
NJ2				S	**S**	**08 24 11.0**	**-6.5**
NJ2				XS		08 24 24.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,20nm,3.5s						
NJ2				LR	LR		
	comp=N,1µm,12.0s						
NJ2				LR	LR		
	comp=E,260nm,13.2s						
ZAK	**Zakamensk**	**17.31**	**6**	*e*P	**P**	**08 21 52.2**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MKAR	**Makanchi Array**	**19.51**	**320**	P	**P**	**08 22 18.1**	**+0.4**
	comp=Z,2.8nm,0.7s,baz=124,slow=12,SNR=26						
MKAR	**Makanchi Array**	**19.51**	**320**	P	**P**	**08 22 18.1**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CN2	**Changchun**	**22.04**	**54**	*e*P	**P**	**08 22 43.2**	**-0.8**
ZAL	**Zalesovo**	**23.62**	**336**	P	**P**	**08 23 01.9**	**+2.5**
	comp=Z,0.9nm,0.4s,mb3.5,baz=359,slow=5.9,SNR=4.5						
ZAL	**Zalesovo**	**23.62**	**336**	P	**P**	**08 23 01.9**	**+2.5**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MDJ	**Mudanjiang**	**25.13**	**54**	P	**P**	**08 23 12.0**	**-2.0**
MDJ				AP	pP	08 23 16.9	0.0
MDJ				AMB	AMB		
	comp=Z,50nm,3.5s						
MDJ				LR	LR		
	comp=N,240nm,12.5s,MS4.0						
MDJ				LR	LR		
	comp=E,100nm,10.7s,MS4.0						
MDJ				LR	LR		
	comp=Z,160nm,12.5s,MS3.7						
TIXI	**Tiksi**	**41.35**	**13**	*e*P	**P**	**08 25 24.4**	**-11**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
BRTR	**Keskin Array B**	**53.18**	**298**	P	**P**	**08 27 06.7**	**-1.4**
	comp=Z,0.5nm,0.7s,mb3.6,baz=62,slow=10,SNR=3.6						
BRTR	**Keskin Array B**	**53.18**	**298**	P	**P**	**08 27 06.7**	**-1.3**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	**ARCESS Array B**	**54.17**	**335**	P	**P**	**08 27 14.5**	**-0.4**
	comp=Z,1.1nm,0.5s,mb4.1,baz=98,slow=8.6,SNR=7.2						
ARCES	**ARCESS Array B**	**54.17**	**335**	P	**P**	**08 27 14.5**	**-0.3**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
FINES	**FINESS Array B**	**54.21**	**325**	P	**P**	**08 27 14.9**	**-0.3**
	comp=Z,1.6nm,0.6s,mb4.1,baz=91,slow=7.9,SNR=7.5						
FINES	**FINESS Array B**	**54.21**	**325**	P	**P**	**08 27 14.9**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**61.33**	**326**	P	**P**	**08 28 04.0**	**-1.5**
	comp=Z,0.8nm,0.7s,mb4.0,baz=106,slow=4.8,SNR=3.6						
NOA	**NORSAR Array B**	**61.33**	**326**	P	**P**	**08 28 04.0**	**-1.4**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**64.00**	**313**	P	**P**	**08 28 21.9**	**-1.4**
	comp=Z,0.2nm,0.2s,mb3.7,baz=45,slow=5.6,SNR=2.2						
INK	**Inuvik**	**71.16**	**19**	P	**P**	**08 29 06.3**	**-1.6**
	comp=Z,1.4nm,1.1s,mb3.8,baz=336,slow=7.8,SNR=2.5						
INK	**Inuvik**	**71.16**	**19**	P	**P**	**08 29 06.3**	**-1.6**
INK	**Inuvik**	**71.16**	**19**	P	**P**	**08 29 06.3**	**-1.6**
INK				pmax	pmax		
	comp=Z,1.0nm,1.1s						

ISC 04 08:52:58.0±1.1**, 38.24N**±0.04×**26.61E**±0.07**, h10**^{km}**, n9,** σ**1**^{s}**25**/16**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.12**	**356**	*i* P	**Pg**	**08 53 00.8**	**-0.3**
URLA				*i* S	**Sg**	**08 53 01.5**	**-1.5**
BLCB	**Balcova**	**0.37**	**67**	*i* PG	**Pg**	**08 53 05.3**	**-0.3**
BLCB				*i* SG	**Sg**	**08 53 10.7**	**-0.1**

IZM	**Izmir**	**0.54**	**73**	*i* PG	**Pg**	**08 53 08.6**	**-0.4**
KDAG	**Bornova**	**0.55**	**73**	*i* P	**Pg**	**08 53 07.8**	**-1.3**
KDAG				*i* S	**Sg**	**08 53 15.3**	**-1.1**
AYVA	**Ayvalik**	**1.07**	**4**	*i* P	**Pb**	**08 53 20.1**	**+2.0**
AYVA				*i* S	**Sb**	**08 53 36.9**	**+4.9**
AKS	**Akhisar**	**1.14**	**56**	*e*PN	**Pn**	**08 53 20.4**	**+0.4**
AYDN	**Tasoluk**	**1.16**	**120**	*i* P	**Pb**	**08 53 22.3**	**+2.6**
AYDN				*i* S	**Sb**	**08 53 34.3**	**-0.4**
BDRM	**Kayabasi**	**1.35**	**150**	*i* P	**Pb**	**08 53 19.6**	**-3.3**
BDRM				*i* S	**Sb**	**08 53 39.6**	**-0.5**
MANT	**Manisa**	**1.56**	**80**	*i* P	**Pn**	**08 53 27.6**	**+1.6**
MANT				*i* S	**Sb**	**08 53 47.6**	**+1.5**

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*NEIC **04** 08:59:28.3±0.6, 3.87N×123.88E, mb4.1/1, Error ellipse: s-maj=12.4km s-min=9.8km az=64.0*

*IDC **04** 08:59:28.5±0.9, 3.88N×123.92E, h45^{km}±9^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.7/16, mbtmp4.0/5, Error ellipse: s-maj=81.5km s-min=15.1km az=68.0*

ISC 04 08:59:26.3±0.6**, 3.92N**±0.05×**123.88E**±0.08**, h47^{km}, h47^{km}**±3.9^{km}**:pP-P, n14, σ1^{s}06**/17**, mb4.0**/6**, 2C, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**2.41**	**26**	⇑*i*P	**P**	**09 00 04.2**	**+0.1**
GSPH				*e*S	**S**	**09 00 30.5**	**-2.0**
KCP	**Kidapawan**	**3.30**	**21**	⇑*e*P	**P**	**09 00 17.4**	**+0.5**
KCP				*i* S	**S**	**09 00 54.0**	**-1.2**
DAV	**Davao City (W)**	**3.56**	**28**	*e*Pn	**P**	**09 00 20.8**	**+0.3**
DAV				*e*Sn	**S**	**09 01 03.7**	**+1.9**
KKM	**Kota Kinabalu**	**7.92**	**286**	*e*Pn	**P**	**09 01 20.5**	**-1.0**
KSM	**Kuching**	**13.77**	**260**	Pn	**P**	**09 02 40.8**	**-0.1**
KSM				*e*		09 02 51.3	
FITZ	**Fitzroy Crossi**	**21.95**	**176**	*e*P	**P**	**09 04 19.9**	**+2.3**
	11nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**21.95**	**176**	P	**P**	**09 04 16.9**	**-0.7**
	15nm,0.8s,mb4.5,baz=11,slow=12,SNR=13						
WRAB	**Tennant Creek**	**25.84**	**157**	*e*P	**P**	**09 04 54.8**	**-0.5**
	3.2nm,0.5s,mb4.1						
WRAB				*e*pP	pP	09 05 07.9	+0.5
WRA	**Warramunga Arr**	**25.84**	**157**	P	**P**	**09 04 54.8**	**-0.6**
	4.3nm,0.5s,mb4.2,baz=337,slow=10.0,SNR=50						
WRA				pP	pP	09 05 08.4	+1.0
	5.7nm,0.5s,baz=336,slow=10,SNR=11						
WB2	**Warramunga Arr**	**25.85**	**157**	*e*P	**P**	**09 04 54.4**	**-1.0**
STKA	**Stephens Creek**	**39.38**	**156**	P	**P**	**09 06 54.0**	**+0.9**
	2.8nm,0.6s,mb4.1,baz=317,slow=8.6,SNR=10						
SONM	**Songino Array**	**46.27**	**344**	P	**P**	**09 07 49.9**	**+1.0**
	0.4nm,0.6s,mb3.5,baz=153,slow=9.7,SNR=3.4						
SONM				pP	pP	09 08 02.1	+0.3
	0.4nm,0.6s,baz=165,slow=7.9,SNR=3.3						
MKAR	**Makanchi Array**	**55.80**	**327**	P	**P**	**09 09 02.1**	**+1.0**
	0.6nm,0.6s,mb3.8,baz=123,slow=8.0,SNR=5.9						
MKAR				pP	pP	09 09 13.8	-0.5
	0.9nm,0.5s,baz=124,slow=8.4,SNR=8.6						
MKAR	**Makanchi Array**	**55.80**	**327**	P	**P**	**09 09 02.1**	**+1.0**
MKAR				pP	pP	09 09 13.8	-0.5

GUC 04 09:12:43.9±1.0**, 31.24S×68.90W, h160^{km}**±22^{km}**, MD3.5, ML3.6, 2C-2D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.80**	**271**	⇓*i*P	P	09 13 17.9	+0.2
CMCH				*i* S	S	09 13 44.1	+0.2
CMCH				AMP		09 13 48.6	
	comp=E,1µm,0.6s						
TLL	**Tololo Astrono**	**1.96**	**302**	⇑*i*P	P	09 13 20.2	+0.7
TLL				*i* S	S	09 13 47.7	+0.9
TLL				AMP		09 13 50.5	
	comp=N,350nm,0.7s						
CHNG	**Los Chungos**	**2.31**	**253**	*i* P	P	09 13 24.2	+0.5
CHNG				*i* S	S	09 13 53.3	-1.0
CHNG				AMP		09 14 02.0	
	comp=E,83nm,0.5s						
FCH	**Farellones**	**2.40**	**209**	*e*P	P	09 13 24.9	+0.1
FCH				*i* S	S	09 13 57.2	+1.1
FCH				AMP		09 13 58.3	
	comp=E,106nm,0.2s						
LSCH	**La Serena**	**2.42**	**303**	⇓*i*P	P	09 13 24.9	-0.1
LSCH				*i* S	S	09 13 55.8	-0.8
LSCH				AMP		09 13 58.0	
	comp=N,258nm,0.2s						
RCDM	**Rinconada Maip**	**2.77**	**215**	⇑*i*P	P	09 13 29.6	+0.2
RCDM				*i* S	S	09 14 04.4	+0.2
RCDM				AMP		09 14 09.2	
	comp=E,174nm,0.1s						

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*NDI **04** 10:01:50.2±2.4, 34.68N×73.10E, h10^{km}, MD3.6, ML3.5*

*NNC **04** 10:01:52.8±2.0, 35.51N×72.28E, mpv3.7, Error ellipse: s-maj=28.2km s-min=12.1km az=115.0*

ISC 04 10:01:46.4±0.8**, 35.01N**±0.07×**73.2E**±0.1**, h33^{km}, n12, σ1^{s}41**/16**, 3C-1D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.34**	**139**	*e*P	**P**	**10 02 39.5**	**+2.0**
THN				*e*SB	**Sb**	**10 03 25.0**	**-0.3**
DLH	**Dalhousie**	**3.40**	**136**	*e*P	**P**	**10 02 40.0**	**+1.7**
DLH				*e*S	**S**	**10 03 19.0**	**+1.1**
BHK	**Bhakra**	**4.50**	**142**	*e*S	**S**	**10 03 44.6**	**-1.4**
SDNR	**Sundarnagar**	**4.74**	**136**	*e*P	**P**	**10 02 58.6**	**+1.2**
SDNR				*e*S	**S**	**10 03 48.4**	**-3.5**
SMLA	**Simla**	**5.13**	**138**	*e*x	x	10 02 58.2	
SMLA				*e*x	x	10 03 36.0	
KLP	**Kalpa**	**5.50**	**128**	*e*x	x	10 02 24.3	
KLP				*e*S	**S**	**10 04 08.3**	**-2.6**
KLP				AML	AML	10 04 39.1	
	comp=N,70nm,0.5s						
KLP				AML	AML	10 04 39.6	
	comp=E,97nm,0.6s						
AYAN	**Aya Nagar**	**7.33**	**151**	*e*P	**P**	**10 03 34.0**	**+0.2**
AYAN				*e*S	**S**	**10 04 48.5**	**-8.2**
KUDL	**Kundal**	**7.41**	**156**	*e*x	x	10 03 29.1	
KUDL				*e*S	**S**	**10 04 49.5**	**-9.2**
AAK	**Ala-Archa**	**7.69**	**7**	Sn	**Sn**	**10 05 07.0**	**+1.2**
KK31	**Karatay Array**	**8.34**	**347**	⇑Pn	**P**	**10 03 48.7**	**+0.9**
	comp=E,2.9nm,0.6s,baz=167,slow=12,SNR=24						
KK31				⇑Sn	**Sn**	**10 05 20.5**	**-1.6**
	comp=E,0.9nm,0.3s,baz=169,slow=23,SNR=7.9						
AB31	**Akbulak array**	**17.25**	**330**	⇓P	**P**	**10 05 45.3**	**-0.8**
	comp=E,0.2nm,0.3s,baz=156,slow=12,SNR=8.7						
AKTO	**Aktyubinsk**	**18.95**	**329**	⇑P	**P**	**10 06 06.3**	**-0.9**
	comp=E,0.3nm,0.6s						

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*LDG **04** 10:27:41.8±0.1, 48.29N×7.48E, h8^{km}, Md3.0/3, Ml2.9/5, Error ellipse: s-maj=1.9km s-min=1.6km az=86.0*

*BGR **04** 10:27:42.2±0.4, 48.30N×7.47E, h5^{km}, ML1.4/1, Error ellipse: s-maj=8.9km s-min=4.4km az=163.0*

*NEIC **04** 10:27:42.4, 48.27N×7.44E, h5^{km}, ML2.9(LDG), ML2.2(STR), After STR.*

*CSEM **04** 10:27:42.1±0.1, 48.29N×7.46E, h8^{km}, ML2.9/5, Error ellipse: s-maj=1.7km s-min=1.4km az=19.0*

STR 04 10:27:42.4±0.1**, 48.27N×7.44E, h5^{km}**±1^{km}**, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLS	**Welschbruch**	**0.15**	**338**	Pg	Pg	10 27 45.2	-0.4
WLS				Sg	Sg	10 27 48.3	+0.5
WLS	**Welschbruch**	**0.15**	**338**	*e*Pg	Pg	10 27 45.2	-0.4
LIBD	**Limburg**	**0.16**	**138**	*e*Pg	Pg	10 27 45.7	0.0
LIBD	**Limburg**	**0.16**	**138**	Pg	Pg	10 27 45.7	0.0
LIBD				Sg	Sg	10 27 48.6	+0.6
CDF	**Champ du Feu**	**0.18**	**323**	*e*Pg	Pg	10 27 45.5	-0.6
CDF				*e*Sg	Sg	10 27 48.2	-0.4
	90nm,0.2s						
ECH	**Echery**	**0.20**	**254**	Pg	Pg	10 27 46.2	-0.2
ECH				Sg	Sg	10 27 49.5	+0.4
ECH	**Echery**	**0.20**	**254**	*e*Pg	Pg	10 27 46.3	-0.1
ECH	**Echery**	**0.20**	**254**	Pg	Pg	10 27 46.3	-0.1
ECH				Sg	Sg	10 27 49.5	+0.4
MOF	**Molkenrain**	**0.47**	**206**	Pg	Pg	10 27 51.6	-0.2
MOF				Sg	Sg	10 27 58.2	+0.2
MOF	**Molkenrain**	**0.47**	**206**	*e*Pg	Pg	10 27 51.5	-0.3
BFO	**Black Forest**	**0.60**	**84**	*e*Pg	Pg	10 27 53.3	-1.1
BFO				*e*Sg	Sg	10 28 00.5	-1.8
HINF	**Hinteralfeld**	**0.60**	**221**	*e*Pg	Pg	10 27 53.7	-0.7
HINF				*e*Pn	Pn	10 27 55.4	-1.8
HINF				*e*Sg	Sg	10 28 01.4	-1.1
	38nm,0.2s						
LANF	**Langenberg**	**0.75**	**19**	Pg	Pg	10 27 57.2	-0.2
LANF				Sg	Sg	10 28 07.5	0.0
HAU	**Haudompre**	**0.78**	**251**	*e*Pg	Pg	10 27 57.1	-0.9
HAU				*e*Pn	Pn	10 27 57.9	-1.9
HAU				*e*Sg	Sg	10 28 07.7	-0.6
	43nm,0.3s						
HAU	**Haudompre**	**0.78**	**251**	*e*Pg	Pg	10 27 57.1	-0.9
HAU	**Haudompre**	**0.78**	**251**	*e*Pn	Pn	10 27 57.9	-1.9
HAU				*e*Sg	Sg	10 28 07.7	-0.6
	21nm,0.3s						
THEF	**They Montfort**	**0.97**	**268**	Pg	Pg	10 28 01.0	-0.8
THEF				Sg	Sg	10 28 14.2	-0.6
LOMF	**Lomont**	**1.01**	**204**	Pg	Pg	10 28 01.7	-0.8
LOMF				Sg	Sg	10 28 16.3	+0.3
LOMF	**Lomont**	**1.01**	**204**	*e*Pg	Pg	10 28 01.8	-0.7
RFYF	**Reffroy**	**1.36**	**286**	*e*Pg	Pg	10 28 07.1	-2.4
	baz=100						
RFYF				*e*Sg	Sg	10 28 25.2	-2.4
	36nm,0.2s						
SFTF	**Sexfontaines**	**1.61**	**269**	*e*Pn	Pn	10 28 09.4	-2.2
SFTF				*e*Sg	Sg	10 28 33.0	-2.9
	23nm,0.2s						
MEZF	**Maizieres J'vi**	**1.61**	**279**	*e*Pn	Pn	10 28 10.1	-1.5
MEZF				*e*Pg	Pg	10 28 12.6	-1.9
MEZF				*e*Sg	Sg	10 28 32.9	-3.1
	11nm,0.3s						
CABF	**La Chapelle**	**1.90**	**209**	*e*Pn	Pn	10 28 13.6	-2.2
CABF				*e*Pg	Pg	10 28 18.1	-2.2
CABF				*e*Sg	Sg	10 28 41.7	-3.9
	6.0nm,0.4s						
SMF	**Signal de Mont**	**2.93**	**238**	*e*Pg	Pg	10 28 37.0	-4.0
AVF	**Avril sur Loir**	**3.14**	**243**	*e*Pg	Pg	10 28 41.0	-4.1

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*CSEM **04** 10:43:46.5±1.8, 12.12N×43.64E, h14^{km}, ML3.8, Error ellipse: s-maj=44.2km s-min=37.6km az=104.0, After DHMR*

DHMR 04 10:43:46.5±1.2**, 12.12N×43.64E, h14^{km}**±7^{km}**, ML3.8, 2C-3D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.20**	**23**	⇓*i*P	Pb	10 44 08.4	0.0
TRBA				*i* S	Sb	10 44 26.0	+2.4
TRBA				AML	AML	10 44 27.7	
	comp=N,1µm,0.6s						
UDYN	**Al 'Udayn**	**1.87**	**10**	⇓*i*P	Pn	10 44 19.2	+0.8
UDYN				*i* S	Sn	10 44 44.1	+2.3
UDYN				AML	AML	10 44 54.8	
	comp=N,1µm,0.4s						
LBOS		**2.34**	**42**	⇑*i*P	Pn	10 44 27.0	+1.8
LBOS				*i* S	Sn	10 44 58.3	+4.4
DHBB	**Dhamar BB**	**2.55**	**17**	⇑*i*P	Pn	10 44 30.6	+2.5
DHBB				*i* S	Sn	10 45 05.2	+6.1
BDHA	**Al Bayda'**	**2.63**	**45**	⇓*i*P	Pn	10 44 31.5	+2.2
BDHA				*i* S	Sn	10 45 06.8	+5.5
BDHA				AML	AML	10 45 14.5	
	comp=E,777nm,0.5s						

ISC 04 11:32:46.4±1.3**, 41.03N**±0.09×**38.65E**±0.06**, h7^{km}**±10^{km}**, n5, σ0^{s}57**/9**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRSN	**GIRESUNGRSN**	**0.31**	**249**	*i* P	**Pg**	**11 32 52.9**	**+0.2**
GRSN				*i* S	**Sg**	**11 32 57.1**	**+0.3**
GUMT	**Gumushane**	**0.85**	**132**	*i* PG	**Pg**	**11 33 03.6**	**+0.1**
GUMT				*i* SG	**Sg**	**11 33 14.2**	**-0.7**
MACK	**Trabzon**	**0.85**	**96**	*i* P	**Pb**	**11 33 02.7**	**-0.4**
MACK				*i* S	**Sb**	**11 33 15.2**	**+0.6**
KELT	**Kelkit**	**1.00**	**152**	*i* P	**Pb**	**11 33 06.5**	**+1.0**
KELT				*i* S	**Sb**	**11 33 18.4**	**-0.3**
KVT	**Kavak**	**1.97**	**272**	*e*PN	**Pn**	**11 33 19.7**	**-0.8**

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*NIED **04** 11:44:00, 44.90N×151.70E, h11^{km}, Mw4.7 Best double couple: M$_0$1.21×10^{16} NP1:φ$_s$190°, δ64°, λ-95°. NP2:φ$_s$21°, δ27°, λ-81°.*

*IDC **04** 11:44:09.7±0.4, 44.68N×152.01E, mb5.0/23, mb1 5.1/26, mb1mx5.0/28, mbtmp5.0/26, ML4.5/3, MS4.3/15, Ms1 4.3/15, ms1mx4.0/32, Error ellipse: s-maj=13.8km s-min=10.9km az=137.0*

*SKHL **04** 11:44:10.5±1.0, 44.70N×152.16E, h42^{km}±3^{km}, mb5.4/5, Ms4.7/8, msh5.1/3*

*MOS **04** 11:44:13.4±0.9, 44.66N×151.91E, h33^{km}, mb5.4/103, MS4.4/17, Error ellipse: s-maj=7.3km s-min=4.3km az=107.3*

*HRVD **04** 11:44:16.4±0.4, 44.80N×152.25E, h12^{km}±1^{km}, MW4.8/44, Centroid moment Tensor Solution. LP body waves: s11,c16;Mantle waves: s44,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.19±.21; M$_{θθ}$1.02±.13; M$_{φφ}$1.16±.13; M$_{rθ}$0.78±.34; M$_{θφ}$1.15±.07; M$_{φr}$0.07±.33; Best double couple: M$_0$2.351×10^{16} NP1:φ$_s$31°, δ39°, λ-110°. NP2:φ$_s$236°, δ54°, λ-75°. Principal axes: T 2.32, Plg8°, Azm315°; N .052, Plg12°, Azm47°; P -2.382, Plg75°, Azm194°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **04** 11:44:16.4±0.1, 44.65N×151.94E, mb5.2/125 Error ellipse: s-maj=4.1km s-min=2.4km az=169.0*

*BJI **04** 11:44:20.1, 44.89N×151.01E, h45^{km}, mB4.9, mb4.9, Ms4.5, Msz4.2*

ISC 04 11:44:14.8±0.2**, 44.70N**±0.03×**151.93E**±0.03**, h44^{km}, h44^{km}**±.7^{km}**:pP-P, n556, σ1^{s}00**/537**, mb5.1**/188**, MS4.4**/35**, 31C-35D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.93**	**282**	*i* P	**P**	**11 44 56.1**	**-4.1**
KUR				AMB	AMB	11 44 57.6	
	430nm,0.9s						
KUR				AMB	AMB	11 44 57.6	
	170nm,0.9s						
KUR				AMB	AMB	11 44 57.6	
	1µm,0.9s						
KUR				*i* S	**S**	**11 45 31.0**	**-3.5**
KUR				A		11 45 32.5	
	2µm,0.9s						
KUR				A		11 45 32.5	
	1µm,0.9s						
KUR				A		11 45 33.0	
	10µm,2.0s						
KUR				A		11 45 33.0	
	2µm,2.0s						
KUR	**Kuril'sk**	**2.93**	**282**	⇓*i*PN	**P**	**11 44 56.1**	**-4.1**
KUR				*i* S	**S**	**11 45 31.0**	**-3.5**
KUR				pmax	pmax		
	comp=N,430nm,0.9s						
KUR				pmax	pmax		
	comp=E,170nm,0.9s						
KUR				pmax	pmax		
	comp=Z,1µm,0.9s						
KUR				smax			
	comp=N,2µm,0.9s						
KUR				smax			
	comp=E,1µm,0.9s						
KUR				smax			
	comp=N,10µm,2.0s						
KUR				smax			
	comp=E,2µm,2.0s						
YUK	**Yuzh-Kuril'sk**	**4.40**	**263**	*e*P	**P**	**11 45 17.5**	**-3.4**
YUK				AMB	AMB	11 45 21.7	
	comp=E,380nm,0.5s						
YUK				AMB	AMB	11 45 21.7	
	comp=E,850nm,0.5s						
YUK				AMB	AMB	11 45 24.8	
	comp=E,3µm,1.0s						
YUK				*e*S	**S**	**11 46 07.0**	**-4.6**
YUK				A		11 46 11.0	
	comp=E,2µm,0.5s						
YUK				A		11 46 11.0	
	comp=E,1µm,0.5s						
YUK				A		11 46 23.0	
	comp=E,5µm,1.0s						
YUK				AMS	AMS	11 47 15.0	
	comp=E,8µm,15.0s						
YUK				AMS	AMS	11 47 15.0	
	comp=E,5µm,15.0s						
YUK				AMS	AMS	11 47 15.0	
	comp=E,5µm,15.0s						
SKR	**Severo-Kuril's**	**6.62**	**24**	*e*P	**P**	**11 45 44.4**	**-7.7**
SKR				AMB	AMB	11 45 46.0	
	comp=E,2µm,2.0s						
SKR				AMB	AMB	11 45 47.0	
	comp=E,180nm,0.5s						
SKR				AMB	AMB	11 45 47.0	
	comp=E,150nm,0.5s						
SKR				AMB	AMB	11 45 47.0	
	comp=E,460nm,0.5s						
SKR				pP		11 45 58.0	
SKR				*i* S	**S**	**11 46 54.0**	**-13**
SKR				A		11 46 59.0	
	comp=E,350nm,0.5s						
SKR				A		11 46 59.0	
	comp=E,280nm,0.5s						
SKR				A		11 46 59.0	
	comp=E,150nm,0.5s						
SKR				AMS	AMS	11 48 57.0	
	comp=E,3µm,14.0s						
SKR				AMS	AMS	11 48 57.0	
	comp=E,3µm,14.0s						
ASAJ	**Asahikawa**	**6.71**	**268**	Pn	**P**	**11 45 52.2**	**-1.1**
	comp=E,31nm,0.3s,baz=82,slow=18,SNR=176						
ASAJ	**Asahikawa**	**6.71**	**268**	PN	**P**	**11 45 52.2**	**-1.1**
ASAJ				pmax	pmax		
	comp=Z,31nm,0.3s						
YSS	**Yuzh-Sakhalins**	**6.80**	**293**	⇑*i*P	**P**	**11 45 52.8**	**-1.7**
YSS				AMB	AMB	11 45 54.8	
	comp=Z,40nm,0.5s						
YSS				AMB	AMB	11 45 54.8	
	comp=Z,100nm,0.8s						
YSS				AMB	AMB	11 45 54.8	
	comp=Z,90nm,0.6s						
YSS				pP		11 46 07.5	
YSS				*e*S	**S**	**11 47 05.0**	**-6.5**
YSS				A		11 47 06.2	
	comp=Z,80nm,1.0s						
YSS				AMS	AMS	11 49 56.0	
	comp=Z,1µm,15.0s						
YSS				AMS	AMS	11 49 56.0	
	comp=Z,2µm,15.0s						
YSS				AMS	AMS	11 49 56.0	
	comp=Z,2µm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.80**	**293**	*e*Pn	**P**	**11 45 52.8**	**-1.8**
	comp=Z,63nm,0.6s						
YSS	**Yuzh-Sakhalins**	**6.80**	**293**	⇑*i*PN	**P**	**11 45 52.8**	**-1.7**
YSS				*e*		11 47 18.6	
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YSS				pmax	pmax		
	comp=N,40nm,0.5s						
YSS				pmax	pmax		
	comp=E,90nm,0.6s						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s						
YSS				MLR	MLR		
	comp=N,1µm,13.0s						
PAU	**Pauzhetka**	**7.52**	**24**	*i* P	**P**	**11 45 59.1**	**-5.5**
UGL	**Uglegorsk**	**8.05**	**306**	*e*P	**P**	**11 46 10.0**	**-2.0**
UGL				*e*P		11 46 11.5	
UGL				AMB	AMB	11 46 14.0	
	comp=N,46nm,0.7s						
UGL				AMB	AMB	11 46 19.0	
	comp=N,500nm,8.0s						
UGL				sP		11 46 25.0	
UGL				*e*S	**S**	**11 47 40.0**	**-2.7**
UGL				A		11 47 47.5	
	comp=N,72nm,0.6s						
UGL				A		11 47 47.5	
	comp=N,80nm,0.6s						
UGL				AMS	AMS	11 50 48.0	
	comp=N,2µm,15.0s						
UGL				AMS	AMS	11 50 48.0	
	comp=N,2µm,15.0s						
UGL				AMS	AMS	11 50 48.0	
	comp=N,3µm,15.0s						
UGL	**Uglegorsk**	**8.05**	**306**	*e*PN	**P**	**11 46 10.0**	**-2.0**
UGL				pmax	pmax		
	comp=Z,46nm,0.7s						
UGL				pmax	pmax		
	comp=N,500nm,8.0s						
UGL				pmax	pmax		
	comp=E,500nm,8.0s						
UGL				MLR	MLR		
	comp=N,2µm,15.0s						
UGL				MLR	MLR		
	comp=Z,3µm,15.0s						
UGL				MLR	MLR		
	comp=E,2µm,14.0s						
TYV	**Tymovskoe**	**8.77**	**318**	*e*P	**P**	**11 46 16.8**	**-5.1**
TYV				AMB	AMB	11 46 23.2	
	comp=E,18nm,0.6s						
TYV				AMB	AMB	11 46 31.0	
	comp=E,400nm,8.0s						
TYV				sP		11 46 34.5	
TYV				*e*S	**S**	**11 47 54.2**	**-6.4**
TYV				*e*S	**S**	**11 47 56.0**	**-4.6**
TYV				A		11 47 57.7	
	comp=E,38nm,0.8s						
TYV				A		11 48 32.0	
	comp=E,400nm,7.0s						
TYV				AMS	AMS	11 51 06.0	
	comp=E,2µm,15.0s						
TYV				AMS	AMS	11 51 06.0	
	comp=E,1µm,15.0s						
TYV				AMS	AMS	11 51 06.0	
	comp=E,3µm,15.0s						
PET	**Petropavlovsk**	**9.43**	**26**	*e*P	**P**	**11 46 25.9**	**-5.2**
PET				AMB	AMB	11 46 48.3	
	comp=E,44nm,0.6s						
PET				*e*S	**S**	**11 48 05.1**	**-12**
PET				A		11 48 07.3	
	comp=E,170nm,0.6s						
PET				A		11 48 14.2	
	comp=E,130nm,0.6s						
PET				AMS	AMS	11 52 40.6	
	comp=E,950nm,16.0s						
PET	**Petropavlovsk**	**9.43**	**26**	*e*Pn	**P**	**11 46 25.4**	**-5.6**
	comp=E,25nm,0.6s						
PET				*e*Sn	**S**	**11 48 06.2**	**-11**
PET	**Petropavlovsk**	**9.43**	**26**	*e*PN	**P**	**11 46 25.9**	**-5.2**
PET				pmax	pmax		
	comp=Z,44nm,0.6s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
OKH	**Okha**	**10.63**	**330**	AMS	AMS	11 52 05.8	
	comp=Z,3µm,13.0s						
OKH				AMS	AMS	11 52 05.8	
	comp=Z,3µm,13.0s						
OKH				AMS	AMS	11 52 05.8	
	comp=Z,3µm,13.0s						
TEY	**Ternei**	**10.89**	**277**	*e*P	**P**	**11 46 48.0**	**-2.9**
TEY				*e*P		11 46 49.0	
TEY				AMS	AMS	11 52 42.0	
	comp=Z,800nm,14.0s						
TEY				AMS	AMS	11 52 42.0	
	comp=Z,1µm,14.0s						
TEY				AMS	AMS	11 52 42.0	
	comp=Z,2µm,14.0s						
NKL	**Nikolayevsk**	**11.23**	**323**	*e*P	**P**	**11 46 53.5**	**-1.9**
NKL				AMB	AMB	11 46 56.0	
	comp=Z,700nm,8.0s						
NKL				AMB	AMB	11 47 03.0	
	comp=Z,64nm,1.0s						
NKL				sP		11 49 41.0	
NKL				AMS	AMS	11 52 48.0	
	comp=Z,1µm,17.0s						
NKL				AMS	AMS	11 52 48.0	
	comp=Z,2µm,17.0s						
GRNR	**Gornyy**	**12.07**	**306**	*e*P	**P**	**11 47 00.0**	**-6.8**
GRNR				AMB	AMB	11 47 01.0	
	comp=Z,52nm,1.0s						
MAJO	**Matsushiro**	**13.21**	**237**	*e*Pn	**P**	**11 47 17.6**	**-4.5**
	comp=Z,30nm,0.7s						
MAJO	**Matsushiro**	**13.21**	**237**	*e*PN	**P**	**11 47 17.6**	**-4.5**
MAJO				pmax	pmax		
	comp=Z,30nm,0.7s						
MAT	**Matsushiro**	**13.21**	**237**	P	**P**	**11 47 17.2**	**-4.9**
MAT				S	**S**	**11 49 43.3**	**-5.2**
MAT	**Matsushiro**	**13.21**	**237**	*e*P	**P**	**11 47 17.0**	**-5.1**
	comp=Z,24nm,0.9s						
MAT				*e*S	**S**	**11 50 01.0**	**+12**
MAT	**Matsushiro**	**13.21**	**237**	*e*PN	**P**	**11 47 17.0**	**-5.1**

MAT				*e*S	**S**	**11 50 01.0**	**+12**
MAT				pmax	pmax		
	comp=Z,24nm,0.9s						
MJAR	**Matsushiro Arr**	**13.21**	**237**	Pn	**P**	**11 47 18.7**	**-3.4**
	comp=Z,0.7nm,0.3s,baz=32,slow=13,SNR=36						
MJAR				Sn	**S**	**11 49 48.5**	**0.0**
	comp=Z,0.5nm,0.3s,baz=24,slow=24,SNR=3.7						
KLR	**Kul'dur**	**14.49**	**295**	*e*P	**P**	**11 47 37.3**	**-1.4**
KLR				*e*P		11 47 37.5	
KLR				AMS	AMS	11 56 30.0	
	comp=Z,4µm,13.0s						
KLR	**Kul'dur**	**14.49**	**295**	*e*P	**P**	**11 47 37.3**	**-1.4**
KLR				MLR	MLR		
	comp=Z,4µm,12.5s						
VLA	**Vladivostok**	**14.53**	**271**	*e*P	**P**	**11 47 35.0**	**-4.2**
VLA				pmax	pmax		
	comp=Z,75nm,1.5s						
VLA				MLR	MLR		
	comp=Z,600nm,14.4s						
JHJ	**Hachijo jima 2**	**14.91**	**223**	Pn	**P**	**11 47 47.2**	**+3.0**
	comp=Z,10nm,0.3s,baz=190,slow=7.0,SNR=5.4						
MA2	**Magadan**	**14.92**	**358**	*e*Pn	**P**	**11 47 43.8**	**-0.4**
MA2	**Magadan**	**14.92**	**358**	*e*P	**P**	**11 47 44.3**	**+0.1**
MA2				*e*S	**S**	**11 50 29.0**	**+0.3**
MA2				pmax	pmax		
	comp=Z,20nm,1.1s						
MA2				MLR	MLR		
	comp=Z,600nm,18.0s						
EKMR	**Ekimchan**	**15.00**	**311**	*e*P	**P**	**11 47 43.4**	**-1.9**
EKMR				AMB	AMB	11 48 01.5	
	comp=Z,23nm,0.6s						
MDJ	**Mudanjiang**	**15.89**	**278**	P	**P**	**11 47 54.2**	**-2.6**
MDJ				AP		11 47 59.9	
MDJ				PP	PP	11 48 08.6	-1.2
MDJ				S	**S**	**11 50 47.5**	**-3.9**
MDJ				AMB	AMB		
	comp=Z,60nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,90nm,3.2s						
MDJ				LR	LR		
	comp=N,1µm,15.0s						
MDJ				LR	LR		
	comp=E,440nm,17.5s						
MDJ				LR	LR		
	comp=Z,960nm,16.6s						
MDJ	**Mudanjiang**	**15.89**	**278**	*e*P	**P**	**11 47 54.2**	**-2.6**
	comp=Z,64nm,0.9s						
FX1	**Attu Island--F**	**16.17**	**52**	Pn	**P**	**11 47 56.5**	**-3.7**
	comp=Z,3.1nm,0.3s,baz=147,slow=18,SNR=20						
FX1				Sn	**S**	**11 50 42.1**	**-16**
	comp=Z,8.4nm,0.3s,baz=52,slow=19,SNR=8.9						
FX1				LR	LR	11 54 38.9	
	comp=Z,28nm,18.1s,baz=275,slow=39						
FX1	**Attu Island--F**	**16.17**	**52**	*e*P	**P**	**11 47 59.5**	**-0.7**
SEY	**Seymchan**	**18.27**	**1**	⇓*i*P	**P**	**11 48 24.2**	**-2.3**
ZEA	**Zeya**	**18.41**	**308**	*e*P	**P**	**11 48 23.4**	**-4.8**
ZEA				AMB	AMB	11 48 24.6	
	comp=Z,70nm,1.1s						
ZEA				AMB	AMB	11 48 24.6	
	comp=Z,60nm,1.1s						
ZEA				AMB	AMB	11 48 24.6	
	comp=Z,100nm,1.1s						
ZEA				AMB	AMB	11 48 29.0	
	comp=Z,400nm,6.0s						
ZEA				*e*S	**S**	**11 51 48.0**	**-0.6**
ZEA				A		11 51 52.0	
	comp=Z,300nm,5.0s						
ZEA				AMS	AMS	11 57 26.0	
	comp=Z,400nm,13.0s						
ZEA				AMS	AMS	11 57 26.0	
	comp=Z,1µm,13.0s						
ZEA				AMS	AMS	11 57 26.0	
	comp=Z,1µm,13.0s						
KROS	**Kirovskiy**	**18.80**	**310**	*e*P	**P**	**11 48 30.9**	**-2.0**
KROS				AMB	AMB	11 48 34.9	
	comp=Z,21nm,0.6s						
KROS				AMB	AMB	11 48 34.9	
	comp=Z,31nm,0.6s						
CN2	**Changchun**	**18.97**	**277**	⇓P	**P**	**11 48 31.9**	**-3.1**
CN2				AMB	AMB		
	comp=Z,40nm,0.8s						
CN2				AMB	AMB		
	comp=Z,260nm,7.0s						
CN2				LR	LR		
	comp=N,960nm,15.0s						
CN2				LR	LR		
	comp=E,770nm,15.0s						
CN2				LR	LR		
	comp=Z,720nm,16.0s						
KS15	**Wonju Array Si**	**19.48**	**257**	*e*P	**P**	**11 48 39.3**	**-1.4**
JNU	**Nakatsue**	**19.99**	**242**	P	**P**	**11 48 46.7**	**+0.5**
	comp=Z,9.5nm,0.8s,baz=67,slow=13,SNR=11						
JNU				S	**S**	**11 52 30.9**	**+7.4**
	comp=Z,1.9nm,0.8s,baz=167,slow=14,SNR=1.7						
INCN	**Inchon**	**20.33**	**258**	P	**P**	**11 48 48.3**	**-1.5**
	comp=Z,45nm,0.9s						
SNY	**Shenyang**	**20.80**	**272**	⇑P	**P**	**11 48 53.2**	**-1.4**
SNY				AP		11 49 00.2	
SNY				XP		11 49 05.4	
SNY				S	**S**	**11 52 40.4**	**+1.1**
SNY				AMB	AMB		
	comp=Z,80nm,1.3s						
SNY				AMB	AMB		
	comp=Z,190nm,14.7s						
SNY				LR	LR		
	comp=N,460nm,13.8s						
SNY				LR	LR		
	comp=E,240nm,19.8s						
SNY				LR	LR		
	comp=Z,520nm,16.2s,MS4.0						
CLNS	**Chul'man**	**20.81**	**315**	*e*P	**P**	**11 48 52.5**	**-2.1**
CLNS				*e*		11 49 05.6	
CLNS				*e*PPP	PPP	11 49 13.5	-13
CLNS				*e*S	**S**	**11 52 37.2**	**-2.2**
CLNS				*e*		11 52 59.1	
CLNS				*e*SS	SS	11 53 10.0	-2.6
CLNS				pmax	pmax		
	comp=Z,63nm,0.9s						
CLNS				pmax	pmax		
	comp=N,29nm,1.1s						
CLNS				pmax	pmax		
	comp=E,26nm,1.0s						
CLNS				smax			
	comp=N,15nm,1.0s						
CLNS				smax			
	comp=Z,8.0nm,1.0s						
CLNS				smax			
	comp=E,31nm,1.3s						
CLNS				MLR	MLR		
	comp=N,200nm,12.0s,MS4.2						
CLNS				MLR	MLR		
	comp=E,600nm,12.0s,MS4.2						
CLNS				MLR	MLR		
	comp=Z,600nm,12.0s,MS4.2						
YAK	**Yakutsk**	**21.66**	**331**	*e*P	**P**	**11 49 00.5**	**-2.6**
	comp=Z,162nm,0.7s,mb5.6						
YAK				*e*S	**S**	**11 52 54.8**	**-0.5**
YAK	**Yakutsk**	**21.66**	**331**	*c* *i*P	**P**	**11 49 00.5**	**-2.6**
YAK				pmax	pmax		
	comp=Z,124nm,0.8s,mb5.4						
YAK				MLR	MLR		
	comp=Z,700nm,20.0s,MS4.1						
HIA	**Hailar**	**22.33**	**293**	*e*P	**P**	**11 49 05.7**	**-4.1**
	comp=Z,37nm,1.1s,mb4.7						
HIA	**Hailar**	**22.33**	**293**	*e*P	**P**	**11 49 05.7**	**-4.1**
HIA				pmax	pmax		
	comp=Z,37nm,1.1s						
DL2	**Dalian**	**23.24**	**266**	P	**P**	**11 49 20.9**	**+2.2**
DL2				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.8						
DL2				AMB	AMB		
	comp=Z,280nm,8.0s						
DL2				LR	LR		
	comp=N,150nm,13.7s,MS3.8						
DL2				LR	LR		
	comp=E,200nm,14.2s,MS3.8						
DL2				LR	LR		
	comp=Z,260nm,16.2s,MS3.8						
BILL	**Bilibino**	**24.58**	**13**	*e*P	**P**	**11 49 31.8**	**+0.3**
	comp=Z,52nm,1.0s,mb5.0						
BILL	**Bilibino**	**24.58**	**13**	*d* *i*P	**P**	**11 49 31.8**	**+0.3**
BILL				pmax	pmax		
	comp=Z,41nm,1.0s,mb4.9						
BILL				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.3						
JOW	**Kunigami**	**26.05**	**235**	P	**P**	**11 49 45.1**	**-0.6**
	comp=Z,40nm,0.8s,mb5.0,baz=55,slow=9.0,SNR=13						
CIT	**Chita**	**26.29**	**300**	*e*P	**P**	**11 49 46.1**	**-1.6**
CIT				*e*		11 54 16.7	
CIT				pmax	pmax		
	comp=Z,142nm,1.6s,mb5.2						
BOD	**Bodaibo**	**26.72**	**313**	*e*P	**P**	**11 49 48.5**	**-3.2**
BOD				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.5						
SSE	**Sheshan**	**27.62**	**251**	P	**P**	**11 49 56.9**	**-3.2**
SSE				AP	pP	11 50 07.8	-4.0
SSE				XP	sP	11 50 12.6	-4.6
SSE				S	**S**	**11 54 34.8**	**-2.2**
SSE				XS		11 54 53.8	
SSE				SCP		11 56 51.8	
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
SSE				AMB	AMB		
	comp=Z,20nm,3.4s						
SSE				LR	LR		
	comp=N,170nm,16.3s,MS3.8						
SSE				LR	LR		
	comp=E,130nm,16.1s,MS3.8						
SSE				LR	LR		
	comp=Z,270nm,13.9s,MS4.0						
TIA	**Tai'an**	**27.64**	**264**	*e*P	**P**	**11 50 00.9**	**+0.6**
TIA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
NJ2	**Nanjing**	**28.64**	**255**	*e*P	**P**	**11 50 07.0**	**-2.3**
NJ2				AP	pP	11 50 18.8	-2.1
NJ2				XP	sP	11 50 23.9	-2.5
NJ2				PP	PP	11 51 00.1	-2.4
NJ2				S	**S**	**11 54 50.0**	**-3.3**
NJ2				XS		11 55 11.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,280nm,5.2s						
NJ2				LR	LR		
	comp=N,370nm,18.4s,MS4.1						
NJ2				LR	LR		
	comp=E,170nm,18.8s,MS4.1						
NJ2				LR	LR		
	comp=Z,460nm,19.9s,MS4.1						
TIXI	**Tiksi**	**29.23**	**345**	*c* *i*P	**P**	**11 50 11.4**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,31nm,1.7s,mb4.8						
HHC	**Hu-ho-hao-te**	**29.66**	**277**	*e*P	**P**	**11 50 20.8**	**+2.5**
HHC				AP	pP	11 50 32.5	+2.4
HHC				XP	sP	11 50 38.0	+2.4
HHC				PCP	PcP	11 53 20.9	-1.1
HHC				SCP		11 56 58.2	
HHC				PCS		11 57 03.1	
HHC				SCS	ScS	12 00 52.4	-0.1
HHC				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
HHC				LR	LR		
	comp=N,760nm,18.0s,MS4.5						
HHC				LR	LR		
	comp=E,650nm,17.0s,MS4.5						
HHC				LR	LR		
	comp=Z,640nm,17.0s,MS4.3						
BTO	**Baotou**	**30.84**	**277**	*e*P	**P**	**11 50 29.5**	**+0.7**
BTO				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.3						
SONM	**Songino Array**	**31.29**	**292**	P	**P**	**11 50 31.6**	**-1.0**
	comp=Z,7.5nm,0.8s,mb4.6,baz=68,slow=7.2,SNR=20						
SONM				PcP	PcP	11 53 25.2	-1.0
	comp=Z,2.5nm,0.6s,baz=123,slow=1.8,SNR=4.3						
SONM				LR	LR	12 04 40.1	
	comp=Z,490nm,19.4s,MS4.2,baz=64,slow=39						
SONM	**Songino Array**	**31.29**	**292**	P	**P**	**11 50 31.6**	**-1.0**
SONM						11 53 25.2	
SONM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,490nm,19.4s						
WHN	**Wuhan**	**32.64**	**257**	P	**P**	**11 50 45.6**	**+0.9**
KDAK	**Kodiak Island**	**36.06**	**49**	P	**P**	**11 51 11.8**	**-1.9**
	comp=Z,69nm,0.7s,mb5.7,baz=286,slow=5.4,SNR=40						
ENH	**Enshi**	**36.21**	**261**	*e*P	**P**	**11 51 13.5**	**-1.7**
	comp=Z,9.2nm,0.8s,mb4.8						
ENH				*e*PcP	PcP	11 53 39.4	-0.9
LZH	**Lanzhou**	**37.16**	**274**	*e*P	**P**	**11 51 24.5**	**+1.4**
LZH				AP	pP	11 51 32.0	-3.2
LZH				XP	sP	11 51 35.1	-5.6
LZH				PP	PP	11 52 48.0	-2.7
LZH				*e*S	**S**	**11 57 08.6**	**+2.5**
LZH				XS		11 57 20.5	
LZH				SS	SS	11 59 33.6	-4.6
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,90nm,5.6s						
LZH				LR	LR		
	comp=E,630nm,13.6s						
LZH				LR	LR		
	comp=Z,880nm,17.5s,MS4.6						
PMR	**Palmer**	**37.67**	**42**	*e*P	**P**	**11 51 26.9**	**-0.2**
	comp=Z,66nm,1.2s,mb5.2						
PMR				LR	LR		
	comp=Z,500nm,17.0s,MS4.4						
PMR	**Palmer**	**37.67**	**42**	*e*P	**P**	**11 51 26.9**	**-0.2**
PMR				pmax	pmax		
	comp=Z,66nm,1.2s,mb5.2						
PMR				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.4						
MCK	**McKinley**	**37.76**	**39**	*e*P	**P**	**11 51 27.4**	**-0.5**
	comp=Z,17nm,1.2s,mb4.6						
MCK				*e*PcP	PcP	11 53 43.0	-1.7
MCK	**McKinley**	**37.76**	**39**	*e*P	**P**	**11 51 27.5**	**-0.4**
MCK				*e*		11 53 43.0	
MCK				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.7						
SML	**Sawmill**	**38.04**	**42**	*e*P	**P**	**11 51 29.9**	**-0.4**
KRAR	**Krasnoyarsk**	**38.19**	**309**	*e*P	**P**	**11 51 28.8**	**-2.8**
KRAR				*e**PP	pP	11 51 39.8	-3.8
KRAR				*e**SP	sP	11 51 45.1	-4.0
KRAR				*e*S	**S**	**11 57 19.5**	**-2.1**
COLA	**College**	**38.27**	**37**	*e*P	**P**	**11 51 32.3**	**+0.2**
	comp=Z,52nm,1.1s,mb5.2						
COLA	**College**	**38.27**	**37**	*d* *i*P	**P**	**11 51 32.1**	**0.0**
GTA	**Gaotai**	**38.51**	**281**	⇑P	**P**	**11 51 35.6**	**+1.2**
GTA				PP	PP	11 53 08.7	+2.2
GTA				PCP	PcP	11 53 47.4	+0.2
GTA				S	**S**	**11 57 24.9**	**-1.7**
GTA				SCP		11 57 31.9	
GTA				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.2						
GTA				AMB	AMB		
	comp=Z,160nm,4.9s						
GTA				LR	LR		
	comp=N,600nm,16.4s,MS4.6						
GTA				LR	LR		
	comp=E,400nm,16.7s,MS4.6						
GTA				LR	LR		
	comp=Z,340nm,16.0s,MS4.3						
ILAR	**Eielson Array**	**38.68**	**37**	P	**P**	**11 51 34.8**	**-0.8**
	comp=Z,16nm,1.1s,mb4.7,baz=251,slow=7.3,SNR=62						
ILAR				PcP	PcP	11 53 44.7	-2.8
	comp=Z,3.3nm,0.6s,baz=277,slow=2.8,SNR=8.2						
ILAR	**Eielson Array**	**38.68**	**37**	P	**P**	**11 51 34.8**	**-0.7**
ILAR						11 53 44.7	
ILAR				pmax	pmax		
	comp=Z,16nm,1.1s						
DIV	**Divide**	**39.31**	**43**	*e*P	**P**	**11 51 40.6**	**-0.1**
	comp=Z,144nm,1.0s,mb5.7						
CD2	**Chengdu**	**39.91**	**267**	*e*P	**P**	**11 51 46.1**	**0.0**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
GYA	**Guiyang**	**40.48**	**259**	⇑*i*P	**P**	**11 51 51.1**	**+0.2**
GYA				PCP	PcP	11 53 54.0	+0.4
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,350nm,4.8s						
DAWY	**Dawson**	**41.96**	**38**	*e*P	**P**	**11 52 02.9**	**+0.3**
ZAL	**Zalesovo**	**43.18**	**307**	P	**P**	**11 52 11.6**	**-1.1**
	comp=Z,4.3nm,0.7s,mb4.3,baz=35,slow=7.2,SNR=17						
ZAL				PcP	PcP	11 54 01.5	-0.6
	comp=Z,4.9nm,0.7s,baz=39,slow=5.3,SNR=5.9						
ZAL				LR	LR	12 12 18.3	
	comp=Z,488nm,18.4s,MS4.4,baz=62,slow=39						
ZAL	**Zalesovo**	**43.18**	**307**	P	**P**	**11 52 11.6**	**-1.1**
ZAL						11 54 01.5	
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZAL				MLR	MLR		
	comp=Z,489nm,18.4s						
NVS	**Novosibirsk**	**43.81**	**309**	*i* P	**P**	**11 52 15.9**	**-1.8**
NVS				pmax	pmax		
	comp=E,30nm,1.6s						
INK	**Inuvik**	**43.84**	**31**	*e*P	**P**	**11 52 17.8**	**0.0**
	comp=E,49nm,0.8s,mb5.3						
INK	**Inuvik**	**43.84**	**31**	*e*P	**P**	**11 52 17.8**	**0.0**
INK				pmax	pmax		
	comp=Z,49nm,0.8s						
KMI	**Kunming**	**44.07**	**261**	P	**P**	**11 52 20.9**	**+0.7**
KMI				AP	pP	11 52 32.0	-0.4
KMI				PP	PP	11 54 04.8	+0.1
KMI				PPP	PPP	11 54 41.9	-1.2
KMI				S	**S**	**11 58 47.8**	**-1.3**
KMI				XS		11 59 06.5	
KMI				SS	SS	12 01 56.2	-2.6
KMI				SSS	SSS	12 02 49.2	-5.5
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
KMI				LR	LR		
	comp=N,210nm,16.7s,MS4.3						
KMI				LR	LR		
	comp=E,230nm,17.7s,MS4.3						
KMI				LR	LR		
	comp=Z,350nm,17.7s,MS4.3						
WMQ	**Urumqi**	**44.92**	**293**	⇑*i*P	**P**	**11 52 28.2**	**+1.4**
WMQ				AP	pP	11 52 40.8	+1.8
WMQ				XP	sP	11 52 46.2	+1.9
WMQ				PCP	PcP	11 54 09.2	+1.0
WMQ				PP	PP	11 54 14.6	+1.6
WMQ				SCP		11 57 56.5	
WMQ				PCS		11 58 01.7	
WMQ				S	**S**	**11 59 02.7**	**+1.6**
WMQ				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,380nm,4.5s						
WMQ				LR	LR		
	comp=N,230nm,17.0s,MS4.2						
WMQ				LR	LR		
	comp=E,160nm,19.2s,MS4.2						
WMQ				LR	LR		
	comp=Z,220nm,18.7s,MS4.1						
MKAR	**Makanchi Array**	**47.17**	**299**	P	**P**	**11 52 44.8**	**+0.2**
	comp=Z,25nm,0.8s,mb5.2,baz=70,slow=7.7,SNR=176						
MKAR				PcP	PcP	11 54 15.2	-0.8
	comp=Z,3.2nm,0.6s,baz=178,slow=0.5,SNR=4.4						
MKAR				LR	LR	12 14 10.8	
	comp=Z,722nm,18.3s,MS4.7,baz=65,slow=38						
MKAR	**Makanchi Array**	**47.17**	**299**	P	**P**	**11 52 44.8**	**+0.2**
MKAR						11 54 15.2	
MKAR				pmax	pmax		
	comp=Z,25nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,722nm,18.3s						
DLBC	**Dease Lake**	**47.63**	**44**	⇓*e*P	**P**	**11 52 49.5**	**+1.4**
KURK	**Kurchatov**	**47.83**	**305**	*e*P	**P**	**11 52 48.9**	**-0.8**
	comp=Z,58nm,0.9s,mb5.6						
KURK	**Kurchatov**	**47.83**	**305**	*c* *i*P	**P**	**11 52 49.3**	**-0.4**
LSA	**Lhasa**	**49.58**	**274**	*e*P	**P**	**11 53 03.6**	**+0.2**
	comp=Z,9.8nm,0.6s,mb5.0						
LSA	**Lhasa**	**49.58**	**274**	*e*P	**P**	**11 53 03.6**	**+0.1**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
CHKZ	**Chkalovo**	**51.14**	**311**	*e*P	**P**	**11 53 13.2**	**-1.8**
	comp=Z,25nm,0.8s,mb5.2						
CHKZ				*e*	pP	11 53 26.5	-0.8
CHKZ	**Chkalovo**	**51.14**	**311**	P	**P**	**11 53 13.6**	**-1.4**
CHKZ				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
SHL	**Shillong**	**51.50**	**269**	*e*P	**P**	**11 53 17.7**	**-0.4**
SHL				*e*x	x	11 53 30.0	
BVA0	**Borovoye Array**	**51.54**	**310**	*i* P	**P**	**11 53 17.8**	**-0.2**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	**Borovoye Array**	**51.54**	**310**	P	**P**	**11 53 16.9**	**-1.1**
	baz=52,slow=7.8						
BVAR				PcP	PcP	11 54 31.1	-0.7
	comp=Z,7.6nm,0.6s,baz=105,slow=2.9,SNR=9.0						
BRVK	**Borovoye**	**51.58**	**310**	*e*P	**P**	**11 53 17.9**	**-0.4**
	comp=Z,12nm,0.8s,mb4.9						
BRVK	**Borovoye**	**51.58**	**310**	*e*P	**P**	**11 53 17.9**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
YKW3	**Yellowknife Ar**	**53.04**	**35**	*e*P	**P**	**11 53 28.6**	**-0.5**
YKA	**Yellowknife Ar**	**53.07**	**35**	P	**P**	**11 53 28.7**	**-0.7**
	comp=Z,14nm,0.7s,mb5.0,baz=292,slow=7.0,SNR=28						
YKA				PcP	PcP	11 54 36.4	-0.9
	comp=Z,6.1nm,0.8s,baz=304,slow=4.0,SNR=8.3						
YKA	**Yellowknife Ar**	**53.07**	**35**	P	**P**	**11 53 28.7**	**-0.7**
YKA				PcP	PcP	11 54 36.4	-0.9
YKA	**Yellowknife Ar**	**53.07**	**35**	P	**P**	**11 53 28.7**	**-0.7**
YKA						11 54 36.4	
YKA				pmax	pmax		
	comp=Z,14nm,0.7s						
ULHL	**Ulahol**	**53.10**	**296**	P	**P**	**11 53 30.9**	**+1.0**
	SNR=19						
TKM2	**Tokmak 2**	**53.17**	**297**	P	**P**	**11 53 31.1**	**+0.7**
	SNR=11						
USP	**Ospenovka**	**53.69**	**298**	P	**P**	**11 53 35.2**	**+0.9**
	SNR=14						
KZA	**Kyzart**	**53.82**	**296**	P	**P**	**11 53 36.7**	**+1.5**
	SNR=37						
FRU	**Bishkek**	**53.84**	**297**	*e*P	**P**	**11 53 36.0**	**+0.7**
FRU				*e*	pP	11 53 48.0	+0.2
FRU				pmax	pmax		
	comp=Z,40nm,2.0s,mb5.0						
AAK	**Ala-Archa**	**54.02**	**297**	P	**P**	**11 53 37.9**	**+1.3**
	SNR=10.0						
AAK	**Ala-Archa**	**54.02**	**297**	*e*P	**P**	**11 53 36.1**	**-0.5**
	comp=Z,15nm,0.8s,mb5.0						
AAK	**Ala-Archa**	**54.02**	**297**	*e*P	**P**	**11 53 36.1**	**-0.6**
AAK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
PMG	**Port Moresby**	**54.02**	**186**	LR	LR	12 11 54.3	
	comp=Z,74nm,21.3s,MS3.7,baz=52,slow=31						
HNR	**Honiara**	**54.36**	**170**	LR	LR	12 15 03.9	
	comp=Z,159nm,18.4s,MS4.1,baz=303,slow=34						
GUN	**Gumba**	**54.37**	**276**	*e*P	**P**	**11 53 39.3**	**-0.1**
	comp=Z,85nm,0.9s,mb5.7						
KBS	**Kingsbay**	**54.40**	**351**	*e*P	**P**	**11 53 38.8**	**-0.3**
	comp=Z,140nm,1.3s,mb5.7						
KBS				*e*	pP	11 53 51.6	+0.1
KBS	**Kingsbay**	**54.40**	**351**	*e*P	**P**	**11 53 38.8**	**-0.2**
KBS				*e*	pP	11 53 51.6	+0.1
KBS				pmax	pmax		
	comp=Z,140nm,1.3s,mb5.7						
EKS2	**Erkin-Say**	**54.46**	**297**	P	**P**	**11 53 40.8**	**+0.9**
	SNR=18						
KSH	**Kashi**	**54.68**	**293**	*e*P	**P**	**11 53 41.5**	**-0.1**
KSH				*e*AP	pP	11 53 53.1	-0.9
KSH				*e*XP	sP	11 53 58.0	-1.2
KSH				*e*PCP	PcP	11 54 44.2	+0.4
KSH				*e*PP	PP	11 55 44.0	-1.8
KSH				*e*PPP	PPP	11 56 56.1	-2.0
KSH				*e*SCP		11 58 36.0	
KSH				*e*PCS		11 58 41.3	
KSH				*e*S	**S**	**12 01 14.7**	**-2.1**
KSH				*e*PS	PS	12 01 31.2	-2.9
KSH				*e*XS		12 01 35.1	
KSH				*e*SCS	ScS	12 03 22.1	-1.3
KSH				*e*SS	SS	12 04 56.0	-3.7
KSH				LR	LR		
	comp=N,570nm,5.2s						
KSH				LR	LR		
	comp=E,600nm,5.3s						
AML	**Almayashu**	**54.78**	**297**	P	**P**	**11 53 43.8**	**+1.5**
	SNR=22						
KKN	**Kakani**	**54.86**	**276**	*e*P	**P**	**11 53 43.3**	**+0.3**
	comp=E,96nm,0.9s,mb5.8						
PKI	**Pulchoki**	**54.90**	**276**	*e*P	**P**	**11 53 43.2**	**-0.1**
	comp=E,85nm,1.2s,mb5.7						
DMN	**Daman**	**55.09**	**276**	*e*P	**P**	**11 53 45.0**	**+0.3**
	comp=E,65nm,0.8s,mb5.7						
GKN	**Gorkha**	**55.19**	**277**	*e*P	**P**	**11 53 45.2**	**-0.2**
	comp=E,100nm,1.0s,mb5.8						
ARU	**Arti**	**55.98**	**318**	*e*P	**P**	**11 53 49.2**	**-1.4**
	comp=E,29nm,0.7s,mb5.4						
ARU	**Arti**	**55.98**	**318**	⇑*i*P	**P**	**11 53 49.5**	**-1.1**
ARU				*e*		11 55 54.3	
ARU				*e*PPP	PPP	11 57 06.5	-6.7
ARU				*e*S	**S**	**12 01 36.1**	**+2.3**
ARU				*e*SS	SS	12 05 22.9	+2.8

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ARU                                     pmax      pmax
          comp=Z,28nm,1.2s,mb5.2
KOLN  Koldanda            56.07 277  eP        P          11 53 51.5  -0.2
          comp=Z,86nm,1.1s,mb5.7
KKAR  Karatay Array       56.28 299  i P       P          11 53 53.0   0.0
KKAR                                    pmax      pmax
          comp=Z,8.0nm,0.7s,mb4.9
JCW   Jim Creek           56.42  53   P        P          11 53 53.4  -0.6
KSM   Kuching             56.57 233  eP        P          11 53 54.8  -0.7
BOK   Bokaro              56.87 272  eP        P          11 53 55.2  -2.4
BOK                                     AMb       AMB     11 54 01.4
          comp=Z,15nm,1.0s,mb5.0
PTH   Pithoragarh         57.39 281  eP        P          11 54 01.3  +0.2
NLW   Nelson Butte        57.39  53   P        P          11 54 00.3  -0.5
EBG   Ellensburg          57.89  54   P        P          11 54 04.3   0.0
SSOR  Sweet Springs       57.89  57   P        P          11 54 04.9  +0.5
EPH   Ephrata             58.20  53   P        P          11 54 05.5  -1.0
VFP   Flag Point          58.23  56   P        P          11 54 07.0  +0.2
EDM   Edmonton            58.35  45  eP        P          11 54 06.2  -1.3
EDM                                  epP       pP         11 54 19.6  -0.5
BRVW  Black Rock Val      58.45  54   P        P          11 54 08.3  +0.1
VGB   Gordon Butte        58.53  55   P        P          11 54 09.0  +0.2
SMLA  Simla               58.58 284  eP        P          11 54 06.6  -2.8
SMLA                                    AMb       AMB     11 54 13.0
          comp=Z,178nm,1.6s,mb5.9
DAG   Danmarks Havn       58.66 357⇓iP        P          11 54 08.3  -1.1
          comp=Z,10.0nm,1.0s,mb4.8
DAG   Danmarks Havn       58.66 357⇓eP        P          11 54 08.3  -1.1
          comp=Z,10.0nm,1.0s,mb4.8
DAG   Danmarks Havn       58.66 357⇓eP        P          11 54 08.3  -1.1
DAG                                     pmax      pmax
          comp=Z,10.0nm,1.0s,mb4.8
CROR  Criterion Ridg      58.70  56   P        P          11 54 10.0   0.0
WRD   Warden              58.76  53   P        P          11 54 09.0  -1.5
HAWA  Hanford             58.77  54  eP        P          11 54 10.0  -0.5
          comp=Z,3.1nm,1.1s,mb4.2
PRW   Prosser             58.78  54   P        P          11 54 10.8  +0.2
THN   Thein Dam           58.81 286  eP        P          11 54 10.0  -1.0
H2OWA Water               58.83  54   P        P          11 54 10.6  -0.3
VTHM  Trough              58.84  56   P        P          11 54 11.0   0.0
KTRM  Thompson Ridge      58.96  60   P        P          11 54 12.4  +0.5
KEV   Kevo                59.00 341  ep        P          11 54 10.9  -0.9
          comp=Z,24nm,0.7s,mb5.3
KEV   Kevo                59.00 341  eP        P          11 54 10.9  -0.9
KEV                                     pmax      pmax
          comp=Z,24nm,0.7s,mb5.3
NEW   Newport             59.09  51  eP        P          11 54 11.6  -1.1
          comp=Z,35nm,1.0s,mb5.3
NEW   Newport             59.09  51  eP        P          11 54 11.6  -1.1
NEW                                     pmax      pmax
          comp=Z,35nm,1.0s
AB31  Akbulak array       59.11 310  i P       P          11 54 12.7  -0.2
AB31                                    pmax      pmax
          comp=Z,8.0nm,0.5s,mb5.0
VIPM  Ingram Point        59.18  56   P        P          11 54 13.4   0.0
KULM  Kulim               59.44 244  eP        P          11 54 15.2  -0.4
YBH   Yreka Blue Hor      59.47  60  eP        P          11 54 15.4  -0.1
          comp=Z,20nm,0.8s,mb5.2
AKTO  Aktyubinsk          59.49 312   P        P          11 54 15.1  -0.3
AKTO                                    pmax      pmax
          comp=Z,8.0nm,1.4s,mb4.6
ARCES ARCESS Array B      59.52 341   P        P          11 54 14.5  -0.9
          comp=Z,20nm,0.9s,mb5.2,baz=11,slow=6.2,SNR=13
ARCES                                   LR        LR      12 23 11.3
          comp=Z,145nm,19.1s,MS4.1,baz=274,slow=39
ARCES ARCESS Array B      59.52 341   P        P          11 54 14.5  -0.9
ARCES                                   LR        LR      12 23 11.3
ARCES ARCESS Array B      59.52 341   P        P          11 54 14.5  -0.9
ARCES                                   pmax      pmax
          comp=Z,20nm,0.9s
ARCES                                   MLR       MLR
          comp=Z,145nm,19.1s
ARE0  ARCESS Array S      59.52 341  eP        P          11 54 14.4  -1.0
KAKA  Kakadu              59.81 202⇓iP        P          11 54 33.9  +16
          comp=Z,33nm,0.8s,mb5.4
LHEM  Herd Peak           59.83  60   P        P          11 54 18.2  +0.2
NDI   New Delhi           60.01 282  eP        P          11 54 18.0  -1.3
NDI                                     AMb       AMB     11 54 25.6
          comp=Z,67nm,0.8s,mb5.7
KCPM  Cahto Peak          60.09  62  eP        P          11 54 19.8  +0.1
WDC   Whiskeytown Da      60.23  61  eP        P          11 54 20.3  -0.4
          comp=Z,36nm,1.1s,mb5.3
WDC   Whiskeytown Da      60.23  61  eP        P          11 54 20.3  -0.4
WDC                                     pmax      pmax
          comp=Z,36nm,1.1s,mb5.3
ORR   Orenburg            60.50 315⇑iP        P          11 54 22.4  +0.1
ORR                                     pmax      pmax
          comp=Z,20nm,1.0s,mb5.1
BLSP  Bilaspur            60.60 273  eP        P          11 54 24.1  +0.7
BLSP                                    AMb       AMB     11 54 26.2
          comp=Z,16nm,0.5s,mb5.4
BLSP                                 ex        x          11 59 11.3
BMO   Blue Mountains      60.93  54  eP        P          11 54 24.9  -0.4
          comp=Z,16nm,0.8s,mb5.2
KLMR  Klimovskoe          61.44 329c iP        P          11 54 28.2  -0.4
KLMR                                 eS        S          12 02 49.1  +4.4
KLMR                                    pmax      pmax
          comp=Z,50nm,1.5s,mb5.4
KLMR                                    smax
          comp=E,1µm,5.1s
WVOR  Wild Horse Val      61.55  57  eP        P          11 54 28.6  -0.9
          comp=E,39nm,1.0s,mb5.5
WVOR  Wild Horse Val      61.55  57  eP        P          11 54 28.6  -1.0
WVOR                                    pmax      pmax
          comp=Z,39nm,1.0s,mb5.5
OHCM  Honcut              61.61  62  eP        P          11 54 29.0  -1.0
MSO   Missoula            61.68  51  eP        P          11 54 29.6  -0.8
          comp=Z,30nm,0.9s,mb5.4
MSO                                  epP       pP         11 54 42.9  -0.1
CHMT  Chamberlain Mo      62.02  51  eP        P          11 54 31.6  -1.0
SUMG  Summit              62.80   4  eP        P          11 54 37.5  -0.1
          comp=Z,58nm,0.9s,mb5.7
JOF   Joensuu             62.81 334  ep        P          11 54 36.5  -1.2
          comp=Z,16nm,0.7s,mb5.3
HRY   Holter Researc      62.92  50  eP        P          11 54 38.0  -0.7
CMB   Columbia Colle      63.08  62  eP        P          11 54 39.0  -0.8
          comp=Z,50nm,1.3s,mb5.5
CMB                                  ePcP      PcP        11 55 15.9  -1.2
CMB   Columbia Colle      63.08  62  eP        P          11 54 39.0  -0.8
CMB                                  e                    11 55 15.9
CMB                                     pmax      pmax
          comp=Z,50nm,1.3s,mb5.5
HLID  Hailey              63.37  54  eP        P          11 54 41.4  -0.3
          comp=Z,18nm,0.9s,mb5.2
LRV   Little Rabbit       63.64  64  eP        P          11 54 43.0  -0.6
BOZ   Bozeman (W)         63.68  51  eP        P          11 54 43.5  -0.1
          comp=Z,20nm,0.6s,mb5.3
BOZ   Bozeman (W)         63.68  51  eP        P          11 54 43.5  -0.1
BOZ                                     pmax      pmax
          comp=Z,20nm,0.6s,mb5.3
NVAR  Mina Array Bea      64.14  61   P        P          11 54 46.7   0.0
          comp=Z,25nm,0.7s,mb5.3,baz=299,slow=5.5,SNR=187
NVAR                                    PcP       PcP     11 55 21.1  -0.2
          comp=Z,7.6nm,0.9s,baz=292,slow=2.1,SNR=4.8
NVAR  Mina Array Bea      64.14  61   P        P          11 54 46.7   0.0
NVAR                                    PcP       PcP     11 55 21.1  -0.2
MNV   Mina                64.23  61  eP        P          11 54 46.9  -0.4
          comp=Z,23nm,1.0s,mb5.2
MNV   Mina                64.23  61  eP        P          11 54 46.9  -0.4
MNV                                     pmax      pmax
          comp=Z,23nm,1.0s,mb5.2
PTRM  Twissleman Ran      64.63  64  eP        P          11 54 49.5  -0.5
MTUM  Tungsten Hills      64.64  62  eP        P          11 54 49.8  -0.2
GCMT  Greycliff           64.67  50  eP        P          11 54 49.9  -0.1
CTA   Charters Tower      64.68 186   P        P          11 54 48.7  -1.8
          comp=Z,5.6nm,0.9s,mb4.6,baz=351,slow=8.1,SNR=3.2
KAF   Kangasniemi         64.96 335  ep        P          11 54 50.4  -1.2
          comp=Z,22nm,0.8s,mb5.2,baz=36,slow=6.0
KAF   Kangasniemi         64.96 335  eP        P          11 54 50.4  -1.2
KAF                                     pmax      pmax
          comp=Z,23nm,0.8s,mb5.3
TPH   Tonopah             65.03  61  eP        P          11 54 52.1  -0.4
          comp=Z,61nm,1.1s,mb5.5
TPH   Tonopah             65.03  61  eP        P          11 54 52.1  -0.4
TPH                                     pmax      pmax
          comp=Z,61nm,1.1s,mb5.5
SCO   Scoresbysund        65.05 358  i P       P          11 54 52.1   0.0
          comp=Z,17nm,0.8s,mb5.1
SCO   Scoresbysund        65.05 358  i P       P          11 54 52.1   0.0
SCO                                     pmax      pmax
          comp=Z,17nm,0.8s,mb5.1
RRI2  Red Ridge           65.28  53  eP        P          11 54 54.5  +0.5
          comp=Z,56nm,0.8s,mb5.7
RRI2                                 epP       pP         11 55 07.6  +0.8
MOOW  Moose Ponds         65.35  52  eP        P          11 54 54.4   0.0
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          comp=Z,34nm,1.1s,mb5.3
TPAW  Teton Pass          65.39  53  eP        P          11 54 55.5  +0.7
          comp=Z,70nm,0.9s,mb5.7
HVU   Hansel Valley       65.42  55  eP        P          11 54 54.7  -0.2
          comp=Z,22nm,0.9s,mb5.2
HVU   Hansel Valley       65.42  55  eP        P          11 54 54.7  -0.2
HVU                                     pmax      pmax
          comp=Z,22nm,0.9s,mb5.2
LOHW  Long Hollow         65.51  52  eP        P          11 54 55.8  +0.3
          comp=Z,19nm,0.8s,mb5.2
LOHW                                 epP       pP         11 55 08.4  +0.1
SNOW  Snow King Moun      65.52  53  eP        P          11 54 56.2  +0.6
          comp=Z,51nm,1.1s,mb5.5
FINES FINESS Array B      65.54 335   P        P          11 54 54.8  -0.6
          comp=Z,27nm,0.6s,mb5.5,baz=35,slow=7.6,SNR=66
FINES                                   LR        LR      12 26 15.8
          comp=Z,229nm,18.6s,MS4.4,baz=352,slow=38
MOS   Moscow              65.67 326  eP        P          11 55 04.8  +8.5
MOS                                     pmax      pmax
          comp=Z,36nm,0.9s,mb5.4
DGMT  Dagmar              65.83  45  eP        P          11 54 56.8  -0.7
          comp=Z,27nm,1.0s,mb5.2
SPUT  South Promonto      65.90  55  eP        P          11 54 57.9  -0.1
DAC   Darwin (Calif)      65.91  62  eP        P          11 54 57.3  -0.9
          comp=Z,9.8nm,0.7s,mb5.0
DAC   Darwin (Calif)      65.91  62  eP        P          11 54 57.3  -0.9
DAC                                     pmax      pmax
          comp=Z,10.0nm,0.7s,mb5.0
LAO   LASA Array          65.94  48  eP        P          11 54 58.1  -0.1
          comp=Z,46nm,1.0s,mb5.5
HYB   Hyderabad           66.21 271  i P       P          11 55 00.0  -0.4
HYB   Hyderabad           66.21 271  eP        P          11 55 00.0  -0.4
HWUT  Hardware Ranch      66.23  55  eP        P          11 54 59.9  -0.2
          comp=Z,29nm,1.0s,mb5.3
WRAB  Tennant Creek       66.29 198  eP        P          11 54 58.8  -2.0
          comp=Z,29nm,1.0s,mb5.3
WRAB  Tennant Creek       66.29 198  eP        P          11 54 58.8  -2.0
WRAB                                    pmax      pmax
          comp=Z,29nm,1.0s,mb5.3
WB2   Warramunga Arr      66.30 198  eP        P          11 54 59.0  -1.9
WRA   Warramunga Arr      66.30 198   P        P          11 54 59.0  -1.9
          comp=Z,12nm,0.6s,mb5.1,baz=17,slow=6.9,SNR=70
WRA                                     PKPPKP            12 23 33.5
          comp=Z,4.0nm,0.8s,baz=197,slow=3.0,SNR=16
TPNV  Topopah Spring      66.34  61  eP        P          11 55 00.5  -0.4
          comp=Z,42nm,1.0s,mb5.4
TPNV  Topopah Spring      66.34  61  eP        P          11 55 00.5  -0.4
TPNV                                    pmax      pmax
          comp=Z,42nm,1.0s,mb5.4
DUG   Dugway              66.39  56  eP        P          11 55 00.8  -0.3
          comp=Z,32nm,0.9s,mb5.3
DUG                                  epP       pP         11 55 13.9   0.0
DUG   Dugway              66.39  56  eP        P          11 55 00.9  -0.2
DUG                                  e*PP      pP         11 55 13.9   0.0
DUG                                     pmax      pmax
          comp=Z,32nm,0.9s,mb5.3
NOQ   North Oquirrh       66.51  56  eP        P          11 55 01.4  -0.4
          comp=Z,78nm,1.2s,mb5.6
OBN   Obninsk             66.53 326c eP        P          11 55 01.5  -0.3
OBN                                  e*PP      pP         11 55 14.3  -0.3
OBN                                  eS        S          12 03 44.0  -3.8
OBN                                     pmax      pmax
          comp=Z,59nm,1.7s,mb5.3
OBN                                     MLR       MLR
          comp=Z,300nm,18.0s,MS4.5
TCUT  Toone Canyon        66.63  55  eP        P          11 55 02.5  -0.1
BW06  Boulder Array       66.64  52  eP        P          11 55 02.0  -0.7
          comp=Z,20nm,1.0s,mb5.1
PDAR  Pinedale Array      66.64  52   P        P          11 55 02.1  -0.6
          comp=Z,13nm,0.9s,mb5.0,baz=271,slow=2.3,SNR=81
CTU   Camp Tracy          66.70  55  eP        P          11 55 02.9  -0.2
          comp=Z,15nm,0.9s,mb5.0
FITZ  Fitzroy Crossi      66.94 207  eP        P          11 55 04.2  -0.7
          comp=Z,19nm,0.8s,mb5.2
FITZ  Fitzroy Crossi      66.94 207   P        P          11 55 04.3  -0.6
          baz=56,slow=2.2
NLU   North Lily Min      66.98  56  eP        P          11 55 04.7  -0.1
NLU                                  epP       pP         11 55 17.5  -0.2
DAU   Daniels Canyon      67.17  55  eP        P          11 55 06.3  +0.3
MPU   Maple Canyon        67.20  56  eP        P          11 55 06.1  -0.1
          comp=Z,26nm,1.0s,mb5.2
MPU                                  epP       pP         11 55 19.1   0.0
SFJD  Kangerlussuaq       67.31   9   LR       LR         12 27 49.0
          comp=Z,708nm,18.5s,MS4.9,baz=306,slow=39
ARUT  Antelope Range      67.54  59  eP        P          11 55 08.1  -0.3
VSU   Vasula              67.65 332  eP        P          11 55 09.3  +0.6
DZM   Mont Dzumac         67.75 165   LR       LR         12 22 37.9
          comp=Z,203nm,18.5s,MS4.4,baz=198,slow=34
MSU   Marysvale           67.84  57  eP        P          11 55 10.3   0.0
NEN   Nelson              68.04  61  eP        P          11 55 10.9  -0.7
SRU   San Rafael          68.44  56  eP        P          11 55 13.5  -0.5
          comp=Z,42nm,0.8s,mb5.5
SRU   San Rafael          68.44  56  eP        P          11 55 13.5  -0.5
SRU                                     pmax      pmax
          comp=Z,42nm,0.8s,mb5.5
ULM   Lac du Bonnet       68.63  40   P        P          11 55 13.7  -1.2
          comp=Z,4.7nm,0.7s,mb4.5,baz=298,slow=3.8,SNR=6.2
BAR   Barrett             68.78  65  eP        P          11 55 15.6  -0.6
POO   Poona               68.83 275  eP        P          11 55 16.5  -0.2
POO                                     AMb       AMB     11 55 20.8
          comp=Z,19nm,1.1s,mb4.9
POO                                  ex        x          11 58 43.9
KAD   Karad               69.40 274  eP        P          11 55 18.9  -1.4
KAD                                  ex        x          11 55 19.7
KAD                                     AMb       AMB     11 55 23.9
          comp=Z,17nm,1.8s,mb4.7
NB2   NORSAR Subarra      69.90 341   P        P          11 55 22.5  -0.1
          comp=Z,47nm,1.2s,mb5.3,baz=28,slow=6.2
NB2   NORSAR Subarra      69.90 341   P        P          11 55 22.5  -0.1
          baz=28,slow=6.2
NOA   NORSAR Array B      69.90 341   P        P          11 55 22.6  +0.1
          comp=Z,9.1nm,0.5s,mb4.9,baz=28,slow=6.4,SNR=25
NOA                                     LR        LR      12 30 32.3
          comp=Z,138nm,18.6s,MS4.2,baz=30,slow=40
ASPA  Alice Springs       70.00 198  eP        P          11 55 23.1  -0.7
NAO01 NORSAR Array S      70.15 341  eP        P          11 55 23.9  -0.2
          comp=Z,14nm,0.9s,mb4.9
NAO   NORSAR Subarra      70.18 341   P        P          11 55 22.5  -1.8
          comp=Z,47nm,1.2s,mb5.3
NAO   NORSAR Subarra      70.18 341   P        P          11 55 22.5  -1.8
NAO                                     pmax      pmax
          comp=Z,47nm,1.2s,mb5.3
WUAZ  Wupatki             70.27  59  eP        P          11 55 25.3   0.0
          comp=Z,19nm,0.9s,mb5.0
GOF   Gofitskoye          70.68 315⇑iP        P          11 55 27.0  -0.6
GOF                                     pmax      pmax
          comp=Z,45nm,1.3s,mb5.2
KIV   Kislovodsk          71.64 314  eP        P          11 55 33.7  +0.4
          comp=Z,24nm,0.8s,mb5.2
KIV   Kislovodsk          71.64 314d iP        P          11 55 33.3   0.0
KIV                                     pmax      pmax
          comp=Z,45nm,1.3s,mb5.2
KIV                                     MLR       MLR
          comp=Z,500nm,19.0s,MS4.8
MBWA  Marble Bar          71.83 212  eP        P          11 55 34.2  -0.7
          comp=Z,14nm,1.0s,mb4.8
ZEI   Tsey                71.84 313  eP        P          11 55 32.5  -2.1
ZEI                                  i *PP     pP         11 55 46.7  -0.8
ZEI                                     pmax      pmax
          comp=Z,19nm,1.3s,mb4.9
SDCO  Great Sand Dun      72.29  54  eP        P          11 55 37.1  -0.2
          comp=Z,6.5nm,0.8s,mb4.6
TUC   Tucson              72.77  62  eP        P          11 55 39.8  -0.4
          comp=Z,2.6nm,0.7s,mb4.3
TUC   Tucson              72.77  62  eP        P          11 55 39.8  -0.4
TUC                                     pmax      pmax
          comp=Z,3.0nm,0.7s,mb4.3
AKASG Malin Array Be      72.79 326   P        P          11 55 39.8  -0.1
          comp=Z,10nm,0.5s,mb5.0,baz=35,slow=6.3,SNR=28
AKASG Malin Array Be      72.79 326   P        P          11 55 39.8  -0.2
AKASG                                   pmax      pmax
          comp=Z,10.0nm,0.5s
GNI   Garni               73.22 310   LR       LR         12 32 28.1
          comp=Z,182nm,19.2s,MS4.4,baz=340,slow=40
GNI   Garni               73.22 310d iP        P          11 55 44.8  +2.0
GNI                                     pmax      pmax
          comp=Z,32nm,1.7s
SOC   Sochi               73.41 315  eP        P          11 55 44.7  +0.9
SOC                                  eS        S          12 05 01.3  -7.0
SOC                                  eSSS      SSS        12 13 01.7  -2.9
SOC                                     pmax      pmax
          comp=Z,18nm,0.7s,mb5.1
SOC                                     MLR       MLR
          comp=Z,277nm,16.0s,MS4.6
ANMO  Albuquerque         73.63  57  eP        P          11 55 45.3   0.0
          comp=Z,6.4nm,0.9s,mb4.5
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ANMO  Albuquerque         73.63  57d iP        P          11 55 45.6  +0.3
LPM   Los Pinos Moun      73.97  58  eP        P          11 55 46.8  -0.4
CBKS  Cedar Bluff         74.79  50  eP        P          11 55 50.2  -1.7
          comp=Z,34nm,1.2s,mb5.2
CBKS  Cedar Bluff         74.79  50  eP        P          11 55 50.2  -1.7
CBKS                                    pmax      pmax
          comp=Z,34nm,1.2s,mb5.2
SCHQ  Schefferville       75.53  22   P        P          11 55 55.2  -0.6
          comp=Z,3.7nm,0.9s,mb4.3,baz=342,slow=8.8,SNR=4.9
SCHQ  Schefferville       75.53  22   P        P          11 55 55.2  -0.6
KWP   Kalwaria            76.16 329  eP        P          11 56 00.9  +1.4
KWP   Kalwaria            76.16 329  eP        P          11 56 00.9  +1.5
BIDO  Bidbid              76.42 290  ⇑P        P          11 56 02.7  +1.2
WBK   Wadi Bani Khal      76.47 288  ⇑P        P          11 56 02.7  +0.9
CPRX  Cap Rock            76.51  57  eP        P          11 56 01.6  -0.2
MNTX  Cornudas Mount      76.53  59  eP        P          11 56 01.7  -0.2
          comp=Z,9.5nm,0.7s,mb4.8
OJC   Ojcow               76.71 331  eP        P          11 56 03.1  +0.5
STKA  Stephens Creek      76.79 189   P        P          11 56 03.1  -0.3
          comp=Z,4.8nm,0.6s,mb4.6,baz=342,slow=8.6,SNR=9.9
SMDO  Samad               76.79 289  ⇑P        P          11 56 04.6  +1.0
GDL2  Guadalupe Moun      76.79  58  eP        P          11 56 03.1  -0.3
BURAR Bucovina Array      76.84 326  ⇑P        P          11 56 04.3  +0.9
BURAR Bucovina Array      76.84 326  ⇑P        P          11 56 04.2  +0.9
STHS  Stebnicka Huta      76.87 329  i P       P          11 56 04.9  +1.4
STHS                                 e                    11 56 11.1
STHS  Stebnicka Huta      76.87 329  i P       P          11 56 04.8  +1.3
STHS                                 e                    11 56 10.4
MSL   Mosul               76.88 308  ex        x          11 56 10.5
KOLS  Kolonicke sedl      76.89 329  i P       P          11 56 04.5  +0.9
KOLS                                 epP       pP         11 56 17.7  +1.1
KOLS  Kolonicke sedl      76.89 329  eP        P          11 56 04.4  +0.8
KOLS                                 e         pP         11 56 17.4  +0.8
ASHO  Ashiyiah            77.01 292  ⇓P        P          11 56 05.3  +0.4
          SNR=5.8
CRVS  Cervenica-Dubn      77.22 329  eP        P          11 56 05.8  +0.3
CRVS  Cervenica-Dubn      77.22 329  eP        P          11 56 05.6  +0.1
JMDO  Jabal Madar         77.22 289   P        P          11 56 07.0  +1.0
          SNR=7.5
KSP   Ksiaz               77.36 333  eP        P          11 56 07.2  +1.0
KSP   Ksiaz               77.36 333  eP        P          11 56 06.8  +0.6
KSP                                  epP       pP         11 56 19.1  -0.1
BSY   Bisya               77.58 290   P        P          11 56 09.0  +1.0
          SNR=11
CFR   Carcaliu            77.59 323  ⇑P        P          11 56 07.2  -0.4
CFR   Carcaliu            77.59 323  ⇑P        P          11 56 07.2  -0.4
OKC   Ostrava-Krasne      77.61 331  eP        P          11 56 08.1  +0.5
ARQ   Araqi               77.62 290   P        P          11 56 09.1  +0.8
          SNR=8.0
VRI   Vrincioaia          77.63 324  ⇓P        P          11 56 09.9  +2.1
VRI   Vrincioaia          77.63 324  ⇓P        P          11 56 09.9  +2.1
UPC   Upice               77.74 333  eP        P          11 56 09.2  +0.9
DPC   Dobruska-Polom      77.78 333  eP        P          11 56 08.9  +0.4
MORC  Moravsky Berou      77.86 332  eP        P          11 56 09.5  +0.5
          comp=Z,19nm,0.9s,mb5.0
MORC  Moravsky Berou      77.86 332  eP        P          11 56 09.5  +0.5
MORC                                    pmax      pmax
          comp=Z,19nm,0.9s,mb5.0
KECS  Kecovo              77.92 329  i P       P          11 56 09.3   0.0
KECS                                 epP       pP         11 56 23.2  +0.9
KECS  Kecovo              77.92 329  eP        P          11 56 09.8  +0.5
KECS                                 e         pP         11 56 23.1  +0.8
CLL   Collm               77.99 335  ⇓P        P          11 56 09.6   0.0
          comp=Z,logA/T=1.5,mb5.2
CLL                                  e                    11 56 13.0
CLL                                  i *PP     pP         11 56 22.7  +0.1
CLL   Collm               77.99 335⇓iP        P          11 56 09.6   0.0
          comp=Z,26nm,0.9s,mb5.2
CLL                                  i pP      pP         11 56 22.7  +0.1
CLL   Collm               77.99 335⇓iP        P          11 56 09.6   0.0
CLL                                  i *PP     pP         11 56 22.7  +0.1
CLL                                     pmax      pmax
          comp=Z,26nm,0.9s,mb5.2
TIRR  Tirgusor            78.04 322  ⇑P        P          11 56 11.0  +0.9
HARR  Harsova             78.06 323  ⇓P        P          11 56 10.3  +0.1
HARR  Harsova             78.06 323  ⇓P        P          11 56 10.3  +0.1
FORT  Forrest             78.20 201  eP        P          11 56 11.8  +0.5
          comp=Z,19nm,0.8s,mb5.1
WMOK  Wichita Mounta      78.25  53  eP        P          11 56 10.7  -0.8
          comp=Z,11nm,0.9s,mb4.8
WMOK  Wichita Mounta      78.25  53  eP        P          11 56 10.7  -0.8
WMOK                                    pmax      pmax
          comp=Z,11nm,0.9s,mb4.8
MLR   Muntele Rosu        78.26 324  ⇓P        P          11 56 12.6  +1.3
MLR   Muntele Rosu        78.26 324  ⇓P        P          11 56 12.6  +1.3
CLZ   Clausthal           78.28 337  eP        P          11 56 12.1  +0.9
          comp=Z,16nm,0.8s,mb5.0
CLZ   Clausthal           78.28 337  eP        P          11 56 12.1  +0.9
CLZ                                     pmax      pmax
          comp=Z,16nm,0.8s,mb5.0
ISR   Istrita             78.31 324  ⇑P        P          11 56 12.1  +0.6
ISR   Istrita             78.31 324  ⇑P        P          11 56 12.1  +0.5
VYHS  Vyhne               78.51 330  eP        P          11 56 13.5  +1.0
VYHS                                 epP       pP         11 56 25.7  +0.2
VYHS  Vyhne               78.51 330  eP        P          11 56 13.3  +0.8
VYHS                                 e         pP         11 56 25.9  +0.4
PSZ   Piszkesteto         78.61 329  eP        P          11 56 13.9  +0.8
          comp=Z,16nm,1.0s,mb4.9
PSZ   Piszkesteto         78.61 329  eP        P          11 56 13.9  +0.8
PSZ                                     pmax      pmax
          comp=Z,15nm,1.0s,mb4.9
PRU   Pruhonice           78.66 334  eP        P          11 56 14.2  +0.8
VOIR                      78.67 325  ⇓P        P          11 56 15.3  +1.8
VOIR                      78.67 325  ⇓P        P          11 56 15.3  +1.7
MOX   Moxa                78.98 336  i P       P          11 56 15.5  +0.4
          comp=Z,logA/T=1.2,mb4.9
MOX   Moxa                78.98 336  eP        P          11 56 15.5  +0.4
          comp=Z,22nm,1.3s,mb4.9
MOX   Moxa                78.98 336  eP        P          11 56 15.5  +0.4
MOX                                     pmax      pmax
          comp=Z,22nm,1.3s,mb4.9
NKC   Novy Kostel         79.10 335  epP       pP         11 56 30.2  +1.4
LTX   Lajitas             79.24  59  eP        P          11 56 16.7  -0.3
          comp=Z,30nm,1.1s,mb5.1
LTX   Lajitas             79.24  59  eP        P          11 56 16.7  -0.3
LTX                                     pmax      pmax
          comp=Z,30nm,1.1s,mb5.1
TXAR  Lajitas Array       79.24  59   P        P          11 56 16.8  -0.2
          comp=Z,13nm,0.8s,mb4.9,baz=301,slow=3.8,SNR=107
TXAR                                    PKKPbc            12 15 08.0
          comp=Z,0.5nm,0.9s,baz=117,slow=2.8,SNR=5.6
BR131 Keskin Array S      79.31 316  eP        P          11 56 18.1  +0.9
          comp=Z,6.1nm,0.9s,mb4.5
BRTR  Keskin Array B      79.31 316   P        P          11 56 17.9  +0.8
          comp=Z,4.4nm,0.8s,mb4.5,baz=78,slow=5.8,SNR=18
BRTR                                    PP        PP      11 59 18.0  -0.8
          comp=Z,1.7nm,0.9s,baz=45,slow=5.2,SNR=3.9
QRN   Al-Qurain           79.41 300  eP        P          11 56 18.6  +0.7
QRN                                     AMb       AMB     11 56 26.6
          comp=Z,88nm,0.6s,mb5.8
NAY   Al-Naaiem           79.47 301  eP        P          11 56 18.6  +0.3
NAY                                     AMb       AMB     11 56 26.8
          comp=Z,34nm,0.6s,mb5.5
RDF   Al-Radifah          79.51 300  eP        P          11 56 18.9  +0.4
RDF                                     AMb       AMB     11 56 27.3
          comp=Z,109nm,0.6s,mb5.9
ANTO  Ankara              79.61 317  eP        P          11 56 19.5  +0.7
          comp=Z,7.9nm,0.7s,mb4.8
ANTO  Ankara              79.61 317  eP        P          11 56 19.5  +0.7
ANTO                                    pmax      pmax
          comp=Z,8.0nm,0.7s,mb4.8
KHC   Kasperske Hory      79.72 334  eP        P          11 56 19.7  +0.6
KHC                                     pP        pP      11 56 32.5  +0.3
KHC   Kasperske Hory      79.72 334  eP        P          11 56 19.7  +0.6
KHC                                  e         pP         11 56 32.5  +0.3
WET   Wettzell            79.93 334  eP        P          11 56 20.9  +0.6
          comp=Z,16nm,1.0s,mb4.9
WET   Wettzell            79.93 334  eP        P          11 56 20.9  +0.6
WET                                     pmax      pmax
          comp=Z,16nm,1.0s,mb4.9
GEC2  GERESS Array S      79.93 333  eP        P          11 56 20.7  +0.4
          comp=Z,5.0nm,0.7s,mb4.5
GEC2  GERESS Array S      79.93 333  eP        P          11 56 20.7  +0.4
GEC2                                    pmax      pmax
          comp=Z,5.0nm,0.7s,mb4.5
GERES GERESS Array B      79.93 333   P        P          11 56 20.7  +0.5
          comp=Z,4.5nm,0.7s,mb4.5,baz=34,slow=4.8,SNR=28
GERES                                   LR        LR      12 35 35.0
          comp=Z,283nm,18.2s,MS4.7,baz=234,slow=39
GRA1  Grafenberg Arr      79.95 335  eP        P          11 56 21.5  +1.1
          comp=Z,24nm,0.8s,mb5.2
GRA1                                 epP       pP         11 56 34.6  +1.2
GRF   Grafenberg Arr      79.95 335  eP        P          11 56 21.5  +1.1
          comp=Z,24nm,0.8s,mb5.2
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GRF				epP	pP	11 56 34.6	+1.2
GRF	Grafenberg Arr	79.95	335	eP	P	11 56 21.5	+1.1
GRF				e*PP	pP	11 56 34.6	+1.2
GRF				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
GRF	Grafenberg Arr	79.95	335	eP	P	11 56 21.5	+1.1
GRF				e*PP	pP	11 56 34.6	+1.2
GRF				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
TNS	Taunus Mts	80.27	337	eP	P	11 56 22.6	+0.5
	comp=Z,16nm,1.0s,mb4.9						
TNS	Taunus Mts	80.27	337	eP	P	11 56 22.6	+0.5
TNS				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
MOA	Molln	80.62	333	⇑iP	P	11 56 24.9	+1.0
	comp=Z,5.1nm,0.7s,mb4.6						
DLF	Lyons Farm	80.65	347	eP	P	11 56 30.0	+6.0
DCN	Croghan	80.72	348	eP	P	11 56 26.0	+1.6
JCT	Junction City	80.75	56	eP	P	11 56 24.2	-0.8
	comp=Z,2μm,0.2s						
JCT				epP	pP	11 56 39.1	+1.0
HASS	Wahat al Ahsa’	80.81	296	P	P	11 56 25.7	+0.3
GIVF	Givet	81.34	339	eP	P	11 56 28.2	+0.5
PERS	Pernice	81.39	332	eP	P	11 56 28.8	+0.7
BAIF	Baives	81.53	340	eP	P	11 56 28.8	+0.1
KBA	Koelnbreinsper	81.60	333	i P	P	11 56 30.7	+1.6
	comp=Z,31nm,0.7s,mb5.3,SNR=15						
KBA	Koelnbreinsper	81.60	333	P	P	11 56 30.7	+1.6
	comp=Z,31nm,0.7s,mb5.3						
KBA	Koelnbreinsper	81.60	333	P	P	11 56 30.7	+1.6
KBA				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.3						
PPT	Papeete	81.65	125	eS	S	12 06 40.0	+2.5
PPT				eLR	LR	12 20 59.0	
	comp=Z,202nm,20.2s,baz=329						
PPT	Papeete	81.65	125	LR	LR	12 30 32.2	
	comp=Z,245nm,18.1s,MS4.6,baz=238,slow=34						
PARMO	Parma	81.68	46	eP	P	11 56 29.5	-0.2
OBKA	Obir	81.70	332	⇑iP	P	11 56 30.1	+0.5
	comp=Z,8.1nm,0.9s,mb4.6						
OBKA	Obir	81.70	332	⇑P	P	11 56 30.1	+0.5
	comp=Z,8.1nm,0.9s,mb4.7						
VTS	Vitosha	81.77	324	i P	P	11 56 30.0	-0.1
WATA	Walderalm	81.93	334	⇓iP	P	11 56 32.0	+1.2
	comp=Z,17nm,1.1s,mb4.9						
WTTA	Wattenberg	81.98	334	⇓iP	P	11 56 32.4	+1.3
	comp=Z,20nm,0.6s,mb5.2,SNR=9.4						
WTTA	Wattenberg	81.98	334	⇓P	P	11 56 32.4	+1.3
	comp=Z,20nm,0.6s,mb5.2						
WTTA	Wattenberg	81.98	334	⇓P	P	11 56 32.4	+1.3
WTTA				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
BFO	Black Forest	82.01	336	eP	P	11 56 32.0	+0.8
	comp=Z,16nm,1.1s,mb4.9						
BFO	Black Forest	82.01	336	eP	P	11 56 32.0	+0.8
BFO				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
MOTA	Moosalm	82.07	334	⇓iP	P	11 56 32.6	+1.0
	comp=Z,11nm,0.9s,mb4.8,SNR=7.3						
MOTA	Moosalm	82.07	334	⇓P	P	11 56 32.6	+1.0
MOTA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
GNAR	Gosnell	82.08	46	eP	P	11 56 31.8	-0.1
	comp=Z,102nm,0.3s						
SQTA	Sankt Quirin	82.15	334	⇑iP	P	11 56 33.4	+1.4
	comp=Z,12nm,1.0s,mb4.7						
SQTA	Sankt Quirin	82.15	334	⇑P	P	11 56 33.4	+1.4
SQTA				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
WCI	Wyandotte Cave	82.17	43	eP	P	11 56 31.3	-1.0
	comp=Z,21nm,0.8s,mb5.1						
WCI	Wyandotte Cave	82.17	43	eP	P	11 56 31.3	-1.0
WCI				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
PTCC	Patocco-Chiusa	82.19	332	P	P	11 56 32.1	-0.1
VISS	Visnje	82.21	331	eP	P	11 56 32.2	-0.1
CDF	Champ du Feu	82.23	337	eP	P	11 56 32.4	0.0
	comp=Z,18nm,0.8s,mb4.7						
CDF	Champ du Feu	82.23	337	eP	P	11 56 32.4	0.0
CDF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
BOJS	Bojanci	82.33	331	eP	P	11 56 33.0	+0.1
MMB	Musomiste	82.38	324	i P	P	11 56 24.0	-9.2
KKB	Krupnik	82.42	324	i P	P	11 56 34.0	+0.5
DAVA	Damuels	82.50	335	⇑iP	P	11 56 35.0	+1.3
	comp=Z,22nm,0.9s,mb5.1,SNR=6.2						
DAVA	Damuels	82.50	335	⇑P	P	11 56 35.0	+1.3
	comp=Z,22nm,0.9s,mb5.1						
MEZF	Maizieres J’vi	82.75	339	eP	P	11 56 35.2	+0.2
	comp=Z,21nm,0.7s,mb5.0						
HAU	Haudompre	82.86	338	eP	P	11 56 35.5	-0.1
	comp=Z,9.6nm,0.6s,mb4.7						
HAU				eR			
	comp=Z,339nm,22.0s						
HAU	Haudompre	82.86	338	eP	P	11 56 35.5	-0.1
HAU				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
HAU				MLR	MLR		
	comp=Z,340nm,22.0s,MS4.7						
HINF	Hinteralfeld	82.89	337	eP	P	11 56 36.1	+0.4
WVT	Waverly	83.07	45	eP	P	11 56 36.5	-0.4
	comp=Z,13nm,0.8s,mb5.0						
WVT	Waverly	83.07	45	eP	P	11 56 36.5	-0.4
WVT				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
BRMO	Bormio	83.08	334	P	P	11 56 38.3	+1.6
VAY	Valandovo	83.09	324	eP	P	11 56 37.1	+0.2
VAY	Valandovo	83.09	324	eP	P	11 56 37.1	+0.2
WHFO	Wadi Hawf	83.22	288	P	P	11 56 38.1	+0.1
	SNR=9.8						
NWAO	Narrogin (SRO)	83.46	209	P	P	11 56 38.9	0.0
	comp=Z,9.5nm,0.8s,mb4.9,baz=55,slow=8.3,SNR=3.1						
OXF	Oxford	83.52	47	eP	P	11 56 38.6	-0.6
	comp=Z,54nm,1.1s,mb5.6						
OXF				epP	pP	11 56 51.7	-0.6
OXF	Oxford	83.52	47	eP	P	11 56 38.6	-0.6
OXF				e*PP	pP	11 56 51.7	-0.6
OXF				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.6						
FLN	La Foliniere	83.84	342	eP	P	11 56 40.3	-0.1
	comp=Z,14nm,0.6s,mb5.0						
FLN				eR			
	comp=Z,174nm,20.8s						
FLN	La Foliniere	83.84	342	eP	P	11 56 40.3	-0.1
FLN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb5.0						
FLN				MLR	MLR		
	comp=Z,170nm,20.8s,MS4.4						
LDF	La Druitiere	83.92	342	eP	P	11 56 41.2	+0.4
	comp=Z,12nm,0.7s,mb4.8						
LDF	La Druitiere	83.92	342	eP	P	11 56 41.2	+0.4
LDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
ABTO	Aybut	83.94	288	P	P	11 56 42.4	+0.8
	SNR=6.9						
MUGIO	Muggio	83.98	335	P	P	11 56 41.8	+0.6
OHR	Ohrid	83.99	325	eP	P	11 56 42.2	+0.8
OHR	Ohrid	83.99	325	eP	P	11 56 42.2	+0.8
VAI	Varese	84.11	335	P	P	11 56 42.8	+0.9
	comp=Z,8.5nm,0.5s,mb5.1						
VAI	Varese	84.11	335	P	P	11 56 42.8	+0.9
VAI				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.2						
HILS	Ha’il	84.13	303	P	P	11 56 44.0	+1.6
LOR	Lormes	84.20	339	eP	P	11 56 42.5	+0.2
	comp=Z,23nm,0.8s,mb5.0						
LOR				eR			
	comp=Z,294nm,21.0s						
LOR	Lormes	84.20	339	eP	P	11 56 42.5	+0.2
LOR				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
LOR				MLR	MLR		
	comp=Z,290nm,21.0s,MS4.6						
CABF	La Chapelle	84.21	337	eP	P	11 56 42.7	+0.3
	comp=Z,5.2nm,0.5s,mb4.6						
CABF	La Chapelle	84.21	337	eP	P	11 56 42.7	+0.3
CABF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.7						
GRR	Gorron	84.28	342	eP	P	11 56 42.8	+0.2
	comp=Z,31nm,0.8s,mb5.2						
GRR	Gorron	84.28	342	eP	P	11 56 42.8	+0.2
GRR				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.2						
MZLS	Mizel	84.48	298	P	P	11 56 45.4	+1.2
SSF	Saint Saulge	84.48	339	eP	P	11 56 44.0	+0.3
	comp=Z,14nm,0.9s,mb5.1						
SSF	Saint Saulge	84.48	339	eP	P	11 56 44.0	+0.3
SSF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.1						
SWET	Sewanee	84.74	44	eP	P	11 56 43.6	-1.7
SWET				epP	pP	11 56 56.7	-1.7
SGMF	Saint Gilles	84.77	343	eP	P	11 56 45.6	+0.5
	comp=Z,57nm,1.0s,mb5.3						
SGMF	Saint Gilles	84.77	343	eP	P	11 56 45.6	+0.5
SGMF				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.3						
FSSB	Fossombrone	84.77	332	P	P	11 56 46.5	+1.3
AVF	Avril sur Loir	84.77	339	eP	P	11 56 45.6	+0.4
	comp=Z,47nm,0.8s,mb5.3						
AVF	Avril sur Loir	84.77	339	eP	P	11 56 45.6	+0.4
AVF				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.4						
SMF	Signal de Mont	84.78	339	eP	P	11 56 45.8	+0.6
	comp=Z,95nm,0.9s,mb5.6						
SMF	Signal de Mont	84.78	339	eP	P	11 56 45.8	+0.6
SMF				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.6						
ZCCA	Zocca	84.78	333	P	P	11 56 47.8	+2.5
ROSF	Rostrenen	84.83	344	eP	P	11 56 45.8	+0.4
ARV	Arcevia	84.89	331	P	P	11 56 46.9	+1.1
	comp=Z,8.2nm,0.8s,mb4.9						
BOB	Bobbio (Coli)	84.89	334	P	P	11 56 47.4	+1.6
	comp=Z,12nm,0.8s,mb5.1						
BOB	Bobbio (Coli)	84.89	334	P	P	11 56 47.4	+1.6
BOB				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
SFI	Santa Sofia	84.89	332	P	P	11 56 47.9	+2.1
	comp=Z,30nm,1.1s,mb5.3						
SFI	Santa Sofia	84.89	332	P	P	11 56 47.9	+2.1
SFI				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.3						
GSCL	Gusciola	84.91	333	P	P	11 56 47.9	+2.0
VMG	Vicchio	84.94	332	P	P	11 56 48.5	+2.4
PGD	Poggio Sodo	84.96	332	P	P	11 56 48.5	+2.3
	comp=Z,34nm,1.1s,mb5.4						
PGD	Poggio Sodo	84.96	332	P	P	11 56 48.5	+2.3
PGD				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.4						
LPL	La Plagne	85.03	336	eP	P	11 56 47.6	+1.1
	comp=Z,19nm,0.7s,mb5.0						
LPL	La Plagne	85.03	336	eP	P	11 56 47.6	+1.1
LPL				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.0						
LPG	La Plagne	85.04	336	eP	P	11 56 47.7	+1.2
	comp=Z,43nm,1.0s,mb5.2						
LPG	La Plagne	85.04	336	eP	P	11 56 47.7	+1.2
LPG				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.2						
SNTG	Esanatoglia	85.10	331	P	P	11 56 48.1	+1.2
CRE	Caprese Michel	85.11	332	P	P	11 56 48.1	+1.2
	comp=Z,11nm,0.8s,mb5.0						
CRE	Caprese Michel	85.11	332	P	P	11 56 48.1	+1.2
CRE				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
BGF	Bois d’Agland	85.12	339	eP	P	11 56 47.3	+0.4
	comp=Z,21nm,0.6s,mb5.1						
BGF	Bois d’Agland	85.12	339	eP	P	11 56 47.3	+0.4
BGF				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.1						
QUIF	Quistinic	85.21	343	eP	P	11 56 47.4	+0.1
MURB	Monte Urbino	85.24	332	P	P	11 56 49.9	+2.3
	comp=Z,48nm,1.2s,mb5.5						
FWV	Forest Hill	85.26	39	eP	P	11 56 47.5	-0.3
NRCA	Norcia	85.41	331	P	P	11 56 49.9	+1.5
TERO	Teramo	85.43	331	P	P	11 56 49.5	+1.0
	comp=Z,27nm,1.3s,mb5.2						
BNI	Bardonecchia	85.47	336	eP	P	11 56 50.0	+1.3
	comp=Z,17nm,1.2s,mb5.1						
BNI	Bardonecchia	85.47	336	eP	P	11 56 50.0	+1.4
BNI				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
TCF	Toulx Ste Croi	85.53	339	eP	P	11 56 49.6	+0.7
	comp=Z,10.0nm,0.7s,mb4.9						
TCF	Toulx Ste Croi	85.53	339	eP	P	11 56 49.6	+0.7
TCF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
ELN	Prospectdale	85.58	40	eP	P	11 56 49.0	-0.4
ELN				epP	pP	11 57 01.9	-0.7
URZ	Urewera	85.65	160	LR	LR	12 26 00.3	
	comp=Z,86nm,22.0s,MS4.1,baz=255,slow=29						
MBDF	Montbardon	85.74	336	eP	P	11 56 50.8	+0.8
BLA	Blacksburg	85.74	39	eP	P	11 56 49.4	-0.8
	comp=Z,18nm,0.9s,mb5.3						
BLA	Blacksburg	85.74	39	eP	P	11 56 49.4	-0.8
BLA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.3						
MFF	Saint Martin d	85.80	341	eP	P	11 56 50.3	+0.1
	comp=Z,25nm,0.9s,mb5.2						
MFF	Saint Martin d	85.80	341	eP	P	11 56 50.3	+0.1
MFF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.2						
ORIF	Oris-en-Rattie	85.82	337	eP	P	11 56 51.2	+0.8
	comp=Z,21nm,0.6s,mb5.2						
ORIF				eR			
	comp=Z,228nm,22.5s						
AFFS	‘Afif	85.93	300	P	P	11 56 52.7	+1.3
MNS	Montasola	85.96	331	P	P	11 56 51.6	+0.5
	comp=Z,21nm,0.8s,mb5.4						
MNS	Montasola	85.96	331	P	P	11 56 51.6	+0.5
MNS				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.4						
VIVF	Saint-Julien-l	86.21	337	eP	P	11 56 52.9	+0.6
	comp=Z,31nm,0.8s,mb5.3						
VIVF	Saint-Julien-l	86.21	337	eP	P	11 56 52.9	+0.6
VIVF				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.3						
SBF	Sospel	86.33	335	eP	P	11 56 53.2	+0.3
	comp=Z,90nm,1.0s,mb5.6						
SBF	Sospel	86.33	335	eP	P	11 56 53.2	+0.3
SBF				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.7						
ALWS	Ilw as Safayha	86.57	309	P	P	11 57 02.0	+7.6
RJF	Les Rejaudoux	86.62	340	eP	P	11 56 54.8	+0.5
	comp=Z,41nm,1.1s,mb5.3						
RJF				eR			
	comp=Z,286nm,22.0s						
RJF	Les Rejaudoux	86.62	340	eP	P	11 56 54.8	+0.5
RJF				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.3						
RJF				MLR	MLR		
	comp=Z,290nm,22.0s,MS4.6						
JMOS	Jabal al Moall	86.65	309	P	P	11 57 02.4	+7.6
SMRF	Simiane la Rot	86.77	336	eP	P	11 56 55.0	0.0
FRF	La Foret Royal	86.84	336	eP	P	11 56 55.8	+0.4
CAF	Calviac	86.84	339	eP	P	11 56 55.6	+0.2
	comp=Z,73nm,1.3s,mb5.5						
CAF	Calviac	86.84	339	eP	P	11 56 55.6	+0.2
CAF				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.4						
PGF	Pioggiola	87.03	334	eP	P	11 56 56.4	0.0
	comp=Z,29nm,0.8s,mb5.2						
PGF	Pioggiola	87.03	334	eP	P	11 56 56.4	0.0
PGF				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.2						
IDI	Anoyia	87.04	319	LR	LR	12 43 13.1	
	comp=Z,225nm,18.3s,MS4.6,baz=272,slow=41						
LMR	La Mourre	87.09	336	eP	P	11 56 56.8	+0.2
	comp=Z,92nm,1.2s,mb5.6						
LMR	La Mourre	87.09	336	eP	P	11 56 56.8	+0.2
LMR				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.6						
LASF	Ste Croix	87.16	338	eP	P	11 56 57.3	+0.4
LFF	La Frestale	87.16	340	eP	P	11 56 57.1	+0.2
TIP	Timpagrande	87.26	327	eP	P	11 56 58.0	+0.4
KAMS	Al Khamasin	87.58	296	P	P	11 57 00.1	+0.6
JSC	Jenkinsville	87.76	42	eP	P	11 57 00.1	0.0
MTLF	Montolieu	88.28	338	eP	P	11 57 02.8	+0.5
EPF	Esparros	89.05	340	eP	P	11 57 05.7	-0.3
	comp=Z,5.0nm,0.5s,mb4.8						
EPF	Esparros	89.05	340	eP	P	11 57 05.7	-0.3
EPF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.9						
ETSF	Etsaut	89.39	340	eP	P	11 57 07.9	+0.3
RPZ	Rata Peaks	89.66	166	P	P	11 57 09.9	+1.0
	comp=Z,9.6nm,0.8s,mb5.2,baz=78,slow=10,SNR=4.8						
BLJS	Baljurashi	89.78	298	P	P	11 57 11.2	+1.2
DJNS	Zahran al Janu	90.15	295	P	P	11 57 13.6	+1.9
SDV	Santo Domingo	114.30	47	ePKP	PKPdf	12 02 50.8	+0.8
VNDA	Vanda	122.09	177	ePKPdf	PKPdf	12 03 04.0	+0.4
LSZ	Lusaka	124.46	283	ePKPdf	PKPdf	12 03 10.9	+1.4
DBIC	Dimbokro	124.77	332	PKP	PKPdf	12 03 10.8	+0.5
	comp=Z,5.7nm,0.9s,baz=52,slow=3.3,SNR=7.3						
MAW	Mawson	130.01	210	PKP	PKPdf	12 03 20.1	+1.2
	comp=Z,2.7nm,0.7s,baz=92,slow=0.6,SNR=9.0						
LBTB	Lobatse	132.70	276	ePKPdf	PKPdf	12 03 26.2	+1.1
SAML	Samuel	133.22	51	ePKPdf	PKPdf	12 03 26.8	+0.4
SAML				epPKPdf		12 03 40.2	
QSPA	South Pole Qui	134.43	180	ePKPdf	PKPdf	12 03 28.7	+1.7
LPAZ	La Paz	136.02	63	PKP	PKPdf	12 03 33.7	+2.3
	comp=Z,5.0nm,0.7s,baz=2.4,slow=1.0,SNR=18						
LPAZ	La Paz	136.02	63	ePKPdf	PKPdf	12 03 33.0	+1.6
BDFB	Brasilia	146.48	37	PKPbc	PKPbc	12 03 52.5	+1.2
	comp=Z,53nm,0.8s,baz=319,slow=3.0,SNR=53						
BAO	Brasilia Array	146.49	36	P	PKPdf	12 03 49.5	-0.5
NVL	N’lazarevskaya	147.42	203	ePKP2	PKPab	12 03 53.5	-3.1
NVL				e		12 07 22.4	
NVL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAIT	Maitri	147.44	203	ePKPdf	PKPdf	12 03 54.3	+4.3
PLCA	Paso Flores	148.80	98	PKPbc	PKPdf	12 03 58.5	+5.5
	comp=Z,51nm,0.7s,baz=266,slow=3.1,SNR=86						
PLCA	Paso Flores	148.80	98	ePKPbc	PKPdf	12 03 58.4	+5.4
PLCA				epPKPdf		12 04 11.6	
CPUP	Villa Florida	150.18	62	ePKPbc	PKPdf	12 04 01.7	+6.0
SNAA	Sanae	150.35	196	⇓iP	PKPdf	12 04 01.1	+6.5
SNAA	Sanae	150.35	196	e	PKPdf	12 04 03.0	+8.4
SNAA	Sanae	150.35	196	e	PKPdf	12 04 09.6	+15
SNAA	Sanae	150.35	196	e	PKPdf	12 04 12.0	+17
SNAA	Sanae	150.35	196	e	PKPdf	12 04 21.1	+27
SNAA	Sanae	150.35	196	PKPbc	PKPdf	12 04 01.0	+6.4
	comp=Z,11nm,0.8s,baz=193,slow=3.6,SNR=60						
SNAA	Sanae	150.35	196	ePKPdf	PKPdf	12 03 55.6	+1.1
SNAA				ePKPbc	PKPdf	12 04 01.1	+6.5
SNAA				e		12 04 09.6	
SNAA				e		12 04 12.0	
SNAA				e		12 04 21.1	
VNA2	Neumayer--Watz	151.81	194	e	PKPdf	12 04 07.1	+10
VNA2	Neumayer--Watz	151.81	194	e	PKPdf	12 04 15.5	+19
VNA2	Neumayer--Watz	151.81	194	e	PKPdf	12 04 18.0	+21
VNA2	Neumayer--Watz	151.81	194	e	PKPdf	12 04 28.4	+32
VNA2	Neumayer--Watz	151.81	194	⇓iPKPdf	PKPdf	12 04 05.0	+8.2
VNA2				e		12 04 07.1	
VNA2				e		12 04 15.5	
VNA2				e		12 04 18.0	
VNA2				e		12 04 28.4	
VNA3	Neumayer Olymp	151.91	193	e	PKPdf	12 04 07.0	+10
VNA3	Neumayer Olymp	151.91	193	e	PKPdf	12 04 14.7	+18
VNA3	Neumayer Olymp	151.91	193	e	PKPdf	12 04 17.0	+20
VNA3	Neumayer Olymp	151.91	193	e	PKPdf	12 04 28.1	+31
VNA3	Neumayer Olymp	151.91	193	⇓iPKPdf	PKPdf	12 04 04.9	+8.0
VNA3				e		12 04 07.0	
VNA3				e		12 04 14.7	
VNA3				e		12 04 17.0	
VNA3				e		12 04 28.1	
VNA1	Neumayer--Stat	152.19	194	e	PKPdf	12 04 07.8	+10
VNA1	Neumayer--Stat	152.19	194	e	PKPdf	12 04 15.6	+18
VNA1	Neumayer--Stat	152.19	194	e	PKPdf	12 04 18.0	+21
VNA1	Neumayer--Stat	152.19	194	e	PKPdf	12 04 28.9	+32
VNA1	Neumayer--Stat	152.19	194	⇓iPKPdf	PKPdf	12 04 06.0	+8.7
VNA1				e		12 04 07.8	
VNA1				e		12 04 15.6	
VNA1				e		12 04 18.0	
VNA1				e		12 04 28.9	

JMA 04 12:03:20.8, 28.69N×129.66E, h21^{km}±2^{km}, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JAM	Amami Oshima	0.28	190	P	Pb	12 03 27.1	-0.1
JAM				S	Sb	12 03 31.5	-0.1
JZK	Kikaishima	0.46	144	P	Pb	12 03 30.0	-0.2
JZK				S	Sb	12 03 36.9	+0.3
JTK	Tokunoshima	1.10	215	P	Pb	12 03 40.7	-0.2
JTK				S	Sb	12 03 56.2	+1.4
JNN	Nakanoshima	1.16	9	P	Pn	12 03 41.7	-0.3
JNN				S	Sb	12 03 57.4	+0.7
JKC	Kuchinoerabu	1.83	15	P	Pn	12 03 51.0	-0.5
JKC				S	Sn	12 04 13.4	-0.8
JOW	Kunigami	2.22	214	P	Pn	12 03 58.1	+0.9
JIH	Iheya	2.23	223	P	Pn	12 03 57.8	+0.5
JIH				eS	Sn	12 04 24.5	+0.1
JTN	Tanegashima 3	2.27	30	P	Pn	12 03 59.0	+1.1
JAGN	Aguni-jima	3.00	226	P	Pn	12 04 08.8	+0.6
JKE	Kume jima 2	3.47	228	P	Pn	12 04 15.5	+0.5
JKE				S	Sn	12 04 56.2	+0.2

NAO ***04*** *12:11:44.8±3.5, 76.78N×19.38E, h16^{km}±28^{km}, ML2.7*
CSEM ***04*** *12:11:44.6±1.5, 77.00N×20.92E, h1^{km}±6^{km}, ML2.7, Error ellipse: s-maj=35.3km s-min=10.1km az=76.0*
BER ***04*** *12:11:51.6±4.5, 77.04N×20.01E, h15^{km}±77^{km}, MD2.4, ML3.0*

ISC 04 12:11:45.9±1.4**, 77.01N**±0.06×**19.4E**±0.2**, h2**^{km}±14^{km}**, n9, σ0^{s}.42**/15**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HSP	Hornsund	0.88	272	eP	Pg	12 12 03.7	+0.3
HSP				eS	Sg	12 12 14.7	-0.3
SPA0	Spitsbergen Ar	1.35	332	Pn	Pn	12 12 11.9	+0.1
	baz=157,slow=22						
SPA0				Pg	Pg	12 12 13.3	+0.4
	baz=154,slow=18						
SPA0				Lg		12 12 33.0	
	baz=155,slow=37						
SPA0	Spitsbergen Ar	1.35	332	Pg	Pg	12 12 13.3	+0.4
	SNR=3.3						
HOPEN	Hopen	1.38	108	eP	Pb	12 12 12.3	+0.2
HOPEN				eS	Sb	12 12 29.9	-0.2
HOPEN				AML	AML	12 12 32.1	
	comp=N,787nm,0.3s						
KBS	Kingsbay	2.49	325	Pn	Pn	12 12 27.8	-0.3
KBS				Pg	Pg	12 12 34.5	-1.0
KBS				Lg		12 13 08.9	
KBS	Kingsbay	2.49	325	eP	Pn	12 12 27.7	-0.3
KBS				ePg	Pg	12 12 34.7	-0.8
KBS				eSg	Sg	12 13 09.2	+0.5
KBS				AML	AML	12 13 13.3	
	comp=Z,74nm,0.4s						
BJO	Bjornoya	2.52	181	eS	Sn	12 13 00.3	+0.2
BJO	Bjornoya	2.52	181	eS	Sn	12 13 00.3	+0.2
	SNR=62						
ARA0	ARCESS Array S	7.71	164	Sn	Sn	12 14 54.2	-17
	baz=3.2,slow=22						

NDI ***04*** *12:24:54.2±4.7, 34.55N×72.56E, h10^{km}, ML3.2*
IDC ***04*** *12:24:54.4±1.9, 34.62N×73.31E, mb4.2/3, mb1 4.4/5, mb1mx3.8/20, mbtmp4.2/5, ML3.7/3, Error ellipse: s-maj=52.6km s-min=26.9km az=64.0*
MOS ***04*** *12:24:54.5±0.7, 34.63N×73.21E, h14^{km}, mb4.4/2, Error ellipse: s-maj=44.5km s-min=12.3km az=90.3*
NEIC ***04*** *12:24:55.8±1.2, 34.60N×73.25E, h10^{km}, mb3.3/2, Error ellipse: s-maj=26.9km s-min=15.9km az=78.0*
NNC ***04*** *12:25:09.1±5.3, 35.14N×72.70E, h78^{km}±50^{km}, mpv3.9, Error ellipse: s-maj=43.0km s-min=34.4km az=42.0*

ISC 04 12:24:54.6±0.8**, 34.67N**±0.08×**73.2E**±0.1**, h10**^{km}**, n30, σ1^{s}.31**/37**, mb4.2**/2**, 5C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
THN	Thein Dam	3.09	136	eP	Pn	12 25 48.0	+3.6
THN				eS	Sn	12 26 28.7	+6.9
DLH	Dalhousie	3.16	132	eP	Pn	12 25 50.0	+4.5
DLH				eS	Sn	12 26 28.0	+4.4
BHK	Bhakra	4.24	139	eSB	Sb	12 27 12.1	+11
SDNR	Sundarnagar	4.50	134	eP	Pn	12 26 05.6	+1.2
SDNR				eS	Sn	12 26 56.6	-0.8
SMLA	Simla	4.88	135	ex	x	12 27 03.2	
SMLA				ex	x	12 27 24.1	
KLP	Kalpa	5.29	125	eP	Pn	12 26 18.5	+2.8
KLP				eS	Sn	12 27 16.8	-0.7
KLP				AML	AML	12 27 22.0	
	comp=N,72nm,0.3s						
KLP				AML	AML	12 27 23.3	
	comp=E,77nm,0.6s						
KHET	Khetri	6.95	160	eS	Sn	12 27 51.1	-8.1
KHET				AML	AML	12 27 56.5	
	comp=E,14nm,0.2s						
KHET				AML	AML	12 27 56.7	

	comp=N,15nm,0.2s						
SONA	**Sohna**	7.22	151	*e*P	Pn	12 26 40.8	-2.1
SONA				*e*S	Sn	12 27 59.0	-6.9
SONA				AML	AML	12 28 02.6	
	comp=N,11nm,0.3s						
SONA				AML	AML	12 28 03.4	
	comp=E,17nm,0.5s						
AAK	**Ala-Archa**	8.02	7	⇑P	P	12 26 56.8	+2.8
	comp=E,4.4nm,1.3s						
AAK				⇑S	Sn	12 28 21.7	-3.9
	comp=E,4.5nm,1.1s						
AAK	**Ala-Archa**	8.02	7	Pn	P	12 26 54.0	0.0
KK31	**Karatay Array**	8.67	347	P	P	12 27 04.3	+1.2
	comp=E,5.6nm,0.3s,baz=154,slow=11,SNR=180						
KK31				⇑S	Sn	12 28 38.7	-3.2
	comp=E,3.1nm,0.5s,baz=169,slow=22,SNR=6.6						
MK31	**Makanchi Array**	13.93	27	P	P	12 28 21.4	+7.1
	comp=E,1.5nm,1.0s,baz=206,slow=12,SNR=8.0						
MKAR	**Makanchi Array**	13.93	27	Pn	P	12 28 13.4	-0.9
	comp=E,0.1nm,0.3s,baz=218,slow=17,SNR=4.0						
AB31	**Akbulak array**	17.54	330	⇑P	P	12 29 00.1	-0.6
	comp=E,0.5nm,0.4s,baz=127,slow=7.2,SNR=19						
AB31				⇓S	S	12 32 07.1	-7.1
	comp=E,0.5nm,0.6s,baz=151,slow=22,SNR=2.7						
BVA0	**Borovoye Array**	18.45	355	P	P	12 29 12.9	+0.8
	comp=E,0.1nm,0.7s,baz=198,slow=8.1,SNR=11						
BVAR	**Borovoye Array**	18.45	355	P	P	12 29 13.0	+0.9
	comp=E,0.6nm,0.3s,baz=169,slow=10,SNR=15						
BVAR	**Borovoye Array**	18.45	355	P	P	12 29 13.0	+0.9
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	18.49	355	*e*P	P	12 29 12.5	0.0
	comp=Z,1.6nm,0.7s						
BRVK	**Borovoye**	18.49	355	*e*P	P	12 29 12.5	-0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHKZ	**Chkalovo**	19.09	355	P	P	12 29 19.2	-0.5
CHKZ	**Chkalovo**	19.09	355	*e*P	P	12 29 19.2	-0.5
	comp=Z,1.1nm,0.6s						
CHKZ	**Chkalovo**	19.09	355	*e*P	P	12 29 19.2	-0.5
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTO	**Aktyubinsk**	19.24	330	⇑P	P	12 29 21.5	-0.1
	comp=Z,0.6nm,0.8s						
AKTO	**Aktyubinsk**	19.24	330	P	P	12 29 21.7	+0.1
	comp=Z,0.5nm,0.3s,baz=133,slow=12,SNR=12						
AKTO	**Aktyubinsk**	19.24	330	P	P	12 29 21.7	+0.1
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	20.93	19	P	P	12 29 38.5	-1.2
	comp=Z,5.8nm,0.5s,baz=260,slow=6.0,SNR=17						
ZAL	**Zalesovo**	20.93	19	P	P	12 29 38.5	-1.2
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARCES	**ARCESS Array B**	43.50	338	P	P	12 32 59.3	-0.1
	comp=Z,2.9nm,0.9s,mb4.0,baz=113,slow=9.2,SNR=6.0						
ARCES	**ARCESS Array B**	43.50	338	P	P	12 32 59.3	-0.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	79.52	123	P	P	12 37 02.7	-0.7
	comp=Z,4.0nm,1.0s,mb4.3,baz=320,slow=4.9,SNR=6.5						

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*SKO **04** 12:25:00.5,35.32S×56.45E*

*IDC **04** 12:25:00.8±0.5,35.62S×53.46E,mb4.6/21,mb1 4.7/22, mb1mx4.6/26,mbtmp4.6/22,MS4.9/13,Ms1 4.8/13, ms1mx4.8/14,Error ellipse: s-maj=16.4km s-min=12.0km az=50.0*

*MOS **04** 12:25:01.5±1.2,35.71S×53.34E,h10^{km},mb5.3/20, MS4.8/7,Error ellipse: s-maj=17.8km s-min=8.7km az=99.4*

*BJI **04** 12:25:02.7,35.86S×53.51E,h13^{km},mB5.4,mb5.1,Ms5.2, Msz4.9*

*HRVD **04** 12:25:03.0±0.2,35.59S×53.46E,h18^{km}±1^{km},MW5.6/66, Centroid moment Tensor Solution. LP body waves: s61,c130;Mantle waves: s66,c139; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.44±.04; $M_{\theta\theta}$0.76±.05; $M_{\phi\phi}$-0.32±.05; $M_{r\theta}$-0.26±.11; $M_{\theta\phi}$2.87±.05; $M_{\phi r}$0.52±.11; Best double couple: $M_0$2.99×10^{17} NP1:ϕ_s95°, δ79°,λ-8°. NP2:ϕ_s186°,δ82°,λ-169°. Principal axes: T 3.146, Plg2°, Azm320°; N -.312, Plg77°, Azm221°; P -2.834, Plg13°, Azm51°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **04** 12:25:03.0±0.2,35.65S×53.37E,h10^{km},mb5.0/25, MS5.0/8 Error ellipse: s-maj=8.4km s-min=6.9km az=77.0*

ISC 04 12:25:00.6±3.8**,35.73S**±0.05×**53.38E**±0.07**,h5**^{km}±23^{km}**, h26**^{km}±3.7^{km}**:pP-P,n169,**σ**1^{s}18**/141**,mb4.9**/54**,MS4.9**/31**, 9C-8D,Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	17.95	341	P	P	12 29 12.2	-0.4
	19nm,0.3s,baz=170,slow=11,SNR=65						
OPO				S	S	12 32 32.5	+1.8
	2.4nm,0.3s,baz=270,slow=19,SNR=3.7						
BOSA	**Boshof**	24.78	279	P	P	12 30 24.9	+0.3
	94nm,1.3s,mb5.2,baz=112,slow=9.1,SNR=8.9						
BOSA				LR	LR	12 37 43.2	
	comp=Z,2μm,18.1s,MS4.7,baz=116,slow=31						
BOSA	**Boshof**	24.78	279	*e*P	P	12 30 24.8	+0.1
	76nm,1.3s,mb5.1						
BOSA	**Boshof**	24.78	279	*e*P	P	12 30 24.8	+0.1
BOSA				pmax	pmax		
	comp=Z,76nm,1.3s,mb5.1						
LBTB	**Lobatse**	26.16	286	P	P	12 30 35.8	-1.8
	comp=Z,17nm,0.8s,mb4.6,baz=139,slow=7.3,SNR=9.9						
LBTB	**Lobatse**	26.16	286	*e*P	P	12 30 36.5	-1.1
	comp=Z,36nm,1.1s,mb4.8						
LBTB	**Lobatse**	26.16	286	*e*P	P	12 30 36.5	-1.1
LBTB				pmax	pmax		
	comp=Z,36nm,1.1s,mb4.8						
MATP	**Matopo**	26.62	298	P	P	12 30 40.2	-1.7
	comp=Z,6.2nm,0.7s,mb4.2,baz=129,slow=8.7,SNR=4.8						
MATP				LR	LR	12 39 34.9	
	comp=Z,3μm,21.6s,MS4.9,baz=129,slow=33						
MATP	**Matopo**	26.62	298	P	P	12 30 40.2	-1.7
MATP				LR	LR	12 39 34.9	
SUR	**Sutherland**	27.12	268	P	P	12 30 47.3	+0.9
	comp=Z,14nm,1.0s,mb4.5,baz=116,slow=3.2,SNR=4.1						
LSZ	**Lusaka**	30.36	306	P	P	12 31 14.7	-1.0
	comp=Z,3.1nm,0.6s,mb4.2,baz=136,slow=10,SNR=6.6						
LSZ				LR	LR	12 41 44.4	
	comp=Z,4μm,21.9s,MS5.0,baz=132,slow=33						
LSZ	**Lusaka**	30.36	306	*e*P	P	12 31 14.3	-1.4
	comp=Z,12nm,0.9s,mb4.6						
LSZ				LR	LR		
	comp=Z,3μm,21.0s,MS5.0						
LSZ	**Lusaka**	30.36	306	*e*P	P	12 31 14.3	-1.4
LSZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
LSZ				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.0						
MAW	**Mawson**	32.38	173	P	P	12 31 32.5	-0.4
	comp=Z,2.7nm,0.8s,mb4.2,baz=15,slow=9.9,SNR=4.3						
MAW				LR	LR	12 41 18.6	
	comp=Z,3μm,21.4s,MS5.0,baz=341,slow=30						
SYO	**Syowa Base**	34.21	189	⇓P	P	12 31 50.9	+2.1
SYO	**Syowa Base**	34.21	189	⇓*e*P	P	12 31 50.9	+2.1
TSUM	**Tsumeb**	35.53	288	P	P	12 31 59.5	-1.1
	comp=Z,9.0nm,0.9s,mb4.7,baz=125,slow=13,SNR=6.8						
TSUM				LR	LR	12 44 39.8	
	comp=Z,4μm,19.3s,MS5.2,baz=117,slow=33						
TSUM	**Tsumeb**	35.53	288	*e*P	P	12 32 01.3	+0.7
	comp=Z,23nm,1.2s,mb5.0						
TSUM				LR	LR		
	comp=Z,4μm,22.0s,MS5.1						
MIR	**Mirnyy**	38.42	156	*d i*P	P	12 32 25.4	+0.9
MIR				pmax	pmax		
	comp=Z,29nm,1.4s,mb4.8						
CASY	**Casey**	44.75	151	*e*P	P	12 33 16.9	+0.6
CASY	**Casey**	44.75	151	*e*P	P	12 33 16.6	+0.3
	comp=Z,22nm,1.0s,mb5.0						
CASY				LR	LR		
	comp=Z,3μm,19.0s,MS5.2						
SNAA	**Sanae**	46.00	201	⇑*i*P	P	12 33 26.9	+0.7
SNAA	**Sanae**	46.00	201	*e*	P	12 33 36.7	+11
SNAA	**Sanae**	46.00	201	*e*	P	12 33 41.6	+15
SNAA	**Sanae**	46.00	201	P	P	12 33 26.4	+0.3
	comp=Z,3.4nm,0.8s,mb4.3,baz=80,slow=6.4,SNR=13						
SNAA	**Sanae**	46.00	201	*e*P	P	12 33 26.4	+0.2
	comp=Z,13nm,0.9s,mb4.9						
SNAA	**Sanae**	46.00	201	*e*P	P	12 33 26.9	+0.7
VNA2	**Neumayer--Watz**	47.19	203	⇑*i*P	P	12 33 36.6	+1.1
VNA2				*e*		12 33 46.2	
VNA2				*e*		12 33 50.6	
VNA1	**Neumayer--Stat**	47.40	203	⇑*i*P	P	12 33 38.4	+1.2
VNA1				*e*		12 33 48.1	
VNA1				*e*		12 33 52.8	
VNA3	**Neumayer Olymp**	47.98	203	⇑*i*P	P	12 33 42.3	+0.5
VNA3				*e*		12 33 53.7	
VNA3				*e*		12 33 58.4	
ATD	**Arta Tunnel**	48.04	346	P	P	12 33 42.5	-0.5
	comp=Z,25nm,0.8s,mb5.3,baz=249,slow=15,SNR=9.7						
DJNS	**Zahran al Janu**	53.95	348	P	P	12 34 29.1	+1.5
QSPA	**South Pole Qui**	54.46	180	*e*P	P	12 34 29.7	-1.0
	comp=Z,23nm,1.0s,mb5.1						
KAMS	**Al Khamasin**	56.35	350	P	P	12 34 44.7	-0.4
BLJS	**Baljurashi**	56.42	347	P	P	12 34 47.6	+2.0
LTHS	**Al Lith**	57.03	345	P	P	12 34 49.9	-0.1
HYB	**Hyderabad**	57.99	29	*i* P	P	12 35 01.0	+4.3
HYB				*e*S	S	12 42 52.0	-3.9
HYB	**Hyderabad**	57.99	29	*e*P	P	12 35 01.0	+4.3
MBWA	**Marble Bar**	59.12	95	*e*P	P	12 35 05.7	+1.1
	comp=Z,7.9nm,0.9s,mb4.7						
MBWA				LR	LR		
	comp=Z,2μm,21.0s,MS5.1						
VNDA	**Vanda**	59.25	166	*e*P	P	12 35 03.2	-1.6
	comp=Z,17nm,1.5s,mb4.8						
VNDA				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
VNDA	**Vanda**	59.25	166	*e*P	P	12 35 03.2	-1.6
VNDA				pmax	pmax		
	comp=Z,17nm,1.5s						
VNDA				MLR	MLR		
	comp=Z,1μm,19.0s						
MZLS	**Mizel**	59.93	351	P	P	12 35 09.7	-0.5
AFFS	**‘Afif**	60.13	349	P	P	12 35 11.3	-0.3
KULM	**Kulim**	60.23	57	*e*P	P	12 35 12.3	0.0
HASS	**Wahat al Ahsa’**	60.69	356	P	P	12 35 14.8	-0.5
FITZ	**Fitzroy Crossi**	65.46	95	*e*P	P	12 35 48.3	+1.3
	comp=Z,18nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	65.46	95	P	P	12 35 46.0	-1.0
	comp=Z,6.1nm,0.7s,mb4.8,baz=220,slow=3.6,SNR=10.0						
TBKS	**Tabuk**	65.56	344	P	P	12 35 47.4	-0.1
BDAS	**Al Bad‘**	66.10	342	P	P	12 35 52.8	+1.9
HAQS	**Haql**	66.74	342	P	P	12 35 55.2	+0.1
DBIC	**Dimbokro**	69.00	295	P	P	12 36 08.4	-1.0
	comp=Z,3.5nm,0.8s,mb4.3,baz=123,slow=4.4,SNR=4.0						
DBIC				LR	LR	13 02 19.9	
	comp=Z,994nm,19.0s,MS5.1,baz=114,slow=32						
ASPA	**Alice Springs**	69.22	105	*e*P	P	12 36 09.3	-1.3
KOLN	**Koldanda**	69.29	28	*e*P	P	12 36 11.6	+0.6
	comp=Z,88nm,1.2s,mb5.6						
DMN	**Daman**	69.75	30	*e*P	P	12 36 13.3	-0.5
	comp=Z,60nm,0.9s,mb5.5						
PKI	**Pulchoki**	69.84	30	*e*P	P	12 36 13.9	-0.4
GKN	**Gorkha**	69.91	29	*e*P	P	12 36 13.9	-0.9
	comp=Z,62nm,1.0s,mb5.5						
KKN	**Kakani**	69.98	30	*e*P	P	12 36 14.1	-1.1
GUN	**Gumba**	70.33	30	*e*P	P	12 36 15.4	-1.9
STKA	**Stephens Creek**	70.91	116	P	P	12 36 19.4	-1.4
	comp=Z,3.0nm,0.9s,mb4.2,baz=271,slow=9.6,SNR=5.2						
STKA				LR	LR	13 00 48.3	
	comp=Z,2μm,21.3s,MS5.2,baz=230,slow=30						
STKA	**Stephens Creek**	70.91	116	*e*P	P	12 36 19.5	-1.3
SHL	**Shillong**	71.00	36	*e*P	P	12 36 23.0	+1.6
WRA	**Warramunga Arr**	71.50	102	P	P	12 36 23.3	-1.3
	comp=Z,10nm,0.9s,mb4.8,baz=234,slow=5.2,SNR=29						
WB2	**Warramunga Arr**	71.51	102	*e*P	P	12 36 23.2	-1.4
WRAB	**Tennant Creek**	71.51	102	*e*P	P	12 36 23.5	-1.1
	comp=Z,56nm,1.1s,mb5.4						
WRAB	**Tennant Creek**	71.51	102	*d i*P	P	12 36 23.6	-1.0
MSL	**Mosul**	72.29	351	*e*x	x	12 36 37.0	
LSA	**Lhasa**	74.16	34	P	P	12 36 42.3	+2.3
LSA	**Lhasa**	74.16	34	*e*P	P	12 36 42.2	+2.2
	comp=Z,18nm,1.0s,mb5.0						
LSA				LR	LR		
	comp=Z,830nm,21.0s,MS5.0						
LSA	**Lhasa**	74.16	34	*e*P	P	12 36 42.2	+2.2
LSA				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
LSA				MLR	MLR		
	comp=Z,830nm,21.0s,MS5.0						
GNI	**Garni**	75.92	353	P	P	12 36 49.4	-0.6
	comp=Z,5.2nm,0.5s,mb4.7,baz=205,slow=19,SNR=3.6						
GNI	**Garni**	75.92	353	*e*P	P	12 36 49.7	-0.2
	comp=Z,55nm,1.3s,mb5.3						
GNI	**Garni**	75.92	353	*c i*P	P	12 36 51.3	+1.4
GNI				pmax	pmax		
	comp=Z,40nm,1.7s						
QIZ	**Qiongzhong**	76.30	54	P	P	12 36 52.6	+0.1
QIZ				S	S	12 46 36.0	-0.4
QIZ				AMB	AMB		
	comp=Z,20nm,2.0s,mb4.7						
QIZ				AMB	AMB		
	comp=Z,330nm,4.0s						
QIZ				LR	LR		
	comp=N,400nm,21.0s						
QIZ				LR	LR		
	comp=Z,390nm,18.9s,MS4.7						
KMI	**Kunming**	76.41	45	P	P	12 36 55.4	+2.4
KMI				XP	sP	12 37 00.6	+5.4
KMI				PP	PP	12 39 44.9	-1.5
KMI				PPP	PPP	12 41 30.5	-3.3
KMI				S	S	12 46 31.2	-6.3
KMI				SKS	SKS	12 46 59.1	-4.7
KMI				AMB	AMB		
	comp=Z,180nm,8.5s						
KMI				LR	LR		
	comp=N,600nm,22.0s,MS5.0						
KMI				LR	LR		
	comp=E,480nm,21.4s,MS5.0						
KMI				LR	LR		
	comp=Z,800nm,21.4s,MS5.0						
BR131	**Keskin Array S**	77.25	345	*e*P	P	12 36 55.8	-1.6
	comp=Z,10nm,0.9s,mb4.8						
BR131				LR	LR		
	comp=Z,414nm,20.0s,MS4.8						
BRTR	**Keskin Array B**	77.25	345	P	P	12 36 55.9	-1.5
	comp=Z,4.2nm,0.8s,mb4.4,baz=172,slow=7.1,SNR=19						
TI2	**Plekhanov**	77.49	353	*e*P	P	12 36 59.4	+0.7
ANTO	**Ankara**	77.58	344	*e*P	P	12 36 59.7	+0.5
	comp=Z,12nm,1.0s,mb4.8						
ANTO	**Ankara**	77.58	344	*e*P	P	12 36 59.7	+0.5
ANTO				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
ZEI	**Tsey**	78.60	353	*e*P	P	12 37 04.8	+0.1
ZEI				*i* *PP	pP	12 37 15.5	+9.1
ZEI				*i*		12 40 00.5	
ZEI				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
GYA	**Guiyang**	79.72	47	P	P	12 37 13.8	+2.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
GYA				AMB	AMB		
	comp=Z,150nm,5.4s						
KIV	**Kislovodsk**	79.90	352	*e*P	P	12 37 11.6	-0.2
	comp=Z,25nm,1.0s,mb5.1						
KIV	**Kislovodsk**	79.90	352	*d i*P	P	12 37 11.7	-0.1
KIV				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
SOC	**Sochi**	79.91	350	*e*P	P	12 37 23.7	+12
SOC				*e*S	S	12 47 11.9	-2.6
SOC				*e*SS	SS	12 52 20.2	-6.6
SOC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
SOC				MLR	MLR		
	comp=Z,280nm,16.0s,MS4.7						
AAK	**Ala-Archa**	80.34	16	*e*P	P	12 37 13.2	-0.9
	comp=Z,21nm,1.0s,mb5.0						
AAK				LR	LR		
	comp=Z,145nm,20.0s,MS4.3						
AAK	**Ala-Archa**	80.34	16	*e*P	P	12 37 13.2	-0.9
AAK				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
AAK				MLR	MLR		
	comp=Z,145nm,20.0s,MS4.3						
FRU	**Bishkek**	80.55	16	*e*P	P	12 37 18.0	+2.7
FRU				*e*		12 37 27.0	
CTA	**Charters Tower**	80.79	108	*e*P	P	12 37 16.5	-0.5
	comp=Z,6.5nm,0.9s,mb4.6						
CTAO	**Charters Tower**	80.79	108	*e*P	P	12 37 16.7	-0.2
	comp=Z,16nm,1.1s,mb4.9						
CTAO	**Charters Tower**	80.79	108	*e*P	P	12 37 16.7	-0.3
CTAO				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
GOF	**Gofitskoye**	80.95	353	*e*P	P	12 37 15.5	-1.8
CD2	**Chengdu**	81.44	42	*e*P	P	12 37 24.8	+4.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb5.1						
VAY	**Valandovo**	81.72	337	*e*P	P	12 37 21.3	-0.1
TIP	**Timpagrande**	81.84	332	*e*P	P	12 37 21.0	-1.1
OHR	**Ohrid**	82.11	336	*e*P	P	12 37 23.6	+0.2
OHR	**Ohrid**	82.11	336	*e*P	P	12 37 23.6	+0.2
CFR	**Carcaliu**	83.71	342	⇑P	P	12 37 30.5	-1.1
CFR	**Carcaliu**	83.71	342	⇑P	P	12 37 30.5	-1.0
ENH	**Enshi**	84.21	46	*e*P	P	12 37 36.1	+1.6
	comp=Z,49nm,1.7s,mb5.4						
VRI	**Vrincioaia**	84.70	342	⇓P	P	12 37 36.5	0.0
WMQ	**Urumqi**	85.10	24	⇓P	P	12 37 40.9	+2.3
WMQ				AP	pP	12 37 45.5	+5.3
WMQ				XP	sP	12 37 48.5	+7.7
WMQ				PP	PP	12 40 59.9	+2.4
WMQ				SKS	SKS	12 48 01.9	-2.4
WMQ				*e*S	S	12 48 08.9	+1.6
WMQ				AMB	AMB		
	comp=Z,20nm,1.7s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,230nm,3.2s						
WMQ				LR	LR		
	comp=N,420nm,24.6s,MS5.0						
WMQ				LR	LR		
	comp=E,530nm,23.1s,MS5.0						
WMQ				LR	LR		
	comp=Z,390nm,18.1s,MS4.8						
LZH	**Lanzhou**	85.49	39	*e*P	P	12 37 42.1	+1.4
LZH				PP	PP	12 41 03.2	+2.4
LZH				SKS	SKS	12 48 02.0	-5.1
LZH				*e*S	S	12 48 09.3	-1.9
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,240nm,9.2s						
LZH				LR	LR		
	comp=N,830nm,16.2s						
LZH				LR	LR		
	comp=Z,1μm,18.5s,MS5.4						
AKTO	**Aktyubinsk**	85.89	3	P	P	12 37 41.0	-1.3
	comp=Z,9.2nm,0.8s,mb5.1,baz=211,slow=2.9,SNR=15						
MKAR	**Makanchi Array**	86.16	19	P	P	12 37 42.5	-1.3
	comp=Z,3.4nm,0.8s,mb4.6,baz=208,slow=5.4,SNR=18						
MKAR				LR	LR	13 12 15.5	
	comp=Z,172nm,19.3s,MS4.5,baz=195,slow=33						
MKAR	**Makanchi Array**	86.16	19	P	P	12 37 42.5	-1.3
MKAR				LR	LR	13 12 15.5	
MKAR	**Makanchi Array**	86.16	19	*i* P	P	12 37 44.7	+0.9
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GTA	**Gaotai**	86.17	34	*e*P	P	12 37 44.3	+0.3
GTA				AP	pP	12 37 52.1	+6.4
GTA				XP	sP	12 37 55.3	+9.1
GTA				PP	PP	12 41 07.3	+1.0
GTA				SKS	SKS	12 48 05.9	-5.7
GTA				S	S	12 48 16.6	-1.1
GTA				XS		12 48 31.4	
GTA				PS	PS	12 49 20.8	+2.9
GTA				SS	SS	12 53 59.9	+0.3
GTA				AMB	AMB		
	comp=Z,130nm,7.2s						
GTA				LR	LR		
	comp=N,320nm,20.2s,MS4.8						
GTA				LR	LR		
	comp=E,310nm,21.7s,MS4.8						
GTA				LR	LR		
	comp=Z,400nm,23.9s,MS4.7						
DRGR		86.64	339	⇑P	P	12 37 44.4	-1.8
DRGR		86.64	339	⇑P	P	12 37 44.4	-1.8
ORR	**Orenburg**	86.98	1	*e*P	P	12 37 48.1	+0.4
ORR				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.2						
PLCA	**Paso Flores**	88.12	219	LR	LR	13 11 26.4	
	comp=Z,342nm,19.1s,MS4.8,baz=135,slow=32						
PSZ	**Piszkesteto**	88.49	338	*e*P	P	12 37 55.0	0.0
	comp=Z,6.8nm,0.8s,mb4.9						
PSZ	**Piszkesteto**	88.49	338	*e*P	P	12 37 55.0	0.0
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
AKASG	**Malin Array Be**	88.65	345	P	P	12 37 54.2	-1.5
	comp=Z,3.0nm,0.6s,mb4.8,baz=161,slow=4.7,SNR=18						
AKASG	**Malin Array Be**	88.65	345	P	P	12 37 54.2	-1.5
AKASG	**Malin Array Be**	88.65	345	*i* P	P	12 37 55.0	-0.7
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KOLS	**Kolonicke sedl**	88.71	340	*e*P	P	12 37 56.4	+0.3
KECS	**Kecovo**	88.82	339	*e*P	P	12 37 58.5	+1.9
KURK	**Kurchatov**	88.90	16	*e*P	P	12 37 58.3	+1.4
	comp=Z,3.9nm,1.0s,mb4.7						
KURK	**Kurchatov**	88.90	16	*e*P	P	12 37 58.2	+1.3
CRVS	**Cervenica-Dubn**	88.91	340	*e*P	P	12 37 57.0	0.0
CRVS				*e*		12 38 07.2	
VYHS	**Vyhne**	89.32	338	*e*P	P	12 37 58.8	-0.2
BVAR	**Borovoye Array**	89.61	10	P	P	12 37 58.6	-1.6
	comp=Z,1.8nm,0.8s,mb4.5,baz=194,slow=6.1,SNR=9.3						
BDFB	**Brasilia**	89.95	251	P	P	12 38 08.1	+5.4
	comp=Z,3.1nm,0.8s,mb4.7,baz=157,slow=6.0,SNR=3.2						
BDFB				LR	LR	13 15 08.6	
	comp=Z,319nm,18.8s,MS4.8,baz=126,slow=33						
CHKZ	**Chkalovo**	90.28	10	*e*P	P	12 38 02.6	-0.7
	comp=Z,9.7nm,1.5s,mb4.9						
CHKZ	**Chkalovo**	90.28	10	*e*P	P	12 38 02.6	-0.7
CHKZ				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb4.9						
NJ2	**Nanjing**	91.16	51	*e*P	P	12 38 08.1	+0.2
NJ2				AP	pP	12 38 19.0	+9.5
NJ2				XP	sP	12 38 23.1	+13
NJ2				PP	PP	12 41 47.3	+0.1
NJ2				S	S	12 49 02.0	-2.0
NJ2				XS		12 49 20.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,1μm,6.8s						
NJ2				LR	LR		
	comp=N,330nm,14.2s,MS5.0						
NJ2				LR	LR		
	comp=E,270nm,15.0s,MS5.0						
GERES	**GERESS Array B**	91.30	335	LR	LR	13 22 59.7	
	comp=E,334nm,18.4s,MS4.8,baz=148,slow=38						
KHC	**Kasperske Hory**	91.59	335	*e*P	P	12 38 11.8	+2.4
OBN	**Obninsk**	91.62	350	⇓*e*P	P	12 38 09.9	+0.5
OBN				*e*		12 41 49.1	
OBN				*e*S		12 48 47.9	
OBN				*e*SS	SS	12 55 26.3	+8.7
OBN				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.1						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.8						
ESDC	**Sonseca Array**	91.76	319	P	P	12 38 11.0	+0.5
	comp=Z,0.4nm,0.3s,mb4.2,baz=143,slow=6.1,SNR=4.5						
ARU	**Arti**	91.90	3	*e*P	P	12 38 10.6	-0.1
	comp=Z,7.1nm,0.8s,mb5.0						
ARU	**Arti**	91.90	3	*e*P	P	12 38 10.6	-0.1
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
SSE	**Sheshan**	92.01	53	P	P	12 38 11.6	-0.2
SSE				AP	pP	12 38 20.9	+7.4
SSE				XP	sP	12 38 24.8	+11
SSE				PP	PP	12 41 51.2	-2.9
SSE				S	S	12 49 12.1	+0.4
SSE				XS		12 49 28.7	
SSE				SS	SS	12 55 23.2	-0.5
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,60nm,7.0s						
SSE				LR	LR		
	comp=N,280nm,27.5s,MS4.7						
SSE				LR	LR		
	comp=E,200nm,27.9s,MS4.7						
SSE				LR	LR		
	comp=Z,390nm,27.9s,MS4.7						
GRA1	**Grafenberg Arr**	92.88	334	*e*P	P	12 38 15.9	+0.5
	comp=Z,13nm,1.2s,mb5.2						
GRF	**Grafenberg Arr**	92.88	334	*e*P	P	12 38 15.9	+0.5
	comp=Z,13nm,1.2s,mb5.2						
GRF	**Grafenberg Arr**	92.88	334	*e*P	P	12 38 15.9	+0.5
GRF				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.2						
GRF	**Grafenberg Arr**	92.88	334	*e*P	P	12 38 15.9	+0.5
GRF				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.2						
HHC	**Hu-ho-hao-te**	93.06	40	*e*P	P	12 38 20.0	+3.6
HHC				AP	pP	12 38 24.2	+6.1

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HHC                                  XP        sP          12 38 27.1 +8.5
HHC                                  SKS       SKS         12 48 52.6 -0.8
HHC                                  S         S           12 49 28.3 +7.8
HHC                                  XS                    12 49 34.5
HHC                                  AMB       AMB
        comp=Z,10.0nm,0.5s,mb5.5
HHC                                  AMB       AMB
        comp=Z,80nm,3.4s
HHC                                  LR        LR
        comp=N,360nm,16.2s,MS5.0
HHC                                  LR        LR
        comp=E,320nm,19.2s,MS5.0
HHC                                  LR        LR
        comp=Z,300nm,27.6s
ZAL     Zalesovo          93.34  18  P         P           12 38 15.7 -1.6
        comp=Z,1.1nm,0.8s,mb4.4,baz=271,slow=3.9,SNR=6.4
ZAL                                  LR        LR          13 17 13.2
        comp=Z,295nm,19.8s,MS4.7,baz=130,slow=34
ZAL     Zalesovo          93.34  18 i P        P           12 38 18.6 +1.2
ZAL                                  pmax      pmax
        comp=Z,1.0nm,0.8s
SONM    Songino Array     95.73  33  LR        LR          13 19 48.7
        comp=Z,448nm,18.2s,MS5.0,baz=223,slow=34
KLMR    Klimovskoe        96.90 353 eP         P           12 38 30.4 -3.1
KLMR                                 pmax      pmax
        comp=Z,60nm,3.3s
MDJ     Mudanjiang       105.57  46  PDIF      Pdif        12 39 14.8 +2.1
MDJ                                  PP        PP          12 43 36.7 -0.9
MDJ                                  S                     12 51 10.8
MDJ                                  PS        PS          12 52 50.9 +0.6
MDJ                                  SS        SS          12 58 37.2 +4.1
MDJ                                  PP        PP
        comp=Z,100nm,6.8s
MDJ                                  LR        LR
        comp=N,130nm,29.8s,MS4.7
MDJ                                  LR        LR
        comp=E,280nm,30.3s,MS4.7
MDJ                                  LR        LR
        comp=Z,390nm,34.4s,MS4.7
TBI     Tubuai           117.39 156 ePP        PP          12 44 52.1  -12
TBI     Tubuai           117.39 156 ePS        PS          12 54 36.3 -7.4
TBI     Tubuai           117.39 156 eSS        SS          13 01 10.5 -0.3
TBI                                 eLR        LR          13 19 23.8
        comp=Z,576nm,25.5s
TIXI    Tiksi            119.13  21 i PKIKP    PKPdf       12 43 50.6 -1.7
TIXI                                 pmax      pmax
        comp=Z,2.0nm,1.0s
TIXI                                 MLR       MLR
        comp=Z,189nm,19.0s,MS4.7
RKT     Rikitea          120.94 171 eLQ                    13 15 36.4
RKT     Rikitea          120.94 171 ePS        PS          12 55 08.5 -7.1
RKT     Rikitea          120.94 171 eSS        SS          13 02 10.5  +14
RKT                                 eLR        LR          13 21 08.0
        comp=Z,565nm,29.5s
PPT     Papeete          122.71 154 eLQ                    13 16 40.3
PPT     Papeete          122.71 154 ePP        PP          12 45 35.3 -4.9
PPT     Papeete          122.71 154 ePS        PS          12 55 30.5 -1.1
PPT     Papeete          122.71 154 eSS        SS          13 02 14.8 -5.2
PPT                                 eLR        LR          13 21 54.9
        comp=Z,793nm,31.5s
TAOE    Nuku Hiva Isla   133.86 161 eLR        LR          13 27 03.8
        comp=Z,2μm,23.7s
SWET    Sewanee          147.02 281 ePKPdf     PKPdf       12 44 44.4 -0.4
INK     Inuvik           147.14   5 ePKPbc     PKPdf       12 44 44.0  0.0
COLA    College          148.16  17 ePKPbc     PKPdf       12 44 50.0 +4.3
ILAR    Eielson Array    148.47  16  PKP       PKPdf       12 44 44.7 -1.5
        comp=Z,3.0nm,0.8s,baz=314,slow=2.5,SNR=28
ILAR                                 PKPbc     PKPdf       12 44 47.5 +1.4
        comp=Z,6.3nm,0.8s,baz=318,slow=2.7,SNR=29
WVT     Waverly          148.72 282 ePKPbc     PKPdf       12 44 48.9 +1.4
MCK     McKinley         148.82  19 ePKPbc     PKPdf       12 44 51.1 +4.3
SML     Sawmill          150.53  21 ePKPbc     PKPdf       12 44 55.0 +5.5
DAWY    Dawson           150.58  11 ePKPbc     PKPdf       12 44 54.2 +4.7
YKA     Yellowknife Ar   152.18 348  PKP       PKPdf       12 44 51.6 -0.3
        comp=Z,0.7nm,0.7s,baz=15,slow=1.6,SNR=2.4
YKA                                  PKPbc     PKPdf       12 44 56.4 +4.5
        comp=Z,3.8nm,0.7s,baz=20,slow=1.5,SNR=9.1
YKA     Yellowknife Ar   152.18 348  PKIKP     PKPdf       12 44 51.7 -0.3
YKA                                                        12 44 56.4
TXAR    Lajitas Array    159.64 258  PKP       PKPdf       12 45 03.8 +1.0
        comp=Z,0.7nm,0.8s,baz=174,slow=2.4,SNR=7.8
TXAR                                 PKPab     PKPab       12 45 41.5 +0.3
        comp=Z,2.1nm,1.0s,baz=121,slow=7.3,SNR=6.7
PDAR    Pinedale Array   165.04 303  PKP       PKPdf       12 45 08.3 +0.6
        comp=Z,0.7nm,0.7s,baz=113,slow=3.3,SNR=7.5
PDAR                                 PP        PP          12 49 54.1 +2.3
        comp=Z,0.5nm,0.8s,baz=67,slow=11,SNR=4.0
NVAR    Mina Array Bea   172.82 295  PKP       PKPdf       12 45 16.1 +3.2
        comp=Z,1.3nm,1.0s,baz=186,slow=1.1,SNR=7.3
```

ISC 04 12:29:20.7±1.7**, 46.03N**±0.05×**13.5E**±0.1**, n6,** σ0^{s}42/11**, 1C, Austria**

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Code    Station Name       Δ°   AZ°     Phase ID              Time      Res
                                      Op         ISC        h  m  s     ISC
DRE     Drenchia          0.16   27⇑i Pg        Pg          12 29 23.7 -0.1
DRE                                 i Sg        Sg          12 29 25.9  0.0
ROBS    Robic             0.21  354 i Pg        Pg          12 29 25.6 +0.7
CADS    Cadrg             0.24   35 i Pg        Pg          12 29 25.2 -0.2
CADS                                i Sg        Sg          12 29 29.2 +0.5
VOJS    Vojsko            0.24   90 i Pg        Pg          12 29 25.1 -0.3
VOJS                                i Sg        Sg          12 29 29.0 +0.4
JAVS    Javornik          0.39  111 i Pg        Pg          12 29 28.3 -0.2
JAVS                                i Sg        Sg          12 29 34.0 +0.3
        comp=Z,5.0nm,0.1s
GORS    Gorjuse           0.43   48 i Pg        Pg          12 29 28.5 -0.7
GORS                                i Sg        Sg          12 29 34.4 -0.5
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*MDD **04** 12:45:43.7±1.6, 36.97N×12.83W, mb4.4/8, Error ellipse: s-maj=15.0km s-min=12.7km az=94.0, PRXIMO*
*NEIC **04** 12:45:43.0±0.8, 36.96N×12.91W, h10^{km}, MG4.4(MDD), Error ellipse: s-maj=11.4km s-min=6.9km az=98.0*
*INMG **04** 12:45:45.8±0.9, 36.78N×13.16W, h10^{km}, ML2.9, Error ellipse: s-maj=5.8km s-min=4.6km az=80.0*
*CSEM **04** 12:45:45.7±0.1, 36.99N×12.87W, h25^{km}, ML3.8/8, Error ellipse: s-maj=2.7km s-min=2.1km az=105.0*
ISC 04 12:45:45.8±1.0**, 37.16N**±0.05×**12.50W**±0.06**, h10^{km}, n61,** σ1^{s}24/111**, 9C-2D, Azores-Cape St. Vincent Ridge**

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Code    Station Name       Δ°   AZ°     Phase ID              Time      Res
                                      Op         ISC        h  m  s     ISC
PTEO    Sao Teotonio      3.03   82 i Pn        Pn          12 46 36.1 +1.3
PTEO                                eSn         Sn          12 47 13.6 +2.0
        26nm,0.5s
PTEO    Sao Teotonio      3.03   82 ⇑Pn         Pn          12 46 36.1 +1.3
PTEO                                 Sn         Sn          12 47 13.6 +2.0
        13nm,0.5s
PLOU    Loures            3.16   56 ePn         Pn          12 46 38.5 +1.9
PLOU                                eSn         Sn          12 47 17.8 +3.1
        22nm,0.1s
PLOU    Loures            3.16   56  Pn         Pn          12 46 38.5 +1.9
PLOU                                 Sn         Sn          12 47 17.8 +3.1
        11nm,0.1s
PBEJ    Beja              3.78   75 ePn         Pn          12 46 46.3 +0.9
PBEJ                                eSn         Sn          12 47 31.8 +1.3
        11nm,0.3s
PBEJ    Beja              3.78   75 ePn         Pn          12 46 46.3 +0.9
PBEJ                                eSn         Sn          12 47 31.8 +1.3
        11nm,0.3s
EVO     Evora             3.81   68 ePg         Pg          12 47 00.1 -1.7
EVO                                 eSn         Sn          12 47 31.0 -0.2
        18nm,0.3s
EVO     Evora             3.81   68 ePn         Pn          12 46 45.5 -0.3
EGRO    El Granado        4.02   83 ⇑Pn         Pn          12 46 49.4 +0.6
        3.3nm,0.1s,SNR=18
EGRO                                 Sn         Sn          12 47 37.2 +0.8
        19nm,0.2s,SNR=7.3
EGRO    El Granado        4.02   83 ⇑Pn         Pn          12 46 49.2 +0.4
EGRO                                 Sn         Sn          12 47 37.4 +0.9
EGRO    El Granado        4.02   83 ⇑Pn         Pn          12 46 49.2 +0.4
EGRO                                 Sn         Sn          12 47 37.2 +0.7
        19nm,0.2s,SNR=7.3
PTOM    Tomar             4.04   51 ePn         Pn          12 46 51.0 +1.8
PTOM                                eSn         Sn          12 47 39.3 +2.2
        24nm,0.2s
PTOM    Tomar             4.04   51  Pn         Pn          12 46 51.0 +1.8
PTOM                                 Sn         Sn          12 47 39.3 +2.2
        12nm,0.2s
EBAD    Badajoz           4.62   68 ⇑Pn         Pn          12 46 57.7 +0.4
        1.9nm,0.1s,SNR=18
EBAD                                 Sn         Sn          12 47 52.0 +0.2
        15nm,0.3s,SNR=4.8
EBAD    Badajoz           4.62   68 ⇑Pn         Pn          12 46 57.8 +0.4
EBAD                                 Sn         Sn          12 47 52.0 +0.3
EBAD    Badajoz           4.62   68 ⇑Pn         Pn          12 46 57.8 +0.4
EBAD                                 Sn         Sn          12 47 52.0 +0.3
        15nm,0.3s,SNR=4.8
EMIN    Mina Concepcio    4.68   81 ⇑Pn         Pn          12 46 58.4 +0.2
        1.6nm,0.1s,SNR=18
EMIN                                 Sn         Sn          12 47 52.6 -0.6
        5.5nm,0.2s,SNR=11
EMIN    Mina Concepcio    4.68   81 ⇑Pn         Pn          12 46 58.4 +0.2
EMIN                                 Sn         Sn          12 47 52.9 -0.3
EMIN    Mina Concepcio    4.68   81  Pn         Pn          12 46 58.4 +0.2
        1.6nm,0.1s,SNR=18
EMIN                                 Sn         Sn          12 47 52.9 -0.3
MTE     Manteigas         5.04   49 eSn         Sn          12 48 03.5 +1.0
        13nm,0.3s
MTE     Manteigas         5.04   49  Sn         Sn          12 48 03.5 +1.0
        6.3nm,0.3s
PVIS    Viseu             5.05   44 ePn         Pn          12 47 03.9 +0.5
PVIS                                eSn         Sn          12 48 02.6  0.0
        17nm,0.1s
PVIS    Viseu             5.05   44  Pn         Pn          12 47 03.9 +0.5
PVIS                                 Sn         Sn          12 48 02.6  0.0
        8.5nm,0.1s
ESPR    Espera            5.33   91  Pn         Pn          12 47 07.5 +0.1
        1.9nm,0.1s,SNR=5.8
ESPR                                 Sn         Sn          12 48 09.0 -0.5
        39nm,0.4s,SNR=7.9
ESPR    Espera            5.33   91  Pn         Pn          12 47 07.5 +0.1
ESPR                                 Sn         Sn          12 48 09.2 -0.3
ESPR    Espera            5.33   91  Pn         Pn          12 47 07.5 +0.2
        1.9nm,0.1s,SNR=5.8
ESPR                                 Sn         Sn          12 48 09.0 -0.5
        39nm,0.4s,SNR=7.9
PVRL    Vila Real         5.54   41 ePn         Pn          12 47 10.2 -0.1
PVRL                                eSn         Sn          12 48 14.8 -0.1
        12nm,0.1s
PVRL    Vila Real         5.54   41  Pn         Pn          12 47 10.2 -0.1
PVRL                                 Sn         Sn          12 48 14.8 -0.1
        5.8nm,0.1s
EJIF    Jimena Fronter    5.69   95  Sn         Sn          12 48 16.3 -2.3
        1.5nm,0.4s,SNR=7.9
ECAB    El Cabril         5.70   79  Pn         Pn          12 47 12.8 +0.3
        1.5nm,0.1s,SNR=14
ECAB                                 Sn         Sn          12 48 17.0 -1.8
        16nm,0.4s,SNR=7.9
ECAB    El Cabril         5.70   79  Pn         Pn          12 47 12.8 +0.3
ECAB                                 Sn         Sn          12 48 18.1 -0.7
ECAB    El Cabril         5.70   79  Pn         Pn          12 47 12.8 +0.2
        1.5nm,0.1s,SNR=14
ECAB                                 Sn         Sn          12 48 18.1 -0.7
PCAB    Cabril            5.71   36 eSn         Sn          12 48 18.5 -0.7
        8.9nm,0.1s
PCAB    Cabril            5.71   36  Sn         Sn          12 48 18.5 -0.7
        4.4nm,0.1s
EZAM    Zamans            5.78   29  Pn         Pn          12 47 13.0 -0.7
        1.9nm,0.2s,SNR=4.0
EZAM                                 Sn         Sn          12 48 19.3 -1.7
        10nm,0.2s,SNR=9.4
EZAM    Zamans            5.78   29  Pn         Pn          12 47 13.2 -0.6
EZAM                                 Sn         Sn          12 48 19.7 -1.2
EZAM    Zamans            5.78   29  Pn         Pn          12 47 13.1 -0.7
EZAM                                 Sn         Sn          12 48 19.3 -1.7
        10nm,0.2s,SNR=9.4
ELOB    Lobios            5.82   35  Pn         Pn          12 47 14.4 +0.1
        0.3nm,0.0s,SNR=7.9
ELOB                                 Sn         Sn          12 48 20.1 -1.8
        6.2nm,0.1s,SNR=8.9
ELOB    Lobios            5.82   35  Pn         Pn          12 47 14.2 -0.1
ELOB                                 Sn         Sn          12 48 20.7 -1.2
ELOB    Lobios            5.82   35  Pn         Pn          12 47 14.2 -0.1
ELOB                                 Sn         Sn          12 48 20.7 -1.2
EADA    Adamuz            6.37   79 ⇓Pn         Pn          12 47 21.8 -0.3
        1.3nm,0.1s,SNR=18
EADA                                 Sn         Sn          12 48 33.8 -1.8
        9.2nm,0.3s,SNR=7.9
EADA    Adamuz            6.37   79 ⇓Pn         Pn          12 47 21.8 -0.3
EADA                                 Sn         Sn          12 48 34.1 -1.5
EADA    Adamuz            6.37   79  Pn         Pn          12 47 21.8 -0.2
        1.3nm,0.1s,SNR=18
EADA                                 Sn         Sn          12 48 34.1 -1.5
EMAZ    Mazaricos         6.38   24  Pn         Pn          12 47 21.9 -0.3
        1.3nm,0.1s,SNR=4.0
EMAZ                                 Sn         Sn          12 48 29.9 -6.0
        19nm,0.2s,SNR=7.9
EMAZ    Mazaricos         6.38   24  Pn         Pn          12 47 21.9 -0.3
        1.3nm,0.1s,SNR=4.0
CIA     Chichaoua         6.38  150  Pn         Pn          12 47 09.0  -13
CIA                                  Sn         Sn          12 48 21.0  -15
PBRG    Braganca          6.43   42 ePn         Pn          12 47 22.9  0.0
PBRG                                eSn         Sn          12 48 36.4 -0.7
ECAL    Calabor           6.53   41  Pn         Pn          12 47 24.5 +0.2
        3.5nm,0.1s,SNR=9.0
ECAL                                 Sn         Sn          12 48 38.5 -1.1
        9.6nm,0.2s,SNR=7.9
ECAL    Calabor           6.53   41  Pn         Pn          12 47 24.5 +0.2
ECAL                                 Sn         Sn          12 48 39.2 -0.4
ECAL    Calabor           6.53   41  Pn         Pn          12 47 24.5 +0.2
        3.5nm,0.1s,SNR=9.0
ECAL                                 Sn         Sn          12 48 38.5 -1.1
        9.6nm,0.2s,SNR=7.9
ESDC    Sonseca Array     7.16   67  Pn         Pn          12 47 32.7 -0.4
        0.4nm,0.5s,baz=252,slow=13,SNR=4.5
ESDC    Sonseca Array     7.16   67  Pn         Pn          12 47 32.7 -0.4
        0.4nm,0.5s,SNR=4.5
CZD     Col de Zad        7.37  122  Pn         Pn          12 47 42.0 +5.9
CZD                                  Sn         Sn          12 48 51.0  -10
EPON    Pontenova         7.39   32  Pn         Pn          12 47 35.2 -1.3
        0.7nm,0.1s,SNR=4.0
EPON                                 Sn         Sn          12 48 57.1 -4.1
        0.7nm,0.1s,SNR=7.9
EPON    Pontenova         7.39   32  Pn         Pn          12 47 35.2 -1.3
EPON                                 Sn         Sn          12 48 57.4 -3.9
EPON    Pontenova         7.39   32  Pn         Pn          12 47 35.2 -1.2
        0.7nm,0.1s,SNR=4.0
EPON                                 Sn         Sn          12 48 57.4 -3.8
EQES    Quesada           7.53   82  Pn         Pn          12 47 37.9 -0.4
        0.3nm,0.1s,SNR=7.9
EQES                                 Sn         Sn          12 49 01.9 -2.7
        2.0nm,0.2s,SNR=7.9
EQES    Quesada           7.53   82  Pn         Pn          12 47 37.9 -0.4
        0.3nm,0.1s,SNR=7.9
EFAM    Famara            8.06  186  Pn         Pn          12 47 36.9 -8.8
        9.2nm,0.1s,SNR=4.0
EARI    Arriondas         8.29   40  Pn         P           12 47 48.9  0.0
        3.1nm,0.3s,SNR=7.9
EARI                                 Sn         Sn          12 49 19.6 -3.9
        0.6nm,0.2s,SNR=7.9
EARI    Arriondas         8.29   40  Pn         P           12 47 48.9  0.0
        3.1nm,0.3s,SNR=7.9
EARI                                 Sn         Sn          12 49 19.6 -4.0
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*NIED **04** 13:35:00, 37.00N×141.60E, h26^{km}, Mw3.6 Best double couple: $M_0$3.24×10^{14} NP1:ϕ_s30°, δ74°, λ94°. NP2:ϕ_s194°, δ16°, λ75°.*
*MOS **04** 13:35:29.9±0.9, 37.06N×141.75E, h46^{km}, mb4.2/7, Error ellipse: s-maj=17.0km s-min=15.0km az=17.7*
*NEIC **04** 13:35:31.0±0.9, 37.03N×141.75E, h35^{km}, mb4.1/3, Error ellipse: s-maj=18.1km s-min=11.8km az=148.0*
*IDC **04** 13:35:31.1±2.7, 36.92N×141.93E, h41^{km}±26^{km}, mb3.5/5, mb1 3.7/8, mb1mx3.5/23, mbtmp3.8/8, ML3.6/3, Error ellipse: s-maj=18.9km s-min=15.1km az=83.0*
*JMA **04** 13:35:31.0±0.2, 37.01N×141.58E, h48^{km}±2^{km}, M3.6*
ISC 04 13:35:29.5±1.0**, 37.01N**±0.04×**141.73E**±0.09**, h40^{km}**±9^{km}**, n31,** σ1^{s}00/42**, mb3.9**/8**, 7D, Near east coast of eastern Honshu**

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Code    Station Name       Δ°   AZ°     Phase ID              Time      Res
                                      Op         ISC        h  m  s     ISC
ONAJ    Iwakimizuishiy    0.75  277 ⇓P          P           13 35 43.8 +0.2
ONAJ                                eS          S           13 35 52.6 -1.4
JFK     Kawauchi          0.77  298 ⇓P          P           13 35 44.0 +0.1
JFK                                 eS          S           13 35 53.1 -1.4
JHO     Hitachi           1.01  247 ⇓P          P           13 35 47.1 -0.3
JHO                                 eS          S           13 35 59.1 -1.5
JMM     Marumori          1.13  319 ⇓P          P           13 35 49.5 +0.4
JMM                                 eS          S           13 36 02.9 -0.8
JFT     Otama             1.22  295 ⇓P          P           13 35 51.3 +1.0
JIO     Ouri              1.48  348 ⇓P          P           13 35 54.6 +0.6
JIO                                 eS          S           13 36 11.4 -0.9
JOU     Okura             1.60  328  P          P           13 35 56.6 +0.8
JOU                                 eS          S           13 36 15.5 +0.2
JFY     Yanaizu           1.66  284 ⇓P          P           13 35 57.5 +0.8
MJAR    Matsushiro Arr    2.86  262  P          P           13 36 14.6 +0.8
        8.2nm,0.3s,baz=65,slow=8.5,SNR=47
MJAR                                 S          S           13 36 52.3 +4.9
        6.9nm,0.3s,baz=98,slow=17,SNR=8.9
MJAR    Matsushiro Arr    2.86  262  P          P           13 36 14.6 +0.8
MJAR                                 S          S           13 36 52.3 +4.9
MJAR                                 pmax       pmax
        comp=Z,8.0nm,0.3s
MAJO    Matsushiro        2.86  262 ePn         P           13 36 15.1 +1.3
MAT     Matsushiro        2.86  262  P          P           13 36 14.9 +1.1
MAT                                  S          S           13 36 49.9 +2.5
MAT     Matsushiro        2.86  262 eP          P           13 36 15.0 +1.2
MAT                                 eS          S           13 36 50.0 +2.6
JHJ     Hachijo jima 2    4.19  203  P          P           13 36 33.0 +0.3
        comp=Z,12nm,0.3s,baz=253,slow=22,SNR=9.0
JHJ                                  S          S           13 37 18.6 -2.5
        comp=Z,24nm,0.3s,baz=352,slow=15,SNR=4.7
ASAJ    Asahikawa         7.13    5  P          P           13 37 12.4 -1.5
        comp=Z,0.7nm,0.3s,baz=220,slow=16,SNR=10.0
ASAJ    Asahikawa         7.13    5  P          P           13 37 12.5 -1.5
ASAJ                                 pmax       pmax
        comp=Z,1.0nm,0.3s
SONM    Songino Array    28.01  304  P          P           13 41 18.6  0.0
        comp=Z,1.0nm,0.4s,mb3.8,baz=112,slow=6.2,SNR=4.3
SONM    Songino Array    28.01  304  P          P           13 41 18.6  0.0
SONM                                 pmax       pmax
        comp=Z,1.0nm,0.4s
ZAL     Zalesovo         42.13  312  P          P           13 43 19.7 +0.5
        comp=Z,1.1nm,0.7s,mb3.6,baz=5.9,slow=12,SNR=4.4
ZAL     Zalesovo         42.13  312  P          P           13 43 19.7 +0.5
ZAL                                  pmax       pmax
        comp=Z,1.0nm,0.7s
MKAR    Makanchi Array   44.34  302  P          P           13 43 37.6 +0.3
        comp=Z,1.9nm,0.7s,mb3.9,baz=87,slow=9.8,SNR=17
MKAR    Makanchi Array   44.34  302  P          P           13 43 37.6 +0.3
MKAR                                 pmax       pmax
        comp=Z,2.0nm,0.7s
KURK    Kurchatov        46.15  308 eP          P           13 43 51.2 -0.4
        comp=Z,5.8nm,0.9s,mb4.5
KURK    Kurchatov        46.15  308 eP          P           13 43 51.2 -0.4
KURK                                 pmax       pmax
        comp=Z,6.0nm,0.9s,mb4.5
ILAR    Eielson Array    49.38   32  P          P           13 44 17.8 +1.2
        comp=Z,0.6nm,0.8s,mb3.7,baz=256,slow=5.9,SNR=6.1
ILAR    Eielson Array    49.38   32  P          P           13 44 17.8 +1.2
ILAR                                 pmax       pmax
        comp=Z,1.0nm,0.8s
CHKZ    Chkalovo         50.51  313 eP          P           13 44 24.9 -0.5
        comp=Z,0.8nm,0.5s,mb3.9
CHKZ    Chkalovo         50.51  313 eP          P           13 44 24.9 -0.5
CHKZ                                 pmax       pmax
        comp=Z,1.0nm,0.5s,mb4.0
BRVK    Borovoye         50.83  312 eP          P           13 44 27.2 -0.7
        comp=Z,1.0nm,0.5s,mb4.0
BRVK    Borovoye         50.83  312 eP          P           13 44 27.2 -0.7
BRVK                                 pmax       pmax
        comp=Z,1.0nm,0.5s,mb4.0
WRA     Warramunga Arr   57.07  188  P          P           13 45 13.4 -0.8
        comp=Z,0.4nm,0.9s,mb3.5,baz=7.1,slow=7.4,SNR=5.6
```

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*NEIC **04** 13:38:02.8±0.6, 23.06S×66.45W, h212^{km}±6^{km}, mb4.2/16, Error ellipse: s-maj=10.1km s-min=6.6km az=96.0*
*IDC **04** 13:38:02.7±1.6, 23.04S×66.53W, h210^{km}±15^{km}, mb3.5/6, mb1 3.9/11, mb1mx3.7/18, mbtmp4.2/11, Error ellipse: s-maj=21.7km s-min=11.5km az=79.0*
*GUC **04** 13:38:04.4±0.8, 23.39S×66.68W, h219^{km}±250^{km}, ML4.9*
ISC 04 13:38:01.8±0.7**, 23.12S**±0.04×**66.45W**±0.07**, h220^{km}**±6^{km}**, n39,** σ1^{s}11/46**, mb4.0**/18**, 4D, Jujuy Province**

```
Code    Station Name       Δ°   AZ°     Phase ID              Time      Res
                                      Op         ISC        h  m  s     ISC
CEN1    Los Morros        3.46  265⇓i P         P           13 39 01.6 +3.1
CEN1                                i S         S           13 39 44.6 +2.4
CEN1                                  AMP                   13 39 47.0
        comp=N,572nm,0.2s
ANCH    Antofagasta       3.68  260⇓i P         P           13 39 02.8 +1.7
ANCH                                i S         S           13 39 45.9 -1.0
ANCH                                  AMP                   13 39 48.5
        comp=N,2μm,0.1s
CPN1    Cerro Paranal     3.92  247⇓i P         P           13 39 05.3 +1.4
CPN1                                i S         S           13 39 51.8 -0.3
CRCH    Chaqaral          4.97  229 eP          P           13 39 17.3 +0.3
CRCH                                i S         S           13 40 13.4 -2.0
CDCH    Caldera           5.59  224 eP          P           13 39 24.0 -0.9
CDCH                                i S         S           13 40 26.0 -3.5
LPAZ    La Paz            6.97  347  P          P           13 39 43.9 +1.3
        comp=N,7.9nm,0.3s,baz=158,slow=8.2,SNR=93
LPAZ                                 S          S           13 41 01.1 -0.2
        baz=336,slow=20,SNR=2.7
LPAZ    La Paz            6.97  347 ePn         P           13 39 43.9 +1.3
        comp=N,26nm,0.5s
LPAZ                                eS          S           13 41 00.1 -1.2
ARE     Arequipa          8.14  323 eP          P           13 39 56.0 -1.7
ARE                                 eS          S           13 41 24.0 -4.3
CFAA    Coronel Fontan    8.60  190  P          P           13 40 03.6  0.0
        comp=N,1.2nm,0.3s,baz=16,slow=11,SNR=34
CFAA                                 S          S           13 41 34.5 -4.4
        comp=N,1.3nm,0.3s,baz=292,slow=22,SNR=11
SIV     San Ignacio       8.71   37  P          P           13 40 04.4 -0.7
        comp=N,2.2nm,0.3s,baz=222,slow=13,SNR=77
SAML    Samuel           14.43   13 ePn         P           13 41 16.7 -0.8
        comp=N,9.8nm,0.9s
NNA     Nana             14.84  316 ePn         P           13 41 24.2 +1.7
PLCA    Paso Flores      17.90  190  P          P           13 41 57.5 -0.1
        comp=N,0.7nm,0.3s,baz=7.2,slow=12,SNR=14
PLCA    Paso Flores      17.90  190 eP          P           13 41 57.7 +0.2
        comp=N,7.6nm,0.9s
BDFB    Brasilia         18.91   70  P          P           13 42 08.3 +0.3
        comp=N,0.7nm,0.3s,baz=234,slow=11,SNR=7.5
VNA2    Neumayer--Watz   58.38  161             P           13 47 37.4 +1.6
SNAA    Sanae            60.02  161             P           13 47 47.9 +0.9
SNAA    Sanae            60.02  161  P          P           13 47 47.8 +0.8
        comp=N,0.3nm,0.4s,mb3.3,baz=310,slow=2.8,SNR=17
SNAA    Sanae            60.02  161 eP          P           13 47 47.6 +0.6
        comp=N,0.9nm,0.6s,mb3.6
JCT     Junction City    62.16  328 eP          P           13 48 01.2 -0.8
        comp=N,5.9nm,0.6s,mb4.4
WVT     Waverly          62.30  341 eP          P           13 48 00.6 -2.1
        comp=N,3.4nm,0.8s,mb4.0
TXAR    Lajitas Array    63.26  324  P          P           13 48 08.4 -0.7
        comp=N,0.6nm,0.4s,mb3.6,baz=149,slow=7.6,SNR=14
MNTX    Cornudas Mount   66.02  324 eP          P           13 48 25.6 -1.3
        comp=N,3.7nm,0.9s,mb4.0
CBKS    Cedar Bluff      69.05  333 eP          P           13 48 45.0 -0.5
        comp=N,7.6nm,0.7s,mb4.4
ANMO    Albuquerque      69.10  326 eP          P           13 48 46.4 +0.5
        comp=N,3.5nm,0.9s,mb4.0
SDCO    Great Sand Dun   70.80  328 eP          P           13 48 57.0 +0.8
        comp=N,6.6nm,1.1s,mb4.2
SYO     Syowa Base       74.19  159 ⇓P          P           13 49 14.4 -1.2
DUG     Dugway           76.36  325 eP          P           13 49 29.1 +0.7
        comp=N,2.4nm,0.9s,mb3.8
BW06    Boulder Array    76.65  329 eP          P           13 49 29.6 -0.2
        comp=N,1.0nm,0.5s,mb3.7
PDAR    Pinedale Array   76.65  329  P          P           13 49 30.1 +0.2
        comp=N,1.2nm,0.7s,mb3.6,baz=133,slow=8.0,SNR=9.1
HWUT    Hardware Ranch   76.76  327 eP          P           13 49 30.7 +0.1
        comp=N,2.9nm,0.6s,mb4.1
ULM     Lac du Bonnet    77.55  341  P          P           13 49 33.6 -1.1
        comp=N,1.8nm,0.7s,mb3.8,baz=359,slow=14,SNR=4.8
LOHW    Long Hollow      77.79  329 eP          P           13 49 36.8 +0.6
        comp=N,3.8nm,0.6s,mb4.2
TPAW    Teton Pass       77.86  329 eP          P           13 49 37.3 +0.7
        comp=N,3.0nm,0.6s,mb4.1
NVAR    Mina Array Bea   78.17  321  P          P           13 49 39.0 +0.7
        comp=N,0.9nm,0.7s,mb3.5,baz=141,slow=6.1,SNR=9.6
HLID    Hailey           79.62  327 eP          P           13 49 47.2 +1.2
        comp=N,5.6nm,0.7s,mb4.3
YKA     Yellowknife Ar   93.47  340  P          P           13 50 52.9 -0.1
        comp=N,0.8nm,0.5s,mb4.0,baz=133,slow=4.8,SNR=7.8
MKAR    Makanchi Array  145.53   39  PKPbc      PKPbc       13 57 15.8 +1.5
        comp=N,3.0nm,0.6s,baz=313,slow=3.0,SNR=28
MKAR    Makanchi Array  145.53   39  PKPbc      PKPbc       13 57 15.8 +1.5
```

DHMR 04 13:52:42.8±0.8**, 11.98N**×**43.75E, h6^{km}**±8^{km}**, ML3.7, 1C-4D, Ethiopia**

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Code    Station Name       Δ°   AZ°     Phase ID              Time      Res
                                      Op         ISC        h  m  s     ISC
TRBA    At Turbah         1.29   16⇓i P         Pb          13 53 07.3 +0.1
TRBA                                i S         Sb          13 53 25.6 +1.6
TRBA                                  AML       AML         13 53 31.2
        comp=E,826nm,0.6s
UDYN    Al ‘Udayn         1.99    6⇑i P         Pn          13 53 18.3 +0.9
```

UDYN				*i* S	Sn	13 53 45.7	+2.8
UDYN				AML	AML	13 53 53.2	
	comp=N,1µm,0.5s						
LBOS		2.38	38	⇓*i*P	Pn	13 53 24.4	+1.3
LBOS				*i* S	Sn	13 53 57.5	+4.6
DHBB	**Dhamar BB**	2.65	14	⇓*i*P	Pn	13 53 28.8	+1.9
DHBB				*i* S	Sn	13 54 05.5	+5.7
BDHA	**Al Bayda'**	2.66	42	⇓*i*P	Pn	13 53 29.3	+2.3
BDHA				*i* S	Sn	13 54 05.1	+5.1
BDHA				AML	AML	13 54 19.0	
	comp=E,349nm,0.5s						

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*PRU **04** 14:37:54.9, 51.41N×16.29E*

*WAR **04** 14:37:55.7, 51.41N×16.24E, h1^{km}, ML2.5, Mining Induced*

*NEIC **04** 14:37:56.6±1.8, 51.33N×16.09E, h5^{km}, MG2.5(WAR), Error ellipse: s-maj=19.7km s-min=7.2km az=205.0*

ISC 04 14:37:52.7±1.2**, 51.42N**±0.05×**16.23E**±0.06**, n13, σ1^{s}16**/23**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.58	176	*e*PG	Pg	14 38 06.0	+1.7
KSP				*e*SG	Sg	14 38 14.0	+1.9
KSP	**Ksiaz**	0.58	176	*e*Pg	Pg	14 38 06.1	+1.8
KSP				*e*Sg	Sg	14 38 13.8	+1.7
UPC	**Upice**	0.93	189	*e*PG	Pg	14 38 12.4	+1.2
DPC	**Dobruska-Polom**	1.08	177	*e*PG	Pg	14 38 15.0	+0.8
DPC				*e*SG	Sg	14 38 29.4	+0.9
	6.3nm,0.2s						
PVCC	**Panska Ves**	1.38	230	*e*PG	Pg	14 38 21.1	+0.8
PRU	**Pruhonice**	1.79	217	*e*PG	Pg	14 38 27.6	-0.9
PRU				*e*SG	Sg	14 38 52.2	-0.2
MORC	**Moravsky Berou**	1.85	153	*e*Pn	Pn	14 38 27.2	+1.2
MORC				*e*Sg	Sg	14 38 52.2	-2.0
OKC	**Ostrava-Krasne**	2.00	142	*e*PG	Pg	14 38 32.3	-0.4
OKC				*e*SG	Sg	14 38 56.9	-2.5
CLL	**Collm**	2.03	268	*e*PG	Pg	14 38 33.0	-0.2
CLL				*e*SG	Sg	14 39 01.0	+0.8
TREC	**Trest**	2.18	193	*e*PG	Pg	14 38 35.7	-0.6
NKC	**Novy Kostel**	2.68	245	*e*SG	Sg	14 39 21.8	-0.1
KHC	**Kasperske Hory**	2.86	218	*e*PN	Pn	14 38 41.0	+0.6
KHC				*e*PG	Pg	14 38 46.9	-2.8
KHC				*e*SG	Sg	14 39 26.9	-0.9
MOX	**Moxa**	3.02	257	*e*Pg	Pg	14 38 52.0	-0.9
MOX				*e*Sg	Sg	14 39 32.5	-0.6

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*CSEM **04** 14:48:28.2, 66.58N×17.78W, h11^{km}, ML3.8, After REY*

REY 04 14:48:28.2, 66.58N×17.78W, h11^{km}, ML3.8, ML3.4, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGRI	**Grimsey**	0.10	250	P	Pg	14 48 30.9	-0.1
IGRI				S	Sg	14 48 33.0	+0.1
IFLA	**Flatey**	0.42	184	P	Pg	14 48 35.9	-0.9
IFLA				S	Sg	14 48 42.5	0.0
IHED	**Heoinshofoi**	0.53	159	P	Pg	14 48 37.7	-1.3
IHED				S	Sg	14 48 45.2	-1.1
ILEI	**Leirhofn**	0.54	108	P	Pb	14 48 38.0	-1.2
ILEI				S	Sg	14 48 45.6	-1.0
ISIG	**Siglufjorour**	0.64	226	P	Pb	14 48 39.5	-1.4
ISIG				S	Sb	14 48 47.8	-1.7
IGRA	**Granastaoir**	0.67	173	P	Pb	14 48 39.9	-1.4
IGRA				S	Sb	14 48 49.0	-1.3
IHLA	**Hella**	0.68	201	P	Pb	14 48 40.2	-1.4
IHLA				S	Sb	14 48 49.4	-1.3
IGIL	**Gilhagi**	0.76	130	P	Pb	14 48 41.2	-1.8
IGIL				S	Sb	14 48 51.7	-1.4
IHRN	**Hraun**	1.06	245	P	Pb	14 48 45.7	-2.3
IHRN				S	Sb	14 48 59.1	-2.5
IGRS	**Grimsstaoir**	1.16	144	P	Pb	14 48 47.8	-1.9
IGRS				S	Sb	14 49 03.0	-1.6
ISVA	**Svartarkot**	1.26	170	P	Pb	14 48 49.6	-1.9
ISVA				S	Sb	14 49 05.9	-1.7

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*CSEM **04** 14:56:44.5, 66.57N×17.77W, h11^{km}, ML3.5, After REY*

REY 04 14:56:44.5, 66.57N×17.77W, h11^{km}, ML3.5, ML3.1, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGRI	**Grimsey**	0.10	255	P	Pg	14 56 47.2	-0.1
IGRI				S	Sg	14 56 49.3	+0.1
IFLA	**Flatey**	0.41	184	P	Pg	14 56 52.7	-0.2
IFLA				S	Sg	14 56 58.9	+0.4
IHED	**Heoinshofoi**	0.52	159	P	Pg	14 56 53.7	-1.4
IHED				S	Sg	14 57 01.4	-0.8
ILEI	**Leirhofn**	0.54	107	P	Pg	14 56 54.2	-1.2
ILEI				S	Sg	14 57 01.7	-1.0
ISIG	**Siglufjorour**	0.64	227	P	Pb	14 56 55.6	-1.5
ISIG				S	Sb	14 57 03.8	-1.9
IGRA	**Granastaoir**	0.66	173	P	Pb	14 56 56.2	-1.3
IGRA				S	Sb	14 57 05.2	-1.2
IHLA	**Hella**	0.68	202	P	Pb	14 56 56.5	-1.3
IHLA				S	Sb	14 57 05.6	-1.3
IGIL	**Gilhagi**	0.76	130	P	Pb	14 56 57.5	-1.7
IGIL				S	Sb	14 57 07.8	-1.4
IKVO	**Krokottuvotn**	0.93	157	P	Pb	14 57 00.4	-1.8
IKVO				S	Sb	14 57 13.2	-1.1
IREN	**Reynihlio**	0.99	159	P	Pb	14 57 01.4	-1.8
IREN				S	Sb	14 57 14.8	-1.2
IHRN	**Hraun**	1.05	245	P	Pb	14 57 01.7	-2.6
IHRN				S	Sb	14 57 15.4	-2.5
IGRS	**Grimsstaoir**	1.15	144	P	Pb	14 57 04.0	-1.9
IGRS				S	Sb	14 57 19.5	-1.2
ISVA	**Svartarkot**	1.25	170	P	Pb	14 57 05.9	-1.8
ISVA				S	Sb	14 57 22.2	-1.5
IADA	**Aoalbol**	1.80	149	P	Pn	14 57 14.7	-1.1
IHVE	**Hveravellir**	1.86	204	P	Pn	14 57 15.2	-1.4
IHVE				S	Sn	14 57 38.9	-1.4
IBRU	**Bruarjokull**	1.88	157	P	Pn	14 57 15.9	-1.0
IBRU				S	Sn	14 57 39.9	-0.9
IGLU	**Glumsstadir**	1.94	144	P	Pn	14 57 16.9	-0.9
IGLU				S	Sn	14 57 45.0	+2.6
IVSH	**V-Sauoahnukur**	1.96	154	P	Pn	14 57 17.3	-0.8
ISKR	**Skrokkalda**	2.03	188	P	Pn	14 57 17.7	-1.4
ISKR				S	Sn	14 57 44.7	0.0
IASB	**`sbjarnarst**	2.35	220	P	Pn	14 57 22.2	-1.4
IASB				S	Sn	14 57 51.8	-0.9
IVAT	**Vatnsfell**	2.44	192	P	Pn	14 57 24.2	-0.7

NNC 04 15:09:58.3±2.6**, 36.93N×70.77E, h143^{km}**±55^{km}**, mpv3.2, 2C-1D, Error ellipse: s-maj=25.1km s-min=19.4km az=29.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.17	358	P	P	15 11 27.5	-0.7
	0.6nm,0.2s,baz=182,slow=12,SNR=59						
KK31				S	S	15 12 37.1	-0.9
	2.2nm,0.5s,baz=179,slow=17,SNR=8.2						
AAK	**Ala-Archa**	6.38	26	⇓P	P	15 11 29.7	-1.3
	1.0nm,0.4s						
AAK				⇑S	S	15 12 42.6	-0.4
	4.6nm,0.8s						
AB31	**Akbulak array**	14.62	331	⇑P	P	15 13 18.1	-1.0
	1.2nm,0.8s,baz=160,slow=12,SNR=11						

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*NEIC **04** 15:13:41.6±1.4, 4.27N×125.95E, h93^{km}±16^{km}, mb4.3/2, Error ellipse: s-maj=48.4km s-min=9.2km az=73.0*

*IDC **04** 15:13:44.1±12.0, 4.24N×126.03E, h118^{km}±121^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.7/17, mbtmp4.3/7, Error ellipse: s-maj=72.0km s-min=24.2km az=63.0*

ISC 04 15:13:47.2±0.8**, 4.17N**±0.09×**125.9E**±0.2**, h164^{km}**±10^{km}**, n19, σ0^{s}59**/20**, mb4.3**/11**, 1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	2.13	334	⇓*e*P	P	15 14 25.1	+0.1
GSPH				*e*S	S	15 14 53.1	-1.1
MATI	**Mati**	2.78	7	*e*P	P	15 14 33.4	+0.3
DAV	**Davao City (W)**	2.90	354	Pn	P	15 14 24.5	-10
PAGZ	**Pagadian**	4.43	326	*e*P	P	15 14 55.7	+1.5
FITZ	**Fitzroy Crossi**	22.13	181	*e*P	P	15 18 30.5	+0.4
	12nm,0.4s,mb4.7						
FITZ	**Fitzroy Crossi**	22.13	181	P	P	15 18 30.7	+0.7
	20nm,0.6s,mb4.7,baz=12,slow=9.6,SNR=59						
WRAB	**Tennant Creek**	25.35	161	*e*P	P	15 19 01.7	+0.8
	3.7nm,0.4s,mb4.3						
WRA	**Warramunga Arr**	25.36	161	P	P	15 19 00.2	-0.7
	4.9nm,0.4s,mb4.3,baz=341,slow=10,SNR=62						
WB2	**Warramunga Arr**	25.36	161	*e*P	P	15 19 00.2	-0.8
ASPA	**Alice Springs**	28.75	165	*e*P	P	15 19 31.1	-0.6
FORT	**Forrest**	34.81	177	*e*P	P	15 20 24.3	0.0
	12nm,0.6s,mb4.7						
KLBR	**Kellerberrin**	36.40	192	*e*P	P	15 20 37.2	-0.4
	77nm,1.7s,mb5.1						
MUN	**Mundaring**	37.11	194	*e*P	P	15 20 43.4	-0.2
NWAO	**Narrogin (SRO)**	37.80	192	P	P	15 20 49.6	+0.3
	12nm,1.0s,mb4.5,baz=34,slow=7.3,SNR=5.9						
STKA	**Stephens Creek**	38.84	158	P	P	15 20 58.5	+0.5
	2.2nm,0.6s,mb3.9,baz=349,slow=9.7,SNR=8.1						
MKAR	**Makanchi Array**	56.72	325	P	P	15 23 15.8	-0.2
	0.7nm,0.5s,mb3.8,baz=119,slow=8.0,SNR=22						
MKAR				pP	pP	15 23 55.9	+1.8
	0.6nm,0.6s,baz=119,slow=8.2,SNR=8.1						
MKAR				PcP	PcP	15 24 10.3	+0.4
	0.9nm,0.5s,baz=122,slow=4.9,SNR=6.3						
KURK	**Kurchatov**	60.93	328	*e*P	P	15 23 44.8	-0.2
	2.2nm,0.6s,mb4.2						
BVAR	**Borovoye Array**	66.50	327	P	P	15 24 21.2	-0.2
	0.7nm,0.6s,mb3.6,baz=143,slow=7.2,SNR=5.5						
BVAR				pP	pP	15 24 59.6	-1.0
	1.3nm,0.8s,baz=127,slow=7.4,SNR=4.9						
FINES	**FINESS Array B**	91.06	332	P	P	15 26 34.0	+0.1
	1.3nm,0.8s,mb4.0,baz=72,slow=4.4,SNR=3.9						

IGQ 04 15:28:13.5, 3.07S×78.54W, h12^{km}±5^{km}, mb4.1, 5C-2D, Error ellipse: s-maj=17.6km s-min=4.9km az=177.9, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARRY	**Arrayan**	1.56	3	⇑P	Pn	15 28 42.0	+0.8
ARRY				S	Sb	15 29 01.7	+0.3
IGUA	**Igualata**	1.57	356	⇓P	Pn	15 28 44.8	+3.3
CUSU	**Cusua**	1.62	2	P	Pn	15 28 43.6	+1.5
JUIV	**Juive**	1.64	3	P	Pn	15 28 44.0	+1.6
RUN5	**Runtun**	1.65	4	P	Pn	15 28 43.7	+1.1
RUN5				S	Sn	15 29 06.5	+2.6
PISA	**Pisayambo**	2.01	4	P	Pn	15 28 49.5	+1.8
PISA				S	Sn	15 29 15.9	+3.0
TAMB	**Tambo**	2.37	4	⇑P	Pn	15 28 55.4	+2.5
TAMB				S	Sn	15 29 25.1	+3.0
VC1	**Cotopaxi 1**	2.42	3	⇑P	Pn	15 28 56.6	+3.0
VC1				S	Sn	15 29 28.4	+5.1
ANTI	**Antisana**	2.63	8	⇓P	Pn	15 28 57.9	+1.2
ANTI				S	Sn	15 29 30.6	+1.8
JUA2	**San Juan 2**	2.84	359	P	Pn	15 29 05.7	+6.1
GGP	**Refugio Guagua**	2.88	359	P	Pn	15 29 04.8	+4.7
TERV	**Terraza Guagua**	2.88	359	P	Pn	15 29 06.5	+6.3
PINO	**Pino**	2.90	359	P	Pn	15 29 06.5	+6.1
YANA	**Yana**	2.93	359	P	Pn	15 29 06.7	+5.8
LAV3	**Lava3-Reventad**	3.09	17	P	Pn	15 29 03.7	+0.5
CAYR	**Refugio Cayamb**	3.11	10	⇑P	Pn	15 29 06.7	+3.3
CONE	**Cono NE Rev Vo**	3.11	17	P	Pn	15 29 04.2	+0.7
CONE				S	Sn	15 29 43.7	+2.7
ANGU	**Angureal**	3.14	10	⇑P	Pn	15 29 07.3	+3.4
CAYA	**Cayambe**	3.17	10	P	Pn	15 29 07.7	+3.4

DHMR 04 15:44:15.9±1.6**, 12.07N×43.49E, h11^{km}**±12^{km}**, ML3.6, 1C-4D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	1.30	28	⇑*i*P	Pb	15 44 40.6	+0.7
TRBA				*i* S	Sb	15 44 58.4	+1.9
TRBA				AML	AML	15 44 59.9	
	comp=N,671nm,0.3s						
UDYN	**Al 'Udayn**	1.94	14	⇓*i*P	Pn	15 44 50.9	+1.7
UDYN				*i* S	Sn	15 45 16.5	+2.8
UDYN				AML	AML	15 45 26.4	
	comp=N,1µm,0.4s						
LBOS		2.48	44	⇓*i*P	Pn	15 44 58.4	+1.6
LBOS				*i* S	Sn	15 45 32.2	+4.9
DHBB	**Dhamar BB**	2.63	19	⇓*i*P	Pn	15 45 01.1	+2.1
DHBB				*i* S	Sn	15 45 36.8	+5.5
BDHA	**Al Bayda'**	2.77	47	⇓*i*P	Pn	15 45 02.3	+1.3
BDHA				*i* S	Sn	15 45 40.8	+6.0
BDHA				AML	AML	15 45 46.5	
	comp=N,346nm,0.4s						

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*NEIC **04** 15:48:24.0, 38.20N×26.56E, h8^{km}, MD3.4(ATH), MD3.2(ISK), After ISK.*

*ISK **04** 15:48:25.5, 38.22N×26.63E, h13^{km}, MD3.2*

*ATH **04** 15:48:25.7, 38.15N×26.46E, h23^{km}±1^{km}, MD3.4/3*

*CSEM **04** 15:48:26.3±0.1, 38.22N×26.71E, h15^{km}, MD3.2, Error ellipse: s-maj=1.8km s-min=1.4km az=93.0*

ISC 04 15:48:25.2±0.7**, 38.22N**±0.02×**26.59E**±0.04**, h3^{km}**±5^{km}**, n22, σ0^{s}69**/33**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.14	2	*i* P	Pg	15 48 27.9	-0.2
URLA				*i* S	Sg	15 48 30.4	+0.3
BLCB	**Balcova**	0.40	65	PG	Pg	15 48 33.2	+0.1
BLCB				SG	Sg	15 48 38.6	+0.2
SMG	**Samos**	0.54	159	*e*PN	Pg	15 48 36.5	+0.4
SMG				*e*SN	Sg	15 48 44.4	+1.0
IZM	**Izmir**	0.56	71	*i* PG	Pg	15 48 36.3	-0.1
IZM				*i* SG	Sg	15 48 44.4	+0.5
KDAG	**Bornova**	0.57	71	*i* P	Pg	15 48 35.6	-1.0
KDAG				*i* S	Sg	15 48 43.4	-0.6
PRK	**Paraskevi**	1.06	347	*e*PN	Pn	15 48 46.7	-0.1
PRK				*e*SN	Sn	15 49 02.5	+0.3
AYVA	**Ayvalik**	1.09	4	*i* P	Pb	15 48 46.6	+0.2
AYVA				*i* S	Sb	15 49 04.2	+3.3
AYDN	**Tasoluk**	1.16	118	*i* P	Pb	15 48 47.7	+0.1
AYDN				*i* S	Sb	15 49 03.2	+0.3
AKS	**Akhisar**	1.17	55	PN	Pn	15 48 47.6	-0.8
BODT	**Bodrum**	1.29	153	PN	Pn	15 48 49.6	-0.5
MLSB	**Milas**	1.32	134	*e*PN	Pn	15 48 49.9	-0.6
BDRM	**Kayabasi**	1.33	149	*i* P	Pb	15 48 51.9	+1.4
BDRM				*i* S	Sb	15 49 08.2	+0.3
APE	**Apeiranthos**	1.42	217	PN	Pn	15 48 51.9	-0.1
APE				SN	Sn	15 49 11.5	+0.1
APE	**Apeiranthos**	1.42	217	*e*PN	Pn	15 48 50.5	-1.5
MANT	**Manisa**	1.57	79	*i* P	Pn	15 48 55.3	+1.1
MANT				*i* S	Sb	15 49 15.4	+0.6
DAT	**Datca**	1.68	152	*e*PN	Pn	15 48 55.2	-0.5
YER	**Yerkesik**	1.73	128	*e*PN	Pn	15 48 55.7	-0.6
BALB	**Balikesir**	1.74	35	*e*PN	Pn	15 48 56.2	-0.4
DENT	**Denizli**	1.99	103	*e*PN	Pn	15 48 59.1	-1.0
LIA	**Limnos Island**	2.00	327	*e*PN	Pn	15 49 00.5	+0.2
KHL	**Karahalli**	2.31	86	*e*PN	Pn	15 49 03.7	-1.1
RDO	**Rodhopi**	3.04	345	*e*PN	Pn	15 49 15.3	+0.2

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*IDC **04** 16:06:07.0±0.6, 52.92S×21.16E, mb4.4/12, mb1 4.5/12, mb1mx4.4/16, mbtmp4.4/12, MS4.0/9, Ms1 3.9/9, ms1mx3.9/11, Error ellipse: s-maj=22.9km s-min=16.5km az=86.0*

*NEIC **04** 16:06:08.3±0.2, 52.90S×21.11E, h10^{km}, mb4.8/14, Error ellipse: s-maj=7.9km s-min=5.2km az=89.0*

ISC 04 16:06:06.9±0.4**, 52.91S**±0.06×**21.0E**±0.1**, h10^{km}, n86, σ0^{s}74**/47**, mb4.6**/21**, MS3.9**/9**, 12C-2D, South of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	**Syowa Base**	18.35	159	⇓P	P	16 10 22.2	-0.6
SYO	**Syowa Base**	18.35	159	⇑P	P	16 10 28.1	+5.3
SYO	**Syowa Base**	18.35	159	⇓*e*P	P	16 10 22.2	-0.6
SYO				⇑*e*P		16 10 28.1	
SUR	**Sutherland**	20.52	359	P	P	16 10 47.4	-0.4
	19nm,0.9s,baz=176,slow=11,SNR=6.8						
SUR				LR	LR	16 16 51.5	
	comp=Z,597nm,18.5s,MS4.0,baz=190,slow=31						
SUR	**Sutherland**	20.52	359	*e*P	P	16 10 48.3	+0.5
	34nm,1.1s						
SNAA	**Sanae**	21.56	200	⇑*i*	P	16 10 58.4	+0.2
SNAA	**Sanae**	21.56	200	⇑*i*	P	16 11 02.4	+4.2
SNAA	**Sanae**	21.56	200	⇑*i*	P	16 11 10.4	+12
SNAA	**Sanae**	21.56	200	P	P	16 10 58.9	+0.7
	20nm,1.1s,mb4.5,baz=39,slow=8.5,SNR=63						
SNAA				LR	LR	16 17 25.7	
	comp=Z,224nm,19.0s,MS3.6,baz=32,slow=32						
SNAA	**Sanae**	21.56	200	*e*P	P	16 10 58.3	+0.1
	77nm,1.2s,mb5.0						
VNA2	**Neumayer--Watz**	22.09	205		P	16 11 04.4	+0.9
VNA2	**Neumayer--Watz**	22.09	205	⇑*i*	P	16 11 07.0	+3.5
VNA2	**Neumayer--Watz**	22.09	205	⇑*i*	P	16 11 15.0	+11
VNA1	**Neumayer--Stat**	22.14	206	⇑*i*	P	16 11 04.7	+0.7
VNA1	**Neumayer--Stat**	22.14	206	⇑*i*	P	16 11 10.3	+6.3
VNA1	**Neumayer--Stat**	22.14	206	⇑*i*	P	16 11 17.1	+13
VNA3	**Neumayer Olymp**	22.87	205	⇑*i*	P	16 11 13.0	+2.0
VNA3	**Neumayer Olymp**	22.87	205	⇑*i*	P	16 11 18.5	+7.5
BOSA	**Boshof**	24.47	9	P	P	16 11 29.0	+1.9
	4.6nm,0.9s,mb3.9,baz=177,slow=6.9,SNR=6.0						
BOSA				LR	LR	16 19 01.6	
	comp=Z,428nm,21.4s,MS3.9,baz=174,slow=32						
MAW	**Mawson**	24.78	142	P	P	16 11 29.8	+0.2
	7.2nm,0.7s,mb4.3,baz=290,slow=8.8,SNR=20						
MAW				LR	LR	16 18 42.9	
	comp=Z,266nm,21.9s,MS3.7,baz=272,slow=31						
MAW	**Mawson**	24.78	142	*e*P	P	16 11 29.8	+0.2
	8.2nm,0.8s,mb4.3						
LBTB	**Lobatse**	28.07	9	P	P	16 11 58.6	-1.8
	3.3nm,1.0s,mb3.9,baz=207,slow=4.5,SNR=3.2						
LBTB				LR	LR	16 21 21.0	
	comp=Z,431nm,20.3s,MS4.0,baz=148,slow=33						
TSUM	**Tsumeb**	33.75	354	P	P	16 12 50.9	+0.3
	7.2nm,1.1s,mb4.5,baz=135,slow=13,SNR=3.1						
QSPA	**South Pole Qui**	37.32	180	*e*P	P	16 13 20.4	-0.1
	33nm,0.7s,mb5.3						
LSZ	**Lusaka**	37.97	11	P	P	16 13 26.8	+0.3
	3.3nm,0.8s,mb4.1,baz=187,slow=10,SNR=3.4						
LSZ	**Lusaka**	37.97	11	*e*P	P	16 13 26.9	+0.3
	12nm,1.4s,mb4.4						
CASY	**Casey**	43.12	144	*e*P	P	16 14 08.3	-0.1
	9.8nm,0.9s,mb4.5						
VNDA	**Vanda**	47.58	169	*e*P	P	16 14 43.4	-0.5
	4.8nm,0.9s,mb4.5						
SBA	**Scott Base**	47.80	171	*e*P	P	16 14 46.4	+0.7
	17nm,1.2s,mb5.0						
TRQA	**Tornquist**	56.87	249	*e*P	P	16 15 53.2	-0.8
	4.1nm,0.4s,mb4.8						
PLCA	**Paso Flores**	59.71	242	LR	LR	16 36 02.4	
	comp=Z,97nm,19.5s,MS4.0,baz=179,slow=30						
CPUP	**Villa Florida**	62.58	262	*e*P	P	16 16 32.0	-1.3
	20nm,0.7s,mb5.3						
DBIC	**Dimbokro**	63.30	331	LR	LR	16 36 18.7	
	comp=Z,150nm,21.3s,MS4.1,baz=64,slow=29						
BDFB	**Brasilia**	65.05	277	P	P	16 16 49.5	-0.1
	5.6nm,0.8s,mb4.7,baz=190,slow=3.3,SNR=7.9						
BDFB				LR	LR	16 38 33.1	
	comp=Z,72nm,21.8s,MS3.8,baz=74,slow=30						
LPAZ	**La Paz**	76.69	261	P	P	16 18 00.5	+0.6
	3.2nm,0.6s,mb4.5,baz=269,slow=8.8,SNR=16						
LPAZ				LR	LR	16 46 54.5	
	comp=Z,67nm,18.5s,MS4.0,baz=50,slow=32						
LPAZ	**La Paz**	76.69	261	*e*P	P	16 18 00.2	+0.4
	3.2nm,0.7s,mb4.4						
MBWA	**Marble Bar**	78.45	110	P	P	16 18 09.0	-0.4
	4.6nm,0.6s,mb4.6						
SAML	**Samuel**	79.45	269	*e*P	P	16 18 15.1	+0.1
	14nm,0.8s,mb4.9						
STKA	**Stephens Creek**	81.01	132	P	P	16 18 23.1	+0.1
	8.0nm,1.1s,mb4.6,baz=230,slow=7.5,SNR=9.1						
STKA	**Stephens Creek**	81.01	132	*e*P	P	16 18 22.9	-0.1
ASPA	**Alice Springs**	84.15	122	*e*P	P	16 18 39.3	-0.1
FITZ	**Fitzroy Crossi**	84.23	112	*e*P	P	16 18 39.9	+0.1
	6.1nm,0.6s,mb4.9						
WRA	**Warramunga Arr**	87.45	120	P	P	16 18 55.6	-0.1
	3.4nm,0.8s,mb4.6,baz=204,slow=3.3,SNR=21						
WB2	**Warramunga Arr**	87.46	120	*e*P	P	16 18 55.5	-0.3
WRAB	**Tennant Creek**	87.47	120	*e*P	P	16 18 55.4	-0.4
	9.6nm,1.0s,mb5.0						
KULM	**Kulim**	87.94	79	*e*P	P	16 18 58.6	+0.3
CKFL	**Kef-Lekhel**	89.81	348	P	P	16 19 06.0	-0.6
BRTR	**Keskin Array B**	92.90	10	P	P	16 19 21.5	+0.7
	0.6nm,0.9s,mb4.0,baz=135,slow=2.0,SNR=2.9						
BRTR	**Keskin Array B**	92.90	10	P	P	16 19 21.5	+0.7
ARCES	**ARCESS Array B**	122.17	2	PKP	PKPdf	16 25 00.8	-3.1
	1.9nm,0.7s,baz=198,slow=2.9,SNR=5.0						
SONM	**Songino Array**	123.70	54	PKP	PKPdf	16 25 05.0	-2.4
	1.7nm,0.7s,baz=198,slow=4.6,SNR=7.7						
TXAR	**Lajitas Array**	133.55	262	PKP	PKPdf	16 25 25.9	-0.6
	1.0nm,0.7s,baz=162,slow=3.3,SNR=10						
WMOK	**Wichita Mounta**	134.38	271	*e*PKPdf	PKPdf	16 25 25.5	-2.4
ULM	**Lac du Bonnet**	141.82	292	PKP	PKPdf	16 25 39.1	-1.8
	3.0nm,0.9s,baz=126,slow=10,SNR=3.1						
RSSD	**Black Hills**	143.39	279	*e*PKPdf	PKPdf	16 25 39.5	-4.3
SRU	**San Rafael**	144.35	267	*e*PKPdf	PKPdf	16 25 42.3	-3.3
FCC	**Fort Churchill**	144.41	306	*e*PKPdf	PKPdf	16 25 41.6	-3.5
NEN	**Nelson**	144.67	259	*e*PKPdf	PKPdf	16 25 43.7	-2.6
TMUT	**Trail Mountain**	144.88	267	*e*PKPdf	PKPdf	16 25 44.8	-1.8
MSU	**Marysvale**	144.97	265	*e*PKPdf	PKPdf	16 25 45.3	-1.4
MVU	**Marysvale**	144.98	265	*e*PKPdf	PKPdf	16 25 45.7	-1.0
ARUT	**Antelope Range**	145.26	263	*e*PKPbc	PKPbc	16 25 46.0	+1.4
MPU	**Maple Canyon**	145.58	267	*e*PKPbc	PKPbc	16 25 46.9	+1.6
DAU	**Daniels Canyon**	145.60	268	*e*PKPbc	PKPbc	16 25 47.3	+1.9
PDAR	**Pinedale Array**	145.96	273	PKPbc	PKPbc	16 25 46.9	+0.7
	14nm,0.8s,baz=123,slow=5.5,SNR=88						
BW06	**Boulder Array**	145.96	273	*e*PKPbc	PKPbc	16 25 46.9	+0.7
TCUT	**Toone Canyon**	146.11	269	*e*PKPbc	PKPbc	16 25 48.6	+1.9
TPNV	**Topopah Spring**	146.39	259	*e*PKPbc	PKPbc	16 25 49.5	+2.1
DUG	**Dugway**	146.41	267	*e*PKPbc	PKPbc	16 25 48.8	+1.5
HWUT	**Hardware Ranch**	146.50	270	*e*PKPbc	PKPbc	16 25 48.8	+1.3
AHID	**Auburn Hatcher**	146.89	272	*e*PKPbc	PKPbc	16 25 50.3	+1.9
LOHW	**Long Hollow**	147.06	273	*e*PKPbc	PKPdf	16 25 50.2	+0.1
TPAW	**Teton Pass**	147.21	273	*e*PKPbc	PKPdf	16 25 51.5	+1.1
MOOW	**Moose Ponds**	147.22	274	*e*PKPbc	PKPdf	16 25 51.1	+0.8
RRI2	**Red Ridge**	147.35	272	*e*PKPbc	PKPdf	16 25 51.8	+1.2
PTRM	**Twissleman Ran**	147.83	253	*e*PKPbc	PKPdf	16 25 54.5	+2.9
MTUM	**Tungsten Hills**	148.03	257	*e*PKPbc	PKPdf	16 25 53.8	+2.0
MNV	**Mina**	148.50	259	*e*PKPbc	PKPdf	16 25 55.2	+2.6
NVAR	**Mina Array Bea**	148.59	259	PKP	PKPdf	16 25 52.0	-0.7
	11nm,0.8s,baz=169,slow=4.6,SNR=24						
NVAR				PKPbc	PKPdf	16 25 55.9	+3.2
	11nm,0.8s,baz=158,slow=4.9,SNR=55						
NVAR	**Mina Array Bea**	148.59	259	PKP	PKPdf	16 25 52.0	-0.7
NVAR				PKPbc	PKPdf	16 25 55.9	+3.2
MSO	**Missoula**	150.75	276	*e*PKPbc	PKPdf	16 26 00.4	+4.6
WVOR	**Wild Horse Val**	151.26	265	*e*PKPbc	PKPdf	16 26 02.4	+5.7
MA2	**Magadan**	151.88	56	*e*PKPbc	PKPdf	16 26 01.9	+4.8
EDM	**Edmonton**	152.94	289	*e*PKPbc	PKPdf	16 26 04.4	+5.6
PET	**Petropavlovsk**	154.74	73	*e*PKPbc	PKPdf	16 26 08.2	+7.0
YKA	**Yellowknife Ar**	154.94	310	PKPab	PKPab	16 26 24.5	-0.3
	2.7nm,0.7s,baz=96,slow=4.9,SNR=11						

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*ISK **04** 16:11:10.9, 38.21N×26.63E, h13^{km}, MD3.1*

*ATH **04** 16:11:10.5, 38.21N×26.98E, h38^{km}±2^{km}, MD3.4/3*

*CSEM **04** 16:11:11.3±0.2, 38.22N×26.66E, h15^{km}±1^{km}, MD3.1, Error ellipse: s-maj=3.1km s-min=1.9km az=104.0*

ISC 04 16:11:10.7±0.8**, 38.22N**±0.03×**26.59E**±0.05**, h4^{km}**±5^{km}**, n21, σ0^{s}70**/31**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.14	2	*i* P	Pg	16 11 13.2	-0.4
URLA				*i* S	Sg	16 11 15.7	+0.2
BLCB	**Balcova**	0.39	65	PG	Pg	16 11 18.6	0.0
SMG	**Samos**	0.55	159	*e*PN	Pg	16 11 21.9	+0.2
SMG				*e*SN	Sg	16 11 30.3	+1.3
IZM	**Izmir**	0.56	71	PG	Pg	16 11 22.0	+0.1
IZM				SG	Sg	16 11 29.9	+0.5
KDAG	**Bornova**	0.56	71	*i* P	Pg	16 11 20.8	-1.2
KDAG				*i* S	Sg	16 11 28.9	-0.6
PRK	**Paraskevi**	1.05	346	*e*PN	Pn	16 11 32.1	0.0
PRK				*e*SN	Sn	16 11 47.7	+0.3
AYVA	**Ayvalik**	1.09	4	*i* P	Pb	16 11 32.4	+0.7
AYVA				*i* S	Sb	16 11 49.6	+3.5
AYDN	**Tasoluk**	1.16	118	*i* P	Pb	16 11 33.0	0.0
AYDN				*i* S	Sb	16 11 48.9	+0.7
AKS	**Akhisar**	1.16	55	PN	Pn	16 11 33.1	-0.6
BODT	**Bodrum**	1.29	153	PN	Pn	16 11 34.9	-0.6
BODT				SN	Sn	16 11 52.3	-1.0
MLSB	**Milas**	1.32	134	*e*PN	Pn	16 11 35.0	-0.9
BDRM	**Kayabasi**	1.34	149	*i* P	Pb	16 11 36.1	+0.2
BDRM				*i* S	Sb	16 11 53.6	+0.3
APE	**Apeiranthos**	1.42	217	*e*PN	Pn	16 11 37.4	0.0
APE	**Apeiranthos**	1.42	217	*e*PN	Pn	16 11 38.5	+1.1
MANT	**Manisa**	1.57	79	*i* P	Pn	16 11 40.7	+1.2
MANT				*i* S	Sb	16 12 01.1	+1.0
EZN	**Ezine**	1.62	353	PN	Pn	16 11 40.0	-0.2
YER	**Yerkesik**	1.73	128	PN	Pn	16 11 41.2	-0.5
BALB	**Balikesir**	1.74	35	PN	Pn	16 11 41.5	-0.4

DENT	**Denizli**	**1.99**	**103**	PN	**Pn**	**16 11 44.7**	**-0.7**
DST	**Dursunbey**	**2.11**	**48**	PN	**Pn**	**16 11 46.9**	**-0.3**
KHL	**Karahalli**	**2.31**	**87**	PN	**Pn**	**16 11 49.6**	**-0.5**

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*NEIC **04** 16:37:31.4,35.86S×70.50W,h194^{km},MD3.4(GUC),After GUC.*

GUC 04 16:37:31.4±0.7**,35.86S×70.50W,h194^{km}**±9^{km}**,MD3.4, ML3.6,4C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	**San Fernando**	**1.31**	**341**	⇑*i*P	P	16 38 03.1	-0.1
SFDO				*i* S	S	16 38 27.4	-0.5
LMEL	**Las Melosas**	**2.02**	**7**	*i* P	P	16 38 10.9	+0.8
LMEL				AMP		16 38 50.0	
	comp=N,199nm,0.2s						
TACH	**Talagante**	**2.23**	**351**	⇑*i*P	P	16 38 12.6	+0.2
TACH				*i* S	S	16 38 43.8	-0.1
ANTU	**Antumapu**	**2.29**	**357**	*e*P	P	16 38 13.5	+0.5
ANTU				*i* S	S	16 38 45.3	+0.2
ANTU				AMP		16 38 48.7	
	comp=N,175nm,0.2s						
RCDM	**Rinconada Maip**	**2.38**	**354**	*e*P	P	16 38 14.2	+0.1
RCDM				*i* S	S	16 38 46.6	-0.3
RCDM				AMP		16 38 48.2	
	comp=N,430nm,0.1s						
FCH	**Farellones**	**2.53**	**4**	*e*P	P	16 38 16.5	+0.7
FCH				*i* S	S	16 38 51.3	+1.3
FCH				AMP		16 38 53.3	
	comp=N,104nm,0.3s						
LCCH	**Las Cruces**	**2.54**	**339**	⇓*i*P	P	16 38 16.3	+0.5
LCCH				*i* S	S	16 38 49.9	-0.3
ROCH	**El Roble**	**2.91**	**352**	⇑*i*P	P	16 38 20.7	+0.5
JACH	**Jahuel**	**3.17**	**359**	⇑*i*P	P	16 38 23.6	+0.2
JACH				*i* S	S	16 39 03.4	-0.1

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*NNC **04** 16:42:48.8±3.8,36.56N×72.47E,mpv3.4,Error ellipse: s-maj=43.2km s-min=28.8km az=90.0*

ISC 04 16:42:44.1±0.8**,36.4N**±0.1×**74.0E**±0.3**,h33^{km},n12,** σ**1^{s}36**/18**,2C-2D,Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**4.19**	**157**	*e*S	**S**	**16 44 40.0**	**+4.2**
THN	**Thein Dam**	**4.21**	**160**	*e*P	**P**	**16 43 51.3**	**+3.6**
THN				*e*S	**S**	**16 44 40.9**	**+4.5**
SMLA	**Simla**	**5.89**	**152**	*e*P	**P**	**16 44 10.9**	**-0.3**
SMLA				*e*S	**S**	**16 45 17.5**	**-1.2**
KLP	**Kalpa**	**6.01**	**143**	*e*P	**P**	**16 44 14.6**	**+1.6**
KLP				*e*S	**S**	**16 45 26.1**	**+4.5**
KLP				AML	AML	16 45 37.6	
	comp=N,54nm,0.5s						
KLP				AML	AML	16 45 39.9	
	comp=E,48nm,0.7s						
AAK	**Ala-Archa**	**6.22**	**3**	⇑Pn	**Pn**	**16 44 20.5**	**+4.4**
	comp=E,5.0nm,1.4s						
AAK				⇑Sn	**Sn**	**16 45 38.3**	**+11**
	comp=E,3.4nm,1.0s						
AAK				⇓Lg		16 46 07.2	
	comp=E,5.0nm,0.9s						
KK31	**Karatay Array**	**7.20**	**339**	Pn	**Pn**	**16 44 31.2**	**+1.4**
	comp=E,0.6nm,0.2s,baz=153,slow=11,SNR=39						
KK31				⇓Sn	**Sn**	**16 45 51.8**	**+0.4**
	comp=E,1.3nm,0.4s,baz=156,slow=27,SNR=9.1						
KOLN	**Koldanda**	**11.85**	**134**	*e*P	**P**	**16 45 34.3**	**+0.6**
	comp=E,2.9nm,0.4s						
GKN	**Gorkha**	**12.30**	**130**	*e*P	**P**	**16 45 39.2**	**-0.5**
	comp=E,6.2nm,0.4s						
GKN				*e*S	**S**	**16 47 52.3**	**-4.3**
KKN	**Kakani**	**12.85**	**129**	*e*P	**P**	**16 45 46.1**	**-1.0**
	comp=E,4.0nm,0.4s						
DMN	**Daman**	**12.87**	**130**	*e*P	**P**	**16 45 46.8**	**-0.6**
	comp=E,2.9nm,0.3s						
AB31	**Akbulak array**	**16.43**	**326**	P	**P**	**16 46 31.3**	**-2.2**
	comp=E,0.4nm,0.4s,baz=126,slow=18,SNR=15						
AKTO	**Aktyubinsk**	**18.14**	**326**	P	**P**	**16 46 54.2**	**-0.8**

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*ISK **04** 16:53:25.3,38.12N×26.55E,h8^{km},MD2.8*

*CSEM **04** 16:53:25.4±0.2,38.14N×26.56E,h5^{km},MD2.8,Error ellipse: s-maj=5.0km s-min=2.0km az=130.0*

*ATH **04** 16:53:26.0,38.11N×26.74E,h35^{km},MD3.2/3*

ISC 04 16:53:25.7±0.9**,38.12N**±0.03×**26.55E**±0.06**,h3^{km}**±7^{km}**, n10,** σ**0^{s}79**/19**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.24**	**9**	*i* P	**Pg**	**16 53 30.3**	**-0.2**
URLA				*i* S	**Sg**	**16 53 34.5**	**+0.9**
BLCB	**Balcova**	**0.47**	**56**	PG	**Pg**	**16 53 34.7**	**-0.3**
BLCB				SG	**Sg**	**16 53 41.2**	**-0.1**
SMG	**Samos**	**0.47**	**151**	*e*PB	**Pg**	**16 53 35.4**	**+0.3**
SMG				*e*SB	**Sg**	**16 53 42.7**	**+1.3**
IZM	**Izmir**	**0.62**	**64**	PG	**Pg**	**16 53 37.6**	**-0.5**
IZM				SG	**Sg**	**16 53 47.6**	**+1.1**
KDAG	**Bornova**	**0.63**	**64**	*i* P	**Pg**	**16 53 36.7**	**-1.6**
KDAG				*i* S	**Sg**	**16 53 45.3**	**-1.4**
PRK	**Paraskevi**	**1.14**	**349**	*e*PN	**Pn**	**16 53 47.6**	**-0.9**
PRK				*e*SN	**Sn**	**16 54 04.5**	**-0.3**
AYVA	**Ayvalik**	**1.19**	**5**	*i* P	**Pb**	**16 53 48.6**	**+0.2**
AYVA				*i* S	**Sb**	**16 54 05.7**	**+1.6**
AKS	**Akhisar**	**1.25**	**52**	PN	**Pn**	**16 53 50.0**	**0.0**
APE	**Apeiranthos**	**1.33**	**218**	*e*PN	**Pn**	**16 53 51.0**	**-0.1**
APE				*e*SN	**Sn**	**16 54 09.1**	**-0.4**
MANT	**Manisa**	**1.62**	**76**	*i* P	**Pn**	**16 53 55.8**	**+0.5**
MANT				*i* S	**Sb**	**16 54 16.6**	**-0.1**

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*NIED **04** 17:05:00,44.90N×151.80E,h5^{km},Mw4.7 Best double couple: M$_0$1.27×10^{16} NP1:φ$_s$252°,δ78°,λ-86°. NP2:φ$_s$53°, δ13°,λ-109°.*

*IDC **04** 17:05:46.0±0.5,44.64N×152.02E,mb4.5/19,mb1 4.7/22, mb1mx4.6/26,mbtmp4.5/22,ML4.0/3,MS3.8/8,Ms1 3.8/8, ms1mx3.4/30,Error ellipse: s-maj=17.0km s-min=12.3km az=143.0*

*BJI **04** 17:05:49.6,44.65N×151.52E,h13^{km},mB4.9,mb4.7, Ms4.2,Msz4.0*

*SKHL **04** 17:05:50.9±2.6,44.94N×151.89E,h48^{km}±21^{km},mb5.4/3, mbh5.9/1,Ms4.6/6,msh5.5/1*

*MOS **04** 17:05:50.8±1.1,44.53N×151.78E,h49^{km},mb5.1/50, MS3.9/12,Error ellipse: s-maj=7.8km s-min=5.1km az=111.5*

*NEIC **04** 17:05:52.2±0.2,44.64N×151.89E,mb4.8/57,Error ellipse: s-maj=5.8km s-min=3.6km az=164.0*

ISC 04 17:05:50.8±0.2**,44.64N**±0.04×**151.81E**±0.04**,h45^{km}, h45^{km}**±1.0^{km}**:pP-P,n290,** σ**1^{s}12**/271**,mb4.8**/99**,MS4.1**/18**, 23C-6D,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.86**	**283**	*e*P	**P**	**17 06 33.0**	**-2.1**
KUR				AMB	AMB	17 06 36.5	
	150nm,0.5s						
KUR				*i* S	**S**	**17 07 07.5**	**-1.1**
KUR				A		17 07 08.5	
	6µm,2.0s						
KUR				A		17 07 08.5	
	3µm,2.0s						
KUR				A		17 07 10.0	
	770nm,0.7s						
KUR				A		17 07 10.0	
	600nm,0.7s						
KUR	**Kuril'sk**	**2.86**	**283**	*e*PN	**P**	**17 06 33.0**	**-2.1**
KUR				*e*S	**S**	**17 07 07.5**	**-1.1**
KUR				pmax	pmax		
	comp=Z,150nm,0.5s						
KUR				smax			
	comp=N,6µm,1.8s						
KUR				smax			
	comp=E,3µm,1.8s						
KUR				smax			
	comp=N,770nm,0.7s						
KUR				smax			
	comp=E,600nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**4.31**	**264**	*e*PN	**P**	**17 06 55.0**	**-0.6**
YUK				*e*S	**S**	**17 07 42.2**	**-3.1**
YUK				smax			
	comp=N,1µm,0.5s						
YUK				smax			
	comp=E,700nm,0.5s						
YUK				smax			
	comp=N,2µm,1.0s						
YUK				smax			
	comp=E,1µm,0.6s						
ASAJ	**Asahikawa**	**6.62**	**269**	Pn	**P**	**17 07 28.4**	**+0.3**
	comp=E,7.8nm,0.3s,baz=82,slow=18,SNR=64						
ASAJ	**Asahikawa**	**6.62**	**269**	PN	**P**	**17 07 28.4**	**+0.3**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
SKR	**Severo-Kuril's**	**6.70**	**24**	*e*P	**P**	**17 07 23.2**	**-6.0**
SKR				AMB	AMB	17 07 25.0	
	comp=Z,2µm,3.0s						
SKR				AMB	AMB	17 07 25.0	
	comp=Z,2µm,3.0s						
SKR				AMB	AMB	17 07 25.5	
	comp=Z,80nm,0.6s						
SKR				AMB	AMB	17 07 25.5	
	comp=Z,170nm,0.6s						
SKR				*e*S	**S**	**17 08 31.5**	**-14**
SKR				A		17 08 42.0	
	comp=Z,90nm,0.6s						
SKR				A		17 08 42.0	
	comp=Z,150nm,0.6s						
SKR				A		17 08 42.0	
	comp=Z,80nm,0.6s						
SKR				AMS	AMS	17 09 50.0	
	comp=Z,2µm,16.0s						
SKR				AMS	AMS	17 09 50.0	
	comp=Z,2µm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.74**	**293**	⇓*e*P	**P**	**17 07 29.9**	**+0.2**
YSS				AMB	AMB	17 07 32.9	
	comp=Z,30nm,0.7s						
YSS				AMB	AMB	17 07 32.9	
	comp=Z,60nm,1.0s						
YSS				*e*S	**S**	**17 08 42.9**	**-3.1**
YSS				AMS	AMS	17 11 34.0	
	comp=Z,900nm,14.0s						
YSS				AMS	AMS	17 11 34.0	
	comp=Z,800nm,14.0s						
YSS				AMS	AMS	17 11 34.0	
	comp=Z,1µm,14.0s						
YSS	**Yuzh-Sakhalins**	**6.74**	**293**	*e*Pn	**P**	**17 07 29.0**	**-0.6**
	comp=Z,32nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.74**	**293**	⇓*e*PN	**P**	**17 07 29.9**	**+0.2**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				pmax	pmax		
	comp=E,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS				MLR	MLR		
	comp=N,900nm,12.0s						
YSS				MLR	MLR		
	comp=E,800nm,14.0s						
PAU	**Pauzhetka**	**7.60**	**24**	*i* P	**P**	**17 07 37.4**	**-4.3**
UGL	**Uglegorsk**	**8.02**	**307**	*e*P	**P**	**17 07 52.0**	**+4.6**
UGL				AMB	AMB	17 07 55.0	
	comp=E,500nm,6.0s						
UGL				AMS	AMS	17 12 28.0	
	comp=E,1µm,13.0s						
UGL				AMS	AMS	17 12 28.0	
	comp=E,2µm,13.0s						
UGL				AMS	AMS	17 12 28.0	
	comp=E,2µm,13.0s						
TYV	**Tymovskoe**	**8.76**	**319**	*e*P	**P**	**17 07 54.7**	**-2.9**
TYV				AMB	AMB	17 07 55.8	
	comp=E,9.0nm,0.7s						
TYV				AMB	AMB	17 08 04.0	
	comp=E,300nm,7.0s						
TYV				A		17 09 34.0	
	comp=E,24nm,0.8s						
TYV				AMS	AMS	17 12 42.0	
	comp=E,1µm,14.0s						
TYV				AMS	AMS	17 12 42.0	
	comp=E,2µm,14.0s						
PET	**Petropavlovsk**	**9.52**	**26**	*e*PN	**P**	**17 08 07.0**	**-1.0**
TEY	**Ternei**	**10.81**	**277**	*e*P	**P**	**17 08 25.0**	**-0.8**
TEY				AMB	AMB	17 08 26.0	
	comp=E,60nm,1.3s						
TEY				AMS	AMS	17 14 36.0	
	comp=E,900nm,1.4s						
NKL	**Nikolayevsk**	**11.22**	**323**	AMS	AMS	17 14 26.0	
	comp=E,1µm,16.0s						
NKL				AMS	AMS	17 14 26.0	
	comp=E,900nm,16.0s						
NKL				AMS	AMS	17 14 26.0	
	comp=E,1µm,16.0s						
GRNR	**Gornyy**	**12.03**	**306**	*e*P	**P**	**17 08 38.2**	**-4.0**
GRNR				AMB	AMB	17 08 39.6	
	comp=E,13nm,0.8s						
MAJO	**Matsushiro**	**13.12**	**237**	*e*Pn	**P**	**17 08 53.4**	**-3.3**
	comp=E,14nm,0.8s						
MAJO	**Matsushiro**	**13.12**	**237**	*e*PN	**P**	**17 08 53.4**	**-3.3**
MAJO				pmax	pmax		
	comp=Z,14nm,0.8s						
MAT	**Matsushiro**	**13.12**	**237**	P	**P**	**17 08 53.1**	**-3.6**
MAT				S	**S**	**17 11 18.2**	**-3.8**
MAT	**Matsushiro**	**13.12**	**237**	*e*P	**P**	**17 08 53.0**	**-3.7**
	comp=Z,9.0nm,0.8s						
MAT				S	S	17 11 45.0	+23
MAT	**Matsushiro**	**13.12**	**237**	*e*PN	**P**	**17 08 53.0**	**-3.7**
MAT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MJAR	**Matsushiro Arr**	**13.12**	**237**	Pn	**P**	**17 08 54.0**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=33,slow=12,SNR=16						
MJAR				Sn	**S**	**17 11 22.1**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=16,slow=22,SNR=3.4						
MJAR	**Matsushiro Arr**	**13.12**	**237**	PN	**P**	**17 08 54.0**	**-2.7**
MJAR						17 11 22.1	
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KLR	**Kul'dur**	**14.44**	**296**	*e*P	**P**	**17 09 16.0**	**+2.1**
KLR				AMS	AMS	17 16 53.0	
	comp=Z,2µm,14.0s						
VLA	**Vladivostok**	**14.45**	**271**	*e*P	**P**	**17 09 11.5**	**-2.6**
VLA				*i*		17 11 48.7	
VLA				pmax	pmax		
	comp=Z,23nm,1.4s						
VLA				MLR	MLR		
	comp=Z,400nm,19.3s						
JHJ	**Hachijo jima 2**	**14.82**	**223**	Pn	**P**	**17 09 24.4**	**+5.5**
	comp=Z,11nm,0.3s,baz=73,slow=6.5,SNR=5.1						
MA2	**Magadan**	**14.97**	**358**	*e*P	**P**	**17 09 20.6**	**-0.1**
	comp=Z,22nm,0.6s						
MA2	**Magadan**	**14.97**	**358**	*e*P	**P**	**17 09 21.3**	**+0.6**
MA2				*e*S	**S**	**17 12 05.8**	**0.0**
MA2				pmax	pmax		
	comp=Z,20nm,0.8s						
MA2				MLR	MLR		
	comp=Z,500nm,18.0s						
EKMR	**Ekimchan**	**14.97**	**311**	*e*P	**P**	**17 09 21.6**	**+0.8**
EKMR				AMB	AMB	17 09 28.5	
	comp=Z,6.0nm,0.5s						
MDJ	**Mudanjiang**	**15.82**	**278**	P	**P**	**17 09 29.2**	**-2.5**
MDJ				AP		17 09 33.9	
MDJ				XP		17 09 36.2	
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,80nm,3.8s						
MDJ				LR	LR		
	comp=N,400nm,13.2s						
MDJ				LR	LR		
	comp=E,160nm,14.1s						
MDJ				LR	LR		
	comp=Z,540nm,14.1s						
MDJ	**Mudanjiang**	**15.82**	**278**	*e*P	**P**	**17 09 30.1**	**-1.6**
	comp=Z,31nm,1.0s						
FX1	**Attu Island--F**	**16.27**	**52**	Pn	**P**	**17 09 33.6**	**-3.7**
	comp=Z,0.7nm,0.3s,baz=310,slow=18,SNR=7.6						
FX1	**Attu Island--F**	**16.27**	**52**	P	**P**	**17 09 36.4**	**-1.0**
FX1	**Attu Island--F**	**16.27**	**52**	P	**P**	**17 09 33.6**	**-3.8**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YASR	**Yasnyy**	**17.81**	**308**	*e*P	**P**	**17 09 52.2**	**-4.5**
YASR				AMB	AMB	17 09 55.0	
	comp=Z,1µm,0.6s						
YASR				AMB	AMB	17 09 55.0	
	comp=Z,8.0nm,0.6s						
YASR				AMB	AMB	17 09 55.0	
	comp=Z,16nm,0.6s						
BMKR	**Bomnak**	**17.88**	**312**	*e*P	**P**	**17 09 57.0**	**-0.5**
BMKR				AMB	AMB	17 09 58.4	
	comp=Z,19nm,0.5s						
SEY	**Seymchan**	**18.33**	**1**	*e*P	**P**	**17 10 00.3**	**-2.8**
ZEA	**Zeya**	**18.37**	**308**	*e*P	**P**	**17 10 00.5**	**-3.2**
ZEA				AMB	AMB	17 10 02.2	
	comp=Z,35nm,1.1s						
ZEA				AMB	AMB	17 10 02.2	
	comp=Z,57nm,1.1s						
ZEA				AMS	AMS	17 18 55.0	
	comp=Z,400nm,13.0s						
ZEA				AMS	AMS	17 18 55.0	
	comp=Z,600nm,13.0s						
KROS	**Kirovskiy**	**18.77**	**310**	*e*P	**P**	**17 10 06.9**	**-1.6**
KROS				AMB	AMB	17 10 10.5	
	comp=Z,6.0nm,0.5s						
KROS				AMB	AMB	17 10 10.5	
	comp=Z,19nm,0.5s						
CN2	**Changchun**	**18.89**	**277**	⇑P	**P**	**17 10 07.8**	**-2.2**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,440nm,14.0s						
CN2				LR	LR		
	comp=E,480nm,14.0s						
CN2				LR	LR		
	comp=Z,510nm,15.0s						
JNU	**Nakatsue**	**19.89**	**242**	P	**P**	**17 10 20.8**	**-0.2**
	comp=Z,8.0nm,1.1s,baz=207,slow=11,SNR=3.0						
SNY	**Shenyang**	**20.72**	**272**	⇑P	**P**	**17 10 29.8**	**+0.1**
SNY				S	**S**	**17 14 18.8**	**+5.2**
SNY				AMB	AMB		
	comp=Z,20nm,1.4s						
SNY				AMB	AMB		
	comp=Z,150nm,3.9s						
SNY				LR	LR		
	comp=E,250nm,12.6s						
SNY				LR	LR		
	comp=Z,280nm,15.6s,MS3.7						
CLNS	**Chul'man**	**20.79**	**315**	*e*P	**P**	**17 10 28.2**	**-2.1**
CLNS				*e*PPP	PPP	17 10 48.7	-14
CLNS				*e*S	**S**	**17 14 18.8**	**+3.9**
CLNS				*e*SS	SS	17 15 00.1	+12
CLNS				pmax	pmax		
	comp=Z,43nm,0.9s						
CLNS				pmax	pmax		
	comp=N,27nm,1.1s						
CLNS				pmax	pmax		
	comp=E,23nm,1.1s						
CLNS				smax			
	comp=N,10.0nm,1.1s						
CLNS				smax			
	comp=E,8.0nm,1.1s						
CLNS				smax			
	comp=Z,8.0nm,1.0s						
CLNS				MLR	MLR		
	comp=N,200nm,13.0s,MS3.8						
CLNS				MLR	MLR		
	comp=Z,400nm,13.0s,MS4.0						
CLNS				MLR	MLR		
	comp=E,200nm,14.0s,MS3.8						
YAK	**Yakutsk**	**21.67**	**331**	*e*P	**P**	**17 10 36.6**	**-2.5**
	comp=E,86nm,0.6s,mb5.4						
YAK				*e*S	**S**	**17 14 31.9**	**+0.6**
YAK	**Yakutsk**	**21.67**	**331**	*e*P	**P**	**17 10 36.3**	**-2.8**
YAK				*e*		17 10 49.7	
YAK				*e*S	**S**	**17 14 30.4**	**-0.9**
YAK				*e*SS	SS	17 14 40.9	-29
YAK				pmax	pmax		
	comp=Z,23nm,0.7s,mb4.7						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK				smax			
	comp=N,22nm,1.0s						
YAK				smax			
	comp=Z,6.0nm,1.1s						
YAK				smax			
	comp=E,12nm,0.8s						
YAK				MLR	MLR		
	comp=Z,264nm,17.0s,MS3.7						
YAK				MLR	MLR		
	comp=N,97nm,16.0s						
HIA	**Hailar**	**22.27**	**293**	*e*P	**P**	**17 10 43.9**	**-1.3**
	comp=N,11nm,0.7s,mb4.4						
HIA	**Hailar**	**22.27**	**293**	*e*P	**P**	**17 10 43.9**	**-1.3**
HIA				pmax	pmax		
	comp=Z,11nm,0.7s						
BILL	**Bilibino**	**24.65**	**13**	*e*P	**P**	**17 11 08.0**	**-0.1**
BILL	**Bilibino**	**24.65**	**13**	*d* *i*P	**P**	**17 11 07.7**	**-0.4**
BILL				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.7						
BILL				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.0						
JOW	**Kunigami**	**25.95**	**235**	P	**P**	**17 11 21.4**	**+0.6**
	comp=Z,19nm,0.9s,mb4.6,baz=58,slow=6.7,SNR=6.7						
CIT	**Chita**	**26.24**	**300**	*e*P	**P**	**17 11 22.5**	**-0.7**
CIT				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.7						
BOD	**Bodaibo**	**26.70**	**313**	*e*P	**P**	**17 11 23.6**	**-3.7**
BOD				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.2						
SSE	**Sheshan**	**27.52**	**251**	P	**P**	**17 11 33.4**	**-1.8**
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,50nm,3.9s						
NJ2	**Nanjing**	**28.54**	**255**	*e*P	**P**	**17 11 45.2**	**+0.9**
NJ2				PP	PP	17 12 39.5	+2.3
NJ2				S	**S**	**17 16 29.0**	**+1.3**
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,400nm,6.0s						
NJ2				LR	LR		
	comp=N,350nm,13.0s						
NJ2				LR	LR		
	comp=E,560nm,20.7s						
NJ2				LR	LR		
	comp=Z,2µm,17.8s,MS4.8						
TIXI	**Tiksi**	**29.25**	**345**	*e*P	**P**	**17 11 47.0**	**-3.3**
TIXI				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.7						
SONM	**Songino Array**	**31.23**	**292**	P	**P**	**17 12 08.1**	**0.0**
	comp=Z,5.2nm,0.8s,mb4.4,baz=74,slow=7.5,SNR=12						
SONM				LR	LR	17 26 17.5	
	comp=Z,180nm,19.9s,MS3.7,baz=236,slow=39						
SONM	**Songino Array**	**31.23**	**292**	P	**P**	**17 12 08.1**	**+0.1**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,180nm,20.0s						
GUMO	**Guam**	**31.51**	**193**	LR	LR	17 22 23.7	
	comp=Z,91nm,19.4s,MS3.5,baz=15,slow=32						
ZAK	**Zakamensk**	**32.80**	**298**	*e*P	**P**	**17 12 21.3**	**-0.4**
ZAK				*e*		17 15 04.9	
ENH	**Enshi**	**36.12**	**261**	*e*P	**P**	**17 12 49.9**	**-0.4**
	comp=Z,4.8nm,0.8s,mb4.5						
LZH	**Lanzhou**	**37.08**	**274**	*e*P	**P**	**17 13 02.1**	**+3.7**
LZH				AP	pP	17 13 06.0	-4.5
LZH				XP	sP	17 13 09.1	-7.0
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,100nm,5.1s						
LZH				LR	LR		
	comp=N,780nm,12.3s						
LZH				LR	LR		
	comp=Z,1µm,14.5s,MS4.8						
KRAR	**Krasnoyarsk**	**38.16**	**309**	*e*P	**P**	**17 13 05.6**	**-1.6**
KRAR				*e**PP	pP	17 13 20.6	+1.3
KRAR				pmax	pmax		
	comp=N,26nm,0.6s						
COLA	**College**	**38.36**	**37**	*e*P	**P**	**17 13 08.3**	**-0.5**
	comp=N,13nm,1.3s,mb4.5						
COLA	**College**	**38.36**	**37**	*e*P	**P**	**17 13 08.8**	**0.0**
GTA	**Gaotai**	**38.44**	**281**	P	**P**	**17 13 11.7**	**+2.0**
GTA				AP	pP	17 13 16.1	-5.7
GTA				XP	sP	17 13 18.7	-8.6
GTA				PP	PP	17 14 44.1	+2.5
GTA				PCP	PcP	17 15 23.5	+0.6
GTA				S	**S**	**17 19 07.9**	**+6.6**
GTA				XS		17 19 12.5	
GTA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,140nm,5.7s						
GTA				LR	LR		

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      comp=N,300nm,19.0s,MS4.2
GTA                                LR        LR
      comp=E,180nm,18.3s,MS4.2
GTA                                LR        LR
      comp=Z,180nm,18.6s,MS3.9
ILAR  Eielson Array      38.77  37  P        P         17 13 11.1  -1.1
      comp=Z,5.7nm,1.1s,mb4.2,baz=267,slow=7.3,SNR=21
ILAR  Eielson Array      38.77  37  P        P         17 13 11.1  -1.1
ILAR                                pmax     pmax
      comp=Z,6.0nm,1.1s
CD2   Chengdu            39.82 267 eP        P         17 13 21.2   0.0
CD2                                 AMB      AMB
      comp=Z,10.0nm,1.0s,mb4.5
GYA   Guiyang            40.39 259⇓iP        P         17 13 26.8  +0.8
GYA                                 AMB      AMB
      comp=Z,20nm,0.9s,mb4.8
DAWY  Dawson             42.06  38 eP        P         17 13 39.0  -0.2
ZAL   Zalesovo           43.15 307  LR       LR        17 34 04.7
      comp=Z,480nm,19.4s,MS4.4,baz=81,slow=39
NVS   Novosibirsk        43.77 309 eP        P         17 13 51.7  -1.6
INK   Inuvik             43.92  31 eP        P         17 13 54.0  -0.4
      comp=Z,10nm,0.8s,mb4.6
INK                                epP       pP        17 14 05.5  -1.2
INK   Inuvik             43.92  31 eP        P         17 13 54.0  -0.4
INK                                e*PP      pP        17 14 05.5  -1.2
INK                                 pmax     pmax
      comp=Z,11nm,0.8s
WMQ   Urumqi             44.87 293  P        P         17 14 04.4  +2.1
MK02  Makanchi Array     47.12 299  P        P         17 14 21.1  +1.0
MK02                                pmax     pmax
      comp=Z,13nm,0.7s,mb5.0
MKAR  Makanchi Array     47.12 299  P        P         17 14 21.3  +1.2
      comp=Z,16nm,0.7s,mb5.0,baz=70,slow=8.0,SNR=102
MKAR                                LR       LR        17 35 47.5
      comp=Z,250nm,18.4s,MS4.2,baz=1.1,slow=38
MKAR  Makanchi Array     47.12 299  P        P         17 14 21.3  +1.2
MKAR                                LR       LR        17 35 47.5
MKAR  Makanchi Array     47.12 299  P        P         17 14 21.3  +1.2
MKAR                                pmax     pmax
      comp=Z,16nm,0.7s
MKAR                                MLR      MLR
      comp=Z,250nm,18.4s
KURK  Kurchatov          47.79 305 eP        P         17 14 24.3  -1.0
      comp=Z,20nm,0.9s,mb5.2
KURK                               epP       pP        17 14 37.6  -0.1
KURK  Kurchatov          47.79 305 eP        P         17 14 25.1  -0.2
LSA   Lhasa              49.49 274  P        P         17 14 40.3  +1.6
LSA   Lhasa              49.49 274 eP        P         17 14 40.3  +1.6
      comp=Z,12nm,1.0s,mb4.9
LSA   Lhasa              49.49 274 eP        P         17 14 40.3  +1.6
LSA                                 pmax     pmax
      comp=Z,12nm,1.0s,mb4.9
CHKZ  Chkalovo           51.11 311 eP        P         17 14 49.6  -1.0
      comp=Z,14nm,0.9s,mb4.9
CHKZ                               epP       pP        17 15 02.4  -0.7
CHKZ  Chkalovo           51.11 311 eP        P         17 14 49.7  -1.0
CHKZ                               e*PP      pP        17 15 02.4  -0.7
CHKZ                                pmax     pmax
      comp=Z,14nm,0.9s,mb4.9
SHL   Shillong           51.42 269 eP        P         17 14 54.0  +0.6
BVA0  Borovoye Array     51.51 310 i P       P         17 14 53.6  -0.1
BVA0                                pmax     pmax
      comp=Z,3.0nm,1.5s,mb4.0
BRVK  Borovoye           51.55 310 eP        P         17 14 53.9  -0.1
      comp=Z,3.1nm,0.6s,mb4.4
BRVK  Borovoye           51.55 310 eP        P         17 14 53.9  -0.1
BRVK                                pmax     pmax
      comp=Z,3.0nm,0.6s,mb4.4
TKM2  Tokmak 2           53.12 297  P        P         17 15 07.4  +1.4
      SNR=11
YKA   Yellowknife Ar     53.16  35  P        P         17 15 03.5  -2.5
      comp=Z,4.6nm,0.9s,mb4.4,baz=300,slow=7.4,SNR=6.5
YKA   Yellowknife Ar     53.16  35 i P       P         17 15 04.5  -1.5
YKA                                 pmax     pmax
      comp=Z,5.0nm,1.0s
USP   Ospenovka          53.64 298  P        P         17 15 10.6  +0.8
      SNR=27
KBK   Karagaybulak       53.67 297  P        P         17 15 10.9  +1.0
      SNR=12
KZA   Kyzart             53.77 296  P        P         17 15 13.0  +2.3
      SNR=16
FRU   Bishkek            53.79 297 eP        P         17 15 12.0  +1.1
FRU                                e         pP        17 15 28.0  +4.6
PMG   Port Moresby       53.96 186  LR       LR        17 35 00.5
      comp=Z,33nm,21.6s,MS3.4,baz=323,slow=32
AAK   Ala-Archa          53.97 297  P        P         17 15 13.2  +1.0
      SNR=14
AAK   Ala-Archa          53.97 297 eP        P         17 15 11.7  -0.5
      comp=Z,9.6nm,0.8s,mb4.8
AAK   Ala-Archa          53.97 297  P        P         17 15 13.0  +0.8
AAK                                 pmax     pmax
      comp=Z,10.0nm,0.9s,mb4.8
GUN   Gumba              54.29 276 eP        P         17 15 15.4  +0.7
      comp=Z,50nm,1.0s,mb5.4
HNR   Honiara            54.32 170  LR       LR        17 33 33.9
      comp=Z,89nm,19.9s,MS3.8,baz=348,slow=31
EKS2  Erkin-Say          54.41 297  P        P         17 15 16.2  +0.8
      SNR=17
KSH   Kashi              54.63 293 eP        P         17 15 17.0   0.0
KSH                                eAP       pP        17 15 27.0  -2.6
KSH                                eXP       sP        17 15 31.0  -3.8
KSH                                 AMB      AMB
      comp=Z,200nm,4.9s
KKN   Kakani             54.78 276 eP        P         17 15 19.0  +0.6
      comp=Z,53nm,1.0s,mb5.5
PKI   Pulchoki           54.82 276 eP        P         17 15 19.1  +0.5
      comp=Z,40nm,1.1s,mb5.3
DMN   Daman              55.02 276 eP        P         17 15 20.8  +0.8
      comp=Z,54nm,1.1s,mb5.5
GKN   Gorkha             55.11 277 eP        P         17 15 21.2  +0.5
      comp=Z,72nm,1.0s,mb5.7
ARU   Arti               55.96 318 eP        P         17 15 24.9  -1.4
      comp=Z,16nm,0.8s,mb5.1
ARU   Arti               55.96 318⇓iP        P         17 15 25.4  -1.0
ARU                                e         pP        17 15 39.2  +0.2
ARU                                e                   17 16 20.0
ARU                                e                   17 17 30.1
ARU                                eS        S         17 23 10.4  +1.0
ARU                                eSS       SS        17 26 58.5  +2.8
ARU                                 pmax     pmax
      comp=Z,15nm,0.8s,mb5.1
KOLN  Koldanda           55.99 277 eP        P         17 15 27.8  +0.8
      comp=Z,48nm,1.1s,mb5.5
KKAR  Karatay Array      56.23 299  P        P         17 15 26.9  -1.6
KKAR                                pmax     pmax
      comp=Z,4.0nm,0.6s,mb4.6
BOK   Bokaro             56.79 272 ex        x         17 15 45.0
EDM   Edmonton           58.44  45 eP        P         17 15 42.2  -1.8
EDM                                epP       pP        17 15 54.9  -1.8
DAG   Danmarks Havn      58.71 357⇑iP        P         17 15 44.0  -1.6
      comp=Z,6.8nm,0.7s,mb4.8
DAG   Danmarks Havn      58.71 357⇑eP        P         17 15 44.0  -1.6
      comp=Z,6.8nm,0.7s,mb4.8
DAG   Danmarks Havn      58.71 357⇑eP        P         17 15 44.0  -1.6
DAG                                 pmax     pmax
      comp=Z,7.0nm,0.7s,mb4.8
KEV   Kevo               59.02 341 ep        P         17 15 46.2  -1.7
      comp=Z,18nm,0.8s,mb5.1
KEV   Kevo               59.02 341 eP        P         17 15 46.2  -1.7
KEV                                 pmax     pmax
      comp=Z,18nm,0.8s,mb5.2
AB31  Akbulak array      59.08 310 i P       P         17 15 48.9  +0.4
AB31                                pmax     pmax
      comp=Z,9.0nm,0.5s,mb5.1
NEW   Newport            59.19  51 eP        P         17 15 46.9  -2.5
      comp=Z,3.8nm,1.0s,mb4.4
NEW   Newport            59.19  51 eP        P         17 15 46.9  -2.4
NEW                                 pmax     pmax
      comp=Z,4.0nm,1.0s
ARCES ARCESS Array B     59.54 341  P        P         17 15 51.0  -0.5
      comp=Z,12nm,0.9s,mb4.9,baz=56,slow=8.7,SNR=11
ARCES ARCESS Array B     59.54 341  P        P         17 15 51.0  -0.5
ARCES                               pmax     pmax
      comp=Z,12nm,0.9s
NDI   New Delhi          59.93 282 eP        P         17 15 53.0  -1.7
ORR   Orenburg           60.47 315⇑iP        P         17 15 57.9  -0.2
ORR                                 pmax     pmax
      comp=Z,20nm,1.2s,mb5.0
BLSP  Bilaspur           60.52 273 eP        P         17 15 57.9  -0.9
KLMR  Klimovskoe         61.44 329 eP        P         17 16 00.4  -4.1
KLMR                                pmax     pmax
      comp=Z,40nm,1.5s,mb5.3
WVOR  Wild Horse Val     61.65  57 eP        P         17 16 05.2  -0.9
      comp=Z,4.6nm,0.8s,mb4.7
WVOR  Wild Horse Val     61.65  57 eP        P         17 16 05.2  -0.9
WVOR                                pmax     pmax
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      comp=Z,5.0nm,0.8s,mb4.7
JOF   Joensuu            62.82 334 ep        P         17 16 12.5  -1.2
      comp=Z,12nm,0.6s,mb5.2
SUMG  Summit             62.86   3 eP        P         17 16 13.9  +0.1
      comp=Z,19nm,0.8s,mb5.3
BHPL  Bhopal             63.16 277 eP        P         17 16 16.4  -0.1
BHPL                                AMb      AMB       17 16 17.8
      comp=Z,17nm,0.8s,mb5.2
HLID  Hailey             63.47  54 eP        P         17 16 17.5  -0.7
      comp=Z,3.1nm,0.8s,mb4.5
HLID                               epP       pP        17 16 29.9  -1.1
BOZ   Bozeman (W)        63.77  51 eP        P         17 16 19.5  -0.6
      comp=Z,12nm,1.1s,mb4.9
BOZ                                epP       pP        17 16 31.8  -1.2
BOZ   Bozeman (W)        63.77  51 eP        P         17 16 19.5  -0.6
BOZ                                e*PP      pP        17 16 31.8  -1.2
BOZ                                 pmax     pmax
      comp=Z,12nm,1.1s,mb4.8
NVAR  Mina Array Bea     64.24  61  P        P         17 16 23.1  -0.2
      comp=Z,4.9nm,0.7s,mb4.6,baz=294,slow=6.2,SNR=20
QLMT  Earthquake Lak     64.39  52 eP        P         17 16 23.5  -0.6
QLMT                               epP       pP        17 16 35.8  -1.2
KAF   Kangasniemi        64.97 335 ep        P         17 16 26.9  -0.7
      comp=Z,11nm,0.9s,mb4.9,baz=37,slow=6.1
KAF   Kangasniemi        64.97 335 eP        P         17 16 26.9  -0.7
KAF                                 pmax     pmax
      comp=Z,11nm,0.9s,mb4.9
RRI2  Red Ridge          65.37  53 eP        P         17 16 30.5   0.0
      comp=Z,12nm,0.8s,mb5.0
RRI2                               epP       pP        17 16 43.0  -0.4
MOOW  Moose Ponds        65.45  52 eP        P         17 16 30.6  -0.3
      comp=Z,4.7nm,0.9s,mb4.5
TPAW  Teton Pass         65.49  53 eP        P         17 16 31.7  +0.5
      comp=Z,7.6nm,0.7s,mb4.8
TPAW                               epP       pP        17 16 44.3  +0.1
FINES FINESS Array B     65.56 335  P        P         17 16 31.3   0.0
      comp=Z,9.5nm,0.6s,mb5.0,baz=29,slow=7.1,SNR=37
FINES                               LR       LR        17 49 01.6
      comp=Z,87nm,20.7s,MS3.9,baz=2.0,slow=40
FINES FINESS Array B     65.56 335  P        P         17 16 31.3   0.0
FINES                               pmax     pmax
      comp=Z,10.0nm,0.6s
FINES                               MLR      MLR
      comp=Z,87nm,20.7s
LOHW  Long Hollow        65.61  52 eP        P         17 16 32.2  +0.1
      comp=Z,8.2nm,1.3s,mb4.6
LOHW                               epP       pP        17 16 44.9   0.0
MOS   Moscow             65.66 326 eP        P         17 16 31.7  -0.4
MOS                                 pmax     pmax
      comp=Z,81nm,1.6s,mb5.5
WRAB  Tennant Creek      66.21 198 eP        P         17 16 34.9  -1.4
      comp=Z,19nm,1.2s,mb5.0
WRAB                               epP       pP        17 16 48.6  -0.6
WRAB  Tennant Creek      66.21 198 eP        P         17 16 35.5  -0.7
WB2   Warramunga Arr     66.22 198 eP        P         17 16 35.1  -1.2
WRA   Warramunga Arr     66.22 198  P        P         17 16 35.0  -1.3
      comp=Z,3.8nm,0.8s,mb4.5,baz=18,slow=6.9,SNR=16
WRA                                 PKPPKP             17 45 14.0
      comp=Z,0.8nm,0.8s,baz=201,slow=3.1,SNR=5.3
HWUT  Hardware Ranch     66.33  54 eP        P         17 16 36.0  -0.6
      comp=Z,3.4nm,0.7s,mb4.5
HWUT                               epP       pP        17 16 48.6  -0.9
DUG   Dugway             66.49  56 eP        P         17 16 37.1  -0.5
      comp=Z,11nm,1.1s,mb4.8
DUG                                epP       pP        17 16 49.6  -1.0
DUG   Dugway             66.49  56 eP        P         17 16 37.1  -0.5
DUG                                e*PP      pP        17 16 49.6  -1.0
DUG                                 pmax     pmax
      comp=Z,11nm,1.1s,mb4.8
OBN   Obninsk            66.53 325 eP        P         17 16 37.6   0.0
OBN                                e*PP      pP        17 16 50.3  -0.3
OBN                                eS        S         17 25 22.5  -1.1
OBN                                 pmax     pmax
      comp=Z,36nm,1.2s,mb5.3
OBN                                 MLR      MLR
      comp=Z,200nm,17.0s,MS4.4
BW06  Boulder Array      66.74  52 eP        P         17 16 37.9  -1.3
      comp=Z,21nm,1.8s,mb4.9
BW06                               epP       pP        17 16 51.1  -1.0
PDAR  Pinedale Array     66.74  52  P        P         17 16 38.5  -0.7
      comp=Z,3.3nm,1.0s,mb4.3,baz=270,slow=3.0,SNR=16
FITZ  Fitzroy Crossi     66.85 207 eP        P         17 16 40.9  +0.6
      comp=Z,5.6nm,1.0s,mb4.5
FITZ  Fitzroy Crossi     66.85 207  P        P         17 16 40.6  +0.3
      comp=Z,4.5nm,0.8s,mb4.6,baz=48,slow=11,SNR=5.9
VRHR  Novokhopersk       67.16 320 eP        P         17 16 40.7  -1.0
VRHR                                pmax     pmax
      comp=E,10.0nm,0.7s
VRHR                                pmax     pmax
      comp=Z,20nm,0.7s,mb5.3
VRHR                                pmax     pmax
      comp=N,20nm,0.6s
VSU   Vasula             67.66 332⇓iP        P         17 16 45.5  +0.8
SRU   San Rafael         68.54  56 eP        P         17 16 49.8  -0.7
      comp=N,10nm,0.9s,mb4.8
SRU                                epP       pP        17 17 03.0  -0.5
SRU   San Rafael         68.54  56 eP        P         17 16 49.8  -0.7
SRU                                e*PP      pP        17 17 03.0  -0.5
SRU                                 pmax     pmax
      comp=Z,10.0nm,0.9s,mb4.8
POO   Poona              68.75 275 eP        P         17 16 52.0  -0.1
RSSD  Black Hills        68.89  48 eP        P         17 16 51.7  -0.9
      comp=Z,6.0nm,0.8s,mb4.6
RSSD                               epP       pP        17 17 03.8  -1.8
RSSD  Black Hills        68.89  48 eP        P         17 16 51.7  -0.9
RSSD                               e*PP      pP        17 17 03.8  -1.8
RSSD                                pmax     pmax
      comp=Z,6.0nm,0.8s,mb4.6
KAD   Karad              69.32 274 ex        x         17 16 55.4
NB2   NORSAR Subarra     69.92 341  P        P         17 16 58.4  -0.2
      comp=Z,40nm,1.4s,mb5.2,baz=30,slow=6.2
NB2   NORSAR Subarra     69.92 341  P        P         17 16 58.4  -0.2
      baz=30,slow=6.5
NOA   NORSAR Array B     69.92 341  P        P         17 16 58.6  +0.1
      comp=Z,8.4nm,1.0s,mb4.6,baz=28,slow=6.3,SNR=12
NOA                                 LR       LR        17 52 15.9
      comp=Z,42nm,21.4s,MS3.6,baz=285,slow=40
ASPA  Alice Springs      69.92 197 eP        P         17 16 59.1  -0.1
NAO   NORSAR Subarra     70.20 341  P        P         17 16 58.4  -1.9
      comp=Z,40nm,1.4s,mb5.2
NAO   NORSAR Subarra     70.20 341  P        P         17 16 58.4  -1.9
NAO                                 pmax     pmax
      comp=Z,40nm,1.4s,mb5.2
SMCO  Snowmass           70.57  54 eP        P         17 17 02.0  -1.0
      comp=Z,4.8nm,0.8s,mb4.5
GOF   Gofitskoye         70.66 315 eP        P         17 17 04.0  +0.6
KIV   Kislovodsk         71.61 314 eP        P         17 17 09.2  +0.1
      comp=Z,26nm,1.1s,mb5.1
KIV   Kislovodsk         71.61 314 i P       P         17 17 09.6  +0.5
KIV                                 pmax     pmax
      comp=Z,28nm,1.3s,mb5.0
ZEI   Tsey               71.81 312 i P       P         17 17 08.6  -1.7
ZEI                                i *PP     pP        17 17 22.4  -0.9
ZEI                                i                   17 19 48.1
ZEI                                 pmax     pmax
      comp=Z,9.0nm,1.0s,mb4.7
AKASG Malin Array Be     72.78 326  P        P         17 17 15.8   0.0
      comp=Z,7.1nm,0.5s,mb4.8,baz=36,slow=6.2,SNR=19
GNI   Garni              73.19 310 eP        P         17 17 18.6  +0.1
GNI                                 pmax     pmax
      comp=Z,26nm,1.3s
TRD   Trivandrum         73.30 265 ex        x         17 16 54.1
ANN   Anapa              73.62 317 eP        P         17 17 16.7  -4.2
ANN                                 pmax     pmax
      comp=Z,171nm,2.4s,mb5.5
LAZ   Ladron             73.70  58 eP        P         17 17 21.9  +0.4
ANMO  Albuquerque        73.73  57  P        P         17 17 21.5  -0.2
      comp=Z,2.4nm,0.8s,mb4.2,baz=304,slow=12,SNR=3.5
ANMO  Albuquerque        73.73  57 eP        P         17 17 21.3  -0.4
      comp=Z,2.1nm,0.6s,mb4.2
ANMO                               epP       pP        17 17 34.3  -0.5
KWP   Kalwaria           76.16 329 eP        P         17 17 35.9  +0.6
      comp=Z,49nm,1.3s,mb5.3
KWP   Kalwaria           76.16 329 eP        P         17 17 35.9  +0.6
KWP                                 pmax     pmax
      comp=Z,49nm,1.3s,mb5.3
MNTX  Cornudas Mount     76.63  59 eP        P         17 17 38.2  -0.2
      comp=Z,1.5nm,0.5s,mb4.2
STKA  Stephens Creek     76.72 189  P        P         17 17 38.5  -0.5
      comp=Z,2.1nm,0.8s,mb4.1,baz=339,slow=13,SNR=3.3
BURAR Bucovina Array     76.84 326 ⇑P        P         17 17 40.3  +1.1
STHS  Stebnicka Huta     76.87 329 eP        P         17 17 39.1  -0.3
KOLS  Kolonicke sedl     76.89 329 eP        P         17 17 39.7  +0.2
CRVS  Cervenica-Dubn     77.22 329 eP        P         17 17 42.5  +1.1
KSP   Ksiaz              77.37 333 eP        P         17 17 42.5  +0.4
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OKC   Ostrava-Krasne     77.61 331 eP        P         17 17 44.2  +0.7
UPC   Upice              77.75 333 eP        P         17 17 44.9  +0.7
DPC   Dobruska-Polom     77.78 333 eP        P         17 17 45.5  +1.1
MORC  Moravsky Berou     77.87 332 eP        P         17 17 44.1  -0.8
      comp=Z,8.4nm,1.0s,mb4.6
MORC  Moravsky Berou     77.87 332 eP        P         17 17 44.1  -0.8
MORC                                pmax     pmax
      comp=Z,8.0nm,1.0s,mb4.6
KECS  Kecovo             77.93 329 eP        P         17 17 46.5  +1.3
CLL   Collm              78.00 335  P        P         17 17 45.9  +0.3
      comp=Z,logA/T=1.2,mb4.9
CLL                                e         pP        17 17 59.0  +0.3
CLL   Collm              78.00 335 i P       P         17 17 45.9  +0.3
      comp=Z,18nm,1.1s,mb4.9
CLL   Collm              78.00 335 i P       P         17 17 45.9  +0.3
CLL                                 pmax     pmax
      comp=Z,18nm,1.1s,mb4.9
PVCC  Panska Ves         78.19 334 eP        P         17 17 47.6  +0.9
WMOK  Wichita Mounta     78.35  52 eP        P         17 17 46.8  -1.1
      comp=Z,3.5nm,1.0s,mb4.2
WMOK                               epP       pP        17 17 59.7  -1.3
WMOK  Wichita Mounta     78.35  52 eP        P         17 17 46.8  -1.1
WMOK                               e*PP      pP        17 17 59.7  -1.3
WMOK                                pmax     pmax
      comp=Z,3.0nm,1.0s,mb4.2
VYHS  Vyhne              78.51 330 eP        P         17 17 49.6  +1.1
VYHS                               e                   17 17 55.0
PRU   Pruhonice          78.67 333 eP        P         17 17 50.0  +0.7
TREC  Trest              78.97 333 eP        P         17 17 52.4  +1.4
SMOL  Smolenice          78.99 331 eP        P         17 17 52.5  +1.4
MOX   Moxa               79.00 335 eP        P         17 17 52.0  +0.9
NKC   Novy Kostel        79.11 335 eP        P         17 17 52.1  +0.4
BR131 Keskin Array S     79.29 316 eP        P         17 17 54.0  +1.1
      comp=Z,2.3nm,0.8s,mb4.2
BRTR  Keskin Array B     79.29 316  P        P         17 17 54.5  +1.5
      comp=Z,2.6nm,1.0s,mb4.1,baz=27,slow=2.8,SNR=10.0
LTX   Lajitas            79.34  59 eP        P         17 17 52.9  -0.5
      comp=Z,4.2nm,1.0s,mb4.3
LTX                                epP       pP        17 18 05.6  -1.0
LTX   Lajitas            79.34  59 eP        P         17 17 52.9  -0.5
LTX                                e*PP      pP        17 18 05.6  -0.9
LTX                                 pmax     pmax
      comp=Z,4.0nm,1.0s,mb4.3
TXAR  Lajitas Array      79.34  59  P        P         17 17 53.2  -0.2
      comp=Z,4.2nm,1.0s,mb4.3,baz=288,slow=4.0,SNR=21
TXAR  Lajitas Array      79.34  59  P        P         17 17 53.2  -0.2
ANTO  Ankara             79.59 317 eP        P         17 17 54.2  -0.3
      comp=Z,5.0nm,0.7s,mb4.5
ANTO  Ankara             79.59 317 eP        P         17 17 54.2  -0.4
ANTO                                pmax     pmax
      comp=Z,5.0nm,0.7s,mb4.5
KHC   Kasperske Hory     79.73 334 eP        P         17 17 55.9  +0.8
KHC                                epP       pP        17 18 08.4  +0.2
GERES GERESS Array B     79.94 333  P        P         17 17 56.4  +0.2
      comp=Z,1.5nm,0.7s,mb4.0,baz=34,slow=4.8,SNR=12
GRA1  Grafenberg Arr     79.96 335 eP        P         17 17 56.9  +0.6
      comp=Z,10.0nm,1.0s,mb4.7
GRF   Grafenberg Arr     79.96 335 eP        P         17 17 56.9  +0.6
      comp=Z,10.0nm,1.0s,mb4.7
GRF   Grafenberg Arr     79.96 335 eP        P         17 17 56.9  +0.6
GRF                                 pmax     pmax
      comp=Z,10.0nm,1.0s,mb4.7
GRF   Grafenberg Arr     79.96 335 eP        P         17 17 56.9  +0.6
GRF                                 pmax     pmax
      comp=Z,10.0nm,1.0s,mb4.7
JCT   Junction City      80.85  56 eP        P         17 18 01.1  -0.3
      comp=Z,7.1nm,0.9s,mb4.6
JCT   Junction City      80.85  56 eP        P         17 18 01.1  -0.3
JCT                                 pmax     pmax
      comp=Z,7.0nm,0.9s,mb4.6
GIVF  Givet              81.36 339 eP        P         17 18 05.5  +1.8
BAIF  Baives             81.55 340 eP        P         17 18 05.7  +1.0
CDF   Champ du Feu       82.25 337 eP        P         17 18 09.5  +1.2
FLN   La Foliniere       83.86 342 eP        P         17 18 17.7  +1.3
      comp=Z,155nm,1.6s,mb5.6
FLN                                eR
      comp=Z,185nm,19.5s
FLN   La Foliniere       83.86 342 eP        P         17 18 17.7  +1.3
FLN                                 pmax     pmax
      comp=Z,78nm,1.6s,mb5.6
FLN                                 MLR      MLR
      comp=Z,190nm,19.5s,MS4.5
LDF   La Druitiere       83.94 342 eP        P         17 18 18.0  +1.1
      comp=Z,61nm,1.3s,mb5.3
LDF   La Druitiere       83.94 342 eP        P         17 18 18.0  +1.1
LDF                                 pmax     pmax
      comp=Z,31nm,1.3s,mb5.3
LOR   Lormes             84.22 339 eP        P         17 18 19.2  +0.9
      comp=Z,51nm,1.4s,mb5.2
LOR                                eR
      comp=Z,216nm,21.0s
LOR   Lormes             84.22 339 eP        P         17 18 19.2  +0.9
LOR                                 pmax     pmax
      comp=Z,25nm,1.4s,mb5.2
LOR                                 MLR      MLR
      comp=Z,220nm,21.0s,MS4.5
GRR   Gorron             84.30 342 eP        P         17 18 20.0  +1.3
SSF   Saint Saulge       84.50 339 eP        P         17 18 20.3  +0.6
AVF   Avril sur Loir     84.79 339 eP        P         17 18 22.5  +1.3
      comp=Z,42nm,1.2s,mb5.1
AVF   Avril sur Loir     84.79 339 eP        P         17 18 22.5  +1.3
AVF                                 pmax     pmax
      comp=Z,21nm,1.2s,mb5.1
SMF   Signal de Mont     84.80 338 eP        P         17 18 22.6  +1.4
      comp=Z,56nm,1.0s,mb5.3
SMF   Signal de Mont     84.80 338 eP        P         17 18 22.6  +1.4
SMF                                 pmax     pmax
      comp=Z,28nm,1.0s,mb5.3
LPL   La Plagne          85.04 336 eP        P         17 18 24.0  +1.6
      comp=Z,3.6nm,0.6s,mb4.4
LPL   La Plagne          85.04 336 eP        P         17 18 24.0  +1.6
LPL                                 pmax     pmax
      comp=Z,2.0nm,0.6s,mb4.4
LPG   La Plagne          85.05 336 eP        P         17 18 23.9  +1.4
BGF   Bois d'Agland      85.14 339 eP        P         17 18 23.9  +1.0
      comp=Z,9.1nm,0.7s,mb4.7
BGF   Bois d'Agland      85.14 339 eP        P         17 18 23.9  +1.0
BGF                                 pmax     pmax
      comp=Z,5.0nm,0.7s,mb4.8
QUIF  Quistinic          85.24 343 eP        P         17 18 24.4  +1.1
TCF   Toulx Ste Croi     85.55 339 eP        P         17 18 25.7  +0.8
      comp=Z,58nm,1.5s,mb5.3
TCF   Toulx Ste Croi     85.55 339 eP        P         17 18 25.7  +0.8
TCF                                 pmax     pmax
      comp=Z,29nm,1.5s,mb5.3
MBDF  Montbardon         85.75 336 eP        P         17 18 27.4  +1.5
ORIF  Oris-en-Rattie     85.83 336 eP        P         17 18 27.3  +1.0
      comp=Z,23nm,1.0s,mb5.1
ORIF                               eR
      comp=Z,186nm,17.5s
VIVF  Saint-Julien-l     86.23 337 eP        P         17 18 29.4  +1.1
SBF   Sospel             86.34 335 eP        P         17 18 30.2  +1.4
      comp=Z,59nm,1.1s,mb5.4
SBF   Sospel             86.34 335 eP        P         17 18 30.2  +1.4
SBF                                 pmax     pmax
      comp=Z,30nm,1.1s,mb5.4
CAF   Calviac            86.86 339 eP        P         17 18 32.7  +1.4
PGF   Pioggiola          87.04 333 eP        P         17 18 33.7  +1.4
      comp=Z,71nm,1.5s,mb5.4
PGF   Pioggiola          87.04 333 eP        P         17 18 33.7  +1.4
PGF                                 pmax     pmax
      comp=Z,36nm,1.5s,mb5.4
LFF   La Frestale        87.18 340 eP        P         17 18 34.0  +1.1
TIP   Timpagrande        87.25 327 eP        P         17 18 34.1  +0.7
EPF   Esparros           89.07 339 eP        P         17 18 43.3  +1.3
ETSF  Etsaut             89.42 340 eP        P         17 18 44.9  +1.3
LPAZ  La Paz            136.12  63  PKP      PKPdf     17 25 09.6  +2.1
      comp=Z,0.8nm,0.8s,baz=320,slow=7.9,SNR=3.4
LPAZ  La Paz            136.12  63  PKP      PKPdf     17 25 09.6  +2.0
BDFB  Brasilia          146.58  36  PKPbc    PKPbc     17 25 28.9  +1.5
      comp=Z,12nm,1.0s,baz=350,slow=5.4,SNR=9.6
BAO   Brasilia Array    146.58  36  P        PKPdf     17 25 26.5  +0.5
NVL   N'lazarevskaya    147.34 203 ePKP2     PKPab     17 25 29.7  -2.5
NVL                                 pmax     pmax
      comp=Z,1.0nm,1.0s
PLCA  Paso Flores       148.87  98  PKPbc    PKPdf     17 25 34.7  +5.7
      comp=Z,7.7nm,0.7s,baz=311,slow=2.1,SNR=14
SNAA  Sanae             150.28 196⇑iP        PKPdf     17 25 38.6  +8.2
SNAA  Sanae             150.28 196⇑i         PKPdf     17 25 49.8   +19
SNAA  Sanae             150.28 196           PKPdf     17 26 11.0   +41
SNAA  Sanae             150.28 196  PKPbc    PKPdf     17 25 37.6  +7.3
      comp=Z,4.0nm,1.1s,baz=148,slow=0.9,SNR=20
SNAA  Sanae             150.28 196 ePKPdf    PKPdf     17 25 31.8  +1.5
SNAA                               ePKPbc    PKPdf     17 25 37.2  +6.8
VNA2  Neumayer--Watz    151.74 194⇑iP        PKPdf     17 25 40.9  +8.4
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VNA2	Neumayer--Watz	151.74	194	⇑i	PKPdf	17 25 42.9	+10
VNA2	Neumayer--Watz	151.74	194		PKPdf	17 25 49.9	+17
VNA2	Neumayer--Watz	151.74	194	⇑i	PKPdf	17 25 54.6	+22
VNA2	Neumayer--Watz	151.74	194	⇑i	PKPdf	17 26 04.5	+32
VNA2	Neumayer--Watz	151.74	194	⇑i	PKPdf	17 26 16.6	+44
VNA3	Neumayer Olymp	151.84	193	⇑iP	PKPdf	17 25 40.9	+8.2
VNA3	Neumayer Olymp	151.84	193	⇑i	PKPdf	17 25 42.9	+10
VNA3	Neumayer Olymp	151.84	193	⇑i	PKPdf	17 25 49.0	+16
VNA3	Neumayer Olymp	151.84	193	⇑i	PKPdf	17 25 53.9	+21
VNA3	Neumayer Olymp	151.84	193	⇑i	PKPdf	17 26 07.0	+34
VNA3	Neumayer Olymp	151.84	193	⇑i	PKPdf	17 26 11.6	+39
VNA1	Neumayer--Stat	152.12	194	⇑iP	PKPdf	17 25 42.1	+9.0
VNA1	Neumayer--Stat	152.12	194	⇑i	PKPdf	17 25 45.1	+12
VNA1	Neumayer--Stat	152.12	194	⇑i	PKPdf	17 25 53.9	+21

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*CASC **04** 17:15:14.7±1.9, 12.98N×89.05W, h46^{km}±29^{km}, MD4.2, ML4.3, mb3.8(NEIC)*
*IDC **04** 17:15:19.4±3.1, 13.54N×88.46W, h92^{km}±37^{km}, mb3.3/5, mb1 3.7/7, mb1mx3.5/20, mbtmp3.7/7, MS3.4/1, Ms1 3.5/1, ms1mx2.8/21, Error ellipse: s-maj=46.8km s-min=21.1km az=35.0*
*NEIC **04** 17:15:20.0±1.3, 13.39N×88.48W, h108^{km}±14^{km}, mb3.8/3, MD4.4(SNET), Error ellipse: s-maj=22.7km s-min=8.5km az=218.0*
NEIC Felt [II] at San Salvador.
ISC 04 17:15:17.5±1.0, **13.4N**±0.2×**88.6W**±0.1, **h99**^{km}±10^{km}, **n48, σ0^{s}96**/36, **mb3.8**/8, **4C-16D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	San Miguel	0.29	81	⇓iP	Px	17 15 35.5	
VSM				eS	Sx	17 15 49.3	
BLLM	Bellamira	0.33	79	⇓eP	Px	17 15 35.7	
BLLM				eS	Sx	17 15 47.9	
SNVI	San Vicente	0.35	311	⇓iP	Px	17 15 32.4	
SNVI				eS	Sx	17 15 43.1	
LCBS	La Ceiba	0.48	304	⇓iP	Px	17 15 32.4	
LCBS				eS	Sx	17 15 42.9	
CAHU	Cacacuatique	0.52	42	⇑eP	Px	17 15 38.8	
CAHU				eS	Sx	17 15 54.6	
LFRS	El Faro	0.54	296	⇓iP	Px	17 15 31.9	
LFRS				eS	Sx	17 15 41.7	
LBRS	Las Brisas	0.58	307	⇓eP	Px	17 15 33.8	
LBRS				eS	Sx	17 15 45.0	
LFU	La Fuente	0.64	304	⇓iP	Px	17 15 33.9	
LFU				eS	Sx	17 15 45.2	
SNET	Serv Nac Est T	0.71	295	⇓eP	Px	17 15 28.9	
SNET				eS	Sx	17 15 39.0	
SNET				i		17 15 40.3	
	comp=Z,13µm,0.3s						
CNCH	Conchagua	0.72	98	⇓eP	Px	17 15 39.9	
CNCH				eS	Sx	17 15 55.6	
BOQS	Boqueron	0.78	297	⇓iP	Px	17 15 34.3	
BOQS				eS	Sx	17 15 46.7	
SNJE	San Jose	1.12	296	⇓eP	Px	17 15 37.9	
SNJE				eS	Sx	17 15 52.6	
SBLS	San Blas	1.12	294	⇓eP	Px	17 15 37.8	
SBLS				eS	Sx	17 15 51.9	
RTR	El Retiro	1.17	296	⇓eP	Px	17 15 38.7	
RTR				eS	Sx	17 15 52.8	
RBDL	Robledal	1.31	304	⇑iP	Px	17 15 33.8	
RBDL				eS	Sx	17 15 50.5	
CRIN	San Cristobal	1.63	114	⇓eP	P	17 15 46.5	+0.8
CRIN				i		17 16 20.7	
	comp=Z,554nm,0.4s						
CHIN	Chinandega	1.67	116	i	P	17 15 47.2	+0.9
	comp=Z,27µm,0.5s						
TELN	Telica	1.86	114	⇑eP	P	17 15 48.4	-0.3
TELN				eS	S	17 16 15.7	+3.9
TEL3	Telica 3	1.86	115	⇓eP	P	17 15 48.8	+0.1
LEON	Leon	1.89	120	eP	P	17 15 48.0	-1.2
CNGN	Cerro Negro	2.02	116	eP	P	17 15 50.6	-0.2
MIRN	Miramar	2.04	117	⇓eP	P	17 15 51.3	+0.3
MOMJ	Momotombo	2.20	116	⇑eP	P	17 15 53.1	-0.2
COPN	Copaltepe	2.27	122	eP	P	17 15 53.1	-1.1
XAVN	Gruta Xavier	2.51	119	eP	P	17 15 57.4	-0.1
MGAN	Managua	2.58	118	eS	S	17 16 29.4	+0.4
MGAN				i		17 16 37.4	
	comp=E,389nm,0.3s						
TICN	Ticuantepe	2.64	120	eP	P	17 15 58.6	-0.8
JTS	JuntasAbangare	4.69	131	P	P	17 16 27.7	+0.4
	comp=E,2.7nm,0.3s,baz=297,slow=6.8,SNR=9.5						
JTS				S	S	17 17 22.3	+1.4
	comp=E,3.5nm,0.3s,baz=307,slow=18,SNR=1.9						
JTS	JuntasAbangare	4.69	131	ePn	P	17 16 27.8	+0.4
JTS				S	S	17 17 22.3	+1.4
JTS				eSn	S	17 17 23.2	+2.3
PRS1	Puriscal	5.37	129	eP	P	17 16 34.9	-1.7
LAJ	Bijagual	5.58	128	eP	P	17 16 34.6	-4.9
LCR2	La Lucha 2	5.75	128	eP	P	17 16 40.5	-1.3
URSC	Urasca	5.87	126	eP	P	17 16 42.3	-1.1
BUS	Buena Vista	6.06	128	eP	P	17 16 47.5	+1.4
BUS				eS	S	17 17 56.1	+1.5
SDV	Santo Domingo	18.15	102	P	P	17 19 24.2	-0.3
	comp=E,0.5nm,0.3s,baz=8.1,slow=9.6,SNR=5.6						
SDV	Santo Domingo	18.15	102	eP	P	17 19 23.3	-1.3
	comp=E,3.6nm,0.6s						
TXAR	Lajitas Array	21.17	321	P	P	17 19 57.0	+0.5
	comp=E,1.5nm,0.7s,mb3.4,baz=143,slow=11,SNR=8.2						
TXAR	Lajitas Array	21.17	321	P	P	17 19 57.0	+0.5
LTX	Lajitas	21.17	321	eP	P	17 19 57.6	+1.1
	comp=E,1.9nm,0.6s,mb3.6						
SJG	San Juan	22.07	75	P	P	17 20 05.9	+0.4
	comp=E,19nm,0.3s,mb4.9,baz=90,slow=20,SNR=6.3						
SAML	Samuel	33.58	130	eP	P	17 21 49.6	-0.8
	comp=E,2.2nm,0.6s,mb4.2						
PDAR	Pinedale Array	34.44	332	P	P	17 21 57.8	+0.3
	comp=E,0.4nm,0.6s,mb3.4,baz=105,slow=10,SNR=3.2						
LPAZ	La Paz	35.74	145	LR	LR	17 37 02.3	
	comp=E,49nm,18.9s,baz=11,slow=36						
NVAR	Mina Array Bea	36.29	319	P	P	17 22 14.6	+1.3
	comp=E,0.3nm,0.5s,mb3.5,baz=111,slow=7.7,SNR=3.5						
NVAR				PcP	PcP	17 24 37.7	+1.2
	comp=E,1.1nm,0.7s,baz=138,slow=3.7,SNR=7.9						
YKA	Yellowknife Ar	52.43	345	P	P	17 24 21.3	-0.5
	comp=E,1.7nm,0.7s,mb4.2,baz=142,slow=7.8,SNR=6.2						
YKA	Yellowknife Ar	52.43	345	P	P	17 24 21.3	-0.5
ILAR	Eielson Array	64.73	336	P	P	17 25 46.1	-1.1
	comp=E,0.4nm,0.6s,mb3.5,baz=150,slow=4.3,SNR=6.4						
WRA	Warramunga Arr	138.47	255	PKP	PKPdf	17 34 34.1	+1.6
	comp=E,0.5nm,0.7s,baz=89,slow=2.0,SNR=6.6						

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*NIED **04** 17:21:00, 29.10N×130.00E, h41^{km}, Mw4.1 Best double couple: M$_0$1.74×10^{15} NP1:φ$_s$27°, δ73°, λ89°. NP2:φ$_s$212°, δ17°, λ95°.*
JMA 04 17:21:03.6±0.2, **29.08N**×**130.01E, h60**^{km}±4^{km}, **M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAM	Amami Oshima	0.76	208	P	P	17 21 18.3	-0.3
JAM				S	S	17 21 29.1	-0.7
JZK	Kikaishima	0.76	183	P	P	17 21 18.8	+0.1
JNN	Nakanoshima	0.77	351	P	P	17 21 18.4	-0.4
JKC	Kuchinoerabu	1.39	7	P	P	17 21 27.2	-0.1
JKC				S	S	17 21 44.6	-0.2
JTK	Tokunoshima	1.59	216	P	P	17 21 30.6	+0.5
JTN	Tanegashima 3	1.78	28	P	P	17 21 32.6	-0.1
JTN				S	S	17 21 54.8	+0.6
JOW	Kunigami	2.71	215	P	P	17 21 46.0	+0.1
JOW				S	S	17 22 17.9	+0.3
JIH	Iheya	2.72	222	P	P	17 21 46.2	+0.2
JIH				S	S	17 22 18.5	+0.7
JAGN	Aguni-jima	3.49	225	P	P	17 21 57.3	+0.5
JAGN				S	S	17 22 37.7	+0.6
JKE	Kume jima 2	3.96	227	P	P	17 22 03.2	-0.2
JKE				S	S	17 22 48.3	-0.7

CASC 04 17:27:01.2±2.2, **13.27N**×**89.76W, h20**^{km}±13^{km}, **MD3.5, 3C-7D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNJE	San Jose	0.61	14	⇑eP	Pb	17 27 19.0	+6.0
SNJE				eS	Sb	17 27 28.3	+7.2
RTR	El Retiro	0.63	10	⇓eP	Pb	17 27 19.4	+6.1
RTR				eS	Sb	17 27 29.2	+7.5
LFRS	El Faro	0.76	63	⇑eP	Pb	17 27 20.6	+4.9
LFRS				eS	Sb	17 27 31.4	+5.9
LFU	La Fuente	0.79	53	⇓eP	Pb	17 27 21.3	+5.3
LFU				eS	Sb	17 27 33.2	+7.0
LBRS	Las Brisas	0.83	56	⇓eP	Pb	17 27 22.1	+5.2
LBRS				eS	Sb	17 27 34.6	+6.9
RBDL	Robledal	0.84	5	⇓eP	Pb	17 27 21.4	+4.5
RBDL				eS	Sb	17 27 33.1	+5.4
LCBS	La Ceiba	0.85	63	⇓eP	Pb	17 27 21.9	+4.8
LCBS				eS	Sb	17 27 33.5	+5.4
SNVI	San Vicente	0.96	69	⇓eP	Pb	17 27 23.4	+4.5
SNVI				eS	Sb	17 27 36.8	+5.7
IXG	Ixpaco	1.12	323	⇓eP	Pb	17 27 20.9	-0.9
IXG				eS	Sb	17 27 35.9	0.0
VSM	San Miguel	1.45	84	eP	Pn	17 27 30.3	+3.6
VSM				eS	Sn	17 27 48.7	+3.4
BLLM	Bellamira	1.49	83	⇑eP	Pn	17 27 31.6	+4.4
BLLM				eS	Sn	17 27 51.2	+5.0
TP2	Tecpan 2	1.94	321	eP	Pn	17 27 34.0	+0.4
TP2				eS	Sn	17 27 59.2	+1.6

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*NDI **04** 17:29:32.0±4.7, 34.30N×73.46E, h10^{km}, MD3.3, ML3.1*
*NNC **04** 17:29:40.2±4.8, 34.81N×72.64E, h1^{km}±62^{km}, mpv3.8, Error ellipse: s-maj=68.1km s-min=46.9km az=147.0*
ISC 04 17:29:30.8±0.8, **34.16N**±0.07×**73.4E**±0.2, **h10**^{km}, **n21, σ1^{s}30**/26, **1C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.58	131	eP	Pn	17 30 16.5	+3.1
THN				eS	Sn	17 30 50.3	+5.3
DLH	Dalhousie	2.67	126	eP	Pn	17 30 17.0	+2.3
DLH				ex	x	17 30 52.0	
BHK	Bhakra	3.72	136	ex	x	17 31 26.1	
SDNR	Sundarnagar	3.99	131	eP	Pn	17 30 33.6	+0.1
SDNR				ex	x	17 31 33.2	
SMLA	Simla	4.37	133	eP	Pn	17 30 38.3	-0.5
SMLA				eS	Sn	17 31 28.3	-2.2
KLP	Kalpa	4.83	121	eP	Pn	17 30 44.8	-0.6
KLP				eS	Sn	17 31 37.5	-4.6
KLP				AML	AML	17 31 46.8	
	comp=N,111nm,0.6s						
KLP				AML	AML	17 31 49.8	
	comp=E,128nm,0.5s						
NDI	New Delhi	6.35	148	ex	x	17 32 16.0	
KHET	Khetri	6.40	161	eP	Pn	17 31 09.1	+1.6
KHET				eS	Sn	17 32 16.6	-4.8
KHET				AML	AML	17 32 22.6	
	comp=N,12nm,0.1s						
KHET				AML	AML	17 32 22.8	
	comp=E,13nm,0.1s						
SONA	Sohna	6.67	151	eP	Pn	17 31 09.9	-1.4
SONA				eS	Sn	17 32 22.6	-5.6
SONA				AML	AML	17 32 50.0	
	comp=E,13nm,0.8s						
SONA				AML	AML	17 32 50.2	
	comp=N,8.0nm,0.5s						
AML	Almayashu	7.96	1	P	Pn	17 31 30.5	+1.1
	SNR=12						
KZA	Kyzart	8.04	10	P	P	17 31 30.6	+0.1
	SNR=6.3						
UCH	Uchtor	8.10	6	P	P	17 31 32.2	+0.8
	SNR=12						
EKS2	Erkin-Say	8.49	2	P	P	17 31 37.4	+0.5
	SNR=11						
AAK	Ala-Archa	8.50	5	Pn	P	17 31 38.1	+1.1
AAK				⇓Sn	Sn	17 33 09.7	-4.3
	comp=N,5.1nm,0.9s						
USP	Ospenovka	9.13	5	P	P	17 31 50.2	+4.5
	SNR=5.4						
KK31	Karatay Array	9.22	347	⇑Pn	P	17 31 46.0	-0.9
	comp=N,2.2nm,0.5s,baz=162,slow=12,SNR=41						
KK31				⇓Sn	Sn	17 33 25.7	-6.0
	comp=N,4.6nm,0.6s,baz=168,slow=24,SNR=13						
MK31	Makanchi Array	14.30	25	P	P	17 33 01.7	+6.4
	comp=N,1.0nm,0.6s,baz=209,slow=13,SNR=6.2						
AB31	Akbulak array	18.09	331	⇓P	P	17 33 44.0	+0.2
	comp=N,0.5nm,0.5s,baz=134,slow=11,SNR=13						
BVA0	Borovoye Array	18.98	354	P	P	17 33 53.6	-1.1
	comp=N,0.7nm,1.1s,baz=158,slow=9.8,SNR=16						
CHKZ	Chkalovo	19.61	355	P	P	17 33 59.8	-2.2
AKTO	Aktyubinsk	19.80	330	⇓P	P	17 34 03.6	-0.5
	comp=N,0.7nm,0.8s						

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*CSEM **04** 17:34:55.8±0.1, 28.43N×57.27E, h30^{km}, ML3.5, Error ellipse: s-maj=2.8km s-min=2.1km az=52.0*
*THR **04** 17:34:56.7±0.6, 28.50N×57.35E, h30^{km}±5^{km}, ML3.5*
*KISR **04** 17:34:59.4±1.2, 28.69N×56.67E, h16^{km}±999^{km}, ML4.1*
ISC 04 17:34:56.6±0.7, **28.40N**±0.05×**57.25E**±0.08, **h30**^{km}, **n18, σ1^{s}33**/23, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	1.38	224	ePg	Pn	17 35 23.9	+3.7
BNDS				eSg	Sn	17 35 44.4	+6.9
BNDS				AML	AML	17 35 50.2	
	comp=N,683nm,0.3s						
KRBR	Kerman	1.64	345	ePg	Pn	17 35 25.2	+1.3
KRBR				AML	AML	17 35 48.5	
	comp=N,517nm,0.3s						
BANOM	Banah	2.60	199	P	Pn	17 35 39.5	+1.8
	SNR=84						
ZHSF	Zahedan	3.32	68	ePn	Pn	17 35 47.4	-0.4
GHIR	Ghir-Karzin	3.76	269	ePn	Pn	17 35 56.1	+1.9
ASHO	Ashiyiah	3.85	196	P	Pn	17 35 57.7	+2.3
	SNR=30						
HOQ	Hoqain	4.79	179	P	Pn	17 36 08.2	-0.6
	SNR=11						
BIDO	Bidbid	4.92	171	P	Pn	17 36 10.0	-0.5
	SNR=12						
ARQ	Araqi	5.08	188	P	Pn	17 36 14.4	+1.6
	SNR=18						
SMDO	Samad	5.36	172	P	Pn	17 36 16.8	-0.1
	SNR=12						
NASN	Na'in	5.83	320	ePn	Pn	17 36 23.5	+0.2
WBK	Wadi Bani Khal	5.97	165	P	Pn	17 36 24.9	-0.4
	SNR=11						
QRN	Al-Qurain	8.21	275	eP	P	17 36 55.8	-1.0
QRN				eS	Sn	17 38 23.9	-5.7
QRN				AML	AML	17 38 25.2	
	comp=Z,65nm,0.2s						
UMR	Umm Al-Rimmam	8.43	280	eP	P	17 36 59.2	-0.7
UMR				AML	AML	17 38 28.9	
	comp=Z,12nm,0.3s						
UMR				eS	Sn	17 38 29.0	-6.0
RDF	Al-Radifah	8.54	276	eP	P	17 37 00.5	-0.9
RDF				eS	Sn	17 38 31.5	-6.2
RDF				AML	AML	17 38 33.9	
	comp=Z,21nm,0.3s						
MIB	Mutribah	8.79	282	eP	P	17 37 04.1	-0.7
MIB				eS	Sn	17 38 36.5	-7.3
MIB				AML	AML	17 38 37.5	
	comp=Z,5.5nm,0.5s						
WHFO	Wadi Hawf	10.91	198	P	P	17 37 31.0	-3.0
	SNR=8.2						
ABTO	Aybut	11.58	199	P	P	17 37 40.3	-2.8
	SNR=5.5						

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*IGQ **04** 17:40:47.3, 1.71S×78.06W, h178^{km}±3^{km}, mb4.2, Error ellipse: s-maj=3.0km s-min=2.4km az=84.7*
*NEIC **04** 17:40:53.0±1.8, 1.58S×77.75W, h193^{km}±19^{km}, mb4.0/2, MD4.1(IGQ), Error ellipse: s-maj=20.2km s-min=12.0km az=88.0*
*IDC **04** 17:40:53.9±4.7, 1.56S×77.80W, h201^{km}±44^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.3/19, mbtmp4.0/6, Error ellipse: s-maj=29.4km s-min=20.0km az=70.0*
ISC 04 17:40:49.2±0.5, **1.65S**±0.06×**78.15W**±0.08, **h169**^{km}±5^{km}, **n36, σ0^{s}76**/39, **mb3.7**/4, **6C-14D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATA	Patacocha	0.32	298	⇑P	P	17 41 12.4	-0.1
PATA				S	S	17 41 30.6	+0.3
ARRY	Arrayan	0.34	295	⇑P	P	17 41 11.8	-0.7
ARRY				S	S	17 41 29.5	-1.0
RUN5	Runtun	0.36	311	⇑P	P	17 41 12.1	-0.5
JUIV	Juive	0.39	306	⇑P	P	17 41 12.4	-0.3
JUIV				S	S	17 41 30.4	-0.4
CUSU	Cusua	0.39	302	⇑P	P	17 41 12.6	-0.1
IGUA	Igualata	0.51	288	⇑P	P	17 41 13.1	-0.1
PISA	Pisayambo	0.64	338	⇓P	P	17 41 13.9	+0.1
TAMB	Tambo	0.98	347	⇓P	P	17 41 16.5	+0.7
VC1	Cotopaxi 1	1.03	346	⇓P	P	17 41 17.0	+0.8
QIL1	Quilotoa	1.12	316	⇓P	P	17 41 17.8	+0.7
ANTI	Antisana	1.20	359	⇓P	P	17 41 18.0	+0.3
JUA2	San Juan 2	1.50	342	⇓P	P	17 41 20.9	+0.3
GGP	Refugio Guagua	1.53	343	⇓P	P	17 41 21.4	+0.4
PINO	Pino	1.55	343	⇓P	P	17 41 21.6	+0.5
YANA	Yana	1.58	345	⇓P	P	17 41 21.7	+0.2
LAV3	Lava3-Reventad	1.63	19	⇓P	P	17 41 21.4	-0.5
CONE	Cono NE Rev Vo	1.65	18	P	P	17 41 21.6	-0.5
CAYR	Refugio Cayamb	1.66	5	⇓P	P	17 41 22.7	+0.5
ANGU	Angureal	1.69	5	⇓P	P	17 41 23.0	+0.4
CAYA	Cayambe	1.72	5	⇓P	P	17 41 23.4	+0.5
COTA	Cotacachi	1.98	355	⇓P	P	17 41 26.4	+0.7
MAG1	Magdalena	2.26	314	P	P	17 41 28.8	-0.1
MAG1				S	S	17 41 58.3	-1.2
JAMA	Jama	2.48	304	P	P	17 41 32.0	+0.5
JAMA				S	S	17 42 00.8	-3.3
NNA	Nana	10.35	173	ePn	P	17 43 17.2	+2.8
SDV	Santo Domingo	12.87	35	P	P	17 43 46.4	-0.5
	1.5nm,0.3s,baz=256,slow=14,SNR=6.5						
SDV	Santo Domingo	12.87	35	ePn	P	17 43 46.1	-0.9
SAML	Samuel	16.56	116	eP	P	17 44 28.5	-4.8
	4.5nm,0.6s						
LPAZ	La Paz	17.58	146	P	P	17 44 44.8	-0.3
	0.5nm,0.3s,baz=332,slow=13,SNR=14						
LPAZ	La Paz	17.58	146	eP	P	17 44 44.3	-0.8
	3.4nm,0.7s						
SIV	San Ignacio	22.05	131	P	P	17 45 30.7	-0.1
	1.9nm,0.5s,mb3.8,baz=292,slow=10.0,SNR=13						
PLCA	Paso Flores	39.51	171	P	P	17 48 05.2	+0.3
	1.5nm,0.7s,mb3.7,baz=16,slow=12,SNR=4.0						
NVAR	Mina Array Bea	54.38	321	P	P	17 50 01.5	+0.7
	0.4nm,0.6s,mb3.3,baz=120,slow=7.3,SNR=3.1						
DBIC	Dimbokro	73.61	83	P	P	17 52 04.0	-2.5
	1.3nm,0.4s,mb4.0,baz=264,slow=7.4,SNR=9.3						
DBIC	Dimbokro	73.61	83	P	P	17 52 04.0	-2.5
WRA	Warramunga Arr	141.58	234	PKhKP		17 59 56.8	
	0.6nm,0.6s,baz=113,slow=2.2,SNR=4.6						
WRA				PKP	PKPdf	18 00 01.6	+0.5
	0.8nm,1.0s,baz=113,slow=2.1,SNR=5.7						
FITZ	Fitzroy Crossi	149.44	229	PKPbc	PKPdf	18 00 20.6	+6.2
	5.7nm,0.8s,baz=108,slow=5.1,SNR=6.3						
FITZ				PKPab	PKPab	18 00 26.6	-0.1
	5.2nm,0.9s,baz=177,slow=8.7,SNR=5.5						

NNC 04 17:44:24.1±3.2, **37.04N**×**71.10E, h57**^{km}±103^{km}, **mpv3.2, 2C-2D, Error ellipse: s-maj=26.3km s-min=21.1km az=149.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.07	356	P	P	17 45 51.7	-1.6
	0.5nm,0.3s,baz=174,slow=12,SNR=27						
KK31				⇓S	S	17 46 59.8	-2.4
	1.1nm,0.3s,baz=176,slow=22,SNR=18						
AAK	Ala-Archa	6.17	24	⇑P	P	17 45 52.1	-2.5
	1.6nm,0.3s						
AAK				⇓S	S	17 47 02.7	-1.9
	3.1nm,0.6s						
AB31	Akbulak array	14.65	330	⇑P	P	17 47 47.9	-1.4
	0.1nm,0.3s,baz=160,slow=12,SNR=7.7						

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*BJI **04** 17:44:46.1, 1.12N×97.26E, h35^{km}, mB5.9, mb5.6, Ms5.6, Msz5.6*
*CSEM **04** 17:44:47.5, 1.29N×97.30E, h30^{km}, mb5.5*
*MOS **04** 17:44:47.2±0.9, 1.32N×97.33E, h33^{km}, mb5.6/79, MS5.2/27, Error ellipse: s-maj=9.0km s-min=4.4km az=119.4*
*IDC **04** 17:44:47.8±2.3, 1.16N×97.32E, h29^{km}±14^{km}, mb4.8/20, mb1 4.9/20, mb1mx4.8/21, mbtmp5.0/20, MS5.2/13, Ms1 5.2/13, ms1mx5.0/22, Error ellipse: s-maj=17.9km s-min=11.6km az=49.0*
*HRVD **04** 17:44:48.2±0.2, 0.97N×96.96E, h21^{km}, MW5.5/61, Centroid moment Tensor Solution. LP body waves: s58,c111;Mantle waves: s61,c122; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.00±.04; M$_{\theta\theta}$-0.43±.02; M$_{\phi\phi}$-0.56±.03; M$_{r\theta}$1.19±.05; M$_{\theta\phi}$0.68±.02; M$_{\phi r}$-1.18±.05; Best double couple: M$_0$1.999×10^{17} NP1: φ$_s$321°, δ17°, λ96°. NP2:φ$_s$135°, δ74°, λ88°. Principal axes: T 1.907, Plg61°, Azm42°; N .184, Plg2°, Azm136°; P -2.091, Plg28°, Azm226°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **04** 17:44:48.1±0.1, 1.23N×97.27E, h30^{km}, mb5.4/91, MS5.1/18, MW5.5 Error ellipse: s-maj=4.5km s-min=3.5km az=200.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.31; M$_{\theta\theta}$-0.80; M$_{\phi\phi}$-1.51; M$_{r\theta}$0.54; M$_{\theta\phi}$0.92; M$_{\phi r}$-0.54; Best double couple: M$_0$2.4×10^{17} NP1: φ$_s$329°, δ36°, λ95°. NP2:φ$_s$142°, δ54°, λ86°. Principal axes: T 2.44, Plg80°, Azm37°; N -.17, Plg3°, Azm144°; P -2.26, Plg9°, Azm235°;*
*SKO **04** 17:44:51.2, 0.97S×94.26E*
ISC 04 17:44:46.3±0.2, **1.25N**±0.03×**97.32E**±0.02, **h29**^{km}, **h29**^{km}±1.1^{km}**:pP-P, n461, σ0^{s}94**/454, **mb5.4**/165, **MS5.3**/61, **57C-18D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPI	Padang Panjang	3.51	119	P	Pn	17 45 41.9	+1.5
	1µm,1.0s						
BSI	Banda Aceh	4.68	334	P	Pn	17 45 54.1	-2.9
	442nm,0.9s						
KULM	Kulim	5.21	40	ePn	Pn	17 46 06.0	+1.5
SNG	Songkhla	6.74	29	P	Pn	17 46 26.0	-0.1
	1µm,1.0s						
KSI	Kapahiang	7.17	133	P	Pn	17 46 33.5	+1.4
	379nm,0.8s						
PBA	Port Blair	11.29	336	ex	x	17 47 32.4	
PBA				ex	x	17 50 23.2	
NNT	Nongplab	11.52	12	P	P	17 47 30.8	-1.4
KSM	Kuching	12.98	89	ePn	P	17 47 51.0	-0.8
LEM	Lembang	13.04	128	P	P	17 47 52.8	+0.3
	63nm,1.9s						
NST	Nakhon Sawan	14.60	11	P	P	17 48 12.0	-1.1
UBT	Ubonrachathani	15.85	28	P	P	17 48 30.0	+0.7
KKTK	Khon Kaen	15.94	20	P	P	17 48 30.0	-0.6
PALK	Pallekele	17.61	290	eP	P	17 48 51.0	-0.7
	243nm,1.6s						
NANT	Nan	17.75	11	P	P	17 48 52.0	-1.3
KKM	Kota Kinabalu	19.44	75	eP	P	17 49 14.0	+0.2
VIS	Vishakhapatnam	21.38	321	eP	P	17 49 35.3	+1.4
VIS				AMb	AMB	17 49 44.9	
	comp=Z,420nm,1.6s,mb5.5						
VIS				eS	S	17 53 24.2	-0.6
QIZ	Qiongzhong	21.51	34	P	P	17 49 34.9	-0.4
QIZ				AP		17 49 44.6	
QIZ				PP	PP	17 50 00.8	+1.0
QIZ				eS	S	17 53 28.7	+1.4
QIZ				XS		17 53 43.9	
QIZ				AMB	AMB		
	comp=Z,190nm,1.6s,mb5.3						
QIZ				LR	LR		
	comp=N,7µm,13.8s,MS5.5						
QIZ				LR	LR		
	comp=E,11µm,14.0s,MS5.5						
QIZ				LR	LR		
	comp=Z,11µm,12.5s,MS5.5						
QIZ	Qiongzhong	21.51	34	eP	P	17 49 35.3	0.0
	comp=Z,393nm,1.4s,mb5.7						
TRD	Trivandrum	21.52	290	eP	P	17 49 36.2	+0.8
TRD				AMb	AMB	17 49 47.8	
	comp=Z,138nm,1.0s,mb5.3						
TRD				ex	x	17 53 27.7	
PCI	Palu	22.61	95	P	P	17 49 46.6	+0.1
	comp=Z,212nm,1.9s,mb5.2						
CAL	Calcutta	22.90	338	ex	x	17 53 37.9	
CAL				ex	x	17 55 42.3	
AGT	Agartala	23.26	346	⇑ix	x	17 49 59.0	
AGT				i x	x	17 50 33.0	
KMI	Kunming	24.30	12	P	P	17 50 04.9	+2.1
KMI				AP		17 50 11.8	
KMI				XP		17 50 14.5	
KMI				PP	PP	17 50 42.7	+4.6
KMI				PPP	PPP	17 50 52.0	+3.6
KMI				S	S	17 54 23.8	+6.8
KMI				XS		17 54 35.4	
KMI				SSS	SSS	17 55 40.0	+12
KMI				SCP		17 57 20.3	

KMI				AMB	AMB		
	comp=Z,640nm,1.3s,mb5.9						
KMI				AMB	AMB		
	comp=Z,3µm,4.1s						
KMI				LR	LR		
	comp=N,21µm,15.8s,MS5.8						
KMI				LR	LR		
	comp=E,8µm,14.2s,MS5.8						
KMI				LR	LR		
	comp=Z,23µm,15.0s,MS5.8						
HYB	**Hyderabad**	**24.47**	**312**	⇑*i*P	**P**	**17 50 05.5**	**+1.0**
	comp=Z,90nm,1.0s,mb5.2						
HYB				*e*S	**S**	**17 54 24.0**	**+4.1**
HYB				*e*SS	SS	17 55 20.0	+4.8
HYB				LR	LR	17 59 20.0	
	comp=Z,4.8nm,18.0s						
HYB	**Hyderabad**	**24.47**	**312**	⇑*e*P	**P**	**17 50 05.5**	**+1.0**
	comp=Z,90nm,1.0s,mb5.2						
HYB				*e*S	**S**	**17 54 24.0**	**+4.1**
HYB	**Hyderabad**	**24.47**	**312**	⇑*e*P	**P**	**17 50 05.5**	**+1.0**
HYB				*e*S	**S**	**17 54 24.0**	**+4.1**
HYB				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.2						
SHL	**Shillong**	**24.74**	**348**	*e*P	**P**	**17 50 07.0**	**0.0**
SHL				*e*S	**S**	**17 54 26.0**	**+1.7**
BOK	**Bokaro**	**25.00**	**335**	*e*P	**P**	**17 50 11.5**	**+2.0**
BOK				*e*S	**S**	**17 54 33.6**	**+4.8**
MNGI	**Mangalore**	**25.13**	**299**	*e*x	x	17 50 00.1	
MNGI				*e*S	**S**	**17 54 37.3**	**+6.2**
BLSP	**Bilaspur**	**25.48**	**326**	*e*P	**P**	**17 50 14.9**	**+0.9**
BLSP				AMb	AMB	17 50 18.2	
	comp=Z,201nm,1.2s,mb5.5						
BLSP				*e*S	**S**	**17 54 40.6**	**+3.8**
HKC	**Hong Kong**	**26.58**	**37**	⇑*i*P	**P**	**17 50 28.0**	**+3.8**
HKC				*i* S	S	17 55 28.0	+33
GYA	**Guiyang**	**26.63**	**19**	⇑*i*P	**P**	**17 50 23.4**	**-1.2**
GYA				S	**S**	**17 54 56.2**	**+0.5**
GYA				AMB	AMB		
	comp=Z,110nm,1.6s,mb5.1						
GYA				AMB	AMB		
	comp=Z,790nm,6.3s						
GYA				LR	LR		
	comp=N,5µm,18.9s,MS5.4						
GYA				LR	LR		
	comp=E,10µm,18.3s,MS5.4						
GYA				LR	LR		
	comp=Z,7µm,18.6s,MS5.2						
GZH	**Guangzhou**	**26.70**	**34**	P	**P**	**17 50 29.5**	**+4.2**
GZH				S	**S**	**17 55 06.7**	**+10**
GZH				LR	LR		
	comp=N,5µm,19.3s,MS5.2						
GZH				LR	LR		
	comp=E,4µm,17.4s,MS5.2						
GZH				LR	LR		
	comp=Z,18µm,13.7s,MS5.8						
TBP	**Tagbilaran**	**27.69**	**71**	*e*P	**P**	**17 50 32.7**	**-1.7**
AKL	**Akola**	**27.70**	**316**	*i* x	x	17 50 43.1	
KAD	**Karad**	**27.79**	**306**	*e*P	**P**	**17 50 36.0**	**+0.7**
KAD				AMb	AMB	17 50 48.2	
	comp=Z,38nm,1.2s,mb4.9						
KAD				*e*S	**S**	**17 55 16.5**	**+1.8**
LLP	**Lapu-Lapu**	**27.97**	**70**	⇑*e*P	**P**	**17 50 37.3**	**+0.3**
ALBI	**Allahabad**	**28.22**	**329**	*e*P	**P**	**17 50 37.5**	**-1.6**
BUKP	**Musuan**	**28.41**	**76**	*e*P	**P**	**17 50 41.4**	**+0.5**
PKI	**Pulchoki**	**28.55**	**337**	*e*P	**P**	**17 50 42.5**	**+0.4**
	comp=Z,326nm,1.0s,mb6.0						
GUN	**Gumba**	**28.68**	**339**	*e*P	**P**	**17 50 44.3**	**+1.1**
	comp=Z,388nm,0.8s,mb6.2						
DMN	**Daman**	**28.71**	**337**	*e*P	**P**	**17 50 44.1**	**+0.7**
	comp=Z,717nm,1.4s,mb6.2						
POO	**Poona**	**28.73**	**308**	*e*P	**P**	**17 50 45.3**	**+1.6**
POO				*e*S	**S**	**17 55 30.6**	**+0.9**
DAV	**Davao City (W)**	**28.76**	**78**	⇓*e*P	**P**	**17 50 45.7**	**+1.7**
MSLP	**Maasin**	**28.76**	**71**	*e*P	**P**	**17 50 44.5**	**+0.5**
KKN	**Kakani**	**28.80**	**337**	*e*P	**P**	**17 50 44.7**	**+0.4**
	comp=Z,630nm,1.2s,mb6.2						
LSA	**Lhasa**	**28.90**	**349**	P	**P**	**17 50 46.2**	**+1.1**
LSA				AP	pP	17 50 54.0	+0.5
LSA				S	**S**	**17 55 33.4**	**+1.1**
LSA				XS		17 55 55.1	
LSA				LR	LR		
	comp=N,2µm,26.4s,MS5.0						
LSA				LR	LR		
	comp=E,4µm,25.2s,MS5.0						
LSA				LR	LR		
	comp=Z,4µm,26.7s,MS4.8						
LSA	**Lhasa**	**28.90**	**349**	*e*P	**P**	**17 50 45.9**	**+0.8**
	comp=Z,84nm,0.9s,mb5.5						
LSA				LR	LR		
	comp=Z,4µm,20.0s,MS5.0						
LSA	**Lhasa**	**28.90**	**349**	*e*P	**P**	**17 50 45.9**	**+0.8**
LSA				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.5						
LSA				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.0						
BHPL	**Bhopal**	**29.17**	**320**	*e*P	**P**	**17 50 48.1**	**+0.4**
BHPL				AMb	AMB	17 51 06.3	
	comp=Z,79nm,1.2s,mb5.3						
BHPL				*e*S	**S**	**17 55 37.7**	**+1.0**
GKN	**Gorkha**	**29.24**	**337**	*e*P	**P**	**17 50 48.6**	**+0.3**
	comp=Z,230nm,0.8s,mb6.0						
MATI	**Mati**	**29.40**	**78**	*e*P	**P**	**17 50 50.1**	**+0.3**
KOLN	**Koldanda**	**29.46**	**335**	*e*P	**P**	**17 50 51.0**	**+0.7**
	comp=Z,789nm,1.4s,mb6.2						
BOM	**Bombay**	**29.75**	**308**	*e*x	x	17 55 40.7	
CD2	**Chengdu**	**30.12**	**11**	*e*P	**P**	**17 50 55.2**	**-0.9**
CD2				AP	pP	17 51 04.8	+0.3
CD2				XP	sP	17 51 09.5	+1.2
CD2				PP	PP	17 51 53.6	-1.1
CD2				S	**S**	**17 55 46.6**	**-5.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.3s,mb5.0						
CD2				AMB	AMB		
	comp=Z,580nm,3.5s						
CD2				LR	LR		
	comp=E,9µm,14.8s						
CD2				LR	LR		
	comp=Z,10µm,14.8s,MS5.6						
ENH	**Enshi**	**31.09**	**21**	*e*P	**P**	**17 51 03.7**	**-0.9**
	comp=Z,166nm,0.9s,mb5.9						
MBWA	**Marble Bar**	**31.25**	**137**	*e*P	**P**	**17 51 06.0**	**-0.1**
	comp=Z,54nm,1.3s,mb5.2						
QZH	**Quanzhou**	**31.26**	**39**	⇑*i*P	**P**	**17 51 06.4**	**+0.3**
QZH				S	**S**	**17 56 07.0**	**-2.6**
QZH				AMB	AMB		
	comp=Z,440nm,1.4s,mb6.1						
QZH				AMB	AMB		
	comp=Z,2µm,4.2s						
QZH				LR	LR		
	comp=N,10µm,12.3s,MS5.8						
QZH				LR	LR		
	comp=E,8µm,12.2s,MS5.8						
QZH				LR	LR		
	comp=Z,18µm,14.4s,MS5.9						
PTH	**Pithoragarh**	**32.52**	**332**	*e*P	**P**	**17 51 17.9**	**+0.8**
PTH				*e*x	x	17 56 34.2	
NACB	**Ninganchiao**	**32.73**	**44**	*e*P	**P**	**17 51 18.5**	**-0.5**
YHNB	**Yeheng**	**32.90**	**43**	*e*P	**P**	**17 51 20.5**	**0.0**
TATO	**Taipei**	**33.18**	**43**	*e*P	**P**	**17 51 23.3**	**+0.4**
	comp=Z,86nm,1.3s,mb5.5						
WHN	**Wuhan**	**33.31**	**27**	⇑P	**P**	**17 51 24.4**	**+0.4**
WHN				PP	PP	17 52 40.0	+4.1
WHN				S	**S**	**17 56 48.0**	**+6.4**
WHN				AMB	AMB		
	comp=Z,140nm,1.2s,mb5.8						
WHN				LR	LR		
	comp=Z,15µm,14.2s,MS5.8						
NDI	**New Delhi**	**33.36**	**327**	*e*P	**P**	**17 51 23.0**	**-1.5**
FITZ	**Fitzroy Crossi**	**33.86**	**126**	⇑*i*P	**P**	**17 51 27.5**	**-1.4**
	comp=Z,34nm,0.7s,mb5.4						
FITZ				*e*SCP		17 57 52.6	
FITZ	**Fitzroy Crossi**	**33.86**	**126**	P	**P**	**17 51 27.5**	**-1.4**
	comp=Z,43nm,0.7s,mb5.5,baz=302,slow=6.3,SNR=51						
FITZ				ScP		17 57 51.1	
	comp=Z,13nm,0.9s,baz=13,slow=2.9,SNR=4.6						
XAN	**Xi'an**	**34.38**	**17**	P	**P**	**17 51 31.9**	**-1.3**
XAN				PP	PP	17 52 44.5	-4.5
XAN				S	**S**	**17 56 54.5**	**-3.6**
XAN				AMB	AMB		
	comp=Z,160nm,1.4s,mb5.8						
XAN				AMB	AMB		
	comp=Z,650nm,12.4s						
XAN				LR	LR		
	comp=N,4µm,16.7s,MS5.4						
XAN				LR	LR		
	comp=E,5µm,15.7s,MS5.4						
XAN				LR	LR		
	comp=Z,11µm,15.6s,MS5.7						
LZH	**Lanzhou**	**35.19**	**9**	⇑P	**P**	**17 51 40.3**	**+0.2**
LZH				AP	pP	17 51 46.1	-2.5
LZH				PP	PP	17 52 56.5	-2.8
LZH				S	**S**	**17 57 06.3**	**-4.3**
LZH				SCS	ScS	18 01 58.0	+2.0
LZH				AMB	AMB		
	comp=Z,150nm,1.1s,mb5.8						
LZH				AMB	AMB		
	comp=Z,1µm,6.5s						
LZH				LR	LR		
	comp=E,10µm,15.8s						
LZH				LR	LR		
	comp=Z,14µm,17.9s,MS5.8						
SMLA	**Simla**	**35.31**	**329**	*e*P	**P**	**17 51 39.6**	**-1.7**
SMLA				*e*S	**S**	**17 57 13.0**	**+0.3**
BHK	**Bhakra**	**35.93**	**329**	*e*P	**P**	**17 51 47.8**	**+1.3**
NJ2	**Nanjing**	**36.76**	**31**	*e*P	**P**	**17 51 53.1**	**-0.3**
NJ2				AP	pP	17 52 03.2	+1.2
NJ2				XP	sP	17 52 07.1	+1.5
NJ2				S	**S**	**17 57 35.0**	**+0.2**
NJ2				XS		17 57 50.0	
NJ2				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,1µm,5.4s						
NJ2				LR	LR		
	comp=N,1µm,16.0s,MS4.9						
NJ2				LR	LR		
	comp=E,870nm,13.0s,MS4.9						
NJ2				LR	LR		
	comp=Z,2µm,12.0s,MS5.2						
DLH	**Dalhousie**	**37.06**	**329**	*e*P	**P**	**17 51 55.0**	**-0.9**
THN	**Thein Dam**	**37.10**	**329**	*e*P	**P**	**17 51 55.4**	**-0.9**
THN				*e*x	x	17 56 55.6	
SSE	**Sheshan**	**37.30**	**35**	P	**P**	**17 51 58.6**	**+0.6**
SSE				XP	sP	17 52 11.4	+1.2
SSE				PP	PP	17 53 25.1	-0.7
SSE				PCP	PcP	17 54 14.8	-2.6
SSE				S	**S**	**17 57 47.6**	**+4.4**
SSE				XS		17 58 03.2	
SSE				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.4						
SSE				AMB	AMB		
	comp=Z,560nm,5.2s						
SSE				LR	LR		
	comp=N,5µm,16.1s,MS5.5						
SSE				LR	LR		
	comp=E,5µm,16.1s,MS5.5						
SSE				LR	LR		
	comp=Z,7µm,15.0s,MS5.6						
KAKA	**Kakadu**	**37.51**	**113**	⇑*i*P	**P**	**17 52 16.2**	**+16**
	comp=Z,30nm,0.9s,mb5.0						
MUN	**Mundaring**	**37.58**	**153**	*e*P	**P**	**17 52 03.3**	**+3.0**
GTA	**Gaotai**	**38.05**	**3**	⇑*i*P	**P**	**17 52 04.6**	**+0.4**
GTA				AP	pP	17 52 11.8	-1.0
GTA				XP	sP	17 52 15.0	-1.4
GTA				PP	PP	17 53 34.7	+0.1
GTA				PCP	PcP	17 54 20.4	+0.7
GTA				S	**S**	**17 57 54.3**	**-0.2**
GTA				SCP		17 58 06.5	
GTA				SS	SS	18 00 30.3	-2.1
GTA				SCS	ScS	18 02 12.2	+0.3
GTA				AMB	AMB		
	comp=Z,130nm,0.8s,mb5.7						
GTA				AMB	AMB		
	comp=Z,1µm,6.1s						
GTA				LR	LR		
	comp=N,5µm,17.1s,MS5.5						
GTA				LR	LR		
	comp=E,3µm,14.8s,MS5.5						
GTA				LR	LR		
	comp=Z,6µm,18.6s,MS5.4						
NWAO	**Narrogin (SRO)**	**38.84**	**153**	P	**P**	**17 52 10.2**	**-0.7**
	comp=Z,9.0nm,0.8s,mb4.5,baz=343,slow=12,SNR=3.0						
TIY	**Taiyuan**	**38.86**	**19**	*i* P	**P**	**17 52 10.0**	**-1.0**
TIY				LR	LR		
	comp=N,15µm,14.0s						
JOW	**Kunigami**	**39.12**	**47**	P	**P**	**17 52 14.4**	**+1.1**
	comp=N,66nm,0.9s,mb5.4,baz=255,slow=8.0,SNR=25						
TIA	**Tai'an**	**39.33**	**26**	⇑P	**P**	**17 52 15.0**	**0.0**
TIA				S	**S**	**17 58 13.5**	**-0.4**
TIA				AMB	AMB		
	comp=Z,100nm,1.6s,mb5.3						
TIA				LR	LR		
	comp=N,5µm,13.0s,MS5.7						
TIA				LR	LR		
	comp=E,5µm,13.0s,MS5.7						
BTO	**Baotou**	**40.83**	**15**	P	**P**	**17 52 28.1**	**+0.8**
BTO				S	**S**	**17 58 35.0**	**-1.3**
BTO				AMB	AMB		
	comp=Z,70nm,2.1s,mb4.9						
HHC	**Hu-ho-hao-te**	**41.48**	**16**	⇑*i*P	**P**	**17 52 34.2**	**+1.7**
HHC				AP	pP	17 52 43.7	+2.6
HHC				XP	sP	17 52 47.4	+2.7
HHC				PP	PP	17 54 14.0	+2.6
HHC				PCP	PcP	17 54 29.9	-0.7
HHC				SCP		17 58 16.8	
HHC				PCS		17 58 20.6	
HHC				S	**S**	**17 58 49.6**	**+3.8**
HHC				XS		17 59 05.3	
HHC				SS	SS	18 01 50.0	+4.2
HHC				SCS	ScS	18 02 32.3	+0.4
HHC				AMB	AMB		
	comp=Z,80nm,2.1s,mb5.0						
HHC				AMB	AMB		
	comp=Z,1µm,6.1s						
HHC				LR	LR		
	comp=N,8µm,15.9s,MS5.8						
HHC				LR	LR		
	comp=E,7µm,16.7s,MS5.8						
HHC				LR	LR		
	comp=Z,8µm,17.6s,MS5.6						
WRA	**Warramunga Arr**	**41.96**	**122**	P	**P**	**17 52 36.1**	**-0.7**
	comp=Z,28nm,0.6s,mb5.0,baz=300,slow=9.1,SNR=201						
WRA				ScP		17 58 21.4	
	comp=Z,2.8nm,1.2s,baz=306,slow=4.5,SNR=7.0						
WRA				S	**S**	**17 58 49.7**	**-3.5**
	comp=Z,2.2nm,0.9s,baz=292,slow=16,SNR=7.2						
WRA	**Warramunga Arr**	**41.96**	**122**	P	**P**	**17 52 36.1**	**-0.7**
WRA				S	**S**	**17 58 49.7**	**-3.5**
WRAB	**Tennant Creek**	**41.96**	**122**	*e*P	**P**	**17 52 36.3**	**-0.5**
	comp=Z,104nm,1.0s,mb5.4						
WRAB				LR	LR		
	comp=Z,816nm,19.0s,MS4.6						
WRAB	**Tennant Creek**	**41.96**	**122**	*e*P	**P**	**17 52 36.3**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,104nm,1.0s,mb5.4						
WRAB				MLR	MLR		
	comp=Z,816nm,19.0s,MS4.6						
WB2	**Warramunga Arr**	**41.97**	**122**	*e*P	**P**	**17 52 36.2**	**-0.7**
WB2				*e*S	**S**	**17 58 49.2**	**-4.2**
KSH	**Kashi**	**42.78**	**336**	*e*P	**P**	**17 52 43.2**	**-0.1**
KSH				AMB	AMB		
	comp=Z,1µm,3.9s						
KSH				LR	LR		
	comp=N,3µm,13.2s,MS5.5						
KSH				LR	LR		
	comp=E,3µm,13.8s,MS5.5						
FORT	**Forrest**	**43.23**	**140**	*e*P	**P**	**17 52 47.0**	**-0.1**
	comp=E,82nm,0.7s,mb5.6						
WMQ	**Urumqi**	**43.25**	**350**	⇑*i*P	**P**	**17 52 48.2**	**+1.2**
WMQ				AP	pP	17 52 58.2	+2.6
WMQ				XP	sP	17 53 02.7	+3.5
WMQ				PP	PP	17 54 30.8	+1.2
WMQ				PCP	PcP	17 54 38.0	+1.6
WMQ				SCP		17 58 25.2	
WMQ				PCS		17 58 29.2	
WMQ				S	**S**	**17 59 12.4**	**+0.6**
WMQ				XS		17 59 28.7	
WMQ				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,1µm,4.5s						
WMQ				LR	LR		
	comp=N,2µm,26.7s,MS5.2						
WMQ				LR	LR		
	comp=E,3µm,22.0s,MS5.2						
WMQ				LR	LR		
	comp=Z,2µm,20.2s,MS4.9						
ASPA	**Alice Springs**	**43.32**	**127**	⇑*i*P	**P**	**17 52 47.9**	**0.0**
ASPA				*e*S	**S**	**17 59 11.3**	**-1.9**
DL2	**Dalian**	**43.58**	**28**	⇑*i*P	**P**	**17 52 50.5**	**+0.7**
DL2				AP	pP	17 52 56.9	-1.5
DL2				XP	sP	17 53 01.0	-0.9
DL2				S	**S**	**17 59 21.5**	**+4.8**
DL2				XS		17 59 32.1	
DL2				AMB	AMB		
	comp=Z,120nm,0.8s,mb5.7						
DL2				AMB	AMB		
	comp=Z,620nm,4.5s						
DL2				LR	LR		
	comp=N,1µm,15.1s,MS5.1						
DL2				LR	LR		
	comp=E,1µm,15.3s,MS5.1						
DL2				LR	LR		
	comp=Z,2µm,14.9s,MS5.1						
JNU	**Nakatsue**	**44.69**	**41**	LR	LR	18 14 09.2	
	comp=Z,3µm,18.1s,MS5.2,baz=236,slow=39						
ULHL	**Ulahol**	**44.99**	**338**	P	**P**	**17 53 02.5**	**+1.4**
	SNR=5.9						
INCN	**Inchon**	**45.04**	**33**	*e*P	**P**	**17 53 00.7**	**-0.9**
	comp=Z,328nm,1.6s,mb5.9						
KZA	**Kyzart**	**45.23**	**337**	P	**P**	**17 53 04.1**	**+1.0**
	SNR=32						
AAA	**Alma-Ata**	**45.63**	**339**	*i* P	**P**	**17 53 07.1**	**+1.0**
AAA				*i* S	**S**	**17 59 48.8**	**+2.6**
AAA				pmax	pmax		
	comp=Z,2µm,3.4s						
AAA				smax			
	comp=E,2µm,6.7s						
AAA				MLR	MLR		
	comp=Z,3µm,18.2s,MS5.2						
UCH	**Uchtor**	**45.65**	**336**	P	**P**	**17 53 07.6**	**+1.2**
	SNR=82						
KS15	**Wonju Array Si**	**45.71**	**34**	*e*P	**P**	**17 53 07.4**	**+0.5**
TKM2	**Tokmak 2**	**45.82**	**338**	P	**P**	**17 53 08.8**	**+1.1**
	SNR=42						
KBK	**Karagaybulak**	**45.84**	**337**	P	**P**	**17 53 09.4**	**+1.5**
	SNR=65						
AML	**Almayashu**	**45.91**	**335**	P	**P**	**17 53 09.6**	**+1.2**
	SNR=80						
AAK	**Ala-Archa**	**46.00**	**337**	P	**P**	**17 53 10.4**	**+1.2**
	SNR=20						
AAK	**Ala-Archa**	**46.00**	**337**	*e*P	**P**	**17 53 09.1**	**0.0**
	comp=Z,132nm,1.4s,mb5.7						
AAK	**Ala-Archa**	**46.00**	**337**	P	**P**	**17 53 10.2**	**+1.1**
AAK				pmax	pmax		
	comp=Z,279nm,1.7s,mb5.9						
FRU	**Bishkek**	**46.12**	**337**	*i* P	**P**	**17 53 11.0**	**+0.9**
FRU				*i*		17 53 24.0	
FRU				*e*		18 00 06.0	
FRU				pmax	pmax		
	comp=Z,140nm,2.0s,mb5.5						
FRU				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.3						
CHMS	**Chumysh**	**46.21**	**337**	P	**P**	**17 53 11.5**	**+0.7**
	SNR=23						
EKS2	**Erkin-Say**	**46.31**	**336**	P	**P**	**17 53 12.7**	**+1.1**
	SNR=78						
USP	**Ospenovka**	**46.53**	**337**	P	**P**	**17 53 14.2**	**+0.9**
	SNR=106						
SNY	**Shenyang**	**46.80**	**27**	⇑P	**P**	**17 53 15.4**	**-0.1**
SNY				AP	pP	17 53 23.0	-1.1
SNY				XP	sP	17 53 25.4	-2.2
SNY				PP	PP	17 55 05.9	+0.7
SNY				S	**S**	**18 00 04.4**	**+1.4**
SNY				AMB	AMB		
	comp=Z,110nm,1.3s,mb5.6						
SNY				LR	LR		
	comp=N,3µm,15.6s,MS5.5						
SNY				LR	LR		
	comp=E,3µm,14.9s,MS5.5						
SNY				LR	LR		
	comp=Z,3µm,16.2s,MS5.4						
SONM	**Songino Array**	**47.06**	**8**	P	**P**	**17 53 18.4**	**+0.9**
	comp=Z,51nm,0.9s,mb5.5,baz=193,slow=8.7,SNR=85						
SONM				PcP	PcP	17 54 49.5	0.0
	comp=Z,16nm,0.8s,baz=183,slow=3.4,SNR=5.1						
SONM				LR	LR	18 15 52.4	
	comp=Z,10µm,18.5s,MS5.8,baz=84,slow=40						
MKAR	**Makanchi Array**	**47.22**	**346**	P	**P**	**17 53 18.7**	**0.0**
	comp=Z,46nm,0.7s,mb5.5,baz=159,slow=7.8,SNR=418						
MKAR				LR	LR	18 17 20.1	
	comp=Z,2µm,21.2s,MS5.0,baz=143,slow=41						
MKAR	**Makanchi Array**	**47.22**	**346**	*i* P	**P**	**17 53 19.0**	**+0.3**
MKAR				pmax	pmax		
	comp=Z,117nm,1.0s						
KKAR	**Karatay Array**	**48.07**	**334**	*i* P	**P**	**17 53 25.2**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,140nm,1.3s,mb5.8						
CN2	**Changchun**	**49.20**	**27**	⇑P	**P**	**17 53 33.6**	**-0.6**
CN2				PP	PP	17 55 28.3	+0.1
CN2				*e*S	**S**	**18 00 38.5**	**+1.7**
CN2				AMB	AMB		
	comp=Z,160nm,0.9s,mb6.0						
CN2				AMB	AMB		
	comp=Z,1µm,3.0s						
CN2				LR	LR		
	comp=N,6µm,18.0s,MS5.7						
CN2				LR	LR		
	comp=E,3µm,18.0s,MS5.7						
CN2				LR	LR		
	comp=Z,7µm,15.0s,MS5.8						
ZAK	**Zakamensk**	**49.21**	**5**	⇑*i*P	**P**	**17 53 34.6**	**+0.5**
ZAK				*e*		17 54 50.1	
ZAK				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
MOY	**Mondy**	**50.33**	**3**	*e*P	**P**	**17 53 43.8**	**+1.1**
MOY				pmax	pmax		
	comp=Z,122nm,2.1s,mb5.6						
PMG	**Port Moresby**	**50.75**	**103**	*e*P	**P**	**17 53 46.2**	**-0.1**
	comp=Z,28nm,0.8s,mb5.2						
PMG	**Port Moresby**	**50.75**	**103**	⇑*e*P	**P**	**17 53 46.7**	**+0.4**
IRK	**Irkutsk**	**51.15**	**5**	*e*P	**P**	**17 53 47.5**	**-1.4**
IRK				*e*		17 55 48.4	
IRK				pmax	pmax		
	comp=Z,160nm,1.7s,mb5.7						
HIA	**Hailar**	**51.55**	**19**	*e*P	**P**	**17 53 51.9**	**-0.1**
	comp=Z,87nm,0.9s,mb5.7						
HIA				LR	LR		
	comp=Z,5µm,22.0s,MS5.5						
HIA	**Hailar**	**51.55**	**19**	*e*P	**P**	**17 53 51.9**	**-0.1**
HIA				pmax	pmax		
	comp=Z,87nm,0.9s						
HIA				MLR	MLR		
	comp=Z,5µm,22.0s						
MAJO	**Matsushiro**	**51.57**	**42**	*e*P	**P**	**17 53 51.3**	**-1.0**
	comp=Z,174nm,2.0s,mb5.6						
MAJO				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
MAJO	**Matsushiro**	**51.57**	**42**	*e*P	**P**	**17 53 51.3**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,174nm,2.0s,mb5.6						
MAJO				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.1						
MAT	**Matsushiro**	**51.57**	**42**	P	**P**	**17 53 50.6**	**-1.7**
MAT				S	**S**	**18 01 15.0**	**+5.4**
MAT	**Matsushiro**	**51.57**	**42**	*e*P	**P**	**17 53 51.0**	**-1.3**
	comp=Z,467nm,2.9s,mb5.9						
MAT				*e*S	**S**	**18 01 16.0**	**+6.4**
MAT				LR	LR		
	comp=Z,2µm,21.0s,MS5.1						
MAT	**Matsushiro**	**51.57**	**42**	*e*P	**P**	**17 53 51.0**	**-1.3**
MAT				*e*S	**S**	**18 01 16.0**	**+6.4**
MAT				pmax	pmax		
	comp=Z,467nm,2.9s,mb5.9						
MAT				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.1						
MJAR	**Matsushiro Arr**	**51.57**	**42**	P	**P**	**17 53 51.7**	**-0.6**
	comp=Z,8.9nm,0.7s,mb4.8,baz=217,slow=6.1,SNR=20						
MJAR				LR	LR	18 15 58.9	
	comp=Z,2µm,20.9s,MS5.0,baz=225,slow=36						
HASS	**Wahat al Ahsa'**	**51.71**	**301**	P	**P**	**17 53 53.3**	**-0.2**
MDJ	**Mudanjiang**	**51.76**	**29**	P	**P**	**17 53 54.2**	**+0.5**
MDJ				AP	pP	17 54 06.2	+3.8
MDJ				XP	sP	17 54 10.8	+5.0
MDJ				PP	PP	17 55 52.1	+0.1
MDJ				PCS		17 59 05.2	
MDJ				S	**S**	**18 01 15.2**	**+3.0**
MDJ				XS		18 01 30.3	
MDJ				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,710nm,3.8s						
MDJ				LR	LR		
	comp=N,3µm,16.7s,MS5.5						

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MDJ                                LR       LR
       comp=E,2µm,18.0s,MS5.5
MDJ                                LR       LR
       comp=Z,6µm,16.0s,MS5.7
MDJ    Mudanjiang       51.76  29 eP       P          17 53 54.0 +0.4
       comp=Z,153nm,1.4s,mb5.7
MDJ                                LR       LR
       comp=Z,3µm,20.0s,MS5.3
KURK   Kurchatov        51.78 345 eP       P          17 53 53.3 -0.3
       comp=Z,101nm,1.0s,mb5.7
KURK   Kurchatov        51.78 345 eP       P          17 53 53.3 -0.3
KURK                               pmax     pmax
       comp=Z,101nm,1.0s,mb5.7
VLA    Vladivostok      51.86  32 i P      P          17 53 54.5 +0.1
VLA    Vladivostok      51.86  32d iP      P          17 53 54.9 +0.5
VLA                               i        pP         17 54 02.1 -1.1
VLA                               e                   17 55 56.1
VLA                               eS       S          18 01 19.3 +5.7
VLA                               i                   18 01 30.8
VLA                               e                   18 03 42.1
VLA                                pmax     pmax
       comp=Z,390nm,1.7s,mb6.1
VLA                                MLR      MLR
       comp=Z,4µm,12.7s,MS5.7
CIT    Chita            52.40  13 eP       P          17 53 59.2 +0.9
CIT                                pmax     pmax
       comp=Z,98nm,1.8s,mb5.4
CTA    Charters Tower   52.41 117 eP       P          17 53 59.1 +0.2
       comp=Z,13nm,0.9s,mb4.9
CTA    Charters Tower   52.41 117  LR       LR         18 20 33.8
       comp=Z,3µm,19.1s,MS5.4,baz=284,slow=41
CTAO   Charters Tower   52.41 117 eP       P          17 53 58.5 -0.3
       comp=Z,132nm,1.6s,mb5.6
CTAO                               LR       LR
       comp=Z,2µm,21.0s,MS5.2
CTAO   Charters Tower   52.41 117 eP       P          17 53 58.6 -0.3
CTAO                               pmax     pmax
       comp=Z,132nm,1.6s,mb5.6
CTAO                               MLR      MLR
       comp=Z,2µm,21.0s,MS5.2
STKA   Stephens Creek   53.30 132  P       P          17 54 05.0 -0.3
       comp=Z,20nm,0.6s,mb5.2,baz=306,slow=7.3,SNR=58
STKA                               LR       LR         18 19 09.8
       comp=Z,4µm,21.7s,MS5.5,baz=292,slow=39
STKA   Stephens Creek   53.30 132 eP       P          17 54 05.4 +0.1
NVS    Novosibirsk      54.65 350⇑iP       P          17 54 12.7 -2.2
NVS                               e                   17 54 31.7
NVS                               eS       S          18 01 50.9 -0.2
NVS                                pmax     pmax
       comp=Z,111nm,1.0s,mb5.8
NVS                                pmax     pmax
       comp=N,120nm,1.6s
NVS                                pmax     pmax
       comp=E,46nm,1.2s
NVS                                smax
       comp=E,59nm,1.7s
NVS                                smax
       comp=N,57nm,2.0s
RDF    Al-Radifah       54.80 305 eP       P          17 54 15.3 -1.1
RDF                                AMb      AMB        17 54 16.8
       comp=Z,99nm,0.9s,mb5.9
KAMS   Al Khamasin      54.86 294  P       P          17 54 15.4 -1.5
UMR    Umm Al-Rimmam    54.89 306 eP       P          17 54 15.8 -1.3
UMR                                AMb      AMB        17 54 17.4
       comp=Z,54nm,0.9s,mb5.6
MZLS   Mizel            55.24 299  P       P          17 54 19.4 -0.3
DJNS   Zahran al Janu   55.27 291  P       P          17 54 20.5 +0.6
MIB    Mutribah         55.29 306 eP       P          17 54 19.1 -0.8
MIB                                AMb      AMB        17 54 20.4
       comp=Z,104nm,0.8s,mb5.9
VOSK   Vostochnaya      55.80 341  P       P          17 54 22.1 -1.1
VOSK                               pmax     pmax
       comp=Z,41nm,1.2s,mb5.3
KLR    Kul'dur          56.16  27d iP      P          17 54 25.5 -0.3
KLR                               eS       S          18 02 15.0 +3.6
KLR                                pmax     pmax
       comp=N,1µm,6.0s
KLR                                pmax     pmax
       comp=E,600nm,6.0s
KLR                                pmax     pmax
       comp=Z,1µm,6.0s
KLR                                pmax     pmax
       comp=E,140nm,2.0s
KLR                                pmax     pmax
       comp=Z,230nm,2.0s,mb5.9
BVA0   Borovoye Array   56.24 341 i P      P          17 54 25.2 -1.2
BVA0                               pmax     pmax
       comp=Z,9.0nm,1.0s,mb4.8
BRVK   Borovoye         56.31 341⇑eP       P          17 54 25.7 -1.2
CHKZ   Chkalovo         56.72 341 eP       P          17 54 28.8 -1.1
       comp=Z,113nm,1.0s,mb5.8
CHKZ   Chkalovo         56.72 341 eP       P          17 54 28.8 -1.0
CHKZ                               pmax     pmax
       comp=Z,113nm,1.0s,mb5.8
AFFS   'Afif            57.16 298  P       P          17 54 33.6 +0.2
BLJS   Baljurashi       57.51 293  P       P          17 54 37.3 +1.5
AB31   Akbulak array    57.53 332 i P      P          17 54 34.4 -1.2
AB31                               pmax     pmax
       comp=Z,83nm,0.9s,mb5.8
BOD    Bodaibo          57.94  10⇑iP       P          17 54 38.6 +0.2
BOD                                pmax     pmax
       comp=Z,89nm,1.1s,mb5.7
ASAJ   Asahikawa        58.55  37  P       P          17 54 41.8 -1.0
       comp=Z,11nm,0.7s,mb5.0,baz=250,slow=4.6,SNR=2.9
ASAJ                               LR       LR         18 18 57.8
       comp=Z,1µm,21.7s,MS5.0,baz=269,slow=35
HILS   Ha'il            59.13 301  P       P          17 54 47.6 +0.5
CLNS   Chul'man         59.66  17 eP       P          17 54 49.6 -0.7
CLNS                              e                   17 55 36.5
CLNS                              e                   17 56 56.3
CLNS                              eS       S          18 02 54.9 -2.2
CLNS                               pmax     pmax
       comp=Z,56nm,0.7s,mb5.7
CLNS                               pmax     pmax
       comp=N,43nm,1.1s
CLNS                               pmax     pmax
       comp=E,19nm,0.6s
CLNS                               pmax     pmax
       comp=Z,12nm,1.0s,mb4.9
CLNS                               pmax     pmax
       comp=N,11nm,0.9s
CLNS                               pmax     pmax
       comp=E,13nm,0.9s
CLNS                               smax
       comp=N,230nm,12.3s
CLNS                               smax
       comp=Z,300nm,11.7s
CLNS                               smax
       comp=E,147nm,10.2s
CLNS                               MLR      MLR
       comp=Z,7µm,17.0s,MS5.8
CLNS                               MLR      MLR
       comp=N,2µm,20.0s,MS5.7
CLNS                               MLR      MLR
       comp=E,4µm,16.0s,MS5.7
YSS    Yuzh-Sakhalins   60.24  34 eP       P          17 54 54.2 -0.2
       comp=E,170nm,1.2s,mb6.0
YSS    Yuzh-Sakhalins   60.24  34α iP      P          17 54 54.0 -0.4
YSS                               e*SP     sP         17 55 11.0 +4.4
YSS                               e                   17 57 09.0
YSS                               eS       S          18 03 08.0 +3.3
YSS                               ePS      PS         18 03 22.0 -1.9
YSS                                pmax     pmax
       comp=N,50nm,1.2s
YSS                                pmax     pmax
       comp=Z,140nm,1.2s,mb5.9
YSS                                pmax     pmax
       comp=E,110nm,1.7s
YSS                                pmax     pmax
       comp=Z,700nm,8.0s
YSS                                MLR      MLR
       comp=N,2µm,15.0s,MS5.5
YSS                                MLR      MLR
       comp=E,2µm,15.0s,MS5.5
YSS                                MLR      MLR
       comp=Z,3µm,15.0s,MS5.6
MSL    Mosul            60.99 311 ex       x          17 55 04.0
GNI    Garni            61.34 316  P       P          17 55 01.5 -0.6
       comp=Z,13nm,0.9s,mb5.0,baz=339,slow=5.2,SNR=5.9
GNI    Garni            61.34 316 eP       P          17 55 01.1 -1.0
       comp=Z,58nm,1.1s,mb5.6
GNI    Garni            61.34 316 eP       P          17 55 01.4 -0.6
GNI                                pmax     pmax
       comp=Z,22nm,1.0s
ORR    Orenburg         61.58 331c iP      P          17 55 01.9 -1.6
ORR                                pmax     pmax
       comp=Z,50nm,1.5s,mb5.4
TI2    Plekhanov        62.02 318 eP       P          17 55 05.6 -1.0
TBLG   Delisi           62.03 318  P       P          17 55 05.9 -0.8
ZEI    Tsey             63.04 318 eP       P          17 55 10.5 -2.8
ZEI                               i *PP    pP         17 55 19.7 -2.6
ZEI                               i                   17 55 47.1
ZEI                                pmax     pmax
       comp=Z,24nm,0.8s,mb5.4
ARU    Arti             63.19 337 eP       P          17 55 12.3 -1.7
       comp=Z,40nm,1.0s,mb5.5
ARU    Arti             63.19 337⇑iP       P          17 55 12.7 -1.4
ARU                               e                   17 55 49.4
ARU                               e                   17 57 31.3
ARU                               ePPP     PPP        17 58 59.8 -6.0
ARU                               eS       S          18 03 44.1 +2.2
ARU                               eSS      SS         18 07 45.2 -5.0
ARU                                pmax     pmax
       comp=Z,43nm,1.1s,mb5.5
ARU                                MLR      MLR
       comp=Z,2µm,17.0s,MS5.3
ARU                                MLR      MLR
       comp=N,400nm,16.0s,MS5.3
ARU                                MLR      MLR
       comp=E,2µm,17.0s,MS5.3
HNR    Honiara          63.25 101 eP       P          17 55 14.9 -0.2
       comp=E,89nm,0.7s,mb6.0
HNR    Honiara          63.25 101 eP       P          17 55 14.9 -0.2
HNR                                pmax     pmax
       comp=Z,89nm,0.7s,mb6.0
ONI    Oni              63.26 318  P       P          17 55 15.0 +0.2
TBKS   Tabuk            63.84 301  P       P          17 55 19.7 +0.8
KIV    Kislovodsk       64.35 319⇑iP       P          17 55 20.9 -1.1
GOF    Gofitskoye       64.60 320⇓iP       P          17 55 28.5 +4.9
GOF                                pmax     pmax
       comp=Z,37nm,1.5s,mb5.2
BDAS   Al Bad'          65.13 301  P       P          17 55 27.1 -0.1
JMOS   Jabal al Moall   65.28 302  P       P          17 55 28.2 -0.1
YAK    Yakutsk          65.34  16 eP       P          17 55 27.1 -0.9
       comp=Z,182nm,0.9s,mb6.1
YAK    Yakutsk          65.34  16c iP      P          17 55 27.3 -0.7
YAK                               e*PP     pP         17 55 33.8 -3.2
YAK                               e                   17 55 44.3
YAK                               e                   17 57 50.1
YAK                               eS       S          18 04 09.7 +1.3
YAK                               e*SS                18 04 20.7
YAK                               e                   18 05 16.6
YAK                               eSS      SS         18 08 26.1 +2.8
YAK                                pmax     pmax
       comp=Z,105nm,1.0s,mb5.8
YAK                                pmax     pmax
       comp=N,43nm,1.2s
YAK                                pmax     pmax
       comp=E,32nm,1.3s
YAK                                pmax     pmax
       comp=Z,5.0nm,0.9s,mb4.5
YAK                                pmax     pmax
       comp=N,5.0nm,1.2s
YAK                                pmax     pmax
       comp=E,4.0nm,1.3s
YAK                                smax
       comp=N,11nm,4.5s
YAK                                smax
       comp=E,2.0nm,1.2s
YAK                                MLR      MLR
       comp=N,2µm,14.0s,MS5.6
YAK                                MLR      MLR
       comp=E,2µm,14.0s,MS5.6
YAK                                MLR      MLR
       comp=Z,3µm,14.0s,MS5.7
ALWS   Ilw as Safayha   65.35 302  P       P          17 55 28.1 -0.6
HAQS   Haql             65.41 301  P       P          17 55 28.6 -0.4
SOC    Sochi            66.17 318 eP       P          17 55 31.4 -2.2
SOC                               e                   17 55 38.2
SOC                               e                   17 55 59.6
SOC                               eS       S          18 04 08.6  -10
SOC                               e*SS                18 04 54.0
SOC                                pmax     pmax
       comp=Z,37nm,1.0s,mb5.4
SOC                                pmax     pmax
       comp=Z,232nm,3.5s
MIR    Mirnyy           67.72 182 eP       P          17 55 50.0 +6.9
MIR                                pmax     pmax
       comp=Z,29nm,1.6s,mb5.1
CASY   Casey            68.04 174 eP       PcP        17 56 12.1 +1.0
CSS    Prodhromos       68.14 307 eP       P          17 55 45.0 -1.2
       comp=Z,78nm,1.3s,mb5.6
ANN    Anapa            68.14 318 eP       P          17 55 39.4 -6.7
ANN                                pmax     pmax
       comp=Z,456nm,11.6s
ANN                                MLR      MLR
       comp=Z,709nm,19.0s,MS4.9
VRHR   Novokhopersk     68.16 326 eP       P          17 55 44.0 -2.1
VRHR                               pmax     pmax
       comp=Z,60nm,0.9s,mb5.6
VRHR                               pmax     pmax
       comp=N,20nm,0.8s
VRHR                               pmax     pmax
       comp=E,30nm,0.7s
BR131  Keskin Array S   69.17 312 eP       P          17 55 51.0 -1.6
       comp=E,14nm,0.9s,mb4.9
BR131                              LR       LR
       comp=Z,451nm,19.0s,MS4.7
BRTR   Keskin Array B   69.17 312  P       P          17 55 51.0 -1.6
       comp=Z,9.8nm,0.8s,mb4.8,baz=130,slow=7.1,SNR=60
PECR   Pechory          69.43 332 eP       P          17 55 52.3 -1.5
PECR                               pmax     pmax
       comp=Z,240nm,2.0s,mb5.8
PECR                               MLR      MLR
       comp=Z,1µm,16.0s,MS5.2
VOR    Voronezh         69.80 326 eP       P          17 55 54.0 -2.2
VOR                                pmax     pmax
       comp=E,40nm,1.2s
VOR                                pmax     pmax
       comp=Z,70nm,1.2s,mb5.5
ANTO   Ankara           69.83 312 eP       P          17 55 55.3 -1.3
       comp=Z,28nm,1.0s,mb5.1
ANTO                               LR       LR
       comp=Z,448nm,19.0s,MS4.7
ANTO   Ankara           69.83 312 eP       P          17 55 55.3 -1.3
ANTO                               pmax     pmax
       comp=Z,28nm,1.0s,mb5.2
ANTO                               MLR      MLR
       comp=Z,448nm,19.0s,MS4.7
LSZ    Lusaka           70.25 253 eP       P          17 55 59.1 -0.4
       comp=Z,29nm,1.5s,mb5.0
LSZ    Lusaka           70.25 253 eP       P          17 55 59.1 -0.4
LSZ                                pmax     pmax
       comp=Z,29nm,1.5s,mb5.0
SIM    Simferopol'      70.41 318ceP       P          17 55 58.9 -1.1
SIM                               eS       S          18 05 07.0 -2.4
SIM                                pmax     pmax
       comp=Z,24nm,0.9s,mb5.1
ISP    Isparta          71.04 310 eP       P          17 55 59.0 -5.0
ISP    Isparta          71.04 310 eP       P          17 55 59.9 -4.1
MA2    Magadan          71.23  26 eP       P          17 56 04.7 -0.1
       comp=Z,47nm,0.9s,mb5.4
MA2    Magadan          71.23  26 eP       P          17 56 05.0 +0.2
MA2                               e                   17 56 22.4
MA2                               e                   17 58 40.8
MA2                               ePPP     PPP        18 00 22.6 -3.4
MA2                               eS       S          18 05 21.2 +2.4
MA2                               ePS      PS         18 05 53.3 +2.2
MA2                               e                   18 06 00.0
MA2                                pmax     pmax
       comp=Z,30nm,0.8s,mb5.3
MA2                                pmax     pmax
       comp=N,20nm,1.4s
MA2                                MLR      MLR
       comp=Z,2µm,21.0s,MS5.4
PET    Petropavlovsk    72.12  34 eP       P          17 56 10.0 -0.2
       comp=Z,56nm,0.8s,mb5.5
PET    Petropavlovsk    72.12  34α iP      P          17 56 10.3 +0.1
PET                               e                   17 56 28.4
PET                               eS       S          18 05 34.7 +5.7
PET                               eSP      SP         18 06 04.0 +4.0
PET                                pmax     pmax
       comp=N,30nm,1.2s
PET                                pmax     pmax
       comp=Z,83nm,1.0s,mb5.6
PET                                pmax     pmax
       comp=E,27nm,0.9s
PET                                pmax     pmax
       comp=Z,600nm,6.9s
PET                                pmax     pmax
       comp=Z,500nm,15.5s
PET                                pmax     pmax
       comp=Z,200nm,22.6s
PET                                smax
       comp=E,600nm,11.1s
PET                                smax
       comp=N,700nm,15.6s
PET                                smax
       comp=E,700nm,18.5s
PET                                MLR      MLR
       comp=Z,2µm,16.0s,MS5.4
PET                                MLR      MLR
       comp=Z,2µm,20.0s
MOS    Moscow           72.35 329 eP       P          17 56 08.5 -3.0
MOS                               i                   17 56 15.2
MOS                               e                   17 58 55.3
MOS                                pmax     pmax
       comp=Z,93nm,1.6s,mb5.5
OBN    Obninsk          72.64 328 eP       P          17 56 11.7 -1.5
       comp=Z,37nm,0.9s,mb5.3
OBN    Obninsk          72.64 328c iP      P          17 56 12.1 -1.1
OBN                               e                   17 58 50.5
OBN                               eS       S          18 05 31.9 -3.0
OBN                                pmax     pmax
       comp=Z,122nm,2.5s,mb5.4
OBN                                MLR      MLR
       comp=Z,800nm,19.0s,MS5.0
MAW    Mawson           72.79 193 eP       P          17 56 14.1 +0.3
       comp=Z,7.1nm,1.0s,mb4.5
MAW    Mawson           72.79 193  P       P          17 56 13.9 +0.1
       comp=Z,3.0nm,0.9s,baz=19,slow=5.6,SNR=4.9
MAW                                LR       LR         18 24 55.2
       comp=Z,1µm,18.1s,MS5.3,baz=46,slow=33
MAW    Mawson           72.79 193  P       P          17 56 13.9 +0.1
MAW                                LR       LR         18 24 55.2
TIXI   Tiksi            73.12  10⇑eP       P          17 56 14.7 -1.0
TIXI   Tiksi            73.12  10 eP       P          17 56 09.9 -5.8
TIXI                              e                   17 58 54.6
TIXI                              eS       S          18 05 35.5 -4.5
TIXI                               pmax     pmax
       comp=Z,59nm,1.1s,mb5.4
TIXI                               MLR      MLR
       comp=Z,3µm,15.0s,MS5.7
SEY    Seymchan         73.67  23⇑eP       P          17 56 19.6 +0.6
KLMR   Klimovskoe       73.76 334 eP       P          17 56 16.7 -2.9
KLMR                               pmax     pmax
       comp=Z,70nm,1.4s,mb5.4
KLMR                               pmax     pmax
       comp=Z,360nm,5.7s
LBTB   Lobatse          74.02 244 eP       P          17 56 21.9 +0.1
       comp=Z,27nm,1.0s,mb5.1
LBTB   Lobatse          74.02 244 eP       P          17 56 21.9 +0.1
LBTB                               pmax     pmax
       comp=Z,27nm,1.0s,mb5.1
TIRR   Tirgusor         74.17 316 eP       P          17 56 21.0 -1.3
CFR    Carcaliu         74.54 317 ⇓P       P          17 56 21.4 -3.0
CFR    Carcaliu         74.54 317 ⇓P       P          17 56 21.4 -3.0
HARR   Harsova          74.56 316 ⇓P       P          17 56 24.0 -0.6
HARR   Harsova          74.56 316 ⇓P       P          17 56 24.1 -0.5
PRD    Provadia         74.59 315 eP       P          17 56 24.0 -0.8
BOSA   Boshof           74.91 240  P       P          17 56 26.1 -0.9
       comp=Z,4.9nm,0.8s,mb4.5,baz=111,slow=6.4,SNR=7.8
BOSA                               LR       LR         18 27 45.7
       comp=Z,1µm,18.4s,MS5.3,baz=60,slow=34
BOSA   Boshof           74.91 240 eP       P          17 56 26.2 -0.8
       comp=Z,24nm,1.3s,mb5.0
BOSA   Boshof           74.91 240 eP       P          17 56 26.2 -0.7
BOSA                               pmax     pmax
       comp=Z,24nm,1.3s,mb5.0
AKASG  Malin Array Be   75.29 322  P       P          17 56 27.2 -1.4
       comp=Z,16nm,0.9s,mb5.0,baz=89,slow=5.1,SNR=60
VRI    Vrincioaia       75.67 317 ⇑P       P          17 56 31.2 +0.3
VRI    Vrincioaia       75.67 317 ⇑P       P          17 56 31.2 +0.3
MTUR   Matau            76.67 316 ⇑P       P          17 56 35.6 -0.9
MTUR   Matau            76.67 316 ⇑P       P          17 56 35.6 -1.0
VOIR                    76.72 316 ⇓P       pP         17 56 45.2 -0.7
MMB    Musomiste        76.93 312 eP       P          17 56 37.0 -1.1
BURAR  Bucovina Array   77.07 319 ⇓P       P          17 56 39.2 +0.5
BURAR  Bucovina Array   77.07 319 ⇓P       P          17 56 39.2 +0.5
MNK    Minsk            77.18 326 eP       P          17 56 38.0 -1.2
KKB    Krupnik          77.45 313 eP       P          17 56 39.0 -2.0
VTS    Vitosha          77.49 313 eP       P          17 56 40.0 -1.1
VAY    Valandovo        77.74 312 eP       P          17 56 40.6 -1.9
VAY    Valandovo        77.74 312 eP       P          17 56 40.6 -2.0
JOF    Joensuu          78.15 335 ep       P          17 56 42.7 -1.7
       comp=Z,12nm,0.9s,mb4.8
DRGR                    78.58 317 ⇑P       P          17 56 46.9 -0.1
DRGR                    78.58 317 ⇑P       P          17 56 46.9 -0.2
OHR    Ohrid            79.03 312 eP       P          17 56 48.2 -1.4
OHR    Ohrid            79.03 312 eP       P          17 56 48.2 -1.5
KWP    Kalwaria         79.11 320 eP       P          17 56 50.1 +0.2
KWP    Kalwaria         79.11 320 eP       P          17 56 50.1 +0.2
APA    Apatity          79.12 339⇑iP       P          17 56 49.2 -0.4
APA                               e        pP         17 57 00.0 +1.3
APA                               e                   18 06 49.0
APA                                pmax     pmax
       comp=Z,21nm,1.0s,mb5.0
APA                                MLR      MLR
       comp=Z,2µm,17.0s,MS5.5
KOLS   Kolonicke sedl   79.26 320 i P      P          17 56 51.5 +0.8
KOLS                              epP      pP         17 56 59.3 -0.5
SUR    Sutherland       79.29 237 eP       P          17 56 51.9 +0.6
       comp=Z,38nm,1.0s,mb5.3
GRUS   Gruza            79.49 314 i P      P          17 56 51.1 -0.9
SUW    Suwalki          79.70 325 eP       P          17 56 52.4 -0.6
SUW    Suwalki          79.70 325 eP       P          17 56 52.4 -0.6
CRVS   Cervenica-Dubn   79.78 319 eP       P          17 56 53.7 +0.2
STHS   Stebnicka Huta   80.01 320 eP       P          17 56 55.3 +0.6
STHS                              e                   17 57 15.1
FINES  FINESS Array B   80.01 332  P       P          17 56 54.4 -0.1
       comp=Z,10nm,0.8s,mb4.8,baz=94,slow=6.3,SNR=19
FINES                              LR       LR         18 39 24.1
       comp=Z,706nm,18.2s,MS5.0,baz=293,slow=41
DIVS   Divcibare        80.04 314⇓iP       P          17 56 54.4 -0.6
SYO    Syowa Base       80.09 198 ⇑PcP     PcP        17 57 00.3 -2.2
SYO    Syowa Base       80.09 198 ⇓pP      pP         17 57 06.4 +2.5
KAF    Kangasniemi      80.09 333 ep       P          17 56 53.2 -1.7
       comp=Z,17nm,0.9s,mb5.0,baz=104,slow=4.9
KAF    Kangasniemi      80.09 333 eP       P          17 56 53.2 -1.7
KAF                                pmax     pmax
       comp=Z,17nm,0.9s,mb5.0
KECS   Kecovo           80.35 319 eP       P          17 56 56.3 -0.3
FX1    Attu Island--F   80.48  37  P       P          17 56 58.2 +1.1
       comp=Z,20nm,0.7s,mb5.2,baz=341,slow=4.2,SNR=12
FX1    Attu Island--F   80.48  37 eP       P          17 56 57.8 +0.7
PSZ    Piszkesteto      80.65 318⇑iP       P          17 56 58.3 +0.1
PSZ    Piszkesteto      80.65 318 eP       P          17 56 58.0 -0.2
       comp=Z,47nm,1.4s,mb5.2
PSZ    Piszkesteto      80.65 318 eP       P          17 56 58.0 -0.2
PSZ                                pmax     pmax
       comp=Z,47nm,1.4s,mb5.2
TSUM   Tsumeb           80.72 250 eP       P          17 57 00.3 +1.2
       comp=Z,23nm,1.1s,mb5.0
OJC    Ojcow            81.06 321 eP       P          17 57 00.4 +0.1
OJC                               ePcP     PcP        17 57 07.5 +0.5
BILL   Bilibino         81.07  21 eP       P          17 56 59.9 -0.1
       comp=Z,26nm,1.2s,mb5.0
BILL   Bilibino         81.07  21 eP       P          17 56 59.9 -0.1
BILL                               pmax     pmax
       comp=Z,26nm,1.2s,mb5.0
VYHS   Vyhne            81.44 319 i P      P          17 57 02.2 -0.1
VYHS                              e        pP         17 57 10.0 -1.4
TIP    Timpagrande      81.89 309  P       P          17 57 05.3 +0.5
       comp=Z,237nm,4.1s
OKC    Ostrava-Krasne   82.06 320 eP       P          17 57 05.9 +0.4
OKC                               epP      pP         17 57 14.5 -0.2
KEV    Kevo             82.09 341 ep       P          17 57 04.7 -0.6
       comp=Z,17nm,0.9s,mb5.0
KEV    Kevo             82.09 341 eP       P          17 57 04.7 -0.6
KEV                                pmax     pmax
       comp=Z,17nm,0.9s,mb5.0
TDS    Terranova Siba   82.26 310  P       P          17 57 08.4 +1.7
       comp=Z,84nm,1.0s,mb5.6
TDS    Terranova Siba   82.26 310  P       P          17 57 08.4 +1.7
TDS                                pmax     pmax
       comp=Z,84nm,1.0s,mb5.6
MORC   Moravsky Berou   82.44 320 eP       P          17 57 07.6 +0.2
       comp=Z,14nm,1.0s,mb4.9
MORC                              epP      pP         17 57 17.9 +1.2
MORC   Moravsky Berou   82.44 320 eP       P          17 57 07.6 +0.1
MORC                              e*PP     pP         17 57 17.9 +1.2
MORC                               pmax     pmax
       comp=Z,14nm,1.0s,mb4.8
ARCES  ARCESS Array B   82.53 340  P       P          17 57 07.9 +0.4
       comp=Z,12nm,0.8s,mb5.0,baz=94,slow=4.9,SNR=31
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ARCES				PP	PP	18 00 22.3	+3.3
	comp=Z,3.6nm,0.8s,baz=108,slow=8.6,SNR=3.6						
ARCES				LR	LR	18 38 05.7	
	comp=Z,2µm,20.8s,MS5.4,baz=219,slow=39						
ZST	**Bratislava**	**82.55**	**318**	*e*P	**P**	**17 57 08.6**	**+0.6**
ZST				*e*sP	sP	17 57 20.8	+0.6
ZST				*e*L		18 40 34.8	
MTTG	**Motta San Giov**	**82.63**	**308**	P	**P**	**17 57 09.8**	**+1.1**
SGO	**Sicignano**	**83.12**	**311**	P	**P**	**17 57 11.4**	**+0.2**
	comp=Z,11nm,1.0s,mb4.8						
SGO	**Sicignano**	**83.12**	**311**	P	**P**	**17 57 11.4**	**+0.2**
SGO				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
DPC	**Dobruska-Polom**	**83.29**	**320**	*e*P	**P**	**17 57 12.5**	**+0.7**
DPC				*e*pP	pP	17 57 22.8	+1.8
KSP	**Ksiaz**	**83.36**	**321**	*e*P	**P**	**17 57 12.8**	**+0.6**
KSP	**Ksiaz**	**83.36**	**321**	*e*P	**P**	**17 57 12.6**	**+0.4**
KSP				*e*pP	pP	17 57 23.1	+1.7
KSP				*e*S	S	18 07 37.0	+7.2
KSP				LR	LR		
	comp=Z,1µm,21.5s,MS5.3						
UPC	**Upice**	**83.50**	**321**	*e*P	**P**	**17 57 13.6**	**+0.7**
UPC				*e*pP	pP	17 57 23.8	+1.7
ARSA	**Arzberg**	**83.51**	**317**	⇑*i*P	**P**	**17 57 13.5**	**+0.4**
	comp=Z,18nm,1.0s,mb5.2						
BOJS	**Bojanci**	**83.55**	**315**	⇑*e*P	**P**	**17 57 13.1**	**-0.2**
TREC	**Trest**	**83.72**	**319**	*e*P	**P**	**17 57 13.8**	**-0.3**
PERS	**Pernice**	**83.74**	**317**	⇑*e*P	**P**	**17 57 14.5**	**+0.3**
LJU	**Ljubljana**	**84.09**	**316**	⇑*e*P	**P**	**17 57 16.3**	**+0.3**
OBKA	**Obir**	**84.12**	**316**	⇑*i*P	**P**	**17 57 16.7**	**+0.6**
	comp=Z,12nm,1.1s,mb4.9						
OBKA	**Obir**	**84.12**	**316**	⇑P	**P**	**17 57 16.7**	**+0.6**
	comp=Z,12nm,1.1s,mb4.9						
PRU	**Pruhonice**	**84.40**	**320**	*e*P	**P**	**17 57 17.6**	**+0.1**
MOA	**Molln**	**84.41**	**318**	⇑*i*P	**P**	**17 57 17.6**	**0.0**
	comp=Z,7.4nm,0.9s,mb4.8						
PVCC	**Panska Ves**	**84.42**	**320**	*e*P	**P**	**17 57 18.4**	**+0.8**
PVCC				*e*pP	pP	17 57 24.8	-2.0
VVLD	**Villa Vallelon**	**84.47**	**312**	P	**P**	**17 57 17.8**	**-0.2**
	comp=Z,87nm,1.8s,mb5.6						
VOY	**Vojsko**	**84.53**	**316**	*e*P	**P**	**17 57 18.0**	**-0.3**
VOY				*e*	pP	17 57 27.8	+0.3
PTQR	**Pietraquaria**	**84.65**	**312**	P	**P**	**17 57 19.0**	**+0.1**
AQU	**L'Aquila**	**84.66**	**312**	P	**P**	**17 57 19.5**	**+0.5**
	comp=Z,41nm,0.8s,mb5.6						
AQU	**L'Aquila**	**84.66**	**312**	P	**P**	**17 57 19.5**	**+0.5**
AQU				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.6						
ROBS	**Robic**	**84.81**	**316**	⇑*e*P	**P**	**17 57 19.1**	**-0.5**
GEC2	**GERESS Array S**	**84.86**	**319**	*e*P	**P**	**17 57 19.9**	**+0.1**
	comp=Z,28nm,1.1s,mb5.3						
GEC2	**GERESS Array S**	**84.86**	**319**	*e*P	**P**	**17 57 19.9**	**+0.1**
GEC2				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.3						
GERES	**GERESS Array B**	**84.86**	**319**	P	**P**	**17 57 20.2**	**+0.5**
	comp=Z,12nm,0.9s,mb5.0,baz=104,slow=5.5,SNR=74						
FIAM	**Fiamignano**	**84.87**	**312**	P	**P**	**17 57 20.3**	**+0.3**
	comp=Z,29nm,0.8s,mb5.5						
CING	**Cingoli**	**84.87**	**313**	P	**P**	**17 57 20.4**	**+0.4**
	comp=Z,82nm,2.0s,mb5.5						
NRCA	**Norcia**	**84.90**	**313**	P	**P**	**17 57 20.6**	**+0.4**
PTCC	**Patocco-Chiusa**	**84.93**	**316**	P	**P**	**17 57 19.9**	**-0.3**
KHC	**Kasperske Hory**	**84.96**	**319**	*e*P	**P**	**17 57 20.1**	**-0.2**
KHC				x	x	17 57 40.0	
KHC	**Kasperske Hory**	**84.96**	**319**	*e*P	**P**	**17 57 20.1**	**-0.2**
KHC				*e*		17 57 40.0	
GMNA	**Gemona**	**85.01**	**316**	P	**P**	**17 57 20.9**	**+0.3**
ARV	**Arcevia**	**85.06**	**313**	P	**P**	**17 57 21.6**	**+0.7**
	comp=Z,27nm,0.8s,mb5.4						
ARV	**Arcevia**	**85.06**	**313**	P	**P**	**17 57 21.6**	**+0.7**
ARV				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.4						
RUE	**Ruedersdorf**	**85.07**	**322**	*e*P	**P**	**17 57 21.0**	**+0.2**
	comp=Z,40nm,0.9s,mb5.5						
FSSB	**Fossombrone**	**85.19**	**314**	P	**P**	**17 57 22.1**	**+0.5**
MNS	**Montasola**	**85.20**	**312**	P	**P**	**17 57 21.5**	**-0.2**
	comp=Z,15nm,1.0s,mb5.1						
MNS	**Montasola**	**85.20**	**312**	P	**P**	**17 57 21.5**	**-0.2**
MNS				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.1						
WET	**Wettzell**	**85.42**	**319**	*e*P	**P**	**17 57 22.5**	**-0.1**
	comp=Z,19nm,1.0s,mb5.2						
WET	**Wettzell**	**85.42**	**319**	*e*P	**P**	**17 57 22.5**	**-0.1**
WET				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
CLL	**Collm**	**85.47**	**321**	P	**P**	**17 57 22.8**	**0.0**
	comp=Z,logA/T=1.1,mb5.0						
CLL				*e*S	S	18 07 49.0	-1.6
CLL				*e*PS	PS	18 08 45.0	-7.1
CLL	**Collm**	**85.47**	**321**	*i* P	**P**	**17 57 22.8**	**0.0**
	comp=Z,13nm,1.1s,mb5.0						
CLL				*e*S	S	18 07 49.0	-1.6
CLL				LR	LR		
	comp=Z,700nm,19.4s,MS5.1						
CLL	**Collm**	**85.47**	**321**	*i* P	**P**	**17 57 22.8**	**0.0**
CLL				*e*S	S	18 07 49.0	-1.6
CLL				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
CLL				MLR	MLR		
	comp=Z,700nm,19.4s,MS5.1						
NKC	**Novy Kostel**	**85.76**	**320**	*e*P	**P**	**17 57 24.6**	**+0.3**
NKC				*e*pP	pP	17 57 35.0	+1.5
VNDA	**Vanda**	**85.85**	**169**	*e*P	**P**	**17 57 24.7**	**+0.5**
	comp=Z,16nm,1.5s,mb5.0						
VNDA				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
VNDA	**Vanda**	**85.85**	**169**	*e*P	**P**	**17 57 24.7**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,16nm,1.5s						
VNDA				MLR	MLR		
	comp=Z,1µm,19.0s						
SFI	**Santa Sofia**	**85.87**	**314**	P	**P**	**17 57 26.0**	**+1.0**
	comp=Z,63nm,1.0s,mb5.8						
SFI	**Santa Sofia**	**85.87**	**314**	P	**P**	**17 57 26.0**	**+1.0**
SFI				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.8						
PGD	**Poggio Sodo**	**85.96**	**314**	P	**P**	**17 57 26.8**	**+1.4**
	comp=Z,18nm,0.7s,mb5.4						
PGD	**Poggio Sodo**	**85.96**	**314**	P	**P**	**17 57 26.8**	**+1.4**
PGD				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.4						
VMG	**Vicchio**	**86.09**	**314**	P	**P**	**17 57 27.8**	**+1.7**
CTI	**Castel Tesino**	**86.10**	**316**	P	**P**	**17 57 26.8**	**+0.8**
	comp=Z,27nm,0.8s,mb5.5						
CTI	**Castel Tesino**	**86.10**	**316**	P	**P**	**17 57 26.8**	**+0.8**
CTI				pmax	pmax		
	comp=Z,27nm,0.8s,mb5.5						
WTTA	**Wattenberg**	**86.15**	**317**	⇓*i*P	**P**	**17 57 26.3**	**0.0**
	comp=Z,19nm,1.0s,mb5.2						
WTTA	**Wattenberg**	**86.15**	**317**	⇓P	**P**	**17 57 26.3**	**0.0**
	comp=Z,19nm,1.0s,mb5.3						
WTTA	**Wattenberg**	**86.15**	**317**	⇓P	**P**	**17 57 26.3**	**0.0**
WTTA				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.3						
MOX	**Moxa**	**86.31**	**320**	*i* P	**P**	**17 57 27.5**	**+0.5**
	comp=Z,logA/T=1.1,mb5.1						
MOX				L		18 44 28.0	
MOX	**Moxa**	**86.31**	**320**	*e*P	**P**	**17 57 27.5**	**+0.5**
	comp=Z,22nm,1.6s,mb5.1						
MOX				LR	LR		
	comp=Z,700nm,20.0s,MS5.1						
MOX	**Moxa**	**86.31**	**320**	*e*P	**P**	**17 57 27.5**	**+0.5**
MOX				pmax	pmax		
	comp=Z,22nm,1.6s,mb5.1						
MOX				MLR	MLR		
	comp=Z,700nm,20.0s,MS5.1						
SQTA	**Sankt Quirin**	**86.44**	**317**	⇓*i*P	**P**	**17 57 27.4**	**-0.3**
	comp=Z,9.7nm,1.0s,mb5.0						
SQTA	**Sankt Quirin**	**86.44**	**317**	⇓P	**P**	**17 57 27.4**	**-0.3**
SQTA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
MOTA	**Moosalm**	**86.52**	**317**	⇑*i*P	**P**	**17 57 27.6**	**-0.5**
	comp=Z,9.6nm,1.0s,mb5.0						
MOTA	**Moosalm**	**86.52**	**317**	⇑P	**P**	**17 57 27.6**	**-0.5**
	comp=Z,9.6nm,1.0s,mb5.0						
MOTA	**Moosalm**	**86.52**	**317**	⇑P	**P**	**17 57 27.6**	**-0.5**
MOTA				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
GRA1	**Grafenberg Arr**	**86.53**	**320**	*e*P	**P**	**17 57 28.3**	**+0.3**
	comp=Z,35nm,1.1s,mb5.5						
GRA1				LR	LR		
	comp=Z,800nm,21.5s,MS5.1						
GRF	**Grafenberg Arr**	**86.53**	**320**	*e*P	**P**	**17 57 28.3**	**+0.3**
	comp=Z,35nm,1.1s,mb5.5						
GRF				LR	LR		
	comp=Z,800nm,21.5s,MS5.1						
GRF	**Grafenberg Arr**	**86.53**	**320**	*e*P	**P**	**17 57 28.3**	**+0.3**
GRF				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.5						
GRF				MLR	MLR		
	comp=Z,800nm,21.5s,MS5.1						
GRF	**Grafenberg Arr**	**86.53**	**320**	*e*P	**P**	**17 57 28.3**	**+0.3**
GRF				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.5						
GRF				MLR	MLR		
	comp=Z,800nm,21.5s,MS5.1						
SBA	**Scott Base**	**86.95**	**169**	*e*P	**P**	**17 57 30.9**	**+1.4**
	comp=Z,96nm,2.1s,mb5.7						
SBA	**Scott Base**	**86.95**	**169**	*e*P	**P**	**17 57 30.9**	**+1.4**
SBA				pmax	pmax		
	comp=Z,96nm,2.1s,mb5.7						
NB2	**NORSAR Subarra**	**87.02**	**331**	P	**P**	**17 57 29.9**	**-0.3**
	comp=Z,21nm,1.0s,mb5.3,baz=96,slow=4.8						
NB2	**NORSAR Subarra**	**87.02**	**331**	P	**P**	**17 57 29.9**	**-0.3**
	baz=96,slow=4.8						
NOA	**NORSAR Array B**	**87.02**	**331**	P	**P**	**17 57 30.4**	**+0.3**
	comp=Z,12nm,0.9s,mb5.1,baz=94,slow=5.0,SNR=25						
NOA				PP	PP	18 00 52.0	-4.0
	comp=Z,1.6nm,0.9s,baz=94,slow=8.5,SNR=3.6						
NOA				LR	LR	18 42 21.2	
	comp=Z,742nm,20.7s,MS5.1,baz=100,slow=40						
CLZ	**Clausthal**	**87.14**	**322**	*e*P	**P**	**17 57 31.1**	**+0.1**
	comp=Z,20nm,1.1s,mb5.3						
CLZ	**Clausthal**	**87.14**	**322**	*e*P	**P**	**17 57 31.1**	**+0.1**
CLZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.3						
NAO01	**NORSAR Array S**	**87.17**	**331**	*e*P	**P**	**17 57 30.6**	**-0.3**
	comp=Z,14nm,1.0s,mb5.1						
NAO	**NORSAR Subarra**	**87.20**	**331**	P	**P**	**17 57 29.9**	**-1.1**
	comp=Z,21nm,1.0s,mb5.3						
NAO	**NORSAR Subarra**	**87.20**	**331**	P	**P**	**17 57 29.9**	**-1.1**
NAO				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.3						
BSEG	**Bad Segeberg**	**87.23**	**324**	*e*P	**P**	**17 57 31.7**	**+0.3**
PGF	**Pioggiola**	**87.92**	**312**	*e*P	**P**	**17 57 35.7**	**+0.7**
	comp=Z,35nm,1.1s,mb5.2						
PGF	**Pioggiola**	**87.92**	**312**	*e*P	**P**	**17 57 35.7**	**+0.7**
PGF				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.2						
TNS	**Taunus Mts**	**88.33**	**320**	*e*P	**P**	**17 57 37.0**	**+0.3**
	comp=Z,11nm,1.0s,mb5.0						
TNS	**Taunus Mts**	**88.33**	**320**	*e*P	**P**	**17 57 37.0**	**+0.3**
TNS				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.0						
BFO	**Black Forest**	**88.40**	**318**	*e*P	**P**	**17 57 37.2**	**+0.1**
SBF	**Sospel**	**89.06**	**314**	*e*P	**P**	**17 57 40.5**	**+0.1**
CDF	**Champ du Feu**	**89.11**	**318**	*e*P	**P**	**17 57 40.4**	**-0.1**
WTSB	**Winterswijk**	**89.35**	**322**	P	**P**	**17 57 31.9**	**-10**
LPG	**La Plagne**	**89.52**	**315**	*e*P	**P**	**17 57 43.0**	**+0.5**
	comp=Z,30nm,0.9s,mb5.3						
LPG	**La Plagne**	**89.52**	**315**	*e*P	**P**	**17 57 43.0**	**+0.5**
LPG				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
MBDF	**Montbardon**	**89.52**	**315**	*e*P	**P**	**17 57 42.2**	**-0.3**
LPL	**La Plagne**	**89.53**	**315**	*e*P	**P**	**17 57 43.1**	**+0.5**
	comp=Z,38nm,0.9s,mb5.4						
LPL	**La Plagne**	**89.53**	**315**	*e*P	**P**	**17 57 43.1**	**+0.5**
LPL				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.4						
BNI	**Bardonecchia**	**89.58**	**315**	*e*P	**P**	**17 57 42.5**	**-0.3**
	comp=Z,11nm,0.9s,mb5.2						
BNI	**Bardonecchia**	**89.58**	**315**	*e*P	**P**	**17 57 42.5**	**-0.3**
BNI				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.2						
FRF	**La Foret Royal**	**89.64**	**313**	*e*P	**P**	**17 57 43.4**	**+0.3**
	comp=Z,30nm,0.9s,mb5.3						
FRF	**La Foret Royal**	**89.64**	**313**	*e*P	**P**	**17 57 43.4**	**+0.3**
FRF				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
NVL	**N'lazarevskaya**	**89.68**	**199**	*e*P	**P**	**17 57 43.8**	**+1.1**
NVL				*e**PP	pP	17 57 54.2	+2.3
NVL				*e**SP	sP	17 57 58.3	+3.4
NVL				*e*S	S	18 08 06.6	-23
NVL				*e*		18 08 25.9	
NVL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,81nm,17.8s						
HAU	**Haudompre**	**89.73**	**318**	*e*P	**P**	**17 57 43.4**	**-0.1**
	comp=Z,54nm,1.2s,mb5.5						
HAU				*e*R			
	comp=Z,967nm,20.2s						
HAU	**Haudompre**	**89.73**	**318**	*e*P	**P**	**17 57 43.4**	**-0.1**
HAU				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.5						
HAU				MLR	MLR		
	comp=Z,970nm,20.3s,MS5.2						
LMR	**La Mourre**	**89.75**	**313**	*e*P	**P**	**17 57 43.8**	**+0.2**
WLF	**Walferdange**	**89.82**	**319**	*e*P	**P**	**17 57 43.9**	**+0.1**
	comp=Z,46nm,1.4s,mb5.6						
WLF	**Walferdange**	**89.82**	**319**	*e*P	**P**	**17 57 43.9**	**+0.1**
WLF				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.6						
CABF	**La Chapelle**	**89.95**	**316**	*e*P	**P**	**17 57 45.1**	**+0.6**
	comp=Z,44nm,1.1s,mb5.4						
CABF	**La Chapelle**	**89.95**	**316**	*e*P	**P**	**17 57 45.1**	**+0.6**
CABF				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.4						
ORIF	**Oris-en-Rattie**	**90.15**	**315**	*e*P	**P**	**17 57 46.0**	**+0.5**
	comp=Z,41nm,1.2s,mb5.3						
ORIF				*e*R			
	comp=Z,920nm,20.0s						
MEZF	**Maizieres J'vi**	**90.58**	**318**	*e*P	**P**	**17 57 47.8**	**+0.4**
	comp=Z,40nm,1.0s,mb5.4						
GIVF	**Givet**	**90.66**	**320**	*e*P	**P**	**17 57 48.1**	**+0.4**
	comp=Z,69nm,1.1s,mb5.6						
GIVF	**Givet**	**90.66**	**320**	*e*P	**P**	**17 57 48.1**	**+0.4**
GIVF				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.6						
VIVF	**Saint-Julien-l**	**91.01**	**315**	*e*P	**P**	**17 57 49.9**	**+0.5**
	comp=Z,182nm,1.8s,mb5.8						
VIVF	**Saint-Julien-l**	**91.01**	**315**	*e*P	**P**	**17 57 49.9**	**+0.5**
VIVF				pmax	pmax		
	comp=Z,91nm,1.8s,mb5.8						
BAIF	**Baives**	**91.06**	**320**	*e*P	**P**	**17 57 50.3**	**+0.8**
	comp=Z,61nm,0.9s,mb5.6						
BAIF	**Baives**	**91.06**	**320**	*e*P	**P**	**17 57 50.3**	**+0.8**
BAIF				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.6						
LOR	**Lormes**	**91.45**	**317**	*e*P	**P**	**17 57 51.8**	**+0.4**
	comp=Z,58nm,1.0s,mb5.6						
LOR				*e*R			
	comp=Z,886nm,20.2s						
LOR	**Lormes**	**91.45**	**317**	*e*P	**P**	**17 57 51.8**	**+0.4**
LOR				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.6						
LOR				MLR	MLR		
	comp=Z,890nm,20.3s,MS5.2						
SMF	**Signal de Mont**	**91.50**	**317**	*e*P	**P**	**17 57 51.9**	**+0.3**
	comp=Z,51nm,0.9s,mb5.5						
SMF	**Signal de Mont**	**91.50**	**317**	*e*P	**P**	**17 57 51.9**	**+0.3**
SMF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.6						
LASF	**Ste Croix**	**91.64**	**314**	*e*P	**P**	**17 57 53.0**	**+0.7**
SSF	**Saint Saulge**	**91.70**	**317**	*e*P	**P**	**17 57 53.1**	**+0.6**
	comp=Z,13nm,1.1s,mb5.2						
SSF	**Saint Saulge**	**91.70**	**317**	*e*P	**P**	**17 57 53.1**	**+0.6**
SSF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.2						
AVF	**Avril sur Loir**	**91.82**	**317**	*e*P	**P**	**17 57 53.4**	**+0.3**
	comp=Z,60nm,1.1s,mb5.5						
AVF	**Avril sur Loir**	**91.82**	**317**	*e*P	**P**	**17 57 53.4**	**+0.3**
AVF				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.5						
BGF	**Bois d'Agland**	**92.19**	**316**	*e*P	**P**	**17 57 55.6**	**+0.8**
	comp=Z,52nm,0.9s,mb5.6						
BGF	**Bois d'Agland**	**92.19**	**316**	*e*P	**P**	**17 57 55.6**	**+0.8**
BGF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.6						
HYF	**Humbligny**	**92.28**	**317**	*e*P	**P**	**17 57 56.2**	**+1.0**
TCF	**Toulx Ste Croi**	**92.65**	**316**	*e*P	**P**	**17 57 57.6**	**+0.7**
MTLF	**Montolieu**	**92.87**	**313**	*e*P	**P**	**17 57 58.7**	**+0.7**
	comp=Z,52nm,1.1s,mb5.6						
MTLF	**Montolieu**	**92.87**	**313**	*e*P	**P**	**17 57 58.7**	**+0.7**
MTLF				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.6						
LFF	**La Frestale**	**93.79**	**315**	*e*P	**P**	**17 58 03.2**	**+1.0**
FLN	**La Foliniere**	**94.22**	**319**	*e*P	**P**	**17 58 03.4**	**-0.7**
FLN				*e*R			
	comp=Z,841nm,21.5s						
SNAA	**Sanae**	**94.38**	**198**	*e*P	**P**	**17 58 04.8**	**+0.5**
	comp=Z,3.3nm,1.1s,mb4.7						
SNAA	**Sanae**	**94.38**	**198**	*e*P	**P**	**17 58 04.8**	**+0.5**
SNAA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
DAG	**Danmarks Havn**	**94.58**	**348**	⇑*i*P	**P**	**17 58 05.2**	**+0.1**
	comp=Z,6.7nm,0.9s,mb5.1						
DAG	**Danmarks Havn**	**94.58**	**348**	⇑*i*P	**P**	**17 58 05.2**	**+0.1**
DAG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
KDAK	**Kodiak Island**	**99.54**	**31**	LR	LR	18 47 45.6	
	comp=Z,744nm,19.5s,MS5.2,baz=202,slow=38						
ILAR	**Eielson Array**	**99.61**	**23**	P	**P**	**17 58 27.4**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=273,slow=5.2,SNR=6.8						
ILAR				PP	PP	18 02 32.4	-2.2
	comp=Z,1.2nm,0.8s,baz=297,slow=6.8,SNR=5.8						
INK	**Inuvik**	**102.39**	**17**	P	Pdif	17 58 41.3	+0.8
	comp=Z,2.6nm,1.0s,baz=315,slow=1.4,SNR=4.4						
INK				PP	PP	18 02 53.7	-2.1
	comp=Z,2.0nm,0.8s,baz=306,slow=11,SNR=3.3						
INK	**Inuvik**	**102.39**	**17**	P	Pdif	17 58 41.3	+0.8
INK				PP	PP	18 02 53.7	-2.1
TBI	**Tubuai**	**111.76**	**115**	*e*PP	PP	18 03 56.0	-10
TBI	**Tubuai**	**111.76**	**115**	*e*PS	PS	18 13 35.0	+1.4
TBI	**Tubuai**	**111.76**	**115**	*e*SS	SS	18 19 42.6	+5.5
TBI				*e*LR	LR	18 37 06.5	
	comp=Z,1µm,24.2s						
YKA	**Yellowknife Ar**	**112.01**	**15**	PP	PP	18 04 01.8	-5.1
	comp=Z,2.1nm,0.8s,baz=328,slow=7.3,SNR=4.4						
PPT	**Papeete**	**112.38**	**108**	*e*PP	PP	18 04 00.0	-11
PPT	**Papeete**	**112.38**	**108**	*e*PS	PS	18 13 39.8	+0.2
PPT	**Papeete**	**112.38**	**108**	*e*LR	LR	18 37 19.1	
	comp=Z,833nm,23.5s						
RKT	**Rikitea**	**124.85**	**117**	*e*PS	PS	18 15 32.7	+0.2
RKT	**Rikitea**	**124.85**	**117**	*e*LR	LR	18 43 03.1	
	comp=Z,893nm,24.2s						
WVOR	**Wild Horse Val**	**125.77**	**32**	*e*PKPdf	PKPdf	18 03 48.4	-2.5
BOZ	**Bozeman (W)**	**126.74**	**25**	*e*PKPdf	PKPdf	18 03 49.7	-2.9
HLID	**Hailey**	**127.10**	**29**	*e*PKPdf	PKPdf	18 03 50.7	-2.6
ULM	**Lac du Bonnet**	**127.47**	**11**	PKP	PKPdf	18 03 49.5	-4.4
	comp=Z,5.6nm,0.9s,baz=16,slow=1.4,SNR=6.6						
NVAR	**Mina Array Bea**	**128.67**	**36**	PKP	PKPdf	18 03 54.1	-2.5
	comp=Z,3.0nm,0.9s,baz=262,slow=0.8,SNR=18						
BW06	**Boulder Array**	**129.94**	**26**	*e*PKPdf	PKPdf	18 03 56.2	-2.7
PDAR	**Pinedale Array**	**129.94**	**26**	PKP	PKPdf	18 03 55.9	-3.0
	comp=Z,2.0nm,0.8s,baz=170,slow=0.9,SNR=11						
PDAR				PP	PP	18 06 10.3	+0.3
	comp=Z,1.4nm,1.0s,baz=270,slow=1.5,SNR=4.0						
DUG	**Dugway**	**130.42**	**30**	*e*PKPdf	PKPdf	18 03 57.3	-2.6
RSSD	**Black Hills**	**130.96**	**20**	*e*PKPdf	PKPdf	18 03 57.9	-2.8
MSU	**Marysvale**	**132.01**	**31**	*e*PKPdf	PKPdf	18 04 01.6	-1.3
NEN	**Nelson**	**132.59**	**36**	*e*PKPdf	PKPdf	18 04 02.1	-2.0
ANMO	**Albuquerque**	**137.66**	**29**	*e*PKPdf	PKPdf	18 04 12.0	-1.4
BNM	**Barren Site**	**138.21**	**30**	*e*PKPdf	PKPdf	18 04 12.5	-2.0
MNTX	**Cornudas Mount**	**140.79**	**31**	*e*PKPpre		18 04 11.3	
GDL2	**Guadalupe Moun**	**140.91**	**30**	*e*PKPpre		18 04 09.8	
WMOK	**Wichita Mounta**	**141.15**	**21**	*e*PKPpre		18 04 09.7	
WVT	**Waverly**	**142.50**	**7**	*e*PKPpre		18 04 14.8	
LTX	**Lajitas**	**143.56**	**32**	*e*PKPpre		18 04 18.4	
TXAR	**Lajitas Array**	**143.56**	**32**	PKP	PKPdf	18 04 19.0	-5.1
	comp=Z,2.8nm,0.7s,baz=270,slow=1.3,SNR=30						
TXAR				SKPbc		18 07 59.3	
	comp=Z,3.0nm,1.1s,baz=270,slow=2.7,SNR=3.9						
TXAR	**Lajitas Array**	**143.56**	**32**	PKP	PKPdf	18 04 19.0	-5.1
TXAR				SKPbc		18 07 59.3	
JCT	**Junction City**	**144.48**	**26**	*e*PKPdf	PKPdf	18 04 21.3	-4.4
JSC	**Jenkinsville**	**144.63**	**358**	*e*PKPdf	PKPdf	18 04 21.1	-4.7
CPUP	**Villa Florida**	**145.12**	**222**	*e*PKPdf	PKPdf	18 04 23.1	-3.9
NATX	**Nacogdoches**	**145.26**	**18**	*e*PKPbc	PKPbc	18 04 23.8	+1.3
NHSC	**New Hope**	**145.75**	**356**	*e*PKPbc	PKPbc	18 04 25.2	+1.6
SIV	**San Ignacio**	**154.15**	**234**	PKP	PKPdf	18 04 38.7	-2.5
	comp=Z,1.6nm,0.9s,baz=41,slow=1.6,SNR=6.6						
SAML	**Samuel**	**159.15**	**248**	*e*PKPdf	PKPdf	18 04 44.1	-3.7
SAML				*e*PKPab	PKPab	18 05 21.4	-0.6
LPAZ	**La Paz**	**159.29**	**223**	PKP	PKPdf	18 04 46.2	-1.6
	comp=Z,0.7nm,0.2s,baz=66,slow=8.8,SNR=5.8						
LPAZ	**La Paz**	**159.29**	**223**	*e*PKPdf	PKPdf	18 04 45.9	-1.9

*CSEM **04** 18:04:10.6±0.5, 37.49N×19.65E, h5^{km}, MD3.7, Error ellipse: s-maj=14.5km s-min=8.9km az=18.0*

*ATH **04** 18:04:11.6, 37.58N×19.76E, h14^{km}±2^{km}, MD3.7/5*

*NEIC **04** 18:04:11.6, 37.58N×19.76E, h14^{km}, MD3.7(ATH), After ATH.*

ISC 04 18:04:10.8±1.3**, 37.49N**±0.10×**19.71E**±0.08**, h10^{km}, n7, σ0^{s}.99**/9**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.98**	**45**	*e*PB	**Pb**	**18 04 28.7**	**-0.8**
VLS				*e*SB	**Sb**	**18 04 41.2**	**-1.1**
RLS	**Riolos of Patr**	**1.51**	**67**	*e*PB	**Pb**	**18 04 38.6**	**+0.1**
RLS				*e*SB	**Sb**	**18 04 58.5**	**+1.0**
ITM	**Ithomi**	**1.80**	**99**	*e*PN	**Pn**	**18 04 43.5**	**+1.3**
EVR	**Evrytania**	**2.19**	**49**	*e*PN	**Pn**	**18 04 48.4**	**+0.6**
KEK	**Kerkira**	**2.22**	**2**	*e*PN	**Pn**	**18 04 49.1**	**+0.8**
VLI	**Veliai**	**2.70**	**106**	*e*PB	**Pb**	**18 04 56.9**	**-1.9**
TIP	**Timpagrande**	**2.87**	**307**	*e*P	**Pn**	**18 04 57.1**	**-0.4**

*IDC **04** 18:06:33.4±1.6, 6.61S×130.26E, mb4.0/2, mb1 4.3/4, mb1mx4.0/11, mbtmp4.2/4, ML4.4/2, MS4.4/1, Ms1 4.4/1, ms1mx3.8/17, Error ellipse: s-maj=74.6km s-min=25.2km az=71.0*

ISC 04 18:06:44.1±2.1**, 7.4S**±0.1×**130.2E**±0.1**, h33^{km}, n9, σ1^{s}.18**/12**, mb3.8**/2**, MS4.3**/1**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.68**	**158**	*e*P	Px	18 08 30.5	
	24nm,0.6s						
KAKA				*e*S	Sx	18 09 38.1	
FITZ	**Fitzroy Crossi**	**11.52**	**202**	*e*P	**P**	**18 09 30.0**	**+0.7**
	5.5nm,0.2s						
FITZ				*e*S	**S**	**18 11 36.6**	**-1.1**
FITZ	**Fitzroy Crossi**	**11.52**	**202**	Pn	**P**	**18 09 31.2**	**+2.0**
	3.4nm,0.3s,baz=42,slow=13,SNR=60						
FITZ				Sn	**S**	**18 11 36.7**	**-1.0**
	1.2nm,0.3s,baz=282,slow=23,SNR=6.7						
WRA	**Warramunga Arr**	**13.06**	**163**	Pn	**P**	**18 09 50.1**	**+0.1**
	1.0nm,0.3s,baz=344,slow=13,SNR=60						
WRA				Sn	**S**	**18 12 14.5**	**-0.5**
	0.6nm,0.3s,baz=334,slow=22,SNR=8.0						
WB2	**Warramunga Arr**	**13.06**	**163**	*e*P	**P**	**18 09 49.5**	**-0.5**
WB2				*e*S	**S**	**18 12 14.5**	**-0.6**
ASPA	**Alice Springs**	**16.52**	**168**	*e*P	**P**	**18 10 36.1**	**+1.1**
ASPA				*e*S	**S**	**18 13 39.4**	**+2.8**
STKA	**Stephens Creek**	**26.53**	**158**	P	**P**	**18 12 19.4**	**-1.4**
	0.7nm,0.3s,mb3.6,baz=328,slow=9.5,SNR=5.0						
JOW	**Kunigami**	**34.11**	**357**	LR	LR	18 27 07.1	
	comp=Z,567nm,18.2s,MS4.3,baz=210,slow=37						
MKAR	**Makanchi Array**	**68.71**	**327**	P	**P**	**18 17 34.9**	**-12**
	0.6nm,0.4s,mb3.9,baz=118,slow=7.9,SNR=17						

*IDC **04** 18:26:26.6±1.0, 25.49N×141.34E, mb3.9/8, mb1 4.2/8, mb1mx4.0/20, mbtmp3.9/8, MS4.6/3, Ms1 4.6/3, ms1mx3.7/36, Error ellipse: s-maj=29.0km s-min=20.0km az=113.0*

*BJI **04** 18:26:35.1, 25.40N×141.40E, h82^{km}, mb4.5*

*NEIC **04** 18:26:37.1±4.0, 25.43N×141.38E, h83^{km}±36^{km}, mb4.4/4, Error ellipse: s-maj=17.1km s-min=14.5km az=90.0*

ISC 04 18:26:31.6±2.0**, 25.45N**±0.09×**141.6E**±0.1**, h56^{km}**±19^{km}**, n23, σ0^{s}.90**/21**, mb4.3**/16**, MS4.7**/3**, 1C, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.72**	**18**	Pn	**P**	**18 26 58.7**	**-1.1**
	77nm,0.3s,baz=196,slow=4.8,SNR=75						
CBIJ				Sn	**S**	**18 27 21.2**	**+0.5**
	43nm,0.3s,baz=270,slow=23,SNR=15						
KS15	**Wonju Array Si**	**16.71**	**319**	*e*Pn	**P**	**18 30 24.8**	**+1.4**
WHN	**Wuhan**	**24.56**	**288**	⇑P	**P**	**18 31 49.2**	**+1.6**
ENH	**Enshi**	**28.74**	**287**	P	**P**	**18 32 24.0**	**-2.0**
	2.5nm,0.7s,mb4.0						
SONM	**Songino Array**	**35.56**	**318**	P	**P**	**18 33 25.2**	**-0.1**
	0.9nm,0.6s,mb3.9,baz=117,slow=9.9,SNR=4.0						
WRAB	**Tennant Creek**	**45.66**	**190**	*e*P	**P**	**18 34 48.9**	**+0.1**
	10nm,0.8s,mb4.8						
WB2	**Warramunga Arr**	**45.67**	**190**	*e*P	**P**	**18 34 49.2**	**+0.3**
WRA	**Warramunga Arr**	**45.67**	**190**	P	**P**	**18 34 48.9**	**0.0**
	7.1nm,0.8s,mb4.7,baz=8.5,slow=8.7,SNR=50						
GUN	**Gumba**	**49.49**	**286**	*e*P	**P**	**18 35 19.1**	**+0.5**

	15nm,0.7s,mb5.1						
KKN	Kakani	50.03	286	eP	P	18 35 22.7	-0.1
	8.0nm,0.8s,mb4.8						
DMN	Daman	50.22	286	eP	P	18 35 24.5	+0.3
	8.9nm,0.8s,mb4.8						
GKN	Gorkha	50.55	286	eP	P	18 35 26.7	0.0
	13nm,0.8s,mb4.9						
MKAR	Makanchi Array	51.13	311	P	P	18 35 29.4	-1.5
	1.0nm,0.7s,mb3.8,baz=93,slow=8.9,SNR=11						
KOLN	Koldanda	51.49	286	eP	P	18 35 34.4	+0.5
	19nm,0.9s,mb5.0						
CHKZ	Chkalovo	58.75	319	P	P	18 36 25.6	-0.4
	0.7nm,0.7s,mb3.8						
BVAR	Borovoye Array	58.90	318	P	P	18 36 26.8	-0.3
	1.6nm,0.7s,mb4.1,baz=101,slow=7.6,SNR=9.3						
ILAR	Eielson Array	59.40	28	P	P	18 36 31.3	+0.9
	1.6nm,1.0s,mb4.0,baz=262,slow=5.7,SNR=6.5						
INK	Inuvik	64.74	24	P	P	18 37 06.2	+0.3
	1.3nm,1.0s,mb3.9,baz=256,slow=4.6,SNR=3.5						
YBH	Yreka Blue Hor	77.51	50	LR	LR	19 04 09.0	
	comp=Z,663nm,21.4s,MS4.9,baz=351,slow=29						
GNI	Garni	78.95	309	LR	LR	19 19 09.8	
	comp=Z,100nm,18.4s,MS4.2,baz=153,slow=40						
FINES	FINESS Array B	79.19	334	P	P	18 38 30.5	-1.3
	0.7nm,0.6s,mb3.8,baz=56,slow=5.0,SNR=6.7						
NVAR	Mina Array Bea	81.95	51	P	P	18 38 51.0	+4.1
	1.1nm,1.0s,mb3.7,baz=274,slow=4.4,SNR=3.9						
ELK	Elko	83.02	48	LR	LR	19 11 26.5	
	comp=Z,453nm,20.7s,MS4.8,baz=342,slow=32						

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*TIR **04** 18:27:47.2,41.08N×20.33E,h10^{km}*

*PDG **04** 18:27:48.7±0.3,41.11N×20.42E,h10^{km}±1^{km}*

*NEIC **04** 18:27:48.7,41.11N×20.42E,h10^{km},MD2.7(PDG), ML2.4(SKO),After PDG.*

*SKO **04** 18:27:48.1,40.97N×20.35E,h8^{km}*

ISC 04 18:27:49.9±0.6,41.08N±0.04×20.48E±0.04,h10^{km},n19, σ1$\overset{s}{.}$51/38,6C-4D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.24	82	i Pg	Pg	18 27 55.5	+0.4
OHR				eSg	Sg	18 28 01.1	+2.5
OHR	Ohrid	0.24	82	i Pg	Pg	18 27 55.5	+0.4
OHR				eSg	Sg	18 28 01.1	+2.6
KBN	Korca	0.51	152	i Pg	Pg	18 27 59.0	-1.2
KBN				i Sg	Sg	18 28 08.7	+1.6
BIA	Bitola	0.64	95	⇑iPg	Pg	18 28 01.2	-1.6
BIA				eSg	Sg	18 28 11.6	+0.2
BIA	Bitola	0.64	95	⇑iPg	Pg	18 28 01.2	-1.6
BIA				eSg	Sg	18 28 11.6	+0.2
PUK	Puka	1.06	336	i Pg	Pg	18 28 07.6	-3.5
PUK				i Sg	Sg	18 28 24.7	-0.6
SKO	Skopje	1.15	39	ePg	Pg	18 28 11.4	-1.5
SKO				eSg	Sg	18 28 28.9	+0.6
SKO	Skopje	1.15	39	ePg	Pg	18 28 11.4	-1.5
SKO				eSg	Sg	18 28 28.9	+0.6
SKO				Lg		18 28 34.0	
ULC	Ulcinj	1.28	314	ePg	Pg	18 28 10.8	-4.7
ULC				eSg	Sg	18 28 30.4	-2.2
PVY	Plav	1.56	346	⇑iPg	Pg	18 28 16.6	-4.6
PVY				eSg	Sg	18 28 40.9	-1.2
VAY	Valandovo	1.60	80	i Pg	Pg	18 28 18.8	-3.0
VAY				eSg	Sg	18 28 43.0	-0.1
VAY	Valandovo	1.60	80	i Pg	Pg	18 28 18.8	-3.0
VAY				eSg	Sg	18 28 43.0	-0.1
TTG	Podgorica	1.63	326	⇓iPn	Pn	18 28 17.5	-1.3
TTG				eSn	Sn	18 28 42.9	+2.9
BUM	Brajici-Budva	1.70	316	⇑iPn	Pn	18 28 19.4	-0.5
BUM				eSn	Sn	18 28 44.7	+2.9
IVA	Berane	1.85	347	⇓iPn	Pn	18 28 21.6	-0.4
IVA				eSn	Sn	18 28 49.0	+3.5
HCY	Herceg Novi	2.02	313	⇓iPn	Pn	18 28 23.5	-0.9
HCY				eSn	Sn	18 28 52.5	+2.7
NKY	Niksic	2.06	328	⇑iPn	Pn	18 28 24.5	-0.4
NKY				eSn	Sn	18 28 53.8	+2.9
BRY	Bratogost	2.33	322	⇑iPn	Pn	18 28 29.1	+0.3
BRY				eSn	Sn	18 28 59.4	+1.7
UPM	Unac-Piva	2.42	332	⇓iPn	Pn	18 28 30.1	-0.1
UPM				eSn	Sn	18 29 02.7	+2.5

CASC 04 18:27:59.3±1.7,8.97N×82.84W,h14^{km}±19^{km},MD3.8, MW3.8,3C,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTCR	Cotoan	0.11	136	⇑iP	Pb	18 28 03.4	+0.9
BRU2	Volcan	0.23	141	⇑iP	Pg	18 28 05.0	+0.4
BRU2				eS	Sg	18 28 09.1	+1.0
URSC	Urasca	1.26	313	⇑eP	Pb	18 28 22.6	+0.2
URSC				eS	Sb	18 28 38.6	+0.4
LCR2	La Lucha 2	1.38	304	eP	Pn	18 28 24.6	+0.4
LCR2				eS	Sb	18 28 42.1	+0.5

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*IDC **04** 18:55:17.4±0.5,33.76N×37.90W,mb4.1/21,mb1 4.2/21, mb1mx4.2/27,mbtmp4.1/21,MS4.5/12,Ms1 4.4/12, ms1mx4.1/30,Error ellipse: s-maj=17.3km s-min=12.1km az=145.0*

*MOS **04** 18:55:17.1±0.8,33.72N×37.99W,h10^{km},mb4.9/16,Error ellipse: s-maj=18.5km s-min=10.7km az=51.4*

*NEIC **04** 18:55:19.1±0.2,33.73N×37.94W,h10^{km},mb4.7/21,Error ellipse: s-maj=8.1km s-min=5.4km az=162.0*

ISC 04 18:55:17.2±0.3,33.74N±0.07×37.96W±0.06,h10^{km},n75, σ0$\overset{s}{.}$82/67,mb4.4/40,MS4.5/12,2D,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	Sonseca Array	27.78	68	P	P	19 01 08.3	+0.1
	0.1nm,0.3s,baz=270,slow=6.4,SNR=3.6						
MDT	Midelt	27.83	83	LR	LR	19 09 55.5	
	comp=Z,466nm,18.1s,MS4.1,baz=180,slow=32						
SCHQ	Schefferville	29.18	325	LR	LR	19 10 07.1	
	comp=Z,843nm,21.4s,MS4.3,baz=68,slow=30						
SADO	Sadowa	33.41	302	LR	LR	19 14 24.4	
	comp=Z,753nm,21.3s,MS4.4,baz=47,slow=34						
ALLY	Alegheny Colle	34.03	296	eP	P	19 01 58.2	-5.2
SFJD	Kangerlussuaq	34.12	351	LR	LR	19 13 09.1	
	comp=Z,743nm,19.8s,MS4.4,baz=157,slow=31						
FRB	Frobisher Bay	35.49	337	LR	LR	19 13 27.9	
	comp=Z,922nm,21.5s,MS4.5,baz=300,slow=31						
DAVOX	Davos	38.19	55	P	P	19 02 39.0	+0.4
	3.7nm,0.8s,mb4.2,baz=314,slow=12,SNR=4.0						
SDV	Santo Domingo	38.93	238	P	P	19 02 47.3	+2.2
	8.9nm,0.8s,mb4.5,baz=57,slow=6.5,SNR=10						
SDV	Santo Domingo	38.93	238	eP	P	19 02 46.4	+1.3
	25nm,1.2s,mb4.8						
GRA1	Grafenberg Arr	39.27	51	eP	P	19 02 48.4	+0.8
	7.0nm,0.9s,mb4.4						
GRF	Grafenberg Arr	39.27	51	eP	P	19 02 48.4	+0.8
	7.0nm,0.9s,mb4.4						
GRF	Grafenberg Arr	39.27	51	eP	P	19 02 48.4	+0.8
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
GRF	Grafenberg Arr	39.27	51	eP	P	19 02 48.4	+0.8
GRF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
MOX	Moxa	39.61	49	eP	P	19 02 52.0	+1.5
WVT	Waverly	40.60	288	eP	P	19 02 57.4	-1.3
	comp=Z,24nm,1.6s,mb4.6						
WVT	Waverly	40.60	288	eP	P	19 02 57.4	-1.3
WVT				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.6						
KHC	Kasperske Hory	40.77	52	eP	P	19 03 00.0	0.0
DBIC	Dimbokro	40.78	124	P	P	19 03 00.4	0.0
	comp=Z,4.1nm,0.8s,mb4.1,baz=302,slow=10.0,SNR=4.6						
DBIC				LR	LR	19 18 13.4	
	comp=Z,490nm,18.3s,MS4.4,baz=356,slow=34						
GERES	GERESS Array B	40.84	52	P	P	19 03 01.3	+0.7
	comp=Z,1.1nm,0.7s,mb3.6,baz=270,slow=8.0,SNR=9.1						
CII	Carovilli	41.55	63	eP	P	19 03 03.8	-2.7
	comp=Z,4.8nm,0.8s,mb4.2						
NOA	NORSAR Array B	41.57	34	P	P	19 03 05.3	-1.1
	comp=Z,0.7nm,0.7s,mb3.4,baz=245,slow=8.0,SNR=2.3						
ULM	Lac du Bonnet	44.93	310	P	P	19 03 33.2	-0.6
	comp=Z,1.9nm,0.6s,mb4.1,baz=172,slow=14,SNR=2.6						
ULM				LR	LR	19 20 33.2	
	comp=Z,686nm,21.1s,MS4.6,baz=70,slow=34						
BOLS	Boljevac	46.86	59	⇓iP	P	19 03 50.5	+1.4
FINES	FINESS Array B	48.69	35	P	P	19 04 02.8	-0.4
	comp=Z,4.0nm,1.0s,mb4.4,baz=236,slow=6.9,SNR=4.7						
SAML	Samuel	48.75	214	eP	P	19 04 03.9	-0.4
	comp=Z,24nm,1.8s,mb4.9						
ARCES	ARCESS Array B	49.57	24	P	P	19 04 08.9	-1.1
	comp=Z,5.0nm,1.0s,mb4.5,baz=259,slow=6.2,SNR=7.1						
WMOK	Wichita Mounta	49.60	289	eP	P	19 04 10.4	-0.2
	comp=Z,4.2nm,0.9s,mb4.5						
WMOK	Wichita Mounta	49.60	289	eP	P	19 04 10.5	-0.1
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BDFB	Brasilia	50.03	193	P	P	19 04 13.2	-1.0
	comp=Z,2.4nm,0.6s,mb4.4,baz=96,slow=4.9,SNR=4.2						
AKASG	Malin Array Be	50.79	49	P	P	19 04 18.6	-0.9
	comp=Z,0.2nm,0.2s,mb3.6,baz=272,slow=7.6,SNR=9.3						
SDCO	Great Sand Dun	53.89	295	P	P	19 04 45.3	+2.5
	comp=Z,14nm,0.7s,mb5.0						
SIV	San Ignacio	54.14	208	P	P	19 04 44.1	-0.8
	comp=Z,1.7nm,0.7s,mb4.1,baz=36,slow=6.0,SNR=9.8						
YKA	Yellowknife Ar	54.62	326	LR	LR	19 25 47.0	
	comp=Z,642nm,21.2s,MS4.7,slow=34						
MOS	Moscow	55.02	42	eP	P	19 04 50.7	-0.2
MOS				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.3						
TXAR	Lajitas Array	55.34	285	P	P	19 04 53.4	-0.2
	comp=Z,1.7nm,0.9s,mb4.1,baz=106,slow=9.1,SNR=6.7						
PDAR	Pinedale Array	55.41	302	P	P	19 04 53.8	-0.1
	comp=Z,3.8nm,1.0s,mb4.4,baz=78,slow=7.5,SNR=16						
PDAR				LR	LR	19 25 57.6	
	comp=Z,314nm,19.3s,MS4.4,baz=94,slow=33						
BW06	Boulder Array	55.41	302	eP	P	19 04 53.7	-0.3
	comp=Z,14nm,1.5s,mb4.8						
BRTR	Keskin Array B	56.30	62	P	P	19 04 59.4	-0.9
	comp=Z,1.8nm,0.9s,mb4.1,baz=283,slow=5.5,SNR=8.3						
HWUT	Hardware Ranch	57.17	301	eP	P	19 05 06.5	-0.1
	comp=Z,4.4nm,0.9s,mb4.5						
LPAZ	La Paz	57.47	215	P	P	19 05 09.3	+0.3
	comp=Z,1.8nm,0.5s,mb4.3,baz=25,slow=7.6,SNR=13						
LPAZ	La Paz	57.47	215	eP	P	19 05 09.5	+0.5
	comp=Z,34nm,1.6s,mb5.1						
LPAZ	La Paz	57.47	215	eP	P	19 05 09.5	+0.5
LPAZ				pmax	pmax		
	comp=Z,34nm,1.6s						
DUG	Dugway	58.52	300	eP	P	19 05 16.7	+0.7
	comp=Z,14nm,1.3s,mb4.8						
DUG	Dugway	58.52	300	eP	P	19 05 16.7	+0.6
DUG				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
HLID	Hailey	58.57	304	P	P	19 05 15.6	-0.7
	comp=Z,140nm,2.8s,mb5.5						
NEW	Newport	58.94	310	P	P	19 05 18.4	-0.4
	comp=Z,4.5nm,0.7s,mb4.6,baz=69,slow=17,SNR=3.8						
NEW	Newport	58.94	310	eP	P	19 05 18.5	-0.4
	comp=Z,6.0nm,0.7s,mb4.7						
NEW	Newport	58.94	310	eP	P	19 05 18.5	-0.3
NEW				pmax	pmax		
	comp=Z,6.0nm,0.7s						
INK	Inuvik	61.11	335	eP	P	19 05 33.5	0.0
	comp=Z,24nm,1.5s,mb5.1						
INK	Inuvik	61.11	335	eP	P	19 05 33.5	+0.1
INK				pmax	pmax		
	comp=Z,24nm,1.5s						
NEN	Nelson	61.66	296	eP	P	19 05 38.2	+0.6
TPNV	Topopah Spring	62.20	298	eP	P	19 05 41.8	+0.5
	comp=Z,9.5nm,1.4s,mb4.7						
TPNV	Topopah Spring	62.20	298	eP	P	19 05 41.8	+0.5
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.7						
DLBC	Dease Lake	62.98	324	LR	LR	19 32 48.7	
	comp=Z,534nm,20.1s,MS4.7,baz=77,slow=36						
NVAR	Mina Array Bea	63.13	300	P	P	19 05 47.5	+0.1
	comp=Z,1.0nm,0.8s,mb4.0,baz=77,slow=7.1,SNR=5.6						
NVAR				LR	LR	19 34 49.5	
	comp=Z,400nm,18.2s,MS4.6,baz=95,slow=38						
NVAR	Mina Array Bea	63.13	300	P	P	19 05 47.5	+0.1
NVAR				LR	LR	19 34 49.5	
MOD	Modoc	63.21	304	eP	P	19 05 47.5	-0.3
	comp=Z,101nm,2.5s,mb5.5						
ORR	Orenburg	65.94	43	⇓iP	P	19 06 04.2	-1.2
ORR				pmax	pmax		
	comp=Z,50nm,5.1s						
ARU	Arti	65.98	37	eP	P	19 06 05.4	-0.1
ILAR	Eielson Array	67.44	334	P	P	19 06 15.6	+0.9
	comp=Z,1.1nm,1.0s,mb3.9,baz=64,slow=4.6,SNR=8.3						
CFAA	Coronel Fontan	70.99	207	P	P	19 06 37.0	-0.2
	comp=Z,0.3nm,0.6s,mb3.4,baz=66,slow=18,SNR=3.9						
CHKZ	Chkalovo	73.35	36	eP	P	19 06 51.0	+0.3
	comp=Z,3.8nm,0.8s,mb4.4						
CHKZ	Chkalovo	73.35	36	eP	P	19 06 51.0	+0.3
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
TIXI	Tiksi	74.49	4	eP	P	19 06 56.7	-0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KURK	Kurchatov	79.06	35	eP	P	19 07 23.3	+0.4
	comp=Z,7.2nm,0.9s,mb4.6						
KURK	Kurchatov	79.06	35	eP	P	19 07 23.3	+0.4
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
LSZ	Lusaka	79.60	116	eP	P	19 07 27.5	+1.0
	comp=Z,8.2nm,1.2s,mb4.5						
LSZ	Lusaka	79.60	116	eP	P	19 07 27.5	+1.0
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
AAK	Ala-Archa	82.06	44	eP	P	19 07 39.6	+0.6
	comp=Z,16nm,1.9s,mb4.6						
AAK	Ala-Archa	82.06	44	eP	P	19 07 39.6	+0.6
AAK				pmax	pmax		
	comp=Z,16nm,1.9s,mb4.6						
MKAR	Makanchi Array	83.50	37	P	P	19 07 46.5	+0.2
	comp=Z,2.8nm,0.9s,mb4.3,baz=315,slow=5.1,SNR=21						
MKAR	Makanchi Array	83.50	37	P	P	19 07 46.5	+0.2
BOD	Bodaibo	85.79	15	eP	P	19 07 58.1	+0.6
BOD				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.0						
BOSA	Boshof	86.17	128	LR	LR	19 46 00.2	
	comp=Z,127nm,18.7s,MS4.3,baz=336,slow=35						

IDC 04 19:54:22.8±2.1,16.16S×175.21W,h173^{km}±39^{km}, mb3.6/3,mb1 3.8/4,mb1mx3.5/14,mbtmp4.1/4,Error ellipse: s-maj=149.5km s-min=19.3km az=140.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.00	56	P	P	19 55 25.7	+1.2
	14nm,0.3s,baz=48,slow=7.8,SNR=9.6						
AFI				S	S	19 56 11.1	-0.9
	50nm,0.3s,baz=30,slow=22,SNR=16						
STKA	Stephens Creek	42.15	240	P	P	20 01 57.9	-2.0
	3.6nm,0.7s,baz=75,slow=9.3,SNR=7.3						
WB2	Warramunga Arr	47.96	258	eP	P	20 02 44.9	-1.2
WRA	Warramunga Arr	47.97	258	P	P	20 02 44.4	-1.7
	0.5nm,0.3s,baz=92,slow=6.9,SNR=14						
ASPA	Alice Springs	48.22	253	eP	P	20 02 46.5	-1.5
ILAR	Eielson Array	83.53	12	P	P	20 06 31.1	-1.1
	0.8nm,0.5s,baz=224,slow=5.2,SNR=18						
GERES	GERESS Array B	146.60	349	PKPbc	PKPbc	20 13 43.2	-0.3
	0.5nm,0.7s,slow=1.3,SNR=5.1						

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*NEIC **04** 20:11:56.1±1.8,18.83S×175.50W,h162^{km}±16^{km},mb4.8/3, Error ellipse: s-maj=19.6km s-min=12.7km az=134.0*

*IDC **04** 20:11:56.8±2.9,18.74S×175.53W,h166^{km}±26^{km},mb3.9/6, mb1 4.1/7,mb1mx3.9/15,mbtmp4.4/7,Error ellipse: s-maj=30.8km s-min=15.7km az=135.0*

ISC 04 20:11:54.6±2.0,18.8S±0.1×175.6W±0.1,h157^{km}±19^{km}, n25,σ0$\overset{s}{.}$82/24,mb4.4/12,4C-2D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	6.11	37	P	P	20 13 23.6	-0.1
	12nm,0.3s,baz=59,slow=3.4,SNR=6.5						
AFI				S	S	20 14 26.5	-6.4
	20nm,0.3s,baz=235,slow=22,SNR=7.3						
AFI	Afiamalu	6.11	37	P	P	20 13 23.6	-0.1
AFI				S	S	20 14 26.5	-6.4
RPZ	Rata Peaks	27.24	201	P	P	20 17 27.2	+1.4
	5.9nm,0.6s,mb4.4,baz=16,slow=18,SNR=2.6						
CTA	Charters Tower	35.95	262	eP	P	20 18 42.6	+0.7
	9.7nm,0.3s,mb4.9						
STKA	Stephens Creek	40.56	243	P	P	20 19 20.4	+0.3
	2.3nm,0.5s,mb4.1,baz=89,slow=14,SNR=7.7						
STKA	Stephens Creek	40.56	243	P	P	20 19 20.4	+0.3
WB2	Warramunga Arr	47.09	260	⇓iP	P	20 20 11.9	-0.8
WRAB	Tennant Creek	47.10	260	eP	P	20 20 11.9	-0.8
	10nm,0.4s,mb4.8						
WRA	Warramunga Arr	47.10	260	P	P	20 20 12.1	-0.7
	7.5nm,0.4s,mb4.7,baz=97,slow=7.9,SNR=187						
WRA				PcP	PcP	20 21 41.2	-1.2
	0.9nm,0.3s,baz=91,slow=3.8,SNR=9.6						
ASPA	Alice Springs	47.13	255	⇑iP	P	20 20 12.8	-0.1
KAKA	Kakadu	50.24	269	eP	P	20 20 46.3	+9.3
	15nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	55.52	261	⇓iP	P	20 21 15.2	-0.7
	8.7nm,1.2s,mb4.5						
MJAR	Matsushiro Arr	70.26	322	P	P	20 22 52.6	-0.1
	3.7nm,0.7s,mb4.2,baz=157,slow=5.9,SNR=14						
KS15	Wonju Array Si	77.20	317	eP	P	20 23 34.0	+1.2
NVAR	Mina Array Bea	78.26	42	P	P	20 23 37.4	-1.2
	1.5nm,0.9s,mb3.6,baz=232,slow=12,SNR=7.1						
TXAR	Lajitas Array	84.25	57	P	P	20 24 09.9	-0.2
	0.3nm,0.3s,mb3.6,baz=207,slow=8.4,SNR=5.1						
GDL2	Guadalupe Moun	84.93	54	eP	P	20 24 13.7	+0.2
YMR	Madison River	86.28	40	eP	P	20 24 20.6	+0.9
	21nm,0.7s,mb5.0						
ENH	Enshi	87.01	303	eP	P	20 24 24.8	+1.2
	8.8nm,1.4s,mb4.4						
SNAA	Sanae	89.59	178	⇑	P	20 24 35.7	+0.8
VNA3	Neumayer Olymp	89.64	175	⇑	P	20 24 33.6	-1.5
VNA2	Neumayer--Watz	90.10	176	⇑	P	20 24 37.0	-0.3
ARCES	ARCESS Array B	127.67	351	PKP	PKPdf	20 30 40.3	-0.5
	2.3nm,0.9s,baz=24,slow=3.1,SNR=3.8						
BRTR	Keskin Array B	147.32	316	PKPbc	PKPdf	20 31 20.4	+3.3
	0.8nm,0.5s,baz=45,slow=6.1,SNR=11						
GERES	GERESS Array B	149.13	348	PKPbc	PKPdf	20 31 25.6	+5.9
	0.4nm,0.5s,baz=27,slow=3.0,SNR=5.6						

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*SOF **04** 20:12:05.0,40.61N×27.40E,h2^{km},MD3.8*

*ATH **04** 20:12:07.7,40.77N×27.45E,h31^{km}±11^{km},MD3.9/6*

*IDC **04** 20:12:07.7±1.3,40.60N×27.18E,mb3.6/5,mb1 3.7/9, mb1mx3.6/24,mbtmp3.5/9,ML3.6/5,Error ellipse: s-maj=19.8km s-min=14.7km az=54.0*

*MOS **04** 20:12:07.8±0.9,40.70N×27.32E,h10^{km},mb3.9/6,Error ellipse: s-maj=9.2km s-min=5.1km az=109.8*

*ISK **04** 20:12:08.8,40.68N×27.30E,h13^{km},ML4.1*

*CSEM **04** 20:12:08.5±0.0,40.69N×27.33E,h10^{km},ML4.2,Error ellipse: s-maj=1.3km s-min=0.8km az=14.0*

*NEIC **04** 20:12:08.0,40.70N×27.30E,h13^{km},MD3.9(ATH), ML4.1(ISK),After ISK.*

*THE **04** 20:12:09.4,40.73N×27.50E,h20^{km},ML4.2*

*SKO **04** 20:12:12.3,37.46N×24.60E,h10^{km}*

ISC 04 20:12:08.5±0.3,40.71N±0.02×27.29E±0.02,h10^{km}±2^{km}, n134,σ0$\overset{s}{.}$91/166,mb3.8/5,10C-9D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SART	Tekirdag	0.09	258	i P	Pg	20 12 10.9	-0.1
SART				i S	Sg	20 12 12.6	0.0
RKY	Sarkoy-Tekirda	0.09	257	PG	Pg	20 12 11.9	+0.9
MRMT	Marmara Adasi	0.26	114	PG	Pg	20 12 13.6	-0.3
MRMT				SG	Sg	20 12 18.0	+0.5
TKR	Tekirdag	0.34	33	PG	Pg	20 12 16.4	+0.9
TKR				SG	Sg	20 12 21.8	+1.6
LPK	Lapseki	0.52	231	PG	Pg	20 12 19.4	+0.3
EDC	Edincik	0.57	129	PG	Pg	20 12 20.2	+0.3
BNT	Bandirma	0.59	126	PG	Pg	20 12 20.5	0.0
SLVT	Silivri	0.87	53	PG	Pg	20 12 26.4	+0.4
SLVT				SG	Sg	20 12 39.3	+1.6
KCT	Karacabey	0.93	118	PG	Pg	20 12 26.3	-0.8
KCT				SG	Sg	20 12 38.9	-0.6
ALN	Alexandroupoli	0.96	282	ePg	Pg	20 12 27.5	-0.3
ALN				eSg	Sg	20 12 40.8	+0.1
CTT	Catalca	0.97	63	PG	Pg	20 12 27.5	-0.4
ELBA	Catalca	0.97	63	i P	Pb	20 12 27.5	+0.6
ELBA				i S	Sb	20 12 40.1	+0.5
BTOK	Tokmak	1.10	149	i P	Pb	20 12 30.2	+1.0
BTOK				i S	Sb	20 12 45.6	+2.2
EZN	Ezine	1.15	220	PN	Pn	20 12 30.6	0.0
BALB	Balikesir	1.16	157	PN	Pn	20 12 30.8	+0.1
ARMT	Armutlu	1.21	96	PN	Pn	20 12 31.8	+0.4
EDRB	Edirne	1.21	340	PN	Pn	20 12 32.6	+1.1
BGKT	Bogazkoy	1.22	67	PN	Pn	20 12 32.4	+0.8
ISK	Istanbul-Kandi	1.39	74	PN	Pn	20 12 33.0	-1.0
ORLT	Orhaneli	1.39	118	PN	Pn	20 12 34.5	+0.4
BADT	Buyukada	1.40	83	PN	Pn	20 12 34.0	-0.1
RDO	Rodhopi	1.40	289	ePN	Pn	20 12 34.9	+0.8
RDO				eSN	Sn	20 12 53.5	+0.8
KLYT	Kilyos	1.44	67	PN	Pn	20 12 34.9	+0.2
AYVA	Ayvalik	1.47	198	i P	Pn	20 12 36.6	+1.5
AYVA				i S	Sb	20 12 57.6	+3.5
DST	Dursunbey	1.50	137	PN	Pn	20 12 35.9	+0.2
ULDT	Uludag	1.52	111	i P	Pn	20 12 36.1	+0.3
ULDT				i S	Sb	20 12 56.3	+0.8
YLV	Yalova	1.59	94	PN	Pn	20 12 37.3	+0.4
PRK	Paraskevi	1.66	209	ePB	Pb	20 12 38.2	-0.5
PRK				eSN	Sn	20 13 00.7	+1.4
KDZ	Kurdzhali	1.70	304	i P	Pn	20 12 39.0	+0.6
LIA	Limnos Island	1.80	244	ePN	Pn	20 12 40.0	+0.1
LIA				eSN	Sn	20 13 04.0	+1.0
HRT	Hereke	1.81	86	PN	Pn	20 12 39.9	-0.1
SILT	Sile	1.84	75	PN	Pn	20 12 40.7	+0.3
LOS	Limnos	1.86	246	ePn	Pn	20 12 40.5	-0.2
LOS				eSn	Sn	20 13 05.7	+1.3
AKS	Akhisar	1.87	167	PN	Pn	20 12 41.1	+0.2
DIM	Dimitrovgrad	1.88	316	i P	Pn	20 12 41.0	-0.1
RZN	Rozhen	2.17	298	i P	Pn	20 12 45.0	-0.3
EYL	Eskiyayla	2.19	93	PN	Pn	20 12 45.6	+0.2
IZM	Izmir	2.31	181	PN	Pn	20 12 47.1	0.0
BLCB	Balcova	2.33	185	PN	Pn	20 12 47.3	-0.1
GDZ	Gediz	2.34	133	i P	Pn	20 12 47.2	-0.3
GDZ				i S	Sn	20 13 21.9	+5.3
GPA	Golpazari	2.34	99	PN	Pn	20 12 48.0	+0.4
PLD	Plovdiv	2.40	307	i P	Pn	20 12 48.2	-0.2
PRD	Provadia	2.49	2	i P	Pn	20 12 49.0	-0.8
OUR	Ouranopolis	2.55	263	ePn	Pn	20 12 50.1	-0.5
	comp=Z,20nm,0.4s						
BORA	Eskisehir	2.56	108	i P	Pn	20 12 57.0	+6.2
BORA				i S	Sn	20 13 31.3	+9.1
NVR	Nevrokopi	2.67	285	ePN	Pn	20 12 52.7	+0.3
ALT	Altintas	2.73	126	PN	Pn	20 12 52.9	-0.2
SZH	Strazhica	2.75	339	i P	Pn	20 12 54.0	+0.5
MMB	Musomiste	2.83	289	i P	Pn	20 12 54.5	-0.1
PAIG	Paliouri	2.87	255	ePn	Pn	20 12 54.4	-0.8
PVL	Pavlikeni	2.90	330	i P	Pn	20 12 56.0	+0.4
KHL	Karahalli	2.94	143	PN	Pn	20 12 56.2	0.0
PLG	Polygyros	2.95	265	ePN	Pn	20 12 56.1	-0.2
ESKT	Eskisehir	2.98	112	PN	Pn	20 12 57.1	+0.4
PGB	Panagyurishte	2.98	309	i P	Pn	20 12 56.0	-0.7
SOH	Sokhos	2.99	273	ePn	Pn	20 12 56.6	-0.4
SOH				eSn	Sn	20 13 34.9	+1.6
MDU	Mudurnu	3.00	93	PN	Pn	20 12 57.5	+0.5
SMG	Samos	3.02	187	ePN	Pn	20 12 56.2	-1.1
AOS	Alonnisos	3.04	241	ePn	Pn	20 12 56.8	-0.8
	comp=Z,5.6nm,0.7s						
DENT	Denizli	3.25	155	PN	Pn	20 13 00.5	0.0
THE	Thessaloniki	3.29	270	ePn	Pn	20 13 01.7	+0.5
	comp=Z,2.7nm,0.2s						
KNT	Kendrikon	3.36	279	ePn	Pn	20 13 02.2	0.0
	comp=Z,15nm,0.5s						
KKB	Krupnik	3.37	291	i P	Pn	20 13 03.0	+0.6
XOR	Xorichti	3.42	248	ePn	Pn	20 13 01.6	-1.4
VTS	Vitosha	3.59	303	i P	Pn	20 13 06.0	+0.6
VAY	Valandovo	3.62	281	ePn	Pg	20 13 14.6	-6.2
VAY				eSn	Sg	20 14 04.4	-4.7
VAY	Valandovo	3.62	281	ePn	Pg	20 13 14.6	-6.2
VAY				eSn	Sg	20 14 04.4	-4.7
YER	Yerkesik	3.65	167	ePN	Pn	20 13 06.6	+0.3
LIT	Litokhoron	3.71	262	ePn	Pn	20 13 06.4	-0.8
GRG	Griva	3.72	275	ePn	Pn	20 13 07.2	0.0
GRG	Griva	3.72	275	ePn	Pn	20 13 07.2	0.0
ISP	Isparta	3.80	138	ePN	Pn	20 13 09.0	+0.6
ISP	Isparta	3.80	138	ePn	Pn	20 13 08.0	-0.4
ISP				ePg	Pg	20 13 21.1	-3.2
ISP				eSg	Sg	20 14 13.1	-1.9
TIRR	Tirgusor	3.84	12	⇓P	Pn	20 13 08.5	-0.5
TIRR	Tirgusor	3.84	12	⇓P	Pn	20 13 08.5	-0.5
KIZT	Kizilcal	3.98	116	ePN	Pn	20 13 11.0	0.0
HARR	Harsova	4.01	7	⇑P	Pn	20 13 10.5	-0.9
HARR	Harsova	4.01	7	⇑P	Pn	20 13 10.5	-0.9
SAFT	Safranbolu	4.12	81	ePN	Pn	20 13 13.3	+0.3
AGG	Agios Georgios	4.17	248	ePn	Pn	20 13 13.0	-0.7
LOD	Lodumlu	4.27	99	ePN	Pn	20 13 15.1	+0.1
ANTO	Ankara	4.29	99	ePg	Pg	20 13 29.2	-5.0
ANTO				eSg	Sg	20 14 24.8	-6.6
ANTO	Ankara	4.29	99	ePg	Pg	20 13 29.2	-5.0

ANTO				eSg	Sg	20 14 24.8	-6.6
ISR	Istrita	4.44	353	⇑P	Pn	20 13 21.4	+3.8
FNA	Florina	4.49	273	ePn	Pn	20 13 18.4	+0.1
CFR	Carcaliu	4.51	8	⇑P	Pn	20 13 17.2	-1.3
CFR	Carcaliu	4.51	8	⇑P	Pn	20 13 17.2	-1.3
BIA	Bitola	4.53	276	ePn	Pn	20 13 18.5	-0.4
BIA				eSn	Sn	20 14 06.5	-5.8
BARS	Barje	4.60	299	⇑iPn	Pn	20 13 20.1	+0.3
BARS				Sn	Sn	20 14 14.6	+0.7
MEV	Metsovon	4.73	261	ePn	Pn	20 13 21.5	-0.1
MTUR	Matau	4.80	341	⇓P	Pn	20 13 21.8	-0.9
MTUR	Matau	4.80	341	⇓P	Pn	20 13 21.8	-0.9
SNX	Sinaia	4.82	345	⇓P	Pn	20 13 22.6	-0.4
SNX	Sinaia	4.82	345	⇓P	Pn	20 13 22.6	-0.3
MLR	Muntele Rosu	4.88	349	Pn	Pn	20 13 25.0	+1.2
	6.6nm,0.3s,baz=133,slow=4.8,SNR=46						
MLR				Lg		20 14 44.9	
	2.5nm,0.3s,baz=12,slow=22,SNR=3.1						
OHR	Ohrid	4.94	277	ePn	Pn	20 13 23.9	-0.6
OHR				eSn	Sn	20 14 16.7	-5.7
BR131	Keskin Array S	4.96	99	ePn	Pn	20 13 23.9	-1.0
BR131				ePg	Pg	20 13 43.1	-4.4
BR131	Keskin Array S	4.96	99	ePn	Pn	20 13 23.9	-1.0
BR131	Keskin Array S	4.96	99	ePg	Pg	20 13 43.1	-4.4
BRTR	Keskin Array B	4.96	99	Pn	Pn	20 13 24.2	-0.7
	0.7nm,0.3s,baz=276,slow=12,SNR=26						
BRTR				Pg	Pg	20 13 43.4	-4.1
	1.3nm,0.3s,baz=276,slow=15,SNR=16						
BRTR				Sn	Sn	20 14 19.1	-3.9
	1.2nm,0.3s,baz=243,slow=16,SNR=3.3						
BRTR				Lg		20 14 48.5	
	baz=222,slow=15,SNR=2.7						
BRTR	Keskin Array B	4.96	99	P	Pn	20 13 24.2	-0.7
BRTR						20 14 19.1	
BRTR	Keskin Array B	4.96	99	Pg	Pg	20 13 43.4	-4.1
BRTR				S	Sn	20 14 19.1	-3.9
VOIR		5.00	342	⇑P	Pn	20 13 25.9	+0.4
VOIR		5.00	342	⇑P	Pn	20 13 25.9	+0.4
BOLS	Boljevac	5.04	310	eSn	Sn	20 14 11.5	-13
VRI	Vrincioaia	5.17	356	⇓P	Pn	20 13 30.0	+2.1
VRI	Vrincioaia	5.17	356	⇓P	Pn	20 13 30.0	+2.1
IGT	Igoumenitsa	5.46	260	ePn	Pn	20 13 33.9	+2.0
IDI	Anoyia	5.73	200	Pn	Pn	20 13 33.7	-2.0
	0.6nm,0.3s,baz=16,slow=20,SNR=6.2						
IDI				Sn	Sn	20 14 37.4	-4.9
	0.8nm,0.3s,baz=318,slow=23,SNR=3.0						
GRUS	Gruza	5.82	305	iPn	Pn	20 13 36.2	-0.8
DIVS	Divcibare	6.38	305	iPn	Pn	20 13 45.2	+0.4
GVD	Gavdhos	6.38	204	ePn	Pn	20 13 39.8	-5.1
	52nm,0.4s						
GVD	Gavdhos	6.38	204	ePn	Pn	20 13 39.8	-5.1
	52nm,0.4s						
KIS	Kishinev	6.38	9	eP	Pn	20 13 51.0	+6.0
SIM	Simferopol’	6.57	48	deP	Pn	20 13 45.7	-1.9
SIM				e		20 14 55.5	
SIM				pmax	pmax		
	comp=Z,38nm,0.3s						
SIM	Simferopol’	6.57	48	eP	Pn	20 13 45.7	-1.9
	comp=Z,38nm,0.3s						
TIP	Timpagrande	8.23	263	ePn	P	20 14 07.9	-3.0
TIP	Timpagrande	8.23	263	ePn	P	20 14 07.9	-3.0
PKSM	Moragy	8.35	314	⇑iP	P	20 14 10.6	-1.9
AKASG	Malin Array Be	10.09	7	Pn	P	20 14 34.4	-2.0
	comp=Z,0.5nm,0.3s,baz=196,slow=10,SNR=2.7						
AKASG				Sn	S	20 16 34.5	+3.8
	comp=Z,0.7nm,0.3s,baz=189,slow=25,SNR=5.9						
AKASG				Lg		20 17 29.6	
	comp=Z,0.1nm,0.3s,baz=187,slow=29,SNR=4.0						
GERES	GERESS Array B	12.61	315	Pn	P	20 15 08.4	-2.3
	comp=Z,0.1nm,0.3s,baz=122,slow=13,SNR=3.8						
KHC	Kasperske Hory	12.84	316	eP	P	20 15 17.5	+3.7
FINES	FINESS Array B	20.78	358	P	P	20 16 49.9	-2.1
	comp=Z,1.6nm,0.6s,baz=162,slow=8.8,SNR=8.4						
FINES	FINESS Array B	20.78	358	P	P	20 16 49.9	-2.0
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS	Hagfors	21.21	341	P	P	20 16 56.7	+0.4
	comp=Z,4.5nm,0.9s,mb3.8,baz=156,slow=14,SNR=3.2						
HFS	Hagfors	21.21	341	P	P	20 16 56.7	+0.4
HFS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ORR	Orenburg	21.80	51	⇑iP	P	20 17 00.6	-1.8
ORR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
NB2	NORSAR Subarra	22.62	339	P	P	20 17 10.2	-0.2
	comp=Z,6.7nm,1.1s,mb4.0,baz=148,slow=11						
NOA	NORSAR Array B	22.62	339	P	P	20 17 10.9	+0.5
	comp=Z,1.7nm,0.9s,mb3.5,baz=148,slow=11,SNR=4.3						
NOA	NORSAR Array B	22.62	339	P	P	20 17 10.9	+0.5
NOA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EKA	Eskdalemuir Ar	24.82	316	P	P	20 17 30.9	-0.9
	comp=Z,2.1nm,0.8s,mb3.8,baz=112,slow=9.6,SNR=4.0						
EKA	Eskdalemuir Ar	24.82	316	P	P	20 17 30.9	-0.9
EKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	Makanchi Array	39.50	62	P	P	20 19 40.0	-0.7
	comp=Z,1.0nm,0.8s,mb3.6,baz=281,slow=7.1,SNR=9.1						
MKAR	Makanchi Array	39.50	62	P	P	20 19 40.0	-0.7
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						

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*IDC **04** 20:37:35.3±1.1, 28.80N×43.31W, mb4.0/8, mb1 4.3/8, mb1mx4.0/24, mbtmp4.0/8, MS4.0/7, Ms1 4.0/7, ms1mx3.6/30, Error ellipse: s-maj=32.3km s-min=23.4km az=160.0*

*NEIC **04** 20:37:37.0±0.5, 28.78N×43.32W, h10^{km}, mb4.4/7, Error ellipse: s-maj=12.9km s-min=10.5km az=162.0*

ISC 04 20:37:35.0±0.8**, 28.8N**±0.1×**43.3W**±0.1**, h10^{km}, n24, σ0^{s}.51**/17**, mb4.2**/14**, MS4.0**/7**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAML	Samuel	42.19	210	eP	P	20 45 29.5	-0.3
	7.2nm,1.1s,mb4.2						
DBIC	Dimbokro	42.41	114	LR	LR	21 00 02.5	
	comp=Z,151nm,19.4s,MS3.9,baz=314,slow=32						
BDFB	Brasilia	44.44	187	LR	LR	21 01 09.6	
	comp=Z,105nm,18.2s,MS3.8,baz=110,slow=32						
WMOK	Wichita Mounta	47.06	292	eP	P	20 46 08.9	+0.2
	2.4nm,0.6s,mb4.3						
LPAZ	La Paz	50.88	211	P	P	20 46 38.6	+0.2
	1.0nm,0.7s,mb3.8,baz=356,slow=15,SNR=3.1						
TXAR	Lajitas Array	52.25	286	P	P	20 46 48.7	+0.1
	1.5nm,0.8s,mb4.0,baz=94,slow=7.1,SNR=12						
TXAR	Lajitas Array	52.25	286	P	P	20 46 48.7	+0.1
ANMO	Albuquerque	53.23	294	P	P	20 46 56.2	+0.3
	2.0nm,0.7s,mb4.2						
BW06	Boulder Array	54.24	304	eP	P	20 47 03.4	+0.2
	3.2nm,0.5s,mb4.5						
PDAR	Pinedale Array	54.24	304	P	P	20 47 03.2	+0.1
	3.9nm,0.8s,mb4.4,baz=77,slow=7.6,SNR=9.0						
EDM	Edmonton	55.74	317	eP	P	20 47 13.6	-0.4
DUG	Dugway	57.10	301	eP	P	20 47 24.2	+0.4
	5.2nm,1.0s,mb4.5						
AKASG	Malin Array Be	57.45	46	P	P	20 47 25.2	-1.0
	0.1nm,0.3s,mb3.4,baz=276,slow=6.4,SNR=5.9						
NEW	Newport	58.68	311	eP	P	20 47 34.6	-0.2
	7.7nm,1.1s,mb4.7						
ELK	Elko	58.79	302	LR	LR	21 09 50.5	
	comp=Z,183nm,21.4s,MS4.2,baz=200,slow=33						
NVAR	Mina Array Bea	61.65	300	P	P	20 47 54.2	-1.1
	1.0nm,0.8s,mb4.0,baz=81,slow=7.4,SNR=7.5						
BR131	Keskin Array S	62.70	58	eP	P	20 48 03.4	+1.0
	1.3nm,0.8s,mb4.1						
BRTR	Keskin Array B	62.70	58	P	P	20 48 03.2	+0.9
	1.1nm,0.8s,mb4.0,baz=279,slow=4.8,SNR=7.5						
INK	Inuvik	63.65	335	P	P	20 48 08.1	-0.1
	1.4nm,0.5s,mb4.2,baz=59,slow=11,SNR=8.2						
YBH	Yreka Blue Hor	64.00	305	LR	LR	21 16 44.6	
	comp=Z,162nm,18.7s,MS4.2,baz=131,slow=37						
DLBC	Dease Lake	64.28	324	LR	LR	21 16 48.7	
	comp=Z,287nm,21.3s,MS4.4,baz=66,slow=37						
ILAR	Eielson Array	69.83	334	P	P	20 48 47.9	+0.5
	1.3nm,0.8s,mb3.9,baz=127,slow=7.1,SNR=12						
PLCA	Paso Flores	73.69	201	LR	LR	21 21 50.1	
	comp=Z,51nm,18.3s,MS3.9,baz=181,slow=36						
AKTO	Aktyubinsk	74.99	40	LR	LR	21 21 19.4	
	comp=Z,51nm,18.4s,MS3.9,slow=35						

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*IDC **04** 20:38:34.0±1.0, 35.00S×178.80W, h37^{km}±4^{km}, mb4.5/3, mb1 4.6/6, mb1mx4.2/14, mbtmp4.6/6, ML4.2/3, MS3.9/6, Ms1 3.9/6, ms1mx3.6/20, Error ellipse: s-maj=34.4km s-min=21.3km az=154.0*

*NEIC **04** 20:38:35.5±0.8, 34.93S×179.10W, mb4.9/6, Error ellipse: s-maj=18.4km s-min=10.2km az=100.0*

ISC 04 20:38:35.4±0.9**, 34.90S**±0.05×**179.3W**±0.1**, h40^{km}, h40^{km}±.6^{km}:pP-P, n89, σ1^{s}.39**/68**, mb4.8**/10**, MS3.9**/4**, 14C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	3.27	215	ePN	P	20 39 25.9	+0.4
MXZ				SN	S	20 40 10.2	+6.5
MXZ	Matakaoa Point	3.27	215	eP	P	20 39 25.9	+0.4
PUZ	Puketiti	3.71	211	ePN	P	20 39 31.6	-0.1
PUZ				SN	S	20 40 19.1	+4.2
PUZ	Puketiti	3.71	211	eP	P	20 39 31.6	-0.2
MWZ	Matawai	4.26	215	ePN	P	20 39 39.6	+0.1
MWZ				SN	S	20 40 35.1	+6.5
MWZ	Matawai	4.26	215	eP	P	20 39 39.6	+0.1
URZ	Urewera	4.41	219	Pn	P	20 39 42.5	+0.9
	10nm,0.3s,baz=41,slow=4.8,SNR=96						
URZ				Sn	S	20 40 35.0	+2.6
	6.7nm,0.3s,baz=121,slow=12,SNR=3.3						
URZ	Urewera	4.41	219	PN	P	20 39 42.5	+0.9
URZ				SN	S	20 40 36.5	+4.1
KNZ	Kokohu	4.76	209	ePN	P	20 39 46.0	-0.6
KNZ				SN	S	20 40 44.8	+3.5
KNZ	Kokohu	4.76	209	eP	P	20 39 46.1	-0.5
WCZ	Waipu Caves	5.26	257	ePN	P	20 39 56.8	+3.1
WCZ	Waipu Caves	5.26	257	eP	P	20 39 56.8	+3.2
BKZ	Black Stump Fm	5.41	217	ePN	P	20 39 54.8	-0.9
BKZ				SN	S	20 40 57.8	+0.2
BKZ	Black Stump Fm	5.41	217	eP	P	20 39 54.8	-0.9
BKZ				S	S	20 40 57.8	+0.2
RAO	Raoul Island	5.76	12	LR	LR	20 41 41.2	
	comp=Z,336nm,22.0s,baz=106,slow=32						
NGZ	Ngauruhoe	5.88	222	eP	P	20 40 03.3	+1.0
TSZ	Takapari Road	6.37	215	ePN	P	20 40 06.9	-2.2
TSZ				SN	S	20 41 21.5	0.0
TSZ	Takapari Road	6.37	215	eP	P	20 40 06.9	-2.2
KIW	Kapiti Island	7.49	216	SN	S	20 41 46.7	-2.8
SNZO	South Karori	7.94	214	Pn	P	20 40 28.1	-2.9
SNZO				eSn	S	20 41 55.8	-4.7
TCW	Tory Channel	8.07	217	SN	S	20 41 59.8	-3.9
THZ	Tophouse	9.17	219	ePN	P	20 40 43.3	-4.8
THZ				SN	S	20 42 26.7	-4.4
THZ	Tophouse	9.17	219	eP	P	20 40 43.3	-4.8
RPZ	Rata Peaks	11.52	217	Pn	P	20 41 17.1	-3.1
	1.3nm,0.3s,baz=73,slow=18,SNR=3.4						
RPZ				Sn	S	20 43 18.8	-10
	1.3nm,0.3s,baz=95,slow=18,SNR=4.5						
DZM	Mont Dzumac	17.85	312	P	P	20 42 44.4	+2.0
	0.8nm,0.3s,baz=116,slow=19,SNR=9.6						
DZM				LR	LR	20 48 29.7	
	comp=Z,444nm,20.2s,baz=23,slow=33						
PPT	Papeete	31.62	65	LR	LR	20 55 31.4	
	comp=Z,226nm,18.2s,MS3.9,baz=210,slow=32						
HNR	Honiara	31.65	318	LR	LR	20 55 39.6	
	comp=Z,57nm,20.0s,MS3.2,baz=121,slow=32						
STKA	Stephens Creek	32.62	264	P	P	20 45 06.7	+1.1
	3.8nm,0.9s,mb4.3,baz=104,slow=12,SNR=7.0						
STKA				pP	pP	20 45 17.6	+1.0
	1.8nm,0.5s,baz=103,slow=15,SNR=2.9						
STKA				PcP	PcP	20 47 49.2	-1.9
	1.9nm,0.8s,baz=142,slow=2.5,SNR=2.8						
STKA				LR	LR	20 58 57.1	
	comp=Z,279nm,18.4s,MS4.0,baz=27,slow=37						
STKA	Stephens Creek	32.62	264	eP	P	20 45 06.5	+0.9
CTA	Charters Tower	33.71	287	eP	P	20 45 15.9	+0.9
	7.5nm,0.6s,mb4.8						
CTA				e	pP	20 45 27.4	+1.3
CTA	Charters Tower	33.71	287	P	P	20 45 16.0	+1.0
	11nm,0.8s,mb4.8,baz=103,slow=11,SNR=17						
CTA				pP	pP	20 45 27.3	+1.2
	7.4nm,0.5s,baz=105,slow=10,SNR=3.9						
CTA	Charters Tower	33.71	287	P	P	20 45 16.0	+1.0
CTA				pP	pP	20 45 27.3	+1.2
CTAO	Charters Tower	33.71	287	eP	P	20 45 15.5	+0.4
	18nm,1.0s,mb5.0						
ASPA	Alice Springs	41.96	273	eP	P	20 46 24.2	0.0
ASPA				e	pP	20 46 35.1	-0.4
WB2	Warramunga Arr	43.35	278	⇑iP	P	20 46 35.0	-0.5
WB2				e	pP	20 46 46.6	-0.3
WRAB	Tennant Creek	43.35	278	eP	P	20 46 35.1	-0.5
	22nm,0.6s,mb5.1						
WRA	Warramunga Arr	43.36	278	P	P	20 46 35.1	-0.5
	14nm,0.6s,mb4.9,baz=118,slow=7.7,SNR=226						
WRA				pP	pP	20 46 46.3	-0.6
	8.4nm,0.5s,baz=119,slow=7.6,SNR=10						
WRA				PcP	PcP	20 48 21.4	-2.9
	1.7nm,0.7s,baz=120,slow=3.2,SNR=4.1						
WRA				pPcP		20 48 33.6	
	2.1nm,0.8s,baz=119,slow=3.4,SNR=5.1						
WRA				S	S	20 52 59.7	-0.4
	1.1nm,1.0s,baz=123,slow=12,SNR=4.3						
FORT	Forrest	43.98	260	eP	P	20 46 40.4	-0.1
	19nm,0.5s,mb5.1						
CASY	Casey	50.66	209	eP	P	20 47 28.4	-3.9
	8.0nm,0.9s,mb4.7						
FITZ	Fitzroy Crossi	51.39	274	eP	P	20 47 37.8	-0.7
	13nm,0.6s,mb5.0						
FITZ				e	pP	20 47 49.2	-0.7
FITZ	Fitzroy Crossi	51.39	274	LR	LR	21 10 20.4	
	comp=Z,560nm,18.3s,MS4.6,baz=185,slow=37						
MBWA	Marble Bar	54.75	267	eP	P	20 48 01.0	-2.4
	4.4nm,0.5s,mb4.7						
QSPA	South Pole Qui	55.23	180	eP	P	20 48 07.7	+1.6
	16nm,1.0s,mb5.0						
SYO	Syowa Base	72.49	194	⇑P	P	20 49 55.7	-3.5
SYO	Syowa Base	72.49	194	⇑eP	P	20 49 55.7	-3.5
KKM	Kota Kinabalu	72.96	290	eP	P	20 50 01.0	-2.0
SNAA	Sanae	73.70	179		P	20 50 06.5	+0.4
SNAA	Sanae	73.70	179	⇑i	P	20 50 17.7	+12
SNAA	Sanae	73.70	179	eP	P	20 50 06.6	+0.5
	5.6nm,1.1s,mb4.4						
VNA3	Neumayer Olymp	73.90	177	⇑i	P	20 50 07.5	+0.2
VNA3	Neumayer Olymp	73.90	177	⇑i	P	20 50 10.8	+3.5
VNA3	Neumayer Olymp	73.90	177	⇑i	P	20 50 19.3	+12
VNA3	Neumayer Olymp	73.90	177	⇑i	P	20 50 23.6	+16
VNA2	Neumayer--Watz	74.32	177	⇑i	P	20 50 10.3	+0.6
VNA2	Neumayer--Watz	74.32	177	⇑i	P	20 50 13.6	+3.9
VNA2	Neumayer--Watz	74.32	177	⇑i	P	20 50 22.0	+12
VNA2	Neumayer--Watz	74.32	177	⇑i	P	20 50 26.6	+17
VNA1	Neumayer--Stat	74.56	177	⇑i	P	20 50 14.8	+3.7
VNA1	Neumayer--Stat	74.56	177	⇑i	P	20 50 24.7	+14
ARCES	ARCESS Array B	142.70	346	PKP	PKPdf	20 58 00.6	-2.6
	2.3nm,0.9s,baz=49,slow=3.3,SNR=3.9						
JOF	Joensuu	146.10	335	epkp	PKPdf	20 58 20.8	+12
KAF	Kangasniemi	148.33	337	epkp	PKPdf	20 58 25.6	+13
	baz=39,slow=2.4						
FINES	FINESS Array B	148.89	336	PKPbc	PKPdf	20 58 17.7	+3.8
	4.5nm,0.7s,baz=28,slow=4.6,SNR=17						
FINES				pPKPbc		20 58 29.7	
	18nm,0.8s,baz=48,slow=3.9,SNR=16						
FINES	FINESS Array B	148.89	336	PKPbc	PKPdf	20 58 17.7	+3.8
FINES				pPKPbc		20 58 29.7	
LIC	Lamto	150.99	168	ePKP1		20 58 35.6	
	19nm,0.6s						
DBIC	Dimbokro	151.45	168	pPKPbc		20 58 36.3	
	5.1nm,0.8s,baz=155,slow=6.6,SNR=4.1						
NB2	NORSAR Subarra	152.97	349	PKPbc	PKPdf	20 58 26.3	+6.3
	2.2nm,0.8s,baz=24,slow=2.0						
NOA	NORSAR Array B	152.97	349	PKPbc	PKPdf	20 58 26.4	+6.4
	0.9nm,0.7s,baz=14,slow=4.1,SNR=4.2						
NOA				pPKPbc		20 58 38.7	
	1.8nm,0.7s,baz=11,slow=4.0,SNR=4.0						
NOA	NORSAR Array B	152.97	349	PKPbc	PKPdf	20 58 26.4	+6.4
NOA				pPKPbc		20 58 38.7	
BRTR	Keskin Array B	153.42	290	PKPbc	PKPdf	20 58 29.6	+8.3
	1.5nm,0.7s,baz=154,slow=4.0,SNR=22						
BRTR				pPKPbc		20 58 40.9	
	1.7nm,0.6s,baz=138,slow=4.3,SNR=6.1						
AKASG	Malin Array Be	153.98	316	PKPbc	PKPdf	20 58 29.9	+8.2
	1.0nm,0.5s,baz=58,slow=2.6,SNR=8.1						
AKASG				pPKPbc		20 58 41.4	
	2.6nm,0.7s,baz=61,slow=3.1,SNR=5.5						
AKASG	Malin Array Be	153.98	316	PKPbc	PKPdf	20 58 29.9	+8.2
AKASG				pPKPbc		20 58 41.4	
BAIF	Baives	164.63	351	ePKP2	PKPab	20 59 39.6	+8.0
CDF	Champ du Feu	165.63	342	ePKP2	PKPab	20 59 44.0	+8.0
	12nm,1.0s						
HAU	Haudompre	166.23	344	ePKP2	PKPab	20 59 46.5	+7.9
LDF	La Druitiere	166.30	2	ePKP2	PKPab	20 59 46.0	+7.1
SGMF	Saint Gilles	166.44	9	ePKP2	PKPab	20 59 48.2	+8.7
	123nm,1.5s						
GRR	Gorron	166.47	4	ePKP2	PKPab	20 59 47.5	+7.8
	183nm,1.8s						
CABF	La Chapelle	167.60	342	ePKP2	PKPab	20 59 51.1	+6.5
SSF	Saint Saulge	167.66	351	ePKP2	PKPab	20 59 52.2	+7.3
	18nm,1.1s						
AVF	Avril sur Loir	167.95	351	ePKP2	PKPab	20 59 53.3	+7.2
	9.0nm,0.9s						
SMF	Signal de Mont	168.02	349	ePKP2	PKPab	20 59 53.6	+7.1
	17nm,0.8s						
LPL	La Plagne	168.43	338	ePKP2	PKPab	20 59 54.4	+6.1
LPG	La Plagne	168.44	338	ePKP2	PKPab	20 59 54.5	+6.1
TCF	Toulx Ste Croi	168.56	355	ePKP2	PKPab	20 59 56.1	+7.2
SBF	Sospel	169.63	332	ePKP2	PKPab	20 59 59.1	+5.5
	294nm,1.8s						
LFF	La Frestale	169.97	360	ePKP2	PKPab	21 00 02.7	+7.6
SMRF	Simiane la Rot	170.17	339	ePKP2	PKPab	21 00 01.6	+5.6
FRF	La Foret Royal	170.19	334	ePKP2	PKPab	21 00 01.9	+5.8

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*CSEM **04** 20:41:32.7±0.1, 38.87N×25.98E, h5^{km}, MD3.4, Error ellipse: s-maj=2.1km s-min=1.6km az=36.0*

*ATH **04** 20:41:33.9, 38.96N×26.09E, h32^{km}±2^{km}, MD3.4/4*

*NEIC **04** 20:41:33.9, 38.96N×26.09E, h32^{km}, MD3.4(ATH), MD3.3(ISK), After ATH.*

*ISK **04** 20:41:34.8, 38.88N×25.92E, h32^{km}, MD3.3*

*THE **04** 20:41:36.0, 38.83N×25.89E, h21^{km}, ML3.1*

ISC 04 20:41:32.4±0.6**, 38.89N**±0.03×**25.88E**±0.03**, h6^{km}**±4^{km}**, n39, σ0^{s}.75**/57**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PRK	Paraskevi	0.47	40	ePB	Pb	20 41 42.3	-0.3
PRK				eSB	Sb	20 41 47.9	-1.6
AYVA	Ayvalik	0.76	56	iP	Pb	20 41 47.6	+0.1
AYVA				iS	Sg	20 41 57.7	0.0
URLA	Izmir	0.77	133	iP	Pb	20 41 47.4	-0.3
URLA				iS	Sb	20 41 59.3	+1.2
EZN	Ezine	1.00	20	PG	Pg	20 41 52.6	+0.2
EZN				SG	Sg	20 42 06.1	+0.3
BLCB	Balcova	1.04	118	PG	Pg	20 41 53.0	-0.1
BLCB				SG	Sg	20 42 06.2	-0.7
LIA	Limnos Island	1.15	332	ePN	Pn	20 41 55.6	+0.7
IZM	Izmir	1.19	114	PN	Pn	20 41 55.7	+0.3
KDAG	Bornova	1.19	114	iP	Pb	20 41 54.9	0.0
KDAG				iS	Sb	20 42 09.5	-0.7
LOS	Limnos	1.22	330	ePg	Pg	20 41 56.9	+0.1
	comp=Z,10nm,0.4s						
LOS				eSg	Sg	20 42 13.1	+0.1
SMG	Samos	1.39	147	ePN	Pn	20 41 58.5	+0.1
SMG				eSN	Sn	20 42 16.9	-0.4
AKS	Akhisar	1.51	90	PN	Pn	20 41 59.8	-0.2
AOS	Alonnisos	1.59	281	ePg	Pg	20 42 01.9	-2.2
	comp=Z,3.4nm,0.5s						
AOS				eSg	Sg	20 42 21.1	-4.1
AOS	Alonnisos	1.59	281	ePg	Pg	20 42 01.9	-2.2
	3.4nm,0.5s						
AOS				eSg	Sg	20 42 21.1	-4.1
LPK	Lapseki	1.63	24	PN	Pn	20 42 02.1	+0.3
BALB	Balikesir	1.72	63	PN	Pn	20 42 03.5	+0.4
APE	Apeiranthos	1.83	189	ePN	Pn	20 42 04.7	0.0
APE	Apeiranthos	1.83	189	ePN	Pn	20 42 06.9	+2.2
BTOK	Tokmak	1.88	62	iP	Pn	20 42 05.4	0.0
BTOK				iS	Sn	20 42 29.1	-0.6
AYDN	Tasoluk	1.99	127	iP	Pn	20 42 11.8	+4.9
AYDN				iS	Sn	20 42 38.2	+5.8
PAIG	Paliouri	2.00	302	ePn	Pn	20 42 07.9	+0.9
PAIG				eSn	Sn	20 42 32.1	-0.6
ALN	Alexandroupoli	2.01	4	ePn	Pn	20 42 07.2	-0.1
ALN				eSn	Sn	20 42 33.0	0.0
SART	Tekirdag	2.06	29	iP	Pn	20 42 10.5	+2.5
SART				iS	Sn	20 42 37.2	+3.0
OUR	Ouranopolis	2.06	315	ePn	Pn	20 42 08.3	+0.3
	comp=Z,2.4nm,0.2s						
OUR				eSn	Sn	20 42 34.1	-0.1
EDC	Edincik	2.12	46	PN	Pn	20 42 09.0	+0.3
BNT	Bandirma	2.15	46	PN	Pn	20 42 08.6	-0.7
MRMT	Marmara Adasi	2.17	37	PN	Pn	20 42 09.8	+0.3
MFT	Murefte	2.18	29	PN	Pn	20 42 10.1	+0.4
RDO	Rodhopi	2.27	353	ePN	Pn	20 42 11.2	+0.2
KCT	Karacabey	2.36	53	PN	Pn	20 42 12.0	-0.2
ORLT	Orhaneli	2.60	63	PN	Pn	20 42 15.1	-0.6
SOH	Sokhos	2.74	316	ePn	Pn	20 42 17.9	+0.2
SOH				eSn	Sn	20 42 51.1	-0.5
AGG	Agios Georgios	2.77	274	ePn	Pn	20 42 18.1	-0.1
KDZ	Kurdzhali	2.79	353	iP	Pn	20 42 18.0	-0.3
LIT	Litokhoron	2.89	296	ePn	Pn	20 42 20.2	+0.4
RZN	Rozhen	2.94	343	iP	Pn	20 42 20.5	0.0
MMB	Musomiste	3.17	329	iP	Pn	20 42 23.0	-0.7
KNT	Kendrikon	3.23	316	ePn	Pn	20 42 25.5	+0.9
KNT				eSn	Sn	20 43 02.6	-1.3
GRG	Griva	3.38	309	ePn	Pn	20 42 26.4	-0.5
VTS	Vitosha	4.22	332	eP	Pn	20 42 40.0	+1.2

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*BJI **04** 20:51:10.4, 41.33N×87.69E, h17^{km}, ML3.7*

*NNC **04** 20:51:16.3±3.7, 41.94N×87.10E, mpv3.5, Error ellipse: s-maj=42.1km s-min=16.9km az=89.0*

ISC 04 20:51:08.9±2.9**, 41.6N**±0.1×**87.6E**±0.3**, h10^{km}, n7, σ1^{s}.50**/9**, 2C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	2.23	2	P	Pn	20 51 51.8	+5.3
WMQ				SG	Sg	20 52 22.0	-1.2
WMQ				Smax			
	comp=N,310nm,0.3s						
WMQ				Smax			
	comp=E,380nm,0.3s						
MK31	Makanchi Array	6.45	326	Pn	Pn	20 52 48.1	+1.7
	comp=E,1.4nm,0.2s,baz=140,slow=14,SNR=346						
MK31				⇑Sn	Sn	20 54 01.1	+0.2
	comp=E,2.3nm,0.4s						
MK31				⇓Lg		20 54 23.9	
	comp=E,7.7nm,0.5s						
AAK	Ala-Archa	9.80	280	⇓Pn	P	20 53 32.8	-0.1
	comp=E,1.1nm,0.5s						
KURK	Kurchatov	11.04	329	⇑Pn	P	20 53 49.2	-0.7
	comp=E,1.0nm,0.9s						
BVA0	Borovoye Array	16.30	320	P	P	20 55 03.5	+4.2
	comp=E,0.2nm,0.4s,baz=129,slow=12,SNR=13						
CHKZ	Chkalovo	16.60	323	P	P	20 55 01.2	-1.9
AB31	Akbulak array	20.79	301	P	P	20 55 52.3	-0.3
	comp=E,0.3nm,0.3s,baz=92,slow=8.6,SNR=9.5						

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*NEIC **04** 20:54:47.4±7.7, 34.73N×72.34E, h10^{km}, mb3.2/4, Error ellipse: s-maj=95.6km s-min=26.4km az=170.0*

*NDI **04** 20:54:47.3±4.9, 34.74N×73.51E, h10^{km}, ML3.4, mb3.2(NEIC)*

*MOS **04** 20:54:49.9±1.0, 35.12N×72.33E, h10^{km}, mb3.8/1, Error ellipse: s-maj=44.2km s-min=11.8km az=93.3*

*NNC **04** 20:54:53.6±6.0, 34.92N×72.60E, h71^{km}±55^{km}, mpv4.2, Error ellipse: s-maj=49.3km s-min=38.2km az=47.0*

ISC 04 20:54:40.6±0.8**, 34.39N**±0.09×**72.7E**±0.1**, h10^{km}, n27, σ0^{s}.95**/41**, 13C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.21	127	ePB	Pb	20 55 37.5	+0.2
THN				eSB	Sb	20 56 17.1	+0.4
DLH	Dalhousie	3.31	123	eP	Pn	20 55 35.0	+1.4
DLH				ex	x	20 56 14.0	
BHK	Bhakra	4.33	132	eSB	Sb	20 56 54.2	+5.1
SDNR	Sundarnagar	4.62	127	eP	Pn	20 55 52.0	-0.2
SDNR				eS	Sn	20 56 42.0	-4.6
KLP	Kalpa	5.49	120	eP	Pn	20 56 02.2	-2.2
KLP				eS	Sn	20 56 58.5	-10
KLP				AML	AML	20 57 06.1	
	comp=E,75nm,0.5s						
KLP				AML	AML	20 57 08.0	
	comp=N,311nm,0.1s						
KHET	Khetri	6.85	156	eP	Pn	20 56 23.4	-0.1
KHET				eS	Sn	20 57 36.5	-5.8
KHET				AML	AML	20 57 42.6	
	comp=N,12nm,0.2s						
KHET				AML	AML	20 57 44.0	
	comp=E,17nm,0.1s						
SONA	Sohna	7.19	147	eP	Pn	20 56 28.3	-0.1
SONA				eS	Sn	20 57 45.5	-5.5

AAK	Ala-Archa	8.35	9	⇑P	P	20 56 44.7	+0.1
	comp=E,4.7nm,0.8s						
AAK				⇑S	Sn	20 58 12.9	-7.0
	comp=E,9.0nm,1.2s						
AAK	Ala-Archa	8.35	9	⇑P	P	20 56 44.7	+0.1
	comp=E,4.7nm,0.8s						
AAK				S	Sn	20 58 12.9	-7.0
AAK	Ala-Archa	8.35	9	⇑P	P	20 56 44.7	+0.1
AAK				S	Sn	20 58 12.9	-7.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KK31	Karatay Array	8.86	350	⇑P	P	20 56 51.6	-0.1
	comp=Z,9.3nm,0.3s,baz=153,slow=11,SNR=164						
KK31				S	Sn	20 58 26.9	-5.7
	comp=Z,1.1nm,0.3s,baz=152,slow=22,SNR=8.5						
KK31	Karatay Array	8.86	350	⇑P	P	20 56 51.6	-0.1
	comp=Z,9.3nm,0.3s						
KK31				S	Sn	20 58 26.9	-5.7
KK31	Karatay Array	8.86	350	⇑P	P	20 56 51.6	0.0
KK31				S	Sn	20 58 26.9	-5.7
KK31				pmax	pmax		
	comp=Z,9.0nm,0.3s						
MK02	Makanchi Array	14.35	28	P	P	20 58 09.3	+3.5
MK31	Makanchi Array	14.37	28	P	P	20 58 09.3	+3.3
	comp=Z,0.1nm,0.2s,baz=206,slow=10,SNR=5.0						
AB31	Akbulak array	17.58	331	⇑P	P	20 58 46.6	-0.6
	comp=Z,0.7nm,0.5s,baz=158,slow=10,SNR=19						
AB31				⇑S	S	21 01 55.8	-5.3
	comp=Z,2.1nm,0.9s						
AB31	Akbulak array	17.58	331	⇑P	P	20 58 46.6	-0.6
	comp=Z,0.7nm,0.5s						
AB31				S	S	21 01 55.8	-5.3
AB31	Akbulak array	17.58	331	⇑P	P	20 58 46.6	-0.6
AB31				S	S	21 01 55.8	-5.3
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVA0	Borovoye Array	18.70	356	P	P	20 59 00.5	-0.4
	comp=Z,0.2nm,0.4s,baz=156,slow=9.0,SNR=8.4						
BVA0	Borovoye Array	18.70	356	P	P	20 59 00.5	-0.4
	comp=Z,0.2nm,0.4s						
BRVK	Borovoye	18.74	356	*e*P	P	20 59 01.8	+0.4
	comp=Z,2.2nm,0.6s						
BRVK	Borovoye	18.74	356	*e*P	P	20 59 01.8	+0.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTK	Aktyubinsk	19.28	331	⇑P	P	20 59 08.8	+0.9
AKTO	Aktyubinsk	19.28	331	⇑P	P	20 59 08.9	+0.9
	comp=Z,0.5nm,0.6s						
CHKZ	Chkalovo	19.33	356	P	P	20 59 05.9	-2.6
CHKZ	Chkalovo	19.33	356	*e*P	P	20 59 07.4	-1.1
	comp=Z,1.7nm,0.7s						
CHKZ	Chkalovo	19.33	356	*e*P	P	20 59 07.4	-1.1
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						

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*IDC **04** 20:56:24.1±0.8, 25.94S×70.99E, mb4.0/8, mb1 4.1/8, mb1mx3.9/17, mbtmp4.0/8, MS3.8/2, Ms1 3.7/2, ms1mx3.4/13, Error ellipse: s-maj=37.3km s-min=21.9km az=87.0*

*NEIC **04** 20:56:25.9±0.4, 25.95S×71.01E, h10^{km}, mb4.4/4, Error ellipse: s-maj=17.6km s-min=10.4km az=94.0*

ISC 04 20:56:23.9±0.5**, 25.98S**±0.10×**71.0E**±0.2**, h10^{km}, n19, σ0^{s}.43**/18**, mb4.0**/11**, MS3.8**/2**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	Boshof	40.58	256	LR	LR	21 16 14.0	
	comp=Z,80nm,20.5s,MS3.6,baz=281,slow=29						
MAW	Mawson	41.94	185	P	P	21 04 16.8	+0.7
	0.7nm,0.4s,mb3.7,baz=323,slow=9.2,SNR=4.1						
MAW				LR	LR	21 17 46.4	
	comp=Z,207nm,20.7s,MS4.0,baz=69,slow=30						
MAW	Mawson	41.94	185	P	P	21 04 16.8	+0.7
MAW				LR	LR	21 17 46.4	
WRA	Warramunga Arr	58.12	98	P	P	21 06 20.3	+0.1
	2.4nm,0.8s,mb4.3,baz=252,slow=7.3,SNR=9.4						
WRAB	Tennant Creek	58.13	98	*e*P	P	21 06 20.6	+0.2
	2.1nm,0.6s,mb4.3						
SNAA	Sanae	60.50	200	P	P	21 06 35.4	-0.7
	0.4nm,0.9s,mb3.5,baz=101,slow=7.7,SNR=5.7						
SNAA	Sanae	60.50	200	*e*P	P	21 06 35.4	-0.7
	1.7nm,1.1s,mb4.0						
VNA2	Neumayer--Watz	61.91	201		P	21 06 45.9	+0.3
VNA3	Neumayer Olymp	62.66	201		P	21 06 50.7	+0.1
VNDA	Vanda	65.01	166	*e*P	P	21 07 05.2	-0.7
	5.4nm,1.0s,mb4.5						
MKAR	Makanchi Array	73.15	8	P	P	21 07 56.0	-0.5
	1.9nm,0.7s,mb4.1,baz=194,slow=5.9,SNR=20						
MKAR	Makanchi Array	73.15	8	P	P	21 07 56.0	-0.5
BRTR	Keskin Array B	74.09	331	P	P	21 08 02.5	+0.3
	1.2nm,1.0s,mb3.8,baz=146,slow=4.5,SNR=6.1						
KURK	Kurchatov	76.65	5	*e*P	P	21 08 17.1	+0.5
	5.2nm,1.1s,mb4.4						
AKTO	Aktyubinsk	76.95	351	P	P	21 08 18.1	-0.1
	0.9nm,0.7s,mb3.8,baz=153,slow=4.5,SNR=3.7						
ZAL	Zalesovo	80.47	8	P	P	21 08 37.0	-0.3
	1.2nm,0.8s,mb3.9,baz=282,slow=5.3,SNR=6.5						
ZAL	Zalesovo	80.47	8	P	P	21 08 37.0	-0.3
AKASG	Malin Array Be	84.82	335	P	P	21 08 59.7	0.0
	0.4nm,0.5s,mb3.8,baz=126,slow=4.6,SNR=5.4						
AKASG	Malin Array Be	84.82	335	P	P	21 08 59.7	0.0

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*ATH **04** 20:58:59.7, 38.08N×26.42E, h38^{km}±2^{km}, MD3.0/3*

*ISK **04** 20:59:00.8, 38.20N×26.61E, h10^{km}, MD2.9*

*CSEM **04** 20:59:00.7±0.1, 38.22N×26.61E, h10^{km}, MD2.9, Error ellipse: s-maj=2.8km s-min=2.2km az=117.0*

ISC 04 20:59:00.0±1.2**, 38.17N**±0.03×**26.57E**±0.06**, h0^{km}**±7^{km}**, n14, σ0^{s}.83**/23**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.20	7	*i* P	Pg	20 59 03.9	-0.1
URLA				*i* S	Sg	20 59 06.9	+0.3
BLCB	Balcova	0.43	59	PG	Pg	20 59 09.0	+0.3
BLCB				SG	Sg	20 59 14.7	+0.2
SMG	Samos	0.50	155	*e*PB	Pb	20 59 11.0	-0.4
SMG				*e*SB	Sb	20 59 18.8	-0.1
IZM	Izmir	0.60	67	*i* PG	Pg	20 59 11.9	0.0
IZM				*i* SG	Sg	20 59 20.2	+0.3
KDAG	Bornova	0.60	66	*i* P	Pg	20 59 10.8	-1.2
KDAG				*i* S	Sg	20 59 18.9	-1.1
PRK	Paraskevi	1.10	348	*e*PN	Pn	20 59 21.3	-1.2
PRK				*e*SN	Sn	20 59 36.8	-1.9
AYVA	Ayvalik	1.15	5	*i* P	Pb	20 59 23.4	+1.1
AYVA				*i* S	Sb	20 59 39.3	+1.7
AYDN	Tasoluk	1.16	115	*i* P	Pb	20 59 23.8	+1.3
AYDN				*i* S	Sb	20 59 37.4	-0.5
AKS	Akhisar	1.21	54	*e*PN	Pn	20 59 23.6	-0.5
MLSB	Milas	1.29	132	*e*PN	Pn	20 59 25.5	+0.3
APE	Apeiranthos	1.37	217	*e*PN	Pn	20 59 27.3	+1.0
APE	Apeiranthos	1.37	217	*e*PN	Pn	20 59 22.1	-4.2
MANT	Manisa	1.60	78	*i* P	Pn	20 59 30.3	+0.6
MANT				*i* S	Sb	20 59 51.1	+0.3
DENT	Denizli	1.99	101	*e*PN	Pn	20 59 35.4	+0.1

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*IDC **04** 21:05:49.6±1.2, 34.37N×74.22E, mb3.8/9, mb1 4.1/11, mb1mx3.9/21, mbtmp3.9/11, ML4.3/2, Error ellipse: s-maj=30.8km s-min=21.6km az=42.0*

*NEIC **04** 21:05:50.4±0.8, 34.25N×74.27E, h10^{km}, mb3.6/4, Error ellipse: s-maj=14.7km s-min=10.9km az=216.0*

*MOS **04** 21:05:51.8±1.2, 34.31N×74.24E, h33^{km}, mb4.0/9, Error ellipse: s-maj=20.5km s-min=9.7km az=98.5*

*BJI **04** 21:05:52.5, 34.56N×73.89E, h13^{km}, ML3.5*

*NDI **04** 21:05:53.6±4.1, 34.61N×74.49E, h10^{km}, MD3.6*

*NNC **04** 21:05:60.0±7.3, 34.83N×72.96E, h10^{km}±108^{km}, mpv3.7, Error ellipse: s-maj=107.2km s-min=58.1km az=161.0*

ISC 04 21:05:51.5±1.4**, 34.45N**±0.05×**74.19E**±0.10**, h19^{km}**±11^{km}**, n52, σ1^{s}.21**/64**, mb3.8**/8**, 7C-3D, Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	Srinagar	0.65	122	*e*P	Pb	21 06 03.0	-1.0
SRNI				*e*S	Sb	21 06 11.0	-1.5
JMU	Jammu	1.83	161	*e*S	Sn	21 06 49.5	+4.4
THN	Thein Dam	2.38	147	*e*P	Pn	21 06 33.0	+2.7
THN				*e*S	Sn	21 07 05.0	+5.8
DLH	Dalhousie	2.41	141	*e*P	Pn	21 06 33.0	+2.2
DLH				*e*S	Sn	21 07 05.0	+4.9
BHK	Bhakra	3.56	148	*e*PG	Pn	21 07 04.6	+18
BHK				*e*SB	Sb	21 07 43.8	+7.1
SDNR	Sundarnagar	3.76	141	*e*P	Pn	21 06 52.0	+2.1
SDNR				*e*S	Sn	21 07 34.0	-0.1
SMLA	Simla	4.15	142	*e*P	Pn	21 06 55.5	0.0
SMLA				*e*S	Sn	21 07 41.1	-3.0
KLP	Kalpa	4.48	129	*e*P	Pn	21 07 01.9	+1.8
KLP				*e*S	Sn	21 07 51.9	-0.6
KLP				AML	AML	21 07 56.9	
	comp=N,241nm,0.3s						
KLP				AML	AML	21 07 58.0	
	comp=E,198nm,0.4s						
KHET	Khetri	6.50	167	*e*P	Pn	21 07 28.1	-0.5
KHET				*e*S	Sn	21 08 57.6	+14
KHET				AML	AML	21 09 16.0	
	comp=N,11nm,0.1s						
KHET				AML	AML	21 09 16.5	
	comp=E,15nm,0.2s						
SONA	Sohna	6.66	157	*e*P	Pn	21 07 30.3	-0.6
SONA				*e*S	Sn	21 08 43.7	-3.3
SONA				AML	AML	21 08 45.0	
	comp=N,25nm,0.3s						
SONA				AML	AML	21 08 45.1	
	comp=E,58nm,0.3s						
AAK	Ala-Archa	8.18	2	⇑Pn	P	21 07 56.8	+4.6
	comp=E,1.6nm,0.6s						
AAK				⇓Sn	Sn	21 09 28.8	+3.8
	comp=E,7.6nm,1.0s						
AAK	Ala-Archa	8.18	2	Pn	P	21 07 54.5	+2.4
	comp=E,0.9nm,0.7s						
KK31	Karatay Array	9.11	343	⇓Pn	P	21 08 05.2	+0.2
	comp=E,2.9nm,0.5s,baz=107,slow=23,SNR=42						
KK31				⇑Sn	Sn	21 09 43.6	-4.5
	comp=E,3.1nm,0.4s,baz=148,slow=22,SNR=14						
MK31	Makanchi Array	13.77	24	⇑P	P	21 09 15.9	+7.9
	comp=E,1.3nm,0.7s,baz=203,slow=11,SNR=16						
MKAR	Makanchi Array	13.77	24	Pn	P	21 09 06.8	-1.2
	comp=E,0.0nm,0.3s,baz=207,slow=13,SNR=2.8						
LSA	Lhasa	15.14	104	P	P	21 09 32.0	+5.9
LSA	Lhasa	15.14	104	P	P	21 09 22.1	-3.9
	comp=E,3.5nm,0.6s						
LSA	Lhasa	15.14	104	P	P	21 09 22.1	-4.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KURK	Kurchatov	16.58	10	*e*P	P	21 09 46.7	+2.3
	comp=Z,2.3nm,0.7s						
KURK	Kurchatov	16.58	10	*e*P	P	21 09 46.7	+2.3
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AB31	Akbulak array	18.16	329	⇑P	P	21 10 04.3	0.0
	comp=Z,0.8nm,0.5s,baz=132,slow=11,SNR=15						
AB31				⇑S	S	21 13 16.9	-6.5
	comp=Z,0.9nm,0.7s,baz=153,slow=22,SNR=4.1						
BVA0	Borovoye Array	18.77	353	⇑P	P	21 10 12.3	+0.6
	comp=Z,0.4nm,0.7s,baz=179,slow=11,SNR=22						
BVAR	Borovoye Array	18.77	353	P	P	21 10 11.6	0.0
	comp=Z,1.3nm,0.3s,baz=156,slow=8.9,SNR=24						
BVAR	Borovoye Array	18.77	353	P	P	21 10 11.6	-0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	18.81	353	*e*P	P	21 10 12.7	+0.5
	comp=Z,4.2nm,0.8s						
BRVK	Borovoye	18.81	353	*e*P	P	21 10 12.7	+0.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHKZ	Chkalovo	19.39	354	⇓P	P	21 10 18.3	-0.7
	comp=Z,3.7nm,1.2s						
CHKZ	Chkalovo	19.39	354	*e*P	P	21 10 18.1	-0.9
	comp=Z,1.1nm,0.5s						
CHKZ	Chkalovo	19.39	354	*e*P	P	21 10 18.1	-0.9
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTO	Aktyubinsk	19.87	328	⇑P	P	21 10 23.8	-0.6
	comp=Z,1.4nm,0.9s						
AKTO	Aktyubinsk	19.87	328	P	P	21 10 23.1	-1.3
	comp=Z,0.7nm,0.3s,baz=136,slow=11,SNR=14						
AKTO	Aktyubinsk	19.87	328	P	P	21 10 23.1	-1.3
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	20.87	18	P	P	21 10 33.7	-1.1
	comp=Z,2.1nm,0.5s,baz=253,slow=6.5,SNR=7.4						
ZAL	Zalesovo	20.87	18	P	P	21 10 33.7	-1.1
ZAL	Zalesovo	20.87	18	P	P	21 10 33.7	-1.1
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRTR	Keskin Array B	32.57	291	P	P	21 12 23.1	-0.6
	comp=Z,0.8nm,0.9s,mb3.6,baz=90,slow=5.8,SNR=3.3						
BRTR	Keskin Array B	32.57	291	P	P	21 12 23.1	-0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	36.26	311	P	P	21 12 54.5	-0.7
	comp=Z,0.5nm,0.4s,mb3.8,baz=80,slow=7.6,SNR=4.5						
AKASG	Malin Array Be	36.26	311	P	P	21 12 54.5	-0.7
AKASG	Malin Array Be	36.26	311	P	P	21 12 54.5	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	40.63	327	P	P	21 13 31.3	-0.3
	comp=Z,3.0nm,0.9s,mb3.9,baz=180,slow=25,SNR=4.8						
FINES	FINESS Array B	40.63	327	P	P	21 13 31.3	-0.3
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	44.03	338	P	P	21 13 59.9	+0.7
	comp=Z,3.2nm,1.0s,mb4.0,baz=113,slow=9.3,SNR=7.8						
ARCES	ARCESS Array B	44.03	338	P	P	21 13 59.9	+0.7
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NB2	NORSAR Subarra	47.57	324	P	P	21 14 26.3	-1.2
	comp=Z,0.8nm,0.6s,mb3.9,baz=98,slow=7.4						
NOA	NORSAR Array B	47.57	324	P	P	21 14 26.5	-1.0
	comp=Z,0.8nm,0.6s,mb4.0,baz=94,slow=7.6,SNR=4.0						
NOA	NORSAR Array B	47.57	324	P	P	21 14 26.5	-1.0
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
INK	Inuvik	75.48	10	P	P	21 17 36.0	+0.5
	comp=Z,0.5nm,0.3s,mb3.9,baz=1.7,slow=5.1,SNR=5.0						
INK	Inuvik	75.48	10	P	P	21 17 36.0	+0.5
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ILAR	Eielson Array	76.01	17	P	P	21 17 38.5	-0.2
	comp=Z,0.4nm,0.6s,mb3.5,baz=297,slow=6.4,SNR=5.3						
WRA	Warramunga Arr	78.69	124	P	P	21 17 53.6	-0.7
	comp=Z,1.3nm,0.6s,mb4.0,baz=320,slow=5.0,SNR=23						
WRA	Warramunga Arr	78.69	124	P	P	21 17 53.6	-0.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

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*ATH **04** 21:11:32.9, 38.17N×26.47E, h22^{km}±4^{km}, MD3.1/3*

*ISK **04** 21:11:33.8, 38.21N×26.69E, h15^{km}, MD2.9*

*NEIC **04** 21:11:33.0, 38.21N×26.68E, h15^{km}, MD3.1(ATH), MD2.9(ISK), After ISK.*

*CSEM **04** 21:11:33.0±0.2, 38.23N×26.64E, h13^{km}±1^{km}, MD2.9, Error ellipse: s-maj=4.1km s-min=2.6km az=100.0*

ISC 04 21:11:31.7±1.0**, 38.17N**±0.03×**26.56E**±0.05**, h1^{km}**±6^{km}**, n15, σ1^{s}.01**/25**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.19	10	*i* P	Pg	21 11 35.3	-0.2
URLA				*i* S	Sg	21 11 37.9	0.0
BLCB	Balcova	0.44	61	*i* PG	Pg	21 11 41.5	+1.1
BLCB				*i* SG	Sg	21 11 45.8	-0.5
SMG	Samos	0.52	154	*e*PN	Pn	21 11 43.7	-2.0
SMG				*e*SN	Sn	21 11 52.1	-3.1
IZM	Izmir	0.60	68	*i* PG	Pg	21 11 43.8	+0.2
IZM				*i* SG	Sg	21 11 51.9	+0.2
KDAG	Bornova	0.60	68	*i* P	Pg	21 11 42.6	-1.2
KDAG				*i* S	Sg	21 11 50.8	-1.1
PRK	Paraskevi	1.09	348	*e*PN	Pn	21 11 53.2	-0.8
PRK				*e*SN	Sn	21 12 09.1	-0.8
AYVA	Ayvalik	1.14	5	*i* P	Pb	21 11 57.6	+3.8
AYVA				*i* S	Sb	21 12 11.2	+2.3
AYDN	Tasoluk	1.17	116	*i* P	Pb	21 11 55.4	+1.1
AYDN				*i* S	Sb	21 12 10.3	+0.6
AKS	Akhisar	1.21	54	*e*PN	Pn	21 11 55.0	-0.6
AKS				*e*SN	Sn	21 12 11.6	-1.4
BODT	Bodrum	1.26	151	*e*PN	Pn	21 11 57.0	+0.6
MLSB	Milas	1.31	132	*e*PN	Pn	21 11 57.7	+0.7
APE	Apeiranthos	1.37	217	*e*PN	Pn	21 11 58.2	+0.3
MANT	Manisa	1.61	78	*i* P	Pn	21 12 02.3	+1.0
MANT				*i* S	Sb	21 12 23.5	+1.0
YER	Yerkesik	1.72	127	*e*PN	Pn	21 12 03.0	+0.1
LIA	Limnos Island	2.03	329	*e*PN	Pn	21 12 07.6	+0.3

CASC 04 21:26:54.4±1.2**, 8.97N**×**82.85W, h11^{km}**±5^{km}**, MD3.8, MW4.3, 3C-1D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	Volcan	0.23	139	⇑*i*P	Pg	21 27 00.1	+0.6
BRU2				*e*S	Sg	21 27 04.2	+1.3
BUS	Buena Vista	1.07	303	⇓*e*P	Pb	21 27 14.3	-0.2
BUS				*e*S	Sb	21 27 29.2	+0.9
URSC	Urasca	1.26	313	⇑*e*P	Pb	21 27 17.6	-0.1
LCR2	La Lucha 2	1.38	304	*e*P	Pn	21 27 19.0	-0.6
LCR2				*e*S	Sb	21 27 37.3	+0.2
SJS	Escuela Geolog	1.53	309	*e*S	Sb	21 27 42.1	+0.4
LAJ	Bijagual	1.54	305	*e*P	Pn	21 27 26.1	+4.1
LAJ				*e*S	Sb	21 27 50.6	+8.7
PRS1	Puriscal	1.76	305	⇑*e*P	Pn	21 27 24.4	-0.7
PRS1				*e*S	Sn	21 27 47.6	-0.1
CGA2	Cerro Gallo 2	1.91	303	*e*P	Pn	21 27 27.1	-0.1
CGA2				*e*S	Sn	21 27 51.8	+0.5

DHMR 04 21:47:57.6±1.1**, 11.88N**×**43.89E, h3^{km}**±12^{km}**, ML4.3, 5D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	At Turbah	1.36	9	⇓*i*P	Pb	21 48 23.6	+0.2
TRBA				*i* S	Sb	21 48 42.5	+1.4
TRBA				AML	AML	21 48 42.8	
	comp=N,3µm,0.5s						
UDYN	Al ‘Udayn	2.08	2	⇓*i*P	Pn	21 48 34.4	+0.7
UDYN				*i* S	Sn	21 49 03.8	+3.4
UDYN				AML	AML	21 49 09.9	
	comp=N,5µm,0.4s						
LBOS		2.38	34	⇓*i*P	Pn	21 48 39.6	+1.5
LBOS				*i* S	Sn	21 49 11.9	+3.7
BDHA	Al Bayda’	2.65	38	⇓*i*P	Pn	21 48 43.6	+1.8
BDHA				*i* S	Sn	21 49 20.5	+5.6
BDHA				AML	AML	21 49 29.4	
	comp=E,3µm,0.4s						
DHBB	Dhamar BB	2.72	10	⇓*i*P	Pn	21 48 44.9	+1.9
DHBB				*i* S	Sn	21 49 22.1	+5.4

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*IDC **04** 21:49:55.7±0.9, 10.00N×126.02E, mb4.0/7, mb1 4.1/7, mb1mx3.9/15, mbtmp4.0/7, MS3.3/1, Ms1 3.3/1, ms1mx2.9/25, Error ellipse: s-maj=61.1km s-min=22.0km az=69.0*

*NEIC **04** 21:50:02.6±0.6, 9.94N×125.98E, h50^{km}, mb4.2/1, Error ellipse: s-maj=42.5km s-min=13.0km az=67.0*

ISC 04 21:50:03.2±0.9**, 10.01N**±0.04×**126.15E**±0.07**, h70^{km}**±9^{km}**, n23, σ0^{s}.96**/29**, mb3.9**/8**, 1C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	1.16	207	*e*P	P	21 50 22.8	-1.2
BUTP				*e*S	S	21 50 39.5	-0.1
MSLP	Maasin	1.28	275	*e*P	P	21 50 24.9	-0.8
MSLP				*e*S	S	21 50 42.7	+0.4
PLP	Palo	1.62	315	*e*P	P	21 50 29.6	-0.8
PLP				*e*S	S	21 50 49.0	-1.4
BESP	Borongan	1.73	336	*e*P	P	21 50 32.0	+0.3
CGP	Cagayan de Oro	2.12	223	⇓*i*P	P	21 50 37.3	+0.3
CGP				*e*S	S	21 51 03.6	+1.5
LLP	Lapu-Lapu	2.17	278	⇓*e*P	P	21 50 38.2	+0.3
LLP				*e*S	S	21 51 03.4	-0.2
TBP	Tagbilaran	2.28	262	⇑*e*P	P	21 50 39.5	+0.1
TBP				*e*S	S	21 51 07.4	+1.1
BUKP	Musuan	2.38	207	*e*P	P	21 50 41.8	+1.0
DCPH	Dipolog City	3.11	243	⇓*e*P	P	21 50 50.6	-0.5
DCPH				*e*S	S	21 51 24.9	-2.2
PAGZ	Pagadian	3.48	232	*e*P	P	21 50 56.7	+0.4
GUIM	Jordan	3.56	280	*e*P	P	21 50 57.3	-0.1
RCP	Roxas	3.68	295	⇓*e*P	P	21 50 59.6	+0.5
PVCP	Virac	4.06	331	*e*P	P	21 51 06.8	+2.4
OTRP	Odiongan	4.68	300	*e*P	P	21 51 13.2	+0.2
MJAR	Matsushiro Arr	28.58	21	LR	LR	22 06 35.6	
	comp=Z,63nm,20.6s,baz=345,slow=35						
WRA	Warramunga Arr	30.84	165	P	P	21 56 13.5	-1.6
	0.6nm,0.7s,mb3.5,baz=345,slow=8.4,SNR=3.7						
STKA	Stephens Creek	44.20	161	P	P	21 58 07.2	0.0
	1.3nm,0.7s,mb3.8,baz=344,slow=16,SNR=3.3						
MKAR	Makanchi Array	52.16	323	P	P	21 59 07.7	-1.1
	0.9nm,0.7s,mb3.9,baz=118,slow=7.3,SNR=13						
KURK	Kurchatov	56.21	326	*e*P	P	21 59 37.1	-1.3
	2.0nm,0.7s,mb4.3						
ILAR	Eielson Array	79.72	26	P	P	22 02 05.6	+0.8
	0.7nm,0.7s,mb3.6,baz=269,slow=3.9,SNR=7.2						
ARCES	ARCESS Array B	84.39	340	P	P	22 02 30.0	+1.3
	2.6nm,0.8s,mb4.1,baz=83,slow=7.3,SNR=3.4						
BRTR	Keskin Array B	85.60	309	P	P	22 02 36.2	+0.8
	0.6nm,0.7s,mb3.6,baz=108,slow=4.6,SNR=4.2						
FINES	FINESS Array B	86.06	332	P	P	22 02 37.1	0.0
	1.8nm,0.9s,mb4.0,baz=90,slow=3.8,SNR=7.1						

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*ISK **04** 21:57:02.9, 38.27N×26.63E, h16^{km}, MD2.8*

*ATH **04** 21:57:02.1, 38.14N×26.90E, h37^{km}±6^{km}, MD2.9/3*

*CSEM **04** 21:57:02.5±0.3, 38.21N×26.66E, h17^{km}±1^{km}, MD2.8, Error ellipse: s-maj=8.5km s-min=2.0km az=116.0*

ISC 04 21:57:02.8±1.2**, 38.16N**±0.04×**26.66E**±0.08**, h12^{km}**±8^{km}**, n6, σ0^{s}.42**/11**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	Balcova	0.37	53	*i* PG	Pg	21 57 10.5	-0.1
BLCB				*i* SG	Sg	21 57 15.8	0.0
SMG	Samos	0.47	163	*e*PB	Pb	21 57 12.3	-0.3
SMG				*e*SB	Sb	21 57 19.6	+0.5
IZM	Izmir	0.53	63	*e*PG	Pg	21 57 13.5	-0.1
IZM				*e*SG	Sg	21 57 21.4	+0.6
PRK	Paraskevi	1.13	344	*e*PN	Pn	21 57 24.1	-0.3
PRK				*e*SN	Sn	21 57 40.6	+0.7
AKS	Akhisar	1.15	51	*e*PN	Pn	21 57 24.0	-0.8
AKS				*e*SN	Sn	21 57 40.4	-0.2
APE	Apeiranthos	1.41	220	*e*PB	Pb	21 57 28.7	0.0

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*NDI **04** 22:01:08.6±3.4, 34.27N×73.74E, h10^{km}, MD3.5, ML3.1*

*NNC **04** 22:01:32.5±6.5, 35.74N×73.24E, h92^{km}±86^{km}, mpv3.2, Error ellipse: s-maj=97.9km s-min=46.0km az=76.0*

ISC 04 22:01:05.1±0.8**, 34.03N**±0.08×**73.5E**±0.2**, h10^{km}, n10, σ1^{s}.40**/15**, 1C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	2.43	130	*e*P	Pn	22 01 50.5	+4.9
THN				*e*S	Sn	22 02 21.4	+5.7
DLH	Dalhousie	2.53	125	*e*P	Pn	22 01 51.0	+4.0
DLH				*e*x	x	22 02 23.0	
SMLA	Simla	4.22	132	*e*P	Pn	22 02 12.5	+1.4
SMLA				*e*S	Sn	22 03 00.2	-0.8
KLP	Kalpa	4.70	121	*e*P	Pn	22 02 18.9	+1.1
KLP				*e*S	Sn	22 03 09.5	-3.5
KLP				AML	AML	22 03 34.1	
	comp=E,94nm,0.6s						
KLP				AML	AML	22 03 34.5	
	comp=N,58nm,0.1s						
KHET	Khetri	6.25	161	*e*S	Sn	22 03 50.7	-1.3
KHET				AML	AML	22 04 42.7	
	comp=N,7.5nm,0.1s						
KHET				AML	AML	22 04 42.8	
	comp=E,14nm,0.1s						
KUDL	Kundal	6.39	156	*e*P	Pn	22 02 43.9	+2.2
KUDL				*e*S	Sn	22 03 54.9	-0.7
KK31	Karatay Array	9.36	346	Pn	P	22 03 22.4	-0.8
	comp=E,0.8nm,0.5s,baz=157,slow=11,SNR=21						
KK31				⇑Sn	Sn	22 04 49.4	-20
	comp=E,0.8nm,0.5s,baz=164,slow=29,SNR=6.8						
AB31	Akbulak array	18.24	331	P	P	22 05 22.4	+2.4
	comp=E,0.5nm,0.7s,baz=134,slow=9.9,SNR=4.6						
BVA0	Borovoye Array	19.12	354	P	P	22 05 29.7	-1.0
	comp=E,0.1nm,0.8s,baz=168,slow=7.9,SNR=7.7						
AKTO	Aktyubinsk	19.95	330	P	P	22 05 39.2	-0.9

DHMR 04 22:06:57.0±0.7**, 12.05N**×**43.43E, h16^{km}**±8^{km}**, ML3.7, 5D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	At Turbah	1.35	30	⇓*i*P	Pn	22 07 21.6	+0.3
TRBA				*i* S	Sb	22 07 40.2	+1.8

TRBA				AML	AML	22 07 40.9	
	comp=N,732nm,0.3s						
UDYN	**Al ‘Udayn**	**1.98**	**15**	⇓iP	Pn	22 07 31.8	+1.5
UDYN				i S	Sn	22 07 58.5	+3.7
UDYN				AML	AML	22 08 06.9	
	comp=N,2µm,0.4s						
LBOS		**2.53**	**44**	⇓iP	Pn	22 07 40.5	+2.2
LBOS				i S	Sn	22 08 14.4	+5.4
DHBB	**Dhamar BB**	**2.67**	**20**	⇓iP	Pn	22 07 42.4	+2.1
DHBB				i S	Sn	22 08 18.1	+5.5
BDHA	**Al Bayda’**	**2.83**	**47**	⇓iP	Pn	22 07 44.3	+1.8
BDHA				i S	Sn	22 08 22.0	+5.5
BDHA				AML	AML	22 08 27.3	
	comp=E,513nm,0.4s						

*NEIC **04** 22:14:36.5±1.1, 17.35S×178.69W, h500^{km}, mb3.6/1, Error ellipse: s-maj=77.3km s-min=16.6km az=152.0*

*IDC **04** 22:14:37.9±11.0, 17.61S×178.59W, h518^{km}±141^{km}, mb3.0/4, mb1 3.3/4, mb1mx3.1/13, mbtmp3.8/4, Error ellipse: s-maj=132.1km s-min=41.4km az=165.0*

ISC 04 22:14:35.7±1.5**, 17.4S**±0.8×**178.7W**±0.4**, h500^{km}, n8, σ0^{s}48**/6**, mb3.3**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.61**	**240**	P	**P**	**22 21 16.2**	**-0.2**
	2.3nm,0.8s,mb3.7,baz=102,slow=9.3,SNR=4.2						
WRAB	**Tennant Creek**	**44.41**	**259**	eP	**P**	**22 22 02.8**	**-0.2**
	1.1nm,0.5s,mb3.5						
WRA	**Warramunga Arr**	**44.42**	**259**	P	**P**	**22 22 03.5**	**+0.4**
	0.9nm,0.5s,mb3.5,baz=97,slow=6.7,SNR=26						
TXAR	**Lajitas Array**	**85.98**	**58**	P	**P**	**22 26 24.2**	**+0.4**
	0.2nm,0.7s,mb2.9,baz=207,slow=5.6,SNR=4.6						
TXAR	**Lajitas Array**	**85.98**	**58**	P	**P**	**22 26 24.2**	**+0.4**
PDAR	**Pinedale Array**	**87.19**	**44**	P	**P**	**22 26 28.8**	**-0.4**
	0.3nm,0.7s,mb3.1,baz=217,slow=4.5,SNR=2.8						
BRTR	**Keskin Array B**	**144.20**	**315**	PKP	PKPdf	22 33 14.9	+0.9
	0.5nm,0.5s,baz=27,slow=3.2,SNR=5.1						
GERES	**GERESS Array B**	**147.03**	**345**	PKPbc	PKPdf	22 33 22.5	+4.0
	0.5nm,0.5s,baz=20,slow=3.3,SNR=7.3						

*ISK **04** 22:36:18.4, 38.21N×26.68E, h19^{km}, MD2.9*

*ATH **04** 22:36:18.0, 38.19N×26.65E, h37^{km}±13^{km}, MD3.0/3*

*CSEM **04** 22:36:18.8±0.2, 38.22N×26.71E, h20^{km}, MD2.9, Error ellipse: s-maj=7.2km s-min=3.1km az=126.0*

ISC 04 22:36:16.3±1.2**, 38.16N**±0.03×**26.54E**±0.05**, h0^{km}**±7^{km}**, n16, σ1^{s}08**/25**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.21**	**12**	i P	**Pg**	**22 36 20.6**	**+0.2**
URLA				i S	**Sg**	**22 36 23.0**	**-0.2**
BLCB	**Balcova**	**0.46**	**60**	ePG	**Pg**	**22 36 25.6**	**+0.3**
BLCB				eSG	**Sg**	**22 36 31.0**	**-0.4**
SMG	**Samos**	**0.50**	**152**	ePN	**Pn**	**22 36 29.0**	**-1.2**
SMG				eSN	**Sn**	**22 36 37.4**	**-2.3**
IZM	**Izmir**	**0.62**	**67**	ePG	**Pg**	**22 36 29.2**	**+0.6**
IZM				eSG	**Sg**	**22 36 37.0**	**+0.2**
KDAG	**Bornova**	**0.62**	**66**	i P	**Pg**	**22 36 28.0**	**-0.6**
KDAG				i S	**Sg**	**22 36 35.7**	**-1.3**
PRK	**Paraskevi**	**1.11**	**349**	ePN	**Pn**	**22 36 38.2**	**-0.7**
PRK				eSN	**Sn**	**22 36 53.7**	**-1.4**
AYVA	**Ayvalik**	**1.16**	**6**	i P	**Pb**	**22 36 39.2**	**+0.4**
AYVA				i S	**Sb**	**22 36 56.4**	**+2.2**
AYDN	**Tasoluk**	**1.17**	**115**	i P	**Pb**	**22 36 40.1**	**+1.1**
AYDN				i S	**Sb**	**22 36 55.6**	**+1.2**
AKS	**Akhisar**	**1.23**	**54**	ePN	**Pn**	**22 36 39.8**	**-0.8**
BODT	**Bodrum**	**1.25**	**151**	ePN	**Pn**	**22 36 42.0**	**+1.2**
APE	**Apeiranthos**	**1.35**	**217**	ePN	**Pn**	**22 36 44.3**	**+2.0**
APE	**Apeiranthos**	**1.35**	**217**	ePN	**Pn**	**22 36 43.3**	**+1.0**
MANT	**Manisa**	**1.62**	**77**	i P	**Pn**	**22 36 48.0**	**+1.8**
MANT				i S	**Sb**	**22 37 08.7**	**+1.0**
YER	**Yerkesik**	**1.72**	**126**	ePN	**Pn**	**22 36 46.9**	**-0.6**
BALB	**Balikesir**	**1.81**	**35**	ePN	**Pn**	**22 36 48.3**	**-0.7**
DENT	**Denizli**	**2.01**	**101**	PN	**Pn**	**22 36 50.6**	**-1.1**

*BJI **04** 22:39:29.5, 56.42N×113.13E, h10^{km}, mB4.3, mb4.3, Ms4.4, Msz4.5*

*IDC **04** 22:39:32.5±1.1, 56.13N×112.59E, mb3.8/12, mb1 4.0/12, mb1mx3.9/21, mbtmp3.8/12, MS3.4/1, Ms1 3.4/1, ms1mx2.7/27, Error ellipse: s-maj=28.7km s-min=21.3km az=174.0*

*NEIC **04** 22:39:34.0±0.5, 56.20N×112.70E, h10^{km}, mb4.2/4, Error ellipse: s-maj=9.9km s-min=8.7km az=161.0*

*MOS **04** 22:39:35.4±2.2, 56.22N×112.59E, h19^{km}, mb4.2/10, Error ellipse: s-maj=8.4km s-min=5.4km az=65.6*

*BYKL **04** 22:39:36.0±0.4, 56.18N×112.59E, h21^{km}±13^{km}, FELT I=IV-V MSK at Yanchukan, III-IV at Severomuisk, III at Bodaybo, II at Angarakan*

ISC 04 22:39:35.9±0.5**, 56.18N**±0.04×**112.56E**±0.05**, h33^{km}**±4^{km}**, n99, σ1^{s}14**/121**, mb3.9**/18**, MS4.2**/1**, 9C-11D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOA	**Uoyan**	**0.47**	**264**	⇓iPg	**Pb**	**22 39 45.8**	**-0.2**
YOA				Pmax		22 39 46.2	
	10µm,0.3s						
YOA				eSg	**Sb**	**22 39 53.5**	**+0.5**
YOA				Smax		22 39 56.5	
	28µm,0.4s						
YOA	**Uoyan**	**0.47**	**264**	⇓iPG	**Pb**	**22 39 45.9**	**-0.1**
YOA				i		22 39 53.3	
YOA				pmax	pmax		
	comp=Z,9µm,0.3s						
YOA				smax			
	comp=N,9µm,0.4s						
SVKR	**Severomuysk**	**0.56**	**96**	⇓iPg	**Pb**	**22 39 46.3**	**-1.1**
SVKR				Pmax		22 39 46.6	
	comp=N,24µm,0.3s						
SVKR				i Sg	**Sb**	**22 39 53.9**	**-1.5**
SVKR				Smax		22 39 54.3	
	comp=N,91µm,0.4s						
SVKR	**Severomuysk**	**0.56**	**96**	ePG	**Pb**	**22 39 46.3**	**-1.1**
SVKR				e		22 39 53.8	
SVKR				pmax	pmax		
	comp=Z,24µm,0.3s						
SVKR				smax			
	comp=N,76µm,0.4s						
KMO	**Kumora**	**0.82**	**249**	⇑iPg	**Pn**	**22 39 51.6**	**+0.4**
	comp=N,291nm,0.8s						
KMO				⇑iPg	**Pn**	**22 39 51.6**	**+0.4**
	comp=N,534nm,0.8s						
KMO				⇓iPg	**Pn**	**22 39 51.6**	**+0.4**
	comp=N,728nm,0.8s						
KMO				ePb	**Pb**	**22 39 53.8**	**+2.2**
KMO				max		22 39 54.0	
	comp=N,3µm,0.4s						
KMO				eSg	**Sn**	**22 40 03.2**	**+1.0**
KMO				Smax		22 40 04.7	
	comp=N,14µm,1.0s						
KMO	**Kumora**	**0.82**	**249**	ePG	**Pn**	**22 39 51.7**	**+0.5**
KMO				e		22 40 03.1	
KMO				pmax	pmax		
	comp=Z,3µm,0.3s						
KMO				smax			
	comp=N,4µm,0.8s						
UKT	**Uakit**	**0.92**	**139**	⇓iPg	**Pn**	**22 39 52.8**	**+0.2**
	comp=N,2µm,0.5s						
UKT				⇑iPg	**Pn**	**22 39 52.8**	**+0.2**
	comp=N,1µm,0.5s						
UKT				⇑iPg	**Pn**	**22 39 52.8**	**+0.2**
	comp=N,2µm,0.5s						
UKT				Pmax		22 39 53.0	
	comp=N,2µm,0.4s						
UKT				eSg	**Sn**	**22 40 05.3**	**+0.5**
UKT				Smax		22 40 05.7	
	comp=N,14µm,0.3s						
UKT	**Uakit**	**0.92**	**139**	ePG	**Pn**	**22 39 52.7**	**+0.1**
UKT				e		22 40 05.1	
UKT				pmax	pmax		
	comp=Z,1µm,0.3s						
UKT				smax			
	comp=N,13µm,0.3s						
YLYR	**Ulyunkhan**	**1.53**	**212**	⇓iPg	**Pn**	**22 40 03.9**	**+2.5**
	comp=N,913nm,0.6s						
YLYR				⇓iPg	**Pn**	**22 40 03.9**	**+2.5**
	comp=N,579nm,0.6s						
YLYR				⇑iPg	**Pn**	**22 40 03.9**	**+2.5**
	comp=N,1µm,0.6s						
YLYR				Pmax		22 40 12.3	
	comp=N,948nm,0.4s						
YLYR				eSg	**Sn**	**22 40 25.0**	**+4.7**
YLYR				Smax		22 40 27.1	
	comp=N,12µm,0.6s						
YLYR	**Ulyunkhan**	**1.53**	**212**	⇑iPN	**Pn**	**22 40 03.9**	**+2.5**
YLYR				e		22 40 24.5	
YLYR				pmax	pmax		
	comp=Z,1µm,0.2s						
YLYR				smax			
	comp=N,13µm,0.5s						
NIZ	**Nizh Angarsk**	**1.75**	**258**	ePn	**Pn**	**22 40 06.8**	**+2.4**
NIZ				ePg	**Pn**	**22 40 07.9**	**+3.5**
NIZ				Pmax		22 40 08.3	
	comp=N,2µm,0.4s						
NIZ				eSg	**Sn**	**22 40 31.9**	**+6.2**
NIZ				Smax		22 40 32.7	
	comp=N,4µm,0.7s						
NIZ	**Nizh Angarsk**	**1.75**	**258**	ePN	**Pn**	**22 40 06.7**	**+2.3**
NIZ				e		22 40 07.9	
NIZ				e		22 40 31.9	
NIZ				pmax	pmax		
	comp=Z,2µm,0.5s						
NIZ				smax			
	comp=E,4µm,0.9s						
NLYR	**Nelyaty**	**1.78**	**79**	ePn	**Pn**	**22 40 06.0**	**+1.1**
NLYR				ePg	**Pn**	**22 40 07.1**	**+2.2**
NLYR				Pmax		22 40 11.7	
	comp=E,1µm,0.5s						
NLYR				eSg	**Sn**	**22 40 30.5**	**+4.0**
NLYR				Smax		22 40 32.0	
	comp=E,9µm,0.8s						
NLYR	**Nelyaty**	**1.78**	**79**	ePN	**Pn**	**22 40 07.1**	**+2.2**
NLYR				e		22 40 29.9	
NLYR				pmax	pmax		
	comp=Z,1µm,0.3s						
NLYR				smax			
	comp=N,9µm,0.8s						
BOD	**Bodaibo**	**1.82**	**25**	⇑iPn	**Pn**	**22 40 06.4**	**+0.9**
BOD				ePg	**Pn**	**22 40 07.4**	**+1.9**
BOD				Pmax		22 40 07.8	
	comp=N,1µm,0.4s						
BOD				eSn	**Sn**	**22 40 29.7**	**+2.1**
BOD				eSg	**Sn**	**22 40 30.8**	**+3.2**
BOD				Smax		22 40 31.7	
	comp=N,8µm,0.5s						
BOD				eSgSg		22 40 37.0	
BOD	**Bodaibo**	**1.82**	**25**	⇑iPN	**Pn**	**22 40 05.8**	**+0.3**
BOD				e		22 40 29.9	
BOD				pmax	pmax		
	comp=Z,1µm,0.4s						
BOD				smax			
	comp=E,8µm,0.3s						
SYVR	**Suvo**	**2.93**	**211**	ePn	**Pn**	**22 40 22.5**	**+1.1**
SYVR				ePg	**Pn**	**22 40 28.6**	**+7.2**
SYVR				Pmax		22 40 31.5	
	comp=E,254nm,0.6s						
SYVR				eSg	**Sn**	**22 41 06.8**	**+11**
SYVR				Smax		22 41 12.7	
	comp=E,2µm,1.1s						
SYVR	**Suvo**	**2.93**	**211**	ePN	**Pn**	**22 40 22.6**	**+1.2**
CRS	**Chara**	**3.24**	**75**	ePn	**Pn**	**22 40 26.5**	**+0.7**
CRS				ePg	**Pn**	**22 40 32.8**	**+7.0**
CRS				Pmax		22 40 36.8	
	comp=E,685nm,1.0s						
CRS				eSg	**Sn**	**22 41 14.4**	**+11**
CRS				Smax		22 41 19.7	
	comp=E,3µm,1.4s						
CRS	**Chara**	**3.24**	**75**	ePN	**Pn**	**22 40 26.9**	**+1.1**
CRS				e		22 40 32.9	
CRS				e		22 41 14.6	
CRS				pmax	pmax		
	comp=Z,693nm,0.5s						
CRS				smax			
	comp=E,2µm,0.5s						
MXMB	**Maximikha**	**3.67**	**219**	ePn	**Pn**	**22 40 33.2**	**+1.4**
MXMB				ePg	**Pn**	**22 40 41.4**	**+10**
MXMB				Pmax		22 40 54.0	
	comp=E,198nm,1.0s						
MXMB				eSg	**Sn**	**22 41 29.7**	**+15**
MXMB				Smax		22 41 38.9	
	comp=E,5µm,0.6s						
OGRR	**Ongureny**	**3.83**	**230**	⇓iPn	**Pn**	**22 40 35.1**	**+1.0**
OGRR				ePg	**Pn**	**22 40 44.2**	**+10**
OGRR				Pmax		22 40 54.9	
	comp=E,140nm,0.8s						
OGRR				eSg	**Sn**	**22 41 33.7**	**+15**
OGRR				Smax		22 41 42.1	
	comp=E,706nm,1.0s						
OGRR	**Ongureny**	**3.83**	**230**	ePN	**Pn**	**22 40 35.2**	**+1.1**
OGRR				e		22 40 44.6	
OGRR				e		22 41 33.7	
OGRR				pmax	pmax		
	comp=Z,143nm,0.9s						
OGRR				smax			
	comp=E,710nm,1.5s						
CIT	**Chita**	**4.21**	**172**	ePn	**Pn**	**22 40 38.9**	**-0.6**
CIT				ePg	Px	22 40 51.7	
CIT				Pmax		22 40 58.9	
	comp=E,296nm,1.0s						
CIT				eSg	Px	22 41 48.5	
CIT				Smax		22 41 52.5	
	comp=E,1µm,1.0s						
CIT	**Chita**	**4.21**	**172**	ePN	**Pn**	**22 40 38.7**	**-0.8**
CIT				e		22 40 51.4	
CIT				e		22 41 45.7	
CIT				pmax	pmax		
	comp=Z,308nm,1.0s						
CIT				smax			
	comp=E,1µm,1.0s						
TUP	**Tupik**	**4.58**	**110**	⇑iPn	**Pn**	**22 40 43.9**	**-0.8**
TUP				ePg	Px	22 40 57.7	
TUP				Pmax		22 41 02.7	
	comp=E,146nm,1.1s						
TUP				eSg	Px	22 41 56.8	
TUP				Smax		22 42 09.1	
	comp=E,2µm,0.8s						
TUP	**Tupik**	**4.58**	**110**	ePN	**Pn**	**22 40 44.0**	**-0.7**
TUP				e		22 40 56.7	
TUP				e		22 41 56.7	
TUP				pmax	pmax		
	comp=Z,128nm,0.5s						
TUP				smax			
	comp=N,1µm,1.1s						
ZRHB	**Zarechye**	**4.82**	**223**	eSg	Sx	22 42 04.7	
ZRHB				Smax		22 42 17.2	
	comp=N,3µm,1.0s						
TRTB	**Turuntaevo**	**4.90**	**218**	ePn	**Pn**	**22 40 50.2**	**+0.8**
TRTB				ePg	Px	22 41 03.5	
TRTB				Pmax		22 41 16.9	
	comp=N,116nm,1.1s						
TRTB				eSg	Px	22 42 07.8	
TRTB				Smax		22 42 20.1	
	comp=N,1µm,1.1s						
TRG	**Tyrgan**	**4.99**	**229**	ePn	**Pn**	**22 40 50.9**	**+0.4**
TRG				ePg	Px	22 41 05.2	
TRG				Pmax		22 41 11.6	
	comp=N,88nm,1.2s						
TRG				eSg	Px	22 42 09.0	
TRG				Smax		22 42 19.1	
	comp=N,559nm,1.6s						
TRG	**Tyrgan**	**4.99**	**229**	ePN	**Pn**	**22 40 50.5**	**0.0**
TRG				e		22 41 04.7	
TRG				eS	**Sn**	**22 41 47.9**	**+0.1**
TRG				e		22 42 08.5	
TRG				pmax	pmax		
	comp=Z,62nm,0.3s						
TRG				smax			
	comp=N,481nm,0.7s						
FFNB	**Fofonovo**	**5.37**	**222**	ePn	**Pn**	**22 40 55.7**	**-0.1**
FFNB				eSg	Sx	22 42 20.6	
FFNB				Smax		22 42 32.9	
	comp=N,1µm,0.7s						
KAB	**Kabansk**	**5.40**	**222**	ePg	Px	22 41 12.8	
KAB				Pmax		22 41 42.4	
	comp=N,342nm,1.7s						
KAB				eSg	Sx	22 42 22.8	
KAB				Smax		22 42 36.3	
	comp=N,3µm,1.5s						
KAB	**Kabansk**	**5.40**	**222**	ePN	Px	22 41 14.6	
IRK	**Irkutsk**	**6.26**	**234**	eSg	Sx	22 42 49.0	
IRK				Smax		22 42 55.6	
	comp=N,2µm,1.1s						
IRK	**Irkutsk**	**6.26**	**234**	ePN	Px	22 41 26.7	
IRK				e		22 42 48.7	
IRK				pmax	pmax		
	comp=Z,105nm,1.1s						
IRK				smax			
	comp=N,2µm,1.2s						
LSTR	**Listvyanka**	**6.28**	**230**	ePn	**Pn**	**22 41 07.6**	**-1.1**
LSTR				max		22 42 03.8	
	comp=N,66nm,1.0s						
LSTR				eSg	Sx	22 42 48.9	
LSTR				Smax		22 42 56.9	
	comp=N,659nm,1.4s						
LSTR	**Listvyanka**	**6.28**	**230**	ePG	Px	22 41 29.1	
LSTR				e		22 42 48.8	
LSTR				pmax	pmax		
	comp=Z,34nm,1.4s						
LSTR				smax			
	comp=N,682nm,1.5s						
KPC	**Khapcheranga**	**6.49**	**181**	ePg	Px	22 41 33.5	
KPC				Pmax		22 41 43.7	
	comp=N,44nm,1.0s						
KPC				eSg	Sx	22 42 58.1	
KPC				Smax		22 43 05.1	
	comp=N,879nm,0.9s						
KPC	**Khapcheranga**	**6.49**	**181**	ePG	Px	22 41 34.0	
KPC				e		22 42 59.2	
KPC				pmax	pmax		
	comp=Z,44nm,0.5s						
KPC				smax			
	comp=E,690nm,0.8s						
CLNS	**Chul’man**	**6.86**	**79**	ePN	**Pn**	**22 41 08.2**	**-8.7**
CLNS				e		22 41 40.2	
CLNS				pmax	pmax		
	comp=Z,2.0nm,0.2s						
CLNS				pmax	pmax		
	comp=N,1.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,1.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,36nm,0.6s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,15nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,200nm,10.0s						
TLY	**Talaya**	**6.93**	**233**	ePn	**Pn**	**22 41 16.9**	**-1.0**
TLY				ePg	Px	22 41 40.7	
TLY				Pmax		22 41 51.7	
	comp=Z,30nm,0.3s						
TLY				eSg	Px	22 43 10.8	
TLY				Smax		22 43 12.9	
	comp=Z,322nm,1.0s						
TLY	**Talaya**	**6.93**	**233**	ePN	**Pn**	**22 41 16.7**	**-1.2**
TLY				e		22 41 39.1	
TLY				e		22 43 09.9	
TLY				pmax	pmax		
	comp=Z,15nm,0.3s						
TLY				smax			
	comp=E,330nm,1.0s						
ARS	**Arshan**	**7.33**	**239**	ePn	**Pn**	**22 41 22.2**	**-1.4**
ARS				ePg	Px	22 41 48.3	
ARS				Pmax		22 41 56.0	
	comp=E,103nm,0.5s						
ARS				eSg	Px	22 43 23.1	
ARS				Smax		22 43 29.2	
	comp=E,1µm,0.6s						
ARS	**Arshan**	**7.33**	**239**	ePG	Px	22 41 49.9	
ZAK	**Zakamensk**	**8.04**	**228**	ePn	**P**	**22 41 33.7**	**+0.3**
ZAK				ePg	Px	22 42 01.2	
ZAK				Pmax		22 42 17.4	
	comp=E,12nm,0.7s						
ZAK				eSg	Px	22 43 45.4	
ZAK				Smax		22 43 54.8	
	comp=E,190nm,1.1s						
ZAK	**Zakamensk**	**8.04**	**228**	ePN	**P**	**22 41 32.0**	**-1.4**
ZAK				e		22 42 00.2	
ZAK				e		22 43 43.7	
ZAK				pmax	pmax		
	comp=Z,13nm,0.9s						
ZAK				smax			
	comp=E,190nm,1.4s						
HIA	**Hailar**	**8.18**	**145**	ePn	**P**	**22 41 31.0**	**-4.4**
	comp=E,13nm,0.6s						
HIA				Sn	**Sn**	**22 43 00.8**	**-6.9**
HIA	**Hailar**	**8.18**	**145**	d iPN	**P**	**22 41 30.8**	**-4.5**
MOY	**Mondy**	**8.19**	**241**	ePn	**P**	**22 41 35.3**	**-0.1**
MOY				max		22 41 51.0	
	comp=E,61nm,1.0s						
MOY				ePg	Px	22 42 03.0	
MOY				eSn	**Sn**	**22 43 04.6**	**-3.2**
MOY				eSg	Sx	22 43 49.6	
MOY				Smax		22 44 04.2	
	comp=E,449nm,1.5s						
MOY	**Mondy**	**8.19**	**241**	ePN	**P**	**22 41 34.6**	**-0.8**
MOY				e		22 42 02.2	
MOY				eS	**Sn**	**22 43 03.7**	**-4.1**
MOY				e		22 43 49.2	
MOY				pmax	pmax		
	comp=Z,47nm,0.9s						
MOY				smax			
	comp=E,475nm,1.6s						
MOY	**Mondy**	**8.19**	**241**	ePN	**P**	**22 41 34.8**	**-0.6**
MOY				e		22 42 02.2	
MOY				eS	**Sn**	**22 43 03.8**	**-4.0**
MOY				e		22 43 49.2	
MOY				pmax	pmax		
	comp=Z,47nm,0.9s						
MOY				smax			
	comp=E,476nm,1.6s						
ORL	**Orlik**	**8.29**	**249**	ePn	**P**	**22 41 35.4**	**-1.5**
ORL				max		22 41 47.3	
	comp=E,83nm,1.3s						
ORL				e		22 43 02.9	
ORL				eSg	Sx	22 43 51.5	
ORL				Smax		22 43 59.9	
	comp=E,357nm,1.1s						
ORL	**Orlik**	**8.29**	**249**	ePN	**P**	**22 41 36.3**	**-0.6**
ORL				e		22 42 04.9	
ORL				e		22 43 53.5	
ORL				pmax	pmax		
	comp=Z,84nm,1.1s						
ORL				smax			
	comp=N,369nm,1.3s						
SONM	**Songino Array**	**9.18**	**207**	Pn	**P**	**22 41 48.8**	**-0.4**
	comp=N,0.7nm,0.3s,baz=17,slow=13,SNR=4.1						
SONM				Lg		22 44 23.5	
	comp=N,3.6nm,0.3s,baz=25,slow=27,SNR=4.1						
SONM				LR	LR	22 45 38.5	
	comp=N,202nm,19.4s,baz=69,slow=40						
TDJR	**Todzha**	**10.34**	**255**	eSg	Sx	22 44 56.7	
YAK	**Yakutsk**	**10.55**	**49**	ePn	**P**	**22 42 03.3**	**-4.6**
YAK	**Yakutsk**	**10.55**	**49**	eP	**P**	**22 42 03.4**	**-4.5**
YAK				eS	**S**	**22 43 58.9**	**-7.0**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,1.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
YAK				smax			
	comp=N,8.0nm,0.9s						
YAK				smax			
	comp=E,10.0nm,0.9s						
YAK				smax			
	comp=Z,4.0nm,0.9s						
YAK				smax			
	comp=N,124nm,0.9s						
YAK				smax			
	comp=E,88nm,0.8s						
YAK				smax			
	comp=Z,42nm,0.8s						
YAK				MLR	MLR		
	comp=Z,100nm,11.0s						
KRAR	**Krasnoyarsk**	**11.00**	**277**	eP	**P**	**22 42 11.8**	**-2.1**
KRAR				e		22 44 15.8	
KRAR				pmax	pmax		
	comp=N,31nm,0.7s						
KRAR				pmax	pmax		

	comp=N,40nm,0.7s						
KRAR				smax			
	comp=N,121nm,0.7s						
KRAR				smax			
	comp=N,584nm,1.3s						
KLR	**Kul'dur**	**13.53**	**113**	*e*P	**P**	**22 42 50.8**	**+3.1**
NVS	**Novosibirsk**	**16.61**	**278**	*e*P	**P**	**22 43 26.2**	**-1.4**
NVS				*e*		22 46 38.8	
TIXI	**Tiksi**	**16.99**	**18**	*e*P	**P**	**22 43 24.0**	**-8.2**
TIXI				pmax	pmax		
	comp=Z,11nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,71nm,9.0s						
WMQ	**Urumqi**	**20.07**	**242**	*e*P	**P**	**22 44 09.0**	**-0.1**
KURK	**Kurchatov**	**20.79**	**269**	*e*P	**P**	**22 44 15.4**	**-1.1**
	comp=Z,9.7nm,0.8s						
KURK	**Kurchatov**	**20.79**	**269**	*d i*P	**P**	**22 44 15.4**	**-1.1**
MKAR	**Makanchi Array**	**20.90**	**256**	P	**P**	**22 44 17.2**	**-0.4**
	comp=Z,7.2nm,0.6s,baz=52,slow=8.7,SNR=86						
MKAR	**Makanchi Array**	**20.90**	**256**	*e*P	**P**	**22 44 17.3**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CHKZ	**Chkalovo**	**23.96**	**282**	*e*P	**P**	**22 44 48.1**	**+0.4**
	comp=Z,4.3nm,0.6s,mb4.1						
CHKZ	**Chkalovo**	**23.96**	**282**	*e*P	**P**	**22 44 48.1**	**+0.4**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
BVA0	**Borovoye Array**	**24.35**	**280**	*i* P	**P**	**22 44 52.3**	**+0.8**
BVA0				pmax	pmax		
	comp=Z,10.0nm,2.2s,mb3.9						
BVAR	**Borovoye Array**	**24.35**	**280**	P	**P**	**22 44 52.4**	**+0.9**
	comp=Z,4.6nm,0.6s,mb4.1,baz=67,slow=11,SNR=24						
BVAR	**Borovoye Array**	**24.35**	**280**	P	**P**	**22 44 52.4**	**+0.9**
BVAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	**Borovoye**	**24.39**	**281**	*e*P	**P**	**22 44 52.8**	**+0.8**
	comp=Z,6.1nm,0.8s,mb4.1						
BRVK	**Borovoye**	**24.39**	**281**	*e*P	**P**	**22 44 52.8**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
NJ2	**Nanjing**	**24.52**	**167**	*e*P	**P**	**22 44 52.6**	**-0.8**
NJ2				AP		22 45 01.8	
NJ2				XP		22 45 06.0	
NJ2				PP	PP	22 45 30.4	+0.9
NJ2				S	**S**	**22 49 08.0**	**-0.9**
NJ2				XS		22 49 22.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,50nm,5.0s						
NJ2				LR	LR		
	comp=N,210nm,16.4s,MS3.9						
NJ2				LR	LR		
	comp=E,250nm,19.7s,MS3.9						
NJ2				LR	LR		
	comp=Z,1μm,16.6s,MS4.4						
WHN	**Wuhan**	**25.66**	**176**	⇓P	**P**	**22 45 06.1**	**+1.9**
SSE	**Sheshan**	**25.80**	**163**	P	**P**	**22 45 05.4**	**-0.1**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,40nm,8.0s						
ARCES	**ARCESS Array B**	**38.17**	**325**	P	**P**	**22 46 53.1**	**-0.3**
	comp=Z,3.2nm,1.0s,mb4.0,baz=69,slow=7.7,SNR=3.0						
ARCES	**ARCESS Array B**	**38.17**	**325**	P	**P**	**22 46 53.2**	**-0.2**
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**41.96**	**314**	P	**P**	**22 47 24.4**	**-0.3**
	comp=Z,1.8nm,0.6s,mb3.9,baz=63,slow=8.5,SNR=10.0						
FINES	**FINESS Array B**	**41.96**	**314**	P	**P**	**22 47 24.4**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIV	**Kislovodsk**	**44.57**	**285**	*e*P	**P**	**22 47 44.5**	**-1.6**
KIV				*e*SS	SS	22 57 41.4	+11
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
ILAR	**Eielson Array**	**45.16**	**36**	P	**P**	**22 47 50.1**	**-0.4**
	comp=Z,0.3nm,0.7s,mb3.2,baz=293,slow=6.9,SNR=3.4						
INK	**Inuvik**	**46.74**	**28**	P	**P**	**22 48 04.2**	**+1.2**
	comp=Z,0.3nm,0.4s,mb3.6,baz=16,slow=7.4,SNR=2.5						
AKASG	**Malin Array Be**	**47.07**	**300**	P	**P**	**22 48 04.7**	**-1.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=44,slow=8.7,SNR=6.4						
AKASG	**Malin Array Be**	**47.07**	**300**	*i* P	**P**	**22 48 05.0**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NB2	**NORSAR Subarra**	**47.88**	**320**	P	**P**	**22 48 11.3**	**-0.7**
	comp=Z,1.1nm,0.6s,mb4.1,baz=50,slow=7.4						
NOA	**NORSAR Array B**	**47.88**	**320**	P	**P**	**22 48 11.3**	**-0.7**
	comp=Z,1.5nm,0.7s,mb4.2,baz=49,slow=7.5,SNR=5.3						
NOA	**NORSAR Array B**	**47.88**	**320**	P	**P**	**22 48 11.3**	**-0.7**
NOA	**NORSAR Array B**	**47.88**	**320**	P	**P**	**22 48 11.3**	**-0.7**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NAO	**NORSAR Subarra**	**48.16**	**320**	P	**P**	**22 48 11.3**	**-2.9**
	comp=Z,1.1nm,0.6s,mb4.1						
BRTR	**Keskin Array B**	**52.37**	**287**	P	**P**	**22 48 47.1**	**+0.5**
	comp=Z,0.7nm,0.7s,mb3.7,baz=60,slow=4.9,SNR=4.0						
BRTR	**Keskin Array B**	**52.37**	**287**	P	**P**	**22 48 47.2**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	**55.56**	**308**	P	**P**	**22 49 09.6**	**-0.4**
	comp=Z,0.5nm,0.6s,mb3.7,baz=59,slow=7.8,SNR=5.5						
GERES	**GERESS Array B**	**55.56**	**308**	P	**P**	**22 49 09.6**	**-0.3**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**76.35**	**39**	P	**P**	**22 51 23.9**	**+0.9**
	comp=Z,0.3nm,0.5s,mb3.5,baz=315,slow=3.8,SNR=3.1						
WRA	**Warramunga Arr**	**78.03**	**159**	P	**P**	**22 51 31.8**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.5,baz=351,slow=6.2,SNR=4.7						
VNA2	**Neumayer--Watz**	**151.02**	**216**	P	PKPdf	22 59 26.3	+3.3
VNA2				P	tx	22 59 32.8	
VNA2				P	tx	22 59 34.5	
VNA2				P	tx	22 59 40.1	
VNA3	**Neumayer Olymp**	**151.76**	**215**	P	PKPdf	22 59 27.3	+3.1
VNA3				P	tx	22 59 34.1	
VNA3				P	tx	22 59 36.8	
VNA3				P	tx	22 59 41.0	

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*NEIC **04** 23:04:09.3±0.7, 34.62S×179.04W, h35^{km}, Error ellipse: s-maj=18.8km s-min=8.7km az=124.0*
*IDC **04** 23:04:11.2±4.2, 34.61S×179.04W, h53^{km}±44^{km}, mb4.0/4, mb1 4.1/5, mb1mx3.9/13, mbtmp4.3/5, ML4.3/1, MS3.4/2, Ms1 3.3/2, ms1mx2.8/16, Error ellipse: s-maj=51.9km s-min=22.1km az=151.0*
ISC 04 23:04:07.5±0.8**, 34.58S**±0.08×**179.1W**±0.2**, h33**^{km}**, n31, σ0**^{s}**74**/31**, mb4.3**/4**, MS3.4**/1**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.66**	**215**	*e*PN	**Pn**	**23 05 03.4**	**+0.1**
MXZ				SN	**Sn**	**23 05 46.5**	**+0.8**
MXZ	**Matakaoa Point**	**3.66**	**215**	*e*P	**P**	**23 05 03.4**	**+0.2**
PUZ	**Puketiti**	**4.10**	**211**	*e*PN	**Pn**	**23 05 08.6**	**-1.0**
PUZ				SN	**Sn**	**23 05 57.1**	**+0.1**
PUZ	**Puketiti**	**4.10**	**211**	*e*P	**P**	**23 05 08.6**	**-0.8**
PUZ				S	**S**	**23 05 57.1**	**+0.2**
MWZ	**Matawai**	**4.64**	**215**	*e*PN	**Pn**	**23 05 16.7**	**-0.6**
MWZ				SN	**Sn**	**23 06 10.7**	**0.0**
MWZ	**Matawai**	**4.64**	**215**	*e*P	**P**	**23 05 16.7**	**-0.5**
MWZ				S	**S**	**23 06 10.7**	**+0.1**
URZ	**Urewera**	**4.79**	**219**	P	**P**	**23 05 19.5**	**+0.2**
	13nm,0.3s,baz=31,slow=3.0,SNR=60						
URZ				S	**S**	**23 06 15.9**	**+1.6**
	9.0nm,0.3s,baz=141,slow=20,SNR=7.1						
URZ	**Urewera**	**4.79**	**219**	PN	**Pn**	**23 05 19.3**	**-0.1**
URZ				SN	**Sn**	**23 06 14.4**	**-0.1**
URZ	**Urewera**	**4.79**	**219**	P	**P**	**23 05 19.3**	**0.0**
KNZ	**Kokohu**	**5.14**	**209**	PN	**Pn**	**23 05 23.8**	**-0.6**
BKZ	**Black Stump Fm**	**5.79**	**216**	*e*PN	**Pn**	**23 05 32.6**	**-1.0**
BKZ	**Black Stump Fm**	**5.79**	**216**	*e*P	**P**	**23 05 32.6**	**-0.8**
DZM	**Mont Dzumac**	**17.80**	**311**	LR	LR	23 13 41.0	
	comp=Z,98nm,20.5s,baz=300,slow=32						
RAR	**Rarotonga**	**21.59**	**57**	P	**P**	**23 08 56.9**	**+0.4**
	12nm,0.4s,mb4.7,baz=157,slow=7.7,SNR=4.3						
STKA	**Stephens Creek**	**32.87**	**263**	P	**P**	**23 10 41.1**	**+0.5**
	1.5nm,0.8s,mb4.0,baz=102,slow=9.3,SNR=3.2						
STKA				LR	LR	23 21 57.7	
	comp=Z,71nm,19.8s,MS3.4,baz=204,slow=32						
CTA	**Charters Tower**	**33.82**	**286**	P	**P**	**23 10 48.9**	**+0.1**
	3.1nm,0.7s,mb4.3,baz=127,slow=10,SNR=5.1						
CTA	**Charters Tower**	**33.82**	**286**	P	**P**	**23 10 48.9**	**+0.1**
WRA	**Warramunga Arr**	**43.52**	**277**	P	**P**	**23 12 09.8**	**-0.1**
	1.7nm,0.4s,mb4.1,baz=118,slow=7.5,SNR=6.9						
VNA3	**Neumayer Olymp**	**74.21**	**176**		**P**	**23 15 54.0**	**+12**
VNA3	**Neumayer Olymp**	**74.21**	**176**		**P**	**23 16 01.8**	**+20**
VNA3	**Neumayer Olymp**	**74.21**	**176**		tx	23 16 10.2	
VNA3	**Neumayer Olymp**	**74.21**	**176**	P	**P**	**23 15 46.2**	**+4.1**
VNA3				P		23 15 54.0	
VNA3				P		23 16 01.8	
VNA3				P		23 16 10.2	
VNA2	**Neumayer--Watz**	**74.63**	**177**		**P**	**23 15 56.8**	**+12**
VNA2	**Neumayer--Watz**	**74.63**	**177**		tx	23 16 08.3	
VNA2	**Neumayer--Watz**	**74.63**	**177**	P	**P**	**23 15 47.4**	**+2.9**
VNA2				P	pP	23 15 56.8	+2.0
VNA2				P		23 16 08.3	
VNA1	**Neumayer--Stat**	**74.86**	**177**		**P**	**23 15 59.4**	**+14**
VNA1	**Neumayer--Stat**	**74.86**	**177**		tx	23 16 15.4	
VNA1	**Neumayer--Stat**	**74.86**	**177**	P	**P**	**23 15 49.3**	**+3.4**
VNA1				P	pP	23 15 59.4	+3.2
VNA1				P		23 16 09.6	
VNA1				P		23 16 15.4	
FINES	**FINESS Array B**	**148.68**	**337**	PKPbc	PKPdf	23 23 51.4	+4.8
	2.0nm,0.6s,baz=63,slow=3.1,SNR=10						
FINES	**FINESS Array B**	**148.68**	**337**	PKPbc	PKPdf	23 23 51.4	+4.8
BRTR	**Keskin Array B**	**153.51**	**291**	PKPbc	PKPdf	23 24 03.1	+8.6
	0.7nm,0.8s,baz=135,slow=2.0,SNR=4.1						
BRTR				PKPab	PKPab	23 24 15.8	-1.3
	1.0nm,1.0s,baz=166,slow=5.9,SNR=4.1						

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*NEIC **04** 23:31:55.7±2.8, 21.64S×178.37W, h486^{km}±29^{km}, mb4.0/7, Error ellipse: s-maj=20.4km s-min=14.0km az=89.0*
*IDC **04** 23:31:57.6±4.9, 21.49S×178.47W, h502^{km}±52^{km}, mb3.4/8, mb1 3.7/9, mb1mx3.6/14, mbtmp4.3/9, Error ellipse: s-maj=44.4km s-min=23.0km az=143.0*
ISC 04 23:31:45.9±1.6**, 21.6S**±0.1×**178.13W**±0.10**, h391**^{km}±19^{km}**, n35, σ1**^{s}**23**/29**, mb4.0**/20**, 3C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.74**	**39**	P	**P**	**23 34 03.1**	**+1.1**
	1.9nm,0.3s,baz=214,slow=3.6,SNR=3.0						
AFI				S	**S**	**23 35 47.1**	**-2.4**
	2.0nm,0.3s,baz=60,slow=23,SNR=3.0						
DZM	**Mont Dzumac**	**14.33**	**265**	*e*P	**P**	**23 34 57.2**	**+3.0**
DZM	**Mont Dzumac**	**14.33**	**265**	P	**P**	**23 34 57.2**	**+3.0**
	2.5nm,0.3s,baz=110,slow=11,SNR=24						
CNB	**Canberra Magne**	**31.53**	**237**	*e*P	**P**	**23 37 36.3**	**+1.2**
	13nm,0.5s,mb4.5						
CTA	**Charters Tower**	**33.27**	**266**	P	**P**	**23 37 50.8**	**+0.6**
	2.6nm,0.4s,mb3.9,baz=98,slow=10,SNR=4.9						
TOO	**Toolangi**	**35.17**	**235**	*e*P	**P**	**23 38 07.0**	**+1.1**
	7.5nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**37.22**	**245**	P	**P**	**23 38 24.1**	**+1.0**
	6.5nm,0.5s,mb4.2,baz=87,slow=10,SNR=17						
ASPA	**Alice Springs**	**44.16**	**258**	*e*P	**P**	**23 39 19.6**	**+0.2**
WB2	**Warramunga Arr**	**44.33**	**263**	*e*P	**P**	**23 39 19.9**	**-0.9**
WRAB	**Tennant Creek**	**44.33**	**263**	*e*P	**P**	**23 39 19.6**	**-1.2**
	4.9nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**44.34**	**263**	P	**P**	**23 39 20.1**	**-0.7**
	4.7nm,1.0s,mb3.8,baz=96,slow=7.5,SNR=31						
KAKA	**Kakadu**	**47.88**	**272**	*e*P	**P**	**23 40 05.4**	**+17**
	3.0nm,0.4s,mb4.0						
FORT	**Forrest**	**48.76**	**247**	*e*P	**P**	**23 39 53.8**	**-1.1**
	34nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**52.77**	**263**	*e*P	**P**	**23 40 24.4**	**-0.4**
	3.8nm,0.4s,mb4.0						
SBA	**Scott Base**	**56.79**	**184**	*e*P	**P**	**23 40 49.4**	**-3.2**
	5.6nm,0.7s,mb4.0						
VNDA	**Vanda**	**56.83**	**185**	*e*P	**P**	**23 40 51.1**	**-1.7**
	1.1nm,0.6s,mb3.4						
MBWA	**Marble Bar**	**57.50**	**258**	*e*P	**P**	**23 40 56.9**	**-1.2**
	15nm,0.6s,mb4.5						
CASY	**Casey**	**62.94**	**205**	*e*P	**P**	**23 41 31.2**	**-2.5**
	5.1nm,0.9s,mb4.0						
QSPA	**South Pole Qui**	**68.49**	**180**	*e*P	**P**	**23 42 09.3**	**+1.1**
	8.4nm,0.8s,mb4.4						
MAW	**Mawson**	**80.51**	**200**	P	**P**	**23 43 15.9**	**-0.4**
	1.5nm,0.7s,mb3.8,baz=149,slow=5.9,SNR=3.8						
NVAR	**Mina Array Bea**	**81.89**	**43**	P	**P**	**23 43 25.9**	**+1.9**
	1.0nm,0.5s,mb3.8,baz=220,slow=7.6,SNR=6.8						
SNAA	**Sanae**	**86.94**	**179**	*e*P	**P**	**23 43 47.8**	**-0.4**
	0.7nm,0.5s,mb3.6						
VNA3	**Neumayer Olymp**	**87.08**	**176**	⇑*i*	**P**	**23 43 49.0**	**+0.2**
VNA2	**Neumayer--Watz**	**87.52**	**177**	⇑*i*	**P**	**23 43 51.2**	**+0.3**
TXAR	**Lajitas Array**	**87.74**	**57**	P	**P**	**23 43 54.5**	**+1.6**
	0.5nm,0.6s,mb3.4,baz=225,slow=7.1,SNR=7.9						
VNA1	**Neumayer--Stat**	**87.75**	**177**	⇑*i*	**P**	**23 43 52.9**	**+0.9**
ILAR	**Eielson Array**	**89.39**	**13**	P	**P**	**23 43 58.9**	**-0.8**
	0.3nm,0.4s,mb3.4,baz=215,slow=4.9,SNR=9.2						
PDAR	**Pinedale Array**	**89.83**	**43**	P	**P**	**23 44 02.4**	**+0.1**
	0.9nm,0.6s,mb3.8,baz=217,slow=3.1,SNR=4.0						
ARCES	**ARCESS Array B**	**129.96**	**349**	PKP	PKPdf	23 50 08.2	-1.0
	1.3nm,0.6s,baz=27,slow=2.7,SNR=5.2						
FINES	**FINESS Array B**	**136.77**	**343**	PKP	PKPdf	23 50 22.8	+0.8
	2.0nm,0.8s,baz=49,slow=1.6,SNR=4.2						
HFS	**Hagfors**	**140.58**	**351**	PKhKP		23 50 23.3	
	1.3nm,0.5s,baz=90,slow=4.4,SNR=5.9						
AKASG	**Malin Array Be**	**143.89**	**330**	PKP	PKPdf	23 50 33.0	-1.9
	1.3nm,0.4s,baz=46,slow=4.5,SNR=14						
EKA	**Eskdalemuir Ar**	**146.09**	**5**	PKPbc	PKPbc	23 50 39.5	-0.6
	2.3nm,0.9s,baz=315,slow=1.2,SNR=3.7						
MLR	**Muntele Rosu**	**149.05**	**326**	PKPbc	PKPdf	23 50 48.6	+5.0
	1.7nm,0.7s,baz=165,slow=3.2,SNR=3.3						
GERES	**GERESS Array B**	**151.20**	**344**	PKPbc	PKPdf	23 50 54.0	+7.2
	0.5nm,0.4s,baz=63,slow=3.0,SNR=5.7						

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*ATH **04** 23:32:08.5, 38.27N×27.15E, h18^{km}±2^{km}, MD3.1/3*
*ISK **04** 23:32:09.0, 38.19N×26.60E, h13^{km}, MD3.0*
*CSEM **04** 23:32:11.4±0.2, 38.19N×26.82E, h20^{km}, MD3.0, Error ellipse: s-maj=5.3km s-min=2.5km az=96.0*
ISC 04 23:32:09.3±0.9**, 38.19N**±0.03×**26.58E**±0.05**, h3**^{km}±5^{km}**, n16, σ1**^{s}**06**/26**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.17**	**5**	*i* P	**Pg**	**23 32 12.4**	**-0.3**
URLA				*i* S	**Sg**	**23 32 14.7**	**-0.4**
BLCB	**Balcova**	**0.42**	**62**	PG	**Pg**	**23 32 17.5**	**-0.1**
BLCB				SG	**Sg**	**23 32 23.1**	**0.0**
SMG	**Samos**	**0.52**	**157**	*e*PN	**Pg**	**23 32 20.7**	**+1.0**
SMG				*e*SN	**Sg**	**23 32 29.2**	**+2.5**
IZM	**Izmir**	**0.58**	**69**	PG	**Pg**	**23 32 20.6**	**-0.2**
IZM				SG	**Sg**	**23 32 29.2**	**+0.7**
KDAG	**Bornova**	**0.58**	**68**	*i* P	**Pg**	**23 32 19.8**	**-1.2**
KDAG				*i* S	**Sg**	**23 32 27.7**	**-1.0**
PRK	**Paraskevi**	**1.08**	**347**	*e*PN	**Pn**	**23 32 30.8**	**-0.4**
PRK				*e*SN	**Sn**	**23 32 47.5**	**+0.6**
AYVA	**Ayvalik**	**1.12**	**5**	*i* P	**Pb**	**23 32 32.5**	**+1.5**
AYVA				*i* S	**Sb**	**23 32 48.1**	**+2.3**
AYDN	**Tasoluk**	**1.16**	**117**	*i* P	**Pb**	**23 32 32.4**	**+0.8**
AYDN				*i* S	**Sb**	**23 32 47.4**	**+0.5**
AKS	**Akhisar**	**1.19**	**54**	PN	**Pn**	**23 32 31.7**	**-1.1**
BODT	**Bodrum**	**1.27**	**152**	*e*PN	**Pn**	**23 32 32.4**	**-1.5**
BODT				*e*SN	**Sn**	**23 32 50.7**	**-0.9**
MLSB	**Milas**	**1.30**	**133**	*e*PN	**Pn**	**23 32 33.0**	**-1.4**
APE	**Apeiranthos**	**1.39**	**217**	*e*PN	**Pn**	**23 32 40.4**	**+4.7**
MANT	**Manisa**	**1.59**	**78**	*i* P	**Pn**	**23 32 39.4**	**+0.9**
MANT				*i* S	**Sb**	**23 33 00.7**	**+1.4**
BALB	**Balikesir**	**1.77**	**35**	*e*PN	**Pn**	**23 32 40.4**	**-0.7**
DENT	**Denizli**	**1.99**	**102**	*e*PN	**Pn**	**23 32 43.6**	**-0.6**
DST	**Dursunbey**	**2.14**	**48**	PN	**Pn**	**23 32 45.1**	**-1.2**

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*HLW **04** 23:46:26.2, 34.81N×26.31E, h24^{km}, Mb3.4*
*CSEM **04** 23:46:26.1±0.1, 34.67N×26.41E, h40^{km}, MD3.6, Error ellipse: s-maj=4.0km s-min=2.9km az=45.0*
*IDC **04** 23:46:27.8±3.3, 34.91N×26.64E, mb3.8/5, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6, ML3.4/1, Error ellipse: s-maj=64.1km s-min=18.7km az=179.0*
*ATH **04** 23:46:34.4, 35.15N×26.27E, h28^{km}±4^{km}, MD3.6/4*
*NEIC **04** 23:46:34.4, 35.15N×26.27E, h28^{km}, MD3.6(ATH), After ATH.*
ISC 04 23:46:28.3±0.4**, 34.53N**±0.03×**26.58E**±0.07**, h33**^{km}**, n24, σ1**^{s}**30**/28**, mb3.7**/5**, 3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**1.08**	**313**	*e*PN	**Pn**	**23 46 45.0**	**-2.4**
NPS				*e*SN	**Sn**	**23 46 53.8**	**-7.5**
KARP	**Karpathos**	**1.13**	**25**	*e*PN	**Pn**	**23 46 50.8**	**+2.8**
IDI	**Anoyia**	**1.58**	**299**	Pn	**Pn**	**23 46 55.2**	**+0.7**
	2.2nm,0.3s,baz=122,slow=15,SNR=21						
IDI				Sn	**Sn**	**23 47 18.6**	**+4.6**
	18nm,0.3s,baz=18,slow=22,SNR=11						
SANT	**Santorini**	**2.06**	**334**	*e*Pg	**P**	**23 47 01.2**	**+0.1**
SANT	**Santorini**	**2.06**	**334**	*e*Pg	**P**	**23 47 01.2**	**+0.1**
GVD	**Gavdhos**	**2.08**	**279**	*e*Pn	**Pn**	**23 47 03.7**	**+2.1**
ARG	**Arkhangelos**	**2.11**	**36**	*e*PB	**Pb**	**23 47 06.3**	**+0.5**
VAM	**Vamos**	**2.14**	**295**	*e*PN	**Pn**	**23 47 05.0**	**+2.5**
SLUM		**3.24**	**201**	P	**P**	**23 47 17.9**	**0.0**
SLUM				S	**S**	**23 47 56.2**	**+0.3**
HMAT	**Matruh**	**3.45**	**173**	P	**P**	**23 47 22.3**	**+1.3**
HBRG	**Burj al 'Arab**	**4.81**	**144**	⇓P	**P**	**23 47 41.1**	**+0.8**
SWA1		**5.30**	**188**	⇓*e*P	**P**	**23 47 46.6**	**-0.6**
SWA1				S	**S**	**23 48 46.4**	**-1.5**
SWA2		**5.35**	**191**	⇓P	**P**	**23 47 47.1**	**-0.8**
GLL	**Jalalah**	**6.58**	**137**	P	**P**	**23 48 05.7**	**+0.5**
BRTR	**Keskin Array B**	**7.66**	**45**	Pn	**Pn**	**23 48 16.9**	**-3.7**
	0.0nm,0.3s,baz=186,slow=13,SNR=2.6						
TIP	**Timpagrande**	**9.14**	**303**	*e*Pn	**P**	**23 48 37.1**	**-3.7**
TIP	**Timpagrande**	**9.14**	**303**	*e*Pn	**P**	**23 48 37.1**	**-3.7**
AKASG	**Malin Array Be**	**16.28**	**6**	Pn	**P**	**23 50 15.4**	**-0.5**
	0.9nm,0.3s,baz=193,slow=11,SNR=8.8						
GERES	**GERESS Array B**	**17.20**	**330**	Pn	**P**	**23 50 28.1**	**+0.6**
	0.1nm,0.3s,baz=143,slow=15,SNR=3.5						
FINES	**FINESS Array B**	**26.94**	**359**	P	**P**	**23 52 06.2**	**-2.1**
	2.2nm,0.9s,mb3.7,baz=217,slow=9.5,SNR=3.6						
HFS	**Hagfors**	**26.97**	**346**	P	**P**	**23 52 07.9**	**-0.6**
	3.6nm,1.0s,mb3.9,baz=162,slow=4.6,SNR=3.7						
AKTO	**Aktyubinsk**	**27.84**	**46**	P	**P**	**23 52 16.3**	**-0.4**
	0.5nm,0.5s,mb3.4,baz=25,slow=9.6,SNR=3.1						
ARCES	**ARCESS Array B**	**35.07**	**359**	P	**P**	**23 53 18.0**	**-1.9**
	2.4nm,0.9s,mb4.1,baz=185,slow=10.0,SNR=4.8						
MKAR	**Makanchi Array**	**43.16**	**56**	P	**P**	**23 54 28.4**	**+1.1**
	0.3nm,0.5s,mb3.3,baz=282,slow=6.7,SNR=7.3						

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*CSEM **05** 00:21:04.1±0.8, 11.42N×43.49E, h2^{km}, ML4.8, Error ellipse: s-maj=15.9km s-min=9.7km az=24.0*
*DHMR **05** 00:21:08.0±0.9, 11.79N×43.62E, h6^{km}±8^{km}, ML4.8*
*NEIC **05** 00:21:12.3±0.8, 11.92N×43.65E, h10^{km}, ML4.7(DHMR), Error ellipse: s-maj=20.9km s-min=8.2km az=135.0*
*IDC **05** 00:21:13.6±2.2, 11.77N×43.64E, mb3.8/7, mb1 3.9/7, mb1mx3.8/18, mbtmp3.8/7, MS3.6/6, Ms1 3.6/6, ms1mx3.4/20, Error ellipse: s-maj=52.1km s-min=9.4km az=152.0*
ISC 05 00:21:12.0±0.7**, 11.72N**±0.05×**43.71E**±0.05**, h10**^{km}**, n39, σ1**^{s}**42**/49**, mb3.8**/8**, MS3.6**/6**, 3C-5D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**0.86**	**258**	Pg	**Pg**	**00 21 29.3**	**-0.1**
	291nm,0.3s,baz=59,slow=3.6,SNR=158						
ATD				Lg		00 21 40.7	
	1μm,0.3s,baz=107,slow=22,SNR=77						
TRBA	**At Turbah**	**1.56**	**15**	⇑*i*P	**Pn**	**00 21 36.1**	**-3.8**
TRBA				AML	AML	00 21 56.4	
	comp=N,10μm,0.4s						
TRBA	**At Turbah**	**1.56**	**15**	*i* P	**Pn**	**00 21 36.2**	**-3.8**
TRBA				*i* S	**Sb**	**00 21 56.0**	**-4.1**
UDYN	**Al 'Udayn**	**2.25**	**6**	⇑*i*P	**Pn**	**00 21 47.6**	**-2.3**
UDYN				*i* S	**Sn**	**00 22 17.0**	**-0.9**
UDYN				AML	AML	00 22 23.5	
	comp=N,11μm,0.4s						
UDYN	**Al 'Udayn**	**2.25**	**6**	*i* P	**Pn**	**00 21 47.8**	**-2.1**
UDYN				*i* S	**Sn**	**00 22 17.7**	**-0.2**
UDYN	**Al 'Udayn**	**2.25**	**6**	⇑*i*P	**Pn**	**00 21 47.6**	**-2.3**
UDYN				*i* S	**Sn**	**00 22 17.0**	**-0.9**
	comp=N,6μm,0.4s						
LBOS		**2.62**	**35**	⇓*i*P	**Pn**	**00 21 53.1**	**-2.0**
LBOS				*i* S	**Sn**	**00 22 29.1**	**+1.9**
LBOS		**2.62**	**35**	*i* P	**Pn**	**00 21 53.1**	**-2.0**
LBOS				*i* S	**Sn**	**00 22 29.2**	**+2.0**
BDHA	**Al Bayda'**	**2.88**	**39**	⇓*i*P	**Pn**	**00 21 57.3**	**-1.7**
BDHA				*i* S	**Sn**	**00 22 36.4**	**+2.3**
BDHA				AML	AML	00 22 43.0	
	comp=E,8μm,0.5s						
BDHA	**Al Bayda'**	**2.88**	**39**	*i* P	**Pn**	**00 21 57.0**	**-1.9**
BDHA				*i* S	**Sn**	**00 22 36.4**	**+2.3**
BDHA	**Al Bayda'**	**2.88**	**39**	⇓*i*P	**Pn**	**00 21 57.3**	**-1.7**
BDHA				*i* S	**Sn**	**00 22 36.4**	**+2.3**
	comp=E,4μm,0.5s						
DHBB	**Dhamar BB**	**2.91**	**13**	⇓*i*P	**Pn**	**00 21 57.3**	**-2.0**
DHBB				*i* S	**Sn**	**00 22 35.7**	**+1.0**
DHBB	**Dhamar BB**	**2.91**	**13**	*i* P	**Pn**	**00 21 57.3**	**-2.0**
DHBB				*i* S	**Sn**	**00 22 36.4**	**+1.7**
SANA	**San'a**	**3.68**	**8**	*i* S	**Sn**	**00 22 54.0**	**-0.2**
FRSS	**Farasan al Kab**	**5.22**	**343**	P	**Pn**	**00 22 27.7**	**-4.5**
FRSS				S	**Sn**	**00 23 33.9**	**+0.7**
MUKL	**Al Mukalla**	**5.87**	**62**	⇓*i*P	**Pn**	**00 22 38.0**	**-3.3**
MUKL				*i* S	**Sn**	**00 23 48.3**	**-1.1**
MUKL				AML	AML	00 24 39.9	
	comp=N,221nm,0.6s						
MUKL	**Al Mukalla**	**5.87**	**62**	*i* P	**Pn**	**00 22 38.0**	**-3.3**
MUKL				*i* S	**Sn**	**00 23 47.8**	**-1.7**
DJNS	**Zahran al Janu**	**5.96**	**359**	P	**Pn**	**00 22 40.3**	**-2.2**
DJNS				S	Sn	00 24 20.1	+29
BLJS	**Baljurashi**	**8.37**	**346**	P	**P**	**00 23 14.8**	**-1.5**
BLJS				S	**Sn**	**00 25 04.3**	**+13**
KAMS	**Al Khamasin**	**8.58**	**6**	P	**P**	**00 23 26.1**	**+6.8**
GNI	**Garni**	**28.33**	**2**	LR	LR	00 39 13.1	
	comp=N,53nm,18.4s,MS3.2,baz=165,slow=38						
BR131	**Keskin Array S**	**29.29**	**344**	P	**P**	**00 27 18.0**	**+1.2**
	comp=N,1.3nm,0.7s,mb3.8						
BRTR	**Keskin Array B**	**29.29**	**344**	P	**P**	**00 27 18.9**	**+2.1**
	comp=N,2.2nm,0.9s,mb3.9,baz=154,slow=11,SNR=12						
LSZ	**Lusaka**	**30.91**	**210**	P	**P**	**00 27 30.7**	**-0.7**
AKTO	**Aktyubinsk**	**40.35**	**14**	P	**P**	**00 28 52.4**	**+0.9**
	comp=N,2.3nm,1.1s,mb3.8,baz=203,slow=6.4,SNR=5.1						
AKASG	**Malin Array Be**	**40.64**	**346**	P	**P**	**00 28 53.7**	**-0.2**
	comp=N,0.2nm,0.3s,mb3.3,baz=165,slow=7.1,SNR=5.5						
AKASG	**Malin Array Be**	**40.64**	**346**	P	**P**	**00 28 53.7**	**-0.2**
AAK	**Ala-Archa**	**40.79**	**35**	P	**P**	**00 28 57.0**	**+1.8**
PSZ	**Piszkesteto**	**41.23**	**336**	*e*P	**P**	**00 28 59.4**	**+0.7**
BOSA	**Boshof**	**43.88**	**204**	LR	LR	00 49 59.6	
	comp=N,128nm,18.2s,MS3.9,baz=162,slow=39						
GERES	**GERESS Array B**	**44.62**	**332**	P	**P**	**00 29 26.4**	**0.0**
	comp=N,1.0nm,0.8s,mb3.7,baz=135,slow=9.4,SNR=8.4						
BVAR	**Borovoye Array**	**46.41**	**22**	P	**P**	**00 29 41.9**	**+1.3**
	comp=N,1.2nm,0.7s,mb3.9,baz=207,slow=6.6,SNR=7.3						
CHKZ	**Chkalovo**	**47.02**	**22**	*e*P	**P**	**00 29 46.5**	**+1.2**
	comp=N,0.6nm,0.5s,mb3.8						
MKAR	**Makanchi Array**	**47.73**	**35**	P	**P**	**00 29 51.9**	**+0.8**
	comp=N,0.6nm,0.7s,mb3.7,baz=233,slow=6.1,SNR=5.9						
MKAR				LR	LR	00 54 16.0	
	comp=N,52nm,18.2s,MS3.5,baz=271,slow=42						
KURK	**Kurchatov**	**48.21**	**29**	P	**P**	**00 29 55.1**	**+0.3**
FINES	**FINESS Array B**	**51.28**	**349**	LR	LR	00 52 53.5	
	comp=N,86nm,18.6s,MS3.8,baz=314,slow=37						
NOA	**NORSAR Array B**	**54.66**	**341**	LR	LR	00 58 00.1	
	comp=N,32nm,20.1s,MS3.4,baz=275,slow=40						
ARCES	**ARCESS Array B**	**58.93**	**353**	LR	LR	01 00 08.8	
	comp=N,101nm,19.1s,MS4.0,baz=246,slow=40						
SONM	**Songino Array**	**63.13**	**42**	P	**P**	**00 31 43.7**	**+1.4**
	comp=N,1.0nm,0.8s,mb4.0,baz=256,slow=6.1,SNR=5.3						

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*ISK **05** 00:21:53.5, 38.12N×26.63E, h11^{km}, MD3.1*
*ATH **05** 00:21:54.7, 38.18N×26.54E, h29^{km}±9^{km}, MD3.4/3*
*NEIC **05** 00:21:54.7, 38.18N×26.54E, h29^{km}, MD3.4(ATH), MD3.1(ISK), After ATH.*
*CSEM **05** 00:21:54.5±0.1, 38.13N×26.70E, h15^{km}, MD3.1, Error ellipse: s-maj=1.6km s-min=1.4km az=83.0*
ISC 05 00:21:53.1±0.8**, 38.14N**±0.03×**26.57E**±0.04**, h2**^{km}±5^{km}**, n36, σ1**^{s}**04**/48**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.23**	**5**	*i* P	**Pg**	**00 21 56.9**	**-0.7**
URLA				*i* S	**Sg**	**00 21 59.9**	**-0.8**
BLCB	**Balcova**	**0.45**	**56**	*i* PG	**Pg**	**00 22 02.3**	**+0.2**
BLCB				*i* SG	**Sg**	**00 22 08.3**	**+0.2**
SMG	**Samos**	**0.47**	**153**	*e*PN	**Pn**	**00 22 05.7**	**-0.8**
SMG				*e*SN	**Sn**	**00 22 14.0**	**-1.4**
IZM	**Izmir**	**0.60**	**64**	*i* PG	**Pg**	**00 22 05.5**	**+0.3**
IZM				*i* SG	**Sg**	**00 22 13.8**	**+0.5**
KDAG	**Bornova**	**0.61**	**64**	*i* P	**Pg**	**00 22 04.5**	**-0.9**
KDAG				*i* S	**Sg**	**00 22 12.7**	**-0.8**
PRK	**Paraskevi**	**1.13**	**348**	*e*PN	**Pn**	**00 22 15.1**	**-0.8**
PRK				*e*SN	**Sn**	**00 22 30.2**	**-2.0**
AYDN	**Tasoluk**	**1.14**	**114**	*i* P	**Pb**	**00 22 16.7**	**+1.5**
AYDN				*i* S	**Sb**	**00 22 32.1**	**+1.8**
AYVA	**Ayvalik**	**1.18**	**5**	*i* P	**Pb**	**00 22 16.9**	**+1.1**
AYVA				*i* S	**Sb**	**00 22 33.1**	**+1.8**
BODT	**Bodrum**	**1.22**	**151**	*e*PN	**Pn**	**00 22 16.4**	**-0.7**
BODT				*e*SN	**Sn**	**00 22 33.8**	**-0.6**

AKS	**Akhisar**	**1.23**	**52**	*e*PN	**Pn**	**00 22 16.8**	**-0.4**
AKS				*e*SN	**Sn**	**00 22 33.6**	**-0.9**
MLSB	**Milas**	**1.27**	**131**	*e*PN	**Pn**	**00 22 17.2**	**-0.7**
BDRM	**Kayabasi**	**1.27**	**147**	*i* P	**Pb**	**00 22 19.9**	**+2.4**
BDRM				*i* S	**Sb**	**00 22 37.8**	**+3.7**
APE	**Apeiranthos**	**1.35**	**218**	*i* PN	**Pn**	**00 22 18.6**	**-0.3**
APE	**Apeiranthos**	**1.35**	**218**	*e*Pn	**Pn**	**00 22 19.8**	**+0.9**
MANT	**Manisa**	**1.60**	**77**	*i* P	**Pn**	**00 22 24.0**	**+1.4**
MANT				*i* S	**Sb**	**00 22 45.3**	**+1.5**
DAT	**Datca**	**1.62**	**150**	*e*PN	**Pn**	**00 22 22.3**	**-0.5**
YER	**Yerkesik**	**1.69**	**126**	*e*PN	**Pn**	**00 22 23.5**	**-0.3**
EZN	**Ezine**	**1.70**	**354**	*e*PN	**Pn**	**00 22 24.6**	**+0.6**
BALB	**Balikesir**	**1.82**	**34**	*e*PN	**Pn**	**00 22 26.0**	**+0.3**
DENT	**Denizli**	**1.98**	**100**	*e*PN	**Pn**	**00 22 27.8**	**-0.2**
LIA	**Limnos Island**	**2.06**	**329**	*e*PB	**Pb**	**00 22 29.3**	**-1.7**
DALT	**Dalyan (Mudla)**	**2.14**	**129**	*e*PN	**Pn**	**00 22 29.0**	**-1.2**
LOS	**Limnos**	**2.14**	**328**	*e*P	**Pn**	**00 22 31.1**	**+0.9**
DST	**Dursunbey**	**2.18**	**47**	*e*PN	**Pn**	**00 22 29.6**	**-1.2**
KHL	**Karahalli**	**2.33**	**84**	*e*PN	**Pn**	**00 22 32.1**	**-1.0**
AOS	**Alonnisos**	**2.35**	**297**	*e*P	**Pn**	**00 22 38.7**	**+5.5**
EDC	**Edincik**	**2.43**	**24**	*e*PN	**Pn**	**00 22 34.6**	**+0.2**
BNT	**Bandirma**	**2.45**	**25**	*e*PN	**Pn**	**00 22 34.5**	**-0.3**
KCT	**Karacabey**	**2.54**	**33**	*e*PN	**Pn**	**00 22 35.7**	**-0.3**
ALN	**Alexandroupoli**	**2.79**	**352**	*e*P	**Pn**	**00 22 40.2**	**+0.7**
ALN	**Alexandroupoli**	**2.79**	**352**	*e*P	**Pn**	**00 22 40.2**	**+0.6**
PAIG	**Paliouri**	**2.88**	**309**	*e*P	**Pn**	**00 22 42.3**	**+1.5**
OUR	**Ouranopolis**	**2.98**	**318**	*e*P	**Pn**	**00 22 42.5**	**+0.2**
RDO	**Rodhopi**	**3.11**	**345**	*e*PN	**Pn**	**00 22 43.6**	**-0.5**
AGG	**Agios Georgios**	**3.44**	**286**	*e*P	**Pn**	**00 22 51.2**	**+2.4**
GRG	**Griva**	**4.28**	**312**	*e*P	**Pn**	**00 23 00.7**	**-0.1**

DHMR 05 00:26:25.0±1.6**, 11.95N×43.67E, h10**^{km}±11^{km}**, ML4.0, 1C-4D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**1.34**	**19**	⇓*i*P	Pb	00 26 50.5	+0.7
TRBA				*i* S	Sb	00 27 08.6	+1.8
TRBA				AML	AML	00 27 09.6	
	comp=N,2μm,0.3s						
UDYN	**Al ‘Udayn**	**2.02**	**8**	⇓*i*P	Pn	00 27 00.6	+1.1
UDYN				*i* S	Sn	00 27 29.1	+4.0
UDYN				AML	AML	00 27 36.0	
	comp=N,2μm,0.5s						
LBOS		**2.45**	**39**	⇓*i*P	Pn	00 27 07.6	+1.9
LBOS				*i* S	Sn	00 27 40.3	+4.4
DHBB	**Dhamar BB**	**2.69**	**15**	⇑*i*P	Pn	00 27 11.1	+1.9
DHBB				*i* S	Sn	00 27 47.2	+5.0
BDHA	**Al Bayda’**	**2.73**	**42**	⇓*i*P	Pn	00 27 11.5	+1.8
BDHA				*i* S	Sn	00 27 49.2	+6.2
BDHA				AML	AML	00 27 56.5	
	comp=E,934nm,0.9s						

*LDG **05** 00:30:08.6±0.1, 43.04N×0.09E, h3^{km}, Md3.6/3, Ml3.7/42, Error ellipse: s-maj=1.4km s-min=1.0km az=58.0*
*NEIC **05** 00:30:08.6, 43.04N×0.09E, h3^{km}, ML3.7(LDG), ML3.5(STR), ML3.4(MRB), MN3.2(MDD), After LDG.*
*MRB **05** 00:30:08.1, 43.10N×0.22E, h10^{km}±99^{km}, ML3.4/8*
*STR **05** 00:30:09.1±0.1, 43.06N×0.18E, h10^{km}±1^{km}, Ml3.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **05** 00:30:09.6±0.0, 43.03N×0.16E, h10^{km}, ML3.7/62, Error ellipse: s-maj=0.8km s-min=0.6km az=137.0*
MDD 05 00:30:09.6±0.2**, 43.03N×0.18E, h11**^{km}**, mbLg3.3**/56**, 4C-1D, Error ellipse: s-maj=1.6km s-min=1.2km az=3.0, PRXIMO, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LABF	**Labassere**	**0.08**	**286**	Pg	Pg	00 30 12.4	+0.3
LABF				Sg	Sg	00 30 16.2	+2.4
LABF	**Labassere**	**0.08**	**286**	Pg	Pg	00 30 12.5	+0.4
LABF				Lg		00 30 14.6	
EPF	**Esparros**	**0.12**	**87**	*e*Pg	Pg	00 30 12.5	-0.1
EPF				*e*Sg	Sg	00 30 15.2	+0.6
	4μm,0.2s						
VIEF	**Viey**	**0.18**	**220**	Pg	Pg	00 30 13.3	-0.4
VIEF				Lg		00 30 16.0	
RESF	**Ens**	**0.25**	**152**	Pg	Pg	00 30 14.5	-0.4
RESF	**Ens**	**0.25**	**152**	Pg	Pg	00 30 14.6	-0.3
RESF				Lg		00 30 18.2	
EBIE	**Bielsa**	**0.34**	**185**	⇓Pg	Pg	00 30 15.9	-0.7
	112nm,0.1s,SNR=18						
EBIE				Lg		00 30 20.2	
	1μm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**0.34**	**185**	Pg	Pg	00 30 15.9	-0.8
	112nm,0.1s,SNR=18						
EBIE				Lg		00 30 20.2	
	1μm,0.1s,SNR=7.9						
REYF	**Montagne du Re**	**0.42**	**276**	Pg	Pg	00 30 17.3	-1.0
REYF	**Montagne du Re**	**0.42**	**276**	Pg	Pg	00 30 17.3	-1.0
REYF				Lg		00 30 23.8	
MELF	**Melles**	**0.45**	**110**	Pg	Pg	00 30 17.8	-1.0
MELF	**Melles**	**0.45**	**110**	Pg	Pg	00 30 17.8	-1.0
MELF				Lg		00 30 24.0	
ETSF	**Etsaut**	**0.56**	**257**	*e*Pn	Pn	00 30 19.5	-3.7
ETSF				*e*Sg	Sg	00 30 24.9	-3.6
	4μm,0.3s						
FDAF	**Les Forges d’A**	**0.59**	**250**	Pg	Pg	00 30 20.2	-1.3
FDAF				Sg	Sg	00 30 24.5	-4.9
FDAF	**Les Forges d’A**	**0.59**	**250**	Pg	Pg	00 30 20.3	-1.2
FDAF				Lg		00 30 28.0	
ATE	**Arette**	**0.65**	**276**	Pg	Pg	00 30 21.3	-1.4
ATE	**Arette**	**0.65**	**276**	Pg	Pg	00 30 21.2	-1.5
ATE				Lg		00 30 30.4	
MLS	**Moulis**	**0.67**	**95**	Pg	Pg	00 30 21.5	-1.7
MLS				Sg	Sg	00 30 32.6	+0.4
MLS	**Moulis**	**0.67**	**95**	Pg	Pg	00 30 21.0	-2.1
MLS				Lg		00 30 32.6	
SALF	**Salau**	**0.79**	**109**	Pg	Pg	00 30 23.6	-1.8
SALF	**Salau**	**0.79**	**109**	Pg	Pg	00 30 23.3	-2.1
SALF				Lg		00 30 34.5	
EGRA	**Graus**	**0.84**	**173**	Pg	Pg	00 30 25.3	-1.1
	43nm,0.1s,SNR=126						
EGRA				Lg		00 30 36.6	
	112nm,0.2s,SNR=13						
ORDF	**Ordiarp**	**0.84**	**283**	Pg	Pg	00 30 25.3	-1.2
ORDF				Sg	Sg	00 30 36.7	-1.1
ORDF	**Ordiarp**	**0.84**	**283**	Pg	Pg	00 30 25.4	-1.1
ORDF				Lg		00 30 37.0	
LARF	**Larrau**	**0.86**	**271**	Pg	Pg	00 30 25.5	-1.3
LARF				Sg	Sg	00 30 35.0	-3.3
LARF	**Larrau**	**0.86**	**271**	Pg	Pg	00 30 25.2	-1.6
LARF				Lg		00 30 37.1	
CSOR	**Sort**	**0.96**	**132**	Pg	Pg	00 30 27.3	-1.5
CSOR				Lg		00 30 39.9	
	279nm,0.2s						
CSOR	**Sort**	**0.96**	**132**	Pg	Pg	00 30 27.4	-1.4
CSOR				Sg	Sg	00 30 40.0	-1.6
CSOR	**Sort**	**0.96**	**132**	Pg	Pg	00 30 27.4	-1.4
CSOR				Sg	Sg	00 30 40.0	-1.6
	558nm,0.2s						
GRBF	**Gourbit**	**1.01**	**100**	Pg	Pg	00 30 27.3	-2.6
OSSF	**Osses**	**1.08**	**283**	Pg	Pg	00 30 28.9	-2.4
OSSF	**Osses**	**1.08**	**283**	Pg	Pg	00 30 28.0	-3.3
OSSF	**Osses**	**1.08**	**283**	Pn	Pn	00 30 29.6	-1.1
OSSF				Pg	Pg	00 30 29.8	-1.5
OSSF				Sg	Sg	00 30 43.6	-2.2
OSSF	**Osses**	**1.08**	**283**	Pn	Pn	00 30 29.6	-1.1
IPRE	**Itoiz**	**1.15**	**260**	Pg	Pg	00 30 31.3	-1.4
	1.1nm,0.1s,SNR=7.8						
IPRE				Lg		00 30 46.7	
	258nm,0.2s,SNR=6.7						
IPRE	**Itoiz**	**1.15**	**260**	Pg	Pg	00 30 31.3	-1.4
	1.1nm,0.1s,SNR=7.8						
CORG	**Organya**	**1.16**	**133**	Pg	Pg	00 30 31.0	-1.7
CORG				Lg		00 30 46.9	
	126nm,0.2s						
CORG	**Organya**	**1.16**	**133**	Pg	Pg	00 30 31.0	-1.7
CORG				Sg	Sg	00 30 47.0	-1.2
CORG	**Organya**	**1.16**	**133**	Pg	Pg	00 30 31.0	-1.7
CORG				Sg	Sg	00 30 47.0	-1.2
	251nm,0.2s						
CAVN	**Les Avellanes**	**1.22**	**160**	Pg	Pg	00 30 32.1	-1.9
CAVN				Lg		00 30 48.9	
	264nm,0.2s						
CAVN	**Les Avellanes**	**1.22**	**160**	Pg	Pg	00 30 32.2	-1.8
CAVN				Sg	Sg	00 30 48.9	-1.3
CAVN	**Les Avellanes**	**1.22**	**160**	Pg	Pg	00 30 32.2	-1.8
CAVN				Sg	Sg	00 30 48.9	-1.4
	529nm,0.2s						
EALK	**Alkurruntz**	**1.25**	**279**	Pn	Pn	00 30 31.4	-1.7
	98nm,0.1s,SNR=118						
EALK				Lg		00 30 49.2	
	251nm,0.2s,SNR=12						
ELIZ	**Elizondo**	**1.26**	**277**	Lg		00 30 50.6	
	0.2nm,0.2s,SNR=4.0						
IUNC	**Unciti**	**1.27**	**258**	Pg	Pg	00 30 33.7	-1.2
	90nm,0.1s,SNR=7.9						
IUNC				Lg		00 30 50.9	
	491nm,0.3s,SNR=7.9						
IUNC	**Unciti**	**1.27**	**258**	Pg	Pg	00 30 33.7	-1.2
	90nm,0.1s,SNR=7.9						
LPEF	**Le Peyrat**	**1.27**	**93**	Pg	Pg	00 30 33.9	-1.1
LPEF				Sg	Sg	00 30 51.8	-0.1
LPEF	**Le Peyrat**	**1.27**	**93**	Pg	Pg	00 30 33.1	-1.9
LPEF				Lg		00 30 51.9	
IUSE	**Utxeti**	**1.27**	**267**	Pg	Pg	00 30 33.2	-1.9
	80nm,0.1s,SNR=7.9						
IUSE				Lg		00 30 51.0	
	431nm,0.3s,SNR=7.9						
EARA	**Aranguren**	**1.32**	**260**	Pg	Pg	00 30 34.1	-1.9
	61nm,0.1s,SNR=91						
EARA				Lg		00 30 52.8	
	1μm,0.2s,SNR=12						
ESAC	**San Caprasio**	**1.39**	**201**	⇑Pg	Pg	00 30 35.1	-2.3
	1μm,0.3s,SNR=18						
ESAC				Lg		00 30 53.5	
	2μm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**1.39**	**201**	Pg	Pg	00 30 35.1	-2.3
	1μm,0.3s,SNR=18						
CLLI	**Llivia**	**1.43**	**112**	Pg	Pg	00 30 35.6	-2.6
CLLI				Lg		00 30 56.0	
	79nm,0.2s						
CLLI	**Llivia**	**1.43**	**112**	Pg	Pg	00 30 35.7	-2.5
CLLI				Sg	Sg	00 30 56.1	-1.2
CLLI	**Llivia**	**1.43**	**112**	Pg	Pg	00 30 35.7	-2.5
CLLI				Sg	Sg	00 30 56.1	-1.2
	158nm,0.2s						
CARF	**Carcanieres**	**1.45**	**102**	Pg	Pg	00 30 37.1	-1.5
CARF				Sg	Sg	00 30 56.0	-1.9
CARF	**Carcanieres**	**1.45**	**102**	Pg	Pg	00 30 36.3	-2.3
CARF				Lg		00 30 55.9	
VALF	**Valcebollere**	**1.49**	**114**	Pg	Pg	00 30 37.3	-2.1
VALF	**Valcebollere**	**1.49**	**114**	Pg	Pg	00 30 37.4	-2.0
VALF				Sg	Sg	00 30 56.9	-2.4
VALF				Sg	Sg	00 30 58.0	-1.3
VALF	**Valcebollere**	**1.49**	**114**	Pg	Pg	00 30 36.7	-2.7
VALF				Lg		00 30 57.0	
VALF	**Valcebollere**	**1.49**	**114**	Pn	Pn	00 30 36.4	-0.1
VALF				Pg	Pg	00 30 39.0	-0.4
VALF				Sg	Sg	00 30 59.5	+0.2
VALF	**Valcebollere**	**1.49**	**114**	Pg	Pg	00 30 37.4	-2.0
VALF				Sg	Sg	00 30 58.0	-1.3
EMIR	**Miracle**	**1.49**	**138**	Pg	Pg	00 30 37.1	-2.3
	90nm,0.2s,SNR=328						
EMIR				Lg		00 30 56.7	
	210nm,0.1s,SNR=15						
EMIR	**Miracle**	**1.49**	**138**	Pg	Pg	00 30 37.1	-2.3
	90nm,0.2s,SNR=328						
MTLF	**Montolieu**	**1.52**	**77**	*e*Pn	Pn	00 30 34.8	-2.2
MTLF				*e*Pg	Pg	00 30 38.1	-1.9
MTLF				*e*Sg	Sg	00 30 58.0	-2.4
	757nm,0.2s						
CBRU	**Bruguera**	**1.65**	**116**	Pg	Pg	00 30 40.1	-2.5
CBRU				Lg		00 31 03.3	
	160nm,0.2s						
CBRU	**Bruguera**	**1.65**	**116**	Pg	Pg	00 30 40.2	-2.4
CBRU				Sg	Sg	00 31 03.4	-1.2
CBRU	**Bruguera**	**1.65**	**116**	Pg	Pg	00 30 40.2	-2.4
CBRU				Sg	Sg	00 31 03.4	-1.2
LRDF	**Laroque-de-Fa**	**1.73**	**92**	Pg	Pg	00 30 42.3	-1.9
LRDF				Sg	Sg	00 31 05.6	-1.7
LRDF	**Laroque-de-Fa**	**1.73**	**92**	Pg	Pg	00 30 41.9	-2.3
LRDF				Lg		00 31 04.6	
EPOB	**Poblet**	**1.80**	**158**	Pn	Pn	00 30 40.4	-0.5
	2.8nm,0.2s,SNR=7.9						
EPOB				Pg	Pg	00 30 42.4	-3.2
	16nm,0.1s,SNR=85						
EPOB				Sn	Sn	00 31 02.6	-1.3
	36nm,0.2s,SNR=4.0						
EPOB				Lg		00 31 05.4	
	119nm,0.1s,SNR=19						
EPOB	**Poblet**	**1.80**	**158**	Pn	Pn	00 30 40.4	-0.5
	2.8nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**1.80**	**158**	Pg	Pg	00 30 42.4	-3.2
	16nm,0.1s,SNR=85						
EPOB				Sn	Sn	00 31 02.6	-1.3
	36nm,0.2s,SNR=4.0						
FILF	**Fillols**	**1.81**	**104**	Pg	Pg	00 30 41.7	-4.1
FILF				Sg	Sg	00 31 07.7	-2.3
FILF	**Fillols**	**1.81**	**104**	Pg	Pg	00 30 41.8	-4.0
FILF				Lg		00 31 04.5	
CGAR	**Garraf**	**1.87**	**157**	Pg	Pg	00 30 46.2	-0.8
CGAR				Lg		00 31 17.3	
	35nm,0.2s						
CGAR	**Garraf**	**1.87**	**157**	Pg	Pg	00 30 46.3	-0.7
LFF	**La Frestale**	**1.96**	**12**	*e*Pn	Pn	00 30 41.0	-2.2
LFF				*e*Pg	Pg	00 30 44.9	-3.8
LFF				*e*Sn	Sn	00 31 04.6	-3.3
LFF				*e*Sg	Sg	00 31 09.9	-4.9
	308nm,0.3s						
SJAF	**Saint Jean de**	**2.06**	**104**	Pn	Pn	00 30 45.1	+0.4
SJAF	**Saint Jean de**	**2.06**	**104**	Pg	Pg	00 30 48.8	-2.0
SJAF				Sg	Sg	00 31 15.9	-2.4
SJAF	**Saint Jean de**	**2.06**	**104**	Pg	Pg	00 30 45.8	-4.9
SJAF				Lg		00 31 15.4	
SJAF	**Saint Jean de**	**2.06**	**104**	Pn	Pn	00 30 43.9	-0.8
SJAF				Pg	Pg	00 30 48.5	-2.3
SJAF				Sg	Sg	00 31 17.9	-0.4
SJAF	**Saint Jean de**	**2.06**	**104**	Pg	Pg	00 30 48.5	-2.3
SJAF				Sg	Sg	00 31 15.9	-2.4
EJON	**La Jonquera**	**2.08**	**105**	Pn	Pn	00 30 45.9	+1.0
	6.3nm,0.1s,SNR=24						
EJON				Pg	Pg	00 30 48.7	-2.4
	13nm,0.2s,SNR=11						
EJON				Lg		00 31 15.4	
	115nm,0.3s,SNR=17						
EJON	**La Jonquera**	**2.08**	**105**	Pn	Pn	00 30 45.9	+1.0
	6.3nm,0.1s,SNR=24						
EJON	**La Jonquera**	**2.08**	**105**	Pg	Pg	00 30 48.7	-2.4
	13nm,0.2s,SNR=11						
CFON	**Fontmartina**	**2.09**	**126**	Pg	Pg	00 30 45.8	-5.6
CFON	**Fontmartina**	**2.09**	**126**	Pg	Pg	00 30 45.9	-5.5
CFON	**Fontmartina**	**2.09**	**126**	Pg	Pg	00 30 45.9	-5.5
CAF	**Calviac**	**2.34**	**35**	*e*Pn	Pn	00 30 45.8	-2.8
CAF				*e*Pg	Pg	00 30 51.8	-4.5
CAF				*e*Sn	Sn	00 31 14.4	-3.2
CAF				*e*Sg	Sg	00 31 22.9	-4.5
	140nm,0.2s						
RJF	**Les Rejaudoux**	**2.47**	**22**	*e*Pn	Pn	00 30 47.2	-3.4
RJF				*e*Pg	Pg	00 30 54.6	-4.4
RJF				*e*Sn	Sn	00 31 17.5	-3.5
RJF				*e*Sg	Sg	00 31 26.8	-5.2
	112nm,0.2s						
ELAN	**Lanestosa**	**2.66**	**276**	Pn	Pn	00 30 53.5	+0.3
	4.9nm,0.1s,SNR=56						
ELAN				Pg	Pg	00 30 58.8	-3.8
	15nm,0.2s,SNR=4.0						
ELAN				Sn	Sn	00 31 21.8	-3.9
	9.2nm,0.2s,SNR=6.0						
ELAN				Lg		00 31 29.9	
	16nm,0.2s,SNR=4.0						
ELAN	**Lanestosa**	**2.66**	**276**	Pn	Pn	00 30 53.5	+0.3
ELAN				Pg	Pg	00 30 58.8	-3.8
ELAN				Sn	Sn	00 31 21.8	-3.9
ELAN				Lg		00 31 26.8	
ELAN	**Lanestosa**	**2.66**	**276**	Pn	Pn	00 30 53.5	+0.3
	4.9nm,0.1s,SNR=56						
ELAN	**Lanestosa**	**2.66**	**276**	Pg	Pg	00 30 58.8	-3.8
	15nm,0.2s,SNR=4.0						
EMOS	**Mosqueruela**	**2.70**	**191**	Pn	Pn	00 30 53.3	-0.6
	4.0nm,0.1s,SNR=53						
EMOS				Sn	Sn	00 31 22.6	-4.3
	9.5nm,0.1s,SNR=10						
EMOS				Lg		00 31 33.7	
	81nm,0.3s,SNR=7.3						
EMOS	**Mosqueruela**	**2.70**	**191**	Pn	Pn	00 30 53.3	-0.6
	4.0nm,0.1s,SNR=53						
EMOS				Sn	Sn	00 31 22.6	-4.3
	9.5nm,0.1s,SNR=10						
MATF	**Mathat**	**2.83**	**353**	Pn	Pn	00 30 53.3	-2.3
LASF	**Ste Croix**	**2.87**	**67**	*e*Pn	Pn	00 30 53.6	-2.6
LASF				*e*Pg	Pg	00 31 02.3	-4.6
LASF				*e*Sn	Sn	00 31 27.9	-3.2
LASF				*e*Sg	Sg	00 31 39.8	-5.4
	188nm,0.2s						
FRNF	**Fournols**	**2.92**	**35**	Pn	Pn	00 30 54.3	-2.6
LBL	**Lubilhac**	**3.12**	**44**	Pn	Pn	00 30 57.3	-2.5
LBL				Sg	Sg	00 31 49.9	-3.6
VERF	**Verneugheol**	**3.18**	**30**	Pn	Pn	00 30 57.8	-2.9
PYM	**Petit Puy Mans**	**3.40**	**36**	Pn	Pn	00 31 00.8	-2.9
PYM				Sg	Sg	00 31 58.2	-4.5
ECHE	**Chera**	**3.54**	**195**	Pn	Pn	00 31 04.5	-1.2
	2.5nm,0.2s,SNR=19						
ECHE				Pg	Pg	00 31 15.2	-5.1
	2.8nm,0.2s,SNR=4.0						
ECHE				Sn	Sn	00 31 43.9	-4.2
	3.9nm,0.2s,SNR=5.3						
ECHE				Lg		00 31 59.0	
	7.8nm,0.2s,SNR=5.4						
COLF	**Collangettes**	**3.54**	**44**	Pn	Pn	00 31 03.4	-2.4
TCF	**Toulx Ste Croi**	**3.57**	**23**	*e*Pn	Pn	00 31 02.4	-3.8
TCF				*e*Pg	Pg	00 31 15.2	-5.7
TCF				*e*Sn	Sn	00 31 42.5	-6.3
TCF				*e*Sg	Sg	00 32 00.7	-7.7
	40nm,0.2s						
MFF	**Saint Martin d**	**3.58**	**356**	*e*Pn	Pn	00 31 03.4	-3.0
MFF				*e*Pg	Pg	00 31 14.5	-6.7
MFF				*e*Sn	Sn	00 31 42.1	-7.1
MFF				*e*Sg	Sg	00 31 59.7	-9.3
	32nm,0.2s						
AGO	**Saint Agoulin**	**3.69**	**34**	Pn	Pn	00 31 05.0	-2.9
AGO				Sg	Sg	00 32 07.3	-5.1
VIVF	**Saint-Julien-l**	**3.72**	**59**	*e*Pn	Pn	00 31 05.2	-3.2
VIVF				*e*Pg	Pg	00 31 18.7	-5.3
VIVF				*e*Sg	Sg	00 32 06.1	-7.5
	101nm,0.3s						
ETOS	**Mallorca**	**3.81**	**148**	Pn	Pn	00 31 08.0	-1.6
	1.6nm,0.1s,SNR=11						
ETOS				Sn	Sn	00 31 49.5	-5.4
	7.0nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.81**	**148**	Pn	Pn	00 31 08.0	-1.6
	1.6nm,0.1s,SNR=11						
ETOS				Sn	Sn	00 31 49.5	-5.4
	7.0nm,0.2s,SNR=7.9						
PLDF	**La Plantade**	**3.84**	**39**	Pn	Pn	00 31 07.1	-2.9
PLDF				Sg	Sg	00 32 12.5	-4.9
EARI	**Arriondas**	**3.96**	**276**	Pn	Pn	00 31 11.1	-0.5
	6.7nm,0.2s,SNR=72						
EARI				Sn	Sn	00 31 55.7	-2.9
	9.4nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**3.96**	**276**	Pn	Pn	00 31 11.1	-0.5
	6.7nm,0.2s,SNR=72						
EARI				Sn	Sn	00 31 55.7	-2.9
	9.4nm,0.2s,SNR=7.9						
BGF	**Bois d’Agland**	**4.01**	**27**	*e*Pn	Pn	00 31 08.9	-3.5
BGF				*e*Pg	Pg	00 31 23.0	-6.6
BGF				*e*Sg	Sg	00 32 14.1	-9.0
	149nm,0.3s						
GUD	**Guadarrama**	**4.02**	**235**	⇑Pn	Pn	00 31 11.4	-1.2
	9.0nm,0.2s,SNR=18						
GUD				Sn	Sn	00 31 56.4	-3.9
	5.2nm,0.2s,SNR=7.9						
GUD				Lg		00 32 14.9	
	11nm,0.2s,SNR=7.9						
SMRF	**Simiane la Rot**	**4.04**	**75**	*e*Pn	Pn	00 31 10.1	-2.7
SMRF				*e*Pg	Pg	00 31 24.9	-5.3
SMRF				*e*Sg	Sg	00 32 17.4	-6.6
	108nm,0.5s						
EIBI	**Ibiza**	**4.09**	**167**	Pn	Pn	00 31 11.9	-1.6
	2.5nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	00 31 55.6	-6.4
	23nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**4.09**	**167**	Pn	Pn	00 31 11.9	-1.7
	2.5nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	00 31 55.6	-6.4
	23nm,0.3s,SNR=7.9						
AVF	**Avril sur Loir**	**4.39**	**30**	*e*Pn	Pn	00 31 14.4	-3.4
AVF				*e*Pg	Pg	00 31 31.5	-5.7
AVF				*e*Sn	Sn	00 32 03.1	-6.4
AVF				*e*Sg	Sg	00 32 26.1	-10
	54nm,0.4s						
SMF	**Signal de Mont**	**4.46**	**34**	*e*Pn	Pn	00 31 15.2	-3.6
SMF				*e*Sn	Sn	00 32 05.1	-6.2
SMF				*e*Sg	Sg	00 32 29.2	-8.8
	20nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.53**	**63**	*e*Pn	Pn	00 31 17.1	-2.7
ORIF				*e*Pg	Pg	00 31 33.5	-6.5
ORIF				*e*Sg	Sg	00 32 32.5	-7.8
	12nm,0.4s						
ETOB	**Tobarra**	**4.57**	**197**	Pn	Pn	00 31 17.6	-2.8
	5.3nm,0.2s,SNR=28						
ETOB				Sn	Sn	00 32 07.5	-6.6
	15nm,0.4s,SNR=7.9						
ETOB				Lg		00 32 33.9	
	9.7nm,0.4s,SNR=6.5						
ETOB	**Tobarra**	**4.57**	**197**	Pn	Pn	00 31 17.6	-2.8
ETOB				Sn	Sn	00 32 07.5	-6.6
ETOB				Lg		00 32 31.6	
ETOB	**Tobarra**	**4.57**	**197**	Pn	Pn	00 31 17.6	-2.8
	5.3nm,0.2s,SNR=28						
ETOB				Sn	Sn	00 32 07.5	-6.6
	15nm,0.4s,SNR=7.9						
ESDC	**Sonseca Array**	**4.58**	**224**	Pn	Pn	00 31 17.8	-2.7
	33nm,0.2s,baz=42,slow=14,SNR=144						
ESDC				Sn	Sn	00 32 06.8	-7.5
	14nm,0.2s,baz=44,slow=24,SNR=7.0						
ESDC				Lg		00 32 31.3	
	7.8nm,0.4s,baz=46,slow=30,SNR=4.5						
ESDC	**Sonseca Array**	**4.58**	**224**	Pn	Pn	00 31 17.8	-2.7
ESDC				Sn	Sn	00 32 06.8	-7.5
ESDC				Lg		00 32 31.2	
ESDC	**Sonseca Array**	**4.58**	**224**	Pn	Pn	00 31 17.8	-2.7
	33nm,0.2s,SNR=144						
ESDC				Sn	Sn	00 32 06.8	-7.5
	14nm,0.2s,SNR=7.0						
HYF	**Humbligny**	**4.58**	**21**	*e*Pn	Pn	00 31 17.3	-3.3
HYF				*e*Sn	Sn	00 32 07.1	-7.4
HYF				*e*Sg	Sg	00 32 32.6	-10
	202nm,0.3s						
LMR	**La Mourre**	**4.64**	**84**	*e*Pn	Pn	00 31 18.2	-3.1
LMR				*e*Pg	Pg	00 31 35.6	-6.6
LMR				*e*Sg	Sg	00 32 35.8	-8.2
	35nm,0.4s						
SSF	**Saint Saulge**	**4.67**	**29**	*e*Pn	Pn	00 31 17.9	-3.9
SSF				*e*Sg	Sg	00 32 35.2	-10
	8.2nm,0.2s						
FRF	**La Foret Royal**	**4.75**	**81**	*e*Pn	Pn	00 31 19.5	-3.4
FRF				*e*Sn	Sn	00 32 13.5	-5.2
	29nm,0.4s						
FRF				*e*Sg	Sg	00 32 39.8	-7.9
	33nm,0.4s						
EVIA	**Vianos**	**4.83**	**206**	Pn	Pn	00 31 21.3	-2.8
	0.9nm,0.2s,SNR=7.9						
EVIA				Pg	Pg	00 31 38.0	-8.1
	1.9nm,0.2s,SNR=4.0						
EVIA				Sn	Sn	00 32 14.9	-5.9
	4.6nm,0.3s,SNR=7.9						
EVIA				Lg		00 32 41.8	
	8.3nm,0.3s,SNR=4.0						
EVIA	**Vianos**	**4.83**	**206**	Pn	Pn	00 31 21.3	-2.8
EVIA				Pg	Pg	00 31 38.0	-8.1
EVIA				Sn	Sn	00 32 14.9	-5.9
EVIA				Lg		00 32 39.7	
EVIA	**Vianos**	**4.83**	**206**	Pg	Pg	00 31 38.0	-8.1
	1.9nm,0.2s,SNR=4.0						
EVIA				Sn	Sn	00 32 14.9	-5.9
	4.6nm,0.3s,SNR=7.9						
LOR	**Lormes**	**4.98**	**30**	*e*Pn	Pn	00 31 22.4	-3.7
	baz=218						
LOR				*e*Sn	Sn	00 32 17.7	-6.7
LOR				*e*Sg	Sg	00 32 44.7	-11
	21nm,0.3s						
MBDF	**Montbardon**	**5.06**	**68**	*e*Pn	Pn	00 31 24.2	-3.1
MBDF				*e*Pg	Pg	00 31 44.0	-6.6
MBDF				*e*Sg	Sg	00 32 49.2	-8.8
	12nm,0.7s						
ECAL	**Calabor**	**5.23**	**260**	⇑Pn	Pn	00 31 27.7	-2.1
	16nm,0.2s,SNR=18						
ECAL				Sn	Sn	00 32 24.0	-6.8
	23nm,0.2s,SNR=82						
ECAL				Lg		00 32 52.6	
	29nm,0.4s,SNR=4.6						
ECAL	**Calabor**	**5.23**	**260**	⇑Pn	Pn	00 31 27.7	-2.1
ECAL				Sn	Sn	00 32 24.0	-6.8
ECAL				Lg		00 32 49.7	
ECAL	**Calabor**	**5.23**	**260**	Pn	Pn	00 31 27.7	-2.0
	16nm,0.2s,SNR=18						

ECAL				Sn	Sn	00 32 24.0	-6.8
	23nm,0.2s,SNR=82						
EMUR	**La Murta**	**5.29**	**192**	Pn	Pn	00 31 28.3	-2.3
	2.6nm,0.1s,SNR=14						
EMUR				Sn	Sn	00 32 23.1	-9.2
	1.3nm,0.2s,SNR=7.9						
EMUR				Lg		00 32 54.9	
	7.9nm,0.4s,SNR=4.6						
EMUR	**La Murta**	**5.29**	**192**	Pn	Pn	00 31 28.3	-2.3
EMUR				Sn	Sn	00 32 23.1	-9.2
EMUR				Lg		00 32 52.8	
EMUR	**La Murta**	**5.29**	**192**	Pn	Pn	00 31 28.3	-2.3
	2.6nm,0.1s,SNR=14						
EMUR				Sn	Sn	00 32 23.1	-9.2
	1.3nm,0.2s,SNR=7.9						
LPL	**La Plagne**	**5.32**	**60**	*e*Pn	Pn	00 31 27.5	-3.5
LPL				*e*Sg	Sg	00 32 57.3	-9.5
	8.5nm,0.4s						
LPG	**La Plagne**	**5.33**	**60**	*e*Pn	Pn	00 31 27.9	-3.2
LPG				*e*Sg	Sg	00 32 57.7	-9.2
	13nm,0.5s						
SBF	**Sospel**	**5.35**	**79**	*e*Pn	Pn	00 31 28.1	-3.3
SBF				*e*Sg	Sg	00 32 58.5	-9.1
	23nm,0.4s						
EPON	**Pontenova**	**5.37**	**276**	Pn	Pn	00 31 30.4	-1.3
	7.9nm,0.2s,SNR=29						
EPON				Sn	Sn	00 32 29.1	-5.2
	15nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**5.37**	**276**	Pn	Pn	00 31 30.4	-1.3
	7.9nm,0.2s,SNR=29						
EPON				Sn	Sn	00 32 29.1	-5.2
	15nm,0.3s,SNR=7.9						
GRR	**Gorron**	**5.41**	**353**	*e*Pn	Pn	00 31 27.5	-4.8
GRR				*e*Pg	Pg	00 31 47.5	-10
GRR				*e*Sn	Sn	00 32 26.2	-9.2
GRR				*e*Sg	Sg	00 32 56.7	-13
	16nm,0.4s						
QUIF	**Quistinic**	**5.43**	**335**	*e*Pn	Pn	00 31 28.2	-4.3
QUIF				*e*Sn	Sn	00 32 25.7	-10
QUIF				*e*Sg	Sg	00 32 56.8	-14
	9.0nm,0.3s						
ERUA	**La Rua**	**5.43**	**266**	Pn	Pn	00 31 30.6	-2.0
	12nm,0.2s,SNR=18						
ERUA				Pg	Pg	00 31 49.5	-8.6
	4.1nm,0.3s,SNR=4.0						
ERUA				Sn	Sn	00 32 30.4	-5.5
	12nm,0.3s,SNR=5.7						
ERUA				Lg		00 33 00.6	
	3.7nm,0.3s,SNR=12						
ERUA	**La Rua**	**5.43**	**266**	Pn	Pn	00 31 30.6	-2.0
	12nm,0.2s,SNR=18						
ERUA				Sn	Sn	00 32 30.4	-5.5
	12nm,0.3s,SNR=5.7						
CABF	**La Chapelle**	**5.52**	**47**	*e*Pn	Pn	00 31 30.3	-3.5
CABF				*e*Pg	Pg	00 31 52.0	-7.8
CABF				*e*Sn	Sn	00 32 30.6	-7.5
CABF				*e*Sg	Sg	00 33 03.1	-10
	28nm,0.5s						
SGMF	**Saint Gilles**	**5.57**	**341**	*e*Pn	Pn	00 31 30.1	-4.4
SGMF				*e*Sn	Sn	00 32 29.7	-10
SGMF				*e*Sg	Sg	00 33 01.4	-14
	12nm,0.4s						
LDF	**La Druitiere**	**5.57**	**358**	*e*Pn	Pn	00 31 29.5	-5.1
LDF				*e*Sn	Sn	00 32 30.4	-9.0
	4.5nm,0.2s						
LDF				*e*Sg	Sg	00 33 01.8	-13
	9.9nm,0.3s						
EHUE	**Huescar**	**5.62**	**203**	Pn	Pn	00 31 33.0	-2.2
	0.8nm,0.2s,SNR=9.0						
EHUE				Sn	Sn	00 32 33.5	-7.0
	1.5nm,0.4s,SNR=7.9						
EHUE				Lg		00 33 05.7	
	0.9nm,0.3s,SNR=5.1						
EBAN	**Banos Encina**	**5.72**	**213**	Pn	Pn	00 31 33.4	-3.2
	2.2nm,0.2s,SNR=7.0						
EBAN				Sn	Sn	00 32 34.8	-8.2
	3.4nm,0.2s,SNR=7.9						
EBAN				Lg		00 33 10.5	
	6.4nm,0.4s,SNR=7.9						
EBAN	**Banos Encina**	**5.72**	**213**	Pn	Pn	00 31 33.4	-3.2
EBAN				Sn	Sn	00 32 34.8	-8.2
EBAN				Lg		00 33 04.9	
FLN	**La Foliniere**	**5.76**	**356**	*e*Pn	Pn	00 31 32.1	-5.0
	baz=171						
FLN				*e*Sn	Sn	00 32 34.4	-10
	4.2nm,0.2s						
FLN				*e*Sg	Sg	00 33 08.4	-13
	14nm,0.4s						
EQES	**Quesada**	**5.78**	**207**	Pn	Pn	00 31 34.5	-2.9
	1.0nm,0.1s,SNR=18						
EQES				Sn	Sn	00 32 35.6	-8.9
	2.2nm,0.2s,SNR=7.9						
EQES				Lg		00 33 11.5	
	3.3nm,0.3s,SNR=7.9						
EQES	**Quesada**	**5.78**	**207**	Pn	Pn	00 31 34.5	-2.9
EQES				Sn	Sn	00 32 35.6	-8.9
EQES				Lg		00 33 09.3	
EQES	**Quesada**	**5.78**	**207**	Pn	Pn	00 31 34.5	-2.9
	1.0nm,0.1s,SNR=18						
ROSF	**Rostrenen**	**5.84**	**337**	*e*Pn	Pn	00 31 33.9	-4.4
ROSF				*e*Sn	Sn	00 32 35.9	-10
	7.3nm,0.3s						
EADA	**Adamuz**	**6.05**	**218**	Pn	Pn	00 31 38.6	-2.7
	2.0nm,0.1s,SNR=15						
EADA				Sn	Sn	00 32 43.0	-8.4
	4.5nm,0.3s,SNR=7.9						
EADA				Lg		00 33 20.1	
	5.1nm,0.3s,SNR=7.9						
EADA	**Adamuz**	**6.05**	**218**	Pn	Pn	00 31 38.6	-2.7
EADA				Sn	Sn	00 32 43.0	-8.4
EADA				Lg		00 33 17.5	
EADA	**Adamuz**	**6.05**	**218**	Pn	Pn	00 31 38.6	-2.8
	2.0nm,0.1s,SNR=15						
SFTF	**Sexfontaines**	**6.20**	**32**	*e*Pn	Pn	00 31 39.1	-4.3
SFTF				*e*Sn	Sn	00 32 47.3	-7.7
SFTF				*e*Sg	Sg	00 33 23.6	-12
	18nm,0.5s						
ELOB	**Lobios**	**6.21**	**262**	Pn	Pn	00 31 40.6	-2.9
	2.6nm,0.1s,SNR=25						
ELOB				Sn	Sn	00 32 46.4	-8.9
	3.1nm,0.2s,SNR=7.9						
ELOB				Lg		00 33 24.9	
	9.8nm,0.4s,SNR=7.7						
ELOB	**Lobios**	**6.21**	**262**	Pn	Pn	00 31 40.6	-2.9
ELOB				Sn	Sn	00 32 46.4	-8.9
ELOB				Lg		00 33 19.6	
ELOB	**Lobios**	**6.21**	**262**	Pn	Pn	00 31 40.6	-2.9
	2.6nm,0.1s,SNR=25						
ELOB				Sn	Sn	00 32 46.4	-8.9
	3.1nm,0.2s,SNR=7.9						
STS	**Santiago**	**6.41**	**272**	Pn	Pn	00 31 43.6	-2.8
	4.7nm,0.2s,SNR=7.1						
STS				Sn	Sn	00 32 52.5	-7.8
	3.2nm,0.2s,SNR=7.9						
ECOG	**Cogollos-Vega**	**6.42**	**208**	Pn	Pn	00 31 43.2	-3.3
	0.9nm,0.2s,SNR=7.9						
ECOG				Lg		00 33 33.1	
	1.4nm,0.3s,SNR=7.9						
ELUQ	**Luque**	**6.43**	**213**	Pn	Pn	00 31 44.6	-2.0
	1.1nm,0.2s,SNR=6.3						
ELUQ				Sn	Sn	00 32 53.1	-7.8
	1.3nm,0.3s,SNR=7.9						
ELUQ				Lg		00 33 31.8	
	1.8nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**6.44**	**207**	Pn	Pn	00 31 43.9	-2.9
	1.1nm,0.2s,SNR=7.1						
EQUE				Sn	Sn	00 32 53.3	-7.9
	1.3nm,0.2s,SNR=7.9						
EQUE				Lg		00 33 29.1	
	1.8nm,0.3s,SNR=7.9						
MEZF	**Maizieres J’vi**	**6.45**	**30**	*e*Pn	Pn	00 31 43.0	-3.9
MEZF				*e*Sg	Sg	00 33 31.8	-12
	20nm,0.4s						
PGF	**Pioggiola**	**6.50**	**91**	*e*Pn	Pn	00 31 42.8	-4.9
PGF				*e*Sn	Sn	00 32 55.5	-7.2
	5.2nm,0.3s						
HAU	**Haudompre**	**6.60**	**39**	*e*Pn	Pn	00 31 45.1	-3.9
HAU				*e*Sg	Sg	00 33 36.5	-13
	13nm,0.4s						
EZAM	**Zamans**	**6.61**	**265**	Pn	Pn	00 31 46.2	-3.0
	2.0nm,0.1s,SNR=6.2						
EZAM				Lg		00 33 38.3	
	5.5nm,0.4s,SNR=4.0						
HINF	**Hinteralfeld**	**6.71**	**42**	*e*Pn	Pn	00 31 46.7	-3.8
HINF				*e*Sg	Sg	00 33 40.0	-13
	8.9nm,0.4s						
RFYF	**Reffroy**	**6.71**	**32**	*e*Pn	Pn	00 31 46.5	-4.1
EMAZ	**Mazaricos**	**6.72**	**272**	Pn	Pn	00 31 47.6	-3.1
	9.2nm,0.2s,SNR=31						
EMAZ				Sn	Sn	00 32 59.1	-8.9
	3.6nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**6.75**	**211**	Pn	Pn	00 31 48.1	-3.0
	1.0nm,0.2s,SNR=7.9						
ELOJ				Sn	Sn	00 32 59.8	-8.9
	1.6nm,0.4s,SNR=7.9						
EBAD	**Badajoz**	**6.92**	**234**	Pn	Pn	00 31 49.6	-3.9
	3.7nm,0.1s,SNR=28						
EBAD				Sn	Sn	00 33 03.1	-10
	4.1nm,0.3s,SNR=5.1						
EBAD				Lg		00 33 49.0	
	1.5nm,0.2s,SNR=4.0						
EBAD	**Badajoz**	**6.92**	**234**	Pn	Pn	00 31 49.6	-4.0
CDF	**Champ du Feu**	**7.32**	**40**	*e*Pn	Pn	00 31 54.6	-4.6
CDF				*e*Sg	Sg	00 33 58.5	-15
	8.9nm,0.6s						
EMIN	**Mina Concepcio**	**7.41**	**227**	Pn	Pn	00 31 56.4	-4.1
	0.5nm,0.1s,SNR=12						
EMIN				Sn	Sn	00 33 14.3	-11
	0.8nm,0.2s,SNR=7.9						
EMIN				Lg		00 34 03.1	
	2.4nm,0.4s,SNR=5.0						
EMIN	**Mina Concepcio**	**7.41**	**227**	Pn	Pn	00 31 56.4	-4.0
EMIJ	**Mijas**	**7.49**	**212**	Pn	Pn	00 31 58.9	-2.7
	1.0nm,0.2s,SNR=4.0						
BAIF	**Baives**	**7.56**	**20**	*e*Pn	Pn	00 31 58.0	-4.5
BAIF				*e*Pg	Pg	00 32 27.9	-13
BAIF				*e*Sn	Sn	00 33 18.1	-11
BAIF				*e*Sg	Sg	00 34 04.9	-16
	45nm,1.1s						
ESPR	**Espera**	**7.70**	**219**	Pn	Pn	00 32 01.9	-2.6
	2.3nm,0.2s,SNR=10						
ESPR				Lg		00 34 14.2	
	2.9nm,0.4s,SNR=4.0						
ESPR	**Espera**	**7.70**	**219**	Pn	Pn	00 32 01.9	-2.6
GIVF	**Givet**	**7.77**	**23**	*e*Pn	Pn	00 32 00.7	-4.7
GIVF				*e*Pg	Pg	00 32 32.3	-12
GIVF				*e*Sn	Sn	00 33 24.1	-10
GIVF				*e*Sg	Sg	00 34 11.8	-16
	2.6nm,0.3s						
EJIF	**Jimena Fronter**	**7.88**	**215**	Pn	Pn	00 32 04.1	-2.8
	0.5nm,0.2s,SNR=7.9						
EJIF				Sn	Sn	00 33 22.9	-14
	0.4nm,0.2s,SNR=7.9						
EJIF				Lg		00 34 15.8	
	1.3nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**8.02**	**229**	Pn	P	00 32 04.3	-4.7
	0.9nm,0.2s,SNR=4.8						
EGRO				Sn	Sn	00 33 28.4	-12
	0.7nm,0.2s,SNR=7.9						
EGRO				Lg		00 34 24.7	
	1.0nm,0.3s,SNR=4.0						
EGRO	**El Granado**	**8.02**	**229**	Pn	P	00 32 04.3	-4.7

MAN 05 00:51:16.6, 10.22N×126.22E, h70^{km}, mb4.0, ML2.8, MS2.5, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	**Maasin**	**1.34**	**267**	*e*P	P	00 51 40.1	+0.1
MSLP				*e*S	S	00 51 58.1	+0.9
TBP	**Tagbilaran**	**2.38**	**258**	*e*P	P	00 51 54.8	+0.6
TBP				*e*S	S	00 52 22.7	+0.5
BUKP	**Musuan**	**2.59**	**206**	*e*P	P	00 51 57.2	+0.1

DHMR 05 00:55:07.3±1.1, **12.04N×43.74E, h2^{km}**±11^{km}**, ML3.7, 3C-2D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.24**	**17**⇑	*i*P	Pb	00 55 31.2	+0.1
TRBA				*i* S	Sb	00 55 48.1	+0.7
TRBA				AML	AML	00 55 56.2	
	comp=E,1μm,0.5s						
UDYN	**Al ‘Udayn**	**1.93**	**7**⇓	*i*P	Pn	00 55 41.7	+0.3
UDYN				*i* S	Sn	00 56 09.2	+2.6
UDYN				AML	AML	00 56 15.3	
	comp=N,1μm,0.3s						
LBOS		**2.34**	**39**⇑	*i*P	Pn	00 55 49.0	+1.6
LBOS				*i* S	Sn	00 56 21.2	+4.1
DHBB	**Dhamar BB**	**2.59**	**14**⇑	*i*P	Pn	00 55 52.8	+1.8
DHBB				*i* S	Sn	00 56 28.8	+5.3
BDHA	**Al Bayda’**	**2.62**	**43**⇓	*i*P	Pn	00 55 52.7	+1.3
BDHA				*i* S	Sn	00 56 29.1	+4.9
BDHA				AML	AML	00 56 36.6	
	comp=E,607nm,0.5s						

*CRAAG **05** 00:55:35.4, 36.42N×2.49E, Ml3.3*
*MDD **05** 00:55:36.5±0.5, 36.45N×2.44E, mb3.7/7, Error ellipse: s-maj=7.7km s-min=4.7km az=23.0, PRXIMO*
*NEIC **05** 00:55:36.3±0.4, 36.44N×2.50E, h10^{km}, ML3.3(ALG), Error ellipse: s-maj=5.7km s-min=3.6km az=196.0*
*CSEM **05** 00:55:36.1±0.1, 36.49N×2.50E, h20^{km}, ML3.3, Error ellipse: s-maj=2.6km s-min=2.0km az=13.0*
ISC 05 00:55:35.6±0.5**, 36.56N**±0.04×**2.43E**±0.04**, h10^{km}, n29, σ1^{s}11**/45**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.55**	**64**	P	**Pg**	**00 55 47.7**	**+1.1**
EMHD	**Djebel Mahouad**	**0.56**	**130**	P	**Pg**	**00 55 45.0**	**-1.8**
EBNR	**Beni Rached**	**0.77**	**250**	P	**Pb**	**00 55 52.0**	**+1.4**
ABMS	**Boumerdes**	**0.87**	**77**	P	**Pb**	**00 55 52.8**	**+0.5**
ADJB	**Djebel Djouab**	**0.91**	**116**	P	**Pb**	**00 55 52.4**	**-0.6**
AKET	**Djebel Ketaf**	**1.28**	**113**	P	**Pb**	**00 55 58.3**	**-1.1**
ETRT	**Tiaret**	**1.48**	**218**	P	**Pn**	**00 56 02.0**	**-0.5**
EIBI	**Ibiza**	**2.61**	**341**	P	**Pn**	**00 56 20.1**	**+1.5**
	4.5nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**00 56 49.8**	**-0.8**
	6.4nm,0.1s,SNR=7.9						
EIBI	**Ibiza**	**2.61**	**341**	P	**Pn**	**00 56 19.7**	**+1.2**
EIBI				S	**Sn**	**00 56 48.9**	**-1.7**
EIBI	**Ibiza**	**2.61**	**341**	P	**Pn**	**00 56 19.7**	**+1.2**
	4.5nm,0.1s,SNR=7.9						
EIBI				S	**Sn**	**00 56 48.8**	**-1.8**
	6.4nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**3.19**	**295**	P	**Pn**	**00 56 27.7**	**+0.8**
	0.8nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**00 57 04.6**	**-0.9**
	3.0nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**3.19**	**295**	P	**Pn**	**00 56 27.7**	**+0.8**
	0.8nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**00 57 04.6**	**-0.9**
	3.0nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.22**	**5**	P	**Pn**	**00 56 27.5**	**+0.3**
	1.3nm,0.1s,SNR=11						
ETOS				S	**Sn**	**00 57 05.6**	**-0.4**
	17nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	**3.22**	**5**	P	**Pn**	**00 56 27.6**	**+0.3**
ETOS				S	**Sn**	**00 57 02.9**	**-3.1**
ETOS	**Mallorca**	**3.22**	**5**	P	**Pn**	**00 56 27.5**	**+0.3**
	1.3nm,0.1s,SNR=11						
ETOS				S	**Sn**	**00 57 02.9**	**-3.1**
	17nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**3.78**	**305**	P	**Pn**	**00 56 36.5**	**+1.2**
	1.1nm,0.1s,SNR=18						
ETOB				S	**Sn**	**00 57 19.5**	**-0.8**
	7.7nm,0.3s,SNR=6.3						
ETOB	**Tobarra**	**3.78**	**305**	P	**Pn**	**00 56 36.5**	**+1.3**
	1.1nm,0.1s,SNR=18						
ETOB				S	**Sn**	**00 57 19.5**	**-0.8**
	7.7nm,0.3s,SNR=6.3						
EMOS	**Mosqueruela**	**4.43**	**330**	P	**Pn**	**00 56 45.5**	**+1.1**
	2.2nm,0.1s,SNR=24						
EMOS				S	**Sn**	**00 57 34.1**	**-2.6**
	2.8nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**4.43**	**330**	P	**Pn**	**00 56 45.5**	**+1.1**
	2.2nm,0.1s,SNR=24						
EMOS				S	**Sn**	**00 57 34.1**	**-2.5**
	2.8nm,0.3s,SNR=7.9						
EQES	**Quesada**	**4.56**	**287**	P	**Pn**	**00 56 47.4**	**+1.1**
	1.7nm,0.2s,SNR=6.1						
EQES				S	**Sn**	**00 57 39.2**	**-0.8**
	6.7nm,0.4s,SNR=12						
EQES	**Quesada**	**4.56**	**287**	P	**Pn**	**00 56 47.4**	**+1.1**
	1.7nm,0.2s,SNR=6.1						
EQES				S	**Sn**	**00 57 39.2**	**-0.9**
	6.7nm,0.4s,SNR=12						
EQUE	**Quentar**	**4.75**	**280**	P	**Pn**	**00 56 48.6**	**-0.4**
	0.9nm,0.3s,SNR=7.9						
EQUE				S	**Sn**	**00 57 40.6**	**-4.1**
	2.7nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**4.90**	**348**	P	**Pn**	**00 56 51.8**	**+0.7**
	0.1nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.90**	**348**	P	**Pn**	**00 56 51.8**	**+0.7**
	0.1nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.39**	**353**	P	**Pn**	**00 56 59.4**	**+1.3**
	0.1nm,0.2s,SNR=7.9						
EMIR				S	**Sn**	**00 57 56.2**	**-4.7**
	1.2nm,0.2s,SNR=4.0						
EMIR	**Miracle**	**5.39**	**353**	P	**Pn**	**00 56 59.3**	**+1.2**
ESDC	**Sonseca Array**	**5.92**	**304**	P	**Pn**	**00 57 05.1**	**-0.4**
	0.5nm,0.2s,baz=120,slow=13,SNR=4.8						
ESDC	**Sonseca Array**	**5.92**	**304**	P	**Pn**	**00 57 05.1**	**-0.4**
	0.5nm,0.2s,SNR=4.8						
GUD	**Guadarrama**	**6.57**	**310**	P	**Pn**	**00 57 15.1**	**+0.4**
	0.4nm,0.3s,SNR=4.0						

*ISK **05** 01:03:56.9, 38.20N×26.81E, h14^{km}, MD3.1*
*NEIC **05** 01:03:56.0, 38.21N×26.78E, h12^{km}, MD3.4(ATH), MD3.1(ISK), After ISK.*
*CSEM **05** 01:03:56.9±0.1, 38.20N×26.82E, h15^{km}, MD3.1, Error ellipse: s-maj=2.3km s-min=1.4km az=95.0*
*ATH **05** 01:03:57.2, 38.21N×26.72E, h28^{km}±3^{km}, MD3.4/3*
ISC 05 01:03:56.2±0.7**, 38.20N**±0.03×**26.73E**±0.04**, h6^{km}**±4^{km}**, n30, σ0^{s}85**/41**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.19**	**327**	*i* P	**Pg**	**01 04 00.7**	**+0.5**
URLA				*i* S	**Sg**	**01 04 03.9**	**+1.0**
BLCB	**Balcova**	**0.31**	**53**	*i* PG	**Pg**	**01 04 02.8**	**+0.3**
BLCB				*i* SG	**Sg**	**01 04 06.3**	**-0.4**
IZM	**Izmir**	**0.47**	**65**	*i* PG	**Pg**	**01 04 05.9**	**+0.3**
IZM				*i* SG	**Sg**	**01 04 11.7**	**-0.1**
KDAG	**Bornova**	**0.47**	**64**	*i* P	**Pg**	**01 04 04.9**	**-0.8**
KDAG				*i* S	**Sg**	**01 04 11.0**	**-1.0**
SMG	**Samos**	**0.50**	**170**	*e*PN	**Pn**	**01 04 08.1**	**-1.3**
SMG				*e*SN	**Sn**	**01 04 16.0**	**-2.3**
AYDN	**Tasoluk**	**1.06**	**120**	*i* P	**Pb**	**01 04 17.8**	**+1.3**
AYDN				*i* S	**Sb**	**01 04 31.6**	**+1.3**
AKS	**Akhisar**	**1.09**	**51**	PG	**Pg**	**01 04 17.2**	**-0.8**
PRK	**Paraskevi**	**1.10**	**341**	*e*PN	**Pn**	**01 04 17.8**	**-0.3**
PRK				*e*SN	**Sn**	**01 04 33.1**	**-0.6**
AYVA	**Ayvalik**	**1.11**	**358**	*i* P	**Pb**	**01 04 17.9**	**+0.5**
AYVA				*i* S	**Sb**	**01 04 34.4**	**+2.5**
BODT	**Bodrum**	**1.23**	**158**	*e*PN	**Pn**	**01 04 19.5**	**-0.3**
BODT				*e*SN	**Sn**	**01 04 36.5**	**-0.3**
MLSB	**Milas**	**1.23**	**137**	*e*PN	**Pn**	**01 04 19.5**	**-0.3**
BDRM	**Kayabasi**	**1.27**	**153**	*i* P	**Pb**	**01 04 21.0**	**+0.9**
BDRM				*i* S	**Sb**	**01 04 38.9**	**+2.4**
MANT	**Manisa**	**1.47**	**78**	*i* P	**Pn**	**01 04 24.1**	**+0.8**
MANT				*i* S	**Sb**	**01 04 42.8**	**+0.5**
APE	**Apeiranthos**	**1.48**	**221**	*e*PN	**Pn**	**01 04 24.0**	**+0.6**
DAT	**Datca**	**1.61**	**155**	*e*PN	**Pn**	**01 04 25.2**	**-0.2**
YER	**Yerkesik**	**1.63**	**130**	*e*PN	**Pn**	**01 04 25.1**	**-0.5**
EZN	**Ezine**	**1.66**	**349**	PN	**Pn**	**01 04 26.3**	**+0.4**
BALB	**Balikesir**	**1.70**	**32**	PN	**Pn**	**01 04 26.9**	**+0.4**
DENT	**Denizli**	**1.87**	**103**	PN	**Pn**	**01 04 29.0**	**-0.1**
DST	**Dursunbey**	**2.04**	**46**	PN	**Pn**	**01 04 30.6**	**-0.9**
LIA	**Limnos Island**	**2.08**	**325**	*e*PB	**Pb**	**01 04 32.3**	**-1.7**
LPK	**Lapseki**	**2.17**	**1**	PN	**Pn**	**01 04 33.6**	**+0.3**
KHL	**Karahalli**	**2.20**	**86**	PN	**Pn**	**01 04 33.6**	**-0.2**
EDC	**Edincik**	**2.32**	**22**	PN	**Pn**	**01 04 35.5**	**0.0**
BNT	**Bandirma**	**2.34**	**23**	PN	**Pn**	**01 04 36.0**	**+0.2**
KCT	**Karacabey**	**2.42**	**31**	PN	**Pn**	**01 04 36.2**	**-0.7**
MRMT	**Marmara Adasi**	**2.49**	**15**	*e*PN	**Pn**	**01 04 38.0**	**+0.1**
ORLT	**Orhaneli**	**2.50**	**42**	PN	**Pn**	**01 04 37.4**	**-0.6**
MFT	**Murefte**	**2.62**	**9**	*e*PN	**Pn**	**01 04 39.8**	**0.0**
RDO	**Rodhopi**	**3.08**	**343**	*e*PN	**Pn**	**01 04 46.1**	**-0.3**

*IDC **05** 01:08:53.6±0.8, 0.82N×29.30W, mb4.1/13, mb1 4.2/13, mb1mx4.1/24, mbtmp4.1/13, MS4.2/21, Ms1 4.2/21, ms1mx4.1/26, Error ellipse: s-maj=28.2km s-min=11.0km az=161.0*
*NEIC **05** 01:08:54.6±0.5, 0.73N×29.28W, h10^{km}, mb4.3/1, Error ellipse: s-maj=20.0km s-min=6.9km az=142.0*
ISC 05 01:08:53.5±0.7**, 0.9N**±0.2×**29.3W**±0.1**, h10^{km}, n36, σ0^{s}97**/24**, mb4.0**/14**, MS4.2**/21**, 3C-1D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**9.38**	**224**	*e*P	**P**	**01 11 07.2**	**-4.6**
	46nm,0.6s						
BDFB	**Brasilia**	**24.73**	**228**	P	**P**	**01 14 16.0**	**-0.6**
	2.6nm,0.8s,mb3.8,baz=21,slow=11,SNR=3.5						
BDFB				LR	LR	01 22 55.6	
	comp=Z,717nm,19.7s,MS4.2,baz=75,slow=34						
DBIC	**Dimbokro**	**25.07**	**76**	P	**P**	**01 14 19.1**	**-0.8**
	15nm,1.1s,mb4.5,baz=220,slow=11,SNR=9.9						
DBIC				S	**S**	**01 18 47.6**	**+6.2**
	1.9nm,0.8s,baz=283,slow=23,SNR=2.0						
DBIC				LR	LR	01 22 14.6	
	comp=Z,733nm,18.7s,MS4.2,baz=236,slow=32						
SAML	**Samuel**	**35.13**	**253**	*e*P	**P**	**01 15 48.9**	**-0.7**
	4.8nm,1.1s,mb4.3						
SIV	**San Ignacio**	**35.57**	**240**	P	**P**	**01 15 53.1**	**-0.2**
	2.1nm,0.8s,mb4.1,baz=86,slow=8.5,SNR=12						
MDT	**Midelt**	**39.34**	**34**	P	**P**	**01 16 26.1**	**+1.3**
	1.7nm,0.7s,mb3.9,baz=306,slow=5.8,SNR=3.7						
MDT				LR	LR	01 30 52.6	
	comp=Z,347nm,20.4s,MS4.2,baz=32,slow=34						
SJG	**San Juan**	**40.00**	**298**	LR	LR	01 29 24.5	
	comp=Z,296nm,18.8s,MS4.2,baz=273,slow=31						
SDV	**Santo Domingo**	**41.88**	**282**	P	**P**	**01 16 46.2**	**+0.2**
	1.6nm,0.4s,mb4.0,baz=130,slow=20,SNR=4.4						
SDV				S	**S**	**01 23 07.8**	**+4.0**
	1.0nm,0.4s,baz=242,slow=21,SNR=2.2						
LPAZ	**La Paz**	**41.94**	**244**	P	**P**	**01 16 47.8**	**+1.3**
	2.2nm,0.8s,mb3.9,baz=79,slow=4.5,SNR=11						
LPAZ				LR	LR	01 33 20.6	
	comp=Z,311nm,20.2s,MS4.2,baz=93,slow=35						
ESDC	**Sonseca Array**	**44.98**	**28**	P	**P**	**01 17 11.9**	**+1.0**
	1.7nm,0.8s,mb3.9,baz=228,slow=8.3,SNR=7.6						
ROSC	**El Rosal**	**45.11**	**276**	LR	LR	01 34 40.0	
	comp=Z,432nm,21.0s,MS4.4,baz=188,slow=34						
PLCA	**Paso Flores**	**55.86**	**217**	LR	LR	01 42 01.8	
	comp=Z,159nm,20.2s,MS4.1,baz=60,slow=36						
BOSA	**Boshof**	**59.87**	**124**	LR	LR	01 39 33.1	
	comp=Z,174nm,19.1s,MS4.2,baz=252,slow=31						
GERES	**GERESS Array B**	**60.35**	**31**	P	**P**	**01 19 04.7**	**-0.4**
	0.9nm,0.8s,mb3.9,baz=233,slow=6.7,SNR=11						
GERES				LR	LR	01 42 17.7	
	comp=Z,72nm,20.6s,MS3.8,baz=255,slow=33						
KHC	**Kasperske Hory**	**60.46**	**31**	*e*P	**P**	**01 19 05.0**	**-0.8**
IDI	**Anoyia**	**60.83**	**49**	LR	LR	01 47 56.9	
	comp=Z,134nm,18.4s,MS4.1,baz=93,slow=38						
VRAC	**Vranov**	**62.15**	**32**	LR	LR	01 47 13.1	
	comp=Z,123nm,18.5s,MS4.1,baz=255,slow=37						
MLR	**Muntele Rosu**	**65.67**	**39**	P	**P**	**01 19 40.3**	**-0.1**
	3.3nm,1.0s,mb4.3,baz=158,slow=11,SNR=4.5						
NOA	**NORSAR Array B**	**67.44**	**20**	P	**P**	**01 19 51.1**	**-0.3**
	0.8nm,0.8s,mb3.8,baz=232,slow=6.0,SNR=2.9						
NOA				LR	LR	01 46 06.2	
	comp=Z,80nm,20.3s,MS3.9,baz=195,slow=33						
HFS	**Hagfors**	**67.69**	**22**	LR	LR	01 44 12.9	
	comp=Z,114nm,19.6s,MS4.1,baz=239,slow=31						
BRTR	**Keskin Array B**	**68.86**	**47**	P	**P**	**01 20 00.7**	**+0.1**
	1.0nm,0.8s,mb3.8,baz=243,slow=5.5,SNR=6.4						
AKASG	**Malin Array Be**	**69.88**	**35**	P	**P**	**01 20 06.2**	**-0.5**
	2.5nm,0.6s,mb4.3,baz=246,slow=6.4,SNR=8.3						
VNA1	**Neumayer--Stat**	**72.78**	**173**⇑	*i*	**P**	**01 20 34.2**	**+11**
VNA2	**Neumayer--Watz**	**73.14**	**173**⇑	*i*P	**P**	**01 20 34.6**	**+8.8**
VNA2				*e*		01 20 53.8	
VNA3	**Neumayer Olymp**	**73.16**	**173**⇑	*i*P	**P**	**01 20 33.0**	**+7.1**
VNA3				*e*		01 20 52.0	
FINES	**FINESS Array B**	**73.34**	**24**	LR	LR	01 49 13.8	
	comp=Z,126nm,21.2s,MS4.2,baz=246,slow=33						
SNAA	**Sanae**	**74.45**	**172**⇓	*i*P	**P**	**01 20 38.7**	**+5.3**
SNAA				*e*		01 20 58.2	
ULM	**Lac du Bonnet**	**74.48**	**322**	LR	LR	01 49 07.6	
	comp=Z,255nm,21.0s,MS4.5,baz=29,slow=32						
TXAR	**Lajitas Array**	**75.92**	**300**	P	**P**	**01 20 42.8**	**+0.1**
	0.5nm,0.7s,mb3.6,baz=135,slow=7.7,SNR=6.8						
TXAR				LR	LR	01 54 09.6	
	comp=Z,212nm,19.0s,MS4.5,baz=125,slow=36						
ARCES	**ARCESS Array B**	**77.45**	**17**	LR	LR	01 48 16.1	
	comp=Z,124nm,21.4s,MS4.2,baz=104,slow=30						
MNTX	**Cornudas Mount**	**77.67**	**302**	P	**P**	**01 20 51.6**	**-0.7**
SDCO	**Great Sand Dun**	**78.52**	**308**	P	**P**	**01 20 57.2**	**+0.3**

PDAR	**Pinedale Array**	82.21	313	LR	LR	01 51 13.2	
	comp=Z,205nm,19.7s,MS4.5,baz=66,slow=31						
YKA	**Yellowknife Ar**	87.01	332	LR	LR	01 54 08.9	
	comp=Z,192nm,20.9s,MS4.5,baz=90,slow=31						
NVAR	**Mina Array Bea**	88.64	308	LR	LR	01 56 06.4	
	comp=Z,125nm,19.1s,MS4.3,baz=270,slow=32						
MAW	**Mawson**	91.68	157	LR	LR	01 54 03.0	
	comp=Z,34nm,18.9s,MS3.8,baz=242,slow=30						

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*IDC **05** 01:47:58.1±1.2, 22.52S×169.63E, mb4.0/6, mb1 4.1/7, mb1mx4.0/13, mbtmp4.0/7, ML3.8/1, MS3.7/5, Ms1 3.7/5, ms1mx3.4/17, Error ellipse: s-maj=41.8km s-min=23.9km az=168.0*

*NEIC **05** 01:47:59.4±0.4, 22.54S×169.59E, h10^{km}, mb4.6/1, Error ellipse: s-maj=12.5km s-min=11.1km az=206.0*

ISC 05 01:47:59.7±6.2**, 22.6S**±0.2×**169.6E**±0.1**, h21**^{km}±42^{km}**, h16**^{km}±.5^{km}**:pP-P, n48, σ**0^{s}**90**/28**, mb4.0**/7**, MS4.1**/2**, 3D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	2.96	279	eP	Pn	01 48 46.5	0.0
DZM				eS	Sn	01 49 21.8	0.0
DZM	**Mont Dzumac**	2.96	279	Pn	Pn	01 48 46.5	-0.1
	12nm,0.3s,baz=87,slow=18,SNR=425						
DZM				Sn	Sn	01 49 22.6	+0.8
	48nm,0.3s,baz=153,slow=20,SNR=8.5						
DZM	**Mont Dzumac**	2.96	279	eP	Pn	01 48 46.5	0.0
DZM				eS	Sn	01 49 21.8	0.0
HNR	**Honiara**	16.01	323	LR	LR	01 57 19.2	
	comp=Z,201nm,18.2s,baz=131,slow=35						
URZ	**Urewera**	16.92	159	LR	LR	01 56 55.8	
	comp=Z,207nm,18.6s,baz=57,slow=32						
AFI	**Afiamalu**	19.66	67	LR	LR	01 57 01.6	
	comp=Z,36nm,20.4s,baz=208,slow=28						
CTA	**Charters Tower**	21.87	272	P	P	01 52 54.9	+1.7
	2.5nm,0.8s,mb3.7,baz=89,slow=12,SNR=3.6						
STKA	**Stephens Creek**	26.50	244	P	P	01 53 38.5	+0.9
	0.9nm,0.4s,mb3.6,baz=83,slow=8.1,SNR=4.3						
STKA				LR	LR	02 04 26.0	
	comp=Z,139nm,18.1s,MS3.5,baz=210,slow=37						
WRAB	**Tennant Creek**	32.90	268	P	P	01 54 33.2	-1.7
WRA	**Warramunga Arr**	32.91	268	P	P	01 54 33.1	-1.9
	0.5nm,0.4s,mb3.8,baz=98,slow=8.3,SNR=7.1						
MBWA	**Marble Bar**	46.12	262	eP	P	01 56 24.2	-0.4
SBA	**Scott Base**	55.35	181	P	P	01 57 33.9	-0.2
QSPA	**South Pole Qui**	67.50	180	eP	P	01 58 55.9	0.0
	2.5nm,0.5s,mb4.5						
MAW	**Mawson**	75.49	202	P	P	01 59 44.0	+0.2
	2.2nm,0.9s,mb4.1,baz=76,slow=7.9,SNR=3.6						
SNAA	**Sanae**	85.87	182	e	P	02 00 43.8	+5.2
SNAA	**Sanae**	85.87	182	e	P	02 00 56.7	+18
SNAA	**Sanae**	85.87	182	P	P	02 00 38.3	-0.3
SNAA				e	pP	02 00 43.8	-1.5
SNAA				e		02 00 56.7	
VNA3	**Neumayer Olymp**	86.44	180	e	P	02 00 46.2	+4.7
VNA3	**Neumayer Olymp**	86.44	180	e	P	02 00 51.2	+10
VNA3	**Neumayer Olymp**	86.44	180	e	P	02 01 01.6	+20
VNA3	**Neumayer Olymp**	86.44	180	⇓iP	P	02 00 41.1	-0.4
VNA3				e	pP	02 00 46.2	-1.9
VNA3				e		02 00 51.2	
VNA3				e		02 01 01.6	
VNA2	**Neumayer--Watz**	86.74	181	e	P	02 00 47.8	+4.9
VNA2	**Neumayer--Watz**	86.74	181	e	P	02 00 52.7	+10
VNA2	**Neumayer--Watz**	86.74	181	e	tx	02 01 04.6	
VNA2	**Neumayer--Watz**	86.74	181	⇓iP	P	02 00 42.9	0.0
VNA2				e	pP	02 00 47.8	-1.8
VNA2				e		02 00 52.7	
VNA2				e		02 01 04.6	
VNA1	**Neumayer--Stat**	87.03	181	e	P	02 00 51.2	+6.9
VNA1	**Neumayer--Stat**	87.03	181	e	tx	02 01 05.8	
VNA1	**Neumayer--Stat**	87.03	181	⇓iP	P	02 00 45.5	+1.2
VNA1				e	pP	02 00 51.2	+0.2
VNA1				e		02 01 05.8	
SONM	**Songino Array**	90.06	323	P	P	02 00 59.9	+0.6
	1.7nm,1.1s,mb4.3,baz=141,slow=2.3,SNR=8.6						
NVAR	**Mina Array Bea**	90.75	48	P	P	02 01 02.6	-0.1
	0.8nm,0.9s,mb4.0,baz=202,slow=4.9,SNR=3.3						
TXAR	**Lajitas Array**	98.06	62	LR	LR	02 38 18.2	
	comp=Z,246nm,19.5s,MS4.7,baz=350,slow=31						
CRVS	**Cervenica-Dubn**	143.58	324	ePKP	PKPdf	02 07 32.8	-4.2
KECS	**Kecovo**	144.35	324	ePKP	PKPdf	02 07 34.6	-3.8
KSP	**Ksiaz**	144.95	330	eP	PKPbc	02 07 36.9	+1.6
PSZ	**Piszkesteto**	145.00	324	ePKP	PKPdf	02 07 36.6	-3.0
VYHS	**Vyhne**	145.23	325	i PKP	PKPdf	02 07 38.0	-1.9
DPC	**Dobruska-Polom**	145.27	330	ePKP	PKPdf	02 07 37.5	-2.5
UPC	**Upice**	145.31	330	ePKP	PKPdf	02 07 36.7	-3.3
UPC				ex	x	02 07 53.9	
SMOL	**Smolenice**	145.95	326	i PKP	PKPdf	02 07 40.1	-1.1
PVCC	**Panska Ves**	145.95	331	ePKP	PKPdf	02 07 38.5	-2.6
CLL	**Collm**	146.05	333	P	PKPbc	02 07 47.0	+8.9
	logA/T=0.7						
CLL				e		02 07 55.0	
CLL	**Collm**	146.05	333	eP	PKPbc	02 07 47.0	+8.9
ZST	**Bratislava**	146.32	326	ePKP	PKPdf	02 07 40.0	-1.8
PRU	**Pruhonice**	146.35	331	ePKP	PKPdf	02 07 41.0	-0.8
PRU				ex	x	02 07 56.9	
TREC	**Trest**	146.39	329	ePKP	PKPdf	02 07 41.0	-0.9
TREC				ex	x	02 07 49.6	
TREC				ex	x	02 07 57.5	
KHC	**Kasperske Hory**	147.40	330	ePKP	PKPdf	02 07 41.3	-2.3
GERES	**GERESS Array B**	147.55	330	PKPbc	PKPdf	02 07 44.0	+0.2
	2.7nm,1.0s,baz=27,slow=3.0,SNR=14						
GRA1	**Grafenberg Arr**	148.01	333	ePKP	PKPdf	02 07 45.3	+0.8

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*ISK **05** 01:51:21.6, 38.22N×26.65E, h20^{km}, MD2.9*

*ATH **05** 01:51:21.3, 38.17N×26.44E, h20^{km}, MD3.1/3*

*NEIC **05** 01:51:21.0, 38.24N×26.63E, h18^{km}, MD3.1(ATH), MD2.9(ISK), After ISK.*

*CSEM **05** 01:51:22.2±0.1, 38.24N×26.67E, h15^{km}, MD2.9, Error ellipse: s-maj=2.6km s-min=2.4km az=66.0*

ISC 05 01:51:21.1±0.8**, 38.23N**±0.03×**26.56E**±0.05**, h3**^{km}±6^{km}**, n16, σ**0^{s}**83**/26**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.14	13	i P	Pg	01 51 23.9	+0.1
URLA				i S	Sg	01 51 26.7	+1.0
BLCB	**Balcova**	0.41	67	PG	Pg	01 51 29.3	0.0
BLCB				SG	Sg	01 51 34.8	0.0
SMG	**Samos**	0.56	157	ePN	Pg	01 51 32.5	+0.2
SMG				eSN	Sg	01 51 40.3	+0.5
IZM	**Izmir**	0.58	73	PG	Pg	01 51 32.7	0.0
IZM				SG	Sg	01 51 40.6	+0.2
KDAG	**Bornova**	0.58	72	i P	Pg	01 51 31.4	-1.3
KDAG				i S	Sg	01 51 39.2	-1.4
PRK	**Paraskevi**	1.04	348	ePN	Pn	01 51 41.9	-0.5
PRK				eSN	Sn	01 51 57.0	-0.7
AYVA	**Ayvalik**	1.08	5	i P	Pb	01 51 43.2	+1.1
AYVA				i S	Sb	01 52 00.0	+3.5
AKS	**Akhisar**	1.18	56	ePN	Pn	01 51 43.8	-0.6
AYDN	**Tasoluk**	1.19	118	i P	Pb	01 51 43.5	-0.4
AYDN				i S	Sb	01 51 59.2	-0.4
BDRM	**Kayabasi**	1.36	148	i P	Pb	01 51 47.7	+0.9
BDRM				i S	Sb	01 52 04.7	+0.2
APE	**Apeiranthos**	1.41	215	ePN	Pn	01 51 47.3	-0.5
APE	**Apeiranthos**	1.41	215	ePN	Pn	01 51 46.3	-1.5
MANT	**Manisa**	1.59	80	i P	Pn	01 51 51.4	+1.0
MANT				i S	Sb	01 52 12.7	+1.3
BALB	**Balikesir**	1.75	36	ePN	Pn	01 51 51.0	-1.5
LIA	**Limnos Island**	1.98	328	ePN	Pn	01 51 56.1	+0.2
RDO	**Rodhopi**	3.02	345	ePN	Pn	01 52 11.0	+0.3

DHMR 05 01:56:26.7±0.3**, 12.10N×43.54E, h10**^{km}±2^{km}**, ML3.7, 5D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	1.25	27	⇓eP	Pb	01 56 49.9	-0.1
TRBA				i S	Sb	01 57 07.9	+1.9
TRBA				AML	AML	01 57 15.2	
	comp=E,1μm,0.5s						
UDYN	**Al ‘Udayn**	1.90	13	⇓eP	Pn	01 57 00.5	+1.0
UDYN				i S	Sn	01 57 26.8	+3.1
UDYN				AML	AML	01 57 34.3	
	comp=N,768nm,0.5s						
LBOS		2.42	43	⇓eP	Pn	01 57 08.9	+1.9
LBOS				i S	Sn	01 57 41.8	+4.8
DHBB	**Dhamar BB**	2.59	19	⇓iP	Pn	01 57 11.6	+2.2
DHBB				i S	Sn	01 57 46.4	+5.2
BDHA	**Al Bayda’**	2.71	46	⇓eP	Pn	01 57 13.3	+2.1
BDHA				i S	Sn	01 57 49.8	+5.4
BDHA				AML	AML	01 58 00.4	
	comp=E,600nm,0.6s						

DHMR 05 02:14:38.2±0.9**, 12.06N×43.47E, h9**^{km}±7^{km}**, ML3.7, 3C-2D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	1.32	28	⇓iP	Pb	02 15 02.9	+0.1
TRBA				i S	Sb	02 15 21.7	+1.9
TRBA				AML	AML	02 15 27.1	
	comp=E,1μm,0.4s						
UDYN	**Al ‘Udayn**	1.96	14	⇑iP	Pn	02 15 13.3	+1.4
UDYN				AML	AML	02 15 19.6	
	comp=E,612nm,0.7s						
UDYN				i S	Sn	02 15 39.7	+2.8
LBOS		2.50	44	⇑iP	Pn	02 15 21.7	+1.9
LBOS				i S	Sn	02 15 55.5	+4.8
DHBB	**Dhamar BB**	2.65	20	⇑iP	Pn	02 15 23.9	+1.9
DHBB				i S	Sn	02 16 00.3	+5.7
BDHA	**Al Bayda’**	2.79	47	⇓iP	Pn	02 15 25.7	+1.8
BDHA				i S	Sn	02 16 03.8	+5.6
BDHA				AML	AML	02 16 08.5	
	comp=E,728nm,0.4s						

JMA 05 02:15:46.1±0.3**, 43.98N×147.97E, M4.2, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	1.73	250	P	Pn	02 16 17.6	0.0
NEM2				eS	Sb	02 16 40.6	-0.1
JRA	**Rausu**	2.06	270	P	Pn	02 16 22.3	0.0
JRA				eS	Sn	02 16 49.3	+0.2
JNK	**Nakash**	2.39	262	P	Pn	02 16 27.3	+0.2
JNK				S	Sn	02 16 57.9	+0.4
JAK	**Akkeshi**	2.58	249	P	Pn	02 16 29.8	0.0
JAK				eS	Sn	02 17 01.6	-0.7
JTKR	**Abashiri--Toko**	2.93	271	P	Pn	02 16 35.2	+0.4
JAR	**Ashorobuto**	3.12	259	P	Pn	02 16 38.3	+0.7
JAR				eS	Sn	02 17 16.2	0.0
JCH	**Churui**	3.63	250	P	Pn	02 16 44.4	-0.3
JCH				eS	Sn	02 17 28.0	-0.9
JKK2	**Kamakawa 2**	3.77	270	P	Pn	02 16 48.1	+1.3
JNBK	**Urakawa-nobuka**	4.18	248	P	Pn	02 16 52.3	-0.3
JKB	**Kayabe**	5.50	250	P	Pn	02 17 10.6	-0.7
JKB				eS	Sn	02 18 13.8	-2.5

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*NNC **05** 02:24:03.0±11.0, 35.12N×73.47E, h180^{km}±98^{km}, mpv3.5, Error ellipse: s-maj=160.7km s-min=91.1km az=75.0*

ISC 05 02:23:51.1±0.7**, 34.78N**±0.05×**73.9E**±0.1**, h33**^{km}**, n12, σ**1^{s}**28**/18**, 4C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	2.78	147	eP	P	02 24 34.7	+0.4
THN				eS	S	02 25 13.3	+6.3
DLH	**Dalhousie**	2.81	142	eP	P	02 24 35.0	+0.3
DLH				eS	S	02 25 16.0	+8.2
BHK	**Bhakra**	3.96	147	ex	x	02 25 51.0	
SDNR	**Sundarnagar**	4.16	141	eP	P	02 24 53.0	-0.8
SDNR				ex	x	02 25 57.0	
KLP	**Kalpa**	4.87	131	eP	P	02 25 03.8	-0.1
KLP				eS	S	02 25 58.2	-1.6
KLP				AML	AML	02 26 22.7	
	comp=N,185nm,0.6s						
KLP				AML	AML	02 26 25.3	
	comp=E,225nm,0.5s						
NDI	**New Delhi**	6.70	154	ex	x	02 26 39.0	
NDI				ex	x	02 27 16.0	
KHET	**Khetri**	6.88	166	eP	P	02 25 29.9	-2.3
KHET				eS	S	02 26 51.8	+1.7
KHET				AML	AML	02 27 28.8	
	comp=N,11nm,0.3s						
KHET				AML	AML	02 27 28.9	
	comp=E,20nm,0.5s						
KUDL	**Kundal**	6.97	161	eP	P	02 25 28.1	-5.3
SONA	**Sohna**	7.05	157	eP	P	02 25 29.4	-5.1
SONA				eS	S	02 26 55.7	+1.3
SONA				AML	AML	02 27 37.9	
	comp=E,27nm,0.5s						
SONA				AML	AML	02 27 43.7	
	comp=N,22nm,0.7s						
AAK	**Ala-Archa**	7.85	3	⇓P	P	02 25 49.5	+3.8
	comp=N,1.8nm,0.8s						
AAK				⇑S	S	02 27 16.1	+1.7
	comp=N,5.6nm,0.7s						
KK31	**Karatay Array**	8.72	343	⇓P	P	02 25 57.9	+0.1
	comp=N,0.9nm,0.3s,baz=169,slow=13,SNR=24						
KK31				⇑S	S	02 27 34.6	-1.4
	comp=N,1.8nm,0.3s,baz=175,slow=25,SNR=5.3						
AB31	**Akbulak array**	17.76	329	⇑P	P	02 27 57.0	-0.2
	comp=N,1.1nm,0.8s,baz=135,slow=12,SNR=4.6						
AB31				⇑S	S	02 31 01.8	-10
	comp=N,0.6nm,0.8s,baz=145,slow=11,SNR=4.6						

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*NNC **05** 02:53:15.9±14.0, 34.82N×71.98E, mpv3.4, Error ellipse: s-maj=308.5km s-min=104.8km az=93.0*

ISC 05 02:53:13.2±2.1**, 34.7N**±0.2×**72.8E**±0.4**, h33**^{km}**, n3, σ**0^{s}**64**/5**, 2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	3.34	132	eP	P	02 54 05.0	+0.6
THN				eS	S	02 54 43.0	-0.5
KK31	**Karatay Array**	8.57	349	P	P	02 55 18.4	+0.5
	0.6nm,0.3s,baz=162,slow=12,SNR=22						
KK31				⇑S	S	02 56 54.4	-0.1
	0.5nm,0.4s,baz=176,slow=25,SNR=5.2						
AB31	**Akbulak array**	17.35	331	⇑P	P	02 57 13.8	-0.5
	0.2nm,0.5s,baz=150,slow=14,SNR=7.2						

IDC 05 03:00:53.6±10.0**, 47.61N×146.91E, h437**^{km}±120^{km}**, mb2.9**/8**, mb1 3.1**/8**, mb1mx2.9**/20**, mbtmp3.7**/8**, Error ellipse: s-maj=25.0km s-min=21.7km az=137.0, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	42.75	294	P	P	03 08 11.2	-0.4
	0.4nm,0.6s,baz=67,slow=9.2,SNR=4.1						
INK	**Inuvik**	43.19	32	P	P	03 08 13.0	-1.8
	0.2nm,0.3s,baz=299,slow=10,SNR=6.7						
ARCES	**ARCESS Array B**	55.58	339	P	P	03 09 45.7	-1.8
	4.5nm,0.9s,baz=54,slow=7.8,SNR=2.5						
FINES	**FINESS Array B**	61.37	332	P	P	03 10 24.8	-1.9
	1.3nm,0.9s,baz=27,slow=8.5,SNR=7.8						
NOA	**NORSAR Array B**	65.95	338	P	P	03 10 54.1	-1.7
	0.8nm,0.9s,baz=32,slow=7.4,SNR=3.2						
PDAR	**Pinedale Array**	67.57	51	P	P	03 11 05.8	-0.5
	0.7nm,0.7s,baz=331,slow=1.7,SNR=6.2						
WRA	**Warramunga Arr**	68.18	193	P	P	03 11 08.6	-1.8
	0.3nm,0.5s,baz=8.6,slow=6.5,SNR=5.6						
TXAR	**Lajitas Array**	80.66	57	P	P	03 12 20.3	-0.1
	0.1nm,0.3s,baz=292,slow=4.4,SNR=3.6						

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*NEIC **05** 03:06:20.2±1.0, 12.56S×73.72W, h64^{km}±10^{km}, mb4.3/1, Error ellipse: s-maj=14.6km s-min=9.5km az=224.0*

*IDC **05** 03:06:21.3±7.0, 12.25S×73.54W, h63^{km}±73^{km}, mb3.5/3, mb1 3.7/5, mb1mx3.5/19, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=89.0km s-min=36.2km az=73.0*

ISC 05 03:06:19.0±1.0**, 12.55S**±0.09×**73.68W**±0.07**, h71**^{km}±11^{km}**, n17, σ**0^{s}**90**/16**, mb4.1**/4**, 3D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	3.14	280	eP	P	03 07 06.8	-0.6
NNA				eS	S	03 07 44.4	+0.5
ARE	**Arequipa**	4.43	152	P	P	03 07 24.0	-1.4
LPAZ	**La Paz**	6.54	125	P	P	03 07 56.5	+2.0
	0.6nm,0.3s,baz=308,slow=12,SNR=28						
SAML	**Samuel**	10.91	72	eP	P	03 08 54.6	+0.2
	16nm,0.8s						
SIV	**San Ignacio**	12.69	107	P	P	03 09 18.4	+0.2
	0.2nm,0.3s,baz=294,slow=12,SNR=4.4						
SDV	**Santo Domingo**	21.50	8	P	P	03 11 01.6	-2.2
	4.5nm,0.2s,mb4.5,baz=218,slow=13,SNR=2.8						
TXAR	**Lajitas Array**	50.71	326	P	P	03 15 13.2	-0.6
	2.3nm,1.3s,mb4.1,baz=153,slow=5.6,SNR=5.4						
ANMO	**Albuquerque**	56.55	328	P	P	03 15 56.6	0.0
SDCO	**Great Sand Dun**	58.26	331	eP	P	03 16 09.1	+0.4
	1.7nm,0.6s,mb4.2						
TPNV	**Topopah Spring**	63.45	323	P	P	03 16 44.9	+1.1
PDAR	**Pinedale Array**	64.11	331	P	P	03 16 49.0	+0.9
	0.5nm,0.6s,mb3.5,baz=130,slow=7.0,SNR=3.6						
VNA3	**Neumayer Olymp**	69.96	162	⇓i	P	03 17 24.1	-0.3
VNA1	**Neumayer--Stat**	70.19	161		P	03 17 26.1	+0.3
VNA2	**Neumayer--Watz**	70.55	161	⇓i	P	03 17 27.5	-0.5
SNAA	**Sanae**	72.17	162	⇓i	P	03 17 37.3	-0.3
WRA	**Warramunga Arr**	137.54	221	PKP	PKPdf	03 25 37.0	+1.3
	0.5nm,0.6s,baz=137,slow=2.0,SNR=7.0						
SONM	**Songino Array**	144.82	360	PKP	PKPdf	03 25 50.9	+3.1
	2.3nm,0.7s,baz=330,slow=3.2,SNR=9.2						
SONM				pPKP		03 26 10.3	
	1.4nm,0.8s,baz=322,slow=2.9,SNR=3.8						

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*IDC **05** 03:22:52.7±4.3, 23.16N×143.57E, h42^{km}±37^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.5/19, mbtmp3.8/5, ML3.3/1, Error ellipse: s-maj=48.8km s-min=22.9km az=89.0*

ISC 05 03:22:51.3±3.8**, 23.2N**±0.1×**143.6E**±0.4**, h48**^{km}±32^{km}**, n5, σ**0^{s}**80**/6**, mb3.8**/4**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	4.11	342	P	P	03 23 53.9	+0.6
	3.4nm,0.3s,baz=292,slow=17,SNR=7.3						
CBIJ				S	S	03 24 40.1	-0.6
	5.7nm,0.3s,baz=299,slow=24,SNR=6.0						
WRA	**Warramunga Arr**	43.80	193	P	P	03 30 53.9	-0.5
	0.4nm,0.5s,mb3.4,baz=13,slow=8.8,SNR=8.3						
WRA				pP	pP	03 31 09.0	+1.5
	0.5nm,0.5s,baz=17,slow=9.3,SNR=3.1						
MKAR	**Makanchi Array**	54.00	312	P	P	03 32 13.3	+0.5
	0.7nm,0.6s,mb3.8,baz=90,slow=8.5,SNR=6.2						
ILAR	**Eielson Array**	60.55	27	P	P	03 32 58.8	0.0
	0.5nm,0.7s,mb3.8,baz=265,slow=5.3,SNR=5.9						
FINES	**FINESS Array B**	82.02	335	P	P	03 35 07.5	+0.1
	2.3nm,0.9s,mb4.1,baz=72,slow=6.0,SNR=9.4						

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*ISK **05** 03:46:20.8, 38.26N×26.62E, h27^{km}, MD2.9*

*ATH **05** 03:46:21.5, 38.16N×26.57E, h29^{km}±6^{km}, MD3.1/3*

*NEIC **05** 03:46:21.5, 38.16N×26.57E, h29^{km}, MD3.1(ATH), After ATH.*

*CSEM **05** 03:46:22.1±0.2, 38.18N×26.81E, h31^{km}±2^{km}, MD2.9, Error ellipse: s-maj=8.1km s-min=4.2km az=115.0*

ISC 05 03:46:21.5±0.6**, 38.20N**±0.03×**26.59E**±0.04**, h10**^{km}**, n13, σ**1^{s}**16**/22**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.16	3	i P	Pg	03 46 24.4	-0.7
URLA				i S	Sg	03 46 27.3	-0.3
BLCB	**Balcova**	0.40	63	ePG	Pg	03 46 29.2	-0.6
BLCB				eSG	Sg	03 46 35.0	-0.3
SMG	**Samos**	0.53	158	ePB	Pg	03 46 31.9	-0.4
SMG				eSB	Sg	03 46 39.9	+0.5
IZM	**Izmir**	0.57	70	i PG	Pg	03 46 32.4	-0.6
IZM				i SG	Sg	03 46 40.8	+0.2
KDAG	**Bornova**	0.57	69	i P	Pg	03 46 31.6	-1.5
KDAG				i S	Sg	03 46 39.8	-1.0
PRK	**Paraskevi**	1.07	347	ePN	Pn	03 46 42.5	0.0
PRK				eSN	Sn	03 46 57.8	+0.3
AYVA	**Ayvalik**	1.11	4	i P	Pb	03 46 43.6	+1.3
AYVA				i S	Sb	03 46 59.0	+2.4
AYDN	**Tasoluk**	1.16	117	i P	Pb	03 46 44.6	+1.4
AYDN				i S	Sb	03 46 58.1	+0.1
AKS	**Akhisar**	1.18	55	ePN	Pn	03 46 41.0	-3.0
APE	**Apeiranthos**	1.41	217	ePN	Pn	03 46 46.7	-0.6
MANT	**Manisa**	1.58	79	i P	Pn	03 46 51.7	+1.9
MANT				i S	Sb	03 47 12.2	+2.0
BALB	**Balikesir**	1.75	35	ePN	Pn	03 46 49.9	-2.5
LIA	**Limnos Island**	2.02	328	ePN	Pn	03 46 56.2	+0.2

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*ATH **05** 04:00:58.3, 34.79N×26.40E, h5^{km}±2^{km}, MD3.8/4*

*NEIC **05** 04:00:58.3, 34.79N×26.40E, h5^{km}, MD3.8(ATH), After ATH.*

*CSEM **05** 04:00:58.3, 34.79N×26.40E, h5^{km}, MD3.7/1, After ATH*

*IDC **05** 04:00:59.9±3.8, 34.25N×25.96E, h89^{km}±21^{km}, mb3.6/3, mb1 3.5/6, mb1mx3.4/18, mbtmp3.7/6, Error ellipse: s-maj=48.6km s-min=24.1km az=7.0*

ISC 05 04:00:57.8±1.5**, 34.5N**±0.1×**25.96E**±0.07**, h33**^{km}**, n14, σ**1^{s}**12**/18**, mb3.8**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	**Neapolis**	0.82	340	ePB	Pb	04 01 13.1	-0.5
NPS				eSB	Sb	04 01 24.4	0.0
IDI	**Anoyia**	1.18	312	P	P	04 01 23.3	+5.2
	7.2nm,0.3s,baz=124,slow=20,SNR=31						
IDI				S	S	04 01 41.9	+8.6
	16nm,0.3s,slow=20,SNR=11						
KARP	**Karpathos**	1.44	43	ePB	Pb	04 01 17.0	-7.0
VAM	**Vamos**	1.71	303	ePN	Pn	04 01 34.5	+8.7
VAM				eSN	Sn	04 02 00.3	+14
SANT	**Santorini**	1.92	348	eP	P	04 01 30.1	+1.4
ARG	**Arkhangelos**	2.47	45	ePN	Pn	04 01 35.4	-1.3
ISP	**Isparta**	4.97	46	eP	P	04 02 12.7	+0.5
BRTR	**Keskin Array B**	8.05	47	P	P	04 02 56.3	+1.0
	0.1nm,0.3s,baz=220,slow=16,SNR=4.4						
BRTR	**Keskin Array B**	8.05	47	P	P	04 02 56.3	+1.0
VAE	**Valguarnera**	9.82	291	P	P	04 03 21.0	+1.3
	0.5nm,0.3s,baz=292,slow=19,SNR=3.6						
VAE				S	S	04 05 09.3	-0.7
	0.4nm,0.3s,baz=96,slow=15,SNR=1.9						
AKASG	**Malin Array Be**	16.37	7	P	P	04 04 46.6	+0.1
	0.9nm,0.3s,baz=193,slow=11,SNR=6.6						
FINES	**FINESS Array B**	26.97	0	P	P	04 06 35.7	-2.4
	2.2nm,0.9s,mb3.7,baz=164,slow=10,SNR=3.9						
ARCES	**ARCESS Array B**	35.10	360	P	P	04 07 45.4	-4.2
	5.6nm,1.1s,mb4.4,baz=192,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	43.60	56	P	P	04 08 56.3	-4.1
	0.3nm,0.5s,mb3.3,baz=281,slow=6.8,SNR=5.7						

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*NEIC **05** 04:02:58.5±0.5, 12.45N×87.66W, h10^{km}, mb4.4/6, Error ellipse: s-maj=15.4km s-min=5.9km az=49.0*

*IDC **05** 04:02:58.0±1.0, 12.54N×87.60W, mb4.3/9, mb1 4.4/12, mb1mx4.2/22, mbtmp4.2/12, ML3.1/3, MS3.8/5, Ms1 3.8/5, ms1mx3.5/26, Error ellipse: s-maj=39.1km s-min=14.8km az=50.0*

*CASC **05** 04:03:00.8±2.3, 12.03N×88.29W, h25^{km}±12^{km}, MD4.3, ML3.7, mb4.4(NEIC)*

ISC 05 04:03:02.9±0.7**, 12.20N**±0.07×**88.13W**±0.06**, h71**^{km}±6^{km}**, n70, σ**1^{s}**06**/60**, mb4.2**/17**, 14C-11D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	1.11	15	⇑eP	Px	04 03 32.0	
CNCH				eS	Sx	04 03 50.7	
CRIN	**San Cristobal**	1.17	65	⇑eP	P	04 03 24.9	+1.0
LEON	**Leon**	1.23	80	⇑eP	P	04 03 24.6	-0.1
VSM	**San Miguel**	1.23	353	⇑eP	Px	04 03 33.3	
VSM				eS	Sx	04 03 51.3	
BLLM	**Bellamira**	1.24	355	⇑eP	Px	04 03 33.1	
BLLM				eS	Sx	04 03 51.9	
TEL3	**Telica 3**	1.31	73	⇑eP	P	04 03 25.9	0.0
TELN	**Telica**	1.33	72	eP	P	04 03 27.1	+0.9
MIRN	**Miramar**	1.41	80	⇓eP	P	04 03 26.9	-0.3
CNGN	**Cerro Negro**	1.43	78	⇓eP	P	04 03 27.8	+0.3
COPN	**Copaltepe**	1.50	90	⇓eP	P	04 03 28.3	-0.2
COPN				eS	S	04 03 50.9	+3.5
CAHU	**Cacacuatique**	1.57	357	eP	Px	04 03 38.7	
CAHU				eS	Sx	04 04 00.7	
SNVI	**San Vicente**	1.57	334	eP	Px	04 03 37.5	
SNVI				eS	Sx	04 04 01.8	
MOMJ	**Momotombo**	1.57	82	⇓eP	P	04 03 29.3	0.0
LCBS	**La Ceiba**	1.67	330	⇑eP	Px	04 03 37.8	
LCBS				eS	Sx	04 03 59.8	
LFRS	**El Faro**	1.68	327	⇑eP	Px	04 03 37.5	
LFRS				eS	Sx	04 03 59.6	
XAVN	**Gruta Xavier**	1.77	91	⇓eP	P	04 03 32.0	+0.1
LBRS	**Las Brisas**	1.77	330	eP	Px	04 03 39.0	
LBRS				eS	Sx	04 04 03.0	
MGAN	**Managua**	1.84	91	⇑eP	P	04 03 32.9	-0.2

MGAN				eS	S	04 03 57.2	+1.9
	comp=N,836nm,0.4s						
TICN	**Ticuantepe**	1.86	95	⇓eP	P	04 03 33.4	+0.1
BOQS	**Boqueron**	1.90	324	⇓eP	Px	04 03 40.1	
BOQS				eS	Sx	04 04 05.3	
WILN	**Americas 2**	1.90	91	⇑eP	P	04 03 33.7	-0.1
APON	**Apoyo**	2.04	98	⇑eP	P	04 03 35.1	-0.6
PYTN	**Playitas**	2.05	80	eP	P	04 03 37.0	+1.0
SBLS	**San Blas**	2.19	318	eP	Px	04 03 44.8	
SBLS				eS	Sx	04 04 13.2	
SNJE	**San Jose**	2.20	319	⇑eP	Px	04 03 44.8	
SNJE				eS	Sx	04 04 10.9	
RTR	**El Retiro**	2.24	319	⇓eP	Px	04 03 45.9	
RTR				eS	Sx	04 04 13.6	
RBDL	**Robledal**	2.43	322	eP	Px	04 03 40.4	
RBDL				eS	Sx	04 04 10.9	
MTO2	**Montecristo 2**	2.50	331	⇓eP	Px	04 03 50.4	
MTO2				eS	Sx	04 04 22.8	
CONN	**Concepcion**	2.53	104	⇑eP	P	04 03 41.9	-0.7
IXG	**Ixpaco**	3.00	311	⇑eP	P	04 03 47.7	-1.5
IXG				eS	S	04 04 24.7	+0.6
MRL	**Marmol**	3.23	332	eP	P	04 03 51.2	-1.3
MRL				eS	S	04 04 29.7	-0.2
JTS	**JuntasAbangare**	3.65	121	Pn	P	04 03 53.0	-5.3
	comp=N,5.9nm,0.3s,baz=315,slow=19,SNR=21						
JTS				Sn	S	04 04 35.0	-5.4
	comp=N,9.1nm,0.3s,baz=326,slow=20,SNR=4.8						
JTS				LR	LR	04 05 32.5	
	comp=N,342nm,18.7s,baz=309,slow=45						
JTS	**JuntasAbangare**	3.65	121	Pn	P	04 03 53.0	-5.3
JTS				Sn	S	04 04 35.0	-5.4
JTS				LR	LR	04 05 32.5	
FORC	**Fortuna**	3.80	116	eP	P	04 03 59.3	-1.2
PRS1	**Puriscal**	4.35	120	eP	P	04 04 08.3	+0.3
PRS1				eS	S	04 04 57.8	-0.1
LCR2	**La Lucha 2**	4.73	121	⇓eP	P	04 04 12.6	-0.8
LCR2				eS	S	04 05 07.5	0.0
BUS	**Buena Vista**	5.03	121	⇓eP	P	04 04 16.9	-0.7
ROSC	**El Rosal**	15.47	117	Pn	P	04 06 33.5	-4.8
	comp=N,0.3nm,0.3s,baz=86,slow=22,SNR=1.7						
SDV	**Santo Domingo**	17.51	99	P	P	04 06 56.6	-7.4
	comp=N,0.3nm,0.3s,baz=342,slow=5.6,SNR=4.8						
JCT	**Junction City**	21.16	331	eP	P	04 07 44.4	+0.1
	comp=N,12nm,0.6s,mb4.4						
TXAR	**Lajitas Array**	22.36	322	P	P	04 07 58.6	+2.6
	comp=N,6.6nm,0.8s,mb4.0,baz=142,slow=10,SNR=66						
TXAR				PcP	PcP	04 11 55.4	+5.0
	comp=N,0.4nm,0.6s,baz=124,slow=4.5,SNR=3.7						
TXAR	**Lajitas Array**	22.36	322	P	P	04 07 58.6	+2.6
TXAR				PcP	PcP	04 11 55.4	+5.0
UALR	**University of**	22.80	351	P	P	04 08 00.1	-0.3
	comp=N,13nm,0.8s,mb4.3						
JSC	**Jenkinsville**	22.86	15	P	P	04 07 57.8	-3.2
CPRX	**Cap Rock**	25.25	328	eP	P	04 08 26.4	+2.3
ELN	**Prospectdale**	25.79	14	P	P	04 08 27.2	-1.9
ANMO	**Albuquerque**	28.10	327	P	P	04 08 49.1	-1.2
	comp=N,0.3nm,0.6s,mb3.0,baz=272,slow=7.8,SNR=3.3						
SDCO	**Great Sand Dun**	29.81	332	eP	P	04 09 06.7	+1.2
	comp=N,4.0nm,1.1s,mb4.0						
SAML	**Samuel**	32.50	129	eP	P	04 09 27.7	-1.5
	comp=N,3.4nm,0.8s,mb4.1						
SADO	**Sadowa**	33.36	12	P	P	04 09 34.3	-2.2
	comp=N,7.1nm,0.5s,mb4.8,baz=219,slow=9.1,SNR=16						
TPNV	**Topopah Spring**	35.27	319	P	P	04 09 54.8	+2.0
PDAR	**Pinedale Array**	35.68	333	P	P	04 09 57.7	+1.4
	comp=N,1.0nm,0.8s,mb3.8,baz=122,slow=9.8,SNR=6.3						
PDAR				PcP	PcP	04 12 26.4	+2.8
	comp=N,0.6nm,0.6s,baz=135,slow=4.4,SNR=3.7						
PDAR	**Pinedale Array**	35.68	333	P	P	04 09 57.7	+1.4
PDAR				PcP	PcP	04 12 26.4	+2.8
EYMN	**Ely**	35.75	356	eP	P	04 09 55.7	-1.1
NVAR	**Mina Array Bea**	37.46	320	P	P	04 10 14.2	+3.0
	comp=N,0.2nm,0.3s,mb3.5,baz=243,slow=9.9,SNR=4.8						
ULM	**Lac du Bonnet**	38.47	352	P	P	04 10 19.3	-0.3
	comp=N,16nm,0.7s,mb5.0,baz=171,slow=9.0,SNR=29						
ULM	**Lac du Bonnet**	38.47	352	P	P	04 10 19.3	-0.3
DGMT	**Dagmar**	38.56	343	eP	P	04 10 20.9	+0.6
	comp=N,16nm,0.9s,mb4.9						
SIV	**San Ignacio**	38.74	136	P	P	04 10 23.2	+1.1
	comp=N,4.0nm,0.7s,mb4.3,baz=323,slow=8.4,SNR=15						
SIV				PcP	PcP	04 12 38.5	+5.4
	comp=N,1.5nm,0.6s,baz=270,slow=5.4,SNR=8.0						
MCMT	**McKenzie Canyo**	38.79	332	eP	P	04 10 21.7	-0.5
MSO	**Missoula**	40.80	333	eP	P	04 10 38.8	-0.1
	comp=N,7.1nm,1.5s,mb4.3						
MSO				e		04 10 50.8	
EDM	**Edmonton**	45.60	339	eP	P	04 11 17.6	-0.1
SCHQ	**Schefferville**	45.71	17	P	P	04 11 17.8	-0.8
	comp=N,6.8nm,0.6s,mb4.6,baz=210,slow=5.8,SNR=11						
BDFB	**Brasilia**	48.38	124	LR	LR	04 32 09.5	
	comp=N,105nm,18.3s,baz=304,slow=36						
YKA	**Yellowknife Ar**	53.68	345	P	P	04 12 19.1	-0.4
	comp=N,2.3nm,0.7s,mb4.3,baz=139,slow=7.0,SNR=8.0						
YKA				LR	LR	04 35 20.2	
	comp=N,118nm,19.3s,baz=90,slow=36						
PLCA	**Paso Flores**	55.12	164	P	P	04 12 31.1	+0.9
	comp=N,1.6nm,0.8s,mb4.1,baz=311,slow=9.8,SNR=3.1						
ILAR	**Eielson Array**	65.98	336	P	P	04 13 44.1	+0.4
	comp=N,0.4nm,0.6s,mb3.5,baz=156,slow=3.9,SNR=8.4						
ARCES	**ARCESS Array B**	86.64	19	LR	LR	05 00 20.7	
	comp=N,66nm,18.5s,baz=40,slow=40						
FINES	**FINESS Array B**	90.49	26	LR	LR	04 54 25.2	
	comp=N,51nm,18.5s,baz=323,slow=34						
WRA	**Warramunga Arr**	138.56	254	PKP	PKPdf	04 22 26.9	+5.4
	comp=N,0.9nm,0.6s,baz=91,slow=2.1,SNR=14						

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*IDC **05** 04:29:10.1±1.5, 35.47N×70.02E, mb3.8/5, mb1 4.0/7, mb1mx3.7/20, mbtmp3.9/7, ML4.2/2, Error ellipse: s-maj=33.6km s-min=25.6km az=19.0*

*MOS **05** 04:29:12.8±2.5, 35.40N×70.16E, h33^{km}, mb4.0/5, Error ellipse: s-maj=27.5km s-min=13.9km az=92.4*

*NEIC **05** 04:29:33.9±1.4, 36.40N×70.64E, h176^{km}±15^{km}, mb4.0/5, Error ellipse: s-maj=18.7km s-min=6.1km az=56.0*

*NNC **05** 04:29:40.4±3.7, 36.94N×70.51E, h204^{km}±33^{km}, mpv4.3, Error ellipse: s-maj=33.3km s-min=21.4km az=31.0*

ISC 05 04:29:34.8±0.5, **36.49N**±0.03×**70.75E**±0.07, **h198**^{km}±7^{km}, **n57**, σ1^{s}**04**/71, **mb3.4**/5, **10C-8D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	2.82	160	⇑P	P	04 30 22.9	+0.2
CEP				S	S	04 30 59.0	-0.7
CHCP	**Chirah Chowk**	3.49	143	⇓P	P	04 30 31.1	+0.3
THW	**Thamme Wali**	3.77	167	⇓P	P	04 30 34.2	-0.1
SBDP	**Sheikh Budin**	4.18	179	⇓P	P	04 30 38.4	-1.0
SARP	**Sargodha**	4.82	160	⇑P	P	04 30 46.7	-0.9
THN	**Thein Dam**	5.76	133	eP	P	04 31 00.0	+0.4
THN				ex	x	04 32 02.8	
DLH	**Dalhousie**	5.83	131	eP	P	04 31 05.0	+4.4
DLH				eS	S	04 32 02.0	-5.3
AML	**Almayashu**	6.08	21	P	P	04 31 04.1	+0.3
	SNR=457						
UCH	**Uchtor**	6.43	26	P	P	04 31 08.8	+0.5
	SNR=68						
KZA	**Kyzart**	6.58	31	P	P	04 31 07.0	-3.3
	SNR=13						
EKS2	**Erkin-Say**	6.59	20	P	P	04 31 10.8	+0.3
	SNR=19						
KK31	**Karatay Array**	6.61	358	P	P	04 31 10.3	-0.4
	11nm,0.4s,baz=176,slow=10,SNR=366						
KK31				⇑S	S	04 32 20.7	-4.8
	20nm,0.3s,baz=170,slow=13,SNR=20						
KK31	**Karatay Array**	6.61	358	P	P	04 31 10.3	-0.4
	11nm,0.4s						
KK31				S	S	04 32 20.7	-4.8
AAK	**Ala-Archa**	6.78	24	P	P	04 31 13.4	+0.5
	SNR=45						
AAK	**Ala-Archa**	6.78	24	⇑P	P	04 31 13.3	+0.3
	11nm,0.4s						
AAK				⇓S	S	04 32 29.0	-0.5
	50nm,0.7s						
AAK	**Ala-Archa**	6.78	24	⇑P	P	04 31 13.2	+0.3
	11nm,0.4s						
AAK				S	S	04 32 29.0	-0.5
KBK	**Karagaybulak**	6.96	26	P	P	04 31 16.0	+0.7
	SNR=8.3						
CHMS	**Chumysh**	7.20	24	P	P	04 31 18.9	+0.5
	SNR=12						
USP	**Ospenovka**	7.36	22	P	P	04 31 20.8	+0.3
	SNR=11						
TKM2	**Tokmak 2**	7.43	29	P	P	04 31 21.8	+0.4
	SNR=40						
KLP	**Kalpa**	7.95	126	eP	P	04 31 27.8	-0.3
KLP				eS	S	04 32 43.5	-13
KLP				AML	AML	04 32 58.9	
	comp=E,102nm,0.6s						
KLP				AML	AML	04 33 00.6	
	comp=N,75nm,0.4s						
KHET	**Khetri**	9.41	152	eP	P	04 31 50.1	+2.9
KHET				eS	S	04 33 24.6	-6.3
KHET				AML	AML	04 33 27.3	
	comp=N,33nm,0.4s						
KHET				AML	AML	04 33 27.5	
	comp=E,30nm,0.5s						
AYAN	**Aya Nagar**	9.62	144	eP	P	04 31 52.6	+2.6
AYAN				eS	S	04 33 26.6	-9.1
KUDL	**Kundal**	9.63	148	eP	P	04 31 52.5	+2.4
SONA	**Sohna**	9.80	145	eP	P	04 31 54.9	+2.7
SONA				eS	S	04 33 31.5	-8.4
SONA				AML	AML	04 33 36.6	
	comp=E,18nm,0.3s						
SONA				AML	AML	04 33 37.4	
	comp=N,14nm,0.3s						
AGRA	**Agra**	11.06	144	ex	x	04 33 56.9	
MK31	**Makanchi Array**	13.42	36	P	P	04 32 38.9	+0.5
	comp=N,4.2nm,0.6s,baz=214,slow=11,SNR=31						
MKAR	**Makanchi Array**	13.42	36	Pn	P	04 32 38.5	+0.1
	comp=N,0.4nm,0.3s,baz=225,slow=14,SNR=30						
MKAR	**Makanchi Array**	13.42	36	Pn	P	04 32 38.5	+0.1
KOLN	**Koldanda**	13.92	125	eP	P	04 32 43.2	-1.5
GKN	**Gorkha**	14.46	122	eP	P	04 32 51.0	-0.5
AB31	**Akbulak array**	15.00	332	⇑P	P	04 32 56.2	-1.8
	comp=N,0.9nm,0.4s,baz=142,slow=12,SNR=19						
AB31				⇓S	S	04 35 35.2	-3.7
	comp=N,0.7nm,0.4s,baz=149,slow=23,SNR=3.9						
AB31	**Akbulak array**	15.00	332	⇑P	P	04 32 56.2	-1.8
	comp=N,0.9nm,0.4s						
AB31				S	S	04 35 35.2	-3.7
KKN	**Kakani**	15.04	121	eP	P	04 32 58.5	-0.2
PKI	**Pulchoki**	15.27	121	eP	P	04 33 02.0	+0.5
KURK	**Kurchatov**	15.31	19	⇑P	P	04 33 00.1	-1.7
	comp=N,1.1nm,0.4s						
GUN	**Gumba**	15.38	119	eP	P	04 33 03.2	+0.3
JIRN	**Jiri**	15.75	120	eP	P	04 33 07.6	+0.1
JIRN				eS	S	04 35 52.9	-3.1
BVA0	**Borovoye Array**	16.54	359	⇑P	P	04 33 16.2	-0.6
	comp=N,0.6nm,0.8s,baz=186,slow=15,SNR=6.8						
BVAR	**Borovoye Array**	16.54	359	P	P	04 33 16.4	-0.4
	comp=N,1.5nm,0.3s,baz=165,slow=11,SNR=22						
BVAR	**Borovoye Array**	16.54	359	P	P	04 33 16.4	-0.4
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTK	**Aktyubinsk**	16.69	331	⇓P	P	04 33 17.6	-1.0
AKTK				S	S	04 36 17.3	+0.5
AKTO	**Aktyubinsk**	16.69	331	⇓P	P	04 33 17.6	-1.0
	comp=Z,1.5nm,0.9s						
AKTO				⇑S	S	04 36 17.3	+0.5
	comp=Z,0.8nm,1.3s						
AKTO	**Aktyubinsk**	16.69	331	P	P	04 33 18.6	-0.1
	comp=Z,1.1nm,0.3s,baz=149,slow=12,SNR=24						
AKTO	**Aktyubinsk**	16.69	331	P	P	04 33 18.6	0.0
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVS	**Novosibirsk**	20.27	21	⇓iP	P	04 33 56.0	-0.2
NVS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NVS				pmax	pmax		
	comp=N,6.0nm,0.8s						
ARU	**Arti**	21.58	341	eP	P	04 34 10.8	+1.7
SONM	**Songino Array**	28.51	55	P	P	04 35 15.1	+1.4
	comp=N,0.8nm,0.9s,mb3.3,baz=255,slow=10,SNR=4.1						
SONM	**Songino Array**	28.51	55	P	P	04 35 15.1	+1.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRTR	**Keskin Array B**	29.25	288	P	P	04 35 10.1	-10
	comp=Z,0.8nm,1.0s,mb3.3,baz=59,slow=9.9,SNR=3.6						
BRTR	**Keskin Array B**	29.25	288	P	P	04 35 10.1	-10
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
FINES	**FINESS Array B**	37.38	326	P	P	04 36 29.8	0.0
	comp=Z,0.6nm,0.5s,mb3.4,baz=111,slow=12,SNR=6.0						
FINES	**FINESS Array B**	37.38	326	P	P	04 36 29.8	0.0
FINES	**FINESS Array B**	37.38	326	P	P	04 36 29.8	0.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ARCES	**ARCESS Array B**	41.08	338	P	P	04 37 01.0	+0.8
	comp=Z,2.8nm,0.9s,mb3.7,baz=108,slow=7.7,SNR=4.0						
ARCES	**ARCESS Array B**	41.08	338	P	P	04 37 01.0	+0.8
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WRA	**Warramunga Arr**	82.15	122	P	P	04 41 33.7	-1.2
	comp=Z,0.3nm,0.4s,mb3.3,baz=322,slow=5.0,SNR=7.1						

IDC 05 04:44:07.8±5.5, **23.23N**×**144.10E, h46**^{km}±39^{km}, **mb3.4**/3, **mb1 3.6**/4, **mb1mx3.3**/19, **mbtmp3.7**/4, **ML3.3**/1, **Error ellipse: s-maj=123.8km s-min=26.3km az=79.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	4.22	336	P	P	04 45 10.4	-1.0
	3.4nm,0.3s,baz=62,slow=20,SNR=5.4						
CBIJ				S	S	04 45 58.1	-1.9
	6.6nm,0.3s,baz=305,slow=23,SNR=6.0						
WRA	**Warramunga Arr**	43.95	193	P	P	04 52 10.3	-2.1
	0.2nm,0.4s,baz=16,slow=9.0,SNR=5.2						
MKAR	**Makanchi Array**	54.30	312	P	P	04 53 29.3	-2.4
	0.1nm,0.5s,baz=100,slow=7.4,SNR=3.9						
FINES	**FINESS Array B**	82.17	335	P	P	04 56 23.7	-1.2
	0.6nm,0.4s,baz=63,slow=4.3,SNR=8.2						

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*NEIC **05** 04:50:47.1±0.8, 5.46S×154.49E, mb4.3/3, Error ellipse: s-maj=17.7km s-min=14.3km az=120.0*

*IDC **05** 04:50:49.9±3.9, 5.52S×154.43E, h148^{km}±35^{km}, mb3.8/8, mb1 3.9/10, mb1mx3.8/15, mbtmp4.3/10, Error ellipse: s-maj=24.3km s-min=20.1km az=76.0*

ISC 05 04:50:50.2±3.1, **5.6S**±0.1×**154.4E**±0.1, **h165**^{km}±26^{km}, **n18**, σ0^{s}**63**/19, **mb4.0**/10, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	8.11	241	P	P	04 52 46.2	+0.2
	4.5nm,0.3s,baz=53,slow=9.6,SNR=9.8						
PMG				S	S	04 54 16.2	-0.1
	4.3nm,0.3s,baz=132,slow=18,SNR=8.2						
CTA	**Charters Tower**	16.46	208	P	P	04 54 33.7	+0.5
	0.6nm,0.3s,baz=25,slow=13,SNR=7.9						
CTA	**Charters Tower**	16.46	208	P	P	04 54 33.7	+0.5
DZM	**Mont Dzumac**	20.14	146	eP	P	04 55 12.9	-0.5
DZM	**Mont Dzumac**	20.14	146	P	P	04 55 13.3	-0.1
	11nm,0.5s,baz=317,slow=11,SNR=30						
DZM	**Mont Dzumac**	20.14	146	eP	P	04 55 12.9	-0.5
WRAB	**Tennant Creek**	24.16	232	eP	P	04 55 51.9	-0.6
	5.6nm,0.8s,mb4.2						
WB2	**Warramunga Arr**	24.16	232	eP	P	04 55 51.9	-0.7
WRA	**Warramunga Arr**	24.17	232	P	P	04 55 52.5	-0.2
	1.8nm,0.5s,mb3.9,baz=57,slow=9.9,SNR=22						
WRA				pP		04 56 22.3	
	1.6nm,0.7s,baz=55,slow=9.7,SNR=3.4						
STKA	**Stephens Creek**	28.79	203	P	P	04 56 34.4	-0.5
	1.5nm,0.6s,mb3.9,baz=180,slow=23,SNR=3.4						
FITZ	**Fitzroy Crossi**	30.70	244	eP	P	04 56 51.1	-0.8
	4.3nm,0.8s,mb4.2						
NWAO	**Narrogin (SRO)**	44.00	227	P	P	04 58 44.1	+1.1
	17nm,1.1s,mb4.6,baz=54,slow=4.6,SNR=3.0						
SONM	**Songino Array**	67.80	327	P	P	05 01 32.7	+0.4
	1.5nm,0.7s,mb3.9,baz=147,slow=5.1,SNR=7.9						
MKAR	**Makanchi Array**	81.93	319	P	P	05 02 53.4	+0.7
	0.7nm,0.5s,mb3.6,baz=91,slow=8.4,SNR=16						
MKAR				pP	pP	05 03 25.4	-8.4
	0.5nm,0.7s,baz=78,slow=7.1,SNR=2.9						
MKAR	**Makanchi Array**	81.93	319	P	P	05 02 53.4	+0.7
MKAR				pP	pP	05 03 25.4	-8.4
ILAR	**Eielson Array**	82.27	22	P	P	05 02 53.2	-1.0
	0.6nm,0.5s,mb3.5,baz=242,slow=5.4,SNR=11						
QSPA	**South Pole Qui**	84.41	180	eP	P	05 03 05.2	+0.6
	6.9nm,0.8s,mb4.4						
QSPA				epP	pP	05 03 37.1	-8.8
MAW	**Mawson**	85.48	203	P	P	05 03 10.8	+0.7
	3.1nm,0.6s,mb4.2,baz=110,slow=5.1,SNR=10						

MAN 05 04:51:59.2, 9.63N×126.44E, h8^{km}, mb4.7, ML3.6, MS3.5, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	1.04	231	eP	Pb	04 52 18.9	-0.2
BESP	**Borongan**	2.19	333	eP	Pn	04 52 37.0	+0.4
BUKP	**Musuan**	2.21	218	eP	Pn	04 52 37.0	+0.2
MATI	**Mati**	2.67	184	eP	Pn	04 52 43.0	-0.3
CNP	**Catarman**	3.35	329	eP	Pn	04 52 52.6	-0.5
PAGZ	**Pagadian**	3.50	240	eP	Pn	04 52 54.6	-0.6
PAGZ				eS	Sn	04 53 38.0	+0.6
IPIL	**Ipil**	4.24	245	eP	Pn	04 53 05.4	-0.3

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*IPEC **05** 04:59:32.8±0.3, 51.51N×16.40E, ML2.9/4, Error ellipse: s-maj=1.9km s-min=1.5km az=42.0*

*MOS **05** 04:59:32.2±1.2, 51.64N×16.19E, h10^{km}, mb3.7/1, Error ellipse: s-maj=10.7km s-min=5.4km az=87.7*

*NEIC **05** 04:59:33.9±0.4, 51.50N×16.24E, h5^{km}, ML3.3(SZGRF), Error ellipse: s-maj=5.1km s-min=3.6km az=198.0*

*BGR **05** 04:59:34.7±0.6, 51.40N×16.20E, h1^{km}, ML3.3/13, Error ellipse: s-maj=6.7km s-min=5.6km az=163.0*

*PRU **05** 04:59:35.4, 51.40N×16.18E, Felt In Harrachov*

*WAR **05** 04:59:35.3, 51.45N×16.19E, h1^{km}, ML3.2, Mining Induced*

*IDC **05** 04:59:35.3±0.8, 51.42N×16.04E, mb1 3.4/6, mb1mx3.3/22, mbtmp3.3/6, ML3.1/5, Error ellipse: s-maj=10.5km s-min=7.0km az=117.0*

*CSEM **05** 04:59:35.5±0.1, 51.39N×16.13E, ML3.6/7, Error ellipse: s-maj=2.5km s-min=1.3km az=20.0*

*VIE **05** 04:59:36.4±0.6, 51.22N×16.22E, mb2.7/4, ML3.1/4, Error ellipse: s-maj=3.9km s-min=2.5km az=15.0, Suspected Mining induced.*

ISC 05 04:59:32.7±0.4, **51.38N**±0.02×**16.20E**±0.02, **n86**, σ1^{s}**42**/155, **5C-7D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.54	174	⇓iPG	Pg	04 59 46.4	+2.9
KSP				⇓eSG	Sg	04 59 53.4	+2.7
KSP	**Ksiaz**	0.54	174	ePg	Pg	04 59 46.4	+3.0
KSP				eSg	Sg	04 59 53.4	+2.7
KSP	**Ksiaz**	0.54	174	⇓iPg	Pg	04 59 46.4	+2.9
KSP				eSg	Sg	04 59 53.4	+2.7
KSP				e		04 59 58.7	
KSP	**Ksiaz**	0.54	174	⇓iP	Pg	04 59 46.4	+2.9
KSP				e		04 59 58.7	
KSP	**Ksiaz**	0.54	174	⇓iPg	Pg	04 59 46.4	+2.9
KSP				eSg	Sg	04 59 53.5	+2.8
KSP				eS	Sg	04 59 58.7	+8.0
UPC	**Upice**	0.88	188	ePG	Pg	04 59 52.5	+2.2
DPC	**Dobruska-Polom**	1.03	176	ePG	Pg	04 59 55.1	+1.8
DPC				eSG	Sg	05 00 09.4	+2.3
	244nm,0.6s						
DPC	**Dobruska-Polom**	1.03	176	eP	Pg	04 59 55.1	+1.8
DPC				e		05 00 09.4	
DPC				smax			
	comp=N,245nm,0.6s						
DPC	**Dobruska-Polom**	1.03	176	ePg	Pg	04 59 55.1	+1.8
DPC				eSg	Sg	05 00 09.5	+2.4
PVCC	**Panska Ves**	1.34	231	ePG	Pg	05 00 00.4	+1.0
PVCC	**Panska Ves**	1.34	231	ePn	Pn	05 00 00.5	+1.9
PVCC				eSg	Sg	05 00 20.5	+3.3
BRG	**Berggiesshubel**	1.51	251	ePn	Pn	05 00 01.7	+0.7
BRG				eSg	Sg	05 00 24.0	+1.1
PRU	**Pruhonice**	1.75	218	ePN	Pn	05 00 05.8	+1.4
PRU				ePG	Pg	05 00 07.6	+0.1
PRU				eSG	Sg	05 00 31.1	+0.3
	comp=N,205nm,0.7s						
PRU	**Pruhonice**	1.75	218	eP	Pn	05 00 05.8	+1.4
PRU				e		05 00 31.1	
PRU				smax			
	comp=N,205nm,0.7s						
RAC	**Raciborz**	1.82	135	eP	Pn	05 00 10.0	+4.6
RAC				eS	Sn	05 00 35.0	+5.5
RAC	**Raciborz**	1.82	135	ePg	Pg	05 00 10.4	+1.5
RAC				eSg	Sg	05 00 34.9	+1.8
MORC	**Moravsky Berou**	1.82	151	eP	Pn	05 00 06.6	+1.1
MORC	**Moravsky Berou**	1.82	151	ePn	Pn	05 00 06.8	+1.3
MORC				eSg	Sg	05 00 31.2	-2.1
	comp=N,56nm,0.5s						
FBE	**Freiberg**	1.85	257	ePg	Pg	05 00 08.9	-0.7
FBE				eSg	Sg	05 00 34.5	+0.4
RUE	**Ruedersdorf**	1.86	307	eP	Pn	05 00 05.0	-1.0
OKC	**Ostrava-Krasne**	1.98	140	ePN	Pn	05 00 08.1	+0.3
OKC				ePG	Pg	05 00 12.5	+0.3
OKC				eSG	Sg	05 00 37.5	-1.2
	comp=N,122nm,0.8s						
OKC	**Ostrava-Krasne**	1.98	140	eP	Pn	05 00 08.1	+0.3
OKC				e		05 00 37.5	
OKC				smax			
	comp=N,122nm,0.8s						
CLL	**Collm**	2.00	269	ePN	Pn	05 00 08.0	-0.1
CLL				i PG	Pg	05 00 12.1	-0.6
CLL				e		05 00 15.0	
CLL				eSG	Sg	05 00 39.0	-0.4
CLL	**Collm**	2.00	269	ePn	Pn	05 00 08.2	+0.1
CLL				eSg	Sg	05 00 38.3	-1.1
CLL	**Collm**	2.00	269	ePn	Pn	05 00 08.0	-0.1
CLL				i Pg	Pg	05 00 12.1	-0.6
CLL				eSg	Sg	05 00 39.0	-0.4
CLL	**Collm**	2.00	269	eP	Pn	05 00 08.0	-0.1
CLL				e		05 00 39.0	
CLL	**Collm**	2.00	269	i Pg	Pg	05 00 12.1	-0.6
CLL				Sg	Sg	05 00 38.3	-1.1
CLL				eS	Sg	05 00 39.0	-0.4
VRAC	**Vranov**	2.09	173	Pn	Pn	05 00 12.3	+3.0
	comp=N,6.8nm,0.3s,baz=356,slow=15,SNR=24						
VRAC				Pg	Pg	05 00 14.9	+0.5
	comp=N,6.6nm,0.3s,baz=352,slow=16,SNR=17						
VRAC				Lg		05 00 42.5	
	comp=N,13nm,0.3s,baz=87,slow=17,SNR=6.7						
VRAC	**Vranov**	2.09	173	ePn	Pn	05 00 11.1	+1.7
VRAC	**Vranov**	2.09	173	P	Pn	05 00 12.3	+2.9
	comp=N,7.0nm,0.3s						
VRAC	**Vranov**	2.09	173	Pg	Pg	05 00 14.9	+0.5
VRAC				eSg	Sg	05 00 42.0	-0.3
	comp=N,39nm,0.4s						
KRUC	**Moravsky**	2.33	177	ePn	Pn	05 00 13.7	+1.0
KRUC				eSg	Sg	05 00 49.9	-0.2
	comp=N,81nm,0.9s						
TANN	**Tannenbergstha**	2.56	249	ePn	Pn	05 00 17.1	+1.1
OJC	**Ojcow**	2.56	116	ePG	Pg	05 00 23.0	-0.8
OJC				eSG	Sg	05 00 57.0	-1.0
WERD	**Werda**	2.63	251	ePn	Pn	05 00 18.0	+0.9
WERD				eSg	Sg	05 00 57.7	-2.6
NKC	**Novy Kostel**	2.64	246	ePN	Pn	05 00 18.2	+1.0
NKC				ePG	Pg	05 00 24.3	-1.1
NKC				eSG	Sg	05 01 01.1	+0.5
	comp=N,48nm,0.3s						
NKC	**Novy Kostel**	2.64	246	eP	Pn	05 00 18.2	+1.0
NKC				e		05 01 01.1	
NKC				smax			
	comp=N,48nm,0.3s						
GUNZ	**Gunzen**	2.65	249	ePn	Pn	05 00 18.6	+1.3
NEUB	**Neuenburg**	2.78	268	ePg	Pg	05 00 26.1	-2.0
NEUB				eSg	Sg	05 01 03.0	-2.2
KHC	**Kasperske Hory**	2.81	218	ePN	Pn	05 00 20.6	+1.0
KHC				ePG	Pg	05 00 26.9	-1.9
KHC				eSG	Sg	05 01 04.5	-1.7
	comp=N,36nm,0.5s						
KHC	**Kasperske Hory**	2.81	218	eP	Pn	05 00 20.6	+1.0
KHC				e		05 01 04.5	
KHC				smax			
	comp=N,36nm,0.5s						
SMOL	**Smolenice**	2.98	164	ePN	Pn	05 00 25.7	+3.7
SMOL				ePG	Pg	05 00 32.9	+0.8
SMOL				eSG	Sg	05 01 12.0	+0.2
SMOL	**Smolenice**	2.98	164	eP	Pn	05 00 25.7	+3.7
SMOL				e		05 01 12.0	
SMOL	**Smolenice**	2.98	164	ePg	Pg	05 00 32.9	+0.8
SMOL				eSg	Sg	05 01 12.0	+0.2
MOX	**Moxa**	2.99	257	i P	Pn	05 00 23.3	+1.2
MOX				Pg	Pg	05 00 31.0	-1.3
MOX				Sg	Sg	05 01 11.0	-1.0
MOX	**Moxa**	2.99	257	ePn	Pn	05 00 22.5	+0.4
MOX				eSg	Sg	05 01 08.4	-3.6
MOX	**Moxa**	2.99	257	ePn	Pn	05 00 23.3	+1.2
MOX				ePg	Pg	05 00 31.0	-1.3
MOX				eSg	Sg	05 01 11.0	-1.0
MOX	**Moxa**	2.99	257	eP	Pn	05 00 23.3	+1.2

MOX	Moxa	2.99	257	ePg	Pg	05 00 31.0	-1.3
MOX				Sg	Sg	05 01 08.4	-3.6
GEC2	GERESS Array S	3.00	213	ePn	Pn	05 00 24.4	+2.0
GEC2				eSg	Sg	05 01 10.1	-2.6
GEC2	GERESS Array S	3.00	213	ePn	Pn	05 00 24.4	+2.0
GEC2				eSg	Sg	05 01 10.1	-2.6
GERES	GERESS Array B	3.00	213	Pn	Pn	05 00 24.2	+1.8
	comp=N,2.0nm,0.3s,baz=31,slow=13,SNR=76						
GERES				Pg	Pg	05 00 30.1	-2.5
	comp=N,14nm,0.3s,baz=34,slow=17,SNR=76						
GERES				Sn	Sn	05 00 59.9	+0.3
	comp=N,4.5nm,0.3s,baz=28,slow=26,SNR=6.1						
GERES				Lg		05 01 08.8	
	comp=N,5.4nm,0.3s,baz=34,slow=26,SNR=7.6						
GERES	GERESS Array B	3.00	213	Pn	Pn	05 00 24.2	+1.8
GERES				Pg	Pg	05 00 30.1	-2.5
GERES				Sn	Sn	05 00 59.9	+0.3
GERES				Lg		05 01 08.8	
GERES	GERESS Array B	3.00	213	P	Pn	05 00 24.2	+1.8
GERES						05 00 59.9	
GERES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GERES				pmax	pmax		
	comp=Z,14nm,0.3s						
GERES	GERESS Array B	3.00	213	Pg	Pg	05 00 30.1	-2.5
GERES				S	Sn	05 00 59.9	+0.2
ROTZ	Rotzenmuhle	3.01	239	ePn	Pn	05 00 24.0	+1.4
ROTZ				eSg	Sg	05 01 11.3	-1.7
NOTT	Nottersdorf	3.04	240	ePn	Pn	05 00 23.6	+0.8
NOTT				eSg	Sg	05 01 11.5	-2.2
WET	Wettzell	3.09	225	ePn	Pn	05 00 24.5	+0.8
WET				eSg	Sg	05 01 13.0	-2.6
WET	Wettzell	3.09	225	ePn	Pn	05 00 24.5	+0.9
WET				eSg	Sg	05 01 13.0	-2.5
ZST	Bratislava	3.24	169	ePN	Pn	05 00 30.2	+4.4
ZST				eSG	Sg	05 01 19.8	-0.8
NIE	Niedzica	3.29	125	eP	Pg	05 00 37.0	-1.2
NIE				eS	Sg	05 01 20.0	-2.0
VYHS	Vyhne	3.35	148	eSG	Sg	05 01 24.4	0.0
GRA1	Grafenberg Arr	3.60	244	ePn	Pn	05 00 31.6	+0.8
GRA1				eSg	Sg	05 01 27.9	-4.5
GRA1	Grafenberg Arr	3.60	244	Pn	Pn	05 00 31.6	+0.8
GRA1				Sg	Sg	05 01 27.9	-4.5
GRF	Grafenberg Arr	3.60	244	ePn	Pn	05 00 31.6	+0.8
GRF				eSg	Sg	05 01 27.9	-4.4
MOA	Molln	3.75	200	⇑iPn	Pn	05 00 34.3	+1.2
	SNR=15						
MOA	Molln	3.75	200	⇑iSg	Sg	05 01 37.0	-0.6
	comp=Z,31nm,0.5s						
MOA	Molln	3.75	200	⇑Pn	Pn	05 00 34.2	+1.2
MOA				Sg	Sg	05 01 37.0	-0.6
MOA	Molln	3.75	200	Pn	Pn	05 00 34.3	+1.3
	SNR=15						
MOA				Sg	Sg	05 01 37.0	-0.5
	comp=Z,31nm,0.5s						
STHS	Stebnicka Huta	3.78	119	ePN	Pn	05 00 35.8	+2.4
STHS				ePG	Pg	05 00 47.2	-0.9
STHS				eSG	Sg	05 01 36.0	-2.5
HROE	Hohe Rhon--Fla	3.91	260	⇓iPn	Pn	05 00 35.4	+0.1
KECS	Kecovo	4.01	135	eP	Pn	05 00 36.7	0.0
KECS				ePg	Pg	05 00 50.5	-2.2
ARSA	Arzberg	4.16	186	⇑iPn	Pn	05 00 40.3	+1.5
ARSA	Arzberg	4.16	186	⇑Pn	Pn	05 00 40.3	+1.5
ARSA				Sg	Sg	05 01 48.4	-2.7
ARSA	Arzberg	4.16	186	Pn	Pn	05 00 40.3	+1.5
ARSA				Sg	Sg	05 01 48.4	-2.7
	comp=Z,44nm,0.8s						
CRVS	Cervenica-Dubn	4.20	124	ePG	Pg	05 00 54.9	-1.6
KOLS	Kolonicke sedl	4.61	120	e	Pn	05 00 45.6	+0.4
KOLS				e		05 01 06.1	
DAVOX	Davos	6.20	224	Pn	Pn	05 01 08.8	+1.2
	comp=Z,0.6nm,0.3s,baz=45,slow=16,SNR=5.6						
DAVOX				Sn	Sn	05 02 19.3	-0.9
	comp=Z,0.4nm,0.3s,baz=35,slow=18,SNR=2.3						
DAVOX				Lg		05 02 51.1	
	comp=Z,0.7nm,0.3s,baz=357,slow=16,SNR=4.2						
DAVOX	Davos	6.20	224	Pn	Pn	05 01 08.8	+1.2
DAVOX				Sn	Sn	05 02 19.3	-0.9
DAVOX				Lg		05 02 51.1	
BURAR	Bucovina Array	6.98	119	⇓P	Pn	05 01 17.2	-1.5
AKASG	Malin Array Be	8.24	90	Pn	P	05 01 33.8	-2.5
	comp=Z,1.0nm,0.3s,baz=280,slow=12,SNR=5.1						
AKASG				Sn	Sn	05 03 05.8	-5.5
	comp=Z,0.7nm,0.3s,baz=272,slow=23,SNR=4.6						
AKASG	Malin Array Be	8.24	90	P	P	05 01 33.8	-2.5
AKASG						05 03 05.8	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
HFS	Hagfors	8.89	352	Pn	P	05 01 41.2	-4.1
	comp=Z,0.0nm,0.3s,baz=175,slow=16,SNR=5.6						
FINES	FINESS Array B	11.46	25	Pn	P	05 02 15.0	-5.5
	comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=8.4						
EKA	Eskdalemuir Ar	12.21	296	Pn	P	05 02 25.9	-4.8
	comp=Z,0.1nm,0.3s,baz=103,slow=14,SNR=2.8						
ARCES	ARCESS Array B	18.74	10	P	P	05 03 49.5	-5.2
	comp=Z,0.4nm,0.3s,baz=194,slow=11,SNR=11						

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*ISK **05** 05:29:35.9,38.20N×26.77E,h17^{km},MD2.9*
*ATH **05** 05:29:35.3,38.16N×26.66E,h29^{km}±8^{km},MD3.4/3*
*NEIC **05** 05:29:35.0,38.19N×26.73E,h12^{km},MD3.4(ATH), MD3.0(ISK),After ISK.*
*CSEM **05** 05:29:35.8±0.1,38.21N×26.78E,h15^{km},MD2.9,Error ellipse: s-maj=2.5km s-min=1.7km az=102.0*
ISC 05 05:29:34.9±1.3,**38.20N**±0.03×**26.68E**±0.08,**h8**^{km}±10^{km}, **n17,σ0^{s}.52**/22,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	Balcova	0.34	57	i PG	Pg	05 29 42.1	+0.3
BLCB				i SG	Sg	05 29 46.4	0.0
IZM	Izmir	0.50	67	i PG	Pg	05 29 45.4	+0.4
IZM				i SG	Sg	05 29 52.1	+0.5
SMG	Samos	0.51	166	ePB	Pb	05 29 45.7	+0.1
SMG				eSB	Sb	05 29 52.9	+0.1
PRK	Paraskevi	1.09	343	ePN	Pn	05 29 56.7	+0.3
PRK				eSN	Sn	05 30 11.7	0.0
AKS	Akhisar	1.11	52	i PG	Pg	05 29 56.7	-0.5
AKS				i SG	Sg	05 30 11.5	-0.6
BODT	Bodrum	1.24	156	PN	Pn	05 29 58.7	+0.1
MLSB	Milas	1.25	136	PN	Pn	05 29 58.7	0.0
APE	Apeiranthos	1.45	219	PN	Pn	05 30 02.3	+0.7
APE	Apeiranthos	1.45	219	ePN	Pn	05 30 01.1	-0.5
EZN	Ezine	1.65	350	PN	Pn	05 30 05.4	+1.1
YER	Yerkesik	1.66	129	PN	Pn	05 30 04.2	-0.3
BALB	Balikesir	1.71	33	PN	Pn	05 30 05.7	+0.4
DENT	Denizli	1.91	103	ePN	Pn	05 30 07.4	-0.7
LIA	Limnos Island	2.06	326	ePB	Pb	05 30 10.7	-1.4
DST	Dursunbey	2.07	47	PN	Pn	05 30 10.3	0.0
LPK	Lapseki	2.17	2	ePN	Pn	05 30 12.1	+0.3
RDO	Rodhopi	3.07	344	ePN	Pn	05 30 24.6	-0.1

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*IDC **05** 05:33:06.8±0.7,9.06N×126.30E,mb4.2/9,mb1 4.3/9, mb1mx4.1/18,mbtmp4.2/9,MS2.9/2,Ms1 2.9/2, ms1mx2.6/23,Error ellipse: s-maj=58.2km s-min=15.8km az=72.0*
*NEIC **05** 05:33:08.7±0.5,9.03N×126.34E,h15^{km},mb4.4/2,Error ellipse: s-maj=25.6km s-min=8.8km az=78.0*
*MAN **05** 05:33:15.8,8.99N×126.21E,h35^{km},mb5.0,ML4.0,MS4.0*
ISC 05 05:33:14.4±0.5,**8.93N**±0.03×**126.31E**±0.05,**h79**^{km}±5^{km}, **n38,σ1^{s}.19**/46,**mb4.1**/11,**3C-4D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	Butuan	0.68	273	eP	P	05 33 28.9	-1.2
BUTP				eS	S	05 33 37.9	-3.7
BIPH	Bislig	0.74	176	⇑eP	P	05 33 30.4	-0.3
BIPH				i S	S	05 33 41.6	-1.1
BUKP	Musuan	1.62	230	eP	P	05 33 42.3	+0.5
BUKP				eS	S	05 34 05.1	+3.2
CGP	Cagayan de Oro	1.67	254	⇓eP	P	05 33 41.5	-0.9
CGP				eS	S	05 34 01.6	-1.4
MSLP	Maasin	1.87	310	eP	P	05 33 45.3	+0.2
MATI	Mati	1.97	182	eP	P	05 33 48.1	+1.6
DAV	Davao City (W)	1.98	201	P	P	05 33 43.6	-3.0
KCP	Kidapawan	2.26	212	⇓eP	P	05 33 52.2	+1.8
KCP				i S	S	05 34 18.7	+1.5
TBP	Tagbilaran	2.53	288	eP	P	05 33 53.9	-0.4
TBP				eS	S	05 34 22.5	-1.6
PLP	Palo	2.58	330	i P	P	05 33 56.0	+1.0
PLP				i S	S	05 34 27.8	+2.5
LLP	Lapu-Lapu	2.69	301	⇓eP	P	05 33 58.1	+1.5
LLP				i S	S	05 34 29.1	+1.0
BESP	Borongan	2.79	342	eP	P	05 33 57.9	0.0
DCPH	Dipolog City	2.94	264	⇓eP	P	05 33 59.6	-0.5
DCPH				eS	S	05 34 33.9	-0.5
SNPH	Sibulan	3.06	278	⇑iP	P	05 34 01.6	-0.2
SNPH				i S	S	05 34 36.2	-1.1
PAGZ	Pagadian	3.09	250	eP	P	05 34 02.8	+0.7
PAGZ				eS	S	05 34 40.5	+2.5
IPIL	Ipil	3.87	253	eP	P	05 34 12.7	-0.3
CNP	Catarman	3.91	336	eP	P	05 34 13.5	0.0
GUIM	Jordan	4.04	295	eP	P	05 34 14.9	-0.4
RCP	Roxas	4.38	307	⇑eP	P	05 34 20.8	+0.9
PVCP	Virac	5.10	336	eP	P	05 34 29.6	-0.3
JOW	Kunigami	17.91	6	LR	LR	05 44 07.9	
	comp=Z,60nm,19.2s,baz=119,slow=37						
KAKA	Kakadu	22.34	164	eP	P	05 38 25.0	+18
	17nm,0.9s,mb4.4						
FITZ	Fitzroy Crossi	26.86	181	eP	P	05 38 50.6	+0.7
	2.9nm,0.3s,mb4.3						
FITZ	Fitzroy Crossi	26.86	181	P	P	05 38 50.9	+1.0
	4.3nm,0.3s,mb4.4,baz=2.4,slow=9.6,SNR=27						
JHJ	Hachijo jima 2	27.10	25	LR	LR	05 48 25.9	
	comp=Z,19nm,20.7s,baz=152,slow=34						
WRAB	Tennant Creek	29.75	165	eP	P	05 39 14.7	-1.1
WRA	Warramunga Arr	29.76	165	P	P	05 39 15.3	-0.6
	0.5nm,0.3s,mb3.6,baz=322,slow=11,SNR=33						
WB2	Warramunga Arr	29.76	165	eP	P	05 39 14.9	-0.9
ASPA	Alice Springs	33.23	167	eP	P	05 39 46.1	-0.1
STKA	Stephens Creek	43.13	161	P	P	05 41 09.9	+1.1
	2.4nm,0.3s,mb4.3,baz=342,slow=7.6,SNR=20						
MKAR	Makanchi Array	53.12	323	P	P	05 42 25.4	-0.8
	2.3nm,0.7s,mb4.3,baz=123,slow=8.0,SNR=23						
MKAR				PcP	PcP	05 43 35.1	+1.7
	1.0nm,0.5s,baz=106,slow=6.5,SNR=5.5						
ZAL	Zalesovo	55.82	332	P	P	05 42 44.0	-1.7
	0.9nm,0.4s,mb4.2,baz=330,slow=5.8,SNR=3.9						
KURK	Kurchatov	57.19	326	eP	P	05 42 53.9	-1.7
	4.4nm,1.0s,mb4.4						
BVAR	Borovoye Array	62.79	326	P	P	05 43 32.9	-0.9
	0.7nm,0.6s,mb3.8,baz=112,slow=8.0,SNR=4.8						
ILAR	Eielson Array	80.62	26	P	P	05 45 20.4	+0.7
	0.3nm,0.7s,mb3.3,baz=251,slow=4.3,SNR=5.4						
ARCES	ARCESS Array B	85.46	340	P	P	05 45 47.0	+2.9
	2.7nm,0.8s,mb4.2,baz=74,slow=5.5,SNR=6.9						
FINES	FINESS Array B	87.08	332	P	P	05 45 52.7	+0.5
	0.7nm,0.3s,mb4.0,baz=54,slow=3.5,SNR=13						
PLCA	Paso Flores	144.96	157	PKPbc	PKPbc	05 52 46.3	+3.3
	4.1nm,0.8s,baz=224,slow=4.6,SNR=7.5						

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*CASC **05** 05:40:57.7±2.3,14.64N×92.22W,h71^{km}±32^{km},MD4.3, ML4.7,mb4.6(NEIC)*
*NEIC **05** 05:40:57.8±0.4,14.78N×91.81W,mb4.6/20,Error ellipse: s-maj=8.9km s-min=5.2km az=50.0*
*IDC **05** 05:40:58.8±0.9,14.95N×91.60W,h96^{km}±8^{km},mb4.0/14, mb1 4.2/16,mb1mx4.1/23,mbtmp4.3/16,MS3.6/1, Ms1 3.6/1,ms1mx2.9/22,Error ellipse: s-maj=26.1km s-min=9.9km az=54.0*
ISC 05 05:41:00.1±0.6,**14.83N**±0.05×**91.84W**±0.06,**h130**^{km}±5^{km}, **h89**^{km}±2.6^{km}**:pP-P,n92,σ0^{s}.94**/83,**mb4.4**/26,**6C-6D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCG	Pacaya	1.27	110	eP	P	05 41 24.6	-1.5
PCG				eS	S	05 41 45.3	-0.4
GCG	Guatemala City	1.29	101	eP	P	05 41 24.9	-1.4
GCG				eS	S	05 41 46.9	+0.8
IXG	Ixpaco	1.49	116	eP	P	05 41 26.9	-1.7
IXG				eS	S	05 41 49.2	-1.1
IXG				AML	AML	05 41 55.4	
	comp=N,75µm,0.4s						
MRL	Marmol	2.09	83	⇑eP	P	05 41 36.3	+0.6
MRL				eS	S	05 42 06.7	+3.9
MRL				AML	AML	05 42 08.6	
	comp=N,1µm,0.7s						
RTR	El Retiro	2.32	113	⇓eP	Px	05 41 47.2	
RTR				eS	Sx	05 42 18.2	
SBLS	San Blas	2.37	114	⇓eP	Px	05 41 49.1	
SBLS				eS	Sx	05 42 20.8	
SNJE	San Jose	2.37	113	⇑eP	Px	05 41 47.4	
SNJE				eS	Sx	05 42 19.3	
MTO2	Montecristo 2	2.44	100	⇑iP	Px	05 41 48.9	
MTO2				eS	Sx	05 42 21.2	
BOQS	Boqueron	2.71	113	eP	Px	05 41 52.5	
BOQS				eS	Sx	05 42 29.9	
LFRS	El Faro	2.95	114	⇓eP	Px	05 41 55.2	
LFRS				eS	Sx	05 42 34.5	
LCBS	La Ceiba	3.01	112	⇑eP	Px	05 41 55.9	
LCBS				eS	Sx	05 42 35.2	
SNVI	San Vicente	3.15	112	⇓eP	Px	05 41 58.4	
SNVI				eS	Sx	05 42 38.4	
CRIN	San Cristobal	5.11	114	eP	P	05 42 18.4	+2.6
TELN	Telica	5.35	114	eP	P	05 42 19.5	+0.5
TEL3	Telica 3	5.35	114	eP	P	05 42 18.8	-0.1
LEON	Leon	5.38	116	⇑eP	P	05 42 20.8	+1.5
MIRN	Miramar	5.52	115	⇓eP	P	05 42 20.9	-0.3
MOMJ	Momotombo	5.69	114	eP	P	05 42 24.5	+1.0
COPN	Copaltepe	5.75	117	⇑eP	P	05 42 25.1	+0.8
TICN	Ticuantepe	6.12	116	eP	P	05 42 30.9	+1.5
JTS	JuntasAbangare	8.10	123	P	P	05 42 52.8	-3.2
	comp=N,1.5nm,0.3s,baz=326,slow=16,SNR=9.4						
JTS	JuntasAbangare	8.10	123	P	P	05 42 53.7	-2.4
	comp=N,29nm,0.8s						
LCR2	La Lucha 2	9.18	123	eP	P	05 43 11.0	+0.5
URSC	Urasca	9.31	121	eP	P	05 43 15.9	+3.7
BUS	Buena Vista	9.48	123	⇓eP	P	05 43 15.4	+0.8
SOR	Soroa	11.52	45	ePG	P	05 43 40.7	-0.8
	baz=214						
SOR				eSG	S	05 45 49.3	+1.3
	comp=N,1.8nm,0.5s						
	comp=E,1.9nm,0.5s						
DWPF	Disney	16.37	34	eP	P	05 44 44.1	+0.4
	comp=E,137nm,1.3s						
TXAR	Lajitas Array	18.10	325	P	P	05 45 04.0	-0.5
	comp=E,0.5nm,0.3s,baz=151,slow=11,SNR=53						
TXAR				PcP	PcP	05 49 34.0	+1.5
	comp=E,0.1nm,0.3s,baz=129,slow=3.0,SNR=6.3						
TXAR				ScP		05 53 03.1	
	comp=E,0.0nm,0.3s,baz=153,slow=2.8,SNR=6.5						
TXAR	Lajitas Array	18.10	325	P	P	05 45 04.0	-0.5
TXAR				PcP	PcP	05 49 34.0	+1.5
TXAR				ScP		05 53 03.1	
LRAL	Lakeview Retre	18.65	13	eP	P	05 45 10.7	+0.2
	comp=E,11nm,0.6s						
OXF	Oxford	19.72	6	eP	P	05 45 21.4	-0.3
	comp=E,41nm,0.8s						
UALR	University of	19.87	359	eP	P	05 45 23.1	-0.1
	comp=E,23nm,0.6s						
UALR				e		05 45 41.3	
HBAR	Harrisburg	20.67	3	eP	P	05 45 30.3	-1.1
GDL2	Guadalupe Moun	20.73	329	eP	P	05 45 32.0	+0.1
WMOK	Wichita Mounta	20.79	344	eP	P	05 45 31.3	-1.2
	comp=E,6.9nm,0.5s						
MNTX	Cornudas Mount	20.86	326	eP	P	05 45 32.2	-1.1
	comp=E,20nm,0.8s						
SWET	Sewanee	20.98	14	eP	P	05 45 33.7	-0.8
NHSC	New Hope	21.06	28	P	P	05 45 35.2	-0.1
	comp=E,64nm,1.1s,mb4.9						
CPRX	Cap Rock	21.16	331	eP	P	05 45 35.9	-0.4
WVT	Waverly	21.52	9	eP	P	05 45 38.8	-0.9
	comp=E,20nm,0.4s,mb4.9						
CPCT	Cooper Cave	21.56	16	eP	P	05 45 40.9	+0.7
CPCT				epP		05 45 57.8	
SDV	Santo Domingo	21.57	104	P	P	05 45 39.8	-0.6
	comp=E,7.7nm,0.7s,mb4.3,baz=1.8,slow=5.5,SNR=12						
SDV	Santo Domingo	21.57	104	eP	P	05 45 39.1	-1.3
	comp=E,8.9nm,0.8s,mb4.2						
JSC	Jenkinsville	21.60	24	eP	P	05 45 41.3	+0.7
TZTN	Tazewell	22.86	17	eP	P	05 45 53.9	+1.0
TZTN				epP		05 46 14.4	
SIUC	Southern Illin	22.91	5	eP	P	05 45 54.1	+0.7
	comp=E,46nm,0.6s,mb5.1						
SIUC				epP		05 46 14.6	
CCM	Cathedral Cave	23.14	1	eP	P	05 45 54.6	-1.0
	comp=E,13nm,0.5s,mb4.6						
BNM	Barren Site	23.42	328	eP	P	05 45 59.8	+1.5
LPM	Los Pinos Moun	23.55	328	eP	P	05 46 01.0	+1.4
LENM	Lemitar	23.61	327	eP	P	05 46 01.4	+1.2
SLM	Saint Louis	23.76	3	eP	P	05 46 01.2	-0.3
	comp=E,63nm,0.6s,mb5.3						
WCI	Wyandotte Cave	23.82	11	eP	P	05 46 01.7	-0.4
	comp=E,85nm,0.8s,mb5.3						
ANMO	Albuquerque	23.97	329	P	P	05 46 05.1	+1.5
	comp=E,7.1nm,0.6s,mb4.3,baz=149,slow=11,SNR=35						
ANMO				PcP	PcP	05 49 44.4	+0.7
	comp=E,1.4nm,0.7s,baz=154,slow=5.7,SNR=4.0						
ANMO	Albuquerque	23.97	329	eP	P	05 46 04.4	+0.8
	comp=E,7.1nm,0.7s,mb4.3						
ELN	Prospectdale	24.39	22	eP	P	05 46 07.9	+0.3
FWV	Forest Hill	24.69	21	eP	P	05 46 10.5	+0.1
SJG	San Juan	24.84	79	LR	LR	05 55 49.8	
	comp=E,134nm,18.4s,baz=272,slow=36						
MTP	Monte Pirata	25.41	79	eP	P	05 46 17.0	-0.3
SDCO	Great Sand Dun	25.84	335	eP	P	05 46 21.0	-0.2
NEN	Nelson	29.24	319	eP	P	05 46 52.1	+0.1
MSU	Marysvale	29.64	327	eP	P	05 46 55.8	+0.3
ARUT	Antelope Range	29.82	324	eP	P	05 46 57.8	+0.7
SADO	Sadowa	31.73	17	P	P	05 47 12.6	-1.2
	comp=E,12nm,0.6s,mb4.8,baz=218,slow=9.4,SNR=8.7						
BW06	Boulder Array	31.74	335	P	P	05 47 13.5	-0.5
PDAR	Pinedale Array	31.74	335	P	P	05 47 15.2	+1.2
	comp=E,0.8nm,0.7s,mb3.5,baz=135,slow=8.4,SNR=6.8						
PDAR				PcP	PcP	05 50 02.5	+0.1
	comp=E,1.3nm,0.5s,baz=137,slow=5.1,SNR=14						
PDAR				ScP		05 53 41.1	
	comp=E,1.1nm,0.9s,baz=135,slow=6.3,SNR=6.8						
HVU	Hansel Valley	32.39	330	eP	P	05 47 19.5	-0.1
NCB	Newcomb	32.70	24	eP	P	05 47 21.3	-1.0
	comp=E,9.1nm,0.7s,mb4.6						
ELK	Elko	32.89	326	eP	P	05 47 24.3	+0.4
	comp=E,5.6nm,0.8s,mb4.3						
MNV	Mina	33.04	320	eP	P	05 47 26.5	+1.3
	comp=E,10nm,0.9s,mb4.5						
NVAR	Mina Array Bea	33.13	320	P	P	05 47 27.8	+1.8
	comp=E,11nm,0.7s,mb4.7,baz=130,slow=9.6,SNR=106						
NVAR				pP	pP	05 47 47.8	-6.8
	comp=E,2.9nm,0.8s,baz=128,slow=9.8,SNR=4.0						
NVAR				PcP	PcP	05 50 07.6	+1.4
	comp=E,2.6nm,0.8s,baz=120,slow=4.4,SNR=14						
NVAR				ScP		05 53 46.7	
	comp=E,0.5nm,0.7s,baz=127,slow=5.1,SNR=5.3						
NVAR	Mina Array Bea	33.13	320	P	P	05 47 27.8	+1.8
NVAR				pP	pP	05 47 47.8	-6.8
NVAR				PcP	PcP	05 50 07.6	+1.4
NVAR				ScP		05 53 46.7	
HLID	Hailey	34.53	331	eP	P	05 47 38.0	+0.1
	comp=E,4.0nm,0.9s,mb4.0						
WVOR	Wild Horse Val	35.90	325	eP	P	05 47 49.5	+0.1
	comp=E,7.9nm,0.8s,mb4.4						
CHMT	Chamberlain Mo	36.64	335	eP	P	05 47 55.1	-0.5
SAML	Samuel	36.95	128	eP	P	05 47 56.9	-1.6
	comp=E,7.4nm,0.9s,mb4.3						
LPAZ	La Paz	38.78	142	P	P	05 48 14.7	+0.8
	comp=E,1.3nm,0.7s,mb3.7,baz=330,slow=9.4,SNR=8.1						
LPAZ				pP	pP	05 48 36.8	-6.3
	comp=E,1.5nm,0.8s,baz=335,slow=9.7,SNR=4.0						
LPAZ				PcP	PcP	05 50 24.8	+1.6
	comp=E,0.6nm,0.5s,baz=36,slow=4.6,SNR=4.8						
SIV	San Ignacio	43.15	134	P	P	05 48 49.8	+0.1
	comp=E,4.6nm,0.7s,mb4.2,baz=303,slow=8.4,SNR=37						
SIV				pP	pP	05 49 11.3	-7.9
	comp=E,2.1nm,0.7s,baz=329,slow=4.8,SNR=3.4						
SIV				PcP	PcP	05 50 38.2	+0.7
	comp=E,1.5nm,0.6s,baz=300,slow=4.5,SNR=5.6						
YKA	Yellowknife Ar	50.26	346	P	P	05 49 43.7	-1.1
	comp=E,6.8nm,0.6s,mb4.5,baz=136,slow=8.8,SNR=38						
YKA	Yellowknife Ar	50.26	346	P	P	05 49 43.7	-1.2
BDFB	Brasilia	52.84	123	P	P	05 50 04.5	-0.4
	comp=E,3.4nm,0.7s,mb4.2,baz=302,slow=8.9,SNR=6.0						
PLCA	Paso Flores	58.70	161	P	P	05 50 46.2	-0.3
	comp=E,5.6nm,1.0s,mb4.4,baz=354,slow=9.1,SNR=7.2						
PLCA	Paso Flores	58.70	161	P	P	05 50 46.2	-0.3
DAWY	Dawson	58.97	338	eP	P	05 50 47.5	-0.6
ILAR	Eielson Array	62.14	337	P	P	05 51 08.9	-0.6
	comp=E,5.1nm,0.8s,mb4.4,baz=144,slow=4.9,SNR=46						
ILAR				PcP	PcP	05 51 47.1	-0.9
	comp=E,1.0nm,0.7s,baz=133,slow=3.0,SNR=5.1						
ESDC	Sonseca Array	79.09	52	P	P	05 52 50.3	-1.5
	comp=E,1.6nm,0.8s,mb3.7,baz=284,slow=6.1,SNR=5.6						
NOA	NORSAR Array B	83.35	29	P	P	05 53 13.9	+0.3
	comp=E,0.6nm,0.7s,mb3.5,baz=284,slow=5.9,SNR=2.9						
ARCES	ARCESS Array B	85.31	18	P	P	05 53 22.8	-0.4
	comp=E,3.7nm,0.9s,mb4.1,baz=338,slow=6.5,SNR=5.0						
MKAR	Makanchi Array	118.44	5	PKP	PKPdf	05 59 33.1	+0.8
	comp=E,0.4nm,0.6s,baz=4.7,slow=4.0,SNR=4.5						
BOSA	Boshof	120.56	115	PKP	PKPdf	05 59 39.3	+2.3
	comp=E,4.7nm,0.8s,baz=297,slow=4.8,SNR=6.2						
STKA	Stephens Creek	128.59	241	PKP	PKPdf	05 59 53.9	+1.4
	comp=E,1.9nm,0.8s,baz=53,slow=7.0,SNR=3.2						
ASPA	Alice Springs	136.08	251	eP	PKPdf	05 59 56.7	-10
FITZ	Fitzroy Crossi	143.95	260	PKP	PKPdf	06 00 21.0	+0.1
	comp=E,4.0nm,0.5s,baz=98,slow=3.5,SNR=6.2						

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*NEIC **05** 05:49:08.9,23.51S×69.75W,h79^{km},MD4.0(GUC),After GUC.*
GUC 05 05:49:08.9±0.6,**23.51S**×**69.75W,h79**^{km}±8^{km},**MD4.0, ML4.2,2C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEN1	Los Morros	0.43	286	⇑iP	P	05 49 23.1	+1.1
CEN1				i S	S	05 49 33.7	+1.9
CEN1				AMP		05 49 34.9	
	comp=N,12µm,0.4s						
ANCH	Antofagasta	0.63	254	⇓iP	P	05 49 23.9	0.0
ANCH				i S	S	05 49 35.1	+0.1
ANCH				AMP		05 49 37.2	
	comp=N,24µm,0.1s						
CPN1	Cerro Paranal	1.26	208	⇑iP	P	05 49 31.9	+0.5
CPN1				i S	S	05 49 50.1	+1.8
CPN1				AMP		05 49 51.8	
	comp=E,6µm,0.2s						
SPCH	San Pedro de A	1.55	68	i P	P	05 49 36.1	+0.8
SPCH				i S	S	05 49 56.5	+1.7
SPCH				AMP		05 49 57.9	
	comp=E,5µm,0.4s						
ARE	Arequipa	7.20	347	eP	P	05 50 49.0	-4.5
LPAZ	La Paz	7.34	12	eP	P	05 50 54.4	-1.1

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*PRU **05** 06:46:21.7,51.49N×16.06E*
*WAR **05** 06:46:21.5,51.54N×16.06E,h1^{km},ML2.7,Mining Induced*
ISC 05 06:46:19.1±1.1,**51.52N**±0.05×**16.04E**±0.05,**n10,σ1^{s}.19**/20, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.69	166	ePG	Pg	06 46 34.0	+1.1
KSP				eSG	Sg	06 46 44.0	+1.8
UPC	Upice	1.01	181	ePG	Pg	06 46 40.4	+1.2
DPC	Dobruska-Polom	1.18	171	ePG	Pg	06 46 43.2	+0.5
DPC				eSG	Sg	06 46 58.9	+0.5
	7.4nm,0.2s						
PVCC	Panska Ves	1.35	224	ePG	Pg	06 46 47.1	+1.0
PRU	Pruhonice	1.80	212	ePN	Pn	06 46 53.1	+1.5
PRU				ePG	Pg	06 46 54.7	-0.3
PRU				eSG	Sg	06 47 18.2	-0.8
	8.5nm,0.2s						
CLL	Collm	1.91	265	i PG	Pg	06 46 56.4	-0.8
CLL				eSG	Sg	06 47 22.0	-0.7
OKC	Ostrava-Krasne	2.15	141	eSG	Sg	06 47 29.0	-1.7
	18nm,0.7s						
NKC	Novy Kostel	2.61	242	ePN	Pn	06 47 04.5	+1.3
NKC				eSG	Sg	06 47 45.7	-0.3
	8.8nm,0.2s						
OJC	Ojcow	2.71	117	ePG	Pg	06 47 13.0	-0.3
OJC				eSG	Sg	06 47 47.0	-2.5
KHC	Kasperske Hory	2.86	214	ePN	Pn	06 47 07.8	+1.0
KHC				ePG	Pg	06 47 13.2	-3.0
KHC				eSN	Sn	06 47 42.0	-0.4
KHC				eSG	Sg	06 47 52.8	-1.5

IDC 05 07:08:01.7±2.7,**7.06S**×**155.46E,mb3.9**/5,**mb1 4.0**/5, **mb1mx3.9**/13,**mbtmp3.9**/5,**MS3.5**/1,**Ms1 3.4**/1, **ms1mx2.7**/20,**Error ellipse: s-maj=73.7km s-min=27.8km az=108.0,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	15.73	214	Pn	P	07 11 50.0	+3.5
	0.1nm,0.3s,baz=45,slow=16,SNR=2.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.16	236	P	P	07 13 20.3	-0.5
	2.1nm,0.7s,baz=62,slow=9.8,SNR=27						
STKA	Stephens Creek	27.88	206	P	P	07 13 52.7	-2.6
	0.4nm,0.5s,baz=33,slow=13,SNR=2.8						
STKA				LR	LR	07 24 46.8	
	comp=Z,87nm,19.4s,baz=197,slow=36						
FITZ	Fitzroy Crossi	31.05	246	P	P	07 14 22.5	-1.4
	3.4nm,1.0s,baz=98,slow=14,SNR=4.6						
SONM	Songino Array	69.64	327	P	P	07 19 13.1	-1.9
	0.2nm,0.4s,baz=180,slow=4.3,SNR=2.7						
SONM				pP	pP	07 19 22.7	+7.7
	1.1nm,0.8s,baz=137,slow=5.8,SNR=7.1						
MKAR	Makanchi Array	83.75	319	P	P	07 20 32.4	-1.8
	0.5nm,0.6s,baz=111,slow=5.0,SNR=6.3						
MKAR				pP	pP	07 20 41.6	+7.4
	0.8nm,0.8s,baz=100,slow=7.4,SNR=6.9						

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*ATH **05** 07:10:56.2, 38.15N×26.62E, h29^{km}±4^{km}, MD3.3/3*
*CSEM **05** 07:10:56.9±0.1, 38.12N×26.81E, h12^{km}, MD3.3, Error ellipse: s-maj=2.1km s-min=1.3km az=95.0*
*ISK **05** 07:10:57.1, 38.13N×26.79E, h14^{km}, MD3.3*
*NEIC **05** 07:10:57.0, 38.13N×26.78E, h14^{km}, MD3.3(ISK), MD3.3(ATH), After ISK.*
ISC 05 07:10:56.5±0.6**, 38.17N**±0.02×**26.69E**±0.04**, h7**^{km}±4^{km}**, n35, σ1**^{s}**01**/47**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.20	339	*i* P	Pg	07 11 00.3	-0.5
URLA				*i* S	Sg	07 11 03.9	+0.3
BLCB	Balcova	0.35	52	*i* PG	Pg	07 11 03.6	0.0
SMG	Samos	0.47	165	*e*PB	Pg	07 11 06.4	+0.4
SMG				*e*SB	Sg	07 11 13.9	+1.5
IZM	Izmir	0.51	63	*i* PG	Pg	07 11 06.9	+0.2
IZM				*i* SG	Sg	07 11 14.0	+0.5
KDAG	Bornova	0.51	63	*i* P	Pg	07 11 06.0	-0.8
KDAG				*i* S	Sg	07 11 13.0	-0.7
AYDN	Tasoluk	1.07	118	*i* P	Pb	07 11 18.4	+1.4
AYDN				*i* S	Sb	07 11 31.9	+0.9
PRK	Paraskevi	1.12	343	*e*PN	Pn	07 11 17.7	-0.9
PRK				*e*SN	Sn	07 11 33.0	-1.5
AKS	Akhisar	1.13	51	PN	Pn	07 11 17.9	-0.8
AKS				SN	Sn	07 11 34.2	-0.4
AYVA	Ayvalik	1.14	0	*i* P	Pb	07 11 18.9	+0.8
AYVA				*i* S	Sb	07 11 34.8	+1.8
BODT	Bodrum	1.21	156	PN	Pn	07 11 19.2	-0.6
MLSB	Milas	1.23	135	PN	Pn	07 11 19.7	-0.4
APE	Apeiranthos	1.43	220	*e*PN	Pn	07 11 23.4	+0.4
APE	Apeiranthos	1.43	220	*e*PN	Pn	07 11 21.6	-1.4
MANT	Manisa	1.51	77	*i* P	Pn	07 11 25.3	+1.2
MANT				*i* S	Sb	07 11 43.3	-0.4
DAT	Datca	1.60	153	*e*PN	Pn	07 11 24.4	-1.1
YER	Yerkesik	1.63	129	*e*PN	Pn	07 11 24.9	-1.0
EZN	Ezine	1.68	350	*e*PN	Pn	07 11 27.8	+1.3
BALB	Balikesir	1.74	32	*e*PN	Pn	07 11 27.3	-0.2
DENT	Denizli	1.90	102	*e*PN	Pn	07 11 28.8	-0.9
DST	Dursunbey	2.09	46	*e*PN	Pn	07 11 32.0	-0.4
LIA	Limnos Island	2.09	326	*e*PN	Pn	07 11 31.4	-1.0
LPK	Lapseki	2.20	1	*e*PN	Pn	07 11 35.0	+1.0
KHL	Karahalli	2.24	85	*e*PN	Pn	07 11 33.6	-1.0
EDC	Edincik	2.36	22	*e*PN	Pn	07 11 36.9	+0.6
GDZ	Gediz	2.37	66	*i* P	Pg	07 11 41.0	-2.9
GDZ				*i* S	Sg	07 12 13.6	-2.0
BNT	Bandirma	2.38	23	*e*PN	Pn	07 11 37.0	+0.4
KCT	Karacabey	2.46	31	*e*PN	Pn	07 11 38.2	+0.4
MRMT	Marmara Adasi	2.53	16	*e*PN	Pn	07 11 39.4	+0.6
ORLT	Orhaneli	2.54	42	*e*PN	Pn	07 11 39.1	+0.2
MFT	Murefte	2.66	10	*e*PN	Pn	07 11 41.3	+0.8
ULDT	Uludag	2.74	43	*i* P	Pb	07 11 46.8	+1.2
ULDT				*i* S	Sb	07 12 23.4	+4.0
TKTP	Tekketepe	2.87	91	*i* P	Pg	07 11 53.1	-0.7
TKTP				*i* S	Sg	07 12 33.8	+1.7
RDO	Rodhopi	3.10	344	*e*PN	Pn	07 11 45.3	-1.6
YLV	Yalova	3.17	40	*e*PN	Pn	07 11 47.9	0.0
EDRB	Edirne	3.67	1	*e*PN	Pn	07 11 56.6	+1.6

IDC 05 08:25:00.9±5.2**, 18.74N×145.29E, h324**^{km}±52^{km}**, mb3.2**/6**, mb1 3.4**/8**, mb1mx3.3**/19**, mbtmp4.0**/8**, Error ellipse: s-maj=38.6km s-min=15.0km az=82.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOW	Kunigami	17.62	300	P	P	08 28 45.5	-1.4
	5.9nm,0.3s,baz=139,slow=12,SNR=18						
MJAR	Matsushiro Arr	18.80	342	P	P	08 28 56.9	-1.9
	0.7nm,0.3s,baz=166,slow=10,SNR=7.1						
WB2	Warramunga Arr	39.91	196	*e*P	P	08 32 04.6	-1.2
WRA	Warramunga Arr	39.91	196	P	P	08 32 04.7	-1.2
	2.3nm,0.5s,baz=22,slow=9.0,SNR=34						
SONM	Songino Array	42.87	322	P	P	08 32 27.8	-1.8
	0.3nm,0.4s,baz=127,slow=7.1,SNR=4.9						
STKA	Stephens Creek	50.45	184	P	P	08 33 25.7	-2.7
	1.3nm,0.9s,baz=349,slow=12,SNR=4.5						
MKAR	Makanchi Array	58.16	314	P	P	08 34 22.1	-1.2
	0.5nm,0.5s,baz=100,slow=7.4,SNR=5.7						
NVAR	Mina Array Bea	83.42	52	P	P	08 36 53.8	+0.1
	0.3nm,0.6s,baz=257,slow=8.9,SNR=6.4						
FINES	FINESS Array B	86.69	335	P	P	08 37 07.5	-1.6
	0.8nm,0.4s,baz=60,slow=3.5,SNR=13						

DHMR 05 08:50:45.6±1.4**, 12.04N×43.67E, h9**^{km}±14^{km}**, ML3.6, 3C-2D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRBA	At Turbah	1.26	20	⇑*i*P	Pb	08 51 09.1	0.0
TRBA				*i* S	Sb	08 51 27.0	+1.8
TRBA				AML	AML	08 51 28.2	
	comp=N,706nm,0.4s						
UDYN	Al ‘Udayn	1.94	9	⇑*i*P	Pn	08 51 20.1	+1.1
UDYN				*i* S	Sn	08 51 45.8	+2.2
UDYN				AML	AML	08 51 55.7	
	comp=N,856nm,0.5s						
LBOS		2.38	40	⇑*i*P	Pn	08 51 26.7	+1.3
LBOS				*i* S	Sn	08 51 59.9	+4.8
DHBB	Dhamar BB	2.61	15	⇓*i*P	Pn	08 51 31.2	+2.5
DHBB				*i* S	Sn	08 52 06.8	+5.9
BDHA	Al Bayda’	2.67	44	⇓*i*P	Pn	08 51 31.3	+1.8
BDHA				AML	AML	08 52 14.1	
	comp=E,608nm,0.4s						

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*CSEM **05** 08:58:59.6±1.0, 11.59N×43.58E, h20^{km}, ML4.0, Error ellipse: s-maj=21.9km s-min=19.5km az=134.0*
DHMR 05 08:59:02.4±1.5**, 11.92N×43.78E, h4**^{km}±11^{km}**, ML4.5, 2C-3D, Ethiopia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRBA	At Turbah	1.34	14	⇑*e*P	Pb	08 59 28.2	+0.4
TRBA				*i* S	Sb	08 59 46.9	+1.6
TRBA				AML	AML	08 59 47.5	
	comp=N,5μm,0.4s						
UDYN	Al ‘Udayn	2.04	5	⇓*e*P	Pn	08 59 39.1	+1.2
UDYN				*i* S	Sn	09 00 06.8	+2.5
UDYN				AML	AML	09 00 15.6	
	comp=N,7μm,0.5s						
LBOS		2.41	36	⇑*i*P	Pn	08 59 44.5	+1.3
LBOS				*i* S	Sn	09 00 18.6	+5.0
BDHA	Al Bayda’	2.68	40	⇓*i*P	Pn	08 59 48.3	+1.1
BDHA				*i* S	Sn	09 00 25.7	+5.1
BDHA				AML	AML	09 00 33.7	
	comp=E,4μm,0.5s						
DHBB	Dhamar BB	2.70	13	⇓*i*P	Pn	08 59 49.5	+2.1
DHBB				*i* S	Sn	09 00 25.6	+4.7
SANA	San‘a	3.47	7	*i* S	Sn	09 00 45.5	+5.1

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*KRSC **05** 09:08:40.8±0.9, 50.43N×156.51E, h112^{km}±6^{km}, ML4.0*
*IDC **05** 09:08:43.3±3.6, 51.18N×155.79E, h115^{km}±36^{km}, mb3.4/8, mb1 3.7/10, mb1mx3.5/23, mbtmp3.8/10, MS4.1/2, Ms1 4.1/2, ms1mx2.9/20, Error ellipse: s-maj=34.0km s-min=15.0km az=165.0*
*MOS **05** 09:08:43.0±0.8, 51.15N×155.74E, h133^{km}, mb4.1/4, Error ellipse: s-maj=27.2km s-min=18.1km az=66.0*
ISC 05 09:08:41.7±0.7**, 50.45N**±0.06×**156.50E**±0.09**, h112**^{km}**, n38, σ0**^{s}**98**/48**, mb3.8**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	0.34	314	*i* P	P	09 08 57.2	-0.8
SKR				*i* S	S	09 09 09.6	-0.6
ALID	Alaid	0.74	305	*e*P	P	09 09 01.4	+0.7
ALID				*e*S	S	09 09 15.7	+0.7
PAU	Pauzhetka	1.04	11	*i* P	P	09 09 04.6	+0.9
PAU				*e*S	S	09 09 21.2	+0.9
PAU				Smax			
	640nm,1.1s						
MIPR	Malaya Ipel’ka	1.84	5	*i* P	P	09 09 12.8	-0.3
MIPR				*e*S	S	09 09 35.7	-1.1
GRL	Gorelyy	2.33	24	*e*P	P	09 09 20.4	+0.8
GRL				*e*S	S	09 09 48.6	+0.5
RUS	Russkaya	2.35	32	*e*P	P	09 09 20.9	+1.0
RUS				*e*S	S	09 09 50.5	+1.8
APC	Apacha	2.51	9	*i* P	P	09 09 21.3	-0.8
PET	Petropavlovsk	2.91	27	*e*P	P	09 09 28.0	+0.6
PET				*e*S	S	09 10 01.8	-0.1
PET	Petropavlovsk	2.91	27	*e*PN	P	09 09 25.2	-2.2
UGLR	Uglovaya	3.12	27	*e*P	P	09 09 31.4	+1.1
KOK	Koryaka	3.14	24	*i* P	P	09 09 31.9	+1.3
AVH	Avacha	3.14	25	*e*P	P	09 09 31.4	+0.8
SMAR	Somma	3.16	26	*e*P	P	09 09 32.1	+1.3
NLC	Nalytchevo	3.25	32	*e*P	P	09 09 31.6	-0.4
NLC				*e*S	S	09 10 09.0	-1.2
GNL	Ganaly	3.37	15	*i* P	P	09 09 33.5	-0.2
SPN	Mys Shipunski	3.44	38	*e*P	P	09 09 34.7	+0.1
SPN				*e*S	S	09 10 14.7	-0.1
MKZ	Mys Kozlova	5.21	36	*e*P	P	09 09 57.1	-1.4
MKZ				*e*S	S	09 10 53.6	-4.3
TUMR	Tumrok	5.32	23	*e*P	P	09 09 59.9	-0.2
KMNR	Kamenistaya	5.77	21	*e*P	P	09 10 06.0	-0.2
SRDR	Sredinnyy	6.19	17	*e*P	P	09 10 11.0	-0.8
KBTR	Krutoberegovo	6.90	31	*e*P	P	09 10 20.6	-1.1
BKI	Bering	7.46	47	*e*S	S	09 11 41.4	-11
FX1	Attu Island--F	10.63	70	P	P	09 11 15.5	+3.7
	0.9nm,0.3s,baz=307,slow=22,SNR=14						
FX1				S	S	09 13 10.1	+0.9
	14nm,0.3s,baz=239,slow=22,SNR=21						
YAK	Yakutsk	18.72	318	*e*P	P	09 12 45.1	-8.5
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
MJAR	Matsushiro Arr	19.14	230	P	P	09 12 59.5	+1.2
	comp=E,0.4nm,0.3s,baz=20,slow=12,SNR=4.6						
ILAR	Eielson Array	32.27	42	P	P	09 14 59.5	-1.8
	comp=E,1.0nm,0.7s,mb3.6,baz=269,slow=6.0,SNR=15						
ILAR	Eielson Array	32.27	42	P	P	09 14 59.5	-1.7
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	32.38	285	P	P	09 14 56.2	-6.2
	comp=Z,0.2nm,0.4s,mb3.2,baz=72,slow=9.1,SNR=2.4						
INK	Inuvik	37.33	35	P	P	09 15 41.9	-2.2
	comp=Z,0.5nm,0.3s,mb3.9,baz=286,slow=10,SNR=11						
INK	Inuvik	37.33	35	P	P	09 15 41.9	-2.2
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	42.37	304	LR	LR	09 35 32.7	
	comp=Z,212nm,19.1s,baz=265,slow=39						
MKAR	Makanchi Array	47.30	296	P	P	09 16 58.9	-6.3
	comp=Z,0.4nm,0.6s,mb3.4,baz=36,slow=7.2,SNR=4.2						
ARCES	ARCESS Array B	55.09	341	P	P	09 17 55.4	-8.1
	comp=Z,8.9nm,1.1s,mb4.7,baz=31,slow=7.1,SNR=5.2						
ARCES	ARCESS Array B	55.09	341	P	P	09 17 55.4	-8.2
ARCES				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NVAR	Mina Array Bea	58.80	66	P	P	09 18 30.4	+0.2
	comp=Z,0.6nm,0.5s,mb3.9,baz=287,slow=8.8,SNR=8.2						
PDAR	Pinedale Array	60.80	57	P	P	09 18 43.0	-0.9
	comp=Z,1.1nm,0.7s,mb4.0,baz=342,slow=2.1,SNR=9.4						
PDAR				LR	LR	09 46 48.8	
	comp=Z,137nm,18.9s,baz=139,slow=38						
TXAR	Lajitas Array	73.77	64	P	P	09 20 05.0	-0.2
	comp=Z,1.3nm,0.5s,mb3.9,baz=296,slow=5.3,SNR=25						
TXAR	Lajitas Array	73.77	64	P	P	09 20 05.0	-0.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

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*CRAAG **05** 09:10:28.5, 35.74N×2.20E, Ml3.6*
*CSEM **05** 09:10:31.2±0.2, 35.86N×2.26E, h15^{km}, ML3.6, Error ellipse: s-maj=4.5km s-min=1.9km az=178.0*
*MDD **05** 09:10:32.2±1.1, 35.86N×2.21E, mb3.9/5, Error ellipse: s-maj=15.7km s-min=5.6km az=174.0, PRXIMO SOLUCIN POBRE*
*NEIC **05** 09:10:32.7, 35.89N×2.24E, ML3.6(ALG), After MDD.*
ISC 05 09:10:32.5±1.0**, 35.9N**±0.1×**2.22E**±0.06**, h19**^{km}±12^{km}**, n26, σ0**^{s}**95**/41**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMHD	Djebel Mahouad	0.65	65	P	Pb	09 10 45.2	+0.1
EBNR	Beni Rached	0.67	303	P	Pb	09 10 46.0	+0.6
ECHA	Ech Chlef	0.73	288	P	Pb	09 10 47.0	+0.6
ECHF	Ech Chlef	0.75	288	P	Pb	09 10 47.0	+0.2
EANR	’Ain N’Sour	0.91	272	P	Pb	09 10 47.6	-1.9
ADJB	Djebel Djouab	1.01	76	P	Pb	09 10 51.0	-0.2
ABA	Alger-Bouzarea	1.09	37	P	Pb	09 10 52.4	-0.2
EIBI	Ibiza	3.18	348	P	Pn	09 11 23.2	+0.5
	20nm,0.3s,SNR=6.4						
EIBI				S	Sn	09 11 60.0	-0.5
	8.1nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.18	348	P	Pn	09 11 23.3	+0.6
EIBI				S	Sn	09 12 00.2	-0.2
EIBI	Ibiza	3.18	348	P	Pn	09 11 23.2	+0.5
	20nm,0.3s,SNR=6.4						
EIBI				S	Sn	09 12 00.2	-0.3
EMUR	La Murta	3.37	306	P	Pn	09 11 25.6	+0.2
	2.0nm,0.2s,SNR=4.0						
EMUR	La Murta	3.37	306	P	Pn	09 11 26.3	+0.8
EMUR	La Murta	3.37	306	P	Pn	09 11 25.6	+0.1
	2.0nm,0.2s,SNR=4.0						
ETOS	Mallorca	3.87	7	P	Pn	09 11 32.4	-0.1
	3.9nm,0.3s,SNR=7.9						
ETOS				S	Sn	09 12 16.8	-1.1
	1.6nm,0.3s,SNR=7.9						
ETOS	Mallorca	3.87	7	P	Pn	09 11 33.2	+0.7
ETOS				S	Sn	09 12 18.9	+0.9
ETOS	Mallorca	3.87	7	P	Pn	09 11 32.4	-0.1
	3.9nm,0.3s,SNR=7.9						
ETOS				S	Sn	09 12 18.9	+1.0
ETOB	Tobarra	4.05	313	P	Pn	09 11 36.0	+0.9
	0.8nm,0.1s,SNR=7.0						
ETOB				S	Sn	09 12 19.9	-2.7
	1.2nm,0.2s,SNR=7.9						
ETOB	Tobarra	4.05	313	P	Pn	09 11 36.4	+1.2
ETOB				S	Sn	09 12 23.6	+1.0
ETOB	Tobarra	4.05	313	P	Pn	09 11 36.0	+0.9
	0.8nm,0.1s,SNR=7.0						
ETOB				S	Sn	09 12 23.6	+1.0
EQES	Quesada	4.64	295	P	Pn	09 11 43.7	+0.2
	1.4nm,0.1s,SNR=7.9						
EQES				S	Sn	09 12 36.8	-0.7
	2.2nm,0.3s,SNR=7.9						
EQES	Quesada	4.64	295	P	Pn	09 11 44.2	+0.7
EQES				S	Sn	09 12 38.8	+1.3
EQES	Quesada	4.64	295	P	Pn	09 11 43.7	+0.2
	1.4nm,0.1s,SNR=7.9						
EQES				S	Sn	09 12 38.8	+1.3
EQUE	Quentar	4.73	287	P	Pn	09 11 43.4	-1.5
	5.1nm,0.3s,SNR=8.3						
EMOS	Mosqueruela	4.92	335	P	Pn	09 11 48.0	+0.6
	1.5nm,0.1s,SNR=12						
EMOS				S	Sn	09 12 42.1	-2.4
	0.8nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.92	335	P	Pn	09 11 48.0	+0.6
EMOS				S	Sn	09 12 42.5	-2.0
EMOS	Mosqueruela	4.92	335	P	Pn	09 11 48.0	+0.6
	1.5nm,0.1s,SNR=12						
EMOS				S	Sn	09 12 42.1	-2.4
	0.8nm,0.3s,SNR=7.9						

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*BJI **05** 09:10:56.2, 2.13S×80.54W, h19^{km}, mB5.2, Ms5.2, Msz4.9*
*HRVD **05** 09:10:57.4±0.3, 2.07S×80.42W, h58^{km}±2^{km}, MW5.1/49, Centroid moment Tensor Solution. LP body waves: s43,c67;Mantle waves: s49,c82; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.96±.22; $M_{\theta\theta}$2.50±.16; $M_{\phi\phi}$1.46±.23; $M_{r\theta}$1.82±.13; $M_{\theta\phi}$-2.01±.14; $M_{\phi r}$-4.02±.16; Best double couple: $M_0$5.952×10^{16} NP1:ϕ_s112°,δ25°, λ-123°. NP2:ϕ_s327°,δ69°,λ-76°. Principal axes: T 5.75, Plg23°, Azm46°; N .404, Plg13°, Azm142°; P -6.153, Plg63°, Azm259°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*IGQ **05** 09:10:59.9, 1.93S×80.52W, h27^{km}±17^{km}, mb5.0 Error ellipse: s-maj=18.3km s-min=3.7km az=138.0*
*NEIC **05** 09:11:03.1±0.7, 1.99S×80.33W, h67^{km}±6^{km}, mb4.9/18, MD5.0(IGQ), Error ellipse: s-maj=7.2km s-min=4.4km az=56.0*
NEIC Felt in Guayas, Manabi and Tungurahua.
*IDC **05** 09:11:05.2±3.0, 2.01S×80.37W, h87^{km}±27^{km}, mb4.1/19, mb1 4.3/22, mb1mx4.3/27, mbtmp4.4/22, MS4.3/12, Ms1 4.3/12, ms1mx4.2/20, Error ellipse: s-maj=22.0km s-min=10.6km az=56.0*
*MOS **05** 09:11:19.6±2.4, 0.16S×79.16W, h128^{km}, mb4.3/1, Error ellipse: s-maj=38.1km s-min=19.0km az=111.5*
ISC 05 09:11:02.9±0.7**, 1.95S**±0.05×**80.43W**±0.05**, h78**^{km}±5^{km}**, n171, σ0**^{s}**98**/130**, mb4.5**/34**, 23C-12D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAMA	Jama	1.69	8	⇑P	P	09 11 29.9	-1.2
JAMA				S	S	09 11 50.7	-1.3
IGUA	Igualata	1.85	76	⇓P	P	09 11 33.1	-0.1
QIL1	Quilotoa	1.85	54	⇑P	P	09 11 31.8	-1.5
MAG1	Magdalena	1.98	19	⇓P	P	09 11 34.2	-0.8
CUSU	Cusua	2.01	76	⇑P	P	09 11 35.7	+0.2
ARRY	Arrayan	2.02	77	⇓P	P	09 11 35.3	-0.3
JUIV	Juive	2.03	75	⇑P	P	09 11 35.8	0.0
PATA	Patacocha	2.04	78	⇑P	P	09 11 33.3	-2.6
RETU	Refugio	2.04	76	P	P	09 11 37.6	+1.7
RETU				S	S	09 12 02.9	+2.6
RUN5	Runtun	2.07	75	⇓P	P	09 11 36.5	+0.1
PISA	Pisayambo	2.23	67	⇑P	P	09 11 39.3	+0.8
VC1	Cotopaxi 1	2.41	57	⇑P	P	09 11 42.4	+1.4
TAMB	Tambo	2.41	59	⇑P	P	09 11 42.3	+1.2
JUA2	San Juan 2	2.51	47	⇑P	P	09 11 42.1	-0.4
TERV	Terraza Guagua	2.54	46	⇑P	P	09 11 42.5	-0.4
GGP	Refugio Guagua	2.54	46	⇑P	P	09 11 42.5	-0.4
PINO	Pino	2.55	46	⇑P	P	09 11 42.4	-0.6
YANA	Yana	2.60	46	⇑P	P	09 11 43.0	-0.7
ANTI	Antisana	2.71	57	⇑P	P	09 11 45.9	+0.5
COTA	Cotacachi	3.09	43	⇑P	P	09 11 50.3	-0.2
CAYR	Refugio Cayamb	3.11	51	⇑P	P	09 11 52.0	+1.1
ANGU	Angureal	3.13	51	⇑P	P	09 11 52.0	+0.8
CAYA	Cayambe	3.16	51	⇑P	P	09 11 52.3	+0.7
LAV3	Lava3-Reventad	3.35	57	⇓P	P	09 11 55.2	+1.0
ROSC	El Rosal	9.10	42	P	P	09 13 13.4	-0.1
	6.2nm,0.3s,baz=204,slow=4.6,SNR=10						
ROSC				LR	LR	09 17 26.5	
	comp=Z,1μm,18.9s,baz=195,slow=42						
PAYG	Puerto Ayora	9.93	277	*e*Pn	P	09 13 25.3	+0.4
	215nm,1.0s						
NNA	Nana	10.59	161	*e*Pn	P	09 13 29.9	-3.9
	99nm,1.0s						
NNA				*e*Sn	S	09 15 24.1	-7.3
JTS	JuntasAbangare	12.96	340	P	P	09 14 07.6	+2.1
	0.5nm,0.3s,baz=111,slow=9.1,SNR=7.3						
JTS				LR	LR	09 18 07.7	
	comp=Z,1μm,20.9s,baz=166,slow=32						
JTS	JuntasAbangare	12.96	340	*e*Pn	P	09 14 04.2	-1.3
JTS				LR	LR	09 18 07.7	
JTS	JuntasAbangare	12.96	340	*d i*P	P	09 14 06.6	+1.1
SDV	Santo Domingo	14.53	42	P	P	09 14 23.6	-2.3
	0.8nm,0.3s,baz=249,slow=10,SNR=21						
SDV	Santo Domingo	14.53	42	*e*Pn	P	09 14 23.6	-2.4
	183nm,0.9s						
ARE	Arequipa	16.89	149	*e*P	P	09 14 57.0	+1.2
SAML	Samuel	18.51	113	*e*P	P	09 15 10.6	-5.0
	3.2nm,0.3s						
LPAZ	La Paz	18.70	140	P	P	09 15 17.0	-0.7
	0.5nm,0.3s,baz=329,slow=12,SNR=26						
LPAZ	La Paz	18.70	140	*e*P	P	09 15 16.6	-1.1
SIV	San Ignacio	23.63	127	P	P	09 16 07.8	-0.1
	16nm,0.9s,mb4.3,baz=301,slow=11,SNR=56						
SJG	San Juan	24.39	35	P	P	09 16 15.7	+0.3
	51nm,0.6s,mb5.0,baz=213,slow=4.9,SNR=19						
SJG	San Juan	24.39	35	*e*P	P	09 16 15.5	+0.1
	50nm,0.6s,mb5.0						
MTP	Monte Pirata	24.72	36	*e*P	P	09 16 18.4	-0.1
CFAA	Coronel Fontan	31.66	160	P	P	09 17 18.8	-2.3
	0.5nm,0.8s,baz=339,slow=9.1,SNR=6.5						
MDZ	Mendoza	32.64	162	*e*P	P	09 17 31.8	+2.2
BDFB	Brasilia	34.73	115	P	P	09 17 46.5	-1.2
	5.8nm,0.7s,mb4.5,baz=288,slow=9.6,SNR=9.9						
BDFB				LR	LR	09 33 03.0	
	comp=Z,680nm,19.2s,baz=122,slow=38						
BAO	Brasilia Array	34.74	115	P	P	09 17 46.0	-1.9
NHSC	New Hope	34.87	0	P	P	09 17 47.7	-1.0
	61nm,1.3s,mb5.3						
NHSC				*e*		09 17 54.5	
JSC	Jenkinsville	36.05	359	P	P	09 17 57.9	-0.8
JSC				*e*		09 18 04.1	
TXAR	Lajitas Array	38.24	326	P	P	09 18 18.1	+0.9
	1.6nm,1.0s,mb3.8,baz=149,slow=7.3,SNR=9.5						
TXAR				PcP	PcP	09 20 30.8	+0.1
	2.1nm,0.8s,baz=152,slow=7.1,SNR=9.5						
TXAR	Lajitas Array	38.24	326	P	P	09 18 18.1	+0.9
TXAR				PcP	PcP	09 20 30.8	+0.1
FWV	Forest Hill	39.33	360	P	P	09 18 25.1	-1.0
PLCA	Paso Flores	39.63	168	P	P	09 18 28.1	-0.4
	25nm,1.2s,mb4.9,baz=344,slow=10,SNR=12						
PLCA				LR	LR	09 32 14.0	
	comp=Z,249nm,19.9s,baz=336,slow=32						
GDL2	Guadalupe Moun	40.84	328	*e*P	P	09 18 39.8	+1.2
GDL2				*e*		09 18 45.5	
CPRX	Cap Rock	41.24	330	*e*P	P	09 18 43.7	+1.8
KSU1	Kansas State U	43.48	342	*e*P	P	09 19 00.9	+0.7
	4.2nm,0.9s,mb4.2						
KSU1				*e*		09 19 07.3	
ANMO	Albuquerque	44.07	329	P	P	09 19 05.8	+0.7
	7.3nm,0.9s,mb4.4,baz=149,slow=10,SNR=21						
ANMO	Albuquerque	44.07	329	*e*P	P	09 19 06.0	+0.8
	20nm,1.1s,mb4.8						
ANMO	Albuquerque	44.07	329	*i* P	P	09 19 06.4	+1.3
RCBR	Riachuelo	44.58	96	P	P	09 19 07.7	-1.8
	18nm,1.1s,mb4.7						
WUAZ	Wupatki	47.18	325	*e*P	P	09 19 30.1	+0.4
	38nm,1.2s,mb5.0						
WUAZ				*e*PcP	PcP	09 20 59.8	-0.7
PV01	Paradox Valley	47.61	330	*e*P	P	09 19 34.1	+1.0
PV01				*e*		09 19 41.5	
PV10	Paradox Valley	48.03	330	P	P	09 19 36.4	0.0
NEN	Nelson	49.31	323	*e*P	P	09 19 46.5	+0.3
NEN				*e*		09 19 55.1	
ARUT	Antelope Range	49.95	326	*e*P	P	09 19 52.1	+1.0
ARUT				*e*		09 19 57.9	
RSSD	Black Hills	50.49	338	*e*P	P	09 19 55.8	+0.6
	6.0nm,1.1s,mb4.4						
PDAR	Pinedale Array	51.68	333	P	P	09 20 04.0	-0.1
	1.8nm,1.0s,mb4.1,baz=143,slow=7.4,SNR=9.7						
MTUM	Tungsten Hills	52.70	322	*e*P	P	09 20 12.4	+0.6
NVAR	Mina Array Bea	53.22	323	P	P	09 20 16.6	+0.8
	3.0nm,0.8s,mb4.4,baz=131,slow=7.8,SNR=22						
NVAR				LR	LR	09 42 19.6	
	comp=Z,190nm,18.6s,baz=10.0,slow=35						
ULM	Lac du Bonnet	53.66	348	P	P	09 20 17.5	-1.3
	8.1nm,0.9s,mb4.7,baz=151,slow=6.9,SNR=6.9						
QLMT	Earthquake Lak	54.14	333	*e*P	P	09 20 21.5	-0.8
QLMT				*e*		09 20 28.9	
BOZ	Bozeman (W)	54.86	334	*e*P	P	09 20 26.9	-0.7
	8.7nm,0.9s,mb4.8						
MOD	Modoc	56.62	325	*e*P	P	09 20 39.3	-1.0
	8.2nm,1.2s,mb4.6						
RKT	Rikitea	56.84	244	*e*P	P	09 20 41.6	-0.6
	94nm,1.1s						
RKT	Rikitea	56.84	244	*e*LR	LR	09 37 24.7	
	704nm,29.0s,baz=70						
SCHQ	Schefferville	57.69	9	LR	LR	09 45 15.1	
	comp=Z,487nm,18.2s,baz=74,slow=36						
NEW	Newport	59.31	332	P	P	09 20 57.0	-2.0
	1.9nm,0.7s,mb4.2,baz=146,slow=12,SNR=3.0						
NEW	Newport	59.31	332	P	P	09 20 57.0	-2.0
EDM	Edmonton	61.48	338	*e*P	P	09 21 11.7	-2.0
YKA	Yellowknife Ar	69.27	344	P	P	09 22 02.4	-1.1
	1.0nm,0.6s,mb3.9,baz=144,slow=6.1,SNR=5.2						
YKA	Yellowknife Ar	69.27	344	P	P	09 22 02.4	-1.1
PPT	Papeete	69.54	252	*e*LR	LR	09 43 11.3	
	797nm,27.2s,baz=87						
PPT	Papeete	69.54	252	LR	LR	09 43 39.7	
	comp=Z,264nm,21.6s,baz=106,slow=28						

TBI	**Tubuai**	**70.00**	**246**	*e*LR	LR	09 43 28.5	
	580nm,30.8s,baz=78						
DLBC	**Dease Lake**	**71.82**	**335**	P	**P**	**09 22 19.4**	**+0.5**
	7.1nm,0.9s,mb4.5,baz=158,slow=6.8,SNR=7.0						
DLBC	**Dease Lake**	**71.82**	**335**	P	**P**	**09 22 19.4**	**+0.5**
LIC	**Lamto**	**75.71**	**83**	⇑*i*P	**P**	**09 22 41.5**	**-1.0**
	104nm,1.1s,mb5.2						
LIC				*e*R			
	282nm,20.0s						
DBIC	**Dimbokro**	**75.91**	**83**	P	**P**	**09 22 42.9**	**-0.7**
	34nm,1.0s,mb5.0,baz=247,slow=4.0,SNR=15						
DBIC				LR	LR	09 53 17.7	
	comp=Z,232nm,19.6s,baz=245,slow=33						
MAUI	**Maui**	**77.45**	**292**	*i* P	**P**	**09 23 05.8**	**+14**
INK	**Inuvik**	**78.94**	**342**	P	**P**	**09 22 59.4**	**0.0**
	4.3nm,0.7s,mb4.4,baz=144,slow=5.7,SNR=42						
ESDC	**Sonseca Array**	**80.85**	**49**	P	**P**	**09 23 10.7**	**+0.6**
	0.2nm,0.3s,mb3.5,baz=267,slow=4.4,SNR=9.0						
ILAR	**Eielson Array**	**81.92**	**337**	P	**P**	**09 23 15.1**	**-0.1**
	1.9nm,0.9s,mb3.9,baz=130,slow=4.3,SNR=10						
VNA3	**Neumayer Olymp**	**82.04**	**162**	*e*	**P**	**09 23 19.8**	**+4.1**
VNA3	**Neumayer Olymp**	**82.04**	**162**	*e*	**P**	**09 23 25.8**	**+10**
VNA3	**Neumayer Olymp**	**82.04**	**162**	*e*	**P**	**09 23 30.4**	**+15**
VNA3	**Neumayer Olymp**	**82.04**	**162**	⇓*i*P	**P**	**09 23 15.3**	**-0.4**
VNA3				*e*		09 23 19.8	
VNA3				*e*		09 23 25.8	
VNA3				*e*		09 23 30.4	
VNA1	**Neumayer--Stat**	**82.31**	**161**	*e*	**P**	**09 23 21.5**	**+4.4**
VNA1	**Neumayer--Stat**	**82.31**	**161**	*e*	**P**	**09 23 27.1**	**+10**
VNA1	**Neumayer--Stat**	**82.31**	**161**	*e*	**P**	**09 23 32.1**	**+15**
VNA1	**Neumayer--Stat**	**82.31**	**161**	⇓*i*P	**P**	**09 23 16.9**	**-0.2**
VNA1				*e*		09 23 21.5	
VNA1				*e*		09 23 27.1	
VNA1				*e*		09 23 32.1	
COLA	**College**	**82.34**	**337**	P	**P**	**09 23 19.4**	**+2.1**
	7.6nm,1.0s,mb4.5						
VNA2	**Neumayer--Watz**	**82.66**	**162**	*e*	**P**	**09 23 22.9**	**+4.0**
VNA2	**Neumayer--Watz**	**82.66**	**162**	*e*	**P**	**09 23 28.3**	**+9.4**
VNA2	**Neumayer--Watz**	**82.66**	**162**	*e*	**P**	**09 23 33.5**	**+15**
VNA2	**Neumayer--Watz**	**82.66**	**162**	⇓*i*P	**P**	**09 23 18.4**	**-0.5**
VNA2				*e*		09 23 22.9	
VNA2				*e*		09 23 28.3	
VNA2				*e*		09 23 33.5	
ETSF	**Etsaut**	**83.90**	**47**	*e*P	**P**	**09 23 26.1**	**+0.4**
SNAA	**Sanae**	**84.26**	**162**	*e*	**P**	**09 23 29.9**	**+3.0**
SNAA	**Sanae**	**84.26**	**162**	*e*	**P**	**09 23 36.2**	**+9.3**
SNAA	**Sanae**	**84.26**	**162**	*e*	**P**	**09 23 41.6**	**+15**
SNAA	**Sanae**	**84.26**	**162**	⇓*i*P	**P**	**09 23 26.3**	**-0.6**
SNAA				*e*		09 23 29.9	
SNAA				*e*		09 23 36.2	
SNAA				*e*		09 23 41.6	
EKA	**Eskdalemuir Ar**	**84.37**	**34**	P	**P**	**09 23 27.8**	**0.0**
	4.7nm,0.9s,mb4.3,baz=270,slow=3.3,SNR=5.5						
GRR	**Gorron**	**84.53**	**41**	*e*P	**P**	**09 23 28.5**	**-0.2**
	117nm,1.5s,mb5.3						
EPF	**Esparros**	**84.57**	**47**	*e*P	**P**	**09 23 29.5**	**+0.4**
MFF	**Saint Martin d**	**84.73**	**43**	*e*P	**P**	**09 23 29.9**	**+0.1**
	14nm,0.7s,mb4.7						
LDF	**La Druitiere**	**85.04**	**41**	*e*P	**P**	**09 23 31.4**	**+0.1**
	37nm,1.0s,mb5.0						
LFF	**La Frestale**	**85.11**	**45**	*e*P	**P**	**09 23 31.7**	**0.0**
	26nm,0.8s,mb4.9						
DAG	**Danmarks Havn**	**85.64**	**12**	*i* P	**P**	**09 23 39.0**	**+5.4**
DAG	**Danmarks Havn**	**85.64**	**12**	*e*P	**P**	**09 23 39.0**	**+5.4**
MTLF	**Montolieu**	**85.97**	**46**	*e*P	**P**	**09 23 35.8**	**-0.2**
JMIC	**Jan Mayen**	**86.00**	**18**	LR	LR	09 56 25.3	
	comp=Z,182nm,21.7s,baz=267,slow=32						
TCF	**Toulx Ste Croi**	**86.31**	**44**	*e*P	**P**	**09 23 37.2**	**-0.3**
BGF	**Bois d'Agland**	**86.77**	**43**	*e*P	**P**	**09 23 39.7**	**-0.1**
AVF	**Avril sur Loir**	**87.14**	**43**	*e*P	**P**	**09 23 41.3**	**-0.3**
SMF	**Signal de Mont**	**87.46**	**43**	*e*P	**P**	**09 23 43.0**	**-0.2**
QSPA	**South Pole Qui**	**88.11**	**180**	*e*P	**P**	**09 23 45.8**	**+0.3**
	27nm,1.2s,mb5.2						
GIVF	**Givet**	**88.43**	**40**	*e*P	**P**	**09 23 48.0**	**+0.3**
ORIF	**Oris-en-Rattie**	**88.74**	**45**	*e*P	**P**	**09 23 49.6**	**+0.3**
	17nm,1.1s,mb4.7						
ORIF				*e*R			
	201nm,20.0s						
NVL	**N'lazarevskaya**	**88.92**	**161**	*e*P	**P**	**09 24 04.2**	**+15**
NVL				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
FRF	**La Foret Royal**	**89.21**	**47**	*e*P	**P**	**09 23 52.1**	**+0.6**
LPL	**La Plagne**	**89.38**	**45**	*e*P	**P**	**09 23 53.1**	**+0.8**
LPG	**La Plagne**	**89.39**	**45**	*e*P	**P**	**09 23 53.2**	**+0.9**
KBS	**Kingsbay**	**92.36**	**11**	*e*P	**P**	**09 24 05.7**	**+0.3**
NOA	**NORSAR Array B**	**92.49**	**29**	LR	LR	10 02 06.8	
	comp=Z,109nm,18.0s,baz=280,slow=33						
CLL	**Collm**	**93.66**	**39**	P	pP	09 24 27.0	-6.4
	comp=Z,logA/T=0.9						
KHC	**Kasperske Hory**	**94.09**	**41**	*e*P	**P**	**09 24 14.5**	**+0.6**
KHC	**Kasperske Hory**	**94.09**	**41**	⇑*e*P	**P**	**09 24 12.4**	**-1.5**
GERES	**GERESS Array B**	**94.18**	**41**	P	**P**	**09 24 15.6**	**+1.3**
	comp=Z,0.5nm,0.7s,mb3.9,baz=252,slow=4.2,SNR=4.5						
KSP	**Ksiaz**	**95.76**	**39**	*e*P	**P**	**09 24 22.5**	**+1.1**
ARCES	**ARCESS Array B**	**97.36**	**20**	LR	LR	10 03 58.2	
	comp=Z,123nm,20.0s,baz=16,slow=33						
FINES	**FINESS Array B**	**99.56**	**28**	LR	LR	10 03 06.5	
	comp=Z,143nm,20.6s,baz=310,slow=31						
APA	**Apatity**	**100.73**	**21**	⇑*e*P	P	09 24 32.0	-12
ARU	**Arti**	**116.56**	**24**	*i* PKIKP	PKPdf	09 29 44.2	+6.3
ARU				*e*		09 36 20.4	
ARU				*e*SS	SS	09 46 20.7	-25
MAK	**Makhachkala**	**118.29**	**41**	*e*PKPdf	PKPdf	09 29 45.6	+4.1
BRVK	**Borovoye**	**123.58**	**21**	*i* PKPdf	PKPdf	09 29 59.0	+7.4
ZAL	**Zalesovo**	**126.77**	**11**	PKP	PKPdf	09 29 56.9	-0.7
	comp=Z,1.2nm,0.3s,baz=254,slow=0.9,SNR=3.8						
ZAL	**Zalesovo**	**126.77**	**11**	PKP	PKPdf	09 29 56.9	-0.7
KURK	**Kurchatov**	**128.28**	**17**	*e*PKPdf	PKPdf	09 30 03.3	+2.6
KURK				*i* PKPdf	PKPdf	09 30 06.9	+6.2
KURK	**Kurchatov**	**128.28**	**17**	*i* PKIKP	PKPdf	09 30 06.9	+6.2
MDJ	**Mudanjiang**	**129.91**	**332**	PKP	PKPdf	09 30 07.0	+3.0
MDJ				PP	PP		
	comp=Z,120nm,6.5s						
MJAR	**Matsushiro Arr**	**130.44**	**319**	PKP	PKPdf	09 30 05.9	+0.7
	comp=Z,1.4nm,0.8s,baz=45,slow=1.8,SNR=4.8						
ZAK	**Zakamensk**	**131.64**	**357**	*e*PKIKP	PKPdf	09 30 15.5	+8.4
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s						
CN2	**Changchun**	**132.41**	**335**	*e*PKP	PKPdf	09 30 10.0	+1.2
MKAR	**Makanchi Array**	**132.86**	**16**	PKP	PKPdf	09 30 08.8	-0.7
	comp=Z,0.2nm,0.3s,baz=307,slow=2.7,SNR=2.7						
MKAR	**Makanchi Array**	**132.86**	**16**	PKP	PKPdf	09 30 08.8	-0.7
MKAR				⇑*i*PKPdf	PKPdf	09 30 17.8	+8.3
MKAR	**Makanchi Array**	**132.86**	**16**	⇑*i*PKIKP	PKPdf	09 30 17.8	+8.3
SONM	**Songino Array**	**133.91**	**354**	PKP	PKPdf	09 30 11.8	+0.4
	comp=Z,0.2nm,0.6s,baz=270,slow=2.9,SNR=3.2						
WMQ	**Urumqi**	**136.99**	**13**	*e*PKP	PKPdf	09 30 18.6	+1.4
WMQ				XPKP		09 30 31.1	
WMQ				PP	PP	09 33 05.6	+0.9
WMQ				PP	PP		
	comp=Z,150nm,8.0s						
WMQ				LR	LR		
	comp=N,60nm,18.3s						
WMQ				LR	LR		
	comp=E,80nm,36.4s						
WMQ				LR	LR		
	comp=Z,100nm,23.5s						
WB2	**Warramunga Arr**	**139.53**	**236**	*e*P	PKPdf	09 30 13.9	-8.6
WRAB	**Tennant Creek**	**139.54**	**236**	*i* PKIKP	PKPdf	09 30 40.1	+18
WRA	**Warramunga Arr**	**139.54**	**236**	PKhKP		09 30 15.8	
	comp=Z,0.9nm,0.8s,baz=110,slow=3.0,SNR=8.8						
WRA				PKP	PKPdf	09 30 23.0	+0.5
	comp=Z,3.3nm,0.9s,baz=114,slow=2.2,SNR=15						
SSE	**Sheshan**	**144.53**	**327**	*e*PKP	PKPdf	09 30 31.6	+0.6
SSE				PP	PP		
	comp=Z,40nm,5.3s						
NJ2	**Nanjing**	**144.98**	**331**	*e*PKP	PKPdf	09 30 31.5	-0.3
NJ2				APKP		09 30 42.8	
NJ2				XPKP		09 30 45.5	
NJ2				PP	PP	09 33 53.0	-0.9
NJ2				PP	PP		
	comp=Z,130nm,10.0s						
NJ2				LR	LR		
	comp=N,370nm,21.7s						
NJ2				LR	LR		
	comp=E,370nm,28.8s						
NJ2				LR	LR		
	comp=Z,390nm,36.0s						
LZH	**Lanzhou**	**145.80**	**354**	⇓PKP	PKPdf	09 30 35.0	+2.0
LZH				APKP		09 30 43.0	
LZH				XPKP		09 30 45.9	
LZH				*e*PP	PP	09 33 59.2	+0.5
LZH				*e*SS	SS	09 52 47.8	+3.9
LZH				PP	PP		
	comp=Z,60nm,8.2s						
LZH				LR	LR		
	comp=E,160nm,18.5s						
LZH				LR	LR		
	comp=Z,290nm,20.0s						
LZH	**Lanzhou**	**145.80**	**354**	⇓PKP	PKPdf	09 30 35.0	+2.0
LZH				PKP	PKPdf	09 30 37.7	+4.7
LZH				pPKP		09 30 43.0	
LZH				sPKP		09 30 45.9	
LZH				*e*PP	PP	09 33 59.2	+0.5
LZH				SKKS		09 40 45.6	
LZH				*e*SS	SS	09 52 47.8	+3.9
LZH				LR	LR		
	comp=Z,290nm,20.0s						
FITZ	**Fitzroy Crossi**	**147.50**	**231**	*e*P	PKPdf	09 30 36.6	+0.2
	comp=Z,31nm,0.8s						
KOLN	**Koldanda**	**150.12**	**29**	*e*P	PKPdf	09 30 45.3	+5.0
	comp=Z,68nm,1.4s						
ENH	**Enshi**	**150.30**	**342**	*e*PKPdf	PKPdf	09 30 42.3	+1.8
ENH				*e*PKPbc	PKPdf	09 30 46.6	+6.1
ENH				*e*PKPab	PKPab	09 30 53.6	-0.9
GKN	**Gorkha**	**150.42**	**27**	*e*P	PKPdf	09 30 42.3	+1.5
	comp=Z,123nm,1.5s						
KKN	**Kakani**	**150.89**	**27**	*e*P	PKPdf	09 30 46.8	+5.3
	comp=Z,24nm,0.8s						
CD2	**Chengdu**	**150.92**	**353**	*e*PKP	PKPdf	09 30 47.3	+5.9
PKI	**Pulchoki**	**151.14**	**27**	*e*P	PKPdf	09 30 49.8	+8.0
	comp=Z,31nm,1.0s						
LSA	**Lhasa**	**151.26**	**15**	*e*PKPbc	PKPdf	09 30 57.0	+15
LSA				*e*PKPab	PKPab	09 31 05.4	+6.9
JIRN	**Jiri**	**151.41**	**25**	*e*P	PKPdf	09 30 50.6	+8.4
	comp=Z,12nm,0.6s						
KMI	**Kunming**	**156.76**	**353**	PKP	PKPdf	09 30 51.8	+2.2

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*LDG **05** 09:19:42.4±0.1,49.38N×6.90E,h1^{km},Md3.0/3,Ml2.9/29, Error ellipse: s-maj=1.1km s-min=0.9km az=12.0, Suspected Mining induced.*
*STR **05** 09:19:42.1±0.3,49.37N×6.87E,h1^{km}±1^{km},Ml2.5,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **05** 09:19:42.1,49.37N×6.87E,h1^{km},ML2.9(LDG), ML2.9(CSEM),ML2.5(STR),ML2.3(LEDBW),After STR.*
*CSEM **05** 09:19:42.2±0.0,49.39N×6.91E,h2^{km},ML3.0/25,Error ellipse: s-maj=0.8km s-min=0.7km az=143.0*
*BNS **05** 09:19:43.2±0.8,49.40N×7.00E,h1^{km},ML2.1*
BGR 05 09:19:41.9±0.4,**49.38N×6.91E,h1**^{km}**,ML2.1**/3,**Error ellipse: s-maj=6.7km s-min=4.4km az=3.0,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLF	**Walferdange**	**0.57**	**301**	*e*Pg	Pg	09 19 53.2	-0.1
	SNR=7.8						
WLF				*e*Sg	Sg	09 19 59.6	-1.3
	SNR=19						
WLF	**Walferdange**	**0.57**	**301**	*e*Pg	Pg	09 19 52.9	-0.4
WLF				*e*Sg	Sg	09 19 59.3	-1.7
ABH	**Alteburg**	**0.66**	**39**	Pg	Pg	09 19 54.3	-0.7
LANF	**Langenberg**	**0.71**	**124**	Pg	Pg	09 19 56.5	+0.5
KTD	**Kalmit**	**0.77**	**94**	Pg	Pg	09 19 57.1	-0.2
BGG	**Burgeitz**	**0.88**	**18**	*e*Pg	Pg	09 19 58.8	-0.6
HILG	**Hillesheim**	**0.93**	**351**	*e*Pg	Pg	09 20 00.7	+0.2
CDF	**Champ du Feu**	**0.99**	**166**	*e*Pg	Pg	09 20 01.0	-0.7
CDF				*e*Pn	Pn	09 20 01.8	-1.0
CDF				*e*Sg	Sg	09 20 13.8	-1.2
	32nm,0.2s						
CDF	**Champ du Feu**	**0.99**	**166**	*e*Pn	Pn	09 20 01.8	-1.0
CDF				*e*Sg	Sg	09 20 13.8	-1.2
	16nm,0.2s						
WLS	**Welschbruch**	**1.01**	**163**	Pg	Pg	09 20 01.5	-0.5
WLS				Sg	Sg	09 20 15.4	0.0
ECH	**Echery**	**1.17**	**172**	Pg	Pg	09 20 04.8	-0.5
ECH				Sg	Sg	09 20 19.8	-1.1
KOE	**Koeppel**	**1.18**	**26**	*e*Pg	Pg	09 20 04.6	-0.8
KOE				*e*Sg	Sg	09 20 19.6	-1.6
	59nm,0.3s						
RFYF	**Reffroy**	**1.21**	**232**	*e*Pg	Pg	09 20 05.1	-0.9
	baz=50						
RFYF				*e*Sg	Sg	09 20 20.7	-1.3
	70nm,0.2s						
TOD	**Tromm**	**1.26**	**79**	Pg	Pg	09 20 06.0	-1.0
TOD				Sg	Sg	09 20 23.5	-0.2
THEF	**They Montfort**	**1.30**	**208**	Pg	Pg	09 20 06.4	-1.5
THEF				Sg	Sg	09 20 23.6	-1.6
LIBD	**Limburg**	**1.31**	**159**	Pg	Pg	09 20 07.4	-0.6
LIBD				Sg	Sg	09 20 25.0	-0.5
TNS	**Taunus Mts**	**1.31**	**49**	*e*Pg	Pg	09 20 06.9	-1.1
	SNR=1.9						
TNS				*e*Sg	Sg	09 20 25.0	-0.5
	SNR=18						
TNS	**Taunus Mts**	**1.31**	**49**	*e*Pg	Pg	09 20 06.6	-1.4
TNS				*e*Sg	Sg	09 20 25.1	-0.4
KLL	**Kalltalsperre**	**1.33**	**343**	*e*Pg	Pg	09 20 06.5	-1.9
BFO	**Black Forest**	**1.40**	**138**	*e*Pg	Pg	09 20 07.7	-2.2
	SNR=1.1						
BFO				*e*Sg	Sg	09 20 26.4	-2.2
	SNR=24						
BFO	**Black Forest**	**1.40**	**138**	*e*Pg	Pg	09 20 07.7	-2.2
BFO				*e*Sg	Sg	09 20 27.6	-1.1
BFO	**Black Forest**	**1.40**	**138**	Pg	Pg	09 20 07.7	-2.2
	SNR=1.1						
BFO				*e*Sg	Sg	09 20 27.6	-1.1
HAU	**Haudompre**	**1.42**	**195**	*e*Pn	Pn	09 20 07.7	-1.2
HAU				*e*Pg	Pg	09 20 08.9	-1.4
HAU				*e*Sn	Sn	09 20 25.5	-3.0
	41nm,0.2s						
HAU				*e*Sg	Sg	09 20 27.3	-1.9
	38nm,0.2s						
MEZF	**Maizieres J'vi**	**1.50**	**235**	*e*Pn	Pn	09 20 08.8	-1.3
	baz=51						
MEZF				*e*Pg	Pg	09 20 10.4	-1.6
MEZF				*e*Sn	Sn	09 20 27.9	-2.8
	23nm,0.4s						
MEZF				*e*Sg	Sg	09 20 29.8	-2.2
	26nm,0.4s						
HGN	**Heimansgroeve**	**1.53**	**336**	*e*Pg	Pg	09 20 09.3	-3.1
	2.7nm,0.1s						
HGN				*e*Sg	Sg	09 20 30.1	-2.6
MOF	**Molkenrain**	**1.53**	**174**	Pg	Pg	09 20 11.1	-1.4
MOF				Sg	Sg	09 20 31.6	-1.3
GIVF	**Givet**	**1.54**	**299**	*e*Pn	Pn	09 20 09.5	-1.1
GIVF				*e*Pg	Pg	09 20 11.2	-1.4
GIVF				*e*Sg	Sg	09 20 30.7	-2.4
	34nm,0.2s						
HINF	**Hinteralfeld**	**1.56**	**181**	*e*Pn	Pn	09 20 09.3	-1.6
HINF				*e*Pg	Pg	09 20 11.4	-1.7
HINF				*e*Sn	Sn	09 20 29.3	-2.7
HINF				*e*Sg	Sg	09 20 31.7	-2.1
	76nm,0.2s						
HOBG	**Hohbusch**	**1.63**	**9**	*e*Sg	Sg	09 20 31.9	-4.3
SFTF	**Sexfontaines**	**1.70**	**227**	*e*Pn	Pn	09 20 11.7	-1.3
SFTF				*e*Pg	Pg	09 20 14.1	-1.8
	baz=52						
SFTF				*e*Sn	Sn	09 20 32.5	-3.2
SFTF				*e*Sg	Sg	09 20 36.0	-2.6
	16nm,0.3s						
SFTF	**Sexfontaines**	**1.70**	**227**	*e*Pg	Pg	09 20 14.1	-1.8
SFTF				*e*Sn	Sn	09 20 32.5	-3.2
SFTF				*e*Sg	Sg	09 20 36.0	-2.6
	8.0nm,0.3s						
BAIF	**Baives**	**1.88**	**292**	*e*Pn	Pn	09 20 14.5	-1.0
BAIF				*e*Pg	Pg	09 20 17.5	-2.0
BAIF				*e*Sn	Sn	09 20 36.9	-3.4
BAIF				*e*Sg	Sg	09 20 41.3	-3.3
	14nm,0.3s						
LOMF	**Lomont**	**2.03**	**182**	Pg	Pg	09 20 20.1	-2.3
LOMF				Sg	Sg	09 20 47.8	-1.6
CABF	**La Chapelle**	**2.82**	**192**	*e*Pn	Pn	09 20 26.9	-2.0
CABF				*e*Pg	Pg	09 20 34.7	-3.5
CABF				*e*Sn	Sn	09 20 59.7	-4.4
CABF				*e*Sg	Sg	09 21 10.9	-4.9
	7.4nm,0.3s						
LOR	**Lormes**	**2.93**	**225**	*e*Pn	Pn	09 20 27.9	-2.6
	baz=50						
LOR				*e*Pg	Pg	09 20 37.1	-3.3
	baz=41						
LOR				*e*Sn	Sn	09 21 02.2	-4.7
LOR				*e*Sg	Sg	09 21 14.6	-4.9
	13nm,0.3s						
LOR	**Lormes**	**2.93**	**225**	*e*Pg	Pg	09 20 37.1	-3.3
LOR				*e*Sn	Sn	09 21 02.2	-4.7
LOR				*e*Sg	Sg	09 21 14.6	-4.9
	6.6nm,0.3s						
SSF	**Saint Saulge**	**3.25**	**226**	*e*Pn	Pn	09 20 31.9	-3.1
SSF				*e*Pg	Pg	09 20 42.6	-4.1
SSF				*e*Sn	Sn	09 21 09.5	-5.4
SSF				*e*Sg	Sg	09 21 24.1	-5.9
	14nm,0.6s						
MOX	**Moxa**	**3.29**	**65**	*e*Sg	Sg	09 21 26.2	-5.3
	SNR=1.8						
CLZ	**Clausthal**	**3.31**	**40**	*e*Sg	Sg	09 21 26.7	-5.4
	SNR=1.4						
NOTT	**Nottersdorf**	**3.42**	**81**	*e*Sg	Sg	09 21 31.0	-4.7
	SNR=1.1						
SMF	**Signal de Mont**	**3.42**	**218**	*e*Pn	Pn	09 20 34.3	-3.2
SMF				*e*Pg	Pg	09 20 45.9	-4.3
SMF				*e*Sn	Sn	09 21 13.4	-5.9
SMF				*e*Sg	Sg	09 21 29.5	-6.3
	6.0nm,0.3s						
AVF	**Avril sur Loir**	**3.52**	**224**	*e*Pn	Pn	09 20 35.6	-3.3
AVF				*e*Pg	Pg	09 20 47.7	-4.4
AVF				*e*Sn	Sn	09 21 15.6	-6.1
	3.8nm,0.3s						
AVF				*e*Sg	Sg	09 21 32.9	-6.1
	4.9nm,0.5s						
HYF	**Humbligny**	**3.54**	**235**	*e*Pn	Pn	09 20 36.8	-2.4
HYF				*e*Pg	Pg	09 20 48.4	-4.3
HYF				*e*Sn	Sn	09 21 16.7	-5.7
HYF				*e*Sg	Sg	09 21 33.4	-6.5
GUNZ	**Gunzen**	**3.64**	**72**	*e*Sg	Sg	09 21 37.8	-5.4
	SNR=2.3						
WERD	**Werda**	**3.65**	**71**	*e*Pg	Pg	09 20 50.6	-4.1
	SNR=1.7						
WERD				*e*Sg	Sg	09 21 37.5	-5.9
	SNR=1.8						
TANN	**Tannenbergstha**	**3.74**	**72**	*e*Pn	Pn	09 20 36.6	-5.4
	SNR=1.8						
TANN				*e*Pg	Pg	09 20 52.9	-3.6
	SNR=1.9						
TANN				*e*Sg	Sg	09 21 38.7	-7.6
	SNR=2.7						
LPL	**La Plagne**	**3.86**	**182**	*e*Pn	Pn	09 20 41.4	-2.3
LPL				*e*Pg	Pg	09 20 54.3	-4.7
LPL				*e*Sg	Sg	09 21 43.8	-6.7
	3.6nm,0.6s						
LPG	**La Plagne**	**3.88**	**182**	*e*Pn	Pn	09 20 41.9	-2.1
LPG				*e*Pg	Pg	09 20 54.8	-4.6
LPG				*e*Sg	Sg	09 21 44.5	-6.6
	1.7nm,0.3s						
BGF	**Bois d'Agland**	**3.92**	**226**	*e*Pn	Pn	09 20 41.3	-3.3
BGF				*e*Pg	Pg	09 20 55.2	-5.1
BGF				*e*Sn	Sn	09 21 25.2	-6.8
BGF				*e*Sg	Sg	09 21 45.5	-7.1
	24nm,0.5s						
TCF	**Toulx Ste Croi**	**4.42**	**227**	*e*Pn	Pn	09 20 48.4	-3.3
TCF				*e*Pg	Pg	09 21 04.1	-6.1
TCF				*e*Sn	Sn	09 21 37.5	-7.1
TCF				*e*Sg	Sg	09 22 01.1	-8.1
	6.0nm,0.4s						
GEC2	**GERESS Array S**	**4.49**	**94**	*e*Pn	Pn	09 20 51.7	-1.0
	SNR=7.1						
ORIF	**Oris-en-Rattie**	**4.51**	**189**	*e*Pn	Pn	09 20 49.7	-3.3
ORIF				*e*Pg	Pg	09 21 06.6	-5.4
ORIF				*e*Sg	Sg	09 22 04.1	-8.1
	2.9nm,0.4s						
LDF	**La Druitiere**	**4.70**	**263**	*e*Pn	Pn	09 20 52.1	-3.5
LDF				*e*Sn	Sn	09 21 43.9	-7.7
LDF				*e*Sg	Sg	09 22 09.6	-8.7
	1.5nm,0.3s						
FLN	**La Foliniere**	**4.90**	**266**	*e*Pn	Pn	09 20 53.7	-4.8
FLN				*e*Sn	Sn	09 21 49.1	-7.6
FLN				*e*Sg	Sg	09 22 15.7	-9.3
	7.3nm,0.4s						
GRR	**Gorron**	**5.22**	**262**	*e*Pn	Pn	09 20 58.8	-4.2
GRR				*e*Pg	Pg	09 21 19.3	-6.8
GRR				*e*Sg	Sg	09 22 26.2	-10
	2.3nm,0.3s						
SGMF	**Saint Gilles**	**6.35**	**263**	*e*Pn	Pn	09 21 14.7	-4.3
SGMF				*e*Pg	Pg	09 21 40.5	-8.3
SGMF				*e*Sn	Sn	09 22 23.2	-10
SGMF				*e*Sg	Sg	09 23 00.5	-13
	0.8nm,0.2s						
ROSF	**Rostrenen**	**6.80**	**265**	*e*Pn	Pn	09 21 20.1	-5.2
ROSF				*e*Pg	Pg	09 21 47.5	-10
ROSF				*e*Sn	Sn	09 22 33.4	-11
	4.0nm,0.3s						
QUIF	**Quistinic**	**6.83**	**261**	*e*Pn	Pn	09 21 21.4	-4.4
QUIF				*e*Sg	Sg	09 23 15.5	-14
	2.0nm,0.4s						

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*PRU **05** 10:07:24.3,51.40N×16.23E*
*WAR **05** 10:07:24.3,51.45N×16.16E,h1^{km},ML2.6,Mining Induced*
ISC 05 10:07:22.6±0.9,**51.39N**±0.05×**16.17E**±0.05,**n10,**σ**1**^{s}**19**/22,**2D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.56**	**172**	⇓*i*PG	**Pg**	**10 07 35.5**	**+1.8**
KSP				⇓*e*SG	**Sg**	**10 07 44.5**	**+3.4**
UPC	**Upice**	**0.89**	**186**	*e*PG	**Pg**	**10 07 41.7**	**+1.3**
DPC	**Dobruska-Polom**	**1.05**	**174**	*e*PG	**Pg**	**10 07 44.3**	**+0.8**
DPC				*e*SG	**Sg**	**10 07 58.9**	**+1.4**
	8.9nm,0.3s						
PVCC	**Panska Ves**	**1.33**	**230**	*e*PG	**Pg**	**10 07 49.7**	**+0.6**
PRU	**Pruhonice**	**1.74**	**217**	*e*PN	**Pn**	**10 07 55.0**	**+0.7**
PRU				*e*PG	**Pg**	**10 07 56.5**	**-0.9**
PRU				*e*SG	**Sg**	**10 08 20.2**	**-0.4**
	15nm,0.5s						
CLL	**Collm**	**1.98**	**269**	*e*PN	**Pn**	**10 07 59.0**	**+1.2**
CLL				*e*PG	**Pg**	**10 08 02.0**	**-0.2**
CLL				*i*		10 08 04.6	
CLL				*e*SG	**Sg**	**10 08 28.0**	**-0.7**
OKC	**Ostrava-Krasne**	**2.00**	**140**	*e*SG	**Sg**	**10 08 27.5**	**-1.8**
OJC	**Ojcow**	**2.59**	**116**	*e*PG	**Pg**	**10 08 14.0**	**-0.2**
OJC				*e*SG	**Sg**	**10 08 47.0**	**-1.7**
NKC	**Novy Kostel**	**2.63**	**245**	*e*PN	**Pn**	**10 08 07.5**	**+0.5**
NKC				*e*PG	**Pg**	**10 08 14.3**	**-0.7**
NKC				*e*SG	**Sg**	**10 08 49.6**	**-0.5**
	11nm,0.3s						
KHC	**Kasperske Hory**	**2.81**	**217**	*e*PN	**Pn**	**10 08 10.3**	**+0.8**
KHC				*e*PG	**Pg**	**10 08 15.5**	**-3.1**
KHC				*e*SN	**Sn**	**10 08 44.5**	**-0.1**
KHC				*e*SG	**Sg**	**10 08 53.8**	**-2.2**

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*ISK **05** 10:11:28.4,38.24N×26.73E,h22^{km},MD3.1*
*ATH **05** 10:11:28.2,38.17N×26.83E,h38^{km}±2^{km},MD3.2/3*
*CSEM **05** 10:11:28.9±0.1,38.22N×26.82E,h25^{km},MD3.1,Error ellipse: s-maj=4.5km s-min=2.6km az=114.0*
ISC 05 10:11:27.8±0.9,**38.16N**±0.03×**26.67E**±0.05,**h2**^{km}±6^{km}**, n15,**σ**0**^{s}**98**/24,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.21**	**343**	*i* P	**Pg**	**10 11 32.3**	**+0.4**
URLA				*i* S	**Sg**	**10 11 35.7**	**+1.0**
BLCB	**Balcova**	**0.37**	**52**	PG	**Pg**	**10 11 35.4**	**+0.3**
SMG	**Samos**	**0.47**	**164**	*e*PB	**Pb**	**10 11 38.8**	**+0.4**
SMG				*e*SB	**Sb**	**10 11 46.4**	**+0.9**
IZM	**Izmir**	**0.52**	**63**	PG	**Pg**	**10 11 38.3**	**+0.2**
IZM				SG	**Sg**	**10 11 45.3**	**+0.2**
KDAG	**Bornova**	**0.53**	**62**	*i* P	**Pg**	**10 11 37.4**	**-0.8**
KDAG				*i* S	**Sg**	**10 11 44.9**	**-0.4**
AYDN	**Tasoluk**	**1.08**	**117**	*i* P	**Pb**	**10 11 49.2**	**+0.5**
AYDN				*i* S	**Sb**	**10 12 03.1**	**0.0**
PRK	**Paraskevi**	**1.13**	**344**	*e*PN	**Pn**	**10 11 49.6**	**-0.8**
PRK				*e*SN	**Sn**	**10 12 05.3**	**-1.4**
AKS	**Akhisar**	**1.15**	**51**	PG	**Pg**	**10 11 48.9**	**-1.7**
AYVA	**Ayvalik**	**1.15**	**1**	*i* P	**Pb**	**10 11 50.2**	**+0.3**
AYVA				*i* S	**Sb**	**10 12 06.9**	**+1.8**
BODT	**Bodrum**	**1.21**	**155**	*e*PN	**Pn**	**10 11 50.6**	**-1.0**
BODT				*e*SN	**Sn**	**10 12 08.6**	**-0.1**
MLSB	**Milas**	**1.23**	**134**	*e*PN	**Pn**	**10 11 51.0**	**-0.9**
APE	**Apeiranthos**	**1.42**	**220**	PN	**Pn**	**10 11 54.9**	**+0.3**
APE	**Apeiranthos**	**1.42**	**220**	*e*PN	**Pn**	**10 11 54.6**	**0.0**
MANT	**Manisa**	**1.52**	**77**	*i* P	**Pn**	**10 11 57.9**	**+1.9**
MANT				*i* S	**Sb**	**10 12 16.5**	**+0.6**
BALB	**Balikesir**	**1.75**	**32**	*e*PN	**Pn**	**10 11 56.4**	**-3.0**

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*NEIC **05** 10:20:11.8±1.1,20.38S×177.67W,h458^{km}±13^{km},mb4.1/6, Error ellipse: s-maj=20.4km s-min=8.8km az=149.0*
*IDC **05** 10:20:11.5±2.7,20.35S×177.72W,h451^{km}±30^{km},mb3.3/6, mb1 3.6/8,mb1mx3.5/14,mbtmp4.2/8,Error ellipse:*

s-maj=44.6km s-min=15.8km az=150.0

ISC 05 10:20:09.4±1.4**, 20.3S**±0.2×**177.8W**±0.1**, h440**^{km}±17^{km}**,**
n20, σ**0**$\overset{s}{.}$**94**/22**, mb3.8**/11**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.54**	**43**	P	**P**	**10 22 12.9**	**+1.0**
	14nm,0.3s,baz=160,slow=3.7,SNR=21						
AFI				S	**S**	**10 23 47.6**	**-1.3**
	3.8nm,0.3s,baz=52,slow=20,SNR=5.5						
AFI	**Afiamalu**	**8.54**	**43**	*e*Pn	**P**	**10 22 12.8**	**+0.8**
AFI				*e*Sn	**S**	**10 23 47.7**	**-1.1**
DZM	**Mont Dzumac**	**14.83**	**260**	P	**P**	**10 23 23.3**	**+2.7**
	0.7nm,0.3s,baz=91,slow=16,SNR=7.7						
DZM				S	**S**	**10 25 50.9**	**-3.6**
	0.2nm,0.3s,baz=358,slow=18,SNR=7.0						
CNB	**Canberra Magne**	**32.53**	**236**	*e*P	**P**	**10 26 04.1**	**+0.5**
	13nm,0.6s,mb4.4						
CTA	**Charters Tower**	**33.73**	**264**	*e*P	**P**	**10 26 14.8**	**+1.0**
	2.7nm,0.4s,mb3.9						
CTAO	**Charters Tower**	**33.73**	**264**	*e*P	**P**	**10 26 14.6**	**+0.8**
	3.1nm,0.4s,mb4.0						
TOO	**Toolangi**	**36.20**	**234**	*e*P	**P**	**10 26 34.8**	**+0.4**
	4.3nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**38.08**	**244**	P	**P**	**10 26 50.3**	**+0.4**
	5.5nm,0.8s,mb3.9,baz=90,slow=7.4,SNR=9.1						
ASPA	**Alice Springs**	**44.78**	**256**	⇓*i*P	**P**	**10 27 43.4**	**-0.5**
WB2	**Warramunga Arr**	**44.83**	**262**	*e*P	**P**	**10 27 43.7**	**-0.7**
WRAB	**Tennant Creek**	**44.84**	**262**	*e*P	**P**	**10 27 43.8**	**-0.6**
	3.7nm,0.6s,mb3.9						
WRAB				*e*		10 28 18.7	
WRA	**Warramunga Arr**	**44.84**	**262**	P	**P**	**10 27 43.9**	**-0.6**
	1.7nm,0.3s,mb3.9,baz=97,slow=7.2,SNR=98						
QSPA	**South Pole Qui**	**69.79**	**180**	*e*P	**P**	**10 30 33.7**	**-1.4**
MJAR	**Matsushiro Arr**	**70.16**	**323**	P	**P**	**10 30 38.2**	**+0.2**
	3.1nm,0.6s,mb4.0,baz=156,slow=5.7,SNR=14						
MJAR	**Matsushiro Arr**	**70.16**	**323**	P	**P**	**10 30 38.2**	**+0.2**
MAJO	**Matsushiro**	**70.16**	**323**	*e*P	**P**	**10 30 38.0**	**0.0**
	3.1nm,0.6s,mb4.0						
NVAR	**Mina Array Bea**	**80.72**	**43**	P	**P**	**10 31 37.3**	**+0.7**
	0.8nm,0.9s,mb3.5,baz=218,slow=7.6,SNR=5.6						
TXAR	**Lajitas Array**	**86.75**	**57**	P	**P**	**10 32 07.5**	**+0.6**
	0.3nm,0.6s,mb3.2,baz=211,slow=7.3,SNR=5.0						
PDAR	**Pinedale Array**	**88.65**	**43**	P	**P**	**10 32 15.3**	**-0.1**
	0.5nm,0.8s,mb3.3,baz=270,slow=1.5,SNR=3.7						
AKASG	**Malin Array Be**	**142.92**	**331**	PKhKP		10 38 48.3	
	0.9nm,0.4s,baz=40,slow=4.0,SNR=6.3						

NNC 05 10:25:53.5±3.6**, 39.15N**×**71.84E, mpv2.5, 3C-2D, Error ellipse: s-maj=37.2km s-min=27.0km az=168.0,**
Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**4.02**	**29**	⇑Pn	Pn	10 26 57.0	-0.7
	1.0nm,0.5s						
AAK				⇑Lg		10 27 59.1	
	4.6nm,0.9s						
KK31	**Karatay Array**	**4.08**	**346**	⇓Pn	Pn	10 26 59.9	+1.4
	0.2nm,0.3s,baz=164,slow=14,SNR=3.5						
KK31				⇑Lg		10 28 03.3	
	0.9nm,0.3s,baz=167,slow=18,SNR=15						
AB31	**Akbulak array**	**13.21**	**324**	⇓P	P	10 29 00.4	-4.5
	0.1nm,0.4s,baz=138,slow=12,SNR=4.8						

ISK ***05*** *10:28:56.9, 38.22N×26.63E, h28*^{km}*, MD2.8*
ATH ***05*** *10:28:56.7, 38.08N×26.59E, h35*^{km}*±4*^{km}*, MD3.0/3*
CSEM ***05*** *10:28:57.7±0.1, 38.15N×26.70E, h25*^{km}*, MD2.8, Error ellipse: s-maj=4.4km s-min=2.9km az=95.0*
ISC 05 10:28:57.3±0.8**, 38.14N**±0.03×**26.57E**±0.06**, h19**^{km}±7^{km}**,**
n12, σ**0**$\overset{s}{.}$**87**/20**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.22**	**5**	*i* P	**Pb**	**10 29 01.4**	**-1.2**
URLA				*i* S	**Sb**	**10 29 06.5**	**+0.2**
BLCB	**Balcova**	**0.44**	**57**	*e*PG	**Pb**	**10 29 05.8**	**-0.5**
BLCB				*e*SG	**Sb**	**10 29 11.6**	**-0.8**
SMG	**Samos**	**0.48**	**154**	*e*PB	**Pb**	**10 29 06.5**	**-0.4**
SMG				*e*SB	**Sb**	**10 29 13.7**	**+0.2**
IZM	**Izmir**	**0.60**	**65**	*e*PG	**Pb**	**10 29 08.0**	**-0.9**
IZM				*e*SG	**Sb**	**10 29 17.8**	**+0.9**
KDAG	**Bornova**	**0.61**	**64**	*i* P	**Pb**	**10 29 09.6**	**+0.6**
KDAG				*i* S	**Sb**	**10 29 17.4**	**+0.3**
PRK	**Paraskevi**	**1.13**	**348**	*e*PN	**Pn**	**10 29 18.7**	**+0.5**
PRK				*e*SN	**Sn**	**10 29 34.6**	**+1.4**
AYDN	**Tasoluk**	**1.14**	**115**	*i* P	**Pb**	**10 29 19.4**	**+1.3**
AYDN				*i* S	**Sb**	**10 29 33.9**	**+1.3**
AKS	**Akhisar**	**1.22**	**53**	*e*PN	**Pn**	**10 29 17.4**	**-2.1**
BODT	**Bodrum**	**1.23**	**151**	*e*PN	**Pn**	**10 29 19.3**	**-0.3**
BODT				*e*SN	**Sn**	**10 29 35.5**	**-0.2**
MLSB	**Milas**	**1.27**	**131**	*e*PN	**Pn**	**10 29 19.4**	**-0.9**
APE	**Apeiranthos**	**1.35**	**218**	*e*PN	**Pn**	**10 29 22.0**	**+0.6**
YER	**Yerkesik**	**1.69**	**126**	*e*PN	**Pn**	**10 29 25.9**	**-0.3**

IDC ***05*** *10:28:58.5±6.3, 11.70N×39.81E, mb3.8/7, mb1 3.9/8, mb1mx3.8/19, mbtmp3.8/8, ML4.0/1, MS3.6/3, Ms1 3.5/3, ms1mx3.3/22, Error ellipse: s-maj=131.8km s-min=24.6km az=24.0*
DHMR ***05*** *10:29:06.8±2.5, 12.66N×40.56E, h2*^{km}*±12*^{km}*, ML3.9*
ISC 05 10:29:04.5±1.0**, 12.6N**±0.1×**40.23E**±0.06**, h10**^{km}**, n16,**
σ**1**$\overset{s}{.}$**18**/18**, mb3.7**/7**, MS3.5**/3**, 4D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**2.76**	**112**	Pn	**Pn**	**10 29 48.1**	**-1.5**
	22nm,0.3s,baz=286,slow=9.8,SNR=56						
ATD				Sn	**Sn**	**10 30 24.9**	**+1.5**
	16nm,0.3s,baz=89,slow=23,SNR=8.0						
TRBA	**At Turbah**	**3.84**	**80**	⇓*e*P	**Pn**	**10 30 05.3**	**+0.2**
TRBA				*i* S	**Sn**	**10 30 50.7**	**0.0**
TRBA				AML	AML	10 31 11.3	
	comp=N,599nm,0.7s						
UDYN	**Al ‘Udayn**	**3.89**	**69**	⇓*e*P	**Pn**	**10 30 06.2**	**+0.5**
UDYN				*i* S	**Sn**	**10 30 52.2**	**+0.2**
UDYN				AML	AML	10 31 20.0	
	comp=E,383nm,0.8s						
DHBB	**Dhamar BB**	**4.50**	**63**	⇓*e*P	**Pn**	**10 30 14.2**	**-0.2**
DHBB				*i* S	**Sn**	**10 31 06.9**	**-0.6**
LBOS		**5.05**	**75**	⇓*e*P	**Pn**	**10 30 19.0**	**-3.2**
LBOS				*i* S	**Sn**	**10 31 16.0**	**-5.4**
BDHA	**Al Bayda’**	**5.38**	**74**	*i* S	**Sn**	**10 31 23.8**	**-5.7**
BRTR	**Keskin Array B**	**27.66**	**349**	P	**P**	**10 34 57.2**	**+2.6**
	comp=E,1.9nm,0.9s,mb3.7,baz=164,slow=9.0,SNR=8.3						
GNI	**Garni**	**27.75**	**7**	LR	LR	10 46 26.4	
	comp=E,87nm,19.8s,MS3.3,baz=37,slow=36						
LSZ	**Lusaka**	**30.13**	**204**	LR	LR	10 47 24.6	
	comp=E,93nm,21.8s,MS3.4,baz=57,slow=38						
AKASG	**Malin Array Be**	**39.07**	**349**	P	**P**	**10 36 33.7**	**+0.3**
	comp=E,0.9nm,0.7s,mb3.6,baz=170,slow=7.3,SNR=7.2						
AKTO	**Aktyubinsk**	**40.46**	**18**	P	**P**	**10 36 46.3**	**+1.5**
	comp=E,1.3nm,0.8s,mb3.7,baz=235,slow=5.7,SNR=5.2						
GERES	**GERESS Array B**	**42.31**	**334**	P	**P**	**10 36 58.0**	**-2.1**
	comp=E,0.5nm,0.5s,mb3.4,baz=135,slow=9.4,SNR=4.4						
BOSA	**Boshof**	**43.43**	**199**	LR	LR	10 54 18.9	
	comp=E,112nm,19.1s,MS3.8,baz=115,slow=36						
MKAR	**Makanchi Array**	**49.06**	**38**	P	**P**	**10 37 54.0**	**+0.2**
	comp=E,1.1nm,0.8s,mb3.9,baz=239,slow=7.1,SNR=9.9						
ZAL	**Zalesovo**	**54.15**	**31**	P	**P**	**10 38 30.9**	**-1.0**
	comp=E,0.8nm,0.7s,mb3.8,baz=256,slow=3.5,SNR=5.8						
SONM	**Songino Array**	**64.81**	**43**	P	**P**	**10 39 45.8**	**+0.1**
	comp=E,1.2nm,0.8s,mb4.0,baz=256,slow=5.6,SNR=9.0						

NEIC ***05*** *10:36:37.2±0.8, 15.97S×69.69W, h210*^{km}*±8*^{km}*, mb4.0/1, Error ellipse: s-maj=16.1km s-min=13.2km az=117.0*
IDC ***05*** *10:36:37.2±2.5, 15.99S×69.76W, h202*^{km}*±26*^{km}*, mb3.6/3, mb1 3.4/5, mb1mx3.2/19, mbtmp3.7/5, Error ellipse: s-maj=55.8km s-min=23.3km az=92.0*
ISC 05 10:36:36.4±0.8**, 15.96S**±0.10×**69.7W**±0.1**, h219**^{km}±7^{km}**,**
n12, σ**0**$\overset{s}{.}$**95**/12**, mb3.8**/4**, 1C, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**1.53**	**103**	P	**P**	**10 37 13.9**	**+1.4**
	44nm,0.3s,baz=310,slow=7.8,SNR=1149						
LPAZ				S	**S**	**10 37 39.9**	**-0.5**
	7.1nm,0.3s,baz=9.2,slow=24,SNR=4.5						
ARE	**Arequipa**	**1.80**	**254**	⇑*i*P	**P**	**10 37 14.4**	**-0.5**
SIV	**San Ignacio**	**8.29**	**91**	P	**P**	**10 38 34.6**	**+0.4**
	0.2nm,0.3s,baz=291,slow=6.8,SNR=4.2						
SAML	**Samuel**	**9.43**	**43**	*e*Pn	**P**	**10 38 47.7**	**-1.1**
CFAA	**Coronel Fontan**	**15.63**	**175**	P	**P**	**10 40 06.9**	**+0.2**
	0.1nm,0.3s,baz=356,slow=10.0,SNR=3.3						
TRQA	**Tornquist**	**23.04**	**164**	*e*P	**P**	**10 41 23.9**	**+0.5**
PLCA	**Paso Flores**	**24.70**	**182**	P	**P**	**10 41 38.8**	**-0.2**
	2.6nm,1.1s,mb3.8,baz=4.5,slow=9.7,SNR=3.0						
SNAA	**Sanae**	**67.74**	**162**	*e*P	**P**	**10 47 10.0**	**-1.8**
	5.0nm,1.5s,mb3.9						
ULM	**Lac du Bonnet**	**69.84**	**342**	P	**P**	**10 47 24.8**	**-0.2**
	1.3nm,0.4s,mb4.0,baz=158,slow=2.4,SNR=6.4						
YKA	**Yellowknife Ar**	**85.74**	**341**	P	**P**	**10 48 53.3**	**+1.7**
	0.3nm,0.4s,mb3.4,baz=137,slow=4.8,SNR=4.4						
YKA	**Yellowknife Ar**	**85.74**	**341**	P	**P**	**10 48 53.3**	**+1.7**
SONM	**Songino Array**	**148.05**	**5**	PKPbc	PKPdf	10 55 59.7	+7.4
	0.4nm,0.5s,baz=342,slow=4.7,SNR=4.5						

IDC ***05*** *10:48:17.1±0.4, 3.06S×148.28E, mb5.3/23, mb1 5.3/27, mb1mx5.3/28, mbtmp5.3/27, ML4.2/4, MS6.1/22, Ms1 6.1/22, ms1mx6.0/25, Error ellipse: s-maj=12.4km s-min=8.3km az=94.0*
BJI ***05*** *10:48:19.7, 3.04S×148.95E, h46*^{km}*, mB6.1, mb5.4, Ms6.1, Msz5.9*
HRVD ***05*** *10:48:21.3±0.1, 3.17S×148.61E, h13*^{km}*, MW6.4/78, Centroid moment Tensor Solution. LP body waves: s78,c199;Mantle waves: s77,c353; Half duration:* $3\overset{s}{.}9$ *Moment tensor: Scale* 10^{18}*Nm;* M_{rr}*-0.15±.03;* $M_{\theta\theta}$*3.57±.03;* $M_{\phi\phi}$*-3.42±.03;* $M_{r\theta}$*-0.01±.07;* $M_{\theta\phi}$*3.56±.03;* $M_{\phi r}$*0.70±.07; Best double couple:* M_0*5.039×*10^{18} *NP1:* ϕ_s*112°,δ83°,λ-3°. NP2:*ϕ_s*202°,δ87°,λ-173°. Principal axes: T 5.077, Plg3°, Azm337°; N -.077, Plg82°, Azm226°; P -5, Plg8°, Azm67°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
MOS ***05*** *10:48:21.4±2.2, 3.10S×147.90E, h33*^{km}*, mb5.9/33, MS6.2/14 Error ellipse: s-maj=13.8km s-min=6.7km az=91.8*
NEIC ***05*** *10:48:21.2±0.2, 3.15S×148.14E, h25*^{km}*, mb5.7/57, MS6.4/125, MW6.3, Error ellipse: s-maj=7.3km s-min=5.5km az=95.0, Moment Tensor Solution. s27 Moment tensor: Scale* 10^{18}*Nm;* M_{rr}*1.27;* $M_{\theta\theta}$*1.37;* $M_{\phi\phi}$*-2.64;* $M_{r\theta}$*1.16;* $M_{\theta\phi}$*1.78;* $M_{\phi r}$*1.86; Best double couple:* M_0*3.6×*10^{18} *NP1:*ϕ_s*121°,δ49°,λ20°. NP2:*ϕ_s*17°,δ75°, λ137°. Principal axes: T 3.55, Plg40°, Azm330°; N .16, Plg45°, Azm182°; P -3.71, Plg17°, Azm74°; Complex event observed on broadband displacement seismograms.*
ISC 05 10:48:20.6±0.2**, 3.20S**±0.03×**148.22E**±0.03**, h32**^{km}**,**
h32^{km}±1.5^{km}**:pP-P, n506,** σ**1**$\overset{s}{.}$**37**/304**, mb5.7**/109**, MS6.2**/167**,**
33C-21D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.25**	**190**	Pn	**Pn**	**10 49 52.7**	**-0.4**
	5.1nm,0.3s,baz=22,slow=12,SNR=17						
PMG				Sn	**Sn**	**10 51 10.2**	**+6.0**
	19nm,0.3s,baz=336,slow=9.8,SNR=3.2						
PMG	**Port Moresby**	**6.25**	**190**	⇑*e*P	**Pn**	**10 49 51.6**	**-1.5**
	1μm,0.9s						
PMG	**Port Moresby**	**6.25**	**190**	⇑*e*P	**Pn**	**10 49 51.6**	**-1.5**
PMG				pmax	pmax		
	comp=Z,1μm,1.0s						
HNR	**Honiara**	**13.20**	**119**	Pn	**P**	**10 51 25.6**	**-2.9**
	comp=Z,6.6nm,0.3s,baz=265,slow=4.4,SNR=4.3						
HNR				Sn	**S**	**10 53 53.5**	**-1.5**
	comp=Z,2.7nm,0.3s,baz=69,slow=14,SNR=1.4						
CTA	**Charters Tower**	**16.89**	**186**	⇓*i*P	**P**	**10 52 15.9**	**-0.5**
	comp=Z,207nm,1.1s						
CTA				*e*S	S	10 55 43.3	+21
CTA	**Charters Tower**	**16.89**	**186**	P	**P**	**10 52 16.7**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=5.3,slow=12,SNR=18						
CTA				S	**S**	**10 55 30.6**	**+8.7**
	comp=Z,0.3nm,0.3s,baz=78,slow=6.1,SNR=2.2						
CTA				LR	LR	10 58 57.7	
	comp=Z,87μm,18.1s,baz=6.4,slow=38						
CTAO	**Charters Tower**	**16.89**	**186**	⇑*e*P	**P**	**10 52 15.0**	**-1.4**
	comp=Z,732nm,1.4s						
CTAO	**Charters Tower**	**16.89**	**186**	⇑*e*P	**P**	**10 52 15.0**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,730nm,1.3s						
GUMO	**Guam**	**17.01**	**349**	Pn	**P**	**10 52 14.1**	**-3.8**
	comp=Z,1.3nm,0.3s,baz=182,slow=10,SNR=8.8						
GUMO				LR	LR	10 58 07.2	
	comp=Z,26μm,20.0s,baz=145,slow=35						
GUMO	**Guam**	**17.01**	**349**	*e*Pn	**P**	**10 52 16.1**	**-1.9**
	comp=Z,2μm,1.7s						
GUMO	**Guam**	**17.01**	**349**	P	**P**	**10 52 18.1**	**+0.2**
GUMO				pmax	pmax		
	comp=Z,2μm,1.7s						
KAKA	**Kakadu**	**18.24**	**238**	*e*P	**P**	**10 52 49.2**	**+16**
	comp=Z,776nm,1.0s						
WRAB	**Tennant Creek**	**21.44**	**218**	*e*P	**P**	**10 53 07.0**	**-1.3**
	comp=Z,1μm,1.1s,mb6.1						
WRAB				LR	LR		
	comp=Z,17μm,19.0s,MS5.5						
WRAB	**Tennant Creek**	**21.44**	**218**	*d i*P	**P**	**10 53 05.8**	**-2.6**
WB2	**Warramunga Arr**	**21.45**	**218**	⇑*i*P	**P**	**10 53 07.1**	**-1.3**
WB2				*e*S	**S**	**10 57 09.9**	**+10**
WRA	**Warramunga Arr**	**21.45**	**218**	P	**P**	**10 53 07.4**	**-1.1**
	comp=Z,299nm,1.2s,mb5.5,baz=44,slow=9.8,SNR=108						
WRA				S	**S**	**10 57 12.0**	**+12**
	comp=Z,25nm,1.1s,baz=36,slow=2.0,SNR=3.8						
WRA	**Warramunga Arr**	**21.45**	**218**	*i* P	**P**	**10 53 07.1**	**-1.4**
WRA				pmax	pmax		
	comp=Z,299nm,1.2s						
KWAJ	**Kwajalein Atol**	**22.72**	**58**	⇓*e*P	**P**	**10 53 18.9**	**-2.4**
	comp=Z,856nm,1.3s,mb6.0						
KWAJ				LR	LR		
	comp=Z,29μm,20.0s,MS5.7						
MATI	**Mati**	**24.12**	**295**	*e*P	**P**	**10 53 34.8**	**-0.2**
BIPH	**Bislig**	**24.56**	**298**	⇑*i*P	**P**	**10 53 39.1**	**-0.1**
ASPA	**Alice Springs**	**24.61**	**213**	*e*P	**P**	**10 53 39.2**	**-0.3**
ASPA				*e*S	**S**	**10 58 14.4**	**+19**
DAV	**Davao City (W)**	**24.79**	**294**	⇓*e*P	**P**	**10 53 48.0**	**+6.6**
DAV	**Davao City (W)**	**24.79**	**294**	PFAKE		10 53 50.0	+8.6
DAV				LR	LR		
	comp=Z,11μm,22.0s,MS5.3						
BUKP	**Musuan**	**25.59**	**296**	*e*P	**P**	**10 53 49.8**	**+0.9**
DZM	**Mont Dzumac**	**25.79**	**138**	*e*P	**P**	**10 53 47.4**	**-3.3**
DZM	**Mont Dzumac**	**25.79**	**138**	P	**P**	**10 53 50.3**	**-0.3**
	comp=Z,196nm,1.0s,mb5.6,baz=3.6,slow=7.0,SNR=27						
DZM				S	**S**	**10 58 20.9**	**+5.6**
	comp=Z,4.6nm,0.9s,baz=6.2,slow=22,SNR=1.9						
DZM				LR	LR	11 02 24.6	
	comp=Z,191μm,19.7s,MS6.6,baz=312,slow=33						
SCPH	**Surigao**	**26.06**	**300**	⇓*e*P	**P**	**10 53 59.9**	**+6.7**
FITZ	**Fitzroy Crossi**	**26.62**	**235**	*e*P	**P**	**10 53 57.0**	**-1.3**
	comp=Z,563nm,1.0s,mb6.0						
FITZ	**Fitzroy Crossi**	**26.62**	**235**	P	**P**	**10 53 58.7**	**+0.4**
	comp=Z,252nm,0.9s,mb5.7,baz=56,slow=10,SNR=43						
FITZ				S	**S**	**10 58 38.6**	**+10**
	comp=Z,42nm,1.0s,baz=344,slow=18,SNR=1.6						
FITZ				LR	LR	11 05 02.3	
	comp=Z,130μm,20.9s,MS6.5,baz=62,slow=38						
MSLP	**Maasin**	**26.77**	**300**	*e*P	**P**	**10 54 08.6**	**+8.8**
PAGZ	**Pagadian**	**27.10**	**294**	*e*P	**P**	**10 54 07.8**	**+5.0**
TBP	**Tagbilaran**	**27.44**	**298**	*e*P	**P**	**10 54 05.2**	**-0.6**
WAKE	**Wake Island**	**28.78**	**38**	PFAKE		10 54 30.0	+12
WAKE				LR	LR		
	comp=Z,22μm,19.0s,MS5.8						
PVCP	**Virac**	**29.13**	**305**	*e*P	**P**	**10 54 28.4**	**+7.3**
STKA	**Stephens Creek**	**29.20**	**192**	P	**P**	**10 54 20.6**	**-1.0**
	comp=Z,22nm,0.7s,mb5.0,baz=2.6,slow=9.8,SNR=17						
STKA				S	**S**	**10 59 12.7**	**+2.2**
	comp=Z,12nm,1.0s,baz=92,slow=11,SNR=1.8						
STKA				LR	LR	11 06 50.0	
	comp=Z,125μm,19.8s,MS6.5,baz=129,slow=38						
STKA	**Stephens Creek**	**29.20**	**192**	P	**P**	**10 54 20.1**	**-1.5**
	comp=Z,64nm,0.9s,mb5.3						
SJMP	**San Jose**	**31.10**	**301**	*e*P	**P**	**10 54 50.2**	**+12**
TSM	**Tawau**	**31.22**	**284**	P	**P**	**10 54 42.9**	**+3.2**
CNB	**Canberra Magne**	**31.97**	**178**	*e*P	**P**	**10 54 43.6**	**-2.5**
	comp=Z,207nm,1.2s,mb5.8						
TGY	**Tagaytay City**	**32.05**	**303**	P	**P**	**10 54 47.6**	**+0.7**
	comp=Z,72nm,0.3s,mb5.9,baz=297,slow=17,SNR=4.3						
TGY				LR	LR	11 06 01.6	
	comp=Z,49nm,18.6s,baz=325,slow=33						
PPR	**Puerto Princes**	**32.08**	**294**	*e*P	**P**	**10 54 56.9**	**+10**
BATP	**Bataraza**	**32.58**	**292**	*e*P	**P**	**10 54 54.0**	**+2.4**
ADE	**Adelaide**	**32.81**	**194**	P	**P**	**10 54 48.3**	**-5.1**
MBWA	**Marble Bar**	**32.96**	**235**	*e*P	**P**	**10 54 55.2**	**+0.4**
	comp=Z,112nm,1.3s,mb5.6						
MBWA				LR	LR		
	comp=Z,59μm,22.0s,MS6.2						
KKM	**Kota Kinabalu**	**33.25**	**286**	P	**P**	**10 54 56.0**	**-1.4**
KKM	**Kota Kinabalu**	**33.25**	**286**	P	**P**	**10 55 01.3**	**+3.9**
FORT	**Forrest**	**33.39**	**213**	*e*P	**P**	**10 54 56.9**	**-1.6**
	comp=Z,225nm,0.7s,mb6.2						
ABRA	**Dolores**	**34.13**	**308**	*e*P	**P**	**10 55 04.9**	**-0.1**
TOO	**Toolangi**	**34.30**	**184**	*e*P	**P**	**10 55 04.1**	**-2.1**
	comp=Z,100nm,1.2s,mb5.6						
JOW	**Kunigami**	**35.53**	**328**	P	**P**	**10 55 16.0**	**-0.9**
	comp=Z,42nm,0.9s,mb5.3,baz=154,slow=8.9,SNR=9.5						
JOW				LR	LR	11 06 31.7	
	comp=Z,25μm,21.4s,MS6.0,baz=214,slow=31						
NACB	**Ninganchiao**	**37.56**	**318**	*e*P	**P**	**10 55 33.3**	**-0.7**
YHNB	**Yeheng**	**38.05**	**318**	*e*P	**P**	**10 55 37.3**	**-0.8**
KSM	**Kuching**	**38.18**	**276**	*e*P	**P**	**10 55 38.7**	**-0.5**
TATO	**Taipei**	**38.18**	**319**	*e*P	**P**	**10 55 38.1**	**-1.1**
	comp=Z,607nm,1.1s,mb6.2						
TATO				LR	LR		
	comp=Z,30μm,22.0s,MS6.1						
TAU	**Tasmania Unive**	**39.54**	**181**	*e*P	**P**	**10 55 51.5**	**+1.1**
	comp=Z,267nm,1.3s,mb5.8						
TAU				LR	LR		
	comp=Z,25μm,20.0s,MS6.0						
TAU	**Tasmania Unive**	**39.54**	**181**	P	**P**	**10 55 53.0**	**+2.6**
TAU				pmax	pmax		
	comp=Z,270nm,1.3s,mb5.8						
JNU	**Nakatsue**	**39.68**	**337**	P	**P**	**10 55 48.4**	**-3.2**
	comp=Z,142nm,1.0s,mb5.7,baz=190,slow=11,SNR=15						
QZH	**Quanzhou**	**40.12**	**316**	⇑*i*P	**P**	**10 55 56.1**	**+0.8**
QZH				S	**S**	**11 02 07.0**	**+7.7**
QZH				AMB	AMB		
	comp=Z,290nm,1.0s,mb6.0						
QZH				LR	LR		
	comp=N,16μm,19.8s						
QZH				LR	LR		
	comp=E,44μm,29.0s						
QZH				LR	LR		
	comp=Z,59μm,31.0s						
KLBR	**Kellerberrin**	**40.24**	**222**	*e*P	**P**	**10 55 56.2**	**0.0**
	comp=Z,83nm,0.8s,mb5.5						
KLBR				*e*PP	PP	10 57 31.8	-0.5
MJAR	**Matsushiro Arr**	**40.63**	**348**	P	**P**	**10 55 56.4**	**-3.0**
	comp=Z,9.0nm,0.8s,baz=168,slow=8.4,SNR=17						
MJAR				LR	LR	11 10 54.8	
	comp=Z,20μm,21.4s,MS5.9,baz=160,slow=34						
MAJO	**Matsushiro**	**40.63**	**348**	PFAKE		10 56 10.0	+11
MAJO				LR	LR		
	comp=Z,23μm,19.0s,MS6.1						
MAT	**Matsushiro**	**40.63**	**348**	P	**P**	**10 55 56.5**	**-2.9**
MAT				S	**S**	**11 02 03.0**	**-3.7**
MAT	**Matsushiro**	**40.63**	**348**	*e*P	**P**	**10 55 57.0**	**-2.4**
	comp=Z,34nm,1.2s,mb4.9						
MAT				*e*S	**S**	**11 02 03.0**	**-3.7**
MAT				LR	LR		
	comp=Z,20μm,20.0s,MS6.0						
AFI	**Afiamalu**	**40.90**	**108**	P	**P**	**10 56 02.5**	**+0.7**
	comp=Z,82nm,1.1s,mb5.3,baz=245,slow=19,SNR=3.7						
AFI				LR	LR	11 11 02.9	
	comp=Z,32μm,18.5s,MS6.2,baz=116,slow=33						
RAO	**Raoul Island**	**41.28**	**132**	LR	LR	11 10 59.7	
	comp=Z,35μm,19.1s,MS6.2,baz=310,slow=33						
RAO	**Raoul Island**	**41.28**	**132**	PFAKE		10 56 20.0	+15
RAO				LR	LR		
	comp=Z,31μm,20.0s,MS6.2						
NWAO	**Narrogin (SRO)**	**41.41**	**221**	P	**P**	**10 56 06.3**	**+0.4**
	comp=Z,34nm,1.0s,mb4.9,baz=76,slow=3.8,SNR=8.9						
NWAO				LR	LR	11 13 59.4	
	comp=Z,51μm,21.3s,MS6.4,baz=266,slow=37						
NWAO	**Narrogin (SRO)**	**41.41**	**221**	*e*P	**P**	**10 56 07.3**	**+1.4**
	comp=Z,100nm,1.3s,mb5.3						
NWAO				LR	LR		
	comp=Z,38μm,21.0s,MS6.2						
NWAO	**Narrogin (SRO)**	**41.41**	**221**	P	**P**	**10 56 07.6**	**+1.7**
NWAO				pmax	pmax		
	comp=Z,100nm,1.2s						
MUN	**Mundaring**	**41.51**	**223**	*e*P	**P**	**10 56 08.1**	**+1.3**
MUN				*e*PP	PP	10 57 44.2	-1.5
MUN				*e*PCP	PcP	10 58 03.2	-1.3
HKC	**Hong Kong**	**41.82**	**309**	P	**P**	**10 56 16.0**	**+6.6**
HKC				S	**S**	**11 02 41.0**	**+16**
HIZ	**Hauiti**	**42.73**	**149**	PN	**P**	**10 56 15.0**	**-1.7**
SSE	**Sheshan**	**42.74**	**325**	⇑P	**P**	**10 56 17.2**	**+0.4**
SSE				AP	pP	10 56 28.7	+2.2
SSE				XP	sP	10 56 34.0	+3.4
SSE				PP	PP	10 57 57.7	-0.7
SSE				PCP	PcP	10 58 07.6	-1.0
SSE				S	**S**	**11 02 39.1**	**+1.0**
SSE				XS		11 03 00.6	
SSE				SCS	ScS	11 06 14.9	+1.9
SSE				AMB	AMB		
	comp=Z,120nm,1.6s,mb5.4						
SSE				AMB	AMB		
	comp=Z,1μm,12.0s						
SSE				LR	LR		
	comp=N,19μm,34.6s,MS5.9						
SSE				LR	LR		
	comp=E,18μm,34.6s,MS5.9						
SSE				LR	LR		
	comp=Z,32μm,29.6s,MS6.0						
SSE	**Sheshan**	**42.74**	**325**	⇑P	**P**	**10 56 17.2**	**+0.4**
	comp=Z,120nm,1.6s,mb5.4						
SSE				pP	pP	10 56 28.7	+2.2
SSE				sP	sP	10 56 34.0	+3.4
SSE				PP	PP	10 57 57.7	-0.7
SSE				PcP	PcP	10 58 07.6	-1.0
SSE				S	**S**	**11 02 39.1**	**+1.0**
SSE				sS		11 03 00.6	
SSE				ScS	ScS	11 06 14.9	+1.9
SSE				LR	LR		
	comp=Z,32μm,29.6s,MS6.0						
GZH	**Guangzhou**	**42.89**	**309**	P	**P**	**10 56 20.3**	**+2.2**
GZH				S	**S**	**11 02 46.8**	**+6.5**
GZH				AMB	AMB		
	comp=Z,80nm,1.4s,mb5.3						
GZH				LR	LR		
	comp=N,5μm,17.4s,MS5.6						
GZH				LR	LR		
	comp=E,5μm,19.9s,MS5.6						
GZH				LR	LR		
	comp=Z,19μm,21.2s,MS6.0						
QIZ	**Qiongzhong**	**43.73**	**302**	P	**P**	**10 56 25.3**	**+0.3**
QIZ				S	**S**	**11 02 55.3**	**+2.7**
QIZ				SS	SS	11 06 07.2	+6.2
QIZ				LR	LR		
	comp=E,11μm,21.9s						
QIZ				LR	LR		
	comp=Z,21μm,24.2s,MS6.0						
URZ	**Urewera**	**43.75**	**147**	P	**P**	**10 56 25.2**	**+0.3**
	comp=Z,63nm,1.0s,mb5.3,baz=304,slow=4.7,SNR=14						
URZ				LR	LR	11 11 31.5	
	comp=Z,85μm,21.3s,MS6.6,baz=126,slow=32						
MWZ	**Matawai**	**44.03**	**146**	PN	**P**	**10 56 25.5**	**-1.8**
PUZ	**Puketiti**	**44.26**	**146**	PN	**P**	**10 56 28.6**	**-0.5**
TSZ	**Takapari Road**	**44.46**	**149**	PN	**P**	**10 56 30.8**	**+0.1**
KNZ	**Kokohu**	**44.60**	**147**	PN	**P**	**10 56 31.6**	**-0.2**
KS15	**Wonju Array Si**	**44.63**	**337**	*e*P	**P**	**10 56 32.6**	**+0.4**
MRZ	**Mangatainoka R**	**44.72**	**150**	PN	**P**	**10 56 32.2**	**-0.5**
SNZO	**South Karori**	**44.79**	**152**	PFAKE		10 56 40.0	+6.7
SNZO				LR	LR		
	comp=Z,83μm,20.0s,MS6.7						
NJ2	**Nanjing**	**44.79**	**324**	*e*P	**P**	**10 56 33.0**	**-0.5**
NJ2				AP	pP	10 56 43.8	+0.6
NJ2				XP	sP	10 56 46.4	-0.8
NJ2				PP	PP	10 58 18.1	-0.9
NJ2				S	**S**	**11 03 16.0**	**+8.1**
NJ2				XS		11 03 31.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,340nm,4.5s						
NJ2				LR	LR		
	comp=N,75μm,35.0s,MS6.5						
NJ2				LR	LR		
	comp=E,60μm,32.0s,MS6.5						
NJ2				LR	LR		
	comp=Z,41μm,33.9s,MS6.1						
RPZ	**Rata Peaks**	**45.13**	**157**	*e*PN	**P**	**10 56 35.2**	**-0.8**
INCN	**Inchon**	**45.17**	**336**	*e*P	**P**	**10 56 33.0**	**-3.5**
	comp=Z,229nm,1.4s,mb5.8						
INCN				LR	LR		
	comp=Z,11μm,21.0s,MS5.8						
KGM	**Kluang**	**45.18**	**276**	P	**P**	**10 56 38.7**	**+2.0**
MIDW	**Midway**	**45.51**	**44**	PFAKE		10 56 50.0	+11
MIDW				LR	LR		
	comp=Z,18μm,19.0s,MS6.0						
WHN	**Wuhan**	**46.59**	**319**	⇓P	**P**	**10 56 49.0**	**+1.3**

WHN				S	**S**	**11 03 42.0**	**+8.4**
WHN				LR	LR		
	comp=N,54µm,38.8s,MS6.3						
WHN				LR	LR		
	comp=E,44µm,35.1s,MS6.3						
WHN				LR	LR		
	comp=Z,73µm,37.2s,MS6.4						
YUK	**Yuzh-Kuril’sk**	**47.07**	**358**	P	**P**	**10 56 54.3**	**+3.0**
YUK				*e*		10 58 29.2	
YUK				*e*PPP	PP	10 58 46.8	+5.3
YUK				S	**S**	**11 03 36.9**	**-3.3**
YUK				pmax	pmax		
	comp=N,4µm,3.0s						
YUK				pmax	pmax		
	comp=Z,2µm,3.0s						
YUK				smax			
	comp=N,6µm,14.0s						
YUK				smax			
	comp=E,5µm,11.0s						
ASAJ	**Asahikawa**	**47.37**	**355**	P	**P**	**10 56 51.9**	**-1.9**
	comp=E,62nm,1.1s,mb5.5,baz=207,slow=12,SNR=7.8						
IPM	**Ipoh**	**47.78**	**279**	P	**P**	**10 56 59.4**	**+2.1**
KULM	**Kulim**	**48.26**	**280**	*e*P	**P**	**10 57 02.1**	**+1.1**
VLA	**Vladivostok**	**48.41**	**344**	*e*P	**P**	**10 56 58.1**	**-3.7**
VLA				*e*S	**S**	**11 04 00.8**	**+1.7**
VLA				LR	LR		
	comp=Z,4µm,17.5s,MS5.5						
VLA	**Vladivostok**	**48.41**	**344**	*e*P	**P**	**10 57 01.9**	**+0.1**
VLA				*e*S	**S**	**11 04 00.8**	**+1.7**
VLA				pmax	pmax		
	comp=Z,204nm,1.6s,mb5.9						
VLA				MLR	MLR		
	comp=Z,4µm,17.5s,MS5.5						
DL2	**Dalian**	**48.55**	**332**	P	**P**	**10 57 02.7**	**-0.2**
DL2				S	**S**	**11 04 01.5**	**+0.3**
DL2				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.5						
DL2				LR	LR		
	comp=N,5µm,20.4s,MS5.7						
DL2				LR	LR		
	comp=E,6µm,23.1s,MS5.7						
DL2				LR	LR		
	comp=Z,15µm,35.7s						
SNG	**Songkhla**	**48.61**	**282**	P	**P**	**10 57 09.0**	**+5.3**
	comp=Z,220nm,1.0s,mb6.1						
TIA	**Tai’an**	**48.79**	**326**	*e*P	**P**	**10 57 04.0**	**-0.8**
TIA				S	**S**	**11 03 56.7**	**-7.8**
TIA				AMB	AMB		
	comp=Z,70nm,1.4s,mb5.5						
TIA				LR	LR		
	comp=N,7µm,16.0s,MS6.0						
TIA				LR	LR		
	comp=E,12µm,19.0s,MS6.0						
KKTK	**Khon Kaen**	**48.88**	**295**	PG	**P**	**10 57 06.0**	**+0.3**
GYA	**Guiyang**	**49.82**	**309**	⇑*i*P	**P**	**10 57 13.3**	**+0.5**
GYA				PCP	PcP	10 58 30.2	-3.2
GYA				SCP		11 02 23.3	
GYA				S	**S**	**11 04 29.4**	**+10**
GYA				AMB	AMB		
	comp=Z,110nm,0.8s,mb5.9						
GYA				AMB	AMB		
	comp=Z,2µm,6.3s						
GYA				LR	LR		
	comp=N,4µm,21.2s,MS5.5						
GYA				LR	LR		
	comp=E,5µm,22.7s,MS5.5						
GYA				LR	LR		
	comp=Z,6µm,20.0s,MS5.6						
SNY	**Shenyang**	**50.10**	**336**	⇑P	**P**	**10 57 11.6**	**-3.2**
SNY				PP	PP	10 59 08.5	-2.3
SNY				S	**S**	**11 04 22.9**	**+0.2**
SNY				AMB	AMB		
	comp=Z,50nm,2.2s,mb5.2						
SNY				LR	LR		
	comp=N,11µm,19.6s,MS5.9						
SNY				LR	LR		
	comp=E,5µm,22.0s,MS5.9						
SNY				LR	LR		
	comp=Z,11µm,28.2s						
YSS	**Yuzh-Sakhalins**	**50.17**	**355**	⇑*e*P	**P**	**10 57 12.0**	**-3.3**
	comp=Z,80nm,1.1s,mb5.7						
YSS				*e*pP	pP	10 57 22.0	-3.2
YSS				*e*sP	sP	10 57 28.0	-1.0
YSS				*e*		10 58 31.2	
YSS				*e*		10 59 05.0	
YSS				*e*sS		11 04 28.0	
YSS				*i*		11 04 44.0	
YSS				LR	LR		
	comp=Z,6µm,16.0s,MS5.7						
YSS	**Yuzh-Sakhalins**	**50.17**	**355**	*ce*P	**P**	**10 57 12.0**	**-3.3**
YSS				*e**PP	pP	10 57 22.0	-3.2
YSS				*e**SP	sP	10 57 28.0	-1.0
YSS				*e*		10 58 31.2	
YSS				*e*		10 59 05.0	
YSS				*e**SS		11 04 28.0	
YSS				*i*		11 04 44.0	
YSS				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.7						
YSS				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.7						
YSS				pmax	pmax		
	comp=N,6µm,14.0s						
YSS				pmax	pmax		
	comp=E,3µm,14.0s						
YSS				MLR	MLR		
	comp=N,5µm,16.0s						
YSS				MLR	MLR		
	comp=Z,6µm,16.0s,MS5.7						
MDJ	**Mudanjiang**	**50.44**	**343**	P	**P**	**10 57 16.9**	**-0.4**
MDJ				AP	pP	10 57 25.3	-1.9
MDJ				XP	sP	10 57 28.2	-2.9
MDJ				PCP	PcP	10 58 36.5	+1.0
MDJ				PP	PP	10 59 12.7	-1.1
MDJ				PCS		11 02 33.5	
MDJ				XS		11 04 43.8	
MDJ				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,2µm,13.9s						
MDJ				LR	LR		
	comp=N,23µm,42.9s						
MDJ				LR	LR		
	comp=E,16µm,34.1s						
MDJ				LR	LR		
	comp=Z,36µm,36.8s						
NNT	**Nongplab**	**50.65**	**289**	P	**P**	**10 57 21.0**	**+1.7**
CN2	**Changchun**	**51.07**	**339**	⇑P	**P**	**10 57 22.0**	**-0.1**
CN2				*e*AP	pP	10 57 34.7	+2.7
CN2				*e*S	**S**	**11 04 37.9**	**+1.9**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
CN2				AMB	AMB		
	comp=Z,2µm,8.0s						
CN2				LR	LR		
	comp=N,14µm,23.0s,MS6.0						
CN2				LR	LR		
	comp=E,11µm,23.0s,MS6.0						
CN2				LR	LR		
	comp=Z,22µm,25.0s,MS6.1						
NST	**Nakhon Sawan**	**51.12**	**293**	P	**P**	**10 57 22.5**	**-0.4**
	comp=Z,200nm,0.8s,mb6.1						
NANT	**Nan**	**51.61**	**297**	⇑P	**P**	**10 57 25.0**	**-1.5**
	comp=Z,1µm,1.0s						
COCO	**West Island**	**51.61**	**257**	PFAKE		10 57 40.0	+13
COCO				LR	LR		
	comp=Z,2µm,20.0s						
KMI	**Kunming**	**52.32**	**305**	P	**P**	**10 57 33.6**	**+1.7**
KMI				AP	pP	10 57 43.7	+1.9
KMI				XP	sP	10 57 48.1	+2.5
KMI				PCP	PcP	10 58 45.1	+2.4
KMI				PP	PP	10 59 33.4	+2.1
KMI				PPP	PPP	11 00 38.0	+2.0
KMI				PCS		11 02 41.8	
KMI				S	**S**	**11 04 55.7**	**+2.2**
KMI				PS	PS	11 05 09.5	+1.9
KMI				XS		11 05 13.8	
KMI				SCS	ScS	11 07 17.6	+1.8
KMI				SS	SS	11 08 33.9	+4.3
KMI				SSS	SSS	11 10 15.9	+2.4
KMI				AMB	AMB		
	comp=Z,40nm,1.5s,mb5.1						
KMI				AMB	AMB		
	comp=Z,510nm,4.5s						
KMI				LR	LR		
	comp=N,9µm,24.2s,MS5.8						
KMI				LR	LR		
	comp=E,7µm,25.6s,MS5.8						
KMI				LR	LR		
	comp=Z,15µm,32.6s						
KMI	**Kunming**	**52.32**	**305**	P	**P**	**10 57 33.6**	**+1.7**
	comp=Z,48nm,1.5s,mb5.2						
KMI				pP	pP	10 57 43.7	+1.9
KMI				sP	sP	10 57 48.1	+2.5
KMI				PcP	PcP	10 58 45.1	+2.4
KMI				PP	PP	10 59 33.4	+2.1
KMI				PcS		11 02 41.8	
KMI				S	**S**	**11 04 55.7**	**+2.2**
KMI				sS		11 05 13.8	
KMI				ScS	ScS	11 07 17.6	+1.8
KMI				SS	SS	11 08 33.9	+4.3
KMI				LR	LR		
	comp=Z,15µm,32.6s,MS5.8						
TIY	**Taiyuan**	**52.51**	**324**	*e*P	**P**	**10 57 35.0**	**+1.9**
TIY				S	**S**	**11 05 03.0**	**+7.1**
TIY				LR	LR		
	comp=N,9µm,16.0s						
CHG	**Chiang Mai**	**53.18**	**296**	P	**P**	**10 57 38.2**	**-0.1**
	comp=N,79nm,0.8s,mb5.7						
RAR	**Rarotonga**	**53.60**	**114**	LR	LR	11 17 23.5	
	comp=N,8µm,21.6s,MS5.8,baz=280,slow=33						
KLR	**Kul’dur**	**54.14**	**347**	*e*P	**P**	**10 57 43.0**	**-1.9**
KLR				*e*		10 59 49.5	
KLR				pmax	pmax		
	comp=N,1µm,14.0s						
KLR				pmax	pmax		
	comp=Z,3µm,14.0s						
KLR				MLR	MLR		
	comp=Z,9µm,13.0s,MS6.0						
CD2	**Chengdu**	**54.26**	**312**	P	**P**	**10 57 45.5**	**-0.5**
CD2				AP	pP	10 57 56.1	+0.2
CD2				XP	sP	10 58 00.0	+0.2
CD2				PPP	PPP	11 00 56.5	-3.6
CD2				S	**S**	**11 05 17.3**	**-2.3**
CD2				AMB	AMB		
	comp=Z,360nm,2.8s,mb5.8						
CD2				LR	LR		
	comp=E,5µm,23.4s						
CD2				LR	LR		
	comp=Z,9µm,30.0s						
HHC	**Hu-ho-hao-te**	**55.14**	**327**	*e*P	**P**	**10 57 52.0**	**-0.4**
HHC				PCP	PcP	10 58 51.3	-1.9
HHC				PP	PP	10 59 57.2	0.0
HHC				SCP		11 02 45.1	
HHC				PCS		11 02 51.0	
HHC				S	**S**	**11 05 37.7**	**+6.3**
HHC				XS		11 05 50.9	
HHC				PS	PS	11 05 53.3	+6.4
HHC				SCS	ScS	11 07 35.2	-0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.7						
HHC				AMB	AMB		
	comp=Z,1µm,8.4s						
HHC				LR	LR		
	comp=N,9µm,21.6s,MS5.9						
HHC				LR	LR		
	comp=E,7µm,19.2s,MS5.9						
HHC				LR	LR		
	comp=Z,16µm,21.6s,MS6.1						
BTO	**Baotou**	**55.84**	**325**	*e*P	**P**	**10 57 58.8**	**+1.3**
BTO				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.5						
PET	**Petropavlovsk**	**56.71**	**8**	*e*P	**P**	**10 58 01.4**	**-2.1**
	comp=Z,62nm,1.0s,mb5.6						
PET				*e*		11 00 14.0	
PET				*i* S	**S**	**11 05 49.0**	**-3.0**
PET				*e*		11 07 45.2	
PET				LR	LR		
	comp=Z,11µm,18.0s,MS6.0						
PET	**Petropavlovsk**	**56.71**	**8**	*e*P	**P**	**10 58 01.4**	**-2.1**
PET				*e*		11 00 14.0	
PET				*i* S	**S**	**11 05 49.0**	**-3.0**
PET				*e*		11 07 45.2	
PET				pmax	pmax		
	comp=Z,1µm,11.8s						
PET				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.6						
PET				pmax	pmax		
	comp=Z,1µm,3.7s						
PET				pmax	pmax		
	comp=Z,56nm,1.1s,mb5.5						
PET				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.2						
PET				pmax	pmax		
	comp=N,1µm,14.4s						
PET				pmax	pmax		
	comp=Z,2µm,14.6s						
PET				smax			
	comp=E,5µm,13.3s						
PET				smax			
	comp=E,12µm,25.2s						
PET				smax			
	comp=N,14µm,28.4s						
PET				MLR	MLR		
	comp=Z,11µm,18.0s,MS6.0						
PET				MLR	MLR		
	comp=Z,10µm,19.0s						
LZH	**Lanzhou**	**56.94**	**317**	⇓P	**P**	**10 58 04.5**	**-0.9**
LZH				AP	pP	10 58 15.2	-0.2
LZH				XP	sP	10 58 19.0	-0.1
LZH				PP	PP	11 00 12.5	-0.9
LZH				S	**S**	**11 05 53.5**	**-1.7**
LZH				SS	SS	11 09 42.7	-2.2
LZH				AMB	AMB		
	comp=Z,180nm,1.4s,mb5.9						
LZH				AMB	AMB		
	comp=Z,1µm,6.3s						
LZH				LR	LR		
	comp=N,5µm,15.2s						
LZH				LR	LR		
	comp=Z,9µm,18.3s,MS5.9						
LZH	**Lanzhou**	**56.94**	**317**	⇓P	**P**	**10 58 04.5**	**-0.9**
	comp=Z,180nm,1.4s,mb5.9						
LZH				pP	pP	10 58 15.2	-0.2
LZH				sP	sP	10 58 19.0	-0.1
LZH				PP	PP	11 00 12.5	-0.9
LZH				S	**S**	**11 05 53.5**	**-1.7**
LZH				SS	SS	11 09 42.7	-2.2
LZH				LR	LR		
	comp=Z,9µm,18.3s,MS5.9						
KIP	**Kipapa**	**58.02**	**62**	PFAKE		10 58 20.0	+6.9
KIP				LR	LR		
	comp=Z,17µm,20.0s,MS6.2						
KIP	**Kipapa**	**58.02**	**62**	⇑*e*P	**P**	**10 58 15.0**	**+1.9**
FX1	**Attu Island--F**	**59.70**	**17**	P	**P**	**10 58 23.1**	**-1.3**
	comp=Z,162nm,1.1s,mb6.0,baz=127,slow=8.1,SNR=14						
FX1	**Attu Island--F**	**59.70**	**17**	*e*P	**P**	**10 58 23.5**	**-0.9**
POHA	**Pohakuloa**	**59.75**	**65**	*e*P	**P**	**10 58 25.9**	**+0.7**
	comp=Z,163nm,1.9s,mb5.7						
POHA				LR	LR		
	comp=Z,41µm,20.0s,MS6.6						
SMY	**Shemya**	**59.85**	**18**	*e*P	**P**	**10 58 26.5**	**+1.1**
	comp=Z,235nm,0.9s,mb6.2						
SMY				LR	LR		
	comp=Z,10µm,20.0s,MS5.9						
GTA	**Gaotai**	**61.41**	**319**	*e*P	**P**	**10 58 35.2**	**-1.1**
GTA				AP	pP	10 58 45.0	-1.4
GTA				PCP	PcP	10 59 16.2	-1.7
GTA				PP	PP	11 00 52.9	-0.8
GTA				SCP		11 03 13.8	
GTA				S	**S**	**11 06 52.2**	**-1.1**
GTA				SS	SS	11 10 55.5	-0.1
GTA				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
GTA				AMB	AMB		
	comp=Z,510nm,4.9s						
GTA				LR	LR		
	comp=N,6µm,27.4s,MS5.8						
GTA				LR	LR		
	comp=E,7µm,23.6s,MS5.8						
GTA				LR	LR		
	comp=Z,16µm,34.2s						
SHL	**Shillong**	**61.57**	**301**	*e*P	**P**	**10 58 37.0**	**-0.5**
SHL				*e*x	x	11 07 04.0	
AGT	**Agartala**	**61.58**	**299**	*e*x	x	10 58 44.0	
CIT	**Chita**	**62.36**	**337**	*e*P	**P**	**10 58 41.5**	**-1.0**
	comp=Z,303nm,1.9s,mb6.1						
CIT	**Chita**	**62.36**	**337**	*e*P	**P**	**10 58 41.5**	**-1.0**
CIT				pmax	pmax		
	comp=Z,303nm,1.9s,mb6.1						
PPT	**Papeete**	**62.56**	**108**	*e*P	**P**	**10 58 44.9**	**+0.6**
	comp=Z,127nm,1.4s,mb5.8						
PPT	**Papeete**	**62.56**	**108**	*e*S	**S**	**11 07 09.4**	**+1.3**
PPT				*e*LQ		11 14 29.4	
PPT				*e*LR	LR	11 17 47.5	
	comp=Z,43µm,28.0s,baz=286						
PPT	**Papeete**	**62.56**	**108**	LR	LR	11 21 44.2	
	comp=Z,7µm,18.4s,MS5.9,baz=276,slow=32						
PAE	**Paea**	**62.57**	**108**	*e*P	**P**	**10 58 44.7**	**+0.4**
	comp=Z,414nm,1.6s,mb6.3						
SONM	**Songino Array**	**62.59**	**330**	P	**P**	**10 58 41.6**	**-2.5**
	comp=Z,21nm,1.0s,mb5.2,baz=141,slow=5.8,SNR=54						
SONM				LR	LR	11 26 10.4	
	comp=Z,14µm,20.1s,MS6.1,baz=125,slow=36						
SONM				PKPPKP		11 27 47.6	
	comp=Z,0.3nm,0.4s,baz=45,slow=2.1,SNR=4.8						
MA2	**Magadan**	**62.62**	**1**	*e*P	**P**	**10 58 42.6**	**-1.5**
	comp=Z,79nm,1.7s,mb5.6						
MA2	**Magadan**	**62.62**	**1**	*e*P	**P**	**10 58 42.6**	**-1.5**
MA2				pmax	pmax		
	comp=Z,79nm,1.7s,mb5.6						
CLNS	**Chul’man**	**62.77**	**346**	*e*P	**P**	**10 58 42.0**	**-3.1**
CLNS				*e**PP	pP	10 58 48.5	-6.7
CLNS				*e*		10 59 21.5	
CLNS				*e*S	**S**	**11 07 06.4**	**-3.7**
CLNS				*e*		11 08 30.4	
CLNS				pmax	pmax		
	comp=Z,94nm,1.3s,mb5.8						
CLNS				pmax	pmax		
	comp=N,52nm,1.2s						
CLNS				pmax	pmax		
	comp=E,17nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
CLNS				pmax	pmax		
	comp=N,13nm,0.9s						
CLNS				pmax	pmax		
	comp=E,22nm,1.0s						
CLNS				smax			
	comp=N,3µm,22.7s						
CLNS				smax			
	comp=Z,4µm,18.1s						
CLNS				smax			
	comp=E,7µm,24.8s						
TVO	**Taravao**	**62.89**	**108**	*e*P	**P**	**10 58 47.3**	**+0.9**
	comp=E,283nm,1.0s,mb6.3						
TBI	**Tubuai**	**63.38**	**114**	*e*LQ		11 15 09.2	
TBI	**Tubuai**	**63.38**	**114**	*e*P	**P**	**10 58 50.6**	**+1.1**
	comp=E,176nm,0.9s,mb6.2						
TBI	**Tubuai**	**63.38**	**114**	*e*S	**S**	**11 07 19.7**	**+1.5**
TBI				*e*LR	LR	11 18 00.9	
	comp=E,30µm,28.2s						
LSA	**Lhasa**	**63.58**	**305**	P	**P**	**10 58 50.9**	**0.0**
LSA				AP	pP	10 59 01.8	+0.8
LSA				S	**S**	**11 07 25.5**	**+4.8**
LSA				LR	LR		
	comp=E,8µm,29.9s						
LSA				LR	LR		
	comp=Z,11µm,27.2s,MS5.9						
DRV	**Dumont d’Urvil**	**63.60**	**184**	P	**P**	**10 58 56.0**	**+5.6**
DRV				S	**S**	**11 07 29.0**	**+8.6**
DRV				SP	SP	11 07 45.0	+6.0
DRV				L		11 14 00.0	
DRV				R		11 19 00.0	
CAL	**Calcutta**	**63.77**	**297**	*e*x	x	10 58 59.0	
CAL				*e*x	x	11 07 39.3	
PMOR	**Pomariorio Ree**	**63.97**	**105**	*e*P	**P**	**10 58 54.0**	**+0.4**
	comp=Z,344nm,1.1s,mb6.3						
MEH	**Mehetia**	**64.03**	**108**	*e*P	**P**	**10 58 54.4**	**+0.4**
	comp=Z,85nm,1.1s,mb5.7						
VAH	**Vaihoa**	**64.24**	**105**	*e*P	**P**	**10 58 55.4**	**0.0**
	comp=Z,227nm,1.2s,mb6.1						
ZAK	**Zakamensk**	**65.80**	**330**	*e*P	**P**	**10 59 02.3**	**-2.6**
	comp=Z,61nm,1.1s,mb5.5						
ZAK	**Zakamensk**	**65.80**	**330**	*e*P	**P**	**10 59 02.3**	**-2.6**
ZAK				pmax	pmax		
	comp=Z,61nm,1.1s,mb5.5						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
SEY	**Seymchan**	**66.03**	**2**	⇑*e*P	**P**	**10 59 02.7**	**-3.5**
BOK	**Bokaro**	**66.27**	**298**	*e*P	**P**	**10 59 08.8**	**+0.5**
BOK				AMb	AMB	10 59 17.5	
	comp=Z,109nm,1.4s,mb5.7						
BOK				*e*S	S	11 07 56.9	+3.0
IRK	**Irkutsk**	**66.53**	**332**	*e*P	**P**	**10 59 08.3**	**-1.2**
	comp=Z,122nm,2.1s,mb5.6						
IRK				*e*		10 59 23.3	
IRK				*e*		11 08 17.0	
IRK				*e*		11 15 01.3	
IRK	**Irkutsk**	**66.53**	**332**	*e*P	**P**	**10 59 08.3**	**-1.2**
IRK				*e*		10 59 23.3	
IRK				*e*		11 08 17.0	
IRK				*e*		11 15 01.3	
IRK				pmax	pmax		
	comp=Z,122nm,2.1s,mb5.6						
NIKO	**Nikolski**	**66.55**	**27**	P	**P**	**10 59 09.6**	**-0.1**
YAK	**Yakutsk**	**66.58**	**351**	⇑*e*P	**P**	**10 59 08.5**	**-1.2**
	comp=Z,167nm,1.5s,mb5.8						
YAK	**Yakutsk**	**66.58**	**351**	⇑*e*P	**P**	**10 59 08.5**	**-1.2**
YAK				pmax	pmax		
	comp=Z,167nm,1.5s,mb5.8						
BOD	**Bodaibo**	**66.73**	**341**	*e*P	**P**	**10 59 09.5**	**-1.2**
	comp=Z,49nm,1.5s,mb5.3						
BOD	**Bodaibo**	**66.73**	**341**	*e*P	**P**	**10 59 09.5**	**-1.2**
BOD				pmax	pmax		
	comp=Z,49nm,1.5s,mb5.3						
VIS	**Vishakhapatnam**	**67.22**	**291**	*e*x	x	10 59 16.7	
VIS				AMb	AMB	10 59 28.7	
	comp=Z,146nm,1.3s,mb5.9						
VIS				*e*S	S	11 08 07.6	+2.1
GUN	**Gumba**	**67.39**	**302**	*e*P	**P**	**10 59 14.7**	**-0.7**
	comp=Z,877nm,1.4s,mb6.6						
PKI	**Pulchoki**	**67.70**	**301**	*e*P	**P**	**10 59 18.2**	**+0.8**
	comp=Z,322nm,1.3s,mb6.2						
MOY	**Mondy**	**67.73**	**330**	*e*P	**P**	**10 59 17.7**	**+0.5**
	comp=Z,364nm,3.0s						
MOY	**Mondy**	**67.73**	**330**	*e*P	**P**	**10 59 17.7**	**+0.5**
MOY				pmax	pmax		
	comp=Z,364nm,3.0s						
KKN	**Kakani**	**67.87**	**302**	*e*P	**P**	**10 59 18.7**	**+0.3**
	comp=Z,249nm,1.0s,mb6.2						
DMN	**Daman**	**67.97**	**301**	*e*P	**P**	**10 59 18.5**	**-0.5**
	comp=Z,485nm,1.1s,mb6.4						
PALK	**Pallekele**	**68.17**	**279**	P	**P**	**10 59 19.5**	**-1.1**
	comp=Z,68nm,1.2s,mb5.5						
PALK				LR	LR		
	comp=Z,976nm,19.0s						
UNV	**Unalaska Valle**	**68.19**	**27**	P	**P**	**10 59 20.5**	**+0.5**
	comp=Z,312nm,1.2s,mb6.2						
CASY	**Casey**	**68.26**	**195**	*e*P	**P**	**10 59 19.1**	**-1.1**
	comp=Z,97nm,1.2s,mb5.7						
CASY				*e*PP	PP	11 01 50.5	-2.3
CASY				LR	LR		
	comp=Z,42µm,20.0s,MS6.7						
GKN	**Gorkha**	**68.47**	**302**	*e*P	**P**	**10 59 21.0**	**-1.2**
BLSP	**Bilaspur**	**69.23**	**295**	*e*P	**P**	**10 59 27.1**	**+0.1**
BLSP				*e*P		10 59 29.4	
KOLN	**Koldanda**	**69.29**	**301**	*e*P	**P**	**10 59 26.1**	**-1.1**
	comp=Z,173nm,0.9s,mb6.0						
MDRS	**Chennai**	**69.36**	**285**	*e*x	x	11 00 31.2	
ALBI	**Allahabad**	**70.24**	**298**	*e*P	**P**	**10 59 30.0**	**-3.0**
TAOE	**Nuku Hiva Isla**	**71.38**	**98**	*e*S	S	11 08 55.6	+1.1
TAOE				*e*SS	SS	11 13 32.0	+0.9
TAOE				*e*LQ		11 17 41.8	
TAOE				*e*LR	LR	11 21 00.0	
	comp=Z,96µm,32.1s,baz=278						
WMQ	**Urumqi**	**71.50**	**318**	⇑P	**P**	**10 59 40.6**	**+0.3**
WMQ				AP	pP	10 59 51.1	+0.6
WMQ				XP	sP	10 59 55.6	+1.5
WMQ				PCP	PcP	11 00 00.6	+0.9
WMQ				PP	PP	11 02 21.1	+0.2
WMQ				PPP	PPP	11 04 02.6	+0.2
WMQ				S	S	11 08 55.6	+0.2
WMQ				AMB	AMB		
	comp=Z,100nm,1.1s,mb5.7						
WMQ				AMB	AMB		
	comp=Z,1µm,4.0s						
WMQ				LR	LR		
	comp=N,13µm,32.0s						
WMQ				LR	LR		
	comp=E,10µm,38.0s						
WMQ				LR	LR		
	comp=Z,12µm,44.0s						
HYB	**Hyderabad**	**71.65**	**289**	*i* P	**P**	**10 59 43.5**	**+1.8**
	comp=Z,70nm,1.0s,mb5.5						
HYB				*e*pP	pP	10 59 53.0	+1.2

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HYB                                ePcP    PcP     11 00 03.0 +2.2
HYB                                eS      S       11 09 00.0 +2.4
HYB                                eScS    ScS     11 09 44.0 +3.4
HYB   Hyderabad          71.65 289 eP      P       10 59 43.5 +1.8
      comp=Z,70nm,1.0s,mb5.5
HYB                                e               10 59 46.0
HYB                                eS      S       11 09 06.0 +8.4
TRD   Trivandrum         71.99 280 eP      P       10 59 39.8 -4.0
TRD                                 AMb    AMB     10 59 52.3
      comp=Z,232nm,2.3s,mb5.7
TRD                                eS      S       11 09 04.1 +2.6
BILL  Bilibino           72.20   7⇓eP      P       10 59 43.5 -0.6
      comp=Z,47nm,1.7s,mb5.1
BILL  Bilibino           72.20   7⇓eP      P       10 59 43.5 -0.6
BILL                                pmax   pmax
      comp=Z,47nm,1.7s,mb5.1
MIR   Mirnyy             73.81 200c iP     P       10 59 57.0 +3.5
MIR                                 pmax   pmax
      comp=Z,285nm,1.6s,mb6.0
NDI   New Delhi          74.98 301 eP      P       11 00 03.0 +1.9
NDI                                ex      x       11 09 43.0
DGAR  Diego Garcia       75.48 263  PFAKE          11 00 10.0 +5.8
DGAR                                LR     LR
      comp=Z,1µm,20.0s,MS5.2
TNA   Tin City           75.58  17  PFAKE          11 00 10.0 +6.3
TNA                                 LR     LR
      comp=Z,9µm,21.0s,MS6.1
KAD   Karad              75.76 289 eP      P       11 00 07.3 +1.6
TIXI  Tiksi              75.77 354⇓iP      P       11 00 01.5 -3.2
      comp=Z,24nm,1.0s,mb5.1
TIXI                               eS      S       11 09 42.4 -0.5
TIXI  Tiksi              75.77 354⇓iP      P       11 00 01.5 -3.2
TIXI                               eS      S       11 09 42.4 -0.5
TIXI                                pmax   pmax
      comp=Z,24nm,1.0s,mb5.1
MKAR  Makanchi Array     76.14 320  P      P       11 00 06.3 -1.0
      comp=Z,49nm,1.1s,mb5.3,baz=101,slow=6.2,SNR=40
MKAR                                PKPPKP         11 27 29.7
      comp=Z,2.6nm,1.1s,baz=297,slow=2.7,SNR=8.2
MKAR                                LR     LR      11 34 27.3
      comp=Z,7µm,21.8s,MS6.0,baz=109,slow=36
MKAR  Makanchi Array     76.14 320  P      P       11 00 05.5 -1.8
MKAR                                pmax   pmax
      comp=Z,184nm,1.2s
BHK   Bhakra             76.24 303 ex      x       11 00 19.3
POO   Poona              76.25 290 eP      P       11 00 09.7 +1.3
POO                                 AMb    AMB     11 00 16.3
      comp=Z,111nm,1.4s,mb5.6
RKT   Rikitea            76.62 113 eP      P       11 00 11.0 +0.5
      comp=Z,200nm,1.2s,mb5.9
RKT   Rikitea            76.62 113 eS      S       11 09 54.1 +0.9
RKT                                eLQ             11 20 43.3
RKT                                eLR     LR      11 23 20.7
      comp=Z,21µm,27.8s
AJM   Ajmer              76.79 298 eP      P       11 00 11.3 -0.1
THN   Thein Dam          77.04 304 eP      P       11 00 12.0 -0.6
SVW2  Sparrevohn         77.21  24 eP      P       11 00 16.1 +3.1
ZAL   Zalesovo           77.33 327  P      P       11 00 11.7 -2.1
      comp=Z,9.8nm,0.9s,mb4.7,baz=6.1,slow=6.7,SNR=22
ZAL                                 LR     LR      11 35 32.5
      comp=Z,10µm,21.2s,MS6.1,baz=4.0,slow=37
KSH   Kashi              78.44 311 eP      P       11 00 21.0 +0.8
KSH                                eAP     pP      11 00 29.2 -1.2
KSH                                ePCP    PcP     11 00 31.0 +1.4
KSH                                ePP     PP      11 03 20.1 +0.5
KSH                                ePPP    PPP     11 05 09.0  0.0
KSH                                eS      S       11 10 13.0 +0.5
KSH                                eSKS    SKS     11 10 28.4 -7.7
KSH                                eSCS    ScS     11 10 36.0 +1.1
KSH                                ePS     PS      11 10 59.1 +0.4
KSH                                eSS     SS      11 15 19.2 +0.5
KSH                                 AMB    AMB
      comp=Z,920nm,1.8s,mb6.4
KSH                                 LR     LR
      comp=N,4µm,13.6s
KSH                                 LR     LR
      comp=E,12µm,20.8s
NVS   Novosibirsk        78.52 328 eP      P       11 00 18.0 -2.3
      comp=E,280nm,1.8s,mb5.9
NVS                                eS      S       11 10 15.3 +2.3
NVS   Novosibirsk        78.52 328 eP      P       11 00 18.0 -2.3
NVS                                eS      S       11 10 15.3 +2.3
NVS                                 pmax   pmax
      comp=N,131nm,1.8s
NVS                                 pmax   pmax
      comp=E,170nm,1.8s
NVS                                 pmax   pmax
      comp=Z,280nm,1.8s,mb5.9
NVS                                 smax
      comp=N,81nm,4.4s
NVS                                 smax
      comp=E,165nm,4.2s
AAA   Alma-Ata           78.68 315 i P     P       11 00 24.8 +3.4
AAA                                i S     S       11 10 27.7  +13
AAA                                 pmax   pmax
      comp=Z,1µm,2.4s,mb6.4
AAA                                 smax
      comp=E,2µm,4.9s
AAA                                 MLR    MLR
      comp=Z,4µm,10.6s,MS6.0
ULHL  Ulahol             78.92 314  P      P       11 00 24.3 +1.6
      SNR=17
SLKM  Skilak Lake        79.22  26 eP      P       11 00 25.0 +1.0
SLKM  Skilak Lake        79.22  26  P      P       11 00 25.5 +1.5
FIB   Fire Island        79.54  26  PFAKE          11 00 40.0  +14
FIB                                 LR     LR
      comp=Z,6µm,21.0s,MS5.9
TKM2  Tokmak 2           79.55 315  P      P       11 00 27.8 +1.7
      SNR=17
KZA   Kyzart             79.59 314  P      P       11 00 27.4 +1.0
      SNR=49
KURK  Kurchatov          79.72 323⇑eP      P       11 00 24.7 -2.2
KBK   Karagaybulak       79.94 314  P      P       11 00 27.2 -1.1
      SNR=9.4
UCH   Uchtor             80.16 314  P      P       11 00 30.1 +0.7
      SNR=47
CHMS  Chumysh            80.17 314  P      P       11 00 30.9 +1.5
      SNR=12
PMR   Palmer             80.18  26  P      P       11 00 29.3 +0.2
      comp=Z,67nm,1.3s,mb5.4
PMR                                 LR     LR
      comp=Z,14µm,22.0s,MS6.2
PMR   Palmer             80.18  26  P      P       11 00 32.7 +3.6
PMR                                 pmax   pmax
      comp=Z,67nm,1.2s,mb5.5
FRU   Bishkek            80.22 314 eP      P       11 00 32.0 +2.3
      comp=Z,180nm,1.7s,mb5.7
FRU                                e       pP      11 00 44.0 +4.0
FRU                                eS      S       11 10 34.0 +2.8
FRU                                 LR     LR
      comp=Z,4µm,19.0s,MS5.7
FRU   Bishkek            80.22 314 eP      P       11 00 32.0 +2.3
FRU                                e       pP      11 00 44.0 +4.0
FRU                                eS      S       11 10 34.0 +2.8
FRU                                 pmax   pmax
      comp=Z,180nm,1.7s,mb5.7
FRU                                 pmax   pmax
      comp=Z,800nm,4.5s
FRU                                 MLR    MLR
      comp=Z,4µm,19.0s,MS5.7
AAK   Ala-Archa          80.27 314  P      P       11 00 31.6 +1.7
      SNR=12
AAK   Ala-Archa          80.27 314  P      P       11 00 28.8 -1.2
      comp=Z,56nm,1.2s,mb5.4
AAK   Ala-Archa          80.27 314  P      P       11 00 28.8 -1.2
AAK                                 pmax   pmax
      comp=Z,56nm,1.2s,mb5.4
USP   Ospenovka          80.41 315  P      P       11 00 30.4 -0.3
      SNR=17
SML   Sawmill            80.61  26  P      P       11 00 30.4 -1.0
SML   Sawmill            80.61  26 eP      P       11 00 25.0 -6.4
AML   Almayashu          80.73 313  P      P       11 00 33.1 +0.7
      SNR=25
BHJ   Bhuj               80.77 294 ex      x       11 00 35.5
EKS2  Erkin-Say          80.79 314  P      P       11 00 32.5 -0.3
      SNR=13
PTCN  Pitcairn Islan     81.13 115  PFAKE          11 00 50.0  +15
PTCN                                LR     LR
      comp=Z,12µm,20.0s,MS6.2
MCK   McKinley           81.20  24 eP      P       11 00 32.8 -1.7
      comp=Z,57nm,1.1s,mb5.4
MCK                                 LR     LR
      comp=Z,8µm,20.0s,MS6.1
DIV   Divide             81.46  27 eP      P       11 00 36.9 +1.0
      comp=Z,500nm,1.5s,mb6.2
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DIV                                 LR     LR
      comp=Z,31µm,21.0s,MS6.6
COLA  College            82.12  23 eP      P       11 00 37.7 -1.5
      comp=Z,48nm,1.1s,mb5.3
COLA                                LR     LR
      comp=Z,8µm,20.0s,MS6.1
COLA  College            82.12  23 eP      P       11 00 38.2 -1.0
THY   Trims Highway      82.36  25 eP      P       11 00 42.4 +1.9
ILAR  Eielson Array      82.45  23  P      P       11 00 38.0 -2.9
      comp=Z,12nm,0.8s,mb4.9,baz=255,slow=4.3,SNR=28
ILAR                                PKPPKP         11 27 20.3
      comp=Z,1.0nm,1.1s,baz=333,slow=2.0,SNR=4.5
MENT  Mentasta           83.04  25 eP      P       11 00 45.1 +1.1
KKAR  Karatay Array      83.23 314 i P     P       11 00 43.9 -1.5
      comp=Z,343nm,1.6s,mb6.1
KKAR  Karatay Array      83.23 314 i P     P       11 00 43.9 -1.5
KKAR                                pmax   pmax
      comp=Z,343nm,1.6s,mb6.1
DAWY  Dawson             85.24  25 eP      P       11 00 55.7 +0.7
BVA0  Borovoye Array     85.24 324 i P     P       11 00 54.1 -1.2
      comp=Z,34nm,1.5s,mb5.3
BVA0  Borovoye Array     85.24 324 i P     P       11 00 54.1 -1.2
BVA0                                pmax   pmax
      comp=Z,34nm,1.5s,mb5.3
BVAR  Borovoye Array     85.24 324  P      P       11 00 54.0 -1.3
      comp=Z,15nm,0.8s,mb5.2,baz=124,slow=5.3,SNR=20
MAW   Mawson             85.28 203  P      P       11 00 56.3 +1.2
      comp=Z,10nm,1.0s,mb4.9,baz=63,slow=4.3,SNR=12
MAW                                 LR     LR      11 36 56.9
      comp=Z,28µm,21.1s,MS6.6,baz=81,slow=34
MAW   Mawson             85.28 203 eP      P       11 00 56.7 +1.5
      comp=Z,45nm,1.1s,mb5.5
MAW                                 LR     LR
      comp=Z,43µm,20.0s,MS6.8
MAW   Mawson             85.28 203  P      P       11 00 56.5 +1.3
MAW                                 pmax   pmax
      comp=Z,110nm,1.1s
BRVK  Borovoye           85.31 324  P      P       11 00 56.4 +0.7
      comp=Z,100nm,1.5s,mb5.7
BRVK  Borovoye           85.31 324  P      P       11 00 56.4 +0.7
BRVK                                pmax   pmax
      comp=Z,100nm,1.5s,mb5.7
SIT   Sitka              85.34  32  PFAKE          11 01 10.0  +14
SIT                                 LR     LR
      comp=Z,20µm,21.0s,MS6.5
QSPA  South Pole Qui     86.75 180 eP      P       11 01 02.1 -0.1
      comp=Z,56nm,1.1s,mb5.7
DLBC  Dease Lake         88.39  31 eP      P       11 01 12.2 +1.6
INK   Inuvik             88.63  21  P      P       11 01 09.8 -1.7
      comp=Z,20nm,1.0s,mb5.4,baz=239,slow=7.0,SNR=4.1
INK   Inuvik             88.63  21 eP      P       11 01 10.2 -1.2
      comp=Z,1µm,1.0s
INK   Inuvik             88.63  21  P      P       11 01 10.3 -1.1
INK                                 pmax   pmax
      comp=Z,39nm,1.0s
WBK   Wadi Bani Khal     90.52 292  P      P       11 01 23.7 +2.3
      SNR=7.4
OCWA  Octopus Mounta     90.73  42  PFAKE          11 01 30.0 +8.2
OCWA                                LR     LR
      comp=Z,13µm,20.0s,MS6.3
HOPS  Hopland            90.99  51  PFAKE          11 01 30.0 +6.8
HOPS                                LR     LR
      comp=Z,24µm,20.0s,MS6.6
AB31  Akbulak array      91.27 319 i P     P       11 01 22.3 -1.9
      comp=Z,34nm,1.1s,mb5.6
AB31  Akbulak array      91.27 319 i P     P       11 01 22.3 -1.9
AB31                                pmax   pmax
      comp=Z,34nm,1.1s,mb5.6
HUMO  Hull Mountain      91.28  48  PFAKE          11 01 30.0 +5.6
HUMO                                LR     LR
      comp=Z,17µm,21.0s,MS6.5
BIDO  Bidbid             91.34 293 ⇓P      P       11 01 26.6 +1.5
      SNR=5.7
YBH   Yreka Blue Hor     91.42  48  P      P       11 01 27.6 +2.5
      comp=Z,59nm,1.4s,mb5.7
YBH                                 LR     LR
      comp=Z,26µm,21.0s,MS6.6
YBH   Yreka Blue Hor     91.42  48  P      P       11 01 29.3 +4.2
YBH                                 pmax   pmax
      comp=Z,59nm,1.4s
WDC   Whiskeytown Da     91.48  50  PFAKE          11 01 40.0  +15
WDC                                 LR     LR
      comp=Z,26µm,20.0s,MS6.7
HOQ   Hoqain             92.09 293 ⇑P      P       11 01 23.9 -4.7
      SNR=5.3
BSY   Bisya              92.16 293  P      P       11 01 33.5 +4.6
      SNR=7.6
SAO   San Andreas Ge     92.17  53  PFAKE          11 01 40.0  +11
SAO                                 LR     LR
      comp=Z,12µm,20.0s,MS6.3
ARU   Arti               92.45 326⇓iP      P       11 01 28.9 -0.6
      comp=Z,35nm,0.9s,mb5.7
ARU                                e               11 05 09.6
ARU                                ePPP    PPP     11 07 08.3 -6.4
ARU                                eS              11 11 59.0
ARU                                ePS     PS      11 13 45.9 -2.7
ARU                                eSS     SS      11 18 39.1 -4.4
ARU                                eSSS    SSS     11 22 13.4 -8.6
ARU                                 LR     LR
      comp=Z,18µm,22.0s,MS6.5
ARU   Arti               92.45 326⇓iP      P       11 01 28.9 -0.6
ARU                                e               11 05 09.6
ARU                                ePPP    PPP     11 07 08.3 -6.4
ARU                                eS              11 11 59.0
ARU                                ePS     PS      11 13 45.9 -2.7
ARU                                eSS     SS      11 18 39.1 -4.4
ARU                                eSSS    SSS     11 22 13.4 -8.6
ARU                                 pmax   pmax
      comp=Z,35nm,0.9s,mb5.7
ARU                                 MLR    MLR
      comp=Z,18µm,22.0s,MS6.5
ARU                                 MLR    MLR
      comp=N,1µm,19.0s,MS6.3
ARU                                 MLR    MLR
      comp=E,12µm,22.0s,MS6.3
MSEY  Mahe Island        92.47 265  PFAKE          11 01 40.0 +9.4
MSEY                                LR     LR
      comp=Z,1µm,22.0s,MS5.3
AKTO  Aktyubinsk         92.57 320  LR     LR      11 44 44.0
      comp=Z,7µm,20.3s,MS6.1,baz=116,slow=37
ARQ   Araqi              92.81 293  P      P       11 01 32.3 +0.4
      SNR=21
CMB   Columbia Colle     93.06  52  PFAKE          11 01 40.0 +7.3
CMB                                 LR     LR
      comp=Z,20µm,22.0s,MS6.5
PTRM  Twissleman Ran     93.13  55 eP      P       11 01 34.9 +1.8
MOD   Modoc              93.22  48 eP      P       11 01 35.3 +1.9
      comp=Z,60nm,1.4s,mb5.8
MOD                                 LR     LR
      comp=Z,24µm,20.0s,MS6.7
SYO   Syowa Base         93.62 200 ⇓P      P       11 01 38.0 +3.4
SYO   Syowa Base         93.62 200 ⇓pP     pP      11 01 44.9 -0.1
SYO   Syowa Base         93.62 200⇓eP      P       11 01 38.0 +3.4
SYO                               ⇓epP     pP      11 01 44.9 -0.1
SNCC  San Nicolas Is     93.63  57  PFAKE          11 01 50.0  +15
SNCC                                LR     LR
      comp=Z,18µm,20.0s,MS6.5
HAWA  Hanford            93.85  44  PFAKE          11 01 50.0  +14
HAWA                                LR     LR
      comp=Z,11µm,19.0s,MS6.3
MTUM  Tungsten Hills     94.49  53  P      P       11 01 41.1 +1.8
ISA   Isabella           94.54  55  PFAKE          11 01 50.0  +10
ISA                                 LR     LR
      comp=Z,3µm,19.0s,MS5.7
ORR   Orenburg           94.64 321d iP     P       11 01 39.7  0.0
ORR                                e               11 05 22.0
ORR                                 pmax   pmax
      comp=Z,50nm,1.2s,mb5.8
NVAR  Mina Array Bea     94.70  52  P      P       11 01 40.5 +0.3
      comp=Z,21nm,1.2s,mb5.5,baz=252,slow=4.1,SNR=22
NVAR                                LR     LR      11 35 54.5
      comp=Z,15µm,21.7s,MS6.4,baz=280,slow=30
MNV   Mina               94.82  52 eP      P       11 01 43.1 +2.3
      comp=Z,37nm,1.4s,mb5.6
MNV                                 LR     LR
      comp=Z,19µm,22.0s,MS6.5
MNV   Mina               94.82  52  P      P       11 01 43.2 +2.4
MNV                                 pmax   pmax
      comp=Z,37nm,1.3s,mb5.7
MWC   Mount Wilson       94.87  56 eP      P       11 01 41.8 +0.7
MWC   Mount Wilson       94.87  56 eP      P       11 01 42.0 +0.9
DAC   Darwin (Calif)     95.26  54  PFAKE          11 01 50.0 +7.1
DAC                                 LR     LR
      comp=Z,15µm,20.0s,MS6.5
BMO   Blue Mountains     95.42  45  PFAKE          11 01 50.0 +6.6
BMO                                 LR     LR
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      comp=Z,15µm,22.0s,MS6.4
NEW   Newport            95.48  42  P      P       11 01 44.7 +1.1
      comp=Z,14nm,1.2s,mb5.3,baz=239,slow=9.2,SNR=2.9
NEW                                 LR     LR      11 37 10.5
      comp=Z,10µm,20.7s,MS6.3,baz=266,slow=31
NEW   Newport            95.48  42  P      P       11 01 44.7 +1.1
NEW                                 LR     LR      11 37 10.5
TPH   Tonopah            95.55  52  PFAKE          11 01 50.0 +5.8
TPH                                 LR     LR
      comp=Z,12µm,20.0s,MS6.4
BAR   Barrett            96.02  58 eP      P       11 01 49.1 +2.6
YKW3  Yellowknife Ar     96.14  28 eP      P       11 01 46.2  0.0
YKA   Yellowknife Ar     96.15  28  P      P       11 01 44.6 -1.7
      comp=Z,8.9nm,0.7s,mb5.3,baz=276,slow=4.9,SNR=17
YKA                                 LR     LR      11 44 15.2
      comp=Z,7µm,19.8s,MS6.1,baz=300,slow=35
YKA   Yellowknife Ar     96.15  28 i P     P       11 01 46.2 -0.1
YKA                                 pmax   pmax
      comp=Z,9.0nm,0.7s
TPNV  Topopah Spring     96.34  53  PFAKE          11 02 00.0  +12
TPNV                                LR     LR
      comp=Z,14µm,20.0s,MS6.4
ELK   Elko               97.04  50  PFAKE          11 02 00.0 +9.1
ELK                                 LR     LR
      comp=Z,19µm,20.0s,MS6.6
LDFC  Landfair           97.29  55 eP      P       11 01 54.7 +2.5
NEN   Nelson             97.50  55 eP      P       11 01 54.5 +1.5
HLID  Hailey             97.54  47  PFAKE          11 02 00.0 +7.0
HLID                                LR     LR
      comp=Z,22µm,20.0s,MS6.6
EDM   Edmonton           97.61  37 eP      P       11 01 54.1 +1.0
EDM   Edmonton           97.61  37  P      P       11 01 58.3 +5.2
MSO   Missoula           97.69  43  PFAKE          11 02 00.0 +6.4
MSO                                 LR     LR
      comp=Z,9µm,21.0s,MS6.2
CHMT  Chamberlain Mo     98.16  43 eP      P       11 01 57.7 +1.9
MCMT  McKenzie Canyo     98.59  45 eP      P       11 01 58.2 +0.5
DUG   Dugway             98.91  50  PFAKE          11 02 10.0  +11
DUG                                 LR     LR
      comp=Z,14µm,21.0s,MS6.5
BOZ   Bozeman (W)        99.38  44  PFAKE          11 02 10.0 +8.7
BOZ                                 LR     LR
      comp=Z,10µm,19.0s,MS6.3
OPO   Ambohidratompo     99.42 251  P      P       11 02 02.4 +0.3
      comp=Z,6.7nm,1.2s,mb5.0,baz=7.5,slow=2.0,SNR=3.0
MVU   Marysvale          99.48  52  PFAKE          11 02 10.0 +8.1
MVU                                 LR     LR
      comp=Z,15µm,21.0s,MS6.5
RPN   Rapa Nui           99.59 118  PFAKE          11 02 10.0 +7.3
RPN                                 LR     LR
      comp=Z,1µm,19.0s,MS5.5
MPU   Maple Canyon       99.83  50  PFAKE          11 02 10.0 +6.5
MPU                                 LR     LR
      comp=Z,19µm,20.0s,MS6.6
YMR   Madison River      99.94  45  PFAKE          11 02 10.0 +6.1
YMR                                 LR     LR
      comp=Z,15µm,21.0s,MS6.5
AHID  Auburn Hatcher    100.01  47  PFAKE          11 02 10.0 +5.7
AHID                                LR     LR
      comp=Z,18µm,20.0s,MS6.6
WUAZ  Wupatki           100.33  55  PFAKE          11 02 20.0  +14
WUAZ                                LR     LR
      comp=Z,13µm,22.0s,MS6.4
LKWY  Lake              100.35  45  PFAKE          11 02 20.0  +14
LKWY                                LR     LR
      comp=Z,16µm,19.0s,MS6.5
TUC   Tucson            101.00  58  PFAKE          11 02 20.0  +11
TUC                                 LR     LR
      comp=Z,22µm,21.0s,MS6.6
BW06  Boulder Array     101.14  47  PFAKE          11 02 20.0  +11
BW06                                LR     LR
      comp=Z,21µm,21.0s,MS6.6
PDAR  Pinedale Array    101.14  47  P      P       11 02 10.9 +1.5
      comp=Z,1.2nm,0.8s,SNR=8.0
PDAR                                PP     PP      11 06 18.6 -2.5
      comp=Z,0.8nm,0.9s,baz=270,slow=4.4,SNR=3.9
KBS   Kingsbay          101.18 352 eSS     SS      11 20 47.7 +1.8
KBS                                 AMS    AMS     11 42 33.9
      comp=Z,2µm,23.2s,MS5.6
KBS   Kingsbay          101.18 352  PFAKE          11 02 20.0  +11
KBS                                 LR     LR
      comp=Z,4µm,21.0s,MS5.9
LVZ   Lovozero          101.68 339 i P     P       11 02 01.3  -10
LVZ                                i               11 12 45.2
LVZ                                i SS    SS      11 20 56.8 +3.8
KLMR  Klimovskoe        101.83 332 i P     P       11 02 03.1 -8.9
KLMR                               ePS     PS      11 15 19.8 -8.1
KLMR                                pmax   pmax
      comp=Z,40nm,1.9s
KLMR                                MLR    MLR
      comp=Z,10µm,23.0s,MS6.3
TI2   Plekhanov         102.17 312 eP      Pdif    11 02 09.0 -4.9
APA   Apatity           102.24 339⇑eP      Pdif    11 02 13.0 -0.6
APA                                e               11 06 29.0
APA                                ePPP    PPP     11 08 41.0 +0.6
APA                                e               11 12 55.0
APA                                ePS     PS      11 15 20.0  -12
APA                                ePPS    PPS     11 16 19.0 -4.5
APA                                eSS     SS      11 21 00.0 -0.9
APA                                 LR     LR
      comp=Z,6µm,21.0s,MS6.0
ZEI   Tsey              102.67 313 i P     Pdif    11 02 15.0 -1.1
BJO   Bjornoya          102.85 348  AMS    AMS     11 57 11.3
      comp=Z,4µm,26.2s,MS5.8
SNAA  Sanae             102.93 189 e       Pdif    11 02 23.8 +7.2
SNAA  Sanae             102.93 189 e       Pdif    11 02 27.3  +11
SNAA  Sanae             102.93 189 e       Px      11 06 38.8
SNAA  Sanae             102.93 189 e       Px      11 06 46.6
SNAA  Sanae             102.93 189 e       Px      11 06 53.0
SNAA  Sanae             102.93 189⇑iPdif   Pdif    11 02 17.3 +0.7
SNAA                               e               11 02 23.8
SNAA                               e               11 02 27.3
SNAA                               e               11 06 38.8
SNAA                               e               11 06 46.6
SNAA                               e               11 06 53.0
GOF   Gofitskoye        102.97 315 eP      Pdif    11 02 21.0 +3.7
LAO   LASA Array        102.98  43  PFAKE          11 02 30.0  +13
LAO                                 LR     LR
      comp=Z,11µm,21.0s,MS6.4
ONI   Oni               103.02 313  P      Px      11 06 53.0
BHD   Baghdad           103.32 303 ex      x       11 02 21.0
KIV   Kislovodsk        103.38 314 eP      Pdif    11 02 22.1 +2.9
      comp=Z,15nm,1.3s
KIV   Kislovodsk        103.38 314 eP      Pdif    11 02 22.1 +2.9
KIV                                 pmax   pmax
      comp=Z,15nm,1.3s
KIV                                 MLR    MLR
      comp=Z,6µm,23.0s,MS6.1
KEV   Kevo              103.42 342  PFAKE          11 02 30.0  +11
KEV                                 LR     LR
      comp=Z,7µm,22.0s,MS6.1
FFC   Flin Flon         103.97  34  PFAKE          11 02 30.0 +8.5
FFC                                 LR     LR
      comp=Z,4µm,20.0s,MS5.9
MSL   Mosul             104.08 306 ex      x       11 02 32.0
MSL                                e               11 06 26.0
MSL                                e               11 13 17.0
VNA2  Neumayer--Watz    104.27 188 e       Pdif    11 02 32.9  +10
VNA2  Neumayer--Watz    104.27 188 e       Pdif    11 02 37.0  +15
VNA2  Neumayer--Watz    104.27 188 e       Px      11 06 43.3
VNA2  Neumayer--Watz    104.27 188 e       Px      11 06 50.7
VNA2  Neumayer--Watz    104.27 188 e       Px      11 06 55.2
VNA2  Neumayer--Watz    104.27 188⇑iPdif   Pdif    11 02 25.0 +2.5
VNA2                               e               11 02 32.9
VNA2                               e               11 02 37.0
VNA2                               e               11 06 43.3
VNA2                               e               11 06 50.7
VNA2                               e               11 06 55.2
VNA3  Neumayer Olymp    104.28 187 e       Pdif    11 02 32.8  +10
VNA3  Neumayer Olymp    104.28 187 e       Pdif    11 02 36.8  +14
VNA3  Neumayer Olymp    104.28 187 e       Px      11 06 43.3
VNA3  Neumayer Olymp    104.28 187 e       Px      11 06 51.2
VNA3  Neumayer Olymp    104.28 187 e       Px      11 06 55.7
VNA3  Neumayer Olymp    104.28 187⇑iPdif   Pdif    11 02 24.9 +2.4
VNA3                               e               11 02 32.8
VNA3                               e               11 02 36.8
VNA3                               e               11 06 43.3
VNA3                               e               11 06 51.2
VNA3                               e               11 06 55.7
ANMO  Albuquerque       104.38  55  Pdiff  Pdif    11 02 29.6 +5.7
      comp=Z,0.2nm,0.3s,baz=304,slow=6.3,SNR=3.7
ANMO  Albuquerque       104.38  55  Pdif   Pdif    11 02 29.6 +5.7
ANMO                                LR     LR
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	comp=Z,12µm,20.0s,MS6.4						
ISCO	**Idaho Springs**	**104.45**	**50**	PFAKE		11 02 30.0	+6.0
ISCO				LR	LR		
	comp=Z,15µm,20.0s,MS6.5						
VNA1	**Neumayer--Stat**	**104.65**	**188**	⇑*i*Pdif	Pdif	11 02 24.3	+0.2
VNA1				*e*		11 06 44.0	
VNA1				*e*		11 06 51.3	
VNA1				*e*		11 06 57.0	
SDCO	**Great Sand Dun**	**104.82**	**52**	PFAKE		11 02 40.0	+14
SDCO				LR	LR		
	comp=Z,12µm,20.0s,MS6.4						
OBN	**Obninsk**	**104.89**	**326**	*e*P	Pdif	11 02 24.2	-1.3
	comp=Z,9.0nm,1.1s						
OBN				*i*		11 06 41.2	
OBN				*i* PS	PS	11 16 03.5	+3.9
OBN	**Obninsk**	**104.89**	**326**	*e*P	Pdif	11 02 24.2	-1.3
OBN				*i*		11 06 41.2	
OBN				*i* PS	PS	11 16 03.5	+3.9
OBN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
OBN				pmax	pmax		
	comp=Z,18nm,1.2s						
OBN				MLR	MLR		
	comp=Z,10µm,21.0s,MS6.3						
RSSD	**Black Hills**	**104.94**	**45**	PFAKE		11 02 40.0	+14
RSSD				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
MNTX	**Cornudas Mount**	**105.63**	**58**	PFAKE		11 06 50.0	
MNTX				LR	LR		
	comp=Z,17µm,20.0s,MS6.6						
TRO	**Tromso**	**105.86**	**344**	*e*SS	SS	11 21 52.3	+1.8
TRO				AMS	AMS	11 51 52.8	
	comp=Z,5µm,24.0s,MS6.0						
TRO	**Tromso**	**105.86**	**344**	*e*P		11 06 46.6	
TRO				LR	LR		
	comp=Z,5421µm,24.0s						
TXAR	**Lajitas Array**	**107.35**	**60**	Pdiff	Pdif	11 02 48.3	+11
	comp=Z,0.1nm,0.3s,baz=270,slow=1.8,SNR=4.6						
TXAR				PKiKP		11 06 46.7	
	comp=Z,2.2nm,1.2s,baz=270,slow=3.8,SNR=4.2						
TXAR				PP	PP	11 07 03.8	-4.0
	comp=Z,6.2nm,1.3s,baz=236,slow=4.5,SNR=7.1						
TXAR				PKKPab		11 18 18.2	
	comp=Z,1.1nm,0.9s,baz=135,slow=6.4,SNR=6.3						
TXAR	**Lajitas Array**	**107.35**	**60**	PKPdf		11 06 46.7	
TXAR				PP	PP	11 07 03.8	-4.0
TXAR				PKKPab		11 18 18.2	
FINES	**FINESS Array B**	**107.69**	**335**	Pdiff	Pdif	11 02 42.9	+5.2
	comp=Z,2.7nm,0.9s,baz=212,slow=18,SNR=3.6						
PMSA	**Palmer Station**	**108.16**	**166**	PFAKE		11 07 00.0	
PMSA				LR	LR		
	comp=Z,7µm,19.0s,MS6.3						
CBKS	**Cedar Bluff**	**109.11**	**50**	PFAKE		11 07 00.0	
CBKS				LR	LR		
	comp=Z,18µm,20.0s,MS6.6						
JCT	**Junction City**	**110.53**	**59**	PFAKE		11 07 00.0	+4.5
JCT				LR	LR		
	comp=Z,25µm,21.0s,MS6.8						
WMOK	**Wichita Mounta**	**110.66**	**54**	PFAKE		11 07 00.0	+4.3
WMOK				LR	LR		
	comp=Z,11µm,20.0s,MS6.4						
BR131	**Keskin Array S**	**110.83**	**311**	PFAKE		11 07 00.0	+4.1
BR131				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
BRTR	**Keskin Array B**	**110.83**	**311**	PKiKP		11 06 55.0	
	comp=Z,1.5nm,0.8s,baz=117,slow=2.8,SNR=6.0						
BRTR				PKKPbc		11 17 53.7	
	comp=Z,1.4nm,1.0s,baz=143,slow=6.2,SNR=5.0						
NSS	**Namsos**	**111.22**	**341**	*e*SS	SS	11 23 03.7	+1.4
NSS				AMS	AMS	11 52 01.9	
	comp=Z,6µm,22.9s,MS6.2						
ANTO	**Ankara**	**111.43**	**312**	PFAKE		11 07 00.0	+3.0
ANTO				LR	LR		
	comp=Z,3µm,22.0s,MS5.8						
KSU1	**Kansas State U**	**111.43**	**49**	PFAKE		11 07 00.0	+2.9
KSU1				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
EYMN	**Ely**	**112.31**	**39**	PFAKE		11 07 10.0	+11
EYMN				LR	LR		
	comp=Z,122µm,21.0s						
NB2	**NORSAR Subarra**	**113.82**	**339**	PKPdf	PKPdf	11 07 01.1	-0.1
	comp=Z,14nm,1.7s,baz=45,slow=1.9						
NB2	**NORSAR Subarra**	**113.82**	**339**	PKPd		11 07 01.1	
	baz=44,slow=1.9						
NB2	**NORSAR Subarra**	**113.82**	**339**	⇓PKP	PKPdf	11 07 01.1	-0.1
NAO01	**NORSAR Array S**	**114.07**	**339**	PFAKE		11 07 10.0	+8.3
NAO01				LR	LR		
	comp=Z,8µm,19.0s,MS6.3						
NAO	**NORSAR Subarra**	**114.11**	**339**	PKPdf	PKPdf	11 07 01.1	-0.7
NATX	**Nacogdoches**	**114.64**	**57**	PFAKE		11 07 10.0	+6.5
NATX				LR	LR		
	comp=Z,14µm,20.0s,MS6.5						
KWP	**Kalwaria**	**114.79**	**324**	*e*Pdiff	Pdif	11 02 55.4	-14
KWP				MLR	MLR	11 52 50.1	
	comp=Z,16µm,27.8s,MS6.5						
MIAR	**Mount Ida**	**114.89**	**53**	PFAKE		11 07 10.0	+6.0
MIAR				LR	LR		
	comp=Z,7µm,22.0s,MS6.2						
KONO	**Kongsberg**	**115.36**	**338**	PFAKE		11 07 10.0	+5.7
KONO				LR	LR		
	comp=Z,8µm,22.0s,MS6.3						
CCM	**Cathedral Cave**	**115.76**	**49**	PFAKE		11 07 10.0	+4.4
CCM				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
OJC	**Ojcow**	**116.17**	**326**	*e*PKP	PKPdf	11 07 03.8	-2.3
OJC				*i* PP	PP	11 08 12.0	+1.0
OJC				*e*SKS	SKS	11 13 59.5	+2.4
OJC				*e*PS	PS	11 17 47.2	-1.2
OJC				*e*SS	SS	11 24 17.3	+9.2
OJC				MLR	MLR	11 55 54.3	
	comp=Z,11µm,21.7s,MS6.4						
OJC	**Ojcow**	**116.17**	**326**	*e*PKIKP	PKPdf	11 07 03.8	-2.3
OJC				*i*		11 08 12.0	
OJC				*e*PS	PS	11 17 47.2	-1.2
OJC				*e*SS	SS	11 24 17.3	+9.2
OJC				MLR	MLR		
	comp=Z,11µm,21.7s,MS6.4						
NIE	**Niedzica**	**116.27**	**325**	*e*PKP	PKPdf	11 07 07.2	+0.9
BER	**Bergen**	**116.33**	**340**	*e*PP	PP	11 08 08.1	-3.8
BER				*e*SS	SS	11 24 10.2	+0.3
BER				AMS	AMS	11 59 01.1	
	comp=Z,5µm,19.5s,MS6.2						
BOSA	**Boshof**	**116.82**	**236**	PKP	PKPdf	11 07 05.6	-2.2
	comp=Z,3.9nm,1.0s,baz=247,slow=6.9,SNR=3.6						
BOSA	**Boshof**	**116.82**	**236**	PKP	PKPdf	11 07 05.6	-2.2
BOSA				LR	LR		
	comp=Z,11µm,21.0s,MS6.5						
OKC	**Ostrava-Krasne**	**117.29**	**326**	AMS	AMS	11 56 40.0	
MBAR	**Mbarara**	**117.39**	**268**	PFAKE		11 07 20.0	+11
MBAR				LR	LR		
	comp=Z,1.0nm,22.0s						
MORC	**Moravsky Berou**	**117.65**	**326**	*e*PKPdf	PKPdf	11 07 06.4	-2.5
LBTB	**Lobatse**	**117.71**	**240**	PFAKE		11 07 20.0	+10
LBTB				LR	LR		
	comp=Z,7µm,19.0s,MS6.3						
LSZ	**Lusaka**	**117.88**	**251**	*e*PKPdf	PKPdf	11 07 05.8	-4.3
LSZ				LR	LR		
	comp=Z,10µm,19.0s,MS6.5						
DPC	**Dobruska-Polom**	**118.02**	**327**	*e*PKP	PKPdf	11 07 08.4	-1.2
DPC				AMS	AMS	11 58 10.0	
	comp=Z,12µm,20.9s						
UPC	**Upice**	**118.10**	**328**	*e*PKP	PKPdf	11 07 12.3	+2.5
BORG	**Borgarnes**	**118.12**	**355**	PFAKE		11 07 20.0	+11
BORG				LR	LR		
	comp=Z,2µm,21.0s,MS5.7						
OXF	**Oxford**	**118.22**	**52**	PFAKE		11 07 20.0	+10
OXF				LR	LR		
	comp=Z,14µm,22.0s,MS6.6						
PVCC	**Panska Ves**	**118.85**	**328**	*e*PKP	PKPdf	11 07 13.9	+2.6
PVCC				AMS	AMS	11 57 10.0	
DIVS	**Divcibare**	**118.92**	**320**	⇑*i*PKP	PKPdf	11 07 08.6	-3.0
SUR	**Sutherland**	**118.92**	**230**	PFAKE		11 07 20.0	+8.1
SUR				LR	LR		
	comp=Z,3µm,21.0s,MS6.0						
WVT	**Waverly**	**118.95**	**50**	PFAKE		11 07 20.0	+8.2
WVT				LR	LR		
	comp=Z,11µm,21.0s,MS6.5						
TREC	**Trest**	**119.04**	**327**	*e*PKP	PKPdf	11 07 11.3	-0.4
TREC				*e*x	x	11 07 21.1	
TREC				*e*x	x	11 18 18.7	
TREC				*e*x	x	11 20 13.9	
TREC				*e*SS	SS	11 25 11.7	+26
TREC				AMS	AMS	11 51 20.0	
	comp=Z,24µm,33.3s						
TREC	**Trest**	**119.04**	**327**	*e*PKIKP	PKPdf	11 07 11.3	-0.4
TREC				*e*		11 07 21.1	
TREC				*e*		11 18 18.7	
TREC				MLR	MLR		
	comp=Z,24µm,33.3s,MS6.6						
PRU	**Pruhonice**	**119.17**	**328**	*e*PKP	PKPdf	11 07 11.7	-0.2
PRU				*e*PS	PS	11 18 18.0	+2.6
PRU				AMS	AMS	11 58 50.0	
	comp=Z,8µm,21.4s						
CLL	**Collm**	**119.21**	**330**	*e*PKIKP	PKPdf	11 07 11.0	-0.9
CLL				*e*PP	PP	11 08 31.0	-1.1
CLL				*e*PS	PS	11 18 20.0	+4.3
CLL				*e*SS	SS	11 25 00.0	+12
CLL				*e*SSS	SSS	11 29 00.0	-14
CLL	**Collm**	**119.21**	**330**	*e*PKIKP	PKPdf	11 07 11.0	-0.9
CLL				*e*PS	PS	11 18 20.0	+4.3
CLL				MLR	MLR		
	comp=Z,12µm,22.2s,MS6.5						
WCI	**Wyandotte Cave**	**119.39**	**47**	PFAKE		11 07 20.0	+7.4
WCI				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
NKC	**Novy Kostel**	**120.13**	**329**	AMS	AMS	11 59 20.0	
	comp=Z,9µm,22.8s						
KHC	**Kasperske Hory**	**120.17**	**327**	*e*PKP	PKPdf	11 07 10.4	-3.4
KHC				*e*pPKP		11 07 16.0	
KHC				*e*PS	PS	11 18 25.4	+1.0
KHC				AMS	AMS	12 00 20.0	
	comp=Z,15µm,21.6s						
KHC	**Kasperske Hory**	**120.17**	**327**	*i* PKIKP	PKPdf	11 07 08.9	-4.9
GERES	**GERESS Array B**	**120.27**	**327**	PKP	PKPdf	11 07 10.3	-3.7
	comp=Z,2.1nm,0.7s,baz=45,slow=1.9,SNR=14						
MOX	**Moxa**	**120.31**	**330**	*i* P	PKPdf	11 07 20.2	+6.1
	comp=Z,logA/T=1.1						
MOX				PP	PP	11 08 45.0	+6.0
MOX				*e*		11 18 28.0	
MOX				SS	SS	11 25 29.0	+27
MOX				L		11 59 38.0	
MOX	**Moxa**	**120.31**	**330**	*e*PKP	PKPdf	11 07 20.2	+6.1
MOX				*e*PP	PP	11 08 45.1	+6.1
MOX				*e*SKSP		11 18 28.0	
MOX				*e*SS	SS	11 25 29.0	+27
MOX				LR	LR		
	comp=Z,8µm,22.0s,MS6.3						
LRAL	**Lakeview Retre**	**120.57**	**53**	PFAKE		11 07 20.0	+4.9
LRAL				LR	LR		
	comp=Z,14µm,20.0s,MS6.6						
CRES	**Cresnjev**	**120.91**	**323**	*e*PKPdf	PKPdf	11 07 12.0	-3.4
ACSO	**Alum Creek Sta**	**120.98**	**44**	PFAKE		11 07 20.0	+4.3
ACSO				LR	LR		
	comp=Z,13µm,21.0s,MS6.6						
GRA1	**Grafenberg Arr**	**121.09**	**329**	*e*PKP	PKPdf	11 07 11.6	-4.0
GRA1				*e*PP	PP	11 08 49.1	+4.6
GRA1				*e*SP	SP	11 18 41.4	+13
GRA1				LR	LR		
	comp=Z,10µm,21.5s,MS6.4						
GRF	**Grafenberg Arr**	**121.09**	**329**	*e*PKP	PKPdf	11 07 11.6	-4.0
GRF				*e*PP	PP	11 08 49.1	+4.6
GRF				*e*SP	SP	11 18 41.4	+13
GRF				LR	LR		
	comp=Z,10µm,21.5s,MS6.4						
GRF	**Grafenberg Arr**	**121.09**	**329**	*e*PKIKP	PKPdf	11 07 11.6	-4.0
GRF				*e*		11 08 49.1	
GRF				MLR	MLR		
	comp=Z,10µm,21.5s,MS6.4						
SCHQ	**Schefferville**	**121.21**	**23**	PFAKE		11 07 20.0	+4.3
SCHQ				LR	LR		
	comp=Z,10µm,20.0s,MS6.5						
LJU	**Ljubljana**	**121.34**	**324**	*e*PKPdf	PKPdf	11 07 13.8	-2.5
SADO	**Sadowa**	**121.38**	**38**	PKP	PKPdf	11 07 13.2	-3.1
	comp=Z,5.8nm,0.9s,baz=330,slow=8.1,SNR=2.6						
PAYG	**Puerto Ayora**	**121.40**	**93**	PFAKE		11 07 20.0	+2.9
PAYG				LR	LR		
	comp=Z,17µm,20.0s,MS6.7						
KBA	**Koelnbreinsper**	**121.46**	**325**	⇑*i*P	PKPdf	11 07 16.7	+0.2
	comp=Z,8.0nm,0.8s						
VOJS	**Vojsko**	**121.73**	**324**	*e*PKPdf	PKPdf	11 07 06.3	-11
NVLJ	**Novalja**	**121.92**	**322**	*i* PKP	PKPdf	11 07 11.3	-6.0
TZTN	**Tazewell**	**122.04**	**48**	PFAKE		11 07 20.0	+2.2
TZTN				LR	LR		
	comp=Z,12µm,20.0s,MS6.5						
WTTA	**Wattenberg**	**122.31**	**326**	⇑*i*P	PKPdf	11 07 17.1	-0.9
	comp=Z,24nm,1.1s						
WTTA	**Wattenberg**	**122.31**	**326**	⇑P	PKPdf	11 07 17.1	-1.0
MOTA	**Moosalm**	**122.56**	**327**	⇑*i*P	PKPdf	11 07 15.9	-2.6
	comp=Z,9.8nm,1.0s						
SQTA	**Sankt Quirin**	**122.58**	**327**	⇑*i*P	PKPdf	11 07 17.1	-1.4
EKA	**Eskdalemuir Ar**	**123.11**	**341**	PKP	PKPdf	11 07 16.1	-3.3
	comp=Z,6.4nm,0.9s,baz=45,slow=2.4,SNR=5.6						
ESK	**Eskdalemuir**	**123.14**	**341**	PFAKE		11 07 30.0	+11
ESK				LR	LR		
	comp=Z,996nm,20.0s,MS5.5						
GOGA	**Godfrey**	**123.25**	**52**	PFAKE		11 07 30.0	+10
GOGA				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
TIP	**Timpagrande**	**123.28**	**316**	*e*PKPdf	PKPdf	11 07 15.6	-4.5
MCWV	**Mont Chateau**	**123.40**	**43**	PFAKE		11 07 30.0	+10
MCWV				LR	LR		
	comp=Z,17µm,20.0s,MS6.7						
DAVOX	**Davos**	**123.57**	**327**	PKP	PKPdf	11 07 17.0	-3.5
	comp=Z,8.5nm,0.9s,baz=134,slow=4.3,SNR=5.9						
FWV	**Forest Hill**	**123.63**	**46**	*e*PKPdf	PKPdf	11 07 17.0	-3.9
PLCA	**Paso Flores**	**123.75**	**145**	PKP	PKPdf	11 07 17.8	-3.2
	comp=Z,23nm,1.2s,baz=213,slow=3.1,SNR=13						
PLCA	**Paso Flores**	**123.75**	**145**	*e*PKPdf	PKPdf	11 07 17.7	-3.3
PLCA				LR	LR		
	comp=Z,11µm,22.0s,MS6.5						
ELN	**Prospectdale**	**123.82**	**46**	*e*PKPdf	PKPdf	11 07 20.2	-1.1
CDF	**Champ du Feu**	**123.91**	**330**	*e*PKIKP	PKPdf	11 07 13.8	-7.3
GIVF	**Givet**	**123.96**	**332**	*e*PKIKP	PKPdf	11 07 14.2	-7.0
BLA	**Blacksburg**	**124.07**	**46**	*e*PKPdf	PKPdf	11 07 18.5	-3.2
BLA				LR	LR		
	comp=Z,308µm,20.0s						
HINF	**Hinteralfeld**	**124.52**	**329**	*e*PKIKP	PKPdf	11 07 14.7	-7.6
	comp=Z,26nm,1.1s						
JSC	**Jenkinsville**	**124.63**	**50**	*e*PKPdf	PKPdf	11 07 21.2	-1.7
NCB	**Newcomb**	**124.78**	**36**	*e*PKPdf	PKPdf	11 07 20.9	-2.1
NCB				LR	LR		
	comp=Z,12µm,19.0s,MS6.6						
MIV	**Mineville/With**	**125.13**	**36**	*e*PKPdf	PKPdf	11 07 20.1	-3.5
CABF	**La Chapelle**	**125.70**	**329**	*e*PKIKP	PKPdf	11 07 17.7	-6.9
	comp=Z,53nm,1.2s						
CBN	**Corbin**	**125.78**	**44**	*e*PKPdf	PKPdf	11 07 23.3	-1.8
CBN				LR	LR		
	comp=Z,13µm,21.0s,MS6.6						
NHSC	**New Hope**	**125.92**	**51**	*e*PKPdf	PKPdf	11 07 22.1	-3.4
NHSC				LR	LR		
	comp=Z,17µm,21.0s,MS6.7						
LBNH	**Lisbon**	**125.96**	**35**	PFAKE		11 07 30.0	+4.8
LBNH				LR	LR		
	comp=Z,14µm,21.0s,MS6.6						
LPL	**La Plagne**	**126.07**	**327**	*e*PKIKP	PKPdf	11 07 18.4	-6.9
	comp=Z,66nm,1.7s						
LPG	**La Plagne**	**126.07**	**327**	*e*PKIKP	PKPdf	11 07 18.5	-6.8
LOR	**Lormes**	**126.39**	**330**	*e*PKIKP	PKPdf	11 07 18.8	-7.1
	comp=Z,64nm,1.4s						
LOR				*e*R			
	comp=Z,12µm,22.8s						
BNI	**Bardonecchia**	**126.39**	**327**	PKP	PKPdf	11 07 23.5	-2.4
PQI	**Presque Isle**	**126.50**	**30**	PFAKE		11 07 30.0	+3.9
PQI				LR	LR		
	comp=Z,51µm,21.0s,MS7.2						
MBDF	**Montbardon**	**126.55**	**326**	*e*PKIKP	PKPdf	11 07 19.3	-7.0
	comp=Z,19nm,1.1s						
TSUM	**Tsumeb**	**126.61**	**243**	PFAKE		11 07 30.0	+3.0
TSUM				LR	LR		
	comp=Z,9µm,20.0s,MS6.4						
DWPF	**Disney**	**126.66**	**57**	PFAKE		11 07 30.0	+3.0
DWPF				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
LSCT	**Lakeside**	**126.69**	**38**	PFAKE		11 07 30.0	+3.4
LSCT				LR	LR		
	comp=Z,18µm,21.0s,MS6.7						
SSF	**Saint Saulge**	**126.70**	**330**	*e*PKIKP	PKPdf	11 07 19.5	-7.0
	comp=Z,13nm,0.8s						
JTS	**JuntasAbangare**	**126.79**	**80**	PKP	PKPdf	11 07 24.8	-2.7
JTS				LR	LR		
	comp=Z,7µm,21.0s,MS6.3						
SMF	**Signal de Mont**	**126.83**	**330**	*e*PKIKP	PKPdf	11 07 19.5	-7.2
ORIF	**Oris-en-Rattie**	**126.91**	**327**	*e*PKIKP	PKPdf	11 07 19.7	-7.3
	comp=Z,22nm,1.0s						
ORIF				*e*R			
	comp=Z,13µm,22.8s						
WVL	**Waterville**	**127.03**	**33**	PFAKE		11 07 30.0	+2.8
WVL				LR	LR		
	comp=Z,42µm,20.0s,MS7.1						
HRV	**Harvard--Oak R**	**127.22**	**36**	PFAKE		11 07 30.0	+2.4
HRV				LR	LR		
	comp=Z,11µm,21.0s,MS6.5						
BGF	**Bois d'Agland**	**127.38**	**330**	*e*PKIKP	PKPdf	11 07 20.8	-7.1
WES	**Weston**	**127.43**	**36**	PFAKE		11 07 30.0	+1.9
WES				LR	LR		
	comp=Z,10µm,21.0s,MS6.5						
VIVF	**Saint-Julien-l**	**127.60**	**328**	*e*PKIKP	PKPdf	11 07 21.3	-7.1
	comp=Z,25nm,1.1s						
TCF	**Toulx Ste Croi**	**127.88**	**331**	*e*PKIKP	PKPdf	11 07 21.7	-7.2
	comp=Z,87nm,1.6s						
EMMW	**East Machias**	**128.12**	**32**	PFAKE		11 07 40.0	+11
EMMW				LR	LR		
	comp=Z,40µm,19.0s,MS7.1						
RJF	**Les Rejaudoux**	**128.92**	**330**	*e*PKIKP	PKPdf	11 07 23.9	-7.0
	comp=Z,58nm,1.5s						
RJF				*e*R			
	comp=Z,9µm,22.2s						
NNA	**Nana**	**132.74**	**109**	*e*PKPdf	PKPdf	11 07 36.1	-2.9
NNA				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
LVC	**Limon Verde**	**135.59**	**127**	*e*PKPdf	PKPdf	11 07 41.5	-2.5
LVC				LR	LR		
	comp=Z,8µm,20.0s,MS6.5						
ESDC	**Sonseca Array**	**135.79**	**329**	PP	PP	11 10 21.5	+0.6
	comp=Z,4.1nm,1.0s,baz=40,slow=6.0,SNR=6.7						
ESLA	**Sonseca Array**	**135.79**	**329**	PFAKE		11 07 50.0	+6.1
ESLA				LR	LR		
	comp=Z,39µm,22.0s,MS7.1						
TRIS	**Tristan da Cun**	**136.03**	**203**	PFAKE		11 07 50.0	+5.6
TRIS				LR	LR		
	comp=Z,9µm,19.0s,MS6.5						
ROSC	**El Rosal**	**137.53**	**86**	PKP	PKPdf	11 07 46.1	-1.7
	comp=Z,34nm,0.9s,baz=293,slow=22,SNR=9.9						
BBSR	**BB Station**	**137.64**	**43**	PFAKE		11 07 50.0	+2.5
BBSR				LR	LR		
	comp=Z,8µm,21.0s,MS6.4						
EVO	**Evora**	**138.68**	**331**	*e*PKIKP	PKPdf	11 07 42.3	-7.0
	comp=Z,57nm,1.4s						
EVO				*e*R			
	comp=Z,3µm,22.8s						
LPAZ	**La Paz**	**139.19**	**119**	PKhKP		11 07 41.4	
	comp=Z,6.2nm,1.1s,baz=336,slow=1.1,SNR=9.8						
LPAZ				PKP	PKPdf	11 07 51.0	+0.3
	comp=Z,79nm,1.2s,baz=3.4,slow=6.9,SNR=31						
LPAZ	**La Paz**	**139.19**	**119**	PKP	PKPdf	11 07 41.4	-9.3
LPAZ				*e*PKPdf	PKPdf	11 07 49.0	-1.7
SDV	**Santo Domingo**	**140.98**	**80**	*e*PKPdf	PKPdf	11 07 48.7	-5.5
MDT	**Midelt**	**141.07**	**322**	PKP	PKPdf	11 07 48.9	-4.9
	comp=Z,4.8nm,1.0s,baz=57,slow=5.3,SNR=4.6						
CPUP	**Villa Florida**	**141.63**	**141**	*e*PKPdf	PKPdf	11 07 51.2	-3.7
SJG	**San Juan**	**143.23**	**64**	PKP	PKPdf	11 07 54.0	-3.8
	comp=Z,26nm,0.8s,baz=283,slow=4.0,SNR=4.7						
SJG	**San Juan**	**143.23**	**64**	*e*PKPdf	PKPdf	11 07 54.4	-3.4
ADH	**Angra Heroismo**	**144.47**	**354**	*e*SS	SS	11 30 17.5	+22
ADH	**Angra Heroismo**	**144.47**	**354**	*i* LR	LR	11 57 22.5	
PDA	**Ponta Delgada**	**145.17**	**351**	*e*PKP	PKPdf	11 08 01.5	+0.8
PDA	**Ponta Delgada**	**145.17**	**351**	*e*LR	LR	11 57 42.0	
SAML	**Samuel**	**146.45**	**111**	*e*PKPdf	PKPdf	11 08 00.2	-3.4
CAM4	**Nova Friburgo**	**152.50**	**158**	*e*P	PKPdf	11 08 15.9	+3.2
CAM4				*i*		11 08 19.0	
CAM4				*i*		11 08 25.3	
CAM4				*i*		11 08 35.8	
DBIC	**Dimbokro**	**152.96**	**278**	PKP	PKPdf	11 08 11.5	-2.1
	comp=Z,5.5nm,0.8s,baz=288,slow=2.8,SNR=3.6						
DBIC				PKPbc	PKPdf	11 08 19.5	+5.9
	comp=Z,26nm,0.9s,baz=43,slow=1.4,SNR=13						
DBIC	**Dimbokro**	**152.96**	**278**	PKP	PKPdf	11 08 11.5	-2.1
DBIC				PKPbc	PKPdf	11 08 19.5	+5.9
LIC	**Lamto**	**153.17**	**277**	*e*PKIKP	PKPdf	11 08 07.4	-6.5
	comp=Z,132nm,1.1s						
LIC				*e*R			
	comp=Z,12µm,21.5s						
BDFB	**Brasilia**	**155.33**	**140**	PKP	PKPdf	11 08 15.2	-1.6
	comp=Z,20nm,1.1s,baz=43,slow=1.9,SNR=12						
BDFB				PKPab	PKPab	11 08 40.4	+1.2
	comp=Z,39nm,1.0s,baz=226,slow=5.3,SNR=7.4						
BAO	**Brasilia Array**	**155.35**	**140**	PKPdf	PKPdf	11 08 14.0	-2.8

ISK ***05*** *10:55:35.2, 38.11N×26.70E, h13^{km}, MD3.3*
NEIC ***05*** *10:55:35.0, 38.11N×26.73E, h14^{km}, MD3.3(ISK), MD3.3(ATH), After ISK.*
ATH ***05*** *10:55:36.3, 38.11N×26.51E, h23^{km}±1^{km}, MD3.3/3*
CSEM ***05*** *10:55:36.5±0.1, 38.14N×26.81E, h20^{km}, MD3.3, Error ellipse: s-maj=3.0km s-min=1.8km az=72.0*
ISC 05 10:55:35.0±0.8**, 38.12N**±0.03×**26.66E**±0.05**, h6**^{km}±5^{km}**,**
n51, σ0.82/66**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.25**	**349**	*i* P	**Pg**	**10 55 39.8**	**-0.3**
URLA				*i* S	**Sg**	**10 55 43.3**	**-0.1**
BLCB	**Balcova**	**0.41**	**49**	*i* PG	**Pg**	**10 55 43.2**	**+0.1**
BLCB	**Balcova**	**0.41**	**49**	Pg	**Pg**	**10 55 43.4**	**+0.3**
BLCB				Sg	**Sg**	**10 55 48.4**	**-0.2**
BLCB	**Balcova**	**0.41**	**49**	Pg	**Pg**	**10 55 43.4**	**+0.3**
BLCB				Sg	**Sg**	**10 55 48.4**	**-0.2**
SMG	**Samos**	**0.43**	**160**	*e*PB	**Pg**	**10 55 46.1**	**+2.5**
SMG				*e*SB	**Sg**	**10 55 53.4**	**+3.9**
IZM	**Izmir**	**0.56**	**59**	*i* PG	**Pg**	**10 55 46.4**	**+0.3**
IZM				*i* SG	**Sg**	**10 55 53.7**	**+0.2**
IZM	**Izmir**	**0.56**	**59**	Pg	**Pg**	**10 55 45.9**	**-0.2**
IZM				Sg	**Sg**	**10 55 53.9**	**+0.4**
KDAG	**Bornova**	**0.56**	**59**	*i* P	**Pg**	**10 55 45.5**	**-0.7**
KDAG				*i* S	**Sg**	**10 55 50.5**	**-3.2**
AYDN	**Tasoluk**	**1.07**	**115**	*i* P	**Pb**	**10 55 56.7**	**+1.3**
AYDN				*i* S	**Sb**	**10 56 15.1**	**+5.5**
PRK	**Paraskevi**	**1.17**	**345**	*e*PN	**Pn**	**10 55 58.0**	**+0.2**
PRK				*e*SN	**Sn**	**10 56 14.2**	**+0.1**
BODT	**Bodrum**	**1.18**	**153**	PN	**Pn**	**10 55 57.5**	**-0.4**
BODT				SN	**Sn**	**10 56 14.2**	**-0.1**
BODT	**Bodrum**	**1.18**	**153**	Pn	**Pn**	**10 55 57.6**	**-0.3**
BODT	**Bodrum**	**1.18**	**153**	Pn	**Pn**	**10 55 57.6**	**-0.3**
BODT				*e*Sn	**Sn**	**10 56 14.2**	**-0.1**
AKS	**Akhisar**	**1.19**	**50**	PN	**Pn**	**10 55 57.6**	**-0.4**
AKS	**Akhisar**	**1.19**	**50**	Pn	**Pn**	**10 55 57.6**	**-0.4**
AYVA	**Ayvalik**	**1.19**	**1**	*i* P	**Pb**	**10 55 58.0**	**+0.4**
MLSB	**Milas**	**1.21**	**132**	*e*PN	**Pn**	**10 55 58.0**	**-0.4**
APE	**Apeiranthos**	**1.38**	**221**	*e*PN	**Pn**	**10 56 00.5**	**-0.2**
APE	**Apeiranthos**	**1.38**	**221**	*e*Pn	**Pn**	**10 56 01.1**	**+0.4**
MANT	**Manisa**	**1.54**	**75**	*i* P	**Pn**	**10 56 04.7**	**+1.6**
MANT				*i* S	**Sb**	**10 56 25.0**	**+1.7**
DAT	**Datca**	**1.57**	**152**	*e*PN	**Pn**	**10 56 02.9**	**-0.6**
YER	**Yerkesik**	**1.62**	**127**	*e*PN	**Pn**	**10 56 04.1**	**-0.2**
YER	**Yerkesik**	**1.62**	**127**	Pn	**Pn**	**10 56 04.2**	**-0.1**
EZN	**Ezine**	**1.73**	**352**	*e*PN	**Pn**	**10 56 06.3**	**+0.5**
EZN	**Ezine**	**1.73**	**352**	Pn	**Pn**	**10 56 06.3**	**+0.6**
BALB	**Balikesir**	**1.80**	**32**	*e*PN	**Pn**	**10 56 06.0**	**-0.8**
DENT	**Denizli**	**1.92**	**100**	*e*PN	**Pn**	**10 56 08.2**	**-0.3**
DENT	**Denizli**	**1.92**	**100**	Pn	**Pn**	**10 56 08.3**	**-0.2**
DNZL	**Cakiroluk**	**1.94**	**102**	*i* P	**Pn**	**10 56 09.5**	**+0.7**
DNZL				*i* S	**Sn**	**10 56 40.2**	**+6.5**
BTOK	**Tokmak**	**1.96**	**33**	*i* P	**Pn**	**10 56 12.9**	**+3.8**
DALT	**Dalyan (Mudla)**	**2.07**	**130**	*e*PN	**Pn**	**10 56 09.8**	**-0.9**
DALT	**Dalyan (Mudla)**	**2.07**	**130**	Pn	**Pn**	**10 56 09.8**	**-0.9**
DALT	**Dalyan (Mudla)**	**2.07**	**130**	Pn	**Pn**	**10 56 09.9**	**-0.8**
LIA	**Limnos Island**	**2.12**	**328**	*e*PN	**Pn**	**10 56 11.8**	**+0.5**
DST	**Dursunbey**	**2.14**	**45**	*e*PN	**Pn**	**10 56 10.9**	**-0.8**
DST	**Dursunbey**	**2.14**	**45**	Pn	**Pn**	**10 56 10.9**	**-0.8**
LPK	**Lapseki**	**2.25**	**2**	*e*PN	**Pn**	**10 56 13.1**	**-0.2**
LPK	**Lapseki**	**2.25**	**2**	Pn	**Pn**	**10 56 14.2**	**+0.9**
KHL	**Karahalli**	**2.27**	**84**	*e*PN	**Pn**	**10 56 12.6**	**-0.9**
KHL	**Karahalli**	**2.27**	**84**	Pn	**Pn**	**10 56 12.7**	**-0.9**
KHL	**Karahalli**	**2.27**	**84**	Pn	**Pn**	**10 56 12.7**	**-0.8**
EDC	**Edincik**	**2.42**	**22**	*e*PN	**Pn**	**10 56 15.5**	**-0.1**
FETY	**Fethiye**	**2.44**	**127**	Pn	**Pn**	**10 56 14.2**	**-1.7**
BNT	**Bandirma**	**2.44**	**23**	*e*PN	**Pn**	**10 56 15.7**	**-0.3**
BNT	**Bandirma**	**2.44**	**23**	Pn	**Pn**	**10 56 15.8**	**-0.2**
KCT	**Karacabey**	**2.52**	**31**	*e*PN	**Pn**	**10 56 16.8**	**-0.3**
KCT	**Karacabey**	**2.52**	**31**	Pn	**Pn**	**10 56 16.8**	**-0.3**
MFT	**Murefte**	**2.71**	**10**	*e*PN	**Pn**	**10 56 19.9**	**+0.1**
ULDT	**Uludag**	**2.80**	**43**	*i* P	**Pn**	**10 56 28.1**	**+7.1**
ULDT				*i* S	**Sn**	**10 57 02.9**	**+7.4**
TKTP	**Tekketepe**	**2.89**	**90**	*i* P	**Pn**	**10 56 32.3**	**+10**
TKTP				*i* S	**Sn**	**10 57 12.6**	**+15**
YLV	**Yalova**	**3.23**	**40**	*e*PN	**Pn**	**10 56 27.3**	**+0.1**

IDC ***05*** *11:02:28.0±1.8, 3.45S×149.32E, mb4.0/6, mb1 4.2/7, mb1mx4.0/13, mbtmp4.0/7, ML2.2/1, Error ellipse:*

s-maj=62.3km s-min=22.1km az=112.0

ISC 05 11:02:33.2±5.0**,3.6S**±0.3×**149.3E**±0.4**,h55**^{km}±54^{km}**,n9,** σ**0**^{s}.**59**/10**,mb4.0**/6**,Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.13	200	Pn	P	11 04 03.4	+0.1
	0.3nm,0.3s,baz=145,slow=23,SNR=1.8						
PMG				Sn	S	11 05 21.6	+8.6
	0.7nm,0.3s,baz=35,slow=22,SNR=2.5						
WB2	Warramunga Arr	21.82	221	eP	P	11 07 22.1	-0.4
WRA	Warramunga Arr	21.83	221	P	P	11 07 21.9	-0.7
	4.2nm,0.8s,mb3.9,baz=41,slow=11,SNR=10.0						
FITZ	Fitzroy Crossi	27.29	236	eP	P	11 08 16.1	+1.3
	7.4nm,0.3s,mb4.7						
FITZ	Fitzroy Crossi	27.29	236	P	P	11 08 16.1	+1.3
	21nm,1.0s,mb4.6,baz=59,slow=13,SNR=7.2						
SONM	Songino Array	63.51	329	P	P	11 12 59.7	-0.4
	1.1nm,0.8s,mb4.0,baz=150,slow=4.7,SNR=6.3						
MKAR	Makanchi Array	77.17	320	P	P	11 14 23.2	+0.3
	1.3nm,0.9s,mb3.9,baz=90,slow=10,SNR=7.0						
ZAL	Zalesovo	78.27	327	P	P	11 14 28.4	-0.4
	1.2nm,0.6s,mb4.0,baz=32,slow=6.7,SNR=5.8						
ILAR	Eielson Array	82.41	23	P	P	11 14 51.0	+0.4
	0.6nm,1.0s,mb3.5,baz=270,slow=3.6,SNR=3.9						

ISC 05 11:12:57.4±1.3**,33.5S**±0.2×**178.7W**±0.4**,h351**^{km}±20^{km}**, n18,** σ**1**^{s}.**22**/32**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.77	210	PN	P	11 14 15.0	0.0
MXZ				SN	S	11 15 16.2	+0.2
PUZ	Puketiti	5.23	207	PN	P	11 14 21.9	+1.8
PUZ				SN	S	11 15 27.0	+2.0
MWZ	Matawai	5.75	211	PN	P	11 14 25.2	-0.8
MWZ				SN	S	11 15 36.4	+0.8
URZ	Urewera	5.87	214	PN	P	11 14 26.4	-1.0
URZ				SN	S	11 15 36.4	-1.7
BKZ	Black Stump Fm	6.89	213	PN	P	11 14 38.7	-0.6
BKZ				SN	S	11 15 59.5	+0.3
TSZ	Takapari Road	7.86	211	PN	P	11 14 51.5	+0.9
TSZ				SN	S	11 16 19.6	-0.1
BFZ	Birch Farm	8.26	208	PN	P	11 14 58.3	+2.9
MRZ	Mangatainoka R	8.52	211	PN	P	11 14 58.0	-0.5
MRZ				SN	S	11 16 32.0	-1.9
MRZ				eSN	S	11 16 32.1	-1.9
KIW	Kapiti Island	8.97	213	PN	P	11 15 02.9	-1.0
KIW				SN	S	11 16 44.8	+1.0
CAW	Cannon Point	9.10	211	PN	P	11 15 04.1	-1.4
CAW				SN	S	11 16 48.6	+2.0
MRW	Makara Radio	9.36	212	SN	S	11 16 53.1	+0.9
DUWZ	D'Urville Isla	9.40	217	SN	S	11 16 54.5	+1.5
TCW	Tory Channel	9.54	214	PN	P	11 15 09.3	-1.4
TCW				SN	S	11 16 54.7	-1.5
TUWZ	Tuamarina	9.87	214	PN	P	11 15 12.7	-1.9
TUWZ				SN	S	11 17 03.0	-0.2
NNZ	Nelson	9.98	217	SN	S	11 17 05.9	+0.4
QRZ	Quartz Range	10.14	221	PN	P	11 15 19.0	+1.1
QRZ				SN	S	11 17 07.5	-1.6
KHZ	Kahutara	10.83	212	ePN	P	11 15 27.2	+0.9
KHZ				SN	S	11 17 23.5	-0.5
ASPA	Alice Springs	42.43	271	eP	P	11 20 21.7	+1.3

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*IDC **05** 11:27:25.5±6.3, 4.66S×151.29E, h211^{km}±36^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.2/13, mbtmp3.8/4, Error ellipse: s-maj=121.0km s-min=27.2km az=109.0*

ISC 05 11:27:22.0±5.3**,4.7S**±0.4×**151.6E**±0.7**,h206**^{km}±33^{km}**,n9,** σ**0**^{s}.**81**/9**,mb4.0**/4**,1D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.46	223	P	P	11 28 55.5	-0.5
	0.4nm,0.3s,baz=354,slow=10,SNR=1.9						
PMG				S	S	11 30 09.7	+0.5
	0.3nm,0.3s,baz=26,slow=8.0,SNR=3.4						
KAKA	Kakadu	20.55	246	⇓iP	Px	11 31 51.8	
	34nm,0.8s						
WB2	Warramunga Arr	22.65	226	eP	P	11 32 07.1	+0.5
WRA	Warramunga Arr	22.66	226	P	P	11 32 07.1	+0.4
	5.6nm,1.0s,mb4.0,baz=50,slow=9.1,SNR=12						
ASPA	Alice Springs	25.47	220	eP	P	11 32 38.6	+5.5
FITZ	Fitzroy Crossi	28.69	240	eP	P	11 33 00.4	-1.9
	30nm,0.9s,mb4.9						
FITZ	Fitzroy Crossi	28.69	240	P	P	11 33 00.6	-1.7
	44nm,0.9s,mb5.1,baz=74,slow=8.6,SNR=22						
SONM	Songino Array	65.58	328	P	P	11 37 45.6	-0.2
	0.5nm,0.6s,mb3.3,baz=153,slow=3.2,SNR=3.7						
MKAR	Makanchi Array	79.45	319	P	P	11 39 07.9	+0.9
	0.8nm,0.8s,mb3.4,baz=100,slow=7.4,SNR=5.5						

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*ISK **05** 11:35:47.2, 37.48N×42.94E, h18^{km}, MD3.7*

*NEIC **05** 11:35:47.0, 37.48N×42.94E, h18^{km}, MD3.7(ISK), After ISK.*

*CSEM **05** 11:35:47.0±0.1, 37.49N×42.95E, h17^{km}, MD3.7, Error ellipse: s-maj=3.7km s-min=1.4km az=162.0*

ISC 05 11:35:46.7±0.8**,37.40N**±0.07×**42.97E**±0.04**,h4**^{km}±7^{km}**, n33,** σ**1**^{s}.**27**/41**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRT	Sirnak	0.43	284	i PG	Pg	11 35 55.7	+0.3
SIRT				i SG	Sg	11 36 02.2	+1.0
HAKT	HAKKARI	0.61	75	i P	Pg	11 35 58.9	0.0
HAKT				i S	Sg	11 36 08.0	+0.9
HKR	Hakkari	0.64	74	i PG	Pg	11 36 00.3	+0.7
HKR				i SG	Sg	11 36 09.9	+1.8
HKR	Hakkari	0.64	74	Pg	Pg	11 36 00.4	+0.8
HKR				Sg	Sg	11 36 09.4	+1.3
VANT	Van	1.09	18	i PG	Pg	11 36 06.6	-2.0
VANT	Van	1.09	18	Pg	Pg	11 36 06.8	-1.8
MSL	Mosul	1.11	175	i x	x	11 36 17.0	
MSL				i x	x	11 36 32.5	
MSL				i x	x	11 36 34.5	
TVAN	Van	1.18	17	i P	Pb	11 36 07.9	-1.4
TVAN				i S	Sb	11 36 27.1	+2.3
VANB	Van	1.24	16	i PN	Pn	11 36 09.3	-1.5
VANB	Van	1.24	16	Pn	Pn	11 36 08.7	-2.2
BTMT	Batman	1.41	304	PN	Pn	11 36 13.3	0.0
BEST	Besiri	1.43	290	i P	Pn	11 36 13.9	+0.3
BEST				i S	Sb	11 36 34.4	+2.2
MARD	Mardin	1.75	268	i P	Pn	11 36 18.8	+0.7
MARD				i S	Sn	11 36 43.0	+1.9
CLDR	Caldiran	1.89	23	PN	Pn	11 36 18.7	-1.5
CLDR	Caldiran	1.89	23	Pn	Pn	11 36 18.8	-1.4
BNGL	BINGOL	2.11	318	i P	Pn	11 36 23.8	+0.5
BNGL				i S	Sn	11 36 53.4	+3.1
DIY	Diyarbakir	2.23	284	ePN	Pn	11 36 24.2	-0.8
DIY	Diyarbakir	2.23	284	Pn	Pn	11 36 24.3	-0.8
BINT	Bingol	2.45	308	ePN	Pn	11 36 26.6	-1.5
BINT	Bingol	2.45	308	Pn	Pn	11 36 26.6	-1.5
GNI	Garni	3.08	26	ePn	Pn	11 36 38.2	+1.1
GNI	Garni	3.08	26	ePn	Pn	11 36 38.2	+1.1
PTK	Pertek	3.19	299	ePN	Pn	11 36 37.2	-1.5
PTK	Pertek	3.19	299	Pn	Pn	11 36 38.0	-0.7
URFA	Urfa	3.30	272	ePN	Pn	11 36 39.3	-1.0
URFA	Urfa	3.30	272	Pn	Pn	11 36 40.2	-0.1
ELZG	Elazig	3.33	290	i P	Pn	11 36 39.5	-1.2
ELZG				i S	Sn	11 37 27.0	+5.6
MYA	Malataya	3.71	286	ePN	Pn	11 36 44.8	-1.3
MYA	Malataya	3.71	286	Pn	Pn	11 36 44.9	-1.2
MYA	Malataya	3.71	286	Pn	Pn	11 36 44.9	-1.2
GZT	Gaziantep	4.30	271	i P	Pn	11 37 06.9	+12
GAZ	Gaziantep	4.59	269	ePN	Pn	11 36 58.0	-0.7
COBT	Iskenderun	5.45	263	i P	Pn	11 37 30.0	+19

IGQ 05 11:36:13.1,1.89S×80.47W,h24^{km}±24^{km}**,mb4.0,9C-4D, Error ellipse: s-maj=20.5km s-min=4.2km az=156.2, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAMA	Jama	1.64	9	P	Pn	11 36 42.1	+1.2
JAMA				S	Sn	11 37 03.4	+2.0
QIL1	Quilotoa	1.85	56	⇑P	Pn	11 36 44.1	+0.2
QIL1				S	Sn	11 37 06.7	-0.1
IGUA	Igualata	1.87	78	⇓P	Pn	11 36 45.5	+1.2
IGUA				S	Sn	11 37 08.7	+1.4
MAG1	Magdalena	1.93	21	P	Pn	11 36 46.7	+1.6
CUSU	Cusua	2.04	78	P	Pn	11 36 48.0	+1.4
CUSU				S	Sn	11 37 12.9	+1.4
JUIV	Juive	2.06	77	P	Pn	11 36 48.3	+1.5
JUIV				S	Sn	11 37 13.3	+1.3
RUN5	Runtun	2.10	77	⇑P	Pn	11 36 49.1	+1.6
RUN5				S	Sn	11 37 14.9	+1.9
PISA	Pisayambo	2.24	68	P	Pn	11 36 51.9	+2.4
PISA				S	Sn	11 37 20.4	+3.7
VC1	Cotopaxi 1	2.41	59	⇑P	Pn	11 36 54.7	+2.8
TAMB	Tambo	2.41	61	⇑P	Pn	11 36 54.6	+2.6
JUA2	San Juan 2	2.50	48	⇑P	Pn	11 36 54.9	+1.8
TERV	Terraza Guagua	2.52	48	P	Pn	11 36 55.0	+1.4
GGP	Refugio Guagua	2.53	48	⇓P	Pn	11 36 55.0	+1.4
GGP				S	Sn	11 37 28.2	+4.1
PINO	Pino	2.53	47	⇓P	Pn	11 36 55.0	+1.3
YANA	Yana	2.58	47	⇓P	Pn	11 36 55.6	+1.1
ANTI	Antisana	2.71	58	⇑P	Pn	11 36 58.9	+2.6
COTA	Cotacachi	3.07	44	⇑P	Pn	11 37 03.5	+2.2
CAYR	Refugio Cayamb	3.10	53	⇑P	Pn	11 37 05.4	+3.6
ANGU	Angureal	3.12	52	P	Pn	11 37 04.5	+2.5
CAYA	Cayambe	3.15	52	⇑P	Pn	11 37 05.9	+3.4

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*CSEM **05** 11:37:09.1±0.3, 36.00N×21.82E, h2^{km}, ML3.8, Error ellipse: s-maj=6.7km s-min=3.0km az=50.0*

*ATH **05** 11:37:10.0, 35.97N×21.96E, h14^{km}±2^{km}, MD3.8/5, ML3.8*

*NEIC **05** 11:37:10.0, 35.97N×21.96E, h14^{km}, ML3.8(ATH), After ATH.*

*IDC **05** 11:37:10.1±5.2, 36.55N×22.20E, mb4.0/5, mb1 3.9/7, mb1mx3.7/23, mbtmp3.8/7, ML3.3/2, Error ellipse: s-maj=111.7km s-min=23.5km az=44.0*

ISC 05 11:37:09.3±1.0**,35.98N**±0.06×**21.84E**±0.06**,h10**^{km}**,n34,** σ**1**^{s}.**33**/39**,mb4.0**/5**,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KYTH	Kithira	1.01	72	ePB	Pb	11 37 27.8	-0.6
VLI	Veliai	1.15	50	ePG	Pg	11 37 30.4	-1.9
VLI				eSB	Sb	11 37 45.9	+0.3
VAM	Vamos	2.00	106	ePN	Pn	11 37 44.5	+0.9
VAM				eSN	Sn	11 38 09.5	+0.6
RLS	Riolos of Patr	2.10	352	ePN	Pn	11 37 47.3	+2.4
VLS	Valsamata	2.41	336	ePB	Pb	11 37 51.7	-0.7
ATH	Athens Observa	2.49	36	ePB	Pb	11 37 51.4	-2.4
IDI	Anoyia	2.58	105	Pn	Pn	11 37 52.5	+0.7
	1.9nm,0.3s,baz=290,slow=14,SNR=11						
IDI				Lg		11 38 37.4	
	7.0nm,0.3s,baz=294,slow=22,SNR=3.2						
MPAR	Parnis Oros	2.64	34	ePN	Pn	11 37 54.0	+1.2
LKR	Lokris	2.82	19	ePB	Pb	11 37 57.4	-2.0
EVR	Evrytania	2.93	359	ePB	Pb	11 37 59.5	-1.8
AGG	Agios Georgios	3.06	7	eP	Pn	11 37 59.9	+1.2
AGG	Agios Georgios	3.06	7	P	Pn	11 37 59.9	+1.2
AGG				S	Sn	11 38 37.5	+1.7
AGG	Agios Georgios	3.06	7	eP	Pn	11 37 59.9	+1.2
AGG				S	Sn	11 38 37.5	+1.7
NEO	Neokhori	3.50	18	ePN	Pn	11 38 05.8	+0.9
XOR	Xorichti	3.54	17	eP	Pn	11 38 06.8	+1.2
AOS	Alonnisos	3.57	26	eP	Pn	11 38 07.4	+1.5
IGT	Igoumenitsa	3.74	342	eP	Pn	11 38 07.4	-1.0
MEV	Metsovon	3.83	353	eP	Pn	11 38 09.8	+0.1
KEK	Kerkira	4.06	337	ePN	Pn	11 38 15.6	+2.6
LIT	Litokhoron	4.14	7	eP	Pn	11 38 15.1	+1.0
PAIG	Paliouri	4.20	20	eP	Pn	11 38 15.3	+0.4
OUR	Ouranopolis	4.66	21	eP	Pn	11 38 22.1	+0.6
FNA	Florina	4.81	356	eP	Pn	11 38 22.8	-0.7
SOH	Sokhos	4.98	13	eP	Pn	11 38 26.0	+0.1
GRG	Griva	4.99	5	eP	Pn	11 38 25.8	-0.3
TIP	Timpagrande	5.15	310	ePn	Pn	11 38 28.0	-0.3
TIP				eSn	Sn	11 39 18.2	-10
KNT	Kendrikon	5.24	9	eP	Pn	11 38 29.2	-0.4
BRTR	Keskin Array B	10.05	65	Pn	P	11 39 34.5	-2.2
	0.2nm,0.3s,baz=241,slow=15,SNR=4.1						
GERES	GERESS Array B	14.18	338	Pn	P	11 40 27.9	-4.3
	0.1nm,0.3s,baz=180,slow=18,SNR=2.7						
HFS	Hagfors	24.74	350	P	P	11 42 27.9	-3.9
	1.2nm,0.5s,mb3.7,baz=164,slow=11,SNR=5.7						
FINES	FINESS Array B	25.63	5	P	P	11 42 36.3	-3.9
	1.6nm,0.8s,mb3.6,baz=156,slow=14,SNR=3.1						
ARCES	ARCESS Array B	33.67	2	P	P	11 43 46.5	-5.6
	3.8nm,0.9s,mb4.3,baz=188,slow=8.6,SNR=6.5						
MKAR	Makanchi Array	45.59	57	P	P	11 45 27.3	-3.8
	0.8nm,0.4s,mb4.0,baz=269,slow=7.9,SNR=12						
ZAL	Zalesovo	46.39	47	P	P	11 45 32.9	-4.4
	0.8nm,0.3s,mb4.1,baz=167,slow=19,SNR=2.8						

DHMR 05 11:37:55.5±0.9**,12.01N×43.71E,h6**^{km}±9^{km}**,ML3.6,4C-1D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	At Turbah	1.27	18	⇑iP	Pb	11 38 19.5	-0.1
TRBA				i S	Sb	11 38 37.6	+1.5
TRBA				AML	AML	11 38 38.5	
	comp=E,963nm,0.2s						
UDYN	Al 'Udayn	1.96	7	⇓iP	Pn	11 38 30.5	+0.8
UDYN				i S	Sn	11 38 57.5	+2.6
UDYN				AML	AML	11 39 03.8	
	comp=N,925nm,0.4s						
LBOS		2.38	39	⇑iP	Pn	11 38 36.9	+1.1
LBOS				i S	Sn	11 39 10.2	+4.5
DHBB	Dhamar BB	2.63	15	⇑iP	Pn	11 38 41.2	+1.9
DHBB				i S	Sn	11 39 17.6	+5.6
BDHA	Al Bayda'	2.66	43	⇑iP	Pn	11 38 42.1	+2.3
BDHA				i S	Sn	11 39 17.7	+4.9
BDHA				AML	AML	11 39 24.7	
	comp=E,308nm,0.3s						

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*NNC **05** 11:49:08.5±0.8, 45.70N×91.93E, mpv2.8, Error ellipse: s-maj=50.5km s-min=6.6km az=12.0*

BJI 05 11:49:05.3,44.61N×92.43E,h11^{km}**,ML3.3,1C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	3.49	259	eP	Pn	11 50 03.6	+2.8
WMQ				SG	Sg	11 50 46.3	-15
WMQ				Smax			
	comp=N,100nm,0.9s						
WMQ				Smax			
	comp=E,50nm,0.6s						
MK31	Makanchi Array	7.43	291	⇑Pn	Pn	11 50 51.9	-4.4
	comp=E,0.2nm,0.3s,baz=96,slow=15,SNR=12						
MK31				⇓Sn	Sn	11 52 13.6	-7.9
	comp=E,1.8nm,0.7s,baz=96,slow=26,SNR=2.7						
MK31				⇓Lg		11 52 41.7	
	comp=E,3.0nm,0.6s						

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*IDC **05** 12:05:00.0±1.4, 6.77N×92.93E, mb3.7/8, mb1 4.0/8, mb1mx3.8/17, mbtmp3.7/8, Error ellipse: s-maj=51.4km s-min=26.9km az=48.0*

*NEIC **05** 12:05:05.0±0.6, 6.83N×93.07E, h30^{km}, mb4.4/2, Error ellipse: s-maj=16.9km s-min=9.7km az=199.0*

ISC 05 12:04:59.5±6.0**,6.8N**±0.1×**93.07E**±0.09**,h5**^{km}±40^{km}**,n15,** σ**0**^{s}.**68**/14**,mb3.8**/9**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	7.69	101	ePn	Pn	12 06 53.7	-1.2
PALK	Pallekele	12.29	273	ePn	P	12 07 58.7	+0.5
PALK				eSn	S	12 10 03.7	-13
QIZ	Qiongzhong	20.32	52	eP	P	12 09 40.2	+0.8
	14nm,1.0s						
MKAR	Makanchi Array	40.88	349	P	P	12 12 44.0	-0.1
	0.2nm,0.5s,mb3.0,baz=172,slow=8.2,SNR=4.0						
SONM	Songino Array	42.41	13	P	P	12 12 57.2	+0.5
	0.3nm,0.6s,mb3.1,baz=202,slow=7.8,SNR=3.2						
ZAL	Zalesovo	47.45	353	P	P	12 13 37.6	+0.6
	0.6nm,0.3s,mb4.0,baz=328,slow=4.6,SNR=3.2						
WRA	Warramunga Arr	48.54	124	P	P	12 13 46.2	+0.3
	1.1nm,0.9s,mb3.9,baz=304,slow=9.0,SNR=7.2						
WRAB	Tennant Creek	48.54	124	eP	P	12 13 46.9	+0.9
	4.2nm,0.9s,mb4.5						
BRTR	Keskin Array B	62.31	311	P	P	12 15 24.5	-0.8
	1.1nm,1.0s,mb4.0,baz=162,slow=3.9,SNR=4.1						
FINES	FINESS Array B	73.14	332	P	P	12 16 31.9	-0.9
	3.8nm,1.0s,mb4.3,baz=117,slow=12,SNR=3.2						
GERES	GERESS Array B	77.90	318	P	P	12 16 59.5	-0.5
	0.5nm,0.6s,mb3.6,baz=80,slow=8.1,SNR=4.0						
ILAR	Eielson Array	96.10	22	P	P	12 18 29.0	-0.2
	0.3nm,0.6s,mb3.9,baz=326,slow=9.8,SNR=6.7						
ILAR	Eielson Array	96.10	22	P	P	12 18 28.9	-0.2
TXAR	Lajitas Array	140.60	23	PKP	PKPdf	12 24 31.8	-1.7
	0.1nm,0.3s,baz=106,slow=7.7,SNR=3.0						
TXAR	Lajitas Array	140.60	23	PKP	PKPdf	12 24 31.8	-1.7

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*GUC **05** 12:13:40.1±0.7, 29.02S×70.40W, h78^{km}±12^{km}, ML4.7*

*NEIC **05** 12:13:40.1, 29.02S×70.40W, h78^{km}, mb4.1/2, After GUC.*

NEIC Felt at Alto del Carmen, Copiapo, Huasco, Tierra Amarilla and Vallenar.

*IDC **05** 12:13:40.5±2.9, 28.90S×70.28W, h93^{km}±18^{km}, mb4.1/2, mb1 4.0/6, mb1mx3.7/16, mbtmp4.3/6, MS3.7/2, Ms1 3.7/2, ms1mx3.6/21, Error ellipse: s-maj=49.1km s-min=11.8km az=80.0*

ISC 05 12:13:38.6±0.4**,29.00S**±0.02×**70.48W**±0.09**,h104**^{km}±6^{km}**, n35,** σ**0**^{s}.**87**/42**,mb4.1**/4**,6C-4D,Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	La Serena	1.13	216	⇑iP	P	12 14 01.1	0.0
LSCH				i S	S	12 14 16.8	-1.1
LSCH				AMP		12 14 17.7	
	comp=N,19μm,0.3s						
TLL	Tololo Astrono	1.20	193	⇑iP	P	12 14 02.4	+0.4
TLL				i S	S	12 14 19.4	-0.1
TLL				AMP		12 14 22.9	
	comp=N,21μm,0.7s						
CPCH	Copiapo	1.64	4	⇑iP	P	12 14 07.8	+0.7
CPCH				i S	S	12 14 28.9	+0.4
CPCH				AMP		12 14 32.2	
	comp=E,64μm,0.0s						
OVCH	Ovalle	1.72	201	⇓iP	P	12 14 08.3	+0.1
OVCH				i S	S	12 14 29.8	-0.6
OVCH				AMP		12 14 38.5	
	comp=E,8μm,0.2s						
CDCH	Caldera	1.94	351	⇑iP	P	12 14 10.7	-0.3
CDCH				i S	S	12 14 36.2	+1.0
CDCH				AMP		12 14 41.5	
	comp=N,487nm,0.3s						
CMCH	Combarbala	2.22	192	⇓iP	P	12 14 14.4	-0.3
CMCH				i S	S	12 14 41.1	-0.6
CMCH				AMP		12 15 05.8	
	comp=E,17μm,0.4s						
CRCH	Chaqaral	2.64	357	eP	P	12 14 20.3	-0.3
CRCH				eS	S	12 14 52.3	+0.2
CRCH				AMP		12 15 01.5	
	comp=N,6μm,0.5s						
ZON	Zonda	2.98	149	eP	P	12 14 29.3	+4.1
ZON				eS	S	12 15 18.3	+18
CHNG	Los Chungos	3.01	197	⇓iP	P	12 14 26.0	+0.5
CHNG				i S	S	12 15 01.3	+0.4
CHNG				AMP		12 15 10.4	
	comp=E,2μm,0.4s						
CFAA	Coronel Fontan	3.24	144	P	P	12 14 29.4	+0.7
	comp=E,14nm,0.3s,baz=328,slow=10,SNR=718						
CFAA				S	S	12 15 07.1	+0.4
	comp=E,23nm,0.3s,baz=221,slow=18,SNR=30						
CFAA				LR	LR	12 15 27.9	
	comp=E,296nm,20.6s,baz=320,slow=33						
CFAA	Coronel Fontan	3.24	144	P	P	12 14 29.4	+0.7
CFAA				S	S	12 15 07.1	+0.4
CFAA				LR	LR	12 15 27.9	
JACH	Jahuel	3.67	181	⇓iP	P	12 14 35.0	+0.4
MDZ	Mendoza	4.12	161	⇑iP	P	12 14 42.0	+1.3
MDZ				i S	S	12 15 11.7	-16
MDZ				i		12 15 36.8	
FCH	Farellones	4.32	178	⇑iP	P	12 14 44.2	+0.8
RCDM	Rinconada Maip	4.49	183	eP	P	12 14 46.0	+0.3
LVC	Limon Verde	6.51	13	P	P	12 15 11.1	-2.3
	comp=E,4.3nm,0.3s,baz=184,slow=10,SNR=31						
LVC				S	S	12 16 25.4	-1.3
	comp=E,14nm,0.3s,baz=211,slow=14,SNR=3.6						
LVC	Limon Verde	6.51	13	ePn	P	12 15 10.9	-2.4
LVC				eSn	S	12 16 25.3	-1.4
TRQA	Tornquist	11.48	144	ePn	P	12 16 19.3	-1.0
	comp=E,21nm,0.6s						
PLCA	Paso Flores	11.71	180	P	P	12 16 21.2	-2.1
	comp=E,0.3nm,0.3s,baz=355,slow=12,SNR=8.5						
PLCA	Paso Flores	11.71	180	ePn	P	12 16 22.6	-0.7
CPUP	Villa Florida	11.96	80	ePn	P	12 16 24.3	-2.4
	comp=E,75nm,0.6s						
ARE	Arequipa	12.51	356	eP	P	12 16 35.0	+1.0
LPAZ	La Paz	12.83	10	P	P	12 16 37.6	-0.6
	comp=E,0.3nm,0.3s,baz=179,slow=10,SNR=10.0						
SIV	San Ignacio	15.58	36	P	P	12 17 14.5	+0.9
	comp=E,0.7nm,0.3s,baz=241,slow=9.2,SNR=13						
SAML	Samuel	21.09	20	eP	P	12 18 17.0	+0.7
	comp=E,1.9nm,0.8s,mb3.5						
BDFB	Brasilia	24.61	62	P	P	12 18 50.0	-0.6
	comp=E,6.2nm,0.9s,mb4.0,baz=224,slow=9.6,SNR=5.4						
RPN	Rapa Nui	34.23	264	LR	LR	12 30 59.4	
	comp=E,511nm,21.1s,baz=256,slow=30						
RCBR	Riachuelo	39.98	61	eP	P	12 21 05.7	+1.0
	comp=E,12nm,1.1s,mb4.6						
TXAR	Lajitas Array	66.10	328	pP	pP	12 24 42.4	-0.7
	comp=E,0.6nm,0.9s,baz=148,slow=8.6,SNR=2.5						
DBIC	Dimbokro	72.33	72	P	P	12 24 55.4	+0.2
	comp=E,4.8nm,0.7s,mb4.4,baz=228,slow=12,SNR=8.6						
ASPA	Alice Springs	122.62	207	eP	PKPdf	12 32 37.0	+15
WRA	Warramunga Arr	125.77	209	pPKP		12 32 55.9	
	comp=E,0.4nm,0.4s,baz=160,slow=1.7,SNR=2.4						
FITZ	Fitzroy Crossi	130.66	200	eP		12 33 03.9	
	comp=E,6.8nm,1.1s						
ZAL	Zalesovo	149.25	29	PKPbc	PKPdf	12 33 17.2	+7.2
	comp=E,2.4nm,0.5s,baz=142,slow=1.5,SNR=10						
ZAL				pPKPbc		12 33 42.4	
	comp=E,2.1nm,0.3s,baz=189,slow=1.6,SNR=2.1						
MKAR	Makanchi Array	152.33	43	PKPbc	PKPdf	12 33 24.8	+10
	comp=E,1.3nm,0.5s,baz=305,slow=1.7,SNR=15						
MKAR				pPKPbc		12 33 49.6	
	comp=E,0.5nm,0.6s,baz=283,slow=2.4,SNR=3.7						

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*IDC **05** 12:13:40.8±1.6, 3.83N×123.03E, mb4.0/3, mb1 4.2/3, mb1mx3.7/16, mbtmp4.0/3, Error ellipse: s-maj=217.8km s-min=24.3km az=61.0*

ISC 05 12:13:39.5±1.2**,4.7N**±0.1×**124.5E**±0.3**,h10**^{km}**,n6,** σ**1**^{s}.**54**/6**, mb4.1**/4**,1C,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	2.38	15	⇑eP	Pn	12 14 19.3	0.0
FITZ	Fitzroy Crossi	22.68	177	eP	P	12 18 48.0	+5.3
	3.5nm,0.3s,mb4.3						
WRA	Warramunga Arr	26.34	159	P	P	12 19 17.4	-0.4
	1.9nm,0.3s,mb4.0,baz=333,slow=11,SNR=33						
WB2	Warramunga Arr	26.34	159	eP	P	12 19 19.7	+1.9
STKA	Stephens Creek	39.86	157	P	P	12 21 13.7	-1.5
	2.1nm,0.5s,mb4.1,baz=356,slow=12,SNR=3.6						
MKAR	Makanchi Array	55.48	326	P	P	12 23 17.0	0.0
	0.9nm,0.5s,mb4.0,baz=118,slow=7.6,SNR=18						

IDC 05 12:14:35.7±4.0**,28.47N×84.82E,mb3.3**/2**,mb1 3.5**/3**, mb1mx3.3**/19**,mbtmp3.3**/3**,ML3.2**/1**,Error ellipse: s-maj=117.6km s-min=33.9km az=79.0,Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	18.40	354	P	P	12 18 51.8	-2.1
	0.1nm,0.3s,baz=172,slow=11,SNR=8.2						
SONM	Songino Array	25.57	35	P	P	12 20 06.7	-1.1
	0.2nm,0.5s,baz=227,slow=9.2,SNR=3.7						
WRA	Warramunga Arr	67.85	129	P	P	12 25 36.0	-2.2
	0.3nm,0.5s,baz=322,slow=6.5,SNR=4.9						

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*NNC **05** 12:44:47.6±11.0, 35.07N×72.37E, h77^{km}±266^{km}, mpv3.5, Error ellipse: s-maj=124.4km s-min=89.9km az=91.0*

ISC 05 12:44:37.4±1.3**,34.67N**±0.09×**73.3E**±0.2**,h33**^{km}**,n9,** σ**0**^{s}.**98**/14**,4C-1D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.00	137	eP	P	12 45 31.0	+7.2
THN				eS	S	12 46 18.8	+20
AAK	Ala-Archa	8.00	6	⇑P	P	12 46 36.5	+2.4
	1.8nm,0.9s						
AAK				⇑S	S	12 48 04.0	-0.5
	2.6nm,0.8s						
KK31	Karatay Array	8.70	346	⇓P	P	12 46 43.4	-0.4
	1.3nm,0.5s,baz=160,slow=12,SNR=10						
KK31				⇑S	S	12 48 16.5	-5.4
	1.2nm,0.5s,baz=52,slow=41,SNR=7.5						

KOLN	Koldanda	11.17	125	*e*P	P	12 47 17.7	-0.2
	2.7nm,0.3s						
GKN	Gorkha	11.74	121	*e*P	P	12 47 25.6	+0.1
	5.4nm,0.3s						
GKN				*e*S	S	12 49 34.9	-1.5
DMN	Daman	12.31	122	*e*P	P	12 47 33.4	+0.2
	5.0nm,0.3s						
PKI	Pulchoki	12.54	121	*e*P	P	12 47 37.2	+0.8
	4.6nm,0.3s						
GUN	Gumba	12.68	119	*e*P	P	12 47 38.8	+0.6
	4.5nm,0.3s						
AB31	Akbulak array	17.60	330	P	P	12 48 40.6	-0.9
	0.1nm,0.3s,baz=161,slow=12,SNR=4.5						
AB31				⇑S	S	12 51 42.7	-12
	0.5nm,0.7s						

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*IDC **05** 13:52:36.7±0.9, 32.74S×178.60W, mb4.3/3, mb1 4.6/4, mb1mx4.3/10, mbtmp4.4/4, ML4.7/1, MS4.1/2, Ms1 4.1/2, ms1mx3.6/27, Error ellipse: s-maj=29.9km s-min=20.6km az=154.0*

*NEIC **05** 13:52:37.4±4.1, 33.27S×178.35W, h12^{km}±24^{km}, mb4.8/7, Error ellipse: s-maj=15.2km s-min=9.2km az=85.0*

ISC 05 13:52:35.9±0.7, **33.27S**±0.05×**178.4W**±0.1, **h10**^{km}, **n66**, σ**1**^{s}**35**/71, **mb4.6**/9, **MS4.2**/1, **5C-1D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.03	6	Pn	Pn	13 53 33.4	-5.7
	75nm,0.3s,baz=269,slow=24,SNR=4.8						
RAO				Sn	Sn	13 54 16.2	-11
	65nm,0.3s,baz=33,slow=22,SNR=4.0						
MXZ	Matakaoa Point	5.05	211	PN	Pn	13 53 54.0	+0.3
MXZ				SN	Sn	13 54 53.8	+1.0
MXZ	Matakaoa Point	5.05	211	*e*P	Pn	13 53 54.3	+0.7
MXZ				S	Sn	13 54 53.8	+1.0
PUZ	Puketiti	5.51	208	PN	Pn	13 53 59.3	-0.8
PUZ				SN	Sn	13 55 06.1	+1.9
PUZ	Puketiti	5.51	208	*e*P	Pn	13 53 59.3	-0.7
PUZ				S	Sn	13 55 06.0	+1.8
MWZ	Matawai	6.04	212	PN	Pn	13 54 06.5	-1.0
MWZ				SN	Sn	13 55 17.7	+0.3
MWZ	Matawai	6.04	212	*e*P	Pn	13 54 06.0	-1.5
MWZ				S	Sn	13 55 17.2	-0.3
URZ	Urewera	6.17	215	Pn	Pn	13 54 10.3	+0.9
	7.3nm,0.3s,baz=40,slow=4.2,SNR=41						
URZ				Sn	Sn	13 55 22.2	+1.5
	15nm,0.3s,baz=120,slow=22,SNR=9.3						
URZ	Urewera	6.17	215	PN	Pn	13 54 08.6	-0.8
URZ				SN	Sn	13 55 20.4	-0.4
URZ	Urewera	6.17	215	*e*P	Pn	13 54 08.5	-0.9
KNZ	Kokohu	6.55	208	PN	Pn	13 54 17.2	+2.4
KNZ				SN	Sn	13 55 27.3	-3.1
KNZ	Kokohu	6.55	208	*e*P	Pn	13 54 17.2	+2.4
KNZ				S	Sn	13 55 27.3	-3.1
BKZ	Black Stump Fm	7.18	213	PN	Pn	13 54 22.2	-1.5
BKZ				SN	Sn	13 55 44.3	-1.8
BKZ	Black Stump Fm	7.18	213	*e*P	Pn	13 54 22.2	-1.4
BKZ				S	Sn	13 55 44.3	-1.8
TSZ	Takapari Road	8.14	212	SN	Sn	13 56 03.5	-6.7
TSZ	Takapari Road	8.14	212	*e*P	P	13 54 30.5	-6.6
TSZ				*e*S	Sn	13 56 03.3	-6.9
BFZ	Birch Farm	8.54	208	PN	P	13 54 38.2	-4.4
BFZ				SN	Sn	13 56 13.2	-6.8
BFZ	Birch Farm	8.54	208	*e*P	P	13 54 38.1	-4.5
BFZ				S	Sn	13 56 12.5	-7.6
MRZ	Mangatainoka R	8.80	211	*e*PN	P	13 54 43.1	-3.2
MRZ				SN	Sn	13 56 18.7	-7.9
MRZ	Mangatainoka R	8.80	211	*e*P	P	13 54 43.1	-3.2
MRZ				S	Sn	13 56 18.7	-7.9
RPZ	Rata Peaks	13.29	215	Pn	P	13 55 46.2	-1.0
	0.8nm,0.3s,baz=42,slow=12,SNR=2.2						
RPZ				Sn	S	13 58 02.5	-13
	3.6nm,0.3s,baz=308,slow=19,SNR=8.3						
DZM	Mont Dzumac	17.42	306	Pn	P	13 56 42.9	+2.2
	0.1nm,0.3s,baz=115,slow=14,SNR=2.5						
DZM				LR	LR	14 01 22.2	
	comp=Z,646nm,19.5s,baz=186,slow=31						
AFI	Afiamalu	20.20	19	P	P	13 57 11.7	-2.0
	1.0nm,0.3s,baz=104,slow=20,SNR=3.0						
STKA	Stephens Creek	33.59	261	P	P	13 59 21.1	+2.7
	0.9nm,0.4s,mb4.0,baz=144,slow=16,SNR=4.6						
STKA				PcP	PcP	14 01 57.4	-1.5
	1.9nm,0.8s,baz=79,slow=5.2,SNR=2.8						
CTA	Charters Tower	34.02	284	*e*P	P	13 59 22.7	+0.5
	7.4nm,0.6s,mb4.8						
CTA	Charters Tower	34.02	284	P	P	13 59 23.0	+0.8
	5.5nm,0.5s,mb4.8,baz=121,slow=10,SNR=11						
CTAO	Charters Tower	34.02	284	P	P	13 59 22.8	+0.6
	7.4nm,0.5s,mb4.9						
PMG	Port Moresby	39.59	299	*e*P	P	14 00 08.2	-1.2
ASPA	Alice Springs	42.68	270	*e*P	P	14 00 34.7	0.0
WB2	Warramunga Arr	43.92	275	*e*P	P	14 00 44.1	-0.6
WRAB	Tennant Creek	43.92	275	P	P	14 00 44.4	-0.4
	71nm,1.5s,mb5.2						
WRA	Warramunga Arr	43.93	275	P	P	14 00 44.1	-0.7
	3.6nm,0.5s,mb4.3,baz=115,slow=7.5,SNR=45						
WRA				S	S	14 07 16.1	+0.3
	0.8nm,1.1s,baz=124,slow=13,SNR=2.5						
CASY	Casey	52.46	209	*e*P	P	14 01 51.3	+0.7
CASY	Casey	52.46	209	*e*P	P	14 01 50.5	-0.1
	9.7nm,0.9s,mb4.7						
QSPA	South Pole Qui	56.85	180	*e*P	P	14 02 23.1	+0.5
	17nm,1.0s,mb5.0						
MAW	Mawson	69.51	201	*e*P	P	14 03 53.2	+7.0
	2.0nm,0.7s,mb4.2						
MAW	Mawson	69.51	201	P	P	14 03 50.0	+3.8
	2.0nm,0.7s,mb4.1,baz=113,slow=7.0,SNR=4.9						
MAW	Mawson	69.51	201	P	P	14 03 46.0	-0.3
	4.2nm,0.9s,mb4.4						
SNAA	Sanae	75.31	179		P	14 04 21.8	+1.4
SNAA	Sanae	75.31	179		P	14 04 32.6	+12
SNAA	Sanae	75.31	179		P	14 04 40.0	+20
SNAA	Sanae	75.31	179	*e*P	P	14 04 21.4	+1.1
	7.7nm,1.1s,mb4.5						
VNA3	Neumayer Olymp	75.48	176	⇑*i*	P	14 04 24.6	+3.2
VNA3	Neumayer Olymp	75.48	176	⇑*i*	P	14 04 28.6	+7.2
VNA3	Neumayer Olymp	75.48	176		P	14 04 34.9	+14
VNA2	Neumayer--Watz	75.91	177	⇑*i*	P	14 04 26.7	+2.9
VNA2	Neumayer--Watz	75.91	177	⇑*i*	P	14 04 38.7	+15
VNA2	Neumayer--Watz	75.91	177	⇓*i*	P	14 04 40.4	+17
VNA1	Neumayer--Stat	76.14	177	⇑*i*	P	14 04 29.2	+4.1
VNA1	Neumayer--Stat	76.14	177		P	14 04 40.2	+15
ASAJ	Asahikawa	84.82	333	LR	LR	14 35 40.1	
	comp=Z,118nm,21.6s,MS4.2,baz=184,slow=31						
NVAR	Mina Array Bea	90.58	43	P	P	14 05 39.8	+0.2
	1.2nm,0.9s,mb4.2,baz=208,slow=7.8,SNR=7.0						
MKAR	Makanchi Array	119.31	309	PKP	PKPdf	14 11 26.0	-2.4
	0.2nm,0.5s,baz=117,slow=2.7,SNR=5.2						
BVAR	Borovoye Array	128.17	314	PKP	PKPdf	14 11 42.2	-3.1
	0.6nm,0.5s,baz=161,slow=2.2,SNR=8.9						
ARCES	ARCESS Array B	141.30	347	PKhKP		14 12 01.4	
	6.0nm,1.0s,baz=333,slow=2.7,SNR=3.2						
JOF	Joensuu	144.92	337	*e*p	PKPbc	14 12 12.8	+0.2
	2.5nm,0.6s						
KAF	Kangasniemi	147.10	339	*e*p	PKPdf	14 12 17.7	-1.5
	2.2nm,0.7s						
FINES	FINESS Array B	147.69	338	PKPbc	PKPdf	14 12 20.2	+0.1
	5.7nm,0.7s,baz=37,slow=3.9,SNR=19						
NB2	NORSAR Subarra	151.51	350	PKPabc	PKPdf	14 12 30.5	+4.3
	9.4nm,1.0s,baz=22,slow=3.0						
NOA	NORSAR Array B	151.51	350	PKPbc	PKPdf	14 12 30.1	+3.9
	2.6nm,0.7s,baz=14,slow=4.1,SNR=8.8						
NOA				PKPab	PKPab	14 12 38.6	-1.5
	6.2nm,0.9s,baz=17,slow=3.0,SNR=9.2						
NAO	NORSAR Subarra	151.78	350	PKPab	PKPdf	14 12 30.5	+3.9
HFS	Hagfors	151.96	347	PKPbc	PKPdf	14 12 30.6	+3.7
	4.5nm,0.8s,baz=72,slow=4.7,SNR=8.2						
AKASG	Malin Array Be	153.29	319	PKPbc	PKPdf	14 12 36.8	+7.8
	0.5nm,0.4s,baz=48,slow=3.1,SNR=3.2						
BR131	Keskin Array S	153.53	293	*e*PKPdf	PKPdf	14 12 28.6	-1.1
BR131				*e*PKPbc	PKPdf	14 12 36.8	+7.1
BRTR	Keskin Array B	153.53	293	PKPbc	PKPdf	14 12 35.5	+5.8
	2.1nm,0.5s,baz=143,slow=3.7,SNR=12						
KHC	Kasperske Hory	161.80	334	*e*P	PKPab	14 13 21.5	-2.9

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*IDC **05** 14:08:47.6±3.9, 51.90N×178.55W, h149^{km}±42^{km}, mb3.3/5, mb1 3.7/7, mb1mx3.4/25, mbtmp3.9/7, Error ellipse: s-maj=47.5km s-min=17.3km az=154.0*

*NEIC **05** 14:08:50.9, 52.17N×178.52W, h174^{km}, MG3.3(AEIC), After AEIC.*

ISC 05 14:08:49.4±0.6, **52.3N**±0.2×**178.65W**±0.08, **h182**^{km}±5^{km}, **n22**, σ**0**^{s}**76**/30, **mb3.6**/4, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KICM	Kanaga Island	0.96	110	P	P	14 09 17.9	+0.7
KICM				S	S	14 09 39.2	+0.5
KIKV	Kanaga Island	0.99	111	P	P	14 09 18.0	+0.6
KIKV				S	S	14 09 39.0	0.0
KINC	Kanaga Island	0.99	108	P	P	14 09 17.9	+0.5
KIMD	Kanaga Island	1.00	119	P	P	14 09 17.8	+0.3
KIMD				S	S	14 09 38.1	-1.1
KIWB	Kanaga Island	1.01	113	P	P	14 09 18.1	+0.6
KIRH	Kanaga Island	1.02	109	P	P	14 09 18.3	+0.7
ADAG	Mount Adagdak	1.29	101	P	P	14 09 20.2	+0.2
GSSP	Great Sitkin S	1.53	95	P	P	14 09 22.6	+0.3
GSCK	Great Sitkin C	1.55	98	P	P	14 09 22.6	+0.1
GSCK				S	S	14 09 46.9	-1.1
GSTD	Great Sitkin T	1.56	96	P	P	14 09 22.1	-0.3
GSTD				S	S	14 09 47.2	-0.8
GSTR	Great Sitkin T	1.60	94	P	P	14 09 23.2	+0.2
GSMY	Great Sitkin M	1.61	96	P	P	14 09 23.0	-0.1
GSMY				S	S	14 09 49.7	+0.8
ATKA	Atka Island	2.74	89	P	P	14 09 35.6	0.0
ATKA				S	S	14 10 10.1	-1.1
FX1	Attu Island--F	5.03	280	P	P	14 10 05.0	+0.4
	1.7nm,0.3s,baz=89,slow=3.3,SNR=23						
FX1				S	S	14 11 01.6	-1.2
	6.9nm,0.3s,baz=351,slow=22,SNR=19						
KDAK	Kodiak Island	15.88	59	P	P	14 12 23.1	-0.8
	2.3nm,0.3s,baz=271,slow=6.8,SNR=29						
ILAR	Eielson Array	20.51	40	P	P	14 13 14.5	+0.2
	0.8nm,0.5s,baz=242,slow=8.8,SNR=16						
INK	Inuvik	26.70	36	P	P	14 14 16.1	+3.2
	0.8nm,0.5s,mb3.6,baz=263,slow=10,SNR=9.8						
NVAR	Mina Array Bea	43.36	84	P	P	14 16 35.4	+0.6
	1.2nm,0.6s,mb3.7,baz=300,slow=6.8,SNR=14						
NVAR	Mina Array Bea	43.36	84	P	P	14 16 35.4	+0.6
TXAR	Lajitas Array	58.43	82	P	P	14 18 26.8	-1.2
	0.9nm,0.6s,mb3.8,baz=297,slow=4.2,SNR=8.9						
TXAR	Lajitas Array	58.43	82	P	P	14 18 26.8	-1.2
WRA	Warramunga Arr	82.70	224	P	P	14 20 53.3	-0.4
	0.4nm,0.8s,mb3.2,baz=33,slow=6.1,SNR=6.8						

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*HLW **05** 14:11:10.8, 34.75N×25.32E, h33^{km}, Mb3.9*

*ATH **05** 14:11:12.2, 34.35N×25.27E, h25^{km}±2^{km}, MD3.8/7*

*NEIC **05** 14:11:12.2, 34.35N×25.27E, h25^{km}, MD3.8(ATH), After ATH.*

*CSEM **05** 14:11:12.6±0.1, 34.55N×25.43E, h80^{km}, MD3.8, Error ellipse: s-maj=2.9km s-min=1.8km az=66.0*

*IDC **05** 14:11:13.9±2.7, 35.05N×25.61E, mb3.3/2, mb1 3.5/4, mb1mx3.4/20, mbtmp3.3/4, ML3.8/2, Error ellipse: s-maj=62.6km s-min=18.6km az=2.0*

ISC 05 14:11:14.0±0.4, **34.40N**±0.04×**25.43E**±0.07, **h46**^{km}±11^{km}, **n31**, σ**1**^{s}**08**/35, **mb3.2**/2, **4D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.52	25	*e*PN	P	14 11 25.0	-0.3
NPS	Neapolis	0.87	10	*e*PN	P	14 11 30.0	0.0
IDI	Anoyia	0.99	334	Pn	P	14 11 30.0	-1.6
	46nm,0.3s,baz=155,slow=18,SNR=104						
IDI				Lg		14 11 41.4	
	90nm,0.3s,baz=325,slow=19,SNR=31						
GVD	Gavdhos	1.19	292	*e*PN	P	14 11 33.5	-0.9
VAM	Vamos	1.42	315	*e*PN	P	14 11 37.5	-0.4
VAM				*e*SN	S	14 11 57.3	+1.7
KARP	Karpathos	1.83	51	*e*PN	P	14 11 46.6	+3.1
SANT	Santorini	1.96	1	*e*Pn	P	14 11 49.5	+4.1
APE	Apeiranthos	2.66	2	*e*PN	P	14 11 56.7	+1.2
KYTH	Kithira	2.71	314	*e*PN	P	14 11 55.0	-1.1
ARG	Arkhangelos	2.85	50	P	P	14 12 00.7	+2.5
SLUM		2.91	184	P	P	14 11 59.7	+0.7
HMAT	Matruh	3.59	156	⇓P	P	14 12 09.3	+0.7
HMAT				S	S	14 12 51.6	+1.5
SWA1		5.13	177	⇓*e*P	P	14 12 30.9	+0.6
SWA2		5.14	180	P	P	14 12 31.0	+0.5
HBRG	Burj al ‘Arab	5.34	134	P	P	14 12 33.2	+0.1
HNAT	Natroun	6.48	136	P	P	14 12 49.1	-0.1
AWBH		6.75	153	P	P	14 12 52.9	-0.1
GLL	Jalalah	7.18	130	⇓P	P	14 12 58.1	-0.9
AMAG	Maghara	7.56	118	P	P	14 13 02.3	-2.0
HFRF	Wahat Farafira	7.64	160	⇓P	P	14 13 05.0	-0.5
HFRF	Wahat Farafira	7.64	160	P	P	14 13 04.9	-0.5
SUZ		7.75	124	P	P	14 13 05.9	-1.0
TIP	Timpagrande	8.43	307	*e*Pn	P	14 13 11.3	-4.9
TIP				*e*Sn	S	14 14 33.7	-17
TIP	Timpagrande	8.43	307	*e*Pn	P	14 13 11.3	-4.9
BRTR	Keskin Array B	8.44	49	Pn	P	14 13 16.1	-0.3
	baz=206,slow=11,SNR=2.1						
BRTR				Sn	S	14 14 43.1	-8.3
	0.1nm,0.3s,baz=225,slow=18,SNR=2.2						
HNKL	Nakhl	8.51	119	P	P	14 13 16.2	-1.2
AKASG	Malin Array Be	16.52	9	Pn	P	14 14 55.9	-7.9
	0.8nm,0.3s,baz=200,slow=11,SNR=4.3						
AKASG	Malin Array Be	16.52	9	Pn	P	14 14 55.9	-7.9
GERES	GERESS Array B	16.85	332	Pn	P	14 15 07.4	-0.6
	0.1nm,0.3s,baz=139,slow=10,SNR=3.1						
MKAR	Makanchi Array	44.01	56	P	P	14 19 18.2	-0.3
	0.2nm,0.6s,mb3.1,baz=273,slow=8.8,SNR=4.9						
SONM	Songino Array	59.80	50	P	P	14 21 18.0	+1.3
	0.2nm,0.6s,mb3.4,baz=297,slow=8.4,SNR=2.4						

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*IDC **05** 14:13:06.9±2.1, 33.04S×179.09W, mb4.3/3, mb1 4.4/4, mb1mx4.1/12, mbtmp4.3/4, ML4.0/1, MS4.1/3, Ms1 4.1/3, ms1mx3.4/32, Error ellipse: s-maj=53.8km s-min=36.4km az=140.0*

*NEIC **05** 14:13:09.6±1.2, 32.93S×179.24W, h10^{km}, Error ellipse: s-maj=27.8km s-min=22.1km az=74.0*

ISC 05 14:13:15.1±2.7, **33.2S**±0.1×**179.7W**±0.2, **h38**^{km}±23^{km}, **n20**, σ**0**^{s}**80**/18, **mb4.3**/3, **MS4.6**/2, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.18	22	LR	LR	14 14 55.1	
	comp=Z,450nm,21.1s,baz=136,slow=28						
MXZ	Matakaoa Point	4.69	200	PN	P	14 14 25.3	-0.1
PUZ	Puketiti	5.18	198	PN	P	14 14 32.1	-0.1
PUZ				SN	S	14 15 32.1	+0.4
MWZ	Matawai	5.64	203	PN	P	14 14 39.0	+0.3
MWZ				SN	S	14 15 43.0	-0.1
URZ	Urewera	5.72	206	Pn	P	14 14 38.8	-0.9
	3.3nm,0.3s,baz=182,slow=7.8,SNR=14						
URZ				Sn	S	14 15 45.0	0.0
	1.6nm,0.3s,baz=261,slow=20,SNR=5.9						
URZ	Urewera	5.72	206	PN	P	14 14 40.2	+0.5
OUZ	Omahuta	5.91	248	PN	P	14 14 48.9	+6.4
STKA	Stephens Creek	32.52	261	P	P	14 19 42.4	-2.2
	9.3nm,0.7s,mb4.8,baz=318,slow=12,SNR=26						
CTA	Charters Tower	32.93	285	P	P	14 19 48.3	+0.1
	2.7nm,1.0s,mb4.1,baz=122,slow=13,SNR=4.1						
PMG	Port Moresby	38.59	300	LR	LR	14 31 43.4	
	comp=Z,827nm,20.4s,MS4.5,baz=207,slow=29						
WB2	Warramunga Arr	42.82	276	*e*P	P	14 21 12.2	+1.0
WRA	Warramunga Arr	42.83	276	P	P	14 21 11.9	+0.6
	0.9nm,0.4s,mb3.8,baz=116,slow=7.7,SNR=31						
VNA3	Neumayer Olymp	75.66	177		P	14 24 56.6	-0.8
VNA3	Neumayer Olymp	75.66	177		P	14 24 59.2	+1.8
VNA3	Neumayer Olymp	75.66	177		P	14 25 07.1	+10
VNA2	Neumayer--Watz	76.08	177		P	14 24 59.0	-0.8
VNA2	Neumayer--Watz	76.08	177		P	14 25 04.1	+4.3
YBH	Yreka Blue Hor	91.09	39	LR	LR	15 02 37.2	
	comp=Z,192nm,18.1s,MS4.6,baz=65,slow=33						
FINES	FINESS Array B	147.16	337	PKPbc	PKPdf	14 32 50.5	-0.6
	1.2nm,0.6s,baz=63,slow=4.3,SNR=9.2						
NOA	NORSAR Array B	151.20	349	PKPbc	PKPdf	14 33 01.4	+3.9
	0.8nm,0.7s,baz=13,slow=4.1,SNR=3.6						

CASC 05 14:24:38.8±2.7, **12.30N**×**90.61W**, **MD4.0**, **1C-1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNJE	San Jose	1.84	32	*e*P	Pn	14 25 25.2	+13
SNJE				*e*S	Sn	14 25 52.2	+16
RTR	El Retiro	1.85	31	*e*P	Pn	14 25 25.4	+13
RTR				*e*S	Sn	14 25 50.9	+14
IXG	Ixpaco	1.87	5	⇑*e*P	Pn	14 25 11.8	-0.5
IXG				*e*S	Sn	14 25 36.7	-0.3
LFRS	El Faro	2.00	49	*e*P	Pn	14 25 29.1	+15
LFRS				*e*S	Sn	14 25 56.4	+16
LCBS	La Ceiba	2.09	50	*e*P	Pn	14 25 29.6	+14
LCBS				*e*S	Sn	14 25 59.1	+17
TP2	Tecpan 2	2.50	351	⇓*e*P	Pn	14 25 22.7	+1.3
TP2				*e*S	Sn	14 25 55.8	+2.7
MRL	Marmol	2.89	18	*e*P	Pn	14 25 27.6	+0.6
MRL				*e*S	Sn	14 26 03.3	+0.4

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*IDC **05** 14:37:00.4±0.4, 9.68S×118.01E, mb4.9/21, mb1 4.9/23, mb1mx4.9/24, mbtmp4.9/23, ML4.7/2, MS4.1/10, Ms1 4.1/10, ms1mx3.8/23, Error ellipse: s-maj=18.3km s-min=12.3km az=79.0*

*BJI **05** 14:37:01.3, 9.70S×118.00E, h6^{km}, mB5.0, mb5.1, Ms4.3, Msz4.1*

*NEIC **05** 14:37:01.4±2.7, 9.74S×117.98E, h7^{km}±16^{km}, mb4.9/23, Error ellipse: s-maj=8.0km s-min=4.8km az=67.0*

*MOS **05** 14:37:03.1±1.6, 9.57S×118.22E, h33^{km}, mb5.2/18, Error ellipse: s-maj=27.7km s-min=12.9km az=112.9*

ISC 05 14:37:04.3±1.5, **9.73S**±0.04×**118.08E**±0.05, **h42**^{km}±13^{km}, **h23**^{km}±4.2^{km}**:pP-P**, **n183**, σ**1**^{s}**01**/163, **mb4.9**/72, **MS4.1**/15, **14C-11D, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	Palu	8.94	11	P	P	14 39 19.8	+6.1
	234nm,1.1s						
LEM	Lembang	10.75	285	P	P	14 39 48.1	+9.4
	58nm,0.9s						
FITZ	Fitzroy Crossi	11.09	139	*e*P	P	14 39 40.4	-2.9
	99nm,0.8s						
FITZ				*e*S	S	14 41 35.5	-11
FITZ	Fitzroy Crossi	11.09	139	Pn	P	14 39 40.5	-2.8
	11nm,0.3s,baz=322,slow=8.0,SNR=99						
FITZ				Sn	S	14 41 36.3	-11
	25nm,0.3s,baz=186,slow=18,SNR=14						
FITZ				LR	LR	14 44 30.2	
	comp=Z,2μm,18.0s,baz=320,slow=40						
MBWA	Marble Bar	11.47	172	*e*Pn	P	14 39 43.5	-5.0
	42nm,0.6s						
KSM	Kuching	13.56	325	Pn	P	14 40 16.1	-0.3
KAKA	Kakadu	14.39	103	*e*P	P	14 40 45.0	+18
	29nm,0.4s						
KAKA				*e*S	S	14 43 17.0	+11
KKM	Kota Kinabalu	15.78	353	*e*P	P	14 40 52.3	+7.0
WRA	Warramunga Arr	18.69	125	P	P	14 41 21.0	-0.6
	1.3nm,0.3s,baz=295,slow=13,SNR=49						
WRA				S	S	14 44 34.9	-10
	0.8nm,0.3s,baz=300,slow=24,SNR=4.4						
WRAB	Tennant Creek	18.70	125	*e*P	P	14 41 20.9	-0.8
	32nm,0.8s						
WRAB	Tennant Creek	18.70	125	*e*P	P	14 41 20.1	-1.6
WB2	Warramunga Arr	18.70	125	*e*P	P	14 41 20.8	-0.9
WB2				*e*S	S	14 44 33.5	-12
KGM	Kluang	18.77	308	P	P	14 41 24.2	+1.6
PPI	Padang Panjang	19.86	297	P	P	14 41 32.5	-2.3
	67nm,1.2s						
KLBR	Kellerberrin	21.76	181	*e*P	P	14 41 53.9	-0.1
	135nm,1.4s,mb5.2						
KLBR				*e*S	S	14 45 39.3	-7.8
IPM	Ipoh	22.16	309	P	P	14 42 00.0	+1.9
MUN	Mundaring	22.21	184	*e*P	P	14 41 59.5	+1.0
MUN				*e*S	S	14 45 53.0	-2.4
KULM	Kulim	22.90	310	*e*P	P	14 42 05.9	+0.3
FORT	Forrest	22.91	157	*e*P	P	14 42 05.3	-0.3
	30nm,0.5s,mb5.0						
FORT				*e*S	S	14 46 14.8	+6.6
NWAO	Narrogin (SRO)	23.10	182	P	P	14 42 07.8	+0.4
	22nm,1.0s,mb4.5,baz=4.6,slow=12,SNR=5.1						
NWAO				S	S	14 46 11.6	+0.1
	8.9nm,0.3s,baz=266,slow=21,SNR=4.3						
NWAO				LR	LR	14 51 02.7	
	comp=Z,568nm,19.5s,MS4.0,baz=168,slow=36						
NWAO	Narrogin (SRO)	23.10	182	*e*P	P	14 42 06.8	-0.5
	52nm,0.8s,mb5.0						
SNG	Songkhla	24.18	313	P	P	14 42 18.5	+0.5
PMG	Port Moresby	28.67	92	LR	LR	14 55 47.8	
	comp=Z,292nm,19.9s,MS3.9,baz=31,slow=39						
CTA	Charters Tower	29.06	114	*e*P	P	14 43 05.2	+2.2
	3.6nm,0.8s,mb4.2						
CTA	Charters Tower	29.06	114	P	P	14 43 03.5	+0.5
	3.5nm,0.9s,mb4.1,baz=310,slow=16,SNR=3.1						
CTAO	Charters Tower	29.06	114	*e*P	P	14 43 05.0	+2.0
QIZ	Qiongzhong	29.71	344	*e*P	P	14 43 10.3	+1.5
	6.7nm,0.9s,mb4.4						
KKTK	Khon Kaen	29.98	330	P	P	14 43 11.0	-0.2
STKA	Stephens Creek	30.98	139	P	P	14 43 20.6	+0.6
	3.8nm,0.5s,mb4.5,baz=312,slow=9.3,SNR=21						
STKA				LR	LR	14 56 10.5	
	comp=Z,449nm,21.9s,MS4.1,baz=222,slow=37						
GZH	Guangzhou	32.94	352	P	P	14 43 43.0	+5.8
GZH				S	S	14 49 03.1	+12
GZH				LR	LR		
	comp=N,200nm,24.5s,MS3.8						
GZH				LR	LR		
	comp=E,150nm,23.6s,MS3.8						
GZH				LR	LR		
	comp=Z,320nm,25.5s,MS3.9						
NANT	Nan	33.13	329	P	P	14 43 38.0	-0.9
CHG	Chiang Mai	34.07	326	P	P	14 43 47.0	0.0
YHNB	Yeheng	34.34	5	*e*P	P	14 43 49.7	+0.5
YHNB				*e*pP	pP	14 43 56.7	-4.1
GUMO	Guam	35.26	49	P	P	14 43 57.4	+0.1
	comp=Z,75nm,0.9s,mb5.6,baz=66,slow=18,SNR=3.4						
GYA	Guiyang	37.64	343	⇓*i*P	P	14 44 18.3	+1.1
GYA				PCP	PcP	14 46 36.7	+2.1
GYA				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.1						
JOW	Kunigami	37.67	15	P	P	14 44 18.9	+1.5
	comp=Z,26nm,0.5s,mb5.2,baz=201,slow=9.0,SNR=19						
JOW				LR	LR	14 59 53.0	
	comp=Z,172nm,21.3s,MS3.8,baz=125,slow=36						
KMI	Kunming	37.73	337	P	P	14 44 20.4	+2.5
KMI				AP	pP	14 44 26.2	-3.4
KMI				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.9						
KMI				AMB	AMB		
	comp=Z,110nm,7.3s						
KMI				LR	LR		
	comp=N,140nm,9.0s						
KMI				LR	LR		
	comp=E,180nm,14.9s						
KMI				LR	LR		
	comp=Z,230nm,17.1s,MS4.0						
WHN	Wuhan	40.20	355	P	P	14 44 40.7	+2.3
ENH	Enshi	40.62	349	*e*P	P	14 44 43.0	+1.1
	comp=Z,43nm,0.7s,mb5.2						
SSE	Sheshan	40.70	4	*e*P	P	14 44 43.0	+0.5
SSE				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.2						
SSE				AMB	AMB		
	comp=Z,60nm,7.1s						
PALK	Pallekele	40.89	293	*e*P	P	14 44 44.0	-0.3
	comp=Z,14nm,0.8s,mb4.7						
NJ2	Nanjing	41.55	1	*e*P	P	14 44 50.9	+1.3
NJ2				PP	PP	14 46 31.5	+2.6
NJ2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,30nm,6.7s						
NJ2				LR	LR		
	comp=Z,430nm,14.9s,MS4.5						
CD2	Chengdu	42.68	342	P	P	14 44 59.4	+0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
SHL	Shillong	43.38	325	*e*P	P	14 45 05.0	+0.4
TIA	Tai’an	45.70	359	⇓P	P	14 45 23.6	+0.4
TIA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
LSA	Lhasa	47.01	327	P	P	14 45 34.0	+0.5
LSA	Lhasa	47.01	327	*e*P	P	14 45 34.2	+0.7
	comp=Z,6.8nm,0.4s,mb4.9						
LZH	Lanzhou	47.51	344	*e*P	P	14 45 37.5	+0.2
LZH				AP	pP	14 45 45.2	-4.0
LZH				XP	sP	14 45 48.3	-5.9
LZH				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
KS15	Wonju Array Si	47.81	11	*e*P	P	14 45 40.6	+0.9
GUN	Gumba	48.70	321	*e*P	P	14 45 46.0	-0.7
	comp=Z,64nm,0.7s,mb5.8						
PKI	Pulchoki	48.75	320	*e*P	P	14 45 46.1	-1.0
DMN	Daman	48.97	320	*e*P	P	14 45 47.7	-1.1
	comp=Z,40nm,0.7s,mb5.5						
KKN	Kakani	48.99	320	*e*P	P	14 45 47.6	-1.3

	comp=Z,25nm,0.8s,mb5.3						
GKN	Gorkha	49.54	320	eP	P	14 45 52.0	-1.2
	comp=Z,31nm,0.4s,mb5.7						
MAJO	Matsushiro	49.77	21	eP	P	14 45 54.4	-0.5
	comp=Z,16nm,0.8s,mb5.1						
MAT	Matsushiro	49.77	21	P	P	14 45 54.5	-0.3
MAT	Matsushiro	49.77	21	eP	P	14 45 55.0	+0.2
	comp=Z,16nm,0.9s,mb5.0						
MJAR	Matsushiro Arr	49.77	21	P	P	14 45 53.6	-1.3
	comp=Z,16nm,0.9s,mb5.1,baz=198,slow=7.7,SNR=48						
MJAR				LR	LR	15 05 00.3	
	comp=Z,103nm,19.8s,MS3.8,baz=135,slow=34						
KOLN	Koldanda	50.04	319	eP	P	14 45 55.7	-1.4
	comp=Z,54nm,0.7s,mb5.7						
SNY	Shenyang	51.55	5	⇑P	P	14 46 08.0	-0.3
SNY				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
GTA	Gaotai	51.75	342	P	P	14 46 10.7	+0.9
GTA				PCP	PcP	14 47 24.3	+1.5
GTA				S	S	14 53 24.3	-2.9
GTA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
GTA				AMB	AMB		
	comp=Z,150nm,5.7s						
GTA				LR	LR		
	comp=N,120nm,16.7s,MS4.2						
GTA				LR	LR		
	comp=E,160nm,16.4s,MS4.2						
GTA				LR	LR		
	comp=Z,200nm,20.9s,MS4.1						
CN2	Changchun	53.69	7	eP	P	14 46 23.6	-0.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
VLA	Vladivostok	54.08	12	eP	P	14 46 27.6	+0.5
VLA	Vladivostok	54.08	12	eP	P	14 46 22.3	-4.8
VLA				pmax	pmax		
	comp=Z,71nm,1.5s,mb5.4						
MDJ	Mudanjiang	55.08	10	P	P	14 46 34.9	+0.5
MDJ				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,100nm,7.1s						
MDJ				LR	LR		
	comp=N,60nm,30.2s,MS3.6						
MDJ				LR	LR		
	comp=E,40nm,25.9s,MS3.6						
MDJ				LR	LR		
	comp=Z,80nm,30.2s,MS3.6						
MDJ	Mudanjiang	55.08	10	eP	P	14 46 35.3	+0.9
	comp=Z,29nm,0.7s,mb5.4						
ASAJ	Asahikawa	58.02	21	P	P	14 46 55.7	+0.4
	comp=Z,4.4nm,0.5s,mb4.8,baz=232,slow=13,SNR=15						
SONM	Songino Array	58.24	351	P	P	14 46 56.8	0.0
	comp=Z,12nm,0.6s,mb5.1,baz=169,slow=8.9,SNR=130						
SONM				PcP	PcP	14 47 48.5	+0.9
	comp=Z,4.5nm,0.5s,baz=174,slow=3.5,SNR=6.9						
SONM				ScP		14 51 45.4	
	comp=Z,0.4nm,0.6s,baz=166,slow=1.1,SNR=3.1						
SONM				LR	LR	15 13 01.0	
	comp=Z,168nm,18.9s,MS4.2,baz=196,slow=37						
KLR	Kul'dur	59.92	10	eP	P	14 47 08.3	-0.2
WMQ	Urumqi	60.02	335	P	P	14 47 09.5	+0.3
YSS	Yuzh-Sakhalins	60.57	19	eP	P	14 47 12.4	-0.5
	comp=Z,1.5nm,0.8s,mb4.2						
YSS	Yuzh-Sakhalins	60.57	19	eP	P	14 47 13.0	+0.1
YSS				pmax	pmax		
	comp=Z,25nm,1.7s,mb5.1						
ZAK	Zakamensk	61.24	349	eP	P	14 47 16.4	-1.0
ZAK				e		14 47 59.5	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
KSH	Kashi	62.66	324	eP	P	14 47 27.0	0.0
KSH				eAP	pP	14 47 37.2	-2.1
KSH				eXP	sP	14 47 42.4	-1.7
KSH				AMB	AMB		
	comp=Z,170nm,4.2s						
MK02	Makanchi Array	64.67	334	P	P	14 47 39.4	-0.7
MK02				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
MKAR	Makanchi Array	64.70	334	P	P	14 47 39.5	-0.8
	comp=Z,11nm,0.4s,mb5.2,baz=151,slow=5.8,SNR=132						
MKAR				LR	LR	15 17 22.8	
	comp=Z,122nm,21.1s,MS4.1,baz=140,slow=38						
MKAR	Makanchi Array	64.70	334	P	P	14 47 39.5	-0.8
MKAR				LR	LR	15 17 22.8	
KZA	Kyzart	64.78	326	P	P	14 47 40.8	-0.1
	SNR=15						
TKM2	Tokmak 2	65.16	327	P	P	14 47 43.0	-0.4
	SNR=7.4						
UCH	Uchtor	65.29	326	P	P	14 47 44.0	-0.2
	SNR=6.3						
KBK	Karagaybulak	65.33	326	P	P	14 47 44.4	-0.1
	SNR=9.1						
AAK	Ala-Archa	65.57	326	P	P	14 47 45.7	-0.3
	SNR=9.5						
AAK	Ala-Archa	65.57	326	eP	P	14 47 44.6	-1.4
	comp=Z,9.5nm,0.8s,mb4.9						
AML	Almayashu	65.68	325	P	P	14 47 46.4	-0.3
	SNR=16						
EKS2	Erkin-Say	65.98	326	P	P	14 47 49.6	+1.0
	SNR=8.8						
USP	Ospenovka	65.99	327	P	P	14 47 47.9	-0.8
	SNR=7.0						
WBK	Wadi Bani Khal	66.20	300	⇓P	P	14 47 50.1	-0.3
JMDO	Jabal Madar	66.86	299	⇑P	P	14 47 53.8	-0.7
	SNR=9.1						
SMDO	Samad	67.16	300	⇑P	P	14 47 56.0	-0.3
	SNR=11						
BIDO	Bidbid	67.27	301	⇑P	P	14 47 56.9	-0.2
	SNR=9.2						
BOD	Bodaibo	67.39	358	eP	P	14 47 56.3	-0.9
BOD				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
SHAO	Shalim	67.53	294	⇑P	P	14 47 59.1	+0.4
BSY	Bisya	67.77	299	⇑P	P	14 47 59.8	-0.4
	SNR=6.9						
HOQ	Hoqain	67.98	300	⇓P	P	14 48 01.5	0.0
MAW	Mawson	68.25	200	eP	P	14 48 03.2	+0.8
	comp=Z,2.8nm,0.6s,mb4.5						
MAW	Mawson	68.25	200	P	P	14 48 02.3	-0.1
	comp=Z,2.5nm,0.8s,mb4.3,baz=85,slow=10,SNR=5.1						
MAW				LR	LR	15 12 50.9	
	comp=Z,195nm,19.9s,MS4.3,baz=203,slow=32						
MAW	Mawson	68.25	200	eP	P	14 48 01.6	-0.8
ARQ	Araqi	68.57	300	⇑P	P	14 48 04.7	-0.5
RBK	Rabkut	68.65	293	⇓P	P	14 48 06.3	+0.5
	SNR=6.8						
WHFO	Wadi Hawf	69.17	293	⇓P	P	14 48 08.4	-0.6
	SNR=21						
ZAL	Zalesovo	69.40	340	P	P	14 48 08.7	-1.1
	comp=Z,7.5nm,0.4s,mb5.0,baz=343,slow=4.5,SNR=26						
ABTO	Aybut	69.43	293	⇓P	P	14 48 10.5	0.0
	SNR=10						
ASHO	Ashiyiah	69.45	301	⇓P	P	14 48 10.4	-0.2
	SNR=6.6						
BANOM	Banah	69.71	302	⇑P	P	14 48 11.8	-0.3
NVS	Novosibirsk	70.67	339	eP	P	14 48 15.2	-2.3
NVS				pmax	pmax		
	comp=N,10.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
VNDA	Vanda	71.41	171	eP	P	14 48 23.8	+2.1
	comp=Z,6.2nm,1.2s,mb4.4						
PET	Petropavlovsk	71.42	24	⇑iP	P	14 48 22.5	+0.5
PET	Petropavlovsk	71.42	24	⇑iP	P	14 48 22.4	+0.4
PET				pmax	pmax		
	comp=Z,42nm,1.7s,mb5.1						
YAK	Yakutsk	72.11	6	⇑iP	P	14 48 25.9	0.0
YAK	Yakutsk	72.11	6	eP	P	14 48 25.3	-0.6
YAK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
SBA	Scott Base	72.42	170	eP	P	14 48 27.1	-0.5
	comp=N,2.0nm,0.9s,mb4.0						
VOSK	Vostochnaya	74.05	332	P	P	14 48 37.2	-0.3
VOSK				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
BVA0	Borovoye Array	74.51	332	i P	P	14 48 40.0	-0.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BVAR	Borovoye Array	74.51	332	P	P	14 48 40.4	+0.2
	comp=Z,18nm,0.8s,mb5.1,baz=143,slow=7.4,SNR=66						
BRVK	Borovoye	74.58	332	eP	P	14 48 40.2	-0.3
	comp=Z,3.7nm,0.6s,mb4.5						
CHKZ	Chkalovo	74.84	333	eP	P	14 48 41.9	-0.2
	comp=Z,16nm,0.6s,mb5.1						
SEY	Seymchan	77.10	15	eP	P	14 48 55.8	+1.1
AB31	Akbulak array	77.64	325	i P	P	14 48 57.7	-0.3
AB31				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
FX1	Attu Island--F	77.97	31	eP	P	14 49 00.0	+0.3
AKTO	Aktyubinsk	79.31	326	P	P	14 49 07.4	+0.3
	comp=Z,20nm,0.5s,mb5.3,baz=103,slow=6.3,SNR=66						
AKTO	Aktyubinsk	79.31	326	P	P	14 49 07.2	+0.1
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
QSPA	South Pole Qui	80.27	180	eP	P	14 49 13.1	+1.4
	comp=Z,16nm,1.1s,mb4.9						
KMBO	Kilima Mbogo	80.77	270	P	P	14 49 17.8	+2.1
	comp=Z,7.4nm,0.9s,mb4.6,baz=62,slow=5.9,SNR=9.5						
KMBO				LR	LR	15 19 57.7	
	comp=Z,101nm,21.4s,MS4.1,baz=86,slow=32						
KMBO	Kilima Mbogo	80.77	270	P	P	14 49 17.8	+2.1
KMBO				LR	LR	15 19 57.7	
TIXI	Tiksi	81.52	3	⇑eP	P	14 49 18.4	0.0
TIXI	Tiksi	81.52	3	eP	P	14 49 15.1	-3.3
TIXI				eS	S	14 59 26.0	+0.4
TIXI				eSS	SS	15 04 51.2	+5.2
TIXI				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
ORR	Orenburg	81.69	326	⇑iP	P	14 49 20.9	+1.2
ORR				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
ARU	Arti	82.06	331	⇑eP	P	14 49 21.4	-0.1
ARU	Arti	82.06	331	⇓iP	P	14 49 21.5	0.0
ARU				e		14 52 29.2	
ARU				eS	S	14 59 34.0	+2.7
ARU				eSS	SS	15 04 54.5	+0.2
ARU				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
MAK	Makhachkala	82.72	316	eP	P	14 49 26.1	+0.9
ZEI	Tsey	85.17	315	eP	P	14 49 36.2	-1.4
ZEI				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.3						
MATP	Matopo	86.27	250	P	P	14 49 45.6	+2.1
	comp=Z,4.9nm,0.6s,mb5.0,baz=114,slow=6.1,SNR=17						
KIV	Kislovodsk	86.37	316	eP	P	14 49 41.7	-1.7
KIV	Kislovodsk	86.37	316	eP	P	14 49 41.6	-1.8
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
GOF	Gofitskoye	86.45	317	⇓iP	P	14 49 44.5	+0.7
GOF				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.3						
MBAR	Mbarara	87.28	270	eP	P	14 49 46.1	-2.5
LSZ	Lusaka	87.38	255	eP	P	14 49 50.7	+1.7
	comp=Z,5.3nm,0.6s,mb5.0						
BOSA	Boshof	87.86	241	P	P	14 49 52.5	+1.5
	comp=Z,2.3nm,0.7s,mb4.5,baz=160,slow=4.8,SNR=4.8						
LBTB	Lobatse	88.18	245	eP	P	14 49 55.2	+2.6
	comp=Z,4.6nm,0.6s,mb4.9						
SOC	Sochi	88.33	315	eP	P	14 49 51.1	-1.8
SOC				eS	S	15 00 16.4	-16
SOC				eSSS	SSS	15 10 05.6	+6.4
SOC				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.4						
SNAA	Sanae	90.06	196	P	P	14 50 02.4	+2.0
	comp=Z,0.3nm,0.7s,mb3.7,baz=40,slow=0.2,SNR=16						
SNAA	Sanae	90.06	196	eP	P	14 50 01.8	+1.4
BR131	Keskin Array S	91.91	310	eP	P	14 50 10.8	+1.1
	comp=Z,0.7nm,0.6s,mb4.2						
BRTR	Keskin Array B	91.91	310	P	P	14 50 10.6	+0.8
	comp=Z,1.8nm,0.8s,mb4.5,baz=131,slow=6.5,SNR=11						
OBN	Obninsk	93.09	325	⇓iP	P	14 50 15.3	+0.5
OBN				LR	LR		
	comp=Z,100nm,17.0s,MS4.3						
AKASG	Malin Array Be	96.72	320	P	P	14 50 30.6	-0.8
	comp=Z,1.4nm,0.5s,mb4.6,baz=84,slow=4.7,SNR=6.6						
AKASG	Malin Array Be	96.72	320	i P	P	14 50 30.6	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KAF	Kangasniemi	99.36	332	ep	P	14 50 42.1	-1.0
	comp=Z,4.0nm,0.6s,mb5.1						
KAF	Kangasniemi	99.36	332	eP	P	14 50 42.1	-1.0
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb5.1						
FINES	FINESS Array B	99.43	331	P	P	14 50 42.7	-0.7
	comp=Z,4.7nm,0.8s,mb5.1,baz=79,slow=5.9,SNR=14						
FINES	FINESS Array B	99.43	331	P	P	14 50 42.7	-0.7
FINES	FINESS Array B	99.43	331	i P	P	14 50 44.2	+0.8
FINES				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARCES	ARCESS Array B	99.95	339	P	P	14 50 44.6	-1.0
	comp=Z,4.9nm,0.9s,mb5.0,slow=2.4,SNR=7.4						
ILAR	Eielson Array	100.88	26	P	P	14 50 49.0	-0.9
	comp=Z,0.3nm,0.6s,baz=255,slow=4.3,SNR=4.8						
YKA	Yellowknife Ar	115.22	24	PKP	PKPdf	14 55 42.9	+2.0
	comp=Z,2.2nm,0.5s,baz=306,slow=2.1,SNR=14						
YKA	Yellowknife Ar	115.22	24	PKP	PKPdf	14 55 42.9	+2.0
ESDC	Sonseca Array	120.69	310	PKP	PKPdf	14 55 54.7	+2.6
	comp=Z,1.0nm,0.5s,baz=30,slow=2.6,SNR=4.9						
NVAR	Mina Array Bea	122.18	51	PKP	PKPdf	14 55 58.4	+3.3
	comp=Z,1.0nm,0.6s,baz=242,slow=2.3,SNR=11						
HLID	Hailey	123.48	44	ePKPdf	PKPdf	14 56 00.6	+3.2
DBIC	Dimbokro	123.49	272	PKP	PKPdf	14 56 00.7	+2.6
	comp=Z,1.1nm,0.4s,baz=345,slow=14,SNR=7.2						
NEN	Nelson	125.55	53	ePKPdf	PKPdf	14 56 04.3	+2.7
PDAR	Pinedale Array	127.06	43	PKP	PKPdf	14 56 05.8	+1.4
	comp=Z,0.4nm,0.6s,baz=207,slow=3.3,SNR=3.7						
PV01	Paradox Valley	129.56	48	ePKPdf	PKPdf	14 56 11.4	+2.1
ULM	Lac du Bonnet	130.82	28	PKP	PKPdf	14 56 13.8	+2.5
	comp=Z,1.4nm,0.6s,baz=56,slow=3.6,SNR=3.9						
ANMO	Albuquerque	132.29	51	i PKIKP	PKPdf	14 56 17.2	+2.6
SCHQ	Schefferville	134.85	4	PKP	PKPdf	14 56 22.3	+3.5
	comp=Z,2.3nm,0.4s,baz=158,slow=8.2,SNR=6.8						
SCHQ				SKPbc		14 59 48.2	
	comp=Z,7.7nm,0.9s,baz=310,slow=3.8,SNR=3.8						
SCHQ	Schefferville	134.85	4	PKP	PKPdf	14 56 22.3	+3.5
SCHQ				SKPbc		14 59 48.2	
TXAR	Lajitas Array	136.39	57	PKhKP		14 56 12.2	
	comp=Z,0.1nm,0.3s,baz=316,slow=25,SNR=2.6						
TXAR				SKPbc		14 59 52.5	
	comp=Z,0.8nm,0.9s,baz=270,slow=3.8,SNR=4.4						
SADO	Sadowa	142.05	20	PKP	PKPdf	14 56 34.6	+2.6
	comp=Z,3.0nm,0.6s,baz=206,slow=2.4,SNR=3.9						
WVT	Waverly	144.73	38	ePKPdf	PKPdf	14 56 39.1	+2.1
OXF	Oxford	144.77	41	ePKPdf	PKPdf	14 56 39.6	+2.5
SWET	Sewanee	146.48	37	ePKPbc	PKPbc	14 56 43.2	+1.8
SWET				ePKPab	PKPab	14 56 44.6	0.0
TZTN	Tazewell	146.88	33	ePKPbc	PKPbc	14 56 45.8	+3.6
PAL	Palisades	147.09	17	ePKPbc	PKPdf	14 56 46.4	+5.5
LVC	Limon Verde	147.14	168	PKPbc	PKPdf	14 56 46.7	+5.2
	comp=Z,3.2nm,0.7s,baz=266,slow=9.0,SNR=4.2						
CPCT	Cooper Cave	147.14	35	ePKPbc	PKPdf	14 56 46.3	+5.2
CPCT				ePKPab	PKPab	14 56 48.5	+1.4
MVL	Millersville	147.23	21	ePKPbc	PKPdf	14 56 46.5	+5.5
LRAL	Lakeview Retre	147.26	41	ePKPbc	PKPdf	14 56 47.1	+5.8
LRAL				ePKPab	PKPab	14 56 48.7	+1.1
FWV	Forest Hill	147.45	29	ePKPbc	PKPdf	14 56 47.3	+5.8
ELN	Prospectdale	147.77	29	ePKPbc	PKPdf	14 56 47.6	+5.6
ELN				ePKPab	PKPab	14 56 49.9	+0.4
BDFB	Brasilia	151.28	209	PKPbc	PKPdf	14 56 55.6	+7.5
	comp=Z,2.9nm,0.6s,baz=130,slow=3.9,SNR=3.3						
LPAZ	La Paz	153.43	167	PKP	PKPdf	14 56 55.6	+4.4
	comp=Z,0.7nm,0.6s,baz=72,slow=9.6,SNR=2.7						
LPAZ				PKPab	PKPab	14 57 13.6	0.0
	comp=Z,1.2nm,0.7s,baz=25,slow=7.5,SNR=3.9						
SIV	San Ignacio	154.43	182	PKPab	PKPab	14 57 18.8	+1.1
	comp=Z,0.4nm,0.3s,baz=274,slow=19,SNR=3.4						

DHMR 05 14:38:58.4±1.4, 11.92N×43.69E, h9^{km}±9^{km}, ML3.6, 2C-3D, Ethiopia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	At Turbah	1.37	18	⇓eP	Pn	14 39 24.2	+0.4
TRBA				i S	Sb	14 39 43.2	+2.0
TRBA				AML	AML	14 39 54.6	
	comp=N,577nm,0.5s						
UDYN	Al 'Udayn	2.05	8	⇑eP	Pn	14 39 34.9	+1.3
UDYN				AML	AML	14 39 41.0	
	comp=Z,612nm,0.5s						
UDYN				i S	Sn	14 40 02.3	+2.8
LBOS		2.47	38	⇓iP	Pn	14 39 40.9	+1.4
LBOS				i S	Sn	14 40 15.5	+5.5
DHBB	Dhamar BB	2.72	14	⇓iP	Pn	14 39 45.8	+2.7
DHBB				i S	Sn	14 40 22.5	+6.0
BDHA	Al Bayda'	2.75	42	⇑iP	Pn	14 39 45.1	+1.6
BDHA				i S	Sn	14 40 22.2	+5.2
BDHA				AML	AML	14 40 37.4	
	comp=N,649nm,0.6s						

*ISK **05** 14:46:47.1, 38.38N×26.60E, h28^{km}, MD3.0*
*ATH **05** 14:46:47.9, 38.17N×26.52E, h28^{km}±9^{km}, MD3.1/3*
*CSEM **05** 14:46:48.4±0.1, 38.23N×26.68E, h15^{km}, MD3.0, Error ellipse: s-maj=3.1km s-min=2.2km az=99.0*
ISC 05 14:46:47.0±1.2**, 38.16N**±0.04×**26.58E**±0.07**, h6^{km}**±8^{km}**, n12, σ0^{s}88**/20**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.20	4	i P	Pg	14 46 50.7	-0.4
URLA				i S	Sg	14 46 53.9	+0.1
BLCB	Balcova	0.43	58	PG	Pg	14 46 55.6	0.0
BLCB				SG	Sg	14 47 01.3	0.0
SMG	Samos	0.49	156	ePN	Pn	14 46 58.8	-1.3
SMG				eSN	Sn	14 47 07.1	-1.9
IZM	Izmir	0.59	66	PG	Pg	14 46 58.7	-0.1
IZM				SG	Sg	14 47 07.2	+0.6
KDAG	Bornova	0.59	66	i P	Pg	14 46 58.2	-0.6
KDAG				i S	Sg	14 47 06.5	-0.3
PRK	Paraskevi	1.11	348	ePN	Pn	14 47 08.9	-0.1
PRK				eSN	Sn	14 47 23.9	-0.8
AYVA	Ayvalik	1.15	4	i P	Pb	14 47 10.1	+1.3
AYVA				i S	Sb	14 47 28.1	+4.2
AKS	Akhisar	1.21	53	PG	Pg	14 47 06.8	-4.2
BODT	Bodrum	1.24	152	ePN	Pn	14 47 12.0	+1.2
BODT				eSN	Sn	14 47 29.5	+1.5
APE	Apeiranthos	1.37	218	ePN	Pn	14 47 13.4	+0.7
APE	Apeiranthos	1.37	218	ePN	Pn	14 47 12.9	+0.2
YER	Yerkesik	1.70	127	ePN	Pn	14 47 17.5	+0.2

IGQ 05 14:51:47.2, 2.00S×78.29W, h162^{km}±4^{km}, mb4.1, 4C-4D, Error ellipse: s-maj=5.8km s-min=3.8km az=53.3, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARRY	Arrayan	0.52	341	⇑P	P	14 52 10.3	-0.1
ARRY				S	S	14 52 26.0	-2.1
CUSU	Cusua	0.58	341	⇑P	P	14 52 11.4	+0.8
RUN5	Runtun	0.59	347	⇑P	P	14 52 11.1	+0.3
JUIV	Juive	0.60	343	P	P	14 52 11.1	+0.4
IGUA	Igualata	0.61	325	P	P	14 52 11.5	+0.7
PISA	Pisayambo	0.94	354	⇓P	P	14 52 13.5	+0.8
TAMB	Tambo	1.30	356	⇓P	P	14 52 17.0	+1.1
QIL1	Quilotoa	1.31	331	⇑P	P	14 52 17.5	+1.4
VC1	Cotopaxi 1	1.35	355	⇓P	P	14 52 17.6	+1.1
ANTI	Antisana	1.54	5	⇓P	P	14 52 19.1	+0.8
ANTI				S	S	14 52 42.9	+0.3
JUA2	San Juan 2	1.80	350	P	P	14 52 21.8	+0.7
GGP	Refugio Guagua	1.84	350	P	P	14 52 22.1	+0.6
TERV	Terraza Guagua	1.84	350	P	P	14 52 22.9	+1.4
PINO	Pino	1.85	350	P	P	14 52 22.6	+0.9
YANA	Yana	1.89	351	P	P	14 52 22.8	+0.8
LAV3	Lava3-Reventad	2.00	19	P	P	14 52 23.4	+0.1
CAYR	Refugio Cayamb	2.02	8	P	P	14 52 24.8	+1.2
CONE	Cono NE Rev Vo	2.02	19	P	P	14 52 23.3	-0.3
ANGU	Angureal	2.05	8	P	P	14 52 24.9	+1.0
CAYA	Cayambe	2.08	8	P	P	14 52 25.9	+1.7
COTA	Cotacachi	2.32	359	P	P	14 52 29.6	+2.5
MAG1	Magdalena	2.42	322	P	P	14 52 28.6	+0.2
JAMA	Jama	2.58	312	P	P	14 52 29.2	-1.2
JAMA				S	S	14 52 59.1	-4.4

*CSEM **05** 15:17:52.8±0.0, 45.67N×6.43E, h5^{km}, ML3.3/37, Error ellipse: s-maj=0.8km s-min=0.6km az=58.0*
*LDG **05** 15:17:53.4±0.1, 45.71N×6.38E, h2^{km}, Md3.2/3, Ml3.3/43, Error ellipse: s-maj=1.0km s-min=0.9km az=109.0*
*ZUR **05** 15:17:53.3, 45.68N×6.39E, h10^{km}, ML2.7/7*
*GEN **05** 15:17:53.8, 45.71N×6.43E, h2^{km}, ML3.0*
*NEIC **05** 15:17:53.4, 45.71N×6.38E, h2^{km}, ML3.5(CSEM), ML3.5(GEN), ML3.3(LDG), ML2.9(STR), After LDG.*
*STR **05** 15:17:54.7±0.1, 45.72N×6.19E, h5^{km}±1^{km}, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 05 15:17:51.1±0.2**, 45.722N**±0.009×**6.28E**±0.01**, h7^{km}**±1^{km}**, n151, σ1^{s}24**/287**, 16C-12D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPL	La Plagne	0.38	123	ePg	Pg	15 17 59.7	+0.9
LPL				eSg	Sg	15 18 03.9	0.0
	332nm,0.3s						
LPG	La Plagne	0.40	124	ePg	Pg	15 18 00.2	+1.0
LPG				eSg	Sg	15 18 04.9	+0.3
	296nm,0.2s						
GDM	Grand'Maison	0.53	192	Pg	Pg	15 18 03.9	+2.1
GDM				Sg	Sg	15 18 11.5	+2.6
EMV	Vieux Emosson	0.55	52	⇓iPg	Pg	15 18 03.7	+1.5
EMV				eSg	Sg	15 18 10.5	+0.9
EMV	Vieux Emosson	0.55	52	Pg	Pg	15 18 03.8	+1.6
EMV				Sg	Sg	15 18 10.5	+0.9
GRN	Grenoble	0.61	218	Pg	Pg	15 18 05.5	+2.2
GRN				Sg	Sg	15 18 13.8	+2.3
SALAN	Lac Salanfe	0.64	49	⇓iPg	Pg	15 18 05.4	+1.4
SALAN				eSg	Sg	15 18 13.4	+0.8
SALAN	Lac Salanfe	0.64	49	⇓iP	Pg	15 18 05.5	+1.5
SALAN	Lac Salanfe	0.64	49	⇓iPg	Pg	15 18 05.4	+1.4
SALAN				eSg	Sg	15 18 13.3	+0.7
LSD	Ceresole Reale	0.67	113	P	Pg	15 18 04.8	+0.2
LSD				S	Sg	15 18 12.3	-1.3
LSD	Ceresole Reale	0.67	113	P	Pg	15 18 04.8	+0.3
LSD				S	Sg	15 18 12.3	-1.2
BNI	Bardonecchia	0.73	157	Pg	Pg	15 18 06.2	+0.5
BNI				Sg	Sg	15 18 15.2	-0.2
AIGLE	Aigle	0.78	37	⇓iPg	Pg	15 18 08.1	+1.4
GRYON	Gryon	0.79	47	⇓iPg	Pg	15 18 08.0	+1.2
GRYON	Gryon	0.79	47	⇓iPg	Pg	15 18 08.1	+1.3
GIMEL	Gimel	0.81	359	ePg	Pg	15 18 10.0	+2.6
ORIF	Oris-en-Rattie	0.85	199	ePg	Pg	15 18 08.7	+0.6
ORIF				eSg	Sg	15 18 20.6	+1.1
	95nm,0.2s						
DIX	Grande Dixence	0.87	65	⇓iPg	Pg	15 18 09.1	+0.6
DIX	Grande Dixence	0.87	65	Pg	Pg	15 18 09.3	+0.8
DIX				Sg	Sg	15 18 20.2	+0.1
RRL	Cesana Torines	0.88	156	P	Pb	15 18 09.4	+1.2
RRL				S	Sb	15 18 20.4	+0.4
RRL	Cesana Torines	0.88	156	P	Pb	15 18 09.4	+1.1
RRL				S	Sb	15 18 20.4	+0.4
FENE	Fenestrelle	0.89	141	P	Pb	15 18 09.1	+0.7
FENE				S	Sb	15 18 19.7	-0.6
FENE	Fenestrelle	0.89	141	P	Pb	15 18 09.1	+0.7
FENE				S	Sb	15 18 19.7	-0.5
RSP	Reno Superiore	0.89	129	P	Pb	15 18 09.4	+0.8
RSP				S	Sb	15 18 20.1	-0.4
RSP	Reno Superiore	0.89	129	P	Pb	15 18 09.4	+0.8
RSP				S	Sb	15 18 20.1	-0.4
CABF	La Chapelle	0.90	352	ePg	Pg	15 18 11.3	+2.2
CABF				eSn	Sn	15 18 25.0	+1.6
SENIN	Lac Senin	0.96	48	⇓iPg	Pg	15 18 11.2	+0.9
TRAV		1.05	101	P	Pb	15 18 11.6	+0.4
TRAV				S	Sb	15 18 23.9	-1.2
TRAV		1.05	101	P	Pb	15 18 11.6	+0.3
TRAV				S	Sb	15 18 23.9	-1.2
MBDF	Montbardon	1.05	161	ePg	Pg	15 18 12.2	0.0
MBDF				eSg	Sg	15 18 25.8	-0.5
	92nm,0.5s						
MBDF				eSn	Sn	15 18 27.4	+0.1
	25nm,0.2s						
BHB	Bricherasio	1.12	141	P	Pb	15 18 13.7	+1.2
BHB				S	Sb	15 18 26.8	-0.3
BHB	Bricherasio	1.12	141	P	Pb	15 18 13.7	+1.2
BHB				S	Sb	15 18 26.8	-0.3
LKBD	Leukerbad	1.15	54	ePg	Pg	15 18 14.6	+0.5
LKBD	Leukerbad	1.15	54	i P	Pg	15 18 14.6	+0.5
TORNY	Torny	1.15	24	eP*	Pb	15 18 15.9	+2.9
TORNY	Torny	1.15	24	eP	Pb	15 18 16.0	+3.0
ORX	Oropa	1.20	94	P	Pb	15 18 14.2	+0.5
ORX				S	Sb	15 18 28.1	-1.2
ORX	Oropa	1.20	94	P	Pb	15 18 14.2	+0.4
ORX				S	Sb	15 18 28.1	-1.2
ORO	Oropa	1.20	94	Pg	Pg	15 18 14.7	-0.4
MCGN	Macugnaga	1.22	78	Pg	Pg	15 18 15.0	-0.5
MMK	Mattmark	1.22	74	ePg	Pg	15 18 14.8	-0.8

MMK	Mattmark	1.22	74	*e*P	Pb	15 18 14.9	+0.7
BRANT	Les Verrieres	1.22	6	⇑*i*Pn	Pn	15 18 17.2	+2.5
BRANT	Les Verrieres	1.22	6	⇑*e*P	Pb	15 18 17.1	+2.9
SURF	Saint Ours	1.30	163	Pg	Pg	15 18 19.7	+2.7
SURF				Sg	Sg	15 18 37.9	+3.6
WIMIS	Wimmis	1.33	44	⇑*i*Pg	Pg	15 18 18.2	+0.5
PZZ	Prazzo	1.35	154	P	Pb	15 18 16.9	+0.6
PZZ	Prazzo	1.35	154	P	Pb	15 18 16.9	+0.6
DOI	San Damiano	1.40	150	Pg	Pg	15 18 18.5	-0.5
VIVF	Saint-Julien-l	1.43	233	*e*Pn	Pn	15 18 19.7	+2.1
VIVF				*e*Pg	Pg	15 18 21.0	+1.4
VIVF				*e*Sn	Sn	15 18 38.0	+1.3
	296nm,0.2s						
VIVF				*e*Sg	Sg	15 18 39.5	+0.9
	376nm,0.2s						
STV	Sta Anna Valdi	1.65	153	P	Pn	15 18 21.7	+0.9
STV	Sta Anna Valdi	1.65	153	P	Pn	15 18 21.7	+0.9
STV2	Anna di Valdie	1.65	153	P	Pn	15 18 21.6	+0.8
STV2				S	Sn	15 18 40.5	-2.0
STV2	Anna di Valdie	1.65	153	P	Pn	15 18 21.6	+0.8
STV2				S	Sn	15 18 40.5	-2.0
ENR	Entracque	1.70	151	P	Pn	15 18 22.3	+0.8
ENR				S	Sn	15 18 41.7	-2.0
ENR	Entracque	1.70	151	P	Pn	15 18 22.3	+0.8
ENR				S	Sn	15 18 41.7	-2.0
VAI	Varese	1.75	84	Pg	Pg	15 18 24.9	-1.1
BOURR	Bourrignon	1.80	21	*e*Pn	Pn	15 18 24.6	+1.7
SMRF	Simiane la Rot	1.82	196	*e*Pn	Pn	15 18 25.0	+1.9
SMRF				*e*Pg	Pg	15 18 27.9	+0.5
SMRF				*e*Sg	Sg	15 18 50.9	-0.7
	20nm,0.4s						
ROB	Roburent	1.82	141	P	Pn	15 18 24.1	+0.9
COLF	Collangettes	1.82	265	Pg	Pg	15 18 28.6	+1.0
SMF	Signal de Mont	1.93	299	*e*Pn	Pn	15 18 26.6	+1.9
SMF				*e*Pg	Pg	15 18 30.5	+0.9
SMF				*e*Sn	Sn	15 18 50.1	+0.6
	72nm,0.2s						
SMF				*e*Sg	Sg	15 18 56.0	+0.6
	65nm,0.2s						
BBS	Basel-Blauen	1.94	26	Pn	Pn	15 18 27.6	+2.7
MUGIO	Muggio	1.94	83	Pg	Pg	15 18 28.3	-1.6
MUGIO				Sg	Sg	15 18 53.8	-2.0
MONE	Monesi	1.95	147	P	Pn	15 18 25.8	+0.8
MONE				S	Sn	15 18 47.6	-2.5
MONE	Monesi	1.95	147	P	Pn	15 18 25.8	+0.8
MONE				S	Sn	15 18 47.6	-2.4
PCP	Pian Castagno	1.99	126	P	Pn	15 18 26.0	+0.3
PCP	Pian Castagno	1.99	126	P	Pn	15 18 26.0	+0.4
SBF	Sospel	2.03	156	*e*Pg	Pg	15 18 30.0	-1.7
SBF				*e*Sg	Sg	15 18 56.2	-2.6
	62nm,0.5s						
FIN	Finale Ligure	2.04	137	P	Pn	15 18 25.9	-0.5
FIN				Pg	Pg	15 18 29.9	-2.0
FIN	Finale Ligure	2.04	137	P	Pn	15 18 25.9	-0.4
FIN	Finale Ligure	2.04	137	Pg	Pg	15 18 29.9	-2.0
RORO		2.05	141	P	Pn	15 18 26.2	-0.3
RORO				S	Sn	15 18 47.7	-4.9
RORO		2.05	141	P	Pn	15 18 26.2	-0.3
RORO				S	Sn	15 18 47.7	-4.9
NEGI	Negi	2.13	151	P	Pn	15 18 27.5	-0.1
NEGI	Negi	2.13	151	P	Pn	15 18 27.5	-0.1
HINF	Hinteralfeld	2.13	10	*e*Pn	Pn	15 18 28.4	+0.7
HINF				*e*Pg	Pg	15 18 33.1	-0.6
HINF				*e*Sn	Sn	15 18 53.4	-1.3
	30nm,0.2s						
HINF				*e*Sg	Sg	15 19 00.4	-1.7
	32nm,0.2s						
IMI	Imperia	2.14	147	P	Pn	15 18 27.8	-0.1
IMI				Pg	Pg	15 18 32.1	-1.8
IMI	Imperia	2.14	147	P	Pn	15 18 27.8	0.0
IMI	Imperia	2.14	147	Pg	Pg	15 18 32.1	-1.8
FRF	La Foret Royal	2.18	173	*e*Pn	Pn	15 18 30.2	+1.9
FRF				*e*Pg	Pg	15 18 33.8	-0.8
FRF				*e*Sn	Sn	15 18 54.5	-1.3
	23nm,0.2s						
FRF				*e*Sg	Sg	15 19 01.2	-2.4
	38nm,0.4s						
LBL	Lubilhac	2.19	258	Pg	Pg	15 18 35.0	+0.2
LBL	Lubilhac	2.19	258	Pn	Pn	15 18 30.2	+1.7
LBL				Pg	Pg	15 18 35.0	+0.2
LBL	Lubilhac	2.19	258	Pg	Pg	15 18 35.0	+0.2
MOF	Molkenrain	2.21	15	Pn	Pn	15 18 30.4	+1.6
AGO	Saint Agoulin	2.22	280	Pg	Pg	15 18 36.4	+0.9
AGO	Saint Agoulin	2.22	280	Pn	Pn	15 18 30.1	+1.1
AGO				Pg	Pg	15 18 36.4	+0.9
AGO	Saint Agoulin	2.22	280	Pg	Pg	15 18 36.4	+0.9
TUE	Stuetta	2.26	70	Pg	Pg	15 18 34.3	-2.0
LOR	Lormes	2.28	314	*e*Pn	Pn	15 18 32.0	+2.3
	baz=131						
LOR				*e*Pg	Pg	15 18 37.2	+0.6
	baz=134						
LOR				*e*Sn	Sn	15 18 58.4	0.0
LOR				*e*Sg	Sg	15 19 05.6	-1.4
	62nm,0.3s						
LOR	Lormes	2.28	314	*e*Pg	Pg	15 18 37.2	+0.6
LOR				*e*Sn	Sn	15 18 58.4	0.0
LOR				*e*Sg	Sg	15 19 05.6	-1.4
	31nm,0.3s						
HAU	Haudompre	2.29	1	*e*Pn	Pn	15 18 30.7	+0.8
HAU				*e*Pg	Pg	15 18 36.2	-0.6
HAU				*e*Sn	Sn	15 18 57.5	-1.1
HAU				*e*Sg	Sg	15 19 05.9	-1.3
	35nm,0.2s						
PYM	Petit Puy Mans	2.29	272	Pg	Pg	15 18 37.3	+0.4
PYM				Sg	Sg	15 19 06.7	-0.7
AVF	Avril sur Loir	2.29	299	*e*Pn	Pn	15 18 32.2	+2.2
AVF				*e*Pg	Pg	15 18 37.2	+0.3
AVF				*e*Sn	Sn	15 18 59.4	+0.6
AVF				*e*Sg	Sg	15 19 07.0	-0.5
	59nm,0.4s						
SSF	Saint Saulge	2.34	306	*e*Pn	Pn	15 18 32.1	+1.5
SSF				*e*Pg	Pg	15 18 38.1	+0.2
SSF				*e*Sn	Sn	15 19 00.0	0.0
SSF				*e*Sg	Sg	15 19 08.4	-0.7
	27nm,0.2s						
SSF	Saint Saulge	2.34	306	*e*Pg	Pg	15 18 38.1	+0.2
SSF				*e*Sn	Sn	15 19 00.0	0.0
SSF				*e*Sg	Sg	15 19 08.4	-0.7
	13nm,0.2s						
LASF	Ste Croix	2.38	227	*e*Pn	Pn	15 18 32.2	+1.0
LASF				*e*Pg	Pg	15 18 38.0	-0.7
LASF				*e*Sn	Sn	15 19 00.8	-0.2
LASF				*e*Sg	Sg	15 19 09.3	-1.1
	24nm,0.3s						
LMR	La Mourre	2.39	176	*e*Pn	Pn	15 18 31.2	-0.2
LMR				*e*Pg	Pg	15 18 37.4	-1.5
LMR				*e*Sn	Sn	15 18 59.9	-1.4
LMR				*e*Sg	Sg	15 19 07.8	-3.0
	16nm,0.3s						
THEF	They Montfort	2.51	356	Pn	Pn	15 18 34.6	+1.5
BGF	Bois d’Agland	2.53	291	*e*Pn	Pn	15 18 35.5	+2.2
BGF				*e*Pg	Pg	15 18 42.5	+0.9
BGF				*e*Sg	Sg	15 19 14.5	-0.8
	147nm,0.6s						
ECH	Echery	2.57	13	Pn	Pn	15 18 35.4	+1.5
SFTF	Sexfontaines	2.63	342	*e*Pn	Pn	15 18 35.3	+0.6
	baz=155						
SFTF				*e*Pg	Pg	15 18 43.0	-0.5
	baz=150						
SFTF				*e*Sn	Sn	15 19 06.5	-0.7
SFTF				*e*Sg	Sg	15 19 17.1	-1.4
	46nm,0.5s						
SFTF	Sexfontaines	2.63	342	*e*Pg	Pg	15 18 43.0	-0.5
SFTF				*e*Sn	Sn	15 19 06.5	-0.7
SFTF				*e*Sg	Sg	15 19 17.1	-1.4
	23nm,0.5s						
FRNF	Fournols	2.63	264	Pg	Pg	15 18 42.6	-1.1
FRNF				Sg	Sg	15 19 18.2	-0.6
CDF	Champ du Feu	2.78	14	*e*Pn	Pn	15 18 36.7	-0.2
CDF				*e*Pg	Pg	15 18 45.2	-1.4
CDF				*e*Sn	Sn	15 19 09.4	-1.7
CDF				*e*Sg	Sg	15 19 20.3	-3.3
	11nm,0.3s						
WLS	Welschbruch	2.79	15	Pn	Pn	15 18 38.4	+1.3
CODM		2.86	116	P	Pn	15 18 37.7	-0.4
CODM		2.86	116	P	Pn	15 18 37.7	-0.4
TCF	Toulx Ste Croi	2.89	283	*e*Pn	Pn	15 18 40.2	+1.7
TCF				*e*Pg	Pg	15 18 48.6	-0.3
TCF				*e*Sn	Sn	15 19 13.0	-1.0
TCF				*e*Sg	Sg	15 19 26.6	-0.8
	33nm,0.5s						
MEZF	Maizieres J’vi	2.91	344	*e*Pn	Pn	15 18 39.3	+0.6
MEZF				*e*Pg	Pg	15 18 48.4	-0.7
	baz=162						
MEZF				*e*Sn	Sn	15 19 13.4	-0.9
MEZF				*e*Sg	Sg	15 19 25.6	-2.2
	28nm,0.4s						
MEZF	Maizieres J’vi	2.91	344	*e*Pg	Pg	15 18 48.4	-0.7
MEZF				*e*Sn	Sn	15 19 13.4	-0.9
MEZF				*e*Sg	Sg	15 19 25.6	-2.2
	14nm,0.4s						
DAVA	Damuels	2.94	57	⇑*i*Pn	Pn	15 18 41.0	+1.8
DAVA	Damuels	2.94	57	⇑*i*Sn	Sn	15 19 15.4	+0.2
DAVA				⇑*i*Sg	Sg	15 19 28.7	-0.3
	comp=Z,15nm,0.4s						
DAVA	Damuels	2.94	57	⇑Pn	Pn	15 18 41.0	+1.8
DAVA				Sn	Sn	15 19 15.4	+0.2
DAVA				Sg	Sg	15 19 28.7	-0.3
GRAM		2.95	113	P	Pn	15 18 39.3	-0.1
HYF	Humbligny	2.95	303	*e*Pn	Pn	15 18 40.3	+0.9
HYF				*e*Pg	Pg	15 18 50.0	-0.1
HYF				*e*Sn	Sn	15 19 15.6	+0.1
HYF				*e*Sg	Sg	15 19 28.4	-1.0
RFYF	Reffroy	2.96	350	*e*Pn	Pn	15 18 39.6	+0.1
	baz=163						
RFYF				*e*Pg	Pg	15 18 49.1	-1.1
RFYF				*e*Sn	Sn	15 19 14.3	-1.4
RFYF				*e*Sg	Sg	15 19 27.0	-2.7
	22nm,0.2s						
BACM		3.05	117	P	Pn	15 18 40.9	+0.1
BACM		3.05	117	P	Pn	15 18 40.9	+0.1
CAF	Calviac	3.08	257	*e*Pn	Pn	15 18 42.4	+1.2
CAF				*e*Pg	Pg	15 18 51.6	-1.0
CAF				*e*Sg	Sg	15 19 32.0	-1.6
	17nm,0.3s						
VALM		3.13	115	P	Pn	15 18 41.8	-0.1
VALM		3.13	115	P	Pn	15 18 41.8	-0.1
SARO	Sassorosso	3.31	116	P	Pn	15 18 44.7	+0.3
SARO	Sassorosso	3.31	116	P	Pn	15 18 44.7	+0.3
SARO	Sassorosso	3.31	116	P	Pn	15 18 44.7	+0.3
RJF	Les Rejaudoux	3.37	265	*e*Pn	Pn	15 18 46.1	+0.7
RJF				*e*Pg	Pg	15 18 56.4	-2.1
RJF				*e*Sg	Sg	15 19 40.8	-2.7
	18nm,0.4s						
MOTA	Moosalm	3.71	62	⇑*i*Pn	Pn	15 18 51.3	+1.3
MOTA	Moosalm	3.71	62	⇓*i*Sn	Sn	15 19 33.4	-1.1
MOTA	Moosalm	3.71	62	⇑Pn	Pn	15 18 51.3	+1.3
MOTA				Sn	Sn	15 19 33.4	-1.1
SQTA	Sankt Quirin	3.72	64	⇑*i*Pn	Pn	15 18 51.0	+0.7
SQTA	Sankt Quirin	3.72	64	⇓*i*Sn	Sn	15 19 33.7	-1.3
SQTA	Sankt Quirin	3.72	64	⇑Pn	Pn	15 18 51.0	+0.7
SQTA				Sn	Sn	15 19 33.7	-1.3
MTLF	Montolieu	3.75	232	*e*Pn	Pn	15 18 50.4	-0.4
MTLF				*e*Pg	Pg	15 19 03.9	-2.2
MTLF				*e*Sn	Sn	15 19 33.5	-2.3
	8.1nm,0.3s						
MTLF				*e*Sg	Sg	15 19 52.2	-3.9
	9.5nm,0.3s						
LFF	La Frestale	3.98	261	*e*Pn	Pn	15 18 54.3	+0.3
LFF				*e*Pg	Pg	15 19 07.4	-3.2
LFF				*e*Sg	Sg	15 20 00.0	-3.7
	16nm,0.4s						
WATA	Walderalm	4.00	64	⇑*i*Pn	Pn	15 18 54.7	+0.5
WATA	Walderalm	4.00	64	⇑*i*Sn	Sn	15 19 40.4	-1.5
WATA	Walderalm	4.00	64	⇑Pn	Pn	15 18 54.7	+0.5
WATA				Sn	Sn	15 19 40.4	-1.6
WTTA	Wattenberg	4.01	65	⇑*i*Pn	Pn	15 18 54.8	+0.4
WTTA	Wattenberg	4.01	65	⇓*i*Sn	Sn	15 19 40.7	-1.6
WTTA	Wattenberg	4.01	65	⇑Pn	Pn	15 18 54.8	+0.4
WTTA				Sn	Sn	15 19 40.7	-1.6
MFF	Saint Martin d	4.55	283	*e*Pn	Pn	15 19 02.4	+0.3
MFF				*e*Sn	Sn	15 19 53.5	-2.5
MFF				*e*Sg	Sg	15 20 18.2	-4.4
	7.6nm,0.3s						
BAIF	Baives	4.56	343	*e*Pn	Pn	15 19 02.1	-0.1
BAIF				*e*Sn	Sn	15 19 52.2	-4.0
	1.5nm,0.2s						
EPF	Esparros	5.04	240	*e*Pn	Pn	15 19 08.6	-0.3
EPF				*e*Pg	Pg	15 19 27.8	-3.8
EPF				*e*Sg	Sg	15 20 32.5	-6.3
	3.1nm,0.3s						
LDF	La Druitiere	5.23	306	*e*Pn	Pn	15 19 11.3	-0.3
LDF				*e*Sn	Sn	15 20 08.9	-4.1
	1.2nm,0.2s						
FLN	La Foliniere	5.52	306	*e*Pn	Pn	15 19 15.1	-0.6
FLN				*e*Sn	Sn	15 20 16.6	-3.7
FLN				*e*Sg	Sg	15 20 48.1	-6.7
	7.1nm,0.4s						
GRR	Gorron	5.56	301	*e*Pn	Pn	15 19 15.6	-0.7
GRR				*e*Sn	Sn	15 20 17.1	-4.2
	9.8nm,0.4s						
ETSF	Etsaut	5.66	243	*e*Pn	Pn	15 19 17.4	-0.3
ETSF				*e*Pg	Pg	15 19 39.3	-4.8
ETSF				*e*Sn	Sn	15 20 19.1	-4.8
ETSF				*e*Sg	Sg	15 20 51.8	-7.7
	5.8nm,0.4s						
KHC	Kasperske Hory	6.01	53	*e*SN	Sn	15 20 26.2	-6.5
SGMF	Saint Gilles	6.55	296	*e*Pn	Pn	15 19 29.4	-1.0
SGMF				*e*Sn	Sn	15 20 40.8	-5.4
	7.0nm,0.5s						
QUIF	Quistinic	6.84	292	*e*Pn	Pn	15 19 32.9	-1.5
QUIF				*e*Sn	Sn	15 20 47.7	-5.7
	2.4nm,0.3s						
ROSF	Rostrenen	7.03	295	*e*Pn	Pn	15 19 35.8	-1.3
ROSF				*e*Sn	Sn	15 20 51.9	-6.3
	2.6nm,0.4s						

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*NEIC **05** 15:27:11.4, 38.16N×26.50E, h7^{km}, MD3.8(ISK), ML4.0(ATH), After ISK.*

*ISK **05** 15:27:12.8, 38.17N×26.58E, h12^{km}, MD3.7*

*ATH **05** 15:27:13.4, 38.14N×26.61E, h26^{km}, MD3.9/8, ML4.0*

*MOS **05** 15:27:13.2±1.2, 38.16N×26.56E, h10^{km}, mb3.6/1, Error ellipse: s-maj=20.2km s-min=8.3km az=104.9*

*CSEM **05** 15:27:13.6±0.1, 38.15N×26.70E, h10^{km}, MD3.7, Error ellipse: s-maj=1.8km s-min=1.1km az=23.0*

*THE **05** 15:27:14.3, 38.00N×26.86E, h20^{km}, ML3.9*

ISC 05 15:27:12.2±0.5**, 38.17N**±0.02×**26.56E**±0.02**, h1**^{km}±4^{km}**, n132, σ0ˢ96**/168**, 3C-5D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.19	7	*i* P	Pg	15 27 16.8	+0.8
URLA				*i* S	Sg	15 27 20.3	+1.7
BLCB	Balcova	0.43	60	*i* PG	Pg	15 27 21.4	+0.6
BLCB				*i* SG	Sg	15 27 27.9	+1.3
BLCB	Balcova	0.43	60	Pg	Pg	15 27 21.5	+0.7
BLCB				Sg	Sg	15 27 27.5	+0.9
BLCB	Balcova	0.43	60	*i* Pg	Pg	15 27 21.4	+0.6
BLCB				Sg	Sg	15 27 27.5	+0.9
SMG	Samos	0.51	155	*e*PB	Pg	15 27 23.3	+1.0
SMG				*e*SB	Sg	15 27 30.3	+1.2
IZM	Izmir	0.59	67	*i* PG	Pg	15 27 24.6	+0.6
IZM	Izmir	0.59	67	Pg	Pg	15 27 24.6	+0.6
KDAG	Bornova	0.60	67	*i* P	Pg	15 27 24.1	-0.1
KDAG				*i* S	Sg	15 27 32.3	+0.1
PRK	Paraskevi	1.10	348	*e*PN	Pn	15 27 35.2	+0.6
PRK				*e*SN	Sn	15 27 50.8	+0.2
AYVA	Ayvalik	1.14	5	*i* P	Pb	15 27 35.4	+1.0
AYVA				*i* S	Sb	15 27 52.9	+3.4
AYDN	Tasoluk	1.16	116	*i* P	Pb	15 27 35.2	+0.6
AYDN				*i* S	Sb	15 27 49.7	-0.3
AKS	Akhisar	1.21	54	PN	Pn	15 27 36.0	-0.1
BODT	Bodrum	1.25	152	PN	Pn	15 27 36.2	-0.6
BODT				SN	Sn	15 27 53.9	-0.6
BODT	Bodrum	1.25	152	*e*Pn	Pn	15 27 36.2	-0.6
BODT				Sg	Sg	15 27 53.2	-0.7
BODT				*e*Sn	Sn	15 27 53.9	-0.6
MLSB	Milas	1.30	132	PN	Pn	15 27 37.3	-0.1
MLSB	Milas	1.30	132	Pn	Pn	15 27 37.8	+0.4
APE	Apeiranthos	1.37	217	PN	Pn	15 27 38.8	+0.4
APE				SN	Sn	15 27 56.9	-0.6
APE	Apeiranthos	1.37	217	*e*PN	Pn	15 27 38.3	-0.1
APE	Apeiranthos	1.37	217	Pn	Pn	15 27 36.2	-2.2
APE	Apeiranthos	1.37	217	*e*P	Pb	15 27 37.7	-0.6
APE	Apeiranthos	1.37	217	*e*Pn	Pn	15 27 38.8	+0.4
APE				*e*Sn	Sn	15 27 56.9	-0.6
MANT	Manisa	1.60	78	*i* P	Pn	15 27 43.0	+1.3
MANT				*i* S	Sb	15 28 04.4	+1.6
DAT	Datca	1.65	150	*e*PN	Pn	15 27 41.7	-0.7
EZN	Ezine	1.67	354	PN	Pn	15 27 43.2	+0.6
EZN	Ezine	1.67	354	Pn	Pn	15 27 41.8	-0.9
YER	Yerkesik	1.71	127	PN	Pn	15 27 43.1	-0.2
YER	Yerkesik	1.71	127	Pn	Pn	15 27 43.1	-0.2
BALB	Balikesir	1.79	35	PN	Pn	15 27 43.9	-0.6
BALB	Balikesir	1.79	35	Pn	Pn	15 27 44.0	-0.5
BALB	Balikesir	1.79	35	Pn	Pn	15 27 44.0	-0.5
BTOK	Tokmak	1.96	35	*i* P	Pn	15 27 46.9	+0.1
BTOK				*i* S	Sn	15 28 17.4	+5.0
DENT	Denizli	2.00	101	PN	Pn	15 27 47.3	-0.1
DENT	Denizli	2.00	101	Pn	Pn	15 27 47.3	0.0
DNZL	Cakiroluk	2.02	103	*i* P	Pn	15 27 47.6	-0.1
DNZL				*i* S	Sn	15 28 15.6	+1.6
LIA	Limnos Island	2.03	329	*e*PN	Pn	15 27 48.7	+0.8
LOS	Limnos	2.11	327	*e*Pn	Pn	15 27 50.0	+1.0
	comp=Z,6.7nm,0.4s						
LOS				*e*Sn	Sn	15 28 17.0	+0.8
PTL	Penteli	2.13	268	*e*PB	Pb	15 27 50.0	-1.3
DST	Dursunbey	2.16	48	PN	Pn	15 27 49.2	-0.5
DST	Dursunbey	2.16	48	Pn	Pn	15 27 50.0	+0.3
DALT	Dalyan (Mudla)	2.16	130	*e*PN	Pn	15 27 49.4	-0.4
DALT	Dalyan (Mudla)	2.16	130	Pn	Pn	15 27 49.4	-0.3
LPK	Lapseki	2.21	4	PN	Pn	15 27 49.6	-0.8
LPK	Lapseki	2.21	4	Pn	Pn	15 27 49.6	-0.7
LPK	Lapseki	2.21	4	Pn	Pn	15 27 49.7	-0.7
MPAR	Parnis Oros	2.23	270	*e*PN	Pn	15 27 51.8	+1.1
ATH	Athens Observa	2.26	266	*e*PN	Pn	15 27 51.9	+0.8
ARG	Arkhangelos	2.31	147	*e*PN	Pn	15 27 51.6	-0.3
AOS	Alonnisos	2.33	296	*e*Pn	Pn	15 27 53.0	+0.9
	comp=Z,5.5nm,0.6s						
AOS				*e*Sn	Sn	15 28 22.7	+0.9
KHL	Karahalli	2.33	85	PN	Pn	15 27 51.7	-0.5
KHL	Karahalli	2.33	85	Pn	Pn	15 27 51.8	-0.5
KHL	Karahalli	2.33	85	Pn	Pn	15 27 51.8	-0.4
EDC	Edincik	2.40	24	PN	Pn	15 27 52.8	-0.3
EDC	Edincik	2.40	24	Pn	Pn	15 27 52.9	-0.3
BNT	Bandirma	2.42	25	PN	Pn	15 27 53.0	-0.5
GDZ	Gediz	2.46	67	*i* P	Pg	15 28 00.1	-1.2
GDZ				*i* S	Sg	15 28 32.1	-2.0
FETY	Fethiye	2.52	127	*e*PN	Pn	15 27 54.4	-0.5
FETY	Fethiye	2.52	127	Pn	Pn	15 27 53.9	-1.0
GOLH	Golhisar	2.55	110	*i* P	Pn	15 27 55.9	+0.5
GOLH				*i* S	Sn	15 28 34.5	+7.0
MRMT	Marmara Adasi	2.56	18	*e*PN	Pn	15 27 55.0	-0.4
SART	Tekirdag	2.56	11	*i* P	Pn	15 27 56.2	+0.7
SART				*i* S	Sn	15 28 36.0	+8.2
ORLT	Orhaneli	2.61	43	*e*PN	Pn	15 27 55.3	-0.8
ORLT	Orhaneli	2.61	43	Pn	Pn	15 27 55.3	-0.8
MFT	Murefte	2.67	12	*e*PN	Pn	15 27 56.5	-0.6
ALN	Alexandroupoli	2.75	352	*e*Pn	Pn	15 27 58.0	-0.2
	comp=Z,9.5nm,0.8s						
ALN				*e*Sn	Sn	15 28 30.9	-1.7
ULDT	Uludag	2.81	45	*i* P	Pb	15 28 04.7	+1.8
ULDT				*i* S	Sb	15 28 42.0	+4.1
PAIG	Paliouri	2.85	309	*e*Pn	Pn	15 28 00.8	+1.2
PAIG				*e*Sn	Sn	15 28 34.8	-0.3
XOR	Xorichti	2.89	295	*e*Pn	Pn	15 28 00.7	+0.5
XOR				*e*Sn	Sn	15 28 36.0	-0.1
ALT	Altintas	2.92	71	*e*PN	Pn	15 28 00.2	-0.3
ALT	Altintas	2.92	71	Pn	Pn	15 28 00.3	-0.3
OUR	Ouranopolis	2.95	318	*e*Pn	Pn	15 28 01.5	+0.5
	comp=Z,3.6nm,0.4s						
OUR				*e*Sn	Sn	15 28 37.5	0.0
TKTP	Tekketepe	2.96	91	*i* P	Pn	15 28 00.6	-0.6
TKTP				*i* S	Sn	15 28 40.9	+2.9
ELL	Elmali	3.02	117	*e*PN	Pn	15 28 01.5	-0.5
ELL	Elmali	3.02	117	Pn	Pn	15 28 01.5	-0.4
RDO	Rodhopi	3.08	345	*e*PN	Pn	15 28 03.3	+0.5
AKAS	Kas	3.10	128	*i* P	Pn	15 28 04.5	+1.4
AKAS				*i* S	Sn	15 28 47.0	+5.5
ISP	Isparta	3.13	95	*e*PN	Pn	15 28 03.0	-0.6
ISP	Isparta	3.13	95	*d i*P	Pn	15 28 02.9	-0.7
VLI	Veliai	3.23	244	*e*PN	Pn	15 28 04.6	-0.4
YLV	Yalova	3.24	41	*e*PN	Pn	15 28 04.5	-0.6
ELBA	Catalca	3.30	25	*i* P	Pg	15 28 15.4	-2.7
ELBA				*i* S	Sg	15 28 58.8	-3.4
BADT	Buyukada	3.33	36	*e*PN	Pn	15 28 06.3	-0.1
BADT	Buyukada	3.33	36	Pn	Pn	15 28 06.3	-0.1
AGG	Agios Georgios	3.42	286	*e*Pn	Pn	15 28 08.5	+0.7
AGG				*e*Sn	Sn	15 28 48.9	-0.8
AGG	Agios Georgios	3.42	286	*e*Pn	Pn	15 28 08.5	+0.7
AGG				*e*Sn	Sn	15 28 48.8	-0.8
ISK	Istanbul-Kandi	3.48	33	*e*PN	Pn	15 28 08.0	-0.5
HRT	Hereke	3.58	41	*e*PN	Pn	15 28 10.0	+0.1
ESKT	Eskisehir	3.61	67	*e*PN	Pn	15 28 10.4	0.0
ESKT	Eskisehir	3.61	67	*i* P	Pg	15 28 19.4	-4.8
ESKT				*i* S	Sg	15 29 10.2	-2.0
ESKT	Eskisehir	3.61	67	Pn	Pn	15 28 10.9	+0.5
EDRB	Edirne	3.68	2	*e*PN	Pn	15 28 11.0	-0.3
EDRB	Edirne	3.68	2	Pn	Pn	15 28 10.2	-1.2
LIT	Litokhoron	3.71	303	*e*Pn	Pn	15 28 12.7	+0.9
THE	Thessaloniki	3.72	313	*e*Pn	Pn	15 28 12.4	+0.5
THE	Thessaloniki	3.72	313	*e*Pn	Pn	15 28 12.4	+0.5
RZN	Rozhen	3.79	339	*e*P	Pn	15 28 13.0	0.0
NVR	Nevrokopi	3.80	328	*e*PN	Pn	15 28 13.5	+0.4
DIM	Dimitrovgrad	3.96	349	*e*P	Pn	15 28 15.0	-0.3
MMB	Musomiste	4.05	328	*e*P	Pn	15 28 16.0	-0.7
KNT	Kendrikon	4.12	318	*e*Pn	Pn	15 28 18.3	+0.7
KNT				*e*Sn	Sn	15 29 05.9	-1.2
PLD	Plovdiv	4.18	341	*e*P	Pn	15 28 19.0	+0.5
KIZT	Kizilcal	4.23	79	*e*PN	Pn	15 28 18.6	-0.6
KIZT	Kizilcal	4.23	79	Pn	Pn	15 28 18.7	-0.5
KIZT	Kizilcal	4.23	79	Pn	Pn	15 28 18.7	-0.5
GRG	Griva	4.25	312	*e*Pn	Pn	15 28 20.0	+0.4
GRG				*e*Sn	Sn	15 29 08.6	-2.0
HENT	Hendek	4.27	50	*i* P	Pb	15 28 34.0	+6.0
HENT				*i* S	Sb	15 29 23.1	+2.6
MDU	Mudurnu	4.27	56	*e*PN	Pn	15 28 19.5	-0.3
MDU	Mudurnu	4.27	56	Pn	Pn	15 28 20.1	+0.2
JMB	Yambol	4.29	0	*e*P	Pn	15 28 20.0	-0.1
MEV	Metsovon	4.46	293	*e*Pn	Pn	15 28 23.1	+0.6
MEV	Metsovon	4.46	293	*e*Pn	Pn	15 28 23.0	+0.5
KKB	Krupnik	4.56	325	*e*P	Pn	15 28 24.0	+0.1
PGB	Panagyurishte	4.74	338	*e*P	Pn	15 28 26.0	-0.5
IGT	Igoumenitsa	5.05	288	*e*Pn	Pn	15 28 30.9	0.0
PRD	Provadia	5.07	7	*e*P	Pn	15 28 29.0	-2.1
VTS	Vitosha	5.11	331	*e*P	Pn	15 28 30.0	-1.6
LOD	Lodumlu	5.12	68	*e*PN	Pn	15 28 32.1	+0.2
KAMT	Kaman	5.71	76	*e*PN	Pn	15 28 39.8	-0.4
KAMT	Kaman	5.71	76	Pn	Pn	15 28 39.9	-0.3
KAMT	Kaman	5.71	76	Pn	Pn	15 28 39.9	-0.3
BR131	Keskin Array S	5.73	72	*e*Pn	Pn	15 28 37.1	-3.3
	7.2nm,0.7s						
TIRR	Tirgusor	6.43	12	⇓P	Pn	15 28 49.1	-1.3
TIRR	Tirgusor	6.43	12	⇓P	Pn	15 28 49.1	-1.3
CFR	Carcaliu	7.10	9	⇑P	Pn	15 28 56.9	-2.9
CFR	Carcaliu	7.10	9	⇑P	Pn	15 28 56.9	-2.8
VRI	Vrincioaia	7.69	1	⇑P	Pn	15 29 12.8	+4.8
TIP	Timpagrande	7.74	281	*e*Pn	Pn	15 29 08.6	-0.1
BURAR	Bucovina Array	9.49	354	⇓P	P	15 29 32.4	-0.6
BURAR	Bucovina Array	9.49	354	⇓P	P	15 29 32.4	-0.6
KHC	Kasperske Hory	14.41	324	*e*P	P	15 30 47.5	+8.3
KHC	Kasperske Hory	14.41	324	*e*P	P	15 30 41.0	+1.8
KONO	Kongsberg	24.08	339	*e*P	P	15 32 31.3	+1.7
MKAR	Makanchi Array	41.23	59	*i* P	P	15 35 00.6	+0.6

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*IDC **05** 15:28:32.7±0.5, 34.62S×178.58W, mb4.9/9, mb1 5.1/11, mb1mx5.1/12, mbtmp5.0/11, ML5.0/2, MS4.7/10, Ms1 4.7/10, ms1mx4.5/16, Error ellipse: s-maj=17.7km s-min=15.3km az=158.0*

*BJI **05** 15:28:36.7, 35.27S×177.24W, h61^{km}, mB5.8, mb5.4, Ms5.0, Msz4.6*

*MOS **05** 15:28:36.9±1.4, 34.76S×178.11W, h33^{km}, mb5.7/5, Error ellipse: s-maj=28.7km s-min=16.2km az=94.1*

*HRVD **05** 15:28:38.2±0.2, 34.68S×178.04W, h12^{km}, MW5.3/66, Centroid moment Tensor Solution. LP body waves: s53,c97;Mantle waves: s66,c135; Half duration: 1ˢ1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.98±.03; M$_{\theta\theta}$-0.00±.02; M$_{\phi\phi}$0.97±.02; M$_{r\theta}$-0.11±.07; M$_{\theta\phi}$0.19±.03; M$_{\phi r}$0.47±.07; Best double couple: M$_0$1.108×10^{17} NP1: φ$_s$21°,δ34°,λ-73°. NP2:φ$_s$180°,δ58°,λ-101°. Principal axes: T 1.11, Plg12°, Azm279°; N -.004, Plg10°, Azm187°; P -1.106, Plg74°, Azm59°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 15:28:38.2±0.4, 35.12S×178.20W, mb5.3/21 Error ellipse: s-maj=11.8km s-min=5.4km az=125.0*

ISC 05 15:28:35.5±0.4**, 35.31S**±0.04×**177.89W**±0.06**, h43**^{km}**, h43**^{km}±2.4^{km}**:pP-P, n330, σ1ˢ56**/262**, mb5.1**/38**, MS4.7**/19**, 19C-15D, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.80	233	PN	P	15 29 34.6	+1.5
MXZ				SN	S	15 30 21.1	+4.1
MXZ				T		15 33 47.2	
MXZ	Matakaoa Point	3.80	233	P	P	15 29 34.6	+1.6
PUZ	Puketiti	4.14	227	PN	P	15 29 40.3	+2.4
PUZ				SN	S	15 30 32.3	+6.6
WIZ	White Island	4.54	239	PN	P	15 29 44.9	+1.4
MWZ	Matawai	4.75	229	PN	P	15 29 47.8	+1.2
MWZ				SN	S	15 30 45.7	+4.7
MWZ				SN	S	15 30 46.3	+5.2
MWZ	Matawai	4.75	229	*e*P	P	15 29 47.7	+1.2
URZ	Urewera	4.97	232	Pn	P	15 29 51.0	+1.4
	40nm,0.3s,baz=9.2,slow=1.6,SNR=136						
URZ				Sn	S	15 30 50.5	+3.9
	295nm,0.3s,baz=181,slow=22,SNR=16						
URZ	Urewera	4.97	232	PN	P	15 29 50.6	+1.0
URZ				SN	S	15 30 49.5	+2.9
URZ	Urewera	4.97	232	*e*P	P	15 29 50.3	+0.7
MARZ	Manawahe	5.12	237	PN	P	15 29 54.5	+2.8
MARZ	Manawahe	5.12	237	*e*P	P	15 29 54.0	+2.4
MYRZ	Mayor Island	5.13	246	PN	P	15 29 51.9	+0.1
EDRZ	Edgecumbe	5.14	236	PN	P	15 29 54.4	+2.5
EDRZ	Edgecumbe	5.14	236	*e*P	P	15 29 54.4	+2.5
TGRZ	Tauranga	5.29	241	PN	P	15 29 54.4	+0.4
TGRZ				SN	S	15 30 54.8	+0.2
TGRZ	Tauranga	5.29	241	*e*P	P	15 29 54.3	+0.3
LIRZ	Lichensteins R	5.33	238	PN	P	15 29 55.8	+1.3
LIRZ	Lichensteins R	5.33	238	*e*P	P	15 29 55.7	+1.2
TAZ	Tarawera	5.36	235	PN	P	15 29 57.3	+2.3
TAZ	Tarawera	5.36	235	*e*P	P	15 29 56.8	+1.9
KUZ	Kuaotunu	5.37	253	PN	P	15 29 54.0	-1.1
KUZ				SN	S	15 30 55.8	-0.7
KUZ	Kuaotunu	5.37	253	*e*P	P	15 29 54.0	-1.1
MKAZ	Moumakai	5.89	250	PN	P	15 30 02.1	-0.3
MKAZ	Moumakai	5.89	250	*e*P	P	15 30 02.1	-0.3
BKZ	Black Stump Fm	5.90	228	PN	P	15 30 02.9	+0.3
BKZ				SN	S	15 31 13.4	+3.4
BKZ	Black Stump Fm	5.90	228	*e*P	P	15 30 02.7	+0.1
MTAZ	Motutapu	6.01	254	PN	P	15 30 05.0	+0.8
MTAZ	Motutapu	6.01	254	*e*P	P	15 30 05.5	+1.4
OTAZ	Otara	6.04	252	PN	P	15 30 05.2	+0.7
OTAZ	Otara	6.04	252	*e*P	P	15 30 05.2	+0.7
RAO	Raoul Island	6.04	360	Pn	P	15 29 50.4	-14
	95nm,0.3s,baz=67,slow=23,SNR=5.1						
RAO				Sn	S	15 30 48.2	-25
	356nm,0.3s,baz=78,slow=22,SNR=6.5						
KAAZ	Kauri Point	6.18	254	PN	P	15 30 07.8	+1.3
RATZ	Rangitukua	6.18	233	PN	P	15 30 08.6	+2.0
RATZ	Rangitukua	6.18	233	P	P	15 30 08.6	+2.1
RITZ	Rihia Road	6.19	232	PN	P	15 30 09.4	+2.8
RITZ				SN	S	15 31 19.1	+2.1
RITZ	Rihia Road	6.19	232	*e*P	P	15 30 09.4	+2.8
PXZ	Pawanui	6.28	220	PN	P	15 30 06.8	-1.2
PXZ				SN	S	15 31 22.4	+3.1
KATZ	Kakaramea	6.29	233	PN	P	15 30 11.4	+3.3
KATZ	Kakaramea	6.29	233	*e*P	P	15 30 11.4	+3.3
WCZ	Waipu Caves	6.35	262	PN	P	15 30 07.0	-1.9
WCZ	Waipu Caves	6.35	262	P	P	15 30 07.0	-2.0
KRVZ	Karewarewa	6.39	232	PN	P	15 30 10.6	+1.1
KRVZ				SN	S	15 31 23.0	+0.9
OTVZ	Oturere	6.42	231	PN	P	15 30 11.1	+1.3
NGZ	Ngauruhoe	6.46	231	PN	P	15 30 11.7	+1.2
NGZ				SN	S	15 31 25.6	+1.8
NGZ	Ngauruhoe	6.46	231	*e*P	P	15 30 11.7	+1.2
TUVZ	Tukino	6.48	231	PN	P	15 30 11.6	+0.8
TUVZ	Tukino	6.48	231	*e*P	P	15 30 11.6	+0.8
MOVZ	Moawhango	6.50	229	PN	P	15 30 12.1	+1.0
MOVZ				SN	S	15 31 23.9	-0.9
MOVZ	Moawhango	6.50	229	*e*P	P	15 30 12.1	+1.0
MOVZ				S	S	15 31 23.9	-0.9
CNZ	Chateau	6.51	232	PN	P	15 30 12.1	+0.9
CNZ	Chateau	6.51	232	*e*P	P	15 30 11.9	+0.7
WPVZ	Whakapapa	6.52	231	PN	P	15 30 12.8	+1.5
FWVZ	Far West T-bar	6.54	231	PN	P	15 30 13.4	+1.8
FWVZ				SN	S	15 31 26.1	+0.3
FWVZ	Far West T-bar	6.54	231	*e*P	P	15 30 13.4	+1.8
FWVZ				S	S	15 31 26.1	+0.3
WNVZ	Wahianoa	6.55	230	PN	P	15 30 11.9	+0.2
WNVZ	Wahianoa	6.55	230	*e*P	P	15 30 11.8	0.0
TRVZ	Turoa	6.57	231	PN	P	15 30 12.4	+0.5
TRVZ				SN	S	15 31 28.0	+1.6
HIZ	Hauiti	6.63	239	PN	P	15 30 13.5	+0.7
HIZ	Hauiti	6.63	239	*e*P	P	15 30 13.2	+0.4
MTVZ	Mangateitei	6.67	230	PN	P	15 30 13.2	-0.1
MTVZ				SN	S	15 31 29.9	+1.0
PKVZ	Pokaka	6.69	232	PN	P	15 30 15.6	+1.9
TSZ	Takapari Road	6.80	224	PN	P	15 30 14.2	-1.0
TSZ				SN	S	15 31 34.0	+1.9
TSZ	Takapari Road	6.80	224	*e*P	P	15 30 13.8	-1.4
OUZ	Omahuta	6.96	268	PN	P	15 30 14.1	-3.4
OUZ	Omahuta	6.96	268	*e*P	P	15 30 14.1	-3.4
VRZ	Vera Road	6.99	235	PN	P	15 30 18.9	+1.1
VRZ	Vera Road	6.99	235	*e*P	P	15 30 18.9	+1.0
BFZ	Birch Farm	7.08	219	PN	P	15 30 18.1	-1.0
BFZ				SN	S	15 31 40.5	+1.4
BFZ	Birch Farm	7.08	219	*e*P	P	15 30 17.8	-1.3
WAZ	Wanganui	7.19	230	PN	P	15 30 19.5	-1.2
WAZ				SN	S	15 31 43.8	+1.9
MRZ	Mangatainoka R	7.42	222	PN	P	15 30 22.6	-1.3
MRZ				SN	S	15 31 46.7	-0.9
MRZ	Mangatainoka R	7.42	222	*e*P	P	15 30 22.6	-1.2
MRZ				S	S	15 31 46.7	-0.9
NEZ	North Egmont	7.51	236	PN	P	15 30 27.9	+2.8
NEZ	North Egmont	7.51	236	*e*P	P	15 30 27.9	+2.8
MTW	Mount Morrison	7.81	220	PN	P	15 30 27.9	-1.3
MTW				SN	S	15 31 57.7	+0.3
MTW	Mount Morrison	7.81	220	*e*P	P	15 30 27.0	-2.3
MTW				S	S	15 31 57.7	+0.3
TRWZ	Traveller	7.89	218	PN	P	15 30 29.2	-1.2
KIW	Kapiti Island	7.93	224	PN	P	15 30 30.5	-0.4
KIW				SN	S	15 32 00.4	+0.2
KIW	Kapiti Island	7.93	224	*e*P	P	15 30 30.5	-0.4
KIW				S	S	15 32 00.4	+0.2
CAW	Cannon Point	8.01	222	PN	P	15 30 30.0	-2.0
CAW				SN	S	15 32 00.9	-1.3
CAW	Cannon Point	8.01	222	*e*P	P	15 30 30.0	-2.0
CAW				S	S	15 32 00.9	-1.3
PAWZ	Paruwai Farm	8.01	219	PN	P	15 30 30.3	-1.8
PAWZ				SN	S	15 32 01.7	-0.7
PAWZ	Paruwai Farm	8.01	219	*e*P	P	15 30 30.3	-1.8
PAWZ				S	S	15 32 01.7	-0.7
MSWZ	Moikau Station	8.13	219	PN	P	15 30 31.8	-1.9
MSWZ	Moikau Station	8.13	219	*e*P	P	15 30 31.8	-1.9
MRW	Makara Radio	8.29	222	PN	P	15 30 36.5	+0.5
MRW	Makara Radio	8.29	222	*e*P	P	15 30 36.5	+0.6
WEL	Wellington	8.29	222	PN	P	15 30 37.4	+1.5
WEL				SN	S	15 32 08.6	-0.8
WEL	Wellington	8.29	222	*e*P	P	15 30 37.4	+1.4
WEL				S	S	15 32 08.6	-0.8
BHW	Baring Head	8.32	221	PN	P	15 30 36.8	+0.5
BHW	Baring Head	8.32	221	*e*P	P	15 30 36.8	+0.4
SNZO	South Karori	8.35	222	PN	P	15 30 34.4	-2.2
SNZO				SN	S	15 32 08.8	-1.9
SNZO	South Karori	8.35	222	*e*Pn	P	15 30 36.6	0.0
DUWZ	D'Urville Isla	8.47	227	PN	P	15 30 37.0	-1.4
TCW	Tory Channel	8.52	224	PN	P	15 30 37.7	-1.3
TCW				SN	S	15 32 12.8	-2.2
TCW	Tory Channel	8.52	224	*e*P	P	15 30 37.7	-1.4
TCW				S	S	15 32 12.8	-2.1
TUWZ	Tuamarina	8.85	224	PN	P	15 30 42.4	-1.3
NNZ	Nelson	9.04	227	PN	P	15 30 45.2	-1.1
NNZ				SN	S	15 32 25.1	-2.8
NNZ	Nelson	9.04	227	*e*P	P	15 30 45.2	-1.1
NNZ				S	S	15 32 25.1	-2.9
BSWZ	Blackbirch Sta	9.08	223	PN	P	15 30 46.0	-0.7
BSWZ	Blackbirch Sta	9.08	223	*e*P	P	15 30 46.0	-0.8
QRZ	Quartz Range	9.34	231	PN	P	15 30 48.1	-2.4
QRZ	Quartz Range	9.34	231	*e*P	P	15 30 48.1	-2.3
KHZ	Kahutara	9.74	221	PN	P	15 30 54.9	-1.0
KHZ	Kahutara	9.74	221	*e*P	P	15 30 54.9	-1.0
DSZ	Denniston Nort	10.31	228	PN	P	15 31 00.7	-3.0
DSZ	Denniston Nort	10.31	228	*e*P	P	15 31 00.7	-3.0
LTZ	Lake Taylor	10.68	223	PN	P	15 31 06.1	-2.7
LTZ	Lake Taylor	10.68	223	*e*P	P	15 31 06.1	-2.6
CRLZ	Canterbury Las	11.03	219	PN	P	15 31 12.9	-0.6
CRLZ	Canterbury Las	11.03	219	*e*P	P	15 31 12.9	-0.6
MQZ	McQueen's Vall	11.11	218	PN	P	15 31 13.3	-1.3
MQZ				SN	S	15 33 12.1	-6.4
MQZ	McQueen's Vall	11.11	218	*e*P	P	15 31 13.3	-1.3
WVZ	Waitaha Valley	11.73	225	PN	P	15 31 20.6	-2.5
WVZ	Waitaha Valley	11.73	225	*e*P	P	15 31 20.6	-2.4
RPZ	Rata Peaks	11.96	222	Pn	P	15 31 25.6	-0.4
	14nm,0.3s,baz=34,slow=3.7,SNR=29						
RPZ				Sn	S	15 33 29.7	-9.4
	23nm,0.3s,baz=343,slow=5.8,SNR=14						
RPZ	Rata Peaks	11.96	222	PN	P	15 31 24.6	-1.4
RPZ				SN	S	15 33 32.1	-6.9
RPZ	Rata Peaks	11.96	222	*e*P	P	15 31 24.6	-1.4
FOZ	Fox Glacier	12.64	226	PN	P	15 31 32.6	-2.5
FOZ				SN	S	15 33 43.9	-11
FOZ	Fox Glacier	12.64	226	*e*P	P	15 31 32.6	-2.5
LBZ	Lake Benmore	12.87	222	PN	P	15 31 36.9	-1.3
LBZ				SN	S	15 33 53.2	-7.8
LBZ	Lake Benmore	12.87	222	*e*P	P	15 31 36.9	-1.3
ODZ	Otahua Downs	13.07	219	PN	P	15 31 38.9	-2.0
ODZ	Otahua Downs	13.07	219	*e*P	P	15 31 38.9	-2.0
JCZ	Jackson Bay	13.48	226	PN	P	15 31 44.2	-2.1
JCZ				SN	S	15 34 05.6	-10
JCZ	Jackson Bay	13.48	226	*e*P	P	15 31 44.2	-2.1
WKZ	Wanaka	13.80	223	PN	P	15 31 49.2	-1.1
WKZ	Wanaka	13.80	223	*e*P	P	15 31 49.2	-1.1
EAZ	Earnscleugh	13.90	221	PN	P	15 31 50.1	-1.6
EAZ				SN	S	15 34 18.4	-7.0
EAZ	Earnscleugh	13.90	221	*e*P	P	15 31 50.1	-1.5
TUZ	Tuapeka	14.22	218	PN	P	15 31 55.9	+0.1
TUZ	Tuapeka	14.22	218	*e*P	P	15 31 55.9	+0.1
MLZ	Mavora Lakes	14.59	222	PN	P	15 32 01.4	+0.7
MLZ	Mavora Lakes	14.59	222	*e*P	P	15 32 01.4	+0.7
DZM	Mont Dzumac	19.02	310	*e*P	P	15 32 50.9	-5.5
DZM	Mont Dzumac	19.02	310	P	P	15 32 51.1	-5.3
	1.2nm,0.3s,baz=103,slow=15,SNR=13						
NOUC	Port Laguerre	19.08	309	*e*P	P	15 32 52.7	-4.5
NOUC				*e*S	S	15 36 39.4	+15
NOUC	Port Laguerre	19.08	309	*e*P	P	15 32 52.7	-4.5
NOUC				*e*S	S	15 36 39.4	+15
RAR	Rarotonga	21.21	53	P	P	15 33 17.2	-2.4
	20nm,0.5s,mb4.7,baz=202,slow=2.6,SNR=4.3						
RAR				S	S	15 36 52.1	-16
	9.6nm,0.4s,baz=88,slow=20,SNR=3.5						
RAR				LR	LR	15 39 11.4	
	comp=Z,2µm,19.2s,MS4.5,baz=234,slow=30						
RAR	Rarotonga	21.21	53	P	P	15 33 17.2	-2.4
RAR				LR	LR	15 39 11.4	
AFI	Afiamalu	22.01	16	P	P	15 33 24.2	-3.5
	101nm,0.9s,mb5.3,baz=98,slow=20,SNR=16						
AFI				S	S	15 37 08.1	-15
	24nm,0.7s,baz=74,slow=23,SNR=4.4						
AFI	Afiamalu	22.01	16	*e*P	P	15 33 26.4	-1.3
	113nm,0.8s,mb5.3						
CNB	Canberra Magne	26.66	260	*e*P	P	15 34 13.6	+1.5
	27nm,1.0s,mb4.7						
TBI	Tubuai	27.41	72	*e*LQ		15 39 31.4	
TBI				*e*LR	LR	15 40 38.0	
	4µm,27.8s,baz=236						
TOO	Toolangi	29.43	255	*e*P	P	15 34 38.2	+1.2
	20nm,1.3s,mb4.7						
PPT	Papeete	30.75	62	*e*LQ		15 40 59.1	
PPT				*e*LR	LR	15 42 13.5	
	4µm,26.2s,baz=232						
PPT	Papeete	30.75	62	LR	LR	15 43 42.3	
	comp=Z,2µm,19.1s,MS4.7,baz=245,slow=29						
STKA	Stephens Creek	33.76	264	P	P	15 35 13.4	-1.6
	9.3nm,0.6s,mb4.9,baz=107,slow=9.1,SNR=16						
STKA				PcP	PcP	15 37 54.9	+1.0
	7.9nm,0.9s,baz=41,slow=2.9,SNR=3.6						
STKA	Stephens Creek	33.76	264	*e*P	P	15 35 13.5	-1.6
STKA				*e*	pP	15 35 27.4	+0.5
CTA	Charters Tower	34.96	286	*e*P	P	15 35 23.0	-2.5
	50nm,1.1s,mb5.4						
CTA				*e*sP	sP	15 35 35.8	-7.1
CTA				*e*S	S	15 40 52.1	-1.3
CTAO	Charters Tower	34.96	286	*e*P	P	15 35 23.0	-2.6
	82nm,1.0s,mb5.6						
CTAO				*e*	pP	15 35 35.7	-1.6
ADE	Adelaide	35.28	258	*e*P	P	15 35 28.8	+0.7
RKT	Rikitea	39.10	84	*e*LQ		15 44 32.5	
RKT				*e*LR	LR	15 46 00.8	
	3µm,27.0s,baz=244						
PMG	Port Moresby	40.98	300	*e*P	P	15 36 13.0	-2.9
	28nm,1.0s,mb4.8						
PMG				*e*	pP	15 36 24.7	-3.2
PMG	Port Moresby	40.98	300	*e*P	P	15 36 14.9	-1.0
SBA	Scott Base	43.16	185	*e*P	P	15 36 42.9	+10
	15nm,1.0s,mb4.7						
SBA				*e*	pP	15 36 57.3	+12
ASPA	Alice Springs	43.16	272	⇑*i*P	P	15 36 31.9	-1.8
ASPA				*e*S	S	15 42 50.7	-6.0
VNDA	Vanda	43.23	186	*e*P	P	15 36 42.1	+8.5
	16nm,1.6s,mb4.5						
TAOE	Nuku Hiva Isla	43.36	62	*e*LR	LR	15 48 02.6	
	5µm,24.4s,baz=243						
WB2	Warramunga Arr	44.57	277	⇑*i*P	P	15 36 42.4	-2.7
WB2				*e*sP	sP	15 36 55.1	-7.3
WB2				*e*S	S	15 43 10.3	-7.0
WRAB	Tennant Creek	44.58	277	*e*P	P	15 36 42.4	-2.8
	178nm,1.1s,mb5.8						
WRAB				*e*	pP	15 36 55.2	-2.0
WRAB	Tennant Creek	44.58	277	*c* *i*P	P	15 36 42.3	-2.9
WRA	Warramunga Arr	44.58	277	P	P	15 36 42.5	-2.7
	50nm,0.7s,mb5.5,baz=117,slow=7.7,SNR=416						
WRA				S	S	15 43 10.6	-6.8
	1.6nm,0.9s,baz=119,slow=14,SNR=5.0						
FORT	Forrest	45.07	260	*e*P	P	15 36 48.3	-0.7
	27nm,0.4s,mb5.4						
KAKA	Kakadu	50.03	284	*e*P	P	15 37 42.6	+15
	7.8nm,0.3s,mb5.2						
CASY	Casey	50.89	210	*e*P	P	15 37 39.3	+5.5
FITZ	Fitzroy Crossi	52.60	274	*e*P	P	15 37 45.0	-2.3
	55nm,1.0s,mb5.4						
FITZ				*e*sP	sP	15 37 57.7	-6.9
KLBR	Kellerberrin	52.98	254	*e*P	P	15 37 48.9	-1.1
	51nm,1.0s,mb5.4						
MUN	Mundaring	54.05	253	*e*P	P	15 37 58.8	+0.9
QSPA	South Pole Qui	54.81	180	*e*P	P	15 38 10.8	+8.0
	43nm,0.9s,mb5.5						
MIR	Mirnyy	57.82	208	*c* *i*P	P	15 38 30.2	+5.7
MIR				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
MAW	Mawson	67.76	201	*e*P	P	15 39 35.9	+5.8
	comp=Z,5.2nm,0.4s,mb4.9						
MAW	Mawson	67.76	201	P	P	15 39 35.8	+5.7
	comp=Z,14nm,1.1s,mb4.9,baz=128,slow=9.1,SNR=14						
MAW				LR	LR	16 09 37.4	
	comp=Z,382nm,20.5s,MS4.6,baz=116,slow=36						
USHA	Ushuaia	71.84	145	LR	LR	16 06 57.8	
	comp=Z,618nm,18.9s,MS4.9,baz=178,slow=32						
SYO	Syowa Base	72.36	193	⇓X	P	15 40 03.0	+4.9
SYO	Syowa Base	72.36	193	⇑X		15 40 18.0	
SYO	Syowa Base	72.36	193	⇓pP	pP	15 40 22.6	+12
SYO	Syowa Base	72.36	193	⇓*e*P	P	15 40 03.0	+4.9
SYO				*e*	pP	15 40 18.0	+7.2
SYO				⇓*e*pP	pP	15 40 22.6	+12
CBIJ	Chichi jima	72.64	323	LR	LR	16 05 21.0	
	comp=Z,219nm,21.9s,MS4.4,baz=175,slow=31						
SNAA	Sanae	73.26	178	⇓*i*P	P	15 40 09.4	+6.2
SNAA	Sanae	73.26	178		P	15 40 10.1	+6.9
SNAA	Sanae	73.26	178	⇑*e*P	P	15 40 06.5	+3.3
VNA3	Neumayer Olymp	73.41	176	⇓*i*P	P	15 40 11.6	+7.5
VNA3	Neumayer Olymp	73.41	176	⇑*i*	P	15 40 12.2	+8.1
VNA3	Neumayer Olymp	73.41	176	⇑*i*	P	15 40 16.7	+13
VNA2	Neumayer--Watz	73.84	177	⇓*i*P	P	15 40 14.7	+8.0
VNA2	Neumayer--Watz	73.84	177	⇑*i*	P	15 40 16.0	+9.3
MAIT	Maitri	73.98	183	*e*P	P	15 40 13.4	+5.9
NVL	N'lazarevskaya	73.99	183	*e*P	P	15 40 13.4	+5.9
NVL				*e**PP	pP	15 40 29.9	+10
NVL				*e*		15 50 24.8	
NVL				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
NVL				MLR	MLR		
	comp=Z,100nm,18.4s,MS4.1						
VNA1	Neumayer--Stat	74.07	176	⇓*i*P	P	15 40 16.2	+8.2
VNA1	Neumayer--Stat	74.07	176	⇑*i*	P	15 40 16.8	+8.8
KSM	Kuching	76.07	282	*e*P	P	15 40 19.4	-1.3
PLCA	Paso Flores	79.12	132	P	P	15 40 42.5	+5.6
	comp=Z,12nm,1.1s,mb4.7,baz=214,slow=6.0,SNR=14						
PLCA				LR	LR	16 11 24.9	
	comp=Z,364nm,18.1s,MS4.8,baz=101,slow=32						
MJAR	Matsushiro Arr	82.33	326	P	P	15 40 50.6	-3.4
	comp=Z,13nm,0.9s,mb4.8,baz=160,slow=5.2,SNR=28						
MAJO	Matsushiro	82.33	326	*e*P	P	15 40 52.8	-1.2
	comp=Z,19nm,1.0s,mb5.0						
MAT	Matsushiro	82.33	326	P	P	15 40 52.3	-1.7
MAT				S	S	15 50 56.6	-8.5
MAT	Matsushiro	82.33	326	*e*P	P	15 40 52.0	-2.0
	comp=Z,20nm,1.0s,mb5.0						
SSE	Sheshan	87.41	311	*e*P	P	15 41 19.3	-0.1
SSE				S	S	15 51 56.6	+1.6
SSE				SS	SS	15 57 45.8	+2.1
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.8						
SSE				LR	LR		
	comp=N,180nm,15.3s,MS4.6						
SSE				LR	LR		
	comp=E,60nm,15.3s,MS4.6						
SSE				LR	LR		
	comp=Z,230nm,19.6s,MS4.6						
YSS	Yuzh-Sakhalins	89.20	334	*e*P	P	15 41 28.5	+1.0
	comp=Z,51nm,0.9s,mb5.8						
YSS				*e*	pP	15 41 39.7	-1.0
YSS	Yuzh-Sakhalins	89.20	334	*e*P	P	15 41 27.5	0.0
YSS				*e*	pP	15 41 39.8	-0.9
YSS				*e*		15 51 48.0	
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb6.0						
YSS				MLR	MLR		
	comp=E,300nm,17.0s,MS5.1						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s,MS5.0						
YSS				MLR	MLR		
	comp=N,500nm,18.0s,MS5.1						
NJ2	Nanjing	89.50	311	*e*P	P	15 41 31.0	+1.6
NJ2				AP	pP	15 41 43.4	+0.9
NJ2				PP	PP	15 45 04.1	+0.7
NJ2				S	S	15 52 14.0	-0.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,60nm,4.9s						
NJ2				LR	LR		
	comp=N,970nm,22.0s,MS5.4						
NJ2				LR	LR		
	comp=E,1µm,22.6s,MS5.4						
NJ2				LR	LR		
	comp=Z,280nm,26.0s,MS4.6						
PET	Petropavlovsk	90.31	346	*e*P	P	15 41 32.9	+0.3
	comp=Z,30nm,0.9s,mb5.6						
PET				*e*	pP	15 41 44.8	-1.0
PET	Petropavlovsk	90.31	346	*e*P	P	15 41 33.9	+1.3
PET				*e**PP	pP	15 41 44.5	-1.3
PET				*e**SP	sP	15 41 51.4	+1.2
PET				*e*S	S	15 52 23.7	+2.4
PET				*e*PS	PS	15 53 34.4	-2.5
PET				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.8						
PET				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.3						
PET				pmax	pmax		
	comp=Z,25nm,1.6s,mb5.3						
PET				smax			
	comp=E,600nm,11.8s						
CMB	Columbia Colle	90.35	42	*e*P	P	15 41 35.1	+1.9
	comp=E,8.0nm,1.0s,mb5.0						
CMB				*e*	pP	15 41 47.5	+1.1
VLA	Vladivostok	90.50	326	*e*P	P	15 41 35.7	+1.9
VLA				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.5						
LVC	Limon Verde	91.48	119	*e*P	P	15 41 45.5	+6.7
	comp=Z,8.1nm,0.9s,mb5.0						
LVC				*e*	pP	15 41 57.9	+5.9
NVAR	Mina Array Bea	91.78	43	P	P	15 41 42.1	+2.3
	comp=Z,3.0nm,0.9s,mb4.6,baz=201,slow=6.5,SNR=18						
NVAR				LR	LR	16 15 04.0	
	comp=Z,311nm,18.3s,MS4.8,baz=270,slow=30						
NEN	Nelson	91.83	47	*e*P	P	15 41 43.1	+3.0
NEN				*e*	pP	15 41 55.7	+2.4
MDJ	Mudanjiang	92.71	325	P	P	15 41 46.1	+2.1
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,40nm,4.1s						
MDJ				LR	LR		
	comp=N,120nm,27.1s						
MDJ				LR	LR		
	comp=E,60nm,19.1s						
MDJ				LR	LR		
	comp=Z,60nm,20.1s						
MDJ	Mudanjiang	92.71	325	*e*P	P	15 41 46.0	+2.0
	comp=Z,32nm,1.1s,mb5.7						
MDJ				*e*	pP	15 41 56.5	-0.6
CN2	Changchun	94.10	323	*e*P	P	15 41 49.8	-0.4
CN2				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.7						
CN2				AMB	AMB		
	comp=Z,180nm,4.0s						
CN2				LR	LR		
	comp=N,380nm,20.0s						
CN2				LR	LR		
	comp=Z,290nm,18.0s,MS4.8						
ENH	Enshi	94.43	304	*e*P	P	15 41 54.4	+2.3
	comp=Z,9.0nm,0.7s,mb5.3						
ENH				*e*		15 42 04.5	
TXAR	Lajitas Array	94.95	58	P	P	15 41 56.9	+2.3
	comp=Z,1.1nm,0.4s,mb4.6,baz=202,slow=6.7,SNR=13						
TXAR				PKKPbc		15 58 54.1	
	comp=Z,1.0nm,0.3s,baz=72,slow=4.0,SNR=5.5						
TXAR				LR	LR	16 20 00.6	
	comp=Z,739nm,18.2s,MS5.2,baz=205,slow=32						
LPAZ	La Paz	96.04	115	P	P	15 42 05.0	+5.4
	comp=Z,2.0nm,0.7s,mb4.7,baz=173,slow=6.7,SNR=12						
LPAZ				LR	LR	16 19 37.0	
	comp=Z,226nm,19.5s,MS4.7,baz=44,slow=32						
ANMO	Albuquerque	96.56	52	⇑*e*P	P	15 42 04.3	+2.6
PDAR	Pinedale Array	99.61	44	P	P	15 42 12.9	-2.4
	comp=Z,0.2nm,0.3s,mb4.0,baz=18,slow=4.7,SNR=3.3						
PDAR				LR	LR	16 17 31.4	
	comp=Z,353nm,20.4s,MS4.9,baz=235,slow=30						
HHC	Hu-ho-hao-te	99.69	313	*e*P	P	15 42 16.8	+1.1
HHC				PP	PP	15 46 24.3	+1.6
HHC				SKS	SKS	15 52 46.7	-2.7
HHC				S	S	15 53 43.1	+1.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb5.1						
HHC				AMB	AMB		
	comp=Z,160nm,6.0s						
HHC				LR	LR		
	comp=N,140nm,15.6s,MS4.7						
HHC				LR	LR		
	comp=E,120nm,15.6s,MS4.7						
HHC				LR	LR		
	comp=Z,210nm,19.2s,MS4.7						
SONM	Songino Array	106.81	317	Pdiff	Pdif	15 42 48.0	+0.8
	comp=Z,0.5nm,1.0s,baz=124,slow=5.2,SNR=3.3						
TIXI	Tiksi	113.00	344	⇑*e*PKP	PKPdf	15 47 08.9	+1.9
TIXI	Tiksi	113.00	344	*i* PKIKP	PKPdf	15 47 07.4	+0.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WMQ	Urumqi	116.27	306	*e*PKP	PKPdf	15 47 14.0	0.0
WMQ				PP	PP	15 48 25.5	+0.5
WMQ				PP	PP		
	comp=Z,250nm,5.0s						
WMQ				LR	LR		
	comp=N,90nm,28.6s,MS4.3						
WMQ				LR	LR		
	comp=E,70nm,25.6s,MS4.3						
WMQ				LR	LR		
	comp=Z,100nm,27.1s,MS4.3						
MKAR	Makanchi Array	120.93	308	PKP	PKPdf	15 47 23.5	+0.5
	comp=Z,5.0nm,1.0s,baz=66,slow=1.6,SNR=19						
MKAR				PKKPbc		15 57 32.9	
	comp=Z,0.6nm,0.6s,baz=283,slow=3.2,SNR=8.0						
MKAR	Makanchi Array	120.93	308	⇑*i*PKIKP	PKPdf	15 47 24.8	+1.8
ZAL	Zalesovo	121.71	316	PKP	PKPdf	15 47 25.2	+0.9
	comp=Z,1.3nm,0.4s,baz=336,slow=2.3,SNR=7.0						
ZAL	Zalesovo	121.71	316	PKP	PKPdf	15 47 25.2	+0.9
AAK	Ala-Archa	124.82	301	*e*PKPdf	PKPdf	15 47 32.8	+2.2
CHKZ	Chkalovo	129.85	314	*e*PKPdf	PKPdf	15 47 40.2	+0.3
BVAR	Borovoye Array	129.90	313	PKP	PKPdf	15 47 41.9	+1.8
	comp=Z,5.1nm,1.0s,baz=113,slow=2.0,SNR=16						
BRVK	Borovoye	129.97	313	*e*PKPdf	PKPdf	15 47 42.1	+2.0
ARU	Arti	136.85	317	*i* PKIKP	PKPdf	15 47 58.6	+5.7
ARU				*e*		15 50 41.7	
AKTO	Aktyubinsk	137.35	309	PKP	PKPdf	15 47 56.5	+2.5
	comp=Z,5.6nm,1.1s,baz=68,slow=3.2,SNR=6.7						
ORR	Orenburg	139.40	310	⇑*i*PKIKP	PKPdf	15 48 03.5	+5.8
ORR				pmax	pmax		
	comp=Z,20nm,1.3s						
ARCES	ARCESS Array B	143.39	346	PKhKP		15 48 03.0	
	comp=Z,5.3nm,0.8s,baz=48,slow=3.2,SNR=14						

ARCES	**ARCESS Array B**	**143.39**	**346**	PKP	PKPdf	15 48 03.0	-1.1
KLMR	**Klimovskoe**	**145.06**	**329**	*e*PKIKP	PKPdf	15 48 06.9	-0.3
KLMR				pmax	pmax		
	comp=Z,60nm,1.3s						
GNI	**Garni**	**146.18**	**291**	PKPbc	PKPbc	15 48 13.5	+2.6
	comp=Z,8.2nm,0.7s,baz=82,slow=16,SNR=5.7						
GNI	**Garni**	**146.18**	**291**	*e*PKPdf	PKPdf	15 48 13.6	+3.8
TI2	**Plekhanov**	**146.29**	**294**	⇑*i*PKP2	PKPab	15 48 14.0	-0.1
TI2				pmax	pmax		
	comp=Z,60nm,0.6s						
TBLG	**Delisi**	**146.30**	**294**	P	PKPdf	15 48 16.5	+6.6
LOF	**Lofoten**	**146.50**	**352**	*e*P	PKPdf	15 48 14.9	+5.5
LOF				AMb	AMB	15 48 19.0	
	comp=Z,215nm,1.3s						
HAKT	**HAKKARI**	**146.65**	**286**	*i* P	PKPdf	15 48 15.7	+5.0
MSL	**Mosul**	**146.92**	**284**	*e*x	x	15 48 22.5	
ZEI	**Tsey**	**146.97**	**296**	*i* PKIKP	PKPdf	15 48 12.6	+1.5
JOF	**Joensuu**	**146.97**	**336**	*e*p	PKPdf	15 48 14.1	+3.7
TVAN	**Van**	**147.02**	**288**	*i* P	PKPdf	15 48 19.1	+7.8
GOF	**Gofitskoye**	**147.56**	**300**	⇑*i*PKP2	PKPab	15 48 19.0	+0.1
GOF				pmax	pmax		
	comp=Z,59nm,1.3s						
VRHR	**Novokhopersk**	**147.62**	**311**	*e*PKP2	PKPab	15 48 16.9	-2.0
VRHR				pmax	pmax		
	comp=Z,90nm,0.8s						
VRHR				pmax	pmax		
	comp=N,30nm,1.1s						
VRHR				pmax	pmax		
	comp=E,50nm,0.8s						
MELSS	**Ber_school_2**	**147.69**	**351**	*e*P	PKPdf	15 48 16.3	+4.8
KIV	**Kislovodsk**	**147.85**	**298**	⇓*i*PKP	PKPdf	15 48 16.4	+4.0
KIV				*e*PKPab	PKPab	15 48 22.2	+2.1
KIV	**Kislovodsk**	**147.85**	**298**	⇓*i*PKIKP	PKPdf	15 48 16.3	+3.9
KIV				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.9						
MOR8	**Moi Rana**	**148.26**	**351**	*e*P	PKPdf	15 48 16.5	+4.2
MOR8				AMb	AMB	15 48 23.4	
	comp=Z,66nm,1.6s						
MOS	**Moscow**	**148.33**	**321**	*e*PKP2	PKPab	15 48 17.6	-4.0
MOS				*e*		15 51 50.2	
MOS				pmax	pmax		
	comp=Z,125nm,1.0s						
MOS				pmax	pmax		
	comp=Z,300nm,1.6s						
BEST	**Besiri**	**148.61**	**286**	*i* P	PKPdf	15 48 20.9	+7.1
MARD	**Mardin**	**148.92**	**285**	*i* P	PKPdf	15 48 18.3	+3.9
OBN	**Obninsk**	**149.14**	**321**	*e*PKPdf	PKPdf	15 48 20.1	+5.9
OBN				*e*PKPbc	PKPdf	15 48 23.8	+10
OBN				*e*PKPab	PKPab	15 48 26.6	+1.7
OBN	**Obninsk**	**149.14**	**321**	⇓*i*PKP2	PKPab	15 48 20.0	-4.9
OBN				pmax	pmax		
	comp=Z,22nm,0.9s						
OBN				pmax	pmax		
	comp=Z,72nm,1.3s						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.9						
KAF	**Kangasniemi**	**149.16**	**338**	*e*p	PKPdf	15 48 19.2	+5.2
	baz=37,slow=2.3						
FINES	**FINESS Array B**	**149.74**	**337**	PKPbc	PKPdf	15 48 21.4	+6.5
	comp=Z,45nm,0.8s,baz=43,slow=3.2,SNR=121						
FINES	**FINESS Array B**	**149.74**	**337**	⇑*i*PKP2	PKPab	15 48 21.3	-5.9
SOC	**Sochi**	**150.01**	**297**	*d i*PKP2	PKPab	15 48 24.1	-4.8
SOC				*e*		15 51 57.8	
SOC				*e*PPP	PPP	15 55 27.6	+4.5
SOC				pmax	pmax		
	comp=Z,32nm,1.1s						
NSS	**Namsos**	**150.15**	**351**	*e*P	PKPdf	15 48 21.2	+5.8
LIC	**Lamto**	**150.31**	**166**	*e*PKIKP	PKPdf	15 48 21.8	+4.5
	comp=Z,78nm,0.8s						
LIC				*e*R			
	comp=Z,449nm,19.8s						
ELZG	**Elazig**	**150.47**	**287**	*i* P	PKPdf	15 48 25.5	+8.7
DBIC	**Dimbokro**	**150.78**	**166**	PKP	PKPdf	15 48 23.7	+5.7
	comp=Z,6.0nm,0.9s,baz=150,slow=4.7,SNR=4.7						
DBIC				PKPbc	PKPdf	15 48 29.0	+11
	comp=Z,27nm,0.8s,baz=179,slow=2.9,SNR=13						
DBIC				PKPab	PKPab	15 48 37.6	+4.6
	comp=Z,11nm,0.7s,baz=172,slow=4.2,SNR=6.6						
GZT	**Gaziantep**	**151.46**	**285**	*i* P	PKPdf	15 48 26.9	+8.6
COBT	**Iskenderun**	**152.40**	**283**	*i* P	PKPdf	15 48 29.3	+10
MOL	**Molde**	**152.51**	**355**	*e*P	PKPdf	15 48 31.9	+13
DOMB	**Dombas**	**152.89**	**353**	*e*P	PKPdf	15 48 29.4	+10
NB2	**NORSAR Subarra**	**153.60**	**350**	PKPabc	PKPdf	15 48 30.6	+10
	comp=Z,19nm,0.9s,baz=25,slow=2.9						
NOA	**NORSAR Array B**	**153.60**	**350**	PKPbc	PKPdf	15 48 30.1	+10
	comp=Z,7.0nm,0.5s,baz=13,slow=4.1,SNR=34						
NOA				PKPab	PKPab	15 48 42.6	-0.8
	comp=Z,4.3nm,0.6s,baz=13,slow=4.2,SNR=11						
FOO	**Floro**	**153.63**	**357**	*e*P	PKPdf	15 48 31.3	+11
NAO01	**NORSAR Array S**	**153.84**	**350**	*e*PKPbc	PKPdf	15 48 32.2	+11
NAO01				*e*PKPab	PKPab	15 48 43.7	-0.7
HFS	**Hagfors**	**154.05**	**347**	PKPbc	PKPdf	15 48 31.1	+10
	comp=Z,12nm,0.8s,baz=56,slow=5.3,SNR=21						
HFS				PKPab	PKPab	15 48 44.0	-1.3
	comp=Z,13nm,0.6s,baz=72,slow=4.7,SNR=21						
BR131	**Keskin Array S**	**154.68**	**289**	*e*PKPdf	PKPdf	15 48 25.6	+3.0
BR131				*e*PKPbc	PKPdf	15 48 34.5	+12
BR131				*e*PKPab	PKPab	15 48 48.8	+0.2
BRTR	**Keskin Array B**	**154.68**	**289**	PKP	PKPdf	15 48 27.5	+4.8
	comp=Z,1.6nm,1.0s,baz=72,slow=3.9,SNR=6.4						
BRTR				PKPbc	PKPdf	15 48 34.4	+12
	comp=Z,4.9nm,0.9s,baz=150,slow=4.0,SNR=18						
AKASG	**Malin Array Be**	**155.10**	**316**	PKP	PKPdf	15 48 24.8	+2.0
	comp=Z,0.4nm,0.3s,baz=270,slow=1.0,SNR=2.8						
AKASG				PKPbc	PKPdf	15 48 33.5	+11
	comp=Z,1.0nm,0.4s,baz=46,slow=2.1,SNR=6.2						
AKASG	**Malin Array Be**	**155.10**	**316**	PKP	PKPdf	15 48 24.8	+2.0
AKASG				PKPbc	PKPdf	15 48 33.5	+11
SUW	**Suwalki**	**156.20**	**328**	*e*PKP	PKPab	15 48 55.1	+0.4
TIRR	**Tirgusor**	**157.92**	**302**	⇑P	PKPab	15 49 03.0	+0.6
VRI	**Vrincioaia**	**158.62**	**307**	⇓P	PKPab	15 49 07.6	+2.3
BURAR	**Bucovina Array**	**158.86**	**313**	⇓P	PKPab	15 49 06.1	-0.2
KWP	**Kalwaria**	**159.22**	**320**	*e*PKP	PKPab	15 49 08.9	+1.1
MLR	**Muntele Rosu**	**159.26**	**307**	PKPab	PKPab	15 49 06.4	-1.7
	comp=Z,5.6nm,0.8s,baz=257,slow=7.0,SNR=4.7						
STHS	**Stebnicka Huta**	**160.12**	**321**	*e*PKP	PKPab	15 49 12.6	+0.9
STHS				*e*		15 49 22.1	
CRVS	**Cervenica-Dubn**	**160.31**	**320**	*i* PKP	PKPab	15 49 13.4	+0.9
CRVS				*e*		15 49 21.2	
DRGR		**160.75**	**313**	⇓P	PKPab	15 49 15.4	+0.9
KECS	**Kecovo**	**161.08**	**320**	*i* PKP	PKPab	15 49 16.5	+0.6
KECS				*e*		15 49 25.1	
OKC	**Ostrava-Krasne**	**161.35**	**326**	*e*PKPAB	PKPab	15 49 17.3	+0.3
KSP	**Ksiaz**	**161.39**	**331**	*e*PKP	PKPab	15 49 18.6	+1.5
IDI	**Anoyia**	**161.41**	**277**	PKPab	PKPab	15 49 17.1	-0.6
	comp=Z,5.4nm,0.5s,baz=72,slow=13,SNR=6.3						
DPC	**Dobruska-Polom**	**161.76**	**330**	*e*PKPAB	PKPab	15 49 19.8	+1.0
UPC	**Upice**	**161.76**	**331**	*e*PKPAB	PKPab	15 49 17.9	-0.9
VYHS	**Vyhne**	**161.93**	**322**	*e*PKP	PKPab	15 49 19.6	0.0
CLL	**Collm**	**162.19**	**337**	P	PKPab	15 49 18.0	-2.6
	comp=Z,logA/T=0.8						
CLL				*e*PKP2	PKPab	15 49 21.0	+0.4
CLL				*e*		15 49 31.0	
CLL	**Collm**	**162.19**	**337**	*e*PKP2	PKPab	15 49 18.0	-2.6
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PVCC	**Panska Ves**	**162.31**	**333**	*e*PKPAB	PKPab	15 49 22.3	+1.2
VRAC	**Vranov**	**162.43**	**327**	PKPab	PKPab	15 49 20.6	-1.1
	comp=Z,4.6nm,0.4s,baz=42,slow=5.5,SNR=10						
SMOL	**Smolenice**	**162.61**	**324**	*e*PKP	PKPab	15 49 23.7	+1.2
PRU	**Pruhonice**	**162.75**	**332**	*e*PKPAB	PKPab	15 49 22.7	-0.4
ZST	**Bratislava**	**162.99**	**324**	*e*PKP	PKPab	15 49 25.9	+1.8
NKC	**Novy Kostel**	**163.29**	**336**	*e*PKPAB	PKPab	15 49 26.4	+1.0
DIVS	**Divcibare**	**163.71**	**308**	⇑*i*PKP	PKPab	15 49 29.1	+1.6
KHC	**Kasperske Hory**	**163.82**	**332**	*e*PKPAB	PKPab	15 49 28.3	+0.5
GERES	**GERESS Array B**	**164.00**	**331**	PKP	PKPdf	15 48 35.5	+2.4
	comp=Z,0.7nm,0.9s,baz=230,slow=10,SNR=5.6						
GERES				PKPab	PKPab	15 49 26.6	-2.0
	comp=Z,2.8nm,0.9s,baz=45,slow=3.8,SNR=11						
PERS	**Pernice**	**165.04**	**323**	*e*P	PKPab	15 49 34.1	+1.0
BAIF	**Baives**	**165.18**	**355**	*e*PKP2	PKPab	15 49 32.3	-1.3
GOLS	**Golise**	**165.21**	**320**	*e*P	PKPab	15 49 35.2	+1.3
JAVS	**Javornik**	**166.08**	**323**	*e*P	PKPab	15 49 38.2	+0.5
CDF	**Champ du Feu**	**166.36**	**345**	*e*PKP2	PKPab	15 49 37.1	-1.7
	comp=Z,17nm,0.9s						
GRR	**Gorron**	**166.75**	**9**	*e*PKP2	PKPab	15 49 40.0	-0.5
	comp=Z,30nm,1.1s						
HAU	**Haudompre**	**166.93**	**347**	*e*PKP2	PKPab	15 49 39.5	-1.8
HAU				*e*R			
	comp=Z,480nm,20.0s						
HINF	**Hinteralfeld**	**167.02**	**346**	*e*PKP2	PKPab	15 49 39.8	-1.9
DAVOX	**Davos**	**167.14**	**335**	PKPab	PKPab	15 49 41.1	-1.1
	comp=Z,5.8nm,0.9s,baz=354,slow=1.2,SNR=5.4						
LOR	**Lormes**	**167.98**	**354**	*e*PKP2	PKPab	15 49 44.3	-1.7
	comp=Z,23nm,1.2s						
LOR				*e*R			
	comp=Z,654nm,19.2s						
SSF	**Saint Saulge**	**168.22**	**355**	*e*PKP2	PKPab	15 49 45.6	-1.4
CABF	**La Chapelle**	**168.32**	**346**	*e*PKP2	PKPab	15 49 46.0	-1.5
AVF	**Avril sur Loir**	**168.50**	**356**	*e*PKP2	PKPab	15 49 46.4	-1.8
MFF	**Saint Martin d**	**168.60**	**8**	*e*PKP2	PKPab	15 49 46.7	-2.0
	comp=Z,27nm,1.1s						
SMF	**Signal de Mont**	**168.60**	**354**	*e*PKP2	PKPab	15 49 47.2	-1.5
	comp=Z,30nm,0.9s						
TCF	**Toulx Ste Croi**	**169.04**	**360**	*e*PKP2	PKPab	15 49 50.0	-0.6
LPL	**La Plagne**	**169.22**	**342**	*e*PKP2	PKPab	15 49 49.8	-1.7
	comp=Z,26nm,1.1s						
LPG	**La Plagne**	**169.23**	**342**	*e*PKP2	PKPab	15 49 49.9	-1.6
	comp=Z,37nm,1.2s						
ORIF	**Oris-en-Rattie**	**169.98**	**344**	*e*PKP2	PKPab	15 49 52.9	-1.9
	comp=Z,27nm,1.0s						
ORIF				*e*R			
	comp=Z,450nm,22.2s						
LFF	**La Frestale**	**170.33**	**6**	*e*PKP2	PKPab	15 49 55.2	-1.2
SBF	**Sospel**	**170.53**	**336**	*e*PKP2	PKPab	15 49 55.3	-2.0
SMRF	**Simiane la Rot**	**170.95**	**344**	*e*PKP2	PKPab	15 49 57.1	-2.1
FRF	**La Foret Royal**	**171.05**	**338**	*e*PKP2	PKPab	15 49 57.8	-1.9
EVO	**Evora**	**171.28**	**65**	*e*PKP2	PKPab	15 50 01.9	+1.0
	comp=Z,20nm,1.0s						
EVO				*e*R			
	comp=Z,601nm,18.8s						
ETSF	**Etsaut**	**172.15**	**14**	*e*PKP2	PKPab	15 50 02.9	-1.6
	comp=Z,26nm,1.2s						
MDT	**Midelt**	**173.89**	**112**	PKP	PKPdf	15 48 45.4	+5.4
	comp=Z,3.0nm,1.0s,baz=123,slow=6.5,SNR=3.7						

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*IDC **05** 15:51:30.1±0.9, 34.30S×178.36W, mb4.5/6, mb1 4.7/7, mb1mx4.6/12, mbtmp4.5/7, ML4.7/1, MS4.0/2, Ms1 4.0/2, ms1mx3.6/13, Error ellipse: s-maj=33.2km s-min=23.4km az=154.0*

*NEIC **05** 15:51:36.4±0.6, 34.97S×178.31W, mb4.9/7, Error ellipse: s-maj=16.1km s-min=7.6km az=122.0*

ISC 05 15:51:30.0±0.6**, 35.08S**±0.06×**178.10W**±0.09**, h10^{km}, (h43^{km}**±2.4^{km}**:pP-P), n97, σ1^{s}55**/111**, mb4.5**/12**, MS4.2**/1**, 1C, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.82**	**228**	PN	**Pn**	**15 52 32.8**	**+2.6**
MXZ				SN	**Sn**	**15 53 19.9**	**+4.1**
MXZ	**Matakaoa Point**	**3.82**	**228**	*e*P	**Pn**	**15 52 32.8**	**+2.5**
PUZ	**Puketiti**	**4.19**	**223**	PN	**Pn**	**15 52 38.4**	**+2.9**
PUZ				SN	**Sn**	**15 53 30.7**	**+5.5**
PUZ	**Puketiti**	**4.19**	**223**	*e*P	**Pn**	**15 52 38.4**	**+2.9**
MWZ	**Matawai**	**4.79**	**226**	PN	**Pn**	**15 52 46.6**	**+2.5**
MWZ				SN	**Sn**	**15 53 44.2**	**+3.9**
MWZ	**Matawai**	**4.79**	**226**	*e*P	**Pn**	**15 52 45.9**	**+1.9**
URZ	**Urewera**	**5.00**	**229**	Pn	**Pn**	**15 52 49.6**	**+2.7**
	19nm,0.3s,baz=2.6,slow=1.6,SNR=59						
URZ				Sn	**Sn**	**15 53 49.2**	**+3.7**
	52nm,0.3s,baz=178,slow=21,SNR=14						
URZ	**Urewera**	**5.00**	**229**	PN	**Pn**	**15 52 49.5**	**+2.6**
URZ				SN	**Sn**	**15 53 48.1**	**+2.6**
URZ	**Urewera**	**5.00**	**229**	*e*P	**Pn**	**15 52 48.6**	**+1.7**
MYRZ	**Mayor Island**	**5.08**	**243**	PN	**Pn**	**15 52 51.8**	**+3.7**
KNZ	**Kokohu**	**5.19**	**219**	PN	**Pn**	**15 52 51.7**	**+2.0**
KNZ				SN	**Sn**	**15 53 54.0**	**+3.6**
KNZ	**Kokohu**	**5.19**	**219**	*e*P	**Pn**	**15 52 51.6**	**+1.9**
KUZ	**Kuaotunu**	**5.29**	**250**	PN	**Pn**	**15 52 52.8**	**+1.8**
KUZ				SN	**Sn**	**15 53 53.5**	**+0.7**
KUZ	**Kuaotunu**	**5.29**	**250**	*e*P	**Pn**	**15 52 52.6**	**+1.5**
LIRZ	**Lichensteins R**	**5.32**	**235**	PN	**Pn**	**15 52 56.1**	**+4.6**
LIRZ	**Lichensteins R**	**5.32**	**235**	*e*P	**Pn**	**15 52 55.9**	**+4.4**
TAZ	**Tarawera**	**5.36**	**232**	PN	**Pn**	**15 52 58.5**	**+6.5**
TAZ	**Tarawera**	**5.36**	**232**	*e*P	**Pn**	**15 52 58.3**	**+6.2**
RAO	**Raoul Island**	**5.81**	**2**	Pn	**Pn**	**15 52 45.9**	**-12**
	31nm,0.3s,baz=328,slow=19,SNR=2.2						
RAO				Sn	Sn	15 53 45.2	-21
	95nm,0.3s,baz=54,slow=22,SNR=5.2						
BKZ	**Black Stump Fm**	**5.95**	**225**	PN	**Pn**	**15 53 01.8**	**+1.5**
BKZ				SN	**Sn**	**15 54 10.4**	**+1.0**
BKZ	**Black Stump Fm**	**5.95**	**225**	*e*P	**Pn**	**15 53 01.6**	**+1.3**
PXZ	**Pawanui**	**6.37**	**217**	PN	**Pn**	**15 53 06.8**	**+0.5**
PXZ				SN	**Sn**	**15 54 19.8**	**0.0**
OTVZ	**Oturere**	**6.44**	**229**	PN	**Pn**	**15 53 09.0**	**+1.7**
OTVZ				SN	**Sn**	**15 54 21.8**	**+0.1**
CNZ	**Chateau**	**6.54**	**229**	PN	**Pn**	**15 53 10.6**	**+2.0**
CNZ	**Chateau**	**6.54**	**229**	*e*P	**Pn**	**15 53 10.6**	**+2.0**
MOVZ	**Moawhango**	**6.54**	**227**	PN	**Pn**	**15 53 11.5**	**+2.8**
MOVZ				SN	**Sn**	**15 54 22.9**	**-1.3**
MOVZ	**Moawhango**	**6.54**	**227**	*e*P	**Pn**	**15 53 11.0**	**+2.3**
WNVZ	**Wahianoa**	**6.58**	**228**	PN	**Pn**	**15 53 11.9**	**+2.6**
WNVZ				SN	**Sn**	**15 54 26.4**	**+1.1**
WNVZ	**Wahianoa**	**6.58**	**228**	*e*P	**Pn**	**15 53 12.9**	**+3.6**
HIZ	**Hauiti**	**6.62**	**237**	PN	**Pn**	**15 53 13.5**	**+3.8**
HIZ	**Hauiti**	**6.62**	**237**	P	**Pn**	**15 53 13.5**	**+3.7**
MTVZ	**Mangateitei**	**6.70**	**228**	PN	**Pn**	**15 53 13.2**	**+2.3**
MTVZ				SN	**Sn**	**15 54 27.4**	**-0.7**
TSZ	**Takapari Road**	**6.86**	**222**	PN	**Pn**	**15 53 12.6**	**-0.6**
TSZ				SN	**Sn**	**15 54 30.8**	**-1.3**
BFZ	**Birch Farm**	**7.17**	**217**	PN	**Pn**	**15 53 16.9**	**-0.6**
BFZ				SN	**Sn**	**15 54 37.8**	**-2.0**
BFZ	**Birch Farm**	**7.17**	**217**	*e*P	**Pn**	**15 53 16.6**	**-0.9**
WAZ	**Wanganui**	**7.22**	**228**	PN	**Pn**	**15 53 19.2**	**+1.0**
WAZ				SN	**Sn**	**15 54 41.0**	**-0.2**
WAZ	**Wanganui**	**7.22**	**228**	*e*P	**Pn**	**15 53 19.2**	**+0.9**
MRZ	**Mangatainoka R**	**7.49**	**220**	PN	**Pn**	**15 53 20.8**	**-1.2**
MRZ				SN	**Sn**	**15 54 46.0**	**-1.9**
MRZ	**Mangatainoka R**	**7.49**	**220**	*e*P	**Pn**	**15 53 20.7**	**-1.3**
MTW	**Mount Morrison**	**7.89**	**218**	PN	**Pn**	**15 53 26.4**	**-1.3**
MTW				SN	**Sn**	**15 54 55.9**	**-2.1**
MTW	**Mount Morrison**	**7.89**	**218**	*e*P	**Pn**	**15 53 26.4**	**-1.3**
KIW	**Kapiti Island**	**7.99**	**222**	PN	**Pn**	**15 53 29.6**	**+0.6**
KIW				SN	**Sn**	**15 54 56.8**	**-3.6**
KIW	**Kapiti Island**	**7.99**	**222**	*e*P	**Pn**	**15 53 29.6**	**+0.6**
CAW	**Cannon Point**	**8.08**	**220**	PN	**P**	**15 53 28.4**	**-1.9**
CAW				SN	**Sn**	**15 54 59.2**	**-3.5**
CAW	**Cannon Point**	**8.08**	**220**	*e*P	**P**	**15 53 28.6**	**-1.7**
PAWZ	**Paruwai Farm**	**8.10**	**217**	SN	**Sn**	**15 55 00.7**	**-2.4**
TCW	**Tory Channel**	**8.58**	**222**	PN	**P**	**15 53 36.8**	**-0.4**
TCW				SN	**Sn**	**15 55 11.2**	**-3.9**
TUWZ	**Tuamarina**	**8.91**	**222**	PN	**P**	**15 53 40.6**	**-1.2**
TUWZ				SN	**Sn**	**15 55 18.5**	**-4.9**
QRZ	**Quartz Range**	**9.37**	**229**	PN	**P**	**15 53 46.5**	**-1.7**
QRZ				SN	**Sn**	**15 55 27.2**	**-7.4**
QRZ	**Quartz Range**	**9.37**	**229**	*e*P	**P**	**15 53 46.0**	**-2.1**
KHZ	**Kahutara**	**9.82**	**219**	*e*PN	**P**	**15 53 54.0**	**-0.3**
KHZ				SN	**Sn**	**15 55 38.4**	**-7.3**
KHZ	**Kahutara**	**9.82**	**219**	*e*P	**P**	**15 53 54.0**	**-0.3**
DSZ	**Denniston Nort**	**10.35**	**227**	SN	**S**	**15 55 51.1**	**-7.6**
LTZ	**Lake Taylor**	**10.74**	**221**	PN	**P**	**15 54 07.8**	**+0.8**
LTZ				SN	**S**	**15 56 00.5**	**-7.9**
CRLZ	**Canterbury Las**	**11.12**	**217**	SN	**S**	**15 56 09.5**	**-8.1**
MQZ	**McQueen's Vall**	**11.20**	**217**	SN	**S**	**15 56 11.5**	**-8.0**
RPZ	**Rata Peaks**	**12.03**	**221**	Pn	**P**	**15 54 24.1**	**-0.4**
	0.7nm,0.3s,baz=92,slow=22,SNR=4.7						
RPZ				Sn	**S**	**15 56 29.8**	**-10**
	4.8nm,0.3s,baz=13,slow=21,SNR=13						
JCZ	**Jackson Bay**	**13.54**	**224**	PN	**P**	**15 54 43.8**	**-0.7**
DZM	**Mont Dzumac**	**18.74**	**310**	LR	LR	16 01 01.9	
	comp=Z,299nm,21.2s,baz=189,slow=32						
STKA	**Stephens Creek**	**33.62**	**264**	P	**P**	**15 58 12.1**	**-0.6**
	1.4nm,0.5s,mb4.2,baz=89,slow=13,SNR=6.4						
STKA				PcP	PcP	16 00 50.9	-2.2
	2.9nm,0.9s,baz=33,slow=4.9,SNR=3.4						
STKA				LR	LR	16 09 38.1	
	comp=Z,405nm,18.3s,MS4.2,baz=34,slow=32						
STKA	**Stephens Creek**	**33.62**	**264**	*e*P	**P**	**15 58 12.3**	**-0.4**
CTA	**Charters Tower**	**34.74**	**286**	*e*P	**P**	**15 58 21.1**	**-1.4**
	9.8nm,0.6s,mb4.9						
CTA	**Charters Tower**	**34.74**	**286**	P	**P**	**15 58 19.6**	**-2.9**
	14nm,0.8s,mb5.0,baz=102,slow=11,SNR=18						
CTAO	**Charters Tower**	**34.74**	**286**	*e*P	**P**	**15 58 19.9**	**-2.6**
	12nm,0.7s,mb4.9						
PMG	**Port Moresby**	**40.72**	**300**	P	**P**	**15 59 12.2**	**-0.5**
	9.3nm,0.9s,mb4.4						
ASPA	**Alice Springs**	**42.99**	**272**	*e*P	**P**	**15 59 30.2**	**-1.0**
WB2	**Warramunga Arr**	**44.38**	**277**	⇑*i*P	**P**	**15 59 40.5**	**-2.1**
WRAB	**Tennant Creek**	**44.38**	**277**	*e*P	**P**	**15 59 39.8**	**-2.8**
	18nm,0.6s,mb5.0						
WRAB				*e*pP	pP	15 59 53.0	+7.5
WRA	**Warramunga Arr**	**44.39**	**277**	P	**P**	**15 59 38.7**	**-4.0**
	12nm,0.6s,mb4.8,baz=116,slow=7.7,SNR=92						
WRA				S	**S**	**16 06 08.2**	**-8.4**
	0.5nm,0.9s,baz=117,slow=14,SNR=2.8						
KAKA	**Kakadu**	**49.82**	**284**	*e*P	**P**	**16 00 41.5**	**+16**
	2.7nm,0.4s,mb4.6						
FITZ	**Fitzroy Crossi**	**52.42**	**274**	*e*P	**P**	**16 00 43.3**	**-1.7**
	12nm,1.2s,mb4.7						
QSPA	**South Pole Qui**	**55.05**	**180**	P	**P**	**16 01 08.2**	**+4.6**
	34nm,0.6s,mb5.5						
QSPA				*e*pP	pP	16 01 20.4	+14
MAW	**Mawson**	**67.92**	**201**	*e*P	**P**	**16 02 31.4**	**+1.0**
	6.4nm,1.1s,mb4.6						
MAW				*e*pP	pP	16 02 45.7	+12
SNAA	**Sanae**	**73.50**	**178**		**P**	**16 03 07.1**	**+3.1**
SNAA	**Sanae**	**73.50**	**178**		**P**	**16 03 09.4**	**+5.4**
SNAA	**Sanae**	**73.50**	**178**	*e*P	**P**	**16 03 06.1**	**+2.1**
VNA3	**Neumayer Olymp**	**73.66**	**176**		**P**	**16 03 09.8**	**+4.9**
VNA3	**Neumayer Olymp**	**73.66**	**176**		**P**	**16 03 12.5**	**+7.6**
VNA3	**Neumayer Olymp**	**73.66**	**176**		**P**	**16 03 22.4**	**+17**
VNA2	**Neumayer--Watz**	**74.09**	**177**		**P**	**16 03 12.7**	**+5.3**
VNA2	**Neumayer--Watz**	**74.09**	**177**		**P**	**16 03 15.6**	**+8.2**
VNA2	**Neumayer--Watz**	**74.09**	**177**		**P**	**16 03 23.3**	**+16**
MJAR	**Matsushiro Arr**	**82.04**	**326**	P	**P**	**16 03 47.5**	**-4.3**
	1.0nm,0.7s,mb3.9,baz=162,slow=4.9,SNR=4.3						
NVAR	**Mina Array Bea**	**91.72**	**43**	P	**P**	**16 04 38.1**	**-0.7**
	0.7nm,0.8s,mb4.1,baz=211,slow=6.1,SNR=5.2						
TXAR	**Lajitas Array**	**94.97**	**58**	P	**P**	**16 04 53.8**	**-0.2**
	0.2nm,0.3s,mb4.0,baz=135,slow=2.6,SNR=3.4						
MKAR	**Makanchi Array**	**120.65**	**308**	PKP	PKPdf	16 10 22.0	-3.0
	0.7nm,0.9s,baz=90,slow=3.6,SNR=5.9						
BVAR	**Borovoye Array**	**129.61**	**313**	PKP	PKPdf	16 10 39.7	-2.4
	0.6nm,0.6s,baz=286,slow=1.0,SNR=4.3						
ARCES	**ARCESS Array B**	**143.12**	**346**	PKhKP		16 10 54.1	
	4.5nm,0.9s,baz=332,slow=29,SNR=2.4						
JOF	**Joensuu**	**146.68**	**336**	*e*p	PKPbc	16 11 10.8	-0.1
	3.9nm,0.5s						
KAF	**Kangasniemi**	**148.88**	**338**	*e*p	PKPdf	16 11 17.2	+1.1
	3.1nm,0.6s						
FINES	**FINESS Array B**	**149.46**	**337**	PKPbc	PKPdf	16 11 17.6	+0.6
	9.5nm,0.8s,baz=50,slow=3.7,SNR=31						
DBIC	**Dimbokro**	**151.06**	**166**	PKPbc	PKPdf	16 11 26.8	+5.9
	4.4nm,0.9s,baz=265,slow=3.2,SNR=4.6						
NB2	**NORSAR Subarra**	**153.34**	**350**	PKPabc	PKPdf	16 11 28.3	+5.5
	1.8nm,0.6s,baz=15,slow=2.5						
NOA	**NORSAR Array B**	**153.34**	**350**	PKPbc	PKPdf	16 11 27.9	+5.1
	1.9nm,0.5s,baz=14,slow=4.1,SNR=10						
NOA				PKPab	PKPab	16 11 38.4	-3.4
	1.9nm,0.7s,baz=18,slow=4.2,SNR=5.9						
HFS	**Hagfors**	**153.78**	**347**	PKPbc	PKPdf	16 11 28.6	+5.2
	3.8nm,0.8s,baz=117,slow=3.3,SNR=6.2						
HFS				PKPab	PKPab	16 11 40.9	-2.8
	2.3nm,0.5s,baz=63,slow=3.3,SNR=10						
BRTR	**Keskin Array B**	**154.44**	**290**	PKPbc	PKPdf	16 11 32.1	+7.2
	0.7nm,0.7s,baz=146,slow=6.9,SNR=5.4						
BRTR				PKPab	PKPab	16 11 41.4	-5.7
	1.4nm,0.5s,baz=154,slow=3.9,SNR=13						
AKASG	**Malin Array Be**	**154.81**	**317**	PKPbc	PKPdf	16 11 29.2	+4.1
	0.7nm,0.6s,baz=204,slow=9.4,SNR=4.0						
AKASG				PKPab	PKPab	16 11 41.4	-6.9
	1.1nm,0.5s,baz=49,slow=2.9,SNR=7.7						

MOS 05 16:54:01.2±1.8**, 48.45N**×**99.01E, h10^{km}, mb4.3**/1**, Error ellipse: s-maj=33.8km s-min=14.4km az=74.9, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAK	**Zakamensk**	**3.39**	**54**	*e*PN	Pn	16 54 55.8	+0.5
ZAK				*e*		16 55 02.3	
ZAK				*e*		16 55 48.2	
ZAK				pmax	pmax		
	comp=Z,43nm,0.3s						
ZAK				smax			
	comp=N,132nm,0.7s						
MOY	**Mondy**	**3.46**	**21**	*e*PN	Pn	16 55 04.8	+8.4
MOY				*e*		16 55 49.9	
MOY				pmax	pmax		
	comp=Z,53nm,0.3s						
MOY				smax			
	comp=E,319nm,1.0s						
ARS	**Arshan**	**4.11**	**31**	*e*PN	Pn	16 55 15.5	+10
ARS				*e*		16 56 09.1	
ARS				pmax	pmax		
	comp=Z,80nm,0.5s						
ARS				smax			
	comp=E,336nm,0.6s						
ORL	**Orlik**	**4.13**	**7**	*e*PN	Pn	16 55 16.0	+10
ORL				*e*		16 56 08.5	
ORL				pmax	pmax		
	comp=Z,17nm,0.4s						
ORL				smax			
	comp=E,210nm,0.8s						
TLY	**Talaya**	**4.40**	**41**	*e*PN	Pn	16 55 19.9	+10
TLY				*e*		16 56 17.4	
TLY				pmax	pmax		
	comp=Z,71nm,0.4s						
TLY				smax			
	comp=N,110nm,0.7s						
LSTR	**Listvyanka**	**5.07**	**45**	*e*PN	Pn	16 55 33.2	+14
LSTR				*e*		16 56 38.4	
LSTR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LSTR				smax			
	comp=N,58nm,1.6s						
IRK	**Irkutsk**	**5.08**	**40**	*e*PN	Pn	16 55 31.0	+12
IRK				*e*		16 56 38.3	
IRK				pmax	pmax		
	comp=Z,65nm,0.3s						
IRK				smax			
	comp=N,305nm,0.5s						
TRG	**Tyrgan**	**6.36**	**45**	*e*PN	Pn	16 55 34.7	-2.6
TRG				*e*		16 55 54.5	
TRG				*e*S	Sn	16 56 46.1	-4.7
TRG				*e*		16 57 16.6	
TRG				pmax	pmax		
	comp=Z,15nm,0.5s						
TRG				smax			
	comp=E,61nm,0.7s						
OGRR	**Ongureny**	**7.50**	**43**	*e*PG	Pg	16 56 15.1	-16
OGRR				*e*		16 57 52.4	
OGRR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OGRR				smax			
	comp=E,51nm,1.2s						
KRAR	**Krasnoyarsk**	**8.45**	**336**	*e*PN	P	16 56 04.1	-2.6
KRAR				*e*		16 57 37.9	

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*ISK **05** 17:24:31.3, 39.05N×31.15E, h2^{km}, MD3.5*

*NEIC **05** 17:24:31.0, 39.06N×31.12E, h5^{km}, MD3.5(ISK), After ISK.*

*CSEM **05** 17:24:31.1±0.1, 39.04N×31.14E, h2^{km}, MD3.5, Error ellipse: s-maj=2.1km s-min=1.5km az=175.0*

*IDC **05** 17:24:32.7±1.6, 38.87N×31.38E, mb3.6/5, mb1 3.8/7, mb1mx3.6/21, mbtmp3.6/7, ML3.6/2, Error ellipse: s-maj=23.5km s-min=14.2km az=6.0*

ISC 05 17:24:31.7±0.3**, 39.01N**±0.02×**31.16E**±0.03**, h2^{km}, n54, σ1^{s}04**/67**, mb3.6**/5**, 1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESKT	**Eskisehir**	**0.56**	**335**	*i* PG	**Pg**	**17 24 42.5**	**-0.4**
ESKT				*i* SG	**Sg**	**17 24 50.3**	**0.0**
ESKT	**Eskisehir**	**0.56**	**335**	*i* P	**Pg**	**17 24 40.7**	**-2.1**
ESKT				*i* S	**Sg**	**17 24 48.7**	**-1.6**
KIZT	**Kizilcal**	**0.58**	**103**	*i* PG	**Pg**	**17 24 43.4**	**+0.2**
ALT	**Altintas**	**0.82**	**273**	*i* PG	**Pg**	**17 24 47.4**	**-0.6**
KDHN	**Kadinhani**	**0.90**	**123**	*i* P	**Pg**	**17 24 49.0**	**-0.5**
KDHN				*i* S	**Sg**	**17 24 58.8**	**-2.6**
BORA	**Eskisehir**	**1.02**	**328**	*i* P	**Pb**	**17 24 51.6**	**-0.2**
BORA				*i* S	**Sb**	**17 25 06.8**	**+1.3**
TKTP	**Tekketepe**	**1.17**	**214**	*i* P	**Pb**	**17 24 53.7**	**-0.7**
TKTP				*i* S	**Sb**	**17 25 10.7**	**+0.9**
ISP	**Isparta**	**1.27**	**204**	PN	**Pn**	**17 24 57.0**	**+0.5**
ISP	**Isparta**	**1.27**	**204**	*e*Pg	**Pg**	**17 24 56.1**	**-1.0**
ISP				*e*S	**Sb**	**17 25 18.3**	**+5.6**
GDZ	**Gediz**	**1.31**	**274**	*i* P	**Pb**	**17 24 55.0**	**-1.6**
GDZ				*i* S	**Sb**	**17 25 14.9**	**+1.2**
GPA	**Golpazari**	**1.43**	**333**	PN	**Pn**	**17 24 58.7**	**0.0**
MDU	**Mudurnu**	**1.45**	**2**	PN	**Pn**	**17 24 58.9**	**-0.1**
KHL	**Karahalli**	**1.46**	**242**	PN	**Pn**	**17 24 59.5**	**+0.5**
LOD	**Lodumlu**	**1.52**	**54**	PN	**Pn**	**17 25 00.1**	**+0.1**
ANTO	**Ankara**	**1.53**	**55**	*e*Pn	**Pn**	**17 25 00.7**	**+0.6**
ANTO				*e*S	**Sb**	**17 25 22.1**	**+2.0**
ANTO	**Ankara**	**1.53**	**55**	*e*Pn	**Pn**	**17 25 00.7**	**+0.6**
ANTO				*e*S	**Sb**	**17 25 22.1**	**+2.0**
BCK	**Bucak**	**1.61**	**196**	PN	**Pn**	**17 25 02.5**	**+1.2**

HENT	**Hendek**	**1.82**	**354**	*i* P	**Pn**	**17 25 04.4**	**+0.1**
ULDT	**Uludag**	**1.93**	**306**	*i* P	**Pn**	**17 25 04.8**	**-1.0**
ULDT				*i* S	**Sn**	**17 25 29.4**	**-1.6**
KAMT	**Kaman**	**2.02**	**79**	PN	**Pn**	**17 25 07.8**	**+0.7**
ORLT	**Orhaneli**	**2.03**	**301**	PN	**Pn**	**17 25 07.5**	**+0.2**
BR131	**Keskin Array S**	**2.05**	**69**	*e*Pn	**Pn**	**17 25 08.0**	**+0.5**
BR131				*e*S	**Sn**	**17 25 35.0**	**+1.0**
BR131	**Keskin Array S**	**2.05**	**69**	*e*Pn	**Pn**	**17 25 08.0**	**+0.5**
BR131				*e*S	**Sn**	**17 25 35.0**	**+1.0**
BRTR	**Keskin Array B**	**2.05**	**69**	Pg	**Pn**	**17 25 08.0**	**+0.5**
	3.6nm,0.3s,baz=240,slow=14,SNR=151						
BRTR				Lg		17 25 35.1	
	4.3nm,0.3s,baz=247,slow=19,SNR=5.5						
DST	**Dursunbey**	**2.05**	**288**	PN	**Pn**	**17 25 07.6**	**0.0**
YLV	**Yalova**	**2.08**	**319**	PN	**Pn**	**17 25 07.9**	**0.0**
MANT	**Manisa**	**2.10**	**256**	*i* P	**Pn**	**17 25 11.0**	**+2.8**
DNZL	**Cakiroluk**	**2.12**	**232**	*i* P	**Pn**	**17 25 13.5**	**+4.9**
HRT	**Hereke**	**2.14**	**328**	PN	**Pn**	**17 25 08.5**	**-0.3**
ELDT	**Eldivan**	**2.29**	**49**	*i* P	**Pn**	**17 25 10.4**	**-0.5**
ELDT				*i* S	Sn	17 26 04.7	+25
BADT	**Buyukada**	**2.42**	**320**	PN	**Pn**	**17 25 12.6**	**-0.2**
KCT	**Karacabey**	**2.50**	**301**	*e*PN	**Pn**	**17 25 13.6**	**-0.4**
SAFT	**Safranbolu**	**2.51**	**27**	*e*PN	**Pn**	**17 25 14.6**	**+0.4**
BTOK	**Tokmak**	**2.54**	**288**	*i* P	**Pn**	**17 25 19.9**	**+5.3**
CDAG	**Cicekdag**	**2.56**	**75**	*i* P	**Pn**	**17 25 14.7**	**-0.3**
ISK	**Istanbul-Kandi**	**2.61**	**322**	*e*PN	**Pn**	**17 25 15.0**	**-0.5**
BALB	**Balikesir**	**2.62**	**285**	*e*PN	**Pn**	**17 25 15.7**	**0.0**
ERMK	**Ermenek**	**2.74**	**149**	*i* P	**Pn**	**17 25 24.0**	**+6.5**
BNT	**Bandirma**	**2.84**	**299**	*e*PN	**Pn**	**17 25 19.0**	**+0.2**
CORM	**Corum**	**2.92**	**65**	*e*PN	**Pn**	**17 25 19.9**	**-0.1**
AKAS	**Kas**	**3.04**	**204**	*i* P	**Pn**	**17 25 22.6**	**+0.9**
BALT	**Daday**	**3.04**	**33**	*i* P	**Pn**	**17 25 20.7**	**-1.0**
CTKT	**Corum**	**3.23**	**59**	*i* P	**Pn**	**17 25 29.6**	**+5.3**
AYVA	**Ayvalik**	**3.49**	**276**	*i* P	**Pn**	**17 25 38.5**	**+10**
TIRR	**Tirgusor**	**5.82**	**340**	⇓P	**Pn**	**17 25 59.3**	**-1.7**
IDI	**Anoyia**	**6.24**	**235**	Pn	**Pn**	**17 26 07.0**	**0.0**
	0.3nm,0.3s,baz=16,slow=15,SNR=3.2						
MLR	**Muntele Rosu**	**7.54**	**331**	Pn	**Pn**	**17 26 28.1**	**+2.8**
	0.5nm,0.3s,baz=69,slow=14,SNR=3.2						
MLR				Sn	**Sn**	**17 27 54.6**	**+2.2**
	0.6nm,0.3s,baz=45,slow=22,SNR=4.1						
CII	**Carovilli**	**13.14**	**287**	*e*Pn	**P**	**17 27 36.2**	**-5.7**
	6.8nm,0.4s						
CII	**Carovilli**	**13.14**	**287**	*e*Pn	**P**	**17 27 36.2**	**-5.7**
	6.8nm,0.4s						
AKTO	**Aktyubinsk**	**22.11**	**50**	P	**P**	**17 29 29.8**	**0.0**
	1.5nm,0.7s,mb3.5,baz=258,slow=11,SNR=6.6						
FINES	**FINESS Array B**	**22.68**	**354**	P	**P**	**17 29 37.7**	**+2.5**
	2.9nm,0.9s,mb3.7,baz=158,slow=15,SNR=2.8						
MKAR	**Makanchi Array**	**37.68**	**61**	P	**P**	**17 31 49.3**	**-0.6**
	0.8nm,0.7s,mb3.5,baz=283,slow=6.7,SNR=9.1						
ZAL	**Zalesovo**	**38.86**	**49**	P	**P**	**17 31 58.1**	**-1.6**
	0.5nm,0.4s,mb3.6,baz=176,slow=14,SNR=3.4						
SONM	**Songino Array**	**53.34**	**54**	P	**P**	**17 33 52.8**	**-1.5**
	0.3nm,0.5s,mb3.5,baz=297,slow=6.4,SNR=3.7						

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*BJI **05** 17:32:06.0,12.80S×166.80E,h94^{km},mB4.9,mb4.7*

*MOS **05** 17:32:07.0±1.4,12.70S×166.57E,h96^{km},mb4.8/6,Error ellipse: s-maj=22.2km s-min=19.9km az=42.7*

*HRVD **05** 17:32:08.1±0.4,12.86S×166.69E,h87^{km}±3^{km},MW5.1/61, Centroid moment Tensor Solution. LP body waves: s28,c41;Mantle waves: s61,c100; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.72±.28; M$_{\theta\theta}$-5.42±.26; M$_{\phi\phi}$6.15±.25; M$_{r\theta}$-2.28±.19; M$_{\theta\phi}$0.56±.29; M$_{\phi r}$1.33±.19; Best double couple: M$_0$6.414×10^{16} NP1: φ$_s$46°,δ66°,λ-9°. NP2:φ$_s$140°,δ82°,λ-156°. Principal axes: T 6.4, Plg10°, Azm271°; N .036, Plg65°, Azm158°; P -6.429, Plg23°, Azm5°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **05** 17:32:08.1±0.4,12.76S×166.80E,mb5.0/14 Error ellipse: s-maj=11.3km s-min=8.7km az=108.0*

*IDC **05** 17:32:08.7±0.6,12.66S×166.75E,h93^{km}±4^{km},mb4.3/9, mb1 4.5/12,mb1mx4.4/16,mbtmp4.7/12,MS4.0/14, Ms1 4.0/14,ms1mx3.9/22,Error ellipse: s-maj=16.8km s-min=13.5km az=128.0*

ISC 05 17:32:06.8±0.4**,12.74S**±0.06×**166.74E**±0.07**,h94^{km}, h94^{km}**±2.8^{km}**:pP-P,n80,σ1^{s}04**/73**,mb4.8**/34**,6C-3D,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.43**	**296**	P	**P**	**17 33 55.5**	**+1.1**
	132nm,0.3s,baz=162,slow=4.3,SNR=78						
HNR				S	**S**	**17 35 17.5**	**-0.3**
	267nm,0.3s,baz=348,slow=24,SNR=8.4						
HNR	**Honiara**	**7.43**	**296**	P	**P**	**17 33 55.5**	**+1.1**
HNR				S	**S**	**17 35 17.5**	**-0.3**
HNR				*e*Sn	**S**	**17 35 19.6**	**+1.8**
DZM	**Mont Dzumac**	**9.28**	**182**	*e*P	**P**	**17 34 18.1**	**-1.3**
DZM				*e*S	**S**	**17 36 09.8**	**+7.0**
DZM	**Mont Dzumac**	**9.28**	**182**	P	**P**	**17 34 19.7**	**+0.3**
	18nm,0.3s,baz=30,slow=22,SNR=152						
DZM				S	**S**	**17 36 08.1**	**+5.3**
	2.0nm,0.3s,baz=307,slow=20,SNR=1.9						
DZM				LR	LR	17 37 37.4	
	comp=Z,849nm,18.0s,baz=16,slow=35						
PMG	**Port Moresby**	**19.50**	**278**	P	**P**	**17 36 30.1**	**+1.1**
	0.7nm,0.3s,baz=98,slow=5.9,SNR=13						
PMG				LR	LR	17 42 58.1	
	comp=Z,425nm,21.8s,baz=313,slow=33						
PMG	**Port Moresby**	**19.50**	**278***c*	*i*P	**P**	**17 36 29.2**	**+0.1**
AFI	**Afiamalu**	**20.94**	**96**	LR	LR	17 42 28.1	
	comp=Z,255nm,21.0s,baz=334,slow=30						
CTA	**Charters Tower**	**20.95**	**247**	*e*P	**P**	**17 36 45.3**	**+1.3**
	63nm,0.8s						
CTA	**Charters Tower**	**20.95**	**247**	P	**P**	**17 36 45.3**	**+1.3**
	76nm,0.8s,baz=77,slow=12,SNR=89						
CTA				LR	LR	17 43 24.2	
	comp=Z,431nm,21.5s,baz=69,slow=32						
CTAO	**Charters Tower**	**20.95**	**247**	*e*P	**P**	**17 36 44.8**	**+0.8**
	77nm,0.8s						
URZ	**Urewera**	**27.04**	**162**	LR	LR	17 46 56.4	
	comp=Z,160nm,21.1s,baz=322,slow=33						
STKA	**Stephens Creek**	**29.93**	**226**	P	**P**	**17 38 08.4**	**+0.2**
	6.9nm,0.7s,mb4.4,baz=36,slow=6.7,SNR=12						
STKA				pP	pP	17 38 29.6	+0.1
	6.7nm,0.7s,baz=43,slow=9.8,SNR=4.2						
STKA				LR	LR	17 49 40.3	
	comp=Z,425nm,18.4s,baz=49,slow=35						
STKA	**Stephens Creek**	**29.93**	**226**	*e*P	**P**	**17 38 08.0**	**-0.3**
STKA				pP	pP	17 38 29.6	+0.1
STKA				LR	LR	17 49 40.4	
WB2	**Warramunga Arr**	**31.85**	**253**	⇑*i*P	**P**	**17 38 24.1**	**-1.1**
WRAB	**Tennant Creek**	**31.85**	**253**	*e*P	**P**	**17 38 24.0**	**-1.1**
	52nm,1.1s,mb5.2						
WRAB	**Tennant Creek**	**31.85**	**253***c*	*i*P	**P**	**17 38 23.8**	**-1.4**
WRA	**Warramunga Arr**	**31.86**	**253**	P	**P**	**17 38 23.9**	**-1.4**
	23nm,0.9s,mb4.9,baz=86,slow=9.4,SNR=57						
WRA				pP	pP	17 38 47.3	+0.4
	5.8nm,1.0s,baz=84,slow=8.9,SNR=3.2						
WRA	**Warramunga Arr**	**31.86**	**253**	*i* P	**P**	**17 38 21.1**	**-4.2**
WRA				pmax	pmax		
	comp=Z,23nm,0.9s						
ASPA	**Alice Springs**	**32.95**	**246**	⇑*i*P	**P**	**17 38 33.7**	**-1.0**
KAKA	**Kakadu**	**33.44**	**266**	⇑*i*P	**P**	**17 38 56.9**	**+18**
	comp=Z,36nm,0.7s,mb5.3						
FORT	**Forrest**	**39.91**	**237**	*e*P	**P**	**17 39 33.7**	**+0.5**
	comp=Z,34nm,0.6s,mb5.4						
FITZ	**Fitzroy Crossi**	**39.92**	**257**	⇑*i*P	**P**	**17 39 33.7**	**+0.3**
	comp=Z,58nm,0.9s,mb5.4						
PPT	**Papeete**	**42.37**	**102**	*e*S	**S**	**17 46 23.4**	**+16**
PPT				*e*LQ		17 50 00.0	
PPT				*e*LR	LR	17 51 55.5	
	comp=Z,691nm,32.5s						
PPT	**Papeete**	**42.37**	**102**	LR	LR	17 54 18.6	
	comp=Z,107nm,19.5s,baz=263,slow=31						
MBWA	**Marble Bar**	**45.60**	**253**	*e*P	**P**	**17 40 20.0**	**+0.3**
	comp=Z,82nm,0.9s,mb5.5						
KLBR	**Kellerberrin**	**48.65**	**239**	*e*P	**P**	**17 40 42.6**	**-0.8**
	comp=Z,24nm,1.1s,mb5.0						
NWAO	**Narrogin (SRO)**	**49.35**	**237**	*e*P	**P**	**17 40 47.5**	**-1.3**
MUN	**Mundaring**	**50.02**	**239**	*e*P	**P**	**17 40 53.5**	**-0.4**
MJAR	**Matsushiro Arr**	**55.91**	**332**	P	**P**	**17 41 36.1**	**-1.4**
	comp=Z,3.4nm,0.8s,mb4.4,baz=157,slow=8.2,SNR=8.9						
MJAR				pP	pP	17 41 58.9	-1.8
	comp=Z,3.5nm,1.0s,baz=168,slow=8.1,SNR=3.6						
MAT	**Matsushiro**	**55.92**	**332**	P	**P**	**17 41 36.1**	**-1.4**
MAT				*e*S	**S**	**17 49 05.6**	**-10**
MAT	**Matsushiro**	**55.92**	**332**	*e*P	**P**	**17 41 36.0**	**-1.5**
	comp=Z,15nm,1.3s,mb4.9						
MAT				S	**S**	**17 49 06.0**	**-10**
SSE	**Sheshan**	**61.74**	**316**	*e*P	**P**	**17 42 14.4**	**-3.4**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,40nm,7.5s						
SSE				LR	LR		
	comp=N,90nm,40.7s						
SSE				LR	LR		
	comp=E,70nm,40.6s						
SSE				LR	LR		
	comp=Z,90nm,30.3s						
YSS	**Yuzh-Sakhalins**	**63.19**	**342**	*e*P	**P**	**17 42 26.8**	**-0.5**
YSS				pmax	pmax		
	comp=Z,24nm,1.6s,mb4.9						
NJ2	**Nanjing**	**63.90**	**315**	*e*P	**P**	**17 42 32.1**	**-0.1**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,60nm,9.4s						
NJ2				LR	LR		
	comp=Z,610nm,20.7s						
VNDA	**Vanda**	**64.83**	**181**	*e*P	**P**	**17 42 34.2**	**-3.3**
	comp=Z,5.4nm,1.1s,mb4.3						
VNDA				*e*pP	pP	17 42 59.0	-2.4
SBA	**Scott Base**	**65.11**	**180**	*e*P	**P**	**17 42 39.7**	**+0.4**
	comp=Z,18nm,1.2s,mb4.8						
SBA				*e*pP	pP	17 43 01.9	-1.3
CN2	**Changchun**	**67.69**	**329**	*e*P	**P**	**17 42 55.6**	**-0.5**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
KLR	**Kul'dur**	**68.99**	**336**	*e*P	**P**	**17 43 04.0**	**-0.1**
ENH	**Enshi**	**69.72**	**309**	*e*P	**P**	**17 43 08.5**	**-0.4**
	comp=Z,17nm,1.0s,mb4.8						
GYA	**Guiyang**	**70.17**	**304**	P	**P**	**17 43 10.0**	**-1.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
XAN	**Xi'an**	**71.98**	**312**	P	**P**	**17 43 23.9**	**+1.5**
KMI	**Kunming**	**72.83**	**301**	P	**P**	**17 43 29.6**	**+2.0**
KMI				AMB	AMB		
	comp=Z,140nm,7.2s						
KMI				LR	LR		
	comp=Z,70nm,24.8s						
HIA	**Hailar**	**74.32**	**330**	*e*P	**P**	**17 43 35.9**	**+0.1**
	comp=Z,25nm,1.8s,mb4.6						
SEY	**Seymchan**	**76.26**	**353**	*e*P	**P**	**17 43 45.0**	**-1.5**
LZH	**Lanzhou**	**76.61**	**312**	*e*P	**P**	**17 43 50.5**	**+1.4**
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
LZH				AMB	AMB		
	comp=Z,70nm,4.5s						
LZH				LR	LR		
	comp=E,420nm,14.7s						
LZH				LR	LR		
	comp=Z,610nm,17.8s						
YAK	**Yakutsk**	**79.99**	**343***d*	*i*P	**P**	**17 44 06.4**	**-0.6**
YAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.5						
BILL	**Bilibino**	**80.56**	**360**	*e*P	**P**	**17 44 09.4**	**-0.6**
	comp=Z,9.5nm,1.2s,mb4.5						
BILL	**Bilibino**	**80.56**	**360***d*	*i*P	**P**	**17 44 09.5**	**-0.5**
BILL				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.6						
SONM	**Songino Array**	**80.60**	**324**	P	**P**	**17 44 11.2**	**+0.6**
	comp=Z,1.8nm,0.6s,mb4.1,baz=140,slow=7.1,SNR=12						
SONM				pP	pP	17 44 36.1	+0.7
	comp=Z,1.5nm,0.6s,baz=140,slow=6.5,SNR=5.7						
SONM				LR	LR	18 17 55.4	
	comp=Z,48nm,20.2s,baz=306,slow=34						
GTA	**Gaotai**	**80.93**	**314**	*e*P	**P**	**17 44 14.1**	**+1.6**
GTA				AMB	AMB		
	comp=Z,150nm,4.6s						
GTA				LR	LR		
	comp=N,160nm,13.3s						
GTA				LR	LR		
	comp=E,90nm,15.2s						
GTA				LR	LR		
	comp=Z,130nm,14.5s						
MAW	**Mawson**	**83.52**	**202**	LR	LR	18 16 43.9	
	comp=Z,63nm,21.1s,baz=240,slow=32						
ZAK	**Zakamensk**	**83.64**	**325**	*e*P	**P**	**17 44 26.1**	**0.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.0						
COLA	**College**	**84.59**	**18**	*e*P	**P**	**17 44 30.4**	**-0.1**
ILAR	**Eielson Array**	**84.81**	**18**	P	**P**	**17 44 31.1**	**-0.6**
	comp=Z,2.4nm,0.6s,mb4.3,baz=238,slow=4.7,SNR=39						
ILAR				pP	pP	17 44 58.2	+1.6
	comp=Z,2.1nm,0.7s,baz=227,slow=4.5,SNR=5.8						
NVAR	**Mina Array Bea**	**86.37**	**49**	P	**P**	**17 44 41.9**	**+1.9**
	comp=Z,0.3nm,0.6s,mb3.4,baz=229,slow=9.6,SNR=3.5						
NVAR				pP	pP	17 45 05.4	+0.4
	comp=Z,1.0nm,0.8s,baz=226,slow=6.0,SNR=5.3						
NVAR				LR	LR	18 16 39.5	
	comp=Z,184nm,19.4s,baz=125,slow=31						
TIXI	**Tiksi**	**87.93**	**349***d*	*i*P	**P**	**17 44 46.4**	**-0.3**
TIXI				e*PP	pP	17 45 17.3	+5.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.4						
GUN	**Gumba**	**87.99**	**299**	*e*P	**P**	**17 44 48.9**	**+0.9**
PKI	**Pulchoki**	**88.30**	**299**	*e*P	**P**	**17 44 49.7**	**+0.2**
	comp=Z,12nm,0.6s,mb5.1						
KKN	**Kakani**	**88.47**	**299**	*e*P	**P**	**17 44 50.7**	**+0.4**
	comp=Z,9.9nm,0.8s,mb4.9						
DMN	**Daman**	**88.57**	**299**	*e*P	**P**	**17 44 51.1**	**+0.3**
	comp=Z,17nm,0.7s,mb5.2						
GKN	**Gorkha**	**89.07**	**299**	*e*P	**P**	**17 44 53.3**	**+0.2**
	comp=Z,10nm,0.7s,mb5.0						
ELK	**Elko**	**89.35**	**48**	LR	LR	18 20 26.2	
	comp=Z,198nm,18.2s,baz=238,slow=32						
KOLN	**Koldanda**	**89.90**	**298**	*e*P	**P**	**17 44 56.7**	**-0.3**
	comp=Z,6.5nm,0.6s,mb5.0						
PDAR	**Pinedale Array**	**93.98**	**47**	LR	LR	18 21 31.4	
	comp=Z,130nm,18.3s,baz=160,slow=32						
MKAR	**Makanchi Array**	**95.42**	**317**	P	**P**	**17 45 22.5**	**+0.6**
	comp=Z,1.8nm,0.7s,mb4.6,baz=96,slow=6.6,SNR=23						
MKAR				pP	pP	17 45 45.8	-1.6
	comp=Z,2.1nm,0.6s,baz=100,slow=7.4,SNR=7.7						
MKAR	**Makanchi Array**	**95.42**	**317**	P	**P**	**17 45 22.5**	**+0.6**
MKAR				pP	pP	17 45 45.8	-1.5
MKAR	**Makanchi Array**	**95.42**	**317**	*i* P	**P**	**17 45 22.5**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SNAA	**Sanae**	**95.49**	**183**	P	**P**	**17 45 25.5**	**+3.8**
SNAA	**Sanae**	**95.49**	**183**	*e*P	**P**	**17 45 23.8**	**+2.1**
ZAL	**Zalesovo**	**95.50**	**324**	P	**P**	**17 45 21.8**	**-0.3**
	comp=Z,0.7nm,0.4s,mb4.5,baz=310,slow=8.5,SNR=4.0						
ZAL				LR	LR	18 25 20.4	
	comp=Z,68nm,20.8s,baz=205,slow=33						
TXAR	**Lajitas Array**	**95.78**	**61**	pP	pP	17 45 49.0	-0.5
	comp=Z,0.8nm,0.8s,baz=254,slow=6.6,SNR=3.9						
TXAR				LR	LR	18 24 19.2	
	comp=Z,118nm,18.4s,baz=60,slow=33						
VNA3	**Neumayer Olymp**	**96.18**	**181**	P	**P**	**17 45 29.3**	**+4.5**
VNA2	**Neumayer--Watz**	**96.44**	**182**	P	**P**	**17 45 29.0**	**+3.0**
ARU	**Arti**	**110.57**	**326**	*i* PKIKP	PKPdf	17 50 33.5	+5.5
BLA	**Blacksburg**	**115.74**	**55**	*e*PKPdf	PKPdf	17 50 36.3	-2.3
ARCES	**ARCESS Array B**	**118.21**	**346**	PKP	PKPdf	17 50 43.2	+0.7
	comp=Z,2.6nm,0.7s,baz=70,slow=3.5,SNR=7.8						
ARCES				pPKP		17 51 08.1	
	comp=Z,3.8nm,0.8s,baz=14,slow=10.0,SNR=2.0						
ARCES	**ARCESS Array B**	**118.21**	**346**	PKP	PKPdf	17 50 43.2	+0.7
ARCES				pPKP		17 51 08.1	
FINES	**FINESS Array B**	**123.70**	**339**	PKP	PKPdf	17 50 54.3	+0.9
	comp=Z,2.9nm,1.2s,baz=63,slow=4.3,SNR=3.4						
ANN	**Anapa**	**126.44**	**317**	*i* PKIKP	PKPdf	17 51 07.0	+8.0
ANN				*e*		17 51 36.3	
ESDC	**Sonseca Array**	**151.94**	**345**	PKPbc	PKPdf	17 51 54.3	+10
	comp=Z,0.9nm,0.7s,baz=296,slow=37,SNR=2.4						
ESDC				PKPab	PKPab	17 52 02.9	-0.1
	comp=Z,0.9nm,0.5s,baz=12,slow=3.9,SNR=10						
ESDC				pPKPbc		17 52 17.7	
	comp=Z,1.4nm,0.7s,baz=14,slow=3.6,SNR=4.1						

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*ISK **05** 17:36:23.7,39.06N×31.15E,h2^{km},MD3.5*

*NEIC **05** 17:36:23.0,39.03N×31.14E,h3^{km},MD3.5(ISK),After ISK.*

*CSEM **05** 17:36:23.7,39.06N×31.15E,h2^{km},MD3.5,After ISK*

ISC 05 17:36:24.2±0.3**,39.03N**±0.02×**31.17E**±0.03**,h2^{km},n38, σ0^{s}99**/53**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESKT	**Eskisehir**	**0.55**	**333**	*i* PG	**Pg**	**17 36 34.4**	**-0.8**
ESKT				*i* SG	**Sg**	**17 36 42.7**	**+0.2**
ESKT	**Eskisehir**	**0.55**	**333**	*i* P	**Pg**	**17 36 33.2**	**-2.0**
ESKT				*i* S	**Sg**	**17 36 41.6**	**-0.9**
KIZT	**Kizilcal**	**0.57**	**105**	*i* PG	**Pg**	**17 36 36.0**	**+0.3**
ALT	**Altintas**	**0.83**	**272**	*i* PG	**Pg**	**17 36 40.0**	**-0.8**
KDHN	**Kadinhani**	**0.90**	**124**	*i* P	**Pg**	**17 36 41.1**	**-1.0**
KDHN				*i* S	**Sg**	**17 36 53.7**	**-0.4**
BORA	**Eskisehir**	**1.01**	**327**	*i* P	**Pb**	**17 36 44.2**	**+0.1**
BORA				*i* S	**Sb**	**17 36 59.3**	**+1.5**
TKTP	**Tekketepe**	**1.20**	**214**	*i* P	**Pb**	**17 36 46.8**	**-0.5**
TKTP				*i* S	**Sb**	**17 37 03.3**	**+0.2**
ISP	**Isparta**	**1.30**	**204**	PN	**Pn**	**17 36 49.3**	**0.0**
ISP				SN	**Sn**	**17 37 08.8**	**+1.3**
ISP	**Isparta**	**1.30**	**204**	*e*P	**Pb**	**17 36 49.5**	**+0.5**
ISP				*e*S	**Sb**	**17 37 10.9**	**+5.0**
GDZ	**Gediz**	**1.32**	**273**	*i* P	**Pb**	**17 36 47.5**	**-1.9**
GDZ				*i* S	**Sb**	**17 37 07.0**	**+0.4**
GPA	**Golpazari**	**1.42**	**332**	PN	**Pn**	**17 36 50.9**	**-0.2**
MDU	**Mudurnu**	**1.43**	**1**	PN	**Pn**	**17 36 51.4**	**+0.1**
LOD	**Lodumlu**	**1.50**	**55**	PN	**Pn**	**17 36 52.6**	**+0.3**
ANTO	**Ankara**	**1.51**	**56**	*e*P	**Pn**	**17 36 49.8**	**-2.6**
ANTO				*e*S	**Sb**	**17 37 15.2**	**+3.1**
HENT	**Hendek**	**1.80**	**353**	*i* P	**Pn**	**17 36 57.9**	**+1.3**
HENT				*i* S	**Sn**	**17 37 20.9**	**+0.6**
ULDT	**Uludag**	**1.93**	**306**	*i* P	**Pn**	**17 36 57.4**	**-1.0**
ULDT				*i* S	**Sn**	**17 37 23.9**	**+0.4**
KAMT	**Kaman**	**2.00**	**80**	PN	**Pn**	**17 37 00.0**	**+0.5**
ORLT	**Orhaneli**	**2.03**	**301**	PN	**Pn**	**17 36 59.6**	**-0.3**
BR131	**Keskin Array S**	**2.03**	**69**	*e*Pb	**Pb**	**17 37 00.6**	**-1.0**
DST	**Dursunbey**	**2.06**	**287**	PN	**Pn**	**17 37 00.5**	**+0.3**
YLV	**Yalova**	**2.07**	**318**	PN	**Pn**	**17 37 00.0**	**-0.4**
DENT	**Denizli**	**2.11**	**233**	PN	**Pn**	**17 37 01.5**	**+0.5**
MANT	**Manisa**	**2.11**	**256**	*i* P	**Pn**	**17 37 03.7**	**+2.6**
HRT	**Hereke**	**2.13**	**328**	*e*PN	**Pn**	**17 37 00.6**	**-0.7**
ELDT	**Eldivan**	**2.27**	**49**	*i* P	**Pn**	**17 37 03.0**	**-0.3**
ELDT				*i* S	**Sn**	**17 37 34.8**	**+2.6**
BADT	**Buyukada**	**2.41**	**320**	PN	**Pn**	**17 37 04.8**	**-0.5**
SAFT	**Safranbolu**	**2.49**	**27**	*e*PN	**Pn**	**17 37 06.5**	**0.0**
KCT	**Karacabey**	**2.50**	**300**	*e*PN	**Pn**	**17 37 06.5**	**-0.1**
BTOK	**Tokmak**	**2.54**	**288**	*i* P	**Pn**	**17 37 12.7**	**+5.5**
BTOK				*i* S	**Sn**	**17 37 50.0**	**+11**
CDAG	**Cicekdag**	**2.55**	**76**	*i* P	**Pn**	**17 37 07.2**	**-0.1**
CDAG				*i* S	**Sn**	**17 37 37.6**	**-1.7**
BALB	**Balikesir**	**2.62**	**284**	*e*PN	**Pn**	**17 37 08.2**	**-0.2**
BNT	**Bandirma**	**2.84**	**299**	*e*PN	**Pn**	**17 37 11.5**	**+0.1**
EDC	**Edincik**	**2.87**	**298**	*e*PN	**Pn**	**17 37 11.5**	**-0.4**
AVNT	**Avonos**	**2.88**	**94**	*e*P	**Pn**	**17 37 16.8**	**+4.8**
AVNT				*i* S	**Sn**	**17 37 50.9**	**+3.1**
CORM	**Corum**	**2.91**	**66**	*e*PN	**Pn**	**17 37 12.2**	**-0.2**
BALT	**Daday**	**3.02**	**33**	*i* P	**Pn**	**17 37 14.2**	**+0.2**
CTKT	**Corum**	**3.21**	**59**	*i* P	**Pn**	**17 37 22.7**	**+6.1**
GNI	**Garni**	**10.54**	**80**	*e*Pn	**P**	**17 38 54.5**	**-4.8**
	26nm,1.3s						

NDI 05 17:38:03.4±2.9**,32.41N×78.78E,h10^{km},MD3.1,ML3.0, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLP	**Kalpa**	**0.98**	**208**	*e*P	Pb	17 38 21.4	-0.6
KLP				*e*S	Sb	17 38 34.4	-0.5
KLP				AML	AML	17 38 39.5	
	comp=E,946nm,0.6s						
KLP				AML	AML	17 38 40.2	
	comp=N,985nm,0.6s						
SDNR	**Sundarnagar**	**1.79**	**240**	*e*P	Pn	17 38 33.6	-1.0
SDNR				*e*S	Sn	17 38 58.0	+0.5
SMLA	**Simla**	**1.88**	**228**	*e*P	Pn	17 38 35.2	-0.7
SMLA				*e*S	Sn	17 38 58.3	-1.5
BHK	**Bhakra**	**2.24**	**244**	*e*PB	Pb	17 38 43.8	+0.2
BHK				*e*SB	Sb	17 39 13.7	+2.3
DLH	**Dalhousie**	**2.38**	**274**	*e*P	Pn	17 38 40.0	-3.2
DLH				*e*S	Sn	17 39 11.0	-1.7
THN	**Thein Dam**	**2.59**	**271**	*e*x	x	17 38 42.1	
THN				*e*S	Sn	17 39 16.1	-1.9
NDI	**New Delhi**	**3.95**	**200**	*e*PB	Pb	17 39 13.0	+0.2
NDI				*e*x	x	17 40 08.0	
SONA	**Sohna**	**4.40**	**200**	*e*S	Sn	17 39 59.4	-4.3
SONA				AML	AML	17 40 32.8	
	comp=N,17nm,0.5s						
SONA				AML	AML	17 40 33.9	
	comp=E,29nm,0.5s						
KUDL	**Kundal**	**4.69**	**206**	*e*P	Pn	17 39 15.3	-0.7
KUDL				*e*S	Sn	17 40 06.3	-4.8
KHET	**Khetri**	**5.03**	**212**	*e*S	Sn	17 40 15.2	-4.4
KHET				AML	AML	17 40 45.8	
	comp=E,12nm,0.1s						
KHET				AML	AML	17 40 45.9	
	comp=N,11nm,0.1s						
SHL	**Shillong**	**13.33**	**117**	*e*x	x	17 44 21.0	

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*NEIC **05** 17:47:13.6±0.8,23.74S×66.59W,h182^{km}±16^{km},Error ellipse: s-maj=19.1km s-min=9.1km az=110.0*

*IDC **05** 17:47:13.4±1.3,23.77S×66.54W,h172^{km}±22^{km}, mb1 3.5/4,mb1mx3.3/16,mbtmp4.0/4,Error ellipse: s-maj=25.4km s-min=14.5km az=91.0*

*GUC **05** 17:47:16.3±0.6,23.92S×67.30W,h245^{km}±123^{km},ML4.1*

ISC 05 17:47:12.8±0.7**,23.79S**±0.05×**66.8W**±0.2**,h218^{km}**±26^{km}**, n17,σ1^{s}32**/29**,3C-2D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.27**	**300**	P	**P**	**17 47 57.1**	**+1.2**
	63nm,0.3s,baz=122,slow=7.3,SNR=228						
LVC				S	**S**	**17 48 28.7**	**-0.4**
	35nm,0.3s,baz=356,slow=18,SNR=12						
LVC	**Limon Verde**	**2.27**	**300**	*e*Pn	**P**	**17 47 56.6**	**+0.7**
LVC				S	**S**	**17 48 28.7**	**-0.4**
CEN1	**Los Morros**	**3.15**	**277**	⇓*i*P	**P**	**17 48 08.5**	**+2.8**
CEN1				*i* S	**S**	**17 48 47.6**	**+1.0**
CEN1				AMP		17 48 51.8	
	comp=E,132nm,0.5s						
ANCH	**Antofagasta**	**3.32**	**271**	⇑*i*P	**P**	**17 48 09.1**	**+1.4**
ANCH				*i* S	**S**	**17 48 48.9**	**-1.2**
ANCH				AMP		17 48 53.0	
	comp=N,404nm,0.1s						
ANCH	**Antofagasta**	**3.32**	**271**	⇑*i*P	**P**	**17 48 09.2**	**+1.6**
ANCH				*i* S	**S**	**17 48 48.9**	**-1.2**
CPN1	**Cerro Paranal**	**3.40**	**255**	*e*P	**P**	**17 48 10.3**	**+1.6**
CPN1				*i* S	**S**	**17 48 51.7**	**-0.2**
CPN1				AMP		17 48 55.5	
	comp=E,284nm,0.6s						
CRCH	**Chaqaral**	**4.31**	**233**	*i* P	**P**	**17 48 20.7**	**+1.1**
CRCH				*i* S	**S**	**17 49 09.9**	**-1.6**
CDCH	**Caldera**	**4.90**	**227**	⇓*i*P	**P**	**17 48 27.1**	**0.0**
CDCH				*i* S	**S**	**17 49 22.2**	**-2.6**
CDCH	**Caldera**	**4.90**	**227**	⇑*i*P	**P**	**17 48 27.2**	**+0.1**
CDCH				*i* S	**S**	**17 49 22.2**	**-2.6**
LPAZ	**La Paz**	**7.57**	**350**	P	**P**	**17 49 01.8**	**+0.6**
	comp=E,0.8nm,0.3s,baz=168,slow=9.3,SNR=11						
LPAZ				S	**S**	**17 50 24.7**	**-1.3**
	comp=E,0.1nm,0.3s,baz=357,slow=18,SNR=4.2						
LPAZ	**La Paz**	**7.57**	**350**	*e*Pn	**P**	**17 49 01.6**	**+0.3**
LPAZ				*e*S	**S**	**17 50 24.1**	**-1.9**
CFAA	**Coronel Fontan**	**7.89**	**189**	P	**P**	**17 49 06.7**	**+1.3**
	comp=E,0.1nm,0.3s,baz=37,slow=18,SNR=21						
CFAA				S	**S**	**17 50 32.4**	**-1.2**
	comp=E,0.3nm,0.3s,baz=198,slow=15,SNR=14						
CFAA	**Coronel Fontan**	**7.89**	**189**	P	**P**	**17 49 06.7**	**+1.3**
CFAA				S	**S**	**17 50 32.4**	**-1.2**
SIV	**San Ignacio**	**9.44**	**36**	P	**P**	**17 49 23.2**	**-2.2**
	comp=E,0.7nm,0.3s,baz=227,slow=14,SNR=7.5						
SAML	**Samuel**	**15.15**	**14**	Pn	**P**	**17 50 36.8**	**-0.6**
BDFB	**Brasilia**	**19.43**	**69**	P	**P**	**17 51 25.5**	**+0.9**
	comp=E,0.4nm,0.3s,baz=257,slow=11,SNR=8.1						
MKAR	**Makanchi Array**	**146.24**	**39**	PKPbc	PKPbc	18 06 32.1	+4.9
	comp=E,0.9nm,0.8s,baz=316,slow=3.2,SNR=8.8						

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*ISK **05** 17:48:27.6,39.05N×31.13E,h2^{km},ML3.9*

*NEIC **05** 17:48:27.0,39.05N×31.12E,h5^{km},ML3.8(ISK),After ISK.*

*CSEM **05** 17:48:27.1±0.3,39.04N×31.14E,h1^{km}±1^{km},mb3.8/2, Error ellipse: s-maj=1.3km s-min=1.1km az=178.0*

*MOS **05** 17:48:28.9±1.4,39.21N×31.17E,h10^{km},mb4.0/6,Error ellipse: s-maj=12.3km s-min=9.1km az=132.3*

*IDC **05** 17:48:29.3±1.6,39.10N×31.22E,mb3.8/5,mb1 3.8/8, mb1mx3.7/23,mbtmp3.8/8,ML3.9/3,MS3.3/4,Ms1 3.3/4, ms1mx2.9/29,Error ellipse: s-maj=21.1km s-min=12.2km az=18.0*

ISC 05 17:48:27.6±0.7**,39.07N**±0.02×**31.17E**±0.02**,h2^{km}**±5^{km}**,**

n95,σ1^{s}09/111,**mb3.8**/6,**MS3.4**/2,**6C-2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESKT	Eskisehir	0.52	331	*i* PG	Pg	17 48 38.5	+0.6
ESKT				*i* SG	Sg	17 48 46.6	+1.8
ESKT	Eskisehir	0.52	331	*i* P	Pg	17 48 36.9	-1.0
ESKT				*i* S	Sg	17 48 44.2	-0.6
KIZT	Kizilcal	0.58	108	*i* PG	Pg	17 48 39.7	+0.4
ALT	Altintas	0.82	270	*i* PG	Pg	17 48 43.6	-0.5
KDHN	Kadinhani	0.92	126	*i* P	Pb	17 48 44.9	-1.1
KDHN				*i* S	Sg	17 48 56.8	-1.4
BORA	Eskisehir	0.98	326	*i* P	Pb	17 48 47.7	+0.6
BORA				*i* S	Sb	17 49 01.3	+0.9
TKTP	Tekketepe	1.22	213	*i* P	Pb	17 48 50.1	-1.1
TKTP				*i* S	Sb	17 49 07.0	-0.3
GDZ	Gediz	1.31	272	*i* P	Pb	17 48 51.1	-1.7
GDZ				*i* S	Sb	17 49 10.7	+0.8
ISP	Isparta	1.33	203	*i* PN	Pn	17 48 53.5	+0.3
ISP				*i* SN	Sn	17 49 12.3	+0.6
ISP	Isparta	1.33	203	*e*Pn	Pn	17 48 52.5	-0.7
GPA	Golpazari	1.39	332	*i* PN	Pn	17 48 54.8	+0.7
MDU	Mudurnu	1.40	1	*i* PN	Pn	17 48 55.3	+1.1
LOD	Lodumlu	1.48	56	PN	Pn	17 48 56.7	+1.3
KHL	Karahalli	1.49	241	PN	Pn	17 48 55.9	+0.4
ANTO	Ankara	1.49	57	PN	Pn	17 48 56.7	+1.1
ANTO	Ankara	1.49	57	*e*Pn	Pn	17 48 55.0	-0.5
ANTO				Sn	Sn	17 49 13.2	-2.7
ANTO	Ankara	1.49	57	*e*Pn	Pn	17 48 56.7	+1.1
ANTO				Sn	Sn	17 49 13.2	-2.7
BCK	Bucak	1.67	196	PN	Pn	17 48 58.8	+0.7
HENT	Hendek	1.77	353	*i* P	Pn	17 49 00.5	+1.0
HENT				*i* S	Sn	17 49 24.5	+1.6
ULDT	Uludag	1.90	305	*i* P	Pn	17 49 01.2	-0.2
ULDT				*i* S	Sn	17 49 25.5	-0.9
KAMT	Kaman	2.00	80	PN	Pn	17 49 04.2	+1.4
ORLT	Orhaneli	2.01	300	PN	Pn	17 49 03.3	+0.3
BR131	Keskin Array S	2.02	70	*e*Pb	Pb	17 49 04.2	-0.7
BRTR	Keskin Array B	2.02	70	Pg	Pg	17 49 04.2	-3.8
	8.4nm,0.3s,baz=245,slow=15,SNR=371						
BRTR				Lg		17 49 34.6	
	16nm,0.3s,baz=240,slow=28,SNR=11						
YLV	Yalova	2.04	318	PN	Pn	17 49 04.3	+0.9
DST	Dursunbey	2.04	286	PN	Pn	17 49 03.8	+0.3
HRT	Hereke	2.10	327	PN	Pn	17 49 05.2	+0.9
MANT	Manisa	2.12	255	*i* P	Pn	17 49 06.6	+2.0
DENT	Denizli	2.13	233	*e*PN	Pn	17 49 04.8	+0.1
DNZL	Cakiroluk	2.16	231	*i* P	Pn	17 49 08.8	+3.6
DNZL				*i* S	Sn	17 49 44.6	+12
GOLH	Golhisar	2.22	215	*i* P	Pn	17 49 06.0	-0.1
GOLH				*i* S	Sn	17 49 44.0	+10
ELDT	Eldivan	2.25	50	*i* P	Pn	17 49 06.3	0.0
BADT	Buyukada	2.38	319	*e*PN	Pn	17 49 08.5	+0.2
SAFT	Safranbolu	2.46	28	*e*PN	Pn	17 49 10.4	+0.9
KCT	Karacabey	2.48	300	*e*PN	Pn	17 49 09.9	+0.2
ELL	Elmali	2.52	204	*e*PN	Pn	17 49 10.2	-0.1
BTOK	Tokmak	2.53	287	*i* P	Pn	17 49 16.2	+5.8
BTOK				*i* S	Sn	17 49 53.8	+12
CDAG	Cicekdag	2.54	76	*i* P	Pn	17 49 10.6	-0.1
CDAG				*i* S	Sn	17 49 39.1	-3.5
ISK	Istanbul-Kandi	2.57	322	*e*PN	Pn	17 49 11.4	+0.4
BALB	Balikesir	2.62	284	*e*PN	Pn	17 49 11.8	+0.2
AKS	Akhisar	2.62	267	*e*PN	Pn	17 49 11.8	0.0
ERMK	Ermenek	2.79	150	*i* P	Pn	17 49 19.6	+5.5
ERMK				*i* S	Sn	17 50 00.0	+11
AVNT	Avonos	2.89	95	*i* P	Pn	17 49 18.6	+3.0
AVNT				*i* S	Sn	17 49 54.6	+3.3
CORM	Corum	2.89	66	*e*PN	Pn	17 49 16.6	+1.0
FETY	Fethiye	2.94	215	*e*PN	Pn	17 49 16.4	+0.2
TOS	Tosya	2.94	47	*e*PN	Pn	17 49 17.3	+1.0
YER	Yerkesik	2.98	231	*e*PN	Pn	17 49 16.6	-0.3
BALT	Daday	2.99	34	*i* P	Pn	17 49 16.8	-0.2
AKAS	Kas	3.09	204	*i* P	Pn	17 49 19.5	+1.1
KDAG	Bornova	3.12	259	*i* P	Pn	17 49 26.0	+7.1
IZM	Izmir	3.13	259	*e*PN	Pn	17 49 18.9	-0.1
MRMT	Marmara Adasi	3.15	300	*e*PN	Pn	17 49 19.9	+0.6
MERS	Mersin	3.44	129	*e*PN	Pn	17 49 24.0	+0.6
KOZT	Kozan	3.99	112	*e*PN	Pn	17 49 32.2	+1.0
CSS	Prodhromos	4.45	156	Pn	Pn	17 49 34.6	-3.1
CSS	Prodhromos	4.45	156	Pn	Pn	17 49 34.6	-3.1
JMB	Yambol	4.87	316	*e*P	Pn	17 49 43.0	-0.6
DIM	Dimitrovgrad	5.23	307	*e*P	Pn	17 49 47.0	-1.7
RZN	Rozhen	5.58	300	*e*P	Pn	17 49 53.0	-0.7
PLD	Plovdiv	5.78	304	*e*P	Pn	17 49 55.0	-1.6
HARR	Harsova	6.12	338	⇑P	Pn	17 50 00.1	-1.2
HARR	Harsova	6.12	338	⇑P	Pn	17 50 00.1	-1.2
MMB	Musomiste	6.22	296	*e*P	Pn	17 50 01.0	-1.8
IDI	Anoyia	6.27	235	Pn	Pn	17 50 05.1	+1.6
	1.0nm,0.3s,baz=50,slow=15,SNR=9.1						
CFR	Carcaliu	6.51	341	⇑P	Pn	17 50 04.9	-1.9
CFR	Carcaliu	6.51	341	⇑P	Pn	17 50 04.9	-2.0
KKB	Krupnik	6.77	297	*e*P	Pn	17 50 10.0	-0.5
VTS	Vitosha	6.99	303	*e*P	Pn	17 50 12.0	-1.6
MLR	Muntele Rosu	7.50	331	Pn	Pn	17 50 21.8	+1.1
	0.8nm,0.3s,baz=98,slow=7.1,SNR=9.6						
MLR				Sn	Sn	17 51 45.7	-1.6
	0.3nm,0.3s,baz=39,slow=23,SNR=3.5						
MLR	Muntele Rosu	7.50	331	P	Pn	17 50 21.8	+1.1
MLR						17 51 45.7	
MLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRI	Vrincioaia	7.55	336	⇑P	Pn	17 50 21.8	+0.4
VRI	Vrincioaia	7.55	336	⇑P	Pn	17 50 21.8	+0.4
BURAR	Bucovina Array	9.58	335	⇓P	P	17 50 50.1	+0.5
BURAR	Bucovina Array	9.58	335	⇓P	P	17 50 50.1	+0.5
KIV	Kislovodsk	9.92	57	*i* P	P	17 50 50.8	-3.5
GNI	Garni	10.53	80	LR	LR	17 55 29.8	
	comp=Z,109nm,18.1s,baz=339,slow=40						
AKASG	Malin Array Be	11.71	354	Pn	P	17 51 16.0	-2.8
	comp=Z,1.1nm,0.3s,baz=179,slow=11,SNR=7.4						
AKASG				Sn	S	17 53 23.2	-8.1
	comp=Z,0.6nm,0.3s,baz=181,slow=22,SNR=4.2						
AKASG	Malin Array Be	11.71	354	Pn	P	17 51 16.0	-2.8
AKASG				Sn	S	17 53 23.2	-8.1
AKASG	Malin Array Be	11.71	354	P	P	17 51 16.0	-2.8
AKASG						17 53 23.3	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC	Vranov	14.61	319	LR	LR	17 57 11.1	
	comp=Z,63nm,20.3s,baz=28,slow=36						
ORR	Orenburg	20.68	45	*e*P	P	17 53 10.1	-1.3
ORR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKTK	Aktyubinsk	22.07	50	P	P	17 53 25.9	+0.4
	comp=Z,3.0nm,0.6s,mb3.9						
AKTO	Aktyubinsk	22.07	50	P	P	17 53 25.9	+0.4
	comp=Z,2.8nm,0.6s,mb3.9,baz=250,slow=11,SNR=13						
AKTO	Aktyubinsk	22.07	50	P	P	17 53 25.9	+0.4
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
FINES	FINESS Array B	22.62	354	P	P	17 53 31.3	+0.5
	comp=Z,1.9nm,0.8s,mb3.6,baz=158,slow=15,SNR=4.4						
FINES	FINESS Array B	22.62	354	P	P	17 53 31.3	+0.5
FINES	FINESS Array B	22.62	354	P	P	17 53 31.3	+0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	25.25	337	LR	LR	18 05 36.3	
	comp=Z,24nm,18.9s,MS2.7,baz=130,slow=41						
MKAR	Makanchi Array	37.65	61	P	P	17 55 45.5	-0.2
	comp=Z,1.7nm,0.7s,mb3.9,baz=284,slow=6.2,SNR=21						
MKAR	Makanchi Array	37.65	61	P	P	17 55 45.5	-0.1
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAL	Zalesovo	38.82	49	P	P	17 55 54.3	-1.1
	comp=Z,0.8nm,0.5s,mb3.7,baz=187,slow=8.4,SNR=3.2						
ZAL	Zalesovo	38.82	49	P	P	17 55 54.3	-1.1
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM	Songino Array	53.30	54	P	P	17 57 48.7	-1.4
	comp=Z,0.6nm,0.8s,mb3.6,baz=292,slow=6.9,SNR=4.9						
SONM	Songino Array	53.30	54	P	P	17 57 48.7	-1.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BDFB	Brasilia	91.57	251	LR	LR	18 43 29.4	
	comp=Z,74nm,19.1s,MS4.1,baz=15,slow=36						

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*HLW **05** 17:57:26.9,34.93N×25.64E,h15^{km},Mb3.3*
*ATH **05** 17:57:27.1,34.73N×26.00E,h39^{km}±3^{km},MD3.3/3*
*NEIC **05** 17:57:27.1,34.73N×26.00E,h39^{km},MD3.3(ATH),After ATH.*
*CSEM **05** 17:57:29.4±0.3,34.66N×25.87E,h25^{km},MD3.3,Error ellipse: s-maj=13.1km s-min=4.9km az=62.0*
ISC 05 17:57:28.9±1.2,**34.76N**±0.07×**25.9E**±0.1,**h30**^{km}±9^{km},**n11, σ0^{s}77**/14,**3D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	Khrisi	0.23	301	*e*PB	Pb	17 57 35.7	+0.3
NPS	Neapolis	0.57	333	*e*PN	Pn	17 57 40.0	-0.9
NPS				*e*SN	Sn	17 57 48.9	-0.3
GVD	Gavdhos	1.52	274	*e*PN	Pn	17 57 54.0	-0.5
VAM	Vamos	1.56	295	*e*PN	Pn	17 57 55.0	-0.1
VAM				*e*SN	Sn	17 58 16.0	+1.5
SLUM		3.31	191	⇓P	Pn	17 58 20.0	0.0
HMAT	Matruh	3.78	165	⇓P	Pn	17 58 27.6	+0.8
HBRG	Burj al ‘Arab	5.32	141	P	Pn	17 58 49.6	+1.2
HBRG				S	Sn	17 59 49.9	+0.4
SWA1		5.48	182	⇓*e*P	Pn	17 58 49.9	-0.9
SWA2		5.51	184	P	Pn	17 58 50.4	-0.9
HFRF	Wahat Farafira	7.86	164	P	Pn	17 59 23.5	-0.7
NVLJ	Novalja	12.97	322	*i* Pn	P	18 00 38.5	+4.6

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*BJI **05** 18:18:57.6,37.24N×71.49E,h21^{km},ML4.4,Ms4.0*
*NEIC **05** 18:18:58.0±0.5,37.01N×71.55E,h10^{km},mb4.1/4,Error ellipse: s-maj=11.8km s-min=5.6km az=46.0*
*IDC **05** 18:19:15.4±5.3,37.69N×72.00E,h150^{km}±47^{km},mb3.5/14, mb1 3.7/18,mb1mx3.6/26,mbtmp4.0/18,MS3.6/1, Ms1 3.6/1,ms1mx2.8/17,Error ellipse: s-maj=31.9km s-min=15.7km az=8.0*
*MOS **05** 18:19:16.6±1.1,37.84N×72.03E,h173^{km},mb3.9/12,Error ellipse: s-maj=16.9km s-min=8.1km az=103.2*
*NNC **05** 18:19:17.6±4.7,37.87N×71.80E,h196^{km}±42^{km},mpv4.7, Error ellipse: s-maj=43.9km s-min=28.9km az=24.0*
ISC 05 18:19:09.1±0.3,**37.15N**±0.02×**72.33E**±0.05,**h157**^{km}±5^{km}, **n98,σ1^{s}33**/130,**mb3.7**/18,**11C-7D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	3.34	186	⇑P	P	18 20 02.8	+1.0
CEP				S	S	18 20 41.0	-1.2
CHCP	Chirah Chowk	3.57	167	⇑P	P	18 20 07.9	+3.1
KSH	Kashi	3.71	49	PG	P	18 20 10.0	+3.4
KSH				S	S	18 20 54.8	+4.0
KSH				Smax			
	comp=N,720nm,0.4s						
KSH				Smax			
	comp=E,580nm,0.6s						
THW	Thamme Wali	4.38	186	⇓P	P	18 20 15.5	+0.2
SBDP	Sheikh Budin	5.00	195	P	P	18 20 23.9	+0.4
AML	Almayashu	5.08	12	P	P	18 20 24.6	0.0
	SNR=314						
SARP	Sargodha	5.23	177	⇓P	P	18 20 26.5	0.0
SARP				S	S	18 21 24.0	-2.4
UCH	Uchtor	5.34	18	P	P	18 20 28.7	+0.8
	SNR=107						
KZA	Kyzart	5.41	24	P	P	18 20 29.3	+0.4
	SNR=20						
THN	Thein Dam	5.47	148	*e*P	P	18 20 32.0	+2.3
THN				*e*S	S	18 21 33.5	+1.3
DLH	Dalhousie	5.49	146	*e*P	P	18 20 32.0	+2.1
DLH				*e*S	S	18 21 33.0	+0.4
EKS2	Erkin-Say	5.61	11	P	P	18 20 31.8	+0.3
	SNR=76						
DRP	Derazinda	5.67	199	⇓P	P	18 20 32.4	0.0
AAK	Ala-Archa	5.72	16	P	P	18 20 33.9	+0.9
	SNR=121						
AAK	Ala-Archa	5.72	16	⇑P	P	18 20 33.7	+0.7
	comp=E,52nm,0.6s						
AAK				⇓S	S	18 21 36.0	-2.1
	comp=E,104nm,0.8s						
AAK	Ala-Archa	5.72	16	⇑*e*Pn	P	18 20 32.9	-0.1
	comp=E,54nm,0.5s						
AAK				S	S	18 21 36.0	-2.1
KBK	Karagaybulak	5.85	19	P	P	18 20 35.9	+1.1
	SNR=30						
ULHL	Ulahol	5.91	29	P	P	18 20 36.4	+0.8
	SNR=22						
KK31	Karatay Array	6.10	347	⇓P	P	18 20 36.1	-2.0
	comp=E,36nm,0.3s,baz=172,slow=12,SNR=1336						
KK31				⇑S	S	18 21 38.6	-8.7
	comp=E,46nm,0.5s,baz=187,slow=26,SNR=15						
KKAR	Karatay Array	6.10	347	*e*PN	P	18 20 36.0	-2.1
KKAR				S	S	18 21 38.6	-8.7
KKAR				pmax	pmax		
	comp=Z,19nm,0.3s						
KKAR				smax			
	comp=Z,7.0nm,0.2s						
CHMS	Chumysh	6.13	17	P	P	18 20 38.9	+0.5
	SNR=80						
TKM2	Tokmak 2	6.28	23	P	P	18 20 42.1	+1.6
	SNR=27						
USP	Ospenovka	6.33	15	P	P	18 20 40.8	-0.3
	SNR=22						
SDNR	Sundarnagar	6.82	144	*e*P	P	18 20 49.0	+1.2
SDNR				*e*S	S	18 22 01.8	-2.7
SMLA	Simla	7.22	145	*e*P	P	18 20 53.2	+0.1
SMLA				*e*S	S	18 22 10.0	-4.1
KLP	Kalpa	7.44	137	*e*P	P	18 20 57.3	+1.2
KLP				*e*P		18 20 58.3	
KLP				*e*S	S	18 22 17.0	-2.3
KLP				AML	AML	18 22 25.3	
	comp=N,616nm,0.5s						
KLP				AML	AML	18 22 25.7	
	comp=E,498nm,0.6s						
JOSI	Joshimath	8.91	136	*e*x	x	18 20 33.9	
NDI	New Delhi	9.39	153	*e*P	P	18 21 22.5	+0.7
NDI				*e*S	S	18 23 02.0	-3.6
NDI				AML	AML	18 23 04.6	
	comp=N,78nm,0.3s						
NDI				AML	AML	18 23 08.3	
	comp=E,106nm,0.5s						
KHET	Khetri	9.52	161	*e*P	P	18 21 21.8	-1.7
AYAN	Aya Nagar	9.54	154	*e*P	P	18 21 24.1	+0.3
AYAN				*e*P		18 21 24.3	
AYAN				*e*S	S	18 23 02.1	-7.1
AYAN				*e*S	S	18 23 04.5	-4.7
KUDL	Kundal	9.64	158	*e*P	P	18 21 24.5	-0.6
KUDL				*e*P		18 21 25.2	
KUDL				*e*S	S	18 23 07.4	-4.3
SONA	Sohna	9.74	154	*e*P	P	18 21 24.6	-1.8
SONA				*e*P		18 21 25.6	
SONA				*e*S	S	18 23 09.7	-4.2
AJM	Ajmer	10.82	169	*e*P	P	18 21 41.1	+0.5
MK31	Makanchi Array	12.14	34	P	P	18 21 58.5	+0.8
	comp=E,3.4nm,0.6s,baz=216,slow=13,SNR=25						
MKAR	Makanchi Array	12.14	34	P	P	18 21 58.7	+1.0
	comp=E,0.2nm,0.3s,baz=219,slow=14,SNR=16						
MKAR	Makanchi Array	12.14	34	P	P	18 21 58.7	+1.0
KOLN	Koldanda	13.34	131	*e*Pn	P	18 22 14.2	+1.1
KOLN				*e*Sn	S	18 24 36.7	-1.4
	comp=E,25nm,0.4s						
GKN	Gorkha	13.81	128	*e*Pn	P	18 22 20.1	+0.9
GKN				*e*Sn	S	18 24 46.6	-2.4
	comp=E,54nm,0.3s						
BHJ	Bhuj	14.04	190	*e*P	P	18 22 21.2	-0.9
KKN	Kakani	14.36	127	*e*Pn	P	18 22 26.3	+0.1
KKN				*e*Sn	S	18 24 59.3	-2.4
DMN	Daman	14.38	128	*e*Pn	P	18 22 26.7	+0.3
DMN				*e*Sn	S	18 25 01.4	-0.6
PKI	Pulchoki	14.60	127	*e*Pn	P	18 22 30.2	+1.0
PKI				*e*Sn	S	18 25 05.3	-1.7
	comp=E,28nm,0.4s						
GUN	Gumba	14.67	125	*e*Pn	P	18 22 30.6	+0.5
AB31	Akbulak array	15.07	327	⇑P	P	18 22 31.3	-3.7
	comp=E,2.3nm,0.3s,baz=141,slow=12,SNR=151						
AB31				S	S	18 25 03.5	-14
	comp=E,12nm,0.6s,baz=150,slow=22,SNR=13						
AB31	Akbulak array	15.07	327	⇑P	P	18 22 31.3	-3.7
	comp=E,2.3nm,0.3s						
AB31				S	S	18 25 03.5	-14
AB31	Akbulak array	15.07	327	*e*P	P	18 22 31.2	-3.7
AB31				*e*S	S	18 25 03.5	-14
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AB31				smax			
	comp=Z,7.0nm,0.5s						
BVA0	Borovoye Array	15.93	356	P	P	18 22 43.7	-1.9
	comp=Z,0.3nm,0.6s,baz=166,slow=13,SNR=22						
BVA0				⇑S	S	18 25 31.3	-5.7
	comp=Z,1.0nm,1.4s,baz=164,slow=24,SNR=5.3						
BVA0	Borovoye Array	15.93	356	P	P	18 22 43.7	-1.9
	comp=Z,0.3nm,0.6s						
BVA0				S	S	18 25 31.3	-5.7
BVA0	Borovoye Array	15.93	356	*e*P	P	18 22 43.6	-2.0
BVAR	Borovoye Array	15.93	356	P	P	18 22 43.4	-2.2
	comp=Z,0.7nm,0.3s,baz=156,slow=13,SNR=15						
BVAR				S	S	18 25 33.6	-3.4
	comp=Z,0.4nm,0.3s,baz=165,slow=23,SNR=5.7						
BVAR	Borovoye Array	15.93	356	P	P	18 22 43.4	-2.2
BVAR				S	S	18 25 33.6	-3.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	15.97	356	*e*P	P	18 22 43.9	-2.2
	comp=Z,1.6nm,0.6s						
BRVK				S	S	18 25 33.5	-4.5
AKTK	Aktyubinsk	16.78	327	⇓P	P	18 22 54.5	-1.6
AKTK				S	S	18 25 49.1	-7.0
AKTO	Aktyubinsk	16.78	327	⇓P	P	18 22 54.5	-1.6
	comp=Z,1.6nm,0.8s						
AKTO				⇑S	S	18 25 49.1	-7.0
	comp=Z,1.9nm,0.9s						
AKTO	Aktyubinsk	16.78	327	P	P	18 22 54.6	-1.5
	comp=Z,1.0nm,0.3s,baz=129,slow=14,SNR=21						
AKTO				S	S	18 25 52.7	-3.4
	comp=Z,1.0nm,0.3s,baz=25,slow=19,SNR=9.4						
AKTO	Aktyubinsk	16.78	327	P	P	18 22 54.6	-1.5
AKTO				S	S	18 25 52.7	-3.4
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
LSA	Lhasa	17.36	110	P	P	18 23 08.2	+5.0
LSA	Lhasa	17.36	110	*e*P	P	18 23 07.8	+4.6
	comp=Z,17nm,1.0s						
BOK	Bokaro	17.69	135	*e*P	P	18 23 08.4	+1.4
POO	Poona	18.60	175	*e*x	x	18 27 19.0	
ZAL	Zalesovo	18.87	23	P	P	18 23 20.6	+1.1
	comp=Z,2.8nm,0.3s,baz=249,slow=6.4,SNR=21						
ZAL	Zalesovo	18.87	23	P	P	18 23 20.6	+1.1
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ORR	Orenburg	19.08	325	⇑*i*P	P	18 23 22.9	+1.2
ORR				*e*		18 26 42.5	
ORR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ORR				smax			
	comp=N,10.0nm,0.6s						
NVS	Novosibirsk	19.20	19	*e*P	P	18 23 21.9	-1.0
SHL	Shillong	20.26	119	*e*P	P	18 23 39.0	+5.0
ARU	Arti	21.39	339	*e*P	P	18 23 44.5	-0.4
	comp=N,7.7nm,0.9s,mb4.0						
SONM	Songino Array	27.09	56	P	P	18 24 43.1	+4.2
	comp=N,0.6nm,0.8s,mb3.2,baz=262,slow=9.6,SNR=4.7						
SONM				pP	pP	18 25 14.3	+3.1
	comp=N,0.7nm,0.7s,baz=257,slow=11,SNR=5.5						
SONM	Songino Array	27.09	56	P	P	18 24 43.1	+4.2
SONM				*PP	pP	18 25 14.3	+3.1
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	Keskin Array B	30.26	287	P	P	18 25 08.2	+0.9
	comp=Z,0.6nm,0.5s,mb3.6,baz=92,slow=7.6,SNR=10						
BRTR	Keskin Array B	30.26	287	P	P	18 25 08.2	+0.9
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	33.38	308	P	P	18 25 35.0	+0.7
	comp=Z,0.9nm,0.4s,mb3.9,baz=108,slow=9.0,SNR=5.2						
AKASG	Malin Array Be	33.38	308	P	P	18 25 35.0	+0.7
AKASG	Malin Array Be	33.38	308	P	P	18 25 35.0	+0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MLR	Muntele Rosu	35.40	298	P	P	18 25 54.0	+2.5
	comp=Z,3.5nm,0.8s,mb4.0,baz=84,slow=2.1,SNR=5.1						
MLR	Muntele Rosu	35.40	298	P	P	18 25 54.0	+2.5
MLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
JOF	Joensuu	35.84	329	*e*p	P	18 25 55.4	+0.4
	comp=Z,1.7nm,0.5s,mb3.9						
JOF	Joensuu	35.84	329	*e*P	P	18 25 55.4	+0.4
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
KWP	Kalwaria	37.49	306	*e*P	P	18 26 07.4	-1.6
	comp=Z,64nm,0.5s						
FINES	FINESS Array B	37.55	325	P	P	18 26 10.0	+0.7
	comp=Z,1.0nm,0.4s,mb3.8,baz=117,slow=9.7,SNR=15						
FINES	FINESS Array B	37.55	325	P	P	18 26 10.0	+0.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	40.95	337	P	P	18 26 38.7	+1.3
	comp=Z,5.7nm,1.0s,mb4.2,baz=117,slow=8.9,SNR=12						
ARCES	ARCESS Array B	40.95	337	P	P	18 26 38.7	+1.3
ARCES	ARCESS Array B	40.95	337	P	P	18 26 38.7	+1.3
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HFS	Hagfors	43.22	321	P	P	18 26 56.6	+0.8
	comp=Z,1.9nm,0.4s,mb4.0,baz=98,slow=10,SNR=13						
HFS	Hagfors	43.22	321	P	P	18 26 56.6	+0.8
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GERES	GERESS Array B	43.43	305	P	P	18 26 59.0	+1.3
	comp=Z,0.2nm,0.5s,mb3.0,baz=90,slow=5.9,SNR=2.6						
GERES				LR	LR	18 47 12.1	
	comp=Z,77nm,19.9s,baz=176,slow=39						
NB2	NORSAR Subarra	44.51	323	P	P	18 27 06.4	+0.3
	comp=Z,2.5nm,0.9s,mb3.8,baz=94,slow=7.9						
NOA	NORSAR Array B	44.51	323	P	P	18 27 06.7	+0.6
	comp=Z,1.2nm,0.7s,mb3.6,baz=94,slow=7.6,SNR=4.5						
NOA	NORSAR Array B	44.51	323	P	P	18 27 06.7	+0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NAO	NORSAR Subarra	44.68	322	P	P	18 27 06.4	-1.1
	comp=Z,2.5nm,0.9s,mb3.8						
TIXI	Tiksi	44.77	22	⇑*i*P	P	18 27 08.0	-0.1
TIXI				*e*	pP	18 27 42.3	-0.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
DAVOX	Davos	46.30	303	P	P	18 27 21.1	+0.6
	comp=Z,1.4nm,0.4s,mb3.9,baz=338,slow=11,SNR=3.6						
EKA	Eskdalemuir Ar	52.56	316	P	P	18 28 07.9	-0.3
	comp=Z,1.1nm,0.9s,mb3.6,baz=63,slow=7.9,SNR=3.6						
EKA	Eskdalemuir Ar	52.56	316	P	P	18 28 07.9	-0.3
EKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ESDC	Sonseca Array	58.09	298	P	P	18 28 48.6	+0.4
	comp=Z,0.5nm,0.4s,mb3.7,baz=57,slow=7.3,SNR=9.1						
YKA	Yellowknife Ar	80.54	3	P	P	18 31 06.8	+2.1
	comp=Z,0.5nm,0.4s,mb3.5,baz=350,slow=5.5,SNR=4.2						
YKA	Yellowknife Ar	80.54	3	P	P	18 31 06.8	+2.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	Warramunga Arr	81.44	123	P	P	18 31 19.1	+8.8
	comp=Z,0.2nm,0.4s,mb3.1,baz=324,slow=5.0,SNR=4.7						

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*ISK **05** 19:06:12.4,38.23N×26.77E,h14^{km},MD3.1*
*NEIC **05** 19:06:12.0,38.24N×26.76E,h14^{km},MD3.2(ATH), MD3.1(ISK),After ISK.*
*ATH **05** 19:06:13.1,38.21N×26.68E,h29^{km}±4^{km},MD3.2/3*
*CSEM **05** 19:06:13.5±0.1,38.26N×26.86E,h20^{km},MD3.1,Error ellipse: s-maj=2.8km s-min=1.7km az=94.0*
ISC 05 19:06:12.7±0.6,**38.24N**±0.03×**26.74E**±0.04,**h8**^{km}±4^{km}, **n25,σ1^{s}08**/39,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.17	319	*i* P	Pg	19 06 16.6	+0.3
URLA				*i* S	Sg	19 06 19.7	+1.0
BLCB	Balcova	0.28	58	PG	Pg	19 06 18.5	0.0
IZM	Izmir	0.45	68	PG	Pg	19 06 21.4	-0.3
IZM				SG	Sg	19 06 27.7	0.0
KDAG	Bornova	0.45	68	*i* P	Pg	19 06 20.7	-1.1
KDAG				*i* S	Sg	19 06 26.6	-1.2
SMG	Samos	0.53	171	*e*PN	Pg	19 06 23.9	+0.5
SMG				*e*SN	Sg	19 06 31.9	+1.4
AKS	Akhisar	1.06	52	PG	Pg	19 06 32.9	-1.0
AYDN	Tasoluk	1.07	122	*i* P	Pb	19 06 33.5	+0.4
AYDN				*i* S	Sb	19 06 47.4	+0.3
AYVA	Ayvalik	1.07	358	*i* P	Pb	19 06 33.9	+0.8
AYVA				*i* S	Sb	19 06 51.2	+4.1
PRK	Paraskevi	1.07	340	*e*PN	Pn	19 06 33.7	-0.3
PRK				*e*SN	Sn	19 06 48.9	-0.3
MLSB	Milas	1.25	138	*e*PN	Pn	19 06 35.8	-0.7
BODT	Bodrum	1.26	159	*e*PN	Pn	19 06 35.8	-0.8
BODT				*e*SN	Sn	19 06 53.4	-0.4
MANT	Manisa	1.46	79	*i* P	Pn	19 06 40.7	+1.3
MANT				*i* S	Sb	19 06 58.9	+0.7
APE	Apeiranthos	1.51	220	*e*PN	Pn	19 06 39.6	-0.6
APE	Apeiranthos	1.51	220	*e*PN	Pn	19 06 39.5	-0.7

DAT	Datca	1.65	156	ePN	Pn	19 06 41.4	-0.8
YER	Yerkesik	1.65	131	ePN	Pn	19 06 41.5	-0.7
BALB	Balikesir	1.66	32	ePN	Pn	19 06 41.8	-0.6
BTOK	Tokmak	1.83	33	i P	Pn	19 06 47.5	+2.7
BTOK				i S	Sn	19 07 07.9	-0.5
DENT	Denizli	1.88	104	ePN	Pn	19 06 44.4	-1.1
DNZL	Cakiroluk	1.91	106	eP	Pn	19 06 48.7	+2.8
DNZL				i S	Sn	19 07 10.4	0.0
LIA	Limnos Island	2.05	324	ePB	Pb	19 06 48.2	-1.7
GDZ	Gediz	2.31	68	i P	Pn	19 06 55.3	+3.6
GDZ				i S	Sn	19 07 24.8	+4.1
ULDT	Uludag	2.67	44	i P	Pn	19 07 01.7	+4.9
ULDT				i S	Sn	19 07 33.7	+4.1
TKTP	Tekketepe	2.83	93	i P	Pn	19 07 07.1	+7.9
TKTP				i S	Sn	19 07 47.6	+14
RDO	Rodhopi	3.05	343	ePN	Pn	19 07 02.0	-0.2

DHMR 05 19:18:07.5±1.7**, 11.95N**×**43.73E, h5**^{km}±17^{km}**, ML4.0, 2C-1D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	At Turbah	1.33	16	⇑iP	Pb	19 18 32.6	+0.1
TRBA				i S	Sb	19 18 51.2	+1.5
TRBA				AML	AML	19 18 56.1	
	comp=Z,2μm,0.5s						
UDYN	Al ‘Udayn	2.02	7	⇑iP	Pn	19 18 44.1	+1.5
UDYN				i S	Sn	19 19 10.8	+2.4
UDYN				AML	AML	19 19 17.8	
	comp=N,2μm,0.5s						
LBOS		2.42	38	i P	Pn	19 18 49.3	+1.0
LBOS				i S	Sn	19 19 23.9	+5.3
DHBB	Dhamar BB	2.68	14	⇓iP	Pn	19 18 54.7	+2.6
DHBB				i S	Sn	19 19 30.8	+5.4
BDHA	Al Bayda’	2.69	41	i P	Pn	19 18 53.4	+1.2
BDHA				i S	Sn	19 19 30.7	+5.1
BDHA				AML	AML	19 19 38.8	
	comp=N,1μm,0.5s						

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*ISK **05** 19:35:52.4, 38.22N×26.83E, h14^{km}, MD3.1*
*ATH **05** 19:35:52.1, 38.21N×26.68E, h28^{km}±6^{km}, MD3.3/3*
*NEIC **05** 19:35:52.0, 38.22N×26.83E, h13^{km}, MD3.3(ATH), MD3.1(ISK), After ISK.*
*CSEM **05** 19:35:52.6±0.1, 38.22N×26.85E, h15^{km}, MD3.1, Error ellipse: s-maj=2.3km s-min=1.2km az=87.0*
ISC 05 19:35:52.0±0.5**, 38.23N**±0.02×**26.76E**±0.04**, h8**^{km}±4^{km}**, n37, σ0^{s}91**/51**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.18	315	i P	Pg	19 35 55.7	-0.2
URLA				i S	Sg	19 35 59.1	+0.6
BLCB	Balcova	0.27	56	i PG	Pg	19 35 57.7	+0.1
IZM	Izmir	0.43	67	i PG	Pg	19 36 00.9	+0.2
IZM				i SG	Sg	19 36 06.6	+0.1
KDAG	Bornova	0.43	67	i P	Pg	19 35 59.9	-1.0
KDAG				i S	Sg	19 36 05.8	-0.9
SMG	Samos	0.53	173	ePN	Pg	19 36 03.0	+0.4
SMG				eSN	Sg	19 36 10.6	+0.9
AKS	Akhisar	1.05	52	PG	Pg	19 36 12.5	-0.5
AYDN	Tasoluk	1.05	122	i P	Pb	19 36 12.7	+0.6
AYDN				i S	Sb	19 36 26.7	+0.8
AYVA	Ayvalik	1.07	357	i P	Pb	19 36 12.8	+0.3
AYVA				i S	Sb	19 36 30.9	+4.3
PRK	Paraskevi	1.08	340	ePN	Pn	19 36 12.8	-0.6
PRK				eSN	Sn	19 36 27.9	-0.8
MLSB	Milas	1.24	139	ePN	Pn	19 36 15.3	-0.3
BODT	Bodrum	1.25	159	ePN	Pn	19 36 15.4	-0.4
BODT				eSN	Sn	19 36 32.6	-0.4
MANT	Manisa	1.44	79	i P	Pn	19 36 19.8	+1.3
APE	Apeiranthos	1.52	220	ePN	Pn	19 36 20.0	+0.4
EZN	Ezine	1.63	348	ePN	Pn	19 36 21.9	+0.7
YER	Yerkesik	1.63	132	ePN	Pn	19 36 21.2	-0.1
DAT	Datca	1.64	156	ePN	Pn	19 36 21.0	-0.4
BALB	Balikesir	1.66	32	ePN	Pn	19 36 21.7	+0.1
BTOK	Tokmak	1.82	33	i P	Pn	19 36 26.3	+2.3
BTOK				i S	Sn	19 36 49.7	+2.2
DENT	Denizli	1.86	104	ePN	Pn	19 36 24.2	-0.4
DNZL	Cakiroluk	1.89	106	i P	Pn	19 36 26.7	+1.7
DNZL				i S	Sn	19 36 47.6	-1.6
DST	Dursunbey	2.00	46	ePN	Pn	19 36 26.3	-0.3
LIA	Limnos Island	2.07	324	ePB	Pb	19 36 27.2	-2.2
DALT	Dalyan (Mudla)	2.09	134	ePN	Pn	19 36 27.5	-0.4
KHL	Karahalli	2.18	87	ePN	Pn	19 36 28.5	-0.6
EDC	Edincik	2.28	22	ePN	Pn	19 36 30.4	-0.2
GDZ	Gediz	2.30	67	i P	Pn	19 36 34.3	+3.4
GDZ				i S	Sn	19 37 04.6	+5.0
BNT	Bandirma	2.31	23	ePN	Pn	19 36 31.0	+0.1
GOLH	Golhisar	2.44	113	i P	Pn	19 36 33.1	+0.3
GOLH				i S	Sn	19 37 10.0	+6.9
FETY	Fethiye	2.44	130	ePN	Pn	19 36 32.1	-0.8
ORLT	Orhaneli	2.46	42	ePN	Pn	19 36 32.9	-0.2
MFT	Murefte	2.58	9	ePN	Pn	19 36 35.6	+0.7
ULDT	Uludag	2.66	43	i P	Pn	19 36 41.6	+5.6
ULDT				i S	Sn	19 37 16.7	+8.0
TKTP	Tekketepe	2.82	93	eP	Pn	19 36 38.1	-0.1
RDO	Rodhopi	3.06	342	ePN	Pn	19 36 41.1	-0.6
YLV	Yalova	3.09	40	ePN	Pn	19 36 42.1	0.0
ESKT	Eskisehir	3.44	67	i P	Pn	19 36 56.1	+9.0
ESKT				i S	Sn	19 37 45.6	+17
BR131	Keskin Array S	5.57	72	ePn	Pn	19 37 14.2	-3.0
	2.0nm,0.8s						
BR131				epPn		19 37 18.1	

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*IDC **05** 20:03:06.8±2.8, 57.11N×157.27W, h80^{km}±24^{km}, mb3.5/9, mb1 3.8/13, mb1mx3.6/24, mbtmp3.9/13, Error ellipse: s-maj=27.6km s-min=19.8km az=3.0*
*BJI **05** 20:03:07.1, 56.70N×157.20W, h70^{km}, mB4.7, mb4.3, Ms4.2, Msz4.0*
*NEIC **05** 20:03:07.1, 56.69N×157.21W, h70^{km}, MG3.8(AEIC), After AEIC.*
ISC 05 20:03:04.7±0.4**, 56.75N**±0.07×**157.29W**±0.09**, h92**^{km}±3^{km}**, n55, σ1^{s}00**/66**, mb3.7**/10**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANPK	Aniakchak Peak	0.47	281	P	P	20 03 19.6	+0.1
ANPK				S	S	20 03 29.7	-1.0
ANPB	Aniakchak Plen	0.55	276	P	P	20 03 20.1	-0.1
ANPB				S	S	20 03 30.3	-1.5
KJL	Kejulik	1.60	35	P	P	20 03 32.9	+0.6
CAHL	Cahill	1.69	39	P	P	20 03 34.0	+0.6
CAHL				S	S	20 03 54.5	-0.1
CNTC	Contact Creek	1.70	26	P	P	20 03 34.2	+0.7
CNTC				S	S	20 03 55.4	+0.7
ANCK	Angle Creek	1.75	33	P	P	20 03 34.9	+0.8
ACHA	Angle Creek He	1.81	35	P	P	20 03 35.8	+0.9
ACHA				S	S	20 03 58.4	+1.2
MGLS	Mageik LS	1.81	35	P	P	20 03 35.3	+0.4
MGLS				S	S	20 03 57.3	+0.1
KABR	Katmai Barrier	1.87	41	P	P	20 03 36.2	+0.6
KABR				S	S	20 03 59.3	+0.7
KAIC	Katmai Ikaglui	2.12	34	P	P	20 03 39.9	+0.9
SDPT	Sand Point	2.27	233	P	P	20 03 41.1	-0.1
KDAK	Kodiak Island	2.76	66	P	P	20 03 47.0	-1.0
	155nm,0.3s,baz=238,slow=7.1,SNR=2101						
KDAK				S	S	20 04 18.2	-2.1
	27nm,0.3s,baz=304,slow=20,SNR=9.4						
KDAK	Kodiak Island	2.76	66	P	P	20 03 47.1	-0.8
BLHA	Black Hill	2.87	250	P	P	20 03 49.3	-0.1
PVV	Pavlof Volcano	2.88	243	P	P	20 03 49.7	+0.1
PN6	Pavlof North-6	2.90	245	P	P	20 03 50.9	+0.9
PN7A	Pavlof North-7	2.95	245	P	P	20 03 51.1	+0.5
HAG	Hague Volcano	2.96	243	P	P	20 03 51.1	+0.3
DOL	Dolgoi Island	3.03	240	P	P	20 03 51.6	-0.2
DTNA	Dutton South F	3.22	242	P	P	20 03 54.3	0.0
AUI	Augustine Isla	3.31	37	P	P	20 03 56.3	+0.8
AUH	Augustine H	3.32	36	P	P	20 03 56.8	+1.0
AGU	Augustine-Summ	3.32	36	P	P	20 03 56.9	+1.1
AUP	Augustine Pinn	3.33	37	P	P	20 03 56.8	+1.0
SVW2	Sparrevohn	4.45	11	P	P	20 04 11.5	+0.3
SLKM	Skilak Lake	5.27	41	eP	P	20 04 21.8	-0.6
RC01	Rabbit Creek A	5.85	39	P	P	20 04 29.8	-0.5
UNV	Unalaska Valle	6.01	245	eP	P	20 04 31.5	-1.1
VLZ	Valdez	7.17	48	P	P	20 04 47.3	-1.3
DIV	Divide	7.40	49	P	P	20 04 50.2	-1.5
MCK	McKinley	8.14	27	P	P	20 05 00.6	-1.2
IM3	Indian Mountai	9.42	9	P	P	20 05 18.2	-1.0
ILAR	Eielson Array	9.51	28	P	P	20 05 17.1	-3.0
	1.2nm,0.3s,baz=211,slow=13,SNR=78						
ILAR				S	S	20 06 58.1	-7.8
	0.9nm,0.3s,baz=213,slow=23,SNR=7.8						
PNL	Peninsula	9.88	65	P	P	20 05 23.7	-1.5
DAWY	Dawson	11.45	43	eP	P	20 05 45.6	-0.7
DLBC	Dease Lake	14.67	72	P	P	20 06 29.4	+1.1
	0.6nm,0.3s,baz=238,slow=13,SNR=4.3						
DLBC	Dease Lake	14.67	72	P	P	20 06 29.4	+1.1
INK	Inuvik	15.80	33	P	P	20 06 40.5	-2.1
	0.4nm,0.3s,baz=216,slow=13,SNR=13						
INK				S	S	20 09 41.0	+6.3
	0.1nm,0.3s,baz=242,slow=32,SNR=10						
INK	Inuvik	15.80	33	P	P	20 06 40.5	-2.1
INK				S	S	20 09 41.0	+6.3
FX1	Attu Island--F	17.39	270	P	P	20 07 03.6	+1.2
	1.4nm,0.3s,baz=121,slow=19,SNR=7.9						
YKA	Yellowknife Ar	22.00	57	P	P	20 07 52.5	+0.7
	0.7nm,0.6s,mb3.2,baz=271,slow=11,SNR=4.6						
YKA	Yellowknife Ar	22.00	57	P	P	20 07 52.5	+0.7
NVAR	Mina Array Bea	31.47	109	P	P	20 09 21.7	+2.4
	0.2nm,0.6s,mb3.1,baz=311,slow=8.3,SNR=3.2						
MDJ	Mudanjiang	45.70	287	P	P	20 11 19.8	+2.2
MDJ				AMB	AMB		
	comp=Z,60nm,6.5s						
CN2	Changchun	48.43	289	eP	P	20 11 45.0	+6.0
ARCES	ARCESS Array B	54.00	359	P	P	20 12 19.6	-1.1
	comp=Z,2.2nm,0.8s,mb4.2,baz=17,slow=7.5,SNR=6.8						
SONM	Songino Array	54.84	305	P	P	20 12 27.3	+0.3
	comp=Z,1.1nm,0.6s,mb4.0,baz=45,slow=6.5,SNR=12						
SONM				PcP	PcP	20 13 29.2	+1.3
	comp=Z,1.2nm,0.6s,baz=66,slow=2.1,SNR=9.9						
KAF	Kangasniemi	61.44	358	ep	P	20 13 11.7	-1.2
	comp=Z,1.5nm,0.6s,mb4.2						
FINES	FINESS Array B	62.12	358	P	P	20 13 16.2	-1.2
	comp=Z,4.0nm,1.1s,mb4.4,baz=34,slow=6.9,SNR=8.4						
FINES	FINESS Array B	62.12	358	P	P	20 13 16.2	-1.2
MKAR	Makanchi Array	65.50	319	P	P	20 13 39.2	-0.4
	comp=Z,0.3nm,0.4s,mb3.5,baz=27,slow=5.5,SNR=8.7						
MKAR	Makanchi Array	65.50	319	P	P	20 13 39.2	-0.4
AKASG	Malin Array Be	72.78	356	P	P	20 14 23.6	-0.4
	comp=Z,1.0nm,0.4s,mb4.0,baz=6.5,slow=5.7,SNR=8.6						
GERES	GERESS Array B	74.51	6	P	P	20 14 33.9	-0.2
	comp=Z,0.3nm,0.6s,mb3.2,baz=326,slow=4.8,SNR=3.9						
BRTR	Keskin Array B	83.45	352	P	P	20 15 23.9	+1.3
	comp=Z,0.7nm,0.8s,mb3.5,baz=14,slow=2.6,SNR=4.7						

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*IDC **05** 20:27:51.8±1.4, 63.07N×150.94W, h91^{km}±15^{km}, mb3.8/8, mb1 3.9/12, mb1mx3.7/20, mbtmp4.1/12, Error ellipse: s-maj=21.4km s-min=10.2km az=113.0*
*NEIC **05** 20:27:54.9, 63.07N×150.60W, h110^{km}, MG3.8(AEIC), After AEIC.*
ISC 05 20:27:53.3±0.2**, 63.07N**±0.02×**150.56W**±0.06**, h125**^{km}±3^{km}**, n87, σ0^{s}93**/105**, mb4.2**/11**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.40	18	P	P	20 28 11.7	+0.2
TRF				S	S	20 28 24.5	-0.7
HUR	Hurricane	0.43	102	P	P	20 28 11.7	+0.1
KTH	Kantishna Hill	0.51	341	P	P	20 28 12.1	+0.1
KTH				S	S	20 28 24.9	-1.4
CUT	Chulitna	0.68	169	P	P	20 28 13.3	+0.1
RND	Reindeer	0.84	66	P	P	20 28 15.0	+0.5
MCK	McKinley	0.99	47	P	P	20 28 16.4	+0.5
MCK				S	S	20 28 32.8	-0.2
BWN	Browne	1.21	23	P	P	20 28 19.3	+1.0
DHY	Denali Highway	1.45	88	P	P	20 28 22.0	+1.1
GHO	Glory Hole Cre	1.51	149	P	P	20 28 22.2	+0.6
PMR	Palmer	1.63	155	P	P	20 28 22.9	-0.1
PMR				S	S	20 28 44.8	-0.8
SML	Sawmill	1.64	140	P	P	20 28 23.4	+0.3
NEA	Nenana	1.65	23	P	P	20 28 23.4	+0.1
NEA				S	S	20 28 44.2	-1.8
STLK	Strandline Lak	1.69	201	P	P	20 28 23.8	+0.1
STLK				S	S	20 28 46.3	-0.5
WRH	Wood River Hil	1.78	37	P	P	20 28 25.3	+0.5
NCG	North Capps Gl	1.83	205	P	P	20 28 25.6	+0.2
NCG				S	S	20 28 50.1	+0.3
FIB	Fire Island	1.92	174	P	P	20 28 28.0	+1.5
KNK	Knik Glacier	1.94	148	P	P	20 28 27.1	+0.4
SCM	Sheep Creek Mo	1.95	128	P	P	20 28 27.0	+0.2
SCM				S	S	20 28 51.5	-0.8
MLY	Manley	1.97	358	P	P	20 28 27.4	+0.4
CCB	Clear Creek Bu	2.00	36	P	P	20 28 27.8	+0.4
CCB				S	S	20 28 53.6	+0.4
CKN	Chakachatna No	2.01	203	P	P	20 28 28.4	+0.9
SPU	Mount Spurr	2.02	201	P	P	20 28 27.7	0.0
RC01	Rabbit Creek A	2.03	169	P	P	20 28 28.1	+0.3
RC01				S	S	20 28 53.5	-0.5
CKL	Chakachamna La	2.06	205	P	P	20 28 28.7	+0.4
HDA	Harding Lake	2.09	49	P	P	20 28 29.3	+0.7
MDM	Murphy Dome	2.15	27	P	P	20 28 29.8	+0.4
COLA	College	2.17	32	P	P	20 28 30.0	+0.3
THY	Trims Highway	2.20	79	P	P	20 28 32.2	+2.1
THY				S	S	20 28 59.5	+1.5
PAX	Paxson	2.32	90	P	P	20 28 32.7	+1.0
PAX				S	S	20 29 01.3	+0.5
ILAR	Eielson Array	2.35	42	P	P	20 28 32.2	+0.1
	59nm,0.3s,baz=219,slow=11,SNR=3952						
ILAR				S	S	20 28 59.9	-1.6
	18nm,0.3s,baz=175,slow=29,SNR=6.6						
NKA	Nikishka	2.36	188	P	P	20 28 34.6	+2.5
TT01	Tatalina	2.50	269	P	P	20 28 33.5	-0.6
SLKM	Skilak Lake	2.58	176	P	P	20 28 35.3	+0.2
SLKM				S	S	20 29 05.6	-1.1
TZL	Tazlina	2.59	111	P	P	20 28 36.2	+1.0
MPA	Moose Pass	2.66	167	P	P	20 28 35.8	-0.3
MPA				S	S	20 29 06.6	-1.9
KLU	Klutina	2.69	124	P	P	20 28 36.0	-0.5
GLI	Glacier Island	2.74	142	P	P	20 28 36.6	-0.6
VLZ	Valdez	2.78	133	P	P	20 28 37.2	-0.5
VLZ				S	S	20 29 10.1	-1.4
RSO	Redoubt South	2.82	203	P	P	20 28 38.1	-0.2
DIV	Divide	2.98	129	P	P	20 28 39.4	-1.0
DIV				S	S	20 29 14.7	-1.4
FID	Port Fidalgo	3.03	139	P	P	20 28 40.4	-0.6
FID				S	S	20 29 16.3	-0.9
SEW	Seward	3.03	169	P	P	20 28 40.7	-0.3
SEW				S	S	20 29 15.8	-1.4
SVW2	Sparrevohn	3.08	232	P	P	20 28 41.1	-0.7
MENT	Mentasta	3.12	89	P	P	20 28 42.8	+0.5
IM3	Indian Mountai	3.23	336	P	P	20 28 43.8	+0.1
INE	Iliamna NE	3.25	203	P	P	20 28 42.7	-1.2
GCSA	Galena City Sc	3.26	304	P	P	20 28 43.4	-0.7
ILW	Iliamna West	3.27	203	P	P	20 28 45.5	+1.3
EYAK	Cordova Ski Ar	3.41	136	P	P	20 28 46.2	+0.1
HOM	Homer	3.47	189	P	P	20 28 47.9	+1.0
BMRM	Bremner River	3.51	124	P	P	20 28 46.8	-0.7
GLB	Gilahina Butte	3.56	114	P	P	20 28 48.2	+0.2
CNPM	China Poot	3.57	186	P	P	20 28 48.2	-0.1
OPT	Oil Point	3.67	202	P	P	20 28 51.1	+1.5
XLV	Seldovia	3.67	189	P	P	20 28 49.5	-0.1
AUP	Augustine Pinn	3.97	202	P	P	20 28 56.1	+2.4
AGU	Augustine-Summ	3.98	202	P	P	20 28 55.0	+1.3
AUI	Augustine Isla	4.00	202	P	P	20 28 56.4	+2.4
MID	Middleton Isla	4.19	149	P	P	20 28 57.1	+0.6
TGL	Tana Glacier	4.33	119	P	P	20 28 58.0	-0.5
BALM	Baldy	4.37	114	P	P	20 28 58.8	-0.2
CTGM	Chitina Glacie	4.83	112	P	P	20 29 05.8	+0.6
BM3	Burnt Mountain	5.03	27	P	P	20 29 07.8	0.0
KDAK	Kodiak Island	5.40	192	P	P	20 29 11.2	-1.6
	4.9nm,0.3s,baz=35,slow=7.1,SNR=113						
KDAK				S	S	20 30 07.8	-6.5
	13nm,0.3s,baz=12,slow=22,SNR=13						
KDAK	Kodiak Island	5.40	192	P	P	20 29 11.2	-1.6
KDAK				S	S	20 30 07.8	-6.5
KABR	Katmai Barrier	5.41	206	P	P	20 29 13.1	+0.1
CAHL	Cahill	5.55	207	P	P	20 29 15.2	+0.3
INK	Inuvik	8.75	46	P	P	20 29 57.0	-1.1
	0.6nm,0.3s,baz=235,slow=16,SNR=17						
INK	Inuvik	8.75	46	P	P	20 29 57.0	-1.1
YKA	Yellowknife Ar	16.33	76	P	P	20 31 38.5	+2.5
	0.2nm,0.3s,baz=291,slow=11,SNR=4.2						
YKA	Yellowknife Ar	16.33	76	P	P	20 31 38.5	+2.5
PDAR	Pinedale Array	31.20	111	pP	pP	20 34 21.2	-8.5
	0.3nm,0.5s,baz=352,slow=6.4,SNR=2.6						
NVAR	Mina Array Bea	31.41	126	pP	pP	20 34 23.5	-8.2
	0.4nm,0.6s,baz=338,slow=4.9,SNR=3.0						
TXAR	Lajitas Array	45.12	116	P	P	20 36 00.9	+2.5
	0.1nm,0.5s,mb2.9,baz=320,slow=7.0,SNR=2.4						
TXAR				pP	pP	20 36 15.9	-11
	0.3nm,0.4s,baz=332,slow=6.6,SNR=3.9						
KEV	Kevo	47.44	1	ep	P	20 36 15.7	-0.4
	8.7nm,1.0s,mb4.4						
ARCES	ARCESS Array B	47.65	2	P	P	20 36 17.9	+0.2
	3.7nm,0.6s,mb4.4,baz=13,slow=8.3,SNR=15						
SONM	Songino Array	53.94	306	P	P	20 37 06.2	+0.7
	2.1nm,0.8s,mb4.2,baz=20,slow=6.5,SNR=18						
JOF	Joensuu	54.31	359	ep	P	20 37 07.0	-1.1
	1.7nm,0.5s,mb4.3						
KAF	Kangasniemi	55.11	2	ep	P	20 37 12.2	-1.7
	3.0nm,0.9s,mb4.3						
NB2	NORSAR Subarra	55.44	11	P	P	20 37 15.8	-0.5
	0.5nm,0.5s,mb3.8,baz=351,slow=7.4						
NOA	NORSAR Array B	55.44	11	P	P	20 37 16.1	-0.2
	0.9nm,0.6s,mb4.0,baz=351,slow=7.2,SNR=4.9						
ZAL	Zalesovo	55.60	324	P	P	20 37 16.9	-0.7
	2.0nm,0.6s,mb4.3,baz=91,slow=7.2,SNR=12						
FINES	FINESS Array B	55.78	2	P	P	20 37 17.6	-1.1
	1.5nm,0.6s,mb4.2,baz=2.4,slow=9.4,SNR=12						
ARU	Arti	58.71	342	eP	P	20 37 38.5	-0.9
MKAR	Makanchi Array	62.74	322	P	P	20 38 05.4	-1.4
	2.1nm,0.6s,mb4.3,baz=44,slow=6.6,SNR=35						
AKASG	Malin Array Be	66.57	0	P	P	20 38 30.8	-0.5
	2.0nm,0.3s,mb4.4,baz=359,slow=6.3,SNR=11						
BOSA	Boshof	145.43	6	PKPbc	PKPbc	20 47 18.2	+2.0
	1.6nm,0.8s,baz=328,slow=7.6,SNR=5.5						

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*NDI **05** 20:41:51.7±1.9, 33.12N×72.17E, h10^{km}, MD3.9*
*IDC **05** 20:41:54.6±1.3, 34.10N×73.40E, mb3.9/8, mb1 4.0/11, mb1mx3.8/22, mbtmp3.9/11, ML3.9/3, Error ellipse: s-maj=30.1km s-min=22.4km az=28.0*
*MOS **05** 20:41:54.9±1.1, 34.10N×73.31E, h15^{km}, mb4.0/6, Error ellipse: s-maj=25.6km s-min=11.1km az=99.2*
*NEIC **05** 20:41:55.9±1.1, 34.04N×73.36E, h10^{km}, Error ellipse: s-maj=19.9km s-min=17.9km az=147.0*
*NNC **05** 20:42:04.8±9.6, 34.28N×73.28E, h97^{km}±85^{km}, mpv4.0, Error ellipse: s-maj=86.8km s-min=72.0km az=82.0*
ISC 05 20:41:54.8±0.6**, 34.07N**±0.05×**73.20E**±0.10**, h10**^{km}**, n42, σ1^{s}30**/46**, mb3.7**/8**, 4C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.67	127	eP	Pn	20 42 40.8	+2.2
THN				eS	Sn	20 43 16.3	+5.0
DLH	Dalhousie	2.77	123	eP	Pn	20 42 41.0	+0.8
DLH				eS	Sn	20 43 20.0	+6.0
BHK	Bhakra	3.79	133	ex	x	20 43 08.3	
SDNR	Sundarnagar	4.08	128	eP	Pn	20 42 59.0	+0.3
SDNR				ex	x	20 44 00.8	
SMLA	Simla	4.45	130	eP	Pn	20 43 02.8	-1.2
SMLA				eS	Sn	20 43 53.4	-3.1
NDI	New Delhi	6.37	146	ex	x	20 44 43.0	
AML	Almayashu	8.06	3	P	P	20 43 56.7	+1.9
	SNR=26						
KZA	Kyzart	8.16	11	P	P	20 43 57.4	+1.3
	SNR=10						
UCH	Uchtor	8.21	7	P	P	20 43 58.3	+1.4
	SNR=19						
EKS2	Erkin-Say	8.59	3	P	P	20 44 04.0	+1.8
	SNR=15						
AAK	Ala-Archa	8.61	6	P	P	20 44 04.8	+2.3
	SNR=8.5						
AAK	Ala-Archa	8.61	6	⇑P	P	20 44 04.9	+2.4
	3.0nm,0.5s						
AAK				⇓S	Sn	20 45 39.6	-1.1
	7.6nm,1.1s						
AAK	Ala-Archa	8.61	6	ePn	P	20 44 02.9	+0.4
	4.9nm,0.5s						
KBK	Karagaybulak	8.68	9	P	P	20 44 04.8	+1.4
	SNR=6.9						
TKM2	Tokmak 2	9.04	11	P	P	20 44 09.2	+0.9
	SNR=10						
KK31	Karatay Array	9.26	348	P	P	20 44 11.5	+0.1
	2.6nm,0.3s,baz=160,slow=12,SNR=38						
KK31				⇑S	Sn	20 45 51.5	-5.3
	1.6nm,0.3s						
KKAR	Karatay Array	9.26	348	eP	P	20 44 11.5	0.0
KKAR				S	Sn	20 45 52.8	-4.0
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KKAR				smax			
	comp=Z,1.0nm,0.4s						
MK31	Makanchi Array	14.46	26	⇑P	P	20 45 19.8	-1.6
	comp=Z,0.6nm,0.6s,baz=199,slow=11,SNR=4.6						
MKAR	Makanchi Array	14.46	26	Pn	P	20 45 19.9	-1.6
	comp=Z,0.1nm,0.3s,baz=207,slow=14,SNR=4.8						
AB31	Akbulak array	18.08	331	P	P	20 46 06.9	-0.7
	comp=Z,2.8nm,0.6s,baz=141,slow=12,SNR=56						
AB31	Akbulak array	18.08	331	eP	P	20 46 06.8	-0.8
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BVA0	Borovoye Array	19.06	355	⇑P	P	20 46 14.9	-4.6
	comp=Z,0.2nm,0.5s,baz=163,slow=10.0,SNR=15						
BVAR	Borovoye Array	19.06	355	P	P	20 46 18.6	-1.0
	comp=Z,0.7nm,0.3s,baz=155,slow=8.6,SNR=18						
BVAR	Borovoye Array	19.06	355	P	P	20 46 18.6	-0.9
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	19.78	330	⇓P	P	20 46 26.0	-1.9
	comp=Z,0.9nm,0.5s						
AKTO	Aktyubinsk	19.78	330	P	P	20 46 27.7	-0.2
	comp=Z,1.6nm,0.3s,baz=132,slow=12,SNR=28						
AKTO	Aktyubinsk	19.78	330	P	P	20 46 27.7	-0.2
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	Zalesovo	21.49	19	P	P	20 46 42.8	-2.9
	comp=Z,2.7nm,0.4s,mb4.0,baz=268,slow=7.4,SNR=11						
ZAL	Zalesovo	21.49	19	P	P	20 46 42.8	-2.8
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SONM	Songino Array	28.35	51	P	P	20 47 50.3	-0.6
	comp=Z,0.1nm,0.4s,mb2.8,baz=252,slow=9.1,SNR=2.5						
BRTR	Keskin Array B	31.95	292	P	P	20 48 24.7	+1.8
	comp=Z,1.0nm,1.0s,mb3.6,baz=99,slow=11,SNR=3.5						
BRTR	Keskin Array B	31.95	292	P	P	20 48 24.7	+1.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
FINES	FINESS Array B	40.50	327	P	P	20 49 34.6	-0.6
	comp=Z,2.8nm,1.0s,mb4.0,baz=112,slow=10,SNR=4.5						
FINES	FINESS Array B	40.50	327	P	P	20 49 34.6	-0.6
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ARCES	ARCESS Array B	44.07	338	P	P	20 50 03.8	-0.4
	comp=Z,6.7nm,1.1s,mb4.3,baz=315,slow=1.7,SNR=20						
ARCES	ARCESS Array B	44.07	338	P	P	20 50 03.8	-0.4
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NOA	NORSAR Array B	47.40	324	P	P	20 50 29.9	-0.9
	comp=Z,0.7nm,0.7s,mb3.7,baz=95,slow=7.5,SNR=2.9						
NOA	NORSAR Array B	47.40	324	P	P	20 50 29.9	-0.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	Inuvik	76.00	10	P	P	20 53 42.9	-0.3
	comp=Z,0.7nm,0.6s,mb3.8,baz=9.8,slow=3.4,SNR=3.3						
INK	Inuvik	76.00	10	P	P	20 53 42.9	-0.3
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	79.17	123	P	P	20 54 00.5	-1.2
	comp=Z,0.5nm,0.7s,mb3.5,baz=306,slow=6.8,SNR=7.1						
WRA	Warramunga Arr	79.17	123	P	P	20 54 00.5	-1.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

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*IDC **05** 20:48:46.6±0.9, 33.74N×88.84E, mb4.0/8, mb1 4.2/9, mb1mx3.9/20, mbtmp4.0/9, ML3.0/2, MS3.0/1, Ms1 3.0/1, ms1mx2.7/17, Error ellipse: s-maj=29.2km s-min=19.2km az=72.0*
*MOS **05** 20:48:49.6±1.4, 33.97N×88.95E, h33^{km}, mb4.2/6, Error ellipse: s-maj=30.6km s-min=13.3km az=94.3*
*BJI **05** 20:48:51.9, 33.93N×88.84E, h41^{km}, mb3.8, Ms3.4, Msz3.4*
*NEIC **05** 20:48:53.0±0.9, 33.94N×88.79E, h41^{km}±10^{km}, mb3.6/3, Error ellipse: s-maj=11.4km s-min=8.1km az=92.0*
ISC 05 20:48:50.4±1.3**, 33.96N**±0.07×**88.8E**±0.1**, h39**^{km}±15^{km}**, n34, σ1^{s}09**/30**, mb3.9**/11**, MS2.8**/1**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.69	154	P	P	20 50 01.1	+0.5
LSA				LR	LR		

	comp=N,210nm,9.8s						
LSA				LR	LR		
	comp=E,510nm,10.8s						
LSA				LR	LR		
	comp=Z,410nm,8.9s						
LSA	Lhasa	4.69	154	ePn	P	20 50 02.8	+2.2
GUN	Gumba	6.54	204	eP	P	20 50 28.1	+1.4
	comp=Z,14nm,0.5s						
KKN	Kakani	6.87	207	eP	P	20 50 30.7	-0.5
	comp=Z,13nm,0.6s						
GKN	Gorkha	6.94	212	eP	P	20 50 31.7	-0.6
	comp=Z,12nm,0.5s						
DMN	Daman	7.09	208	eP	P	20 50 33.1	-1.3
	comp=Z,16nm,0.5s						
MKAR	Makanchi Array	13.74	341	Pn	P	20 52 04.0	-0.8
	comp=Z,0.0nm,0.3s,baz=149,slow=17,SNR=4.3						
ENH	Enshi	17.88	96	eP	P	20 52 58.1	+0.3
	comp=Z,3.6nm,0.8s						
SONM	Songino Array	19.13	38	P	P	20 53 13.7	+0.9
	comp=Z,0.1nm,0.3s,baz=225,slow=15,SNR=9.2						
ZAK	Zakamensk	19.54	29	eP	P	20 53 14.9	-2.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAL	Zalesovo	20.17	353	P	P	20 53 24.8	+0.7
	comp=Z,3.6nm,0.7s,baz=299,slow=11,SNR=22						
ZAL				LR	LR	21 01 51.7	
	comp=Z,44nm,18.9s,MS2.8,baz=334,slow=38						
ZAL	Zalesovo	20.17	353	P	P	20 53 24.8	+0.7
ZAL				LR	LR	21 01 51.6	
ZAL	Zalesovo	20.17	353	P	P	20 53 24.8	+0.7
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZAL				MLR	MLR		
	comp=Z,44nm,18.9s						
NVS	Novosibirsk	21.24	351	eP	P	20 53 34.4	-0.6
NVS				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.8						
NVS				pmax	pmax		
	comp=N,11nm,1.5s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.0s						
BVAR	Borovoye Array	23.16	331	P	P	20 53 56.4	+2.4
	comp=E,0.8nm,0.5s,mb3.4,baz=139,slow=8.8,SNR=8.1						
BVAR	Borovoye Array	23.16	331	P	P	20 53 56.4	+2.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	Borovoye	23.23	331	eP	P	20 54 00.2	+5.6
	comp=Z,1.0nm,0.6s,mb3.4						
TIXI	Tiksi	43.20	17	eP	P	20 56 48.3	-0.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
NB2	NORSAR Subarra	55.07	325	P	P	20 58 20.7	+0.4
	comp=Z,0.9nm,0.6s,mb4.0,baz=82,slow=7.0						
NOA	NORSAR Array B	55.07	325	P	P	20 58 21.0	+0.7
	comp=Z,1.1nm,0.6s,mb4.0,baz=82,slow=7.4,SNR=5.3						
NOA	NORSAR Array B	55.07	325	P	P	20 58 21.0	+0.7
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NAO	NORSAR Subarra	55.29	324	P	P	20 58 20.7	-1.2
	comp=Z,0.9nm,0.6s,mb4.0						
GERES	GERESS Array B	56.06	310	P	P	20 58 28.9	+1.3
	comp=Z,1.5nm,0.6s,mb4.2,baz=73,slow=6.1,SNR=14						
GERES	GERESS Array B	56.06	310	P	P	20 58 28.9	+1.3
GERES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
OPO	Ambohidratompo	65.59	224	P	P	20 59 32.1	-0.7
	comp=Z,1.5nm,0.6s,mb4.2,baz=14,slow=8.3,SNR=4.5						
WRA	Warramunga Arr	68.94	134	P	P	20 59 52.6	-1.1
	comp=Z,1.0nm,0.6s,mb4.0,baz=326,slow=6.7,SNR=16						
WRA	Warramunga Arr	68.94	134	P	P	20 59 52.6	-1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESDC	Sonseca Array	71.20	305	P	P	21 00 07.5	+0.4
	comp=Z,0.7nm,0.6s,mb3.7,baz=50,slow=6.2,SNR=5.1						
BOSA	Boshof	86.54	232	P	P	21 01 31.2	+0.5
	comp=Z,4.3nm,0.9s,mb4.7,baz=47,slow=3.5,SNR=4.8						
BOSA	Boshof	86.54	232	P	P	21 01 31.2	+0.5
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7						
VNA2	Neumayer--Watz	123.69	203		PKPdf	21 07 45.9	+2.6
VNA2	Neumayer--Watz	123.69	203		PKPdf	21 07 49.4	+6.1
VNA3	Neumayer Olymp	124.46	203		PKPdf	21 07 47.4	+2.6
VNA3	Neumayer Olymp	124.46	203		PKPdf	21 07 51.7	+6.9

*NEIC **05** 20:52:25.8±1.1, 30.22S×179.36W, h230^{km}±12^{km}, mb4.1/1, Error ellipse: s-maj=30.0km s-min=19.4km az=109.0*

*IDC **05** 20:52:25.4±1.2, 29.97S×178.85W, h269^{km}±12^{km}, mb3.2/2, mb1 3.5/3, mb1mx3.2/12, mbtmp4.0/3, Error ellipse: s-maj=45.2km s-min=23.4km az=144.0*

ISC 05 20:52:22.2±1.0**, 30.1S**±0.1×**179.0W**±0.4**, h235**^{km}±17^{km}**, n26, σ1^{s}08**/24**, mb3.6**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.29	47	P	P	20 53 03.0	+5.2
	107nm,0.3s,baz=87,slow=11,SNR=18						
RAO				S	S	20 53 25.1	-0.2
	257nm,0.3s,baz=90,slow=22,SNR=8.8						
MXZ	Matakaoa Point	7.74	196	SN	S	20 55 39.9	+0.5
PUZ	Puketiti	8.23	195	SN	S	20 55 50.8	-0.1
MWZ	Matawai	8.67	198	PN	P	20 54 25.2	+0.5
MWZ				SN	S	20 55 59.4	-1.3
MWZ	Matawai	8.67	198	eP	P	20 54 24.2	-0.5
MWZ				S	S	20 55 59.4	-1.3
URZ	Urewera	8.72	201	P	P	20 54 29.4	+4.1
	2.6nm,0.3s,baz=339,slow=2.0,SNR=18						
URZ				S	S	20 56 01.6	-0.3
	4.8nm,0.3s,baz=28,slow=19,SNR=12						
URZ	Urewera	8.72	201	PN	P	20 54 27.2	+1.8
URZ				SN	S	20 56 02.1	+0.2
URZ	Urewera	8.72	201	eP	P	20 54 26.8	+1.4
BKZ	Black Stump Fm	9.74	201	PN	P	20 54 40.6	+2.2
BKZ				SN	S	20 56 25.2	-0.1
WNVZ	Wahianoa	10.19	204	PN	P	20 54 46.0	+1.9
TSZ	Takapari Road	10.72	201	PN	P	20 54 50.4	-0.5
CAW	Cannon Point	11.96	202	PN	P	20 55 04.5	-2.0
NNZ	Nelson	12.67	207	PN	P	20 55 14.7	-0.6
QRZ	Quartz Range	12.70	211	PN	P	20 55 15.2	-0.4
STKA	Stephens Creek	33.70	257	P	P	20 58 44.4	+1.3
	1.2nm,0.8s,mb3.5,baz=103,slow=14,SNR=3.7						
WRA	Warramunga Arr	43.22	272	P	P	21 00 00.7	-1.3
	0.9nm,0.5s,mb3.5,baz=110,slow=7.8,SNR=17						
WRA	Warramunga Arr	43.22	272	P	P	21 00 00.7	-1.3
CASY	Casey	54.97	208	eP	P	21 01 30.5	-0.1
	5.9nm,1.1s,mb4.0						
BVAR	Borovoye Array	125.62	316	PKP	PKPdf	21 10 54.2	-1.0
	0.6nm,0.7s,baz=57,slow=2.5,SNR=5.9						
JOF	Joensuu	141.86	338	ep	PKPdf	21 11 30.2	+5.3
	3.3nm,0.8s						
FINES	FINESS Array B	144.60	339	PKP	PKPdf	21 11 28.1	-1.7
	3.9nm,0.5s,baz=57,slow=4.3,SNR=76						
NB2	NORSAR Subarra	148.36	351	PKPabc	PKPdf	21 11 39.2	+3.2
	0.6nm,0.6s,baz=13,slow=2.7						
NOA	NORSAR Array B	148.36	351	PKPbc	PKPdf	21 11 38.0	+2.0
	1.1nm,0.7s,baz=16,slow=4.2,SNR=4.4						
NAO	NORSAR Subarra	148.62	351	PKPab	PKPab	21 11 39.2	-7.8
AKASG	Malin Array Be	150.57	322	PKPbc	PKPdf	21 11 44.6	+4.8
	1.7nm,0.5s,baz=49,slow=3.0,SNR=10.0						
BRTR	Keskin Array B	151.72	299	PKPbc	PKPdf	21 11 48.1	+6.3
	0.3nm,0.5s,baz=143,slow=4.8,SNR=8.0						

*ISK **05** 20:53:31.8, 38.13N×26.66E, h16^{km}, MD3.0*

*ATH **05** 20:53:31.8, 38.13N×26.49E, h21^{km}, MD3.2/3*

*NEIC **05** 20:53:32.0, 38.06N×26.78E, h19^{km}, MD3.2(ATH), MD3.0(ISK), After ISK.*

*CSEM **05** 20:53:32.5±0.1, 38.16N×26.70E, h20^{km}, MD3.0, Error ellipse: s-maj=2.9km s-min=2.3km az=85.0*

ISC 05 20:53:32.1±0.5**, 38.14N**±0.03×**26.57E**±0.04**, h10**^{km}**, n22, σ1^{s}26**/35**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	Balcova	0.45	56	i PG	Pg	20 53 40.1	-1.0
SMG	Samos	0.48	154	ePN	Pg	20 53 41.9	+0.2
SMG				eSN	Sg	20 53 49.2	+1.0
IZM	Izmir	0.60	64	PG	Pg	20 53 43.0	-1.2
IZM				SG	Sg	20 53 51.1	-1.2
KDAG	Bornova	0.61	64	i P	Pb	20 53 42.3	-2.0
KDAG				i S	Sg	20 53 50.0	-2.5
PRK	Paraskevi	1.13	348	ePN	Pn	20 53 53.3	-0.6
PRK				eSN	Sn	20 54 09.0	-0.5
AYDN	Tasoluk	1.14	114	i P	Pb	20 53 54.0	+0.6
AYDN				i S	Sb	20 54 08.3	+0.3
AYVA	Ayvalik	1.17	5	i P	Pb	20 53 54.1	+0.2
AYVA				i S	Sb	20 54 13.2	+4.2
AKS	Akhisar	1.22	52	ePN	Pn	20 53 54.4	-0.8
BODT	Bodrum	1.22	151	ePN	Pn	20 53 54.5	-0.7
BODT				eSN	Sn	20 54 11.0	-0.9
APE	Apeiranthos	1.35	218	ePN	Pn	20 53 57.3	+0.3
APE				eSN	Sn	20 54 15.9	+0.8
APE	Apeiranthos	1.35	218	ePN	Pn	20 53 56.5	-0.5
MANT	Manisa	1.60	77	i P	Pn	20 54 01.9	+1.2
MANT				i S	Sn	20 54 20.6	-0.9
DAT	Datca	1.62	150	ePN	Pn	20 53 59.7	-1.2
YER	Yerkesik	1.69	126	ePN	Pn	20 54 01.0	-0.9
BALB	Balikesir	1.81	34	ePN	Pn	20 54 03.3	-0.4
BTOK	Tokmak	1.98	35	i P	Pb	20 54 09.6	+1.8
BTOK				i S	Sb	20 54 35.6	+3.1
DENT	Denizli	1.98	100	ePN	Pn	20 54 04.7	-1.4
DNZL	Cakiroluk	2.01	102	i P	Pb	20 54 09.8	+1.6
DNZL				i S	Sb	20 54 35.3	+2.0
LIA	Limnos Island	2.06	329	ePN	Pn	20 54 07.2	0.0
ULDT	Uludag	2.83	44	i P	Pb	20 54 24.0	+1.7
ULDT				i S	Sb	20 54 59.4	+2.4
TKTP	Tekketepe	2.96	91	i P	Pb	20 54 27.9	+3.4
TKTP				i S	Sb	20 55 13.7	+13
RDO	Rodhopi	3.11	345	ePN	Pn	20 54 22.2	0.0

*ATH **05** 21:06:42.3, 38.27N×26.93E, h24^{km}, MD2.9/3*

*ISK **05** 21:06:43.0, 38.27N×26.66E, h19^{km}, MD2.9*

*CSEM **05** 21:06:43.7±0.2, 38.25N×26.73E, h20^{km}, MD2.9, Error ellipse: s-maj=4.7km s-min=2.2km az=110.0*

ISC 05 21:06:40.9±1.4**, 38.16N**±0.04×**26.54E**±0.07**, h1**^{km}±8^{km}**, n11, σ1^{s}01**/20**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.21	13	i P	Pg	21 06 45.4	+0.4
URLA				i S	Sg	21 06 48.5	+0.7
BLCB	Balcova	0.46	60	i PG	Pg	21 06 50.2	+0.2
BLCB				i SG	Sg	21 06 55.6	-0.5
SMG	Samos	0.51	152	ePN	Pn	21 06 53.8	-1.0
SMG				eSN	Sn	21 07 02.1	-2.2
IZM	Izmir	0.62	67	i PG	Pg	21 06 53.7	+0.5
IZM				i SG	Sg	21 07 01.4	-0.1
KDAG	Bornova	0.62	67	i P	Pg	21 06 52.6	-0.7
KDAG				i S	Sg	21 07 00.4	-1.2
PRK	Paraskevi	1.10	349	ePN	Pn	21 07 03.3	-0.1
PRK				eSN	Sn	21 07 18.7	-0.7
AKS	Akhisar	1.23	54	PN	Pn	21 07 04.0	-1.2
BODT	Bodrum	1.25	151	ePN	Pn	21 07 06.8	+1.3
BODT				eSN	Sn	21 07 24.3	+1.0
APE	Apeiranthos	1.35	217	ePN	Pn	21 07 11.8	+4.9
MANT	Manisa	1.62	78	i P	Pn	21 07 12.1	+1.3
MANT				i S	Sb	21 07 33.6	+1.4
DNZL	Cakiroluk	2.04	103	i P	Pn	21 07 20.7	+4.0
DNZL				i S	Sn	21 07 48.9	+5.7

NDI 05 21:08:03.1±4.1**, 34.14N**×**72.54E, h10**^{km}**, ML3.6, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	Srinagar	1.92	90	ex	x	21 06 03.5	
SRNI				ex	x	21 06 11.5	
THN	Thein Dam	3.16	122	eP	Pn	21 08 53.9	0.0
THN				eSB	Sb	21 09 38.5	+0.8
DLH	Dalhousie	3.28	118	eP	Pn	21 08 57.0	+1.4
DLH				eS	Sn	21 09 34.0	-1.1
SDNR	Sundarnagar	4.56	124	eP	Pn	21 09 10.8	-3.1
SDNR				eSB	Sb	21 10 21.0	+2.5
KLP	Kalpa	5.46	117	eP	Pn	21 09 22.7	-3.9
KLP				eS	Sn	21 10 23.7	-6.5
KLP				AML	AML	21 10 52.9	
	comp=N,93nm,0.6s						
KLP				AML	AML	21 10 54.6	
	comp=E,114nm,0.5s						
KUDL	Kundal	6.87	149	eP	Pn	21 09 42.8	-3.5
KUDL				eS	Sn	21 10 57.1	-8.2
JOSI	Joshimath	6.93	119	ex	x	21 09 23.2	
JOSI				ex	x	21 10 11.6	
JOSI				AML	AML	21 10 53.7	
	comp=N,51nm,0.7s						

*NEIC **05** 21:47:35.8, 37.72S×176.92E, h272^{km}, MG4.3(WEL), After WEL.*

WEL 05 21:47:37.9±0.3**, 37.34S**×**176.86E, h201**^{km}±2^{km}**, ML4.2**/17**, 11D, Error ellipse: s-maj=2.8km s-min=2.8km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYRZ	Mayor Island	0.49	276	PN	P	21 48 04.3	-1.2
MARZ	Manawahe	0.66	192	eP	P	21 48 05.9	-0.2
MARZ	Manawahe	0.66	192	PN	P	21 48 05.9	-0.2
TAZ	Tarawera	0.94	197	P	P	21 48 07.8	+0.3
TAZ	Tarawera	0.94	197	PN	P	21 48 07.8	+0.3
URZ	Urewera	0.94	168	⇓P	P	21 48 07.1	-0.5
URZ	Urewera	0.94	168	⇓PN	P	21 48 07.1	-0.5
URZ				SN	S	21 48 29.8	-0.8
URZ				SN	S	21 48 29.9	-0.6
MWZ	Matawai	1.13	152	P	P	21 48 08.5	-0.4
MWZ				S	S	21 48 32.7	-0.3
MWZ	Matawai	1.13	152	PN	P	21 48 08.5	-0.5
MWZ				SN	S	21 48 32.6	-0.3
PATZ	Paeroa	1.15	204	⇓P	P	21 48 09.3	+0.2
PATZ	Paeroa	1.15	204	⇓PN	P	21 48 09.3	+0.3
MXZ	Matakaoa Point	1.18	102	P	P	21 48 08.7	-0.6
MXZ				S	S	21 48 33.3	-0.3
MXZ	Matakaoa Point	1.18	102	PN	P	21 48 08.7	-0.7
MXZ				SN	S	21 48 33.3	-0.3
PUZ	Puketiti	1.33	124	⇓P	P	21 48 10.4	-0.2
PUZ	Puketiti	1.33	124	⇓PN	P	21 48 10.3	-0.3
PUZ				SN	S	21 48 35.1	-0.8
WATZ	Wairara	1.63	213	PN	P	21 48 13.2	-0.1
HATZ	Hinemaiaia	1.67	201	P	P	21 48 13.0	-0.6
HATZ	Hinemaiaia	1.67	201	PN	P	21 48 13.0	-0.6
RATZ	Rangitukua	1.75	209	P	P	21 48 13.9	-0.5
RATZ	Rangitukua	1.75	209	PN	P	21 48 13.9	-0.5
KNZ	Kokohu	1.80	159	⇓P	P	21 48 14.6	-0.3
KNZ				S	S	21 48 43.2	-0.2
KNZ	Kokohu	1.80	159	⇓PN	P	21 48 14.6	-0.2
KNZ				SN	S	21 48 43.2	-0.2
RITZ	Rihia Road	1.82	205	P	P	21 48 14.7	-0.3
RITZ	Rihia Road	1.82	205	PN	P	21 48 14.9	-0.1
BKZ	Black Stump Fm	1.85	189	P	P	21 48 14.5	-0.9
BKZ	Black Stump Fm	1.85	189	PN	P	21 48 14.5	-0.9
BKZ				SN	S	21 48 43.3	-0.9
KATZ	Kakaramea	1.88	209	P	P	21 48 15.2	-0.4
KATZ	Kakaramea	1.88	209	PN	P	21 48 15.1	-0.5
HIZ	Hauiti	1.97	233	P	P	21 48 16.3	-0.2
HIZ	Hauiti	1.97	233	PN	P	21 48 16.3	-0.2
KRVZ	Karewarewa	2.00	208	PN	P	21 48 16.3	-0.6
WTVZ	West Tongariro	2.04	209	P	P	21 48 16.6	-0.6
WTVZ	West Tongariro	2.04	209	PN	P	21 48 16.6	-0.6
OTVZ	Oturere	2.05	207	PN	P	21 48 17.0	-0.4
TWVZ	Taurewa	2.06	212	P	P	21 48 16.9	-0.6
TWVZ	Taurewa	2.06	212	PN	P	21 48 16.9	-0.6
NGZ	Ngauruhoe	2.08	208	P	P	21 48 17.3	-0.5
NGZ	Ngauruhoe	2.08	208	PN	P	21 48 17.3	-0.5
CNZ	Chateau	2.12	209	P	P	21 48 17.5	-0.7
CNZ	Chateau	2.12	209	PN	P	21 48 17.4	-0.8
WPVZ	Whakapapa	2.13	209	P	P	21 48 17.7	-0.6
WPVZ	Whakapapa	2.13	209	PN	P	21 48 17.7	-0.6
TUVZ	Tukino	2.15	206	P	P	21 48 17.8	-0.6
TUVZ	Tukino	2.15	206	PN	P	21 48 17.8	-0.6
FWVZ	Far West T-bar	2.17	208	P	P	21 48 18.1	-0.6
FWVZ	Far West T-bar	2.17	208	PN	P	21 48 18.1	-0.6
DRZ	Dome Shelter	2.19	207	P	P	21 48 18.4	-0.5
DRZ	Dome Shelter	2.19	207	PN	P	21 48 18.4	-0.5
TRVZ	Turoa	2.21	207	PN	P	21 48 18.5	-0.6
WNVZ	Wahianoa	2.22	206	⇓P	P	21 48 18.4	-0.8
WNVZ	Wahianoa	2.22	206	PN	P	21 48 18.4	-0.8
MOVZ	Moawhango	2.24	202	P	P	21 48 18.1	-1.4
MOVZ	Moawhango	2.24	202	PN	P	21 48 18.0	-1.4
PKVZ	Pokaka	2.28	211	PN	P	21 48 18.9	-1.1
MTVZ	Mangateitei	2.32	208	PN	P	21 48 19.4	-0.9
VRZ	Vera Road	2.43	222	P	P	21 48 21.1	-0.5
VRZ	Vera Road	2.43	222	PN	P	21 48 21.1	-0.5
PXZ	Pawanui	2.69	180	PN	P	21 48 22.9	-1.6
RAEZ	Rainy Point	2.75	224	P	P	21 48 25.1	0.0
RAEZ	Rainy Point	2.75	224	PN	P	21 48 25.1	0.0
TSZ	Takapari Road	2.81	194	P	P	21 48 24.0	-1.8
TSZ				S	S	21 49 01.1	-1.8
TSZ	Takapari Road	2.81	194	PN	P	21 48 24.0	-1.9
TSZ				SN	S	21 49 01.1	-1.8
TSZ				SN	S	21 49 02.5	-0.4
WAZ	Wanganui	2.83	211	P	P	21 48 24.5	-1.6
WAZ	Wanganui	2.83	211	PN	P	21 48 24.5	-1.6
NEZ	North Egmont	2.91	227	P	P	21 48 26.8	-0.2
NEZ	North Egmont	2.91	227	PN	P	21 48 26.8	-0.2
PKE	Pukeiti	2.92	230	P	P	21 48 27.0	-0.2
PKE	Pukeiti	2.92	230	PN	P	21 48 27.0	-0.2
DFE	Dawson Falls	2.94	227	PN	P	21 48 26.8	-0.6
NRZ	Ngariki Road	3.04	228	PN	P	21 48 28.6	0.0
NWEZ	Newall Road	3.04	230	P	P	21 48 28.7	+0.1
NWEZ	Newall Road	3.04	230	PN	P	21 48 28.7	+0.1
BFZ	Birch Farm	3.37	188	P	P	21 48 30.0	-2.6
BFZ	Birch Farm	3.37	188	PN	P	21 48 30.0	-2.6
MRZ	Mangatainoka R	3.47	196	⇓P	P	21 48 30.8	-3.0
MRZ				S	S	21 49 13.9	-3.0
MRZ	Mangatainoka R	3.47	196	⇓PN	P	21 48 30.8	-3.0
MRZ				SN	S	21 49 13.9	-3.1
KIW	Kapiti Island	3.83	203	P	P	21 48 34.7	-3.6
KIW	Kapiti Island	3.83	203	PN	P	21 48 34.7	-3.5
MTW	Mount Morrison	3.96	195	PN	P	21 48 36.1	-3.7
CAW	Cannon Point	4.01	200	P	P	21 48 36.8	-3.7
CAW	Cannon Point	4.01	200	PN	P	21 48 36.8	-3.7
DUWZ	D'Urville Isla	4.15	213	PN	P	21 48 38.4	-3.8
TRWZ	Traveller	4.16	192	PN	P	21 48 38.7	-3.6
PAWZ	Paruwai Farm	4.19	195	P	P	21 48 38.8	-3.9
PAWZ	Paruwai Farm	4.19	195	PN	P	21 48 38.8	-3.9
MRW	Makara Radio	4.23	203	P	P	21 48 39.2	-4.1
MRW	Makara Radio	4.23	203	PN	P	21 48 39.2	-4.0
MSWZ	Moikau Station	4.26	196	P	P	21 48 39.6	-4.0
MSWZ	Moikau Station	4.26	196	PN	P	21 48 39.6	-4.0
WEL	Wellington	4.26	202	P	P	21 48 39.8	-3.9
WEL	Wellington	4.26	202	PN	P	21 48 39.8	-3.8
SNZO	South Karori	4.30	202	P	P	21 48 40.0	-4.2
SNZO				eS	S	21 49 32.3	-3.2
SNZO	South Karori	4.30	202	PN	P	21 48 40.0	-4.2
BHW	Baring Head	4.35	200	P	P	21 48 40.5	-4.2
BHW	Baring Head	4.35	200	PN	P	21 48 40.5	-4.2
TCW	Tory Channel	4.36	207	P	P	21 48 40.7	-4.1
TCW	Tory Channel	4.36	207	PN	P	21 48 40.7	-4.1
TUWZ	Tuamarina	4.67	208	PN	P	21 48 44.5	-4.3
NNZ	Nelson	4.72	214	P	P	21 48 45.0	-4.5
NNZ	Nelson	4.72	214	PN	P	21 48 44.5	-4.9
QRZ	Quartz Range	4.84	223	eP	P	21 48 46.7	-4.3
QRZ	Quartz Range	4.84	223	PN	P	21 48 46.7	-4.3
BSWZ	Blackbirch Sta	4.94	207	P	P	21 48 48.5	-3.8
BSWZ	Blackbirch Sta	4.94	207	PN	P	21 48 48.5	-3.8
THZ	Tophouse	5.37	213	eP	P	21 48 53.4	-4.4
THZ	Tophouse	5.37	213	PN	P	21 48 53.4	-4.4
KHZ	Kahutara	5.68	206	P	P	21 48 57.2	-4.6
KHZ	Kahutara	5.68	206	PN	P	21 48 57.0	-4.7
DSZ	Denniston Nort	5.88	220	eP	P	21 48 59.4	-5.0
DSZ	Denniston Nort	5.88	220	PN	P	21 48 59.1	-5.4
LTZ	Lake Taylor	6.48	211	P	P	21 49 06.9	-5.2
LTZ	Lake Taylor	6.48	211	PN	P	21 49 06.9	-5.2
MQZ	McQueen's Vall	7.12	205	eP	P	21 49 14.0	-6.5
MQZ	McQueen's Vall	7.12	205	PN	P	21 49 13.9	-6.6
WVZ	Waitaha Valley	7.40	217	eP	P	21 49 18.9	-5.2
WVZ	Waitaha Valley	7.40	217	PN	P	21 49 18.9	-5.3
FOZ	Fox Glacier	8.28	219	eP	P	21 49 28.9	-6.7
FOZ	Fox Glacier	8.28	219	PN	P	21 49 28.9	-6.7
LBZ	Lake Benmore	8.66	214	eP	P	21 49 34.8	-5.8
LBZ	Lake Benmore	8.66	214	PN	P	21 49 34.8	-5.8
ODZ	Otahua Downs	9.01	209	eP	P	21 49 39.9	-5.2
ODZ	Otahua Downs	9.01	209	PN	P	21 49 39.9	-5.2
JCZ	Jackson Bay	9.11	220	eP	P	21 49 40.4	-6.0
JCZ	Jackson Bay	9.11	220	PN	P	21 49 40.3	-6.2
MBWA	Marble Bar	51.64	271	eP	P	21 56 13.0	-13
VNA3	Neumayer Olymp	71.62	178		P	21 58 34.2	-4.3
VNA2	Neumayer--Watz	72.00	179		P	21 58 37.1	-3.7

*NEIC **05** 22:24:32.1±0.9, 6.78S×130.67E, h30^{km}, Error ellipse: s-maj=31.1km s-min=10.3km az=76.0*

*IDC **05** 22:24:44.0±13.0, 7.47S×130.58E, h172^{km}±167^{km}, mb3.4/2, mb1 3.9/4, mb1mx3.6/10, mbtmp4.3/4, ML4.5/2, Error ellipse: s-maj=96.0km s-min=50.9km az=180.0*

ISC 05 22:24:31.4±1.6**, 7.10S**±0.10×**130.1E**±0.2**, h33**^{km}**, n8, σ1^{s}27**/13**, mb3.9**/2**, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.77	201	eP	P	22 27 25.1	+5.1
	10nm,0.2s						
FITZ				eS	S	22 29 32.0	+0.8
FITZ	Fitzroy Crossi	11.77	201	P	P	22 27 25.5	+5.5
	8.3nm,0.3s,baz=38,slow=12,SNR=99						
FITZ				S	S	22 29 31.0	-0.2
	6.7nm,0.3s,baz=189,slow=16,SNR=9.4						
WRAB	Tennant Creek	13.41	163	ePn	P	22 27 42.5	+0.7
	14nm,0.6s						
WRA	Warramunga Arr	13.41	163	P	P	22 27 42.6	+0.7
	1.3nm,0.3s,baz=348,slow=13,SNR=54						
WRA				S	S	22 30 03.7	-7.1
	2.0nm,0.3s,baz=343,slow=22,SNR=11						
WB2	Warramunga Arr	13.42	163	eP	P	22 27 42.7	+0.7
WB2				eS	S	22 30 05.4	-5.5
ASPA	Alice Springs	16.87	168	eP	P	22 28 31.2	+4.5
ASPA				eS	S	22 31 30.3	-1.7
SONM	Songino Array	58.57	341	P	P	22 34 25.7	-1.6
	0.4nm,0.5s,mb3.7,baz=161,slow=7.4,SNR=10						
MKAR	Makanchi Array	68.36	327	P	P	22 35 30.7	-1.0
	0.9nm,0.5s,mb4.0,baz=112,slow=7.8,SNR=33						

*ISK **05** 22:30:24.1, 38.22N×26.64E, h20^{km}, MD2.9*

*ATH **05** 22:30:24.7, 38.10N×26.57E, h24^{km}, MD3.0/3*

*CSEM **05** 22:30:25.3±0.2, 38.15N×26.79E, h20^{km}, MD2.9, Error ellipse: s-maj=5.0km s-min=2.9km az=113.0*

ISC 05 22:30:24.1±0.9**, 38.12N**±0.04×**26.65E**±0.05**, h5**^{km}±7^{km}**, n11, σ0^{s}59**/21**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.24	350	i P	Pg	22 30 29.0	+0.1
URLA				i S	Sg	22 30 33.0	+0.8
BLCB	Balcova	0.41	50	PG	Pg	22 30 32.3	+0.1
BLCB				SG	Sg	22 30 37.5	-0.2
SMG	Samos	0.44	160	ePB	Pb	22 30 34.1	+0.1
SMG				eSB	Sb	22 30 41.0	+0.4
IZM	Izmir	0.56	60	PG	Pg	22 30 35.2	0.0
IZM				SG	Sg	22 30 43.1	+0.5
KDAG	Bornova	0.56	60	i P	Pg	22 30 34.5	-0.9
KDAG				i S	Sg	22 30 42.3	-0.5
PRK	Paraskevi	1.16	345	ePN	Pn	22 30 46.9	0.0
PRK				eSN	Sn	22 31 03.2	-0.1
AKS	Akhisar	1.19	50	ePN	Pn	22 30 45.9	-1.4
APE	Apeiranthos	1.38	220	ePN	Pn	22 30 49.3	-0.7
APE				eSN	Sn	22 31 08.8	0.0
APE	Apeiranthos	1.38	220	ePn	Pn	22 30 49.8	-0.2
APE				eSn	Sn	22 31 08.8	0.0
MANT	Manisa	1.55	76	i P	Pn	22 30 53.8	+1.3
MANT				i S	Sb	22 31 13.0	+0.3
ULDT	Uludag	2.79	43	i P	Pn	22 31 17.2	+6.9
ULDT				i S	Sn	22 31 54.0	+9.1

*IDC **05** 22:31:20.3±0.7, 56.91S×24.92W, mb4.2/7, mb1 4.2/8, mb1mx4.1/13, mbtmp4.2/8, ML3.9/1, MS4.1/10, Ms1 4.1/10, ms1mx4.0/16, Error ellipse: s-maj=26.8km s-min=18.0km az=20.0*

*NEIC **05** 22:31:26.2±2.3, 56.93S×24.95W, h42^{km}±21^{km}, mb4.7/8, Error ellipse: s-maj=11.8km s-min=8.0km az=218.0*

ISC 05 22:31:20.2±0.5**, 56.89S**±0.08×**24.9W**±0.2**, h10**^{km}**, n39, σ0^{s}82**/21**, mb4.5**/14**, MS4.1**/10**, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	17.47	157	P	P	22 35 25.2	+0.1
	0.4nm,0.3s,baz=335,slow=14,SNR=82						
SNAA	Sanae	17.47	157	ePn	P	22 35 25.4	+0.3
	15nm,0.9s						
PMSA	Palmer Station	20.32	231	P	P	22 35 57.9	-0.9
USHA	Ushuaia	24.19	256	P	P	22 36 38.2	+0.9

	19nm,1.0s,mb4.5,baz=97,slow=3.2,SNR=4.0						
USHA				LR	LR	22 43 26.7	
	comp=Z,817nm,21.4s,MS4.2,baz=21,slow=30						
TRQA	**Tornquist**	**30.80**	**292**	*e*P	**P**	**22 37 36.2**	**-1.8**
QSPA	**South Pole Qui**	**33.36**	**180**	P	**P**	**22 37 59.8**	**-0.1**
	9.4nm,0.8s,mb4.8						
PLCA	**Paso Flores**	**33.37**	**279**	LR	LR	22 50 17.5	
	comp=Z,392nm,20.6s,MS4.1,baz=130,slow=34						
CPUP	**Villa Florida**	**38.31**	**309**	*e*P	**P**	**22 38 42.1**	**-0.4**
	38nm,1.0s,mb5.1						
MAW	**Mawson**	**38.72**	**142**	P	**P**	**22 38 45.8**	**+0.2**
	1.6nm,0.7s,mb3.8,baz=220,slow=9.4,SNR=4.1						
MAW				LR	LR	22 52 23.9	
	comp=Z,266nm,18.3s,MS4.1,baz=138,slow=33						
CFAA	**Coronel Fontan**	**39.04**	**292**	P	**P**	**22 38 48.5**	**-0.1**
	0.3nm,0.4s,mb3.4,baz=164,slow=7.4,SNR=4.5						
BDFB	**Brasilia**	**44.73**	**328**	P	**P**	**22 39 36.5**	**+1.2**
	4.3nm,1.0s,mb4.2,baz=135,slow=2.9,SNR=4.6						
BOSA	**Boshof**	**45.00**	**73**	P	**P**	**22 39 37.4**	**+0.1**
	3.0nm,0.9s,mb4.1,baz=242,slow=7.9,SNR=3.4						
BOSA				LR	LR	22 54 40.2	
	comp=Z,445nm,20.1s,MS4.4,baz=229,slow=31						
BOSA	**Boshof**	**45.00**	**73**	P	**P**	**22 39 37.4**	**+0.1**
BOSA				LR	LR	22 54 40.2	
SBA	**Scott Base**	**45.32**	**183**	*e*P	**P**	**22 39 39.4**	**+0.2**
	5.8nm,1.2s,mb4.3						
VNDA	**Vanda**	**45.78**	**182**	*e*P	**P**	**22 39 42.9**	**0.0**
	4.4nm,0.7s,mb4.5						
VNDA				*e*pP	pP	22 39 48.8	+2.9
LVC	**Limon Verde**	**46.80**	**298**	*e*P	**P**	**22 39 53.5**	**+1.9**
	8.2nm,0.6s,mb4.8						
LBTB	**Lobatse**	**48.09**	**70**	P	**P**	**22 40 01.6**	**-0.2**
	3.2nm,0.8s,mb4.4,baz=249,slow=8.6,SNR=3.4						
LPAZ	**La Paz**	**51.88**	**303**	P	**P**	**22 40 31.4**	**+0.6**
	26nm,0.6s,mb5.3,baz=146,slow=6.2,SNR=118						
LPAZ				LR	LR	23 00 18.2	
	comp=Z,60nm,18.6s,MS3.7,baz=304,slow=34						
LPAZ	**La Paz**	**51.88**	**303**	⇑*e*P	**P**	**22 40 31.3**	**+0.4**
	28nm,0.6s,mb5.4						
SAML	**Samuel**	**56.29**	**313**	*e*P	**P**	**22 41 02.2**	**-1.0**
	8.9nm,0.9s,mb4.8						
DBIC	**Dimbokro**	**65.45**	**22**	P	**P**	**22 42 04.8**	**-0.7**
	6.9nm,1.1s,mb4.6,baz=146,slow=7.2,SNR=4.2						
DBIC				LR	LR	23 04 02.4	
	comp=Z,128nm,18.9s,MS4.1,baz=250,slow=30						
DBIC	**Dimbokro**	**65.45**	**22**	P	**P**	**22 42 04.8**	**-0.7**
DBIC				LR	LR	23 04 02.4	
ROSC	**El Rosal**	**73.40**	**308**	LR	LR	23 13 14.1	
	comp=Z,46nm,21.6s,MS3.7,baz=312,slow=34						
RPZ	**Rata Peaks**	**78.86**	**192**	LR	LR	23 13 51.4	
	comp=Z,157nm,20.0s,MS4.3,baz=190,slow=32						
ATD	**Arta Tunnel**	**87.86**	**65**	LR	LR	23 20 58.1	
	comp=Z,96nm,18.9s,MS4.2,baz=190,slow=34						
MDT	**Midelt**	**91.00**	**17**	LR	LR	23 21 47.4	
	comp=Z,123nm,18.4s,MS4.4,baz=168,slow=33						
WRA	**Warramunga Arr**	**101.51**	**160**	P	P	22 45 13.5	0.0
	0.5nm,0.5s,baz=198,slow=4.3,SNR=6.8						
POO	**Poona**	**110.10**	**87**	*e*x	x	22 45 41.0	
NOA	**NORSAR Array B**	**120.97**	**20**	PKP	PKPdf	22 50 11.7	-3.3
	1.1nm,0.9s,baz=142,slow=2.2,SNR=3.3						
PDAR	**Pinedale Array**	**121.85**	**300**	PKP	PKPdf	22 50 14.8	-2.3
	0.2nm,0.4s,baz=166,slow=6.1,SNR=3.4						
FINES	**FINESS Array B**	**124.56**	**27**	PKP	PKPdf	22 50 18.7	-3.0
	1.5nm,0.8s,baz=180,slow=3.8,SNR=5.2						
ARCES	**ARCESS Array B**	**131.27**	**21**	PKP	PKPdf	22 50 33.1	-1.3
	3.3nm,0.9s,baz=342,slow=3.8,SNR=4.4						
MKAR	**Makanchi Array**	**135.98**	**71**	PKP	PKPdf	22 50 41.7	-2.0
	0.5nm,0.8s,baz=270,slow=2.4,SNR=4.1						
YKA	**Yellowknife Ar**	**137.64**	**316**	PKP	PKPdf	22 50 43.2	-3.1
	1.6nm,0.6s,baz=115,slow=2.5,SNR=5.0						
YKA	**Yellowknife Ar**	**137.64**	**316**	PKP	PKPdf	22 50 43.2	-3.1
DAWY	**Dawson**	**148.29**	**310**	*e*PKPbc	PKPdf	22 51 06.2	+1.6
SONM	**Songino Array**	**149.53**	**86**	PKPbc	PKPdf	22 51 10.5	+3.4
	4.4nm,0.6s,baz=232,slow=3.0,SNR=54						
MCK	**McKinley**	**152.27**	**308**	*e*PKPbc	PKPdf	22 51 16.5	+5.8
MAT	**Matsushiro**	**156.72**	**144**	*e*P	PKPdf	22 51 14.0	-3.6
MAT				*e*S		22 51 26.0	

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*ISK **05** 22:44:41.6, 38.12N×26.74E, h11^{km}, MD3.0*
*ATH **05** 22:44:41.5, 38.07N×26.54E, h27^{km}±5^{km}, MD3.2/3*
*NEIC **05** 22:44:42.0, 38.12N×26.85E, h12^{km}, MD3.2(ATH), MD3.0(ISK), After ISK.*
*CSEM **05** 22:44:42.2±0.1, 38.14N×26.78E, h15^{km}, MD3.0, Error ellipse: s-maj=2.6km s-min=1.8km az=92.0*
ISC 05 22:44:41.5±0.7**, 38.13N**±0.03×**26.68E**±0.04**, h4**^{km}±5^{km}**, n23, σ0^{s}83**/33**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.24**	**344**	*i* P	**Pg**	**22 44 45.8**	**-0.6**
URLA				*i* S	**Sg**	**22 44 49.8**	**+0.2**
BLCB	**Balcova**	**0.38**	**48**	*i* PG	**Pg**	**22 44 49.1**	**0.0**
BLCB				*i* SG	**Sg**	**22 44 54.3**	**+0.1**
SMG	**Samos**	**0.44**	**164**	*e*PB	**Pg**	**22 44 50.9**	**+0.7**
SMG				*e*SB	**Sg**	**22 44 57.5**	**+1.4**
IZM	**Izmir**	**0.53**	**59**	PG	**Pg**	**22 44 51.9**	**-0.2**
KDAG	**Bornova**	**0.54**	**59**	*i* P	**Pg**	**22 44 51.2**	**-0.9**
KDAG				*i* S	**Sg**	**22 44 59.0**	**-0.4**
AKS	**Akhisar**	**1.16**	**49**	PN	**Pn**	**22 45 03.7**	**-0.7**
PRK	**Paraskevi**	**1.16**	**344**	*e*PN	**Pn**	**22 45 04.2**	**-0.2**
PRK				*e*SN	**Sn**	**22 45 20.3**	**-0.5**
BODT	**Bodrum**	**1.18**	**155**	*e*PN	**Pn**	**22 45 04.0**	**-0.6**
AYVA	**Ayvalik**	**1.18**	**0**	*i* P	**Pb**	**22 45 05.4**	**+1.4**
AYVA				*i* S	**Sb**	**22 45 21.2**	**+1.8**
MLSB	**Milas**	**1.20**	**133**	*e*PN	**Pn**	**22 45 04.4**	**-0.6**
APE	**Apeiranthos**	**1.40**	**221**	*e*PN	**Pn**	**22 45 07.7**	**-0.1**
APE				*e*SN	**Sn**	**22 45 27.3**	**+0.5**
APE	**Apeiranthos**	**1.40**	**221**	*e*PN	**Pn**	**22 45 05.5**	**-2.3**
MANT	**Manisa**	**1.52**	**76**	*i* P	**Pn**	**22 45 10.5**	**+1.0**
MANT				*i* S	**Sb**	**22 45 29.8**	**+0.5**
YER	**Yerkesik**	**1.61**	**127**	*e*PN	**Pn**	**22 45 10.2**	**-0.6**
EZN	**Ezine**	**1.72**	**351**	*e*PN	**Pn**	**22 45 12.8**	**+0.5**
BALB	**Balikesir**	**1.77**	**31**	*e*PN	**Pn**	**22 45 12.9**	**-0.3**
DENT	**Denizli**	**1.90**	**101**	*e*PN	**Pn**	**22 45 14.1**	**-0.8**
DNZL	**Cakiroluk**	**1.92**	**102**	*i* P	**Pn**	**22 45 20.1**	**+4.9**
BTOK	**Tokmak**	**1.94**	**32**	*e*P	**Pn**	**22 45 17.4**	**+1.8**
BTOK				*i* S	**Sn**	**22 45 46.9**	**+6.3**
DST	**Dursunbey**	**2.12**	**45**	*e*PN	**Pn**	**22 45 17.5**	**-0.6**
LIA	**Limnos Island**	**2.12**	**327**	*e*PN	**Pn**	**22 45 17.4**	**-0.7**
ULDT	**Uludag**	**2.77**	**43**	*i* P	**Pn**	**22 45 33.0**	**+5.6**
ULDT				*i* S	**Sn**	**22 46 07.7**	**+6.0**
RDO	**Rodhopi**	**3.14**	**344**	*e*PN	**Pn**	**22 45 31.9**	**-0.8**

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*BJI **05** 23:03:42.2, 34.31N×72.89E, h10^{km}, mB4.9, mb4.4, ML4.5*
*MOS **05** 23:03:47.7±1.1, 34.19N×73.76E, h12^{km}, mb4.3/12, Error ellipse: s-maj=21.5km s-min=7.6km az=98.6*
*NDI **05** 23:03:48.6±4.8, 34.30N×73.47E, h10^{km}, ML3.9, mb4.1(NEIC)*
*IDC **05** 23:03:48.1±1.4, 34.21N×73.73E, mb4.1/7, mb1 4.3/10, mb1mx4.1/20, mbtmp4.2/10, ML4.5/3, MS3.6/1, Ms1 3.6/1, ms1mx2.8/32, Error ellipse: s-maj=32.4km s-min=21.8km az=34.0*
*NEIC **05** 23:03:49.4±0.6, 34.19N×73.83E, h10^{km}, mb4.1/6, Error ellipse: s-maj=15.2km s-min=6.2km az=52.0*
*NNC **05** 23:04:00.8±12.0, 34.66N×73.11E, h64^{km}±120^{km}, mpv4.5, Error ellipse: s-maj=97.9km s-min=64.9km az=38.0*
ISC 05 23:03:48.1±0.3**, 34.24N**±0.03×**73.86E**±0.05**, h10**^{km}**, n89, σ1^{s}65**/107**, mb4.1**/14**, MS3.7**/2**, 5C-7D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**0.76**	**220**	⇓P	**Pb**	**23 04 04.6**	**+1.6**
JMU	**Jammu**	**1.75**	**150**	*e*P	**Pn**	**23 04 25.0**	**+6.1**
JMU				*e*S	**Sn**	**23 04 46.0**	**+4.6**
THW	**Thamme Wali**	**2.28**	**231**	⇑P	**Pn**	**23 04 28.4**	**+2.0**
THN	**Thein Dam**	**2.38**	**139**	*e*P	**Pn**	**23 04 31.9**	**+4.0**
THN				*e*S	**Sn**	**23 05 04.5**	**+7.1**
DLH	**Dalhousie**	**2.45**	**133**	*e*P	**Pn**	**23 04 32.0**	**+3.2**
DLH				*e*S	**Sn**	**23 05 02.0**	**+3.0**
SARP	**Sargodha**	**2.52**	**204**	P	**Pn**	**23 04 30.9**	**+1.1**
SARP				S	**Sn**	**23 05 05.0**	**+4.1**
BHK	**Bhakra**	**3.55**	**142**	*e*P	**Pn**	**23 04 56.9**	**+12**
BHK				*e*S	**Sn**	**23 05 40.3**	**+13**
SDNR	**Sundarnagar**	**3.79**	**135**	*e*P	**Pn**	**23 04 50.0**	**+2.2**
SDNR				*e*S	**Sn**	**23 05 35.0**	**+2.1**
DRP	**Derazinda**	**3.96**	**232**	P	**Pn**	**23 04 52.1**	**+1.9**
KLP	**Kalpa**	**4.58**	**125**	*e*P	**Pn**	**23 05 01.9**	**+2.9**
KLP				*e*S	**Sn**	**23 05 56.1**	**+3.2**
KLP				AML	AML	23 06 15.2	
	comp=N,288nm,0.4s						
KLP				AML	AML	23 06 15.7	
	comp=E,551nm,0.4s						
JOSI	**Joshimath**	**6.06**	**126**	*e*x	x	23 04 40.2	
JOSI				*e*x	x	23 06 02.2	
NDI	**New Delhi**	**6.24**	**152**	*e*x	x	23 05 17.0	
NDI				*e*S	**Sn**	**23 06 32.0**	**-2.7**
KHET	**Khetri**	**6.37**	**164**	*e*P	**Pn**	**23 05 24.0**	**-0.4**
KHET				*e*x	x	23 06 45.0	
KHET				AML	AML	23 07 17.7	
	comp=N,50nm,0.3s						
KHET				AML	AML	23 07 18.6	
	comp=E,66nm,0.7s						
AYAN	**Aya Nagar**	**6.38**	**153**	*e*x	x	23 05 15.5	
AYAN				*e*x	x	23 06 32.8	
KUDL	**Kundal**	**6.48**	**159**	*e*P	**Pn**	**23 05 23.4**	**-2.6**
KUDL				*e*S	**Sn**	**23 06 37.6**	**-3.2**
PTH	**Pithoragarh**	**7.15**	**129**	*e*P	**Pn**	**23 05 38.1**	**+2.8**
PTH				*e*S	**Sn**	**23 06 58.3**	**+0.9**
JASL	**Jaisalmer**	**7.72**	**200**	*e*P	**Pn**	**23 05 41.1**	**-2.3**
JASL				*e*x	x	23 07 08.4	
AJM	**Ajmer**	**7.77**	**175**	*e*P	**Pn**	**23 05 42.4**	**-1.6**
AJM				*e*S	**Sn**	**23 07 06.2**	**-6.8**
AJM				AML	AML	23 07 08.1	
	comp=E,53nm,0.3s						
AJM				AML	AML	23 07 08.1	
	comp=N,66nm,0.4s						
AGRA	**Agra**	**7.82**	**152**	*e*P	**Pn**	**23 05 43.0**	**-1.8**
AGRA				AML	AML	23 08 08.7	
	comp=N,106nm,0.4s						
AGRA				AML	AML	23 08 10.0	
	comp=E,118nm,0.5s						
AML	**Almayashu**	**7.88**	**359**	P	**Pn**	**23 05 48.0**	**+2.4**
	SNR=38						
UCH	**Uchtor**	**7.99**	**4**	P	**Pn**	**23 05 49.4**	**+2.3**
	SNR=26						
ULHL	**Ulahol**	**8.21**	**12**	P	**P**	**23 05 53.5**	**+3.4**
	SNR=7.9						
AAK	**Ala-Archa**	**8.39**	**3**	P	**P**	**23 05 55.3**	**+2.6**
	SNR=12						
AAK	**Ala-Archa**	**8.39**	**3**	⇑P	**P**	**23 05 55.0**	**+2.3**
	comp=E,11nm,0.7s						
AAK				⇓S	**Sn**	**23 07 26.1**	**-2.4**
	comp=E,9.3nm,0.8s						
AAK	**Ala-Archa**	**8.39**	**3**	⇑P	**P**	**23 05 55.0**	**+2.3**
	comp=E,11nm,0.7s						
AAK				S	**Sn**	**23 07 26.1**	**-2.4**
AAK	**Ala-Archa**	**8.39**	**3**	P	**P**	**23 05 54.9**	**+2.2**
AAK						23 07 27.2	
AAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AAK				smax			
	comp=Z,10.0nm,0.9s						
EKS2	**Erkin-Say**	**8.41**	**360**	P	**P**	**23 05 55.4**	**+2.5**
	SNR=45						
KBK	**Karagaybulak**	**8.44**	**5**	P	**P**	**23 05 56.3**	**+2.8**
	SNR=17						
CHMS	**Chumysh**	**8.77**	**4**	P	**P**	**23 06 00.2**	**+2.2**
	SNR=38						
TKM2	**Tokmak 2**	**8.77**	**8**	P	**P**	**23 06 01.1**	**+3.2**
	SNR=6.6						
USP	**Ospenovka**	**9.03**	**3**	P	**P**	**23 06 03.3**	**+1.8**
	SNR=9.7						
KK31	**Karatay Array**	**9.23**	**345**	⇑P	**P**	**23 06 04.7**	**+0.4**
	comp=Z,9.0nm,0.3s,baz=150,slow=11,SNR=221						
KK31				⇓S	**Sn**	**23 07 43.3**	**-5.9**
	comp=Z,8.0nm,0.6s,baz=44,slow=47,SNR=6.3						
KK31	**Karatay Array**	**9.23**	**345**	⇑P	**P**	**23 06 04.7**	**+0.4**
	comp=Z,9.0nm,0.3s						
KK31				S	**Sn**	**23 07 43.3**	**-5.9**
KKAR	**Karatay Array**	**9.23**	**345**	P	**P**	**23 06 04.7**	**+0.4**
KKAR				S	**Sn**	**23 07 44.4**	**-4.8**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KKAR				smax			
	comp=Z,2.0nm,0.3s						
KOLN	**Koldanda**	**10.55**	**125**	*e*Pn	**P**	**23 06 21.9**	**-0.7**
KOLN				*e*Sn	**S**	**23 08 14.0**	**-7.9**
	comp=Z,34nm,0.5s						
GKN	**Gorkha**	**11.13**	**121**	*e*Pn	**P**	**23 06 28.3**	**-2.1**
GKN				*e*Sn	**S**	**23 08 27.3**	**-8.7**
	comp=Z,54nm,0.4s						
DMN	**Daman**	**11.70**	**121**	*e*Pn	**P**	**23 06 35.5**	**-2.7**
DMN				*e*Sn	**S**	**23 08 40.3**	**-10**
	comp=Z,35nm,0.6s						
KKN	**Kakani**	**11.71**	**120**	*e*Pn	**P**	**23 06 36.4**	**-2.0**
KKN				*e*Sn	**S**	**23 08 41.2**	**-9.1**
	comp=Z,54nm,0.7s						
PKI	**Pulchoki**	**11.94**	**121**	*e*Pn	**P**	**23 06 40.0**	**-1.4**
PKI				*e*Sn	**S**	**23 08 46.8**	**-8.8**
	comp=Z,27nm,0.4s						
GUN	**Gumba**	**12.08**	**118**	*e*Pn	**P**	**23 06 41.9**	**-1.4**
MK31	**Makanchi Array**	**14.07**	**24**	P	**P**	**23 07 09.9**	**+0.2**
	comp=Z,1.7nm,0.6s,baz=219,slow=13,SNR=51						
MK31	**Makanchi Array**	**14.07**	**24**	P	**P**	**23 07 09.9**	**+0.2**
	comp=Z,1.7nm,0.6s						
MKAR	**Makanchi Array**	**14.07**	**24**	Pn	**P**	**23 07 09.6**	**0.0**
	comp=Z,0.3nm,0.3s,baz=218,slow=15,SNR=16						
LSA	**Lhasa**	**15.36**	**102**	P	**P**	**23 07 32.0**	**+5.4**
LSA	**Lhasa**	**15.36**	**102**	*e*Pn	**P**	**23 07 24.0**	**-2.6**
	comp=Z,9.5nm,0.7s						
POO	**Poona**	**15.65**	**180**	*e*x	x	23 11 04.0	
HYB	**Hyderabad**	**17.27**	**165**	*i* P	**P**	**23 07 53.0**	**+1.9**
HYB	**Hyderabad**	**17.27**	**165**	*e*P	**P**	**23 07 53.0**	**+1.9**
AB31	**Akbulak array**	**18.20**	**330**	P	**P**	**23 08 01.6**	**-0.8**
	comp=Z,0.7nm,0.3s,baz=143,slow=12,SNR=61						
AB31				⇓S	**S**	**23 11 12.8**	**-10**
	comp=Z,0.9nm,0.5s,baz=145,slow=22,SNR=4.1						
AB31	**Akbulak array**	**18.20**	**330**	P	**P**	**23 08 01.6**	**-0.8**
	comp=Z,0.7nm,0.3s						
AB31				S	**S**	**23 11 12.8**	**-10**
AB31	**Akbulak array**	**18.20**	**330**	*e*P	**P**	**23 08 01.6**	**-0.8**
AB31				*e*S	**S**	**23 11 12.7**	**-10**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31				smax			
	comp=Z,1.0nm,0.5s						
BVA0	**Borovoye Array**	**18.94**	**354**	⇓P	**P**	**23 08 10.5**	**-0.9**
	comp=Z,1.7nm,0.5s,baz=161,slow=12,SNR=165						
BVA0	**Borovoye Array**	**18.94**	**354**	*i* P	**P**	**23 08 10.9**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**18.94**	**354**	P	**P**	**23 08 10.2**	**-1.2**
	comp=Z,5.8nm,0.3s,baz=155,slow=8.2,SNR=163						
BVAR	**Borovoye Array**	**18.94**	**354**	P	**P**	**23 08 10.2**	**-1.2**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
BRVK	**Borovoye**	**18.98**	**353**	*e*P	**P**	**23 08 11.1**	**-0.8**
	comp=Z,12nm,0.6s						
AKTK	**Aktyubinsk**	**19.91**	**329**	⇓P	**P**	**23 08 21.3**	**-1.3**
AKTO	**Aktyubinsk**	**19.91**	**329**	⇓P	**P**	**23 08 21.3**	**-1.3**
	comp=Z,1.3nm,0.5s						
AKTO	**Aktyubinsk**	**19.91**	**329**	P	**P**	**23 08 22.1**	**-0.5**
	comp=Z,3.2nm,0.3s,baz=131,slow=11,SNR=38						
AKTO	**Aktyubinsk**	**19.91**	**329**	P	**P**	**23 08 22.1**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZAL	**Zalesovo**	**21.15**	**18**	P	**P**	**23 08 34.9**	**-0.6**
	comp=Z,11nm,0.4s,mb4.5,baz=258,slow=6.6,SNR=55						
ZAL	**Zalesovo**	**21.15**	**18**	P	**P**	**23 08 34.9**	**-0.6**
ZAL				pmax	pmax		
	comp=Z,11nm,0.4s						
GTA	**Gaotai**	**21.38**	**68**	*e*P	**P**	**23 08 38.4**	**+0.5**
GTA				AP		23 08 42.8	
GTA				XP		23 08 45.6	
NVS	**Novosibirsk**	**21.61**	**15**	*e*P	**P**	**23 08 37.8**	**-2.4**
NVS				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.1						
NVS				pmax	pmax		
	comp=N,3.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.6s						
ORR	**Orenburg**	**22.19**	**327**	*i* P	**P**	**23 08 45.6**	**-0.3**
ORR				*e*		23 08 50.4	
ORR				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.3						
ARU	**Arti**	**24.55**	**339**	*e*P	**P**	**23 09 09.8**	**+1.0**
	comp=Z,8.1nm,0.4s,mb4.6						
ARU	**Arti**	**24.55**	**339**	*e*P	**P**	**23 09 10.0**	**+1.2**
TRD	**Trivandrum**	**25.77**	**173**	*e*x	x	23 19 07.7	
SONM	**Songino Array**	**27.82**	**51**	P	**P**	**23 09 40.6**	**+1.2**
	comp=Z,2.2nm,0.8s,mb3.9,baz=252,slow=9.7,SNR=23						
SONM	**Songino Array**	**27.82**	**51**	P	**P**	**23 09 40.6**	**+1.3**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	**Malin Array Be**	**36.18**	**311**	P	**P**	**23 10 51.6**	**-0.9**
	comp=Z,0.6nm,0.4s,mb3.9,baz=81,slow=7.6,SNR=7.3						
AKASG	**Malin Array Be**	**36.18**	**311**	P	**P**	**23 10 51.6**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOF	**Joensuu**	**38.98**	**331**	*e*p	**P**	**23 11 15.7**	**-0.3**
	comp=Z,1.5nm,0.5s,mb4.0						
JOF	**Joensuu**	**38.98**	**331**	*e*P	**P**	**23 11 15.7**	**-0.3**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
FINES	**FINESS Array B**	**40.65**	**327**	P	**P**	**23 11 29.1**	**-0.6**
	comp=Z,1.1nm,0.6s,mb3.6,baz=121,slow=11,SNR=12						
FINES	**FINESS Array B**	**40.65**	**327**	P	**P**	**23 11 29.2**	**-0.5**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KAF	**Kangasniemi**	**40.78**	**328**	*e*p	**P**	**23 11 30.4**	**-0.4**
	comp=Z,1.5nm,0.7s,mb3.7,baz=112,slow=8.1						
KAF	**Kangasniemi**	**40.78**	**328**	*e*P	**P**	**23 11 30.4**	**-0.4**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
ARCES	**ARCESS Array B**	**44.12**	**338**	P	**P**	**23 11 57.9**	**+0.1**
	comp=Z,3.9nm,0.7s,mb4.3,baz=112,slow=8.2,SNR=15						
ARCES	**ARCESS Array B**	**44.12**	**338**	P	**P**	**23 11 57.9**	**0.0**
ARCES	**ARCESS Array B**	**44.12**	**338**	P	**P**	**23 11 57.9**	**0.0**
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HFS	**Hagfors**	**46.28**	**323**	LR	LR	23 32 24.1	
	comp=Z,64nm,18.8s,MS3.6,baz=240,slow=37						
TIXI	**Tiksi**	**47.02**	**21**	*e*P	**P**	**23 12 19.9**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,53nm,12.0s,MS3.7						
NB2	**NORSAR Subarra**	**47.58**	**324**	P	**P**	**23 12 24.2**	**-1.3**
	comp=Z,1.6nm,0.6s,mb4.2,baz=94,slow=7.4						
NOA	**NORSAR Array B**	**47.58**	**324**	P	**P**	**23 12 24.2**	**-1.3**
	comp=Z,2.4nm,0.7s,mb4.4,baz=96,slow=7.6,SNR=11						
NOA	**NORSAR Array B**	**47.58**	**324**	P	**P**	**23 12 24.3**	**-1.2**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NAO	**NORSAR Subarra**	**47.75**	**324**	P	**P**	**23 12 24.2**	**-2.7**
	comp=Z,1.6nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**78.81**	**123**	P	**P**	**23 15 53.4**	**+0.4**
	comp=Z,0.6nm,0.5s,mb3.8,baz=322,slow=5.4,SNR=2.9						
WRA	**Warramunga Arr**	**78.81**	**123**	P	**P**	**23 15 53.4**	**+0.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

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*NEIC **05** 23:07:56.5±3.9, 22.64S×178.66W, h547^{km}±32^{km}, mb4.3/4, Error ellipse: s-maj=56.2km s-min=18.8km az=63.0*
*IDC **05** 23:08:04.7±5.6, 23.18S×179.68W, h550^{km}±53^{km}, mb3.7/5, mb1 3.7/7, mb1mx3.3/16, mbtmp4.6/7, Error ellipse: s-maj=58.9km s-min=25.0km az=53.0*
ISC 05 23:07:56.9±3.9**, 22.6S**±0.2×**178.7W**±0.4**, h578**^{km}±35^{km}**, n19, σ0^{s}77**/17**, mb4.3**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.80**	**269**	P	**P**	**23 10 53.7**	**-0.1**
	0.4nm,0.3s,baz=77,slow=17,SNR=5.8						
URZ	**Urewera**	**16.03**	**192**	P	**P**	**23 11 15.7**	**+0.3**
	2.5nm,0.3s,baz=330,slow=2.9,SNR=16						
RPZ	**Rata Peaks**	**22.72**	**200**	P	**P**	**23 12 17.2**	**-0.2**
	11nm,0.6s,mb4.7,baz=21,slow=12,SNR=7.4						
CTAO	**Charters Tower**	**32.74**	**268**	*e*P	**P**	**23 13 44.4**	**-0.1**
PMG	**Port Moresby**	**35.28**	**286**	P	**P**	**23 14 08.2**	**+2.5**
	12nm,0.8s,mb4.6,baz=117,slow=14,SNR=4.7						
PMG	**Port Moresby**	**35.28**	**286**	*e*P	**P**	**23 14 08.1**	**+2.5**
	10nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**36.37**	**247**	P	**P**	**23 14 13.6**	**-0.8**
	2.1nm,0.5s,mb3.9,baz=93,slow=13,SNR=6.6						
STKA	**Stephens Creek**	**36.37**	**247**	*e*P	**P**	**23 14 13.8**	**-0.7**
ASPA	**Alice Springs**	**43.49**	**259**	*e*P	**P**	**23 15 11.5**	**-0.2**
WB2	**Warramunga Arr**	**43.74**	**264**	*e*P	**P**	**23 15 13.4**	**-0.3**
WRAB	**Tennant Creek**	**43.74**	**264**	*e*P	**P**	**23 15 12.9**	**-0.8**
	9.2nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**43.75**	**264**	P	**P**	**23 15 13.5**	**-0.3**
	5.4nm,0.6s,mb4.3,baz=91,slow=8.4,SNR=37						
GUMO	**Guam**	**50.70**	**312**	*e*P	**P**	**23 16 05.4**	**-0.9**
FITZ	**Fitzroy Crossi**	**52.18**	**264**	*e*P	**P**	**23 16 18.4**	**+1.6**
	4.1nm,0.4s,mb4.1						
FITZ	**Fitzroy Crossi**	**52.18**	**264**	P	**P**	**23 16 17.7**	**+0.8**
	4.9nm,0.4s,mb4.2,baz=109,slow=7.3,SNR=16						
KLBR	**Kellerberrin**	**56.64**	**246**	*e*P	**P**	**23 16 48.0**	**+0.2**
	5.1nm,0.6s,mb3.9						
NWAO	**Narrogin (SRO)**	**56.91**	**245**	*e*P	**P**	**23 16 49.9**	**+0.2**
HFS	**Hagfors**	**141.50**	**350**	PKP	PKPdf	23 26 30.6	+8.6
	1.2nm,0.3s,baz=45,slow=4.2,SNR=12						
AKASG	**Malin Array Be**	**144.52**	**329**	PKP	PKPdf	23 26 38.6	+11
	0.8nm,0.4s,baz=41,slow=3.7,SNR=7.7						

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*ISK **05** 23:17:06.6, 38.27N×26.62E, h8^{km}, MD2.9*
*ATH **05** 23:17:06.0, 38.13N×26.73E, h40^{km}±9^{km}, MD3.0/3*
*CSEM **05** 23:17:06.1±0.1, 38.14N×26.71E, h20^{km}, MD2.9, Error ellipse: s-maj=3.7km s-min=2.0km az=127.0*
ISC 05 23:17:06.9±0.7**, 38.16N**±0.04×**26.65E**±0.06**, h18**^{km}±10^{km}**, n7, σ0^{s}58**/13**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.38**	**53**	*i* PG	**Pb**	**23 17 14.0**	**-0.8**
BLCB				*i* SG	**Sb**	**23 17 19.4**	**-0.8**
SMG	**Samos**	**0.47**	**162**	*e*P	**Pb**	**23 17 16.3**	**0.0**
SMG				*e*S	**Sb**	**23 17 23.8**	**+1.1**
IZM	**Izmir**	**0.54**	**63**	*i* PG	**Pb**	**23 17 17.3**	**-0.1**
IZM				*i* SG	**Sb**	**23 17 25.2**	**+0.5**
PRK	**Paraskevi**	**1.13**	**345**	*e*P	**Pb**	**23 17 27.4**	**-0.2**
PRK				*e*S	**Sb**	**23 17 42.8**	**+1.0**
AKS	**Akhisar**	**1.16**	**51**	*e*PN	**Pn**	**23 17 28.4**	**0.0**
APE	**Apeiranthos**	**1.41**	**220**	*e*P	**Pn**	**23 17 31.3**	**-0.5**
APE				*e*S	**Sb**	**23 17 49.4**	**-0.4**
BALB	**Balikesir**	**1.76**	**32**	*e*PN	**Pn**	**23 17 37.1**	**+0.1**
BALB				*e*SN	**Sn**	**23 17 59.3**	**+0.2**

WEL 05 23:17:51.9±0.1**, 40.91S**×**172.50E, h5**^{km}**, ML3.5**/15**, 2C, Error ellipse: s-maj=1.3km s-min=0.9km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.08**	**16**	⇑PG	Pg	23 17 54.0	+0.2
QRZ				SG	Sg	23 17 55.2	+0.2
NNZ	**Nelson**	**0.73**	**116**	P*	Pb	23 18 06.0	-0.8
NNZ				S*	Sb	23 18 16.5	-0.5
NNZ				S*	Sb	23 18 16.5	-0.4
THZ	**Tophouse**	**0.91**	**161**	P*	Pb	23 18 09.1	-0.7
THZ				S*	Sb	23 18 22.1	+0.1
DSZ	**Denniston Nort**	**0.99**	**212**	⇑P*	Pb	23 18 10.7	-0.5
DSZ				S*	Sb	23 18 24.3	-0.1
DUWZ	**D'Urville Isla**	**1.08**	**85**	P*	Pb	23 18 11.9	-0.9
DUWZ				S*	Sb	23 18 27.8	+0.8
TUWZ	**Tuamarina**	**1.21**	**116**	P*	Pb	23 18 14.1	-0.8
TUWZ				S*	Sb	23 18 30.1	-0.5
BSWZ	**Blackbirch Sta**	**1.31**	**128**	P*	Pb	23 18 16.9	+0.2
BSWZ				S*	Sb	23 18 34.9	+1.2
TCW	**Tory Channel**	**1.38**	**104**	PN	Pn	23 18 17.1	-0.8
MRW	**Makara Radio**	**1.69**	**102**	PN	Pn	23 18 23.3	+0.9
MRW				SN	Sn	23 18 45.5	+0.8
KHZ	**Kahutara**	**1.70**	**153**	PN	Pn	23 18 23.8	+1.3
SNZO	**South Karori**	**1.71**	**104**	PN	Pn	23 18 23.6	+0.9
WEL	**Wellington**	**1.75**	**103**	PN	Pn	23 18 24.6	+1.3
KIW	**Kapiti Island**	**1.83**	**89**	PN	Pn	23 18 24.8	+0.6
BHW	**Baring Head**	**1.86**	**106**	PN	Pn	23 18 25.7	+0.9
LTZ	**Lake Taylor**	**1.88**	**185**	PN	Pn	23 18 24.8	-0.3
CAW	**Cannon Point**	**1.95**	**97**	*e*PN	Pn	23 18 27.2	+1.1
PKE	**Pukeiti**	**2.05**	**34**	PN	Pn	23 18 26.6	-0.9
MSWZ	**Moikau Station**	**2.14**	**105**	PN	Pn	23 18 29.9	+1.2
WAZ	**Wanganui**	**2.22**	**60**	PN	Pn	23 18 30.3	+0.4

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*NEIC **05** 23:23:36.9±3.8, 4.24S×125.88E, h361^{km}±45^{km}, mb4.6/6, Error ellipse: s-maj=19.9km s-min=18.8km az=119.0*
*IDC **05** 23:23:40.3±3.8, 4.34S×126.01E, h404^{km}±45^{km}, mb3.6/6, mb1 3.9/8, mb1mx3.7/16, mbtmp4.6/8, Error ellipse: s-maj=26.6km s-min=14.9km az=68.0*
ISC 05 23:23:35.8±2.5**, 4.34S**±0.08×**125.8E**±0.1**, h366**^{km}±29^{km}**, n19, σ0^{s}81**/22**, mb4.0**/9**, 2C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**10.58**	**142**	⇑*i*P	**P**	**23 26 21.0**	**+19**
	43nm,0.5s						

FITZ	Fitzroy Crossi	13.68	181	⇑*i*P	P	23 26 38.6	+0.5
	46nm,0.4s						
FITZ	Fitzroy Crossi	13.68	181	P	P	23 26 38.6	+0.5
	15nm,0.3s,baz=16,slow=8.7,SNR=193						
FITZ				S	S	23 29 01.2	-2.1
	0.1nm,0.3s,baz=205,slow=17,SNR=7.0						
WRAB	Tennant Creek	17.58	153	*e*P	P	23 27 19.0	+0.1
	48nm,0.6s						
WRA	Warramunga Arr	17.59	153	P	P	23 27 19.1	+0.1
	5.4nm,0.3s,baz=334,slow=10,SNR=106						
WRA				S	S	23 30 18.6	-0.4
	0.4nm,0.3s,baz=332,slow=19,SNR=7.8						
WB2	Warramunga Arr	17.59	153	*e*P	P	23 27 19.1	+0.1
WB2				*e*		23 27 21.9	
WB2				*e*S	S	23 30 19.3	+0.2
WB2	Warramunga Arr	17.59	153	*e*P	P	23 27 21.9	+2.9
WB2				*e*S	S	23 30 19.3	+0.2
MBWA	Marble Bar	17.74	199	*e*P	P	23 27 20.3	-0.2
	54nm,2.1s						
PMG	Port Moresby	21.76	104	P	P	23 27 59.8	-0.1
	7.5nm,0.5s,mb4.2,baz=273,slow=4.9,SNR=4.0						
FORT	Forrest	26.38	176	*e*P	P	23 28 42.5	+0.4
	19nm,0.7s,mb4.4						
KLBR	Kellerberrin	28.15	195	*e*P	P	23 28 58.9	+1.1
	21nm,1.3s,mb4.2						
STKA	Stephens Creek	31.14	153	P	P	23 29 23.7	0.0
	6.7nm,0.3s,mb4.3,baz=336,slow=8.2,SNR=53						
STKA	Stephens Creek	31.14	153	P	P	23 29 23.7	0.0
SONM	Songino Array	54.69	344	P	P	23 32 30.0	-0.3
	0.3nm,0.6s,mb2.8,baz=149,slow=5.9,SNR=4.4						
MKAR	Makanchi Array	63.77	328	P	P	23 33 31.3	-0.2
	1.0nm,0.4s,mb3.8,baz=114,slow=8.4,SNR=19						
ZAL	Zalesovo	67.41	335	P	P	23 33 53.4	-1.0
	1.3nm,0.4s,mb4.0,baz=341,slow=5.6,SNR=4.8						
BVAR	Borovoye Array	73.63	329	P	P	23 34 31.1	-0.5
	0.5nm,0.5s,mb3.5,baz=129,slow=9.2,SNR=3.9						
OPO	Ambohidratompo	77.87	252	P	P	23 34 57.2	+1.3
	3.7nm,0.6s,mb4.3,baz=94,slow=2.2,SNR=13						
PDAR	Pinedale Array	117.90	43	PKP	PKPdf	23 41 40.5	+1.0
	0.2nm,0.4s,baz=53,slow=0.9,SNR=4.6						

MOS ***05*** *23:24:22.4±1.0, 36.58N×70.76E, h245^{km}, mb3.9/13, Error ellipse: s-maj=17.0km s-min=8.1km az=98.1*
BJI ***05*** *23:24:23.1, 36.73N×70.72E, h247^{km}, mB4.7, mb4.3*
IDC ***05*** *23:24:23.9±4.2, 36.52N×70.83E, h246^{km}±39^{km}, mb3.5/12, mb1 3.6/16, mb1mx3.5/23, mbtmp4.2/16, Error ellipse: s-maj=23.4km s-min=13.6km az=2.0*
NEIC ***05*** *23:24:24.0±1.2, 36.61N×70.84E, h243^{km}±13^{km}, mb4.0/9, Error ellipse: s-maj=14.1km s-min=6.6km az=53.0*
NNC ***05*** *23:24:32.2±5.7, 37.31N×71.29E, h280^{km}±48^{km}, mpv4.5, Error ellipse: s-maj=58.4km s-min=37.7km az=33.0*
ISC 05 23:24:23.2±0.4**, 36.63N**±0.03×**70.82E**±0.05**, h251**^{km}±5^{km}**, n91, σ1^{s}00**/111**, mb3.8**/16**, 9C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.93	162	⇑P	P	23 25 16.4	+0.9
CHCP	Chirah Chowk	3.58	145	P	P	23 25 24.0	+1.4
THW	Thamme Wali	3.90	168	P	P	23 25 26.8	+0.4
SBDP	Sheikh Budin	4.31	180	⇑P	P	23 25 31.9	+0.6
DRP	Derazinda	4.89	186	P	P	23 25 38.6	+0.3
SARP	Sargodha	4.94	161	P	P	23 25 38.8	0.0
KSH	Kashi	4.99	53	P	P	23 25 40.5	+1.1
KSH				S	S	23 26 38.7	-0.2
KSH				Smax			
	comp=N,2μm,0.6s						
KSH				Smax			
	comp=E,2μm,0.8s						
THN	Thein Dam	5.82	135	*e*P	P	23 25 50.5	+0.8
THN				*e*x	x	23 26 56.2	
DLH	Dalhousie	5.88	132	*e*P	P	23 25 51.0	+0.5
DLH				*e*S	S	23 26 54.0	-4.8
AML	Almayashu	5.93	21	P	P	23 25 51.4	+0.3
	SNR=205						
UCH	Uchtor	6.28	26	P	P	23 25 56.0	+0.5
	SNR=190						
KZA	Kyzart	6.44	31	P	P	23 25 57.7	+0.2
	SNR=25						
EKS2	Erkin-Say	6.45	20	P	P	23 25 57.8	+0.3
	SNR=57						
KK31	Karatay Array	6.47	358	⇓P	P	23 25 57.6	-0.3
	comp=E,20nm,0.5s,baz=182,slow=14,SNR=557						
KK31				S	S	23 27 10.1	-2.0
	comp=E,8.8nm,0.4s,baz=188,slow=19,SNR=3.7						
KK31	Karatay Array	6.47	358	⇓P	P	23 25 57.6	-0.3
	comp=E,20nm,0.4s						
KK31				S	S	23 27 10.1	-2.0
KKAR	Karatay Array	6.47	358	*i* PN	P	23 25 57.6	-0.3
KKAR						23 27 10.0	
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KKAR				smax			
	comp=Z,3.0nm,0.3s						
AAK	Ala-Archa	6.64	24	P	P	23 26 00.4	+0.5
	SNR=79						
AAK	Ala-Archa	6.64	24	⇓P	P	23 26 00.4	+0.4
	comp=Z,27nm,0.4s						
AAK				⇑S	S	23 27 08.0	-7.7
	comp=Z,59nm,0.9s						
AAK	Ala-Archa	6.64	24	PN	P	23 26 00.3	+0.3
AAK				pmax	pmax		
	comp=Z,11nm,0.4s						
KBK	Karagaybulak	6.81	27	P	P	23 26 02.9	+0.7
	SNR=14						
BHK	Bhakra	6.97	137	*e*x	x	23 26 55.7	
BHK				*e*x	x	23 27 23.2	
ULHL	Ulahol	7.01	35	P	P	23 26 05.0	+0.4
	SNR=27						
CHMS	Chumysh	7.05	24	P	P	23 26 04.9	-0.2
	SNR=10						
USP	Ospenovka	7.21	22	P	P	23 26 06.5	-0.7
	SNR=16						
SDNR	Sundarnagar	7.22	133	*e*P	P	23 26 07.8	+0.4
SDNR				*e*S	S	23 27 25.2	-3.8
TKM2	Tokmak 2	7.29	29	P	P	23 26 08.5	+0.3
	SNR=11						
SMLA	Simla	7.61	134	*e*P	P	23 26 11.3	-0.9
SMLA				*e*S	S	23 27 35.5	-2.2
KLP	Kalpa	7.99	127	*e*P	P	23 26 18.2	+1.2
KLP				*e*S	S	23 27 43.8	-2.5
KLP				AML	AML	23 27 46.8	
	comp=E,395nm,0.9s						
KLP				AML	AML	23 27 48.4	
	comp=N,310nm,0.8s						
KHET	Khetri	9.51	152	*e*P	P	23 26 36.0	-0.4
KHET				*e*S	S	23 28 17.3	-3.7
KHET				AML	AML	23 28 21.7	
	comp=E,68nm,0.7s						
KHET				AML	AML	23 28 22.0	
	comp=N,37nm,0.4s						
NDI	New Delhi	9.58	144	*e*P	P	23 26 36.0	-1.2
NDI				*e*S	S	23 28 17.0	-5.5
AYAN	Aya Nagar	9.71	145	*e*P	P	23 26 38.7	-0.1
AYAN				*e*S	S	23 28 19.2	-6.2
KUDL	Kundal	9.72	149	*e*P	P	23 26 38.6	-0.4
KUDL				*e*S	S	23 28 19.7	-6.0
MK31	Makanchi Array	13.28	37	P	P	23 27 23.0	-0.4
	comp=N,2.8nm,0.5s,baz=223,slow=15,SNR=38						
MK31	Makanchi Array	13.28	37	P	P	23 27 23.0	-0.4
	comp=N,2.8nm,0.5s						
MKAR	Makanchi Array	13.28	37	P	P	23 27 22.6	-0.8
	comp=N,0.9nm,0.3s,baz=223,slow=17,SNR=54						
MKAR	Makanchi Array	13.28	37	*e*P	P	23 27 22.9	-0.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KOLN	Koldanda	13.96	126	*e*Pn	P	23 27 32.5	+0.7
KOLN				*e*Sn	S	23 30 03.4	+2.3
	comp=Z,30nm,0.6s						
GKN	Gorkha	14.49	122	*e*Pn	P	23 27 38.3	-0.2
GKN				*e*Sn	S	23 30 12.7	-0.4
	comp=Z,35nm,0.4s						
AB31	Akbulak array	14.90	331	⇑P	P	23 27 41.6	-1.7
	comp=Z,1.4nm,0.3s,baz=150,slow=12,SNR=64						
AB31				⇑S	S	23 30 25.2	+3.2
	comp=Z,4.3nm,0.8s,baz=145,slow=20,SNR=4.3						
AB31	Akbulak array	14.90	331	⇑P	P	23 27 41.6	-1.7
	comp=Z,1.4nm,0.3s						
AB31				S	S	23 30 25.2	+3.2
DMN	Daman	15.06	123	*e*Pn	P	23 27 46.0	+0.5
DMN				*e*Sn	S	23 30 26.8	+1.0
	comp=Z,32nm,0.5s						
KKN	Kakani	15.07	122	*e*Pn	P	23 27 45.8	+0.3
PKI	Pulchoki	15.29	122	*e*Pn	P	23 27 48.2	0.0
GUN	Gumba	15.41	120	*e*Pn	P	23 27 47.6	-1.9
BVA0	Borovoye Array	16.40	359	⇑P	P	23 28 01.0	+0.3
	comp=Z,0.6nm,0.5s,baz=157,slow=9.8,SNR=68						
BVA0	Borovoye Array	16.40	359	*e*P	P	23 28 00.1	-0.6
BVAR	Borovoye Array	16.40	359	P	P	23 27 59.8	-0.9
	comp=Z,2.6nm,0.3s,baz=159,slow=12,SNR=50						
BVAR				S	S	23 30 59.3	+4.6
	baz=172,slow=22,SNR=5.0						
BVAR	Borovoye Array	16.40	359	P	P	23 27 59.8	-0.9
BVAR				S	S	23 30 59.3	+4.7
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BRVK	Borovoye	16.44	359	*e*P	P	23 28 00.6	-0.5
	comp=Z,4.9nm,0.4s						
AKTK	Aktyubinsk	16.60	330	⇑P	P	23 28 02.0	-0.9
AKTK				S	S	23 30 58.5	-0.2
AKTO	Aktyubinsk	16.60	330	⇑P	P	23 28 02.0	-0.8
	comp=Z,3.4nm,1.0s						
AKTO				⇓S	S	23 30 58.5	-0.2
	comp=Z,1.6nm,1.4s						
AKTO	Aktyubinsk	16.60	330	P	P	23 28 02.4	-0.5
	comp=Z,1.6nm,0.3s,baz=138,slow=11,SNR=34						
AKTO	Aktyubinsk	16.60	330	P	P	23 28 02.4	-0.5
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ORR	Orenburg	18.85	328	*d* *i*P	P	23 28 26.3	+0.1
ORR				pmax	pmax		
	comp=Z,20nm,1.0s						
ZAL	Zalesovo	19.85	25	P	P	23 28 36.9	+0.6
	comp=Z,2.7nm,0.3s,baz=249,slow=6.0,SNR=20						
ZAL				S	S	23 32 04.2	+3.3
	comp=Z,0.3nm,0.3s,baz=159,slow=21,SNR=7.5						
ZAL	Zalesovo	19.85	25	P	P	23 28 36.9	+0.6
ZAL				S	S	23 32 04.2	+3.3
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ARU	Arti	21.47	341	*e*P	P	23 28 53.5	+1.3
	comp=Z,11nm,0.6s,mb4.6						
ARU	Arti	21.47	341	*e*P	P	23 28 53.9	+1.7
SONM	Songino Array	28.39	56	P	P	23 29 57.6	+1.3
	comp=Z,1.0nm,0.6s,mb3.6,baz=270,slow=9.1,SNR=10						
SONM	Songino Array	28.39	56	P	P	23 29 57.6	+1.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	Keskin Array B	29.26	288	P	P	23 30 04.5	+0.5
	comp=Z,1.1nm,0.6s,mb3.6,baz=101,slow=8.2,SNR=8.5						
BRTR	Keskin Array B	29.26	288	P	P	23 30 04.6	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	32.75	309	P	P	23 30 33.9	-0.4
	comp=Z,0.4nm,0.3s,mb3.4,baz=81,slow=7.8,SNR=6.7						
MLR	Muntele Rosu	34.59	299	P	P	23 30 51.8	+1.9
	comp=Z,2.4nm,0.9s,mb3.7,baz=169,slow=3.3,SNR=4.9						
MLR	Muntele Rosu	34.59	299	P	P	23 30 51.8	+1.8
MLR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JOF	Joensuu	35.69	330	*e*p	P	23 30 58.7	-0.3
	comp=Z,4.0nm,0.5s,mb4.2						
JOF	Joensuu	35.69	330	*e*P	P	23 30 58.7	-0.3
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.2						
FINES	FINESS Array B	37.30	326	P	P	23 31 12.7	+0.2
	comp=Z,2.0nm,0.7s,mb3.8,baz=115,slow=11,SNR=12						
FINES	FINESS Array B	37.30	326	P	P	23 31 12.7	+0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	ARCESS Array B	40.97	338	P	P	23 31 43.2	+0.5
	comp=Z,2.6nm,0.4s,mb4.0,baz=112,slow=7.5,SNR=29						
ARCES	ARCESS Array B	40.97	338	P	P	23 31 43.3	+0.6
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HFS	Hagfors	42.88	322	P	P	23 31 58.0	-0.1
	comp=Z,1.8nm,0.4s,mb3.9,baz=97,slow=10,SNR=16						
HFS	Hagfors	42.88	322	P	P	23 31 58.0	-0.1
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CII	Carovilli	43.44	295	P	P	23 32 06.1	+3.2
NB2	NORSAR Subarra	44.19	323	P	P	23 32 07.9	-0.7
	comp=Z,1.6nm,0.6s,mb3.5,baz=97,slow=7.4						
NOA	NORSAR Array B	44.19	323	P	P	23 32 08.2	-0.3
	comp=Z,1.6nm,0.6s,mb3.5,baz=96,slow=7.7,SNR=7.6						
NOA	NORSAR Array B	44.19	323	P	P	23 32 08.3	-0.3
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NAO	NORSAR Subarra	44.36	323	P	P	23 32 07.9	-2.0
	comp=Z,1.6nm,0.6s,mb3.5						
TIXI	Tiksi	45.71	22	*e*P	P	23 32 19.5	-0.9
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.7						
INK	Inuvik	73.81	9	P	P	23 35 32.0	+0.9
	comp=Z,1.8nm,0.6s,mb3.9,baz=329,slow=4.9,SNR=12						
INK	Inuvik	73.81	9	*e*P	P	23 35 31.6	+0.5
	comp=Z,2.5nm,0.8s,mb3.9						
INK	Inuvik	73.81	9	P	P	23 35 32.0	+0.9
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
DBIC	Dimbokro	74.56	267	P	P	23 35 35.2	-1.3
	comp=Z,2.7nm,0.7s,mb4.0,baz=213,slow=18,SNR=4.2						
DBIC	Dimbokro	74.56	267	P	P	23 35 35.3	-1.2
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKA	Yellowknife Ar	81.13	3	P	P	23 36 11.9	+0.7
	comp=Z,0.6nm,0.3s,mb3.6,baz=349,slow=5.4,SNR=6.0						
YKA	Yellowknife Ar	81.13	3	P	P	23 36 11.9	+0.7
YKA	Yellowknife Ar	81.13	3	P	P	23 36 11.9	+0.7
YKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	82.18	122	P	P	23 36 16.4	-1.1
	comp=Z,0.5nm,0.6s,mb3.3,baz=323,slow=4.3,SNR=3.4						
WRA	Warramunga Arr	82.18	122	P	P	23 36 16.4	-1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PLCA	Paso Flores	149.73	250	PKPbc	PKPdf	23 43 44.4	+6.7
	comp=Z,3.1nm,0.9s,baz=153,slow=8.2,SNR=4.5						
PLCA	Paso Flores	149.73	250	PKP2	PKPdf	23 43 44.4	+6.7
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.9s						

MOS ***05*** *23:25:35.7±1.1, 34.24N×73.41E, h11^{km}, mb4.2/6, Error ellipse: s-maj=33.8km s-min=15.3km az=92.8*
IDC ***05*** *23:25:36.1±1.5, 34.25N×73.51E, mb4.0/6, mb1 4.1/9, mb1mx3.9/21, mbtmp4.0/9, ML4.2/2, Error ellipse: s-maj=36.3km s-min=24.2km az=43.0*
NEIC ***05*** *23:25:39.3±1.3, 34.48N×73.32E, h10^{km}, mb3.8/1, Error ellipse: s-maj=24.5km s-min=13.5km az=208.0*
ISC 05 23:25:40.6±1.2**, 34.5N**±0.1×**73.4E**±0.1**, h33**^{km}**, n22, σ0^{s}97**/22**, mb3.9**/7**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	14.02	26	Pn	P	23 28 59.0	+0.2
	baz=229,slow=13,SNR=2.3						
LSA	Lhasa	15.78	103	*e*P	P	23 29 23.4	+1.5
	4.8nm,0.6s						
BVAR	Borovoye Array	18.66	354	P	P	23 29 58.3	+0.3
	0.7nm,0.3s,baz=164,slow=10,SNR=5.0						
BVAR	Borovoye Array	18.66	354	P	P	23 29 58.3	+0.3
BVAR	Borovoye Array	18.66	354	P	P	23 29 58.3	+0.3
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	18.70	354	*e*P	P	23 29 58.2	-0.2
AKTO	Aktyubinsk	19.51	329	P	P	23 30 08.5	+0.9
	comp=Z,0.7nm,0.3s,baz=145,slow=11,SNR=5.8						
AKTO	Aktyubinsk	19.51	329	P	P	23 30 08.5	+0.8
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	21.05	19	P	P	23 30 22.6	-1.3
	comp=Z,5.5nm,0.4s,mb4.3,baz=256,slow=6.3,SNR=6.2						
ZAL	Zalesovo	21.05	19	P	P	23 30 22.6	-1.2
ZAL				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ARU	Arti	24.19	340	*e*P	P	23 30 54.0	-0.7
SONM	Songino Array	27.96	51	P	P	23 31 29.6	-0.5
	comp=Z,0.8nm,0.8s,mb3.4,baz=258,slow=9.4,SNR=4.7						
SONM	Songino Array	27.96	51	P	P	23 31 29.6	-0.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	43.75	338	P	P	23 33 45.1	+0.9
	comp=Z,4.5nm,1.0s,mb4.1,baz=111,slow=7.7,SNR=3.7						
ARCES	ARCESS Array B	43.75	338	P	P	23 33 45.1	+0.9
ARCES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HFS	Hagfors	45.86	323	P	P	23 34 01.6	+0.4
	comp=Z,1.0nm,0.3s,mb4.2,baz=99,slow=9.9,SNR=9.5						
HFS	Hagfors	45.86	323	P	P	23 34 01.6	+0.5
HFS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA	NORSAR Array B	47.16	324	P	P	23 34 11.2	-0.2
	comp=Z,0.8nm,0.6s,mb3.9,baz=97,slow=7.7,SNR=2.9						
NOA	NORSAR Array B	47.16	324	P	P	23 34 11.2	-0.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	Matsushiro Arr	51.88	68	Pn	P	23 34 51.9	+3.9
	comp=Z,0.2nm,0.3s,mb3.5,baz=227,slow=13,SNR=4.2						
WRA	Warramunga Arr	79.26	123	P	P	23 37 42.4	-2.1
	comp=Z,1.3nm,0.8s,mb3.9,baz=320,slow=5.2,SNR=6.6						
WRA	Warramunga Arr	79.26	123	P	P	23 37 42.4	-2.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

NEIC ***05*** *23:26:03.6±0.6, 26.89S×176.14W, h30^{km}, Error ellipse: s-maj=24.6km s-min=14.2km az=135.0*
IDC ***05*** *23:26:03.1±3.9, 27.60S×175.74W, h37^{km}±7^{km}, mb3.8/4, mb1 4.2/4, mb1mx3.8/11, mbtmp4.0/4, MS3.6/2, Ms1 3.6/2, ms1mx3.3/11, Error ellipse: s-maj=246.4km s-min=27.4km az=162.0*
ISC 05 23:26:02.4±1.0**, 26.9S**±0.2×**176.1W**±0.2**, h33**^{km}**, n13, σ0^{s}69**/6**, mb4.0**/4**, MS3.5**/2**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.79	214	*e*Pn	Pn	23 26 46.0	+0.1
CTA	Charters Tower	35.06	273	LR	LR	23 45 44.2	
	comp=Z,90nm,20.9s,MS3.5,baz=49,slow=33						
PMG	Port Moresby	38.80	290	LR	LR	23 47 21.2	
	comp=Z,94nm,20.4s,MS3.6,baz=124,slow=32						
WRAB	Tennant Creek	45.73	268	*e*P	P	23 34 22.0	-0.6
WRA	Warramunga Arr	45.74	268	P	P	23 34 23.0	+0.4
	2.8nm,0.8s,mb4.3,baz=106,slow=7.8,SNR=5.7						
WRA				pP	pP	23 34 35.3	+2.8
	2.1nm,0.7s,baz=107,slow=7.6,SNR=6.7						
FITZ	Fitzroy Crossi	54.11	266	P	P	23 35 26.7	+0.1
	6.0nm,0.9s,mb4.5,baz=102,slow=6.8,SNR=3.3						
NVAR	Mina Array Bea	84.58	42	P	P	23 38 34.4	+0.7
	0.6nm,0.9s,mb3.7,baz=229,slow=8.3,SNR=3.8						
TXAR	Lajitas Array	89.13	56	P	P	23 38 55.3	-0.7
	0.1nm,0.3s,mb3.6,baz=225,slow=5.3,SNR=3.7						
MKAR	Makanchi Array	116.77	311	PKP	PKPdf	23 44 44.4	+1.1
	0.4nm,0.7s,baz=181,slow=3.3,SNR=4.5						
MKAR				pPKP		23 44 56.5	
	0.3nm,0.7s,baz=90,slow=1.4,SNR=2.8						
MKAR	Makanchi Array	116.77	311	PKP	PKPdf	23 44 44.4	+1.1
MKAR				pPKP		23 44 56.5	
FINES	FINESS Array B	142.40	343	PKhKP		23 45 29.4	
	1.9nm,0.8s,baz=45,slow=2.0,SNR=3.4						
NOA	NORSAR Array B	145.54	354	PKPbc	PKPbc	23 45 38.1	+1.0
	0.9nm,0.9s,baz=296,slow=10,SNR=3.5						
AKASG	Malin Array Be	149.40	328	PKPbc	PKPdf	23 45 49.5	+6.4
	1.0nm,0.6s,baz=43,slow=4.0,SNR=6.4						
AKASG				pPKPbc		23 46 00.5	
	0.4nm,0.5s,baz=38,slow=3.3,SNR=2.6						

JSN ***05*** *23:30:10.5±1.0, 19.32N×81.58W, h50^{km}±999^{km}, MD4.5*
SSNC ***05*** *23:30:16.1±2.3, 18.75N×81.32W, h29^{km}±676^{km}, MD3.9, ML4.1*
ISC 05 23:30:13.7±1.4**, 18.9N**±0.1×**81.26W**±0.09**, h33**^{km}**, n10, σ0^{s}98**/15**, 5C-2D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCJ	Malvern	3.52	105	⇓*e*P	P	23 31 07.2	-0.1
CVJ	Coleyville	3.59	100	⇑*i*P	P	23 31 08.2	-0.1
PCJ	Portland Cotta	4.06	106	⇑*i*P	P	23 31 14.4	-0.6
PCJ				*e*S	S	23 32 03.8	+1.8
BNJ	Bonny Gate	4.12	97	⇓*e*P	P	23 31 14.9	-1.0
LMGC	Las Mercedes	4.18	73	*e*P	P	23 31 17.9	+1.1
LMGC				*e*S	S	23 32 05.0	-0.2
	comp=N,76nm,0.3s						
	comp=E,99nm,0.4s						
SOR	Soroa	4.22	338	*e*P	P	23 31 18.3	+1.0
SOR				*e*S	S	23 32 05.3	-0.8
	comp=N,3μm,0.5s						
	comp=E,2μm,0.6s						
STH	Stony Hill	4.30	100	⇑*e*P	P	23 31 18.2	-0.2
STH				*e*S	S	23 32 07.4	-0.7
HOJ	Hope	4.37	101	⇑*e*P	P	23 31 19.0	-0.4
GWJ	Greenwich	4.38	100	⇑*e*P	P	23 31 19.1	-0.4
RCC	Rio Carpintero	5.37	77	*e*P	P	23 31 35.3	+1.8
RCC				*e*S	S	23 32 31.2	-3.8
	comp=N,19nm,0.1s						
	comp=E,28nm,0.1s						

JMA ***05*** *23:32:15.7±0.1, 29.39N×130.82E, h28^{km}, M3.3*
IDC ***05*** *23:32:20.9±2.0, 29.53N×129.04E, mb3.5/3, mb1 3.4/5, mb1mx3.3/22, mbtmp3.4/5, ML3.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/26, Error ellipse: s-maj=46.7km s-min=24.3km az=93.0*
ISC 05 23:32:16.4±1.2**, 29.40N**±0.06×**130.8E**±0.1**, h52**^{km}±10^{km}**, n10, σ0^{s}52**/14**, mb3.4**/3**, MS3.0**/1**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.91	299	P	P	23 32 32.6	-0.5
JNN				S	S	23 32 45.5	0.0
JTN	Tanegashima 3	1.27	8	P	P	23 32 38.1	0.0
JTN				*e*S	S	23 32 54.6	+0.3
JAM	Amami Oshima	1.43	227	P	P	23 32 40.7	+0.3
JAM				*e*S	S	23 32 59.0	+0.8
JTSR	Tashiro 2	1.77	4	*e*S	S	23 33 06.3	-0.2
JTK	Tokunoshima	2.27	226	P	P	23 32 52.6	+0.3
JTZ	Takazaki	2.51	6	P	P	23 32 56.0	+0.3
JOW	Kunigami	3.38	222	Pn	P	23 33 06.6	-1.4
	3.7nm,0.3s,baz=112,slow=19,SNR=7.7						
JOW				Sn	S	23 33 41.8	-5.5
	1.9nm,0.3s,baz=63,slow=18,SNR=3.1						
SONM	Songino Array	26.32	321	P	P	23 37 49.0	+0.1
	0.3nm,0.7s,mb2.9,baz=135,slow=8.2,SNR=3.4						
SONM				LR	LR	23 48 08.2	
	comp=Z,43nm,18.2s,MS3.0,baz=216,slow=38						
MKAR	Makanchi Array	41.22	309	P	P	23 39 58.1	+0.5
	0.3nm,0.5s,mb3.2,baz=92,slow=10.0,SNR=6.0						
BVAR	Borovoye Array	49.49	316	P	P	23 41 02.9	-0.4
	1.1nm,0.6s,mb4.1,baz=98,slow=10,SNR=7.8						

IDC ***05*** *23:59:07.2±1.2, 7.37N×92.27E, h24^{km}±5^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.7/18, mbtmp3.9/8, Error ellipse: s-maj=47.1km s-min=18.9km az=55.0*
ISC 05 23:59:05.0±1.2**, 7.3N**±0.2×**92.2E**±0.3**, h24**^{km}**, h24**^{km}±.6^{km}**:pP-P, n10, σ0^{s}57**/8**, mb3.8**/8**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	40.24	349	P	P	00 06 41.9	+0.2
	1.2nm,0.4s,mb3.9,baz=166,slow=8.7,SNR=34						
MKAR				pP	pP	00 06 48.6	-0.3
	1.2nm,0.6s,baz=165,slow=9.2,SNR=9.1						
FITZ	Fitzroy Crossi	41.54	128	P	P	00 06 53.1	+0.5
	2.7nm,0.7s,mb4.0,baz=352,slow=7.1,SNR=4.5						
SONM	Songino Array	42.13	14	P	P	00 06 57.0	-0.1
	0.5nm,0.5s,mb3.4,baz=182,slow=11,SNR=5.0						
SONM				pP	pP	00 07 04.5	+0.1
	0.5nm,0.6s,baz=198,slow=9.4,SNR=3.3						
ZAL	Zalesovo	46.87	354	P	P	00 07 35.3	+0.3
	0.7nm,0.4s,mb4.0,baz=100,slow=3.5,SNR=3.1						
BVAR	Borovoye Array	48.92	343	P	P	00 07 51.2	+0.1
	0.9nm,0.7s,mb3.9,baz=141,slow=9.5,SNR=5.1						
BVAR				pP	pP	00 07 58.6	+0.1
	0.7nm,0.7s,baz=135,slow=10,SNR=3.8						
WRA	Warramunga Arr	49.50	124	P	P	00 07 55.6	-0.4
	0.5nm,0.4s,mb3.9,baz=303,slow=8.7,SNR=6.5						
FINES	FINESS Array B	72.32	333	P	P	00 10 29.2	-1.3
	1.6nm,0.8s,mb4.0,baz=113,slow=11,SNR=5.8						
GERES	GERESS Array B	76.98	318	P	P	00 10 58.2	+0.7
	0.4nm,0.8s,mb3.4,baz=90,slow=2.7,SNR=4.9						
GERES				pP	pP	00 11 06.3	+1.1
	0.6nm,0.7s,baz=76,slow=5.5,SNR=4.4						
PDAR	Pinedale Array	126.34	20	PKP	PKPdf	00 18 08.0	-2.8
	0.3nm,0.5s,baz=315,slow=3.8,SNR=3.6						
NVAR	Mina Array Bea	126.34	30	PKP	PKPdf	00 18 10.2	-0.7
	0.3nm,0.5s,baz=270,slow=4.4,SNR=3.9						

KRSC 06 00:14:18.5±0.5**, 52.39N**×**160.72E, h22**^{km}±7^{km}**, ML3.9, Off**

east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.83	329	i P	Pb	00 14 34.4	+0.4
SPN				i S	Sb	00 14 46.0	+1.3
NLC	Nalytchevo	1.14	314	i P	Pn	00 14 39.4	0.0
NLC				eS	Sb	00 14 54.4	+0.5
RUS	Russkaya	1.35	273	i P	Pn	00 14 41.8	-0.6
RUS				eS	Sn	00 14 59.6	-0.2
PET	Petropavlovsk	1.41	298	i P	Pn	00 14 43.2	0.0
PET				eS	Sn	00 15 01.3	+0.1
UGLR	Uglovaya	1.41	306	eP	Pn	00 14 43.8	+0.6
SDLR	Sedlovina	1.43	309	i P	Pn	00 14 43.7	+0.3
SMAR	Somma	1.46	308	eP	Pn	00 14 43.6	-0.2
AVH	Avacha	1.49	307	eP	Pn	00 14 45.1	+0.8
KOK	Koryaka	1.55	306	eP	Pn	00 14 46.2	+1.0
GRL	Gorelyy	1.63	277	eP	Pn	00 14 46.9	+0.6
GRL				eS	Sn	00 15 07.1	+0.4
KII	Karymskiy	1.82	336	eP	Pn	00 14 49.8	+0.8
GNL	Ganaly	2.13	309	eP	Pn	00 14 54.3	+0.9
APC	Apacha	2.23	285	eP	Pn	00 14 55.7	+0.7
APC				eS	Sn	00 15 22.9	+0.7
APC				Smax			
	80nm,1.0s						
MKZ	Mys Kozlova	2.25	15	eP	Pn	00 14 54.8	-0.4
MKZ				eS	Sn	00 15 22.0	-0.6
MIPR	Malaya Ipel'ka	2.43	269	eP	Pn	00 14 57.6	-0.2
TUMR	Tumrok	2.92	354	eP	Pn	00 15 05.1	+0.4
TUMR				eS	Sn	00 15 38.6	-0.9
KMNR	Kamenistaya	3.38	355	eP	Pn	00 15 11.9	+0.5
ZLN	Zelenaya	3.63	1	eP	Pn	00 15 15.9	+1.0
LGNR	Loginova	3.70	360	eP	Pn	00 15 16.8	+1.0
CIRR	Tsirk	3.73	0	eP	Pn	00 15 17.1	+0.8
KRSR	Krestovskiy	3.84	359	eP	Pn	00 15 18.8	+1.0
KBTR	Krutoberegovo	4.02	17	eP	Pn	00 15 20.3	-0.1
BKI	Bering	4.20	46	eS	Sn	00 16 06.1	-5.9
BKI				Smax			
	40nm,0.3s						

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*IDC **06** 00:17:45.1±1.1, 30.52S×177.54W, mb4.9/4, mb1 4.9/6, mb1mx4.5/13, mbtmp4.8/6, ML4.3/2, Error ellipse: s-maj=33.1km s-min=21.0km az=104.0*

*NEIC **06** 00:17:52.1±1.9, 30.30S×177.73W, h45^{km}±17^{km}, mb4.9/7, Error ellipse: s-maj=17.8km s-min=14.6km az=70.0*

ISC 06 00:17:49.8±0.6**, 30.43S**±0.04×**177.9W**±0.1**, h33^{km}, n38, σ0^{s}99**/29**, mb4.8**/10**, 4C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.17	359	Pn	Pn	00 18 10.5	+0.4
	648nm,0.3s,baz=93,slow=12,SNR=91						
RAO				Sn	Sn	00 18 24.8	-0.3
	3µm,0.3s,baz=192,slow=23,SNR=17						
RAO	Raoul Island	1.17	359	eP	P	00 18 10.2	+0.3
RAO				eS	S	00 18 24.4	-0.6
URZ	Urewera	8.83	206	Pn	P	00 19 52.9	-5.2
	1.8nm,0.3s,baz=338,slow=2.4,SNR=8.3						
URZ				Sn	Sn	00 21 29.3	-8.4
	7.4nm,0.3s,baz=255,slow=5.7,SNR=11						
RPZ	Rata Peaks	15.90	210	Pn	P	00 21 31.0	-1.6
	1.9nm,0.3s,baz=352,slow=7.1,SNR=4.9						
RPZ				Sn	S	00 24 12.6	-15
	1.5nm,0.3s,baz=45,slow=18,SNR=4.1						
RPZ	Rata Peaks	15.90	210	Pn	P	00 21 31.0	-1.6
RPZ				Sn	S	00 24 12.6	-15
TBI	Tubuai	26.28	81	eLR	LR	00 29 45.9	
	138nm,27.5s						
PPT	Papeete	28.78	70	eLR	LR	00 30 53.1	
	150nm,26.8s,baz=236						
CTA	Charters Tower	33.89	279	P	P	00 24 33.3	+1.6
	16nm,0.5s,mb5.2,baz=104,slow=10,SNR=37						
CTAO	Charters Tower	33.89	279	eP	P	00 24 33.2	+1.4
	16nm,0.7s,mb5.1						
STKA	Stephens Creek	34.56	257	P	P	00 24 39.2	+1.9
	20nm,0.7s,mb5.2,baz=98,slow=9.8,SNR=32						
STKA	Stephens Creek	34.56	257	eP	P	00 24 38.9	+1.6
ASPA	Alice Springs	43.20	267	eP	P	00 25 49.9	+0.4
WB2	Warramunga Arr	44.17	272	eP	P	00 25 57.2	-0.2
WRAB	Tennant Creek	44.18	272	eP	P	00 25 57.2	-0.3
	11nm,0.6s,mb4.8						
WRA	Warramunga Arr	44.19	272	P	P	00 25 57.0	-0.6
	8.3nm,0.3s,mb4.9,baz=111,slow=8.0,SNR=167						
SBA	Scott Base	48.02	184	eP	P	00 26 29.2	+2.1
	4.2nm,0.7s,mb4.6						
KAKA	Kakadu	49.02	280	eP	P	00 26 53.8	+18
	4.1nm,0.8s,mb4.5						
FITZ	Fitzroy Crossi	52.45	270	eP	P	00 27 01.3	-0.3
	6.9nm,0.8s,mb4.6						
CASY	Casey	55.16	208	eP	P	00 27 19.1	-1.9
	23nm,0.9s,mb5.2						
QSPA	South Pole Qui	59.68	180	eP	P	00 27 53.6	+0.8
	15nm,0.4s,mb5.4						
QSPA				e		00 27 59.8	
MAW	Mawson	72.31	201	P	P	00 29 12.9	-0.5
	2.2nm,0.7s,mb4.2,baz=127,slow=8.0,SNR=7.7						
MAW	Mawson	72.31	201	P	P	00 29 11.2	-2.2
	2.8nm,0.8s,mb4.2						
SNAA	Sanae	78.13	178	⇑i	P	00 29 46.0	-0.5
VNA3	Neumayer Olymp	78.27	176	⇑iP	P	00 29 47.2	-0.2
VNA3				e		00 30 03.7	
VNA3				e		00 30 07.7	
VNA2	Neumayer--Watz	78.71	177	⇑iP	P	00 29 50.0	+0.2
VNA2				e		00 30 06.8	
VNA2				e		00 30 10.3	
VNA1	Neumayer--Stat	78.94	176	⇑iP	P	00 29 51.6	+0.6
VNA1				e		00 30 08.5	
MKAR	Makanchi Array	117.86	310	PKP	PKPdf	00 36 32.9	+0.2
	0.5nm,0.6s,baz=200,slow=0.6,SNR=8.5						
MKAR	Makanchi Array	117.86	310	PKP	PKPdf	00 36 32.9	+0.2
ARCES	ARCESS Array B	138.63	348	PKP	PKPdf	00 37 13.4	+1.8
	3.8nm,1.0s,baz=76,slow=3.7,SNR=5.3						
JOF	Joensuu	142.48	338	epkp	PKPdf	00 37 15.4	-3.1
KAF	Kangasniemi	144.60	341	epkp	PKPdf	00 37 21.3	-0.9
	baz=36,slow=3.1						
FINES	FINESS Array B	145.20	340	PKPbc	PKPbc	00 37 23.6	+0.1
	9.6nm,0.7s,baz=54,slow=4.7,SNR=72						
NB2	NORSAR Subarra	148.79	351	PKPabc	PKPdf	00 37 34.3	+5.1
	1.9nm,0.7s,baz=15,slow=2.8						
NOA	NORSAR Array B	148.79	351	PKPbc	PKPdf	00 37 34.2	+5.1
	2.5nm,0.7s,baz=14,slow=4.2,SNR=9.6						
NAO	NORSAR Subarra	149.05	352	PKPab	PKPdf	00 37 34.3	+4.7
AKASG	Malin Array Be	151.38	323	PKPbc	PKPdf	00 37 40.5	+7.1
	3.5nm,0.4s,baz=51,slow=2.8,SNR=30						
BR131	Keskin Array S	152.69	298	ePKPbc	PKPdf	00 37 44.0	+8.2
BRTR	Keskin Array B	152.69	298	PKPbc	PKPdf	00 37 44.0	+8.2
	0.8nm,0.8s,baz=138,slow=4.8,SNR=7.4						

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*LDG **06** 00:34:29.9±0.1, 42.31N×2.15E, h5^{km}, Md2.5/3, Ml2.4/18, Error ellipse: s-maj=0.9km s-min=0.9km az=13.0*

*NEIC **06** 00:34:29.9, 42.31N×2.15E, h5^{km}, ML2.4(STR), ML2.4(LDG), MN1.9(MDD), After LDG.*

NEIC Felt [II] at Queralbs and Ribas de Fresser, Spain.

*STR **06** 00:34:30.2±0.3, 42.34N×2.15E, h5^{km}±1^{km}, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **06** 00:34:30.5±0.1, 42.34N×2.17E, h10^{km}, ML2.5/23, Error ellipse: s-maj=1.2km s-min=0.7km az=122.0*

MDD 06 00:34:30.6±0.2**, 42.34N×2.17E, mbLg1.9**/21**, Error ellipse: s-maj=1.7km s-min=1.5km az=167.0, PRXIMO Datos intensidad: IGN-ICC, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBRU	Bruguera	0.05	169	Pg	Pg	00 34 31.4	-0.3
CBRU				Lg		00 34 32.5	
	223nm,0.1s						
VALF	Valcebollere	0.13	301	Pg	Pg	00 34 33.0	-0.2
VALF				Sg	Sg	00 34 34.7	-0.2
VALF	Valcebollere	0.13	301	P	Pg	00 34 33.1	-0.1
VALF				S	Sg	00 34 34.8	-0.1
CLLI	Llivia	0.20	315	Pg	Pg	00 34 34.4	-0.3
CLLI				Lg		00 34 37.4	
	34nm,0.1s						
FILF	Fillols	0.37	52	Pg	Pg	00 34 36.1	-1.9
FILF				Sg	Sg	00 34 40.5	-2.4
FILF	Fillols	0.37	52	P	Pg	00 34 36.2	-1.8
FILF				S	Sg	00 34 40.2	-2.7
CARF	Carcanieres	0.38	353	Pg	Pg	00 34 37.8	-0.5
CARF				Sg	Sg	00 34 43.2	-0.2
CARF	Carcanieres	0.38	353	P	Pg	00 34 38.1	-0.2
CARF				S	Sg	00 34 43.3	-0.1
EJON	La Jonquera	0.55	78	Pg	Pg	00 34 40.8	-0.7
	3.8nm,0.7s,SNR=17						
EJON				Lg		00 34 48.2	
	16nm,0.2s,SNR=23						
EJON	La Jonquera	0.55	78	Pg	Pg	00 34 40.8	-0.8
	3.8nm,0.7s,SNR=17						
CFON	Fontmartina	0.61	161	Pg	Pg	00 34 41.5	-1.3
EMIR	Miracle	0.64	229	Pg	Pg	00 34 42.4	-1.0
	4.2nm,0.1s,SNR=38						
EMIR				Lg		00 34 51.2	
	13nm,0.3s,SNR=16						
EMIR	Miracle	0.64	229	Pg	Pg	00 34 42.4	-0.9
	4.2nm,0.1s,SNR=38						
CORG	Organya	0.64	261	Pg	Pg	00 34 42.4	-1.0
LRDF	Laroque-de-Fa	0.66	24	S	Sg	00 34 52.4	-0.2
GRBF	Gourbit	0.69	318	P	Pg	00 34 43.3	-1.0
GRBF				S	Sg	00 34 52.6	-0.9
CSOR	Sort	0.77	273	Pg	Pg	00 34 44.7	-1.2
CSOR				Lg		00 34 55.2	
	7.0nm,0.1s						
SALF	Salau	0.84	301	Pg	Pg	00 34 46.1	-1.3
SALF				Sg	Sg	00 34 57.4	-1.1
SALF	Salau	0.84	301	P	Pg	00 34 45.9	-1.5
SALF				S	Sg	00 34 57.1	-1.4
MTLF	Montolieu	1.01	2	ePg	Pg	00 34 49.3	-1.4
MTLF				eSg	Sg	00 35 02.7	-1.4
	18nm,0.3s						
CAVN	Les Avellanes	1.15	247	Pg	Pg	00 34 51.7	-1.8
CAVN				Lg		00 35 07.3	
	26nm,0.1s						
EPOB	Poblet	1.27	220	Pg	Pg	00 34 53.9	-2.2
	3.8nm,0.1s,SNR=62						
EPOB				Lg		00 35 10.8	
	9.9nm,0.5s,SNR=18						
EPOB	Poblet	1.27	220	Pg	Pg	00 34 53.9	-2.2
	3.8nm,0.1s,SNR=62						
CGAR	Garraf	1.29	217	Pg	Pg	00 34 50.5	-6.0
EGRA	Graus	1.38	265	Pg	Pg	00 34 56.9	-1.3
	2.5nm,0.4s,SNR=12						
EGRA				Lg		00 35 15.1	
	6.4nm,0.3s,SNR=15						
RESF	Ens	1.43	290	S	Sb	00 35 20.2	+3.6
EPF	Esparros	1.52	298	ePn	Pn	00 34 55.8	-3.3
EPF				ePg	Pg	00 34 57.8	-3.1
EPF				eSg	Sg	00 35 17.8	-3.3
	6.5nm,0.2s						
EBIE	Bielsa	1.54	284	Pg	Pg	00 34 59.2	-2.1
	1.6nm,0.1s,SNR=23						
EBIE				Lg		00 35 21.0	
	9.8nm,0.3s,SNR=21						
EBIE	Bielsa	1.54	284	Pg	Pg	00 34 59.2	-2.1
	1.6nm,0.1s,SNR=23						
VIEF	Viey	1.67	290	S	Sb	00 35 25.7	+2.0
ESAC	San Caprasio	2.06	254	Pn	Pn	00 35 05.6	-1.2
	1.8nm,0.1s,SNR=8.3						
ESAC				Pg	Pg	00 35 09.0	-2.7
	3.2nm,0.2s,SNR=6.4						
ESAC				Sn	Sn	00 35 31.5	-2.1
	6.6nm,0.2s,SNR=7.9						
ESAC				Lg		00 35 35.6	
	16nm,0.3s,SNR=11						
ESAC	San Caprasio	2.06	254	Pn	Pn	00 35 05.6	-1.3
	1.8nm,0.1s,SNR=8.3						
ESAC	San Caprasio	2.06	254	Pg	Pg	00 35 09.0	-2.7
	3.2nm,0.2s,SNR=6.4						
ESAC				Sn	Sn	00 35 31.5	-2.1
	6.6nm,0.2s,SNR=7.9						
ETSF	Etsaut	2.09	287	ePn	Pn	00 35 03.5	-3.8
ETSF				ePg	Pg	00 35 07.9	-4.4
ETSF				eSg	Sg	00 35 35.7	-4.5
	9.1nm,0.3s						
LASF	Ste Croix	2.13	35	ePn	Pn	00 35 04.7	-3.3
LASF				ePg	Pg	00 35 10.3	-2.9
LASF				eSg	Sg	00 35 37.5	-4.2
	2.2nm,0.3s						
CAF	Calviac	2.59	358	ePn	Pn	00 35 11.1	-3.4
CAF				ePg	Pg	00 35 18.5	-3.9
CAF				eSn	Sn	00 35 41.5	-5.6
CAF				eSg	Sg	00 35 52.1	-4.8
	3.9nm,0.2s						
ETOS	Mallorca	2.61	169	Pn	Pn	00 35 12.4	-2.4
	2.4nm,0.2s,SNR=4.0						
ETOS				Sn	Sn	00 35 42.9	-4.8
	10nm,0.7s,SNR=4.0						
ETOS	Mallorca	2.61	169	Pn	Pn	00 35 12.4	-2.4
	2.4nm,0.2s,SNR=4.0						
ETOS				Sn	Sn	00 35 42.9	-4.8
	10nm,0.7s,SNR=4.0						
IPRE	Itoiz	2.64	281	Lg		00 35 56.2	
	2.3nm,0.6s,SNR=4.0						
IUNC	Unciti	2.74	280	Lg		00 35 58.7	
	7.1nm,0.8s,SNR=4.0						
EMOS	Mosqueruela	2.80	226	Pn	Pn	00 35 15.9	-1.5
	0.2nm,0.1s,SNR=7.9						
EMOS				Pg	Pg	00 35 21.8	-4.7
	0.7nm,0.4s,SNR=7.9						
EMOS				Sn	Sn	00 35 48.9	-3.5
	5.7nm,0.6s,SNR=7.9						
EMOS				Lg		00 35 58.7	
	6.7nm,0.6s,SNR=7.9						
EMOS	Mosqueruela	2.80	226	Pn	Pn	00 35 15.9	-1.6
	0.2nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	2.80	226	Pg	Pg	00 35 21.8	-4.7
	0.7nm,0.4s,SNR=7.9						
EMOS				Sn	Sn	00 35 48.9	-3.5
	5.7nm,0.6s,SNR=7.9						
LFF	La Frestale	2.80	339	ePn	Pn	00 35 13.7	-3.8
LFF				ePg	Pg	00 35 22.6	-4.0
LFF				eSg	Sg	00 35 58.7	-5.2
	15nm,0.4s						
EALK	Alkurruntz	2.84	289	Pn	Pn	00 35 16.4	-1.7
	1.1nm,0.6s,SNR=7.9						
EALK				Pg	Pg	00 35 22.9	-4.6
	0.2nm,0.4s,SNR=4.5						
EALK				Sn	Sn	00 35 48.9	-4.7
	7.2nm,0.9s,SNR=4.0						
EALK				Lg		00 36 00.5	
	8.0nm,0.5s,SNR=7.9						
EALK	Alkurruntz	2.84	289	Pg	Pg	00 35 22.9	-4.5
	0.2nm,0.4s,SNR=4.5						
EALK				Sn	Sn	00 35 48.9	-4.7
	7.2nm,0.9s,SNR=4.0						
RJF	Les Rejaudoux	3.00	351	ePn	Pn	00 35 16.6	-3.8
RJF				ePg	Pg	00 35 26.0	-4.6
RJF				eSn	Sn	00 35 51.7	-6.0
RJF				eSg	Sg	00 36 05.2	-5.5
	4.6nm,0.3s						
VIVF	Saint-Julien-l	3.11	35	ePg	Pg	00 35 27.6	-5.1
VIVF				eSg	Sg	00 36 07.7	-6.4
	3.4nm,0.4s						
LMR	La Mourre	3.35	71	ePn	Pn	00 35 21.1	-4.2
LMR				eSn	Sn	00 35 59.0	-7.3
	0.6nm,0.2s						
FRF	La Foret Royal	3.51	68	ePn	Pn	00 35 23.2	-4.4
FRF				eSn	Sn	00 36 03.0	-7.4
	0.8nm,0.2s						
TCF	Toulx Ste Croi	3.95	0	ePg	Pg	00 35 43.2	-6.3
TCF				eSg	Sg	00 36 34.6	-7.6
	1.1nm,0.2s						
BGF	Bois d'Agland	4.25	6	ePg	Pg	00 35 48.3	-7.2
BGF				eSg	Sg	00 36 43.9	-8.2
	7.1nm,0.4s						
SMF	Signal de Mont	4.47	15	ePg	Pg	00 35 53.2	-6.7
SMF				eSg	Sg	00 36 50.5	-9.0
	1.4nm,0.3s						
AVF	Avril sur Loir	4.53	10	ePg	Pg	00 35 54.2	-7.0
AVF				eSg	Sg	00 36 52.7	-8.9
	0.4nm,0.2s						
MFF	Saint Martin d	4.58	340	ePn	Pn	00 35 38.5	-4.2
MFF				ePg	Pg	00 35 55.2	-6.8
MFF				eSn	Sn	00 36 28.6	-8.8
MFF				eSg	Sg	00 36 53.9	-9.1
	3.6nm,0.5s						
SSF	Saint Saulge	4.82	11	eSg	Sg	00 37 02.0	-9.1
	0.4nm,0.4s						
GUD	Guadarrama	5.04	253	Sn	Sn	00 36 42.7	-6.4
	2.6nm,1.1s,SNR=7.9						
LOR	Lormes	5.08	13	ePg	Pg	00 36 04.5	-7.5
LOR				eSg	Sg	00 37 09.9	-10
	0.8nm,0.3s						
ESDC	Sonseca Array	5.34	242	Pn	Pn	00 35 50.3	-3.3
	0.2nm,0.3s,baz=63,slow=14,SNR=3.6						
ESDC				Sn	Sn	00 36 48.5	-8.3
	0.4nm,0.8s,baz=57,slow=24,SNR=7.9						
ESDC	Sonseca Array	5.34	242	Pn	Pn	00 35 50.3	-3.3
	0.2nm,0.3s,baz=63,slow=14,SNR=3.6						
ESDC				Sn	Sn	00 36 48.5	-8.3
	0.4nm,0.8s,baz=57,slow=24,SNR=7.9						
EARI	Arriondas	5.51	283	Pn	Pn	00 35 54.7	-1.2
	1.3nm,0.6s,SNR=4.0						
EARI				Sn	Sn	00 36 55.6	-5.3
	SNR=4.0						

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*LDG **06** 01:36:49.1±0.1, 29.65N×81.71E, h10^{km}, Mb5.0/29, Ms3.8/1, Error ellipse: s-maj=9.3km s-min=3.7km az=30.0*

*DMN **06** 01:36:52.6±0.8, 29.61N×82.02E, h10^{km}, Ml5.3/4, Error ellipse: s-maj=22.9km s-min=14.9km az=30.0*

*NDI **06** 01:36:53.8±5.0, 29.68N×81.85E, h14^{km}±23^{km}, mb5.2, mb5.0(NEIC)*

*IDC **06** 01:36:54.9±3.3, 29.66N×81.87E, h33^{km}±22^{km}, mb4.2/16, mb1 4.3/17, mb1mx4.2/24, mbtmp4.4/17, ML3.8/1, MS4.0/10, Ms1 4.0/10, ms1mx3.8/25, Error ellipse: s-maj=20.6km s-min=17.8km az=25.0*

*BJI **06** 01:36:55.9, 29.97N×82.01E, h42^{km}, mB4.7, mb4.8, Ms4.4, Msz4.2*

*MOS **06** 01:36:55.0±0.9, 29.98N×81.80E, h33^{km}, mb4.9/18, Error ellipse: s-maj=15.5km s-min=6.2km az=117.0*

*NEIC **06** 01:36:56.7±0.1, 29.73N×81.87E, mb5.0/46, Error ellipse: s-maj=5.6km s-min=2.5km az=32.0*

*NNC **06** 01:37:07.7±7.9, 30.70N×81.64E, h67^{km}±50^{km}, Error ellipse: s-maj=68.9km s-min=41.1km az=9.0*

ISC 06 01:36:54.1±0.3**, 29.77N**±0.03×**81.81E**±0.02**, h41**^{km}±4^{km}**, h36**^{km}±3.6^{km}**:pP-P, n230, σ1^{s}08**/255**, mb4.7**/79**, MS4.0**/19**, 25C-14D, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTH	Pithoragarh	1.40	261	eP	P	01 37 19.5	+1.8
PTH				eS	S	01 37 39.9	+4.7
JOSI	Joshimath	2.10	292	ex	x	01 36 47.1	
JOSI				ex	x	01 37 18.6	
KOLN	Koldanda	2.54	141	⇓iSn	S	01 38 06.2	+2.5
	4µm,0.5s						
KOLN	Koldanda	2.54	141	⇓iPn	P	01 37 34.7	+0.9
KOLN				i Sn	S	01 38 06.2	+2.5
KALG	Kalgarh	2.67	265	eP	P	01 37 38.7	+3.0
KALG				eS	S	01 38 09.8	+2.7
GKN	Gorkha	3.04	125	⇓iSn	S	01 38 18.0	+1.5
	4µm,0.3s						
GKN	Gorkha	3.04	125	ePn	P	01 37 41.7	+0.7
GKN				i Sn	S	01 38 18.0	+1.5
DDI	Dehra Dun	3.30	281	eP	P	01 37 46.8	+2.2
DDI				eS	S	01 38 23.0	-0.1
KLP	Kalpa	3.53	301	eP	P	01 37 51.5	+3.5
KLP				AMb	AMB	01 37 54.7	
	comp=Z,114nm,0.6s						
DMN	Daman	3.61	126	ePn	P	01 37 49.4	+0.4
KKN	Kakani	3.63	122	⇓iSn	S	01 38 31.8	+0.3
	comp=Z,2µm,0.5s						
KKN	Kakani	3.63	122	ePn	P	01 37 49.7	+0.4
KKN				i Sn	S	01 38 31.8	+0.3
PKI	Pulchoki	3.85	124	ePn	P	01 37 52.6	+0.2
BISR	Bishrakh	4.00	254	eP	P	01 37 55.2	+0.6
GUN	Gumba	4.02	116	ePn	P	01 37 55.3	+0.4
GUN				i Sn	S	01 38 42.3	+0.9
NDI	New Delhi	4.16	256	eP	P	01 37 55.3	-1.5
NDI				eP		01 37 57.0	
NDI				AMb	AMB	01 38 03.6	
	comp=Z,88nm,0.6s						
NDI				eS	S	01 38 43.7	-1.0
SMLA	Simla	4.23	290	eP	P	01 37 58.0	+0.2
SMLA				eS	S	01 38 46.9	+0.3
AGRA	Agra	4.24	234	eP	P	01 37 58.0	0.0
AGRA				AMb	AMB	01 38 00.0	
	comp=Z,106nm,0.4s						
AGRA				ex	x	01 38 59.9	
AYAN	Aya Nagar	4.29	254	eP	P	01 37 59.1	+0.4
AYAN				AMb	AMB	01 38 00.2	
	comp=Z,82nm,0.8s						
JIRN	Jiri	4.38	118	⇓iSn	S	01 38 50.2	-0.3
	comp=Z,2µm,0.3s						
JIRN	Jiri	4.38	118	ePn	P	01 38 00.1	+0.1
JIRN				i Sn	S	01 38 50.2	-0.3
BHGR	Bahadurgarh	4.39	257	eP	P	01 38 01.2	+1.1
BHGR				AMb	AMB	01 38 09.2	
	comp=Z,237nm,0.6s						
ALBI	Allahabad	4.44	180	ex	x	01 37 56.5	
SDNR	Sundarnagar	4.51	294	eP	P	01 38 04.8	+3.0
SDNR				ex	x	01 39 18.2	
RTK	Rohtak	4.76	262	ex	x	01 38 21.6	
BHK	Bhakra	4.93	291	ex	x	01 38 21.8	
BHK				ex	x	01 39 07.4	
KUDL	Kundal	4.93	252	eP	P	01 38 06.9	-0.8
KUDL				AMb	AMB	01 38 10.4	
	comp=Z,67nm,0.8s						
KHET	Khetri	5.53	254	eP	P	01 38 15.8	-0.2
KHET				AMb	AMB	01 38 17.9	
	comp=Z,106nm,0.7s						
KHET				eS	S	01 39 16.0	-3.2
DLH	Dalhousie	5.72	300	eP	P	01 38 19.0	+0.3
DLH				eS	S	01 39 18.0	-6.0
THN	Thein Dam	5.86	298	eP	P	01 38 20.8	+0.1
THN				eS	S	01 39 25.9	-1.6
BOK	Bokaro	6.98	148	eP	P	01 38 33.5	-2.9
BOK				AMb	AMB	01 38 35.2	
	comp=Z,88nm,0.4s						
BOK				eS	S	01 39 47.2	-8.1
AJM	Ajmer	7.12	244	eP	P	01 38 37.1	-1.4
AJM				eS	S	01 39 52.8	-6.2
BHPL	Bhopal	7.59	212	eP	P	01 38 40.9	-4.1
BHPL				eS	S	01 40 02.0	-8.7
LSA	Lhasa	8.12	88	P	P	01 38 53.0	+0.7
LSA				S	S	01 40 21.0	-2.8
LSA	Lhasa	8.12	88	eP	P	01 38 52.6	+0.3
	comp=Z,43nm,0.5s						
LSA				eS	S	01 40 19.2	-4.7
CHCP	Chirah Chowk	8.24	300	⇑P	P	01 38 54.0	0.0
NGP	Nagpur	8.94	197	ex	x	01 38 58.4	
NGP				eS	S	01 40 32.5	-12
THW	Thamme Wali	9.12	292	⇓P	P	01 39 03.5	-2.7
CAL	Calcutta	9.28	139	eP	P	01 39 05.0	-3.3
CAL				ex	x	01 40 56.8	
CEP	Cherat	9.34	298	⇑P	P	01 39 07.2	-2.0
CEP				S	S	01 40 47.0	-7.1
SBDP	Sheikh Budin	9.77	288	⇓P	P	01 39 13.9	-1.2
SHL	Shillong	9.86	113	eP	P	01 39 14.0	-2.4
SHL				ex	x	01 41 00.0	
DRP	Derazinda	10.18	284	⇑P	P	01 39 18.4	-2.3
AGT	Agartala	10.27	123	ex	x	01 39 26.0	
KSH	Kashi	10.84	335	eP	P	01 39 29.0	-0.7
KSH				eAP		01 39 36.1	
KSH				eXP		01 39 40.0	
KSH				ePPP	PPP	01 39 45.2	-0.5
KSH				eS	S	01 41 27.8	-2.9
KSH				eXS		01 41 40.2	
KSH				AMB	AMB		
	comp=Z,180nm,1.2s						
KSH				LR	LR		
	comp=N,2µm,6.4s						
KSH				LR	LR		
	comp=E,2µm,8.6s						
VIS	Vishakhapatnam	12.07	173	ex	x	01 39 40.7	
VIS				eS	S	01 41 47.5	-13
LATR	Latur	12.27	204	ex	x	01 39 42.5	
HYB	Hyderabad	12.65	194	i P	P	01 39 47.0	-7.2
	comp=E,120nm,1.0s						
HYB				e		01 41 59.0	
HYB				eS	S	01 42 15.0	+0.4
HYB				LR	LR	01 44 12.0	
	comp=E,4.9nm,12.0s						
HYB	Hyderabad	12.65	194	eP	P	01 39 47.0	-7.2
	comp=E,120nm,1.0s						
HYB				eS	S	01 41 59.0	-16
BHJ	Bhuj	12.66	242	eP	P	01 39 50.1	-4.2
BHJ				AMb	AMB	01 39 54.2	
	comp=Z,82nm,0.9s						
BHJ				ex	x	01 42 07.1	
ULHL	Ulahol	13.23	342	P	P	01 40 01.2	-0.6
	SNR=9.5						
POO	Poona	13.33	215	ex	x	01 39 58.8	
POO				eS	S	01 42 18.6	-12
BOM	Bombay	13.57	219	ex	x	01 40 00.9	
BOM				ex	x	01 42 23.1	
UCH	Uchtor	13.75	337	P	P	01 40 07.1	-1.5
	SNR=65						

AML	Almayashu	13.97	334	P	P	01 40 09.4	-1.9
	SNR=48						
KBK	Karagaybulak	13.99	339	P	P	01 40 13.7	+2.0
	SNR=22						
TKM2	Tokmak 2	14.04	341	P	P	01 40 13.3	+1.0
	SNR=20						
AAK	Ala-Archa	14.12	337	P	P	01 40 13.7	+0.3
	SNR=27						
AAK	Ala-Archa	14.12	337	⇓P	P	01 40 13.5	+0.2
	comp=Z,93nm,1.3s						
AAK	Ala-Archa	14.12	337	eP	P	01 40 11.2	-2.2
	comp=Z,88nm,1.3s						
KAD	Karad	14.23	211	ex	x	01 40 09.6	
KAD				AMb	AMB	01 40 26.5	
	comp=Z,56nm,0.9s						
KAD				ex	x	01 42 36.0	
FRU	Bishkek	14.26	338	eP	P	01 40 18.0	+2.8
CHMS	Chumysh	14.37	339	P	P	01 40 17.4	+0.8
	SNR=11						
EKS2	Erkin-Say	14.39	336	P	P	01 40 16.6	-0.4
	SNR=20						
USP	Ospenovka	14.69	338	P	P	01 40 28.7	+8.0
	SNR=8.2						
WMQ	Urumqi	14.79	17	⇑iP	P	01 40 21.7	-0.4
WMQ				AP		01 40 29.7	
WMQ				XP		01 40 34.7	
WMQ				eS	S	01 43 04.7	-0.7
WMQ				XS		01 43 17.7	
WMQ				SS	SS	01 43 21.7	-1.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s						
WMQ				LR	LR		
	comp=N,640nm,12.0s						
WMQ				LR	LR		
	comp=E,180nm,12.0s						
WMQ				LR	LR		
	comp=Z,380nm,17.7s						
KK31	Karatay Array	16.09	329	P	P	01 40 36.5	-2.4
	comp=Z,19nm,0.8s,baz=137,slow=11,SNR=121						
KK31				⇑S	S	01 43 27.3	-8.4
	comp=Z,29nm,0.8s,baz=149,slow=24,SNR=7.5						
KKAR	Karatay Array	16.09	329	i P	P	01 40 36.4	-2.5
KKAR				eS	S	01 43 26.2	-10
KKAR				pmax	pmax		
	comp=Z,31nm,1.0s						
KKAR				smax			
	comp=Z,25nm,0.9s						
MK31	Makanchi Array	17.00	1	P	P	01 40 49.0	-1.3
	comp=Z,93nm,1.4s,baz=182,slow=13,SNR=148						
MKAR	Makanchi Array	17.00	1	P	P	01 40 49.4	-0.9
	comp=Z,0.3nm,0.3s,baz=182,slow=13,SNR=55						
MKAR				S	S	01 44 01.9	+5.3
	comp=Z,0.1nm,0.3s,baz=216,slow=16,SNR=2.9						
MKAR				LR	LR	01 48 33.0	
	comp=Z,501nm,19.4s,baz=126,slow=41						
MKAR				ScP		01 49 07.1	
	baz=180,slow=2.9,SNR=3.6						
MKAR	Makanchi Array	17.00	1	P	P	01 40 49.4	-0.9
MKAR				S	S	01 44 01.9	+5.3
MKAR				LR	LR	01 48 33.0	
MKAR				ScP		01 49 07.1	
MKAR	Makanchi Array	17.00	1	i P	P	01 40 49.0	-1.3
MKAR				pmax	pmax		
	comp=Z,62nm,1.0s						
GTA	Gaotai	17.64	52	eP	P	01 40 56.7	-1.7
GTA				AP		01 41 03.9	
GTA				XP		01 41 08.7	
GTA				SCS	ScS	01 52 49.3	+3.3
GTA				AMB	AMB		
	comp=Z,110nm,4.2s						
GTA				LR	LR		
	comp=N,470nm,14.8s						
GTA				LR	LR		
	comp=E,410nm,18.3s						
GTA				LR	LR		
	comp=Z,440nm,19.0s						
MNGI	Mangalore	17.95	203	ex	x	01 44 03.5	
MNGI				ex	x	01 46 03.5	
CD2	Chengdu	18.98	81	P	P	01 41 11.1	-3.7
CD2				AP		01 41 21.9	
CD2				XP		01 41 26.3	
CD2				PP	PP	01 41 31.1	-0.5
CD2				S	S	01 44 41.9	+0.5
CD2				XS		01 44 54.9	
CD2				SS	SS	01 45 06.9	-0.5
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s						
CD2				LR	LR		
	comp=N,590nm,12.0s						
CD2				LR	LR		
	comp=Z,350nm,10.8s						
CHG	Chiang Mai	19.02	121	P	P	01 41 20.7	+5.3
	comp=Z,16nm,0.8s						
KMI	Kunming	19.14	99	P	P	01 41 15.4	-1.2
KMI				AP		01 41 27.0	
KMI				XP		01 41 33.0	
KMI				S	S	01 44 42.2	-2.8
KMI				SS	SS	01 45 11.6	+0.2
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s						
KMI				AMB	AMB		
	comp=Z,90nm,3.5s						
KMI				LR	LR		
	comp=N,300nm,14.0s						
KMI				LR	LR		
	comp=E,210nm,12.3s						
KMI				LR	LR		
	comp=Z,210nm,10.5s						
KMI	Kunming	19.14	99	P	P	01 41 15.4	-1.2
	comp=Z,16nm,1.1s						
KMI				pP		01 41 27.0	
KMI				sP		01 41 33.0	
KMI				S	S	01 44 42.2	-2.8
KMI				sS		01 45 03.8	
KMI				SS	SS	01 45 11.6	+0.2
LZH	Lanzhou	19.52	65	eP	P	01 41 19.9	-0.9
LZH				AP		01 41 31.3	
LZH				XP		01 41 33.4	
LZH				PP	PP	01 41 40.0	+0.9
LZH				eS	S	01 44 57.2	+3.7
LZH				AMB	AMB		
	comp=Z,70nm,1.2s						
LZH				AMB	AMB		
	comp=Z,400nm,5.2s						
LZH				LR	LR		
	comp=E,1µm,12.2s						
LZH				LR	LR		
	comp=Z,1µm,12.4s						
LZH	Lanzhou	19.52	65	eP	P	01 41 19.9	-0.9
	comp=Z,70nm,1.2s						
LZH				pP		01 41 31.3	
LZH				sP		01 41 33.4	
LZH				PP	PP	01 41 40.0	+0.9
LZH				eS	S	01 44 57.2	+3.7
LZH				sS		01 45 10.4	
LZH				SS	SS	01 45 27.0	+6.1
TRD	Trivandrum	21.64	193	ex	x	01 45 36.7	
TRD				ex	x	01 47 26.7	
NST	Nakhon Sawan	21.92	126	P	P	01 41 42.0	-3.7
GYA	Guiyang	22.16	93	⇑iP	P	01 41 47.4	-0.6
GYA				AP		01 41 56.2	
GYA				XP		01 42 01.0	
GYA				PP	PP	01 42 11.4	-3.7
GYA				S	S	01 45 42.6	-1.9
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
GYA				AMB	AMB		
	comp=Z,300nm,6.0s						
GYA				LR	LR		
	comp=N,350nm,14.0s,MS4.3						
GYA				LR	LR		
	comp=E,680nm,12.6s,MS4.3						
GYA				LR	LR		
	comp=Z,610nm,13.2s,MS4.2						
PALK	Pallekele	22.40	183	eP	P	01 41 51.0	+0.5
	comp=Z,23nm,1.0s,mb4.6						
XAN	Xi'an	23.38	73	P	P	01 41 58.4	-1.5
XAN				AP		01 42 11.3	
XAN				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.0						
ENH	Enshi	23.95	82	eP	P	01 42 05.3	-0.1
	comp=Z,20nm,0.8s,mb4.6						
ZAL	Zalesovo	24.25	4	P	P	01 42 09.2	+1.1
	comp=Z,6.5nm,0.4s,mb4.4,baz=284,slow=9.9,SNR=34						
ZAL				LR	LR	01 53 38.3	
	comp=Z,299nm,19.7s,MS3.8,baz=276,slow=41						
VOSK	Vostochnaya	24.28	344	⇑P	P	01 42 10.5	+2.1
	comp=Z,20nm,1.4s,mb4.4						
VOSK	Vostochnaya	24.28	344	P	P	01 42 09.7	+1.3
VOSK				pmax	pmax		
	comp=Z,27nm,1.4s,mb4.5						
BVA0	Borovoye Array	24.70	343	P	P	01 42 13.6	+1.1
	comp=Z,3.0nm,0.9s,mb3.8,baz=156,slow=7.0,SNR=42						
BVA0	Borovoye Array	24.70	343	i P	P	01 42 13.6	+1.1
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
BVAR	Borovoye Array	24.70	343	P	P	01 42 13.5	+1.0
	comp=Z,8.4nm,0.8s,mb4.3,baz=158,slow=8.0,SNR=37						
BRVK	Borovoye	24.76	343	eP	P	01 42 13.6	+0.5
	comp=Z,10nm,0.9s,mb4.3						
NVS	Novosibirsk	25.08	2	eP	P	01 42 15.3	-0.8
NVS				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.5						
NVS				pmax	pmax		
	comp=N,38nm,1.6s						
NVS				pmax	pmax		
	comp=E,15nm,1.3s						
BTO	Baotou	25.36	57	eP	P	01 42 20.3	+1.3
BTO				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
AB31	Akbulak array	25.59	326	P	P	01 42 22.9	+1.9
	comp=Z,17nm,0.7s,mb4.7,baz=120,slow=9.5,SNR=184						
AB31	Akbulak array	25.59	326	i P	P	01 42 22.9	+1.9
AB31				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.6						
SONM	Songino Array	26.14	40	P	P	01 42 27.9	+1.7
	comp=Z,20nm,1.1s,mb4.6,baz=230,slow=8.1,SNR=67						
SONM				PcP	PcP	01 45 52.8	-0.4
	comp=Z,0.9nm,0.7s,baz=223,slow=3.2,SNR=4.4						
SONM				ScP		01 49 29.0	
	comp=Z,1.7nm,1.1s,baz=198,slow=4.7,SNR=4.9						
SONM				LR	LR	01 53 46.2	
	comp=Z,432nm,21.7s,MS4.0,baz=74,slow=39						
SONM	Songino Array	26.14	40	P	P	01 42 27.9	+1.7
SONM				PcP	PcP	01 45 52.8	-0.4
SONM				ScP		01 49 29.0	
SONM				LR	LR	01 53 46.2	
ZAK	Zakamensk	26.17	32	eP	P	01 42 27.7	+1.3
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
HHC	Hu-ho-hao-te	26.56	57	eP	P	01 42 31.4	+1.3
HHC				PCP	PcP	01 45 52.5	-1.7
HHC				S	S	01 47 02.9	+3.2
HHC				PCS		01 49 32.7	
HHC				AMB	AMB		
	comp=Z,110nm,2.2s,mb5.0						
HHC				LR	LR		
	comp=N,280nm,15.2s,MS4.1						
HHC				LR	LR		
	comp=E,330nm,14.2s,MS4.1						
HHC				LR	LR		
	comp=Z,400nm,11.8s,MS4.2						
AKTO	Aktyubinsk	27.31	326	P	P	01 42 37.8	+0.9
	comp=Z,3.0nm,0.5s,mb4.0,baz=126,slow=8.8,SNR=16						
AKTO				LR	LR	01 54 35.1	
	comp=Z,402nm,21.1s,MS4.0,slow=39						
ORR	Orenburg	29.66	325	⇓iP	P	01 42 59.1	+1.2
ORR				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
ARU	Arti	31.29	335	⇑iP	P	01 43 12.6	+0.3
ARU				e		01 44 10.6	
ARU				e		01 46 10.0	
ARU				eS	S	01 48 11.2	-3.7
ARU				eSS	SS	01 49 54.9	-8.2
ARU				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
NJ2	Nanjing	31.77	76	eP	P	01 43 16.0	-0.8
NJ2				PP	PP	01 44 22.1	-0.6
NJ2				S	S	01 48 19.0	-3.7
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,120nm,4.5s						
NJ2				LR	LR		
	comp=N,370nm,24.4s						
NJ2				LR	LR		
	comp=E,310nm,18.4s						
NJ2				LR	LR		
	comp=Z,130nm,20.0s,MS3.6						
GNI	Garni	31.89	299	P	P	01 43 18.8	+1.0
	comp=Z,1.5nm,0.5s,mb4.1,baz=176,slow=13,SNR=4.8						
GNI				LR	LR	01 59 57.1	
	comp=Z,68nm,18.3s,MS3.4,baz=349,slow=43						
GNI	Garni	31.89	299	eP	P	01 43 18.7	+0.9
	comp=Z,14nm,1.0s,mb4.8						
GNI	Garni	31.89	299	⇑eP	P	01 43 20.6	+2.9
GNI				pmax	pmax		
	comp=Z,26nm,1.6s						
ZEI	Tsey	32.93	304	eP	P	01 43 26.3	-0.4
ZEI				i *PP	pP	01 43 39.1	+1.1
ZEI				i		01 44 34.3	
ZEI				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
SSE	Sheshan	33.86	78	eP	P	01 43 35.2	+0.3
SSE				PP	PP	01 44 52.0	+3.0
SSE				PCP	PcP	01 46 14.9	+1.7
SSE				S	S	01 48 53.1	-2.2
SSE				SCS	ScS	01 53 55.3	+1.6
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,40nm,5.5s						
SSE				LR	LR		
	comp=N,230nm,24.6s,MS3.8						
SSE				LR	LR		
	comp=E,50nm,24.5s,MS3.8						
SSE				LR	LR		
	comp=Z,80nm,24.0s,MS3.4						
SSE	Sheshan	33.86	78	eP	P	01 43 35.2	+0.3
	comp=Z,30nm,0.8s,mb5.3						
SSE				pP	pP	01 43 53.1	+6.9
SSE				sP	sP	01 44 00.5	+9.0
SSE				PP	PP	01 44 52.0	+3.0
SSE				PcP	PcP	01 46 14.9	+1.7
SSE				S	S	01 48 53.1	-2.2
SSE				sS		01 49 24.4	
SSE				ScS	ScS	01 53 55.3	+1.6
SSE				LR	LR		
	comp=Z,90nm,24.0s,MS3.4						
KIV	Kislovodsk	34.02	305	eP	P	01 43 37.5	+1.4
KIV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.6						
BOD	Bodaibo	35.80	29	eP	P	01 43 50.9	-0.3
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
CN2	Changchun	37.22	56	eP	P	01 44 03.7	+0.4
CN2				eAP	pP	01 44 13.1	-1.6
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
CN2				AMB	AMB		
	comp=Z,160nm,3.0s						
CN2				LR	LR		
	comp=N,320nm,13.0s,MS4.7						
CN2				LR	LR		
	comp=E,700nm,13.0s,MS4.7						
CN2				LR	LR		
	comp=Z,790nm,14.0s,MS4.7						
ANN	Anapa	37.88	306	eP	P	01 44 08.4	-0.4
ANN				pmax	pmax		
	comp=Z,138nm,1.6s,mb5.4						
MDJ	Mudanjiang	40.27	55	P	P	01 44 28.9	+0.2
MDJ				AP	pP	01 44 37.1	-3.1
MDJ				S	S	01 50 35.0	+2.0
MDJ				AMB	AMB		
	comp=Z,30nm,3.1s						
MDJ				LR	LR		
	comp=E,120nm,17.2s						
MDJ				LR	LR		
	comp=Z,150nm,17.2s,MS3.9						
BR131	Keskin Array S	40.39	298	eP	P	01 44 31.3	+1.6
	comp=Z,1.5nm,0.4s,mb4.1						
BRTR	Keskin Array B	40.39	298	P	P	01 44 30.9	+1.2
	comp=Z,2.0nm,0.9s,mb3.9,baz=110,slow=10,SNR=11						
OBN	Obninsk	40.88	321	⇓eP	P	01 44 34.9	+1.3
OBN				e	pP	01 44 45.6	+0.5
OBN						01 46 05.0	
OBN				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.7						
ANTO	Ankara	41.04	298	P	P	01 44 34.1	-0.9
	comp=Z,10.0nm,1.2s,mb4.3						
KLMR	Klimovskoe	41.79	330	eP	P	01 44 36.5	-4.4
KLMR				e		01 46 17.2	
KLMR				eS	S	01 50 47.1	-8.2
KLMR				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.6						
KLMR				smax			
	comp=E,290nm,4.1s						
KLMR				MLR	MLR		
	comp=Z,310nm,14.0s,MS4.3						
AKASG	Malin Array Be	44.18	314	P	P	01 45 00.7	+0.2
	comp=Z,1.4nm,0.6s,mb3.9,baz=76,slow=8.1,SNR=7.4						
YAK	Yakutsk	44.72	30	eP	P	01 45 04.7	0.0
	comp=Z,13nm,0.5s,mb5.0						
YAK	Yakutsk	44.72	30	⇑eP	P	01 45 04.7	0.0
YAK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
VRI	Vrincioaia	45.48	307	⇓P	P	01 45 20.1	+9.1
VRI	Vrincioaia	45.48	307	⇓P	P	01 45 20.1	+9.0
JOF	Joensuu	46.18	331	ep	P	01 45 17.1	+0.8
	comp=Z,0.8nm,0.2s,mb4.3						
JOF	Joensuu	46.18	331	eP	P	01 45 17.1	+0.8
JOF				pmax	pmax		
	comp=Z,1.0nm,0.2s,mb4.4						
BURAR	Bucovina Array	46.55	309	⇑P	P	01 45 20.8	+1.3
BURAR	Bucovina Array	46.55	309	⇑P	P	01 45 20.8	+1.3
VSU	Vasula	47.01	324	⇑eP	P	01 45 23.4	+0.5
IDI	Anoyia	47.75	292	P	P	01 45 30.1	+1.1
	comp=Z,11nm,1.0s,mb4.8,baz=9.7,slow=11,SNR=7.1						
FINES	FINESS Array B	48.05	328	P	P	01 45 31.6	+0.6
	comp=Z,6.1nm,0.7s,mb4.7,baz=112,slow=8.7,SNR=55						
FINES				LR	LR	02 07 16.5	
	comp=Z,261nm,19.9s,MS4.2,baz=150,slow=38						
FINES	FINESS Array B	48.05	328	eP	P	01 45 31.6	+0.6
KAF	Kangasniemi	48.12	329	ep	P	01 45 32.3	+0.7
	baz=106,slow=7.3						
DRGR		48.26	308	⇓P	P	01 45 32.7	-0.2
DRGR		48.26	308	⇓P	P	01 45 32.7	-0.1
KWP	Kalwaria	48.27	312	eP	P	01 45 34.2	+1.4
KWP	Kalwaria	48.27	312	eP	P	01 45 34.2	+1.3
TIXI	Tiksi	48.99	18	⇑eP	P	01 45 38.6	+0.4
TIXI				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.2						
STHS	Stebnicka Huta	49.22	311	eP	P	01 45 41.3	+1.1
NIE	Niedzica	49.83	311	eP	P	01 45 46.4	+1.5
KEV	Kevo	50.39	338	ep	P	01 45 48.3	-0.6
ARCES	ARCESS Array B	50.80	338	P	P	01 45 52.1	+0.1
	comp=Z,4.7nm,0.7s,mb4.5,baz=88,slow=7.6,SNR=19						
ARCES				LR	LR	02 08 48.6	
	comp=Z,291nm,19.5s,MS4.3,baz=161,slow=38						
VYHS	Vyhne	50.83	310	eP	P	01 45 53.1	+0.6
VYHS				e		01 46 01.3	
SRO	Srobarova	51.21	309	e	P	01 46 04.2	+8.8
OKC	Ostrava-Krasne	51.23	312	eP	P	01 45 56.0	+0.5
MORC	Moravsky Berou	51.62	312	eP	P	01 45 58.8	+0.3
	comp=Z,6.3nm,1.1s,mb4.5						
KSP	Ksiaz	52.38	313	eP	P	01 46 04.3	+0.2
DPC	Dobruska-Polom	52.38	313	eP	P	01 46 04.0	-0.2
KMBO	Kilima Mbogo	52.43	242	LR	LR	02 09 15.7	
	comp=Z,87nm,19.0s,MS3.8,baz=89,slow=37						
UPC	Upice	52.57	313	eP	P	01 46 06.6	+1.0
TREC	Trest	52.98	311	eP	P	01 46 09.9	+1.2
PVCC	Panska Ves	53.49	313	eP	P	01 46 12.8	+0.4
PRU	Pruhonice	53.55	312	eP	P	01 46 13.8	+0.9
GERES	GERESS Array B	54.20	311	P	P	01 46 17.4	-0.2
	comp=Z,0.6nm,0.7s,baz=90,slow=5.3,SNR=8.1						
KHC	Kasperske Hory	54.25	311	eP	P	01 46 18.4	+0.4
KHC	Kasperske Hory	54.25	311	⇑eP	P	01 46 18.8	+0.8
CLL	Collm	54.42	314	P	P	01 46 20.0	+0.8
	comp=Z,logA/T=0.8,mb4.5						
CLL				e*PP	pP	01 46 31.0	-0.1
CLL	Collm	54.42	314	eP	P	01 46 20.0	+0.8
	comp=Z,8.0nm,1.2s,mb4.5						
CLL	Collm	54.42	314	eP	P	01 46 20.0	+0.8
CLL				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
CII	Carovilli	54.79	302	eP	P	01 46 22.5	+0.4
	comp=Z,29nm,1.5s,mb5.1						
NKC	Novy Kostel	54.87	313	eP	P	01 46 22.4	-0.1
NB2	NORSAR Subarra	55.10	326	P	P	01 46 23.2	-0.9
	comp=Z,17nm,1.0s,mb5.0,baz=89,slow=7.4						
NOA	NORSAR Array B	55.10	326	P	P	01 46 23.7	-0.3
	comp=Z,8.8nm,1.0s,mb4.8,baz=90,slow=7.2,SNR=12						
NOA				LR	LR	02 11 34.4	
	comp=Z,184nm,19.1s,MS4.2,baz=85,slow=38						
NAO	NORSAR Subarra	55.28	326	P	P	01 46 23.2	-2.2
	comp=Z,17nm,1.0s,mb5.0						
AQU	L'Aquila	55.34	303	P	P	01 46 26.5	+0.4
	comp=Z,18nm,0.9s,mb5.1						
GRA1	Grafenberg Arr	55.71	312	eP	P	01 46 29.3	+0.6
	comp=Z,18nm,1.3s,mb4.9						
GRF	Grafenberg Arr	55.71	312	eP	P	01 46 29.3	+0.6
	comp=Z,18nm,1.3s,mb4.9						
GRF	Grafenberg Arr	55.71	312	eP	P	01 46 29.3	+0.6
GRF				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.9						
FUR	Furstenfeldbru	55.88	310	eP	P	01 46 28.8	-1.1
	comp=Z,43nm,1.8s,mb5.2						
FUR	Furstenfeldbru	55.88	310	eP	P	01 46 28.8	-1.1
FUR				pmax	pmax		
	comp=Z,43nm,1.8s,mb5.2						
KONO	Kongsberg	55.91	324	⇑eP	P	01 46 30.3	+0.4
CLZ	Clausthal	56.00	315	eP	P	01 46 30.9	+0.2
	comp=Z,23nm,1.4s,mb5.0						
CLZ	Clausthal	56.00	315	eP	P	01 46 30.9	+0.2
CLZ				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
TNS	Taunus Mts	57.42	313	eP	P	01 46 41.5	+0.7
	comp=Z,7.0nm,1.0s,mb4.7						
TNS	Taunus Mts	57.42	313	eP	P	01 46 41.5	+0.7
TNS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
CDF	Champ du Feu	58.48	311	eP	P	01 46 47.8	-0.4
	comp=Z,56nm,1.8s,mb5.0						
HINF	Hinteralfeld	58.87	310	⇑iP	P	01 46 50.5	-0.5
	comp=Z,17nm,1.1s,mb4.7						
HAU	Haudompre	59.16	311	eP	P	01 46 52.5	-0.5
	comp=Z,30nm,1.2s,mb4.9						
SBF	Sospel	59.30	306	eP	P	01 46 53.8	-0.2
	comp=Z,96nm,1.2s,mb5.4						
LPG	La Plagne	59.41	308	⇑iP	P	01 46 55.1	+0.3
	comp=Z,37nm,1.0s,mb5.1						
LPL	La Plagne	59.42	308	⇑iP	P	01 46 55.1	+0.2
	comp=Z,37nm,1.0s,mb5.1						
MBDF	Montbardon	59.57	307	eP	P	01 46 56.1	+0.2
CABF	La Chapelle	59.62	309	eP	P	01 46 56.1	-0.1
GIVF	Givet	59.73	313	eP	P	01 46 56.8	-0.1
MEZF	Maizieres J'vi	59.91	312	eP	P	01 46 57.9	-0.3
	comp=Z,25nm,1.2s,mb4.8						
FRF	La Foret Royal	59.93	306	eP	P	01 46 57.8	-0.6
	comp=Z,37nm,1.1s,mb5.0						
BAIF	Baives	60.13	313	eP	P	01 46 59.4	-0.3
	comp=Z,86nm,1.6s,mb5.2						
ORIF	Oris-en-Rattie	60.14	307	eP	P	01 46 59.5	-0.3
	comp=Z,14nm,1.0s,mb4.6						
SMRF	Simiane la Rot	60.58	306	eP	P	01 47 02.9	+0.1
	comp=Z,81nm,1.5s,mb5.3						
BILL	Bilibino	60.71	25	P	P	01 47 03.0	-0.4
BILL				e		01 47 19.3	
BILL						01 47 48.0	
BILL				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.4						
LOR	Lormes	60.96	310	⇑iP	P	01 47 04.4	-1.0
	comp=Z,41nm,1.4s,mb5.1						
VIVF	Saint-Julien-l	60.99	308	eP	P	01 47 05.3	-0.3
	comp=Z,15nm,1.0s,mb4.8						
SMF	Signal de Mont	61.12	310	⇑iP	P	01 47 05.8	-0.6
	comp=Z,33nm,1.2s,mb5.0						
SSF	Saint Saulge	61.25	310	eP	P	01 47 06.5	-0.8
	comp=Z,34nm,1.3s,mb5.0						
AVF	Avril sur Loir	61.41	310	eP	P	01 47 07.7	-0.7
	comp=Z,29nm,1.3s,mb5.0						
LASF	Ste Croix	61.76	307	eP	P	01 47 10.7	0.0
	comp=Z,39nm,1.1s,mb5.1						
HYF	Humbligny	61.77	311	eP	P	01 47 10.6	-0.2
BGF	Bois d'Agland	61.81	310	eP	P	01 47 10.4	-0.7
TCF	Toulx Ste Croi	62.30	310	⇑iP	P	01 47 14.2	-0.2
	comp=Z,66nm,1.4s,mb5.3						
CAF	Calviac	62.76	308	eP	P	01 47 17.3	-0.2
	comp=Z,17nm,1.0s,mb4.8						
RJF	Les Rejaudoux	63.03	309	eP	P	01 47 19.3	0.0
	comp=Z,45nm,1.2s,mb5.2						
MTLF	Montolieu	63.10	306	eP	P	01 47 19.5	-0.2
	comp=Z,30nm,1.2s,mb5.0						

LDF	**La Druitiere**	**63.23**	**313**	*e*P	**P**	**01 47 19.6**	**-0.9**
	comp=Z,55nm,1.1s,mb5.3						
FLN	**La Foliniere**	**63.41**	**313**	*e*P	**P**	**01 47 21.0**	**-0.7**
DAG	**Danmarks Havn**	**63.62**	**345**	⇑*i*P	**P**	**01 47 22.7**	**+0.1**
	comp=Z,5.2nm,0.8s,mb4.6						
DAG	**Danmarks Havn**	**63.62**	**345**	⇑*e*P	**P**	**01 47 22.7**	**+0.1**
	comp=Z,5.2nm,0.8s,mb4.6						
DAG	**Danmarks Havn**	**63.62**	**345**	⇑*e*P	**P**	**01 47 22.7**	**+0.1**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
LFF	**La Frestale**	**63.66**	**308**	*e*P	**P**	**01 47 22.6**	**-0.8**
GRR	**Gorron**	**63.75**	**313**	*e*P	**P**	**01 47 22.8**	**-1.1**
MFF	**Saint Martin d**	**63.79**	**310**	*e*P	**P**	**01 47 23.1**	**-1.0**
SGMF	**Saint Gilles**	**64.88**	**313**	*e*P	**P**	**01 47 30.7**	**-0.5**
	comp=Z,70nm,1.2s,mb5.3						
ETSF	**Etsaut**	**65.17**	**307**	*e*P	**P**	**01 47 33.3**	**+0.1**
	comp=Z,33nm,1.3s,mb4.9						
ESDC	**Sonseca Array**	**68.68**	**304**	P	**P**	**01 47 55.2**	**-0.1**
	comp=Z,2.2nm,0.8s,mb4.2,baz=69,slow=5.7,SNR=8.8						
WRA	**Warramunga Arr**	**70.72**	**128**	P	**P**	**01 48 06.7**	**-1.4**
	comp=Z,2.4nm,0.9s,mb4.1,baz=322,slow=6.1,SNR=12						
WRAB	**Tennant Creek**	**70.73**	**128**	*e*P	**P**	**01 48 06.8**	**-1.4**
	comp=Z,15nm,1.0s,mb4.9						
WRAB	**Tennant Creek**	**70.73**	**128**	*e*P	**P**	**01 48 14.9**	**+6.8**
WB2	**Warramunga Arr**	**70.73**	**128**	*e*P	**P**	**01 48 06.8**	**-1.4**
EVO	**Evora**	**72.03**	**304**	*e*P	**P**	**01 48 16.3**	**+0.7**
	comp=Z,31nm,1.4s,mb4.7						
ASPA	**Alice Springs**	**72.99**	**131**	*e*P	**P**	**01 48 21.0**	**-0.6**
LBTB	**Lobatse**	**76.64**	**231**	*e*P	**P**	**01 48 42.5**	**-0.2**
	comp=Z,10nm,1.0s,mb4.7						
ILAR	**Eielson Array**	**78.44**	**19**	P	**P**	**01 48 51.9**	**+0.1**
	comp=Z,3.1nm,1.0s,mb4.2,baz=293,slow=4.0,SNR=4.3						
ILAR				PP	PP	01 51 47.5	-3.8
	comp=Z,1.8nm,1.0s,baz=303,slow=6.1,SNR=4.7						
INK	**Inuvik**	**78.76**	**13**	*e*P	**P**	**01 48 53.6**	**+0.1**
BOSA	**Boshof**	**79.28**	**228**	LR	LR	02 20 47.8	
	comp=Z,123nm,21.2s,MS4.2,baz=246,slow=33						
DBIC	**Dimbokro**	**83.84**	**274**	P	**P**	**01 49 22.3**	**+1.0**
	comp=Z,4.5nm,0.8s,mb4.7,baz=354,slow=4.3,SNR=5.4						
DBIC	**Dimbokro**	**83.84**	**274**	P	**P**	**01 49 22.3**	**+1.0**
TXAR	**Lajitas Array**	**121.00**	**6**	PKP	PKPdf	01 55 44.8	+2.1
	comp=Z,0.6nm,0.8s,baz=286,slow=0.9,SNR=6.4						
LPAZ	**La Paz**	**149.36**	**289**	PKPbc	PKPdf	01 56 42.2	+7.4
	comp=Z,1.1nm,0.7s,baz=57,slow=4.3,SNR=4.4						
LPAZ	**La Paz**	**149.36**	**289**	*e*PKPdf	PKPdf	01 56 37.3	+2.6
LPAZ				PKPbc	PKPdf	01 56 42.2	+7.4

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*IDC **06** 01:56:59.8±0.6, 12.34N×143.82E, mb4.5/13, mb1 4.6/13, mb1mx4.5/20, mbtmp4.5/13, MS4.0/5, Ms1 4.0/5, ms1mx3.7/22, Error ellipse: s-maj=20.9km s-min=13.9km az=87.0*

*HRVD **06** 01:57:00.3±0.4, 12.23N×143.80E, h14^{km}±1^{km}, MW5.0/50, Centroid moment Tensor Solution. LP body waves: s25,c34;Mantle waves: s50,c82; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.39±.23; M$_{\theta\theta}$0.72±.14; M$_{\phi\phi}$2.67±.15; M$_{r\theta}$0.35±.38; M$_{\theta\phi}$-1.76±.10; M$_{\phi r}$1.14±.33; Best double couple: M$_0$3.752×10^{16} NP1:ϕ$_s$315°,δ40°, λ-112°. NP2:ϕ$_s$163°,δ53°,λ-72°. Principal axes: T 3.8, Plg7°, Azm241°; N -.095, Plg14°, Azm333°; P -3.705, Plg74°, Azm127°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **06** 01:57:00.3±4.3, 12.32N×143.86E, h3^{km}±26^{km}, mb4.9/15 Error ellipse: s-maj=8.4km s-min=6.4km az=90.0*

*BJI **06** 01:57:01.0, 12.41N×143.81E, h8^{km}, mB4.8, mb4.8, Ms4.8, Msz4.2*

*MOS **06** 01:57:02.2±0.8, 12.28N×143.94E, h33^{km}, mb5.1/7, Error ellipse: s-maj=40.8km s-min=15.2km az=103.3*

ISC 06 01:56:59.4±1.9**, 12.27N**±0.05×**143.85E**±0.06**, h8**^{km}±11^{km}**, h15**^{km}±.8^{km}**:pP-P, n91, σ1^{s}05**/82**, mb4.7**/42**, MS4.1**/10**, 10C-2D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.65**	**37**	Pn	**Pn**	**01 57 29.7**	**+0.8**
	295nm,0.3s,baz=187,slow=6.2,SNR=168						
GUMO				Sn	**Sn**	**01 57 50.7**	**+0.2**
	448nm,0.3s,baz=191,slow=22,SNR=17						
GUMO				LR	LR	01 58 00.4	
	comp=Z,3µm,18.7s,baz=66,slow=38						
GUMO	**Guam**	**1.65**	**37**	⇑*e*P	**Pn**	**01 57 29.3**	**+0.4**
CBIJ	**Chichi jima**	**14.84**	**354**	LR	LR	02 05 38.8	
	comp=Z,441nm,20.9s,baz=132,slow=35						
JHJ	**Hachijo jima 2**	**21.09**	**350**	LR	LR	02 09 53.8	
	comp=Z,299nm,18.3s,MS3.7,baz=142,slow=37						
PMG	**Port Moresby**	**21.78**	**171**	P	**P**	**02 01 53.5**	**-0.3**
	6.7nm,0.5s,mb4.3,baz=43,slow=10,SNR=4.4						
PMG	**Port Moresby**	**21.78**	**171**	*e*P	**P**	**02 01 53.2**	**-0.7**
	37nm,1.4s,mb4.6						
PMG	**Port Moresby**	**21.78**	**171**	⇑*i*P	**P**	**02 01 53.4**	**-0.4**
MJAR	**Matsushiro Arr**	**24.70**	**349**	LR	LR	02 11 49.5	
	comp=Z,190nm,18.8s,MS3.6,baz=140,slow=36						
MAJO	**Matsushiro**	**24.70**	**349**	P	**P**	**02 02 21.7**	**-0.7**
KAKA	**Kakadu**	**27.27**	**205**	*e*P	**P**	**02 03 06.2**	**+20**
	13nm,0.8s,mb4.5						
KKM	**Kota Kinabalu**	**27.96**	**260**	*e*P	**P**	**02 02 53.9**	**+1.1**
SSE	**Sheshan**	**28.08**	**315**	*e*P	**P**	**02 02 54.1**	**+0.4**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,100nm,6.7s						
SSE	**Sheshan**	**28.08**	**315**	*e*P	**P**	**02 02 54.1**	**+0.4**
	comp=Z,32nm,0.7s,mb5.1						
NJ2	**Nanjing**	**30.26**	**315**	*e*P	**P**	**02 03 16.1**	**+2.9**
NJ2				S	**S**	**02 08 11.0**	**-0.8**
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,130nm,4.8s						
NJ2				LR	LR		
	comp=N,730nm,16.2s,MS4.6						
NJ2				LR	LR		
	comp=E,700nm,15.5s,MS4.6						
NJ2				LR	LR		
	comp=Z,250nm,24.9s						
CTA	**Charters Tower**	**32.24**	**176**	*e*P	**P**	**02 03 31.1**	**+0.4**
	comp=Z,7.5nm,1.2s,mb4.4						
CTAO	**Charters Tower**	**32.24**	**176**	*e*P	**P**	**02 03 30.7**	**0.0**
	comp=Z,54nm,1.8s,mb5.1						
WRAB	**Tennant Creek**	**33.33**	**196**	*e*P	**P**	**02 03 39.6**	**-0.6**
	comp=Z,47nm,1.4s,mb5.2						
WRAB	**Tennant Creek**	**33.33**	**196**	*e*P	**P**	**02 03 39.4**	**-0.9**
WB2	**Warramunga Arr**	**33.34**	**196**	*e*P	**P**	**02 03 39.7**	**-0.6**
WRA	**Warramunga Arr**	**33.34**	**196**	P	**P**	**02 03 40.0**	**-0.3**
	comp=Z,5.9nm,0.8s,mb4.6,baz=22,slow=9.9,SNR=20						
MDJ	**Mudanjiang**	**34.48**	**342**	P	**P**	**02 03 50.7**	**+0.8**
MDJ				XP	sP	02 04 02.5	+9.2
MDJ				PP	PP	02 05 08.7	+2.9
MDJ				PCP	PcP	02 06 23.7	-1.6
MDJ				S	**S**	**02 09 19.9**	**+2.4**
MDJ				SCP		02 10 09.1	
MDJ				AMB	AMB		
	comp=Z,40nm,3.5s						
MDJ				LR	LR		
	comp=N,100nm,20.4s,MS3.7						
MDJ				LR	LR		
	comp=E,130nm,21.6s,MS3.7						
MDJ				LR	LR		
	comp=Z,160nm,16.8s,MS3.8						
KSM	**Kuching**	**34.93**	**255**	*e*P	**P**	**02 03 53.9**	**-0.2**
FITZ	**Fitzroy Crossi**	**35.12**	**211**	*e*P	**P**	**02 03 55.7**	**0.0**
ASPA	**Alice Springs**	**37.01**	**195**	*e*P	**P**	**02 04 12.7**	**+1.1**
GYA	**Guiyang**	**37.66**	**298**	⇑*i*P	**P**	**02 04 20.0**	**+3.0**
GYA				AP	pP	02 04 24.8	+5.4
GYA				XP	sP	02 04 27.6	+7.2
GYA				PP	PP	02 05 50.2	+4.5
GYA				PCP	PcP	02 06 34.5	-0.5
GYA				SCS	ScS	02 14 29.2	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
GYA				AMB	AMB		
	comp=Z,20nm,3.0s						
GYA				LR	LR		
	comp=N,480nm,17.8s,MS4.5						
GYA				LR	LR		
	comp=E,460nm,18.0s,MS4.5						
GYA				LR	LR		
	comp=Z,430nm,18.4s,MS4.3						
HHC	**Hu-ho-hao-te**	**40.15**	**321**	*e*P	**P**	**02 04 37.3**	**-0.3**
HHC				AP	pP	02 04 41.6	+1.6
HHC				PP	PP	02 06 13.6	-0.2
HHC				PCP	PcP	02 06 42.5	-0.2
HHC				SCP		02 10 29.5	
HHC				PCS		02 10 31.9	
HHC				S	**S**	**02 10 42.6**	**-1.5**
HHC				XS		02 10 49.5	
HHC				SS	SS	02 13 32.5	-2.8
HHC				SCS	ScS	02 14 41.6	-1.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.3						
HHC				AMB	AMB		
	comp=Z,60nm,3.7s						
HHC				LR	LR		
	comp=N,230nm,11.2s,MS4.6						
HHC				LR	LR		
	comp=E,500nm,12.7s,MS4.6						
HHC				LR	LR		
	comp=Z,360nm,19.2s						
DZM	**Mont Dzumac**	**40.69**	**147**	P	**P**	**02 04 43.4**	**+1.1**
	comp=Z,13nm,0.6s,mb4.8,baz=340,slow=9.6,SNR=22						
KMI	**Kunming**	**40.82**	**294**	P	**P**	**02 04 44.6**	**+1.3**
	comp=Z,8.0nm,0.5s,mb4.6						
KMI				S	**S**	**02 10 55.5**	**+1.2**
KMI				LR	LR		
	comp=Z,170nm,25.5s,MS3.8						
CD2	**Chengdu**	**41.36**	**303**	*e*P	**P**	**02 04 48.4**	**+0.7**
LZH	**Lanzhou**	**43.09**	**310**	*e*P	**P**	**02 05 05.0**	**+3.1**
LZH				AP	pP	02 05 10.0	+5.7
LZH				XP	sP	02 05 14.0	+8.8
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH	**Lanzhou**	**43.09**	**310**	*e*P	**P**	**02 05 05.0**	**+3.1**
	comp=Z,20nm,1.0s,mb4.8						
LZH				pP	pP	02 05 10.0	+5.7
LZH				sP	sP	02 05 14.0	+8.8
STKA	**Stephens Creek**	**43.94**	**183**	P	**P**	**02 05 08.7**	**-0.1**
	comp=Z,4.2nm,0.6s,mb4.3,baz=359,slow=9.4,SNR=10						
STKA				LR	LR	02 23 50.7	
	comp=Z,191nm,19.8s,MS4.0,baz=15,slow=37						
SONM	**Songino Array**	**47.25**	**326**	P	**P**	**02 05 34.4**	**-0.6**
	comp=Z,0.4nm,0.5s,mb3.6,baz=143,slow=7.6,SNR=6.1						
SONM				PcP	PcP	02 07 05.4	-1.2
	comp=Z,1.8nm,0.8s,baz=135,slow=4.1,SNR=6.8						
GTA	**Gaotai**	**47.32**	**313**	*e*P	**P**	**02 05 37.7**	**+2.0**
GTA				AP	pP	02 05 41.5	+3.5
GTA				XP	sP	02 05 43.9	+4.9
GTA				PCP	PcP	02 07 12.5	+5.5
KLBR	**Kellerberrin**	**50.27**	**209**	*e*P	**P**	**02 05 57.9**	**-0.7**
	comp=Z,25nm,1.3s,mb5.1						
ZAK	**Zakamensk**	**50.39**	**327**	*e*P	**P**	**02 05 58.0**	**-1.2**
ZAK				*e*		02 07 18.0	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
YAK	**Yakutsk**	**50.73**	**351**	*e*P	**P**	**02 06 01.7**	**+0.1**
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
JIRN	**Jiri**	**55.85**	**295**	*e*P	**P**	**02 06 40.3**	**+0.2**
	comp=Z,14nm,0.6s,mb5.1						
GUN	**Gumba**	**56.15**	**295**	*e*P	**P**	**02 06 42.2**	**0.0**
	comp=Z,13nm,0.4s,mb5.3						
PKI	**Pulchoki**	**56.54**	**295**	*e*P	**P**	**02 06 44.9**	**-0.1**
KKN	**Kakani**	**56.67**	**295**	*e*P	**P**	**02 06 45.8**	**-0.1**
DMN	**Daman**	**56.81**	**295**	*e*P	**P**	**02 06 46.9**	**-0.1**
	comp=Z,20nm,1.0s,mb5.1						
GKN	**Gorkha**	**57.25**	**295**	*e*P	**P**	**02 06 49.4**	**-0.7**
	comp=Z,27nm,1.0s,mb5.2						
WMQ	**Urumqi**	**57.34**	**314**	⇑P	**P**	**02 06 51.4**	**+0.9**
WMQ				AP	pP	02 06 56.4	+3.5
WMQ				XP	sP	02 06 58.7	+4.9
WMQ				PCP	PcP	02 07 44.9	+0.5
WMQ				PP	PP	02 09 00.4	+1.0
WMQ				S	**S**	**02 14 45.7**	**+0.5**
WMQ				XS		02 14 53.4	
WMQ				PS	PS	02 15 00.4	+1.9
WMQ				LR	LR		
	comp=N,310nm,15.3s,MS4.6						
WMQ				LR	LR		
	comp=E,180nm,16.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,190nm,19.5s,MS4.2						
BILL	**Bilibino**	**57.63**	**10**	*e*P	**P**	**02 06 50.1**	**-2.1**
BILL				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
KOLN	**Koldanda**	**58.15**	**295**	*e*P	**P**	**02 06 55.6**	**-0.8**
	comp=Z,9.7nm,0.8s,mb4.9						
MKAR	**Makanchi Array**	**61.76**	**317**	P	**P**	**02 07 20.9**	**0.0**
	comp=Z,1.5nm,0.7s,mb4.2,baz=94,slow=8.6,SNR=17						
MKAR	**Makanchi Array**	**61.76**	**317**	P	**P**	**02 07 20.9**	**0.0**
ZAL	**Zalesovo**	**62.13**	**325**	P	**P**	**02 07 23.0**	**-0.3**
	comp=Z,1.1nm,0.5s,mb4.3,baz=31,slow=2.5,SNR=3.9						
ZAL	**Zalesovo**	**62.13**	**325**	P	**P**	**02 07 23.0**	**-0.3**
NVS	**Novosibirsk**	**63.28**	**326**	*e*P	**P**	**02 07 29.3**	**-1.6**
NVS				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.8						
NVS				pmax	pmax		
	comp=N,1.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.4s						
COLA	**College**	**69.81**	**25**	*e*P	**P**	**02 08 11.1**	**-1.1**
ILAR	**Eielson Array**	**70.18**	**25**	P	**P**	**02 08 12.5**	**-2.0**
	comp=E,1.6nm,0.8s,mb4.0,baz=253,slow=4.3,SNR=13						
BVAR	**Borovoye Array**	**70.35**	**322**	P	**P**	**02 08 15.6**	**-0.1**
	baz=113,slow=7.5						
BRVK	**Borovoye**	**70.41**	**322**	*e*P	**P**	**02 08 16.2**	**+0.1**
	comp=E,2.1nm,0.7s,mb4.2						
PPT	**Papeete**	**72.10**	**113**	*e*LR	LR	02 29 29.5	
	comp=E,197nm,21.8s						
PPT	**Papeete**	**72.10**	**113**	LR	LR	02 34 02.4	
	comp=E,240nm,19.3s,MS4.5,baz=291,slow=31						
TBI	**Tubuai**	**74.20**	**119**	*e*LR	LR	02 30 27.3	
	comp=E,205nm,38.8s						
INK	**Inuvik**	**75.96**	**22**	*e*P	**P**	**02 08 47.6**	**-0.8**
	comp=E,6.3nm,0.9s,mb4.5						
ARU	**Arti**	**77.28**	**325**	*e*P	**P**	**02 08 55.5**	**-0.4**
	comp=E,8.9nm,0.9s,mb4.7						
ARU	**Arti**	**77.28**	**325**	⇑*i*P	**P**	**02 08 55.6**	**-0.3**
ARU				*e*		02 11 51.5	
ARU				*e*PPP	PPP	02 13 38.0	-2.0
ARU				*e*S	S	02 18 39.4	-5.3
ARU				*e*SS	SS	02 23 41.4	-4.3
ARU				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
AKTO	**Aktyubinsk**	**78.01**	**319**	P	**P**	**02 08 59.2**	**-0.9**
	comp=Z,1.0nm,0.5s,mb4.0,baz=45,slow=7.9,SNR=1.9						
ORR	**Orenburg**	**79.94**	**321**	⇑*i*P	**P**	**02 09 11.1**	**+0.6**
ORR				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
YKA	**Yellowknife Ar**	**84.49**	**27**	P	**P**	**02 09 33.9**	**+0.1**
	comp=Z,3.7nm,0.7s,mb4.6,baz=288,slow=5.5,SNR=6.3						
RKT	**Rikitea**	**86.81**	**114**	*e*LR	LR	02 36 18.4	
	comp=Z,198nm,33.2s						
NEW	**Newport**	**86.87**	**41**	*e*P	**P**	**02 09 46.6**	**+0.5**
	comp=Z,15nm,0.9s,mb5.2						
EDM	**Edmonton**	**87.80**	**36**	*e*P	**P**	**02 09 49.1**	**-1.3**
ARCES	**ARCESS Array B**	**88.03**	**342**	P	**P**	**02 09 51.3**	**+0.2**
	comp=Z,4.0nm,0.7s,mb4.7,baz=59,slow=7.1,SNR=9.9						
NVAR	**Mina Array Bea**	**88.52**	**51**	P	**P**	**02 09 56.0**	**+1.8**
	comp=Z,2.5nm,0.7s,mb4.7,baz=259,slow=3.9,SNR=25						
MOS	**Moscow**	**88.88**	**327**	*e*P	**P**	**02 10 05.5**	**+10**
JOF	**Joensuu**	**89.07**	**335**	*e*p	**P**	**02 09 54.5**	**-1.7**
	comp=Z,6.9nm,0.7s,mb5.1						
JOF	**Joensuu**	**89.07**	**335**	*e*P	**P**	**02 09 54.5**	**-1.7**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb5.1						
KIV	**Kislovodsk**	**89.47**	**315**	*i* P	**P**	**02 09 58.1**	**-0.4**
OBN	**Obninsk**	**89.66**	**327**	P	**P**	**02 09 59.0**	**-0.2**
OBN				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.3						
HLID	**Hailey**	**89.98**	**45**	*e*P	**P**	**02 10 02.4**	**+1.5**
	comp=Z,14nm,1.5s,mb5.1						
HRY	**Holter Researc**	**90.76**	**42**	*e*P	**P**	**02 10 06.2**	**+1.8**
KAF	**Kangasniemi**	**91.50**	**335**	*e*p	**P**	**02 10 05.8**	**-1.7**
	comp=Z,5.8nm,0.6s,mb5.1						
KAF	**Kangasniemi**	**91.50**	**335**	*e*P	**P**	**02 10 05.8**	**-1.7**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.1						
LDFC	**Landfair**	**91.88**	**54**	*e*P	**P**	**02 10 11.1**	**+1.1**
NEN	**Nelson**	**91.93**	**53**	*e*P	**P**	**02 10 13.2**	**+3.0**
FINES	**FINESS Array B**	**91.93**	**335**	P	**P**	**02 10 08.2**	**-1.3**
	comp=Z,5.3nm,0.6s,mb5.1,baz=61,slow=5.3,SNR=45						
FINES	**FINESS Array B**	**91.93**	**335**	⇑*e*P	**P**	**02 10 08.1**	**-1.4**
NOA	**NORSAR Array B**	**97.92**	**339**	P	**P**	**02 10 36.0**	**-0.9**
	comp=Z,0.9nm,0.7s,mb4.4,baz=45,slow=4.4,SNR=3.2						
SYO	**Syowa Base**	**106.48**	**201**	⇓Pdiff	Pdif	02 11 15.1	+0.2
SYO	**Syowa Base**	**106.48**	**201**	⇓*e*Pdif	Pdif	02 11 15.1	+0.2
SNAA	**Sanae**	**117.30**	**191**	⇑*i*P	PKPdf	02 15 46.6	-1.3
VNA2	**Neumayer--Watz**	**118.75**	**190**	⇑*i*PKPdf	PKPdf	02 15 49.9	-0.9
VNA2				*e*		02 24 47.7	
VNA3	**Neumayer Olymp**	**118.87**	**189**	⇑*i*PKPdf	PKPdf	02 15 49.5	-1.5
VNA3				*e*		02 24 48.3	
DBIC	**Dimbokro**	**143.64**	**300**	PKP	PKPdf	02 16 34.8	-4.1
	comp=Z,3.8nm,0.8s,baz=213,slow=3.3,SNR=7.7						
LPAZ	**La Paz**	**148.77**	**101**	PKPbc	PKPdf	02 16 52.2	+4.9
	comp=Z,2.9nm,0.9s,baz=261,slow=3.6,SNR=9.8						
LPAZ	**La Paz**	**148.77**	**101**	*e*PKPbc	PKPdf	02 16 52.1	+4.8

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*MOS **06** 02:09:51.5±1.0, 34.74N×73.03E, h17^{km}, mb4.3/11, Error ellipse: s-maj=19.5km s-min=10.7km az=94.5*

*BJI **06** 02:09:52.0, 35.19N×72.27E, h32^{km}, mb3.9, ML4.1*

*NEIC **06** 02:09:52.4±0.5, 34.76N×73.08E, h10^{km}, mb4.4/6, Error ellipse: s-maj=9.4km s-min=7.2km az=218.0*

*IDC **06** 02:09:53.8±0.8, 34.77N×73.14E, h19^{km}±3^{km}, mb3.8/12, mb1 4.0/15, mb1mx3.9/22, mbtmp3.9/15, ML3.9/3, Error ellipse: s-maj=18.8km s-min=13.5km az=27.0*

*NDI **06** 02:09:58.4±4.8, 34.67N×73.27E, h10^{km}, mb4.2, ML4.5, mb4.4(NEIC)*

*NNC **06** 02:10:00.4±5.0, 34.93N×72.75E, h74^{km}±52^{km}, mpv4.3, Error ellipse: s-maj=55.5km s-min=37.4km az=93.0*

ISC 06 02:09:53.7±0.3**, 34.93N**±0.03×**73.15E**±0.05**, h19**^{km}**, h19**^{km}±.5^{km}**:pP-P, n80, σ1^{s}33**/80**, mb4.0**/19**, 2C-7D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.27**	**176**	⇓P	**Pn**	**02 10 18.2**	**+1.6**
CEP	**Cherat**	**1.50**	**223**	⇓P	**Pn**	**02 10 21.7**	**+1.7**
CEP				S	**Sn**	**02 10 45.0**	**+5.8**
THW	**Thamme Wali**	**2.43**	**209**	⇓P	**Pn**	**02 10 35.8**	**+2.6**
SARP	**Sargodha**	**3.02**	**188**	⇓P	**Pn**	**02 10 43.4**	**+1.7**
SARP				S	**Sn**	**02 11 27.0**	**+9.2**
SBDP	**Sheikh Budin**	**3.27**	**217**	⇓P	**Pn**	**02 10 48.2**	**+3.0**
DLH	**Dalhousie**	**3.34**	**135**	*e*PB	**Pb**	**02 10 53.0**	**+0.8**
DLH				*e*SB	**Sb**	**02 11 32.0**	**-0.8**
SDNR	**Sundarnagar**	**4.69**	**136**	*e*P	**Pn**	**02 11 06.4**	**+1.1**
KLP	**Kalpa**	**5.45**	**127**	*e*P	**Pn**	**02 11 17.4**	**+1.3**
KLP				AML	AML	02 14 14.3	
	comp=N,3µm,0.2s						
KLP				AML	AML	02 14 14.7	
	comp=E,5µm,0.5s						
JOSI	**Joshimath**	**6.94**	**127**	*e*x	x	02 10 56.0	
JOSI				*e*x	x	02 12 14.0	
NDI	**New Delhi**	**7.12**	**150**	*e*P	**Pn**	**02 11 39.5**	**-0.2**
NDI				*e*x	x	02 12 59.0	
KALG	**Kalgarh**	**7.20**	**137**	*e*x	x	02 12 45.0	
KHET	**Khetri**	**7.20**	**161**	*i* P	**Pn**	**02 11 39.8**	**-0.9**
KHET				AMb	AMB	02 11 41.4	
	comp=Z,7.1nm,0.8s						
KHET				*e*x	x	02 13 01.3	
KHET				AML	AML	02 13 41.7	
	comp=N,85nm,0.4s						
KHET				AML	AML	02 14 49.2	
	comp=E,159nm,0.3s						
AML	**Almayashu**	**7.21**	**3**	P	**Pn**	**02 11 42.3**	**+1.5**
	SNR=20						
AYAN	**Aya Nagar**	**7.26**	**151**	*i* P	**Pn**	**02 11 43.0**	**+1.3**
AYAN				*e*x	x	02 13 01.7	
AYAN				AML	AML	02 13 40.8	
	comp=Z,130nm,0.7s						
KUDL	**Kundal**	**7.34**	**156**	*e*P	**Pn**	**02 11 41.2**	**-1.5**
KUDL				*e*x	x	02 13 01.8	
UCH	**Uchtor**	**7.37**	**8**	P	**Pn**	**02 11 45.3**	**+2.2**
	SNR=13						
EKS2	**Erkin-Say**	**7.74**	**3**	P	**Pn**	**02 11 49.8**	**+1.5**
	SNR=11						
AAK	**Ala-Archa**	**7.77**	**7**	P	**Pn**	**02 11 52.6**	**+3.9**
	SNR=8.6						
AAK	**Ala-Archa**	**7.77**	**7**	⇑P	**Pn**	**02 11 52.1**	**+3.4**
	comp=Z,7.6nm,0.5s						
AAK				⇑S	**Sn**	**02 13 18.8**	**+1.8**
	comp=Z,21nm,0.7s						
AAK	**Ala-Archa**	**7.77**	**7**	*e*P	**Pn**	**02 11 48.5**	**-0.2**
	comp=Z,12nm,0.5s						
AAK				S	**Sn**	**02 13 18.8**	**+1.8**
TKM2	**Tokmak 2**	**8.21**	**13**	P	**P**	**02 11 56.7**	**+1.9**
	SNR=6.1						
JASL	**Jaisalmer**	**8.21**	**194**	*e*x	x	02 11 59.6	
KK31	**Karatay Array**	**8.42**	**347**	P	**P**	**02 11 57.9**	**+0.2**
	comp=Z,3.5nm,0.2s,baz=151,slow=9.9,SNR=232						
KK31				⇓S	**Sn**	**02 13 32.2**	**-1.0**
	comp=Z,12nm,0.5s,baz=174,slow=23,SNR=4.2						
KK31	**Karatay Array**	**8.42**	**347**	P	**P**	**02 11 57.9**	**+0.2**
	comp=Z,3.5nm,0.3s						
KK31				S	**Sn**	**02 13 32.2**	**-1.0**
AJM	**Ajmer**	**8.52**	**171**	*i* P	**P**	**02 11 57.4**	**-1.8**
AJM				*e*x	x	02 13 36.0	
AJM				AML	AML	02 16 26.1	
	comp=E,658nm,0.8s						
AJM				AML	AML	02 16 57.1	
	comp=N,326nm,0.9s						
BHJ	**Bhuj**	**12.03**	**196**	*i* P	**P**	**02 12 44.7**	**-2.5**
BHJ				*e*x	x	02 14 38.7	
ALBI	**Allahabad**	**12.16**	**140**	*e*x	x	02 13 20.0	
BHPL	**Bhopal**	**12.23**	**161**	*i* P	**P**	**02 12 47.2**	**-2.7**
BHPL				*e*x	x	02 14 39.0	
BHPL				AML	AML	02 17 04.1	
	comp=N,153nm,0.4s						
BHPL				AML	AML	02 17 22.1	
	comp=E,150nm,0.7s						
MKAR	**Makanchi Array**	**13.71**	**27**	Pn	**P**	**02 13 09.3**	**-0.2**
	comp=E,0.1nm,0.3s,baz=205,slow=16,SNR=13						
MKAR				pP		02 13 15.0	
	comp=E,0.2nm,0.3s,baz=209,slow=15,SNR=17						
AKL	**Akola**	**14.58**	**165**	⇓*i*x	x	02 14 21.2	
BLSP	**Bilaspur**	**14.99**	**146**	*e*x	x	02 13 31.4	
BOK	**Bokaro**	**15.68**	**132**	*e*x	x	02 13 56.2	
LSA	**Lhasa**	**16.08**	**104**	P	**P**	**02 13 40.4**	**-0.1**
	comp=E,9.0nm,0.6s						
AB31	**Akbulak array**	**17.31**	**330**	P	**P**	**02 13 54.8**	**-1.1**
	comp=E,0.6nm,0.4s,baz=133,slow=12,SNR=51						
BVA0	**Borovoye Array**	**18.20**	**355**	P	**P**	**02 14 07.0**	**+0.1**
	comp=E,0.4nm,0.5s,baz=164,slow=10,SNR=34						
BVAR	**Borovoye Array**	**18.20**	**355**	P	**P**	**02 14 07.1**	**+0.2**
	comp=E,0.6nm,0.3s,baz=167,slow=10,SNR=13						
BVAR				pP		02 14 12.7	
	comp=E,1.6nm,0.3s,baz=168,slow=9.9,SNR=22						
BVAR	**Borovoye Array**	**18.20**	**355**	P	**P**	**02 14 07.1**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**18.24**	**354**	*e*P	**P**	**02 14 07.0**	**-0.4**
	comp=Z,7.3nm,0.8s						
BRVK				*e*		02 14 13.2	
SHL	**Shillong**	**18.66**	**115**	*e*P	**P**	**02 14 12.5**	**-0.3**
AKTO	**Aktyubinsk**	**19.02**	**329**	P	**P**	**02 14 16.3**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=137,slow=11,SNR=12						
AKTO				pP		02 14 22.2	
	comp=Z,1.9nm,0.3s,baz=128,slow=10,SNR=13						
AKTO	**Aktyubinsk**	**19.02**	**329**	P	**P**	**02 14 16.3**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	**Zalesovo**	**20.70**	**20**	P	**P**	**02 14 33.2**	**-1.9**
	comp=Z,5.2nm,0.6s,baz=263,slow=11,SNR=17						
ZAL				pP		02 14 39.0	
	comp=Z,14nm,0.5s,baz=259,slow=7.9,SNR=18						
ZAL	**Zalesovo**	**20.70**	**20**	P	**P**	**02 14 33.3**	**-1.9**
ZAL				*PP		02 14 39.0	
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZAL				pmax	pmax		
	comp=Z,14nm,0.5s						
ORR	**Orenburg**	**21.29**	**327**	*e*P	**P**	**02 14 47.2**	**+5.9**
ORR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.1						
GTA	**Gaotai**	**21.68**	**70**	*e*P	**P**	**02 14 48.1**	**+2.8**
GTA				AP		02 14 52.8	
GNI	**Garni**	**23.07**	**291**	P	**P**	**02 14 59.3**	**+0.3**
	comp=Z,12nm,0.9s,mb4.3						
ARU	**Arti**	**23.70**	**340**	*e*P	**P**	**02 15 05.7**	**+0.8**
	comp=Z,7.7nm,0.8s,mb4.2						
ARU				*e*		02 15 12.0	
ZAK	**Zakamensk**	**26.77**	**46**	*e*P	**P**	**02 15 36.4**	**+2.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
SONM	**Songino Array**	**27.85**	**52**	P	**P**	**02 15 43.2**	**-0.7**
	comp=Z,0.4nm,0.7s,mb3.1,baz=246,slow=7.2,SNR=3.1						

SONM				pP	pP	02 15 48.4	-1.2
	comp=Z,0.7nm,0.5s,baz=250,slow=9.3,SNR=6.8						
SONM	**Songino Array**	**27.85**	**52**	P	**P**	**02 15 43.2**	**-0.7**
SONM				*PP	pP	02 15 48.4	-1.2
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
OBN	**Obninsk**	**32.26**	**320**	P	**P**	**02 16 28.0**	**+4.9**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
AKASG	**Malin Array Be**	**35.29**	**310**	P	**P**	**02 16 48.1**	**-1.2**
	comp=Z,0.1nm,0.3s,mb3.2,baz=83,slow=7.0,SNR=3.0						
AKASG				pP	pP	02 16 54.2	-0.9
	comp=Z,0.6nm,0.5s,baz=83,slow=8.0,SNR=4.9						
AKASG	**Malin Array Be**	**35.29**	**310**	P	**P**	**02 16 48.1**	**-1.2**
AKASG				*PP	pP	02 16 54.2	-0.8
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JOF	**Joensuu**	**38.10**	**330**	*e*p	**P**	**02 17 12.9**	**+0.1**
	comp=Z,2.3nm,0.3s,mb4.4						
JOF	**Joensuu**	**38.10**	**330**	*e*P	**P**	**02 17 12.9**	**+0.1**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.3						
FINES	**FINESS Array B**	**39.76**	**327**	P	**P**	**02 17 25.9**	**-0.7**
	comp=Z,1.0nm,0.4s,mb3.9,baz=116,slow=10,SNR=11						
FINES				pP	pP	02 17 32.3	-0.2
	comp=Z,4.6nm,0.6s,baz=116,slow=10,SNR=5.7						
FINES	**FINESS Array B**	**39.76**	**327**	P	**P**	**02 17 25.9**	**-0.7**
FINES				pP	pP	02 17 32.3	-0.2
FINES	**FINESS Array B**	**39.76**	**327**	P	**P**	**02 17 25.9**	**-0.8**
FINES				*PP	pP	02 17 32.3	-0.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KAF	**Kangasniemi**	**39.89**	**328**	*e*p	**P**	**02 17 27.4**	**-0.3**
	baz=112,slow=8.2						
ARCES	**ARCESS Array B**	**43.26**	**338**	P	**P**	**02 17 55.0**	**-0.1**
	comp=Z,3.9nm,1.0s,mb4.1,baz=90,slow=2.4,SNR=9.5						
ARCES				pP	pP	02 18 01.1	+0.1
	comp=Z,5.6nm,0.7s,baz=117,slow=8.0,SNR=3.8						
ARCES	**ARCESS Array B**	**43.26**	**338**	P	**P**	**02 17 55.1**	**-0.1**
ARCES				*PP	pP	02 18 01.1	+0.1
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GERES	**GERESS Array B**	**45.27**	**307**	P	**P**	**02 18 10.5**	**-1.1**
	comp=Z,0.3nm,0.8s,mb3.2,baz=85,slow=8.8,SNR=2.3						
GERES				pP	pP	02 18 16.9	-0.6
	comp=Z,0.2nm,0.4s,baz=63,slow=6.0,SNR=2.5						
NB2	**NORSAR Subarra**	**46.68**	**324**	P	**P**	**02 18 21.4**	**-1.2**
	comp=Z,5.4nm,0.8s,mb4.5,baz=97,slow=7.4						
NOA	**NORSAR Array B**	**46.68**	**324**	P	**P**	**02 18 21.9**	**-0.7**
	comp=Z,1.2nm,0.7s,mb3.9,baz=96,slow=7.9,SNR=4.3						
NOA				pP	pP	02 18 27.4	-1.1
	comp=Z,4.2nm,0.7s,baz=96,slow=7.6,SNR=12						
NOA	**NORSAR Array B**	**46.68**	**324**	P	**P**	**02 18 21.9**	**-0.7**
NOA				pP	pP	02 18 27.4	-1.1
NOA	**NORSAR Array B**	**46.68**	**324**	P	**P**	**02 18 21.9**	**-0.7**
NOA				*PP	pP	02 18 27.4	-1.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NAO	**NORSAR Subarra**	**46.85**	**324**	P	**P**	**02 18 21.4**	**-2.6**
	comp=Z,5.4nm,0.8s,mb4.5						
MAJO	**Matsushiro**	**51.91**	**68**	*e*P	**P**	**02 19 01.0**	**-2.3**
	comp=Z,6.6nm,0.8s,mb4.6						
MAJO				*e*	pP	02 19 07.4	-1.8
MJAR	**Matsushiro Arr**	**51.91**	**68**	P	**P**	**02 19 02.0**	**-1.3**
	comp=Z,1.8nm,0.7s,mb4.1,baz=294,slow=9.7,SNR=6.8						
MJAR				pP	pP	02 19 08.1	-1.2
	comp=Z,5.5nm,0.8s,baz=290,slow=9.8,SNR=14						
MJAR	**Matsushiro Arr**	**51.91**	**68**	P	**P**	**02 19 02.1**	**-1.2**
MJAR				*PP	pP	02 19 08.1	-1.1
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ILAR	**Eielson Array**	**75.80**	**17**	P	**P**	**02 21 39.0**	**-0.7**
	comp=Z,0.7nm,0.9s,mb3.6,baz=305,slow=4.5,SNR=5.3						
ILAR				pP	pP	02 21 44.7	-1.0
	comp=Z,1.7nm,0.9s,baz=309,slow=5.7,SNR=10						
ILAR	**Eielson Array**	**75.80**	**17**	P	**P**	**02 21 39.0**	**-0.6**
ILAR				*PP	pP	02 21 44.7	-1.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BOSA	**Boshof**	**77.71**	**222**	P	**P**	**02 21 47.0**	**-3.9**
	comp=Z,5.1nm,1.0s,mb4.4,baz=36,slow=6.9,SNR=4.3						
BOSA	**Boshof**	**77.71**	**222**	P	**P**	**02 21 47.1**	**-3.9**
BOSA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
WRA	**Warramunga Arr**	**79.67**	**123**	P	**P**	**02 22 01.1**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=322,slow=5.1,SNR=6.1						
WRA				pP	pP	02 22 06.9	-1.1
	comp=Z,1.5nm,0.5s,baz=323,slow=5.1,SNR=7.5						
WRA	**Warramunga Arr**	**79.67**	**123**	P	**P**	**02 22 01.1**	**-0.8**
WRA				*PP	pP	02 22 06.9	-1.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRAB	**Tennant Creek**	**79.67**	**123**	*e*P	**P**	**02 22 01.2**	**-0.7**
WRAB				*e*	pP	02 22 07.1	-1.0
YKA	**Yellowknife Ar**	**82.72**	**4**	P	**P**	**02 22 16.5**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.2,baz=350,slow=5.0,SNR=6.0						
YKA				pP	pP	02 22 22.4	-0.7
	comp=Z,4.6nm,0.6s,baz=347,slow=5.5,SNR=7.2						
YKA	**Yellowknife Ar**	**82.72**	**4**	P	**P**	**02 22 16.5**	**-0.5**
YKA				pP	pP	02 22 22.4	-0.7
YKA	**Yellowknife Ar**	**82.72**	**4**	P	**P**	**02 22 16.5**	**-0.5**
YKA				*PP	pP	02 22 22.4	-0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA				pmax	pmax		
	comp=Z,5.0nm,0.6s						

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*NEIC **06** 02:11:53.0±0.1, 34.52N×73.39E, h10^{km}, mb5.2/156, MS4.5/15, Error ellipse: s-maj=4.0km s-min=2.2km az=203.0*

NEIC Seven people injured at Batgram. Felt at Balakot, Islamabad, Malakand, Mansehra, Peshawar and Swat. Also felt at Muzaffarabad and Rawala Kot, Kashmir.

*MOS **06** 02:11:52.8±1.0, 34.62N×73.43E, h17^{km}, mb5.4/40, MS4.5/29, Error ellipse: s-maj=7.5km s-min=4.4km az=118.3*

*BJI **06** 02:11:53.8, 34.59N×73.71E, h11^{km}, mB5.1, mb5.2, ML5.7, Ms5.1, Msz4.8*

*HRVD **06** 02:11:53.0±0.6, 34.51N×73.20E, h13^{km}, MW5.1/50, Centroid moment Tensor Solution. LP body waves: s20,c25;Mantle waves: s50,c77; Half duration: 1^{s}1 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.64±.15; M$_{\theta\theta}$-1.47±.14; M$_{\phi\phi}$-0.17±.13; M$_{r\theta}$2.59±.40; M$_{\theta\phi}$1.26±.10; M$_{\phi r}$-5.10±.30; Best double couple: M$_0$6.061×10^{16} NP1: ϕ$_s$274°,δ14°,λ34°. NP2:ϕ$_s$151°,δ82°,λ102°. Principal axes: T 6.114, Plg51°, Azm74°; N -.106, Plg12°, Azm329°; P -6.008, Plg36°, Azm231°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NDI **06** 02:11:54.3±5.4, 34.48N×73.36E, h10^{km}, mb5.2, ML4.9, mb5.2(NEIC)*

*IDC **06** 02:11:57.5±1.4, 34.62N×73.41E, h39^{km}±10^{km}, mb4.9/23, mb1 5.0/26, mb1mx5.0/26, mbtmp5.1/26, ML5.4/3, MS4.5/15, Ms1 4.5/15, ms1mx4.3/24, Error ellipse: s-maj=12.9km s-min=8.9km az=17.0*

*CRAAG **06** 02:12:02.2, 34.86N×73.41E, Mb5.1*

*NNC **06** 02:12:02.2±3.3, 34.78N×72.90E, h97^{km}±25^{km}, mpv6.0, Error ellipse: s-maj=31.8km s-min=23.1km az=73.0*

ISC 06 02:11:52.0±0.1**, 34.54N**±0.02×**73.40E**±0.02**, h14**^{km}**, h14**^{km}±1.3^{km}**:pP-P, n573,** σ**1^{s}05**/599**, mb5.1**/210**, MS4.7**/54**, 66C-56D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**0.89**	**188**	⇑P	**Pb**	**02 12 11.2**	**+2.5**
SRNI	**Srinagar**	**1.28**	**110**	*e*PG	**Pg**	**02 12 20.0**	**+2.5**
SRNI				*e*x	x	02 12 43.0	
CEP	**Cherat**	**1.43**	**240**	⇑P	**Pn**	**02 12 18.4**	**+0.7**
JMU	**Jammu**	**2.21**	**145**	*e*PG	**Pg**	**02 12 33.5**	**-2.6**
JMU				*e*SG	**Sg**	**02 13 04.5**	**-1.1**
SARP	**Sargodha**	**2.69**	**193**	⇓P	**Pn**	**02 12 36.3**	**+0.7**
SARP				S	**Sn**	**02 13 13.0**	**+4.8**
THN	**Thein Dam**	**2.86**	**137**	*e*PB	**Pb**	**02 12 42.6**	**+0.3**
THN				*e*SB	**Sb**	**02 13 23.9**	**+6.6**
DLH	**Dalhousie**	**2.93**	**132**	*e*P	**Pn**	**02 12 42.0**	**+2.9**
DLH				*e*SB	**Sb**	**02 13 21.0**	**+1.7**
SBDP	**Sheikh Budin**	**3.12**	**225**	⇓P	**Pn**	**02 12 44.3**	**+2.5**
DRP	**Derazinda**	**3.87**	**225**	⇓P	**Pn**	**02 12 53.3**	**+0.8**
SDNR	**Sundarnagar**	**4.26**	**134**	*e*S	**Sn**	**02 13 46.8**	**-1.4**
SMLA	**Simla**	**4.65**	**136**	*e*P	**Pn**	**02 13 04.0**	**+0.5**
SMLA				*e*S	**Sn**	**02 13 55.5**	**-2.4**
KLP	**Kalpa**	**5.06**	**125**	*e*P	**Pn**	**02 13 12.6**	**+3.3**
KLP				AML	AML	02 14 44.2	
	comp=N,8µm,0.7s						
KLP				AML	AML	02 14 55.9	
	comp=E,9µm,1.0s						
DDI	**Dehra Dun**	**5.76**	**136**	*e*P	**Pn**	**02 13 21.0**	**+1.8**
DDI				*e*x	x	02 14 32.0	
NDI	**New Delhi**	**6.69**	**150**	*e*P	**Pn**	**02 13 31.0**	**-1.3**
NDI				*e*x	x	02 14 46.0	
KHET	**Khetri**	**6.77**	**162**	*e*P	**Pn**	**02 13 33.0**	**-0.4**
KALG	**Kalgarh**	**6.77**	**136**	*e*P	**Pn**	**02 13 35.2**	**+1.8**
KALG				*e*x	x	02 14 49.0	
AYAN	**Aya Nagar**	**6.83**	**151**	*e*P	**Pn**	**02 13 35.1**	**+0.9**
AYAN				*e*x	x	02 14 55.2	
KUDL	**Kundal**	**6.90**	**157**	*e*P	**Pn**	**02 13 35.0**	**-0.3**
KUDL				*e*x	x	02 14 52.3	
KUDL				AML	AML	02 15 02.6	
	comp=Z,362nm,0.7s						
KZA	**Kyzart**	**7.66**	**10**	P	**Pn**	**02 13 49.3**	**+3.4**
	SNR=35						
AJM	**Ajmer**	**8.11**	**172**	*e*P	**P**	**02 13 50.6**	**-1.5**
AJM				*e*S	**Sn**	**02 15 16.7**	**-7.8**
AAK	**Ala-Archa**	**8.12**	**6**	⇑P	**P**	**02 13 55.5**	**+3.1**
	comp=Z,238nm,0.6s						
AAK				⇓S	**Sn**	**02 15 23.5**	**-1.3**
	comp=Z,763nm,0.8s						
FRU	**Bishkek**	**8.33**	**6**	*e*P	**P**	**02 13 59.0**	**+3.7**
FRU				*e*S	**Sn**	**02 15 30.0**	**-0.1**
FRU				pmax	pmax		
	comp=Z,2µm,3.0s						
FRU				smax			
	comp=E,2µm,3.0s						
KK31	**Karatay Array**	**8.84**	**346**	⇓P	**P**	**02 14 03.7**	**+1.4**
	comp=E,610nm,0.5s,baz=168,slow=13,SNR=234						
KK31				⇓S	**Sn**	**02 15 38.3**	**-4.4**
	comp=E,692nm,0.6s						
KK31	**Karatay Array**	**8.84**	**346**	⇓P	**P**	**02 14 03.7**	**+1.4**
	comp=E,610nm,0.5s						
KK31				S	**Sn**	**02 15 38.3**	**-4.4**
KKAR	**Karatay Array**	**8.84**	**346**	*i* P	**P**	**02 14 03.3**	**+1.0**
KKAR				S	**Sn**	**02 15 38.3**	**-4.4**
KKAR				pmax	pmax		
	comp=Z,170nm,0.4s						
KKAR				smax			
	comp=Z,166nm,0.3s						
AAA	**Alma-Ata**	**9.14**	**17**	⇑*i*P	**P**	**02 14 08.5**	**+2.0**
AAA				*e*S	**Sn**	**02 15 41.8**	**-8.4**
AAA				pmax	pmax		
	comp=Z,740nm,0.7s						
AAA				smax			
	comp=E,1µm,1.9s						
AAA				MLR	MLR		
	comp=Z,10µm,9.7s						
KOLN	**Koldanda**	**11.04**	**125**	*e*Pn	**P**	**02 14 31.9**	**-0.6**
KOLN				*e*Sn	**S**	**02 16 30.4**	**-6.3**
	comp=Z,1µm,0.9s						
GKN	**Gorkha**	**11.61**	**121**	*e*Pn	**P**	**02 14 39.2**	**-1.1**
GKN				*e*Sn	**S**	**02 16 42.7**	**-8.0**
	comp=Z,1µm,0.8s						
BHJ	**Bhuj**	**11.72**	**197**	*e*P	**P**	**02 14 38.5**	**-3.3**
BHPL	**Bhopal**	**11.80**	**162**	*i* P	**P**	**02 14 41.0**	**-1.9**
BHPL				*e*S	**S**	**02 16 44.6**	**-11**
BHPL				AML	AML	02 17 59.5	
	comp=E,168nm,0.6s						
BHPL				AML	AML	02 18 15.1	
	comp=N,128nm,0.3s						
DMN	**Daman**	**12.18**	**121**	*e*Pn	**P**	**02 14 47.1**	**-0.9**
DMN				*e*Sn	**S**	**02 16 56.5**	**-8.0**
	comp=N,1µm,1.0s						
KKN	**Kakani**	**12.19**	**120**	*e*Pn	**P**	**02 14 47.4**	**-0.8**
KKN				*e*Sn	**S**	**02 16 55.8**	**-9.1**
	comp=N,918nm,0.9s						
PKI	**Pulchoki**	**12.41**	**121**	*e*Pn	**P**	**02 14 50.3**	**-0.9**
PKI				*e*Sn	**S**	**02 17 01.1**	**-9.2**
	comp=N,1µm,0.9s						
GUN	**Gumba**	**12.55**	**118**	*e*Pn	**P**	**02 14 52.3**	**-0.7**
JIRN	**Jiri**	**12.92**	**119**	*e*Pn	**P**	**02 14 57.5**	**-0.4**
JIRN				*e*Sn	**S**	**02 17 12.8**	**-10**
	comp=N,838nm,0.8s						
MK31	**Makanchi Array**	**13.96**	**26**	⇑P	**P**	**02 15 11.8**	**+0.2**
	comp=N,73nm,0.6s,baz=201,slow=13,SNR=88						
MKAR	**Makanchi Array**	**13.96**	**26**	Pn	**P**	**02 15 11.8**	**+0.3**
	comp=N,3.5nm,0.3s,baz=202,slow=12,SNR=62						
MKAR				Sn	**S**	**02 17 39.9**	**-7.3**
	baz=202,slow=23,SNR=2.1						
MKAR	**Makanchi Array**	**13.96**	**26**	P	**P**	**02 15 11.9**	**+0.4**
MKAR						02 17 39.9	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
WMQ	**Urumqi**	**14.43**	**46**	⇓P	**P**	**02 15 16.7**	**-1.0**
WMQ				AP		02 15 20.2	
WMQ				XP		02 15 23.7	
WMQ				PP	PP	02 15 28.7	-0.5
WMQ				PPP	PPP	02 15 35.7	-0.5
WMQ				S	**S**	**02 17 58.5**	**+0.2**
WMQ				XS		02 18 03.2	
WMQ				SS	SS	02 18 15.2	-0.1
WMQ				AMB	AMB		
	comp=Z,180nm,0.9s						
WMQ				LR	LR		
	comp=N,6µm,15.0s						
WMQ				LR	LR		
	comp=E,8µm,16.5s						
WMQ				LR	LR		
	comp=Z,7µm,18.5s						
BOK	**Bokaro**	**15.27**	**131**	*e*x	x	02 18 08.0	
BOM	**Bombay**	**15.60**	**182**	*e*x	x	02 15 42.6	
BOM				*e*x	x	02 18 18.3	
LSA	**Lhasa**	**15.79**	**103**	P	**P**	**02 15 33.6**	**-1.9**
LSA				S	**S**	**02 18 23.6**	**-6.9**
LSA				PCP	PcP	02 20 36.9	+1.1
LSA				AMB	AMB		
	comp=Z,50nm,0.9s						
LSA				LR	LR		
	comp=N,1µm,11.1s						
LSA				LR	LR		
	comp=E,3µm,12.7s						
LSA				LR	LR		
	comp=Z,4µm,11.1s						
LSA	**Lhasa**	**15.79**	**103**	*e*P	**P**	**02 15 33.1**	**-2.5**
	comp=Z,122nm,0.9s						
POO	**Poona**	**15.96**	**178**	*i* P	**P**	**02 15 36.8**	**-1.0**
POO				AMb	AMB	02 15 49.4	
	comp=Z,100nm,1.2s						
LATR	**Latur**	**16.31**	**169**	*e*P	**P**	**02 15 40.0**	**-2.2**
BANOM	**Banah**	**17.08**	**244**	⇑P	**P**	**02 15 54.6**	**+2.6**
	SNR=8.4						
KAD	**Karad**	**17.18**	**177**	*e*P	**P**	**02 15 52.2**	**-1.0**
KAD				AMb	AMB	02 15 53.4	
	comp=Z,42nm,0.7s						
BIDO	**Bidbid**	**17.27**	**235**	⇑P	**P**	**02 15 56.3**	**+2.0**
	SNR=11						
WBK	**Wadi Bani Khal**	**17.36**	**231**	⇓P	**P**	**02 15 54.5**	**-1.0**
	SNR=31						
SMDO	**Samad**	**17.64**	**234**	⇑P	**P**	**02 15 58.3**	**-0.7**
	SNR=31						
HYB	**Hyderabad**	**17.67**	**164**	*i* P	**P**	**02 15 54.0**	**-5.4**
	comp=Z,70nm,1.0s						
HYB				*e*		02 16 02.0	
HYB				*e*		02 19 00.0	
HYB				*e*S	**S**	**02 19 20.0**	**+6.2**
HYB	**Hyderabad**	**17.67**	**164**	*e*P	**P**	**02 15 54.0**	**-5.4**
	comp=Z,70nm,1.0s						
HYB				*e*		02 16 02.0	
HYB				*e*S	**S**	**02 19 00.0**	**-14**
CAL	**Calcutta**	**17.72**	**129**	*e*P	**P**	**02 15 57.3**	**-2.7**
CAL				*e*x	x	02 19 03.0	
AB31	**Akbulak array**	**17.75**	**330**	P	**P**	**02 15 58.2**	**-1.9**
	comp=Z,120nm,0.9s,baz=137,slow=13,SNR=143						
AB31				⇓S	**S**	**02 19 09.0**	**-6.4**
	comp=Z,324nm,0.6s						
AB31	**Akbulak array**	**17.75**	**330**	P	**P**	**02 15 58.2**	**-1.9**
	comp=Z,120nm,0.9s						
AB31				S	**S**	**02 19 09.0**	**-6.4**
AB31	**Akbulak array**	**17.75**	**330**	*i* P	**P**	**02 15 58.2**	**-1.9**
AB31				pmax	pmax		
	comp=Z,22nm,0.5s						
HOQ	**Hoqain**	**17.79**	**236**	⇓P	**P**	**02 16 02.7**	**+1.9**
	SNR=12						
ASHO	**Ashiyiah**	**17.98**	**241**	⇑P	**P**	**02 16 05.0**	**+1.9**
	SNR=28						
JMDO	**Jabal Madar**	**18.09**	**232**	⇑P	**P**	**02 16 04.6**	**0.0**
	SNR=31						
VOSK	**Vostochnaya**	**18.25**	**355**	⇑P	**P**	**02 16 04.8**	**-1.6**
	comp=Z,39nm,0.7s						
VOSK				⇑S	**S**	**02 19 26.8**	**-0.1**
	comp=Z,71nm,1.7s						
VOSK	**Vostochnaya**	**18.25**	**355**	P	**P**	**02 16 04.8**	**-1.7**
VOSK				S	**S**	**02 19 30.2**	**+3.3**
VOSK				pmax	pmax		
	comp=Z,27nm,0.7s						
VOSK				smax			
	comp=Z,120nm,1.7s						
SHL	**Shillong**	**18.31**	**114**	*e*x	x	02 16 02.3	
SHL				*e*x	x	02 19 17.2	
BSY	**Bisya**	**18.42**	**235**	⇑P	**P**	**02 16 09.4**	**+0.7**
	SNR=32						
ARQ	**Araqi**	**18.49**	**237**	⇑P	**P**	**02 16 11.0**	**+1.4**
	SNR=43						
BVA0	**Borovoye Array**	**18.60**	**354**	P	**P**	**02 16 09.1**	**-1.6**
	comp=Z,23nm,0.8s,baz=161,slow=12,SNR=179						
BVA0				⇓S	**S**	**02 19 34.4**	**-0.3**
	comp=Z,16nm,1.4s						
BVA0	**Borovoye Array**	**18.60**	**354**	P	**P**	**02 16 09.1**	**-1.6**
	comp=Z,23nm,0.8s						
BVA0				S	**S**	**02 19 34.4**	**-0.3**
BVA0	**Borovoye Array**	**18.60**	**354**	*i* P	**P**	**02 16 09.0**	**-1.7**
BVA0				S	**S**	**02 19 34.4**	**-0.3**
BVA0				pmax	pmax		
	comp=Z,18nm,0.8s						
BVA0				smax			
	comp=Z,22nm,1.4s						
BVAR	**Borovoye Array**	**18.60**	**354**	P	**P**	**02 16 09.7**	**-1.0**
	comp=Z,31nm,0.3s,baz=156,slow=12,SNR=125						
BVAR				S	**S**	**02 19 30.2**	**-4.5**
	comp=Z,2.3nm,0.3s,baz=165,slow=23,SNR=4.8						
BVAR	**Borovoye Array**	**18.60**	**354**	P	**P**	**02 16 09.7**	**-1.0**
BVAR				S	**S**	**02 19 30.2**	**-4.5**
BVAR				pmax	pmax		
	comp=Z,31nm,0.3s						
BRVK	**Borovoye**	**18.64**	**354**	*e*P	**P**	**02 16 09.9**	**-1.3**
	comp=Z,145nm,1.0s						
AGT	**Agartala**	**18.83**	**120**	⇑*i*x	x	02 16 46.0	
VIS	**Vishakhapatnam**	**18.95**	**150**	*e*P	**P**	**02 16 15.0**	**-0.2**
VIS				*e*x	x	02 19 31.7	
GOA	**Goa**	**18.98**	**179**	*e*P	**P**	**02 16 14.0**	**-1.4**
GOA				*e*x	x	02 19 39.0	
AKTO	**Aktyubinsk**	**19.45**	**329**	P	**P**	**02 16 20.4**	**-0.4**
	comp=Z,30nm,0.3s,baz=135,slow=10,SNR=127						
AKTO				S	**S**	**02 19 49.2**	**-4.8**
	comp=Z,2.1nm,0.3s,baz=135,slow=15,SNR=3.7						
AKTO				LR	LR	02 25 24.1	
	comp=Z,180nm,18.9s,slow=42						
AKTO	**Aktyubinsk**	**19.45**	**329**	P	**P**	**02 16 20.5**	**-0.3**
AKTO				S	**S**	**02 19 49.2**	**-4.8**
AKTO				pmax	pmax		
	comp=Z,30nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,180nm,18.9s						
ZAL	**Zalesovo**	**20.99**	**19**	P	**P**	**02 16 36.6**	**-0.5**
	comp=Z,227nm,0.4s,baz=258,slow=7.6,SNR=181						
ZAL				S	**S**	**02 20 24.6**	**-1.1**
	comp=Z,8.7nm,0.6s,baz=179,slow=25,SNR=5.6						
ZAL				LR	LR	02 25 50.6	
	comp=Z,2µm,18.1s,MS4.6,baz=257,slow=40						
ZAL	**Zalesovo**	**20.99**	**19**	P	**P**	**02 16 36.6**	**-0.5**
ZAL				S	**S**	**02 20 24.6**	**-1.0**
ZAL				pmax	pmax		
	comp=Z,227nm,0.4s						
ZAL				MLR	MLR		
	comp=Z,2µm,18.1s						
NVS	**Novosibirsk**	**21.42**	**16**	*e*P	**P**	**02 16 39.7**	**-1.8**
NVS				*e*S	**S**	**02 20 32.6**	**-1.2**
NVS				pmax	pmax		
	comp=N,145nm,1.0s						
NVS				pmax	pmax		
	comp=E,57nm,1.0s						
NVS				pmax	pmax		
	comp=Z,181nm,1.0s,mb5.4						
NVS				smax			
	comp=N,245nm,1.7s						
NVS				smax			
	comp=E,108nm,1.5s						
MNGI	**Mangalore**	**21.55**	**176**	*e*P	**P**	**02 16 44.7**	**+1.7**
MNGI				*e*S	**S**	**02 20 44.6**	**+8.2**
GTA	**Gaotai**	**21.62**	**69**	⇑P	**P**	**02 16 45.0**	**+1.4**
GTA				AP		02 16 49.1	
GTA				XP		02 16 52.2	
GTA				PP	PP	02 17 08.9	+0.6
GTA				PCP	PcP	02 20 50.2	+4.4
GTA				SCP		02 24 25.2	
GTA				PCS		02 24 27.9	
GTA				SCS	ScS	02 28 04.4	+0.4
GTA				AMB	AMB		
	comp=Z,200nm,1.0s,mb5.5						
GTA				AMB	AMB		
	comp=Z,1µm,6.1s						
GTA				LR	LR		
	comp=N,2µm,12.6s,MS4.8						
GTA				LR	LR		
	comp=E,2µm,14.8s,MS4.8						
GTA				LR	LR		
	comp=Z,3µm,15.6s,MS4.8						
ORR	**Orenburg**	**21.73**	**327*c***	*i*P	**P**	**02 16 44.4**	**-0.2**
ORR				S	**S**	**02 20 40.8**	**+1.2**
ORR				pmax	pmax		
	comp=Z,140nm,0.5s,mb5.7						
ORR				MLR	MLR		
	comp=Z,320nm,12.0s,MS4.0						
MAK	**Makhachkala**	**21.81**	**300**	P	**P**	**02 16 53.0**	**+7.5**
MAK				*e*S	**S**	**02 20 46.0**	**+4.8**
MAK				smax			
	comp=N,3µm,8.0s						
MAK				smax			
	comp=E,1µm,8.0s						
MAK				MLR	MLR		
	comp=N,2µm,11.0s,MS5.0						
MAK				MLR	MLR		
	comp=E,3µm,11.0s,MS5.0						
MAK				MLR	MLR		
	comp=Z,6µm,11.0s,MS5.2						
SHAO	**Shalim**	**22.85**	**228**	⇓P	**P**	**02 16 58.9**	**+2.9**
DGRG	**David-gareji**	**23.08**	**296**	P	**P**	**02 17 00.1**	**+2.1**
DGRG				S	**S**	**02 21 12.4**	**+8.2**
GNI	**Garni**	**23.41**	**292**	*e*P	**P**	**02 17 05.7**	**+4.4**
GNI	**Garni**	**23.41**	**292**	P	**P**	**02 17 04.0**	**+2.8**
	comp=Z,25nm,0.9s,mb4.7,baz=354,slow=2.6,SNR=11						
GNI				S	**S**	**02 21 14.1**	**+4.1**
	comp=Z,4.9nm,0.8s,baz=294,slow=6.5,SNR=1.4						
GNI				LR	LR	02 28 01.8	
	comp=Z,673nm,21.1s,MS4.1,baz=257,slow=41						
GNI	**Garni**	**23.41**	**292**	*e*P	**P**	**02 17 03.9**	**+2.7**
	comp=Z,591nm,1.2s,mb5.9						
GNI	**Garni**	**23.41**	**292**	P	**P**	**02 17 04.0**	**+2.8**
GNI				S	**S**	**02 21 14.1**	**+4.1**
GNI				pmax	pmax		
	comp=Z,25nm,0.9s						
GNI				MLR	MLR		
	comp=Z,673nm,21.1s						
MTA	**Mtatsminda**	**23.54**	**296**	P	**P**	**02 17 04.6**	**+2.1**
MTA				S	**S**	**02 21 21.6**	**+9.2**
TI2	**Plekhanov**	**23.58**	**296**	*i* P	**P**	**02 17 06.4**	**+3.5**
CLDR	**Caldiran**	**23.99**	**290**	*e*P	**P**	**02 17 10.6**	**+3.7**
BHD	**Baghdad**	**24.09**	**275**	*e*x	x	02 17 05.0	
BHD				*e*x	x	02 21 18.0	
WHFO	**Wadi Hawf**	**24.10**	**232**	⇑P	**P**	**02 17 08.9**	**+0.7**
	SNR=37						
RBK	**Rabkut**	**24.13**	**230**	⇓P	**P**	**02 17 09.6**	**+1.2**
	SNR=28						
ARU	**Arti**	**24.13**	**340**	*e*P	**P**	**02 17 08.9**	**+0.8**
	comp=Z,139nm,0.8s,mb5.4						
ARU	**Arti**	**24.13**	**340**	⇑*i*P	**P**	**02 17 09.6**	**+1.5**
ARU				*e*PPP	PPP	02 17 43.8	-9.1
ARU				*e*S	**S**	**02 21 25.2**	**+2.9**
ARU				*e*SS	SS	02 22 11.3	-3.2
ARU				pmax	pmax		
	comp=Z,168nm,0.8s,mb5.5						
ARU				MLR	MLR		
	comp=Z,700nm,14.5s,MS4.3						

ARU				MLR	MLR		
	comp=N,400nm,14.0s,MS4.2						
ARU				MLR	MLR		
	comp=E,400nm,15.0s,MS4.2						
HAKT	**HAKKARI**	**24.15**	**286**	*i* P	**P**	**02 17 09.6**	**+1.1**
ZEI	**Tsey**	**24.37**	**298**	*e*P	**P**	**02 17 09.9**	**-0.7**
ZEI				*i*		02 17 43.2	
ZEI				pmax	pmax		
	comp=Z,37nm,0.7s,mb4.9						
TVAN	**Van**	**24.38**	**288**	*i* P	**P**	**02 17 16.1**	**+5.4**
VANB	**Van**	**24.39**	**288**	*e*P	**P**	**02 17 14.1**	**+3.3**
AKH	**Akhalkalaki**	**24.48**	**295**	P	**P**	**02 17 15.1**	**+3.5**
ONI	**Oni**	**24.66**	**298**	P	**P**	**02 17 17.4**	**+4.0**
MSL	**Mosul**	**24.72**	**283**	*e*x	x	02 17 21.5	
MSL				*e*x	x	02 21 41.5	
ABTO	**Aybut**	**24.82**	**231**	⇑P	**P**	**02 17 15.8**	**+0.6**
	SNR=61						
LZH	**Lanzhou**	**24.84**	**78**	P	**P**	**02 17 17.3**	**+2.1**
LZH				AP		02 17 24.0	
LZH				XP		02 17 27.8	
LZH				PP	PP	02 17 55.0	+2.8
LZH				S	**S**	**02 21 30.0**	**-4.6**
LZH				XS		02 21 45.0	
LZH				*e*SS	SS	02 22 28.0	-4.5
LZH				AMB	AMB		
	comp=Z,360nm,1.0s,mb5.9						
LZH				AMB	AMB		
	comp=Z,2µm,4.2s						
LZH				LR	LR		
	comp=N,4µm,16.7s						
LZH				LR	LR		
	comp=Z,3µm,18.8s,MS4.8						
LZH	**Lanzhou**	**24.84**	**78**	P	**P**	**02 17 17.3**	**+2.1**
	comp=Z,360nm,1.0s,mb5.9						
LZH				pP		02 17 24.0	
LZH				sP		02 17 27.8	
LZH				PP	PP	02 17 55.0	+2.8
LZH				S	**S**	**02 21 30.0**	**-4.6**
LZH				sS		02 21 45.0	
LZH				*e*SS	SS	02 22 28.0	-4.5
LZH				LR	LR		
	comp=Z,3µm,18.8s,MS4.8						
SIRT	**Sirnak**	**25.16**	**286**	*e*P	**P**	**02 17 09.1**	**-9.2**
RYDS	**Riyadh**	**25.44**	**253**	P	**P**	**02 17 18.1**	**-2.8**
GOF	**Gofitskoye**	**25.45**	**303**	⇑*i*P	**P**	**02 17 23.0**	**+2.1**
GOF				pmax	pmax		
	comp=Z,68nm,1.3s,mb5.0						
KIV	**Kislovodsk**	**25.45**	**301**	*e*P	**P**	**02 17 21.5**	**+0.6**
	comp=Z,79nm,0.8s,mb5.3						
KIV				LR	LR		
	comp=Z,286nm,20.0s,MS3.8						
KIV	**Kislovodsk**	**25.45**	**301**	*e*P	**P**	**02 17 21.5**	**+0.6**
KIV				*e*		02 17 57.4	
KIV				*e*S	**S**	**02 21 42.2**	**-2.6**
KIV				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.7						
KIV				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.4						
CD2	**Chengdu**	**25.74**	**90**	⇑*i*P	**P**	**02 17 24.6**	**+0.8**
CD2				AP	pP	02 17 29.3	+1.5
CD2				XP	sP	02 17 32.1	+2.5
CD2				PP	PP	02 18 05.4	+1.4
CD2				S	**S**	**02 21 50.7**	**+0.9**
CD2				XS		02 21 56.3	
CD2				SS	SS	02 22 55.2	+0.8
CD2				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.8						
CD2				LR	LR		
	comp=E,1µm,13.2s						
CD2				LR	LR		
	comp=Z,1µm,13.3s,MS4.6						
BTMT	**Batman**	**25.89**	**287**	*e*P	**P**	**02 17 28.4**	**+3.3**
ERZM	**Erzurum**	**25.98**	**291**	*i* P	**P**	**02 17 29.3**	**+3.4**
MOY	**Mondy**	**26.20**	**41**	*e*P	**P**	**02 17 29.9**	**+2.1**
MOY				pmax	pmax		
	comp=Z,101nm,1.8s,mb5.0						
MARD	**Mardin**	**26.49**	**286**	*i* P	**P**	**02 17 30.8**	**+0.2**
ZAK	**Zakamensk**	**26.89**	**45**	⇑*i*P	**P**	**02 17 35.6**	**+1.4**
ZAK				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.8						
ZAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.5						
DIY	**Diyarbakir**	**26.89**	**287**	*e*P	**P**	**02 17 34.3**	**0.0**
KMI	**Kunming**	**27.05**	**102**	P	**P**	**02 17 37.2**	**+1.4**
KMI				AP	pP	02 17 40.0	+0.2
KMI				XP	sP	02 17 41.2	-0.4
KMI				PP	PP	02 18 22.8	+0.8
KMI				PPP	PPP	02 18 34.9	+0.9
KMI				PCP	PcP	02 20 59.1	+1.6
KMI				S	**S**	**02 22 13.7**	**+2.4**
KMI				XS		02 22 17.9	
KMI				SS	SS	02 23 26.3	+0.6
KMI				SSS	SSS	02 23 43.4	-0.4
KMI				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
KMI				AMB	AMB		
	comp=Z,130nm,3.9s						
KMI				LR	LR		
	comp=N,910nm,18.2s,MS4.6						
KMI				LR	LR		
	comp=E,910nm,14.7s,MS4.6						
KMI				LR	LR		
	comp=Z,2µm,11.5s,MS4.8						
KMI	**Kunming**	**27.05**	**102**	P	**P**	**02 17 37.2**	**+1.4**
	comp=Z,29nm,1.0s,mb4.8						
KMI				pP	pP	02 17 40.0	+0.2
KMI				sP	sP	02 17 41.2	-0.4
KMI				PP	PP	02 18 22.8	+0.8
KMI				PPP	PPP	02 18 34.9	+0.9
KMI				PcP	PcP	02 20 59.1	+1.6
KMI				S	**S**	**02 22 13.7**	**+2.4**
KMI				sS		02 22 17.9	
KMI				SS	SS	02 23 26.3	+0.6
KMI				SSS	SSS	02 23 43.4	-0.4
KMI				LR	LR		
	comp=Z,2µm,11.5s,MS4.8						
PTK	**Pertek**	**27.51**	**289**	*e*P	**P**	**02 17 40.2**	**+0.3**
SOC	**Sochi**	**27.52**	**299**	*e*P	**P**	**02 17 40.7**	**+0.8**
SOC				*e*		02 18 20.6	
SOC				*e*		02 20 59.7	
SOC				*e*S	**S**	**02 22 19.9**	**+1.2**
SOC				pmax	pmax		
	comp=Z,29nm,1.2s,mb4.8						
SOC				MLR	MLR		
	comp=Z,1µm,23.0s,MS4.3						
SONM	**Songino Array**	**27.92**	**52**	P	**P**	**02 17 44.2**	**+0.7**
	comp=Z,35nm,0.8s,mb5.1,baz=258,slow=9.5,SNR=115						
SONM				ScP		02 24 35.7	
	comp=Z,3.2nm,0.9s,baz=219,slow=4.3,SNR=4.4						
SONM				LR	LR	02 30 16.4	
	comp=Z,8µm,18.1s,MS5.3,baz=234,slow=39						
HILS	**Ha’il**	**27.95**	**264**	P	**P**	**02 17 43.8**	**-0.3**
URFA	**Urfa**	**28.04**	**286**	*e*P	**P**	**02 17 42.6**	**-2.1**
IRK	**Irkutsk**	**28.26**	**42**	*e*P	**P**	**02 17 44.2**	**-2.3**
IRK				pmax	pmax		
	comp=Z,77nm,2.2s,mb4.9						
VRHR	**Novokhopersk**	**28.29**	**316**	*e*P	**P**	**02 17 47.3**	**+0.5**
VRHR				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.3						
VRHR				pmax	pmax		
	comp=N,50nm,1.3s						
VRHR				pmax	pmax		
	comp=E,80nm,0.7s						
AFFS	**‘Afif**	**28.46**	**256**	P	**P**	**02 17 47.5**	**-1.2**
GZT	**Gaziantep**	**29.04**	**286**	*i* P	**P**	**02 17 54.2**	**+0.4**
XAN	**Xi’an**	**29.26**	**81**	P	**P**	**02 17 55.7**	**-0.1**
XAN				AP	pP	02 18 02.3	+2.5
XAN				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.1						
XAN				LR	LR		
	comp=E,940nm,15.6s						
XAN				LR	LR		
	comp=Z,990nm,14.2s,MS4.6						
ANN	**Anapa**	**29.31**	**301**	*e*P	**P**	**02 18 11.4**	**+15**
ANN				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.3						
ANN				MLR	MLR		
	comp=N,1µm,16.0s,MS5.0						
ANN				MLR	MLR		
	comp=E,2µm,16.0s,MS5.0						
ANN				MLR	MLR		
	comp=Z,2µm,16.0s,MS4.9						
GAZ	**Gaziantep**	**29.34**	**286**	*e*P	**P**	**02 17 58.5**	**+2.1**
BTO	**Baotou**	**29.50**	**67**	*e*P	**P**	**02 17 59.1**	**+1.3**
BTO				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
BTO				LR	LR		
	comp=N,700nm,3.9s						
BTO				LR	LR		
	comp=E,1µm,12.4s						
PECR	**Pechory**	**29.57**	**326**	*e*P	**P**	**02 17 57.0**	**-1.3**
GYA	**Guiyang**	**29.67**	**97**	⇑*i*P	**P**	**02 17 58.8**	**-0.7**
GYA				AP	pP	02 18 03.2	-0.3
GYA				XP	sP	02 18 06.7	+1.4
GYA				PCP	PcP	02 21 04.1	+0.2
GYA				S	**S**	**02 22 52.1**	**-1.3**
GYA				PCS		02 24 46.2	
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,1µm,17.7s,MS4.8						
GYA				LR	LR		
	comp=E,2µm,16.5s,MS4.8						
GYA				LR	LR		
	comp=Z,2µm,18.3s,MS4.7						
VOR	**Voronezh**	**29.93**	**316**	P	**P**	**02 18 04.0**	**+2.4**
VOR						02 18 54.0	
VOR				pmax	pmax		
	comp=N,30nm,1.5s						
VOR				pmax	pmax		
	comp=Z,40nm,1.5s,mb4.9						
COBT	**Iskenderun**	**30.18**	**285**	*i* P	**P**	**02 18 03.1**	**-0.8**
QURS	**Qurayyt al Mil**	**30.34**	**274**	P	**P**	**02 18 06.0**	**+0.6**
KOZT	**Kozan**	**30.41**	**287**	*e*P	**P**	**02 18 12.0**	**+6.1**
NST	**Nakhon Sawan**	**30.49**	**121**	P	**P**	**02 18 19.0**	**+12**
CEYT	**Ceyhan**	**30.52**	**286**	*e*P	**P**	**02 18 04.0**	**-3.0**
ENH	**Enshi**	**30.66**	**88**	⇑*e*P	**P**	**02 18 08.3**	**+0.1**
	comp=Z,65nm,1.0s,mb5.4						
KBRS	**Khaybar**	**30.66**	**263**	P	**P**	**02 18 08.9**	**+0.6**
HHC	**Hu-ho-hao-te**	**30.67**	**67**	*e*P	**P**	**02 18 09.6**	**+1.4**
HHC				AP	pP	02 18 13.8	+1.6
HHC				XP	sP	02 18 16.4	+2.4
HHC				PP	PP	02 19 12.3	+3.4
HHC				PCP	PcP	02 21 04.1	-2.2
HHC				S	**S**	**02 23 14.4**	**+5.4**
HHC				XS		02 23 21.6	
HHC				SCP		02 24 45.4	
HHC				PCS		02 24 47.1	
HHC				SCS	ScS	02 28 41.1	-1.2
HHC				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.9						
HHC				AMB	AMB		
	comp=Z,340nm,5.4s						
HHC				LR	LR		
	comp=N,2µm,11.3s,MS5.1						
HHC				LR	LR		
	comp=E,2µm,10.8s,MS5.1						
HHC				LR	LR		
	comp=Z,2µm,14.4s,MS4.8						
BOYT	**Boyabat**	**30.92**	**294**	*i* P	**P**	**02 18 11.9**	**+1.5**
BHL	**Bhannes**	**31.10**	**280**	*e*P	**P**	**02 18 13.1**	**+1.0**
SIM	**Simferopol’**	**31.67**	**301**	*e*P	**P**	**02 18 23.6**	**+6.6**
SIM				*e*S	**S**	**02 23 27.0**	**+2.4**
SIM				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.8						
BLJS	**Baljurashi**	**31.68**	**251**	P	**P**	**02 18 17.3**	**+0.1**
KAMT	**Kaman**	**31.90**	**290**	*e*P	**P**	**02 18 20.6**	**+1.5**
BR131	**Keskin Array S**	**31.93**	**291**	⇑*e*P	**P**	**02 18 20.0**	**+0.7**
	comp=Z,17nm,0.8s,mb4.9						
BRTR	**Keskin Array B**	**31.93**	**291**	P	**P**	**02 18 20.2**	**+0.9**
	comp=Z,6.7nm,0.8s,mb4.5,baz=86,slow=9.5,SNR=27						
BRTR				ScP		02 24 49.6	
	comp=Z,2.6nm,0.9s,baz=144,slow=5.0,SNR=5.9						
TBKS	**Tabuk**	**31.96**	**269**	P	**P**	**02 18 21.3**	**+1.6**
YNBS	**Yanbu‘ al Bahr**	**32.33**	**261**	P	**P**	**02 18 23.1**	**+0.2**
LTHS	**Al Lith**	**32.39**	**253**	P	**P**	**02 18 23.5**	**0.0**
MOS	**Moscow**	**32.41**	**322**	*e*P	**P**	**02 18 27.1**	**+3.8**
MOS				*e*		02 19 34.3	
MOS				*e*PPP	PPP	02 19 43.1	-3.7
MOS				*e*		02 23 33.9	
MOS				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.2						
MOS				MLR	MLR		
	comp=Z,900nm,16.7s,MS4.5						
UMJS	**Umm Lajj**	**32.50**	**263**	P	**P**	**02 18 25.2**	**+0.8**
ANTO	**Ankara**	**32.58**	**291**	P	**P**	**02 18 25.6**	**+0.7**
	comp=Z,15nm,1.0s,mb4.9						
SAFT	**Safranbolu**	**32.59**	**294**	*e*P	**P**	**02 18 25.3**	**+0.2**
OBN	**Obninsk**	**32.69**	**320**	*e*P	**P**	**02 18 24.7**	**-1.1**
	comp=Z,36nm,0.6s,mb5.5						
OBN	**Obninsk**	**32.69**	**320**	*de*P	**P**	**02 18 25.4**	**-0.4**
OBN				*e*		02 18 31.7	
OBN				S	**S**	**02 23 38.0**	**-2.5**
OBN				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.2						
OBN				MLR	MLR		
	comp=Z,700nm,18.0s,MS4.4						
JMOS	**Jabal al Moall**	**32.83**	**271**	P	**P**	**02 18 27.4**	**+0.2**
BDAS	**Al Bad‘**	**33.09**	**270**	P	**P**	**02 18 29.7**	**+0.2**
LEF	**Lefka**	**33.10**	**283**	*e*P	**P**	**02 18 26.5**	**-3.1**
FRSS	**Farasan al Kab**	**33.13**	**246**	P	**P**	**02 18 30.9**	**+0.9**
KIZT	**Kizilcal**	**33.36**	**290**	*e*P	**P**	**02 18 31.2**	**-0.5**
CIT	**Chita**	**33.52**	**46**	*e*P	**P**	**02 18 33.9**	**+0.9**
CIT				*e*		02 19 55.3	
CIT				*e*		02 21 14.1	
CIT				pmax	pmax		
	comp=Z,71nm,2.3s,mb5.2						
ESKT	**Eskisehir**	**34.10**	**291**	*e*P	**P**	**02 18 31.2**	**-6.9**
ESKT	**Eskisehir**	**34.10**	**291**	*i* P	**P**	**02 18 37.2**	**-1.0**
KLMR	**Klimovskoe**	**34.14**	**331**	*c* *i*P	**P**	**02 18 37.5**	**-0.8**
KLMR				*e*S	**S**	**02 23 56.9**	**-6.0**
KLMR				pmax	pmax		
	comp=Z,110nm,1.5s,mb5.6						
KLMR				pmax	pmax		
	comp=Z,40nm,3.8s						
KLMR				smax			
	comp=E,580nm,4.8s						
KLMR				MLR	MLR		
	comp=Z,620nm,11.0s,MS4.6						
ISP	**Isparta**	**34.55**	**288**	P	**P**	**02 18 41.8**	**-0.3**
	comp=Z,29nm,1.1s,mb5.1						
ISP	**Isparta**	**34.55**	**288**	⇓*i*P	**P**	**02 18 43.9**	**+1.8**
WHN	**Wuhan**	**34.58**	**85**	⇑P	**P**	**02 18 43.0**	**+0.6**
WHN				S	**S**	**02 24 03.0**	**-7.1**
WHN				LR	LR		
	comp=N,2µm,11.4s						
WHN				LR	LR		
	comp=E,770nm,7.9s						
WHN				LR	LR		
	comp=Z,2µm,13.7s,MS5.1						
ELL	**Elmali**	**35.19**	**286**	*i* P	**P**	**02 18 48.7**	**+1.1**
GDZ	**Gediz**	**35.20**	**291**	*i* P	**P**	**02 18 50.8**	**+3.2**
KHL	**Karahalli**	**35.26**	**289**	*e*P	**P**	**02 18 45.5**	**-2.7**
ULDT	**Uludag**	**35.35**	**292**	*i* P	**P**	**02 18 49.2**	**+0.3**
TIA	**Tai’an**	**35.47**	**74**	*e*P	**P**	**02 18 50.6**	**+0.7**
KIS	**Kishinev**	**35.52**	**304**	*e*P	**P**	**02 18 50.0**	**-0.3**
KIS				*e*	pP	02 18 54.0	-0.4
KIS				*e*		02 20 08.0	
BOD	**Bodaibo**	**35.69**	**37**	*e*P	**P**	**02 18 51.3**	**-0.2**
BOD				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
AKASG	**Malin Array Be**	**35.70**	**311**	P	**P**	**02 18 50.4**	**-1.4**
	comp=Z,4.2nm,0.4s,mb4.7,baz=82,slow=7.9,SNR=5.3						
AKASG				S	**S**	**02 24 24.0**	**-3.2**
	comp=Z,2.9nm,0.8s,baz=98,slow=15,SNR=4.2						
AKASG	**Malin Array Be**	**35.70**	**311**	P	**P**	**02 18 50.4**	**-1.4**
AKASG				S	**S**	**02 24 24.0**	**-3.2**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
DENT	**Denizli**	**35.72**	**288**	*e*P	**P**	**02 18 47.9**	**-4.2**
QIZ	**Qiongzhong**	**35.79**	**106**	P	**P**	**02 18 50.4**	**-2.4**
QIZ				AP	pP	02 19 02.4	+5.5
QIZ				S	**S**	**02 24 26.9**	**-2.0**
QIZ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
QIZ				AMB	AMB		
	comp=Z,140nm,4.9s						
QIZ				LR	LR		
	comp=N,450nm,10.7s,MS4.7						
QIZ				LR	LR		
	comp=E,680nm,13.3s,MS4.7						
QIZ				LR	LR		
	comp=Z,1µm,13.3s,MS4.8						
CFR	**Carcaliu**	**35.91**	**301**	⇑P	**P**	**02 18 53.0**	**-0.6**
CFR	**Carcaliu**	**35.91**	**301**	⇑P	**P**	**02 18 53.0**	**-0.6**
ATD	**Arta Tunnel**	**36.02**	**238**	P	**P**	**02 18 56.5**	**+1.7**
	comp=Z,16nm,0.9s,mb5.0,baz=74,slow=24,SNR=8.7						
ATD				PP	PP	02 20 14.0	-2.8
	comp=Z,7.6nm,0.7s,baz=45,slow=11,SNR=2.7						
HARR	**Harsova**	**36.05**	**300**	⇑P	**P**	**02 18 54.2**	**-0.6**
HARR	**Harsova**	**36.05**	**300**	⇑P	**P**	**02 18 54.2**	**-0.6**
HIA	**Hailar**	**36.89**	**52**	*e*P	**P**	**02 19 03.0**	**+1.2**
	comp=Z,17nm,0.8s,mb4.9						
HIA				LR	LR		
	comp=Z,6µm,19.0s,MS5.4						
VRI	**Vrincioaia**	**36.91**	**302**	⇑P	**P**	**02 19 03.4**	**+1.4**
VRI	**Vrincioaia**	**36.91**	**302**	⇑P	**P**	**02 19 03.4**	**+1.4**
IZM	**Izmir**	**37.01**	**290**	*e*P	**P**	**02 18 59.7**	**-3.2**
MNK	**Minsk**	**37.29**	**317**	*e*P	**P**	**02 19 06.0**	**+0.9**
MLR	**Muntele Rosu**	**37.46**	**302**	P	**P**	**02 19 08.5**	**+1.9**
	comp=Z,46nm,0.7s,mb5.4,baz=100,slow=2.1,SNR=53						
MLR				S	**S**	**02 24 53.4**	**-0.8**
	comp=Z,8.1nm,1.2s,baz=240,slow=21,SNR=3.3						
MLR	**Muntele Rosu**	**37.46**	**302**	P	**P**	**02 19 08.5**	**+1.9**
MLR				S	**S**	**02 24 53.4**	**-0.8**
MLR				pmax	pmax		
	comp=Z,46nm,0.7s						
MLR				smax			
	comp=N,8.0nm,1.2s						
NJ2	**Nanjing**	**37.83**	**81**	*e*P	**P**	**02 19 11.0**	**+1.2**
NJ2				AP	pP	02 19 15.1	+1.1
NJ2				XP	sP	02 19 17.5	+1.8
NJ2				PP	PP	02 20 41.0	+1.7
NJ2				S	**S**	**02 25 02.0**	**+2.0**
NJ2				XS		02 25 10.0	
NJ2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,160nm,8.2s						
NJ2				LR	LR		
	comp=N,2µm,14.0s						
NJ2				LR	LR		
	comp=E,2µm,19.2s						
NJ2				LR	LR		
	comp=Z,860nm,18.4s,MS4.6						
BURAR	**Bucovina Array**	**38.00**	**305**	⇑P	**P**	**02 19 11.9**	**+0.8**
BURAR	**Bucovina Array**	**38.00**	**305**	⇑P	**P**	**02 19 11.9**	**+0.8**
VOIR		**38.09**	**301**	⇑P	**P**	**02 19 12.7**	**+0.8**
VOIR		**38.09**	**301**	⇑P	**P**	**02 19 12.7**	**+0.8**
KULM	**Kulim**	**38.51**	**133**	⇑*i*P	**P**	**02 19 15.5**	**-0.3**
JOF	**Joensuu**	**38.54**	**330**	*e*p	**P**	**02 19 15.7**	**+0.2**
	comp=Z,13nm,0.3s,mb5.1						
JOF	**Joensuu**	**38.54**	**330**	*e*P	**P**	**02 19 15.7**	**+0.2**
JOF				pmax	pmax		
	comp=Z,13nm,0.3s,mb5.1						
RZN	**Rozhen**	**38.54**	**295**	*e*P	**P**	**02 19 17.0**	**+1.2**
PGB	**Panagyurishte**	**38.87**	**297**	*e*P	**P**	**02 19 20.0**	**+1.5**
VSU	**Vasula**	**38.93**	**323**	⇑*e*P	**P**	**02 19 18.8**	**0.0**
MMB	**Musomiste**	**39.29**	**295**	*e*P	**P**	**02 19 23.0**	**+1.0**
IDI	**Anoyia**	**39.47**	**285**	P	**P**	**02 19 23.1**	**-0.5**
	comp=Z,14nm,0.6s,mb4.9,baz=80,slow=8.5,SNR=13						
VTS	**Vitosha**	**39.57**	**297**	*e*P	**P**	**02 19 22.5**	**-1.8**
SNY	**Shenyang**	**39.63**	**64**	⇑P	**P**	**02 19 25.5**	**+0.7**
SNY				S	**S**	**02 25 28.9**	**+1.7**
SNY				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.8						
SNY				AMB	AMB		
	comp=Z,180nm,12.0s						
SNY				LR	LR		
	comp=N,2µm,11.2s,MS5.2						
SNY				LR	LR		
	comp=E,2µm,15.5s,MS5.2						
SNY				LR	LR		
	comp=Z,2µm,16.3s,MS5.1						
DRGR		**39.70**	**304**	⇑P	**P**	**02 19 25.5**	**+0.2**
KKB	**Krupnik**	**39.74**	**296**	*e*P	**P**	**02 19 26.0**	**+0.3**
KWP	**Kalwaria**	**39.75**	**308**	*e*P	**P**	**02 19 26.5**	**+0.8**
KWP				MLR	MLR	02 35 14.6	
	comp=Z,500nm,28.0s,MS4.2						
SUW	**Suwalki**	**39.88**	**315**	*e*P	**P**	**02 19 25.8**	**-1.0**
SUW				MLR	MLR	02 39 01.0	
	comp=Z,1µm,18.8s,MS4.7						
LVZ	**Lovozero**	**40.00**	**338**	⇑*e*P	**P**	**02 19 27.5**	**-0.1**
LVZ				pmax	pmax		
	comp=Z,178nm,2.0s,mb5.5						
KOLS	**Kolonicke sedl**	**40.01**	**307**	*e*P	**P**	**02 19 26.1**	**-1.8**
KOLS				*e*PP	PP	02 21 04.9	+1.1
KOLS				*e*		02 25 20.0	
SSE	**Sheshan**	**40.01**	**81**	*e*P	**P**	**02 19 27.6**	**-0.5**
SSE				AP	pP	02 19 30.7	-1.5
SSE				PCP	PcP	02 21 32.7	-1.0
SSE				S	**S**	**02 25 32.6**	**-0.4**
SSE				XS		02 25 38.4	
SSE				AMB	AMB		
	comp=Z,130nm,1.0s,mb5.6						
SSE				AMB	AMB		
	comp=Z,20nm,3.5s						
SSE				LR	LR		
	comp=N,300nm,15.4s,MS4.7						
SSE				LR	LR		
	comp=E,710nm,15.5s,MS4.7						
SSE				LR	LR		
	comp=Z,700nm,17.9s,MS4.5						
SSE	**Sheshan**	**40.01**	**81**	*e*P	**P**	**02 19 27.6**	**-0.5**
	comp=Z,134nm,1.0s,mb5.6						
SSE				pP	pP	02 19 30.7	-1.5
SSE				PcP	PcP	02 21 32.7	-1.0
SSE				S	**S**	**02 25 32.6**	**-0.4**
SSE				sS		02 25 38.4	
SSE				LR	LR		
	comp=Z,710nm,17.9s,MS4.6						
FINES	**FINESS Array B**	**40.19**	**327**	P	**P**	**02 19 29.1**	**-0.1**
	comp=Z,7.0nm,0.4s,mb4.7,baz=120,slow=11,SNR=48						
FINES				PP	PP	02 21 01.3	-4.2
	comp=Z,9.6nm,0.7s,baz=97,slow=11,SNR=3.4						
FINES				LR	LR	02 39 55.8	
	comp=Z,352nm,19.3s,MS4.2,baz=114,slow=42						
FINES	**FINESS Array B**	**40.19**	**327**	P	**P**	**02 19 29.2**	**0.0**
FINES						02 21 01.3	
FINES				pmax	pmax		
	comp=Z,7.0nm,0.4s						
FINES				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,352nm,19.3s						
KAF	**Kangasniemi**	**40.33**	**328**	*e*p	**P**	**02 19 30.3**	**0.0**
	comp=Z,3.9nm,0.5s,mb4.4,baz=112,slow=8.1						
KAF	**Kangasniemi**	**40.33**	**328**	*e*P	**P**	**02 19 30.3**	**0.0**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
BOLS	**Boljevac**	**40.37**	**299**	⇑*i*P	**P**	**02 19 31.0**	**+0.1**
CRVS	**Cervenica-Dubn**	**40.55**	**307**	*e*P	**P**	**02 19 33.7**	**+1.4**
CRVS				*e*PP	PP	02 21 10.7	+1.5
STHS	**Stebnicka Huta**	**40.70**	**308**	*i* P	**P**	**02 19 33.6**	**+0.1**
STHS				*e*PP	PP	02 21 10.7	0.0
STHS				*e*PCP	PcP	02 21 33.4	-2.3
STHS				*e*		02 25 20.2	
CN2	**Changchun**	**40.81**	**61**	*e*P	**P**	**02 19 35.5**	**+1.0**
CN2				*e*XP	sP	02 19 42.0	+1.7
CN2				*e*S	**S**	**02 25 45.8**	**+1.1**
CN2				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.7						
CN2				AMB	AMB		
	comp=Z,380nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s,MS5.2						
CN2				LR	LR		
	comp=E,2µm,15.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2µm,16.0s,MS5.2						
CLNS	**Chul’man**	**41.06**	**41**	*e*P	**P**	**02 19 37.4**	**+1.0**
CLNS				*e**PP	pP	02 19 40.0	-0.5
CLNS				*e*		02 21 09.9	
CLNS				*e*		02 21 39.9	
CLNS				*e*S	**S**	**02 25 45.2**	**-3.1**
CLNS				*e*		02 29 38.2	
CLNS				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.1						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.5s						
CLNS				pmax	pmax		
	comp=E,25nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
CLNS				pmax	pmax		
	comp=N,11nm,0.8s						
CLNS				pmax	pmax		
	comp=E,12nm,0.8s						
CLNS				smax			
	comp=N,116nm,13.3s						
CLNS				smax			

	comp=Z,109nm,13.3s						
CLNS				smax			
	comp=E,116nm,13.0s						
CLNS				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.1						
CLNS				MLR	MLR		
	comp=N,400nm,10.0s						
CLNS				MLR	MLR		
	comp=E,2µm,16.0s						
KECS	**Kecovo**	**41.19**	**306**	*e*P	**P**	**02 19 37.2**	**-0.3**
KECS				*e*		02 25 23.6	
GRUS	**Gruza**	**41.26**	**299**	*i* P	**P**	**02 19 38.4**	**+0.2**
NIE	**Niedzica**	**41.30**	**308**	⇓*e*P	**P**	**02 19 39.5**	**+1.0**
PSZ	**Piszkesteto**	**41.59**	**305**	⇓*e*P	**P**	**02 19 41.7**	**+0.9**
OJC	**Ojcow**	**41.65**	**309**	*e*P	**P**	**02 19 40.9**	**-0.4**
DIVS	**Divcibare**	**41.76**	**300**	⇑*i*P	**P**	**02 19 42.8**	**+0.6**
VYHS	**Vyhne**	**42.29**	**306**	*e*P	**P**	**02 19 50.2**	**+3.7**
VYHS	**Vyhne**	**42.29**	**306**	*e*pP	pP	02 19 50.2	-0.4
PKS8	**Sarbogard**	**42.47**	**304**	⇑*e*P	**P**	**02 19 48.3**	**+0.3**
YHNB	**Yeheng**	**42.52**	**90**	*e*P	**P**	**02 19 50.4**	**+1.7**
PKSM	**Moragy**	**42.53**	**303**	⇓*e*P	**P**	**02 19 48.8**	**+0.2**
SRO2	**Moca**	**42.61**	**305**	*e*P	**P**	**02 19 50.1**	**+0.9**
SRO	**Srobarova**	**42.66**	**305**	*e*P	**P**	**02 19 50.6**	**+1.0**
OKC	**Ostrava-Krasne**	**42.71**	**308**	*e*P	**P**	**02 19 55.8**	**+5.8**
OKC				AMS	AMS	02 43 10.0	
	comp=E,500nm,7.5s						
RHK1	**Bakonya**	**42.94**	**303**	*e*P	**P**	**02 19 52.1**	**+0.2**
MORC	**Moravsky Berou**	**43.11**	**308**	*e*P	**P**	**02 19 53.3**	**+0.1**
	comp=E,16nm,0.7s,mb4.9						
SMOL	**Smolenice**	**43.22**	**306**	*e*P	**P**	**02 19 54.8**	**+0.7**
KEV	**Kevo**	**43.34**	**338**	*e*p	**P**	**02 19 55.3**	**+0.5**
	comp=E,40nm,0.7s,mb5.3						
KEV	**Kevo**	**43.34**	**338**	*e*P	**P**	**02 19 55.3**	**+0.5**
KEV				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.3						
ZST	**Bratislava**	**43.45**	**306**	*e*P	**P**	**02 19 56.8**	**+0.8**
ZST				*e*PP	PP	02 21 42.4	+3.2
KS15	**Wonju Array Si**	**43.66**	**70**	*e*P	**P**	**02 19 58.7**	**+0.8**
MDJ	**Mudanjiang**	**43.69**	**59**	P	**P**	**02 19 58.2**	**+0.3**
MDJ				AP	pP	02 20 00.6	-1.5
MDJ				PP	PP	02 21 39.7	-1.9
MDJ				SCP		02 25 35.7	
MDJ				S	**S**	**02 26 27.7**	**+0.8**
MDJ				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,60nm,3.1s						
MDJ				LR	LR		
	comp=N,370nm,15.7s,MS5.0						
MDJ				LR	LR		
	comp=E,1µm,15.7s,MS5.0						
MDJ				LR	LR		
	comp=Z,2µm,15.7s,MS5.1						
MDJ	**Mudanjiang**	**43.69**	**59**	*e*P	**P**	**02 19 59.5**	**+1.5**
	comp=Z,105nm,1.3s,mb5.4						
ARCES	**ARCESS Array B**	**43.70**	**338**	P	**P**	**02 19 58.5**	**+0.8**
	comp=Z,35nm,0.5s,mb5.4,baz=113,slow=7.7,SNR=139						
ARCES	**ARCESS Array B**	**43.70**	**338**	P	**P**	**02 19 58.5**	**+0.8**
ARCES				pmax	pmax		
	comp=Z,35nm,0.5s						
ARE0	**ARCESS Array S**	**43.70**	**338**	⇑*e*P	**P**	**02 19 58.1**	**+0.4**
DPC	**Dobruska-Polom**	**43.88**	**309**	*e*P	**P**	**02 19 59.8**	**+0.4**
DPC				AMS	AMS	02 40 30.0	
KSP	**Ksiaz**	**43.89**	**310**	*e*P	**P**	**02 19 58.9**	**-0.6**
KSP				*e*pP	pP	02 20 11.5	+7.9
KSP				MLR	MLR	02 41 45.5	
	comp=Z,1µm,15.9s,MS4.9						
KSP	**Ksiaz**	**43.89**	**310**	*e*P	**P**	**02 20 00.2**	**+0.7**
UPC	**Upice**	**44.07**	**309**	*e*P	**P**	**02 20 01.6**	**+0.6**
KTK1	**Kautokeino**	**44.19**	**337**	*e*P	**P**	**02 20 02.1**	**+0.4**
BRT	**Bari-Castellan**	**44.26**	**295**	P	**P**	**02 20 03.4**	**+0.7**
	comp=Z,6.4nm,0.5s,mb4.6						
YAK	**Yakutsk**	**44.45**	**34**	*e*P	**P**	**02 20 04.1**	**+0.2**
	comp=Z,228nm,0.7s,mb6.0						
YAK				LR	LR		
	comp=Z,1µm,20.0s,MS4.8						
YAK	**Yakutsk**	**44.45**	**34**	*c* *i*P	**P**	**02 20 04.2**	**+0.3**
YAK				pmax	pmax		
	comp=Z,262nm,0.8s,mb6.0						
YAK				MLR	MLR		
	comp=Z,1µm,17.0s,MS4.8						
TREC	**Trest**	**44.46**	**308**	*e*P	**P**	**02 20 04.6**	**+0.4**
TREC				AMS	AMS	02 42 10.0	
	comp=Z,900nm,17.6s						
KLR	**Kul'dur**	**44.75**	**52**	*e*P	**P**	**02 20 07.4**	**+0.9**
KLR				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.1						
KLR				MLR	MLR		
	comp=Z,15µm,13.0s,MS6.1						
PERS	**Pernice**	**44.92**	**304**	*e*P	**P**	**02 20 08.3**	**+0.4**
TIP	**Timpagrande**	**44.94**	**293**	*e*P	**P**	**02 20 08.2**	**0.0**
BOJS	**Bojanci**	**44.96**	**302**	*e*P	**P**	**02 20 09.0**	**+0.7**
PVCC	**Panska Ves**	**44.99**	**309**	*e*P	**P**	**02 20 09.0**	**+0.5**
PVCC				AMS	AMS	02 42 20.0	
	comp=Z,500nm,13.8s						
FGMS	**Monte Sant'Ang**	**45.03**	**297**	P	**P**	**02 20 09.2**	**+0.3**
	comp=Z,30nm,0.8s,mb5.2						
PRU	**Pruhonice**	**45.04**	**309**	*e*P	**P**	**02 20 09.3**	**+0.5**
PRU				AMS	AMS	02 37 30.0	
	comp=Z,300nm,19.1s						
TDS	**Terranova Siba**	**45.15**	**294**	P	**P**	**02 20 11.2**	**+1.3**
	comp=Z,45nm,0.7s,mb5.4						
GRI	**Girifalco**	**45.27**	**293**	P	**P**	**02 20 11.5**	**+0.7**
RGNG	**Rignano Grg**	**45.31**	**297**	P	**P**	**02 20 11.2**	**+0.1**
MOA	**Molln**	**45.38**	**306**	*i* P	**P**	**02 20 11.3**	**-0.2**
	comp=Z,28nm,1.2s,mb5.0,SNR=20						
MOA	**Molln**	**45.38**	**306**	P	**P**	**02 20 11.3**	**-0.2**
	comp=Z,28nm,1.2s,mb5.0						
RUE	**Ruedersdorf**	**45.42**	**312**	*e*P	**P**	**02 20 11.5**	**-0.3**
	comp=Z,47nm,1.0s,mb5.3						
CUC	**Castrocucco**	**45.47**	**295**	P	**P**	**02 20 13.1**	**+0.7**
SLCN	**Sala Consilina**	**45.53**	**295**	P	**P**	**02 20 13.9**	**+1.1**
VLA	**Vladivostok**	**45.55**	**61**	*e*P	**P**	**02 20 13.7**	**+0.8**
VLA				*i*	pP	02 20 18.5	+1.4
VLA				*e*		02 20 23.3	
VLA				*e*		02 22 02.7	
VLA				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.8						
VLA				MLR	MLR		
	comp=Z,1µm,11.5s,MS5.0						
MGR	**Morigerati**	**45.64**	**295**	P	**P**	**02 20 14.3**	**+0.6**
	comp=Z,12nm,0.5s,mb5.1						
GEC2	**GERESS Array S**	**45.66**	**307**	*e*P	**P**	**02 20 13.6**	**-0.2**
	comp=Z,4.0nm,1.0s,mb4.3						
GEC2	**GERESS Array S**	**45.66**	**307**	*e*P	**P**	**02 20 13.6**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
GERES	**GERESS Array B**	**45.66**	**307**	P	**P**	**02 20 13.8**	**0.0**
	comp=Z,1.0nm,0.5s,mb4.0,baz=83,slow=6.3,SNR=13						
GERES				PcP	PcP	02 21 51.0	-1.4
	comp=Z,3.9nm,0.9s,baz=108,slow=4.2,SNR=4.0						
GERES				LR	LR	02 41 59.8	
	comp=Z,357nm,19.2s,MS4.3,baz=81,slow=40						
GERES	**GERESS Array B**	**45.66**	**307**	P	**P**	**02 20 13.8**	**0.0**
GERES						02 21 51.0	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GERES				MLR	MLR		
	comp=Z,357nm,19.3s						
KHC	**Kasperske Hory**	**45.72**	**308**	*e*P	**P**	**02 20 14.8**	**+0.6**
KHC				x	x	02 20 30.5	
KHC				AMS	AMS	02 42 50.0	
	comp=Z,500nm,13.9s						
KHC	**Kasperske Hory**	**45.72**	**308**	*e*P	**P**	**02 20 14.8**	**+0.6**
KHC				*e*		02 20 30.5	
KHC				LR	LR		
	comp=Z,500nm,13.9s,MS4.6						
KHC	**Kasperske Hory**	**45.72**	**308**	*e*P	**P**	**02 20 14.8**	**+0.6**
KHC				MLR	MLR		
	comp=Z,500nm,13.9s,MS4.6						
SGO	**Sicignano**	**45.73**	**295**	P	**P**	**02 20 15.3**	**+0.8**
	comp=Z,6.4nm,0.5s,mb4.8						
HFS	**Hagfors**	**45.81**	**323**	LR	LR	02 39 22.2	
	comp=Z,219nm,21.3s,MS4.1,baz=105,slow=36						
TRO	**Tromso**	**45.84**	**337**	*e*P	**P**	**02 20 14.0**	**-0.9**
CADS	**Cadrg**	**45.92**	**303**	*e*P	**P**	**02 20 15.4**	**-0.4**
CLL	**Collm**	**45.95**	**311**	P	**P**	**02 20 15.5**	**-0.5**
	comp=Z,logA/T=0.8,mb4.5						
CLL				*e**SP	sP	02 20 20.0	-1.8
CLL				*e*S	**S**	**02 26 54.0**	**-5.4**
CLL	**Collm**	**45.95**	**311**	*i* P	**P**	**02 20 15.5**	**-0.5**
	comp=Z,7.0nm,1.0s,mb4.5						
CLL	**Collm**	**45.95**	**311**	*i* P	**P**	**02 20 15.5**	**-0.5**
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
KBA	**Koelnbreinsper**	**46.08**	**305**	⇑*i*P	**P**	**02 20 16.6**	**-0.5**
	comp=Z,6.1nm,0.9s,mb4.5						
KBA	**Koelnbreinsper**	**46.08**	**305**	⇑P	**P**	**02 20 16.6**	**-0.5**
	comp=Z,6.1nm,0.9s,mb4.5						
PTCC	**Patocco-Chiusa**	**46.16**	**304**	P	**P**	**02 20 17.9**	**+0.2**
WET	**Wettzell**	**46.18**	**308**	*e*P	**P**	**02 20 18.4**	**+0.6**
	comp=Z,8.0nm,1.6s,mb4.4						
WET	**Wettzell**	**46.18**	**308**	*e*P	**P**	**02 20 18.4**	**+0.6**
WET				pmax	pmax		
	comp=Z,8.0nm,1.6s,mb4.4						
CII	**Carovilli**	**46.24**	**297**	*e*P	**P**	**02 20 19.9**	**+1.4**
	comp=Z,22nm,0.8s,mb5.1						
SGG	**Gregorio Mates**	**46.26**	**297**	P	**P**	**02 20 19.1**	**+0.5**
NKC	**Novy Kostel**	**46.37**	**309**	*e*P	**P**	**02 20 20.3**	**+1.0**
NKC				AMS	AMS	02 41 20.0	
	comp=Z,400nm,25.9s						
MOR8	**Moi Rana**	**46.47**	**331**	*e*P	**P**	**02 20 19.5**	**-0.4**
MOR8				AMb	AMB	02 20 31.3	
	comp=Z,77nm,1.0s,mb5.6						
MOR8	**Moi Rana**	**46.47**	**331**	*e*P	**P**	**02 20 19.5**	**-0.4**
	comp=Z,77nm,1.0s,mb5.6						
CING	**Cingoli**	**46.74**	**300**	P	**P**	**02 20 23.7**	**+1.4**
PTQR	**Pietraquaria**	**46.85**	**298**	P	**P**	**02 20 24.6**	**+1.4**
MOX	**Moxa**	**46.87**	**310**	*i* P	**P**	**02 20 23.4**	**+0.2**
	comp=Z,logA/T=1.4,mb5.1						
MOX				L		02 43 44.0	
MOX	**Moxa**	**46.87**	**310**	*e*P	**P**	**02 20 23.4**	**+0.2**
	comp=Z,36nm,1.6s,mb5.0						
MOX				LR	LR		
	comp=Z,500nm,18.0s,MS4.5						
MOX	**Moxa**	**46.87**	**310**	*e*P	**P**	**02 20 23.4**	**+0.2**
MOX				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0						
MOX				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.5						
MELSS	**Ber_school_2**	**46.91**	**332**	*e*P	**P**	**02 20 23.6**	**+0.3**
STOK	**Stokkvaagen**	**47.07**	**331**	*e*P	**P**	**02 20 24.8**	**+0.1**
NB2	**NORSAR Subarra**	**47.12**	**324**	P	**P**	**02 20 23.9**	**-1.2**
	comp=Z,18nm,0.6s,mb5.2,baz=98,slow=7.4						
NB2	**NORSAR Subarra**	**47.12**	**324**	P	**P**	**02 20 23.9**	**-1.2**
	baz=98,slow=7.9						
NOA	**NORSAR Array B**	**47.12**	**324**	P	**P**	**02 20 24.1**	**-0.9**
	comp=Z,15nm,0.5s,mb5.2,baz=96,slow=7.6,SNR=67						
NOA				LR	LR	02 43 16.5	
	comp=Z,386nm,18.7s,MS4.4,baz=105,slow=40						
NOA	**NORSAR Array B**	**47.12**	**324**	P	**P**	**02 20 24.2**	**-0.9**
NOA				pmax	pmax		
	comp=Z,15nm,0.5s						
NOA				MLR	MLR		
	comp=Z,387nm,18.7s						
NSS	**Namsos**	**47.19**	**329**	*e*P	**P**	**02 20 24.1**	**-1.5**
JNU	**Nakatsue**	**47.20**	**75**	P	**P**	**02 20 27.1**	**+1.0**
	comp=Z,16nm,0.9s,mb5.0,baz=93,slow=15,SNR=4.8						
GRA1	**Grafenberg Arr**	**47.20**	**308**	*e*P	**P**	**02 20 26.4**	**+0.5**
	comp=Z,12nm,0.9s,mb4.8						
GRA1				LR	LR		
	comp=Z,300nm,19.9s,MS4.3						
GRF	**Grafenberg Arr**	**47.20**	**308**	*e*P	**P**	**02 20 26.4**	**+0.5**
	comp=Z,12nm,0.9s,mb4.8						
GRF				LR	LR		
	comp=Z,300nm,19.9s,MS4.3						
GRF	**Grafenberg Arr**	**47.20**	**308**	*e*P	**P**	**02 20 26.4**	**+0.5**
GRF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
GRF				MLR	MLR		
	comp=Z,300nm,19.9s,MS4.3						
WTTA	**Wattenberg**	**47.22**	**305**	⇓*i*P	**P**	**02 20 25.4**	**-0.6**
	comp=Z,19nm,1.1s,mb4.9,SNR=10						
MURB	**Monte Urbino**	**47.24**	**300**	P	**P**	**02 20 28.1**	**+1.8**
WATA	**Walderalm**	**47.25**	**305**	⇑*i*P	**P**	**02 20 25.9**	**-0.4**
	comp=Z,4.0nm,0.9s,mb4.3						
WATA	**Walderalm**	**47.25**	**305**	⇑P	**P**	**02 20 25.9**	**-0.4**
	comp=Z,4.0nm,0.9s,mb4.3						
NAO01	**NORSAR Array S**	**47.26**	**324**	*e*P	**P**	**02 20 25.3**	**-1.0**
	comp=Z,6.3nm,0.5s,mb4.8						
LOF	**Lofoten**	**47.27**	**334**	*e*P	**P**	**02 20 27.4**	**+1.2**
NAO	**NORSAR Subarra**	**47.28**	**324**	P	**P**	**02 20 23.9**	**-2.5**
	comp=Z,18nm,0.6s,mb5.2						
GIB	**Gibilmanna**	**47.30**	**292**	P	**P**	**02 20 26.1**	**-0.8**
MNS	**Montasola**	**47.30**	**298**	P	**P**	**02 20 26.9**	**+0.1**
	comp=Z,30nm,1.1s,mb5.1						
JOW	**Kunigami**	**47.32**	**84**	P	**P**	**02 20 27.1**	**-0.2**
	comp=Z,20nm,0.5s,mb5.3,baz=242,slow=6.5,SNR=6.1						
FUR	**Furstenfeldbru**	**47.34**	**306**	*e*P	**P**	**02 20 27.7**	**+0.7**
	comp=Z,35nm,1.4s,mb5.1						
FUR	**Furstenfeldbru**	**47.34**	**306**	*e*P	**P**	**02 20 27.7**	**+0.7**
FUR				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.1						
CTI	**Castel Tesino**	**47.38**	**304**	P	**P**	**02 20 27.3**	**-0.1**
	comp=Z,11nm,0.6s,mb5.0						
BADI	**Badiali**	**47.40**	**300**	P	**P**	**02 20 28.8**	**+1.2**
BSEG	**Bad Segeberg**	**47.46**	**314**	*e*P	**P**	**02 20 27.9**	**0.0**
BSEG				pmax	pmax		
	comp=Z,16nm,0.6s,mb5.1						
SQTA	**Sankt Quirin**	**47.51**	**305**	⇓*i*P	**P**	**02 20 27.2**	**-1.2**
	comp=Z,6.7nm,1.0s,mb4.6,SNR=11						
SQTA	**Sankt Quirin**	**47.51**	**305**	⇓P	**P**	**02 20 27.2**	**-1.2**
	comp=Z,6.7nm,1.0s,mb4.6						
CLZ	**Clausthal**	**47.55**	**311**	*e*P	**P**	**02 20 28.1**	**-0.6**
	comp=Z,9.0nm,0.8s,mb4.8						
CLZ	**Clausthal**	**47.55**	**311**	*e*P	**P**	**02 20 28.1**	**-0.6**
CLZ				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
MOTA	**Moosalm**	**47.56**	**305**	⇑*i*P	**P**	**02 20 27.7**	**-1.2**
	comp=Z,5.2nm,0.8s,mb4.6,SNR=9.3						
MOTA	**Moosalm**	**47.56**	**305**	⇑P	**P**	**02 20 27.7**	**-1.2**
	comp=Z,5.2nm,0.8s,mb4.6						
KSM	**Kuching**	**47.60**	**126**	*e*P	**P**	**02 20 29.5**	**0.0**
SFI	**Santa Sofia**	**47.60**	**301**	P	**P**	**02 20 30.1**	**+0.9**
	comp=Z,33nm,0.8s,mb5.4						
PGD	**Poggio Sodo**	**47.70**	**301**	P	**P**	**02 20 31.3**	**+1.4**
	comp=Z,20nm,0.7s,mb5.2						
DOMB	**Dombas**	**48.22**	**325**	*e*P	**P**	**02 20 33.8**	**0.0**
DOMB				AMb	AMB	02 20 45.5	
	comp=Z,70nm,1.4s,mb5.5						
DOMB	**Dombas**	**48.22**	**325**	*e*P	**P**	**02 20 33.8**	**0.0**
	comp=Z,70nm,1.4s,mb5.5						
DAVA	**Damuels**	**48.40**	**305**	*i* P	**P**	**02 20 34.7**	**-0.6**
	comp=Z,58nm,0.9s,mb5.6,SNR=36						
DAVA	**Damuels**	**48.40**	**305**	P	**P**	**02 20 34.7**	**-0.6**
	comp=Z,58nm,0.9s,mb5.6						
DAVOX	**Davos**	**48.48**	**305**	ScP		02 25 54.2	
	comp=Z,4.2nm,0.8s,baz=45,slow=5.7,SNR=3.7						
DAVOX				LR	LR	02 41 51.8	
	comp=Z,265nm,19.8s,MS4.2,baz=207,slow=37						
KKM	**Kota Kinabalu**	**48.60**	**116**	⇑*e*P	**P**	**02 20 38.4**	**+1.1**
STU	**Stuttgart**	**48.63**	**307**	*e*P	**P**	**02 20 37.8**	**+0.7**
	comp=Z,14nm,0.7s,mb5.1						
TNS	**Taunus Mts**	**48.92**	**309**	*e*P	**P**	**02 20 39.7**	**+0.4**
	comp=Z,7.0nm,1.3s,mb4.5						
TNS	**Taunus Mts**	**48.92**	**309**	*e*P	**P**	**02 20 39.7**	**+0.4**
TNS				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
MOL	**Molde**	**48.96**	**326**	*e*P	**P**	**02 20 40.4**	**+1.0**
KMBO	**Kilima Mbogo**	**49.05**	**231**	P	**P**	**02 20 41.9**	**+1.1**
	comp=Z,12nm,0.8s,mb5.0,baz=34,slow=11,SNR=39						
KMBO				LR	LR	02 43 37.4	
	comp=Z,738nm,18.8s,MS4.7,baz=93,slow=39						
KMBO	**Kilima Mbogo**	**49.05**	**231**	P	**P**	**02 20 41.9**	**+1.1**
KMBO				pmax	pmax		
	comp=Z,12nm,0.8s						
KMBO				MLR	MLR		
	comp=Z,738nm,18.8s						
LANF	**Langenberg**	**49.51**	**308**	*e*P	**P**	**02 20 44.1**	**+0.2**
PGF	**Pioggiola**	**49.92**	**299**	⇓*i*P	**P**	**02 20 46.0**	**-1.1**
	comp=Z,73nm,1.1s,mb5.3						
CDF	**Champ du Feu**	**49.95**	**307**	*e*P	**P**	**02 20 46.9**	**-0.3**
	comp=Z,24nm,1.1s,mb4.8						
BER	**Bergen**	**49.98**	**323**	*e*P	**P**	**02 20 47.3**	**-0.1**
EGD	**Espegrend**	**50.04**	**323**	*e*P	**P**	**02 20 48.0**	**+0.2**
ASK	**Askoy**	**50.05**	**323**	*e*P	**P**	**02 20 47.8**	**0.0**
ECH	**Echery**	**50.06**	**307**	*e*P	**P**	**02 20 49.0**	**+0.9**
MOF	**Molkenrain**	**50.14**	**307**	*e*P	**P**	**02 20 48.6**	**-0.1**
HINF	**Hinteralfeld**	**50.33**	**307**	⇓*i*P	**P**	**02 20 49.3**	**-0.8**
	comp=Z,22nm,0.7s,mb5.0						
WLF	**Walferdange**	**50.47**	**309**	*e*P	**P**	**02 20 51.3**	**+0.1**
	comp=Z,26nm,0.9s,mb5.3						
HAU	**Haudompre**	**50.63**	**307**	⇓*i*P	**P**	**02 20 51.7**	**-0.7**
	comp=Z,22nm,0.6s,mb5.0						
HAU				*e*R			
	comp=Z,294nm,19.0s						
SBF	**Sospel**	**50.73**	**301**	⇓*i*P	**P**	**02 20 52.7**	**-0.6**
	comp=Z,96nm,1.0s,mb5.4						
LPG	**La Plagne**	**50.85**	**304**	⇓*i*P	**P**	**02 20 54.1**	**0.0**
	comp=Z,61nm,0.8s,mb5.3						
LPL	**La Plagne**	**50.86**	**304**	⇓*i*P	**P**	**02 20 54.1**	**-0.1**
	comp=Z,55nm,0.8s,mb5.3						
KBS	**Kingsbay**	**50.95**	**347**	*e*P	**P**	**02 20 54.6**	**+0.1**
	comp=Z,24nm,0.7s,mb5.2						
KBS	**Kingsbay**	**50.95**	**347**	*e*P	**P**	**02 20 53.5**	**-1.0**
BNI	**Bardonecchia**	**51.00**	**303**	*e*P	**P**	**02 20 54.7**	**-0.5**
	comp=Z,35nm,1.1s,mb5.2						
MBDF	**Montbardon**	**51.01**	**303**	⇓*i*P	**P**	**02 20 54.3**	**-1.0**
	comp=Z,50nm,0.8s,mb5.2						
SURF	**Saint Ours**	**51.03**	**302**	*e*P	**P**	**02 20 55.7**	**+0.2**
CABF	**La Chapelle**	**51.07**	**305**	⇓*i*P	**P**	**02 20 55.2**	**-0.6**
GIVF	**Givet**	**51.25**	**310**	*e*P	**P**	**02 20 56.1**	**-1.0**
FRF	**La Foret Royal**	**51.36**	**301**	⇓*i*P	**P**	**02 20 56.9**	**-1.1**
	comp=Z,33nm,0.8s,mb5.0						
MEZF	**Maizieres J'vi**	**51.39**	**308**	⇓*i*P	**P**	**02 20 57.7**	**-0.5**
	comp=Z,56nm,1.1s,mb5.1						
ORIF	**Oris-en-Rattie**	**51.58**	**303**	*e*P	**P**	**02 20 58.2**	**-1.5**
	comp=Z,34nm,1.0s,mb4.9						
ORIF				*e*R			
	comp=Z,430nm,21.8s						
GRN	**Grenoble**	**51.60**	**304**	*e*P	**P**	**02 20 59.2**	**-0.6**
BAIF	**Baives**	**51.65**	**310**	⇓*i*P	**P**	**02 20 59.8**	**-0.3**
	comp=Z,40nm,1.0s,mb5.0						
MAJO	**Matsushiro**	**51.86**	**68**	*e*P	**P**	**02 21 01.0**	**-0.9**
	comp=Z,28nm,0.8s,mb5.2						
MAT	**Matsushiro**	**51.86**	**68**	P	**P**	**02 21 01.1**	**-0.8**
MJAR	**Matsushiro Arr**	**51.86**	**68**	P	**P**	**02 21 01.8**	**-0.1**
	comp=Z,16nm,0.8s,mb5.0,baz=292,slow=10,SNR=29						
MJAR				LR	LR	02 45 00.9	
	comp=Z,238nm,19.0s,MS4.2,baz=40,slow=38						
MJAR	**Matsushiro Arr**	**51.86**	**68**	P	**P**	**02 21 01.8**	**-0.1**
MJAR				pmax	pmax		
	comp=Z,16nm,0.8s						
MJAR				MLR	MLR		
	comp=Z,238nm,19.0s						
SMRF	**Simiane la Rot**	**52.02**	**302**	*e*P	**P**	**02 21 02.4**	**-0.6**
	comp=Z,14nm,0.7s,mb4.7						
YSS	**Yuzh-Sakhalins**	**52.37**	**54**	*e*P	**P**	**02 21 06.0**	**+0.4**
	comp=Z,143nm,1.1s,mb5.8						
YSS	**Yuzh-Sakhalins**	**52.37**	**54**	⇓*i*P	**P**	**02 21 06.0**	**+0.4**
YSS				*e*		02 28 38.0	
YSS				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.8						
YSS				MLR	MLR		
	comp=E,2µm,14.0s						
YSS				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.3						
LOR	**Lormes**	**52.43**	**306**	⇓*i*P	**P**	**02 21 04.6**	**-1.4**
	comp=Z,42nm,1.2s,mb5.0						
LOR				*e*R			
	comp=Z,396nm,22.0s						
VIVF	**Saint-Julien-l**	**52.43**	**303**	⇓*i*P	**P**	**02 21 05.4**	**-0.7**
	comp=Z,18nm,0.6s,mb4.9						
SMF	**Signal de Mont**	**52.58**	**306**	⇓*i*P	**P**	**02 21 06.2**	**-1.0**
	comp=Z,91nm,0.8s,mb5.5						
SSF	**Saint Saulge**	**52.71**	**306**	⇓*i*P	**P**	**02 21 07.0**	**-1.1**
	comp=Z,39nm,1.0s,mb5.0						
CMAH	**Djebel Manchou**	**52.73**	**293**	P	**P**	**02 21 06.0**	**-2.5**
ABSA	**Djebel Ababsia**	**52.80**	**292**	P	**P**	**02 21 09.0**	**0.0**
AVF	**Avril sur Loir**	**52.87**	**306**	⇓*i*P	**P**	**02 21 08.3**	**-1.1**
	comp=Z,70nm,0.8s,mb5.3						
LASF	**Ste Croix**	**53.19**	**302**	⇓*i*P	**P**	**02 21 11.3**	**-0.5**
	comp=Z,44nm,0.9s,mb5.1						
AGO	**Saint Agoulin**	**53.19**	**305**	*e*P	**P**	**02 21 11.1**	**-0.7**
HYF	**Humbligny**	**53.24**	**307**	*e*P	**P**	**02 21 11.4**	**-0.7**
BGF	**Bois d'Agland**	**53.27**	**306**	⇓*i*P	**P**	**02 21 11.1**	**-1.2**
	comp=Z,27nm,0.8s,mb4.9						
LBL	**Lubilhac**	**53.32**	**304**	*e*P	**P**	**02 21 12.2**	**-0.5**
CKFL	**Kef-Lekhel**	**53.34**	**293**	P	**P**	**02 21 13.0**	**0.0**
PYM	**Petit Puy Mans**	**53.35**	**305**	*e*P	**P**	**02 21 12.2**	**-0.7**
CASM	**Ain Smara**	**53.56**	**292**	P	**P**	**02 21 14.0**	**-0.6**
TCF	**Toulx Ste Croi**	**53.76**	**306**	⇓*i*P	**P**	**02 21 15.2**	**-0.7**
	comp=Z,57nm,0.8s,mb5.3						
CAF	**Calviac**	**54.20**	**304**	⇓*i*P	**P**	**02 21 18.7**	**-0.5**
	comp=Z,43nm,0.7s,mb5.2						
EJON	**La Jonquera**	**54.31**	**301**	P	**P**	**02 21 19.2**	**-0.8**
	comp=Z,12nm,0.9s,mb4.8						
CKHR	**Kef el Ahmar**	**54.39**	**292**	P	**P**	**02 21 21.0**	**+0.4**
SET	**Setif**	**54.41**	**293**	P	**P**	**02 21 21.0**	**+0.2**
RJF	**Les Rejaudoux**	**54.48**	**304**	⇓*i*P	**P**	**02 21 20.7**	**-0.5**
	comp=Z,29nm,0.8s,mb5.0						
RJF				*e*R			
	comp=Z,232nm,21.0s						
MTLF	**Montolieu**	**54.53**	**302**	⇓*i*P	**P**	**02 21 20.8**	**-0.8**
	comp=Z,20nm,0.6s,mb5.0						
MA2	**Magadan**	**54.71**	**37**	*e*P	**P**	**02 21 22.8**	**+0.2**
	comp=Z,71nm,1.1s,mb5.6						
MA2	**Magadan**	**54.71**	**37**	*e*P	**P**	**02 21 22.9**	**+0.2**
MA2				*e*		02 29 23.9	
MA2				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.5						
LDF	**La Druitiere**	**54.72**	**309**	⇓*i*P	**P**	**02 21 21.5**	**-1.5**
	comp=Z,22nm,0.5s,mb5.1						
FLN	**La Foliniere**	**54.91**	**309**	⇓*i*P	**P**	**02 21 22.8**	**-1.6**
	comp=Z,54nm,0.9s,mb5.3						
FLN				*e*R			
	comp=Z,343nm,21.5s						
SEY	**Seymchan**	**54.96**	**33**	*c* *i*P	**P**	**02 21 24.8**	**+0.3**
LFF	**La Frestale**	**55.11**	**304**	⇓*i*P	**P**	**02 21 25.1**	**-0.7**
	comp=Z,52nm,0.7s,mb5.4						
ETOS	**Mallorca**	**55.17**	**298**	P	**P**	**02 21 25.7**	**-0.7**
	comp=Z,56nm,1.5s,mb5.4						
YUK	**Yuzh-Kuril'sk**	**55.22**	**57**	P	**P**	**02 21 26.0**	**-0.7**
GRR	**Gorron**	**55.25**	**309**	*e*P	**P**	**02 21 25.3**	**-1.5**
	comp=Z,42nm,0.8s,mb5.2						
MFF	**Saint Martin d**	**55.25**	**306**	⇓*i*P	**P**	**02 21 25.3**	**-1.5**
	comp=Z,46nm,0.9s,mb5.2						
MLS	**Moulis**	**55.43**	**302**	*e*P	**P**	**02 21 27.0**	**-1.2**
EMIR	**Miracle**	**55.44**	**301**	P	**P**	**02 21 28.3**	**+0.1**
	comp=Z,15nm,0.7s,mb5.1						
EPOB	**Poblet**	**55.93**	**300**	P	**P**	**02 21 30.8**	**-1.0**
	comp=Z,14nm,0.7s,mb5.1						
EPF	**Esparros**	**55.94**	**302**	⇓*i*P	**P**	**02 21 29.9**	**-1.9**
	comp=Z,22nm,0.6s,mb5.0						
RESF	**Ens**	**56.01**	**302**	*e*P	**P**	**02 21 31.9**	**-0.4**
EBIE	**Bielsa**	**56.18**	**302**	P	**P**	**02 21 32.9**	**-0.7**
	comp=Z,7.9nm,0.5s,mb5.0						
VIEF	**Viey**	**56.20**	**302**	*e*P	**P**	**02 21 33.1**	**-0.6**
EGRA	**Graus**	**56.21**	**301**	P	**P**	**02 21 33.2**	**-0.6**
	comp=Z,13nm,0.6s,mb5.2						
SGMF	**Saint Gilles**	**56.38**	**309**	⇓*i*P	**P**	**02 21 33.6**	**-1.3**
	comp=Z,48nm,1.0s,mb5.2						
EIBI	**Ibiza**	**56.49**	**297**	P	**P**	**02 21 35.6**	**-0.3**
	comp=Z,113nm,2.9s,mb5.4						
ETSF	**Etsaut**	**56.60**	**302**	⇓*i*P	**P**	**02 21 36.0**	**-0.6**
	comp=Z,72nm,0.6s,mb5.6						
FDAF	**Les Forges d'A**	**56.64**	**302**	*e*P	**P**	**02 21 36.5**	**-0.4**
ROSF	**Rostrenen**	**56.82**	**309**	*e*P	**P**	**02 21 36.5**	**-1.6**
	comp=Z,62nm,0.8s,mb5.4						
LARF	**Larrau**	**56.86**	**303**	*e*P	**P**	**02 21 37.9**	**-0.6**
QUIF	**Quistinic**	**56.87**	**309**	*e*P	**P**	**02 21 36.7**	**-1.7**
	comp=Z,38nm,0.8s,mb5.2						
ESAC	**San Caprasio**	**56.91**	**301**	P	**P**	**02 21 38.1**	**-0.8**
	comp=Z,26nm,0.6s,mb5.4						
DAG	**Danmarks Havn**	**57.15**	**344**	⇓*i*P	**P**	**02 21 39.5**	**-0.6**
	comp=Z,33nm,0.8s,mb5.4						
DAG	**Danmarks Havn**	**57.15**	**344**	⇓*e*P	**P**	**02 21 39.5**	**-0.6**
	comp=Z,33nm,0.8s,mb5.4						
DAG	**Danmarks Havn**	**57.15**	**344**	⇓*e*P	**P**	**02 21 39.5**	**-0.6**
DAG				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.4						
EALK	**Alkurruntz**	**57.16**	**303**	P	**P**	**02 21 39.5**	**-1.1**
	comp=Z,8.0nm,0.5s,mb5.0						
EMOS	**Mosqueruela**	**57.37**	**299**	P	**P**	**02 21 41.5**	**-0.6**
	comp=Z,93nm,2.2s,mb5.4						
ECHE	**Chera**	**57.99**	**299**	P	**P**	**02 21 46.6**	**+0.2**
	comp=Z,4.1nm,0.6s,mb4.6						
ETOB	**Tobarra**	**58.74**	**298**	P	**P**	**02 21 51.9**	**+0.2**
	comp=Z,12nm,0.8s,mb5.0						
EMUR	**La Murta**	**58.81**	**297**	P	**P**	**02 21 51.7**	**-0.5**
	comp=Z,8.7nm,0.9s,mb4.8						
BILL	**Bilibino**	**59.51**	**26**	*e*P	**P**	**02 21 56.9**	**+0.3**
	comp=Z,79nm,0.8s,mb5.8						
BILL	**Bilibino**	**59.51**	**26**	α*i*P	**P**	**02 21 57.3**	**+0.7**
BILL				*e*	pP	02 22 02.9	+2.0
BILL						02 22 45.0	
BILL				pmax	pmax		
	comp=Z,93nm,1.0s,mb5.8						
BILL				MLR	MLR		
	comp=Z,700nm,14.0s,MS4.9						
EARI	**Arriondas**	**59.69**	**304**	P	**P**	**02 21 57.5**	**-0.7**
	comp=Z,20nm,0.8s,mb5.2						
EHUE	**Huescar**	**59.81**	**297**	P	**P**	**02 21 58.9**	**-0.3**
	comp=Z,7.6nm,0.8s,mb4.8						
GUD	**Guadarrama**	**59.90**	**301**	P	**P**	**02 21 59.2**	**-0.5**
	comp=Z,16nm,1.5s,mb4.8						
ESDC	**Sonseca Array**	**60.12**	**300**	P	**P**	**02 22 00.3**	**-0.9**

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      comp=Z,9.4nm,0.7s,mb5.0,baz=57,slow=7.1,SNR=43
ESLA  Sonseca Array      60.12 300  eP        P         02 22 00.2  -1.0
      comp=Z,1.8nm,0.7s,mb4.2
ESLA                                 LR       LR
      comp=Z,1µm,19.0s,MS5.1
EQES  Quesada            60.17 297   P        P         02 22 00.9  -0.7
      comp=Z,20nm,0.8s,mb5.2
EBAN  Banos Encina       60.55 298   P        P         02 22 03.7  -0.5
      comp=Z,14nm,0.7s,mb5.2
PET   Petropavlovsk      60.59  44  eP        P         02 22 02.2  -2.0
      comp=Z,40nm,1.2s,mb5.4
PET   Petropavlovsk      60.59  44  eP        P         02 22 02.5  -1.7
PET                                 eS        S         02 30 27.3  +9.3
PET                                  pmax     pmax
      comp=Z,43nm,1.2s,mb5.5
PET                                  MLR      MLR
      comp=Z,1µm,20.0s,MS5.0
ECOG  Cogollos-Vega      60.73 297   P        P         02 22 04.6  -0.9
      comp=Z,9.4nm,0.9s,mb4.9
EPON  Pontenova          61.00 305   P        P         02 22 06.4  -0.8
      comp=Z,10nm,0.4s,mb5.3
ERON  Agron              61.01 297   P        P         02 22 06.4  -0.9
      comp=Z,7.3nm,0.6s,mb5.0
EADA  Adamuz             61.13 298   P        P         02 22 07.3  -0.8
      comp=Z,10nm,0.8s,mb5.0
ELUQ  Luque              61.14 298   P        P         02 22 07.1  -1.0
      comp=Z,11nm,0.6s,mb5.2
ELOJ  Sierra Loja        61.22 297   P        P         02 22 06.9  -1.8
      comp=Z,2.5nm,0.5s,mb4.6
ECAL  Calabor            61.23 303   P        P         02 22 08.4  -0.4
      comp=Z,39nm,1.9s,mb5.2
PBRG  Braganca           61.28 303  eP        P         02 22 08.6  -0.5
      comp=Z,9.7nm,0.9s,mb4.9
ERUA  La Rua             61.34 304   P        P         02 22 09.1  -0.4
      comp=Z,18nm,1.0s,mb5.2
EMIJ  Mijas              61.90 297   P        P         02 22 12.5  -0.9
      comp=Z,25nm,1.2s,mb5.2
STS   Santiago           62.12 305   P        P         02 22 14.5  -0.3
      comp=Z,50nm,1.4s,mb5.5
PVRL  Vila Real          62.16 303  eP        P         02 22 14.4  -0.7
      comp=Z,36nm,1.5s,mb5.3
ELOB  Lobios             62.17 303   P        P         02 22 14.6  -0.5
      comp=Z,17nm,0.6s,mb5.4
PCAB  Cabril             62.21 303  eP        P         02 22 15.4   0.0
      comp=Z,19nm,1.1s,mb5.1
MTE   Manteigas          62.38 302  eP        P         02 22 16.0  -0.5
      comp=Z,23nm,0.9s,mb5.3
MTE   Manteigas          62.38 302  eP        P         02 22 16.3  -0.2
      comp=Z,33nm,1.0s,mb5.4
EMAZ  Mazaricos          62.38 305   P        P         02 22 15.8  -0.7
      comp=Z,14nm,0.7s,mb5.2
EJIF  Jimena Fronter     62.46 297   P        P         02 22 16.4  -0.7
      comp=Z,9.1nm,1.0s,mb4.9
EZAM  Zamans             62.50 304   P        P         02 22 17.1  -0.1
      comp=Z,18nm,1.5s,mb5.0
PVIS  Viseu              62.50 302  eP        P         02 22 16.8  -0.5
      comp=Z,20nm,0.8s,mb5.3
ESPR  Espera             62.58 297   P        P         02 22 17.8  -0.1
      comp=Z,6.1nm,0.6s,mb4.9
EBAD  Badajoz            62.66 300   P        P         02 22 17.5  -0.9
      comp=Z,21nm,0.7s,mb5.4
EMIN  Mina Concepcio     62.81 299   P        P         02 22 18.2  -1.2
      comp=Z,6.6nm,0.6s,mb4.9
PTOM  Tomar              63.30 301  eP        P         02 22 22.1  -0.5
      comp=Z,36nm,0.8s,mb5.5
EVO   Evora              63.46 300  eP        P         02 22 23.2  -0.5
      comp=Z,70nm,1.4s,mb5.3
EVO                                 eR
      comp=Z,250nm,20.0s
EGRO  El Granado         63.49 299   P        P         02 22 23.5  -0.4
      comp=Z,9.4nm,0.6s,mb5.1
SUMG  Summit             63.54 342  eP        P         02 22 23.9  +0.3
      comp=Z,53nm,0.8s,mb5.6
PBEJ  Beja               63.56 299  eP        P         02 22 23.8  -0.5
      comp=Z,13nm,0.9s,mb5.0
PLOU  Loures             64.13 301  eP        P         02 22 27.6  -0.4
      comp=Z,37nm,0.8s,mb5.5
PTEO  Sao Teotonio       64.38 299  eP        P         02 22 29.7   0.0
      comp=Z,37nm,1.5s,mb5.2
LSZ   Lusaka             65.58 229  eP        P         02 22 37.1  -0.7
      comp=Z,34nm,1.3s,mb5.2
FX1   Attu Island--F     68.64  40  eP        P         02 22 56.4  -0.1
SFJD  Kangerlussuaq      70.28 340  i P       P         02 23 05.2  -1.1
      comp=Z,23nm,0.6s,mb5.3
SFJD                                i                   02 23 16.2
SFJD  Kangerlussuaq      70.28 340  i P       P         02 23 05.2  -1.1
SFJD                                i                   02 23 16.2
SFJD                                 pmax     pmax
      comp=Z,23nm,0.6s,mb5.3
FITZ  Fitzroy Crossi     72.15 128  eP        P         02 23 18.2  -0.2
      comp=Z,24nm,1.1s,mb5.0
KAKA  Kakadu             73.08 119⇑iP        P         02 23 41.3   +17
      comp=Z,38nm,0.9s,mb5.3
LBTB  Lobatse            74.59 224  eP        P         02 23 32.5  -0.1
      comp=Z,34nm,0.9s,mb5.3
LBTB                                 LR       LR
      comp=Z,393nm,19.0s,MS4.7
TSUM  Tsumeb             75.30 234  eP        P         02 23 36.9  +0.1
      comp=Z,29nm,0.9s,mb5.2
INK   Inuvik             75.50  10  eP        P         02 23 37.3  +0.4
      comp=Z,83nm,1.2s,mb5.5
COLA  College            75.79  17  eP        P         02 23 39.0  +0.3
      comp=Z,57nm,0.8s,mb5.5
COLA  College            75.79  17c iP        P         02 23 39.2  +0.6
ILAR  Eielson Array      76.11  17   P        P         02 23 40.1  -0.3
      comp=Z,21nm,0.7s,mb5.2,baz=302,slow=5.3,SNR=134
ILAR  Eielson Array      76.11  17   P        P         02 23 40.1  -0.3
ILAR                                 pmax     pmax
      comp=Z,21nm,0.7s
MCK   McKinley           76.47  18  eP        P         02 23 42.6  +0.2
      comp=Z,12nm,0.9s,mb4.8
DBIC  Dimbokro           76.59 269   P        P         02 23 43.6  -0.6
      comp=Z,12nm,0.6s,mb5.0,baz=26,slow=6.4,SNR=40
DBIC                                 LR       LR        03 00 48.5
      comp=Z,1µm,19.4s,MS5.2,baz=41,slow=38
DBIC  Dimbokro           76.59 269   P        P         02 23 43.6  -0.5
DBIC                                 pmax     pmax
      comp=Z,12nm,0.6s
DBIC                                 MLR      MLR
      comp=Z,1µm,19.4s
SVW2  Sparrevohn         76.69  22  eP        P         02 23 45.8  +2.0
LIC   Lamto              76.98 269⇓iP        P         02 23 45.3  -1.0
      comp=Z,63nm,0.8s,mb5.3
LIC                                 eR
      comp=Z,1µm,20.2s
THY   Trims Highway      77.52  17  eP        P         02 23 48.9  +0.6
BOSA  Boshof             77.56 222   P        P         02 23 49.1  -0.1
      comp=Z,19nm,0.6s,mb5.2,baz=39,slow=6.1,SNR=38
BOSA                                 LR       LR        02 55 37.9
      comp=Z,309nm,21.6s,MS4.6,baz=30,slow=34
BOSA  Boshof             77.56 222  eP        P         02 23 49.1  -0.2
      comp=Z,41nm,1.0s,mb5.3
KLBR  Kellerberrin       77.91 142  eP        P         02 23 49.8  -1.3
      comp=Z,31nm,1.0s,mb5.2
PMR   Palmer             78.18  19  eP        P         02 23 52.5  +0.6
      comp=Z,18nm,0.6s,mb5.2
PMR                                  LR       LR
      comp=Z,500nm,17.0s,MS4.9
SML   Sawmill            78.22  19  eP        P         02 23 52.6  +0.5
DAWY  Dawson             78.36  14  eP        P         02 23 53.3  +0.4
MENT  Mentasta           78.41  16  eP        P         02 23 55.0  +1.8
NWAO  Narrogin (SRO)     78.73 144  eP        P         02 23 53.9  -1.7
      comp=Z,45nm,1.5s,mb5.2
SLKM  Skilak Lake        78.77  20  eP        P         02 23 55.3  +0.1
WRA   Warramunga Arr     79.29 123   P        P         02 23 59.0  +0.1
      comp=Z,39nm,0.8s,mb5.4,baz=325,slow=5.5,SNR=121
WRA                                  S        S         02 33 57.7  +0.3
      comp=Z,14nm,1.3s,baz=313,slow=11,SNR=19
WRA                                  PKKPbc             02 42 49.1
      comp=Z,0.8nm,0.8s,baz=124,slow=2.2,SNR=10.0
WRA   Warramunga Arr     79.29 123   P        P         02 23 59.0  +0.1
WRA                                  S        S         02 33 57.7  +0.3
WRA                                  pmax     pmax
      comp=Z,39nm,0.8s
WRA                                  pmax     pmax
      comp=Z,1.0nm,0.8s
WRAB  Tennant Creek      79.29 123  eP        P         02 23 59.0  +0.1
      comp=Z,92nm,0.9s,mb5.7
WRAB  Tennant Creek      79.29 123c iP        P         02 23 58.9   0.0
WB2   Warramunga Arr     79.30 123  eP        P         02 23 59.0  +0.1
WB2                                 eS        S         02 33 58.0  +0.5
DIV   Divide             79.46  18  eP        P         02 23 59.8  +0.9
      comp=Z,44nm,0.7s,mb5.5
ASPA  Alice Springs      81.52 126  eP        P         02 24 11.2  +0.5
ASPA  Alice Springs      81.52 126  eS        S         02 34 20.7  +0.1
PMG   Port Moresby       82.17 107  eP        P         02 24 15.0  +0.8
      comp=Z,16nm,0.9s,mb5.0
PMG   Port Moresby       82.17 107⇑iP        P         02 24 14.0  -0.2
FORT  Forrest            82.90 135  eP        P         02 24 18.3  +0.6
      comp=Z,34nm,0.7s,mb5.5
YKW3  Yellowknife Ar     83.02   4  eP        P         02 24 17.7  +0.1
YKA   Yellowknife Ar     83.09   4   P        P         02 24 18.8  +0.8
      comp=Z,40nm,0.7s,mb5.5,baz=347,slow=5.2,SNR=66
YKA                                  LR       LR        03 05 21.9
      comp=Z,260nm,18.3s,MS4.6,baz=305,slow=39
YKA   Yellowknife Ar     83.09   4   P        P         02 24 18.8  +0.8
YKA                                  pmax     pmax
      comp=Z,40nm,0.7s
YKA                                  MLR      MLR
      comp=Z,260nm,18.3s
SCHQ  Schefferville      84.65 338   P        P         02 24 25.9   0.0
      comp=Z,14nm,1.0s,mb5.1,baz=16,slow=5.2,SNR=9.1
CTA   Charters Tower     87.93 116  eP        P         02 24 42.8  -0.1
      comp=Z,15nm,0.9s,mb5.2
CTAO  Charters Tower     87.93 116  eP        P         02 24 42.6  -0.3
      comp=Z,27nm,1.0s,mb5.4
STKA  Stephens Creek     92.05 128   P        P         02 25 02.3  +0.4
      comp=Z,6.5nm,0.9s,mb5.0,baz=0.6,slow=7.4,SNR=5.5
EDM   Edmonton           92.40   4  eP        P         02 25 03.7  +0.8
ULM   Lac du Bonnet      95.04 353   P        P         02 25 14.8  -0.4
      comp=Z,6.3nm,0.9s,mb5.0,baz=32,slow=5.2,SNR=7.2
ULM                                  LR       LR        03 10 22.2
      comp=Z,216nm,20.7s,MS4.6,baz=346,slow=37
ULM   Lac du Bonnet      95.04 353   P        P         02 25 14.8  -0.4
ULM                                  LR       LR        03 10 22.2
CHMT  Chamberlain Mo     98.69   5  eP        P         02 25 32.4  +0.6
HRY   Holter Researc     98.98   4  eP        P         02 25 34.1  +1.0
PDAR  Pinedale Array    103.01   2   Pdiff    Pdif      02 25 52.4  +0.9
      comp=Z,0.9nm,1.0s,baz=45,slow=4.2,SNR=4.7
PDAR                                 PKiKP              02 30 11.6
      comp=Z,1.8nm,1.1s,baz=50,slow=4.2,SNR=4.2
NVAR  Mina Array Bea    106.59  10   Pdiff    Pdif      02 26 09.7  +2.4
      comp=Z,0.5nm,0.7s,baz=349,slow=4.6,SNR=4.5
NVAR                                 PKiKP              02 30 18.8
      comp=Z,0.6nm,0.7s,baz=281,slow=2.7,SNR=3.8
NVAR                                 PKKPbc             02 41 37.4
      comp=Z,0.2nm,0.6s,baz=170,slow=8.4,SNR=3.5
JCT   Junction City     115.01 354  ePKiKP              02 30 34.2
TXAR  Lajitas Array     116.41 357   PKP      PKPdf     02 30 37.2  -1.8
      comp=Z,1.1nm,0.7s,baz=196,slow=0.5,SNR=14
TXAR                                 PKKPbc             02 41 04.7
      comp=Z,0.8nm,0.9s,baz=169,slow=6.4,SNR=5.6
TXAR  Lajitas Array     116.41 357   PKP      PKPdf     02 30 37.2  -1.8
TXAR                                 PKKPbc             02 41 04.7
TXAR  Lajitas Array     116.41 357   PKIKP    PKPdf     02 30 37.2  -1.8
TXAR                                 pmax     pmax
      comp=Z,1.0nm,0.7s
TXAR                                 pmax     pmax
      comp=Z,1.0nm,0.9s
SNAA  Sanae             118.25 200  e         PKPdf     02 30 42.1  +0.5
SNAA  Sanae             118.25 200  e         PKPdf     02 30 44.6  +3.0
SNAA  Sanae             118.25 200  e         tx        02 30 57.8
SNAA  Sanae             118.25 200⇑iPKPdf    PKPdf     02 30 37.9  -3.7
SNAA                                e                   02 30 42.1
SNAA                                e                   02 30 44.6
SNAA                                e                   02 30 57.8
SNAA                                e                   02 34 07.1
SNAA                                e                   02 40 57.6
SNAA                                e                   02 41 00.9
SNAA  Sanae             118.25 200  i PKIKP   PKPdf     02 30 39.0  -2.6
VNA2  Neumayer--Watz    119.32 202  e         PKPdf     02 30 43.6   0.0
VNA2  Neumayer--Watz    119.32 202  e         PKPdf     02 30 45.8  +2.2
VNA2  Neumayer--Watz    119.32 202  e         tx        02 31 00.0
VNA2  Neumayer--Watz    119.32 202⇑iPKPdf    PKPdf     02 30 40.6  -3.0
VNA2                                e                   02 30 43.6
VNA2                                e                   02 30 45.8
VNA2                                e                   02 31 00.0
VNA2                                e                   02 34 14.1
VNA2                                e                   02 40 54.3
VNA2                                e                   02 40 57.3
VNA1  Neumayer--Stat    119.49 202  e         PKPdf     02 30 45.0  +1.1
VNA1  Neumayer--Stat    119.49 202  e         PKPdf     02 30 47.0  +3.1
VNA1  Neumayer--Stat    119.49 202  e         tx        02 31 00.8
VNA1  Neumayer--Stat    119.49 202⇑iPKPdf    PKPdf     02 30 41.2  -2.7
VNA1                                e                   02 30 45.0
VNA1                                e                   02 30 47.0
VNA1                                e                   02 31 00.8
VNA1                                e                   02 34 15.0
VNA1                                e                   02 40 53.4
VNA3  Neumayer Olymp    120.12 202  e         PKPdf     02 30 45.2   0.0
VNA3  Neumayer Olymp    120.12 202  e         PKPdf     02 30 47.0  +1.8
VNA3  Neumayer Olymp    120.12 202  e         tx        02 31 01.6
VNA3  Neumayer Olymp    120.12 202⇑iPKPdf    PKPdf     02 30 41.9  -3.3
VNA3                                e                   02 30 45.2
VNA3                                e                   02 30 47.0
VNA3                                e                   02 31 01.6
VNA3                                e                   02 34 14.9
VNA3                                e                   02 40 51.4
VNA3                                e                   02 40 54.1
QSPA  South Pole Qui    124.34 180  eP        PKPdf     02 30 49.7  -3.5
SDV   Santo Domingo     125.00 315  ePKPdf    PKPdf     02 30 53.2  -2.9
ROSC  El Rosal          130.40 316   PKP      PKPdf     02 31 03.9  -2.5
      comp=Z,10nm,0.9s,baz=269,slow=23,SNR=7.6
ROSC                                 SKPbc              02 34 25.5
      comp=Z,15nm,0.8s,baz=133,slow=3.3,SNR=14
SAML  Samuel            132.82 292  ePKPdf    PKPdf     02 31 06.7  -4.3
LPAZ  La Paz            141.08 288   PKhKP              02 31 16.9
      comp=Z,1.2nm,0.8s,baz=25,slow=17,SNR=4.3
LPAZ                                 PKP      PKPdf     02 31 22.7  -3.4
      comp=Z,1.5nm,0.8s,baz=15,slow=7.7,SNR=5.8
LPAZ                                 SKPbc              02 34 57.4
      comp=Z,3.4nm,0.9s,baz=31,slow=2.5,SNR=5.4
LPAZ  La Paz            141.08 288  ePKPpre             02 31 17.5
LPAZ                                 PKP      PKPdf     02 31 22.7  -3.4
LPAZ                                 SKPbc              02 34 57.4
LPAZ  La Paz            141.08 288   PKHKP              02 31 16.9
LPAZ                                                    02 31 22.7
LPAZ                                 pmax     pmax
      comp=Z,1.0nm,0.8s
LPAZ                                 pmax     pmax
      comp=Z,2.0nm,0.8s
ARE   Arequipa          143.80 291  eP        PKPbc     02 31 25.0  -1.2
TRQA  Tornquist         144.13 251  ePKPdf    PKPdf     02 31 26.1  -4.6
NNA   Nana              144.85 302  ePKPdf    PKPdf     02 31 29.3  -3.3
LVC   Limon Verde       145.03 280  ePKPdf    PKPdf     02 31 30.1  -2.6
PLCA  Paso Flores       150.94 247   PKPbc    PKPdf     02 31 45.1  +3.4
      comp=Z,8.6nm,0.9s,baz=130,slow=3.4,SNR=12
PLCA  Paso Flores       150.94 247  ePKPbc    PKPdf     02 31 45.4  +3.7
PLCA  Paso Flores       150.94 247   PKIKP    PKPdf     02 31 45.2  +3.5
PLCA                                 pmax     pmax
      comp=Z,9.0nm,0.9s
```

DMN 06 02:12:18.2±0.7**, 29.46N**×**82.15E, h10^{km}, Ml4.6**/7**, Error ellipse: s-maj=21.4km s-min=12.6km az=30.0, Nepal**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time        Res
                                     Op       ISC       h  m  s      ISC
KOLN  Koldanda            2.11 142  ePn       Pn        02 12 57.9  +3.8
KOLN                                eSn       Sn        02 13 28.2  +7.5
      678nm,0.4s
GKN   Gorkha              2.62 123  ePn       Pn        02 13 04.0  +2.6
GKN                                 eSn       Sn        02 13 40.5  +6.9
      633nm,0.3s
DMN   Daman               3.19 125  ePn       Pn        02 13 12.8  +3.3
DMN                                 eSn       Sn        02 13 53.8  +5.8
      558nm,0.5s
KKN   Kakani              3.22 120  ePn       Pn        02 13 13.3  +3.4
KKN                                 eSn       Sn        02 13 54.3  +5.6
      690nm,0.4s
PKI   Pulchoki            3.43 122  ePn       Pn        02 13 16.3  +3.4
PKI                                 eSn       Sn        02 13 59.1  +5.0
      218nm,0.2s
GUN   Gumba               3.62 114  ePn       Pn        02 13 18.6  +3.0
GUN                                 eSn       Sn        02 14 03.9  +4.9
      328nm,0.3s
JIRN  Jiri                3.98 116  ePn       Pn        02 13 24.4  +3.7
JIRN                                eSn       Sn        02 14 12.4  +4.4
      445nm,0.2s
```

MAN 06 03:01:56.7, 12.72N×**125.87E, h21^{km}, mb4.1, ML2.9, MS2.6, Samar**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time        Res
                                     Op       ISC       h  m  s      ISC
CNP   Catarman            1.19 260  eP        Pn        03 02 17.4  -1.0
CNP                                 eS        Sb        03 02 32.4  -1.2
PLP   Palo                1.78 209  eP        Pn        03 02 25.8  -0.9
PLP                                 eS        Sn        03 02 46.9  -2.0
PVCP  Virac               1.88 298  eP        Pn        03 02 28.1  -0.1
PVCP                                eS        Sn        03 03 00.1  +8.6
MSLP  Maasin              2.76 201  eP        Pn        03 02 40.5  -0.3
MSLP                                eS        Sn        03 03 16.3  +2.6
```

NEIC ***06*** *03:04:12.9, 16.91N×99.48W, h36^{km}, MD3.9(MEX), After MEX.*

MEX 06 03:04:12.9±1.0**, 16.91N**×**99.48W, h36^{km}**±22^{km}**, MD3.9, Near coast of Guerrero**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time        Res
                                     Op       ISC       h  m  s      ISC
ACX   Acapulco            0.42 264  i P       P         03 04 20.5  -1.9
ACX                                 i S       S         03 04 27.5  -1.5
CAIG  El Cayaco           0.76 281  i P       P         03 04 25.3  -1.9
CAIG                                i S       S         03 04 35.0  -2.6
PLIG  Platanillo          1.48 359  i P       P         03 04 36.6  -0.8
PLIG                                i S       S         03 04 52.9  -2.8
PPM   Popocatepetl        2.29  21  i P       P         03 04 49.5  +0.3
PPM                                 eP                  03 04 51.0
PPM                                 i S       S         03 05 13.3  -3.1
PPM   Popocatepetl        2.29  21  i P       P         03 04 49.5  +0.3
PPM                                 i S       S         03 05 13.3  -3.1
VHO   Vista Hermosa       2.64  86  i P       P         03 04 54.1  +0.1
VHO                                 i S       S         03 05 22.4  -2.7
OXX   Oaxaca              2.65  86  eP        P         03 04 55.0  +0.9
OXX                                 i S       S         03 05 30.0  +4.6
```

IDC 06 03:07:47.0±1.3**, 5.35N**×**126.61E, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/15**, mbtmp3.8**/4**, MS3.9**/1**, Ms1 3.8**/1**, ms1mx3.0**/21**, Error ellipse: s-maj=74.5km s-min=31.7km az=68.0, Mindanao**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time        Res
                                     Op       ISC       h  m  s      ISC
WRA   Warramunga Arr     26.25 163   P        P         03 13 24.3  -1.6
      0.4nm,0.8s,baz=343,slow=11,SNR=3.1
STKA  Stephens Creek     39.67 160   LR       LR        03 30 04.6
      comp=Z,189nm,21.8s,baz=202,slow=34
MKAR  Makanchi Array     56.17 325   P        P         03 17 28.6  -2.3
      0.2nm,0.4s,baz=122,slow=6.8,SNR=5.8
MKAR                                 PcP      PcP       03 18 26.6  -2.1
      0.4nm,0.7s,baz=124,slow=4.4,SNR=3.7
ILAR  Eielson Array      83.71  25   P        P         03 20 17.6  -1.2
      0.6nm,1.0s,baz=249,slow=4.3,SNR=4.3
FINES FINESS Array B     90.36 332   P        P         03 20 49.7  -1.5
      2.1nm,0.8s,baz=68,slow=7.5,SNR=7.7
```

CSEM ***06*** *03:46:19.0±1.3, 11.96N×43.53E, h3^{km}, ML4.5, Error ellipse: s-maj=33.3km s-min=26.0km az=110.0, After DHMR*

DHMR 06 03:46:19.0±1.5**, 11.96N**×**43.53E, h3^{km}**±11^{km}**, ML4.5, 5C-2D, Ethiopia**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time        Res
                                     Op       ISC       h  m  s      ISC
TRBA  At Turbah           1.38  24  i P       Pb        03 46 45.6  +0.5
TRBA                                i S       Sb        03 47 04.2  +1.1
TRBA                                 AML      AML       03 47 05.6
      comp=E,9µm,0.3s
UDYN  Al ‘Udayn           2.04  12⇑iP        Pn        03 46 55.9  +1.4
UDYN                                i S       Sn        03 47 24.1  +3.3
UDYN                                 AML      AML       03 47 30.6
      comp=N,7µm,0.6s
UDYN  Al ‘Udayn           2.04  12⇑iP        Pn        03 46 55.9  +1.3
UDYN                                i S       Sn        03 47 24.1  +3.3
      comp=N,4µm,0.6s
LBOS                      2.53  41⇓eP        Pn        03 47 03.5  +1.8
LBOS                                i S       Sn        03 47 38.3  +4.9
DHBB  Dhamar BB           2.72  18⇑iP        Pn        03 47 06.8  +2.4
DHBB                                i S       Sn        03 47 44.0  +5.7
BDHA  Al Bayda’           2.82  45⇑eP        Pn        03 47 07.4  +1.7
BDHA                                i S       Sn        03 47 46.3  +5.6
BDHA                                 AML      AML       03 47 56.9
      comp=N,4µm,0.5s
BDHA  Al Bayda’           2.82  45⇑eP        Pn        03 47 07.4  +1.7
BDHA                                i S       Sn        03 47 46.3  +5.7
      comp=N,2µm,0.5s
SANA  San‘a               3.47  11⇓iP        Pn        03 47 15.9  +1.0
```

MOS ***06*** *04:59:23.5±1.5, 36.62N×42.83E, h33^{km}, mb4.1/1, Error ellipse: s-maj=20.6km s-min=11.7km az=92.6*

IDC ***06*** *04:59:26.1±1.8, 36.89N×42.98E, h31^{km}±6^{km}, mb3.4/4, mb1 3.6/9, mb1mx3.5/23, mbtmp3.6/9, ML3.5/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/25, Error ellipse: s-maj=31.2km s-min=16.0km az=168.0*

NEIC ***06*** *04:59:29.1±2.1, 37.24N×42.99E, h35^{km}, ML3.8(ISK), Error ellipse: s-maj=37.0km s-min=13.5km az=168.0*

ISK ***06*** *04:59:31.0, 38.09N×42.56E, h5^{km}, MD3.8*

CSEM ***06*** *04:59:36.4±0.1, 38.36N×42.29E, h25^{km}, MD3.8, Error ellipse: s-maj=3.8km s-min=3.5km az=154.0*

ISC 06 04:59:32.3±0.8**, 38.07N**±0.04×**42.58E**±0.03**, h6^{km}**±7^{km}**, n52, σ1§27**/62**, mb3.3**/4**, MS3.1**/1**, Turkey**

```
Code  Station Name        Δ°   AZ°    Phase ID           Time        Res
                                     Op       ISC       h  m  s      ISC
VANT  Van                 0.74  59  i PG      Pg        04 59 44.5  -2.6
TVAN  Van                 0.80  54  i P       Pb        04 59 45.8  -2.4
TVAN                                i S       Sb        05 00 02.5  +3.5
VANB  Van                 0.83  50   PG       Pg        04 59 47.9  -0.9
BTMT  Batman              0.87 279   PG       Pg        04 59 50.7  +1.1
HAKT  HAKKARI             1.03 119  i P       Pb        04 59 51.6  -0.5
HAKT                                i S       Sb        05 00 06.1  +0.4
HKR   Hakkari             1.04 118   PG       Pg        04 59 52.5  -0.6
HKR                                  SG       Sg        05 00 08.5  +1.5
BNGL  BINGOL              1.43 309  i P       Pn        04 59 59.0  +0.2
BNGL                                i S       Sb        05 00 16.6  -0.6
MARD  Mardin              1.61 243  i P       Pn        05 00 01.8  +0.3
MARD                                i S       Sb        05 00 25.2  +2.6
MSL   Mosul               1.82 167  i x       x         05 00 11.5
MSL                                 i x       x         05 00 13.0
MSL                                 i x       x         05 00 15.5
MSL                                 i x       x         05 00 36.5
MSL                                 i x       x         05 00 38.2
MSL                                 i x       x         05 00 39.5
MSL                                 i x       x         05 00 40.5
BINT  Bingol              1.83 297   PN       Pn        05 00 04.8  +0.2
BINT                                 SN       Sn        05 00 29.5  +1.2
DIY   Diyarbakir          1.86 265   PN       Pn        05 00 05.3  +0.2
ERZM  Erzurum             2.06 333  i P       Pn        05 00 09.3  +1.4
ERZM                                i S       Sn        05 00 41.3  +7.0
KARS  Kars                2.57   9   PN       Pn        05 00 15.7  +0.5
GNI   Garni               2.68  38   PN       Pn        05 00 16.5  -0.2
GNI   Garni               2.68  38   Pn       Pn        05 00 19.9  +3.2
      1.5nm,0.3s,baz=64,slow=3.3,SNR=4.7
GNI                                  Sn       Sn        05 01 01.4   +12
      3.6nm,0.3s,baz=308,slow=23,SNR=7.2
GNI   Garni               2.68  38  eP        Pn        05 00 18.1  +1.4
GNI                                  Sn       Sn        05 01 01.4   +12
GNI   Garni               2.68  38   P        Pn        05 00 19.9  +3.2
GNI                                                     05 01 01.4
GNI                                  pmax     pmax
      comp=Z,2.0nm,0.3s
GNI   Garni               2.68  38  eP        Pn        05 00 18.1  +1.4
EZC   Erzincan            2.73 309   PN       Pn        05 00 21.3  +3.8
ELZG  Elazig              2.86 280  i P       Pn        05 00 17.9  -1.4
ELZG                                i S       Sn        05 00 53.9  -0.7
URFA  Urfa                3.04 259   PN       Pn        05 00 22.1  +0.2
ARTV  Artvin              3.15 351  i P       Pn        05 00 23.7  +0.2
MYA   Malataya            3.28 276   PN       Pn        05 00 25.4  +0.1
KELT  Kelkit              3.32 310  eP        Pn        05 00 28.3  +2.5
KELT                                i S       Sn        05 01 06.1   0.0
GUMT  Gumushane           3.39 316   PN       Pn        05 00 26.6  -0.3
ATAB  Bozova              3.44 261  i P       Pn        05 00 26.2  -1.5
TI2   Plekhanov           4.03  24  eP        Pn        05 00 45.0  +9.1
GZT   Gaziantep           4.04 261  i P       Pn        05 00 41.5  +5.4
GAZ   Gaziantep           4.35 260   PN       Pn        05 00 40.6  +0.1
ZEI   Tsey                4.80  12  eP        Pn        05 00 55.2  +8.2
HWQ   Hawqa               6.56 237  ePn       Pn        05 01 11.1  -0.7
BHL   Bhannes             6.98 236  ePn       Pn        05 01 18.3  +0.7
BR131 Keskin Array S      7.17 286  eP        Pn        05 01 19.7  -0.5
      comp=Z,3.5nm,0.7s
BR131 Keskin Array S      7.17 286  eP        Pn        05 01 19.7  -0.5
BRTR  Keskin Array B      7.17 286   Pn       Pn        05 01 19.6  -0.6
      comp=Z,0.1nm,0.3s,baz=111,slow=13,SNR=7.9
BRTR  Keskin Array B      7.17 286   Pn       Pn        05 01 19.6  -0.6
ANTO  Ankara              7.83 286   P        Pn        05 01 26.2  -3.3
ANTO  Ankara              7.83 286   P        Pn        05 01 26.2  -3.4
```

MLR	Muntele Rosu	14.44	306	Pn	P	05 03 01.4	+2.2
	comp=Z,0.4nm,0.3s,baz=157,slow=15,SNR=4.2						
AKASG	Malin Array Be	15.80	327	Pn	P	05 03 20.1	+3.3
	comp=Z,1.1nm,0.3s,baz=140,slow=10,SNR=8.4						
AKASG	Malin Array Be	15.80	327	P	P	05 03 20.1	+3.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	16.55	37	P	P	05 03 26.7	+0.3
	comp=Z,0.1nm,0.3s,baz=223,slow=13,SNR=5.4						
AKTO				sP		05 03 38.8	
	comp=Z,0.2nm,0.3s,baz=234,slow=9.6,SNR=6.2						
TIP	Timpagrande	20.19	281	*e*P	P	05 04 08.6	-1.8
TIP	Timpagrande	20.19	281	*e*P	P	05 04 08.6	-1.8
GERES	GERESS Array B	23.43	307	P	P	05 04 40.8	-2.1
	comp=Z,0.2nm,0.5s,mb2.8,baz=114,slow=10,SNR=2.8						
GERES				sP		05 04 55.2	
	comp=Z,0.6nm,0.8s,baz=117,slow=8.8,SNR=3.7						
GERES	GERESS Array B	23.43	307	P	P	05 04 40.8	-2.0
GERES				*SP		05 04 55.2	
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
DAVOX	Davos	25.51	300	P	P	05 05 01.4	-1.5
	comp=Z,1.5nm,0.6s,mb3.7,baz=72,slow=5.6,SNR=5.9						
FINES	FINESS Array B	25.56	342	P	P	05 05 02.0	-1.2
	comp=Z,2.0nm,0.9s,mb3.7,baz=149,slow=11,SNR=5.7						
FINES				LR	LR	05 17 51.9	
	comp=Z,56nm,20.8s,MS3.1,baz=159,slow=41						
FINES	FINESS Array B	25.56	342	P	P	05 05 02.0	-1.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FINES				MLR	MLR		
	comp=Z,56nm,20.8s						
MKAR	Makanchi Array	30.31	60	P	P	05 05 37.5	-9.0
	comp=Z,0.3nm,0.9s,mb3.0,baz=290,slow=9.3,SNR=2.6						
MKAR				pP	pP	05 05 46.6	-1.6
	comp=Z,1.3nm,0.7s,baz=263,slow=7.0,SNR=13						
MKAR				sP	sP	05 05 49.8	+0.9
	comp=Z,1.3nm,0.7s,baz=265,slow=6.9,SNR=13						
MKAR	Makanchi Array	30.31	60	P	P	05 05 37.5	-9.0
MKAR				pP	pP	05 05 46.6	-1.6
MKAR				sP	sP	05 05 49.8	+0.9
MKAR	Makanchi Array	30.31	60	P	P	05 05 37.5	-9.0
MKAR				*PP	pP	05 05 46.6	-1.6
MKAR				*SP	sP	05 05 49.8	+0.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

JMA 06 05:18:27.1±0.2,37.82N×142.19E,h37^{km}±3^{km},M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.92	314	P	P	05 18 43.9	+0.3
JIO				S	S	05 18 55.7	-0.1
JMM	Marumori	1.11	273	P	P	05 18 46.6	+0.3
JMM				S	S	05 19 00.5	-0.1
JFK	Kawauchi	1.14	247	P	P	05 18 46.6	-0.1
JOU	Okura	1.32	295	P	P	05 18 50.3	+0.9
JOU				S	S	05 19 07.5	+1.4
JMK	Ichinoseki	1.36	326	P	P	05 18 50.7	+0.7
JFT	Otama	1.50	259	S	S	05 19 11.8	+1.2
JYK	Kaneyama	1.81	308	P	P	05 18 57.3	+0.9
MAT	Matsushiro	3.43	249	P	P	05 19 20.7	+1.3
MAT				*e*S	S	05 20 01.0	+1.6

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*THR **06** 05:39:20.1±0.3,31.23N×59.47E,h14^{km}±5^{km},ML3.8*
*CSEM **06** 05:39:24.0±0.6,31.47N×58.89E,h12^{km},ML3.6,Error ellipse: s-maj=20.8km s-min=5.5km az=127.0*
*TEH **06** 05:39:35.4,32.27N×57.87E,h8^{km},Mn3.6*
ISC 06 05:39:21.6±1.2,**31.29N**±0.08×**59.2E**±0.1,**h10^{km},n15, σ1^{s}.47**/16,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHSF	Zahedan	2.16	140	*e*PG	Pn	05 39 55.9	-2.2
KRBR	Kerman	2.46	239	*e*PN	Pn	05 40 04.6	+2.2
KRBR				*e*SG	Sg	05 40 43.0	-0.6
KRBR				AML	AML	05 40 56.4	
	comp=N,477nm,0.5s						
IBAF	Bafgh	3.11	277	Pn	Pn	05 40 10.9	-0.8
IMEH	Mehriz	3.91	273	Pn	Pn	05 40 21.0	-2.1
ICHK	Chekchek	4.18	284	Pn	Pn	05 40 25.8	-1.1
BNDS	Bandar-Abbas	4.68	215	*e*PN	Pn	05 40 33.8	-0.2
IMOG	Moghan	4.81	1	Pn	Pn	05 40 36.6	+0.8
MHI	Mashhad	5.01	3	Pn	Pn	05 40 39.9	+1.2
IMYA	Miamay	5.10	8	Pn	Pn	05 40 47.6	+7.7
IPAY	Payeh	5.15	358	Pn	Pn	05 40 37.4	-3.3
IPAR	Pars	5.49	256	Pn	Pb	05 40 59.0	+1.7
IKRD	Kardeh	5.50	354	Pn	Pn	05 40 45.0	-0.6
NASN	Na'in	5.62	287	*e*PN	Pn	05 40 49.1	+1.8
NASN				AML	AML	05 42 31.1	
	comp=N,31nm,0.4s						
IDMV	Damavand	7.35	308	Pn	Pn	05 41 01.8	-10
IDMV				Sn	Sn	05 42 07.0	-29
IAFJ	Afjeh	7.72	308	Pn	Pn	05 41 06.8	-10

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*ATH **06** 05:56:54.9,38.22N×26.93E,h24^{km},MD3.0/3*
*ISK **06** 05:56:55.5,38.22N×26.63E,h22^{km},MD3.0*
*CSEM **06** 05:56:55.5±0.1,38.22N×26.65E,h22^{km},MD3.0,Error ellipse: s-maj=2.9km s-min=1.1km az=101.0*
ISC 06 05:56:52.8±1.5,**38.09N**±0.04×**26.51E**±0.07,**h1^{km}**±8^{km},**n12,σ0^{s}.99**/19,**2C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.28	13	*i* P	Pg	05 56 58.5	0.0
URLA				*i* S	Sg	05 57 02.4	+0.2
SMG	Samos	0.46	146	⇑*i*PN	Pn	05 57 05.5	-0.5
SMG				*e*SN	Sn	05 57 13.1	-1.8
BLCB	Balcova	0.51	54	*i* PG	Pg	05 57 03.6	+0.5
IZM	Izmir	0.67	62	PG	Pg	05 57 06.8	+0.6
IZM				SG	Sg	05 57 14.8	-0.2
KDAG	Bornova	0.67	62	*i* P	Pg	05 57 05.6	-0.7
KDAG				*i* S	Sg	05 57 14.0	-1.3
PRK	Paraskevi	1.17	351	⇑*i*PN	Pn	05 57 16.8	+0.5
PRK				*e*SN	Sn	05 57 32.9	-0.2
MLSB	Milas	1.28	128	*e*PN	Pn	05 57 18.8	+1.1
MLSB				*e*SN	Sn	05 57 36.0	+0.3
APE	Apeiranthos	1.28	218	*e*PN	Pn	05 57 23.9	+6.1
AKS	Akhisar	1.29	52	PN	Pn	05 57 16.8	-1.2
MANT	Manisa	1.66	75	*i* P	Pn	05 57 25.5	+2.3
MANT				*i* S	Sb	05 57 46.5	+1.3
YER	Yerkesik	1.70	124	*e*PN	Pn	05 57 24.6	+0.8
BALB	Balikesir	1.88	34	*e*PN	Pn	05 57 24.9	-1.5

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*JMA **06** 05:58:44.5±0.3,29.31N×130.59E,h14^{km}±4^{km},M3.7*
*IDC **06** 05:58:46.9±2.1,29.32N×130.52E,h46^{km}±24^{km},mb3.4/4, mb1 3.5/7,mb1mx3.4/23,mbtmp3.6/7,ML3.2/3,MS3.1/3, Ms1 3.1/3,ms1mx2.6/37,Error ellipse: s-maj=35.9km s-min=16.5km az=92.0*
ISC 06 05:58:46.1±0.8,**29.33N**±0.05×**130.5E**±0.1,**h57^{km}**±8^{km},**n16,σ0^{s}.91**/20,**mb3.5**/4,**MS3.1**/1,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.76	313	P	P	05 59 00.0	-1.0
JNN				*e*S	S	05 59 11.1	-0.9
JKC	Kuchinoerabu	1.17	346	P	P	05 59 06.2	-0.3
JKC				S	S	05 59 22.6	+0.9
JAM	Amami Oshima	1.21	221	P	P	05 59 07.3	+0.2
JAM				*e*S	S	05 59 23.3	+0.6
JTN	Tanegashima 3	1.39	17	P	P	05 59 09.4	-0.3
JTN				S	S	05 59 28.6	+1.4
JTSR	Tashiro 2	1.87	11	P	P	05 59 17.3	+1.0
JTK	Tokunoshima	2.06	222	P	P	05 59 19.1	+0.1
JSU	Suzuyama	2.17	359	P	P	05 59 21.0	+0.3
JOW	Kunigami	3.17	219	P	P	05 59 33.8	-1.1
	3.2nm,0.3s,baz=160,slow=23,SNR=4.6						
JOW				S	S	06 00 15.3	+3.6
	4.6nm,0.3s,baz=107,slow=20,SNR=3.0						
JNU	Nakatsue	3.80	5	P	P	05 59 43.5	-0.1
	3.0nm,0.3s,baz=188,slow=16,SNR=12						
JNU				S	S	06 00 26.6	-0.8
	2.1nm,0.3s,baz=205,slow=14,SNR=2.9						
JHJ	Hachijo jima 2	8.79	62	LR	LR	06 02 58.5	
	comp=Z,92nm,21.1s,baz=293,slow=28						
MJAR	Matsushiro Arr	9.67	40	P	P	06 01 04.0	-1.2
	0.4nm,0.3s,baz=236,slow=14,SNR=4.1						
ASAJ	Asahikawa	17.63	30	LR	LR	06 09 19.5	
	comp=Z,57nm,19.1s,baz=305,slow=36						
SONM	Songino Array	26.22	321	P	P	06 04 18.7	+1.4
	0.7nm,0.6s,mb3.4,baz=143,slow=9.7,SNR=4.7						
SONM				LR	LR	06 16 04.1	
	comp=Z,59nm,19.6s,MS3.1,baz=44,slow=40						
MKAR	Makanchi Array	41.08	309	P	P	06 06 26.3	+0.7
	0.2nm,0.5s,mb3.0,baz=93,slow=8.3,SNR=4.3						
WRA	Warramunga Arr	49.12	175	P	P	06 07 29.9	-0.2
	0.9nm,1.1s,mb3.7,baz=359,slow=8.3,SNR=3.5						
BVAR	Borovoye Array	49.38	316	P	P	06 07 30.2	-1.4
	1.0nm,0.5s,mb4.1,baz=112,slow=7.8,SNR=5.4						

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*NIED **06** 06:00:00,41.90N×144.60E,h8^{km},Mw3.5 Best double couple: M$_0$1.72×10^{14} NP1:φ$_s$299°,δ69°,λ-34°. NP2:φ$_s$43°, δ59°,λ-156°.*
JMA 06 06:00:12.3,41.90N×144.57E,h21^{km}±1^{km},M3.5, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	1.06	277	P	Pb	06 00 31.6	-0.2
JAK	Akkeshi	1.10	5	P	Pb	06 00 31.9	-0.6
JAK				*e*S	Sb	06 00 47.1	+0.7
JOB	Onbets	1.14	332	P	Pb	06 00 32.9	-0.3
JCH	Churui	1.15	309	P	Pn	06 00 32.8	-0.5

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*IDC **06** 06:10:49.4±9.6,34.41N×26.95E,mb4.1/2,mb1 4.0/3, mb1mx3.6/18,mbtmp3.8/3,ML3.5/1,Error ellipse: s-maj=156.6km s-min=34.2km az=179.0*
*ATH **06** 06:10:52.0,34.23N×26.47E,h25^{km}±9^{km},MD3.4/4*
*HLW **06** 06:10:52.4,34.61N×26.58E,h15^{km},Mb3.3*
*CSEM **06** 06:10:52.3±0.1,34.36N×26.62E,h5^{km},ML3.3,Error ellipse: s-maj=7.5km s-min=2.6km az=65.0*
*NEIC **06** 06:10:52.0,34.23N×26.47E,h25^{km},MD3.4(ATH),After ATH.*
ISC 06 06:10:54.4±0.5,**34.42N**±0.04×**26.66E**±0.08,**h33^{km},n16, σ1^{s}.16**/21,**mb4.0**/2,**3D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.92	300	*e*PN	Pn	06 11 09.5	-1.5
XRY				*e*SN	Sn	06 11 22.5	-0.6
KARP	Karpathos	1.20	20	*e*PN	Pn	06 11 18.5	+3.3
NPS	Neapolis	1.20	315	*e*PN	Pn	06 11 16.0	+0.8
IDI	Anoyia	1.69	301	Pn	Pn	06 11 23.4	+1.2
	3.5nm,0.3s,baz=128,slow=9.0,SNR=22						
IDI				Sn	Sn	06 11 48.1	+5.2
	8.3nm,0.3s,baz=18,slow=19,SNR=10						
APE	Apeiranthos	2.80	341	*e*PN	Pn	06 11 39.0	+1.0
SLUM		3.16	203	P	P	06 11 43.8	+0.8
HMAT	Matruh	3.33	173	P	P	06 11 46.7	+1.3
HMAT				S	S	06 12 25.6	+1.3
HBRG	Burj al 'Arab	4.68	144	P	P	06 12 04.8	+0.2
HBRG				S	S	06 12 58.2	-0.2
SWA1		5.20	189	⇓P	P	06 12 12.0	+0.2
SWA1				S	S	06 13 09.7	-1.8
SWA2		5.26	192	⇓P	P	06 12 12.8	+0.1
AWBH		6.37	162	P	P	06 12 28.5	+0.1
AMAG	Maghara	6.69	122	P	P	06 12 31.9	-0.9
HFRF	Wahat Farafira	7.38	168	⇓P	P	06 12 41.8	-0.7
GERES	GERESS Array B	17.33	330	P	P	06 14 55.7	+0.6
	0.1nm,0.3s,baz=148,slow=13,SNR=4.4						
FINES	FINESS Array B	27.05	359	P	P	06 16 32.7	-2.7
	1.4nm,0.8s,mb3.5,baz=168,slow=13,SNR=2.6						
ARCES	ARCESS Array B	35.18	359	P	P	06 17 45.0	-1.8
	5.7nm,1.0s,mb4.5,baz=174,slow=8.4,SNR=6.6						

IDC 06 06:15:23.8±32.0,**0.18N**×**97.61E**,**mb3.9**/4,**mb1 4.0**/4, **mb1mx3.7**/16,**mbtmp3.9**/4,**Error ellipse: s-maj=634.7km s-min=137.4km az=168.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	48.08	8	P	P	06 24 05.2	-1.9
	0.3nm,0.4s,baz=193,slow=9.4,SNR=3.8						
MKAR	Makanchi Array	48.32	346	P	P	06 24 07.0	-2.0
	1.2nm,0.6s,baz=161,slow=7.9,SNR=17						
ZAL	Zalesovo	54.62	351	P	P	06 24 53.9	-2.4
	1.1nm,0.3s,baz=294,slow=7.1,SNR=4.9						
BVAR	Borovoye Array	57.34	341	P	P	06 25 13.5	-2.5
	0.7nm,0.5s,baz=135,slow=8.2,SNR=5.0						

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*SKO **06** 06:40:16.6,41.30N×20.98E,h15^{km}*
*NEIC **06** 06:40:17.5,41.30N×20.90E,h7^{km},MD2.9(PDG), ML3.0(SKO),After SKO.*
*PDG **06** 06:40:18.1±0.3,41.37N×20.80E*
*CSEM **06** 06:40:18.3±0.1,41.35N×21.06E,h2^{km},ML3.0,Error ellipse: s-maj=2.8km s-min=1.6km az=43.0*
*THE **06** 06:40:19.6,41.29N×21.12E,h10^{km},ML2.7*
ISC 06 06:40:17.2±0.3,**41.32N**±0.02×**21.02E**±0.03,**h10^{km},n28, σ1^{s}.30**/47,**10C,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.27	218	*e*Pg	Pg	06 40 21.7	-1.1
OHR				*e*Sg	Sg	06 40 25.5	-1.1
BIA	Bitola	0.38	142	⇑*i*Pg	Pg	06 40 24.6	-0.4
BIA				*e*Sg	Sg	06 40 32.1	+1.8
FNA	Florina	0.60	153	*e*Pg	Pg	06 40 28.7	-0.7
	comp=Z,18nm,0.2s						
FNA				*e*Sg	Sg	06 40 38.3	+0.8
SKO	Skopje	0.72	26	*e*Pg	Pg	06 40 31.8	+0.1
SKO				*e*Sg	Sg	06 40 42.2	+0.7
SKO	Skopje	0.72	26	*e*Pg	Pg	06 40 31.8	0.0
SKO				*e*Sg	Sg	06 40 42.2	+0.7
SKO				Lg		06 40 43.0	
GRG	Griva	1.11	109	*e*Pg	Pg	06 40 38.8	-0.6
VAY	Valandovo	1.17	90	*i* Pg	Pg	06 40 39.8	-0.9
VAY				*e*Sg	Sg	06 40 56.3	0.0
KNT	Kendrikon	1.43	96	*e*Pg	Pg	06 40 44.6	-1.2
	comp=Z,3.3nm,0.6s						
KNT				*e*Sg	Sg	06 41 04.7	-0.1
ULC	Ulcinj	1.47	296	*e*Pg	Pg	06 40 41.2	-5.4
ULC				*e*Sg	Sg	06 41 02.8	-3.5
PVY	Plav	1.49	329	⇑*i*Pg	Pg	06 40 43.3	-3.7
PVY				*e*Sg	Sg	06 41 04.9	-2.0
MEV	Metsovon	1.54	174	*e*Pg	Pg	06 40 46.7	-1.3
THE	Thessaloniki	1.63	114	*e*Pg	Pg	06 40 48.1	-1.7
KKB	Krupnik	1.64	70	P	Pn	06 40 47.5	+1.1
TTG	Podgorica	1.72	311	⇑*i*Pg	Pg	06 40 46.2	-5.3
TTG				*e*Sg	Sg	06 41 11.1	-3.3
IVA	Berane	1.76	332	⇑*i*Pn	Pn	06 40 48.2	+0.1
IVA				*e*Sn	Sn	06 41 13.4	+2.8
SOH	Sokhos	1.84	105	*e*Pb	Pb	06 40 50.9	+0.4
SOH	Sokhos	1.84	105	*e*Pb	Pb	06 40 50.8	+0.3
BUM	Brajici-Budva	1.86	302	⇑*i*Pn	Pn	06 40 49.5	0.0
BUM				*e*Sn	Sn	06 41 15.9	+2.6
IGT	Igoumenitsa	1.86	197	*e*Pb	Pb	06 40 51.9	+0.9
IGT				*e*Sb	Sb	06 41 18.3	+4.1
MMB	Musomiste	2.06	82	P	Pn	06 40 56.0	+3.7
VTS	Vitosha	2.07	51	P	Pn	06 40 53.5	+1.0
NKY	Niksic	2.12	315	⇑*i*Pn	Pn	06 40 53.9	+0.7
NKY				*e*Sn	Sn	06 41 22.3	+2.5
HCY	Herceg Novi	2.19	302	⇑*i*Pn	Pn	06 40 54.2	-0.1
HCY				*e*Sn	Sn	06 41 23.2	+1.6
NVSS	Nova Varos 2	2.39	336	⇑*i*Pn	Pn	06 40 56.5	-0.6
NVSS				Sn	Sn	06 41 24.8	-2.0
BRY	Bratogost	2.42	311	⇑*i*Pn	Pn	06 40 57.8	+0.2
BRY				*e*Sn	Sn	06 41 28.3	+0.7
UPM	Unac-Piva	2.44	321	⇑*i*Pn	Pn	06 40 58.7	+0.9
UPM				*e*Sn	Sn	06 41 30.5	+2.4
AGG	Agios Georgios	2.51	156	*e*Pn	Pn	06 40 59.6	+0.9
DIVS	Divcibare	2.88	345	*e*Pn	Pn	06 41 03.6	-0.4
DIVS				Sn	Sn	06 41 36.8	-2.3

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*NEIC **06** 06:53:32.1,16.43N×98.80W,h2^{km},MD3.9(MEX),After MEX.*
MEX 06 06:53:32.4±0.6,**16.49N**×**98.78W,h3^{km}**±12^{km},**MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.63	98	*i* P	Pg	06 53 44.0	-1.0
PNIG				*i* S	Sg	06 53 53.5	+0.1
PNIG	Pinotepa	0.63	98	*i* P	Pg	06 53 44.0	-1.0
PNIG				*i* S	Sg	06 53 53.9	+0.4
CAIG	El Cayaco	1.53	292	*i* P	Pn	06 53 56.8	-4.0
CAIG				*i* S	Sb	06 54 16.3	-4.5
PLIG	Platanillo	2.02	340	*i* P	Pn	06 54 04.3	-3.4
PLIG				*i* S	Sn	06 54 30.4	-3.3
VHO	Vista Hermosa	2.04	73	*e*P	Pn	06 54 03.1	-5.0
VHO				*i* S	Sn	06 54 30.5	-3.9
VHO	Vista Hermosa	2.04	73	*e*P	Pn	06 54 05.9	-2.1
VHO				*i* S	Sn	06 54 30.5	-3.9
OXX	Oaxaca	2.06	73	*e*P	Pn	06 54 11.0	+2.8
OXX				*i* S	Sn	06 54 37.5	+2.8
YAIG	Yautepec	2.38	353	*i* P	Pn	06 54 07.7	-5.2
YAIG				*i* S	Sn	06 54 38.5	-4.5
YAIG	Yautepec	2.38	353	*i* P	Pn	06 54 11.2	-1.7
YAIG				*i* S	Sn	06 54 40.6	-2.4
PPM	Popocatepetl	2.57	3	*e*P	Pn	06 54 15.0	-0.6
PPM				*e*P		06 54 15.7	
PPM				*i* S	Sn	06 54 45.1	-2.7
PPM	Popocatepetl	2.57	3	*e*P	Pn	06 54 15.7	+0.1
PPM				*i* S	Sn	06 54 45.1	-2.7
CMIG	Matias Romero	3.78	80	*e*P	Pn	06 54 27.1	-5.7
CMIG				*i* S	Sn	06 55 12.5	-5.9

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*CSEM **06** 07:26:32.3±0.5,51.45N×16.13E,h1^{km},ML3.2/7,Error ellipse: s-maj=6.5km s-min=3.5km az=7.0*
*PRU **06** 07:26:33.2,51.38N×16.11E*
*IPEC **06** 07:26:33.0±0.4,51.41N×16.56E,ML1.9/3,Error ellipse: s-maj=3.7km s-min=2.2km az=80.0*
*VIE **06** 07:26:33.6±0.4,51.29N×16.18E,mb2.0/2,ML2.6/3,Error ellipse: s-maj=3.1km s-min=2.6km az=81.0,Suspected Mining induced.*
WAR 06 07:26:32.2,51.48N×16.11E,h1^{km},ML2.7,2C-2D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	170	⇓*i*PG	Pg	07 26 44.0	-1.1
KSP				⇓*e*SG	Sg	07 26 52.0	-1.7
KSP	Ksiaz	0.65	170	*e*Pg	Pg	07 26 44.0	-1.0
KSP				*e*Sg	Sg	07 26 52.4	-1.2
KSP	Ksiaz	0.65	170	*e*Pg	Pg	07 26 43.9	-1.2
KSP				*e*Sg	Sg	07 26 52.4	-1.3
UPC	Upice	0.97	184	*e*PG	Pg	07 26 49.9	-1.7
PVCC	Panska Ves	1.36	226	*e*PG	Pg	07 26 57.6	-1.8
PRU	Pruhonice	1.79	214	*e*PG	Pg	07 27 04.9	-3.1
PRU				*e*SG	Sg	07 27 27.9	-4.0
	17nm,0.3s						
MORC	Moravsky Berou	1.93	151	*e*Pn	Pn	07 27 04.8	-1.7
MORC				*e*Sg	Sg	07 27 27.7	-8.8
CLL	Collm	1.96	266	*e*PG	Pg	07 27 08.0	-3.2
CLL				*i*		07 27 11.2	
CLL				*e*SG	Sg	07 27 35.0	-2.3
OKC	Ostrava-Krasne	2.09	141	*e*PG	Pg	07 27 10.3	-3.6
OKC				*e*SG	Sg	07 27 38.0	-3.8
	12nm,0.3s						
VRAC	Vranov	2.19	172	*e*Pn	Pn	07 27 09.1	-1.2
VRAC				*e*Sg	Sg	07 27 38.7	-6.5
	7.7nm,0.2s						
KRUC	Moravsky	2.42	176	*e*Pn	Pn	07 27 13.2	-0.4
KRUC				*e*Sg	Sg	07 27 47.2	-5.7
	8.2nm,0.4s						
NKC	Novy Kostel	2.63	243	*e*PN	Pn	07 27 15.5	-1.1
NKC				*e*PG	Pg	07 27 21.2	-3.6
NKC				*e*SG	Sg	07 27 56.0	-3.9
	25nm,0.2s						
OJC	Ojcow	2.65	117	*e*PG	Pg	07 27 23.0	-2.2
OJC				*e*SG	Sg	07 27 56.0	-4.6
KHC	Kasperske Hory	2.86	216	*e*PN	Pn	07 27 18.5	-1.2
KHC				*e*PG	Pg	07 27 23.9	-5.3
KHC				*e*SN	Sn	07 27 52.3	-2.9
KHC				*e*SG	Sg	07 28 01.5	-5.8
	7.7nm,0.3s						
SMOL	Smolenice	3.09	164	*e*SG	Sg	07 28 11.5	-3.4
MOA	Molln	3.82	199	⇑*i*Pn	Pn	07 27 31.7	-1.8
MOA				⇑*i*Sg	Sg	07 28 35.0	-4.5
	comp=Z,4.6nm,0.4s						

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*NEIC **06** 07:42:23.8,39.24N×23.34E,h18^{km},ML3.4(ATH),After ATH.*
*ATH **06** 07:42:24.0,39.23N×23.34E,h22^{km}±1^{km},MD3.5/11, ML3.4*
*THE **06** 07:42:25.4,39.27N×23.30E,h7^{km},ML3.4*
*CSEM **06** 07:42:25.5±0.1,39.24N×23.31E,h20^{km},ML3.4,Error ellipse: s-maj=1.9km s-min=1.5km az=87.0*
*SOF **06** 07:42:26.9,39.45N×23.61E,h10^{km},MD3.1*
*SKO **06** 07:42:28.1,39.67N×23.44E*
ISC 06 07:42:23.8±0.5,**39.24N**±0.02×**23.31E**±0.03,**h10^{km}**±3^{km},**n43,σ1^{s}.15**/63,**4C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	0.10	312	⇑*i*Pb	Pb	07 42 27.8	+0.4
NEO				*e*Sb	Sb	07 42 29.5	-0.1
XOR	Xorichti	0.16	323	*e*Pg	Pg	07 42 28.7	+1.3
AOS	Alonnisos	0.45	99	*e*Pg	Pg	07 42 34.2	+1.3
AOS				*e*Sg	Sg	07 42 40.9	+1.9
LKR	Lokris	0.64	203	⇑*i*PN	Pn	07 42 36.8	-1.9
LKR				*e*SN	Sn	07 42 45.8	-3.2
PAIG	Paliouri	0.74	22	*e*Pg	Pg	07 42 39.4	+0.7
PAIG				*e*Sg	Sg	07 42 50.2	+1.5
AGG	Agios Georgios	0.80	254	*e*Pg	Pg	07 42 39.1	-0.8
AGG				*e*Sg	Sg	07 42 51.2	+0.7
AGG	Agios Georgios	0.80	254	*e*Pg	Pg	07 42 39.1	-0.7
AGG				*e*Sg	Sg	07 42 51.2	+0.7
LIT	Litokhoron	1.07	324	*e*Pg	Pg	07 42 44.7	-0.5
LIT				*e*Sg	Sg	07 43 00.1	+0.6
PLG	Polygyros	1.13	5	⇑*i*PN	Pn	07 42 46.2	+0.4
OUR	Ouranopolis	1.21	25	*e*Pg	Pg	07 42 47.6	-0.4
	comp=Z,25nm,0.2s						
OUR				*e*Sg	Sg	07 43 04.7	+0.6
ATH	Athens Observa	1.31	166	⇑*i*PN	Pn	07 42 49.0	+0.7
ATH				*e*SN	Sn	07 43 05.5	-0.4
THE	Thessaloniki	1.41	349	*e*Pg	Pg	07 42 50.0	-2.1
	comp=Z,4.2nm,0.2s						
THE				*e*Sg	Sg	07 43 09.1	-1.9
LOS	Limnos	1.53	63	*e*Pg	Pg	07 42 52.6	-1.8
	comp=Z,4.8nm,0.4s						
SOH	Sokhos	1.58	1	*e*Pg	Pg	07 42 52.4	-3.0
SOH				*e*Sg	Sg	07 43 14.0	-2.5
KZN	Kozani	1.59	312	*e*PN	Pn	07 42 53.2	+0.8
MEV	Metsovon	1.70	289	*e*Pb	Pb	07 42 54.5	-0.4
MEV				*e*Sb	Sb	07 43 17.4	+1.2
GRG	Griva	1.85	338	*e*Pb	Pb	07 42 56.3	-1.1
GRG				*e*Sb	Sb	07 43 19.5	-1.0
RLS	Riolos of Patr	1.87	231	*e*PN	Pn	07 42 57.1	+0.8
KNT	Kendrikon	1.94	351	*e*Pb	Pb	07 42 58.6	-0.4
	comp=Z,9.0nm,0.4s						
KNT				*e*Sb	Sb	07 43 22.7	-0.6
JAN	Janina	1.95	283	*e*PB	Pb	07 42 58.0	-1.1
FNA	Florina	2.14	317	*e*Pn	Pn	07 43 00.9	+0.7
	comp=Z,4.0nm,0.3s						
FNA				*e*Sn	Sn	07 43 27.3	+0.2
VAY	Valandovo	2.15	345	*e*Pn	Pn	07 43 00.6	+0.2
VAY				*e*Sn	Sn	07 43 23.0	-4.4
PRK	Paraskevi	2.30	89	*e*PN	Pn	07 43 02.7	+0.3
IGT	Igoumenitsa	2.33	278	*e*Pn	Pn	07 43 04.9	+2.0
IGT				*e*Sn	Sn	07 43 34.2	+2.3
ITM	Ithomi	2.33	208	*e*PB	Pb	07 43 04.5	-1.1
BIA	Bitola	2.34	320	*e*Pn	Pn	07 43 03.7	+0.6
BIA				*e*Sn	Sn	07 43 31.0	-1.2
MMB	Musomiste	2.37	8	*i* P	Pn	07 43 03.5	+0.1
VLS	Valsamata	2.38	244	*e*PB	Pb	07 43 05.3	-1.2
VLI	Veliai	2.54	187	*e*PB	Pb	07 43 07.2	-2.0
RDO	Rodhopi	2.55	41	*e*PN	Pn	07 43 05.7	-0.4
KKB	Krupnik	2.63	356	P	Pn	07 43 07.9	+0.7
ALN	Alexandroupoli	2.67	51	*e*Pn	Pn	07 43 08.1	+0.3
OHR	Ohrid	2.68	315	*e*Pn	Pn	07 43 09.7	+1.7
OHR				*e*Sn	Sn	07 43 41.3	+0.5
OHR	Ohrid	2.68	315	*e*Pn	Pn	07 43 09.6	+1.7
OHR				*e*Sn	Sn	07 43 41.3	+0.5
APE	Apeiranthos	2.79	140	*e*PN	Pn	07 43 09.7	+0.3
KDZ	Kurdzhali	2.89	33	P	Pn	07 43 10.0	-0.9
VTS	Vitosha	3.35	359	*e*P	Pn	07 43 19.0	+1.6
PGB	Panagyurishte	3.37	11	*e*P	Pn	07 43 19.0	+1.3
PVL	Pavlikeni	4.25	20	*e*P	Pn	07 43 28.5	-1.8
BRT	Bari-Castellan	4.96	291	Pn	Pn	07 43 40.9	+0.5

SLCN	Sala Consilina	6.02	283	Pn	Pn	07 43 55.9	+0.6
SGO	Sicignano	6.30	285	Pn	Pn	07 43 58.7	-0.4
	3.8nm,0.3s						
CSSN	Cassano Irpino	6.56	287	Pn	Pn	07 44 03.3	+0.4

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*IDC **06** 07:50:47.5±1.9,34.68N×73.33E,mb3.9/3,mb1 3.9/6, mb1mx3.6/21,mbtmp3.8/6,ML3.5/3,Error ellipse: s-maj=52.7km s-min=27.5km az=65.0*
*NEIC **06** 07:50:48.8±1.3,34.64N×73.26E,h10^{km},Error ellipse: s-maj=22.6km s-min=15.8km az=53.0*
*NDI **06** 07:50:48.2±1.8,34.74N×72.89E,h10^{km},ML3.8*
*MOS **06** 07:50:48.1±1.0,34.68N×73.19E,h18^{km},mb3.9/1,Error ellipse: s-maj=56.1km s-min=20.7km az=90.3*
*NNC **06** 07:50:51.2±5.4,34.83N×72.81E,mpv4.0,Error ellipse: s-maj=111.2km s-min=47.5km az=89.0*
ISC 06 07:50:50.3±1.1,34.70N±0.07×73.1E±0.1,h35^{km}±16^{km}, n26,σ0$\overset{s}{.}$96/31,mb3.8/2,4C-2D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.14	135	*e*P	P	07 51 40.8	+2.3
THN				*e*x	x	07 52 23.4	
DLH	Dalhousie	3.21	131	*e*P	P	07 51 40.0	+0.5
DLH				*e*S	S	07 52 20.0	+2.9
BHK	Bhakra	4.29	139	*e*x	x	07 52 48.8	
SDNR	Sundarnagar	4.55	134	*e*P	P	07 51 59.0	+0.5
SDNR				*e*S	S	07 52 50.0	-0.9
SMLA	Simla	4.93	135	*e*P	P	07 52 03.3	-0.6
SMLA				*e*S	S	07 53 00.1	-0.5
KLP	Kalpa	5.34	125	*e*P	P	07 52 10.4	+0.7
KLP				*e*S	S	07 53 11.0	0.0
KLP				AML	AML	07 53 39.5	
	comp=E,182nm,0.5s						
KLP				AML	AML	07 53 41.5	
	comp=N,116nm,0.3s						
NDI	New Delhi	6.94	149	*e*x	x	07 53 09.0	
KHET	Khetri	7.00	160	*e*P	P	07 52 32.3	-0.6
KHET				*e*S	S	07 53 47.2	-5.0
AYAN	Aya Nagar	7.08	150	*e*P	P	07 52 33.7	-0.5
KUDL	Kundal	7.14	155	*e*P	P	07 52 33.3	-1.7
KUDL				*e*S	S	07 53 49.9	-6.0
SONA	Sohna	7.27	151	*e*S	S	07 53 54.1	-4.9
KK31	Karatay Array	8.63	347	P	P	07 52 56.5	+0.8
	comp=N,4.2nm,0.6s,baz=155,slow=11,SNR=70						
KK31				⇑S	S	07 54 32.0	-0.9
	comp=N,2.1nm,0.4s						
MKAR	Makanchi Array	13.92	27	Pn	P	07 54 05.9	-1.3
	comp=N,0.1nm,0.3s,baz=204,slow=11,SNR=3.8						
AB31	Akbulak array	17.49	330	⇑P	P	07 54 52.7	-0.1
	comp=N,0.7nm,0.7s,baz=149,slow=12,SNR=9.5						
AB31	Akbulak array	17.49	330	⇑P	P	07 54 52.7	-0.2
	comp=N,0.7nm,0.6s						
BVA0	Borovoye Array	18.42	355	⇑P	P	07 55 05.1	+0.6
	comp=N,0.7nm,1.7s,baz=161,slow=9.8,SNR=9.3						
BVAR	Borovoye Array	18.42	355	P	P	07 55 05.0	+0.5
	comp=N,0.5nm,0.3s,baz=163,slow=9.9,SNR=12						
BVAR	Borovoye Array	18.42	355	P	P	07 55 05.0	+0.5
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	18.46	355	P	P	07 55 04.9	-0.1
	comp=Z,0.7nm,0.4s						
AKTK	Aktyubinsk	19.20	330	⇓P	P	07 55 13.8	+0.1
AKTO	Aktyubinsk	19.20	330	⇓P	P	07 55 13.8	+0.1
	comp=Z,0.4nm,0.7s						
AKTO	Aktyubinsk	19.20	330	P	P	07 55 13.4	-0.3
	comp=Z,0.2nm,0.3s,baz=132,slow=11,SNR=9.0						
ZAL	Zalesovo	20.92	20	P	P	07 55 30.9	-1.1
	comp=Z,1.8nm,0.4s,baz=230,slow=6.9,SNR=7.5						
ZAL	Zalesovo	20.92	20	P	P	07 55 30.9	-1.1
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES	ARCESS Array B	43.46	338	P	P	07 58 52.6	+1.5
	comp=Z,3.9nm,1.0s,mb4.1,baz=117,slow=8.1,SNR=5.7						
WRA	Warramunga Arr	79.57	123	P	P	08 02 55.8	+0.2
	comp=Z,0.3nm,0.6s,mb3.4,baz=319,slow=4.5,SNR=5.8						

MAN 06 08:39:28.9,9.29N×123.00E,mb4.6,ML3.4,MS3.3,1C-4D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	Sibulan	0.24	77	⇓*i*P	Pg	08 39 34.0	+0.4
TBP	Tagbilaran	0.94	65	⇓*e*P	Pg	08 39 46.9	-0.7
TBP				*i* S	Sg	08 39 58.5	-1.6
GUIM	Jordan	1.39	343	*e*P	Pb	08 39 57.4	+2.0
GUIM				*e*S	Sb	08 40 17.5	+3.8
LLP	Lapu-Lapu	1.39	43	⇓*i*P	Pb	08 39 55.4	-0.2
LLP				*i* S	Sb	08 40 13.3	-0.5
PAGZ	Pagadian	1.48	165	*e*P	Pn	08 39 55.6	-1.2
IPIL	Ipil	1.55	196	*e*P	Pn	08 39 58.2	+0.3
IPIL				*e*S	Sb	08 40 19.7	+1.4
CGP	Cagayan de Oro	1.86	116	⇓*e*P	Pn	08 40 01.7	-0.6
CGP				*e*S	Sn	08 40 25.9	-1.1
MSLP	Maasin	2.01	65	*e*P	Pn	08 40 04.5	0.0
MSLP				*e*S	Sn	08 40 31.6	+0.9
RCP	Roxas	2.27	354	⇑*e*P	Pn	08 40 11.4	+3.2
RCP				*e*S	Sn	08 40 41.4	+4.1
BUKP	Musuan	2.47	124	*e*P	Pn	08 40 11.1	+0.1
BUKP				*e*S	Sn	08 40 46.5	+4.1
CUYO	Cuyo Island	2.50	309	*e*P	Pn	08 40 11.1	-0.3
CUYO				*e*S	Sn	08 40 41.6	-1.4
BUTP	Butuan	2.60	97	*e*P	Pn	08 40 12.8	-0.2
OTRP	Odiongan	3.20	343	*e*P	Pn	08 40 24.2	+2.8
OTRP				*e*S	Sn	08 41 04.2	+3.3
BUSP	Coron	3.86	315	*e*P	Pn	08 40 30.4	-0.3
BUSP				*e*S	Sn	08 41 13.5	-3.9

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*NDI **06** 08:57:44.7±4.5,34.72N×72.80E,h10^{km},ML3.2*
*NNC **06** 08:57:49.7±7.8,35.21N×72.67E,mpv3.4,Error ellipse: s-maj=548.4km s-min=72.6km az=78.0*
ISC 06 08:57:40.5±1.2,34.6N±0.1×72.5E±0.2,h10^{km},n7, σ1$\overset{s}{.}$33/14,1C-1D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.48	128	*e*P	Pn	08 58 38.0	+2.1
THN				*e*SB	Sb	08 59 23.6	-0.8
DLH	Dalhousie	3.58	124	*e*P	Pn	08 58 39.0	+1.7
DLH				*e*S	Sn	08 59 21.0	+0.9
SDNR	Sundarnagar	4.89	128	*e*P	Pn	08 58 56.0	0.0
SDNR				*e*S	Sn	08 59 48.0	-5.4
KLP	Kalpa	5.74	121	*e*P	Pn	08 59 05.9	-2.1
KLP				*e*S	Sn	09 00 08.1	-6.6
KLP				AML	AML	09 00 37.6	
	comp=E,84nm,0.4s						
KLP				AML	AML	09 00 37.8	
	comp=N,100nm,0.5s						
KHET	Khetri	7.12	155	*e*P	Pn	08 59 27.6	+0.2
KHET				*e*S	Sn	09 00 44.6	-4.5
KHET				AML	AML	09 00 49.8	
	comp=N,14nm,0.6s						
KHET				AML	AML	09 00 50.0	
	comp=E,15nm,0.5s						
KUDL	Kundal	7.31	151	*e*P	Pn	08 59 29.4	-0.6
KUDL				*e*S	Sn	09 00 48.1	-5.8
KUDL				AML	AML	09 00 52.5	
	comp=Z,5.4nm,0.1s						
KK31	Karatay Array	8.61	350	⇑P	P	08 59 48.0	-0.2
	comp=Z,0.7nm,0.3s,baz=165,slow=12,SNR=26						
KK31				⇓S	Sn	09 01 21.1	-5.2
	comp=Z,2.2nm,0.7s,baz=168,slow=22,SNR=6.9						

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*NDI **06** 09:04:50.7±3.8,34.70N×73.02E,h10^{km},ML3.4*
*NNC **06** 09:04:55.8±55.0,34.84N×72.70E,mpv3.5,Error ellipse: s-maj=644.8km s-min=500.3km az=78.0*
ISC 06 09:04:48.0±1.1,34.51N±0.09×72.7E±0.2,h10^{km},n10, σ1$\overset{s}{.}$50/17,2C,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.26	129	*e*P	Pn	09 05 41.9	+1.6
THN				*e*SB	Sb	09 06 25.5	0.0
DLH	Dalhousie	3.35	125	*e*P	Pn	09 05 44.0	+2.4
DLH				*e*S	Sn	09 06 20.0	-2.0
BHK	Bhakra	4.38	134	*e*SB	Sb	09 07 05.0	+6.7
SDNR	Sundarnagar	4.67	129	*e*P	Pn	09 06 01.0	+0.7
SDNR				*e*SB	Sb	09 07 09.0	+2.4
SMLA	Simla	5.04	131	*e*P	Pn	09 06 04.5	-1.1
SMLA				*e*S	Sn	09 07 00.4	-4.3
KLP	Kalpa	5.52	121	*e*P	Pn	09 06 11.0	-1.3
KLP				*e*S	Sn	09 07 09.2	-7.5
KLP				AML	AML	09 07 39.4	
	comp=E,201nm,0.4s						
KLP				AML	AML	09 07 40.0	
	comp=N,162nm,0.7s						
KHET	Khetri	6.94	157	*e*P	Pn	09 06 32.9	+0.5
KHET				*e*S	Sn	09 07 47.6	-4.6
KHET				AML	AML	09 08 40.1	
	comp=N,8.8nm,0.5s						
KHET				AML	AML	09 08 41.2	
	comp=E,10.0nm,0.3s						
NDI	New Delhi	6.97	145	*e*x	x	09 07 01.0	
KUDL	Kundal	7.12	152	*e*P	Pn	09 06 33.1	-1.8
KUDL				*e*S	Sn	09 07 52.0	-4.8
KK31	Karatay Array	8.75	349	⇑P	P	09 06 59.1	+1.5
	comp=E,0.8nm,0.3s,baz=156,slow=11,SNR=19						
KK31				⇑S	Sn	09 08 36.2	-1.1
	comp=E,1.6nm,0.8s,baz=168,slow=23,SNR=3.7						

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*NEIC **06** 09:12:16.4±1.4,18.07S×179.38W,h600^{km}±19^{km},mb3.7/2, Error ellipse: s-maj=40.3km s-min=14.9km az=155.0*
*IDC **06** 09:12:21.5±10.0,17.32S×179.89W,h643^{km}±142^{km}, mb3.0/5,mb1 3.4/5,mb1mx3.2/13,mbtmp4.0/5,Error ellipse: s-maj=112.0km s-min=38.1km az=166.0*
ISC 06 09:12:15.2±1.5,18.3S±0.3×179.4W±0.2,h596^{km}±22^{km}, n13,σ0$\overset{s}{.}$91/12,mb3.6/7,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.48	60	P	P	09 14 19.4	-0.1
CTAO	Charters Tower	32.49	261	*e*P	P	09 18 00.2	+0.5
STKA	Stephens Creek	37.66	241	P	P	09 18 44.8	+2.5
	2.9nm,0.4s,mb4.1,baz=100,slow=7.5,SNR=19						
STKA	Stephens Creek	37.66	241	*e*P	P	09 18 44.6	+2.2
WB2	Warramunga Arr	43.66	260	*e*P	P	09 19 29.5	-0.8
WRAB	Tennant Creek	43.66	260	*e*P	P	09 19 29.3	-1.0
	2.1nm,0.5s,mb3.9						
WRA	Warramunga Arr	43.67	260	P	P	09 19 30.0	-0.4
	1.7nm,0.7s,mb3.7,baz=97,slow=7.0,SNR=35						
ASPA	Alice Springs	43.82	255	*e*P	P	09 19 31.9	+0.4
SBA	Scott Base	60.01	183	*e*P	P	09 21 26.1	-0.8
	1.6nm,0.6s,mb3.4						
NVAR	Mina Array Bea	80.31	44	P	P	09 23 26.3	-0.2
	0.8nm,0.7s,mb3.1,baz=218,slow=7.3,SNR=7.5						
TXAR	Lajitas Array	86.95	58	P	P	09 24 00.7	+1.3
	1.0nm,0.9s,mb3.6,baz=225,slow=5.3,SNR=10						
PDAR	Pinedale Array	88.24	44	P	P	09 24 04.5	-0.6
	0.4nm,0.6s,mb3.3,baz=239,slow=5.3,SNR=3.2						
GERES	GERESS Array B	147.71	344	PKPbc	PKPdf	09 30 52.2	+2.7
	0.5nm,0.7s,baz=27,slow=3.0,SNR=4.3						

IDC 06 09:14:54.8±21.0,20.38N×144.90E,h157^{km}±200^{km}, mb3.3/6,mb1 3.6/6,mb1mx3.4/18,mbtmp3.8/6,Error ellipse: s-maj=39.2km s-min=36.3km az=85.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	41.39	195	P	P	09 22 25.5	-1.7
	0.3nm,0.6s,baz=7.9,slow=8.6,SNR=4.9						
MKAR	Makanchi Array	56.76	313	P	P	09 24 22.9	-1.7
	0.2nm,0.4s,baz=92,slow=9.4,SNR=3.8						
ILAR	Eielson Array	62.48	27	P	P	09 25 00.8	-2.7
	0.7nm,0.8s,baz=257,slow=4.9,SNR=5.1						
ARCES	ARCESS Array B	80.67	342	P	P	09 26 49.6	-1.4
	3.7nm,0.9s,baz=84,slow=8.2,SNR=3.4						
NVAR	Mina Array Bea	82.70	52	P	P	09 27 02.1	-0.1
	0.2nm,0.4s,baz=270,slow=5.4,SNR=3.6						
FINES	FINESS Array B	85.05	335	P	P	09 27 12.2	-1.2
	0.8nm,0.3s,baz=78,slow=4.9,SNR=12						

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*NIED **06** 09:51:00,36.40N×141.10E,h59^{km},Mw3.7 Best double couple: M$_0$3.68×10^{14} NP1:φ$_s$208°,δ61°,λ-39°. NP2: φ$_s$319°,δ57°,λ-144°.*
*IDC **06** 09:51:40.1±1.5,36.35N×141.00E,mb3.6/2,mb1 3.9/3, mb1mx3.4/21,mbtmp3.5/3,ML3.5/1,MS4.0/1,Ms1 4.0/1, ms1mx2.4/28,Error ellipse: s-maj=27.4km s-min=18.6km az=3.0*
*JMA **06** 09:51:45.1±0.1,36.36N×141.02E,h47^{km}±1^{km},M3.6*
JMA Felt I J1.
ISC 06 09:51:44.4±0.8,36.36N±0.04×141.09E±0.09,h44^{km}±11^{km}, n12,σ0$\overset{s}{.}$72/18,mb3.7/2,3C-4D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	Hitachi	0.48	301	⇓P	P	09 51 55.3	+0.2
JHO				S	S	09 52 02.3	-0.4
CHOJ	Chosi	0.68	196	⇑P	P	09 51 58.2	+0.5
CHOJ				S	S	09 52 07.4	0.0
JYT	Yasato	0.73	260	⇑P	P	09 51 58.5	+0.1
JYT				S	S	09 52 07.6	-1.0
ONAJ	Iwakimizuishiy	0.77	343	⇓P	P	09 51 59.1	+0.1
ONAJ				S	S	09 52 08.9	-0.8
JFK	Kawauchi	1.02	350	⇓P	P	09 52 02.4	0.0
JFK				S	S	09 52 14.7	-1.1
JFT	Otama	1.30	333	⇓P	P	09 52 07.8	+1.2
JFT				S	S	09 52 23.7	+0.7
JAG	Ashikaga	1.32	273	⇑P	P	09 52 06.9	+0.1
MJAR	Matsushiro Arr	2.33	275	Pn	P	09 52 20.5	-0.6
	13nm,0.3s,baz=108,slow=8.6,SNR=150						
MJAR				Lg		09 52 49.7	
	7.5nm,0.3s,baz=89,slow=33,SNR=6.3						
MAT	Matsushiro	2.33	275	P	P	09 52 22.0	+0.9
MAT				S	S	09 52 49.3	+0.7
JNU	Nakatsue	9.00	252	LR	LR	09 57 15.3	
	comp=Z,886nm,20.9s,baz=246,slow=38						
ILAR	Eielson Array	50.20	32	P	P	10 00 38.1	+0.6
	0.5nm,0.8s,mb3.6,baz=250,slow=7.6,SNR=4.1						
WRA	Warramunga Arr	56.36	188	P	P	10 01 22.1	-1.5
	0.4nm,0.5s,mb3.8,baz=5.5,slow=7.4,SNR=10						

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*NNC **06** 09:52:47.6±8.4,35.01N×72.33E,mpv3.4,Error ellipse: s-maj=199.7km s-min=57.8km az=90.0*
ISC 06 09:52:44.5±2.0,34.8N±0.2×72.9E±0.4,h33^{km},n3,σ1$\overset{s}{.}$47/5, 1C,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.35	135	*e*P	P	09 53 33.7	-2.0
THN				*e*S	S	09 54 15.9	+1.1
KK31	Karatay Array	8.46	348	P	P	09 54 48.1	+0.5
	0.7nm,0.4s,baz=156,slow=11,SNR=25						
KK31				⇑S	S	09 56 22.6	-0.4
	0.2nm,0.3s,baz=172,slow=24,SNR=4.7						
AB31	Akbulak array	17.30	330	P	P	09 56 45.3	+0.5
	0.1nm,0.3s,baz=160,slow=11,SNR=4.1						

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*IDC **06** 10:22:56.7±5.2,52.27N×174.05W,mb3.3/3,mb1 3.9/5, mb1mx3.5/24,mbtmp3.6/5,ML3.7/1,MS3.5/1,Ms1 3.5/1, ms1mx2.5/18,Error ellipse: s-maj=93.0km s-min=49.0km az=86.0*
*NEIC **06** 10:23:13.2,52.18N×173.20W,h114^{km},MG3.4(AEIC), After AEIC.*
ISC 06 10:23:13.1±0.5,52.5N±0.2×173.3W±0.1,h125^{km}±7^{km},n22, σ0$\overset{s}{.}$94/26,mb3.2/3,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.61	241	P	P	10 23 31.7	-0.7
ATKA				S	S	10 23 45.5	-1.6
GSIG	Igitkin Island	1.67	253	P	P	10 23 44.3	+1.0
GSTR	Great Sitkin T	1.72	258	P	P	10 23 43.8	0.0
GSMY	Great Sitkin M	1.73	256	P	P	10 23 43.6	-0.4
GSTD	Great Sitkin T	1.78	257	P	P	10 23 44.2	-0.4
GSTD				S	S	10 24 09.8	+1.3
GSCK	Great Sitkin C	1.81	256	P	P	10 23 44.4	-0.4
GSCK				S	S	10 24 09.6	+0.6
ADAG	Mount Adagdak	2.08	257	P	P	10 23 49.5	+1.2
KIMD	Kanaga Island	2.52	255	P	P	10 23 53.8	-0.2
KIMD				S	S	10 24 24.3	-0.7
NIKO	Nikolski	2.77	78	P	P	10 23 55.9	-1.4
NIKO				S	S	10 24 30.7	-0.1
OKCD	Okmok Cone D	3.29	71	P	P	10 24 04.8	+0.5
OKER	East Rim	3.33	71	P	P	10 24 05.4	+0.6
MSW	Makushin Switc	4.19	68	P	P	10 24 17.9	+1.6
MNAT	Makushin Natee	4.23	68	P	P	10 24 17.7	+0.7
MTBL	Makushin Table	4.26	67	P	P	10 24 18.3	+1.0
UNV	Unalaska Valle	4.33	69	P	P	10 24 17.8	-0.4
KDAK	Kodiak Island	12.97	58	Pn	P	10 26 09.8	-3.7
	0.4nm,0.3s,baz=253,slow=11,SNR=6.4						
KDAK	Kodiak Island	12.97	58	Pn	P	10 26 09.8	-3.7
ILAR	Eielson Array	18.27	38	P	P	10 27 18.1	-1.0
	0.6nm,0.3s,baz=230,slow=9.3,SNR=67						
INK	Inuvik	24.60	35	P	P	10 28 21.7	-0.7
	0.8nm,0.6s,mb3.3,baz=232,slow=4.8,SNR=1.8						
DLBC	Dease Lake	24.90	59	LR	LR	10 38 36.2	
	comp=Z,95nm,18.5s,baz=182,slow=37						
NVAR	Mina Array Bea	40.09	88	P	P	10 30 38.9	+1.4
	0.2nm,0.5s,mb3.2,baz=288,slow=9.1,SNR=3.6						
TXAR	Lajitas Array	55.17	86	P	P	10 32 33.4	-1.3
	0.1nm,0.4s,mb3.2,baz=304,slow=6.5,SNR=4.7						

IDC 06 10:30:41.2±9.2,5.45S×102.65E,mb3.6/2,mb1 3.8/2, mb1mx3.5/14,mbtmp3.6/2,Error ellipse: s-maj=339.4km s-min=37.8km az=57.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	34.01	118	P	P	10 37 27.1	-2.1
	0.7nm,0.8s,baz=292,slow=10.0,SNR=4.6						
SONM	Songino Array	53.16	3	P	P	10 40 00.9	-2.2
	0.5nm,0.5s,baz=183,slow=10,SNR=6.2						
TXAR	Lajitas Array	145.60	43	PKPbc	PKPbc	10 50 21.8	-1.0
	0.7nm,0.8s,baz=274,slow=0.6,SNR=8.5						

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*ATH **06** 10:32:07.7,39.37N×21.39E,h27^{km}±14^{km},MD3.1/5*
*NEIC **06** 10:32:07.7,39.37N×21.39E,h27^{km},MD3.1(ATH),After ATH.*
*THE **06** 10:32:08.6,39.37N×21.44E,h16^{km},ML3.0*
*CSEM **06** 10:32:09.0±0.1,39.40N×21.41E,h20^{km},ML3.0,Error ellipse: s-maj=2.4km s-min=2.0km az=30.0*
*SKO **06** 10:32:11.4,39.48N×21.60E*
ISC 06 10:32:07.1±0.6,39.36N±0.03×21.51E±0.03,h5^{km}±4^{km}, n24,σ1$\overset{s}{.}$17/42,Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MEV	Metsovon	0.47	333	*e*Pg	Pg	10 32 17.0	+0.4
MEV				*e*Sg	Sg	10 32 24.4	+1.5
JAN	Janina	0.58	300	*e*PN	Pg	10 32 18.4	-0.4
AGG	Agios Georgios	0.73	118	*e*Pg	Pg	10 32 22.5	+0.9
	comp=Z,7.2nm,0.4s						
AGG				*e*Sg	Sg	10 32 34.7	+3.4
IGT	Igoumenitsa	0.92	281	*e*Pg	Pg	10 32 24.6	-1.0
IGT				*e*Sg	Sg	10 32 37.5	-0.4
KZN	Kozani	0.96	12	*e*PB	Pb	10 32 26.0	0.0
KZN				*e*SN	Sn	10 32 40.7	-0.7
LIT	Litokhoron	1.06	46	*e*Pg	Pg	10 32 28.6	+0.3
	comp=Z,10.0nm,0.2s						
LIT				*e*Sg	Sg	10 32 43.4	+1.0
RLS	Riolos of Patr	1.30	181	*e*PN	Pn	10 32 33.0	+0.9
XOR	Xorichti	1.31	89	*e*Pg	Pg	10 32 32.9	-0.3
XOR				*e*Sg	Sg	10 32 50.8	+0.1
NEO	Neokhori	1.33	92	*e*PB	Pb	10 32 33.1	+0.8
NEO				*e*SN	Sn	10 32 53.2	+2.4
LKR	Lokris	1.36	121	*e*PN	Pn	10 32 34.1	+1.2
VLS	Valsamata	1.38	211	*e*PB	Pb	10 32 32.0	-1.1
FNA	Florina	1.42	356	*e*Pg	Pg	10 32 32.5	-3.0
	comp=Z,3.8nm,0.5s						
FNA				*e*Sg	Sg	10 32 51.0	-3.5
BIA	Bitola	1.66	355	*e*Pn	Pn	10 32 38.5	+1.3
BIA				*e*Sn	Sn	10 33 00.5	+1.4
THE	Thessaloniki	1.69	41	*e*Pb	Pb	10 32 37.3	-1.1
GRG	Griva	1.73	23	*e*Pb	Pb	10 32 38.1	-1.0
GRG				*e*Sb	Sb	10 33 01.2	0.0
PAIG	Paliouri	1.77	71	*e*Pb	Pb	10 32 38.2	-1.6
PAIG				*e*Sb	Sb	10 33 00.6	-1.7
PLG	Polygyros	1.80	55	*e*PB	Pb	10 32 41.0	+0.7
OHR	Ohrid	1.83	343	*e*Pn	Pn	10 32 43.1	+3.5
OHR				*e*Sn	Sn	10 33 06.9	+3.5
OHR	Ohrid	1.83	343	*e*Pn	Pn	10 32 43.1	+3.6
OHR				*e*Sn	Sn	10 33 06.9	+3.5
AOS	Alonnisos	1.85	95	*e*Pb	Pb	10 32 39.6	-1.6
AOS				*e*Sb	Sb	10 33 03.8	-0.9
SOH	Sokhos	2.03	44	*e*Pn	Pn	10 32 41.9	-0.6
SOH				*e*Sn	Sn	10 33 08.6	0.0
KNT	Kendrikon	2.09	30	*e*Pn	Pn	10 32 42.8	-0.5
KNT				*e*Sn	Sn	10 33 09.1	-0.9
VAY	Valandovo	2.12	22	*e*Pn	Pn	10 32 47.0	+3.3
VAY				*e*Sn	Sn	10 33 11.7	+0.9
OUR	Ouranopolis	2.14	62	*e*Pn	Pn	10 32 44.2	+0.2
OUR				*e*Sn	Sn	10 33 10.4	-0.9

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*KRSC **06** 11:19:02.7±0.8,48.52N×155.88E,h40^{km}±40^{km},ML4.1*
*IDC **06** 11:19:31.6±6.7,49.58N×151.43E,h226^{km}±76^{km},mb3.0/3, mb1 3.2/5,mb1mx3.0/22,mbtmp3.7/5,MS2.7/1,Ms1 2.7/1, ms1mx2.0/20,Error ellipse: s-maj=61.4km s-min=33.0km az=14.0*
ISC 06 11:19:05.6±1.2,48.8N±0.1×155.6E±0.3,h100^{km},n20, σ0$\overset{s}{.}$93/24,mb4.1/1,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.92	9	*e*P	P	11 19 33.5	-4.0
ALID	Alaid	2.08	358	*e*P	P	11 19 40.0	+0.3
PAU	Pauzhetka	2.78	15	*e*P	P	11 19 49.4	+0.1
PAU				*e*S	S	11 20 23.1	+0.9
PAU				Smax			
	250nm,0.3s						
MIPR	Malaya Ipel'ka	3.56	11	*e*P	P	11 20 00.0	0.0
GRL	Gorelyy	4.07	21	*e*P	P	11 20 07.6	+0.6
RUS	Russkaya	4.08	26	*e*P	P	11 20 06.6	-0.5
RUS				*e*S	S	11 20 53.6	-0.4
APC	Apacha	4.25	12	*e*P	P	11 20 10.6	+1.2
PET	Petropavlovsk	4.65	23	*e*P	P	11 20 14.8	0.0
PET				*e*S	S	11 21 07.3	-0.7
UGLR	Uglovaya	4.86	23	*i* P	P	11 20 18.7	+1.0
KOK	Koryaka	4.89	22	*e*P	P	11 20 19.2	+1.1
AVH	Avacha	4.89	22	*e*P	P	11 20 18.6	+0.5
AVH				*e*S	S	11 21 13.9	0.0
SMAR	Somma	4.90	23	*e*P	P	11 20 19.1	+0.8
NLC	Nalytchevo	4.97	27	*e*P	P	11 20 18.2	-1.0
NLC				*e*S	S	11 21 14.5	-1.4
GNL	Ganaly	5.12	16	*e*P	P	11 20 22.1	+0.8
SPN	Mys Shipunski	5.12	31	*e*P	P	11 20 21.5	+0.2
SPN				*e*S	S	11 21 18.5	-1.2
ASAJ	Asahikawa	10.14	247	P	P	11 21 26.4	-3.0
	1.3nm,0.3s,baz=89,slow=22,SNR=13						
ASAJ				LR	LR	11 24 33.7	
	comp=Z,49nm,18.0s,baz=49,slow=37						
MJAR	Matsushiro Arr	17.68	233	P	P	11 23 07.4	+0.8
	0.2nm,0.3s,baz=11,slow=13,SNR=4.0						
MKAR	Makanchi Array	47.53	297	P	x	11 27 21.0	
	0.3nm,0.8s,baz=56,slow=5.2,SNR=2.7						
FINES	FINESS Array B	62.91	335	P	P	11 29 21.6	-1.3
	2.3nm,0.9s,mb4.1,baz=39,slow=8.9,SNR=4.9						
TXAR	Lajitas Array	75.02	63	P	pP	11 30 59.5	-4.1
	0.2nm,0.5s,baz=303,slow=4.9,SNR=4.1						

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*IDC **06** 12:07:10.5±0.8,15.62N×96.33W,mb4.4/21,mb1 4.6/23, mb1mx4.5/29,mbtmp4.4/23,ML4.2/2,MS4.4/19,Ms1 4.4/19, ms1mx4.3/28,Error ellipse: s-maj=29.7km s-min=10.8km az=52.0*
*BJI **06** 12:07:11.9,15.50N×96.40W,h5^{km},mB5.2,Ms4.8,Msz4.5*
*MEX **06** 12:07:11.9±0.8,15.44N×96.42W,h5^{km},MD4.9*
*NEIC **06** 12:07:11.9,15.46N×96.43W,h3^{km},mb4.8/39,MS4.4/1, MD4.9(MEX),After MEX.*
ISC 06 12:07:11.7±0.9,15.52N±0.04×96.38W±0.03,h25^{km}±5^{km}, n150,σ1$\overset{s}{.}$41/154,mb4.6/48,MS4.4/23,2C,Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.36	46	*i* P	Pb	12 07 19.9	+0.4
HUIG				*i* S	Sb	12 07 26.0	+1.1
HUIG	Huatulco	0.36	46	*i* P	Pb	12 07 19.9	+0.4
HUIG				*i* S	Sb	12 07 26.1	+1.3
VHO	Vista Hermosa	1.58	347	*i* P	Pn	12 07 38.2	-0.4
VHO				*i* S	Sn	12 07 58.4	-0.1
OXX	Oaxaca	1.59	348	*i* P	Pn	12 07 38.5	-0.2

OXX				*i* S	Sn	12 08 03.0	+4.4
PNIG	Pinotepa	1.90	298	*e*P	Pn	12 07 40.4	-2.6
PNIG				*i* S	Sn	12 08 04.6	-1.8
CMIG	Matias Romero	2.12	42	*e*P	Pn	12 07 45.8	-0.5
CMIG				*i* S	Sn	12 08 13.8	+1.7
EVV	El Vigia	3.08	18	*e*P	Pn	12 08 00.0	0.0
EVV				*i* S	Sn	12 08 45.0	+8.5
TUIG	Tuzandepetl	3.12	37	*e*P	Pn	12 08 00.7	+0.2
TUIG				*i* S	Sn	12 08 36.7	-0.8
TUIG	Tuzandepetl	3.12	37	*e*P	Pn	12 08 00.7	+0.2
TUIG				*e*S	Sn	12 08 40.9	+3.4
ACX	Acapulco	3.66	292	*i* P	Pn	12 08 05.0	-3.2
SCX	San Cristobal	3.79	71	*e*P	Pn	12 08 11.0	+0.9
SCX				*i* S	Sn	12 08 59.0	+4.5
CAIG	El Cayaco	4.04	293	*e*P	Pn	12 08 10.9	-2.6
CAIG				*e*S	Sn	12 09 01.2	+0.5
PPM	Popocatepetl	4.13	329	*e*P	Pn	12 08 15.0	+0.1
PPM				*e*P		12 08 16.8	
PPM				*i* S	Sn	12 09 04.2	+1.1
PPM	Popocatepetl	4.13	329	*e*P	Pn	12 08 16.8	+1.9
PPM				*i* S	Sn	12 09 04.2	+1.1
PLIG	Platanillo	4.14	314	*e*P	Pn	12 08 14.7	-0.3
PLIG				*e*S	Sn	12 09 03.0	-0.2
CCIG	Comitan	4.15	79	*e*P	Pn	12 08 14.5	-0.6
CCIG				*i* S	Sn	12 09 05.5	+2.0
YAIG	Yautepec	4.20	323	*e*P	Pn	12 08 16.5	+0.6
YAIG				*e*S	Sn	12 09 01.7	-3.2
IIZ	Mezontepec	4.56	324	*e*P	Pn	12 08 22.0	+1.0
UNM	Universidad Na	4.64	325	*e*P	Pn	12 08 22.3	+0.2
UNM				*e*P		12 08 26.0	
UNM				*i* S	Sn	12 09 15.9	0.0
UNM	Universidad Na	4.64	325	*e*P	Pn	12 08 22.3	+0.2
UNM				*i* S	Sn	12 09 15.9	0.0
ZIIG	Zihuatanejo	5.30	294	*i* P	Pn	12 08 30.0	-1.5
ZIIG				*i* S	Sn	12 09 27.4	-5.2
MOIG	Morelia	6.18	313	*e*P	Pn	12 08 42.8	-1.0
MOIG				*i* S	Sn	12 09 51.3	-3.2
SFJM	Santa Fe	8.04	309	*i* P	P	12 09 10.0	+0.1
CJM	Chamela	9.17	297	*i* P	P	12 09 24.7	-0.8
CJM				*i* S	Sn	12 11 05.0	-4.0
ZAIG	Zacatecas	9.29	322	*i* P	P	12 09 24.8	-2.4
ZAIG				*i* S	Sn	12 11 06.8	-5.1
JTS	JuntasAbangare	12.29	114	Pn	P	12 10 07.0	-1.2
	2.8nm,0.3s,baz=260,slow=11,SNR=5.5						
JTS	JuntasAbangare	12.29	114	Pn	P	12 10 07.0	-1.2
	11nm,1.4s						
LTX	Lajitas	15.30	335	*e*P	P	12 10 54.5	+6.5
	12nm,0.7s						
TXAR	Lajitas Array	15.30	335	Pn	P	12 10 49.4	+1.4
	0.1nm,0.3s,baz=154,slow=12,SNR=30						
TXAR				LR	LR	12 16 55.6	
	comp=Z,2µm,19.2s,baz=300,slow=38						
TXAR	Lajitas Array	15.30	335	Pn	P	12 10 49.4	+1.4
TXAR				LR	LR	12 16 55.6	
LPIG	La Paz	15.64	305	*i* P	P	12 10 53.5	+1.2
NATX	Nacogdoches	16.24	5	*e*P	P	12 11 03.1	+3.0
	6.2nm,0.8s						
GDL2	Guadalupe Moun	18.13	338	*e*P	P	12 11 24.5	+0.8
CPRX	Cap Rock	18.71	340	*e*P	P	12 11 30.6	-0.2
MIAR	Mount Ida	19.11	7	*e*P	P	12 11 34.2	-1.4
	40nm,1.0s						
WMOK	Wichita Mounta	19.26	354	*e*P	P	12 11 34.6	-2.7
	52nm,1.0s						
UALR	University of	19.52	10	*e*P	P	12 11 38.7	-1.5
	90nm,1.0s						
OXF	Oxford	19.93	17	*e*P	P	12 11 42.2	-2.5
	85nm,1.0s						
HBAR	Harrisburg	20.60	13	*e*P	P	12 11 50.9	-0.8
LPM	Los Pinos Moun	20.87	336	*e*P	P	12 11 55.0	+0.5
LENM	Lemitar	20.88	335	*e*P	P	12 11 56.1	+1.4
GNAR	Gosnell	21.14	14	*e*P	P	12 11 55.0	-2.2
	301nm,1.2s,mb5.5						
LAZ	Ladron	21.16	335	*e*P	P	12 11 59.5	+2.1
TUC	Tucson	21.24	324	*e*P	P	12 11 58.5	+0.2
	28nm,1.0s,mb4.5						
HALT	Halls	21.26	16	*e*P	P	12 11 57.7	-0.8
GOGA	Godfrey	21.30	31	*e*P	P	12 11 56.4	-2.5
	28nm,0.8s,mb4.7						
GOGA				*e*pP		12 12 07.4	
ANMO	Albuquerque	21.37	337	P	P	12 12 00.8	+1.3
	7.5nm,0.8s,mb4.1,baz=149,slow=11,SNR=25						
ANMO				LR	LR	12 20 21.4	
	comp=Z,780nm,20.5s,MS4.1,slow=37						
ANMO	Albuquerque	21.37	337	*e*P	P	12 12 00.4	+0.8
	9.5nm,0.6s,mb4.3						
GLAT	Glass	21.61	16	*e*P	P	12 12 00.7	-1.3
PVMO	Portageville	21.64	15	P	P	12 12 00.7	-1.6
SWET	Sewanee	21.74	24	*e*P	P	12 11 58.5	-4.8
UTMT	University of	21.79	17	*e*P	P	12 12 02.2	-1.7
	131nm,1.0s,mb5.3						
PARMO	Parma	21.87	14	*e*P	P	12 12 03.7	-0.9
WVT	Waverly	21.90	19	*e*P	P	12 12 03.4	-1.4
	36nm,0.7s,mb4.9						
CPCT	Cooper Cave	22.51	26	*e*P	P	12 12 08.2	-2.8
JSC	Jenkinsville	23.12	33	*e*P	P	12 12 15.4	-1.6
KSU1	Kansas State U	23.49	360	*e*P	P	12 12 19.8	-0.8
TZTN	Tazewell	23.85	26	*e*P	P	12 12 22.4	-1.7
WUAZ	Wupatki	24.02	329	*e*P	P	12 12 28.3	+2.6
	64nm,0.8s,mb5.1						
ROSC	El Rosal	24.12	114	P	P	12 12 30.5	+3.7
	9.9nm,0.5s,mb4.5,baz=104,slow=21,SNR=9.6						
GLA	Glamis	24.17	320	*e*P	P	12 12 29.1	+1.8
WCI	Wyandotte Cave	24.31	20	*e*P	P	12 12 27.2	-1.3
	246nm,1.4s,mb5.4						
PV01	Paradox Valley	24.97	337	*e*P	P	12 12 37.2	+2.3
BAR	Barrett	25.12	316	*e*P	P	12 12 38.4	+2.0
SMCO	Snowmass	25.34	340	*e*P	P	12 12 39.9	+1.6
	17nm,1.0s,mb4.5						
PV10	Paradox Valley	25.36	336	P	P	12 12 38.8	+0.3
PFO	Pinyon Flat Ob	25.57	318	*e*P	P	12 12 41.1	+0.6
	14nm,1.1s,mb4.4						
ELN	Prospectdale	25.68	30	*e*P	P	12 12 38.5	-3.1
LDFC	Landfair	25.73	323	*e*P	P	12 12 43.4	+1.4
FWV	Forest Hill	25.94	29	*e*P	P	12 12 42.5	-1.5
NEN	Nelson	25.98	324	*e*P	P	12 12 45.1	+0.8
SDV	Santo Domingo	25.99	102	P	P	12 12 46.0	+1.4
	14nm,0.7s,mb4.6,baz=302,slow=4.2,SNR=18						
SDV	Santo Domingo	25.99	102	*e*P	P	12 12 45.3	+0.6
	17nm,0.8s,mb4.6						
SRU	San Rafael	26.58	335	*e*P	P	12 12 51.2	+1.4
	7.3nm,0.8s,mb4.3						
MSU	Marysvale	26.80	332	*e*P	P	12 12 53.7	+1.8
ARUT	Antelope Range	26.83	329	*e*P	P	12 12 54.6	+2.5
TMUT	Trail Mountain	27.02	334	P	P	12 12 56.3	+2.4
ACSO	Alum Creek Sta	27.25	23	*e*P	P	12 12 54.0	-2.0
	12nm,0.7s,mb4.5						
TPNV	Topopah Spring	27.70	324	*e*P	P	12 13 01.9	+1.8
	7.7nm,0.9s,mb4.3						
DAU	Daniels Canyon	27.98	335	*e*P	P	12 13 04.8	+2.2
TCUT	Toone Canyon	28.65	336	*e*P	P	12 13 08.8	+0.2
SJG	San Juan	29.03	81	LR	LR	12 25 23.2	
	comp=Z,513nm,20.3s,MS4.1,baz=99,slow=38						
PDAR	Pinedale Array	29.42	340	P	P	12 13 16.1	+0.6
	3.1nm,0.7s,mb4.1,baz=138,slow=9.2,SNR=25						
PDAR				LR	LR	12 24 43.2	
	comp=Z,405nm,20.4s,MS4.0,baz=349,slow=36						
HVU	Hansel Valley	29.75	335	*e*P	P	12 13 21.0	+2.5
	16nm,1.0s,mb4.7						
NVAR	Mina Array Bea	29.90	324	P	P	12 13 21.2	+1.3
	8.6nm,0.8s,mb4.5,baz=127,slow=8.9,SNR=53						
NVAR	Mina Array Bea	29.90	324	P	P	12 13 21.2	+1.3
ELK	Elko	30.01	331	P	P	12 13 22.1	+1.3
	6.4nm,0.8s,mb4.4,baz=144,slow=6.9,SNR=19						
ELK				LR	LR	12 26 18.9	
	comp=Z,1µm,19.0s,MS4.6,baz=137,slow=38						
ELK	Elko	30.01	331	*e*P	P	12 13 21.7	+0.9
	9.1nm,0.9s,mb4.5						
REDW	Red Top Meadow	30.38	339	*e*P	P	12 13 22.3	-1.8
	18nm,0.9s,mb4.8						
SNOW	Snow King Moun	30.44	339	*e*P	P	12 13 25.4	+0.8
	37nm,0.8s,mb5.2						
LOHW	Long Hollow	30.52	339	*e*P	P	12 13 24.6	-0.6
	20nm,0.9s,mb5.0						
TPAW	Teton Pass	30.53	339	*e*P	P	12 13 25.8	+0.5
	13nm,0.9s,mb4.8						
GENY	Geneseo	31.48	27	*e*P	P	12 13 36.0	+2.3
YMR	Madison River	31.57	340	*e*P	P	12 13 35.5	+1.0
	13nm,0.9s,mb4.8						
HLID	Hailey	31.91	335	*e*P	P	12 13 37.8	+0.4
	7.6nm,0.8s,mb4.6						
GCMT	Greycliff	32.18	342	*e*P	P	12 13 40.5	+0.7
MCMT	McKenzie Canyo	32.37	338	*e*P	P	12 13 43.6	+2.1
SADO	Sadowa	32.60	23	P	P	12 13 41.4	-2.1
	16nm,0.8s,mb5.0,baz=223,slow=9.9,SNR=11						
BOZ	Bozeman (W)	32.66	340	*e*P	P	12 13 45.9	+1.9
	43nm,2.0s,mb5.0						
DLMT	Dillon	32.74	339	*e*P	P	12 13 45.8	+1.1
	29nm,0.9s,mb5.2						
MOD	Modoc	33.41	327	*e*P	P	12 13 51.3	+0.7
	8.0nm,0.7s,mb4.8						
DGMT	Dagmar	33.48	351	*e*P	P	12 13 48.4	-2.7
	7.2nm,0.5s,mb4.9						
HRY	Holter Researc	33.67	341	*e*P	P	12 13 53.7	+1.0
CHMT	Chamberlain Mo	34.31	339	*e*P	P	12 13 57.9	-0.4
LOZ	Lake Ozonia	34.38	28	*e*P	P	12 13 57.6	-1.3
YBH	Yreka Blue Hor	34.62	324	P	P	12 14 00.3	-0.7
	2.2nm,0.7s,mb4.2,baz=160,slow=8.8,SNR=7.7						
YBH				LR	LR	12 29 24.9	
	comp=Z,620nm,21.5s,MS4.3,baz=147,slow=39						
ULM	Lac du Bonnet	34.64	1	P	P	12 13 59.5	-1.6
	1.9nm,0.7s,mb4.1,baz=208,slow=6.1,SNR=3.1						
ULM				LR	LR	12 29 07.4	
	comp=Z,248nm,18.5s,MS4.0,baz=105,slow=38						
NEW	Newport	36.85	337	P	P	12 14 20.8	+0.9
	3.0nm,1.0s,mb4.1,baz=139,slow=11,SNR=4.8						
EDM	Edmonton	39.93	344	*e*P	P	12 14 44.7	-0.8
SAML	Samuel	40.89	124	*e*P	P	12 14 54.4	+0.6
	8.0nm,1.5s,mb4.1						
SAML				*e*	pP	12 15 02.1	+0.9
LPAZ	La Paz	42.14	137	P	P	12 15 07.8	+3.7
	2.6nm,0.9s,mb3.9,baz=347,slow=12,SNR=8.1						
LPAZ				LR	LR	12 31 40.7	
	comp=Z,330nm,18.1s,MS4.3,baz=317,slow=35						
LPAZ	La Paz	42.14	137	*e*P	P	12 15 08.0	+3.8
	4.5nm,1.3s,mb3.9						
LPAZ				*e*pP	pP	12 15 20.8	+9.2
SCHQ	Schefferville	45.41	24	P	P	12 15 30.9	+0.8
	5.1nm,0.8s,mb4.4,baz=232,slow=9.9,SNR=5.0						
SCHQ				LR	LR	12 35 13.7	
	comp=Z,368nm,20.6s,MS4.3,baz=217,slow=37						
SCHQ	Schefferville	45.41	24	*e*P	P	12 15 30.3	+0.2
SIV	San Ignacio	46.85	130	P	P	12 15 42.3	+0.3
	2.2nm,0.9s,mb4.1,baz=304,slow=9.3,SNR=9.6						
YKA	Yellowknife Ar	48.65	349	P	P	12 15 54.6	-0.8
	4.4nm,0.8s,mb4.5,baz=155,slow=7.0,SNR=5.3						
YKA				LR	LR	12 38 16.0	
	comp=Z,423nm,19.7s,MS4.4,baz=170,slow=38						
DLBC	Dease Lake	49.59	337	P	P	12 16 02.2	-0.6
	5.8nm,0.8s,mb4.7,baz=129,slow=8.3,SNR=10						
DLBC				LR	LR	12 37 19.8	
	comp=Z,922nm,19.1s,MS4.8,baz=135,slow=36						
DLBC	Dease Lake	49.59	337	P	P	12 16 02.2	-0.6
DLBC				LR	LR	12 37 19.8	
TAOE	Nuku Hiva Isla	49.67	244	*e*LR	LR	12 29 35.1	
	822nm,25.3s						
BDFB	Brasilia	56.92	121	P	P	12 16 56.8	-0.7
	4.9nm,0.8s,mb4.6,baz=282,slow=3.6,SNR=5.7						
BAO	Brasilia Array	56.93	121	P	P	12 16 55.0	-2.7
INK	Inuvik	57.83	345	P	P	12 17 01.7	-1.6
	7.6nm,0.7s,mb4.8,baz=130,slow=7.7,SNR=39						
INK				LR	LR	12 42 55.1	
	comp=Z,646nm,19.5s,MS4.8,baz=169,slow=37						
INK	Inuvik	57.83	345	*e*P	P	12 17 01.9	-1.3
	8.7nm,0.8s,mb4.8						
THY	Trims Highway	58.68	336	*e*P	P	12 17 10.4	+1.1
PMR	Palmer	59.17	334	*e*P	P	12 17 12.0	-0.8
	11nm,1.0s,mb4.8						
ILAR	Eielson Array	59.80	338	P	P	12 17 16.3	-0.8
	5.1nm,0.8s,mb4.6,baz=135,slow=4.0,SNR=33						
ILAR				LR	LR	12 45 01.5	
	comp=Z,638nm,18.2s,MS4.8,baz=337,slow=38						
MCK	McKinley	60.07	336	*e*P	P	12 17 16.9	-2.0
	11nm,1.3s,mb4.7						
COLA	College	60.21	337	*e*P	P	12 17 19.3	-0.5
	805nm,3.4s						
PLCA	Paso Flores	60.88	158	P	P	12 17 24.4	-0.3
	3.6nm,0.9s,mb4.5,baz=339,slow=8.1,SNR=6.3						
PLCA				LR	LR	12 38 36.6	
	comp=Z,219nm,18.8s,MS4.3,baz=351,slow=31						
PLCA	Paso Flores	60.88	158	*e*P	P	12 17 27.0	+2.3
	3.4nm,0.9s,mb4.5						
PPT	Papeete	61.90	240	*e*LR	LR	12 35 15.6	
	241nm,28.2s,baz=61						
PPT	Papeete	61.90	240	LR	LR	12 36 16.2	
	comp=Z,203nm,21.9s,MS4.2,baz=75,slow=28						
TBI	Tubuai	64.70	234	*e*LR	LR	12 36 34.3	
	193nm,29.2s						
DAG	Danmarks Havn	72.19	14	⇑*i*P	P	12 18 35.2	-0.9
	2.1nm,0.7s,mb4.2						
DAG	Danmarks Havn	72.19	14	⇑*e*P	P	12 18 35.2	-0.9
	2.0nm,0.7s,mb4.2						
ESDC	Sonseca Array	82.08	51	P	P	12 19 32.1	+0.5
	1.2nm,0.8s,mb3.9,baz=308,slow=3.9,SNR=5.8						
NOA	NORSAR Array B	84.81	28	P	P	12 19 46.5	+1.5
	2.1nm,0.9s,mb4.3,baz=296,slow=4.8,SNR=4.3						
NOA				LR	LR	12 55 44.2	
	comp=Z,162nm,21.0s,MS4.4,baz=260,slow=34						
ARCES	ARCESS Array B	86.00	17	LR	LR	12 57 27.7	
	comp=Z,269nm,19.7s,MS4.7,baz=332,slow=35						
DBIC	Dimbokro	89.70	83	LR	LR	12 55 53.0	
	comp=Z,120nm,18.9s,MS4.3,baz=289,slow=33						
FINES	FINESS Array B	90.88	24	LR	LR	13 00 10.2	
	comp=Z,149nm,20.7s,MS4.4,baz=151,slow=35						
MDJ	Mudanjiang	107.00	328	PDIF	Pdif	12 21 28.1	+0.8
MDJ				S		12 33 25.1	
MDJ				PP	PP		
	comp=Z,80nm,3.7s						
MDJ				LR	LR		
	comp=N,80nm,19.8s,MS4.4						
MDJ				LR	LR		
	comp=E,70nm,23.5s,MS4.4						
MDJ				LR	LR		
	comp=Z,90nm,22.2s,MS4.3						
HHC	Hu-ho-hao-te	118.22	336	*e*PKP	PKPdf	12 25 59.9	-1.8
HHC				PP	PP	12 27 24.5	+6.8
HHC				PKS	PKS	12 29 35.4	+2.5
HHC				SKS	SKS	12 33 07.3	+11
HHC				PP	PP		
	comp=Z,50nm,11.3s						
HHC				LR	LR		
	comp=N,200nm,19.2s,MS5.0						
HHC				LR	LR		
	comp=E,270nm,20.6s,MS5.0						
HHC				LR	LR		
	comp=Z,220nm,20.4s,MS4.8						
WMQ	Urumqi	120.84	357	*e*PKP	PKPdf	12 26 04.6	-2.1
WMQ				*e*PP	PP	12 27 35.6	+0.6
WMQ				PP	PP		
	comp=Z,20nm,6.2s						
WMQ				LR	LR		
	comp=N,110nm,18.7s,MS4.6						
WMQ				LR	LR		
	comp=E,100nm,20.0s,MS4.6						
WMQ				LR	LR		
	comp=Z,120nm,21.6s,MS4.5						
SSE	Sheshan	121.26	322	*e*PKP	PKPdf	12 26 06.5	-1.4
SSE				LR	LR		
	comp=N,20nm,28.3s,MS4.2						
SSE				LR	LR		
	comp=E,70nm,28.4s,MS4.2						
SSE				LR	LR		
	comp=Z,70nm,16.3s						
NJ2	Nanjing	121.89	325	*e*PKP	PKPdf	12 26 08.2	-0.8
CD2	Chengdu	129.94	337	*e*PKP	PKPdf	12 26 23.1	-1.6
WRA	Warramunga Arr	131.64	257	PKP	PKPdf	12 26 25.5	-2.7
	comp=Z,0.7nm,0.7s,baz=84,slow=2.1,SNR=6.3						
KMI	Kunming	135.51	335	PKP	PKPdf	12 26 33.3	-1.9
KMI				SS	SS	12 47 05.7	+1.5
KMI				LR	LR		
	comp=Z,70nm,21.4s,MS4.3						
HYB	Hyderabad	146.89	9	*i* PKP	PKPdf	12 26 55.5	-0.1
HYB	Hyderabad	146.89	9	*e*P	PKPbc	12 26 55.5	+3.0

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*DHMR **06** 12:11:09.8±1.5, 11.74N×43.61E, h7km±14km, ML5.0*
*MOS **06** 12:11:09.7±0.8, 10.65N×43.77E, h10km, mb4.4/6, Error ellipse: s-maj=31.1km s-min=11.9km az=91.9*
*IDC **06** 12:11:16.3±0.9, 11.78N×43.62E, mb4.3/13, mb1 4.4/14, mb1mx4.3/21, mbtmp4.3/14, ML3.3/1, MS4.2/7, Ms1 4.2/7, ms1mx3.8/27, Error ellipse: s-maj=23.6km s-min=8.3km az=151.0*
*BJI **06** 12:11:17.1, 11.98N×42.68E, h31km, mB5.0, mb4.7*
*CSEM **06** 12:11:17.7±0.1, 12.00N×43.93E, h10km, mb4.5/7, Error ellipse: s-maj=4.6km s-min=3.4km az=118.0*
*NEIC **06** 12:11:18.3±0.6, 11.70N×43.63E, h10km, mb4.5/10, ML5.0(DHMR), Error ellipse: s-maj=14.8km s-min=10.6km az=154.0*
ISC 06 12:11:17.1±0.5, **11.82N**±0.04×**43.86E**±0.06, **h10km, n80,** σ$1^{s}58$/75, **mb4.4**/32, **MS4.2**/9, **10C-7D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	1.03	254	Pg	Pg	12 11 31.1	-6.7
	2µm,0.3s,baz=48,slow=7.6,SNR=1083						
ATD				Lg		12 11 42.0	
	12µm,0.3s,baz=128,slow=22,SNR=92						
TRBA	At Turbah	1.43	10	⇑*i*P	Pn	12 11 39.0	-4.2
TRBA				*i* S	Sb	12 12 00.2	-1.3
TRBA				AML	AML	12 12 08.8	
	comp=E,20µm,0.6s						
UDYN	Al ‘Udayn	2.14	3	⇑*e*P	Pn	12 11 49.8	-3.6
UDYN				AML	AML	12 11 56.1	
	comp=Z,17µm,0.4s						
UDYN				*i* S	Sn	12 12 20.2	-0.1
UDYN	Al ‘Udayn	2.14	3	⇑*e*P	Pn	12 11 49.8	-3.6
	comp=Z,8µm,0.4s						
UDYN				*i* S	Sn	12 12 20.2	0.0
LBOS		2.45	33	⇓*e*P	Pn	12 11 55.2	-2.7
LBOS				*i* S	Sn	12 12 32.2	+4.1
BDHA	Al Bayda’	2.71	38	⇓*i*P	Pn	12 11 59.1	-2.4
BDHA				*i* S	Sn	12 12 39.6	+4.8
BDHA				AML	AML	12 12 48.0	
	comp=E,13µm,0.6s						
DHBB	Dhamar BB	2.79	11	⇑*e*P	Pn	12 11 59.5	-3.1
DHBB				*i* S	Sn	12 12 38.1	+1.5
SANA	San‘a	3.57	5	⇓*e*P	Pn	12 12 10.3	-3.4
SANA				*i* S	Sn	12 12 56.7	+0.3
MUKL	Al Mukalla	5.69	62	⇑*e*P	Pn	12 12 39.9	-3.9
KMBO	Kilima Mbogo	14.44	207	Pn	P	12 14 42.3	-1.5
	comp=E,0.1nm,0.3s,baz=41,slow=13,SNR=7.9						
KMBO				Lg		12 18 50.1	
	comp=E,0.6nm,0.3s,baz=119,slow=18,SNR=8.6						
KMBO				LR	LR	12 20 09.0	
	comp=E,685nm,20.9s,baz=276,slow=37						
ARQ	Araqi	16.62	45	⇑P	P	12 15 12.1	+0.1
JMDO	Jabal Madar	17.17	50	⇑P	P	12 15 17.4	-1.5
ASHO	Ashiyiah	17.24	40	⇓P	P	12 15 18.7	-1.1
HOQ	Hoqain	17.33	46	⇓P	P	12 15 20.6	-0.3
SMDO	Samad	17.54	49	⇑P	P	12 15 22.7	-0.7
	SNR=16						
BIDO	Bidbid	17.88	47	⇓P	P	12 15 26.2	-1.5
	SNR=6.2						
WBK	Wadi Bani Khal	17.97	51	⇓P	P	12 15 27.9	-0.9
	SNR=6.1						
BHD	Baghdad	21.36	1	*e*x	x	12 16 02.0	
BHD				*e*x	x	12 22 38.0	
MSL	Mosul	24.38	358	*e*x	x	12 16 45.0	
MSL				*e*x	x	12 24 09.5	
MSL				*e*x	x	12 24 31.5	
MSL				*e*x	x	12 26 17.5	
CSS	Prodhromos	24.95	339	P	P	12 16 45.7	+3.5
	comp=E,31nm,1.3s,mb4.7						
BRTR	Keskin Array B	29.24	344	P	P	12 17 20.5	-0.9
	comp=E,6.0nm,1.0s,mb4.3						
ANTO	Ankara	29.61	343	*e*P	P	12 17 26.5	+1.8
	comp=E,8.7nm,0.8s,mb4.5						
ANTO	Ankara	29.61	343	*e*P	P	12 17 26.5	+1.8
	comp=E,8.7nm,0.8s,mb4.5						
LSZ	Lusaka	31.07	210	LR	LR	12 28 50.9	
	comp=E,270nm,19.2s,MS3.9,baz=255,slow=34						
KIV	Kislovodsk	32.04	358	*e*P	P	12 17 45.4	-0.8
	comp=E,20nm,0.9s,mb4.9						
KIV	Kislovodsk	32.04	358	*e*P	P	12 17 45.0	-1.1
KIV				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.0						
KIV				MLR	MLR		
	comp=Z,267nm,15.0s,MS4.0						
KIV	Kislovodsk	32.04	358	*e*P	P	12 17 45.3	-0.8
	comp=Z,20nm,0.9s,mb4.9						
MLR	Muntele Rosu	36.88	339	P	P	12 18 27.6	0.0
	comp=Z,4.8nm,0.9s,mb4.3,baz=250,slow=12,SNR=3.4						
KKAR	Karatay Array	38.79	32	*i* P	P	12 18 46.2	+2.5
KKAR				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.1						
AB31	Akbulak array	39.64	17	*i* P	P	12 18 52.9	+2.2
AB31				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
AKTO	Aktyubinsk	40.22	14	P	P	12 18 56.5	+0.9
	comp=Z,6.4nm,1.0s,mb4.3,baz=210,slow=9.5,SNR=6.6						
AKTO	Aktyubinsk	40.22	14	P	P	12 18 57.5	+2.0
AKTO				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
TSUM	Tsumeb	40.26	220	LR	LR	12 36 43.8	
	comp=Z,195nm,19.1s,MS4.0,baz=148,slow=38						
KOLN	Koldanda	40.41	61	*e*P	P	12 18 56.8	-0.5
	comp=Z,18nm,0.8s,mb4.8						
AKASG	Malin Array Be	40.59	346	P	P	12 18 58.6	+0.2
	comp=Z,5.7nm,0.9s,mb4.2,baz=160,slow=6.8,SNR=17						
AAK	Ala-Archa	40.62	35	*e*P	P	12 19 02.5	+3.7
	comp=Z,5.3nm,0.9s,mb4.2						
ORR	Orenburg	40.67	10	⇑*i*P	P	12 19 01.9	+2.8
ORR				*e*		12 19 09.1	
ORR				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.7						
KOLS	Kolonicke sedl	41.12	338	*e*pP	pP	12 19 05.3	-0.6
GKN	Gorkha	41.35	61	*e*P	P	12 19 06.3	+1.3
	comp=Z,18nm,0.8s,mb4.7						
CRVS	Cervenica-Dubn	41.40	338	*e*P	P	12 19 05.4	+0.3
KECS	Kecovo	41.42	336	*e*P	P	12 19 06.7	+1.3
KKN	Kakani	41.85	61	*e*P	P	12 19 11.7	+2.5
	comp=Z,36nm,0.6s,mb5.2						
STHS	Stebnicka Huta	41.90	338	*e*pP	pP	12 19 11.0	-1.3
PKI	Pulchoki	41.91	62	*e*P	P	12 19 11.7	+2.0
	comp=Z,14nm,0.9s,mb4.6						
GUN	Gumba	42.40	61	*e*P	P	12 19 16.9	+3.2
	comp=Z,31nm,0.8s,mb5.0						
ZST	Bratislava	42.60	334	*e*P	P	12 19 16.1	+1.1
OBN	Obninsk	43.57	354	⇑*e*P	P	12 19 24.6	+1.7
OBN				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.6						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.1						
OBN	Obninsk	43.57	354	*e*P	P	12 19 24.6	+1.7
	comp=Z,200nm,17.0s						
BOSA	Boshof	44.03	204	LR	LR	12 38 14.9	
	comp=Z,247nm,19.5s,MS4.1,baz=38,slow=37						
GERES	GERESS Array B	44.61	332	P	P	12 19 28.6	-2.8
	comp=Z,3.7nm,1.0s,mb4.2,baz=157,slow=7.5,SNR=14						
ARU	Arti	45.95	11	P	P	12 19 43.6	+1.7
	comp=Z,7.0nm,0.8s,mb4.6						
ARU	Arti	45.95	11	P	P	12 19 43.6	+1.7
	comp=Z,7.0nm,0.8s,mb4.6						
BRVK	Borovoye	46.26	22	*e*P	P	12 19 46.1	+1.8
	comp=Z,3.0nm,1.0s,mb4.2						
BVA0	Borovoye Array	46.27	22	*i* P	P	12 19 45.3	+0.9
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
BVA0	Borovoye Array	46.27	22	*i* P	P	12 19 45.3	+0.9
	comp=Z,1.0nm,1.0s,mb3.7						
BVAR	Borovoye Array	46.27	22	P	P	12 19 43.5	-1.0
	comp=Z,3.5nm,0.8s,mb4.3,baz=225,slow=8.4,SNR=10						
GRA1	Grafenberg Arr	46.36	331	*e*P	P	12 19 44.8	-0.4
	comp=Z,3.0nm,1.1s,mb4.1						
GRF	Grafenberg Arr	46.36	331	*e*P	P	12 19 44.8	-0.4
GRF				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
GRF	Grafenberg Arr	46.36	331	*e*P	P	12 19 44.8	-0.4
	comp=Z,3.0nm,1.1s,mb4.1						
CHKZ	Chkalovo	46.87	22	*e*P	P	12 19 51.2	+2.0
	comp=Z,5.4nm,1.1s,mb4.4						
MKAR	Makanchi Array	47.56	35	P	P	12 19 53.4	-1.4
	comp=Z,4.9nm,1.0s,mb4.5,baz=225,slow=6.9,SNR=19						
MKAR				LR	LR	12 43 46.0	
	comp=Z,240nm,19.0s,MS4.2,baz=136,slow=41						
MKAR	Makanchi Array	47.56	35	P	P	12 19 53.4	-1.4
MKAR				LR	LR	12 43 46.0	
MKAR	Makanchi Array	47.56	35	*i* P	P	12 19 52.6	-2.2
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	48.31	268	P	P	12 19 57.3	-3.8
	comp=Z,2.3nm,0.9s,mb4.2,baz=66,slow=13,SNR=2.1						
FINES	FINESS Array B	51.22	349	P	P	12 20 20.4	-2.3
	comp=Z,6.9nm,1.0s,mb4.5,baz=108,slow=6.0,SNR=6.8						
JOF	Joensuu	51.81	353	*e*p	P	12 20 27.7	+0.6
NVS	Novosibirsk	52.86	27	*e*P	P	12 20 31.5	-3.6
ZAL	Zalesovo	53.03	29	P	P	12 20 34.0	-2.4
	comp=Z,2.6nm,0.7s,mb4.3,baz=257,slow=5.5,SNR=9.1						
ZAL				LR	LR	12 47 34.5	
	comp=Z,706nm,18.1s,MS4.8,baz=245,slow=41						
NOA	NORSAR Array B	54.62	341	P	P	12 20 46.2	-1.8
	comp=Z,3.4nm,0.9s,mb4.4,baz=139,slow=7.3,SNR=3.8						
NOA	NORSAR Array B	54.62	341	P	P	12 20 46.2	-1.8
GTA	Gaotai	56.40	50	*e*P	P	12 21 04.8	+3.6
GTA				AP	pP	12 21 09.1	+4.8

SONM	Songino Array	62.96	42	P	P	12 21 45.4	-0.8
	comp=Z,4.6nm,0.9s,mb4.6,baz=252,slow=5.4,SNR=19						
TIXI	Tiksi	77.29	19	eP	P	12 23 12.8	-0.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,407nm,20.0s,MS4.7						
TIXI	Tiksi	77.29	19	eP	P	12 23 12.8	-0.2
	comp=Z,407nm,20.0s						
MAW	Mawson	80.40	173	LR	LR	12 55 18.5	
	comp=Z,111nm,20.2s,MS4.2,baz=276,slow=33						
WRA	Warramunga Arr	94.39	109	P	P	12 24 39.4	+0.3
	comp=Z,0.9nm,0.9s,mb4.2,baz=296,slow=3.5,SNR=5.5						
PDAR	Pinedale Array	120.47	338	PKP	PKPdf	12 30 11.4	-0.9
	comp=Z,0.6nm,0.9s,baz=90,slow=1.5,SNR=3.9						
NVAR	Mina Array Bea	127.31	342	PKP	PKPdf	12 30 24.9	-0.8
	comp=Z,1.6nm,0.9s,baz=304,slow=0.3,SNR=8.7						
NVAR	Mina Array Bea	127.31	342	PKP	PKPdf	12 30 24.9	-0.8
TXAR	Lajitas Array	128.47	323	PKP	PKPdf	12 30 27.3	-0.9
	comp=Z,1.0nm,0.8s,baz=84,slow=2.6,SNR=10						

NIC ***06*** *12:21:38.2±0.3, 37.91N×30.02E, h46^{km}, mb4.6, ML4.2, MW3.9*

CSEM ***06*** *12:21:42.9±0.0, 37.01N×30.44E, h10^{km}, mb4.3/13, Error ellipse: s-maj=1.1km s-min=0.9km az=70.0*

IDC ***06*** *12:21:44.5±0.7, 37.05N×30.24E, mb4.1/11, mb1 4.1/16, mb1mx4.0/26, mbtmp4.0/16, ML3.7/4, Error ellipse: s-maj=18.0km s-min=13.3km az=124.0*

MOS ***06*** *12:21:44.2±1.0, 36.99N×30.23E, h10^{km}, mb4.3/10, Error ellipse: s-maj=20.4km s-min=9.6km az=83.5*

ISK ***06*** *12:21:45.5, 37.04N×30.43E, h43^{km}, MD4.2*

NEIC ***06*** *12:21:45.4±0.4, 36.97N×30.38E, h10^{km}, mb4.2/20, ML4.1(ISK), Error ellipse: s-maj=7.8km s-min=5.4km az=195.0*

HLW ***06*** *12:21:47.2, 36.96N×30.41E, h10^{km}, Mb4.1*

ISC 06 12:21:43.0±0.7**, 36.96N**±0.02×**30.40E**±0.02**, h5^{km}**±5^{km}**, n179, σ1^{s}05**/211**, mb4.4**/25**, 7C-6D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	Golhisar	0.72	293	iP	Pg	12 21 54.5	-3.0
GOLH				iS	Sg	12 22 13.1	+5.9
ISP	Isparta	0.89	6	PG	Pg	12 22 00.8	+0.1
ISP	Isparta	0.89	6	eP	Pb	12 21 59.8	-0.7
AKAS	Kas	0.97	222	iP	Pb	12 22 03.5	+1.7
AKAS				iS	Sb	12 22 19.7	+5.1
TKTP	Tekketepe	1.08	357	iP	Pb	12 22 03.6	-0.1
TKTP				iS	Sb	12 22 23.7	+5.7
FETY	Fethiye	1.10	253	PN	Pn	12 22 06.0	+1.0
FETY				SN	Sn	12 22 20.9	+0.2
DNZL	Cakiroluk	1.30	304	iP	Pb	12 22 06.9	-0.6
DNZL				iS	Sb	12 22 27.8	+3.5
DENT	Denizli	1.35	306	PN	Pn	12 22 08.2	-0.2
DALT	Dalyan (Mudla)	1.43	263	PN	Pn	12 22 10.2	+0.6
KHL	Karahalli	1.53	333	PN	Pn	12 22 10.6	-0.4
YER	Yerkesik	1.70	276	PN	Pn	12 22 14.1	+0.6
ERMK	Ermenek	2.04	98	iP	Pn	12 22 20.3	+1.9
ERMK				iS	Sn	12 22 54.1	+10
KDHN	Kadinhani	2.07	41	iP	Pn	12 22 10.7	-8.0
KDHN				iS	Sn	12 22 40.6	-4.6
ALT	Altintas	2.10	354	PN	Pn	12 22 17.8	-1.5
MANT	Manisa	2.11	317	iP	Pn	12 22 20.4	+0.9
MANT				iS	Sn	12 22 47.7	+1.4
MLSB	Milas	2.12	280	PN	Pn	12 22 19.9	+0.4
AYDN	Tasoluk	2.13	290	iP	Pn	12 22 21.4	+1.7
AYDN				iS	Sn	12 22 53.9	+7.2
GDZ	Gediz	2.25	341	iP	Pn	12 22 21.9	+0.6
GDZ				iS	Sn	12 23 00.0	+10
KIZT	Kizilcal	2.25	31	PN	Pn	12 22 20.4	-0.9
DAT	Datca	2.27	265	PN	Pn	12 22 22.4	+0.7
BODT	Bodrum	2.47	273	PN	Pn	12 22 24.9	+0.3
AKMC	Akamas	2.48	140	P	Pn	12 22 29.9	+5.2
ALFC	Alevga	2.53	135	P	Pn	12 22 30.2	+4.8
ALFC				S	Sg	12 23 11.3	+4.0
ESKT	Eskisehir	2.58	8	PN	Pn	12 22 25.5	-0.6
ESKT	Eskisehir	2.58	8	iP	Pn	12 22 26.4	+0.3
ESKT				iS	Sn	12 23 02.4	+4.2
PPCY	Paphos	2.60	142	P	Pn	12 22 31.4	+4.9
LEF	Lefka	2.73	132	PN	Pn	12 22 28.9	+0.7
IKL	Isikli	2.74	104	PN	Pn	12 22 28.6	+0.2
AKS	Akhisar	2.80	314	PN	Pn	12 22 29.0	-0.3
IZM	Izmir	2.87	301	PN	Pn	12 22 30.0	-0.3
KDAG	Bornova	2.87	301	iP	Pn	12 22 30.4	+0.1
KDAG				iS	Sn	12 22 54.0	-12
MAMC	Mammari	2.90	127	P	Pn	12 22 34.6	+3.9
BORA	Eskisehir	2.92	1	iP	Pn	12 22 31.7	+0.8
BORA				iS	Sg	12 23 24.3	+4.3
DST	Dursunbey	2.98	333	PN	Pn	12 22 31.0	-0.9
SZAC	Souni-Zanaja	2.98	137	P	Pn	12 22 36.9	+5.0
SZAC				S	Sg	12 23 22.2	-0.2
MEST	Erdemli	3.03	96	iP	Pn	12 22 31.9	-0.6
MEST				iS	Sg	12 23 23.4	-0.5
CSS	Prodhromos	3.10	129	P	Pn	12 22 37.1	+3.5
	4.9nm,0.6s						
CSS				S	Sg	12 23 23.4	-2.9
CSS	Prodhromos	3.10	129	eP	Pn	12 22 32.4	-1.2
CSS				P	Pn	12 22 37.1	+3.5
CSS				S	Sg	12 23 23.4	-2.9
CSS	Prodhromos	3.10	129	eP	Pn	12 22 32.3	-1.3
ORLT	Orhaneli	3.30	340	ePN	Pn	12 22 35.8	-0.5
BALB	Balikesir	3.33	324	ePN	Pn	12 22 36.5	-0.3
BTOK	Tokmak	3.36	327	iP	Pn	12 22 37.5	+0.3
BTOK				iS	Sg	12 23 37.6	+2.8
ANTO	Ankara	3.46	32	ePN	Pn	12 22 38.2	-0.4
ANTO	Ankara	3.46	32	eP	Pn	12 22 39.6	+1.0
ANTO	Ankara	3.46	32	eP	Pn	12 22 39.6	+1.0
LOD	Lodumlu	3.46	32	ePN	Pn	12 22 37.5	-1.2
PHNC	Paralimni	3.54	122	P	Pn	12 22 42.6	+2.9
	11nm,1.0s						
PHNC				S	Sg	12 23 33.1	-7.6
NIG	Nigde	3.54	70	ePN	Pn	12 22 39.2	-0.5
KAMT	Kaman	3.55	46	ePN	Pn	12 22 38.9	-1.0
MDU	Mudurnu	3.56	10	ePN	Pn	12 22 38.8	-1.2
YLV	Yalova	3.69	348	ePN	Pn	12 22 40.6	-1.3
KARA	Karaisali	3.73	84	ePN	Pn	12 22 42.3	-0.2
BRTR	Keskin Array B	3.76	42	Pn	Pn	12 22 45.1	+2.3
BRTR				Sn	Sn	12 23 31.4	+3.4
HRT	Hereke	3.90	352	ePN	Pn	12 22 44.0	-0.8
BNT	Bandirma	3.91	331	ePN	Pn	12 22 44.8	-0.2
CDAG	Cicekdag	4.10	48	iP	Pn	12 22 48.9	+1.1
CDAG				iS	Sg	12 24 04.6	+5.0
ELDT	Eldivan	4.25	33	iP	Pn	12 22 50.9	+1.1
ELDT				iS	Sn	12 23 25.4	-15
CEYT	Ceyhan	4.28	88	ePN	Pn	12 22 49.9	-0.4
KOZT	Kozan	4.36	82	ePN	Pn	12 22 51.3	-0.2
MFT	Murefte	4.53	328	ePN	Pn	12 22 53.1	-0.7
CORM	Corum	4.62	45	ePN	Pn	12 22 54.1	-1.0
HTY	Hatay	4.70	99	ePN	Pn	12 22 56.0	-0.2
BNN	Bunyan	4.70	65	ePN	Pn	12 22 55.8	-0.5
COBT	Iskenderun	4.72	94	iP	Pn	12 22 58.9	+2.3
COBT				iS	Sn	12 24 01.9	+9.4
IDI	Anoyia	4.76	251	Pn	Pn	12 22 57.0	-0.1
	4.1nm,0.3s,baz=47,slow=15,SNR=11						
IDI				Sn	Sn	12 23 52.7	-0.7
	6.5nm,0.3s,baz=49,slow=15,SNR=7.1						
CTKT	Corum	5.01	42	iP	Pn	12 23 03.5	+2.8
CTKT				iS	Sn	12 24 05.8	+6.0
KAHT	Ahir Dag	5.21	81	iP	Pn	12 23 04.5	+1.2
KAHT				iS	Sg	12 24 30.1	-6.2
HWQ	Hawqa	5.25	119	ePn	Pn	12 23 05.0	+1.0
GAZ	Gaziantep	5.45	86	ePN	Pn	12 23 06.8	-0.1
EDRB	Edirne	5.64	331	ePN	Pn	12 23 09.2	-0.3
BOYT	Boyabat	5.66	37	iP	Pn	12 23 15.6	+5.7
BOYT				iS	Sn	12 24 15.6	-0.5
HBRG	Burj al ‘Arab	6.39	184	⇓eP	Pn	12 23 20.5	+0.4
HMAT	Matruh	6.46	206	P	Pn	12 23 21.3	+0.2
HMAT				S	Sn	12 24 31.4	-4.7
AANS		6.71	173	P	Pn	12 23 24.5	0.0
AMAG	Maghara	6.72	159	⇓P	Pn	12 23 24.8	+0.1
AMAG				S	Sn	12 24 37.2	-5.4
URFA	Urfa	6.74	83	ePN	Pn	12 23 23.9	-1.1
SLUM		6.94	220	P	Pn	12 23 27.8	-0.1
HMYD	Mayadein	7.15	177	P	Pn	12 23 31.2	+0.4
AYT	Al ‘Ayyat	7.26	175	P	Pn	12 23 32.1	-0.2
FYM	Al Fayyum	7.27	176	⇓P	Pn	12 23 32.7	+0.3
HNAT	Natroun	7.31	179	P	Pn	12 23 32.9	-0.2
HSAF	As Saff	7.39	172	P	Pn	12 23 33.9	-0.2
SUZ		7.39	163	P	Pn	12 23 33.9	-0.2
GLL	Jalalah	7.45	171	⇑P	Pn	12 23 34.7	-0.3
HNKL	Nakhl	7.62	156	P	Pn	12 23 37.5	+0.1
HNKL	Nakhl	7.62	156	P	Pn	12 23 37.5	+0.1
TIRR	Tirgusor	7.64	349	⇑P	Pn	12 23 37.5	-0.1
TIRR	Tirgusor	7.64	349	eP	Pn	12 23 36.7	-1.0
TIRR	Tirgusor	7.64	349	eP	Pn	12 23 36.7	-0.9
CFR	Carcaliu	8.38	349	⇑P	P	12 23 46.8	-1.2
SWA1		8.62	208	P	P	12 23 50.6	-0.7
SWA1				S	Sn	12 25 22.8	-7.2
AWBH		8.71	189	P	P	12 23 51.5	-1.0
SWA2		8.74	210	P	P	12 23 52.5	-0.5
HKAT	Jabal Katrina	8.94	159	⇓P	P	12 23 55.0	-0.7
MLR	Muntele Rosu	9.16	340	Pn	P	12 23 58.0	-0.8
	0.3nm,0.3s,baz=238,slow=11,SNR=3.6						
VRI	Vrincioaia	9.31	344	⇑P	P	12 24 01.7	+0.8
VRI	Vrincioaia	9.31	344	⇑P	P	12 24 01.7	+0.8
VOIR		9.38	336	⇑P	P	12 24 01.6	-0.2
VOIR		9.38	336	⇑P	P	12 24 01.6	-0.2
HFRF	Wahat Farafira	9.94	191	P	P	12 24 08.2	-1.4
TIP	Timpagrande	10.98	286	P	P	12 24 24.9	+1.1
BURAR	Bucovina Array	11.31	342	⇓P	P	12 24 32.1	+3.8
BURAR	Bucovina Array	11.31	342	⇓P	P	12 24 32.1	+3.8
TDS	Terranova Siba	11.37	288	P	P	12 24 34.1	+5.0
	74nm,1.4s						
CEL	Celeste	11.58	281	P	P	12 24 34.3	+2.3
CUC	Castrocucco	11.82	289	P	P	12 24 37.3	+2.0
	136nm,1.8s						
SGO	Sicignano	12.32	292	P	P	12 24 45.8	+3.9
	2.0nm,0.4s						
AKASG	Malin Array Be	13.76	357	Pn	P	12 25 00.6	-0.4
	0.6nm,0.3s,baz=176,slow=12,SNR=2.8						
AKASG	Malin Array Be	13.76	357	P	P	12 25 00.6	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES	GERESS Array B	17.00	320	Pn	P	12 25 43.6	+0.6
	comp=Z,0.1nm,0.3s,baz=128,slow=11,SNR=3.8						
PGF	Pioggiola	17.36	295	eP	P	12 25 48.3	+0.8
DAVOX	Davos	18.11	309	P	P	12 25 58.5	+1.7
	comp=Z,0.2nm,0.3s,baz=145,slow=19,SNR=3.5						
SBF	Sospel	18.76	299	eP	P	12 26 06.1	+1.2
GRA1	Grafenberg Arr	18.81	319	eP	P	12 26 10.2	+4.8
	comp=Z,6.0nm,1.2s						
GRF	Grafenberg Arr	18.81	319	eP	P	12 26 10.2	+4.8
	comp=Z,6.0nm,1.2s						
GRF	Grafenberg Arr	18.81	319	eP	P	12 26 10.2	+4.8
GRF				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MOX	Moxa	19.18	321	eP	P	12 26 12.0	+2.2
FRF	La Foret Royal	19.25	297	eP	P	12 26 11.5	+0.8
MBDF	Montbardon	19.44	301	eP	P	12 26 13.1	+0.2
	comp=Z,28nm,0.9s						
LPG	La Plagne	19.67	303	eP	P	12 26 15.7	+0.2
	comp=Z,28nm,0.8s						
LPL	La Plagne	19.69	303	eP	P	12 26 15.6	-0.1
	comp=Z,26nm,1.0s						
ORIF	Oris-en-Rattie	20.10	301	eP	P	12 26 19.3	-0.9
	comp=Z,21nm,0.9s						
CDF	Champ du Feu	20.41	311	eP	P	12 26 20.4	-3.0
	comp=Z,23nm,0.9s						
HINF	Hinteralfeld	20.42	309	eP	P	12 26 21.8	-1.7
	comp=Z,14nm,0.9s						
CABF	La Chapelle	20.46	306	eP	P	12 26 23.5	-0.5
	comp=Z,15nm,0.6s						
HAU	Haudompre	20.80	310	eP	P	12 26 25.8	-1.7
	comp=Z,44nm,1.4s						
VIVF	Saint-Julien-l	20.92	300	eP	P	12 26 26.7	-2.0
	comp=Z,20nm,1.0s						
MEZF	Maizieres J’vi	21.80	310	eP	P	12 26 35.6	-2.0
SMF	Signal de Mont	21.95	304	eP	P	12 26 37.6	-1.5
	comp=Z,20nm,0.8s,mb4.3						
LOR	Lormes	22.12	306	eP	P	12 26 40.5	-0.3
	comp=Z,60nm,1.5s,mb4.5						
SSF	Saint Saulge	22.29	305	eP	P	12 26 42.2	-0.3
	comp=Z,8.2nm,0.9s,mb4.2						
AVF	Avril sur Loir	22.31	305	eP	P	12 26 42.0	-0.7
	comp=Z,16nm,0.8s,mb4.2						
BGF	Bois d’Agland	22.58	304	eP	P	12 26 44.3	-1.1
	comp=Z,22nm,1.0s,mb4.3						
GIVF	Givet	22.59	314	eP	P	12 26 43.2	-2.2
CAF	Calviac	22.75	299	eP	P	12 26 47.3	+0.3
BAIF	Baives	22.93	313	eP	P	12 26 46.5	-2.2
TCF	Toulx Ste Croi	22.94	303	eP	P	12 26 49.6	+0.7
	comp=Z,13nm,0.9s,mb4.0						
RJF	Les Rejaudoux	23.20	300	eP	P	12 26 51.1	-0.3
AKTO	Aktyubinsk	23.92	47	P	P	12 27 00.9	+2.6
	comp=Z,2.6nm,0.5s,mb3.9,baz=256,slow=9.4,SNR=11						
AKTO	Aktyubinsk	23.92	47	P	P	12 27 00.9	+2.6
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.0						
MFF	Saint Martin d	24.60	303	eP	P	12 27 04.3	-0.7
	comp=Z,28nm,0.9s,mb4.5						
FINES	FINESS Array B	24.66	355	P	P	12 27 06.5	+1.1
	comp=Z,2.8nm,0.7s,mb3.9,baz=156,slow=9.1,SNR=11						
FINES	FINESS Array B	24.66	355	P	P	12 27 06.5	+1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KAF	Kangasniemi	25.31	355	ep	P	12 27 12.5	+0.9
GRR	Gorron	25.48	307	eP	P	12 27 11.9	-1.5
JOF	Joensuu	25.99	1	ep	P	12 27 18.7	+0.7
ESDC	Sonseca Array	27.00	286	P	P	12 27 26.5	-1.0
	comp=Z,2.8nm,0.8s,mb3.8,baz=76,slow=8.7,SNR=9.4						
CHKZ	Chkalovo	32.32	46	eP	P	12 28 15.2	+0.4
	comp=Z,2.3nm,0.7s,mb4.1						
CHKZ	Chkalovo	32.32	46	eP	P	12 28 15.2	+0.4
	comp=Z,2.3nm,0.7s,mb4.1						
ARCES	ARCESS Array B	32.74	357	P	P	12 28 18.1	-0.3
	comp=Z,6.7nm,1.0s,mb4.5,baz=151,slow=9.3,SNR=4.8						
ARCES	ARCESS Array B	32.74	357	P	P	12 28 18.1	-0.3
ARCES				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARCES	ARCESS Array B	32.74	357	P	P	12 28 18.0	-0.4
MKAR	Makanchi Array	39.23	59	P	P	12 29 14.5	+0.8
	comp=Z,3.0nm,0.6s,mb4.2,baz=277,slow=7.3,SNR=20						
MKAR	Makanchi Array	39.23	59	P	P	12 29 14.5	+0.8
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAL	Zalesovo	40.67	48	P	P	12 29 25.4	-0.1
	comp=Z,0.7nm,0.5s,mb3.5,baz=202,slow=10,SNR=4.7						
ZAL	Zalesovo	40.67	48	P	P	12 29 25.4	-0.1
ZAL	Zalesovo	40.67	48	P	P	12 29 25.4	-0.1
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LFA	Lagoa do Fogo	43.85	289	eP	P	12 29 44.9	-6.8
DBIC	Dimbokro	44.05	236	P	P	12 29 52.4	-1.2
	comp=Z,3.2nm,0.9s,mb4.0,baz=142,slow=7.6,SNR=3.3						
DBIC	Dimbokro	44.05	236	P	P	12 29 52.4	-1.2
DBIC	Dimbokro	44.05	236	P	P	12 29 52.4	-1.2
DBIC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KOLN	Koldanda	45.36	86	eP	P	12 30 04.1	+0.1
	comp=Z,29nm,1.1s,mb5.0						
GKN	Gorkha	46.09	85	eP	P	12 30 10.4	+0.6
	comp=Z,34nm,1.0s,mb5.2						
HYB	Hyderabad	46.51	101	iP	P	12 30 13.0	-0.2
HYB	Hyderabad	46.51	101	eP	P	12 30 13.0	-0.2
DMN	Daman	46.63	85	eP	P	12 30 14.7	+0.6
	comp=Z,30nm,0.8s,mb5.3						
KKN	Kakani	46.70	85	eP	P	12 30 14.2	-0.3
	comp=Z,12nm,0.6s,mb5.0						
PKI	Pulchoki	46.89	85	eP	P	12 30 15.8	-0.3
	comp=Z,17nm,0.9s,mb5.0						
GUN	Gumba	47.12	84	eP	P	12 30 18.5	+0.6
	comp=Z,25nm,0.9s,mb5.1						
LSZ	Lusaka	52.00	183	P	P	12 30 56.9	+1.4
	comp=Z,1.9nm,0.6s,mb4.2,baz=7.6,slow=8.0,SNR=7.7						
LSZ	Lusaka	52.00	183	P	P	12 30 56.9	+1.4
LSZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ZAK	Zakamensk	52.35	51	eP	P	12 30 58.1	+0.4
SONM	Songino Array	55.04	53	P	P	12 31 18.0	+0.3
	comp=Z,1.6nm,0.6s,mb4.2,baz=291,slow=8.0,SNR=11						
SONM	Songino Array	55.04	53	P	P	12 31 18.0	+0.3
SONM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BOSA	Boshof	65.41	185	P	P	12 32 30.2	+1.4
	comp=Z,4.5nm,0.7s,mb4.6,baz=16,slow=2.5,SNR=10.0						
BOSA	Boshof	65.41	185	P	P	12 32 30.2	+1.4
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
INK	Inuvik	74.36	354	P	P	12 33 21.2	-1.4
	comp=Z,1.0nm,1.0s,mb3.7,baz=12,slow=13,SNR=3.0						
INK	Inuvik	74.36	354	eP	P	12 33 21.7	-1.0
INK	Inuvik	74.36	354	P	P	12 33 21.3	-1.4
INK				pmax	pmax		
	comp=Z,1.0nm,1.0s						

MAN 06 12:51:07.5, 14.71N×123.08E, h78^{km}, mb4.3, ML3.2, MS2.9, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	1.01	218	⇑eP	P	12 51 26.0	-0.9
GQP				eS	S	12 51 42.2	+0.9
POLP	Polilio Island	1.10	271	eP	P	12 51 28.4	+0.4
POLP				eS	S	12 51 46.2	+2.9
AUQP	San Andres	1.44	196	eP	P	12 51 33.9	+1.4
AUQP				eS	S	12 51 57.5	+6.6
PVCP	Virac	1.52	137	eP	P	12 51 30.2	-3.4
PVCP				eS	S	12 51 50.3	-2.5
BOAC	Boac	1.73	224	eP	P	12 51 39.0	+2.7
BOAC				eS	S	12 52 03.7	+6.2
BALP	Baler	1.78	305	eP	P	12 51 36.9	0.0
BALP				eS	S	12 52 01.6	+3.1
CAUP	Cauayan	2.53	332	eP	P	12 51 47.2	-0.2
CAUP				eS	S	12 52 20.7	+3.6
CNP	Catarman	2.68	145	eP	P	12 51 49.3	-0.2
CNP				eS	S	12 52 23.6	+2.8
APYP	Conner	3.59	331	eP	P	12 52 02.0	-0.2
APYP				eS	S	12 52 44.4	+0.7

NEIC ***06*** *13:18:52.0±4.2, 21.22N×120.37E, h28^{km}±32^{km}, mb4.7/2, Error ellipse: s-maj=17.3km s-min=12.5km az=96.0*

BJI ***06*** *13:19:01.1, 21.88N×119.41E, h28^{km}, mB4.4, mb4.3, Ms4.1, Msz3.7*

IDC ***06*** *13:19:03.6±9.2, 20.91N×119.84E, h134^{km}±90^{km}, mb3.2/7, mb1 3.4/7, mb1mx3.3/17, mbtmp3.6/7, MS3.2/1, Ms1 3.2/1, ms1mx2.8/8, Error ellipse: s-maj=33.9km s-min=19.8km az=62.0*

ISC 06 13:18:48.6±3.7**, 21.15N**±0.07×**120.4E**±0.1**, h17^{km}**±28^{km}**, n16, σ0^{s}94**/16**, mb3.6**/8**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	3.22	21	eP	Pn	13 19 39.8	+0.1
YHNB	Yeheng	3.63	15	eP	Pn	13 19 45.3	-0.2
YHNB				eS	Sn	13 20 28.1	-0.3
JOW	Kunigami	9.19	50	LR	LR	13 24 45.8	
	comp=Z,117nm,18.6s,baz=174,slow=35						
QIZ	Qiongzhong	10.10	260	eP	P	13 21 16.8	+0.6
QIZ	Qiongzhong	10.10	260	eP	P	13 21 16.3	+0.1
MJAR	Matsushiro Arr	21.85	42	P	P	13 23 50.6	+8.3
	2.5nm,0.9s,mb3.7,baz=235,slow=9.9,SNR=4.0						
GTA	Gaotai	25.32	321	eP	P	13 24 20.1	+4.0
GTA				AP	pP	13 24 24.3	+3.4
GTA				XP	sP	13 24 27.3	+4.2
SONM	Songino Array	28.91	340	P	P	13 24 52.3	+3.5
	0.4nm,0.9s,mb3.1,baz=90,slow=4.3,SNR=3.4						
MKAR	Makanchi Array	40.05	319	P	P	13 26 23.0	-1.6
	0.3nm,0.6s,mb3.2,baz=133,slow=6.5,SNR=3.2						
ZAL	Zalesovo	42.42	329	P	P	13 26 43.7	-0.3
	0.4nm,0.4s,mb3.4,baz=342,slow=16,SNR=2.7						
ZAL	Zalesovo	42.42	329	P	P	13 26 43.7	-0.3
WRAB	Tennant Creek	43.06	161	P	P	13 26 48.0	-1.6
	7.0nm,0.9s,mb4.4						
WRA	Warramunga Arr	43.06	161	P	P	13 26 49.9	+0.2
	2.3nm,0.6s,mb4.1,baz=343,slow=9.1,SNR=7.1						
WB2	Warramunga Arr	43.07	161	eP	P	13 26 50.3	+0.6
ILAR	Eielson Array	72.25	27	P	P	13 30 15.8	+1.2
	0.3nm,0.6s,mb3.4,baz=277,slow=3.1,SNR=4.9						
GERES	GERESS Array B	84.69	321	P	P	13 31 23.2	+0.4
	0.2nm,0.4s,mb3.6,baz=180,slow=2.7,SNR=3.6						

IDC ***06*** *13:27:49.7±0.6, 49.12S×164.69E, mb4.6/6, mb1 4.7/8, mb1mx4.7/11, mbtmp4.6/8, ML4.4/2, MS4.8/12, Ms1 4.8/12, ms1mx4.6/16, Error ellipse: s-maj=27.0km s-min=20.9km az=51.0*

MOS ***06*** *13:27:53.5±3.3, 48.96S×164.13E, h10^{km}, mb5.1/2, Error ellipse: s-maj=50.8km s-min=19.3km az=106.8*

NEIC ***06*** *13:28:00.1±1.3, 48.89S×164.84E, h74^{km}±12^{km}, mb5.0/12, Error ellipse: s-maj=13.2km s-min=9.0km az=222.0*

NEIC Felt on Stewart Island.

BJI ***06*** *13:28:03.6, 48.70S×164.90E, h103^{km}, mB5.2, mb5.1*

HRVD ***06*** *13:28:03.7±0.2, 49.13S×164.33E, h24^{km}, MW5.4/69, Centroid moment Tensor Solution. LP body waves: s55,c107;Mantle waves: s69,c143; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.58±.03; M$_{\theta\theta}$0.62±.03; M$_{\phi\phi}$-1.20±.02; M$_{r\theta}$0.86±.04; M$_{\theta\phi}$0.30±.02; M$_{\phi r}$-0.07±.04; Best double couple: M$_0$1.373×10^{17} NP1:φ$_s$26°, δ54°, λ151°. NP2:φ$_s$134°, δ67°, λ40°. Principal axes: T 1.47, Plg44°, Azm355°; N -.198, Plg45°, Azm159°; P -1.276, Plg8°, Azm257°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 06 13:27:52.7±1.4**, 48.99S**±0.05×**164.75E**±0.07**, h15^{km}**±9^{km}**, n160, σ1^{s}50**/126**, mb4.9**/19**, MS4.8**/18**, 11C-9D, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	3.78	36	PN	Pn	13 28 53.4	+1.6
WHZ				SN	Sn	13 29 36.8	+0.4
WHZ	Wether Hill Ro	3.78	36	P	Pn	13 28 53.4	+1.7
WHZ				S	Sn	13 29 36.8	+0.5
MLZ	Mavora Lakes	4.32	34	PN	Pn	13 29 00.8	+1.3
MLZ				SN	Sn	13 29 50.8	+0.7
MLZ	Mavora Lakes	4.32	34	P	Pn	13 29 00.8	+1.3
MLZ				S	Sn	13 29 50.8	+0.6
TUZ	Tuapeka	4.49	49	PN	Pn	13 29 03.2	+1.4
TUZ	Tuapeka	4.49	49	P	Pn	13 29 03.2	+1.4
MSZ	Milford Sound	4.83	28	PN	Pn	13 29 08.7	+2.0
MSZ				SN	Sn	13 30 04.5	+1.4
MSZ	Milford Sound	4.83	28	P	Pn	13 29 08.7	+2.0
MSZ				S	Sn	13 30 04.5	+1.4
EAZ	Earnscleugh	4.88	41	PN	Pn	13 29 08.1	+0.7
EAZ	Earnscleugh	4.88	41	P	Pn	13 29 08.1	+0.8
WKZ	Wanaka	5.08	37	PN	Pn	13 29 12.0	+1.8
WKZ	Wanaka	5.08	37	P	Pn	13 29 12.0	+1.8
JCZ	Jackson Bay	5.64	31	PN	Pn	13 29 20.3	+2.3
JCZ	Jackson Bay	5.64	31	P	Pn	13 29 20.3	+2.3
ODZ	Otahua Downs	5.64	48	PN	Pn	13 29 17.8	-0.2
ODZ	Otahua Downs	5.64	48	P	Pn	13 29 17.8	-0.2
LBZ	Lake Benmore	5.93	41	PN	Pn	13 29 21.0	-1.2
LBZ				SN	Sn	13 30 29.0	-1.5
LBZ	Lake Benmore	5.93	41	P	Pn	13 29 21.0	-1.1
LBZ				S	Sn	13 30 31.1	+0.6
FOZ	Fox Glacier	6.41	34	PN	Pn	13 29 30.4	+1.4
FOZ	Fox Glacier	6.41	34	eP	Pn	13 29 30.7	+1.7
RPZ	Rata Peaks	6.84	42	Pn	Pn	13 29 32.5	-2.5
	14nm,0.3s,baz=216,slow=6.3,SNR=59						
RPZ				Sn	Sn	13 30 47.8	-5.5
	6.7nm,0.3s,baz=25,slow=23,SNR=4.8						
RPZ				LR	LR	13 32 27.9	
	comp=Z,15µm,19.7s,baz=216,slow=40						
RPZ	Rata Peaks	6.84	42	PN	Pn	13 29 32.5	-2.5
RPZ				SN	Sn	13 30 52.4	-0.9
RPZ	Rata Peaks	6.84	42	P	Pn	13 29 32.5	-2.5
WVZ	Waitaha Valley	7.23	37	PN	Pn	13 29 39.5	-1.0
WVZ	Waitaha Valley	7.23	37	eP	Pn	13 29 39.9	-0.6
MQZ	McQueen’s Vall	7.60	49	PN	Pn	13 29 44.8	-0.9
MQZ	McQueen’s Vall	7.60	49	eP	Pn	13 29 44.8	-0.8
CRLZ	Canterbury Las	7.68	48	PN	Pn	13 29 45.2	-1.5
CRLZ	Canterbury Las	7.68	48	eP	Pn	13 29 45.9	-0.9
LTZ	Lake Taylor	8.12	43	PN	P	13 29 50.4	-2.5
LTZ	Lake Taylor	8.12	43	eP	P	13 29 50.4	-2.5
DSZ	Denniston Nort	8.77	37	PN	P	13 29 58.4	-3.6
DSZ	Denniston Nort	8.77	37	eP	P	13 29 59.1	-2.9
KHZ	Kahutara	8.99	46	PN	P	13 30 03.2	-1.8
KHZ				SN	Sn	13 31 46.6	-0.4
KHZ	Kahutara	8.99	46	eP	P	13 30 03.2	-1.8
KHZ				S	Sn	13 31 46.6	-0.4
THZ	Tophouse	9.22	41	PN	P	13 30 06.3	-1.8
THZ	Tophouse	9.22	41	eP	P	13 30 06.7	-1.5
QRZ	Quartz Range	9.84	37	PN	P	13 30 14.7	-1.9
QRZ	Quartz Range	9.84	37	eP	P	13 30 14.7	-2.0
NNZ	Nelson	9.87	41	eP	P	13 30 15.5	-1.6
TCW	Tory Channel	10.28	44	P	P	13 30 24.5	+1.9
SNZO	South Karori	10.40	46	eP	P	13 30 23.5	-0.8
MRW	Makara Radio	10.46	46	P	P	13 30 26.6	+1.4
MSWZ	Moikau Station	10.58	48	P	P	13 30 27.1	+0.3
CAW	Cannon Point	10.73	47	P	P	13 30 29.9	+1.1
KIW	Kapiti Island	10.85	45	ePN	P	13 30 31.6	+1.2
KIW	Kapiti Island	10.85	45	P	P	13 30 22.6	-7.8
MTW	Mount Morrison	10.90	48	P	P	13 30 32.7	+1.5

MRZ	Mangatainoka R	11.32	47	*e*P	P	13 30 35.3	-1.6
BFZ	Birch Farm	11.63	49	*e*P	P	13 30 41.5	+0.4
NRZ	Ngariki Road	11.67	38	*e*P	P	13 30 42.0	+0.3
NWEZ	Newall Road	11.70	37	*e*P	P	13 30 42.2	+0.1
WAZ	Wanganui	11.77	42	PN	P	13 30 46.1	+3.1
NEZ	North Egmont	11.80	38	P	P	13 30 43.6	+0.2
PKE	Pukeiti	11.82	38	P	P	13 30 43.1	-0.6
VRZ	Vera Road	12.19	40	*e*PN	P	13 30 47.1	-1.6
HIZ	Hauiti	12.75	39	*e*P	P	13 30 54.7	-1.5
TAU	Tasmania Unive	13.55	290	*e*P	P	13 31 02.0	-4.7
	54nm,0.4s						
URZ	Urewera	13.95	44	Pn	P	13 31 09.6	-2.3
	0.8nm,0.3s,baz=245,slow=12,SNR=5.0						
URZ				Sn	S	13 33 39.3	-8.0
	0.7nm,0.3s,baz=9.1,slow=22,SNR=3.9						
CNB	Canberra Magne	17.75	315	*e*P	P	13 32 02.3	+1.5
	188nm,1.7s						
TOO	Toolangi	18.02	302	*e*P	P	13 32 05.6	+1.5
	88nm,0.7s						
RIV	Riverview	18.21	321	*e*P	P	13 32 08.0	+1.5
DRV	Dumont d'Urvil	21.81	207	P	P	13 32 51.0	+5.2
DRV				SP		13 37 03.0	
RAO	Raoul Island	23.75	40	P	P	13 33 09.5	+4.4
	157nm,0.7s,mb5.6,baz=242,slow=22,SNR=2.5						
RAO				LR	LR	13 41 57.2	
	comp=Z,5µm,21.6s,MS4.9,baz=196,slow=36						
RAO	Raoul Island	23.75	40	P	P	13 33 09.6	+4.5
RAO				LR	LR	13 41 57.2	
STKA	Stephens Creek	24.40	306	P	P	13 33 10.7	-0.7
	20nm,0.8s,mb4.6,baz=134,slow=10,SNR=26						
STKA				LR	LR	13 40 49.4	
	comp=Z,4µm,19.0s,MS5.0,baz=118,slow=32						
STKA	Stephens Creek	24.40	306	*e*P	P	13 33 11.0	-0.4
	29nm,0.9s,mb4.7						
NOUC	Port Laguerre	26.86	3	*e*P	P	13 33 34.4	-0.1
DZM	Mont Dzumac	26.89	3	P	P	13 33 36.6	+1.8
	22nm,0.8s,mb4.8,baz=177,slow=7.1,SNR=16						
DZM				LR	LR	13 42 41.2	
	comp=Z,2µm,19.3s,MS4.8,baz=181,slow=33						
VNDA	Vanda	28.66	181	*e*P	P	13 33 50.8	+0.5
	17nm,1.6s,mb4.5						
SBA	Scott Base	28.99	179	*e*P	P	13 33 54.9	+1.6
	168nm,2.5s,mb5.3						
CTA	Charters Tower	32.43	326	*e*P	P	13 34 23.3	-0.9
	12nm,0.8s,mb4.8						
CTAO	Charters Tower	32.43	326	*e*P	P	13 34 23.2	-1.0
	5.1nm,0.6s,mb4.5						
CASY	Casey	32.45	218	P	P	13 34 24.2	+0.2
	4.4nm,0.8s,mb4.3						
ASPA	Alice Springs	35.03	305	*e*P	P	13 34 44.7	-2.0
WB2	Warramunga Arr	37.85	309	*e*P	P	13 35 08.0	-2.5
WB2				*e*PCP	PcP	13 37 24.5	-2.9
WRA	Warramunga Arr	37.86	309	P	P	13 35 08.1	-2.4
	22nm,0.7s,mb5.0,baz=146,slow=8.0,SNR=134						
WRA				PcP	PcP	13 37 24.5	-2.9
	9.0nm,0.7s,baz=145,slow=2.7,SNR=17						
WRAB	Tennant Creek	37.86	309	*e*P	P	13 35 07.8	-2.8
WRAB	Tennant Creek	37.86	309	*c* *i*P	P	13 35 08.1	-2.5
QSPA	South Pole Qui	41.14	180	*e*P	P	13 35 41.8	+4.6
	84nm,2.0s,mb5.0						
PMG	Port Moresby	42.12	334	P	P	13 35 45.8	-0.1
	26nm,0.8s,mb4.9,baz=126,slow=5.1,SNR=10						
PMG	Port Moresby	42.12	334	*e*P	P	13 35 46.5	+0.6
	288nm,2.0s,mb5.6						
TBI	Tubuai	44.05	71	*e*S	S	13 42 38.5	+5.7
TBI				*e*SS	SS	13 45 59.4	+17
TBI				*e*LR	LR	13 48 20.0	
	1µm,28.0s,baz=221						
FITZ	Fitzroy Crossi	44.07	300	*e*P	P	13 36 00.0	-1.8
	46nm,0.6s,mb5.4						
FITZ				*e*PCP	PcP	13 37 44.8	-2.8
KAKA	Kakadu	44.95	312	*e*P	P	13 36 24.4	+16
	19nm,0.8s,mb5.0						
KAKA				*e*PCP	PcP	13 38 05.6	+15
PPT	Papeete	48.33	66	*e*S	S	13 43 39.3	+5.4
PPT				*e*SS	SS	13 47 09.0	+10
PPT				*e*LR	LR	13 50 13.7	
	2µm,24.8s,baz=227						
PPT	Papeete	48.33	66	LR	LR	13 52 51.3	
	comp=Z,1µm,18.9s,MS4.9,baz=243,slow=31						
MAW	Mawson	49.99	209	*e*P	P	13 36 52.3	+4.7
	9.1nm,1.0s,mb4.8						
MAW	Mawson	49.99	209	P	P	13 36 45.3	-2.3
	1.7nm,1.0s,mb4.0,baz=117,slow=14,SNR=3.0						
MAW				LR	LR	13 56 06.3	
	comp=Z,2µm,19.6s,MS5.1,baz=114,slow=34						
MAW	Mawson	49.99	209	*e*P	P	13 36 52.3	+4.7
MAW				LR	LR	13 56 06.3	
RKT	Rikitea	53.53	84	*e*S	S	13 44 51.3	+5.8
RKT				*e*SS	SS	13 48 34.3	+8.8
RKT				*e*LR	LR	13 52 47.2	
	871nm,23.2s,baz=219						
SYO	Syowa Base	55.59	201	⇑P	P	13 37 33.2	+3.9
SYO	Syowa Base	55.59	201	⇑*e*P	P	13 37 33.2	+3.9
SNAA	Sanae	59.33	185	⇑*i*	P	13 38 00.0	+4.3
SNAA	Sanae	59.33	185		P	13 38 06.9	+11
SNAA	Sanae	59.33	185	LR	LR	14 02 33.8	
	comp=Z,354nm,19.0s,MS4.5,baz=206,slow=35						
SNAA	Sanae	59.33	185	*c* *i*P	P	13 38 00.2	+4.5
VNA3	Neumayer Olymp	60.01	182	⇓*i*	P	13 38 04.5	+4.1
VNA3	Neumayer Olymp	60.01	182		P	13 38 11.5	+11
VNA2	Neumayer--Watz	60.27	183	⇑*i*	P	13 38 06.9	+4.8
VNA1	Neumayer--Stat	60.57	183	⇑*i*	P	13 38 09.3	+5.1
VNA1	Neumayer--Stat	60.57	183		P	13 38 21.2	+17
TAOE	Nuku Hiva Isla	60.82	68	*e*LR	LR	13 56 02.6	
	4µm,22.9s						
USHA	Ushuaia	67.34	150	LR	LR	14 04 08.1	
	comp=Z,666nm,18.0s,MS4.9,baz=204,slow=32						
RPN	Rapa Nui	67.48	106	LR	LR	14 04 20.6	
	comp=Z,229nm,18.4s,MS4.4,baz=24,slow=32						
KSM	Kuching	68.67	299	*e*P	P	13 38 54.9	-2.8
KSM				*e*		13 39 02.7	
PLCA	Paso Flores	78.23	140	P	P	13 39 51.4	-1.5
	1.8nm,0.8s,mb4.1,baz=227,slow=9.3,SNR=3.2						
PLCA				LR	LR	14 07 11.9	
	comp=Z,383nm,19.8s,MS4.7,baz=203,slow=30						
QIZ	Qiongzhong	83.43	309	P	P	13 40 18.8	-2.0
QIZ				S	S	13 50 40.2	+0.1
QIZ				AMB	AMB		
	comp=Z,140nm,9.2s						
QIZ				LR	LR		
	comp=N,220nm,19.3s,MS4.7						
QIZ				LR	LR		
	comp=E,170nm,18.1s,MS4.7						
QIZ				LR	LR		
	comp=Z,210nm,22.2s,MS4.5						
CFAA	Coronel Fontan	86.91	137	P	P	13 40 36.9	-1.0
	comp=Z,0.1nm,0.6s,baz=231,slow=6.9,SNR=3.8						
CFAA	Coronel Fontan	86.91	137	P	P	13 40 36.9	-1.0
MJAR	Matsushiro Arr	88.36	339	P	P	13 40 45.0	+0.3
	comp=Z,4.4nm,1.0s,mb4.6,baz=169,slow=3.2,SNR=7.7						
MAT	Matsushiro	88.36	339	P	P	13 40 46.2	+1.4
NJ2	Nanjing	90.46	322	*e*P	P	13 40 54.6	-0.2
NJ2				PP	PP	13 44 30.6	-1.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,60nm,4.5s						
NJ2				LR	LR		
	comp=N,500nm,20.2s,MS5.2						
NJ2				LR	LR		
	comp=E,710nm,16.0s,MS5.2						
NJ2				LR	LR		
	comp=Z,430nm,25.7s						
GYA	Guiyang	91.22	310	P	P	13 40 57.7	-0.7
GYA				S	S	13 51 49.7	-3.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,90nm,6.0s						
GYA				LR	LR		
	comp=N,330nm,19.5s,MS4.9						
GYA				LR	LR		
	comp=E,280nm,19.5s,MS4.9						
GYA				LR	LR		
	comp=Z,280nm,21.2s,MS4.7						
KMI	Kunming	92.14	307	P	P	13 41 03.2	+0.6
KMI				PP	PP	13 44 48.1	+2.6
KMI				S	S	13 52 01.0	-0.8
KMI				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.9						
KMI				AMB	AMB		
	comp=Z,90nm,5.2s						
KMI				LR	LR		
	comp=N,290nm,17.2s,MS4.9						
KMI				LR	LR		
	comp=E,200nm,18.5s,MS4.9						
KMI				LR	LR		
	comp=Z,260nm,17.2s,MS4.7						
KMI	Kunming	92.14	307	P	P	13 41 03.2	+0.6
	comp=Z,14nm,1.7s,mb5.0						
KMI				PP	PP	13 44 48.1	+2.6
KMI				S	S	13 52 01.0	-0.8
KMI				LR	LR		
	comp=Z,260nm,17.2s,MS4.7						
BOSA	Boshof	94.70	215	LR	LR	14 17 10.7	
	comp=Z,562nm,19.9s,MS5.0,baz=155,slow=31						
CD2	Chengdu	96.32	311	*e*P	P	13 41 23.0	+1.3
MDJ	Mudanjiang	98.16	335	P	P	13 41 32.4	+2.8
MDJ				PP	PP	13 45 38.5	+6.5
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.6						
MDJ				AMB	AMB		
	comp=Z,170nm,3.1s						
MDJ				LR	LR		
	comp=N,130nm,24.9s,MS4.4						
MDJ				LR	LR		
	comp=E,120nm,26.8s,MS4.4						
MDJ				LR	LR		
	comp=Z,210nm,23.1s,MS4.6						
LPAZ	La Paz	99.91	129	LR	LR	14 17 38.8	
	comp=Z,133nm,18.8s,MS4.5,baz=45,slow=30						
WMQ	Urumqi	114.35	309	*e*PKP	PKPdf	13 46 32.5	-2.4
WMQ				PP	PP	13 47 31.8	-0.5
WMQ				PP	PP		
	comp=Z,110nm,5.0s						
WMQ				LR	LR		
	comp=N,200nm,28.0s,MS4.7						
WMQ				LR	LR		
	comp=E,140nm,26.5s,MS4.7						
WMQ				LR	LR		
	comp=Z,130nm,22.0s,MS4.5						
BILL	Bilibino	116.70	1	PKIKP	PKPdf	13 46 36.0	-2.9
BILL				*e*		13 58 46.4	
MKAR	Makanchi Array	119.16	309	PKP	PKPdf	13 46 38.9	-5.3
	comp=Z,1.5nm,0.8s,baz=198,slow=1.5,SNR=11						
MKAR	Makanchi Array	119.16	309	PKPdf	PKPdf	13 46 38.9	-5.3
ZAL	Zalesovo	122.60	316	PKP	PKPdf	13 46 44.8	-5.8
	comp=Z,0.7nm,0.6s,baz=313,slow=1.9,SNR=5.6						
ZAL	Zalesovo	122.60	316	PKPdf	PKPdf	13 46 44.8	-5.8
TIXI	Tiksi	122.99	347	⇑*i*PKIKP	PKPdf	13 46 44.8	-6.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ARU	Arti	136.69	309	*i* PKIKP	PKPdf	13 47 11.4	-5.7
ARU				MLR	MLR		
	comp=Z,300nm,23.0s,MS5.0						
DBIC	Dimbokro	136.92	195	PKP	PKPdf	13 47 13.3	-5.4
	comp=Z,4.1nm,0.8s,baz=104,slow=4.6,SNR=5.6						
DBIC	Dimbokro	136.92	195	PKP	PKPdf	13 47 13.3	-5.4
BRTR	Keskin Array B	144.39	274	PKP	PKPdf	13 47 25.5	-5.8
	comp=Z,2.4nm,0.5s,baz=155,slow=3.4,SNR=13						
ANTO	Ankara	145.02	273	PKPdf	PKPdf	13 47 27.9	-4.5
MOS	Moscow	147.71	302	*e*PKIKP	PKPdf	13 47 34.3	-2.1
MOS				pmax	pmax		
	comp=Z,57nm,1.2s						
OBN	Obninsk	148.19	301	α *i*PKIKP	PKPdf	13 47 36.9	-0.2
OBN				pmax	pmax		
	comp=Z,37nm,0.9s						
SCHQ	Schefferville	148.26	60	PKP	PKPdf	13 47 32.4	-4.9
	comp=Z,5.6nm,1.0s,baz=245,slow=19,SNR=2.6						
SCHQ				PKPbc	PKPdf	13 47 36.2	-1.1
	comp=Z,6.7nm,0.9s,baz=240,slow=13,SNR=3.2						
TIRR	Tirgusor	150.04	278	⇓P	PKPdf	13 47 39.4	-1.1
TIRR	Tirgusor	150.04	278	⇓P	PKPdf	13 47 39.4	-1.1
HARR	Harsova	150.45	278	⇓P	PKPdf	13 47 41.6	+0.5
HARR	Harsova	150.45	278	⇓P	PKPdf	13 47 41.6	+0.5
CFR	Carcaliu	150.51	279	⇓P	PKPdf	13 47 41.5	+0.3
CFR	Carcaliu	150.51	279	⇓P	PKPdf	13 47 41.5	+0.3
JOF	Joensuu	151.19	316	*e*pkp	PKPdf	13 47 43.8	+2.2
AKASG	Malin Array Be	151.59	291	PKPbc	PKPdf	13 47 44.5	+1.9
	comp=Z,14nm,0.7s,baz=86,slow=2.6,SNR=87						
AKASG				PKPab	PKPab	13 47 52.7	-3.5
	comp=Z,4.8nm,0.7s,baz=89,slow=2.7,SNR=8.8						
ARCES	ARCESS Array B	151.62	331	PKPbc	PKPdf	13 47 44.1	+2.1
	comp=Z,22nm,0.8s,baz=91,slow=1.5,SNR=36						
ARCES				PKPab	PKPab	13 47 53.9	-1.9
	comp=Z,13nm,0.8s,baz=52,slow=1.7,SNR=7.7						
VRI	Vrincioaia	151.69	280	⇓P	PKPdf	13 47 45.2	+2.3
MLR	Muntele Rosu	152.06	279	⇓P	PKPdf	13 47 46.3	+2.8
BURAR	Bucovina Array	153.26	283	⇑P	PKPdf	13 47 49.2	+4.1
KAF	Kangasniemi	153.61	315	*e*pkp	PKPdf	13 47 48.7	+3.6
FINES	FINESS Array B	153.83	314	PKP	PKPdf	13 47 42.9	-2.5
	comp=Z,2.4nm,0.9s,baz=153,slow=17,SNR=2.2						
FINES				PKPbc	PKPdf	13 47 48.9	+3.5
	comp=Z,5.5nm,0.8s,baz=98,slow=5.0,SNR=16						
FINES				PKPab	PKPab	13 48 03.1	-2.1
	comp=Z,2.2nm,0.7s,baz=63,slow=4.3,SNR=4.7						
FINES	FINESS Array B	153.83	314	PKP	PKPdf	13 47 42.9	-2.5
FINES				PKPbc	PKPdf	13 47 48.9	+3.5
FINES				PKPab	PKPab	13 48 03.1	-2.1
CRVS	Cervenica-Dubn	156.03	284	*e*	PKPab	13 48 21.2	+6.2
KECS	Kecovo	156.56	282	*e*	PKPab	13 48 22.9	+5.6
VYHS	Vyhne	157.62	282	*e*	PKPab	13 48 27.9	+6.0
OKC	Ostrava-Krasne	158.35	285	*e*pPKP	PKPab	13 48 24.9	-0.1
NB2	NORSAR Subarra	160.78	319	P	PKPab	13 48 32.3	-2.8
	comp=Z,5.9nm,0.8s,baz=62,slow=4.3						
NB2	NORSAR Subarra	160.78	319	P	PKPab	13 48 32.3	-2.8
	baz=62,slow=4.4						
NOA	NORSAR Array B	160.78	319	PKPab	PKPab	13 48 31.6	-3.4
	comp=Z,3.8nm,0.8s,baz=62,slow=4.4,SNR=13						
GERES	GERESS Array B	161.02	281	PKPab	PKPab	13 48 32.7	-3.8
	comp=Z,1.5nm,0.7s,baz=108,slow=4.2,SNR=11						
KHC	Kasperske Hory	161.15	281	*e*PKPab	PKPab	13 48 43.3	+6.3
CLL	Collm	161.79	288	*i* PKP2	PKPab	13 48 37.1	-2.7

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*GUC **06** 13:43:46.6±0.7, 32.87S×70.39W, h3^{km}±1^{km}, MD4.3, ML4.4*

*NEIC **06** 13:43:46.8±0.8, 32.82S×70.39W, h13^{km}±6^{km}, mb4.3/3, ML4.4(GUC), Error ellipse: s-maj=8.5km s-min=5.8km az=89.0*

NEIC Felt [III] at Santiago and [II] at Los Andes, Petorca and San Felipe.

*IDC **06** 13:43:52.0±2.3, 32.76S×70.39W, h55^{km}±19^{km}, mb3.9/10, mb1 4.0/15, mb1mx3.9/21, mbtmp4.1/15, ML4.2/3, Error ellipse: s-maj=20.0km s-min=13.4km az=109.0*

ISC 06 13:43:46.4±0.5**, 32.79S**±0.03×**70.34W**±0.04**, h21**^{km}±5^{km}**, n55, σ0^{s}92**/61**, mb4.1**/12**, 6C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	0.24	297	⇑*i*P	Pb	13 43 52.1	-0.1
JACH				*i* S	Sb	13 43 56.0	-0.1
FCH	Farellones	0.54	175	*i* P	Pb	13 43 56.2	-0.8
FCH				*i* S	Sb	13 44 03.7	-0.6
FCH				AMP		13 44 04.2	
	comp=E,64µm,0.2s						
ROCH	El Roble	0.59	252	⇑*i*P	Pb	13 43 58.0	+0.1
ROCH				*i* S	Sb	13 44 06.1	+0.2
SAN	Santiago	0.71	202	⇑*i*P	Pb	13 43 59.8	-0.2
SAN				*i* S	Sb	13 44 09.1	-0.2
RCDM	Rinconada Maip	0.80	209	⇓*i*P	Pb	13 44 01.4	-0.1
RCDM				*i* S	Sb	13 44 12.3	+0.4
RCDM				AMP		13 44 12.7	
	comp=E,67µm,0.1s						
ANTU	Antumapu	0.82	197	⇓*i*P	Pb	13 44 01.6	-0.2
ANTU				*i* S	Sb	13 44 12.5	+0.3
ANTU				AMP		13 44 12.9	
	comp=E,26µm,0.3s						
SJCH	San Jose de Ma	0.85	181	*i* P	Pb	13 44 01.2	-1.1
SJCH				AMP		13 44 12.9	
	comp=N,16µm,0.2s						
SJCH				*i* S	Sb	13 44 13.0	-0.3
SJCH	San Jose de Ma	0.85	181	*i* P	Pb	13 44 01.2	-1.1
SJCH				*i* S	Sb	13 44 13.0	-0.3
TACH	Talagante	1.00	210	⇑*i*P	Pb	13 44 04.5	-0.3
TACH				*i* S	Sb	13 44 17.6	+0.1
LMEL	Las Melosas	1.06	174	⇑*i*P	Pb	13 44 05.9	-0.1
LMEL				*i* S	Sb	13 44 20.2	+0.7
LMEL				AMP		13 44 21.4	
	comp=N,26µm,0.1s						
IHA	Instituto Hidr	1.12	257	⇓*i*P	Pb	13 44 06.6	-0.2
IHA				*i* S	Sb	13 44 21.9	+0.9
MDZ	Mendoza	1.26	95	⇑*i*P	Pn	13 44 10.1	+1.1
MDZ				*i*		13 44 12.5	
MDZ				*i* S	Sb	13 44 28.3	+3.2
CMCH	Combarbala	1.71	341	AMP		13 44 47.8	
	comp=E,9µm,0.6s						
CFAA	Coronel Fontan	2.14	57	P	Pn	13 44 25.6	+4.1
	comp=E,12nm,0.3s,baz=235,slow=16,SNR=733						
CFAA				S	Sn	13 44 52.2	+4.5
	comp=E,23nm,0.3s,baz=309,slow=11,SNR=22						
PLCA	Paso Flores	7.93	181	P	Pn	13 45 44.1	+0.7
	comp=E,0.6nm,0.3s,baz=339,slow=10,SNR=10						
PLCA	Paso Flores	7.93	181	P	Pn	13 45 42.2	-1.2
	comp=E,3.1nm,0.5s						
TRQA	Tornquist	8.61	130	*e*P	P	13 45 52.5	-0.4
	comp=E,24nm,0.7s						
LVC	Limon Verde	10.21	7	P	P	13 46 16.2	+1.2
	comp=E,0.5nm,0.3s,baz=228,slow=14,SNR=3.8						
CPUP	Villa Florida	13.02	64	*e*P	P	13 46 52.3	-0.6
	comp=E,28nm,0.6s						
LPAZ	La Paz	16.55	7	P	P	13 47 39.2	+0.2
	comp=E,0.2nm,0.3s,baz=183,slow=9.0,SNR=17						
LPAZ	La Paz	16.55	7	*e*P	P	13 47 40.0	+1.1
SIV	San Ignacio	18.71	29	P	P	13 48 04.3	-1.6
	comp=E,0.7nm,0.3s,baz=212,slow=10,SNR=21						
USHA	Ushuaia	22.08	177	P	P	13 48 42.6	+1.0
	comp=E,6.9nm,0.8s,mb4.1,baz=7.1,slow=8.1,SNR=2.8						
SAML	Samuel	24.63	17	*e*P	P	13 49 08.2	+1.3
	comp=E,5.5nm,0.9s,mb4.1						
BDFB	Brasilia	26.48	55	P	P	13 49 23.1	-1.1
	comp=E,9.6nm,0.8s,mb4.4,baz=256,slow=7.9,SNR=11						
BAO	Brasilia Array	26.50	55	P	P	13 49 22.0	-2.3
VNA3	Neumayer Olymp	49.95	158		P	13 52 42.5	+2.2
VNA3	Neumayer Olymp	49.95	158		P	13 52 44.2	+3.9
VNA3	Neumayer Olymp	49.95	158		P	13 52 53.7	+13
VNA1	Neumayer--Stat	50.24	157		P	13 52 32.5	-10
VNA1	Neumayer--Stat	50.24	157		P	13 52 34.8	-7.7
VNA1	Neumayer--Stat	50.24	157		P	13 52 41.9	-0.6
VNA1	Neumayer--Stat	50.24	157	P	P	13 52 41.9	-0.6
VNA2	Neumayer--Watz	50.59	158		P	13 52 45.5	+0.4
VNA2	Neumayer--Watz	50.59	158		P	13 52 47.2	+2.1
VNA2	Neumayer--Watz	50.59	158		P	13 52 53.5	+8.4
SJG	San Juan	50.77	5	P	P	13 52 45.0	-2.2
	comp=E,16nm,0.7s,mb5.1,baz=133,slow=5.4,SNR=6.1						
SNAA	Sanae	52.18	158		P	13 52 57.5	+0.3
SNAA	Sanae	52.18	158		P	13 52 59.3	+2.1
SNAA	Sanae	52.18	158		P	13 53 15.5	+18
SNAA	Sanae	52.18	158	P	P	13 52 57.3	+0.1
	comp=E,0.4nm,0.6s,mb3.6,baz=256,slow=9.1,SNR=5.1						
SNAA	Sanae	52.18	158	*e*P	P	13 52 57.7	+0.5
	comp=E,1.0nm,0.5s,mb4.0						
TXAR	Lajitas Array	69.40	329	P	P	13 54 54.8	-0.1
	comp=E,0.2nm,0.5s,mb3.3,baz=167,slow=12,SNR=3.1						
WVT	Waverly	70.49	345	*e*P	P	13 55 01.3	-0.1
	comp=E,9.7nm,0.8s,mb4.8						
DBIC	Dimbokro	73.44	71	P	P	13 55 18.4	-1.0
	comp=E,4.4nm,0.7s,mb4.5,baz=238,slow=4.9,SNR=10						
MAW	Mawson	73.93	163	P	P	13 55 21.2	0.0
	comp=E,1.2nm,0.7s,mb3.9,baz=185,slow=9.5,SNR=7.2						
LBTB	Lobatse	81.52	114	P	P	13 56 04.2	+0.3
	comp=E,1.8nm,0.5s,mb4.2,baz=290,slow=5.3,SNR=4.6						
PDAR	Pinedale Array	83.34	332	P	P	13 56 13.1	+0.1
	comp=E,0.3nm,0.6s,mb3.5,baz=135,slow=6.3,SNR=3.8						
NVAR	Mina Array Bea	83.72	324	P	P	13 56 16.0	+1.0
	comp=E,0.8nm,0.8s,mb3.9,baz=152,slow=6.5,SNR=6.6						
WRA	Warramunga Arr	122.50	208	PKP	PKPdf	14 02 41.0	-4.0
	comp=E,0.3nm,0.4s,baz=159,slow=1.8,SNR=11						
CHKZ	Chkalovo	145.33	41	*e*PKPdf	PKPdf	14 03 24.7	-1.6
BRVK	Borovoye	145.36	42	*e*PKPdf	PKPdf	14 03 24.9	-1.5
AAK	Ala-Archa	150.68	60	*e*PKPbc	PKPdf	14 03 38.8	+3.4
ZAL	Zalesovo	152.44	32	PKPbc	PKPdf	14 03 42.8	+5.2
	comp=E,4.2nm,0.7s,baz=125,slow=2.2,SNR=26						
ZAL				PKPab	PKPab	14 03 51.9	-1.0
	comp=E,2.0nm,0.5s,baz=160,slow=2.0,SNR=6.5						
MKAR	Makanchi Array	154.90	48	PKPbc	PKPdf	14 03 45.7	+4.5
	comp=E,0.4nm,0.8s,baz=315,slow=1.7,SNR=4.6						
MKAR				PKPab	PKPab	14 04 03.5	0.0
	comp=E,1.5nm,0.7s,baz=284,slow=4.1,SNR=10.0						

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*NEIC **06** 14:19:11.4, 37.02N×8.43W, MN2.5(MDD), After MDD.*

*INMG **06** 14:19:12.4±1.2, 36.87N×8.62W, h27^{km}±6^{km}, ML2.2, Error ellipse: s-maj=8.4km s-min=2.4km az=57.0*

*IGIL **06** 14:19:13.9, 36.89N×8.55W, h2^{km}, ML2.5*

MDD 06 14:19:12.5±1.2**, 36.90N×8.58W, h29**^{km}±8^{km}**, mbLg2.5**/22**, 1C-2D, Error ellipse: s-maj=14.6km s-min=5.7km az=49.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	Marmelete	0.41	352	*e*P	Pb	14 19 21.4	0.0
MORF				*e*		14 19 21.7	
	baz=341,slow=16						
MORF				*e*S	Sb	14 19 27.0	-0.5
MORF				*e*S	Sb	14 19 27.0	-0.5
MORF				AML	AML	14 19 29.4	
	comp=E,360nm,0.1s						
MORF	Marmelete	0.41	352	*e*P	Pb	14 19 21.4	0.0
MORF				*e*S	Sb	14 19 27.0	-0.5
PTEO	Sao Teotonio	0.66	350	*i* Pg	Pb	14 19 25.0	-0.3
PTEO				*e*Sg	Sb	14 19 34.4	+0.2
	comp=E,66nm,0.2s						
PTEO	Sao Teotonio	0.66	350	⇑P	Pb	14 19 25.0	-0.3
PTEO				S	Sb	14 19 34.4	+0.2
	comp=E,33nm,0.2s						
PBEJ	Beja	1.26	26	*e*P	Pn	14 19 33.1	-1.3
	comp=E,16nm,0.1s						
EMIN	Mina Concepcio	1.75	60	P	Pn	14 19 39.5	-1.9
	comp=E,0.5nm,0.1s,SNR=18						
EMIN				S	Sn	14 20 00.7	-2.2
	comp=E,8.6nm,0.1s,SNR=11						
PLOU	Loures	2.03	347	*e*Sn	Sn	14 20 07.0	-3.2
	comp=E,20nm,0.2s						
PLOU	Loures	2.03	347	S	Sn	14 20 07.0	-3.2
	comp=E,9.9nm,0.2s						
ESPR	Espera	2.18	90	P	Pn	14 19 45.9	-1.8
	comp=E,5.4nm,0.1s,SNR=8.7						
ESPR				S	Sn	14 20 10.8	-3.1
	comp=E,13nm,0.2s,SNR=5.7						
EBAD	Badajoz	2.23	33	⇓P	Pn	14 19 46.2	-2.1
	comp=E,3.7nm,0.1s,SNR=18						
EBAD				S	Sn	14 20 12.8	-2.3
	comp=E,3.0nm,0.1s,SNR=6.9						
EBAD	Badajoz	2.23	33	⇓P	Pn	14 19 46.2	-2.1
EBAD				S	Sn	14 20 12.8	-2.3
PTOM	Tomar	2.72	3	*e*Pn	Pn	14 19 53.5	-1.8
PTOM				*e*Sn	Sn	14 20 23.4	-4.1
	comp=E,16nm,0.1s						
PTOM	Tomar	2.72	3	P	Pn	14 19 53.5	-1.8
PTOM				S	Sn	14 20 23.4	-4.1
	comp=E,8.1nm,0.1s						
ECAB	El Cabril	2.77	64	P	Pn	14 19 53.9	-2.2
	comp=E,2.3nm,0.1s,SNR=29						
ECAB				S	Sn	14 20 24.5	-4.4
	comp=E,12nm,0.2s,SNR=11						
EMIJ	Mijas	3.07	95	P	Pn	14 19 58.1	-2.2
	comp=E,1.2nm,0.2s,SNR=7.9						
EMIJ				S	Sn	14 20 32.5	-4.1
	comp=E,0.9nm,0.1s,SNR=7.9						
EADA	Adamuz	3.42	67	P	Pn	14 20 02.8	-2.5
	comp=E,2.0nm,0.1s,SNR=23						
EADA				S	Sn	14 20 39.3	-6.0
	comp=E,3.4nm,0.1s,SNR=9.5						
ELUQ	Luque	3.50	78	P	Pn	14 20 05.0	-1.4
	comp=E,0.8nm,0.2s,SNR=4.0						
ELUQ				S	Sn	14 20 41.7	-5.7
	comp=E,2.7nm,0.1s,SNR=7.9						
ELOJ	Sierra Loja	3.55	85	P	Pn	14 20 06.0	-1.1
	comp=E,0.6nm,0.2s,SNR=7.9						
ELOJ				S	Sn	14 20 43.7	-4.9
	comp=E,1.0nm,0.2s,SNR=7.9						
MTE	Manteigas	3.59	13	*e*Pn	Pn	14 20 05.1	-2.5
MTE				*e*Sn	Sn	14 20 44.0	-5.5
	comp=E,3.6nm,0.3s						
MTE	Manteigas	3.59	13	P	Pn	14 20 05.1	-2.5
MTE				S	Sn	14 20 44.0	-5.5
	comp=E,1.8nm,0.3s						
PVIS	Viseu	3.85	8	*e*Sn	Sn	14 20 50.6	-5.5
	comp=E,4.9nm,0.1s						
PVIS	Viseu	3.85	8	S	Sn	14 20 50.6	-5.5
	comp=E,2.5nm,0.1s						
EBAN	Banos Encina	4.01	70	P	Pn	14 20 10.5	-3.2
	comp=E,2.4nm,0.1s,SNR=10						
EBAN				S	Sn	14 20 52.7	-7.6
	comp=E,5.8nm,0.1s,SNR=16						
EQUE	Quentar	4.12	84	P	Pn	14 20 13.2	-2.0
	SNR=7.9						
EQUE				S	Sn	14 20 58.0	-5.1
	comp=E,1.2nm,0.2s,SNR=7.9						
PVRL	Vila Real	4.42	8	*e*Sn	Sn	14 21 04.3	-6.4
	comp=E,5.8nm,0.1s						

PVRL	**Vila Real**	4.42	8	S	Sn	14 21 04.3	-6.4
	comp=E,2.9nm,0.1s						
EQES	**Quesada**	4.48	77	P	Pn	14 20 17.1	-3.2
	comp=E,0.9nm,0.2s,SNR=7.9						
EQES				S	Sn	14 21 06.4	-5.7
	comp=E,3.5nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	4.56	51	P	Pn	14 20 18.5	-3.1
	comp=E,1.2nm,0.2s,baz=237,slow=13,SNR=24						
ESDC				S	Sn	14 21 07.8	-6.5
	comp=E,1.0nm,0.3s,baz=236,slow=24,SNR=12						
ESLA	**Sonseca Array**	4.56	51	*e*P	Pn	14 20 18.0	-3.5
ESLA				*e*S	Sn	14 21 08.9	-5.4
PCAB	**Cabril**	4.82	5	*e*Pn	Pn	14 20 21.4	-3.8
PCAB				*e*Sn	Sn	14 21 13.4	-7.4
	comp=E,3.2nm,0.1s						
PCAB	**Cabril**	4.82	5	P	Pn	14 20 21.4	-3.8
PCAB				S	Sn	14 21 13.4	-7.4
	comp=E,1.6nm,0.1s						
EHUE	**Huescar**	4.85	77	S	Sn	14 21 15.6	-6.0
	comp=E,3.2nm,0.2s,SNR=4.0						
ELOB	**Lobios**	4.98	4	P	Pn	14 20 23.8	-3.6
	comp=E,0.8nm,0.1s,SNR=7.9						
ELOB				S	Sn	14 21 17.4	-7.2
	comp=E,5.7nm,0.2s,SNR=7.9						
GUD	**Guadarrama**	5.09	41	S	Sn	14 21 21.7	-5.7
	comp=E,0.7nm,0.2s,SNR=7.9						
PBRG	**Braganca**	5.10	16	*e*Pn	Pn	14 20 25.8	-3.3
PBRG				*e*Sn	Sn	14 21 20.2	-7.6
	comp=E,1.4nm,0.2s						
PBRG	**Braganca**	5.10	16	P	Pn	14 20 25.8	-3.3
PBRG				S	Sn	14 21 20.2	-7.6
	comp=E,0.7nm,0.2s						
EVIA	**Vianos**	5.11	68	S	Sn	14 21 21.2	-6.9
	comp=E,1.5nm,0.2s,SNR=7.9						
ECAL	**Calabor**	5.23	15	P	Pn	14 20 27.0	-3.9
	comp=E,0.9nm,0.2s,SNR=6.9						
ECAL				S	Sn	14 21 24.1	-6.9
	comp=E,1.0nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	5.83	71	P	Pn	14 20 34.5	-4.9
	comp=E,0.1nm,0.1s,SNR=7.9						
ETOB				S	Sn	14 21 37.2	-9.0
	comp=E,0.6nm,0.1s,SNR=7.9						
EMUR	**La Murta**	5.92	79	S	Sn	14 21 40.0	-8.2
	SNR=4.0						
EMOS	**Mosqueruela**	7.22	59	P	Pn	14 20 56.2	-2.8
	comp=E,0.8nm,0.2s,SNR=4.0						
EMOS				S	Sn	14 22 12.6	-8.3
	comp=E,0.9nm,0.1s,SNR=7.9						

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*PRU **06** 14:44:25.5, 49.22N×20.59E*

WAR 06 14:44:26, 49.30N×20.50E, ML2.5, 1C, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIE	**Niedzica**	0.17	314⇑	*i*Pg	Pg	14 44 31.1	+1.7
NIE				*e*Sg	Sg	14 44 35.6	+3.9
STHS	**Stebnicka Huta**	0.50	76	*e*PG	Pg	14 44 33.7	-2.3
STHS				*e*SG	Sg	14 44 39.7	-2.9
CRVS	**Cervenica-Dubn**	0.75	122	*i* PG	Pg	14 44 37.4	-3.5
CRVS				*e*SG	Sg	14 44 46.7	-4.2
KECS	**Kecovo**	0.82	181	*e*PG	Pg	14 44 39.7	-2.6
KECS				*e*SG	Sg	14 44 49.1	-4.1
OJC	**Ojcow**	1.03	334	*e*PG	Pg	14 44 46.0	-0.5
OJC				*e*SG	Sg	14 45 01.0	+0.8
KOLS	**Kolonicke sedl**	1.22	107	*e*PN	Pn	14 44 47.2	-3.1
KOLS				*e*SN	Sn	14 45 03.0	-4.7
VYHS	**Vyhne**	1.36	234	*e*PN	Pn	14 44 50.8	-1.5
VYHS				*e*SN	Sn	14 45 09.6	-1.7
OKC	**Ostrava-Krasne**	1.62	290	*e*PG	Pg	14 44 57.6	-0.8
OKC				*e*SG	Sg	14 45 20.2	+0.2
DPC	**Dobruska-Polom**	2.90	293	*e*SG	Sg	14 46 00.0	-2.6

CASC 06 16:06:36.5±2.5, 12.41N×87.89W, h44^{km}±67^{km}, MD3.8, ML3.5, 5C-15D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	**San Cristobal**	0.87	70⇓	*e*P	P	16 06 53.8	+1.3
CRIN				*e*S	S	16 07 05.8	+1.7
CNCH	**Conchagua**	0.87	3⇓	*e*P	P	16 06 54.1	+1.7
CNCH				*e*S	S	16 07 06.5	+2.3
LEON	**Leon**	0.97	89⇑	*e*P	P	16 06 53.7	-0.2
LEON				*e*S	S	16 07 06.5	-0.2
	comp=Z,643nm,0.4s						
TEL3	**Telica 3**	1.03	81⇑	*e*P	P	16 06 54.9	+0.2
TEL3				*e*S	S	16 07 08.8	+0.6
TELN	**Telica**	1.05	79⇓	*e*P	P	16 06 55.7	+0.7
TELN				*e*S	S	16 07 08.5	-0.2
VSM	**San Miguel**	1.08	340⇓	*e*P	P	16 06 57.5	+2.0
VSM				*e*S	S	16 07 11.6	+2.0
BLLM	**Bellamira**	1.09	342⇓	*e*P	P	16 06 56.6	+1.1
BLLM				*e*S	S	16 07 10.8	+1.1
MIRN	**Miramar**	1.15	88⇑	*e*P	P	16 06 56.1	-0.2
MIRN				*e*S	S	16 07 10.7	-0.4
CNGN	**Cerro Negro**	1.16	85⇓	*e*P	P	16 06 56.7	+0.1
CNGN				*e*S	S	16 07 10.7	-0.9
COPN	**Copaltepe**	1.28	100⇓	*e*P	P	16 06 58.0	-0.3
COPN				*e*S	S	16 07 13.3	-1.4
	comp=Z,803nm,0.5s						
MOMJ	**Momotombo**	1.31	90⇓	*e*P	P	16 06 58.7	-0.2
MOMJ				*e*S	S	16 07 14.9	-0.6
SNVI	**San Vicente**	1.52	322⇓	*e*P	P	16 07 02.8	+1.1
SNVI				*e*S	S	16 07 21.6	+1.2
XAVN	**Gruta Xavier**	1.54	99⇓	*e*P	P	16 07 02.1	+0.1
XAVN				*e*S	S	16 07 20.5	-0.6
	comp=Z,711nm,0.3s						
MGAN	**Managua**	1.62	99⇑	*e*P	P	16 07 02.6	-0.5
MGAN				*e*S	S	16 07 21.9	-1.1
	comp=N,1μm,0.3s						
LCBS	**La Ceiba**	1.64	320⇑	*e*P	P	16 07 04.6	+1.2
LCBS				*e*S	S	16 07 23.6	+0.2
TICN	**Ticuantepe**	1.66	103⇓	*e*P	P	16 07 04.2	+0.5
TICN				*e*S	S	16 07 23.5	-0.4
LFRS	**El Faro**	1.67	317⇓	*e*P	P	16 07 04.8	+1.0
LFRS				*e*S	S	16 07 24.7	+0.5
LBRS	**Las Brisas**	1.74	320⇓	*e*P	P	16 07 06.5	+1.6
LBRS				*e*S	S	16 07 26.9	+0.9
PYTN	**Playitas**	1.79	86⇓	*e*P	P	16 07 05.3	-0.2
PYTN				*e*S	S	16 07 27.5	+0.3
BOQS	**Boqueron**	1.90	314⇓	*e*P	P	16 07 08.6	+1.6
BOQS				*e*S	S	16 07 31.1	+1.3

IDC 06 16:07:16.7±1.6**, 31.13N×140.61E, mb3.6**/2**, mb1 3.9**/4**, mb1mx3.6**/21**, mbtmp3.7**/4**, ML3.4**/1**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/28**, Error ellipse: s-maj=63.2km s-min=22.8km az=82.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	2.10	341	Pn	Pn	16 07 54.9	+1.3
	16nm,0.3s,baz=78,slow=21,SNR=2.4						
JHJ				LR	LR	16 08 19.1	
	comp=Z,488nm,21.0s,baz=345,slow=30						
JHJ				Sn	Sn	16 08 19.2	-1.7
	26nm,0.3s,baz=66,slow=19,SNR=2.7						
MJAR	**Matsushiro Arr**	5.76	340	Pn	Pn	16 08 42.2	-3.3
	1.0nm,0.3s,baz=154,slow=11,SNR=13						
MAT	**Matsushiro**	5.76	340	P	Pn	16 08 42.1	-3.4
WRA	**Warramunga Arr**	51.13	188	P	P	16 16 21.3	-2.3
	0.6nm,0.9s,baz=2.8,slow=7.4,SNR=5.2						
ILAR	**Eielson Array**	54.88	30	P	P	16 16 48.5	-2.5
	1.0nm,1.1s,baz=240,slow=7.3,SNR=4.0						

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*IDC **06** 16:26:51.9±0.8, 21.82S×67.33W, h167^{km}±10^{km}, mb3.1/3, mb1 3.6/7, mb1mx3.5/16, mbtmp3.9/7, Error ellipse: s-maj=17.6km s-min=11.0km az=103.0*

*NEIC **06** 16:26:52.5±0.7, 21.73S×67.43W, h172^{km}±7^{km}, mb4.0/6, Error ellipse: s-maj=12.4km s-min=9.5km az=77.0*

*GUC **06** 16:26:53.9±0.5, 22.26S×67.56W, h203^{km}±11^{km}, ML4.3*

ISC 06 16:26:51.5±0.5**, 21.88S**±0.04×**67.44W**±0.07**, h184**^{km}±6^{km}**, n30, σ1^{s}46**/38**, mb3.7**/7**, 2D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	1.24	215	*i* P	P	16 27 24.2	+2.3
SPCH				AMP		16 27 49.7	
	comp=E,585nm,0.5s						
LVC	**Limon Verde**	1.55	242	P	P	16 27 25.6	+0.9
	baz=56,slow=11						
LVC				S	S	16 27 50.0	-0.2
	comp=E,66nm,0.3s,baz=218,slow=20,SNR=25						
CEN1	**Los Morros**	2.96	239⇓	*i*P	P	16 27 43.2	+2.7
CEN1				*i* S	S	16 28 20.3	+2.1
CEN1				AMP		16 28 24.1	
	comp=N,690nm,0.4s						
ANCH	**Antofagasta**	3.28	236	*e*P	P	16 27 44.3	-0.1
ANCH				*i* S	S	16 28 22.8	-2.3
CPN1	**Cerro Paranal**	3.86	224	*e*P	P	16 27 51.8	+0.1
CPN1				*i* S	S	16 28 35.8	-2.4
CPN1				AMP		16 28 38.3	
	comp=N,653nm,0.1s						
LPAZ	**La Paz**	5.60	353	P	P	16 28 15.4	+1.3
	comp=N,16nm,0.3s,baz=163,slow=7.9,SNR=236						
LPAZ				S	S	16 29 17.6	-0.7
	baz=10,slow=18,SNR=1.7						
LPAZ	**La Paz**	5.60	353⇓	*i*P	P	16 28 15.3	+1.2
LPAZ				S	S	16 29 17.6	-0.7
LPAZ				*e*S	S	16 29 18.5	+0.2
CDCH	**Caldera**	6.02	210	*i* S	S	16 29 22.1	-6.0
CPCH	**Copiapo**	6.06	205	*i* S	S	16 29 23.6	-5.5
ARE	**Arequipa**	6.61	324	*e*P	P	16 28 24.0	-3.4
SIV	**San Ignacio**	8.40	47	P	P	16 28 48.4	-2.5
	comp=N,43nm,0.3s,baz=238,slow=11,SNR=737						
SIV				S	S	16 30 11.4	-13
	comp=N,3.9nm,0.3s,baz=241,slow=14,SNR=4.1						
CFAA	**Coronel Fontan**	9.71	184	P	P	16 29 07.3	-0.8
	comp=N,0.5nm,0.3s,baz=355,slow=12,SNR=24						
CFAA				S	S	16 30 52.2	-2.7
	comp=N,0.4nm,0.3s,baz=279,slow=21,SNR=8.4						
CPUP	**Villa Florida**	10.24	118	*e*P	P	16 29 16.8	+1.9
NNA	**Nana**	13.33	316	*e*P	P	16 29 54.2	-0.3
	comp=N,26nm,1.0s						
TRQA	**Tornquist**	16.79	165	*e*P	P	16 30 37.6	+0.2
	comp=N,4.0nm,0.4s						
PLCA	**Paso Flores**	18.98	187	P	P	16 31 01.6	+0.6
	comp=N,0.3nm,0.3s,baz=5.2,slow=12,SNR=12						
BDFB	**Brasilia**	19.40	75	P	P	16 31 04.2	-1.3
	comp=N,1.7nm,0.3s,baz=240,slow=12,SNR=10						
BAO	**Brasilia Array**	19.42	75	P	P	16 30 55.0	-11
VNA3	**Neumayer Olymp**	59.28	161		P	16 36 38.7	+3.1
VNA2	**Neumayer--Watz**	59.84	161		P	16 36 41.8	+2.4
SNAA	**Sanae**	61.47	161		P	16 36 51.5	+1.1
SNAA	**Sanae**	61.47	161	P	P	16 36 51.0	+0.6
	comp=N,0.2nm,0.6s,mb3.2,baz=287,slow=4.7,SNR=6.9						
SNAA	**Sanae**	61.47	161	P	P	16 36 51.5	+1.1
TXAR	**Lajitas Array**	61.73	324	P	P	16 36 52.3	-0.4
	comp=N,0.1nm,0.3s,mb3.1,baz=138,slow=13,SNR=2.5						
MNTX	**Cornudas Mount**	64.49	324	*e*P	P	16 37 09.8	-1.0
	comp=N,0.8nm,0.8s,mb3.6						
DBIC	**Dimbokro**	67.53	73	P	P	16 37 29.6	-0.8
	comp=N,13nm,1.0s,mb4.6,baz=218,slow=7.8,SNR=13						
SDCO	**Great Sand Dun**	69.28	328	*e*P	P	16 37 42.0	+1.3
	comp=N,3.5nm,1.3s,mb3.9						
PDAR	**Pinedale Array**	75.13	329	P	P	16 38 15.6	+0.5
	comp=N,0.4nm,0.4s,mb3.4,baz=112,slow=7.4,SNR=4.7						
VNDA	**Vanda**	76.71	190	P	P	16 38 22.7	-0.6
	comp=N,2.5nm,0.8s,mb3.9						
MKAR	**Makanchi Array**	145.12	37	PKPbc	PKPbc	16 46 09.4	+2.1
	comp=N,0.5nm,0.6s,baz=288,slow=3.8,SNR=4.0						

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*BJI **06** 16:34:11.6, 19.10S×178.40W, h612^{km}, mB4.3, mb4.3*

*NEIC **06** 16:34:11.7±0.8, 19.09S×178.42W, h613^{km}±10^{km}, mb4.2/15, Error ellipse: s-maj=10.7km s-min=7.7km az=148.0*

*IDC **06** 16:34:13.9±1.7, 19.34S×178.49W, h648^{km}±22^{km}, mb3.5/13, mb1 3.7/16, mb1mx3.7/19, mbtmp4.6/16, Error ellipse: s-maj=12.3km s-min=11.6km az=131.0*

ISC 06 16:34:10.2±0.8**, 19.16S**±0.08×**178.44W**±0.07**, h606**^{km}±11^{km}**, n62, σ1^{s}01**/54**, mb4.1**/27**, 5C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	8.25	52	P	P	16 36 13.1	+0.7
	27nm,0.3s,baz=43,slow=1.7,SNR=49						
AFI				S	S	16 37 49.4	-0.8
	3.3nm,0.3s,baz=193,slow=21,SNR=5.2						
AFI	**Afiamalu**	8.25	52⇑	*e*P	P	16 36 12.9	+0.5
	79nm,0.5s						
DZM	**Mont Dzumac**	14.45	256	P	P	16 37 16.1	+3.2
	0.9nm,0.3s,baz=75,slow=22,SNR=12						
RAR	**Rarotonga**	17.64	100	P	P	16 37 44.0	+0.8
	3.4nm,0.3s,baz=278,slow=1.4,SNR=3.3						
URZ	**Urewera**	19.42	191	P	P	16 37 57.7	-2.0
	6.9nm,0.3s,baz=47,slow=2.9,SNR=40						
URZ				S	S	16 41 00.1	-4.0
	0.2nm,0.3s,baz=5.1,slow=22,SNR=2.8						
RPZ	**Rata Peaks**	26.02	198	P	P	16 38 57.9	-0.8
	12nm,0.5s,mb4.8,baz=78,slow=3.3,SNR=9.8						
CNB	**Canberra Magne**	32.65	234⇑	*i*P	P	16 39 56.7	+1.3
	24nm,1.1s,mb4.7						
CTA	**Charters Tower**	33.23	262⇓	*i*P	P	16 40 00.9	+0.6
	4.7nm,0.4s,mb4.5						
CTAO	**Charters Tower**	33.23	262	*e*P	P	16 40 00.5	+0.1
	5.7nm,0.5s,mb4.5						
PMG	**Port Moresby**	34.66	281	P	P	16 40 12.7	+0.5
	18nm,0.8s,mb4.7,baz=98,slow=3.9,SNR=6.0						
PMG	**Port Moresby**	34.66	281	*e*P	P	16 40 12.6	+0.4
	20nm,1.1s,mb4.7						
TOO	**Toolangi**	36.37	232⇑	*i*P	P	16 40 27.2	+1.1
	17nm,0.7s,mb4.7						
STKA	**Stephens Creek**	38.02	243	P	P	16 40 40.1	+0.4
	13nm,0.7s,mb4.6,baz=93,slow=8.7,SNR=56						
STKA	**Stephens Creek**	38.02	243	*e*P	P	16 40 40.6	+1.0
WB2	**Warramunga Arr**	44.38	261⇓	*i*P	P	16 41 29.2	-1.0
WRAB	**Tennant Creek**	44.38	261	*e*P	P	16 41 29.3	-0.9
	8.6nm,0.6s,mb4.5						
WRA	**Warramunga Arr**	44.39	261	P	P	16 41 29.6	-0.7
	4.6nm,0.4s,mb4.3,baz=98,slow=7.1,SNR=158						
WRA				S	S	16 47 17.8	-4.7
	0.9nm,0.7s,baz=96,slow=13,SNR=6.3						
ASPA	**Alice Springs**	44.44	255⇓	*i*P	P	16 41 30.2	-0.4
ASPA				*e*S	S	16 47 19.9	-3.2
KAKA	**Kakadu**	47.54	270⇓	*i*P	P	16 42 11.3	+17
	5.3nm,0.4s,mb4.4						
GUMO	**Guam**	48.63	309	P	P	16 42 01.8	-0.7
	37nm,0.7s,mb4.9,baz=163,slow=20,SNR=2.6						
FITZ	**Fitzroy Crossi**	52.80	261	*e*P	P	16 42 32.1	-0.5
	5.4nm,0.4s,mb4.2						
SBA	**Scott Base**	59.17	184	*e*P	P	16 43 16.9	+1.3
	5.9nm,0.8s,mb3.8						
VNDA	**Vanda**	59.20	185	*e*P	P	16 43 15.5	-0.3
	1.3nm,0.6s,mb3.2						
MJAR	**Matsushiro Arr**	68.89	324	P	P	16 44 16.1	-1.1
	2.0nm,0.6s,mb3.7,baz=162,slow=6.1,SNR=7.7						
NVAR	**Mina Array Bea**	80.34	44	P	P	16 45 21.1	+0.4
	0.5nm,0.4s,mb3.2,baz=222,slow=7.4,SNR=9.4						
CN2	**Changchun**	80.99	323	*e*P	P	16 45 25.9	+2.0
MAW	**Mawson**	82.68	200	P	P	16 45 31.4	-0.6
	1.3nm,0.6s,mb3.6,baz=136,slow=5.8,SNR=7.3						
ELK	**Elko**	83.59	43	P	P	16 45 37.5	+0.5
	0.6nm,0.5s,mb3.4						
HLID	**Hailey**	85.59	41	*e*P	P	16 45 47.0	+0.3
	0.9nm,0.6s,mb3.6						
MCK	**McKinley**	85.76	13	*e*P	P	16 45 46.6	-0.4
	2.8nm,1.1s,mb3.8						
TXAR	**Lajitas Array**	86.69	58	P	P	16 45 53.2	+0.9
	2.1nm,0.7s,mb4.0,baz=219,slow=5.7,SNR=15						
TXAR	**Lajitas Array**	86.69	58	P	P	16 45 53.2	+0.9
COLA	**College**	87.00	13	*e*P	P	16 45 51.7	-1.2
	2.9nm,0.6s,mb4.2						
ILAR	**Eielson Array**	87.11	13	P	P	16 45 52.2	-1.2
	1.2nm,0.7s,mb3.8,baz=218,slow=4.9,SNR=14						
HHC	**Hu-ho-hao-te**	88.12	315	*e*P	P	16 45 59.0	+0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.3						
HHC				AMB	AMB		
	comp=Z,110nm,3.6s						
BW06	**Boulder Array**	88.28	43	*e*P	P	16 45 59.3	-0.1
	comp=Z,1.5nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	88.28	43	P	P	16 45 59.6	+0.2
	comp=Z,1.7nm,0.6s,mb4.0,baz=214,slow=3.4,SNR=18						
KMI	**Kunming**	88.37	297	P	P	16 46 01.6	+1.3
SNAA	**Sanae**	89.35	179		P	16 46 03.2	-0.6
SNAA	**Sanae**	89.35	179		P	16 46 07.5	+3.7
SNAA	**Sanae**	89.35	179		P	16 46 20.0	+16
SNAA	**Sanae**	89.35	179	P	P	16 46 02.7	-1.0
	comp=Z,0.5nm,0.8s,mb3.4,baz=169,slow=7.6,SNR=5.6						
SNAA	**Sanae**	89.35	179	P	P	16 46 03.2	-0.6
VNA3	**Neumayer Olymp**	89.50	176⇑	*i*	P	16 46 05.7	+1.3
VNA3	**Neumayer Olymp**	89.50	176		P	16 46 07.9	+3.5
VNA3	**Neumayer Olymp**	89.50	176		P	16 46 14.5	+10
VNA2	**Neumayer--Watz**	89.94	177⇑	*i*	P	16 46 08.3	+1.8
VNA2	**Neumayer--Watz**	89.94	177		P	16 46 10.3	+3.8
VNA2	**Neumayer--Watz**	89.94	177		P	16 46 17.1	+11
PLCA	**Paso Flores**	90.49	134	P	P	16 46 08.6	-1.1
	comp=Z,0.8nm,0.7s,mb3.7,baz=333,slow=6.8,SNR=2.1						
MKAR	**Makanchi Array**	109.98	314	PKiKP		16 51 33.4	
	comp=Z,0.6nm,0.6s,baz=228,slow=0.8,SNR=4.5						
ARCES	**ARCESS Array B**	127.53	350	PKP	PKPdf	16 52 06.2	-0.6
	comp=Z,2.4nm,0.7s,slow=2.4,SNR=7.4						
ARCES	**ARCESS Array B**	127.53	350	PKP	PKPdf	16 52 06.2	-0.6
AKASG	**Malin Array Be**	141.65	332	PKhKP		16 52 28.6	
	comp=Z,0.8nm,0.4s,baz=42,slow=3.7,SNR=8.0						
BR131	**Keskin Array S**	145.63	313	*e*PKPdf	PKPdf	16 52 42.4	+2.0
BRTR	**Keskin Array B**	145.63	313	PKPbc	PKPbc	16 52 42.8	+1.0
	comp=Z,1.5nm,0.6s,baz=131,slow=3.7,SNR=9.2						
CLL	**Collm**	146.67	347⇓	*i*PKP1	PKPbc	16 52 45.3	+1.4
DPC	**Dobruska-Polom**	146.73	343	*e*P	PKPdf	16 52 46.1	+4.2
PRU	**Pruhonice**	147.54	344	*e*PKP	PKPdf	16 52 48.5	+5.3
GRA1	**Grafenberg Arr**	148.57	348	*e*PKP	PKPdf	16 52 50.5	+5.7
KHC	**Kasperske Hory**	148.57	345	*e*PKP	PKPdf	16 52 50.5	+5.6
GERES	**GERESS Array B**	148.81	344	PKPbc	PKPdf	16 52 50.2	+5.0
	comp=Z,1.5nm,0.6s,baz=30,slow=2.9,SNR=20						

IDC 06 16:46:34.5±1.7**, 0.06S×124.26E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/14**, mbtmp3.6**/3**, Error ellipse: s-maj=72.9km s-min=27.8km az=73.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.09	154	P	P	16 51 31.5	-1.6
	3.4nm,0.7s,baz=331,slow=12,SNR=18						
MJAR	**Matsushiro Arr**	38.65	18	P	P	16 53 59.8	-1.8
	1.6nm,0.7s,baz=193,slow=8.6,SNR=7.2						
MKAR	**Makanchi Array**	59.33	328	P	P	16 56 38.4	-2.3
	0.3nm,0.6s,baz=129,slow=8.8,SNR=4.2						

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*LDG **06** 16:58:35.9±0.0, 48.32N×6.63E, h5^{km}, Md2.7/4, Ml2.6/17, Error ellipse: s-maj=0.9km s-min=0.7km az=175.0*

*STR **06** 16:58:35.5±0.2, 48.33N×6.65E, h10^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*NEIC **06** 16:58:35.5, 48.33N×6.65E, h10^{km}, ML2.6(LDG), ML2.2(STR), After STR.*

*CSEM **06** 16:58:35.9±0.1, 48.33N×6.66E, h10^{km}, ML2.5/16, Error ellipse: s-maj=1.5km s-min=1.3km az=177.0*

*BGR **06** 16:58:36.2±0.5, 48.36N×6.71E, h5^{km}, ML2.2/2, Error ellipse: s-maj=4.4km s-min=3.3km az=68.0*

ISC 06 16:58:33.7±0.3**, 48.30N**±0.02×**6.59E**±0.02**, h13**^{km}±2^{km}**, n46, σ1^{s}45**/97**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAU	**Haudompre**	0.33	208	*e*Pg	Pg	16 58 43.4	+2.6
HAU				*e*Sg	Sg	16 58 47.6	+2.0
	39nm,0.2s						
ECH	**Echery**	0.39	102	Pg	Pg	16 58 43.0	+1.1
ECH				Sg	Sg	16 58 47.6	+0.2
ECH	**Echery**	0.39	102	*e*Pg	Pg	16 58 43.1	+1.2
	SNR=7.3						
THEF	**They Montfort**	0.41	260	Pg	Pg	16 58 44.4	+2.2
THEF				Sg	Sg	16 58 50.6	+2.8
CDF	**Champ du Feu**	0.47	76	*e*Pg	Pg	16 58 44.0	+0.5
CDF				*e*Pn	Pn	16 58 44.9	-0.9
CDF				*e*Sg	Sg	16 58 49.6	-0.4
	43nm,0.4s						
CDF	**Champ du Feu**	0.47	76	*e*Pn	Pn	16 58 44.9	-0.9
CDF				*e*Sg	Sg	16 58 49.6	-0.4
	22nm,0.4s						
HINF	**Hinteralfeld**	0.52	160	*e*Pg	Pg	16 58 46.0	+1.7
HINF				*e*Sg	Sg	16 58 53.0	+1.7
	31nm,0.2s						
WLS	**Welschbruch**	0.53	77	*e*Pg	Pg	16 58 45.0	+0.5
	SNR=20						
MOF	**Molkenrain**	0.58	140	Pg	Pg	16 58 47.0	+1.5
MOF	**Molkenrain**	0.58	140	*e*Pg	Pg	16 58 47.1	+1.6
	SNR=7.8						
LIBD	**Limburg**	0.70	102	Pg	Pg	16 58 49.1	+1.3
RFYF	**Reffroy**	0.81	294	*e*Pg	Pg	16 58 51.6	+1.5
	baz=110						
RFYF				*e*Pn	Pn	16 58 52.6	+2.0
	baz=111						
RFYF				*e*Sg	Sg	16 59 02.2	+1.2
RFYF				*e*Sn	Sn	16 59 04.9	+2.5
	45nm,0.2s						
LOMF	**Lomont**	0.96	170	Pg	Pg	16 58 54.8	+1.7
LOMF				Sg	Sg	16 59 08.0	+2.0
LOMF	**Lomont**	0.96	170	*e*Pg	Pg	16 58 55.0	+1.9
	SNR=5.1						
SFTF	**Sexfontaines**	1.04	265	*e*Pg	Pg	16 58 55.8	+1.2
	baz=88						
SFTF				*e*Pn	Pn	16 58 56.3	+2.5
SFTF				*e*Sg	Sg	16 59 10.0	+1.5
	22nm,0.2s						
BBS	**Basel-Blauen**	1.04	143	Pg	Pg	16 58 55.8	+1.1
BBS				Sg	Sg	16 59 09.4	+0.8
MEZF	**Maizieres J'vi**	1.04	282	*e*Pg	Pg	16 58 55.9	+1.3
	baz=109						
MEZF				*e*Sg	Sg	16 59 09.6	+1.0
	25nm,0.2s						
LANF	**Langenberg**	1.06	49	Pg	Pg	16 58 54.2	-0.8
LANF	**Langenberg**	1.06	49	*e*Pg	Pg	16 58 54.1	-0.8
	SNR=6.6						
BFO	**Black Forest**	1.17	88	*e*Pg	Pg	16 58 55.8	-1.3
	SNR=7.7						
BFO				*e*Sg	Sg	16 59 10.0	-2.7
WLF	**Walferdange**	1.40	348	*e*Pg	Pg	16 59 01.8	+0.2
	SNR=1.8						
WLF				*e*Sg	Sg	16 59 18.8	-1.5
CABF	**La Chapelle**	1.72	191	*e*Pn	Pn	16 59 05.3	+1.7
CABF				*e*Pg	Pg	16 59 08.5	+0.3
CABF				*e*Sg	Sg	16 59 31.1	-0.1
	6.1nm,0.2s						
LOR	**Lormes**	2.11	242	*e*Pn	Pn	16 59 10.4	+1.2
LOR				*e*Pg	Pg	16 59 15.8	-0.1
	baz=60						
LOR				*e*Sg	Sg	16 59 42.8	-1.2
	10nm,0.2s						
GIVF	**Givet**	2.14	328	*e*Pn	Pn	16 59 10.8	+1.2
GIVF				*e*Pg	Pg	16 59 15.5	-1.1
GIVF				*e*Sn	Sn	16 59 36.8	+0.6
GIVF				*e*Sg	Sg	16 59 43.2	-2.0
	4.7nm,0.2s						
TNS	**Taunus Mts**	2.28	32	*e*Sg	Sg	16 59 45.7	-4.0
BAIF	**Baives**	2.35	319	*e*Pn	Pn	16 59 13.7	+1.0
BAIF				*e*Pg	Pg	16 59 20.0	-0.7
BAIF				*e*Sg	Sg	16 59 49.7	-2.4
	3.0nm,0.3s						
SSF	**Saint Saulge**	2.42	240	*e*Pn	Pn	16 59 14.4	+0.8
SSF				*e*Pg	Pg	16 59 21.6	-0.5
SSF				*e*Sg	Sg	16 59 52.7	-1.7
	5.9nm,0.3s						
SSF	**Saint Saulge**	2.42	240	*e*Pg	Pg	16 59 21.6	-0.5
SSF				*e*Sg	Sg	16 59 52.7	-1.7
	3.0nm,0.3s						
SMF	**Signal de Mont**	2.49	229	*e*Pn	Pn	16 59 15.8	+1.2
SMF				*e*Pg	Pg	16 59 22.0	-1.5
SMF				*e*Sg	Sg	16 59 55.2	-1.5
	9.7nm,0.2s						
AVF	**Avril sur Loir**	2.66	237	*e*Pn	Pn	16 59 17.6	+0.6
AVF				*e*Pg	Pg	16 59 25.0	-1.9
AVF				*e*Sn	Sn	16 59 49.1	-0.3
AVF				*e*Sg	Sg	17 00 00.0	-2.4
	2.0nm,0.2s						
LPL	**La Plagne**	2.79	178	*e*Pg	Pg	16 59 28.3	-1.1
LPL				*e*Sg	Sg	17 00 04.0	-2.6
	1.2nm,0.3s						
LPG	**La Plagne**	2.81	178	*e*Pg	Pg	16 59 28.7	-1.1
LPG				*e*Sg	Sg	17 00 04.8	-2.4
	2.4nm,0.5s						
HYF	**Humbligny**	2.85	250	*e*Pn	Pn	16 59 21.1	+1.3
HYF				*e*Pg	Pg	16 59 29.6	-1.1
HYF				*e*Sg	Sg	17 00 06.4	-2.4
HYF	**Humbligny**	2.85	250	*e*Pg	Pg	16 59 29.6	-1.1
HYF				*e*Sg	Sg	17 00 06.4	-2.4
BGF	**Bois d'Agland**	3.08	237	*e*Pn	Pn	16 59 24.2	+1.2
BGF				*e*Pg	Pg	16 59 34.1	-1.1
BGF				*e*Sg	Sg	17 00 13.8	-2.5
	12nm,0.3s						
GRA1	**Grafenberg Arr**	3.36	64	Sg	Sg	17 00 19.4	-6.1
GRF	**Grafenberg Arr**	3.36	64	*e*Sg	Sg	17 00 19.4	-6.1
ORIF	**Oris-en-Rattie**	3.42	188	*e*Pn	Pn	16 59 28.5	+0.7
ORIF				*e*Pg	Pg	16 59 39.6	-2.4
ORIF				*e*Sn	Sn	17 00 07.6	-0.9

ORIF				*e*Sg	**Sg**	**17 00 24.0**	**-3.6**
	1.6nm,0.3s						
TCF	**Toulx Ste Croi**	**3.59**	**238**	*e*Pn	**Pn**	**16 59 30.6**	**+0.3**
TCF				*e*Sn	**Sn**	**17 00 11.6**	**-1.4**
TCF				*e*Sg	**Sg**	**17 00 29.9**	**-3.5**
	2.9nm,0.3s						
VIVF	**Saint-Julien-l**	**3.69**	**202**	*e*Pn	**Pn**	**16 59 32.1**	**+0.4**
VIVF				*e*Pg	**Pg**	**16 59 44.5**	**-2.9**
VIVF				*e*Sg	**Sg**	**17 00 32.1**	**-4.5**
	1.5nm,0.2s						
WET	**Wettzell**	**4.25**	**76**	*e*Pn	**Pn**	**16 59 39.1**	**-0.6**
	SNR=1.7						
WET				*e*Sn	**Sn**	**17 00 25.2**	**-4.5**
WET				*e*Sg	**Sg**	**17 00 47.7**	**-7.6**
CAF	**Calviac**	**4.59**	**224**	*e*Pn	**Pn**	**16 59 44.1**	**-0.4**
FLN	**La Foliniere**	**4.72**	**278**	*e*Pn	**Pn**	**16 59 45.9**	**-0.4**
GEC2	**GERESS Array S**	**4.76**	**81**	*e*Pn	**Pn**	**16 59 46.6**	**-0.3**
	SNR=1.3						
GEC2				*e*Sn	**Sn**	**17 00 39.4**	**-3.0**
SGMF	**Saint Gilles**	**6.10**	**273**	*e*Pn	**Pn**	**17 00 04.8**	**-1.0**
ROSF	**Rostrenen**	**6.58**	**274**	*e*Pn	**Pn**	**17 00 11.6**	**-0.9**

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*TRN **06** 17:16:49.4, 10.58N×62.55W, h73^{km}, MD2.8*

*FUNV **06** 17:16:51.1, 10.49N×62.79W, h0^{km}, MW2.3*

ISC 06 17:16:48.1±0.8**, 10.55N**±0.07×**62.56W**±0.04**, h88**^{km}±10^{km}**, n11, σ1**^{s}**05**/20**, 2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.35**	**73**	*e*P	**P**	**17 17 02.4**	**+0.7**
GUIV				*e*S	**S**	**17 17 11.8**	**-0.2**
ITEV	**Isla Los Testi**	**0.98**	**325**	*e*P	**P**	**17 17 08.4**	**+0.7**
ITEV				*e*S	**S**	**17 17 22.2**	**-0.2**
TRN	**Trinidad (W)**	**1.14**	**85**	⇓*i*P	**P**	**17 17 10.6**	**+0.9**
TRN				*e*S	**S**	**17 17 24.4**	**-1.5**
ORIV	**Oritupano**	**1.69**	**210**	*e*P	**P**	**17 17 19.5**	**+2.8**
GRW	**Mount Saint Ca**	**1.83**	**29**	*e*P	**P**	**17 17 18.3**	**-0.2**
GRW				*e*S	**S**	**17 17 40.4**	**-0.5**
TPR	**Prospect**	**1.86**	**70**	*e*P	**P**	**17 17 18.9**	**0.0**
TPR				*e*S	**S**	**17 17 41.4**	**-0.3**
PCRV	**Puerto La Cruz**	**2.08**	**260**	*e*P	**P**	**17 17 23.4**	**+1.5**
CUPV	**Cœpira**	**3.21**	**262**	⇓*i*P	**P**	**17 17 38.8**	**+1.1**
CUPV				*e*S	**S**	**17 18 14.3**	**-0.7**
MERV	**Las Mercedes**	**3.90**	**251**	*e*P	**P**	**17 17 47.8**	**+0.6**
MERV				*e*S	**S**	**17 18 30.6**	**-1.4**
CAOV	**Caicara del Or**	**4.91**	**230**	*e*P	**P**	**17 18 01.1**	**+0.2**
CAOV				*e*S	**S**	**17 18 54.1**	**-2.8**
BAUV	**El Baul**	**5.63**	**254**	*e*P	**P**	**17 18 10.4**	**-0.5**
BAUV				*e*S	**S**	**17 19 10.8**	**-4.2**

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*JMA **06** 17:35:06.5±0.1, 39.79N×138.69E, h40^{km}±2^{km}, M3.9*

ISC 06 17:35:06.9±0.9**, 39.78N**±0.05×**138.70E**±0.07**, h38**^{km}±40^{km}**, n18, σ0**^{s}**36**/27**, 11C, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOG2	**Oga 2**	**0.85**	**81**	⇑P	**P**	**17 35 22.3**	**-0.1**
JOG2				*e*S	**S**	**17 35 33.8**	**-0.1**
JTB	**Tobi-shima**	**0.89**	**131**	⇑P	**P**	**17 35 22.7**	**-0.2**
JTB				*e*S	**S**	**17 35 34.9**	**+0.2**
JYW	**Yuwa**	**1.19**	**101**	P	**P**	**17 35 27.0**	**-0.2**
JYW				*e*S	**S**	**17 35 42.6**	**+0.1**
JIW	**Iwasaki**	**1.29**	**51**	⇑P	**P**	**17 35 28.4**	**-0.2**
JIW				*e*S	**S**	**17 35 44.4**	**-0.6**
JAW	**Awa shima**	**1.39**	**162**	⇑P	**P**	**17 35 30.1**	**-0.1**
JYA	**Atsumi**	**1.43**	**146**	⇑P	**P**	**17 35 30.5**	**-0.2**
JAH	**Hinai**	**1.54**	**74**	⇑P	**P**	**17 35 32.7**	**+0.4**
JAH				*e*S	**S**	**17 35 51.0**	**-0.3**
JYK	**Kaneyama**	**1.55**	**123**	⇑P	**P**	**17 35 32.2**	**-0.2**
JSD	**Sado**	**1.78**	**191**	⇑P	**P**	**17 35 36.3**	**+0.6**
JSD				*e*S	**S**	**17 35 57.3**	**0.0**
JYS	**Shirataka**	**1.89**	**145**	⇑P	**P**	**17 35 37.5**	**+0.2**
JNS	**Sasagawa**	**2.02**	**166**	P	**P**	**17 35 39.2**	**+0.1**
JNS				*e*S	**S**	**17 36 03.4**	**0.0**
JOM	**Ohasama**	**2.03**	**98**	⇑P	**P**	**17 35 39.2**	**0.0**
JOM				*e*S	**S**	**17 36 03.8**	**+0.3**
JMK	**Ichinoseki**	**2.12**	**112**	P	**P**	**17 35 40.6**	**0.0**
JANG	**Nango**	**2.24**	**74**	P	**P**	**17 35 42.5**	**+0.2**
JOT	**Ohata**	**2.40**	**47**	P	**P**	**17 35 44.9**	**+0.4**
JMM	**Marumori**	**2.52**	**139**	⇑P	**P**	**17 35 46.4**	**+0.1**
JSZ	**Suzu**	**2.56**	**205**	*e*S	**S**	**17 36 16.3**	**-0.7**
MAT	**Matsushiro**	**3.26**	**187**	P	**P**	**17 35 57.8**	**+1.0**
MAT				S	**S**	**17 36 34.2**	**-0.7**

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*SKO **06** 18:27:29.8, 37.08N×21.23E, h210^{km}*

*THE **06** 18:27:50.8, 39.28N×20.92E, h5^{km}, ML3.4*

*CSEM **06** 18:27:50.7±0.1, 39.28N×20.88E, h8^{km}, ML3.4, Error ellipse: s-maj=2.0km s-min=1.5km az=12.0*

*ATH **06** 18:27:51.2, 39.30N×20.98E, h13^{km}±1^{km}, MD3.6/8*

*NEIC **06** 18:27:51.2, 39.30N×20.98E, h13^{km}, MD3.6(ATH), After ATH.*

ISC 06 18:27:49.6±0.5**, 39.28N**±0.02×**20.93E**±0.02**, h0**^{km}±4^{km}**, n49, σ1**^{s}**08**/77**, 1C, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.38**	**351**	⇑*i*PG	**Pg**	**18 27 58.1**	**+0.9**
JAN				*e*SB	**Sg**	**18 28 03.6**	**+1.3**
IGT	**Igoumenitsa**	**0.53**	**299**	*e*Sg	**Sg**	**18 28 08.6**	**+1.5**
MEV	**Metsovon**	**0.56**	**25**	*e*Pg	**Pg**	**18 28 00.9**	**+0.2**
MEV				*e*Sg	**Sg**	**18 28 09.6**	**+1.5**
EVR	**Evrytania**	**0.77**	**117**	*e*PB	**Pb**	**18 28 05.7**	**+0.1**
EVR				*e*SB	**Sb**	**18 28 16.6**	**+0.2**
KEK	**Kerkira**	**0.98**	**297**	*e*PB	**Pb**	**18 28 10.2**	**+1.2**
KEK				*e*SB	**Sb**	**18 28 24.2**	**+1.9**
AGG	**Agios Georgios**	**1.12**	**103**	*e*Pg	**Pg**	**18 28 12.2**	**+0.2**
	comp=Z,6.9nm,0.2s						
AGG				*e*Sg	**Sg**	**18 28 28.1**	**+1.3**
AGG	**Agios Georgios**	**1.12**	**103**	*e*Pg	**Pg**	**18 28 12.1**	**+0.2**
	6.9nm,0.2s						
AGG				*e*Sg	**Sg**	**18 28 28.1**	**+1.3**
VLS	**Valsamata**	**1.13**	**194**	*e*PN	**Pn**	**18 28 13.0**	**+0.5**
VLS				*e*SB	**Sb**	**18 28 29.5**	**+2.7**
KZN	**Kozani**	**1.22**	**32**	*e*PN	**Pn**	**18 28 13.1**	**-0.6**
KZN				*e*SB	**Sb**	**18 28 29.4**	**+0.2**
RLS	**Riolos of Patr**	**1.29**	**161**	*e*PB	**Pb**	**18 28 15.8**	**+1.4**
RLS				*e*SB	**Sb**	**18 28 33.7**	**+2.3**
LIT	**Litokhoron**	**1.46**	**55**	*e*Pg	**Pg**	**18 28 17.5**	**-1.2**
	comp=Z,12nm,0.4s						
LIT				*e*Sg	**Sg**	**18 28 38.0**	**-0.1**
FNA	**Florina**	**1.54**	**13**	*e*Pg	**Pg**	**18 28 18.3**	**-2.0**
	comp=Z,7.4nm,0.4s						
FNA				*e*Sg	**Sg**	**18 28 39.5**	**-1.4**
FNA	**Florina**	**1.54**	**13**	*e*Pg	**Pg**	**18 28 18.3**	**-2.1**
	7.4nm,0.4s						
FNA				*e*Sg	**Sg**	**18 28 39.5**	**-1.4**
LKR	**Lokris**	**1.73**	**111**	*e*PG	**Pg**	**18 28 23.1**	**-1.0**
XOR	**Xorichti**	**1.76**	**86**	*e*Pb	**Pb**	**18 28 21.6**	**-0.8**
XOR				*e*Sb	**Sb**	**18 28 44.8**	**-0.2**
BIA	**Bitola**	**1.77**	**10**	*i* Pn	**Pn**	**18 28 22.2**	**+0.7**
BIA				*i* Sn	**Sn**	**18 28 46.6**	**+1.5**
BIA	**Bitola**	**1.77**	**10**	*i* Pn	**Pn**	**18 28 22.2**	**+0.6**
BIA				*i* Sn	**Sn**	**18 28 46.6**	**+1.5**
NEO	**Neokhori**	**1.78**	**88**	*e*PN	**Pn**	**18 28 23.1**	**+1.3**
OHR	**Ohrid**	**1.83**	**357**	*i* Pn	**Pn**	**18 28 24.5**	**+1.9**
OHR				*i* Sn	**Sn**	**18 28 48.1**	**+1.3**
GRG	**Griva**	**2.02**	**33**	*e*Pn	**Pn**	**18 28 24.6**	**-0.7**
GRG				*e*Sn	**Sn**	**18 28 51.3**	**-0.3**
THE	**Thessaloniki**	**2.07**	**49**	*e*Pn	**Pn**	**18 28 25.0**	**-0.9**
THE				*e*Sn	**Sn**	**18 28 51.9**	**-0.8**
PAIG	**Paliouri**	**2.22**	**72**	*e*Pn	**Pn**	**18 28 27.4**	**-0.8**
PAIG				*e*Sn	**Sn**	**18 28 56.2**	**-0.5**
PLG	**Polygyros**	**2.23**	**60**	*e*PN	**Pn**	**18 28 29.3**	**+1.1**
PLG				*e*SN	**Sn**	**18 28 56.8**	**0.0**
ITM	**Ithomi**	**2.24**	**159**	*e*PB	**Pb**	**18 28 29.9**	**-0.7**
AOS	**Alonnisos**	**2.29**	**92**	*e*Pn	**Pn**	**18 28 29.1**	**-0.1**
AOS				*e*Sn	**Sn**	**18 28 58.0**	**-0.6**
VAY	**Valandovo**	**2.40**	**31**	*i* Pn	**Pn**	**18 28 31.2**	**+0.6**
VAY				*e*Sn	**Sn**	**18 28 54.5**	**-6.6**
KNT	**Kendrikon**	**2.41**	**38**	*e*Pn	**Pn**	**18 28 30.9**	**0.0**
KNT				*e*Sn	**Sn**	**18 29 01.8**	**+0.3**
LCI	**Lecce**	**2.41**	**297**	Pn	**Pn**	**18 28 35.2**	**+4.3**
SOH	**Sokhos**	**2.42**	**50**	*e*Pn	**Pn**	**18 28 29.9**	**-1.0**
SOH				*e*Sn	**Sn**	**18 29 01.9**	**+0.2**
OUR	**Ouranopolis**	**2.58**	**65**	*e*Pn	**Pn**	**18 28 33.2**	**0.0**
	comp=Z,2.9nm,0.4s						
OUR				*e*Sn	**Sn**	**18 29 05.1**	**-0.6**
PUK	**Puka**	**2.87**	**344**	*i* Pn	**Pn**	**18 28 37.1**	**-0.3**
PUK				*i* Sn	**Sn**	**18 29 13.3**	**+0.1**
NVR	**Nevrokopi**	**3.05**	**46**	*e*PN	**Pn**	**18 28 41.3**	**+1.3**
KKB	**Krupnik**	**3.06**	**32**	P	**Pn**	**18 28 41.0**	**+0.9**
MMB	**Musomiste**	**3.15**	**42**	P	**Pn**	**18 28 41.0**	**-0.3**
TIP	**Timpagrande**	**3.24**	**270**	Pn	**Pn**	**18 28 40.7**	**-2.0**
BRT	**Bari-Castellan**	**3.27**	**300**	Pn	**Pn**	**18 28 41.8**	**-1.3**
LOS	**Limnos**	**3.27**	**77**	*e*Pn	**Pn**	**18 28 42.9**	**-0.3**
VTS	**Vitosha**	**3.73**	**27**	P	**Pn**	**18 28 51.0**	**+1.3**
RZN	**Rozhen**	**3.76**	**49**	P	**Pn**	**18 28 50.0**	**0.0**
CUC	**Castrocucco**	**4.01**	**282**	Pn	**Pn**	**18 28 53.1**	**-0.5**
CEL	**Celeste**	**4.06**	**257**	Pn	**Pn**	**18 28 52.5**	**-1.9**
SLCN	**Sala Consilina**	**4.23**	**287**	Pn	**Pn**	**18 28 55.8**	**-0.9**
ALN	**Alexandroupoli**	**4.25**	**66**	*e*Pn	**Pn**	**18 28 56.0**	**-0.9**
STON	**Ston**	**4.34**	**327**	*i* Pn	**Pn**	**18 28 54.8**	**-3.5**
STON				*i* Sn	**Sn**	**18 29 41.6**	**-8.7**
STON	**Ston**	**4.34**	**327**	*i* Pn	**Pn**	**18 28 54.7**	**-3.6**
STON				*i* Sn	**Sn**	**18 29 41.6**	**-8.8**
SGO	**Sicignano**	**4.51**	**288**	Pn	**Pn**	**18 29 00.1**	**-0.6**
RGNG	**Rignano Grg**	**4.72**	**302**	Pn	**Pn**	**18 29 01.3**	**-2.4**
SGG	**Gregorio Mates**	**5.43**	**295**	Pn	**Pn**	**18 29 13.1**	**-0.6**
CII	**Carovilli**	**5.61**	**298**	Pn	**Pn**	**18 29 14.1**	**-2.1**

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*IDC **06** 19:34:33.8±1.0, 57.48N×120.65E, mb3.8/11, mb1 4.0/12, mb1mx3.9/20, mbtmp3.8/12, ML3.4/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/22, Error ellipse: s-maj=25.4km s-min=19.6km az=166.0*

*BYKL **06** 19:34:34.9±0.4, 57.46N×120.75E, MS3.4*

*NEIC **06** 19:34:34.9±0.6, 57.61N×120.78E, h5^{km}, mb3.9/4, Error ellipse: s-maj=13.7km s-min=9.1km az=128.0*

*BJI **06** 19:34:36.7, 57.05N×120.86E, h5^{km}, mB4.7, mb4.3, ML4.6, Ms3.8, Msz3.3*

*MOS **06** 19:34:36.4±2.1, 57.33N×120.69E, h15^{km}, mb4.1/9, Error ellipse: s-maj=10.7km s-min=8.0km az=65.0*

ISC 06 19:34:37.1±0.5**, 57.44N**±0.03×**120.75E**±0.03**, h33**^{km}±4^{km}**, n85, σ1**^{s}**22**/105**, mb4.0**/20**, 3C-3D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.46**	**249**	*e*Pg	**Pn**	**19 35 01.4**	**-0.1**
CRS				*e*		19 35 04.0	
CRS				max		19 35 04.6	
	1µm,0.9s						
CRS				*i* Sg	**Sn**	**19 35 19.9**	**+0.3**
CRS				Smax		19 35 26.5	
	2µm,1.1s						
CRS	**Chara**	**1.46**	**249**	*e*P	**Pn**	**19 35 01.9**	**+0.4**
CRS				*e*		19 35 19.9	
CRS				pmax	pmax		
	comp=Z,1µm,0.7s						
CRS				smax			
	comp=E,1µm,0.8s						
CLNS	**Chul’man**	**2.34**	**103**	*e*Pn	**Pn**	**19 35 15.2**	**+1.0**
CLNS				*e*Pg	**Pb**	**19 35 17.1**	**-1.4**
CLNS				Pmax		19 35 24.4	
	comp=E,710nm,0.3s						
CLNS				*i* Sg	**Sb**	**19 35 47.5**	**+0.3**
CLNS				Smax		19 35 51.9	
	comp=E,7µm,0.3s						
CLNS	**Chul’man**	**2.34**	**103**	*e*P	**Pn**	**19 35 15.2**	**+1.0**
CLNS				*e*S	**Sn**	**19 35 46.1**	**+4.0**
CLNS				pmax	pmax		
	comp=Z,26nm,0.3s						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.2s						
CLNS				pmax	pmax		
	comp=N,27nm,0.3s						
CLNS				pmax	pmax		
	comp=E,35nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,86nm,0.3s						
CLNS				smax			
	comp=N,71nm,0.3s						
CLNS				smax			
	comp=Z,123nm,0.6s						
CLNS				smax			
	comp=E,62nm,0.3s						
CLNS				smax			
	comp=N,106nm,0.2s						
CLNS				smax			
	comp=Z,275nm,0.3s						
CLNS				smax			
	comp=E,857nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,300nm,11.0s						
ALDR	**Aldan**	**2.74**	**63**	*e*Pn	**Pn**	**19 35 20.4**	**+0.5**
ALDR				*e*Pg	**Pb**	**19 35 23.1**	**-2.2**
ALDR				*e*		19 35 29.0	
ALDR				max		19 35 32.0	
	comp=Z,521nm,0.3s						
ALDR				*e*Sn	**Sn**	**19 35 49.1**	**-3.2**
ALDR				*e*Sg	**Sb**	**19 35 59.0**	**+0.2**
ALDR				Smax		19 35 59.7	
	comp=Z,16µm,0.5s						
NLYR	**Nelyaty**	**2.92**	**253**	*e*Pn	**Pn**	**19 35 22.8**	**+0.4**
NLYR				*e*Pg	**Pb**	**19 35 27.3**	**-1.0**
NLYR				*e*PgPg		19 35 29.8	
NLYR				max		19 35 30.1	
	comp=Z,496nm,0.8s						
NLYR				*e*Sg	**Sb**	**19 36 02.3**	**-1.7**
NLYR				*e*SgSg		19 36 07.7	
NLYR				max		19 36 08.9	
	comp=Z,2µm,1.4s						
NLYR	**Nelyaty**	**2.92**	**253**	*e*P	**Pn**	**19 35 22.1**	**-0.3**
NLYR				*e*		19 36 03.4	
NLYR				pmax	pmax		
	comp=Z,500nm,0.7s						
NLYR				smax			
	comp=N,2µm,1.3s						
TUP	**Tupik**	**3.06**	**189**	*e*Pn	**Pn**	**19 35 23.1**	**-1.3**
TUP				*e*		19 35 26.3	
TUP				*e*Pg	**Pb**	**19 35 29.7**	**-1.0**
TUP				Pmax		19 35 31.6	
	comp=N,1µm,0.6s						
TUP				*e*PgPg		19 35 33.9	
TUP				*e*Sn	**Sn**	**19 35 58.6**	**-1.6**
TUP				*e*Sg	**Sb**	**19 36 07.2**	**-0.7**
TUP				*e*SgSg		19 36 14.1	
TUP				max		19 36 17.4	
	comp=N,2µm,1.1s						
TUP				*e*LR	LR	19 36 26.4	
TUP				LRmax		19 36 31.4	
	comp=N,768nm,3.7s						
TUP	**Tupik**	**3.06**	**189**	*e*P	**Pn**	**19 35 23.1**	**-1.3**
TUP				*e*S	**Sn**	**19 35 58.6**	**-1.6**
TUP				pmax	pmax		
	comp=Z,1µm,0.5s						
TUP				smax			
	comp=E,2µm,0.6s						
TNDR	**Tynda**	**3.19**	**134**	⇓*i*Pn	**Pn**	**19 35 26.0**	**-0.3**
TNDR				*e*Pg	**Pb**	**19 35 29.1**	**-3.9**
TNDR				*e*		19 35 36.4	
TNDR				max		19 35 39.5	
	comp=E,985nm,0.3s						
TNDR				*e*Sn	**Sn**	**19 36 04.8**	**+1.1**
TNDR				*e*Sg	**Sb**	**19 36 13.4**	**+1.6**
TNDR				Smax		19 36 21.2	
	comp=E,12µm,0.5s						
BOD	**Bodaibo**	**3.65**	**279**	*e*Pn	**Pn**	**19 35 32.3**	**-0.4**
BOD				*e*		19 35 35.7	
BOD				*e*Pg	**Pb**	**19 35 41.7**	**+1.0**
BOD				Pmax		19 35 44.6	
	comp=E,70nm,0.8s						
BOD				*e*Sg	**Sb**	**19 36 26.9**	**+2.1**
BOD				Smax		19 36 35.9	
	comp=E,753nm,1.5s						
BOD				*e*LR	LR	19 36 47.6	
BOD				LRmax		19 36 54.8	
	comp=E,401nm,3.4s						
BOD	**Bodaibo**	**3.65**	**279**	*e*P	**Pn**	**19 35 31.9**	**-0.8**
BOD				*e*		19 36 26.1	
BOD				pmax	pmax		
	comp=Z,70nm,0.5s						
BOD				smax			
	comp=N,753nm,0.7s						
SVKR	**Severomuysk**	**4.17**	**254**	⇓*i*Pn	**Pn**	**19 35 39.7**	**-0.5**
SVKR				*e*Pg	**Pb**	**19 35 50.9**	**+1.3**
SVKR				Pmax		19 35 56.3	
	comp=N,132nm,0.6s						
SVKR				*e*Sn	**Sn**	**19 36 28.1**	**-0.3**
SVKR				*e*Sg	**Sb**	**19 36 44.6**	**+4.6**
SVKR				Smax		19 37 00.1	
	comp=N,1µm,1.3s						
UKT	**Uakit**	**4.41**	**247**	*e*Pn	**Pn**	**19 35 43.1**	**-0.4**
UKT				*e*Pg	**Pb**	**19 35 53.7**	**0.0**
UKT				Pmax		19 36 01.2	
	comp=N,95nm,0.8s						
UKT				*e*		19 36 17.7	
UKT				*e*Sg	**Sb**	**19 36 50.3**	**+3.5**
UKT				Smax		19 36 57.7	
	comp=N,395nm,2.2s						
UKT	**Uakit**	**4.41**	**247**	*e*P	**Pb**	**19 35 55.2**	**+1.5**
UKT				pmax	pmax		
	comp=Z,76nm,0.6s						
KROS	**Kirovskiy**	**4.62**	**128**	⇑*i*Pn	**Pn**	**19 35 46.2**	**-0.3**
KROS				⇓*i*Pg	**Pb**	**19 35 58.5**	**+1.2**
KROS				Pmax		19 36 02.5	
	comp=Z,180nm,0.6s						
KROS				*e*Sn	**Sn**	**19 36 37.0**	**-2.8**
KROS				*i* Sg	**Sb**	**19 36 58.0**	**+5.0**
KROS				Smax		19 37 03.9	
	comp=Z,370nm,0.6s						
YOA	**Uoyan**	**5.13**	**259**	*e*Pn	**Pn**	**19 35 54.1**	**+0.3**
YOA				*e*		19 36 09.9	
YOA				max		19 36 16.6	
	comp=Z,305nm,1.5s						
YOA				*e*		19 36 52.9	
YOA				*e*Sg	**Sb**	**19 37 13.7**	**+5.9**
YOA				Smax		19 37 31.9	
	comp=Z,3µm,1.4s						
YOA	**Uoyan**	**5.13**	**259**	*e*P	Px	19 36 09.3	
YOA				pmax	pmax		
	comp=Z,292nm,1.3s						
CGD	**Chagda**	**5.40**	**72**	⇑*i*Pn	**Pn**	**19 35 57.4**	**-0.1**
CGD				*e*		19 36 00.9	
CGD				⇑*e*Pg	Px	19 36 12.0	
CGD				Pmax		19 36 12.8	
	comp=Z,629nm,0.3s						
CGD				*e*Sn	**Sn**	**19 36 58.5**	**-0.8**
CGD				*e*Sg	Sx	19 37 19.8	
CGD				Smax		19 37 25.0	
	comp=Z,16µm,0.5s						
CGD				*e*LR	LR	19 37 44.6	
KMO	**Kumora**	**5.49**	**258**	*e*Pn	**Pn**	**19 35 59.0**	**+0.2**
KMO				*e*Pg	Px	19 36 12.9	
KMO				Pmax		19 36 30.7	
	comp=Z,39nm,0.6s						
KMO				*e*		19 37 06.6	
KMO				*e*Sg	Sx	19 37 24.3	
KMO				Smax		19 37 37.4	
	comp=Z,526nm,1.3s						
KMO	**Kumora**	**5.49**	**258**	*e*P	Px	19 36 15.9	
KMO				pmax	pmax		
	comp=Z,33nm,0.6s						
YLYR	**Ulyunkhan**	**5.94**	**248**	*e*Pn	**Pn**	**19 36 04.7**	**-0.5**
YLYR				*e*Pg	Px	19 36 22.7	
YLYR				*e*		19 36 25.5	
YLYR				max		19 36 33.6	
	comp=Z,27nm,1.0s						
YLYR				*e*Sg	Sx	19 37 38.5	
YLYR				Smax		19 37 59.3	
	comp=Z,337nm,1.3s						
NIZ	**Nizh Angarsk**	**6.41**	**260**	*e*	**Pn**	**19 36 13.6**	**+1.8**
NIZ				Pg	Px	19 36 30.0	
NIZ				Pmax		19 36 39.6	
	comp=Z,15nm,0.9s						
NIZ				*e*Sg	Px	19 37 53.3	
NIZ				Smax		19 38 26.9	
	comp=Z,205nm,1.4s						
NIZ	**Nizh Angarsk**	**6.41**	**260**	*e*P	Px	19 36 30.6	
NIZ				pmax	pmax		
	comp=Z,16nm,0.8s						
YAK	**Yakutsk**	**6.45**	**41**	*e*Pn	**Pn**	**19 36 13.5**	**+1.2**
YAK				*e*Pg	Px	19 36 29.3	
YAK				Pmax		19 36 33.9	
	comp=Z,647nm,1.0s						
YAK				*e*Sn	**Sn**	**19 37 21.5**	**-4.0**
YAK				*e*Sg	Sx	19 37 52.4	
YAK				Smax		19 37 55.9	
	comp=Z,2µm,0.5s						
YAK	**Yakutsk**	**6.45**	**41**	Pn	**Pn**	**19 36 07.0**	**-5.3**
	comp=Z,117nm,0.9s						
YAK				*e*Pg	Px	19 36 29.2	
YAK				*e*Sn	**Sn**	**19 37 17.2**	**-8.2**
YAK				*e*Sg	Px	19 37 52.1	
YAK	**Yakutsk**	**6.45**	**41**	*e*P	**Pn**	**19 36 11.3**	**-1.0**
YAK				*e*S	**Sn**	**19 37 20.2**	**-5.3**
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,73nm,0.8s						
YAK				pmax	pmax		
	comp=N,59nm,1.1s						
YAK				pmax	pmax		
	comp=E,65nm,1.0s						
YAK				smax			
	comp=N,82nm,1.0s						
YAK				smax			
	comp=Z,49nm,0.9s						
YAK				smax			
	comp=E,63nm,0.8s						
YAK				smax			
	comp=E,293nm,1.0s						
YAK				smax			
	comp=N,311nm,0.9s						
YAK				smax			
	comp=Z,221nm,0.9s						
YAK				MLR	MLR		
	comp=Z,293nm,2.0s						
CIT	**Chita**	**6.84**	**221**	*e*Pn	**Pn**	**19 36 17.9**	**0.0**
CIT				*e*Pg	Px	19 36 38.2	
CIT				Pmax		19 36 40.8	
	comp=Z,89nm,1.1s						
CIT				*e*Sn	**Sn**	**19 37 43.5**	**+8.1**
CIT				*e*Sg	Sx	19 38 05.9	
CIT				Smax		19 38 08.2	
	comp=Z,837nm,1.5s						
CIT	**Chita**	**6.84**	**221**	*e*P	**Pn**	**19 36 15.6**	**-2.3**
SYVR	**Suvo**	**7.18**	**243**	*e*Pn	**Pn**	**19 36 21.8**	**-0.8**
SYVR				*e*Pg	Px	19 36 45.7	
SYVR				Pmax		19 36 48.6	
	comp=Z,54nm,1.1s						
SYVR				*e*		19 37 48.3	
SYVR				*e*Sg	Sx	19 38 18.2	
SYVR				Smax		19 38 25.6	
	comp=Z,409nm,1.9s						
HIA	**Hailar**	**8.21**	**185**	*e*P	**P**	**19 36 31.0**	**-6.0**
	comp=Z,18nm,0.4s						
HIA				*e*Sg	Sx	19 38 48.4	
KPC	**Khapcheranga**	**9.21**	**216**	*e*Pg	Px	19 37 21.5	
KPC				Pmax		19 37 28.9	
	comp=Z,6.0nm,0.5s						
KPC				*e*Sn	**Sn**	**19 38 29.2**	**-5.0**
KPC				*e*Sg	Sx	19 39 17.1	
KPC				Smax		19 39 27.8	
	comp=Z,199nm,0.9s						
TRG	**Tyrgan**	**9.49**	**246**	*e*Sg	Sx	19 39 28.7	
TRG				Smax		19 39 53.0	
	comp=Z,97nm,1.0s						
KAB	**Kabansk**	**9.77**	**242**	*e*Sg	Sx	19 39 37.3	
KAB				Smax		19 40 00.2	
	comp=Z,2µm,1.8s						
KLR	**Kul’dur**	**10.52**	**137**	*e*P	**P**	**19 37 07.3**	**-1.4**
LSTR	**Listvyanka**	**10.77**	**246**	*e*Sg	Sx	19 40 08.3	
LSTR				Smax		19 40 28.1	
	comp=Z,95nm,1.7s						
TLY	**Talaya**	**11.47**	**247**	*e*Sg	Sx	19 40 31.3	
TLY				Smax		19 40 48.7	
	comp=Z,49nm,1.4s						
ARS	**Arshan**	**11.94**	**250**	*e*Sg	Sx	19 40 44.7	
ARS				Smax		19 40 50.7	
	comp=Z,105nm,2.7s						
BTGS	**Batagay**	**12.04**	**26**	*e*Sg	Sx	19 40 48.7	
BTGS				Smax		19 41 13.1	
	comp=Z,885nm,1.5s						
ZAK	**Zakamensk**	**12.47**	**243**	*e*Sg	Sx	19 41 03.0	
ZAK				Smax		19 41 12.2	
	comp=Z,53nm,1.4s						
ZAK	**Zakamensk**	**12.47**	**243**	*e*P	**P**	**19 37 35.9**	**+0.9**
MOY	**Mondy**	**12.82**	**252**	*e*Sg	Sx	19 41 11.5	
MOY				Smax		19 41 38.1	
	comp=Z,93nm,1.8s						

SONM	**Songino Array**	**12.95**	**228**	Pn	**P**	**19 37 40.5**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=31,slow=12,SNR=12						
SONM				LR	LR	19 42 23.4	
	comp=Z,61nm,18.1s,baz=270,slow=36						
ORL	**Orlik**	**12.96**	**257**	*e*	rx	19 40 19.1	
ORL				*e*Sg	Sx	19 41 16.1	
ORL				Smax		19 41 42.4	
	comp=Z,55nm,1.2s						
TIXI	**Tiksi**	**14.66**	**10**	*i* P	**P**	**19 37 57.6**	**-6.0**
TIXI				MLR	MLR		
	comp=Z,100nm,14.0s						
KRAR	**Krasnoyarsk**	**15.32**	**276**	*e*P	**P**	**19 38 11.5**	**-0.8**
KRAR				*e*		19 41 01.8	
KRAR				pmax	pmax		
	comp=N,22nm,0.8s						
KRAR				smax			
	comp=N,22nm,0.6s						
KRAR				smax			
	comp=N,102nm,1.3s						
SEY	**Seymchan**	**16.54**	**57**	*i* P	**P**	**19 38 30.1**	**+2.3**
NVS	**Novosibirsk**	**20.89**	**279**	*e*P	**P**	**19 39 18.6**	**-0.1**
GTA	**Gaotai**	**22.61**	**226**	*e*P	**P**	**19 39 36.6**	**+0.7**
GTA				AP		19 39 40.7	
GTA				XP		19 39 43.7	
BILL	**Bilibino**	**22.79**	**44**	P	**P**	**19 39 40.0**	**+2.6**
MKAR	**Makanchi Array**	**25.56**	**262**	P	**P**	**19 40 04.8**	**+0.5**
	comp=N,0.9nm,0.7s,mb3.4,baz=80,slow=8.8,SNR=6.5						
MKAR	**Makanchi Array**	**25.56**	**262**	*i* P	**P**	**19 40 09.8**	**+5.5**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SSE	**Sheshan**	**26.34**	**179**	*e*P	**P**	**19 40 13.7**	**+2.0**
SSE				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.1						
SSE	**Sheshan**	**26.34**	**179**	*e*P	**P**	**19 40 13.7**	**+2.0**
	comp=Z,33nm,0.7s,mb5.0						
CHKZ	**Chkalovo**	**28.07**	**284**	*e*P	**P**	**19 40 25.9**	**-1.3**
	comp=Z,0.8nm,0.5s,mb3.6						
BVAR	**Borovoye Array**	**28.50**	**283**	P	**P**	**19 40 30.2**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.4,baz=63,slow=9.7,SNR=3.4						
AAK	**Ala-Archa**	**32.48**	**263**	P	**P**	**19 41 08.7**	**+2.4**
	comp=Z,0.7nm,0.6s,mb3.7						
GUN	**Gumba**	**38.34**	**235**	*e*P	**P**	**19 41 58.0**	**+1.5**
KKN	**Kakani**	**38.71**	**235**	*e*P	**P**	**19 42 00.5**	**+0.9**
	comp=Z,6.2nm,0.7s,mb4.5						
GKN	**Gorkha**	**38.82**	**236**	*e*P	**P**	**19 42 02.1**	**+1.6**
	comp=Z,12nm,0.8s,mb4.7						
DMN	**Daman**	**38.95**	**235**	*e*P	**P**	**19 42 03.3**	**+1.7**
	comp=Z,16nm,1.1s,mb4.7						
KLMR	**Klimovskoe**	**39.30**	**310**	*e*P	**P**	**19 42 02.8**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
KOLN	**Koldanda**	**39.48**	**237**	*e*P	**P**	**19 42 06.9**	**+0.9**
ARCES	**ARCESS Array B**	**39.64**	**327**	P	**P**	**19 42 05.0**	**-1.9**
	comp=Z,2.3nm,0.8s,mb4.0,baz=34,slow=13,SNR=5.4						
ARCES	**ARCESS Array B**	**39.64**	**327**	P	**P**	**19 42 05.0**	**-1.9**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ILAR	**Eielson Array**	**41.37**	**40**	P	**P**	**19 42 22.1**	**+1.0**
	comp=Z,1.1nm,0.6s,mb3.7,baz=295,slow=4.6,SNR=17						
ILAR	**Eielson Array**	**41.37**	**40**	P	**P**	**19 42 22.1**	**+1.0**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
JOF	**Joensuu**	**41.38**	**316**	*e*p	**P**	**19 42 21.1**	**-0.1**
	comp=Z,0.6nm,0.4s,mb3.6						
JOF	**Joensuu**	**41.38**	**316**	*e*P	**P**	**19 42 21.1**	**-0.1**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
KAF	**Kangasniemi**	**43.72**	**317**	*e*p	**P**	**19 42 41.1**	**+0.9**
FINES	**FINESS Array B**	**44.23**	**317**	P	**P**	**19 42 43.1**	**-1.2**
	comp=Z,2.9nm,0.7s,mb4.1,baz=45,slow=8.1,SNR=8.9						
FINES	**FINESS Array B**	**44.23**	**317**	P	**P**	**19 42 43.2**	**-1.1**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NB2	**NORSAR Subarra**	**49.70**	**323**	P	**P**	**19 43 26.5**	**-0.7**
	comp=Z,1.3nm,0.6s,mb4.1,baz=40,slow=7.4						
NOA	**NORSAR Array B**	**49.70**	**323**	P	**P**	**19 43 25.1**	**-2.1**
	comp=Z,1.4nm,0.8s,mb4.0,baz=43,slow=7.9,SNR=2.9						
NOA	**NORSAR Array B**	**49.70**	**323**	P	**P**	**19 43 25.1**	**-2.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NAO	**NORSAR Subarra**	**49.98**	**323**	P	**P**	**19 43 26.5**	**-2.9**
	comp=Z,1.3nm,0.6s,mb4.1						
AKASG	**Malin Array Be**	**50.20**	**304**	P	**P**	**19 43 30.4**	**-0.9**
	comp=Z,1.3nm,0.4s,mb4.3,baz=38,slow=8.6,SNR=8.7						
AKASG	**Malin Array Be**	**50.20**	**304**	*i* P	**P**	**19 43 31.2**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KHC	**Kasperske Hory**	**58.03**	**312**	*e*P	**P**	**19 44 29.0**	**+0.3**
GERES	**GERESS Array B**	**58.21**	**312**	P	**P**	**19 44 29.1**	**-0.8**
	comp=Z,1.1nm,0.7s,mb4.0,baz=39,slow=6.3,SNR=9.6						
GERES	**GERESS Array B**	**58.21**	**312**	P	**P**	**19 44 29.1**	**-0.8**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PDAR	**Pinedale Array**	**71.65**	**37**	P	**P**	**19 45 56.5**	**-0.4**
	comp=Z,0.2nm,0.7s,mb3.1,baz=342,slow=2.9,SNR=3.6						
NVAR	**Mina Array Bea**	**72.41**	**45**	P	**P**	**19 46 02.6**	**+1.1**
	comp=Z,0.3nm,0.6s,mb3.4,baz=348,slow=2.7,SNR=3.9						
WRA	**Warramunga Arr**	**77.92**	**167**	P	**P**	**19 46 32.4**	**-0.8**
	comp=Z,0.5nm,0.7s,mb3.5,baz=350,slow=6.6,SNR=5.9						
WRA	**Warramunga Arr**	**77.92**	**167**	P	**P**	**19 46 32.4**	**-0.8**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*CSEM **06** 19:38:28.9±0.1,30.81N×56.87E,h16^{km},ML3.4,Error ellipse: s-maj=4.2km s-min=2.1km az=53.0*

*THR **06** 19:38:29.0±0.5,30.82N×56.89E,h18^{km}±7^{km},ML3.0*

*TEH **06** 19:38:35.1,30.85N×56.50E,h10^{km},Mn3.4*

ISC 06 19:38:29.0±0.9**,30.81N**±0.05×**56.9E**±0.1**,h10^{km},n9, σ0^{s}.90**/13**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.83**	**187**	*e*Pg	**Pg**	**19 38 44.9**	**-0.7**
KRBR				*e*Sg	**Sg**	**19 38 57.0**	**+0.2**
KRBR				AML	AML	19 39 00.8	
	comp=N,655nm,0.3s						
IBAF	**Bafgh**	**1.36**	**305**	Pg	**Pg**	**19 38 54.0**	**-2.3**
IMEH	**Mehriz**	**2.02**	**287**	Pn	**Pn**	**19 39 05.1**	**+1.5**
ICHK	**Chekchek**	**2.55**	**305**	Pn	**Pn**	**19 39 11.5**	**+0.4**
ZHSF	**Zahedan**	**3.58**	**108**	*e*Pn	**Pn**	**19 39 25.9**	**0.0**
ZHSF				AML	AML	19 40 29.7	
	comp=N,23nm,0.7s						
NASN	**Na’in**	**3.99**	**301**	*e*Pn	**Pn**	**19 39 31.7**	**+0.1**
NASN				*e*Pg	**Pg**	**19 39 41.0**	**-7.6**
IMOK	**Mook**	**4.01**	**245**	Pn	**Pn**	**19 39 23.6**	**-8.4**
IFIR	**Firoozkooh**	**5.93**	**325**	Pn	**Pn**	**19 39 59.1**	**+0.1**
IFIR				Sn	**Sn**	**19 41 01.9**	**-5.9**
IDMV	**Damavand**	**6.25**	**321**	Pn	**Pn**	**19 40 03.9**	**+0.3**
IDMV				Sn	**Sn**	**19 41 08.5**	**-7.4**

JMA 06 20:09:27.1±0.2**,22.25N×121.72E,h70^{km},M3.6,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**2.50**	**28**	P	P	20 10 06.3	-0.1
YOJ				S	S	20 10 35.5	-0.3
HATJ	**Hateruma jima**	**2.63**	**46**	P	P	20 10 08.1	-0.2
HATJ				*e*S	S	20 10 38.9	-0.2
IRIF	**Iriomote-Funau**	**2.78**	**41**	P	P	20 10 10.3	-0.1
IRIF				S	S	20 10 42.9	+0.1
JKRS	**Kuro-shima**	**2.89**	**46**	P	P	20 10 11.9	0.0
JKRS				*e*S	S	20 10 45.1	-0.5
JIJ	**Ishigaki jima**	**3.06**	**46**	P	P	20 10 13.7	-0.7
JIJ				S	S	20 10 48.9	-1.1
JTJ	**Tarama**	**3.63**	**48**	P	P	20 10 22.1	-0.1
JTJ				S	S	20 11 03.8	-0.3
JMJ	**Miyako jima 2**	**4.16**	**51**	P	P	20 10 29.2	-0.4
JMJ				*e*S	S	20 11 18.2	+0.9
JOGS	**Gusukube**	**4.21**	**53**	P	P	20 10 29.7	-0.6
JOGS				*e*S	S	20 11 18.6	0.0
JKE	**Kume jima 2**	**6.15**	**48**	P	P	20 10 55.7	-1.5
JIH	**Iheya**	**7.41**	**49**	P	P	20 11 13.7	-1.1
JOW	**Kunigami**	**7.51**	**51**	P	P	20 11 15.2	-0.9
JMZ	**Minamidaito 2**	**9.38**	**66**	P	P	20 11 38.4	-3.3

*THE **06** 20:14:33.1,39.24N×20.93E,h1^{km},ML3.2*

*ATH **06** 20:14:34.1,39.31N×21.02E,h11^{km}±2^{km},MD3.3/7*

*SOF **06** 20:14:34.6,39.20N×21.43E,h2^{km},MD2.6*

*NEIC **06** 20:14:34.1,39.31N×21.02E,h11^{km},MD3.3(ATH),After ATH.*

*CSEM **06** 20:14:34.7±0.2,39.35N×20.93E,h9^{km}±1^{km},MD3.3,Error ellipse: s-maj=3.5km s-min=3.0km az=17.0*

ISC 06 20:14:33.3±0.4**,39.27N**±0.02×**20.93E**±0.02**,h11^{km},n42, σ1^{s}.34**/64**,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	**Janina**	**0.39**	**351**	*e*PG	**Pg**	**20 14 40.8**	**-0.5**
JAN				*e*SB	**Sb**	**20 14 47.0**	**-0.4**
IGT	**Igoumenitsa**	**0.53**	**300**	*e*Pg	**Pg**	**20 14 42.4**	**-1.6**
IGT				*e*Sg	**Sg**	**20 14 51.8**	**+0.6**
MEV	**Metsovon**	**0.56**	**25**	*e*Pg	**Pg**	**20 14 43.8**	**-0.9**
MEV				*e*Sg	**Sg**	**20 14 52.5**	**+0.1**
EVR	**Evrytania**	**0.77**	**117**	*e*PB	**Pb**	**20 14 48.4**	**+0.1**
SRN	**Sarande**	**0.94**	**311**	*i* Pg	**Pg**	**20 14 50.0**	**-2.2**
SRN				*i* Sg	**Sg**	**20 15 05.9**	**+1.2**
KEK	**Kerkira**	**0.98**	**297**	*e*PG	**Pg**	**20 14 53.3**	**+0.4**
KEK				*e*SB	**Sb**	**20 15 07.9**	**+3.4**
AGG	**Agios Georgios**	**1.12**	**102**	*e*Pg	**Pg**	**20 14 54.3**	**-1.5**
	comp=Z,7.5nm,0.2s						
AGG				*e*Sg	**Sg**	**20 15 10.1**	**-0.7**
VLS	**Valsamata**	**1.12**	**194**	*e*PB	**Pb**	**20 14 56.5**	**+2.2**
VLS				*e*SB	**Sb**	**20 15 13.0**	**+4.2**
KZN	**Kozani**	**1.22**	**32**	*e*PG	**Pg**	**20 14 55.6**	**-2.2**
KZN				*e*SB	**Sb**	**20 15 12.0**	**+0.4**
RLS	**Riolos of Patr**	**1.28**	**161**	*e*PB	**Pb**	**20 14 58.5**	**+1.4**
LIT	**Litokhoron**	**1.46**	**55**	*e*Pg	**Pg**	**20 15 00.2**	**-2.4**
	comp=Z,9.0nm,0.4s						
LIT				*e*Sg	**Sg**	**20 15 20.8**	**-1.4**
LIT	**Litokhoron**	**1.46**	**55**	*e*Pg	**Pg**	**20 15 00.2**	**-2.4**
	9.0nm,0.4s						
LIT				*e*Sg	**Sg**	**20 15 20.8**	**-1.4**
FNA	**Florina**	**1.55**	**13**	*e*Pg	**Pg**	**20 15 01.3**	**-3.0**
	comp=Z,5.3nm,0.4s						
FNA				*e*Sg	**Sg**	**20 15 23.3**	**-1.7**
LKR	**Lokris**	**1.73**	**110**	*e*PB	**Pb**	**20 15 05.8**	**+1.1**
XOR	**Xorichti**	**1.76**	**86**	*e*Pb	**Pb**	**20 15 03.2**	**-2.1**
XOR				*e*Sb	**Sb**	**20 15 27.3**	**0.0**
BIA	**Bitola**	**1.77**	**10**	*e*Pn	**Pn**	**20 15 06.0**	**+1.8**
BIA				*e*Sn	**Sn**	**20 15 27.8**	**+0.9**
NEO	**Neokhori**	**1.78**	**88**	*e*PG	**Pg**	**20 15 05.9**	**-3.1**
OHR	**Ohrid**	**1.84**	**357**	*e*Pn	**Pn**	**20 15 07.4**	**+2.2**
OHR				*e*Sn	**Sn**	**20 15 31.2**	**+2.6**
GRG	**Griva**	**2.03**	**33**	*e*Pn	**Pn**	**20 15 07.6**	**-0.3**
GRG				*e*Sn	**Sn**	**20 15 35.1**	**+1.7**
THE	**Thessaloniki**	**2.07**	**48**	*e*Pn	**Pn**	**20 15 08.9**	**+0.3**
THE				*e*Sn	**Sn**	**20 15 35.8**	**+1.2**
PAIG	**Paliouri**	**2.23**	**72**	*e*Pn	**Pn**	**20 15 10.0**	**-0.8**
PAIG				*e*Sn	**Sn**	**20 15 39.4**	**+0.9**
PLG	**Polygyros**	**2.23**	**60**	*e*PB	**Pb**	**20 15 11.0**	**-2.3**
AOS	**Alonnisos**	**2.30**	**92**	*e*Pn	**Pn**	**20 15 11.8**	**0.0**
AOS				*e*Sn	**Sn**	**20 15 40.9**	**+0.7**
VAY	**Valandovo**	**2.40**	**31**	*e*Pn	**Pn**	**20 15 13.7**	**+0.4**
VAY				*e*Sn	**Sn**	**20 15 39.7**	**-3.2**
LCI	**Lecce**	**2.41**	**297**	Pn	**Pn**	**20 15 12.6**	**-0.8**
KNT	**Kendrikon**	**2.42**	**38**	*e*Pn	**Pn**	**20 15 13.8**	**+0.3**
KNT				*e*Sn	**Sn**	**20 15 45.3**	**+2.0**
SOH	**Sokhos**	**2.42**	**50**	*e*Pn	**Pn**	**20 15 13.9**	**+0.3**
SOH				*e*Sn	**Sn**	**20 15 45.7**	**+2.2**
OUR	**Ouranopolis**	**2.58**	**65**	*e*Pn	**Pn**	**20 15 16.1**	**+0.2**
SKO	**Skopje**	**2.73**	**8**	*e*Pn	**Pn**	**20 15 19.6**	**+1.7**
SKO				*e*Sn	**Sn**	**20 15 50.5**	**-0.6**
NVR	**Nevrokopi**	**3.06**	**46**	*e*PN	**Pn**	**20 15 23.9**	**+1.3**
KKB	**Krupnik**	**3.07**	**32**	P	**Pn**	**20 15 24.0**	**+1.2**
MMB	**Musomiste**	**3.15**	**42**	P	**Pn**	**20 15 24.0**	**+0.1**
BRT	**Bari-Castellan**	**3.27**	**300**	Pn	**Pn**	**20 15 24.5**	**-1.2**
LOS	**Limnos**	**3.28**	**77**	*e*Pn	**Pn**	**20 15 24.9**	**-0.8**
VTS	**Vitosha**	**3.74**	**27**	P	**Pn**	**20 15 35.0**	**+2.7**
RZN	**Rozhen**	**3.77**	**49**	*e*P	**Pn**	**20 15 33.0**	**+0.4**
SLCN	**Sala Consilina**	**4.22**	**287**	Pn	**Pn**	**20 15 39.0**	**-0.2**
ALN	**Alexandroupoli**	**4.25**	**66**	*e*Pn	**Pn**	**20 15 39.3**	**-0.3**
SGO	**Sicignano**	**4.51**	**288**	Pn	**Pn**	**20 15 42.6**	**-0.6**
SGG	**Gregorio Mates**	**5.43**	**295**	Pn	**Pn**	**20 15 56.2**	**0.0**
CII	**Carovilli**	**5.61**	**298**	Pn	**Pn**	**20 15 57.5**	**-1.3**
NRCA	**Norcia**	**6.89**	**304**	Pn	**Pn**	**20 16 14.5**	**-2.3**

*NEIC **06** 20:14:36.3,19.35N×64.89W,h2^{km},MD3.5(RSPR),After RSPR.*

RSPR 06 20:14:36.3,19.35N×64.89W,h2^{km}±5^{km}**,MD3.5**/5**, MD3.5**/5**,5C,Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.97**	**164**	⇑*e*P	Pb	20 14 53.5	-2.0
TBVI				*e*S	Sb	20 15 07.2	-1.5
MTP	**Monte Pirata**	**1.40**	**207**	⇑*e*P	Pb	20 15 00.2	-2.6
MTP				*e*S	Sb	20 15 18.6	-2.5
HUMP	**Col San Antoni**	**1.51**	**217**	⇑*e*P	Pn	20 15 01.1	-3.3
HUMP				*e*S	Sb	20 15 20.4	-3.8
SJG	**San Juan**	**1.72**	**224**	*e*S	Sn	20 15 25.3	-5.0
SJG	**San Juan**	**1.72**	**224**	*e*S	Sn	20 15 26.4	-3.9
CELP	**Cerrillos**	**2.05**	**232**	⇑*e*P	Pn	20 15 08.7	-3.4
LSP	**Las Mesas**	**2.39**	**241**	*e*S	Sn	20 15 43.8	-3.4
CRPR	**Cabo Rojo, PR**	**2.50**	**238**	⇑*e*P	Pn	20 15 15.1	-3.4
CRPR				*e*S	Sn	20 15 44.9	-5.0

*IDC **06** 20:58:06.3±1.4,32.84N×143.20E,mb3.8/3,mb1 4.0/4, mb1mx3.6/19,mbtmp3.7/4,ML2.9/1,MS3.1/1,Ms1 3.1/1, ms1mx2.6/24,Error ellipse: s-maj=55.5km s-min=32.5km az=75.0*

*JMA **06** 20:58:20.6±0.3,34.08N×139.60E,h154^{km}±3^{km},M2.8*

ISC 06 20:58:18.7±1.0**,34.1N**±0.2×**139.5E**±0.3**,h175^{km}**±11^{km}**, n11,σ0^{s}.75**/11**,mb3.3**/2**,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIM2	**Oshima 3**	**0.59**	**358**	P	**P**	**20 58 43.6**	**-0.2**
JIZS	**Izushimoda**	**0.76**	**321**	P	**P**	**20 58 45.0**	**+0.4**
BSO4	**Boso 4**	**1.13**	**40**	P	**P**	**20 58 47.3**	**+0.1**
JOD2	**Odawara 2**	**1.18**	**345**	P	**P**	**20 58 48.0**	**+0.3**
JOD2				S	**S**	**20 59 09.3**	**-0.7**
JHU	**Hanno**	**1.73**	**355**	P	**P**	**20 58 53.5**	**+0.5**
JHU				S	**S**	**20 59 18.2**	**-1.2**
JRY	**Ryogami san**	**1.94**	**347**	P	**P**	**20 58 56.8**	**+1.6**
MJAR	**Matsushiro Arr**	**2.62**	**337**	Pn	**S**	**20 59 28.9**	**-8.4**
	0.4nm,0.3s,baz=126,slow=16,SNR=4.6						
CBIJ	**Chichi jima**	**7.39**	**161**	LR	LR	21 01 17.9	
	comp=Z,168nm,19.9s,baz=345,slow=33						
WRA	**Warramunga Arr**	**53.98**	**186**	P	**P**	**21 07 25.9**	**-0.9**
	0.2nm,0.5s,mb3.1,baz=0.4,slow=7.5,SNR=4.7						
FINES	**FINESS Array B**	**70.64**	**332**	P	PcP	21 09 39.3	+2.8
	1.1nm,0.7s,baz=53,slow=9.5,SNR=5.3						
TXAR	**Lajitas Array**	**93.17**	**51**	P	**P**	**21 11 14.4**	**+0.2**
	0.3nm,0.7s,mb3.5,baz=270,slow=4.5,SNR=3.6						

*ATH **06** 21:12:18.3,38.36N×21.85E,h21^{km}±1^{km},ML3.0*

*NEIC **06** 21:12:18.3,38.36N×21.85E,h21^{km},ML3.0(ATH),After ATH.*

*CSEM **06** 21:12:18.9±0.1,38.33N×21.90E,h2^{km},ML3.0,Error ellipse: s-maj=2.4km s-min=1.6km az=137.0*

*THE **06** 21:12:21.1,38.44N×22.11E,h2^{km},ML3.2*

ISC 06 21:12:17.5±0.5**,38.34N**±0.04×**21.90E**±0.06**,h2^{km},n20, σ1^{s}.11**/21**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.44**	**231**	*e*PB	**Pb**	**21 12 27.3**	**-0.3**
RLS				*e*SB	**Sb**	**21 12 33.7**	**-0.7**
EVR	**Evrytania**	**0.58**	**353**	*e*PN	**Pg**	**21 12 29.4**	**+0.3**
AGG	**Agios Georgios**	**0.76**	**26**	*e*Pg	**Pg**	**21 12 32.0**	**-0.7**
	comp=Z,15nm,0.2s						
LKR	**Lokris**	**0.92**	**70**	*e*PN	**Pn**	**21 12 36.3**	**-0.9**
VLS	**Valsamata**	**1.04**	**262**	*e*PN	**Pn**	**21 12 37.5**	**-1.5**
ITM	**Ithomi**	**1.16**	**179**	*e*PN	**Pn**	**21 12 40.6**	**0.0**
NEO	**Neokhori**	**1.42**	**47**	*e*PN	**Pn**	**21 12 45.0**	**+0.7**
XOR	**Xorichti**	**1.44**	**44**	*e*Pg	**Pg**	**21 12 45.1**	**-1.2**
ATH	**Athens Observa**	**1.48**	**104**	*e*PN	**Pn**	**21 12 46.3**	**+1.1**
MEV	**Metsovon**	**1.54**	**340**	*e*Pg	**Pg**	**21 12 47.8**	**-0.4**
IGT	**Igoumenitsa**	**1.71**	**315**	*e*Pb	**Pb**	**21 12 52.1**	**+2.8**
AOS	**Alonnisos**	**1.76**	**61**	*e*Pg	**Pg**	**21 12 48.6**	**-4.0**
VLI	**Veliai**	**1.82**	**153**	*e*PN	**Pn**	**21 12 51.7**	**+1.6**
LIT	**Litokhoron**	**1.82**	**14**	*e*Pb	**Pb**	**21 12 50.5**	**-0.7**
	comp=Z,3.7nm,0.4s						
PAIG	**Paliouri**	**2.11**	**41**	*e*Pb	**Pb**	**21 12 54.0**	**-2.1**
FNA	**Florina**	**2.48**	**351**	*e*Pn	**Pn**	**21 13 01.1**	**+1.6**
FNA	**Florina**	**2.48**	**351**	*e*Pn	**Pn**	**21 13 01.0**	**+1.5**
GRG	**Griva**	**2.64**	**8**	*e*Pn	**Pn**	**21 13 02.8**	**+0.9**
SOH	**Sokhos**	**2.72**	**24**	*e*Pn	**Pn**	**21 13 03.4**	**+0.4**
KNT	**Kendrikon**	**2.92**	**15**	*e*Pn	**Pn**	**21 13 06.5**	**+0.6**

MAN 06 21:26:22.7,12.70N×125.96E,h14^{km},mb4.2,ML3.0, MS2.7,1C,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.21**	**205**	*e*P	Pb	21 26 45.0	+0.2
BESP				*e*S	Sb	21 27 01.2	+1.1
CNP	**Catarman**	**1.28**	**262**	*e*P	Pb	21 26 44.1	-1.9
CNP				*e*S	Sb	21 26 57.8	-4.3
PVCP	**Virac**	**1.97**	**297**	*e*P	Pn	21 26 55.0	-1.1
PVCP				*e*S	Sn	21 27 21.9	+1.2
AUQP	**San Andres**	**3.26**	**281**	*e*P	Pn	21 27 25.2	+11
RCP	**Roxas**	**3.34**	**251**	⇑*e*P	Pn	21 27 15.2	-0.4
GUIM	**Jordan**	**3.89**	**238**	*e*P	Pn	21 27 23.9	+0.4
GUIM				*e*S	Sn	21 28 09.6	+0.1
BOAC	**Boac**	**4.08**	**281**	*e*P	Pn	21 27 29.1	+2.9
BOAC				*e*S	Sn	21 28 20.5	+6.3
BALP	**Baler**	**5.21**	**306**	*e*P	Pn	21 27 41.8	-0.4
APYP	**Conner**	**6.86**	**319**	*e*P	Pn	21 28 04.8	-0.5
APYP				*e*S	Sn	21 29 09.1	-15

*NEIC **06** 21:31:02.9,32.87S×70.38W,h4^{km},ML2.5(GUC),After GUC.*

GUC 06 21:31:02.9±0.7**,32.87S×70.38W,h4^{km}**±2^{km}**,MD3.6, ML2.5,4C-2D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	**Jahuel**	**0.26**	**316**	⇑*i*P	Pg	21 31 08.3	+0.3
JACH				*i* S	Sg	21 31 12.0	+0.5
FCH	**Farellones**	**0.47**	**171**	⇓*i*P	Pg	21 31 13.0	+0.7
FCH				*i* S	Sg	21 31 20.2	+1.8
FCH				AMP		21 31 20.7	
	comp=N,553nm,0.2s						
ROCH	**El Roble**	**0.54**	**259**	⇑*i*P	Pg	21 31 14.3	+0.6
ROCH				*i* S	Sg	21 31 22.8	+1.9
RCDM	**Rinconada Maip**	**0.72**	**210**	⇓*i*P	Pg	21 31 17.6	+0.4
RCDM				*i* S	Sg	21 31 28.6	+1.8
RCDM				AMP		21 31 29.0	
	comp=E,899nm,0.1s						
TACH	**Talagante**	**0.91**	**211**	⇑*i*P	Pb	21 31 20.8	-0.1
TACH				*i* S	Sb	21 31 34.0	+0.8
LMEL	**Las Melosas**	**0.99**	**171**	*e*P	Pb	21 31 21.7	-0.6
LMEL				*i* S	Sb	21 31 36.3	+0.8
LMEL				AMP		21 31 37.9	
	comp=N,273nm,0.1s						
LCCH	**Las Cruces**	**1.17**	**238**	⇑*i*P	Pb	21 31 24.9	-0.4
LCCH				*i* S	Sb	21 31 40.2	-0.4
CHNG	**Los Chungos**	**1.36**	**316**	AMP		21 31 47.3	
	comp=E,72nm,0.3s						
SFDO	**San Fernando**	**1.82**	**197**	*e*P	Pn	21 31 35.0	-0.3

KRSC 06 22:01:35.4±0.3**,54.24N×161.08E,h74^{km}**±10^{km}**,ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KII	**Karymskiy**	**0.98**	**259**	*i* P	P	22 01 54.2	+0.1
KII				*i* S	S	22 02 07.9	-0.2
TUMR	**Tumrok**	**1.18**	**333**	*i* P	P	22 01 57.0	+0.4
TUMR				*e*S	S	22 02 12.8	+0.3
SPN	**Mys Shipunski**	**1.31**	**209**	*i* P	P	22 01 58.6	+0.1
SPN				*i* S	S	22 02 15.4	-0.2
NLC	**Nalytchevo**	**1.49**	**225**	*i* P	P	22 02 01.3	+0.4
NLC				*i* S	S	22 02 20.3	+0.7
KMNR	**Kamenistaya**	**1.59**	**343**	*i* P	P	22 02 03.3	+1.0
KMNR				*e*S	S	22 02 23.6	+1.5
SDLR	**Sedlovina**	**1.62**	**234**	*i* P	P	22 02 03.5	+0.9
SMAR	**Somma**	**1.67**	**235**	*i* P	P	22 02 04.4	+1.1
UGLR	**Uglovaya**	**1.69**	**233**	*i* P	P	22 02 04.6	+1.0
AVH	**Avacha**	**1.70**	**236**	*e*P	P	22 02 04.6	+0.9
AVH				*e*S	S	22 02 25.9	+1.4
KOK	**Koryaka**	**1.73**	**238**	*e*P	P	22 02 05.1	+1.0
ZLN	**Zelenaya**	**1.79**	**355**	*i* P	P	22 02 06.1	+1.2
ZLN				*i* S	S	22 02 28.4	+1.8
KPT	**Kopyto**	**1.80**	**344**	*e*P	P	22 02 05.7	+0.7
KPT				*e*S	S	22 02 28.1	+1.3
LGNR	**Loginova**	**1.86**	**353**	*i* P	P	22 02 07.1	+1.3
LGNR				*e*S	S	22 02 30.3	+2.0
CIRR	**Tsirk**	**1.89**	**354**	*i* P	P	22 02 07.4	+1.2
PET	**Petropavlovsk**	**1.89**	**231**	*e*P	P	22 02 06.6	+0.4
PET				*e*S	S	22 02 29.4	+0.4
GNL	**Ganaly**	**1.93**	**255**	*i* P	P	22 02 07.6	+0.8
KOZ	**Kozyrevsk**	**1.95**	**340**	*e*P	P	22 02 07.5	+0.5
KOZ				*e*S	S	22 02 30.9	+0.5
KRSR	**Krestovskiy**	**2.00**	**352**	*e*P	P	22 02 08.2	+0.4
KRSR				*e*S	S	22 02 32.5	+0.8
KLY	**Klyuchi**	**2.09**	**353**	*e*P	P	22 02 09.5	+0.5
KLY				*e*S	S	22 02 34.6	+0.7
ESO	**Esso**	**2.17**	**322**	*e*P	P	22 02 09.9	-0.3
ESO				*e*S	S	22 02 35.2	-0.8
ESO				Smax			
	50nm,0.4s						
KBTR	**Krutoberegovo**	**2.21**	**26**	*e*P	P	22 02 11.2	+0.5
KBTR				*e*S	S	22 02 37.5	+0.6
SRDR	**Sredinnyy**	**2.22**	**340**	*i* P	P	22 02 10.8	-0.1
RUS	**Russkaya**	**2.38**	**221**	*e*P	P	22 02 13.1	+0.1
RUS				*e*S	S	22 02 41.0	0.0
GRL	**Gorelyy**	**2.47**	**228**	*e*P	P	22 02 15.5	+1.1
GRL				*e*S	S	22 02 45.1	+1.7
APC	**Apacha**	**2.68**	**242**	*e*P	P	22 02 18.3	+0.9
APC				Smax			
	10.0nm,0.3s						
BKI	**Bering**	**3.00**	**69**	*e*S	S	22 02 54.3	-2.3
MIPR	**Malaya Ipel’ka**	**3.26**	**235**	*e*P	P	22 02 26.5	+1.1

*IDC **06** 22:18:16.0±3.0,71.52N×6.22W,mb3.5/2,mb1 3.8/7, mb1mx3.6/23,mbtmp3.7/7,ML3.3/5,Error ellipse: s-maj=57.9km s-min=18.7km az=169.0*

*NEIC **06** 22:18:19.1±0.6,71.30N×6.02W,h10^{km},ML3.3(BER), Error ellipse: s-maj=9.5km s-min=6.2km az=180.0*

*CSEM **06** 22:18:19.7±0.1,71.37N×6.10W,h35^{km},ML3.0,Error ellipse: s-maj=4.3km s-min=2.6km az=162.0*

*BER **06** 22:18:20.0±0.9,71.53N×6.10W,h10^{km},MD3.7,ML3.0*

ISC 06 22:18:17.1±0.6**,71.34N**±0.07×**5.8W**±0.1**,h10^{km},n22, σ1^{s}.10**/29**,mb3.4**/2**,2C,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**0.88**	**247**	*e*P	**Pb**	**22 18 34.9**	**+0.9**
JNE				*e*S	**Sb**	**22 18 45.9**	**+0.2**
JNE				AML	AML	22 18 48.5	
	comp=Z,1μm,0.5s						
JNE	**Jan Mayen East**	**0.88**	**247**	*e*P	**Pb**	**22 18 34.9**	**+0.9**
	SNR=53						
JNE				*e*S	**Sb**	**22 18 45.9**	**+0.2**
	comp=Z,1μm,0.5s,SNR=53						
JNW	**Jan Mayen West**	**0.91**	**251**	*e*P	**Pb**	**22 18 35.2**	**+0.8**
JNW				*e*S	**Sb**	**22 18 45.9**	**-0.5**
JNW				AML	AML	22 18 50.2	
	comp=Z,481nm,0.4s						
JNW	**Jan Mayen West**	**0.91**	**251**	*e*P	**Pb**	**22 18 35.2**	**+0.7**
	SNR=53						
JNW				*e*S	**Sb**	**22 18 45.9**	**-0.5**
	comp=Z,481nm,0.4s,SNR=53						
JMIC	**Jan Mayen**	**0.95**	**249**	Pn	**Pn**	**22 18 35.6**	**-0.7**
	comp=Z,20nm,0.3s,baz=46,slow=2.7,SNR=28						
JMIC				Sn	**Sn**	**22 18 47.1**	**-2.9**
	comp=Z,80nm,0.3s,baz=156,slow=22,SNR=44						
JMI	**Jan Mayen**	**1.04**	**248**	*e*P	**Pb**	**22 18 37.3**	**+0.6**
JMI				*e*S	**Sb**	**22 18 50.3**	**+0.1**
JMI				AML	AML	22 18 54.2	
	comp=Z,412nm,0.3s						
JMI	**Jan Mayen**	**1.04**	**248**	*e*P	**Pb**	**22 18 37.3**	**+0.6**
	SNR=53						
JMI				*e*S	**Sb**	**22 18 50.3**	**+0.1**
	comp=Z,412nm,0.3s,SNR=53						
DAG	**Danmarks Havn**	**6.48**	**333**	⇑*i*P	**Pn**	**22 19 54.8**	**-0.1**
	comp=Z,4.8nm,0.7s						
DAG				*e*		22 21 02.0	
DAG	**Danmarks Havn**	**6.48**	**333**	⇑*e*P	**Pn**	**22 19 54.8**	**-0.1**
	comp=Z,4.8nm,0.7s						
DAG				*e*		22 21 02.0	
KBS	**Kingsbay**	**8.81**	**23**	*e*P	**P**	**22 20 27.6**	**+0.1**

KBS	Kingsbay	8.81	23	*e*P	P	22 20 27.6	+0.1
ARCES	ARCESS Array B	10.58	85	Pn	P	22 20 49.6	-1.9
	comp=Z,0.1nm,0.3s,baz=298,slow=12,SNR=5.9						
NOA	NORSAR Array B	12.35	138	Pn	P	22 21 14.2	-1.4
	comp=Z,0.1nm,0.3s,baz=333,slow=21,SNR=3.5						
NOA	NORSAR Array B	12.35	138	Pn	P	22 21 14.2	-1.4
NAO01	NORSAR Array S	12.46	139	*e*P	P	22 21 17.0	0.0
NAO01	NORSAR Array S	12.46	139	*e*P	P	22 21 17.0	-0.1
HFS	Hagfors	13.71	135	Pn	P	22 21 32.6	-0.9
	comp=Z,0.0nm,0.3s,baz=353,slow=12,SNR=4.1						
FINES	FINESS Array B	15.92	112	Pn	P	22 22 03.8	+1.4
	comp=Z,0.1nm,0.3s,baz=318,slow=19,SNR=6.1						
EKA	Eskdalemuir Ar	16.11	175	Pn	P	22 22 05.0	+0.1
	comp=Z,0.2nm,0.3s,baz=357,slow=13,SNR=3.7						
EKA	Eskdalemuir Ar	16.11	175	Pn	P	22 22 04.9	0.0
GERES	GERESS Array B	24.33	148	P	P	22 23 38.6	+3.2
	comp=Z,0.8nm,0.8s,mb3.2,baz=353,slow=7.9,SNR=5.2						
BRTR	Keskin Array B	37.41	126	P	P	22 25 33.1	+1.6
	comp=Z,0.9nm,0.8s,mb3.6,baz=352,slow=8.7,SNR=3.9						

IDC 06 22:25:37.0±30.0**,24.47S**×**177.46W,h535**^{km}±347^{km}**, mb3.4**/4**,mb1 3.6**/4**,mb1mx3.2**/13**,mbtmp4.3**/4**,Error ellipse: s-maj=148.2km s-min=92.8km az=102.0,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.80	270	P	P	22 31 34.8	-1.0
	2.7nm,0.3s,baz=110,slow=13,SNR=5.3						
STKA	Stephens Creek	36.68	249	P	P	22 31 58.2	-1.4
	1.4nm,0.5s,baz=101,slow=11,SNR=6.3						
WRA	Warramunga Arr	44.69	266	P	P	22 33 02.6	-1.2
	2.1nm,0.4s,baz=103,slow=7.9,SNR=9.5						
ILAR	Eielson Array	92.05	13	P	P	22 37 48.1	-0.9
	0.7nm,0.4s,baz=206,slow=4.8,SNR=12						

NNC 06 22:33:37.8±8.4**,37.06N**×**70.18E,mpv3.0,1C-2D,Error ellipse: s-maj=73.2km s-min=44.2km az=147.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.05	2	⇓P	Pn	22 35 09.6	-1.0
	0.4nm,0.2s,baz=166,slow=12,SNR=18						
KK31				⇑S	Sn	22 36 19.8	-1.8
	0.5nm,0.3s,baz=191,slow=24,SNR=5.0						
AAK	Ala-Archa	6.48	29	⇓S	Sn	22 36 30.2	-2.3
	2.0nm,0.5s						
AB31	Akbulak array	14.28	332	P	P	22 36 59.0	-4.4
	0.3nm,0.5s,baz=150,slow=12,SNR=13						

NDI ***06*** *22:58:01.8±3.7,34.59N×72.71E,h10*^{km}*,MD3.6,ML3.4*
NNC ***06*** *22:58:06.5±3.0,35.11N×72.11E,mpv3.5,Error ellipse: s-maj=35.4km s-min=20.5km az=117.0*
ISC 06 22:57:59.4±0.8**,34.45N**±0.06×**72.5E**±0.1**,h33**^{km}**,n11,** $\sigma 1\overset{s}{.}58$/19**,2C-2D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.37	126	*e*P	P	22 58 55.0	+4.0
THN				*e*SB	Sb	22 59 40.7	+1.4
DLH	Dalhousie	3.48	122	*e*P	P	22 58 56.0	+3.5
DLH				*e*S	S	22 59 35.0	+1.8
SDNR	Sundarnagar	4.79	127	*e*P	P	22 59 13.4	+2.3
SDNR				*e*S	S	23 00 04.2	-1.9
KLP	Kalpa	5.66	119	*e*P	P	22 59 22.3	-0.9
KLP				*e*S	S	23 00 27.0	-1.0
KLP				AML	AML	23 00 53.2	
	comp=E,62nm,0.7s						
KLP				AML	AML	23 00 54.7	
	comp=N,50nm,0.8s						
KHET	Khetri	6.97	155	*e*P	P	22 59 42.5	+0.7
KHET				*e*S	S	23 00 59.6	-1.1
KHET				AML	AML	23 01 03.0	
	comp=E,53nm,0.2s						
KHET				AML	AML	23 01 03.7	
	comp=N,61nm,0.5s						
KUDL	Kundal	7.16	150	*e*P	P	22 59 46.8	+2.3
KUDL				*e*S	S	23 01 03.0	-2.6
SONA	Sohna	7.33	146	*e*S	S	23 01 07.2	-2.5
SONA				AML	AML	23 01 11.6	
	comp=N,7.9nm,0.5s						
SONA				AML	AML	23 01 12.1	
	comp=E,28nm,0.6s						
AAK	Ala-Archa	8.32	10	⇑P	P	23 00 00.9	+0.4
	comp=E,4.8nm,1.8s						
AAK				⇑S	S	23 01 29.7	-4.6
	comp=E,2.3nm,0.9s						
KK31	Karatay Array	8.77	351	⇓P	P	23 00 05.7	-1.1
	comp=E,1.8nm,0.6s,baz=160,slow=11,SNR=37						
KK31				⇓S	S	23 01 38.8	-6.9
	comp=E,0.8nm,0.3s,baz=175,slow=24,SNR=12						
AB31	Akbulak array	17.45	332	P	P	23 02 01.9	+0.2
	comp=E,0.3nm,0.5s,baz=289,slow=3.7,SNR=5.2						
AKTO	Aktyubinsk	19.15	331	P	P	23 02 22.6	+0.1
	comp=E,0.1nm,0.2s						

ROM ***07*** *00:11:18.9±0.4,41.65N×16.97E,h14*^{km}*±4*^{km}*,Md3.1/19, Ml2.7/7,Error ellipse: s-maj=6.6km s-min=3.7km az=177.0*
NEIC ***07*** *00:11:18.9,41.65N×16.97E,h14*^{km}*,MD2.6(PDG), ML2.7(ROM),After ROM.*
CSEM ***07*** *00:11:24.2±0.1,41.51N×16.80E,h40*^{km}*,ML3.8/2,Error ellipse: s-maj=2.9km s-min=1.5km az=143.0*
PDG ***07*** *00:11:26.4±0.2,41.79N×17.25E,h12*^{km}
ISC 07 00:11:22.6±0.6**,41.60N**±0.02×**16.86E**±0.03**,h25**^{km}±5^{km}**, n42,** $\sigma 1\overset{s}{.}14$/69**,11C,Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAI	Bari	0.49	179	*e*Sg	Sb	00 11 40.2	+0.7
CDT	Castel del Mon	0.68	221	*e*Pg	Pb	00 11 35.6	-0.2
CDT				*e*Sg	Sb	00 11 47.6	+2.8
FGMS	Monte Sant'Ang	0.69	279	Pn	Pn	00 11 34.3	-2.4
FGMS				Sn	Sn	00 11 47.6	+1.0
	182nm,0.2s						
MS1	Monte Sant'Ang	0.70	279	*e*Pg	Pb	00 11 35.0	-1.1
MS1				*e*Sg	Sb	00 11 45.5	+0.2
AMUR	Altamura	0.72	196	Pn	Pn	00 11 34.2	-2.9
AMUR				Sn	Sn	00 11 46.2	-1.2
	115nm,0.6s						
BRT	Bari-Castellan	0.77	160	Pn	Pn	00 11 34.8	-3.0
BRT				Sn	Sn	00 11 48.8	+0.3
	395nm,0.6s						
NOCI	Noci	0.82	169	Pn	Pn	00 11 36.0	-2.6
NOCI				Sn	Sn	00 11 50.9	+0.9
	655nm,0.4s						
PE1	Pezze di Greco	0.90	152	*e*Pg	Pb	00 11 38.0	-1.4
PE1				*e*Sg	Sb	00 11 52.2	+1.2
RGNG	Rignano Grg	0.96	275	Pn	Pn	00 11 38.8	-1.8
RGNG				Sn	Sn	00 11 54.4	+0.9
FG4	Candela	1.12	246	Pn	Pn	00 11 43.0	+0.2
FG4				Sn	Sn	00 11 59.1	+1.7
	111nm,0.3s						
VULT	Monte Vulture	1.14	236	Pn	Pn	00 11 44.0	+0.9
	225nm,0.7s						
FG2	Serracapriola	1.29	280	Pn	Pn	00 11 44.9	-0.4
	261nm,0.6s						
MRLC	Muro Lucano	1.34	231	Pn	Pn	00 11 46.5	+0.6
MRLC				Sn	Sn	00 12 06.9	+3.9
CAFE	Carife	1.35	246	Pn	Pn	00 11 47.2	+1.0
STON	Ston	1.41	26	*i* Pn	Pn	00 11 44.8	-2.3
STON				*i* Sg	Sn	00 12 03.6	-1.4
STON	Ston	1.41	26	*i* Pn	Pn	00 11 44.7	-2.4
STON				*i* Sg	Sn	00 12 03.6	-1.4
SNAL	S. Angelo Dei	1.42	242	Pn	Pn	00 11 47.9	+0.8
CIGN	Sant'Elia a Pi	1.47	273	Pn	Pn	00 11 48.6	+0.8
HCY	Herceg Novi	1.48	55	⇑*i*Pg	Pn	00 11 46.5	-1.6
HCY				*e*Sg	Sn	00 12 05.2	-1.6
MCRV	Calabrutti - M	1.52	238	Pn	Pn	00 11 48.9	+0.4
MCRV				Sn	Sn	00 12 13.2	+5.6
	68nm,0.4s						
SLCN	Sala Consilina	1.53	218	Pn	Pn	00 11 48.0	-0.7
SLCN				Sn	Sn	00 12 13.0	+5.2
	35nm,0.4s						
SGO	Sicignano	1.57	229	Pn	Pn	00 11 49.2	-0.1
	24nm,0.4s						
LCI	Lecce	1.58	143	Pn	Pn	00 11 48.1	-1.3
	58nm,0.4s						
CDRU	Civita di Ruta	1.62	227	Pn	Pn	00 11 48.6	-1.4
	36nm,0.3s						
BUM	Brajici-Budva	1.67	65	⇑*i*Pg	Pn	00 11 50.9	+0.2
BUM				*e*Sg	Sn	00 12 12.4	+0.9
BUM	Brajici-Budva	1.67	65	⇑*i*Pg	Pn	00 11 50.9	+0.2
BUM				*e*Sg	Sn	00 12 12.4	+0.9
CMPR	Campora	1.74	223	Pn	Pn	00 11 50.4	-1.4
MGR	Morigerati	1.77	215	Pn	Pn	00 11 51.4	-0.7
	53nm,0.6s						
CUC	Castrocucco	1.79	207	Pn	Pn	00 11 52.4	-0.1
	86nm,0.7s						
BRY	Bratogost	1.80	43	⇑*i*Pg	Pn	00 11 53.5	+0.9
BRY				*e*Sg	Sn	00 12 15.3	+0.4
ULC	Ulcinj	1.82	78	⇑*i*Pg	Pn	00 11 54.5	+1.6
ULC				*e*Sg	Sn	00 12 16.1	+0.8
SGG	Gregorio Mates	1.88	264	Pn	Pn	00 11 55.1	+1.4
TTG	Podgorica	1.97	64	⇑*i*Pn	Pn	00 11 55.7	+0.7
TTG				*e*Sn	Sn	00 12 20.0	+0.9
NKY	Niksic	2.00	52	⇑*i*Pn	Pn	00 11 56.4	+1.0
NKY				*e*Sn	Sn	00 12 20.5	+0.7
NKY	Niksic	2.00	52	⇑*i*Pn	Pn	00 11 56.3	+0.9
NKY				*e*Sn	Sn	00 12 20.5	+0.7
UPM	Unac-Piva	2.21	43	*e*Pn	Pn	00 11 59.7	+1.3
UPM				*e*Sn	Sn	00 12 25.4	+0.3
TIP	Timpagrande	2.42	182	*e*P	Pn	00 12 01.2	-0.3
TIP				*e*S	Sn	00 12 53.6	+23
PVY	Plav	2.52	66	⇑*i*Pn	Pn	00 12 03.5	+0.7
PVY				*e*Sn	Sn	00 12 32.5	-0.5
PVY	Plav	2.52	66	⇑*i*Pn	Pn	00 12 03.5	+0.6
PVY				*e*Sn	Sn	00 12 32.5	-0.6
IVA	Berane	2.59	60	⇑*i*Pn	Pn	00 12 03.9	0.0
IVA				*e*Sn	Sn	00 12 34.7	-0.1
NRCA	Norcia	3.05	295	Pn	Pn	00 12 09.4	-0.9
DIVS	Divcibare	3.39	42	*e*Pn	Pn	00 12 33.5	+18
DIVS				Sn	Sn	00 13 12.8	+18

NNC ***07*** *00:19:22.6±3.7,38.33N×72.26E,h221*^{km}*±46*^{km}*,mpv3.2, Error ellipse: s-maj=48.7km s-min=35.6km az=44.0*
ISC 07 00:19:15.6±2.1**,37.9N**±0.2×**72.6E**±0.3**,h244**^{km}±49^{km}**,n7,** $\sigma 0\overset{s}{.}77$/10**,5C-1D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.95	16	⇑P	P	00 20 31.6	+0.4
	1.7nm,0.5s						
AAK				⇑S	S	00 21 30.2	0.0
	7.5nm,0.8s						
KK31	Karatay Array	5.44	344	⇓P	P	00 20 36.7	-0.5
	2.0nm,0.4s,baz=159,slow=13,SNR=61						
KK31				⇑S	S	00 21 36.6	-4.4
	14nm,0.5s,baz=180,slow=24,SNR=44						
KOLN	Koldanda	13.68	134	*e*P	P	00 22 20.7	-0.4
	2.6nm,0.3s						
GKN	Gorkha	14.11	131	*e*P	P	00 22 26.0	-0.4
	7.3nm,0.3s						
AB31	Akbulak array	14.57	325	⇑P	P	00 22 33.7	+1.7
	0.8nm,0.5s,baz=140,slow=13,SNR=23						
AB31				⇑S	S	00 25 06.8	-0.7
	2.0nm,1.2s,baz=131,slow=25,SNR=5.4						
DMN	Daman	14.68	131	*e*P	P	00 22 33.5	0.0
	4.0nm,0.3s						
PKI	Pulchoki	14.89	130	*e*P	P	00 22 36.4	+0.4
	3.4nm,0.4s						

IDC 07 00:34:13.0±3.5**,28.68N**×**43.27W,mb3.9**/7**,mb1 4.2**/7**, mb1mx3.8**/24**,mbtmp3.9**/7**,MS3.7**/4**,Ms1 3.7**/4**, ms1mx3.2**/32**,Error ellipse: s-maj=112.2km s-min=31.5km az=175.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SADO	Sadowa	32.62	309	LR	LR	00 53 17.5	
	comp=Z,96nm,18.9s,baz=274,slow=35						
MDT	Midelt	33.35	73	LR	LR	00 50 50.9	
	comp=Z,108nm,18.4s,baz=254,slow=30						
DBIC	Dimbokro	42.35	114	LR	LR	00 58 18.7	
	comp=Z,74nm,18.7s,baz=356,slow=34						
TXAR	Lajitas Array	52.29	286	P	P	00 43 26.5	-2.0
	0.9nm,0.8s,baz=99,slow=8.7,SNR=12						
ANMO	Albuquerque	53.29	294	P	P	00 43 35.3	-0.6
	0.9nm,0.8s,baz=56,slow=11,SNR=3.3						
PDAR	Pinedale Array	54.33	304	P	P	00 43 41.0	-2.3
	1.5nm,0.7s,baz=84,slow=8.2,SNR=12						
NEW	Newport	58.77	311	P	P	00 44 12.4	-2.7
	2.3nm,0.7s,baz=88,slow=6.4,SNR=5.9						
NVAR	Mina Array Bea	61.73	301	P	P	00 44 33.3	-2.2
	0.5nm,0.7s,baz=77,slow=7.6,SNR=5.1						
BRTR	Keskin Array B	62.78	58	P	P	00 44 40.5	-1.9
	1.4nm,0.9s,baz=284,slow=5.9,SNR=3.6						
DLBC	Dease Lake	64.40	324	LR	LR	01 11 15.2	
	comp=Z,69nm,18.4s,baz=6.1,slow=34						
ILAR	Eielson Array	69.96	334	P	P	00 45 25.9	-1.8
	1.1nm,0.7s,baz=68,slow=4.1,SNR=16						

IDC ***07*** *01:46:55.2±1.6,54.55N×160.26W,mb3.7/3,mb1 3.9/5, mb1mx3.6/23,mbtmp3.7/5,ML4.0/2,MS3.6/1,Ms1 3.6/1, ms1mx2.6/29,Error ellipse: s-maj=30.7km s-min=23.1km az=154.0*
NEIC ***07*** *01:47:03.2±0.5,54.91N×160.06W,h51*^{km}*±7*^{km}*, ML4.1(PMR),ML3.8(AEIC),Error ellipse: s-maj=10.8km s-min=2.7km az=150.0*
ISC 07 01:47:01.0±0.7**,54.86N**±0.06×**159.89W**±0.07**,h53**^{km}±9^{km}**, n55,** $\sigma 1\overset{s}{.}01$/65**,mb3.7**/3**,MS3.5**/1**,South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	Sand Point	0.60	326	P	P	01 47 12.9	-0.8
SDPT				S	S	01 47 21.2	-1.7
DOL	Dolgoi Island	1.18	285	P	P	01 47 20.3	-1.1
DOL				S	S	01 47 34.5	-2.2
PS1A	Pavlof South-1	1.21	299	P	P	01 47 21.6	-0.3
PVV	Pavlof Volcano	1.21	296	P	P	01 47 21.3	-0.6
HAG	Hague Volcano	1.25	293	P	P	01 47 22.0	-0.5
PN6	Pavlof North-6	1.31	298	P	P	01 47 23.8	+0.2
PN6				S	S	01 47 41.6	+1.4
PN7A	Pavlof North-7	1.34	296	P	P	01 47 23.9	-0.1
DRIA	Deer Island	1.38	276	P	P	01 47 24.1	-0.3
DTNA	Dutton South F	1.39	283	P	P	01 47 23.9	-0.8
BLHA	Black Hill	1.51	305	P	P	01 47 25.9	-0.3
BLHA				S	S	01 47 43.6	-1.3
BALA	Baldy Mountain	1.70	283	P	P	01 47 29.5	+0.6
BALA				S	S	01 47 51.4	+1.8
ANPB	Aniakchak Plen	2.15	24	P	P	01 47 36.9	+1.7
ANPK	Aniakchak Peak	2.23	26	P	P	01 47 38.4	+2.1
SSLN	Shishaldin Nor	2.38	271	P	P	01 47 38.8	+0.4
SSLS	Shishaldin Sou	2.38	268	P	P	01 47 38.6	0.0
SSLW	Shishaldin Wes	2.45	270	P	P	01 47 40.2	+0.7
WTUG	Tugumak	2.60	272	P	P	01 47 42.2	+0.5
WTUG				S	S	01 48 12.7	+0.6
WESN	West Dahl Nort	2.74	266	P	P	01 47 43.9	+0.3
WESN				S	S	01 48 17.5	+1.9
WESE	West Dahl East	2.76	264	P	P	01 47 44.2	+0.4
WPOG	Pogromni	2.83	267	P	P	01 47 45.1	+0.2
WPOG				S	S	01 48 18.9	+1.0
WFAR	Faris Peak	2.85	266	P	P	01 47 45.3	+0.1
WFAR				S	S	01 48 19.9	+1.3
AKUT	Akutan	3.51	261	P	P	01 47 54.7	+0.3
AKLV	Akutan Long Va	3.60	261	P	P	01 47 56.2	+0.4
UNV	Unalaska Valle	4.00	258	P	P	01 48 00.1	-1.3
KJL	Kejulik	4.00	35	P	P	01 48 02.1	+0.7
MTBL	Makushin Table	4.07	260	P	P	01 48 01.8	-0.5
CNTC	Contact Creek	4.07	31	P	P	01 48 02.7	+0.3
CAHL	Cahill	4.09	37	P	P	01 48 03.3	+0.6
MNAT	Makushin Natee	4.09	259	P	P	01 48 01.4	-1.3
MSW	Makushin Switc	4.14	260	P	P	01 48 02.1	-1.3
ANCK	Angle Creek	4.14	34	P	P	01 48 04.1	+0.8
ACHA	Angle Creek He	4.21	35	P	P	01 48 05.3	+1.0
MGLS	Mageik LS	4.21	35	P	P	01 48 04.8	+0.6
MGOD	Makushin Gods	4.22	258	P	P	01 48 03.4	-1.1
KABR	Katmai Barrier	4.27	38	P	P	01 48 05.6	+0.4
KAWH	Katmai	4.52	36	P	P	01 48 09.2	+0.5
KDAK	Kodiak Island	5.01	51	Pn	P	01 48 14.3	-1.3
	4.6nm,0.3s,baz=219,slow=4.8,SNR=51						
KDAK				Sn	S	01 49 07.0	-6.0
	1.6nm,0.3s,baz=13,slow=21,SNR=2.2						
KDAK				Lg		01 49 34.7	
	4.0nm,0.3s,baz=334,slow=22,SNR=6.1						
KDAK	Kodiak Island	5.01	51	P	P	01 48 15.6	0.0
OKCD	Okmok Cone D	5.04	257	P	P	01 48 16.1	+0.1
ILW	Iliamna West	6.36	32	P	P	01 48 35.9	+1.5
SVW2	Sparrevohn	6.66	18	P	P	01 48 39.0	+0.3
SLKM	Skilak Lake	7.67	38	P	P	01 48 56.5	+3.8
TT01	Tatalina	8.32	12	P	P	01 49 01.1	-0.4
PMR	Palmer	8.81	36	P	P	01 49 11.9	+3.6
DIV	Divide	9.77	44	P	P	01 49 19.9	-1.4
IM3	Indian Mountai	11.56	13	P	P	01 49 45.8	+0.1
COLA	College	11.70	26	P	P	01 49 44.9	-2.6
ILAR	Eielson Array	11.87	28	Pn	P	01 49 46.0	-3.9
	0.3nm,0.3s,baz=221,slow=12,SNR=16						
ILAR				Sn	S	01 51 54.9	-6.8
	0.1nm,0.3s,baz=315,slow=4.0,SNR=2.7						
DAWY	Dawson	13.85	40	*e*P	P	01 50 14.6	-1.2
DLBC	Dease Lake	16.73	65	Pn	P	01 50 51.3	-1.6
	0.2nm,0.3s,baz=337,slow=13,SNR=3.7						
INK	Inuvik	18.19	32	P	P	01 51 10.1	-0.9
	0.5nm,0.3s,baz=238,slow=13,SNR=27						
ANMO	Albuquerque	41.56	96	LR	LR	02 09 27.1	
	comp=Z,74nm,20.2s,MS3.5,baz=111,slow=32						
TXAR	Lajitas Array	47.28	99	P	P	01 55 31.3	+0.5
	0.1nm,0.5s,mb3.0,baz=270,slow=3.6,SNR=2.5						
SONM	Songino Array	54.72	305	P	P	01 56 26.0	-0.8
	1.2nm,0.7s,mb4.0,baz=40,slow=6.9,SNR=9.6						
BVAR	Borovoye Array	64.72	329	P	P	01 57 35.3	+0.1
	1.9nm,0.7s,mb4.2,baz=27,slow=6.6,SNR=4.8						

SKO ***07*** *01:49:30.3,71.85N×15.72W*
MOS ***07*** *01:49:34.5±1.0,71.54N×12.62W,h10*^{km}*,mb4.7/27, MS4.1/23,Error ellipse: s-maj=19.4km s-min=6.1km az=106.8*
BER ***07*** *01:49:35.2±0.8,71.99N×11.39W,h10*^{km}*,mb4.8,ML3.4, mb5.0(NEIC)*
IDC ***07*** *01:49:35.1±0.5,71.53N×12.56W,mb4.4/22,mb1 4.6/27, mb1mx4.5/31,mbtmp4.4/27,ML4.1/5,MS4.3/19,Ms1 4.3/19, ms1mx4.2/23,Error ellipse: s-maj=18.2km s-min=9.4km az=25.0*
NAO ***07*** *01:49:36.8±9.4,71.56N×11.42W,h9*^{km}*±47*^{km}
BJI ***07*** *01:49:36.3,71.70N×12.10W,h23*^{km}*,mB5.2,mb4.8,Ms4.9, Msz4.4*
CSEM ***07*** *01:49:37.3,71.70N×12.26W,h30*^{km}*,mb5.1*
HRVD ***07*** *01:49:38.4±0.3,71.65N×11.98W,h13*^{km}*±1*^{km}*,MW5.0/54, Centroid moment Tensor Solution. LP body waves: s21,c28;Mantle waves: s54,c95; Half duration: 0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*-1.98±.20;* $M_{\theta\theta}$*1.91±.20;* $M_{\phi\phi}$*0.06±.14;* $M_{r\theta}$*-0.18±.42;* $M_{\theta\phi}$*3.67±.15;* $M_{\phi r}$*-1.85±.44; Best double couple:* M_0*4.44×10*^{16} *NP1:*ϕ_s*272°,δ55°,λ-22°. NP2:*ϕ_s*15°,δ72°,λ-143°. Principal axes: T 5.016, Plg11°, Azm140°; N -1.154, Plg50°, Azm37°; P -3.865, Plg38°, Azm239°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***07*** *01:49:38.4±0.1,71.69N×12.06W,mb5.0/95,MS4.2/7 Error ellipse: s-maj=5.0km s-min=2.5km az=215.0*
ISC 07 01:49:34.7±0.1**,71.69N**±0.02×**12.15W**±0.06**,h10**^{km}**, (h23**^{km}±1.3^{km}**:pP-P),n428,** $\sigma 1\overset{s}{.}08$/439**,mb4.8**/134**, MS4.3**/31**,26C-15D,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMI	Jan Mayen	1.34	123	*e*P	Pb	01 49 56.8	-2.7
JMI				*e*S	Sb	01 50 12.7	-4.0
JMI				*e*		01 50 17.2	
JMI	Jan Mayen	1.34	123	*e*P	Pb	01 49 55.9	-3.6
JMI				*e*S	Sb	01 50 12.7	-4.0
JMI	Jan Mayen	1.34	123	*e*P	Pb	01 49 55.9	-3.6
JMI				*e*S	Sb	01 50 12.7	-3.9
	SNR=53						
JMIC	Jan Mayen	1.37	120	Pg	Pg	01 49 57.2	-4.9
JMIC				Lg		01 50 12.8	
JMIC	Jan Mayen	1.37	120	Pn	Pn	01 49 57.3	-2.6
	238nm,0.3s,baz=258,slow=1.4,SNR=252						
JMIC				Sn	Sn	01 50 12.5	-5.6
	611nm,0.3s,baz=7.7,slow=23,SNR=43						
JMIC	Jan Mayen	1.37	120	⇑*i*P	Pn	01 49 56.6	-3.3
JMIC				*e*S	Sb	01 50 12.4	-4.9
JNW	Jan Mayen West	1.37	117	*e*P	Pn	01 49 56.8	-3.1
JNW				*e*S	Sb	01 50 12.3	-5.0
JNW				AML	AML	01 50 19.0	
	comp=Z,2µm,0.4s						
SCO	Scoresbysund	3.42	254	*i* P	Pn	01 50 26.7	-2.4
	comp=Z,574nm,0.4s						
SCO				*i* S	Sn	01 51 03.1	-7.0
SCO	Scoresbysund	3.42	254	*i* P	Pn	01 50 26.7	-2.4
SCO				*i* S	Sn	01 51 03.1	-7.0
SCO				pmax	pmax		
	comp=Z,570nm,0.4s						
DAG	Danmarks Havn	5.40	344	⇓*i*P	Pn	01 50 54.2	-3.1
	comp=Z,727nm,0.3s						
	comp=Z,3µm,17.0s						
DAG	Danmarks Havn	5.40	344	⇓*e*P	Pn	01 50 54.2	-3.1
	comp=Z,727nm,0.3s						
DAG	Danmarks Havn	5.40	344	⇓*e*P	Pn	01 50 54.2	-3.1
DAG				pmax	pmax		
	comp=Z,730nm,0.3s						
DAG				MLR	MLR		
	comp=Z,3µm,17.0s						
DAG				MLR	MLR		
	comp=N,3µm,18.0s						
DAG				MLR	MLR		
	comp=E,4µm,18.0s						
BORG	Borgarnes	7.76	210	Pn	Pn	01 51 30.8	+0.4
	comp=E,11nm,0.3s,baz=26,slow=8.7,SNR=31						
BORG				Sn	Sn	01 53 00.8	+1.6
	baz=87,slow=10,SNR=4.3						
BORG				LR	LR	01 53 43.7	
	comp=E,2µm,21.1s,baz=187,slow=33						
BORG	Borgarnes	7.76	210	*e*Pn	Pn	01 51 32.1	+1.7
	comp=E,102nm,0.8s						
SUMG	Summit	8.10	289	*e*Pn	P	01 51 34.5	-0.7
	comp=E,161nm,0.8s						
SUMG				*e*Sn	Sn	01 52 59.2	-8.7
KBS	Kingsbay	9.38	29	Pn	P	01 51 49.9	-3.1
KBS	Kingsbay	9.38	29	*e*Pn	P	01 51 50.2	-2.8
KBS				*e*Sn	Sn	01 53 25.8	-14
KBS				AML	AML	01 53 36.2	
	comp=Z,38nm,0.3s						
KBS	Kingsbay	9.38	29	*e*P	P	01 51 49.9	-3.1
KBS				*e*S	Sn	01 53 25.8	-14
KBS	Kingsbay	9.38	29	*e*P	P	01 51 49.9	-3.1
KBS				*e*Sn	Sn	01 53 25.8	-14
	comp=Z,38nm,0.3s,SNR=53						
BJO1	Bjornoya	9.41	58	*e*P	P	01 51 51.4	-2.0
BJO1	Bjornoya	9.41	58	*e*P	P	01 51 51.4	-2.0
BJO	Bjornoya	9.46	58	*e*Pn	P	01 51 51.4	-2.7
SPA0	Spitsbergen Ar	9.73	36	Pn	P	01 51 54.5	-3.0
	baz=235,slow=12						
SPA0				Sn	Sn	01 53 40.8	-7.1
	baz=300,slow=22						
MELSS	Ber_school_2	10.30	105	*e*Pn	P	01 52 02.6	-2.8
STOK	Stokkvaagen	10.43	109	*e*Pn	P	01 52 03.0	-4.2
TRO	Tromso	10.43	86	*e*Pn	P	01 52 03.3	-3.9
MOR8	Moi Rana	10.97	107	*e*Pn	P	01 52 11.4	-3.1
MOR8				AML	AML	01 54 14.8	
	comp=Z,9.9nm,0.5s						
NSS	Namsos	11.42	117	*e*Pn	P	01 52 16.4	-4.4
NSS				*e*Sn	S	01 54 13.7	-16
NSS				AML	AML	01 54 19.6	
	comp=Z,6.8nm,0.3s						
NSS	Namsos	11.42	117	*e*Pn	P	01 52 16.4	-4.3
	SNR=53						
NSS				*e*Sn	S	01 54 13.7	-16
	comp=Z,6.8nm,0.3s,SNR=53						
MOL	Molde	11.86	131	*e*Pn	P	01 52 23.9	-2.7
KTK1	Kautokeino	12.08	86	*e*Pn	P	01 52 29.1	-0.5
ARA0	ARCESS Array S	12.54	82	P	P	01 52 34.0	-1.8
	baz=297,slow=12						
ARCES	ARCESS Array B	12.54	82	Pn	P	01 52 33.9	-2.0
	comp=Z,0.9nm,0.3s,baz=297,slow=12,SNR=38						
ARCES				LR	LR	01 56 31.8	
	comp=Z,1µm,20.4s,baz=302,slow=33						
ARCES	ARCESS Array B	12.54	82	P	P	01 52 33.9	-1.9
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES				MLR	MLR		
	comp=Z,1µm,20.5s						
ARE0	ARCESS Array S	12.54	82	*e*Pn	P	01 52 34.4	-1.4
ARE0	ARCESS Array S	12.54	82	*e*Pn	P	01 52 34.4	-1.4
KEV	Kevo	12.91	80	*e*p	P	01 52 37.9	-2.8
NB2	NORSAR Subarra	14.07	127	P	P	01 52 52.7	-3.2
	baz=318,slow=12						
NB2	NORSAR Subarra	14.07	127	Pn	P	01 52 53.3	-2.6
	comp=Z,19nm,1.1s,baz=329,slow=14						
NB2	NORSAR Subarra	14.07	127	Pn	P	01 52 53.3	-2.6

	comp=Z,19nm,1.1s,baz=329,slow=14						
NOA	NORSAR Array B	14.07	127	Pn	P	01 52 54.2	-1.7
	comp=Z,0.2nm,0.3s,baz=326,slow=13,SNR=6.4						
NOA				LR	LR	01 57 34.9	
	comp=Z,691nm,21.3s,baz=330,slow=34						
SFJD	Kangerlussuaq	14.15	270	Pn	P	01 52 52.7	-4.2
	comp=Z,4.3nm,0.3s,baz=38,slow=11,SNR=20						
SFJD				Sn	S	01 55 21.1	-14
	comp=Z,2.4nm,0.3s,baz=328,slow=16,SNR=4.3						
SFJD				LR	LR	01 57 55.1	
	comp=Z,1µm,20.6s,baz=29,slow=36						
SFJD	Kangerlussuaq	14.15	270	*i* P	P	01 52 53.2	-3.7
	comp=Z,36nm,0.6s						
SFJD				*i*		01 53 03.5	
SFJD				*e*S	S	01 56 09.4	+34
	comp=Z,1µm,17.0s						
SFJD	Kangerlussuaq	14.15	270	*i* P	P	01 52 53.2	-3.7
SFJD				pmax	pmax		
	comp=Z,36nm,0.6s						
SFJD				MLR	MLR		
	comp=Z,1µm,17.0s						
NAO	NORSAR Subarra	14.16	129	Pn	P	01 52 53.3	-3.8
	comp=Z,19nm,1.1s						
HFS	Hagfors	15.48	125	P	P	01 53 13.5	-0.8
	baz=309,slow=16						
HFS	Hagfors	15.48	125	Pn	P	01 53 13.2	-1.1
	comp=Z,0.1nm,0.3s,baz=338,slow=8.0,SNR=8.5						
HFS				LR	LR	01 58 18.6	
	comp=Z,1µm,20.9s,baz=324,slow=34						
HFS	Hagfors	15.48	125	P	P	01 53 13.5	-0.8
	SNR=5.8						
APA0	Apatity Array	15.90	83	P	P	01 53 17.9	-1.7
EKA	Eskdalemuir Ar	16.87	162	Pn	P	01 53 31.4	-0.7
	comp=Z,0.8nm,0.3s,baz=359,slow=12,SNR=16						
EKA	Eskdalemuir Ar	16.87	162	P	P	01 53 31.4	-0.7
EKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KAF	Kangasniemi	17.50	104	*e*p	P	01 53 40.6	+0.6
	comp=Z,13nm,1.0s,baz=318,slow=11						
KAF	Kangasniemi	17.50	104	*e*P	P	01 53 40.6	+0.6
KAF				pmax	pmax		
	comp=Z,13nm,1.0s						
FIA0	FINESS Array S	17.95	105	P	P	01 53 42.5	-3.0
	baz=330,slow=10						
FINES	FINESS Array B	17.95	105	P	P	01 53 45.4	-0.1
	comp=Z,0.5nm,0.3s,baz=324,slow=10,SNR=17						
FINES	FINESS Array B	17.95	105	*e*P	P	01 53 47.7	+2.2
JOF	Joensuu	18.46	96	*e*p	P	01 53 52.0	+0.1
COP	Copenhagen	19.14	134	*i* P	P	01 54 00.4	+0.2
	comp=Z,190nm,22.0s						
COP	Copenhagen	19.14	134	*e*P	P	01 54 00.4	+0.2
COP				MLR	MLR		
	comp=Z,190nm,22.0s						
VSU	Vasula	20.54	110	*e*P	P	01 54 13.3	-2.2
WTSB	Winterswijk	21.52	147	⇑*e*P	P	01 54 24.8	-0.8
	comp=Z,114nm,1.6s,mb5.1						
FRB	Frobisher Bay	21.95	278	P	P	01 54 28.2	-1.6
	comp=Z,24nm,0.8s,mb4.7,baz=33,slow=8.8,SNR=4.3						
FRB				LR	LR	02 02 32.1	
	comp=Z,739nm,20.8s,MS4.1,baz=47,slow=36						
FRB	Frobisher Bay	21.95	278	P	P	01 54 28.2	-1.6
FRB				LR	LR	02 02 32.1	
FRB	Frobisher Bay	21.95	278	P	P	01 54 28.2	-1.5
FRB				pmax	pmax		
	comp=Z,24nm,0.8s						
FRB				MLR	MLR		
	comp=Z,739nm,20.8s						
RUE	Ruedersdorf	22.42	135	*e*P	P	01 54 34.7	+0.2
	comp=Z,144nm,1.4s,mb5.2						
RUE	Ruedersdorf	22.42	135	*e*P	P	01 54 34.7	+0.2
	comp=Z,144nm,1.4s,mb5.2						
HGN	Heimansgroeve	22.54	149	⇑*e*P	P	01 54 35.8	+0.2
	comp=Z,173nm,1.3s,mb5.3						
HGN				*e*PP	PP	01 55 39.2	+36
HGN				*e*S	S	01 58 39.0	+1.3
HGN				*e*x	x	02 01 14.8	
HGN	Heimansgroeve	22.54	149	⇑*e*P	P	01 54 35.8	+0.3
	comp=Z,173nm,1.3s,mb5.3						
HGN				*e*S	S	01 58 39.0	+1.3
KLMR	Klimovskoe	22.59	92	*c i*P	P	01 54 35.6	-0.4
KLMR				*e*S	S	01 58 32.6	-6.0
KLMR				pmax	pmax		
	comp=Z,120nm,1.5s,mb5.1						
KLMR				smax			
	comp=E,530nm,5.4s						
KLMR				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.5						
BAIF	Baives	22.95	152	*e*P	P	01 54 39.6	0.0
	comp=Z,160nm,1.2s,mb5.0						
GIVF	Givet	23.00	151	*e*P	P	01 54 39.4	-0.7
	comp=Z,177nm,1.2s,mb5.1						
CLL	Collm	23.35	138	⇑P	P	01 54 43.7	+0.3
	comp=Z,logA/T=2.2,mb5.4						
CLL	Collm	23.35	138	⇑*i*P	P	01 54 43.7	+0.3
	comp=Z,374nm,2.5s,mb5.4						
CLL				LR	LR		
	comp=Z,500nm,20.0s,MS4.0						
CLL	Collm	23.35	138	⇑*i*P	P	01 54 43.7	+0.3
CLL				pmax	pmax		
	comp=Z,374nm,2.5s,mb5.4						
CLL				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.0						
SUW	Suwalki	23.36	121	*e*P	P	01 54 43.0	-0.5
	comp=Z,500nm,2.8s,mb5.5						
SUW				*e*pP		01 54 48.7	
SUW				MLR	MLR	02 02 22.0	
	comp=Z,900nm,25.6s,MS4.1						
SUW	Suwalki	23.36	121	*e*P	P	01 54 43.0	-0.5
SUW				e*PP		01 54 48.7	
SUW				pmax	pmax		
	comp=Z,500nm,2.8s,mb5.5						
SUW				MLR	MLR		
	comp=Z,900nm,25.6s,MS4.1						
TNS	Taunus Mts	23.49	145	*e*P	P	01 54 45.6	+0.8
TNS				pmax	pmax		
	comp=Z,38nm,1.6s,mb4.6						
TNS	Taunus Mts	23.49	145	*e*P	P	01 54 45.6	+0.8
	comp=Z,38nm,1.6s,mb4.6						
FLN	La Foliniere	23.63	161	*e*P	P	01 54 44.9	-1.3
	comp=Z,140nm,1.3s,mb4.9						
FLN				*e*R			
	comp=Z,1µm,22.8s						
ABH	Alteburg	23.66	147	*e*P	P	01 54 48.4	+1.9
MOX	Moxa	23.69	140	*i* P	P	01 54 47.4	+0.7
	comp=Z,logA/T=1.7,mb4.9						
MOX	Moxa	23.69	140	*e*P	P	01 54 47.4	+0.7
MOX				pmax	pmax		
	comp=Z,110nm,2.0s,mb4.9						
MOX	Moxa	23.69	140	*e*P	P	01 54 47.4	+0.7
	comp=Z,110nm,2.0s,mb4.9						
ROSF	Rostrenen	23.80	165	*e*P	P	01 54 46.0	-1.8
	comp=Z,399nm,1.7s,mb5.3						
LDF	La Druitiere	23.84	160	*e*P	P	01 54 46.9	-1.3
	comp=Z,143nm,1.4s,mb4.9						
SGMF	Saint Gilles	23.94	164	*e*P	P	01 54 47.4	-1.8
	comp=Z,299nm,1.7s,mb5.1						
GRR	Gorron	23.96	161	*e*P	P	01 54 47.9	-1.6
TOD	Tromm	24.14	145	*e*P	P	01 54 52.7	+1.5
QUIF	Quistinic	24.22	165	*e*P	P	01 54 50.3	-1.7
	comp=Z,596nm,1.8s,mb5.4						
MNK	Minsk	24.23	114	*e*P	P	01 54 50.0	-2.0
NKC	Novy Kostel	24.25	139	*e*P	P	01 54 52.6	+0.4
PVCC	Panska Ves	24.42	136	*e*P	P	01 54 54.2	+0.3
KSP	Ksiaz	24.51	133	*e*P	P	01 54 56.1	+1.4
	comp=Z,700nm,1.7s,mb5.9						
KSP				*e*S	S	01 59 14.3	+2.0
KSP				MLR	MLR	02 02 05.3	
	comp=Z,1µm,31.5s,MS4.2						
KSP	Ksiaz	24.51	133	⇑*e*P	P	01 54 55.9	+1.1
KSP				*e*pP		01 55 04.1	
GRA1	Grafenberg Arr	24.52	142	*e*P	P	01 54 55.4	+0.6
	comp=Z,108nm,1.6s,mb5.1						
GRA1				LR	LR		
	comp=Z,400nm,21.9s,MS3.9						
GRF	Grafenberg Arr	24.52	142	*e*P	P	01 54 55.4	+0.6
	comp=Z,108nm,1.6s,mb5.1						
GRF				LR	LR		
	comp=Z,400nm,21.9s,MS3.9						
GRF	Grafenberg Arr	24.52	142	*e*P	P	01 54 55.4	+0.6
GRF				pmax	pmax		
	comp=Z,108nm,1.6s,mb5.1						
GRF				MLR	MLR		
	comp=Z,400nm,21.9s,MS3.9						
GRF	Grafenberg Arr	24.52	142	*e*P	P	01 54 55.4	+0.6
	comp=Z,108nm,1.6s,mb5.1						
LANF	Langenberg	24.57	147	*e*P	P	01 54 56.6	+1.2
MEZF	Maizieres J'vi	24.60	152	*e*P	P	01 54 54.9	-0.7
	comp=Z,108nm,1.3s,mb4.9						
UPC	Upice	24.76	134	*e*P	P	01 54 57.4	+0.2
PRU	Pruhonice	24.92	137	*e*P	P	01 54 59.5	+0.8
DPC	Dobruska-Polom	24.98	134	*e*P	P	01 55 00.2	+0.9
THEF	They Montfort	25.01	151	*e*P	P	01 55 00.9	+1.3
CDF	Champ du Feu	25.03	148	*e*P	P	01 55 00.4	+0.6
	comp=Z,81nm,1.2s,mb4.8						
WLS	Welschbruch	25.05	148	*e*P	P	01 55 01.2	+1.3
ECH	Echery	25.20	149	*e*P	P	01 55 02.7	+1.3
HAU	Haudompre	25.28	150	*e*P	P	01 55 02.8	+0.7
	comp=Z,94nm,1.2s,mb4.9						
HAU				*e*R			
	comp=Z,939nm,22.0s						
BFO	Black Forest	25.29	147	*e*P	P	01 55 02.7	+0.5
BFO				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.0						
BFO	Black Forest	25.29	147	*e*P	P	01 55 02.7	+0.5
	comp=Z,80nm,1.6s,mb5.0						
WET	Wettzell	25.37	140	*e*P	P	01 55 04.0	+1.0
WET				pmax	pmax		
	comp=Z,99nm,1.6s,mb5.1						
WET	Wettzell	25.37	140	*e*P	P	01 55 04.0	+1.0
	comp=Z,99nm,1.6s,mb5.1						
HYF	Humbligny	25.47	156	*e*P	P	01 55 03.9	0.0
KHC	Kasperske Hory	25.53	139	*e*P	P	01 55 05.3	+0.8
KHC	Kasperske Hory	25.53	139	⇑*i*P	P	01 55 04.8	+0.3
HINF	Hinteralfeld	25.54	149	*e*P	P	01 55 04.9	+0.3
	comp=Z,92nm,1.4s,mb4.8						
MOF	Molkenrain	25.55	149	*e*P	P	01 55 05.7	+1.0
LOR	Lormes	25.63	154	*e*P	P	01 55 05.3	-0.2
	comp=Z,193nm,1.5s,mb5.1						
LOR				*e*R			
	comp=Z,651nm,17.8s						
RAC	Raciborz	25.66	131	*e*P	P	01 55 06.0	+0.3
RAC				MLR	MLR	02 06 03.0	
	comp=Z,500nm,15.1s,MS4.2						
TREC	Trest	25.78	136	*e*P	P	01 55 07.5	+0.6
SSF	Saint Saulge	25.79	155	*e*P	P	01 55 06.5	-0.4
	comp=Z,63nm,1.5s,mb4.9						
MORC	Moravsky Berou	25.80	132	*e*P	P	01 55 06.8	-0.2
	comp=Z,45nm,1.1s,mb4.9						
MFF	Saint Martin d	25.80	161	*e*P	P	01 55 06.0	-1.1
	comp=Z,130nm,1.2s,mb5.0						
GEC2	GERESS Array S	25.82	139	*e*P	P	01 55 07.2	-0.1
GEC2				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.0						
GEC2	GERESS Array S	25.82	139	*e*P	P	01 55 07.2	-0.1
	comp=Z,62nm,1.2s,mb5.0						
GERES	GERESS Array B	25.82	139	P	P	01 55 07.7	+0.4
	comp=Z,21nm,1.1s,mb4.6,baz=338,slow=7.2,SNR=46						
GERES				LR	LR	02 04 28.6	
	comp=Z,335nm,21.0s,MS3.9,baz=330,slow=35						
GERES	GERESS Array B	25.82	139	P	P	01 55 07.7	+0.5
GERES				pmax	pmax		
	comp=Z,21nm,1.1s						
GERES				MLR	MLR		
	comp=Z,335nm,21.0s						
OKC	Ostrava-Krasne	25.88	132	*e*P	P	01 55 08.1	+0.3
OJC	Ojcow	25.93	129	*e*P	P	01 55 08.3	+0.1
LOMF	Lomont	25.99	150	*e*P	P	01 55 09.6	+0.8
VRAC	Vranov	26.02	134	P	P	01 55 09.5	+0.4
	comp=Z,42nm,1.1s,mb4.9,baz=342,slow=10.0,SNR=23						
VRAC				LR	LR	02 04 25.5	
	comp=Z,501nm,19.6s,MS4.1,baz=324,slow=34						
VRAC	Vranov	26.02	134	P	P	01 55 09.5	+0.5
VRAC				pmax	pmax		
	comp=Z,42nm,1.1s						
VRAC				MLR	MLR		
	comp=Z,501nm,19.7s						
AVF	Avril sur Loir	26.03	155	*e*P	P	01 55 08.7	-0.5
	comp=Z,83nm,1.3s,mb4.8						
BGF	Bois d'Agland	26.19	156	*e*P	P	01 55 10.3	-0.4
	comp=Z,119nm,1.4s,mb4.9						
SMF	Signal de Mont	26.24	155	*e*P	P	01 55 10.7	-0.4
	comp=Z,132nm,1.3s,mb5.0						
OBN	Obninsk	26.32	103	*e*P	P	01 55 11.6	-0.2
OBN				*e*		01 58 36.4	
OBN				*e*S	S	01 59 43.9	+1.5
OBN				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.4						
OBN				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.2						
OBN	Obninsk	26.32	103	*e*P	P	01 55 11.6	-0.2
	comp=Z,8.0nm,0.7s,mb4.4						
OBN	Obninsk	26.32	103	*e*PcP	PcP	01 58 36.4	-2.0
OBN				*e*S	S	01 59 43.9	+1.5
	comp=Z,500nm,14.0s						
TCF	Toulx Ste Croi	26.38	157	*e*P	P	01 55 11.8	-0.6
	comp=Z,57nm,1.1s,mb4.7						
CABF	La Chapelle	26.60	151	*e*P	P	01 55 14.7	+0.3
	comp=Z,64nm,1.2s,mb4.7						
AGO	Saint Agoulin	26.73	156	*e*P	P	01 55 16.2	+0.6
MOTA	Moosalm	26.74	143	⇓*i*P	P	01 55 16.1	+0.4
	comp=Z,29nm,1.2s,mb4.7						
NIE	Niedzica	26.79	129	⇑*i*P	P	01 55 16.9	+0.7
WATA	Walderalm	26.84	143	⇑*i*P	P	01 55 17.2	+0.5
	comp=Z,30nm,1.3s,mb4.7						
PLDF	La Plantade	26.87	155	*e*P	P	01 55 16.9	0.0
SQTA	Sankt Quirin	26.88	143	⇑*i*P	P	01 55 17.8	+0.8
	comp=Z,29nm,1.3s,mb4.6						
MOA	Molln	26.89	139	⇑*i*P	P	01 55 16.7	-0.3
	comp=Z,32nm,1.6s,mb4.6						
WTTA	Wattenberg	26.92	143	⇑*i*P	P	01 55 17.7	+0.3
	comp=Z,35nm,1.1s,mb4.8						
SMOL	Smolenice	26.95	134	*e*P	P	01 55 18.7	+1.0
PYM	Petit Puy Mans	27.01	156	*e*P	P	01 55 18.7	+0.5
STHS	Stebnicka Huta	27.03	128	*i* P	P	01 55 19.4	+1.1
DAVOX	Davos	27.06	145	LR	LR	02 06 23.9	
	comp=Z,364nm,18.4s,MS4.0,baz=256,slow=37						
ZST	Bratislava	27.18	134	*e*P	P	01 55 20.6	+0.9
ZST				*e*sP	sP	01 55 34.3	+10
KWP	Kalwaria	27.20	126	*e*P	P	01 55 19.5	-0.4
KWP				*e*pP	pP	01 55 23.9	+1.1
KWP				MLR	MLR	02 03 58.6	
	comp=Z,700nm,31.5s,MS4.0						
RJF	Les Rejaudoux	27.27	159	*e*P	P	01 55 20.0	-0.6
	comp=Z,197nm,1.4s,mb5.2						
RJF				*e*R			
	comp=Z,897nm,21.2s						
VYHS	Vyhne	27.30	132	*i* P	P	01 55 21.1	+0.3
LVV	L'vov	27.37	124	*e*P	P	01 55 21.0	-0.5
KBA	Koelnbreinsper	27.43	140	⇓*i*P	P	01 55 22.1	0.0
	comp=Z,26nm,1.5s,mb4.5						
BRMO	Bormio	27.44	145	P	P	01 55 23.5	+1.4
MCGN	Macugnaga	27.53	149	P	P	01 55 24.7	+1.7
LFF	La Frestale	27.54	160	*e*P	P	01 55 22.0	-1.0
	comp=Z,116nm,1.3s,mb5.0						
CRVS	Cervenica-Dubn	27.56	128	*e*P	P	01 55 23.2	0.0
CAF	Calviac	27.70	158	*e*P	P	01 55 23.8	-0.7
	comp=Z,74nm,1.5s,mb4.8						
KECS	Kecovo	27.71	129	*i* P	P	01 55 24.6	+0.1
ARSA	Arzberg	27.73	137	⇑*i*P	P	01 55 23.9	-0.8
	comp=Z,11nm,1.5s,mb4.3						
KOLS	Kolonicke sedl	27.73	127	*e*P	P	01 55 24.7	0.0
LPL	La Plagne	27.76	151	*e*P	P	01 55 25.8	+0.7
	comp=Z,47nm,1.3s,mb4.7						
LPG	La Plagne	27.78	151	*e*P	P	01 55 26.1	+0.8
	comp=Z,77nm,1.4s,mb4.8						
ORO	Oropa	27.85	149	P	P	01 55 27.3	+1.4
	comp=Z,33nm,1.3s,mb4.8						
SRO2	Moca	27.88	133	*e*P	P	01 55 27.0	+0.9
AKASG	Malin Array Be	27.99	116	P	P	01 55 26.1	-1.0
	comp=Z,1.1nm,0.5s,mb3.8,baz=328,slow=9.6,SNR=22						
AKASG	Malin Array Be	27.99	116	P	P	01 55 26.1	-1.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
UZH	Uzhgorod	28.02	127	*e*P	P	01 55 28.0	+0.7
PSZ	Piszkesteto	28.09	131	⇓*i*P	P	01 55 28.9	+0.9
CTI	Castel Tesino	28.09	143	P	P	01 55 29.4	+1.4
VIVF	Saint-Julien-l	28.11	154	*e*P	P	01 55 28.0	-0.2
	comp=Z,46nm,1.2s,mb4.7						
BNI	Bardonecchia	28.21	151	*e*P	P	01 55 30.1	+1.0
	comp=Z,17nm,1.0s,mb4.6						
BNI	Bardonecchia	28.21	151	*e*P	P	01 55 30.1	+1.0
	comp=Z,17nm,1.0s,mb4.6						
ORIF	Oris-en-Rattie	28.22	152	*e*P	P	01 55 29.2	0.0
	comp=Z,86nm,1.4s,mb4.9						
ORIF				*e*R			
	comp=Z,288nm,19.8s						
SCHQ	Schefferville	28.41	263	P	P	01 55 27.9	-2.9
	comp=Z,6.0nm,1.0s,mb4.2,baz=7.2,slow=19,SNR=2.5						
SCHQ				LR	LR	02 06 13.8	
	comp=Z,803nm,18.6s,MS4.3,baz=19,slow=35						
MBDF	Montbardon	28.54	151	*e*P	P	01 55 32.9	+0.8
LASF	Ste Croix	28.77	156	*e*P	P	01 55 34.4	+0.3
	comp=Z,45nm,1.3s,mb4.7						
SMRF	Simiane la Rot	29.10	153	*e*P	P	01 55 37.4	+0.3
	comp=Z,116nm,1.5s,mb5.1						
MTLF	Montolieu	29.29	158	*e*P	P	01 55 38.8	0.0
	comp=Z,84nm,1.7s,mb4.9						
SAOF	Saorge	29.38	150	*e*P	P	01 55 40.3	+0.6
EPF	Esparros	29.39	161	*e*P	P	01 55 38.7	-1.0
	comp=Z,93nm,1.5s,mb5.0						
ETSF	Etsaut	29.43	163	*e*P	P	01 55 39.4	-0.7
	comp=Z,50nm,1.4s,mb4.8						
SBF	Sospel	29.49	150	*e*P	P	01 55 41.3	+0.7
	comp=Z,64nm,0.8s,mb5.1						
GSCL	Gusciola	29.54	146	P	P	01 55 42.5	+1.4
FRF	La Foret Royal	29.66	152	*e*P	P	01 55 41.5	-0.7
	comp=Z,16nm,0.8s,mb4.5						
BURAR	Bucovina Array	29.71	124	⇑P	P	01 55 42.4	-0.2
BURAR	Bucovina Array	29.71	124	⇑P	P	01 55 42.4	-0.2
EBIE	Bielsa	29.71	162	P	P	01 55 38.2	-4.4
	comp=Z,3.7nm,1.3s,mb4.0						
EBIE	Bielsa	29.71	162	P	P	01 55 38.2	-4.4
	comp=Z,3.7nm,1.3s,mb4.0,SNR=5.1						
DRGR		29.83	128	⇓P	P	01 55 43.0	-0.7
DRGR		29.83	128	⇓P	P	01 55 43.0	-0.6
LMR	La Mourre	29.86	152	*e*P	P	01 55 44.1	+0.1
	comp=Z,13nm,0.9s,mb4.3						
PII	Pisa	30.14	146	P	P	01 55 46.2	-0.2
EGRA	Graus	30.21	161	P	P	01 55 45.7	-1.4
	comp=Z,61nm,2.6s,mb4.9						
EGRA	Graus	30.21	161	P	P	01 55 45.7	-1.4
	comp=Z,61nm,2.6s,mb4.9,SNR=4.9						
PGF	Pioggiola	31.02	149	*e*P	P	01 55 55.5	+1.3
	comp=Z,99nm,1.3s,mb5.2						
GUD	Guadarrama	31.38	168	P	P	01 55 55.4	-2.0
	comp=Z,13nm,1.1s,mb4.7,SNR=7.9						
DIVS	Divcibare	31.71	133	⇓*i*P	P	01 55 59.7	-0.6
VRI	Vrincioaia	31.72	123	⇓P	P	01 56 00.8	+0.5
NVSS	Nova Varos 2	32.20	134	⇑*i*P	P	01 56 04.9	+0.3
ESDC	Sonseca Array	32.36	168	P	P	01 56 05.4	-0.5
	comp=Z,2.6nm,0.9s,mb4.1,baz=356,slow=8.6,SNR=9.0						
ESDC	Sonseca Array	32.36	168	P	P	01 56 04.2	-1.8
	comp=Z,7.5nm,1.2s,mb4.4						
ESDC	Sonseca Array	32.36	168	P	P	01 56 04.2	-1.8
	comp=Z,7.5nm,1.2s,mb4.4,SNR=5.3						
CFR	Carcaliu	32.73	122	⇓P	P	01 56 07.6	-1.6
CFR	Carcaliu	32.73	122	⇓P	P	01 56 07.5	-1.6
HARR	Harsova	33.13	123	⇑P	P	01 56 11.0	-1.6
HARR	Harsova	33.13	123	⇑P	P	01 56 11.0	-1.6
ETOB	Tobarra	33.56	165	P	P	01 56 16.0	-0.4
	comp=Z,34nm,1.9s,mb5.0						
ETOB	Tobarra	33.56	165	P	P	01 56 16.0	-0.5
	comp=Z,34nm,1.9s,mb5.0,SNR=7.9						
EADA	Adamuz	33.82	169	P	P	01 56 18.1	-0.6
	comp=Z,14nm,3.9s						
EADA	Adamuz	33.82	169	P	P	01 56 18.1	-0.6
	comp=Z,14nm,3.9s,SNR=4.8						
VTS	Vitosha	33.90	130	*e*P	P	01 56 19.0	-0.3
EMUR	La Murta	34.38	165	P	P	01 56 24.6	+1.0
	comp=Z,24nm,1.2s,mb5.0						
EMUR	La Murta	34.38	165	P	P	01 56 24.6	+1.0
	comp=Z,24nm,1.2s,mb5.0,SNR=7.9						
ELUQ	Luque	34.45	169	P	P	01 56 27.0	+2.8
	comp=Z,8.6nm,1.2s,mb4.6						
ELUQ	Luque	34.45	169	P	P	01 56 27.0	+2.9
	comp=Z,8.6nm,1.2s,mb4.6,SNR=7.9						
KKB	Krupnik	34.55	131	*e*P	P	01 56 25.0	0.0
TIXI	Tiksi	34.70	20	*i* P	P	01 56 27.4	+1.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
TIXI	Tiksi	34.70	20	*i* P	P	01 56 27.4	+1.4
	comp=Z,6.0nm,1.2s,mb4.4						
OHR	Ohrid	34.73	134	*i* P	P	01 56 26.5	0.0
VAY	Valandovo	34.95	132	*e*P	P	01 56 26.6	-1.8
INK	Inuvik	34.96	326	P	P	01 56 28.1	-0.1
	comp=Z,3.4nm,1.0s,mb4.2,baz=349,slow=7.9,SNR=8.5						
INK	Inuvik	34.96	326	P	P	01 56 28.1	-0.1
INK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MMB	Musomiste	34.97	130	*e*P	P	01 56 29.0	+0.4
ORR	Orenburg	35.01	89	⇓*i*P	P	01 56 28.6	-0.2
ORR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
ANN	Anapa	35.70	112	*e*P	P	01 56 40.1	+5.4
YKA	Yellowknife Ar	36.04	310	P	P	01 56 37.4	0.0
	comp=Z,3.1nm,0.6s,mb4.4,baz=28,slow=8.4,SNR=7.8						
YKA				LR	LR	02 11 14.4	
	comp=Z,919nm,18.5s,MS4.6,baz=65,slow=36						
YKA	Yellowknife Ar	36.04	310	P	P	01 56 37.4	0.0
YKA				LR	LR	02 11 14.4	
YKA	Yellowknife Ar	36.04	310	P	P	01 56 37.4	0.0
YKA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKA				MLR	MLR		
	comp=Z,919nm,18.5s						
GOF	Gofitskoye	37.14	105	⇓*i*P	P	01 56 47.0	+0.2
GOF				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.9						
GOF	Gofitskoye	37.14	105	*i* P	P	01 56 47.0	+0.2
	comp=Z,25nm,1.3s,mb4.9						
SOC	Sochi	37.48	110	*e*P	P	01 56 48.8	-0.9
SOC				*e*		01 59 08.6	
SOC				*e*S	S	02 02 34.9	-3.0
SOC				*e*SS	SS	02 05 11.9	+1.5
SOC				*e*SSS	SSS	02 05 47.7	+5.8
SOC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
SOC				MLR	MLR		
	comp=Z,770nm,17.0s,MS4.6						
SOC	Sochi	37.48	110	*e*P	P	01 56 48.8	-0.9
	comp=Z,13nm,0.9s,mb4.8						
KIV	Kislovodsk	38.03	107	*e*P	P	01 56 53.1	-1.3
KIV				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.7						
KIV				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.3						
KIV	Kislovodsk	38.03	107	*e*P	P	01 56 53.1	-1.3
	comp=Z,400nm,15.0s						
CHKZ	Chkalovo	38.16	73	*e*P	P	01 56 56.1	+0.7
	comp=Z,8.6nm,1.1s,mb4.4						
CHKZ	Chkalovo	38.16	73	*e*P	P	01 56 56.1	+0.7
	comp=Z,8.6nm,1.1s,mb4.4						
BVAR	Borovoye Array	38.66	74	P	P	01 57 00.6	+1.1
	comp=Z,3.1nm,0.9s,mb4.0,baz=315,slow=6.3,SNR=8.9						
BVAR				PP	PP	01 58 30.5	-1.2
	comp=Z,1.5nm,0.8s,baz=326,slow=11,SNR=4.0						
BVAR	Borovoye Array	38.66	74	P	P	01 57 00.6	+1.1
BVAR						01 58 30.5	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BR131	Keskin Array S	39.30	119	*e*P	P	01 57 06.5	+1.5
	comp=Z,5.0nm,1.1s,mb4.2						
BR131	Keskin Array S	39.30	119	*e*P	P	01 57 06.5	+1.5
	comp=Z,5.0nm,1.1s,mb4.2						
BRTR	Keskin Array B	39.30	119	P	P	01 57 06.7	+1.7
	comp=Z,3.0nm,1.0s,mb4.0,baz=321,slow=7.9,SNR=11						
BRTR				PP	PP	01 58 35.7	-3.4
	comp=Z,1.4nm,1.0s,baz=329,slow=7.2,SNR=3.6						
BRTR	Keskin Array B	39.30	119	P	P	01 57 06.7	+1.7
BRTR						01 58 35.7	
BRTR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BRTR	Keskin Array B	39.30	119	PP	PP	01 58 35.7	-3.4
FFC	Flin Flon	39.34	294	*e*P	P	01 57 05.9	+0.6
	comp=Z,50nm,1.1s,mb5.2						
FFC	Flin Flon	39.34	294	*e*P	P	01 57 05.9	+0.7
	comp=Z,50nm,1.1s,mb5.2						
ZEI	Tsey	39.48	106	*e*P	P	01 57 05.5	-1.0
ZEI				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.2						
ISP	Isparta	40.22	124	⇓*i*P	P	01 57 12.5	-0.1
ILAR	Eielson Array	40.37	332	P	P	01 57 14.8	+1.2
	comp=Z,2.9nm,0.9s,mb4.0,baz=16,slow=7.6,SNR=15						
ILAR				LR	LR	02 15 37.9	
	comp=Z,182nm,19.9s,MS3.9,baz=14,slow=39						
ILAR	Eielson Array	40.37	332	P	P	01 57 14.8	+1.2
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,182nm,19.9s						
COLA	College	40.42	333	*e*P	P	01 57 15.1	+1.1
	comp=Z,12nm,1.1s,mb4.5						
COLA	College	40.42	333	⇑*e*P	P	01 57 15.8	+1.8
COLA	College	40.42	333	*e*P	P	01 57 15.1	+1.1

	comp=Z,12nm,1.1s,mb4.5						
BILL	**Bilibino**	**40.51**	**1**	*i* P	**P**	**01 57 17.8**	**+3.1**
BILL				*e*S	**S**	**02 03 25.7**	**+2.2**
BILL				*e*SS	SS	02 06 27.8	+10
BILL				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.3						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.0						
NVS	**Novosibirsk**	**40.82**	**62**	*i* P	**P**	**01 57 20.9**	**+3.5**
ULM	**Lac du Bonnet**	**41.45**	**285**	P	**P**	**01 57 22.8**	**+0.2**
	comp=Z,20nm,0.8s,mb4.8,baz=34,slow=8.0,SNR=23						
ULM				LR	LR	02 13 42.2	
	comp=Z,304nm,20.3s,MS4.2,baz=28,slow=35						
ULM	**Lac du Bonnet**	**41.45**	**285**	P	**P**	**01 57 22.8**	**+0.2**
ULM				LR	LR	02 13 42.2	
GNI	**Garni**	**42.13**	**107**	⇑*e*P	**P**	**01 57 29.5**	**+1.3**
GNI				pmax	pmax		
	comp=Z,35nm,1.6s						
GNI				MLR	MLR		
	comp=Z,300nm,17.0s						
EYMN	**Ely**	**42.13**	**280**	*e*P	**P**	**01 57 28.5**	**+0.5**
	comp=Z,34nm,1.0s,mb4.9						
EYMN	**Ely**	**42.13**	**280**	*e*P	**P**	**01 57 28.5**	**+0.4**
	comp=Z,34nm,1.0s,mb4.9						
EDM	**Edmonton**	**43.85**	**302**	*e*P	**P**	**01 57 41.5**	**-0.5**
EDM	**Edmonton**	**43.85**	**302**	*e*P	**P**	**01 57 41.5**	**-0.5**
MVL	**Millersville**	**44.52**	**261**	*e*P	**P**	**01 57 48.6**	**+1.0**
MVL	**Millersville**	**44.52**	**261**	*e*P	**P**	**01 57 48.6**	**+1.0**
SDMD	**Soldier's Deli**	**45.21**	**261**	*e*P	**P**	**01 57 42.5**	**-11**
ACSO	**Alum Creek Sta**	**46.39**	**267**	*e*P	**P**	**01 58 03.3**	**+0.8**
	comp=Z,11nm,0.9s,mb4.8						
ACSO	**Alum Creek Sta**	**46.39**	**267**	*e*P	**P**	**01 58 03.3**	**+0.9**
	comp=Z,11nm,0.9s,mb4.8						
MKAR	**Makanchi Array**	**47.74**	**68**	P	**P**	**01 58 14.0**	**+1.0**
	comp=Z,2.7nm,1.0s,mb4.2,baz=350,slow=7.4,SNR=7.6						
MKAR				PcP	PcP	01 59 44.1	+1.6
	comp=Z,1.2nm,0.8s,baz=342,slow=3.8,SNR=3.8						
MKAR				LR	LR	02 21 20.7	
	comp=Z,245nm,18.4s,MS4.2,baz=307,slow=40						
MKAR	**Makanchi Array**	**47.74**	**68**	P	**P**	**01 58 14.0**	**+1.0**
MKAR				PcP	PcP	01 59 44.1	+1.6
MKAR				LR	LR	02 21 20.7	
MKAR	**Makanchi Array**	**47.74**	**68**	P	**P**	**01 58 14.0**	**+1.0**
MKAR						01 59 44.2	
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,245nm,18.4s						
CLNS	**Chul'man**	**48.28**	**30**	*e*P	**P**	**01 58 19.8**	**+2.7**
CLNS				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
CLNS				pmax	pmax		
	comp=N,21nm,1.5s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.1s						
BLA	**Blacksburg**	**48.34**	**263**	*e*P	**P**	**01 58 18.1**	**+0.2**
	comp=E,16nm,0.8s,mb5.1						
BLA	**Blacksburg**	**48.34**	**263**	*e*P	**P**	**01 58 18.1**	**+0.3**
	comp=E,16nm,0.8s,mb5.1						
ELN	**Prospectdale**	**48.43**	**263**	*e*P	**P**	**01 58 18.5**	**0.0**
ELN	**Prospectdale**	**48.43**	**263**	*e*P	**P**	**01 58 18.5**	**0.0**
AAK	**Ala-Archa**	**49.16**	**77**	*e*P	**P**	**01 58 24.7**	**+0.6**
	comp=E,9.2nm,1.3s,mb4.7						
AAK	**Ala-Archa**	**49.16**	**77**	*e*P	**P**	**01 58 24.9**	**+0.8**
WCI	**Wyandotte Cave**	**49.26**	**269**	*e*P	**P**	**01 58 24.8**	**-0.1**
	comp=E,22nm,0.9s,mb5.2						
WCI	**Wyandotte Cave**	**49.26**	**269**	*e*P	**P**	**01 58 24.8**	**-0.1**
	comp=E,22nm,0.9s,mb5.2						
HRY	**Holter Researc**	**49.32**	**297**	*e*P	**P**	**01 58 25.3**	**0.0**
HRY	**Holter Researc**	**49.32**	**297**	*e*P	**P**	**01 58 25.3**	**+0.1**
NEW	**Newport**	**49.36**	**302**	P	**P**	**01 58 25.1**	**-0.4**
	comp=E,3.3nm,0.8s,mb4.4,baz=30,slow=7.8,SNR=6.1						
NEW	**Newport**	**49.36**	**302**	P	**P**	**01 58 25.1**	**-0.4**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.8s						
RSSD	**Black Hills**	**49.41**	**289**	*e*P	**P**	**01 58 26.1**	**+0.1**
	comp=Z,11nm,1.0s,mb4.8						
RSSD	**Black Hills**	**49.41**	**289**	*e*P	**P**	**01 58 26.1**	**+0.2**
	comp=Z,11nm,1.0s,mb4.8						
CHMT	**Chamberlain Mo**	**49.53**	**298**	*e*P	**P**	**01 58 26.8**	**-0.1**
CHMT	**Chamberlain Mo**	**49.53**	**298**	*e*P	**P**	**01 58 26.8**	**-0.1**
GCMT	**Greycliff**	**49.54**	**294**	*e*P	**P**	**01 58 27.3**	**+0.3**
MSO	**Missoula**	**49.80**	**298**	*e*P	**P**	**01 58 28.9**	**-0.1**
	comp=Z,28nm,1.2s,mb5.2						
MSO	**Missoula**	**49.80**	**298**	*e*P	**P**	**01 58 28.9**	**-0.1**
	comp=Z,28nm,1.2s,mb5.2						
TZTN	**Tazewell**	**49.94**	**266**	*e*P	**P**	**01 58 28.2**	**-2.0**
TZTN				*e*pP	pP	01 58 36.7	+3.5
TZTN	**Tazewell**	**49.94**	**266**	*e*P	**P**	**01 58 28.2**	**-1.9**
TZTN				*e*pP	pP	01 58 36.7	+3.5
BOZ	**Bozeman (W)**	**50.23**	**296**	*e*P	**P**	**01 58 32.6**	**+0.3**
	comp=Z,6.4nm,0.9s,mb4.7						
BOZ	**Bozeman (W)**	**50.23**	**296**	*e*P	**P**	**01 58 32.6**	**+0.3**
	comp=Z,6.4nm,0.9s,mb4.7						
DLMT	**Dillon**	**50.77**	**296**	*e*P	**P**	**01 58 36.4**	**+0.1**
	comp=Z,11nm,1.0s,mb4.7						
DLMT	**Dillon**	**50.77**	**296**	*e*P	**P**	**01 58 36.4**	**+0.1**
	comp=Z,11nm,1.0s,mb4.7						
CCM	**Cathedral Cave**	**50.98**	**274**	*e*P	**P**	**01 58 36.6**	**-1.5**
	comp=Z,26nm,1.0s,mb5.1						
CCM	**Cathedral Cave**	**50.98**	**274**	*e*P	**P**	**01 58 36.6**	**-1.4**
	comp=Z,26nm,1.0s,mb5.1						
YFT	**Old Faithful**	**51.10**	**295**	*e*P	**P**	**01 58 41.0**	**+2.1**
CPCT	**Cooper Cave**	**51.25**	**266**	*e*P	**P**	**01 58 40.1**	**-0.1**
CPCT	**Cooper Cave**	**51.25**	**266**	*e*P	**P**	**01 58 40.1**	**0.0**
JSC	**Jenkinsville**	**51.30**	**262**	*e*P	**P**	**01 58 41.2**	**+0.6**
JSC	**Jenkinsville**	**51.30**	**262**	*e*P	**P**	**01 58 41.2**	**+0.7**
MCMT	**McKenzie Canyo**	**51.33**	**296**	*e*P	**P**	**01 58 41.1**	**+0.5**
MCMT				*e*pP	pP	01 58 48.7	+5.0
MCMT	**McKenzie Canyo**	**51.33**	**296**	*e*P	**P**	**01 58 41.1**	**+0.5**
IMW	**Indian Meadow**	**51.64**	**294**	*e*P	**P**	**01 58 44.1**	**+1.1**
	comp=Z,8.5nm,0.8s,mb4.7						
WVT	**Waverly**	**51.67**	**270**	*e*P	**P**	**01 58 41.7**	**-1.6**
	comp=Z,11nm,1.2s,mb4.7						
WVT	**Waverly**	**51.67**	**270**	*e*P	**P**	**01 58 41.7**	**-1.6**
	comp=Z,11nm,1.2s,mb4.7						
KSU1	**Kansas State U**	**51.71**	**279**	*e*P	**P**	**01 58 42.9**	**-0.7**
KSU1				*e*pP	pP	01 58 49.4	+2.8
KSU1	**Kansas State U**	**51.71**	**279**	*e*P	**P**	**01 58 42.9**	**-0.7**
KSU1				*e*pP	pP	01 58 49.4	+2.8
SWET	**Sewanee**	**51.91**	**267**	*e*P	**P**	**01 58 43.3**	**-1.8**
WMQ	**Urumqi**	**52.01**	**65**	⇑P	**P**	**01 58 47.4**	**+1.6**
WMQ				AP	pP	01 58 53.5	+4.7
WMQ				XP	sP	01 58 58.0	+8.0
WMQ				PCP	PcP	01 59 59.9	+1.7
WMQ				PP	PP	02 00 46.4	+1.7
WMQ				S	**S**	**02 06 08.0**	**+0.3**
WMQ				AMB	AMB		
	comp=Z,30nm,3.2s						
WMQ				LR	LR		
	comp=N,170nm,23.6s,MS4.2						
WMQ				LR	LR		
	comp=E,190nm,24.9s,MS4.2						
WMQ				LR	LR		
	comp=Z,200nm,17.0s						
NHSC	**New Hope**	**52.05**	**261**	*e*P	**P**	**01 58 46.4**	**+0.1**
	comp=Z,40nm,0.8s,mb5.4						
NHSC	**New Hope**	**52.05**	**261**	*e*P	**P**	**01 58 46.4**	**+0.2**
	comp=Z,40nm,0.8s,mb5.4						
PDAR	**Pinedale Array**	**52.28**	**293**	P	**P**	**01 58 47.2**	**-0.5**
	comp=Z,8.0nm,0.9s,mb4.7,baz=47,slow=5.9,SNR=61						
PDAR				LR	LR	02 21 07.5	
	comp=Z,844nm,18.4s,MS4.8,baz=31,slow=36						
PDAR	**Pinedale Array**	**52.28**	**293**	P	**P**	**01 58 47.2**	**-0.6**
BMO	**Blue Mountains**	**52.55**	**300**	*e*P	**P**	**01 58 49.1**	**-0.7**
	comp=Z,10nm,0.9s,mb4.8						
BMO				*e*pP	pP	01 58 56.2	+3.3
BMO	**Blue Mountains**	**52.55**	**300**	*e*P	**P**	**01 58 49.1**	**-0.7**
	comp=Z,10nm,0.9s,mb4.8						
BMO				*e*pP	pP	01 58 56.2	+3.3
GOGA	**Godfrey**	**52.80**	**264**	*e*P	**P**	**01 58 51.6**	**-0.3**
	comp=Z,30nm,0.2s,mb5.9						
GOGA	**Godfrey**	**52.80**	**264**	*e*P	**P**	**01 58 51.6**	**-0.2**
	comp=Z,30nm,0.2s,mb5.9						
HLID	**Hailey**	**52.94**	**297**	*e*P	**P**	**01 58 52.6**	**-0.1**
	comp=Z,10nm,1.0s,mb4.7						
HLID				*e*pP	pP	01 58 59.8	+4.0
HLID	**Hailey**	**52.94**	**297**	*e*P	**P**	**01 58 52.6**	**-0.1**
	comp=Z,10nm,1.0s,mb4.7						
HLID				*e*pP	pP	01 58 59.8	+4.0
SONM	**Songino Array**	**53.18**	**48**	P	**P**	**01 58 56.4**	**+2.0**
	comp=Z,1.6nm,1.0s,mb3.9,baz=333,slow=6.6,SNR=8.9						
SONM	**Songino Array**	**53.18**	**48**	P	**P**	**01 58 56.4**	**+2.0**
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
OXF	**Oxford**	**53.66**	**270**	*e*P	**P**	**01 58 56.6**	**-1.5**
	comp=Z,76nm,1.1s,mb5.5						
HWUT	**Hardware Ranch**	**53.93**	**294**	*e*P	**P**	**01 58 59.9**	**-0.1**
	comp=Z,12nm,1.0s,mb4.8						
LRAL	**Lakeview Retre**	**54.26**	**267**	*e*P	**P**	**01 59 00.5**	**-2.0**
	comp=Z,8.8nm,0.9s,mb4.7						
LRAL	**Lakeview Retre**	**54.26**	**267**	*e*P	**P**	**01 59 00.5**	**-2.1**
	comp=Z,8.8nm,0.9s,mb4.7						
CTU	**Camp Tracy**	**54.82**	**293**	*e*P	**P**	**01 59 06.3**	**-0.3**
	comp=Z,13nm,1.1s,mb4.9						
CTU	**Camp Tracy**	**54.82**	**293**	*e*P	**P**	**01 59 06.3**	**-0.3**
	comp=Z,13nm,1.1s,mb4.9						
DUG	**Dugway**	**55.59**	**294**	*e*P	**P**	**01 59 12.8**	**+0.6**
	comp=Z,25nm,1.0s,mb5.2						
DUG	**Dugway**	**55.59**	**294**	*e*P	**P**	**01 59 12.8**	**+0.6**
	comp=Z,25nm,1.0s,mb5.2						
NLU	**North Lily Min**	**55.60**	**293**	*e*P	**P**	**01 59 13.0**	**+0.7**
NLU	**North Lily Min**	**55.60**	**293**	*e*P	**P**	**01 59 13.0**	**+0.7**
SDCO	**Great Sand Dun**	**55.69**	**287**	*e*P	**P**	**01 59 04.2**	**-8.7**
	comp=Z,16nm,1.3s,mb4.9						
SDCO				*e*pP	pP	01 59 12.4	-3.7
ELK	**Elko**	**55.77**	**296**	P	**P**	**01 59 13.9**	**+0.3**
	comp=Z,3.9nm,0.9s,mb4.4,baz=18,slow=7.4,SNR=14						
ELK	**Elko**	**55.77**	**296**	*e*P	**P**	**01 59 13.8**	**+0.3**
	comp=Z,12nm,1.3s,mb4.8						
ELK	**Elko**	**55.77**	**296**	P	**P**	**01 59 13.9**	**+0.4**
ELK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ELK	**Elko**	**55.77**	**296**	*e*P	**P**	**01 59 13.8**	**+0.3**
	comp=Z,12nm,1.3s,mb4.8						
SRU	**San Rafael**	**55.93**	**292**	*e*P	**P**	**01 59 14.8**	**+0.1**
	comp=Z,16nm,0.9s,mb5.1						
SRU	**San Rafael**	**55.93**	**292**	*e*P	**P**	**01 59 14.8**	**+0.2**
	comp=Z,16nm,0.9s,mb5.1						
TMUT	**Trail Mountain**	**55.96**	**292**	*e*P	**P**	**01 59 15.2**	**+0.3**
TMUT	**Trail Mountain**	**55.96**	**292**	*e*P	**P**	**01 59 15.2**	**+0.4**
MOD	**Modoc**	**56.10**	**301**	*e*P	**P**	**01 59 16.2**	**+0.3**
	comp=Z,14nm,1.2s,mb4.9						
MOD	**Modoc**	**56.10**	**301**	*e*P	**P**	**01 59 16.2**	**+0.4**
	comp=Z,14nm,1.2s,mb4.9						
PV10	**Paradox Valley**	**56.17**	**290**	*e*P	**P**	**01 59 16.9**	**+0.5**
PV10	**Paradox Valley**	**56.17**	**290**	*e*P	**P**	**01 59 16.9**	**+0.5**
PV01	**Paradox Valley**	**56.25**	**290**	*e*P	**P**	**01 59 17.0**	**0.0**
WMOK	**Wichita Mounta**	**56.40**	**279**	*e*P	**P**	**01 59 17.2**	**-0.9**
	comp=Z,18nm,1.2s,mb5.0						
WMOK	**Wichita Mounta**	**56.40**	**279**	*e*P	**P**	**01 59 17.2**	**-0.9**
	comp=Z,18nm,1.2s,mb5.0						
YBH	**Yreka Blue Hor**	**56.90**	**303**	P	**P**	**01 59 20.8**	**-0.8**
	comp=Z,3.0nm,0.9s,mb4.3,baz=357,slow=0.2,SNR=3.6						
YBH	**Yreka Blue Hor**	**56.90**	**303**	P	**P**	**01 59 20.8**	**-0.8**
YBH				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MSU	**Marysvale**	**56.97**	**293**	*e*P	**P**	**01 59 22.5**	**+0.3**
MSU	**Marysvale**	**56.97**	**293**	*e*P	**P**	**01 59 22.5**	**+0.4**
MVU	**Marysvale**	**56.98**	**293**	*e*P	**P**	**01 59 23.1**	**+0.9**
	comp=Z,11nm,1.1s,mb4.8						
MVU				*e*PP	PP	02 01 27.9	-2.6
MVU	**Marysvale**	**56.98**	**293**	*e*P	**P**	**01 59 23.1**	**+0.9**
	comp=Z,11nm,1.1s,mb4.8						
MVU	**Marysvale**	**56.98**	**293**	*e*PP	PP	02 01 27.9	-2.6
ARUT	**Antelope Range**	**58.00**	**294**	*e*P	**P**	**01 59 30.2**	**+0.8**
ARUT				*e*PcP	PcP	02 00 19.1	-2.2
ARUT	**Antelope Range**	**58.00**	**294**	*e*P	**P**	**01 59 30.2**	**+0.8**
ARUT	**Antelope Range**	**58.00**	**294**	*e*PcP	PcP	02 00 19.1	-2.2
ANMO	**Albuquerque**	**58.56**	**286**	P	**P**	**01 59 33.0**	**-0.4**
	comp=Z,5.8nm,0.9s,mb4.6,baz=25,slow=6.7,SNR=12						
ANMO	**Albuquerque**	**58.56**	**286**	*e*P	**P**	**01 59 33.1**	**-0.2**
	comp=Z,8.1nm,1.0s,mb4.7						
ANMO				*e*PP	PP	02 01 42.4	-2.3
ANMO	**Albuquerque**	**58.56**	**286**	P	**P**	**01 59 33.0**	**-0.4**
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ANMO	**Albuquerque**	**58.56**	**286**	*e*P	**P**	**01 59 33.2**	**-0.2**
	comp=Z,8.1nm,1.0s,mb4.7						
ANMO	**Albuquerque**	**58.56**	**286**	*e*PP	PP	02 01 42.4	-2.4
MNV	**Mina**	**58.74**	**298**	*e*P	**P**	**01 59 34.1**	**-0.5**
	comp=Z,8.3nm,1.1s,mb4.7						
MNV	**Mina**	**58.74**	**298**	*e*P	**P**	**01 59 34.1**	**-0.5**
	comp=Z,8.3nm,1.1s,mb4.7						
NVAR	**Mina Array Bea**	**58.79**	**298**	P	**P**	**01 59 34.8**	**-0.1**
	comp=Z,3.1nm,0.9s,mb4.3,baz=38,slow=6.6,SNR=21						
NVAR				LR	LR	02 24 45.1	
	comp=Z,234nm,20.9s,MS4.3,baz=5.0,slow=36						
OHCM	**Honcut**	**58.81**	**301**	*e*P	**P**	**01 59 34.3**	**-0.7**
OHCM	**Honcut**	**58.81**	**301**	*e*P	**P**	**01 59 34.3**	**-0.8**
LPM	**Los Pinos Moun**	**59.21**	**286**	*e*P	**P**	**01 59 37.6**	**-0.2**
LPM	**Los Pinos Moun**	**59.21**	**286**	*e*P	**P**	**01 59 37.7**	**-0.2**
BNM	**Barren Site**	**59.36**	**286**	*e*P	**P**	**01 59 39.0**	**+0.1**
GTA	**Gaotai**	**59.45**	**57**	*e*P	**P**	**01 59 41.6**	**+2.2**
GTA				AP	pP	01 59 49.1	+6.5
GTA				XP	sP	01 59 52.5	+8.8
GTA				PCP	PcP	02 00 30.1	+3.2
GTA				PP	PP	02 01 54.3	+1.7
GTA				SCP		02 04 25.9	
GTA				S	**S**	**02 07 45.1**	**-1.8**
GTA				XS		02 07 58.0	
GTA				AMB	AMB		
	comp=Z,100nm,4.6s						
GTA				LR	LR		
	comp=N,180nm,19.5s,MS4.4						
GTA				LR	LR		
	comp=E,180nm,16.1s,MS4.4						
GTA				LR	LR		
	comp=Z,240nm,16.1s,MS4.4						
LENM	**Lemitar**	**59.45**	**286**	*e*P	**P**	**01 59 39.8**	**+0.3**
LENM				*e*pP	pP	01 59 45.8	+3.1
LENM	**Lemitar**	**59.45**	**286**	*e*P	**P**	**01 59 39.8**	**+0.3**
LENM				*e*pP	pP	01 59 45.8	+3.2
WUAZ	**Wupatki**	**59.51**	**291**	*e*P	**P**	**01 59 39.6**	**-0.4**
	comp=Z,26nm,1.3s,mb5.1						
WUAZ	**Wupatki**	**59.51**	**291**	*e*P	**P**	**01 59 39.6**	**-0.3**
	comp=Z,26nm,1.3s,mb5.1						
CPRX	**Cap Rock**	**59.55**	**283**	*e*P	**P**	**01 59 36.1**	**-4.1**
TPNV	**Topopah Spring**	**59.59**	**296**	*e*P	**P**	**01 59 39.7**	**-0.7**
	comp=Z,15nm,1.0s,mb5.0						
TPNV	**Topopah Spring**	**59.59**	**296**	*e*P	**P**	**01 59 39.7**	**-0.8**
	comp=Z,15nm,1.0s,mb5.0						
CMB	**Columbia Colle**	**59.73**	**300**	*e*P	**P**	**01 59 41.3**	**-0.2**
	comp=Z,11nm,1.1s,mb4.8						
CMB				*e*pP	pP	01 59 48.3	+3.7
CMB	**Columbia Colle**	**59.73**	**300**	*e*P	**P**	**01 59 41.3**	**-0.1**
	comp=Z,11nm,1.1s,mb4.8						
CMB				*e*pP	pP	01 59 48.3	+3.7
MTUM	**Tungsten Hills**	**59.87**	**298**	*e*P	**P**	**01 59 43.5**	**+1.2**
MTUM	**Tungsten Hills**	**59.87**	**298**	*e*P	**P**	**01 59 43.5**	**+1.1**
NEN	**Nelson**	**60.40**	**294**	*e*P	**P**	**01 59 44.7**	**-1.4**
NEN	**Nelson**	**60.40**	**294**	*e*P	**P**	**01 59 44.7**	**-1.3**
GDL2	**Guadalupe Moun**	**60.48**	**283**	*e*P	**P**	**01 59 45.6**	**-1.0**
GDL2	**Guadalupe Moun**	**60.48**	**283**	*e*P	**P**	**01 59 45.6**	**-1.0**
DAC	**Darwin (Calif)**	**60.60**	**297**	*e*P	**P**	**01 59 47.8**	**+0.4**
	comp=Z,14nm,1.4s,mb4.9						
DAC	**Darwin (Calif)**	**60.60**	**297**	*e*P	**P**	**01 59 47.8**	**+0.4**
	comp=Z,14nm,1.4s,mb4.9						
JCT	**Junction City**	**60.66**	**278**	*e*P	**P**	**01 59 46.9**	**-0.9**
	comp=Z,12nm,0.8s,mb5.1						
JCT	**Junction City**	**60.66**	**278**	*e*P	**P**	**01 59 46.9**	**-1.0**
	comp=Z,12nm,0.8s,mb5.1						
CN2	**Changchun**	**60.96**	**34**	*e*P	**P**	**01 59 50.7**	**+1.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.1						
HHC	**Hu-ho-hao-te**	**60.98**	**46**	*e*P	**P**	**01 59 50.8**	**+0.9**
HHC				AP	pP	01 59 57.5	+4.5
HHC				XP	sP	02 00 01.5	+7.4
HHC				PCP	PcP	02 00 32.4	-0.6
HHC				PP	PP	02 02 07.9	+1.5
HHC				SCP		02 04 30.9	
HHC				PCS		02 04 34.0	
HHC				S	**S**	**02 08 08.9**	**+2.4**
HHC				XS		02 08 20.7	
HHC				PS	PS	02 08 27.5	+4.6
HHC				SCS	ScS	02 09 36.5	-0.9
HHC				AMB	AMB		
	comp=Z,130nm,4.7s						
HHC				LR	LR		
	comp=N,300nm,17.2s,MS4.9						
HHC				LR	LR		
	comp=E,710nm,20.6s,MS4.9						
HHC				LR	LR		
	comp=Z,420nm,18.0s,MS4.6						
LDFC	**Landfair**	**61.01**	**294**	*e*P	**P**	**01 59 50.9**	**+0.8**
LDFC	**Landfair**	**61.01**	**294**	*e*P	**P**	**01 59 50.9**	**+0.7**
MNTX	**Cornudas Mount**	**61.26**	**284**	*e*P	**P**	**01 59 50.8**	**-1.1**
	comp=Z,4.4nm,0.9s,mb4.6						
MNTX	**Cornudas Mount**	**61.26**	**284**	*e*P	**P**	**01 59 50.8**	**-1.1**
	comp=Z,4.4nm,0.9s,mb4.6						
LRV	**Little Rabbit**	**61.42**	**300**	*e*P	**P**	**01 59 54.2**	**+1.3**
MWC	**Mount Wilson**	**62.65**	**296**	*e*P	**P**	**02 00 01.4**	**+0.2**
TXAR	**Lajitas Array**	**62.93**	**281**	P	**P**	**02 00 02.1**	**-1.0**
	comp=Z,2.1nm,0.6s,mb4.5,baz=41,slow=5.7,SNR=38						
TXAR				PP	PP	02 02 18.3	-4.9
	comp=Z,1.1nm,0.9s,baz=27,slow=8.4,SNR=3.8						
TXAR				LR	LR	02 26 59.1	
	comp=Z,389nm,20.5s,MS4.6,baz=60,slow=36						
TXAR	**Lajitas Array**	**62.93**	**281**	P	**P**	**02 00 02.2**	**-0.9**
TXAR						02 02 18.3	
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TXAR				MLR	MLR		
	comp=Z,389nm,20.5s						
DBIC	**Dimbokro**	**65.11**	**172**	LR	LR	02 27 39.8	
	comp=Z,164nm,19.4s,MS4.2,baz=342,slow=35						
LSA	**Lhasa**	**66.14**	**68**	P	**P**	**02 00 24.0**	**+0.1**
CD2	**Chengdu**	**68.51**	**56**	*e*P	**P**	**02 00 40.0**	**+1.2**
MJAR	**Matsushiro Arr**	**70.05**	**25**	P	**P**	**02 00 49.6**	**+1.5**
	comp=Z,0.7nm,0.3s,mb4.1,baz=333,slow=5.4,SNR=3.5						
MJAR	**Matsushiro Arr**	**70.05**	**25**	P	**P**	**02 00 49.6**	**+1.5**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NJ2	**Nanjing**	**71.03**	**43**	*e*P	**P**	**02 00 55.2**	**+1.0**
NJ2				PP	PP	02 03 37.7	+3.8
NJ2				S	S	02 10 13.0	+4.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				LR	LR		
	comp=N,390nm,19.0s,MS4.8						
NJ2				LR	LR		
	comp=E,280nm,18.4s,MS4.8						
NJ2				LR	LR		
	comp=Z,190nm,13.9s,MS4.5						
SSE	**Sheshan**	**72.45**	**41**	P	**P**	**02 01 00.5**	**-2.2**
SSE				AP	pP	02 01 10.0	+4.2
SSE				S	S	02 10 22.9	-2.4
SSE				XS		02 10 39.1	
SSE				SS	SS	02 15 02.7	-3.2
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,80nm,4.5s						
SSE				LR	LR		
	comp=N,50nm,18.6s,MS4.2						
SSE				LR	LR		
	comp=E,110nm,18.6s,MS4.2						
SSE				LR	LR		
	comp=Z,190nm,19.4s,MS4.4						
SSE	**Sheshan**	**72.45**	**41**	P	**P**	**02 01 00.5**	**-2.2**
	comp=Z,41nm,0.7s,mb5.5						
SSE				pP	pP	02 01 10.0	+4.2
SSE				S	S	02 10 22.9	-2.4
SSE				sS		02 10 39.1	
SSE				SS	SS	02 15 02.7	-3.2
SSE				LR	LR		
	comp=Z,190nm,19.4s,MS4.4						
KMI	**Kunming**	**73.74**	**59**	P	**P**	**02 01 12.2**	**+2.0**
KMI				AP	pP	02 01 18.8	+5.4
KMI				XP	sP	02 01 22.2	+7.7
KMI				S	S	02 10 41.1	+1.3
KMI				SS	SS	02 15 26.1	+0.3
KMI				AMB	AMB		
	comp=Z,80nm,4.6s						
KMI				LR	LR		
	comp=N,140nm,25.0s						
KMI				LR	LR		
	comp=E,140nm,19.7s						
KMI				LR	LR		
	comp=Z,180nm,19.7s						
KMI	**Kunming**	**73.74**	**59**	P	**P**	**02 01 12.2**	**+2.0**
	comp=Z,8.0nm,1.0s,mb4.6						
KMI				pP	pP	02 01 18.8	+5.4
KMI				sP	sP	02 01 22.2	+7.7
KMI				S	S	02 10 41.1	+1.3
KMI				SS	SS	02 15 26.1	+0.3
KMI				LR	LR		
	comp=Z,190nm,19.7s,MS4.4						
BDFB	**Brasilia**	**90.43**	**214**	LR	LR	02 36 21.9	
	comp=Z,167nm,19.4s,MS4.5,baz=100,slow=31						
PPT	**Papeete**	**120.44**	**312**	*e*LR	LR	02 45 22.2	
	comp=Z,157nm,25.2s						
RKT	**Rikitea**	**121.88**	**294**	*e*LR	LR	02 46 04.5	
	comp=Z,246nm,29.2s						
TBI	**Tubuai**	**125.97**	**310**	*e*LR	LR	02 47 56.2	
	comp=Z,169nm,33.5s						
VNA2	**Neumayer--Watz**	**142.42**	**177**	*e*	PKPdf	02 09 11.0	+2.5
VNA2	**Neumayer--Watz**	**142.42**	**177**	⇑*i*P	PKPdf	02 09 04.9	-3.6
VNA2				*e*		02 09 11.0	
VNA3	**Neumayer Olymp**	**142.71**	**179**	*e*	PKPdf	02 09 10.9	+1.9
VNA3	**Neumayer Olymp**	**142.71**	**179**	⇑*i*P	PKPdf	02 09 04.9	-4.1
VNA3				*e*		02 09 10.9	
SNAA	**Sanae**	**143.26**	**175**	PKP	PKPdf	02 09 05.9	-4.0
	comp=Z,0.7nm,1.0s,baz=350,slow=6.7,SNR=4.7						
SNAA	**Sanae**	**143.26**	**175**	PKIKP	PKPdf	02 09 05.9	-4.0
SNAA				pmax	pmax		
	comp=Z,1.0nm,1.0s						

*ATH **07** 01:56:48.3, 39.11N×24.22E, h31^{km}±6^{km}, MD2.6/5*
*THE **07** 01:56:48.6, 39.12N×24.23E, h8^{km}, ML2.6*
*NEIC **07** 01:56:48.4, 39.11N×24.22E, h32^{km}, MD2.6(ATH), After ATH.*
*CSEM **07** 01:56:48.8±0.1, 39.08N×24.24E, h20^{km}, ML2.6, Error ellipse: s-maj=2.7km s-min=2.3km az=93.0*
ISC 07 01:56:47.3±1.0, **39.12N**±0.05×**24.25E**±0.06, **h10**^{km}±8^{km}, **n17**, σ**0^{s}73**/21, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AOS	**Alonnisos**	**0.29**	**281**	*e*Pg	**Pg**	**01 56 54.0**	**+0.6**
NEO	**Neokhori**	**0.82**	**284**	*e*PN	**Pn**	**01 57 04.4**	**-0.2**
XOR	**Xorichti**	**0.86**	**287**	*e*Pg	**Pg**	**01 57 04.8**	**+0.3**
XOR				*e*Sg	**Sg**	**01 57 16.8**	**+0.8**
PAIG	**Paliouri**	**0.92**	**332**	*e*Pg	**Pg**	**01 57 06.0**	**+0.2**
PAIG				*e*Sg	**Sg**	**01 57 18.9**	**+0.8**
PAIG	**Paliouri**	**0.92**	**332**	*e*Pg	**Pg**	**01 57 05.9**	**+0.1**
PAIG				*e*Sg	**Sg**	**01 57 18.9**	**+0.8**
LOS	**Limnos**	**1.04**	**38**	*e*Pg	**Pg**	**01 57 08.0**	**-0.1**
MPAR	**Parnis Oros**	**1.04**	**203**	*e*PN	**Pn**	**01 57 08.0**	**+0.2**
MPAR				*e*SN	**Sn**	**01 57 22.5**	**0.0**
LKR	**Lokris**	**1.08**	**245**	*e*PB	**Pb**	**01 57 07.7**	**+0.1**
PTL	**Penteli**	**1.11**	**196**	*e*PN	**Pn**	**01 57 08.5**	**-0.2**
ATH	**Athens Observa**	**1.22**	**200**	*e*PN	**Pn**	**01 57 10.5**	**+0.2**
OUR	**Ouranopolis**	**1.23**	**350**	*e*Pg	**Pg**	**01 57 10.8**	**-1.2**
PLG	**Polygyros**	**1.40**	**334**	*e*PN	**Pn**	**01 57 13.1**	**+0.2**
AGG	**Agios Georgios**	**1.50**	**267**	*e*Pg	**Pg**	**01 57 14.6**	**-2.6**
PRK	**Paraskevi**	**1.58**	**85**	*e*PN	**Pn**	**01 57 16.4**	**+1.0**
LIT	**Litokhoron**	**1.68**	**306**	*e*Pb	**Pb**	**01 57 17.0**	**-0.8**
SOH	**Sokhos**	**1.84**	**338**	*e*Pb	**Pb**	**01 57 19.7**	**-0.8**
GRG	**Griva**	**2.32**	**323**	*e*Pn	**Pn**	**01 57 26.6**	**+0.5**

WEL 07 02:13:24.6±0.8, **36.28S**×**179.11E**, **h12**^{km}, **ML4.2**/5, **Error ellipse: s-maj=7.3km s-min=5.3km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.44**	**206**	P*	Pb	02 13 48.7	-2.1
MXZ				S*	Sb	02 14 05.7	-3.3
MXZ				S*	Sb	02 14 05.9	-3.1
PUZ	**Puketiti**	**1.92**	**200**	PN	Pn	02 13 56.6	-1.0
PUZ				SN	Sn	02 14 23.7	+2.0
MWZ	**Matawai**	**2.41**	**211**	P*	Pb	02 14 03.3	-4.3
URZ	**Urewera**	**2.54**	**218**	P*	Pb	02 14 04.6	-5.1
URZ				S*	Sb	02 14 35.4	-5.7
MARZ	**Manawahe**	**2.59**	**228**	P*	Pb	02 14 04.8	-5.7
KNZ	**Kokohu**	**2.97**	**202**	PN	Pn	02 14 08.9	-3.7
KNZ				SN	Sn	02 14 43.9	-4.5
PATZ	**Paeroa**	**3.09**	**226**	P*	Pb	02 14 12.8	-6.4
TOZ	**Tahuroa Road**	**3.23**	**242**	P*	Pb	02 14 14.3	-7.3
BKZ	**Black Stump Fm**	**3.55**	**215**	P*	Pb	02 14 17.1	-10
CNZ	**Chateau**	**4.06**	**223**	P*	Pb	02 14 26.3	-9.4
FWVZ	**Far West T-bar**	**4.10**	**222**	P*	Pb	02 14 28.0	-8.4
MOVZ	**Moawhango**	**4.10**	**219**	P*	Pb	02 14 24.2	-12
MRZ	**Mangatainoka R**	**5.18**	**211**	PN	Pn	02 14 37.6	-6.3

*NEIC **07** 02:15:47.8, 28.87S×71.34W, h47^{km}, mb4.4/1, After GUC.*
GUC 07 02:15:47.8±0.7, 28.87S×71.34W, h47^{km}±14^{km}, ML3.4, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.38	160	⇑iP	P	02 16 12.3	+1.2
TLL				iS	S	02 16 29.7	+1.3
TLL				AMP		02 16 35.8	
	comp=N,780nm,0.4s						
CPCH	Copiapo	1.74	30	⇑iP	P	02 16 16.3	+0.2
CPCH				iS	S	02 16 37.4	+0.3
CPCH				AMP		02 16 41.4	
	comp=E,4µm,0.1s						
CDCH	Caldera	1.84	14	eP	P	02 16 17.4	-0.2
CDCH				AMP		02 16 48.1	
	comp=E,13nm,0.4s						
CMCH	Combarbala	2.32	173	⇓iP	P	02 16 24.2	-0.1
CMCH				iS	S	02 16 51.8	0.0
CMCH				AMP		02 17 03.4	
	comp=E,1µm,0.6s						
CRCH	Chaqaral	2.59	14	AMP		02 17 13.8	
	comp=E,202nm,0.3s						
CHNG	Los Chungos	3.01	183	iS	S	02 17 07.9	-1.4
CHNG				AMP		02 17 22.4	
	comp=E,130nm,0.6s						
LVC	Limon Verde	6.60	20	ePn	P	02 17 24.4	-0.2
LVC				eSn	S	02 18 35.8	-3.6
TRQA	Tornquist	12.04	142	ePn	P	02 18 40.6	+1.3
PAYG	Puerto Ayora	33.37	324	eP	P	02 22 23.7	-0.3
	comp=E,68nm,1.4s						
SDV	Santo Domingo	37.54	1	P	P	02 22 54.8	-4.5
	comp=E,7.5nm,1.4s						

IDC 07 03:01:49.6±9.6, 7.79N×103.14W, mb3.5/4, mb1 4.0/4, mb1mx3.8/16, mbtmp3.5/4, MS3.6/3, Ms1 3.6/3, ms1mx3.1/20, Error ellipse: s-maj=229.9km s-min=103.5km az=117.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	JuntasAbangare	18.13	81	LR	LR	03 11 06.1	
	comp=Z,43nm,18.8s,baz=92,slow=31						
TXAR	Lajitas Array	21.44	359	P	P	03 06 39.4	-2.2
	1.2nm,0.8s,baz=180,slow=13,SNR=10.0						
TXAR				LR	LR	03 14 08.6	
	comp=Z,158nm,19.1s,baz=250,slow=34						
NVAR	Mina Array Bea	33.44	338	P	P	03 08 30.6	-1.8
	0.2nm,0.6s,baz=135,slow=7.7,SNR=3.1						
PDAR	Pinedale Array	35.29	352	P	P	03 08 46.8	-1.6
	0.9nm,0.9s,baz=153,slow=8.1,SNR=6.7						
PPT	Papeete	52.34	241	eLR	LR	03 10 41.7	
	143nm,26.2s,baz=50						
TBI	Tubuai	54.84	234	eLR	LR	03 12 03.8	
	128nm,28.5s,baz=45						
KDAK	Kodiak Island	62.69	333	LR	LR	03 34 24.6	
	comp=Z,161nm,19.2s,baz=102,slow=31						
ILAR	Eielson Array	64.63	341	P	P	03 12 28.8	-2.3
	0.8nm,0.8s,baz=147,slow=4.5,SNR=7.7						

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*IDC **07** 03:03:11.0±3.3, 4.98S×151.65E, h127^{km}±25^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.9/13, mbtmp4.3/7, Error ellipse: s-maj=42.1km s-min=18.7km az=111.0*
*NEIC **07** 03:03:13.2±3.0, 5.00S×151.55E, h149^{km}±24^{km}, mb4.5/2, Error ellipse: s-maj=42.4km s-min=19.2km az=110.0*
ISC 07 03:03:08.8±2.6, 4.9S±0.2×151.7E±0.2, h123^{km}±20^{km}, n14, σ0^{s}84/16, mb4.0/7, 2C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.33	225	P	P	03 04 42.2	+1.3
	5.5nm,0.3s,baz=44,slow=9.3,SNR=13						
PMG				S	S	03 05 51.6	-0.6
	24nm,0.3s,baz=150,slow=20,SNR=14						
KAKA	Kakadu	20.53	247	⇑iP	P	03 07 56.0	+17
	9.9nm,0.5s						
KAKA				eS	S	03 11 34.6	+18
WRAB	Tennant Creek	22.53	227	eP	P	03 07 59.1	0.0
	14nm,0.6s,mb4.5						
WB2	Warramunga Arr	22.53	227	⇑iP	P	03 07 59.1	0.0
WB2				eS	S	03 11 54.9	+1.9
WRA	Warramunga Arr	22.54	227	P	P	03 07 59.1	-0.1
	6.8nm,0.4s,mb4.3,baz=53,slow=9.6,SNR=110						
WRA				PcP	PcP	03 11 50.4	+0.1
	1.5nm,0.7s,baz=47,slow=2.1,SNR=10						
WRA				ScP		03 15 15.7	
	0.3nm,0.6s,baz=50,slow=2.8,SNR=6.3						
ASPA	Alice Springs	25.32	221	eP	P	03 08 25.2	-0.6
STKA	Stephens Creek	28.43	198	P	P	03 08 54.4	+0.3
	0.7nm,0.4s,mb3.6,baz=295,slow=18,SNR=4.0						
STKA	Stephens Creek	28.43	198	P	P	03 08 54.4	+0.3
FITZ	Fitzroy Crossi	28.64	241	⇓iP	P	03 08 54.4	-1.7
	3.8nm,0.4s,mb4.4						
FITZ	Fitzroy Crossi	28.64	241	P	P	03 08 54.5	-1.6
	6.4nm,0.5s,mb4.5,baz=61,slow=5.9,SNR=23						
SONM	Songino Array	65.86	328	P	P	03 13 44.4	+1.0
	2.3nm,0.5s,mb4.3,baz=148,slow=5.3,SNR=18						
MKAR	Makanchi Array	79.71	319	P	P	03 15 04.2	-0.3
	0.5nm,0.6s,mb3.6,baz=97,slow=8.0,SNR=7.1						
ILAR	Eielson Array	82.70	22	P	P	03 15 19.4	-0.3
	0.6nm,0.5s,mb3.7,baz=251,slow=5.6,SNR=9.6						
GERES	GERESS Array B	123.59	328	PKP	PKPdf	03 21 53.0	+1.1
	0.8nm,0.6s,baz=45,slow=1.9,SNR=8.3						

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*NEIC **07** 03:05:37.7±0.8, 6.71N×72.97W, h176^{km}±9^{km}, mb4.4/1, Error ellipse: s-maj=17.7km s-min=11.3km az=100.0*
*IDC **07** 03:05:37.1±0.8, 6.77N×73.01W, h162^{km}±13^{km}, mb3.4/3, mb1 3.8/5, mb1mx3.3/21, mbtmp4.0/5, Error ellipse: s-maj=39.3km s-min=7.8km az=132.0*
*FUNV **07** 03:05:37.0, 6.77N×73.14W, h169^{km}, MW3.0*
ISC 07 03:05:36.2±0.5, 6.80N±0.06×72.98W±0.07, h173^{km}±6^{km}, n21, σ0^{s}92/26, mb3.7/3, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.25	32	eP	P	03 06 06.4	+0.8
CAPV				eS	S	03 06 27.6	-0.7
ROSC	El Rosal	2.35	215	P	P	03 06 18.4	+1.2
	51nm,0.3s,baz=83,slow=11,SNR=162						
ROSC				S	S	03 06 48.0	-0.7
	116nm,0.3s,baz=86,slow=16,SNR=16						
VIGV	El Vigia	2.59	38	eP	P	03 06 20.9	+0.8
VIGV				eS	S	03 06 53.0	-0.9
SDV	Santo Domingo	3.12	48	P	P	03 06 28.8	+2.1
	44nm,0.3s,baz=258,slow=13,SNR=221						
SDV				S	S	03 07 05.8	+0.3
	16nm,0.3s,baz=39,slow=4.9,SNR=11						
SDV	Santo Domingo	3.12	48	ePn	P	03 06 28.4	+1.7
SDV				eSn	S	03 07 04.7	-0.7
VIRV	Villa del Rosa	3.73	9	eP	P	03 06 33.1	-1.2
VIRV				eS	S	03 07 15.2	-4.0
QARV	Quebrada Arrib	4.17	35	eP	P	03 06 40.8	+0.8
SANV	Sanarito	4.34	52	eP	P	03 06 42.7	+0.4
CURV	Curarigua	4.38	43	eP	P	03 06 43.1	+0.4
TEPV	Terepaima	4.90	50	eP	P	03 06 50.0	+0.6
SIQV	Siquisique	4.95	39	eP	P	03 06 50.2	+0.1
BAUV	El Baul	5.34	66	eP	P	03 06 54.5	-0.7
CAOV	Caicara del Or	6.63	85	eP	P	03 07 11.8	-0.5
BIRV	Birongo	7.58	61	eP	P	03 07 24.2	-0.6
CUPV	Cœpira	7.82	65	eP	P	03 07 27.7	-0.3
SAML	Samuel	18.44	148	ePn	P	03 09 42.0	+0.8
NNA	Nana	19.05	192	eP	P	03 09 44.8	-2.6
	21nm,1.3s						
TXAR	Lajitas Array	36.58	312	P	P	03 12 28.1	+0.8
	0.3nm,0.4s,mb3.2,baz=119,slow=8.1,SNR=8.3						
ULM	Lac du Bonnet	47.36	340	P	P	03 13 53.8	-0.6
	1.4nm,0.5s,mb3.9,baz=148,slow=9.5,SNR=6.0						
YKA	Yellowknife Ar	63.34	340	P	P	03 15 48.6	-0.1
	1.1nm,0.5s,mb3.9,baz=130,slow=6.5,SNR=8.1						
WRA	Warramunga Arr	150.44	241	PKPbc	PKPdf	03 25 09.9	+7.5
	0.3nm,0.4s,baz=107,slow=2.7,SNR=9.7						

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*NEIC **07** 03:19:34.4±1.4, 36.00N×70.74E, h35^{km}, mb4.2/4, Error ellipse: s-maj=27.2km s-min=15.9km az=55.0*
*NNC **07** 03:19:46.3±5.4, 36.84N×70.83E, h121^{km}±82^{km}, mpv4.1, Error ellipse: s-maj=64.0km s-min=32.6km az=42.0*
ISC 07 03:19:38.5±0.5, 36.24N±0.04×71.31E±0.08, h160^{km}±14^{km}, n28, σ1^{s}06/41, mb4.6/1, 5C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.46	168	⇓P	P	03 20 20.4	+0.2
CEP				S	S	03 20 51.0	-1.2
CHCP	Chirah Chowk	3.04	147	P	P	03 20 29.0	+1.6
THW	Thamme Wali	3.46	174	⇓P	P	03 20 32.7	-0.1
SBDP	Sheikh Budin	3.95	186	P	P	03 20 39.7	+0.5
SARP	Sargodha	4.45	165	⇓P	P	03 20 45.3	-0.5
DRP	Derazinda	4.58	192	P	P	03 20 47.4	0.0
THN	Thein Dam	5.26	135	eP	P	03 20 56.9	+0.5
THN				eS	S	03 21 57.0	+0.3
DLH	Dalhousie	5.33	132	eP	P	03 20 57.0	-0.3
DLH				eS	S	03 21 58.0	-0.3
AML	Almayashu	6.17	17	P	P	03 21 08.7	+0.3
	SNR=32						
UCH	Uchtor	6.48	22	P	P	03 21 13.1	+0.5
	SNR=9.3						
SDNR	Sundarnagar	6.67	133	eP	P	03 21 14.8	-0.3
SDNR				eS	S	03 22 28.2	-2.1
EKS2	Erkin-Say	6.69	16	P	P	03 21 15.9	+0.5
	SNR=9.1						
AAK	Ala-Archa	6.84	20	P	P	03 21 18.0	+0.5
	SNR=14						
AAK	Ala-Archa	6.84	20	⇓P	P	03 21 18.0	+0.6
	5.0nm,0.5s						
AAK				⇑S	S	03 22 32.1	-2.4
	9.5nm,0.7s						
AAK	Ala-Archa	6.84	20	⇓P	P	03 21 18.0	+0.6
	5.0nm,0.4s						
AAK				S	S	03 22 32.0	-2.4
KK31	Karatay Array	6.88	355	⇓P	P	03 21 16.7	-1.3
	10nm,0.3s,baz=177,slow=12,SNR=292						
KK31				⇑S	S	03 22 28.7	-6.6
	14nm,0.5s,baz=189,slow=24,SNR=15						
USP	Ospenovka	7.44	18	P	P	03 21 25.8	+0.5
	SNR=6.0						
KLP	Kalpa	7.44	127	eP	P	03 21 26.4	+1.0
KLP				eS	S	03 22 43.8	-4.9
KLP				AML	AML	03 22 54.2	
	comp=N,64nm,0.6s						
KLP				AML	AML	03 22 55.9	
	comp=E,63nm,0.6s						
TKM2	Tokmak 2	7.45	25	P	P	03 21 26.4	+0.9
	SNR=5.6						
KHET	Khetri	8.99	154	eP	P	03 21 45.5	-0.4
KHET				eS	S	03 23 17.9	-7.5
KUDL	Kundal	9.19	150	eP	P	03 21 48.4	-0.1
KUDL				eS	S	03 23 22.0	-8.1
SONA	Sohna	9.35	147	eS	S	03 23 27.8	-6.1
AB31	Akbulak array	15.43	331	⇓P	P	03 23 08.2	-0.5
	comp=E,1.3nm,0.4s,baz=143,slow=12,SNR=64						
AB31				⇓S	S	03 25 46.2	-8.8
	comp=E,1.1nm,0.5s,baz=155,slow=24,SNR=6.0						
AKTK	Aktyubinsk	17.13	330	⇑P	P	03 23 31.2	+1.7
AKTK				S	S	03 26 30.8	-2.3
AKTO	Aktyubinsk	17.13	330	⇑P	P	03 23 31.2	+1.7
	comp=E,0.8nm,0.8s						
AKTO				⇑S	S	03 26 30.8	-2.3
	comp=E,0.4nm,0.6s						
CHKZ	Chkalovo	17.44	359	ePn	P	03 23 34.5	+1.3
	comp=E,1.1nm,0.4s						
HIA	Hailar	37.24	54	eP	P	03 26 45.9	+10
MBWA	Marble Bar	73.17	133	eP	P	03 31 03.2	+10
	comp=E,16nm,1.3s,mb4.6						

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*NDI **07** 03:53:00.2±3.5, 33.58N×73.19E, h10^{km}, ML3.4*
*NNC **07** 03:53:07.1±6.9, 34.18N×71.57E, mpv3.8, Error ellipse: s-maj=129.9km s-min=62.9km az=91.0*
ISC 07 03:52:55.8±1.0, 33.47N±0.05×72.95E±0.09, h10^{km}, n12, σ1^{s}32/21, 3C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.55	113	eP	Pn	03 53 42.0	+4.0
THN				eSB	Sb	03 54 13.1	+0.3
DLH	Dalhousie	2.70	109	eP	Pn	03 53 41.0	+0.9
DLH				eS	Sn	03 54 13.0	-0.2
BHK	Bhakra	3.58	124	eSB	Sb	03 54 47.8	+5.1
SDNR	Sundarnagar	3.93	119	eP	Pn	03 53 59.5	+1.9
SDNR				eSB	Sb	03 54 54.0	+1.2
SMLA	Simla	4.27	122	eP	Pn	03 54 03.0	+0.5
SMLA				eS	Sn	03 54 51.3	-1.6
KLP	Kalpa	4.88	112	eP	Pn	03 54 12.3	+1.3
KLP				eS	Sn	03 55 04.8	-3.5
KLP				AML	AML	03 55 33.0	
	comp=E,308nm,0.6s						
KLP				AML	AML	03 55 34.2	
	comp=N,291nm,0.7s						
KHET	Khetri	5.92	155	eP	Pn	03 54 26.4	+0.7
KHET				eS	Sn	03 55 33.1	-1.3
KHET				AML	AML	03 56 20.1	
	comp=E,18nm,0.1s						
KHET				AML	AML	03 56 20.8	
	comp=N,16nm,0.5s						
NDI	New Delhi	6.02	141	eS	Sn	03 55 34.5	-2.4
NDI				ex	x	03 56 03.0	
KUDL	Kundal	6.12	149	eP	Pn	03 54 29.3	+0.7
KUDL				eS	Sn	03 55 36.0	-3.5
SONA	Sohna	6.30	145	eS	Sn	03 55 38.4	-5.7
SONA				AML	AML	03 55 44.8	
	comp=E,47nm,0.2s						
SONA				AML	AML	03 56 18.1	
	comp=N,15nm,0.5s						
AAK	Ala-Archa	9.23	7	⇑Pn	P	03 55 16.9	+4.9
	comp=N,1.4nm,0.5s						
AAK				⇑Sn	Sn	03 56 55.2	-1.7
	comp=N,4.9nm,0.9s						
KK31	Karatay Array	9.80	349	⇑Pn	P	03 55 20.0	+0.1
	comp=N,1.8nm,0.4s,baz=163,slow=12,SNR=47						
KK31				⇓Sn	Sn	03 57 05.8	-5.3
	comp=N,1.1nm,0.5s,baz=169,slow=23,SNR=8.1						

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*HLW **07** 04:11:39.4, 35.22N×26.22E, h15^{km}, Mb3.4*
*IDC **07** 04:11:40.2±1.4, 34.78N×26.17E, mb3.8/5, mb1 3.7/8, mb1mx3.6/21, mbtmp3.6/8, ML3.3/3, Error ellipse: s-maj=24.3km s-min=13.6km az=7.0*
*CSEM **07** 04:11:40.7±0.1, 34.85N×26.28E, h5^{km}, MD3.7, Error ellipse: s-maj=2.9km s-min=1.5km az=82.0*
*ISK **07** 04:11:42.6, 34.82N×26.04E, h45^{km}, MD4.0*
*NEIC **07** 04:11:42.3, 34.84N×26.16E, h15^{km}, MD3.7(ATH), ML3.4(ISK), After ATH.*
*ATH **07** 04:11:42.3, 34.84N×26.16E, h15^{km}±1^{km}, MD3.7/10*
ISC 07 04:11:40.4±1.1, 34.83N±0.03×26.22E±0.04, h0^{km}±8^{km}, n50, σ1^{s}19/57, mb3.8/5, 3D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.43	276	ePB	Pb	04 11 50.0	-0.5
NPS	Neapolis	0.66	311	ePN	Pn	04 11 53.4	-3.2
NPS				eSN	Sn	04 12 02.7	-5.0
KARP	Karpathos	1.05	47	ePN	Pn	04 12 02.4	+0.2
KARP				eSN	Sn	04 12 18.0	+0.2
IDI	Anoyia	1.18	293	Pg	Pg	04 12 02.8	-1.2
	27nm,0.3s,baz=111,slow=16,SNR=232						
IDI				Lg		04 12 19.1	
	297nm,0.3s,baz=3.1,slow=19,SNR=24						
SANT	Santorini	1.66	338	ePn	Pn	04 12 11.6	+0.7
SANT				eSn	Sn	04 12 33.2	+0.1
SANT	Santorini	1.66	338	ePn	Pn	04 12 11.6	+0.8
SANT				eSn	Sn	04 12 33.2	+0.1
GVD	Gavdhos	1.75	271	ePN	Pn	04 12 14.0	+1.8
VAM	Vamos	1.75	290	ePN	Pn	04 12 13.5	+1.3
VAM				eSN	Sn	04 12 36.8	+1.3
NISR	Nisiros	1.93	22	ePN	Pn	04 12 16.5	+1.8
ARG	Arkhangelos	2.08	48	ePN	Pn	04 12 20.2	+3.3
DAT	Datca	2.19	30	ePN	Pn	04 12 18.3	-0.2
DAT				eSN	Sn	04 12 45.8	-0.9
APE	Apeiranthos	2.30	346	ePN	Pn	04 12 19.6	-0.5
APE	Apeiranthos	2.30	346	ePB	Pb	04 12 21.3	-1.2
BODT	Bodrum	2.40	21	ePN	Pn	04 12 20.9	-0.5
BDRM	Kayabasi	2.44	24	iP	Pn	04 12 24.6	+2.5
DALT	Dalyan (Mudla)	2.76	45	ePN	Pn	04 12 27.4	+0.8
YER	Yerkesik	2.84	35	iPN	Pn	04 12 28.7	+0.9
FETY	Fethiye	2.95	51	ePN	Pn	04 12 30.1	+0.8
KYTH	Kithira	2.97	300	ePN	Pn	04 12 31.0	+1.4
AKAS	Kas	3.10	62	iP	Pn	04 12 26.4	-5.0
AYDN	Tasoluk	3.13	25	iP	Pn	04 12 35.6	+3.7
VLI	Veliai	3.27	306	ePN	Pn	04 12 34.1	+0.3
SLUM		3.43	195	⇓eP	Pn	04 12 37.2	+1.0
ELL	Elmali	3.56	56	ePN	Pn	04 12 39.2	+1.2
BLCB	Balcova	3.61	10	ePN	Pn	04 12 38.5	-0.2
DNZL	Cakiroluk	3.66	38	iP	Pn	04 12 39.7	+0.3
IZM	Izmir	3.66	13	ePN	Pn	04 12 38.8	-0.6
HMAT	Matruh	3.80	169	⇓eP	Pn	04 12 42.8	+1.5
HMAT				S	Sn	04 13 28.1	+0.8
MPAR	Parnis Oros	3.87	330	ePN	Pn	04 12 44.0	+1.6
AKS	Akhisar	4.24	17	ePN	Pn	04 12 47.7	+0.1
ISP	Isparta	4.59	48	ePn	Pn	04 12 50.2	-2.4
ISP	Isparta	4.59	48	ePn	Pn	04 12 50.2	-2.4
SWA1		5.57	185	P	Pn	04 13 06.5	0.0
SWA2		5.61	187	P	Pn	04 13 07.3	+0.3
KIZT	Kizilcal	6.08	47	ePN	Pn	04 13 14.0	+0.4
AWBH		6.88	160	P	Pn	04 13 25.0	+0.1
AMAG	Maghara	7.22	123	P	Pn	04 13 27.5	-2.2
BRTR	Keskin Array B	7.67	48	Pn	Pn	04 13 35.3	-0.7
	0.1nm,0.3s,baz=270,slow=7.2,SNR=2.8						
HFRF	Wahat Farafira	7.86	166	P	Pn	04 13 38.3	-0.4
ASUT		8.71	147	P	P	04 13 49.8	-0.7
GTR	Jabal at Tayr	10.02	157	⇓P	P	04 14 08.0	-0.6
AKASG	Malin Array Be	16.01	7	Pn	P	04 15 27.4	-1.0
	0.5nm,0.3s,baz=194,slow=11,SNR=5.3						
AKASG	Malin Array Be	16.01	7	Pn	P	04 15 27.4	-1.0
GERES	GERESS Array B	16.79	330	Pn	P	04 15 37.3	-1.0
	0.0nm,0.3s,baz=156,slow=12,SNR=3.5						
ESDC	Sonseca Array	24.44	290	P	P	04 17 00.4	-1.4
	0.5nm,0.5s,mb3.3,baz=79,slow=10.0,SNR=3.0						
MDT	Midelt	25.65	274	P	P	04 17 10.6	-2.7
	1.2nm,0.6s,mb3.7,baz=74,slow=8.8,SNR=4.7						
ARCES	ARCESS Array B	34.76	360	P	P	04 18 30.7	-3.3
	2.3nm,0.8s,mb4.1,baz=191,slow=9.2,SNR=7.5						
DBIC	Dimbokro	40.05	233	P	P	04 19 17.1	-2.0
	1.8nm,0.5s,mb4.0,baz=26,slow=9.4,SNR=6.2						
DBIC	Dimbokro	40.05	233	P	P	04 19 17.0	-2.0
MKAR	Makanchi Array	43.23	56	P	P	04 19 44.2	-0.5
	0.9nm,0.6s,mb3.7,baz=270,slow=8.3,SNR=6.1						

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*NEIC **07** 05:31:35.6, 24.15S×67.34W, h214^{km}, mb3.7/2, After GUC.*
GUC 07 05:31:35.9±0.7, 24.34S×67.26W, h190^{km}, MD3.6, ML3.8, 3C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.67	329	⇑iP	P	05 32 11.5	+0.8
SPCH				iS	S	05 32 39.2	+1.7
SPCH				AMP		05 32 41.8	
	comp=E,124nm,0.6s						
LVC	Limon Verde	2.30	318	ePn	P	05 32 17.8	+0.5
LVC				eS	S	05 32 49.0	-0.3
CEN1	Los Morros	2.86	289	⇓iP	P	05 32 26.1	+2.2
CEN1				iS	S	05 33 03.4	+2.6
CEN1				AMP		05 33 05.1	
	comp=E,213nm,0.3s						
CPN1	Cerro Paranal	2.88	264	⇑iP	P	05 32 25.8	+1.6
CPN1				iS	S	05 33 03.9	+2.5
CPN1				AMP		05 33 05.4	
	comp=E,196nm,0.5s						
ANCH	Antofagasta	2.96	282	eP	P	05 32 26.4	+1.4
ANCH				iS	S	05 33 04.1	+1.0
ANCH				AMP		05 33 06.6	
	comp=N,365nm,0.2s						
ANCH	Antofagasta	2.96	282	⇑iP	P	05 32 26.4	+1.4
ANCH				iS	S	05 33 04.0	+1.0
CRCH	Chaqaral	3.64	236	eP	P	05 32 34.2	+0.8
CRCH				iS	S	05 33 19.4	+1.5
CRCH	Chaqaral	3.64	236	⇓iP	P	05 32 34.3	+0.8
CRCH				iS	S	05 33 19.6	+1.7
LPAZ	La Paz	8.05	354	ePn	P	05 33 27.9	-2.8
	comp=N,1.0nm,0.4s						
CPUP	Villa Florida	9.20	105	ePn	P	05 33 43.4	-2.2
TRQA	Tornquist	14.39	163	ePn	P	05 34 52.4	+0.4
	comp=N,10nm,1.5s						

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*IDC **07** 06:15:37.2±0.8, 16.27S×172.72W, mb4.0/7, mb1 4.2/8, mb1mx4.1/17, mbtmp4.0/8, ML2.1/1, MS3.7/1, Ms1 3.7/1, ms1mx3.0/27, Error ellipse: s-maj=45.3km s-min=18.2km az=129.0*
*NEIC **07** 06:15:42.9±0.4, 16.39S×172.71W, h35^{km}, mb4.5/5, Error ellipse: s-maj=16.3km s-min=10.1km az=132.0*
ISC 07 06:15:40.4±0.5, 16.21S±0.09×172.7W±0.1, h33^{km}, n22, σ1^{s}14/22, mb4.2/12, MS3.6/1, 4C, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.47	22	Pn	Pn	06 16 17.5	-1.9
	20nm,0.3s,baz=281,slow=5.8,SNR=14						
AFI				Sn	Sn	06 16 45.0	-3.7
	127nm,0.3s,baz=40,slow=20,SNR=13						
AFI	Afiamalu	2.47	22	ePn	Pn	06 16 16.7	-2.7
AFI				eSn	Sn	06 16 46.3	-2.4
URZ	Urewera	23.71	200	P	P	06 20 49.7	-0.5
	5.1nm,0.6s,mb4.1,baz=346,slow=12,SNR=5.8						
HNR	Honiara	27.46	281	LR	LR	06 30 53.9	
	comp=Z,151nm,18.9s,MS3.6,baz=56,slow=33						
CTAO	Charters Tower	39.10	258	eP	P	06 23 07.8	+1.3
	20nm,1.8s,mb4.5						
STKA	Stephens Creek	44.20	241	P	P	06 23 47.9	-0.4
	3.0nm,0.7s,mb4.1,baz=84,slow=8.7,SNR=5.9						
STKA	Stephens Creek	44.20	241	eP	P	06 23 48.0	-0.3
WRAB	Tennant Creek	50.28	257	eP	P	06 24 34.5	-1.6
	2.8nm,0.8s,mb4.3						
WRA	Warramunga Arr	50.29	257	P	P	06 24 35.8	-0.3
	1.1nm,0.8s,mb4.0,baz=96,slow=6.9,SNR=12						
VNDA	Vanda	62.64	186	eP	P	06 26 03.0	-0.6
	1.7nm,0.7s,mb4.3						
MBWA	Marble Bar	63.76	254	P	P	06 26 12.1	+0.4
NVAR	Mina Array Bea	74.50	42	P	P	06 27 18.2	+0.6
	2.8nm,1.1s,mb4.1,baz=237,slow=12,SNR=9.6						
MNV	Mina	74.60	42	eP	P	06 27 19.4	+1.2
	7.0nm,1.3s,mb4.4						
TXAR	Lajitas Array	80.53	56	P	P	06 27 52.3	+1.0
	0.2nm,0.7s,mb3.2,baz=230,slow=7.0,SNR=2.7						
COLA	College	83.04	10	eP	P	06 28 05.5	+2.0
	11nm,1.1s,mb4.8						
ILAR	Eielson Array	83.12	11	P	P	06 28 05.2	+1.2
	1.0nm,0.7s,mb4.0,baz=221,slow=4.5,SNR=6.8						
MAW	Mawson	87.23	198	P	P	06 28 25.0	+0.8
	1.3nm,0.7s,mb4.3,baz=137,slow=5.0,SNR=4.3						
VNA3	Neumayer Olymp	91.99	175	⇑i	P	06 28 46.3	-0.3
SNAA	Sanae	92.06	177	⇑i	P	06 28 45.1	-1.9
VNA2	Neumayer--Watz	92.49	175	⇑i	P	06 28 48.2	-0.7
VNA1	Neumayer--Stat	92.69	175	⇑i	P	06 28 50.3	+0.4
GERES	GERESS Array B	147.03	352	PKPbc	PKPdf	06 35 22.5	+4.8
	0.3nm,0.4s,baz=315,slow=1.9,SNR=4.6						

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*LDG **07** 06:27:56.3±0.1, 46.80N×6.78E, h10^{km}, Md2.6/3, Ml2.6/20, Error ellipse: s-maj=1.3km s-min=0.9km az=106.0*
*STR **07** 06:27:56.8±0.5, 46.82N×6.77E, h10^{km}±1^{km}, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*CSEM **07** 06:27:56.4±0.1, 46.80N×6.79E, h15^{km}, ML2.6/17, Error ellipse: s-maj=1.1km s-min=0.8km az=95.0*
*VIE **07** 06:28:05.7±0.5, 46.50N×7.60E, h10^{km}, ML2.2/1, Error ellipse: s-maj=7.6km s-min=3.8km az=155.0*
ZUR 07 06:27:56.2, 46.81N×6.82E, h12^{km}, ML1.9/7, 7C-1D, Switzerland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORNY	Torny	0.10	109	⇑iPg	Pg	06 27 59.2	0.0
TORNY				iSg	Sg	06 28 01.4	+0.1
BRANT	Les Verrieres	0.27	299	⇓iPg	Pg	06 28 02.0	0.0
BRANT				eSg	Sg	06 28 06.4	+0.5
GIMEL	Gimel	0.47	234	⇑iPg	Pg	06 28 05.4	-0.4
AIGLE	Aigle	0.47	168	ePg	Pg	06 28 05.9	0.0
CABF	La Chapelle	0.54	249	ePg	Pg	06 28 06.7	-0.5
CABF				eSg	Sg	06 28 13.4	-1.1
	21nm,0.2s						
LOMF	Lomont	0.54	1	Pg	Pg	06 28 07.4	+0.1
LOMF				Sg	Sg	06 28 15.1	+0.4
SENIN	Lac Senin	0.56	143	⇑iPn	Pn	06 28 07.3	-2.3
GRYON	Gryon	0.59	160	iPg	Pg	06 28 07.7	-0.5
SALAN	Lac Salanfe	0.67	171	⇑iPg	Pg	06 28 09.4	-0.4
EMV	Vieux Emosson	0.75	176	⇑iPg	Pg	06 28 10.8	-0.5
BBS	Basel-Blauen	0.81	36	Pg	Pg	06 28 12.4	-0.1
BBS				Sg	Sg	06 28 24.1	+0.7
HINF	Hinteralfeld	1.01	1	ePg	Pg	06 28 15.8	-0.7
HINF				eSg	Sg	06 28 28.3	-1.7
	82nm,0.3s						
MOF	Molkenrain	1.07	12	Pg	Pg	06 28 17.1	-0.5
MOF				Sg	Sg	06 28 31.3	-0.6

HAU	**Haudompre**	**1.24**	**345**	*e*Pn	Pn	06 28 17.7	-1.7
HAU				*e*Pg	Pg	06 28 19.6	-1.5
HAU				*e*Sg	Sg	06 28 35.4	-2.3
	17nm,0.2s						
LPL	**La Plagne**	**1.29**	**183**	*e*Pn	Pn	06 28 18.6	-1.5
LPL				*e*Pg	Pg	06 28 20.7	-1.4
LPL				*e*Sg	Sg	06 28 37.4	-2.0
	6.8nm,0.3s						
LPG	**La Plagne**	**1.31**	**182**	*e*Pn	Pn	06 28 19.0	-1.4
LPG				*e*Pg	Pg	06 28 20.8	-1.7
LPG				*e*Sg	Sg	06 28 38.4	-1.6
	11nm,0.2s						
ECH	**Echery**	**1.43**	**9**	Pg	Pg	06 28 22.9	-1.9
THEF	**They Montfort**	**1.53**	**339**	Pg	Pg	06 28 25.2	-1.6
CDF	**Champ du Feu**	**1.64**	**11**	*e*Pn	Pn	06 28 23.0	-2.0
CDF				*e*P		06 28 25.3	
CDF				*e*Pg	Pg	06 28 26.6	-2.3
CDF				*e*Sg	Sg	06 28 48.1	-2.7
	8.5nm,0.2s						
WLS	**Welschbruch**	**1.65**	**13**	Pg	Pg	06 28 27.9	-1.3
SFTF	**Sexfontaines**	**1.85**	**320**	*e*Pn	Pn	06 28 26.0	-2.0
	baz=144						
SFTF				*e*Pg	Pg	06 28 30.7	-2.4
	baz=138						
SFTF				*e*Sg	Sg	06 28 53.8	-4.0
	9.8nm,0.3s						
SFTF	**Sexfontaines**	**1.85**	**320**	*e*Pg	Pg	06 28 30.7	-2.4
SFTF				*e*Sg	Sg	06 28 53.8	-4.0
	4.9nm,0.3s						
ORIF	**Oris-en-Rattie**	**2.00**	**199**	*e*Pn	Pn	06 28 28.1	-2.1
ORIF				*e*Pg	Pg	06 28 34.2	-2.0
ORIF				*e*Sg	Sg	06 28 59.3	-3.5
	10nm,0.4s						
RFYF	**Reffroy**	**2.04**	**334**	*e*Pn	Pn	06 28 28.5	-2.2
RFYF				*e*Pg	Pg	06 28 33.8	-3.1
RFYF				*e*Sg	Sg	06 29 00.1	-4.0
	8.0nm,0.2s						
SMF	**Signal de Mont**	**2.05**	**267**	*e*Pn	Pn	06 28 28.9	-2.1
SMF				*e*Pg	Pg	06 28 34.6	-2.6
SMF				*e*Sg	Sg	06 28 59.7	-4.9
	5.5nm,0.2s						
MEZF	**Maizieres J'vi**	**2.07**	**326**	*e*Pg	Pg	06 28 34.7	-2.9
LOR	**Lormes**	**2.07**	**284**	*e*Pn	Pn	06 28 29.2	-2.1
LOR				*e*Pg	Pg	06 28 34.5	-3.2
	baz=107						
LOR				*e*Sg	Sg	06 29 00.0	-5.3
	7.5nm,0.2s						
LOR	**Lormes**	**2.07**	**284**	*e*Pg	Pg	06 28 34.5	-3.2
LOR				*e*Sg	Sg	06 29 00.0	-5.3
	3.8nm,0.2s						
MBDF	**Montbardon**	**2.08**	**181**	*e*Pn	Pn	06 28 29.1	-2.3
MBDF				*e*Pg	Pg	06 28 35.9	-1.9
MBDF				*e*Sg	Sg	06 29 01.7	-3.9
	5.0nm,0.5s						
DAVA	**Damuels**	**2.15**	**76**	⇑*i*Pn	Pn	06 28 36.3	+3.9
DAVA				⇑*i*Sn	Sn	06 28 59.6	+0.5
SSF	**Saint Saulge**	**2.28**	**278**	*e*Pn	Pn	06 28 32.3	-2.0
SSF				*e*Pg	Pg	06 28 38.4	-3.4
SSF				*e*Sg	Sg	06 29 06.9	-5.4
	6.4nm,0.3s						
SSF	**Saint Saulge**	**2.28**	**278**	*e*Pg	Pg	06 28 38.4	-3.4
SSF				*e*Sg	Sg	06 29 06.9	-5.4
	3.2nm,0.3s						
AVF	**Avril sur Loir**	**2.38**	**271**	*e*Pn	Pn	06 28 33.1	-2.5
AVF				*e*Pg	Pg	06 28 40.4	-3.3
AVF				*e*Sg	Sg	06 29 10.6	-4.9
	3.5nm,0.2s						
VIVF	**Saint-Julien-l**	**2.46**	**218**	*e*Pn	Pn	06 28 34.6	-2.2
VIVF				*e*Pg	Pg	06 28 42.3	-3.1
VIVF				*e*Sg	Sg	06 29 13.1	-5.1
	6.3nm,0.3s						
BGF	**Bois d'Agland**	**2.74**	**266**	*e*Pn	Pn	06 28 38.2	-2.6
BGF				*e*Pg	Pg	06 28 46.9	-4.1
BGF				*e*Sn	Sn	06 29 10.0	-4.2
BGF				*e*Sg	Sg	06 29 22.2	-5.4
	11nm,0.5s						
TCF	**Toulx Ste Croi**	**3.22**	**262**	*e*Pn	Pn	06 28 44.6	-3.0
TCF				*e*Pg	Pg	06 28 56.0	-4.5
TCF				*e*Sg	Sg	06 29 36.2	-7.3
	1.1nm,0.2s						
LASF	**Ste Croix**	**3.43**	**218**	*e*Pn	Pn	06 28 48.1	-2.6
LASF				*e*Pg	Pg	06 28 59.5	-5.3
LASF				*e*Sg	Sg	06 29 43.2	-7.4
	2.8nm,0.4s						
GIVF	**Givet**	**3.55**	**339**	*e*Pn	Pn	06 28 49.0	-3.4
BAIF	**Baives**	**3.69**	**333**	*e*Pn	Pn	06 28 51.0	-3.3
CAF	**Calviac**	**3.81**	**242**	*e*Pn	Pn	06 28 53.1	-3.0

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*IDC **07** 06:41:16.2±5.8, 51.63N×177.25W, mb3.6/4, mb1 4.2/5, mb1mx3.7/23, mbtmp3.9/5, ML5.1/1, Error ellipse: s-maj=108.0km s-min=53.5km az=86.0*

*BJI **07** 06:41:35.0, 51.80N×174.60W, h33^{km}, mB4.7, mb4.7, Ms4.0, Msz3.8*

*NEIC **07** 06:41:39.0, 51.78N×174.62W, h34^{km}, ML3.6(AEIC), After AEIC.*

ISC 07 06:41:37.1±0.6**, 52.2N**±0.2×**174.67W**±0.09**, h75**^{km}±6^{km}**, n20,** σ**0^{s}79**/28**, mb3.8**/4**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	**Atka Island**	**0.29**	**94**	P	**P**	**06 41 48.4**	**-0.4**
ATKA				S	**S**	**06 41 56.7**	**-0.8**
GSIG	**Igitkin Island**	**0.81**	**253**	P	**P**	**06 41 53.8**	**0.0**
GSTR	**Great Sitkin T**	**0.87**	**262**	P	**P**	**06 41 55.0**	**+0.6**
GSTR				S	**S**	**06 42 06.9**	**-0.4**
GSMY	**Great Sitkin M**	**0.87**	**259**	P	**P**	**06 41 54.6**	**+0.1**
GSTD	**Great Sitkin T**	**0.93**	**260**	P	**P**	**06 41 55.4**	**+0.2**
GSTD				S	**S**	**06 42 08.0**	**-0.7**
GSSP	**Great Sitkin S**	**0.94**	**263**	P	**P**	**06 41 55.8**	**+0.5**
GSSP				S	**S**	**06 42 09.2**	**+0.3**
GSCK	**Great Sitkin C**	**0.94**	**258**	P	**P**	**06 41 55.5**	**+0.1**
GSCK				S	**S**	**06 42 08.1**	**-1.0**
ADAG	**Mount Adagdak**	**1.22**	**259**	P	**P**	**06 41 59.3**	**+0.5**
ADAG				S	**S**	**06 42 15.4**	**+0.2**
ADK	**Adak**	**1.29**	**255**	P	**P**	**06 41 59.6**	**-0.2**
ADK				S	**S**	**06 42 16.9**	**+0.1**
KIKV	**Kanaga Island**	**1.58**	**258**	P	**P**	**06 42 04.0**	**+0.2**
KICM	**Kanaga Island**	**1.59**	**260**	P	**P**	**06 42 04.3**	**+0.4**
KIMD	**Kanaga Island**	**1.65**	**255**	P	**P**	**06 42 04.8**	**+0.1**
KIMD				S	**S**	**06 42 25.4**	**+0.2**
NIKO	**Nikolski**	**3.62**	**76**	P	**P**	**06 42 35.4**	**+3.2**
UNV	**Unalaska Valle**	**5.19**	**69**	P	**P**	**06 42 56.9**	**+3.0**
KDAK	**Kodiak Island**	**13.81**	**58**	Pn	**P**	**06 44 55.8**	**+5.5**
	6.9nm,0.3s,baz=260,slow=7.6,SNR=53						
ILAR	**Eielson Array**	**18.99**	**38**	P	**P**	**06 45 54.1**	**-0.7**
	1.3nm,0.5s,baz=225,slow=10,SNR=28						
INK	**Inuvik**	**25.30**	**35**	P	**P**	**06 46 56.9**	**-0.7**
	0.7nm,0.5s,mb3.4,baz=233,slow=10,SNR=6.9						
PDAR	**Pinedale Array**	**43.61**	**76**	P	**P**	**06 49 35.1**	**-0.1**
	0.6nm,0.6s,mb3.5,baz=328,slow=2.2,SNR=5.8						
NJ2	**Nanjing**	**51.33**	**274**	*e*P	**P**	**06 50 40.3**	**+4.7**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
TXAR	**Lajitas Array**	**56.01**	**85**	P	**P**	**06 51 08.6**	**-1.4**
	comp=Z,0.3nm,0.5s,mb3.6,baz=302,slow=5.6,SNR=11						

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*LDG **07** 07:14:27.8±0.1, 46.12N×8.02E, h7^{km}, Md2.4/3, Ml2.5/17, Error ellipse: s-maj=1.5km s-min=0.7km az=92.0*

*ROM **07** 07:14:27.7±0.3, 46.07N×7.95E, h12^{km}, Md2.3/6, Ml2.0/1, Error ellipse: s-maj=4.1km s-min=2.4km az=25.0*

*NEIC **07** 07:14:27.9, 46.10N×8.00E, h6^{km}, ML2.5(LDG), ML2.1(ZUR), ML2.5(GEN), After ZUR.*

*GEN **07** 07:14:27.0, 46.14N×8.03E, h1^{km}, ML2.0*

*CSEM **07** 07:14:27.1±0.1, 46.09N×8.07E, h10^{km}, ML2.5/16, Error ellipse: s-maj=1.5km s-min=1.0km az=93.0*

ZUR 07 07:14:27.9, 46.13N×8.03E, h6^{km}±2^{km}**, ML2.1**/13**, 9C-2D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMK	**Mattmark**	**0.09**	**208**	⇑*i*Pg	Pg	07 14 30.4	+0.5
MMK				Sg	Sg	07 14 31.8	+0.5
MCGN	**Macugnaga**	**0.17**	**189**	Pg	Pg	07 14 31.6	+0.1
MCGN				Sg	Sg	07 14 33.9	-0.1
	371nm,0.3s						
LKBD	**Leukerbad**	**0.38**	**313**	*e*P	Pg	07 14 35.8	+0.3
DIX	**Grande Dixence**	**0.43**	**264**	Pg	Pg	07 14 36.0	-0.5
DIX				Sg	Sg	07 14 41.6	-0.7
DIX	**Grande Dixence**	**0.43**	**264**	*i* Sg	Sg	07 14 41.5	-0.8
DIX	**Grande Dixence**	**0.43**	**264**	⇑*i*Pg	Pg	07 14 36.0	-0.5
DIX	**Grande Dixence**	**0.43**	**264**	Pg	Pg	07 14 36.0	-0.5
DIX				*i* Sg	Sg	07 14 41.5	-0.8
ORX	**Oropa**	**0.50**	**183**	P	Pg	07 14 37.1	-0.8
ORX				S	Sg	07 14 43.8	-0.8
ORX	**Oropa**	**0.50**	**183**	P	Pg	07 14 37.1	-0.8
ORX				S	Sg	07 14 43.8	-0.8
ORO	**Oropa**	**0.50**	**183**	Pg	Pg	07 14 37.5	-0.5
ORO				Sg	Sg	07 14 44.1	-0.7
	202nm,0.2s						
FUSIO	**Fusio**	**0.55**	**53**	⇑*i*Pg	Pg	07 14 38.5	-0.4
SENIN	**Lac Senin**	**0.56**	**295**	⇑*i*P	Pg	07 14 38.8	-0.2
VAI	**Varese**	**0.58**	**117**	Pg	Pg	07 14 41.0	+1.5
	29nm,0.2s						
HASLI	**Hasliberg**	**0.63**	**8**	⇑*i*Pg	Pg	07 14 40.1	-0.5
HASLI				*e*Sg	Sg	07 14 48.5	-0.5
TRAV		**0.65**	**198**	P	Pg	07 14 39.8	-1.0
TRAV				S	Sg	07 14 48.4	-1.1
TRAV		**0.65**	**198**	P	Pg	07 14 39.8	-1.1
TRAV				S	Sg	07 14 48.4	-1.1
MUGIO	**Muggio**	**0.74**	**106**	⇑*i*Pg	Pg	07 14 41.9	-0.8
MUGIO				*i* Sg	Sg	07 14 51.4	-1.1
MUGIO	**Muggio**	**0.74**	**106**	Pg	Pg	07 14 42.0	-0.7
MUGIO				*i* Sg	Sg	07 14 51.4	-1.1
EMV	**Vieux Emosson**	**0.79**	**266**	⇑*i*Pg	Pg	07 14 42.7	-0.9
BNALP	**Bannalp**	**0.79**	**20**	⇑*i*Pg	Pg	07 14 43.0	-0.7
LSD	**Ceresole Reale**	**0.91**	**222**	P	Pb	07 14 44.8	-0.8
LSD				S	Sb	07 14 57.4	-0.4
LSD	**Ceresole Reale**	**0.91**	**222**	P	Pb	07 14 44.8	-0.9
LSD				S	Sb	07 14 57.3	-0.5
MUO	**Muotathal**	**0.94**	**27**	*e*P	Pb	07 14 46.0	-0.2
LLS	**Linth-Limmern**	**0.99**	**43**	*e*P	Pb	07 14 46.4	-0.7
LPG	**La Plagne**	**1.09**	**235**	*e*Pn	Pn	07 14 47.7	-2.0
LPG				*e*Pg	Pg	07 14 48.3	-1.4
LPG				*e*Sg	Sg	07 15 02.7	-1.6
	20nm,0.3s						
LPL	**La Plagne**	**1.09**	**236**	*e*Pn	Pn	07 14 47.6	-2.1
LPL				*e*Pg	Pg	07 14 48.2	-1.5
LPL				*e*Sg	Sg	07 15 02.9	-1.4
	25nm,0.5s						
RSP	**Reno Superiore**	**1.12**	**209**	P	Pb	07 14 48.4	-0.9
RSP				S	Sb	07 15 02.8	-1.1
RSP	**Reno Superiore**	**1.12**	**209**	P	Pb	07 14 48.4	-0.9
RSP				S	Sb	07 15 02.8	-1.1
FENE	**Fenestrelle**	**1.29**	**212**	P	Pb	07 14 50.6	-1.6
FENE	**Fenestrelle**	**1.29**	**212**	P	Pb	07 14 50.6	-1.6
BHB	**Bricherasio**	**1.40**	**203**	P	Pn	07 14 52.4	-1.6
BHB	**Bricherasio**	**1.40**	**203**	P	Pn	07 14 52.4	-1.6
CABF	**La Chapelle**	**1.43**	**290**	*e*Pg	Pg	07 14 54.4	-2.0
CABF				*e*Sg	Sg	07 15 13.0	-2.4
	16nm,0.6s						
BNI	**Bardonecchia**	**1.43**	**222**	*e*Pn	Pn	07 14 54.2	-0.4
BNI				*e*Sn	Sn	07 15 14.6	+0.7
DAVOX	**Davos**	**1.44**	**62**	⇓*i*P	Pn	07 14 54.6	0.0
RRL	**Cesana Torines**	**1.49**	**216**	P	Pn	07 14 55.1	-0.3
RRL				S	Sb	07 15 14.3	-0.5
RRL	**Cesana Torines**	**1.49**	**216**	P	Pn	07 14 55.1	-0.3
RRL				S	Sb	07 15 14.3	-0.5
FUORN	**Ofenpass**	**1.63**	**72**	*e*P	Pn	07 14 57.8	+0.5
FUORN	**Ofenpass**	**1.63**	**72**	*e*P	Pn	07 14 57.9	+0.6
MBDF	**Montbardon**	**1.66**	**213**	*e*Pn	Pn	07 14 56.0	-1.8
MBDF				*e*P		07 14 57.6	
MBDF				*e*Pg	Pg	07 14 58.7	-2.3
MBDF				*e*Sg	Sg	07 15 20.0	-3.1
	35nm,0.7s						
DAVA	**Damuels**	**1.72**	**47**	⇑*i*Pn	Pn	07 14 59.3	+0.6
DAVA				⇓*i*Sn	Sn	07 15 20.7	-0.6
HINF	**Hinteralfeld**	**1.87**	**335**	*e*Pn	Pn	07 14 58.8	-2.0
HINF				*e*Pg	Pg	07 15 02.7	-2.5
HINF				*e*Sg	Sg	07 15 27.0	-3.1
	8.6nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.93**	**232**	*e*Pg	Pg	07 15 03.7	-2.8
ORIF				*e*Sg	Sg	07 15 29.3	-3.0
	22nm,0.7s						
HAU	**Haudompre**	**2.20**	**329**	*e*Pn	Pn	07 15 03.1	-2.4
HAU				*e*Pg	Pg	07 15 08.7	-3.1
HAU				*e*Sg	Sg	07 15 37.5	-3.6
	6.0nm,0.3s						
SBF	**Sospel**	**2.31**	**191**	*e*Sg	Sg	07 15 40.5	-4.2
	11nm,0.3s						
CDF	**Champ du Feu**	**2.34**	**348**	*e*Pn	Pn	07 15 05.0	-2.5
VIVF	**Saint-Julien-l**	**2.68**	**243**	*e*Pn	Pn	07 15 09.3	-3.1
VIVF				*e*Pg	Pg	07 15 17.5	-3.9
VIVF				*e*Sg	Sg	07 15 52.0	-5.1
	1.8nm,0.3s						
FRF	**La Foret Royal**	**2.75**	**201**	*e*Pn	Pn	07 15 10.5	-2.9
FRF				*e*Sg	Sg	07 15 53.9	-5.6
	5.1nm,0.3s						
SMRF	**Simiane la Rot**	**2.77**	**220**	*e*Sn	Sn	07 15 42.4	-5.4
	1.3nm,0.3s						
SMF	**Signal de Mont**	**2.94**	**282**	*e*Pn	Pn	07 15 13.2	-2.9
SMF				*e*Pg	Pg	07 15 22.2	-4.4
SMF				*e*Sg	Sg	07 16 00.2	-5.6
	4.4nm,0.4s						
LMR	**La Mourre**	**3.00**	**202**	*e*Sg	Sg	07 16 02.0	-5.7
	2.5nm,0.3s						
LOR	**Lormes**	**3.08**	**293**	*e*Pn	Pn	07 15 15.1	-3.1
LOR				*e*Pg	Pg	07 15 25.1	-4.4
LOR				*e*Sg	Sg	07 16 04.8	-5.8
	2.2nm,0.3s						
SSF	**Saint Saulge**	**3.25**	**288**	*e*Pn	Pn	07 15 17.3	-3.2
SSF				*e*Pg	Pg	07 15 27.8	-5.0
SSF				*e*Sg	Sg	07 16 09.1	-7.1
	2.5nm,0.4s						
AVF	**Avril sur Loir**	**3.30**	**283**	*e*Pn	Pn	07 15 18.5	-2.7
AVF				*e*Sg	Sg	07 16 11.5	-6.2
	4.0nm,0.5s						

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*IDC **07** 07:54:09.4±0.7, 45.20S×97.01E, mb4.3/9, mb1 4.4/9, mb1mx4.4/13, mbtmp4.3/9, MS4.0/4, Ms1 4.0/4, ms1mx3.6/17, Error ellipse: s-maj=30.1km s-min=18.0km az=139.0*

*NEIC **07** 07:54:11.2±0.4, 45.26S×97.10E, h10^{km}, mb4.6/4, Error ellipse: s-maj=14.1km s-min=7.9km az=125.0*

ISC 07 07:54:09.2±0.6**, 45.20S**±0.10×**97.1E**±0.2**, h10**^{km}**, n38,** σ**0^{s}90**/27**, mb4.4**/13**, MS4.1**/4**, 2C-3D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CASY	**Casey**	**22.35**	**166**	*e*P	**P**	**07 59 08.3**	**-0.1**
	54nm,1.4s,mb4.8						
MAW	**Mawson**	**28.69**	**207**	P	**P**	**08 00 07.3**	**-0.6**
	2.4nm,0.9s,mb3.9,baz=31,slow=10,SNR=5.7						
MAW				LR	LR	08 09 18.8	
	comp=Z,122nm,19.3s,MS3.5,baz=177,slow=32						
FITZ	**Fitzroy Crossi**	**36.00**	**51**	P	**P**	**08 01 12.2**	**-0.1**
	7.9nm,0.7s,mb4.8,baz=205,slow=8.8,SNR=7.9						
STKA	**Stephens Creek**	**36.82**	**85**	P	**P**	**08 01 19.0**	**0.0**
	4.4nm,0.7s,mb4.4,baz=259,slow=4.2,SNR=7.8						
WRA	**Warramunga Arr**	**39.72**	**63**	P	**P**	**08 01 43.4**	**-0.1**
	9.4nm,0.9s,mb4.5,baz=223,slow=8.0,SNR=44						
WRAB	**Tennant Creek**	**39.74**	**63**	*e*P	**P**	**08 01 43.7**	**+0.1**
	12nm,1.0s,mb4.6						
VNDA	**Vanda**	**40.91**	**163**	*e*P	**P**	**08 01 52.3**	**-0.4**
	6.7nm,1.2s,mb4.2						
QSPA	**South Pole Qui**	**44.95**	**180**	⇑*i*P	**P**	**08 02 25.4**	**0.0**
	11nm,0.9s,mb4.7						
OPO	**Ambohidratompo**	**49.01**	**286**	P	**P**	**08 02 57.6**	**-0.4**
	2.2nm,0.9s,mb4.2,baz=125,slow=16,SNR=2.7						
SNAA	**Sanae**	**50.78**	**204**	⇓*i*	**P**	**08 03 10.7**	**-0.2**
SNAA	**Sanae**	**50.78**	**204**	*e*	**P**	**08 03 12.7**	**+1.8**
SNAA	**Sanae**	**50.78**	**204**	*e*	**P**	**08 03 18.2**	**+7.3**
SNAA	**Sanae**	**50.78**	**204**	P	**P**	**08 03 10.6**	**-0.3**
	3.9nm,0.8s,mb4.4,baz=129,slow=7.7,SNR=50						
VNA2	**Neumayer--Watz**	**52.43**	**204**	*e*	**P**	**08 03 25.6**	**+2.2**
VNA2	**Neumayer--Watz**	**52.43**	**204**	*e*	**P**	**08 03 29.7**	**+6.3**
VNA2	**Neumayer--Watz**	**52.43**	**204**	⇓*i*P	**P**	**08 03 23.2**	**-0.2**
VNA2				*e*	pP	08 03 25.6	-0.8
VNA2				*e*		08 03 29.7	
VNA1	**Neumayer--Stat**	**52.82**	**204**	*e*	**P**	**08 03 28.8**	**+2.5**
VNA1	**Neumayer--Stat**	**52.82**	**204**	*e*	**P**	**08 03 33.0**	**+6.7**
VNA1	**Neumayer--Stat**	**52.82**	**204**	⇑*i*P	**P**	**08 03 26.2**	**-0.1**
VNA1				*e*	pP	08 03 28.8	-0.6
VNA1				*e*		08 03 33.0	
VNA3	**Neumayer Olymp**	**52.90**	**203**	⇓*i*	**P**	**08 03 26.8**	**-0.1**
VNA3	**Neumayer Olymp**	**52.90**	**203**	*e*	**P**	**08 03 28.8**	**+1.9**
VNA3	**Neumayer Olymp**	**52.90**	**203**	*e*	**P**	**08 03 33.5**	**+6.6**
USHA	**Ushuaia**	**79.59**	**188**	LR	LR	08 39 40.8	
	comp=Z,136nm,19.8s,MS4.3,baz=76,slow=34						
CBIJ	**Chichi jima**	**82.85**	**40**	LR	LR	08 41 35.2	
	comp=Z,155nm,19.0s,MS4.4,baz=149,slow=34						
MKAR	**Makanchi Array**	**92.53**	**350**	P	**P**	**08 07 19.9**	**-1.4**
	0.6nm,0.9s,mb4.0,baz=120,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**92.53**	**350**	P	**P**	**08 07 19.9**	**-1.4**
SONM	**Songino Array**	**93.01**	**6**	P	**P**	**08 07 25.7**	**+2.3**
	0.5nm,0.8s,mb4.0,baz=225,slow=2.1,SNR=4.3						
PLCA	**Paso Flores**	**93.74**	**189**	P	**P**	**08 07 26.3**	**-0.7**
	1.5nm,0.9s,mb4.4,baz=195,slow=7.0,SNR=3.6						
PLCA	**Paso Flores**	**93.74**	**189**	P	**P**	**08 07 26.3**	**-0.7**
ASAJ	**Asahikawa**	**97.69**	**31**	LR	LR	08 53 28.2	
	comp=Z,55nm,20.1s,MS4.0,baz=316,slow=36						
JTS	**JuntasAbangare**	**145.18**	**177**	PKPbc	PKPbc	08 13 48.7	+1.1
	5.5nm,1.0s,baz=180,slow=4.0,SNR=5.4						
INK	**Inuvik**	**145.42**	**30**	PKPbc	PKPbc	08 13 48.0	+1.4
	9.5nm,1.0s,baz=296,slow=3.4,SNR=26						
INK	**Inuvik**	**145.42**	**30**	PKPbc	PKPbc	08 13 48.0	+1.4
PTRM	**Twissleman Ran**	**150.29**	**96**	*e*PKPbc	PKPdf	08 14 03.4	+5.4
MWC	**Mount Wilson**	**151.05**	**100**	*e*PKPbc	PKPdf	08 14 04.7	+5.5
NVAR	**Mina Array Bea**	**152.94**	**92**	PKPbc	PKPdf	08 14 09.5	+7.7
	2.6nm,0.7s,baz=230,slow=5.5,SNR=30						
TXAR	**Lajitas Array**	**157.23**	**127**	PKP	PKPdf	08 14 07.2	-0.6
	0.6nm,1.0s,baz=146,slow=3.3,SNR=4.3						
TXAR	**Lajitas Array**	**157.23**	**127**	PKP	PKPdf	08 14 07.2	-0.6

NDI 07 07:58:10.4±3.8**, 30.84N×78.71E, h10**^{km}**, MD2.4, ML2.7, Northern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSI	**Joshimath**	**0.79**	**111**	*e*P	Pb	07 57 41.6	-44
JOSI				*e*S	Sb	07 57 51.7	-44
JOSI				AML	AML	07 57 56.4	
	comp=E,477nm,0.7s						
JOSI				AML	AML	07 57 57.9	
	comp=N,608nm,0.6s						
KLP	**Kalpa**	**0.80**	**331**	*e*P	Pb	07 58 24.9	-0.9
KLP				*e*S	Sb	07 58 36.2	-0.2
KLP				*e*S	Sb	07 58 37.2	+0.8
KLP				AML	AML	07 58 38.7	
	comp=E,82nm,0.5s						
KLP				AML	AML	07 58 38.8	
	comp=N,67nm,0.2s						
SMLA	**Simla**	**1.35**	**283**	*e*x	x	07 58 32.5	
SMLA				*e*x	x	07 58 48.7	
SDNR	**Sundarnagar**	**1.63**	**294**	*e*P	Pn	07 58 40.6	+1.2
SDNR				*e*S	Sn	07 59 03.0	+2.5
PTH	**Pithoragarh**	**1.83**	**134**	*e*P	Pn	07 58 41.4	-0.9
PTH				*e*SB	Sb	07 59 09.1	+2.6
NDI	**New Delhi**	**2.51**	**211**	*e*x	x	07 58 44.5	
NDI				*e*S	Sn	07 59 22.5	-0.4
SONA	**Sohna**	**2.94**	**209**	*e*SG	Sg	07 59 46.7	-1.7
KUDL	**Kundal**	**3.31**	**216**	*e*P	Pn	07 59 02.5	-0.9
KUDL				*e*S	Sn	07 59 40.8	-2.4
POO	**Poona**	**13.03**	**201**	*e*x	x	07 56 44.0	

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*NEIC **07** 08:23:14.6±0.9, 52.47S×18.78E, h10^{km}, mb4.7/1, Error ellipse: s-maj=27.5km s-min=15.8km az=86.0*

*IDC **07** 08:23:14.1±1.2, 52.62S×18.46E, mb3.9/4, mb1 4.0/4, mb1mx3.9/11, mbtmp4.0/4, MS3.7/6, Ms1 3.6/6, ms1mx3.5/12, Error ellipse: s-maj=45.9km s-min=25.9km az=67.0*

ISC 07 08:23:13.0±1.2**, 52.5S**±0.1×**18.8E**±0.3**, h10**^{km}**, n19,** σ**0^{s}67**/13**, mb4.1**/5**, MS3.6**/6**, 5C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**20.13**	**5**	LR	LR	08 33 43.8	
	comp=Z,292nm,21.1s,MS3.6,baz=5.0,slow=31						
SNAA	**Sanae**	**21.51**	**199**	⇑*i*	**P**	**08 28 03.7**	**0.0**
SNAA	**Sanae**	**21.51**	**199**	*e*	**P**	**08 28 16.4**	**+13**
SNAA	**Sanae**	**21.51**	**199**	P	**P**	**08 28 03.2**	**-0.5**
	3.5nm,1.0s,mb3.8,baz=34,slow=10,SNR=16						
SNAA				LR	LR	08 34 03.3	
	comp=Z,75nm,21.4s,MS3.1,baz=24,slow=30						
SNAA	**Sanae**	**21.51**	**199**	⇑*i*P	**P**	**08 28 03.7**	**0.0**
SNAA				*e*		08 28 16.4	
VNA2	**Neumayer--Watz**	**21.94**	**203**	⇑*i*P	**P**	**08 28 07.9**	**-0.1**
VNA2				*e*		08 28 21.0	
VNA1	**Neumayer--Stat**	**21.96**	**204**	⇑*i*P	**P**	**08 28 09.4**	**+1.1**
VNA1				*e*		08 28 22.2	
VNA3	**Neumayer Olymp**	**22.70**	**204**	⇑*i*P	**P**	**08 28 15.4**	**0.0**
VNA3				*e*		08 28 27.6	
BOSA	**Boshof**	**24.31**	**14**	LR	LR	08 36 42.2	
	comp=Z,191nm,20.8s,MS3.6,baz=185,slow=33						
MAW	**Mawson**	**25.96**	**142**	P	**P**	**08 28 47.4**	**+0.6**
	2.1nm,0.8s,mb3.7,baz=289,slow=15,SNR=2.4						
MAW				LR	LR	08 36 04.0	
	comp=Z,142nm,20.9s,MS3.5,baz=46,slow=30						
LBTB	**Lobatse**	**27.90**	**13**	LR	LR	08 38 19.3	
	comp=Z,246nm,20.0s,MS3.8,baz=110,slow=32						
SBA	**Scott Base**	**48.45**	**171**	*e*P	**P**	**08 31 55.4**	**-1.3**
	12nm,1.6s,mb4.7						
DBIC	**Dimbokro**	**62.27**	**333**	P	**P**	**08 33 37.7**	**+0.3**
	4.7nm,1.0s,mb4.6,baz=112,slow=4.3,SNR=4.4						
DBIC				LR	LR	08 54 15.8	
	comp=Z,74nm,20.0s,MS3.9,baz=219,slow=30						
DBIC	**Dimbokro**	**62.27**	**333**	P	**P**	**08 33 37.7**	**+0.3**
DBIC				LR	LR	08 54 15.8	
LPAZ	**La Paz**	**75.40**	**262**	P	**P**	**08 34 58.2**	**-0.4**
	0.3nm,0.4s,mb3.6,baz=124,slow=7.3,SNR=4.6						
LPAZ	**La Paz**	**75.40**	**262**	P	**P**	**08 34 58.2**	**-0.4**
PDAR	**Pinedale Array**	**144.56**	**275**	PKP	PKPdf	08 42 49.3	-2.6
	1.7nm,0.9s,baz=121,slow=4.5,SNR=12						
NVAR	**Mina Array Bea**	**147.31**	**262**	PKPbc	PKPdf	08 42 58.6	+1.9
	1.5nm,0.8s,baz=113,slow=6.0,SNR=14						
ILAR	**Eielson Array**	**165.64**	**335**	PKPab	PKPab	08 44 19.6	+2.5
	0.5nm,0.9s,slow=3.0,SNR=5.6						

NNC 07 08:35:05.3±2.2**, 39.15N×70.10E, h10**^{km}±4^{km}**, mpv3.0, 4C-1D, Error ellipse: s-maj=17.1km s-min=9.9km az=57.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**3.97**	**4**	⇓Pn	Pn	08 36 09.6	+2.0
	0.5nm,0.3s,baz=184,slow=13,SNR=10						
KK31				⇑Sn	Sn	08 36 59.1	+4.5
	3.1nm,0.8s,baz=180,slow=29,SNR=5.5						
KK31				⇑Lg		08 37 11.6	
	2.9nm,0.6s,baz=178,slow=30,SNR=3.8						
AAK	**Ala-Archa**	**4.82**	**42**	⇑Pn	Pn	08 36 17.7	-2.0
	1.7nm,0.3s						
AB31	**Akbulak array**	**12.45**	**328**	⇑Sn	S	08 40 21.7	-3.4
	1.0nm,0.7s						

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*NIED **07** 08:35:00, 31.30N×131.60E, h32^{km}, Mw4.1 Best double couple: $M_0$1.64×10^{15} NP1:ϕ_s58°, δ62°, λ122°. NP2:ϕ_s185°, δ42°, λ45°.*

*IDC **07** 08:35:41.9±0.9, 31.19N×131.54E, mb3.8/6, mb1 3.9/8, mb1mx3.8/20, mbtmp3.8/8, ML3.4/2, MS3.3/3, Ms1 3.3/3, ms1mx2.9/27, Error ellipse: s-maj=25.0km s-min=12.8km az=81.0*

*JMA **07** 08:35:46.7±0.1, 31.26N×131.63E, h26^{km}±1^{km}, M4.0*

JMA Felt I J1.

*NEIC **07** 08:35:47.0±0.6, 31.28N×131.52E, h35^{km}, mb4.5/6, MW4.1(NIED), Error ellipse: s-maj=11.8km s-min=9.4km az=112.0*

ISC 07 08:35:45.4±0.7**, 31.21N**±0.04×**131.67E**±0.07**, h48**^{km}±6^{km}**, n29,** σ**1^{s}19**/34**, mb4.1**/10**, MS3.4**/1**, 4C-5D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNAR	**Kushima--Naru**	**0.46**	**313**	⇓P	**P**	**08 35 55.2**	**-0.8**
JNAR				S	**S**	**08 36 01.2**	**-2.4**
JTSR	**Tashiro 2**	**0.64**	**266**	⇓P	**P**	**08 35 58.5**	**+0.2**
JTSR				S	**S**	**08 36 07.5**	**-0.2**
JTN	**Tanegashima 3**	**0.81**	**227**	⇑P	**P**	**08 36 02.5**	**+1.9**
JTZ	**Takazaki**	**0.84**	**324**	⇓P	**P**	**08 36 01.4**	**+0.3**
JTZ				S	**S**	**08 36 12.8**	**+0.2**
JTSN	**Tsuno**	**1.04**	**352**	⇑P	**P**	**08 36 04.3**	**+0.5**
JSU	**Suzuyama**	**1.08**	**286**	⇓P	**P**	**08 36 05.0**	**+0.7**
JSU				*e*S	**S**	**08 36 19.3**	**+0.9**
JZO	**Okuchi**	**1.30**	**316**	⇑P	**P**	**08 36 08.1**	**+0.6**
JZO				*e*S	**S**	**08 36 24.2**	**+0.3**
JKC	**Kuchinoerabu**	**1.47**	**240**	⇓P	**P**	**08 36 11.3**	**+1.3**
JIU2	**Izumi 2**	**1.51**	**332**	⇑P	**P**	**08 36 11.3**	**+0.7**
JNU	**Nakatsue**	**2.02**	**341**	Pg	**P**	**08 36 18.7**	**+1.1**
	24nm,0.3s,baz=172,slow=7.7,SNR=47						
JNU				Lg		08 36 47.8	
	29nm,0.3s,baz=215,slow=33,SNR=13						

JNU				LR	LR	08 37 14.6	
	comp=Z,417nm,18.2s,baz=70,slow=46						
JOW	Kunigami	5.28	215	Pn	P	08 37 02.8	-1.0
	2.7nm,0.3s,baz=90,slow=15,SNR=2.8						
JOW				Sn	S	08 38 02.1	-2.0
	1.8nm,0.3s,baz=102,slow=26,SNR=2.4						
KS15	Wonju Array Si	6.96	334	ePn	P	08 37 24.6	-2.6
MAJO	Matsushiro	7.60	44	ePn	P	08 37 37.2	+1.0
MJAR	Matsushiro Arr	7.60	44	Pn	P	08 37 34.6	-1.6
	0.6nm,0.3s,baz=243,slow=12,SNR=3.7						
ASAJ	Asahikawa	15.50	31	LR	LR	08 45 05.6	
	comp=Z,121nm,19.5s,baz=352,slow=36						
ENH	Enshi	19.09	273	eP	P	08 40 07.5	+0.8
	6.7nm,0.4s						
HIA	Hailar	20.15	337	eP	P	08 40 15.8	-2.3
	34nm,2.3s						
GUMO	Guam	21.33	142	eP	P	08 40 37.5	+7.0
	89nm,1.0s,mb5.0						
SONM	Songino Array	25.43	318	P	P	08 41 10.4	+0.2
	3.0nm,0.7s,mb3.9,baz=137,slow=8.4,SNR=19						
SONM				LR	LR	08 52 39.7	
	comp=Z,103nm,18.6s,MS3.4,baz=118,slow=40						
MKAR	Makanchi Array	40.71	307	P	P	08 43 22.2	-0.7
	0.3nm,0.4s,mb3.3,baz=90,slow=11,SNR=7.2						
MKAR	Makanchi Array	40.71	307	P	P	08 43 22.2	-0.7
PMG	Port Moresby	43.03	157	P	P	08 43 40.5	-1.8
KURK	Kurchatov	43.49	312	eP	P	08 43 44.6	-0.9
	2.2nm,0.4s,mb4.2						
CHKZ	Chkalovo	48.61	316	eP	P	08 44 25.2	-0.8
	2.5nm,0.4s,mb4.6						
BRVK	Borovoye	48.79	315	eP	P	08 44 27.2	-0.1
	4.3nm,0.4s,mb4.8						
WRA	Warramunga Arr	50.93	177	P	P	08 44 45.3	+1.0
	0.3nm,0.6s,mb3.4,baz=14,slow=8.3,SNR=4.7						
ILAR	Eielson Array	58.63	30	P	P	08 45 40.8	+1.2
	0.6nm,0.7s,mb3.8,baz=267,slow=6.5,SNR=12						
STKA	Stephens Creek	63.45	171	P	P	08 46 13.8	+1.2
	0.7nm,0.5s,mb4.1,baz=328,slow=23,SNR=4.6						
NVAR	Mina Array Bea	84.91	48	P	P	08 48 19.9	+3.4
	0.5nm,0.6s,mb3.8,baz=286,slow=5.9,SNR=5.7						

*MOS **07** 08:47:13.5±1.9, 49.44N×156.23E, h89^{km}, mb4.3/1, Error ellipse: s-maj=99.9km s-min=19.9km az=72.0*

KRSC 07 08:47:13.1±1.1**, 49.26N×156.16E, h32^{km}**±12^{km}**, ML4.2, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril’s	1.43	359	eP	Pn	08 47 36.7	-0.4
SKR				eS	Sn	08 47 53.0	-1.9
ALID	Alaid	1.66	347	eP	Pn	08 47 40.9	+0.4
ALID				eS	Sn	08 48 01.1	+0.3
PAU	Pauzhetka	2.25	10	eP	Pn	08 47 50.0	+1.1
PAU				eS	Sn	08 48 16.4	+0.5
PAU				Smax			
	500nm,0.2s						
MIPR	Malaya Ipel’ka	3.04	7	eP	Pn	08 48 00.7	+0.5
MIPR				eS	Sn	08 48 35.8	-0.2
RUS	Russkaya	3.51	24	P	Pn	08 48 06.8	-0.1
RUS				S	Sn	08 48 45.7	-2.1
RUS	Russkaya	3.51	24	iP	Pn	08 48 06.9	0.0
RUS				eS	Sn	08 48 46.0	-1.8
GRL	Gorelyy	3.51	19	iP	Pn	08 48 08.3	+1.4
GRL				eS	Sn	08 48 47.6	-0.2
APC	Apacha	3.72	9	eP	Pn	08 48 11.4	+1.5
PET	Petropavlovsk	4.08	22	P	Pn	08 48 14.5	-0.5
PET				S	Sn	08 48 59.4	-2.9
PET	Petropavlovsk	4.08	22	eP	Pn	08 48 15.0	0.0
PET				eS	Sn	08 49 00.6	-1.7
UGLR	Uglovaya	4.29	22	iP	Pn	08 48 18.6	+0.6
AVH	Avacha	4.33	21	eP	Pn	08 48 18.6	+0.1
AVH				eS	Sn	08 49 08.0	-0.4
KOK	Koryaka	4.33	20	iP	Pn	08 48 19.9	+1.4
SMAR	Somma	4.34	21	eP	Pn	08 48 19.9	+1.3
SDLR	Sedlovina	4.37	22	iP	Pn	08 48 19.3	+0.2
NLC	Nalytchevo	4.40	26	P	Pn	08 48 18.6	-0.9
NLC				S	Sn	08 49 06.7	-3.6
NLC	Nalytchevo	4.40	26	eS	Sn	08 49 07.1	-3.2
SPN	Mys Shipunski	4.55	31	P	Pn	08 48 21.3	-0.3
SPN				S	Sn	08 49 11.0	-3.0
SPN	Mys Shipunski	4.55	31	eP	Pn	08 48 21.3	-0.3
SPN				eS	Sn	08 49 11.5	-2.5
GNL	Ganaly	4.58	13	eP	Pn	08 48 22.3	+0.2
KBTR	Krutoberegovo	8.04	28	P	P	08 49 08.1	-2.6
KBTR	Krutoberegovo	8.04	28	eP	P	08 49 09.1	-1.6
BKI	Bering	8.46	42	eS	Sn	08 50 38.8	-13

*IDC **07** 09:32:35.5±1.3, 34.05N×73.67E, mb3.9/7, mb1 4.1/10, mb1mx4.0/20, mbtmp4.0/10, ML4.0/3, Error ellipse: s-maj=32.9km s-min=21.5km az=42.0*
*MOS **07** 09:32:35.3±1.2, 34.10N×73.44E, h10^{km}, mb4.2/7, Error ellipse: s-maj=21.8km s-min=9.5km az=89.1*
*NEIC **07** 09:32:36.8±0.7, 34.02N×73.63E, h10^{km}, mb3.7/4, Error ellipse: s-maj=15.2km s-min=10.8km az=73.0*
*NDI **07** 09:32:36.6±4.9, 34.21N×73.64E, h10^{km}, MD3.6, ML3.5, mb3.7(NEIC)*
*NNC **07** 09:32:48.2±2.5, 34.53N×72.94E, h56^{km}±19^{km}, mpv4.0, Error ellipse: s-maj=31.0km s-min=19.1km az=57.0*

ISC 07 09:32:35.2±0.4**, 34.02N**±0.03×**73.54E**±0.07**, h10^{km}, n66,** σ1^{s}**27**/74**, mb3.9**/9**, 10C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	Srinagar	1.09	85	eP	Pb	09 32 54.5	-1.2
SRNI				ex	x	09 33 05.0	
JMU	Jammu	1.73	138	eS	Sn	09 33 33.5	+5.7
THN	Thein Dam	2.42	130	eP	Pn	09 33 19.2	+3.8
THN				ex	x	09 33 51.6	
DLH	Dalhousie	2.51	125	eP	Pn	09 33 20.0	+3.2
DLH				eSB	Sb	09 33 55.0	+4.0
BHK	Bhakra	3.55	136	ePG	Pg	09 33 45.2	-0.9
BHK				ex	x	09 34 33.2	
SDNR	Sundarnagar	3.83	130	eP	Pn	09 33 37.8	+2.3
SDNR				eSB	Sb	09 34 33.6	+4.3
SMLA	Simla	4.21	132	eP	Pn	09 33 41.7	+0.9
SMLA				ex	x	09 34 42.9	
KKR	Kurukshetra	4.91	145	ePB	Pb	09 34 01.5	+0.5
RTK	Rohtak	5.54	153	ex	x	09 34 09.9	
JOSI	Joshimath	6.16	122	ex	x	09 33 26.0	
NDI	New Delhi	6.18	148	eP	Pn	09 34 16.0	+7.3
NDI				eS	Sn	09 35 21.5	+1.3
KHET	Khetri	6.24	161	eP	Pn	09 34 10.9	+1.4
KHET				eS	Sn	09 35 18.6	-3.1
KHET				AML	AML	09 35 58.4	
	comp=E,35nm,0.4s						
KHET				AML	AML	09 36 23.6	
	comp=N,22nm,0.4s						
AYAN	Aya Nagar	6.32	150	eP	Pn	09 34 10.1	-0.6
AYAN				AML	AML	09 36 06.8	
	comp=Z,16nm,0.1s						
ASOR	Ausora	6.37	144	ex	x	09 34 22.7	
KUDL	Kundal	6.38	156	eP	Pn	09 34 12.7	+1.1
KUDL				eS	Sn	09 35 22.4	-2.9
KUDL				AML	AML	09 36 11.9	
	comp=Z,26nm,0.4s						
SONA	Sohna	6.50	151	eP	Pn	09 34 14.4	+1.1
SONA				eS	Sn	09 35 27.5	-0.8
PTH	Pithoragarh	7.22	126	eP	Pn	09 34 27.2	+3.8
PTH				eS	Sn	09 35 44.9	-1.4
AJM	Ajmer	7.57	172	eP	Pn	09 34 26.8	-1.5
AJM				ex	x	09 35 40.9	
AGRA	Agra	7.76	150	ex	x	09 34 43.6	
AGRA				eS	Sn	09 35 53.5	-6.2
AGRA				AML	AML	09 36 53.0	
	comp=N,75nm,0.3s						
AGRA				AML	AML	09 36 57.2	
	comp=E,110nm,0.3s						
AML	Almayashu	8.10	1	P	P	09 34 37.5	+1.8
	SNR=8.8						
KZA	Kyzart	8.16	9	P	P	09 34 37.6	+1.1
	SNR=18						
UCH	Uchtor	8.23	5	P	P	09 34 38.7	+1.1
	SNR=23						
ULHL	Ulahol	8.48	14	P	P	09 34 41.1	0.0
	SNR=7.0						
EKS2	Erkin-Say	8.63	1	P	P	09 34 44.9	+1.8
	SNR=18						
AAK	Ala-Archa	8.63	5	⇓Pn	P	09 34 44.7	+1.6
	comp=E,6.1nm,0.9s						
AAK				⇑Sn	Sn	09 36 21.0	-0.6
	comp=E,15nm,0.6s						
AAK	Ala-Archa	8.63	5	ePn	P	09 34 43.3	+0.2
	comp=E,4.1nm,0.5s						
AAK				eSn	Sn	09 36 05.4	-16
TKM2	Tokmak 2	9.03	10	P	Sn	09 36 30.8	-0.7
	SNR=9.2						
KK31	Karatay Array	9.38	346	⇑Pn	P	09 34 53.5	+0.1
	comp=E,2.2nm,0.3s,baz=171,slow=15,SNR=49						
KK31				⇑Sn	Sn	09 36 33.1	-6.9
	comp=E,3.7nm,0.3s,baz=174,slow=23,SNR=9.6						
BHPL	Bhopal	11.27	161	eP	P	09 35 17.1	-2.2
BHPL				eS	S	09 37 16.4	-10
BHPL				AML	AML	09 38 23.4	
	comp=N,11nm,0.4s						
BHPL				AML	AML	09 38 42.2	
	comp=E,13nm,0.5s						
BLSP	Bilaspur	14.05	145	ex	x	09 38 39.0	
MK31	Makanchi Array	14.38	25	⇑P	P	09 36 05.8	+5.0
	comp=E,1.2nm,0.6s,baz=209,slow=12,SNR=7.8						
MKAR	Makanchi Array	14.38	25	Pn	P	09 35 59.8	-1.0
	comp=E,0.1nm,0.3s,baz=207,slow=14,SNR=5.5						
POO	Poona	15.43	179	ex	x	09 37 52.0	
LSA	Lhasa	15.57	101	eP	P	09 36 19.9	+3.5
	comp=E,9.5nm,0.9s						
KURK	Kurchatov	17.10	11	⇑P	P	09 36 34.9	-0.8
	comp=E,4.9nm,1.7s						
KURK	Kurchatov	17.10	11	ePn	P	09 36 34.9	-0.8
	comp=E,5.2nm,0.8s						
AB31	Akbulak array	18.26	331	P	P	09 36 50.4	+0.1
	comp=E,1.6nm,0.5s,baz=141,slow=13,SNR=36						
AB31				⇑S	S	09 40 03.2	-7.9
	comp=E,1.0nm,0.7s,baz=149,slow=23,SNR=4.4						
VOSK	Vostochnaya	18.79	355	⇑P	P	09 36 56.3	-0.4
	comp=E,2.9nm,0.8s						
BVA0	Borovoye Array	19.13	354	P	P	09 37 00.4	-0.4
	comp=E,0.8nm,0.8s,baz=157,slow=14,SNR=24						
BVAR	Borovoye Array	19.13	354	P	P	09 37 00.6	-0.2
	comp=E,1.3nm,0.3s,baz=159,slow=10,SNR=18						
BVAR	Borovoye Array	19.13	354	P	P	09 37 00.6	-0.2
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	19.18	354	eP	P	09 37 00.9	-0.4
	comp=Z,3.6nm,0.6s						
BRVK				eS	S	09 40 36.7	+4.9
CHKZ	Chkalovo	19.76	355	⇑P	P	09 37 06.4	-1.6
	comp=Z,5.7nm,1.6s						
CHKZ	Chkalovo	19.76	355	eP	P	09 37 06.5	-1.6
	comp=Z,1.7nm,0.5s						
AKTO	Aktyubinsk	19.96	330	⇑P	P	09 37 10.4	+0.1
	comp=Z,1.4nm,0.8s						
AKTO	Aktyubinsk	19.96	330	P	P	09 37 10.6	+0.4
	comp=Z,1.5nm,0.3s,baz=132,slow=11,SNR=25						
AKTO	Aktyubinsk	19.96	330	P	P	09 37 10.6	+0.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	Zalesovo	21.45	18	P	P	09 37 23.9	-1.6
	comp=Z,3.8nm,0.4s,mb4.1,baz=253,slow=6.2,SNR=8.4						
ZAL	Zalesovo	21.45	18	P	P	09 37 23.9	-1.6
ZAL	Zalesovo	21.45	18	P	P	09 37 23.9	-1.6
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SONM	Songino Array	28.16	51	P	P	09 38 29.1	-0.4
	comp=Z,0.8nm,0.8s,mb3.4,baz=254,slow=11,SNR=7.7						
SONM	Songino Array	28.16	51	P	P	09 38 29.1	-0.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
OBN	Obninsk	33.17	321	eP	P	09 39 14.8	+1.1
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
AKASG	Malin Array Be	36.13	311	P	P	09 39 39.1	0.0
	comp=Z,0.7nm,0.4s,mb4.0,baz=82,slow=7.9,SNR=7.0						
AKASG	Malin Array Be	36.13	311	P	P	09 39 39.2	0.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ARCES	ARCESS Array B	44.22	338	P	P	09 40 46.2	+0.4
	comp=Z,1.5nm,0.5s,mb4.0,baz=112,slow=8.0,SNR=12						
ARCES	ARCESS Array B	44.22	338	P	P	09 40 46.2	+0.4
ARCES	ARCESS Array B	44.22	338	P	P	09 40 46.2	+0.4
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TIXI	Tiksi	47.32	21	⇑iP	P	09 41 08.1	-2.3
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
NB2	NORSAR Subarra	47.61	324	P	P	09 41 12.5	-0.3
	comp=Z,2.5nm,0.6s,mb4.4,baz=97,slow=7.4						
NOA	NORSAR Array B	47.61	324	P	P	09 41 12.8	+0.1
	comp=Z,2.7nm,0.7s,mb4.4,baz=95,slow=7.5,SNR=28						
NOA	NORSAR Array B	47.61	324	P	P	09 41 12.9	+0.1
NOA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	76.58	17	P	P	09 44 26.1	-0.8
	comp=Z,0.2nm,0.5s,mb3.4,baz=294,slow=5.0,SNR=6.3						
WRA	Warramunga Arr	78.91	123	P	P	09 44 40.8	+0.2
	comp=Z,1.8nm,0.7s,mb4.1,baz=323,slow=5.3,SNR=24						
WRA	Warramunga Arr	78.91	123	P	P	09 44 40.8	+0.2
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WB2	Warramunga Arr	78.92	123	eP	P	09 44 40.5	-0.2

WEL 07 09:40:29.1±0.5**, 35.58S×179.59E, h262^{km}**±5^{km}**, ML3.9**/11**, Error ellipse: s-maj=17.0km s-min=8.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.23	207	PN	P	09 41 14.7	-0.3
MXZ				SN	S	09 41 50.3	-0.3
MXZ				SN	S	09 41 50.9	+0.3
PUZ	Puketiti	2.71	203	PN	P	09 41 19.4	-0.2
PUZ				SN	S	09 41 58.5	-0.5
MWZ	Matawai	3.21	210	PN	P	09 41 24.8	-0.1
MWZ				SN	S	09 42 09.3	+0.9
URZ	Urewera	3.33	216	PN	P	09 41 24.8	-1.6
URZ				SN	S	09 42 10.3	-0.5
KNZ	Kokohu	3.76	203	PN	P	09 41 31.4	+0.3
BKZ	Black Stump Fm	4.35	214	PN	P	09 41 36.9	-1.1
BKZ				SN	S	09 42 31.0	-0.7
PXZ	Pawanui	4.94	205	PN	P	09 41 44.2	-0.9
PXZ				SN	S	09 42 44.5	+0.1
TSZ	Takapari Road	5.32	212	PN	P	09 41 47.4	-2.2
BFZ	Birch Farm	5.74	206	PN	P	09 41 54.0	-0.7
MRZ	Mangatainoka R	5.98	211	PN	P	09 41 55.2	-2.5
KIW	Kapiti Island	6.43	214	PN	P	09 42 00.1	-3.3
CAW	Cannon Point	6.56	211	PN	P	09 42 01.9	-3.2
TCW	Tory Channel	7.00	215	PN	P	09 42 06.7	-3.9
TUWZ	Tuamarina	7.33	215	PN	P	09 42 10.6	-4.1
THZ	Tophouse	8.09	218	ePN	P	09 42 17.5	-6.8
KHZ	Kahutara	8.29	213	PN	P	09 42 23.5	-3.4

*IPEC **07** 09:44:00.1±0.2, 49.80N×18.56E, ML2.4/4, Error ellipse: s-maj=2.0km s-min=1.0km az=166.0*
*PRU **07** 09:44:01.8, 49.85N×18.40E*
*NEIC **07** 09:44:01.4±0.6, 49.85N×18.43E, h5^{km}, ML2.6(BRA), Error ellipse: s-maj=9.6km s-min=6.4km az=201.0*
*VIE **07** 09:44:01.6±0.3, 49.70N×18.41E, mb2.3/3, ML2.7/3, Error ellipse: s-maj=2.5km s-min=1.4km az=79.0, Suspected Mining induced.*
*CSEM **07** 09:44:01.1±0.2, 49.91N×18.47E, h2^{km}, ML3.1/4, Error ellipse: s-maj=3.5km s-min=2.6km az=16.0*

ISC 07 09:44:00.7±0.3**, 49.79N**±0.02×**18.40E**±0.03**, n30,** σ1^{s}**29**/61**, 2C-4D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.17	288	ePG	Pg	09 44 05.7	+1.6
OKC				eSG	Sg	09 44 09.0	+2.7
	1µm,0.9s						
OKC	Ostrava-Krasne	0.17	288	ePg	Pg	09 44 05.6	+1.5
OKC				eSg	Sg	09 44 09.0	+2.7
RAC	Raciborz	0.33	336	ePg	Pg	09 44 07.8	+0.6
RAC				eSg	Sg	09 44 13.8	+2.3
MORC	Moravsky Berou	0.55	270	ePg	Pg	09 44 12.4	+0.7
MORC				eSg	Sg	09 44 21.4	+2.3
MORC	Moravsky Berou	0.55	270	ePg	Pg	09 44 12.4	+0.7
MORC				eSg	Sg	09 44 20.9	+1.8
	62nm,0.3s						
LIKS	Likavka	0.87	148	ePN	Pn	09 44 20.3	+0.4
LIKS				eSN	Sn	09 44 33.9	+0.4
OJC	Ojcow	1.00	64	ePg	Pg	09 44 17.8	-2.9
OJC				eSg	Sg	09 44 33.5	-0.6
VRAC	Vranov	1.27	249	ePg	Pg	09 44 25.5	-0.5
VRAC				eSg	Sg	09 44 43.4	+0.5
	62nm,0.6s						
NIE	Niedzica	1.30	106	ePg	Pg	09 44 24.7	-1.9
NIE				eSg	Sg	09 44 43.6	-0.3
VYHS	Vyhne	1.32	167	ePN	Pn	09 44 26.1	-0.3
VYHS				eSN	Sn	09 44 45.1	+0.1
SMOL	Smolenice	1.42	207	ePN	Pn	09 44 28.1	+0.3
SMOL				eSN	Sn	09 44 47.9	+0.4
DPC	Dobruska-Polom	1.45	294	ePG	Pg	09 44 27.9	-1.8
DPC				eSG	Sg	09 44 48.6	-0.4
	32nm,0.3s						
DPC	Dobruska-Polom	1.45	294	ePn	Pn	09 44 28.1	-0.1
DPC				eSg	Sg	09 44 48.4	-0.6
KRUC	Moravsky	1.49	242	ePn	Pn	09 44 29.2	+0.4
KRUC				eSg	Sg	09 44 50.2	-0.2
	18nm,0.3s						
KSP	Ksiaz	1.71	309	ePn	Pn	09 44 31.7	-0.3
KSP				ePg	Pg	09 44 33.8	-1.1
KSP				eSn	Sn	09 44 56.2	+1.3
KSP				eSg	Sg	09 44 57.6	-0.1
KSP	Ksiaz	1.71	309	ePn	Pn	09 44 30.9	-1.1
KSP				ePg	Pg	09 44 32.5	-2.4
KSP				eSg	Sg	09 44 55.9	-1.9
KSP	Ksiaz	1.71	309	ePg	Pg	09 44 32.5	-2.4
KSP				eSg	Sg	09 44 55.9	-1.9
ZST	Bratislava	1.80	209	ePN	Pn	09 44 33.6	+0.3
ZST				eSN	Sn	09 44 58.5	+1.3
STHS	Stebnicka Huta	1.89	100	ePN	Pn	09 44 35.9	+1.4
STHS				eSN	Sn	09 45 02.9	+3.6
KECS	Kecovo	1.89	133	eP	Pn	09 44 33.1	-1.4
KECS				eSn	Sn	09 44 59.3	-0.1
PSZ	Piszkesteto	2.11	152	⇓iPB	Pb	09 44 41.7	+2.1
PSZ	Piszkesteto	2.11	152	⇓iP	Pn	09 44 41.8	+4.1
PSZ				eSn	Sn	09 45 04.1	-0.9
PSZ	Piszkesteto	2.11	152	eSn	Sn	09 45 04.1	-1.0
CRVS	Cervenica-Dubn	2.19	113	ePN	Pn	09 44 40.4	+1.6
PRU	Pruhonice	2.50	276	ePG	Pg	09 44 46.2	-4.4
PRU				eSG	Sg	09 45 20.5	-3.5
	8.8nm,0.4s						
KOLS	Kolonicke sedl	2.67	107	ePN	Pn	09 44 49.1	+3.4
KHC	Kasperske Hory	3.21	260	ePN	Pn	09 44 53.5	+0.1
KHC				ePG	Pg	09 45 00.0	-4.8
KHC				eSN	Sn	09 45 33.2	+0.3
KHC				eSG	Sg	09 45 43.1	-4.5
	7.0nm,0.4s						
MOA	Molln	3.35	236	⇑iPn	Pn	09 44 54.9	-0.4
MOA				⇓iPg	Pg	09 45 04.6	-2.9
MOA				⇑iSn	Sn	09 45 35.3	-1.0
MOA				⇓iSg	Sg	09 45 50.5	-1.6
	comp=Z,6.2nm,0.5s						
CLL	Collm	3.76	296	eSG	Sg	09 45 58.0	-8.0
NKC	Novy Kostel	3.86	279	eSG	Sg	09 46 03.8	-5.5

NNC 07 09:48:04.7±1.6**, 38.49N×72.25E, h168^{km}**±20^{km}**, mpv2.7, 3C-2D, Error ellipse: s-maj=19.9km s-min=12.3km az=25.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	4.48	22	⇑P	P	09 49 11.2	-1.2
	0.6nm,0.3s						
AAK				⇓S	S	09 50 05.2	+0.5
	2.1nm,0.6s						
KK31	Karatay Array	4.80	345	⇑P	P	09 49 15.8	-0.7
	0.2nm,0.2s,baz=169,slow=12,SNR=7.8						
KK31				⇓S	S	09 50 11.5	-0.5
	1.0nm,0.5s,baz=166,slow=24,SNR=8.1						
AB31	Akbulak array	13.93	325	⇑P	P	09 51 14.8	-0.9
	0.4nm,0.6s,baz=139,slow=12,SNR=6.4						

MAN 07 09:54:44.2, 7.75N×124.55E, h41^{km}, mb4.5, ML3.3, MS3.2, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.52	76	eP	P	09 54 56.5	+1.2
BUKP				eS	S	09 55 04.3	+1.2
CGP	Cagayan de Oro	0.71	11	⇓eP	P	09 54 58.4	+0.6
CGP				eS	S	09 55 08.8	+1.0
KCP	Kidapawan	0.91	144	⇑eP	P	09 55 02.6	+1.9
KCP				eS	S	09 55 17.0	+4.2
PAGZ	Pagadian	1.16	275	eP	P	09 55 03.7	-0.5
PAGZ				eS	S	09 55 18.5	-0.7
DCPH	Dipolog City	1.45	305	⇓eP	P	09 55 09.8	+1.5
DCPH				eS	S	09 55 27.6	+1.3
SNPH	Sibulan	2.05	321	eP	P	09 55 21.0	+4.1

*NIED **07** 10:35:00, 40.10N×142.80E, h23^{km}, Mw4.9 Best double couple: M$_0$2.25×10^{16} NP1:ϕ_s23°, δ72°, λ99°. NP2:ϕ_s177°, δ20°, λ66°.*
*IDC **07** 10:35:45.3±0.6, 39.97N×142.75E, mb4.6/18, mb1 4.8/20, mb1mx4.7/23, mbtmp4.6/20, ML4.4/2, MS4.3/20, Ms1 4.3/20, ms1mx4.2/29, Error ellipse: s-maj=16.6km s-min=15.7km az=127.0*
*BJI **07** 10:35:48.5, 39.97N×142.77E, h38^{km}, mB5.3, mb5.0, Ms4.6, Msz4.4*
*JMA **07** 10:35:49.2±0.2, 40.10N×142.82E, h24^{km}±2^{km}, M4.9*
JMA Felt II J1.
*MOS **07** 10:35:49.2±1.1, 40.11N×142.70E, h32^{km}, mb5.3/40, MS4.6/14, Error ellipse: s-maj=11.3km s-min=5.2km az=103.4*
*HRVD **07** 10:35:51.9±0.5, 40.28N×142.72E, h30^{km}, MW5.0/50, Centroid moment Tensor Solution. LP body waves: s28,c42;Mantle waves: s50,c80; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.25±.17; M$_{\theta\theta}$0.16±.13; M$_{\phi\phi}$-2.41±.11; M$_{r\theta}$1.73±.21; M$_{\theta\phi}$-0.76±.11; M$_{\phi r}$2.62±.16; Best double couple: M$_0$3.982×10^{16} NP1:ϕ_s178°, δ21°, λ60°. NP2:ϕ_s30°, δ72°, λ101°. Principal axes: T 3.89, Plg62°, Azm316°; N .185, Plg10°, Azm207°; P -4.074, Plg26°, Azm111°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **07** 10:35:51.9±0.2, 40.13N×142.76E, mb5.1/68, MS4.7/2, MW4.8(NIED) Error ellipse: s-maj=5.1km s-min=3.4km az=147.0*

ISC 07 10:35:50.1±0.2**, 40.08N**±0.03×**142.77E**±0.03**, h38^{km}, h38^{km}**±1.0^{km}**:pP-P, n360,** σ1^{s}**03**/355**, mb5.0**/121**, MS4.4**/37**, 45C-32D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.71	259	⇓P	P	10 36 03.6	-0.1
JTH				S	S	10 36 13.0	-0.6
MIYJ	Miyakonagasawa	0.89	236	⇓P	P	10 36 06.1	-0.1
MIYJ				S	S	10 36 18.5	+0.5
JANG	Nango	1.00	288	⇓P	P	10 36 07.8	-0.1
JANG				S	S	10 36 21.3	+0.2
JKZ	Kuzumaki	1.11	266	P	P	10 36 09.7	+0.3
JOM	Ohasama	1.29	243	P	P	10 36 12.7	+0.8
JOM				eS	S	10 36 30.6	+2.3
OFUJ	Ofunato	1.31	221	P	P	10 36 13.0	+0.7
JTM	Tenmabayashi	1.48	299	⇓P	P	10 36 15.5	+0.8
JTM				S	S	10 36 36.1	+3.0
JAH	Hinai	1.64	275	⇓P	P	10 36 18.2	+1.2
JMK	Ichinoseki	1.64	227	⇓P	P	10 36 18.3	+1.3
JOT	Ohata	1.85	315	P	P	10 36 20.7	+0.8
ASAJ	Asahikawa	4.04	358	Pn	P	10 36 50.6	-0.5
	20nm,0.3s,baz=213,slow=9.7,SNR=148						
ASAJ				Sn	S	10 37 38.2	+0.4
	54nm,0.3s,baz=35,slow=25,SNR=6.2						
ASAJ				LR	LR	10 39 02.2	
	comp=Z,5µm,21.9s,baz=190,slow=48						
ASAJ	Asahikawa	4.04	358	P	P	10 36 50.6	-0.5
ASAJ						10 37 38.3	
ASAJ				pmax	pmax		
	comp=Z,20nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,5µm,21.9s						
YUK	Yuzh-Kuril’sk	4.58	29	eP	P	10 36 55.6	-3.2
YUK				eS	S	10 37 43.1	-8.3
YUK				pmax	pmax		
	comp=Z,2µm,0.7s						
YUK				pmax	pmax		
	comp=E,440nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1µm,0.5s						
YUK				pmax	pmax		
	comp=N,460nm,0.5s						
YUK				smax			

	comp=N,20µm,1.4s						
YUK				smax			
	comp=E,15µm,1.0s						
YUK				smax			
	comp=N,8µm,0.5s						
YUK				smax			
	comp=E,4µm,0.4s						
YUK				MLR	MLR		
	comp=Z,3µm,14.0s						
YUK				MLR	MLR		
	comp=E,5µm,15.0s						
MAJO	**Matsushiro**	**5.03**	**227**	*e*Pn	**P**	**10 37 06.8**	**+1.6**
	comp=E,391nm,0.9s						
MAT	**Matsushiro**	**5.03**	**227**	P	**P**	**10 37 06.6**	**+1.4**
MAT	**Matsushiro**	**5.03**	**227**	*e*P	**P**	**10 37 07.0**	**+1.8**
	comp=E,182nm,0.9s						
MAT				S	**S**	**10 38 18.0**	**+15**
MJAR	**Matsushiro Arr**	**5.03**	**227**	Pn	**P**	**10 37 06.8**	**+1.6**
	comp=E,6.8nm,0.3s,baz=31,slow=14,SNR=118						
MJAR				LR	LR	10 39 07.8	
	comp=E,2µm,21.8s,baz=45,slow=41						
MJAR	**Matsushiro Arr**	**5.03**	**227**	P	**P**	**10 37 06.8**	**+1.6**
MJAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,2µm,21.8s						
KUR	**Kuril'sk**	**6.38**	**34**	⇓*i*P	**P**	**10 37 19.0**	**-5.1**
KUR				*i* S	**S**	**10 38 27.2**	**-9.3**
KUR				pmax	pmax		
	comp=Z,210nm,0.6s						
KUR				smax			
	comp=N,640nm,0.6s						
KUR				smax			
	comp=E,460nm,0.6s						
KUR				smax			
	comp=N,5µm,2.0s						
KUR				smax			
	comp=E,4µm,2.0s						
YSS	**Yuzh-Sakhalins**	**6.88**	**360**	*e*Pn	**P**	**10 37 30.0**	**-1.0**
	comp=E,156nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.88**	**360**	⇑*e*P	**P**	**10 37 31.0**	**-0.1**
YSS				*e*S	**S**	**10 38 42.5**	**-6.4**
YSS				pmax	pmax		
	comp=Z,70nm,1.1s						
YSS				smax			
	comp=N,250nm,1.1s						
YSS				MLR	MLR		
	comp=Z,2µm,20.0s						
YSS				MLR	MLR		
	comp=N,2µm,19.0s						
JHJ	**Hachijo jima 2**	**7.35**	**200**	Pn	**P**	**10 37 32.6**	**-5.0**
	comp=N,16nm,0.3s,baz=237,slow=22,SNR=3.3						
JHJ				Sn	**S**	**10 38 54.5**	**-6.2**
	comp=N,13nm,0.3s,baz=104,slow=16,SNR=3.5						
VLA	**Vladivostok**	**8.70**	**294**	*e*P	**P**	**10 37 58.3**	**+1.9**
VLA				pmax	pmax		
	comp=Z,72nm,0.7s						
VLA				MLR	MLR		
	comp=Z,3µm,17.0s						
VLA				MLR	MLR		
	comp=Z,3µm,13.5s						
VLA				MLR	MLR		
	comp=Z,1µm,20.8s						
UGL	**Uglegorsk**	**9.02**	**357**	*e*P	**P**	**10 38 02.0**	**+1.2**
UGL				pmax	pmax		
	comp=Z,53nm,0.6s						
UGL				MLR	MLR		
	comp=N,3µm,18.0s						
UGL				MLR	MLR		
	comp=Z,2µm,18.0s						
UGL				MLR	MLR		
	comp=E,2µm,20.0s						
MDJ	**Mudanjiang**	**10.75**	**299**	P	**P**	**10 38 24.7**	**+0.1**
MDJ				AP		10 38 33.3	
MDJ				XP		10 38 35.8	
MDJ				S	**S**	**10 40 24.9**	**+0.1**
MDJ				PCP	PcP	10 44 22.6	-1.2
MDJ				AMB	AMB		
	comp=Z,40nm,1.4s						
MDJ				AMB	AMB		
	comp=Z,270nm,4.2s						
MDJ				LR	LR		
	comp=N,920nm,16.4s						
MDJ				LR	LR		
	comp=E,2µm,15.3s						
MDJ				LR	LR		
	comp=Z,3µm,17.4s						
MDJ	**Mudanjiang**	**10.75**	**299**	*e*Pn	**P**	**10 38 24.9**	**+0.3**
	comp=Z,99nm,1.0s						
JNU	**Nakatsue**	**11.80**	**238**	Pn	**P**	**10 38 39.8**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=118,slow=12,SNR=6.3						
JNU				LR	LR	10 43 19.9	
	comp=Z,754nm,20.2s,baz=15,slow=39						
KS15	**Wonju Array Si**	**11.92**	**262**	*e*Pn	**P**	**10 38 43.4**	**+3.1**
KLR	**Kul'dur**	**12.04**	**323**	*e*P	**P**	**10 38 39.0**	**-3.0**
KLR				MLR	MLR		
	comp=E,2µm,13.0s						
KLR				MLR	MLR		
	comp=Z,6µm,13.0s						
CBIJ	**Chichi jima**	**12.96**	**182**	Pn	**P**	**10 38 53.0**	**-1.2**
	comp=Z,3.6nm,0.3s,baz=287,slow=20,SNR=2.4						
CN2	**Changchun**	**13.42**	**292**	*e*P	**P**	**10 39 01.7**	**+1.4**
CN2				*e*XP		10 39 14.7	
CN2				*e*S	**S**	**10 41 30.1**	**+1.0**
CN2				AMB	AMB		
	comp=Z,20nm,1.3s						
CN2				AMB	AMB		
	comp=Z,550nm,5.0s						
CN2				LR	LR		
	comp=N,890nm,17.0s						
CN2				LR	LR		
	comp=E,1µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,19.0s						
PET	**Petropavlovsk**	**16.89**	**35**	*i* P	**P**	**10 39 46.7**	**+1.7**
PET	**Petropavlovsk**	**16.89**	**35**	*i* P	**P**	**10 39 46.6**	**+1.6**
HIA	**Hailar**	**18.72**	**307**	*e*P	**P**	**10 40 04.4**	**-3.4**
	comp=Z,75nm,1.2s						
SSE	**Sheshan**	**19.67**	**250**	P	**P**	**10 40 13.3**	**-5.3**
SSE				S	**S**	**10 43 52.5**	**-0.6**
SSE				XS		10 44 06.9	
SSE				AMB	AMB		
	comp=Z,30nm,1.1s						
SSE				LR	LR		
	comp=N,310nm,20.0s						
SSE				LR	LR		
	comp=E,200nm,20.0s						
SSE				LR	LR		
	comp=Z,280nm,22.5s						
SSE	**Sheshan**	**19.67**	**250**	P	**P**	**10 40 13.3**	**-5.3**
	comp=Z,37nm,1.1s						
SSE				pP		10 40 21.2	
SSE				sP		10 40 25.4	
SSE				S	**S**	**10 43 52.5**	**-0.6**
SSE				sS		10 44 06.9	
MA2	**Magadan**	**20.16**	**12**	*e*P	**P**	**10 40 22.1**	**-1.6**
	comp=Z,39nm,0.8s						
MA2				*e*pP		10 40 32.3	
MA2	**Magadan**	**20.16**	**12**	*e*P	**P**	**10 40 22.3**	**-1.4**
MA2				*e*		10 44 11.9	
MA2				pmax	pmax		
	comp=Z,10.0nm,0.3s						
CLNS	**Chul'man**	**20.43**	**331**	*d i*P	**P**	**10 40 24.5**	**-2.0**
CLNS				*e*		10 40 42.7	
CLNS				*e*PPP	PPP	10 40 50.7	-6.2
CLNS				pmax	pmax		
	comp=N,30nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,73nm,0.7s						
CLNS				pmax	pmax		
	comp=E,24nm,1.5s						
CLNS				pmax	pmax		
	comp=Z,57nm,0.7s						
CLNS				pmax	pmax		
	comp=N,134nm,1.1s						
CLNS				pmax	pmax		
	comp=E,27nm,0.7s						
CLNS				MLR	MLR		
	comp=Z,2µm,15.0s,MS4.5						
CLNS				MLR	MLR		
	comp=N,600nm,14.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,800nm,19.0s,MS4.3						
TIA	**Tai'an**	**20.51**	**267**	*e*P	**P**	**10 40 25.0**	**-2.5**
TIA				AMB	AMB		
	comp=Z,30nm,1.1s						

NJ2	**Nanjing**	**20.88**	**255**	*e*P	**P**	**10 40 29.3**	**-2.1**
NJ2				AP		10 40 38.2	
NJ2				XP		10 40 43.0	
NJ2				PP	PP	10 40 48.2	-6.0
NJ2				S	**S**	**10 44 14.0**	**-3.1**
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,620nm,4.5s						
NJ2				LR	LR		
	comp=N,3µm,19.7s,MS4.7						
NJ2				LR	LR		
	comp=E,1µm,15.9s,MS4.7						
NJ2				LR	LR		
	comp=Z,630nm,18.2s,MS4.0						
CIT	**Chita**	**23.36**	**310**	*e*P	**P**	**10 40 58.9**	**+3.2**
CIT				*e*		10 41 04.2	
CIT				pmax	pmax		
	comp=Z,264nm,1.4s,mb5.5						
YAK	**Yakutsk**	**23.38**	**344**	*e*P	**P**	**10 40 53.2**	**-2.6**
	comp=Z,141nm,0.9s,mb5.4						
YAK				*e*pP		10 41 08.6	
YAK	**Yakutsk**	**23.38**	**344**	*e*P	**P**	**10 40 53.1**	**-2.7**
YAK				*e**PP		10 41 02.3	
YAK				*e*PPP	PPP	10 41 28.9	-9.1
YAK				*e*		10 44 37.5	
YAK				*e*S	**S**	**10 44 59.8**	**-2.7**
YAK				*e*SS	SS	10 45 44.8	-5.8
YAK				*e*SSS	SSS	10 45 59.1	-7.8
YAK				*e*		10 51 59.7	
YAK				pmax	pmax		
	comp=Z,78nm,0.9s,mb5.1						
YAK				pmax	pmax		
	comp=N,26nm,1.0s						
YAK				pmax	pmax		
	comp=E,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.6						
YAK				pmax	pmax		
	comp=N,25nm,1.2s						
YAK				pmax	pmax		
	comp=E,14nm,1.0s						
YAK				smax			
	comp=N,18nm,2.1s						
YAK				smax			
	comp=E,15nm,1.0s						
SEY	**Seymchan**	**23.61**	**11**	⇑*e*P	**P**	**10 40 56.2**	**-1.8**
HHC	**Hu-ho-hao-te**	**23.70**	**282**	⇓P	**P**	**10 40 57.7**	**-1.4**
HHC				AP		10 41 07.1	
HHC				XP		10 41 11.1	
HHC				PP	PP	10 41 31.4	-1.1
HHC				S	**S**	**10 45 08.1**	**-0.1**
HHC				XS		10 45 23.2	
HHC				SS	SS	10 45 58.5	+0.1
HHC				SCP		10 48 16.6	
HHC				PCS		10 48 20.5	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
HHC				AMB	AMB		
	comp=Z,120nm,5.4s						
HHC				LR	LR		
	comp=N,330nm,21.4s,MS4.3						
HHC				LR	LR		
	comp=E,1µm,19.0s,MS4.3						
HHC				LR	LR		
	comp=Z,1µm,14.1s,MS4.6						
BTO	**Baotou**	**24.89**	**282**	*e*P	**P**	**10 41 09.3**	**-1.4**
WHN	**Wuhan**	**24.98**	**257**	P	**P**	**10 41 10.5**	**-1.1**
WHN				S	**S**	**10 45 19.0**	**-11**
WHN				LR	LR		
	comp=N,2µm,24.0s						
WHN				LR	LR		
	comp=E,2µm,14.4s						
WHN				LR	LR		
	comp=Z,2µm,17.3s						
BOD	**Bodaibo**	**25.62**	**323**	*e*P	**P**	**10 41 16.3**	**-1.1**
BOD				pmax	pmax		
	comp=Z,121nm,0.9s,mb5.4						
GUMO	**Guam**	**26.45**	**175**	LR	LR	10 51 06.3	
	comp=Z,405nm,19.8s,MS4.0,baz=14,slow=35						
SONM	**Songino Array**	**27.11**	**299**	P	**P**	**10 41 30.8**	**-0.5**
	comp=Z,9.8nm,0.8s,mb4.4,baz=106,slow=10.0,SNR=59						
SONM				LR	LR	10 52 48.6	
	comp=Z,2µm,18.7s,MS4.6,baz=79,slow=38						
SONM	**Songino Array**	**27.11**	**299**	P	**P**	**10 41 30.8**	**-0.5**
SONM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,2µm,18.7s						
XAN	**Xi'an**	**27.57**	**268**	P	**P**	**10 41 33.4**	**-2.2**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
XAN				LR	LR		
	comp=E,500nm,17.2s						
XAN				LR	LR		
	comp=Z,690nm,17.2s,MS4.3						
ENH	**Enshi**	**28.77**	**261**	*e*P	**P**	**10 41 45.1**	**-1.2**
	comp=Z,57nm,1.1s,mb5.2						
IRK	**Irkutsk**	**28.96**	**308**	*e*P	**P**	**10 41 46.1**	**-1.7**
IRK				pmax	pmax		
	comp=Z,38nm,1.7s,mb4.8						
ZAK	**Zakamensk**	**29.34**	**304**	⇑*i*P	**P**	**10 41 50.5**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
GZH	**Guangzhou**	**30.06**	**245**	P	**P**	**10 41 51.9**	**-6.1**
GZH				LR	LR		
	comp=N,400nm,21.1s,MS4.2						
GZH				LR	LR		
	comp=E,360nm,20.5s,MS4.2						
GZH				LR	LR		
	comp=Z,610nm,21.1s,MS4.2						
LZH	**Lanzhou**	**30.73**	**275**	*e*P	**P**	**10 42 00.6**	**-3.2**
LZH				PP	PP	10 43 01.0	-4.3
LZH				*e*S	**S**	**10 46 59.0**	**-3.8**
LZH				SS	SS	10 48 41.0	-5.4
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,310nm,4.2s						
LZH				LR	LR		
	comp=N,780nm,15.0s						
LZH				LR	LR		
	comp=Z,1µm,17.2s,MS4.6						
LZH	**Lanzhou**	**30.73**	**275**	*e*P	**P**	**10 42 00.6**	**-3.2**
	comp=Z,30nm,1.2s,mb5.0						
LZH				pP	pP	10 42 05.4	-9.0
LZH				sP	sP	10 42 08.5	-11
LZH				PP	PP	10 43 01.0	-4.3
LZH				*e*S	**S**	**10 46 59.0**	**-3.8**
LZH				sS		10 47 14.1	
LZH				SS	SS	10 48 41.0	-5.4
LZH				LR	LR		
	comp=Z,1µm,17.2s,MS4.6						
BILL	**Bilibino**	**30.81**	**17**	*e*P	**P**	**10 42 03.0**	**-1.1**
	comp=Z,30nm,1.1s,mb5.0						
BILL				*e*pP	pP	10 42 16.7	+1.9
BILL	**Bilibino**	**30.81**	**17**	⇓*e*P	**P**	**10 42 02.9**	**-1.3**
BILL				*e**PP	pP	10 42 17.6	+2.8
BILL				*e*		10 44 58.6	
BILL				*e*SS	SS	10 48 48.4	+0.4
BILL				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
BILL				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.0						
MOY	**Mondy**	**30.90**	**306**	*e*P	**P**	**10 42 04.8**	**-0.3**
MOY				pmax	pmax		
	comp=Z,64nm,3.1s						
TIXI	**Tiksi**	**32.42**	**352**	*i* P	**P**	**10 42 15.0**	**-3.2**
TIXI	**Tiksi**	**32.42**	**352**	*e*P	**P**	**10 42 14.5**	**-3.7**
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,228nm,15.0s,MS4.0						
GTA	**Gaotai**	**32.80**	**283**	P	**P**	**10 42 21.5**	**-0.4**
GTA				AP	pP	10 42 31.1	-1.5
GTA				XP	sP	10 42 34.9	-2.6
GTA				PP	PP	10 43 32.5	+0.4
GTA				PCP	PcP	10 45 06.3	-0.2
GTA				S	**S**	**10 47 36.8**	**+1.6**
GTA				XS		10 47 53.2	
GTA				PCS		10 48 49.3	
GTA				SS	SS	10 49 38.3	+3.3
GTA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.2						
GTA				AMB	AMB		

	comp=Z,130nm,5.0s						
GTA				LR	LR		
	comp=N,450nm,20.3s,MS4.6						
GTA				LR	LR		
	comp=E,1µm,18.7s,MS4.6						
GTA				LR	LR		
	comp=Z,2µm,19.1s,MS4.7						
CD2	**Chengdu**	**32.84**	**266**	*e*P	**P**	**10 42 20.4**	**-1.9**
CD2				S	**S**	**10 47 34.1**	**-1.7**
CD2				SS	SS	10 49 33.4	-2.5
CD2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
CD2				LR	LR		
	comp=N,290nm,13.2s						
CD2				LR	LR		
	comp=Z,340nm,13.2s,MS4.2						
GYA	**Guiyang**	**32.87**	**257**	⇑*i*P	**P**	**10 42 21.4**	**-1.2**
GYA				AP	pP	10 42 32.2	-1.1
GYA				XP	sP	10 42 38.6	+0.4
GYA				S	**S**	**10 47 32.7**	**-3.7**
GYA				AMB	AMB		
	comp=Z,80nm,1.5s,mb5.4						
GYA				AMB	AMB		
	comp=Z,70nm,3.0s						
GYA				LR	LR		
	comp=N,630nm,16.8s,MS4.5						
GYA				LR	LR		
	comp=E,670nm,20.4s,MS4.5						
GYA				LR	LR		
	comp=Z,700nm,18.8s,MS4.4						
QIZ	**Qiongzhong**	**35.20**	**243**	P	**P**	**10 42 40.0**	**-2.7**
QIZ				XP	sP	10 42 53.7	-4.6
QIZ				PP	PP	10 43 56.5	-5.8
QIZ				S	**S**	**10 48 08.1**	**-4.5**
QIZ				PCS		10 49 00.2	
QIZ				LR	LR		
	comp=N,290nm,21.2s						
QIZ				LR	LR		
	comp=Z,380nm,18.5s,MS4.2						
KMI	**Kunming**	**36.55**	**258**	P	**P**	**10 42 53.8**	**-0.3**
KMI				AP	pP	10 43 02.4	-2.4
KMI				PP	PP	10 44 21.6	+2.7
KMI				PPP	PPP	10 44 42.9	+3.9
KMI				S	**S**	**10 48 39.9**	**+6.6**
KMI				XS		10 48 53.9	
KMI				SCP		10 48 56.5	
KMI				PCS		10 48 59.9	
KMI				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.3						
KMI				AMB	AMB		
	comp=Z,160nm,3.5s						
KMI				LR	LR		
	comp=N,610nm,15.1s,MS4.7						
KMI				LR	LR		
	comp=E,710nm,16.1s,MS4.7						
KMI				LR	LR		
	comp=Z,900nm,16.7s,MS4.6						
KMI	**Kunming**	**36.55**	**258**	P	**P**	**10 42 53.8**	**-0.3**
	comp=Z,57nm,1.1s,mb5.3						
KMI				pP	pP	10 43 02.4	-2.4
KMI				PP	PP	10 44 21.6	+2.7
KMI				PPP	PPP	10 44 42.9	+3.9
KMI				S	**S**	**10 48 39.9**	**+6.6**
KMI				sS		10 48 53.9	
KMI				ScP		10 48 56.5	
KMI				PcS		10 48 59.9	
KMI				SS	SS	10 51 12.3	+12
KMI				SSS	SSS	10 51 43.7	+13
KMI				LR	LR		
	comp=Z,900nm,16.7s,MS4.6						
WMQ	**Urumqi**	**40.50**	**294**	⇑*i*P	**P**	**10 43 27.2**	**+0.4**
WMQ				AP	pP	10 43 38.2	+0.6
WMQ				XP	sP	10 43 42.7	+0.3
WMQ				PP	PP	10 45 04.8	+1.2
WMQ				PCP	PcP	10 45 29.7	+0.2
WMQ				PPP	PPP	10 45 32.2	+0.6
WMQ				SCP		10 49 14.1	
WMQ				PCS		10 49 19.2	
WMQ				S	**S**	**10 49 32.2**	**-0.7**
WMQ				XS		10 49 53.2	
WMQ				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,260nm,3.0s						
WMQ				LR	LR		
	comp=N,260nm,19.1s,MS4.2						
WMQ				LR	LR		
	comp=E,240nm,19.0s,MS4.2						
WMQ				LR	LR		
	comp=Z,280nm,20.2s,MS4.1						
ZAL	**Zalesovo**	**40.73**	**310**	P	**P**	**10 43 27.9**	**-0.7**
	comp=Z,21nm,0.7s,mb4.9,baz=21,slow=8.9,SNR=86						
ZAL				LR	LR	11 01 43.1	
	comp=Z,1µm,18.6s,MS4.8,baz=49,slow=38						
ZAL	**Zalesovo**	**40.73**	**310**	P	**P**	**10 43 27.9**	**-0.7**
ZAL				LR	LR	11 01 43.1	
ZAL	**Zalesovo**	**40.73**	**310**	P	**P**	**10 43 27.9**	**-0.7**
ZAL				pmax	pmax		
	comp=Z,21nm,0.7s						
ZAL				MLR	MLR		
	comp=Z,1µm,18.6s						
NVS	**Novosibirsk**	**41.57**	**311**	⇑*i*P	**P**	**10 43 34.3**	**-1.1**
NVS				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.8						
NVS				pmax	pmax		
	comp=E,28nm,1.1s						
LSA	**Lhasa**	**43.06**	**273**	P	**P**	**10 43 46.0**	**-2.0**
LSA	**Lhasa**	**43.06**	**273**	*e*P	**P**	**10 43 49.2**	**+1.2**
	comp=E,22nm,1.0s,mb4.8						
LSA				*e*pP	pP	10 44 00.5	+1.6
MKAR	**Makanchi Array**	**43.47**	**300**	P	**P**	**10 43 50.8**	**-0.3**
	comp=E,17nm,0.8s,mb4.8,baz=83,slow=9.6,SNR=107						
MKAR				LR	LR	11 02 56.0	
	comp=E,801nm,18.9s,MS4.7,baz=91,slow=38						
MKAR	**Makanchi Array**	**43.47**	**300**	*i* P	**P**	**10 43 50.7**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,17nm,0.8s						
KDAK	**Kodiak Island**	**44.15**	**44**	P	**P**	**10 43 56.8**	**+0.4**
	comp=Z,8.4nm,0.8s,mb4.5,baz=292,slow=11,SNR=6.1						
SHL	**Shillong**	**44.56**	**267**	*e*P	**P**	**10 44 01.0**	**+0.8**
SHL				*e*x	x	10 48 40.0	
KURK	**Kurchatov**	**44.95**	**306**	*e*P	**P**	**10 44 02.2**	**-0.7**
	comp=Z,58nm,0.6s,mb5.6						
KURK				*e*pP	pP	10 44 13.8	-0.1
PMR	**Palmer**	**45.57**	**38**	*e*P	**P**	**10 44 07.3**	**-0.4**
	comp=Z,28nm,1.2s,mb5.1						
PMR				*e*pP	pP	10 44 19.6	+0.9
COLA	**College**	**45.95**	**34**	*e*P	**P**	**10 44 11.2**	**+0.4**
	comp=Z,15nm,0.8s,mb5.0						
COLA	**College**	**45.95**	**34**	*i* P	**P**	**10 44 11.2**	**+0.5**
ILAR	**Eielson Array**	**46.37**	**34**	P	**P**	**10 44 13.4**	**-0.6**
	comp=Z,3.1nm,0.8s,mb4.3,baz=261,slow=5.0,SNR=33						
ILAR				LR	LR	11 05 33.5	
	comp=Z,142nm,19.6s,MS3.9,slow=38						
ILAR	**Eielson Array**	**46.37**	**34**	P	**P**	**10 44 13.4**	**-0.6**
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ILAR				MLR	MLR		
	comp=Z,142nm,19.6s						
JIRN	**Jiri**	**47.86**	**273**	*e*P	**P**	**10 44 26.4**	**+0.2**
	comp=Z,39nm,0.6s,mb5.6						
GUN	**Gumba**	**47.97**	**274**	*e*P	**P**	**10 44 27.3**	**+0.2**
	comp=Z,96nm,0.6s,mb6.0						
KSM	**Kuching**	**48.42**	**226**	*e*P	**P**	**10 44 31.2**	**+0.5**
KKN	**Kakani**	**48.49**	**274**	*e*P	**P**	**10 44 31.0**	**-0.1**
	comp=Z,83nm,0.8s,mb5.8						
PKI	**Pulchoki**	**48.50**	**274**	*e*P	**P**	**10 44 30.7**	**-0.5**
	comp=Z,29nm,0.7s,mb5.4						
DMN	**Daman**	**48.71**	**274**	*e*P	**P**	**10 44 32.6**	**-0.2**
	comp=Z,93nm,1.1s,mb5.7						
GKN	**Gorkha**	**48.87**	**274**	*e*P	**P**	**10 44 33.8**	**-0.2**
	comp=Z,58nm,0.7s,mb5.7						
ULHL	**Ulahol**	**48.97**	**295**	P	**P**	**10 44 34.5**	**-0.1**
	SNR=17						
CHKZ	**Chkalovo**	**49.06**	**311**	*e*P	**P**	**10 44 34.3**	**-0.8**
	comp=Z,64nm,1.0s,mb5.6						
CHKZ	**Chkalovo**	**49.06**	**311**	P	**P**	**10 44 34.2**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.4						
TKM2	**Tokmak 2**	**49.17**	**297**	P	**P**	**10 44 36.5**	**+0.4**
	SNR=72						
BVA0	**Borovoye Array**	**49.36**	**311**	*i* P	**P**	**10 44 36.9**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**49.41**	**311**	*e*P	**P**	**10 44 37.4**	**-0.5**

	comp=Z,26nm,0.8s,mb5.3						
BRVK				epP	pP	10 44 48.5	-0.3
KBK	Karagaybulak	49.71	296	P	P	10 44 40.6	+0.3
	SNR=37						
KZA	Kyzart	49.72	296	P	P	10 44 41.4	+1.0
	SNR=12						
CHMS	Chumysh	49.72	297	P	P	10 44 40.0	-0.4
	SNR=5.7						
KOLN	Koldanda	49.78	275	eP	P	10 44 40.9	-0.2
USP	Ospenovka	49.80	297	P	P	10 44 40.5	-0.4
	SNR=15						
AAK	Ala-Archa	50.03	297	P	P	10 44 42.4	-0.3
	SNR=14						
AAK	Ala-Archa	50.03	297	eP	P	10 44 41.4	-1.4
	comp=Z,18nm,0.9s,mb5.1						
AAK				epP	pP	10 44 52.7	-1.0
BOK	Bokaro	50.11	269	eP	P	10 44 44.0	+0.3
UCH	Uchtor	50.17	296	P	P	10 44 44.3	+0.5
	SNR=15						
KSH	Kashi	50.19	292	eP	P	10 44 46.1	+2.1
KSH				eAP	pP	10 44 54.0	-1.0
KSH				eXP	sP	10 44 59.1	-0.5
KSH				eS	S	10 51 54.0	+2.1
KSH				eSCS	ScS	10 54 32.0	+3.1
KSH				AMB	AMB		
	comp=Z,120nm,1.6s,mb5.7						
KSH				LR	LR		
	comp=N,550nm,6.0s						
KSH				LR	LR		
	comp=E,490nm,6.2s						
EKS2	Erkin-Say	50.51	297	P	P	10 44 46.1	-0.3
	SNR=13						
AML	Almayashu	50.77	296	P	P	10 44 49.1	+0.7
	SNR=10						
INK	Inuvik	51.20	28	P	P	10 44 51.0	-0.3
	comp=E,6.7nm,0.8s,mb4.7,baz=283,slow=6.4,SNR=52						
INK	Inuvik	51.20	28	eP	P	10 44 51.2	-0.1
	comp=E,14nm,0.9s,mb4.9						
INK				epP	pP	10 44 58.6	-3.7
INK	Inuvik	51.20	28	P	P	10 44 51.0	-0.3
INK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KULM	Kulim	51.28	239	eP	P	10 44 52.8	+0.1
KULM				epP	pP	10 45 03.4	-0.2
KKAR	Karatay Array	52.56	299	i P	P	10 45 00.8	-1.0
KKAR				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
KAKA	Kakadu	53.39	193	eP	P	10 45 24.7	+16
	comp=Z,21nm,0.8s,mb5.1						
THN	Thein Dam	53.47	284	eP	P	10 45 07.6	-1.1
BLSP	Bilaspur	53.91	270	eP	P	10 45 11.1	-1.1
BLSP				AMb	AMB	10 45 12.5	
	comp=Z,30nm,0.5s,mb5.5						
BLSP				eS	S	10 52 46.9	+3.7
NDI	New Delhi	54.18	279	eP	P	10 45 12.0	-2.0
AB31	Akbulak array	56.82	309	i P	P	10 45 31.6	-1.2
AB31				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
BHPL	Bhopal	56.91	274	eP	P	10 45 32.6	-1.1
BHPL				ex	x	10 52 18.1	
AKTO	Aktyubinsk	57.46	311	P	P	10 45 36.1	-1.2
AKTO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ORR	Orenburg	58.81	313	eP	P	10 45 45.6	-1.1
ORR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
ORR				MLR	MLR		
	comp=Z,460nm,18.0s,MS4.6						
HYB	Hyderabad	59.37	267	i P	P	10 45 50.0	-1.1
HYB				e	pP	10 46 00.5	-1.8
HYB	Hyderabad	59.37	267	eP	P	10 45 50.0	-1.1
FITZ	Fitzroy Crossi	60.04	199	eP	P	10 45 54.4	-1.3
	comp=Z,11nm,0.9s,mb4.9						
WRAB	Tennant Creek	60.21	189	eP	P	10 45 54.9	-1.9
	comp=Z,32nm,0.9s,mb5.4						
WRAB				epP	pP	10 46 06.0	-2.0
WRAB	Tennant Creek	60.21	189	i P	P	10 45 54.6	-2.2
WB2	Warramunga Arr	60.22	189	eP	P	10 45 54.5	-2.4
WB2				e	pP	10 46 05.8	-2.3
WRA	Warramunga Arr	60.22	189	P	P	10 45 54.7	-2.2
	comp=Z,6.3nm,1.0s,mb4.6,baz=6.5,slow=7.2,SNR=31						
WRA	Warramunga Arr	60.22	189	P	P	10 45 54.7	-2.2
WRA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
APA	Apatity	60.36	335	⇓iP	P	10 45 55.7	-1.5
APA				i		10 46 03.6	
APA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
YKA	Yellowknife Ar	60.66	31	P	P	10 45 58.5	-0.8
	comp=Z,0.6nm,0.5s,mb4.0,baz=303,slow=6.2,SNR=5.0						
YKA				LR	LR	11 16 57.7	
	comp=Z,95nm,18.3s,MS4.0,baz=285,slow=41						
YKA	Yellowknife Ar	60.66	31	P	P	10 45 58.5	-0.8
YKA				LR	LR	11 16 57.7	
YKA	Yellowknife Ar	60.66	31	P	P	10 45 58.5	-0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA				MLR	MLR		
	comp=Z,95nm,18.3s						
KEV	Kevo	60.98	339	ep	P	10 45 55.2	-6.2
ARCES	ARCESS Array B	61.53	339	P	P	10 46 04.2	-0.9
	comp=Z,7.8nm,0.8s,mb4.9,baz=51,slow=7.8,SNR=11						
ARCES				LR	LR	11 18 19.9	
	comp=Z,236nm,18.4s,MS4.4,baz=240,slow=42						
KLMR	Klimovskoe	61.77	327	eP	P	10 46 03.2	-3.6
KLMR				e		10 48 20.6	
KLMR				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.5						
KLMR				pmax	pmax		
	comp=Z,150nm,6.1s						
POO	Poona	62.33	272	eP	P	10 46 12.7	+1.6
KAD	Karad	62.79	270	eP	P	10 46 13.2	-1.0
KAD				AMb	AMB	10 46 14.7	
	comp=Z,56nm,0.9s,mb5.7						
DAG	Danmarks Havn	62.84	355	⇓iP	P	10 46 12.3	-1.5
	comp=Z,20nm,1.0s,mb5.2						
DAG	Danmarks Havn	62.84	355	⇓eP	P	10 46 12.3	-1.5
	comp=Z,20nm,1.0s,mb5.2						
DAG	Danmarks Havn	62.84	355	⇓eP	P	10 46 12.3	-1.5
DAG				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.2						
JOF	Joensuu	63.79	332	ep	P	10 46 18.0	-2.0
ASPA	Alice Springs	63.95	189	eP	P	10 46 20.4	-1.3
KAF	Kangasniemi	66.10	333	ep	P	10 46 32.7	-2.2
	comp=Z,14nm,0.8s,mb5.0,baz=44,slow=5.8						
KAF	Kangasniemi	66.10	333	eP	P	10 46 32.7	-2.2
KAF				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
OBN	Obninsk	66.31	323	⇓eP	P	10 46 35.9	-0.5
OBN				LR	LR		
	comp=Z,900nm,23.0s,MS4.9						
OBN	Obninsk	66.31	323	⇓eP	P	10 46 35.9	-0.5
OBN				e*PP	pP	10 46 48.3	+0.5
OBN				e		10 47 04.7	
OBN				e		10 49 01.0	
OBN				eSS	SS	10 59 37.3	-2.4
OBN				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
OBN				MLR	MLR		
	comp=Z,900nm,23.0s,MS4.9						
EDM	Edmonton	66.32	40	eP	P	10 46 35.8	-0.6
EDM				epP	pP	10 46 48.3	+0.4
FINES	FINESS Array B	66.62	332	P	P	10 46 37.6	-0.7
	comp=Z,19nm,0.7s,mb5.2,baz=45,slow=8.1,SNR=40						
FINES				LR	LR	11 17 51.4	
	comp=Z,542nm,19.9s,MS4.8,baz=206,slow=38						
FINES	FINESS Array B	66.62	332	P	P	10 46 37.6	-0.7
FINES				pmax	pmax		
	comp=Z,19nm,0.7s						
FINES				MLR	MLR		
	comp=Z,542nm,19.9s						
NEW	Newport	67.23	46	eP	P	10 46 40.7	-1.5
	comp=Z,6.2nm,0.9s,mb4.6						
NEW				epP	pP	10 46 54.9	+1.1
SUMG	Summit	67.64	0	eP	P	10 46 45.1	+0.6
	comp=Z,34nm,1.1s,mb5.3						
VSU	Vasula	68.38	329	i P	P	10 46 49.1	-0.2
GOF	Gofitskoye	68.88	312	eP	P	10 46 49.5	-3.1
GOF				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
MOD	Modoc	69.05	53	eP	P	10 46 54.4	+0.7
	comp=Z,4.6nm,0.8s,mb4.5						
MOD				epP	pP	10 47 05.7	+0.4
BMO	Blue Mountains	69.11	49	eP	P	10 46 54.3	+0.2
	comp=Z,7.7nm,1.1s,mb4.5						
BMO				epP	pP	10 47 06.8	+1.2
ZEI	Tsey	69.71	309	eP	P	10 46 55.1	-2.7
ZEI				i *PP	pP	10 47 05.6	-3.7
ZEI				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
KIV	Kislovodsk	69.73	311	eP	P	10 46 58.5	+0.7
	comp=Z,59nm,1.0s,mb5.5						
KIV				epP	pP	10 47 09.1	-0.2
KIV	Kislovodsk	69.73	311	eP	P	10 46 58.3	+0.5
KIV				pmax	pmax		
	comp=N,37nm,0.9s						
KIV				pmax	pmax		
	comp=Z,73nm,0.9s,mb5.6						
KIV				MLR	MLR		
	comp=N,203nm,16.0s,MS4.6						
KIV				MLR	MLR		
	comp=E,173nm,16.0s,MS4.6						
KIV				MLR	MLR		
	comp=Z,353nm,16.0s,MS4.7						
WVOR	Wild Horse Val	69.75	51	eP	P	10 46 58.4	+0.4
	comp=Z,8.4nm,1.1s,mb4.6						
WVOR				epP	pP	10 47 08.2	-1.3
GNI	Garni	70.75	306	i P	P	10 47 04.7	+0.6
GNI	Garni	70.75	306	i P	P	10 47 04.6	+0.5
GNI				pmax	pmax		
	comp=Z,38nm,1.7s						
GNI				MLR	MLR		
	comp=Z,400nm,25.0s						
WBK	Wadi Bani Khal	71.23	284	⇓P	P	10 47 07.5	+0.1
	SNR=12						
BANOM	Banah	71.25	288	⇑P	P	10 47 07.1	-0.3
	SNR=6.7						
CMB	Columbia Colle	71.26	56	eP	P	10 47 07.8	+0.5
	comp=Z,3.4nm,0.8s,mb4.3						
BIDO	Bidbid	71.32	285	⇑P	P	10 47 08.3	+0.4
STKA	Stephens Creek	71.60	181	LR	LR	11 17 49.5	
	comp=Z,137nm,18.6s,MS4.2,baz=24,slow=35						
SMDO	Samad	71.65	285	⇑P	P	10 47 10.3	+0.5
SOC	Sochi	71.66	312	d iP	P	10 47 09.0	-0.6
SOC				e		10 47 29.4	
SOC				eS	S	10 56 28.2	+3.0
SOC				e		10 57 08.0	
SOC				eSS	SS	11 01 03.2	+0.2
SOC				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.3						
SOC				MLR	MLR		
	comp=Z,188nm,16.0s,MS4.5						
NB2	NORSAR Subarra	71.79	337	P	P	10 47 09.2	-0.8
	comp=Z,25nm,0.8s,mb5.2,baz=38,slow=6.2						
NB2	NORSAR Subarra	71.79	337	P	P	10 47 09.2	-0.8
	baz=38,slow=6.2						
NOA	NORSAR Array B	71.79	337	P	P	10 47 09.5	-0.5
	comp=Z,22nm,0.8s,mb5.1,baz=38,slow=6.1,SNR=49						
NOA				LR	LR	11 23 00.6	
	comp=Z,186nm,18.8s,MS4.4,baz=20,slow=39						
NOA	NORSAR Array B	71.79	337	P	P	10 47 09.5	-0.5
NOA				pmax	pmax		
	comp=Z,22nm,0.8s						
NOA				MLR	MLR		
	comp=Z,186nm,18.8s						
HOQ	Hoqain	71.89	286	⇓P	P	10 47 11.1	-0.2
JMDO	Jabal Madar	72.02	284	⇓P	P	10 47 11.8	-0.2
	SNR=11						
NAO	NORSAR Subarra	72.08	337	P	P	10 47 09.2	-2.5
	comp=Z,25nm,0.8s,mb5.2						
ASHO	Ashiyiah	72.16	287	⇑P	P	10 47 12.6	-0.2
	SNR=9.2						
ANN	Anapa	72.19	314	eP	P	10 47 21.7	+9.1
ANN				e*PP	pP	10 47 32.4	+8.3
ANN				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.4						
ANN				MLR	MLR		
	comp=Z,614nm,22.0s,MS4.8						
NVAR	Mina Array Bea	72.34	55	P	P	10 47 14.6	+0.9
	comp=Z,1.2nm,0.8s,baz=296,slow=4.9,SNR=7.3						
NVAR				LR	LR	11 14 03.3	
	comp=Z,78nm,20.7s,MS4.0,baz=320,slow=32						
NVAR	Mina Array Bea	72.34	55	P	P	10 47 14.6	+0.9
NVAR				LR	LR	11 14 03.2	
BSY	Bisya	72.47	285	⇓P	P	10 47 14.6	-0.1
	SNR=7.2						
AKASG	Malin Array Be	72.54	322	P	P	10 47 14.0	-0.6
	comp=Z,11nm,0.6s,mb4.9,baz=44,slow=5.9,SNR=48						
AKASG	Malin Array Be	72.54	322	P	P	10 47 14.0	-0.6
AKASG				pmax	pmax		
	comp=Z,11nm,0.6s						
ARQ	Araqi	72.62	286	⇑P	P	10 47 15.4	-0.1
SFJD	Kangerlussuaq	72.77	5	LR	LR	11 21 33.8	
	comp=Z,408nm,18.3s,MS4.7,baz=319,slow=38						
SUW	Suwalki	72.90	328	eP	P	10 47 16.5	-0.1
SUW	Suwalki	72.90	328	eP	P	10 47 16.5	-0.1
IMW	Indian Meadow	73.30	46	eP	P	10 47 19.7	+0.5
	comp=Z,4.9nm,0.6s,mb4.6						
RRI2	Red Ridge	73.43	47	eP	P	10 47 21.2	+1.2
	comp=Z,11nm,1.0s,mb4.8						
RRI2				epP	pP	10 47 30.8	-0.7
SIM	Simferopol’	73.91	316	eP	P	10 47 22.1	-0.6
SIM	Simferopol’	73.91	316	eP	P	10 47 23.0	+0.3
SIM				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.3						
SIM				MLR	MLR		
	comp=Z,510nm,18.3s,MS4.8						
HWUT	Hardware Ranch	74.41	49	eP	P	10 47 23.8	-1.9
	comp=Z,8.5nm,1.2s,mb4.5						
DUG	Dugway	74.58	50	eP	P	10 47 26.0	-0.7
	comp=Z,4.4nm,0.8s,mb4.4						
BORG	Borgarnes	74.77	353	LR	LR	11 20 47.3	
	comp=Z,190nm,21.9s,MS4.3,baz=223,slow=36						
PDAR	Pinedale Array	74.79	47	P	P	10 47 27.9	+0.1
	comp=Z,0.9nm,0.5s,mb4.0,baz=274,slow=0.4,SNR=15						
ARUT	Antelope Range	75.74	53	eP	P	10 47 34.7	+1.3
MVU	Marysvale	76.02	51	eP	P	10 47 35.2	+0.3
	comp=Z,5.1nm,1.2s,mb4.3						
MVU				epP	pP	10 47 47.2	+0.7
MSU	Marysvale	76.04	51	eP	P	10 47 35.7	+0.6
KWP	Kalwaria	76.28	325	eP	P	10 47 36.8	+0.6
KWP				e	pP	10 47 48.8	+1.0
KWP	Kalwaria	76.28	325	eP	P	10 47 36.8	+0.6
KWP				e	pP	10 47 48.8	+1.1
ULM	Lac du Bonnet	76.39	34	P	P	10 47 35.9	-0.9
	comp=Z,2.9nm,0.7s,mb4.3,baz=322,slow=7.0,SNR=5.8						
ULM	Lac du Bonnet	76.39	34	P	P	10 47 35.9	-0.9
SHAO	Shalim	76.49	282	⇑P	P	10 47 35.9	-2.2
BURAR	Bucovina Array	76.58	322	⇑P	P	10 47 38.1	+0.1
BURAR	Bucovina Array	76.58	322	⇑P	P	10 47 38.1	+0.1
CFR	Carcaliu	76.87	319	⇓P	P	10 47 39.0	-0.7
CFR	Carcaliu	76.87	319	⇓P	P	10 47 39.0	-0.7
KOLS	Kolonicke sedl	76.98	324	eP	P	10 47 40.0	-0.2
STHS	Stebnicka Huta	77.08	325	eP	P	10 47 41.3	+0.5
OJC	Ojcow	77.10	326	eP	P	10 47 41.1	+0.2
OJC				ePcP	PcP	10 47 53.2	+1.3
TIRR	Tirgusor	77.23	318	⇑P	P	10 47 41.8	+0.1
TIRR	Tirgusor	77.23	318	⇑P	P	10 47 41.8	+0.1
CRVS	Cervenica-Dubn	77.37	325	eP	P	10 47 42.3	-0.1
ISR	Istrita	77.72	319	⇑P	P	10 47 44.6	+0.2
ISR	Istrita	77.72	319	⇑P	P	10 47 44.6	+0.3
MLR	Muntele Rosu	77.75	320	⇓P	P	10 47 44.7	+0.2
MLR	Muntele Rosu	77.75	320	⇓P	P	10 47 47.8	+3.3
MLR	Muntele Rosu	77.75	320	⇓P	P	10 47 44.7	+0.2
BSEG	Bad Segeberg	77.83	333	eP	P	10 47 45.2	+0.4
BSEG				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.2						
RBK	Rabkut	77.88	283	⇑P	P	10 47 44.1	-1.7
WHFO	Wadi Hawf	77.94	283	⇑P	P	10 47 44.8	-1.4
	SNR=10						
PV10	Paradox Valley	77.98	50	eP	P	10 47 47.3	+1.3
PV10				epP	pP	10 47 58.8	+1.2
ANTO	Ankara	78.01	312	eP	P	10 47 47.1	+1.0
	comp=Z,34nm,1.0s,mb5.2						
KSP	Ksiaz	78.07	329	eP	P	10 47 46.8	+0.6
KSP				e	pP	10 47 58.9	+1.1
KSP	Ksiaz	78.07	329	⇑eP	P	10 47 46.6	+0.4
KSP				epP	pP	10 47 58.2	+0.5
OKC	Ostrava-Krasne	78.09	327	eP	P	10 47 47.3	+1.0
OKC				epP	pP	10 47 59.3	+1.4
KECS	Kecovo	78.11	325	eP	P	10 47 46.8	+0.4
VOIR		78.22	320	⇓P	P	10 47 48.3	+1.2
VOIR		78.22	320	⇓P	P	10 47 48.3	+1.1
MORC	Moravsky Berou	78.39	327	eP	P	10 47 48.2	+0.3
	comp=Z,18nm,1.0s,mb4.9						
MORC				epP	pP	10 47 59.7	+0.2
PV01	Paradox Valley	78.42	50	eP	P	10 47 47.9	-0.5
PV01				epP	pP	10 48 02.4	+2.4
DPC	Dobruska-Polom	78.44	328	eP	P	10 47 49.1	+0.9
DPC				epP	pP	10 48 01.9	+2.1
UPC	Upice	78.44	329	eP	P	10 47 48.9	+0.7
UPC				epP	pP	10 47 56.3	-3.5
UPC				ex	x	10 48 01.5	
WUAZ	Wupatki	78.47	53	eP	P	10 47 49.9	+1.2
	comp=Z,11nm,1.0s,mb4.7						
WUAZ				epP	pP	10 48 01.2	+0.9
SMCO	Snowmass	78.64	48	P	P	10 47 50.3	+0.8
SMCO				epP	pP	10 48 03.1	+2.0
ABTO	Aybut	78.65	283	⇑P	P	10 47 49.0	-1.0
	SNR=7.8						
VYHS	Vyhne	78.82	326	eP	P	10 47 50.7	+0.3
VYHS				epP	pP	10 48 02.9	+1.0
CLL	Collm	78.98	331	⇑P	P	10 47 51.0	-0.2
	comp=Z,logA/T=1.3,mb5.0						
CLL				e*PP	pP	10 48 01.0	-1.8
CLL				e*SP	sP	10 48 08.0	+1.0
CLL	Collm	78.98	331	⇑iP	P	10 47 51.0	-0.2
	comp=Z,18nm,0.9s,mb5.0						
CLL	Collm	78.98	331	⇑iP	P	10 47 51.0	-0.2
CLL				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
PVCC	Panska Ves	79.00	329	eP	P	10 47 51.8	+0.5
PVCC				epP	pP	10 48 04.4	+1.5
PRU	Pruhonice	79.44	329	eP	P	10 47 54.3	+0.6
PRU				epP	pP	10 48 06.2	+0.9
CLZ	Clausthal	79.52	332	eP	P	10 47 54.4	+0.3
	comp=Z,46nm,1.4s,mb5.2						
CLZ	Clausthal	79.52	332	eP	P	10 47 54.4	+0.3
CLZ				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.2						
TREC	Trest	79.61	328	eP	P	10 47 55.2	+0.6
TREC				epP	pP	10 48 07.6	+1.4
MOX	Moxa	80.04	331	i P	P	10 47 57.0	+0.1
MOX	Moxa	80.04	331	eP	P	10 47 57.0	+0.1
NKC	Novy Kostel	80.06	330	eP	P	10 47 56.9	-0.1
MZLS	Mizel	80.37	293	P	P	10 47 59.1	-0.1
SDCO	Great Sand Dun	80.46	48	eP	P	10 47 59.1	-0.3
	comp=Z,3.6nm,1.0s,mb4.3						
KHC	Kasperske Hory	80.50	329	eP	P	10 47 59.9	+0.5
KHC				epP	pP	10 48 11.3	+0.3
HILS	Ha’il	80.59	298	P	P	10 48 00.7	+0.4
GEC2	GERESS Array S	80.68	329	eP	P	10 48 00.4	+0.1
	comp=Z,14nm,1.1s,mb4.8						
GEC2	GERESS Array S	80.68	329	eP	P	10 48 00.4	+0.1
GEC2				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
GERES	GERESS Array B	80.68	329	P	P	10 48 00.7	+0.4
	comp=Z,4.1nm,0.7s,mb4.5,baz=34,slow=4.8,SNR=27						
GERES				LR	LR	11 26 43.8	
	comp=Z,360nm,20.5s,MS4.7,baz=32,slow=38						
GERES	GERESS Array B	80.68	329	P	P	10 48 00.7	+0.4
GERES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,360nm,20.5s						
WET	Wettzell	80.77	329	eP	P	10 48 01.1	+0.3
	comp=Z,27nm,1.2s,mb5.0						
WET	Wettzell	80.77	329	eP	P	10 48 01.1	+0.3
WET				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.0						
GRA1	Grafenberg Arr	80.96	331	eP	P	10 48 02.4	+0.6
	comp=Z,26nm,0.8s,mb5.2						
GRF	Grafenberg Arr	80.96	331	eP	P	10 48 02.4	+0.6
	comp=Z,26nm,0.8s,mb5.2						
GRF	Grafenberg Arr	80.96	331	eP	P	10 48 02.4	+0.6
GRF				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
ARSA	Arzberg	81.20	327	⇑iP	P	10 48 03.8	+0.7
	comp=Z,8.6nm,1.1s,mb4.6						
MOA	Molln	81.25	328	⇑iP	P	10 48 00.7	-2.6
	comp=Z,14nm,1.3s,mb4.7						
DIVS	Divcibare	81.64	322	i P	P	10 48 05.7	+0.3
ANMO	Albuquerque	81.83	51	eP	P	10 48 08.0	+1.3
	comp=Z,5.8nm,1.1s,mb4.4						
ANMO	Albuquerque	81.83	51	⇓eP	P	10 48 08.2	+1.6
GROS	Grobnik	81.83	326	eP	P	10 48 06.4	0.0
PERS	Pernice	81.85	327	i P	P	10 48 06.9	+0.4
SCHQ	Schefferville	82.12	17	P	P	10 48 07.7	0.0
	comp=Z,7.9nm,0.9s,mb4.6,baz=94,slow=15,SNR=6.9						
SCHQ				LR	LR	11 26 34.0	
	comp=Z,139nm,18.1s,MS4.4,baz=282,slow=37						
FUR	Furstenfeldbru	82.18	330	eP	P	10 48 08.6	+0.4
	comp=Z,40nm,0.9s,mb5.3						
FUR	Furstenfeldbru	82.18	330	eP	P	10 48 08.6	+0.4
FUR				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.3						
OBKA	Obir	82.19	327	⇓iP	P	10 48 09.0	+0.7
	comp=Z,9.8nm,0.8s,mb4.8						
KBA	Koelnbreinsper	82.24	328	⇑iP	P	10 48 10.1	+1.6
	comp=Z,29nm,1.2s,mb5.1						
GCIS	Gornji Cirnik	82.24	326	i P	P	10 48 08.5	0.0
WTTA	Wattenberg	82.78	329	⇑iP	P	10 48 11.8	+0.6
	comp=Z,17nm,1.2s,mb5.0						
MOTA	Moosalm	82.92	329	⇑iP	P	10 48 12.6	+0.7
	comp=Z,25nm,1.0s,mb5.2						
SQTA	Sankt Quirin	82.98	329	⇓iP	P	10 48 13.3	+1.1
	comp=Z,5.3nm,0.6s,mb4.7						
BFO	Black Forest	83.16	331	eP	P	10 48 13.3	+0.1
	comp=Z,13nm,1.0s,mb4.9						
BFO	Black Forest	83.16	331	eP	P	10 48 13.3	+0.1
BFO				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
KBRS	Khaybar	83.34	298	P	P	10 48 15.9	+1.3
CDF	Champ du Feu	83.48	332	eP	P	10 48 15.0	+0.2
	comp=Z,15nm,0.8s,mb4.8						
TBKS	Tabuk	83.54	301	P	P	10 48 16.7	+1.2
BRMO	Bormio	83.92	329	P	P	10 48 18.5	+1.5
HINF	Hinteralfeld	84.13	332	eP	P	10 48 17.9	-0.1
HAU	Haudompre	84.15	332	eP	P	10 48 18.1	0.0
	comp=Z,9.9nm,0.7s,mb4.8						
HAU				eR			
	comp=Z,243nm,18.5s						
BDAS	Al Bad‘	84.34	303	P	P	10 48 20.1	+0.6
MNTX	Cornudas Mount	84.73	53	eP	P	10 48 21.9	+0.5
	comp=Z,5.0nm,0.9s,mb4.6						
MNTX				epP	pP	10 48 33.9	+0.7
GDL2	Guadalupe Moun	84.99	52	eP	P	10 48 23.4	+0.6
GDL2				epP	pP	10 48 35.6	+1.1
UMJS	Umm Lajj	85.03	299	P	P	10 48 24.3	+1.2
VAI	Varese	85.05	330	P	P	10 48 22.7	0.0
PPT	Papeete	85.07	118	eLR	LR	11 14 23.9	
	comp=Z,489nm,22.2s,baz=322						
PPT	Papeete	85.07	118	LR	LR	11 18 51.9	
	comp=Z,354nm,21.2s,MS4.7,baz=315,slow=30						
YNBS	Yanbu‘ al Bahr	85.17	298	P	P	10 48 24.7	+1.0
MCGN	Macugnaga	85.27	330	P	P	10 48 24.5	+0.7
BLJS	Baljurashi	85.59	292	P	P	10 48 27.0	+1.1
DJNS	Zahran al Janu	85.61	289	P	P	10 48 27.3	+1.3
LOR	Lormes	85.66	333	⇑iP	P	10 48 25.8	+0.2
	comp=Z,67nm,1.0s,mb5.5						
LOR				eR			
	comp=Z,413nm,17.2s						
BOB	Bobbio (Coli)	85.70	329	P	P	10 48 26.6	+0.7
	comp=Z,12nm,0.8s,mb5.2						
FLN	La Foliniere	85.76	337	eP	P	10 48 26.2	+0.1
FLN				eR			
	comp=Z,409nm,22.5s						
LDF	La Druitiere	85.80	336	eP	P	10 48 26.6	+0.3
SSF	Saint Saulge	85.96	333	⇑iP	P	10 48 27.4	+0.3
	comp=Z,26nm,0.9s,mb5.2						
HYF	Humbligny	86.07	334	eP	P	10 48 28.1	+0.5
LPL	La Plagne	86.12	331	⇑iP	P	10 48 28.7	+0.8
	comp=Z,44nm,1.0s,mb5.3						
LPG	La Plagne	86.13	331	⇑iP	P	10 48 28.9	+0.9
	comp=Z,36nm,0.9s,mb5.3						
SMF	Signal de Mont	86.20	333	⇑iP	P	10 48 28.8	+0.5
	comp=Z,51nm,1.1s,mb5.4						
GRR	Gorron	86.20	337	⇑iP	P	10 48 28.8	+0.5
	comp=Z,31nm,0.9s,mb5.2						
AVF	Avril sur Loir	86.25	333	⇑iP	P	10 48 29.0	+0.5
	comp=Z,69nm,0.8s,mb5.6						
BNI	Bardonecchia	86.53	330	eP	P	10 48 30.1	+0.2
	comp=Z,6.5nm,0.9s,mb4.9						
BGF	Bois d’Agland	86.62	334	eP	P	10 48 30.9	+0.5
MBDF	Montbardon	86.77	330	eP	P	10 48 32.0	+0.8
	comp=Z,7.7nm,0.8s,mb4.7						
SGMF	Saint Gilles	86.83	338	eP	P	10 48 32.0	+0.7
	comp=Z,99nm,1.4s,mb5.6						
ORIF	Oris-en-Rattie	86.95	331	eP	P	10 48 32.6	+0.6
	comp=Z,13nm,0.8s,mb4.9						
ORIF				eR			
	comp=Z,132nm,17.0s						
ROSF	Rostrenen	86.97	338	eP	P	10 48 32.8	+0.8
TCF	Toulx Ste Croi	87.07	334	⇑iP	P	10 48 33.2	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,27nm,1.1s,mb5.1						
SBF	Sospel	87.25	329	eP	P	10 48 34.0	+0.5
QUIF	Quistinic	87.31	338	eP	P	10 48 34.2	+0.5
TXAR	Lajitas Array	87.44	53	P	P	10 48 35.5	+0.7
	comp=Z,0.7nm,0.6s,mb4.1,baz=285,slow=3.0,SNR=16						
TXAR				LR	LR	11 21 16.7	
	comp=Z,83nm,21.1s,MS4.1,baz=290,slow=31						
VIVF	Saint-Julien-l	87.45	332	⇑iP	P	10 48 35.0	+0.6
	comp=Z,22nm,1.0s,mb5.0						
MFF	Saint Martin d	87.57	335	⇑iP	P	10 48 35.7	+0.7
	comp=Z,28nm,0.9s,mb5.2						
FRF	La Foret Royal	87.81	330	eP	P	10 48 37.2	+1.0
CCM	Cathedral Cave	87.84	40	eP	P	10 48 36.5	+0.1
	comp=Z,7.4nm,0.8s,mb5.0						
CCM				epP	pP	10 48 48.4	+0.1
LMR	La Mourre	88.05	330	eP	P	10 48 38.5	+1.1
RJF	Les Rejaudoux	88.17	334	⇑iP	P	10 48 38.7	+0.8
RJF				eR			
	comp=Z,455nm,20.5s						
CAF	Calviac	88.31	333	eP	P	10 48 39.6	+1.0
	comp=Z,60nm,1.4s,mb5.3						
LASF	Ste Croix	88.41	332	eP	P	10 48 39.8	+0.7
LFF	La Frestale	88.75	334	eP	P	10 48 41.7	+1.0
ETSF	Etsaut	90.99	334	eP	P	10 48 52.3	+1.0
	comp=Z,29nm,1.2s,mb5.2						
DBIC	Dimbokro	124.73	320	PKP	PKPdf	10 54 47.1	+0.7
	comp=Z,1.8nm,0.6s,baz=23,slow=6.7,SNR=6.6						
DBIC	Dimbokro	124.73	320	PKIKP	PKPdf	10 54 47.1	+0.7
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SNAA	Sanae	143.96	198	e	PKPbc	10 55 22.0	+2.7
SNAA	Sanae	143.96	198	e	PKPbc	10 55 30.8	+11
SNAA	Sanae	143.96	198	e	PKPbc	10 55 34.2	+15
SNAA	Sanae	143.96	198	e	PKPbc	10 55 36.4	+17
SNAA	Sanae	143.96	198	⇑iPKPdf	PKPdf	10 55 18.8	-1.4
SNAA				e		10 55 22.0	
SNAA				e		10 55 30.8	
SNAA				e		10 55 34.2	
SNAA				e		10 55 36.4	
SNAA	Sanae	143.96	198	⇓iPKIKP	PKPdf	10 55 19.1	-1.1
LPAZ	La Paz	144.20	57	PKP	PKPdf	10 55 22.6	+0.4
	comp=Z,2.2nm,0.9s,baz=17,slow=11,SNR=6.6						
LPAZ	La Paz	144.20	57	ePKPdf	PKPdf	10 55 23.2	+1.0
LPAZ	La Paz	144.20	57	PKIKP	PKPdf	10 55 22.6	+0.4
LPAZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VNA2	Neumayer--Watz	145.53	197	e	PKPdf	10 55 27.4	+4.5
VNA2	Neumayer--Watz	145.53	197	e	PKPdf	10 55 35.5	+13
VNA2	Neumayer--Watz	145.53	197	e	PKPdf	10 55 38.6	+16
VNA2	Neumayer--Watz	145.53	197	e	PKPdf	10 55 41.4	+18
VNA2	Neumayer--Watz	145.53	197	⇑iPKPdf	PKPdf	10 55 24.1	+1.1
VNA2				e		10 55 27.4	
VNA2				e		10 55 35.5	
VNA2				e		10 55 38.6	
VNA2				e		10 55 41.4	
VNA3	Neumayer Olymp	145.78	195	e	PKPdf	10 55 28.7	+5.3
VNA3	Neumayer Olymp	145.78	195	e	PKPdf	10 55 36.3	+13
VNA3	Neumayer Olymp	145.78	195	e	PKPdf	10 55 39.8	+16
VNA3	Neumayer Olymp	145.78	195	e	PKPdf	10 55 42.0	+19
VNA3	Neumayer Olymp	145.78	195	⇑iPKPdf	PKPdf	10 55 24.8	+1.4
VNA3				e		10 55 28.7	
VNA3				e		10 55 36.3	
VNA3				e		10 55 39.8	
VNA3				e		10 55 42.0	
VNA1	Neumayer--Stat	145.93	197	e	PKPdf	10 55 29.6	+6.0
VNA1	Neumayer--Stat	145.93	197	e	PKPdf	10 55 37.0	+13
VNA1	Neumayer--Stat	145.93	197	e	PKPdf	10 55 40.3	+17
VNA1	Neumayer--Stat	145.93	197	e	PKPdf	10 55 42.4	+19
VNA1	Neumayer--Stat	145.93	197	⇑iPKPdf	PKPdf	10 55 25.8	+2.2
VNA1				e		10 55 29.6	
VNA1				e		10 55 37.0	
VNA1				e		10 55 40.3	
VNA1				e		10 55 42.4	
BDFB	Brasilia	153.90	24	PKPbc	PKPdf	10 55 47.3	+10
	comp=Z,3.9nm,1.0s,baz=197,slow=6.2,SNR=4.1						
PLCA	Paso Flores	154.70	102	PKPbc	PKPdf	10 55 48.9	+11
	comp=Z,1.6nm,1.1s,slow=4.0,SNR=2.7						
PLCA				PKPab	PKPab	10 56 00.5	-3.4
	comp=Z,0.9nm,0.6s,baz=248,slow=6.0,SNR=3.3						
PLCA	Paso Flores	154.70	102	PKPbc	PKPdf	10 55 48.9	+11
PLCA				PKPab	PKPab	10 56 00.5	-3.4

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*CSEM **07** 11:00:42.0±1.1, 11.98N×43.70E, h5^{km}, ML3.5, Error ellipse: s-maj=27.5km s-min=21.0km az=99.0, After DHMR*

DHMR 07 11:00:42.0±0.9**, 11.98N×43.70E, h6**^{km}±9^{km}**, ML3.5, 4C-1D, Ethiopia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRBA	At Turbah	1.31	18	⇑iP	Pb	11 01 06.7	+0.2
TRBA				iS	Sb	11 01 24.9	+1.5
TRBA				AML	AML	11 01 31.2	
	comp=E,690nm,0.3s						
UDYN	Al ‘Udayn	1.99	8	⇑iP	Pn	11 01 17.1	+0.5
UDYN				iS	Sn	11 01 45.0	+2.9
UDYN				AML	AML	11 01 53.0	
	comp=E,461nm,0.5s						
LBOS		2.41	39	⇑iP	Pn	11 01 24.1	+1.5
LBOS				iS	Sn	11 01 57.6	+4.8
DHBB	Dhamar BB	2.66	15	⇑iP	Pn	11 01 28.7	+2.5
DHBB				iS	Sn	11 02 04.4	+5.3
BDHA	Al Bayda’	2.69	42	⇓iP	Pn	11 01 28.3	+1.7
BDHA				iS	Sn	11 02 05.0	+5.1
BDHA				AML	AML	11 02 17.6	
	comp=N,473nm,0.6s						

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*ISK **07** 11:01:43.3, 38.19N×26.67E, h27^{km}, MD2.8*

*ATH **07** 11:01:44.3, 38.19N×26.71E, h20^{km}, MD3.0/3*

*CSEM **07** 11:01:44.9±0.1, 38.17N×26.83E, h30^{km}, MD2.8, Error ellipse: s-maj=3.9km s-min=2.3km az=89.0*

ISC 07 11:01:43.7±0.8**, 38.14N**±0.04×**26.65E**±0.05**, h8**^{km}±5^{km}**, n13,** σ**1**^{s}**29**/21**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.22	349	iP	Pg	11 01 48.1	-0.3
URLA				iS	Sg	11 01 51.8	+0.2
BLCB	Balcova	0.39	51	iPG	Pg	11 01 51.6	-0.1
SMG	Samos	0.46	161	ePB	Pb	11 01 54.2	+0.7
IZM	Izmir	0.55	62	PG	Pg	11 01 54.9	+0.2
IZM				SG	Sg	11 02 02.5	+0.5
KDAG	Bornova	0.55	61	iP	Pg	11 01 53.8	-1.0
KDAG				iS	Sg	11 02 01.2	-1.0
AYDN	Tasoluk	1.08	116	iP	Pb	11 02 06.2	+2.0
AYDN				iS	Sb	11 02 19.5	+1.2
PRK	Paraskevi	1.14	345	ePN	Pn	11 02 05.7	-0.2
PRK				eSN	Sn	11 02 20.5	-1.3
AYVA	Ayvalik	1.17	2	iP	Pb	11 02 05.6	-0.1
AYVA				iS	Sb	11 02 22.7	+1.9
AKS	Akhisar	1.17	51	ePN	Pn	11 02 03.7	-2.6
BODT	Bodrum	1.20	154	ePN	Pn	11 02 05.4	-1.3
BODT				eSN	Sn	11 02 21.1	-2.1
APE	Apeiranthos	1.39	220	ePN	Pn	11 02 11.8	+2.3
MANT	Manisa	1.54	76	iP	Pn	11 02 13.7	+2.1
MANT				iS	Sb	11 02 32.1	+0.5
YER	Yerkesik	1.64	127	ePN	Pn	11 02 11.5	-1.5

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*NEIC **07** 11:04:12.0, 35.10S×70.50W, h7^{km}, ML3.4(GUC), After GUC.*

GUC 07 11:04:12.0±0.6**, 35.10S×70.50W, h7**^{km}±4^{km}**, MD3.6, ML3.4, 4C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NICH	Los Niches	0.60	279	⇓iP	Pg	11 04 24.0	-0.1
NICH				iS	Sg	11 04 33.9	+1.7
TALC	Talca	0.97	252	iP	Pb	11 04 30.2	-0.6
TALC				iS	Sb	11 04 43.7	0.0
TALC				AMP		11 04 44.2	
	comp=N,4μm,0.3s						
LMEL	Las Melosas	1.27	11	⇑iP	Pb	11 04 34.5	-1.4
LMEL				iS	Sb	11 04 52.1	-0.1
LMEL				AMP		11 04 54.5	
	comp=N,461nm,0.2s						
TACH	Talagante	1.48	346	⇓iP	Pn	11 04 38.2	-1.0
TACH				iS	Sb	11 04 58.1	-0.3
ANTU	Antumapu	1.53	356	⇑iP	Pn	11 04 39.4	-0.5
ANTU				iS	Sb	11 04 59.7	0.0
ANTU				AMP		11 05 01.4	
	comp=E,892nm,0.5s						
RCDM	Rinconada Maip	1.62	351	⇑iP	Pn	11 04 40.7	-0.5
RCDM				iS	Sb	11 05 02.1	-0.4
RCDM				AMP		11 05 08.1	
	comp=E,720nm,0.2s						
SAN	Santiago	1.64	355	iP	Pn	11 04 41.2	-0.4
SAN				iS	Sb	11 05 02.9	-0.2
SAN				AMP		11 05 04.5	
	comp=E,924nm,0.5s						
FCH	Farellones	1.77	6	iP	Pn	11 04 43.4	0.0
FCH				iS	Sn	11 05 07.5	+1.1
FCH				AMP		11 05 08.3	
	comp=N,510nm,0.2s						
LCCH	Las Cruces	1.84	331	iP	Pn	11 04 43.9	-0.5
LCCH				iS	Sn	11 05 08.2	0.0
ROCH	El Roble	2.16	349	iP	Pn	11 04 49.4	+0.5
ROCH				iS	Sn	11 05 17.9	+1.7
JACH	Jahuel	2.41	358	⇑iP	Pn	11 04 53.2	+0.7
JACH				iS	Sn	11 05 24.6	+2.0

MAN 07 11:06:45.2, 7.84N×124.49E, h26^{km}**, mb4.7, ML3.6, MS3.6, 2C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUKP	Musuan	0.56	86	eP	Pb	11 06 56.9	+0.3
CGP	Cagayan de Oro	0.65	18	⇓iP	Pb	11 06 58.8	+0.9
CGP				iS	Sb	11 07 09.2	+2.7
KCP	Kidapawan	1.01	144	⇑eP	Pn	11 07 03.5	-0.4
KCP				eS	Sb	11 07 17.6	+0.6
PAGZ	Pagadian	1.10	271	eP	Pn	11 07 04.1	-1.0
PAGZ				eS	Sb	11 07 19.6	+0.1
DCPH	Dipolog City	1.35	303	⇑eP	Pn	11 07 10.3	+1.6
DCPH				eS	Sn	11 07 28.1	+2.1
IPIL	Ipil	1.91	269	eP	Pn	11 07 17.0	+0.3
IPIL				eS	Sn	11 07 40.6	+0.5

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*BJI **07** 11:09:21.7, 18.18N×120.73E, h37^{km}, mB5.0, mb4.6, ML4.5, Ms4.0, Msz3.8*

*NEIC **07** 11:09:24.2±0.9, 18.19N×120.96E, h61^{km}±9^{km}, mb4.3/7, Error ellipse: s-maj=7.6km s-min=6.0km az=85.0*

NEIC Felt [II PIVS] at Pasuquin, Santo Domingo and Sinait.

*MAN **07** 11:09:25.8, 18.36N×120.77E, h51^{km}, mb5.0, ML3.9, MS4.0*

*IDC **07** 11:09:29.5±2.3, 18.19N×121.08E, h109^{km}±21^{km}, mb3.9/15, mb1 4.0/17, mb1mx3.9/24, mbtmp4.3/17, MS3.5/5, Ms1 3.5/5, ms1mx3.2/24, Error ellipse: s-maj=23.2km s-min=9.8km az=79.0*

ISC 07 11:09:25.4±0.3**, 18.32N**±0.03×**120.81E**±0.04**, h81**^{km}±3^{km}**, n71,** σ**1**^{s}**28**/81**, mb4.3**/26**, 3C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.18	270	⇓eP	P	11 09 35.5	-1.7
PIP				eS	S	11 09 43.0	-3.0
APYP	Conner	0.62	138	eP	P	11 09 40.2	-0.3
APYP				eS	S	11 09 52.0	+0.4
ABRA	Dolores	0.68	188	eP	P	11 09 40.8	-0.3
CVP	Callao Caves	1.14	122	⇑eP	P	11 09 47.2	+0.7
CVP				eS	S	11 10 03.0	+0.7
SGCP	Mt. Cagua	1.18	94	eP	P	11 09 47.2	+0.3
SGCP				eS	S	11 10 03.6	+0.5
CAUP	Cauayan	1.68	145	eP	P	11 09 55.9	+2.4
BOLP	Bolinao	2.11	204	eP	P	11 10 00.4	+1.0
BALP	Baler	2.67	164	eP	P	11 10 08.4	+1.2
SCZP	Santa Cruz	2.67	199	eP	P	11 10 03.6	-3.7
PCPH	Palayan	2.76	174	⇑eP	P	11 10 09.5	+1.0
PCPH				eS	S	11 10 45.4	+4.6
POLP	Polilio Island	3.74	163	eP	P	11 10 22.9	+0.9
TGY	Tagaytay City	4.20	178	P	P	11 10 30.1	+1.6
	76nm,0.3s,baz=145,slow=6.1,SNR=10.0						
GQP	Guinayangan	4.67	160	⇑eP	P	11 10 35.0	+0.1
GQP				eS	S	11 11 29.3	+1.0
NACB	Ninganchiao	5.87	7	ePn	P	11 10 49.7	-1.6
NACB				eSn	S	11 11 52.5	-5.4
BUSP	Coron	6.31	185	eP	P	11 10 56.8	-0.8
YHNB	Yeheng	6.34	5	ePn	P	11 10 57.3	-0.6
YHNB				eSn	S	11 12 05.0	-4.6
TATO	Taipei	6.65	5	ePn	P	11 11 02.3	0.0
TATO				eSn	S	11 12 18.4	+1.1
ENPP	El Nido	7.20	191	eP	P	11 11 09.2	-0.7
GZH	Guangzhou	8.44	305	P	P	11 11 25.0	-1.9
GZH				S	S	11 12 54.6	-6.8
GZH				Smax			
	comp=N,110nm,0.3s						
GZH				Smax			
	comp=E,110nm,0.7s						
QIZ	Qiongzhong	10.42	276	eP	P	11 11 51.2	-2.6
QIZ				AMB	AMB		
	comp=Z,20nm,0.7s						
QIZ	Qiongzhong	10.42	276	ePn	P	11 11 51.3	-2.5
	comp=Z,24nm,0.6s						
QIZ				eSn	S	11 13 43.5	-5.9
JOW	Kunigami	10.92	38	S	S	11 13 51.3	-10
	comp=Z,1.1nm,0.3s,baz=112,slow=19,SNR=2.4						
JOW				LR	LR	11 16 15.5	
	comp=Z,118nm,20.5s,baz=28,slow=37						
GYA	Guiyang	15.38	304	eP	P	11 12 55.5	-3.5
GYA				S	S	11 15 41.5	-5.6
GYA				LR	LR		
	comp=N,280nm,10.8s						
GYA				LR	LR		
	comp=E,370nm,11.4s						
GYA				LR	LR		
	comp=Z,260nm,10.4s						
ENH	Enshi	15.73	321	eP	P	11 13 03.8	+0.3
	comp=Z,2.6nm,0.3s						
JNU	Nakatsue	17.29	30	P	P	11 13 22.5	-0.4
	comp=Z,0.4nm,0.3s,baz=208,slow=22,SNR=4.5						
KSM	Kuching	19.66	213	eP	P	11 13 50.2	-0.3
KS15	Wonju Array Si	20.03	17	eP	P	11 13 53.0	-1.2
JHJ	Hachijo jima 2	22.51	45	LR	LR	11 21 21.0	
	comp=Z,119nm,19.2s,baz=357,slow=32						
KULM	Kulim	23.57	239	eP	P	11 14 29.6	+0.2
GUMO	Guam	23.60	98	LR	LR	11 23 11.9	
	comp=Z,48nm,18.1s,baz=306,slow=35						
KGM	Kluang	23.60	229	P	P	11 14 31.6	+1.8
IPM	Ipoh	23.68	237	P	P	11 14 32.4	+1.9
MJAR	Matsushiro Arr	23.76	37	P	P	11 14 32.1	+1.0
	comp=Z,1.0nm,0.5s,mb3.4,baz=65,slow=43,SNR=4.2						
CN2	Changchun	25.70	8	eP	P	11 14 50.2	+0.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
MDJ	Mudanjiang	27.23	14	P	P	11 15 03.0	-0.6
LSA	Lhasa	29.28	298	eP	P	11 15 24.8	+2.6
SONM	Songino Array	31.70	341	P	P	11 15 44.3	+0.9
	comp=Z,0.8nm,0.7s,mb3.6,baz=162,slow=10.0,SNR=6.8						
JIRN	Jiri	33.10	293	eP	P	11 15 57.1	+1.3
	comp=Z,37nm,1.1s,mb5.1						
GUN	Gumba	33.41	293	eP	P	11 15 59.7	+1.3
	comp=Z,25nm,0.7s,mb5.1						
PKI	Pulchoki	33.77	292	eP	P	11 16 02.2	+0.6
	comp=Z,14nm,0.9s,mb4.8						
DMN	Daman	34.05	292	eP	P	11 16 04.4	+0.5
	comp=Z,11nm,0.7s,mb4.8						
GKN	Gorkha	34.51	293	eP	P	11 16 08.3	+0.4
	comp=Z,32nm,1.0s,mb5.1						
KOLN	Koldanda	35.39	292	eP	P	11 16 15.6	+0.3
	comp=Z,10nm,0.7s,mb4.8						
FITZ	Fitzroy Crossi	36.51	172	eP	P	11 16 22.3	-2.6
	comp=Z,2.6nm,0.4s,mb4.5						
FITZ	Fitzroy Crossi	36.51	172	P	P	11 16 22.2	-2.7
	comp=Z,3.4nm,0.4s,mb4.7,baz=352,slow=15,SNR=14						
PMG	Port Moresby	37.89	135	eP	P	11 16 32.6	-3.8
MBWA	Marble Bar	39.25	182	eP	P	11 16 45.2	-2.4
	comp=Z,9.7nm,1.0s,mb4.6						
WRAB	Tennant Creek	40.27	160	eP	P	11 16 54.1	-2.0
WRA	Warramunga Arr	40.28	160	P	P	11 16 53.1	-3.1
	comp=Z,0.9nm,0.3s,mb4.1,baz=334,slow=10,SNR=71						
WRA				PcP	PcP	11 18 59.0	-0.2
	comp=Z,1.3nm,0.5s,baz=343,slow=3.3,SNR=9.5						
WRA				S	S	11 22 51.9	-5.5
	comp=Z,0.5nm,0.8s,baz=345,slow=16,SNR=5.2						
WB2	Warramunga Arr	40.28	160	eP	P	11 16 53.4	-2.8
MKAR	Makanchi Array	42.47	321	P	P	11 17 15.8	+1.9
	comp=Z,3.8nm,0.8s,mb4.2,baz=118,slow=9.5,SNR=26						
MKAR	Makanchi Array	42.47	321	P	P	11 17 15.8	+1.9
ASPA	Alice Springs	43.65	162	eP	P	11 17 20.9	-2.9
YAK	Yakutsk	44.10	6	eP	P	11 17 26.2	-0.8
CTAO	Charters Tower	45.61	146	eP	P	11 17 38.8	-0.7
KURK	Kurchatov	46.48	324	eP	P	11 17 47.2	+1.2
	comp=Z,4.9nm,0.9s,mb4.2						
NWAO	Narrogin (SRO)	51.07	184	P	P	11 18 20.4	-1.4
	comp=Z,5.6nm,0.7s,mb4.7,slow=11,SNR=4.1						
BVAR	Borovoye Array	52.08	324	P	P	11 18 29.9	+0.9
	comp=Z,0.4nm,0.5s,mb3.7,baz=121,slow=8.4,SNR=3.3						
BVAR				PcP	PcP	11 19 39.9	-0.2
	comp=Z,0.9nm,0.5s,baz=114,slow=6.7,SNR=4.2						
BRVK	Borovoye	52.15	324	eP	P	11 18 31.2	+1.7
	comp=Z,1.4nm,0.8s,mb4.0						
CHKZ	Chkalovo	52.20	325	eP	P	11 18 30.4	+0.5
STKA	Stephens Creek	53.75	158	P	P	11 18 39.9	-1.8
	comp=Z,3.2nm,0.7s,mb4.5,baz=357,slow=8.1,SNR=9.4						
AKTO	Aktyubinsk	58.80	318	P	P	11 19 17.5	0.0
	comp=Z,1.2nm,0.5s,mb4.2,baz=112,slow=11,SNR=4.6						
KDAK	Kodiak Island	72.90	34	P	P	11 20 46.9	-0.4
	comp=Z,5.0nm,0.4s,mb4.7,baz=288,slow=3.2,SNR=16						
ILAR	Eielson Array	74.58	26	P	P	11 20 55.6	-1.3
	comp=Z,1.1nm,0.5s,mb3.8,baz=266,slow=4.5,SNR=30						
FINES	FINESS Array B	76.33	330	P	P	11 21 07.8	+0.9
	comp=Z,2.0nm,0.8s,mb3.9,baz=34,slow=10.0,SNR=5.2						
INK	Inuvik	78.77	21	P	P	11 21 19.6	-0.7
	comp=Z,2.4nm,0.8s,mb4.1,baz=314,slow=6.4,SNR=12						
INK				LR	LR	12 00 09.9	
	comp=Z,42nm,18.2s,baz=329,slow=39						
NB2	NORSAR Subarra	83.23	332	P	P	11 21 44.3	+0.5
	comp=Z,1.0nm,0.7s,mb3.8,baz=64,slow=4.8						
NOA	NORSAR Array B	83.23	332	P	P	11 21 44.6	+0.8
	comp=Z,1.3nm,0.8s,mb3.8,baz=63,slow=5.0,SNR=3.7						
NAO	NORSAR Subarra	83.49	332	P	P	11 21 44.3	-0.9
	comp=Z,1.0nm,0.7s,mb3.8						
KMBO	Kilima Mbogo	84.23	267	LR	LR	11 54 52.3	
	comp=Z,57nm,21.7s,baz=94,slow=32						
YKA	Yellowknife Ar	88.49	22	P	P	11 22 10.1	+0.6
	comp=Z,3.4nm,0.8s,mb4.4,baz=307,slow=4.5,SNR=10						

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*IDC **07** 11:24:30.6±1.0, 52.63S×18.57E, mb4.1/3, mb1 4.1/3, mb1mx3.9/10, mbtmp4.1/3, MS3.6/2, Ms1 3.5/2, ms1mx3.4/9, Error ellipse: s-maj=58.2km s-min=28.7km az=53.0*

*NEIC **07** 11:24:31.4±0.8, 52.47S×18.79E, h10^{km}, mb4.3/3, Error ellipse: s-maj=26.0km s-min=14.6km az=92.0*

ISC 07 11:24:29.7±1.2**, 52.4S**±0.1×**19.0E**±0.3**, h10**^{km}**, n23,** σ**0**^{s}**97**/11**, mb4.2**/4**, MS3.5**/2**, 4C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNAA	Sanae	21.63	199	⇑i	Px	11 29 18.8	
SNAA	Sanae	21.63	199	e	P	11 29 22.3	+0.6
SNAA	Sanae	21.63	199	e	Px	11 29 31.0	
SNAA	Sanae	21.63	199	eP	Px	11 29 19.3	
	11nm,0.9s						
VNA2	Neumayer--Watz	22.06	203	e	P	11 29 29.2	+3.2
VNA2	Neumayer--Watz	22.06	203	e	Px	11 29 34.8	
VNA2	Neumayer--Watz	22.06	203	⇑iP	P	11 29 24.9	-1.1
VNA2				e		11 29 29.2	
VNA2				e		11 29 34.8	
VNA1	Neumayer--Stat	22.09	204	e	Px	11 29 30.7	
VNA1	Neumayer--Stat	22.09	204	e	Px	11 29 39.1	
VNA1	Neumayer--Stat	22.09	204	⇑iP	P	11 29 26.6	+0.3
VNA1				e		11 29 30.7	
VNA1				e		11 29 39.1	
VNA3	Neumayer Olymp	22.83	204	e	P	11 29 36.6	+3.2
VNA3	Neumayer Olymp	22.83	204	e	Px	11 29 44.5	
VNA3	Neumayer Olymp	22.83	204	⇑iP	P	11 29 32.3	-1.1
VNA3				e		11 29 36.6	
VNA3				e		11 29 44.5	
BOSA	Boshof	24.20	14	LR	LR	11 37 49.3	
	comp=Z,160nm,18.0s,MS3.5,baz=147,slow=33						
MAW	Mawson	25.98	143	P	P	11 30 04.1	+0.4
	3.3nm,0.8s,mb3.9,baz=292,slow=16,SNR=6.7						
MAW				LR	LR	11 37 56.1	
	comp=Z,101nm,18.3s,MS3.4,baz=244,slow=31						
QSPA	South Pole Qui	37.85	180	eP	P	11 31 46.4	-1.3
	14nm,1.0s,mb4.6						
DBIC	Dimbokro	62.23	333	P	P	11 34 54.1	+0.2
	3.5nm,1.0s,mb4.4,baz=142,slow=11,SNR=3.4						
LPAZ	La Paz	75.51	262	P	P	11 36 15.6	-0.4
	0.6nm,0.5s,mb3.8,baz=180,slow=4.0,SNR=3.6						
LPAZ	La Paz	75.51	262	eP	P	11 36 15.8	-0.2
	1.4nm,0.9s,mb3.9						
SONM	Songino Array	124.43	55	PKP	PKPdf	11 43 30.4	-1.2
	0.3nm,0.6s,baz=207,slow=3.2,SNR=3.5						
PDAR	Pinedale Array	144.65	275	PKP	PKPdf	11 44 05.7	-3.1
	2.5nm,0.9s,baz=127,slow=4.5,SNR=19						
NVAR	Mina Array Bea	147.42	262	PKPbc	PKPdf	11 44 15.4	+1.8
	2.0nm,0.8s,baz=135,slow=5.1,SNR=18						
ILAR	Eielson Array	165.60	335	PKPab	PKPab	11 45 36.5	+2.9
	0.8nm,0.8s,baz=20,slow=2.7,SNR=7.4						

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*MOS **07** 11:43:01.0±3.0, 37.50N×69.20E, h10^{km}, mb4.0/1, Error ellipse: s-maj=24.1km s-min=8.4km az=83.6*

*NNC **07** 11:43:02.3±3.2, 37.69N×69.22E, mpv4.1, Error ellipse: s-maj=26.6km s-min=24.3km az=121.0*

*NEIC **07** 11:43:05.5±0.9, 37.51N×69.37E, h35^{km}, mb3.4/4, Error ellipse: s-maj=16.9km s-min=5.7km az=60.0*

ISC 07 11:43:00.3±0.7**, 37.45N**±0.05×**69.23E**±0.08**, h10**^{km}**, n35,** σ**1**^{s}**07**/46**, mb4.9**/1**, 14C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.74	9	Pn	Pn	11 44 28.3	+0.7
	18nm,0.6s,baz=191,slow=14,SNR=37						
KK31				⇑Pg	Pg	11 44 44.4	-10
	8.2nm,0.8s,baz=206,slow=13,SNR=18						
KK31				⇓Lg		11 45 55.7	
	62nm,0.6s,baz=199,slow=30,SNR=7.1						
KK31	Karatay Array	5.74	9	Pn	Pn	11 44 28.3	+0.7
	18nm,0.6s						
KK31				⇑Pg	Pg	11 44 44.4	-10
KK31				Lg		11 45 55.7	
KKAR	Karatay Array	5.74	9	iPN	Pn	11 44 28.3	+0.7
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AML	Almayashu	5.81	35	P	Pn	11 44 28.5	-0.1
	SNR=18						
EKS2	Erkin-Say	6.27	32	P	Pn	11 44 36.0	+0.8
	SNR=8.1						
UCH	Uchtor	6.27	39	P	Pn	11 44 34.9	-0.2
	SNR=23						
KZA	Kyzart	6.55	43	P	Pn	11 44 35.5	-3.6
	SNR=10						
AAK	Ala-Archa	6.57	36	P	Pn	11 44 40.2	+0.8
	SNR=12						
AAK	Ala-Archa	6.57	36	⇑Pn	Pn	11 44 39.9	+0.6
	comp=Z,32nm,0.8s						
AAK				⇑Pg	Pg	11 44 56.7	-15
AAK				⇑Lg		11 46 19.2	
	comp=Z,95nm,1.1s						
AAK	Ala-Archa	6.57	36	ePn	Pn	11 44 38.4	-1.0
AAK				eSn	Sn	11 45 42.8	-12
AAK				Lg		11 46 19.1	
AAK	Ala-Archa	6.57	36	ePN	Pn	11 44 38.4	-1.0
AAK				S	Sb	11 46 19.2	+5.3
FRU	Bishkek	6.78	36	ePN	Pn	11 44 50.0	+7.7
FRU				i		11 45 06.5	
FRU				iS	Sb	11 46 22.0	+1.9
FRU				pmax	pmax		
	comp=Z,80nm,1.2s						
FRU				pmax	pmax		
	comp=N,380nm,1.8s						
KBK	Karagaybulak	6.80	38	P	Pn	11 44 43.0	+0.3
	SNR=13						
CHMS	Chumysh	6.97	36	P	Pn	11 44 44.2	-0.8
	SNR=7.5						
USP	Ospenovka	7.07	33	P	Pn	11 44 45.9	-0.5
	SNR=11						
MK31	Makanchi Array	13.45	42	⇑Pn	P	11 46 11.4	-2.2
	comp=N,2.3nm,0.7s,baz=231,slow=13,SNR=8.9						
MK31	Makanchi Array	13.45	42	⇑Pn	P	11 46 11.4	-2.2
	comp=N,2.3nm,0.7s						
AB31	Akbulak array	13.59	333	⇑Pn	P	11 46 14.9	-0.5
	comp=N,1.2nm,0.5s,baz=169,slow=12,SNR=31						
AB31				⇑Sn	S	11 48 38.6	-8.8
	comp=N,1.4nm,0.5s						
AB31	Akbulak array	13.59	333	⇑Pn	P	11 46 14.9	-0.5
	comp=N,1.2nm,0.4s						
AB31				Sn	S	11 48 38.6	-8.9
AB31	Akbulak array	13.59	333	P	P	11 46 14.8	-0.6
AB31				S	S	11 48 38.5	-9.0
KURK	Kurchatov	14.87	24	ePn	P	11 46 30.0	-2.1
AKTK	Aktyubinsk	15.27	332	⇑Pn	P	11 46 37.8	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKTK				Sn	S	11 49 22.1	-5.2
AKTO	Aktyubinsk	15.27	332	⇑Pn	P	11 46 37.8	+0.4
	comp=N,1.5nm,0.9s						
AKTO				⇑Sn	S	11 49 22.1	-5.2
	comp=N,0.9nm,1.1s						
KOLN	Koldanda	15.46	124	*e*P	P	11 46 40.9	+0.7
	comp=N,13nm,0.6s						
BVA0	Borovoye Array	15.60	3	⇓P	P	11 46 42.4	+0.6
	comp=N,1.0nm,1.9s,baz=168,slow=13,SNR=14						
BRVK	Borovoye	15.63	2	*e*Pn	P	11 46 42.1	0.0
	comp=N,1.8nm,0.6s						
GKN	Gorkha	16.00	122	*e*P	P	11 46 47.5	+0.4
	comp=N,38nm,0.7s						
CHKZ	Chkalovo	16.26	3	⇑P	P	11 46 49.2	-1.0
	comp=N,3.6nm,1.5s						
CHKZ	Chkalovo	16.26	3	*e*Pn	P	11 46 46.7	-3.5
	comp=N,1.5nm,0.4s						
DMN	Daman	16.58	122	*e*P	P	11 46 54.9	+0.5
	comp=N,11nm,0.5s						
KKN	Kakani	16.58	121	*e*P	P	11 46 53.8	-0.6
PKI	Pulchoki	16.81	121	*e*P	P	11 46 57.6	+0.3
GUN	Gumba	16.91	119	*e*P	P	11 46 58.6	-0.1
	comp=N,16nm,0.5s						
ORR	Orenburg	17.48	329	*d i*P	P	11 47 07.7	+2.1
ORR				pmax	pmax		
	comp=Z,40nm,3.4s						
YAK	Yakutsk	44.03	36	P	P	11 51 09.5	+0.1
	comp=Z,8.3nm,0.3s,mb4.9						

HLW 07 11:59:10.0,34.89N×23.43E,h25^{km},Mb3.3
ATH 07 11:59:23.6,35.84N×24.21E,h23^{km},MD3.5/4
CSEM 07 11:59:23.6,35.84N×24.21E,h23^{km},MD3.5,After ATH
ISC 07 11:59:12.2±0.8,34.46N±0.05×23.5E±0.1,h23^{km},n11, σ0.^{s}97/13,1D,Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAM	Vamos	1.10	31	*e*PB	Pb	11 59 32.9	+0.4
KYTH	Kithira	1.86	348	*e*PN	Pn	11 59 43.5	+0.4
NPS	Neapolis	1.91	65	*e*PN	Pb	11 59 47.4	+1.2
VLI	Veliai	2.30	349	*e*PN	Pn	11 59 49.0	-0.5
SLUM		3.29	154	P	Pn	12 00 04.9	+1.3
HMAT	Matruh	4.52	137	P	Pn	12 00 21.1	+0.1
HMAT				S	Sn	12 01 13.2	-0.3
SWA2		5.46	162	⇓P	Pn	12 00 35.0	+0.7
SWA1		5.51	159	P	Pn	12 00 35.8	+0.8
SWA1				S	Sn	12 01 38.1	-0.4
GLL	Jalalah	8.50	123	P	P	12 01 15.6	-1.4
AMAG	Maghara	9.03	112	P	P	12 01 21.4	-2.9
KHC	Kasperske Hory	16.40	336	*e*P	P	12 03 01.5	-0.9

ATH 07 13:31:35.9,38.16N×27.14E,h42^{km},MD3.0/3
CSEM 07 13:31:37.3±0.1,38.18N×26.71E,h10^{km},MD3.1,Error ellipse: s-maj=3.3km s-min=2.1km az=104.0
ISK 07 13:31:38.0,38.20N×26.72E,h16^{km},MD3.1
ISC 07 13:31:37.6±0.6,38.23N±0.03×26.62E±0.05,h10^{km},n19, σ1.^{s}03/29,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.14	351	*i* P	Pg	13 31 39.8	-1.0
URLA				*i* S	Sg	13 31 43.5	+0.4
BLCB	Balcova	0.37	64	PG	Pg	13 31 44.7	-0.4
IZM	Izmir	0.53	71	PG	Pg	13 31 48.0	-0.4
IZM				SG	Sg	13 31 55.2	-0.4
KDAG	Bornova	0.54	70	*i* P	Pg	13 31 47.2	-1.3
KDAG				*i* S	Sg	13 31 55.4	-0.4
SMG	Samos	0.54	162	*e*P	Pg	13 31 47.5	-1.1
SMG				*e*S	Sg	13 31 56.0	+0.1
PRK	Paraskevi	1.06	345	*e*P	Pb	13 31 58.6	+1.1
PRK				*e*S	Sb	13 32 15.3	+4.1
AYVA	Ayvalik	1.08	3	*i* P	Pb	13 31 55.1	-2.9
AYVA				*i* S	Sb	13 32 16.8	+4.8
AKS	Akhisar	1.14	55	PN	Pn	13 31 59.0	-0.6
AYDN	Tasoluk	1.14	119	*i* P	Pb	13 31 59.1	+0.1
AYDN				*i* S	Sb	13 32 14.6	+0.9
BODT	Bodrum	1.28	155	*e*PN	Pn	13 32 00.9	-0.7
BODT				*e*SN	Sn	13 32 18.1	-0.8
MLSB	Milas	1.30	135	*e*PN	Pn	13 32 01.2	-0.7
BDRM	Kayabasi	1.33	150	*i* P	Pb	13 32 04.3	+2.1
BDRM				*i* S	Sb	13 32 20.2	+1.1
APE	Apeiranthos	1.44	217	*e*PN	Pn	13 32 04.7	+0.8
APE	Apeiranthos	1.44	217	*e*P	Pn	13 32 04.3	+0.4
APE	Apeiranthos	1.44	217	*e*Pn	Pn	13 32 04.7	+0.8
MANT	Manisa	1.54	80	*i* P	Pn	13 32 06.7	+1.3
MANT				*i* S	Sb	13 32 27.2	+1.8
EZN	Ezine	1.61	352	*e*PN	Pn	13 32 07.2	+0.8
DAT	Datca	1.68	153	*e*PN	Pn	13 32 06.4	-0.8
YER	Yerkesik	1.71	129	*e*PN	Pn	13 32 06.9	-0.8

IDC 07 13:31:51.8±0.8,14.26N×144.20E,mb4.1/6,mb1 4.3/6, mb1mx4.1/18,mbtmp4.1/6,MS3.2/3,Ms1 3.2/3, ms1mx3.0/33,Error ellipse: s-maj=29.4km s-min=14.1km az=60.0
NEIC 07 13:31:56.5±0.4,14.30N×144.20E,h35^{km},mb4.7/8,Error ellipse: s-maj=13.9km s-min=6.1km az=72.0
ISC 07 13:31:55.7±1.9,14.28N±0.07×144.2E±0.2,h46^{km}±24^{km}, n23,σ0.^{s}63/22,mb4.4/14,MS3.1/2,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.94	137	Pn	P	13 32 12.1	-0.5
	203nm,0.3s,baz=289,slow=3.9,SNR=84						
GUMO				Sn	S	13 32 25.5	+0.3
	207nm,0.3s,baz=158,slow=22,SNR=20						
GUMO	Guam	0.94	137	*e*Pn	P	13 32 12.1	-0.5
GUMO				*e*Sn	S	13 32 25.4	+0.2
JOW	Kunigami	19.43	312	LR	LR	13 42 22.0	
	comp=Z,62nm,18.1s,baz=217,slow=32						
MJAR	Matsushiro Arr	22.81	347	P	P	13 36 56.8	+1.2
	3.6nm,0.9s,mb3.8,baz=169,slow=10,SNR=7.6						
MJAR				LR	LR	13 43 50.6	
	comp=Z,94nm,21.1s,MS3.2,baz=180,slow=32						
MAJO	Matsushiro	22.81	347	*e*P	P	13 36 56.1	+0.5
	7.6nm,0.7s,mb4.2						
NACB	Ninganchiao	23.48	298	P	P	13 37 03.6	+1.4
TATO	Taipei	23.86	300	*e*P	P	13 37 05.3	-0.6
	73nm,1.2s,mb5.0						
INCN	Inchon	27.90	329	*e*P	P	13 37 43.3	-0.3
	172nm,1.8s,mb5.4						
HNR	Honiara	28.26	146	LR	LR	13 47 45.9	
	comp=Z,43nm,18.4s,MS3.1,baz=162,slow=34						
QIZ	Qiongzhong	33.23	283	*e*P	P	13 38 30.0	-0.8
CTAO	Charters Tower	34.21	177	*e*P	P	13 38 38.8	-0.4
	7.5nm,1.2s,mb4.5						
WRAB	Tennant Creek	35.36	196	*e*P	P	13 38 49.1	+0.1
	16nm,0.9s,mb4.9						
WB2	Warramunga Arr	35.37	196	*e*P	P	13 38 49.3	+0.2
WRA	Warramunga Arr	35.37	196	P	P	13 38 49.3	+0.2
	6.5nm,0.8s,mb4.6,baz=6.8,slow=9.6,SNR=75						
FITZ	Fitzroy Crossi	37.02	210	P	P	13 39 03.5	+0.4
	5.8nm,0.9s,mb4.4,baz=67,slow=13,SNR=3.5						
HIA	Hailar	40.25	335	*e*P	P	13 39 29.5	-0.2
	2.9nm,0.4s,mb4.4						
MBWA	Marble Bar	42.64	215	*e*P	P	13 39 50.2	+0.5
	45nm,1.5s,mb5.0						
SONM	Songino Array	45.80	325	P	P	13 40 15.1	+0.4
	1.0nm,0.8s,mb3.8,baz=141,slow=7.9,SNR=8.4						
SONM				PcP	PcP	13 41 53.0	+0.8
	0.4nm,0.7s,baz=146,slow=5.2,SNR=3.3						
STKA	Stephens Creek	45.96	183	P	P	13 40 16.4	+0.1
	2.6nm,0.9s,mb4.2,baz=354,slow=11,SNR=6.0						
MKAR	Makanchi Array	60.55	316	P	P	13 42 03.1	-0.7
	0.4nm,0.7s,mb3.7,baz=90,slow=12,SNR=4.5						
KURK	Kurchatov	63.65	320	*e*P	P	13 42 23.1	-1.3
	1.8nm,0.8s,mb4.2						
BRVK	Borovoye	69.06	322	P	P	13 42 58.4	-0.3
LPAZ	La Paz	148.76	98	PKPbc	PKPdf	13 51 43.6	+8.5
	0.9nm,0.5s,baz=270,slow=1.0,SNR=7.2						

CASC 07 13:43:43.5±1.4,10.57N×86.49W,h13^{km}±7^{km},MD3.8, ML3.5,mb4.2(NEIC)
IDC 07 13:43:43.3±1.0,11.31N×85.91W,mb3.7/4,mb1 4.1/4, mb1mx3.8/19,mbtmp3.7/4,MS3.5/1,Ms1 3.4/1, ms1mx2.7/32,Error ellipse: s-maj=62.5km s-min=17.1km az=50.0
NEIC 07 13:43:48.3±0.7,11.14N×86.01W,h35^{km},mb4.2/1,Error ellipse: s-maj=24.2km s-min=12.3km az=64.0
ISC 07 13:43:41.6±2.0,10.54N±0.06×86.58W±0.06,h9^{km}±14^{km}, n36,σ0.^{s}89/36,mb3.7/5,MS3.5/1,4C-7D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	San Juan del S	1.04	44	⇑*e*P	Pb	13 44 01.7	+0.5
LIM1	Limonal	1.31	83	⇓*e*P	Pb	13 44 05.0	-1.0
MADN	Villa Maderas	1.34	50	⇑*e*P	Pb	13 44 06.4	-0.1
CONN	Concepcion	1.39	42	⇑*e*P	Pn	13 44 06.8	-0.4
APON	Apoyo	1.46	20	*e*P	Pn	13 44 08.4	+0.2
MASN	Masaya	1.50	16	*e*P	Pn	13 44 09.5	+0.7
TICN	Ticuantepe	1.53	13	⇓*e*P	Pn	13 44 09.8	+0.6
JTS	JuntasAbangare	1.62	99	Pn	Pn	13 44 09.1	-1.4
	21nm,0.3s,baz=314,slow=17,SNR=41						
JTS				Lg		13 44 37.8	
	64nm,0.3s,baz=306,slow=19,SNR=8.8						
JTS	JuntasAbangare	1.62	99	*e*Pn	Pn	13 44 09.3	-1.3
JTS				*e*Sn	Sn	13 44 31.3	-0.3
JTS				Lg		13 44 37.8	
XAVN	Gruta Xavier	1.62	9	*e*P	Pn	13 44 10.9	+0.4
COPN	Copaltepe	1.63	360	⇓*e*P	Pn	13 44 10.8	0.0
MGAN	Managua	1.63	12	*e*P	Pn	13 44 10.8	+0.1
MGAN				*e*S	Sn	13 44 32.4	+0.4
MGAN				*i*		13 44 41.3	
	comp=E,637nm,0.7s						
MOMJ	Momotombo	1.86	1	⇓*e*P	Pn	13 44 13.9	0.0
FORC	Fortuna	1.88	92	⇓*e*P	Pn	13 44 14.1	-0.2
LEON	Leon	1.89	351	⇑*e*P	Pn	13 44 14.4	0.0
MIRN	Miramar	1.90	356	⇓*e*P	Pn	13 44 14.5	0.0
CNGN	Cerro Negro	1.95	357	*e*P	Pn	13 44 15.6	+0.3
TEL3	Telica 3	2.04	353	⇓*e*P	Pn	13 44 16.9	+0.4
TELN	Telica	2.07	353	*e*P	Pn	13 44 16.8	-0.1
CGA2	Cerro Gallo 2	2.15	104	*e*P	Pn	13 44 17.3	-0.8
CRIN	San Cristobal	2.20	348	*e*P	Pn	13 44 18.4	-0.4
PRS1	Puriscal	2.30	104	*e*P	Pn	13 44 20.5	+0.2
LAJ	Bijagual	2.51	105	*e*P	Pn	13 44 19.0	-4.3
LCR2	La Lucha 2	2.66	107	*e*P	Pn	13 44 25.4	0.0
BUS	Buena Vista	2.95	109	*e*P	Pn	13 44 30.2	+0.7
PAYG	Puerto Ayora	11.73	199	*e*Pn	P	13 46 44.0	+12
SDV	Santo Domingo	15.81	95	Pn	P	13 47 28.4	+2.2
	comp=E,0.3nm,0.3s,baz=296,slow=5.4,SNR=6.7						
TXAR	Lajitas Array	24.59	322	P	P	13 49 02.9	-0.5
	comp=E,0.8nm,0.4s,mb3.6,baz=134,slow=9.4,SNR=9.0						
TXAR				PcP	PcP	13 52 43.5	+1.0
	comp=E,0.4nm,0.3s,baz=153,slow=6.0,SNR=3.6						
TXAR	Lajitas Array	24.59	322	P	P	13 49 02.9	-0.5
TXAR				PcP	PcP	13 52 43.5	+1.0
CPCT	Cooper Cave	24.87	4	*e*P	P	13 49 03.6	-2.4
WMOK	Wichita Mounta	26.54	337	*e*P	P	13 49 21.1	-0.5
	comp=E,7.3nm,1.0s,mb4.2						
SIV	San Ignacio	36.50	136	P	P	13 50 51.9	+2.5
	comp=E,0.7nm,0.6s,mb3.7,baz=325,slow=8.8,SNR=6.7						
PDAR	Pinedale Array	37.85	332	P	P	13 50 58.0	-2.5
	comp=E,0.5nm,0.7s,mb3.4,baz=114,slow=8.9,SNR=4.8						
NVAR	Mina Array Bea	39.70	320	P	P	13 51 17.1	+1.1
	comp=E,1.1nm,0.8s,mb3.6,baz=126,slow=8.0,SNR=10						
NVAR				PcP	PcP	13 53 24.2	+1.0
	comp=E,1.1nm,0.7s,baz=125,slow=5.0,SNR=13						
BDFB	Brasilia	46.20	124	LR	LR	14 12 16.3	
	comp=E,55nm,19.4s,MS3.5,baz=102,slow=37						
WRA	Warramunga Arr	139.52	252	PKP	PKPdf	14 03 14.9	+1.4
	comp=E,0.3nm,0.6s,baz=93,slow=1.8,SNR=6.4						

NNC 07 13:53:14.4±3.0,37.41N×70.63E,mpv3.1,2C-3D,Error ellipse: s-maj=27.1km s-min=22.3km az=80.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	5.69	359	⇑Pn	Pn	13 54 43.1	+1.0
	1.0nm,0.5s,baz=179,slow=13,SNR=42						
KK31				⇑Sn	Sn	13 55 52.8	+3.6
	0.9nm,0.3s,baz=185,slow=22,SNR=9.7						
AAK	Ala-Archa	6.00	28	⇓Pn	Pn	13 54 43.7	-2.9
	1.0nm,0.5s						
AAK				⇓Sn	Sn	13 55 55.1	-1.9
	3.8nm,0.8s						
AB31	Akbulak array	14.14	330	⇓Sn	S	13 59 12.0	-4.9
	0.6nm,0.7s,baz=152,slow=23,SNR=4.1						

BJI 07 14:05:09.8,34.51N×72.80E,h10^{km},mB5.0,mb4.5,ML4.4, Ms4.4,Msz4.1
IDC 07 14:05:14.9±1.1,34.39N×73.56E,mb4.2/10,mb1 4.3/13, mb1mx4.2/21,mbtmp4.2/13,ML4.0/3,MS3.6/1,Ms1 3.6/1, ms1mx2.9/19,Error ellipse: s-maj=27.1km s-min=22.0km az=46.0
NEIC 07 14:05:15.9±0.5,34.32N×73.57E,h10^{km},mb4.0/6,Error ellipse: s-maj=12.8km s-min=5.0km az=50.0
MOS 07 14:05:15.3±1.2,34.48N×73.52E,h8^{km},mb4.3/14,Error ellipse: s-maj=18.0km s-min=5.8km az=93.8
NDI 07 14:05:21.0±4.3,34.28N×73.58E,h10^{km},MD3.7,ML3.7, mb4.0(NEIC)
NNC 07 14:05:27.6±3.1,35.07N×73.03E,h23^{km}±29^{km},mpv4.2, Error ellipse: s-maj=35.2km s-min=26.3km az=90.0
ISC 07 14:05:15.0±0.3,34.40N±0.03×73.56E±0.05,h10^{km},n97, σ1.^{s}36/119,mb4.2/21,MS3.8/2,15C-10D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	1.49	248	⇑P	Pn	14 05 46.2	+4.2
JMU	Jammu	2.02	146	*e*SB	Sb	14 06 22.5	+6.0
THN	Thein Dam	2.66	137	*e*P	Pn	14 06 03.5	+4.7
THN				*e*SB	Sb	14 06 39.3	+4.0
DLH	Dalhousie	2.73	132	*e*P	Pn	14 06 03.0	+3.2
DLH				*e*SB	Sb	14 06 42.0	+4.7
BHK	Bhakra	3.82	140	*e*PG	Pg	14 06 34.5	+3.2
BHK				*e*SG	Sg	14 07 21.7	-0.6
SDNR	Sundarnagar	4.07	134	*e*P	Pn	14 06 21.0	+2.2
SDNR				*e*S	Sn	14 07 09.4	+2.3
SMLA	Simla	4.46	136	*e*P	Pn	14 06 26.2	+1.9
SMLA				*e*S	Sn	14 07 17.4	+0.6
KLP	Kalpa	4.87	125	*e*S	Pn	14 06 32.6	+2.5
KLP				*e*S	Sn	14 07 27.4	+0.2
KLP				AML	AML	14 07 58.1	
	comp=N,501nm,0.8s						
KLP				AML	AML	14 07 59.0	
	comp=E,312nm,0.6s						
NDI	New Delhi	6.50	150	*e*x	x	14 06 56.5	
NDI				*e*S	Sn	14 08 03.0	-5.0
KHET	Khetri	6.59	162	*e*P	Pn	14 06 57.6	+3.2
KHET				*e*S	Sn	14 08 05.3	-5.1
KHET				AML	AML	14 09 01.2	
	comp=E,43nm,0.5s						
KHET				AML	AML	14 09 02.3	
	comp=N,33nm,0.5s						
KUDL	Kundal	6.72	157	*e*P	Pn	14 06 57.1	+0.9
KUDL				*e*S	Sn	14 08 08.9	-4.7
SONA	Sohna	6.83	153	*e*P	Pn	14 06 56.6	-1.1
SONA				*e*S	Sn	14 08 12.1	-4.3
SONA				AML	AML	14 08 17.1	
	comp=E,106nm,0.2s						
SONA				AML	AML	14 08 18.2	
	comp=N,71nm,0.3s						
PTH	Pithoragarh	7.44	129	*e*P	Pn	14 07 07.9	+1.6
PTH				*e*x	x	14 08 34.9	
AML	Almayashu	7.72	1	P	Pn	14 07 11.8	+1.6
	SNR=12						
KZA	Kyzart	7.78	9	P	Pn	14 07 13.2	+2.2
	SNR=12						
UCH	Uchtor	7.85	5	P	Pn	14 07 13.9	+1.8
	SNR=17						
EKS2	Erkin-Say	8.25	1	P	P	14 07 19.2	+1.6
	SNR=14						
AAK	Ala-Archa	8.25	5	P	P	14 07 19.6	+1.9
	SNR=6.1						
AAK	Ala-Archa	8.25	5	⇑Pn	P	14 07 20.1	+2.5
	comp=N,4.5nm,0.8s						
AAK				⇑Sn	Sn	14 08 50.8	-1.2
	comp=N,11nm,1.1s						
AAK	Ala-Archa	8.25	5	⇑Pn	P	14 07 20.1	+2.5
	comp=N,4.5nm,0.8s						
AAK				Sn	Sn	14 08 50.8	-1.2
KBK	Karagaybulak	8.31	7	P	P	14 07 20.4	+1.9
	SNR=7.3						
CHMS	Chumysh	8.64	6	P	P	14 07 25.2	+2.2
	SNR=5.7						
KK31	Karatay Array	9.01	346	⇓Pn	P	14 07 28.6	+0.4
	comp=N,14nm,0.4s,baz=159,slow=12,SNR=334						
KK31				⇑Sn	Sn	14 09 05.1	-5.7
	comp=N,3.5nm,0.5s,baz=168,slow=12,SNR=6.8						
KK31	Karatay Array	9.01	346	⇓Pn	P	14 07 28.6	+0.4
	comp=N,14nm,0.4s						
KK31				Sn	Sn	14 09 05.1	-5.7
KKAR	Karatay Array	9.01	346	*e*P	P	14 07 28.5	+0.3
KKAR				S	Sn	14 09 06.1	-4.7
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KKAR				smax			
	comp=Z,1.0nm,0.3s						
KOLN	Koldanda	10.85	125	*e*Pn	P	14 07 50.5	-2.9
KOLN				*e*Sn	S	14 09 47.6	-8.3
	comp=Z,35nm,0.6s						
GKN	Gorkha	11.42	121	*e*Pn	P	14 07 58.7	-2.6
GKN				*e*Sn	S	14 10 03.3	-6.7
	comp=Z,35nm,0.4s						
DMN	Daman	11.99	121	*e*Pn	P	14 08 06.2	-2.8
KKN	Kakani	12.01	120	*e*Pn	P	14 08 06.4	-2.8
PKI	Pulchoki	12.23	121	*e*Pn	P	14 08 10.5	-1.7
PKI				*e*Sn	S	14 10 21.9	-7.7
	comp=Z,46nm,0.8s						
GUN	Gumba	12.37	118	*e*Pn	P	14 08 12.2	-1.9
GUN				*e*Sn	S	14 10 26.7	-6.3
	comp=Z,43nm,0.7s						
MK31	Makanchi Array	14.03	25	⇑P	P	14 08 37.1	+1.1
	comp=Z,2.5nm,0.7s,baz=204,slow=8.4,SNR=6.6						
MK31	Makanchi Array	14.03	25	⇑P	P	14 08 37.1	+1.1
	comp=Z,2.5nm,0.7s						
MKAR	Makanchi Array	14.03	25	Pn	P	14 08 35.2	-0.8
	comp=Z,0.1nm,0.3s,baz=204,slow=12,SNR=8.1						
MKAR	Makanchi Array	14.03	25	Pn	P	14 08 35.2	-0.8
WMQ	Urumqi	14.44	45	⇓P	P	14 08 42.6	+1.3
WMQ				AP		14 08 50.8	
WMQ				PP	PP	14 08 54.4	+1.6
WMQ				*e*S	S	14 11 21.6	-0.8
WMQ				XS		14 11 33.3	
WMQ				AMB	AMB		
	comp=Z,50nm,3.1s						
LSA	Lhasa	15.63	103	P	P	14 09 02.4	+5.4
LSA	Lhasa	15.63	103	*e*Pn	P	14 08 56.0	-1.0
POO	Poona	15.81	179	*e*x	x	14 12 01.5	
KURK	Kurchatov	16.72	11	⇓P	P	14 09 10.8	+0.1
	comp=Z,3.3nm,1.0s						
HYB	Hyderabad	17.49	164	*i* P	P	14 09 25.0	+4.3
HYB	Hyderabad	17.49	164	*e*P	P	14 09 25.0	+4.3
AB31	Akbulak array	17.94	330	⇑P	P	14 09 25.7	-0.3
	comp=Z,2.5nm,0.6s						
AB31				⇓S	S	14 12 34.9	-8.7
	comp=Z,1.4nm,0.7s,baz=149,slow=23,SNR=3.7						
AB31	Akbulak array	17.94	330	⇑P	P	14 09 25.7	-0.3
	comp=Z,2.5nm,0.6s						
AB31				S	S	14 12 34.9	-8.7
SHL	Shillong	18.13	114	*e*x	x	14 09 24.5	
VOSK	Vostochnaya	18.41	355	⇑P	P	14 09 30.4	-1.5
	comp=Z,5.1nm,1.4s						
BVA0	Borovoye Array	18.76	354	⇑P	P	14 09 35.6	-0.5
	comp=Z,0.8nm,0.9s,baz=159,slow=10,SNR=18						
BVA0	Borovoye Array	18.76	354	⇑P	P	14 09 35.6	-0.5
	comp=Z,0.8nm,0.9s						
BVAR	Borovoye Array	18.76	354	P	P	14 09 36.2	+0.1
	comp=Z,1.2nm,0.3s,baz=156,slow=9.1,SNR=15						
BVAR	Borovoye Array	18.76	354	P	P	14 09 36.2	+0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	18.80	354	*e*P	P	14 09 36.7	+0.1
	comp=Z,2.2nm,0.8s						
CHKZ	Chkalovo	19.38	355	⇓P	P	14 09 42.8	-0.8
	comp=Z,5.5nm,1.4s						
CHKZ	Chkalovo	19.38	355	⇓P	P	14 09 42.8	-0.8
AKTK	Aktyubinsk	19.64	329	⇑P	P	14 09 46.2	-0.4
AKTO	Aktyubinsk	19.64	329	⇑P	P	14 09 46.2	-0.4
	comp=Z,1.9nm,0.7s						
AKTO	Aktyubinsk	19.64	329	P	P	14 09 46.3	-0.2
	comp=Z,1.5nm,0.3s,baz=132,slow=11,SNR=46						
AKTO	Aktyubinsk	19.64	329	P	P	14 09 46.3	-0.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	Zalesovo	21.08	19	P	P	14 10 00.2	-1.5
	comp=Z,7.9nm,0.4s,mb4.4,baz=253,slow=8.1,SNR=22						
ZAL	Zalesovo	21.08	19	P	P	14 10 00.2	-1.5
ZAL	Zalesovo	21.08	19	P	P	14 10 00.2	-1.5
ZAL				pmax	pmax		
	comp=Z,8.0nm,0.4s						
NVS	Novosibirsk	21.53	15	*e*P	P	14 10 04.2	-2.0
GTA	Gaotai	21.55	69	*e*P	P	14 10 06.4	-0.1
GTA				AP		14 10 15.3	
GTA				XP		14 10 19.8	
ORR	Orenburg	21.92	327	⇓*i*P	P	14 10 10.3	+0.1
ORR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.5						
ARU	Arti	24.31	340	⇓*i*P	P	14 10 33.7	+0.2
ARU				*e*		14 11 05.7	
ARU				*e*S	S	14 14 50.6	+1.2
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.0						
KIV	Kislovodsk	25.64	301	P	P	14 10 47.7	+1.4
SONM	Songino Array	27.91	51	P	P	14 11 07.4	+0.3
	comp=Z,1.1nm,0.8s,mb3.5,baz=251,slow=9.5,SNR=8.3						
SONM				LR	LR	14 23 41.6	
	comp=Z,113nm,18.1s,MS3.5,slow=40						
SONM	Songino Array	27.91	51	P	P	14 11 07.4	+0.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM				MLR	MLR		
	comp=Z,113nm,18.1s						
HHC	Hu-ho-hao-te	30.60	67	*e*P	P	14 11 33.8	+2.5
HHC				PCP	PcP	14 14 28.3	-1.5
HHC				S	S	14 16 36.3	+4.2
HHC				SCP		14 18 07.4	
HHC				PCS		14 18 11.2	
HHC				SS	SS	14 18 23.3	+10
HHC				SCS	ScS	14 22 03.3	-2.8
HHC				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.4						
HHC				AMB	AMB		
	comp=Z,100nm,4.3s						
HHC				LR	LR		
	comp=N,160nm,4.9s						
HHC				LR	LR		
	comp=E,260nm,5.9s						
HHC				LR	LR		
	comp=Z,130nm,5.7s						
OBN	Obninsk	32.89	320	*e*P	P	14 11 50.9	-0.2
OBN				*e*		14 13 01.5	
OBN				*e*S	S	14 17 06.1	-1.5
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
NJ2	Nanjing	37.72	81	*e*P	P	14 12 31.2	-1.4
NJ2				AP	pP	14 12 40.9	+5.3
NJ2				XP	sP	14 12 44.9	+8.1
NJ2				PP	PP	14 14 00.5	-1.0
NJ2				XS		14 18 33.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,320nm,3.5s						
NJ2				LR	LR		
	comp=N,180nm,18.2s,MS4.0						
NJ2				LR	LR		
	comp=E,210nm,23.0s,MS4.0						
NJ2				LR	LR		
	comp=Z,300nm,23.6s,MS4.0						
SSE	Sheshan	39.91	81	P	P	14 12 48.5	-2.4
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,90nm,5.9s						
SSE	Sheshan	39.91	81	P	P	14 12 48.5	-2.4
	comp=Z,26nm,0.7s,mb5.1						
FINES	FINESS Array B	40.39	327	P	P	14 12 54.0	-0.5
	comp=Z,1.6nm,0.8s,mb3.8,baz=129,slow=12,SNR=4.5						
FINES	FINESS Array B	40.39	327	P	P	14 12 54.0	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CN2	Changchun	40.76	61	*e*P	P	14 12 58.2	+0.5
KEV	Kevo	43.52	338	*e*P	P	14 13 19.2	-0.8
	comp=Z,6.3nm,0.8s,mb4.4						
ARCES	ARCESS Array B	43.88	338	P	P	14 13 23.1	+0.3
	comp=Z,1.4nm,0.5s,mb3.9,baz=114,slow=8.3,SNR=11						
ARCES	ARCESS Array B	43.88	338	P	P	14 13 23.1	+0.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TIXI	Tiksi	46.96	21	⇑*i*P	P	14 13 45.7	-1.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
NB2	NORSAR Subarra	47.31	324	P	P	14 13 49.3	-1.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,2.5nm,0.6s,mb4.3,baz=95,slow=7.4						
NOA	NORSAR Array B	47.31	324	P	P	14 13 49.5	-0.8
	comp=Z,2.1nm,0.6s,mb4.2,baz=96,slow=7.7,SNR=8.5						
NOA	NORSAR Array B	47.31	324	P	P	14 13 49.5	-0.8
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NAO	NORSAR Subarra	47.48	324	P	P	14 13 49.3	-2.3
	comp=Z,2.5nm,0.6s,mb4.3						
BILL	Bilibino	59.58	26	P	P	14 15 19.8	-1.0
BILL				e		14 17 31.4	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
INK	Inuvik	75.62	10	P	P	14 17 01.7	+0.4
	comp=Z,3.3nm,0.5s,mb4.5,baz=354,slow=5.2,SNR=54						
INK	Inuvik	75.62	10	P	P	14 17 01.7	+0.4
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ILAR	Eielson Array	76.21	17	P	P	14 17 04.2	-0.5
	comp=Z,0.9nm,0.5s,mb3.9,baz=296,slow=4.8,SNR=18						
ILAR	Eielson Array	76.21	17	P	P	14 17 04.2	-0.4
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DBIC	Dimbokro	76.72	269	P	P	14 17 08.2	-0.3
	comp=Z,1.9nm,0.8s,mb4.1,baz=12,slow=8.5,SNR=3.9						
DBIC	Dimbokro	76.72	269	P	P	14 17 08.3	-0.2
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	79.10	123	P	P	14 17 21.6	+0.1
	comp=Z,1.7nm,0.6s,mb4.1,baz=324,slow=5.3,SNR=34						
WRA	Warramunga Arr	79.10	123	P	P	14 17 21.6	+0.1
WRA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRAB	Tennant Creek	79.10	123	eP	P	14 17 21.6	+0.1
	comp=Z,3.8nm,0.7s,mb4.4						
WB2	Warramunga Arr	79.11	123	eP	P	14 17 21.5	-0.1
ASPA	Alice Springs	81.33	126	⇓iP	P	14 17 33.7	+0.4
YKA	Yellowknife Ar	83.22	4	P	P	14 17 42.6	+0.3
	comp=Z,1.1nm,0.5s,mb4.1,baz=345,slow=5.3,SNR=6.0						
YKA	Yellowknife Ar	83.22	4	P	P	14 17 42.6	+0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*CASC **07** 14:07:49.2±2.5, 13.30N×89.69W, h52^{km}±24^{km}, MD4.1, ML3.7*

*IDC **07** 14:07:54.9±4.6, 13.58N×89.06W, h116^{km}±80^{km}, mb3.2/3, mb1 3.6/4, mb1mx3.4/19, mbtmp3.7/4, ML3.9/1, MS3.0/1, Ms1 3.0/1, ms1mx2.7/14, Error ellipse: s-maj=119.0km s-min=38.8km az=32.0*

ISC 07 14:07:49.0±0.7**, 13.27N**±0.09×**89.64W**±0.08**, h53**^{km}±14^{km}**, n38,** σ0^{s}**96**/28**, mb3.7**/2**, MS2.8**/1**, 11C-16D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.56	2	⇓eP	Px	14 08 11.4	
SBLS				eS	Sx	14 08 21.7	
SNET	Serv Nac Est T	0.57	44	⇑eP	Px	14 08 12.1	
SNET				eS	Sx	14 08 20.5	
BOQS	Boqueron	0.58	37	⇓eP	Px	14 08 11.9	
BOQS				eS	Sx	14 08 22.2	
SNJE	San Jose	0.59	3	⇓eP	Px	14 08 11.7	
SNJE				eS	Sx	14 08 22.7	
RTR	El Retiro	0.62	359	⇓eP	Px	14 08 12.2	
RTR				eS	Sx	14 08 22.0	
LFRS	El Faro	0.66	58	⇓iP	Px	14 08 13.0	
LFRS				eS	Sx	14 08 25.7	
LFU	La Fuente	0.70	47	⇓eP	Px	14 08 13.8	
LFU				eS	Sx	14 08 24.6	
LBRS	Las Brisas	0.74	51	⇓eP	Px	14 08 14.4	
LBRS				eS	Sx	14 08 26.0	
LCBS	La Ceiba	0.75	59	⇓eP	Px	14 08 14.1	
LCBS				eS	Sx	14 08 26.1	
RBDL	Robledal	0.84	357	⇑eP	Px	14 08 13.8	
RBDL				eS	Sx	14 08 24.3	
SNVI	San Vicente	0.85	66	⇓eP	Px	14 08 15.7	
SNVI				eS	Sx	14 08 28.6	
MTO2	Montecristo 2	1.15	13	⇑eP	Px	14 08 19.7	
MTO2				eS	Sx	14 08 35.7	
IXG	Ixpaco	1.20	319	⇓eP	P	14 08 08.5	-1.2
IXG				eS	S	14 08 23.4	-1.8
VSM	San Miguel	1.34	83	⇓eP	Px	14 08 22.7	
VSM				eS	Sx	14 08 39.6	
BLLM	Bellamira	1.37	83	⇑eP	Px	14 08 22.9	
BLLM				eS	Sx	14 08 42.0	
CAHU	Cacacuatique	1.47	70	⇓eP	Px	14 08 24.5	
CAHU				eS	Sx	14 08 44.3	
CNCH	Conchagua	1.76	90	⇓eP	Px	14 08 28.0	
CNCH				eS	Sx	14 08 51.7	
MRL	Marmol	1.78	358	⇑iP	P	14 08 18.5	+0.5
MRL				eS	S	14 08 39.7	+0.1
TP2	Tecpan 2	2.01	318	⇑eP	P	14 08 21.4	+0.1
TP2				eS	S	14 08 47.0	+1.7
CRIN	San Cristobal	2.59	102	eP	P	14 08 30.4	+0.9
TEL3	Telica 3	2.81	104	⇑eP	P	14 08 32.6	-0.1
TEL3				i		14 09 13.9	
	comp=Z,557nm,0.4s						
TELN	Telica	2.82	103	⇑eP	P	14 08 32.6	-0.1
CNGN	Cerro Negro	2.97	105	eP	P	14 08 34.4	-0.5
MIRN	Miramar	2.97	106	⇑eP	P	14 08 34.6	-0.3
MOMJ	Momotombo	3.14	106	eP	P	14 08 36.9	-0.4
MOMJ				eS	S	14 09 13.8	-0.1
COPN	Copaltepe	3.17	110	⇑eP	P	14 08 38.3	+0.7
XAVN	Gruta Xavier	3.42	109	⇑eP	P	14 08 41.0	-0.2
MGAN	Managua	3.49	108	eP	P	14 08 44.5	+2.2
MGAN				eS	S	14 09 21.1	-1.6
MGAN				i		14 09 22.0	
	comp=E,283nm,0.5s						
TICN	Ticuantepe	3.55	110	eP	P	14 08 43.9	+0.8
JTS	JuntasAbangare	5.46	122	P	P	14 09 09.6	-0.2
	comp=E,4.1nm,0.3s,baz=302,slow=22,SNR=17						
JTS				S	S	14 10 10.2	-1.9
	comp=E,1.2nm,0.3s,baz=280,slow=18,SNR=1.8						
CGA2	Cerro Gallo 2	6.01	122	⇓eP	P	14 09 18.8	+1.2
PRS1	Puriscal	6.16	121	eP	P	14 09 20.1	+0.6
LAJ	Bijagual	6.38	121	⇓eP	P	14 09 18.9	-3.8
LCR2	La Lucha 2	6.54	122	⇓eP	P	14 09 25.8	+0.8
BUS	Buena Vista	6.85	122	eP	P	14 09 29.2	0.0
TXAR	Lajitas Array	20.61	323	P	P	14 12 26.1	-0.2
	comp=E,0.5nm,0.3s,baz=142,slow=11,SNR=5.3						
TXAR				LR	LR	14 23 14.0	
	comp=E,38nm,18.1s,MS2.8,baz=140,slow=44						
NVAR	Mina Array Bea	35.69	320	P	P	14 14 43.8	-0.5
	comp=E,0.6nm,0.6s,mb3.7,baz=135,slow=7.7,SNR=7.1						
YKA	Yellowknife Ar	52.28	346	P	P	14 16 52.4	-4.6
	comp=E,0.3nm,0.3s,mb3.7,baz=131,slow=7.6,SNR=5.6						

*CSEM **07** 14:50:02.2±0.6, 71.30N×12.33W, h15^{km}, ML2.8, Error ellipse: s-maj=15.9km s-min=10.7km az=49.0*

*NAO **07** 14:50:03.7±18.0, 71.48N×11.81W, ML2.0*

*BER **07** 14:50:04.8±0.3, 71.86N×11.91W, h15^{km}, MD3.4, ML2.8*

ISC 07 14:50:00.7±2.0**, 71.6N**±0.1×**12.2W**±0.4**, h9**^{km}±14^{km}**, n12,** σ0^{s}**83**/18**, 1C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMI	Jan Mayen	1.31	121	eP	Pb	14 50 26.2	+1.2
JMI				eS	Sb	14 50 42.0	+0.2
JMI				AML	AML	14 50 45.2	
	comp=Z,192nm,0.4s						
JMI	Jan Mayen	1.31	121	eP	Pb	14 50 26.2	+1.2
	SNR=53						
JMI				eS	Sb	14 50 42.0	+0.3
	comp=Z,192nm,0.4s,SNR=53						
JMIC	Jan Mayen	1.33	117	Pg	Pg	14 50 26.4	-0.9
JMIC				Lg		14 50 42.1	
JNW	Jan Mayen West	1.34	115	eP	Pb	14 50 26.4	+0.9
JNW				eS	Sb	14 50 42.2	-0.5
JNW				AML	AML	14 50 44.8	
	comp=Z,151nm,0.6s						
JNW	Jan Mayen West	1.34	115	eP	Pb	14 50 26.4	+0.9
	SNR=53						
JNW				eS	Sb	14 50 42.2	-0.5
	comp=Z,151nm,0.6s,SNR=53						
JNE	Jan Mayen East	1.40	115	eP	Pn	14 50 27.2	+0.7
JNE				eS	Sb	14 50 43.4	-0.9
JNE				AML	AML	14 50 46.9	
	comp=Z,287nm,0.3s						
JNE	Jan Mayen East	1.40	115	eP	Pn	14 50 27.2	+0.8
	SNR=53						
JNE				eS	Sb	14 50 43.4	-0.9
	comp=Z,287nm,0.3s,SNR=53						
DAG	Danmarks Havn	5.47	344	⇑iP	Pn	14 51 24.2	-0.2
	comp=Z,42nm,0.3s						
SPA0	Spitsbergen Ar	9.79	35	Pn	P	14 52 23.8	-0.6
	baz=239,slow=16						
ARA0	ARCESS Array S	12.55	81	P	P	14 53 03.2	+1.1
	baz=299,slow=12						
ARA0	ARCESS Array S	12.55	81	P	P	14 53 03.2	+1.1
	SNR=4.6						
KHC	Kasperske Hory	25.48	138	eP	P	14 55 29.0	-1.1

*IDC **07** 14:55:06.3±0.8, 2.52S×68.54E, mb4.2/10, mb1 4.2/10, mb1mx4.0/19, mbtmp4.2/10, MS3.8/16, Ms1 3.8/16, ms1mx3.7/24, Error ellipse: s-maj=26.9km s-min=17.8km az=137.0*

*NEIC **07** 14:55:08.3±0.3, 2.55S×68.49E, h10^{km}, mb4.6/7, Error ellipse: s-maj=9.4km s-min=7.1km az=129.0*

ISC 07 14:55:07.6±5.1**, 2.61S**±0.06×**68.57E**±0.07**, h18**^{km}±37^{km}**, n41,** σ0^{s}**99**/29**, mb4.5**/20**, MS3.9**/16**, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	Diego Garcia	6.14	141	ePn	Pn	14 56 39.9	+0.1
DGAR				eSn	Sn	14 57 47.6	-2.8
ATD	Arta Tunnel	29.18	299	LR	LR	15 10 56.3	
	comp=Z,41nm,21.9s,MS3.0,baz=126,slow=33						
KMBO	Kilima Mbogo	31.33	272	P	P	15 01 30.2	+0.6
	3.5nm,0.9s,mb4.2,baz=57,slow=9.0,SNR=9.3						
KMBO				LR	LR	15 11 25.4	
	comp=Z,110nm,19.7s,MS3.5,baz=92,slow=31						
KMBO	Kilima Mbogo	31.33	272	P	P	15 01 30.2	+0.6
KMBO				LR	LR	15 11 25.4	
NDI	New Delhi	32.21	14	ex	x	15 01 30.0	
KOLN	Koldanda	33.50	25	eP	P	15 01 48.2	-0.2
	22nm,1.2s,mb5.0						
DMN	Daman	34.01	27	eP	P	15 01 53.3	+0.5
	28nm,1.1s,mb5.1						
GKN	Gorkha	34.14	26	eP	P	15 01 53.7	-0.3
	34nm,1.3s,mb5.1						
KKN	Kakani	34.24	27	eP	P	15 01 54.9	+0.1
	18nm,1.0s,mb4.9						
GUN	Gumba	34.62	28	eP	P	15 01 58.3	+0.2
	44nm,1.1s,mb5.3						
LSA	Lhasa	38.72	32	eP	P	15 02 34.2	+1.5
	12nm,1.4s,mb4.5						
LSZ	Lusaka	41.73	250	P	P	15 02 57.7	0.0
	2.3nm,0.7s,mb3.9,baz=73,slow=12,SNR=6.2						
KSM	Kuching	41.93	85	eP	P	15 02 59.6	+0.2
MATP	Matopo	42.88	243	P	P	15 03 07.3	+0.2
	3.8nm,0.6s,mb4.3,baz=61,slow=9.6,SNR=9.6						
MATP	Matopo	42.88	243	P	P	15 03 07.3	+0.2
LBTB	Lobatse	46.98	238	eP	P	15 03 40.5	+0.6
	3.1nm,0.7s,mb4.3						
BOSA	Boshof	48.65	233	P	P	15 03 52.9	+0.1
	7.2nm,0.7s,mb4.8,baz=128,slow=3.8,SNR=10						
BOSA				LR	LR	15 23 47.8	
	comp=Z,70nm,18.1s,MS3.7,baz=78,slow=35						
BOSA	Boshof	48.65	233	eP	P	15 03 52.9	0.0
	6.2nm,0.7s,mb4.8						
MKAR	Makanchi Array	50.66	12	P	P	15 04 06.0	-2.1
	0.9nm,0.8s,mb3.7,baz=180,slow=7.3,SNR=7.0						
MKAR				LR	LR	15 23 25.6	
	comp=Z,59nm,20.2s,MS3.6,baz=37,slow=34						
MBWA	Marble Bar	53.06	115	eP	P	15 04 22.5	-4.0
	23nm,1.3s,mb5.0						
AKTO	Aktyubinsk	53.61	352	P	P	15 04 28.3	-1.8
	1.3nm,0.9s,mb3.9,baz=171,slow=7.3,SNR=3.3						
SUR	Sutherland	53.67	231	eP	P	15 04 30.5	-0.3
	11nm,0.9s,mb4.8						
NWAO	Narrogin (SRO)	54.59	129	P	P	15 04 38.7	+1.1
IDI	Anoyia	55.59	317	LR	LR	15 28 20.3	
	comp=Z,45nm,18.0s,MS3.6,baz=264,slow=36						
ZAL	Zalesovo	57.95	11	LR	LR	15 30 19.8	
	comp=Z,145nm,18.8s,MS4.1,baz=271,slow=36						
FITZ	Fitzroy Crossi	57.96	110	LR	LR	15 24 32.0	
	comp=Z,210nm,19.4s,MS4.3,baz=291,slow=30						
SONM	Songino Array	60.12	28	P	P	15 05 16.1	-0.3
	4.3nm,0.9s,mb4.5,baz=224,slow=6.2,SNR=30						
SONM				LR	LR	15 31 14.2	
	comp=Z,72nm,18.6s,MS3.8,baz=180,slow=36						
JOW	Kunigami	64.54	59	LR	LR	15 30 42.2	
	comp=Z,87nm,20.1s,MS3.9,baz=211,slow=33						
MAW	Mawson	64.99	182	P	P	15 05 47.5	-1.1
	1.4nm,0.9s,mb4.0,baz=12,slow=9.3,SNR=4.1						
MAW				LR	LR	15 27 36.1	
	comp=Z,80nm,20.5s,MS3.9,baz=52,slow=30						
WRA	Warramunga Arr	66.36	111	P	P	15 05 58.4	+0.3
	1.1nm,0.8s,mb3.9,baz=284,slow=6.3,SNR=5.7						
WRAB	Tennant Creek	66.37	111	eP	P	15 05 59.8	+1.6
JNU	Nakatsue	68.60	53	LR	LR	15 37 29.2	
	comp=Z,59nm,19.5s,MS3.8,baz=86,slow=37						
GERES	GERESS Array B	69.77	325	LR	LR	15 34 43.7	
	comp=Z,109nm,18.9s,MS4.1,baz=94,slow=34						
FINES	FINESS Array B	71.68	340	LR	LR	15 39 29.0	
	comp=Z,146nm,18.4s,MS4.3,baz=72,slow=37						
DBIC	Dimbokro	73.86	278	P	P	15 06 42.6	-1.5
	3.4nm,0.9s,mb4.3,baz=83,slow=6.1,SNR=4.8						
STKA	Stephens Creek	74.22	122	LR	LR	15 37 28.9	
	comp=Z,90nm,21.6s,MS4.0,baz=28,slow=34						
MJAR	Matsushiro Arr	75.34	51	LR	LR	15 41 31.5	
	comp=Z,86nm,18.0s,MS4.1,baz=240,slow=37						
ARCES	ARCESS Array B	77.62	346	LR	LR	15 44 42.5	
	comp=Z,85nm,18.4s,MS4.1,baz=204,slow=38						
SNAA	Sanae	81.73	198	P	P	15 07 27.0	+0.7
	1.3nm,1.0s,mb3.8						
VNDA	Vanda	88.18	167	eP	P	15 07 59.5	+1.2
TXAR	Lajitas Array	152.42	345	PKPab	PKPab	15 15 13.4	-2.5
	0.3nm,0.4s,slow=0.9,SNR=3.9						

*IDC **07** 15:16:54.0±1.4, 13.45N×119.96E, mb3.5/4, mb1 3.6/4, mb1mx3.5/17, mbtmp3.5/4, Error ellipse: s-maj=25.6km s-min=14.0km az=156.0*

*MAN **07** 15:16:59.4, 13.59N×120.08E, h44^{km}, mb4.2, ML3.0, MS2.7*

ISC 07 15:16:59.2±0.6**, 13.60N**±0.03×**120.11E**±0.07**, h54**^{km}±9^{km}**, n19,** σ0^{s}**95**/24**, mb3.6**/4**, 1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.18	45	eP	P	15 17 06.5	-1.3
PGP	Puerto Galera	0.82	97	eP	P	15 17 14.8	0.0
PGP				eS	S	15 17 26.0	-0.5
TGY	Tagaytay City	0.94	58	Pg	P	15 17 17.0	+0.5
	647nm,0.3s,baz=223,slow=2.5,SNR=29						
TGY				Lg		15 17 31.2	
	1µm,0.3s,baz=220,slow=16,SNR=27						
TGY	Tagaytay City	0.94	58	⇑iP	P	15 17 16.8	+0.4
TGY				i S	S	15 17 31.6	+2.3
SJMP	San Jose	1.50	139	eP	P	15 17 25.1	+0.8
BUSP	Coron	1.59	177	eP	P	15 17 26.2	+0.6
BUSP				eS	S	15 17 45.7	+0.5
BOAC	Boac	1.69	95	eP	P	15 17 26.9	-0.1
POLP	Polilio Island	2.10	58	eP	P	15 17 33.6	+0.9
PCPH	Palayan	2.17	26	⇓eP	P	15 17 31.6	-2.1
PCPH				eS	S	15 17 57.9	-1.5
SCZP	Santa Cruz	2.17	355	eP	P	15 17 33.0	-0.7
OTRP	Odiongan	2.23	123	eP	P	15 17 34.9	+0.3
ENPP	El Nido	2.47	196	eP	P	15 17 38.5	+0.4
BALP	Baler	2.56	33	eP	P	15 17 39.8	+0.6
BOLP	Bolinao	2.77	356	eP	P	15 17 43.4	+1.1
CUYO	Cuyo Island	2.88	162	eP	P	15 17 43.6	-0.2
CUYO				eS	S	15 18 15.8	-1.5
SONM	Songino Array	35.99	344	P	P	15 23 56.9	0.0
	0.8nm,0.5s,mb3.9,baz=158,slow=9.5,SNR=8.6						
WRA	Warramunga Arr	36.15	157	P	P	15 23 57.4	-1.2
	0.4nm,0.6s,mb3.5,baz=339,slow=9.4,SNR=4.7						
MKAR	Makanchi Array	45.77	324	P	P	15 25 18.2	+0.9
	0.3nm,0.7s,mb3.4,baz=124,slow=5.2,SNR=2.8						
BVAR	Borovoye Array	55.53	326	P	P	15 26 31.3	+0.1
	0.6nm,0.6s,mb3.8,baz=115,slow=7.7,SNR=5.7						

*CSEM **07** 15:25:01.9±0.6, 60.79N×29.20E, h2^{km}, ML2.2, Error ellipse: s-maj=14.4km s-min=5.9km az=126.0, Mining explosion.*

*HEL **07** 15:25:03.4±0.3, 60.95N×29.11E, ML2.3, Explosion*

*NAO **07** 15:25:05.0±2.5, 61.08N×28.91E, ML2.5*

*IDC **07** 15:25:05.3±2.1, 60.96N×28.95E, mb1 3.5/2, mb1mx3.2/18, mbtmp3.3/2, ML3.3/2, Error ellipse: s-maj=19.9km s-min=11.0km az=166.0*

ISC 07 15:25:00.5±1.1**, 61.03N**±0.05×**29.2E**±0.1**, n19,** σ0^{s}**88**/26**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	Virojoki	0.92	239	eP	Pg	15 25 19.3	+0.3
VJF				eS	Sg	15 25 30.1	-1.2
VJF	Virojoki	0.92	239	P	Pg	15 25 19.2	+0.3
FIA0	FINESS Array S	1.54	287	Pn	Pn	15 25 31.0	+1.6
	baz=111,slow=16						
FIA0				Lg		15 25 51.6	
	baz=105,slow=28						
FIA0				Rg		15 25 58.7	
	baz=120,slow=37						
FIA0	FINESS Array S	1.54	287	eP	Pn	15 25 30.8	+1.4
FIA0				eS	Sb	15 25 51.1	+1.4
FIA0	FINESS Array S	1.54	287	P	Pn	15 25 30.7	+1.3
FIA0	FINESS Array S	1.54	287	Pn	Pn	15 25 31.0	+1.6
	SNR=1.1						
FIA0				S	Sb	15 25 51.0	+1.3
FINES	FINESS Array B	1.54	287	Pg	Pg	15 25 30.9	-0.4
	2.3nm,0.3s,baz=109,slow=16,SNR=47						
FINES				Lg		15 25 51.5	
	6.4nm,0.3s,baz=98,slow=29,SNR=31						
PVF	Pernaja	1.69	255	eP	Pn	15 25 32.2	+0.9
PVF				eS	Sb	15 25 54.4	+0.6
PVF	Pernaja	1.69	255	P	Pn	15 25 32.2	+0.8
PVF				S	Sb	15 25 54.3	+0.5
JOF	Joensuu	2.15	27	eSG	Sg	15 26 12.1	0.0
SUF	Sumiainen	2.21	321	eSG	Sg	15 26 13.2	-0.9
SUF				MSG		15 26 14.7	
	comp=Z,12nm,0.3s						
KEF	Keuruu	2.34	301	MSG		15 26 17.0	
	comp=Z,13nm,0.3s						
KJN	Kajaani	3.14	348	MSG		15 26 52.4	
	comp=Z,7.6nm,0.2s						
HFS	Hagfors	7.67	270	Pn	Pn	15 26 55.3	-0.8
	baz=115,slow=16						
HFS				Sn	Sn	15 28 17.5	-7.2
	baz=79,slow=28						
HFS				Lg		15 28 58.4	
	baz=86,slow=37						
ARA0	ARCESS Array S	8.68	351	Pn	P	15 27 10.2	+0.1
	baz=171,slow=14						
ARA0				Sn	Sn	15 28 44.2	-5.7
	baz=167,slow=28						
ARA0				Lg		15 29 31.1	
	baz=151,slow=37						
ARA0	ARCESS Array S	8.68	351	Pn	P	15 27 10.2	0.0
	SNR=4.5						
ARA0				Sn	Sn	15 28 44.2	-5.7
	SNR=6.0						
ARCES	ARCESS Array B	8.68	351	Pn	P	15 27 10.4	+0.2
	comp=Z,0.6nm,0.3s,baz=168,slow=13,SNR=32						
ARCES				Sn	Sn	15 28 45.1	-4.8
	comp=Z,0.3nm,0.3s,baz=163,slow=24,SNR=4.5						
ARCES				Lg		15 29 33.5	
	comp=Z,0.5nm,0.3s,baz=150,slow=32,SNR=8.6						
NB2	NORSAR Subarra	8.70	278	Pn	P	15 27 09.3	-1.3
	baz=80,slow=12						
NOA	NORSAR Array B	8.70	278	Pn	P	15 27 09.1	-1.4
	comp=Z,0.2nm,0.3s,baz=57,slow=16,SNR=2.5						

*LJU **07** 15:25:16.1, 45.52N×16.70E, h0^{km}, ML1.8*

*CSEM **07** 15:25:17.0±0.4, 45.56N×16.71E, h2^{km}, ML2.9/3, Error ellipse: s-maj=11.1km s-min=3.0km az=7.0*

*VIE **07** 15:25:17.8±1.4, 45.71N×16.68E, h14^{km}±9^{km}, ML2.2/1, Error ellipse: s-maj=9.4km s-min=7.6km az=73.0*

ISC 07 15:25:16.8±1.4**, 45.5N**±0.1×**16.66E**±0.05**, h10**^{km}**, n11,** σ0^{s}**85**/20**, 1C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCIS	Gornji Cirnik	0.80	295	i Pg	Pg	15 25 32.3	-0.4
GCIS				i Sg	Sg	15 25 43.9	+0.5
	comp=Z,22nm,0.3s						
GCIS	Gornji Cirnik	0.80	295	i Pg	Pg	15 25 32.3	-0.4
GCIS				i Sg	Sg	15 25 43.9	+0.5
	comp=Z,22nm,0.3s						
GOLS	Golise	0.87	304	i Pg	Pg	15 25 34.8	+0.6
GOLS				eSg	Sg	15 25 47.3	+1.5
	comp=Z,34nm,0.2s						
GOLS	Golise	0.87	304	i Pg	Pg	15 25 34.7	+0.6
GOLS				eSg	Sg	15 25 47.3	+1.6
	comp=Z,34nm,0.2s						
CRES	Cresnjev	0.89	290	i Pg	Pg	15 25 34.3	-0.4
CRES				i Sg	Sg	15 25 46.8	+0.2
	comp=Z,16nm,0.2s						
CRES	Cresnjev	0.89	290	i Pg	Pg	15 25 34.3	-0.3
CRES				i Sg	Sg	15 25 46.7	+0.2
KOGS	Kog	0.96	343	i Pg	Pg	15 25 35.0	-1.0
DOBS	Dobrina	1.03	307	i Pg	Pg	15 25 36.9	-0.6
DOBS				i Sg	Sg	15 25 51.9	+0.6
RHK1	Bakonya	1.14	60	⇓ePn	Pn	15 25 38.9	+0.2
RHK3	Tenkes	1.17	72	⇓ePn	Pn	15 25 39.9	+0.7
RHK3				eSn	Sn	15 25 55.5	+0.1
OBKA	Obir	1.76	304	⇓iPg	Pg	15 25 51.2	-0.8
	comp=Z,3.8nm,0.3s						
OBKA				⇑iSg	Sg	15 26 12.5	-3.1
	comp=Z,8.3nm,0.5s						

*IDC **07** 15:40:16.1±1.4, 5.85S×130.51E, mb3.7/3, mb1 3.8/3, mb1mx3.7/8, mbtmp3.7/3, ML4.2/1, Error ellipse: s-maj=124.0km s-min=24.8km az=68.0*

*NEIC **07** 15:40:21.1±0.6, 5.82S×130.77E, h35^{km}, mb4.0/4, Error ellipse: s-maj=19.3km s-min=9.3km az=89.0*

ISC 07 15:40:23.3±2.4**, 6.05S**±0.07×**130.4E**±0.1**, h75**^{km}±24^{km}**, n16,** σ1^{s}**44**/21**, mb3.9**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	6.93	163	eP	Px	15 42 25.0	
	68nm,0.6s						
KAKA				eS	Sx	15 43 39.2	
FITZ	Fitzroy Crossi	12.84	201	eP	P	15 43 26.4	+2.0
	16nm,0.3s						
FITZ				eS	S	15 45 44.0	-1.9
WRAB	Tennant Creek	14.34	165	ePn	P	15 43 43.3	-0.6
	24nm,0.5s						
WRAB				eSn	S	15 46 15.8	-5.6
WRA	Warramunga Arr	14.34	165	Pn	P	15 43 43.0	-1.0
	1.2nm,0.3s,baz=349,slow=13,SNR=57						
WRA				Sn	S	15 46 14.1	-7.5
	2.2nm,0.3s,baz=337,slow=23,SNR=6.2						
WB2	Warramunga Arr	14.35	165	eP	P	15 43 42.9	-1.2
WB2				eS	S	15 46 16.1	-5.6
PMG	Port Moresby	16.97	102	eP	P	15 44 18.5	+1.2
	9.8nm,0.9s						
ASPA	Alice Springs	17.84	169	eP	P	15 44 29.8	+1.6
ASPA				eS	S	15 47 40.7	-0.9
MBWA	Marble Bar	18.22	213	ePn	P	15 44 37.2	+4.5
	8.6nm,0.8s						
MBWA				eSn	S	15 47 50.5	+0.4
CTAO	Charters Tower	20.81	134	eP	P	15 45 02.9	+2.2
	1.8nm,0.6s						
GUMO	Guam	24.24	36	eP	P	15 45 32.0	-2.6
STKA	Stephens Creek	27.76	159	P	P	15 46 07.8	+0.6
	0.7nm,0.3s,mb3.7,baz=332,slow=11,SNR=9.9						
STKA	Stephens Creek	27.76	159	eP	P	15 46 08.2	+0.9
SONM	Songino Array	57.66	341	P	P	15 50 07.6	-0.7
	0.2nm,0.3s,mb3.6,baz=124,slow=5.2,SNR=3.6						
MKAR	Makanchi Array	67.64	326	P	P	15 51 14.3	-0.1
	0.5nm,0.6s,mb3.5,baz=127,slow=7.2,SNR=4.4						
MKAR	Makanchi Array	67.64	326	P	P	15 51 14.3	-0.1
SNAA	Sanae	96.67	193	eP	P	15 53 47.3	+1.4
	4.8nm,1.6s,mb4.7						

*IDC **07** 16:36:21.4±13.0, 16.77S×179.29W, h467^{km}±158^{km}, mb3.0/5, mb1 3.3/5, mb1mx3.2/13, mbtmp3.8/5, Error ellipse: s-maj=112.0km s-min=40.7km az=159.0*

ISC 07 16:36:23.4±1.7**, 16.8S**±0.6×**179.4W**±0.4**, h500**^{km}**, n8,** σ0^{s}**18**/7**, mb3.3**/5**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.36	240	P	P	16 43 01.9	-0.1
	2.4nm,1.0s,mb3.6,baz=91,slow=12,SNR=5.9						
WB2	Warramunga Arr	43.89	258	eP	P	16 43 46.5	0.0
WRA	Warramunga Arr	43.90	258	P	P	16 43 46.7	+0.1
	0.4nm,0.3s,mb3.4,baz=90,slow=7.8,SNR=22						
ASPA	Alice Springs	44.19	253	⇓iP	P	16 43 48.9	+0.1
NVAR	Mina Array Bea	79.27	44	P	P	16 47 37.9	+0.3
	0.4nm,0.6s,mb3.1,baz=210,slow=7.9,SNR=4.8						
ILAR	Eielson Array	84.99	13	P	P	16 48 05.7	-0.1

	0.3nm,0.5s,mb3.2,baz=230,slow=5.3,SNR=6.1						
PDAR	Pinedale Array	87.19	44	P	P	16 48 16.6	-0.3
	0.4nm,0.5s,mb3.4,baz=248,slow=4.9,SNR=3.7						
GERES	GERESS Array B	146.25	344	PKPbc	PKPbc	16 55 08.4	+1.8
	0.4nm,0.4s,baz=18,slow=4.2,SNR=5.5						

*ATH **07** 16:37:30.9,41.80N×23.41E,h14^{km}±3^{km},MD3.3/3*
*CSEM **07** 16:37:30.3±0.1,41.82N×23.28E,h5^{km},ML3.3,Error ellipse: s-maj=1.8km s-min=1.6km az=62.0*
*THE **07** 16:37:31.5,41.73N×23.28E,h4^{km},ML3.3*
*NEIC **07** 16:37:31.5,41.70N×23.30E,h5^{km},MD3.3(ATH),After THE.*
ISC 07 16:37:30.0±0.6**,41.79N**±0.03×**23.23E**±0.04**,h14^{km},n17,σ0^{s}99**/28**,2C,Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVR	Nevrokopi	0.65	133	⇑*i*PB	Pb	16 37 42.0	-0.5
NVR				*e*SB	Sb	16 37 49.7	-1.4
KNT	Kendrikon	0.68	202	*e*Pg	Pg	16 37 43.7	0.0
KNT				*e*Sg	Sg	16 37 53.1	+0.3
VAY	Valandovo	0.68	227	*i* Pg	Pg	16 37 44.6	+0.8
VAY				*i* Sg	Sg	16 37 54.2	+1.1
SOH	Sokhos	0.97	174	*e*Pg	Pg	16 37 48.7	-0.9
SOH				*e*Sg	Sg	16 38 02.3	-0.4
GRG	Griva	1.04	217	*e*Pg	Pg	16 37 50.5	-0.4
GRG				*e*Sg	Sg	16 38 05.1	+0.3
THE	Thessaloniki	1.18	190	*e*Pg	Pg	16 37 52.9	-0.7
THE				*e*Sg	Sg	16 38 08.5	-0.8
PLG	Polygyros	1.43	173	*e*PB	Pb	16 37 57.3	+1.5
BARS	Barje	1.46	315	⇑*i*Pg	Pg	16 37 58.2	-1.1
BARS				Sg	Sg	16 38 17.7	-1.2
OUR	Ouranopolis	1.56	158	*e*Pg	Pg	16 37 58.5	-2.8
OUR				*e*Sg	Sg	16 38 18.6	-3.6
FNA	Florina	1.72	235	*e*Pb	Pb	16 38 01.6	+0.7
RDO	Rodhopi	1.85	110	*e*PN	Pn	16 38 02.2	+0.5
RDO				*e*SN	Sn	16 38 25.9	+0.9
PAIG	Paliouri	1.89	169	*e*Pb	Pb	16 38 02.8	-1.0
PAIG				*e*Sb	Sb	16 38 27.8	+0.5
ALN	Alexandroupoli	2.30	112	*e*Pn	Pn	16 38 08.3	+0.2
ALN				*e*Sn	Sn	16 38 38.0	+1.6
XOR	Xorichti	2.42	181	*e*Pn	Pn	16 38 10.8	+0.9
AOS	Alonnisos	2.66	169	*e*Pn	Pn	16 38 13.6	+0.3
DIVS	Divcibare	3.31	315	*e*Pn	Pn	16 38 23.6	+1.0
DIVS	Divcibare	3.31	315	Pn	Pn	16 38 23.5	+1.0

*NNC **07** 16:40:24.7±4.7,37.11N×70.71E,h142^{km}±28^{km},mpv4.1,Error ellipse: s-maj=49.4km s-min=32.2km az=7.0*
*NEIC **07** 16:40:36.4±5.9,38.34N×70.56E,h35^{km},mb3.2/1,Error ellipse: s-maj=70.4km s-min=15.5km az=183.0*
ISC 07 16:40:14.5±1.7**,36.39N**±0.07×**71.2E**±0.2**,h121**^{km}±35^{km}**,n28,σ0^{s}84**/35**,14C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	5.43	135	*e*P	P	16 41 35.1	+0.7
THN				*e*S	S	16 42 35.4	-0.8
AML	Almayashu	6.05	18	P	P	16 41 43.5	+0.6
	SNR=9.9						
UCH	Uchtor	6.37	23	P	P	16 41 47.7	+0.5
	SNR=17						
KZA	Kyzart	6.49	28	P	P	16 41 49.2	+0.3
	SNR=11						
EKS2	Erkin-Say	6.58	17	P	P	16 41 50.1	+0.1
	SNR=18						
KK31	Karatay Array	6.73	356	⇑P	P	16 41 51.2	-0.9
	3.0nm,0.2s,baz=185,slow=16,SNR=67						
KK31				⇑S	S	16 43 00.6	-7.1
	2.1nm,0.3s,baz=182,slow=29,SNR=4.4						
KK31	Karatay Array	6.73	356	⇑P	P	16 41 51.2	-0.9
KK31				S	S	16 43 00.6	-7.1
AAK	Ala-Archa	6.74	21	P	P	16 41 52.4	+0.2
	SNR=31						
AAK	Ala-Archa	6.74	21	⇓P	P	16 41 52.6	+0.3
	11nm,0.5s						
AAK				⇑S	S	16 43 06.8	-1.1
	14nm,0.9s						
AAK	Ala-Archa	6.74	21	*e*Pn	P	16 41 51.7	-0.5
AAK				*e*Sn	S	16 43 01.6	-6.3
KBK	Karagaybulak	6.90	24	P	P	16 41 54.9	+0.4
	SNR=11						
CHMS	Chumysh	7.15	21	P	P	16 41 57.5	-0.3
	SNR=21						
USP	Ospenovka	7.33	19	P	P	16 41 59.8	-0.4
	SNR=7.5						
TKM2	Tokmak 2	7.35	26	P	P	16 42 00.8	+0.2
	SNR=13						
NDI	New Delhi	9.21	145	*e*SG	S	16 43 58.0	-10
MK31	Makanchi Array	13.29	35	⇑P	P	16 43 26.0	+6.8
	0.3nm,0.3s,baz=117,slow=42,SNR=16						
MK31	Makanchi Array	13.29	35	⇑P	P	16 43 26.0	+6.7
	0.3nm,0.3s						
AB31	Akbulak array	15.26	331	⇑P	P	16 43 42.7	-1.6
	0.3nm,0.2s						
AB31				⇑S	S	16 46 18.1	-12
	0.9nm,0.5s,baz=150,slow=23,SNR=4.8						
AB31	Akbulak array	15.26	331	⇑P	P	16 43 42.7	-1.6
	0.3nm,0.3s						
AB31				S	S	16 46 18.1	-12
KURK	Kurchatov	15.29	18	*e*Pn	P	16 43 48.1	+3.4
VOSK	Vostochnaya	16.34	360	⇑P	P	16 43 56.3	-1.5
	3.5nm,1.1s						
VOSK	Vostochnaya	16.34	360	⇑P	P	16 43 56.3	-1.5
	3.5nm,1.1s						
BVA0	Borovoye Array	16.65	358	⇓P	P	16 44 01.8	+0.2
	0.5nm,1.6s,slow=0.1,SNR=6.6						
BRVK	Borovoye	16.68	358	*e*Pn	P	16 44 03.0	+0.9
AKTK	Aktyubinsk	16.96	330	⇑P	P	16 44 06.2	+0.8
AKTO	Aktyubinsk	16.96	330	⇑P	P	16 44 06.3	+0.8
	1.1nm,1.6s						
CHKZ	Chkalovo	17.29	359	⇑P	P	16 44 09.0	-0.6
	5.6nm,1.9s						
CHKZ	Chkalovo	17.29	359	*e*Pn	P	16 44 09.0	-0.6
	0.7nm,0.4s						

*IGIL **07** 16:49:10.8,36.27N×9.23W,h0^{km},ML3.6*
*CSEM **07** 16:49:11.4±0.2,36.15N×8.85W,h20^{km},ML3.4/14,Error ellipse: s-maj=5.3km s-min=3.3km az=83.0*
*NEIC **07** 16:49:13.5,36.46N×8.76W,MN2.9(MDD),After MDD.*
*INMG **07** 16:49:13.9±1.1,36.43N×8.78W,ML2.8,Error ellipse: s-maj=4.7km s-min=2.9km az=57.0*
*CNRM **07** 16:49:15.2,36.07N×8.93W,h30^{km},MD3.5*
MDD 07 16:49:12.3±0.8**,36.24N×8.95W,h20**^{km}±4^{km}**,mbLg2.9**/7**, Error ellipse: s-maj=9.1km s-min=5.4km az=68.0, PRXIMO,West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MORF	Marmelete	1.09	13	*e*P	Pb	16 49 31.3	-1.0
MORF				*e*		16 49 31.7	
	baz=357,slow=11						
MORF				*e*S	Sb	16 49 46.0	-0.1
MORF				*e*S	Sb	16 49 46.0	-0.1
MORF				AML	AML	16 49 46.5	
	comp=N,892nm,0.3s						
MORF	Marmelete	1.09	13	*e*P	Pb	16 49 31.3	-1.0
MORF				*e*S	Sb	16 49 46.0	-0.1
PTEO	Sao Teotonio	1.31	8	*e*Pn	Pn	16 49 34.5	-1.3
PTEO				*e*Sn	Sn	16 49 50.5	-2.3
	comp=N,202nm,0.3s						
PTEO	Sao Teotonio	1.31	8	Pn	Pn	16 49 34.4	-1.4
PTEO				Sn	Sn	16 49 50.5	-2.3
PBEJ	Beja	1.98	26	*e*Pn	Pn	16 49 43.9	-1.4
PBEJ	Beja	1.98	26	*e*Pg	Pn	16 49 48.6	+3.3
	comp=N,71nm,0.2s						
PBEJ	Beja	1.98	26	Pn	Pn	16 49 43.8	-1.5
PBEJ				Pg	Pn	16 49 48.6	+3.3
PBEJ				Sn	Sn	16 50 08.8	-1.0
PBEJ	Beja	1.98	26	Pn	Pn	16 49 43.8	-1.5
PBEJ				Sn	Sn	16 50 08.8	-1.0
PBEJ	Beja	1.98	26	*e*Pg	Pn	16 49 48.6	+3.3
	comp=N,71nm,0.2s						
PBEJ				Sn	Sn	16 50 08.8	-1.0
EMIN	Mina Concepcio	2.38	49	Pn	Pn	16 49 48.7	-2.3
	comp=N,2.5nm,0.1s,SNR=18						
EMIN				Sn	Sn	16 50 16.0	-3.8
	comp=N,4.2nm,0.1s,SNR=10						
EMIN				Lg		16 50 24.7	
	comp=N,52nm,0.3s,SNR=6.5						
EMIN	Mina Concepcio	2.38	49	Pn	Pn	16 49 48.7	-2.3
EMIN				Sn	Sn	16 50 14.3	-5.5
EMIN				Lg		16 50 21.9	
EMIN	Mina Concepcio	2.38	49	Pn	Pn	16 49 48.7	-2.3
	comp=N,2.5nm,0.1s,SNR=18						
EMIN				Sn	Sn	16 50 14.3	-5.5
	comp=N,4.2nm,0.1s,SNR=10						
EVO	Evora	2.40	18	*e*Pn	Pn	16 49 48.7	-2.7
EVO				*e*Sn	Sn	16 50 16.3	-4.2
	comp=N,75nm,0.2s						
ESPR	Espera	2.57	75	Pn	Pn	16 49 51.9	-1.9
	comp=N,9.8nm,0.1s,SNR=11						
ESPR				Sn	Sn	16 50 19.9	-4.9
	comp=N,52nm,0.3s,SNR=4.0						
ESPR	Espera	2.57	75	Pn	Pn	16 49 51.8	-1.9
	comp=N,9.8nm,0.1s,SNR=11						
ESPR				Sn	Sn	16 50 19.9	-4.8
	comp=N,52nm,0.3s,SNR=4.0						
PLOU	Loures	2.64	357	*e*Pn	Pn	16 49 53.9	-0.9
PLOU				*e*Sn	Sn	16 50 23.5	-3.1
	comp=N,39nm,0.5s						
PLOU	Loures	2.64	357	Pn	Pn	16 49 53.2	-1.6
PLOU				Sn	Sn	16 50 21.1	-5.5
PLOU	Loures	2.64	357	Pn	Pn	16 49 53.2	-1.6
PLOU				*e*Sn	Sn	16 50 23.5	-3.1
	comp=N,39nm,0.5s						
EJIF	Jimena Fronter	2.82	85	Pn	Pn	16 49 56.5	-0.8
	comp=N,4.1nm,0.2s,SNR=9.1						
EJIF				Sn	Sn	16 50 28.0	-3.1
	comp=N,7.6nm,0.4s,SNR=4.0						
EJIF	Jimena Fronter	2.82	85	Pn	Pn	16 49 56.5	-0.8
EJIF				Sn	Sn	16 50 29.2	-1.8
EBAD	Badajoz	2.94	31	Pn	Pn	16 49 57.5	-1.6
	comp=N,8.1nm,0.1s,SNR=9.1						
EBAD				Sn	Sn	16 50 28.5	-5.7
	comp=N,37nm,0.2s,SNR=4.0						
EBAD				Lg		16 50 42.3	
	comp=N,49nm,0.2s,SNR=5.1						
EBAD	Badajoz	2.94	31	Pn	Pn	16 49 57.5	-1.6
EBAD				Sn	Sn	16 50 27.5	-6.7
EBAD				Lg		16 50 38.4	
EBAD	Badajoz	2.94	31	Pn	Pn	16 49 57.5	-1.6
	comp=N,8.1nm,0.1s,SNR=9.1						
EBAD				Sn	Sn	16 50 27.5	-6.7
	comp=N,37nm,0.2s,SNR=4.0						
ECAB	El Cabril	3.36	56	Pn	Pn	16 50 02.5	-2.5
	comp=N,2.0nm,0.1s,SNR=20						
ECAB				Sn	Sn	16 50 38.8	-6.1
	comp=N,6.0nm,0.2s						
ECAB				Lg		16 50 51.9	
	comp=N,19nm,0.3s,SNR=5.0						
ECAB	El Cabril	3.36	56	Pn	Pn	16 50 02.5	-2.5
	comp=N,2.0nm,0.1s,SNR=20						
ECAB				Sn	Sn	16 50 38.8	-6.0
	comp=N,6.0nm,0.2s						
EMIJ	Mijas	3.39	83	Pn	Pn	16 50 03.8	-1.6
	comp=N,2.3nm,0.1s,SNR=7.9						
EMIJ				Sn	Sn	16 50 41.2	-4.2
	comp=N,3.4nm,0.3s,SNR=7.9						
PTOM	Tomar	3.40	7	*e*Pn	Pn	16 50 02.7	-2.8
PTOM	Tomar	3.40	7	*e*Pg	Pn	16 50 11.6	+6.1
PTOM				*e*Sn	Sn	16 50 40.3	-5.4
	comp=N,37nm,0.2s						
PTOM	Tomar	3.40	7	Pn	Pn	16 50 02.6	-2.9
PTOM				Pg	Pn	16 50 11.6	+6.1
PTOM				Sn	Sn	16 50 40.3	-5.4
PTOM	Tomar	3.40	7	Pn	Pn	16 50 02.6	-2.9
PTOM				Sn	Sn	16 50 40.3	-5.4
PTOM	Tomar	3.40	7	*e*Pg	Pn	16 50 11.6	+6.1
PTOM				Sn	Sn	16 50 40.3	-5.4
EADA	Adamuz	3.99	60	Pn	Pn	16 50 11.0	-2.9
	comp=N,3.5nm,0.1s,SNR=20						
EADA				Sn	Sn	16 50 53.7	-6.9
	comp=N,8.9nm,0.1s,SNR=6.5						
EADA				Lg		16 51 13.2	
	comp=N,8.4nm,0.2s,SNR=4.7						
EADA	Adamuz	3.99	60	Pn	Pn	16 50 11.0	-2.9
EADA				Sn	Sn	16 50 53.7	-6.9
EADA				Lg		16 51 11.8	
EADA	Adamuz	3.99	60	Pn	Pn	16 50 11.0	-2.9
	comp=N,3.5nm,0.1s,SNR=20						
EADA				Sn	Sn	16 50 53.7	-6.9
	comp=N,8.9nm,0.1s,SNR=6.5						
MIF	Mishlifen	4.17	132	Pn	Pn	16 50 15.0	-1.5
MIF				Sn	Sn	16 50 51.0	-14
MIF	Mishlifen	4.17	132	*i* P	Pn	16 50 15.0	-1.5
MTE	Manteigas	4.29	15	*e*Pn	Pn	16 50 15.5	-2.8
MTE				*e*Sn	Sn	16 51 02.0	-6.4
MTE				*e*Sg	Sn	16 51 25.0	+17
	comp=N,22nm,0.8s						
MTE	Manteigas	4.29	15	*e*Pn	Pn	16 50 15.5	-2.8
MTE				*e*Sn	Sn	16 51 02.0	-6.4
MTE				*e*Sg	Sn	16 51 25.0	+17
	comp=N,22nm,0.8s						
ECOG	Cogollos-Vega	4.45	75	Pn	Pn	16 50 19.0	-1.4
	comp=N,2.3nm,0.2s,SNR=7.9						
ECOG				Sn	Sn	16 51 06.2	-6.0
	comp=N,3.0nm,0.2s,SNR=7.9						
TZK	Tazeka	4.46	117	*e*P	Pn	16 50 18.0	-2.6
TZK				*e*S	Sn	16 51 05.0	-7.5
EQUE	Quentar	4.53	76	Pn	Pn	16 50 19.8	-1.8
	comp=N,1.3nm,0.1s,SNR=5.1						
EQUE				Sn	Sn	16 51 08.3	-6.1
	comp=N,4.1nm,0.2s,SNR=7.9						
PVIS	Viseu	4.54	10	*e*Sn	Sn	16 51 07.5	-7.2
	comp=N,15nm,0.3s						
PVIS	Viseu	4.54	10	Sn	Sn	16 51 07.6	-7.1
CZD	Col de Zad	4.54	134	*i* P	Pn	16 50 19.0	-2.8
CZD				*i* S	Sn	16 51 07.0	-7.7
EBAN	Banos Encina	4.55	64	Pn	Pn	16 50 18.7	-3.2
	comp=N,3.4nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	16 51 07.8	-7.0
	comp=N,5.5nm,0.2s,SNR=7.9						
EBAN	Banos Encina	4.55	64	Pn	Pn	16 50 18.7	-3.2
EBAN				Sn	Sn	16 51 06.2	-8.6
EBAN	Banos Encina	4.55	64	Pn	Pn	16 50 18.7	-3.2
	comp=N,3.4nm,0.1s,SNR=7.9						
EBAN				Sn	Sn	16 51 06.2	-8.6
	comp=N,5.5nm,0.2s,SNR=7.9						
CIA	Chichaoua	4.67	178	Pn	Pn	16 50 21.0	-2.6
CIA				Sn	Sn	16 51 09.0	-8.9
CIA	Chichaoua	4.67	178	*i* P	Pn	16 50 21.0	-2.6
EQES	Quesada	4.96	70	Pn	Pn	16 50 26.4	-1.3
	comp=N,1.8nm,0.2s,SNR=7.9						
EQES				Sn	Sn	16 51 18.0	-7.1
	comp=N,5.6nm,0.2s,SNR=7.9						
EQES	Quesada	4.96	70	Pn	Pn	16 50 26.4	-1.2
	comp=N,1.8nm,0.2s,SNR=7.9						
EQES				Sn	Sn	16 51 18.0	-7.1
	comp=N,5.6nm,0.2s,SNR=7.9						
OUK	Oukaimeden	5.10	169	Pn	Pn	16 50 27.0	-2.7
OUK				Sn	Sn	16 51 18.0	-11
OUK	Oukaimeden	5.10	169	*i* P	Pn	16 50 27.0	-2.7
PVRL	Vila Real	5.12	11	*e*Sn	Sn	16 51 21.6	-7.5
PVRL	Vila Real	5.12	11	Sn	Sn	16 51 21.5	-7.6
ESDC	Sonseca Array	5.22	48	Pn	Pn	16 50 27.8	-3.6
	comp=N,2.5nm,0.1s,baz=233,slow=13,SNR=6.2						
ESDC				Sn	Sn	16 51 24.1	-7.7
	comp=N,2.4nm,0.2s,baz=230,slow=24,SNR=4.3						
ESDC				Lg		16 51 53.2	
	comp=N,0.7nm,0.3s,baz=226,slow=29,SNR=5.6						
ESDC	Sonseca Array	5.22	48	Pn	Pn	16 50 27.8	-3.6
	comp=N,2.5nm,0.1s,SNR=6.2						
ESDC				Sn	Sn	16 51 24.1	-7.7
	comp=N,2.4nm,0.2s,SNR=4.3						
PCAB	Cabril	5.51	7	*e*Pn	Pn	16 50 31.6	-3.8
PCAB	Cabril	5.51	7	Pn	Pn	16 50 30.5	-4.9
ELOB	Lobios	5.66	7	Pn	Pn	16 50 33.9	-3.6
	comp=N,2.9nm,0.2s,SNR=7.5						
ELOB				Sn	Sn	16 51 34.0	-8.7
	comp=N,4.4nm,0.2s,SNR=7.9						
ELOB	Lobios	5.66	7	Pn	Pn	16 50 33.9	-3.6
	comp=N,2.9nm,0.2s,SNR=7.5						
GUD	Guadarrama	5.79	39	Pn	Pn	16 50 35.4	-3.9
	comp=N,1.2nm,0.2s,SNR=7.9						
GUD				Sn	Sn	16 51 37.8	-8.1
	comp=N,2.0nm,0.2s,SNR=7.9						
GUD				Lg		16 52 09.1	
	comp=N,3.3nm,0.3s,SNR=7.9						
PBRG	Braganca	5.81	17	*e*Pn	Pn	16 50 36.0	-3.7
PBRG				*e*Sg	Sn	16 52 12.2	+26
	comp=N,5.3nm,0.5s						
PBRG	Braganca	5.81	17	Pn	Pn	16 50 35.9	-3.8
PBRG				Sn	Sn	16 51 38.6	-8.0
PBRG				Lg		16 52 12.2	
	comp=N,2.7nm,0.5s						
ECAL	Calabor	5.95	16	Pn	Pn	16 50 38.2	-3.4
	comp=N,4.8nm,0.3s,SNR=5.6						
ECAL				Sn	Sn	16 51 41.9	-8.0
	comp=N,2.9nm,0.2s,SNR=7.9						
ECAL				Lg		16 52 15.6	
	comp=N,8.7nm,0.3s,SNR=5.0						
ECAL	Calabor	5.95	16	Pn	Pn	16 50 38.2	-3.4
	comp=N,4.8nm,0.3s,SNR=5.6						
ETOB	Tobarra	6.36	66	Pn	Pn	16 50 43.4	-4.0
	comp=N,0.8nm,0.1s,SNR=6.1						
ETOB				Sn	Sn	16 51 51.2	-9.1
	comp=N,1.6nm,0.1s,SNR=7.9						
ETOB	Tobarra	6.36	66	Pn	Pn	16 50 43.4	-4.0
	comp=N,0.8nm,0.1s,SNR=6.1						
ETOB				Sn	Sn	16 51 51.2	-9.1
	comp=N,1.6nm,0.1s,SNR=7.9						
EARI	Arriondas	7.62	21	Pn	Pn	16 51 02.9	-2.1
	comp=N,1.4nm,0.3s,SNR=4.0						
EMOS	Mosqueruela	7.83	56	Pn	Pn	16 51 04.8	-3.2
	comp=N,0.3nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	16 52 26.9	-10
	comp=N,2.9nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	7.83	56	Pn	Pn	16 51 04.8	-3.3
	comp=N,0.3nm,0.2s,SNR=7.9						
EMOS				Sn	Sn	16 52 26.9	-10

*NEIC **07** 17:01:45.0,38.08N×26.77E,h15^{km},MD3.1(ISK),MD3.1(ATH),After ISK.*
*ISK **07** 17:01:46.6,38.19N×26.75E,h15^{km},MD3.1*
*ATH **07** 17:01:46.7,38.15N×26.52E,h20^{km},MD3.1/3*
*CSEM **07** 17:01:47.1±0.1,38.20N×26.80E,h18^{km}±1^{km},MD3.1,Error ellipse: s-maj=3.5km s-min=2.1km az=81.0*
ISC 07 17:01:46.6±0.6**,38.20N**±0.02×**26.68E**±0.04**,h9**^{km}±4^{km}**,n18,σ0^{s}75**/30**,1D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.17	338	*i* P	Pg	17 01 50.3	-0.1
URLA				*i* S	Sg	17 01 53.7	+0.8
BLCB	Balcova	0.34	57	*i* PG	Pg	17 01 53.6	+0.1
BLCB				*i* SG	Sg	17 01 58.1	-0.1
IZM	Izmir	0.50	66	*i* PG	Pg	17 01 56.1	-0.6
IZM				*i* SG	Sg	17 02 03.5	+0.1
SMG	Samos	0.50	166	⇓*i*PN	Pg	17 01 56.8	+0.1
SMG				*e*SN	Sg	17 02 04.4	+0.8
KDAG	Bornova	0.51	66	*i* P	Pg	17 01 55.7	-1.1
KDAG				*i* S	Sg	17 02 03.0	-0.6
AYDN	Tasoluk	1.09	119	*i* P	Pb	17 02 08.3	+1.1
AYDN				*i* S	Sb	17 02 21.8	+0.4
PRK	Paraskevi	1.09	343	*e*PN	Pn	17 02 07.8	-0.2
PRK				*e*SN	Sn	17 02 23.3	0.0
AYVA	Ayvalik	1.11	0	*i* P	Pb	17 02 08.4	+0.9
AYVA				*i* S	Sb	17 02 25.4	+3.5
AKS	Akhisar	1.12	52	*e*PN	Pn	17 02 07.6	-0.8
BODT	Bodrum	1.24	156	PN	Pn	17 02 09.4	-0.7
BODT				SN	Sn	17 02 26.4	-0.7
MLSB	Milas	1.25	136	*e*PN	Pn	17 02 09.4	-0.9
BDRM	Kayabasi	1.28	152	*i* P	Pb	17 02 10.5	0.0
BDRM				*i* S	Sb	17 02 28.4	+1.4
APE	Apeiranthos	1.45	219	*e*PN	Pn	17 02 12.0	-1.1
MANT	Manisa	1.51	78	*i* P	Pn	17 02 15.0	+1.1
MANT				*i* S	Sb	17 02 34.0	+0.7
YER	Yerkesik	1.66	129	*e*PN	Pn	17 02 15.2	-0.9
BALB	Balikesir	1.72	33	*e*PN	Pn	17 02 16.8	-0.1
BTOK	Tokmak	1.88	34	*i* P	Pn	17 02 23.8	+4.5
BTOK				*i* S	Sn	17 02 43.0	-0.4
LIA	Limnos Island	2.06	326	*e*PN	Pn	17 02 22.0	+0.2

*NEIC **07** 17:06:34.2±0.2,59.00N×151.22W,h39^{km}±4^{km},mb4.1/4,ML4.1(PMR),ML3.8(AEIC),Error ellipse: s-maj=3.2km s-min=1.8km az=150.0*
*IDC **07** 17:06:36.3±4.6,59.26N×151.26W,h55^{km}±37^{km},mb3.6/9,mb1 3.9/13,mb1mx3.8/23,mbtmp3.9/13,ML4.0/4,MS3.2/3,Ms1 3.2/3,ms1mx3.0/20,Error ellipse: s-maj=36.9km s-min=15.1km az=54.0*
ISC 07 17:06:32.6±0.3**,58.96N**±0.02×**151.12W**±0.04**,h52**^{km}±5^{km}**,n106,σ0^{s}90**/126**,mb3.9**/12**,Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNPM	China Poot	0.57	354	P	P	17 06 45.0	+0.2
CNPM				S	S	17 06 53.4	-0.4
XLV	Seldovia	0.58	328	P	P	17 06 44.8	-0.3
XLV				S	S	17 06 53.1	-1.0
HOM	Homer	0.75	339	P	P	17 06 47.8	+0.6
HOM				S	S	17 06 59.1	+1.2
SYI	Shuyak Island	0.75	242	P	P	17 06 47.3	+0.1
SYI				S	S	17 06 56.8	-1.2
NNL	Ninilchik	1.09	355	P	P	17 06 53.3	+1.4
AUE	Augustine Isla	1.23	290	P	P	17 06 54.0	+0.2
AUI	Augustine Isla	1.25	288	P	P	17 06 54.3	+0.2
AUI				S	S	17 07 10.3	+0.2
AUP	Augustine Pinn	1.25	290	P	P	17 06 54.6	+0.4
AUP				S	S	17 07 11.0	+0.8
AGU	Augustine-Summ	1.26	289	P	P	17 06 54.7	+0.5
AUH	Augustine H	1.26	290	P	P	17 06 54.9	+0.5
AUL	Augustine Lava	1.27	290	P	P	17 06 54.9	+0.6
AUL				S	S	17 07 11.5	+1.0
OPT	Oil Point	1.29	303	P	P	17 06 55.0	+0.3
OPT				S	S	17 07 11.8	+0.7
ILS	Iliamna Low So	1.41	316	P	P	17 06 56.8	+0.3
ILS				S	S	17 07 14.2	0.0
KDAK	Kodiak Island	1.41	214	P	P	17 06 56.5	0.0
	101nm,0.3s,baz=39,slow=11,SNR=1118						
KDAK				S	S	17 07 13.6	-0.6
	189nm,0.3s,baz=307,slow=20,SNR=14						
KDAK	Kodiak Island	1.41	214	P	P	17 06 56.5	0.0
KDAK				S	S	17 07 13.5	-0.7
SEW	Seward	1.43	36	P	P	17 06 57.1	+0.4
SEW				S	S	17 07 14.1	-0.5
IVS	Iliamna South	1.45	317	P	P	17 06 57.7	+0.7
INE	Iliamna NE	1.48	319	P	P	17 06 57.3	-0.2
ILW	Iliamna West	1.51	318	P	P	17 06 57.7	-0.1
ILW				S	S	17 07 16.4	-0.1
SLKM	Skilak Lake	1.62	16	*e*P	P	17 06 59.6	+0.2
MCNL	McNeil River	1.68	279	P	P	17 07 01.0	+0.8
RSO	Redoubt South	1.72	332	P	P	17 07 01.0	+0.3
KAPH	Katmai Pasha	1.72	259	P	P	17 07 00.9	+0.1
REF	Redoubt East F	1.73	333	P	P	17 07 00.7	-0.2
REF				S	S	17 07 21.7	-0.1
RDT	Redoubt	1.74	339	P	P	17 07 01.1	0.0
RDT				S	S	17 07 23.9	+1.8
MPA	Moose Pass	1.77	29	P	P	17 07 02.5	+1.0
KAHG	Katmai Hook Gl	1.85	257	P	P	17 07 03.1	+0.6
KARR	Katmai Rainbow	1.93	258	P	P	17 07 04.8	+1.2
KAHC	Katmai Hardscr	2.05	263	P	P	17 07 04.7	-0.6
KABR	Katmai Barrier	2.19	249	P	P	17 07 06.8	-0.5
KABR				S	S	17 07 33.0	-0.2
BKG	Blockade Glaci	2.19	345	P	P	17 07 07.6	+0.2
BKG				S	S	17 07 33.9	+0.5
RC01	Rabbit Creek A	2.24	17	P	P	17 07 08.7	+0.6
FIB	Fire Island	2.26	12	P	P	17 07 09.6	+1.2
SPU	Mount Spurr	2.28	348	P	P	17 07 08.7	+0.1
CKL	Chakachamna La	2.32	345	P	P	17 07 09.6	+0.3
CKL				S	S	17 07 36.9	+0.2
ACHA	Angle Creek He	2.33	253	P	P	17 07 09.9	+0.5
MGLS	Mageik LS	2.33	253	P	P	17 07 08.4	-1.0
MGLS				S	S	17 07 34.7	-2.1
CAHL	Cahill	2.38	249	P	P	17 07 09.7	-0.4
ANCK	Angle Creek	2.42	253	P	P	17 07 10.3	-0.3
KJL	Kejulik	2.51	251	P	P	17 07 11.8	-0.2
STLK	Strandline Lak	2.57	352	P	P	17 07 13.6	+0.8
CNTC	Contact Creek	2.59	256	P	P	17 07 13.1	-0.1
HIN	Hinchinbrook I	2.75	56	P	P	17 07 15.7	+0.4
GLI	Glacier Island	2.79	45	P	P	17 07 15.7	-0.3
KNK	Knik Glacier	2.79	27	P	P	17 07 16.2	+0.2
PMR	Palmer	2.82	20	*e*P	P	17 07 16.5	+0.2
GHO	Glory Hole Cre	3.02	20	P	P	17 07 19.5	+0.3
SVW2	Sparrevohn	3.10	316	P	P	17 07 19.0	-1.4
EYAK	Cordova Ski Ar	3.15	57	P	P	17 07 20.9	-0.2
SML	Sawmill	3.17	25	P	P	17 07 22.2	+0.8
VLZ	Valdez	3.24	46	P	P	17 07 22.5	+0.2
SCM	Sheep Creek Mo	3.44	32	P	P	17 07 25.9	+0.7
DIV	Divide	3.45	49	P	P	17 07 25.6	+0.3
DIV				S	S	17 08 04.1	-1.2
CUT	Chulitna	3.48	7	P	P	17 07 26.7	+1.1
RAGM	Ragged Mountai	3.57	64	P	P	17 07 26.9	0.0

KLU	Klutina	3.63	43	P	P	17 07 28.1	+0.3
BMRM	Bremner River	3.84	56	P	P	17 07 30.4	-0.4
ANPK	Aniakchak Peak	4.30	243	P	P	17 07 36.7	-0.6
ANPB	Aniakchak Plen	4.39	244	P	P	17 07 38.9	+0.3
GLB	Gilahina Butte	4.41	53	P	P	17 07 38.3	-0.6
SDG	Sourdough	4.50	35	P	P	17 07 41.0	+0.9
DHY	Denali Highway	4.51	22	P	P	17 07 40.5	+0.2
KTH	Kantishna Hill	4.61	1	P	P	17 07 41.5	0.0
TT01	Tatalina	4.62	331	P	P	17 07 40.5	-1.3
BALM	Baldy	4.87	61	P	P	17 07 44.7	-0.5
PAX	Paxson	4.87	32	P	P	17 07 45.2	-0.1
THY	Trims Highway	5.17	28	P	P	17 07 48.3	-1.1
CHX	Chaix Hills	5.21	74	P	P	17 07 51.0	+1.0
BWN	Browne	5.29	8	P	P	17 07 50.8	-0.2
PCA	Pinnacle	5.64	74	P	P	17 07 56.0	0.0
WRH	Wood River Hil	5.71	13	P	P	17 07 56.3	-0.7
NEA	Nenana	5.72	9	P	P	17 07 55.9	-1.1
CCB	Clear Creek Bu	5.92	14	P	P	17 07 59.0	-0.8
PNL	Peninsula	6.04	78	P	P	17 08 01.1	-0.5
COLA	College	6.13	13	P	P	17 08 01.9	-0.9
IL1	Eielson Array	6.16	17	P	P	17 08 02.2	-1.1
ILAR	Eielson Array	6.16	17	P	P	17 08 02.1	-1.2
	2.6nm,0.3s,baz=202,slow=14,SNR=108						
ILAR				S	S	17 09 07.2	-6.0
	1.5nm,0.3s,baz=209,slow=15,SNR=3.2						
MDM	Murphy Dome	6.17	12	P	P	17 08 02.7	-0.7
SDPT	Sand Point	6.25	239	P	P	17 08 03.3	-1.2
GCSA	Galena City Sc	6.41	337	P	P	17 08 05.3	-1.5
IM3	Indian Mountai	7.15	351	P	P	17 08 15.1	-2.0
DAWY	Dawson	7.58	43	P	P	17 08 21.4	-1.7
WHY	Whitehorse	8.36	71	P	P	17 08 32.8	-1.0
BM3	Burnt Mountain	8.98	16	P	P	17 08 39.8	-2.5
UNV	Unalaska Valle	9.94	246	P	P	17 08 58.5	+3.1
DLBC	Dease Lake	10.98	84	P	P	17 09 09.1	-0.4
	1.3nm,0.3s,baz=109,slow=25,SNR=16						
DLBC	Dease Lake	10.98	84	P	P	17 09 08.1	-1.4
INK	Inuvik	12.15	32	P	P	17 09 24.3	-0.9
	0.1nm,0.3s,baz=196,slow=19,SNR=2.0						
INK				LR	LR	17 14 15.3	
	comp=Z,64nm,19.7s,baz=3.8,slow=38						
BBB	Bella Bella	14.62	108	LR	LR	17 14 15.4	
	comp=Z,110nm,19.9s,slow=31						
YKA	Yellowknife Ar	18.04	63	P	P	17 10 42.4	+1.6
	0.3nm,0.3s,baz=273,slow=9.8,SNR=16						
YKA				LR	LR	17 18 24.8	
	comp=Z,118nm,18.1s,baz=270,slow=39						
ELK	Elko	28.95	113	P	P	17 12 32.5	+3.6
	1.7nm,0.7s,mb3.9,baz=305,slow=9.3,SNR=8.8						
ELK	Elko	28.95	113	eP	P	17 12 31.6	+2.7
	1.8nm,0.7s,mb3.9						
ELK				P		17 12 32.5	
NVAR	Mina Array Bea	29.38	120	P	P	17 12 36.2	+3.5
	1.2nm,0.7s,mb3.7,baz=321,slow=7.2,SNR=7.4						
NVAR				PcP	PcP	17 15 39.1	+1.0
	0.6nm,0.6s,baz=289,slow=1.2,SNR=4.8						
NVAR	Mina Array Bea	29.38	120	P	P	17 12 36.2	+3.5
NVAR				PcP	PcP	17 15 39.1	+1.0
PDAR	Pinedale Array	30.21	104	P	P	17 12 42.7	+2.6
	0.4nm,0.7s,mb3.3,baz=312,slow=5.4,SNR=4.2						
SDCO	Great Sand Dun	36.03	106	eP	P	17 13 33.3	+2.7
	2.3nm,0.6s,mb4.3						
WMOK	Wichita Mounta	41.77	102	eP	P	17 14 19.8	+1.7
	2.9nm,0.9s,mb3.9						
JCT	Junction City	44.66	107	eP	P	17 14 44.2	+2.5
	7.3nm,0.6s,mb4.7						
JCT				e	pP	17 14 54.6	-0.8
ARCES	ARCESS Array B	51.78	2	P	P	17 15 35.2	-1.2
	1.5nm,0.5s,mb4.2,baz=1.8,slow=7.6,SNR=10.0						
SONM	Songino Array	56.18	308	P	P	17 16 09.1	0.0
	0.8nm,0.6s,mb3.9,baz=62,slow=7.4,SNR=7.1						
FINES	FINESS Array B	59.91	2	P	P	17 16 33.9	-1.0
	1.3nm,0.6s,mb4.2,baz=3.7,slow=7.5,SNR=11						
MKAR	Makanchi Array	65.84	323	P	P	17 17 12.5	-1.7
	0.4nm,0.6s,mb3.6,baz=46,slow=5.9,SNR=3.7						
MKAR	Makanchi Array	65.84	323	P	P	17 17 12.5	-1.7
AKASG	Malin Array Be	70.70	360	P	P	17 17 43.7	-0.5
	0.6nm,0.4s,mb3.9,baz=360,slow=5.9,SNR=10						
AKASG	Malin Array Be	70.70	360	P	P	17 17 43.7	-0.5
GERES	GERESS Array B	71.84	10	P	P	17 17 51.9	+0.8
	0.6nm,0.6s,mb3.7,slow=4.0,SNR=5.4						

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*IDC **07** 17:08:20.4±2.3, 9.97N×108.24E, mb3.7/3, mb1 3.9/3, mb1mx3.7/14, mbtmp3.7/3, MS3.2/1, Ms1 3.2/1, ms1mx3.1/19, Error ellipse: s-maj=144.4km s-min=25.1km az=62.0*

*NEIC **07** 17:08:22.5±0.5, 10.02N×108.31E, h10^{km}, mb4.0/3, Error ellipse: s-maj=13.8km s-min=8.3km az=81.0*

ISC 07 17:08:19.9±0.6**, 10.04N**±0.07×**108.19E**±0.07**, h10^{km}, n13, σ0^s.73**/13**, mb3.8**/5**, MS3.2**/1**, Vietnam**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	8.01	250	P	P	17 10 18.5	-0.6
	162nm,0.8s						
NNT	Nongplab	8.67	288	P	P	17 10 26.8	-1.6
KSM	Kuching	8.76	166	ePn	P	17 10 29.6	-0.1
KULM	Kulim	8.84	238	ePn	P	17 10 31.0	+0.4
KULM				eSn	Sn	17 12 12.0	+0.7
QIZ	Qiongzhong	9.08	10	ePn	P	17 10 33.8	-0.2
ENH	Enshi	20.17	3	eP	P	17 12 57.1	-0.2
	2.6nm,0.7s						
LSA	Lhasa	25.23	323	eP	P	17 13 51.5	+4.0
	2.7nm,0.6s,mb4.0						
SONM	Songino Array	37.70	358	P	P	17 15 38.3	+1.0
	0.6nm,0.9s,mb3.3,baz=163,slow=6.6,SNR=4.8						
WRA	Warramunga Arr	39.37	139	P	P	17 15 51.2	-0.3
	1.6nm,0.7s,mb3.9,baz=319,slow=9.2,SNR=14						
WRAB	Tennant Creek	39.37	139	eP	P	17 15 51.6	0.0
	3.7nm,0.8s,mb4.2						
MKAR	Makanchi Array	42.73	334	P	P	17 16 19.9	+1.0
	0.8nm,0.7s,mb3.5,baz=144,slow=8.3,SNR=7.0						
NWAO	Narrogin (SRO)	43.58	169	LR	LR	17 35 19.9	
	comp=Z,30nm,19.1s,MS3.2,baz=57,slow=37						
HNR	Honiara	55.02	109	P	P	17 17 54.1	-0.3

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*NEIC **07** 17:14:38.1, 16.03N×97.59W, h13^{km}, MD3.7(MEX), After MEX.*

MEX 07 17:14:38.1±0.4**, 16.01N**×**97.58W, h13**^{km}±15^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.65	306	*i* P	Pb	17 14 49.2	-1.5
PNIG				*i* S	Sb	17 14 57.4	-2.0
PNIG	Pinotepa	0.65	306	*i* P	Pb	17 14 49.0	-1.7
PNIG				*i* S	Sb	17 14 57.0	-2.3
VHO	Vista Hermosa	1.33	37	*i* P	Pb	17 14 58.8	-3.6
VHO				*i* S	Sb	17 15 15.0	-4.2
OXX	Oaxaca	1.35	38	eP	Pn	17 14 59.0	-3.6
OXX				*i* S	Sb	17 15 15.5	-4.1
ACX	Acapulco	2.40	291	eP	Pn	17 14 58.5	-19
CMIG	Matias Romero	2.80	67	*i* P	Pn	17 15 19.4	-4.0
CMIG				*i* S	Sn	17 15 52.6	-4.7
CMIG	Matias Romero	2.80	67	*i* P	Pn	17 15 19.3	-4.2
CMIG				*i* S	Sn	17 15 52.8	-4.5

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*IDC **07** 17:15:48.9±0.5, 10.00N×108.34E, mb4.5/17, mb1 4.6/17, mb1mx4.6/18, mbtmp4.5/17, MS4.8/15, Ms1 4.8/15, ms1mx4.8/15, Error ellipse: s-maj=25.1km s-min=13.0km az=67.0*

*BJI **07** 17:15:50.5, 9.82N×108.29E, h23^{km}, mB5.1, mb4.5, Ms5.5, Msz5.1*

*HRVD **07** 17:15:50.8±0.2, 10.08N×108.26E, h12^{km}, MW5.2/63, Centroid moment Tensor Solution. LP body waves: s38,c65;Mantle waves: s63,c120; Half duration: 1^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.17±.02; $M_{\theta\theta}$-0.52±.01; $M_{\phi\phi}$0.68±.02; $M_{r\theta}$-0.21±.04; $M_{\theta\phi}$-0.50±.01; $M_{\phi r}$-0.20±.04; Best double couple: M_0.846×10^{17} NP1: ϕ_s117°,δ69°,λ-168°. NP2:ϕ_s23°,δ79°,λ-22°. Principal axes: T.879, Plg7°, Azm71°; N -.067, Plg66°, Azm177°; P -.812, Plg23°, Azm339°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 17:15:50.8±0.2, 9.96N×108.39E, h10^{km}, mb4.9/18 Error ellipse: s-maj=7.8km s-min=5.2km az=66.0*

NEIC Felt at Ho Chi Minh City, Vietnam.

*MOS **07** 17:15:52.9±1.7, 10.16N×108.54E, h33^{km}, mb5.0/17, MS5.0/14, Error ellipse: s-maj=20.5km s-min=7.7km az=117.5*

ISC 07 17:15:51.8±0.2**, 9.85N**±0.03×**108.33E**±0.03**, h31^{km}, h31**^{km}±2.3^{km}**:pP-P, n150, σ1^s.35**/161**, mb4.7**/58**, MS5.0**/40**, 8C-4D, South China Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNG	Songkhla	8.07	251	P	P	17 17 47.0	-2.9
KSM	Kuching	8.55	167	ePn	P	17 17 55.6	-1.0
KKM	Kota Kinabalu	8.68	115	ePn	P	17 17 57.3	-1.0
KKM				eSn	Sn	17 19 33.6	-2.6
KKM	Kota Kinabalu	8.68	115	P	P	17 17 57.6	-0.7
KULM	Kulim	8.86	240	ePn	P	17 17 58.8	-2.0
KULM				eSn	Sn	17 19 38.5	-2.0
NNT	Nongplab	8.86	289	P	P	17 17 55.8	-5.0
IPM	Ipoh	8.94	235	P	P	17 18 00.7	-1.1
KGM	Kluang	9.24	213	P	P	17 18 05.3	-0.7
QIZ	Qiongzhong	9.24	9	P	P	17 18 03.2	-2.9
QIZ				S	Sn	17 19 44.1	-6.0
QIZ				LR	LR		
	comp=E,32μm,16.0s						
QIZ				LR	LR		
	comp=Z,14μm,14.0s						
NST	Nakhon Sawan	9.87	307	P	P	17 18 10.2	-4.6
PKT	Phuket	10.17	261	P	P	17 18 19.5	+0.6
TSM	Tawau	10.96	120	P	P	17 18 35.3	+5.5
ENPP	El Nido	11.00	82	eP	P	17 18 30.0	-0.2
BUSP	Coron	11.85	79	eP	P	17 18 42.4	+0.5
SJMP	San Jose	12.82	77	eP	P	17 19 01.4	+6.7
TGY	Tagaytay City	13.04	70	Pn	P	17 19 03.2	+5.5
	comp=Z,14nm,0.3s,baz=190,slow=8.8,SNR=5.7						
TGY				LR	LR	17 22 59.7	
	comp=Z,15nm,19.8s,baz=74,slow=33						
TBP	Tagbilaran	15.31	89	eP	P	17 19 23.2	-4.4
PBA	Port Blair	15.42	278	ex	x	17 17 24.6	
PBA				ex	x	17 22 35.8	
KMI	Kunming	16.09	341	P	P	17 19 37.7	+0.1
KMI				AP		17 19 43.8	
KMI				XP		17 19 47.8	
KMI				PP	PP	17 19 50.9	+0.4
KMI				PPP	PPP	17 19 58.9	+0.4
KMI				S	S	17 22 37.1	+2.4
KMI				XS		17 22 46.8	
KMI				SS	SS	17 22 56.8	+2.8
KMI				AMB	AMB		
	comp=Z,10.0nm,2.0s						
KMI				AMB	AMB		
	comp=Z,760nm,4.0s						
KMI				LR	LR		
	comp=N,6μm,10.1s						
KMI				LR	LR		
	comp=E,7μm,10.1s						
KMI				LR	LR		
	comp=Z,8μm,14.6s						
KMI	Kunming	16.09	341	P	P	17 19 37.7	+0.1
	comp=Z,11nm,2.0s						
KMI				pP		17 19 43.8	
KMI				sP		17 19 47.8	
KMI				PP	PP	17 19 50.9	+0.4
KMI				PPP	PPP	17 19 58.9	+0.4
KMI				S	S	17 22 37.1	+2.4
KMI				sS		17 22 46.8	
KMI				SS	SS	17 22 56.8	+2.8
KMI	Kunming	16.09	341	P	P	17 19 37.7	+0.1
KMI				S	S	17 22 37.1	+2.4
GYA	Guiyang	16.59	355	P	P	17 19 46.6	+2.7
GYA				S	S	17 22 46.7	+0.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
GYA				AMB	AMB		
	comp=Z,200nm,5.0s						
GYA				LR	LR		
	comp=N,4μm,13.2s						
GYA				LR	LR		
	comp=E,8μm,12.9s						
GYA				LR	LR		
	comp=Z,4μm,14.0s						
DAV	Davao City (W)	17.29	98	⇑eP	P	17 20 03.0	+10
QZH	Quanzhou	17.91	32	P	P	17 19 58.4	-2.0
QZH				LR	LR		
	comp=N,16μm,13.8s						
QZH				LR	LR		
	comp=E,14μm,12.6s						
QZH				LR	LR		
	comp=Z,8μm,14.8s						
NACB	Ninganchiao	19.05	40	eP	P	17 20 14.3	0.0
YHNB	Yeheng	19.27	38	eP	P	17 20 12.7	-4.2
ENH	Enshi	20.35	3	eP	P	17 20 28.0	-0.5
	comp=Z,81nm,1.5s						
WHN	Wuhan	21.34	14	eP	P	17 20 43.0	+4.4
WHN				S	S	17 24 38.0	+9.1
WHN				LR	LR		
	comp=N,3μm,10.7s,MS5.8						
WHN				LR	LR		
	comp=E,22μm,14.0s,MS5.8						
WHN				LR	LR		
	comp=Z,9μm,16.8s,MS5.2						
CD2	Chengdu	21.38	349	⇑*i*P	P	17 20 41.4	+2.4
CD2				XP		17 20 54.0	
CD2				PPP	PPP	17 21 14.7	+2.2
CD2				S	S	17 24 36.1	+6.4
CD2				XS		17 24 47.5	
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.6						
CD2				LR	LR		
	comp=E,5μm,12.7s						
CD2				LR	LR		
	comp=Z,2μm,7.8s						
SHL	Shillong	22.09	317	eP	P	17 20 45.0	-1.1
SHL				eS	S	17 24 48.0	+5.2
CAL	Calcutta	22.94	306	ex	x	17 21 15.9	
CAL				ex	x	17 25 25.0	
XAN	Xi'an	24.08	1	P	P	17 21 04.1	-1.5
XAN				S	S	17 25 21.7	+3.7
XAN				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.3						
XAN				LR	LR		
	comp=E,8μm,16.3s						
XAN				LR	LR		
	comp=Z,2μm,11.4s,MS4.9						
NJ2	Nanjing	24.15	22	eP	P	17 21 02.6	-3.7
NJ2				AP		17 21 11.9	
NJ2				XP		17 21 15.9	
NJ2				PP	PP	17 21 36.2	-5.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,120nm,4.5s						
NJ2				LR	LR		
	comp=Z,5μm,9.0s						
SSE	Sheshan	24.29	28	P	P	17 21 04.7	-3.0
SSE				AP		17 21 13.0	
SSE				XP		17 21 17.2	
SSE				S	S	17 25 20.4	-1.1
SSE				XS		17 25 35.3	
SSE				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,200nm,5.5s						
SSE				LR	LR		
	comp=N,3μm,13.1s,MS5.3						
SSE				LR	LR		
	comp=E,6μm,13.1s,MS5.3						
SSE				LR	LR		
	comp=Z,6μm,13.1s,MS5.2						
SSE	Sheshan	24.29	28	P	P	17 21 04.7	-3.0
	comp=Z,56nm,0.7s,mb5.1						
SSE				pP		17 21 13.0	
SSE				sP		17 21 17.2	
SSE				S	S	17 25 20.4	-1.1
SSE				sS		17 25 35.3	
SSE				LR	LR		
	comp=Z,6μm,13.1s,MS5.2						
JOW	Kunigami	25.31	45	LR	LR	17 29 56.3	
	comp=Z,2μm,21.9s,MS4.6,baz=233,slow=34						
LSA	Lhasa	25.45	323	P	P	17 21 19.6	+0.8
LSA				AP	pP	17 21 27.6	-0.2
LSA				XP	sP	17 21 31.6	-0.4
LSA				PCP	PcP	17 24 48.2	-2.8
LSA				S	S	17 25 41.6	+0.4
LSA				SCP		17 28 24.8	
LSA				PCS		17 28 28.8	
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
LSA				LR	LR		
	comp=N,2μm,16.0s,MS5.1						
LSA				LR	LR		
	comp=E,5μm,16.0s,MS5.1						
LSA				LR	LR		
	comp=Z,3μm,20.0s,MS4.8						
LSA	Lhasa	25.45	323	eP	P	17 21 19.3	+0.5
	comp=Z,16nm,0.8s,mb4.6						
LZH	Lanzhou	26.43	352	eP	P	17 21 27.2	-0.6
LZH				AP	pP	17 21 32.9	-4.0
LZH				XP	sP	17 21 36.5	-4.5
LZH				AMB	AMB		
	comp=Z,40nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,390nm,5.1s						
LZH				LR	LR		
	comp=E,21μm,16.0s						
LZH				LR	LR		
	comp=Z,8μm,17.0s,MS5.3						
LZH	Lanzhou	26.43	352	eP	P	17 21 27.2	-0.6
	comp=Z,40nm,1.3s,mb4.8						
LZH				pP	pP	17 21 32.9	-4.0
LZH				sP	sP	17 21 36.5	-4.5
LZH				PP	PP	17 22 20.0	+8.7
LZH				eS	S	17 26 13.3	+16
LZH				sS		17 26 25.0	
LZH				eSS	SS	17 27 40.0	+32
LZH				LR	LR		
	comp=Z,8μm,17.0s,MS5.3						
GUN	Gumba	27.73	313	eP	P	17 21 40.1	+0.4
	comp=Z,110nm,1.3s,mb5.3						
PKI	Pulchoki	27.87	312	eP	P	17 21 39.9	-1.1
	comp=Z,60nm,1.2s,mb5.1						
BLSP	Bilaspur	27.93	299	eP	P	17 21 43.7	+2.2
BLSP				AMb	AMB	17 21 50.4	
	comp=Z,28nm,0.9s,mb4.9						
BLSP				*i* x	x	17 32 16.1	
KKN	Kakani	28.09	313	eP	P	17 21 43.3	+0.3
	comp=Z,107nm,1.5s,mb5.3						
DMN	Daman	28.11	312	eP	P	17 21 43.2	0.0
	comp=Z,37nm,1.0s,mb5.0						
GKN	Gorkha	28.68	312	eP	P	17 21 47.0	-1.3
	comp=Z,57nm,1.1s,mb5.2						
KOLN	Koldanda	29.32	311	eP	P	17 21 53.1	-0.9
	comp=Z,30nm,1.1s,mb4.9						
GTA	Gaotai	30.40	347	eP	P	17 22 02.6	-0.9
GTA				AP	pP	17 22 12.4	-0.3
GTA				XP	sP	17 22 16.2	-0.5
GTA				PP	PP	17 22 58.4	-5.0
GTA				PCP	PcP	17 25 07.9	+5.0
GTA				S	S	17 26 53.0	-8.0
GTA				SCP		17 28 47.4	
GTA				SCS	ScS	17 32 39.3	+3.0
GTA				AMB	AMB		
	comp=Z,110nm,9.2s						
GTA				LR	LR		
	comp=N,4μm,19.1s,MS5.4						
GTA				LR	LR		
	comp=E,6μm,16.8s,MS5.4						
GTA				LR	LR		
	comp=Z,3μm,16.8s,MS5.0						
TRD	Trivandrum	30.99	270	ex	x	17 23 59.7	
TRD				ex	x	17 27 53.7	
HHC	Hu-ho-hao-te	31.01	5	eP	P	17 22 10.5	+1.6
HHC				AP	pP	17 22 20.0	+2.0
HHC				XP	sP	17 22 24.1	+2.1
HHC				PP	PP	17 23 14.6	+3.4
HHC				PCP	PcP	17 25 03.8	-0.6
HHC				S	S	17 27 14.6	+4.1
HHC				XS		17 27 30.7	
HHC				SCP		17 28 42.9	
HHC				PCS		17 28 46.9	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,160nm,5.4s						
HHC				LR	LR		
	comp=N,490nm,11.8s						
HHC				LR	LR		
	comp=E,480nm,8.8s						
HHC				LR	LR		
	comp=Z,480nm,16.1s,MS4.2						
JNU	Nakatsue	31.11	39	LR	LR	17 33 16.3	
	comp=Z,2μm,21.8s,MS4.7,baz=69,slow=34						
BHPL	Bhopal	32.39	298	eP	P	17 22 18.3	-2.8
BHPL				AMb	AMB	17 22 30.2	
	comp=Z,24nm,3.3s						
FITZ	Fitzroy Crossi	32.61	148	P	P	17 22 23.3	+0.2
	comp=Z,7.3nm,0.9s,mb4.6,baz=288,slow=4.9,SNR=3.5						
MBWA	Marble Bar	32.79	160	eP	P	17 22 25.1	+0.5
POO	Poona	34.47	288	eP	P	17 22 36.1	-3.1
POO				AMb	AMB	17 22 45.4	
	comp=Z,15nm,2.4s,mb4.5						
NDI	New Delhi	34.67	307	ex	x	17 22 30.0	
CN2	Changchun	36.95	21	eP	P	17 23 02.9	+2.9
CN2				eXP	sP	17 23 17.0	+3.8
CN2				eS	S	17 28 45.7	+3.1
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
CN2				AMB	AMB		
	comp=Z,100nm,5.0s						
CN2				LR	LR		
	comp=N,8μm,15.0s,MS5.8						
CN2				LR	LR		
	comp=E,10μm,15.0s,MS5.8						
CN2				LR	LR		
	comp=Z,4μm,16.0s,MS5.3						
THN	Thein Dam	37.56	312	ex	x	17 23 00.0	
SONM	Songino Array	37.89	358	P	P	17 23 07.4	-0.4
	comp=Z,3.1nm,0.8s,mb4.1,baz=174,slow=7.0,SNR=18						
SONM				LR	LR	17 39 13.0	
	comp=Z,3μm,18.3s,MS5.1,baz=170,slow=37						
MJAR	Matsushiro Arr	37.92	41	P	P	17 23 06.8	-1.5
	comp=Z,5.1nm,1.0s,mb4.2,baz=248,slow=6.5,SNR=4.3						
MJAR				LR	LR	17 40 02.2	
	comp=Z,693nm,18.6s,MS4.5,baz=245,slow=38						
MJAR	Matsushiro Arr	37.92	41	P	P	17 23 06.8	-1.5
MJAR				LR	LR	17 40 02.1	
WMQ	Urumqi	38.30	336	⇑P	P	17 23 11.5	+0.2
WMQ				AP	pP	17 23 22.0	+1.4
WMQ				XP	sP	17 23 25.7	+1.2
WMQ				PP	PP	17 24 42.5	0.0
WMQ				eS	S	17 29 02.5	-0.5
WMQ				XS		17 29 19.5	
WMQ				AMB	AMB		
	comp=Z,140nm,4.2s						
WMQ				LR	LR		
	comp=N,2μm,18.4s,MS5.1						
WMQ				LR	LR		
	comp=E,1μm,20.0s,MS5.1						
WMQ				LR	LR		
	comp=Z,3μm,19.2s,MS5.1						
WRA	Warramunga Arr	39.15	139	P	P	17 23 19.4	+0.8
	comp=Z,18nm,0.8s,mb4.8,baz=320,slow=8.9,SNR=96						
WRAB	Tennant Creek	39.15	139	eP	P	17 23 19.0	+0.3
	comp=Z,52nm,1.1s,mb5.2						
WRAB	Tennant Creek	39.15	139	⇑eP	P	17 23 19.9	+1.3
WB2	Warramunga Arr	39.15	139	⇑*i*P	P	17 23 19.8	+1.1
MDJ	Mudanjiang	39.21	24	P	P	17 23 19.6	+0.7
MDJ				AP	pP	17 23 28.4	+0.2
MDJ				XP	sP	17 23 32.3	+0.2
MDJ				S	S	17 29 16.2	-0.6
MDJ				XS		17 29 31.1	
MDJ				SCS	ScS	17 33 24.9	+1.6
MDJ				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,70nm,4.0s						
MDJ				LR	LR		
	comp=N,3μm,16.0s,MS5.4						
MDJ				LR	LR		
	comp=E,4μm,16.6s,MS5.4						
MDJ				LR	LR		
	comp=Z,3μm,17.2s,MS5.2						
MDJ	Mudanjiang	39.21	24	eP	P	17 23 18.4	-0.6
	comp=Z,30nm,1.1s,mb4.9						
HIA	Hailar	40.43	12	eP	P	17 23 28.5	-0.5
KSH	Kashi	41.27	321	eP	P	17 23 37.0	+1.1
KSH				eAP	pP	17 23 46.3	+1.1
KSH				eXP	sP	17 23 50.4	+1.3
KSH				ePP	PP	17 25 15.0	+0.9
KSH				ePCP	PcP	17 25 36.0	+1.1
KSH				ePPP	PPP	17 25 45.0	+0.4
KSH				eSCP		17 29 22.1	
KSH				ePCS		17 29 26.1	

KSH				eS	S	17 29 47.0	-0.6
KSH				eXS		17 30 04.2	
KSH				eSS	SS	17 32 47.4	+0.6
KSH				eSCS	ScS	17 33 36.2	+0.8
KSH				AMB	AMB		
	comp=Z,220nm,2.8s,mb5.3						
KSH				LR	LR		
	comp=N,2µm,13.2s,MS5.5						
KSH				LR	LR		
	comp=E,3µm,12.2s,MS5.5						
KLBR	Kellerberrin	42.18	168	eP	P	17 23 44.6	+1.0
	comp=E,48nm,1.6s,mb4.9						
MKAR	Makanchi Array	42.96	334	P	P	17 23 48.9	-0.8
	comp=E,2.5nm,0.7s,mb4.1,baz=138,slow=8.0,SNR=19						
MKAR				LR	LR	17 43 06.1	
	comp=E,2µm,20.4s,MS4.9,baz=354,slow=38						
MKAR	Makanchi Array	42.96	334	⇑eP	P	17 23 48.9	-0.8
PMG	Port Moresby	43.12	115	i P	P	17 23 49.7	-1.8
NWAO	Narrogin (SRO)	43.38	169	P	P	17 23 54.4	+1.1
	comp=E,18nm,0.8s,mb4.9,baz=335,slow=13,SNR=8.2						
NWAO	Narrogin (SRO)	43.38	169	eP	P	17 23 54.4	+1.1
KLR	Kul'dur	43.85	22	eP	P	17 23 56.8	-0.1
KLR				eS	S	17 30 29.5	+4.1
KLR				MLR	MLR		
	comp=Z,10µm,13.0s,MS5.9						
AAK	Ala-Archa	44.05	324	eP	P	17 23 55.5	-3.1
	comp=Z,16nm,1.2s,mb4.6						
AAK	Ala-Archa	44.05	324	eP	P	17 23 55.5	-3.1
AAK				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.6						
FRU	Bishkek	44.10	324	eP	P	17 24 03.5	+4.5
FRU				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.0						
KURK	Kurchatov	47.52	335	eP	P	17 24 25.0	-1.1
	comp=Z,12nm,0.9s,mb4.9						
KURK				ePP	PP	17 26 19.4	+2.6
KURK	Kurchatov	47.52	335	i P	P	17 24 24.9	-1.2
ZAL	Zalesovo	47.83	341	P	P	17 24 26.8	-1.7
	comp=Z,3.7nm,0.5s,mb4.6,baz=327,slow=6.5,SNR=16						
ZAL				LR	LR	17 45 49.4	
	comp=Z,1µm,18.5s,MS4.9,baz=316,slow=38						
BOD	Bodaibo	48.06	4	eP	P	17 24 27.8	-2.4
BOD				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb4.5						
CLNS	Chul'man	48.62	12	eP	P	17 24 35.4	+0.9
CLNS				e		17 26 31.5	
CLNS				eS	S	17 31 44.0	+11
CLNS				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
CLNS				pmax	pmax		
	comp=N,10.0nm,1.2s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.2s						
CLNS				pmax	pmax		
	comp=Z,11nm,1.5s,mb4.7						
CLNS				pmax	pmax		
	comp=N,13nm,1.6s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.2s						
CLNS				smax			
	comp=N,106nm,13.9s						
CLNS				smax			
	comp=Z,30nm,15.1s						
CLNS				smax			
	comp=E,197nm,14.0s						
CLNS				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.5						
CLNS				MLR	MLR		
	comp=N,2µm,14.0s,MS5.3						
CLNS				MLR	MLR		
	comp=E,2µm,13.0s,MS5.3						
STKA	Stephens Creek	52.29	144	P	P	17 25 03.6	+0.8
	comp=E,8.3nm,0.9s,mb4.7,baz=336,slow=6.6,SNR=12						
STKA				LR	LR	17 48 58.6	
	comp=E,360nm,21.4s,MS4.4,baz=314,slow=38						
STKA	Stephens Creek	52.29	144	eP	P	17 25 03.1	+0.2
BRVK	Borovoye	52.85	332	eP	P	17 25 05.5	-1.2
	comp=E,3.9nm,0.8s,mb4.4						
BRVK	Borovoye	52.85	332	eP	P	17 25 05.5	-1.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CHKZ	Chkalovo	53.10	333	eP	P	17 25 07.1	-1.5
	comp=Z,6.2nm,1.0s,mb4.5						
CHKZ	Chkalovo	53.10	333	eP	P	17 25 07.1	-1.5
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
YAK	Yakutsk	54.37	12	eP	P	17 25 15.0	-2.7
	comp=Z,24nm,0.8s,mb5.2						
YAK	Yakutsk	54.37	12	eP	P	17 25 16.9	-0.8
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
YAK				MLR	MLR		
	comp=N,745nm,12.0s,MS5.0						
YAK				MLR	MLR		
	comp=E,343nm,12.0s,MS5.0						
YAK				MLR	MLR		
	comp=Z,912nm,12.0s,MS5.1						
MSEY	Mahe Island	54.59	257	eP	P	17 25 23.0	+2.9
ORR	Orenburg	60.15	325	⇓iP	P	17 25 58.4	-0.5
ORR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
ORR				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.1						
ARU	Arti	60.33	331	⇓iP	P	17 25 59.4	-0.6
ARU				e		17 26 45.4	
ARU				e		17 28 12.7	
ARU				eS	S	17 34 11.8	+1.1
ARU				eSS	SS	17 38 09.1	-0.4
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
ARU				MLR	MLR		
	comp=Z,900nm,21.0s,MS4.9						
ARU				MLR	MLR		
	comp=N,200nm,18.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,800nm,21.0s,MS4.9						
TIXI	Tiksi	63.03	7	⇑iP	P	17 26 13.7	-4.2
TIXI				eS	S	17 34 36.8	-7.9
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.4						
GNI	Garni	63.56	310	eP	P	17 26 22.4	+0.4
GNI	Garni	63.56	310	i P	P	17 26 25.2	+3.3
GNI				MLR	MLR		
	comp=Z,500nm,20.0s						
ZEI	Tsey	64.65	313	eP	P	17 26 28.0	-1.0
ZEI				i *PP	pP	17 26 39.7	+1.0
ZEI				i		17 28 50.2	
ZEI				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
KIV	Kislovodsk	65.72	314	eP	P	17 26 36.6	+0.7
	comp=Z,17nm,0.9s,mb5.1						
KIV	Kislovodsk	65.72	314	eP	P	17 26 36.7	+0.8
KIV				e		17 27 10.2	
KIV				ePPP	PPP	17 30 35.2	-2.3
KIV				eS	S	17 35 18.0	-0.4
KIV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
KIV				pmax	pmax		
	comp=N,11nm,1.2s						
KIV				MLR	MLR		
	comp=Z,439nm,16.0s,MS4.8						
SOC	Sochi	67.79	313	eP	P	17 26 47.2	-1.8
SOC				eS	S	17 35 44.3	+1.0
SOC				e		17 36 47.6	
SOC				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
SOC				MLR	MLR		
	comp=Z,638nm,18.0s,MS4.9						
BILL	Bilibino	69.25	20	i P	P	17 26 57.4	-0.2
BILL				eS	S	17 36 00.0	-0.3
BILL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
BILL				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.0						
ANN	Anapa	69.57	314	eP	P	17 26 58.8	-1.2
ANN				i		17 27 23.3	
ANN				i		17 29 33.2	
ANN				i PPP	PPP	17 31 14.3	-0.7
ANN				eS	S	17 36 04.5	+0.1
ANN				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
ANN				MLR	MLR		
	comp=Z,686nm,16.0s,MS5.0						
KLMR	Klimovskoe	71.18	331	eP	P	17 27 07.3	-2.2
KLMR				i S	S	17 36 27.2	+4.3
KLMR				pmax	pmax		
	comp=Z,20nm,2.5s,mb4.6						
KLMR				smax			
	comp=E,370nm,3.5s						
KLMR				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.2						
OBN	Obninsk	71.56	325	eP	P	17 27 07.3	-4.6
OBN	Obninsk	71.56	325	i P	P	17 27 12.4	+0.6
OBN				eS	S	17 36 33.1	+5.7
OBN				eSS	SS	17 41 09.9	+5.3
OBN				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
OBN				MLR	MLR		
	comp=Z,2µm,25.0s,MS5.2						
KMBO	Kilima Mbogo	71.56	266	P	P	17 27 12.6	0.0
	comp=Z,4.2nm,0.8s,mb4.5,baz=59,slow=13,SNR=9.6						
KMBO				LR	LR	17 58 21.7	
	comp=Z,1µm,18.0s,MS5.1,baz=280,slow=36						
KMBO	Kilima Mbogo	71.56	266	P	P	17 27 12.6	0.0
KMBO				LR	LR	17 58 21.7	
ISP	Isparta	74.43	307	eP	P	17 27 30.3	+1.3
	comp=Z,77nm,2.4s,mb5.2						
AKASG	Malin Array Be	75.54	320	P	P	17 27 33.8	-1.3
	comp=Z,2.8nm,0.8s,mb4.3,baz=80,slow=5.6,SNR=16						
CASY	Casey	75.94	179	eP	P	17 27 37.5	+0.4
MIR	Mirnyy	77.02	186	eP	P	17 27 49.0	+5.9
MIR				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
FINES	FINESS Array B	77.71	331	P	P	17 27 47.1	+0.2
	comp=Z,4.0nm,0.9s,mb4.3,baz=148,slow=18,SNR=5.0						
FINES				LR	LR	18 04 19.3	
	comp=Z,578nm,20.1s,MS4.9,baz=279,slow=38						
KEV	Kevo	77.81	339	P	P	17 27 48.0	+0.6
ARCES	ARCESS Array B	78.32	339	LR	LR	18 06 10.5	
	comp=Z,1µm,18.4s,MS5.2,baz=96,slow=39						
KWP	Kalwaria	79.74	319	eP	P	17 28 00.3	+1.9
	comp=Z,9.9nm,1.0s,mb4.7						
URZ	Urewera	79.87	132	P	P	17 27 59.7	+0.5
	comp=Z,4.6nm,0.6s,mb4.6,baz=274,slow=13,SNR=4.4						
KOLS	Kolonicke sedl	80.07	318	eP	P	17 28 00.9	+0.8
CRVS	Cervenica-Dubn	80.60	318	eP	P	17 28 05.1	+2.2
STHS	Stebnicka Huta	80.71	319	eP	P	17 28 04.9	+1.4
KECS	Kecovo	81.28	318	eP	P	17 28 07.9	+1.4
PSZ	Piszkesteto	81.73	317	eP	P	17 28 09.9	+1.0
VYHS	Vyhne	82.37	318	eP	P	17 28 13.7	+1.5
LSZ	Lusaka	83.20	253	eP	P	17 28 17.6	+0.5
	comp=Z,7.0nm,1.0s,mb4.7						
MAW	Mawson	83.81	196	eP	P	17 28 20.9	+1.8
	comp=Z,4.9nm,1.0s,mb4.6						
MAW	Mawson	83.81	196	P	P	17 28 20.6	+1.5
	comp=Z,5.6nm,1.0s,mb4.7,baz=52,slow=8.1,SNR=7.4						
MAW				LR	LR	18 00 31.1	
	comp=Z,505nm,19.2s,MS4.9,baz=38,slow=32						
NOA	NORSAR Array B	84.89	331	P	P	17 28 26.3	+1.6
	comp=Z,1.8nm,0.9s,mb4.2,baz=80,slow=5.9,SNR=3.0						
NOA				LR	LR	18 11 35.9	
	comp=Z,488nm,18.8s,MS4.9,baz=75,slow=40						
NOA	NORSAR Array B	84.89	331	P	P	17 28 26.2	+1.6
NOA				LR	LR	18 11 36.0	
PRU	Pruhonice	84.96	320	eP	P	17 28 26.9	+1.6
TIP	Timpagrande	85.07	309	eP	P	17 28 27.3	+1.2
GERES	GERESS Array B	85.69	319	P	P	17 28 30.2	+1.2
	comp=Z,2.3nm,0.8s,mb4.4,baz=90,slow=5.3,SNR=13						
GERES				LR	LR	18 11 25.0	
	comp=Z,461nm,18.7s,MS4.9,baz=261,slow=39						
KHC	Kasperske Hory	85.72	319	eP	P	17 28 31.0	+1.9
KHC	Kasperske Hory	85.72	319	⇑eP	P	17 28 31.5	+2.4
MOX	Moxa	86.69	321	i P	P	17 28 31.8	-2.1
MOX				L		18 13 41.0	
MOX	Moxa	86.69	321	eP	P	17 28 31.8	-2.1
MOX				LR	LR		
	comp=Z,800nm,20.0s,MS5.1						
GRA1	Grafenberg Arr	87.13	320	P	P	17 28 37.7	+1.7
GRF	Grafenberg Arr	87.13	320	eP	P	17 28 37.7	+1.7
ILAR	Eielson Array	87.38	25	P	P	17 28 36.1	-0.7
	comp=Z,0.4nm,0.7s,mb3.8,baz=273,slow=4.1,SNR=7.5						
ILAR				LR	LR	18 08 17.0	
	comp=Z,467nm,18.4s,MS4.9,baz=164,slow=36						
BOSA	Boshof	88.65	241	P	P	17 28 45.0	+1.1
	comp=Z,3.9nm,0.9s,mb4.7,baz=77,slow=13,SNR=3.7						
BOSA				LR	LR	18 07 17.4	
	comp=Z,731nm,18.5s,MS5.1,baz=69,slow=35						
WLF	Walferdange	90.33	321	eP	P	17 28 51.3	+0.1
SYO	Syowa Base	91.70	200	⇓P	P	17 28 59.8	+2.7
SYO	Syowa Base	91.70	200	⇓eP	P	17 28 59.8	+2.7
PPT	Papeete	104.36	106	eLR	LR	18 04 24.7	
	comp=Z,438nm,30.5s						
TBI	Tubuai	104.98	112	eLR	LR	18 04 42.2	
	comp=Z,184nm,29.5s						
RKT	Rikitea	118.29	111	eLR	LR	18 10 52.1	
	comp=Z,222nm,32.5s						
PLCA	Paso Flores	149.23	182	PKPbc	PKPdf	17 35 40.2	+1.7
	comp=Z,3.2nm,0.7s,baz=172,slow=6.9,SNR=11						
PLCA	Paso Flores	149.23	182	ePKPdf	PKPdf	17 35 41.0	+2.5
CFAA	Coronel Fontan	158.12	188	PKPab	PKPab	17 36 22.6	+0.5
	baz=145,slow=6.8						

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*IDC **07** 17:18:09.8±1.0, 43.78S×75.70W, mb4.4/7, mb1 4.6/8, mb1mx4.4/15, mbtmp4.4/8, ML3.4/1, MS3.6/2, Ms1 3.6/2, ms1mx3.0/16, Error ellipse: s-maj=28.8km s-min=22.8km az=74.0*

*NEIC **07** 17:18:13.6±0.4, 43.81S×75.45W, h25^{km}, mb4.7/10, Error ellipse: s-maj=11.9km s-min=8.3km az=97.0*

ISC 07 17:18:14.0±0.5**, 43.71S**±0.08×**75.7W**±0.1**, h33^{km}, n43, σ1^{s}26**/43**, mb4.5**/16**, MS3.9**/1**, Off coast of southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	4.85	54	Pn	Pn	17 19 22.8	-3.9
	0.4nm,0.3s,baz=178,slow=23,SNR=3.0						
PLCA				Sn	Sn	17 20 23.6	+1.1
	0.6nm,0.3s,baz=224,slow=10,SNR=3.1						
PLCA	Paso Flores	4.85	54	Pn	Pn	17 19 22.8	-3.9
PLCA				Sn	Sn	17 20 23.6	+1.1
TRQA	Tornquist	11.82	66	ePn	P	17 20 59.2	-4.0
	18nm,1.3s						
USHA	Ushuaia	12.10	160	LR	LR	17 25 58.8	
	comp=Z,108nm,18.6s,baz=255,slow=39						
CFAA	Coronel Fontan	13.45	29	Pn	P	17 21 19.5	-5.3
	0.1nm,0.3s,baz=190,slow=12,SNR=3.5						
EFI	East Falkland	14.28	130	eP	P	17 21 38.9	+3.2
LVC	Limon Verde	21.78	17	P	P	17 23 04.1	-0.6
	6.5nm,0.8s,mb4.1,baz=207,slow=9.2,SNR=7.4						
LVC	Limon Verde	21.78	17	eP	P	17 23 05.9	+1.2
	11nm,1.0s,mb4.2						
PMSA	Palmer Station	22.11	167	P	P	17 23 04.1	-3.6
CPUP	Villa Florida	22.87	47	eP	P	17 23 13.4	-2.1
	36nm,0.6s,mb5.0						
LPAZ	La Paz	28.08	16	P	P	17 24 04.4	-0.3
SAML	Samuel	36.31	21	eP	P	17 25 14.4	-2.1
	5.3nm,1.1s,mb4.4						
BDFB	Brasilia	36.57	49	P	P	17 25 17.3	-1.4
	4.8nm,0.6s,mb4.5,baz=210,slow=7.2,SNR=5.9						
BDFB				LR	LR	17 41 37.2	
	comp=Z,179nm,18.7s,MS3.9,baz=36,slow=38						
VNA3	Neumayer Olymp	41.69	154		P	17 25 58.6	-1.9
VNA3	Neumayer Olymp	41.69	154		P	17 26 02.5	+2.0
VNA3	Neumayer Olymp	41.69	154		P	17 26 06.6	+6.1
VNA3	Neumayer Olymp	41.69	154		P	17 26 15.8	+15
VNA2	Neumayer--Watz	42.41	153		P	17 26 04.5	-1.9
VNA2	Neumayer--Watz	42.41	153		P	17 26 09.2	+2.8
VNA2	Neumayer--Watz	42.41	153		P	17 26 12.7	+6.3
VNA2	Neumayer--Watz	42.41	153		P	17 26 15.6	+9.2
VNA2	Neumayer--Watz	42.41	153		P	17 26 18.8	+12
SNAA	Sanae	43.88	154		P	17 26 18.6	+0.2
SNAA	Sanae	43.88	154		P	17 26 23.8	+5.4
SNAA	Sanae	43.88	154		P	17 26 29.5	+11
SNAA	Sanae	43.88	154		P	17 26 34.9	+16
SNAA	Sanae	43.88	154	P	P	17 26 15.4	-3.0
	0.4nm,0.7s,mb3.3,baz=331,slow=4.8,SNR=8.3						
SNAA	Sanae	43.88	154	eP	P	17 26 15.7	-2.7
	1.5nm,0.8s,mb3.8						
SBA	Scott Base	52.99	194	eP	P	17 27 25.5	-3.5
VNDA	Vanda	54.02	193	eP	P	17 27 35.5	-1.1
	1.1nm,0.8s,mb3.8						
TXAR	Lajitas Array	77.07	335	P	P	17 30 05.3	-0.2
	0.7nm,0.3s,mb4.1,baz=144,slow=7.8,SNR=9.3						
BOSA	Boshof	78.07	118	P	P	17 30 11.8	+0.8
	7.6nm,0.7s,mb4.7,baz=197,slow=4.3,SNR=12						
GDL2	Guadalupe Moun	79.96	336	eP	P	17 30 20.8	-0.5
CPRX	Cap Rock	80.59	336	eP	P	17 30 25.1	+0.6
DBIC	Dimbokro	80.98	72	P	P	17 30 27.4	+0.4
	3.2nm,0.6s,mb4.4,baz=209,slow=5.1,SNR=9.3						
ANMO	Albuquerque	83.15	335	eP	P	17 30 38.1	+0.3
	8.9nm,0.9s,mb4.8						
SDCO	Great Sand Dun	85.46	337	eP	P	17 30 49.6	+0.4
	3.2nm,0.4s,mb4.8						
SMCO	Snowmass	87.21	336	eP	P	17 30 58.4	+0.6
	10nm,1.1s,mb5.0						
TPNV	Topopah Spring	88.31	329	eP	P	17 31 04.6	+1.4
	3.6nm,0.8s,mb4.7						
NVAR	Mina Array Bea	90.39	328	P	P	17 31 13.9	+1.0
	1.1nm,0.7s,mb4.3,baz=155,slow=6.8,SNR=4.0						
PDAR	Pinedale Array	91.28	336	P	P	17 31 16.1	-0.8
	0.7nm,0.8s,mb4.1,baz=135,slow=3.8,SNR=6.3						
YMR	Madison River	93.43	336	P	P	17 31 28.0	+1.2
	7.4nm,0.7s,mb5.2						
MKAR	Makanchi Array	164.21	71	PKPab	PKPab	17 39 07.2	-1.8
	1.4nm,0.9s,baz=295,slow=3.3,SNR=6.8						

WEL 07 17:21:03.9±0.0**, 39.36S**×**174.82E, h28^{km}, ML3.7**/29**, 1C, Error ellipse: s-maj=0.6km s-min=0.4km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	Vera Road	0.24	349	P*	Pb	17 21 10.5	+0.1
VRZ				S*	Sb	17 21 15.2	+0.5
RAEZ	Rainy Point	0.34	282	P*	Pb	17 21 11.8	+0.1
RAEZ				S*	Sb	17 21 17.0	0.0
PKVZ	Pokaka	0.42	81	P*	Pb	17 21 12.6	-0.3
WAZ	Wanganui	0.42	162	⇑P*	Pb	17 21 12.4	-0.5
WAZ				S*	Sb	17 21 18.8	-0.2
MTVZ	Mangateitei	0.51	93	P*	Pb	17 21 14.2	-0.1
DFE	Dawson Falls	0.55	273	P*	Pb	17 21 15.1	0.0
TWVZ	Taurewa	0.56	59	P*	Pb	17 21 14.8	-0.4
TWVZ				S*	Sb	17 21 22.9	0.0
NEZ	North Egmont	0.57	279	P*	Pb	17 21 15.1	-0.1
TRVZ	Turoa	0.57	84	P*	Pb	17 21 15.2	-0.1
TRVZ				S*	Sb	17 21 23.6	+0.5
FWVZ	Far West T-bar	0.58	80	P*	Pb	17 21 15.5	0.0
FWVZ				S*	Sb	17 21 24.0	+0.6
DRZ	Dome Shelter	0.59	82	P*	Pb	17 21 15.8	+0.2
DRZ				S*	Sb	17 21 24.2	+0.7
WPVZ	Whakapapa	0.59	75	P*	Pb	17 21 15.4	-0.2
WPVZ				S*	Sb	17 21 24.2	+0.6
CNZ	Chateau	0.59	75	P*	Pb	17 21 15.4	-0.2
WNVZ	Wahianoa	0.61	87	P*	Pb	17 21 15.8	-0.1
WNVZ				S*	Sb	17 21 24.5	+0.4
NGZ	Ngauruhoe	0.64	74	P*	Pb	17 21 16.2	-0.2
WTVZ	West Tongariro	0.65	68	P*	Pb	17 21 16.3	-0.3
WTVZ				S*	Sb	17 21 26.1	+0.8
TUVZ	Tukino	0.66	82	P*	Pb	17 21 16.7	0.0
PKE	Pukeiti	0.66	284	P*	Pb	17 21 16.6	-0.3
NRZ	Ngariki Road	0.69	272	P*	Pb	17 21 16.9	-0.3
OTVZ	Oturere	0.69	74	P*	Pb	17 21 17.0	-0.2
OTVZ				S*	Sb	17 21 27.0	+0.6
KRVZ	Karewarewa	0.69	68	P*	Pb	17 21 17.0	-0.3
KRVZ				S*	Sb	17 21 26.2	-0.4
MOVZ	Moawhango	0.73	94	P*	Pb	17 21 17.4	-0.5
MOVZ				S*	Sb	17 21 27.0	-0.5
NWEZ	Newall Road	0.74	276	PN	Pn	17 21 17.9	-0.6
KATZ	Kakaramea	0.78	61	PN	Pn	17 21 18.5	-0.6
HIZ	Hauiti	0.84	2	PN	Pn	17 21 19.3	-0.6
HIZ				SN	Sn	17 21 31.6	+0.2
RATZ	Rangitukua	0.89	57	PN	Pn	17 21 20.2	-0.5
WATZ	Wairara	0.96	48	PN	Pn	17 21 21.2	-0.5
TSZ	Takapari Road	1.13	129	PN	Pn	17 21 23.3	-0.7
TSZ				SN	Sn	17 21 38.2	-0.5
MRZ	Mangatainoka R	1.43	156	PN	Pn	17 21 27.9	-0.3
KIW	Kapiti Island	1.50	177	PN	Pn	17 21 28.6	-0.8
KIW				SN	Sn	17 21 46.9	-1.3
DUWZ	D'Urville Isla	1.60	205	PN	Pn	17 21 29.7	-1.1
TOZ	Tahuroa Road	1.71	19	eSN	Sn	17 21 52.5	-1.0
CAW	Cannon Point	1.76	174	PN	Pn	17 21 32.5	-0.5
MTW	Mount Morrison	1.87	164	PN	Pn	17 21 34.8	+0.1
SNZO	South Karori	1.95	182	PN	Pn	17 21 35.2	-0.6
MSWZ	Moikau Station	2.08	171	PN	Pn	17 21 37.2	-0.5
NNZ	Nelson	2.16	210	PN	Pn	17 21 38.0	-0.7
QRZ	Quartz Range	2.29	229	PN	Pn	17 21 38.9	-1.7
OTAZ	Otara	2.41	2	PN	Pn	17 21 40.9	-1.4
THZ	Tophouse	2.81	211	PN	Pn	17 21 46.2	-1.8
WCZ	Waipu Caves	3.43	354	PN	Pn	17 21 55.3	-1.6
FOZ	Fox Glacier	5.70	221	PN	Pn	17 22 24.3	-4.7

WEL 07 17:39:22.1±0.2**, 37.33S**×**177.56E, h107^{km}**±2^{km}**, ML4.0**/5**, Error ellipse: s-maj=1.6km s-min=1.5km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	White Island	0.35	235	PN	P	17 39 37.4	-0.4
WIZ				SN	S	17 39 49.0	-0.7
MXZ	Matakaoa Point	0.64	112	PN	P	17 39 39.7	-0.1
MXZ				SN	S	17 39 53.0	-0.2
MXZ				SN	S	17 39 53.3	+0.2
PUZ	Puketiti	0.93	143	PN	P	17 39 42.3	-0.3
PUZ				SN	S	17 39 56.1	-1.9
MARZ	Manawahe	0.96	226	PN	P	17 39 42.4	-0.5
URZ	Urewera	1.00	201	PN	P	17 39 42.8	-0.5
URZ				SN	S	17 39 59.0	-0.2
MWZ	Matawai	1.01	181	PN	P	17 39 42.9	-0.5
MWZ				SN	S	17 39 59.4	0.0
EDRZ	Edgecumbe	1.01	220	PN	P	17 39 43.3	-0.1
MYRZ	Mayor Island	1.05	272	PN	P	17 39 43.6	-0.3
TAZ	Tarawera	1.23	222	PN	P	17 39 46.0	+0.1
PATZ	Paeroa	1.47	224	PN	P	17 39 49.0	+0.2
KNZ	Kokohu	1.69	177	PN	P	17 39 50.3	-1.3
KNZ				SN	S	17 40 12.5	-1.0
BKZ	Black Stump Fm	2.02	204	PN	P	17 39 55.0	-0.6
BKZ				SN	S	17 40 20.1	-0.7
KATZ	Kakaramea	2.21	221	PN	P	17 39 58.1	-0.1
KRVZ	Karewarewa	2.32	220	PN	P	17 39 59.4	-0.4
OTVZ	Oturere	2.36	218	PN	P	17 39 59.8	-0.5
WTVZ	West Tongariro	2.37	220	PN	P	17 39 59.8	-0.5
NGZ	Ngauruhoe	2.40	219	PN	P	17 40 00.4	-0.5
TWVZ	Taurewa	2.41	223	PN	P	17 40 00.7	-0.4
CNZ	Chateau	2.45	220	PN	P	17 40 01.0	-0.5
TUVZ	Tukino	2.45	217	PN	P	17 40 00.5	-1.0
WPVZ	Whakapapa	2.45	220	PN	P	17 40 00.5	-1.0
FWVZ	Far West T-bar	2.49	219	PN	P	17 40 01.2	-0.9
MOVZ	Moawhango	2.52	214	PN	P	17 40 00.5	-1.9
WNVZ	Wahianoa	2.52	217	PN	P	17 40 01.2	-1.3
TRVZ	Turoa	2.52	218	PN	P	17 40 01.6	-1.0
PXZ	Pawanui	2.76	191	PN	P	17 40 02.6	-3.1
TSZ	Takapari Road	3.00	204	PN	P	17 40 05.9	-3.1
WAZ	Wanganui	3.15	219	PN	P	17 40 09.5	-1.6
MRZ	Mangatainoka R	3.67	204	PN	P	17 40 13.7	-4.4
KIW	Kapiti Island	4.09	209	PN	P	17 40 19.0	-4.8
MTW	Mount Morrison	4.15	202	PN	P	17 40 19.1	-5.5
TRWZ	Traveller	4.32	199	PN	P	17 40 21.7	-5.2
MSWZ	Moikau Station	4.46	203	PN	P	17 40 23.4	-5.4
DUWZ	D'Urville Isla	4.48	218	PN	P	17 40 24.0	-5.1
SNZO	South Karori	4.55	208	PN	P	17 40 24.5	-5.6
TUWZ	Tuamarina	4.96	213	PN	P	17 40 29.9	-5.8
QRZ	Quartz Range	5.25	227	PN	P	17 40 34.3	-5.1
MQZ	McQueen's Vall	7.39	209	PN	P	17 41 00.2	-8.7
ODZ	Otahua Downs	9.30	212	PN	P	17 41 26.7	-8.0

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*NEIC **07** 17:52:41.1, 35.04S×70.52W, h18^{km}, ML2.5(GUC), After GUC.*

GUC 07 17:52:41.1±0.6**, 35.04S**×**70.52W, h18^{km}**±7^{km}**, MD3.6, ML2.5, 1C-4D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.59	316	⇓iP	Pb	17 52 52.4	-0.2
SFDO				i S	Sb	17 53 00.8	+0.4
TACH	Talagante	1.43	346	⇓iP	Pn	17 53 06.8	+0.4
TACH				i S	Sb	17 53 26.4	+1.8
RCDM	Rinconada Maip	1.56	351	eP	Pn	17 53 09.5	+1.2
RCDM				i S	Sn	17 53 30.7	+2.4
RCDM				AMP		17 53 32.3	
	comp=E,138nm,0.1s						
FCH	Farellones	1.72	6	⇑iP	Pn	17 53 12.7	+2.1
FCH				i S	Sn	17 53 35.9	+3.8
FCH				AMP		17 53 36.5	
	comp=N,76nm,0.3s						
LCCH	Las Cruces	1.79	330	⇓iP	Pn	17 53 12.6	+1.0
LCCH				i S	Sn	17 53 36.9	+2.9
JACH	Jahuel	2.35	358	⇓iP	Pn	17 53 22.2	+2.6

*IDC **07** 18:16:25.1±1.3, 17.11N×148.38E, mb4.0/7, mb1 4.1/8, mb1mx4.0/20, mbtmp4.0/8, ML4.0/1, Error ellipse: s-maj=38.5km s-min=23.0km az=108.0*

*NEIC **07** 18:16:30.2±0.8, 17.05N×148.37E, h35^{km}, mb4.1/4, Error ellipse: s-maj=23.8km s-min=11.9km az=108.0*

ISC 07 18:16:28.4±0.9, **17.0N**±0.1×**148.2E**±0.2, **h33^{km}, n13, σ1^{s}19**/15, **mb4.0**/11, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.69	224	Pn	Pn	18 17 39.5	+0.5
	6.2nm,0.3s,baz=183,slow=21,SNR=7.0						
GUMO				Sn	Sn	18 18 30.8	-2.1
	6.4nm,0.3s,baz=198,slow=20,SNR=3.0						
GUMO	Guam	4.69	224	Pn	Pn	18 17 39.1	+0.2
GUMO				Sn	Sn	18 18 30.8	-2.1
QIZ	Qiongzhong	36.48	279	*e*P	P	18 23 35.3	+2.7
	5.6nm,0.8s,mb4.5						
WRAB	Tennant Creek	39.17	201	*e*P	P	18 23 56.0	+1.0
	2.4nm,0.8s,mb4.0						
WRA	Warramunga Arr	39.18	201	P	P	18 23 56.1	+1.0
	0.6nm,0.6s,mb3.5,baz=31,slow=8.6,SNR=7.7						
SONM	Songino Array	45.93	321	P	P	18 24 50.6	+0.7
	1.4nm,0.7s,mb4.0,baz=133,slow=6.7,SNR=11						
ZAL	Zalesovo	60.79	323	P	P	18 26 37.6	-1.8
	0.8nm,0.4s,mb4.2,baz=358,slow=7.0,SNR=4.6						
MKAR	Makanchi Array	61.33	314	P	P	18 26 43.7	+0.5
	0.2nm,0.5s,mb3.5,baz=101,slow=7.3,SNR=3.3						
ILAR	Eielson Array	64.10	26	P	P	18 26 59.5	-1.7
	0.7nm,0.8s,mb3.8,baz=256,slow=6.3,SNR=6.8						
CHKZ	Chkalovo	69.12	322	*e*P	P	18 27 32.7	-0.5
	1.0nm,0.6s,mb3.9						
BVAR	Borovoye Array	69.27	321	P	P	18 27 34.3	+0.2
	3.8nm,0.6s,mb4.5,baz=91,slow=7.4,SNR=25						
BRVK	Borovoye	69.33	321	*e*P	P	18 27 35.1	+0.6
	1.3nm,0.6s,mb4.0						
INK	Inuvik	69.97	23	P	P	18 27 37.6	-0.5
	2.9nm,1.2s,mb4.1,baz=216,slow=3.5,SNR=3.3						

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*NDI **07** 18:24:57.7±3.7, 34.87N×73.64E, h10^{km}, MD3.6, ML3.3*

*NNC **07** 18:25:15.3±2.1, 35.90N×75.95E, mpv3.4, Error ellipse: s-maj=687.0km s-min=22.0km az=61.0*

ISC 07 18:25:03.5±1.2, **34.18N**±0.08×**73.1E**±0.2, **h33^{km}, n9, σ0^{s}92**/12, **2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.79	128	*e*P	P	18 25 47.1	+0.2
THN				*e*S	S	18 26 20.5	+0.7
BHK	Bhakra	3.92	134	*e*S	S	18 26 47.8	-0.5
SDNR	Sundarnagar	4.21	128	*e*P	P	18 26 11.0	+4.0
SDNR				*e*S	S	18 27 01.8	+6.2
SMLA	Simla	4.58	131	*e*x	x	18 26 05.3	
SMLA				*e*x	x	18 26 07.2	
KLP	Kalpa	5.07	120	*e*S	S	18 27 08.8	-8.5
KLP				AML	AML	18 27 31.4	
	comp=E,170nm,0.7s						
KLP				AML	AML	18 27 33.6	
	comp=N,109nm,1.0s						
KHET	Khetri	6.51	158	*e*S	S	18 27 53.9	+0.4
KHET				AML	AML	18 28 27.6	
	comp=E,22nm,0.1s						
KHET				AML	AML	18 28 27.7	
	comp=N,14nm,0.2s						
KUDL	Kundal	6.67	153	*e*P	P	18 26 42.4	+0.7
KUDL				*e*S	S	18 27 57.6	0.0
SONA	Sohna	6.82	149	*e*S	S	18 27 59.4	-1.8
SONA				AML	AML	18 28 39.8	
	comp=N,15nm,0.6s						
SONA				AML	AML	18 28 47.0	
	comp=E,26nm,0.6s						
KK31	Karatay Array	9.14	348	⇑Pn	P	18 27 19.9	+3.8
	comp=E,0.5nm,0.3s,baz=151,slow=11,SNR=36						
KK31				⇑Sn	Sn	18 28 58.5	-0.6
	comp=E,1.9nm,0.5s,baz=146,slow=22,SNR=11						

IDC 07 18:25:51.8±3.3, **29.81N**×**88.68E, mb3.2**/2, **mb1 3.4**/3, **mb1mx3.3**/18, **mbtmp3.2**/3, **ML3.0**/1, **Error ellipse: s-maj=98.3km s-min=33.6km az=79.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	17.67	345	P	P	18 29 59.4	-1.4
	0.1nm,0.3s,baz=180,slow=12,SNR=3.5						
SONM	Songino Array	22.58	32	P	P	18 30 53.9	-1.1
	0.5nm,0.8s,baz=231,slow=9.2,SNR=4.3						
WRA	Warramunga Arr	66.19	133	P	P	18 36 41.5	-2.2
	0.2nm,0.5s,baz=326,slow=6.6,SNR=5.7						

IGQ 07 18:34:26.9, 1.50S×81.04W, h12^{km}±9^{km}, mb4.2, 1D, Error ellipse: s-maj=7.9km s-min=3.1km az=9.5, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAMA	Jama	1.48	34	P	Pn	18 34 54.0	+0.4
JAMA				S	Sb	18 35 14.6	+2.0
MAG1	Magdalena	1.90	42	P	Pn	18 35 01.2	+1.6
QIL1	Quilotoa	2.20	73	P	Pn	18 35 04.0	+0.1
QIL1				S	Sn	18 35 33.8	+2.6
IGUA	Igualata	2.40	90	P	Pn	18 35 08.6	+1.9
IGUA				S	Sn	18 35 38.4	+2.1
JUIV	Juive	2.57	88	P	Pn	18 35 11.5	+2.3
ARRY	Arrayan	2.58	90	P	Pn	18 35 11.4	+2.1
ARRY				S	Sn	18 35 41.6	+0.7
RUN5	Runtun	2.62	88	P	Pn	18 35 12.3	+2.5
RUN5				S	Sn	18 35 45.3	+3.6
PISA	Pisayambo	2.69	81	P	Pn	18 35 14.0	+3.1
JUA2	San Juan 2	2.75	62	P	Pn	18 35 13.0	+1.3
TERV	Terraza Guagua	2.77	62	P	Pn	18 35 13.5	+1.5
VC1	Cotopaxi 1	2.77	72	P	Pn	18 35 15.6	+3.6
PINO	Pino	2.77	61	P	Pn	18 35 12.9	+0.9
GGP	Refugio Guagua	2.77	62	P	Pn	18 35 13.4	+1.3
TAMB	Tambo	2.79	73	P	Pn	18 35 15.6	+3.3
YANA	Yana	2.82	61	P	Pn	18 35 13.9	+1.1
ANTI	Antisana	3.06	70	P	Pn	18 35 19.8	+3.7
ANTI				S	Sn	18 35 57.9	+4.9
COTA	Cotacachi	3.26	56	P	Pn	18 35 23.7	+4.8
CAYR	Refugio Cayamb	3.38	64	P	Pn	18 35 24.9	+4.2
ANGU	Angureal	3.40	63	⇓P	Pn	18 35 24.6	+3.7
ANGU				S	Sn	18 36 09.8	+8.3
CAYA	Cayambe	3.42	63	P	Pn	18 35 24.6	+3.3

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*NEIC **07** 18:42:06.9, 16.49N×98.47W, h52^{km}, mb4.2/15, MD4.5(MEX), After MEX.*

*MEX **07** 18:42:07.6±0.7, 16.63N×98.48W, h9^{km}±10^{km}, MD4.5*

*IDC **07** 18:42:07.6±0.8, 16.69N×98.34W, h31^{km}±3^{km}, mb3.9/7, mb1 4.1/10, mb1mx3.9/22, mbtmp4.0/10, ML3.8/2, MS3.9/2, Ms1 3.8/2, ms1mx3.3/24, Error ellipse: s-maj=40.3km s-min=13.5km az=56.0*

ISC 07 18:42:05.9±0.4, **16.56N**±0.04×**98.45W**±0.03, **h33^{km}, n67, σ1^{s}28**/86, **mb4.2**/16, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.35	118	*i* P	P	18 42 15.3	+0.9
PNIG				*i* S	S	18 42 21.8	+1.5
PNIG	Pinotepa	0.35	118	*e*P	P	18 42 15.4	+1.0
PNIG				*i* S	S	18 42 21.8	+1.5
ACX	Acapulco	1.44	283	*i* P	P	18 42 28.8	-1.1
ACX				*i* S	S	18 42 46.4	-1.4
VHO	Vista Hermosa	1.72	73	*e*P	P	18 42 33.6	-0.3
VHO				*i* S	S	18 42 54.4	-0.6
OXX	Oaxaca	1.73	72	*i* P	P	18 42 33.9	-0.3
CAIG	El Cayaco	1.81	286	*e*P	P	18 42 34.5	-0.7
CAIG				*i* S	S	18 42 56.7	-0.5
CAIG	El Cayaco	1.81	286	*e*P	P	18 42 35.2	+0.1
CAIG				*i* S	S	18 42 56.7	-0.5
PLIG	Platanillo	2.08	331	*e*P	P	18 42 39.8	+0.7
PLIG				*i* S	S	18 43 03.5	-0.6
PLIG	Platanillo	2.08	331	*e*P	P	18 42 40.6	+1.5
PLIG				*i* S	S	18 43 04.7	+0.6
YAIG	Yautepec	2.37	346	*e*P	P	18 42 41.4	-1.8
YAIG				*i* S	S	18 43 08.9	-2.4
YAIG	Yautepec	2.37	346	*e*P	P	18 42 43.8	+0.6
YAIG				*i* S	S	18 43 12.4	+1.1
HUIG	Huatulco	2.38	109	*e*P	P	18 42 45.9	+2.4
HUIG				*i* S	S	18 43 14.8	+2.9
HUIG	Huatulco	2.38	109	*i* P	P	18 42 43.1	-0.4
HUIG				*i* S	S	18 43 09.1	-2.7
PPM	Popocatepetl	2.50	356	*i* P	P	18 42 43.7	-1.4
PPM				*i* P		18 42 44.2	
PPM				*e*P		18 42 44.9	
PPM				*i* S	S	18 43 13.5	-1.2
PPM	Popocatepetl	2.50	356	*i* P	P	18 42 43.7	-1.4
PPM				*i* P		18 42 44.2	
PPM				*e*P		18 42 45.9	
PPM				*i* S	S	18 43 13.5	-1.2
IIZ	Mezontepec	2.72	344	*i* P	P	18 42 46.8	-1.5
UNM	Universidad Na	2.84	346	*e*P	P	18 42 49.0	-1.0
UNM				*e*P		18 42 51.5	
UNM				*i* S	S	18 43 22.0	-1.4
UNM				*i* S	S	18 43 24.8	+1.4
MDVM	Presa Madin	3.06	346	*i* P	P	18 42 53.7	+0.7
MDVM				*i* S	S	18 43 29.8	+0.9
ZIIG	Zihuatanejo	3.06	290	*e*P	P	18 42 52.6	-0.6
ZIIG				*i* S	S	18 43 27.3	-1.8
PTVM	Pico Tres Padr	3.08	348	*i* P	P	18 42 53.2	-0.2
CMIG	Matias Romero	3.46	81	*i* P	P	18 42 56.8	-2.0
CMIG				*i* S	S	18 43 37.3	-1.8
EVV	El Vigia	3.51	57	*e*P	P	18 43 03.7	+4.2
MOIG	Morelia	4.05	320	*e*P	P	18 43 06.9	-0.3
MOIG				*i* S	S	18 43 54.1	0.0
TUIG	Tuzandepetl	4.12	69	*i* P	P	18 43 05.6	-2.5
SFJM	Santa Fe	5.85	313	*e*P	P	18 43 35.0	+2.5
CCIG	Comitan	6.07	92	*e*P	P	18 43 35.6	0.0
TXAR	Lajitas Array	13.59	340	Pn	P	18 45 18.9	+0.1
	baz=157,slow=12,SNR=2.1						
TXAR				Lg		18 49 08.8	
	0.4nm,0.3s,baz=182,slow=40,SNR=3.4						
TXAR				LR	LR	18 51 02.9	
	comp=Z,378nm,18.6s,baz=130,slow=40						
JCT	Junction City	13.91	355	*e*Pn	P	18 45 25.8	+2.8
	14nm,0.8s						
JTS	JuntasAbangare	14.53	114	Pn	P	18 45 30.9	-0.4
	0.4nm,0.3s,baz=315,slow=20,SNR=2.1						
JTS	JuntasAbangare	14.53	114	*e*Pn	P	18 45 33.9	+2.7
	34nm,1.3s						
NATX	Nacogdoches	15.52	12	*e*Pn	P	18 45 46.0	+2.0
	87nm,1.0s						
MNTX	Cornudas Mount	16.34	339	*e*Pn	P	18 45 55.0	+0.5
	8.6nm,1.1s						
GDL2	Guadalupe Moun	16.47	342	*e*Pn	P	18 45 58.9	+2.8
CPRX	Cap Rock	17.12	344	*e*P	P	18 46 05.9	+1.7
WMOK	Wichita Mounta	18.11	359	*e*P	P	18 46 10.6	-6.0
	19nm,1.4s						
MIAR	Mount Ida	18.44	13	*e*P	P	18 46 21.5	+0.7
	19nm,1.0s						
BNM	Barren Site	19.00	339	*e*P	P	18 46 29.3	+1.8
TUC	Tucson	19.26	327	*e*P	P	18 46 31.1	+0.6
	2.4nm,0.8s						
LRAL	Lakeview Retre	19.40	30	*e*P	P	18 46 32.6	+0.6
LAZ	Ladron	19.40	338	*e*P	P	18 46 34.3	+2.2
ANMO	Albuquerque	19.67	340	P	P	18 46 34.1	-0.9
	baz=161,slow=12,SNR=4.2						
ANMO				LR	LR	18 54 39.7	
	comp=Z,338nm,19.1s,baz=78,slow=38						
ANMO	Albuquerque	19.67	340	*e*P	P	18 46 34.2	-0.8
	7.9nm,1.1s						
GNAR	Gosnell	20.73	20	*e*P	P	18 46 54.8	+8.6
GOGA	Godfrey	21.54	36	*e*P	P	18 46 51.0	-3.4
	16nm,0.6s,mb4.6						
SDCO	Great Sand Dun	22.00	345	*e*P	P	18 46 59.0	0.0
	9.7nm,1.1s,mb4.2						
WUAZ	Wupatki	22.12	331	*e*P	P	18 47 01.6	+1.5
	13nm,0.9s,mb4.3						
CBKS	Cedar Bluff	22.20	357	*e*P	P	18 47 04.0	+3.1
	48nm,1.2s,mb4.8						
CPCT	Cooper Cave	22.55	31	*e*P	P	18 47 02.6	-1.9
ARUT	Antelope Range	24.93	331	*e*P	P	18 47 28.5	+0.8
MSU	Marysvale	24.97	334	*e*P	P	18 47 29.5	+1.5
MPU	Maple Canyon	26.03	336	*e*P	P	18 47 38.5	+0.5
DUG	Dugway	26.65	335	*e*P	P	18 47 44.4	+0.7
	4.2nm,1.2s,mb3.8						
PDAR	Pinedale Array	27.79	342	P	P	18 47 52.8	-1.3
	1.8nm,0.8s,mb3.8,baz=137,slow=9.4,SNR=11						
PDAR				sP	sP	18 48 06.7	-1.1
	2.2nm,0.7s,baz=160,slow=9.6,SNR=7.8						
NVAR	Mina Array Bea	27.90	325	P	P	18 47 55.7	+0.7
	2.6nm,0.9s,mb3.9,baz=137,slow=11,SNR=15						
ELK	Elko	28.14	332	P	P	18 47 56.8	-0.5
	0.8nm,0.6s,mb3.5,baz=144,slow=6.3,SNR=4.1						
SDV	Santo Domingo	28.16	102	P	P	18 47 57.5	-0.1
	9.2nm,0.2s,mb5.1,baz=294,slow=2.3,SNR=17						
SDV	Santo Domingo	28.16	102	*e*P	P	18 47 57.9	+0.3
	14nm,0.8s,mb4.7						
REDW	Red Top Meadow	28.73	341	*e*P	P	18 48 02.0	-0.3
	10nm,1.3s,mb4.4						
HLID	Hailey	30.14	337	*e*P	P	18 48 14.4	-0.6
	2.5nm,0.8s,mb4.0						
DLMT	Dillon	31.07	340	*e*P	P	18 48 23.1	-0.1
	11nm,0.9s,mb4.7						
YKA	Yellowknife Ar	47.27	350	P	P	18 50 35.6	-2.1
	2.0nm,0.7s,mb4.2,baz=157,slow=7.2,SNR=7.4						
YKA				sP	sP	18 50 49.3	-2.4
	10nm,0.7s,baz=157,slow=7.2,SNR=28						
YKA	Yellowknife Ar	47.27	350	P	P	18 50 35.6	-2.1
YKA				sP	sP	18 50 49.3	-2.4
ILAR	Eielson Array	58.09	338	P	P	18 51 57.0	-1.2
	2.2nm,1.0s,mb4.2,baz=135,slow=5.0,SNR=11						
ILAR				pP	pP	18 52 07.2	-1.0
	2.8nm,0.9s,baz=134,slow=4.4,SNR=12						
ILAR				sP	sP	18 52 11.4	-0.7
	1.8nm,1.0s,baz=160,slow=5.5,SNR=4.2						
BDFB	Brasilia	59.16	120	P	P	18 52 05.4	-0.9
	2.1nm,0.5s,mb4.4,baz=303,slow=12,SNR=3.8						
PLCA	Paso Flores	62.61	156	P	P	18 52 29.8	+0.4
	1.2nm,0.8s,mb4.1,baz=344,slow=9.2,SNR=3.8						
PLCA				pP	pP	18 52 39.4	-0.1
	1.7nm,1.0s,baz=349,slow=10.0,SNR=2.6						
PLCA	Paso Flores	62.61	156	P	P	18 52 29.8	+0.4
PLCA				pP	pP	18 52 39.4	-0.2
WRA	Warramunga Arr	129.91	258	PKP	PKPdf	19 01 14.2	+1.0
	0.7nm,1.1s,baz=73,slow=1.7,SNR=4.9						
WRA				pPKP		19 01 23.9	
	1.3nm,1.0s,baz=15,slow=0.9,SNR=6.3						

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*NEIC **07** 19:04:26.4, 36.77S×72.65W, h69^{km}, MD3.8(GUC), After GUC.*

GUC 07 19:04:26.4±0.9, **36.77S**×**72.65W, h69^{km}**±6^{km}, **MD3.8, ML3.7, 1C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	0.49	70	⇓*i*P	P	19 04 39.4	+0.3
CCHI				*i* S	S	19 04 48.3	-0.2
CCHI				AMP		19 04 48.7	
	comp=N,8μm,0.3s						
CCHI				AMP		19 04 49.5	
	comp=N,12μm,0.7s						
COCH	Cobquecura	0.65	350	*e*P	P	19 04 41.0	+0.2
COCH				*i* S	S	19 04 51.5	+0.1
COCH				AMP		19 04 51.7	
	comp=N,484nm,0.2s						
LNCH	Linares	1.25	43	*e*P	P	19 04 52.9	+4.5
LNCH				*i* S	S	19 05 09.0	+4.3
LNCH				AMP		19 05 15.8	
	comp=N,2μm,0.5s						
TALC	Talca	1.60	31	⇑*i*P	P	19 04 53.4	+0.3
TALC				*i* S	S	19 05 13.3	+0.4
TALC				AMP		19 05 19.1	
	comp=E,3μm,0.1s						
SFDO	San Fernando	2.53	32	⇓*i*P	P	19 05 05.8	-0.3
SFDO				*i* S	S	19 05 35.7	-0.1
LCCH	Las Cruces	3.40	15	*e*P	P	19 05 16.7	-1.7
TACH	Talagante	3.41	25	⇓*i*P	P	19 05 17.9	-0.5
RCDM	Rinconada Maip	3.60	25	*e*P	P	19 05 20.1	-1.1
RCDM				*i* S	S	19 06 01.5	-1.3
RCDM				AMP		19 06 18.2	
	comp=E,203nm,0.1s						
FCH	Farellones	3.94	30	*e*P	P	19 05 25.6	-0.3
FCH				*e*S	S	19 06 10.9	-0.3
JACH	Jahuel	4.41	23	⇓*i*P	P	19 05 31.3	-1.2

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*IDC **07** 19:05:58.9±2.1, 9.29S×150.81E, mb4.1/3, mb1 4.1/6, mb1mx3.9/13, mbtmp4.0/6, ML3.3/3, MS3.3/3, Ms1 3.3/3, ms1mx3.0/18, Error ellipse: s-maj=34.5km s-min=25.6km az=11.0*

*NEIC **07** 19:06:04.1±1.7, 9.41S×150.80E, h35^{km}, mb3.8/1, Error ellipse: s-maj=28.1km s-min=15.9km az=75.0*

ISC 07 19:06:02.5±2.0, **9.4S**±0.2×**150.8E**±0.2, **h33^{km}, n13, σ1^{s}12**/13, **mb4.0**/3, **MS3.3**/2, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.56	270	Pn	Pn	19 06 56.6	-0.3
	6.2nm,0.3s,baz=99,slow=6.6,SNR=14						
PMG				Pg	P	19 07 06.3	+10
	12nm,0.3s,baz=132,slow=9.2,SNR=24						
PMG				Lg		19 07 51.9	
	5.1nm,0.3s,baz=19,slow=23,SNR=7.6						
PMG	Port Moresby	3.56	270	Pn	Pn	19 06 56.6	-0.3
PMG				Lg		19 07 52.0	
CTA	Charters Tower	11.48	202	Pn	P	19 08 44.8	-2.4
	0.3nm,0.3s,baz=21,slow=13,SNR=3.2						
CTA				LR	LR	19 12 09.7	
	comp=Z,142nm,19.2s,baz=82,slow=32						
CTAO	Charters Tower	11.48	202	*e*Pn	P	19 08 45.2	-1.9
WRAB	Tennant Creek	19.00	235	*e*P	P	19 10 24.2	0.0
	5.1nm,0.8s						
WB2	Warramunga Arr	19.00	235	*e*P	P	19 10 26.1	+1.8
WRA	Warramunga Arr	19.02	235	P	P	19 10 23.7	-0.7
	0.1nm,0.3s,baz=60,slow=11,SNR=10						
STKA	Stephens Creek	23.92	200	P	P	19 11 16.0	+1.5
	3.8nm,0.9s,mb3.8,baz=12,slow=9.3,SNR=5.7						
STKA				LR	LR	19 19 22.0	
	comp=Z,68nm,20.6s,MS3.1,baz=207,slow=33						
STKA	Stephens Creek	23.92	200	*e*P	P	19 11 15.9	+1.4
STKA				LR	LR	19 19 22.0	
FITZ	Fitzroy Crossi	25.87	248	P	P	19 11 33.5	+0.2
	7.0nm,0.7s,mb4.3,baz=92,slow=9.3,SNR=4.2						
JNU	Nakatsue	46.35	337	LR	LR	19 32 06.0	
	comp=Z,44nm,18.2s,MS3.5,baz=101,slow=34						
MKAR	Makanchi Array	82.49	320	P	P	19 18 22.8	-0.5
	0.9nm,0.8s,mb3.8,baz=102,slow=7.2,SNR=3.8						
MKAR	Makanchi Array	82.49	320	P	P	19 18 22.8	-0.5

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*NIED **07** 19:08:00, 23.90N×143.50E, h50^{km}, Mw4.8 Best double couple: M₀1.82×10^{16} NP1:φ$_s$160°, δ65°, λ-50°. NP2: φ$_s$277°, δ46°, λ-144°.*

*IDC **07** 19:08:41.4±0.6, 23.30N×142.09E, mb4.2/15, mb1 4.4/17, mb1mx4.3/23, mbtmp4.2/17, ML3.7/2, MS4.1/22, Ms1 4.1/22, ms1mx4.0/26, Error ellipse: s-maj=25.3km s-min=13.8km az=92.0*

*BJI **07** 19:08:42.8, 22.96N×142.77E, h45^{km}, mB5.3, mb4.6, Ms4.5, Msz4.2*

*MOS **07** 19:08:46.0±1.9, 23.15N×141.62E, h33^{km}, mb4.8/7, Error ellipse: s-maj=32.5km s-min=11.2km az=104.3*

*NEIC **07** 19:08:47.1±0.3, 23.32N×142.24E, h35^{km}, mb4.7/15, MW4.8(NIED), Error ellipse: s-maj=10.2km s-min=6.8km az=77.0*

*JMA **07** 19:08:51.0±0.1, 23.90N×143.49E, h106^{km}±3^{km}, M4.4*

ISC 07 19:08:44.8±1.8, **23.36N**±0.04×**142.27E**±0.07, **h31^{km}**±12^{km}, **h33^{km}**±1.3^{km}**:pP-P, n103, σ1^{s}45**/102, **mb4.5**/40, **MS4.1**/31, **5C, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	3.26	359	P	Pn	19 09 37.2	+2.2
JHHJ				*e*S	Sn	19 10 12.4	-0.8
CBIJ	Chichi jima	3.72	359	Pn	Pn	19 09 41.1	-0.5
	11nm,0.3s,baz=279,slow=19,SNR=5.6						
CBIJ				Sn	Sn	19 10 24.3	-0.6
	66nm,0.3s,baz=270,slow=20,SNR=4.2						
CBIJ				LR	LR	19 11 03.7	
	comp=Z,1μm,18.8s,baz=218,slow=38						
CBIJ	Chichi jima	3.72	359	P	Pn	19 09 42.9	+1.3
JHJ	Hachijo jima 2	9.97	348	LR	LR	19 14 44.2	
	comp=Z,748nm,19.1s,baz=352,slow=36						
GUMO	Guam	10.03	165	*e*Pn	P	19 11 08.3	-1.7
BSO4	Boso 4	11.71	352	S	S	19 13 40.3	-3.2
TATJ	Tateyama 2	11.81	350	P	P	19 11 34.6	+0.3
JOD2	Odawara 2	12.18	348	P	P	19 11 38.5	-0.7
JOD2				*e*S	S	19 13 50.8	-4.1
JMN	Monobe	12.69	326	P	P	19 11 52.4	+6.5
JHU	Hanno	12.72	349	*e*S	S	19 14 04.1	-3.7
JAJ2	Tsuna	12.77	331	P	P	19 11 51.1	+4.0
JRY	Ryogami san	12.95	348	P	P	19 11 49.0	-0.4
JOW	Kunigami	13.14	288	LR	LR	19 16 01.2	
	comp=Z,548nm,19.4s,baz=297,slow=34						
JJS	Sakaide	13.18	328	P	P	19 11 59.2	+6.8
JAG	Ashikaga	13.25	350	P	P	19 11 51.0	-2.3
JHO	Hitachi	13.29	354	P	P	19 11 52.2	-1.7
MJAR	Matsushiro Arr	13.60	346	Pn	P	19 11 56.6	-1.4
	0.3nm,0.3s,baz=155,slow=11,SNR=3.6						
MJAR				LR	LR	19 16 05.2	
	comp=Z,210nm,20.3s,baz=180,slow=33						
JFT	Otama	14.21	354	S	S	19 14 35.6	-7.8
JMM	Marumori	14.52	355	P	P	19 12 07.9	-2.1
JMM				S	S	19 14 41.8	-8.9
YHNB	Yeheng	19.13	278	*e*P	P	19 13 10.0	+1.8
INCN	Inchon	19.45	320	P	P	19 13 15.8	+4.0
SSE	Sheshan	20.25	297	P	P	19 13 10.8	-10
	48nm,0.7s						
SSE				pP		19 13 18.9	
SSE				S	S	19 16 43.2	-17
SSE				sS		19 16 59.1	
SSE				LR	LR		
	comp=Z,70nm,16.7s,MS3.1						
ASAJ	Asahikawa	20.71	1	P	P	19 13 27.1	+2.0
	comp=Z,6.4nm,0.8s,baz=64,slow=27,SNR=5.4						
ASAJ				LR	LR	19 20 57.2	
	comp=Z,624nm,21.5s,MS4.0,baz=189,slow=35						
NJ2	Nanjing	22.43	298	*e*P	P	19 13 43.8	+1.4
NJ2				AP		19 13 52.9	
NJ2				XP		19 13 58.1	
NJ2				S	S	19 17 39.0	-3.0
NJ2				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.7						
NJ2				LR	LR		
	comp=N,730nm,11.6s						
NJ2				LR	LR		
	comp=E,640nm,17.0s						
NJ2				LR	LR		
	comp=Z,240nm,13.7s,MS3.8						
YSS	Yuzh-Sakhalins	23.55	1	*e*P	P	19 13 57.2	+4.0
	comp=Z,17nm,0.6s,mb4.7						
YSS	Yuzh-Sakhalins	23.55	1	*e*P	P	19 13 57.2	+4.0
YSS				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.7						
CN2	Changchun	24.65	330	*e*P	P	19 14 09.3	+5.3
CN2				LR	LR		
	comp=Z,600nm,16.0s,MS4.2						
TIA	Tai'an	25.22	306	⇑P	P	19 14 10.8	+1.4
WHN	Wuhan	25.85	292	P	P	19 14 18.0	+2.6
WHN				LR	LR		
	comp=N,850nm,10.4s						
WHN				LR	LR		
	comp=E,1μm,18.1s						
WHN				LR	LR		
	comp=Z,810nm,10.0s,MS4.5						
ENH	Enshi	29.98	290	*e*P	P	19 14 52.9	0.0
	comp=Z,7.4nm,0.9s,mb4.4						
QIZ	Qiongzhong	30.50	268	*e*P	P	19 14 59.6	+2.1
	comp=Z,5.7nm,0.9s,mb4.4						
HHC	Hu-ho-hao-te	31.10	311	*e*P	P	19 15 06.9	+4.3
HHC				AP	pP	19 15 16.5	+4.8
HHC				XP	sP	19 15 20.6	+4.9
HHC				PP	PP	19 16 11.9	+6.6
HHC				PCP	PcP	19 17 59.2	+1.6
HHC				S	S	19 20 13.1	+8.3
HHC				XS		19 20 28.5	
HHC				SCP		19 21 38.4	
HHC				PCS		19 21 42.3	
HHC				SS	SS	19 22 02.5	+12
HHC				SCS	ScS	19 25 34.8	+2.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.4						
HHC				AMB	AMB		
	comp=Z,50nm,3.1s						
HHC				LR	LR		
	comp=N,230nm,5.5s						
HHC				LR	LR		
	comp=E,310nm,5.7s						
HHC				LR	LR		
	comp=Z,210nm,11.3s,MS4.0						
GYA	Guiyang	32.38	283	P	P	19 15 14.3	+0.4
GYA				AP	pP	19 15 23.4	+0.3
GYA				XP	sP	19 15 27.8	+0.7
GYA				S	S	19 20 21.2	-3.8
GYA				AMB	AMB		

	comp=Z,10.0nm,0.7s,mb4.8						
GYA				AMB	AMB		
	comp=Z,210nm,7.2s						
GYA				LR	LR		
	comp=N,300nm,11.1s,MS4.4						
GYA				LR	LR		
	comp=E,270nm,11.7s,MS4.4						
GYA				LR	LR		
	comp=Z,290nm,11.7s,MS4.2						
LZH	**Lanzhou**	**35.48**	**300**	*e*P	**P**	**19 15 41.8**	**+1.2**
LZH				AP	pP	19 15 52.2	+2.4
LZH				XP	sP	19 15 55.8	+2.1
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
LZH	**Lanzhou**	**35.48**	**300**	*e*P	**P**	**19 15 41.8**	**+1.2**
	comp=Z,30nm,1.5s,mb5.0						
LZH				pP	pP	19 15 52.2	+2.4
LZH				sP	sP	19 15 55.8	+2.1
KMI	**Kunming**	**36.00**	**281**	P	**P**	**19 15 45.6**	**+0.5**
	comp=Z,8.0nm,1.7s,mb4.4						
KMI				S	**S**	**19 21 14.9**	**-6.2**
KMI				LR	LR		
	comp=Z,60nm,22.9s,MS3.3						
HNR	**Honiara**	**36.89**	**150**	LR	LR	19 29 32.3	
	comp=Z,138nm,19.4s,MS3.8,baz=336,slow=34						
SONM	**Songino Array**	**37.53**	**320**	P	**P**	**19 15 57.4**	**-0.3**
	comp=Z,0.4nm,0.7s,mb3.3,baz=115,slow=7.6,SNR=3.2						
SONM				LR	LR	19 31 55.1	
	comp=Z,204nm,18.9s,MS4.0,baz=15,slow=37						
GTA	**Gaotai**	**39.23**	**304**	*e*P	**P**	**19 16 16.0**	**+3.9**
GTA				S	**S**	**19 22 18.3**	**+8.1**
GTA				AMB	AMB		
	comp=Z,40nm,5.0s						
GTA				LR	LR		
	comp=N,240nm,14.9s,MS4.3						
GTA				LR	LR		
	comp=E,210nm,13.8s,MS4.3						
GTA				LR	LR		
	comp=Z,170nm,13.7s,MS4.0						
YAK	**Yakutsk**	**39.60**	**351**	*e*P	**P**	**19 16 15.5**	**+0.6**
	comp=Z,12nm,0.8s,mb4.7						
YAK	**Yakutsk**	**39.60**	**351**	⇑*e*P	**P**	**19 16 21.6**	**+6.7**
YAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
YAK				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.1						
SEY	**Seymchan**	**40.14**	**7**	*i* P	**P**	**19 16 21.5**	**+2.2**
CTA	**Charters Tower**	**43.36**	**175**	P	**P**	**19 16 44.5**	**-1.7**
	comp=Z,5.6nm,1.0s,mb4.2,baz=46,slow=17,SNR=3.2						
CTAO	**Charters Tower**	**43.36**	**175**	P	**P**	**19 16 46.4**	**+0.3**
WRAB	**Tennant Creek**	**43.72**	**191**	*e*P	**P**	**19 16 47.1**	**-2.0**
	comp=Z,83nm,1.1s,mb5.4						
WRAB	**Tennant Creek**	**43.72**	**191**	*i* P	**P**	**19 16 47.9**	**-1.2**
WB2	**Warramunga Arr**	**43.73**	**191**	⇑*i*P	**P**	**19 16 48.0**	**-1.2**
WRA	**Warramunga Arr**	**43.73**	**191**	P	**P**	**19 16 47.9**	**-1.3**
	comp=Z,21nm,1.0s,mb4.8,baz=12,slow=7.9,SNR=39						
FITZ	**Fitzroy Crossi**	**44.29**	**203**	*e*P	**P**	**19 16 53.8**	**0.0**
	comp=Z,10.0nm,0.9s,mb4.5						
FITZ	**Fitzroy Crossi**	**44.29**	**203**	P	**P**	**19 16 52.4**	**-1.4**
	comp=Z,9.1nm,0.8s,mb4.5,baz=27,slow=10,SNR=6.2						
FITZ				LR	LR	19 32 29.8	
	comp=Z,383nm,21.9s,MS4.3,baz=2.8,slow=32						
SHL	**Shillong**	**45.70**	**284**	*e*P	**P**	**19 17 02.5**	**-2.4**
LSA	**Lhasa**	**45.87**	**289**	P	**P**	**19 17 08.6**	**+2.3**
LSA	**Lhasa**	**45.87**	**289**	*e*P	**P**	**19 17 08.7**	**+2.4**
	comp=Z,11nm,1.0s,mb4.7						
BILL	**Bilibino**	**47.07**	**12**	*e*P	**P**	**19 17 18.0**	**+2.8**
	comp=Z,4.6nm,0.6s,mb4.6						
BILL	**Bilibino**	**47.07**	**12**	*i* P	**P**	**19 17 17.5**	**+2.3**
WMQ	**Urumqi**	**48.88**	**308**	⇑P	**P**	**19 17 28.2**	**-1.4**
WMQ				XP	sP	19 17 43.2	+0.4
WMQ				PCP	PcP	19 18 52.2	-1.9
WMQ				PP	PP	19 19 21.7	-1.2
WMQ				PPP	PPP	19 20 15.7	-0.8
WMQ				SCP		19 22 43.2	
WMQ				S	**S**	**19 24 28.7**	**-1.4**
WMQ				AMB	AMB		
	comp=Z,150nm,4.3s						
WMQ				LR	LR		
	comp=N,80nm,16.0s,MS4.0						
WMQ				LR	LR		
	comp=E,110nm,19.1s,MS4.0						
WMQ				LR	LR		
	comp=Z,80nm,16.0s,MS3.8						
TIXI	**Tiksi**	**48.92**	**354**	*e*P	**P**	**19 17 33.4**	**+3.9**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,91nm,10.0s,MS4.1						
MBWA	**Marble Bar**	**49.40**	**208**	*e*P	**P**	**19 17 33.3**	**-0.6**
	comp=Z,20nm,1.2s,mb5.0						
GUN	**Gumba**	**50.67**	**288**	*e*P	**P**	**19 17 43.7**	**+0.2**
	comp=Z,80nm,1.4s,mb5.5						
KKN	**Kakani**	**51.22**	**288**	*e*P	**P**	**19 17 48.2**	**+0.5**
	comp=Z,17nm,1.1s,mb4.9						
DMN	**Daman**	**51.40**	**287**	*e*P	**P**	**19 17 49.7**	**+0.7**
	comp=Z,21nm,1.2s,mb5.0						
GKN	**Gorkha**	**51.74**	**288**	*e*P	**P**	**19 17 51.7**	**0.0**
	comp=Z,17nm,0.9s,mb5.0						
ZAL	**Zalesovo**	**52.40**	**321**	LR	LR	19 41 43.1	
	comp=Z,224nm,18.6s,MS4.2,baz=86,slow=38						
KOLN	**Koldanda**	**52.69**	**288**	*e*P	**P**	**19 17 58.6**	**-0.2**
	comp=Z,22nm,1.1s,mb5.0						
MKAR	**Makanchi Array**	**52.96**	**312**	P	**P**	**19 18 00.1**	**-0.4**
	comp=Z,0.7nm,0.4s,mb3.9,baz=87,slow=9.4,SNR=15						
MKAR				LR	LR	19 42 31.9	
	comp=Z,125nm,18.4s,MS4.0,baz=255,slow=38						
MKAR	**Makanchi Array**	**52.96**	**312**	⇑*e*P	**P**	**19 18 01.6**	**+1.0**
STKA	**Stephens Creek**	**54.93**	**181**	P	**P**	**19 18 13.7**	**-1.5**
	comp=Z,3.0nm,0.7s,mb4.4,baz=351,slow=8.2,SNR=7.4						
STKA				LR	LR	19 41 36.3	
	comp=Z,151nm,21.5s,MS4.0,baz=212,slow=36						
STKA	**Stephens Creek**	**54.93**	**181**	*e*P	**P**	**19 18 15.2**	**0.0**
KURK	**Kurchatov**	**55.69**	**316**	P	**P**	**19 18 16.6**	**-3.8**
	comp=Z,2.8nm,1.0s,mb4.2						
KURK	**Kurchatov**	**55.69**	**316**	*i* P	**P**	**19 18 19.9**	**-0.6**
KDAK	**Kodiak Island**	**57.33**	**35**	P	**P**	**19 18 32.4**	**+0.4**
	comp=Z,1.4nm,0.4s,mb4.4,baz=114,slow=23,SNR=4.2						
KDAK	**Kodiak Island**	**57.33**	**35**	P	**P**	**19 18 32.4**	**+0.4**
CHKZ	**Chkalovo**	**60.73**	**320**	*e*P	**P**	**19 18 54.3**	**-1.3**
BRVK	**Borovoye**	**60.93**	**319**	*e*P	**P**	**19 18 54.9**	**-2.1**
ILAR	**Eielson Array**	**60.96**	**28**	P	**P**	**19 18 57.5**	**+0.5**
	comp=Z,2.3nm,0.9s,mb4.3,baz=270,slow=5.6,SNR=12						
ILAR				LR	LR	19 43 56.9	
	comp=Z,100nm,18.2s,MS4.0,baz=184,slow=35						
INK	**Inuvik**	**66.39**	**24**	P	**P**	**19 19 31.5**	**-1.1**
	comp=Z,0.5nm,0.4s,mb3.9,baz=288,slow=9.6,SNR=3.5						
ARU	**Arti**	**67.43**	**323**	*e*P	**P**	**19 19 55.3**	**+16**
DLBC	**Dease Lake**	**69.23**	**34**	LR	LR	19 45 49.2	
	comp=Z,232nm,19.8s,MS4.4,baz=127,slow=32						
YKA	**Yellowknife Ar**	**75.39**	**28**	P	**P**	**19 20 28.8**	**+2.0**
	comp=Z,1.3nm,0.8s,mb3.9,baz=293,slow=5.7,SNR=5.9						
YKA				LR	LR	19 52 45.4	
	comp=Z,104nm,19.5s,MS4.1,baz=310,slow=35						
YKA	**Yellowknife Ar**	**75.39**	**28**	P	**P**	**19 20 28.8**	**+2.0**
YKA				LR	LR	19 52 45.4	
ARCES	**ARCESS Array B**	**77.08**	**341**	P	**P**	**19 20 40.4**	**+4.1**
	comp=Z,3.8nm,0.8s,mb4.4,baz=72,slow=7.7,SNR=4.7						
ARCES				LR	LR	19 58 33.2	
	comp=Z,175nm,20.0s,MS4.4,baz=76,slow=39						
PPT	**Papeete**	**78.00**	**115**	LR	LR	19 49 09.4	
	comp=Z,162nm,21.5s,MS4.3,baz=321,slow=31						
JOF	**Joensuu**	**78.46**	**334**	*e*p	**P**	**19 20 42.8**	**-1.1**
OBN	**Obninsk**	**79.64**	**326**	*e*P	**P**	**19 20 53.0**	**+2.5**
OBN				*e*S	S	19 30 57.0	+7.9
OBN				*e*SS	SS	19 36 04.6	+3.9
OBN				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
OBN				MLR	MLR		
	comp=Z,200nm,14.0s,MS4.6						
KIV	**Kislovodsk**	**80.67**	**314**	*e*P	**P**	**19 20 58.2**	**+2.0**
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
KIV				MLR	MLR		
	comp=Z,125nm,16.0s,MS4.4						
KAF	**Kangasniemi**	**80.86**	**335**	*e*p	**P**	**19 21 01.6**	**+4.7**
FINES	**FINESS Array B**	**81.33**	**334**	P	**P**	**19 20 58.9**	**-0.4**
	comp=Z,2.1nm,0.9s,mb4.1,baz=177,slow=32,SNR=10.0						
FINES	**FINESS Array B**	**81.33**	**334**	P	**P**	**19 20 58.9**	**-0.4**
FINES	**FINESS Array B**	**81.33**	**334**	*i* P	**P**	**19 21 05.5**	**+6.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	**82.77**	**51**	P	**P**	**19 21 08.2**	**+0.9**
	comp=Z,1.8nm,0.8s,mb4.1,baz=274,slow=6.7,SNR=6.1						
NVAR				LR	LR	19 49 14.2	
	comp=Z,106nm,21.4s,MS4.2,baz=270,slow=29						
SOC	**Sochi**	**82.78**	**314**	*e*P	**P**	**19 21 06.0**	**-1.2**
SOC				*e*		19 21 18.8	
SOC				*e*S	S	19 31 18.5	-3.2
SOC				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
AKASG	**Malin Array Be**	**85.67**	**324**	P	**P**	**19 21 20.3**	**-1.3**
	comp=Z,1.1nm,0.7s,mb4.2,baz=48,slow=4.7,SNR=9.7						
DUG	**Dugway**	**85.86**	**48**	*e*P	**P**	**19 21 24.6**	**+1.8**
	comp=Z,2.6nm,0.6s,mb4.6						
PDAR	**Pinedale Array**	**86.81**	**44**	LR	LR	19 53 06.5	
	comp=Z,142nm,20.6s,MS4.4,baz=288,slow=31						
NOA	**NORSAR Array B**	**87.10**	**338**	P	**P**	**19 21 28.0**	**-0.4**
	comp=Z,1.1nm,0.8s,mb4.1,baz=311,slow=14,SNR=3.3						
NOA				LR	LR	20 06 01.1	
	comp=Z,94nm,19.2s,MS4.2,baz=65,slow=40						
ULM	**Lac du Bonnet**	**90.52**	**33**	LR	LR	19 57 10.5	
	comp=Z,88nm,21.7s,MS4.2,baz=344,slow=32						
SDCO	**Great Sand Dun**	**92.02**	**47**	*e*P	**P**	**19 21 54.6**	**+2.5**
ANMO	**Albuquerque**	**92.81**	**50**	*i* P	**P**	**19 22 02.6**	**+6.8**
GERES	**GERESS Array B**	**94.73**	**329**	P	**P**	**19 22 03.5**	**-0.8**
	comp=Z,0.2nm,0.3s,mb4.0,baz=27,slow=3.0,SNR=4.2						
GERES				LR	LR	20 06 11.0	
	comp=Z,169nm,18.9s,MS4.5,baz=258,slow=36						
TXAR	**Lajitas Array**	**97.76**	**54**	LR	LR	19 59 31.5	
	comp=Z,108nm,21.9s,MS4.3,baz=190,slow=31						
PLCA	**Paso Flores**	**147.47**	**130**	PKPbc	PKPdf	19 28 28.1	-0.4
	comp=Z,2.2nm,0.8s,baz=225,slow=4.4,SNR=5.6						
LPAZ	**La Paz**	**150.59**	**82**	PKPbc	PKPdf	19 28 37.1	+3.1
	comp=Z,1.2nm,0.4s,baz=40,slow=1.5,SNR=4.0						
SAML	**Samuel**	**151.73**	**64**	*e*PKPbc	PKPdf	19 28 38.4	+2.6

MAN 07 19:20:25.7, 8.51N×126.23E, h28^{km}, mb4.4, ML3.3, MS3.1, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.35**	**158**	⇑*e*P	Pb	19 20 34.1	+0.4
BIPH				*e*S	Sb	19 20 40.8	+1.7
BUKP	**Musuan**	**1.31**	**241**	*e*P	Pn	19 20 48.2	-0.2
BUKP				*e*S	Sn	19 21 05.5	+0.3
CGP	**Cagayan de Oro**	**1.52**	**268**	⇑*e*P	Pn	19 20 50.8	-0.6
CGP				*e*S	Sn	19 21 09.8	-0.5
MATI	**Mati**	**1.56**	**179**	*e*P	Pn	19 20 53.2	+1.2
PAGZ	**Pagadian**	**2.89**	**257**	*e*P	Pn	19 21 14.0	+3.0

CASC 07 19:52:02.9±1.9, 13.61N×90.52W, h42^{km}±31^{km}, MD3.6, 2C-9D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.56**	**6**	⇓*e*P	P	19 52 15.1	+0.6
IXG				*e*S	S	19 52 24.7	+1.7
PCG	**Pacaya**	**0.78**	**354**	*e*S	S	19 52 28.6	+0.3
RTR	**El Retiro**	**0.90**	**71**	⇓*e*P	P	19 52 31.1	+12
RTR				*e*S	S	19 52 43.2	+12
SBLS	**San Blas**	**0.90**	**75**	⇓*e*P	P	19 52 30.9	+12
SBLS				*e*S	S	19 52 43.5	+12
SNJE	**San Jose**	**0.92**	**74**	⇓*e*P	P	19 52 31.4	+12
SNJE				*e*S	S	19 52 43.1	+11
RBDL	**Robledal**	**0.95**	**58**	⇓*e*P	P	19 52 37.0	+17
RBDL				*e*S	S	19 52 50.5	+18
BOQS	**Boqueron**	**1.21**	**84**	⇑*e*P	P	19 52 35.1	+11
BOQS				*e*S	S	19 52 52.1	+13
TP2	**Tecpan 2**	**1.26**	**337**	⇓*e*P	P	19 52 25.2	+0.8
TP2				*e*S	S	19 52 42.6	+2.1
MTO2	**Montecristo 2**	**1.37**	**55**	⇓*i*P	P	19 52 37.1	+11
MTO2				*e*S	S	19 52 55.0	+12
LFU	**La Fuente**	**1.37**	**84**	*e*P	P	19 52 36.6	+11
LFU				*e*S	S	19 52 54.3	+11
LFRS	**El Faro**	**1.42**	**89**	⇓*e*P	P	19 52 38.3	+12
LFRS				*e*S	S	19 52 56.2	+12
LCBS	**La Ceiba**	**1.50**	**88**	⇑*e*P	P	19 52 39.4	+12
LCBS				*e*S	S	19 52 59.5	+13
MRL	**Marmol**	**1.65**	**29**	⇓*i*P	P	19 52 29.7	-0.3
MRL				*e*S	S	19 52 51.1	+0.9

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*IDC **07** 20:18:44.9±0.6, 52.69S×18.63E, mb4.3/10, mb1 4.4/10, mb1mx4.3/12, mbtmp4.3/10, MS4.2/12, Ms1 4.2/12, ms1mx4.1/15, Error ellipse: s-maj=25.8km s-min=17.6km az=76.0*

*BJI **07** 20:18:45.9, 52.70S×18.60E, h10^{km}, mB5.5, Ms4.8, Msz4.6*

*NEIC **07** 20:18:46.9±0.4, 52.73S×18.56E, h10^{km}, mb4.6/8, Error ellipse: s-maj=15.1km s-min=8.8km az=93.0*

ISC 07 20:18:45.7±0.4**, 52.76S**±0.06×**18.5E**±0.2**, h10^{km}, n69, σ1^{s}03**/46**, mb4.4**/15**, MS4.2**/13**, 3C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**19.07**	**157**	⇑P	**P**	**20 23 11.2**	**+0.9**
SYO	**Syowa Base**	**19.07**	**157**	⇑*e*P	**P**	**20 23 11.2**	**+0.9**
SUR	**Sutherland**	**20.44**	**6**	P	**P**	**20 23 26.0**	**+0.3**
	22nm,0.8s,baz=190,slow=7.7,SNR=12						
SUR				LR	LR	20 29 35.6	
	comp=Z,1µm,18.5s,MS4.2,baz=183,slow=32						
SUR	**Sutherland**	**20.44**	**6**	*e*P	**P**	**20 23 28.2**	**+2.5**
	23nm,0.8s						
SNAA	**Sanae**	**21.18**	**199**		**P**	**20 23 33.2**	**0.0**
SNAA	**Sanae**	**21.18**	**199**		**P**	**20 23 37.2**	**+4.0**
SNAA	**Sanae**	**21.18**	**199**		**P**	**20 23 48.1**	**+15**
SNAA	**Sanae**	**21.18**	**199**	P	**P**	**20 23 33.1**	**-0.1**
	9.4nm,0.9s,mb4.1,baz=41,slow=9.3,SNR=51						
SNAA				LR	LR	20 29 35.2	
	comp=Z,333nm,20.7s,MS3.7,baz=17,slow=31						
SNAA	**Sanae**	**21.18**	**199**	P	**P**	**20 23 33.2**	**0.0**
VNA2	**Neumayer--Watz**	**21.61**	**203**	⇑*i*	**P**	**20 23 38.0**	**+0.5**
VNA2	**Neumayer--Watz**	**21.61**	**203**		**P**	**20 23 41.2**	**+3.7**
VNA2	**Neumayer--Watz**	**21.61**	**203**		**P**	**20 23 43.2**	**+5.7**
VNA2	**Neumayer--Watz**	**21.61**	**203**		**P**	**20 23 52.4**	**+15**
VNA1	**Neumayer--Stat**	**21.63**	**204**		**P**	**20 23 38.3**	**+0.6**
VNA1	**Neumayer--Stat**	**21.63**	**204**		**P**	**20 23 42.0**	**+4.3**
VNA1	**Neumayer--Stat**	**21.63**	**204**		**P**	**20 23 46.4**	**+8.7**
VNA1	**Neumayer--Stat**	**21.63**	**204**		**P**	**20 23 49.0**	**+11**
VNA1	**Neumayer--Stat**	**21.63**	**204**		**P**	**20 23 54.7**	**+17**
VNA3	**Neumayer Olymp**	**22.37**	**204**		**P**	**20 23 46.2**	**+1.1**
VNA3	**Neumayer Olymp**	**22.37**	**204**		**P**	**20 23 48.8**	**+3.7**
VNA3	**Neumayer Olymp**	**22.37**	**204**		**P**	**20 23 54.2**	**+9.1**
BOSA	**Boshof**	**24.64**	**14**	P	**P**	**20 24 07.1**	**-0.3**
	6.4nm,0.9s,mb4.1,baz=157,slow=8.2,SNR=4.8						
BOSA				LR	LR	20 32 13.2	
	comp=Z,996nm,18.7s,MS4.3,baz=183,slow=33						
BOSA	**Boshof**	**24.64**	**14**	*e*P	**P**	**20 24 09.2**	**+1.8**
	8.7nm,1.0s,mb4.2						
MAW	**Mawson**	**25.83**	**142**	*e*P	**P**	**20 24 17.9**	**-0.5**
	5.9nm,0.9s,mb4.1						
MAW	**Mawson**	**25.83**	**142**	P	**P**	**20 24 18.0**	**-0.3**
	6.5nm,0.8s,mb4.2,baz=284,slow=10,SNR=17						
MAW				LR	LR	20 32 13.9	
	comp=Z,419nm,22.0s,MS3.9,baz=290,slow=31						
LBTB	**Lobatse**	**28.22**	**14**	LR	LR	20 34 11.7	
	comp=Z,969nm,19.0s,MS4.4,baz=199,slow=33						
LBTB	**Lobatse**	**28.22**	**14**	*e*P	**P**	**20 24 40.5**	**-0.2**
TSUM	**Tsumeb**	**33.50**	**358**	P	**P**	**20 25 25.8**	**-1.6**
	1.9nm,0.7s,mb4.1,baz=146,slow=15,SNR=2.3						
TSUM	**Tsumeb**	**33.50**	**358**	*e*P	**P**	**20 25 28.0**	**+0.7**
QSPA	**South Pole Qui**	**37.47**	**180**	*e*P	**P**	**20 26 01.3**	**+0.8**
	27nm,1.0s,mb5.0						
LSZ	**Lusaka**	**38.17**	**15**	*e*P	**P**	**20 26 08.1**	**+1.1**
CASY	**Casey**	**44.14**	**145**	*e*P	**P**	**20 26 55.3**	**-0.1**
VNDA	**Vanda**	**48.00**	**170**	*e*P	**P**	**20 27 25.8**	**-0.2**
	5.5nm,1.0s,mb4.5						
SBA	**Scott Base**	**48.19**	**171**	*e*P	**P**	**20 27 28.1**	**+0.7**
	6.6nm,0.9s,mb4.7						
MBAR	**Mbarara**	**52.97**	**15**	*e*P	**P**	**20 28 05.6**	**+0.9**
	0.3nm,1.5s						
PLCA	**Paso Flores**	**58.42**	**243**	P	**P**	**20 28 42.7**	**-0.9**
	0.8nm,0.6s,mb3.9,baz=123,slow=5.9,SNR=3.7						
PLCA				LR	LR	20 51 23.4	
	comp=Z,121nm,18.1s,MS4.1,baz=179,slow=34						
PLCA	**Paso Flores**	**58.42**	**243**	P	**P**	**20 28 42.7**	**-0.9**
PLCA				LR	LR	20 51 23.4	
DBIC	**Dimbokro**	**62.45**	**334**	P	**P**	**20 29 09.0**	**-2.4**
	5.3nm,0.7s,mb4.8,baz=150,slow=7.1,SNR=16						
DBIC				LR	LR	20 49 35.5	
	comp=Z,206nm,21.4s,MS4.3,baz=152,slow=30						
DBIC	**Dimbokro**	**62.45**	**334**	P	**P**	**20 29 09.0**	**-2.4**
DBIC				LR	LR	20 49 35.5	
BDFB	**Brasilia**	**63.52**	**279**	LR	LR	20 50 55.5	
	comp=Z,92nm,18.6s,MS4.0,baz=228,slow=30						
NWAO	**Narrogin (SRO)**	**69.38**	**117**	*e*P	**P**	**20 29 52.1**	**-3.3**
	50nm,1.4s,mb5.2						
LPAZ	**La Paz**	**75.20**	**263**	P	**P**	**20 30 30.6**	**+0.4**
	1.1nm,0.5s,mb4.0,baz=133,slow=6.7,SNR=6.6						
LPAZ				LR	LR	20 58 04.9	
	comp=Z,86nm,21.2s,MS4.0,baz=285,slow=31						
SAML	**Samuel**	**77.92**	**271**	*e*P	**P**	**20 30 44.9**	**-0.5**
	3.5nm,0.7s,mb4.4						
MBWA	**Marble Bar**	**79.94**	**112**	P	**P**	**20 30 55.0**	**-1.4**
STKA	**Stephens Creek**	**82.23**	**134**	P	**P**	**20 31 08.0**	**-0.2**
	5.0nm,0.9s,mb4.5,baz=161,slow=3.0,SNR=6.9						
STKA	**Stephens Creek**	**82.23**	**134**	*e*P	**P**	**20 31 08.0**	**-0.2**
IDI	**Anoyia**	**87.86**	**5**	LR	LR	21 13 37.1	
	comp=Z,253nm,20.5s,MS4.6,baz=251,slow=38						
WRA	**Warramunga Arr**	**88.84**	**122**	P	**P**	**20 31 40.4**	**-0.8**
	1.8nm,0.9s,mb4.4,baz=207,slow=4.2,SNR=7.9						
ESDC	**Sonseca Array**	**94.11**	**343**	P	**P**	**20 32 04.8**	**-0.3**
	0.3nm,0.5s,mb4.0,baz=136,slow=7.4,SNR=4.8						
GNI	**Garni**	**95.29**	**20**	LR	LR	21 14 35.0	
	comp=Z,125nm,18.9s,MS4.4,baz=13,slow=35						
SDV	**Santo Domingo**	**96.49**	**276**	LR	LR	21 12 38.7	
	comp=Z,70nm,21.6s,MS4.1,baz=47,slow=34						
RKT	**Rikitea**	**100.99**	**205**	*e*LR	LR	21 05 35.0	
	256nm,29.5s						
TBI	**Tubuai**	**103.49**	**191**	*e*LR	LR	21 06 47.0	
	257nm,37.0s						
PPT	**Papeete**	**109.21**	**192**	*e*LR	LR	21 09 26.3	
	194nm,26.2s						
WMQ	**Urumqi**	**113.05**	**47**	PKP	PKPdf	20 37 23.7	-1.9
WMQ				PP	PP	20 38 18.5	+1.6
WMQ				PP	PP		
	comp=Z,140nm,4.8s						
WMQ				LR	LR		
	comp=N,40nm,21.6s,MS4.2						
WMQ				LR	LR		
	comp=E,50nm,18.6s,MS4.2						
WMQ				LR	LR		
	comp=Z,70nm,18.2s,MS4.3						
ZAL	**Zalesovo**	**119.73**	**39**	PKP	PKPdf	20 37 33.9	-4.3
	comp=Z,0.7nm,0.6s,baz=99,slow=2.9,SNR=4.0						
HHC	**Hu-ho-hao-te**	**122.81**	**64**	*e*PKP	PKPdf	20 37 39.1	-5.4
HHC				PP	PP		
	comp=Z,70nm,5.1s						
SONM	**Songino Array**	**124.86**	**55**	PKP	PKPdf	20 37 45.0	-3.3
	comp=Z,1.5nm,0.8s,baz=209,slow=3.2,SNR=10						
PDAR	**Pinedale Array**	**144.42**	**275**	PKP	PKPdf	20 38 19.9	-4.4
	comp=Z,6.1nm,0.7s,baz=122,slow=4.8,SNR=36						
DUG	**Dugway**	**144.88**	**269**	*e*PKPbc	PKPbc	20 38 22.8	+0.4
HWUT	**Hardware Ranch**	**144.97**	**272**	*e*PKPbc	PKPbc	20 38 22.3	-0.3
DAC	**Darwin (Calif)**	**145.26**	**259**	*e*PKPbc	PKPbc	20 38 23.9	+0.5
LOHW	**Long Hollow**	**145.53**	**275**	*e*PKPdf	PKPdf	20 38 23.9	-2.4
ELK	**Elko**	**146.69**	**268**	*e*PKPdf	PKPdf	20 38 28.1	-0.3
NVAR	**Mina Array Bea**	**147.10**	**262**	PKPbc	PKPdf	20 38 29.9	+0.7
	comp=Z,4.9nm,0.8s,baz=128,slow=5.2,SNR=23						
MCMT	**McKenzie Canyo**	**147.54**	**276**	*e*PKPdf	PKPdf	20 38 26.6	-3.0
YKA	**Yellowknife Ar**	**153.67**	**310**	PKPbc	PKPdf	20 38 43.3	+5.0
	comp=Z,1.1nm,0.8s,baz=95,slow=2.0,SNR=4.6						
YKA				PKPab	PKPab	20 38 55.7	-2.6
	comp=Z,1.0nm,0.7s,baz=92,slow=5.6,SNR=4.7						
YKA	**Yellowknife Ar**	**153.67**	**310**	PKPbc	PKPdf	20 38 43.4	+5.0
YKA				PKPab	PKPab	20 38 55.7	-2.6
ILAR	**Eielson Array**	**165.83**	**334**	PKPab	PKPab	20 39 50.6	0.0
	comp=Z,1.9nm,0.8s,baz=14,slow=3.5,SNR=16						

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*NIED **07** 20:35:00, 43.00N×147.80E, h11^{km}, Mw3.7 Best double couple: M$_0$3.82×10^{14} NP1:ϕ_s139°, δ80°, λ28°. NP2:ϕ_s44°, δ62°, λ169°.*

JMA 07 20:35:41.8±0.2**, 43.05N×147.77E, h7^{km}, M4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.52**	**283**	P	Pn	20 36 09.4	-0.1
NEM2				*e*S	Sb	20 36 29.5	+0.3
JAK	**Akkeshi**	**2.25**	**270**	P	Pn	20 36 20.0	-0.1
JAK				*e*S	Sn	20 36 48.0	-0.4
JNK	**Nakash**	**2.29**	**285**	*e*S	Sn	20 36 49.1	-0.2
JOB	**Onbets**	**2.89**	**268**	P	Pn	20 36 29.0	-0.2
JOB				*e*S	Sn	20 37 03.8	-0.8
JAR	**Ashorobuto**	**2.94**	**276**	P	Pn	20 36 29.9	+0.1
JAR				*e*S	Sn	20 37 05.5	-0.2
JTKR	**Abashiri--Toko**	**2.96**	**289**	P	Pn	20 36 30.2	+0.1
JCH	**Churui**	**3.27**	**264**	P	Pn	20 36 34.2	-0.4
JCH				*e*S	Sn	20 37 13.3	-0.9
JNBK	**Urakawa-nobuka**	**3.78**	**260**	P	Pn	20 36 41.7	-0.1
JFR	**Furan**	**3.79**	**273**	P	Pn	20 36 42.4	+0.4
JBT2	**Biratori 2**	**3.98**	**268**	P	Pn	20 36 44.0	-0.6
JEW	**Eniwo**	**4.64**	**270**	P	Pn	20 36 54.4	+0.3
JKB	**Kayabe**	**5.12**	**259**	P	Pn	20 37 00.3	-0.4
JKB				*e*S	Sn	20 37 57.7	-3.2
JOT	**Ohata**	**5.26**	**254**	P	Pn	20 37 01.9	-0.9
JOT				*e*S	Sn	20 38 01.2	-3.3

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*MOS **07** 21:05:13.2±1.9, 34.46N×73.08E, h16^{km}, mb4.1/4, Error ellipse: s-maj=34.4km s-min=10.5km az=87.1*

*NDI **07** 21:05:14.0±4.0, 34.72N×72.72E, h10^{km}, MD3.3, ML3.4, mb3.2(NEIC)*

*IDC **07** 21:05:14.3±1.7, 34.68N×73.40E, mb3.9/4, mb1 4.0/7, mb1mx3.7/20, mbtmp3.8/7, ML3.6/3, Error ellipse: s-maj=43.1km s-min=24.5km az=62.0*

*NEIC **07** 21:05:15.6±1.2, 34.53N×73.25E, h10^{km}, mb3.2/2, Error ellipse: s-maj=27.8km s-min=7.9km az=61.0*

*NNC **07** 21:05:23.7±4.2, 35.31N×72.82E, mpv3.7, Error ellipse: s-maj=57.6km s-min=41.2km az=99.0*

ISC 07 21:05:14.8±0.6**, 34.78N**±0.05×**73.5E**±0.1**, h10^{km}, n40, σ1^{s}50**/53**, mb3.9**/4**, 5C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.01**	**140**	*e*P	**Pn**	**21 06 07.9**	**+4.4**
THN				*e*x	x	21 06 53.7	
DLH	**Dalhousie**	**3.06**	**136**	*e*P	**Pn**	**21 06 08.0**	**+3.7**
DLH				*e*S	**Sn**	**21 06 48.0**	**+6.6**
BHK	**Bhakra**	**4.18**	**143**	*e*PB	**Pb**	**21 06 33.5**	**+5.3**
BHK				*e*SB	**Sb**	**21 07 32.6**	**+14**
SDNR	**Sundarnagar**	**4.41**	**137**	*e*P	**Pn**	**21 06 25.6**	**+2.2**
SDNR				*e*x	x	21 07 35.6	
SMLA	**Simla**	**4.80**	**138**	*e*P	**Pn**	**21 06 28.7**	**-0.3**
SMLA				*e*S	**Sn**	**21 07 28.3**	**+3.0**
KLP	**Kalpa**	**5.17**	**127**	*e*P	**Pn**	**21 06 37.1**	**+3.0**
KLP				*e*S	**Sn**	**21 07 36.1**	**+1.5**
NDI	**New Delhi**	**6.87**	**151**	*e*P	**Pn**	**21 07 00.5**	**+2.3**
NDI				*e*x	x	21 08 52.0	
KUDL	**Kundal**	**7.11**	**158**	*e*P	**Pn**	**21 07 00.8**	**-0.7**
KUDL				*e*S	**Sn**	**21 08 16.2**	**-6.9**
SONA	**Sohna**	**7.21**	**154**	*e*S	**Sn**	**21 08 19.4**	**-6.4**
SONA				AML	AML	21 08 28.3	
	comp=N,17nm,0.1s						
SONA				AML	AML	21 09 11.6	
	comp=E,36nm,0.3s						
PTH	**Pithoragarh**	**7.75**	**130**	*e*P	**Pn**	**21 07 12.9**	**+2.4**
PTH				*e*S	**Sn**	**21 08 39.3**	**+0.1**
AAK	**Ala-Archa**	**7.88**	**6**	⇑Pn	**Pn**	**21 07 17.3**	**+4.9**
	comp=E,1.3nm,0.5s						
AAK				⇑Sn	**Sn**	**21 08 43.0**	**+0.5**
	comp=E,6.1nm,0.9s						
AAK	**Ala-Archa**	**7.88**	**6**	*e*Pn	**Pn**	**21 07 16.7**	**+4.3**
KK31	**Karatay Array**	**8.62**	**345**	Pn	**P**	**21 07 23.3**	**+0.7**
	comp=E,1.9nm,0.3s,baz=154,slow=11,SNR=142						
KK31				⇑Sn	**Sn**	**21 08 58.9**	**-2.0**
	comp=E,1.5nm,0.4s,baz=176,slow=22,SNR=5.4						
KOLN	**Koldanda**	**11.14**	**126**	*e*Pn	**P**	**21 07 55.6**	**-1.7**
KOLN				*e*Sn	**S**	**21 09 58.6**	**-4.4**
	comp=E,19nm,0.7s						
GKN	**Gorkha**	**11.70**	**122**	*e*Pn	**P**	**21 08 02.9**	**-2.0**
GKN				*e*Sn	**S**	**21 10 09.6**	**-7.0**
	comp=E,23nm,0.4s						
DMN	**Daman**	**12.27**	**122**	*e*Pn	**P**	**21 08 10.9**	**-1.7**
DMN				*e*Sn	**S**	**21 10 24.8**	**-5.6**
	comp=E,31nm,0.8s						
KKN	**Kakani**	**12.28**	**121**	*e*Pn	**P**	**21 08 10.4**	**-2.3**
KKN				*e*Sn	**S**	**21 10 25.2**	**-5.5**
	comp=E,38nm,0.9s						
PKI	**Pulchoki**	**12.50**	**122**	*e*Pn	**P**	**21 08 14.0**	**-1.7**
PKI				*e*Sn	**S**	**21 10 30.8**	**-5.3**
GUN	**Gumba**	**12.63**	**119**	*e*Pn	**P**	**21 08 15.8**	**-1.7**
MKAR	**Makanchi Array**	**13.73**	**26**	Pn	**P**	**21 08 34.6**	**+2.7**
	comp=E,0.1nm,0.3s,baz=209,slow=12,SNR=3.0						
KURK	**Kurchatov**	**16.37**	**12**	*e*P	**P**	**21 09 11.4**	**+5.2**
	comp=E,1.7nm,0.9s						
AB31	**Akbulak array**	**17.56**	**330**	⇓P	**P**	**21 09 21.7**	**+0.5**
	comp=E,0.4nm,0.5s,baz=265,slow=3.5,SNR=15						
BVA0	**Borovoye Array**	**18.37**	**354**	⇑P	**P**	**21 09 32.8**	**+1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,0.3nm,0.7s,baz=159,slow=9.4,SNR=9.3						
BVAR	**Borovoye Array**	18.37	354	P	P	21 09 32.4	+1.1
	comp=E,0.3nm,0.3s,baz=154,slow=9.4,SNR=12						
BRVK	**Borovoye**	18.41	354	*e*P	P	21 09 32.5	+0.8
CHKZ	**Chkalovo**	19.00	355	⇑P	P	21 09 41.2	+2.3
	comp=E,1.9nm,0.9s						
CHKZ	**Chkalovo**	19.00	355	*e*P	P	21 09 38.4	-0.5
	comp=E,1.1nm,0.6s						
AKTO	**Aktyubinsk**	19.27	329	⇓P	P	21 09 41.0	-1.2
	comp=E,0.5nm,0.8s						
AKTO	**Aktyubinsk**	19.27	329	P	P	21 09 40.3	-1.8
	comp=E,0.5nm,0.3s,baz=130,slow=12,SNR=11						
AKTO	**Aktyubinsk**	19.27	329	P	P	21 09 40.3	-1.8
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	20.75	19	P	P	21 09 57.4	-0.7
	comp=Z,2.2nm,0.4s,baz=252,slow=6.7,SNR=8.2						
ZAL	**Zalesovo**	20.75	19	P	P	21 09 57.4	-0.7
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
SONM	**Songino Array**	27.75	52	P	P	21 11 04.5	-0.9
	comp=Z,0.7nm,1.1s,mb3.2,baz=245,slow=9.4,SNR=4.3						
SONM	**Songino Array**	27.75	52	P	P	21 11 04.5	-0.9
SONM				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ARCES	**ARCESS Array B**	43.49	338	P	P	21 13 19.5	0.0
	comp=Z,2.8nm,0.8s,mb4.0,baz=113,slow=8.3,SNR=6.8						
ARCES	**ARCESS Array B**	43.49	338	P	P	21 13 19.5	0.0
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MBWA	**Marble Bar**	70.90	134	P	P	21 16 33.2	-1.1
WRA	**Warramunga Arr**	79.39	123	P	P	21 17 22.6	-0.3
	comp=Z,0.7nm,0.4s,mb3.9,baz=323,slow=4.9,SNR=21						
WRA	**Warramunga Arr**	79.39	123	P	P	21 17 22.6	-0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRAB	**Tennant Creek**	79.39	123	*e*P	P	21 17 23.1	+0.2
	comp=Z,3.3nm,0.7s,mb4.4						

CASC 07 21:16:34.6±2.0, 12.36N×88.25W, h39^{km}±999^{km}, MD3.7, 2C-6D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	**Conchagua**	0.99	24	⇓*e*P	P	21 17 05.2	+13
CNCH				*e*S	S	21 17 19.3	+14
VSM	**San Miguel**	1.06	359	⇓*e*P	P	21 17 06.7	+14
VSM				*e*S	S	21 17 21.9	+15
BLLM	**Bellamira**	1.07	1	⇓*e*P	P	21 17 06.5	+13
BLLM				*e*S	S	21 17 20.8	+14
CRIN	**San Cristobal**	1.22	74	⇑*e*P	P	21 16 55.8	+0.4
CRIN				*e*S	S	21 17 11.9	+0.9
LEON	**Leon**	1.33	88	*e*P	P	21 16 56.3	-0.8
LEON				*e*S	S	21 17 12.5	-1.3
SNVI	**San Vicente**	1.37	335	*e*P	P	21 17 16.1	+18
SNVI				*e*S	S	21 17 33.9	+19
TEL3	**Telica 3**	1.39	81	*e*P	P	21 16 57.7	-0.2
TEL3				*e*S	S	21 17 15.8	+0.4
TELN	**Telica**	1.41	80	*e*P	P	21 16 57.4	-0.8
TELN				*e*S	S	21 17 16.4	+0.6
LCBS	**La Ceiba**	1.47	331	⇓*e*P	P	21 17 12.6	+14
LCBS				*e*S	S	21 17 30.2	+13
LFRS	**El Faro**	1.48	328	⇓*e*P	P	21 17 12.7	+13
LFRS				*e*S	S	21 17 30.2	+13
CNGN	**Cerro Negro**	1.52	85	⇓*e*P	P	21 17 00.5	+0.6
CNGN				*e*S	S	21 17 18.9	+0.3
LBRS	**Las Brisas**	1.57	331	⇑*e*P	P	21 17 14.6	+14
LBRS				*e*S	S	21 17 34.1	+14
COPN	**Copaltepe**	1.63	96	*e*P	P	21 17 01.2	-0.2
COPN				*e*S	S	21 17 21.2	-0.2
MOMJ	**Momotombo**	1.67	88	*e*P	P	21 17 01.5	-0.4
MOMJ				*e*S	S	21 17 21.9	-0.5
BOQS	**Boqueron**	1.69	324	*e*P	P	21 17 16.3	+14
BOQS				*e*S	S	21 17 37.6	+15
MGAN	**Managua**	1.97	96	*e*S	S	21 17 28.2	-1.6

IDC ***07*** *22:03:27.2±1.4, 15.91N×61.39W, mb3.9/4, mb1 4.3/5, mb1mx3.8/21, mbtmp4.0/5, ML5.9/1, MS2.8/1, Ms1 2.8/1, ms1mx2.6/27, Error ellipse: s-maj=70.1km s-min=18.9km az=66.0*

TRN ***07*** *22:03:28.7, 15.75N×61.52W, h23^{km}, MD3.8, M3.2(FDF), Md3.1(FDF)*

NEIC ***07*** *22:03:28.9, 15.86N×61.30W, h15^{km}, mb4.1/2, MD3.8(TRN), After TRN.*

ISC 07 22:03:30.4±0.4, 15.76N±0.03×61.54W±0.06, h25^{km}±4^{km}, n32, σ1^{s}12/42, mb3.9/6, 8C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBG	**Guadaloupe-3**	0.14	312	⇑*i*P	Pb	22 03 34.4	-0.9
BBL	**Barber's Block**	0.24	165	⇑*i*P	Pb	22 03 35.9	-0.6
MGG	**Marie-Galante**	0.27	53	⇑*i*P	Pb	22 03 36.3	-0.6
DOG	**Dongo Capester**	0.28	344	⇑*i*P	Pb	22 03 37.0	-0.1
DWS	**Wesley**	0.29	131	*e*P	Pb	22 03 37.5	+0.3
DWS				*e*S	Sb	22 03 41.4	-0.3
SCG	**Saint Claude**	0.30	333	⇓*i*P	Pb	22 03 37.4	-0.1
BCG	**Bois Riant Cap**	0.34	346	*e*P	Pb	22 03 37.7	-0.2
LZG	**Guadaloupe-1**	0.45	329	⇓*i*P	Pb	22 03 39.6	0.0
DEG	**La Desirade**	0.72	40	⇑*e*P	Pb	22 03 43.0	-1.1
FDF	**Fort de France**	1.08	160	⇑*e*P	Pn	22 03 50.1	0.0
FDF				*e*S	Sb	22 04 05.0	+0.9
CRM	**Caravelle**	1.16	149	⇑*e*P	Pn	22 03 50.6	-0.7
CRM				*e*S	Sb	22 04 07.6	+1.2
BPA	**Boggy Peak**	1.32	347	*e*P	Pn	22 03 54.4	+0.9
BPA				*e*S	Sn	22 04 11.4	+1.0
MVM	**Montagne Vaucl**	1.35	153	⇑*e*P	Pn	22 03 53.7	-0.2
CPB	**Codrington**	1.89	352	*e*P	Pn	22 04 02.2	+0.5
CPB				*e*S	Sn	22 04 25.4	+0.3
SKI	**Saint Kitts**	1.95	324	*e*P	Pn	22 04 04.2	+1.7
SKI				*e*S	Sn	22 04 31.1	+4.8
BSK	**Brimstone Hill**	2.02	322	*e*P	Pn	22 04 04.9	+1.4
BSK				*e*S	Sn	22 04 31.8	+3.6
SKDB	**Saint Kitts 2**	2.04	323	*e*P	Pn	22 04 06.0	+2.2
STAT	**Sint Eustatius**	2.21	322	*e*S	Sn	22 04 49.3	+16
GRW	**Mount Saint Ca**	3.58	182	*e*P	Pn	22 04 28.0	+2.2
GRW				*e*S	Sn	22 05 12.7	+5.0
MTP	**Monte Pirata**	4.50	302	*e*Pn	Pn	22 04 38.3	-0.5
TPR	**Prospect**	4.60	171	*e*P	Pn	22 04 40.9	+0.6
SJG	**San Juan**	5.00	299	Pn	Pn	22 04 44.4	-1.5
	8.3nm,0.3s,baz=192,slow=7.4,SNR=7.8						
SJG				Sn	Sn	22 05 39.5	-4.1
	11nm,0.3s,baz=63,slow=23,SNR=5.7						
SJG	**San Juan**	5.00	299	*e*Pn	Pn	22 04 44.8	-1.1
SJG				Sn	Sn	22 05 39.5	-4.1
TRN	**Trinidad (W)**	5.08	179	*e*P	Pn	22 04 49.5	+2.4
TRN				*e*S	Sn	22 05 45.4	-0.2
SDV	**Santo Domingo**	11.21	234	LR	LR	22 10 41.2	
	comp=Z,45nm,19.0s,baz=67,slow=38						
ROSC	**El Rosal**	16.59	231	Sn	S	22 10 25.0	-1.0
	1.4nm,0.3s,baz=93,slow=20,SNR=4.8						
SAML	**Samuel**	24.60	184	*e*P	P	22 08 49.9	-0.3
	1.2nm,0.7s,mb3.5						
SIV	**San Ignacio**	31.55	179	P	P	22 09 52.8	-0.5
	2.1nm,0.6s,mb4.2,baz=11,slow=8.8,SNR=16						
CPUP	**Villa Florida**	42.03	174	*e*P	P	22 11 19.4	-2.4
	3.4nm,0.4s,mb4.3						
PDAR	**Pinedale Array**	48.94	313	P	P	22 12 15.6	-1.0
	1.2nm,1.0s,mb3.9,baz=117,slow=9.9,SNR=6.2						
YKA	**Yellowknife Ar**	59.49	334	P	P	22 13 31.3	-2.4
	1.0nm,0.5s,mb4.1,baz=105,slow=7.2,SNR=5.6						
ILAR	**Eielson Array**	73.90	334	P	P	22 15 03.4	-1.5
	0.3nm,0.7s,mb3.3,baz=102,slow=7.2,SNR=4.4						

MOS ***07*** *22:10:47.2±0.9, 55.81S×27.23W, h10^{km}, mb5.5/7, Error ellipse: s-maj=59.3km s-min=16.4km az=104.4*

CSEM ***07*** *22:10:50.8, 56.15S×27.55W, h33^{km}, mb5.9*

HRVD ***07*** *22:11:01.7±0.1, 56.06S×27.13W, h98^{km}±1^{km}, MW5.5/66, Centroid moment Tensor Solution. LP body waves: s64,c119;Mantle waves: s66,c138; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36±.04; $M_{\theta\theta}$1.16±.04; $M_{\phi\phi}$-0.80±.04; $M_{r\theta}$-1.52±.03; $M_{\theta\phi}$0.66±.04; $M_{\phi r}$0.72±.02; Best double couple: $M_0$2.077×10^{17} NP1: ϕ_s212°, δ34°, λ-169°. NP2:ϕ_s113°, δ84°, λ-56°. Principal axes: T 2.112, Plg31°, Azm176°; N -.067, Plg34°, Azm289°; P -2.041, Plg41°, Azm54°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***07*** *22:11:01.7±0.2, 56.08S×27.35W, mb5.4/17, MW5.5 Error ellipse: s-maj=7.9km s-min=5.5km az=50.0, Moment Tensor Solution. s7 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.11; $M_{\theta\theta}$0.91; $M_{\phi\phi}$-0.80; $M_{r\theta}$-1.45; $M_{\theta\phi}$1.15; $M_{\phi r}$0.77; Best double couple: $M_0$2.2×10^{17} NP1:ϕ_s202°, δ42°, λ-176°. NP2:ϕ_s109°, δ87°, λ-48°. Principal axes: T 2.04, Plg30°, Azm166°; N .25, Plg42°, Azm287°; P -2.3, Plg34°, Azm53°;*

IDC ***07*** *22:11:01.0±0.6, 56.09S×27.41W, h108^{km}±4^{km}, mb4.8/20, mb1 4.9/21, mb1mx4.9/23, mbtmp5.2/21, MS4.3/14, Ms1 4.3/14, ms1mx4.3/15 Error ellipse: s-maj=13.7km s-min=9.3km az=10.0*

BJI ***07*** *22:11:02.2, 56.10S×27.40W, h113^{km}, mB5.4*

ISC 07 22:10:58.7±2.2, 56.01S±0.05×27.4W±0.1, h98^{km}±20^{km}, h110^{km}±4.3^{km}:pP-P, n219, σ0^{s}98/87, mb5.2/31, 29C-3D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	16.87	158	⇑*i*P	P	22 14 49.4	-0.1
VNA1	**Neumayer--Stat**	16.87	158		P	22 14 52.0	+2.5
VNA1	**Neumayer--Stat**	16.87	158	⇑*i*	P	22 14 57.6	+8.1
VNA1	**Neumayer--Stat**	16.87	158	⇑*i*	P	22 15 01.5	+12
VNA3	**Neumayer Olymp**	17.06	160	⇑*i*P	P	22 14 51.5	-0.4
VNA3	**Neumayer Olymp**	17.06	160	⇑*i*	P	22 14 54.2	+2.3
VNA3	**Neumayer Olymp**	17.06	160	⇑*i*	P	22 14 57.4	+5.5
VNA3	**Neumayer Olymp**	17.06	160	⇑*i*	P	22 15 02.9	+11
VNA3	**Neumayer Olymp**	17.06	160	⇑*i*	P	22 15 12.6	+21
VNA3	**Neumayer Olymp**	17.06	160	S	S	22 18 04.2	+7.4
VNA2	**Neumayer--Watz**	17.27	158	⇑*i*P	P	22 14 53.7	-0.8
VNA2	**Neumayer--Watz**	17.27	158	⇑*i*	P	22 14 56.2	+1.7
VNA2	**Neumayer--Watz**	17.27	158	⇑*i*	P	22 14 58.8	+4.3
VNA2	**Neumayer--Watz**	17.27	158	⇑*i*	P	22 15 05.6	+11
VNA2	**Neumayer--Watz**	17.27	158	⇑*i*	P	22 15 14.6	+20
VNA2	**Neumayer--Watz**	17.27	158	S	S	22 18 06.1	+4.8
SNAA	**Sanae**	18.82	156	⇑*i*P	P	22 15 11.2	-1.5
SNAA	**Sanae**	18.82	156	⇑*i*	P	22 15 13.2	+0.5
SNAA	**Sanae**	18.82	156	⇑*i*	P	22 15 17.9	+5.2
SNAA	**Sanae**	18.82	156	⇑*i*	P	22 15 30.4	+18
SNAA	**Sanae**	18.82	156	S	S	22 18 36.7	+1.1
SNAA	**Sanae**	18.82	156	S	S	22 18 48.8	+13
SNAA	**Sanae**	18.82	156	P	P	22 15 11.2	-1.4
	16nm,0.3s,baz=307,slow=9.4,SNR=2233						
SNAA				S	S	22 18 36.6	+1.0
	0.3nm,0.3s,baz=209,slow=14,SNR=5.3						
SNAA				PcP	PcP	22 19 33.9	-1.7
	0.4nm,0.3s,baz=229,slow=9.1,SNR=3.1						
SNAA				LR	LR	22 21 24.0	
	comp=Z,225nm,18.7s,baz=324,slow=33						
SNAA				ScP		22 22 59.5	
	0.7nm,0.3s,baz=322,slow=2.1,SNR=33						
SNAA	**Sanae**	18.82	156	⇑*i*P	P	22 15 13.2	+0.5
SNAA	**Sanae**	18.82	156	*c i*P	P	22 15 11.1	-1.6
PMSA	**Palmer Station**	19.86	229	*e*Pn	P	22 15 24.4	+0.5
	240nm,0.6s						
TRIS	**Tristan da Cun**	21.49	34	*e*P	P	22 15 44.4	+3.8
	162nm,0.9s,mb5.4						
TRIS				*e*pP		22 16 01.6	
MAIT	**Maitri**	22.32	147	*e*P	P	22 15 48.0	-0.5
NVL	**N'lazarevskaya**	22.35	147	*e*P	P	22 15 47.8	-0.9
NVL				*e**PP		22 15 55.3	
NVL				*e*S	S	22 19 41.0	-1.9
NVL				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb3.8						
NVL				MLR	MLR		
	comp=Z,23nm,17.4s						
USHA	**Ushuaia**	23.11	256	P	P	22 15 56.3	+0.2
	comp=Z,14nm,0.6s,mb4.5,baz=80,slow=14,SNR=15						
USHA				pP		22 16 19.6	
	comp=Z,63nm,1.0s,baz=79,slow=7.3,SNR=7.6						
USHA				LR	LR	22 22 11.8	
	comp=Z,792nm,18.9s,baz=86,slow=29						
USHA				ScP		22 23 08.6	
	comp=Z,10nm,0.6s,baz=114,slow=5.3,SNR=7.4						
TRQA	**Tornquist**	29.23	293	P	P	22 16 51.8	-1.1
TRQA				*e*pP	pP	22 17 15.1	+0.1
SYO	**Syowa Base**	31.67	141	⇑P	P	22 17 12.9	-1.3
SYO	**Syowa Base**	31.67	141	⇑*e*P	P	22 17 12.9	-1.3
PLCA	**Paso Flores**	31.91	280	P	P	22 17 14.3	-2.2
	comp=Z,2.8nm,0.7s,mb4.1,baz=146,slow=7.9,SNR=6.6						
PLCA				pP	pP	22 17 39.8	+0.9
	comp=Z,5.6nm,0.9s,baz=148,slow=9.1,SNR=3.8						
PLCA				PcP	PcP	22 20 03.8	-1.1
	comp=Z,3.1nm,0.6s,baz=135,slow=2.9,SNR=4.2						
PLCA				ScP		22 23 35.0	
	comp=Z,14nm,0.8s,baz=130,slow=2.4,SNR=22						
PLCA				LR	LR	22 29 44.3	
	comp=Z,615nm,20.5s,baz=126,slow=35						
PLCA	**Paso Flores**	31.91	280	*e*P	P	22 17 15.0	-1.5
	comp=Z,48nm,1.3s,mb5.1						
PLCA				*e*pP	pP	22 17 41.9	+3.0
CAM4	**Nova Friburgo**	35.45	335	*e*P	P	22 17 48.5	+1.3
CAM4				*i*		22 17 53.6	
CAM4				*i*	pP	22 18 13.9	+4.0
CPUP	**Villa Florida**	36.72	311	P	P	22 17 57.4	-0.4
	comp=Z,94nm,0.9s,mb5.7						
CPUP				*e*pP	pP	22 18 18.6	-2.1
CFAA	**Coronel Fontan**	37.46	293	P	P	22 18 01.9	-2.1
	comp=Z,2.8nm,0.6s,mb4.4,baz=149,slow=8.0,SNR=46						
CFAA				PcP	PcP	22 20 19.4	-1.6
	comp=Z,1.2nm,0.5s,baz=179,slow=2.0,SNR=5.7						
CFAA				S	S	22 23 37.2	-7.6
	comp=Z,0.5nm,0.7s,baz=268,slow=20,SNR=6.0						
CFAA				ScP		22 23 55.3	
	comp=Z,0.9nm,0.5s,baz=147,slow=5.7,SNR=9.0						
CFAA				LR	LR	22 33 23.2	
	comp=Z,67nm,19.9s,baz=140,slow=36						
CFAA	**Coronel Fontan**	37.46	293	P	P	22 18 01.9	-2.1
CFAA				PcP	PcP	22 20 19.4	-1.6
CFAA				S	S	22 23 37.2	-7.6
CFAA				ScP		22 23 55.3	
CFAA				LR	LR	22 33 23.2	
MAW	**Mawson**	40.24	144	⇑*i*P	P	22 18 26.6	0.0
	comp=Z,25nm,0.6s,mb5.2						
MAW	**Mawson**	40.24	144	P	P	22 18 26.7	+0.1
	comp=Z,28nm,0.6s,mb5.3,baz=232,slow=7.7,SNR=6.5						
MAW				LR	LR	22 32 05.9	
	comp=Z,395nm,20.5s,baz=249,slow=32						
MAW	**Mawson**	40.24	144	⇑*i*P	P	22 18 26.6	0.0
MAW				pmax	pmax		
	comp=Z,25nm,0.6s						
SUR	**Sutherland**	40.71	75	P	P	22 18 31.9	+1.0
	comp=Z,28nm,0.8s,mb5.2,baz=215,slow=10,SNR=19						
SUR				PcP	PcP	22 20 32.3	+1.1
	comp=Z,18nm,1.1s,baz=160,slow=12,SNR=2.7						
SUR				LR	LR	22 32 12.6	
	comp=Z,604nm,19.9s,baz=41,slow=31						
SUR	**Sutherland**	40.71	75	P	P	22 18 32.7	+1.8
	comp=Z,167nm,1.4s,mb5.7						
BAO	**Brasilia Array**	43.28	330	P	P	22 18 53.0	+1.0
BDFB	**Brasilia**	43.28	330	P	P	22 18 53.5	+1.5
	comp=Z,20nm,0.6s,mb5.1,baz=160,slow=2.6,SNR=31						
BDFB				LR	LR	22 36 11.9	
	comp=Z,541nm,18.1s,baz=157,slow=35						
LVC	**Limon Verde**	45.20	300	P	P	22 19 08.0	+0.7
	comp=Z,109nm,0.5s,mb5.8,baz=147,slow=5.2,SNR=288						
LVC	**Limon Verde**	45.20	300	P	P	22 19 08.1	+0.7
BOSA	**Boshof**	46.05	76	P	P	22 19 13.0	-1.0
	comp=Z,20nm,0.8s,mb4.9,baz=221,slow=8.5,SNR=34						
BOSA				ScP		22 24 31.3	
	comp=Z,5.0nm,0.8s,baz=233,slow=7.8,SNR=3.7						
BOSA				LR	LR	22 35 24.1	
	comp=Z,690nm,19.1s,baz=218,slow=32						
BOSA	**Boshof**	46.05	76	P	P	22 19 13.8	-0.2
	comp=Z,41nm,1.0s,mb5.1						
SBA	**Scott Base**	46.12	184	P	P	22 19 14.5	+0.6
VNDA	**Vanda**	46.61	183	*e*P	P	22 19 18.1	+0.2
	comp=Z,90nm,0.8s,mb5.5						
SIV	**San Ignacio**	47.48	314	P	P	22 19 24.8	-0.6
	comp=Z,5.9nm,0.6s,mb4.5,baz=159,slow=7.5,SNR=34						
SIV				PcP	PcP	22 20 54.5	0.0
	comp=Z,7.6nm,0.7s,baz=148,slow=4.6,SNR=4.9						
SIV				ScP		22 24 36.7	
	comp=Z,17nm,0.8s,baz=167,slow=5.3,SNR=18						
LBTB	**Lobatse**	49.08	73	P	P	22 19 37.3	-0.4
	comp=Z,35nm,0.6s,mb5.5,baz=231,slow=8.8,SNR=79						
LBTB	**Lobatse**	49.08	73	*e*P	P	22 19 36.4	-1.3
	comp=Z,43nm,0.7s,mb5.5						
LBTB				*e*pP	pP	22 20 03.9	+2.7
TSUM	**Tsumeb**	49.74	61	P	P	22 19 42.7	-0.1
	comp=Z,36nm,0.8s,mb5.3,baz=188,slow=7.0,SNR=54						
TSUM				LR	LR	22 37 18.4	
	comp=Z,368nm,18.5s,baz=218,slow=32						
TSUM	**Tsumeb**	49.74	61	P	P	22 19 42.5	-0.3
	comp=Z,46nm,0.9s,mb5.4						
TSUM				*e*pP	pP	22 20 12.3	+5.9
MIR	**Mirnyy**	49.86	153	*d i*P	P	22 19 43.2	+0.1
MIR				*i*		22 19 47.0	
MIR				pmax	pmax		
	comp=Z,180nm,2.0s,mb5.7						
LPAZ	**La Paz**	50.28	305	P	P	22 19 47.7	+0.7
	comp=Z,45nm,0.7s,mb5.5,baz=134,slow=5.2,SNR=220						
LPAZ				ScP		22 24 48.8	
	comp=Z,6.7nm,0.6s,baz=108,slow=4.4,SNR=11						
LPAZ	**La Paz**	50.28	305	P	P	22 19 47.8	+0.8
	comp=Z,34nm,0.6s,mb5.5						
ARE	**Arequipa**	51.70	302	⇓*i*P	P	22 19 57.9	+0.2
CASY	**Casey**	53.98	160	⇑*i*P	P	22 20 13.3	-0.6
MATP	**Matopo**	54.35	73	P	P	22 20 16.1	-1.1
	comp=Z,32nm,0.6s,mb5.5,baz=213,slow=6.9,SNR=129						
MATP				LR	LR	22 38 44.0	
	comp=Z,158nm,19.1s,baz=203,slow=31						
SAML	**Samuel**	54.71	315	P	P	22 20 18.9	-1.1
NNA	**Nana**	58.15	299	P	P	22 20 43.8	-0.6
	comp=Z,28nm,0.6s,mb5.5						
LSZ	**Lusaka**	58.44	69	LR	LR	22 43 24.0	
	comp=Z,573nm,18.2s,baz=182,slow=33						
LSZ	**Lusaka**	58.44	69	P	P	22 20 45.6	-0.8
LSZ				*e*pP	pP	22 21 13.1	+2.4
DBIC	**Dimbokro**	65.16	25	P	P	22 21 30.6	-0.8
	comp=Z,64nm,0.6s,mb5.6,baz=170,slow=7.1,SNR=225						
DBIC				LR	LR	22 42 48.3	
	comp=Z,356nm,20.8s,baz=171,slow=29						
ROSC	**El Rosal**	71.81	310	LR	LR	22 54 07.4	
	comp=Z,226nm,19.3s,baz=197,slow=36						
SDV	**Santo Domingo**	73.92	315	P	P	22 22 25.0	+0.3
	comp=Z,22nm,0.6s,mb5.1						
SDV				*e*		22 23 01.0	
RPZ	**Rata Peaks**	79.44	193	P	P	22 22 54.4	-0.7
	comp=Z,19nm,0.6s,mb5.1,baz=158,slow=2.8,SNR=12						
TAU	**Tasmania Unive**	81.35	176	P	P	22 23 04.4	-0.8
	comp=Z,101nm,0.9s,mb5.7						
JTS	**JuntasAbangare**	81.41	303	P	P	22 23 06.2	+0.1
	comp=Z,14nm,0.7s,mb4.9,baz=266,slow=1.0,SNR=8.5						
JTS	**JuntasAbangare**	81.41	303	P	P	22 23 06.7	+0.6
JTS				*e*pP	pP	22 23 32.4	+0.5
JTS	**JuntasAbangare**	81.41	303	*c i*P	P	22 23 06.3	+0.2
NWAO	**Narrogin (SRO)**	86.41	151	P	P	22 23 30.8	0.0
	comp=Z,11nm,0.5s,mb5.0,baz=181,slow=3.3,SNR=15						
TOO	**Toolangi**	86.59	174	*e*P	P	22 23 32.3	+0.8
	comp=Z,13nm,0.7s,mb5.0						
MUN	**Mundaring**	87.02	150	*e*P	P	22 23 34.5	+0.8
KLBR	**Kellerberrin**	87.81	151	*e*P	P	22 23 38.1	+0.5
	comp=Z,15nm,0.7s,mb5.1						
ADE	**Adelaide**	88.61	169	*e*P	P	22 23 42.6	+1.4
MDT	**Midelt**	90.57	19	P	P	22 23 51.5	+0.9
	comp=Z,27nm,0.7s,mb5.5,baz=198,slow=3.2,SNR=69						
FORT	**Forrest**	91.05	159	*e*P	P	22 23 54.2	+1.4
	comp=Z,23nm,0.5s,mb5.6						
STKA	**Stephens Creek**	91.96	171	*e*P	P	22 23 56.9	-0.1
	comp=Z,8.7nm,0.6s,mb5.2						
STKA	**Stephens Creek**	91.96	171	P	P	22 23 56.5	-0.5
	comp=Z,11nm,0.6s,mb5.2,baz=158,slow=4.4,SNR=21						
STKA				PP	PP	22 27 35.0	-4.8
	comp=Z,5.8nm,1.0s,baz=149,slow=11,SNR=3.6						
STKA				LR	LR	23 06 57.7	
	comp=Z,262nm,18.8s,baz=321,slow=36						
ESDC	**Sonseca Array**	97.36	18	P	P	22 24 22.1	+0.7
	comp=Z,1.5nm,0.7s,mb4.5,baz=195,slow=5.4,SNR=11						
WRA	**Warramunga Arr**	102.78	162	P	Pdif	22 24 45.0	-1.1
	comp=Z,1.8nm,0.5s,baz=197,slow=4.4,SNR=28						
WRA				PP	PP	22 28 55.8	-7.7
	comp=Z,3.3nm,0.8s,baz=185,slow=6.4,SNR=6.8						
WRA				PKKPbc		22 40 42.0	
	comp=Z,0.6nm,0.6s,baz=351,slow=2.8,SNR=10						
WB2	**Warramunga Arr**	102.78	162	*e*P	Pdif	22 24 46.0	-0.1
WRAB	**Tennant Creek**	102.79	162	⇓*e*P	Pdif	22 24 45.6	-0.6
CCM	**Cathedral Cave**	108.23	312	PP	PP	22 29 43.5	-0.2
GERES	**GERESS Array B**	109.95	27	PKiKP		22 29 16.5	
	comp=Z,0.5nm,0.8s,baz=180,slow=2.7,SNR=3.9						
CLL	**Collm**	112.05	26	*e*PP	PP	22 30 13.0	+2.1
SOC	**Sochi**	114.16	47	*i* PKIKP	PKPdf	22 29 26.3	+0.5
SOC				*e*		22 30 20.5	
SOC				*e*		22 36 17.1	
SOC				*e*PS	PS	22 40 00.5	+0.1
SOC				pmax	pmax		
	comp=Z,22nm,1.0s						
SCHQ	**Schefferville**	115.09	336	PKP	PKPdf	22 29 29.3	+1.9
	comp=Z,4.6nm,0.7s,baz=234,slow=7.0,SNR=5.2						
SCHQ	**Schefferville**	115.09	336	PKP	PKPdf	22 29 29.3	+1.9
KIV	**Kislovodsk**	115.70	49	*i* PKP	PKPdf	22 29 27.0	-1.8
KIV	**Kislovodsk**	115.70	49	*i* PKIKP	PKPdf	22 29 27.9	-0.9
AKASG	**Malin Array Be**	116.22	36	PKP	PKPdf	22 29 29.5	0.0
	comp=Z,1.7nm,0.5s,baz=245,slow=1.7,SNR=13						
AKASG	**Malin Array Be**	116.22	36	PKP	PKPdf	22 29 29.5	0.0
AKASG	**Malin Array Be**	116.22	36	*i* PKIKP	PKPdf	22 29 29.5	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SRU	**San Rafael**	117.90	299	PKPdf	PKPdf	22 29 33.8	+0.7
MSU	**Marysvale**	118.25	298	PKPdf	PKPdf	22 29 36.4	+2.6
MVU	**Marysvale**	118.26	297	PKPdf	PKPdf	22 29 36.5	+2.7
TMUT	**Trail Mountain**	118.38	299	PKPdf	PKPdf	22 29 36.3	+2.3
RSSD	**Black Hills**	118.74	307	PKPdf	PKPdf	22 29 35.7	+1.1
ISA	**Isabella**	119.29	291	PKPdf	PKPdf	22 29 38.4	+2.5
DAC	**Darwin (Calif)**	119.30	292	PKPdf	PKPdf	22 29 36.6	+0.7
DUG	**Dugway**	119.86	298	PKPdf	PKPdf	22 29 38.2	+1.4
TCUT	**Toone Canyon**	119.87	300	PP	PP	22 31 06.1	0.0
ULM	**Lac du Bonnet**	120.16	316	PKP	PKPdf	22 29 36.2	-1.0
	comp=Z,1.7nm,0.6s,baz=181,slow=2.7,SNR=3.4						
ULM	**Lac du Bonnet**	120.16	316	PKP	PKPdf	22 29 36.2	-1.0
PDAR	**Pinedale Array**	120.25	302	PKP	PKPdf	22 29 37.6	+0.1
	comp=Z,1.4nm,0.7s,baz=137,slow=4.4,SNR=11						
HWUT	**Hardware Ranch**	120.32	300	PKPdf	PKPdf	22 29 38.5	+0.7
NAO	**NORSAR Subarra**	120.32	21	PKPdf	PKPdf	22 29 38.6	+1.3
NB2	**NORSAR Subarra**	120.60	21	PKPdf	PKPdf	22 29 38.6	+0.8
	comp=Z,3.6nm,1.0s,baz=202,slow=1.9						
NOA	**NORSAR Array B**	120.60	21	PKP	PKPdf	22 29 38.6	+0.8
	comp=Z,3.5nm,0.7s,baz=205,slow=2.0,SNR=11						
NOA				SKP		22 33 05.0	
	comp=Z,1.2nm,0.7s,baz=207,slow=2.2,SNR=4.0						
NOA				PKKPbc		22 39 42.9	
	comp=Z,1.3nm,0.6s,baz=24,slow=3.3,SNR=4.5						
NOA	**NORSAR Array B**	120.60	21	PKP	PKPdf	22 29 38.6	+0.8
NOA				SKP		22 33 05.0	
NOA				PKKPbc		22 39 42.9	
HVU	**Hansel Valley**	121.04	300	*e*PKPdf	PKPdf	22 29 39.6	+0.4
NVAR	**Mina Array Bea**	121.30	293	PKP	PKPdf	22 29 41.4	+1.7
	comp=Z,1.7nm,0.6s,baz=135,slow=3.9,SNR=8.1						
NVAR	**Mina Array Bea**	121.30	293	PKP	PKPdf	22 29 41.4	+1.7
LOHW	**Long Hollow**	121.38	302	PKPdf	PKPdf	22 29 35.0	-4.8
TPAW	**Teton Pass**	121.46	302	PKPdf	PKPdf	22 29 41.8	+1.8
ELK	**Elko**	121.48	297	PKPdf	PKPdf	22 29 41.9	+1.8
RRI2	**Red Ridge**	121.53	302	PKPdf	PKPdf	22 29 42.1	+2.1
LAO	**LASA Array**	121.70	307	PKPdf	PKPdf	22 29 41.1	+0.8
IMW	**Indian Meadow**	121.76	302	PKPdf	PKPdf	22 29 42.6	+2.2
YFT	**Old Faithful**	122.13	303	PKPdf	PKPdf	22 29 43.0	+1.9
OBN	**Obninsk**	122.36	38	*i* PKP	PKPdf	22 29 42.2	+0.9
OBN	**Obninsk**	122.36	38	*e*PKIKP	PKPdf	22 29 42.0	+0.7
OBN				*e*		22 31 17.6	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
HLID	**Hailey**	123.18	300	PKPdf	PKPdf	22 29 45.5	+2.3
BOZ	**Bozeman (W)**	123.39	303	PKPdf	PKPdf	22 29 45.6	+2.0
KOLN	**Koldanda**	124.15	90	*e*P	PKPdf	22 29 45.5	0.0
	comp=Z,19nm,0.8s						
HRY	**Holter Researc**	124.28	304	PKPdf	PKPdf	22 29 46.8	+1.5
FINES	**FINESS Array B**	124.39	28	PKP	PKPdf	22 29 45.4	+0.2
	comp=Z,13nm,0.5s,baz=136,slow=1.7,SNR=160						
FINES				SKP		22 33 11.6	
	comp=Z,2.5nm,0.7s,baz=135,slow=5.4,SNR=4.4						
FINES				PKKPbc		22 39 28.5	
	comp=Z,3.0nm,0.9s,baz=256,slow=7.9,SNR=4.3						
FINES	**FINESS Array B**	124.39	28	PKP	PKPdf	22 29 45.4	+0.2
FINES				SKP		22 33 11.6	
FINES				PKKPbc		22 39 28.5	
FINES	**FINESS Array B**	124.39	28	*i* PKIKP	PKPdf	22 29 45.4	+0.3
FINES				pmax	pmax		
	comp=Z,13nm,0.5s						
WVOR	**Wild Horse Val**	124.44	296	*e*PKPdf	PKPdf	22 29 47.7	+2.0
DMN	**Daman**	124.87	92	*e*P	PKPdf	22 29 47.5	+0.7
	comp=Z,10nm,0.6s						
MOD	**Modoc**	124.90	295	PKPdf	PKPdf	22 29 48.8	+2.3
GKN	**Gorkha**	124.91	91	*e*P	PKPdf	22 29 47.0	+0.1
	comp=Z,36nm,1.2s						
KAF	**Kangasniemi**	125.01	28	*e*p	PKPdf	22 29 45.9	-0.2
PKI	**Pulchoki**	125.01	92	*e*P	PKPdf	22 29 47.6	+0.5
	comp=Z,13nm,0.6s						
CHMT	**Chamberlain Mo**	125.09	303	PKPdf	PKPdf	22 29 48.5	+1.8
WDC	**Whiskeytown Da**	125.09	292	PKPdf	PKPdf	22 29 47.7	+0.8
KKN	**Kakani**	125.11	92	*e*P	PKPdf	22 29 47.6	+0.3

	comp=Z,11nm,0.6s						
MSO	**Missoula**	**125.35**	**303**	PKPdf	PKPdf	22 29 49.1	+1.9
BMO	**Blue Mountains**	**125.54**	**299**	PKPdf	PKPdf	22 29 48.5	+0.9
GUN	**Gumba**	**125.54**	**92**	*e*P	PKPdf	22 29 49.0	+0.9
	comp=Z,22nm,0.9s						
BSMT	**Bassoo Peak**	**126.49**	**303**	PKPdf	PKPdf	22 29 54.0	+4.7
ORR	**Orenburg**	**126.78**	**50**	⇑*i*PKIKP	PKPdf	22 29 50.5	+0.7
ORR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JOF	**Joensuu**	**127.00**	**29**	*e*p	PKPdf	22 29 49.9	0.0
AB31	**Akbulak array**	**127.42**	**55**	*i* PKIKP	PKPdf	22 29 51.4	+0.3
AB31				pmax	pmax		
	comp=Z,12nm,0.9s						
NEW	**Newport**	**127.89**	**302**	PKP	PKPdf	22 29 52.8	+0.7
	comp=Z,2.6nm,0.6s,baz=145,slow=16,SNR=3.2						
NEW				SKPbc		22 32 59.8	
	comp=Z,2.8nm,0.5s,baz=153,slow=11,SNR=3.1						
KKAR	**Karatay Array**	**128.28**	**68**	*i* PKIKP	PKPdf	22 29 53.4	+0.4
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KSH	**Kashi**	**128.64**	**75**	*e*PKP	PKPdf	22 29 57.0	+3.2
KSH				*e*XPKP		22 30 35.0	
KSH				*e*PPP	tx	22 33 59.8	
KSH				SKS	SKS	22 36 58.3	+7.9
KSH				PP	PP		
	comp=Z,370nm,4.6s						
KSH				LR	LR		
	comp=N,410nm,6.0s						
KSH				LR	LR		
	comp=E,600nm,5.8s						
LON	**Longmire**	**129.11**	**298**	PKPdf	PKPdf	22 29 56.0	+1.6
AML	**Almayashu**	**129.27**	**71**	P	PKPdf	22 29 56.6	+1.7
	SNR=14						
EDM	**Edmonton**	**129.61**	**309**	PKPdf	PKPdf	22 29 56.2	+0.9
EKS2	**Erkin-Say**	**129.68**	**70**	P	PKPdf	22 29 57.9	+2.2
	SNR=5.4						
TTW	**Tolt Reservoir**	**129.70**	**299**	PKPdf	PKPdf	22 29 57.3	+1.8
UCH	**Uchtor**	**129.77**	**71**	P	PKPdf	22 29 58.6	+2.8
	SNR=8.5						
LSA	**Lhasa**	**129.87**	**95**	PKP	PKPdf	22 29 59.0	+2.6
LSA	**Lhasa**	**129.87**	**95**	*e*PKPdf	PKPdf	22 29 59.1	+2.7
AAK	**Ala-Archa**	**130.04**	**71**	P	PKPdf	22 29 57.9	+1.5
	SNR=8.5						
AAK	**Ala-Archa**	**130.04**	**71**	PKPdf	PKPdf	22 29 56.8	+0.5
KBK	**Karagaybulak**	**130.30**	**71**	P	PKPdf	22 29 58.8	+2.0
	SNR=6.8						
USP	**Ospenovka**	**130.49**	**70**	P	PKPdf	22 29 57.7	+0.5
	SNR=5.1						
ARCES	**ARCESS Array B**	**130.94**	**22**	PKP	PKPdf	22 29 57.6	+0.3
	comp=E,9.1nm,0.5s,baz=183,slow=1.9,SNR=77						
ARCES				PP	PP	22 32 15.1	-4.3
	comp=E,4.5nm,0.7s,baz=207,slow=5.4,SNR=8.1						
ARCES				SKPbc		22 33 10.4	
	comp=E,5.1nm,0.8s,baz=207,slow=2.7,SNR=4.9						
PGC	**Sidney**	**131.21**	**299**	*e*SKPbc		22 33 12.6	
KEV	**Kevo**	**131.43**	**22**	*e*p	PKPdf	22 29 57.6	-0.7
ARU	**Arti**	**131.73**	**48**	PKPdf	PKPdf	22 29 58.5	-0.6
ARU				PP	PP	22 32 20.1	-4.4
ARU	**Arti**	**131.73**	**48**	*i* PKIKP	PKPdf	22 30 00.1	+0.9
ARU				*e*		22 32 17.6	
ARU				*e*SS	SS	22 49 49.6	+0.9
KMI	**Kunming**	**132.62**	**110**	PKP	PKPdf	22 30 07.6	+5.9
KMI				PP	PP	22 32 33.3	+2.6
KMI				SS	SS	22 50 02.3	+1.8
KMI				SSS	SSS	22 55 06.0	+8.6
KMI				LR	LR		
	comp=N,130nm,18.2s						
KMI				LR	LR		
	comp=E,110nm,15.4s						
KMI				LR	LR		
	comp=Z,110nm,27.0s						
BRVK	**Borovoye**	**134.80**	**57**	PKPdf	PKPdf	22 30 06.7	+1.7
BVA0	**Borovoye Array**	**134.83**	**58**	*i* PKIKP	PKPdf	22 30 05.7	+0.7
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.2s						
VOSK	**Vostochnaya**	**134.93**	**58**	PKIKP	PKPdf	22 30 05.8	+0.6
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHKZ	**Chkalovo**	**135.34**	**57**	PKPdf	PKPdf	22 30 04.4	-1.6
GYA	**Guiyang**	**135.76**	**112**	*e*PKP	PKPdf	22 30 11.7	+4.2
GYA				XPKP		22 30 51.1	
GYA				PKS	PKS	22 33 46.5	+3.7
GYA				LR	LR		
	comp=N,870nm,20.8s						
GYA				LR	LR		
	comp=E,920nm,22.4s						
GYA				LR	LR		
	comp=Z,640nm,21.6s						
YKA	**Yellowknife Ar**	**136.08**	**318**	PKhKP		22 29 55.2	
	comp=Z,0.6nm,0.5s,baz=119,slow=2.5,SNR=4.2						
YKA				PKP	PKPdf	22 30 07.1	+0.1
	comp=Z,6.3nm,0.6s,baz=127,slow=2.1,SNR=23						
YKA				pPKP		22 30 35.7	
	comp=Z,1.9nm,0.6s,baz=139,slow=1.9,SNR=1.8						
YKA				SKPbc		22 33 28.3	
	comp=Z,7.4nm,0.6s,baz=132,slow=3.7,SNR=25						
YKA	**Yellowknife Ar**	**136.08**	**318**	PKP		22 29 55.2	
YKA				PKP	PKPdf	22 30 07.1	0.0
YKA				pPKP		22 30 35.7	
YKA				SKPbc		22 33 28.3	
YKA	**Yellowknife Ar**	**136.08**	**318**	*i* PKHKP		22 29 58.4	
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKW3	**Yellowknife Ar**	**136.12**	**318**	PKPdf	PKPdf	22 30 08.3	+1.2
MKAR	**Makanchi Array**	**136.96**	**71**	PKhKP		22 29 57.0	
	comp=Z,0.6nm,0.6s,baz=226,slow=2.5,SNR=8.6						
MKAR				PKP	PKPdf	22 30 08.9	-0.1
	comp=Z,2.4nm,0.6s,baz=185,slow=1.9,SNR=14						
MKAR				SKPbc		22 33 31.4	
	comp=Z,4.7nm,0.7s,baz=243,slow=2.1,SNR=15						
MKAR	**Makanchi Array**	**136.96**	**71**	PKP		22 29 57.0	
MKAR				PKP	PKPdf	22 30 08.9	-0.1
MKAR				SKPbc		22 33 31.4	
MKAR	**Makanchi Array**	**136.96**	**71**	*i* PKIKP	PKPdf	22 30 09.1	0.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	**Kurchatov**	**137.47**	**65**	*e*PKPdf	PKPdf	22 30 03.2	-6.7
KURK	**Kurchatov**	**137.47**	**65**	*i* PKIKP	PKPdf	22 30 08.5	-1.4
CD2	**Chengdu**	**137.75**	**106**	*e*PKP	PKPdf	22 30 10.9	-0.1
CD2				PP	PP	22 33 03.4	+0.9
CD2				SKKS		22 39 42.6	
WMQ	**Urumqi**	**137.98**	**78**	⇑PKP	PKPdf	22 30 14.4	+3.3
WMQ				XPKP		22 30 55.4	
WMQ				PP	PP	22 33 08.9	+5.2
WMQ				PP	PP		
	comp=Z,160nm,6.2s						
WMQ				LR	LR		
	comp=N,100nm,24.0s						
WMQ				LR	LR		
	comp=E,90nm,24.0s						
WMQ				LR	LR		
	comp=Z,120nm,25.2s						
DLBC	**Dease Lake**	**140.22**	**307**	*e*SKPdf		22 33 41.5	
ENH	**Enshi**	**140.30**	**112**	*e*PKPdf	PKPdf	22 30 18.9	+3.2
LZH	**Lanzhou**	**141.70**	**100**	*e*PKP	PKPdf	22 30 25.8	+7.9
LZH				LR	LR		
	comp=E,350nm,17.0s						
LZH				LR	LR		
	comp=Z,370nm,19.0s						
GTA	**Gaotai**	**141.81**	**93**	PKP	PKPdf	22 30 20.0	+2.0
GTA				PKS	PKS	22 33 54.4	+1.7
GTA				SKS	SKS	22 37 19.0	+2.9
GTA				SKKS		22 40 06.5	
GTA				SS	SS	22 51 46.9	-2.4
GTA				PP	PP		
	comp=Z,110nm,6.9s						
GTA				LR	LR		
	comp=N,130nm,9.2s						
GTA				LR	LR		
	comp=E,130nm,13.0s						
GTA				LR	LR		
	comp=Z,150nm,16.1s						
NVS	**Novosibirsk**	**142.10**	**62**	*i* PKHKP		22 30 13.4	
NVS				*i*		22 33 26.6	
NVS				pmax	pmax		
	comp=N,15nm,1.8s						
NVS				pmax	pmax		
	comp=Z,47nm,1.8s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.2s						
ZAL	**Zalesovo**	**142.41**	**64**	PKhKP		22 30 14.0	
	comp=E,3.9nm,0.5s,baz=247,slow=1.6,SNR=16						
ZAL				PKP	PKPdf	22 30 21.0	+2.5
	comp=E,6.7nm,0.5s,baz=231,slow=4.3,SNR=17						
ZAL				PP	PP	22 33 30.1	+0.5
	comp=E,0.9nm,0.8s,baz=228,slow=6.1,SNR=3.7						
ZAL				SKPbc		22 33 45.8	
	comp=E,2.5nm,0.6s,baz=265,slow=3.1,SNR=5.2						
ZAL	**Zalesovo**	**142.41**	**64**	PKP	PKPdf	22 30 14.0	-4.5
ZAL				PKP	PKPdf	22 30 21.0	+2.5
ZAL				PP	PP	22 33 30.1	+0.5
ZAL				SKPbc		22 33 45.8	
ZAL	**Zalesovo**	**142.41**	**64**	*i* PKHKP		22 30 14.8	
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.5s						
XAN	**Xi'an**	**142.94**	**108**	PKP	PKPdf	22 30 24.0	+4.0
INK	**Inuvik**	**145.71**	**321**	SKPbc		22 33 53.5	
	comp=Z,13nm,0.9s,baz=194,slow=0.5,SNR=8.2						
INK	**Inuvik**	**145.71**	**321**	PKPdf	PKPdf	22 30 25.5	+1.7
NJ2	**Nanjing**	**146.44**	**121**	*e*PKP	PKPdf	22 30 28.5	+2.3
NJ2				PKP2	PKPab	22 30 32.8	+1.9
NJ2				PP	PP	22 33 56.0	+1.4
NJ2				PKS	PKS	22 34 01.0	+0.5
NJ2				PP	PP		
	comp=Z,290nm,5.4s						
NJ2				LR	LR		
	comp=N,190nm,17.7s						
NJ2				LR	LR		
	comp=E,280nm,24.4s						
NJ2				LR	LR		
	comp=Z,210nm,23.4s						
DAWY	**Dawson**	**146.70**	**312**	PKPdf	PKPdf	22 30 28.5	+3.0
BTO	**Baotou**	**148.32**	**101**	*e*PKP	PKPdf	22 30 33.7	+4.7
DIV	**Divide**	**148.56**	**305**	PKPdf	PKPdf	22 30 34.7	+6.0
TIA	**Tai'an**	**148.90**	**114**	⇑PKP	PKPdf	22 30 35.0	+5.0
MOY	**Mondy**	**149.80**	**76**	*e*PKP2	PKPab	22 30 37.7	-6.1
MOY				pmax	pmax		
	comp=Z,58nm,2.0s						
SML	**Sawmill**	**149.93**	**306**	*e*PKPbc	PKPdf	22 30 37.3	+6.4
ILAR	**Eielson Array**	**150.02**	**312**	PKP	PKPdf	22 30 29.5	-1.4
	comp=Z,2.1nm,0.9s,baz=302,slow=1.8,SNR=8.8						
ILAR				PKPbc	PKPdf	22 30 37.1	+6.2
	comp=Z,44nm,0.7s,baz=130,slow=1.6,SNR=133						
ILAR				pPKP		22 31 02.6	
	comp=Z,25nm,0.9s,baz=113,slow=1.8,SNR=3.8						
PMR	**Palmer**	**150.24**	**305**	*e*PKPbc	PKPdf	22 30 37.9	+6.6
ZAK	**Zakamensk**	**150.43**	**80**	*e*PKIKP	PKPdf	22 30 30.0	-2.0
ZAK				pmax	pmax		
	comp=Z,17nm,0.9s						
SLKM	**Skilak Lake**	**150.44**	**303**	PKPdf	PKPdf	22 30 39.3	+7.7
COLA	**College**	**150.45**	**312**	*e*PKPbc	PKPdf	22 30 38.0	+6.4
COLA	**College**	**150.45**	**312**	*c i*PKIKP	PKPdf	22 30 38.3	+6.8
KDAK	**Kodiak Island**	**150.72**	**297**	PKPbc	PKPdf	22 30 39.3	+7.2
	comp=Z,55nm,0.6s,baz=116,slow=1.0,SNR=56						
KDAK				pPKPbc		22 31 07.3	
	comp=Z,19nm,0.6s,baz=144,slow=1.6,SNR=2.5						
SONM	**Songino Array**	**150.81**	**87**	PKPbc	PKPdf	22 30 39.8	+7.1
	comp=Z,29nm,0.7s,baz=225,slow=5.2,SNR=18						
SVW2	**Sparrevohn**	**153.13**	**302**	*e*P	PKPdf	22 30 44.1	+8.6
CN2	**Changchun**	**158.80**	**114**	*e*PKP	PKPdf	22 30 48.6	+5.1
CN2				*e*APKP		22 31 19.0	
CN2				*e*PKP2	PKPab	22 31 27.3	+5.1
CN2				*e*PP	PP	22 35 09.0	+5.4
CN2				*e*SS	SS	22 55 02.6	+6.2
BOD	**Bodaibo**	**159.01**	**69**	*e*PKIKP	PKPdf	22 30 42.7	-0.6
BOD				*e*		22 31 19.5	
BOD				pmax	pmax		
	comp=Z,14nm,1.4s						
TIXI	**Tiksi**	**161.36**	**24**	*e*PKP2	PKPab	22 31 30.0	-2.4
TIXI				pmax	pmax		
	comp=Z,15nm,0.8s						
MA2	**Magadan**	**176.28**	**15**	*e*PKP2	PKPab	22 32 50.3	+12
MA2				*e*		22 36 37.1	

ATH ***07*** *22:20:21.8, 38.06N×23.90E, h12^{km}±2^{km}, MD3.2/11*
NEIC ***07*** *22:20:21.8, 38.06N×23.90E, h12^{km}, MD3.2(ATH), After ATH.*
CSEM ***07*** *22:20:22.9±0.1, 38.06N×23.86E, h2^{km}, MD3.2, Error ellipse: s-maj=1.9km s-min=1.6km az=114.0*
THE ***07*** *22:20:27.6, 38.31N×23.87E, h14^{km}, ML2.7*
ISC 07 22:20:22.3±0.5**, 38.07N**±0.03×**23.81E**±0.05**, h12^{km}, n23, σ1^{s}11**/27**, 1C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTL	**Penteli**	**0.05**	**118**	*e*PG	**Pg**	**22 20 24.6**	**0.0**
PTL	**Penteli**	**0.05**	**118**	⇑*i*Pg	**Pg**	**22 20 24.7**	**+0.1**
MPAR	**Parnis Oros**	**0.10**	**323**	⇓*i*PG	**Pg**	**22 20 25.7**	**+0.5**
ATH	**Athens Observa**	**0.12**	**217**	*e*PG	**Pg**	**22 20 25.7**	**+0.2**
ATH				*e*SG	**Sg**	**22 20 27.6**	**-0.1**
NAIG	**Nisos Aigina**	**0.40**	**219**	*e*PB	**Pb**	**22 20 31.0**	**+0.2**
LKR	**Lokris**	**0.86**	**312**	*e*PG	**Pg**	**22 20 39.0**	**-0.6**
LKR				*e*SB	**Sb**	**22 20 52.0**	**+2.1**
AOS	**Alonnisos**	**1.10**	**3**	*e*Pg	**Pg**	**22 20 43.8**	**-0.5**
NEO	**Neokhori**	**1.32**	**340**	*e*PB	**Pb**	**22 20 47.5**	**+1.1**
XOR	**Xorichti**	**1.38**	**340**	*e*Pg	**Pg**	**22 20 48.6**	**-1.3**
XOR				*e*Sg	**Sg**	**22 21 05.3**	**-3.1**
AGG	**Agios Georgios**	**1.50**	**310**	*e*Pg	**Pg**	**22 20 52.0**	**-0.3**
VLI	**Veliai**	**1.52**	**208**	*e*PG	**Pg**	**22 20 49.8**	**-2.9**
APE	**Apeiranthos**	**1.69**	**126**	*e*PB	**Pb**	**22 20 52.7**	**-0.2**
ITM	**Ithomi**	**1.74**	**240**	*e*PN	**Pn**	**22 20 54.1**	**+1.5**
EVR	**Evrytania**	**1.78**	**299**	*e*PG	**Pg**	**22 20 57.2**	**-0.7**
RLS	**Riolos of Patr**	**1.85**	**270**	*e*PG	**Pg**	**22 20 58.1**	**-1.2**
PAIG	**Paliouri**	**1.86**	**357**	*e*Pg	**Pg**	**22 20 54.7**	**-4.7**
PAIG				*e*Sg	**Sg**	**22 21 16.1**	**-8.0**
LIA	**Limnos Island**	**2.11**	**30**	*e*PN	**Pn**	**22 20 58.1**	**+0.2**
PRK	**Paraskevi**	**2.25**	**58**	*e*PB	**Pb**	**22 20 59.3**	**-3.2**
OUR	**Ouranopolis**	**2.26**	**3**	*e*Pn	**Pn**	**22 21 00.6**	**+0.5**
LIT	**Litokhoron**	**2.27**	**334**	*e*Pn	**Pn**	**22 21 01.2**	**+0.9**
PLG	**Polygyros**	**2.32**	**353**	*e*PN	**Pn**	**22 21 02.3**	**+1.4**
SMG	**Samos**	**2.42**	**98**	*e*PN	**Pn**	**22 21 02.8**	**+0.5**
ALN	**Alexandroupoli**	**3.31**	**31**	*e*Pn	**Pn**	**22 21 15.4**	**+0.4**

ISK ***07*** *22:33:15.8, 38.20N×26.65E, h24^{km}, MD3.0*
ATH ***07*** *22:33:15.5, 38.10N×26.53E, h26^{km}±13^{km}, MD3.2/3*
NEIC ***07*** *22:33:16.0, 38.20N×26.67E, h24^{km}, MD3.2(ATH), MD3.0(ISK), After ISK.*
CSEM ***07*** *22:33:16.4±0.1, 38.17N×26.74E, h25^{km}, MD3.0, Error ellipse: s-maj=3.1km s-min=2.1km az=109.0*
ISC 07 22:33:14.5±0.9**, 38.14N**±0.03×**26.57E**±0.04**, h1^{km}**±7^{km}**, n21, σ1^{s}04**/32**, 2C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.23**	**4**	*i* P	**Pg**	**22 33 19.6**	**+0.5**
URLA				*i* S	**Sg**	**22 33 23.2**	**+1.2**
BLCB	**Balcova**	**0.45**	**56**	*i* PG	**Pg**	**22 33 24.0**	**+0.6**
SMG	**Samos**	**0.47**	**154**	⇑*i*PB	**Pb**	**22 33 25.3**	**0.0**
SMG				*e*SB	**Sb**	**22 33 32.5**	**0.0**
IZM	**Izmir**	**0.60**	**64**	*i* PG	**Pg**	**22 33 27.0**	**+0.4**
IZM				*i* SG	**Sg**	**22 33 35.4**	**+0.8**
KDAG	**Bornova**	**0.61**	**64**	*i* P	**Pg**	**22 33 26.0**	**-0.7**
KDAG				*i* S	**Sg**	**22 33 33.8**	**-1.0**
PRK	**Paraskevi**	**1.13**	**348**	⇑*i*PN	**Pn**	**22 33 37.1**	**-0.3**
PRK				*e*SN	**Sn**	**22 33 54.1**	**+0.3**
AYDN	**Tasoluk**	**1.14**	**114**	*i* P	**Pb**	**22 33 37.6**	**+0.9**
AYDN				*i* S	**Sb**	**22 33 51.5**	**-0.2**
AYVA	**Ayvalik**	**1.17**	**4**	*i* P	**Pb**	**22 33 36.0**	**-1.3**
AYVA				*i* S	**Sb**	**22 33 56.6**	**+3.8**
BODT	**Bodrum**	**1.22**	**151**	*e*PN	**Pn**	**22 33 38.4**	**-0.2**
AKS	**Akhisar**	**1.22**	**52**	PN	**Pn**	**22 33 37.0**	**-1.7**
MLSB	**Milas**	**1.27**	**131**	PN	**Pn**	**22 33 38.3**	**-1.0**
BDRM	**Kayabasi**	**1.27**	**147**	*i* P	**Pb**	**22 33 39.2**	**+0.2**
BDRM				*i* S	**Sb**	**22 33 57.0**	**+1.4**
APE	**Apeiranthos**	**1.35**	**218**	*e*PN	**Pn**	**22 33 41.1**	**+0.6**
APE				*e*SN	**Sn**	**22 33 59.7**	**+0.5**
APE	**Apeiranthos**	**1.35**	**218**	*e*PN	**Pn**	**22 33 40.0**	**-0.5**
MANT	**Manisa**	**1.60**	**77**	*i* P	**Pn**	**22 33 44.9**	**+0.8**
MANT				*i* S	**Sb**	**22 34 05.0**	**-0.2**
YER	**Yerkesik**	**1.69**	**126**	*e*PN	**Pn**	**22 33 44.7**	**-0.6**
BTOK	**Tokmak**	**1.98**	**35**	*i* P	**Pn**	**22 33 52.7**	**+3.2**
BTOK				*i* S	**Sn**	**22 34 18.2**	**+2.9**
LIA	**Limnos Island**	**2.07**	**329**	*e*PN	**Pn**	**22 33 50.9**	**+0.2**
EDC	**Edincik**	**2.42**	**24**	*e*PN	**Pn**	**22 33 53.8**	**-2.1**
ORLT	**Orhaneli**	**2.63**	**43**	*e*PN	**Pn**	**22 33 56.7**	**-2.1**
RDO	**Rodhopi**	**3.11**	**345**	*e*PN	**Pn**	**22 34 05.2**	**-0.5**

BJI 07 22:39:08.8, 38.46N×77.12E, h19^{km}, ML3.7, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.38**	**320**	PG	Pn	22 39 33.4	+0.1
KSH				SG	Sb	22 39 55.3	+4.2
KSH				Smax			
	comp=N,580nm,0.7s						
KSH				Smax			
	comp=E,340nm,0.5s						

BJI ***07*** *22:47:33.5, 16.61N×145.53E, h516^{km}, mb4.5*
IDC ***07*** *22:47:33.1±0.6, 16.38N×145.60E, h526^{km}±7^{km}, mb3.9/22, mb1 4.0/24, mb1mx4.0/27, mbtmp4.8/24, Error ellipse: s-maj=13.1km s-min=7.4km az=85.0*
MOS ***07*** *22:47:33.0±0.8, 16.43N×145.56E, h541^{km}, mb4.9/5, Error ellipse: s-maj=25.2km s-min=10.5km az=112.9*
NEIC ***07*** *22:47:34.6±0.7, 16.37N×145.52E, h540^{km}±8^{km}, mb4.5/19, Error ellipse: s-maj=6.7km s-min=6.4km az=86.0*
ISC 07 22:47:33.2±0.6**, 16.35N**±0.05×**145.45E**±0.05**, h535^{km}**±7^{km}**, n136, σ0^{s}97**/125**, mb4.3**/59**, 8C-3D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.80**	**192**	P	**P**	**22 48 46.8**	**+0.4**
	79nm,0.3s,baz=138,slow=1.4,SNR=11						
GUMO				S	**S**	**22 49 43.2**	**-1.1**
	94nm,0.3s,baz=140,slow=24,SNR=12						
JOW	**Kunigami**	**19.05**	**306**	P	**P**	**22 51 23.6**	**+1.7**
	0.8nm,0.3s,baz=123,slow=20,SNR=4.0						
MJAR	**Matsushiro Arr**	**21.12**	**344**	P	**P**	**22 51 41.1**	**+0.1**
	2.7nm,0.6s,mb4.0,baz=167,slow=10,SNR=6.0						
PMG	**Port Moresby**	**25.64**	**176**	P	**P**	**22 52 20.7**	**-1.4**
	17nm,0.5s,mb5.0,baz=13,slow=5.5,SNR=9.1						
PMG	**Port Moresby**	**25.64**	**176**	P	**P**	**22 52 21.4**	**-0.7**
NJ2	**Nanjing**	**28.75**	**308**	*e*P	**P**	**22 52 47.6**	**-1.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
KAKA	**Kakadu**	**31.61**	**205**	⇑*i*P	**P**	**22 53 31.4**	**+18**
	comp=Z,18nm,0.6s,mb4.8						
ENH	**Enshi**	**35.65**	**299**	*e*P	**P**	**22 53 49.5**	**+2.0**
	comp=Z,6.5nm,0.6s,mb4.3						
CTA	**Charters Tower**	**36.22**	**179**	P	**P**	**22 53 52.1**	**-0.1**
	comp=Z,3.8nm,0.6s,mb4.1,baz=4.7,slow=4.2,SNR=4.7						
XAN	**Xi'an**	**37.20**	**305**	P	**P**	**22 54 01.7**	**+1.6**
WRAB	**Tennant Creek**	**37.67**	**197**	P	**P**	**22 54 04.7**	**+0.7**
WRAB	**Tennant Creek**	**37.67**	**197**	*c i*P	**P**	**22 54 04.6**	**+0.6**
WB2	**Warramunga Arr**	**37.68**	**197**	⇑*i*P	**P**	**22 54 04.7**	**+0.6**
WB2				*e*S	**S**	**22 59 14.7**	**-2.6**
WRA	**Warramunga Arr**	**37.68**	**197**	P	**P**	**22 54 04.7**	**+0.6**
	comp=Z,26nm,0.7s,mb4.9,baz=24,slow=8.6,SNR=131						
WRA				PcP	PcP	22 56 07.4	-0.6
	comp=Z,3.6nm,0.6s,baz=13,slow=3.5,SNR=10						
WRA				ScP		22 59 02.8	
	comp=Z,2.5nm,0.8s,baz=16,slow=4.2,SNR=10						
WRA				S	**S**	**22 59 15.3**	**-2.0**
	comp=Z,1.8nm,0.9s,baz=15,slow=15,SNR=5.2						
WRA	**Warramunga Arr**	**37.68**	**197**	*i* P	**P**	**22 54 04.6**	**+0.5**
WRA				pmax	pmax		
	comp=Z,26nm,0.7s						
FITZ	**Fitzroy Crossi**	**39.40**	**211**	⇑*i*P	**P**	**22 54 19.0**	**+0.9**
	comp=Z,18nm,0.5s,mb4.9						
FITZ	**Fitzroy Crossi**	**39.40**	**211**	P	**P**	**22 54 18.2**	**+0.1**
	comp=Z,23nm,0.5s,mb5.0,baz=26,slow=9.4,SNR=84						
LZH	**Lanzhou**	**41.80**	**306**	*e*P	**P**	**22 54 39.3**	**+2.1**
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.7						
DZM	**Mont Dzumac**	**43.37**	**151**	P	**P**	**22 54 49.4**	**-0.4**
	comp=Z,9.9nm,0.6s,mb4.5,baz=334,slow=5.9,SNR=16						
DZM				PcP	PcP	22 56 26.9	+0.1
	comp=Z,3.1nm,0.6s,baz=258,slow=23,SNR=5.0						
SONM	**Songino Array**	**44.85**	**323**	P	**P**	**22 55 02.1**	**+1.2**
	comp=Z,4.8nm,0.4s,mb4.4,baz=140,slow=6.7,SNR=92						
SONM				PcP	PcP	22 56 31.2	-0.4
	comp=Z,2.3nm,0.7s,baz=132,slow=3.3,SNR=6.5						
SONM				ScP		22 59 29.8	
	comp=Z,0.8nm,0.9s,baz=90,slow=1.5,SNR=3.5						
MBWA	**Marble Bar**	**45.01**	**215**	*e*P	**P**	**22 55 02.5**	**0.0**
	comp=Z,5.9nm,0.5s,mb4.4						
YAK	**Yakutsk**	**46.98**	**350**	*d i*P	**P**	**22 55 16.3**	**-0.8**
YAK				pmax	pmax		
	comp=Z,24nm,0.7s,mb4.8						
ZAK	**Zakamensk**	**47.90**	**325**	⇓*e*P	**P**	**22 55 24.6**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.8						
STKA	**Stephens Creek**	**48.09**	**184**	P	**P**	**22 55 25.1**	**-0.9**
	comp=Z,1.5nm,0.4s,mb3.8,baz=341,slow=23,SNR=7.6						
STKA				PcP	PcP	22 56 42.6	-0.8
	comp=Z,2.6nm,1.1s,baz=314,slow=13,SNR=2.9						
LSA	**Lhasa**	**51.29**	**295**	*e*P	**P**	**22 55 51.9**	**+2.2**
	comp=Z,15nm,0.6s,mb4.5						
BILL	**Bilibino**	**53.36**	**10**	*i* P	**P**	**22 56 03.2**	**-0.8**
BILL				*e*		22 57 02.3	
BILL				*e**PP	pP	22 57 50.6	+3.2
BILL				*e*SS	SS	23 06 44.8	-2.8
BILL				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
GUN	**Gumba**	**55.91**	**293**	*e*P	**P**	**22 56 23.4**	**+1.1**
	comp=Z,27nm,0.8s,mb4.5						
TIXI	**Tiksi**	**56.17**	**354**	P	**P**	**22 56 21.9**	**-1.6**
TIXI	**Tiksi**	**56.17**	**354**	*i* P	**P**	**22 56 21.4**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.4						
PKI	**Pulchoki**	**56.33**	**292**	*e*P	**P**	**22 56 25.7**	**+0.4**
	comp=Z,12nm,0.7s,mb4.3						
KKN	**Kakani**	**56.44**	**293**	*e*P	**P**	**22 56 26.3**	**+0.3**
	comp=Z,17nm,0.9s,mb4.3						
DMN	**Daman**	**56.60**	**293**	*e*P	**P**	**22 56 27.8**	**+0.7**
	comp=Z,19nm,0.8s,mb4.4						
GKN	**Gorkha**	**57.00**	**293**	*e*P	**P**	**22 56 30.5**	**+0.6**
	comp=Z,43nm,1.1s,mb4.6						
KOLN	**Koldanda**	**57.93**	**293**	*e*P	**P**	**22 56 36.2**	**0.0**
	comp=Z,16nm,0.8s,mb4.3						
ZAL	**Zalesovo**	**59.75**	**323**	P	**P**	**22 56 46.4**	**-1.6**
	comp=Z,2.6nm,0.6s,mb3.7,baz=5.7,slow=6.1,SNR=13						
MKAR	**Makanchi Array**	**59.93**	**315**	P	**P**	**22 56 49.7**	**+0.5**
	comp=Z,7.8nm,0.4s,mb4.4,baz=90,slow=8.4,SNR=128						
MKAR				PcP	PcP	22 57 28.2	-0.7
	comp=Z,2.6nm,0.6s,baz=81,slow=6.0,SNR=7.3						
MKAR	**Makanchi Array**	**59.93**	**315**	P	**P**	**22 56 49.7**	**+0.5**
MKAR				PcP	PcP	22 57 28.2	-0.7
MKAR	**Makanchi Array**	**59.93**	**315**	*e*P	**P**	**22 56 50.0**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
NVS	**Novosibirsk**	**60.85**	**324**	*i* P	**P**	**22 56 54.5**	**-0.7**
KDAK	**Kodiak Island**	**61.45**	**33**	P	**P**	**22 56 57.5**	**-1.6**
	comp=Z,5.8nm,0.3s,mb4.3,baz=259,slow=5.5,SNR=19						
KDAK	**Kodiak Island**	**61.45**	**33**	P	**P**	**22 56 57.5**	**-1.6**
KURK	**Kurchatov**	**62.87**	**319**	P	**P**	**22 57 07.5**	**-0.8**
KURK	**Kurchatov**	**62.87**	**319**	P	**P**	**22 57 08.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.4						
SLKM	**Skilak Lake**	**63.33**	**30**	*e*P	**P**	**22 57 10.4**	**-0.7**
PMR	**Palmer**	**64.11**	**29**	P	**P**	**22 57 14.7**	**-1.4**
COLA	**College**	**65.47**	**26**	*e*P	**P**	**22 57 22.4**	**-2.2**
	comp=Z,5.7nm,0.6s,mb4.2						
COLA	**College**	**65.47**	**26**	*i* P	**P**	**22 57 24.3**	**-0.3**
ILAR	**Eielson Array**	**65.85**	**26**	P	**P**	**22 57 24.6**	**-2.2**
	comp=Z,12nm,0.7s,mb4.5,baz=249,slow=5.8,SNR=147						
THY	**Trims Highway**	**66.04**	**27**	P	**P**	**22 57 27.7**	**-0.4**
VOSK	**Vostochnaya**	**67.77**	**321**	P	**P**	**22 57 38.5**	**-0.4**
VOSK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
CHKZ	**Chkalovo**	**68.02**	**322**	P	**P**	**22 57 40.0**	**-0.5**
	comp=Z,9.2nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**68.02**	**322**	P	**P**	**22 57 39.9**	**-0.5**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.1						
KKAR	**Karatay Array**	**68.09**	**310**	*i* P	**P**	**22 57 41.5**	**+0.5**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
BVA0	**Borovoye Array**	**68.14**	**321**	*i* P	**P**	**22 57 41.2**	**+0.1**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
BVAR	**Borovoye Array**	**68.14**	**321**	P	**P**	**22 57 41.3**	**+0.2**
	comp=Z,20nm,0.7s,mb4.7,baz=102,slow=7.1,SNR=94						
BRVK	**Borovoye**	**68.20**	**321**	P	**P**	**22 57 41.5**	**0.0**
DAWY	**Dawson**	**68.94**	**27**	P	**P**	**22 57 45.8**	**+0.1**
INK	**Inuvik**	**71.62**	**23**	P	**P**	**22 58 00.5**	**-0.9**
	comp=Z,15nm,0.9s,mb4.4						
DLBC	**Dease Lake**	**73.38**	**33**	P	**P**	**22 58 11.9**	**+0.3**
ARU	**Arti**	**74.84**	**325**	P	**P**	**22 58 20.0**	**+0.2**
	comp=Z,13nm,0.6s,mb4.5						
ARU	**Arti**	**74.84**	**325**	*e*P	**P**	**22 58 19.9**	**+0.1**
ARU				*e*		23 01 14.5	
ARU				*e*PPP	PPP	23 03 02.3	-4.6
ARU				*e*S	S	23 07 13.8	+0.5
ARU				*e*SS	SS	23 12 16.3	-2.4
AB31	**Akbulak array**	**74.89**	**317**	*i* P	**P**	**22 58 20.1**	**-0.2**

AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
AKTO	Aktyubinsk	75.96	319	P	P	22 58 25.2	-1.0
	comp=Z,1.9nm,0.7s,mb3.6,baz=86,slow=9.3,SNR=9.5						
AKTO	Aktyubinsk	75.96	319	P	P	22 58 25.7	-0.5
HDW	Hoodsport	79.10	44	P	P	22 58 44.0	+0.9
GNW	Green Mountain	79.27	44	P	P	22 58 44.7	+0.7
YKW3	Yellowknife Ar	80.14	28	P	P	22 58 47.9	-0.3
YKA	Yellowknife Ar	80.17	28	P	P	22 58 47.1	-1.2
	comp=Z,6.7nm,0.7s,mb4.1,baz=288,slow=5.4,SNR=26						
YKA	Yellowknife Ar	80.17	28	iP	P	22 58 47.7	-0.6
YKA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HUMO	Hull Mountain	80.27	48	P	P	22 58 50.5	+1.3
IRO	Indian Ridge	80.45	47	P	P	22 58 50.5	+0.4
FRIS	Frissel Point	80.51	47	P	P	22 58 51.0	+0.5
YBH	Yreka Blue Hor	80.65	49	P	P	22 58 52.2	+0.9
	comp=Z,6.8nm,0.8s,mb4.1						
NLW	Nelson Butte	80.78	43	P	P	22 58 52.1	+0.3
TBM	Table Mountain	80.83	44	P	P	22 58 52.3	+0.2
EBG	Ellensburg	80.91	44	P	P	22 58 53.1	+0.5
LHEM	Herd Peak	81.03	49	P	P	22 58 53.8	+0.6
EPH	Ephrata	81.45	43	P	P	22 58 55.3	+0.1
HAWA	Hanford	81.73	44	P	P	22 58 56.7	0.0
MOD	Modoc	82.36	49	P	P	22 59 00.5	+0.6
NEW	Newport	82.81	42	P	P	22 59 02.1	0.0
	comp=Z,9.3nm,0.9s,mb4.3,baz=280,slow=4.2,SNR=8.7						
CMB	Columbia Colle	83.31	52	eP	P	22 59 04.8	0.0
	comp=Z,4.3nm,0.6s,mb4.2						
EDM	Edmonton	83.61	36	P	P	22 59 05.2	-0.7
BMO	Blue Mountains	83.66	45	P	P	22 59 06.5	+0.1
	comp=Z,15nm,0.9s,mb4.5						
KEV	Kevo	84.08	342	ep	P	22 59 06.1	-1.8
BSMT	Bassoo Peak	84.43	42	P	P	22 59 10.7	+0.6
ARCES	ARCESS Array B	84.65	342	P	P	22 59 10.1	-0.5
	comp=Z,7.2nm,0.6s,mb4.4,baz=70,slow=6.8,SNR=45						
ARE0	ARCESS Array S	84.65	342	eP	P	22 59 10.8	+0.2
NVAR	Mina Array Bea	84.77	52	P	P	22 59 12.5	+0.5
	comp=Z,6.7nm,0.6s,mb4.4,baz=260,slow=7.4,SNR=38						
MNV	Mina	84.89	52	P	P	22 59 13.2	+0.6
DAC	Darwin (Calif)	85.94	54	P	P	22 59 18.1	+0.4
HLID	Hailey	86.03	46	P	P	22 59 18.5	+0.6
	comp=Z,11nm,0.8s,mb4.5						
JOF	Joensuu	86.04	335	ep	P	22 59 15.3	-2.2
ELK	Elko	86.34	49	P	P	22 59 20.0	+0.6
TPNV	Topopah Spring	86.77	53	P	P	22 59 22.3	+0.7
GSC	Goldstone	86.84	54	P	P	22 59 22.8	+0.8
OBN	Obninsk	87.11	327	⇓eP	P	22 59 22.3	-0.4
OBN				e*PP	pP	23 01 19.8	-1.0
OBN				e*SP	sP	23 02 12.9	-1.0
OBN				e		23 02 54.6	
OBN				eS		23 08 59.9	
OBN				eSS	SS	23 15 15.8	-3.1
OBN				pmax	pmax		
	comp=Z,23nm,1.6s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,12.0s						
HVU	Hansel Valley	87.76	47	P	P	22 59 27.1	+1.1
SPUT	South Promonto	88.15	47	P	P	22 59 28.4	+0.5
RRI2	Red Ridge	88.22	45	P	P	22 59 28.8	+0.5
NEN	Nelson	88.25	53	eP	P	22 59 28.5	-0.1
DUG	Dugway	88.27	49	P	P	22 59 28.6	+0.1
	comp=Z,12nm,0.7s,mb4.7						
TPAW	Teton Pass	88.42	45	P	P	22 59 29.8	+0.7
KAF	Kangasniemi	88.45	336	ep	P	22 59 25.7	-3.1
	comp=Z,5.8nm,0.5s,mb4.6						
KAF	Kangasniemi	88.45	336	eP	P	22 59 25.7	-3.1
KAF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
HWUT	Hardware Ranch	88.67	47	P	P	22 59 30.7	+0.3
	comp=Z,11nm,0.8s,mb4.7						
CTU	Camp Tracy	88.86	48	P	P	22 59 31.4	+0.1
NLU	North Lily Min	88.88	49	P	P	22 59 32.2	+0.8
FINES	FINESS Array B	88.91	335	P	P	22 59 30.1	-1.0
	comp=Z,12nm,0.6s,mb4.9,baz=64,slow=4.9,SNR=123						
FINES	FINESS Array B	88.91	335	iP	P	22 59 30.1	-0.9
FINES				pmax	pmax		
	comp=Z,12nm,0.6s						
GLA	Glamis	89.10	56	P	P	22 59 33.1	+0.5
PDAR	Pinedale Array	89.64	45	P	P	22 59 33.0	-1.8
	comp=Z,2.9nm,0.7s,mb4.2,baz=270,slow=1.5,SNR=9.2						
LAO	LASA Array	90.28	41	P	P	22 59 40.0	+2.3
SRU	San Rafael	90.30	49	P	P	22 59 38.4	+0.4
ANN	Anapa	90.86	317	eP	P	22 59 40.3	-0.1
ANN				e		23 03 21.5	
ANN				eS		23 09 22.5	
ANN				eSS	SS	23 16 09.1	-3.7
ANN				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
WUAZ	Wupatki	90.96	53	P	P	22 59 42.3	+1.2
	comp=Z,9.3nm,0.9s,mb4.7						
AKASG	Malin Array Be	93.09	325	P	P	22 59 48.6	-1.9
	comp=Z,0.3nm,0.4s,mb3.6,baz=45,slow=5.2,SNR=4.6						
AKASG	Malin Array Be	93.09	325	iP	P	22 59 48.5	-2.0
HFS	Hagfors	94.47	338	P	P	22 59 55.4	-1.2
	comp=Z,1.9nm,0.5s,mb4.5,baz=90,slow=4.4,SNR=14						
NB2	NORSAR Subarra	94.68	340	P	P	22 59 56.1	-1.4
	comp=Z,1.1nm,0.6s,mb4.2,baz=47,slow=4.5						
NOA	NORSAR Array B	94.68	340	P	P	22 59 56.0	-1.5
	comp=Z,1.7nm,0.8s,mb4.2,baz=51,slow=4.6,SNR=5.5						
NAO	NORSAR Subarra	94.97	340	P	P	22 59 56.1	-2.7
	comp=Z,1.1nm,0.6s,mb4.2						
DPC	Dobruska-Polom	99.98	330	AMS	AMS	23 05 00.0	
PRU	Pruhonice	101.08	330	AMS	AMS	23 04 40.0	
TREC	Trest	101.09	329	AMS	AMS	23 04 50.0	
NKC	Novy Kostel	101.89	331	AMS	AMS	23 05 30.0	
KHC	Kasperske Hory	102.12	330	AMS	AMS	23 05 00.0	
SNAA	Sanae	121.58	191	⇑i	PKPdf	23 05 25.6	+0.3
VNA2	Neumayer--Watz	123.03	190	⇑i	PKPdf	23 05 29.6	+1.6
VNA3	Neumayer Olymp	123.12	189	⇑i	PKPdf	23 05 29.4	+1.2
VNA1	Neumayer--Stat	123.41	190	⇑i	PKPdf	23 05 30.4	+1.6
PLCA	Paso Flores	140.54	135	PKhKP		23 05 57.4	
	comp=Z,1.3nm,0.7s,baz=242,slow=5.8,SNR=3.5						
DBIC	Dimbokro	142.77	306	PKP	PKPdf	23 06 04.9	-1.2
	comp=Z,11nm,0.6s,baz=31,slow=2.9,SNR=42						
LVC	Limon Verde	147.06	106	ePKPbc	PKPdf	23 06 18.6	+5.4
LPAZ	La Paz	147.79	95	PKP	PKPdf	23 06 16.8	+2.3
	comp=Z,5.2nm,0.5s,baz=290,slow=3.6,SNR=7.7						
LPAZ				PKPbc	PKPdf	23 06 20.6	+6.1
	comp=Z,5.2nm,0.5s,baz=290,slow=3.4,SNR=16						
SAML	Samuel	151.14	79	ePKPdf	PKPdf	23 06 21.1	+1.2

NEIC ***07*** *23:02:31.9, 38.33N×21.94E, h10^{km}, MD3.6(ATH), After ATH.*

ATH ***07*** *23:02:32.0, 38.33N×21.94E, h10^{km}±3^{km}, MD3.6/14*

CSEM ***07*** *23:02:32.2±0.1, 38.29N×22.05E, h2^{km}, MD3.6, Error ellipse: s-maj=2.5km s-min=1.9km az=85.0*

THE ***07*** *23:02:33.5, 38.35N×22.12E, h3^{km}, ML3.2*

SOF ***07*** *23:02:50.0, 39.35N×22.76E, h20^{km}, MD2.8*

ISC 07 23:02:32.3±0.4**, 38.33N**±0.03×**21.95E**±0.04**, h10^{km}, n43, σ1^{s}32**/52**, 4C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	Riolos of Patr	0.47	234	⇑iPB	Pb	23 02 40.9	-1.2
RLS				eSB	Sb	23 02 47.7	-1.1
EVR	Evrytania	0.59	350	⇑iPB	Pb	23 02 42.7	-1.6
EVR				eSB	Sb	23 02 52.3	-0.2
AGG	Agios Georgios	0.75	24	ePg	Pg	23 02 46.5	-0.9
LKR	Lokris	0.89	69	ePB	Pb	23 02 47.9	-1.4
VLS	Valsamata	1.08	262	ePB	Pb	23 02 51.3	-1.3
VLS				eSB	Sb	23 03 08.4	+1.9
LKD	Levkas	1.08	291	ePg	Pg	23 02 55.9	+1.9
ITM	Ithomi	1.15	181	⇑iPG	Pg	23 02 53.2	-2.1
NEO	Neokhori	1.40	45	⇑iPG	Pg	23 02 57.8	-2.4
NEO				eSB	Sb	23 03 17.2	+1.5
XOR	Xorichti	1.42	43	ePg	Pg	23 02 58.2	-2.5
MPAR	Parnis Oros	1.42	97	ePB	Pb	23 03 00.0	+1.5
ATH	Athens Observa	1.44	104	ePB	Pb	23 03 00.2	+1.4
MEV	Metsovon	1.56	339	ePg	Pg	23 03 01.5	-1.9
MEV				eSg	Sg	23 03 23.5	-0.7
JAN	Janina	1.57	328	ePB	Pb	23 03 01.9	+0.8
AOS	Alonnisos	1.73	60	ePg	Pg	23 03 01.6	-5.2
AOS	Alonnisos	1.73	60	ePg	Pg	23 03 01.6	-5.3
IGT	Igoumenitsa	1.74	314	ePb	Pb	23 03 05.3	+1.5
IGT	Igoumenitsa	1.74	314	ePb	Pb	23 03 05.3	+1.4
VLI	Veliai	1.79	154	ePN	Pn	23 03 04.3	+0.7
LIT	Litokhoron	1.82	13	ePb	Pb	23 03 04.6	-0.7
LIT				eSb	Sb	23 03 28.1	+0.2
LIT	Litokhoron	1.82	13	ePb	Pb	23 03 04.6	-0.6
LIT				eSb	Sb	23 03 28.1	+0.1
KZN	Kozani	1.98	356	ePN	Pn	23 03 07.8	+1.5
PAIG	Paliouri	2.09	40	ePn	Pn	23 03 06.6	-1.2
LSK	Leskovik	2.10	331	iPg	Pg	23 03 12.6	-1.6
LSK				iSg	rx	23 03 26.3	
SRN	Sarande	2.16	316	iPg	Pn	23 03 08.0	-0.9
SRN				iSg	rx	23 03 19.3	
KEK	Kerkira	2.17	310	ePN	Pn	23 03 09.9	+0.9
KYTH	Kithira	2.22	157	ePN	Pn	23 03 11.3	+1.5
PLG	Polygyros	2.35	29	ePN	Pn	23 03 12.5	+0.9
THE	Thessaloniki	2.43	19	ePn	Pn	23 03 12.9	+0.1
FNA	Florina	2.49	350	ePn	Pn	23 03 14.4	+0.8
OUR	Ouranopolis	2.55	38	ePn	Pn	23 03 13.7	-0.7
GRG	Griva	2.65	8	ePn	Pn	23 03 16.1	+0.3
SOH	Sokhos	2.71	23	ePn	Pn	23 03 16.3	-0.5
BIA	Bitola	2.73	350	ePn	Pn	23 03 20.4	+3.4
OHR	Ohrid	2.91	343	ePn	Pn	23 03 26.2	+6.5
OHR				eSn	Sn	23 03 59.3	+4.2
KNT	Kendrikon	2.92	14	ePn	Pn	23 03 19.4	-0.4
VAY	Valandovo	3.02	9	iPn	Pn	23 03 22.6	+1.4
VAY				eSn	Sn	23 03 57.8	-0.1
NVR	Nevrokopi	3.36	25	ePB	Pb	23 03 28.2	-3.4
VAM	Vamos	3.43	148	ePB	Pb	23 03 29.2	-3.7
MMB	Musomiste	3.53	22	iP	Pn	23 03 28.5	+0.1
KKB	Krupnik	3.64	14	P	Pn	23 03 31.0	+1.1
SKO	Skopje	3.66	354	ePn	Pn	23 03 37.2	+7.0
RZN	Rozhen	3.97	32	iP	Pn	23 03 35.5	+0.8
VTS	Vitosha	4.36	12	P	Pn	23 03 42.5	+2.3

NEIC ***07*** *23:14:20.9, 30.08S×72.52W, h31^{km}, ML3.5(GUC), After GUC.*

GUC 07 23:14:20.9±0.8**, 30.08S×72.52W, h31^{km}**±28^{km}**, MD4.0, ML3.5, 3C-2D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	La Serena	1.12	82	iP	Pn	23 14 40.4	-0.3
LSCH				iS	Sn	23 14 55.4	+0.3
LSCH				AMP		23 14 56.2	
	comp=N,717nm,0.4s						
TLL	Tololo Astrono	1.49	94	⇑iP	Pn	23 14 47.1	+1.1
TLL				iS	Sn	23 15 07.0	+2.5
TLL				AMP		23 15 10.9	
	comp=E,1µm,0.5s						
CMCH	Combarbala	1.71	130	⇓iP	Pn	23 14 50.4	+1.4
CMCH				iS	Sn	23 15 13.1	+3.1
CMCH				AMP		23 15 17.1	
	comp=E,5µm,0.7s						
CHNG	Los Chungos	2.00	154	⇑iP	Pn	23 14 53.6	+0.3
CHNG				iS	Sn	23 15 18.4	+0.9
CHNG				AMP		23 15 19.2	
	comp=E,374nm,0.5s						
JACH	Jahuel	3.08	148	⇓iP	Pn	23 15 10.3	+1.7
JACH				iS	Sn	23 15 47.4	+2.6
ROCH	El Roble	3.16	156	eP	Pn	23 15 10.5	+0.7
LCCH	Las Cruces	3.48	167	⇑iP	Pn	23 15 14.0	-0.4
RCDM	Rinconada Maip	3.70	157	eP	Pn	23 15 17.2	-0.3
RCDM				iS	Sn	23 16 00.1	-0.5
FCH	Farellones	3.76	150	eP	Pn	23 15 19.6	+1.3
FCH				iS	Sn	23 16 03.0	+1.0
SFDO	San Fernando	4.70	165	eP	Pn	23 15 31.4	-0.3

JMA 07 23:36:55.3±0.3**, 27.63N×126.57E, h177^{km}, M3.6, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGN	Aguni-jima	1.20	150	P	P	23 37 24.5	-0.1
JAGN				S	S	23 37 46.6	-0.6
JKE	Kume jima 2	1.31	172	P	P	23 37 25.1	-0.5
JKE				S	S	23 37 49.2	+0.2
JIH	Iheya	1.38	115	P	P	23 37 26.4	+0.2
JIH				S	S	23 37 50.4	+0.3
JOW	Kunigami	1.71	117	P	P	23 37 29.3	-0.2
JOW				eS	S	23 37 55.0	-0.9
NAH1	Naha	1.74	145	P	P	23 37 29.5	-0.2
NAH1				S	S	23 37 54.5	-1.8
JJT2	Tamagusuku 2	1.82	144	P	P	23 37 30.9	+0.3
JJT2				eS	S	23 37 56.8	-1.0
JTK	Tokunoshima	2.12	85	P	P	23 37 33.4	-0.4
JTK				S	S	23 38 02.3	-1.2
JAM	Amami Oshima	2.79	73	P	P	23 37 41.5	-0.4
JAM				eS	S	23 38 16.0	-1.7
JTJ	Tarama	3.42	210	P	P	23 37 46.5	-3.1
JTJ				eS	S	23 38 25.8	-5.7
JIJ	Ishigaki jima	3.92	214	P	P	23 37 51.8	-4.2
JIJ				S	S	23 38 35.7	-7.1
IRIF	Iriomote-Funau	4.16	219	S	S	23 38 42.3	-6.0

LDG ***07*** *23:40:59.8±0.2, 36.20N×8.92W, h10^{km}, Ml3.3/4, Error ellipse: s-maj=4.2km s-min=3.8km az=53.0*

CSEM ***07*** *23:40:59.5±0.1, 36.13N×8.88W, h15^{km}, ML3.6/16, Error ellipse: s-maj=2.5km s-min=1.6km az=72.0*

INMG ***07*** *23:41:00.6±1.2, 36.31N×8.84W, ML3.0, Error ellipse: s-maj=5.3km s-min=2.7km az=57.0*

IGIL ***07*** *23:41:01.7±29.0, 36.33N×8.89W, h2^{km}±152^{km}, ML3.2*

NEIC ***07*** *23:41:01.0, 36.33N×8.89W, h11^{km}, ML3.3(LDG), MN2.9(MDD), After MDD.*

CNRM ***07*** *23:41:07.4, 35.86N×8.74W, h30^{km}, MD3.6*

MDD 07 23:41:00.5±0.9**, 36.31N×8.89W, h8^{km}**±5^{km}**, mbLg3.1**/11**, Error ellipse: s-maj=7.8km s-min=4.8km az=64.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MORF	Marmelete	1.01	11	eP	Pb	23 41 19.6	-0.3
MORF				e		23 41 20.0	
	baz=348,slow=12						
MORF				eS	Sb	23 41 32.8	-0.3
MORF				eS	Sb	23 41 32.8	-0.3
MORF				AML	AML	23 41 34.8	
	comp=N,1µm,0.3s						
MORF	Marmelete	1.01	11	eP	Pb	23 41 19.6	-0.2
MORF				eS	Sb	23 41 32.8	-0.3
PTEO	Sao Teotonio	1.24	6	eP	Pb	23 41 22.8	-0.9
PTEO				eS	Sb	23 41 40.5	+0.8
	comp=N,330nm,0.3s						
PBEJ	Beja	1.89	25	ePn	Pn	23 41 32.2	-1.3
PBEJ	Beja	1.89	25	ePg	Pg	23 41 36.9	-1.4
PBEJ				eSn	Sn	23 41 56.3	-1.5
PBEJ				eSg	Sg	23 42 00.3	-3.3
	comp=N,128nm,0.2s						
PBEJ	Beja	1.89	25	Pn	Pn	23 41 32.2	-1.3
PBEJ				Pg	Pg	23 41 36.8	-1.6
PBEJ				Sn	Sn	23 41 56.6	-1.2
PBEJ				Lg		23 42 00.3	
	comp=N,64nm,0.2s						
PBEJ	Beja	1.89	25	Pg	Pg	23 41 36.8	-1.6
PBEJ				Sn	Sn	23 41 56.6	-1.2
PBEJ	Beja	1.89	25	Pg	Pg	23 41 36.8	-1.6
PBEJ				eSn	Sn	23 41 56.3	-1.5
EMIN	Mina Concepcio	2.29	50	Pn	Pn	23 41 36.9	-2.3
	comp=N,2.0nm,0.3s,SNR=40						
EMIN				Sn	Sn	23 42 04.1	-3.8
	comp=N,16nm,0.2s,SNR=6.1						
EMIN				Lg		23 42 12.7	
	comp=N,36nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	2.29	50	Pn	Pn	23 41 36.9	-2.3
EMIN				Sn	Sn	23 42 02.7	-5.2
EMIN				Lg		23 42 11.3	
EMIN	Mina Concepcio	2.29	50	Pn	Pn	23 41 36.9	-2.3
	comp=N,2.0nm,0.3s,SNR=40						
EMIN				Sn	Sn	23 42 02.7	-5.2
	comp=N,16nm,0.2s,SNR=6.1						
EVO	Evora	2.32	17	ePn	Pn	23 41 36.9	-2.7
EVO				eSn	Sn	23 42 04.5	-4.2
	comp=N,93nm,0.2s						
LIS	Lisbon	2.41	355	eP	Pn	23 41 40.0	-0.9
LIS				eS	Sn	23 42 07.2	-3.7
LIS				eS	Sn	23 42 07.2	-3.6
LIS				AML	AML	23 42 08.2	
	comp=E,114nm,0.2s						
ESPR	Espera	2.50	76	Pn	Pn	23 41 40.3	-2.0
	comp=E,13nm,0.1s,SNR=26						
ESPR				Sn	Sn	23 42 08.1	-5.2
	comp=E,98nm,0.3s,SNR=7.9						
ESPR	Espera	2.50	76	Pn	Pn	23 41 40.3	-1.9
	comp=E,13nm,0.1s,SNR=26						
ESPR				Sn	Sn	23 42 08.1	-5.2
	comp=E,98nm,0.3s,SNR=7.9						
PLOU	Loures	2.58	355	ePn	Pn	23 41 41.6	-1.7
PLOU				eSn	Sn	23 42 12.1	-3.0
PLOU				eSg	Sg	23 42 23.1	-3.2
	comp=E,46nm,0.2s						
PLOU	Loures	2.58	355	Pn	Pn	23 41 41.4	-1.9
PLOU				Sn	Sn	23 42 11.8	-3.3
PLOU				Lg		23 42 23.1	
	comp=E,23nm,0.2s						
PLOU	Loures	2.58	355	Pn	Pn	23 41 41.4	-1.9
PLOU				eSn	Sn	23 42 12.1	-3.0
PLOU				eSg	Sg	23 42 23.1	-3.2
	comp=E,46nm,0.2s						
EJIF	Jimena Fronter	2.76	86	Pn	Pn	23 41 44.9	-1.1
	comp=E,5.8nm,0.2s,SNR=29						
EJIF				Sn	Sn	23 42 17.7	-2.2
	comp=E,7.6nm,0.4s						
ALMR	Almeirim	2.85	5	eP	Pn	23 41 45.8	-1.3
ALMR				eS	Sn	23 42 19.0	-3.1
ALMR				eS	Sn	23 42 19.0	-3.0
ALMR				AML	AML	23 42 25.2	
	comp=E,44nm,0.1s						
EBAD	Badajoz	2.86	31	Pn	Pn	23 41 44.5	-2.7
	comp=E,13nm,0.1s,SNR=83						
EBAD				Sn	Sn	23 42 18.1	-4.2
	comp=E,37nm,0.2s,SNR=5.0						
EBAD				Lg		23 42 31.4	
	comp=E,161nm,0.2s,SNR=7.9						
EBAD	Badajoz	2.86	31	Pn	Pn	23 41 44.5	-2.7
EBAD				Sn	Sn	23 42 16.6	-5.6
EBAD				Lg		23 42 28.6	
EBAD	Badajoz	2.86	31	Pn	Pn	23 41 44.5	-2.8
	comp=E,13nm,0.1s,SNR=83						
EBAD				Sn	Sn	23 42 16.6	-5.7
	comp=E,37nm,0.2s,SNR=5.0						
PTOM	Tomar	3.32	6	ePn	Pn	23 41 51.6	-2.3
PTOM	Tomar	3.32	6	ePg	Pg	23 41 59.9	-6.9
PTOM				eSn	Sn	23 42 30.1	-3.9
PTOM				eSg	Sg	23 42 43.7	-7.4
	comp=E,60nm,0.3s						
PTOM	Tomar	3.32	6	Pn	Pn	23 41 51.5	-2.4
PTOM				Pg	Pg	23 41 59.9	-6.9
PTOM				Sn	Sn	23 42 30.1	-3.9
PTOM				Lg		23 42 43.7	
	comp=E,30nm,0.3s						
PTOM	Tomar	3.32	6	Pn	Pn	23 41 51.5	-2.4
PTOM				Sn	Sn	23 42 30.1	-3.9
PTOM	Tomar	3.32	6	ePg	Pg	23 41 59.9	-6.9
PTOM				eSn	Sn	23 42 30.1	-3.9
EMIJ	Mijas	3.33	84	Pn	Pn	23 41 51.5	-2.5
	comp=E,2.2nm,0.1s,SNR=16						
EMIJ				Sn	Sn	23 42 29.2	-5.0
	comp=E,7.6nm,0.3s,SNR=5.0						
ELOJ	Sierra Loja	3.89	76	Pn	Pn	23 42 01.5	-0.6
	comp=E,1.7nm,0.2s,SNR=7.9						
ELOJ				Sn	Sn	23 42 44.7	-3.8
	comp=E,2.9nm,0.2s,SNR=7.9						
EADA	Adamuz	3.91	60	Pn	Pn	23 41 59.3	-2.9
	comp=E,7.9nm,0.2s,SNR=50						
EADA				Sn	Sn	23 42 42.5	-6.3
	comp=E,5.5nm,0.1s,SNR=5.0						
EADA				Lg		23 43 02.1	
	comp=E,7.9nm,0.1s,SNR=4.0						
EADA	Adamuz	3.91	60	Pn	Pn	23 41 59.3	-2.9
EADA				Sn	Sn	23 42 41.3	-7.5
EADA				Lg		23 43 02.1	
EADA	Adamuz	3.91	60	Pn	Pn	23 41 59.3	-2.9
	comp=E,7.9nm,0.2s,SNR=50						
EADA				Sn	Sn	23 42 41.3	-7.5
	comp=E,5.5nm,0.1s,SNR=5.0						
ELUQ	Luque	3.91	70	Pn	Pn	23 42 00.7	-1.5
	comp=E,3.0nm,0.2s,SNR=9.1						
ELUQ				Sn	Sn	23 42 42.8	-6.0
	comp=E,6.4nm,0.2s,SNR=7.9						
ERON	Agron	4.15	79	Pn	Pn	23 42 04.0	-1.6
	comp=E,4.1nm,0.2s,SNR=7.9						
ERON				Sn	Sn	23 42 50.2	-4.7
	comp=E,3.5nm,0.2s,SNR=7.9						
MIF	Mishlifen	4.18	133	Pn	Pn	23 42 04.0	-2.0
MIF				Sn	Sn	23 42 45.0	-11
MIF	Mishlifen	4.18	133	iP	Pn	23 42 04.0	-2.0
MTE	Manteigas	4.21	14	ePn	Pn	23 42 03.7	-2.9
MTE				eSn	Sn	23 42 51.4	-5.2
MTE				eSg	Sg	23 43 14.3	-6.5
	comp=E,26nm,0.4s						
MTE	Manteigas	4.21	14	Pn	Pn	23 42 03.8	-2.8
MTE				Sn	Sn	23 42 51.4	-5.2
MTE				Lg		23 43 14.3	
	comp=E,13nm,0.4s						
MTE	Manteigas	4.21	14	ePn	Pn	23 42 03.7	-2.9
MTE				eSn	Sn	23 42 51.4	-5.2
MTE				eSg	Sg	23 43 14.3	-6.5
	comp=E,26nm,0.4s						
ECOG	Cogollos-Vega	4.38	76	Pn	Pn	23 42 06.9	-2.0
	comp=E,2.8nm,0.2s,SNR=7.2						
ECOG				Sn	Sn	23 42 55.6	-5.1
	comp=E,4.0nm,0.2s,SNR=5.0						
TZK	Tazeka	4.45	119	Pn	Pn	23 42 07.0	-2.9
TZK				Sn	Sn	23 42 53.0	-9.5
TZK	Tazeka	4.45	119	eP	Pn	23 42 07.0	-2.9
EQUE	Quentar	4.46	77	Pn	Pn	23 42 08.1	-2.1
	comp=E,3.5nm,0.2s,SNR=13						
EQUE				Sn	Sn	23 42 56.9	-6.0
	comp=E,5.9nm,0.2s,SNR=7.9						
PVIS	Viseu	4.46	10	ePn	Pn	23 42 07.1	-3.0
PVIS	Viseu	4.46	10	ePg	Pg	23 42 21.9	-7.7
PVIS				eSn	Sn	23 42 57.3	-5.6
PVIS				eSg	Sg	23 43 21.5	-7.6
	comp=E,24nm,0.3s						
PVIS	Viseu	4.46	10	Pn	Pn	23 42 07.1	-3.0
PVIS				Pg	Pg	23 42 21.9	-7.7
PVIS				Sn	Sn	23 42 57.7	-5.2
PVIS				Lg		23 43 21.5	
	comp=E,12nm,0.3s						
PVIS	Viseu	4.46	10	Pn	Pn	23 42 07.1	-3.0
PVIS				Sn	Sn	23 42 57.7	-5.2
PVIS	Viseu	4.46	10	ePg	Pg	23 42 21.9	-7.7
PVIS				eSn	Sn	23 42 57.3	-5.6
PVIS				eSg	Sg	23 43 21.5	-7.6
	comp=E,24nm,0.3s						
EBAN	Banos Encina	4.47	64	Pn	Pn	23 42 06.7	-3.5
	comp=E,5.0nm,0.2s,SNR=12						
EBAN				Sn	Sn	23 42 56.1	-7.0
	comp=E,4.3nm,0.1s,SNR=5.0						
EBAN				Lg		23 43 19.8	
	comp=E,4.5nm,0.2s,SNR=4.0						
CZD	Col de Zad	4.55	135	Pn	Pn	23 42 08.0	-3.4
CZD				Sn	Sn	23 42 52.0	-13
CZD	Col de Zad	4.55	135	iP	Pn	23 42 08.0	-3.4
CIA	Chichaoua	4.74	179	Pn	Pn	23 42 10.0	-4.0
CIA				Sn	Sn	23 42 56.0	-14
CIA	Chichaoua	4.74	179	iP	Pn	23 42 10.0	-4.0
EQES	Quesada	4.88	71	Pn	Pn	23 42 13.1	-3.0
	comp=E,2.7nm,0.2s,SNR=21						
EQES				Sn	Sn	23 43 06.9	-6.7
	comp=E,6.4nm,0.2s,SNR=5.0						
EQES	Quesada	4.88	71	Pn	Pn	23 42 13.1	-3.0
	comp=E,2.7nm,0.2s,SNR=21						
EQES				Sn	Sn	23 43 06.9	-6.6
	comp=E,6.4nm,0.2s,SNR=5.0						
PVRL	Vila Real	5.04	10	ePn	Pn	23 42 15.1	-3.2
PVRL				eSn	Sn	23 43 10.8	-6.6
PVRL				eSg	Sg	23 43 39.3	-9.0
	comp=E,12nm,0.4s						
PVRL	Vila Real	5.04	10	Pn	Pn	23 42 15.1	-3.2
PVRL				Sn	Sn	23 43 10.8	-6.6
PVRL				Lg		23 43 39.3	
	comp=E,5.8nm,0.4s						
ESDC	Sonseca Array	5.14	48	Pn	Pn	23 42 16.1	-3.5
	comp=E,6.4nm,0.1s,baz=234,slow=13,SNR=30						
ESDC				Sn	Sn	23 43 12.0	-7.9
	comp=E,6.1nm,0.3s,baz=231,slow=24,SNR=7.9						
ESDC				Lg		23 43 40.8	
	comp=E,8.6nm,0.5s,baz=226,slow=29,SNR=7.9						
ESDC	Sonseca Array	5.14	48	Pn	Pn	23 42 16.1	-3.5
	comp=E,6.4nm,0.1s,SNR=30						
ESDC				Sn	Sn	23 43 12.0	-7.9
	comp=E,6.1nm,0.3s,SNR=7.9						
EHUE	Huescar	5.25	72	Pn	Pn	23 42 20.0	-1.3
	comp=E,2.4nm,0.1s,SNR=12						
EHUE				Sn	Sn	23 43 16.7	-6.1
	comp=E,1.8nm,0.2s,SNR=5.0						
ELOB	Lobios	5.58	6	Pn	Pn	23 42 22.0	-4.0
	comp=E,4.8nm,0.2s,SNR=18						
ELOB				Sn	Sn	23 43 22.1	-9.1
	comp=E,5.3nm,0.3s,SNR=5.0						

ELOB				Lg		23 43 57.4	
	comp=E,10nm,0.6s,SNR=4.0						
ELOB	**Lobios**	**5.58**	**6**	Pn	Pn	23 42 22.0	-4.0
ELOB				Sn	Sn	23 43 22.1	-9.1
ELOB				Lg		23 43 56.1	
ELOB	**Lobios**	**5.58**	**6**	Pn	Pn	23 42 22.0	-3.9
	comp=E,4.8nm,0.2s,SNR=18						
EVIA	**Vianos**	**5.58**	**64**	Pn	Pn	23 42 21.9	-4.0
	comp=E,2.0nm,0.2s,SNR=7.9						
EVIA				Sn	Sn	23 43 23.5	-7.6
	comp=E,2.0nm,0.2s,SNR=7.9						
EVIA				Lg		23 43 57.5	
	comp=E,6.5nm,0.4s,SNR=7.9						
EVIA	**Vianos**	**5.58**	**64**	Pn	Pn	23 42 21.9	-4.0
EVIA				Sn	Sn	23 43 23.5	-7.6
EVIA				Lg		23 43 55.7	
GUD	**Guadarrama**	**5.70**	**39**	Pn	Pn	23 42 24.0	-3.5
	comp=E,1.2nm,0.2s,SNR=7.9						
GUD				Sn	Sn	23 43 26.5	-7.5
	comp=E,2.6nm,0.3s,SNR=7.9						
GUD				Lg		23 43 57.2	
	comp=E,7.2nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	**5.70**	**39**	Pn	Pn	23 42 24.0	-3.5
GUD				Sn	Sn	23 43 26.5	-7.5
GUD				Lg		23 43 55.5	
PBRG	**Braganca**	**5.73**	**16**	*e*Pn	Pn	23 42 24.4	-3.6
PBRG				*e*Sn	Sn	23 43 27.9	-7.0
	comp=E,10.0nm,0.6s						
PBRG	**Braganca**	**5.73**	**16**	Pn	Pn	23 42 24.4	-3.6
PBRG				Sn	Sn	23 43 27.9	-7.0
	comp=E,5.0nm,0.6s						
EZAM	**Zamans**	**5.83**	**1**	Pn	Pn	23 42 26.2	-3.2
	comp=E,2.4nm,0.1s,SNR=6.3						
EZAM				Sn	Sn	23 43 28.3	-9.0
	comp=E,4.8nm,0.3s						
ECAL	**Calabor**	**5.86**	**16**	Pn	Pn	23 42 26.4	-3.5
	comp=E,3.4nm,0.1s,SNR=15						
ECAL				Sn	Sn	23 43 30.4	-7.8
	comp=E,7.9nm,0.3s,SNR=5.0						
ECAL				Lg		23 44 04.3	
	comp=E,63nm,0.6s,SNR=7.9						
ECAL	**Calabor**	**5.86**	**16**	Pn	Pn	23 42 26.4	-3.5
	comp=E,3.4nm,0.1s,SNR=15						
ERUA	**La Rua**	**6.22**	**12**	Pn	Pn	23 42 29.3	-5.6
	comp=E,4.1nm,0.1s,SNR=4.0						
ERUA				Sn	Sn	23 43 38.2	-8.8
	comp=E,3.4nm,0.2s,SNR=7.9						
ERUA				Lg		23 44 19.1	
	comp=E,4.0nm,0.5s,SNR=7.9						
ERUA	**La Rua**	**6.22**	**12**	Pn	Pn	23 42 29.3	-5.6
ERUA				Sn	Sn	23 43 38.2	-8.8
ERUA				Lg		23 44 16.3	
ETOB	**Tobarra**	**6.28**	**66**	Pn	Pn	23 42 30.9	-4.9
	comp=E,1.7nm,0.1s,SNR=20						
ETOB				Sn	Sn	23 43 39.6	-9.1
	comp=E,6.2nm,0.3s,SNR=5.0						
ETOB	**Tobarra**	**6.28**	**66**	Pn	Pn	23 42 30.9	-4.9
	comp=E,1.7nm,0.1s,SNR=20						
ETOB				Sn	Sn	23 43 39.6	-9.0
	comp=E,6.2nm,0.3s,SNR=5.0						
EMUR	**La Murta**	**6.30**	**74**	Pn	Pn	23 42 32.0	-4.1
	comp=E,1.3nm,0.2s,SNR=7.9						
EMUR				Sn	Sn	23 43 39.6	-9.5
	comp=E,3.5nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**6.30**	**74**	Pn	Pn	23 42 32.0	-4.1
	comp=E,1.3nm,0.2s,SNR=7.9						
EMUR				Sn	Sn	23 43 39.6	-9.5
	comp=E,3.5nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.63**	**359**	Pn	Pn	23 42 36.6	-4.1
	SNR=4.0						
EMAZ				Sn	Sn	23 43 46.8	-10
	comp=E,3.7nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.63**	**359**	Pn	Pn	23 42 36.6	-4.1
	SNR=4.0						
EPON	**Pontenova**	**7.13**	**10**	Pn	Pn	23 42 42.5	-5.2
	comp=E,0.4nm,0.1s,SNR=7.9						
EPON				Sn	Sn	23 43 59.8	-10
	comp=E,1.9nm,0.3s,SNR=7.9						
EARI	**Arriondas**	**7.53**	**21**	Pn	Pn	23 42 52.4	-0.9
	comp=E,0.2nm,0.1s,SNR=7.9						
EARI				Sn	Sn	23 44 08.6	-11
	comp=E,0.5nm,0.3s,SNR=7.9						
EARI				Lg		23 44 59.4	
	comp=E,0.2nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**7.53**	**21**	Pn	Pn	23 42 46.3	-7.0
EARI				Sn	Sn	23 44 07.4	-12
EARI				Lg		23 44 59.4	
EMOS	**Mosqueruela**	**7.75**	**56**	Pn	Pn	23 42 53.5	-2.9
	comp=E,0.2nm,0.1s,SNR=7.9						
EMOS				Sn	Sn	23 44 13.6	-12
	comp=E,2.7nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**7.75**	**56**	Pn	Pn	23 42 53.5	-2.9
ESAC	**San Caprasio**	**8.49**	**48**	Pn	P	23 43 02.8	-3.9
	comp=E,2.2nm,0.2s,SNR=4.0						
ESAC	**San Caprasio**	**8.49**	**48**	Pn	P	23 43 02.8	-3.9
EIBI	**Ibiza**	**8.55**	**68**	Pn	P	23 43 03.7	-3.9
	comp=E,0.2nm,0.2s,SNR=7.9						
EIBI				Sn	Sn	23 44 33.5	-12
	comp=E,0.6nm,0.2s,SNR=7.9						
EIBI	**Ibiza**	**8.55**	**68**	Pn	P	23 43 03.7	-3.9
SJPF	**Ste Jean**	**8.99**	**39**	*e*Pn	P	23 43 08.8	-4.9
SJPF				*e*Sn	Sn	23 44 45.2	-11
	comp=E,1.8nm,0.3s						
ETSF	**Etsaut**	**9.19**	**42**	*e*Pn	P	23 43 11.6	-4.8
ETSF				*e*Sn	Sn	23 44 49.3	-12
	comp=E,0.9nm,0.4s						
EBIE	**Bielsa**	**9.44**	**45**	Pn	P	23 43 16.0	-3.9
	comp=E,0.1nm,0.1s,SNR=7.9						
EBIE				Sn	Sn	23 44 54.6	-13
	comp=E,0.2nm,0.1s,SNR=4.0						
EPF	**Esparros**	**9.77**	**44**	*e*Pn	P	23 43 19.5	-4.9
EPF				*e*Sn	Sn	23 45 04.4	-11
	comp=E,0.5nm,0.2s						
MTLF	**Montolieu**	**11.05**	**47**	*e*Pn	P	23 43 36.2	-5.7
SGMF	**Saint Gilles**	**12.81**	**19**	*e*Pn	P	23 44 00.8	-4.9

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*IDC **07** 23:44:07.0±1.4, 50.35N×88.41E, mb3.7/4, mb1 3.9/8, mb1mx3.7/22, mbtmp3.8/8, ML3.7/4, Error ellipse: s-maj=17.9km s-min=10.6km az=108.0*

*MOS **07** 23:44:08.3±1.1, 50.46N×88.11E, h15^{km}, mb4.0/3, Error ellipse: s-maj=14.8km s-min=13.1km az=156.3*

*NEIC **07** 23:44:12.2±0.7, 50.40N×88.23E, h35^{km}, mb3.3/2, Error ellipse: s-maj=11.4km s-min=9.9km az=223.0*

*NNC **07** 23:44:15.3±2.6, 50.23N×87.79E, h33^{km}, mpv4.1, Error ellipse: s-maj=27.1km s-min=9.3km az=111.0*

*BJI **07** 23:44:20.5, 49.60N×87.54E, h13^{km}, ML3.8*

ISC 07 23:44:08.2±0.6**, 50.56N**±0.04×**88.00E**±0.07**, h10^{km}, n40,** σ**1^{s}29**/51**, mb3.8**/4**, 16C-4D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAL	**Zalesovo**	**3.91**	**331**	Pn	**Pb**	**23 45 15.1**	**-1.9**
	6.3nm,0.3s,baz=322,slow=9.3,SNR=9.4						
ZAL				Sn	**Sb**	**23 46 03.7**	**-0.9**
	8.8nm,0.3s,baz=307,slow=6.2,SNR=3.9						
ZAL				Lg		23 46 20.6	
	20nm,0.3s,baz=186,slow=8.7,SNR=5.2						
NVS	**Novosibirsk**	**5.17**	**328**	*i* PN	**Pn**	**23 45 30.0**	**+2.4**
NVS				*e*S	**Sn**	**23 46 34.4**	**+6.4**
MK31	**Makanchi Array**	**5.34**	**227**	⇑Pn	**Pn**	**23 45 30.4**	**+0.4**
	34nm,0.5s,baz=59,slow=12,SNR=492						
MK31				⇑Sn	**Sn**	**23 46 33.0**	**+0.7**
	15nm,0.5s,baz=52,slow=23,SNR=5.5						
MK31				⇑Lg		23 46 55.4	
	43nm,0.6s,baz=55,slow=30,SNR=3.9						
MK31	**Makanchi Array**	**5.34**	**227**	⇑Pn	**Pn**	**23 45 30.4**	**+0.4**
	34nm,0.5s						
MK31				Sn	**Sn**	**23 46 33.0**	**+0.7**
MK31				Lg		23 46 55.4	
MKAR	**Makanchi Array**	**5.34**	**227**	Pn	**Pn**	**23 45 30.4**	**+0.4**
	7.1nm,0.3s,baz=59,slow=13,SNR=313						
MKAR				Pg	**Pb**	**23 45 36.3**	**-5.1**
	11nm,0.3s,baz=61,slow=12,SNR=56						
MKAR				Sn	**Sn**	**23 46 32.2**	**0.0**
	14nm,0.3s,baz=53,slow=26,SNR=11						
MKAR				Lg		23 46 54.4	
	14nm,0.3s,baz=53,slow=32,SNR=6.9						
MKAR	**Makanchi Array**	**5.34**	**227**	Pn	**Pn**	**23 45 30.4**	**+0.4**
MKAR				Sn	**Sn**	**23 46 32.2**	**0.0**
MKAR	**Makanchi Array**	**5.34**	**227**	PN	**Pn**	**23 45 30.4**	**+0.4**
MKAR						23 46 32.2	
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MKAR				pmax	pmax		
	comp=Z,11nm,0.3s						
KURK	**Kurchatov**	**5.97**	**275**	⇓Pn	**Pn**	**23 45 41.1**	**+2.3**
	comp=Z,9.5nm,0.9s						
KURK				⇑Lg		23 47 22.3	
	comp=Z,53nm,0.6s						
KURK	**Kurchatov**	**5.97**	**275**	⇓Pn	**Pn**	**23 45 41.1**	**+2.3**
KURK				Lg		23 47 22.3	
KURK	**Kurchatov**	**5.97**	**275**	PN	**Pn**	**23 45 41.0**	**+2.2**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KRAR	**Krasnoyarsk**	**6.19**	**26**	*e*PN	**Pn**	**23 45 43.2**	**+1.2**
KRAR				*i*		23 46 04.3	
KRAR				pmax	pmax		
	comp=N,27nm,0.5s						
KRAR				pmax	pmax		
	comp=N,33nm,0.5s						
WMQ	**Urumqi**	**6.75**	**182**	*e*PG	**Pb**	**23 46 02.5**	**-3.0**
WMQ				Smax			
	comp=N,40nm,0.8s						
WMQ				Smax			
	comp=E,50nm,1.0s						
VOSK	**Vostochnaya**	**10.80**	**288**	⇓Pn	**P**	**23 46 45.5**	**-0.3**
	comp=E,1.1nm,0.5s						
VOSK				⇑Sn	**S**	**23 48 46.0**	**-1.7**
	comp=E,5.1nm,1.1s						
VOSK	**Vostochnaya**	**10.80**	**288**	⇓Pn	**P**	**23 46 45.5**	**-0.3**
	comp=E,1.1nm,0.4s						
VOSK				Sn	**S**	**23 48 46.0**	**-1.7**
CHKZ	**Chkalovo**	**11.13**	**293**	⇑Pn	**P**	**23 46 50.3**	**-0.1**
	comp=E,1.7nm,0.7s						
CHKZ				⇑Sn	**S**	**23 48 53.9**	**-2.0**
	comp=E,3.5nm,0.8s						
CHKZ	**Chkalovo**	**11.13**	**293**	⇑Pn	**P**	**23 46 50.3**	**-0.1**
CHKZ				Sn	**S**	**23 48 53.9**	**-2.0**
CHKZ	**Chkalovo**	**11.13**	**293**	P	**P**	**23 46 50.2**	**-0.2**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVA0	**Borovoye Array**	**11.18**	**290**	⇑Sn	**S**	**23 48 57.2**	**0.0**
	comp=Z,0.6nm,0.7s,baz=92,slow=22,SNR=4.8						
BVAR	**Borovoye Array**	**11.18**	**290**	Pn	**P**	**23 46 51.3**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=100,slow=14,SNR=9.1						
BVAR				Sn	**S**	**23 48 56.2**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=86,slow=22,SNR=7.4						
BVAR	**Borovoye Array**	**11.18**	**290**	P	**P**	**23 46 51.3**	**+0.2**
BVAR						23 48 56.2	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	**Borovoye**	**11.25**	**290**	*e*Pn	**P**	**23 46 52.8**	**+0.8**
	comp=Z,1.0nm,0.3s						
AAK	**Ala-Archa**	**12.20**	**235**	⇑Lg		23 50 33.8	
	comp=Z,14nm,1.3s						
AAK	**Ala-Archa**	**12.20**	**235**	*e*Pn	**P**	**23 47 03.6**	**-1.3**
	comp=Z,1.5nm,0.6s						
SONM	**Songino Array**	**12.34**	**96**	Lg		23 50 20.4	
	baz=287,slow=20,SNR=4.0						
KK31	**Karatay Array**	**14.08**	**245**	⇑Pn	**P**	**23 47 29.4**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=50,slow=13,SNR=11						
KK31				⇑Sn	**S**	**23 50 02.3**	**-4.9**
	comp=Z,1.5nm,0.8s,baz=58,slow=22,SNR=4.4						
AB31	**Akbulak array**	**18.08**	**277**	⇑P	**P**	**23 48 22.9**	**+2.0**
	comp=Z,0.8nm,0.7s,baz=73,slow=10,SNR=6.8						
AKTK	**Aktyubinsk**	**19.02**	**281**	⇑P	**P**	**23 48 34.0**	**+1.6**
AKTO	**Aktyubinsk**	**19.02**	**281**	⇑P	**P**	**23 48 34.0**	**+1.6**
	comp=Z,1.9nm,1.9s						
AKTO	**Aktyubinsk**	**19.02**	**281**	P	**P**	**23 48 33.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=101,slow=14,SNR=6.0						
LSA	**Lhasa**	**20.98**	**172**	P	**P**	**23 48 48.2**	**-5.6**
	comp=Z,1.1nm,0.4s						
FINES	**FINESS Array B**	**34.94**	**312**	P	**P**	**23 51 02.0**	**+0.2**
	comp=Z,2.5nm,1.1s,mb4.1,baz=63,slow=4.3,SNR=6.8						
FINES	**FINESS Array B**	**34.94**	**312**	P	**P**	**23 51 02.0**	**+0.2**
FINES				pmax	pmax		
	comp=Z,3.0nm,1.1s						
NACB	**Ninganchiao**	**36.98**	**123**	*e*P	**P**	**23 51 17.2**	**-2.3**
KWP	**Kalwaria**	**40.67**	**295**	P	**P**	**23 51 51.6**	**+1.7**
NOA	**NORSAR Array B**	**41.94**	**315**	P	**P**	**23 52 00.2**	**+0.1**
	comp=Z,0.9nm,0.8s,mb3.5,baz=61,slow=5.6,SNR=3.3						
NOA	**NORSAR Array B**	**41.94**	**315**	P	**P**	**23 52 00.2**	**+0.1**
NOA	**NORSAR Array B**	**41.94**	**315**	P	**P**	**23 52 00.2**	**+0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**57.41**	**25**	P	**P**	**23 53 57.5**	**-1.2**
	comp=Z,0.5nm,0.6s,mb3.7,baz=327,slow=5.3,SNR=9.6						
ILAR	**Eielson Array**	**57.41**	**25**	P	**P**	**23 53 57.5**	**-1.2**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESDC	**Sonseca Array**	**61.78**	**299**	P	**P**	**23 54 29.2**	**+0.1**
	comp=Z,0.4nm,0.5s,mb3.8,baz=41,slow=7.0,SNR=4.2						

CASC 08 00:21:11.7±2.1**, 11.72N**×**88.56W, h25^{km}**±20^{km}**, MD3.9, ML3.4, 9C-9D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.70**	**24**	⇑*e*P	Pn	00 21 39.0	-1.4
CNCH				*e*S	Sn	00 22 01.7	+0.2
VSM	**San Miguel**	**1.72**	**9**	⇓*e*P	Pn	00 21 40.2	-0.4
VSM				*e*S	Sn	00 22 02.0	-0.1
BLLM	**Bellamira**	**1.74**	**10**	⇑*e*P	Pn	00 21 39.9	-1.0
BLLM				*e*S	Sn	00 22 01.6	-1.0
CRIN	**San Cristobal**	**1.77**	**56**	⇑*e*P	Pn	00 21 41.7	+0.4
CRIN				*e*S	Sn	00 22 05.8	+2.7
LEON	**Leon**	**1.77**	**67**	⇑*e*P	Pn	00 21 40.9	-0.4
LEON				*e*S	Sn	00 22 03.7	+0.5
TEL3	**Telica 3**	**1.88**	**63**	⇓*e*P	Pn	00 21 42.5	-0.3
TEL3				*e*S	Sn	00 22 06.4	+0.4
TELN	**Telica**	**1.90**	**62**	⇑*e*P	Pn	00 21 43.2	0.0
TELN				*e*S	Sn	00 22 07.7	+1.1
SNVI	**San Vicente**	**1.91**	**352**	⇓*e*P	Pn	00 21 42.8	-0.5
SNVI				*e*S	Sn	00 22 06.5	-0.1
MIRN	**Miramar**	**1.94**	**68**	⇑*e*P	Pn	00 21 43.3	-0.5
MIRN				*e*S	Sn	00 22 07.5	-0.1
LFRS	**El Faro**	**1.96**	**345**	⇑*e*P	Pn	00 21 43.1	-0.9
LFRS				*e*S	Sn	00 22 08.0	0.0
LCBS	**La Ceiba**	**1.97**	**348**	⇑*e*P	Pn	00 21 43.3	-0.8
LCBS				*e*S	Sn	00 22 07.8	-0.5
CNGN	**Cerro Negro**	**1.98**	**67**	⇓*e*P	Pn	00 21 43.8	-0.5
CNGN				*e*S	Sn	00 22 09.7	+1.2
COPN	**Copaltepe**	**1.98**	**76**	⇓*e*P	Pn	00 21 43.6	-0.6
COPN				*e*S	Sn	00 22 08.6	+0.1
LBRS	**Las Brisas**	**2.06**	**347**	⇓*e*P	Pn	00 21 45.3	-0.3
LBRS				*e*S	Sn	00 22 12.5	+1.7
MOMJ	**Momotombo**	**2.09**	**71**	⇓*e*P	Pn	00 21 45.1	-0.8
MOMJ				*e*S	Sn	00 22 11.4	+0.1
LFU	**La Fuente**	**2.09**	**345**	*e*P	Pn	00 21 45.8	-0.2
LFU				*e*S	Sn	00 22 14.8	+3.4
BOQS	**Boqueron**	**2.13**	**341**	⇓*e*P	Pn	00 21 46.2	-0.2
BOQS				*e*S	Sn	00 22 12.5	+0.2
MGAN	**Managua**	**2.30**	**79**	*e*S	Sn	00 22 15.4	-1.3
	comp=E,340nm,0.4s						
SBLS	**San Blas**	**2.35**	**334**	*e*P	Pn	00 21 47.1	-2.6
SBLS				*e*S	Sn	00 22 17.2	-0.9
WILN	**Americas 2**	**2.36**	**79**	*e*S	Sn	00 22 17.2	-1.0
SNJE	**San Jose**	**2.37**	**335**	⇓*e*P	Pn	00 21 49.8	-0.1
SNJE				*e*S	Sn	00 22 19.1	+0.6
RTR	**El Retiro**	**2.41**	**334**	⇑*e*P	Pn	00 21 50.9	+0.3
RTR				*e*S	Sn	00 22 21.2	+1.6
APON	**Apoyo**	**2.44**	**85**	*e*P	Pn	00 21 49.7	-1.3
APON				*e*S	Sn	00 22 18.7	-1.7

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*BJI **08** 00:25:36.3, 17.80S×178.60W, h551^{km}, mB4.7, mb4.0*

*NEIC **08** 00:25:38.3±0.9, 17.76S×178.65W, h551^{km}±13^{km}, mb4.3/4, Error ellipse: s-maj=23.9km s-min=11.0km az=153.0*

*IDC **08** 00:25:38.3±1.5, 17.60S×178.69W, h544^{km}±18^{km}, mb3.4/8, mb1 3.7/10, mb1mx3.6/15, mbtmp4.3/10, Error ellipse: s-maj=44.3km s-min=12.5km az=151.0*

ISC 08 00:25:37.6±0.9**, 17.7S**±0.1×**178.68W**±0.09**, h553^{km}**±12^{km}**, n50,** σ**0^{s}82**/29**, mb3.8**/12**, 7C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.64**	**61**	P	**P**	**00 27 31.7**	**-1.0**
	8.1nm,0.3s,baz=100,slow=6.3,SNR=9.5						
AFI				S	**S**	**00 29 04.4**	**-0.1**
	1.9nm,0.3s,slow=20,SNR=2.7						
AFI	**Afiamalu**	**7.64**	**61**	*e*Pn	**P**	**00 27 32.5**	**-0.2**
	51nm,0.7s						
DZM	**Mont Dzumac**	**14.65**	**250**	P	**P**	**00 28 45.1**	**+1.8**
	1.7nm,0.3s,baz=100,slow=22,SNR=14						
PMG	**Port Moresby**	**34.17**	**279**	*e*P	**P**	**00 31 38.1**	**-0.5**
	10nm,1.1s,mb4.3						
STKA	**Stephens Creek**	**38.50**	**241**	P	**P**	**00 32 15.2**	**+1.2**
	4.7nm,0.5s,mb4.3,baz=92,slow=9.1,SNR=20						
STKA	**Stephens Creek**	**38.50**	**241**	*e*P	**P**	**00 32 14.4**	**+0.4**
WB2	**Warramunga Arr**	**44.40**	**259**	*e*P	**P**	**00 33 00.7**	**-0.4**
WRAB	**Tennant Creek**	**44.40**	**259**	*e*P	**P**	**00 33 00.5**	**-0.6**
	1.5nm,0.6s,mb3.7						
WRA	**Warramunga Arr**	**44.41**	**259**	P	**P**	**00 33 00.6**	**-0.6**
	0.8nm,0.5s,mb3.5,baz=95,slow=7.1,SNR=22						
WRA				PcP	PcP	00 34 32.6	-0.6
	0.5nm,0.5s,baz=94,slow=3.8,SNR=5.4						
ASPA	**Alice Springs**	**44.60**	**254**	*e*P	**P**	**00 33 02.6**	**0.0**
MJAR	**Matsushiro Arr**	**67.60**	**323**	P	**P**	**00 35 41.4**	**+0.2**
	0.9nm,0.4s,mb3.7,baz=170,slow=5.6,SNR=5.3						
QSPA	**South Pole Qui**	**72.34**	**180**	*e*P	**P**	**00 36 07.8**	**-0.7**
MDJ	**Mudanjiang**	**77.88**	**325**	P	**P**	**00 36 39.0**	**-0.6**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb3.8						
MDJ				AMB	AMB		
	comp=Z,180nm,4.1s						
NVAR	**Mina Array Bea**	**79.46**	**44**	P	**P**	**00 36 49.2**	**+1.1**
	comp=Z,1.0nm,0.7s,mb3.3,baz=220,slow=7.6,SNR=8.0						
CN2	**Changchun**	**79.71**	**322**	*e*P	**P**	**00 36 49.5**	**+0.3**
ILAR	**Eielson Array**	**85.76**	**13**	P	**P**	**00 37 18.4**	**-0.6**
	comp=Z,1.1nm,0.4s,mb3.8,baz=220,slow=5.0,SNR=34						
TXAR	**Lajitas Array**	**86.11**	**58**	P	**P**	**00 37 23.1**	**+1.5**
	comp=Z,1.1nm,0.7s,mb3.6,baz=221,slow=6.3,SNR=11						
PDAR	**Pinedale Array**	**87.39**	**44**	P	**P**	**00 37 27.9**	**+0.7**
	comp=Z,1.1nm,0.5s,mb3.7,baz=232,slow=3.0,SNR=11						
SNAA	**Sanae**	**90.80**	**179**	⇑*i*	**P**	**00 37 40.7**	**-1.7**
SNAA	**Sanae**	**90.80**	**179**	*e*	**P**	**00 37 42.8**	**+0.4**
VNA3	**Neumayer Olymp**	**90.95**	**176**	⇑*i*	**P**	**00 37 42.3**	**-0.8**
VNA3	**Neumayer Olymp**	**90.95**	**176**	*e*	**P**	**00 37 44.7**	**+1.6**
VNA2	**Neumayer--Watz**	**91.39**	**177**	⇑*i*	**P**	**00 37 44.2**	**-0.9**
VNA2	**Neumayer--Watz**	**91.39**	**177**	*e*	**P**	**00 37 46.0**	**+0.9**
VNA1	**Neumayer--Stat**	**91.61**	**177**	⇑*i*	**P**	**00 37 45.1**	**-1.0**
VNA1	**Neumayer--Stat**	**91.61**	**177**	*e*	**P**	**00 37 46.3**	**+0.2**
INK	**Inuvik**	**91.77**	**15**	*e*P	**P**	**00 37 46.5**	**-0.4**
	comp=Z,1.5nm,0.7s,mb4.1						
YKA	**Yellowknife Ar**	**94.26**	**25**	P	**P**	**00 37 58.1**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.8,baz=229,slow=4.7,SNR=4.3						
MKAR	**Makanchi Array**	**108.81**	**314**	PKiKP		00 43 04.0	
	comp=Z,0.4nm,0.5s,baz=114,slow=0.5,SNR=9.4						
BVAR	**Borovoye Array**	**116.53**	**321**	PKP	PKPdf	00 43 18.8	+0.3
	comp=Z,0.8nm,0.3s,baz=127,slow=2.3,SNR=11						
ARCES	**ARCESS Array B**	**126.08**	**350**	PKP	PKPdf	00 43 37.2	+0.7
	comp=Z,3.8nm,1.0s,baz=35,slow=2.4,SNR=9.9						
FINES	**FINESS Array B**	**132.93**	**344**	PKP	PKPdf	00 43 49.5	-0.3
	comp=Z,1.2nm,0.8s,baz=63,slow=4.3,SNR=3.6						
BURAR	**Bucovina Array**	**144.32**	**332**	⇑P	PKPdf	00 44 12.9	+2.4
BRTR	**Keskin Array B**	**144.46**	**315**	PKP	PKPdf	00 44 12.7	+1.7
	comp=Z,1.4nm,0.4s						
STHS	**Stebnicka Huta**	**144.51**	**337**	*e*	PKPdf	00 44 12.9	+2.1
KOLS	**Kolonicke sedl**	**144.52**	**336**	*e*	PKPdf	00 44 10.6	-0.2
CFR	**Carcaliu**	**144.63**	**327**	⇓P	PKPdf	00 44 12.2	+1.1
CRVS	**Cervenica-Dubn**	**144.86**	**337**	*e*	PKPdf	00 44 12.8	+1.4
HARR	**Harsova**	**145.07**	**326**	⇓P	PKPdf	00 44 13.7	+1.8
CLL	**Collm**	**145.22**	**347**	⇑*i*PKP1	PKPbc	00 44 14.4	+1.5
UPC	**Upice**	**145.23**	**344**	*e*PKP	PKPdf	00 44 16.7	+4.7
UPC				*e*x	x	00 45 13.6	
DPC	**Dobruska-Polom**	**145.29**	**343**	*e*PKP	PKPdf	00 44 15.3	+3.2
KECS	**Kecovo**	**145.57**	**337**	*e*	PKPdf	00 44 15.7	+3.1
PVCC	**Panska Ves**	**145.59**	**345**	*e*PKP	PKPdf	00 44 17.7	+5.1
DRGR		**146.05**	**333**	⇑P	PKPdf	00 44 16.4	+2.9
PRU	**Pruhonice**	**146.09**	**345**	*e*PKP	PKPdf	00 44 17.7	+4.3
VYHS	**Vyhne**	**146.15**	**339**	*e*	PKPdf	00 44 16.9	+3.3
TREC	**Trest**	**146.47**	**343**	*e*PKP	PKPdf	00 44 21.4	+7.3
KHC	**Kasperske Hory**	**147.12**	**345**	*e*PKP	PKPdf	00 44 19.9	+4.7
KHC				*e*x	x	00 44 24.4	
GERES	**GERESS Array B**	**147.36**	**345**	PKPbc	PKPdf	00 44 20.5	+5.0
	comp=Z,2.9nm,0.6s,baz=25,slow=2.8,SNR=34						

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*MOS **08** 00:26:45.1±1.9, 49.39N×110.18E, h22^{km}, mb4.4/1, Error ellipse: s-maj=13.6km s-min=7.7km az=98.5*

BYKL 08 00:26:43.8±0.3**, 49.27N**×**110.16E, h18^{km}**±14^{km}**, 2C-1D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KPC	**Khapcheranga**	**1.51**	**72**	*e*	Pn	00 27 10.3	0.0
KPC				*e*Pg	Pn	00 27 11.2	+0.9
KPC				Pmax		00 27 11.5	
	803nm,0.4s						
KPC				*e*		00 27 19.2	
KPC				*e*Sg	Sn	00 27 30.9	+1.3
KPC				Smax		00 27 31.6	
	2µm,0.1s						
KPC	**Khapcheranga**	**1.51**	**72**	*e*PN	Pn	00 27 11.2	+0.9
KPC				*e*		00 27 30.9	
KPC				pmax	pmax		
	comp=Z,807nm,0.4s						
KPC				smax			
	comp=N,2µm,0.1s						
TRTB	**Turuntaevo**	**3.37**	**333**	⇓*i*Pn	Pn	00 27 36.1	-0.7
TRTB				*e*		00 27 43.2	
TRTB				*e*Pg	Pn	00 27 45.0	+8.2
TRTB				Pmax		00 27 45.6	
	comp=N,353nm,0.9s						
TRTB				*e*Sg	Sn	00 28 26.8	+10
TRTB				Smax		00 28 40.3	
	comp=N,695nm,1.3s						
CIT	**Chita**	**3.50**	**37**	*e*Pg	Pn	00 27 46.5	+7.9
CIT				Pmax		00 27 57.4	
	comp=N,94nm,0.8s						
CIT				*e*Sg	Sn	00 28 31.4	+11
CIT				Smax		00 28 36.2	
	comp=N,1µm,0.9s						
CIT	**Chita**	**3.50**	**37**	*e*PN	Pn	00 27 46.4	+7.8
CIT				*e*		00 28 31.4	
CIT				pmax	pmax		
	comp=Z,51nm,0.5s						
CIT				smax			
	comp=E,1µm,0.8s						
FFNB	**Fofonovo**	**3.52**	**323**	*e*Pg	Pn	00 27 46.7	+7.8
FFNB				*e*Sg	Sn	00 28 31.8	+11
FFNB				Smax		00 28 38.4	
	comp=E,3µm,0.7s						
KAB	**Kabansk**	**3.57**	**323**	*e*Pg	Pn	00 27 48.8	+9.2
KAB				Pmax		00 27 57.7	
	comp=E,217nm,0.5s						
KAB				*e*Sg	Sn	00 28 33.8	+12
KAB				Smax		00 28 48.7	
	comp=E,4µm,1.2s						
KAB	**Kabansk**	**3.57**	**323**	*e*PN	Pn	00 27 48.9	+9.3
BTMB	**Babushkin**	**3.68**	**313**	*e*Pn	Pn	00 27 40.5	-0.7
BTMB				*e*Pg	Pn	00 27 50.2	+9.0
BTMB				Pmax		00 27 57.0	
	comp=E,47nm,0.2s						
BTMB				*e*Sg	Sn	00 28 36.6	+12
BTMB				Smax		00 28 41.7	
	comp=E,2µm,0.8s						
STDB	**Stepnoy Dvoret**	**3.77**	**322**	*e*Pn	Pn	00 27 43.4	+0.9
STDB				*e*Pg	Pn	00 27 52.4	+10
STDB				Pmax		00 28 03.3	
	comp=E,158nm,0.6s						
STDB				*e*Sg	Sn	00 28 41.7	+15
STDB				Smax		00 28 48.9	
	comp=E,4µm,1.0s						
ZRHB	**Zarechye**	**3.80**	**331**	*e*Pg	Pn	00 27 52.4	+10
ZRHB				Pmax		00 27 56.3	
	comp=E,264nm,1.0s						
ZRHB				*e*Sg	Sn	00 28 39.3	+12
ZRHB				Smax		00 29 01.2	
	comp=E,3µm,0.9s						
MXMB	**Maximikha**	**4.10**	**348**	*e*Pn	Pn	00 27 46.5	-0.6
MXMB				*e*Pg	Pn	00 27 58.4	+11
MXMB				Pmax		00 27 59.3	
	comp=E,186nm,0.9s						
MXMB				*e*Sg	Sn	00 28 52.1	+17
MXMB				Smax		00 29 05.7	
	comp=E,1µm,1.0s						
TRG	**Tyrgan**	**4.24**	**327**	*e*	Pn	00 27 47.4	-1.8
TRG				*e*Pg	Pn	00 28 01.3	+12
TRG				Pmax		00 28 15.5	
	comp=E,46nm,0.8s						
TRG				*e*Sn	Sn	00 28 37.0	-1.9
TRG				*e*Sg	Sn	00 28 54.7	+16
TRG				Smax		00 28 58.6	
	comp=E,761nm,1.0s						
TRG	**Tyrgan**	**4.24**	**327**	*e*PN	Pn	00 27 47.4	-1.8
TRG				*e*		00 27 59.0	
TRG				*e*S	Sn	00 28 37.0	-1.9
TRG				*e*		00 28 53.6	
TRG				pmax	pmax		
	comp=Z,42nm,0.4s						

TRG				smax			
	comp=E,759nm,1.0s						
LSTR	**Listvyanka**	**4.28**	**309**	*e*Pg	Pn	00 28 02.3	+13
LSTR				Pmax		00 28 22.2	
	comp=E,54nm,1.7s						
LSTR				*e*Sg	Sn	00 28 56.5	+17
LSTR				Smax		00 29 16.0	
	comp=E,502nm,1.3s						
LSTR	**Listvyanka**	**4.28**	**309**	*e*PN	Pn	00 28 02.1	+12
LSTR				*e*		00 28 56.4	
LSTR				pmax	pmax		
	comp=Z,47nm,0.9s						
LSTR				smax			
	comp=N,438nm,1.1s						
SYVR	**Suvo**	**4.40**	**359**	*e*Pn	Pn	00 27 49.9	-1.5
SYVR				*e*Pg	Pn	00 28 03.5	+12
SYVR				Pmax		00 28 10.4	
	comp=N,72nm,1.0s						
SYVR				*e*Sg	Sn	00 28 58.8	+16
SYVR				Smax		00 29 18.6	
	comp=N,247nm,1.1s						
ZAK	**Zakamensk**	**4.59**	**287**	*e*	Pn	00 27 51.7	-2.4
ZAK				*e*Pg	Pn	00 28 06.8	+13
ZAK				Pmax		00 28 14.0	
	comp=N,73nm,0.9s						
ZAK				*e*Sg	Sn	00 29 05.9	+18
ZAK				Smax		00 29 09.5	
	comp=N,412nm,1.2s						
ZAK	**Zakamensk**	**4.59**	**287**	*e*PN	Pn	00 27 51.5	-2.6
ZAK				*e*		00 28 06.3	
ZAK				*e*		00 29 06.3	
ZAK				pmax	pmax		
	comp=Z,73nm,0.8s						
ZAK				smax			
	comp=N,412nm,1.2s						
OGRR	**Ongureny**	**4.66**	**341**	*e*Pn	Pn	00 27 53.8	-1.4
OGRR				*e*Pg	Pn	00 28 08.1	+13
OGRR				*e*Sn	Sn	00 28 44.9	-4.6
OGRR				*e*Sg	Sn	00 29 06.6	+17
OGRR	**Ongureny**	**4.66**	**341**	*e*PN	Pn	00 27 54.0	-1.2
OGRR				*e*		00 28 06.2	
OGRR				*e*		00 29 06.7	
OGRR				pmax	pmax		
	comp=Z,27nm,0.5s						
OGRR				smax			
	comp=E,142nm,1.0s						
IRK	**Irkutsk**	**4.78**	**311**	*e*	Pn	00 28 50.9	+54
IRK				*e*Sg	Sn	00 29 11.8	+19
IRK				Smax		00 29 17.7	
	comp=E,1μm,0.8s						
TLY	**Talaya**	**4.81**	**303**	*e*Pn	Pn	00 27 56.7	-0.5
TLY				*e*Pg	Pn	00 28 10.2	+13
TLY				Pmax		00 28 15.7	
	comp=E,40nm,0.3s						
TLY				*e*Sg	Sn	00 29 12.3	+19
TLY				Smax		00 29 15.5	
	comp=E,541nm,1.3s						
TLY	**Talaya**	**4.81**	**303**	*e*PN	Pn	00 28 10.1	+13
TLY				*e*		00 29 12.4	
TLY				pmax	pmax		
	comp=Z,41nm,0.3s						
TLY				smax			
	comp=N,442nm,0.9s						
ARS	**Arshan**	**5.60**	**301**	*e*Pg	Pn	00 28 26.3	+18
ARS				Pmax		00 28 39.7	
	comp=N,49nm,0.5s						
ARS				*e*Sg	Sn	00 29 37.7	+25
ARS				Smax		00 29 58.2	
	comp=N,493nm,0.7s						
ARS	**Arshan**	**5.60**	**301**	*e*PN	Pn	00 28 26.4	+18
ARS				*e*		00 29 37.7	
ARS				pmax	pmax		
	comp=Z,56nm,0.5s						
ARS				smax			
	comp=E,497nm,0.7s						
YLYR	**Ulyunkhan**	**5.65**	**6**	⇑*i*	Pn	00 28 06.8	-2.3
YLYR				*e*		00 28 15.9	
YLYR				⇑*i*Pg	Pn	00 28 25.2	+16
YLYR				Pmax		00 28 29.0	
	comp=E,42nm,0.5s						
YLYR				*e*		00 29 13.6	
YLYR				*e*Sg	Sn	00 29 38.9	+25
YLYR				Smax		00 29 48.6	
	comp=E,260nm,0.7s						
YLYR	**Ulyunkhan**	**5.65**	**6**	*e*PN	Pn	00 28 23.1	+14
YLYR				*e*		00 29 35.3	
YLYR				pmax	pmax		
	comp=Z,62nm,0.4s						
YLYR				smax			
	comp=E,266nm,0.9s						
MOY	**Mondy**	**6.33**	**296**	*e*Pg	Pn	00 28 38.5	+20
MOY				Pmax		00 28 46.0	
	comp=E,17nm,0.5s						
MOY				*e*Sg	Sn	00 29 59.7	+29
MOY				Smax		00 30 05.0	
	comp=E,395nm,1.5s						
MOY	**Mondy**	**6.33**	**296**	*e*PG	Pn	00 28 38.5	+20
MOY				*e*		00 30 00.6	
MOY				pmax	pmax		
	comp=Z,17nm,0.4s						
MOY				smax			
	comp=N,391nm,1.3s						
NIZ	**Nizh Angarsk**	**6.53**	**357**	*e*Pn	Pn	00 28 20.3	-1.2
NIZ				*e*		00 28 30.1	
NIZ				*e*Pg	Pn	00 28 42.0	+21
NIZ				Pmax		00 28 43.5	
	comp=N,21nm,0.6s						
NIZ				*e*Sg	Sn	00 30 07.4	+31
NIZ				Smax		00 30 23.7	
	comp=N,145nm,1.5s						
NIZ	**Nizh Angarsk**	**6.53**	**357**	*e*PN	Pn	00 28 20.4	-1.1
NIZ				*e*		00 28 42.1	
UKT	**Uakit**	**6.58**	**17**	*e*Pn	Pn	00 28 20.4	-1.8
UKT				*e*Pg	Pn	00 28 42.0	+20
UKT				Pmax		00 28 45.6	
	comp=N,23nm,1.5s						
UKT				*e*Sg	Sn	00 30 07.6	+30
UKT				Smax		00 30 13.0	
	comp=N,236nm,1.6s						
UKT	**Uakit**	**6.58**	**17**	*e*PG	Pn	00 28 41.1	+19
UKT				*e*		00 30 04.3	
UKT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
UKT				smax			
	comp=E,101nm,0.5s						
KMO	**Kumora**	**6.66**	**5**	*e*Pn	Pn	00 28 21.0	-2.3
KMO				*e*		00 28 29.5	
KMO				*e*Pg	Pn	00 28 44.1	+21
KMO				Pmax		00 28 48.5	
	comp=E,35nm,0.5s						
KMO				*e*Sg	Sn	00 30 10.2	+31
KMO				Smax		00 30 17.3	
	comp=E,584nm,1.3s						
KMO	**Kumora**	**6.66**	**5**	*e*PN	Pn	00 28 22.0	-1.3
KMO				*e*		00 28 43.9	
SVKR	**Severomuysk**	**7.16**	**15**	*e*Sg	Sn	00 30 28.6	+37
SVKR				Smax		00 30 33.3	
	comp=E,511nm,0.8s						
ORL	**Orlik**	**7.32**	**300**	*e*Pg	Pn	00 28 55.5	+23
ORL				Pmax		00 28 59.1	
	comp=E,5.0nm,0.8s						
ORL				*e*Sg	Sn	00 30 29.4	+33
ORL				Smax		00 30 37.8	
	comp=E,253nm,1.3s						
ORL	**Orlik**	**7.32**	**300**	*e*PG	Pn	00 28 55.1	+23
ORL				*e*		00 30 29.6	
ORL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ORL				smax			
	comp=N,131nm,0.9s						
TUP	**Tupik**	**7.96**	**46**	*e*	Pn	00 28 38.5	-3.0
TUP				*e*Pg	Pn	00 29 06.6	+25
TUP				Pmax		00 29 10.8	
	comp=N,4.0nm,0.3s						
TUP				*e*Sg	Sn	00 30 48.2	+36
TUP				Smax		00 30 58.0	
	comp=N,383nm,1.4s						
TUP	**Tupik**	**7.96**	**46**	*e*PN	Pn	00 28 38.5	-3.0
TUP				*e*		00 29 05.4	
TUP				*e*		00 30 47.5	
TUP				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TUP				smax			
	comp=N,353nm,0.9s						
NLYR	**Nelyaty**	**7.97**	**23**	*e*Sg	Sn	00 30 50.4	+38
NLYR				Smax		00 31 01.3	
	comp=N,515nm,1.4s						
NLYR	**Nelyaty**	**7.97**	**23**	*e*PG	Pn	00 29 06.8	+25
NLYR				*e*		00 30 50.5	
NLYR				pmax	pmax		
	comp=Z,21nm,0.8s						
NLYR				smax			
	comp=N,541nm,1.1s						
BOD	**Bodaibo**	**8.86**	**13**	*e*Pn	P	00 28 51.3	-2.8
BOD				*e*Pg	P	00 29 23.1	+29
BOD				Pmax		00 29 34.2	
	comp=N,4.0nm,0.8s						
BOD				*e*Sg	Sn	00 31 17.2	+43
BOD				Smax		00 31 27.6	
	comp=N,126nm,2.1s						
BOD	**Bodaibo**	**8.86**	**13**	*e*PN	P	00 28 51.5	-2.6
BOD				*e*		00 29 22.4	
BOD				*e*S	Sn	00 30 25.5	-9.0
BOD				*e*		00 31 17.4	
BOD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BOD				smax			
	comp=E,118nm,1.2s						
CRS	**Chara**	**9.06**	**29**	*e*	P	00 28 53.5	-3.3
CRS				*e*Sg	Sn	00 31 24.1	+45
CRS				Smax		00 31 42.9	
	comp=E,266nm,1.3s						
CRS	**Chara**	**9.06**	**29**	*e*PG	P	00 29 28.5	+32
TDJR	**Todzha**	**9.43**	**295**	*e*Sg	Sn	00 31 36.4	+48
KRAR	**Krasnoyarsk**	**12.46**	**309**	*e*P	P	00 29 40.8	-2.3

IDC ***08*** *00:30:43.5±1.1, 8.77N×126.64E, mb4.0/5, mb1 4.2/5, mb1mx3.9/17, mbtmp4.0/5, MS3.4/3, Ms1 3.4/3, ms1mx3.0/21, Error ellipse: s-maj=65.2km s-min=22.5km az=77.0*

MAN ***08*** *00:30:46.6, 8.83N×126.66E, h1*^{km}*, mb4.6, ML3.5, MS3.3*

NEIC ***08*** *00:30:53.3±3.6, 8.66N×126.53E, h77*^{km}*±31*^{km}*, Error ellipse: s-maj=53.1km s-min=16.6km az=67.0*

ISC 08 00:30:46.2±1.6**, 8.79N**±0.06×**126.77E**±0.06**, h27**^{km}±11^{km}**, n15, σ1**^{s}**41**/18**, mb3.8**/5**, MS3.5**/2**, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.73**	**214**	⇓*e*P	**Pb**	**00 31 00.4**	**+0.2**
BIPH				*e*S	**Sb**	**00 31 08.3**	**-1.5**
BUTP	**Butuan**	**1.15**	**279**	*e*P	**Pn**	**00 31 07.1**	**+0.4**
SCPH	**Surigao**	**1.60**	**308**	*e*P	**Pn**	**00 31 14.3**	**+1.2**
SCPH				*e*S	**Sn**	**00 31 31.2**	**-2.0**
BUKP	**Musuan**	**1.92**	**242**	*e*P	**Pn**	**00 31 19.8**	**+2.1**
BUKP				*e*S	**Sn**	**00 31 44.1**	**+2.9**
DAV	**Davao City (W)**	**2.08**	**215**	*e*Pn	**Pn**	**00 31 23.1**	**+3.1**
CGP	**Cagayan de Oro**	**2.08**	**261**	⇓*e*P	**Pn**	**00 31 32.1**	**+12**
CGP				*e*S	**Sn**	**00 31 45.0**	**-0.4**
PLP	**Palo**	**2.95**	**323**	*e*P	**Pn**	**00 31 34.2**	**+1.8**
TBP	**Tagbilaran**	**3.01**	**287**	*e*P	**Pn**	**00 31 32.2**	**-1.0**
TBP				*e*S	**Sn**	**00 32 08.1**	**-0.7**
JOW	**Kunigami**	**18.00**	**4**	LR	LR	00 40 20.3	
	comp=Z,80nm,21.3s,baz=282,slow=32						
FITZ	**Fitzroy Crossi**	**26.75**	**182**	P	**P**	**00 36 25.2**	**-0.5**
	13nm,0.8s,mb4.5,baz=356,slow=9.3,SNR=7.5						
WRA	**Warramunga Arr**	**29.51**	**165**	P	**P**	**00 36 49.0**	**-1.7**
	0.3nm,0.5s,mb3.3,baz=348,slow=9.5,SNR=4.9						
SONM	**Songino Array**	**42.57**	**340**	LR	LR	00 57 18.7	
	comp=Z,46nm,18.0s,MS3.4,baz=14,slow=38						
STKA	**Stephens Creek**	**42.85**	**161**	P	**P**	**00 38 43.7**	**-0.3**
	2.2nm,0.6s,mb4.1,baz=358,slow=5.3,SNR=5.5						
MKAR	**Makanchi Array**	**53.50**	**323**	P	**P**	**00 40 05.0**	**-1.6**
	0.6nm,0.6s,mb3.7,baz=119,slow=8.7,SNR=7.2						
MKAR				LR	LR	01 05 30.9	
	comp=Z,43nm,18.6s,MS3.5,baz=243,slow=39						
ILAR	**Eielson Array**	**80.55**	**26**	P	**P**	**00 42 58.5**	**+1.1**
	0.3nm,0.6s,mb3.4,baz=233,slow=5.8,SNR=4.4						

GUC ***08*** *01:22:50.7±1.0, 23.59S×68.98W, h87*^{km}*±17*^{km}*, MD3.9, ML4.1*

NEIC ***08*** *01:22:50.7, 23.59S×68.98W, h87*^{km}*, MD3.9(GUC), After GUC.*

IDC ***08*** *01:23:28.5±20.0, 20.31S×66.03W, h101*^{km}*±99*^{km}*, mb3.7/1, mb1 3.4/3, mb1mx3.2/16, mbtmp3.8/3, ML3.6/2, Error ellipse: s-maj=327.2km s-min=40.4km az=21.0*

ISC 08 01:22:50.6±0.5**, 23.51S**±0.08×**68.98W**±0.07**, h100**^{km}±7^{km}**, n20, σ1**^{s}**13**/23**, mb3.2**/1**, 3C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**0.89**	**4**	*e*Pn	**P**	**01 23 09.7**	**-0.4**
LVC				*e*Sn	**S**	**01 23 24.1**	**-0.6**
SPCH	**San Pedro de A**	**0.94**	**51**	⇑*i*P	**P**	**01 23 11.2**	**+0.6**
SPCH				*i* S	**S**	**01 23 26.3**	**+0.8**
SPCH				AMP		01 23 26.8	
	comp=E,19μm,0.2s						
CEN1	**Los Morros**	**1.12**	**276**	⇓*i*P	**P**	**01 23 13.7**	**+1.0**
CEN1				*i* S	**S**	**01 23 30.7**	**+1.4**
CEN1				AMP		01 23 32.0	
	comp=N,3μm,0.6s						
ANCH	**Antofagasta**	**1.32**	**262**	⇑*i*P	**P**	**01 23 14.7**	**-0.3**
ANCH				*i* S	**S**	**01 23 32.2**	**-1.1**
ANCH				AMP		01 23 34.5	
	comp=E,5μm,0.6s						
CPN1	**Cerro Paranal**	**1.71**	**229**	⇑*i*P	**P**	**01 23 19.8**	**-0.1**
CPN1				*i* S	**S**	**01 23 42.1**	**+0.5**
CPN1				AMP		01 23 48.4	
	comp=E,2μm,0.4s						
CRCH	**Chaqaral**	**3.19**	**207**	*e*P	**P**	**01 23 38.4**	**-1.6**
CDCH	**Caldera**	**3.92**	**205**	*e*P	**P**	**01 23 46.7**	**-3.3**
LPAZ	**La Paz**	**7.23**	**7**	P	**P**	**01 24 34.6**	**-0.6**
	comp=E,0.3nm,0.3s,baz=162,slow=6.4,SNR=8.0						
BDFB	**Brasilia**	**21.23**	**72**	P	**P**	**01 27 28.8**	**-1.3**
	comp=E,0.4nm,0.3s,mb3.2,baz=222,slow=11,SNR=4.9						
VNA3	**Neumayer Olymp**	**58.21**	**161**	⇓*i*	**P**	**01 32 36.0**	**-0.3**
VNA3	**Neumayer Olymp**	**58.21**	**161**	*e*	**P**	**01 32 38.5**	**+2.2**
VNA1	**Neumayer--Stat**	**58.43**	**160**	⇓*i*	**P**	**01 32 38.0**	**+0.2**
VNA1	**Neumayer--Stat**	**58.43**	**160**	*e*	**P**	**01 32 40.3**	**+2.5**
VNA2	**Neumayer--Watz**	**58.79**	**160**	⇓*i*	**P**	**01 32 40.1**	**-0.2**
VNA2	**Neumayer--Watz**	**58.79**	**160**	*e*	**P**	**01 32 43.1**	**+2.8**
SNAA	**Sanae**	**60.42**	**161**	⇓*i*	**P**	**01 32 50.9**	**-0.6**
SNAA	**Sanae**	**60.42**	**161**	*e*	**P**	**01 32 53.7**	**+2.2**
SNAA	**Sanae**	**60.42**	**161**	*e*P	**P**	**01 32 50.6**	**-0.8**
ULM	**Lac du Bonnet**	**77.20**	**343**	P	pP	01 34 58.9	-2.1
	comp=E,0.7nm,0.4s,baz=149,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	**147.28**	**38**	PKP		01 42 50.0	
	comp=E,1.8nm,0.7s,baz=315,slow=1.7,SNR=5.7						

IDC 08 01:25:36.5±10.0**, 11.85S**×**165.61E, h81**^{km}±105^{km}**, mb3.9**/4**, mb1 4.1**/5**, mb1mx3.8**/15**, mbtmp4.1**/5**, ML3.7**/1**, MS3.5**/4**, Ms1 3.5**/4**, ms1mx3.1**/29**, Error ellipse: s-maj=75.9km s-min=32.1km az=158.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.06**	**293**	LR	LR	01 29 18.5	
	comp=Z,340nm,19.3s,baz=198,slow=37						
DZM	**Mont Dzumac**	**10.19**	**176**	P	P	01 28 00.5	-1.4
	0.7nm,0.3s,baz=306,slow=18,SNR=11						
DZM				S	S	01 29 52.8	-2.4
	0.2nm,0.3s,baz=225,slow=1.4,SNR=2.5						
CTA	**Charters Tower**	**20.32**	**244**	LR	LR	01 37 02.6	
	comp=Z,136nm,20.9s,baz=51,slow=34						
AFI	**Afiamalu**	**22.14**	**98**	LR	LR	01 37 32.8	
	comp=Z,128nm,21.7s,baz=49,slow=32						
STKA	**Stephens Creek**	**29.77**	**224**	LR	LR	01 41 31.7	
	comp=Z,142nm,21.7s,baz=41,slow=32						
WRA	**Warramunga Arr**	**31.09**	**251**	P	P	01 31 47.2	-2.3
	2.7nm,0.8s,baz=80,slow=9.5,SNR=15						
FITZ	**Fitzroy Crossi**	**39.05**	**256**	P	P	01 32 55.6	-1.6
	8.6nm,0.8s,baz=96,slow=14,SNR=6.5						
ILAR	**Eielson Array**	**84.31**	**19**	P	P	01 37 58.8	-1.6
	0.7nm,0.7s,baz=207,slow=6.0,SNR=6.9						
MKAR	**Makanchi Array**	**94.02**	**317**	P	P	01 38 46.6	-0.2
	0.5nm,0.7s,baz=93,slow=6.8,SNR=4.9						

BJI ***08*** *01:31:30.8, 8.19S×119.86E, h472*^{km}*, mB4.7, mb4.6*

NEIC ***08*** *01:31:39.3±0.6, 7.22S×119.63E, h473*^{km}*±7*^{km}*, mb4.6/25, Error ellipse: s-maj=6.4km s-min=3.7km az=62.0*

IDC ***08*** *01:31:39.0±1.6, 7.21S×119.61E, h466*^{km}*±17*^{km}*, mb4.1/21, mb1 4.1/23, mb1mx4.1/29, mbtmp5.0/23, Error ellipse: s-maj=13.3km s-min=7.9km az=67.0*

ISC 08 01:31:38.1±0.9**, 7.23S**±0.04×**119.58E**±0.07**, h470**^{km}±11^{km}**, h467**^{km}±5.7^{km}**: pP-P, n94, σ0**^{s}**85**/80**, mb4.5**/47**, 5C-3D, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCI	**Palu**	**6.29**	**2**	P	**P**	**01 33 18.1**	**+1.1**
	257nm,1.0s						
FITZ	**Fitzroy Crossi**	**12.31**	**152**	⇑*i*P	**P**	**01 34 21.2**	**-0.4**
	22nm,0.9s						
FITZ				*e*S	**S**	**01 36 32.8**	**0.0**
FITZ	**Fitzroy Crossi**	**12.31**	**152**	P	**P**	**01 34 21.3**	**-0.3**
	4.1nm,0.3s,baz=345,slow=7.8,SNR=64						
FITZ				S	**S**	**01 36 32.3**	**-0.6**
	0.8nm,0.3s,baz=179,slow=17,SNR=5.5						
KAKA	**Kakadu**	**13.78**	**114**	⇓*i*P	**P**	**01 34 53.9**	**+17**
	147nm,0.6s						
MBWA	**Marble Bar**	**13.85**	**179**	⇑*i*P	**P**	**01 34 37.4**	**-0.5**
	71nm,0.6s						
WRA	**Warramunga Arr**	**19.09**	**133**	P	**P**	**01 35 30.7**	**+0.3**
	12nm,0.3s,baz=303,slow=12,SNR=447						
WRA				S	**S**	**01 38 37.8**	**+0.3**
	0.3nm,0.3s,baz=309,slow=18,SNR=3.9						
WRAB	**Tennant Creek**	**19.10**	**133**	*e*P	**P**	**01 35 31.2**	**+0.8**
	104nm,0.8s						
WRAB				*e*S	**S**	**01 38 44.1**	**+6.5**
WB2	**Warramunga Arr**	**19.10**	**133**	⇓*i*P	**P**	**01 35 30.8**	**+0.4**
WB2				*e*S	**S**	**01 38 40.4**	**+2.7**
WB2				*e*SCS	ScS	01 46 02.3	-2.0
TGY	**Tagaytay City**	**21.23**	**4**	P	**P**	**01 35 51.4**	**+0.8**
	163nm,0.3s,baz=212,slow=5.6,SNR=4.5						
ASPA	**Alice Springs**	**21.36**	**141**	*e*P	**P**	**01 35 51.6**	**-0.1**
ASPA				*e*S	**S**	**01 39 16.2**	**+0.5**
KLBR	**Kellerberrin**	**24.30**	**184**	*e*P	**P**	**01 36 17.3**	**-1.2**
	12nm,0.3s,mb4.8						
NWAO	**Narrogin (SRO)**	**25.66**	**185**	P	**P**	**01 36 30.1**	**-0.6**
	17nm,0.6s,mb4.7,baz=11,slow=7.8,SNR=21						
NWAO	**Narrogin (SRO)**	**25.66**	**185**	*e*P	**P**	**01 36 29.7**	**-1.0**
	22nm,0.8s,mb4.7						
PMG	**Port Moresby**	**27.37**	**96**	P	**P**	**01 36 45.3**	**-0.7**
	15nm,0.5s,mb4.7,baz=212,slow=2.8,SNR=11						
PMG	**Port Moresby**	**27.37**	**96**	*e*P	**P**	**01 36 44.9**	**-1.1**
	17nm,0.6s,mb4.7						
QIZ	**Qiongzhong**	**27.80**	**340**	*e*P	**P**	**01 36 48.6**	**-1.1**
	9.6nm,0.9s,mb4.2						
CTA	**Charters Tower**	**28.84**	**119**	*e*P	**P**	**01 36 58.6**	**-0.2**
	7.0nm,0.8s,mb4.1						
CTA	**Charters Tower**	**28.84**	**119**	P	**P**	**01 36 58.7**	**-0.2**
	11nm,0.9s,mb4.3,baz=304,slow=9.9,SNR=9.7						
CTA				PcP	PcP	01 39 54.1	-0.3
	3.1nm,0.4s,baz=268,slow=3.1,SNR=6.2						
CTAO	**Charters Tower**	**28.84**	**119**	*e*P	**P**	**01 36 58.3**	**-0.6**
	12nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**31.98**	**143**	⇓*i*P	**P**	**01 37 25.6**	**-0.1**
	17nm,0.4s,mb4.8						
STKA	**Stephens Creek**	**31.98**	**143**	P	**P**	**01 37 25.6**	**0.0**
	22nm,0.4s,mb5.0,baz=322,slow=8.1,SNR=151						
STKA				PcP	PcP	01 40 01.5	-1.1
	1.8nm,0.4s,baz=353,slow=6.7,SNR=3.0						
GUMO	**Guam**	**32.53**	**51**	P	**P**	**01 37 29.7**	**-0.7**
	76nm,0.5s,mb5.4,baz=197,slow=16,SNR=5.0						
GUMO	**Guam**	**32.53**	**51**	*e*P	**P**	**01 37 29.5**	**-0.9**
	63nm,0.7s,mb5.2						
GYA	**Guiyang**	**35.76**	**340**	P	**P**	**01 37 58.5**	**+1.1**
GYA				PCP	PcP	01 40 14.5	+1.0
GYA				S	**S**	**01 43 05.5**	**+4.2**
GYA				SCP		01 43 13.4	
GYA				SCS	ScS	01 47 18.0	-1.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
GYA				AMB	AMB		
	comp=Z,130nm,6.0s						
KMI	**Kunming**	**36.10**	**334**	P	**P**	**01 38 02.0**	**+1.8**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.2						
KMI	**Kunming**	**36.10**	**334**	P	**P**	**01 38 02.0**	**+1.8**
	comp=Z,11nm,1.1s,mb4.2						
SSE	**Sheshan**	**38.14**	**2**	P	**P**	**01 38 18.2**	**+1.2**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
SSE				AMB	AMB		
	comp=Z,90nm,5.8s						
SSE	**Sheshan**	**38.14**	**2**	P	**P**	**01 38 18.2**	**+1.2**
	comp=Z,18nm,0.6s,mb4.7						
TOO	**Toolangi**	**38.28**	**146**	*e*P	**P**	**01 38 19.6**	**+1.5**
	comp=Z,5.5nm,0.4s,mb4.3						
ENH	**Enshi**	**38.52**	**346**	*e*P	**P**	**01 38 20.8**	**+0.6**
	comp=Z,16nm,0.6s,mb4.6						
NJ2	**Nanjing**	**39.06**	**359**	*e*P	**P**	**01 38 25.8**	**+1.2**
NJ2				XS		01 46 30.0	
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
CNB	**Canberra Magne**	**39.09**	**140**	*e*P	**P**	**01 38 25.6**	**+0.8**
	comp=Z,40nm,1.5s,mb4.6						
HNR	**Honiara**	**39.99**	**96**	P	**P**	**01 38 31.2**	**-1.0**
	comp=Z,106nm,0.6s,mb5.4,baz=247,slow=7.7,SNR=2.7						
JNU	**Nakatsue**	**41.54**	**14**	P	**P**	**01 38 44.0**	**-0.8**
	comp=Z,6.3nm,0.6s,mb4.2,baz=166,slow=8.3,SNR=3.6						
XAN	**Xi'an**	**42.27**	**347**	P	**P**	**01 38 50.3**	**-0.2**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
LSA	**Lhasa**	**45.77**	**325**	*e*P	**P**	**01 39 18.4**	**+0.4**
	comp=Z,6.8nm,0.6s,mb4.2						
MJAR	**Matsushiro Arr**	**46.92**	**21**	P	**P**	**01 39 25.4**	**-1.4**
	comp=Z,13nm,0.8s,mb4.4,baz=194,slow=7.9,SNR=20						
MAT	**Matsushiro**	**46.92**	**21**	P	**P**	**01 39 24.4**	**-2.3**
MAT	**Matsushiro**	**46.92**	**21**	*e*P	**P**	**01 39 25.0**	**-1.7**
	comp=Z,12nm,0.7s,mb4.4						
JIRN	**Jiri**	**47.39**	**318**	*e*P	**P**	**01 39 30.6**	**+0.2**
	comp=Z,24nm,0.6s,mb4.8						
DZM	**Mont Dzumac**	**47.47**	**113**	P	**P**	**01 39 31.5**	**+0.3**
	comp=Z,5.5nm,0.6s,mb4.2,baz=281,slow=14,SNR=5.2						
GUN	**Gumba**	**47.76**	**318**	*e*P	**P**	**01 39 33.3**	**+0.1**
	comp=Z,27nm,0.6s,mb4.7						
PKI	**Pulchoki**	**47.84**	**318**	*e*P	**P**	**01 39 33.5**	**-0.4**
	comp=Z,21nm,0.4s,mb4.8						
DMN	**Daman**	**48.07**	**318**	*e*P	**P**	**01 39 34.8**	**-0.8**
	comp=Z,11nm,0.3s,mb4.6						
GKN	**Gorkha**	**48.64**	**318**	*e*P	**P**	**01 39 39.3**	**-0.6**
	comp=Z,22nm,0.4s,mb4.8						
KOLN	**Koldanda**	**49.19**	**317**	*e*P	**P**	**01 39 43.4**	**-0.6**
	comp=Z,12nm,0.5s,mb4.5						
GTA	**Gaotai**	**49.89**	**340**	*e*P	**P**	**01 39 49.8**	**+0.7**
GTA				AP	pP	01 41 23.6	+2.6
GTA				XP	sP	01 42 14.2	+1.9
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
CN2	**Changchun**	**51.07**	**5**	*e*P	**P**	**01 39 59.7**	**+1.9**
MDJ	**Mudanjiang**	**52.39**	**9**	P	**P**	**01 40 06.9**	**-0.5**
MDJ				AP	pP	01 41 38.7	-1.8
MDJ				PP	PP	01 42 14.6	+2.5
MDJ				XP	sP	01 42 31.4	+0.1
MDJ				SCP		01 44 17.8	
MDJ				S	**S**	**01 46 58.7**	**+2.1**
MDJ				SS	SS	01 50 53.2	+10
MDJ				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,250nm,5.0s						
MDJ	**Mudanjiang**	**52.39**	**9**	*e*P	**P**	**01 40 06.4**	**-1.0**
	comp=Z,25nm,0.7s,mb4.7						
ASAJ	**Asahikawa**	**55.18**	**20**	P	**P**	**01 40 26.6**	**-0.6**
	comp=Z,12nm,0.4s,mb4.6,baz=254,slow=7.4,SNR=6.7						
SONM	**Songino Array**	**56.05**	**349**	P	**P**	**01 40 33.3**	**+0.1**
	comp=Z,14nm,0.6s,mb4.5,baz=168,slow=8.2,SNR=106						
RPZ	**Rata Peaks**	**57.71**	**138**	P	**P**	**01 40 44.3**	**-0.3**
	comp=Z,38nm,0.6s,mb4.9,baz=243,slow=3.5,SNR=26						
WMQ	**Urumqi**	**58.43**	**333**	⇑P	**P**	**01 40 50.0**	**+0.5**
WMQ				PCP	PcP	01 41 29.5	-4.7
WMQ				PCS		01 45 31.5	
WMQ				AMB	AMB		
	comp=Z,140nm,4.1s						
SNZO	**South Karori**	**59.36**	**134**	*e*P	**P**	**01 40 54.5**	**-1.3**
	comp=Z,211nm,1.5s,mb5.2						
URZ	**Urewera**	**60.24**	**130**	P	**P**	**01 41 00.5**	**-1.2**
	comp=Z,8.5nm,0.4s,mb4.5,baz=271,slow=4.0,SNR=9.5						
MKAR	**Makanchi Array**	**63.16**	**332**	P	**P**	**01 41 20.4**	**-0.2**
	comp=Z,9.1nm,0.5s,mb4.6,baz=152,slow=7.6,SNR=120						
MKAR				PcP	PcP	01 41 52.9	-0.4
	comp=Z,1.3nm,0.5s,baz=144,slow=4.8,SNR=4.1						
AAK	**Ala-Archa**	**64.37**	**325**	*e*P	**P**	**01 41 27.7**	**-0.8**
	comp=Z,2.9nm,0.8s,mb3.9						
ZAL	**Zalesovo**	**67.60**	**339**	P	**P**	**01 41 47.4**	**-1.0**
	comp=Z,11nm,0.4s,mb4.9,baz=345,slow=4.1,SNR=33						
KURK	**Kurchatov**	**67.68**	**333**	*e*P	**P**	**01 41 48.5**	**-0.3**
	comp=Z,8.8nm,0.9s,mb4.4						

OPO	Ambohidratompo	71.08	253	P	P	01 42 10.1	+0.4
	comp=Z,2.0nm,0.7s,mb3.8,baz=63,slow=2.4,SNR=6.4						
MAW	Mawson	71.09	200	P	P	01 42 09.5	+0.5
	comp=Z,1.2nm,0.5s,mb3.7,baz=66,slow=9.2,SNR=5.5						
BVAR	Borovoye Array	73.02	331	P	P	01 42 20.1	-0.3
	comp=Z,2.9nm,0.6s,mb4.0,baz=121,slow=5.9,SNR=31						
BVAR				pP	pP	01 44 00.6	-1.7
	comp=Z,1.1nm,0.9s,baz=129,slow=9.2,SNR=3.9						
BRVK	Borovoye	73.09	331	eP	P	01 42 20.4	-0.5
	comp=Z,1.1nm,0.6s,mb3.6						
CHKZ	Chkalovo	73.32	332	eP	P	01 42 21.9	-0.2
	comp=Z,5.7nm,0.5s,mb4.4						
VNDA	Vanda	73.64	171	eP	P	01 42 23.6	+0.1
	comp=Z,1.2nm,0.5s,mb3.7						
AKTO	Aktyubinsk	78.11	325	P	P	01 42 48.8	+0.1
	comp=Z,2.1nm,0.5s,mb3.9,baz=112,slow=6.0,SNR=12						
LSZ	Lusaka	89.46	255	eP	P	01 43 46.2	+0.5
BOSA	Boshof	90.36	241	P	P	01 43 49.8	+0.2
	comp=Z,4.2nm,1.0s,mb4.2,baz=130,slow=7.9,SNR=3.3						
SNAA	Sanae	92.85	196	⇑iP	P	01 44 00.7	+0.6
VNA2	Neumayer--Watz	94.48	195	⇑iP	P	01 44 08.5	+1.0
ILAR	Eielson Array	98.00	26	P	P	01 44 22.9	-0.7
	comp=Z,0.6nm,0.5s,mb4.2,baz=245,slow=3.7,SNR=9.5						
INK	Inuvik	102.90	21	P	Pdif	01 44 45.1	-0.2
	comp=Z,1.0nm,0.7s,baz=267,slow=2.6,SNR=6.7						
INK	Inuvik	102.90	21	ePdif	Pdif	01 44 45.4	+0.1
	comp=Z,12nm,1.6s						
GERES	GERESS Array B	105.85	319	Pdiff	Pdif	01 45 00.7	+2.0
	comp=Z,0.7nm,0.8s,baz=154,slow=23,SNR=5.4						
KHC	Kasperske Hory	105.90	319	ePDIF	Pdif	01 45 03.5	+4.6
YKA	Yellowknife Ar	112.35	24	PKiKP		01 49 20.2	
	comp=Z,1.6nm,0.5s,baz=304,slow=2.0,SNR=30						
NVAR	Mina Array Bea	119.45	50	PKP	PKPdf	01 49 36.0	+2.4
	comp=Z,0.8nm,0.7s,baz=200,slow=1.3,SNR=6.0						
PDAR	Pinedale Array	124.23	42	PKP	PKPdf	01 49 43.0	+0.3
	comp=Z,0.2nm,0.5s,baz=168,slow=2.5,SNR=3.9						
DBIC	Dimbokro	124.87	273	PKP	PKPdf	01 49 45.8	+1.0
	comp=Z,0.7nm,0.4s,baz=117,slow=4.5,SNR=3.7						
ULM	Lac du Bonnet	127.93	28	PKP	PKPdf	01 49 50.9	+1.2
	comp=Z,1.5nm,0.6s,baz=303,slow=1.7,SNR=5.2						
SCHQ	Schefferville	132.25	5	PKP	PKPdf	01 49 59.2	+1.5
	comp=Z,1.4nm,0.4s,baz=63,slow=4.5,SNR=6.3						
TXAR	Lajitas Array	133.79	56	PKhKP		01 49 52.0	
	comp=Z,0.3nm,0.7s,baz=294,slow=3.7,SNR=4.4						
TXAR				PKP	PKPdf	01 50 04.6	+3.3
	comp=Z,0.4nm,0.7s,baz=270,slow=0.9,SNR=5.7						
TXAR				SKPbc		01 52 46.2	
	comp=Z,0.3nm,0.7s,baz=288,slow=2.9,SNR=3.9						
MCWV	Mont Chateau	143.30	25	ePKPdf	PKPdf	01 50 18.1	0.0
WES	Weston	143.69	14	ePKPdf	PKPdf	01 50 18.8	+0.2
TZTN	Tazewell	143.99	33	ePKPdf	PKPdf	01 50 20.3	+0.9
CPCT	Cooper Cave	144.25	35	ePKPbc	PKPbc	01 50 20.8	+0.9
MVL	Millersville	144.38	21	ePKPbc	PKPbc	01 50 21.3	+1.3
LRAL	Lakeview Retre	144.41	40	ePKPbc	PKPbc	01 50 21.5	+1.2
FWV	Forest Hill	144.56	29	ePKPbc	PKPbc	01 50 21.6	+1.0
GOGA	Godfrey	146.32	36	ePKPbc	PKPbc	01 50 27.5	+2.3
CPUP	Villa Florida	146.51	185	ePKPbc	PKPbc	01 50 27.8	+1.9
JSC	Jenkinsville	146.92	33	ePKPbc	PKPbc	01 50 28.6	+2.0
LPAZ	La Paz	155.42	162	PKPab	PKPab	01 51 08.9	+0.8
	comp=Z,1.3nm,0.4s,baz=237,slow=5.2,SNR=9.7						

MAN 08 01:36:32.5, 8.52N×121.89E, h30^{km}, mb4.8, ML3.7, MS3.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPIL	Ipil	0.99	137	eP	Pn	01 36 49.3	-1.3
SNPH	Sibulan	1.56	58	eP	Pn	01 36 59.0	+0.3
PAGZ	Pagadian	1.62	114	eP	Pn	01 36 59.2	-0.4
GUIM	Jordan	2.20	18	eP	Pn	01 37 08.3	+0.4
GUIM				eS	Sn	01 37 33.6	-0.8
TBP	Tagbilaran	2.27	59	eP	Pn	01 37 08.1	-0.7
TBP				eS	Sn	01 37 32.5	-3.6
CUYO	Cuyo Island	2.47	340	eP	Pn	01 37 12.0	+0.3
LLP	Lapu-Lapu	2.72	49	eP	Pn	01 37 14.9	-0.4
LLP				eS	Sn	01 37 43.1	-4.4
RCP	Roxas	3.14	16	eP	Pn	01 37 21.8	+0.6
RCP				eS	Sn	01 37 57.2	-0.8
KALP	Kalibo	3.17	8	eP	Pn	01 38 00.6	+39
MSLP	Maasin	3.34	61	eP	Pn	01 37 24.6	+0.5
PPR	Puerto Princes	3.36	292	⇑eP	Pn	01 37 22.4	-2.0
PPR				eS	Sn	01 38 00.2	-3.4
OTRP	Odiongan	3.82	2	eP	Pn	01 37 30.9	0.0
BUSP	Coron	3.84	334	eP	Pn	01 37 30.3	-0.9
SJMP	San Jose	3.99	349	eP	Pn	01 37 32.9	-0.4
LUBP	Lubang	5.42	343	eP	Pn	01 37 53.4	-0.2

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*NEIC **08** 01:40:37.4±2.1, 11.06S×166.36E, h133^{km}±13^{km}, mb4.3/3, Error ellipse: s-maj=26.6km s-min=13.0km az=58.0*

*IDC **08** 01:40:37.8±4.6, 11.09S×166.29E, h131^{km}±30^{km}, mb3.7/4, mb1 3.8/6, mb1mx3.6/16, mbtmp4.2/6, Error ellipse: s-maj=45.9km s-min=20.6km az=56.0*

ISC 08 01:40:38.1±3.1, **11.2S**±0.1×**166.2E**±0.2, **h143**^{km}±19^{km}, **n12, σ0^{s}.60**/16, **mb4.0**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.39	285	P	P	01 42 10.9	0.0
	38nm,0.3s,baz=191,slow=10,SNR=4.7						
HNR				S	S	01 43 22.8	-0.2
	12nm,0.3s,baz=270,slow=3.0,SNR=2.9						
HNR	Honiara	6.39	285	P	P	01 42 10.9	0.0
HNR				S	S	01 43 22.8	-0.2
DZM	Mont Dzumac	10.85	179	eP	P	01 43 10.4	+0.1
DZM				eS	S	01 45 08.1	-1.4
DZM	Mont Dzumac	10.85	179	P	P	01 43 10.8	+0.5
	1.6nm,0.3s,baz=22,slow=19,SNR=14						
DZM				S	S	01 45 10.1	+0.6
	0.5nm,0.3s,baz=150,slow=20,SNR=6.1						
CTA	Charters Tower	21.14	243	P	P	01 45 14.4	+1.5
	4.2nm,0.8s,mb3.8,baz=76,slow=12,SNR=5.6						
CTAO	Charters Tower	21.14	243	eP	P	01 45 13.9	+1.0
	2.5nm,0.5s,mb3.8						
STKA	Stephens Creek	30.66	224	P	P	01 46 41.4	0.0
	2.3nm,0.8s,mb4.0,baz=14,slow=8.3,SNR=3.1						
WRAB	Tennant Creek	31.85	250	eP	P	01 46 51.3	-0.5
	8.4nm,1.1s,mb4.4						
WRA	Warramunga Arr	31.86	250	P	P	01 46 51.2	-0.8
	2.6nm,0.6s,mb4.1,baz=83,slow=8.9,SNR=16						
FITZ	Fitzroy Crossi	39.78	255	P	P	01 47 59.0	+0.3
	baz=102,slow=9.3						
MBWA	Marble Bar	45.58	251	eP	P	01 48 45.9	+0.2
	7.3nm,0.9s,mb4.3						
MKAR	Makanchi Array	93.91	317	P	P	01 53 40.3	-0.2
	0.2nm,0.6s,mb3.5,baz=117,slow=6.4,SNR=2.7						

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*ISK **08** 01:41:27.4, 38.18N×26.58E, h10^{km}, MD3.8, ML3.9*

*NEIC **08** 01:41:27.0, 38.18N×26.58E, h10^{km}, MD3.9(ATH), ML3.8(ISK), After ISK.*

*ATH **08** 01:41:28.8, 38.20N×26.62E, h27^{km}±2^{km}, MD3.9/12*

*CSEM **08** 01:41:29.1±0.1, 38.19N×26.72E, h15^{km}, MD3.8, Error ellipse: s-maj=1.7km s-min=1.2km az=13.0*

*THE **08** 01:41:31.6, 38.21N×26.68E, h22^{km}, ML3.8*

ISC 08 01:41:28.4±0.2, **38.23N**±0.02×**26.61E**±0.02, **h10**^{km}, **n97, σ0^{s}.92**/124, **6C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.14	354	iP	Pg	01 41 30.8	-0.8
URLA				iS	Sg	01 41 33.6	-0.3
BLCB	Balcova	0.37	64	iPG	Pg	01 41 36.2	+0.1
BLCB				iSG	Sg	01 41 41.6	+0.4
IZM	Izmir	0.54	71	iPG	Pg	01 41 39.2	-0.1
KDAG	Bornova	0.54	71	iP	Pg	01 41 38.6	-0.8
KDAG				iS	Sg	01 41 46.8	0.0
SMG	Samos	0.55	161	⇑iPN	Pg	01 41 39.5	0.0
SMG				eSN	Sg	01 41 48.1	+1.3
PRK	Paraskevi	1.05	345	ePB	Pb	01 41 48.7	+0.4
PRK				eSN	Sn	01 42 05.5	+1.5
AYVA	Ayvalik	1.08	3	iP	Pb	01 41 49.3	+0.5
AYVA				iS	Sb	01 42 06.9	+4.1
AKS	Akhisar	1.15	55	iPN	Pn	01 41 50.8	+0.3
AKS				iSN	Sn	01 42 07.6	+1.3
AYDN	Tasoluk	1.15	119	iP	Pb	01 41 50.5	+0.5
AYDN				iS	Sb	01 42 06.8	+2.1
BODT	Bodrum	1.29	154	iPN	Pn	01 41 51.4	-1.1
MLSB	Milas	1.31	135	PN	Pn	01 41 52.4	-0.4
APE	Apeiranthos	1.44	217	PN	Pn	01 41 53.3	-1.4
APE	Apeiranthos	1.44	217	ePb	Pb	01 41 53.5	-1.4
MANT	Manisa	1.55	80	iP	Pn	01 41 57.8	+1.5
MANT				iS	Sb	01 42 18.6	+2.2
EZN	Ezine	1.61	352	PN	Pn	01 41 56.5	-0.7
DAT	Datca	1.68	153	PN	Pn	01 41 57.2	-0.9
YER	Yerkesik	1.71	129	ePN	Pn	01 41 58.0	-0.6
BALB	Balikesir	1.72	35	ePN	Pn	01 41 59.1	+0.3
BTOK	Tokmak	1.89	35	iP	Pn	01 42 01.3	+0.1
BTOK				iS	Sn	01 42 30.2	+5.0
DENT	Denizli	1.97	103	ePN	Pn	01 42 02.1	-0.2
DNZL	Cakiroluk	2.00	105	iP	Pn	01 42 03.2	+0.5
LIA	Limnos Island	2.01	327	ePN	Pn	01 42 03.0	+0.2
SANT	Santorini	2.07	207	ePn	Pn	01 42 07.4	+3.7
SANT				eSn	Sn	01 42 33.0	+3.3
LOS	Limnos	2.08	326	ePn	Pn	01 42 04.5	+0.6
LOS				eSn	Sn	01 42 30.6	+0.5
DST	Dursunbey	2.09	48	ePN	Pn	01 42 04.5	+0.5
LPK	Lapseki	2.15	3	ePN	Pn	01 42 05.0	+0.2
DALT	Dalyan (Mudla)	2.17	131	ePN	Pn	01 42 03.7	-1.4
MPAR	Parnis Oros	2.27	269	ePB	Pb	01 42 08.5	-0.6
KHL	Karahalli	2.29	87	ePN	Pn	01 42 06.8	-0.1
ATH	Athens Observa	2.30	265	ePN	Pn	01 42 07.5	+0.5
EDC	Edincik	2.33	24	ePN	Pn	01 42 07.7	+0.3
AOS	Alonnisos	2.34	295	ePn	Pn	01 42 07.4	-0.2
AOS				eSn	Sn	01 42 37.5	+0.9
ARG	Arkhangelos	2.34	148	ePN	Pn	01 42 07.8	+0.2
BNT	Bandirma	2.36	25	ePN	Pn	01 42 07.6	-0.2
GDZ	Gediz	2.41	68	iP	Pb	01 42 13.1	+1.7
GDZ				iS	Sb	01 42 45.6	+4.4
KCT	Karacabey	2.45	33	ePN	Pn	01 42 08.9	-0.2
MRMT	Marmara Adasi	2.49	17	ePN	Pn	01 42 09.9	+0.1
FETY	Fethiye	2.53	128	ePN	Pn	01 42 09.6	-0.7
GOLH	Golhisar	2.54	112	iP	Pn	01 42 11.3	+0.9
GOLH				iS	Sn	01 42 49.6	+8.0
ORLT	Orhaneli	2.54	44	ePN	Pn	01 42 10.9	+0.4
MFT	Murefte	2.61	11	ePN	Pn	01 42 11.5	+0.1
ALN	Alexandroupoli	2.71	351	ePn	Pn	01 42 11.8	-1.0
ALN				eSn	Sn	01 42 44.8	-1.1
KARP	Karpathos	2.71	171	ePN	Pn	01 42 11.8	-1.0
ULDT	Uludag	2.74	45	iP	Pb	01 42 18.8	+1.6
ULDT				iS	Sb	01 42 56.3	+5.4
PAIG	Paliouri	2.85	308	ePn	Pn	01 42 14.8	0.0
ALT	Altintas	2.86	72	ePN	Pn	01 42 15.4	+0.4
NEO	Neokhori	2.86	293	ePN	Pn	01 42 14.9	-0.1
LKR	Lokris	2.87	280	ePN	Pn	01 42 15.6	+0.5
XOR	Xorichti	2.91	294	ePn	Pn	01 42 15.5	-0.2
TKTP	Tekketepe	2.93	92	iP	Pn	01 42 16.0	+0.1
TKTP				iS	Sg	01 43 04.2	-1.7
OUR	Ouranopolis	2.93	317	ePn	Pn	01 42 16.3	+0.3
ELL	Elmali	3.01	118	ePN	Pn	01 42 16.1	-1.0
RDO	Rodhopi	3.03	344	⇑iPN	Pn	01 42 17.3	-0.2
NPS	Neapolis	3.06	196	ePN	Pn	01 42 18.2	+0.3
ISP	Isparta	3.10	96	ePN	Pn	01 42 18.0	-0.4
ISP	Isparta	3.10	96	ePn	Pn	01 42 19.1	+0.6
ISP				eSn	Sg	01 43 21.8	+10
AKAS	Kas	3.11	129	iP	Pn	01 42 19.0	+0.5
AKAS				iS	Sn	01 43 00.9	+4.9
YLV	Yalova	3.17	42	ePN	Pn	01 42 20.0	+0.6
BCK	Bucak	3.24	102	ePN	Pn	01 42 19.3	-1.1
CTT	Catalca	3.24	25	ePN	Pn	01 42 20.6	+0.2
ELBA	Catalca	3.24	25	iP	Pg	01 42 29.5	-3.6
ELBA				iS	Sg	01 43 11.9	-4.4
VLI	Veliai	3.29	244	ePN	Pn	01 42 20.9	-0.2
ISK	Istanbul-Kandi	3.41	33	ePN	Pn	01 42 22.6	-0.2
BORA	Eskisehir	3.42	60	iP	Pg	01 42 34.0	-2.7
BORA				iS	Sg	01 43 19.3	-2.9
AGG	Agios Georgios	3.45	285	ePn	Pn	01 42 23.7	+0.4
HRT	Hereke	3.51	41	ePN	Pn	01 42 24.5	+0.3
ESKT	Eskisehir	3.55	67	ePN	Pn	01 42 25.2	+0.4
ESKT	Eskisehir	3.55	67	iP	Pg	01 42 34.9	-4.4
ESKT				iS	Sg	01 43 24.6	-2.1
SOH	Sokhos	3.62	317	ePn	Pn	01 42 26.1	+0.3
EDRB	Edirne	3.62	2	ePN	Pn	01 42 25.8	0.0
THE	Thessaloniki	3.71	312	ePn	Pn	01 42 27.4	+0.3
LIT	Litokhoron	3.71	302	ePn	Pn	01 42 27.4	+0.3
LIT				eSn	Sn	01 43 08.9	-2.5
LIT	Litokhoron	3.71	302	ePn	Pn	01 42 27.4	+0.3
LIT				eSn	Sn	01 43 08.9	-2.5
NVR	Nevrokopi	3.77	327	ePN	Pn	01 42 27.7	-0.3
EVR	Evrytania	3.83	282	ePN	Pn	01 42 29.5	+0.7
ITM	Ithomi	3.86	256	ePN	Pn	01 42 29.0	-0.2
KNT	Kendrikon	4.10	317	ePn	Pn	01 42 32.9	+0.3
KIZT	Kizilcal	4.18	79	ePN	Pn	01 42 34.3	+0.5
HENT	Hendek	4.21	51	iP	Pg	01 42 46.5	-6.0
HENT				iS	Sg	01 43 48.2	-0.4
GRG	Griva	4.25	311	ePn	Pn	01 42 35.1	+0.4
KDHN	Kadinhani	4.33	84	iP	Pg	01 42 49.6	-5.4
KDHN				iS	Sg	01 43 53.0	+0.2
VAY	Valandovo	4.39	316	iPn	Pg	01 42 52.3	-3.8
FNA	Florina	4.79	304	ePn	Pn	01 42 43.0	+0.6
IGT	Igoumenitsa	5.07	287	ePn	Pn	01 42 47.2	+0.8
ELDT	Eldivan	5.74	65	iP	Pg	01 43 16.4	-6.7
BALT	Daday	6.17	55	iP	Pg	01 43 21.0	-11
TIRR	Tirgusor	6.37	12	⇑P	Pn	01 43 03.0	-1.8
TIRR	Tirgusor	6.37	12	⇑P	Pn	01 43 03.0	-1.7
HARR	Harsova	6.54	8	⇓P	Pn	01 43 03.6	-3.4
VOIR		7.30	351	⇑P	Pn	01 43 16.6	-1.2
VOIR		7.30	351	⇑P	Pn	01 43 16.6	-1.2
VRI	Vrincioaia	7.64	1	⇓P	Pn	01 43 23.1	+0.6
VRI	Vrincioaia	7.64	1	⇓P	Pn	01 43 23.1	+0.6
TIP	Timpagrande	7.77	280	ePn	Pn	01 43 23.8	-0.5
DRGR		9.03	343	⇓P	P	01 43 47.1	+5.2
BURAR	Bucovina Array	9.44	354	⇓P	P	01 43 48.1	+0.5
BURAR	Bucovina Array	9.44	354	⇓P	P	01 43 48.1	+0.5

MAN 08 01:49:21.5, 17.38N×120.11E, h28^{km}, mb4.4, ML3.2, MS3.0, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	Dolores	0.63	65	eP	Pb	01 49 34.1	+0.1
BOLP	Bolinao	1.01	191	eP	Pn	01 49 39.8	-0.2
BOLP				eS	Sb	01 49 52.5	-0.8
PIP	Pasuquin	1.05	27	⇑iP	Pn	01 49 40.3	-0.3
PIP				iS	Sn	01 49 55.0	+0.5
BCPH	Baguio City Da	1.09	156	⇓eP	Pn	01 49 41.2	+0.1
BCPH				eS	Sn	01 49 54.7	-0.7
APYP	Conner	1.18	66	eP	Pn	01 49 41.6	-0.8
APYP				eS	Sn	01 49 56.7	-0.9
CAUP	Cauayan	1.69	105	eP	Pn	01 49 50.8	+1.1
BALP	Baler	2.15	139	eP	Pn	01 49 56.4	+0.1

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*IDC **08** 01:53:58.4±1.3, 1.59N×97.64E, mb4.1/10, mb1 4.2/10, mb1mx4.0/18, mbtmp4.1/10, Error ellipse: s-maj=68.7km s-min=19.3km az=52.0*

*NEIC **08** 01:54:02.4±0.6, 1.47N×97.52E, h30^{km}, mb4.2/2, Error ellipse: s-maj=19.9km s-min=11.1km az=54.0*

ISC 08 01:54:00.4±0.8, **1.5N**±0.1×**97.5E**±0.1, **h30**^{km}, **n18, σ0^{s}.74**/18, **mb4.1**/13, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	4.92	40	ePn	Pn	01 55 14.9	+0.6
KAKA	Kakadu	37.43	113	eP	P	02 01 28.9	+16
	2.3nm,0.6s,mb4.2						
WRA	Warramunga Arr	41.92	122	P	P	02 01 49.9	-0.5
	2.4nm,0.4s,mb4.2,baz=303,slow=9.0,SNR=31						
WB2	Warramunga Arr	41.93	122	eP	P	02 01 49.5	-1.0
SONM	Songino Array	46.81	8	P	P	02 02 29.0	-0.4
	0.8nm,0.7s,mb3.8,baz=189,slow=9.6,SNR=5.9						
MKAR	Makanchi Array	47.05	346	P	P	02 02 31.8	+0.6
	2.3nm,0.4s,mb4.4,baz=160,slow=8.3,SNR=34						
STKA	Stephens Creek	53.31	132	P	P	02 03 20.5	+1.2
	1.7nm,0.8s,mb4.0,baz=320,slow=15,SNR=3.7						
STKA	Stephens Creek	53.31	132	P	P	02 03 20.5	+1.2
ZAL	Zalesovo	53.33	351	P	P	02 03 18.1	-1.0
	1.6nm,0.5s,mb4.2,baz=300,slow=4.8,SNR=5.4						
BVAR	Borovoye Array	56.09	341	P	P	02 03 38.9	-0.3
	1.4nm,0.6s,mb4.2,baz=140,slow=9.5,SNR=11						
BRVK	Borovoye	56.15	341	eP	P	02 03 38.7	-1.0
	0.9nm,0.5s,mb4.1						
CHKZ	Chkalovo	56.56	341	eP	P	02 03 42.3	-0.3
	1.6nm,0.6s,mb4.2						
AKTO	Aktyubinsk	59.13	332	P	P	02 04 00.4	-0.3
	0.6nm,0.4s,mb4.0,baz=126,slow=6.9,SNR=5.3						
AKASG	Malin Array Be	75.23	322	P	P	02 05 42.7	+0.5
	0.8nm,0.4s,mb4.0,baz=90,slow=5.6,SNR=6.8						
AKASG	Malin Array Be	75.23	322	P	P	02 05 42.7	+0.5
FINES	FINESS Array B	79.90	332	P	P	02 06 08.8	+1.1
	1.1nm,0.5s,mb4.0,baz=93,slow=4.8,SNR=12						
FINES	FINESS Array B	79.90	332	P	P	02 06 08.8	+1.1
ARCES	ARCESS Array B	82.38	340	P	P	02 06 21.4	+0.8
	2.2nm,0.9s,mb4.1,baz=98,slow=8.6,SNR=4.7						

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*BJI **08** 02:00:39.5, 7.40N×35.90W, h5^{km}, mB5.3, Ms5.1, Msz4.6*

*NEIC **08** 02:00:39.6±7.7, 7.41N×35.91W, h3^{km}±49^{km}, mb4.5/10, Error ellipse: s-maj=13.6km s-min=8.0km az=146.0*

*IDC **08** 02:00:39.5±0.7, 7.50N×35.95W, mb4.1/15, mb1 4.2/15, mb1mx4.1/22, mbtmp4.1/15, MS4.0/15, Ms1 4.0/15, ms1mx3.9/22, Error ellipse: s-maj=24.6km s-min=14.8km az=140.0*

ISC 08 02:00:38.9±0.4, **7.39N**±0.07×**35.87W**±0.09, **h10**^{km}, **n49, σ0^{s}.97**/40, **mb4.2**/23, **MS4.0**/16, **4C, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	13.13	180	ePn	P	02 03 46.7	-1.6
	13nm,0.4s						
RCBR				eSn	S	02 06 00.9	-15
BDFB	Brasilia	25.86	208	P	P	02 06 13.9	+1.2
	3.3nm,0.8s,mb3.9,baz=30,slow=5.1,SNR=4.2						
BDFB				LR	LR	02 15 42.5	
	comp=Z,350nm,19.0s,MS3.9,baz=215,slow=35						
DBIC	Dimbokro	30.78	89	P	P	02 06 55.9	-1.2
	3.8nm,0.8s,mb4.3,baz=224,slow=8.1,SNR=6.3						
DBIC	Dimbokro	30.78	89	P	P	02 06 55.9	-1.2
SJG	San Juan	31.35	293	LR	LR	02 16 54.9	
	comp=Z,164nm,21.6s,MS3.7,baz=104,slow=31						
SIV	San Ignacio	34.10	227	P	P	02 07 26.9	+0.8
	1.9nm,0.7s,mb4.2,baz=74,slow=9.4,SNR=13						
SDV	Santo Domingo	34.44	275	LR	LR	02 19 51.5	
	comp=Z,59nm,19.9s,MS3.3,baz=156,slow=34						
ROSC	El Rosal	38.32	268	LR	LR	02 25 05.1	
	comp=Z,134nm,18.6s,MS3.8,baz=335,slow=38						
MDT	Midelt	38.47	45	P	P	02 08 04.7	+1.7
	2.7nm,0.8s,mb4.0,baz=264,slow=9.3,SNR=7.2						
LPAZ	La Paz	39.66	233	P	P	02 08 14.4	+1.4
	3.6nm,0.7s,mb4.2,baz=37,slow=5.1,SNR=20						
LPAZ				LR	LR	02 24 21.1	
	comp=Z,150nm,18.5s,MS3.9,baz=88,slow=36						
LPAZ	La Paz	39.66	233	eP	P	02 08 13.8	+0.7
	5.1nm,0.8s,mb4.3						
ESDC	Sonseca Array	43.02	37	P	P	02 08 41.7	+1.3
	0.2nm,0.5s,mb3.1,baz=236,slow=9.3,SNR=5.0						
LVC	Limon Verde	44.00	226	LR	LR	02 27 57.1	
	comp=Z,228nm,18.1s,MS4.1,baz=218,slow=37						
SCHQ	Schefferville	53.40	338	P	P	02 10 00.6	-0.3
	4.2nm,0.7s,mb4.5,baz=265,slow=17,SNR=11						
WVT	Waverly	55.27	309	eP	P	02 10 14.2	-0.7
	3.0nm,0.5s,mb4.6						
PLCA	Paso Flores	57.54	211	LR	LR	02 35 58.6	
	comp=Z,301nm,18.3s,MS4.4,baz=38,slow=37						
GRA1	Grafenberg Arr	57.60	34	eP	P	02 10 31.5	+0.1
	7.0nm,1.1s,mb4.6						
GRF	Grafenberg Arr	57.60	34	eP	P	02 10 31.5	+0.1
	7.0nm,1.1s,mb4.6						
GERES	GERESS Array B	58.61	36	P	P	02 10 38.4	0.0
	0.3nm,0.4s,mb3.6,baz=207,slow=9.0,SNR=5.4						
GERES				LR	LR	02 32 33.8	
	comp=Z,200nm,18.1s,MS4.3,baz=62,slow=33						
NOA	NORSAR Array B	63.87	23	LR	LR	02 34 00.7	
	comp=Z,127nm,18.9s,MS4.1,baz=270,slow=31						
ULM	Lac du Bonnet	65.40	322	P	P	02 11 22.2	-1.7
	1.8nm,0.8s,mb4.2,baz=127,slow=10.0,SNR=5.1						
ULM				LR	LR	02 35 03.3	
	comp=Z,90nm,18.8s,MS4.0,baz=46,slow=32						
TXAR	Lajitas Array	67.08	299	P	P	02 11 34.0	-1.0
	0.5nm,0.5s,mb3.8,baz=111,slow=6.9,SNR=10						
TXAR				LR	LR	02 37 57.7	
	comp=Z,71nm,19.9s,MS3.9,baz=80,slow=33						
AKASG	Malin Array Be	68.64	38	P	P	02 11 44.2	-0.2
	1.1nm,0.5s,mb4.1,baz=256,slow=6.4,SNR=11						
AKASG	Malin Array Be	68.64	38	P	P	02 11 44.2	-0.2
BOSA	Boshof	68.89	124	LR	LR	02 35 43.0	
	comp=Z,111nm,18.0s,MS4.1,baz=104,slow=30						
SDCO	Great Sand Dun	69.42	307	eP	P	02 11 49.5	+0.1
	1.6nm,0.6s,mb4.1						
FINES	FINESS Array B	70.35	27	P	P	02 11 54.9	+0.2
	2.8nm,0.9s,mb4.2,baz=270,slow=9.5,SNR=7.2						
FINES				LR	LR	02 41 01.7	
	comp=Z,126nm,18.5s,MS4.2,baz=194,slow=34						
PDAR	Pinedale Array	73.05	312	P	P	02 12 11.0	-0.2
	1.8nm,0.6s,mb4.2,baz=108,slow=6.4,SNR=18						
PDAR				LR	LR	02 39 47.6	
	comp=Z,73nm,18.6s,MS4.0,baz=236,slow=32						
ARCES	ARCESS Array B	73.33	19	P	P	02 12 11.9	-0.4
	2.4nm,0.8s,mb4.2,baz=233,slow=6.1,SNR=4.0						
ARCES				LR	LR	02 40 39.7	
	comp=Z,78nm,18.4s,MS4.0,baz=260,slow=33						
LOHW	Long Hollow	73.89	313	eP	P	02 12 16.1	+0.1
	3.1nm,0.6s,mb4.4						
YMR	Madison River	74.24	314	eP	P	02 12 18.7	+0.7
	5.3nm,0.6s,mb4.7						
RRI2	Red Ridge	74.39	313	eP	P	02 12 19.3	+0.3
	4.1nm,0.7s,mb4.5						
HWUT	Hardware Ranch	74.44	311	eP	P	02 12 19.4	+0.1
	4.8nm,0.7s,mb4.5						
HLID	Hailey	76.65	313	eP	P	02 12 32.1	+0.3
	2.1nm,0.8s,mb4.1						
YKA	Yellowknife Ar	78.28	332	P	P	02 12 39.4	-1.0
	0.8nm,0.6s,mb3.8,baz=102,slow=6.2,SNR=5.5						
YKA	Yellowknife Ar	78.28	332	P	P	02 12 39.4	-1.0
VNA1	Neumayer--Stat	80.07	171	e	P	02 12 53.3	+3.3
VNA1	Neumayer--Stat	80.07	171	⇑iP	P	02 12 46.4	-3.6
VNA1				e		02 12 53.3	
VNA3	Neumayer Olymp	80.39	172	⇑i	P	02 12 43.3	-8.4
VNA3	Neumayer Olymp	80.39	172	e	P	02 12 49.1	-2.6
VNA3	Neumayer Olymp	80.39	172	e	P	02 12 54.8	+3.1
VNA2	Neumayer--Watz	80.45	171	e	P	02 12 59.5	+7.5
VNA2	Neumayer--Watz	80.45	171	⇑iP	P	02 12 52.3	+0.3
VNA2				e		02 12 59.5	
SNAA	Sanae	81.85	170	⇑i	P	02 12 53.7	-5.6
SNAA	Sanae	81.85	170	e	P	02 13 02.0	+2.7
SNAA	Sanae	81.85	170	e	P	02 13 09.8	+10
HHC	Hu-ho-hao-te	123.42	29	ePKP	PKPdf	02 19 41.9	+2.0
HHC				PP	PP	02 21 26.8	+4.1
HHC				PKS	PKS	02 23 17.1	+4.6
HHC				SKS	SKS	02 26 52.9	+10
HHC				PP	PP		
	comp=Z,140nm,9.6s						
HHC				LR	LR		
	comp=N,100nm,12.0s,MS5.0						
HHC				LR	LR		
	comp=E,190nm,13.2s,MS5.0						
HHC				LR	LR		
	comp=Z,110nm,12.0s,MS4.7						
CN2	Changchun	126.31	17	ePKP	PKPdf	02 19 39.0	-6.3
MDJ	Mudanjiang	126.59	13	PKP	PKPdf	02 19 43.8	-2.0

NNC 08 02:19:17.8±5.0, **36.93N×70.24E, h161**^{km}±106^{km}, **mpv3.3, 3C, Error ellipse: s-maj=50.6km s-min=33.2km az=21.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	6.17	2	P	P	02 20 47.2	-0.5
	0.6nm,0.2s,baz=177,slow=11,SNR=51						
KK31				⇑S	S	02 21 57.1	-0.6
	0.9nm,0.3s,baz=189,slow=23,SNR=6.8						
AAK	Ala-Archa	6.58	29	⇑P	P	02 20 51.9	-1.2
	1.8nm,0.7s						
AAK				⇑S	S	02 22 07.2	-0.1
	7.6nm,0.7s						
AB31	Akbulak array	14.42	332	P	P	02 22 34.3	-0.9
	0.2nm,0.3s,baz=143,slow=15,SNR=8.4						

OTT 08 02:42:19.9±0.4, **73.90N×73.50W, h18**^{km}, **ML2.6**/2, **Baffin Bay Seismic Zone. 200km northeast from Pond Inlet, Nu, Baffin Bay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PINU	Pond Inlet	1.77	229	PN	Pn	02 42 49.2	-0.9
PINU				SN	Sn	02 43 10.3	-2.1
PINU				Trac		02 43 14.2	
	comp=Z,8.1nm,0.0s						
TULEG	Thule	2.91	22	PN	Pn	02 43 04.2	-2.2
TULEG				SN	Sn	02 43 35.0	-6.1
GIFN	Gifford Fjord,	4.67	217	PN	Pn	02 43 28.6	-2.8
GIFN				SN	Sn	02 44 18.0	-7.8
GIFN				Trac		02 44 20.6	
	comp=Z,1.5nm,0.2s						
ILON	Igloolik, Nuna	5.25	214	PN	Pn	02 43 36.7	-2.9

ILON				SN	Sn	02 44 32.3	-8.2
ILON				Trac		02 44 37.1	
	comp=Z,3.4nm,0.2s						
RES	**Resolute Bay**	**5.85**	**288**	PN	Pn	02 43 46.5	-1.5
RES				SN	Sn	02 44 48.3	-7.1
RES				Trac		02 44 51.1	
	comp=Z,0.6nm,0.1s						
SRLN	**Sarcpa Lake, N**	**6.23**	**215**	PN	Pn	02 43 49.3	-4.2
SRLN				SN	Sn	02 44 53.9	-11
SRLN				Trac		02 44 56.9	
	comp=Z,1.7nm,0.3s						
EUNU	**Eureka**	**6.81**	**341**	PN	Pn	02 43 57.9	-3.6
EUNU				SN	Sn	02 45 08.7	-11
QILN	**Qililugaq Expl**	**8.46**	**217**	PN	P	02 44 19.3	-5.3
QILN				SN	Sn	02 45 47.5	-13
QILN				Trac		02 45 53.2	
	comp=Z,1.7nm,0.6s						
FRB	**Frobisher Bay**	**10.36**	**168**	SN	S	02 46 30.9	-16

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*BJI **08** 02:47:18.7, 63.50N×150.90W, h13^{km}, mB5.3, mb4.8, Ms4.8, Msz4.3*

*MOS **08** 02:47:19.7±1.0, 63.73N×151.02W, h13^{km}, mb4.8/15, Error ellipse: s-maj=24.5km s-min=8.2km az=92.1*

*NEIC **08** 02:47:20.8, 63.55N×150.90W, h13^{km}, mb4.7/62, ML4.5(AEIC), After AEIC.*

NEIC Felt [IV] at Denali National Park and Nenana; [III] at Fairbanks.

*IDC **08** 02:47:21.9±0.6, 63.67N×150.95W, h14^{km}±3^{km}, mb4.3/16, mb1 4.4/21, mb1mx4.4/24, mbtmp4.3/21, ML3.9/5, MS3.4/4, Ms1 3.4/4, ms1mx3.1/29, Error ellipse: s-maj=10.3km s-min=9.0km az=174.0*

ISC 08 02:47:20.4±0.4**, 63.60N**±0.02×**150.93W**±0.05**, h19**^{km}±3^{km}**, h15**^{km}±.8^{km}**:pP-P, n228, σ0^{s}.84**/236**, mb4.6**/99**, MS3.8**/5**, 12C-4D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTH	**Kantishna Hill**	**0.04**	**173**	P	**Pb**	**02 47 23.0**	**-0.7**
KTH				S	**Sb**	**02 47 25.5**	**-0.5**
HUR	**Hurricane**	**0.85**	**136**	P	**Pb**	**02 47 35.9**	**-0.5**
BWN	**Browne**	**0.87**	**48**	P	**Pb**	**02 47 39.0**	**+2.4**
RND	**Reindeer**	**0.95**	**101**	P	**Pb**	**02 47 38.0**	**0.0**
NEA	**Nenana**	**1.28**	**39**	P	**Pn**	**02 47 44.0**	**+0.5**
MLY	**Manley**	**1.44**	**3**	P	**Pn**	**02 47 47.2**	**+1.4**
WRH	**Wood River Hil**	**1.53**	**54**	P	**Pn**	**02 47 47.4**	**+0.4**
DHY	**Denali Highway**	**1.69**	**106**	P	**Pn**	**02 47 50.1**	**+0.8**
CCB	**Clear Creek Bu**	**1.73**	**51**	P	**Pn**	**02 47 50.2**	**+0.2**
MDM	**Murphy Dome**	**1.81**	**40**	P	**Pn**	**02 47 51.5**	**+0.5**
COLA	**College**	**1.86**	**45**	P	**Pn**	**02 47 52.2**	**+0.4**
COLA	**College**	**1.86**	**45**	P	**Pn**	**02 47 52.1**	**+0.3**
HDA	**Harding Lake**	**1.93**	**63**	P	**Pn**	**02 47 53.1**	**+0.3**
GHO	**Glory Hole Cre**	**2.05**	**152**	P	**Pn**	**02 47 54.4**	**-0.1**
GLM	**Gilmore Dome**	**2.08**	**46**	P	**Pn**	**02 47 55.5**	**+0.5**
IL1	**Eielson Array**	**2.13**	**55**	P	**Pn**	**02 47 55.6**	**0.0**
ILAR	**Eielson Array**	**2.13**	**55**	Pn	**Pn**	**02 47 55.5**	**-0.1**
	16nm,0.3s,baz=234,slow=13,SNR=597						
ILAR				Pg	**Pn**	**02 48 00.9**	**+5.3**
	138nm,0.3s,baz=237,slow=16,SNR=212						
ILAR				Lg		02 48 26.3	
	487nm,0.3s,baz=238,slow=30,SNR=21						
ILAR	**Eielson Array**	**2.13**	**55**	P	**Pn**	**02 47 55.6**	**0.0**
ILAR				S	**Sn**	**02 48 26.3**	**+4.5**
SML	**Sawmill**	**2.16**	**145**	P	**Pn**	**02 47 56.1**	**0.0**
PMR	**Palmer**	**2.18**	**157**	P	**Pn**	**02 47 56.3**	**0.0**
DDM	**Donnelly Dome**	**2.27**	**83**	P	**Pn**	**02 47 58.2**	**+0.6**
THY	**Trims Highway**	**2.33**	**92**	P	**Pn**	**02 47 59.3**	**+0.8**
TT01	**Tatalina**	**2.40**	**256**	P	**Pn**	**02 47 59.2**	**-0.4**
SCM	**Sheep Creek Mo**	**2.43**	**135**	P	**Pn**	**02 47 59.6**	**-0.3**
FIB	**Fire Island**	**2.46**	**171**	*e*Pn	**Pn**	**02 48 02.1**	**+1.7**
KNK	**Knik Glacier**	**2.48**	**151**	P	**Pn**	**02 48 01.1**	**+0.5**
PAX	**Paxson**	**2.55**	**102**	P	**Pn**	**02 48 02.2**	**+0.6**
RC01	**Rabbit Creek A**	**2.58**	**167**	P	**Pn**	**02 48 02.3**	**+0.3**
SDG	**Sourdough**	**2.68**	**111**	P	**Pn**	**02 48 03.8**	**+0.3**
IM3	**Indian Mountai**	**2.68**	**335**	P	**Pn**	**02 48 04.8**	**+1.3**
IMA2	**Indian Mountai**	**2.75**	**336**	*e*Pn	**Pn**	**02 48 05.7**	**+1.2**
GCSA	**Galena City Sc**	**2.85**	**297**	P	**Pn**	**02 48 07.2**	**+1.3**
NKA	**Nikishka**	**2.87**	**183**	P	**Pn**	**02 48 08.8**	**+2.6**
TZL	**Tazlina**	**2.97**	**119**	P	**Pn**	**02 48 08.0**	**+0.3**
KLU	**Klutina**	**3.14**	**130**	P	**Pn**	**02 48 10.2**	**+0.2**
MPA	**Moose Pass**	**3.21**	**166**	P	**Pn**	**02 48 10.9**	**-0.1**
JPK	**Jack Peak**	**3.25**	**140**	P	**Pn**	**02 48 11.9**	**+0.2**
GLI	**Glacier Island**	**3.27**	**145**	P	**Pn**	**02 48 12.1**	**+0.3**
VLZ	**Valdez**	**3.27**	**137**	P	**Pn**	**02 48 12.5**	**+0.5**
SVW2	**Sparrevohn**	**3.31**	**223**	P	**Pn**	**02 48 11.7**	**-0.8**
MENT	**Mentasta**	**3.33**	**98**	P	**Pn**	**02 48 13.2**	**+0.6**
DIV	**Divide**	**3.45**	**133**	P	**Pn**	**02 48 14.8**	**+0.4**
FID	**Port Fidalgo**	**3.54**	**142**	P	**Pn**	**02 48 15.9**	**+0.2**
SEW	**Seward**	**3.58**	**168**	P	**Pn**	**02 48 16.9**	**+0.7**
INE	**Iliamna NE**	**3.69**	**197**	P	**Pn**	**02 48 18.4**	**+0.6**
ILW	**Iliamna West**	**3.70**	**197**	P	**Pn**	**02 48 18.3**	**+0.3**
HIN	**Hinchinbrook I**	**3.83**	**145**	P	**Pn**	**02 48 19.9**	**+0.1**
EYAK	**Cordova Ski Ar**	**3.91**	**139**	P	**Pn**	**02 48 21.1**	**+0.1**
BMRM	**Bremner River**	**3.96**	**129**	P	**Pn**	**02 48 21.7**	**0.0**
SGAM	**Sherman Glacie**	**4.11**	**136**	P	**Pn**	**02 48 23.6**	**-0.3**
RAGM	**Ragged Mountai**	**4.37**	**135**	P	**Pn**	**02 48 27.4**	**-0.1**
BM3	**Burnt Mountain**	**4.65**	**32**	P	**Pn**	**02 48 30.8**	**-0.7**
BALM	**Baldy**	**4.76**	**119**	P	**Pn**	**02 48 33.2**	**+0.2**
DAWY	**Dawson**	**5.13**	**80**	P	**Pn**	**02 48 36.9**	**-1.4**
CTGM	**Chitina Glacie**	**5.20**	**116**	P	**Pn**	**02 48 39.5**	**+0.3**
KAHC	**Katmai Hardscr**	**5.34**	**204**	P	**Pn**	**02 48 40.8**	**-0.5**
KDAK	**Kodiak Island**	**5.89**	**189**	Pn	**Pn**	**02 48 48.0**	**-1.0**
	2.1nm,0.3s,baz=30,slow=8.1,SNR=27						
KDAK				Sn	**Sn**	**02 49 55.4**	**-1.3**
	5.5nm,0.3s,baz=333,slow=14,SNR=3.4						
KDAK	**Kodiak Island**	**5.89**	**189**	P	**Pn**	**02 48 47.8**	**-1.2**
PCA	**Pinnacle**	**6.15**	**120**	P	**Pn**	**02 48 51.8**	**-0.9**
PNL	**Peninsula**	**6.76**	**120**	P	**Pn**	**02 49 00.1**	**-1.1**
TNA	**Tin City**	**7.57**	**293**	P	**Pn**	**02 49 11.6**	**-1.0**
WHY	**Whitehorse**	**8.07**	**104**	P	**P**	**02 49 17.4**	**-2.2**
INK	**Inuvik**	**8.52**	**49**	Pn	**P**	**02 49 23.7**	**-2.1**
	1.6nm,0.3s,baz=240,slow=15,SNR=70						
INK				Sn	**Sn**	**02 50 58.5**	**-3.8**
	2.2nm,0.3s,baz=292,slow=19,SNR=2.7						
INK				Lg		02 51 46.7	
	1.8nm,0.3s,baz=173,slow=9.8,SNR=4.8						
INK				LR	LR	02 53 22.1	
	comp=Z,182nm,19.8s,baz=39,slow=42						
INK	**Inuvik**	**8.52**	**49**	*e*Pn	**P**	**02 49 23.9**	**-1.9**
DLBC	**Dease Lake**	**11.35**	**108**	Pn	**P**	**02 50 04.3**	**-0.2**
	0.5nm,0.3s,baz=291,slow=12,SNR=12						
DLBC				Lg		02 53 15.2	
	0.5nm,0.3s,baz=212,slow=19,SNR=3.1						
DLBC				LR	LR	02 54 28.2	
	comp=Z,237nm,19.6s,baz=321,slow=38						
YKW3	**Yellowknife Ar**	**16.34**	**77**	*e*P	**P**	**02 51 08.2**	**-1.9**
YKA	**Yellowknife Ar**	**16.37**	**77**	Pn	**P**	**02 51 08.8**	**-1.6**
	0.3nm,0.3s,baz=282,slow=10,SNR=26						
YKA				PcP	PcP	02 56 01.6	-2.3
	0.1nm,0.3s,baz=297,slow=1.5,SNR=5.1						
YKA				LR	LR	02 57 48.4	
	comp=Z,288nm,18.1s,baz=295,slow=38						
YKA	**Yellowknife Ar**	**16.37**	**77**	⇑*e*P	**P**	**02 51 09.1**	**-1.3**
BILL	**Bilibino**	**17.79**	**303**	⇓*e*P	**P**	**02 51 33.3**	**+5.1**
BILL				*e*S	**S**	**02 54 42.9**	**-0.6**
BILL				pmax	pmax		
	comp=Z,17nm,1.5s						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s						
EDM	**Edmonton**	**21.91**	**101**	*e*P	**P**	**02 52 14.0**	**0.0**
NEW	**Newport**	**23.98**	**114**	P	**P**	**02 52 35.5**	**+1.3**
	comp=Z,7.4nm,0.8s,mb4.1,baz=330,slow=7.6,SNR=14						
NEW	**Newport**	**23.98**	**114**	*e*P	**P**	**02 52 35.3**	**+1.2**
	comp=Z,8.2nm,0.9s,mb4.2						
HAWA	**Hanford**	**24.53**	**120**	P	**P**	**02 52 39.8**	**+0.2**
FFC	**Flin Flon**	**25.99**	**87**	*e*P	**P**	**02 52 53.2**	**-0.1**
	comp=Z,5.9nm,0.7s,mb4.2						
MSO	**Missoula**	**26.43**	**112**	*e*P	**P**	**02 52 57.2**	**-0.2**
	comp=Z,3.0nm,0.6s,mb4.0						
CHMT	**Chamberlain Mo**	**26.65**	**111**	*e*P	**P**	**02 52 59.5**	**+0.1**
BMO	**Blue Mountains**	**26.68**	**119**	*e*P	**P**	**02 52 59.8**	**+0.1**
	comp=Z,28nm,2.0s,mb4.4						
MA2	**Magadan**	**27.18**	**289**	*i* P	**P**	**02 53 04.7**	**+0.5**
HRY	**Holter Researc**	**27.40**	**109**	*e*P	**P**	**02 53 06.9**	**+0.6**
HLID	**Hailey**	**28.90**	**116**	*e*P	**P**	**02 53 19.7**	**-0.1**
	comp=Z,20nm,1.9s,mb4.5						
TIXI	**Tiksi**	**29.25**	**320**	*i* P	**P**	**02 53 23.4**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,100nm,23.0s,MS3.4						
YMR	**Madison River**	**29.40**	**111**	*e*P	**P**	**02 53 24.4**	**0.0**
	comp=Z,9.4nm,0.9s,mb4.5						
LAO	**LASA Array**	**29.83**	**103**	P	**P**	**02 53 27.2**	**-0.9**
IMW	**Indian Meadow**	**30.04**	**112**	*e*P	**P**	**02 53 30.3**	**+0.2**
	comp=Z,5.3nm,0.7s,mb4.4						
RRI2	**Red Ridge**	**30.34**	**113**	*e*P	**P**	**02 53 32.8**	**+0.1**
	comp=Z,5.5nm,0.7s,mb4.4						
LOHW	**Long Hollow**	**30.42**	**112**	*e*P	**P**	**02 53 33.0**	**-0.3**
	comp=Z,3.5nm,0.8s,mb4.1						
SAC	**San Andreas**	**31.20**	**133**	P	**P**	**02 53 41.6**	**+1.3**
BW06	**Boulder Array**	**31.55**	**112**	*e*P	**P**	**02 53 43.1**	**-0.3**
	comp=Z,4.3nm,0.9s,mb4.3						
PDAR	**Pinedale Array**	**31.55**	**112**	P	**P**	**02 53 43.9**	**+0.6**
	comp=Z,3.2nm,0.8s,mb4.2,baz=320,slow=5.7,SNR=28						
PDAR				pP	pP	02 53 48.5	-0.3
	comp=Z,2.1nm,0.7s,baz=5.4,slow=1.7,SNR=9.3						
PDAR				PcP	PcP	02 56 34.5	-1.5
	comp=Z,1.5nm,0.5s,baz=123,slow=1.1,SNR=13						
ULM	**Lac du Bonnet**	**31.77**	**88**	P	**P**	**02 53 45.7**	**+0.5**
	comp=Z,12nm,0.8s,mb4.8,baz=314,slow=7.8,SNR=17						
ULM				PcP	PcP	02 56 34.8	-1.7
	comp=Z,3.0nm,0.5s,baz=311,slow=1.8,SNR=10.0						
ULM				LR	LR	03 05 47.8	
	comp=Z,34nm,18.8s,MS3.0,baz=78,slow=35						
ULM	**Lac du Bonnet**	**31.77**	**88**	P	**P**	**02 53 45.7**	**+0.5**
ULM				PcP	PcP	02 56 34.8	-1.7
ULM				LR	LR	03 05 47.8	
NVAR	**Mina Array Bea**	**31.85**	**127**	P	**P**	**02 53 46.5**	**+0.4**
	comp=Z,1.4nm,0.7s,mb3.9,baz=301,slow=9.8,SNR=9.7						
NVAR				pP	pP	02 53 51.0	-0.6
	comp=Z,0.8nm,0.6s,baz=325,slow=7.0,SNR=6.3						
NVAR				PcP	PcP	02 56 36.9	0.0
	comp=Z,2.2nm,0.7s,baz=349,slow=1.2,SNR=10						
MNV	**Mina**	**31.91**	**126**	P	**P**	**02 53 46.2**	**-0.3**
DUG	**Dugway**	**32.39**	**118**	*e*P	**P**	**02 53 50.1**	**-0.7**
	comp=Z,1.9nm,0.7s,mb4.0						
RSSD	**Black Hills**	**32.80**	**104**	*e*P	**P**	**02 53 54.0**	**-0.3**
	comp=Z,5.0nm,0.6s,mb4.6						
SRU	**San Rafael**	**34.23**	**116**	*e*P	**P**	**02 54 07.2**	**+0.5**
	comp=Z,6.7nm,0.8s,mb4.6						
EYMN	**Ely**	**35.41**	**88**	*e*P	**P**	**02 54 16.5**	**-0.3**
	comp=Z,40nm,0.7s,mb5.5						
NEN	**Nelson**	**35.58**	**124**	*e*P	**P**	**02 54 17.6**	**-0.8**
PV01	**Paradox Valley**	**35.85**	**115**	*e*P	**P**	**02 54 19.8**	**-0.8**
SUMG	**Summit**	**36.73**	**28**	*e*P	**P**	**02 54 28.7**	**+1.0**
	comp=Z,4.7nm,0.7s,mb4.4						
WUAZ	**Wupatki**	**37.01**	**120**	*e*P	**P**	**02 54 30.7**	**+0.4**
	comp=Z,16nm,1.0s,mb4.8						
SDCO	**Great Sand Dun**	**37.44**	**112**	*e*P	**P**	**02 54 33.9**	**0.0**
ANMO	**Albuquerque**	**39.45**	**115**	*e*P	**P**	**02 54 51.8**	**+1.0**
	comp=Z,3.3nm,1.0s,mb4.0						
ANMO	**Albuquerque**	**39.45**	**115**	⇓*e*P	**P**	**02 54 52.0**	**+1.2**
BNM	**Barren Site**	**40.08**	**116**	*e*P	**P**	**02 54 56.5**	**+0.5**
SCHQ	**Schefferville**	**40.87**	**62**	P	**P**	**02 55 03.2**	**+0.9**
	comp=Z,7.9nm,0.8s,mb4.4,baz=327,slow=8.8,SNR=8.5						
SCHQ	**Schefferville**	**40.87**	**62**	P	**P**	**02 55 03.2**	**+0.9**
KIP	**Kipapa**	**42.42**	**190**	*i* P	**P**	**02 55 17.1**	**+1.8**
MNTX	**Cornudas Mount**	**42.73**	**116**	*e*P	**P**	**02 55 17.9**	**+0.2**
	comp=Z,2.2nm,0.9s,mb3.9						
BOD	**Bodaibo**	**42.74**	**308**	*e*P	**P**	**02 55 16.6**	**-0.8**
SIUC	**Southern Illin**	**44.53**	**95**	*e*P	**P**	**02 55 31.2**	**-1.0**
	comp=Z,19nm,1.0s,mb4.9						
ACSO	**Alum Creek Sta**	**45.26**	**88**	*e*P	**P**	**02 55 37.8**	**-0.1**
	comp=Z,12nm,0.6s,mb4.9						
LTX	**Lajitas**	**45.50**	**116**	*e*P	**P**	**02 55 40.8**	**+0.7**
	comp=Z,4.3nm,0.6s,mb4.6						
TXAR	**Lajitas Array**	**45.50**	**116**	P	**P**	**02 55 41.0**	**+0.9**
	comp=Z,4.8nm,0.6s,mb4.6,baz=328,slow=5.8,SNR=75						
TXAR				PcP	PcP	02 57 18.4	-1.0
	comp=Z,1.1nm,0.9s,slow=2.7,SNR=3.1						
JCT	**Junction City**	**46.08**	**111**	*e*P	**P**	**02 55 44.7**	**0.0**
	comp=Z,12nm,0.6s,mb5.0						
WVT	**Waverly**	**46.46**	**95**	*e*P	**P**	**02 55 47.4**	**-0.2**
	comp=Z,5.4nm,0.9s,mb4.5						
MDJ	**Mudanjiang**	**46.81**	**286**	P	**P**	**02 55 47.2**	**-3.0**
MDJ				AMB	AMB		
	comp=Z,200nm,3.9s						
KEV	**Kevo**	**46.92**	**1**	*e*p	**P**	**02 55 47.5**	**-3.2**
	comp=Z,11nm,0.8s,mb4.8						
KEV	**Kevo**	**46.92**	**1**	*e*P	**P**	**02 55 47.5**	**-3.2**
KEV				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
OXF	**Oxford**	**47.12**	**98**	*e*P	**P**	**02 55 52.6**	**-0.2**
	comp=Z,26nm,0.7s,mb5.3						
ARCES	**ARCESS Array B**	**47.13**	**2**	P	**P**	**02 55 52.4**	**0.0**
	comp=Z,1.8nm,0.7s,mb4.1,baz=9.5,slow=7.4,SNR=6.6						
ARCES				PcP	PcP	02 57 23.1	-1.3
	comp=Z,3.1nm,0.8s,slow=3.6,SNR=5.7						
HIA	**Hailar**	**47.21**	**297**	*e*P	**P**	**02 55 54.0**	**+0.7**
	comp=Z,15nm,0.8s,mb5.0						
TZTN	**Tazewell**	**48.03**	**91**	*e*P	**P**	**02 55 59.5**	**-0.5**
SWET	**Sewanee**	**48.07**	**94**	*e*P	**P**	**02 55 58.1**	**-2.1**
FWV	**Forest Hill**	**48.39**	**88**	*e*P	**P**	**02 56 02.2**	**-0.6**
ELN	**Prospectdale**	**48.71**	**88**	*e*P	**P**	**02 56 04.5**	**-0.7**
BLA	**Blacksburg**	**48.88**	**88**	*e*P	**P**	**02 56 06.0**	**-0.4**
	comp=Z,9.8nm,0.6s,mb5.0						
CN2	**Changchun**	**49.24**	**288**	*e*P	**P**	**02 56 09.6**	**+0.5**
CN2				*e*XP	sP	02 56 16.6	-0.4
CN2				*e*S	**S**	**03 03 12.5**	**-0.4**
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
CN2				AMB	AMB		
	comp=Z,300nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s,MS4.5						
CN2				LR	LR		
	comp=E,300nm,14.0s,MS4.5						
CN2				LR	LR		
	comp=Z,300nm,15.0s,MS4.4						
LRAL	**Lakeview Retre**	**49.43**	**97**	*e*P	**P**	**02 56 09.8**	**-1.0**
	comp=Z,5.6nm,0.6s,mb4.8						
GOGA	**Godfrey**	**50.69**	**93**	*e*P	**P**	**02 56 20.0**	**-0.4**
	comp=Z,4.0nm,0.6s,mb4.5						
JSC	**Jenkinsville**	**50.94**	**90**	*e*P	**P**	**02 56 21.5**	**-0.8**
ZAK	**Zakamensk**	**52.46**	**309**	*e*P	**P**	**02 56 30.8**	**-2.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
SONM	**Songino Array**	**53.49**	**305**	P	**P**	**02 56 42.6**	**+1.3**
	comp=Z,5.9nm,0.8s,mb4.6,baz=23,slow=7.0,SNR=28						
JOF	**Joensuu**	**53.79**	**359**	*e*p	**P**	**02 56 41.6**	**-1.6**
	comp=Z,2.7nm,0.8s,mb4.2						
JOF	**Joensuu**	**53.79**	**359**	*e*P	**P**	**02 56 41.6**	**-1.6**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KAF	**Kangasniemi**	**54.59**	**2**	*e*p	**P**	**02 56 47.9**	**-1.2**
	comp=Z,2.7nm,0.6s,mb4.5,baz=354,slow=7.7						
KAF	**Kangasniemi**	**54.59**	**2**	*e*P	**P**	**02 56 47.9**	**-1.2**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
NVS	**Novosibirsk**	**54.67**	**325**	*e*P	**P**	**02 56 47.8**	**-2.0**
NOA	**NORSAR Array B**	**54.95**	**10**	P	**P**	**02 56 51.0**	**-0.8**
	comp=Z,1.2nm,0.7s,mb4.0,baz=350,slow=7.2,SNR=5.2						
ZAL	**Zalesovo**	**55.07**	**323**	P	**P**	**02 56 52.1**	**-0.7**
	comp=Z,5.1nm,1.0s,mb4.5,baz=77,slow=8.8,SNR=22						
FINES	**FINESS Array B**	**55.26**	**2**	P	**P**	**02 56 53.0**	**-0.9**
	comp=Z,4.5nm,0.9s,mb4.5,baz=2.5,slow=7.0,SNR=13						
KLMR	**Klimovskoe**	**55.62**	**354**	*d i*P	**P**	**02 56 56.9**	**+0.3**
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.0						
HHC	**Hu-ho-hao-te**	**57.42**	**297**	*e*P	**P**	**02 57 08.8**	**-0.9**
HHC				AP	pP	02 57 12.9	-2.6
HHC				XP	sP	02 57 16.0	-1.6
HHC				PCP	PcP	02 58 00.8	-2.5
HHC				PP	PP	02 59 16.4	-2.4
HHC				SCP		03 02 01.8	
HHC				S	**S**	**03 05 05.2**	**+1.4**
HHC				SCS	ScS	03 06 51.9	-2.8
HHC				SS	SS	03 08 57.8	+2.7
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,130nm,7.2s						
HHC				LR	LR		
	comp=N,100nm,12.0s,MS4.6						
HHC				LR	LR		
	comp=E,240nm,12.0s,MS4.6						
HHC				LR	LR		
	comp=Z,140nm,16.8s,MS4.1						
ARU	**Arti**	**58.16**	**341**	*e*P	**P**	**02 57 14.0**	**-0.6**
	comp=Z,10.0nm,0.6s,mb5.0						
ARU	**Arti**	**58.16**	**341**	⇑*i*P	**P**	**02 57 14.2**	**-0.5**
ARU				*e*		02 58 03.7	
ARU				*e*		02 59 20.7	
ARU				*e*S	**S**	**03 05 15.8**	**+2.4**
ARU				*e*SS	SS	03 09 08.0	+1.3
ARU				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
CHKZ	**Chkalovo**	**58.68**	**332**	*e*P	**P**	**02 57 17.0**	**-1.3**
	comp=Z,10nm,0.6s,mb5.0						
CHKZ				*e*pP	pP	02 57 21.6	-2.5
CHKZ	**Chkalovo**	**58.68**	**332**	*e*P	**P**	**02 57 17.0**	**-1.3**
CHKZ				*e*PP	pP	02 57 21.6	-2.5
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
BRVK	**Borovoye**	**59.33**	**332**	*e*P	**P**	**02 57 22.1**	**-0.8**
	comp=Z,7.5nm,0.8s,mb4.8						
BRVK				*e*pP	pP	02 57 26.4	-2.2
BRVK	**Borovoye**	**59.33**	**332**	*e*P	**P**	**02 57 22.1**	**-0.8**
BRVK				*e*	pP	02 57 26.4	-2.2
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
BVA0	**Borovoye Array**	**59.34**	**332**	*i* P	**P**	**02 57 22.2**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
VOSK	**Vostochnaya**	**59.49**	**332**	P	**P**	**02 57 22.9**	**-1.1**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
KURK	**Kurchatov**	**59.60**	**326**	*e*P	**P**	**02 57 23.4**	**-1.4**
	comp=Z,8.3nm,1.0s,mb4.7						
KURK				*e*pP	pP	02 57 28.0	-2.6
KURK	**Kurchatov**	**59.60**	**326**	⇑*e*P	**P**	**02 57 23.9**	**-0.9**
OBN	**Obninsk**	**61.48**	**355**	⇑*e*P	**P**	**02 57 36.9**	**-0.7**
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
SSE	**Sheshan**	**61.71**	**283**	P	**P**	**02 57 39.3**	**-0.2**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,40nm,3.7s						
NJ2	**Nanjing**	**61.90**	**286**	*e*P	**P**	**02 57 42.1**	**+1.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
MKAR	**Makanchi Array**	**62.23**	**322**	P	**P**	**02 57 41.4**	**-1.3**
	comp=Z,2.3nm,0.6s,mb4.5,baz=45,slow=6.7,SNR=22						
MKAR				pP	pP	02 57 45.9	-2.6
	comp=Z,2.7nm,0.6s,baz=46,slow=6.4,SNR=12						
MKAR	**Makanchi Array**	**62.23**	**322**	⇑*e*P	**P**	**02 57 41.7**	**-1.0**
GTA	**Gaotai**	**63.17**	**305**	*e*P	**P**	**02 57 49.8**	**+0.8**
GTA				AP	pP	02 57 54.0	-0.8
GTA				XP	sP	02 57 57.2	+0.3
WMQ	**Urumqi**	**63.34**	**316**	⇑P	**P**	**02 57 52.8**	**+2.7**
WMQ				AP	pP	02 57 57.3	+1.4
WMQ				XP	sP	02 57 59.8	+1.9
WMQ				PCP	PcP	02 58 29.3	+2.3
WMQ				PP	PP	03 00 13.8	+2.7
WMQ				SCP		03 02 30.3	
WMQ				S	**S**	**03 06 23.3**	**+3.5**
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,190nm,4.9s						
WMQ				LR	LR		
	comp=N,60nm,18.3s,MS3.9						
WMQ				LR	LR		
	comp=E,50nm,18.3s,MS3.9						
WMQ				LR	LR		
	comp=Z,30nm,15.4s,MS3.6						
ORR	**Orenburg**	**63.38**	**342**	⇑*i*P	**P**	**02 57 50.1**	**-0.1**
ORR				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.1						
AKTO	**Aktyubinsk**	**64.06**	**340**	P	**P**	**02 57 54.1**	**-0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
LZH	**Lanzhou**	**64.57**	**300**	*e*P	**P**	**02 58 01.5**	**+3.4**
LZH				AP	pP	02 58 09.5	+5.6
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
CLL	**Collm**	**64.75**	**11**	P	**P**	**02 57 59.0**	**0.0**
CLL	**Collm**	**64.75**	**11**	*i* P	**P**	**02 57 59.0**	**0.0**
AB31	**Akbulak array**	**64.89**	**338**	*i* P	**P**	**02 57 59.5**	**-0.5**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
BAIF	**Baives**	**65.01**	**17**	*e*P	**P**	**02 58 00.8**	**+0.1**
	comp=Z,6.8nm,0.6s,mb4.6						
GIVF	**Givet**	**65.05**	**17**	*e*P	**P**	**02 58 01.1**	**+0.1**
MOX	**Moxa**	**65.28**	**12**	*i* P	**P**	**02 58 01.3**	**-1.2**
	comp=Z,logA/T=1.1,mb4.9						
MOX	**Moxa**	**65.28**	**12**	*e*P	**P**	**02 58 01.3**	**-1.2**
	comp=Z,8.0nm,0.7s,mb4.9						
MOX	**Moxa**	**65.28**	**12**	*e*P	**P**	**02 58 01.3**	**-1.2**
MOX				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
ROSF	**Rostrenen**	**65.53**	**23**	*e*P	**P**	**02 58 03.9**	**-0.2**
	comp=Z,20nm,0.8s,mb4.9						
FLN	**La Foliniere**	**65.59**	**21**	*e*P	**P**	**02 58 04.2**	**-0.3**
SGMF	**Saint Gilles**	**65.74**	**23**	*e*P	**P**	**02 58 05.2**	**-0.2**
LDF	**La Druitiere**	**65.81**	**21**	*e*P	**P**	**02 58 05.5**	**-0.4**
	comp=Z,24nm,0.9s,mb4.9						
GRR	**Gorron**	**65.89**	**21**	*e*P	**P**	**02 58 06.1**	**-0.3**
	comp=Z,11nm,0.6s,mb4.8						
AKASG	**Malin Array Be**	**66.05**	**360**	P	**P**	**02 58 07.7**	**+0.3**
	comp=Z,1.2nm,0.4s,mb4.2,baz=359,slow=6.4,SNR=8.7						
AKASG	**Malin Array Be**	**66.05**	**360**	*i* P	**P**	**02 58 07.6**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GRA1	**Grafenberg Arr**	**66.19**	**13**	*e*P	**P**	**02 58 09.2**	**+0.9**
	comp=Z,3.0nm,1.0s,mb4.3						
GRF	**Grafenberg Arr**	**66.19**	**13**	*e*P	**P**	**02 58 09.2**	**+0.9**
	comp=Z,3.0nm,1.0s,mb4.3						
GRF	**Grafenberg Arr**	**66.19**	**13**	*e*P	**P**	**02 58 09.2**	**+0.9**
GRF				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
MEZF	**Maizieres J'vi**	**66.65**	**17**	*e*P	**P**	**02 58 11.4**	**+0.1**
KHC	**Kasperske Hory**	**66.96**	**11**	*e*P	**P**	**02 58 14.0**	**+0.8**
KHC	**Kasperske Hory**	**66.96**	**11**	*e*P	**P**	**02 58 14.0**	**+0.8**
KHC				*e*	pP	02 58 18.6	-0.4
CDF	**Champ du Feu**	**67.02**	**16**	*e*P	**P**	**02 58 13.7**	**+0.1**
	comp=Z,2.7nm,0.5s,mb4.3						
GERES	**GERESS Array B**	**67.25**	**11**	P	**P**	**02 58 15.8**	**+0.7**
	comp=Z,1.6nm,0.5s,mb4.3,baz=1.5,slow=7.4,SNR=17						
GERES				pP	pP	02 58 20.3	-0.6
	comp=Z,1.4nm,0.6s,baz=1.8,slow=6.7,SNR=8.0						
HAU	**Haudompre**	**67.31**	**16**	*e*P	**P**	**02 58 15.5**	**+0.1**
	comp=Z,10nm,0.7s,mb4.7						
HYF	**Humbligny**	**67.52**	**19**	*e*P	**P**	**02 58 16.9**	**+0.1**
HINF	**Hinteralfeld**	**67.56**	**16**	*e*P	**P**	**02 58 16.9**	**-0.1**
	comp=Z,9.7nm,0.7s,mb4.6						
LOR	**Lormes**	**67.70**	**18**	*e*P	**P**	**02 58 17.8**	**-0.1**
	comp=Z,14nm,0.6s,mb4.8						
MFF	**Saint Martin d**	**67.74**	**21**	*e*P	**P**	**02 58 18.1**	**-0.1**
	comp=Z,7.3nm,0.5s,mb4.6						
SSF	**Saint Saulge**	**67.85**	**19**	*e*P	**P**	**02 58 18.9**	**0.0**
	comp=Z,28nm,1.0s,mb5.0						
AVF	**Avril sur Loir**	**68.09**	**19**	*e*P	**P**	**02 58 20.1**	**-0.3**
	comp=Z,9.5nm,0.6s,mb4.7						
AAK	**Ala-Archa**	**68.16**	**326**	*e*P	**P**	**02 58 19.2**	**-1.6**
	comp=Z,10nm,1.6s,mb4.6						
AAK				*e*pP	pP	02 58 24.1	-2.6
BGF	**Bois d'Agland**	**68.25**	**19**	*e*P	**P**	**02 58 21.0**	**-0.4**
SMF	**Signal de Mont**	**68.31**	**18**	*e*P	**P**	**02 58 21.3**	**-0.4**
	comp=Z,16nm,0.8s,mb4.8						
TCF	**Toulx Ste Croi**	**68.42**	**20**	*e*P	**P**	**02 58 22.0**	**-0.4**
	comp=Z,11nm,0.8s,mb4.6						
MOTA	**Moosalm**	**68.50**	**13**	⇓*i*P	**P**	**02 58 23.6**	**+0.7**
	comp=Z,2.0nm,0.6s,mb4.3						
WATA	**Walderalm**	**68.55**	**13**	⇑*i*P	**P**	**02 58 23.9**	**+0.7**
	comp=Z,4.0nm,0.5s,mb4.6						
SQTA	**Sankt Quirin**	**68.63**	**13**	⇑*i*P	**P**	**02 58 23.9**	**+0.1**
	comp=Z,3.4nm,0.7s,mb4.4						
WTTA	**Wattenberg**	**68.63**	**13**	⇑*i*P	**P**	**02 58 24.7**	**+1.0**
	comp=Z,5.2nm,0.5s,mb4.7						
CABF	**La Chapelle**	**68.64**	**17**	*e*P	**P**	**02 58 24.1**	**+0.3**
	comp=Z,16nm,0.6s,mb4.8						
KBA	**Koelnbreinsper**	**68.97**	**11**	⇑*i*P	**P**	**02 58 26.6**	**+0.7**
	comp=Z,7.9nm,0.6s,mb4.8						
CD2	**Chengdu**	**69.16**	**297**	*e*P	**P**	**02 58 28.9**	**+1.6**
RJF	**Les Rejaudoux**	**69.27**	**20**	*e*P	**P**	**02 58 27.1**	**-0.6**
LFF	**La Frestale**	**69.50**	**21**	*e*P	**P**	**02 58 29.2**	**+0.1**
	comp=Z,16nm,0.6s,mb4.8						
OBKA	**Obir**	**69.64**	**11**	⇑*i*P	**P**	**02 58 30.8**	**+0.9**
	comp=Z,7.1nm,0.5s,mb4.8						
CAF	**Calviac**	**69.72**	**20**	*e*P	**P**	**02 58 30.3**	**-0.2**
	comp=Z,4.5nm,0.5s,mb4.3						
LPL	**La Plagne**	**69.80**	**17**	*e*P	**P**	**02 58 32.1**	**+1.2**
LPG	**La Plagne**	**69.82**	**17**	*e*P	**P**	**02 58 31.8**	**+0.7**
VIVF	**Saint-Julien-l**	**70.18**	**18**	*e*P	**P**	**02 58 33.4**	**+0.2**
	comp=Z,11nm,0.6s,mb4.7						
ORIF	**Oris-en-Rattie**	**70.28**	**17**	*e*P	**P**	**02 58 34.2**	**+0.4**
	comp=Z,8.9nm,0.7s,mb4.5						
MBDF	**Montbardon**	**70.58**	**17**	*e*P	**P**	**02 58 36.8**	**+1.1**
	comp=Z,8.0nm,0.6s,mb4.5						
GOF	**Gofitskoye**	**71.13**	**350**	*e*P	**P**	**02 58 36.8**	**-2.2**

SMRF	**Simiane la Rot**	**71.16**	**18**	*e*P	**P**	**02 58 40.1**	**+0.9**
	comp=Z,9.4nm,0.8s,mb4.5						
ETSF	**Etsaut**	**71.27**	**23**	*e*P	**P**	**02 58 40.4**	**+0.5**
	comp=Z,5.4nm,0.7s,mb4.3						
EPF	**Esparros**	**71.30**	**22**	*e*P	**P**	**02 58 40.3**	**+0.2**
MTLF	**Montolieu**	**71.30**	**20**	*e*P	**P**	**02 58 40.0**	**-0.1**
	comp=Z,14nm,0.8s,mb4.6						
SBF	**Sospel**	**71.52**	**16**	*e*P	**P**	**02 58 41.6**	**+0.2**
	comp=Z,19nm,0.6s,mb4.9						
FRF	**La Foret Royal**	**71.72**	**17**	*e*P	**P**	**02 58 42.8**	**+0.2**
CPD	**Cerro la Pandu**	**71.81**	**86**	*e*P	**P**	**02 58 42.7**	**-0.8**
LMR	**La Mourre**	**71.92**	**17**	*e*P	**P**	**02 58 44.1**	**+0.3**
	comp=Z,3.9nm,0.6s,mb4.2						
KIV	**Kislovodsk**	**72.25**	**350**	*i* P	**P**	**02 58 49.2**	**+3.5**
ESDC	**Sonseca Array**	**73.77**	**26**	P	**P**	**02 58 54.8**	**+0.2**
	comp=Z,7.4nm,0.7s,mb4.7,baz=345,slow=5.9,SNR=33						
ESDC				pP	pP	02 58 59.3	-1.1
	comp=Z,4.5nm,0.6s,baz=344,slow=6.2,SNR=14						
EVO	**Evora**	**74.03**	**29**	*e*P	**P**	**02 58 56.9**	**+0.8**
	comp=Z,32nm,1.2s,mb4.8						
BRTR	**Keskin Array B**	**76.96**	**356**	P	**P**	**02 59 13.1**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.6,baz=27,slow=2.8,SNR=4.6						
BOSA	**Boshof**	**144.92**	**6**	PKP	PKPdf	03 06 56.7	-2.9
	comp=Z,16nm,0.9s,baz=13,slow=2.8,SNR=16						
BOSA				pPKP		03 07 01.0	
	comp=Z,13nm,0.8s,baz=12,slow=4.6,SNR=7.1						
BOSA	**Boshof**	**144.92**	**6**	PKP	PKPdf	03 06 56.7	-2.9
BOSA				pPKP		03 07 01.0	

*IDC **08** 02:56:12.2±0.5, 24.20S×176.53W, mb4.7/15, mb1 4.9/17, mb1mx4.8/21, mbtmp4.7/17, ML4.0/1, MS4.1/12, Ms1 4.0/12, ms1mx3.8/22, Error ellipse: s-maj=22.3km s-min=14.5km az=143.0*

*MOS **08** 02:56:16.4±0.9, 24.46S×176.70W, h33^{km}, mb5.2/8, Error ellipse: s-maj=26.0km s-min=23.6km az=179.9*

*BJI **08** 02:56:17.4, 24.14S×175.92W, h56^{km}, mB5.5, mb5.2, Ms5.1, Msz4.8*

*HRVD **08** 02:56:17.5±0.6, 24.21S×175.98W, h41^{km}±2^{km}, MW4.8/23, Centroid moment Tensor Solution. LP body waves: s23,c30;Mantle waves: s22,c33; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.74±.26; $M_{\theta\theta}$0.35±.20; $M_{\phi\phi}$-2.09±.17; $M_{r\theta}$0.17±.28; $M_{\theta\phi}$-1.13±.15; $M_{\phi r}$0.89±.19; Best double couple: $M_0$2.328×10^{16} NP1:ϕ_s211°,δ34°,λ104°. NP2:ϕ_s14°,δ57°,λ81°. Principal axes: T 1.943, Plg76°, Azm256°; N .769, Plg8°, Azm19°; P -2.714, Plg11°, Azm111°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 02:56:17.5±0.2, 24.30S×176.56W, mb5.0/24 Error ellipse: s-maj=8.4km s-min=5.5km az=136.0*

ISC 08 02:56:16.2±0.3**, 24.35S**±0.07×**176.61W**±0.07**, h34^{km}, h34^{km}**±3.3^{km}**:pP-P, n205,** σ**0^{s}81**/100**, mb4.9**/42**, MS4.1**/15**, 31C-9D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.02**	**193**	Pn	**P**	**02 57 36.9**	**+5.8**
	48nm,0.3s,baz=315,slow=19,SNR=4.2						
RAO				Sn	**S**	**02 58 35.7**	**+7.0**
	96nm,0.3s,baz=63,slow=23,SNR=7.4						
AFI	**Afiamalu**	**11.35**	**25**	Pn	**P**	**02 58 51.3**	**-7.8**
	12nm,0.3s,baz=122,slow=2.2,SNR=8.0						
AFI				Sn	**S**	**03 00 47.2**	**-19**
	10nm,0.3s,baz=34,slow=23,SNR=4.0						
AFI	**Afiamalu**	**11.35**	**25**	Pn	**P**	**02 58 51.3**	**-7.8**
AFI				Sn	**S**	**03 00 47.2**	**-19**
URZ	**Urewera**	**14.86**	**200**	Pn	**P**	**02 59 44.9**	**-0.7**
	0.6nm,0.3s,baz=358,slow=11,SNR=3.0						
URZ				Sn	**S**	**03 02 24.6**	**-5.2**
	1.2nm,0.3s,baz=107,slow=19,SNR=4.5						
DZM	**Mont Dzumac**	**15.74**	**275**	*e*P	**P**	**03 00 05.9**	**+8.7**
DZM	**Mont Dzumac**	**15.74**	**275**	Pn	**P**	**03 00 05.9**	**+8.7**
	3.4nm,0.3s,baz=86,slow=18,SNR=23						
DZM	**Mont Dzumac**	**15.74**	**275**	*e*P	**P**	**03 00 05.8**	**+8.7**
RAR	**Rarotonga**	**15.84**	**82**	Pn	**P**	**02 59 50.6**	**-7.8**
	10.0nm,0.3s,baz=246,slow=7.6,SNR=8.2						
RAR				LR	LR	03 03 55.5	
	comp=Z,638nm,22.0s,baz=240,slow=29						
RPZ	**Rata Peaks**	**21.81**	**205**	P	**P**	**03 01 07.7**	**+0.6**
	5.3nm,0.5s,mb4.2,baz=338,slow=19,SNR=4.4						
RPZ				LR	LR	03 09 51.8	
	comp=Z,265nm,18.1s,MS3.7,baz=292,slow=37						
TBI	**Tubuai**	**24.84**	**93**	*e*LQ		03 06 19.1	
TBI				*e*LR	LR	03 07 26.3	
	744nm,26.2s,baz=263						
PPT	**Papeete**	**26.10**	**80**	*e*LQ		03 06 51.6	
PPT				*e*LR	LR	03 07 59.4	
	850nm,25.5s,baz=248						
PPT	**Papeete**	**26.10**	**80**	LR	LR	03 09 22.5	
	comp=Z,434nm,20.1s,MS4.0,baz=246,slow=30						
CTA	**Charters Tower**	**34.57**	**270**	⇑*i*P	**P**	**03 03 05.1**	**+1.1**
	15nm,0.3s,mb5.4						
CTA	**Charters Tower**	**34.57**	**270**	LR	LR	03 15 09.7	
	comp=Z,206nm,19.5s,MS3.9,baz=46,slow=33						
CTAO	**Charters Tower**	**34.57**	**270**	*e*P	**P**	**03 03 04.7**	**+0.6**
	19nm,0.4s,mb5.4						
STKA	**Stephens Creek**	**37.44**	**249**	⇑*i*P	**P**	**03 03 29.7**	**+1.5**
	4.7nm,1.0s,mb4.3						
STKA	**Stephens Creek**	**37.44**	**249**	P	**P**	**03 03 28.5**	**+0.3**
	3.9nm,0.5s,mb4.5,baz=90,slow=11,SNR=15						
STKA				PcP	PcP	03 05 47.5	+0.6
	2.1nm,0.5s,baz=90,slow=1.0,SNR=2.9						
STKA				LR	LR	03 17 14.7	
	comp=Z,330nm,19.6s,MS4.1,baz=297,slow=34						
PMG	**Port Moresby**	**37.58**	**287**	P	**P**	**03 03 29.8**	**+0.3**
	40nm,0.9s,mb5.2,baz=130,slow=4.9,SNR=14						
PMG				LR	LR	03 16 47.8	
	comp=Z,246nm,18.8s,MS4.0,baz=57,slow=33						
PMG	**Port Moresby**	**37.58**	**287**	P	**P**	**03 03 29.9**	**+0.3**
PMG				LR	LR	03 16 47.8	
RKT	**Rikitea**	**38.03**	**97**	*e*LR	LR	03 13 33.8	
	392nm,25.8s						
ASPA	**Alice Springs**	**45.02**	**260**	⇑*i*P	**P**	**03 04 30.9**	**+0.3**
WB2	**Warramunga Arr**	**45.45**	**265**	⇑*i*P	**P**	**03 04 33.2**	**-0.9**
WRAB	**Tennant Creek**	**45.45**	**265**	*e*P	**P**	**03 04 33.2**	**-0.9**
	10nm,0.4s,mb5.0						
WRAB	**Tennant Creek**	**45.45**	**265**	⇓*e*P	**P**	**03 04 33.2**	**-1.0**
WRA	**Warramunga Arr**	**45.46**	**265**	P	**P**	**03 04 33.3**	**-0.9**
	7.6nm,0.5s,mb4.8,baz=103,slow=8.0,SNR=176						
WRA				PcP	PcP	03 06 13.3	0.0
	2.2nm,0.9s,baz=104,slow=3.5,SNR=5.7						
WRA				S	**S**	**03 11 10.7**	**-2.1**
	0.9nm,0.8s,baz=101,slow=13,SNR=4.5						
GUMO	**Guam**	**53.26**	**311**	LR	LR	03 25 49.0	
	comp=Z,118nm,19.9s,MS3.9,baz=97,slow=33						
FITZ	**Fitzroy Crossi**	**53.88**	**265**	*e*P	**P**	**03 05 37.5**	**-1.2**
	16nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**53.88**	**265**	P	**P**	**03 05 37.9**	**-0.8**
	21nm,0.7s,mb5.2,baz=138,slow=8.1,SNR=20						
FITZ				LR	LR	03 27 57.3	
	comp=Z,605nm,20.4s,MS4.7,baz=171,slow=35						
SBA	**Scott Base**	**54.14**	**184**	*e*P	**P**	**03 05 41.3**	**+1.4**
	7.9nm,1.0s,mb4.6						
KLBR	**Kellerberrin**	**57.66**	**247**	*e*P	**P**	**03 06 05.5**	**-0.3**
	68nm,1.7s,mb5.4						
MBWA	**Marble Bar**	**58.34**	**259**	*e*P	**P**	**03 06 09.4**	**-1.2**
	9.2nm,0.7s,mb4.9						
CASY	**Casey**	**61.07**	**206**	*e*P	**P**	**03 06 28.1**	**-0.8**
	17nm,1.0s,mb5.1						
CASY				*e*pP	pP	03 06 37.8	-1.3
QSPA	**South Pole Qui**	**65.73**	**180**	⇑*i*P	**P**	**03 06 59.7**	**+0.5**
	12nm,1.1s,mb4.8						
MIR	**Mirnyy**	**68.07**	**206**	*e*P	**P**	**03 07 14.0**	**-0.2**
MIR				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.1						
KKM	**Kota Kinabalu**	**72.00**	**285**	*e*P	**P**	**03 07 38.6**	**-0.3**
MJAR	**Matsushiro Arr**	**74.06**	**324**	P	**P**	**03 07 49.5**	**-1.2**
	comp=Z,6.6nm,0.8s,mb4.6,baz=155,slow=5.0,SNR=9.9						
MJAR				LR	LR	03 35 07.4	
	comp=Z,159nm,20.0s,MS4.3,baz=305,slow=32						
MAW	**Mawson**	**78.39**	**200**	P	**P**	**03 08 15.4**	**+0.9**
	comp=Z,14nm,0.9s,mb4.9,baz=125,slow=6.3,SNR=31						
MAW				LR	LR	03 42 38.1	
	comp=Z,89nm,19.9s,MS4.1,baz=66,slow=36						
SSE	**Sheshan**	**81.13**	**310**	P	**P**	**03 08 29.7**	**-0.4**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,60nm,5.5s						
SSE	**Sheshan**	**81.13**	**310**	P	**P**	**03 08 29.7**	**-0.4**
	comp=Z,17nm,0.8s,mb5.0						
CMB	**Columbia Colle**	**81.44**	**42**	*e*P	**P**	**03 08 31.2**	**-0.3**
	comp=Z,7.3nm,1.0s,mb4.6						
CMB				*e*pP	pP	03 08 43.6	+1.5
YBH	**Yreka Blue Hor**	**82.51**	**38**	P	**P**	**03 08 36.9**	**-0.1**
	comp=Z,6.3nm,0.9s,mb4.6,baz=131,slow=2.4,SNR=7.8						
NVAR	**Mina Array Bea**	**82.96**	**42**	P	**P**	**03 08 39.3**	**0.0**
	comp=Z,4.8nm,0.8s,mb4.6,baz=208,slow=6.4,SNR=28						
NVAR				LR	LR	03 35 46.5	
	comp=Z,29nm,19.8s,MS3.6,baz=125,slow=29						
LDFC	**Landfair**	**82.97**	**47**	*e*P	**P**	**03 08 39.6**	**+0.2**
SYO	**Syowa Base**	**83.26**	**192**	⇑P	**P**	**03 08 40.0**	**-0.2**
SYO	**Syowa Base**	**83.26**	**192**	⇑*e*P	**P**	**03 08 40.0**	**-0.2**
NJ2	**Nanjing**	**83.31**	**309**	*e*P	**P**	**03 08 41.3**	**+0.1**
NJ2				PP	PP	03 11 55.1	+0.1
NJ2				S	S	03 19 00.0	+1.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,110nm,5.9s						
NJ2				LR	LR		
	comp=N,250nm,21.1s,MS4.8						
NJ2				LR	LR		
	comp=E,330nm,23.9s,MS4.8						
NJ2				LR	LR		
	comp=Z,260nm,24.1s,MS4.5						
TPH	**Tonopah**	**83.41**	**43**	*e*P	**P**	**03 08 41.8**	**+0.2**
	comp=Z,16nm,1.2s,mb4.9						
SNAA	**Sanae**	**84.14**	**178**	⇑*i*P	**P**	**03 08 43.6**	**-1.0**
SNAA	**Sanae**	**84.14**	**178**	⇑*i*P	**P**	**03 08 43.6**	**-1.0**
SNAA	**Sanae**	**84.14**	**178**	*e*	**P**	**03 08 48.3**	**+3.7**
SNAA	**Sanae**	**84.14**	**178**	*e*	**P**	**03 08 52.1**	**+7.5**
SNAA	**Sanae**	**84.14**	**178**	*e*	**P**	**03 08 57.9**	**+13**
SNAA	**Sanae**	**84.14**	**178**	*c i*P	**P**	**03 08 44.5**	**-0.1**
VNA3	**Neumayer Olymp**	**84.23**	**176**	⇑*i*P	**P**	**03 08 44.8**	**-0.2**
VNA3	**Neumayer Olymp**	**84.23**	**176**	⇑*i*P	**P**	**03 08 44.8**	**-0.2**
VNA3	**Neumayer Olymp**	**84.23**	**176**	*e*	**P**	**03 08 48.9**	**+3.9**
VNA3	**Neumayer Olymp**	**84.23**	**176**	*e*	**P**	**03 08 52.4**	**+7.4**
VNA3	**Neumayer Olymp**	**84.23**	**176**	*e*	**P**	**03 08 58.3**	**+13**
TUC	**Tucson**	**84.37**	**51**	*e*P	**P**	**03 08 47.0**	**+0.3**
	comp=Z,7.7nm,1.0s,mb4.8						
MDJ	**Mudanjiang**	**84.39**	**325**	P	**P**	**03 08 48.4**	**+2.0**
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.4s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,270nm,4.2s						
VNA2	**Neumayer--Watz**	**84.68**	**176**	⇑*i*P	**P**	**03 08 47.5**	**+0.2**
VNA2	**Neumayer--Watz**	**84.68**	**176**	⇑*i*P	**P**	**03 08 47.5**	**+0.2**
VNA2	**Neumayer--Watz**	**84.68**	**176**	*e*	**P**	**03 08 51.5**	**+4.2**
VNA2	**Neumayer--Watz**	**84.68**	**176**	*e*	**P**	**03 08 56.4**	**+9.1**
VNA2	**Neumayer--Watz**	**84.68**	**176**	*e*	**P**	**03 09 01.1**	**+14**
VNA1	**Neumayer--Stat**	**84.90**	**176**	⇑*i*P	**P**	**03 08 48.8**	**+0.4**
VNA1	**Neumayer--Stat**	**84.90**	**176**	⇑*i*P	**P**	**03 08 48.8**	**+0.4**
VNA1	**Neumayer--Stat**	**84.90**	**176**	*e*	**P**	**03 08 52.9**	**+4.5**
VNA1	**Neumayer--Stat**	**84.90**	**176**	*e*	**P**	**03 08 57.7**	**+9.3**
VNA1	**Neumayer--Stat**	**84.90**	**176**	*e*	**P**	**03 09 02.4**	**+14**
WVOR	**Wild Horse Val**	**85.27**	**39**	*e*P	**P**	**03 08 50.5**	**-0.4**
	comp=Z,14nm,1.1s,mb5.0						
KULM	**Kulim**	**85.57**	**278**	*e*P	**P**	**03 08 53.4**	**+0.4**
PLCA	**Paso Flores**	**85.71**	**133**	P	**P**	**03 08 53.3**	**+0.2**
	comp=Z,2.3nm,0.9s,mb4.4,baz=254,slow=3.4,SNR=4.7						
PLCA				LR	LR	03 38 07.3	
	comp=Z,83nm,18.3s,MS4.2,baz=73,slow=29						
CN2	**Changchun**	**86.12**	**322**	*e*P	**P**	**03 08 57.0**	**+2.0**
TMUT	**Trail Mountain**	**87.94**	**45**	*e*P	**P**	**03 09 04.3**	**+0.4**
MNTX	**Cornudas Mount**	**87.95**	**54**	*e*P	**P**	**03 09 03.7**	**-0.5**
	comp=Z,7.9nm,1.1s,mb4.9						
MNTX				*e*pP	pP	03 09 13.2	-1.7
TXAR	**Lajitas Array**	**88.07**	**57**	P	**P**	**03 09 04.6**	**-0.2**
	comp=Z,3.1nm,1.0s,mb4.5,baz=216,slow=5.7,SNR=22						
SRU	**San Rafael**	**88.28**	**45**	*e*P	**P**	**03 09 05.4**	**-0.2**
	comp=Z,12nm,0.9s,mb5.1						
BNM	**Barren Site**	**88.29**	**51**	*e*P	**P**	**03 09 05.5**	**-0.2**
ANMO	**Albuquerque**	**88.82**	**51**	P	**P**	**03 09 08.6**	**+0.3**
	comp=Z,7.6nm,1.0s,mb5.0,baz=210,slow=6.1,SNR=22						
ANMO	**Albuquerque**	**88.82**	**51**	*e*P	**P**	**03 09 08.5**	**+0.2**
	comp=Z,9.4nm,1.0s,mb5.1						
ANMO	**Albuquerque**	**88.82**	**51**	⇑*e*P	**P**	**03 09 08.8**	**+0.5**
HWUT	**Hardware Ranch**	**89.01**	**43**	*e*P	**P**	**03 09 08.3**	**-0.7**
	comp=Z,2.0nm,0.7s,mb4.6						
ENH	**Enshi**	**89.25**	**304**	*e*P	**P**	**03 09 11.2**	**+0.8**
	comp=Z,45nm,1.4s,mb5.6						
NEW	**Newport**	**89.75**	**35**	P	**P**	**03 09 11.9**	**-0.4**
	comp=Z,2.3nm,0.9s,mb4.5,baz=164,slow=1.5,SNR=3.6						
MCMT	**McKenzie Canyo**	**90.07**	**40**	*e*P	**P**	**03 09 14.1**	**+0.2**
SEY	**Seymchan**	**90.40**	**346**	⇑*e*P	**P**	**03 09 17.5**	**+2.5**
DLMT	**Dillon**	**90.52**	**39**	*e*P	**P**	**03 09 15.9**	**-0.1**
	comp=Z,15nm,1.3s,mb5.2						
THY	**Trims Highway**	**90.80**	**13**	*e*P	**P**	**03 09 16.8**	**0.0**
PDAR	**Pinedale Array**	**90.89**	**43**	P	**P**	**03 09 16.9**	**-0.9**
	comp=Z,3.9nm,0.9s,mb4.7,baz=219,slow=3.1,SNR=28						
SDCO	**Great Sand Dun**	**90.91**	**49**	*e*P	**P**	**03 09 17.6**	**-0.4**
	comp=Z,5.8nm,0.9s,mb4.9						
XAN	**Xi'an**	**91.47**	**307**	P	**P**	**03 09 21.5**	**+0.8**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
COLA	**College**	**91.69**	**12**	*e*P	**P**	**03 09 20.1**	**-0.9**
	comp=Z,7.5nm,0.9s,mb5.0						
COLA	**College**	**91.69**	**12**	⇑*e*P	**P**	**03 09 20.9**	**0.0**
HRY	**Holter Researc**	**91.72**	**39**	*e*P	**P**	**03 09 21.4**	**-0.2**
ILAR	**Eielson Array**	**91.78**	**12**	P	**P**	**03 09 20.0**	**-1.4**
	comp=Z,2.8nm,0.9s,mb4.6,baz=223,slow=7.2,SNR=13						
ILAR				PP	PP	03 13 04.1	+1.2
	comp=Z,1.1nm,0.8s,baz=220,slow=7.3,SNR=6.0						
KMI	**Kunming**	**92.22**	**296**	P	**P**	**03 09 26.6**	**+2.2**
KMI				PP	PP	03 13 11.8	+4.4
KMI				S	S	03 20 17.4	-4.5
KMI				SS	SS	03 26 35.6	-0.3
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb5.2						
KMI				AMB	AMB		
	comp=Z,160nm,4.6s						
KMI	**Kunming**	**92.22**	**296**	P	**P**	**03 09 26.6**	**+2.2**
	comp=Z,14nm,0.9s,mb5.3						
KMI				pP	pP	03 09 50.9	+16
KMI				sP	sP	03 10 00.6	+22
KMI				PP	PP	03 13 11.8	+4.4
KMI				S	S	03 20 17.4	-4.5
KMI				SS	SS	03 26 35.6	-0.3
KMI				LR	LR		
	comp=Z,50nm,31.6s,MS3.8						
HHC	**Hu-ho-hao-te**	**92.94**	**314**	*e*P	**P**	**03 09 27.6**	**+0.3**
HHC				AP	pP	03 09 46.9	+8.8
HHC				PP	PP	03 13 13.1	+0.3
HHC				SKS	SKS	03 19 51.1	-5.8
HHC				S	S	03 20 23.5	-4.4
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb5.1						
HHC				AMB	AMB		
	comp=Z,110nm,6.0s						
HHC				LR	LR		
	comp=N,130nm,12.0s						
HHC				LR	LR		
	comp=E,140nm,9.6s						
HHC				LR	LR		
	comp=Z,140nm,10.8s,MS4.7						
BILL	**Bilibino**	**92.98**	**354**	*de*P	**P**	**03 09 27.0**	**+0.2**
BILL				*e*SS	SS	03 26 52.9	+6.6
BILL				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.3						
RSSD	**Black Hills**	**95.03**	**44**	*e*P	**P**	**03 09 36.0**	**-0.8**
	comp=Z,11nm,0.9s,mb5.3						
WMQ	**Urumqi**	**110.39**	**310**	PKP	PKPdf	03 14 44.7	-0.1
WMQ				PP	PP	03 15 26.2	+1.3
WMQ				PP	PP		
	comp=Z,160nm,4.9s						
WMQ				LR	LR		
	comp=N,40nm,18.3s						
WMQ				LR	LR		
	comp=E,80nm,26.5s						
WMQ				LR	LR		
	comp=Z,50nm,20.4s,MS4.1						
ZAL	**Zalesovo**	**114.28**	**320**	PKP	PKPdf	03 14 51.6	-0.6
	comp=Z,1.8nm,0.3s,baz=186,slow=8.0,SNR=4.0						
MKAR	**Makanchi Array**	**114.74**	**312**	PKP	PKPdf	03 14 53.1	-0.2
	comp=Z,1.1nm,0.7s,baz=204,slow=1.1,SNR=11						
MKAR	**Makanchi Array**	**114.74**	**312**	⇑*i*PKIKP	PKPdf	03 14 53.2	-0.1
KURK	**Kurchatov**	**117.67**	**316**	*e*PKPdf	PKPdf	03 14 58.7	-0.1
KURK	**Kurchatov**	**117.67**	**316**	⇓*i*PKIKP	PKPdf	03 14 58.7	-0.1
CHKZ	**Chkalovo**	**122.66**	**319**	*e*PKPdf	PKPdf	03 15 07.7	-0.7
BRVK	**Borovoye**	**122.89**	**319**	*e*PKPdf	PKPdf	03 15 08.9	0.0
ARU	**Arti**	**129.07**	**324**	*i* PKIKP	PKPdf	03 15 21.0	+0.3
ARU				*e*		03 17 28.5	
ARU				*e*SS	SS	03 34 51.1	+3.4
KEV	**Kevo**	**132.48**	**349**	*e*p	PKPdf	03 15 21.9	-4.9
	comp=Z,12nm,0.9s						
KEV	**Kevo**	**132.48**	**349**	*e*PKIKP	PKPdf	03 15 21.9	-4.9
KEV				pmax	pmax		
	comp=Z,12nm,0.9s						
ARCES	**ARCESS Array B**	**132.92**	**350**	PKhKP		03 15 19.9	
	comp=Z,3.4nm,0.9s,baz=90,slow=1.2,SNR=4.3						
ARCES				PKP	PKPdf	03 15 27.9	+0.2
	comp=Z,6.5nm,0.9s,baz=18,slow=1.4,SNR=16						
ARCES	**ARCESS Array B**	**132.92**	**350**	PKP	PKPdf	03 15 27.9	+0.2
JOF	**Joensuu**	**137.18**	**342**	*e*p	PKPdf	03 15 26.3	-9.4
	comp=Z,3.8nm,0.9s						
JOF	**Joensuu**	**137.18**	**342**	*e*PKHKP		03 15 26.3	
JOF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KAF	**Kangasniemi**	**139.19**	**344**	*e*p	PKPdf	03 15 28.8	-11
	comp=Z,3.8nm,0.8s						
KAF	**Kangasniemi**	**139.19**	**344**	*e*PKHKP		03 15 28.8	
KAF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	**FINESS Array B**	**139.81**	**343**	PKhKP		03 15 31.9	
	comp=Z,2.9nm,0.8s,baz=45,slow=2.7,SNR=7.3						
FINES	**FINESS Array B**	**139.81**	**343**	*i* PKHKP		03 15 32.0	
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN	**Obninsk**	**140.73**	**330**	⇑*i*PKIKP	PKPdf	03 15 45.8	+3.6
OBN				*e*		03 18 42.3	
OBN				*e*SS	SS	03 37 38.4	+32
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV	**Kislovodsk**	**142.50**	**311**	*e*PKIKP	PKPdf	03 15 44.6	-1.0
KIV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NB2	**NORSAR Subarra**	**142.94**	**354**	P	PKPdf	03 15 43.0	-2.8
	comp=Z,4.6nm,0.8s,baz=8.0,slow=5.8						
NOA	**NORSAR Array B**	**142.94**	**354**	PKhKP		03 15 42.3	
	comp=Z,3.0nm,0.7s,baz=16,slow=4.6,SNR=7.0						
BEST	**Besiri**	**145.12**	**302**	*i* P	PKPdf	03 15 51.8	+1.4
MARD	**Mardin**	**145.62**	**301**	*i* P	PKPdf	03 15 52.2	+0.9
KELT	**Kelkit**	**146.09**	**306**	*i* P	PKPdf	03 15 55.3	+3.3
ELZG	**Elazig**	**146.74**	**304**	*i* P	PKPdf	03 15 56.1	+2.9
SUW	**Suwalki**	**146.88**	**339**	*e*PKP	PKPdf	03 15 55.5	+2.7
SUW	**Suwalki**	**146.88**	**339**	*e*PKP	PKPdf	03 15 55.5	+2.6
AKASG	**Malin Array Be**	**146.98**	**329**	PKPbc	PKPbc	03 15 55.4	+0.7
	comp=Z,9.1nm,0.4s,baz=42,slow=4.0,SNR=62						
GZT	**Gaziantep**	**148.11**	**302**	*i* P	PKPdf	03 15 59.4	+4.0
BOYT	**Boyabat**	**148.76**	**311**	*i* P	PKPdf	03 16 01.4	+5.1
CTKT	**Corum**	**149.15**	**309**	*i* P	PKPdf	03 16 01.7	+4.7
COBT	**Iskenderun**	**149.33**	**301**	*i* P	PKPdf	03 16 02.7	+5.3
KIS	**Kishinev**	**149.63**	**324**	*e*PKHKP		03 16 02.0	
KIS				*e*		03 16 06.0	
AVNT	**Avonos**	**149.75**	**306**	*i* P	PKPdf	03 16 04.0	+6.0
BALT	**Daday**	**149.76**	**312**	*i* P	PKPdf	03 16 02.8	+4.9
BRTR	**Keskin Array B**	**150.30**	**308**	PKPbc	PKPdf	03 16 04.7	+5.9
	comp=Z,7.4nm,0.9s,baz=123,slow=2.4,SNR=28						
KWP	**Kalwaria**	**150.60**	**334**	*e*PKP	PKPdf	03 16 05.8	+6.9
ANTO	**Ankara**	**150.85**	**309**	*e*PKPbc	PKPdf	03 16 06.8	+7.2
ANTO				*e*PKPab	PKPab	03 16 13.4	-1.4
MEST	**Erdemli**	**150.95**	**302**	*i* P	PKPdf	03 16 03.2	+3.4
BURAR	**Bucovina Array**	**151.02**	**329**	⇓P	PKPdf	03 16 07.4	+7.8
CFR	**Carcaliu**	**151.13**	**322**	⇓P	PKPdf	03 16 06.1	+6.3
CFR	**Carcaliu**	**151.13**	**322**	⇓P	PKPdf	03 16 06.1	+6.2
OJC	**Ojcow**	**151.20**	**338**	*e*PKP	PKPdf	03 16 06.5	+6.7
KOLS	**Kolonicke sedl**	**151.32**	**334**	*e*PKP	PKPdf	03 16 08.1	+8.1
STHS	**Stebnicka Huta**	**151.34**	**335**	*i* PKP	PKPdf	03 16 07.9	+7.9
TIRR	**Tirgusor**	**151.41**	**321**	⇓P	PKPdf	03 16 07.9	+7.6
VRI	**Vrincioaia**	**151.46**	**325**	⇓P	PKPdf	03 16 07.7	+7.4
HARR	**Harsova**	**151.54**	**322**	⇑P	PKPdf	03 16 07.6	+7.1
CRVS	**Cervenica-Dubn**	**151.67**	**334**	*i* PKP	PKPdf	03 16 08.0	+7.5
NIE	**Niedzica**	**151.69**	**336**	*e*PKP	PKPdf	03 16 08.8	+8.3
KSP	**Ksiaz**	**151.73**	**343**	*e*PKP	PKPdf	03 16 08.6	+8.0
KDHN	**Kadinhani**	**151.85**	**307**	*i* P	PKPdf	03 16 07.6	+6.5
CSS	**Prodhromos**	**152.01**	**299**	*e*PKPbc	PKPdf	03 16 09.5	+8.0
CSS				*e*PKPab	PKPab	03 16 19.5	-0.4
OKC	**Ostrava-Krasne**	**152.07**	**339**	⇑*e*PKPB	PKPdf	03 16 09.1	+8.0
CLL	**Collm**	**152.09**	**347**	*i* PKP1	PKPdf	03 16 08.8	+7.7
CLL				*i* PKP2	PKPab	03 16 22.2	+2.6
CLL				*i* *PPKP		03 16 30.1	
UPC	**Upice**	**152.11**	**343**	⇑*e*PKPB	PKPdf	03 16 09.4	+8.3
UPC				*e*x	x	03 16 34.0	
DPC	**Dobruska-Polom**	**152.17**	**342**	⇑*e*PKPB	PKPdf	03 16 09.7	+8.5
DPC				*e*PKPAB	PKPab	03 16 22.2	+2.2
MORC	**Moravsky Berou**	**152.32**	**340**	*e*PKPbc	PKPdf	03 16 09.4	+7.9
MORC				*e*PKPab	PKPab	03 16 17.7	-2.9
PVCC	**Panska Ves**	**152.47**	**344**	⇑*e*PKPB	PKPdf	03 16 10.3	+8.7
PVCC				*e*PKPAB	PKPab	03 16 19.3	-1.9
PVCC				*e*pPKP		03 16 25.7	
PVCC				*e*sPKP		03 16 34.7	
VOIR		**152.62**	**326**	⇓P	PKPdf	03 16 10.2	+8.2
DRGR		**152.79**	**330**	⇑P	PKPdf	03 16 09.8	+7.6
PRU	**Pruhonice**	**152.97**	**344**	⇑*e*PKPB	PKPdf	03 16 11.1	+8.7
PRU				*e*PKPAB	PKPab	03 16 20.8	-2.6
MOX	**Moxa**	**152.99**	**348**	*i* P	PKPdf	03 16 19.9	+18
	comp=Z,logA/T=1.1						
NKC	**Novy Kostel**	**153.22**	**347**	*e*PKPDF	PKPdf	03 16 12.7	+10
NKC				⇑*e*PKPB	PKPdf	03 16 20.7	+18
NKC				*e*PKPAB	PKPab	03 16 32.0	+7.6
TREC	**Trest**	**153.36**	**342**	⇑*e*PKPB		03 16 19.1	
KHC	**Kasperske Hory**	**154.00**	**345**	*e*PKPDF	PKPdf	03 16 05.1	+1.3
KHC				⇑*e*PKPB	PKPdf	03 16 13.3	+9.5
KHC				*e*PKPAB	PKPab	03 16 25.3	-2.4
GERES	**GERESS Array B**	**154.24**	**344**	PKP	PKPdf	03 16 05.0	+0.9
	comp=Z,0.2nm,0.3s,SNR=4.1						
GERES				PKPbc	PKPdf	03 16 13.7	+10
	comp=Z,0.8nm,0.6s,slow=1.3,SNR=6.3						
GIVF	**Givet**	**154.27**	**358**	*e*PKP2	PKPab	03 16 28.1	-0.7
BAIF	**Baives**	**154.33**	**359**	*e*PKP2	PKPab	03 16 27.8	-1.3
	comp=Z,18nm,0.9s						
RZN	**Rozhen**	**155.24**	**319**	*i* P	PKPab	03 16 33.5	+0.3
FLN	**La Foliniere**	**155.45**	**6**	*e*PKP2	PKPab	03 16 32.1	-1.8
ROSF	**Rostrenen**	**155.49**	**11**	*e*PKP2	PKPab	03 16 32.8	-1.3
VTS	**Vitosha**	**155.52**	**323**	*i* P	PKPab	03 16 34.3	-0.1
LDF	**La Druitiere**	**155.65**	**6**	*e*PKP2	PKPab	03 16 33.2	-1.5
SGMF	**Saint Gilles**	**155.69**	**10**	*e*PKP2	PKPab	03 16 33.1	-1.8
CDF	**Champ du Feu**	**155.79**	**354**	*e*PKP2	PKPab	03 16 34.0	-1.4
	comp=Z,12nm,0.9s						
MMB	**Musomiste**	**155.88**	**320**	*i* P	PKPab	03 16 36.3	+0.3
QUIF	**Quistinic**	**155.91**	**11**	*e*PKP2	PKPab	03 16 34.7	-1.2
KKB	**Krupnik**	**156.07**	**322**	*i* P	PKPab	03 16 37.3	+0.5
HAU	**Haudompre**	**156.28**	**355**	*e*PKP2	PKPab	03 16 35.9	-1.6
	comp=Z,16nm,0.8s						
HINF	**Hinteralfeld**	**156.42**	**354**	*e*PKP2	PKPab	03 16 36.5	-1.6
	comp=Z,10nm,0.8s						
LOR	**Lormes**	**157.13**	**359**	*e*PKP2	PKPab	03 16 39.5	-1.6
	comp=Z,5.5nm,0.6s						
SSF	**Saint Saulge**	**157.34**	**360**	*e*PKP2	PKPab	03 16 40.7	-1.4
	comp=Z,12nm,0.8s						
AVF	**Avril sur Loir**	**157.61**	**0**	*e*PKP2	PKPab	03 16 41.5	-1.7
	comp=Z,16nm,0.9s						
CABF	**La Chapelle**	**157.69**	**355**	*e*PKP2	PKPab	03 16 42.3	-1.2
SMF	**Signal de Mont**	**157.75**	**359**	*e*PKP2	PKPab	03 16 42.3	-1.5
	comp=Z,10nm,0.7s						
BGF	**Bois d'Agland**	**157.84**	**1**	*e*PKP2	PKPab	03 16 42.7	-1.5
LPL	**La Plagne**	**158.71**	**354**	*e*PKP2	PKPab	03 16 47.7	-0.3
	comp=Z,6.6nm,0.8s						
LPG	**La Plagne**	**158.73**	**353**	*e*PKP2	PKPab	03 16 47.9	-0.2
	comp=Z,10nm,0.8s						
LFF	**La Frestale**	**159.35**	**5**	*e*PKP2	PKPab	03 16 49.1	-1.7
ORIF	**Oris-en-Rattie**	**159.38**	**355**	*e*PKP2	PKPab	03 16 50.2	-0.7
	comp=Z,14nm,0.9s						
MBDF	**Montbardon**	**159.49**	**353**	*e*PKP2	PKPab	03 16 50.4	-1.0
	comp=Z,6.0nm,0.7s						
VIVF	**Saint-Julien-l**	**159.52**	**357**	*e*PKP2	PKPab	03 16 50.3	-1.2
LIC	**Lamto**	**160.25**	**154**	*e*PKP2	PKPab	03 16 54.1	-1.5
	comp=Z,12nm,0.9s						
SBF	**Sospel**	**160.26**	**351**	*e*PKP2	PKPab	03 16 53.1	-1.6
	comp=Z,19nm,0.9s						
LASF	**Ste Croix**	**160.32**	**359**	*e*PKP2	PKPab	03 16 54.5	-0.5
SMRF	**Simiane la Rot**	**160.34**	**355**	*e*PKP2	PKPab	03 16 53.7	-1.4
FRF	**La Foret Royal**	**160.65**	**353**	*e*PKP2	PKPab	03 16 55.1	-1.3
	comp=Z,12nm,0.9s						
DBIC	**Dimbokro**	**160.72**	**154**	PKPab	PKPab	03 16 56.2	-1.4
	comp=Z,3.6nm,1.0s,baz=166,slow=6.9,SNR=5.5						
LMR	**La Mourre**	**160.89**	**353**	*e*PKP2	PKPab	03 16 56.1	-1.4
ETSF	**Etsaut**	**161.22**	**9**	*e*PKP2	PKPab	03 16 57.7	-1.2
	comp=Z,14nm,1.1s						
ESDC	**Sonseca Array**	**163.51**	**20**	PKPab	PKPab	03 17 06.7	-2.3
	comp=Z,0.1nm,0.3s,baz=304,slow=4.6,SNR=4.7						

*IDC **08** 03:12:49.0±4.1, 13.28N×120.37E, h118^{km}±48^{km}, mb3.4/4, mb1 3.5/4, mb1mx3.3/18, mbtmp3.8/4, Error ellipse: s-maj=124.4km s-min=18.4km az=62.0*

*NEIC **08** 03:12:50.8±0.7, 13.49N×120.82E, h142^{km}±10^{km}, mb4.7/2, Error ellipse: s-maj=37.7km s-min=7.1km az=51.0*

*MAN **08** 03:12:51.9, 13.60N×120.67E, h115^{km}, mb4.3, ML3.2, MS3.0*

ISC 08 03:12:50.2±0.4, 13.55N±0.05×120.75E±0.07, h145^{km}±4^{km}, n30, σ1^{s}21/35, mb4.3/11, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.21	104	⇑eP	P	03 13 09.4	-0.9
PGP				eS	S	03 13 23.1	-2.4
LUBP	Lubang	0.52	290	eP	P	03 13 10.8	-0.7
LUBP				eS	S	03 13 24.0	-3.9
TGY	Tagaytay City	0.58	19	P	P	03 13 12.0	+0.2
	847nm,0.3s,baz=217,slow=1.6,SNR=101						
TGY				S	S	03 13 27.5	-1.0
	358nm,0.3s,baz=166,slow=23,SNR=10						
TGY	Tagaytay City	0.58	19	⇑iP	P	03 13 12.0	+0.2
TGY				iS	S	03 13 19.7	-8.8
BOAC	Boac	1.07	95	eP	P	03 13 16.2	+0.9
SJMP	San Jose	1.14	161	eP	P	03 13 16.9	+0.9
SJMP				eS	S	03 13 34.0	-1.8
BUSP	Coron	1.63	199	eP	P	03 13 21.9	+0.7
POLP	Polilio Island	1.64	45	eP	P	03 13 22.8	+1.5
OTRP	Odiongan	1.71	133	eP	P	03 13 23.0	+0.9
BALP	Baler	2.32	20	eP	P	03 13 30.3	+1.0
SCZP	Santa Cruz	2.35	340	eP	P	03 13 28.1	-1.7
ENPP	El Nido	2.67	209	eP	P	03 13 35.4	+1.6
CUYO	Cuyo Island	2.70	174	eP	P	03 13 35.7	+1.5
BOLP	Bolinao	2.93	344	eP	P	03 13 36.4	-0.7
PVCP	Virac	3.31	89	eP	P	03 13 44.1	+1.9
PPR	Puerto Princes	4.24	208	eP	P	03 13 56.5	+2.1
APYP	Conner	4.31	6	eP	P	03 13 56.1	+0.8
JIRN	Jiri	35.12	299	eP	P	03 19 32.8	+1.1
GUN	Gumba	35.46	299	eP	P	03 19 34.4	-0.1
	29nm,0.7s,mb5.0						
PKI	Pulchoki	35.76	299	eP	P	03 19 37.5	+0.4
	9.4nm,0.5s,mb4.7						
WRAB	Tennant Creek	35.87	158	eP	P	03 19 36.6	-1.4
	17nm,1.7s,mb4.4						
WRA	Warramunga Arr	35.87	158	P	P	03 19 36.7	-1.4
	0.6nm,0.4s,mb3.6,baz=332,slow=10,SNR=15						
WB2	Warramunga Arr	35.88	158	eP	P	03 19 35.9	-2.2
KKN	Kakani	35.93	299	eP	P	03 19 38.6	+0.1
	11nm,0.6s,mb4.7						
DMN	Daman	36.03	298	eP	P	03 19 39.9	+0.5
	7.9nm,0.4s,mb4.7						
GKN	Gorkha	36.54	299	eP	P	03 19 43.5	-0.1
	7.2nm,0.4s,mb4.6						
KOLN	Koldanda	37.36	298	eP	P	03 19 50.7	+0.1
	10nm,0.8s,mb4.5						
MKAR	Makanchi Array	46.18	324	P	P	03 21 02.1	0.0
	1.1nm,0.7s,mb3.6,baz=124,slow=8.7,SNR=11						
STKA	Stephens Creek	49.39	156	P	P	03 21 25.8	-1.4
	0.9nm,0.5s,mb3.7,baz=339,slow=8.6,SNR=3.3						
BVAR	Borovoye Array	55.92	326	P	P	03 22 14.3	-1.0
	0.5nm,0.5s,mb3.6,baz=105,slow=7.8,SNR=3.6						

ISK 08 03:20:36.7, 38.24N×26.54E, h15^{km}, MD3.4, ML3.5
NEIC 08 03:20:36.0, 38.25N×26.53E, h16^{km}, MD3.7(ATH), MD3.4(ISK), After ISK.
ATH 08 03:20:38.6, 38.17N×26.56E, h30^{km}±2^{km}, MD3.7/5
CSEM 08 03:20:39.2±0.1, 38.28N×26.75E, h25^{km}, MD3.4, Error ellipse: s-maj=1.7km s-min=1.3km az=40.0
ISC 08 03:20:38.1±0.5, 38.25N±0.02×26.64E±0.03, h13^{km}±3^{km}, n56, σ1^{s}02/72, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.12	342	iP	Pg	03 20 40.8	-0.6
URLA				iS	Sg	03 20 43.7	+0.1
BLCB	Balcova	0.34	66	iPG	Pg	03 20 46.0	+0.7
BLCB				iSG	Sg	03 20 51.5	+1.4
IZM	Izmir	0.51	73	iPG	Pg	03 20 48.8	+0.3
IZM				iSG	Sg	03 20 57.6	+2.1
KDAG	Bornova	0.52	72	iP	Pb	03 20 48.3	-0.2
KDAG				iS	Sb	03 20 56.5	+0.9
SMG	Samos	0.56	164	⇑iPN	Pg	03 20 49.3	-0.2
SMG				eSN	Sg	03 20 57.6	+0.5
PRK	Paraskevi	1.04	344	ePB	Pb	03 20 58.4	+0.9
PRK				eSN	Sn	03 21 15.2	+2.5
AYVA	Ayvalik	1.06	2	iP	Pb	03 20 59.4	+1.5
AYVA				iS	Sb	03 21 17.8	+6.4
AKS	Akhisar	1.11	55	iPN	Pn	03 20 58.9	-0.5
AYDN	Tasoluk	1.14	121	iP	Pb	03 21 00.3	+1.1
AYDN				iS	Sb	03 21 17.5	+3.8
BODT	Bodrum	1.30	156	PN	Pn	03 21 01.0	-1.0
MLSB	Milas	1.31	136	PN	Pn	03 21 02.4	+0.2
APE	Apeiranthos	1.47	217	PN	Pn	03 21 01.7	-2.8
APE	Apeiranthos	1.47	217	ePn	Pn	03 21 03.3	-1.2
MANT	Manisa	1.52	80	iP	Pn	03 21 06.3	+1.1
MANT				iS	Sb	03 21 25.8	+0.9
EZN	Ezine	1.59	351	PN	Pn	03 21 05.2	-1.1
DAT	Datca	1.69	154	PN	Pn	03 21 06.6	-1.0
BALB	Balikesir	1.69	34	PN	Pn	03 21 07.3	-0.4
YER	Yerkesik	1.71	130	PN	Pn	03 21 07.6	-0.3
BTOK	Tokmak	1.86	35	iP	Pn	03 21 14.0	+4.0
BTOK				iS	Sn	03 21 40.7	+7.1
DENT	Denizli	1.95	104	PN	Pn	03 21 12.1	+0.7
DNZL	Cakiroluk	1.98	106	iP	Pn	03 21 12.8	+1.1
DNZL				iS	Sn	03 21 41.1	+4.5
LIA	Limnos Island	2.00	326	ePN	Pn	03 21 12.9	+0.8
DST	Dursunbey	2.06	48	PN	Pn	03 21 13.0	+0.1
SANT	Santorini	2.10	207	ePn	Pn	03 21 15.9	+2.5
SANT				eSn	Sn	03 21 45.9	+6.3
SANT	Santorini	2.10	207	ePn	Pn	03 21 15.9	+2.4
LPK	Lapseki	2.12	2	PN	Pn	03 21 13.4	-0.4
DALT	Dalyan (Mudla)	2.17	132	ePN	Pn	03 21 14.3	-0.1
EDC	Edincik	2.30	24	ePN	Pn	03 21 15.6	-0.8
BNT	Bandirma	2.33	25	ePN	Pn	03 21 16.3	-0.4
ARG	Arkhangelos	2.35	149	ePN	Pn	03 21 17.3	+0.2
GDZ	Gediz	2.38	68	iP	Pg	03 21 22.7	-2.8
GDZ				iS	Sg	03 21 55.1	-2.2
KCT	Karacabey	2.42	33	ePN	Pn	03 21 17.0	-1.0
MRMT	Marmara Adasi	2.46	17	ePN	Pn	03 21 17.7	-1.0
ORLT	Orhaneli	2.51	44	ePN	Pn	03 21 18.4	-0.9
FETY	Fethiye	2.52	129	ePN	Pn	03 21 19.1	-0.4
MFT	Murefte	2.58	11	ePN	Pn	03 21 19.1	-1.3
ULDT	Uludag	2.71	45	iP	Pg	03 21 28.6	-3.6
ULDT				iS	Sg	03 22 03.9	-4.4
KARP	Karpathos	2.73	171	ePN	Pn	03 21 21.4	-1.1
ALT	Altintas	2.83	72	ePN	Pn	03 21 23.3	-0.7
NEO	Neokhori	2.87	293	ePN	Pn	03 21 25.0	+0.4
LKR	Lokris	2.89	279	ePN	Pn	03 21 25.1	+0.3
TKTP	Tekketepe	2.91	93	iP	Pn	03 21 25.2	+0.2
TKTP				iS	Sn	03 22 07.4	+7.2
ELL	Elmali	3.00	119	ePN	Pn	03 21 26.8	+0.5
RDO	Rodhopi	3.02	344	ePN	Pn	03 21 27.2	+0.6
YLV	Yalova	3.14	42	ePN	Pn	03 21 27.5	-0.8
BADT	Buyukada	3.23	36	ePN	Pn	03 21 28.7	-0.9
BORA	Eskisehir	3.38	60	iP	Pn	03 21 42.0	+10
ESKT	Eskisehir	3.52	68	ePN	Pn	03 21 33.0	-0.7
ESKT	Eskisehir	3.52	68	iP	Pg	03 21 45.2	-3.2
ESKT				iS	Sg	03 22 28.4	-7.0
KDZ	Kurdzhali	3.53	345	iP	Pn	03 21 34.0	+0.2
EDRB	Edirne	3.60	1	ePN	Pn	03 21 33.7	-1.1
RZN	Rozhen	3.74	337	iP	Pn	03 21 37.3	+0.4
NVR	Nevrokopi	3.77	326	ePN	Pn	03 21 37.4	+0.2
MMB	Musomiste	4.02	327	iP	Pn	03 21 41.0	+0.2
KKB	Krupnik	4.53	324	iP	Pn	03 21 48.5	+0.4
VTS	Vitosha	5.07	330	iP	Pn	03 21 56.5	+0.8

ECX 08 03:25:02.0±0.3, 30.48N×114.86W, h12^{km}, ML3.7, 3C-1D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDX	Rancho Dowling	1.72	327	eP	Pn	03 25 31.4	-0.7
RDX				eS	Sn	03 25 54.3	+0.2
RDX				⇓e		03 26 09.3	
	comp=N,569nm,0.6s						
RDX				⇑e		03 26 09.6	
	comp=E,840nm,0.7s						
ECNX	Esteban Cantu	1.90	309	eP	Pn	03 25 34.2	-0.4
ECNX				eS	Sn	03 25 58.9	+0.3
PBX	Punta Banda	2.04	309	eP	Pn	03 25 35.9	-0.7
ENX	Ensenada	2.08	313	ePN	Pn	03 25 36.5	-0.7
ENX				eS	Sn	03 26 03.7	+0.4
ENX				⇑e		03 26 25.3	
	comp=E,414nm,0.7s						
ENX				⇑e		03 26 25.9	
	comp=N,342nm,0.7s						
CBX	Cerro Bola	2.39	320	ePN	Pn	03 25 41.3	-0.4
CBX				e		03 26 37.1	
	comp=N,956nm,0.5s						

ATH 08 03:26:46.8, 38.17N×26.47E, h26^{km}±4^{km}, MD3.2/4
CSEM 08 03:26:46.8±0.1, 38.24N×26.65E, h12^{km}, MD3.1, Error ellipse: s-maj=3.1km s-min=2.5km az=173.0
ISK 08 03:26:47.3, 38.22N×26.69E, h17^{km}, MD3.1
NEIC 08 03:26:47.0, 38.22N×26.69E, h17^{km}, MD3.2(ATH), MD3.1(ISK), After ISK.
ISC 08 03:26:46.6±1.3, 38.20N±0.04×26.63E±0.09, h13^{km}±10^{km}, n14, σ1^{s}02/18, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.37	60	iPG	Pg	03 26 54.5	0.0
BLCB				iSG	Sg	03 26 59.5	-0.2
SMG	Samos	0.51	162	ePN	Pn	03 26 57.7	-1.6
SMG				eSN	Sn	03 27 06.2	-1.7
IZM	Izmir	0.54	68	iPG	Pg	03 26 57.8	+0.2
IZM				iSG	Sg	03 27 04.8	-0.1
PRK	Paraskevi	1.09	345	ePN	Pn	03 27 07.2	-0.3
PRK				eSN	Sn	03 27 23.4	+1.0
AKS	Akhisar	1.15	53	PN	Pn	03 27 08.7	+0.3
BODT	Bodrum	1.25	154	PN	Pn	03 27 10.6	+0.7
MLSB	Milas	1.28	134	ePN	Pn	03 27 11.6	+1.3
APE	Apeiranthos	1.43	218	ePN	Pn	03 27 13.1	+0.7
APE	Apeiranthos	1.43	218	ePN	Pn	03 27 11.8	-0.6
YER	Yerkesik	1.69	128	ePN	Pn	03 27 16.5	+0.4
LIA	Limnos Island	2.04	327	ePB	Pb	03 27 21.3	-1.8
RDO	Rodhopi	3.06	344	ePN	Pn	03 27 35.4	-0.4
GVD	Gavdhos	3.93	212	ePn	Pn	03 27 50.4	+2.3
GVD	Gavdhos	3.93	212	ePn	Pn	03 27 50.3	+2.3

ISK 08 03:53:44.3, 38.18N×26.55E, h17^{km}, ML3.5
NEIC 08 03:53:44.0, 38.18N×26.54E, h16^{km}, MD3.7(ATH), ML3.5(ISK), After ISK.
ATH 08 03:53:46.5, 38.17N×26.50E, h28^{km}±4^{km}, MD3.7/5
CSEM 08 03:53:46.1±0.1, 38.21N×26.68E, h25^{km}, MD3.7, Error ellipse: s-maj=2.1km s-min=1.5km az=82.0
ISC 08 03:53:45.0±0.5, 38.21N±0.02×26.54E±0.03, h10^{km}±4^{km}, n46, σ1^{s}19/59, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.16	16	iP	Pg	03 53 48.6	0.0
URLA				iS	Sg	03 53 51.5	+0.5
BLCB	Balcova	0.43	66	iPG	Pg	03 53 54.0	+0.2
BLCB				iSG	Sg	03 53 59.5	-0.2
SMG	Samos	0.55	155	⇑iPN	Pg	03 53 57.3	+1.1
SMG				eSN	Sg	03 54 05.9	+2.2
IZM	Izmir	0.60	72	iPG	Pg	03 53 57.3	+0.2
IZM				iSG	Sg	03 54 05.4	+0.2
KDAG	Bornova	0.60	71	iP	Pg	03 53 56.3	-0.9
KDAG				iS	Sg	03 54 04.7	-0.7
PRK	Paraskevi	1.06	349	ePB	Pb	03 54 06.6	+1.7
PRK				eSN	Sn	03 54 22.6	+2.1
AYVA	Ayvalik	1.10	6	iP	Pb	03 54 07.4	+1.7
AYDN	Tasoluk	1.19	117	iP	Pb	03 54 08.6	+1.4
AYDN				iS	Sb	03 54 24.6	+2.1
AKS	Akhisar	1.20	56	iPN	Pn	03 54 07.3	-0.5
BODT	Bodrum	1.30	152	PN	Pn	03 54 08.6	-0.6
MLSB	Milas	1.34	133	PN	Pn	03 54 09.2	-0.6
APE	Apeiranthos	1.39	215	iPN	Pn	03 54 08.6	-1.9
APE	Apeiranthos	1.39	215	ePn	Pn	03 54 11.1	+0.6
MANT	Manisa	1.61	79	iP	Pn	03 54 17.0	+3.4
MANT				iS	Sn	03 54 37.0	+2.4
EZN	Ezine	1.62	354	PN	Pn	03 54 13.2	-0.6
DAT	Datca	1.69	150	PN	Pn	03 54 13.1	-1.7
YER	Yerkesik	1.75	127	PN	Pn	03 54 14.5	-1.2
BALB	Balikesir	1.77	36	PN	Pn	03 54 15.1	-0.8
BTOK	Tokmak	1.94	36	iP	Pn	03 54 18.8	+0.5
BTOK				iS	Sn	03 54 48.7	+5.8
LIA	Limnos Island	1.99	328	ePB	Pb	03 54 21.1	+0.3
DENT	Denizli	2.02	102	PN	Pn	03 54 18.4	-1.1
SANT	Santorini	2.03	205	ePn	Pg	03 54 24.6	-0.9
SANT				eSn	Sg	03 54 55.0	+2.4
DNZL	Cakiroluk	2.05	104	iP	Pn	03 54 21.0	+1.1
DST	Dursunbey	2.14	49	ePN	Pn	03 54 20.3	-1.0
LPK	Lapseki	2.17	4	ePN	Pn	03 54 21.0	-0.6
DALT	Dalyan (Mudla)	2.20	130	ePN	Pn	03 54 21.0	-1.1
ARG	Arkhangelos	2.36	147	ePN	Pn	03 54 25.7	+1.3
EDC	Edincik	2.37	25	ePN	Pn	03 54 24.2	-0.3
BNT	Bandirma	2.40	26	ePN	Pn	03 54 23.6	-1.3
GDZ	Gediz	2.46	68	iP	Pn	03 54 31.5	+5.6
GDZ				iS	Sn	03 55 03.6	+7.3
KCT	Karacabey	2.49	34	ePN	Pn	03 54 25.6	-0.7
MRMT	Marmara Adasi	2.53	19	ePN	Pn	03 54 25.6	-1.2
FETY	Fethiye	2.56	127	ePN	Pn	03 54 25.6	-1.7
GOLH	Golhisar	2.58	111	iP	Pn	03 54 28.8	+1.2
ORLT	Orhaneli	2.59	44	ePN	Pn	03 54 27.5	-0.2
MFT	Murefte	2.64	12	ePN	Pn	03 54 28.2	-0.1
NEO	Neokhori	2.81	294	ePB	Pb	03 54 33.4	-1.6
TKTP	Tekketepe	2.99	92	eP	Pg	03 54 39.0	-5.7
TKTP				iS	Sg	03 55 25.3	+0.8
RDO	Rodhopi	3.03	346	ePN	Pn	03 54 35.3	+1.3
ELL	Elmali	3.05	118	ePN	Pn	03 54 32.7	-1.5
YLV	Yalova	3.22	42	ePN	Pn	03 54 36.6	0.0
ESKT	Eskisehir	3.61	67	ePN	Pn	03 54 41.2	-1.0
ESKT	Eskisehir	3.61	67	iP	Pg	03 54 52.2	-4.8
ESKT				iS	Sg	03 55 42.2	-3.0
EDRB	Edirne	3.64	2	ePN	Pn	03 54 42.5	0.0
NVR	Nevrokopi	3.75	328	ePN	Pn	03 54 46.3	+2.1
KIZT	Kizilcal	4.24	79	ePN	Pn	03 54 51.0	-0.1

ISK 08 03:57:12.9, 38.31N×26.57E, h15^{km}, MD3.4, ML3.4
NEIC 08 03:57:12.0, 38.31N×26.57E, h15^{km}, MD3.6(ATH), MD3.5(ISK), After ISK.
ATH 08 03:57:13.3, 38.24N×26.72E, h29^{km}±1^{km}, MD3.6/6
CSEM 08 03:57:13.3±0.2, 38.29N×26.62E, h16^{km}±1^{km}, MD3.4, Error ellipse: s-maj=3.3km s-min=1.5km az=101.0
ISC 08 03:57:12.6±0.5, 38.27N±0.02×26.57E±0.04, h6^{km}±4^{km}, n42, σ0^{s}98/55, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.09	12	iP	Pg	03 57 15.6	+0.8
URLA				iS	Sg	03 57 18.4	+2.2
BLCB	Balcova	0.39	72	iPG	Pg	03 57 20.9	+0.5
BLCB				iSG	Sg	03 57 26.6	+0.9
IZM	Izmir	0.56	76	iPG	Pg	03 57 23.9	+0.1
IZM				iSG	Sg	03 57 32.7	+1.4
KDAG	Bornova	0.56	76	iP	Pg	03 57 23.4	-0.5
KDAG				iS	Sg	03 57 31.0	-0.5
SMG	Samos	0.60	159	⇑iPN	Pg	03 57 24.4	-0.2
SMG				eSN	Sg	03 57 33.0	+0.4
PRK	Paraskevi	1.00	347	ePN	Pn	03 57 33.6	+0.5
AYVA	Ayvalik	1.04	5	eP	Pb	03 57 33.9	+1.2
AYVA				iS	Sb	03 57 52.0	+5.6
AKS	Akhisar	1.15	58	iPN	Pn	03 57 34.5	-0.6
BODT	Bodrum	1.34	154	iPN	Pn	03 57 38.5	+0.6
MLSB	Milas	1.36	135	ePN	Pn	03 57 39.2	+1.0
APE	Apeiranthos	1.45	215	PN	Pn	03 57 39.9	+0.4
APE	Apeiranthos	1.45	215	ePN	Pn	03 57 38.5	-1.0
APE				eSN	Sn	03 58 00.4	+1.4
APE	Apeiranthos	1.45	215	ePn	Pn	03 57 39.9	+0.4
APE				eSn	Sn	03 58 00.4	+1.4
EZN	Ezine	1.57	353	PN	Pn	03 57 39.9	-1.2
MANT	Manisa	1.58	81	iP	Pn	03 57 43.3	+2.1
MANT				iS	Sb	03 58 04.0	+2.1
BALB	Balikesir	1.71	36	ePN	Pn	03 57 42.5	-0.6
DAT	Datca	1.73	152	PN	Pn	03 57 43.9	+0.4
YER	Yerkesik	1.77	129	ePN	Pn	03 57 44.1	+0.1
BTOK	Tokmak	1.88	37	iP	Pg	03 57 50.2	+0.1
BTOK				iS	Sg	03 58 14.8	-0.2
LIA	Limnos Island	1.95	327	ePN	Pn	03 57 47.7	+1.1
DENT	Denizli	2.01	104	ePN	Pn	03 57 47.9	+0.4
DNZL	Cakiroluk	2.04	106	iP	Pn	03 57 48.0	+0.1
DST	Dursunbey	2.09	50	ePN	Pn	03 57 48.5	-0.1
SANT	Santorini	2.09	205	ePn	Pg	03 57 52.3	-2.1
SANT				eSn	Sg	03 58 21.3	-0.9
LPK	Lapseki	2.11	4	ePN	Pn	03 57 48.5	-0.3
DALT	Dalyan (Mudla)	2.22	132	ePN	Pn	03 57 49.9	-0.6
EDC	Edincik	2.31	25	ePN	Pn	03 57 51.2	-0.5
BNT	Bandirma	2.33	26	ePN	Pn	03 57 51.9	-0.2
ARG	Arkhangelos	2.40	148	ePN	Pn	03 57 51.7	-1.3
GDZ	Gediz	2.42	69	iP	Pg	03 57 58.5	-2.4
GDZ				iS	Sg	03 58 31.7	-1.5
KCT	Karacabey	2.43	34	ePN	Pn	03 57 52.5	-0.9
MRMT	Marmara Adasi	2.46	18	ePN	Pn	03 57 53.2	-0.7
ORLT	Orhaneli	2.53	45	ePN	Pn	03 57 54.5	-0.4
MFT	Murefte	2.58	12	ePN	Pn	03 57 55.2	-0.3
FETY	Fethiye	2.58	128	ePN	Pn	03 57 55.2	-0.4
ULDT	Uludag	2.73	46	iP	Pg	03 58 03.3	-3.9
ULDT				iS	Sg	03 58 42.4	-1.3
TKTP	Tekketepe	2.96	93	iP	Pn	03 58 01.1	0.0
RDO	Rodhopi	2.98	345	ePN	Pn	03 58 02.2	+0.9
ELL	Elmali	3.06	119	ePN	Pn	03 58 03.2	+0.8
YLV	Yalova	3.16	43	ePN	Pn	03 58 02.5	-1.3
ESKT	Eskisehir	3.57	68	ePN	Pn	03 58 09.8	+0.2
ESKT	Eskisehir	3.57	68	iP	Pn	03 58 19.1	+9.4

IDC 08 03:58:26.8±0.5, 6.70N×72.96W, h162^{km}±5^{km}, mb3.7/14, mb1 3.9/18, mb1mx3.8/25, mbtmp4.2/18, Error ellipse: s-maj=11.6km s-min=7.0km az=126.0
BJI 08 03:58:27.3, 6.70N×73.00W, h170^{km}, mB5.0
NEIC 08 03:58:27.6±0.5, 6.72N×72.96W, h170^{km}±5^{km}, mb4.1/15, Error ellipse: s-maj=7.0km s-min=4.8km az=72.0
ISC 08 03:58:26.7±0.5, 6.69N±0.04×72.95W±0.06, h176^{km}±5^{km}, n60, σ0^{s}85/56, mb4.0/27, 6C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	2.28	217	P	P	03 59 08.1	+1.0
	121nm,0.3s,baz=58,slow=4.0,SNR=588						
ROSC				S	S	03 59 36.8	-1.4
	171nm,0.3s,baz=103,slow=16,SNR=11						
SDV	Santo Domingo	3.17	46	P	P	03 59 18.0	+0.2
	50nm,0.3s,baz=243,slow=3.6,SNR=224						
SDV				S	S	03 59 56.0	-1.3
	68nm,0.3s,baz=294,slow=21,SNR=32						
PCJ	Portland Cotta	11.73	340	⇓eP	P	04 01 10.2	+0.6
PCJ				eS	S	04 03 08.5	-8.9
HOJ	Hope	11.84	342	⇑eP	P	04 01 11.4	+0.4
GWJ	Greenwich	11.90	342	⇑eP	P	04 01 12.4	+0.6
STH	Stony Hill	11.93	342	⇓eP	P	04 01 12.0	-0.2
STH				eS	S	04 03 11.3	-11
MCJ	Malvern	12.09	338	⇓iP	P	04 01 14.7	+0.5
CVJ	Coleyville	12.31	339	⇑eP	P	04 01 17.9	+0.8
JTS	JuntasAbangare	12.40	288	P	P	04 01 18.3	+0.1
	0.7nm,0.3s,baz=346,slow=18,SNR=4.7						
JTS	JuntasAbangare	12.40	288	ePn	P	04 01 18.7	+0.5
	4.1nm,0.5s						
SJG	San Juan	13.15	30	P	P	04 01 26.4	-1.4
	1.8nm,0.3s,baz=299,slow=22,SNR=3.0						
RCC	Rio Carpintero	13.49	349	eP	P	04 01 34.0	+1.9
LMGC	Las Mercedes	13.87	344	eP	P	04 01 38.4	+1.5
	baz=156						
LMGC				eS	S	04 03 54.1	-13
	comp=N,7μm,0.3s						
	comp=E,12μm,0.4s						
SAML	Samuel	18.33	148	eP	P	04 02 30.7	+0.3
	comp=E,5.7nm,0.6s						
LPAZ	La Paz	23.32	168	P	P	04 03 21.4	+1.2
	comp=E,0.7nm,0.3s,mb3.5,baz=2.7,slow=12,SNR=6.7						
LPAZ				pP		04 03 53.6	
	comp=E,2.4nm,0.7s,baz=343,slow=11,SNR=4.2						
LPAZ	La Paz	23.32	168	eP	P	04 03 21.9	+1.7
	comp=E,2.6nm,0.8s,mb3.7						
SIV	San Ignacio	25.42	153	P	P	04 03 39.1	-0.8
	comp=E,0.7nm,0.6s,mb3.4,baz=240,slow=14,SNR=3.1						
SIV				pP	pP	04 04 13.9	-1.4
	comp=E,1.1nm,0.5s,baz=317,slow=11,SNR=4.4						
WVT	Waverly	32.32	337	eP	P	04 04 40.4	-0.9
	comp=E,4.4nm,0.5s,mb4.4						
CCM	Cathedral Cave	35.36	335	eP	P	04 05 06.7	-0.5
	comp=E,11nm,0.8s,mb4.5						
TXAR	Lajitas Array	36.68	312	P	P	04 05 17.6	-0.7
	comp=E,0.7nm,0.6s,mb3.5,baz=126,slow=8.7,SNR=11						
TXAR				PcP	PcP	04 07 39.0	+1.4
	comp=E,0.9nm,0.6s,baz=132,slow=6.4,SNR=11						
TXAR	Lajitas Array	36.68	312	P	P	04 05 17.6	-0.7
TXAR				PcP	PcP	04 07 39.0	+1.3
WMOK	Wichita Mounta	36.69	323	eP	P	04 05 16.7	-1.7
	comp=E,1.6nm,0.6s,mb3.8						
NCB	Newcomb	37.15	358	eP	P	04 05 23.0	+0.9
	comp=E,10.0nm,1.1s,mb4.4						
SADO	Sadowa	38.31	353	P	P	04 05 31.9	+0.1
	comp=E,4.1nm,0.8s,mb4.1,baz=153,slow=4.3,SNR=4.0						
CFAA	Coronel Fontan	38.34	174	P	P	04 05 32.0	-0.2
	comp=E,0.1nm,0.3s,mb2.9,baz=341,slow=12,SNR=2.9						
SDCO	Great Sand Dun	42.76	321	eP	P	04 06 09.2	+0.8
	comp=E,3.7nm,1.1s,mb3.9						
ULM	Lac du Bonnet	47.47	340	P	P	04 06 44.3	-1.2
	comp=E,3.7nm,0.3s,mb4.5,baz=144,slow=7.1,SNR=21						
SCHQ	Schefferville	48.26	5	P	P	04 06 51.5	0.0
	comp=E,9.4nm,0.5s,mb4.7,baz=187,slow=7.1,SNR=24						
PDAR	Pinedale Array	48.28	324	P	P	04 06 51.5	-0.4
	comp=E,1.3nm,0.6s,mb3.7,baz=128,slow=9.7,SNR=12						
PDAR				PcP	PcP	04 08 15.7	-0.6
	comp=E,0.5nm,0.4s,baz=120,slow=7.5,SNR=5.9						
TCUT	Toone Canyon	48.44	321	eP	P	04 06 53.0	0.0
HWUT	Hardware Ranch	48.81	322	eP	P	04 06 54.5	-1.4
	comp=E,2.4nm,0.7s,mb3.9						
RRI2	Red Ridge	49.67	324	eP	P	04 07 01.9	-0.6
	comp=E,7.1nm,0.8s,mb4.3						
HLID	Hailey	51.64	322	eP	P	04 07 16.6	-0.8
	comp=E,1.9nm,0.8s,mb3.8						
NVAR	Mina Array Bea	51.70	315	P	P	04 07 17.8	0.0
	comp=E,0.5nm,0.5s,mb3.4,baz=117,slow=8.3,SNR=7.5						
NVAR				PcP	PcP	04 08 29.4	+0.5
	comp=E,0.6nm,0.5s,baz=140,slow=4.7,SNR=6.2						
YKA	Yellowknife Ar	63.45	340	P	P	04 08 38.5	-1.2
	comp=E,5.4nm,0.6s,mb4.6,baz=132,slow=6.5,SNR=46						
DLBC	Dease Lake	67.52	331	eP	P	04 09 05.4	-0.3
DBIC	Dimbokro	67.58	86	P	P	04 09 06.3	-0.5
	comp=E,5.4nm,0.6s,mb4.4,baz=272,slow=7.4,SNR=29						
SUMG	Summit	69.09	11	eP	P	04 09 15.2	+0.1
	comp=E,8.7nm,0.7s,mb4.6						
INK	Inuvik	73.21	340	eP	P	04 09 39.4	-0.4
	comp=E,3.7nm,0.8s,mb4.2						
ILAR	Eielson Array	77.15	335	P	P	04 10 02.0	-0.1
	comp=E,1.0nm,0.7s,mb3.5,baz=112,slow=4.0,SNR=10						
NAO	NORSAR Subarra	81.17	30	P	P	04 10 25.5	+1.7
	comp=E,1.0nm,0.7s,mb3.5						
NB2	NORSAR Subarra	81.36	29	P	P	04 10 25.5	+0.7
	comp=E,1.0nm,0.7s,mb3.5,baz=268,slow=5.3						
NOA	NORSAR Array B	81.36	29	P	P	04 10 25.5	+0.7
	comp=E,0.9nm,0.6s,mb3.6,baz=268,slow=5.4,SNR=4.6						
GERES	GERESS Array B	82.81	42	P	P	04 10 32.3	-0.2
	comp=E,0.6nm,0.6s,mb3.5,baz=270,slow=4.0,SNR=7.0						
ARCES	ARCESS Array B	86.73	20	P	P	04 10 52.1	+0.7
	comp=E,1.5nm,0.6s,mb4.0,baz=269,slow=3.6,SNR=14						
VNA3	Neumayer Olymp	88.00	163	e	P	04 11 04.3	+6.9
VNA3	Neumayer Olymp	88.00	163	⇑iP	P	04 10 57.9	+0.5
VNA3				e		04 11 04.3	
VNA3				e		04 11 34.0	
VNA1	Neumayer--Stat	88.14	162	⇑iP	P	04 10 58.9	+0.8
VNA1				e		04 11 35.3	
VNA2	Neumayer--Watz	88.52	163	e	P	04 11 06.7	+6.8
VNA2	Neumayer--Watz	88.52	163	⇑iP	P	04 11 00.2	+0.3
VNA2				e		04 11 06.7	
VNA2				e		04 11 36.3	
SNAA	Sanae	90.16	163	eP	P	04 11 08.3	+0.6
	comp=E,8.8nm,1.7s,mb4.4						
ZAL	Zalesovo	116.76	15	PKP	PKPdf	04 16 51.5	+1.5
	comp=E,1.7nm,0.3s,baz=176,slow=4.2,SNR=4.3						
MKAR	Makanchi Array	122.39	20	PKP	PKPdf	04 17 02.5	+1.4
	comp=E,0.9nm,0.4s,baz=297,slow=2.7,SNR=20						
MKAR	Makanchi Array	122.39	20	PKP	PKPdf	04 17 02.5	+1.4
SONM	Songino Array	125.71	1	PKP	PKPdf	04 17 09.8	+2.4
	comp=E,0.7nm,0.5s,baz=301,slow=1.1,SNR=6.9						
WMQ	Urumqi	126.76	17	ePKP	PKPdf	04 17 11.0	+1.4
HHC	Hu-ho-hao-te	132.51	355	ePKP	PKPdf	04 17 25.6	+4.9
HHC				PP	PP		
	comp=Z,130nm,4.8s						
SHL	Shillong	144.71	24	eP	PKPdf	04 17 43.5	+0.4
WRAB	Tennant Creek	150.42	241	ePKPbc	PKPdf	04 17 59.5	+7.0
WRA	Warramunga Arr	150.42	241	PKP	PKPdf	04 17 54.8	+2.2
	comp=Z,4.2nm,0.5s,baz=108,slow=2.5,SNR=12						
WRA				PKPbc	PKPdf	04 17 59.8	+7.2
	comp=Z,4.2nm,0.5s,baz=108,slow=2.7,SNR=128						
WRA				pPKPbc		04 18 42.3	
	comp=Z,2.0nm,0.5s,baz=108,slow=2.5,SNR=4.4						

ECX 08 04:11:59.5±0.2, 30.72N×114.24W, h12^{km}, MD3.8, ML3.8, 2D, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDX	Rancho Dowling	1.90	310	ePN	Pn	04 12 31.9	-0.3

RDX				*e*S	Sn	04 12 56.8	+0.6
RDX				⇓*e*		04 13 10.1	
	comp=N,492nm,0.5s						
RDX				⇓*e*		04 13 11.4	
	comp=E,714nm,0.8s						
ECNX	**Esteban Cantu**	**2.23**	**296**	*e*P	Pn	04 12 36.3	-0.5
ECNX				*e*S	Sn	04 13 04.9	+0.4
PBX	**Punta Banda**	**2.37**	**296**	*e*PN	Pn	04 12 38.1	-0.7
ENX	**Ensenada**	**2.38**	**300**	*e*PN	Pn	04 12 38.3	-0.8
CBX	**Cerro Bola**	**2.62**	**308**	*e*P	Pn	04 12 41.7	-0.7

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*NNC **08** 04:31:35.4±3.3, 44.09N×83.18E, h18^{km}±11^{km}, mpv2.8, Error ellipse: s-maj=25.0km s-min=11.9km az=111.0*

BJI 08 04:31:34.7, 44.05N×83.26E, h19^{km}, ML3.5, 4C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**2.83**	**346**	⇓Pn	Pn	04 32 20.9	+1.0
	0.8nm,0.3s,baz=169,slow=14,SNR=251						
MK31				⇑Pg	Pn	04 32 26.8	+6.9
	4.1nm,0.3s,baz=160,slow=16,SNR=39						
MK31				Lg		04 33 04.0	
	36nm,0.6s,baz=158,slow=26,SNR=10						
WMQ	**Urumqi**	**3.21**	**93**	*e*P	Pn	04 32 29.0	+3.6
WMQ				SG	Sn	04 33 08.0	+4.5
WMQ				Smax			
	comp=N,40nm,0.5s						
WMQ				Smax			
	comp=E,50nm,0.6s						
AAK	**Ala-Archa**	**6.55**	**261**	Pg	Pn	04 33 36.5	+24
AAK				⇑Lg		04 34 59.9	
	comp=E,3.9nm,0.7s						
KURK	**Kurchatov**	**7.37**	**336**	⇑Sn	Sn	04 34 45.5	-2.6
	comp=E,4.2nm,1.3s						
KURK				⇑Lg		04 35 25.3	
	comp=E,8.4nm,1.2s						
KK31	**Karatay Array**	**9.30**	**269**	⇓Lg		04 36 30.0	
	comp=E,1.1nm,0.5s,baz=75,slow=28,SNR=4.0						
VOSK	**Vostochnaya**	**11.90**	**321**	⇓P	P	04 34 23.7	-2.6
	comp=E,0.6nm,0.6s						

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*IDC **08** 04:45:16.7±0.8, 6.69N×72.94W, h163^{km}±9^{km}, mb3.1/2, mb1 3.5/4, mb1mx3.1/21, mbtmp3.7/4, Error ellipse: s-maj=38.8km s-min=7.6km az=132.0*

*NEIC **08** 04:45:17.9±0.8, 6.77N×73.00W, h172^{km}±9^{km}, mb3.5/1, Error ellipse: s-maj=17.8km s-min=13.4km az=113.0*

ISC 08 04:45:16.4±0.8**, 6.7N**±0.1×**73.0W**±0.1**, h173**^{km}±10^{km}**, n7, σ1^{s}12**/7**, mb3.3**/2**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**2.31**	**216**	P	**P**	**04 45 58.3**	**+1.3**
	82nm,0.3s,baz=100,slow=18,SNR=223						
ROSC				S	**S**	**04 46 27.2**	**-1.0**
	109nm,0.3s,baz=96,slow=22,SNR=15						
SDV	**Santo Domingo**	**3.15**	**47**	P	**P**	**04 46 08.2**	**+0.9**
	8.7nm,0.3s,baz=241,slow=8.1,SNR=78						
SDV				S	**S**	**04 46 45.7**	**-0.7**
	40nm,0.3s,baz=270,slow=20,SNR=37						
SAML	**Samuel**	**18.39**	**148**	*e*P	**P**	**04 49 20.8**	**-0.1**
	0.9nm,0.4s						
TXAR	**Lajitas Array**	**36.62**	**312**	P	**P**	**04 52 08.1**	**+0.2**
	0.3nm,0.6s,mb3.1,baz=127,slow=10,SNR=4.6						
YKA	**Yellowknife Ar**	**63.38**	**340**	P	**P**	**04 55 28.7**	**-0.6**
	0.6nm,0.6s,mb3.6,baz=133,slow=6.7,SNR=4.6						
MKAR	**Makanchi Array**	**122.35**	**20**	PKP	PKPdf	05 03 52.1	+1.0
	0.1nm,0.4s,baz=315,slow=2.0,SNR=2.8						
WRA	**Warramunga Arr**	**150.42**	**241**	PKPbc	PKPdf	05 04 49.7	+7.1
	1.2nm,0.4s,baz=109,slow=2.4,SNR=16						

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*IDC **08** 04:51:36.5±5.8, 24.73N×92.25E, mb3.7/6, mb1 3.9/6, mb1mx3.7/20, mbtmp3.8/6, Error ellipse: s-maj=119.8km s-min=45.0km az=154.0*

ISC 08 04:51:37.5±1.5**, 24.4N**±0.1×**92.3E**±0.3**, h33**^{km}**, n7, σ1^{s}11**/8**, mb3.8**/6**, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**1.21**	**340**	*e*P	**P**	**04 52 00.0**	**+1.9**
SHL				*e*SG	**S**	**04 52 13.0**	**-0.6**
MKAR	**Makanchi Array**	**23.72**	**343**	P	**P**	**04 56 47.5**	**+0.1**
	0.4nm,0.3s,mb3.3,baz=166,slow=10.0,SNR=7.2						
SONM	**Songino Array**	**25.88**	**22**	P	**P**	**04 57 07.6**	**-0.4**
	1.5nm,0.8s,mb3.6,baz=207,slow=8.5,SNR=10						
AKASG	**Malin Array Be**	**54.59**	**316**	P	**P**	**05 01 03.0**	**-1.9**
	0.2nm,0.4s,mb3.5,baz=84,slow=7.0,SNR=4.7						
FINES	**FINESS Array B**	**57.52**	**329**	P	**P**	**05 01 24.8**	**-1.0**
	2.7nm,1.1s,mb4.2,baz=90,slow=6.9,SNR=3.7						
NOA	**NORSAR Array B**	**64.68**	**328**	P	**P**	**05 02 15.1**	**+1.0**
	1.5nm,0.9s,mb4.0,baz=52,slow=7.3,SNR=3.3						
GERES	**GERESS Array B**	**64.70**	**314**	P	**P**	**05 02 15.3**	**+0.8**
	0.5nm,0.4s,mb3.9,baz=79,slow=6.8,SNR=6.4						

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*IDC **08** 04:53:09.2±0.9, 4.55S×153.56E, h110^{km}±7^{km}, mb4.1/9, mb1 4.3/11, mb1mx4.1/17, mbtmp4.5/11, MS3.3/4, Ms1 3.3/4, ms1mx2.9/29, Error ellipse: s-maj=15.1km s-min=14.1km az=66.0*

*NEIC **08** 04:53:10.3±1.2, 4.55S×153.55E, h120^{km}±10^{km}, mb4.5/8, Error ellipse: s-maj=11.0km s-min=9.0km az=185.0*

ISC 08 04:53:08.4±2.0**, 4.6S**±0.1×**153.55E**±0.06**, h114**^{km}±17^{km}**, h97**^{km}±5.8^{km}**:pP-P, n30, σ0^{s}83**/29**, mb4.4**/16**, 3D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.95**	**233**	P	**P**	**04 55 02.9**	**+0.3**
	15nm,0.3s,baz=42,slow=4.6,SNR=28						
PMG				S	**S**	**04 56 30.4**	**-1.0**
	18nm,0.3s,baz=54,slow=7.1,SNR=6.6						
HNR	**Honiara**	**7.97**	**128**	P	**P**	**04 55 04.2**	**+1.3**
	28nm,0.3s,baz=183,slow=3.9,SNR=3.9						
HNR				S	**S**	**04 56 30.7**	**-1.2**
	29nm,0.3s,baz=196,slow=18,SNR=4.4						
HNR				LR	LR	04 57 06.4	
	comp=Z,66nm,20.2s,baz=86,slow=30						
HNR	**Honiara**	**7.97**	**128**	P	**P**	**04 55 04.2**	**+1.3**
HNR				S	**S**	**04 56 30.7**	**-1.2**
HNR				LR	LR	04 57 06.4	
GUMO	**Guam**	**20.01**	**335**	LR	LR	05 04 11.6	
	comp=Z,35nm,19.6s,baz=207,slow=33						
DZM	**Mont Dzumac**	**21.41**	**145**	P	**P**	**04 57 48.9**	**+0.5**
	4.5nm,0.5s,mb4.0,baz=333,slow=18,SNR=8.9						
DZM				LR	LR	05 03 41.2	
	comp=Z,89nm,18.0s,baz=199,slow=30						
KAKA	**Kakadu**	**22.36**	**247**	*e*P	**P**	**04 58 15.6**	**+18**
	20nm,0.4s,mb4.8						
WRAB	**Tennant Creek**	**24.14**	**229**	*e*P	**P**	**04 58 15.9**	**+0.9**
	41nm,0.5s,mb5.0						
WB2	**Warramunga Arr**	**24.14**	**229**	⇓*i*P	**P**	**04 58 16.0**	**+0.9**
WB2				*e*		04 58 22.1	
WB2				*e*S	**S**	**05 02 38.5**	**+17**
WB2	**Warramunga Arr**	**24.14**	**229**	⇓*i*P	**P**	**04 58 16.0**	**+0.9**
WB2				*e*S	**S**	**05 02 38.5**	**+17**
WRA	**Warramunga Arr**	**24.15**	**229**	P	**P**	**04 58 16.2**	**+1.1**
	5.3nm,0.4s,mb4.2,baz=54,slow=9.9,SNR=97						
WRA				pP		04 58 39.2	
	6.8nm,0.6s,baz=51,slow=9.7,SNR=3.3						
WRA				PcP	PcP	05 01 54.1	-0.3
	2.3nm,0.7s,baz=51,slow=2.1,SNR=6.4						
WRA				ScP		05 05 23.7	
	0.4nm,0.5s,baz=56,slow=2.9,SNR=4.8						
ASPA	**Alice Springs**	**26.82**	**223**	*e*P	**P**	**04 58 47.6**	**+7.5**
STKA	**Stephens Creek**	**29.38**	**201**	*e*P	**P**	**04 59 02.1**	**-0.9**
	3.9nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**29.38**	**201**	P	**P**	**04 59 01.9**	**-1.1**
	4.5nm,0.6s,mb4.3,baz=2.9,slow=7.2,SNR=18						
FITZ	**Fitzroy Crossi**	**30.42**	**242**	⇓*i*P	**P**	**04 59 11.0**	**-1.4**
	16nm,0.9s,mb4.6						
FITZ	**Fitzroy Crossi**	**30.42**	**242**	P	**P**	**04 59 10.9**	**-1.5**
	21nm,0.6s,mb5.0,baz=68,slow=8.9,SNR=51						
MBWA	**Marble Bar**	**36.73**	**240**	*e*P	**P**	**05 00 06.7**	**+0.2**
	14nm,0.5s,mb5.1						
RPZ	**Rata Peaks**	**41.93**	**161**	P	**P**	**05 00 49.6**	**+0.3**
	12nm,0.6s,mb4.8,baz=282,slow=2.8,SNR=12						
RAR	**Rarotonga**	**48.18**	**114**	LR	LR	05 16 38.4	
	comp=Z,2µm,21.7s,baz=165,slow=29						
SONM	**Songino Array**	**66.54**	**327**	P	**P**	**05 03 48.3**	**0.0**
	0.4nm,0.5s,mb3.5,baz=146,slow=4.7,SNR=4.1						
VNDA	**Vanda**	**73.02**	**178**	*e*P	**P**	**05 04 26.9**	**-0.2**
	5.3nm,0.6s,mb4.5						
MKAR	**Makanchi Array**	**80.66**	**319**	P	**P**	**05 05 10.7**	**+0.5**
	1.1nm,0.6s,mb3.9,baz=98,slow=7.1,SNR=8.8						
MKAR				pP	pP	05 05 37.1	-2.4
	0.4nm,0.6s,baz=135,slow=6.1,SNR=2.1						
ILAR	**Eielson Array**	**81.68**	**22**	P	**P**	**05 05 13.9**	**-1.3**
	1.1nm,0.7s,mb3.8,baz=248,slow=5.0,SNR=12						
AAK	**Ala-Archa**	**85.06**	**313**	*e*P	**P**	**05 05 33.1**	**+0.4**
	2.6nm,0.7s,mb4.3						
AAK				*e*pP	pP	05 05 57.0	-5.5
QSPA	**South Pole Qui**	**85.38**	**180**	*e*P	**P**	**05 05 34.1**	**+0.7**
	5.1nm,0.5s,mb4.7						
QSPA				*e*pP	pP	05 05 57.8	-5.5
MAW	**Mawson**	**86.06**	**203**	P	**P**	**05 05 36.8**	**-0.2**
	5.2nm,0.8s,mb4.5,baz=92,slow=5.4,SNR=15						
MAW				pP	pP	05 06 07.0	+0.1
	2.8nm,0.5s,baz=118,slow=3.3,SNR=4.1						
CHKZ	**Chkalovo**	**89.48**	**324**	*e*P	**P**	**05 05 52.8**	**-0.9**
	1.1nm,0.4s,mb4.2						
YKA	**Yellowknife Ar**	**94.89**	**28**	LR	LR	05 45 50.6	
	comp=Z,51nm,18.3s,baz=75,slow=33						
GERES	**GERESS Array B**	**124.26**	**329**	PKP	PKPdf	05 11 55.0	+1.1
	0.5nm,0.4s,baz=44,slow=1.5,SNR=8.3						
DAVOX	**Davos**	**127.56**	**329**	PKP	PKPdf	05 12 02.1	+1.8
	1.0nm,0.4s,baz=180,slow=5.1,SNR=3.4						
BDFB	**Brasilia**	**150.68**	**134**	PKPbc	PKPdf	05 12 48.7	+6.4
	4.0nm,0.4s,baz=254,slow=2.6,SNR=16						

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*NEIC **08** 04:56:38.5, 16.68N×95.31W, h84^{km}, MD4.2(MEX), After MEX.*

MEX 08 04:56:38.5±1.3**, 16.68N×95.31W, h84**^{km}±12^{km}**, MD4.2, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	**0.57**	**45**	*i* P	P	04 56 51.6	-1.8
CMIG				*i* S	S	04 57 02.8	-1.7
HUIG	**Huatulco**	**1.19**	**220**	*i* P	P	04 56 57.6	-2.8
HUIG				*i* S	S	04 57 15.1	-1.8
OXX	**Oaxaca**	**1.41**	**286**	*i* P	P	04 57 02.0	-1.3
OXX				*i* S	S	04 57 20.0	-1.7
VHO	**Vista Hermosa**	**1.42**	**286**	*i* P	P	04 57 01.8	-1.7
VHO				*i* S	S	04 57 19.9	-2.0
TUIG	**Tuzandepetl**	**1.58**	**32**	*e*P	P	04 57 01.7	-3.8
TUIG				*i* S	S	04 57 21.0	-4.5
SCX	**San Cristobal**	**2.56**	**88**	*i* P	P	04 57 18.0	-0.9
SCX				*i* S	S	04 57 47.5	-1.5
CCIG	**Comitan**	**3.07**	**97**	*e*P	P	04 57 24.0	-1.9
CCIG				*i* S	S	04 57 59.1	-2.5
PPM	**Popocatepetl**	**3.95**	**307**	*i* P	P	04 57 37.6	-0.5
PPM				*i* S	S	04 58 21.4	-2.2
ACX	**Acapulco**	**4.42**	**273**	*e*P	P	04 57 39.5	-5.2
JTS	**JuntasAbangare**	**11.90**	**121**	*e*Pn	P	04 59 25.8	-1.0
	75nm,0.6s						

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*NIED **08** 05:08:00, 42.60N×144.40E, h41^{km}, Mw4.2 Best double couple: $M_0$2.66×10^{15} NP1:ϕ_s80°, δ80°, λ110°. NP2:ϕ_s195°, δ22°, λ27°.*

*BJI **08** 05:08:13.1, 42.66N×144.40E, h54^{km}, mB5.1, mb4.7, Ms4.1, Msz4.0*

*MOS **08** 05:08:13.0±0.9, 42.54N×144.35E, h57^{km}, mb4.8/30, Error ellipse: s-maj=10.7km s-min=6.7km az=98.2*

*SKHL **08** 05:08:13.0±2.1, 42.42N×144.49E, h62^{km}±8^{km}, mb5.4/2*

*NEIC **08** 05:08:14.9±0.8, 42.60N×144.37E, h55^{km}±7^{km}, mb4.7/23, MW4.2(NIED), Error ellipse: s-maj=7.4km s-min=5.9km az=120.0*

NEIC Recorded [2 JMA] in eastern Hokkaido and [1 JMA] in south-central Hokkaido.

*IDC **08** 05:08:14.3±0.8, 42.49N×144.46E, h55^{km}±5^{km}, mb4.2/27, mb1 4.4/29, mb1mx4.3/32, mbtmp4.5/29, MS3.5/9, Ms1 3.5/9, ms1mx3.1/36, Error ellipse: s-maj=12.6km s-min=8.3km az=33.0*

*JMA **08** 05:08:14.4±0.1, 42.60N×144.41E, h62^{km}±1^{km}, M4.4*

JMA Felt II J1.

ISC 08 05:08:13.6±0.4**, 42.54N**±0.03×**144.41E**±0.04**, h60**^{km}±2^{km}**, h53**^{km}±2.3^{km}**:pP-P, n181, σ0^{s}96**/171**, mb4.5**/56**, MS3.6**/8**, 11C-15D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAK	**Akkeshi**	**0.50**	**25**	⇓P	**P**	**05 08 25.9**	**+0.3**
JAK				*e*S	**S**	**05 08 34.3**	**-0.1**
JOB	**Onbets**	**0.56**	**310**	⇓P	**P**	**05 08 27.0**	**+0.8**
JOB				*e*S	**S**	**05 08 36.0**	**+0.5**
JCH	**Churui**	**0.78**	**276**	⇓P	**P**	**05 08 29.8**	**+0.9**
JCH				*e*S	**S**	**05 08 40.3**	**+0.1**
JAR	**Ashorobuto**	**0.89**	**328**	⇓P	**P**	**05 08 30.7**	**+0.4**
JAR				*e*S	**S**	**05 08 42.6**	**-0.2**
JNK	**Nakash**	**1.07**	**12**	⇓P	**P**	**05 08 32.8**	**0.0**
JNK				*e*S	**S**	**05 08 45.8**	**-1.1**
JEM	**Erimo**	**1.07**	**241**	P	**P**	**05 08 34.2**	**+1.4**
JNBK	**Urakawa-nobuka**	**1.26**	**258**	⇑P	**P**	**05 08 35.8**	**+0.4**
NEM2	**Nemuro 2**	**1.28**	**50**	⇑P	**P**	**05 08 35.4**	**-0.3**
NEM2				*e*S	**S**	**05 08 50.7**	**-1.4**
JFR	**Furan**	**1.47**	**295**	⇓P	**P**	**05 08 38.6**	**+0.1**
JFR				*e*S	**S**	**05 08 56.7**	**-0.1**
JTKR	**Abashiri--Toko**	**1.47**	**346**	⇓P	**P**	**05 08 39.2**	**+0.8**
JTKR				*e*S	**S**	**05 08 57.5**	**+0.7**
JRA	**Rausu**	**1.49**	**20**	P	**P**	**05 08 39.0**	**+0.4**
JRA				*e*S	**S**	**05 08 56.9**	**-0.3**
JBT2	**Biratori 2**	**1.53**	**280**	⇓P	**P**	**05 08 38.9**	**-0.3**
JBT2				*e*S	**S**	**05 08 57.0**	**-1.1**
JMP	**Maruseppu**	**1.65**	**333**	⇓P	**P**	**05 08 41.3**	**+0.4**
JMP				*e*S	**S**	**05 09 01.1**	**0.0**
YUK	**Yuzh-Kuril'sk**	**1.83**	**35**	⇓*i*P	**P**	**05 08 44.0**	**+0.7**
YUK				AMB	AMB	05 08 44.5	
	5µm,0.3s						
YUK				AMB	AMB	05 08 44.5	
	510nm,0.3s						
YUK				AMB	AMB	05 08 44.5	
	940nm,0.3s						
YUK				AMB	AMB	05 08 44.5	
	4µm,0.3s						
YUK				*i* S	**S**	**05 09 05.7**	**+0.4**
YUK				A		05 09 06.0	
	30µm,1.0s						
YUK				A		05 09 06.0	
	13µm,1.0s						
YUK				A		05 09 07.0	
	17µm,0.5s						
YUK				A		05 09 07.0	
	8µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.83**	**35**	⇓*i*PN	**P**	**05 08 44.0**	**+0.7**
YUK				*i* S	**S**	**05 09 05.7**	**+0.4**
YUK				pmax	pmax		
	comp=Z,4µm,0.4s						
YUK				pmax	pmax		
	comp=N,510nm,0.2s						
YUK				pmax	pmax		
	comp=E,940nm,0.2s						
YUK				pmax	pmax		
	comp=Z,5µm,0.3s						
YUK				smax			
	comp=N,30µm,0.8s						
YUK				smax			
	comp=E,13µm,0.8s						
YUK				smax			
	comp=N,17µm,0.5s						
YUK				smax			
	comp=E,8µm,0.5s						
ASAJ	**Asahikawa**	**2.06**	**321**	P	**P**	**05 08 47.5**	**+1.0**
	comp=E,64nm,0.3s,baz=185,slow=12,SNR=104						
ASAJ				S	**S**	**05 09 14.4**	**+3.5**
	comp=E,228nm,0.3s,baz=347,slow=32,SNR=14						
ASAJ	**Asahikawa**	**2.06**	**321**	PN	**P**	**05 08 47.5**	**+1.0**
ASAJ				S	**S**	**05 09 14.4**	**+3.5**
ASAJ				pmax	pmax		
	comp=Z,64nm,0.3s						
ASAJ				smax			
	comp=N,228nm,0.3s						
KUR	**Kuril'sk**	**3.67**	**42**	*e*P	**P**	**05 09 07.5**	**-1.8**
KUR				AMB	AMB	05 09 09.8	
	comp=N,150nm,0.7s						
KUR				AMB	AMB	05 09 09.8	
	comp=N,300nm,0.7s						
KUR				*i* S	**S**	**05 09 50.0**	**-1.7**
KUR				A		05 09 53.5	
	comp=N,270nm,0.6s						
KUR				A		05 09 53.5	
	comp=N,150nm,0.6s						
KUR	**Kuril'sk**	**3.67**	**42**	*e*PN	**P**	**05 09 07.5**	**-1.8**
KUR				*i* S	**S**	**05 09 50.0**	**-1.7**
KUR				pmax	pmax		
	comp=N,150nm,0.7s						
KUR				pmax	pmax		
	comp=Z,300nm,0.7s						
KUR				pmax	pmax		
	comp=E,150nm,0.0s						
KUR				smax			
	comp=N,270nm,0.6s						
KUR				smax			
	comp=E,150nm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.56**	**346**	*e*P	**P**	**05 09 22.1**	**+0.3**
YSS				*e*S	**S**	**05 10 08.9**	**-5.3**
YSS				A		05 10 12.5	
	comp=E,70nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.56**	**346**	*e*Pn	**P**	**05 09 20.6**	**-1.3**
YSS	**Yuzh-Sakhalins**	**4.56**	**346**	*i* PN	**P**	**05 09 22.3**	**+0.5**
MJAR	**Matsushiro Arr**	**7.67**	**221**	P	**P**	**05 10 04.3**	**-0.8**
	comp=E,3.8nm,0.3s,baz=30,slow=13,SNR=27						
MJAR				LR	LR	05 13 44.6	
	comp=E,324nm,18.1s,baz=40,slow=43						
MJAR	**Matsushiro Arr**	**7.67**	**221**	PN	**P**	**05 10 04.3**	**-0.8**
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,324nm,18.1s						
MAJO	**Matsushiro**	**7.67**	**221**	*e*Pn	**P**	**05 10 04.4**	**-0.6**
	comp=Z,42nm,0.6s						
MAT	**Matsushiro**	**7.67**	**221**	P	**P**	**05 10 03.9**	**-1.2**
MAT				*e*S	**S**	**05 11 30.9**	**-0.5**
MAT	**Matsushiro**	**7.67**	**221**	*e*P	**P**	**05 10 04.0**	**-1.1**
	comp=Z,40nm,1.0s						
MAT				S	**S**	**05 11 16.0**	**-15**
MDJ	**Mudanjiang**	**10.95**	**286**	P	**P**	**05 10 48.3**	**-1.5**
MDJ				S	**S**	**05 12 48.7**	**-2.9**
MDJ				PCP	PcP	05 16 42.0	-2.7
MDJ				SCP		05 20 09.5	
MDJ				PCS		05 20 17.0	
MDJ				SCS	ScS	05 23 46.0	+1.3
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,160nm,4.0s						
KLR	**Kul'dur**	**11.06**	**312**	*e*PN	**P**	**05 10 54.0**	**+2.7**
CN2	**Changchun**	**13.90**	**282**	*e*P	**P**	**05 11 29.1**	**+0.2**
JNU	**Nakatsue**	**14.22**	**233**	LR	LR	05 16 58.6	
	comp=Z,79nm,21.0s,baz=81,slow=37						
CBIJ	**Chichi jima**	**15.52**	**187**	LR	LR	05 18 10.7	
	comp=Z,58nm,19.8s,baz=344,slow=39						
JOW	**Kunigami**	**20.48**	**225**	LR	LR	05 20 50.3	
	comp=Z,71nm,18.8s,MS3.1,baz=115,slow=37						
SEY	**Seymchan**	**20.95**	**10**	⇓*e*P	**P**	**05 12 50.0**	**-3.4**
SSE	**Sheshan**	**21.75**	**246**	P	**P**	**05 13 04.3**	**+2.7**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,70nm,4.7s						
SSE	**Sheshan**	**21.75**	**246**	P	**P**	**05 13 04.3**	**+2.7**
	comp=Z,30nm,0.7s,mb4.8						
FX1	**Attu Island--F**	**21.80**	**52**	P	**P**	**05 13 02.1**	**+0.3**
	comp=Z,43nm,0.5s,mb5.2,baz=43,slow=6.0,SNR=4.0						
FX1	**Attu Island--F**	**21.80**	**52**	P	**P**	**05 13 02.1**	**+0.3**
FX1				pmax	pmax		
	comp=Z,43nm,0.5s						
NJ2	**Nanjing**	**22.79**	**251**	*e*P	**P**	**05 13 12.2**	**+0.5**
NJ2				PP	PP	05 13 41.4	-0.9
NJ2				S	**S**	**05 17 17.0**	**+4.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
NJ2				LR	LR		
	comp=N,180nm,10.0s						
NJ2				LR	LR		
	comp=E,360nm,20.0s						
NJ2				LR	LR		
	comp=Z,150nm,15.8s						
SONM	**Songino Array**	**27.11**	**294**	P	**P**	**05 13 52.3**	**-0.3**
	comp=Z,5.2nm,0.7s,mb4.2,baz=81,slow=8.6,SNR=37						
SONM	**Songino Array**	**27.11**	**294**	P	**P**	**05 13 52.3**	**-0.3**
SONM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZAK	**Zakamensk**	**29.09**	**300**	⇑*i*P	**P**	**05 14 10.0**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
GTA	**Gaotai**	**33.52**	**280**	*e*P	**P**	**05 14 49.8**	**+0.4**
GTA				AP	pP	05 15 04.2	-0.2
GTA				XP	sP	05 15 11.7	-0.1
GTA				PP	PP	05 16 02.8	-0.3
GTA				PCP	PcP	05 17 31.2	+2.0
GTA				S	**S**	**05 20 04.3**	**-1.7**
GTA				XS		05 20 29.9	
GTA				SCP		05 21 08.1	
GTA				SCS	ScS	05 25 08.8	+1.8
GTA				AMB	AMB		
	comp=Z,110nm,6.1s						
GTA				LR	LR		
	comp=N,90nm,11.8s,MS3.9						
GTA				LR	LR		
	comp=E,150nm,16.1s,MS3.9						
GTA				LR	LR		
	comp=Z,150nm,6.9s						
KMI	**Kunming**	**38.29**	**257**	P	**P**	**05 15 27.8**	**-2.0**
	comp=Z,8.0nm,1.1s,mb4.4						
ZAL	**Zalesovo**	**40.15**	**308**	P	**P**	**05 15 44.6**	**-0.4**
	comp=Z,6.8nm,1.0s,mb4.3,baz=26,slow=8.7,SNR=26						
ZAL				PcP	PcP	05 17 48.9	-0.2
	comp=Z,2.1nm,0.6s,baz=51,slow=4.1,SNR=5.1						
ZAL	**Zalesovo**	**40.15**	**308**	P	**P**	**05 15 44.6**	**-0.4**
ZAL						05 17 48.9	
ZAL				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WMQ	**Urumqi**	**40.68**	**292**	⇑P	**P**	**05 15 50.7**	**+1.3**
WMQ				AP	pP	05 16 05.9	+1.2
WMQ				XP	sP	05 16 13.7	+1.9
WMQ				PP	PP	05 17 28.7	+1.6
WMQ				PCP	PcP	05 17 52.7	+1.8
WMQ				PPP	PPP	05 17 57.7	+1.5
WMQ				S	**S**	**05 21 55.7**	**+0.8**
WMQ				XS		05 22 21.6	
WMQ				AMB	AMB		
	comp=Z,230nm,4.5s						
WMQ				LR	LR		
	comp=N,30nm,17.5s,MS3.2						
WMQ				LR	LR		
	comp=E,10.0nm,17.7s,MS3.2						
WMQ				LR	LR		
	comp=Z,40nm,16.0s,MS3.4						
NVS	**Novosibirsk**	**40.92**	**309**	*e*P	**P**	**05 15 48.6**	**-2.7**
KDAK	**Kodiak Island**	**41.53**	**46**	P	**P**	**05 15 56.3**	**+0.1**
	comp=Z,6.1nm,0.4s,mb4.6,baz=274,slow=2.4,SNR=22						
COLA	**College**	**43.22**	**35**	*d i*P	**P**	**05 16 10.9**	**+1.0**
MKAR	**Makanchi Array**	**43.37**	**298**	P	**P**	**05 16 11.3**	**-0.1**
	comp=Z,6.7nm,0.5s,mb4.6,baz=84,slow=9.8,SNR=73						
MKAR				pP	pP	05 16 25.6	-1.2
	comp=Z,3.0nm,0.6s,baz=82,slow=11,SNR=8.9						
MKAR				PcP	PcP	05 17 59.1	-0.6
	comp=Z,1.2nm,0.7s,baz=72,slow=4.6,SNR=3.6						
MKAR	**Makanchi Array**	**43.37**	**298**	P	**P**	**05 16 11.3**	**-0.1**
MKAR				*PP	pP	05 16 25.6	-1.2
MKAR						05 17 59.1	
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**43.64**	**35**	P	**P**	**05 16 13.7**	**+0.4**
	comp=Z,9.0nm,0.6s,mb4.7,baz=273,slow=7.7,SNR=119						
ILAR	**Eielson Array**	**43.64**	**35**	P	**P**	**05 16 13.7**	**+0.4**
ILAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KURK	**Kurchatov**	**44.55**	**304**	*e*P	**P**	**05 16 20.4**	**-0.4**
	comp=Z,18nm,0.9s,mb4.9						
KURK	**Kurchatov**	**44.55**	**304**	*c i*P	**P**	**05 16 20.4**	**-0.4**
CHKZ	**Chkalovo**	**48.38**	**310**	*e*P	**P**	**05 16 50.1**	**-0.9**
	comp=Z,13nm,0.7s,mb5.1						
CHKZ	**Chkalovo**	**48.38**	**310**	P	**P**	**05 16 50.1**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
INK	**Inuvik**	**48.45**	**29**	P	**P**	**05 16 51.1**	**-0.2**
	comp=Z,7.8nm,0.6s,mb4.9,baz=304,slow=6.7,SNR=97						
INK				LR	LR	05 40 51.0	
	comp=Z,74nm,18.2s,MS3.7,baz=236,slow=40						
INK	**Inuvik**	**48.45**	**29**	*e*P	**P**	**05 16 51.2**	**-0.1**

	comp=Z,6.7nm,0.6s,mb4.8						
INK	**Inuvik**	48.45	29	P	P	05 16 51.1	-0.2
INK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
INK				MLR	MLR		
	comp=Z,74nm,18.2s						
VOSK	**Vostochnaya**	48.48	309	P	P	05 16 51.1	-0.7
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
BVA0	**Borovoye Array**	48.72	309	*i* P	P	05 16 53.1	-0.5
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	48.72	309	P	P	05 16 53.5	-0.1
	comp=Z,5.9nm,0.4s,mb5.0,baz=78,slow=9.0,SNR=41						
BVAR	**Borovoye Array**	48.72	309	P	P	05 16 53.5	-0.1
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
BRVK	**Borovoye**	48.77	309	*e*P	P	05 16 53.8	-0.2
	comp=Z,12nm,1.1s,mb4.8						
BRVK	**Borovoye**	48.77	309	*e*P	P	05 16 53.8	-0.2
BRVK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.8						
AAK	**Ala-Archa**	50.07	295	*e*P	P	05 17 03.0	-1.1
	comp=Z,2.6nm,0.4s,mb4.6						
AAK	**Ala-Archa**	50.07	295	*e*P	P	05 17 03.0	-1.2
AAK				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
HNR	**Honiara**	53.64	161	LR	LR	05 37 46.1	
	comp=Z,43nm,19.6s,MS3.5,baz=73,slow=33						
ARU	**Arti**	53.85	317	*e*P	P	05 17 30.9	-1.4
	comp=Z,7.0nm,0.4s,mb4.9						
ARU	**Arti**	53.85	317	⇑*i*P	P	05 17 31.4	-0.9
ARU				*e*		05 19 29.1	
ARU				*e*PPP	PPP	05 20 40.0	-5.6
ARU				*e*S	S	05 24 57.0	-4.1
ARU				*e*SS	SS	05 28 37.4	-4.8
ARU				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
AB31	**Akbulak array**	56.25	308	*i* P	P	05 17 49.1	-0.7
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
AKTO	**Aktyubinsk**	56.80	310	P	P	05 17 52.6	-1.1
	comp=Z,4.7nm,0.6s,mb4.7,baz=80,slow=9.0,SNR=22						
AKTO	**Aktyubinsk**	56.80	310	P	P	05 17 52.6	-1.1
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
YKA	**Yellowknife Ar**	57.91	33	P	P	05 18 00.4	-0.9
	comp=Z,1.8nm,0.7s,mb4.2,baz=295,slow=6.1,SNR=9.6						
YKA				pP	pP	05 18 13.7	-3.6
	comp=Z,1.9nm,0.8s,baz=309,slow=6.4,SNR=4.0						
YKA	**Yellowknife Ar**	57.91	33	P	P	05 18 00.4	-0.9
YKA				pP	pP	05 18 13.7	-3.6
YKA	**Yellowknife Ar**	57.91	33	P	P	05 18 00.4	-0.9
YKA				*PP	pP	05 18 13.7	-3.6
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	59.67	339	P	P	05 18 12.2	-1.2
	comp=Z,3.1nm,0.9s,mb4.3,baz=27,slow=5.4,SNR=13						
ARCES	**ARCESS Array B**	59.67	339	P	P	05 18 12.3	-1.2
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JOF	**Joensuu**	62.21	332	*e*p	P	05 18 28.0	-2.7
	comp=Z,2.5nm,0.4s,mb4.7						
JOF	**Joensuu**	62.21	332	*e*P	P	05 18 28.0	-2.7
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.8						
FITZ	**Fitzroy Crossi**	62.77	200	P	P	05 18 35.2	+0.1
	comp=Z,6.1nm,1.0s,mb4.7,slow=3.0,SNR=3.2						
WRAB	**Tennant Creek**	62.85	191	*e*P	P	05 18 34.6	-1.0
	comp=Z,6.6nm,1.0s,mb4.7						
WRA	**Warramunga Arr**	62.86	191	P	P	05 18 34.9	-0.8
	comp=Z,2.7nm,1.0s,mb4.3,baz=9.1,slow=7.1,SNR=16						
WRA	**Warramunga Arr**	62.86	191	P	P	05 18 34.9	-0.8
WRA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KAF	**Kangasniemi**	64.48	333	*e*p	P	05 18 43.3	-2.2
	comp=Z,2.7nm,0.5s,mb4.5,baz=42,slow=6.0						
KAF	**Kangasniemi**	64.48	333	*e*P	P	05 18 43.3	-2.2
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
FINES	**FINESS Array B**	65.02	332	P	P	05 18 47.7	-1.3
	comp=Z,5.3nm,0.5s,mb4.9,baz=45,slow=7.9,SNR=59						
FINES				pP	pP	05 19 02.0	-3.3
	comp=Z,1.7nm,0.5s,baz=46,slow=7.2,SNR=3.1						
FINES				LR	LR	05 47 29.5	
	comp=Z,91nm,19.6s,MS4.0,baz=32,slow=36						
FINES	**FINESS Array B**	65.02	332	P	P	05 18 47.7	-1.4
FINES				pP	pP	05 19 02.0	-3.3
FINES				LR	LR	05 47 29.5	
FINES	**FINESS Array B**	65.02	332	P	P	05 18 47.7	-1.4
FINES				*PP	pP	05 19 02.0	-3.4
FINES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,91nm,19.7s						
OBN	**Obninsk**	65.08	323	⇓*e*P	P	05 18 48.5	-1.1
OBN				*e*		05 21 12.8	
OBN				*e*S	S	05 27 18.2	-7.6
OBN				pmax	pmax		
	comp=Z,7.0nm,0.3s,mb5.2						
SUMG	**Summit**	65.17	1	*e*P	P	05 18 49.5	-0.4
	comp=Z,7.7nm,0.6s,mb4.9						
KIV	**Kislovodsk**	69.05	311	*e*P	P	05 19 14.9	+0.2
	comp=Z,12nm,0.6s,mb5.0						
KIV	**Kislovodsk**	69.05	311	*e*P	P	05 19 15.1	+0.4
KIV				*e*		05 19 37.7	
KIV				*e*S	S	05 28 10.4	-3.5
KIV				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
NVAR	**Mina Array Bea**	69.92	56	P	P	05 19 21.1	+1.0
	comp=Z,2.4nm,0.7s,mb4.2,baz=298,slow=4.7,SNR=23						
NVAR				pP	pP	05 19 35.8	-0.8
	comp=Z,1.0nm,0.7s,baz=299,slow=4.9,SNR=4.7						
NB2	**NORSAR Subarra**	69.98	338	P	P	05 19 19.2	-0.9
	comp=Z,13nm,1.0s,mb4.8,baz=33,slow=6.2						
NOA	**NORSAR Array B**	69.98	338	P	P	05 19 19.2	-0.9
	comp=Z,6.4nm,0.8s,mb4.6,baz=35,slow=6.1,SNR=16						
NOA	**NORSAR Array B**	69.98	338	P	P	05 19 19.2	-0.9
NOA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HFS	**Hagfors**	70.01	336	P	P	05 19 19.3	-0.9
	comp=Z,8.7nm,0.7s,mb4.8,baz=45,slow=8.4,SNR=36						
HFS	**Hagfors**	70.01	336	P	P	05 19 19.3	-0.9
HFS				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AKASG	**Malin Array Be**	71.34	323	P	P	05 19 27.5	-0.9
	comp=Z,4.5nm,0.6s,mb4.5,baz=42,slow=6.0,SNR=15						
AKASG	**Malin Array Be**	71.34	323	P	P	05 19 27.5	-0.9
AKASG	**Malin Array Be**	71.34	323	P	P	05 19 27.5	-1.0
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TPNV	**Topopah Spring**	72.11	56	*e*P	P	05 19 34.1	+0.8
	comp=Z,8.2nm,1.1s,mb4.6						
BW06	**Boulder Array**	72.21	48	*e*P	P	05 19 33.4	-0.3
	comp=Z,1.3nm,0.5s,mb4.1						
PDAR	**Pinedale Array**	72.21	48	P	P	05 19 34.4	+0.6
	comp=Z,1.8nm,0.5s,mb4.2,baz=12,slow=0.9,SNR=20						
ULM	**Lac du Bonnet**	73.66	36	P	P	05 19 41.2	-0.9
	comp=Z,1.9nm,0.6s,mb4.2,baz=321,slow=6.7,SNR=7.7						
ULM	**Lac du Bonnet**	73.66	36	P	P	05 19 41.2	-0.9
KWP	**Kalwaria**	74.97	325	*e*P	P	05 19 50.6	+0.9
KWP	**Kalwaria**	74.97	325	*e*P	P	05 19 50.6	+0.9
OJC	**Ojcow**	75.72	327	*e*P	P	05 19 54.2	+0.3
KSP	**Ksiaz**	76.60	329	*e*P	P	05 19 59.2	+0.3
MLR	**Muntele Rosu**	76.64	321	P	P	05 19 59.8	+0.5
	comp=Z,0.8nm,0.6s,mb3.8,baz=185,slow=18,SNR=3.3						
MLR	**Muntele Rosu**	76.64	321	P	P	05 19 59.8	+0.6
MLR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	76.90	312	P	P	05 20 01.2	+0.4
	comp=Z,1.1nm,0.7s,mb3.9,baz=56,slow=3.3,SNR=8.0						
BRTR	**Keskin Array B**	76.90	312	P	P	05 20 01.3	+0.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MORC	**Moravsky Berou**	76.97	328	*e*P	P	05 20 01.3	+0.3
	comp=Z,7.4nm,1.4s,mb4.4						
UPC	**Upice**	76.98	329	*e*P	P	05 20 01.2	+0.2
DPC	**Dobruska-Polom**	76.99	329	*e*P	P	05 20 01.8	+0.7
CLL	**Collm**	77.43	331	P	P	05 20 03.6	+0.1
	comp=Z,logA/T=1.0,mb4.7						
CLL	**Collm**	77.43	331	*i* P	P	05 20 03.6	+0.1
	comp=Z,10.0nm,1.0s,mb4.7						
CLL	**Collm**	77.43	331	*i* P	P	05 20 03.6	+0.1
CLL				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
VRAC	**Vranov**	77.72	328	P	P	05 20 06.0	+0.9
	comp=Z,2.5nm,0.5s,mb4.4,baz=81,slow=8.2,SNR=2.9						
VRAC	**Vranov**	77.72	328	P	P	05 20 06.0	+0.9
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.5s						
PRU	**Pruhonice**	77.95	330	*e*P	P	05 20 07.0	+0.6
TREC	**Trest**	78.16	329	*e*P	P	05 20 08.3	+0.8
EKA	**Eskdalemuir Ar**	78.67	342	P	P	05 20 10.6	+0.3
	comp=Z,2.0nm,0.7s,mb4.2,baz=23,slow=5.5,SNR=6.3						
EKA	**Eskdalemuir Ar**	78.67	342	P	P	05 20 10.6	+0.4
EKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KHC	**Kasperske Hory**	79.02	330	*e*P	P	05 20 13.0	+0.7
KHC	**Kasperske Hory**	79.02	330	⇓*e*P	P	05 20 13.0	+0.7
GERES	**GERESS Array B**	79.20	329	P	P	05 20 12.8	-0.5
	comp=Z,0.8nm,0.3s,mb4.1,baz=41,slow=5.5,SNR=12						
GERES				LR	LR	05 58 51.9	
	comp=Z,82nm,19.7s,MS4.1,baz=344,slow=38						
GERES	**GERESS Array B**	79.20	329	P	P	05 20 12.8	-0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES				MLR	MLR		
	comp=Z,82nm,19.7s						
ANMO	**Albuquerque**	79.33	52	⇑*e*P	P	05 20 15.6	+1.3
SCHQ	**Schefferville**	79.40	18	P	P	05 20 14.2	-0.1
	comp=Z,3.1nm,0.6s,mb4.4,baz=44,slow=14,SNR=6.1						
SMF	**Signal de Mont**	84.55	334	*e*P	P	05 20 41.6	+0.6
LPL	**La Plagne**	84.56	332	*e*P	P	05 20 42.0	+0.9
	comp=Z,2.7nm,0.6s,mb4.3						
LPG	**La Plagne**	84.57	332	*e*P	P	05 20 42.4	+1.3
	comp=Z,4.5nm,0.6s,mb4.5						
AVF	**Avril sur Loir**	84.58	334	*e*P	P	05 20 41.8	+0.7
TXAR	**Lajitas Array**	84.98	54	P	P	05 20 44.4	+0.8
	comp=Z,1.0nm,0.6s,mb4.1,baz=298,slow=3.7,SNR=17						
TXAR	**Lajitas Array**	84.98	54	P	P	05 20 44.4	+0.8
TXAR	**Lajitas Array**	84.98	54	P	P	05 20 44.4	+0.8
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PPT	**Papeete**	85.15	119	LR	LR	05 48 52.1	
	comp=Z,22nm,21.7s,MS3.5,baz=297,slow=29						
ORIF	**Oris-en-Rattie**	85.38	332	*e*P	P	05 20 46.2	+1.1
	comp=Z,4.9nm,0.7s,mb4.5						
SBF	**Sospel**	85.73	330	*e*P	P	05 20 47.2	+0.3
	comp=Z,9.0nm,0.6s,mb4.9						
VIVF	**Saint-Julien-l**	85.85	333	*e*P	P	05 20 48.4	+1.0
RJF	**Les Rejaudoux**	86.48	335	*e*P	P	05 20 51.7	+1.2
LMR	**La Mourre**	86.53	331	*e*P	P	05 20 51.3	+0.5
	comp=Z,15nm,0.8s,mb5.0						
CAF	**Calviac**	86.65	334	*e*P	P	05 20 53.0	+1.6
	comp=Z,16nm,0.9s,mb4.9						
EPF	**Esparros**	88.90	335	*e*P	P	05 21 04.2	+2.0
	comp=Z,5.4nm,0.7s,mb4.7						
ETSF	**Etsaut**	89.30	335	*e*P	P	05 21 05.4	+1.3
SNAA	**Sanae**	146.69	198	⇑*i*P	PKPdf	05 27 49.8	+4.2
SNAA	**Sanae**	146.69	198	*e*	PKPdf	05 27 51.6	+6.0
SNAA	**Sanae**	146.69	198	*e*	PKPdf	05 27 52.8	+7.2
SNAA	**Sanae**	146.69	198	*e*	PKPdf	05 27 54.2	+8.6
SNAA	**Sanae**	146.69	198	*e*	PKPdf	05 28 11.5	+26
SNAA	**Sanae**	146.69	198	*e*	PKPdf	05 28 15.3	+30
SNAA	**Sanae**	146.69	198	*e*	PKPdf	05 28 17.3	+32
SNAA	**Sanae**	146.69	198	*e*	PKPdf	05 28 22.4	+37
VNA2	**Neumayer--Watz**	148.25	197	*e*	PKPdf	05 27 54.5	+6.4
VNA2	**Neumayer--Watz**	148.25	197	*e*	PKPdf	05 27 55.7	+7.6
VNA2	**Neumayer--Watz**	148.25	197	*e*	PKPdf	05 27 56.9	+8.8
VNA2	**Neumayer--Watz**	148.25	197	*e*	PKPdf	05 28 13.1	+25
VNA2	**Neumayer--Watz**	148.25	197	*e*	PKPdf	05 28 16.8	+29
VNA2	**Neumayer--Watz**	148.25	197	*e*	PKPdf	05 28 20.3	+32
VNA2	**Neumayer--Watz**	148.25	197	*e*	PKPdf	05 28 25.1	+37
VNA2	**Neumayer--Watz**	148.25	197	⇑*i*PKPdf	PKPdf	05 27 52.8	+4.7
VNA2				*e*		05 27 54.5	
VNA2				*e*		05 27 55.7	
VNA2				*e*		05 27 56.9	
VNA2				*e*		05 28 13.1	
VNA2				*e*		05 28 16.8	
VNA2				*e*		05 28 20.3	
VNA2				*e*		05 28 25.1	
VNA3	**Neumayer Olymp**	148.48	196	*e*	PKPdf	05 27 54.7	+6.3
VNA3	**Neumayer Olymp**	148.48	196	*e*	PKPdf	05 27 56.2	+7.8
VNA3	**Neumayer Olymp**	148.48	196	*e*	PKPdf	05 27 57.8	+9.4
VNA3	**Neumayer Olymp**	148.48	196	*e*	PKPdf	05 28 14.2	+26
VNA3	**Neumayer Olymp**	148.48	196	*e*	PKPdf	05 28 17.8	+29
VNA3	**Neumayer Olymp**	148.48	196	*e*	PKPdf	05 28 21.5	+33
VNA3	**Neumayer Olymp**	148.48	196	*e*	PKPdf	05 28 26.4	+38
VNA3	**Neumayer Olymp**	148.48	196	⇑*i*PKPdf	PKPdf	05 27 52.8	+4.4
VNA3				*e*		05 27 54.7	
VNA3				*e*		05 27 56.2	
VNA3				*e*		05 27 57.8	
VNA3				*e*		05 28 14.2	
VNA3				*e*		05 28 17.8	
VNA3				*e*		05 28 21.5	
VNA3				*e*		05 28 26.4	
VNA1	**Neumayer--Stat**	148.65	197	*e*	PKPdf	05 27 55.7	+7.0
VNA1	**Neumayer--Stat**	148.65	197	*e*	PKPdf	05 27 57.9	+9.2
VNA1	**Neumayer--Stat**	148.65	197	*e*	PKPdf	05 27 59.7	+11
VNA1	**Neumayer--Stat**	148.65	197	⇑*i*PKPdf	PKPdf	05 27 53.6	+4.9
VNA1				*e*		05 27 55.7	
VNA1				*e*		05 27 57.9	
VNA1				*e*		05 27 59.7	
BDFB	**Brasilia**	151.14	25	PKPbc	PKPdf	05 28 02.3	+8.2
	comp=Z,2.5nm,0.7s,baz=211,slow=5.6,SNR=4.6						
BDFB	**Brasilia**	151.14	25	PKIKP	PKPdf	05 28 02.3	+8.1
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.7s						

*NEIC **08** 05:12:27.0, 17.18N×100.94W, h6^{km}, MD4.0(MEX), After MEX.*

MEX 08 05:12:27.0±1.3**, 17.18N×100.94W, h6^{km}**±14^{km}**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.66	101	*i* P	Pg	05 12 38.1	-2.1
CAIG				*i* S	Sg	05 12 46.6	-2.3
ZIIG	**Zihuatanejo**	0.66	310	*i* P	Pg	05 12 39.1	-1.1
ZIIG				*i* S	Sg	05 12 47.9	-1.1
ACX	**Acapulco**	1.03	107	*e*P	Pb	05 12 44.5	-2.3
ACX				*i* S	Sb	05 12 59.0	-1.4
PLIG	**Platanillo**	1.82	48	*i* P	Pn	05 12 54.3	-5.0
PLIG				*i* S	Sn	05 13 18.9	-4.1
YAIG	**Yautepec**	2.44	46	*i* P	Pn	05 13 05.8	-2.4
YAIG				*i* S	Sn	05 13 33.1	-5.7
MOIG	**Morelia**	2.50	355	*i* P	Pn	05 13 07.0	-1.9
MOIG				*i* S	Sn	05 13 33.8	-6.3
PPM	**Popocatepetl**	2.89	49	*e*P	Pn	05 13 10.2	-4.4
PPM				*e*P		05 13 11.0	
PPM				*e*S	Sn	05 13 46.5	-3.6
PPM				*i* S	Sn	05 13 46.8	-3.3
PPM	**Popocatepetl**	2.89	49	*e*P	Pn	05 13 11.0	-3.5
PPM				*e*S	Sn	05 13 46.5	-3.6
VHO	**Vista Hermosa**	4.02	91	*i* P	Pn	05 13 33.6	+3.0
VHO				*i* S	Sn	05 14 13.2	-5.6

*IDC **08** 05:18:36.3±1.3, 26.13S×179.78W, h450^{km}±13^{km}, mb3.7/8, mb1 3.9/10, mb1mx3.8/15, mbtmp4.5/10, Error ellipse: s-maj=24.4km s-min=14.5km az=5.0*

*NEIC **08** 05:18:37.3±0.8, 26.15S×179.81W, h463^{km}±8^{km}, mb4.3/7, Error ellipse: s-maj=13.7km s-min=9.7km az=202.0*

ISC 08 05:18:36.3±0.9**, 26.22S**±0.09×**179.90W**±0.10**, h457^{km}**±9^{km}**, n35, σ0^{s}73**/31**, mb4.1**/13**, 2D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	3.50	150	P	P	05 19 48.8	+0.6
	486nm,0.3s,baz=146,slow=16,SNR=46						
RAO				S	S	05 20 44.5	-0.6
	171nm,0.3s,baz=75,slow=23,SNR=3.3						
URZ	**Urewera**	12.27	191	P	P	05 21 18.7	-0.9
	2.6nm,0.3s,baz=325,slow=3.9,SNR=19						
URZ				S	S	05 23 31.0	+0.5
	2.0nm,0.3s,baz=91,slow=23,SNR=16						
DZM	**Mont Dzumac**	13.13	285	*e*P	P	05 21 30.6	+1.7
DZM	**Mont Dzumac**	13.13	285	P	P	05 21 28.6	-0.3
	2.6nm,0.3s,baz=98,slow=13,SNR=30						
DZM	**Mont Dzumac**	13.13	285	*e*P	P	05 21 30.6	+1.7
CTA	**Charters Tower**	31.65	274	*e*P	P	05 24 22.8	+0.9
	23nm,0.4s,mb5.0						
CTA	**Charters Tower**	31.65	274	P	P	05 24 22.8	+0.9
	29nm,0.4s,mb5.0,baz=98,slow=10,SNR=64						
STKA	**Stephens Creek**	34.01	251	*e*P	P	05 24 42.8	+1.1
	3.3nm,0.4s,mb4.1						
STKA	**Stephens Creek**	34.01	251	P	P	05 24 42.5	+0.9
	4.1nm,0.5s,mb4.1,baz=95,slow=9.9,SNR=22						
ASPA	**Alice Springs**	41.80	263	*e*P	P	05 25 46.2	+0.3
WB2	**Warramunga Arr**	42.38	269	⇓*i*P	P	05 25 50.2	-0.3
WB2				*e*S	S	05 31 38.2	-0.1
WRAB	**Tennant Creek**	42.38	269	*e*P	P	05 25 50.1	-0.4
	9.2nm,0.4s,mb4.6						
WRA	**Warramunga Arr**	42.39	269	P	P	05 25 50.3	-0.3
	6.1nm,0.4s,mb4.4,baz=103,slow=7.6,SNR=98						
KAKA	**Kakadu**	46.65	277	⇓*i*P	P	05 26 40.6	+17
	17nm,0.3s,mb5.0						
FITZ	**Fitzroy Crossi**	50.78	267	*e*P	P	05 26 54.7	-0.3
	12nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	50.78	267	P	P	05 26 54.3	-0.7
	14nm,0.7s,mb4.4,baz=187,slow=5.6,SNR=15						
KLBR	**Kellerberrin**	54.21	249	*e*P	P	05 27 18.6	-1.0
	58nm,1.7s,mb4.6						
MBWA	**Marble Bar**	55.09	262	*e*P	P	05 27 24.8	-1.2
	4.2nm,0.8s,mb3.8						
CASY	**Casey**	58.08	207	*e*P	P	05 27 45.0	-0.9
	3.0nm,0.6s,mb3.8						
QSPA	**South Pole Qui**	63.88	180	*e*P	P	05 28 24.3	+0.4
MAW	**Mawson**	75.62	201	P	P	05 29 34.7	+0.8
	1.9nm,0.5s,mb3.9,baz=141,slow=9.3,SNR=9.2						
VNA3	**Neumayer Olymp**	82.57	177	*e*	P	05 30 18.0	+7.5
VNA3	**Neumayer Olymp**	82.57	177	P	P	05 30 11.0	+0.5
VNA3				*e*		05 30 18.0	
VNA2	**Neumayer--Watz**	82.98	178	*e*	P	05 30 21.3	+8.7
VNA2	**Neumayer--Watz**	82.98	178	P	P	05 30 13.3	+0.7
VNA2				*e*		05 30 21.3	
NVAR	**Mina Array Bea**	86.35	44	P	P	05 30 29.8	0.0
	0.6nm,0.7s,mb3.3,baz=212,slow=6.4,SNR=5.3						
PLCA	**Paso Flores**	86.59	134	P	P	05 30 31.6	+0.7
	1.1nm,0.7s,mb3.7,baz=153,slow=3.9,SNR=3.7						
TXAR	**Lajitas Array**	91.58	58	P	P	05 30 53.8	-0.6
	0.2nm,0.6s,mb3.2,baz=212,slow=5.8,SNR=4.1						
BVAR	**Borovoye Array**	122.22	318	PKP	PKPdf	05 36 38.1	+0.3
	0.8nm,0.5s,baz=150,slow=0.7,SNR=4.8						
FINES	**FINESS Array B**	140.66	341	PKhKP		05 37 05.4	
	1.1nm,0.7s,baz=45,slow=2.7,SNR=7.2						
NB2	**NORSAR Subarra**	144.37	351	PKPabc	PKPdf	05 37 18.4	-0.1
	2.4nm,0.7s,baz=14,slow=4.1						
NOA	**NORSAR Array B**	144.37	351	PKP	PKPdf	05 37 18.1	-0.4
	3.5nm,0.7s,baz=19,slow=2.6,SNR=9.7						
AKASG	**Malin Array Be**	146.94	325	PKPbc	PKPbc	05 37 25.3	0.0
	1.4nm,0.5s,baz=45,slow=4.1,SNR=5.1						
AKASG	**Malin Array Be**	146.94	325	PKPbc	PKPbc	05 37 25.3	0.0
BRTR	**Keskin Array B**	149.00	304	PKPbc	PKPdf	05 37 32.6	+5.9
	0.8nm,0.5s,baz=161,slow=3.4,SNR=3.5						

*MDD **08** 05:24:08.2±0.4, 35.81N×3.39W, mbLg1.6/6, Error ellipse: s-maj=6.0km s-min=3.2km az=79.0, PRXIMO*

*CSEM **08** 05:24:08.1±0.2, 35.71N×3.60W, h56^{km}±4^{km}, MD3.0, Error ellipse: s-maj=4.2km s-min=3.4km az=86.0*

*CNRM **08** 05:24:09.2, 35.79N×3.36W, h15^{km}, MD3.0*

ISC 08 05:24:07.6±0.5**, 35.80N**±0.02×**3.48W**±0.05**, h10^{km}, n19, σ1^{s}28**/35**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMEL	**Melilla**	0.66	140	P	Pb	05 24 19.3	-1.4
	514nm,0.1s,SNR=56						
EMEL				S	Sb	05 24 27.9	-1.7
	1µm,0.2s,SNR=19						
MPAL	**Palemas**	0.69	214	*i* P	Pb	05 24 22.5	+1.3
MPAL				*i* S	Sb	05 24 32.5	+2.0
TOU	**Touzarine**	0.87	195	*e*P	Pb	05 24 24.5	+0.2
TOU				*e*S	Sb	05 24 36.5	+0.8
ERON	**Agron**	1.24	348	P	Pb	05 24 30.6	-0.1
	0.3nm,0.1s,SNR=7.9						
ERON				S	Sb	05 24 48.3	+1.7
	6.7nm,0.3s,SNR=5.8						
EMIJ	**Mijas**	1.29	306	P	Pb	05 24 30.3	-1.2
	1.1nm,0.1s,SNR=7.9						
EMIJ				S	Sb	05 24 47.6	-0.5
	8.4nm,0.2s,SNR=7.3						
EMIJ	**Mijas**	1.29	306	P	Pb	05 24 30.3	-1.3
	1.1nm,0.1s,SNR=7.9						
EMIJ				S	Sb	05 24 47.5	-0.6
	8.4nm,0.2s,SNR=7.3						
EQUE	**Quentar**	1.40	1	P	Pn	05 24 33.1	-0.2
	0.4nm,0.1s,SNR=7.3						
EQUE				S	Sb	05 24 52.5	+1.3
	2.6nm,0.2s,SNR=4.9						
ELOJ	**Sierra Loja**	1.45	338	P	Pn	05 24 35.0	+1.0
	0.5nm,0.1s,SNR=7.9						
ELOJ				S	Sb	05 24 54.8	+2.2
	1.4nm,0.2s,SNR=6.0						
ELUQ	**Luque**	1.87	340	P	Pn	05 24 39.9	0.0
	1.1nm,0.2s,SNR=7.9						
ELUQ				S	Sn	05 25 03.2	-0.6
	2.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	2.02	9	P	Pn	05 24 43.1	+0.9
	1.0nm,0.1s,SNR=15						
EQES				S	Sn	05 25 08.7	+0.9
	3.5nm,0.2s,SNR=9.9						
EQES	**Quesada**	2.02	9	P	Pn	05 24 43.1	+0.9
	1.0nm,0.1s,SNR=15						
EQES				S	Sn	05 25 08.7	+1.0
	3.5nm,0.2s,SNR=9.9						
EADA	**Adamuz**	2.52	340	P	Pn	05 24 49.7	+0.4
	0.1nm,0.1s,SNR=6.0						
EADA				S	Sn	05 25 18.3	-2.1
	0.5nm,0.1s,SNR=7.9						
EADA	**Adamuz**	2.52	340	P	Pn	05 24 49.7	+0.4
	0.1nm,0.1s,SNR=6.0						
EADA				S	Sn	05 25 18.3	-2.1
	0.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	3.23	308	P	Pn	05 24 57.8	-1.6
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	05 25 36.3	-2.1
	0.1nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	3.23	308	P	Pn	05 24 57.1	-2.3
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	05 25 35.6	-2.7
	0.1nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	3.23	28	P	Pn	05 24 59.8	+0.4
	0.3nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	3.23	28	P	Pn	05 24 59.8	+0.4
	0.3nm,0.1s,SNR=7.9						
ETOB				S	Sn	05 25 37.9	-0.4
	0.8nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	4.08	317	S	Sn	05 25 57.2	-2.7
	0.7nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	4.08	317	S	Sn	05 25 57.2	-2.7
	0.7nm,0.2s,SNR=7.9						

NNC 08 05:34:26.9±0.7**, 36.86N×70.97E, h140^{km}**±13^{km}**, mpv3.5, 2C-1D, Error ellipse: s-maj=8.3km s-min=2.7km az=16.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	6.25	357	P	P	05 35 56.7	-1.1
	2.0nm,0.3s,baz=177,slow=12,SNR=72						
KK31				⇑S	S	05 37 07.5	-0.8
	0.5nm,0.4s,baz=183,slow=22,SNR=4.9						
AAK	**Ala-Archa**	6.37	24	⇓P	P	05 35 58.6	-0.9
	1.4nm,0.3s						
AB31	**Akbulak array**	14.76	331	⇑P	P	05 37 48.6	-1.0
	0.3nm,0.5s,baz=161,slow=11,SNR=10.0						

*NEIC **08** 05:35:41.1, 32.82S×69.01W, h6^{km}, ML2.6(GUC), After GUC.*

GUC 08 05:35:41.1±0.8**, 32.82S×69.01W, h6^{km}**±13^{km}**, MD3.5, ML2.6, 2C-4D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MDZ	**Mendoza**	0.15	115	⇓*i*P	Pg	05 35 45.6	+1.3
MDZ				*i*		05 35 47.0	
MDZ				*i* S	Sg	05 35 48.9	+2.4
FCH	**Farellones**	1.19	244	⇓*i*P	Pb	05 36 03.4	-0.2
FCH				*i* S	Sb	05 36 20.2	+1.2
FCH				AMP		05 36 22.0	
	comp=N,75nm,0.1s						
ZON	**Zonda**	1.30	13	*e*P	Pb	05 36 08.2	+2.6
ZON				*e*S	Sb	05 36 28.4	+6.0
JACH	**Jahuel**	1.34	275	⇓*i*P	Pb	05 36 06.2	0.0

JACH				*i* S	Sb	05 36 24.3	+0.9
RCDM	**Rinconada Maip**	**1.65**	**246**	⇑*i*P	Pn	05 36 11.8	+1.1
RCDM				*i* S	Sb	05 36 34.7	+2.3
RCDM				AMP		05 36 35.5	
	comp=E,49nm,0.2s						
TACH	**Talagante**	**1.81**	**242**	⇓*i*P	Pn	05 36 14.2	+1.1
TACH				*i* S	Sn	05 36 38.9	+2.3
LCCH	**Las Cruces**	**2.24**	**252**	*e*P	Pn	05 36 20.9	+1.7
LCCH				*i* S	Sn	05 36 51.9	+4.3
CMCH	**Combarbala**	**2.36**	**314**	⇑*i*P	Pn	05 36 22.9	+2.0
CMCH				*i* S	Sn	05 36 55.5	+5.1
CMCH				AMP		05 36 57.5	
	comp=E,431nm,0.6s						

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*IDC **08** 05:48:36.2±1.1,22.67N×120.70E,mb3.9/9,mb1 4.2/10, mb1mx4.0/20,mbtmp4.0/10,ML3.6/1,Error ellipse: s-maj=30.3km s-min=23.5km az=63.0*

*JMA **08** 05:48:40.9±0.4,22.58N×120.81E,h113^{km}*

*NEIC **08** 05:48:42.7±2.5,22.72N×120.93E,h45^{km}±24^{km},mb4.1/3, Error ellipse: s-maj=32.2km s-min=13.7km az=60.0*

NEIC Recorded [4 TAP] in P'ing-tung; [2 TAP] in Kao-hsiung, T'ai-nan and T'ai-tung; [1 TAP] in Yun-lin Counties.

*BJI **08** 05:48:50.3,23.30N×119.94E,h45^{km},mB4.3,mb4.4, ML3.9,Ms4.2,Msz3.9*

ISC 08 05:48:39.7±1.1**,22.65N**±0.07×**120.67E**±0.05**,h35**^{km}±10^{km}**, n27,**σ**0**^{s}**97**/36**,mb3.9**/11**,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**1.74**	**29**	*e*Pn	**P**	**05 49 07.6**	**-0.4**
NACB				*e*Sn	**S**	**05 49 26.8**	**-2.3**
YHNB	**Yeheng**	**2.11**	**18**	*e*Pn	**P**	**05 49 13.1**	**-0.2**
YHNB				*e*Sn	**S**	**05 49 38.7**	**+0.1**
TATO	**Taipei**	**2.43**	**18**	*e*Pn	**P**	**05 49 19.9**	**+2.0**
YOJ	**Yonaguni jima**	**2.80**	**50**	P	**P**	**05 49 24.4**	**+1.2**
YOJ				S	**S**	**05 49 57.1**	**+0.9**
QZH	**Quanzhou**	**2.97**	**321**	P	**P**	**05 49 23.2**	**-2.3**
QZH				S	**S**	**05 49 54.6**	**-5.7**
QZH				Smax			
	comp=N,380nm,0.7s						
QZH				Smax			
	comp=E,390nm,0.6s						
HATJ	**Hateruma jima**	**3.20**	**64**	P	**P**	**05 49 29.1**	**+0.2**
HATJ				S	**S**	**05 50 06.5**	**+0.2**
IRIF	**Iriomote-Funau**	**3.27**	**59**	P	**P**	**05 49 30.7**	**+0.8**
IRIF				S	**S**	**05 50 08.7**	**+0.6**
JKRS	**Kuro-shima**	**3.45**	**62**	P	**P**	**05 49 32.8**	**+0.4**
JKRS				*e*S	**S**	**05 50 12.6**	**0.0**
JIJ	**Ishigaki jima**	**3.62**	**61**	P	**P**	**05 49 34.3**	**-0.4**
JIJ				S	**S**	**05 50 16.2**	**-0.6**
JTJ	**Tarama**	**4.20**	**61**	P	**P**	**05 49 42.9**	**-0.1**
JTJ				S	**S**	**05 50 30.6**	**-0.9**
JOGS	**Gusukube**	**4.82**	**63**	P	**P**	**05 49 51.3**	**-0.6**
JOW	**Kunigami**	**8.07**	**57**	Pn	**P**	**05 50 34.0**	**-3.3**
	comp=E,2.0nm,0.3s,baz=186,slow=9.2,SNR=3.2						
NJ2	**Nanjing**	**9.50**	**351**	*e*P	**P**	**05 50 58.8**	**+1.7**
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
NJ2				Smax			
	comp=N,170nm,1.0s						
NJ2				Smax			
	comp=E,130nm,1.1s						
NJ2				LR	LR		
	comp=N,1μm,11.6s						
NJ2				LR	LR		
	comp=E,1μm,14.6s						
NJ2				LR	LR		
	comp=Z,470nm,11.4s						
QIZ	**Qiongzhong**	**10.74**	**252**	P	**P**	**05 51 20.7**	**+6.4**
QIZ				LR	LR		
	comp=E,650nm,14.5s						
QIZ				LR	LR		
	comp=Z,790nm,15.2s						
GYA	**Guiyang**	**13.29**	**289**	P	**P**	**05 51 47.8**	**-0.7**
GYA				LR	LR		
	comp=N,770nm,12.0s						
GYA				LR	LR		
	comp=E,760nm,13.8s						
GYA				LR	LR		
	comp=Z,840nm,14.1s						
MJAR	**Matsushiro Arr**	**20.55**	**44**	P	**P**	**05 53 17.9**	**0.0**
	comp=Z,5.0nm,0.7s,baz=232,slow=8.1,SNR=9.1						
SONM	**Songino Array**	**27.60**	**339**	P	**P**	**05 54 26.4**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.2,baz=156,slow=9.9,SNR=3.7						
MKAR	**Makanchi Array**	**39.12**	**317**	P	**P**	**05 56 05.6**	**+0.2**
	comp=Z,0.6nm,0.7s,mb3.4,baz=114,slow=9.6,SNR=7.2						
WRAB	**Tennant Creek**	**44.38**	**161**	*e*P	**P**	**05 56 48.9**	**0.0**
	comp=Z,2.7nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**44.39**	**161**	P	**P**	**05 56 49.0**	**0.0**
	comp=Z,1.8nm,0.7s,mb3.9,baz=344,slow=8.7,SNR=15						
CHKZ	**Chkalovo**	**48.65**	**323**	*e*P	**P**	**05 57 23.6**	**+1.5**
	comp=Z,2.4nm,0.7s,mb4.3						
ARCES	**ARCESS Array B**	**70.78**	**338**	P	**P**	**05 59 55.3**	**+1.3**
	comp=Z,3.9nm,0.8s,mb4.4,baz=60,slow=9.8,SNR=3.6						
ILAR	**Eielson Array**	**70.79**	**27**	P	**P**	**05 59 53.0**	**-1.1**
	comp=Z,0.2nm,0.4s,mb3.4,baz=290,slow=5.3,SNR=4.8						
FINES	**FINESS Array B**	**72.52**	**330**	P	**P**	**06 00 04.4**	**-0.1**
	comp=Z,4.0nm,1.0s,mb4.3,baz=79,slow=7.1,SNR=3.3						
INK	**Inuvik**	**74.82**	**22**	*e*P	**P**	**06 00 16.9**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.0						
NOA	**NORSAR Array B**	**79.35**	**332**	P	**P**	**06 00 42.1**	**-1.2**
	comp=Z,1.2nm,0.8s,mb3.9,baz=56,slow=7.9,SNR=3.6						
YKA	**Yellowknife Ar**	**84.56**	**23**	P	**P**	**06 01 10.3**	**+0.1**
	comp=Z,1.1nm,0.5s,mb4.2,baz=313,slow=4.8,SNR=6.1						

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*NIED **08** 05:49:00,22.90N×120.70E,h14^{km},Mw4.3 Best double couple: M$_0$2.85$\times10^{15}$ NP1:ϕ_s174°,δ57°,λ73°. NP2:ϕ_s24°, δ37°,λ114°.*

*IDC **08** 05:49:21.2±1.1,22.67N×120.66E,mb3.9/9,mb1 4.2/10, mb1mx4.0/21,mbtmp4.0/10,ML3.7/1,MS2.9/1,Ms1 2.9/1, ms1mx2.3/25,Error ellipse: s-maj=29.7km s-min=23.4km az=50.0*

*JMA **08** 05:49:24.4±0.6,22.89N×120.72E,M4.6*

*BJI **08** 05:49:26.7,22.77N×120.76E,h43^{km},mB4.4,mb4.4, ML4.6,Ms4.1,Msz4.0*

*NEIC **08** 05:49:28.6±1.8,22.71N×120.82E,h59^{km}±15^{km},mb4.2/4, Error ellipse: s-maj=20.2km s-min=12.2km az=223.0*

NEIC Recorded [4 TAP] in P'ing-tung; [2 TAP] in Chia-i, Kao-hsiung, T'ai-nan and T'ai-tung Counties.

ISC 08 05:49:26.4±1.4**,22.64N**±0.08×**120.72E**±0.06**,h54**^{km}±12^{km}**, n27,**σ**0**^{s}**91**/34**,mb3.9**/11**,MS3.9**/1**,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	**1.72**	**28**	*e*Pn	**P**	**05 49 54.7**	**+0.1**
NACB				*e*Sn	**S**	**05 50 14.8**	**-0.7**
YHNB	**Yeheng**	**2.11**	**16**	*e*Pn	**P**	**05 50 00.3**	**+0.4**
YHNB				*e*Sn	**S**	**05 50 24.1**	**-0.9**
TATO	**Taipei**	**2.43**	**17**	P	**P**	**05 50 05.5**	**+1.0**
TATO				*e*S	**S**	**05 50 34.5**	**+1.4**
YOJ	**Yonaguni jima**	**2.77**	**49**	P	**P**	**05 50 08.9**	**-0.6**
YOJ				S	**S**	**05 50 42.4**	**+0.5**
HATJ	**Hateruma jima**	**3.17**	**63**	P	**P**	**05 50 15.1**	**+0.1**
HATJ				*e*S	**S**	**05 50 51.9**	**+0.1**
IRIF	**Iriomote-Funau**	**3.24**	**58**	P	**P**	**05 50 16.2**	**+0.2**
IRIF				*e*S	**S**	**05 50 54.3**	**+0.7**
JKRS	**Kuro-shima**	**3.41**	**62**	P	**P**	**05 50 19.6**	**+1.1**
JKRS				*e*S	**S**	**05 50 58.9**	**+0.9**
JIJ	**Ishigaki jima**	**3.58**	**61**	P	**P**	**05 50 20.7**	**-0.1**
JIJ				*e*S	**S**	**05 51 00.6**	**-1.6**
JTJ	**Tarama**	**4.16**	**61**	*e*S	**S**	**05 51 17.0**	**+0.2**
JKE	**Kume jima 2**	**6.63**	**55**	P	**P**	**05 51 01.3**	**-2.3**
JOW	**Kunigami**	**8.03**	**57**	Pn	**P**	**05 51 20.4**	**-2.6**
	2.2nm,0.3s,baz=119,slow=26,SNR=4.2						
HHC	**Hu-ho-hao-te**	**19.73**	**339**	*e*P	**P**	**05 53 53.4**	**-0.8**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s						
CBIJ	**Chichi jima**	**19.97**	**73**	LR	LR	06 00 21.7	
	comp=Z,40nm,20.9s,baz=190,slow=33						
MAJO	**Matsushiro**	**20.52**	**44**	P	**P**	**05 54 04.7**	**+2.1**
	comp=Z,5.5nm,0.5s						
MJAR	**Matsushiro Arr**	**20.52**	**44**	P	**P**	**05 54 01.7**	**-0.9**
	comp=Z,9.1nm,0.7s,baz=233,slow=7.8,SNR=12						
GTA	**Gaotai**	**24.41**	**318**	*e*P	**P**	**05 54 42.0**	**+1.0**
GTA				AMB	AMB		
	comp=Z,110nm,6.9s						
GTA				LR	LR		
	comp=N,210nm,17.6s,MS3.9						
GTA				LR	LR		
	comp=E,280nm,16.0s,MS3.9						
GTA				LR	LR		
	comp=Z,350nm,16.8s,MS3.9						
SONM	**Songino Array**	**27.63**	**339**	P	**P**	**05 55 10.3**	**-0.6**
	comp=Z,1.1nm,0.7s,mb3.6,baz=150,slow=9.8,SNR=6.4						
MKAR	**Makanchi Array**	**39.16**	**317**	P	**P**	**05 56 50.6**	**+0.1**
	comp=Z,0.8nm,0.7s,mb3.6,baz=118,slow=10.0,SNR=5.7						
ZAL	**Zalesovo**	**41.32**	**328**	P	**P**	**05 57 07.3**	**-0.8**
	comp=Z,0.9nm,0.5s,mb3.6,baz=16,slow=10,SNR=0.1						
WRA	**Warramunga Arr**	**44.36**	**162**	P	**P**	**05 57 33.9**	**+0.4**
	comp=Z,1.9nm,1.0s,mb3.8,baz=341,slow=8.4,SNR=7.6						
BVAR	**Borovoye Array**	**48.60**	**322**	P	**P**	**05 58 06.5**	**+0.1**
	comp=Z,1.0nm,0.6s,mb4.0,baz=76,slow=12,SNR=5.1						
BRVK	**Borovoye**	**48.68**	**322**	*e*P	**P**	**05 58 06.6**	**-0.3**
	comp=Z,1.1nm,0.6s,mb4.1						
CHKZ	**Chkalovo**	**48.69**	**323**	*e*P	**P**	**05 58 07.2**	**+0.2**
	comp=Z,2.6nm,0.8s,mb4.3						
ILAR	**Eielson Array**	**70.77**	**27**	P	**P**	**06 00 39.1**	**+0.6**
	comp=Z,0.8nm,0.7s,mb3.8,baz=294,slow=7.3,SNR=7.0						
INK	**Inuvik**	**74.81**	**22**	*e*P	**P**	**06 01 01.4**	**-0.9**
	comp=Z,4.2nm,0.8s,mb4.4						
NOA	**NORSAR Array B**	**79.39**	**332**	P	**P**	**06 01 27.9**	**0.0**
	comp=Z,0.9nm,0.8s,mb3.8,baz=60,slow=5.6,SNR=3.4						
YKA	**Yellowknife Ar**	**84.55**	**23**	P	**P**	**06 01 55.4**	**+0.9**
	comp=Z,1.3nm,0.6s,mb4.3,baz=312,slow=5.2,SNR=5.9						

WEL 08 06:12:59.9±0.4**,35.66S**×**177.81E,h33**^{km}**,ML3.6**/3**,Error ellipse: s-maj=5.0km s-min=2.7km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.95**	**168**	P*	Pb	06 13 30.6	-4.0
MXZ				S*	Sb	06 13 53.5	-5.2
URZ	**Urewera**	**2.66**	**192**	P*	Pb	06 13 40.7	-6.1
URZ				S*	Sb	06 14 11.9	-7.4
MWZ	**Matawai**	**2.69**	**185**	P*	Pb	06 13 40.9	-6.3
MWZ				S*	Sb	06 14 11.6	-8.4

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*ISK **08** 06:13:17.0,38.32N×26.60E,h28^{km},MD2.9*

*ATH **08** 06:13:17.3,38.24N×26.98E,h32^{km},MD2.9/3*

*CSEM **08** 06:13:19.2±0.2,38.24N×26.82E,h26^{km}±2^{km},MD2.9, Error ellipse: s-maj=7.1km s-min=4.2km az=91.0*

ISC 08 06:13:17.2±1.1**,38.20N**±0.04×**26.57E**±0.05**,h3**^{km}±7^{km}**, n13,**σ**1**^{s}**14**/23**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.16**	**9**	*i* P	**Pg**	**06 13 20.6**	**+0.1**
URLA				*i* S	**Sg**	**06 13 23.4**	**+0.7**
BLCB	**Balcova**	**0.42**	**63**	*i* PG	**Pg**	**06 13 25.5**	**-0.1**
BLCB				*i* SG	**Sg**	**06 13 31.4**	**+0.2**
SMG	**Samos**	**0.53**	**156**	*e*PN	**Pn**	**06 13 28.9**	**-2.4**
SMG				*e*SN	**Sn**	**06 13 37.4**	**-3.5**
IZM	**Izmir**	**0.58**	**70**	*i* PG	**Pg**	**06 13 28.5**	**-0.3**
IZM				*i* SG	**Sg**	**06 13 37.2**	**+0.6**
KDAG	**Bornova**	**0.59**	**69**	*i* P	**Pg**	**06 13 28.1**	**-0.8**
KDAG				*i* S	**Sg**	**06 13 36.1**	**-0.7**
PRK	**Paraskevi**	**1.07**	**348**	*e*PN	**Pn**	**06 13 38.8**	**-0.2**
PRK				*e*SN	**Sn**	**06 13 54.4**	**-0.1**
AYVA	**Ayvalik**	**1.11**	**5**	*i* P	**Pb**	**06 13 37.9**	**-0.9**
AYVA				*i* S	**Sb**	**06 13 57.5**	**+4.0**
AYDN	**Tasoluk**	**1.17**	**117**	*i* P	**Pb**	**06 13 40.1**	**+0.5**
AYDN				*i* S	**Sb**	**06 13 55.8**	**+0.7**
BODT	**Bodrum**	**1.28**	**152**	*e*PN	**Pn**	**06 13 40.9**	**-1.0**
BDRM	**Kayabasi**	**1.33**	**148**	*i* P	**Pb**	**06 13 43.3**	**+0.9**
BDRM				*i* S	**Sb**	**06 14 01.2**	**+1.5**
APE	**Apeiranthos**	**1.40**	**216**	*e*PN	**Pn**	**06 13 46.0**	**+2.4**
MANT	**Manisa**	**1.59**	**79**	*i* P	**Pn**	**06 13 49.0**	**+2.6**
MANT				*i* S	**Sb**	**06 14 07.1**	**-0.3**
YER	**Yerkesik**	**1.73**	**127**	*e*PN	**Pn**	**06 13 46.8**	**-1.6**

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*NSSP **08** 06:26:54.3,40.98N×44.93E,h10^{km},ML3.8*

*TIF **08** 06:27:01.0,40.87N×48.14E,h17^{km}±3^{km}*

*CSEM **08** 06:27:03.1±0.1,40.79N×47.64E,h2^{km},mb4.1,Error ellipse: s-maj=3.8km s-min=2.7km az=172.0*

*IDC **08** 06:27:07.1±4.0,40.84N×47.48E,h25^{km}±31^{km},mb4.0/4, mb1 4.0/8,mb1mx3.7/21,mbtmp4.0/8,ML3.7/3,MS3.4/5, Ms1 3.4/5,ms1mx3.0/33,Error ellipse: s-maj=32.5km s-min=13.6km az=152.0*

*MOS **08** 06:27:08.9±1.8,41.16N×47.47E,h43^{km},mb4.1/6,Error ellipse: s-maj=10.8km s-min=8.6km az=81.0*

*NEIC **08** 06:27:11.8±1.5,40.62N×47.53E,h84^{km}±20^{km},mb4.1/5, Error ellipse: s-maj=24.4km s-min=14.0km az=169.0*

*NNC **08** 06:27:14.7±4.0,41.37N×48.31E,h14^{km}±48^{km},Error ellipse: s-maj=51.8km s-min=18.1km az=85.0*

ISC 08 06:27:07.8±0.5**,41.07N**±0.06×**47.62E**±0.04**,h33**^{km}**,n70,** σ**1**^{s}**18**/86**,mb3.9**/6**,MS3.5**/4**,10C-6D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKT	**Akhty**	**0.42**	**12**	*i* P	**P**	**06 27 16.5**	**-0.7**
AKT				*e*S	**S**	**06 27 25.0**	**+1.1**
AKT				pmax	pmax		
	comp=Z,253nm,0.2s						
AKT	**Akhty**	**0.42**	**12**	*i* P	**P**	**06 27 16.5**	**-0.7**
	comp=Z,253nm,0.2s						
AKT				*e*S	**S**	**06 27 25.0**	**+1.1**
XNZR	**Khunzakh**	**1.62**	**335**	⇓*i*P	**P**	**06 27 38.7**	**+4.2**
XNZR				*e*S	**S**	**06 28 01.7**	**+7.3**
XNZR				pmax	pmax		
	comp=Z,385nm,0.7s						
XNZR	**Khunzakh**	**1.62**	**335**	*i* P	**P**	**06 27 38.7**	**+4.2**
	comp=Z,385nm,0.7s						
XNZR				*e*S	**S**	**06 28 01.7**	**+7.3**
DGRG	**David-gareji**	**1.73**	**283**	P	**P**	**06 27 35.3**	**-0.8**
UNCR	**Uncukul**	**1.76**	**340**	⇑*i*P	**P**	**06 27 37.7**	**+1.3**
UNCR				*e*S	**S**	**06 28 04.7**	**+6.9**
UNCR				pmax	pmax		
	comp=Z,200nm,0.4s						
UNCR	**Uncukul**	**1.76**	**340**	*i* P	**P**	**06 27 37.7**	**+1.3**
	comp=Z,200nm,0.4s						
UNCR				*e*S	**S**	**06 28 04.7**	**+6.9**
MAK	**Makhachkala**	**1.89**	**358**	*e*P	**P**	**06 27 44.0**	**+5.7**
MAK				pmax	pmax		
	comp=Z,363nm,1.0s						
MAK	**Makhachkala**	**1.89**	**358**	*e*P	**P**	**06 27 44.0**	**+5.7**
	comp=Z,363nm,1.0s						
MTA	**Mtatsminda**	**2.22**	**287**	P	**P**	**06 27 42.6**	**-0.4**
MTA				S	**S**	**06 28 09.6**	**+0.2**
TI2	**Plekhanov**	**2.26**	**288**	*e*P	**P**	**06 27 43.0**	**-0.5**
TI2				*i* S	**S**	**06 28 12.0**	**+1.5**
TI2				pmax	pmax		
	comp=Z,1μm,0.5s						
TI2				smax			
	comp=E,2μm,0.6s						
TI2	**Plekhanov**	**2.26**	**288**	*e*P	**P**	**06 27 43.0**	**-0.5**
	comp=E,1μm,0.5s						
TI2				*i* S	**S**	**06 28 12.0**	**+1.5**
GNI	**Garni**	**2.37**	**248**	Pn	**Pn**	**06 27 45.2**	**-0.2**
	comp=E,25nm,0.3s,baz=32,slow=2.4,SNR=42						
GNI				Lg		06 28 16.3	
	comp=E,241nm,0.3s,baz=13,slow=10,SNR=22						
GNI	**Garni**	**2.37**	**248**	Pn	**Pn**	**06 27 45.2**	**-0.2**
GNI				Lg		06 28 16.3	
GNI	**Garni**	**2.37**	**248**	*e*P	**P**	**06 27 44.6**	**-0.6**
GNI	**Garni**	**2.37**	**248**	Pn	**Pn**	**06 27 45.2**	**-0.2**
AKH	**Akhalkalaki**	**3.13**	**278**	P	**P**	**06 27 56.7**	**+0.8**
AKH				S	**S**	**06 28 37.3**	**+4.7**
ZEI	**Tsey**	**3.25**	**303**	*i* P	**P**	**06 27 59.2**	**+1.4**
ZEI				*e*		06 28 35.3	
ZEI				pmax	pmax		
	comp=Z,24nm,0.1s						
ZEI				pmax	pmax		
	comp=Z,42nm,0.2s						
ZEI				smax			
	comp=N,327nm,0.4s						
ZEI				smax			
	comp=N,438nm,0.8s						
ZEI	**Tsey**	**3.25**	**303**	*i* P	**P**	**06 27 59.2**	**+1.4**
	comp=N,42nm,0.2s						
ZEI				*e*S	**S**	**06 28 35.3**	**-0.5**
	comp=N,438nm,0.8s						
ONI	**Oni**	**3.46**	**297**	P	**P**	**06 28 00.6**	**-0.1**
ONI				S	**S**	**06 28 42.5**	**+1.5**
KIV	**Kislovodsk**	**4.65**	**310**	*e*Pn	**Pn**	**06 28 24.0**	**+6.3**
KIV	**Kislovodsk**	**4.65**	**310**	*e*P	**P**	**06 28 25.4**	**+7.8**
KIV				pmax	pmax		
	comp=Z,14nm,0.6s						
KIV				pmax	pmax		
	comp=N,9.0nm,0.8s						
KIV				MLR	MLR		
	comp=Z,164nm,15.0s						
KIV	**Kislovodsk**	**4.65**	**310**	*e*Pn	**Pn**	**06 28 24.0**	**+6.3**
KIV	**Kislovodsk**	**4.65**	**310**	*e*P	**P**	**06 28 25.4**	**+7.8**
	comp=Z,164nm,15.0s						
GOF	**Gofitskoye**	**5.21**	**321**	*e*P	**P**	**06 28 21.3**	**-4.2**
GOF				*i* S	**S**	**06 29 23.0**	**-2.3**
GOF				pmax	pmax		
	comp=Z,17nm,0.7s						
GOF				smax			
	comp=N,143nm,1.3s						
GOF	**Gofitskoye**	**5.21**	**321**	*e*P	**P**	**06 28 21.3**	**-4.2**
	comp=N,17nm,0.7s						
GOF				*i* S	**S**	**06 29 23.0**	**-2.3**
	comp=N,143nm,1.3s						
BRTR	**Keskin Array B**	**10.75**	**267**	Pn	**P**	**06 29 42.2**	**-0.3**
	comp=N,0.1nm,0.3s,baz=96,slow=11,SNR=7.6						
AKTK	**Aktyubinsk**	**11.84**	**34**	P	**P**	**06 29 56.4**	**-0.8**
	comp=N,63nm,21.5s						
AKTO	**Aktyubinsk**	**11.84**	**34**	⇑Pn	**P**	**06 29 55.9**	**-1.4**
	comp=N,0.4nm,0.5s						
AKTO				⇓Sn	**S**	**06 32 01.8**	**-7.4**
	comp=N,1.4nm,0.8s						
AKTO	**Aktyubinsk**	**11.84**	**34**	Pn	**P**	**06 29 56.4**	**-0.9**
	comp=N,0.4nm,0.3s,baz=208,slow=13,SNR=8.3						
AKTO				LR	LR	06 35 51.1	
	comp=N,63nm,21.5s,slow=43						
AB31	**Akbulak array**	**11.93**	**43**	⇑Pn	**P**	**06 29 55.9**	**-2.6**
	comp=N,1.5nm,0.5s,baz=235,slow=14						
AB31				⇑Sn	**S**	**06 32 04.6**	**-6.8**
	comp=N,7.9nm,0.8s,baz=226,slow=23						
OBN	**Obninsk**	**15.84**	**336**	⇓*e*P	**P**	**06 30 58.1**	**+8.3**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
OBN	**Obninsk**	**15.84**	**336**	*e*P	**P**	**06 30 58.1**	**+8.3**
	comp=Z,100nm,17.0s						
AKASG	**Malin Array Be**	**15.99**	**313**	Pn	**P**	**06 30 49.2**	**-2.4**
	comp=Z,0.4nm,0.3s,baz=119,slow=12,SNR=5.0						
ARU	**Arti**	**16.95**	**21**	*e*P	**P**	**06 31 09.2**	**+5.5**
	comp=Z,5.4nm,0.4s						
ARU	**Arti**	**16.95**	**21**	⇓*i*P	**P**	**06 31 06.0**	**+2.3**
ARU				*e*S	**S**	**06 34 16.4**	**+6.6**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ARU	**Arti**	**16.95**	**21**	*i* P	**P**	**06 31 06.0**	**+2.3**
	comp=Z,4.0nm,0.7s						
ARU				*e*S	**S**	**06 34 16.4**	**+6.6**
KK31	**Karatay Array**	**17.11**	**76**	⇑P	**P**	**06 31 05.0**	**-0.9**
	comp=Z,4.5nm,0.7s,baz=284,slow=12,SNR=32						
BRVK	**Borovoye**	**19.45**	**44**	*e*P	**P**	**06 31 34.3**	**+0.1**
	comp=Z,3.7nm,0.8s						
BRVK	**Borovoye**	**19.45**	**44**	*e*P	**P**	**06 31 34.3**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRVK	**Borovoye**	**19.45**	**44**	*e*P	**P**	**06 31 34.3**	**+0.1**
	comp=Z,3.7nm,0.8s						
BVA0	**Borovoye Array**	**19.49**	**44**	⇓P	**P**	**06 31 34.7**	**0.0**
	comp=Z,0.6nm,0.7s,baz=232,slow=37,SNR=11						
BVAR	**Borovoye Array**	**19.49**	**44**	P	**P**	**06 31 34.0**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=229,slow=14,SNR=7.9						
VOSK	**Vostochnaya**	**19.67**	**46**	⇓P	**P**	**06 31 36.0**	**-0.6**
	comp=Z,3.0nm,0.8s						
CHKZ	**Chkalovo**	**19.93**	**43**	⇑P	**P**	**06 31 40.4**	**+0.9**
	comp=Z,5.8nm,1.0s						
CHKZ	**Chkalovo**	**19.93**	**43**	*e*P	**P**	**06 31 41.3**	**+1.9**
	comp=Z,5.4nm,0.8s						
CHKZ	**Chkalovo**	**19.93**	**43**	*e*P	**P**	**06 31 41.1**	**+1.7**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHKZ	**Chkalovo**	**19.93**	**43**	*e*P	**P**	**06 31 41.3**	**+1.9**
	comp=Z,5.4nm,0.8s						
AAK	**Ala-Archa**	**20.06**	**77**	⇑P	**P**	**06 31 41.6**	**+0.7**
	comp=Z,15nm,1.1s						
AAK	**Ala-Archa**	**20.06**	**77**	*e*P	**P**	**06 31 40.7**	**-0.1**
	comp=Z,14nm,0.9s						
AAK	**Ala-Archa**	**20.06**	**77**	*e*P	**P**	**06 31 40.7**	**-0.2**
AAK				pmax	pmax		
	comp=Z,14nm,0.9s						
AAK	**Ala-Archa**	**20.06**	**77**	*e*P	**P**	**06 31 40.7**	**-0.2**
	comp=Z,14nm,0.9s						
FRU	**Bishkek**	**20.13**	**76**	*e*P	**P**	**06 31 43.0**	**+1.4**
FRU				*e*		06 31 54.0	
KLMR	**Klimovskoe**	**20.43**	**349**	*e*P	**P**	**06 31 41.7**	**-2.9**
KLMR				pmax	pmax		
	comp=Z,20nm,2.2s						
KURK	**Kurchatov**	**23.48**	**55**	⇑P	**P**	**06 32 17.8**	**+2.7**
	comp=Z,4.3nm,0.8s,mb3.9						
KURK	**Kurchatov**	**23.48**	**55**	*e*P	**P**	**06 32 17.3**	**+2.2**
	comp=Z,7.8nm,0.8s,mb4.2						
KURK	**Kurchatov**	**23.48**	**55**	⇑*e*P	**P**	**06 32 16.6**	**+1.5**
KURK	**Kurchatov**	**23.48**	**55**	*e*P	**P**	**06 32 17.3**	**+2.2**
FINES	**FINESS Array B**	**24.23**	**335**	P	**P**	**06 32 21.2**	**-1.0**
	comp=Z,2.5nm,0.8s,mb3.7,baz=140,slow=12,SNR=5.6						
FINES	**FINESS Array B**	**24.23**	**335**	P	**P**	**06 32 21.3**	**-1.0**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**24.23**	**335**	P	**P**	**06 32 21.2**	**-1.1**
GERES	**GERESS Array B**	**25.07**	**300**	P	**P**	**06 32 30.5**	**0.0**
	comp=Z,1.1nm,0.6s,mb3.6,baz=107,slow=10,SNR=3.6						
GERES	**GERESS Array B**	**25.07**	**300**	P	**P**	**06 32 30.5**	**0.0**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**25.48**	**65**	⇑P	**P**	**06 32 35.7**	**+1.3**
	comp=Z,2.9nm,0.7s,mb4.0,baz=271,slow=7.0,SNR=16						
MKAR	**Makanchi Array**	**25.48**	**65**	P	**P**	**06 32 35.1**	**+0.8**
	comp=Z,2.0nm,0.6s,mb3.9,baz=274,slow=6.9,SNR=14						
MKAR				LR	LR	06 43 06.2	
	comp=Z,64nm,19.1s,MS3.2,baz=34,slow=37						
MKAR	**Makanchi Array**	**25.48**	**65**	P	**P**	**06 32 35.2**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,64nm,19.1s						
ZAL	**Zalesovo**	**27.87**	**50**	LR	LR	06 46 22.8	
	comp=Z,123nm,18.9s,MS3.5,baz=268,slow=41						
ARCES	**ARCESS Array B**	**30.80**	**345**	P	**P**	**06 33 21.1**	**-1.1**
	comp=Z,2.5nm,0.9s,mb4.0,baz=146,slow=9.8,SNR=4.4						
ARCES				LR	LR	06 45 56.7	
	comp=Z,64nm,19.9s,MS3.3,baz=311,slow=36						
ARCES	**ARCESS Array B**	**30.80**	**345**	P	**P**	**06 33 21.1**	**-1.1**
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,64nm,19.9s						
MJAR	**Matsushiro Arr**	**67.56**	**61**	LR	LR	07 10 16.8	
	comp=Z,114nm,21.8s,MS4.0,baz=230,slow=38						

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*NIED **08** 06:37:00,25.20N×122.80E,h200^{km},Mw4.3 Best double couple: M$_0$2.91$\times10^{15}$ NP1:ϕ_s83°,δ73°,λ126°. NP2:ϕ_s195°, δ39°,λ27°.*

*MOS **08** 06:37:00.8±0.9,24.77N×122.28E,h33^{km},mb4.6/7,Error ellipse: s-maj=29.4km s-min=13.1km az=124.4*

*IDC **08** 06:37:18.4±2.7,25.20N×122.58E,h177^{km}±26^{km}, mb3.9/17,mb1 4.0/19,mb1mx4.0/26,mbtmp4.4/19,MS3.4/1, Ms1 3.4/1,ms1mx2.5/31,Error ellipse: s-maj=22.3km s-min=10.8km az=66.0*

*BJI **08** 06:37:20.9,25.24N×122.71E,h217^{km},mB4.6,mb4.4*

*NEIC **08** 06:37:21.2±0.5,25.18N×122.64E,h205^{km}±4^{km},mb4.2/12, Error ellipse: s-maj=9.9km s-min=6.8km az=74.0*

*JMA **08** 06:37:22.8±0.2,25.24N×122.83E,h182^{km}±4^{km},M4.4*

ISC 08 06:37:19.3±0.2**,25.22N**±0.04×**122.80E**±0.03**,h203**^{km}±2^{km}**, n76,**σ**1**^{s}**02**/96**,mb4.0**/32**,2C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.78**	**166**	P	**P**	**06 37 49.4**	**+1.0**
YOJ				*e*S	**S**	**06 38 10.9**	**+0.1**
TATO	**Taipei**	**1.21**	**259**	*e*Pn	**P**	**06 37 51.6**	**+0.3**
TATO				*e*Sn	**S**	**06 38 15.5**	**-0.5**
IRIF	**Iriomote-Funau**	**1.23**	**136**	P	**P**	**06 37 52.3**	**+0.9**
IRIF				S	**S**	**06 38 14.9**	**-1.2**
YHNB	**Yeheng**	**1.40**	**247**	*e*Pn	**P**	**06 37 53.5**	**+0.6**
YHNB				*e*Sn	**S**	**06 38 16.9**	**-1.8**
JKRS	**Kuro-shima**	**1.48**	**131**	P	**P**	**06 37 55.1**	**+1.6**
JKRS				S	**S**	**06 38 19.5**	**-0.4**
HATJ	**Hateruma jima**	**1.48**	**141**	P	**P**	**06 37 55.1**	**+1.6**
HATJ				S	**S**	**06 38 19.6**	**-0.3**
JIJ	**Ishigaki jima**	**1.49**	**125**	P	**P**	**06 37 54.7**	**+1.0**
JIJ				S	**S**	**06 38 18.7**	**-1.4**
NACB	**Ninganchiao**	**1.51**	**227**	*e*Pn	**P**	**06 37 54.0**	**+0.2**

NACB				*e*Sn	**S**	**06 38 19.0**	**-1.4**
JTJ	**Tarama**	**1.82**	**108**	P	**P**	**06 37 58.3**	**+1.6**
JTJ				S	**S**	**06 38 25.4**	**-0.1**
JMJ	**Miyako jima 2**	**2.30**	**100**	P	**P**	**06 38 03.3**	**+1.6**
JMJ				*e*S	**S**	**06 38 34.4**	**0.0**
JOGS	**Gusukube**	**2.41**	**100**	P	**P**	**06 38 04.7**	**+1.8**
JOGS				S	**S**	**06 38 36.6**	**0.0**
JKE	**Kume jima 2**	**3.76**	**72**	P	**P**	**06 38 19.7**	**+0.8**
JKE				*e*S	**S**	**06 39 04.6**	**-0.4**
QZH	**Quanzhou**	**3.82**	**267**	P	**P**	**06 38 20.0**	**+0.4**
QZH				S	**S**	**06 39 00.1**	**-6.2**
QZH				Smax			
	comp=N,400nm,1.0s						
QZH				Smax			
	comp=E,280nm,0.9s						
JAGN	**Aguni-jima**	**4.23**	**70**	P	**P**	**06 38 25.1**	**+0.4**
JAGN				*e*S	**S**	**06 39 12.8**	**-2.6**
JJT2	**Tamagusuku 2**	**4.56**	**77**	P	**P**	**06 38 29.4**	**+0.5**
JJT2				*e*S	**S**	**06 39 22.0**	**-0.8**
JIH	**Iheya**	**4.99**	**68**	P	**P**	**06 38 34.2**	**-0.1**
JIH				*e*S	**S**	**06 39 29.7**	**-2.8**
JOW	**Kunigami**	**5.18**	**71**	P	**P**	**06 38 36.5**	**-0.4**
	comp=E,6.8nm,0.3s,baz=153,slow=11,SNR=9.7						
JOW				S	**S**	**06 39 32.9**	**-4.2**
	comp=E,15nm,0.3s,baz=120,slow=25,SNR=18						
JOW	**Kunigami**	**5.18**	**71**	P	**P**	**06 38 36.3**	**-0.5**
JOW				*e*S	**S**	**06 39 32.5**	**-4.5**
JTK	**Tokunoshima**	**6.08**	**64**	P	**P**	**06 38 47.4**	**-1.0**
JTK				*e*S	**S**	**06 39 51.9**	**-5.7**
JAM	**Amami Oshima**	**6.86**	**61**	P	**P**	**06 38 59.1**	**+0.5**
JMZ	**Minamidaito 2**	**7.63**	**84**	P	**P**	**06 39 08.4**	**-0.2**
JMZ				*e*S	**S**	**06 40 26.7**	**-7.3**
WHN	**Wuhan**	**9.16**	**307**	P	**P**	**06 39 29.5**	**+1.0**
JNU	**Nakatsue**	**10.57**	**40**	P	**P**	**06 39 50.2**	**+3.5**
	comp=E,0.4nm,0.3s,baz=205,slow=14,SNR=4.6						
ENH	**Enshi**	**12.81**	**296**	*e*P	**P**	**06 40 20.3**	**+5.1**
	comp=E,8.5nm,0.8s						
MJAR	**Matsushiro Arr**	**17.36**	**46**	P	**P**	**06 41 10.5**	**0.0**
	comp=E,0.7nm,0.3s,baz=270,slow=8.8,SNR=4.2						
HHC	**Hu-ho-hao-te**	**18.18**	**332**	*e*P	**P**	**06 41 20.6**	**+1.5**
HHC				XP		06 42 19.5	
HHC				S	**S**	**06 44 33.7**	**+1.9**
HHC				PCP	PcP	06 45 44.4	+1.7
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s						
HHC				AMB	AMB		
	comp=Z,100nm,4.8s						
HHC				LR	LR		
	comp=N,200nm,6.6s						
HHC				LR	LR		
	comp=E,240nm,4.8s						
HHC				LR	LR		
	comp=Z,170nm,7.2s						
CN2	**Changchun**	**18.66**	**6**	*e*P	**P**	**06 41 24.7**	**+0.7**
CN2				AMB	AMB		
	comp=Z,40nm,1.0s						
LZH	**Lanzhou**	**19.54**	**308**	*e*P	**P**	**06 41 34.8**	**+1.7**
LZH				AMB	AMB		
	comp=Z,30nm,1.5s						
LZH	**Lanzhou**	**19.54**	**308**	*e*P	**P**	**06 41 34.8**	**+1.7**
	comp=Z,30nm,1.5s						
LZH				pP		06 41 44.3	
LZH				sP		06 41 48.0	
GTA	**Gaotai**	**23.94**	**312**	*e*P	**P**	**06 42 16.3**	**+0.2**
SONM	**Songino Array**	**26.03**	**334**	P	**P**	**06 42 35.3**	**-0.1**
	comp=Z,5.5nm,0.9s,mb4.2,baz=146,slow=9.1,SNR=29						
SONM				LR	LR	06 54 15.7	
	comp=Z,80nm,20.6s,baz=120,slow=39						
MKAR	**Makanchi Array**	**38.64**	**314**	P	**P**	**06 44 24.3**	**-0.2**
	comp=Z,5.3nm,0.6s,mb4.2,baz=104,slow=10,SNR=55						
MKAR				PcP	PcP	06 46 31.9	-0.9
	comp=Z,1.4nm,0.9s,baz=90,slow=6.1,SNR=5.1						
MKAR	**Makanchi Array**	**38.64**	**314**	*e*P	**P**	**06 44 24.3**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KAKA	**Kakadu**	**38.86**	**165**	*e*P	**P**	**06 44 44.4**	**+18**
	comp=Z,3.5nm,0.5s,mb4.2						
ZAL	**Zalesovo**	**40.20**	**326**	P	**P**	**06 44 35.9**	**-1.3**
	comp=Z,3.0nm,0.6s,mb3.9,baz=359,slow=9.2,SNR=17						
ZAL	**Zalesovo**	**40.20**	**326**	P	**P**	**06 44 35.9**	**-1.3**
KURK	**Kurchatov**	**42.26**	**319**	*e*P	**P**	**06 44 53.6**	**-0.5**
	comp=Z,19nm,1.3s,mb4.4						
KURK	**Kurchatov**	**42.26**	**319**	P	**P**	**06 44 53.3**	**-0.7**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.1						
AAK	**Ala-Archa**	**43.06**	**306**	*e*P	**P**	**06 45 00.3**	**-0.3**
	comp=Z,1.8nm,0.8s,mb3.5						
AAK	**Ala-Archa**	**43.06**	**306**	*e*P	**P**	**06 45 00.4**	**-0.2**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
FITZ	**Fitzroy Crossi**	**43.15**	**176**	*e*P	**P**	**06 45 01.5**	**-0.2**
	comp=Z,14nm,0.8s,mb4.4						
FITZ	**Fitzroy Crossi**	**43.15**	**176**	P	**P**	**06 45 01.5**	**-0.2**
	comp=Z,17nm,0.8s,mb4.6,baz=2.5,slow=5.9,SNR=15						
MBWA	**Marble Bar**	**46.20**	**184**	*e*P	**P**	**06 45 24.6**	**-1.2**
	comp=Z,14nm,1.0s,mb4.2						
WRAB	**Tennant Creek**	**46.27**	**165**	*e*P	**P**	**06 45 26.3**	**0.0**
	comp=Z,2.8nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**46.27**	**165**	P	**P**	**06 45 26.6**	**+0.2**
	comp=Z,4.6nm,0.4s,mb4.1,baz=348,slow=8.8,SNR=46						
WRA				S	**S**	**06 51 56.3**	**-0.3**
	comp=Z,0.6nm,0.9s,baz=347,slow=14,SNR=5.2						
WB2	**Warramunga Arr**	**46.28**	**165**	*e*P	**P**	**06 45 26.6**	**+0.2**
WB2				*e*S	**S**	**06 51 55.6**	**-1.1**
TIXI	**Tiksi**	**46.59**	**3**	*e*P	**P**	**06 45 26.4**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.0						
VOSK	**Vostochnaya**	**47.39**	**319**	P	**P**	**06 45 33.7**	**-0.9**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.6						
BVA0	**Borovoye Array**	**47.82**	**320**	*i* P	**P**	**06 45 36.2**	**-1.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.2						
BVAR	**Borovoye Array**	**47.82**	**320**	P	**P**	**06 45 37.2**	**-0.7**
	comp=Z,2.8nm,0.4s,mb4.0,baz=108,slow=8.6,SNR=22						
BVAR				PcP	PcP	06 47 03.1	-0.7
	comp=Z,2.0nm,0.7s,baz=90,slow=4.4,SNR=8.4						
CHKZ	**Chkalovo**	**47.85**	**321**	*e*P	**P**	**06 45 37.5**	**-0.7**
	comp=Z,12nm,0.9s,mb4.2						
CHKZ				*e*PcP	PcP	06 47 02.5	-1.4
CHKZ	**Chkalovo**	**47.85**	**321**	P	**P**	**06 45 37.4**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
BRVK	**Borovoye**	**47.89**	**320**	*e*P	**P**	**06 45 38.1**	**-0.4**
	comp=Z,4.1nm,0.6s,mb3.9						
BRVK	**Borovoye**	**47.89**	**320**	*e*P	**P**	**06 45 38.1**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
ASPA	**Alice Springs**	**49.78**	**167**	*e*P	**P**	**06 45 54.6**	**+1.3**
AB31	**Akbulak array**	**53.78**	**314**	*i* P	**P**	**06 46 22.1**	**-0.6**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
ARU	**Arti**	**55.17**	**322**	*e*P	**P**	**06 46 31.4**	**-1.3**
	comp=Z,3.3nm,0.6s,mb4.0						
ARU	**Arti**	**55.17**	**322**	*e*P	**P**	**06 46 31.2**	**-1.5**
STKA	**Stephens Creek**	**59.55**	**161**	P	**P**	**06 47 03.6**	**-0.1**
	comp=Z,1.9nm,0.6s,mb3.9,baz=3.7,slow=4.0,SNR=4.1						
ILAR	**Eielson Array**	**67.62**	**28**	P	**P**	**06 47 57.2**	**+1.5**
	comp=Z,0.8nm,0.7s,mb3.5,baz=288,slow=9.7,SNR=8.8						
ARCES	**ARCESS Array B**	**69.13**	**338**	P	**P**	**06 48 04.7**	**-0.1**
	comp=Z,1.6nm,0.7s,mb3.8,baz=59,slow=7.1,SNR=3.7						
ARCES				PcP	PcP	06 48 27.1	-0.5
	comp=Z,1.4nm,0.7s,baz=60,slow=4.5,SNR=7.5						
FINES	**FINESS Array B**	**71.29**	**330**	P	**P**	**06 48 17.4**	**-0.7**
	comp=Z,2.6nm,0.6s,mb4.0,baz=65,slow=5.8,SNR=16						
INK	**Inuvik**	**71.72**	**22**	*e*P	**P**	**06 48 20.2**	**-0.3**
	comp=Z,3.3nm,0.8s,mb4.0						
AKASG	**Malin Array Be**	**73.07**	**318**	P	**P**	**06 48 27.9**	**-0.8**
	comp=Z,1.7nm,0.5s,mb3.9,baz=60,slow=6.4,SNR=10						
BRTR	**Keskin Array B**	**73.74**	**307**	P	**P**	**06 48 32.3**	**-0.6**
	comp=Z,2.2nm,0.9s,mb3.8,baz=90,slow=7.4,SNR=7.4						
HFS	**Hagfors**	**77.38**	**331**	P	**P**	**06 48 52.6**	**-0.2**
	comp=Z,2.7nm,0.7s,mb4.0,baz=90,slow=4.4,SNR=5.1						
NB2	**NORSAR Subarra**	**77.99**	**332**	P	**P**	**06 48 55.6**	**-0.6**
	comp=Z,1.9nm,0.5s,mb4.0,baz=56,slow=5.3						
NOA	**NORSAR Array B**	**77.99**	**332**	P	**P**	**06 48 55.9**	**-0.3**
	comp=Z,2.1nm,0.6s,mb3.9,baz=53,slow=5.6,SNR=8.0						
VRAC	**Vranov**	**81.08**	**320**	P	**P**	**06 49 13.2**	**+0.2**
	comp=Z,2.4nm,0.4s,mb4.2,baz=16,slow=7.4,SNR=2.9						
CLL	**Collm**	**82.11**	**323**	P	**P**	**06 49 18.2**	**+0.1**
	comp=Z,logA/T=1.0,mb4.4						
GERES	**GERESS Array B**	**82.97**	**321**	P	**P**	**06 49 23.3**	**+0.6**
	comp=Z,3.3nm,0.8s,mb4.1,baz=18,slow=4.2,SNR=14						
HLID	**Hailey**	**93.76**	**38**	*e*P	**P**	**06 50 16.4**	**+2.3**
	comp=Z,2.0nm,0.9s,mb4.2						
NVAR	**Mina Array Bea**	**94.67**	**44**	P	**P**	**06 50 20.8**	**+2.4**
	comp=Z,1.6nm,0.8s,mb4.2,baz=271,slow=7.3,SNR=11						
SNAA	**Sanae**	**124.68**	**198**		PKPdf	06 55 48.6	-5.4
VNA2	**Neumayer--Watz**	**126.33**	**198**	⇑*i*	PKPdf	06 55 57.9	+0.8
VNA3	**Neumayer Olymp**	**126.79**	**197**	⇑*i*	PKPdf	06 55 49.8	-8.2

WEL 08 06:54:38.1±0.2**, 38.90S×175.70E, h128^{km}±1^{km}, ML3.8**/5**, 10C-14D, Error ellipse: s-maj=1.2km s-min=1.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RATZ	**Rangitukua**	**0.06**	**60**	⇓PN	P	06 54 55.4	-0.2
KATZ	**Kakaramea**	**0.08**	**183**	PN	P	06 54 55.4	-0.2
RITZ	**Rihia Road**	**0.15**	**123**	PN	P	06 54 55.9	+0.2
WATZ	**Wairara**	**0.19**	**8**	PN	P	06 54 55.7	-0.1
WTVZ	**West Tongariro**	**0.23**	**202**	⇑PN	P	06 54 55.8	-0.1
WTVZ				SN	S	06 55 09.2	-0.3
OTVZ	**Oturere**	**0.27**	**186**	⇑PN	P	06 54 56.0	+0.1
OTVZ				SN	S	06 55 09.9	+0.2
TWVZ	**Taurewa**	**0.27**	**230**	⇓PN	P	06 54 55.9	-0.1
NGZ	**Ngauruhoe**	**0.29**	**196**	PN	P	06 54 55.9	-0.1
NGZ				SN	S	06 55 09.8	0.0
HATZ	**Hinemaiaia**	**0.31**	**89**	⇓PN	P	06 54 56.1	-0.1
CNZ	**Chateau**	**0.32**	**202**	⇑PN	P	06 54 56.3	+0.1
WPVZ	**Whakapapa**	**0.33**	**201**	⇓PN	P	06 54 56.3	+0.1
WPVZ				SN	S	06 55 09.8	-0.2
TUVZ	**Tukino**	**0.37**	**186**	⇓PN	P	06 54 56.7	+0.2
TUVZ				SN	S	06 55 10.0	-0.3
FWVZ	**Far West T-bar**	**0.37**	**198**	PN	P	06 54 56.4	-0.1
FWVZ				SN	S	06 55 09.8	-0.6
DRZ	**Dome Shelter**	**0.39**	**196**	PN	P	06 54 57.3	+0.7
TRVZ	**Turoa**	**0.42**	**196**	⇓PN	P	06 54 56.9	+0.2
TRVZ				SN	S	06 55 10.6	-0.2
WNVZ	**Wahianoa**	**0.43**	**191**	⇓PN	P	06 54 56.9	+0.1
WNVZ				SN	S	06 55 10.6	-0.3
PKVZ	**Pokaka**	**0.48**	**215**	PN	P	06 54 56.8	-0.3
PKVZ				SN	S	06 55 10.9	-0.5
MOVZ	**Moawhango**	**0.51**	**175**	⇓PN	P	06 54 56.9	-0.3
MOVZ				SN	S	06 55 10.0	-1.6
MTVZ	**Mangateitei**	**0.52**	**200**	SN	S	06 55 11.1	-0.7
BKZ	**Black Stump Fm**	**0.67**	**114**	⇓PN	P	06 54 58.3	+0.1
BKZ				SN	S	06 55 13.0	-0.6
HIZ	**Hauiti**	**0.77**	**300**	⇓PN	P	06 54 58.6	-0.4
HIZ				SN	S	06 55 14.0	-0.8
VRZ	**Vera Road**	**0.77**	**253**	PN	P	06 54 58.6	-0.4
VRZ				SN	S	06 55 14.1	-0.8
WAZ	**Wanganui**	**1.02**	**213**	PN	P	06 55 00.9	-0.5
WAZ				SN	S	06 55 17.9	-0.9
RAEZ	**Rainy Point**	**1.09**	**249**	⇓PN	P	06 55 02.0	-0.1
TSZ	**Takapari Road**	**1.18**	**170**	⇓PN	P	06 55 02.7	-0.2
TSZ				SN	S	06 55 19.8	-1.9
URZ	**Urewera**	**1.28**	**60**	PN	P	06 55 03.5	-0.5
URZ				SN	S	06 55 21.8	-1.8
NEZ	**North Egmont**	**1.30**	**253**	⇓PN	P	06 55 04.0	-0.3
DFE	**Dawson Falls**	**1.31**	**251**	PN	P	06 55 04.0	-0.4
PKE	**Pukeiti**	**1.37**	**257**	⇑PN	P	06 55 04.2	-0.8
PKE				SN	S	06 55 24.3	-1.2
NRZ	**Ngariki Road**	**1.44**	**252**	⇑PN	P	06 55 05.1	-0.8
PXZ	**Pawanui**	**1.45**	**142**	PN	P	06 55 05.8	-0.1
MWZ	**Matawai**	**1.54**	**69**	⇓PN	P	06 55 06.7	-0.3
MWZ				SN	S	06 55 27.2	-1.7
KNZ	**Kokohu**	**1.54**	**95**	PN	P	06 55 07.0	0.0
KNZ				SN	S	06 55 27.4	-1.6
MRZ	**Mangatainoka R**	**1.76**	**183**	⇑PN	P	06 55 08.2	-1.4
MRZ				SN	S	06 55 30.5	-3.0
BFZ	**Birch Farm**	**1.83**	**167**	PN	P	06 55 09.3	-1.0
BFZ				SN	S	06 55 31.6	-3.2
KIW	**Kapiti Island**	**2.05**	**197**	⇑PN	P	06 55 11.0	-2.1
CAW	**Cannon Point**	**2.26**	**192**	PN	P	06 55 13.4	-2.4
MTW	**Mount Morrison**	**2.26**	**184**	⇑PN	P	06 55 13.4	-2.4
DUWZ	**D'Urville Isla**	**2.34**	**215**	PN	P	06 55 14.2	-2.7
MXZ	**Matakaoa Point**	**2.45**	**58**	PN	P	06 55 17.6	-0.7
MRW	**Makara Radio**	**2.45**	**198**	PN	P	06 55 15.5	-2.8
PAWZ	**Paruwai Farm**	**2.49**	**185**	⇑PN	P	06 55 16.1	-2.7
WEL	**Wellington**	**2.49**	**196**	PN	P	06 55 16.0	-2.8
TRWZ	**Traveller**	**2.50**	**180**	PN	P	06 55 16.3	-2.6
SNZO	**South Karori**	**2.53**	**197**	PN	P	06 55 16.3	-3.0
MSWZ	**Moikau Station**	**2.54**	**188**	⇑PN	P	06 55 16.6	-2.8

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*NEIC **08** 06:57:13.0, 38.21N×26.51E, h5^{km}, MD3.6(ATH), MD3.4(ISK), After ISK.*

*ISK **08** 06:57:14.0, 38.21N×26.51E, h5^{km}, MD3.4*

*CSEM **08** 06:57:15.4±0.1, 38.26N×26.59E, h10^{km}, MD3.4, Error ellipse: s-maj=2.6km s-min=1.9km az=97.0*

*ATH **08** 06:57:16.5, 38.18N×26.48E, h27^{km}±3^{km}, MD3.6/5*

ISC 08 06:57:14.8±0.8**, 38.23N**±0.02×**26.52E**±0.04**, h1^{km}**±5^{km}**, n38, σ0^{s}98**/51**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.14**	**24**	*i* P	**Pg**	**06 57 18.6**	**+0.9**
URLA				*i* S	**Sg**	**06 57 27.5**	**+8.0**
BLCB	**Balcova**	**0.44**	**69**	PG	**Pg**	**06 57 23.3**	**-0.3**
BLCB				SG	**Sg**	**06 57 29.3**	**-0.1**
SMG	**Samos**	**0.58**	**154**	*e*PN	**Pg**	**06 57 27.3**	**+0.9**
SMG				*e*SN	**Sg**	**06 57 36.3**	**+2.2**
IZM	**Izmir**	**0.60**	**74**	PG	**Pg**	**06 57 26.5**	**-0.4**
IZM				SG	**Sg**	**06 57 35.1**	**+0.1**
KDAG	**Bornova**	**0.61**	**74**	*i* P	**Pg**	**06 57 26.2**	**-0.8**
KDAG				*i* S	**Sg**	**06 57 33.2**	**-2.0**
PRK	**Paraskevi**	**1.03**	**349**	*e*PN	**Pn**	**06 57 37.0**	**+0.7**
PRK				*e*SN	**Sn**	**06 57 52.9**	**+1.3**
AYVA	**Ayvalik**	**1.08**	**7**	*i* P	**Pb**	**06 57 37.5**	**+1.4**
AYVA				*i* S	**Sb**	**06 57 53.6**	**+3.0**
AKS	**Akhisar**	**1.20**	**57**	PN	**Pn**	**06 57 37.7**	**-1.0**
AYDN	**Tasoluk**	**1.22**	**118**	*i* P	**Pb**	**06 57 38.5**	**+0.2**
AYDN				*i* S	**Sb**	**06 57 53.9**	**-0.5**
BODT	**Bodrum**	**1.32**	**152**	PN	**Pn**	**06 57 39.1**	**-1.4**
MLSB	**Milas**	**1.36**	**133**	*e*PN	**Pn**	**06 57 40.9**	**-0.2**
BDRM	**Kayabasi**	**1.38**	**148**	*i* P	**Pb**	**06 57 42.4**	**+1.3**
BDRM				*i* S	**Sb**	**06 57 59.7**	**+0.6**
APE	**Apeiranthos**	**1.40**	**214**	PN	**Pn**	**06 57 39.5**	**-2.1**
APE	**Apeiranthos**	**1.40**	**214**	*e*Pn	**Pn**	**06 57 41.6**	**0.0**
EZN	**Ezine**	**1.60**	**355**	*e*PN	**Pn**	**06 57 43.3**	**-1.1**
MANT	**Manisa**	**1.62**	**80**	*i* P	**Pn**	**06 57 46.0**	**+1.2**
MANT				*i* S	**Sb**	**06 58 07.5**	**+1.3**
DAT	**Datca**	**1.72**	**150**	*e*PN	**Pn**	**06 57 45.5**	**-0.7**
BALB	**Balikesir**	**1.76**	**37**	*e*PN	**Pn**	**06 57 46.4**	**-0.3**
YER	**Yerkesik**	**1.77**	**128**	*e*PN	**Pn**	**06 57 46.9**	**-0.1**
DENT	**Denizli**	**2.04**	**103**	*e*PN	**Pn**	**06 57 50.4**	**-0.4**
SANT	**Santorini**	**2.04**	**205**	*e*Pn	**Pn**	**06 57 55.0**	**+4.3**
DNZL	**Cakiroluk**	**2.07**	**104**	*i* P	**Pn**	**06 57 50.8**	**-0.3**
DNZL				*i* S	**Sn**	**06 58 17.5**	**-0.5**
DST	**Dursunbey**	**2.14**	**49**	*e*PN	**Pn**	**06 57 52.1**	**-0.1**
LPK	**Lapseki**	**2.15**	**5**	*e*PN	**Pn**	**06 57 51.4**	**-0.9**
DALT	**Dalyan (Mudla)**	**2.23**	**130**	*e*PN	**Pn**	**06 57 52.7**	**-0.7**
EDC	**Edincik**	**2.35**	**26**	*e*PN	**Pn**	**06 57 54.6**	**-0.6**
BNT	**Bandirma**	**2.38**	**27**	*e*PN	**Pn**	**06 57 55.0**	**-0.6**
ARG	**Arkhangelos**	**2.38**	**147**	*e*PN	**Pn**	**06 57 56.0**	**+0.3**
GDZ	**Gediz**	**2.47**	**69**	*i* P	**Pn**	**06 58 01.6**	**+4.7**
MRMT	**Marmara Adasi**	**2.51**	**19**	*e*PN	**Pn**	**06 57 57.0**	**-0.5**
ORLT	**Orhaneli**	**2.59**	**45**	*e*PN	**Pn**	**06 57 57.9**	**-0.7**
FETY	**Fethiye**	**2.59**	**127**	*e*PN	**Pn**	**06 57 58.5**	**-0.1**
MFT	**Murefte**	**2.62**	**13**	*e*PN	**Pn**	**06 57 58.4**	**-0.6**
ULDT	**Uludag**	**2.79**	**46**	*i* P	**Pb**	**06 58 06.1**	**+0.9**
ULDT				*i* S	**Sb**	**06 58 40.9**	**+0.8**
ALT	**Altintas**	**2.93**	**73**	*e*PN	**Pn**	**06 58 03.0**	**-0.4**
TKTP	**Tekketepe**	**3.00**	**93**	*i* P	**Pg**	**06 58 11.6**	**-3.2**
TKTP				*i* S	**Sg**	**06 58 57.6**	**+2.9**
RDO	**Rodhopi**	**3.01**	**346**	*e*PN	**Pn**	**06 58 05.0**	**+0.4**
YLV	**Yalova**	**3.21**	**43**	*e*PN	**Pn**	**06 58 07.4**	**-0.1**

KRSC 08 06:59:58.0±0.8**, 53.75N×161.94E, h13^{km}**±3^{km}**, ML4.1, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**1.32**	**241**	*e*P	Pb	07 00 22.5	+0.3
SPN				*e*S	Sb	07 00 39.7	+0.9
KII	**Karymskiy**	**1.50**	**282**	*e*P	Pn	07 00 25.3	+0.5
NLC	**Nalytchevo**	**1.66**	**251**	*e*P	Pn	07 00 26.9	-0.1
NLC				*i* S	Sn	07 00 48.7	+0.4
TUMR	**Tumrok**	**1.86**	**326**	*e*P	Pn	07 00 29.8	-0.1
TUMR				*e*S	Sn	07 00 53.1	-0.3
SDLR	**Sedlovina**	**1.89**	**257**	*e*P	Pn	07 00 30.6	+0.3
SMAR	**Somma**	**1.94**	**257**	*e*P	Pn	07 00 31.3	+0.3
UGLR	**Uglovaya**	**1.94**	**255**	*e*P	Pn	07 00 31.4	+0.3
AVH	**Avacha**	**1.97**	**257**	*e*P	Pn	07 00 32.1	+0.5
AVH				*e*S	Sn	07 00 57.2	+0.9
KOK	**Koryaka**	**2.02**	**258**	*e*P	Pn	07 00 32.5	+0.2
PET	**Petropavlovsk**	**2.10**	**251**	*e*P	Pn	07 00 33.9	+0.5
PET				*e*S	Sn	07 01 00.1	+0.6
KMNR	**Kamenistaya**	**2.24**	**335**	*e*P	Pn	07 00 35.7	+0.3
KMNR				*e*S	Sn	07 01 03.3	+0.2
ZLN	**Zelenaya**	**2.37**	**344**	*e*P	Pn	07 00 37.8	+0.6
ZLN				*e*S	Sn	07 01 06.5	+0.2
GNL	**Ganaly**	**2.38**	**270**	*e*P	Pn	07 00 37.5	+0.2
GNL				*e*S	Sn	07 01 06.3	-0.2
KPT	**Kopyto**	**2.43**	**337**	*e*P	Pn	07 00 39.1	+1.0
KPT				*e*S	Sn	07 01 08.3	+0.3
LGNR	**Loginova**	**2.45**	**343**	*e*P	Pn	07 00 39.2	+0.9
LGNR				*e*S	Sn	07 01 09.2	+0.9
RUS	**Russkaya**	**2.45**	**239**	*e*P	Pn	07 00 38.7	+0.3
RUS				*e*S	Sn	07 01 08.2	-0.3
KRMR	**Karymshinskiy**	**2.47**	**250**	*e*P	Pn	07 00 39.3	+0.7
KRMR				*e*S	Sn	07 01 09.4	+0.6
CIRR	**Tsirk**	**2.47**	**344**	*e*P	Pn	07 00 39.2	+0.6
CIRR				*e*S	Sn	07 01 09.0	+0.1
KBTR	**Krutoberegovo**	**2.52**	**11**	*e*P	Pn	07 00 39.9	+0.6
KBTR				*e*S	Sn	07 01 10.6	+0.5
KBG	**Krutoberegovo**	**2.55**	**10**	*e*S	Sn	07 01 10.8	-0.1
KBG				Smax			
	360nm,0.8s						
KRSR	**Krestovskiy**	**2.60**	**343**	*e*P	Pn	07 00 40.7	+0.2
KOZ	**Kozyrevsk**	**2.60**	**334**	*e*P	Pn	07 00 40.9	+0.3
KOZ				*e*S	Sn	07 01 12.3	0.0
GRL	**Gorelyy**	**2.62**	**244**	*e*P	Pn	07 00 41.8	+1.0
GRL				*e*S	Sn	07 01 13.0	+0.3
KLY	**Klyuchi**	**2.67**	**344**	*e*P	Pn	07 00 41.8	+0.2
KLY				*e*S	Sn	07 01 13.9	-0.2
BKI	**Bering**	**2.77**	**57**	*e*S	Sn	07 01 12.5	-4.0
BKI				Smax			
	40nm,0.3s						
SRDR	**Sredinnyy**	**2.87**	**334**	*e*P	Pn	07 00 44.1	-0.3
ESO	**Esso**	**2.87**	**321**	*e*P	Pn	07 00 44.1	-0.3
ESO				*e*S	Sn	07 01 18.7	-0.5
ESO				Smax			
	60nm,0.3s						
APC	**Apacha**	**2.98**	**256**	*e*P	Pn	07 00 47.6	+1.6
APC				*e*S	Sn	07 01 22.4	+0.4
APC				Smax			
	50nm,0.7s						

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*IDC **08** 07:23:38.5±0.9, 2.69N×97.13E, mb4.5/12, mb1 4.5/12, mb1mx4.3/20, mbtmp4.5/12, Error ellipse: s-maj=42.8km s-min=14.3km az=51.0*

*BJI **08** 07:23:42.6, 2.60N×97.00E, h30^{km}, mB5.0, mb4.7, Ms4.7, Msz4.2*

*NEIC **08** 07:23:42.7±0.4, 2.56N×97.01E, h30^{km}, mb4.5/8, Error ellipse: s-maj=12.7km s-min=5.5km az=46.0*

ISC 08 07:23:41.7±0.5**, 2.72N**±0.07×**97.22E**±0.06**, h33^{km}, n34, σ0^{s}66**/34**, mb4.5**/24**, MS4.1**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**4.27**	**53**	*e*Pn	**Pn**	**07 24 50.8**	**+4.5**
KULM				*e*Sn	**Sn**	**07 25 34.8**	**-0.8**
KKM	**Kota Kinabalu**	**19.23**	**79**	*e*P	**P**	**07 28 07.0**	**+1.0**
SHL	**Shillong**	**23.29**	**348**	*e*P	**P**	**07 28 46.5**	**-1.1**
JIRN	**Jiri**	**26.95**	**338**	*e*P	**P**	**07 29 22.7**	**+0.4**
	24nm,0.8s,mb4.8						
GUN	**Gumba**	**27.29**	**338**	*e*P	**P**	**07 29 26.3**	**+0.8**
	20nm,0.5s,mb4.9						
DMN	**Daman**	**27.32**	**336**	*e*P	**P**	**07 29 26.3**	**+0.5**
KKN	**Kakani**	**27.41**	**337**	*e*P	**P**	**07 29 26.8**	**+0.2**
	19nm,0.9s,mb4.6						
GKN	**Gorkha**	**27.86**	**336**	*e*P	**P**	**07 29 31.1**	**+0.4**
	28nm,1.0s,mb4.9						
KOLN	**Koldanda**	**28.10**	**334**	*e*P	**P**	**07 29 33.3**	**+0.5**
	22nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**34.82**	**128**	*e*P	**P**	**07 30 30.8**	**-1.0**
	9.2nm,1.5s,mb4.5						
FITZ	**Fitzroy Crossi**	**34.82**	**128**	P	**P**	**07 30 30.7**	**-1.1**
	3.4nm,0.5s,mb4.5,baz=294,slow=7.3,SNR=9.5						
GTA	**Gaotai**	**36.60**	**3**	*e*P	**P**	**07 30 47.0**	**+0.3**
KAKA	**Kakadu**	**38.19**	**114**	*e*P	**P**	**07 31 17.4**	**+17**
	4.8nm,0.5s,mb4.5						
HHC	**Hu-ho-hao-te**	**40.11**	**17**	*e*P	**P**	**07 31 17.1**	**+1.1**
HHC				AP	pP	07 31 30.0	+4.2
HHC				XP	sP	07 31 35.3	+5.3
HHC				PP	PP	07 32 56.8	+4.8
HHC				PCP	PcP	07 33 22.0	+1.2
HHC				SCP		07 37 05.0	
HHC				PCS		07 37 13.4	
HHC				S	**S**	**07 37 20.6**	**+0.7**
HHC				XS		07 37 42.1	
HHC				SS	SS	07 40 14.4	+2.2
HHC				SCS	ScS	07 41 16.7	-1.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,140nm,7.2s						
HHC				LR	LR		
	comp=N,220nm,15.6s,MS4.3						
HHC				LR	LR		
	comp=E,270nm,14.4s,MS4.3						
HHC				LR	LR		
	comp=Z,110nm,15.6s,MS3.8						
WRA	**Warramunga Arr**	**42.84**	**123**	P	**P**	**07 31 38.3**	**-0.4**
	comp=Z,6.5nm,0.5s,mb4.6,baz=298,slow=9.4,SNR=59						
WRA				pP	pP	07 31 50.3	+1.7
	comp=Z,3.6nm,0.6s,baz=303,slow=9.2,SNR=8.6						
WRAB	**Tennant Creek**	**42.84**	**123**	*e*P	**P**	**07 31 38.8**	**-0.1**
	comp=Z,14nm,0.9s,mb4.7						
WB2	**Warramunga Arr**	**42.85**	**123**	*e*P	**P**	**07 31 39.1**	**+0.3**
AAK	**Ala-Archa**	**44.62**	**336**	*e*P	**P**	**07 31 52.6**	**-0.3**
	comp=Z,5.8nm,1.0s,mb4.4						
SONM	**Songino Array**	**45.64**	**9**	P	**P**	**07 32 01.1**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.3,baz=190,slow=9.6,SNR=21						
SONM				PcP	PcP	07 33 39.5	+0.3
	comp=Z,0.7nm,0.5s,baz=181,slow=3.8,SNR=4.1						
SONM				pPcP		07 33 50.6	
	comp=Z,0.9nm,0.6s,baz=200,slow=3.4,SNR=3.8						
MKAR	**Makanchi Array**	**45.78**	**346**	P	**P**	**07 32 01.9**	**-0.2**
	comp=Z,3.8nm,0.4s,mb4.7,baz=160,slow=8.4,SNR=40						
KURK	**Kurchatov**	**50.34**	**345**	*e*P	**P**	**07 32 37.2**	**-0.3**
	comp=Z,9.3nm,0.9s,mb4.8						
PMG	**Port Moresby**	**51.20**	**104**	P	**P**	**07 32 44.7**	**+0.3**
	comp=Z,16nm,0.7s,mb5.1,baz=352,slow=12,SNR=5.7						
ZAL	**Zalesovo**	**52.06**	**351**	P	**P**	**07 32 50.2**	**-0.2**
	comp=Z,10nm,0.8s,mb4.8,baz=315,slow=5.5,SNR=20						
CTA	**Charters Tower**	**53.17**	**118**	P	**P**	**07 32 59.8**	**+0.6**
	comp=Z,3.2nm,0.7s,mb4.4,baz=297,slow=9.2,SNR=4.4						
CTAO	**Charters Tower**	**53.17**	**118**	*e*P	**P**	**07 32 59.2**	**0.0**
	comp=Z,3.2nm,0.7s,mb4.4						
STKA	**Stephens Creek**	**54.37**	**133**	P	**P**	**07 33 08.2**	**+0.4**
	comp=Z,3.6nm,0.7s,mb4.4,baz=309,slow=10,SNR=7.4						
BRVK	**Borovoye**	**54.89**	**340**	*e*P	**P**	**07 33 09.8**	**-1.6**
	comp=Z,4.2nm,1.0s,mb4.4						
CHKZ	**Chkalovo**	**55.30**	**341**	*e*P	**P**	**07 33 13.4**	**-0.9**
	comp=Z,9.2nm,0.9s,mb4.8						
BRTR	**Keskin Array B**	**68.11**	**312**	P	**P**	**07 34 40.1**	**-0.4**
	comp=Z,0.7nm,0.5s,mb4.0,baz=149,slow=7.4,SNR=4.0						
AKASG	**Malin Array Be**	**74.07**	**322**	P	**P**	**07 35 15.5**	**-0.8**
	comp=Z,0.6nm,0.3s,mb4.0,baz=90,slow=5.4,SNR=8.6						
FINES	**FINESS Array B**	**78.67**	**332**	P	**P**	**07 35 42.3**	**+0.3**
	comp=Z,3.9nm,0.9s,mb4.3,baz=117,slow=4.3,SNR=4.7						
ARCES	**ARCESS Array B**	**81.12**	**340**	P	**P**	**07 35 55.6**	**+0.6**
	comp=Z,1.9nm,0.8s,mb4.1,baz=90,slow=4.9,SNR=11						
TXAR	**Lajitas Array**	**142.37**	**31**	PKhKP		07 43 09.7	
	comp=Z,0.3nm,0.6s,baz=301,slow=0.2,SNR=5.8						
CFAA	**Coronel Fontan**	**148.16**	**204**	PKPbc	PKPdf	07 43 27.2	+5.7
	comp=Z,0.1nm,0.5s,baz=176,slow=2.3,SNR=4.6						

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*IDC **08** 07:32:42.6±1.9, 17.65S×178.80W, h484^{km}±25^{km}, mb3.3/6, mb1 3.5/7, mb1mx3.3/15, mbtmp4.2/7, Error ellipse: s-maj=29.3km s-min=15.1km az=136.0*

*NEIC **08** 07:32:43.5±1.1, 17.68S×178.86W, h496^{km}±14^{km}, mb4.0/4, Error ellipse: s-maj=16.6km s-min=11.4km az=147.0*

ISC 08 07:32:41.4±1.2**, 17.6S**±0.1×**178.9W**±0.1**, h481^{km}**±18^{km}**, n21, σ0^{s}82**/19**, mb3.9**/10**, 3C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.79**	**63**	P	**P**	**07 34 37.6**	**+1.3**
	2.2nm,0.3s,baz=279,slow=13,SNR=5.4						
AFI				S	**S**	**07 36 06.6**	**-1.0**
	2.6nm,0.3s,baz=81,slow=23,SNR=5.7						

URZ	**Urewera**	**20.84**	**189**	P	**P**	**07 36 48.8**	**-0.6**
	10nm,0.7s,baz=0.7,slow=6.1,SNR=7.0						
STKA	**Stephens Creek**	**38.35**	**241**	P	**P**	**07 39 22.9**	**+1.7**
	1.0nm,0.4s,mb3.6,baz=95,slow=10.0,SNR=6.6						
STKA	**Stephens Creek**	**38.35**	**241**	P	**P**	**07 39 22.9**	**+1.7**
WB2	**Warramunga Arr**	**44.21**	**259**	*e*P	**P**	**07 40 08.1**	**-0.3**
WRAB	**Tennant Creek**	**44.22**	**259**	*e*P	**P**	**07 40 07.7**	**-0.7**
	4.4nm,0.7s,mb4.0						
WRA	**Warramunga Arr**	**44.23**	**259**	P	**P**	**07 40 08.5**	**0.0**
	2.4nm,0.6s,mb3.8,baz=97,slow=7.1,SNR=34						
WRA				PcP	PcP	07 41 42.5	-0.8
	0.3nm,0.7s,baz=84,slow=3.7,SNR=4.9						
ASPA	**Alice Springs**	**44.42**	**254**	*e*P	**P**	**07 40 10.5**	**+0.5**
KAKA	**Kakadu**	**47.12**	**269**	*e*P	**P**	**07 40 49.0**	**+18**
	12nm,0.4s,mb4.7						
FORT	**Forrest**	**49.70**	**244**	*e*P	**P**	**07 40 50.0**	**-0.2**
	16nm,0.7s,mb4.5						
FITZ	**Fitzroy Crossi**	**52.62**	**260**	*e*P	**P**	**07 41 12.0**	**+0.3**
	4.3nm,0.6s,mb4.0						
MBWA	**Marble Bar**	**57.69**	**256**	*e*P	**P**	**07 41 46.4**	**-0.7**
	4.2nm,0.8s,mb3.8						
MJAR	**Matsushiro Arr**	**67.41**	**324**	P	**P**	**07 42 49.2**	**-0.5**
	3.1nm,0.8s,mb4.0,baz=144,slow=4.3,SNR=5.3						
ILAR	**Eielson Array**	**85.73**	**13**	P	**P**	**07 44 28.5**	**-0.6**
	0.6nm,0.7s,mb3.4,baz=222,slow=4.5,SNR=8.0						
TXAR	**Lajitas Array**	**86.24**	**58**	P	**P**	**07 44 34.0**	**+1.6**
	0.4nm,0.8s,mb3.1,baz=214,slow=4.5,SNR=4.1						
SNAA	**Sanae**	**90.88**	**179**	⇑*i*	**P**	**07 44 52.0**	**-1.1**
VNA3	**Neumayer Olymp**	**91.04**	**177**	⇑*i*	**P**	**07 44 54.0**	**+0.2**
VNA2	**Neumayer--Watz**	**91.47**	**177**	⇑*i*	**P**	**07 44 56.2**	**+0.4**
BRTR	**Keskin Array B**	**144.26**	**315**	PKP	PKPdf	07 51 22.2	+0.5
	1.6nm,0.7s,baz=128,slow=2.6,SNR=6.7						
KHC	**Kasperske Hory**	**147.00**	**345**	*e*PKP	PKPdf	07 51 30.0	+4.0
GERES	**GERESS Array B**	**147.23**	**345**	PKPbc	PKPdf	07 51 30.4	+4.1
	1.2nm,0.5s,baz=27,slow=2.2,SNR=6.6						

IDC 08 07:51:29.3±1.9**,0.73N**×**89.43E,mb3.8**/4**,mb1 4.0**/4**,**
mb1mx3.7/17**,mbtmp3.8**/4**,MS4.1**/2**,Ms1 4.1**/2**,**
ms1mx3.5/22**,Error ellipse: s-maj=70.5km**
s-min=30.0km az=53.0,North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**42.52**	**145**	LR	LR	08 14 06.2	
	comp=Z,66nm,18.9s,baz=126,slow=32						
MKAR	**Makanchi Array**	**46.30**	**353**	P	P	07 59 57.3	-1.3
	0.9nm,0.8s,baz=172,slow=10,SNR=6.4						
WRA	**Warramunga Arr**	**48.55**	**118**	P	P	08 00 14.3	-2.2
	1.4nm,0.7s,baz=295,slow=8.4,SNR=9.5						
SONM	**Songino Array**	**49.18**	**15**	P	P	08 00 18.7	-2.3
	2.7nm,0.7s,baz=194,slow=8.6,SNR=12						
DZM	**Mont Dzumac**	**78.24**	**113**	LR	LR	08 39 48.5	
	comp=Z,375nm,18.2s,baz=5.3,slow=37						
GERES	**GERESS Array B**	**80.08**	**319**	P	P	08 03 40.4	-2.1
	0.2nm,0.3s,baz=117,slow=3.0,SNR=4.3						
TXAR	**Lajitas Array**	**147.59**	**22**	PKPbc	PKPdf	08 11 16.8	+1.3
	1.3nm,1.0s,baz=297,slow=1.3,SNR=7.3						

PLV ***08*** *07:54:36.6±0.5, 9.90N×108.86E, ML5.3*
BJI ***08*** *07:54:37.7, 9.84N×108.16E, h21^{km}, mB5.2, mb4.9, Ms5.6, Msz5.2*
IDC ***08*** *07:54:37.4±0.5, 9.99N×108.22E, mb4.6/27, mb1 4.7/27, mb1mx4.7/28, mbtmp4.6/27, MS4.9/17, Ms1 4.9/17, ms1mx4.7/26, Error ellipse: s-maj=17.4km s-min=12.9km az=61.0*
MOS ***08*** *07:54:37.4±1.2, 10.08N×108.29E, h10^{km}, mb5.2/29, MS5.2/14, Error ellipse: s-maj=14.5km s-min=6.7km az=111.4*
NEIC ***08*** *07:54:39.0±0.2, 9.97N×108.29E, h10^{km}, mb5.1/34, MS4.9/11, Error ellipse: s-maj=6.2km s-min=4.8km az=60.0*
NEIC One person killed at Ho Chi Minh City, Vietnam. Felt [IV] at Vung Tau and [III] at Ho Chi Minh City. Also felt at Nha Trang.
HRVD ***08*** *07:54:39.0±0.2, 10.12N×108.26E, h12^{km}, MW5.3/63, Centroid moment Tensor Solution. LP body waves: s42,c68;Mantle waves: s63,c123; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.15±.02; $M_{\theta\theta}$-0.79±.02; $M_{\phi\phi}$0.94±.03; $M_{r\theta}$-0.30±.06; $M_{\theta\phi}$-0.56±.02; $M_{\phi r}$-0.29±.06; Best double couple: $M_0$1.12×10^{17} NP1: ϕ_s120°,δ68°,λ-171°. NP2:ϕ_s27°,δ82°,λ-22°. Principal axes: T 1.136, Plg9°, Azm75°; N -.033, Plg66°, Azm187°; P -1.103, Plg21°, Azm342°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 08 07:54:36.9±1.1**,9.95N**±0.03×**108.23E**±0.03**,h7**^{km}±7^{km}**,**
h18^{km}±3.5^{km}**:pP-P,n222,**σ**1**^{s}**17**/230**,mb4.9**/89**,MS5.1**/51**,**
18C-14D,South China Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NHA	**Nha-Trang**	**2.45**	**23**	*e*PN	**Pn**	**07 55 17.3**	**-0.6**
NHA				*e*PG	**Pg**	**07 55 22.4**	**-3.3**
	baz=186,slow=14						
NHA				*e*SG	**Sg**	**07 55 54.3**	**-4.0**
NHA				⇑*e*		07 56 09.1	
	comp=N,34μm,0.7s						
SNG	**Songkhla**	**8.01**	**250**	P	**Pn**	**07 56 35.0**	**-1.5**
	comp=N,1μm,1.0s						
KKTK	**Khon Kaen**	**8.24**	**321**	PN	**P**	**07 56 36.0**	**-3.8**
KKTK				PG	P	07 57 17.0	+37
KKTK				SG	**Sg**	**07 58 21.0**	**-50**
KSM	**Kuching**	**8.67**	**166**	*e*Pn	**P**	**07 56 45.4**	**-0.4**
NNT	**Nongplab**	**8.73**	**288**	P	**P**	**07 56 43.8**	**-2.8**
KKM	**Kota Kinabalu**	**8.81**	**116**	*e*Pn	**P**	**07 56 46.4**	**-1.3**
KKM				*e*S	**Sn**	**07 58 19.3**	**-9.0**
KKM	**Kota Kinabalu**	**8.81**	**116**	P	**P**	**07 56 46.6**	**-1.1**
KULM	**Kulim**	**8.82**	**239**	*e*Pn	**P**	**07 56 46.3**	**-1.5**
IPM	**Ipoh**	**8.91**	**234**	P	**P**	**07 56 49.3**	**+0.2**
QIZ	**Qiongzhong**	**9.16**	**10**	P	**P**	**07 56 50.5**	**-2.0**
QIZ				XP		07 57 02.1	
QIZ				S	**Sn**	**07 58 30.7**	**-6.3**
QIZ				LR	LR		
	comp=N,13μm,13.8s						
QIZ				LR	LR		
	comp=E,35μm,17.1s						
QIZ				LR	LR		
	comp=Z,19μm,14.7s						
QIZ	**Qiongzhong**	**9.16**	**10**	*e*Pn	**P**	**07 56 50.0**	**-2.4**
	comp=Z,54nm,0.9s						
KGM	**Kluang**	**9.27**	**212**	P	**P**	**07 56 54.2**	**+0.2**
NST	**Nakhon Sawan**	**9.73**	**307**	PN	**P**	**07 56 56.7**	**-3.7**
NST				PG	P	07 57 26.4	+26
NST				SG	Sg	07 59 37.0	-24
PPR	**Puerto Princes**	**10.35**	**90**	⇑*i*P	**P**	**07 57 01.9**	**-7.1**
TSM	**Tawau**	**11.10**	**120**	P	**P**	**07 57 21.7**	**+2.5**
BUSP	**Coron**	**11.93**	**79**	*e*P	**P**	**07 57 32.5**	**+1.9**
CHG	**Chiang Mai**	**12.58**	**315**	P	**P**	**07 57 42.4**	**+3.1**
	comp=Z,11nm,1.0s						
BOLP	**Bolinao**	**13.05**	**59**	*e*P	**P**	**07 57 48.9**	**+3.4**
TGY	**Tagaytay City**	**13.10**	**70**	LR	LR	08 01 48.6	
	comp=Z,17nm,20.6s,baz=279,slow=33						
OTRP	**Odiongan**	**13.75**	**79**	*e*P	**P**	**07 58 02.7**	**+7.8**
BALP	**Baler**	**14.23**	**65**	*e*P	**P**	**07 58 05.5**	**+4.4**
CAUP	**Cauayan**	**14.94**	**61**	*e*P	**P**	**07 58 19.1**	**+8.7**
PAGZ	**Pagadian**	**15.12**	**97**	*e*P	**P**	**07 58 17.0**	**+4.1**
KMI	**Kunming**	**15.97**	**342**	P	**P**	**07 58 25.8**	**+2.0**
KMI				PP	PP	07 58 38.7	+1.9
KMI				S	**S**	**08 01 24.4**	**+3.2**
KMI				SS	SS	08 01 43.6	+3.6
KMI				AMB	AMB		
	comp=Z,20nm,1.8s						
KMI				AMB	AMB		
	comp=Z,930nm,3.7s						
KMI				LR	LR		
	comp=N,9μm,6.8s						
KMI				LR	LR		
	comp=E,11μm,10.1s						
KMI				LR	LR		
	comp=Z,11μm,14.7s						
KMI	**Kunming**	**15.97**	**342**	P	**P**	**07 58 25.8**	**+2.0**
	comp=Z,23nm,1.8s						
KMI				sP		07 58 29.7	
KMI				PP	PP	07 58 38.7	+1.9
KMI				PPP	PPP	07 58 46.6	+1.9
KMI				S	**S**	**08 01 24.4**	**+3.2**
KMI				sS		08 01 28.0	
KMI				SS	SS	08 01 43.6	+3.6
KMI				SSS	SSS	08 01 56.0	+2.8
KMI	**Kunming**	**15.97**	**342**	P	**P**	**07 58 25.8**	**+2.0**
KMI				S	**S**	**08 01 24.4**	**+3.2**
GYA	**Guiyang**	**16.49**	**355**	⇓*i*P	**P**	**07 58 29.9**	**-0.5**
GYA				AP		07 58 34.2	
GYA				XP		07 58 37.6	
GYA				S	**S**	**08 01 38.4**	**+5.2**
GYA				AMB	AMB		
	comp=Z,20nm,1.5s						
GYA				AMB	AMB		
	comp=Z,630nm,6.9s						
GYA				LR	LR		
	comp=N,4μm,12.9s						
GYA				LR	LR		
	comp=E,8μm,13.2s						
GYA				LR	LR		
	comp=Z,4μm,15.0s						
QZH	**Quanzhou**	**17.88**	**32**	⇑*i*P	**P**	**07 58 51.5**	**+3.7**
QZH				S	**S**	**08 02 10.5**	**+5.5**
QZH				LR	LR		
	comp=N,18μm,13.5s						
QZH				LR	LR		
	comp=E,17μm,12.5s						
QZH				LR	LR		
	comp=Z,9μm,14.7s						
NACB	**Ninganchiao**	**19.04**	**40**	P	**P**	**07 58 59.5**	**-2.6**
YHNB	**Yeheng**	**19.26**	**39**	P	**P**	**07 59 06.1**	**+1.4**
ENH	**Enshi**	**20.25**	**3**	*e*P	**P**	**07 59 14.1**	**-1.6**
	comp=Z,48nm,0.7s						
ENH				LR	LR		
	comp=Z,4μm,21.0s,MS4.8						
CD2	**Chengdu**	**21.27**	**349**	⇑*i*P	**P**	**07 59 25.4**	**-0.7**
CD2				AP		07 59 30.1	
CD2				XP		07 59 32.7	
CD2				PP	PP	07 59 49.8	+0.2
CD2				S	**S**	**08 03 14.2**	**-3.6**
CD2				SS	SS	08 03 49.5	-1.9
CD2				AMB	AMB		
	comp=Z,40nm,0.7s,mb4.9						
CD2				LR	LR		
	comp=E,6μm,11.4s						
CD2				LR	LR		
	comp=Z,2μm,11.2s,MS4.8						
WHN	**Wuhan**	**21.27**	**15**	P	**P**	**07 59 27.0**	**+0.8**
WHN				S	**S**	**08 03 24.3**	**+6.4**
WHN				LR	LR		
	comp=N,6μm,11.8s,MS5.8						
WHN				LR	LR		
	comp=E,28μm,16.3s,MS5.8						
WHN				LR	LR		
	comp=Z,12μm,17.3s,MS5.3						
SHL	**Shillong**	**21.95**	**317**	⇓*i*P	**P**	**07 59 33.0**	**0.0**
SHL				*e*S	**S**	**08 03 35.0**	**+4.4**
CAL	**Calcutta**	**22.80**	**306**	*e*x	x	08 03 58.3	
CAL				*e*x	x	08 07 44.9	
XAN	**Xi’an**	**23.98**	**1**	P	**P**	**07 59 51.7**	**-1.3**
XAN				S	**S**	**08 04 06.4**	**-0.5**
XAN				AMB	AMB		
	comp=Z,30nm,1.7s,mb4.5						
XAN				AMB	AMB		
	comp=Z,280nm,6.8s						
XAN				LR	LR		
	comp=E,8μm,16.9s						
XAN				LR	LR		
	comp=Z,3μm,14.8s,MS4.9						
NJ2	**Nanjing**	**24.09**	**23**	*e*P	**P**	**07 59 55.2**	**+1.1**
NJ2				AP		07 59 59.4	
NJ2				XP		08 00 02.3	
NJ2				PP	PP	08 00 27.2	-1.3
NJ2				S	**S**	**08 04 08.0**	**-0.8**
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,280nm,5.6s						
NJ2				LR	LR		
	comp=Z,7μm,18.8s,MS5.2						
SSE	**Sheshan**	**24.25**	**28**	P	**P**	**07 59 56.8**	**+1.2**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
SSE				AMB	AMB		
	comp=Z,200nm,8.4s						
SSE	**Sheshan**	**24.25**	**28**	P	**P**	**07 59 56.8**	**+1.2**
	comp=Z,16nm,0.6s,mb4.6						
JOW	**Kunigami**	**25.31**	**46**	P	**P**	**08 00 05.5**	**-0.4**
	comp=Z,12nm,0.8s,mb4.5,baz=295,slow=9.3,SNR=3.5						
JOW				LR	LR	08 08 44.3	
	comp=Z,2μm,20.9s,MS4.7,baz=232,slow=34						
LSA	**Lhasa**	**25.31**	**323**	P	**P**	**08 00 06.0**	**+0.1**
LSA				AP	pP	08 00 15.4	+7.5
LSA				XP	sP	08 00 19.8	+11
LSA				PCP	PcP	08 03 33.6	-6.1
LSA				S	**S**	**08 04 31.6**	**+2.1**
LSA				SCP		08 07 11.4	
LSA				PCS		08 07 14.7	
LSA				SCS	ScS	08 11 01.3	-4.1
LSA				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.1						
LSA				AMB	AMB		
	comp=Z,350nm,6.6s						
LSA				LR	LR		
	comp=N,3μm,16.4s,MS5.3						
LSA				LR	LR		
	comp=E,8μm,18.6s,MS5.3						
LSA				LR	LR		
	comp=Z,5μm,18.6s,MS5.0						
LSA	**Lhasa**	**25.31**	**323**	*e*P	**P**	**08 00 07.4**	**+1.6**
	comp=Z,51nm,0.9s,mb5.1						
LSA				LR	LR		
	comp=Z,4μm,19.0s,MS5.0						
LZH	**Lanzhou**	**26.32**	**352**	*e*P	**P**	**08 00 15.0**	**-0.2**
LZH				AP	pP	08 00 21.7	+4.5
LZH				XP	sP	08 00 26.6	+8.5
LZH				PP	PP	08 01 02.0	+4.3
LZH				*e*S	**S**	**08 04 50.4**	**+4.2**
LZH				XS		08 05 00.4	
LZH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.3						
LZH				AMB	AMB		
	comp=Z,460nm,4.6s						
LZH				LR	LR		
	comp=E,14μm,12.0s						
LZH				LR	LR		
	comp=Z,9μm,17.9s						
LZH	**Lanzhou**	**26.32**	**352**	*e*P	**P**	**08 00 15.0**	**-0.2**
	comp=Z,140nm,1.3s,mb5.3						
LZH				pP	pP	08 00 21.7	+4.5
LZH				sP	sP	08 00 26.6	+8.5
LZH				PP	PP	08 01 02.0	+4.3
LZH				*e*S	**S**	**08 04 50.4**	**+4.2**
LZH				sS		08 05 00.4	
LZH				*e*SS	SS	08 06 02.0	+7.5
LZH				LR	LR		
	comp=Z,9μm,17.9s,MS5.3						
JIRN	**Jiri**	**27.22**	**313**	*e*P	**P**	**08 00 24.2**	**+0.7**
	comp=Z,83nm,1.0s,mb5.2						
TIA	**Tai’an**	**27.36**	**16**	P	**P**	**08 00 23.9**	**-0.8**
TIA				S	**S**	**08 05 08.0**	**+4.8**
TIA				LR	LR		
	comp=N,3μm,16.0s,MS5.5						
TIA				LR	LR		
	comp=E,9μm,15.0s,MS5.5						
GUN	**Gumba**	**27.59**	**313**	*e*P	**P**	**08 00 27.6**	**+0.7**
	comp=E,328nm,1.6s,mb5.7						
PKI	**Pulchoki**	**27.73**	**312**	*e*P	**P**	**08 00 28.5**	**+0.3**
	comp=E,103nm,1.2s,mb5.3						
KKN	**Kakani**	**27.95**	**313**	*e*P	**P**	**08 00 30.3**	**+0.1**
	comp=E,106nm,1.3s,mb5.3						
DMN	**Daman**	**27.97**	**312**	*e*P	**P**	**08 00 31.4**	**+1.0**
	comp=E,70nm,1.0s,mb5.2						
GKN	**Gorkha**	**28.54**	**312**	*e*P	**P**	**08 00 35.7**	**+0.2**
	comp=E,163nm,1.2s,mb5.6						
KOLN	**Koldanda**	**29.18**	**311**	*e*P	**P**	**08 00 41.7**	**+0.5**
	comp=E,44nm,0.9s,mb5.2						
HYB	**Hyderabad**	**29.74**	**288**	*i* P	**P**	**08 00 47.0**	**+0.6**
GTA	**Gaotai**	**30.28**	**347**	P	**P**	**08 00 50.4**	**-0.6**
GTA				AP	pP	08 00 54.7	+1.7
GTA				XP	sP	08 00 57.5	+3.6
GTA				PP	PP	08 01 45.7	-4.2
GTA				S	**S**	**08 05 43.7**	**-6.2**
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
GTA				AMB	AMB		
	comp=Z,230nm,5.0s						
GTA				LR	LR		
	comp=N,5μm,19.5s,MS5.5						
GTA				LR	LR		
	comp=E,7μm,14.9s,MS5.5						
GTA				LR	LR		
	comp=Z,3μm,14.5s,MS5.1						
BTO	**Baotou**	**30.57**	**3**	*e*P	**P**	**08 00 52.9**	**-0.6**
BTO				S	**S**	**08 05 50.6**	**-3.8**
BTO				LR	LR		
	comp=N,700nm,5.5s						
BTO				LR	LR		
	comp=E,6μm,12.9s						
HHC	**Hu-ho-hao-te**	**30.92**	**5**	*e*P	**P**	**08 00 56.4**	**-0.1**
HHC				AP	pP	08 00 59.9	+1.3
HHC				XP	sP	08 01 03.5	+4.0
HHC				PP	PP	08 01 57.5	-0.6
HHC				PCP	PcP	08 03 50.2	-3.0
HHC				S	**S**	**08 06 00.8**	**+0.9**
HHC				SCP		08 07 34.3	
HHC				SS	SS	08 07 46.3	+3.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,250nm,4.8s						
HHC				LR	LR		
	comp=N,4μm,15.3s,MS5.5						
HHC				LR	LR		
	comp=E,9μm,17.1s,MS5.5						
HHC				LR	LR		
	comp=Z,4μm,18.0s,MS5.1						
FITZ	**Fitzroy Crossi**	**32.75**	**148**	P	**P**	**08 01 13.0**	**+0.2**
	comp=Z,6.9nm,1.0s,mb4.5,baz=318,slow=16,SNR=3.0						
KAKA	**Kakadu**	**32.94**	**133**	*e*P	**P**	**08 01 31.4**	**+17**
	comp=Z,7.6nm,0.9s,mb4.6						
POO	**Poona**	**34.34**	**288**	*e*x	x	08 01 22.5	
SONA	**Sohna**	**34.44**	**306**	*e*P	**P**	**08 01 27.3**	**-0.1**
SONA				AMb	AMB	08 01 35.8	
	comp=Z,28nm,0.6s,mb5.4						
SNY	**Shenyang**	**34.51**	**20**	⇓P	**P**	**08 01 31.3**	**+3.5**
SNY				S	**S**	**08 06 54.9**	**-0.8**
SNY				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
SNY				LR	LR		
	comp=N,8μm,15.9s,MS5.8						
SNY				LR	LR		
	comp=E,12μm,14.7s,MS5.8						
SNY				LR	LR		
	comp=Z,7μm,14.2s,MS5.6						
AYAN	**Aya Nagar**	**34.51**	**307**	*e*P	**P**	**08 01 27.3**	**-0.7**
AYAN				AMb	AMB	08 01 36.3	
	comp=Z,24nm,0.9s,mb5.2						
NDI	**New Delhi**	**34.53**	**307**	*e*P	**P**	**08 01 27.0**	**-1.1**
KUDL	**Kundal**	**34.87**	**306**	*e*P	**P**	**08 01 30.7**	**-0.4**
KUDL				AMb	AMB	08 01 39.6	
	comp=Z,11nm,1.2s,mb4.7						
KLP	**Kalpa**	**35.11**	**312**	*e*P	**P**	**08 01 34.0**	**+0.9**
KLP				AMb	AMB	08 01 42.8	
	comp=Z,87nm,1.4s,mb5.5						
BOM	**Bombay**	**35.37**	**289**	*e*x	x	08 02 42.8	
BOM				*e*x	x	08 09 47.0	
SDNR	**Sundarnagar**	**36.04**	**311**	*e*P	**P**	**08 01 41.8**	**+0.8**
CN2	**Changchun**	**36.90**	**21**	*e*P	**P**	**08 01 46.9**	**-1.1**
CN2				*e*S	**S**	**08 07 30.8**	**-1.7**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
CN2				AMB	AMB		
	comp=Z,260nm,6.0s						
CN2				LR	LR		
	comp=N,10μm,15.0s,MS5.9						
CN2				LR	LR		
	comp=E,11μm,15.0s,MS5.9						
CN2				LR	LR		
	comp=Z,5μm,14.0s,MS5.5						
SONM	**Songino Array**	**37.79**	**358**	P	**P**	**08 01 56.1**	**+0.6**
	comp=Z,12nm,0.9s,mb4.6,baz=181,slow=8.9,SNR=28						
SONM				LR	LR	08 19 45.9	
	comp=Z,4μm,18.7s,MS5.2,baz=169,slow=40						
MAJO	**Matsushiro**	**37.91**	**41**	*e*P	**P**	**08 01 56.4**	**-0.3**
	comp=Z,34nm,1.1s,mb5.0						
MAJO	**Matsushiro**	**37.91**	**41**	*e*P	**P**	**08 01 56.4**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.0						
MAT	**Matsushiro**	**37.91**	**41**	P	**P**	**08 01 55.2**	**-1.4**
MAT				S	**S**	**08 07 56.0**	**+7.9**
MAT	**Matsushiro**	**37.91**	**41**	*e*P	**P**	**08 01 55.0**	**-1.6**
MAT				*e*S	**S**	**08 07 56.0**	**+7.9**
MAT				LR	LR		
	comp=Z,1μm,20.0s,MS4.8						
MJAR	**Matsushiro Arr**	**37.91**	**41**	P	**P**	**08 01 56.3**	**-0.4**
	comp=Z,14nm,0.9s,mb4.7,baz=234,slow=7.4,SNR=10						
MJAR				LR	LR	08 18 50.5	
	comp=Z,845nm,18.0s,MS4.6,baz=245,slow=38						
WMQ	**Urumqi**	**38.16**	**336**	⇑P	**P**	**08 01 59.5**	**+0.8**
WMQ				AP	pP	08 02 03.7	+2.9
WMQ				XP	sP	08 02 06.5	+4.9
WMQ				PP	PP	08 03 30.3	+1.2
WMQ				PPP	PPP	08 03 52.5	+1.2
WMQ				PCP	PcP	08 04 14.5	+0.5
WMQ				S	**S**	**08 07 52.2**	**+0.3**
WMQ				XS		08 08 00.4	
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,100nm,3.6s						
WMQ				LR	LR		
	comp=N,2μm,20.3s,MS5.2						
WMQ				LR	LR		
	comp=E,3μm,19.5s,MS5.2						
WMQ				LR	LR		
	comp=Z,3μm,18.5s,MS5.1						
MDJ	**Mudanjiang**	**39.16**	**24**	P	**P**	**08 02 06.9**	**-0.1**
MDJ				PCP	PcP	08 04 18.9	+1.8
MDJ				S	**S**	**08 08 09.7**	**+2.7**
MDJ				SCS	ScS	08 12 15.9	+1.1
MDJ				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,240nm,4.7s						
MDJ				LR	LR		
	comp=N,3μm,22.1s,MS5.3						
MDJ				LR	LR		
	comp=E,4μm,22.9s,MS5.3						
MDJ				LR	LR		
	comp=Z,4μm,15.2s						
MDJ	**Mudanjiang**	**39.16**	**24**	*e*P	**P**	**08 02 04.7**	**-2.3**
	comp=Z,72nm,1.2s,mb5.3						
WRA	**Warramunga Arr**	**39.29**	**139**	P	**P**	**08 02 07.8**	**-0.5**
	comp=Z,8.7nm,0.9s,mb4.5,baz=318,slow=9.0,SNR=32						
WRAB	**Tennant Creek**	**39.29**	**139**	*e*P	**P**	**08 02 07.8**	**-0.5**
	comp=Z,66nm,1.2s,mb5.2						
WRAB	**Tennant Creek**	**39.29**	**139**	*c* *i*P	**P**	**08 02 09.1**	**+0.8**
WB2	**Warramunga Arr**	**39.29**	**139**	*e*P	**P**	**08 02 07.8**	**-0.6**
ZAK	**Zakamensk**	**40.52**	**355**	⇓*i*P	**P**	**08 02 18.7**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.0						
ASPA	**Alice Springs**	**41.79**	**143**	*e*P	**P**	**08 02 29.2**	**+0.2**
IRK	**Irkutsk**	**42.29**	**356**	*e*P	**P**	**08 02 30.0**	**-2.7**
IRK				pmax	pmax		
	comp=Z,43nm,1.7s,mb4.8						
ULHL	**Ulahol**	**42.66**	**325**	P	**P**	**08 02 37.0**	**+1.2**
	SNR=6.8						
MKAR	**Makanchi Array**	**42.83**	**334**	P	**P**	**08 02 37.0**	**-0.1**
	comp=Z,11nm,0.8s,mb4.6,baz=137,slow=8.2,SNR=49						
MKAR				LR	LR	08 21 55.0	
	comp=Z,2μm,21.5s,MS4.9,baz=144,slow=38						
MKAR	**Makanchi Array**	**42.83**	**334**	*i* P	**P**	**08 02 36.8**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,28nm,1.1s						
PMG	**Port Moresby**	**43.26**	**115**	P	**P**	**08 02 40.8**	**-0.3**
	comp=Z,4.0nm,0.4s,mb4.5,baz=326,slow=3.6,SNR=4.5						
TKM2	**Tokmak 2**	**43.45**	**325**	P	**P**	**08 02 43.3**	**+1.0**
	SNR=12						
UCH	**Uchtor**	**43.65**	**323**	P	**P**	**08 02 45.4**	**+1.5**
	SNR=8.3						
KBK	**Karagaybulak**	**43.66**	**324**	P	**P**	**08 02 45.0**	**+1.0**
	SNR=6.4						
KLR	**Kul’dur**	**43.80**	**22**	*e*P	**P**	**08 02 44.2**	**-0.8**
KLR				*e*S	**S**	**08 09 15.5**	**0.0**
KLR				*e*SS	SS	08 12 45.0	+21
KLR				MLR	MLR		
	comp=E,2μm,12.5s						
KLR				MLR	MLR		
	comp=Z,18μm,12.5s,MS6.2						
AAK	**Ala-Archa**	**43.91**	**324**	P	**P**	**08 02 47.4**	**+1.4**
	SNR=5.6						
AAK	**Ala-Archa**	**43.91**	**324**	*e*P	**P**	**08 02 46.1**	**+0.1**
	comp=Z,16nm,0.9s,mb4.8						
AAK				LR	LR		
	comp=Z,302nm,20.0s,MS4.2						
AAK	**Ala-Archa**	**43.91**	**324**	*e*P	**P**	**08 02 45.6**	**-0.4**

FRU	**Bishkek**	**43.96**	**324**	*e*P	**P**	**08 02 47.0**	**+0.6**
FRU				*e*		08 02 52.0	
FRU				pmax	pmax		
	comp=Z,40nm,1.6s,mb4.9						
FRU				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.0						
EKS2	**Erkin-Say**	**44.34**	**323**	P	**P**	**08 02 50.6**	**+1.0**
	SNR=9.8						
YSS	**Yuzh-Sakhalins**	**47.08**	**32**	P	**P**	**08 03 12.2**	**+1.0**
	comp=Z,31nm,0.9s,mb5.2						
YSS	**Yuzh-Sakhalins**	**47.08**	**32**	*e*P	**P**	**08 03 15.0**	**+3.8**
YSS				S	**S**	**08 10 17.0**	**+14**
YSS				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
YSS				MLR	MLR		
	comp=E,2µm,15.0s						
YSS				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.3						
KURK	**Kurchatov**	**47.39**	**335**	⇓*i*P	**P**	**08 03 13.2**	**-0.4**
	comp=Z,52nm,1.1s,mb5.4						
KURK	**Kurchatov**	**47.39**	**335**	*d* *i*P	**P**	**08 03 12.8**	**-0.8**
ZAL	**Zalesovo**	**47.71**	**341**	P	**P**	**08 03 15.1**	**-1.0**
	comp=Z,12nm,0.8s,mb5.0,baz=326,slow=7.4,SNR=60						
ZAL				LR	LR	08 24 37.7	
	comp=Z,2µm,18.1s,MS5.0,baz=318,slow=38						
ZAL	**Zalesovo**	**47.71**	**341**	P	**P**	**08 03 15.1**	**-1.0**
ZAL				LR	LR	08 24 37.7	
BOD	**Bodaibo**	**47.97**	**4**	*e*P	**P**	**08 03 17.4**	**-0.7**
BOD				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
CLNS	**Chul'man**	**48.54**	**12**	*e*P	**P**	**08 03 22.1**	**-0.4**
CLNS				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
CLNS				pmax	pmax		
	comp=N,16nm,0.9s						
CLNS				pmax	pmax		
	comp=E,15nm,0.9s						
NVS	**Novosibirsk**	**48.96**	**341**	*i* P	**P**	**08 03 24.0**	**-1.8**
STKA	**Stephens Creek**	**52.43**	**144**	*e*P	**P**	**08 03 52.2**	**-0.3**
	comp=E,9.8nm,1.1s,mb4.7						
STKA	**Stephens Creek**	**52.43**	**144**	P	**P**	**08 03 51.5**	**-1.0**
	comp=E,4.9nm,0.8s,mb4.5,baz=313,slow=7.9,SNR=6.8						
STKA				LR	LR	08 27 21.1	
	comp=E,631nm,18.9s,MS4.7,baz=308,slow=37						
BVA0	**Borovoye Array**	**52.64**	**332**	*i* P	**P**	**08 03 52.8**	**-1.0**
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
BVAR	**Borovoye Array**	**52.64**	**332**	P	**P**	**08 03 52.8**	**-1.0**
	comp=Z,5.5nm,0.9s,mb4.5,baz=135,slow=8.4,SNR=21						
BRVK	**Borovoye**	**52.71**	**332**	*e*P	**P**	**08 03 53.1**	**-1.3**
	comp=Z,13nm,1.0s,mb4.8						
BRVK				LR	LR		
	comp=Z,363nm,21.0s,MS4.4						
CHKZ	**Chkalovo**	**52.97**	**333**	*e*P	**P**	**08 03 55.2**	**-1.0**
	comp=Z,14nm,1.0s,mb4.8						
CHKZ	**Chkalovo**	**52.97**	**333**	*e*P	**P**	**08 03 55.2**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
YAK	**Yakutsk**	**54.29**	**12**	P	**P**	**08 04 06.7**	**+0.9**
	comp=Z,67nm,0.8s,mb5.6						
YAK	**Yakutsk**	**54.29**	**12**	*e*P	**P**	**08 04 04.8**	**-1.0**
YAK				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.3						
YAK				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.3						
AB31	**Akbulak array**	**56.00**	**324**	*i* P	**P**	**08 04 17.5**	**-0.9**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
AKTO	**Aktyubinsk**	**57.64**	**324**	P	**P**	**08 04 29.4**	**-0.7**
	comp=Z,2.1nm,1.0s,mb4.1,baz=121,slow=7.4,SNR=5.0						
ORR	**Orenburg**	**60.01**	**325**	⇑*i*P	**P**	**08 04 46.0**	**-0.6**
ORR				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
ORR				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.2						
ARU	**Arti**	**60.20**	**331**	*e*P	**P**	**08 04 46.8**	**-1.0**
	comp=Z,39nm,1.2s,mb5.3						
ARU	**Arti**	**60.20**	**331**	⇓*i*P	**P**	**08 04 46.5**	**-1.3**
ARU				*e*		08 05 27.8	
ARU				*e*S	**S**	**08 12 57.8**	**-2.3**
ARU				*e*SS	SS	08 16 54.9	-3.4
ARU				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.1						
ARU				MLR	MLR		
	comp=N,200nm,21.0s,MS4.9						
ARU				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.0						
ARU				MLR	MLR		
	comp=E,900nm,20.0s,MS4.9						
SEY	**Seymchan**	**61.58**	**21**	*e*P	**P**	**08 04 54.6**	**-2.5**
TIXI	**Tiksi**	**62.95**	**7**	*e*P	**P**	**08 05 03.3**	**-2.8**
TIXI				*e*S	**S**	**08 13 31.3**	**-3.4**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.5						
GNI	**Garni**	**63.42**	**310**	*e*P	**P**	**08 05 11.0**	**+1.3**
	comp=Z,54nm,1.2s,mb5.5						
GNI	**Garni**	**63.42**	**310**	*d* *i*P	**P**	**08 05 08.3**	**-1.4**
GNI				pmax	pmax		
	comp=Z,13nm,1.3s						
MSL	**Mosul**	**64.16**	**305**	*e*	**P**	**08 05 20.5**	**+5.9**
ZEI	**Tsey**	**64.50**	**313**	*e*P	**P**	**08 05 13.9**	**-2.9**
ZEI				*i*		08 05 47.2	
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
KIV	**Kislovodsk**	**65.58**	**314**	*e*P	**P**	**08 05 24.0**	**+0.3**
	comp=Z,10nm,0.7s,mb5.0						
KIV				LR	LR		
	comp=Z,168nm,20.0s,MS4.2						
KIV	**Kislovodsk**	**65.58**	**314**	*e*P	**P**	**08 05 23.1**	**-0.6**
KIV				*e*		08 05 55.5	
KIV				*e*S	S	08 14 01.6	-6.2
KIV				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.2						
OPO	**Ambohidratompo**	**66.53**	**245**	P	**P**	**08 05 29.7**	**-0.5**
	comp=Z,11nm,1.0s,mb4.9,baz=48,slow=5.8,SNR=14						
BILL	**Bilibino**	**69.20**	**20**	*e*P	**P**	**08 05 42.9**	**-3.1**
	comp=Z,38nm,1.3s,mb5.2						
BILL	**Bilibino**	**69.20**	**20**	⇑*e*P	**P**	**08 05 43.7**	**-2.3**
BILL				pmax	pmax		
	comp=Z,27nm,2.5s,mb4.7						
BILL				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.1						
MOS	**Moscow**	**70.94**	**326**	*e*P	**P**	**08 06 00.8**	**+4.0**
MOS				*e*		08 06 14.7	
MOS				*e*		08 08 38.4	
MOS				MLR	MLR		
	comp=Z,1µm,21.6s,MS5.2						
KLMR	**Klimovskoe**	**71.05**	**331**	*e*P	**P**	**08 05 54.9**	**-2.5**
KLMR				*e*S	S	08 15 08.5	-4.1
KLMR				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.8						
KLMR				smax			
	comp=E,590nm,5.8s						
KLMR				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.4						
OBN	**Obninsk**	**71.42**	**325**	P	**P**	**08 05 59.4**	**-0.4**
	comp=Z,21nm,0.5s,mb5.3						
OBN	**Obninsk**	**71.42**	**325**	⇓*e*P	**P**	**08 05 58.3**	**-1.4**
OBN				pmax	pmax		
	comp=Z,35nm,1.7s,mb5.0						
OBN				MLR	MLR		
	comp=Z,2µm,23.0s,MS5.3						
KMBO	**Kilima Mbogo**	**71.47**	**265**	P	**P**	**08 06 01.1**	**+0.4**
	comp=Z,9.5nm,1.0s,mb4.7,baz=57,slow=8.7,SNR=22						
KMBO				LR	LR	08 37 10.3	
	comp=Z,1µm,18.2s,MS5.2,baz=93,slow=36						
BRTR	**Keskin Array B**	**71.87**	**309**	P	**P**	**08 06 01.8**	**-0.9**
	comp=Z,2.9nm,0.9s,mb4.2,baz=104,slow=5.1,SNR=9.1						
CSS	**Prodhromos**	**72.01**	**304**	*e*P	**P**	**08 06 04.6**	**+0.9**
	comp=Z,13nm,0.8s,mb4.9						
APA	**Apatity**	**75.08**	**337**	⇓*e*P	**P**	**08 06 22.5**	**+1.6**
APA				*i*		08 06 41.7	
APA				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
APA				MLR	MLR		
	comp=Z,2µm,15.0s,MS5.5						
AKASG	**Malin Array Be**	**75.40**	**320**	P	**P**	**08 06 22.0**	**-1.1**
	comp=Z,5.7nm,0.8s,mb4.5,baz=83,slow=5.5,SNR=18						
AKASG	**Malin Array Be**	**75.40**	**320**	*i* P	**P**	**08 06 22.0**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIRR	**Tirgusor**	**75.84**	**313**	⇑P	**P**	**08 06 26.2**	**+0.5**
TIRR	**Tirgusor**	**75.84**	**313**	⇑P	**P**	**08 06 26.2**	**+0.4**
CASY	**Casey**	**76.04**	**179**	P	**P**	**08 06 25.3**	**-1.2**
	comp=Z,37nm,1.3s,mb5.2						
CASY				*e*		08 06 30.7	
MIR	**Mirnyy**	**77.11**	**186**	*c* *i*P	**P**	**08 06 37.4**	**+5.0**
MIR				pmax	pmax		
	comp=Z,43nm,1.4s,mb5.2						
FINES	**FINESS Array B**	**77.57**	**331**	P	**P**	**08 06 34.4**	**-0.6**
	comp=Z,5.1nm,0.9s,mb4.4,baz=45,slow=2.7,SNR=6.2						
FINES				LR	LR	08 42 28.9	
	comp=Z,789nm,20.6s,MS5.0,baz=275,slow=37						
FINES	**FINESS Array B**	**77.57**	**331**	P	**P**	**08 06 34.4**	**-0.6**
FINES				LR	LR	08 42 28.9	
MLR	**Muntele Rosu**	**77.58**	**314**	⇓P	**P**	**08 06 35.8**	**+0.4**
MLR	**Muntele Rosu**	**77.58**	**314**	⇓P	**P**	**08 06 35.8**	**+0.4**
SNX	**Sinaia**	**77.89**	**314**	⇓P	**P**	**08 06 38.1**	**+1.0**
SNX	**Sinaia**	**77.89**	**314**	⇓P	**P**	**08 06 38.1**	**+1.0**
RPZ	**Rata Peaks**	**78.00**	**139**	LR	LR	08 42 02.7	
	comp=Z,762nm,19.7s,MS5.0,baz=214,slow=36						
BURAR	**Bucovina Array**	**78.02**	**317**	⇑P	**P**	**08 06 39.2**	**+1.4**
BURAR	**Bucovina Array**	**78.02**	**317**	⇑P	**P**	**08 06 39.2**	**+1.4**
ARCES	**ARCESS Array B**	**78.19**	**339**	P	**P**	**08 06 38.8**	**+0.5**
	comp=Z,8.2nm,0.9s,mb4.7,baz=63,slow=8.1,SNR=6.5						
ARCES				LR	LR	08 45 08.4	
	comp=Z,1µm,18.3s,MS5.2,baz=337,slow=39						
IDI	**Anoyia**	**78.92**	**304**	P	**P**	**08 06 44.2**	**+1.2**
	comp=Z,16nm,1.0s,mb4.9,baz=46,slow=9.6,SNR=2.3						
KOLS	**Kolonicke sedl**	**79.93**	**318**	*e*P	**P**	**08 06 49.2**	**+1.1**
URZ	**Urewera**	**80.01**	**132**	LR	LR	08 40 54.8	
	comp=Z,202nm,19.3s,MS4.5,baz=50,slow=35						
CRVS	**Cervenica-Dubn**	**80.46**	**318**	*i* P	**P**	**08 06 52.2**	**+1.2**
CRVS				*e*		08 06 58.4	
STHS	**Stebnicka Huta**	**80.57**	**319**	*e*P	**P**	**08 06 49.5**	**-2.0**
KECS	**Kecovo**	**81.14**	**318**	*e*P	**P**	**08 06 54.4**	**-0.2**
KECS				*e*		08 07 00.8	
VYHS	**Vyhne**	**82.23**	**318**	*e*P	**P**	**08 07 00.8**	**+0.6**
AFI	**Afiamalu**	**82.81**	**105**	LR	LR	08 39 23.7	
	comp=Z,207nm,18.6s,MS4.5,baz=26,slow=32						
LSZ	**Lusaka**	**83.13**	**253**	P	**P**	**08 07 06.3**	**+0.7**
	comp=Z,13nm,1.0s,mb4.9,baz=88,slow=4.5,SNR=6.2						
HFS	**Hagfors**	**83.70**	**330**	P	**P**	**08 07 07.0**	**-0.6**
	comp=Z,7.1nm,0.9s,mb4.8,slow=3.0,SNR=5.2						
MAW	**Mawson**	**83.87**	**196**	P	**P**	**08 07 09.5**	**+1.2**
	comp=Z,14nm,1.1s,mb5.0,baz=43,slow=8.0,SNR=6.3						
MAW				LR	LR	08 37 47.0	
	comp=Z,543nm,21.7s,MS4.9,baz=40,slow=31						
NB2	**NORSAR Subarra**	**84.75**	**331**	P	**P**	**08 07 12.4**	**-0.4**
	comp=Z,1.6nm,0.8s,mb4.2,baz=82,slow=4.6						
NOA	**NORSAR Array B**	**84.75**	**331**	P	**P**	**08 07 12.3**	**-0.5**
	comp=Z,3.4nm,0.9s,mb4.5,baz=81,slow=5.0,SNR=4.9						
NOA				LR	LR	08 46 39.3	
	comp=Z,640nm,19.4s,MS5.0,baz=70,slow=37						
PRU	**Pruhonice**	**84.82**	**320**	*e*pP	pP	08 07 20.8	+5.2
TIP	**Timpagrande**	**84.93**	**309**	*e*P	**P**	**08 07 15.9**	**+1.6**
NAO	**NORSAR Subarra**	**84.98**	**331**	P	**P**	**08 07 12.4**	**-1.5**
	comp=Z,1.6nm,0.8s,mb4.2						
GEC2	**GERESS Array S**	**85.55**	**319**	*e*P	**P**	**08 07 18.1**	**+1.0**
	comp=Z,10.0nm,1.2s,mb4.9						
GEC2	**GERESS Array S**	**85.55**	**319**	*e*P	**P**	**08 07 18.1**	**+1.0**
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.9						
GERES	**GERESS Array B**	**85.55**	**319**	P	**P**	**08 07 17.6**	**+0.5**
	comp=Z,2.8nm,0.8s,mb4.5,baz=90,slow=5.3,SNR=14						
GERES				LR	LR	08 50 12.8	
	comp=Z,667nm,18.4s,MS5.1,baz=261,slow=39						
CLL	**Collm**	**85.56**	**321**	P	**P**	**08 07 17.0**	**-0.1**
	comp=Z,logA/T=1.1,mb5.1						
CLL				*i* *SP	sP	08 07 23.7	+3.7
CLL	**Collm**	**85.56**	**321**	*e*P	**P**	**08 07 17.0**	**-0.1**
	comp=Z,21nm,1.6s,mb5.1						
CLL				*i*		08 07 23.7	
CLL				LR	LR		
	comp=Z,1µm,20.5s,MS5.2						
CLL	**Collm**	**85.56**	**321**	*e*P	**P**	**08 07 17.0**	**-0.1**
CLL				*i*		08 07 23.7	
CLL				pmax	pmax		
	comp=Z,21nm,1.6s,mb5.1						
CLL				MLR	MLR		
	comp=Z,1µm,20.5s,MS5.2						
KHC	**Kasperske Hory**	**85.58**	**319**	*e*P	**P**	**08 07 16.0**	**-1.3**
KHC				x	x	08 07 42.5	
KHC	**Kasperske Hory**	**85.58**	**319**	*e*P	**P**	**08 07 16.0**	**-1.3**
KHC				*e*		08 07 42.5	
KHC	**Kasperske Hory**	**85.58**	**319**	*e*P	**P**	**08 07 17.9**	**+0.6**
CEY	**Cerknica**	**85.59**	**316**	*e*P	**P**	**08 07 18.0**	**+0.6**
VOJS	**Vojsko**	**85.92**	**316**	*e*P	**P**	**08 07 19.3**	**+0.3**
CADS	**Cadrg**	**85.98**	**316**	*e*P	**P**	**08 07 19.4**	**0.0**
WET	**Wettzell**	**86.03**	**319**	*e*P	**P**	**08 07 20.4**	**+0.9**
	comp=Z,20nm,1.5s,mb5.1						
WET	**Wettzell**	**86.03**	**319**	*e*P	**P**	**08 07 20.4**	**+0.9**
WET				pmax	pmax		
	comp=Z,20nm,1.5s,mb5.1						
KDAK	**Kodiak Island**	**86.52**	**32**	P	**P**	**08 07 22.6**	**+1.0**
	comp=Z,7.3nm,0.7s,mb5.0,baz=256,slow=4.2,SNR=4.3						
MOX	**Moxa**	**86.55**	**321**	*i* P	**P**	**08 07 22.7**	**+0.7**
	comp=Z,logA/T=1.3,mb5.3						
MOX				L		08 52 36.0	
MOX	**Moxa**	**86.55**	**321**	*e*P	**P**	**08 07 22.7**	**+0.7**
	comp=Z,29nm,1.6s,mb5.3						
MOX				LR	LR		
	comp=Z,900nm,20.0s,MS5.2						
MOX	**Moxa**	**86.55**	**321**	*e*P	**P**	**08 07 22.7**	**+0.7**
MOX				pmax	pmax		
	comp=Z,29nm,1.6s,mb5.3						
MOX				MLR	MLR		
	comp=Z,900nm,20.0s,MS5.2						
COLA	**College**	**86.90**	**25**	P	**P**	**08 07 28.6**	**+5.2**
	comp=Z,4.3nm,0.9s,mb4.7						
COLA	**College**	**86.90**	**25**	*e*P	**P**	**08 07 25.3**	**+1.9**
GRA1	**Grafenberg Arr**	**86.99**	**320**	*e*P	**P**	**08 07 24.5**	**+0.3**
GRA1				LR	LR		
	comp=Z,600nm,20.7s,MS5.0						
GRF	**Grafenberg Arr**	**86.99**	**320**	*e*P	**P**	**08 07 24.5**	**+0.3**
GRF				LR	LR		
	comp=Z,600nm,20.7s,MS5.0						
CLZ	**Clausthal**	**87.07**	**322**	*e*P	**P**	**08 07 25.5**	**+1.0**
	comp=Z,19nm,1.6s,mb5.1						
CLZ	**Clausthal**	**87.07**	**322**	*e*P	**P**	**08 07 25.5**	**+1.0**
CLZ				pmax	pmax		
	comp=Z,19nm,1.6s,mb5.1						
FUR	**Furstenfeldbru**	**87.27**	**318**	*e*P	**P**	**08 07 27.8**	**+2.3**
	comp=Z,21nm,0.4s,mb5.7						
FUR	**Furstenfeldbru**	**87.27**	**318**	*e*P	**P**	**08 07 27.8**	**+2.3**
FUR				pmax	pmax		
	comp=Z,21nm,0.4s,mb5.7						
ILAR	**Eielson Array**	**87.33**	**24**	P	**P**	**08 07 25.6**	**+0.2**
	comp=Z,1.2nm,1.1s,mb4.1,baz=301,slow=4.0,SNR=6.6						
ILAR				LR	LR	08 47 05.0	
	comp=Z,465nm,18.5s,MS4.9,baz=305,slow=36						
LBTB	**Lobatse**	**87.56**	**244**	*e*P	**P**	**08 07 27.5**	**0.0**
	comp=Z,69nm,1.6s,mb5.6						
DAVOX	**Davos**	**88.48**	**317**	P	**P**	**08 07 31.7**	**+0.2**
	comp=Z,3.6nm,0.7s,mb4.7,baz=110,slow=4.7,SNR=4.6						
BOSA	**Boshof**	**88.61**	**241**	LR	LR	08 46 24.4	
	comp=Z,824nm,18.5s,MS5.2,baz=71,slow=35						
INK	**Inuvik**	**90.80**	**19**	P	**P**	**08 07 43.1**	**+1.4**
	comp=Z,1.9nm,1.1s,mb4.3,baz=299,slow=7.2,SNR=3.4						
INK	**Inuvik**	**90.80**	**19**	*e*P	**P**	**08 07 42.6**	**+0.8**
	comp=Z,21nm,1.4s,mb5.3						
SYO	**Syowa Base**	**91.77**	**200**	⇑P	**P**	**08 07 50.6**	**+4.4**
SYO	**Syowa Base**	**91.77**	**200**	⇑*e*P	**P**	**08 07 50.6**	**+4.4**
VNDA	**Vanda**	**92.32**	**170**	*e*P	**P**	**08 07 52.6**	**+4.0**
	comp=Z,4.9nm,1.1s,mb4.8						
SBA	**Scott Base**	**93.37**	**170**	*e*P	**P**	**08 07 57.9**	**+4.5**
	comp=Z,10nm,1.4s,mb5.1						
PPT	**Papeete**	**104.48**	**106**	*e*SS	SS	08 27 53.7	-1.1
PPT				*e*LR	LR	08 43 09.8	
	comp=Z,619nm,31.0s						
TBI	**Tubuai**	**105.11**	**112**	*e*SS	SS	08 27 52.5	-11
TBI				*e*LR	LR	08 43 27.1	
	comp=Z,212nm,28.8s						
SNAA	**Sanae**	**105.95**	**198**	*e*	Px	08 13 17.1	
SNAA	**Sanae**	**105.95**	**198**	⇑*i*PKPdf	PP	08 13 12.1	-4.0
SNAA				*e*	Px	08 13 17.1	
VNA2	**Neumayer--Watz**	**107.59**	**198**	⇑*i*P		08 13 07.5	
VNA2	**Neumayer--Watz**	**107.59**	**198**	*e*	Px	08 13 12.2	
VNA1	**Neumayer--Stat**	**107.96**	**198**	⇑*i*P		08 13 04.3	
VNA1	**Neumayer--Stat**	**107.96**	**198**	*e*	Px	08 13 09.0	
VNA3	**Neumayer Olymp**	**108.15**	**198**	⇑*i*P		08 13 10.9	
VNA3	**Neumayer Olymp**	**108.15**	**198**	*e*	Px	08 13 14.6	
TAOE	**Nuku Hiva Isla**	**112.65**	**95**	*e*LR	LR	08 46 55.2	
	comp=Z,2µm,34.8s						
DUG	**Dugway**	**117.31**	**34**	PKPdf	PKPdf	08 13 25.5	-0.7
DUG				LR	LR		
	comp=Z,430nm,20.0s,MS5.1						
RKT	**Rikitea**	**118.42**	**111**	*e*SS	SS	08 30 43.2	-17
RKT				*e*LR	LR	08 49 37.2	
	comp=Z,363nm,33.5s						
PLCA	**Paso Flores**	**149.32**	**182**	PKPbc	PKPdf	08 14 29.7	+4.6
	comp=Z,8.7nm,1.0s,baz=192,slow=3.1,SNR=9.5						
TRQA	**Tornquist**	**150.66**	**196**	*e*PKPbc	PKPdf	08 14 31.9	+4.7

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*ISK **08** 08:05:29.6, 38.17N×26.66E, h28^{km}, MD3.0*
*ATH **08** 08:05:29.6, 38.19N×27.09E, h39^{km}±2^{km}, MD3.1/3*
*NEIC **08** 08:05:29.6, 38.19N×27.09E, h39^{km}, MD3.1(ATH), MD3.0(ISK), After ATH.*
*CSEM **08** 08:05:31.9±0.1, 38.16N×26.94E, h30^{km}, MD3.0, Error ellipse: s-maj=4.9km s-min=2.4km az=109.0*
ISC 08 08:05:31.1±0.8**, 38.22N**±0.03×**26.61E**±0.05**, h3**^{km}±6^{km}**, n14, σ0^{s}99**/23**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.14**	**354**	*i* P	**Pg**	**08 05 33.6**	**-0.3**
URLA				*i* S	**Sg**	**08 05 36.9**	**+1.0**
BLCB	**Balcova**	**0.38**	**64**	PG	**Pg**	**08 05 38.7**	**0.0**
BLCB				SG	**Sg**	**08 05 44.0**	**+0.3**
IZM	**Izmir**	**0.54**	**71**	PG	**Pg**	**08 05 41.2**	**-0.8**
IZM				SG	**Sg**	**08 05 50.2**	**+1.0**
SMG	**Samos**	**0.54**	**161**	*e*PN	**Pg**	**08 05 41.3**	**-0.7**
SMG				*e*SN	**Sg**	**08 05 49.5**	**+0.3**
KDAG	**Bornova**	**0.55**	**70**	*i* P	**Pg**	**08 05 40.7**	**-1.3**
KDAG				*i* S	**Sg**	**08 05 49.4**	**0.0**
PRK	**Paraskevi**	**1.06**	**345**	*e*PN	**Pn**	**08 05 51.9**	**-0.8**
PRK				*e*SN	**Sn**	**08 06 08.4**	**+0.3**
AKS	**Akhisar**	**1.15**	**55**	*e*PN	**Pn**	**08 05 50.4**	**-3.6**
BODT	**Bodrum**	**1.28**	**154**	*e*PN	**Pn**	**08 05 51.3**	**-4.6**
MLSB	**Milas**	**1.31**	**135**	*e*PN	**Pn**	**08 05 51.3**	**-5.0**
BDRM	**Kayabasi**	**1.33**	**150**	*i* P	**Pb**	**08 05 56.5**	**+0.1**
BDRM				*i* S	**Sb**	**08 06 13.4**	**-0.3**
APE	**Apeiranthos**	**1.44**	**217**	*e*PN	**Pn**	**08 05 58.2**	**+0.1**
MANT	**Manisa**	**1.55**	**79**	*i* P	**Pn**	**08 06 01.0**	**+1.2**
MANT				*i* S	**Sb**	**08 06 20.5**	**+0.4**
BALB	**Balikesir**	**1.73**	**35**	*e*PN	**Pn**	**08 05 59.4**	**-2.9**
SANT	**Santorini**	**2.06**	**207**	*e*Pn	**Pn**	**08 06 09.8**	**+2.7**
SANT				*e*Sn	**Sn**	**08 06 40.3**	**+6.6**

CASC 08 08:13:04.4±1.7**, 12.27N×88.60W, h23**^{km}±24^{km}**, MD4.0, 5C-11D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSM	**San Miguel**	**1.19**	**16**	⇓*e*P	Pn	08 13 32.0	+6.1
VSM				*e*S	Sb	08 13 49.4	+8.2
CNCH	**Conchagua**	**1.25**	**37**	⇑*e*P	Pn	08 13 31.1	+4.4
CNCH				*e*S	Sb	08 13 48.4	+5.6
SNVI	**San Vicente**	**1.35**	**350**	⇓*e*P	Pn	08 13 34.9	+6.7
SNVI				*e*S	Sn	08 13 53.3	+7.7
LFRS	**El Faro**	**1.42**	**342**	⇓*e*P	Pn	08 13 35.6	+6.6
LFRS				*e*S	Sn	08 13 54.5	+7.3
LCBS	**La Ceiba**	**1.42**	**345**	⇑*e*P	Pn	08 13 35.7	+6.5
LCBS				*e*S	Sn	08 13 54.8	+7.4
CRIN	**San Cristobal**	**1.57**	**74**	⇓*e*P	Pn	08 13 32.2	+0.8
BOQS	**Boqueron**	**1.60**	**336**	⇑*e*P	Pn	08 13 39.1	+7.4
BOQS				*e*S	Sn	08 13 59.9	+8.2
LEON	**Leon**	**1.68**	**85**	⇑*e*P	Pn	08 13 32.0	-0.8
TEL3	**Telica 3**	**1.74**	**80**	⇓*e*P	Pn	08 13 33.4	-0.4
TELN	**Telica**	**1.76**	**79**	⇓*e*P	Pn	08 13 33.1	-0.9
MIRN	**Miramar**	**1.86**	**85**	⇑*e*P	Pn	08 13 34.5	-0.8
MIRN				*e*S	Sn	08 13 58.5	+0.1
SNJE	**San Jose**	**1.86**	**328**	⇓*e*P	Pn	08 13 43.0	+7.5
SNJE				*e*S	Sn	08 14 07.3	+8.7
CNGN	**Cerro Negro**	**1.87**	**83**	*e*P	Pn	08 13 33.6	-2.1
RTR	**El Retiro**	**1.91**	**328**	⇓*e*P	Pn	08 13 43.7	+7.6
RTR				*e*S	Sn	08 14 08.1	+8.4
COPN	**Copaltepe**	**1.97**	**92**	⇓*e*P	Pn	08 13 36.1	-0.9
COPN				*e*S	Sn	08 14 02.1	+0.9
MOMJ	**Momotombo**	**2.02**	**86**	⇓*e*P	Pn	08 13 37.1	-0.7
MOMJ				*e*S	Sn	08 14 01.9	-0.7
XAVN	**Gruta Xavier**	**2.23**	**93**	*e*P	Pn	08 13 40.5	-0.3
XAVN				*e*S	Sn	08 14 07.2	-0.7
MGAN	**Managua**	**2.31**	**93**	⇓*e*P	Pn	08 13 40.8	-1.0
TICN	**Ticuantepe**	**2.33**	**96**	*e*P	Pn	08 13 41.8	-0.4
APON	**Apoyo**	**2.51**	**98**	*e*P	Pn	08 13 44.6	-0.1

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*IDC **08** 08:32:28.0±0.7, 6.74S×155.04E, mb4.3/8, mb1 4.4/10, mb1mx4.4/14, mbtmp4.2/10, ML3.8/2, MS4.0/5, Ms1 4.0/5, ms1mx3.5/28, Error ellipse: s-maj=30.5km s-min=19.8km az=108.0*
*BJI **08** 08:32:40.5, 6.90S×155.00E, h100^{km}, mB5.3, mb4.7*
*NEIC **08** 08:32:40.6±0.4, 6.91S×155.01E, h100^{km}, mb4.7/8, Error ellipse: s-maj=9.8km s-min=8.7km az=62.0*
ISC 08 08:32:39.3±2.1**, 6.89S**±0.10×**154.95E**±0.08**, h98**^{km}±21^{km}**, n40, σ0^{s}86**/36**, mb4.6**/24**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.56**	**117**	Pn	**P**	**08 34 00.6**	**-0.3**
	9.1nm,0.3s,baz=265,slow=4.9,SNR=4.8						
HNR				Sn	**S**	**08 35 04.7**	**+0.7**
	3.2nm,0.3s,baz=286,slow=18,SNR=2.7						
HNR				LR	LR	08 35 12.3	
	comp=Z,270nm,18.0s,baz=286,slow=30						
CTA	**Charters Tower**	**15.59**	**212**	*e*P	**P**	**08 36 16.5**	**+1.7**
	5.8nm,0.9s						
CTA	**Charters Tower**	**15.59**	**212**	Pn	**P**	**08 36 11.4**	**-3.4**
	0.2nm,0.3s,baz=36,slow=16,SNR=3.0						
CTA				LR	LR	08 41 36.6	
	comp=Z,520nm,18.4s,baz=49,slow=35						
CTAO	**Charters Tower**	**15.59**	**212**	*e*Pn	**P**	**08 36 16.4**	**+1.6**
	11nm,1.0s						
CTAO				*e*		08 38 02.4	
DZM	**Mont Dzumac**	**18.73**	**145**	P	**P**	**08 36 49.5**	**-3.5**
	0.5nm,0.3s,baz=20,slow=8.9,SNR=5.6						
KAKA	**Kakadu**	**22.91**	**254**	*e*P	**P**	**08 37 54.0**	**+18**
	19nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**23.82**	**235**	*e*P	**P**	**08 37 44.2**	**0.0**
	32nm,1.1s,mb4.6						
WRAB				*e*		08 38 08.7	
WB2	**Warramunga Arr**	**23.82**	**235**	*e*P	**P**	**08 37 43.9**	**-0.4**
WRA	**Warramunga Arr**	**23.83**	**235**	P	**P**	**08 37 43.8**	**-0.6**
	5.2nm,0.7s,mb4.0,baz=60,slow=9.6,SNR=35						
WRA				PcP	PcP	08 41 27.2	+0.5
	0.4nm,0.6s,baz=58,slow=2.2,SNR=8.2						
STKA	**Stephens Creek**	**27.80**	**205**	P	**P**	**08 38 21.4**	**0.0**
	9.6nm,0.9s,mb4.3,baz=26,slow=13,SNR=16						
FITZ	**Fitzroy Crossi**	**30.65**	**246**	LR	LR	08 51 43.0	
	comp=Z,573nm,21.0s,baz=150,slow=38						
AFI	**Afiamalu**	**33.44**	**105**	LR	LR	08 49 59.2	
	comp=Z,231nm,18.6s,baz=325,slow=32						
MBWA	**Marble Bar**	**36.88**	**244**	P	**P**	**08 39 39.4**	**-0.8**
	69nm,2.1s,mb5.2						
NACB	**Ninganchiao**	**44.85**	**315**	P	**P**	**08 40 45.7**	**-0.1**
YHNB	**Yeheng**	**45.32**	**315**	*e*P	**P**	**08 40 47.8**	**-1.7**
QIZ	**Qiongzhong**	**51.37**	**301**	P	**P**	**08 41 31.8**	**-4.6**
	33nm,1.6s,mb5.1						
QIZ				*e*		08 43 29.9	
GYA	**Guiyang**	**57.35**	**307**	P	**P**	**08 42 20.4**	**+0.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
COCO	**West Island**	**57.46**	**260**	P	**P**	**08 42 19.3**	**-1.5**
	comp=Z,157nm,1.0s,mb6.0						
COCO				*e*		08 42 59.3	
KMI	**Kunming**	**59.92**	**304**	P	**P**	**08 42 38.5**	**+0.8**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
KMI	**Kunming**	**59.92**	**304**	P	**P**	**08 42 38.5**	**+0.8**
	comp=Z,10.0nm,1.0s,mb4.8						
HHC	**Hu-ho-hao-te**	**61.98**	**324**	*e*P	**P**	**08 42 51.7**	**+0.3**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,250nm,7.0s						
HHC				LR	LR		
	comp=N,240nm,13.0s						
HHC				LR	LR		
	comp=E,420nm,12.0s						
HHC				LR	LR		
	comp=Z,240nm,11.0s						
SHL	**Shillong**	**69.20**	**301**	*e*x	x	08 43 38.5	
SONM	**Songino Array**	**69.22**	**327**	P	**P**	**08 43 37.1**	**-0.5**
	comp=Z,2.3nm,1.1s,mb3.9,baz=127,slow=6.0,SNR=7.6						
VNDA	**Vanda**	**70.68**	**178**	*e*P	**P**	**08 43 45.6**	**-0.4**
	comp=Z,1.6nm,0.8s,mb3.9						
JIRN	**Jiri**	**74.69**	**301**	*e*P	**P**	**08 44 11.1**	**+0.7**
	comp=Z,12nm,0.6s,mb4.8						

GUN	Gumba	75.02	301	eP	P	08 44 13.3	+1.0
	comp=Z,20nm,0.7s,mb5.0						
PKI	Pulchoki	75.33	301	eP	P	08 44 14.7	+0.6
	comp=Z,13nm,0.8s,mb4.7						
KKN	Kakani	75.50	301	eP	P	08 44 15.7	+0.7
DMN	Daman	75.60	301	eP	P	08 44 16.5	+0.9
	comp=Z,32nm,1.0s,mb5.0						
GKN	Gorkha	76.11	301	eP	P	08 44 18.9	+0.4
	comp=Z,35nm,1.1s,mb5.0						
KOLN	Koldanda	76.93	300	eP	P	08 44 23.4	+0.3
	comp=Z,14nm,0.9s,mb4.7						
COLA	College	83.00	21	P	P	08 44 53.8	-0.9
	comp=Z,5.3nm,0.8s,mb4.4						
MKAR	Makanchi Array	83.30	319	P	P	08 44 56.5	-0.1
	comp=Z,1.2nm,0.7s,mb3.9,baz=100,slow=6.0,SNR=12						
ILAR	Eielson Array	83.30	22	P	P	08 44 54.6	-1.6
	comp=Z,2.0nm,0.9s,mb4.0,baz=255,slow=4.9,SNR=18						
MAW	Mawson	84.47	203	P	P	08 45 03.0	+1.0
	comp=Z,3.7nm,0.8s,mb4.2,baz=95,slow=6.8,SNR=12						
NVAR	Mina Array Bea	91.70	52	P	P	08 45 37.9	+0.7
	comp=Z,0.7nm,0.6s,mb4.0,baz=252,slow=7.8,SNR=5.2						
NVAR				pP	pP	08 45 48.0	-16
	comp=Z,0.7nm,0.7s,baz=252,slow=4.4,SNR=3.3						
NVAR	Mina Array Bea	91.70	52	P	P	08 45 37.9	+0.7
NVAR				pP	pP	08 45 48.0	-16
NEW	Newport	93.71	42	LR	LR	09 24 39.6	
	comp=Z,250nm,18.9s,baz=350,slow=34						
PDAR	Pinedale Array	98.67	48	P	P	08 46 08.7	-0.2
	comp=Z,0.5nm,0.7s,mb4.2,baz=180,slow=1.5,SNR=4.0						
BDFB	Brasilia	148.09	135	PKPbc	PKPdf	08 52 16.1	+5.0
	comp=Z,4.1nm,0.6s,baz=148,slow=0.3,SNR=6.2						

CASC 08 08:32:51.1±1.2**, 12.17N**×**87.08W, h145**^{km}±8^{km}**, MD3.5, 3C-8D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	0.31	36	⇑eP	P	08 33 11.1	-0.5
LEON				eS	S	08 33 26.8	-0.4
MIRN	Miramar	0.45	52	⇓eP	P	08 33 11.6	-0.6
MIRN				eS	S	08 33 28.1	-0.1
TEL3	Telica 3	0.46	29	⇓eP	P	08 33 11.7	-0.5
TEL3				eS	S	08 33 28.2	-0.2
COPN	Copaltepe	0.47	88	⇓eP	P	08 33 11.8	-0.5
COPN				eS	S	08 33 28.1	-0.4
CRIN	San Cristobal	0.53	3	⇓eP	P	08 33 12.5	-0.1
CRIN				eS	S	08 33 28.7	-0.3
MOMJ	Momotombo	0.58	65	⇓eP	P	08 33 12.0	-0.8
MOMJ				eS	S	08 33 29.1	-0.3
XAVN	Gruta Xavier	0.73	91	⇓eP	P	08 33 13.3	-0.4
MGAN	Managua	0.81	91	⇑eP	P	08 33 13.4	-0.7
MGAN				eS	S	08 33 32.6	+0.6
TICN	Ticuantepe	0.83	99	⇓eP	P	08 33 14.3	0.0
WILN	Americas 2	0.87	90	⇑eP	P	08 33 13.9	-0.7
APON	Apoyo	1.02	104	⇓eP	P	08 33 15.5	-0.2

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*IDC **08** 08:47:30.8±2.0, 16.80S×178.22W, mb3.9/5, mb1 4.3/5, mb1mx4.1/13, mbtmp3.9/5, MS4.0/1, Ms1 4.0/1, ms1mx2.9/33, Error ellipse: s-maj=128.3km s-min=28.4km az=156.0*

ISC 08 08:47:31.4±0.9**, 18.6S**±0.3×**177.5W**±0.3**, h33**^{km}**, n8, σ0**^{s}**.72**/7**, mb3.9**/5**, MS4.0**/1**, 2C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	35.40	280	LR	LR	09 04 11.7	
	comp=Z,255nm,20.0s,MS4.0,baz=187,slow=29						
WRA	Warramunga Arr	45.33	260	P	P	08 55 48.7	+0.1
	0.8nm,0.5s,mb3.8,baz=96,slow=7.4,SNR=18						
NVAR	Mina Array Bea	79.34	43	P	P	08 59 36.1	+0.4
	0.6nm,0.7s,mb3.7,baz=217,slow=8.1,SNR=5.4						
TXAR	Lajitas Array	85.66	57	P	P	09 00 09.5	+1.0
	1.3nm,0.8s,mb4.2,baz=221,slow=6.3,SNR=13						
ILAR	Eielson Array	86.37	13	P	P	09 00 05.5	-5.6
	0.3nm,0.4s,mb3.9,baz=222,slow=5.5,SNR=4.9						
PDAR	Pinedale Array	87.28	43	P	P	09 00 14.7	-1.4
	0.7nm,0.7s,mb4.0,baz=228,slow=4.0,SNR=5.0						
VNA3	Neumayer Olymp	90.00	176	⇑i	P	09 00 28.1	-0.3
VNA2	Neumayer--Watz	90.45	177	⇑i	P	09 00 30.6	+0.1

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*NEIC **08** 08:49:23.3±0.6, 34.62N×72.98E, h10^{km}, mb4.1/3, Error ellipse: s-maj=15.0km s-min=5.4km az=48.0*

*IDC **08** 08:49:23.2±1.1, 34.78N×73.09E, mb4.1/8, mb1 4.2/11, mb1mx3.9/24, mbtmp4.1/11, ML3.9/3, MS4.0/2, Ms1 3.9/2, ms1mx3.2/31, Error ellipse: s-maj=30.9km s-min=21.7km az=72.0*

*NDI **08** 08:49:24.8±3.6, 34.69N×72.68E, h10^{km}, MD4.0, ML4.3, mb4.1(NEIC)*

*MOS **08** 08:49:24.4±0.8, 34.78N×72.98E, h20^{km}, mb4.3/9, Error ellipse: s-maj=26.3km s-min=8.7km az=97.7*

*NNC **08** 08:49:32.8±6.7, 35.20N×72.46E, h25^{km}±117^{km}, mpv3.9, Error ellipse: s-maj=93.1km s-min=54.1km az=169.0*

ISC 08 08:49:23.1±0.3**, 34.83N**±0.03×**73.24E**±0.05**, h10**^{km}**, n59, σ1**^{s}**.36**/71**, mb4.1**/10**, MS4.1**/2**, 3C-7D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.17	179	P	Pb	08 49 46.2	+1.3
CEP	Cherat	1.49	228	P	Pn	08 49 48.5	-1.6
THW	Thamme Wali	2.38	212	⇓P	Pn	08 50 04.5	+1.6
THN	Thein Dam	3.16	139	eP	Pn	08 50 18.1	+4.2
THN				ex	x	08 51 02.6	
DLH	Dalhousie	3.22	134	eP	Pn	08 50 19.0	+4.2
DLH				ex	x	08 51 02.0	
SBDP	Sheikh Budin	3.24	220	P	Pn	08 50 15.8	+0.7
DRP	Derazinda	3.99	220	P	Pn	08 50 26.6	+0.8
BHK	Bhakra	4.32	141	ex	x	08 50 50.2	
BHK				ex	x	08 51 28.8	
SDNR	Sundarnagar	4.56	136	eP	Pn	08 50 36.2	+2.4
SDNR				eS	Sn	08 51 28.6	+1.1
SMLA	Simla	4.95	137	eP	Pn	08 50 41.0	+1.7
SMLA				i P		08 50 41.0	
SMLA				eS	Sn	08 51 38.9	+1.6
SMLA				eS	Sn	08 51 39.0	+1.6
	732nm,0.3s						
KLP	Kalpa	5.33	127	eP	Pn	08 50 48.1	+3.4
KLP				eS	Sn	08 51 51.8	+4.8
KLP				AML	AML	08 52 23.5	
	comp=E,490nm,0.6s						
KLP				AML	AML	08 52 23.7	
	comp=N,376nm,0.5s						
NDI	New Delhi	7.00	150	eP	Pn	08 51 11.0	+2.8
NDI				eS	Sn	08 52 24.0	-4.7
AAK	Ala-Archa	7.85	7	⇑Pn	Pn	08 51 23.5	+3.3
	comp=N,4.4nm,0.8s						
AAK				⇓Sn	Sn	08 52 50.4	+0.4
	comp=N,13nm,0.9s						
AAK	Ala-Archa	7.85	7	ePn	Pn	08 51 22.4	+2.2
	comp=N,3.1nm,0.5s						
AAK				eSn	Sn	08 52 51.4	+1.4
KK31	Karatay Array	8.53	346	⇓Pn	P	08 51 30.2	+0.6
	comp=N,1.8nm,0.2s,baz=156,slow=11,SNR=52						
KK31				⇑Sn	Sn	08 53 03.2	-3.7
	comp=N,3.1nm,0.3s,baz=168,slow=23,SNR=11						
KKAR	Karatay Array	8.53	346	eP	P	08 51 30.2	+0.6
KKAR				S	Sn	08 53 03.2	-3.8
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KKAR				smax			
	comp=Z,3.0nm,0.3s						
KOLN	Koldanda	11.31	126	ePn	P	08 52 07.3	-0.5
KOLN				eSn	S	08 54 13.0	-2.3
	comp=Z,71nm,1.0s						
GKN	Gorkha	11.87	122	ePn	P	08 52 14.1	-1.4
GKN				eSn	S	08 54 23.6	-5.4
	comp=Z,41nm,0.6s						
DMN	Daman	12.44	122	ePn	P	08 52 21.8	-1.3
DMN				eSn	S	08 54 36.9	-5.9
	comp=Z,24nm,0.5s						
KKN	Kakani	12.45	121	ePn	P	08 52 21.9	-1.4
KKN				eSn	S	08 54 37.3	-5.8
PKI	Pulchoki	12.67	121	ePn	P	08 52 24.6	-1.7
PKI				eSn	S	08 54 43.2	-5.3
	comp=Z,26nm,0.8s						
GUN	Gumba	12.80	119	ePn	P	08 52 26.8	-1.2
JIRN	Jiri	13.17	119	ePn	P	08 52 31.3	-1.6
JIRN				eSn	S	08 54 53.7	-6.8
	comp=Z,23nm,0.4s						
MK31	Makanchi Array	13.76	27	⇓P	P	08 52 42.6	+2.0
	comp=Z,0.7nm,0.6s,baz=208,slow=13,SNR=5.1						
MKAR	Makanchi Array	13.76	27	Pn	P	08 52 41.7	+1.1
	comp=Z,0.1nm,0.3s,baz=209,slow=12,SNR=6.0						
POO	Poona	16.24	178	ex	x	08 57 13.0	
AB31	Akbulak array	17.44	330	⇑P	P	08 53 26.9	-1.0
	comp=Z,0.6nm,0.3s,baz=145,slow=11,SNR=29						
AB31				⇓S	S	08 56 29.7	-11
	comp=Z,1.5nm,0.7s,baz=147,slow=23,SNR=4.2						
AB31	Akbulak array	17.44	330	eP	P	08 53 26.8	-1.1
BVA0	Borovoye Array	18.30	355	P	P	08 53 38.9	+0.2
	comp=Z,0.2nm,0.8s,baz=167,slow=10,SNR=11						
BVAR	Borovoye Array	18.30	355	P	P	08 53 39.6	+0.9
	comp=Z,0.6nm,0.3s,baz=164,slow=9.8,SNR=11						
BVAR	Borovoye Array	18.30	355	P	P	08 53 39.6	+0.9
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRVK	Borovoye	18.34	354	ePn	P	08 53 40.3	+1.1
	comp=Z,2.6nm,0.8s						
BRVK	Borovoye	18.34	354	eP	P	08 53 40.3	+1.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKTO	Aktyubinsk	19.14	329	⇓P	P	08 53 47.8	-1.1
	comp=Z,0.9nm,0.5s						
AKTO	Aktyubinsk	19.14	329	P	P	08 53 48.2	-0.7
	comp=Z,1.5nm,0.3s,baz=132,slow=9.9,SNR=33						
AKTO	Aktyubinsk	19.14	329	P	P	08 53 48.1	-0.8
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL	Zalesovo	20.76	20	P	P	08 54 05.8	-0.6
	comp=Z,4.7nm,0.6s,baz=246,slow=5.2,SNR=18						
ZAL	Zalesovo	20.76	20	P	P	08 54 05.9	-0.6
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ORR	Orenburg	21.42	327	⇓iP	P	08 54 12.7	-0.5
ORR				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.2						
FINES	FINESS Array B	39.88	327	P	P	08 56 57.9	-0.5
	comp=Z,1.3nm,0.6s,mb3.8,baz=125,slow=9.8,SNR=7.3						
FINES	FINESS Array B	39.88	327	P	P	08 56 57.9	-0.5
FINES	FINESS Array B	39.88	327	P	P	08 56 57.9	-0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MORC	Moravsky Berou	42.83	308	eP	P	08 57 20.0	-2.6
	comp=Z,7.0nm,0.5s,mb4.7						
ARCES	ARCESS Array B	43.38	338	P	P	08 57 27.2	+0.4
	comp=Z,2.3nm,0.6s,mb4.1,baz=117,slow=8.3,SNR=15						
ARCES	ARCESS Array B	43.38	338	P	P	08 57 27.3	+0.4
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS	Hagfors	45.50	323	P	P	08 57 43.2	-0.8
	comp=Z,2.6nm,0.5s,mb4.4,baz=106,slow=11,SNR=11						
HFS	Hagfors	45.50	323	P	P	08 57 43.2	-0.9
HFS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NB2	NORSAR Subarra	46.81	324	P	P	08 57 52.9	-1.5
	comp=Z,0.8nm,0.5s,mb3.9,baz=95,slow=7.9						
NOA	NORSAR Array B	46.81	324	P	P	08 57 53.0	-1.3
	comp=Z,1.1nm,0.6s,mb4.0,baz=96,slow=7.8,SNR=4.7						
NOA	NORSAR Array B	46.81	324	P	P	08 57 53.0	-1.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NAO	NORSAR Subarra	46.98	324	P	P	08 57 52.9	-2.8
	comp=Z,0.8nm,0.5s,mb3.9						
JHJ	Hachijo jima 2	54.27	72	LR	LR	09 24 41.6	
	comp=Z,152nm,20.2s,MS4.1,baz=118,slow=39						
INK	Inuvik	75.25	10	P	P	09 01 08.0	+0.8
	comp=Z,1.3nm,0.8s,mb3.9,baz=0.6,slow=8.8,SNR=8.3						
INK	Inuvik	75.25	10	P	P	09 01 08.0	+0.8
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BOSA	Boshof	77.69	222	P	P	09 01 21.4	-0.3
	comp=Z,3.9nm,0.9s,mb4.3,baz=358,slow=9.0,SNR=3.8						
BOSA				LR	LR	09 35 42.9	
	comp=Z,80nm,19.2s,MS4.1,baz=202,slow=36						
BOSA	Boshof	77.69	222	P	P	09 01 21.5	-0.2
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BOSA				MLR	MLR		
	comp=Z,80nm,19.2s,MS4.1						
WRA	Warramunga Arr	79.55	123	P	P	09 01 32.6	+0.5
	comp=Z,0.5nm,0.5s,mb3.7,baz=322,slow=4.8,SNR=7.9						
WRA	Warramunga Arr	79.55	123	P	P	09 01 32.6	+0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SMCO	Snowmass	106.36	0	ePKP		09 07 50.5	

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*NEIC **08** 09:08:33.5±1.3, 22.61N×120.58E, h10^{km}, Error ellipse: s-maj=28.0km s-min=18.3km az=106.0*

*JMA **08** 09:08:36.3±0.5, 22.72N×120.65E, h103^{km}, M3.5*

*IDC **08** 09:08:41.1±9.1, 22.62N×120.59E, h76^{km}±86^{km}, mb3.3/6, mb1 3.5/6, mb1mx3.4/20, mbtmp3.6/6, Error ellipse: s-maj=37.3km s-min=24.3km az=75.0*

ISC 08 09:08:35.3±1.4**, 22.56N**±0.07×**120.69E**±0.07**, h38**^{km}±13^{km}**, n19, σ0**^{s}**.98**/28**, mb3.4**/5**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	1.81	27	ePn	P	09 09 03.1	-1.4
NACB				eSn	S	09 09 26.7	+0.3
YHNB	Yeheng	2.19	17	ePn	P	09 09 08.6	-1.4
YHNB				eSn	S	09 09 36.2	+0.1
TATO	Taipei	2.51	17	ePn	P	09 09 16.2	+1.7
TATO				eSn	S	09 09 47.6	+3.4
YOJ	Yonaguni jima	2.85	48	P	P	09 09 19.7	+0.3
YOJ				S	S	09 09 53.0	+0.1
HATJ	Hateruma jima	3.23	62	P	P	09 09 25.4	+0.6
HATJ				S	S	09 10 02.0	-0.5
IRIF	Iriomote-Funau	3.31	57	P	P	09 09 26.6	+0.7
IRIF				eS	S	09 10 06.4	+2.0
JKRS	Kuro-shima	3.48	61	P	P	09 09 28.8	+0.5
JKRS				S	S	09 10 09.4	+0.6
JIJ	Ishigaki jima	3.65	60	P	P	09 09 30.4	-0.3
JIJ				S	S	09 10 11.6	-1.4
JTJ	Tarama	4.22	60	P	P	09 09 39.0	+0.1
JTJ				eS	S	09 10 26.2	-1.5
JOGS	Gusukube	4.85	62	P	P	09 09 48.0	+0.3
JKE	Kume jima 2	6.70	55	P	P	09 10 11.6	-2.2
MJAR	Matsushiro Arr	20.60	44	P	P	09 13 14.5	+0.8
	2.1nm,0.6s,baz=232,slow=7.5,SNR=5.7						
MJAR	Matsushiro Arr	20.60	44	P	P	09 13 14.5	+0.8
SONM	Songino Array	27.70	339	P	P	09 14 21.5	-0.4
	0.3nm,0.5s,mb3.1,baz=175,slow=12,SNR=3.3						
MKAR	Makanchi Array	39.20	318	P	P	09 16 00.8	-0.5
	0.3nm,0.7s,mb3.2,baz=120,slow=9.8,SNR=3.8						
MKAR	Makanchi Array	39.20	318	P	P	09 16 00.8	-0.5
WRA	Warramunga Arr	44.30	161	P	P	09 16 44.1	+0.7
	1.0nm,0.9s,mb3.6,baz=343,slow=8.5,SNR=6.3						
ILAR	Eielson Array	70.86	27	P	P	09 19 49.9	+0.1
	0.2nm,0.6s,mb3.2,baz=282,slow=6.4,SNR=4.5						
INK	Inuvik	74.89	22	P	P	09 20 13.0	-0.4
	1.6nm,0.9s,mb4.0,baz=297,slow=5.8,SNR=8.6						

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*NEIC **08** 09:19:12.8±1.2, 6.85S×155.05E, h35^{km}, mb4.2/1, Error ellipse: s-maj=30.2km s-min=12.3km az=105.0*

*IDC **08** 09:19:14.3±5.8, 6.80S×154.99E, h50^{km}±54^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.9/15, mbtmp4.1/9, ML3.4/2, MS3.6/3, Ms1 3.6/3, ms1mx3.2/18, Error ellipse: s-maj=44.7km s-min=23.5km az=104.0*

ISC 08 09:19:16.1±1.9**, 6.8S**±0.1×**154.83E**±0.05**, h70**^{km}±19^{km}**, n19, σ0**^{s}**.96**/20**, mb4.1**/11**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.69	117	P	P	09 20 40.2	+0.5
	16nm,0.3s,baz=195,slow=5.3,SNR=2.5						
HNR				S	S	09 21 45.2	+0.7
	baz=233,slow=13,SNR=3.3						
HNR				LR	LR	09 22 42.2	
	comp=Z,539nm,19.4s,baz=296,slow=37						
PMG	Port Moresby	8.02	251	P	P	09 21 10.3	-1.8
	1.5nm,0.3s,baz=69,slow=14,SNR=4.6						
PMG				S	S	09 22 43.5	+1.4
	1.3nm,0.3s,baz=269,slow=16,SNR=7.1						
CTA	Charters Tower	15.60	211	P	P	09 22 50.5	-2.6
	0.1nm,0.3s,baz=39,slow=14,SNR=2.8						
CTA				LR	LR	09 27 51.6	
	comp=Z,208nm,18.6s,baz=42,slow=33						
CTA	Charters Tower	15.60	211	P	P	09 22 50.5	-2.6
CTA				LR	LR	09 27 51.6	
WRAB	Tennant Creek	23.77	235	eP	P	09 24 23.5	+0.4
	8.0nm,0.9s,mb4.0						
WRA	Warramunga Arr	23.79	235	P	P	09 24 23.2	0.0
	5.7nm,1.0s,mb3.8,baz=60,slow=9.6,SNR=26						
STKA	Stephens Creek	27.82	205	P	P	09 25 00.8	-0.1
	4.3nm,0.8s,mb4.0,baz=24,slow=13,SNR=11						
STKA				LR	LR	09 34 50.5	
	comp=Z,125nm,18.8s,baz=29,slow=34						
SONM	Songino Array	69.10	327	P	P	09 30 16.2	-0.5
	0.8nm,0.6s,mb3.7,baz=139,slow=6.4,SNR=6.0						
JIRN	Jiri	74.56	301	eP	P	09 30 50.5	+0.9
	3.4nm,0.3s,mb4.5						
GUN	Gumba	74.89	301	eP	P	09 30 52.4	+0.9
PKI	Pulchoki	75.20	301	eP	P	09 30 53.4	+0.2
	6.9nm,0.5s,mb4.6						
DMN	Daman	75.47	301	eP	P	09 30 55.5	+0.7
GKN	Gorkha	75.97	301	eP	P	09 30 57.8	+0.2
	17nm,0.9s,mb4.8						
KOLN	Koldanda	76.80	300	eP	P	09 31 02.9	+0.6
ILAR	Eielson Array	83.27	22	P	P	09 31 34.4	-1.7
	1.1nm,0.8s,mb3.8,baz=257,slow=5.2,SNR=13						
MAW	Mawson	84.50	203	P	P	09 31 41.6	-0.5
	1.0nm,0.6s,mb3.8,baz=88,slow=11,SNR=5.8						
INK	Inuvik	89.61	21	P	P	09 32 05.8	-1.0
	0.8nm,0.5s,mb4.1,baz=250,slow=11,SNR=18						
NVAR	Mina Array Bea	91.74	52	P	P	09 32 17.8	+0.4
	0.7nm,0.8s,mb4.0,baz=243,slow=3.8,SNR=3.8						
BDFB	Brasilia	148.22	135	PKPbc	PKPdf	09 38 55.1	+3.5
	4.1nm,0.7s,baz=49,slow=5.3,SNR=4.1						

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*IDC **08** 09:40:22.1±0.8, 12.43N×88.08W, mb4.5/12, mb1 4.6/14, mb1mx4.5/23, mbtmp4.5/14, MS4.5/15, Ms1 4.5/15, ms1mx4.3/26, Error ellipse: s-maj=35.3km s-min=13.2km az=52.0*

*CASC **08** 09:40:26.5±1.8, 12.14N×88.35W, h22^{km}±6^{km}, MD4.8, ML4.6, mb5.0(NEIC)*

*MOS **08** 09:40:26.0±1.4, 12.31N×88.26W, h33^{km}, mb5.1/4, Error ellipse: s-maj=27.1km s-min=13.0km az=110.5*

*BJI **08** 09:40:27.0, 12.30N×88.20W, h37^{km}, mB5.4, Ms5.4, Msz5.1*

*HRVD **08** 09:40:28.0±0.3, 12.03N×88.64W, h18^{km}±1^{km}, MW5.2/49, Centroid moment Tensor Solution. LP body waves: s30,c50;Mantle waves: s49,c84; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.92±.30; M$_{\theta\theta}$-3.35±.20; M$_{\phi\phi}$-0.56±.20; M$_{r\theta}$4.51±.57; M$_{\theta\phi}$1.21±.12; M$_{\phi r}$-2.99±.61; Best double couple: M$_0$6.645×10^{16} NP1:ϕ_s282°,δ19°,λ72°. NP2:ϕ_s121°,δ72°,λ96°. Principal axes: T 6.766, Plg62°, Azm40°; N -.237, Plg6°, Azm299°; P -6.523, Plg27°, Azm206°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 09:40:28.0±0.7, 12.32N×88.16W, h38^{km}±7^{km}, mb5.0/46 Error ellipse: s-maj=8.7km s-min=4.8km az=218.0*

ISC 08 09:40:27.3±0.4**, 12.13N**±0.03×**88.35W**±0.03**, h57**^{km}±3^{km}**, h51**^{km}±4.3^{km}**:pP-P, n180, σ1**^{s}**.10**/177**, mb4.8**/58**, MS4.6**/22**, 22C-11D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	1.25	24	eP	P	09 40 49.0	+0.1
CNCH				eS	S	09 41 07.3	+2.4
VSM	San Miguel	1.29	3	⇑eP	P	09 40 50.0	+0.4
CRIN	San Cristobal	1.39	66	⇑eP	P	09 40 50.8	-0.3
CRIN				eS	S	09 41 08.8	+0.3
LEON	Leon	1.45	79	⇑eP	P	09 40 50.5	-1.4
TEL3	Telica 3	1.53	73	⇑eP	P	09 40 52.0	-1.0
SNVI	San Vicente	1.55	342	eP	P	09 40 52.8	-0.4
SNVI				eS	S	09 41 12.8	+0.4
TELN	Telica	1.56	72	eP	P	09 40 52.9	-0.4
TELN				eS	S	09 41 13.0	+0.5
MIRN	Miramar	1.63	79	⇓eP	P	09 40 53.1	-1.2
MIRN				eS	S	09 41 14.4	+0.1
LCBS	La Ceiba	1.64	338	⇑eP	P	09 40 53.7	-0.6
CAHU	Cacacuatique	1.64	5	eP	P	09 40 55.2	+0.8
LFRS	El Faro	1.64	335	⇑eP	P	09 40 53.8	-0.7
CNGN	Cerro Negro	1.65	77	⇓eP	P	09 40 53.8	-0.9
CNGN				eS	S	09 41 16.1	+1.3
COPN	Copaltepe	1.72	88	⇓eP	P	09 40 54.6	-0.9
COPN				eS	S	09 41 17.6	+1.3
LBRS	Las Brisas	1.74	337	⇑eP	P	09 40 55.7	-0.1
LBRS				eS	S	09 41 17.1	+0.3
MOMJ	Momotombo	1.79	81	⇑eP	P	09 40 55.5	-1.0
MOMJ				eS	S	09 41 19.4	+1.3
BOQS	Boqueron	1.83	330	eP	P	09 40 56.7	-0.4
BOQS				eS	S	09 41 19.6	+0.4
XAVN	Gruta Xavier	1.98	89	⇓eP	P	09 40 58.9	-0.2
XAVN				eS	S	09 41 24.3	+1.6
MGAN	Managua	2.06	89	⇑eP	P	09 40 59.4	-0.9
MGAN				eS	S	09 41 25.8	+1.2
	comp=N,1μm,0.5s						
TICN	Ticuantepe	2.07	92	eP	P	09 40 59.9	-0.6
TICN				eS	S	09 41 27.0	+1.9
SBLS	San Blas	2.10	324	eP	P	09 41 00.8	-0.2
WILN	Americas 2	2.11	89	⇑eP	P	09 41 00.1	-1.0
RTR	El Retiro	2.16	324	⇑eP	P	09 41 01.8	+0.1
APON	Apoyo	2.24	95	⇓eP	P	09 41 02.1	-0.8
PYTN	Playitas	2.27	80	⇑eP	P	09 41 02.3	-1.1
PYTN				eS	S	09 41 29.2	-1.0
MTO2	Montecristo 2	2.46	337	eP	P	09 41 06.3	+0.3
MTO2				eS	S	09 41 35.9	+0.9
SSNN	San Juan del S	2.59	109	eP	P	09 41 07.9	+0.1
SSNN				eS	S	09 41 40.7	+2.6
CONN	Concepcion	2.73	102	⇓eP	P	09 41 08.9	-0.8
MADN	Villa Maderas	2.85	104	⇓eP	P	09 41 12.4	+0.9
MADN				eS	S	09 41 44.9	+0.2
IXG	Ixpaco	2.89	315	eP	P	09 41 09.8	-2.2
IXG				AML	AML	09 41 45.3	
	comp=E,20μm,0.4s						
IXG				eS	S	09 41 47.1	+1.4
MRL	Marmol	3.20	336	⇑eP	P	09 41 15.3	-1.1
MRL				eS	S	09 41 55.4	+1.9
JTS	JuntasAbangare	3.80	118	Pn	P	09 41 23.0	-1.9
	comp=E,7.1nm,0.3s,baz=316,slow=18,SNR=14						
JTS				Lg		09 42 34.7	
	comp=E,28nm,0.3s,baz=298,slow=19,SNR=5.7						
JTS				LR	LR	09 43 04.6	
	comp=E,4μm,21.5s,baz=180,slow=44						
JTS	JuntasAbangare	3.80	118	ePn	P	09 41 24.3	-0.6
JTS	JuntasAbangare	3.80	118	d iP	P	09 41 24.4	-0.5
CGA2	Cerro Gallo 2	4.35	118	⇓eP	P	09 41 33.3	+0.6
PRS1	Puriscal	4.50	118	eP	P	09 41 35.0	+0.3
LAJ	Bijagual	4.72	118	eP	P	09 41 32.6	-5.2
SJS	Escuela Geolog	4.75	117	eP	P	09 41 37.9	-0.3
SJS				eS	S	09 42 32.2	-0.3
LCR2	La Lucha 2	4.88	119	⇑eP	P	09 41 40.0	0.0
BUS	Buena Vista	5.18	119	⇑eP	P	09 41 44.4	+0.1
BUS				eS	S	09 42 44.6	+1.2
CCIG	Comitan	5.53	319	i P	P	09 41 48.0	-1.0
CMIG	Matias Romero	8.02	309	i P	P	09 42 17.5	-6.1
OXX	Oaxaca	9.48	302	eP	P	09 42 42.0	-1.7
VHO	Vista Hermosa	9.48	302	i P	P	09 42 42.7	-1.1
SOR	Soroa	11.76	25	eP	P	09 43 15.5	+0.8
	baz=209						
	comp=E,1μm,2.3s						
PPM	Popocatepetl	12.06	306	i P	P	09 43 17.9	-0.9
PLIG	Platanillo	12.43	301	i P	P	09 43 23.7	0.0
MOIG	Morelia	14.44	303	i P	P	09 43 50.1	-0.1
ROSC	El Rosal	15.63	116	Pn	P	09 44 06.8	+1.3
	comp=E,1.3nm,0.3s,baz=266,slow=19,SNR=2.9						
ROSC				LR	LR	09 51 02.0	
	comp=E,726nm,18.6s,baz=352,slow=41						
SFJM	Santa Fe	16.36	302	eP	P	09 44 16.0	+1.3
ZAIG	Zacatecas	17.19	310	i P	P	09 44 25.7	+0.6
SDV	Santo Domingo	17.71	99	P	P	09 44 29.3	-2.4
	comp=E,0.7nm,0.3s,baz=300,slow=9.3,SNR=8.9						
LRAL	Lakeview Retre	20.84	3	eP	P	09 45 06.1	-0.6
	comp=E,74nm,1.3s						
JCT	Junction City	21.12	332	⇑eP	P	09 45 08.0	-1.4
	comp=E,166nm,1.2s,mb5.2						
JCT				LR	LR		
	comp=Z,395nm,20.0s,MS3.8						
GOGA	Godfrey	21.65	11	⇑eP	P	09 45 14.4	-0.3
	comp=Z,80nm,1.2s,mb5.0						
GOGA	Godfrey	21.65	11	⇑eP	P	09 45 14.4	-0.3
GOGA				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.0						
NHSC	New Hope	22.18	18	P	P	09 45 19.8	-0.1
	comp=Z,79nm,1.1s,mb5.1						
SJG	San Juan	22.23	72	PFAKE		09 45 30.0	+9.5
SJG				LR	LR		
	comp=Z,2μm,21.0s,MS4.5						
TXAR	Lajitas Array	22.28	323	P	P	09 45 21.4	+0.5
	comp=Z,16nm,0.8s,mb4.5,baz=146,slow=9.9,SNR=139						

TXAR				PcP	PcP	09 49 15.7	-0.7
	comp=Z,2.1nm,1.0s,baz=135,slow=3.5,SNR=3.7						
TXAR				ScP		09 52 57.8	
	comp=Z,1.3nm,0.9s,baz=151,slow=4.5,SNR=8.8						
TXAR				LR	LR	09 53 33.5	
	comp=Z,144nm,21.3s,MS3.4,baz=110,slow=36						
TXAR	Lajitas Array	22.28	323	P	P	09 45 21.4	+0.5
TXAR				PcP	PcP	09 49 15.7	-0.7
TXAR				ScP		09 52 57.8	
TXAR				LR	LR	09 53 33.5	
OXF	Oxford	22.30	358⇑	eP	P	09 45 20.4	-0.7
	comp=Z,105nm,1.3s,mb5.1						
OXF				e		09 45 37.6	
OXF	Oxford	22.30	358⇑	eP	P	09 45 20.4	-0.7
OXF				pmax	pmax		
	comp=Z,105nm,1.3s,mb5.1						
MIAR	Mount Ida	22.82	349⇑	eP	P	09 45 26.4	+0.2
	comp=Z,41nm,1.1s,mb4.8						
UALR	University of	22.83	352⇑	eP	P	09 45 26.8	+0.4
	comp=Z,59nm,1.0s,mb5.0						
JSC	Jenkinsville	22.98	15	eP	P	09 45 28.1	+0.3
SWET	Sewanee	23.09	5	eP	P	09 45 27.5	-1.4
HBAR	Harrisburg	23.41	355	eP	P	09 45 32.5	+0.5
HBAR				e		09 45 49.3	
CPCT	Cooper Cave	23.47	8	eP	P	09 45 32.6	+0.1
HALT	Halls	23.69	358	eP	P	09 45 34.4	-0.3
WVT	Waverly	23.90	1	eP	P	09 45 36.6	0.0
	comp=Z,39nm,1.4s,mb4.6						
GLAT	Glass	24.05	358	eP	P	09 45 37.9	-0.3
WMOK	Wichita Mounta	24.42	339	eP	P	09 45 41.6	-0.2
	comp=Z,46nm,1.0s,mb4.9						
PARMO	Parma	24.46	357	eP	P	09 45 41.9	-0.3
PARMO				S	S	09 49 44.1	-11
TZTN	Tazewell	24.69	9	eP	P	09 45 43.7	-0.7
GDL2	Guadalupe Moun	24.82	326	eP	P	09 45 46.8	+1.1
MNTX	Cornudas Mount	25.01	324	eP	P	09 45 46.9	-0.6
	comp=Z,90nm,1.6s,mb5.0						
CPRX	Cap Rock	25.20	328	eP	P	09 45 49.0	-0.3
ELN	Prospectdale	25.91	14	P	P	09 45 55.5	-0.3
CCM	Cathedral Cave	25.95	355	eP	P	09 45 54.5	-1.7
	comp=Z,90nm,1.3s,mb5.1						
BLA	Blacksburg	25.97	15	eP	P	09 45 55.6	-0.8
	comp=Z,79nm,1.4s,mb5.0						
BLA				e	pP	09 46 08.4	-2.0
BLA	Blacksburg	25.97	15	eP	P	09 45 55.6	-0.8
BLA				pmax	pmax		
	comp=Z,79nm,1.4s,mb5.0						
WCI	Wyandotte Cave	26.05	4	eP	P	09 45 55.7	-1.5
	comp=Z,16nm,0.8s,mb4.6						
FWV	Forest Hill	26.23	14	eP	P	09 45 57.8	-1.1
SLM	Saint Louis	26.45	357	P	P	09 45 59.0	-1.8
LPM	Los Pinos Moun	27.65	326	eP	P	09 46 13.9	+2.0
LPM				e	pP	09 46 26.5	+0.5
LENM	Lemitar	27.73	325	eP	P	09 46 14.9	+2.2
LENM				e		09 46 23.0	
LENM				e	pP	09 46 28.1	+1.3
KSU1	Kansas State U	27.85	346	eP	P	09 46 11.8	-1.8
ANMO	Albuquerque	28.04	327	P	P	09 46 16.1	+0.7
	comp=Z,4.0nm,0.9s,mb4.0,baz=150,slow=11,SNR=11						
ANMO	Albuquerque	28.04	327	eP	P	09 46 16.7	+1.3
	comp=Z,15nm,1.3s,mb4.5						
ANMO	Albuquerque	28.04	327d	iP	P	09 46 18.1	+2.7
ACSO	Alum Creek Sta	28.39	9	eP	P	09 46 16.4	-2.0
	comp=Z,8.0nm,0.9s,mb4.3						
CBKS	Cedar Bluff	28.44	341	eP	P	09 46 18.0	-0.9
	comp=Z,68nm,1.3s,mb5.1						
CBKS				e		09 46 56.3	
TUC	Tucson	28.78	318	eP	P	09 46 23.6	+1.7
	comp=Z,19nm,1.4s,mb4.6						
MVL	Millersville	29.71	19	eP	P	09 46 27.3	-3.0
MVL				e	pP	09 46 42.9	-1.7
SDCO	Great Sand Dun	29.77	332	eP	P	09 46 31.6	+0.8
	comp=Z,33nm,1.0s,mb5.0						
WUAZ	Wupatki	31.24	322	eP	P	09 46 44.8	+1.0
	comp=Z,13nm,1.1s,mb4.7						
ISCO	Idaho Springs	31.51	334	eP	P	09 46 46.6	+0.5
	comp=Z,22nm,1.0s,mb4.9						
SAML	Samuel	32.62	129	eP	P	09 46 55.4	-0.7
	comp=Z,13nm,0.8s,mb4.9						
PHWY	Pilot Hill	32.70	336	eP	P	09 46 56.8	+0.3
BAR	Barrett	33.05	313	P	P	09 47 00.1	+0.5
SRU	San Rafael	33.31	328	eP	P	09 47 01.8	0.0
	comp=Z,13nm,1.0s,mb4.8						
SRU				e	pP	09 47 12.2	-4.1
SADO	Sadowa	33.47	12	P	P	09 47 00.5	-2.6
	comp=Z,12nm,0.8s,mb4.9,baz=200,slow=7.2,SNR=8.9						
SADO	Sadowa	33.47	12	P	P	09 47 00.5	-2.6
NEN	Nelson	33.49	319	eP	P	09 47 04.2	+0.8
RWWY	Rawlins	33.75	334	eP	P	09 47 06.3	+0.7
	comp=Z,49nm,1.0s,mb5.4						
NCB	Newcomb	33.98	18	eP	P	09 47 04.6	-2.9
	comp=Z,34nm,1.5s,mb5.0						
ARUT	Antelope Range	33.99	323	eP	P	09 47 09.0	+1.3
MPU	Maple Canyon	34.55	328	eP	P	09 47 13.1	+0.6
	comp=Z,21nm,1.1s,mb5.0						
LPAZ	La Paz	34.60	144	P	P	09 47 14.7	+1.6
	comp=Z,1.3nm,0.9s,mb3.9,baz=304,slow=14,SNR=2.4						
LPAZ	La Paz	34.60	144	P	P	09 47 14.7	+1.6
LPAZ				LR	LR		
	comp=Z,491nm,19.0s,MS4.3						
RSSD	Black Hills	34.62	340	eP	P	09 47 13.2	+0.2
	comp=Z,48nm,1.6s,mb5.2						
DAU	Daniels Canyon	34.65	328	eP	P	09 47 15.1	+1.9
DAU				e		09 48 34.9	
TCUT	Toone Canyon	35.25	329	eP	P	09 47 20.1	+1.7
DUG	Dugway	35.31	327	eP	P	09 47 19.5	+0.6
	comp=Z,4.8nm,0.9s,mb4.4						
PDAR	Pinedale Array	35.65	333	P	P	09 47 20.8	-1.0
	comp=Z,3.8nm,1.1s,mb4.2,baz=127,slow=7.4,SNR=14						
PDAR				PcP	PcP	09 49 48.7	-0.9
	comp=Z,1.9nm,0.8s,baz=138,slow=4.6,SNR=5.4						
PDAR				LR	LR	10 06 11.3	
	comp=Z,537nm,18.7s,MS4.3,baz=144,slow=44						
HWUT	Hardware Ranch	35.70	330	eP	P	09 47 22.3	+0.1
	comp=Z,30nm,1.4s,mb5.0						
EYMN	Ely	35.80	356	eP	P	09 47 20.6	-2.4
	comp=Z,8.9nm,0.8s,mb4.8						
AHID	Auburn Hatcher	36.35	331	eP	P	09 47 30.0	+2.3
	comp=Z,20nm,0.9s,mb5.0						
HVU	Hansel Valley	36.43	329	eP	P	09 47 37.2	+8.8
	comp=Z,7.3nm,1.0s,mb4.6						
REDW	Red Top Meadow	36.70	332	eP	P	09 47 31.1	+0.5
	comp=Z,58nm,1.0s,mb5.4						
SNOW	Snow King Moun	36.73	332	eP	P	09 47 31.6	+0.7
	comp=Z,84nm,1.0s,mb5.5						
TPAW	Teton Pass	36.84	332	eP	P	09 47 33.2	+1.3
	comp=Z,52nm,1.1s,mb5.3						
TPAW				e		09 47 42.1	
RRI2	Red Ridge	36.90	332	eP	P	09 47 32.4	+0.1
	comp=Z,36nm,1.2s,mb5.1						
ELK	Elko	37.02	325	eP	P	09 47 34.5	+1.2
	comp=Z,13nm,1.3s,mb4.6						
ELK				ePcP	PcP	09 49 55.8	+2.1
ELK				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
IMW	Indian Meadow	37.16	333	eP	P	09 47 35.0	+0.5
	comp=Z,15nm,0.9s,mb4.8						
MNV	Mina	37.28	320	eP	P	09 47 39.0	+3.4
	comp=Z,16nm,1.4s,mb4.6						
NVAR	Mina Array Bea	37.37	320	P	P	09 47 36.9	+0.6
	comp=Z,1.4nm,0.8s,mb3.9,baz=117,slow=7.8,SNR=9.4						
NVAR				PcP	PcP	09 49 56.4	+1.6
	comp=Z,2.4nm,0.8s,baz=125,slow=5.0,SNR=7.3						
NVAR				ScP		09 53 45.4	
	comp=Z,1.7nm,1.0s,baz=139,slow=4.9,SNR=5.8						
NVAR				LR	LR	10 06 18.1	
	comp=Z,1µm,18.4s,MS4.7,baz=115,slow=42						
NVAR	Mina Array Bea	37.37	320	P	P	09 47 36.9	+0.6
NVAR				PcP	PcP	09 49 56.4	+1.6
NVAR				ScP		09 53 45.4	
NVAR				LR	LR	10 06 18.1	
YFT	Old Faithful	37.55	333	eP	P	09 47 40.2	+2.5
YFT				e	pP	09 47 52.8	+0.4
YFT				e	pP	09 47 59.6	+7.2
YMR	Madison River	37.77	333	eP	P	09 47 37.5	-2.0
	comp=Z,53nm,1.0s,mb5.2						
GCMT	Greycliff	38.13	336	eP	P	09 47 42.9	+0.4
ULM	Lac du Bonnet	38.51	352	P	P	09 47 42.9	-2.8
	comp=Z,21nm,0.7s,mb5.0,baz=168,slow=8.9,SNR=43						
ULM				LR	LR	10 04 45.2	
	comp=Z,575nm,22.0s,MS4.3,baz=28,slow=38						
DGMT	Dagmar	38.56	343	eP	P	09 47 45.9	-0.2
	comp=Z,48nm,0.9s,mb5.2						
MCMT	McKenzie Canyo	38.74	332	eP	P	09 47 48.6	+1.0
BOZ	Bozeman (W)	38.83	334	eP	P	09 47 48.8	+0.4
	comp=Z,22nm,0.9s,mb4.9						
SIV	San Ignacio	38.84	135	P	P	09 47 49.0	+0.3
	comp=Z,15nm,1.0s,mb4.7,baz=310,slow=8.5,SNR=35						
DLMT	Dillon	39.04	333	eP	P	09 47 51.0	+0.9
	comp=Z,21nm,0.9s,mb4.9						
HRY	Holter Researc	39.76	335	eP	P	09 47 56.5	+0.5
WVOR	Wild Horse Val	40.05	325	eP	P	09 47 59.0	+0.6
	comp=Z,5.2nm,0.8s,mb4.3						
WVOR				ePcP	PcP	09 50 06.4	+3.3
CHMT	Chamberlain Mo	40.53	334	eP	P	09 48 02.8	+0.4
MSO	Missoula	40.76	333	ePcP	PcP	09 50 07.4	+2.0
	comp=Z,20nm,1.1s						
FFC	Flin Flon	43.83	349	eP	P	09 48 27.7	-1.7
	comp=Z,51nm,1.5s,mb5.0						
EDM	Edmonton	45.59	339	eP	P	09 48 42.3	-1.2
EDM				ePcP	PcP	09 50 21.6	0.0
SCHQ	Schefferville	45.84	17	P	P	09 48 42.9	-2.5
	comp=Z,19nm,0.9s,mb5.0,baz=215,slow=6.6,SNR=9.3						
SCHQ				LR	LR	10 09 26.1	
	comp=Z,1µm,18.8s,MS5.0,baz=180,slow=38						
SCHQ	Schefferville	45.84	17	P	P	09 48 42.9	-2.5
SCHQ				LR	LR	10 09 26.1	
BDFB	Brasilia	48.53	124	P	P	09 49 06.9	0.0
	comp=Z,4.6nm,0.6s,mb4.7,baz=282,slow=7.3,SNR=4.6						
BDFB				LR	LR	10 11 25.1	
	comp=Z,2µm,19.5s,MS5.0,baz=299,slow=38						
BAO	Brasilia Array	48.54	124	P	P	09 49 07.0	-0.1
YKA	Yellowknife Ar	53.69	345	P	P	09 49 43.5	-1.9
	comp=Z,6.3nm,0.8s,mb4.6,baz=139,slow=7.3,SNR=11						
YKA				LR	LR	10 14 36.6	
	comp=Z,483nm,21.5s,MS4.5,baz=120,slow=38						
YKA	Yellowknife Ar	53.69	345	P	P	09 49 43.5	-1.9
YKA				LR	LR	10 14 36.6	
PLCA	Paso Flores	55.12	164	LR	LR	10 08 08.3	
	comp=Z,224nm,20.4s,MS4.2,baz=17,slow=30						
DLBC	Dease Lake	55.82	335	eP	P	09 50 01.3	+0.4
INK	Inuvik	63.25	343	LR	LR	10 24 55.7	
	comp=Z,1µm,18.4s,MS5.0,baz=256,slow=42						
INK	Inuvik	63.25	343	eP	P	09 50 50.2	-1.8
	comp=Z,29nm,1.4s,mb5.2						
ILAR	Eielson Array	65.96	336	P	P	09 51 07.5	-1.9
	comp=Z,5.0nm,1.0s,mb4.5,baz=128,slow=3.9,SNR=15						
ILAR				PP	PP	09 53 32.1	-5.3
	comp=Z,0.8nm,1.0s,baz=135,slow=5.1,SNR=3.8						
ILAR	Eielson Array	65.96	336	P	P	09 51 07.8	-1.7
ILAR				PP	PP	09 53 32.2	-5.2
COLA	College	66.38	336	eP	P	09 51 11.6	-0.5
TBI	Tubuai	69.39	239	eS		10 01 29.5	
TBI				eLR	LR	10 08 39.9	
	comp=Z,3µm,27.2s,baz=122						
NOA	NORSAR Array B	84.07	29	LR	LR	10 29 23.7	
	comp=Z,188nm,18.4s,MS4.5,baz=275,slow=35						
BILL	Bilibino	84.50	339⇓	eP	P	09 52 55.8	+0.9
BILL				eSS	SS	10 08 58.0	+8.2
BILL				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.0						
ARCES	ARCESS Array B	86.77	19	LR	LR	10 30 06.7	
	comp=Z,186nm,19.9s,MS4.5,baz=128,slow=34						
GERES	GERESS Array B	88.75	40	LR	LR	10 28 08.2	
	comp=Z,382nm,20.0s,MS4.8,baz=94,slow=32						
FINES	FINESS Array B	90.64	26	LR	LR	10 34 54.9	
	comp=Z,211nm,19.2s,MS4.6,baz=45,slow=36						
SEY	Seymchan	91.90	336	eP	P	09 53 33.1	+2.7
TIXI	Tiksi	92.79	349	eP	P	09 53 34.6	+0.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.6						
OBN	Obninsk	98.67	28	eP	P	09 54 02.2	+0.8
OBN				e		09 57 58.1	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb5.5						
SNAA	Sanae	100.01	161	eP	P	09 54 09.2	+2.1
CN2	Changchun	116.39	333	ePKP	PKPdf	09 59 09.8	+5.0
SONM	Songino Array	118.88	349	PKP	PKPdf	09 59 12.3	+2.8
	comp=Z,0.9nm,0.9s,baz=27,slow=3.3,SNR=6.1						
HHC	Hu-ho-hao-te	124.16	342	ePKP	PKPdf	09 59 19.6	-0.3
HHC				XPKP		09 59 33.4	
HHC				PP	PP	10 01 10.4	+0.5
HHC				PKS	PKS	10 02 53.4	-2.3
HHC				SKS	SKS	10 06 27.8	+12
HHC				LR	LR		
	comp=N,380nm,18.0s,MS5.3						
HHC				LR	LR		
	comp=E,380nm,15.6s,MS5.3						
HHC				LR	LR		
	comp=Z,580nm,18.0s,MS5.3						
WMQ	Urumqi	124.20	3	PKP	PKPdf	09 59 22.1	+2.2
WMQ				PP	PP	10 01 12.1	+2.0
WMQ				PP	PP		
	comp=Z,230nm,5.4s						
WMQ				LR	LR		
	comp=N,320nm,26.8s,MS5.0						
WMQ				LR	LR		
	comp=E,330nm,22.8s,MS5.0						
WMQ				LR	LR		
	comp=Z,420nm,23.8s,MS5.0						
GTA	Gaotai	128.17	352	PKP	PKPdf	09 59 31.2	+3.5
GTA				PP	PP	10 01 35.5	-0.7
GTA				PKS	PKS	10 03 06.6	+3.3
GTA				SKS	SKS	10 06 38.1	+10
GTA				SKKS		10 08 23.3	
GTA				PP	PP		
	comp=Z,30nm,6.1s						
GTA				LR	LR		
	comp=N,230nm,17.6s,MS5.1						
GTA				LR	LR		
	comp=E,290nm,17.6s,MS5.1						
GTA				LR	LR		
	comp=Z,320nm,20.2s,MS5.0						
SSE	Sheshan	128.51	327	PKP	PKPdf	09 59 25.4	-3.2
SSE				PP	PP	10 01 35.3	-3.5
SSE				PP	PP		
	comp=Z,100nm,5.9s						
SSE				LR	LR		
	comp=N,230nm,23.4s,MS5.0						
SSE				LR	LR		
	comp=E,290nm,23.4s,MS5.0						
SSE				LR	LR		
	comp=Z,400nm,22.4s,MS5.0						
NJ2	Nanjing	128.93	330	ePKP	PKPdf	09 59 26.7	-2.7
LZH	Lanzhou	130.68	347	ePKP	PKPdf	09 59 37.5	+4.9
LZH				XPKP		09 59 54.0	
LZH				SKS	SKS	10 06 45.0	+10
LZH				PP	PP		
	comp=Z,110nm,5.8s						
LZH				LR	LR		
	comp=E,990nm,18.2s						
LZH				LR	LR		
	comp=Z,580nm,21.0s,MS5.2						
LZH	Lanzhou	130.68	347	ePKP	PKPdf	09 59 37.5	+4.9
LZH				pPKP		09 59 49.5	
LZH				sPKP		09 59 54.0	
LZH				PP	PP	10 01 59.1	+6.2
LZH				SKS	SKS	10 06 45.0	+10
LZH				SKKS		10 08 47.0	
LZH				eSS	SS	10 19 25.0	+11
LZH				LR	LR		
	comp=Z,580nm,21.0s,MS5.2						
XAN	Xi'an	131.24	341	PKP	PKPdf	09 59 37.6	+3.9
WRAB	Tennant Creek	138.33	254	i PKIKP	PKPdf	09 59 50.0	+2.8
WRA	Warramunga Arr	138.34	254	PKP	PKPdf	09 59 49.4	+2.1
	comp=Z,1.9nm,0.9s,baz=95,slow=1.6,SNR=7.6						
HYB	Hyderabad	147.92	24	i PKP	PKPdf	10 00 09.0	+5.1
HYB	Hyderabad	147.92	24	eP	PKPdf	10 00 09.0	+5.1
CHG	Chiang Mai	148.42	347	P	PKPdf	10 00 09.7	+5.0
	comp=Z,12nm,0.8s						

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*IDC **08** 09:45:24.9±1.0, 39.07S×92.84W, mb4.0/9, mb1 4.2/10, mb1mx4.2/18, mbtmp4.0/10, ML3.5/1, MS4.5/10, Ms1 4.5/10, ms1mx4.3/20, Error ellipse: s-maj=27.9km s-min=21.6km az=58.0*

*NEIC **08** 09:45:27.0±0.7, 39.08S×92.75W, h10^{km}, mb4.2/2, Error ellipse: s-maj=16.6km s-min=12.2km az=90.0*

ISC 08 09:45:24.5±0.6, **39.09S**±0.09×**92.9W**±0.1, **h10**^{km}**, n31,** σ**0^{s}81**/23, **mb3.9**/10, **MS4.4**/9, **4C, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	17.23	103	P	P	09 49 27.1	+0.4
	0.0nm,0.3s,baz=249,slow=11,SNR=2.0						
PLCA				LR	LR	09 54 17.7	
	comp=Z,2µm,18.9s,baz=257,slow=31						
PLCA	Paso Flores	17.23	103	ePn	P	09 49 27.1	+0.4
	19nm,1.4s						
CFAA	Coronel Fontan	21.42	77	P	P	09 50 13.7	-1.1
	0.4nm,0.6s,mb2.9,baz=242,slow=10,SNR=6.8						
CFAA				LR	LR	09 56 29.4	
	comp=Z,211nm,18.9s,MS3.6,baz=262,slow=31						
USHA	Ushuaia	22.78	142	P	P	09 50 29.4	+1.4
	11nm,1.1s,mb4.2,baz=271,slow=11,SNR=4.5						
USHA				LR	LR	09 57 21.3	
	comp=Z,927nm,21.0s,MS4.2,baz=278,slow=32						
USHA	Ushuaia	22.78	142	P	P	09 50 29.4	+1.3
USHA				LR	LR	09 57 21.2	
LVC	Limon Verde	26.23	58	P	P	09 51 01.4	-0.1
	4.1nm,0.9s,mb3.9,baz=262,slow=7.1,SNR=3.0						
LVC				LR	LR	09 58 26.7	
	comp=Z,2µm,21.2s,MS4.6,baz=208,slow=30						
LPAZ	La Paz	31.39	51	P	P	09 51 48.1	+0.2
	2.6nm,1.1s,mb4.0,baz=170,slow=10,SNR=3.8						
LPAZ				LR	LR	10 01 21.5	
	comp=Z,903nm,21.9s,MS4.4,baz=28,slow=30						
LPAZ	La Paz	31.39	51	eP	P	09 51 47.8	-0.1
	7.1nm,1.3s,mb4.3						
SIV	San Ignacio	36.12	59	P	P	09 52 28.0	-0.7
	0.7nm,0.6s,mb3.8,baz=231,slow=14,SNR=3.1						
RKT	Rikitea	39.01	281	eLR	LR	10 03 35.8	
	1µm,27.0s,baz=125						
VNA3	Neumayer Olymp	51.40	156	e	P	09 54 50.0	+19
VNA3	Neumayer Olymp	51.40	156⇑	iP	P	09 54 31.2	+0.1
VNA3				e		09 54 38.8	
VNA3				e		09 54 50.0	
TAOE	Nuku Hiva Isla	51.81	293	eLR	LR	10 09 33.8	
	2µm,24.8s						
VNA1	Neumayer--Stat	51.96	155	e	P	09 54 54.7	+19
VNA1	Neumayer--Stat	51.96	155⇑	iP	P	09 54 35.3	0.0
VNA1				e		09 54 43.3	
VNA1				e		09 54 45.4	
VNA1				e		09 54 54.7	
VNA2	Neumayer--Watz	52.19	155	e	P	09 54 55.9	+19
VNA2	Neumayer--Watz	52.19	155⇑	iP	P	09 54 36.4	-0.7
VNA2				e		09 54 44.8	
VNA2				e		09 54 46.6	
VNA2				e		09 54 55.9	
PPT	Papeete	53.39	277	eS	S	10 02 15.1	-2.0
PPT				eLR	LR	10 10 04.3	
	1µm,26.5s,baz=112						
SNAA	Sanae	53.46	157⇑	iP	P	09 54 45.8	-0.7
SNAA				e		09 54 52.7	
SNAA				e		09 54 55.1	
RAR	Rarotonga	59.26	267	LR	LR	10 16 38.0	
	comp=Z,318nm,18.5s,MS4.5,baz=192,slow=32						
URZ	Urewera	67.20	239	LR	LR	10 19 27.5	
	comp=Z,489nm,18.4s,MS4.8,baz=217,slow=30						
RPZ	Rata Peaks	68.09	231	LR	LR	10 18 51.4	
	comp=Z,390nm,19.1s,MS4.7,baz=333,slow=29						
RAO	Raoul Island	68.63	249	LR	LR	10 16 56.7	
	comp=Z,194nm,20.4s,MS4.3,baz=31,slow=28						
TXAR	Lajitas Array	68.80	350	P	P	09 56 30.7	-0.4
	1.5nm,0.9s,mb3.9,baz=164,slow=9.1,SNR=7.1						
TXAR	Lajitas Array	68.80	350	P	P	09 56 30.7	-0.4
MAW	Mawson	72.06	170	P	P	09 56 50.0	-0.1
	1.8nm,0.5s,mb4.3,baz=190,slow=7.9,SNR=7.7						
ANMO	Albuquerque	74.73	348	P	P	09 57 07.0	+0.7
	0.4nm,0.3s,mb3.8,baz=190,slow=5.5,SNR=2.8						
NVAR	Mina Array Bea	80.59	340	P	P	09 57 40.1	+1.6
	2.1nm,1.0s,mb4.0,baz=149,slow=5.9,SNR=5.2						
PDAR	Pinedale Array	82.86	348	P	P	09 57 50.6	+0.3
	1.0nm,0.9s,mb3.9,baz=162,slow=4.7,SNR=5.6						
DBIC	Dimbokro	92.65	84	LR	LR	10 36 57.8	
	comp=Z,308nm,19.3s,MS4.8,baz=228,slow=33						
THY	Trims Highway	110.45	338	ePKPdf	PKPdf	10 04 01.3	+2.1
THY				SKP		10 07 31.9	

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*ATH **08** 10:00:23.8, 38.26N×27.08E, h34^{km}±1^{km}, MD3.2/3*

*NEIC **08** 10:00:23.8, 38.26N×27.08E, h34^{km}, MD3.2(ATH), MD3.0(ISK), After ATH.*

*ISK **08** 10:00:25.5, 38.22N×26.66E, h16^{km}, MD3.0*

*CSEM **08** 10:00:25.6±0.1, 38.24N×26.68E, h15^{km}, MD3.0, Error ellipse: s-maj=3.5km s-min=2.7km az=104.0*

ISC 08 10:00:24.9±0.8, **38.23N**±0.03×**26.58E**±0.05, **h8**^{km}±5^{km}**, n20,** σ**1^{s}05**/28, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.13	6	i P	Pg	10 00 27.0	-0.8
URLA				i S	Sg	10 00 30.3	+0.5
BLCB	Balcova	0.40	67	PG	Pg	10 00 32.1	-0.8
SMG	Samos	0.56	158	ePN	Pn	10 00 36.2	-2.6
SMG				eSN	Sn	10 00 45.1	-3.2
IZM	Izmir	0.56	72	PG	Pg	10 00 36.1	-0.1
IZM				SG	Sg	10 00 44.3	+0.5
PRK	Paraskevi	1.04	347	ePN	Pn	10 00 45.5	-0.3
PRK				eSN	Sn	10 01 01.4	+0.8
AKS	Akhisar	1.17	56	PN	Pn	10 00 47.5	0.0
AKS				SN	Sn	10 01 02.9	-0.8
AYDN	Tasoluk	1.18	119	i P	Pb	10 00 48.4	+1.3
AYDN				i S	Sb	10 01 02.2	-0.1
BODT	Bodrum	1.30	153	PN	Pn	10 00 48.9	-0.6
MLSB	Milas	1.33	134	ePN	Pn	10 00 49.4	-0.5
BDRM	Kayabasi	1.35	149	i P	Pb	10 00 52.2	+2.1
BDRM				i S	Sb	10 01 09.0	+1.6
APE	Apeiranthos	1.43	216	ePN	Pn	10 00 52.2	+1.0
APE	Apeiranthos	1.43	216	ePN	Pn	10 00 53.3	+2.1
MANT	Manisa	1.58	80	i P	Pn	10 00 54.0	+0.5
MANT				i S	Sb	10 01 14.8	+0.8
DAT	Datca	1.70	152	ePN	Pn	10 00 55.5	+0.4
BALB	Balikesir	1.74	35	ePN	Pn	10 00 56.1	+0.4
YER	Yerkesik	1.74	128	ePN	Pn	10 00 54.6	-1.1
SANT	Santorini	2.06	206	ePn	Pn	10 00 53.9	-6.4
SANT	Santorini	2.06	206	ePn	Pn	10 00 53.9	-6.4
DST	Dursunbey	2.11	49	ePN	Pn	10 01 00.2	-0.8
FETY	Fethiye	2.55	128	ePN	Pn	10 01 06.7	-0.6

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*MOS **08** 10:01:42.1±0.9, 6.85S×155.06E, h33^{km}, mb5.2/5, MS4.8/4, Error ellipse: s-maj=18.2km s-min=11.4km az=57.3*

*BJI **08** 10:01:45.7, 6.99S×154.55E, h45^{km}, mB5.3, mb5.0, Ms5.0, Msz4.7*

*HRVD **08** 10:01:45.9±0.2, 7.12S×155.02E, h15^{km}, MW5.5/66, Centroid moment Tensor Solution. LP body waves: s62,c123;Mantle waves: s66,c119; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.11±.03; M$_{\theta\theta}$-0.73±.02; M$_{\phi\phi}$-0.37±.02; M$_{r\theta}$1.23±.08; M$_{\theta\phi}$0.67±.02; M$_{\phi r}$-1.13±.08; Best double couple: M$_0$2.046×10^{17} NP1: φ$_s$302°, δ18°, λ81°. NP2: φ$_s$132°, δ72°, λ93°. Principal axes: T 1.979, Plg62°, Azm46°; N .131, Plg3°, Azm311°; P -2.112, Plg27°, Azm219°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 10:01:45.9±0.2, 6.90S×155.01E, mb5.3/23 Error ellipse: s-maj=7.0km s-min=6.4km az=84.0*

*IDC **08** 10:01:45.2±2.6, 6.80S×154.91E, h48^{km}±25^{km}, mb4.6/14, mb1 4.7/18, mb1mx4.7/20, mbtmp4.8/18, ML4.2/4, MS4.8/16, Ms1 4.8/16, ms1mx4.7/22, Error ellipse: s-maj=18.9km s-min=16.8km az=76.0*

ISC 08 10:01:43.2±1.1, **6.91S**±0.05×**155.02E**±0.04, **h38**^{km}±9^{km}, **h43**^{km}±2.0^{km}**:pP-P, n129,** σ**1^{s}02**/127, **mb5.1**/55, **MS4.8**/32, **8C-5D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.49	118	P	P	10 03 06.3	+1.6
	8.7nm,0.3s,baz=193,slow=15,SNR=4.7						
HNR				S	S	10 04 14.6	+7.2
	8.8nm,0.3s,baz=313,slow=14,SNR=2.8						
HNR				LR	LR	10 05 14.5	
	comp=Z,19µm,20.4s,baz=280,slow=37						
PMG	Port Moresby	8.16	252	P	P	10 03 42.0	-0.1
	8.0nm,0.3s,baz=52,slow=11,SNR=20						
PMG				S	S	10 05 14.2	+0.1
	9.9nm,0.3s,baz=130,slow=17,SNR=9.4						
PMG				LR	LR	10 06 50.8	
	comp=Z,9µm,18.9s,baz=57,slow=38						
CTA	Charters Tower	15.62	212	eP	P	10 05 22.6	+0.2
	32nm,0.8s						
CTA	Charters Tower	15.62	212	P	P	10 05 22.5	+0.1
	1.1nm,0.3s,baz=32,slow=13,SNR=16						
CTA				LR	LR	10 10 56.5	
	comp=Z,6µm,18.1s,baz=14,slow=35						
CTA	Charters Tower	15.62	212	eP	P	10 05 22.6	+0.2
CTA				pmax	pmax		
	comp=Z,32nm,0.8s						

CTAO	**Charters Tower**	**15.62**	**212**	*e*Pn	**P**	**10 05 22.5**	**+0.1**
	comp=Z,98nm,1.1s						
CTAO	**Charters Tower**	**15.62**	**212**	*e*P	**P**	**10 05 22.5**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,98nm,1.1s						
DZM	**Mont Dzumac**	**18.68**	**145**	*e*P	**P**	**10 06 00.9**	**+0.1**
DZM	**Mont Dzumac**	**18.68**	**145**	P	**P**	**10 06 00.9**	**+0.1**
	comp=Z,0.9nm,0.3s,baz=341,slow=12,SNR=10						
DZM				LR	LR	10 12 16.6	
	comp=Z,4µm,20.1s,baz=321,slow=34						
GUMO	**Guam**	**22.72**	**334**	LR	LR	10 13 54.2	
	comp=Z,1µm,20.7s,MS4.3,baz=331,slow=32						
KAKA	**Kakadu**	**22.97**	**254**	*e*P	**P**	**10 07 04.0**	**+18**
	comp=Z,69nm,0.8s,mb5.1						
WRAB	**Tennant Creek**	**23.87**	**235**	*e*Pn	**P**	**10 06 54.7**	**+0.3**
	comp=Z,29nm,0.9s,mb4.7						
WRAB	**Tennant Creek**	**23.87**	**235**	*d* *i*P	**P**	**10 06 54.1**	**-0.3**
WB2	**Warramunga Arr**	**23.87**	**235**	*e*P	**P**	**10 06 55.0**	**+0.6**
WB2				*e*S	**S**	**10 11 14.5**	**+10**
WB2				*e*SCS	ScS	10 18 02.9	+5.1
WRA	**Warramunga Arr**	**23.88**	**235**	P	**P**	**10 06 54.2**	**-0.3**
	comp=Z,55nm,0.7s,mb5.1,baz=58,slow=9.8,SNR=212						
WRA				PcP	PcP	10 10 34.6	-3.7
	comp=Z,3.3nm,0.9s,baz=61,slow=3.2,SNR=2.8						
WRA				S	**S**	**10 11 12.2**	**+7.2**
	comp=Z,2.0nm,0.9s,baz=63,slow=18,SNR=4.7						
ASPA	**Alice Springs**	**26.25**	**228**	⇑*i*P	**P**	**10 07 16.7**	**-0.3**
STKA	**Stephens Creek**	**27.82**	**205**	⇑*i*P	**P**	**10 07 30.2**	**-1.1**
	comp=Z,27nm,0.8s,mb4.9						
STKA	**Stephens Creek**	**27.82**	**205**	P	**P**	**10 07 29.7**	**-1.7**
	comp=Z,12nm,0.7s,mb4.6,baz=12,slow=12,SNR=18						
STKA				LR	LR	10 18 50.6	
	comp=Z,4µm,18.3s,MS5.0,baz=4.0,slow=37						
FITZ	**Fitzroy Crossi**	**30.71**	**246**	⇑*i*P	**P**	**10 07 56.1**	**-1.1**
	comp=Z,45nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**30.71**	**246**	LR	LR	10 20 14.1	
	comp=Z,6µm,20.0s,MS5.2,baz=74,slow=36						
FORT	**Forrest**	**34.66**	**223**	⇑*i*P	**P**	**10 08 30.5**	**-1.0**
	comp=Z,53nm,0.8s,mb5.5						
MBWA	**Marble Bar**	**36.93**	**244**	*e*Pn	**P**	**10 08 51.0**	**+0.3**
	comp=Z,48nm,1.2s,mb5.2						
URZ	**Urewera**	**37.07**	**151**	P	**P**	**10 08 51.4**	**-0.4**
	comp=Z,4.5nm,0.9s,mb4.3,baz=4.2,slow=1.0,SNR=2.7						
RPZ	**Rata Peaks**	**39.27**	**162**	P	**P**	**10 09 10.8**	**+0.8**
	comp=Z,9.3nm,0.6s,mb4.7,baz=321,slow=6.3,SNR=4.9						
PPR	**Puerto Princes**	**39.77**	**294**	*e*P	**P**	**10 09 16.4**	**+2.0**
KKM	**Kota Kinabalu**	**40.80**	**287**	*e*Pn	**P**	**10 09 23.1**	**+0.1**
JOW	**Kunigami**	**42.39**	**323**	LR	LR	10 24 25.4	
	comp=Z,649nm,21.6s,MS4.5,baz=312,slow=32						
KLBR	**Kellerberrin**	**42.56**	**230**	*e*P	**P**	**10 09 37.3**	**-0.1**
	comp=Z,24nm,0.8s,mb5.0						
NACB	**Ninganchiao**	**44.91**	**315**	*e*Pn	**P**	**10 09 57.5**	**+1.1**
YHNB	**Yeheng**	**45.38**	**315**	*e*Pn	**P**	**10 10 01.9**	**+1.7**
KSM	**Kuching**	**45.38**	**279**	*e*P	**P**	**10 10 00.0**	**-0.4**
MJAR	**Matsushiro Arr**	**46.01**	**341**	LR	LR	10 27 25.6	
	comp=Z,243nm,20.1s,MS4.1,baz=195,slow=34						
QZH	**Quanzhou**	**47.54**	**313**	P	**P**	**10 10 18.5**	**+1.3**
QZH				S	**S**	**10 17 07.6**	**-1.0**
QZH				AMB	AMB		
	comp=Z,140nm,1.4s,mb5.8						
QZH				LR	LR		
	comp=N,1µm,17.7s,MS5.0						
QZH				LR	LR		
	comp=E,520nm,14.0s,MS5.0						
QZH				LR	LR		
	comp=Z,1µm,17.9s,MS4.9						
SSE	**Sheshan**	**49.75**	**321**	P	**P**	**10 10 34.2**	**-0.1**
SSE				XP	sP	10 10 47.0	-2.7
SSE				PP	PP	10 12 30.3	+0.6
SSE				SCS	ScS	10 20 22.4	+2.8
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.6						
SSE				AMB	AMB		
	comp=Z,150nm,8.0s						
SSE				LR	LR		
	comp=N,230nm,23.4s,MS4.3						
SSE				LR	LR		
	comp=E,290nm,23.4s,MS4.3						
SSE				LR	LR		
	comp=Z,400nm,22.4s,MS4.4						
SSE	**Sheshan**	**49.75**	**321**	P	**P**	**10 10 34.2**	**-0.1**
	comp=Z,41nm,0.7s,mb5.6						
SSE				sP	sP	10 10 47.0	-2.7
SSE				PP	PP	10 12 30.3	+0.6
SSE				S	**S**	**10 17 46.9**	**+7.3**
SSE				sS		10 18 02.9	
SSE				ScS	ScS	10 20 22.4	+2.8
SSE				LR	LR		
	comp=Z,400nm,22.4s,MS4.4						
GZH	**Guangzhou**	**50.48**	**307**	P	**P**	**10 10 37.6**	**-2.4**
GZH				LR	LR		
	comp=N,420nm,20.8s,MS4.7						
GZH				LR	LR		
	comp=E,550nm,19.0s,MS4.7						
GZH				LR	LR		
	comp=Z,970nm,21.1s,MS4.8						
QIZ	**Qiongzhong**	**51.43**	**301**	*e*P	**P**	**10 10 47.5**	**+0.3**
QIZ				XP	sP	10 11 00.8	-1.8
QIZ				S	**S**	**10 18 03.4**	**+0.5**
QIZ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
QIZ				LR	LR		
	comp=N,350nm,19.5s,MS4.8						
QIZ				LR	LR		
	comp=E,760nm,20.0s,MS4.8						
QIZ				LR	LR		
	comp=Z,1µm,20.8s,MS4.9						
QIZ	**Qiongzhong**	**51.43**	**301**	*e*P	**P**	**10 10 49.0**	**+1.8**
	comp=Z,22nm,0.9s,mb5.1						
QIZ				*e*	pP	10 10 58.4	+0.2
NJ2	**Nanjing**	**51.86**	**320**	*e*P	**P**	**10 10 51.1**	**+0.9**
NJ2				AP	pP	10 11 01.0	-0.2
NJ2				XP	sP	10 11 05.1	-0.6
NJ2				S	**S**	**10 18 14.0**	**+5.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,180nm,6.0s						
NJ2				LR	LR		
	comp=N,1µm,28.9s,MS5.0						
NJ2				LR	LR		
	comp=E,1µm,24.3s,MS5.0						
NJ2				LR	LR		
	comp=Z,560nm,27.0s,MS4.5						
WHN	**Wuhan**	**53.89**	**316**	*e*P	**P**	**10 11 05.0**	**-0.4**
WHN				AP	pP	10 11 17.4	+1.0
WHN				LR	LR		
	comp=Z,2µm,17.6s,MS5.2						
PPT	**Papeete**	**55.00**	**107**	*e*S	**S**	**10 18 54.3**	**+2.9**
PPT				*e*SS	SS	10 22 40.1	+5.1
PPT				*e*LQ		10 25 00.3	
PPT				*e*LR	LR	10 27 14.3	
	comp=Z,580nm,20.5s,baz=276						
PPT	**Papeete**	**55.00**	**107**	LR	LR	10 30 24.8	
	comp=Z,712nm,18.1s,MS4.8,baz=273,slow=31						
TBI	**Tubuai**	**55.69**	**113**	*e*LQ		10 25 20.3	
TBI				*e*LR	LR	10 27 33.4	
	comp=Z,1µm,31.2s,baz=289						
SNG	**Songkhla**	**56.04**	**283**	P	**P**	**10 11 21.5**	**+0.3**
MDJ	**Mudanjiang**	**56.17**	**338**	P	**P**	**10 11 22.8**	**+1.1**
MDJ				AP	pP	10 11 34.0	+1.2
MDJ				XP	sP	10 11 39.9	+2.7
MDJ				PCP	PcP	10 12 19.4	+0.3
MDJ				PP	PP	10 13 29.4	+0.9
MDJ				SCP		10 16 16.6	
MDJ				PCS		10 16 20.5	
MDJ				S	**S**	**10 19 13.8**	**+7.2**
MDJ				AMB	AMB		
	comp=Z,90nm,5.2s						
MDJ				LR	LR		
	comp=N,270nm,41.3s,MS4.2						
MDJ				LR	LR		
	comp=E,380nm,43.0s,MS4.2						
MDJ				LR	LR		
	comp=Z,350nm,29.3s						
CN2	**Changchun**	**57.12**	**335**	*e*P	**P**	**10 11 33.4**	**+4.8**
CN2				*e*S	**S**	**10 19 25.1**	**+5.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,15.0s,MS4.9						
CN2				LR	LR		
	comp=E,500nm,15.0s,MS4.9						
CN2				LR	LR		
	comp=Z,500nm,18.0s,MS4.7						
ENH	**Enshi**	**57.20**	**313**	*e*P	**P**	**10 11 28.8**	**-0.5**
	comp=Z,53nm,1.0s,mb5.5						
GYA	**Guiyang**	**57.42**	**307**	⇑*i*P	**P**	**10 11 30.7**	**-0.2**
GYA				AP	pP	10 11 43.2	+1.2
GYA				S	**S**	**10 19 21.9**	**-1.4**
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
GYA				AMB	AMB		
	comp=Z,300nm,5.7s						
GYA				LR	LR		
	comp=N,640nm,20.0s,MS4.9						
GYA				LR	LR		
	comp=E,760nm,19.4s,MS4.9						
GYA				LR	LR		
	comp=Z,640nm,20.3s,MS4.7						
NST	**Nakhon Sawan**	**58.80**	**293**	P	**P**	**10 11 35.6**	**-5.0**
KLR	**Kul'dur**	**59.49**	**343**	*e*P	**P**	**10 11 45.0**	**0.0**
KLR				MLR	MLR		
	comp=E,700nm,13.0s						
KLR				MLR	MLR		
	comp=Z,1µm,13.0s,MS5.2						
XAN	**Xi'an**	**59.66**	**316**	P	**P**	**10 11 45.8**	**-0.6**
XAN				S	**S**	**10 19 54.8**	**+2.4**
XAN				LR	LR		
	comp=N,210nm,21.3s,MS4.4						
XAN				LR	LR		
	comp=E,280nm,23.2s,MS4.4						
XAN				LR	LR		
	comp=Z,610nm,19.9s,MS4.7						
PET	**Petropavlovsk**	**59.78**	**3**	*e*P	**P**	**10 11 52.0**	**+5.1**
PET				*e*S	**S**	**10 20 04.9**	**+11**
PET				pmax	pmax		
	comp=Z,200nm,19.3s						
PET				smax			
	comp=E,400nm,19.6s						
PET				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.6						
KMI	**Kunming**	**59.98**	**304**	P	**P**	**10 11 48.8**	**+0.1**
KMI				AP	pP	10 12 03.7	+3.8
KMI				XP	sP	10 12 08.0	+3.7
KMI				PCP	PcP	10 12 38.2	+3.9
KMI				PP	PP	10 14 04.4	+1.3
KMI				S	**S**	**10 19 56.9**	**+0.1**
KMI				SS	SS	10 23 53.4	-1.2
KMI				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.2						
KMI				AMB	AMB		
	comp=Z,170nm,3.1s						
KMI				LR	LR		
	comp=N,350nm,16.8s,MS4.8						
KMI				LR	LR		
	comp=E,460nm,19.7s,MS4.8						
KMI				LR	LR		
	comp=Z,660nm,22.7s,MS4.7						
KMI	**Kunming**	**59.98**	**304**	P	**P**	**10 11 48.8**	**+0.1**
	comp=Z,32nm,1.2s,mb5.2						
KMI				pP	pP	10 12 03.7	+3.8
KMI				sP	sP	10 12 08.0	+3.7
KMI				PcP	PcP	10 12 38.2	+3.9
KMI				PP	PP	10 14 04.4	+1.3
KMI				S	**S**	**10 19 56.9**	**+0.1**
KMI				PS	PS	10 20 09.9	-7.4
KMI				sS		10 20 20.9	
KMI				SS	SS	10 23 53.4	-1.2
KMI				SSS	SSS	10 26 33.3	+6.5
KMI				LR	LR		
	comp=Z,670nm,22.7s,MS4.7						
CHG	**Chiang Mai**	**60.88**	**296**	P	**P**	**10 11 56.1**	**+1.2**
	comp=Z,16nm,1.2s,mb5.0						
CD2	**Chengdu**	**61.77**	**310**	⇑*i*P	**P**	**10 12 00.9**	**+0.1**
CD2				AP	pP	10 12 11.7	-0.2
CD2				XP	sP	10 12 14.0	-2.3
CD2				PPP	PPP	10 15 44.6	-3.3
CD2				S	**S**	**10 20 15.8**	**-3.7**
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
CD2				AMB	AMB		
	comp=Z,130nm,5.2s						
CD2				LR	LR		
	comp=E,350nm,16.2s						
CD2				LR	LR		
	comp=Z,430nm,17.9s,MS4.7						
HHC	**Hu-ho-hao-te**	**62.04**	**324**	*e*P	**P**	**10 12 02.5**	**+0.1**
HHC				AP	pP	10 12 16.0	+2.4
HHC				XP	sP	10 12 20.8	+2.9
HHC				PCP	PcP	10 12 41.2	-1.1
HHC				PP	PP	10 14 19.4	-1.9
HHC				SCP		10 16 39.5	
HHC				S	**S**	**10 20 25.8**	**+3.1**
HHC				XS		10 20 42.6	
HHC				PS	PS	10 20 46.2	+1.6
HHC				SCS	ScS	10 21 47.3	-0.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.9						
HHC				AMB	AMB		
	comp=Z,230nm,7.2s						
HHC				LR	LR		
	comp=N,360nm,18.0s,MS4.7						
HHC				LR	LR		
	comp=E,330nm,19.2s,MS4.7						
HHC				LR	LR		
	comp=Z,330nm,19.2s,MS4.5						
TAOE	**Nuku Hiva Isla**	**64.19**	**96**	*e*LR	LR	10 31 22.6	
	comp=Z,2µm,21.6s						
LZH	**Lanzhou**	**64.27**	**316**	*e*P	**P**	**10 12 19.1**	**+1.9**
LZH				AP	pP	10 12 31.8	+3.3
LZH				XP	sP	10 12 34.7	+2.0
LZH				PP	PP	10 14 43.0	+2.4
LZH				*e*S	**S**	**10 20 52.5**	**+1.8**
LZH				XS		10 21 10.0	
LZH				PS	PS	10 21 18.0	+2.5
LZH				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.6						
LZH				AMB	AMB		
	comp=Z,480nm,4.5s						
LZH				LR	LR		
	comp=N,940nm,15.5s						
LZH				LR	LR		
	comp=Z,1µm,17.5s,MS5.1						
LZH	**Lanzhou**	**64.27**	**316**	*e*P	**P**	**10 12 19.1**	**+1.9**
	comp=Z,70nm,1.2s,mb5.6						
LZH				pP	pP	10 12 31.8	+3.3
LZH				sP	sP	10 12 34.7	+2.0
LZH				PP	PP	10 14 43.0	+2.4
LZH				*e*S	**S**	**10 20 52.5**	**+1.8**
LZH				sS		10 21 10.0	
LZH				PS	PS	10 21 18.0	+2.5
LZH				*e*SS	SS	10 25 05.0	+2.9
LZH				LR	LR		
	comp=Z,1µm,17.5s,MS5.1						
MA2	**Magadan**	**66.36**	**358**	*e*P	**P**	**10 12 20.9**	**-9.3**
CASY	**Casey**	**66.68**	**198**	*e*P	**P**	**10 12 33.5**	**+1.3**
	comp=Z,67nm,1.7s,mb5.4						
GTA	**Gaotai**	**68.69**	**317**	P	**P**	**10 12 44.2**	**-1.0**
GTA				AP	pP	10 12 57.3	+0.7
GTA				XP	sP	10 13 02.4	+1.7
GTA				PP	PP	10 15 19.2	-0.1
GTA				SCP		10 17 07.9	
GTA				PCS		10 17 11.5	
GTA				S	S	10 21 46.7	+2.5
GTA				AMB	AMB		
	comp=Z,140nm,7.3s						
GTA				LR	LR		
	comp=N,310nm,20.2s,MS4.7						
GTA				LR	LR		
	comp=E,240nm,16.0s,MS4.7						
GTA				LR	LR		
	comp=Z,300nm,25.6s						
RKT	**Rikitea**	**68.95**	**112**	*e*SS	SS	10 26 18.6	+3.3
RKT				*e*LQ		10 30 51.6	
RKT				*e*LR	LR	10 33 42.2	
	comp=Z,1µm,22.8s,baz=282						
SHL	**Shillong**	**69.27**	**301**	*e*P	**P**	**10 12 48.5**	**-0.5**
SHL				*e*S	S	10 21 54.0	+2.8
SONM	**Songino Array**	**69.28**	**327**	P	**P**	**10 12 47.2**	**-1.4**
	comp=Z,11nm,1.1s,mb4.7,baz=134,slow=5.4,SNR=29						
SEY	**Seymchan**	**69.67**	**359**	*e*P	**P**	**10 12 50.8**	**0.0**
VNDA	**Vanda**	**70.67**	**178**	*e*P	**P**	**10 12 56.2**	**-0.4**
	comp=Z,16nm,1.2s,mb4.8						
SBA	**Scott Base**	**71.17**	**177**	P	**P**	**10 12 59.5**	**-0.2**
	comp=Z,74nm,1.0s,mb5.6						
LSA	**Lhasa**	**71.24**	**304**	*e*P	**P**	**10 13 02.4**	**+1.5**
	comp=Z,45nm,1.0s,mb5.3						
YAK	**Yakutsk**	**71.48**	**348**	*e*P	**P**	**10 13 02.5**	**+0.8**
YAK				pmax	pmax		
	comp=Z,36nm,1.7s,mb5.0						
ZAK	**Zakamensk**	**72.43**	**328**	*e*P	**P**	**10 13 06.4**	**-1.2**
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
MIR	**Mirnyy**	**72.78**	**202**	*e*P	**P**	**10 13 13.0**	**+3.7**
MIR				pmax	pmax		
	comp=Z,140nm,1.8s,mb5.6						
BOK	**Bokaro**	**73.98**	**297**	*e*P	**P**	**10 13 18.0**	**+0.8**
BOK				AMb	AMB	10 13 20.0	
	comp=Z,20nm,0.6s,mb5.2						
BOK				*e*S	S	10 22 49.7	+4.2
JIRN	**Jiri**	**74.76**	**301**	*e*P	**P**	**10 13 21.6**	**-0.1**
	comp=Z,91nm,1.1s,mb5.6						
GUN	**Gumba**	**75.09**	**301**	*e*P	**P**	**10 13 23.5**	**-0.1**
	comp=Z,146nm,1.0s,mb5.9						
BILL	**Bilibino**	**75.19**	**4**	*e*P	**P**	**10 13 23.2**	**-0.1**
	comp=Z,29nm,1.0s,mb5.2						
BILL	**Bilibino**	**75.19**	**4**	⇓*e*P	**P**	**10 13 22.7**	**-0.7**
BILL				*e*		10 16 08.9	
BILL				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
BILL				MLR	MLR		
	comp=Z,600nm,19.0s,MS4.9						
PKI	**Pulchoki**	**75.40**	**301**	*e*P	**P**	**10 13 24.8**	**-0.6**
	comp=Z,105nm,1.2s,mb5.7						
KKN	**Kakani**	**75.57**	**301**	*e*P	**P**	**10 13 25.8**	**-0.5**
	comp=Z,124nm,1.3s,mb5.7						
DMN	**Daman**	**75.67**	**301**	*e*P	**P**	**10 13 26.7**	**-0.2**
	comp=Z,151nm,1.0s,mb5.9						
GKN	**Gorkha**	**76.17**	**301**	*e*P	**P**	**10 13 29.4**	**-0.4**
	comp=Z,125nm,1.0s,mb5.8						
KOLN	**Koldanda**	**77.00**	**300**	*e*P	**P**	**10 13 33.7**	**-0.8**
	comp=Z,188nm,1.5s,mb5.8						
WMQ	**Urumqi**	**78.78**	**317**	*e*P	**P**	**10 13 45.8**	**+1.9**
WMQ				PCP	PcP	10 13 54.8	+1.8
WMQ				AP	pP	10 13 59.0	+3.6
WMQ				XP	sP	10 14 04.3	+4.8
WMQ				PP	PP	10 16 46.6	+2.4
WMQ				PPP	PPP	10 18 36.3	+2.3
WMQ				S	S	10 23 38.9	+1.4
WMQ				SKS	SKS	10 23 52.3	+1.3
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,220nm,6.2s						
WMQ				LR	LR		
	comp=N,320nm,26.8s,MS4.7						
WMQ				LR	LR		
	comp=E,330nm,22.8s,MS4.7						
WMQ				LR	LR		
	comp=Z,420nm,23.8s,MS4.7						
HYB	**Hyderabad**	**79.26**	**289**	*i* P	**P**	**10 13 47.0**	**-0.1**
HYB	**Hyderabad**	**79.26**	**289**	*e*P	**P**	**10 13 47.0**	**-0.1**
TIXI	**Tiksi**	**80.27**	**352**	*e*P	**P**	**10 13 51.6**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,10.0nm,2.5s,mb4.3						
PMR	**Palmer**	**80.70**	**24**	*e*P	**P**	**10 13 52.9**	**-1.0**
	comp=Z,32nm,1.2s,mb5.1						
SML	**Sawmill**	**81.14**	**24**	*e*P	**P**	**10 13 56.6**	**+0.4**
BHPL	**Bhopal**	**81.41**	**295**	*e*P	**P**	**10 13 58.0**	**-0.4**
NDI	**New Delhi**	**82.69**	**300**	*e*P	**P**	**10 14 03.0**	**-1.9**
COLA	**College**	**82.99**	**21**	*e*P	**P**	**10 14 03.8**	**-1.9**
QSPA	**South Pole Qui**	**83.07**	**180**	P	**P**	**10 14 05.8**	**0.0**
	comp=Z,62nm,1.1s,mb5.5						
ILAR	**Eielson Array**	**83.29**	**21**	P	**P**	**10 14 05.1**	**-2.1**
	comp=Z,5.3nm,0.7s,mb4.7,baz=253,slow=4.8,SNR=34						
ILAR				LR	LR	10 49 57.9	
	comp=Z,856nm,18.2s,MS5.2,baz=109,slow=35						
KAD	**Karad**	**83.35**	**288**	*e*P	**P**	**10 14 09.0**	**+0.5**
MKAR	**Makanchi Array**	**83.35**	**319**	P	**P**	**10 14 06.5**	**-1.3**
	comp=Z,4.0nm,0.8s,mb4.5,baz=96,slow=5.6,SNR=31						
MKAR				LR	LR	10 52 52.6	
	comp=Z,362nm,20.6s,MS4.7,baz=52,slow=37						
MKAR	**Makanchi Array**	**83.35**	**319**	*i* P	**P**	**10 14 07.1**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
POO	**Poona**	**83.86**	**289**	*e*P	**P**	**10 14 12.3**	**+1.1**
POO				AMb	AMB	10 14 19.9	
	comp=Z,44nm,1.6s,mb5.3						
ZAL	**Zalesovo**	**84.13**	**326**	P	**P**	**10 14 09.8**	**-1.9**
	comp=Z,2.1nm,0.3s,mb4.8,baz=17,slow=0.6,SNR=8.9						
ZAL	**Zalesovo**	**84.13**	**326**	P	**P**	**10 14 09.8**	**-1.9**
MAW	**Mawson**	**84.48**	**203**	P	**P**	**10 14 12.9**	**-0.2**
	comp=Z,8.8nm,0.8s,mb4.9,baz=85,slow=7.1,SNR=20						
MAW				LR	LR	10 48 57.2	
	comp=Z,422nm,19.9s,MS4.8,baz=100,slow=34						
KSH	**Kashi**	**85.97**	**310**	*e*P	**P**	**10 14 24.0**	**+2.9**
KSH				*e*AP	pP	10 14 38.1	+5.3
KSH				*e*XP	sP	10 14 43.2	+6.5
KSH				*e*S	S	10 24 52.0	+1.4
KSH				AMB	AMB		
	comp=Z,420nm,4.4s						
KSH				LR	LR		
	comp=N,550nm,5.8s						
KSH				LR	LR		
	comp=E,520nm,5.3s						
KURK	**Kurchatov**	**86.78**	**322**	*e*P	**P**	**10 14 24.2**	**-0.6**
	comp=E,24nm,1.6s,mb5.2						
KURK				*e*pP	pP	10 14 37.9	+1.4
KURK	**Kurchatov**	**86.78**	**322**	*e*P	**P**	**10 14 24.7**	**-0.1**
INK	**Inuvik**	**89.63**	**21**	P	**P**	**10 14 37.1**	**-0.9**
	comp=E,14nm,1.1s,mb5.2,baz=242,slow=6.7,SNR=28						
INK	**Inuvik**	**89.63**	**21**	*e*P	**P**	**10 14 37.5**	**-0.5**
	comp=E,33nm,1.5s,mb5.4						
MWC	**Mount Wilson**	**91.31**	**56**	*e*P	**P**	**10 14 46.7**	**0.0**
NVAR	**Mina Array Bea**	**91.65**	**52**	P	**P**	**10 14 48.6**	**+0.4**
	comp=E,3.8nm,0.9s,mb4.7,baz=240,slow=4.0,SNR=16						
NVAR				LR	LR	10 50 47.1	
	comp=E,744nm,20.9s,MS5.1,baz=205,slow=32						
NVAR	**Mina Array Bea**	**91.65**	**52**	P	**P**	**10 14 48.6**	**+0.4**
NVAR				LR	LR	10 50 47.1	
BVAR	**Borovoye Array**	**92.24**	**323**	P	**P**	**10 14 48.1**	**-2.4**
	comp=E,1.2nm,0.7s,mb4.3,baz=108,slow=4.7,SNR=7.3						
SYO	**Syowa Base**	**92.41**	**199**	⇑P	**P**	**10 14 50.9**	**-0.1**
SYO	**Syowa Base**	**92.41**	**199**	⇓PcP	PcP	10 14 55.2	+3.3
SYO	**Syowa Base**	**92.41**	**199**	⇑*e*P	**P**	**10 14 50.9**	**-0.1**
SYO				⇓*e*PcP	PcP	10 14 55.2	+3.3
LDFC	**Landfair**	**93.82**	**55**	*e*P	**P**	**10 15 00.1**	**+1.9**
YKA	**Yellowknife Ar**	**96.25**	**28**	P	**P**	**10 15 07.8**	**-0.7**
	comp=E,8.0nm,0.9s,mb5.1,baz=272,slow=4.8,SNR=9.5						
YKA				LR	LR	10 52 53.3	
	comp=E,292nm,20.4s,MS4.8,baz=260,slow=32						
PDAR	**Pinedale Array**	**98.63**	**48**	P	**P**	**10 15 18.8**	**-1.0**
	comp=E,1.4nm,0.9s,mb4.5,baz=270,slow=3.0,SNR=8.8						
PDAR				LR	LR	10 57 52.5	
	comp=E,344nm,18.5s,MS4.9,baz=260,slow=34						
ARU	**Arti**	**99.28**	**326**	⇓*i*P	**P**	**10 15 22.2**	**-0.2**
ARU				*e*		10 19 27.3	
ARU				*e*PPP	PPP	10 21 33.2	-3.8
ARU				*e*S		10 25 58.0	
ARU				*e*SS	SS	10 33 44.8	+3.5
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb5.1						
ARU				MLR	MLR		
	comp=Z,300nm,18.0s,MS4.8						
ARU				MLR	MLR		
	comp=N,100nm,17.0s,MS4.8						
ARU				MLR	MLR		
	comp=E,300nm,20.5s,MS4.8						
SNAA	**Sanae**	**100.23**	**187**	*e*P	P	10 15 21.8	-4.7
AKASG	**Malin Array Be**	**117.48**	**324**	PKP	PKPdf	10 20 25.2	0.0
	comp=E,0.2nm,0.2s,baz=72,slow=2.4,SNR=4.3						
AKASG	**Malin Array Be**	**117.48**	**324**	PKP	PKPdf	10 20 25.2	0.0
BRTR	**Keskin Array B**	**118.34**	**312**	PKP	PKPdf	10 20 28.4	+1.3
	comp=E,1.0nm,0.9s,baz=202,slow=6.7,SNR=3.8						
BOSA	**Boshof**	**120.09**	**231**	PKP	PKPdf	10 20 32.1	+1.2
	comp=E,1.8nm,0.7s,baz=108,slow=3.2,SNR=3.8						
CLL	**Collm**	**125.75**	**332**	*e*PKIKP	PKPdf	10 20 42.0	+0.8
GERES	**GERESS Array B**	**126.99**	**329**	PKP	PKPdf	10 20 45.1	+1.4
	comp=E,1.4nm,0.7s,SNR=4.8						
GERES	**GERESS Array B**	**126.99**	**329**	PKP	PKPdf	10 20 45.1	+1.4
CPUP	**Villa Florida**	**134.43**	**138**	*e*PKPdf	PKPdf	10 21 00.4	+2.0
SAML	**Samuel**	**138.80**	**112**	*e*PKPdf	PKPdf	10 21 08.2	+1.6
BDFB	**Brasilia**	**148.03**	**135**	PKP	PKPdf	10 21 24.4	+1.8
	comp=E,20nm,0.8s,baz=151,slow=0.9,SNR=18						
BDFB				PKPbc	PKPdf	10 21 27.2	+4.6
	comp=E,22nm,1.0s,baz=183,slow=1.7,SNR=18						
BAO	**Brasilia Array**	**148.05**	**135**	PKPdf	PKPdf	10 21 25.0	+2.3

*NEIC **08** 10:03:45.0, 35.91N×22.22E, h18km, MD3.5(ATH), After ATH.*

*CSEM **08** 10:03:45.0, 35.91N×22.22E, h18km, MD3.5/4, After ATH*

ATH 08 10:03:45.0,35.91N×22.22E,h18^{km},MD3.5/4,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	Kithira	0.76	61	ePN	Pn	10 03 59.5	-1.2
VLI	Veliai	0.99	35	ePN	Pn	10 04 04.3	+0.2
ITM	Ithomi	1.29	350	ePN	Pn	10 04 09.3	+1.0
VAM	Vamos	1.69	107	ePN	Pn	10 04 16.0	+2.0
GVD	Gavdhos	1.86	124	eP	Pn	10 04 20.6	+4.1
SANT	Santorini	2.66	79	ePn	Pn	10 04 29.0	+1.1

CASC 08 10:24:24.2±1.5,10.57N×86.48W,h26^{km}±4^{km},MD3.5, 8C-5D,Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	San Juan del S	0.95	41	⇑eP	Pb	10 24 41.5	-0.4
SSNN				eS	Sb	10 24 55.1	+1.0
LIM1	Limonal	1.22	84	⇑iP	Pn	10 24 45.5	-0.3
LIM1				eS	Sn	10 25 01.8	+0.3
MADN	Villa Maderas	1.25	48	⇑eP	Pn	10 24 46.3	0.0
CONN	Concepcion	1.30	40	⇑eP	Pn	10 24 46.5	-0.5
APON	Apoyo	1.40	17	eP	Pn	10 24 48.4	0.0
TICN	Ticuantepe	1.48	10	⇑eP	Pn	10 24 49.4	-0.1
XAVN	Gruta Xavier	1.58	6	⇓eP	Pn	10 24 50.5	-0.5
MGAN	Managua	1.59	8	⇓eP	Pn	10 24 50.5	-0.6
COPN	Copaltepe	1.60	356	⇓eP	Pn	10 24 50.6	-0.8
MOMJ	Momotombo	1.83	358	⇓eP	Pn	10 24 53.7	-0.8
MIRN	Miramar	1.87	353	⇓eP	Pn	10 24 54.2	-0.9
LEON	Leon	1.88	348	⇑eP	Pn	10 24 54.2	-1.0
CNGN	Cerro Negro	1.93	354	eP	Pn	10 24 55.0	-1.0
TEL3	Telica 3	2.02	350	⇑eP	Pn	10 24 56.3	-1.0
CGA2	Cerro Gallo 2	2.06	105	eP	Pn	10 24 57.8	0.0
CGA2				eS	Sn	10 25 22.9	-0.1
CRIN	San Cristobal	2.19	345	⇑eP	Pn	10 24 59.2	-0.5
PRS1	Puriscal	2.22	105	eP	Pn	10 24 57.4	-2.7
LAJ	Bijagual	2.43	107	eP	Pn	10 24 58.5	-4.6
LCR2	La Lucha 2	2.58	108	eP	Pn	10 25 06.6	+1.4

*NDI **08** 10:25:46.6±4.2,33.12N×75.33E,h10^{km},MD3.0,ML3.3*
*NNC **08** 10:25:57.6±16.0,34.20N×73.98E,Error ellipse: s-maj=275.8km s-min=123.7km az=104.0*
ISC 08 10:25:42.2±1.4,33.15N±0.06×75.1E±0.1,h17^{km}±11^{km}, n13,σ1^{s}03/21,1C,Eastern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	0.87	145	ex	x	10 25 57.3	
THN				eS	Sb	10 26 11.2	+1.5
DLH	Dalhousie	0.93	130	eP	Pb	10 25 59.0	-0.5
DLH				eS	Sb	10 26 10.0	-1.5
BHK	Bhakra	2.05	147	eP	Pn	10 26 21.8	+5.4
BHK				eS	Sn	10 26 47.6	+5.9
SDNR	Sundarnagar	2.27	136	eP	Pn	10 26 19.4	-0.2
SDNR				eS	Sn	10 26 46.6	-0.8
SMLA	Simla	2.66	139	eP	Pn	10 26 25.8	+0.7
SMLA				eS	Sn	10 26 58.6	+1.4
KLP	Kalpa	3.10	121	eP	Pn	10 26 35.4	+4.0
KLP				eS	Sn	10 27 08.6	+0.3
KLP				AML	AML	10 27 17.2	
	comp=E,238nm,0.6s						
KLP				AML	AML	10 27 17.4	
	comp=N,276nm,0.8s						
NDI	New Delhi	4.80	157	ex	x	10 26 50.0	
NDI				eS	Sn	10 27 51.0	-0.5
KHET	Khetri	5.10	173	eP	Pn	10 27 03.9	+4.2
KHET				eS	Sn	10 27 58.9	+0.1
KHET				AML	AML	10 28 23.9	
	comp=E,44nm,0.7s						
KHET				AML	AML	10 28 25.1	
	comp=N,44nm,0.5s						
KUDL	Kundal	5.13	166	eP	Pn	10 27 01.4	+1.3
KUDL				eS	Sn	10 27 57.1	-2.6
SONA	Sohna	5.17	160	eS	Sn	10 27 55.7	-5.0
SONA				AML	AML	10 28 33.7	
	comp=N,21nm,0.3s						
SONA				AML	AML	10 28 33.7	
	comp=E,53nm,0.6s						
KK31	Karatay Array	10.57	341	Pn	P	10 28 15.3	-0.7
	comp=E,0.4nm,0.3s,baz=149,slow=12,SNR=12						
KK31				⇑Sn	S	10 30 05.6	-10
	comp=E,2.1nm,0.5s,baz=176,slow=25,SNR=5.5						
AB31	Akbulak array	19.67	329	P	P	10 30 12.9	-0.2
	comp=E,0.7nm,0.5s,baz=140,slow=11,SNR=9.4						
AKTO	Aktyubinsk	21.38	329	P	P	10 30 31.4	+0.5

*KRSC **08** 10:52:56.4±1.2,49.89N×156.59E,h53^{km}±14^{km},ML4.6*
*MOS **08** 10:52:57.5±1.0,50.23N×155.90E,h104^{km},mb4.0/3,Error ellipse: s-maj=40.9km s-min=13.7km az=61.6*
*NEIC **08** 10:52:59.2±1.5,50.20N×155.94E,h102^{km}±13^{km},mb3.9/1, Error ellipse: s-maj=24.7km s-min=9.8km az=143.0*
*IDC **08** 10:52:59.9±4.9,50.21N×155.94E,h108^{km}±50^{km},mb3.6/7, mb1 3.8/8,mb1mx3.5/24,mbtmp4.0/8,Error ellipse: s-maj=39.0km s-min=18.0km az=159.0*
ISC 08 10:52:54.2±0.6,49.75N±0.04×156.66E±0.09,h53^{km},n47, σ1^{s}36/62,mb3.9/7,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.00	340	eP	P	10 53 11.4	-0.8
SKR				i S	S	10 53 24.0	-1.6
ALID	Alaid	1.33	328	eP	P	10 53 18.0	+1.1
ALID				eS	S	10 53 33.7	-0.1
PAU	Pauzhetka	1.73	3	i P	P	10 53 24.4	+2.0
PAU				i S	S	10 53 44.4	+1.1
PAU				Smax			
	4μm,0.1s						
RUS	Russkaya	2.94	23	P	P	10 53 40.4	+0.8
RUS				S	S	10 54 11.7	-2.1
RUS	Russkaya	2.94	23	i P	P	10 53 40.5	+0.9
RUS				i S	S	10 54 12.1	-1.7
GRL	Gorelyy	2.95	17	i P	P	10 53 41.5	+1.8
GRL				eS	S	10 54 13.6	-0.5
APC	Apacha	3.20	5	i P	P	10 53 44.6	+1.3
APC				Smax			
	40nm,0.8s						
KRMR	Karymshinskiy	3.23	16	eS	S	10 54 19.8	-1.3
PET	Petropavlovsk	3.51	20	i P	P	10 53 49.0	+1.3
PET				eS	S	10 54 26.9	-1.5
PET	Petropavlovsk	3.51	20	ePn	P	10 53 48.9	+1.2
PET				eSn	S	10 54 27.5	-0.9
PET	Petropavlovsk	3.51	20	ePN	P	10 53 49.3	+1.6
PET				eS	S	10 54 27.7	-0.7
PET				pmax	pmax		
	comp=Z,32nm,0.5s						
PET				smax			
	comp=N,417nm,0.5s						
PET				smax			
	comp=E,263nm,0.5s						
UGLR	Uglovaya	3.72	21	eP	P	10 53 52.7	+2.0
AVH	Avacha	3.76	19	eP	P	10 53 53.0	+1.9
AVH				eS	S	10 54 33.0	-1.5
KOK	Koryaka	3.76	18	eP	P	10 53 53.3	+2.1
SMAR	Somma	3.77	20	eP	P	10 53 53.2	+1.9
SDLR	Sedlovina	3.80	21	i P	P	10 53 53.2	+1.4
NLC	Nalytchevo	3.82	25	i P	P	10 53 52.1	+0.1
NLC				eS	S	10 54 33.2	-2.9
SPN	Mys Shipunski	3.96	31	P	P	10 53 54.8	+0.8
SPN				S	S	10 54 37.3	-2.4
SPN	Mys Shipunski	3.96	31	i P	P	10 53 54.8	+0.8
SPN				i S	S	10 54 37.6	-2.1
GNL	Ganaly	4.04	11	i P	P	10 53 56.5	+1.4
GNL				eS	S	10 54 39.5	-2.0
MKZ	Mys Kozlova	5.74	31	P	P	10 54 18.9	0.0
TUMR	Tumrok	5.94	20	i P	P	10 54 22.7	+1.0
KMNR	Kamenistaya	6.40	18	eP	P	10 54 28.3	+0.2
KPT	Kopyto	6.59	18	i P	P	10 54 32.1	+1.2
ZLN	Zelenaya	6.76	20	i P	P	10 54 34.4	+1.1
LGNR	Loginova	6.80	19	eP	P	10 54 34.5	+0.8
CIRR	Tsirk	6.84	20	eP	P	10 54 34.6	+0.3
KRSR	Krestovskiy	6.90	18	eP	P	10 54 35.1	0.0
SRKR	Sorokina	7.43	20	i P	P	10 54 42.3	-0.2
SMKR	Semkarok	7.43	21	eP	P	10 54 42.1	-0.4
KBTR	Krutoberegovo	7.46	28	eP	P	10 54 42.5	-0.5
KBTR				eS	S	10 56 00.7	-6.4
BKI	Bering	7.89	43	i S	S	10 56 07.2	-10
BKI				Smax			
	comp=E,100nm,0.2s						
ASAJ	Asahikawa	11.13	245	P	P	10 55 32.8	-0.4
	comp=E,1.5nm,0.3s,baz=69,slow=16,SNR=13						
ASAJ	Asahikawa	11.13	245	PN	P	10 55 32.8	-0.4
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	Matsushiro	18.78	232	P	P	10 57 09.1	-2.4
	comp=Z,5.4nm,0.8s						
MAJO	Matsushiro	18.78	232	P	P	10 57 09.1	-2.4
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
JNU	Nakatsue	25.30	239	P	P	10 58 15.3	-1.8
	comp=Z,10nm,0.8s,mb4.4,baz=238,slow=39,SNR=4.9						
ILAR	Eielson Array	32.73	41	P	P	10 59 21.1	-2.4
	comp=Z,1.5nm,0.7s,mb4.0,baz=258,slow=6.6,SNR=15						
ILAR	Eielson Array	32.73	41	P	P	10 59 21.1	-2.4
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
INK	Inuvik	37.85	35	P	P	11 00 05.2	-1.8
	comp=Z,0.5nm,0.4s,mb3.6,baz=279,slow=5.7,SNR=13						
INK	Inuvik	37.85	35	P	P	11 00 05.2	-1.7
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	47.70	297	P	P	11 01 20.4	-6.6
	comp=Z,0.4nm,0.3s,mb3.9,baz=46,slow=6.0,SNR=11						
BVAR	Borovoye Array	50.80	309	P	P	11 01 43.7	-7.1
	comp=Z,0.4nm,0.5s,mb3.6,baz=63,slow=9.7,SNR=2.8						
PDAR	Pinedale Array	61.10	57	P	P	11 03 03.3	-1.5
	comp=Z,0.7nm,0.8s,mb3.9,baz=297,slow=3.3,SNR=7.0						
TXAR	Lajitas Array	74.00	64	P	P	11 04 24.9	-0.8
	comp=Z,1.3nm,0.6s,mb4.0,baz=297,slow=4.5,SNR=20						
TXAR	Lajitas Array	74.00	64	P	P	11 04 24.9	-0.8
TXAR	Lajitas Array	74.00	64	P	P	11 04 24.9	-0.8
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*MOS **08** 11:03:06.8±0.8,27.46N×140.16E,h480^{km},mb4.3/22, Error ellipse: s-maj=27.8km s-min=8.5km az=116.3*
*BJI **08** 11:03:07.0,27.30N×139.76E,h456^{km},mB4.8,mb4.8*
*NEIC **08** 11:03:09.0±0.8,27.43N×140.08E,h488^{km}±8^{km},mb4.6/17, Error ellipse: s-maj=11.0km s-min=8.6km az=110.0*
*IDC **08** 11:03:08.6±1.0,27.38N×139.92E,h476^{km}±10^{km}, mb3.7/16,mb1 3.8/20,mb1mx3.7/26,mbtmp4.5/20,Error ellipse: s-maj=15.0km s-min=10.8km az=68.0*
*JMA **08** 11:03:09.3±0.2,27.65N×140.66E,h490^{km}±3^{km},M4.1*
ISC 08 11:03:07.6±0.3,27.45N±0.03×140.17E±0.05,h486^{km}±3^{km}, n129,σ0^{s}99/144,mb4.4/54,6C-6D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.83	101	P	P	11 04 11.2	+0.2
	216nm,0.3s,baz=264,slow=4.0,SNR=145						
CBIJ				S	S	11 04 59.8	-1.5
	259nm,0.3s,baz=270,slow=22,SNR=13						
CBIJ	Chichi jima	1.83	101	P	P	11 04 11.5	+0.5
CBIJ				eS	S	11 05 00.1	-1.2
JHHJ	Haha-jima-NKT	1.97	114	P	P	11 04 12.6	+0.9
JHHJ				eS	S	11 05 03.2	+0.7
JHJ2	Mitsune	5.65	357	P	P	11 04 41.3	+0.4
JHJ	Hachijo jima 2	5.66	357	P	P	11 04 41.2	+0.3
	30nm,0.3s,baz=220,slow=18,SNR=7.1						
JHJ				S	S	11 05 53.4	-1.4
	20nm,0.3s,baz=254,slow=22,SNR=2.8						
JWZ	Kozaga	7.18	329	P	P	11 04 58.9	+2.7
BSO1	Boso 1	7.22	5	P	P	11 04 57.3	+0.7
BSO1				eS	S	11 06 24.2	+1.1
BSO3	Boso 3	7.34	2	P	P	11 04 57.9	0.0
BSO3				eS	S	11 06 24.0	-1.4
BSO4	Boso 4	7.52	1	P	P	11 05 00.1	+0.3
BSO4				eS	S	11 06 29.0	+0.2
JIE	Ise	7.53	338	P	P	11 05 01.8	+1.9
JKN2	Miekihoku	7.55	335	P	P	11 05 02.2	+2.1
JOD2	Odawara 2	7.85	354	P	P	11 05 03.9	+0.7
JOD2				eS	S	11 06 34.9	-0.1
JMZ	Minamidaito 2	8.17	261	P	P	11 05 04.1	-2.6
JEG	Eigenji	8.32	338	P	P	11 05 10.9	+2.6
JTO	Tosashimizu	8.35	312	P	P	11 05 09.8	+1.2
JHU	Hanno	8.41	355	P	P	11 05 08.3	-1.0
JHU				eS	S	11 06 43.3	-2.6
JRY	Ryogami san	8.61	353	P	P	11 05 10.9	-0.5
JRY				eS	S	11 06 48.4	-1.3
JYT	Yasato	8.76	0	P	P	11 05 13.1	+0.2
JYT				eS	S	11 06 51.0	-1.4
JAG	Ashikaga	8.97	356	P	P	11 05 14.3	-1.0
JAG				eS	S	11 06 52.7	-3.9
JHO	Hitachi	9.14	2	P	P	11 05 17.4	+0.3
JHO				eS	S	11 06 58.8	-1.2
MJAR	Matsushiro Arr	9.22	350	P	P	11 05 16.6	-1.3
	1.2nm,0.3s,baz=166,slow=10,SNR=8.3						
MJAR				S	S	11 06 59.6	-1.8
	0.6nm,0.3s,baz=148,slow=11,SNR=3.2						
MAJO	Matsushiro	9.22	350	eP	P	11 05 17.4	-0.4
	8.6nm,0.3s						
MAT	Matsushiro	9.22	350	P	P	11 05 17.5	-0.4
MAT				S	S	11 07 01.9	+0.5
MAT	Matsushiro	9.22	350	P	P	11 05 17.0	-0.9
MAT				eS	S	11 07 02.0	+0.6
JNU	Nakatsue	9.82	307	P	P	11 05 25.1	+0.8
	2.6nm,0.3s,baz=128,slow=15,SNR=25						
JNU				S	S	11 07 14.4	+1.3
	0.1nm,0.3s,baz=250,slow=38,SNR=3.1						
JFK	Kawauchi	9.91	3	P	P	11 05 26.2	+1.0
JFK				eS	S	11 07 15.2	+0.3
JSJ	Shimokoshiki	10.03	297	P	P	11 05 26.9	+0.4
JOW	Kunigami	10.61	269	P	P	11 05 33.2	+0.5
	20nm,0.3s,baz=109,slow=11,SNR=54						
JOW				S	S	11 07 28.9	+0.2
	baz=277,slow=30,SNR=6.4						
JOW	Kunigami	10.61	269	P	P	11 05 33.1	+0.4
JMK	Ichinoseki	11.51	4	P	P	11 05 43.7	+1.6
JMK				eS	S	11 07 51.0	+4.9
JKE	Kume jima 2	12.00	268	P	P	11 05 46.9	-0.4
ASAJ	Asahikawa	16.75	6	P	P	11 06 39.2	+3.4
	0.3nm,0.3s,baz=64,slow=33,SNR=3.4						
SSE	Sheshan	16.95	287	P	P	11 06 32.8	-5.2
SSE				AMB	AMB		
	comp=Z,40nm,0.7s						
SSE				AMB	AMB		
	comp=Z,120nm,11.2s						
SSE	Sheshan	16.95	287	P	P	11 06 32.8	-5.2
	comp=Z,42nm,0.7s						
YHNB	Yeheng	17.11	265	eP	P	11 06 38.7	-0.9
NJ2	Nanjing	19.06	289	eP	P	11 06 53.7	-4.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
NJ2				AMB	AMB		
	comp=Z,100nm,6.0s						
SNY	Shenyang	19.75	321	⇓P	P	11 07 06.2	+1.1
SNY				AMB	AMB		
	comp=Z,30nm,0.9s						
CN2	Changchun	20.18	328	eP	P	11 07 11.2	+2.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
WHN	Wuhan	22.78	284	eP	P	11 07 32.5	-0.8
HIA	Hailar	26.88	330	eP	P	11 08 09.4	-0.4
	comp=Z,8.1nm,0.4s,mb4.5						
ENH	Enshi	26.98	283	⇓eP	P	11 08 09.6	-1.2
	comp=Z,23nm,1.0s,mb4.6						
XAN	Xi'an	27.58	292	P	P	11 08 15.1	-0.9
XAN				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.5						
GYA	Guiyang	29.83	276	⇓iP	P	11 08 35.1	-0.6
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
SONM	Songino Array	33.23	317	P	P	11 09 04.3	0.0
	comp=Z,2.8nm,0.6s,mb3.9,baz=122,slow=7.8,SNR=22						
SONM				PcP	PcP	11 11 33.9	+0.3
	comp=Z,1.0nm,0.5s,baz=128,slow=3.7,SNR=6.5						
SONM				ScP		11 14 32.1	
	comp=Z,0.5nm,0.5s,baz=143,slow=4.1,SNR=5.2						
YAK	Yakutsk	35.28	351	eP	P	11 09 10.7	-11
YAK				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.0						
GTA	Gaotai	35.45	300	eP	P	11 09 22.9	-0.2
ZAK	Zakamensk	36.17	319	eP	P	11 09 29.1	+0.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
TIXI	Tiksi	44.69	355	eP	P	11 10 36.7	-0.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb3.9						
WRAB	Tennant Creek	47.43	187	eP	P	11 10 58.6	-0.4
	comp=Z,3.8nm,0.3s,mb4.3						
WRAB				e		11 12 37.2	
WRAB	Tennant Creek	47.43	187	eP	P	11 10 59.0	0.0
WB2	Warramunga Arr	47.44	187	eP	P	11 10 57.7	-1.4
WRA	Warramunga Arr	47.45	187	P	P	11 10 58.1	-1.0
	comp=Z,2.5nm,0.4s,mb4.0,baz=3.9,slow=7.6,SNR=30						
WRA				PcP	PcP	11 12 20.7	+0.3
	comp=Z,1.6nm,0.6s,baz=360,slow=3.9,SNR=9.0						
WRA				ScP		11 15 26.7	
	comp=Z,1.0nm,0.6s,baz=360,slow=4.7,SNR=4.8						
WRA				S	S	11 17 13.7	-3.1
	comp=Z,0.6nm,0.7s,baz=1.0,slow=4.7,SNR=4.1						
WRA	Warramunga Arr	47.45	187	i P	P	11 10 58.5	-0.6
WRA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
JIRN	Jiri	47.52	283	eP	P	11 11 00.3	+0.7
	comp=Z,75nm,0.7s,mb5.1						
GUN	Gumba	47.73	284	eP	P	11 11 01.9	+0.7
	comp=Z,68nm,0.6s,mb5.1						
ZAL	Zalesovo	48.06	319	P	P	11 11 02.4	-0.9
	comp=Z,7.6nm,0.3s,mb4.5,baz=5.8,slow=7.1,SNR=33						
ZAL				PcP	PcP	11 12 21.5	-0.7
	comp=Z,2.1nm,0.5s,baz=322,slow=2.6,SNR=6.0						
ZAL	Zalesovo	48.06	319	i P	P	11 11 02.9	-0.4
ZAL				pmax	pmax		
	comp=Z,8.0nm,0.3s						
PKI	Pulchoki	48.22	284	eP	P	11 11 04.7	-0.1
KKN	Kakani	48.28	284	eP	P	11 11 05.4	+0.1
	comp=Z,42nm,0.9s,mb4.8						
DMN	Daman	48.47	284	eP	P	11 11 06.7	0.0
	comp=Z,20nm,0.5s,mb4.7						
GKN	Gorkha	48.78	284	eP	P	11 11 09.2	+0.1
	comp=Z,14nm,0.4s,mb4.7						
MKAR	Makanchi Array	48.87	309	P	P	11 11 09.4	0.0
	comp=Z,7.1nm,0.5s,mb4.2,baz=88,slow=10,SNR=81						
MKAR				PcP	PcP	11 12 25.1	-0.2
	comp=Z,2.1nm,0.7s,baz=90,slow=6.1,SNR=6.2						
MKAR				ScP		11 15 32.6	
	comp=Z,0.6nm,0.5s,baz=86,slow=4.1,SNR=4.9						
MKAR	Makanchi Array	48.87	309	⇑iP	P	11 11 09.3	-0.1
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NVS	Novosibirsk	49.12	320	i P	P	11 11 09.9	-1.3
NVS				pmax	pmax		
	comp=Z,18nm,1.2s,mb4.3						
NVS				pmax	pmax		
	comp=E,14nm,1.4s						
KOLN	Koldanda	49.73	284	eP	P	11 11 16.1	-0.1
	comp=E,46nm,0.9s,mb4.8						
ASPA	Alice Springs	51.17	187	eP	P	11 11 25.9	-1.0
KURK	Kurchatov	51.46	314	⇓iP	P	11 11 28.1	-0.5
	comp=E,29nm,0.6s,mb4.8						
KURK	Kurchatov	51.46	314	P	P	11 11 28.1	-0.5
KURK				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.2						
ULHL	Ulahol	53.33	304	P	P	11 11 38.0	-4.2
	SNR=8.3						
TKM2	Tokmak 2	53.74	305	P	P	11 11 45.9	+0.8
	SNR=10						
KBK	Karagaybulak	54.24	304	P	P	11 11 49.3	+0.6
	SNR=7.8						
AAK	Ala-Archa	54.58	304	P	P	11 11 51.4	+0.3
	SNR=8.3						
AAK	Ala-Archa	54.58	304	⇓iP	P	11 11 50.3	-0.7
	comp=Z,4.0nm,0.7s,mb3.9						
AAK				ePcP	PcP	11 12 46.2	-0.7
AAK	Ala-Archa	54.58	304	⇓iP	P	11 11 50.3	-0.8
AAK				e		11 12 46.2	
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.9						
UCH	Uchtor	54.61	304	P	P	11 11 52.9	+1.6
	SNR=5.2						
KDAK	Kodiak Island	55.16	37	P	P	11 11 56.0	+1.0
	comp=Z,3.7nm,0.2s,mb4.3,baz=143,slow=9.1,SNR=13						
AML	Almayashu	55.23	304	P	P	11 11 56.8	+1.2
	SNR=9.6						
VOSK	Vostochnaya	56.22	317	P	P	11 12 01.8	-0.6
VOSK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.3						
CHKZ	Chkalovo	56.41	318	eP	P	11 12 02.8	-0.9
	comp=Z,17nm,0.6s,mb4.5						
CHKZ				e	pP	11 13 36.6	-4.9
CHKZ	Chkalovo	56.41	318	P	P	11 12 02.8	-0.9
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.2						
BVA0	Borovoye Array	56.57	317	i P	P	11 12 04.7	-0.1
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
BVAR	Borovoye Array	56.57	317	P	P	11 12 04.7	0.0
	comp=Z,44nm,0.4s,mb5.1,baz=87,slow=7.0,SNR=267						
BVAR				PcP	PcP	11 12 54.5	0.0
	comp=Z,2.8nm,0.6s,baz=94,slow=2.1,SNR=3.5						
BRVK	Borovoye	56.63	317	eP	P	11 12 04.9	-0.2
	comp=Z,20nm,0.6s,mb4.6						
BRVK				e		11 12 54.6	
BRVK	Borovoye	56.63	317	eP	P	11 12 04.9	-0.3
BRVK				e		11 12 54.6	
BRVK				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.6						
KKAR	Karatay Array	57.42	305	eP	P	11 12 10.7	0.0
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.1						
ILAR	Eielson Array	58.27	29	P	P	11 12 16.9	+0.7
	comp=Z,0.6nm,0.3s,mb3.4,baz=259,slow=5.7,SNR=7.0						
STKA	Stephens Creek	59.01	179	P	P	11 12 21.1	-0.4
	comp=Z,1.4nm,0.8s,mb3.3,baz=356,slow=16,SNR=5.7						
SVE	Sverdlovsk	61.85	322	eP	P	11 12 40.4	+0.4
ARU	Arti	63.04	322	P	P	11 12 47.7	-0.1
	comp=Z,17nm,0.6s,mb4.8						
ARU	Arti	63.04	322	⇑iP	P	11 12 47.5	-0.3
ARU				e		11 15 08.1	
ARU				eS	S	11 21 11.4	+32
ARU				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.7						
INK	Inuvik	63.46	25	P	P	11 12 51.8	+1.5
	comp=Z,0.5nm,0.5s,mb3.3,baz=161,slow=10,SNR=7.4						
AB31	Akbulak array	63.56	314	i P	P	11 12 50.8	-0.4
AB31				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.4						
AKTO	Aktyubinsk	64.53	315	P	P	11 12 56.5	-0.8
	comp=Z,8.1nm,0.7s,mb4.5,baz=84,slow=6.5,SNR=27						
ORR	Orenburg	66.25	317	eP	P	11 13 06.7	-1.3
ORR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
KEV	Kevo	72.05	340	ep	P	11 13 40.4	-2.0
	comp=Z,5.1nm,0.5s,mb4.3						
KEV	Kevo	72.05	340	eP	P	11 13 40.4	-2.0
KEV				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.3						
ARCES	ARCESS Array B	72.62	340	P	P	11 13 46.7	+1.1
	comp=Z,5.5nm,0.5s,mb4.4,baz=72,slow=8.4,SNR=70						
JOF	Joensuu	73.97	333	ep	P	11 13 52.2	-1.2
	comp=Z,7.4nm,0.4s,mb4.6						
JOF	Joensuu	73.97	333	eP	P	11 13 52.2	-1.2
JOF				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.5						
OBN	Obninsk	75.21	325	⇑eP	P	11 13 59.2	-1.4
OBN				eS	S	11 23 20.0	+21
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.1						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s						
KAF	Kangasniemi	76.37	334	ep	P	11 14 05.9	-0.9
	comp=Z,11nm,0.5s,mb4.7,baz=53,slow=4.8						
KAF	Kangasniemi	76.37	334	eP	P	11 14 05.9	-0.9
KAF				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.6						
KIV	Kislovodsk	76.49	313	eP	P	11 14 09.7	+1.9
KIV				pmax	pmax		
	comp=Z,18nm,1.7s,mb4.3						
FINES	FINESS Array B	76.83	333	P	P	11 14 09.7	+0.4
	comp=Z,13nm,0.4s,mb4.8,baz=70,slow=5.1,SNR=134						
FINES	FINESS Array B	76.83	333	eP	P	11 14 10.0	+0.7
UMR	Umm Al-Rimmam	78.94	298	eP	P	11 14 21.8	+0.5
UMR				AMb	AMB	11 14 23.6	
	comp=Z,40nm,0.5s,mb5.2						
QRN	Al-Qurain	79.12	297	eP	P	11 14 22.7	+0.4
QRN				AMb	AMB	11 14 23.8	
	comp=Z,214nm,1.5s						
MIB	Mutribah	79.13	298	eP	P	11 14 22.7	+0.4
MIB				AMb	AMB	11 14 23.3	
	comp=Z,45nm,0.5s,mb5.3						
RDF	Al-Radifah	79.34	297	eP	P	11 14 23.8	+0.4
RDF				AMb	AMB	11 14 26.4	
	comp=Z,100nm,1.2s,mb5.2						
NAY	Al-Naaiem	79.44	297	eP	P	11 14 24.3	+0.4
NAY				AMb	AMB	11 14 25.7	

	comp=Z,37nm,0.8s,mb5.0						
AKASG	Malin Array Be	81.27	323	P	P	11 14 33.1	+0.2
	comp=Z,3.1nm,0.4s,mb4.2,baz=52,slow=5.4,SNR=41						
NVAR	Mina Array Bea	81.70	51	P	P	11 14 38.4	+3.0
	comp=Z,0.4nm,0.6s,baz=286,slow=3.4,SNR=4.2						
NB2	NORSAR Subarra	82.61	338	P	P	11 14 39.8	+0.3
	comp=Z,4.9nm,0.5s,mb4.3,baz=49,slow=4.6						
NB2	NORSAR Subarra	82.61	338	P	P	11 14 39.8	+0.3
	baz=49,slow=4.6						
NOA	NORSAR Array B	82.61	338	P	P	11 14 39.9	+0.4
	comp=Z,6.9nm,0.7s,mb4.3,baz=47,slow=4.8,SNR=19						
NAO	NORSAR Subarra	82.90	338	P	P	11 14 39.8	-1.1
	comp=Z,4.9nm,0.5s,mb4.3						
BRTR	Keskin Array B	84.44	312	P	P	11 14 49.3	+0.2
	comp=Z,2.4nm,0.6s,mb3.9,baz=86,slow=3.3,SNR=10						
KHC	Kasperske Hory	90.13	328	*e*P	P	11 15 16.8	+1.1
GERES	GERESS Array B	90.27	328	P	P	11 15 16.7	+0.3
	comp=Z,2.2nm,0.8s,mb4.0,baz=56,slow=4.8,SNR=11						
CDF	Champ du Feu	93.50	331	*e*P	P	11 15 31.3	0.0
LPL	La Plagne	95.95	329	*e*P	P	11 15 42.5	+0.1
	comp=Z,5.5nm,0.7s,mb4.5						
LPG	La Plagne	95.95	329	*e*P	P	11 15 42.7	+0.3
	comp=Z,7.1nm,0.7s,mb4.6						
MBDF	Montbardon	96.53	329	*e*P	P	11 15 44.3	-0.8
	comp=Z,4.3nm,0.7s,mb4.5						
BOSA	Boshof	123.20	252	PKP	PKPdf	11 21 10.2	+1.6
	comp=Z,2.7nm,0.8s,baz=8.5,slow=22,SNR=3.5						
SNAA	Sanae	131.26	195	⇑*i*P	PKPdf	11 21 24.6	+1.6
VNA2	Neumayer--Watz	132.81	194	⇑*i*P	PKPdf	11 21 29.3	+3.5
VNA3	Neumayer Olymp	133.03	193	⇑*i*P	PKPdf	11 21 30.5	+4.3
PLCA	Paso Flores	151.48	126	PKPbc	PKPdf	11 22 08.6	+10
	comp=Z,2.0nm,0.4s,baz=248,slow=1.5,SNR=7.5						
LPAZ	La Paz	151.56	73	PKPbc	PKPdf	11 22 10.9	+11
	comp=Z,2.0nm,0.7s,baz=327,slow=1.7,SNR=8.8						

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*ATH **08** 11:10:48.6, 38.18N×27.32E, h39^{km}±1^{km}, MD3.1/3*
*NEIC **08** 11:10:48.6, 38.18N×27.32E, h39^{km}, MD3.1(ATH), MD2.9(ISK), After ATH.*
*ISK **08** 11:10:50.8, 38.14N×26.59E, h11^{km}, MD2.9*
*CSEM **08** 11:10:50.9±0.1, 38.15N×26.61E, h8^{km}, MD2.9, Error ellipse: s-maj=4.8km s-min=3.2km az=127.0*

ISC 08 11:10:50.6±1.0**, 38.11N**±0.04×**26.61E**±0.05**, h3**^{km}±7^{km}**, n15, σ0^{s}92**/21**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.25	357	*i* P	Pg	11 10 55.6	+0.1
URLA				*i* S	Sg	11 10 59.4	+0.4
BLCB	Balcova	0.44	51	PG	Pg	11 10 59.3	0.0
SMG	Samos	0.44	156	*e*PN	Pn	11 11 01.4	-1.9
SMG				*e*SN	Sn	11 11 10.8	-1.0
IZM	Izmir	0.59	61	PG	Pg	11 11 02.6	+0.3
IZM				SG	Sg	11 11 11.1	+0.9
KDAG	Bornova	0.59	60	*i* P	Pg	11 11 01.5	-0.9
KDAG				*i* S	Sg	11 11 08.7	-1.7
PRK	Paraskevi	1.17	347	*e*PN	Pn	11 11 12.6	-1.1
PRK				*e*SN	Sn	11 11 29.9	-0.4
BODT	Bodrum	1.19	152	*e*PN	Pn	11 11 14.1	+0.1
AKS	Akhisar	1.22	50	*e*PN	Pn	11 11 14.9	+0.5
APE	Apeiranthos	1.35	220	*e*PN	Pn	11 11 16.8	+0.5
APE	Apeiranthos	1.35	220	*e*PN	Pn	11 11 19.0	+2.7
MANT	Manisa	1.58	75	*i* P	Pn	11 11 20.6	+1.0
MANT				*i* S	Sb	11 11 40.9	+0.6
DAT	Datca	1.58	151	*e*PN	Pn	11 11 20.4	+0.8
DALT	Dalyan (Mudla)	2.10	129	*e*PN	Pn	11 11 28.1	+1.1
GVD	Gavdhos	3.85	213	*e*P	Pn	11 11 51.9	-0.1
GVD	Gavdhos	3.85	213	*e*P	Pn	11 11 51.9	0.0

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*IDC **08** 11:14:52.8±0.8, 0.81N×119.97E, mb4.1/10, mb1 4.3/11, mb1mx4.2/19, mbtmp4.2/11, ML4.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/21, Error ellipse: s-maj=33.5km s-min=15.9km az=69.0*
*BJI **08** 11:14:56.0, 0.80N×120.00E, h35^{km}, mB5.4, mb4.6*
*NEIC **08** 11:14:58.0±0.4, 0.83N×120.04E, h35^{km}, mb4.4/2, Error ellipse: s-maj=19.9km s-min=6.9km az=65.0*

ISC 08 11:14:54.5±2.7**, 0.84N**±0.09×**120.0E**±0.1**, h22**^{km}±19^{km}**, n25, σ0^{s}58**/29**, mb4.3**/12**, MS3.4**/1**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSM	Tawau	4.03	329	P	Pn	11 15 56.9	+0.4
KKM	Kota Kinabalu	6.39	324	*e*Pn	Pn	11 16 29.9	0.0
KKM				*e*Sn	Sn	11 17 42.0	-1.0
KKM	Kota Kinabalu	6.39	324	P	Pn	11 16 30.2	+0.3
KAKA	Kakadu	18.27	138	*e*P	P	11 19 26.5	+18
	28nm,0.6s						
FITZ	Fitzroy Crossi	19.62	164	*e*P	P	11 19 24.6	0.0
	8.0nm,0.7s						
FITZ	Fitzroy Crossi	19.62	164	P	P	11 19 24.1	-0.6
	0.6nm,0.3s,baz=30,slow=4.2,SNR=12						
QIZ	Qiongzhong	20.63	332	P	P	11 19 35.1	-0.2
WRAB	Tennant Creek	24.99	146	*e*P	P	11 20 18.4	0.0
	74nm,0.2s,mb5.9						
WRAB				*e*pP		11 20 28.6	
WRA	Warramunga Arr	24.99	146	P	P	11 20 17.9	-0.5
	14nm,0.6s,mb4.6,baz=334,slow=9.5,SNR=96						
WRA				S	S	11 24 38.1	-0.1
	0.8nm,0.8s,baz=303,slow=23,SNR=4.0						
WRA	Warramunga Arr	24.99	146	P	P	11 20 17.9	-0.5
WRA				S	S	11 24 38.1	-0.1
WB2	Warramunga Arr	25.00	146	*e*P	P	11 20 17.7	-0.8
WB2				*e*S	S	11 24 38.7	+0.4
ASPA	Alice Springs	27.86	152	*e*P	P	11 20 45.8	+1.0
ENH	Enshi	30.93	342	*e*P	P	11 21 12.7	+0.5
	8.9nm,0.8s,mb4.7						
STKA	Stephens Creek	38.44	150	P	P	11 22 16.4	-0.1
	3.4nm,0.5s,mb4.3,baz=325,slow=7.6,SNR=14						
STKA	Stephens Creek	38.44	150	P	P	11 22 16.4	-0.1
MJAR	Matsushiro Arr	39.34	23	P	P	11 22 23.4	-0.6
	2.8nm,0.9s,mb4.0,baz=216,slow=6.6,SNR=4.1						
MJAR				LR	LR	11 38 16.0	
	comp=Z,57nm,19.2s,MS3.4,baz=30,slow=36						
GTA	Gaotai	42.58	337	*e*P	P	11 22 52.3	+1.6
GTA				AP	pP	11 22 59.7	+2.4
GTA				XP	sP	11 23 03.0	+3.0
SONM	Songino Array	48.28	348	P	P	11 23 36.2	+0.2
	0.7nm,0.6s,mb3.9,baz=168,slow=7.8,SNR=6.5						
MKAR	Makanchi Array	56.35	330	P	P	11 24 36.2	-0.1
	0.7nm,0.5s,mb4.0,baz=125,slow=9.1,SNR=9.4						
MKAR	Makanchi Array	56.35	330	P	P	11 24 36.2	-0.1
ZAL	Zalesovo	60.34	337	P	P	11 25 03.6	-0.4
	0.8nm,0.6s,mb4.0,baz=180,slow=8.1,SNR=3.5						
AKTO	Aktyubinsk	71.84	324	P	P	11 26 17.6	0.0
	0.6nm,0.4s,mb3.9,baz=91,slow=1.5,SNR=5.0						
OPO	Ambohidratompo	73.98	251	P	P	11 26 30.6	-0.2
	1.8nm,0.8s,mb4.0,baz=31,slow=5.9,SNR=3.6						
MAW	Mawson	78.77	199	P	P	11 26 56.5	-0.2
	1.2nm,0.8s,mb3.9,baz=21,slow=8.6,SNR=4.2						
KMBO	Kilima Mbogo	82.75	269	P	P	11 27 19.6	+0.6
	2.7nm,1.0s,mb4.2,baz=37,slow=10,SNR=5.6						

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*ATH **08** 11:42:51.0, 38.17N×26.47E, h10^{km}, MD3.6/3*
*NEIC **08** 11:42:51.0, 38.17N×26.47E, h10^{km}, MD3.6(ATH), ML3.4(ISK), After ATH.*
*CSEM **08** 11:42:56.4±0.1, 38.37N×26.79E, h10^{km}, MD3.4, Error ellipse: s-maj=3.1km s-min=1.9km az=98.0*

ISK 08 11:42:57.0, 38.36N×26.82E, h13^{km}, MD3.4, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.18	82	PG	Pg	11 43 01.1	-0.2
BLCB				SG	Sg	11 43 04.6	+0.5
IZM	Izmir	0.35	84	PG	Pg	11 43 04.8	+0.4
IZM				SG	Sg	11 43 10.2	+0.9
SMG	Samos	0.65	179	*e*PB	Pg	11 43 01.5	-8.7
AKS	Akhisar	0.94	56	PG	Pg	11 43 15.2	-0.6
AKS				SG	Sg	11 43 29.3	+0.9
PRK	Paraskevi	0.98	334	*e*PB	Pb	11 43 11.4	-3.9
MLSB	Milas	1.31	144	PN	Pn	11 43 21.6	+0.6
BODT	Bodrum	1.35	163	PN	Pn	11 43 22.5	+0.8
BALB	Balikesir	1.52	33	*e*PN	Pn	11 43 24.0	-0.1
APE	Apeiranthos	1.65	219	*e*PN	Pn	11 43 26.7	+0.8
APE	Apeiranthos	1.65	219	*e*PB	Pb	11 43 16.2	-11
YER	Yerkesik	1.69	136	*e*PN	Pn	11 43 26.8	+0.3
DAT	Datca	1.74	159	*e*PN	Pn	11 43 28.0	+0.8
KHL	Karahalli	2.13	90	*e*PN	Pn	11 43 33.2	+0.4
DALT	Dalyan (Mudla)	2.15	137	*e*PN	Pn	11 43 33.5	+0.4
BNT	Bandirma	2.17	23	*e*PN	Pn	11 43 33.8	+0.5
SANT	Santorini	2.26	209	*e*Pn	Pn	11 43 27.6	-7.1
SANT				*e*Sn	Sn	11 43 53.4	-9.3
SANT	Santorini	2.26	209	*e*Pn	Pn	11 43 27.6	-7.1
SANT				*e*Sn	Sn	11 43 53.4	-9.3
MRMT	Marmara Adasi	2.32	15	*e*PN	Pn	11 43 36.6	+1.1
MFT	Murefte	2.45	8	*e*PN	Pn	11 43 37.4	0.0
FETY	Fethiye	2.49	133	*e*PN	Pn	11 43 37.9	-0.1
YLV	Yalova	2.96	41	*e*PN	Pn	11 43 45.3	+0.6

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*NDI **08** 11:49:10.9±3.7, 34.79N×72.77E, h10^{km}, MD3.7, ML3.5*
*NNC **08** 11:49:18.7±8.7, 35.20N×72.68E, mpv3.9, Error ellipse: s-maj=238.5km s-min=74.6km az=81.0*

ISC 08 11:49:08.1±1.4**, 34.66N**±0.06×**72.8E**±0.2**, h33**^{km}**, n14, σ0^{s}97**/20**, 1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.27	132	*e*P	P	11 50 05.1	+6.8
THN				*e*S	S	11 50 45.7	+9.1
SDNR	Sundarnagar	4.69	131	*e*P	P	11 50 24.0	+5.6
SDNR				*e*S	S	11 51 17.0	+4.7
SMLA	Simla	5.07	133	*e*P	P	11 50 27.8	+4.1
SMLA				*e*S	S	11 51 26.0	+4.1
KLP	Kalpa	5.51	123	*e*P	P	11 50 34.1	+4.2
KLP				*e*S	S	11 51 32.9	-0.2
KLP				AML	AML	11 52 08.2	
	comp=E,200nm,0.6s						
KLP				AML	AML	11 52 08.4	
	comp=N,104nm,0.6s						
KHET	Khetri	7.04	158	*e*S	S	11 52 11.1	0.0
KHET				AML	AML	11 52 15.7	
	comp=E,24nm,0.3s						
KHET				AML	AML	11 52 16.1	
	comp=N,19nm,0.1s						
AYAN	Aya Nagar	7.16	148	*e*S	S	11 52 13.9	-0.3
SONA	Sohna	7.35	149	*e*S	S	11 52 18.7	-0.1
SONA				AML	AML	11 52 22.2	
	comp=N,17nm,0.3s						
SONA				AML	AML	11 52 23.2	
	comp=E,41nm,0.5s						
AAK	Ala-Archa	8.07	9	⇓S	S	11 52 36.9	0.0
	comp=E,10nm,1.1s						
KK31	Karatay Array	8.63	349	P	P	11 51 17.1	+3.6
	comp=E,2.3nm,0.3s,baz=157,slow=11,SNR=28						
KK31				S	S	11 52 50.4	-0.3
	comp=E,4.7nm,0.7s,baz=177,slow=25,SNR=9.6						
KOLN	Koldanda	11.49	124	*e*P	P	11 51 52.3	-0.5
KOLN				*e*S	S	11 53 52.7	-8.3
GKN	Gorkha	12.07	120	*e*P	P	11 52 00.1	-0.6
KKN	Kakani	12.66	119	*e*P	P	11 52 08.2	-0.3
PKI	Pulchoki	12.88	120	*e*P	P	11 52 11.5	0.0
GUN	Gumba	13.02	118	*e*P	P	11 52 13.7	+0.3

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*IDC **08** 11:51:50.4±1.6, 10.15N×104.38W, mb3.7/5, mb1 4.1/6, mb1mx3.9/18, mbtmp3.7/6, ML3.1/1, MS4.0/11, Ms1 4.0/11, ms1mx3.7/27, Error ellipse: s-maj=118.1km s-min=24.3km az=72.0*
*NEIC **08** 11:51:51.9±1.2, 10.10N×104.50W, h10^{km}, mb4.2/1, Error ellipse: s-maj=56.5km s-min=18.9km az=78.0*

ISC 08 11:51:49.9±1.3**, 10.1N**±0.2×**104.4W**±0.4**, h10**^{km}**, n15, σ1^{s}03**/7**, mb3.7**/5**, MS4.0**/9**, Northern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	19.14	2	P	P	11 56 14.8	-1.1
	0.0nm,0.3s,baz=185,slow=14,SNR=13						
TXAR				LR	LR	12 03 13.1	
	comp=Z,484nm,19.1s,baz=240,slow=36						
JTS	JuntasAbangare	19.16	88	LR	LR	12 01 30.7	
	comp=Z,254nm,20.8s,baz=265,slow=30						
JCT	Junction City	20.72	11	*e*P	P	11 56 33.7	+0.6
	15nm,1.2s						
ANMO	Albuquerque	24.80	356	P	P	11 57 14.7	+1.2
	0.9nm,0.6s,mb3.5,baz=165,slow=13,SNR=5.6						
NVAR	Mina Array Bea	30.83	338	P	P	11 58 09.6	+1.3
	0.2nm,0.3s,mb3.4,baz=163,slow=11,SNR=3.3						
PDAR	Pinedale Array	32.84	353	P	P	11 58 25.1	-0.7
	0.5nm,0.8s,mb3.5,baz=180,slow=7.4,SNR=3.9						
SDV	Santo Domingo	33.33	89	LR	LR	12 11 15.4	
	comp=Z,109nm,18.2s,MS3.6,baz=231,slow=35						
ULM	Lac du Bonnet	40.64	8	LR	LR	12 16 24.5	
	comp=Z,226nm,19.2s,MS4.0,baz=119,slow=36						
FRB	Frobisher Bay	59.27	18	LR	LR	12 27 26.0	
	comp=Z,120nm,18.7s,MS4.0,baz=146,slow=36						
PLCA	Paso Flores	59.47	151	P	P	12 01 55.5	+0.1
	0.9nm,0.8s,mb3.9,baz=312,slow=6.7,SNR=5.7						
PLCA				LR	LR	12 19 29.0	
	comp=Z,60nm,20.0s,MS3.7,baz=197,slow=28						
BDFB	Brasilia	61.43	114	LR	LR	12 27 00.9	
	comp=Z,149nm,21.0s,MS4.1,baz=304,slow=34						
ILAR	Eielson Array	62.04	341	P	P	12 02 11.2	-1.4
	1.2nm,0.8s,mb4.1,baz=145,slow=5.0,SNR=5.4						
ILAR				LR	LR	12 28 08.1	
	comp=Z,79nm,20.6s,MS3.9,baz=179,slow=35						
ARCES	ARCESS Array B	93.38	16	LR	LR	12 46 22.6	
	comp=Z,121nm,18.1s,MS4.4,baz=117,slow=35						
DAVOX	Davos	98.73	39	LR	LR	12 52 15.2	
	comp=Z,91nm,18.9s,MS4.3,baz=270,slow=37						
FINES	FINESS Array B	98.88	22	LR	LR	12 49 13.9	
	comp=Z,69nm,19.8s,MS4.2,baz=326,slow=35						

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*OMAN **08** 12:01:47.2, 32.58N×57.83E, h31^{km}, Error ellipse: s-maj=1091.0km s-min=27.6km az=4.0*
*CSEM **08** 12:01:47.2, 32.58N×57.83E, h31^{km}, mb3.3, Error ellipse: s-maj=1090.5km s-min=27.6km az=4.0, After OMAN*
*THR **08** 12:02:34.1±0.5, 28.92N×57.23E, h14^{km}±5^{km}, ML3.5*

ISC 08 12:02:33.3±0.6**, 28.89N**±0.03×**57.19E**±0.07**, h10**^{km}**, n20, σ1^{s}12**/24**, 6C-6D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	1.15	341	*e*Pg	Pg	12 02 55.2	-1.1
KRBR				*e*Sg	Sg	12 03 11.1	-0.6
KRBR				AML	AML	12 03 11.9	
	comp=N,1μm,0.2s						
KRBR	Kerman	1.15	341	*e*Pg	Pg	12 02 55.2	-1.1
	SNR=90						
KRBR				*e*Sg	Sg	12 03 11.1	-0.6
	comp=N,1μm,0.2s,SNR=90						
BNDS	Bandar-Abbas	1.73	211	*e*Pg	Pg	12 03 06.6	-1.4
BNDS				*e*Sg	Sg	12 03 30.9	-0.3
BNDS				AML	AML	12 03 33.9	
	comp=N,507nm,0.4s						
BNDS	Bandar-Abbas	1.73	211	*e*Pg	Pg	12 03 06.6	-1.4
	SNR=90						
BNDS				*e*Sg	Sg	12 03 30.9	-0.2
	comp=N,507nm,0.4s,SNR=90						
BANOM	Banah	3.06	195	⇑P	Pn	12 03 24.3	+1.6
	SNR=41						
ZHSF	Zahedan	3.22	76	*e*Pn	Pn	12 03 25.8	+0.8
GHIR	Ghir-Karzin	3.74	262	*e*Pn	Pn	12 03 34.0	+1.6
ASHO	Ashiyiah	4.31	194	⇓P	Pn	12 03 42.4	+1.9
	SNR=10						
BIDO	Bidbid	5.41	171	⇓P	Pn	12 03 54.7	-1.4
NASN	Na'in	5.42	317	*e*Pn	Pn	12 03 57.2	+1.1
ARQ	Araqi	5.56	186	⇓P	Pn	12 03 59.3	+1.1
SMDO	Samad	5.86	172	⇓P	Pn	12 04 02.3	-0.1
BSY	Bisya	6.12	180	⇓P	Pn	12 04 07.3	+1.2
BSYO	Bisya	6.13	180	P	Pn	12 04 07.3	+1.0
WBK	Wadi Bani Khal	6.46	165	⇑P	Pn	12 04 09.4	-1.4
	SNR=12						
JMDO	Jabal Madar	6.55	173	⇓P	Pn	12 04 12.0	-0.1
SHAO	Shalim	10.91	188	⇑P	P	12 05 11.6	-1.1
WHFO	Wadi Hawf	11.36	197	⇑P	P	12 05 18.3	-0.5
RBK	Rabkut	11.66	194	⇑P	P	12 05 21.5	-1.4
ABTO	Aybut	12.03	198	⇑P	P	12 05 27.1	-0.7

MAN 08 12:16:11.6, 14.83N×123.33E, h12^{km}, mb4.6, ML3.5, MS3.3, 2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	1.25	223	⇓*e*P	Pb	12 16 33.1	-1.6
GQP				*e*S	Sb	12 16 49.0	-1.7
POLP	Polilio Island	1.35	266	*e*P	Pn	12 16 35.2	-1.1
POLP				*e*S	Sb	12 16 54.6	+1.2
PVCP	Virac	1.46	147	*e*P	Pn	12 16 36.2	-1.8
AUQP	San Andres	1.62	203	*e*P	Pn	12 16 41.5	+1.2
BALP	Baler	1.92	298	*e*P	Pn	12 16 43.9	-0.7
BOAC	Boac	1.98	227	*e*P	Pn	12 16 46.1	+0.7
PCPH	Palayan	2.28	289	⇓*e*P	Pn	12 16 48.4	-1.2
PCPH				*e*S	Sn	12 17 18.2	+0.4
CAUP	Cauayan	2.56	326	*e*P	Pn	12 16 53.9	+0.3
CNP	Catarman	2.64	150	*e*P	Pn	12 16 55.2	+0.3
LUBP	Lubang	3.18	250	*e*P	Pn	12 17 04.5	+2.0
SJMP	San Jose	3.19	223	*e*P	Pn	12 17 04.8	+2.2

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*NNC **08** 12:31:54.7±22.0, 36.08N×75.84E, mpv3.6, Error ellipse: s-maj=1271.9km s-min=206.9km az=61.0*

ISC 08 12:31:50.7±1.6**, 35.1N**±0.2×**73.8E**±0.4**, h33**^{km}**, n5, σ1^{s}16**/8**, 1D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.08	148	*e*P	P	12 32 37.6	-0.5
THN				*e*S	S	12 33 21.0	+6.9
DLH	Dalhousie	3.10	144	*e*S	S	12 33 17.0	+2.3
SDNR	Sundarnagar	4.44	142	*e*P	P	12 32 55.8	-1.7
SDNR				*e*x	x	12 34 05.8	
KLP	Kalpa	5.13	132	*e*P	P	12 33 00.0	-7.2
KLP				*e*S	S	12 34 05.6	-0.4
KLP				AML	AML	12 34 32.8	
	comp=E,63nm,0.4s						
KLP				AML	AML	12 34 37.8	
	comp=N,43nm,0.9s						
KK31	Karatay Array	8.42	343	P	P	12 33 54.0	+0.8
	comp=N,1.1nm,0.3s,baz=154,slow=11,SNR=29						
KK31				⇓S	S	12 35 28.0	-0.2
	comp=N,0.8nm,0.4s,baz=145,slow=22,SNR=7.3						

OTT 08 12:40:00.9±0.7**, 68.17N×66.77W, h18**^{km}**, MN2.6**/2**, 135km northwest from Qikiqtarjuaq, Nu Baffin Island Seismic Zone, Nt., Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FRB	Frobisher Bay	4.50	190	PN	Pn	12 41 05.7	-4.2
FRB				SN	Sn	12 41 57.0	-5.5
FRB				SG	Sn	12 42 14.5	+12
FRB				Trac		12 42 21.6	
	comp=Z,7.4nm,0.3s						
ILON	Igloolik, Nuna	5.60	289	PN	Pn	12 41 23.3	-2.1
ILON				SN	Sn	12 42 21.6	-8.4
ILON				LG		12 42 49.8	
ILON				Trac		12 42 58.2	
	comp=Z,2.3nm,0.3s						
GIFN	Gifford Fjord,	5.63	296	PN	Pn	12 41 22.5	-3.3
GIFN				SN	Sn	12 42 22.5	-8.3
GIFN				LG		12 42 53.0	
GIFN				Trac		12 42 54.2	
	comp=Z,2.8nm,0.8s						
PINU	Pond Inlet	5.89	326	PN	Pn	12 41 25.7	-3.9
PINU				SN	Sn	12 42 29.4	-8.1
PINU				LG		12 43 01.9	
SRLN	Sarcpa Lake, N	6.13	281	PN	Pn	12 41 30.0	-3.0
SRLN				SN	Sn	12 42 34.4	-9.0
SRLN				LG		12 43 05.2	
SRLN				Trac		12 43 11.2	
	comp=Z,21nm,0.8s						
QILN	Qililugaq Expl	7.69	268	PN	Pn	12 41 49.5	-5.3
QILN				SN	Sn	12 43 10.7	-12
QILN				LG		12 43 52.5	
QILN				Trac		12 43 57.0	
	comp=Z,5.9nm,0.5s						
YRTN	Rankin Inlet	11.75	255	PN	P	12 42 44.6	-5.8
YRTN				SN	S	12 44 45.6	-16
YRTN				LG		12 45 59.8	

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*IDC **08** 12:48:19.7±1.8, 54.79N×19.61E, mb1 3.3/5, mb1mx3.2/22, mbtmp3.3/5, ML3.3/5, Error ellipse: s-maj=31.3km s-min=13.7km az=46.0*
*UPP **08** 12:48:19.4, 54.67N×18.90E, h0^{km}, ML3.1, Suspected Mining explosion.*
*CSEM **08** 12:48:23.7±1.5, 55.06N×19.00E, h2^{km}, ML3.1, Error ellipse: s-maj=36.7km s-min=15.7km az=143.0, Suspected Mining explosion.*

ISC 08 12:48:14.5±1.1**, 54.70N**±0.10×**19.5E**±0.1**, n13, σ1^{s}43**/16**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLEU	Blekinge	2.65	309	P	Pn	12 48 59.2	0.0
BLEU				S	Sn	12 49 31.6	-1.0
BSD	Bornholm Skovb	2.69	281	*i* P	Pb	12 49 04.5	+1.1
BSD				*e*S	Sn	12 49 32.1	-1.5
BSD	Bornholm Skovb	2.69	281	*e*P	Pb	12 49 04.5	+1.1
BSD				*e*S	Sn	12 49 32.1	-1.5
GOTU	Gotland	3.04	350	P	Pn	12 49 08.4	+3.7
OSKU	Oskarshamn	3.15	324	P	Pn	12 49 08.2	+1.8
VSTU	Vaestervik	3.40	332	P	Pn	12 49 11.7	+1.8
VXJU	Vaexsjoe	3.41	313	P	Pn	12 49 10.4	+0.4
VIKU	Vikbolandet	4.12	339	P	Pn	12 49 23.0	+2.9
HFS	Hagfors	6.29	332	Pn	Pn	12 49 51.1	+0.3
	0.2nm,0.3s,baz=143,slow=14,SNR=16						
HFS				Lg		12 51 31.7	
	0.3nm,0.3s,baz=148,slow=33,SNR=5.8						
AKASG	Malin Array Be	7.12	120	Pn	Pn	12 50 02.4	-0.2
	1.3nm,0.3s,baz=310,slow=12,SNR=4.9						
AKASG				Lg		12 52 03.1	
	1.0nm,0.3s,baz=316,slow=27,SNR=2.4						
FINES	FINESS Array B	7.60	25	Pn	Pn	12 50 08.3	-0.8
	0.5nm,0.3s,baz=210,slow=11,SNR=8.2						
FINES				Lg		12 52 20.0	
	1.2nm,0.3s,baz=212,slow=29,SNR=4.6						
NOA	NORSAR Array B	7.74	329	Pn	Pn	12 50 09.3	-1.9
	0.3nm,0.3s,baz=146,slow=11,SNR=2.5						
NOA				Lg		12 52 16.1	
	0.5nm,0.3s,baz=44,slow=13,SNR=2.3						
ARCES	ARCESS Array B	15.13	8	Pn	P	12 51 48.2	-2.6
	0.2nm,0.3s,baz=185,slow=13,SNR=10.0						

MAN 08 12:48:19.4, 12.48N×123.58E, h41^{km}, mb4.2, ML3.1, MS2.8, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUQP	San Andres	1.21	314	*e*P	P	12 48 40.3	+0.2
RCP	Roxas	1.23	222	⇑*e*P	P	12 48 40.5	+0.3
RCP				*e*S	S	12 48 57.8	+1.8
PVCP	Virac	1.24	27	*e*P	P	12 48 41.0	+0.5
KALP	Kalibo	1.45	237	*e*P	S	12 48 58.7	-2.9
GQP	Guinayangan	1.79	322	⇓*e*P	P	12 48 48.3	-0.1
BOAC	Boac	1.95	300	*e*P	P	12 48 51.1	+0.5
BOAC				*e*S	S	12 49 20.1	+6.1

IDC 08 12:48:47.8±1.6**, 54.72N×19.42E, mb1 3.3**/5**, mb1mx3.2**/22**, mbtmp3.3**/5**, ML3.3**/5**, Error ellipse: s-maj=26.1km s-min=12.4km az=51.0, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSD	Bornholm Skovb	2.63	280	*i* P	Pn	12 49 53.5	+21
BSD				*i* S	Sn	12 50 05.0	-0.3
HFS	Hagfors	6.25	333	Pn	Pn	12 50 19.0	-4.4
	0.2nm,0.3s,baz=141,slow=13,SNR=7.5						
HFS				Lg		12 52 02.5	
	0.2nm,0.3s,baz=139,slow=27,SNR=2.8						
AKASG	Malin Array Be	7.18	120	Pn	Pn	12 50 31.0	-5.7
	1.7nm,0.3s,baz=355,slow=7.7,SNR=6.0						
FINES	FINESS Array B	7.61	25	Pn	Pn	12 50 38.6	-3.9
	0.6nm,0.3s,baz=210,slow=11,SNR=5.3						
FINES				Lg		12 52 46.9	
	0.7nm,0.3s,baz=190,slow=24,SNR=2.5						
NOA	NORSAR Array B	7.70	329	Pn	Pn	12 50 38.5	-5.4
	0.3nm,0.3s,baz=146,slow=11,SNR=2.7						
NOA				Lg		12 52 46.6	
	0.6nm,0.3s,baz=339,slow=19,SNR=2.4						
ARCES	ARCESS Array B	15.12	8	Pn	P	12 52 15.7	-8.4
	0.2nm,0.3s,baz=184,slow=14,SNR=2.9						

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*BJI **08** 12:55:13.2, 34.22N×73.04E, h33^{km}, mb4.1, ML4.1, Ms4.3*
*NEIC **08** 12:55:17.9±0.6, 34.21N×73.77E, h10^{km}, mb3.8/6, Error ellipse: s-maj=14.1km s-min=6.1km az=50.0*
*IDC **08** 12:55:17.2±1.2, 34.33N×73.81E, mb4.0/10, mb1 4.2/13, mb1mx4.1/24, mbtmp4.1/13, ML4.1/3, MS3.5/3, Ms1 3.5/3, ms1mx3.1/22, Error ellipse: s-maj=28.3km s-min=20.4km*

az=18.0

*MOS **08** 12:55:17.0±1.3, 34.34N×73.69E, h11^{km}, mb4.3/9, Error ellipse: s-maj=18.7km s-min=6.7km az=92.2*

*NDI **08** 12:55:19.2±2.8, 34.32N×73.52E, h10^{km}, MD3.6, ML3.8, mb3.8(NEIC)*

*NNC **08** 12:55:27.7±2.9, 34.72N×72.94E, h41^{km}±25^{km}, mpv4.2, Error ellipse: s-maj=42.8km s-min=29.4km az=85.0*

ISC 08 12:55:17.3±0.3**, 34.35N**±0.03×**73.85E**±0.04**, h10^{km}, n81, σ1^{s}55**/104**, mb4.0**/11**, MS3.4**/3**, 10C-6D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**1.69**	**253**	P	**Pn**	**12 55 48.4**	**+1.2**
CEP				S	**Sn**	**12 56 09.0**	**-0.1**
JMU	**Jammu**	**1.84**	**151**	*e*P	**Pn**	**12 55 54.0**	**+4.7**
JMU				*e*S	**Sn**	**12 56 20.0**	**+7.1**
THW	**Thamme Wali**	**2.34**	**229**	⇑P	**Pn**	**12 55 58.0**	**+1.5**
THN	**Thein Dam**	**2.46**	**140**	*e*P	**Pn**	**12 56 03.0**	**+4.8**
THN				*e*x	x	12 56 39.4	
DLH	**Dalhousie**	**2.52**	**135**	*e*P	**Pn**	**12 56 03.0**	**+4.0**
DLH				*e*P		12 56 40.0	
SBDP	**Sheikh Budin**	**3.27**	**232**	P	**Pn**	**12 56 10.5**	**+0.9**
BHK	**Bhakra**	**3.63**	**143**	*e*PB	**Pb**	**12 56 31.3**	**+10**
BHK				*e*SB	**Sb**	**12 57 19.3**	**+14**
SDNR	**Sundarnagar**	**3.86**	**136**	*e*P	**Pn**	**12 56 20.6**	**+2.5**
SDNR				*e*S	**Sn**	**12 57 06.2**	**+2.1**
SMLA	**Simla**	**4.25**	**138**	*e*P	**Pn**	**12 56 25.6**	**+2.0**
SMLA				*e*S	**Sn**	**12 57 14.8**	**+0.8**
KLP	**Kalpa**	**4.64**	**126**	*e*P	**Pn**	**12 56 32.0**	**+2.8**
KLP				*e*S	**Sn**	**12 57 25.0**	**+1.3**
KLP				AML	AML	12 57 50.0	
	comp=E,645nm,0.6s						
KLP				AML	AML	12 57 50.3	
	comp=N,520nm,0.6s						
KSH	**Kashi**	**5.43**	**18**	*e*PG	**Pg**	**12 56 52.8**	**-13**
KSH				S	**Sn**	**12 57 50.2**	**+6.5**
KSH				Smax			
	comp=N,70nm,0.6s						
KSH				Smax			
	comp=E,110nm,0.6s						
NDI	**New Delhi**	**6.33**	**152**	*e*P	**Pn**	**12 56 55.0**	**+2.0**
NDI				*e*S	**Sn**	**12 58 04.0**	**-2.2**
KALG	**Kalgarh**	**6.37**	**138**	*e*P	**Pn**	**12 56 56.1**	**+2.5**
KALG				*e*S	**Sn**	**12 58 05.8**	**-1.4**
KALG				AML	AML	12 58 51.2	
	comp=E,158nm,0.4s						
KHET	**Khetri**	**6.47**	**165**	*e*P	**Pn**	**12 56 53.8**	**-1.2**
KHET				*e*S	**Sn**	**12 58 03.8**	**-5.9**
KHET				AML	AML	12 58 52.3	
	comp=N,32nm,0.3s						
KHET				AML	AML	12 58 52.3	
	comp=E,57nm,0.5s						
KUDL	**Kundal**	**6.58**	**159**	*e*P	**Pn**	**12 56 56.0**	**-0.6**
KUDL				*e*S	**Sn**	**12 58 08.9**	**-3.5**
SONA	**Sohna**	**6.67**	**155**	*e*P	**Pn**	**12 56 58.1**	**+0.2**
SONA				*e*S	**Sn**	**12 58 09.0**	**-5.8**
SONA				AML	AML	12 58 14.6	
	comp=E,98nm,0.3s						
SONA				AML	AML	12 58 14.8	
	comp=N,44nm,0.4s						
AML	**Almayashu**	**7.78**	**359**	P	**Pn**	**12 57 15.1**	**+1.8**
	SNR=39						
KZA	**Kyzart**	**7.80**	**8**	P	**Pn**	**12 57 16.1**	**+2.5**
	SNR=12						
UCH	**Uchtor**	**7.89**	**4**	P	**Pn**	**12 57 17.1**	**+2.2**
	SNR=30						
AAK	**Ala-Archa**	**8.29**	**3**	P	**P**	**12 57 22.8**	**+2.3**
	SNR=8.3						
AAK	**Ala-Archa**	**8.29**	**3**	⇓Pn	**P**	**12 57 22.2**	**+1.7**
	comp=N,6.4nm,0.7s						
AAK				⇑Sn	**Sn**	**12 58 53.9**	**-1.3**
	comp=N,6.1nm,0.5s						
AAK	**Ala-Archa**	**8.29**	**3**	*e*Pn	**P**	**12 57 21.5**	**+1.0**
	comp=N,6.4nm,0.7s						
AAK				Sn	**Sn**	**12 58 53.9**	**-1.3**
EKS2	**Erkin-Say**	**8.30**	**360**	P	**P**	**12 57 22.3**	**+1.6**
	SNR=27						
CHMS	**Chumysh**	**8.67**	**4**	P	**P**	**12 57 27.8**	**+2.1**
	SNR=5.8						
TKM2	**Tokmak 2**	**8.67**	**9**	P	**P**	**12 57 27.7**	**+2.0**
	SNR=10						
KK31	**Karatay Array**	**9.13**	**344**	⇑Pn	**P**	**12 57 31.5**	**-0.6**
	comp=N,7.8nm,0.5s,baz=166,slow=12,SNR=142						
KK31				⇑Sn	**Sn**	**12 59 09.3**	**-6.6**
	comp=N,7.6nm,0.5s						
KK31	**Karatay Array**	**9.13**	**344**	⇑Pn	**P**	**12 57 31.4**	**-0.6**
	comp=N,7.8nm,0.5s						
KK31				Sn	**Sn**	**12 59 09.3**	**-6.6**
KOLN	**Koldanda**	**10.62**	**125**	*e*Pn	**P**	**12 57 50.4**	**-2.2**
KOLN				*e*Sn	**S**	**12 59 45.2**	**-7.4**
	comp=N,39nm,0.6s						
GKN	**Gorkha**	**11.19**	**121**	*e*Pn	**P**	**12 57 58.2**	**-2.2**
GKN				*e*Sn	**S**	**12 59 59.2**	**-7.4**
	comp=N,54nm,0.4s						
DMN	**Daman**	**11.76**	**122**	*e*Pn	**P**	**12 58 05.5**	**-2.6**
DMN				*e*Sn	**S**	**13 00 12.8**	**-7.6**
KKN	**Kakani**	**11.77**	**121**	*e*Pn	**P**	**12 58 05.1**	**-3.2**
KKN				*e*Sn	**S**	**13 00 12.3**	**-8.5**
	comp=N,43nm,0.7s						
PKI	**Pulchoki**	**11.99**	**121**	*e*Pn	**P**	**12 58 08.8**	**-2.5**
PKI				*e*Sn	**S**	**13 00 18.8**	**-7.4**
GUN	**Gumba**	**12.13**	**119**	*e*Pn	**P**	**12 58 10.8**	**-2.4**
GUN				*e*Sn	**S**	**13 00 22.4**	**-7.2**
MK31	**Makanchi Array**	**13.98**	**25**	⇓P	**P**	**12 58 39.5**	**+1.9**
	comp=N,0.6nm,0.4s						
MKAR	**Makanchi Array**	**13.98**	**25**	Pn	**P**	**12 58 39.2**	**+1.6**
	comp=N,0.1nm,0.3s,baz=218,slow=14,SNR=4.1						
LSA	**Lhasa**	**15.38**	**103**	*e*Pn	**P**	**12 59 02.8**	**+6.7**
	comp=N,12nm,0.7s						
KURK	**Kurchatov**	**16.73**	**11**	⇑P	**P**	**12 59 12.3**	**-0.8**
	comp=N,3.5nm,1.0s						
AB31	**Akbulak array**	**18.11**	**330**	P	**P**	**12 59 27.9**	**-2.6**
	comp=N,3.5nm,0.7s,baz=146,slow=11,SNR=34						
AB31				S	**S**	**13 02 38.6**	**-11**
	comp=N,1.4nm,0.7s,baz=142,slow=23,SNR=3.7						
AB31	**Akbulak array**	**18.11**	**330**	P	**P**	**12 59 27.9**	**-2.6**
AB31				S	**S**	**13 02 38.6**	**-11**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VOSK	**Vostochnaya**	**18.49**	**354**	⇑P	**P**	**12 59 34.1**	**-1.1**
	comp=Z,3.3nm,0.7s						
VOSK	**Vostochnaya**	**18.49**	**354**	⇑P	**P**	**12 59 34.1**	**-1.1**
	comp=Z,3.3nm,0.6s						
VOSK	**Vostochnaya**	**18.49**	**354**	⇑P	**P**	**12 59 34.1**	**-1.1**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BVA0	**Borovoye Array**	**18.84**	**354**	P	**P**	**12 59 39.0**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=165,slow=11,SNR=41						
BVA0	**Borovoye Array**	**18.84**	**354**	P	**P**	**12 59 39.0**	**-0.4**
	comp=Z,0.9nm,0.6s						
BVA0	**Borovoye Array**	**18.84**	**354**	P	**P**	**12 59 39.0**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**18.84**	**354**	P	**P**	**12 59 39.4**	**0.0**
	comp=Z,1.5nm,0.3s,baz=164,slow=10,SNR=36						
BVAR	**Borovoye Array**	**18.84**	**354**	P	**P**	**12 59 39.4**	**0.0**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	**Borovoye**	**18.88**	**353**	*e*P	**P**	**12 59 39.9**	**0.0**
	comp=Z,7.0nm,1.0s						
BRVK	**Borovoye**	**18.88**	**353**	*e*P	**P**	**12 59 39.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHKZ	**Chkalovo**	**19.46**	**354**	⇓P	**P**	**12 59 45.4**	**-1.4**
	comp=Z,1.6nm,0.6s						
CHKZ	**Chkalovo**	**19.46**	**354**	⇓P	**P**	**12 59 45.4**	**-1.4**
AKTK	**Aktyubinsk**	**19.82**	**329**	⇓P	**P**	**12 59 49.1**	**-1.7**
AKTO	**Aktyubinsk**	**19.82**	**329**	⇓P	**P**	**12 59 49.1**	**-1.7**
	comp=Z,1.6nm,0.6s						
AKTO	**Aktyubinsk**	**19.82**	**329**	P	**P**	**12 59 49.3**	**-1.4**
	comp=Z,1.8nm,0.3s,baz=132,slow=11,SNR=38						
AKTO	**Aktyubinsk**	**19.82**	**329**	P	**P**	**12 59 49.3**	**-1.5**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	**Zalesovo**	**21.06**	**18**	P	**P**	**13 00 02.9**	**-0.8**
	comp=Z,3.2nm,0.5s,mb3.9,baz=257,slow=9.2,SNR=18						
ZAL				LR	LR	13 09 20.0	
	comp=Z,62nm,19.8s,MS3.0,baz=2.9,slow=40						
ZAL	**Zalesovo**	**21.06**	**18**	P	**P**	**13 00 02.9**	**-0.8**
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZAL				MLR	MLR		
	comp=Z,62nm,19.8s						
GTA	**Gaotai**	**21.34**	**69**	*e*P	**P**	**13 00 07.1**	**+0.4**
GTA				AP		13 00 11.3	
GTA				XP		13 00 14.7	
NVS	**Novosibirsk**	**21.52**	**15**	*e*P	**P**	**13 00 07.8**	**-0.6**
SONM	**Songino Array**	**27.76**	**51**	P	**P**	**13 01 09.4**	**+1.4**
	comp=Z,1.6nm,0.7s,mb3.7,baz=256,slow=9.8,SNR=14						
SONM				LR	LR	13 13 53.3	
	comp=Z,97nm,19.1s,MS3.4,baz=13,slow=40						
SONM	**Songino Array**	**27.76**	**51**	P	**P**	**13 01 09.4**	**+1.4**
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,97nm,19.1s						
HHC	**Hu-ho-hao-te**	**30.41**	**66**	*e*P	**P**	**13 01 30.3**	**-1.5**
BRTR	**Keskin Array B**	**32.35**	**291**	P	**P**	**13 01 50.0**	**+1.1**
	comp=Z,0.2nm,0.4s,mb3.3,baz=135,slow=8.2,SNR=2.3						
MLR	**Muntele Rosu**	**37.88**	**302**	P	**P**	**13 02 37.1**	**+1.0**
	comp=Z,2.4nm,0.7s,mb4.0,baz=64,slow=14,SNR=3.9						
MLR	**Muntele Rosu**	**37.88**	**302**	P	**P**	**13 02 37.1**	**+1.0**
MLR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCES	**ARCESS Array B**	**44.02**	**338**	P	**P**	**13 03 25.1**	**-1.2**
	comp=Z,1.8nm,0.7s,mb3.9,baz=111,slow=10,SNR=8.7						
ARCES	**ARCESS Array B**	**44.02**	**338**	P	**P**	**13 03 25.1**	**-1.2**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HFS	**Hagfors**	**46.19**	**323**	P	**P**	**13 03 42.4**	**-1.4**
	comp=Z,3.9nm,0.5s,mb4.6,baz=98,slow=10,SNR=14						
HFS	**Hagfors**	**46.19**	**323**	P	**P**	**13 03 42.4**	**-1.3**
HFS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TIXI	**Tiksi**	**46.93**	**21**	⇑*i*P	**P**	**13 03 47.9**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
NB2	**NORSAR Subarra**	**47.49**	**324**	P	**P**	**13 03 52.2**	**-1.8**
	comp=Z,3.0nm,0.8s,mb4.3,baz=99,slow=7.4						
NOA	**NORSAR Array B**	**47.49**	**324**	P	**P**	**13 03 52.2**	**-1.8**
	comp=Z,1.7nm,0.6s,mb4.2,baz=97,slow=7.6,SNR=5.4						
NOA	**NORSAR Array B**	**47.49**	**324**	P	**P**	**13 03 52.3**	**-1.7**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
INK	**Inuvik**	**75.63**	**10**	P	**P**	**13 07 03.7**	**+0.1**
	comp=Z,1.7nm,0.6s,mb4.2,baz=353,slow=7.1,SNR=28						
INK	**Inuvik**	**75.63**	**10**	*e*P	**P**	**13 07 03.6**	**0.0**
	comp=Z,1.7nm,0.5s,mb4.2						
INK	**Inuvik**	**75.63**	**10**	P	**P**	**13 07 03.7**	**+0.1**
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	**76.19**	**17**	P	**P**	**13 07 06.7**	**-0.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=304,slow=6.2,SNR=8.7						
ILAR	**Eielson Array**	**76.19**	**17**	P	**P**	**13 07 06.7**	**-0.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DBIC	**Dimbokro**	**76.95**	**269**	LR	LR	13 41 19.8	
	comp=Z,56nm,19.2s,MS3.9,baz=328,slow=36						
WRA	**Warramunga Arr**	**78.87**	**123**	P	**P**	**13 07 22.3**	**-0.3**
	comp=Z,1.1nm,0.7s,mb3.9,baz=325,slow=5.6,SNR=8.4						
WRA	**Warramunga Arr**	**78.87**	**123**	P	**P**	**13 07 22.3**	**-0.2**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

IDC 08 13:28:09.1±2.5**, 27.10N**×**92.35E, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.6**/19**, mbtmp3.6**/3**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.8**/20**, 1C, Error ellipse: s-maj=85.9km s-min=29.3km az=70.0, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**1.59**	**196**	⇑*i*PN	Pn	13 28 43.0	+4.5
SHL				*e*SN	Sn	13 29 08.0	+7.9
MKAR	**Makanchi Array**	**21.20**	**341**	P	P	13 32 56.0	-2.5
	2.0nm,0.5s,baz=145,slow=13,SNR=17						
SONM	**Songino Array**	**23.43**	**24**	P	P	13 33 20.3	-0.3
	0.4nm,0.5s,baz=210,slow=11,SNR=4.6						
AKTO	**Aktyubinsk**	**35.00**	**321**	LR	LR	13 52 04.5	
	comp=Z,50nm,19.0s,slow=41						
WRA	**Warramunga Arr**	**61.98**	**135**	P	P	13 38 31.1	-2.4
	1.1nm,0.9s,baz=325,slow=7.0,SNR=5.4						

MAN 08 13:47:14.0, 9.66N×126.04E, h4^{km}, mb4.2, ML3.1, MS2.8, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.80**	**211**	*e*P	Pg	13 47 26.9	-3.1
BUTP				*e*S	Sg	13 47 36.4	-4.4
MSLP	**Maasin**	**1.26**	**292**	*e*P	Pb	13 47 37.3	-0.7
MSLP				*e*S	Sb	13 47 55.3	+0.9
PLP	**Palo**	**1.83**	**325**	*e*P	Pn	13 47 49.5	+2.9
PLP				*e*S	Sn	13 48 12.7	+2.3
BUKP	**Musuan**	**2.02**	**209**	*e*P	Pn	13 47 50.7	+1.5
BESP	**Borongan**	**2.02**	**343**	*e*P	Pn	13 47 49.4	+0.2
MATI	**Mati**	**2.70**	**175**	*e*P	Pn	13 47 58.2	-0.9
CNP	**Catarman**	**3.14**	**335**	*e*P	Pn	13 48 08.1	+2.8
PAGZ	**Pagadian**	**3.19**	**236**	*e*P	Pn	13 48 06.1	+0.1

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*IDC **08** 14:03:59.8±1.7, 4.61S×153.23E, h85^{km}±15^{km}, mb4.2/14, mb1 4.3/17, mb1mx4.3/20, mbtmp4.6/17, MS3.8/15, Ms1 3.8/15, ms1mx3.7/21, Error ellipse: s-maj=13.5km s-min=10.7km az=106.0*

*MOS **08** 14:03:59.7±1.3, 4.53S×153.13E, h93^{km}, mb4.7/8, Error ellipse: s-maj=20.7km s-min=11.4km az=65.1*

*BJI **08** 14:04:00.1, 3.96S×153.17E, h68^{km}, mB5.2, mb4.7, Ms4.7, Msz4.1*

*HRVD **08** 14:04:00.6±0.6, 4.78S×153.19E, h94^{km}±8^{km}, MW4.9/45, Centroid moment Tensor Solution. LP body waves: s7,c7; Mantle waves: s45,c67; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.22±.26; $M_{\theta\theta}$-1.90±.18; $M_{\phi\phi}$1.68±.21; $M_{r\theta}$1.58±.11; $M_{\theta\phi}$0.15±.19; $M_{\phi r}$-1.02±.13; Best double couple: $M_0$2.568×10^{16} NP1:ϕ_s225°, δ43°, λ3°. NP2:ϕ_s133°, δ88°, λ133°. Principal axes: T 2.308, Plg32°, Azm78°; N .523, Plg43°, Azm312°; P -2.828, Plg29°, Azm189°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 14:04:00.6±0.3, 4.56S×153.16E, mb4.9/21 Error ellipse: s-maj=8.6km s-min=5.9km az=90.0*

ISC 08 14:03:58.8±1.4**, 4.59S**±0.05×**153.17E**±0.05**, h90^{km}**±13^{km}**, h77^{km}**±4.4^{km}**:pP-P, n100, σ1^{s}08**/85**, mb4.7**/40**, 2C-10D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.64**	**231**	P	**P**	**14 05 50.0**	**+0.8**
	5.5nm,0.3s,baz=33,slow=9.7,SNR=14						
PMG				S	**S**	**14 07 12.3**	**-2.6**
	23nm,0.3s,baz=74,slow=18,SNR=30						
HNR	**Honiara**	**8.27**	**126**	P	**P**	**14 05 57.6**	**-0.2**
	17nm,0.3s,baz=210,slow=0.5,SNR=12						
HNR				S	**S**	**14 07 29.4**	**-0.8**
	46nm,0.3s,baz=360,slow=24,SNR=7.9						
CTA	**Charters Tower**	**16.81**	**203**	*e*P	**P**	**14 07 51.0**	**+1.1**
	26nm,0.9s						
CTA	**Charters Tower**	**16.81**	**203**	P	**P**	**14 07 51.2**	**+1.3**
	1.3nm,0.3s,baz=25,slow=13,SNR=23						
CTA	**Charters Tower**	**16.81**	**203**	*e*P	**P**	**14 07 51.0**	**+1.1**
CTA				pmax	pmax		
	comp=Z,26nm,0.9s						
CTAO	**Charters Tower**	**16.81**	**203**	*e*Pn	**P**	**14 07 51.4**	**+1.4**
	comp=Z,56nm,1.0s						
CTAO	**Charters Tower**	**16.81**	**203**	*e*P	**P**	**14 07 51.4**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,56nm,1.0s						
GUMO	**Guam**	**19.85**	**336**	LR	LR	14 15 40.2	
	comp=Z,45nm,18.6s,baz=51,slow=35						
DZM	**Mont Dzumac**	**21.62**	**145**	*e*P	**P**	**14 08 39.9**	**-3.1**
DZM	**Mont Dzumac**	**21.62**	**145**	P	**P**	**14 08 42.8**	**-0.2**
	comp=Z,12nm,0.5s,mb4.5,baz=345,slow=11,SNR=39						
KAKA	**Kakadu**	**22.01**	**247**	⇓*i*P	**P**	**14 09 03.8**	**+17**
	comp=Z,41nm,0.5s,mb5.0						
KAKA				*e*S	S	14 13 00.6	+22
WRAB	**Tennant Creek**	**23.84**	**229**	*d* *i*P	**P**	**14 09 05.4**	**+0.7**
WB2	**Warramunga Arr**	**23.85**	**229**	⇓*i*P	**P**	**14 09 05.5**	**+0.8**
WB2				*e*S	**S**	**14 13 18.2**	**+7.1**
WRA	**Warramunga Arr**	**23.86**	**229**	P	**P**	**14 09 05.4**	**+0.6**
	comp=Z,54nm,0.6s,mb5.1,baz=53,slow=9.9,SNR=158						
WRA				S	**S**	**14 13 17.7**	**+6.4**
	comp=Z,0.9nm,0.4s,baz=59,slow=15,SNR=5.7						
WRA				ScP		14 16 18.2	
	comp=Z,3.6nm,0.9s,baz=48,slow=2.8,SNR=8.5						
WRA	**Warramunga Arr**	**23.86**	**229**	*i* P	**P**	**14 09 04.5**	**-0.3**
WRA				pmax	pmax		
	comp=Z,54nm,0.6s						
ARMA	**Armidale**	**25.73**	**183**	⇑*i*P	**P**	**14 09 23.9**	**+1.3**
ASPA	**Alice Springs**	**26.55**	**223**	⇓*i*P	**P**	**14 09 29.6**	**-0.7**
STKA	**Stephens Creek**	**29.23**	**200**	⇓*i*P	**P**	**14 09 53.4**	**-1.0**
	comp=Z,27nm,0.6s,mb5.1						
STKA	**Stephens Creek**	**29.23**	**200**	P	**P**	**14 09 53.5**	**-0.9**
	comp=Z,33nm,0.6s,mb5.1,baz=7.2,slow=8.5,SNR=85						
FITZ	**Fitzroy Crossi**	**30.08**	**241**	⇓*i*P	**P**	**14 10 00.6**	**-1.5**
	comp=Z,37nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**30.08**	**241**	P	**P**	**14 10 00.8**	**-1.3**
	comp=Z,48nm,0.6s,mb5.3,baz=78,slow=7.1,SNR=72						
FITZ				LR	LR	14 23 41.1	
	comp=Z,464nm,19.4s,baz=216,slow=39						
ADE	**Adelaide**	**33.06**	**202**	*e*P	**P**	**14 10 27.9**	**0.0**
FORT	**Forrest**	**35.18**	**219**	*e*P	**P**	**14 10 45.3**	**-0.8**
	comp=Z,79nm,0.7s,mb5.7						
AFI	**Afiamalu**	**35.77**	**107**	LR	LR	14 21 34.3	
	comp=Z,94nm,20.4s,baz=303,slow=30						
MBWA	**Marble Bar**	**36.39**	**240**	*e*P	**P**	**14 10 55.9**	**-0.6**
	comp=Z,53nm,1.2s,mb5.3						
MBWA				*e*	pP	14 11 18.4	+0.8
MBWA				*e*pP	pP	14 11 18.6	+0.9
RAO	**Raoul Island**	**36.76**	**135**	LR	LR	14 22 05.2	
	comp=Z,171nm,18.6s,baz=84,slow=30						
KKM	**Kota Kinabalu**	**38.38**	**286**	*e*P	**P**	**14 11 13.1**	**-0.1**
TAU	**Tasmania Unive**	**38.51**	**187**	P	**P**	**14 11 15.5**	**+1.6**
	comp=Z,37nm,1.0s,mb5.2						
JOW	**Kunigami**	**39.44**	**324**	P	**P**	**14 11 22.2**	**+0.4**
	comp=Z,15nm,0.7s,mb5.0,baz=125,slow=12,SNR=5.2						
URZ	**Urewera**	**39.98**	**150**	LR	LR	14 25 03.2	
	comp=Z,112nm,18.8s,baz=242,slow=32						
SNZO	**South Karori**	**41.34**	**155**	*e*P	**P**	**14 11 37.8**	**+0.5**
	comp=Z,12nm,0.4s,mb5.1						
RPZ	**Rata Peaks**	**42.04**	**161**	P	**P**	**14 11 43.0**	**0.0**
	comp=Z,22nm,0.6s,mb5.1,baz=290,slow=2.0,SNR=35						
KLBR	**Kellerberrin**	**42.71**	**227**	*e*P	**P**	**14 11 47.3**	**-1.4**
	comp=Z,9.4nm,0.5s,mb4.8						
JNU	**Nakatsue**	**43.05**	**332**	P	**P**	**14 11 51.9**	**+0.4**
	comp=Z,8.2nm,0.9s,mb4.5,baz=142,slow=17,SNR=4.2						
JNU				LR	LR	14 27 57.2	
	comp=Z,66nm,18.4s,baz=114,slow=33						
KSM	**Kuching**	**43.24**	**277**	*e*P	**P**	**14 11 52.7**	**-0.6**
KSM				pP	pP	14 12 11.2	-3.6
MJAR	**Matsushiro Arr**	**43.24**	**342**	P	**P**	**14 11 54.7**	**+1.7**
	comp=Z,1.6nm,0.9s,mb3.8,baz=170,slow=7.4,SNR=3.3						
MJAR				LR	LR	14 26 50.4	
	comp=Z,156nm,21.4s,baz=35,slow=32						
NWAO	**Narrogin (SRO)**	**43.79**	**225**	P	**P**	**14 11 57.1**	**-0.4**
	comp=Z,15nm,1.0s,mb4.7						
SSE	**Sheshan**	**46.81**	**321**	P	**P**	**14 12 19.8**	**-1.7**
SSE				PCP	PcP	14 13 51.9	-1.7
SSE				PP	PP	14 14 09.8	-2.6
SSE				SCP		14 17 43.4	
SSE				S	**S**	**14 19 09.4**	**+5.4**
SSE				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.3						
SSE				AMB	AMB		
	comp=Z,60nm,4.0s						
SSE				LR	LR		
	comp=Z,60nm,22.9s						
SSE	**Sheshan**	**46.81**	**321**	P	**P**	**14 12 19.8**	**-1.7**
	comp=Z,49nm,0.6s,mb5.4						
SSE				sP	sP	14 12 32.5	-21
SSE				PcP	PcP	14 13 51.9	-1.7
SSE				PP	PP	14 14 09.8	-2.6
SSE				ScP		14 17 43.4	
SSE				S	**S**	**14 19 09.4**	**+5.4**
SSE				sS		14 19 24.7	
SSE				SS	SS	14 22 37.9	+13
SSE				LR	LR		
	comp=Z,60nm,22.9s						
NJ2	**Nanjing**	**48.92**	**321**	*e*P	**P**	**14 12 37.3**	**-0.5**
NJ2				PP	PP	14 14 31.7	-0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,110nm,4.7s						
NJ2				LR	LR		
	comp=N,250nm,21.4s						
NJ2				LR	LR		
	comp=E,350nm,20.0s						
NJ2				LR	LR		
	comp=Z,190nm,30.6s						
ASAJ	**Asahikawa**	**49.41**	**350**	P	**P**	**14 12 42.0**	**+0.6**
	comp=Z,14nm,1.1s,mb4.8,baz=170,slow=7.5,SNR=4.4						
ASAJ				LR	LR	14 29 24.8	
	comp=Z,15nm,21.3s,baz=351,slow=31						
MDJ	**Mudanjiang**	**53.36**	**339**	P	**P**	**14 13 10.2**	**-1.0**
MDJ				AMB	AMB		
	comp=Z,220nm,4.2s						
MDJ				LR	LR		
	comp=N,50nm,40.4s						
MDJ				LR	LR		
	comp=E,70nm,35.9s						
MDJ				LR	LR		
	comp=Z,40nm,31.4s						
KULM	**Kulim**	**53.36**	**280**	*e*P	**P**	**14 13 10.6**	**-1.2**
KULM				*e*PP	PP	14 15 09.1	-5.1
CN2	**Changchun**	**54.26**	**335**	*e*P	**P**	**14 13 19.5**	**+1.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
KMI	**Kunming**	**57.18**	**304**	P	**P**	**14 13 39.3**	**+0.3**
KMI				S	**S**	**14 21 24.2**	**-1.4**
KMI				AMB	AMB		
	comp=Z,140nm,4.7s						
KMI				LR	LR		
	comp=N,100nm,18.8s						
KMI				LR	LR		
	comp=E,120nm,18.8s						
KMI				LR	LR		
	comp=Z,120nm,18.8s						
KMI	**Kunming**	**57.18**	**304**	P	**P**	**14 13 39.3**	**+0.3**
	comp=Z,4.0nm,0.9s,mb4.5						
KMI				S	**S**	**14 21 24.2**	**-1.4**
KMI				sS		14 21 59.4	
KMI				SS	SS	14 25 10.7	-6.4
KMI				LR	LR		
	comp=Z,130nm,18.8s						
CD2	**Chengdu**	**58.88**	**310**	*e*P	**P**	**14 13 52.0**	**+1.2**
HHC	**Hu-ho-hao-te**	**59.09**	**324**	*e*P	**P**	**14 13 53.9**	**+1.8**
HHC				PCP	PcP	14 14 38.3	-1.4
HHC				SCS	ScS	14 23 29.4	-0.3
HHC				AMB	AMB		
	comp=Z,200nm,9.6s						
HHC				LR	LR		
	comp=N,220nm,12.0s						
HHC				LR	LR		
	comp=E,180nm,10.8s						
HHC				LR	LR		
	comp=Z,110nm,13.2s						
LZH	**Lanzhou**	**61.34**	**316**	*e*P	**P**	**14 14 13.1**	**+5.6**
LZH				AP	pP	14 14 31.0	+0.7
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
GTA	**Gaotai**	**65.75**	**317**	*e*P	**P**	**14 14 37.6**	**+1.1**
GTA				AP	pP	14 14 56.9	-2.6
GTA				PCP	PcP	14 15 09.7	+2.9
GTA				PP	PP	14 17 04.3	-0.2
SONM	**Songino Array**	**66.35**	**328**	P	**P**	**14 14 41.0**	**+0.9**
	comp=Z,1.1nm,0.5s,mb3.9,baz=145,slow=5.8,SNR=7.5						
SONM				LR	LR	14 41 25.4	
	comp=Z,68nm,18.1s,baz=177,slow=34						
SHL	**Shillong**	**66.52**	**300**	*e*x	x	14 14 42.0	
CASY	**Casey**	**68.32**	**197**	*e*P	**P**	**14 14 51.2**	**-0.9**
	comp=Z,12nm,1.1s,mb4.6						
YAK	**Yakutsk**	**68.84**	**348**	*e*P	**P**	**14 14 55.4**	**0.0**
ZAK	**Zakamensk**	**69.51**	**328**	*e*P	**P**	**14 14 59.7**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
VNDA	**Vanda**	**73.02**	**178**	*e*P	**P**	**14 15 20.8**	**+0.6**
	comp=Z,13nm,0.8s,mb4.8						
BILL	**Bilibino**	**73.05**	**5**	*e*P	**P**	**14 15 19.7**	**-0.7**
	comp=Z,3.8nm,0.6s,mb4.4						
BILL	**Bilibino**	**73.05**	**5**	⇓*i*P	**P**	**14 15 20.2**	**-0.3**
BILL				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
SBA	**Scott Base**	**73.56**	**177**	*e*P	**P**	**14 15 25.5**	**+2.1**
	comp=Z,14nm,1.0s,mb4.6						
SBA				pP	pP	14 15 48.7	+1.8
MIR	**Mirnyy**	**74.25**	**201**	*e*P	**P**	**14 15 28.0**	**+0.5**
MIR				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0						
WMQ	**Urumqi**	**75.84**	**317**	⇑P	**P**	**14 15 37.1**	**+0.1**
WMQ				PCP	PcP	14 15 49.8	+0.3
WMQ				AP	pP	14 15 58.3	-2.4
WMQ				PP	PP	14 18 29.8	0.0

WMQ				S	S	14 25 11.1	+0.6
WMQ				SKS	SKS	14 25 35.3	+1.3
WMQ				AMB	AMB		
	comp=Z,200nm,4.8s						
WMQ				LR	LR		
	comp=N,40nm,17.6s						
WMQ				LR	LR		
	comp=E,30nm,19.5s						
WMQ				LR	LR		
	comp=Z,20nm,15.0s						
TIXI	**Tiksi**	**77.74**	**352**	*e*P	**P**	**14 15 46.0**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb3.7						
MKAR	**Makanchi Array**	**80.41**	**319**	P	**P**	**14 16 02.3**	**+0.2**
	comp=Z,2.7nm,0.8s,mb4.1,baz=100,slow=6.4,SNR=14						
MKAR	**Makanchi Array**	**80.41**	**319**	*i* P	**P**	**14 16 05.0**	**+2.9**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ZAL	**Zalesovo**	**81.19**	**326**	P	**P**	**14 16 06.5**	**+0.5**
	comp=Z,0.9nm,0.3s,mb4.1,baz=7.0,slow=5.3,SNR=5.6						
ZAL				LR	LR	14 50 41.1	
	comp=Z,50nm,18.5s,baz=93,slow=34						
ZAL	**Zalesovo**	**81.19**	**326**	*i* P	**P**	**14 16 10.3**	**+4.2**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
COLA	**College**	**81.52**	**22**	*e*P	**P**	**14 16 05.7**	**-1.9**
ILAR	**Eielson Array**	**81.83**	**22**	P	**P**	**14 16 07.3**	**-1.8**
	comp=Z,2.2nm,0.8s,mb4.1,baz=245,slow=5.8,SNR=14						
ILAR				LR	LR	14 46 08.5	
	comp=Z,55nm,20.3s,baz=206,slow=31						
KSH	**Kashi**	**83.08**	**311**	*e*P	**P**	**14 16 20.0**	**+3.9**
KSH				*e*AP	pP	14 16 39.0	-1.0
KSH				*e*PP	PP	14 19 33.3	+3.8
KSH				*e*PPP	PPP	14 21 27.2	+3.7
KSH				*e*SKS	SKS	14 26 30.1	+4.6
KSH				*e*S	S	14 26 32.3	+5.6
KSH				*e*XS		14 27 07.1	
KSH				*e*PS	PS	14 27 35.5	+4.0
KSH				AMB	AMB		
	comp=Z,370nm,5.0s						
KURK	**Kurchatov**	**83.83**	**322**	*e*P	**P**	**14 16 22.0**	**+2.4**
AAK	**Ala-Archa**	**84.79**	**313**	*e*P	**P**	**14 16 25.2**	**+0.6**
	comp=Z,9.5nm,0.8s,mb4.8						
AAK				*e*PcP	PcP	14 16 29.5	+1.2
AAK	**Ala-Archa**	**84.79**	**313**	*e*P	**P**	**14 16 24.8**	**+0.2**
QSPA	**South Pole Qui**	**85.37**	**180**	*e*P	**P**	**14 16 28.1**	**+1.4**
	comp=Z,50nm,1.1s,mb5.4						
MAW	**Mawson**	**85.90**	**203**	*e*P	**P**	**14 16 29.9**	**+0.4**
	comp=Z,3.7nm,0.6s,mb4.5						
MAW	**Mawson**	**85.90**	**203**	P	**P**	**14 16 30.3**	**+0.8**
	comp=Z,4.4nm,0.6s,mb4.6,baz=101,slow=5.4,SNR=30						
MAW				LR	LR	14 50 20.6	
	comp=Z,82nm,21.4s,baz=244,slow=32						
INK	**Inuvik**	**88.13**	**21**	P	**P**	**14 16 39.2**	**-1.1**
	comp=Z,2.5nm,0.9s,mb4.2,baz=220,slow=9.5,SNR=13						
CHKZ	**Chkalovo**	**89.26**	**324**	*e*P	**P**	**14 16 44.9**	**-1.0**
	comp=Z,5.0nm,1.0s,mb4.5						
CHKZ	**Chkalovo**	**89.26**	**324**	*e*P	**P**	**14 16 44.9**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
BRVK	**Borovoye**	**89.36**	**323**	*e*P	**P**	**14 16 46.0**	**-0.3**
	comp=Z,3.7nm,1.0s,mb4.4						
BRVK	**Borovoye**	**89.36**	**323**	*e*P	**P**	**14 16 46.1**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
NVAR	**Mina Array Bea**	**91.67**	**52**	P	**P**	**14 16 57.2**	**-0.3**
	comp=Z,0.4nm,0.9s,mb3.7,baz=264,slow=6.3,SNR=2.6						
NVAR				LR	LR	14 48 37.5	
	comp=Z,98nm,20.6s,baz=180,slow=29						
YKA	**Yellowknife Ar**	**95.07**	**28**	LR	LR	14 56 03.5	
	comp=Z,73nm,18.2s,baz=265,slow=33						
ARU	**Arti**	**96.35**	**326**	⇓*i*P	**P**	**14 17 16.8**	**-1.6**
ARU				*e*		14 21 11.2	
ARU				*e*S	SKS	14 27 48.0	+2.6
ARU				*e*SS	SS	14 35 05.5	-0.4
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
PDAR	**Pinedale Array**	**98.44**	**48**	LR	LR	15 00 52.9	
	comp=Z,70nm,18.0s,baz=262,slow=35						
PMSA	**Palmer Station**	**105.56**	**164**	*e*PKPdf		14 22 05.9	
AKASG	**Malin Array Be**	**114.54**	**325**	PKP	PKPdf	14 22 28.7	+0.2
	comp=Z,1.8nm,0.6s,baz=67,slow=2.1,SNR=10						
AKASG	**Malin Array Be**	**114.54**	**325**	PKP	PKPdf	14 22 28.7	+0.2
NOA	**NORSAR Array B**	**116.84**	**340**	PKP	PKPdf	14 22 34.9	+2.2
	comp=Z,1.7nm,0.9s,baz=333,slow=1.9,SNR=3.4						
TIRR	**Tirgusor**	**117.55**	**318**	⇓*i*P	PKPdf	14 22 41.6	+7.2
TIRR				S		14 22 59.0	
MLR	**Muntele Rosu**	**118.73**	**320**	⇓*i*P		14 23 05.7	
OKC	**Ostrava-Krasne**	**121.14**	**328**	*e*PKP	PKPdf	14 22 43.7	+2.4
DPC	**Dobruska-Polom**	**121.80**	**329**	*e*PKP	PKPdf	14 22 52.0	+9.5
UPC	**Upice**	**121.86**	**329**	*e*PKP		14 23 19.4	
NKC	**Novy Kostel**	**123.81**	**331**	*e*PKPDF	PKPdf	14 22 48.7	+2.3
KHC	**Kasperske Hory**	**123.95**	**329**	*e*PKP	PKPdf	14 22 49.1	+2.4
KHC	**Kasperske Hory**	**123.95**	**329**	*i* PKIKP	PKPdf	14 22 48.9	+2.2
GERES	**GERESS Array B**	**124.07**	**329**	PKP	PKPdf	14 22 48.9	+1.9
	comp=Z,2.7nm,0.7s,baz=90,slow=1.3,SNR=16						
DAVOX	**Davos**	**127.37**	**329**	PKP	PKPdf	14 22 55.6	+2.2
	comp=Z,5.3nm,0.7s,baz=124,slow=8.0,SNR=6.7						
BDFB	**Brasilia**	**150.95**	**134**	PKPbc	PKPdf	14 23 43.1	+6.9
	comp=Z,4.8nm,0.6s,baz=145,slow=4.7,SNR=4.9						
DBIC	**Dimbokro**	**158.03**	**276**	PKPab	PKPab	14 24 22.0	-0.2
	comp=Z,18nm,1.4s,baz=222,slow=3.3,SNR=4.7						

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*ISK **08** 14:12:18.4,38.15N×26.53E,h13^{km},MD3.4*
*ATH **08** 14:12:19.3,38.10N×26.48E,h25^{km}±2^{km},MD3.6/6*
*NEIC **08** 14:12:19.3,38.10N×26.48E,h25^{km},MD3.6(ATH),ML3.4(ISK),After ATH.*
*CSEM **08** 14:12:19.3±0.1,38.16N×26.56E,h20^{km},MD3.6,Error ellipse: s-maj=1.8km s-min=1.0km az=77.0*
ISC 08 14:12:18.2±0.8**,38.14N**±0.02×**26.54E**±0.04**,h5**^{km}±6^{km}**,n42,σ0^{s}67**/53**,1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.23**	**12**	*i* P	**Pg**	**14 12 23.7**	**+0.8**
URLA				*i* S	**Sg**	**14 12 27.2**	**+1.3**
SMG	**Samos**	**0.49**	**151**	*e*PB	**Pb**	**14 12 29.5**	**+0.6**
SMG				*e*SB	**Sb**	**14 12 36.7**	**+0.6**
IZM	**Izmir**	**0.63**	**65**	*i* PG	**Pg**	**14 12 31.0**	**+0.2**
KDAG	**Bornova**	**0.63**	**65**	*i* P	**Pg**	**14 12 30.0**	**-0.8**
KDAG				*i* S	**Sg**	**14 12 38.0**	**-1.3**
PRK	**Paraskevi**	**1.13**	**349**	⇑*i*PN	**Pn**	**14 12 40.9**	**+0.4**
PRK				*e*SN	**Sn**	**14 12 57.8**	**+1.3**
AYDN	**Tasoluk**	**1.16**	**114**	*i* P	**Pb**	**14 12 40.7**	**+0.3**
AYDN				*i* S	**Sb**	**14 12 55.4**	**-0.2**
AYVA	**Ayvalik**	**1.17**	**6**	*i* P	**Pb**	**14 12 41.6**	**+1.0**
AYVA				*i* S	**Sb**	**14 12 59.2**	**+3.3**
BODT	**Bodrum**	**1.24**	**150**	PN	**Pn**	**14 12 42.1**	**0.0**
BODT				SN	**Sn**	**14 12 59.8**	**+0.5**
AKS	**Akhisar**	**1.24**	**53**	PN	**Pn**	**14 12 41.6**	**-0.6**
BDRM	**Kayabasi**	**1.29**	**146**	*i* P	**Pb**	**14 12 43.4**	**+0.8**
BDRM				*i* S	**Sb**	**14 12 59.9**	**+0.6**
MLSB	**Milas**	**1.29**	**130**	PN	**Pn**	**14 12 42.9**	**0.0**
APE	**Apeiranthos**	**1.33**	**217**	PN	**Pn**	**14 12 43.9**	**+0.4**
APE				SN	**Sn**	**14 13 01.3**	**-0.5**
APE	**Apeiranthos**	**1.33**	**217**	*e*Pn	**Pn**	**14 12 43.6**	**+0.1**
APE				*e*Sn	**Sn**	**14 13 01.3**	**-0.5**
MANT	**Manisa**	**1.63**	**77**	*i* P	**Pn**	**14 12 49.4**	**+1.6**
MANT				*i* S	**Sb**	**14 13 09.7**	**+0.6**
DAT	**Datca**	**1.63**	**149**	PN	**Pn**	**14 12 47.8**	**0.0**
EZN	**Ezine**	**1.69**	**354**	*e*PN	**Pn**	**14 12 48.3**	**-0.4**
YER	**Yerkesik**	**1.71**	**125**	*e*PN	**Pn**	**14 12 48.9**	**0.0**
BALB	**Balikesir**	**1.83**	**35**	*e*PN	**Pn**	**14 12 50.7**	**+0.1**
DENT	**Denizli**	**2.01**	**100**	*e*PN	**Pn**	**14 12 52.9**	**-0.3**
DALT	**Dalyan (Mudla)**	**2.16**	**129**	*e*PN	**Pn**	**14 12 55.2**	**-0.1**
DST	**Dursunbey**	**2.19**	**47**	*e*PN	**Pn**	**14 12 55.6**	**-0.2**
LPK	**Lapseki**	**2.24**	**4**	*e*PN	**Pn**	**14 12 55.9**	**-0.6**
ARG	**Arkhangelos**	**2.30**	**146**	*e*PB	**Pb**	**14 12 58.5**	**-1.4**
KHL	**Karahalli**	**2.36**	**85**	*e*PN	**Pn**	**14 12 58.1**	**-0.1**
EDC	**Edincik**	**2.43**	**25**	*e*PN	**Pn**	**14 12 59.0**	**-0.3**
BNT	**Bandirma**	**2.46**	**25**	*e*PN	**Pn**	**14 12 59.3**	**-0.3**
FETY	**Fethiye**	**2.52**	**126**	*e*PN	**Pn**	**14 13 00.4**	**-0.1**
KCT	**Karacabey**	**2.55**	**33**	*e*PN	**Pn**	**14 13 00.7**	**-0.2**
MRMT	**Marmara Adasi**	**2.59**	**18**	*e*PN	**Pn**	**14 13 01.0**	**-0.6**
KARP	**Karpathos**	**2.63**	**169**	*e*PN	**Pn**	**14 13 02.0**	**-0.1**
ORLT	**Orhaneli**	**2.65**	**43**	*e*PN	**Pn**	**14 13 02.0**	**-0.3**
MFT	**Murefte**	**2.71**	**12**	*e*PN	**Pn**	**14 13 02.5**	**-0.7**
ALT	**Altintas**	**2.94**	**71**	*e*PN	**Pn**	**14 13 07.0**	**+0.4**
RDO	**Rodhopi**	**3.10**	**346**	*e*PN	**Pn**	**14 13 09.0**	**+0.2**
YLV	**Yalova**	**3.27**	**41**	*e*PN	**Pn**	**14 13 10.9**	**-0.3**
KDZ	**Kurdzhali**	**3.61**	**347**	*i* P	**Pn**	**14 13 15.5**	**-0.5**
EDRB	**Edirne**	**3.71**	**2**	*e*PN	**Pn**	**14 13 16.9**	**-0.5**
DIM	**Dimitrovgrad**	**3.98**	**349**	*e*P	**Pn**	**14 13 20.0**	**-1.3**
MMB	**Musomiste**	**4.07**	**329**	*i* P	**Pn**	**14 13 22.0**	**-0.5**
KIZT	**Kizilcal**	**4.25**	**78**	*e*PN	**Pn**	**14 13 24.8**	**-0.4**
JMB	**Yambol**	**4.32**	**0**	*e*P	**Pn**	**14 13 20.0**	**-6.1**
KKB	**Krupnik**	**4.57**	**326**	*i* P	**Pn**	**14 13 30.0**	**+0.3**

WEL 08 14:13:50.7±0.3**,36.94S**×**176.72E,h321**^{km}±3^{km}**,ML4.2**/20**,10C-1D,Error ellipse: s-maj=4.6km s-min=4.3km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.35**	**167**	⇑PN	P	14 14 34.9	-0.5
URZ				SN	S	14 15 09.3	-1.0
MXZ	**Matakaoa Point**	**1.41**	**117**	⇑PN	P	14 14 35.5	-0.2
MXZ				SN	S	14 15 09.8	-1.1
MWZ	**Matawai**	**1.54**	**156**	⇑PN	P	14 14 36.3	-0.1
MWZ				SN	S	14 15 11.8	-0.4
PUZ	**Puketiti**	**1.67**	**133**	⇓PN	P	14 14 37.3	-0.1
PUZ				SN	S	14 15 12.8	-0.9
KNZ	**Kokohu**	**2.21**	**160**	PN	P	14 14 41.1	-0.2
BKZ	**Black Stump Fm**	**2.23**	**185**	⇑PN	P	14 14 41.2	-0.3
BKZ				SN	S	14 15 21.7	+0.5
KRVZ	**Karewarewa**	**2.31**	**201**	PN	P	14 14 42.6	+0.4
WTVZ	**West Tongariro**	**2.35**	**202**	PN	P	14 14 42.7	+0.2
TWVZ	**Taurewa**	**2.36**	**205**	PN	P	14 14 42.7	+0.1
OTVZ	**Oturere**	**2.37**	**200**	PN	P	14 14 43.1	+0.4
NGZ	**Ngauruhoe**	**2.40**	**201**	PN	P	14 14 43.1	+0.2
CNZ	**Chateau**	**2.44**	**202**	PN	P	14 14 43.4	+0.2
WPVZ	**Whakapapa**	**2.44**	**202**	PN	P	14 14 43.4	+0.1
TUVZ	**Tukino**	**2.47**	**200**	⇑PN	P	14 14 43.7	+0.1
FWVZ	**Far West T-bar**	**2.49**	**201**	PN	P	14 14 43.9	+0.2
TRVZ	**Turoa**	**2.53**	**201**	PN	P	14 14 44.4	+0.4
WNVZ	**Wahianoa**	**2.54**	**200**	⇑PN	P	14 14 44.2	0.0
MOVZ	**Moawhango**	**2.58**	**197**	⇑PN	P	14 14 43.8	-0.6
PKVZ	**Pokaka**	**2.59**	**204**	PN	P	14 14 44.5	0.0
MTVZ	**Mangateitei**	**2.63**	**202**	PN	P	14 14 44.7	-0.2
PXZ	**Pawanui**	**3.09**	**178**	PN	P	14 14 48.5	-0.7
PXZ				SN	S	14 15 34.6	-0.3
WAZ	**Wanganui**	**3.12**	**205**	PN	P	14 14 49.2	-0.4
TSZ	**Takapari Road**	**3.17**	**191**	⇑PN	P	14 14 49.0	-1.0
BFZ	**Birch Farm**	**3.75**	**185**	PN	P	14 14 54.8	-1.1
MRZ	**Mangatainoka R**	**3.82**	**193**	⇑PN	P	14 14 55.0	-1.7
MRZ				SN	S	14 15 47.5	-0.7
KIW	**Kapiti Island**	**4.16**	**199**	PN	P	14 14 58.4	-1.8
MTW	**Mount Morrison**	**4.32**	**192**	PN	P	14 14 59.9	-2.1
CAW	**Cannon Point**	**4.36**	**197**	PN	P	14 15 00.5	-1.9
DUWZ	**D'Urville Isla**	**4.43**	**209**	PN	P	14 15 01.2	-2.0
TRWZ	**Traveller**	**4.53**	**190**	PN	P	14 15 02.6	-1.6
PAWZ	**Paruwai Farm**	**4.55**	**192**	PN	P	14 15 02.6	-1.9
MRW	**Makara Radio**	**4.56**	**200**	⇑PN	P	14 15 02.7	-1.9
MRW				SN	S	14 16 01.0	-1.7
WEL	**Wellington**	**4.60**	**199**	PN	P	14 15 03.1	-1.9
MSWZ	**Moikau Station**	**4.61**	**194**	PN	P	14 15 03.1	-2.1
SNZO	**South Karori**	**4.64**	**199**	PN	P	14 15 03.4	-2.1
TCW	**Tory Channel**	**4.67**	**203**	PN	P	14 15 04.0	-1.9
TUWZ	**Tuamarina**	**4.98**	**205**	PN	P	14 15 07.1	-2.2
NNZ	**Nelson**	**5.00**	**210**	PN	P	14 15 06.8	-2.7
QRZ	**Quartz Range**	**5.08**	**219**	PN	P	14 15 07.2	-3.2

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*NEIC **08** 14:26:17.4±0.9,20.91S×178.66W,h600^{km},mb3.9/1,Error ellipse: s-maj=28.9km s-min=17.8km az=133.0*
*IDC **08** 14:26:17.9±2.1,20.89S×178.69W,h606^{km}±31^{km},mb3.1/5,mb1 3.4/7,mb1mx3.3/15,mbtmp4.2/7,Error ellipse: s-maj=30.3km s-min=16.6km az=134.0*
ISC 08 14:26:16.2±1.5**,20.9S**±0.2×**178.8W**±0.2**,h587**^{km}±25^{km}**,n10,σ0^{s}88**/9**,mb3.8**/6**,1C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**9.67**	**45**	P	**P**	**14 28 32.2**	**+0.4**
	4.9nm,0.3s,baz=110,slow=5.7,SNR=11						
URZ	**Urewera**	**17.66**	**191**	P	**P**	**14 29 48.7**	**-1.2**
	1.3nm,0.3s,baz=345,slow=5.4,SNR=11						
RPZ	**Rata Peaks**	**24.27**	**198**	P	**P**	**14 30 50.3**	**+0.2**
	1.9nm,0.4s,mb4.1,baz=2.3,slow=16,SNR=4.9						
STKA	**Stephens Creek**	**36.92**	**244**	P	**P**	**14 32 39.1**	**+1.4**
	1.6nm,0.5s,mb3.8,baz=79,slow=10,SNR=3.4						
WRAB	**Tennant Creek**	**43.77**	**263**	*e*P	**P**	**14 33 32.2**	**-0.5**
	2.5nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	**43.77**	**263**	P	**P**	**14 33 32.5**	**-0.2**
	1.1nm,0.3s,mb3.9,baz=97,slow=7.4,SNR=20						
NVAR	**Mina Array Bea**	**81.84**	**44**	P	**P**	**14 37 36.5**	**+0.6**
	0.6nm,0.6s,mb3.3,baz=233,slow=9.6,SNR=4.8						
VNA3	**Neumayer Olymp**	**87.80**	**177**	⇑*i*	**P**	**14 38 04.9**	**+0.8**
ILAR	**Eielson Array**	**88.87**	**13**	P	**P**	**14 38 07.8**	**-1.5**
	0.5nm,0.6s,mb3.6,baz=213,slow=5.6,SNR=7.0						
AKASG	**Malin Array Be**	**142.97**	**330**	PKP	PKPdf	14 44 40.8	-2.5
	2.4nm,0.4s,baz=44,slow=4.4,SNR=18						

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*ISK **08** 14:59:57.6,38.12N×26.56E,h13^{km},MD3.0*
*ATH **08** 15:00:00.0,38.20N×26.79E,h20^{km},MD3.2/3*
*NEIC **08** 15:00:00.0,38.20N×26.79E,h20^{km},MD3.2(ATH),MD3.0(ISK),After ATH.*
*CSEM **08** 15:00:00.7±0.2,38.19N×26.83E,h24^{km}±1^{km},MD3.0,Error ellipse: s-maj=7.1km s-min=3.8km az=99.0*
ISC 08 14:59:59.9±0.6**,38.17N**±0.02×**26.67E**±0.05**,h8**^{km}±4^{km}**,n17,σ1^{s}17**/27**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.20**	**343**	*i* P	**Pg**	**15 00 03.5**	**-0.7**
URLA				*i* S	**Sg**	**15 00 07.7**	**+0.7**
BLCB	**Balcova**	**0.36**	**53**	PG	**Pg**	**15 00 07.0**	**-0.4**
SMG	**Samos**	**0.48**	**164**	*e*PB	**Pg**	**15 00 10.0**	**+0.4**
SMG				*e*SB	**Sg**	**15 00 17.3**	**+1.3**
IZM	**Izmir**	**0.52**	**64**	PG	**Pg**	**15 00 10.5**	**+0.1**
KDAG	**Bornova**	**0.53**	**63**	*i* P	**Pg**	**15 00 09.7**	**-0.9**
KDAG				*i* S	**Sg**	**15 00 17.1**	**-0.5**
PRK	**Paraskevi**	**1.12**	**344**	*e*PN	**Pn**	**15 00 21.3**	**-0.6**
PRK				*e*SN	**Sn**	**15 00 36.8**	**-0.8**
AYVA	**Ayvalik**	**1.14**	**1**	*i* P	**Pb**	**15 00 22.3**	**+0.9**
AYVA				*i* S	**Sb**	**15 00 37.5**	**+1.2**
AKS	**Akhisar**	**1.15**	**51**	PN	**Pn**	**15 00 20.6**	**-1.6**
AKS				SN	**Sn**	**15 00 38.8**	**+0.7**
BODT	**Bodrum**	**1.22**	**155**	*e*PN	**Pn**	**15 00 20.9**	**-2.3**
MLSB	**Milas**	**1.24**	**134**	*e*PN	**Pn**	**15 00 21.6**	**-1.9**
BDRM	**Kayabasi**	**1.26**	**151**	*i* P	**Pb**	**15 00 23.8**	**+0.3**
BDRM				*i* S	**Sb**	**15 00 40.4**	**+0.6**
APE	**Apeiranthos**	**1.42**	**220**	*e*PN	**Pn**	**15 00 22.7**	**-3.4**
APE	**Apeiranthos**	**1.42**	**220**	*e*Pn	**Pn**	**15 00 28.1**	**+2.0**
MANT	**Manisa**	**1.52**	**77**	*i* P	**Pn**	**15 00 29.0**	**+1.4**
MANT				*i* S	**Sb**	**15 00 48.7**	**+1.4**
DAT	**Datca**	**1.61**	**153**	*e*PN	**Pn**	**15 00 26.6**	**-2.2**
SANT	**Santorini**	**2.04**	**209**	Pn	**Pn**	**15 00 36.6**	**+1.7**
SANT				Sn	**Sn**	**15 01 00.4**	**-0.4**
SANT	**Santorini**	**2.04**	**209**	Pn	**Pn**	**15 00 36.6**	**+1.6**
SANT				Sn	**Sn**	**15 01 00.4**	**-0.4**

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*CNRM **08** 15:00:56.5,35.09N×4.76W,h34^{km},MD3.0*
*MDD **08** 15:00:57.3±1.2,34.98N×4.66W,h18^{km}±12^{km},mbLg2.3/6,Error ellipse: s-maj=10.0km s-min=4.8km az=98.0,PRXIMO*
*CSEM **08** 15:00:57.1±0.2,35.00N×4.62W,h35^{km},MD3.0,Error ellipse: s-maj=7.0km s-min=3.3km az=92.0*
ISC 08 15:00:56.7±0.5**,35.03N**±0.03×**4.71W**±0.06**,h48**^{km}±33^{km}**,n23,σ1^{s}18**/41**,Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOU	**Touzarine**	**0.79**	**95**	*i* P	**P**	**15 01 10.5**	**-1.1**
TOU				*i* S	**S**	**15 01 21.0**	**-1.5**
TZK	**Tazeka**	**1.03**	**155**	*e*P	**P**	**15 01 15.5**	**+0.5**
TZK				*e*S	**S**	**15 01 28.5**	**-0.1**
EMIJ	**Mijas**	**1.53**	**358**	P	**P**	**15 01 21.7**	**-0.4**
	2.8nm,0.1s,SNR=6.5						
EMIJ				S	**S**	**15 01 40.0**	**-1.1**
	9.6nm,0.1s,SNR=8.6						
EJIF	**Jimena Fronter**	**1.55**	**337**	P	**P**	**15 01 24.1**	**+1.7**
	1.1nm,0.1s,SNR=4.0						
MIF	**Mishlifen**	**1.67**	**195**	P	**P**	**15 01 24.0**	**-0.1**
MIF				S	**S**	**15 01 42.5**	**-1.9**
MIF	**Mishlifen**	**1.67**	**195**	*i* P	**P**	**15 01 24.0**	**-0.1**
CZD	**Col de Zad**	**2.01**	**188**	*i* P	**P**	**15 01 30.0**	**+1.2**
CZD				*i* S	**S**	**15 01 52.0**	**-0.8**
EQUE	**Quentar**	**2.40**	**25**	P	**P**	**15 01 35.5**	**+1.0**
	1.4nm,0.2s,SNR=7.9						
EQUE				S	**S**	**15 02 02.9**	**+0.1**
	1.3nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**2.55**	**8**	P	**P**	**15 01 38.6**	**+2.0**
	2.7nm,0.2s,SNR=4.0						
ELUQ				S	**S**	**15 02 04.5**	**-2.1**
	6.3nm,0.4s,SNR=7.9						
EQES	**Quesada**	**3.07**	**25**	P	**P**	**15 01 44.7**	**+0.8**
	2.9nm,0.2s,SNR=7.9						
EQES				S	**S**	**15 02 20.4**	**+0.7**
	5.4nm,0.3s,SNR=7.9						
EQES	**Quesada**	**3.07**	**25**	P	**P**	**15 01 44.7**	**+0.8**
	2.9nm,0.2s,SNR=7.9						
EQES				S	**S**	**15 02 20.4**	**+0.7**
	5.4nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**3.10**	**350**	P	**P**	**15 01 46.0**	**+1.7**
	0.2nm,0.1s,SNR=7.9						
ECAB				S	**S**	**15 02 18.9**	**-1.5**
	2.0nm,0.2s,SNR=6.6						
ECAB	**El Cabril**	**3.10**	**350**	P	**P**	**15 01 46.0**	**+1.7**
	0.2nm,0.1s,SNR=7.9						
ECAB				S	**S**	**15 02 18.9**	**-1.4**
	2.0nm,0.2s,SNR=6.6						
EADA	**Adamuz**	**3.13**	**2**	P	**P**	**15 01 46.0**	**+1.1**
	1.0nm,0.1s,SNR=58						
EADA				S	**S**	**15 02 21.2**	**-0.2**
	1.9nm,0.1s						
EADA	**Adamuz**	**3.13**	**2**	P	**P**	**15 01 46.0**	**+1.1**
	1.0nm,0.1s,SNR=58						
EADA				S	**S**	**15 02 21.2**	**-0.2**
	1.9nm,0.1s						
EMIN	**Mina Concepcio**	**3.16**	**330**	P	**P**	**15 01 46.1**	**+0.8**
	0.8nm,0.0s,SNR=37						
EMIN				S	**S**	**15 02 20.9**	**-1.1**
	1.2nm,0.1s						
EMIN	**Mina Concepcio**	**3.16**	**330**	P	**P**	**15 01 46.1**	**+0.9**
	0.8nm,0.0s,SNR=37						
EMIN				S	**S**	**15 02 20.9**	**-1.1**
	1.2nm,0.1s						
EBAN	**Banos Encina**	**3.22**	**13**	P	**P**	**15 01 46.6**	**+0.6**
	1.4nm,0.2s,SNR=4.0						
EBAN				S	**S**	**15 02 21.6**	**-1.8**
	2.0nm,0.2s,SNR=4.0						
EHUE	**Huescar**	**3.26**	**31**	S	**S**	**15 02 24.7**	**+0.1**
	1.5nm,0.4s,SNR=7.9						
EBAD	**Badajoz**	**4.15**	**334**	P	**P**	**15 02 00.3**	**+1.0**
	2.6nm,0.1s,SNR=4.0						
EBAD				S	**S**	**15 02 45.2**	**-1.9**
	3.0nm,0.1s,SNR=4.0						
EBAD	**Badajoz**	**4.15**	**334**	P	**P**	**15 02 00.3**	**+1.1**
	2.6nm,0.1s,SNR=4.0						
EBAD				S	**S**	**15 02 45.2**	**-1.9**
	3.0nm,0.1s,SNR=4.0						
ETOB	**Tobarra**	**4.41**	**34**	P	**P**	**15 02 04.3**	**+1.4**
	SNR=4.0						
ETOB	**Tobarra**	**4.41**	**34**	P	**P**	**15 02 04.3**	**+1.4**
	SNR=4.0						

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*CASC **08** 15:29:34.2±2.3,12.12N×88.86W,h6^{km},MD4.4,ML3.7,mb4.4(NEIC)*
*IDC **08** 15:29:44.7±3.4,12.46N×88.01W,h46^{km}±34^{km},mb4.0/10,mb1 4.2/12,mb1mx4.0/23,mbtmp4.2/12,ML3.5/2,MS3.6/9,Ms1 3.6/9,ms1mx3.4/23,Error ellipse: s-maj=40.9km s-min=16.8km az=53.0*
*BJI **08** 15:29:49.2,12.30N×88.10W,h98^{km},mB5.1*
*NEIC **08** 15:29:49.2±1.6,12.27N×88.12W,h99^{km}±17^{km},mb4.4/15,Error ellipse: s-maj=19.3km s-min=9.3km az=48.0*
ISC 08 15:29:45.5±1.2**,12.25N**±0.08×**88.1W**±0.1**,h77**^{km}±11^{km}**,n75,σ1^{s}07**/56**,mb4.3**/23**,11C-6D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	**Conchagua**	**1.06**	**15**	⇑*e*P	Px	15 30 07.2	
CNCH				*e*S	Sx	15 30 29.6	
CRIN	**San Cristobal**	**1.13**	**67**	⇑*e*P	**P**	**15 30 06.2**	**0.0**
CRIN				*e*S	**S**	**15 30 31.5**	**+10**
VSM	**San Miguel**	**1.18**	**352**	⇑*e*P	Px	15 30 08.2	
VSM				*e*S	Sx	15 30 27.9	
BLLM	**Bellamira**	**1.19**	**354**	⇑*e*P	Px	15 30 08.1	
BLLM				*e*S	Sx	15 30 28.1	
LEON	**Leon**	**1.20**	**82**	⇑*e*P	**P**	**15 30 06.0**	**-1.2**
TEL3	**Telica 3**	**1.28**	**75**	*e*P	**P**	**15 30 07.7**	**-0.5**
TELN	**Telica**	**1.30**	**74**	*e*P	**P**	**15 30 08.8**	**+0.2**
MIRN	**Miramar**	**1.38**	**82**	*e*P	**P**	**15 30 08.9**	**-0.8**
CNGN	**Cerro Negro**	**1.40**	**80**	*e*P	**P**	**15 30 09.6**	**-0.4**
COPN	**Copaltepe**	**1.49**	**93**	⇑*e*P	**P**	**15 30 10.3**	**-0.8**
CAHU	**Cacacuatique**	**1.51**	**356**	⇑*e*P	Px	15 30 13.8	
CAHU				*e*S	Sx	15 30 38.5	
SNVI	**San Vicente**	**1.53**	**332**	*e*P	Px	15 30 11.2	
SNVI				*e*S	Sx	15 30 32.8	
MOMJ	**Momotombo**	**1.54**	**84**	⇓*e*P	**P**	**15 30 11.1**	**-0.7**
LCBS	**La Ceiba**	**1.63**	**329**	⇑*e*P	Px	15 30 12.1	
LCBS				*e*S	Sx	15 30 32.4	
LFRS	**El Faro**	**1.65**	**326**	⇑*e*P	Px	15 30 12.2	
LFRS				*e*S	Sx	15 30 34.2	
LBRS	**Las Brisas**	**1.73**	**329**	*e*P	Px	15 30 14.3	
LBRS				*e*S	Sx	15 30 35.6	
XAVN	**Gruta Xavier**	**1.75**	**93**	*e*P	**P**	**15 30 14.6**	**+0.1**
LFU	**La Fuente**	**1.78**	**327**	*e*P	Px	15 30 14.3	
LFU				*e*S	Sx	15 30 38.0	
MGAN	**Managua**	**1.83**	**93**	*e*P	**P**	**15 30 15.2**	**-0.4**
MGAN				*e*S	**S**	**15 30 48.0**	**+10**
	comp=E,536nm,0.3s						
PICS	**Picacho**	**1.85**	**323**	⇑*e*P	Px	15 30 07.3	
PICS				*e*S	Sx	15 30 30.5	
TICN	**Ticuantepe**	**1.85**	**96**	*e*P	**P**	**15 30 16.3**	**+0.4**
BOQS	**Boqueron**	**1.86**	**323**	⇓*e*P	Px	15 30 15.4	
BOQS				*e*S	Sx	15 30 38.4	
WILN	**Americas 2**	**1.89**	**92**	*e*P	**P**	**15 30 17.4**	**+1.0**
PYTN	**Playitas**	**2.03**	**82**	*e*P	**P**	**15 30 19.7**	**+1.4**
APON	**Apoyo**	**2.03**	**99**	*e*P	**P**	**15 30 20.1**	**+1.8**
SBLS	**San Blas**	**2.16**	**317**	⇓*e*P	Px	15 30 18.4	
SBLS				*e*S	Sx	15 30 45.4	
SNJE	**San Jose**	**2.17**	**318**	⇓*e*P	Px	15 30 19.6	
SNJE				*e*S	Sx	15 30 46.2	
RTR	**El Retiro**	**2.22**	**318**	⇓*e*P	Px	15 30 20.4	
RTR				*e*S	Sx	15 30 45.7	
MTO2	**Montecristo 2**	**2.46**	**331**	⇑*e*P	Px	15 30 24.7	
MTO2				*e*S	Sx	15 30 53.7	
CONN	**Concepcion**	**2.53**	**105**	*e*P	**P**	**15 30 25.6**	**+0.3**
MADN	**Villa Maderas**	**2.66**	**108**	*e*P	**P**	**15 30 26.5**	**-0.7**
JTS	**JuntasAbangare**	**3.66**	**122**	P	**P**	**15 30 39.6**	**-1.6**
	comp=E,2.2nm,0.3s,baz=289,slow=18,SNR=3.6						
JTS				LR	LR	15 32 19.6	
	comp=E,469nm,21.1s,baz=300,slow=42						
JTS	**JuntasAbangare**	**3.66**	**122**	*e*P	**P**	**15 30 43.7**	**+2.6**
JTS				*e*S	S	15 31 51.5	+28
JTS				LR	LR	15 32 19.6	
PRS1	**Puriscal**	**4.36**	**121**	*e*P	**P**	**15 30 51.9**	**+1.1**
LAJ	**Bijagual**	**4.58**	**121**	*e*P	**P**	**15 30 49.1**	**-4.8**
LCR2	**La Lucha 2**	**4.74**	**121**	*e*P	**P**	**15 30 55.5**	**-0.6**
BUS	**Buena Vista**	**5.05**	**122**	⇓*e*P	**P**	**15 30 59.9**	**-0.4**
ROSC	**El Rosal**	**15.48**	**117**	LR	LR	15 39 46.0	
	comp=E,91nm,19.6s,baz=174,slow=39						
SDV	**Santo Domingo**	**17.50**	**99**	P	**P**	**15 33 46.5**	**+0.4**
	comp=E,0.3nm,0.3s,baz=284,slow=19,SNR=2.9						
SDV	**Santo Domingo**	**17.50**	**99**	*e*Pn	**P**	**15 33 48.5**	**+2.3**
	comp=E,11nm,1.1s						
LRAL	**Lakeview Retre**	**20.71**	**3**	*e*P	**P**	**15 34 23.1**	**+1.4**
	comp=E,17nm,1.0s						
JCT	**Junction City**	**21.12**	**331**	*e*P	**P**	**15 34 24.5**	**-1.4**
	comp=E,14nm,0.7s,mb4.4						
GOGA	**Godfrey**	**21.49**	**11**	*e*P	**P**	**15 34 30.4**	**+0.9**
	comp=E,14nm,0.8s,mb4.3						
LTX	**Lajitas**	**22.32**	**322**	*e*P	**P**	**15 34 38.1**	**+0.4**
	comp=E,7.4nm,0.7s,mb4.1						
TXAR	**Lajitas Array**	**22.32**	**322**	P	**P**	**15 34 37.5**	**-0.2**
	comp=E,6.4nm,0.7s,mb4.1,baz=142,slow=11,SNR=35						
MIAR	**Mount Ida**	**22.74**	**348**	*e*P	**P**	**15 34 42.9**	**+1.0**
	comp=E,18nm,1.0s,mb4.3						
UALR	**University of**	**22.75**	**351**	*e*P	**P**	**15 34 43.2**	**+1.2**
	comp=E,25nm,0.9s,mb4.5						
JSC	**Jenkinsville**	**22.80**	**15**	*e*P	**P**	**15 34 44.2**	**+1.8**
SWET	**Sewanee**	**22.95**	**5**	*e*P	**P**	**15 34 43.6**	**-0.2**
WMOK	**Wichita Mounta**	**24.39**	**338**	*e*P	**P**	**15 34 57.7**	**-0.2**
	comp=E,20nm,1.1s,mb4.3						
GDL2	**Guadalupe Moun**	**24.85**	**326**	*e*P	**P**	**15 35 03.6**	**+1.4**
MNTX	**Cornudas Mount**	**25.05**	**323**	*e*P	**P**	**15 35 03.3**	**-1.0**
	comp=E,6.2nm,1.0s,mb4.0						
CPRX	**Cap Rock**	**25.22**	**328**	P	**P**	**15 35 06.7**	**+1.0**
CCM	**Cathedral Cave**	**25.85**	**354**	*e*P	**P**	**15 35 10.4**	**-1.3**
	comp=E,12nm,0.8s,mb4.4						

BNM	Barren Site	27.56	325	eP	P	15 35 29.0	+1.6
SDCO	Great Sand Dun	29.77	332	eP	P	15 35 48.2	+1.1
	comp=E,3.8nm,0.8s,mb4.1						
SAML	Samuel	32.52	129	eP	P	15 36 10.6	-0.8
	comp=E,3.3nm,0.8s,mb4.2						
SADO	Sadowa	33.31	12	P	P	15 36 17.1	-0.9
	comp=E,4.7nm,0.6s,mb4.5,baz=211,slow=6.9,SNR=4.4						
LPAZ	La Paz	34.56	145	LR	LR	15 51 20.2	
	comp=E,58nm,18.9s,baz=266,slow=37						
PDAR	Pinedale Array	35.65	332	P	P	15 36 37.2	-0.8
	comp=E,1.0nm,0.8s,mb3.8,baz=124,slow=9.0,SNR=6.3						
PDAR				PcP	PcP	15 39 06.0	+0.8
	comp=E,1.1nm,0.8s,baz=130,slow=4.8,SNR=6.0						
NVAR	Mina Array Bea	37.43	319	P	P	15 36 53.3	+0.3
	comp=E,0.7nm,0.8s,mb3.6,baz=126,slow=9.1,SNR=4.6						
NVAR				PcP	PcP	15 39 12.3	+1.7
	comp=E,0.9nm,0.9s,baz=113,slow=4.4,SNR=5.0						
NVAR				LR	LR	15 55 07.5	
	comp=E,114nm,18.7s,baz=185,slow=41						
ULM	Lac du Bonnet	38.42	352	P	P	15 36 58.9	-2.2
	comp=E,14nm,0.7s,mb4.9,baz=166,slow=8.5,SNR=22						
ULM				LR	LR	15 54 01.4	
	comp=E,87nm,20.2s,baz=180,slow=38						
DGMT	Dagmar	38.52	343	eP	P	15 37 02.0	+0.1
	comp=E,24nm,0.9s,mb5.0						
SIV	San Ignacio	38.77	136	P	P	15 37 04.8	+0.5
	comp=E,5.3nm,0.8s,mb4.4,baz=313,slow=10,SNR=21						
BOZ	Bozeman (W)	38.83	333	eP	P	15 37 06.9	+2.4
	comp=E,8.3nm,1.1s,mb4.5						
EDM	Edmonton	45.56	339	eP	P	15 37 58.2	-1.1
SCHQ	Schefferville	45.66	17	P	P	15 37 58.9	-1.2
	comp=E,4.7nm,0.7s,mb4.3,baz=224,slow=11,SNR=5.0						
SCHQ				LR	LR	15 59 01.2	
	comp=E,164nm,19.3s,baz=286,slow=39						
FCC	Fort Churchill	46.64	356	eP	P	15 38 06.8	-1.0
	comp=E,5.2nm,0.6s,mb4.4						
BDFB	Brasilia	48.40	124	LR	LR	16 00 19.4	
	comp=E,83nm,21.6s,baz=129,slow=38						
YKA	Yellowknife Ar	53.63	345	P	P	15 38 59.1	-2.0
	comp=E,3.0nm,0.7s,mb4.4,baz=141,slow=7.4,SNR=5.9						
YKA				LR	LR	16 05 19.3	
	comp=E,65nm,18.9s,baz=100,slow=40						
DLBC	Dease Lake	55.81	335	P	P	15 39 17.3	+0.4
	comp=E,4.1nm,0.8s,mb4.5,baz=119,slow=6.4,SNR=4.9						
ILAR	Eielson Array	65.94	336	P	P	15 40 23.8	-1.6
	comp=E,3.8nm,1.2s,mb4.1,baz=124,slow=4.0,SNR=9.3						
ARCES	ARCESS Array B	86.58	19	LR	LR	16 19 00.5	
	comp=E,74nm,20.2s,baz=211,slow=34						
WMQ	Urumqi	124.07	4	ePKP	PKPdf	15 48 35.1	-0.3
WMQ				XPKP		15 49 12.1	
WMQ				PP	PP	15 50 25.1	-0.2
WMQ				PP	PP		
	comp=Z,230nm,5.4s						
WMQ				LR	LR		
	comp=N,60nm,20.0s						
WMQ				LR	LR		
	comp=E,30nm,19.3s						
WMQ				LR	LR		
	comp=Z,30nm,25.8s						
WRA	Warramunga Arr	138.59	254	PKP	PKPdf	15 49 08.2	+4.8
	comp=Z,0.7nm,0.8s,baz=69,slow=1.6,SNR=6.4						

NNC 08 15:35:34.7±7.2, 37.07N×70.63E, h179km±146km, mpv3.3, 5C, Error ellipse: s-maj=75.7km s-min=58.3km az=43.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.03	359	⇑P	P	15 37 02.0	-0.9
	1.6nm,0.4s,baz=179,slow=13,SNR=76						
KK31				⇑S	S	15 38 12.9	+1.5
	1.0nm,0.3s,baz=190,slow=23,SNR=5.3						
AAK	Ala-Archa	6.30	27	⇑P	P	15 37 05.1	-1.4
	1.1nm,0.5s						
AAK				⇑S	S	15 38 18.1	+0.2
	8.3nm,1.1s						
AB31	Akbulak array	14.44	331	P	P	15 38 53.0	+1.3
	0.3nm,0.3s,baz=352,slow=13,SNR=16						
AB31				⇑S	S	15 41 29.0	+1.5
	1.5nm,0.8s,baz=148,slow=23,SNR=5.3						

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*BJI **08** 16:31:36.4, 53.05N×158.91E, h65km, mB5.0, mb4.8, Ms4.5, Msz4.2*

*MOS **08** 16:31:36.2±1.1, 52.58N×158.77E, h58km, mb5.1/57, Error ellipse: s-maj=9.9km s-min=4.7km az=96.3*

*IDC **08** 16:31:37.3±2.0, 52.78N×158.87E, h47km±18km, mb4.6/28, mb1 4.8/28, mb1mx4.8/29, mbtmp4.8/28, ML5.4/1, MS3.9/20, Ms1 3.9/20, ms1mx3.7/39, Error ellipse: s-maj=14.5km s-min=10.6km az=161.0*

*KRSC **08** 16:31:38.7±0.5, 52.60N×159.25E, h53km±6km, ML5.3*

*HRVD **08** 16:31:39.0±0.4, 52.60N×159.28E, h70km±7km, MW4.9/54, Centroid moment Tensor Solution. LP body waves: s23,c35;Mantle waves: s54,c88; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.56±.22; $M_{\theta\theta}$0.63±.19; $M_{\phi\phi}$-0.07±.19; $M_{r\theta}$-2.47±.12; $M_{\theta\phi}$0.68±.14; $M_{\phi r}$-1.87±.10; Best double couple: $M_0$3.202×10^{16} NP1:ϕ_s255°, δ8°, λ-68°. NP2:ϕ_s53°, δ83°, λ-93°. Principal axes: T 3.438, Plg38°, Azm145°; N -.473, Plg3°, Azm53°; P -2.966, Plg52°, Azm319°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **08** 16:31:39.0±0.6, 52.73N×158.85E, h60km±5km, mb5.2/132 Error ellipse: s-maj=4.3km s-min=3.2km az=166.0*

ISC 08 16:31:37.8±0.2, 52.62N±0.03×158.99E±0.04, h67km, h67km±1.5km:pP-P, n582, σ1º01/574, mb5.0/191, 45C-72D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUS	Russkaya	0.34	238	iP	P	16 31 50.3	+1.2
PET	Petropavlovsk	0.46	334	P	P	16 31 51.4	+1.4
PET				S	S	16 32 00.2	+1.2
PET	Petropavlovsk	0.46	334	iP	P	16 31 51.4	+1.4
PET	Petropavlovsk	0.46	334	⇑iP	P	16 31 50.9	+0.8
PET	Petropavlovsk	0.46	334	⇑iPN	P	16 31 50.8	+0.8
PET				eS	S	16 32 00.2	+1.2
PET				pmax	pmax		
	comp=N,31µm,0.5s						
PET				pmax	pmax		
	comp=E,21µm,0.5s						
PET				pmax	pmax		
	comp=Z,93µm,0.4s						
GRL	Gorelyy	0.56	264	iP	P	16 31 54.1	+3.0
KRMR	Karymshinskiy	0.57	293	iP	P	16 31 53.3	+2.1
KRMR				iS	S	16 32 03.9	+3.0
NLC	Nalytchevo	0.60	21	iP	P	16 31 51.3	-0.2
UGLR	Uglovaya	0.60	350	iP	P	16 31 53.1	+1.5
SMAR	Somma	0.66	350	iP	P	16 31 53.4	+1.3
AVH	Avacha	0.67	347	iP	P	16 31 54.1	+1.9
KOK	Koryaka	0.71	343	iP	P	16 31 54.8	+2.1
SPN	Mys Shipunski	0.79	52	iP	P	16 31 53.1	-0.6
APC	Apacha	1.16	286	iP	P	16 32 01.8	+3.4
APC				iS	S	16 32 18.9	+5.1
APC				Smax			
	comp=Z,9µm,0.7s						
GNL	Ganaly	1.25	330	iP	P	16 32 02.1	+2.3
MIPR	Malaya Ipel’ka	1.41	257	iP	P	16 32 05.3	+3.3
PAU	Pauzhetka	1.77	230	iP	P	16 32 09.6	+2.7
PAU				iS	S	16 32 31.9	+3.6
PAU				Smax			
	comp=Z,20µm,0.5s						
TUMR	Tumrok	2.76	14	iP	P	16 32 22.1	+1.3
ALID	Alaid	2.76	232	iP	P	16 32 23.6	+2.8
KMNR	Kamenistaya	3.23	13	iP	P	16 32 28.5	+1.1
ESO	Esso	3.32	357	iP	P	16 32 29.8	+1.2
ESO				Smax			
	comp=Z,1µm,1.0s						
KPT	Kopyto	3.43	12	iP	P	16 32 30.9	+0.7
KOZ	Kozyrevsk	3.49	8	P	P	16 32 32.1	+1.1
KOZ	Kozyrevsk	3.49	8	iP	P	16 32 31.8	+0.8
KOZR	Kozyr	3.50	8	PN	P	16 32 32.1	+1.0
ZLN	Zelenaya	3.57	17	iP	P	16 32 33.9	+1.8
LGNR	Loginova	3.61	15	iP	P	16 32 34.6	+1.9
CIRR	Tsirk	3.66	16	eP	P	16 32 35.0	+1.7
KRSR	Krestovskiy	3.73	14	iP	P	16 32 35.2	+0.9
SRDR	Sredinnyy	3.73	6	iP	P	16 32 35.2	+0.8
KLY	Klyuchi	3.83	14	P	P	16 32 37.3	+1.5
KLY				S	S	16 33 20.6	+0.7
KLY	Klyuchi	3.83	14	eP	P	16 32 37.3	+1.5
KLY				eS	S	16 33 20.5	+0.6
KBTR	Krutoberegovo	4.24	30	P	P	16 32 41.5	0.0
KBTR				S	S	16 33 27.7	-2.4
KBTR	Krutoberegovo	4.24	30	iP	P	16 32 41.4	-0.1
KBG	Krutoberegovo	4.24	29	eP	P	16 32 42.3	+0.8
KBG				Smax			
	comp=Z,20µm,1.0s						
BKI	Bering	4.87	55	iP	P	16 32 47.5	-2.8
BKI				iS	S	16 33 36.8	-9.2
BKI				Smax			
	comp=Z,980nm,0.4s						
OSSR	Ossora	7.03	17	eP	P	16 33 20.2	-0.1
MA2	Magadan	8.35	330	Pn	P	16 33 33.0	-5.4
	comp=Z,68nm,0.9s						
MA2	Magadan	8.35	330	ePN	P	16 33 38.4	0.0
MA2				pmax	pmax		
	comp=Z,42nm,1.1s						
FX1	Attu Island--F	8.61	83	P	P	16 33 38.7	-3.2
	comp=Z,159nm,0.3s,baz=296,slow=4.3,SNR=58						
FX1				S	S	16 35 05.8	-13
	comp=Z,203nm,0.3s,baz=108,slow=22,SNR=15						
FX1				LR	LR	16 36 57.9	
	comp=Z,33nm,19.8s,baz=82,slow=37						
SEY	Seymchan	10.92	344	ePN	P	16 34 14.2	+0.9
YSS	Yuzh-Sakhalins	11.91	248	ePn	P	16 34 30.7	+4.0
	comp=Z,27nm,0.8s						
YSS	Yuzh-Sakhalins	11.91	248	ePN	P	16 34 31.8	+5.1
YSS				eS	S	16 36 46.0	+7.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,700nm,14.0s						
ASAJ	Asahikawa	13.80	238	P	P	16 34 53.9	+2.5
	comp=Z,18nm,0.3s,baz=54,slow=11,SNR=60						
ASAJ				LR	LR	16 40 16.9	
	comp=Z,213nm,19.4s,baz=5.0,slow=38						
ASAJ	Asahikawa	13.80	238	P	P	16 34 53.9	+2.5
ASAJ				pmax	pmax		
	comp=Z,18nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,213nm,19.4s						
BILL	Bilibino	15.87	10	ePn	P	16 35 18.9	+0.9
	comp=Z,29nm,0.8s						
BILL	Bilibino	15.87	10	⇑eP	P	16 35 18.9	+1.0
BILL				pmax	pmax		
	comp=Z,13nm,1.0s						
BILL				MLR	MLR		
	comp=Z,600nm,24.0s						
KLR	Kul’dur	17.46	270	eP	P	16 35 41.3	+3.3
KLR				MLR	MLR		
	comp=Z,2µm,12.0s						
YAK	Yakutsk	18.26	313	eP	P	16 35 45.6	-2.1
	comp=Z,328nm,0.8s						
YAK	Yakutsk	18.26	313	eP	P	16 35 47.7	0.0
YAK				pmax	pmax		
	comp=Z,169nm,0.9s						
YAK				pmax	pmax		
	comp=N,18nm,1.0s						
YAK				pmax	pmax		
	comp=E,56nm,1.0s						
YAK				MLR	MLR		
	comp=Z,248nm,17.0s						
YAK				MLR	MLR		
	comp=N,176nm,16.0s						
YAK				MLR	MLR		
	comp=E,362nm,20.0s						
CLNS	Chul’man	20.00	296	eP	P	16 36 09.6	+2.4
CLNS				pmax	pmax		
	comp=E,109nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,140nm,1.0s						
CLNS				pmax	pmax		
	comp=N,66nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,400nm,14.0s						
CLNS				MLR	MLR		
	comp=N,100nm,13.0s						
CLNS				MLR	MLR		
	comp=E,200nm,15.0s						
MDJ	Mudanjiang	20.90	259	P	P	16 36 15.5	-1.0
MDJ				AP		16 36 28.2	
MDJ				XP		16 36 36.7	
MDJ				S	S	16 40 03.0	+2.3
MDJ				PCP	PcP	16 40 22.5	-0.2
MDJ				SCP		16 43 55.7	
MDJ				PCS		16 44 02.3	
MDJ				SCS	ScS	16 47 36.5	+2.3
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,190nm,4.3s						
MDJ				LR	LR		
	comp=N,390nm,31.4s						
MDJ				LR	LR		
	comp=E,180nm,34.6s						
MDJ				LR	LR		
	comp=Z,300nm,33.0s						
MDJ	Mudanjiang	20.90	259	eP	P	16 36 15.7	-0.8
	comp=Z,18nm,0.7s						
MJAR	Matsushiro Arr	21.73	231	P	P	16 36 25.7	+0.9
	comp=Z,60nm,0.7s,mb5.0,baz=21,slow=10,SNR=105						
MJAR				PcP	PcP	16 40 23.6	-0.7
	comp=Z,2.1nm,0.6s,baz=97,slow=1.2,SNR=4.9						
MJAR	Matsushiro Arr	21.73	231	P	P	16 36 25.7	+0.9
MJAR						16 40 23.6	
MJAR				pmax	pmax		
	comp=Z,60nm,0.7s						
MAJO	Matsushiro	21.73	231	eP	P	16 36 25.9	+1.1
	comp=Z,91nm,0.5s,mb5.4						
MAT	Matsushiro	21.73	231	P	P	16 36 25.6	+0.8
MAT				S	S	16 40 24.0	+8.0
MAT	Matsushiro	21.73	231	eP	P	16 36 26.0	+1.2
	comp=Z,90nm,0.7s,mb5.2						
MAT				eS	S	16 40 25.0	+9.0
TIXI	Tiksi	23.24	336	eP	P	16 36 38.5	-0.7
TIXI				pmax	pmax		
	comp=Z,47nm,1.0s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,800nm,23.0s						
CN2	Changchun	23.84	262	eP	P	16 36 45.2	0.0
CN2				eXP		16 37 09.6	
CN2				eS	S	16 40 51.5	-1.8
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
CN2				AMB	AMB		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,16.0s						
CN2				LR	LR		
	comp=E,600nm,16.0s						
CN2				LR	LR		
	comp=Z,900nm,18.0s						
JHJ	Hachijo jima 2	23.90	223	LR	LR	16 46 32.8	
	comp=Z,86nm,19.5s,baz=197,slow=37						
HIA	Hailar	24.74	278	eP	P	16 36 53.0	-0.9
	comp=Z,46nm,0.8s,mb5.0						
HIA				e		16 37 10.7	
BOD	Bodaibo	25.80	300	eP	P	16 37 03.0	-0.8
BOD				e	pP	16 37 16.1	-3.4
BOD				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
KDAK	Kodiak Island	27.62	60	P	P	16 37 18.9	-1.6
	comp=Z,8.6nm,0.5s,mb4.5,baz=255,slow=8.9,SNR=12						
KDAK	Kodiak Island	27.62	60	P	P	16 37 18.9	-1.6
JNU	Nakatsue	28.07	237	P	P	16 37 25.4	+0.6
	comp=Z,25nm,0.8s,mb4.8,baz=103,slow=11,SNR=13						
JNU				LR	LR	16 49 40.1	
	comp=Z,103nm,18.8s,baz=209,slow=38						
CBIJ	Chichi jima	28.42	213	LR	LR	16 49 01.7	
	comp=Z,28nm,19.8s,baz=39,slow=37						
COLA	College	29.21	44	eP	P	16 37 33.8	-0.9
	comp=Z,28nm,1.3s,mb4.7						
COLA	College	29.21	44	eP	P	16 37 32.9	-1.8
ILAR	Eielson Array	29.63	45	P	P	16 37 36.8	-1.6
	comp=Z,7.9nm,0.8s,mb4.4,baz=266,slow=7.9,SNR=58						
ILAR	Eielson Array	29.63	45	P	P	16 37 36.8	-1.6
ILAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DAWY	Dawson	32.93	45	eP	P	16 38 06.6	-0.8
SONM	Songino Array	33.36	283	P	P	16 38 10.3	-0.9
	comp=Z,0.8nm,0.3s,mb4.0,baz=66,slow=8.6,SNR=26						
SONM				PcP	PcP	16 40 51.2	-0.7
	comp=Z,4.8nm,0.6s,baz=90,slow=1.8,SNR=12						
SONM				ScP		16 44 31.0	
	comp=Z,8.8nm,1.1s,baz=86,slow=2.0,SNR=21						
SONM				LR	LR	16 53 14.4	
	comp=Z,576nm,18.6s,baz=7.4,slow=39						
TIA	Tai’an	33.55	258	P	P	16 38 13.2	+0.2
HHC	Hu-ho-hao-te	33.97	269	eP	P	16 38 17.1	+0.5
HHC				AP	pP	16 38 33.1	0.0
HHC				XP	sP	16 38 40.3	-1.0
HHC				PP	PP	16 39 33.1	+1.1
HHC				PCP	PcP	16 40 51.0	-2.6
HHC				S	S	16 43 38.8	+3.1
HHC				XS		16 44 02.8	
HHC				SCP		16 44 30.4	
HHC				PCS		16 44 38.8	
HHC				SS	SS	16 45 49.5	+2.9
HHC				SCS	ScS	16 48 32.5	+0.7
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
HHC				AMB	AMB		
	comp=Z,150nm,8.4s						
HHC				LR	LR		
	comp=N,340nm,16.8s						
HHC				LR	LR		
	comp=E,290nm,15.6s						
HHC				LR	LR		
	comp=Z,290nm,15.6s						
ZAK	Zakamensk	34.02	289	eP	P	16 38 17.1	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
INK	Inuvik	34.66	37	P	P	16 38 21.6	-0.6
	comp=Z,14nm,0.9s,mb4.8,baz=288,slow=7.3,SNR=34						
INK				PcP	PcP	16 40 54.2	-1.1
	comp=Z,3.4nm,0.8s,baz=292,slow=2.2,SNR=4.3						
INK	Inuvik	34.66	37	eP	P	16 38 21.9	-0.3
	comp=Z,12nm,0.8s,mb4.8						
INK				ePcP	PcP	16 40 54.3	-1.1
INK	Inuvik	34.66	37	P	P	16 38 21.6	-0.6
INK						16 40 54.2	
INK				pmax	pmax		
	comp=Z,14nm,0.9s						
NJ2	Nanjing	35.47	251	eP	P	16 38 30.0	+0.5
NJ2				AP	pP	16 38 48.6	+2.5
NJ2				XP	sP	16 38 57.5	+3.2
NJ2				S	S	16 43 59.0	0.0
NJ2				XS		16 44 29.0	
NJ2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,60nm,7.6s						
NJ2				LR	LR		
	comp=N,420nm,24.0s						
NJ2				LR	LR		
	comp=E,470nm,25.0s						
NJ2				LR	LR		
	comp=Z,260nm,26.2s						
KRAR	Krasnoyarsk	37.40	302	eP	P	16 38 43.8	-1.6
KRAR				i	pP	16 39 00.6	-1.5
KRAR				e		16 40 08.9	
WHN	Wuhan	39.19	254	eP	P	16 39 00.6	0.0
YHNB	Yeheng	39.79	240	eP	P	16 39 06.8	+1.2
NACB	Ninganchiao	40.08	239	P	P	16 39 08.7	+0.6
LZH	Lanzhou	41.66	269	eP	P	16 39 20.8	-0.1
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.9						
LZH	Lanzhou	41.66	269	eP	P	16 39 20.8	-0.1
	comp=Z,30nm,1.2s,mb4.9						
LZH				pP	pP	16 39 28.3	-9.4
LZH				sP	sP	16 39 33.3	-12
GTA	Gaotai	41.99	276	eP	P	16 39 23.5	-0.1
GTA				AP	pP	16 39 38.5	-1.9
GTA				XP	sP	16 39 45.8	-2.5
GTA				PP	PP	16 41 05.3	+0.6
GTA				PCP	PcP	16 41 17.7	-0.7
GTA				SCP		16 45 02.9	
GTA				PCS		16 45 09.8	
GTA				S	S	16 45 38.7	+1.5
GTA				XS		16 46 07.0	
GTA				SS	SS	16 48 41.1	+0.7
GTA				SCS	ScS	16 49 18.0	+0.6
GTA				AMB	AMB		
	comp=Z,40nm,4.6s						
GTA				LR	LR		
	comp=N,300nm,14.5s						
GTA				LR	LR		
	comp=E,280nm,18.3s						
GTA				LR	LR		
	comp=Z,250nm,16.8s						
ENH	Enshi	42.26	258	eP	P	16 39 24.9	-0.9
	comp=Z,23nm,0.7s,mb5.0						
ZAL	Zalesovo	42.49	303	P	P	16 39 25.5	-1.9
	comp=Z,1.3nm,0.5s,baz=41,slow=8.1,SNR=6.9						
ZAL				PcP	PcP	16 41 17.9	-1.9
	comp=Z,5.4nm,0.4s,baz=57,slow=3.2,SNR=10						
ZAL				LR	LR	16 59 05.8	
	comp=Z,466nm,18.6s,baz=62,slow=39						
ZAL	Zalesovo	42.49	303	P	P	16 39 25.5	-1.9
ZAL						16 41 17.9	
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZAL				MLR	MLR		
	comp=Z,466nm,18.6s						
NVS	Novosibirsk	42.83	304	iP	P	16 39 27.9	-2.3
NVS				i *PP	pP	16 39 43.2	-3.9
NVS				e		16 41 05.7	
NVS				eS	S	16 45 42.1	-7.1
NVS				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.8						
NVS				pmax	pmax		
	comp=N,13nm,1.5s						
NVS				pmax	pmax		
	comp=E,26nm,1.4s						
NVS				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.6						
NVS				pmax	pmax		
	comp=E,18nm,1.4s						
NVS				smax			
	comp=N,38nm,2.4s						
NVS				smax			
	comp=E,22nm,2.2s						
YKA	Yellowknife Ar	43.97	42	P	P	16 39 39.3	0.0
	comp=E,3.9nm,0.8s,mb4.2,baz=299,slow=7.6,SNR=5.2						
YKA	Yellowknife Ar	43.97	42	P	P	16 39 39.3	-0.1
YKA	Yellowknife Ar	43.97	42	iP	P	16 39 39.2	-0.1
YKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CD2	Chengdu	45.25	264	eP	P	16 39 49.0	-1.1
WMQ	Urumqi	46.49	289	⇓P	P	16 39 59.1	-0.6
WMQ				AP	pP	16 40 16.2	-0.5
WMQ				XP	sP	16 40 24.1	-0.3
WMQ				PCP	PcP	16 41 34.1	+0.4
WMQ				PP	PP	16 41 48.5	-1.0
WMQ				PPP	PPP	16 42 34.1	-1.6
WMQ				S	S	16 46 40.7	-1.4
WMQ				XS		16 47 09.1	
WMQ				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,100nm,5.0s						
WMQ				LR	LR		
	comp=N,180nm,29.0s						
WMQ				LR	LR		
	comp=E,140nm,25.0s						
WMQ				LR	LR		
	comp=Z,210nm,29.0s						
GYA	Guiyang	46.74	257	P	P	16 40 01.4	-0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
KURK	Kurchatov	47.42	302	eP	P	16 40 04.2	-2.7
	comp=Z,17nm,0.6s,mb5.0						
KURK	Kurchatov	47.42	302	d iP	P	16 40 04.6	-2.3
MKAR	Makanchi Array	47.76	295	P	P	16 40 07.4	-2.2
	comp=Z,5.7nm,0.5s,mb4.7,baz=54,slow=6.5,SNR=117						
MKAR				ScP		16 45 27.3	
	comp=Z,2.8nm,1.0s,baz=45,slow=6.1,SNR=5.5						
MKAR				LR	LR	17 01 13.6	
	comp=Z,242nm,20.4s,baz=41,slow=37						
EDM	Edmonton	49.59	52	eP	P	16 40 23.0	-0.6
CHKZ	Chkalovo	49.66	309	eP	P	16 40 21.1	-3.0
	comp=Z,16nm,0.5s,mb5.2						
CHKZ	Chkalovo	49.66	309	eP	P	16 40 21.1	-3.1
CHKZ				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.2						
KMI	Kunming	50.08	259	P	P	16 40 27.8	0.0
KMI				S	S	16 47 32.0	-0.6
KMI				LR	LR		
	comp=N,280nm,16.4s						
KMI				LR	LR		
	comp=E,130nm,15.6s						
KMI				LR	LR		
	comp=Z,220nm,20.2s						

BVA0	**Borovoye Array**	**50.16**	**308**	*i* P	**P**	**16 40 25.9**	**-2.1**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRVK	**Borovoye**	**50.19**	**308**	*e*P	**P**	**16 40 25.3**	**-2.9**
	comp=Z,12nm,0.6s,mb5.0						
BRVK	**Borovoye**	**50.19**	**308**	*e*P	**P**	**16 40 25.3**	**-2.9**
BRVK				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
QIZ	**Qiongzhong**	**50.64**	**248**	P	**P**	**16 40 33.4**	**+1.3**
QIZ				S	**S**	**16 47 40.8**	**+0.4**
QIZ				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
QIZ	**Qiongzhong**	**50.64**	**248**	*e*P	**P**	**16 40 33.4**	**+1.3**
	comp=Z,38nm,1.3s,mb5.3						
DAG	**Danmarks Havn**	**50.88**	**359**	⇓*i*P	**P**	**16 40 32.0**	**-1.2**
	comp=Z,16nm,1.1s,mb5.0						
DAG	**Danmarks Havn**	**50.88**	**359**	⇓*e*P	**P**	**16 40 32.0**	**-1.2**
	comp=Z,16nm,1.1s,mb5.0						
DAG	**Danmarks Havn**	**50.88**	**359**	⇓*e*P	**P**	**16 40 32.0**	**-1.2**
DAG				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
YBH	**Yreka Blue Hor**	**51.82**	**69**	*e*P	**P**	**16 40 41.2**	**+0.5**
	comp=Z,14nm,1.2s,mb4.9						
YBH	**Yreka Blue Hor**	**51.82**	**69**	P	**P**	**16 40 41.4**	**+0.7**
YBH				pmax	pmax		
	comp=Z,15nm,1.2s						
BMO	**Blue Mountains**	**52.80**	**63**	*e*P	**P**	**16 40 47.5**	**-0.4**
	comp=Z,7.0nm,1.1s,mb4.6						
LVZ	**Lovozero**	**52.88**	**337**	*e*P	**P**	**16 40 45.8**	**-2.5**
LVZ				pmax	pmax		
	comp=Z,59nm,1.8s,mb5.3						
KEV	**Kevo**	**53.05**	**341**	*e*p	**P**	**16 40 48.5**	**-1.1**
MOD	**Modoc**	**53.07**	**67**	*e*P	**P**	**16 40 50.5**	**+0.4**
	comp=Z,42nm,1.4s,mb5.3						
ARU	**Arti**	**53.29**	**317**	*e*P	**P**	**16 40 49.2**	**-2.4**
	comp=Z,6.5nm,0.5s,mb4.9						
ARU				*e*	pP	16 41 06.6	-2.3
ARU				*e*PcP	PcP	16 41 56.8	-1.5
ARU	**Arti**	**53.29**	**317**	⇓*i*P	**P**	**16 40 48.9**	**-2.6**
ARU				*e*		16 41 55.9	
ARU				*e*		16 42 48.2	
ARU				*e*S	**S**	**16 48 17.1**	**+0.9**
ARU				*e*SS	SS	16 51 49.9	-6.1
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
MSO	**Missoula**	**53.30**	**59**	*e*P	**P**	**16 40 51.6**	**-0.1**
	comp=Z,7.2nm,1.2s,mb4.6						
APA	**Apatity**	**53.44**	**337**	⇑*e*P	**P**	**16 40 51.4**	**-1.0**
ARCES	**ARCESS Array B**	**53.53**	**341**	P	**P**	**16 40 50.8**	**-2.3**
	comp=Z,9.9nm,0.9s,mb4.8,baz=44,slow=7.6,SNR=16						
ARCES				LR	LR	17 06 32.5	
	comp=Z,157nm,18.4s,baz=28,slow=39						
ARCES	**ARCESS Array B**	**53.53**	**341**	P	**P**	**16 40 50.8**	**-2.3**
ARCES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,157nm,18.4s						
LSA	**Lhasa**	**53.78**	**273**	*e*P	**P**	**16 40 55.2**	**-0.3**
	comp=Z,6.4nm,0.6s,mb4.8						
FCC	**Fort Churchill**	**54.27**	**38**	P	**P**	**16 40 58.1**	**-0.6**
SUMG	**Summit**	**54.51**	**6**	*e*P	**P**	**16 40 59.6**	**-0.6**
	comp=Z,132nm,1.1s,mb5.9						
AAK	**Ala-Archa**	**54.69**	**296**	⇓*i*P	**P**	**16 40 58.7**	**-3.2**
	comp=Z,11nm,0.9s,mb4.9						
AAK	**Ala-Archa**	**54.69**	**296**	P	**P**	**16 40 59.1**	**-2.8**
AAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
BOZ	**Bozeman (W)**	**55.28**	**59**	*e*P	**P**	**16 41 05.9**	**-0.3**
	comp=Z,6.5nm,0.7s,mb4.8						
BOZ	**Bozeman (W)**	**55.28**	**59**	*e*P	**P**	**16 41 05.9**	**-0.3**
BOZ				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
CMB	**Columbia Colle**	**55.62**	**71**	*e*P	**P**	**16 41 08.4**	**-0.3**
	comp=Z,18nm,1.2s,mb5.0						
CMB	**Columbia Colle**	**55.62**	**71**	P	**P**	**16 41 08.6**	**-0.1**
CMB				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
QLMT	**Earthquake Lak**	**55.94**	**59**	*e*P	**P**	**16 41 10.7**	**-0.3**
SHL	**Shillong**	**56.33**	**269**	*e*x	x	16 41 13.0	
NVAR	**Mina Array Bea**	**56.54**	**69**	P	**P**	**16 41 15.3**	**0.0**
	comp=Z,5.7nm,0.7s,mb4.7,baz=297,slow=7.1,SNR=45						
NVAR				LR	LR	17 00 36.3	
	comp=Z,123nm,21.5s,slow=31						
MNV	**Mina**	**56.62**	**69**	*e*P	**P**	**16 41 16.2**	**+0.3**
	comp=Z,11nm,1.1s,mb4.8						
MNV				*e*	pP	16 41 36.4	+3.0
MNV	**Mina**	**56.62**	**69**	P	**P**	**16 41 16.5**	**+0.6**
MNV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
ELK	**Elko**	**56.67**	**65**	*e*P	**P**	**16 41 16.3**	**+0.1**
	comp=Z,6.7nm,1.0s,mb4.6						
ELK	**Elko**	**56.67**	**65**	P	**P**	**16 41 16.6**	**+0.4**
ELK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	**Klimovskoe**	**57.02**	**329**	*c* *i*P	**P**	**16 41 16.5**	**-2.0**
KLMR						16 43 20.0	
KLMR				pmax	pmax		
	comp=Z,50nm,2.7s,mb5.1						
KLMR				MLR	MLR		
	comp=Z,470nm,15.0s						
MTUM	**Tungsten Hills**	**57.13**	**70**	*e*P	**P**	**16 41 20.1**	**+0.6**
TPH	**Tonopah**	**57.40**	**69**	*e*P	**P**	**16 41 21.4**	**0.0**
	comp=Z,12nm,0.9s,mb4.9						
TPH	**Tonopah**	**57.40**	**69**	P	**P**	**16 41 22.0**	**+0.6**
TPH				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
AKTO	**Aktyubinsk**	**57.65**	**312**	P	**P**	**16 41 20.6**	**-2.3**
	comp=Z,4.0nm,0.4s,mb4.8,baz=66,slow=10						
AKTO	**Aktyubinsk**	**57.65**	**312**	P	**P**	**16 41 20.7**	**-2.3**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.8						
JOF	**Joensuu**	**57.72**	**335**	*e*p	**P**	**16 41 20.3**	**-3.0**
	comp=Z,6.8nm,0.3s,mb5.2						
JOF	**Joensuu**	**57.72**	**335**	*e*P	**P**	**16 41 20.3**	**-3.0**
JOF				pmax	pmax		
	comp=Z,7.0nm,0.3s,mb5.2						
HWUT	**Hardware Ranch**	**58.08**	**62**	*e*P	**P**	**16 41 26.4**	**+0.3**
	comp=Z,10nm,0.9s,mb4.9						
ORR	**Orenburg**	**58.25**	**315**	⇑*i*P	**P**	**16 41 24.1**	**-3.0**
ORR				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
GUN	**Gumba**	**58.28**	**275**	*e*P	**P**	**16 41 25.9**	**-1.8**
	comp=Z,25nm,0.6s,mb5.4						
BW06	**Boulder Array**	**58.34**	**60**	*e*P	**P**	**16 41 27.6**	**-0.3**
	comp=Z,14nm,0.8s,mb5.0						
PDAR	**Pinedale Array**	**58.34**	**60**	P	**P**	**16 41 27.9**	**0.0**
	comp=Z,10nm,0.7s,mb5.0,baz=324,slow=2.5,SNR=83						
PDAR				LR	LR	17 03 30.8	
	comp=Z,71nm,21.7s,baz=327,slow=33						
DUG	**Dugway**	**58.38**	**64**	*e*P	**P**	**16 41 28.6**	**+0.4**
	comp=Z,4.6nm,0.8s,mb4.6						
DUG	**Dugway**	**58.38**	**64**	P	**P**	**16 41 28.8**	**+0.6**
DUG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
DAC	**Darwin (Calif)**	**58.44**	**70**	*e*P	**P**	**16 41 28.4**	**-0.2**
	comp=Z,4.9nm,0.9s,mb4.5						
DAC	**Darwin (Calif)**	**58.44**	**70**	P	**P**	**16 41 28.9**	**+0.2**
DAC				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
KKN	**Kakani**	**58.73**	**276**	*e*P	**P**	**16 41 29.1**	**-1.7**
	comp=Z,28nm,0.5s,mb5.5						
TPNV	**Topopah Spring**	**58.74**	**69**	*e*P	**P**	**16 41 30.8**	**0.0**
	comp=Z,9.9nm,0.9s,mb4.8						
TPNV	**Topopah Spring**	**58.74**	**69**	P	**P**	**16 41 30.8**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
PKI	**Pulchoki**	**58.81**	**275**	*e*P	**P**	**16 41 29.1**	**-2.2**
GKN	**Gorkha**	**58.96**	**276**	*e*P	**P**	**16 41 30.5**	**-1.9**
	comp=Z,11nm,0.3s,mb5.3						
DMN	**Daman**	**58.96**	**276**	*e*P	**P**	**16 41 30.8**	**-1.6**
	comp=Z,36nm,0.6s,mb5.6						
ULM	**Lac du Bonnet**	**59.64**	**46**	P	**P**	**16 41 35.8**	**-0.9**
	comp=Z,2.9nm,0.4s,mb4.7,baz=318,slow=6.6,SNR=13						
ULM				LR	LR	17 08 27.9	
	comp=Z,49nm,19.6s,baz=35,slow=37						
KAF	**Kangasniemi**	**59.66**	**336**	*e*p	**P**	**16 41 34.0**	**-2.7**
	comp=Z,6.2nm,0.3s,mb5.1						
KAF	**Kangasniemi**	**59.66**	**336**	*e*P	**P**	**16 41 34.0**	**-2.7**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb5.1						
ARUT	**Antelope Range**	**59.73**	**66**	*e*P	**P**	**16 41 37.8**	**+0.2**
ARUT	**Antelope Range**	**59.73**	**66**	*e*P	**P**	**16 41 38.8**	**+1.2**
KOLN	**Koldanda**	**59.76**	**277**	*e*P	**P**	**16 41 35.5**	**-2.4**
	comp=Z,15nm,0.4s,mb5.4						
MSU	**Marysvale**	**59.92**	**65**	*e*P	**P**	**16 41 39.4**	**+0.5**
MSU	**Marysvale**	**59.92**	**65**	P	**P**	**16 41 39.6**	**+0.7**
RSSD	**Black Hills**	**60.23**	**55**	*e*P	**P**	**16 41 40.6**	**-0.3**
	comp=Z,20nm,0.7s,mb5.3						
RSSD				*e*	pP	16 41 59.5	+0.9
RSSD				*e*		16 42 08.7	
RSSD	**Black Hills**	**60.23**	**55**	P	**P**	**16 41 40.8**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
FINES	**FINESS Array B**	**60.29**	**336**	P	**P**	**16 41 39.1**	**-2.0**
	comp=Z,8.7nm,0.5s,mb5.0,baz=39,slow=7.9,SNR=45						
FINES				LR	LR	17 11 45.1	
	comp=Z,265nm,18.2s,baz=332,slow=40						
FINES	**FINESS Array B**	**60.29**	**336**	P	**P**	**16 41 39.1**	**-2.0**
FINES				pmax	pmax		
	comp=Z,9.0nm,0.5s						
FINES				MLR	MLR		
	comp=Z,265nm,18.2s						
SRU	**San Rafael**	**60.40**	**63**	*e*P	**P**	**16 41 42.2**	**0.0**
	comp=Z,14nm,0.9s,mb5.0						
SRU				*e*	pP	16 42 01.8	+2.0
SRU				*e*		16 42 10.2	
SRU	**San Rafael**	**60.40**	**63**	P	**P**	**16 41 42.3**	**+0.1**
SRU				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
NEN	**Nelson**	**60.46**	**69**	*e*P	**P**	**16 41 42.4**	**-0.2**
NEN				*e*	pP	16 42 00.2	0.0
LDFC	**Landfair**	**60.71**	**70**	*e*P	**P**	**16 41 44.3**	**-0.1**
PHWY	**Pilot Hill**	**61.53**	**59**	*e*P	**P**	**16 41 50.0**	**+0.3**
PV10	**Paradox Valley**	**61.74**	**63**	*e*P	**P**	**16 41 51.6**	**+0.4**
HNR	**Honiara**	**61.80**	**179**	LR	LR	17 04 58.1	
	comp=Z,97nm,19.9s,baz=230,slow=32						
PV01	**Paradox Valley**	**62.16**	**63**	*e*P	**P**	**16 41 54.1**	**0.0**
ISCO	**Idaho Springs**	**62.54**	**60**	*e*P	**P**	**16 41 56.6**	**+0.1**
	comp=Z,9.4nm,0.9s,mb4.7						
ISCO	**Idaho Springs**	**62.54**	**60**	P	**P**	**16 41 56.8**	**+0.3**
ISCO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
OBN	**Obninsk**	**62.55**	**327**	*e*P	**P**	**16 41 53.1**	**-3.3**
OBN				*e**PP	pP	16 42 18.9	+4.7
OBN				*i*		16 42 33.1	
OBN				*e*S	**S**	**16 50 08.2**	**-9.0**
OBN				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,23.0s						
PMG	**Port Moresby**	**62.60**	**193**	LR	LR	17 04 34.4	
	comp=Z,14nm,21.2s,baz=197,slow=32						
VSU	**Vasula**	**62.69**	**334**	*d* *i*P	**P**	**16 41 56.5**	**-0.8**
NB2	**NORSAR Subarra**	**63.81**	**343**	P	**P**	**16 42 02.6**	**-1.9**
	comp=Z,5.6nm,0.5s,mb4.7,baz=22,slow=6.5						
NOA	**NORSAR Array B**	**63.81**	**343**	P	**P**	**16 42 02.8**	**-1.6**
	comp=Z,7.3nm,0.6s,mb4.7,baz=21,slow=6.7,SNR=26						
NOA				LR	LR	17 11 36.8	
	comp=Z,125nm,19.2s,slow=38						
NOA	**NORSAR Array B**	**63.81**	**343**	P	**P**	**16 42 02.8**	**-1.7**
NOA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
NOA				MLR	MLR		
	comp=Z,125nm,19.2s						
VRHR	**Novokhopersk**	**64.00**	**321**	*e*P	**P**	**16 42 01.5**	**-4.3**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.9s						
VRHR				pmax	pmax		
	comp=E,7.0nm,0.4s						
NAO	**NORSAR Subarra**	**64.08**	**343**	P	**P**	**16 42 02.6**	**-3.6**
	comp=E,5.6nm,0.5s,mb4.7						
SDCO	**Great Sand Dun**	**64.10**	**61**	*e*P	**P**	**16 42 07.0**	**+0.3**
	comp=E,4.2nm,0.9s,mb4.3						
HFS	**Hagfors**	**64.20**	**342**	P	**P**	**16 42 05.3**	**-1.7**
	comp=E,12nm,0.4s,mb5.0,baz=45,slow=6.1,SNR=9.8						
HFS	**Hagfors**	**64.20**	**342**	P	**P**	**16 42 05.3**	**-1.7**
HFS				pmax	pmax		
	comp=Z,12nm,0.4s						
KSM	**Kuching**	**65.00**	**236**	*e*P	**P**	**16 42 13.5**	**+0.6**
ANMO	**Albuquerque**	**65.65**	**64**	*e*P	**P**	**16 42 17.2**	**+0.4**
	comp=Z,5.6nm,0.9s,mb4.4						
ANMO	**Albuquerque**	**65.65**	**64**	P	**P**	**16 42 17.4**	**+0.6**
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LAZ	**Ladron**	**65.69**	**65**	*e*P	**P**	**16 42 17.7**	**+0.6**
SCHQ	**Schefferville**	**66.38**	**27**	P	**P**	**16 42 19.6**	**-1.5**
	comp=Z,7.8nm,0.8s,mb4.6,baz=352,slow=7.9,SNR=7.7						
KULM	**Kulim**	**66.97**	**247**	*e*P	**P**	**16 42 25.9**	**+0.4**
SUW	**Suwalki**	**67.56**	**334**	*e*P	**P**	**16 42 27.2**	**-1.3**
GOF	**Gofitskoye**	**68.29**	**317**	*e*P	**P**	**16 42 30.1**	**-3.1**
CPRX	**Cap Rock**	**68.51**	**64**	*e*P	**P**	**16 42 34.7**	**-0.1**
AKASG	**Malin Array Be**	**68.67**	**328**	P	**P**	**16 42 33.2**	**-2.2**
	comp=Z,6.3nm,0.3s,mb4.9,baz=30,slow=6.1,SNR=70						
AKASG	**Malin Array Be**	**68.67**	**328**	P	**P**	**16 42 33.2**	**-2.3**
AKASG	**Malin Array Be**	**68.67**	**328**	P	**P**	**16 42 33.2**	**-2.3**
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MNTX	**Cornudas Mount**	**68.69**	**66**	*e*P	**P**	**16 42 35.9**	**0.0**
	comp=Z,8.5nm,1.0s,mb4.5						
GDL2	**Guadalupe Moun**	**68.87**	**65**	*e*P	**P**	**16 42 37.2**	**+0.2**
KAKA	**Kakadu**	**68.96**	**208**	*e*P	**P**	**16 42 55.6**	**+18**
	comp=Z,7.5nm,0.6s,mb4.7						
KIV	**Kislovodsk**	**69.33**	**316**	*e*P	**P**	**16 42 37.2**	**-2.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
KIV				MLR	MLR		
	comp=Z,100nm,19.0s						
WMOK	**Wichita Mounta**	**69.93**	**59**	*e*P	**P**	**16 42 42.4**	**-1.0**
	comp=Z,13nm,0.9s,mb4.8						
WMOK				*e*	pP	16 43 02.0	+0.4
WMOK	**Wichita Mounta**	**69.93**	**59**	P	**P**	**16 42 42.6**	**-0.8**
WMOK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
HYB	**Hyderabad**	**70.58**	**273**	*i* P	**P**	**16 42 46.0**	**-1.6**
HYB	**Hyderabad**	**70.58**	**273**	*e*P	**P**	**16 42 46.0**	**-1.6**
ANN	**Anapa**	**70.77**	**320**	*e*P	**P**	**16 42 53.1**	**+4.8**
ANN				pmax	pmax		
	comp=Z,77nm,1.2s,mb5.4						
SADO	**Sadowa**	**70.92**	**40**	LR	LR	17 16 46.4	
	comp=Z,53nm,21.4s,baz=76,slow=38						
CCM	**Cathedral Cave**	**71.11**	**52**	*e*P	**P**	**16 42 49.7**	**-0.8**
	comp=Z,6.7nm,0.9s,mb4.5						
CCM	**Cathedral Cave**	**71.11**	**52**	*e*P	**P**	**16 42 49.8**	**-0.7**
CCM				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
LTX	**Lajitas**	**71.44**	**66**	*e*P	**P**	**16 42 53.1**	**+0.5**
	comp=Z,13nm,0.7s,mb4.9						
LTX				*e*	pP	16 43 12.8	+2.0
LTX	**Lajitas**	**71.44**	**66**	P	**P**	**16 42 53.3**	**+0.6**
LTX				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
TXAR	**Lajitas Array**	**71.44**	**66**	P	**P**	**16 42 53.0**	**+0.3**
	comp=Z,8.1nm,0.5s,mb4.8,baz=298,slow=4.3,SNR=57						
TXAR				pP	pP	16 43 10.0	-0.9
	comp=Z,3.8nm,0.6s,baz=300,slow=4.1,SNR=8.6						
TXAR				LR	LR	17 10 57.8	
	comp=Z,58nm,20.4s,baz=120,slow=33						
TXAR	**Lajitas Array**	**71.44**	**66**	P	**P**	**16 42 53.0**	**+0.3**
TXAR				pP	pP	16 43 10.0	-0.9
TXAR				LR	LR	17 10 57.8	
TXAR	**Lajitas Array**	**71.44**	**66**	P	**P**	**16 42 53.0**	**+0.3**
TXAR				*PP	pP	16 43 10.0	-0.9
TXAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TXAR				MLR	MLR		
	comp=Z,58nm,20.4s						
KWP	**Kalwaria**	**71.60**	**332**	*e*P	**P**	**16 42 52.8**	**-0.4**
KWP	**Kalwaria**	**71.60**	**332**	*e*P	**P**	**16 42 52.8**	**-0.5**
OJC	**Ojcow**	**71.88**	**334**	*e*P	**P**	**16 42 54.2**	**-0.7**
STHS	**Stebnicka Huta**	**72.21**	**333**	*i* P	**P**	**16 42 56.9**	**0.0**
KSP	**Ksiaz**	**72.22**	**336**	*e*P	**P**	**16 42 56.3**	**-0.6**
KSP	**Ksiaz**	**72.22**	**336**	*e*P	**P**	**16 42 56.2**	**-0.7**
KOLS	**Kolonicke sedl**	**72.36**	**332**	*i* P	**P**	**16 42 56.9**	**-0.8**
WIT	**Witteveen**	**72.42**	**343**	*e*P	**P**	**16 42 59.0**	**+0.9**
NIE	**Niedzica**	**72.47**	**333**	*e*P	**P**	**16 42 58.6**	**+0.2**
CLL	**Collm**	**72.56**	**338**	⇓P	**P**	**16 42 58.1**	**-0.7**
	comp=Z,logA/T=1.7,mb5.3						
CLL	**Collm**	**72.56**	**338**	⇓*i*P	**P**	**16 42 58.1**	**-0.7**
	comp=Z,51nm,1.0s,mb5.3						
CLL	**Collm**	**72.56**	**338**	⇓*i*P	**P**	**16 42 58.1**	**-0.7**
CLL				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.3						
UPC	**Upice**	**72.59**	**336**	*e*P	**P**	**16 42 58.5**	**-0.5**
CRVS	**Cervenica-Dubn**	**72.62**	**332**	*e*P	**P**	**16 42 58.5**	**-0.6**
CLZ	**Clausthal**	**72.62**	**340**	*e*P	**P**	**16 42 59.6**	**+0.5**
	comp=Z,76nm,0.9s,mb5.5						
CLZ	**Clausthal**	**72.62**	**340**	*e*P	**P**	**16 42 59.6**	**+0.5**
CLZ				pmax	pmax		
	comp=Z,76nm,0.9s,mb5.5						
BURAR	**Bucovina Array**	**72.65**	**329**	⇓P	**P**	**16 42 58.5**	**-0.9**
BURAR	**Bucovina Array**	**72.65**	**329**	⇓P	**P**	**16 42 58.5**	**-0.8**
DPC	**Dobruska-Polom**	**72.66**	**336**	*e*P	**P**	**16 42 59.3**	**-0.1**
DPC				AMS	AMS	17 14 00.0	
OKC	**Ostrava-Krasne**	**72.67**	**335**	*e*P	**P**	**16 42 59.1**	**-0.3**
MORC	**Moravsky Berou**	**72.88**	**335**	*e*P	**P**	**16 42 59.9**	**-0.7**
	comp=Z,11nm,0.8s,mb4.7						
MORC	**Moravsky Berou**	**72.88**	**335**	P	**P**	**16 43 00.2**	**-0.5**
MORC				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
PVCC	**Panska Ves**	**72.92**	**337**	*e*P	**P**	**16 43 00.5**	**-0.4**
WTSB	**Winterswijk**	**73.20**	**342**	⇓*e*P	**P**	**16 43 02.5**	**0.0**
	comp=Z,87nm,0.6s,mb5.8						
CTA	**Charters Tower**	**73.24**	**192**	*e*P	**P**	**16 43 03.3**	**-0.1**
	comp=Z,8.2nm,0.8s,mb4.6						
CTAO	**Charters Tower**	**73.24**	**192**	*e*P	**P**	**16 43 03.2**	**-0.1**
KECS	**Kecovo**	**73.27**	**333**	*i* P	**P**	**16 43 02.5**	**-0.5**
PRU	**Pruhonice**	**73.43**	**337**	*e*P	**P**	**16 43 03.8**	**-0.1**
PRU				AMS	AMS	17 15 10.0	
MOX	**Moxa**	**73.49**	**339**	*i* P	**P**	**16 43 04.0**	**-0.2**
	comp=Z,logA/T=1.4,mb5.0						
MOX	**Moxa**	**73.49**	**339**	*e*P	**P**	**16 43 04.0**	**-0.2**
	comp=Z,36nm,1.3s,mb5.0						
MOX	**Moxa**	**73.49**	**339**	*e*P	**P**	**16 43 04.0**	**-0.2**
MOX				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.0						
VRAC	**Vranov**	**73.56**	**335**	P	**P**	**16 43 04.3**	**-0.3**
	comp=Z,11nm,0.7s,mb4.7,baz=11,slow=4.9,SNR=12						
VRAC	**Vranov**	**73.56**	**335**	P	**P**	**16 43 04.3**	**-0.3**
VRAC				pmax	pmax		
	comp=Z,11nm,0.7s						
NKC	**Novy Kostel**	**73.69**	**338**	*e*P	**P**	**16 43 05.3**	**-0.1**
NKC				AMS	AMS	17 15 40.0	
VRI	**Vrincioaia**	**73.71**	**327**	⇓P	**P**	**16 43 05.0**	**-0.6**
VRI	**Vrincioaia**	**73.71**	**327**	⇓P	**P**	**16 43 05.0**	**-0.6**
VYHS	**Vyhne**	**73.72**	**334**	*e*P	**P**	**16 43 05.0**	**-0.6**
DLF	**Lyons Farm**	**73.77**	**351**	*e*P	**P**	**16 43 05.0**	**-0.8**
DCN	**Croghan**	**73.79**	**351**	*e*P	**P**	**16 43 06.0**	**+0.1**
TREC	**Trest**	**73.85**	**336**	*e*P	**P**	**16 43 06.2**	**-0.1**
TREC				AMS	AMS	17 13 30.0	
CFR	**Carcaliu**	**73.85**	**326**	⇑P	**P**	**16 43 04.4**	**-2.0**
CFR	**Carcaliu**	**73.85**	**326**	⇑P	**P**	**16 43 04.5**	**-2.0**
SMOL	**Smolenice**	**74.07**	**335**	*e*P	**P**	**16 43 07.9**	**+0.2**
MLR	**Muntele Rosu**	**74.30**	**328**	P	**P**	**16 43 09.0**	**-0.1**
	comp=Z,19nm,0.6s,mb5.0,baz=327,slow=0.1,SNR=50						
MLR	**Muntele Rosu**	**74.30**	**328**	P	**P**	**16 43 09.0**	**-0.1**
MLR				pmax	pmax		
	comp=Z,19nm,0.6s						
TIRR	**Tirgusor**	**74.38**	**326**	*e*P	**P**	**16 43 08.9**	**-0.7**
TIRR	**Tirgusor**	**74.38**	**326**	P	**P**	**16 43 09.0**	**-0.6**
ISR	**Istrita**	**74.43**	**327**	⇓P	**P**	**16 43 09.2**	**-0.6**
ISR	**Istrita**	**74.43**	**327**	⇓P	**P**	**16 43 09.2**	**-0.6**
ZST	**Bratislava**	**74.45**	**335**	*e*P	**P**	**16 43 10.5**	**+0.6**
KHC	**Kasperske Hory**	**74.46**	**337**	*e*P	**P**	**16 43 09.9**	**0.0**
KHC				AMS	AMS	17 12 40.0	
GRA1	**Grafenberg Arr**	**74.47**	**339**	*e*P	**P**	**16 43 10.5**	**+0.5**
	comp=Z,63nm,1.0s,mb5.3						
GRA1				LR	LR		
	comp=Z,200nm,20.9s						
GRF	**Grafenberg Arr**	**74.47**	**339**	*e*P	**P**	**16 43 10.5**	**+0.5**
	comp=Z,63nm,1.0s,mb5.3						
GRF				LR	LR		
	comp=Z,200nm,20.9s						
GRF	**Grafenberg Arr**	**74.47**	**339**	*e*P	**P**	**16 43 10.5**	**+0.5**
GRF				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.3						
GRF				MLR	MLR		
	comp=Z,200nm,20.9s						
HGN	**Heimansgroeve**	**74.51**	**343**	*e*P	**P**	**16 43 10.1**	**-0.1**
	comp=Z,93nm,1.4s,mb5.3						
HGN				*e*x	x	16 43 21.7	
TNS	**Taunus Mts**	**74.55**	**341**	*e*P	**P**	**16 43 10.6**	**+0.2**
	comp=Z,35nm,0.8s,mb5.1						
TNS	**Taunus Mts**	**74.55**	**341**	*e*P	**P**	**16 43 10.6**	**+0.2**
TNS				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.1						
WET	**Wettzell**	**74.61**	**338**	*e*P	**P**	**16 43 11.2**	**+0.4**
	comp=Z,32nm,1.0s,mb5.0						
WET	**Wettzell**	**74.61**	**338**	*e*P	**P**	**16 43 11.2**	**+0.4**
WET				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.0						
VOIR		**74.64**	**328**	⇑P	**P**	**16 43 11.0**	**0.0**
VOIR		**74.64**	**328**	⇑P	**P**	**16 43 11.0**	**0.0**
GEC2	**GERESS Array S**	**74.70**	**337**	*e*P	**P**	**16 43 11.1**	**-0.2**
	comp=Z,12nm,0.8s,mb4.7						
GEC2	**GERESS Array S**	**74.70**	**337**	*e*P	**P**	**16 43 11.1**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
GERES	**GERESS Array B**	**74.70**	**337**	P	**P**	**16 43 10.6**	**-0.7**
	comp=Z,9.2nm,0.8s,mb4.6,baz=34,slow=4.8,SNR=51						
GERES				LR	LR	17 17 18.5	
	comp=Z,281nm,20.9s,baz=35,slow=37						
GERES	**GERESS Array B**	**74.70**	**337**	P	**P**	**16 43 10.6**	**-0.7**
GERES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GERES				MLR	MLR		
	comp=Z,281nm,20.9s						
ABH	**Alteburg**	**75.05**	**341**	⇓*e*P	**P**	**16 43 13.2**	**-0.1**
ABH	**Alteburg**	**75.05**	**341**	*e*P	**P**	**16 43 13.0**	**-0.3**
TOD	**Tromm**	**75.06**	**340**	*e*P	**P**	**16 43 13.4**	**+0.1**
TOD	**Tromm**	**75.06**	**340**	*e*P	**P**	**16 43 13.0**	**-0.3**
SIND	**Sindeldorf**	**75.14**	**340**	⇓*e*P	**P**	**16 43 13.6**	**-0.2**
SWS	**Schriesheim**	**75.20**	**340**	⇓*e*P	**P**	**16 43 14.0**	**-0.1**
GIVF	**Givet**	**75.35**	**343**	*e*P	**P**	**16 43 14.5**	**-0.4**
	comp=Z,113nm,1.2s,mb5.2						
WRAB	**Tennant Creek**	**75.36**	**204**	*e*P	**P**	**16 43 15.8**	**+0.2**
	comp=Z,23nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	**75.36**	**204**	P	**P**	**16 43 16.0**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
WB2	**Warramunga Arr**	**75.36**	**204**	⇑*i*P	**P**	**16 43 16.0**	**+0.3**
WRA	**Warramunga Arr**	**75.37**	**204**	P	**P**	**16 43 16.0**	**+0.3**
	comp=Z,14nm,0.7s,mb4.8,baz=19,slow=6.1,SNR=95						
WRA	**Warramunga Arr**	**75.37**	**204**	P	**P**	**16 43 16.0**	**+0.3**
WRA				pmax	pmax		
	comp=Z,14nm,0.7s						
MOA	**Molln**	**75.49**	**336**	*i* P	**P**	**16 43 15.8**	**0.0**
	comp=Z,12nm,0.7s,mb4.7,SNR=7.3						
BAIF	**Baives**	**75.50**	**344**	⇓*i*P	**P**	**16 43 15.5**	**-0.3**
	comp=Z,83nm,1.0s,mb5.1						
ARSA	**Arzberg**	**75.73**	**335**	⇑*i*P	**P**	**16 43 17.3**	**+0.1**
	comp=Z,7.0nm,0.6s,mb4.6,SNR=7.5						
HDH	**Heidenheim**	**75.74**	**339**	*e*P	**P**	**16 43 17.0**	**-0.2**
LANF	**Langenberg**	**75.86**	**341**	*e*P	**P**	**16 43 18.2**	**+0.3**
FUR	**Furstenfeldbru**	**75.90**	**338**	*e*P	**P**	**16 43 18.2**	**+0.1**
	comp=Z,50nm,1.2s,mb5.1						
FUR	**Furstenfeldbru**	**75.90**	**338**	*e*P	**P**	**16 43 18.2**	**+0.1**
FUR				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.1						
LBG	**Lerchenberg**	**75.96**	**340**	⇓*e*P	**P**	**16 43 18.3**	**-0.2**
BUCH	**Bad Urach**	**76.05**	**340**	⇓*e*P	**P**	**16 43 19.3**	**+0.3**
RHK1	**Bakonya**	**76.12**	**333**	⇑*e*P	**P**	**16 43 18.9**	**-0.6**
FITZ	**Fitzroy Crossi**	**76.13**	**213**	⇑*i*P	**P**	**16 43 21.2**	**+1.1**
	comp=Z,14nm,0.5s,mb4.9						
CPCT	**Cooper Cave**	**76.37**	**49**	*e*P	**P**	**16 43 20.6**	**-0.5**
CPCT				*e*	pP	16 43 39.3	-0.2
BFO	**Black Forest**	**76.37**	**340**	*e*P	**P**	**16 43 20.8**	**0.0**
	comp=Z,22nm,0.7s,mb5.0						
BFO	**Black Forest**	**76.37**	**340**	*e*P	**P**	**16 43 20.8**	**0.0**
BFO				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.0						
PERS	**Pernice**	**76.41**	**335**	*e*P	**P**	**16 43 21.2**	**+0.1**
KBA	**Koelnbreinsper**	**76.44**	**337**	*i* P	**P**	**16 43 22.1**	**+0.9**
	comp=Z,137nm,0.7s,mb5.8,SNR=47						
GUT	**Gutenstein**	**76.46**	**340**	⇓*e*P	**P**	**16 43 21.3**	**0.0**
WLS	**Welschbruch**	**76.49**	**341**	*e*P	**P**	**16 43 21.2**	**-0.3**
SPAK	**Spaichingen**	**76.50**	**340**	*e*P	**P**	**16 43 21.6**	**+0.1**
CDF	**Champ du Feu**	**76.51**	**341**	⇓*i*P	**P**	**16 43 21.3**	**-0.3**
	comp=Z,108nm,0.8s,mb5.3						
BRTR	**Keskin Array B**	**76.56**	**320**	P	**P**	**16 43 21.8**	**-0.3**
	comp=Z,7.0nm,0.6s,mb4.6,baz=53,slow=3.0,SNR=46						
BRTR	**Keskin Array B**	**76.56**	**320**	P	**P**	**16 43 21.8**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WATA	**Walderalm**	**76.61**	**338**	⇑*i*P	**P**	**16 43 22.4**	**+0.2**
	comp=Z,8.8nm,0.5s,mb4.8						
UBR	**Uberruh**	**76.61**	**339**	⇓*e*P	**P**	**16 43 22.2**	**0.0**
WTTA	**Wattenberg**	**76.66**	**338**	*i* P	**P**	**16 43 23.2**	**+0.7**
	SNR=14						
OBKA	**Obir**	**76.67**	**336**	⇑*i*P	**P**	**16 43 22.8**	**+0.2**
	comp=Z,30nm,0.9s,mb5.0,SNR=9.3						
LIBD	**Limburg**	**76.69**	**341**	⇓*e*P	**P**	**16 43 23.0**	**+0.4**
LIBD	**Limburg**	**76.69**	**341**	*e*P	**P**	**16 43 22.7**	**+0.1**
MOTA	**Moosalm**	**76.71**	**338**	⇑*i*P	**P**	**16 43 22.7**	**0.0**
	comp=Z,22nm,0.6s,mb5.0,SNR=16						

ECH	Echery	76.72	341	eP	P	16 43 22.7	-0.1
SQTA	Sankt Quirin	76.80	338	⇑iP	P	16 43 23.7	+0.5
	comp=Z,22nm,0.7s,mb5.0,SNR=9.8						
KIZ	Kirchzarten	76.81	340	⇓eP	P	16 43 23.0	-0.3
MEZF	Maizieres J'vi	76.85	343	⇓iP	P	16 43 23.4	-0.1
	comp=Z,97nm,0.7s,mb5.3						
FELD	Feldberg	76.87	340	eP	P	16 43 23.5	-0.2
THEF	They Montfort	76.94	342	eP	P	16 43 24.1	+0.1
FVI	Forni Avoltri	77.02	337	P	P	16 43 24.2	-0.3
DAVA	Damuels	77.04	339	⇑iP	P	16 43 25.2	+0.6
	comp=Z,42nm,1.2s,mb5.0						
BANOM	Banah	77.06	296	⇑P	P	16 43 24.4	-0.7
PTCC	Patocco-Chiusa	77.06	336	P	P	16 43 24.2	-0.5
CRES	Cresnjev	77.07	335	eP	P	16 43 24.4	-0.4
MOF	Molkenrain	77.07	341	eP	P	16 43 24.8	0.0
HAU	Haudompre	77.08	342	⇓iP	P	16 43 24.4	-0.4
HAU				eR			
	comp=Z,166nm,19.2s						
LJU	Ljubljana	77.11	335	eP	P	16 43 24.0	-1.0
HINF	Hinteralfeld	77.16	341	⇓iP	P	16 43 24.6	-0.7
	comp=Z,40nm,0.7s,mb5.0						
BRES	Bressanone	77.17	338	P	P	16 43 25.9	+0.5
	comp=Z,79nm,0.8s,mb5.5						
GMNA	Gemona	77.21	336	P	P	16 43 24.9	-0.7
VISS	Visnje	77.25	335	eP	P	16 43 25.2	-0.6
BBS	Basel-Blauen	77.37	341	⇓eP	P	16 43 26.5	+0.1
GRUS	Gruza	77.38	330	iP	P	16 43 25.6	-1.0
DIVS	Divcibare	77.40	331	⇑iP	P	16 43 25.8	-0.9
APPI	Appiano	77.50	338	P	P	16 43 26.9	-0.2
	comp=Z,33nm,0.6s,mb5.2						
FLN	La Foliniere	77.50	346	⇓iP	P	16 43 26.5	-0.6
	comp=Z,31nm,0.7s,mb4.9						
FLN				eR			
	comp=Z,121nm,21.0s						
DAVOX	Davos	77.52	339	P	P	16 43 27.7	+0.5
	comp=Z,32nm,0.6s,mb5.2,baz=2.4,slow=3.0,SNR=48						
LDF	La Druitiere	77.61	346	eP	P	16 43 27.1	-0.6
BRMO	Bormio	77.69	338	P	P	16 43 29.1	+0.9
VTS	Vitosha	77.78	328	iP	P	16 43 28.0	-0.8
CTI	Castel Tesino	77.81	337	P	P	16 43 28.6	-0.2
	comp=Z,31nm,0.5s,mb5.3						
GRR	Gorron	77.92	346	⇓iP	P	16 43 29.0	-0.4
TUE	Stuetta	77.93	339	P	P	16 43 30.4	+0.9
	comp=Z,27nm,0.6s,mb5.2						
BIDO	Bidbid	77.93	293	⇑P	P	16 43 30.2	+0.2
NVSS	Nova Varos 2	78.03	331	⇑iP	P	16 43 33.1	+3.0
MABI	Malga Bissina	78.06	338	P	P	16 43 30.6	+0.4
	comp=Z,21nm,0.6s,mb5.0						
RZN	Rozhen	78.09	327	iP	P	16 43 29.5	-1.0
ASHO	Ashiyiah	78.17	295	⇑P	P	16 43 31.4	+0.1
WBK	Wadi Bani Khal	78.17	292	⇓P	P	16 43 30.5	-0.8
LOR	Lormes	78.25	343	⇓iP	P	16 43 31.0	-0.3
	comp=Z,159nm,1.1s,mb5.4						
LOR				eR			
	comp=Z,184nm,19.8s						
PLE	Pljevlja	78.28	331	⇑iP	P	16 43 30.4	-1.1
SGMF	Saint Gilles	78.29	348	⇓iP	P	16 43 31.1	-0.3
	comp=Z,32nm,0.7s,mb4.9						
ROSF	Rostrenen	78.30	348	eP	P	16 43 31.2	-0.3
	comp=Z,39nm,0.8s,mb4.9						
SMDO	Samad	78.34	293	⇑P	P	16 43 32.4	+0.2
HOQ	Hoqain	78.34	293	⇑P	P	16 43 31.9	-0.4
CABF	La Chapelle	78.47	341	⇓iP	P	16 43 32.5	0.0
	comp=Z,103nm,0.9s,mb5.3						
KKB	Krupnik	78.47	328	iP	P	16 43 32.0	-0.6
MMB	Musomiste	78.51	327	iP	P	16 43 32.5	-0.3
SSF	Saint Saulge	78.51	343	eP	P	16 43 32.5	-0.2
	comp=Z,65nm,0.8s,mb5.2						
MUGIO	Muggio	78.52	339	P	P	16 43 32.6	-0.1
UPM	Unac-Piva	78.54	331	eP	P	16 43 31.8	-1.1
IVA	Berane	78.55	331	⇑iP	P	16 43 32.5	-0.5
OG01	Vacheresse	78.62	341	eP	P	16 43 33.5	+0.2
MMK	Mattmark	78.62	340	P	P	16 43 34.3	+1.0
VAI	Varese	78.63	339	P	P	16 43 33.4	0.0
	comp=Z,70nm,1.0s,mb5.5						
MIB	Mutribah	78.67	305	eP	P	16 43 33.0	-1.0
MIB				AMb	AMB	16 43 34.0	
	comp=Z,51nm,0.6s,mb5.6						
UMR	Umm Al-Rimmam	78.69	304	eP	P	16 43 33.1	-1.0
UMR				AMb	AMB	16 43 34.0	
	comp=Z,30nm,0.5s,mb5.4						
MCGN	Macugnaga	78.71	340	P	P	16 43 34.7	+0.9
DIX	Grande Dixence	78.71	340	P	P	16 43 34.9	+1.1
PVY	Plav	78.78	330	⇑iP	P	16 43 32.8	-1.5
AVF	Avril sur Loir	78.80	343	⇓iP	P	16 43 34.2	-0.1
	comp=Z,114nm,0.9s,mb5.4						
JMDO	Jabal Madar	78.85	292	⇓P	P	16 43 34.2	-0.9
	SNR=19						
SMF	Signal de Mont	78.86	343	⇓iP	P	16 43 34.5	-0.1
	comp=Z,126nm,1.1s,mb5.3						
NKY	Niksic	78.87	331	⇑iP	P	16 43 32.5	-2.2
SKO	Skopje	78.90	329	⇓iP	P	16 43 35.0	+0.1
SKO	Skopje	78.90	329	⇓iP	P	16 43 35.0	+0.1
ARQ	Araqi	78.98	294	⇓P	P	16 43 34.7	-1.1
ORX	Oropa	79.02	340	P	P	16 43 34.9	-0.6
ORO	Oropa	79.02	340	P	P	16 43 35.9	+0.4
ASPA	Alice Springs	79.05	203	⇑iP	P	16 43 37.2	+1.1
BSY	Bisya	79.07	293	⇓P	P	16 43 35.2	-1.0
	SNR=19						
BGF	Bois d'Agland	79.12	343	⇓iP	P	16 43 35.9	-0.1
	comp=Z,126nm,1.3s,mb5.3						
VAY	Valandovo	79.13	328	⇓iP	P	16 43 35.4	-0.8
VAY	Valandovo	79.13	328	⇓iP	P	16 43 35.4	-0.8
TTG	Podgorica	79.14	331	eP	P	16 43 35.1	-1.2
NAY	Al-Naaiem	79.17	304	eP	P	16 43 34.9	-1.8
NAY				AMb	AMB	16 43 36.7	
	comp=Z,17nm,0.5s,mb5.1						
TRAV		79.18	340	P	P	16 43 37.0	+0.6
QRN	Al-Qurain	79.24	303	eP	P	16 43 36.4	-0.7
RSL	Roselend	79.24	341	eP	P	16 43 37.3	+0.5
RDF	Al-Radifah	79.28	304	eP	P	16 43 36.4	-0.9
RDF				AMb	AMB	16 43 43.3	
	comp=Z,100nm,1.0s,mb5.6						
HCY	Herceg Novi	79.35	331	⇑iP	P	16 43 36.0	-1.4
LSD	Ceresole Reale	79.36	340	P	P	16 43 38.5	+1.1
BUM	Brajici-Budva	79.37	331	⇑iP	P	16 43 36.7	-0.8
LPL	La Plagne	79.39	341	⇓iP	P	16 43 38.4	+0.9
	comp=Z,125nm,0.8s,mb5.5						
LPG	La Plagne	79.40	341	⇓iP	P	16 43 38.6	+1.0
	comp=Z,137nm,0.8s,mb5.5						
TCF	Toulx Ste Croi	79.49	344	⇓iP	P	16 43 38.2	+0.2
	comp=Z,111nm,1.2s,mb5.3						
BOB	Bobbio (Coli)	79.52	338	P	P	16 43 39.1	+0.8
	comp=Z,33nm,0.6s,mb5.3						
PLDF	La Plantade	79.55	343	eP	P	16 43 39.4	+1.0
AGO	Saint Agoulin	79.56	343	eP	P	16 43 39.1	+0.7
MFF	Saint Martin d	79.56	346	⇓iP	P	16 43 38.4	0.0
	comp=Z,26nm,0.8s,mb4.8						
ZCCA	Zocca	79.56	337	P	P	16 43 40.3	+1.8
ULC	Ulcinj	79.57	331	eP	P	16 43 37.2	-1.4
RSP	Reno Superiore	79.63	340	P	P	16 43 38.3	-0.5
GRAM		79.64	338	P	P	16 43 38.6	-0.3
GSCL	Gusciola	79.66	338	P	P	16 43 40.2	+1.2
VALM		79.74	338	P	P	16 43 39.1	-0.4
FSSB	Fossombrone	79.75	336	P	P	16 43 40.1	+0.6
SEI	Scarperia	79.75	337	P	P	16 43 41.2	+1.7
SFI	Santa Sofia	79.78	337	P	P	16 43 40.8	+1.1
	comp=Z,41nm,1.0s,mb5.2						
FENE	Fenestrelle	79.78	340	P	P	16 43 39.9	+0.2
CODM		79.79	338	P	P	16 43 39.5	-0.2
VMG	Vicchio	79.80	337	P	P	16 43 41.3	+1.5
GDM	Grand'Maison	79.81	341	eP	P	16 43 41.2	+1.4
PGD	Poggio Sodo	79.84	337	P	P	16 43 41.4	+1.4
	comp=Z,59nm,0.6s,mb5.6						
BNI	Bardonecchia	79.84	340	eP	P	16 43 40.8	+0.8
	comp=Z,18nm,0.7s,mb5.0						
BNI	Bardonecchia	79.84	340	P	P	16 43 41.0	+1.0
BNI				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.0						
BACM		79.84	338	P	P	16 43 39.8	-0.2
GRN	Grenoble	79.85	341	eP	P	16 43 41.4	+1.4
SARO	Sassorosso	79.86	338	P	P	16 43 40.5	+0.4
PYM	Petit Puy Mans	79.87	343	eP	P	16 43 41.5	+1.4
OHR	Ohrid	79.88	329	⇓iP	P	16 43 39.9	-0.4
VLC	Villacollemand	79.88	338	eP	P	16 43 40.6	+0.4
	comp=Z,47nm,0.6s,mb5.5						
ARV	Arcevia	79.89	336	P	P	16 43 40.8	+0.5
BHB	Bricherasio	79.92	340	P	P	16 43 39.8	-0.6
BDI	Bagni Di Lucca	79.93	337	P	P	16 43 41.8	+1.3
	comp=Z,70nm,0.6s,mb5.7						
PCP	Pian Castagno	79.94	339	P	P	16 43 40.2	-0.3
RRL	Cesana Torines	79.95	340	P	P	16 43 41.3	+0.8
VINC	Vinca	79.95	338	P	P	16 43 39.5	-1.1
COLF	Collangettes	79.97	343	eP	P	16 43 41.4	+0.7
OG22	Abries	80.01	340	eP	P	16 43 42.8	+1.9
SNTG	Esanatoglia	80.12	336	P	P	16 43 41.9	+0.4
ORIF	Oris-en-Rattie	80.13	341	⇓iP	P	16 43 42.3	+0.8
	comp=Z,89nm,0.8s,mb5.3						
ORIF				eR			
	comp=Z,116nm,19.8s						
MBDF	Montbardon	80.14	340	⇓iP	P	16 43 41.8	+0.2
	comp=Z,29nm,0.6s,mb5.0						
MURB	Monte Urbino	80.21	336	P	P	16 43 43.6	+1.6
	comp=Z,74nm,0.6s,mb5.7						
DOI	San Damiano	80.25	340	P	P	16 43 41.5	-0.7
	comp=Z,26nm,0.5s,mb5.3						
ROB	Roburent	80.32	339	P	P	16 43 42.0	-0.5
CSNT	Castellina Chi	80.32	337	P	P	16 43 42.6	0.0
FIN	Finale Ligure	80.33	339	P	P	16 43 42.2	-0.4
LBL	Lubilhac	80.33	343	eP	P	16 43 43.1	+0.5
VIVF	Saint-Julien-l	80.43	342	⇓iP	P	16 43 43.6	+0.5
	comp=Z,133nm,0.9s,mb5.5						
RORO		80.45	339	P	P	16 43 42.0	-1.2
NRCA	Norcia	80.47	335	P	P	16 43 44.2	+0.8
ENR	Entracque	80.48	340	P	P	16 43 41.8	-1.6
STV2	Anna di Valdie	80.48	340	P	P	16 43 41.4	-2.0
STV	Sta Anna Valdi	80.48	340	P	P	16 43 41.9	-1.5
TERO	Teramo	80.54	335	P	P	16 43 44.1	+0.3
	comp=Z,38nm,0.6s,mb5.4						
MONE	Monesi	80.55	339	P	P	16 43 42.9	-0.9
RJF	Les Rejaudoux	80.56	344	eP	P	16 43 44.1	+0.3
	comp=Z,145nm,1.2s,mb5.4						
RJF				eR			
	comp=Z,207nm,20.0s						
OG25	Le Caire	80.62	341	eP	P	16 43 44.9	+0.8
SAOF	Saorge	80.68	340	eP	P	16 43 44.4	-0.1
IMI	Imperia	80.68	339	P	P	16 43 44.5	0.0
AUTN	L'Aution	80.70	340	eP	P	16 43 45.1	+0.5
GRFL	Gerfalco	80.70	337	P	P	16 43 44.7	+0.1
	comp=Z,39nm,1.2s,mb5.1						
TOUF	Mont Tournerai	80.72	340	eP	P	16 43 45.1	+0.4
NEGI	Negi	80.78	339	P	P	16 43 43.5	-1.5
CSS	Prodhromos	80.78	317	eP	P	16 43 44.3	-0.9
	comp=Z,21nm,0.6s,mb5.2						
SBF	Sospel	80.82	340	⇓iP	P	16 43 44.9	-0.3
	comp=Z,43nm,0.7s,mb5.1						
CAF	Calviac	80.83	344	⇓iP	P	16 43 46.0	+0.7
	comp=Z,104nm,0.9s,mb5.3						
AQU	L'Aquila	80.84	335	P	P	16 43 46.2	+0.8
	comp=Z,48nm,0.6s,mb5.5						
AQU	L'Aquila	80.84	335	P	P	16 43 46.1	+0.7
AQU				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.5						
MVIF	Mont Vial	80.85	340	eP	P	16 43 45.7	+0.3
REVF	Revere	80.95	340	eP	P	16 43 46.3	+0.4
MNS	Montasola	81.00	335	P	P	16 43 45.9	-0.3
MBWA	Marble Bar	81.01	217	eP	P	16 43 46.3	-0.4
STOF	St-Etienne Org	81.01	341	eP	P	16 43 47.4	+1.2
LFF	La Frestale	81.04	345	eP	P	16 43 47.0	+0.6
	comp=Z,236nm,1.3s,mb5.6						
CALN	Calern	81.04	340	eP	P	16 43 47.0	+0.6
SMRF	Simiane la Rot	81.10	341	eP	P	16 43 47.5	+0.8
	comp=Z,37nm,0.8s,mb4.9						
CIGN	Sant'Elia a Pi	81.10	334	P	P	16 43 47.1	+0.4
	comp=Z,433nm,2.4s,mb5.9						
PTQR	Pietraquaria	81.16	335	P	P	16 43 47.5	+0.5
VILF	Villemus	81.19	341	eP	P	16 43 48.6	+1.4
CII	Carovilli	81.20	334	eP	P	16 43 47.4	+0.1
	comp=Z,22nm,0.9s,mb5.0						
HASS	Wahat al Ahsa'	81.20	300	P	P	16 43 46.3	-1.3
VVLD	Villa Vallelon	81.24	335	P	P	16 43 47.3	-0.2
	comp=Z,87nm,1.4s,mb5.4						
FRF	La Foret Royal	81.28	340	⇓iP	P	16 43 47.3	-0.3
	comp=Z,25nm,0.8s,mb4.8						
LASF	Ste Croix	81.33	342	⇓iP	P	16 43 48.7	+0.8
	comp=Z,92nm,1.2s,mb5.2						
PRAF	Pradon	81.34	341	eP	P	16 43 49.5	+1.5
TAVF	Tavernes	81.34	340	eP	P	16 43 48.8	+0.8
SGG	Gregorio Mates	81.49	334	P	P	16 43 49.2	+0.4
PUYF	Puyloubier	81.50	341	eP	P	16 43 49.8	+1.0
LMR	La Mourre	81.52	340	⇓iP	P	16 43 48.8	-0.1
RFI	Roccamonfina	81.68	334	P	P	16 43 51.1	+1.4
	comp=Z,11nm,1.0s,mb4.7						
GELF	Grande-Etoile	81.70	341	eP	P	16 43 51.2	+1.4
BERF	Bertagne	81.71	341	eP	P	16 43 50.9	+1.0
PGF	Pioggiola	81.73	338	⇓iP	P	16 43 50.3	+0.3
	comp=Z,41nm,0.8s,mb5.0						
CSSN	Cassano Irpino	81.81	333	P	P	16 43 50.1	-0.3
SGO	Sicignano	82.01	333	P	P	16 43 51.3	-0.2
	comp=Z,4.1nm,0.5s,mb4.5						
QURS	Qurayyt al Mil	82.13	313	P	P	16 43 53.1	+0.8
MGR	Morigerati	82.33	333	P	P	16 43 53.4	+0.3
	comp=Z,39nm,0.8s,mb5.3						
MTLF	Montolieu	82.34	343	⇓iP	P	16 43 53.8	+0.7
	comp=Z,93nm,1.1s,mb5.2						
TDS	Terranova Siba	82.55	332	P	P	16 43 54.6	+0.3
	comp=Z,43nm,0.6s,mb5.5						
PPT	Papeete	82.83	131	eLR	LR	17 09 13.2	
	comp=Z,566nm,29.0s,baz=329						
PPT	Papeete	82.83	131	LR	LR	17 15 18.2	
	comp=Z,112nm,19.8s,baz=317,slow=32						
TIP	Timpagrande	82.87	331	P	P	16 43 56.2	+0.3
	comp=Z,56nm,1.4s,mb5.2						
MLS	Moulis	82.91	344	eP	P	16 43 57.4	+1.4
EPF	Esparros	82.97	344	⇓iP	P	16 43 56.3	0.0
	comp=Z,80nm,1.1s,mb5.2						
EALK	Alkurruntz	83.07	346	P	P	16 43 57.4	+0.6
	comp=Z,92nm,1.1s,mb5.5						
EJON	La Jonquera	83.09	342	P	P	16 43 57.8	+0.9
	comp=Z,29nm,0.9s,mb5.1						
SJPF	Ste Jean	83.13	346	⇓iP	P	16 43 58.4	+1.3
	comp=Z,52nm,0.9s,mb5.1						
VIEF	Viey	83.16	345	eP	P	16 43 59.0	+1.7
RESF	Ens	83.18	344	eP	P	16 43 59.5	+2.1
ETSF	Etsaut	83.24	345	⇓iP	P	16 43 58.7	+1.0
	comp=Z,45nm,0.8s,mb5.1						
VALF	Valcebollere	83.29	343	eP	P	16 44 00.5	+2.5
GRI	Girifalco	83.30	331	P	P	16 43 53.5	-4.6
EBIE	Bielsa	83.33	344	P	P	16 43 59.5	+1.3
	comp=Z,62nm,1.0s,mb5.4						
HILS	Ha'il	83.41	307	P	P	16 43 58.6	-0.3
EARI	Arriondas	83.49	348	P	P	16 43 59.0	+0.1
	comp=Z,311nm,2.0s,mb5.8						
EPON	Pontenova	83.69	350	P	P	16 43 59.2	-0.7
	comp=Z,268nm,1.6s,mb5.8						
IDI	Anoyia	83.76	324	P	P	16 43 58.1	-2.3
	comp=Z,17nm,0.5s,mb5.1,baz=32,slow=10,SNR=22						
EGRA	Graus	83.78	344	P	P	16 44 02.3	+1.9
	comp=Z,27nm,0.8s,mb5.1						
ESAC	San Caprasio	84.37	345	P	P	16 44 04.6	+1.3
	comp=Z,32nm,0.8s,mb5.2						
EPOB	Poblet	84.47	343	P	P	16 44 06.3	+2.5
	comp=Z,9.8nm,0.8s,mb4.7						
MZLS	Mizel	84.49	303	P	P	16 44 04.2	-0.1
VSL	Villasalto	84.54	337	eP	P	16 44 04.6	+0.4
	comp=Z,33nm,1.0s,mb5.2						
ERUA	La Rua	84.61	350	P	P	16 44 04.6	+0.1
	comp=Z,3.8nm,0.3s,mb4.8						
WHFO	Wadi Hawf	84.84	293	⇑P	P	16 44 04.5	-1.6
	SNR=23						
ALWS	Ilw as Safayha	84.91	313	P	P	16 44 06.7	+0.4
RBK	Rabkut	84.93	292	⇓P	P	16 44 04.5	-2.1
JMOS	Jabal al Moall	85.01	313	P	P	16 44 07.1	+0.3
ERC	Erice	85.11	334	P	P	16 44 08.3	+1.2
	comp=Z,721nm,0.8s						
PBRG	Braganca	85.15	349	eP	P	16 44 08.6	+1.4
	comp=Z,38nm,2.2s,mb4.9						
PBRG				epP	pP	16 44 26.4	+0.5
TBKS	Tabuk	85.17	312	P	P	16 44 07.9	+0.3
HAQS	Haql	85.19	313	P	P	16 44 07.7	0.0
STKA	Stephens Creek	85.50	195	eP	P	16 44 10.1	+0.9
	comp=Z,4.1nm,0.8s,mb4.4						
STKA	Stephens Creek	85.50	195	P	P	16 44 09.8	+0.7
	comp=Z,4.9nm,0.8s,mb4.5,baz=345,slow=4.9,SNR=9.0						
STKA				LR	LR	17 21 50.2	
	comp=Z,163nm,18.1s,baz=203,slow=35						
ABTO	Aybut	85.56	293	⇑P	P	16 44 09.1	-0.6
BDAS	Al Bad'	85.64	313	P	P	16 44 10.0	0.0
AFFS	'Afif	85.69	304	P	P	16 44 10.0	-0.2
PVRL	Vila Real	85.78	350	eP	P	16 44 11.3	+1.0
	comp=Z,21nm,0.7s,mb5.2						
PVRL				epP	pP	16 44 29.6	+0.6
KBRS	Khaybar	85.97	308	P	P	16 44 12.1	+0.5
PVIS	Viseu	86.35	350	eP	P	16 44 14.4	+1.3
	comp=Z,49nm,1.3s,mb5.3						
PVIS				epP	pP	16 44 32.2	+0.4
MTE	Manteigas	86.63	350	eP	P	16 44 16.0	+1.5
MTE				epP	pP	16 44 33.7	+0.5
ESDC	Sonseca Array	86.90	347	P	P	16 44 15.8	0.0
	comp=Z,4.8nm,0.7s,mb4.5,baz=5.3,slow=4.8,SNR=16						
ESDC				pP	pP	16 44 33.7	-0.9
	comp=Z,5.7nm,0.7s,baz=6.7,slow=5.0,SNR=5.3						
ESDC	Sonseca Array	86.90	347	P	P	16 44 15.3	-0.5
	comp=Z,8.3nm,0.7s,mb4.8						
FORT	Forrest	87.33	206	eP	P	16 44 19.4	+1.3
	comp=Z,20nm,0.6s,mb5.2						
EVIA	Vianos	87.70	346	P	P	16 44 19.0	-0.7
	comp=Z,3.4nm,0.4s,mb4.7						
KAMS	Al Khamasin	87.88	301	P	P	16 44 20.4	-0.6
TBI	Tubuai	87.93	134	eLR	LR	17 11 35.5	
	comp=Z,305nm,33.0s,baz=331						
EHUE	Huescar	88.53	346	P	P	16 44 23.9	+0.2
	comp=Z,8.6nm,0.9s,mb4.8						
TATS	Tathlith	89.09	302	P	P	16 44 26.7	-0.1
BLJS	Baljurashi	89.78	303	P	P	16 44 30.1	+0.1
RKT	Rikitea	94.67	122	eLR	LR	17 14 41.2	
	comp=Z,320nm,31.0s						
DBIC	Dimbokro	119.36	342	PKP	PKPdf	16 50 20.7	+1.1
	comp=Z,6.9nm,0.5s,baz=345,slow=2.0,SNR=18						
DBIC	Dimbokro	119.36	342	PKIKP	PKPdf	16 50 20.7	+1.1
DBIC				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LIC	Lamto	119.83	342	ePKIKP	PKPdf	16 50 21.5	+1.0
QSPA	South Pole Qui	142.36	180	P	PKPdf	16 50 57.4	-3.4
PLCA	Paso Flores	144.67	91	PKP	PKPdf	16 51 06.8	+0.8
	comp=Z,7.8nm,0.7s,baz=291,slow=3.3,SNR=28						
PLCA	Paso Flores	144.67	91	PKP	PKPdf	16 51 06.8	+0.8
PLCA	Paso Flores	144.67	91	PKIKP	PKPdf	16 51 06.8	+0.8
PLCA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SYO	Syowa Base	147.91	216	⇓PKPdf	PKPdf	16 51 14.9	+4.4
SYO	Syowa Base	147.91	216	⇓PKPbc	PKPdf	16 51 16.1	+5.6
SYO	Syowa Base	147.91	216	⇓ePKPdf	PKPdf	16 51 14.9	+4.4
SYO				⇓ePKPbc	PKPdf	16 51 16.1	+5.6
TRQA	Tornquist	148.21	79	ePKPdf	PKPdf	16 51 16.6	+4.7
USHA	Ushuaia	152.27	114	PKPbc	PKPdf	16 51 25.1	+7.4
	comp=Z,3.6nm,0.8s,baz=324,slow=5.8,SNR=3.6						
SNAA	Sanae	159.26	196	⇑iP	PKPdf	16 52 06.1	+40
SNAA	Sanae	159.26	196	⇑i	PKPdf	16 52 08.6	+42
SNAA	Sanae	159.26	196	⇑i	PKPdf	16 52 12.1	+46
VNA2	Neumayer--Watz	160.62	193	⇑iP	PKPdf	16 52 13.1	+45
VNA2	Neumayer--Watz	160.62	193	⇑i	PKPdf	16 52 16.1	+48
VNA2	Neumayer--Watz	160.62	193	⇑i	PKPdf	16 52 19.3	+51
VNA3	Neumayer Olymp	160.63	191	⇑iP	PKPdf	16 52 12.3	+44
VNA3	Neumayer Olymp	160.63	191	⇑i	PKPdf	16 52 14.6	+47
VNA3	Neumayer Olymp	160.63	191	⇑i	PKPdf	16 52 18.3	+50
VNA1	Neumayer--Stat	161.00	193	⇑iP	PKPdf	16 52 10.1	+42

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*NNC **08** 16:35:13.2±3.8, 34.96N×72.51E, mpv3.8, Error ellipse: s-maj=272.3km s-min=41.7km az=80.0*

ISC 08 16:35:11.6±1.6**, 35.1N**±0.2×**73.9E**±0.4**, h33**^{km}**, n5,** σ**1**^{s}**93**/6**, 2D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDNR	Sundarnagar	4.40	144	eP	P	16 36 20.0	+2.2
KLP	Kalpa	5.07	133	eP	P	16 36 27.7	+0.4
KLP				eS	S	16 37 24.2	-1.3
KLP				AML	AML	16 37 59.3	
	comp=N,45nm,0.5s						
KLP				AML	AML	16 37 59.4	
	comp=E,41nm,0.6s						
KUDL	Kundal	7.26	162	ex	x	16 38 09.1	
KK31	Karatay Array	8.43	343	⇓P	P	16 37 14.5	+0.2
	comp=E,1.5nm,0.3s,baz=156,slow=11,SNR=71						
KK31				⇓S	S	16 38 49.9	+0.7
	comp=E,0.8nm,0.4s,baz=190,slow=27,SNR=6.1						
AB31	Akbulak array	17.50	328	P	P	16 39 12.1	-2.3
	comp=E,0.2nm,0.3s,baz=137,slow=14,SNR=7.3						

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*NEIC **08** 16:42:23.1, 15.69N×92.73W, h176^{km}, MD4.4(MEX), After MEX.*

MEX 08 16:42:23.1±0.9**, 15.69N×92.73W, h176**^{km}±13^{km}**, MD4.4, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	0.82	44	eP	P	16 42 47.7	-1.7
CCIG				iS	S	16 43 07.9	-1.8
SCX	San Cristobal	1.05	5	eP	P	16 42 49.0	-2.0
SCX				iS	S	16 43 12.0	-0.5
CMIG	Matias Romero	2.50	304	eP	P	16 43 03.9	-2.2
CMIG				iS	S	16 43 35.9	-3.3
TUIG	Tuzandepetl	2.85	325	iP	P	16 43 08.1	-2.2
TUIG				iS	S	16 43 44.1	-2.4
HUIG	Huatulco	3.26	272	eP	P	16 43 13.1	-2.3
HUIG				iS	S	16 43 52.4	-3.2
OXX	Oaxaca	4.08	290	iP	P	16 43 25.0	-0.9
OXX				iS	S	16 44 13.0	-1.3
VHO	Vista Hermosa	4.09	290	eP	P	16 43 25.5	-0.4
VHO				iS	S	16 44 11.9	-2.5
PNIG	Pinotepa	5.24	278	iP	P	16 43 39.5	-1.4
PNIG				iS	S	16 44 38.3	-2.9
PPM	Popocatepetl	6.56	302	eP	P	16 43 58.5	+0.2
PPM				iP		16 43 59.3	
PPM				iS	S	16 45 11.9	-0.5
YAIG	Yautepec	6.83	298	iP	P	16 44 01.8	-0.1
YAIG				iS	S	16 45 14.8	-3.9
ACX	Acapulco	7.01	281	eP	P	16 44 01.5	-2.6
PLIG	Platanillo	7.02	294	iP	P	16 44 04.4	+0.1
PLIG				iS	S	16 45 19.2	-4.0
CAIG	El Cayaco	7.37	282	iP	P	16 44 08.2	-0.7
CAIG				iS	S	16 45 27.3	-4.1
GDL2	Guadalupe Moun	19.56	329	eP	P	16 46 35.8	-3.5

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*ISK **08** 16:48:00.8, 38.40N×26.69E, h28^{km}, MD2.7*
*ATH **08** 16:48:00.8, 38.19N×26.64E, h36^{km}±2^{km}, MD3.1/3*
*CSEM **08** 16:48:01.6±0.1, 38.26N×26.74E, h20^{km}, MD2.7, Error ellipse: s-maj=3.3km s-min=2.6km az=113.0*

ISC 08 16:48:00.4±0.8**, 38.23N**±0.03×**26.59E**±0.05**, h2**^{km}±6^{km}**, n16,** σ**0**^{s}**93**/26**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.13	3	iP	Pg	16 48 02.9	-0.2
URLA				iS	Sg	16 48 05.5	+0.6
BLCB	Balcova	0.39	66	iPG	Pg	16 48 08.3	+0.1
BLCB				iSG	Sg	16 48 13.3	-0.2
SMG	Samos	0.55	159	⇑iPN	Pg	16 48 11.8	+0.3
SMG				eSN	Sg	16 48 20.2	+1.4
IZM	Izmir	0.56	72	iPG	Pg	16 48 11.1	-0.5
IZM				iSG	Sg	16 48 18.7	-0.3
KDAG	Bornova	0.56	72	iP	Pg	16 48 10.6	-1.0
KDAG				iS	Sg	16 48 18.8	-0.4
PRK	Paraskevi	1.05	347	ePN	Pn	16 48 21.2	-0.8
PRK				eSN	Sn	16 48 36.6	-0.8
AYVA	Ayvalik	1.08	4	iP	Pb	16 48 24.7	+3.1
AYVA				iS	Sb	16 48 38.7	+2.7
AYDN	Tasoluk	1.17	118	iP	Pb	16 48 24.4	+1.4
AYDN				iS	Sb	16 48 38.7	+0.2
BODT	Bodrum	1.30	153	ePN	Pn	16 48 24.4	-1.2
MLSB	Milas	1.32	134	ePN	Pn	16 48 25.2	-0.8
BDRM	Kayabasi	1.34	149	iP	Pb	16 48 26.0	0.0
BDRM				iS	Sb	16 48 44.0	+0.4
APE	Apeiranthos	1.43	216	ePN	Pn	16 48 28.1	+0.7
APE	Apeiranthos	1.43	216	ePN	Pn	16 48 26.1	-1.3
MANT	Manisa	1.57	80	iP	Pn	16 48 30.2	+0.7
MANT				iS	Sb	16 48 50.6	+0.4
DAT	Datca	1.69	152	ePN	Pn	16 48 31.3	+0.1
YER	Yerkesik	1.73	128	ePN	Pn	16 48 30.1	-1.7

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*BJI **08** 16:59:56.1, 18.70S×175.40W, h153^{km}, mB5.1, mb4.7*
*NEIC **08** 16:59:57.9±1.1, 18.72S×175.45W, h154^{km}±10^{km}, mb4.6/13, Error ellipse: s-maj=10.7km s-min=6.4km az=137.0*
*IDC **08** 16:59:57.9±2.6, 18.75S×175.44W, h154^{km}±23^{km}, mb4.0/11, mb1 4.2/12, mb1mx4.1/18, mbtmp4.5/12, Error ellipse: s-maj=30.8km s-min=12.4km az=142.0*

ISC 08 16:59:56.6±1.8**, 18.77S**±0.09×**175.47W**±0.09**, h154**^{km}±16^{km}**, n49,** σ**0**^{s}**77**/42**, mb4.3**/22**, 5C-2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.99	37	P	P	17 01 23.9	-0.2
	9.6nm,0.3s,baz=6.5,slow=4.1,SNR=14						
AFI				S	S	17 02 25.5	-6.6

	57nm,0.3s,baz=15,slow=23,SNR=13						
DZM	Mont Dzumac	17.27	256	*e*P	P	17 03 54.5	+4.7
DZM	Mont Dzumac	17.27	256	P	P	17 03 54.8	+4.9
	1.3nm,0.3s,baz=76,slow=18,SNR=19						
DZM	Mont Dzumac	17.27	256	*e*P	P	17 03 54.5	+4.6
NOUC	Port Laguerre	17.40	256	*e*P	P	17 03 54.7	+3.3
NOUC	Port Laguerre	17.40	256	*e*P	P	17 03 54.7	+3.3
URZ	Urewera	20.47	197	P	P	17 04 23.2	-0.7
	4.8nm,0.3s,baz=356,slow=9.1,SNR=9.7						
CTA	Charters Tower	36.07	261	*e*P	P	17 06 45.9	+0.6
	10nm,0.7s,mb4.6						
CTA	Charters Tower	36.07	261	P	P	17 06 45.6	+0.3
	14nm,0.8s,mb4.6,baz=94,slow=11,SNR=19						
CTAO	Charters Tower	36.07	261	*e*P	P	17 06 46.1	+0.8
	18nm,0.9s,mb4.7						
PMG	Port Moresby	37.35	279	*e*P	P	17 06 56.0	-0.1
	14nm,1.0s,mb4.5						
STKA	Stephens Creek	40.69	243	*e*P	P	17 07 24.9	+1.4
	2.1nm,0.6s,mb3.9						
STKA	Stephens Creek	40.69	243	P	P	17 07 24.1	+0.6
	3.1nm,0.6s,mb4.1,baz=90,slow=7.6,SNR=9.7						
WB2	Warramunga Arr	47.21	260	⇓*i*P	P	17 08 15.3	-0.7
WRAB	Tennant Creek	47.22	260	*e*P	P	17 08 15.4	-0.6
	19nm,0.4s,mb5.1						
WRA	Warramunga Arr	47.22	260	P	P	17 08 15.6	-0.5
	12nm,0.4s,mb4.9,baz=98,slow=5.8,SNR=459						
ASPA	Alice Springs	47.26	255	*e*P	P	17 08 16.2	-0.1
KAKA	Kakadu	50.36	269	*e*P	P	17 08 57.4	+17
	7.3nm,0.6s,mb4.5						
FITZ	Fitzroy Crossi	55.64	261	⇑*i*P	P	17 09 18.7	-0.5
	4.9nm,0.4s,mb4.7						
SBA	Scott Base	59.76	184	*e*P	P	17 09 47.3	+0.1
	1.3nm,0.6s,mb3.9						
VNDA	Vanda	59.85	186	*e*P	P	17 09 46.7	-1.1
	2.3nm,1.4s,mb3.8						
MBWA	Marble Bar	60.57	256	*e*P	P	17 09 52.0	-1.4
	5.1nm,0.8s,mb4.4						
MBWA				*e*		17 10 21.5	
QSPA	South Pole Qui	71.29	180	*e*P	P	17 11 00.7	0.0
	7.8nm,0.1s,mb5.4						
YBH	Yreka Blue Hor	77.46	38	P	P	17 11 36.8	+0.2
	2.9nm,0.7s,mb4.0,baz=259,slow=2.7,SNR=5.2						
NVAR	Mina Array Bea	78.14	42	P	P	17 11 40.3	-0.1
	3.2nm,0.7s,mb4.1,baz=223,slow=8.8,SNR=27						
HLID	Hailey	83.47	40	*e*P	P	17 12 08.4	+0.1
	5.6nm,1.2s,mb4.2						
SRU	San Rafael	83.61	45	*e*P	P	17 12 08.9	-0.2
	9.5nm,1.0s,mb4.5						
SRU				*e*		17 12 41.6	
MAW	Mawson	83.98	199	P	P	17 12 10.6	+0.3
	2.3nm,0.9s,mb3.9,baz=13,slow=4.7,SNR=4.2						
TXAR	Lajitas Array	84.12	57	P	P	17 12 12.8	+1.0
	2.0nm,0.8s,mb3.9,baz=225,slow=5.3,SNR=8.1						
ANMO	Albuquerque	84.47	50	P	P	17 12 13.9	+0.4
	3.3nm,0.8s,mb4.1,baz=231,slow=5.4,SNR=5.2						
CPRX	Cap Rock	85.55	53	*e*P	P	17 12 18.9	0.0
COLA	College	86.03	11	*e*P	P	17 12 19.9	-0.5
	10nm,1.1s,mb4.5						
PDAR	Pinedale Array	86.08	42	P	P	17 12 20.6	-0.7
	0.4nm,0.7s,mb3.3,baz=225,slow=4.2,SNR=3.8						
ILAR	Eielson Array	86.12	12	P	P	17 12 20.4	-0.6
	2.4nm,0.9s,mb3.9,baz=243,slow=5.5,SNR=13						
SNAA	Sanae	89.65	178		P	17 12 37.1	-0.5
VNA3	Neumayer Olymp	89.69	175	⇑*i*	P	17 12 38.1	+0.3
VNA3	Neumayer Olymp	89.69	175	⇑*i*	P	17 12 52.1	+14
HHC	Hu-ho-hao-te	89.87	314	*e*P	P	17 12 40.6	+1.3
HHC				PP	PP	17 16 14.9	-1.5
HHC				SKS	SKS	17 22 56.5	+3.0
HHC				S	S	17 23 20.5	+4.6
HHC				SS	SS	17 29 23.7	+2.7
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,140nm,7.2s						
HHC				LR	LR		
	comp=N,200nm,10.8s						
HHC				LR	LR		
	comp=E,150nm,10.8s						
HHC				LR	LR		
	comp=Z,120nm,14.4s						
VNA2	Neumayer--Watz	90.16	176	⇑*i*	P	17 12 40.7	+0.7
VNA2	Neumayer--Watz	90.16	176	⇑*i*	P	17 12 52.9	+13
VNA1	Neumayer--Stat	90.37	176		P	17 12 42.5	+1.5
BVAR	Borovoye Array	119.27	321	PKP	PKPdf	17 18 27.3	0.0
	comp=Z,1.4nm,0.5s,baz=92,slow=0.9,SNR=10						
ARCES	ARCESS Array B	127.63	351	PKP	PKPdf	17 18 43.2	+0.1
	comp=Z,2.6nm,0.8s,baz=31,slow=7.1,SNR=4.4						
AKASG	Malin Array Be	142.58	334	PKhKP		17 19 07.1	
	comp=Z,0.7nm,0.5s,baz=38,slow=3.9,SNR=4.4						
CLL	Collm	146.84	350	⇓*i*PKP1	PKPbc	17 19 21.7	+1.7
BRTR	Keskin Array B	147.35	316	PKPbc	PKPdf	17 19 23.6	+4.0
	comp=Z,2.3nm,0.6s,baz=127,slow=4.2,SNR=10						
KHC	Kasperske Hory	148.84	348	*e*PKPbc	PKPdf	17 19 27.0	+5.3
GERES	GERESS Array B	149.09	348	PKPbc	PKPdf	17 19 27.5	+5.4
	comp=Z,1.6nm,0.8s,baz=27,slow=3.0,SNR=8.9						
DAVOX	Davos	151.72	352	PKPbc	PKPdf	17 19 33.9	+7.8
	comp=Z,2.9nm,0.5s,slow=4.3,SNR=4.9						

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*NEIC **08** 17:02:24.9±1.3, 8.04S×74.33W, h146^{km}±14^{km}, mb4.2/5, Error ellipse: s-maj=14.4km s-min=13.5km az=224.0*

*IDC **08** 17:02:25.9±5.1, 8.03S×74.19W, h153^{km}±42^{km}, mb4.5/1, mb1 3.8/5, mb1mx3.5/20, mbtmp4.3/5, Error ellipse: s-maj=58.8km s-min=35.0km az=80.0*

ISC 08 17:02:23.6±1.4**, 7.98S**±0.09×**74.25W**±0.08**, h145**^{km}±16^{km}**, n28, σ1§02**/22**, mb4.4**/3**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	4.73	212	*e*Pn	P	17 03 32.9	-1.4
NNA				*e*Sn	S	17 04 21.9	-6.8
LPAZ	La Paz	10.19	145	P	P	17 04 47.5	+0.3
	0.5nm,0.3s,baz=318,slow=12,SNR=13						
LPAZ	La Paz	10.19	145	*e*Pn	P	17 04 47.6	+0.5
SAML	Samuel	10.99	96	*e*Pn	P	17 04 58.5	+0.9
	12nm,0.6s						
SAML				*e*Sn	S	17 06 56.7	-1.6
SIV	San Ignacio	15.14	123	P	P	17 05 51.7	+0.6
	0.7nm,0.3s,baz=292,slow=13,SNR=30						
SIV				S	S	17 08 30.3	-4.7
	0.2nm,0.3s,baz=232,slow=19,SNR=1.9						
LVC	Limon Verde	15.43	161	P	P	17 05 55.9	+1.2
	0.4nm,0.3s,baz=330,slow=18,SNR=4.0						
LVC	Limon Verde	15.43	161	*e*P	P	17 05 57.2	+2.5
	4.6nm,0.8s						
SDV	Santo Domingo	17.14	12	P	P	17 06 16.3	+0.5
	0.8nm,0.3s,baz=228,slow=16,SNR=7.2						
SDV	Santo Domingo	17.14	12	*e*P	P	17 06 17.1	+1.3
	4.1nm,0.6s						
CPUP	Villa Florida	24.33	141	*e*P	P	17 07 28.6	-0.6
	25nm,0.7s,mb4.8						
SDCO	Great Sand Dun	54.04	329	P	P	17 11 34.5	-0.7
	2.0nm,0.9s,mb3.9						
DBIC	Dimbokro	70.71	80	P	P	17 13 25.6	-0.6
	6.7nm,0.5s,mb4.6,baz=244,slow=6.8,SNR=18						
VNA3	Neumayer Olymp	74.45	162		P	17 13 40.0	-7.1
VNA3	Neumayer Olymp	74.45	162		P	17 13 48.3	+1.2
VNA2	Neumayer--Watz	75.04	162		P	17 13 51.1	+0.6
VNA2	Neumayer--Watz	75.04	162		P	17 13 56.2	+5.7
VNA2	Neumayer--Watz	75.04	162		P	17 14 01.3	+11
SNAA	Sanae	76.66	162		P	17 13 50.2	-9.4
SNAA	Sanae	76.66	162		P	17 13 59.2	-0.4
ZAL	Zalesovo	131.16	16	PKP	PKPdf	17 21 19.2	+0.9
	1.1nm,0.3s,baz=235,slow=8.1,SNR=4.8						
ZAL	Zalesovo	131.16	16	PKP	PKPdf	17 21 19.2	+0.9
MKAR	Makanchi Array	136.42	23	PKP	PKPdf	17 21 29.8	+1.5
	0.5nm,0.8s,SNR=4.7						
WRA	Warramunga Arr	140.48	225	PKP	PKPdf	17 21 37.3	+0.9
	0.2nm,0.6s,baz=136,slow=1.6,SNR=6.4						
KOLN	Koldanda	151.26	44	*e*P		17 22 41.9	
	11nm,0.9s						
GKN	Gorkha	151.81	42	*e*P		17 22 44.1	
	18nm,0.8s						
KKN	Kakani	152.38	42	*e*P		17 22 44.9	
	10.0nm,0.7s						
DMN	Daman	152.38	42	*e*P		17 22 45.6	
	6.5nm,0.7s						
PKI	Pulchoki	152.61	42	*e*P		17 22 45.2	

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*MOS **08** 17:15:15.6±0.9, 52.52N×159.39E, h32^{km}, mb4.3/1, Error ellipse: s-maj=41.8km s-min=14.4km az=83.6*

KRSC 08 17:15:15.8±0.5**, 52.54N×159.28E, h55**^{km}±6^{km}**, ML4.1, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	0.48	257	P	P	17 15 28.1	+0.9
RUS				S	S	17 15 36.8	+1.3
RUS	Russkaya	0.48	257	*i* P	P	17 15 28.1	+0.9
RUS				*i* S	S	17 15 37.0	+1.5
PET	Petropavlovsk	0.62	322	P	P	17 15 29.2	+0.4
PET				S	S	17 15 38.2	-0.2
PET	Petropavlovsk	0.62	322	*i* P	P	17 15 29.1	+0.3
PET				*i* S	S	17 15 38.4	0.0
NLC	Nalytchevo	0.63	4	*i* P	P	17 15 29.1	+0.1
NLC				*e*S	S	17 15 38.8	+0.1
SPN	Mys Shipunski	0.72	39	P	P	17 15 30.9	+0.8
SPN				S	S	17 15 41.6	+1.0
SPN	Mys Shipunski	0.72	39	*i* P	P	17 15 30.8	+0.7
SPN				*i* S	S	17 15 41.8	+1.2
UGLR	Uglovaya	0.72	338	*i* P	P	17 15 30.8	+0.7
GRL	Gorelyy	0.74	271	*i* P	P	17 15 31.5	+1.2
KRMR	Karymshinskiy	0.76	293	*i* P	P	17 15 31.1	+0.5
KRMR				*i* S	S	17 15 42.0	+0.5
SMAR	Somma	0.78	338	*e*P	P	17 15 31.1	+0.2
AVH	Avacha	0.80	336	*i* P	P	17 15 31.8	+0.7
AVH				*e*S	S	17 15 43.1	+0.7
KOK	Koryaka	0.85	333	*i* P	P	17 15 32.5	+0.7
APC	Apacha	1.35	287	*i* P	P	17 15 39.4	+0.6
APC				*i* S	S	17 15 57.1	+1.2
APC				Smax			
	110nm,0.6s						
GNL	Ganaly	1.41	326	*i* P	P	17 15 40.0	+0.3
GNL				*i* S	S	17 15 58.3	+0.9
PAU	Pauzhetka	1.87	236	*e*P	P	17 15 46.8	+0.8
PAU				*e*S	S	17 16 09.4	+1.0
PAU				Smax			
	200nm,0.9s						
SKR	Severo-Kuril's	2.71	228	*e*P	P	17 15 57.5	-0.5
SKR				*e*S	S	17 16 28.0	-1.7
TUMR	Tumrok	2.80	10	*e*P	P	17 15 59.5	+0.3
KMNR	Kamenistaya	3.27	10	*e*P	P	17 16 07.1	+1.2
ESO	Esso	3.41	355	*e*P	P	17 16 08.0	+0.2
KPT	Kopyto	3.48	9	*e*P	P	17 16 09.6	+0.8
KOZ	Kozyrevsk	3.54	5	P	P	17 16 11.3	+1.6
KOZ	Kozyrevsk	3.54	5	*e*P	P	17 16 10.6	+0.9
KOZR	Kozyr	3.55	6	PN	P	17 16 11.3	+1.4
ZLN	Zelenaya	3.60	14	*e*P	P	17 16 12.0	+1.5
LGNR	Loginova	3.65	13	*e*P	P	17 16 12.3	+1.1
CIRR	Tsirk	3.68	13	*e*P	P	17 16 13.3	+1.6
KRSR	Krestovskiy	3.76	11	*e*P	P	17 16 13.7	+0.9
KRSR				*e*S	S	17 16 56.4	+0.2
SRDR	Sredinnyy	3.79	4	P	P	17 16 14.4	+1.1
KLY	Klyuchi	3.87	11	P	P	17 16 16.1	+1.8
KLY				S	S	17 17 01.3	+2.5
KLY	Klyuchi	3.87	11	*e*P	P	17 16 16.1	+1.8
KBTR	Krutoberegovo	4.22	28	P	P	17 16 19.8	+0.6
KBTR				S	S	17 17 06.7	-1.0
KBTR	Krutoberegovo	4.22	28	*e*P	P	17 16 19.8	+0.6
KBG	Krutoberegovo	4.23	27	S	S	17 17 06.1	-1.8
SMKR	Semkarok	4.25	17	*i* P	P	17 16 20.0	+0.4
SRKR	Sorokina	4.27	14	*e*P	P	17 16 21.3	+1.4
BKI	Bering	4.78	53	*e*P	P	17 16 25.0	-2.0
BKI				*e*S	S	17 17 14.9	-6.8

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*ISK **08** 17:16:22.9, 38.08N×26.79E, h4^{km}, MD3.4*

*ATH **08** 17:16:22.5, 38.14N×26.49E, h24^{km}±1^{km}, MD3.5/4*

*NEIC **08** 17:16:22.0, 38.08N×26.80E, h2^{km}, MD3.5(ATH), MD3.4(ISK), After ISK.*

*CSEM **08** 17:16:22.1±0.1, 38.15N×26.67E, h12^{km}, MD3.4, Error ellipse: s-maj=2.4km s-min=1.8km az=116.0*

ISC 08 17:16:22.2±0.8**, 38.16N**±0.03×**26.61E**±0.05**, h4**^{km}±5^{km}**, n22, σ1§09**/31**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.20	356	*i* P	Pg	17 16 25.8	-0.4
URLA				*i* S	Sg	17 16 29.3	+0.4
BLCB	Balcova	0.41	56	*i* PG	Pg	17 16 30.3	0.0
BLCB				*i* SG	Sg	17 16 35.8	+0.1
SMG	Samos	0.48	159	⇑*i*PN	Pg	17 16 32.9	+1.0
SMG				*e*SN	Sg	17 16 40.8	+2.5
IZM	Izmir	0.56	65	*i* PG	Pg	17 16 33.4	0.0
IZM				*i* SG	Sg	17 16 40.6	-0.4
KDAG	Bornova	0.57	64	*i* P	Pg	17 16 32.5	-1.0
KDAG				*i* S	Sg	17 16 39.5	-1.6
AYDN	Tasoluk	1.12	116	*i* P	Pb	17 16 44.5	+0.7
AYDN				*i* S	Sb	17 16 59.5	+1.0
PRK	Paraskevi	1.12	346	*e*PN	Pn	17 16 43.8	-0.8
PRK				*e*SN	Sn	17 16 59.6	-1.0
AYVA	Ayvalik	1.15	3	*i* P	Pb	17 16 45.0	+0.7
AYVA				*i* S	Sb	17 17 01.6	+2.2
AKS	Akhisar	1.18	52	PN	Pn	17 16 44.9	-0.6
BODT	Bodrum	1.23	153	*i* PN	Pn	17 16 44.1	-2.0
MLSB	Milas	1.26	133	PN	Pn	17 16 44.8	-1.8
APE	Apeiranthos	1.39	219	PN	Pn	17 16 50.4	+2.0
APE	Apeiranthos	1.39	219	*e*Pn	Pn	17 16 47.5	-0.9
MANT	Manisa	1.56	77	*i* P	Pn	17 16 52.0	+1.1
MANT				*i* S	Sb	17 17 12.3	+0.8
DAT	Datca	1.62	151	*e*PN	Pn	17 16 51.1	-0.7
BALB	Balikesir	1.78	33	*e*PN	Pn	17 16 55.3	+1.3
DENT	Denizli	1.95	101	*e*PN	Pn	17 16 56.0	-0.5
DALT	Dalyan (Mudla)	2.12	130	*e*PN	Pn	17 16 58.1	-0.9
FETY	Fethiye	2.49	127	*e*PN	Pn	17 17 02.9	-1.2
ORLT	Orhaneli	2.59	43	*e*PN	Pn	17 17 06.5	+0.9
RDO	Rodhopi	3.10	345	*e*PN	Pn	17 17 12.3	-0.5
YLV	Yalova	3.22	41	*e*PN	Pn	17 17 15.6	+1.0

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*MOS **08** 17:19:37.0±0.8, 52.56N×159.27E, h33^{km}, mb4.2/1, Error ellipse: s-maj=43.8km s-min=14.5km az=81.3*

KRSC 08 17:19:37.0±0.7**, 52.57N×159.26E, h54**^{km}±5^{km}**, ML4.1, 1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	0.48	254	P	P	17 19 48.8	+0.5
RUS				S	S	17 19 57.5	+1.0
RUS	Russkaya	0.48	254	*i* P	P	17 19 48.9	+0.6
RUS				*e*S	S	17 19 57.5	+1.0
PET	Petropavlovsk	0.58	321	P	P	17 19 49.9	+0.4
PET				S	S	17 19 58.9	+0.1
PET	Petropavlovsk	0.58	321	*i* P	P	17 19 50.0	+0.5
PET				*e*S	S	17 19 58.9	+0.1
PET	Petropavlovsk	0.58	321	⇓*i*PN	P	17 19 50.1	+0.6
PET				*e*S	S	17 19 59.0	+0.2
PET				pmax	pmax		
	comp=N,520nm,0.5s						
PET				pmax	pmax		
	comp=Z,2µm,0.3s						
PET				pmax	pmax		
	comp=E,471nm,0.6s						
PET				smax			
	comp=E,1µm,0.4s						
PET				smax			
	comp=N,3µm,0.3s						
NLC	Nalytchevo	0.60	5	*i* P	P	17 19 50.0	+0.2
NLC				*e*S	S	17 19 59.3	+0.1
UGLR	Uglovaya	0.69	338	*i* P	P	17 19 51.7	+0.8
SPN	Mys Shipunski	0.70	41	P	P	17 19 52.0	+1.0
SPN				S	S	17 20 03.7	+2.3
SPN	Mys Shipunski	0.70	41	*i* P	P	17 19 51.9	+0.9
SPN				*i* S	S	17 20 02.6	+1.2
GRL	Gorelyy	0.72	269	*i* P	P	17 19 52.7	+1.4
KRMR	Karymshinskiy	0.73	291	*i* P	P	17 19 51.8	+0.4
KRMR				*i* S	S	17 20 02.5	+0.4
SMAR	Somma	0.75	338	*i* P	P	17 19 52.1	+0.5
AVH	Avacha	0.77	336	*i* P	P	17 19 52.7	+0.9
AVH				*e*S	S	17 20 04.4	+1.6
KOK	Koryaka	0.82	333	*i* P	P	17 19 53.4	+0.9
APC	Apacha	1.33	286	*i* P	P	17 19 59.5	-0.2
APC				*e*S	S	17 20 17.4	+0.8
APC				Smax			
	comp=N,80nm,0.4s						
GNL	Ganaly	1.38	325	*i* P	P	17 20 00.9	+0.4
GNL				*i* S	S	17 20 18.8	+1.0
PAU	Pauzhetka	1.87	235	*e*P	P	17 20 08.2	+0.9
PAU				Smax			
	comp=N,340nm,0.5s						
SKR	Severo-Kuril's	2.72	227	*e*P	P	17 20 17.9	-1.4
TUMR	Tumrok	2.77	11	*e*P	P	17 20 21.3	+1.3
KMNR	Kamenistaya	3.24	10	*e*P	P	17 20 27.5	+0.8
ESO	Esso	3.38	355	*e*P	P	17 20 28.6	0.0
KPT	Kopyto	3.45	9	*e*P	P	17 20 30.2	+0.6
KOZ	Kozyrevsk	3.51	6	P	P	17 20 31.0	+0.5
KOZ	Kozyrevsk	3.51	6	*e*P	P	17 20 30.4	-0.1
KOZR	Kozyr	3.52	6	PN	P	17 20 31.0	+0.3
ZLN	Zelenaya	3.57	14	*e*P	P	17 20 32.7	+1.4
LGNR	Loginova	3.62	13	*e*P	P	17 20 32.4	+0.4
CIRR	Tsirk	3.66	13	*e*P	P	17 20 34.2	+1.7
KRSR	Krestovskiy	3.73	11	*e*P	P	17 20 34.1	+0.5
SRDR	Sredinnyy	3.77	4	P	P	17 20 34.6	+0.6
KLY	Klyuchi	3.84	12	P	P	17 20 36.7	+1.6
KLY				S	S	17 21 21.0	+1.6
KLY	Klyuchi	3.84	12	*e*P	P	17 20 36.3	+1.2
KBTR	Krutoberegovo	4.20	28	P	P	17 20 41.7	+1.6
KBTR				S	S	17 21 28.2	-0.2
KBTR	Krutoberegovo	4.20	28	*e*P	P	17 20 40.6	+0.5
KBG	Krutoberegovo	4.21	27	*e*P	P	17 20 41.0	+0.7
KBG				Smax			
	comp=N,1µm,0.8s						
SMKR	Semkarok	4.22	17	*i* P	P	17 20 41.1	+0.6
SRKR	Sorokina	4.24	14	*e*P	P	17 20 41.7	+1.0
BKI	Bering	4.77	54	*e*S	S	17 21 35.4	-7.3
BKI				Smax			
	comp=N,40nm,0.7s						

IDC 08 17:19:59.5±1.3**, 21.46S×66.90W, h188**^{km}±22^{km}**, mb3.8**/1**, mb1 3.4**/4**, mb1mx3.2**/16**, mbtmp3.9**/4**, Error ellipse: s-maj=47.1km s-min=17.9km az=122.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	2.19	238	P	P	17 20 40.7	+1.2
	13nm,0.3s,baz=44,slow=11,SNR=114						
LVC				S	S	17 21 10.6	+0.2
	6.5nm,0.3s,baz=337,slow=14,SNR=17						
LPAZ	La Paz	5.28	347	P	P	17 21 17.1	-0.8
	0.6nm,0.3s,baz=151,slow=11,SNR=6.8						
LPAZ				S	S	17 22 13.8	-5.0
	0.2nm,0.3s,baz=351,slow=14,SNR=4.6						
SIV	San Ignacio	7.75	46	P	P	17 21 50.1	-0.3
	2.2nm,0.3s,baz=244,slow=10,SNR=39						
SIV				S	S	17 23 13.1	-3.8
	0.4nm,0.3s,baz=328,slow=23,SNR=8.3						
BOSA	Boshof	81.81	117	P	P	17 31 57.4	-1.7
	2.7nm,0.9s,baz=267,slow=6.9,SNR=2.9						
MKAR	Makanchi Array	144.49	37	PKP	PKPdf	17 39 14.5	+1.4
	0.5nm,0.5s,baz=330,slow=3.4,SNR=10						

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*ISK **08** 17:30:23.2, 38.14N×26.62E, h8^{km}, MD3.5, ML3.6*

*NEIC **08** 17:30:23.0, 38.15N×26.62E, h10^{km}, MD3.6(ISK), ML3.9(ATH), After ISK.*

*ATH **08** 17:30:24.6, 38.25N×26.76E, h25^{km}±2^{km}, MD3.7/6, ML3.9*

*CSEM **08** 17:30:25.1±0.1, 38.19N×26.69E, h20^{km}, MD3.5, Error ellipse: s-maj=2.2km s-min=1.8km az=77.0*

ISC 08 17:30:22.8±0.8**, 38.17N**±0.02×**26.56E**±0.03**, h1**^{km}±5^{km}**, n53, σ1§11**/64**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.19	9	*i* P	Pg	17 30 26.4	-0.2
URLA				*i* S	Sg	17 30 29.9	+0.8
BLCB	Balcova	0.44	61	*i* PG	Pg	17 30 31.9	+0.4
BLCB				*i* SG	Sg	17 30 37.7	+0.4
SMG	Samos	0.51	154	*e*PN	Pn	17 30 35.3	-1.4
SMG				*e*SN	Sn	17 30 44.1	-2.1
IZM	Izmir	0.60	68	*i* PG	Pg	17 30 35.1	+0.4
IZM				*i* SG	Sg	17 30 43.0	+0.3
KDAG	Bornova	0.60	67	*i* P	Pg	17 30 34.1	-0.7
KDAG				*i* S	Sg	17 30 41.8	-1.1
PRK	Paraskevi	1.10	348	*e*PN	Pn	17 30 44.8	-0.3
PRK				*e*SN	Sn	17 31 00.8	-0.3
AYVA	Ayvalik	1.14	5	*i* P	Pb	17 30 45.5	+0.6
AYVA				*i* S	Sb	17 31 02.9	+2.8
AYDN	Tasoluk	1.16	116	*i* P	Pb	17 30 46.3	+1.0
AYDN				*i* S	Sb	17 31 01.7	+1.0
AKS	Akhisar	1.21	54	PN	Pn	17 30 46.7	0.0
BODT	Bodrum	1.26	151	*i* PN	Pn	17 30 46.4	-1.0
MLSB	Milas	1.30	132	PN	Pn	17 30 46.4	-1.6
BDRM	Kayabasi	1.31	147	*i* P	Pb	17 30 49.8	+2.0
BDRM				*i* S	Sb	17 31 08.1	+3.1
APE	Apeiranthos	1.37	217	PN	Pn	17 30 49.2	+0.2
APE	Apeiranthos	1.37	217	Pn	Pn	17 30 50.6	+1.6
MANT	Manisa	1.60	78	*i* P	Pn	17 30 54.6	+2.2
MANT				*i* S	Sb	17 31 14.9	+1.4
DAT	Datca	1.65	150	PN	Pn	17 30 52.7	-0.3
EZN	Ezine	1.66	354	PN	Pn	17 30 53.6	+0.4
BALB	Balikesir	1.79	35	*e*PN	Pn	17 30 55.5	+0.5
SANT	Santorini	2.00	206	*e*Pn	Pn	17 30 58.8	+0.7
SANT				*e*Sn	Sn	17 31 27.6	+3.6
SANT	Santorini	2.00	206	*e*Pn	Pn	17 30 58.8	+0.8
DENT	Denizli	2.00	101	*e*PN	Pn	17 30 57.6	-0.4
LIA	Limnos Island	2.03	329	*e*PN	Pn	17 30 59.0	+0.6
DST	Dursunbey	2.16	48	*e*PN	Pn	17 30 59.6	-0.7
DALT	Dalyan (Mudla)	2.17	130	*e*PN	Pn	17 31 00.3	-0.1
LPK	Lapseki	2.20	4	*e*PN	Pn	17 31 01.0	+0.1
ATH	Athens Observa	2.25	266	*e*PN	Pn	17 31 05.0	+3.4
ARG	Arkhangelos	2.32	147	*e*PB	Pb	17 31 03.7	-1.4
EDC	Edincik	2.40	25	*e*PN	Pn	17 31 03.1	-0.6
BNT	Bandirma	2.42	25	*e*PN	Pn	17 31 04.5	+0.4
NAIG	Nisos Aigina	2.46	261	*e*PN	Pn	17 31 08.0	+3.4
KCT	Karacabey	2.52	33	*e*PN	Pn	17 31 05.9	+0.5
FETY	Fethiye	2.53	127	*e*PN	Pn	17 31 05.2	-0.4
ORLT	Orhaneli	2.61	43	*e*PN	Pn	17 31 07.3	+0.6
KARP	Karpathos	2.66	169	Pn	Pn	17 31 09.0	+1.5
MFT	Murefte	2.67	12	*e*PN	Pn	17 31 08.0	+0.4
ALT	Altintas	2.92	71	*e*PN	Pn	17 31 10.8	-0.4
RDO	Rodhopi	3.07	345	*e*PN	Pn	17 31 13.2	-0.2
ISP	Isparta	3.14	95	P	Pn	17 31 12.6	-1.7
YLV	Yalova	3.24	41	*e*PN	Pn	17 31 15.6	-0.1
HRT	Hereke	3.58	41	*e*PN	Pn	17 31 20.5	0.0
ESKT	Eskisehir	3.61	67	*e*PN	Pn	17 31 21.2	+0.2
EDRB	Edirne	3.67	2	*e*PN	Pn	17 31 21.9	0.0
RZN	Rozhen	3.79	339	*i* P	Pn	17 31 23.0	-0.5
NVR	Nevrokopi	3.79	328	*e*PN	Pn	17 31 23.8	+0.2
MMB	Musomiste	4.05	328	*i* P	Pn	17 31 26.5	-0.7
KIZT	Kizilcal	4.23	79	*e*PN	Pn	17 31 30.3	+0.5
VAY	Valandovo	4.40	317	*e*Pn	Pg	17 31 49.4	-1.2
PGB	Panagyurishte	4.74	338	*e*P	Pn	17 31 35.0	-2.0
VTS	Vitosha	5.10	331	*i* P	Pn	17 31 42.5	+0.3
TIRR	Tirgusor	6.43	12	⇑P	Pn	17 31 59.1	-1.8
KIV	Kislovodsk	13.46	59	P	P	17 33 33.6	-3.8
GNI	Garni	14.25	76	P	P	17 33 44.5	-3.2
ZAL	Zalesovo	42.13	49	P	P	17 38 15.0	-2.8

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*BJI **08** 17:34:44.7, 22.70S×66.10W, h235^{km}, mB5.1*

*NEIC **08** 17:34:44.7±0.6, 22.74S×66.07W, h236^{km}±11^{km}, mb4.2/7, MD4.1(GUC), Error ellipse: s-maj=13.7km s-min=9.0km az=115.0*

*IDC **08** 17:34:44.0±0.9, 22.73S×66.02W, h239^{km}±8^{km}, mb3.7/6, mb1 3.9/11, mb1mx3.8/17, mbtmp4.4/11, Error ellipse: s-maj=15.8km s-min=13.2km az=146.0*

*GUC **08** 17:34:46.0±0.6, 23.14S×66.35W, h240^{km}±16^{km}, MD4.1, ML4.0*

ISC 08 17:34:43.9±0.5**, 22.74S**±0.04×**66.10W**±0.07**, h251**^{km}±6^{km}**, n53, σ1§26**/62**, mb3.9**/7**, 12C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	San Pedro de A	1.95	265	⇑*i*P	P	17 35 28.6	+2.4
SPCH				*i* S	S	17 35 59.9	+0.8
SPCH				AMP		17 36 27.8	
	comp=N,653nm,0.4s						
LVC	Limon Verde	2.60	272	P	P	17 35 33.7	+1.0
	comp=N,200nm,0.3s,baz=91,slow=5.8,SNR=1098						
LVC				S	S	17 36 10.6	+0.1
	comp=N,141nm,0.3s,baz=246,slow=19,SNR=14						
LVC	Limon Verde	2.60	272	*e*Pn	P	17 35 33.2	+0.5
LVC				*e*Sn	S	17 36 10.1	-0.5
CEN1	Los Morros	3.84	259	*i* P	P	17 35 48.4	+2.1
CEN1				⇓*i*P		17 35 48.4	
CEN1				*i* S	S	17 36 35.5	+0.7
ANCH	Antofagasta	4.08	256	*i* P	P	17 35 49.5	+0.3
ANCH				*i* S	S	17 36 37.0	-3.0
CPN1	Cerro Paranal	4.37	244	⇑*i*P	P	17 35 52.9	+0.2
CPN1				*i* S	S	17 36 43.9	-2.4
CRCH	Chaqaral	5.47	228	⇑*i*P	P	17 36 05.2	-0.8
CRCH				*i* S	S	17 37 05.9	-4.2

CPCH	Copiapo	6.00	219	*i* S	S	17 37 17.7	-4.4
CDCH	Caldera	6.09	224	⇑*i*P	P	17 36 11.7	-2.0
CDCH				*i* S	S	17 37 18.4	-5.6
LPAZ	La Paz	6.70	343	P	P	17 36 22.6	+1.1
	comp=N,1.9nm,0.3s,baz=171,slow=7.9,SNR=17						
LPAZ				S	S	17 37 37.1	-0.7
	comp=N,1.9nm,0.3s,baz=283,slow=21,SNR=7.7						
LPAZ	La Paz	6.70	343	*e*Pn	P	17 36 22.6	+1.1
	comp=N,12nm,0.6s						
LPAZ				*e*Sn	S	17 37 38.4	+0.6
ARE	Arequipa	8.05	320	*e*P	P	17 36 36.0	-2.6
ARE				*e*S	S	17 38 01.0	-7.5
SIV	San Ignacio	8.22	36	P	P	17 36 39.5	-1.2
	comp=N,3.0nm,0.3s,baz=228,slow=9.2,SNR=122						
CPUP	Villa Florida	8.74	116	*e*Pn	P	17 36 47.2	-0.2
	comp=N,30nm,0.7s						
CFAA	Coronel Fontan	9.03	192	P	P	17 36 50.6	-0.5
	comp=N,0.2nm,0.3s,baz=18,slow=13,SNR=15						
CFAA				S	S	17 38 24.9	-6.0
	comp=N,1.3nm,0.3s,baz=287,slow=22,SNR=16						
FCH	Farellones	11.18	198	⇓*i*P	P	17 37 20.3	+2.2
SAML	Samuel	13.99	12	*e*Pn	P	17 37 52.0	-1.2
	comp=N,12nm,0.8s						
SAML				*e*Sn	S	17 40 28.7	+5.8
NNA	Nana	14.81	314	*e*P	P	17 38 03.1	-0.1
	comp=N,14nm,0.8s						
TRQA	Tornquist	15.67	168	P	P	17 38 11.5	-1.9
	comp=N,3.7nm,0.7s						
PLCA	Paso Flores	18.33	191	P	P	17 38 41.8	-0.2
	comp=N,0.4nm,0.3s,baz=8.3,slow=12,SNR=20						
PLCA	Paso Flores	18.33	191	*e*P	P	17 38 41.8	-0.2
	comp=N,9.1nm,0.9s						
BDFB	Brasilia	18.47	71	P	P	17 38 43.3	-0.2
	comp=N,1.6nm,0.3s,baz=253,slow=11,SNR=45						
BAO	Brasilia Array	18.49	71	P	P	17 38 44.5	+0.8
VNA3	Neumayer Olymp	58.08	161	⇑*i*	P	17 44 14.5	+1.9
VNA3	Neumayer Olymp	58.08	161	⇑*i*	P	17 44 17.1	+4.5
VNA3	Neumayer Olymp	58.08	161	⇑*i*	P	17 44 21.6	+9.0
VNA3	Neumayer Olymp	58.08	161		P	17 44 29.6	+17
VNA3	Neumayer Olymp	58.08	161		P	17 44 32.8	+20
VNA1	Neumayer--Stat	58.25	161	⇑*i*	P	17 44 16.2	+2.3
VNA1	Neumayer--Stat	58.25	161		P	17 44 19.0	+5.1
VNA1	Neumayer--Stat	58.25	161		P	17 44 24.8	+11
VNA1	Neumayer--Stat	58.25	161		P	17 44 32.4	+19
VNA2	Neumayer--Watz	58.62	161	⇑*i*	P	17 44 18.4	+2.0
VNA2	Neumayer--Watz	58.62	161	⇑*i*	P	17 44 28.0	+12
VNA2	Neumayer--Watz	58.62	161		P	17 44 31.7	+15
SNAA	Sanae	60.26	161	⇑*i*	P	17 44 27.4	-0.2
SNAA	Sanae	60.26	161		P	17 44 31.1	+3.5
SNAA	Sanae	60.26	161		P	17 44 34.2	+6.6
SNAA	Sanae	60.26	161		P	17 44 39.8	+12
SNAA	Sanae	60.26	161		P	17 44 42.9	+15
MAIT	Maitri	64.72	159	*e*P	P	17 44 58.0	+1.2
DBIC	Dimbokro	66.62	72	P	P	17 45 07.9	-1.8
	comp=N,6.7nm,0.7s,mb4.4,baz=225,slow=7.5,SNR=11						
QSPA	South Pole Qui	67.46	180	*e*P	P	17 45 13.4	-0.6
	comp=N,2.1nm,0.7s,mb3.9						
SYO	Syowa Base	74.42	159	⇑P	P	17 45 56.6	+0.9
PDAR	Pinedale Array	76.50	329	P	P	17 46 08.1	+0.2
	comp=N,0.6nm,0.6s,mb3.4,baz=166,slow=6.1,SNR=4.5						
NVAR	Mina Array Bea	78.09	321	P	P	17 46 17.1	+0.4
	comp=N,0.4nm,0.5s,mb3.3,baz=127,slow=5.5,SNR=4.5						
BOSA	Boshof	80.56	117	P	P	17 46 29.2	-0.8
	comp=N,2.6nm,0.7s,mb4.0,baz=261,slow=3.6,SNR=5.2						
MAW	Mawson	82.39	163	P	P	17 46 39.6	+1.0
	comp=N,1.7nm,0.8s,mb3.7,baz=263,slow=8.6,SNR=4.1						
ESDC	Sonseca Array	84.91	43	P	P	17 46 51.8	-0.2
	comp=N,5.6nm,0.9s,mb4.3,baz=235,slow=4.5,SNR=12						
WRA	Warramunga Arr	133.12	207	PKP	PKPdf	17 53 31.9	+1.5
	comp=N,0.2nm,0.3s,baz=150,slow=1.8,SNR=8.1						
WRA				SKPbc		17 56 36.4	
	comp=N,3.6nm,0.9s,baz=152,slow=2.9,SNR=18						
MKAR	Makanchi Array	145.03	39	PKP	PKPdf	17 53 52.8	+1.8
	comp=N,12nm,0.7s,baz=308,slow=3.4,SNR=118						
MKAR				SKPbc		17 57 09.1	
	comp=N,0.8nm,0.8s,baz=317,slow=1.9,SNR=5.1						
WMQ	Urumqi	149.85	40	*e*PKP	PKPdf	17 53 59.8	+0.8
SONM	Songino Array	154.25	12	PKPbc	PKPdf	17 54 15.7	+11
	comp=N,0.5nm,0.7s,baz=276,slow=1.8,SNR=5.1						
SONM				PKPab	PKPab	17 54 30.2	-0.9
	comp=N,0.8nm,0.7s,baz=321,slow=4.4,SNR=5.0						

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*CSEM **08** 17:38:06.1±0.1, 34.44N×46.70E, h20^{km}, ML3.3, Error ellipse: s-maj=3.0km s-min=2.1km az=137.0*
*TEH **08** 17:38:07.1, 34.53N×46.63E, h10^{km}, Mn3.3*
*THR **08** 17:38:09.4±0.4, 34.60N×46.93E, h14^{km}±6^{km}, ML3.0*
ISC 08 17:38:06.6±0.6**, 34.39N**±0.05×**46.82E**±0.06**, h10**^{km}**, n27, σ1$\overset{s}{.}$33**/29**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGHG	Ghaleghazi	0.21	253	Pg	Pg	17 38 11.1	-0.1
IDHR	Dehrash	0.47	311	Pg	Pg	17 38 12.0	-4.1
IKOM	Komasi	0.62	110	Pg	Pg	17 38 18.3	-0.7
ASAO	Ashtian	2.66	86	*e*PN	Pn	17 38 52.7	+2.5
ASAO				*e*SG	Sg	17 39 29.7	-5.3
ASAO				AML	AML	17 39 41.7	
	comp=N,58nm,0.6s						
IRAZ	Razeghan	2.75	68	Pn	Pn	17 39 06.9	+15
SHGR	Shooshtar-Gavs	2.82	143	*e*PN	Pn	17 38 57.5	+4.9
SHGR				Sn	Sn	17 39 33.0	+6.0
SHGR				AML	AML	17 39 50.9	
	comp=N,62nm,0.5s						
SHGR	Shooshtar-Gavs	2.82	143	*e*Pn	Pn	17 38 57.5	+4.9
	SNR=52						
SHGR				Sn	Sn	17 39 33.0	+6.0
	comp=N,62nm,0.5s,SNR=52						
IAZR	Azarshahr	3.35	349	Pn	Pn	17 38 58.2	-1.8
IQOM	Qom	3.54	82	Lg		17 40 02.2	
IQOM	Qom	3.54	82	Pn	Pn	17 39 06.9	+4.2
MSL	Mosul	3.58	303	*e*	Pn	17 39 17.0	+14
MSL				*e*		17 39 50.5	
IPIR	Pirpir	3.81	115	Pn	Pn	17 39 05.5	-1.1
CHTH	Charan	3.84	66	*e*PN	Pn	17 39 08.2	+1.2
ISHB	Shabestar	4.00	346	Pn	Pn	17 39 10.6	+1.3
IVRN	Varamin	4.09	80	Pn	Pn	17 39 11.1	+0.5
IVRN				Sn	Sn	17 39 58.2	-0.9
IKLH	Kalahroud	4.11	104	Pn	Pn	17 39 07.9	-2.9
IAFJ	Afjeh	4.27	69	Pn	Pn	17 39 13.5	+0.3
IAFJ				Sn	Sn	17 40 01.6	-2.1
IMRD	Marand	4.40	349	Pn	Pn	17 39 19.7	+4.7
DAMV	Damavand	4.41	72	*e*PN	Pn	17 39 16.2	+1.1
IDMV	Damavand	4.44	73	Lg		17 40 29.1	
IDMV	Damavand	4.44	73	Pn	Pn	17 39 15.3	-0.3
MIB	Mutribah	4.60	174	*e*P	Pn	17 39 18.2	+0.4
MIB				AMb	AMB	17 39 19.2	
	comp=Z,32nm,0.4s						
IFIR	Firoozkooh	5.03	74	Lg		17 40 47.2	
IFIR	Firoozkooh	5.03	74	Pn	Pn	17 39 23.3	-0.6
NAY	Al-Naaiem	5.14	176	*e*P	Pn	17 39 25.0	-0.5
NASN	Na'in	5.25	106	*e*Pn	Pn	17 39 29.5	+2.5
RDF	Al-Radifah	5.49	173	*e*P	Pn	17 39 29.8	-0.6

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*NEIC **08** 17:53:27.6±1.0, 18.95S×69.87W, h88^{km}±11^{km}, mb3.9/3, Error ellipse: s-maj=16.1km s-min=11.0km az=81.0*
*IDC **08** 17:53:28.8±3.0, 18.98S×69.77W, h91^{km}±26^{km}, mb3.6/2, mb1 3.8/5, mb1mx3.5/18, mbtmp4.1/5, Error ellipse: s-maj=49.2km s-min=20.9km az=109.0*
ISC 08 17:53:26.4±1.0**, 18.91S**±0.07×**69.8W**±0.1**, h95**^{km}±14^{km}**, n14, σ1$\overset{s}{.}$41**/15**, mb3.9**/3**, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	Arequipa	2.91	326	*e*P	P	17 54 12.0	+0.1
LPAZ	La Paz	3.06	32	P	P	17 54 17.2	+3.3
	2.9nm,0.3s,baz=206,slow=7.0,SNR=94						
LPAZ	La Paz	3.06	32	⇑*i*Pn	P	17 54 17.0	+3.1
LVC	Limon Verde	3.78	167	P	P	17 54 23.3	-0.4
	11nm,0.3s,baz=336,slow=11,SNR=60						
LVC				S	S	17 55 12.1	+4.8
	50nm,0.3s,baz=164,slow=23,SNR=19						
LVC	Limon Verde	3.78	167	*e*Pn	P	17 54 23.2	-0.5
LVC				*e*Sn	S	17 55 06.8	-0.4
LVC				S	S	17 55 12.1	+4.8
SIV	San Ignacio	8.83	72	P	P	17 55 31.9	-1.0
	3.0nm,0.3s,baz=266,slow=10,SNR=43						
SAML	Samuel	11.81	34	*e*Pn	P	17 56 11.1	-1.8
	1.8nm,0.6s						
TRQA	Tornquist	20.26	162	*e*P	P	17 57 55.3	-1.1
	5.2nm,0.9s						
BDFB	Brasilia	21.07	84	P	P	17 58 06.4	+1.7
	1.9nm,0.4s,mb3.8,baz=276,slow=8.9,SNR=3.0						
PLCA	Paso Flores	21.76	182	P	P	17 58 13.2	+1.8
	3.8nm,0.6s,mb3.9,baz=357,slow=11,SNR=12						
PLCA	Paso Flores	21.76	182	*e*P	P	17 58 13.2	+1.8
	4.0nm,0.7s,mb3.9						
WMOK	Wichita Mounta	60.04	333	P	P	18 03 24.9	-0.8
	1.5nm,0.7s,mb4.1						
WRA	Warramunga Arr	134.70	213	PKP	PKPdf	18 12 36.1	+1.3
	0.2nm,0.5s,baz=152,slow=1.8,SNR=5.4						
SONM	Songino Array	150.99	5	PKPbc	PKPdf	18 13 11.0	+8.9
	0.4nm,0.6s,baz=338,slow=1.6,SNR=3.9						

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*IDC **08** 18:16:48.9±0.8, 6.73N×72.92W, h160^{km}±12^{km}, mb3.3/4, mb1 3.7/6, mb1mx3.4/21, mbtmp3.8/6, Error ellipse: s-maj=37.0km s-min=8.1km az=132.0*
*NEIC **08** 18:16:49.5±0.9, 6.73N×72.91W, h169^{km}±12^{km}, Error ellipse: s-maj=34.3km s-min=13.3km az=129.0*
ISC 08 18:16:48.3±1.7**, 6.8N**±0.5×**72.9W**±0.6**, h172**^{km}±38^{km}**, n9, σ0$\overset{s}{.}$68**/11**, mb3.5**/4**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	El Rosal	2.34	217	P	P	18 17 30.0	+0.8
	30nm,0.3s,baz=30,slow=2.6,SNR=63						
ROSC				S	S	18 18 00.0	-0.7
	18nm,0.3s,baz=95,slow=13,SNR=8.4						
SDV	Santo Domingo	3.11	47	P	P	18 17 39.7	+1.1
	35nm,0.3s,baz=230,slow=2.9,SNR=174						
SDV				S	S	18 18 16.6	-0.6
	8.9nm,0.3s,baz=271,slow=21,SNR=9.1						
SDV	Santo Domingo	3.11	47	*e*Pn	P	18 17 39.4	+0.8
SDV				*e*Sn	S	18 18 16.5	-0.7
TXAR	Lajitas Array	36.65	312	P	P	18 23 40.7	+0.5
	0.2nm,0.4s,mb3.1,baz=119,slow=9.3,SNR=2.9						
ULM	Lac du Bonnet	47.42	340	P	P	18 25 06.4	-0.7
	1.1nm,0.6s,mb3.7,baz=146,slow=3.6,SNR=3.3						
PDAR	Pinedale Array	48.25	324	P	P	18 25 14.1	+0.4
	0.3nm,0.4s,mb3.2,baz=127,slow=9.0,SNR=2.5						
YKA	Yellowknife Ar	63.40	340	P	P	18 27 00.9	-0.5
	1.1nm,0.6s,mb3.9,baz=130,slow=6.8,SNR=5.8						
YKA	Yellowknife Ar	63.40	340	P	P	18 27 00.9	-0.5
WRA	Warramunga Arr	150.47	241	PKPbc	PKPdf	18 36 22.2	+7.5
	0.2nm,0.4s,baz=109,slow=2.7,SNR=12						

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*ATH **08** 18:17:05.6, 38.14N×27.07E, h42^{km}±2^{km}, MD3.1/3*
*ISK **08** 18:17:06.2, 38.16N×26.69E, h19^{km}, MD2.8*
*CSEM **08** 18:17:06.7±0.1, 38.14N×26.78E, h19^{km}±1^{km}, MD2.8, Error ellipse: s-maj=3.9km s-min=2.2km az=96.0*
ISC 08 18:17:06.8±0.6**, 38.20N**±0.03×**26.63E**±0.05**, h15**^{km}±7^{km}**, n18, σ1$\overset{s}{.}$31**/28**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.16	351	*i* P	Pb	18 17 09.5	-1.6
URLA				*i* S	Sb	18 17 13.0	-0.9
BLCB	Balcova	0.38	60	*i* PG	Pb	18 17 14.1	-0.6
BLCB				*i* SG	Sb	18 17 19.5	-0.4
SMG	Samos	0.52	161	*e*P	Pb	18 17 16.7	-0.4
SMG				*e*S	Sb	18 17 24.6	+0.6
IZM	Izmir	0.54	68	*i* PG	Pb	18 17 16.9	-0.5
IZM				*i* SG	Sb	18 17 25.5	+0.8
KDAG	Bornova	0.54	68	*i* P	Pb	18 17 16.3	-1.2
KDAG				*i* S	Sb	18 17 23.2	-1.6
PRK	Paraskevi	1.08	345	*e*P	Pb	18 17 28.0	+1.3
PRK				*e*S	Sb	18 17 44.7	+4.3
AYVA	Ayvalik	1.11	3	*i* P	Pb	18 17 28.8	+1.7
AYVA				*i* S	Sb	18 17 45.0	+3.9
AYDN	Tasoluk	1.13	118	*i* P	Pb	18 17 28.1	+0.7
AYDN				*i* S	Sb	18 17 42.9	+1.2
AKS	Akhisar	1.15	54	PN	Pn	18 17 28.2	-0.2
BODT	Bodrum	1.26	154	*e*PN	Pn	18 17 28.7	-1.2
MLSB	Milas	1.28	134	*e*PN	Pn	18 17 28.7	-1.6
BDRM	Kayabasi	1.30	150	*i* P	Pb	18 17 31.0	+0.5
BDRM				*i* S	Sb	18 17 49.0	+2.2
APE	Apeiranthos	1.43	218	*e*PN	Pn	18 17 32.7	+0.4
APE	Apeiranthos	1.43	218	*e*P	Pn	18 17 33.2	+0.9
MANT	Manisa	1.55	79	*i* P	Pn	18 17 35.6	+1.6
MANT				*i* S	Sn	18 17 56.5	+2.6
DAT	Datca	1.65	152	*e*PN	Pn	18 17 34.2	-1.3
BALB	Balikesir	1.74	34	*e*PN	Pn	18 17 36.2	-0.6
DALT	Dalyan (Mudla)	2.14	131	*e*PN	Pn	18 17 40.7	-1.9

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*IDC **08** 18:19:06.5±1.3, 1.81S×99.73E, mb4.2/9, mb1 4.3/9, mb1mx4.1/17, mbtmp4.2/9, Error ellipse: s-maj=70.6km s-min=17.5km az=51.0*
*NEIC **08** 18:19:17.2±1.1, 1.52S×100.16E, h77^{km}±10^{km}, mb4.3/2, Error ellipse: s-maj=16.4km s-min=8.3km az=71.0*
ISC 08 18:19:15.3±1.9**, 1.52S**±0.09×**100.2E**±0.1**, h75**^{km}±18^{km}**, n16, σ0$\overset{s}{.}$76**/14**, mb4.1**/11**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	6.78	4	*e*Pn	P	18 20 54.0	-0.1
COCO	West Island	11.11	197	*e*Pn	P	18 21 53.5	+0.3
FITZ	Fitzroy Crossi	29.95	125	P	P	18 25 18.0	-0.7
	3.8nm,0.8s,mb4.1,baz=283,slow=5.2,SNR=4.4						
WRA	Warramunga Arr	38.10	121	P	P	18 26 28.8	+0.2
	1.6nm,0.4s,mb4.2,baz=303,slow=9.0,SNR=17						
WRA				PcP	PcP	18 28 43.5	+0.6
	0.3nm,0.5s,baz=314,slow=2.6,SNR=6.0						
WRAB	Tennant Creek	38.10	121	*e*P	P	18 26 28.4	-0.3
	4.3nm,0.9s,mb4.3						
STKA	Stephens Creek	49.35	132	P	P	18 27 59.5	+0.3
	1.5nm,0.7s,mb4.0,baz=331,slow=11,SNR=4.2						
SONM	Songino Array	49.45	6	P	P	18 28 01.1	+1.3
	1.0nm,0.6s,mb3.9,baz=188,slow=8.3,SNR=10						
SONM				PcP	PcP	18 29 21.6	+0.5
	0.5nm,0.9s,baz=189,slow=5.0,SNR=3.5						
MKAR	Makanchi Array	50.61	344	P	P	18 28 09.0	+0.4
	1.8nm,0.6s,mb4.3,baz=152,slow=7.7,SNR=9.3						
MKAR	Makanchi Array	50.61	344	P	P	18 28 09.0	+0.4
BVAR	Borovoye Array	59.79	340	P	P	18 29 13.7	-1.2
	0.7nm,0.5s,mb4.0,baz=146,slow=8.0,SNR=6.8						
CHKZ	Chkalovo	60.25	340	*e*P	P	18 29 17.0	-1.0
	1.0nm,0.6s,mb4.0						
MLR	Muntele Rosu	80.06	317	P	P	18 31 18.0	-0.4
	1.6nm,0.8s,mb3.9,baz=70,slow=6.5,SNR=4.2						
FINES	FINESS Array B	83.76	332	P	P	18 31 36.9	-0.3
	0.8nm,0.5s,mb3.8,baz=104,slow=5.7,SNR=6.8						
ARCES	ARCESS Array B	86.08	340	P	P	18 31 50.0	+1.5
	4.7nm,0.8s,mb4.4,baz=90,slow=6.1,SNR=5.4						
TXAR	Lajitas Array	144.22	37	PKP	PKPdf	18 38 46.0	+2.8
	1.4nm,0.5s,baz=237,slow=1.0,SNR=6.0						
JCT	Junction City	145.53	31	*e*PKPdf	PKPdf	18 38 47.5	+2.1

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*MOS **08** 18:39:47.3±0.8, 54.61N×162.28E, h10^{km}, mb4.2/1, Error ellipse: s-maj=32.0km s-min=14.2km az=80.6*
KRSC 08 18:39:48.0±0.8**, 54.61N×162.26E, h14**^{km}±2^{km}**, ML4.0, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMR	Tumrok	1.39	300	*i* P	Pn	18 40 13.1	-0.1
TUMR				*e*S	Sb	18 40 31.3	+0.5
KBTR	Krutoberegovo	1.63	11	*e*P	Pn	18 40 17.3	+0.7
KBTR				*e*S	Sn	18 40 38.6	+1.1
KMNR	Kamenistaya	1.63	316	*e*P	Pn	18 40 16.6	0.0
KMNR				*e*S	Sn	18 40 37.6	+0.1
ZLN	Zelenaya	1.64	330	*e*P	Pn	18 40 17.2	+0.6
ZLN				*e*S	Sn	18 40 38.8	+1.2
KBG	Krutoberegovo	1.67	9	*e*P	Pn	18 40 18.1	+1.0
KBG				*e*S	Sn	18 40 38.4	0.0
KBG				Smax			
	1µm,1.0s						
LGNR	Loginova	1.73	329	*e*P	Pn	18 40 18.8	+0.9
LGNR				*e*S	Sn	18 40 41.3	+1.4
CIRR	Tsirk	1.74	331	*e*P	Pn	18 40 18.6	+0.5
CIRR				*e*S	Sn	18 40 40.9	+0.8
KPT	Kopyto	1.79	320	*e*P	Pn	18 40 19.4	+0.6
KPT				*e*S	Sn	18 40 42.3	+0.8
KRSR	Krestovskiy	1.88	330	*e*P	Pn	18 40 20.6	+0.5
KRSR				*e*S	Sn	18 40 44.5	+0.8
KLY	Klyuchi	1.94	332	P	Pn	18 40 20.5	-0.4
KLY				S	Sn	18 40 44.3	-0.9
KLY	Klyuchi	1.94	332	*e*P	Pn	18 40 20.5	-0.4
KLY				*e*S	Sn	18 40 44.1	-1.1
KOZR	Kozyr	1.99	318	PN	Pn	18 40 22.5	+0.8
KOZR				S	Sn	18 40 48.5	+2.0
KOZ	Kozyrevsk	1.99	318	P	Pn	18 40 22.5	+0.8
KOZ				S	Sn	18 40 48.5	+1.9
KOZ	Kozyrevsk	1.99	318	*e*P	Pn	18 40 22.4	+0.7
KOZ				*e*S	Sn	18 40 47.4	+0.8
SPN	Mys Shipunski	2.01	222	P	Pn	18 40 21.7	-0.3
SPN				S	Sn	18 40 47.2	+0.1
SPN	Mys Shipunski	2.01	222	*e*P	Pn	18 40 21.4	-0.6
SPN				*e*S	Sn	18 40 47.3	+0.2
SMKR	Semkarok	2.03	348	*e*P	Pn	18 40 22.6	+0.4
SMKR				*e*S	Sn	18 40 48.0	+0.5
SRKR	Sorokina	2.14	344	*e*P	Pn	18 40 24.1	+0.3
SRKR				*e*S	Sn	18 40 50.4	0.0
BKI	Bering	2.23	73	*e*S	Sn	18 40 49.8	-2.7
BKI				Smax			
	60nm,0.4s						
SRDR	Sredinnyy	2.24	321	*e*P	Pn	18 40 25.1	-0.2
NLC	Nalytchevo	2.25	231	*e*P	Pn	18 40 25.2	-0.2
NLC				*e*S	Sn	18 40 52.7	-0.4
ESO	Esso	2.43	304	*e*P	Pn	18 40 27.9	0.0
SMAR	Somma	2.45	238	*e*P	Pn	18 40 29.2	+0.9
UGLR	Uglovaya	2.47	237	*e*P	Pn	18 40 29.5	+0.9
AVH	Avacha	2.48	239	*i* P	Pn	18 40 29.9	+1.2
AVH				*e*S	Sn	18 40 59.6	+0.6
KOK	Koryaka	2.52	240	*e*P	Pn	18 40 30.2	+1.0
PET	Petropavlovsk	2.66	235	P	Pn	18 40 31.9	+0.6
PET				S	Sn	18 41 03.7	0.0
PET	Petropavlovsk	2.66	235	*e*P	Pn	18 40 31.6	+0.3
PET				*e*S	Sn	18 41 03.7	0.0
PET	Petropavlovsk	2.66	235	*e*PN	Pn	18 40 33.4	+2.1
PET				*e*S	Sn	18 41 02.5	-1.2
PET				pmax	pmax		
	comp=Z,25nm,0.5s						
PET				smax			
	comp=N,168nm,0.9s						
GNL	Ganaly	2.70	252	*e*P	Pn	18 40 32.7	+0.9
KRMR	Karymshinskiy	3.03	236	*e*S	Sn	18 41 12.5	-0.5
RUS	Russkaya	3.12	227	P	Pn	18 40 38.9	+1.0
RUS				S	Sn	18 41 16.2	+0.9
RUS	Russkaya	3.12	227	*e*P	Pn	18 40 38.7	+0.8
RUS				*e*S	Sn	18 41 15.3	0.0

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*MOS **08** 18:41:28.3±1.3, 54.59N×162.20E, h39^{km}, mb4.3/1, Error ellipse: s-maj=40.2km s-min=17.6km az=80.8*
KRSC 08 18:41:28.0±0.8**, 54.58N×162.27E, h23**^{km}±5^{km}**, ML4.1, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUMR	Tumrok	1.41	301	*e*P	Pn	18 41 52.4	-0.2
TUMR				*e*S	Sn	18 42 10.4	-0.3
KMNR	Kamenistaya	1.66	316	*e*P	Pn	18 41 55.5	-0.6
KMNR				*e*S	Sn	18 42 16.6	-0.3
KBTR	Krutoberegovo	1.66	11	P	Pn	18 41 56.2	0.0
KBTR				S	Sn	18 42 16.5	-0.5
KBTR	Krutoberegovo	1.66	11	*i* P	Pn	18 41 56.3	+0.1
KBTR				*i* S	Sn	18 42 17.0	0.0
ZLN	Zelenaya	1.67	330	*e*P	Pn	18 41 57.1	+0.8
ZLN				*e*S	Sn	18 42 18.0	+0.9
KBG	Krutoberegovo	1.70	8	*e*P	Pn	18 41 57.3	+0.6
KBG				*e*S	Sn	18 42 19.1	+1.2
LGNR	Loginova	1.76	330	*e*P	Pn	18 41 57.9	+0.4
LGNR				*e*S	Sn	18 42 19.4	0.0
CIRR	Tsirk	1.77	331	*e*P	Pn	18 41 57.8	+0.1
CIRR				*e*S	Sn	18 42 19.3	-0.4
KPT	Kopyto	1.82	321	*e*P	Pn	18 41 58.4	0.0
KPT				*e*S	Sn	18 42 20.3	-0.6
KRSR	Krestovskiy	1.91	330	*e*P	Pn	18 42 00.8	+1.1
KRSR				*e*S	Sn	18 42 23.9	+0.7
KLY	Klyuchi	1.97	333	P	Pn	18 42 00.4	-0.1
KLY				S	Sn	18 42 23.3	-1.4
KLY	Klyuchi	1.97	333	*i* P	Pn	18 41 59.5	-1.1
KLY				*e*S	Sn	18 42 23.4	-1.3
SPN	Mys Shipunski	1.99	223	P	Pn	18 42 00.1	-0.8
SPN				S	Sn	18 42 23.4	-2.0
SPN	Mys Shipunski	1.99	223	*e*P	Pn	18 42 01.3	+0.3
SPN				*e*S	Sn	18 42 25.6	+0.2
KOZR	Kozyr	2.02	319	PN	Pn	18 42 01.7	+0.4
KOZR				S	Sn	18 42 25.3	-0.7
KOZ	Kozyrevsk	2.02	318	P	Pn	18 42 01.7	+0.4
KOZ				S	Sn	18 42 25.3	-0.7
KOZ	Kozyrevsk	2.02	318	*e*P	Pn	18 42 01.5	+0.2
KOZ				*e*S	Sn	18 42 25.7	-0.3
SMKR	Semkarok	2.06	348	*i* P	Pn	18 42 01.5	-0.4
SMKR				*e*S	Sn	18 42 27.6	+0.5
SRKR	Sorokina	2.17	344	*i* P	Pn	18 42 04.2	+0.7
SRKR				*i* S	Sn	18 42 30.3	+0.4
BKI	Bering	2.23	72	*e*P	Pn	18 42 02.7	-1.6
BKI				*e*S	Sn	18 42 28.0	-3.4
BKI				Smax			
	120nm,0.3s						
NLC	Nalytchevo	2.23	232	P	Pn	18 42 04.2	-0.2
NLC				S	Sn	18 42 30.1	-1.4
NLC	Nalytchevo	2.23	232	*e*P	Pn	18 42 04.1	-0.3
NLC				*e*S	Sn	18 42 30.8	-0.7
SRDR	Sredinnyy	2.27	321	*i* P	Pn	18 42 06.1	+1.2
SRDR				*e*S	Sn	18 42 32.5	+0.1
SMAR	Somma	2.44	239	*e*P	Pn	18 42 08.3	+1.0
ESO	Esso	2.45	305	*e*P	Pn	18 42 07.2	-0.3
UGLR	Uglovaya	2.46	237	*e*P	Pn	18 42 08.5	+0.9
AVH	Avacha	2.47	239	*e*P	Pn	18 42 09.0	+1.2
KOK	Koryaka	2.51	240	*e*P	Pn	18 42 08.5	+0.2
PET	Petropavlovsk	2.65	235	P	Pn	18 42 11.2	+0.8
PET				S	Sn	18 42 42.3	+0.2
PET	Petropavlovsk	2.65	235	*e*P	Pn	18 42 11.1	+0.7
PET				*e*S	Sn	18 42 42.3	+0.2
GNL	Ganaly	2.70	253	*e*P	Pn	18 42 11.4	+0.4
KRMR	Karymshinskiy	3.02	236	*e*S	Sn	18 42 50.9	-0.6
RUS	Russkaya	3.11	228	*e*S	Sn	18 42 52.7	-1.0
GRL	Gorelyy	3.22	233	*e*P	Pn	18 42 19.1	+0.6

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*NEIC **08** 19:35:08.2±1.2, 6.85S×154.99E, h62^{km}±11^{km}, mb3.9/3, Error ellipse: s-maj=12.2km s-min=9.1km az=186.0*
*IDC **08** 19:35:09.8±2.5, 6.79S×154.93E, h74^{km}±23^{km}, mb3.7/8, mb1 3.9/11, mb1mx3.9/14, mbtmp4.0/11, MS3.0/1, Ms1 3.0/1, ms1mx2.8/14, Error ellipse: s-maj=22.3km s-min=13.9km az=178.0*
ISC 08 19:35:07.6±1.8**, 6.8S**±0.1×**154.92E**±0.05**, h67**^{km}±17^{km}**, n22, σ0$\overset{s}{.}$98**/25**, mb4.0**/15**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	5.61	118	P	P	19 36 30.5	+0.3
	4.1nm,0.3s,baz=240,slow=4.9,SNR=3.3						
HNR				S	S	19 37 35.9	+1.7
	26nm,0.3s,baz=210,slow=7.4,SNR=3.5						
HNR				LR	LR	19 38 13.9	
	comp=Z,156nm,19.9s,baz=232,slow=33						
HNR	Honiara	5.61	118	*e*Pn	P	19 36 28.3	-1.9
	55nm,0.7s						
HNR				S	S	19 37 35.9	+1.7
HNR				LR	LR	19 38 13.9	
PMG	Port Moresby	8.09	251	P	P	19 37 03.7	-1.0
	1.6nm,0.3s,baz=65,slow=5.5,SNR=5.8						
PMG				S	S	19 38 37.3	+1.7
	1.0nm,0.3s,baz=331,slow=21,SNR=4.0						
PMG	Port Moresby	8.09	251	*e*Pn	P	19 37 03.8	-0.9
PMG				*e*Sn	S	19 38 35.0	-0.6
DZM	Mont Dzumac	18.80	145	P	P	19 39 21.8	-2.5
	0.2nm,0.3s,baz=285,slow=9.0,SNR=3.5						
WRAB	Tennant Creek	23.83	235	*e*P	P	19 40 15.7	+0.2
	1.9nm,0.6s,mb3.6						
WRA	Warramunga Arr	23.84	235	P	P	19 40 16.0	+0.4
	1.8nm,0.5s,mb3.6,baz=58,slow=9.1,SNR=17						
WRA				PcP	PcP	19 43 58.3	-0.6
	0.5nm,0.6s,baz=59,slow=2.2,SNR=6.6						
STKA	Stephens Creek	27.84	205	P	P	19 40 54.3	+1.2
	3.5nm,1.0s,mb3.9,baz=22,slow=14,SNR=8.8						
SONM	Songino Array	69.16	327	P	P	19 46 08.7	-0.3
	0.5nm,0.6s,mb3.5,baz=138,slow=5.5,SNR=5.4						
VNDA	Vanda	70.74	178	P	P	19 46 17.4	-0.8
	0.7nm,0.9s,mb3.5						
GUN	Gumba	74.97	301	*e*P	P	19 46 45.0	+1.1
	13nm,0.6s,mb4.8						
KKN	Kakani	75.44	301	*e*P	P	19 46 47.0	+0.4
	4.8nm,0.6s,mb4.4						
DMN	Daman	75.54	301	*e*P	P	19 46 47.5	+0.3
	12nm,0.8s,mb4.7						
GKN	Gorkha	76.05	301	*e*P	P	19 46 50.3	+0.2
	11nm,0.9s,mb4.6						
KOLN	Koldanda	76.87	300	*e*P	P	19 46 54.5	-0.2

	19nm,1.3s,mb4.7						
MKAR	Makanchi Array	83.23	319	P	P	19 47 28.6	+0.4
	0.5nm,0.6s,mb3.5,baz=102,slow=6.3,SNR=7.4						
ILAR	Eielson Array	83.25	22	P	P	19 47 26.6	-1.3
	0.8nm,0.6s,mb3.7,baz=252,slow=5.3,SNR=12						
MAW	Mawson	84.51	203	P	P	19 47 33.1	-1.0
	0.9nm,0.5s,mb4.0,baz=79,slow=9.9,SNR=4.2						
INK	Inuvik	89.60	21	*e*P	P	19 47 58.6	-0.1
	42nm,0.5s						
NVAR	Mina Array Bea	91.68	52	P	P	19 48 10.4	+1.2
	0.6nm,0.7s,mb3.9,baz=250,slow=3.4,SNR=4.5						
YKA	Yellowknife Ar	96.23	28	P	P	19 48 29.0	-0.3
	0.5nm,0.5s,mb4.2,baz=265,slow=4.5,SNR=5.7						
BDFB	Brasilia	148.15	135	PKPbc	PKPdf	19 54 47.6	+4.1
	2.0nm,0.4s,baz=225,slow=2.9,SNR=3.7						

*IDC **08** 19:49:07.5±14.0, 20.76S×176.24W, h342^{km}±137^{km}, mb3.0/3, mb1 3.3/4, mb1mx3.2/14, mbtmp3.9/4, Error ellipse: s-maj=152.2km s-min=40.1km az=147.0*

ISC 08 19:49:07.4±1.1, 20.6S±0.3×176.4W±0.2, h350^{km}, n15, σ0^{s}41/9, mb3.2/3, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	16.05	262	P	P	19 52 35.5	-0.1
	0.2nm,0.3s,baz=94,slow=16,SNR=4.5						
STKA	Stephens Creek	39.09	245	P	P	19 56 03.3	+0.1
	2.1nm,0.8s,mb3.4,baz=88,slow=10,SNR=4.0						
WRA	Warramunga Arr	46.07	262	P	P	19 56 59.4	+0.1
	0.9nm,0.7s,mb3.0,baz=96,slow=6.1,SNR=7.2						
NVAR	Mina Array Bea	80.08	43	P	P	20 00 40.3	0.0
	0.3nm,0.6s,mb3.2,baz=202,slow=9.1,SNR=4.1						
SNAA	Sanae	87.85	178		P	20 01 18.9	+0.7
SNAA	Sanae	87.85	178		Px	20 01 28.5	
SNAA	Sanae	87.85	178		Px	20 01 39.6	
VNA3	Neumayer Olymp	87.93	176		P	20 01 18.0	-0.6
VNA3	Neumayer Olymp	87.93	176		P	20 01 24.6	+6.0
VNA3	Neumayer Olymp	87.93	176		Px	20 01 37.9	
VNA3	Neumayer Olymp	87.93	176		Px	20 01 46.8	
VNA2	Neumayer--Watz	88.39	176		P	20 01 19.9	-0.8
VNA2	Neumayer--Watz	88.39	176		P	20 01 26.4	+5.7
VNA2	Neumayer--Watz	88.39	176		Px	20 01 41.0	
VNA2	Neumayer--Watz	88.39	176		Px	20 01 45.4	

*IDC **08** 19:49:26.4±6.7, 31.59N×66.72E, mb3.7/3, mb1 3.7/4, mb1mx3.5/21, mbtmp3.7/4, ML3.4/1, Error ellipse: s-maj=115.7km s-min=50.0km az=8.0*
*NEIC **08** 19:49:29.1±3.0, 31.71N×66.83E, h10^{km}, mb3.6/2, Error ellipse: s-maj=44.6km s-min=28.2km az=183.0*
*MOS **08** 19:49:34.5±0.7, 32.07N×67.07E, h33^{km}, mb3.7/5, Error ellipse: s-maj=80.3km s-min=19.2km az=71.9*

ISC 08 19:49:28.9±3.7, 31.9N±0.4×67.0E±0.2, h10^{km}, n13, σ0^{s}63/13, mb3.6/6, 1D, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	12.30	27	*e*Pn	P	19 52 26.4	-0.6
	2.0nm,0.6s						
MKAR	Makanchi Array	18.99	34	P	P	19 53 52.5	-0.4
	0.1nm,0.3s,baz=212,slow=9.0,SNR=11						
BVAR	Borovoye Array	21.28	6	P	P	19 54 18.1	+0.5
	1.4nm,0.5s,mb3.6,baz=187,slow=8.0,SNR=9.8						
BVAR	Borovoye Array	21.28	6	P	P	19 54 18.1	+0.5
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRVK	Borovoye	21.31	6	*e*P	P	19 54 18.5	+0.6
	comp=Z,2.3nm,0.8s,mb3.6						
BRVK	Borovoye	21.31	6	*e*P	P	19 54 18.5	+0.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.5						
ORR	Orenburg	21.67	339	⇓*i*P	P	19 54 21.9	+0.4
ORR				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.0						
CHKZ	Chkalovo	21.95	6	*e*P	P	19 54 24.7	+0.4
	comp=Z,1.5nm,0.7s,mb3.5						
CHKZ	Chkalovo	21.95	6	*e*P	P	19 54 24.7	+0.4
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.4						
SONM	Songino Array	33.80	50	P	P	19 56 13.4	+0.4
	comp=Z,0.5nm,0.8s,mb3.5,baz=260,slow=9.0,SNR=3.8						
SONM	Songino Array	33.80	50	P	P	19 56 13.4	+0.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	ARCESS Array B	44.26	341	P	P	19 57 38.5	-1.3
	comp=Z,1.5nm,0.7s,mb3.8,baz=124,slow=8.7,SNR=7.1						
ARCES	ARCESS Array B	44.26	341	P	P	19 57 38.5	-1.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						

*ISK **08** 19:54:54.5, 38.15N×26.66E, h15^{km}, MD3.0*
*ATH **08** 19:54:54.7, 38.14N×26.60E, h36^{km}±5^{km}, MD3.1/3*
*NEIC **08** 19:54:54.0, 38.15N×26.65E, h15^{km}, MD3.1(ATH), MD3.0(ISK), After ISK.*
*CSEM **08** 19:54:55.0±0.1, 38.16N×26.69E, h20^{km}, MD3.0, Error ellipse: s-maj=2.7km s-min=1.8km az=113.0*

ISC 08 19:54:53.2±1.1, 38.15N±0.03×26.55E±0.05, h1^{km}±8^{km}, n20, σ0^{s}78/30, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.22	10	*i* P	Pg	19 54 57.5	-0.1
URLA				*i* S	Sg	19 55 00.6	+0.1
BLCB	Balcova	0.46	58	*i* PG	Pg	19 55 02.5	+0.2
BLCB				*i* SG	Sg	19 55 08.2	-0.2
SMG	Samos	0.49	152	⇑*i*PB	Pb	19 55 05.1	+0.8
SMG				*e*SB	Sb	19 55 13.1	+1.4
IZM	Izmir	0.62	66	*i* PG	Pg	19 55 05.8	+0.3
IZM				*i* SG	Sg	19 55 14.4	+0.6
KDAG	Bornova	0.62	65	*i* P	Pg	19 55 04.7	-0.9
KDAG				*i* S	Sg	19 55 13.2	-0.8
PRK	Paraskevi	1.12	349	*e*PN	Pn	19 55 15.7	-0.2
PRK				*e*SN	Sn	19 55 31.3	-0.8
AYDN	Tasoluk	1.16	114	*i* P	Pb	19 55 16.5	+0.8
AYDN				*i* S	Sb	19 55 31.8	+0.7
AYVA	Ayvalik	1.17	6	*i* P	Pb	19 55 17.8	+2.0
AYVA				*i* S	Sb	19 55 32.6	+1.3
AKS	Akhisar	1.23	53	PN	Pn	19 55 16.9	-0.6
BODT	Bodrum	1.24	150	PN	Pn	19 55 17.3	-0.3
MLSB	Milas	1.29	131	*e*PN	Pn	19 55 17.8	-0.6
APE	Apeiranthos	1.34	217	*e*PN	Pn	19 55 20.3	+1.2
APE	Apeiranthos	1.34	217	*e*PN	Pn	19 55 19.2	+0.1
DAT	Datca	1.64	150	*e*PN	Pn	19 55 22.8	-0.4
YER	Yerkesik	1.71	126	*e*PN	Pn	19 55 23.3	-1.0
BALB	Balikesir	1.82	34	*e*PN	Pn	19 55 25.3	-0.6
SANT	Santorini	1.97	206	*e*Pn	Pn	19 55 28.3	+0.3
SANT				*e*Sn	Sn	19 55 52.9	-0.9
SANT	Santorini	1.97	206	*e*Pn	Pn	19 55 28.3	+0.2
SANT				*e*Sn	Sn	19 55 52.9	-0.8
DALT	Dalyan (Mudla)	2.16	129	*e*PN	Pn	19 55 29.7	-1.0
DST	Dursunbey	2.18	47	*e*PN	Pn	19 55 30.7	-0.4

WEL 08 20:35:39.0±0.3, 37.93S×176.29E, h164^{km}±2^{km}, ML3.5/10, 2C-2D, Error ellipse: s-maj=4.1km s-min=2.9km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.73	117	⇑PN	P	20 36 03.2	-0.3
URZ				SN	S	20 36 22.0	-0.4
BKZ	Black Stump Fm	1.25	173	⇓PN	P	20 36 07.3	-0.2
BKZ				SN	S	20 36 28.3	-1.3
WNVZ	Wahianoa	1.50	201	PN	P	20 36 10.0	0.0
WNVZ				SN	S	20 36 33.9	0.0
MOVZ	Moawhango	1.54	196	PN	P	20 36 09.9	-0.5
MOVZ				SN	S	20 36 34.4	-0.2
KNZ	Kokohu	1.54	136	PN	P	20 36 10.3	-0.1
KNZ				SN	S	20 36 33.4	-1.3
PXZ	Pawanui	2.15	168	SN	S	20 36 44.4	-2.0
BFZ	Birch Farm	2.75	181	PN	P	20 36 22.7	-1.8
MRZ	Mangatainoka R	2.79	191	PN	P	20 36 22.4	-2.5
MRZ				SN	S	20 36 55.6	-4.6
KIW	Kapiti Island	3.12	200	PN	P	20 36 26.2	-2.9
KIW				SN	S	20 37 03.6	-4.0
MTW	Mount Morrison	3.28	190	PN	P	20 36 27.9	-3.3
MTW				SN	S	20 37 06.1	-5.2
CAW	Cannon Point	3.31	196	PN	P	20 36 28.4	-3.2
PAWZ	Paruwai Farm	3.51	191	SN	S	20 37 11.1	-5.5
MSWZ	Moikau Station	3.58	193	⇑PN	P	20 36 31.2	-3.7
TCW	Tory Channel	3.63	205	PN	P	20 36 32.3	-3.4
KHZ	Kahutara	4.95	204	⇓PN	P	20 36 48.7	-4.2

*NEIC **08** 20:39:20.2, 27.88S×71.19W, h40^{km}, After GUC.*

GUC 08 20:39:20.2±0.6, 27.88S×71.19W, h40^{km}±3^{km}, ML4.4, 1C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDCH	Caldera	0.86	22	*i* P	P	20 39 36.1	+0.2
CDCH				*i* S	S	20 39 48.4	+0.9
CPCH	Copiapo	0.91	55	*e*P	P	20 39 36.8	+0.2
CPCH				*i* S	S	20 39 49.7	+1.1
CPCH				AMP		20 39 55.4	
	comp=N,15µm,0.1s						
CRCH	Chaqaral	1.61	19	⇑*i*P	P	20 39 46.9	+0.3
CRCH				*i* S	S	20 40 07.5	+1.2
LSCH	La Serena	2.03	181	*i* P	P	20 39 53.2	+0.6
LSCH				*i* S	S	20 40 17.5	+0.7
TLL	Tololo Astrono	2.31	172	*i* P	P	20 39 57.1	+0.5
TLL				*i* S	S	20 40 25.8	+1.8
TLL				AMP		20 40 33.6	
	comp=E,2µm,0.6s						
CMCH	Combarbala	3.29	177	AMP		20 41 09.2	
	comp=N,2µm,0.8s						
CPN1	Cerro Paranal	3.31	12	AMP		20 41 11.4	
	comp=N,205nm,0.5s						
CEN1	Los Morros	4.55	12	AMP		20 41 43.0	
	comp=E,66nm,0.4s						
FCH	Farellones	5.49	172	AMP		20 42 08.2	
	comp=E,80nm,0.7s						

KRSC 08 20:54:38.2±0.1, 54.63N×162.25E, h20^{km}±6^{km}, ML4.1, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUMR	Tumrok	1.38	299	*i* P	Pn	20 55 02.4	-0.2
KMNR	Kamenistaya	1.61	315	*e*P	Pn	20 55 06.1	+0.1
KBTR	Krutoberegovo	1.61	11	*i* P	Pn	20 55 06.4	+0.4
KBTR				*e*S	Sn	20 55 27.1	+0.7
ZLN	Zelenaya	1.62	330	*i* P	Pn	20 55 06.2	+0.2
KBG	Krutoberegovo	1.65	9	*e*P	Pn	20 55 07.1	+0.6
KBG				*e*S	Sn	20 55 28.1	+0.9
LGNR	Loginova	1.71	329	*e*P	Pn	20 55 07.9	+0.6
CIRR	Tsirk	1.72	331	*e*P	Pn	20 55 07.8	+0.3
KPT	Kopyto	1.77	320	*e*P	Pn	20 55 08.5	+0.3
KRSR	Krestovskiy	1.86	330	*e*P	Pn	20 55 09.6	+0.1
KLY	Klyuchi	1.92	332	*e*P	Pn	20 55 09.5	-0.8
KLY				*e*S	Sn	20 55 32.4	-1.6
SMKR	Semkarok	2.01	348	*e*P	Pn	20 55 11.6	0.0
SMKR				*e*S	Sn	20 55 35.9	-0.4
SPN	Mys Shipunski	2.02	222	*e*S	Sn	20 55 36.4	-0.4
SRKR	Sorokina	2.12	344	*e*P	Pn	20 55 13.1	-0.1
SRKR				*e*S	Sn	20 55 38.6	-0.6
SRDR	Sredinnyy	2.22	321	*e*P	Pn	20 55 16.0	+1.3
BKI	Bering	2.22	73	*e*S	Sn	20 55 39.1	-2.8
BKI				Smax			
	80nm,0.3s						
NLC	Nalytchevo	2.26	231	*e*S	Sn	20 55 41.7	-1.0
ESO	Esso	2.41	304	*e*P	Pn	20 55 17.1	-0.3
ESO				Smax			
	60nm,0.4s						
SMAR	Somma	2.46	238	*e*P	Pn	20 55 18.3	+0.3
UGLR	Uglovaya	2.48	236	*e*P	Pn	20 55 18.6	+0.3
AVH	Avacha	2.49	238	*e*P	Pn	20 55 19.2	+0.8
KOK	Koryaka	2.52	239	*e*P	Pn	20 55 19.4	+0.5
PET	Petropavlovsk	2.67	234	*e*P	Pn	20 55 22.3	+1.2
GNL	Ganaly	2.70	251	*e*P	Pn	20 55 21.9	+0.4
KRMR	Karymshinskiy	3.04	235	*e*S	Sn	20 56 01.4	-1.1
RUS	Russkaya	3.13	227	*e*S	Sn	20 56 02.6	-2.3
GRL	Gorelyy	3.25	232	*e*P	Pn	20 55 30.4	+1.2
APC	Apacha	3.47	243	*e*P	Pn	20 55 33.0	+0.6

CASC 08 21:02:39.4±1.5, 10.44N×86.54W, h27^{km}±5^{km}, MD3.6, 6C-6D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	San Juan del S	1.09	39	⇑*e*P	Pn	21 02 58.6	-0.4
LIM1	Limonal	1.29	78	⇑*e*P	Pn	21 03 01.8	-0.2
LIM1				*i* S	Sn	21 03 19.0	+0.5
MADN	Villa Maderas	1.39	46	⇑*e*P	Pn	21 03 03.4	+0.1
CONN	Concepcion	1.44	39	⇑*e*P	Pn	21 03 03.7	-0.4
TICN	Ticuantepe	1.62	11	⇓*e*P	Pn	21 03 06.6	0.0
XAVN	Gruta Xavier	1.72	7	⇓*e*P	Pn	21 03 07.5	-0.5
MGAN	Managua	1.73	10	*e*S	Sn	21 03 27.4	-2.0
COPN	Copaltepe	1.73	358	⇓*e*P	Pn	21 03 07.5	-0.8
MOMJ	Momotombo	1.96	0	*e*P	Pn	21 03 10.8	-0.8
LEON	Leon	2.00	350	⇑*e*P	Pn	21 03 11.2	-0.9
MIRN	Miramar	2.00	355	⇑*e*P	Pn	21 03 11.3	-0.8
CNGN	Cerro Negro	2.06	356	*e*P	Pn	21 03 12.8	-0.1
PYTN	Playitas	2.14	13	*e*P	Pn	21 03 13.3	-0.8
TEL3	Telica 3	2.14	352	⇓*e*P	Pn	21 03 13.6	-0.6
TELN	Telica	2.17	353	⇓*e*P	Pn	21 03 14.5	-0.1
CRIN	San Cristobal	2.31	348	⇓*e*P	Pn	21 03 15.7	-0.8

*MOS **08** 21:10:25.3±0.5, 44.29N×12.44E, h10^{km}, mb3.8/1, Error ellipse: s-maj=16.9km s-min=6.1km az=88.0*
*ROM **08** 21:10:26.5±0.1, 44.15N×12.25E, h20^{km}±1^{km}, Md3.4/8, Ml3.6/31, Error ellipse: s-maj=2.2km s-min=1.5km az=165.0*
*NEIC **08** 21:10:26.5, 44.15N×12.25E, h20^{km}, ML3.9(SZGRF), ML3.8(STR), ML3.7(LDG), ML3.6(ROM), After ROM.*
*CSEM **08** 21:10:27.1±0.0, 44.11N×12.28E, h15^{km}, ML3.9/33, Error ellipse: s-maj=1.0km s-min=0.9km az=30.0*
*LDG **08** 21:10:28.6±0.1, 44.26N×12.23E, h10^{km}, Ml3.7/38, Error ellipse: s-maj=4.0km s-min=2.5km az=52.0*
*PRU **08** 21:10:28.1, 44.38N×12.55E*
*IDC **08** 21:10:28.6±2.1, 44.43N×12.65E, mb3.4/1, mb1 3.7/7, mb1mx3.6/23, mbtmp3.6/7, ML3.6/6, Error ellipse: s-maj=20.5km s-min=18.6km az=173.0*
*STR **08** 21:10:31.5±1.7, 44.32N×12.09E, h10^{km}±1^{km}, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*ZUR **08** 21:10:49.2, 45.41N×10.76E, h5^{km}±5^{km}, ML2.9/2*

ISC 08 21:10:27.0±0.3, 44.24N±0.01×12.23E±0.02, h19^{km}±3^{km}, n308, σ1^{s}41/423, mb3.5/1, 32C-36D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRSN	Barisano	0.12	292	⇑*i*Pg	Pb	21 10 32.0	+1.1
SFI	Santa Sofia	0.43	219	⇓*e*Pg	Pb	21 10 34.9	-0.9
SFI				Sg	Sb	21 10 41.9	+0.1
	9µm,0.4s						
PGD	Poggio Sodo	0.52	225	⇓*i*Pg	Pb	21 10 36.4	-0.8
PESA	Pesaro	0.53	124	Pg	Pb	21 10 36.8	-0.7
PESA				Sg	Sb	21 10 45.7	+1.1
	3µm,0.4s						
VMG	Vicchio	0.57	241	⇑*i*Pg	Pb	21 10 37.6	-0.4
CRE	Caprese Michel	0.65	198	Pg	Pb	21 10 38.1	-1.4
CRE				Sg	Sb	21 10 48.0	-0.1
	4µm,0.6s						
SEI	Scarperia	0.66	254	⇑Pg	Pb	21 10 39.2	-0.3
	1µm,0.3s						
FIU	Minerbio Fiu	0.66	307	Pg	Pb	21 10 44.0	+4.3
FIU				Sg	Sb	21 10 56.3	+8.0
FSSB	Fossombrone	0.68	144	⇓*e*Pg	Pb	21 10 38.4	-1.5
	268nm,0.4s						
BADI	Badiali	0.73	179	⇓*e*Pg	Pb	21 10 39.3	-1.5
BADI				Sg	Sb	21 10 49.8	-0.5
	4µm,0.5s						
FNVD	Fontana Vidola	0.80	265	Pg	Pb	21 10 42.4	+0.4
FNVD				Sg	Sb	21 10 55.3	+3.0
	3µm,0.6s						
ARV	Arcevia	0.90	145	Pg	Pb	21 10 42.4	-1.4
ARVD	Arcevia	0.90	145	Pg	Pb	21 10 42.7	-1.1
ARVD				Sg	Sb	21 10 56.7	+1.3
	2µm,0.7s						
ZCCA	Zocca	0.91	277	Pg	Pb	21 10 46.1	+2.3
	2µm,1.2s						
RAVA	Ravarino	0.95	303	⇑*e*Pg	Pb	21 10 48.5	+4.0
RAVA				Sg	Sb	21 11 04.8	+8.2
	4µm,0.5s						
MURB	Monte Urbino	1.00	168	Pg	Pb	21 10 44.1	-1.3
	5µm,0.7s						
CSNT	Castellina Chi	1.02	222	Pg	Pb	21 10 45.1	-0.7
CING	Cingoli	1.11	141	Pg	Pb	21 10 46.9	-0.4
CING				Sg	Sb	21 11 04.1	+2.7
	1µm,0.5s						
SNTG	Esanatoglia	1.11	152	⇓*e*Pg	Pb	21 10 46.1	-1.2
GSCL	Gusciola	1.18	276	Pg	Pn	21 10 51.8	+3.1
	191nm,0.4s						
BDI	Bagni Di Lucca	1.19	262	Pg	Pn	21 10 49.6	+0.9
BDI				Sg	Sb	21 11 07.9	+4.3
	1µm,0.6s						
TEOL	Teolo	1.19	341	⇑*e*Pg	Pn	21 10 49.7	+0.9
AOI	Ancona	1.21	124	Pg	Pn	21 10 49.3	+0.3
AOI				Sg	Sb	21 11 07.7	+3.5
SBPO	S.Benedetto Po	1.24	311	Pg	Pn	21 10 52.0	+2.6
	4µm,0.8s						
IESO	Jesolo	1.30	10	⇑*i*Pg	Pn	21 10 51.5	+1.2
ERBM	Eremo	1.31	278	Pg	Pn	21 10 53.8	+3.2
	961nm,0.8s						
SARO	Sassorosso	1.31	268	P	Pn	21 10 53.1	+2.6
SARO				S	Sb	21 11 10.3	+3.0
SARO	Sassorosso	1.31	268	P	Pn	21 10 53.1	+2.6
SARO				S	Sb	21 11 10.3	+3.0
VLC	Villacollemand	1.33	267	Pg	Pn	21 10 52.4	+1.7
VLC				Sg	Sn	21 11 12.3	+4.3
	890nm,1.0s						
VLC	Villacollemand	1.33	267	*e*Pn	Pn	21 10 52.0	+1.3
VLC				*e*Pg	Pn	21 10 53.5	+2.7
VLC				*e*Sg	Sn	21 11 10.9	+2.9
VLC	Villacollemand	1.33	267	*e*Pn	Pn	21 10 52.0	+1.3
VLC	Villacollemand	1.33	267	Pg	Pn	21 10 52.4	+1.7
VLC				Sg	Sn	21 11 12.3	+4.3
	890nm,1.0s						
PII	Pisa	1.33	248	Pg	Pn	21 10 50.8	0.0
SACS	San Casciano d	1.41	190	⇓*i*Pg	Pn	21 10 51.7	-0.2
	1µm,0.9s						
GRFL	Gerfalco	1.42	220	Pg	Pn	21 10 52.0	-0.1
	99nm,0.4s						
VALM		1.43	275	P	Pn	21 10 55.1	+3.0
VALM				S	Sn	21 11 13.7	+3.2
VALM		1.43	275	P	Pn	21 10 55.1	+3.0
VALM				S	Sn	21 11 13.7	+3.2
ARCI	Arcidosso	1.49	202	⇓*e*Pg	Pn	21 10 52.6	-0.5
ARCI				Sg	Sn	21 11 14.6	+2.4
	1µm,1.0s						
VINC	Vinca	1.50	267	P	Pn	21 10 55.4	+2.3
VINC				S	Sn	21 11 14.2	+1.9
VINC	Vinca	1.50	267	P	Pn	21 10 55.4	+2.3
VINC	Vinca	1.50	267	P	Pn	21 10 55.4	+2.3
VINC				S	Sn	21 11 14.1	+1.8
NRCA	Norcia	1.55	155	⇓*e*Pg	Pn	21 10 53.5	-0.4
BACM		1.55	272	P	Pn	21 10 56.4	+2.5
BACM				S	Sn	21 11 15.9	+2.3
BACM		1.55	272	P	Pn	21 10 56.4	+2.5
BACM				S	Sn	21 11 15.9	+2.3
GRAM		1.57	280	P	Pn	21 10 57.4	+3.1
GRAM				S	Sn	21 11 17.4	+3.3
GRAM		1.57	280	P	Pn	21 10 57.3	+3.1
GRAM				S	Sn	21 11 17.4	+3.2
MTLO	Montello	1.58	357	⇓*i*Pg	Pn	21 10 55.0	+0.8
MTLO	Montello	1.58	357	*i* Pg	Pn	21 10 55.0	+0.7
CGRP	Cima Grappa	1.67	350	⇓*e*Pg	Pn	21 10 56.4	+0.8
CGRP				*e*Sg	Sn	21 11 18.1	+1.4
CODM		1.71	276	P	Pn	21 10 59.0	+2.7
CODM				S	Sn	21 11 20.2	+2.4
CODM		1.71	276	P	Pn	21 10 59.0	+2.7
CODM				S	Sn	21 11 20.2	+2.4
LNSS	Leonessa	1.74	160	Pg	Pn	21 10 57.6	+1.0
	641nm,0.4s						
CAE	Caneva	1.77	5	⇑*i*Pg	Pn	21 10 57.6	+0.5
TLI	Talmassons	1.79	20	⇓*i*Pg	Pn	21 10 57.6	+0.2
SAL	Salo	1.82	319	⇑*i*Pg	Pn	21 10 59.3	+1.5
	2µm,0.8s						
TRI	Trieste	1.83	36	Pg	Pn	21 10 57.5	-0.4
	220nm,0.2s						
CTI	Castel Tesino	1.85	347	⇓*i*Pg	Pn	21 10 59.3	+1.1
	301nm,0.3s						
GROG	Isola di Gorgo	1.88	245	Pg	Pn	21 10 58.7	+0.1
	313nm,0.5s						
MNS	Montasola	1.88	170	Pg	Pn	21 10 58.7	0.0
	120nm,0.4s						
TERO	Teramo	1.90	148	Pg	Pn	21 11 00.0	+1.1
	776nm,0.7s						
NVLJ	Novalja	1.92	79	*i* Pn	Pn	21 10 59.0	-0.2
NVLJ				*i* Sn	Sn	21 11 22.6	-0.5
NVLJ				*i* Sg	Sn	21 11 24.4	+1.4
NVLJ	Novalja	1.92	79	*i* Pn	Pn	21 10 59.0	-0.2
NVLJ				*i* Sn	Sn	21 11 22.5	-0.6
NVLJ				*i* Sg	Sn	21 11 24.4	+1.3
MLNI	Malnisio	1.93	8	⇓*e*Pg	Pn	21 10 59.7	+0.4
SC2M	Scurtabr	1.94	276	P	Pn	21 11 02.1	+2.6
SC2M				S	Sn	21 11 25.4	+1.8
MAON	Monte Argentar	1.98	204	Pg	Pn	21 11 00.8	+0.7
	267nm,1.1s						
FAU	Forcella Aurin	2.00	355	⇑*i*Pg	Pn	21 11 01.1	+0.7
FAU	Forcella Aurin	2.00	355	*i* Pg	Pn	21 11 01.0	+0.7
CSO	Casso	2.03	2	⇓*e*Pg	Pn	21 11 00.9	+0.1
CSO				*e*Sg	Sn	21 11 26.8	+0.8
BOB	Bobbio (Coli)	2.06	286	⇑*i*Pg	Pn	21 11 04.0	+2.8
	252nm,0.8s						
AQU	L'Aquila	2.07	155	Pg	Pn	21 11 02.8	+1.4
	1µm,1.4s						
MPRI	Monte Prat	2.07	15	⇓*i*Pg	Pn	21 11 02.1	+0.7
MPRI				*i* Sg	Sn	21 11 28.7	+1.8
FIAM	Fiamignano	2.08	161	Pg	Pn	21 11 02.5	+1.1
	540nm,0.9s						
BUA	Buia	2.08	17	⇓*i*Pg	Pn	21 11 01.9	+0.5
BUA				*i* Sg	Sn	21 11 28.2	+1.2
BUA	Buia	2.08	17	*i* Pg	Pn	21 11 02.0	+0.6
BUA				*i* Sg	Sn	21 11 28.2	+1.2
BAD	Bernadia	2.12	19	⇓*i*Pg	Pn	21 11 02.2	+0.1
BAD				*i* Sg	Sn	21 11 28.5	+0.3
VOJS	Vojsko	2.14	33	*i* Pn	Pn	21 11 02.0	-0.4
VOY	Vojsko	2.14	33	*e*Sn	Sn	21 11 30.5	+1.8
GMNA	Gemona	2.16	19	⇓*i*Pg	Pn	21 11 02.6	0.0
	539nm,0.3s						
BOO	Bordano	2.17	16	⇓*e*Pg	Pn	21 11 03.0	+0.2
DRE	Drenchia	2.18	27	⇓*i*Pg	Pn	21 11 02.8	-0.1
DRE				*i* Sg	Sn	21 11 29.8	+0.2
TOLF	Tolfa	2.18	184	Pg	Pn	21 11 02.6	-0.4
	146nm,0.7s						
MABI	Malga Bissina	2.18	327	Pn	Pn	21 11 04.0	+1.0
	233nm,0.8s						
MTCE	Montecelio	2.25	170	Pn	Pn	21 11 04.2	+0.3
	203nm,0.9s						
CADS	Cadrg	2.25	28	*i* Pn	Pn	21 11 03.8	-0.2
AFL	Alpe Faloria	2.29	359	⇓*i*Pg	Pn	21 11 05.7	+1.2
PTCC	Patocco-Chiusa	2.31	20	⇓*e*Pg	Pn	21 11 04.7	0.0
	128nm,0.3s						
GENL	Genova Univers	2.34	275	P	Pn	21 11 06.3	+1.0
GENL	Genova Univers	2.34	275	P	Pn	21 11 06.3	+1.0
APPI	Appiano	2.35	343	Pn	Pn	21 11 06.6	+1.3
	752nm,0.8s						
CERT	Cerreto	2.36	166	Pn	Pn	21 11 05.7	+0.3
	301nm,0.9s						
MDI	Monti di Nese	2.36	312	Pn	Pn	21 11 06.1	+0.7
	259nm,0.5s						
ZOU	Zoufplan	2.38	12	⇓*e*Pg	Pn	21 11 06.3	+0.6
ZOU				*e*Sg	Sn	21 11 35.6	+1.0
PTQR	Pietraquaria	2.38	158	Pn	Pn	21 11 06.6	+0.8
	33nm,0.4s						
FVI	Forni Avoltri	2.39	9	Pn	Pn	21 11 06.9	+1.0
	318nm,0.5s						
PLRO	Paularo	2.40	15	⇓*i*Pg	Pn	21 11 06.5	+0.4
PLRO				*i* Sg	Sn	21 11 35.7	+0.5
PLRO	Paularo	2.40	15	*i* Pg	Pn	21 11 06.4	+0.3
PLRO				*i* Sg	Sn	21 11 35.7	+0.5
LSR	Lussari	2.42	22	⇓*i*Pg	Pn	21 11 06.4	+0.1
VISS	Visnje	2.42	49	*i* Pn	Pn	21 11 06.1	-0.3
LJU	Ljubljana	2.43	41	*e*Pn	Pn	21 11 06.4	-0.1
LJU				*e*Pg	Pn	21 11 14.1	+7.6
LJU				*e*Sn	Sn	21 11 36.0	0.0
LJU				*e*Sg	Sn	21 11 47.5	+12
LJU	Ljubljana	2.43	41	*e*Pn	Pn	21 11 06.4	-0.1
LJU				*e*Pg	Pn	21 11 14.0	+7.5
LJU				*e*Sn	Sn	21 11 36.0	0.0
LJU				*e*Sg	Sn	21 11 47.5	+12
LJU	Ljubljana	2.43	41	*e*Pn	Pn	21 11 06.4	-0.1
LJU				*e*Sn	Sn	21 11 36.0	0.0
BOJS	Bojanci	2.49	58	*i* Pn	Pn	21 11 07.1	-0.3
SEST	Monte Rota	2.51	360	Pn	Pn	21 11 09.1	+1.5
	489nm,0.8s						
VVLD	Villa Vallelon	2.58	156	Pn	Pn	21 11 10.0	+1.4
	400nm,0.9s						
BRMO	Bormio	2.59	330	Pn	Pn	21 11 10.6	+1.8
	246nm,0.7s						

PCP	**Pian Castagno**	**2.66**	**278**	P	**Pn**	**21 11 11.4**	**+1.7**
PCP	**Pian Castagno**	**2.66**	**278**	P	**Pn**	**21 11 11.5**	**+1.7**
BERNI	**Berninapass**	**2.67**	**325**	⇑*i*P*	**Pb**	**21 11 11.5**	**-2.4**
FUORN	**Ofenpass**	**2.75**	**331**	Pn	**Pn**	**21 11 13.3**	**+2.2**
FUORN	**Ofenpass**	**2.75**	**331**	⇓*e*P*	**Pb**	**21 11 13.1**	**-2.2**
OBKA	**Obir**	**2.80**	**35**	⇑*e*Pn	**Pn**	**21 11 12.2**	**+0.5**
	comp=Z,3.4nm,0.2s,SNR=14						
OBKA	**Obir**	**2.80**	**35**	⇓*i*Sn	**Sn**	**21 11 45.4**	**+0.1**
	comp=E,264nm,0.5s						
OBKA	**Obir**	**2.80**	**35**	Pn	**Pn**	**21 11 12.2**	**+0.5**
	14nm,3.0s						
OBKA				Sn	**Sn**	**21 11 41.2**	**-4.1**
MUGIO	**Muggio**	**2.81**	**308**	⇑*i*Pn	**Pn**	**21 11 12.1**	**+0.1**
FIN	**Finale Ligure**	**2.89**	**271**	Pn	**Pn**	**21 11 13.5**	**+0.4**
	92nm,0.4s						
PGF	**Pioggiola**	**2.90**	**235**	*e*Pn	**Pn**	**21 11 12.9**	**-0.3**
PGF				*e*Sn	**Sn**	**21 11 47.1**	**-0.8**
	120nm,0.4s						
CII	**Carovilli**	**2.94**	**148**	*e*Pb	**Pb**	**21 11 18.9**	**+0.4**
CII				*e*Pg	**Pn**	**21 11 23.7**	**+10**
VAI	**Varese**	**2.94**	**305**	Pn	**Pn**	**21 11 14.2**	**+0.4**
KBA	**Koelnbreinsper**	**2.94**	**15**	⇓*e*Pn	**Pn**	**21 11 14.9**	**+1.1**
	comp=Z,48nm,0.5s,SNR=117						
KBA	**Koelnbreinsper**	**2.94**	**15**	⇓*i*Sn	**Sn**	**21 11 49.9**	**+0.9**
	comp=E,90nm,0.4s						
VDL	**Val di Lei**	**2.97**	**320**	⇑*i*Pn	**Pn**	**21 11 15.9**	**+1.7**
RORO		**3.00**	**269**	P	**Pn**	**21 11 15.0**	**+0.4**
RORO				S	**Sn**	**21 11 47.2**	**-3.2**
RORO		**3.00**	**269**	P	**Pn**	**21 11 15.0**	**+0.4**
TUE	**Stuetta**	**3.02**	**319**	Pn	**Pn**	**21 11 16.3**	**+1.4**
	185nm,0.8s						
DAVOX	**Davos**	**3.03**	**328**	Pn	**Pn**	**21 11 17.7**	**+2.7**
	15nm,0.3s,baz=144,slow=14,SNR=91						
DAVOX				Sn	**Sn**	**21 11 54.7**	**+3.5**
	21nm,0.3s,baz=322,slow=19,SNR=8.3						
DAVOX				Lg		21 12 07.5	
	19nm,0.3s,baz=328,slow=21,SNR=8.7						
DAVOX	**Davos**	**3.03**	**328**	⇓*i*Pn	**Pn**	**21 11 17.5**	**+2.5**
WTTA	**Wattenberg**	**3.05**	**352**	*i* Pn	**Pn**	**21 11 17.0**	**+1.7**
	comp=Z,9.7nm,0.1s,SNR=11						
WTTA	**Wattenberg**	**3.05**	**352**	⇑*i*Pg	**Pn**	**21 11 26.6**	**+11**
	comp=Z,21nm,0.2s						
WTTA	**Wattenberg**	**3.05**	**352**	⇑*i*Sn	**Sn**	**21 11 54.2**	**+2.4**
	comp=N,159nm,0.6s						
WTTA	**Wattenberg**	**3.05**	**352**	⇑*i*Sg	**Sn**	**21 12 06.5**	**+15**
	comp=N,155nm,0.5s						
WTTA	**Wattenberg**	**3.05**	**352**	Pn	**Pn**	**21 11 17.0**	**+1.6**
	10.0nm,8.0s						
WTTA				Sn	**Sn**	**21 11 54.2**	**+2.4**
SQTA	**Sankt Quirin**	**3.06**	**347**	⇓*i*Pn	**Pn**	**21 11 17.2**	**+1.7**
	comp=Z,7.9nm,0.3s,SNR=183						
SQTA	**Sankt Quirin**	**3.06**	**347**	⇑*i*Pg	**Pn**	**21 11 26.2**	**+11**
	comp=Z,106nm,0.4s						
SQTA	**Sankt Quirin**	**3.06**	**347**	⇑*i*Sn	**Sn**	**21 11 56.2**	**+4.2**
	comp=Z,88nm,0.2s						
SQTA	**Sankt Quirin**	**3.06**	**347**	⇑*i*Sg	**Sn**	**21 12 07.0**	**+15**
	comp=Z,178nm,0.5s						
SQTA	**Sankt Quirin**	**3.06**	**347**	Pn	**Pn**	**21 11 17.2**	**+1.7**
	183nm,1.0s						
SQTA				Sn	**Sn**	**21 11 56.2**	**+4.1**
WATA	**Walderalm**	**3.13**	**352**	*i* Pn	**Pn**	**21 11 18.5**	**+2.0**
	comp=Z,19nm,0.1s,SNR=34						
WATA	**Walderalm**	**3.13**	**352**	Pn	**Pn**	**21 11 18.5**	**+2.0**
	34nm,2.0s						
WATA				Sn	**Sn**	**21 11 57.6**	**+3.9**
ROB	**Roburent**	**3.13**	**273**	P	**Pn**	**21 11 17.1**	**+0.7**
ROB	**Roburent**	**3.13**	**273**	P	**Pn**	**21 11 17.1**	**+0.6**
IMI	**Imperia**	**3.15**	**265**	Pn	**Pn**	**21 11 17.1**	**+0.4**
	45nm,0.4s						
MONC	**Moncucco Torin**	**3.18**	**287**	Pn	**Pn**	**21 11 18.9**	**+1.7**
	263nm,0.7s						
MOTA	**Moosalm**	**3.20**	**346**	*i* Pn	**Pn**	**21 11 19.5**	**+2.0**
	SNR=76						
MOTA	**Moosalm**	**3.20**	**346**	⇓*i*Sg	**Sn**	**21 12 12.3**	**+17**
	comp=Z,53nm,0.5s						
MOTA	**Moosalm**	**3.20**	**346**	Pn	**Pn**	**21 11 19.5**	**+2.0**
	76nm,3.0s						
MOTA				Sn	**Sn**	**21 12 00.7**	**+5.1**
MONE	**Monesi**	**3.22**	**269**	P	**Pn**	**21 11 18.9**	**+1.1**
MONE	**Monesi**	**3.22**	**269**	P	**Pn**	**21 11 18.9**	**+1.1**
NEGI	**Negi**	**3.29**	**265**	P	**Pn**	**21 11 18.8**	**+0.1**
NEGI				S	**Sn**	**21 11 53.5**	**-4.2**
NEGI	**Negi**	**3.29**	**265**	P	**Pn**	**21 11 18.8**	**+0.1**
ORO	**Oropa**	**3.32**	**296**	Pn	**Pn**	**21 11 18.7**	**-0.5**
	56nm,0.2s						
ORX	**Oropa**	**3.32**	**296**	P	**Pn**	**21 11 18.7**	**-0.5**
ORX	**Oropa**	**3.32**	**296**	P	**Pn**	**21 11 18.7**	**-0.5**
FUSIO	**Fusio**	**3.35**	**313**	*i* Pn	**Pn**	**21 11 20.1**	**+0.5**
SAOF	**Saorge**	**3.38**	**267**	Pn	**Pn**	**21 11 21.5**	**+1.5**
TRAV		**3.43**	**293**	P	**Pn**	**21 11 19.5**	**-1.3**
TRAV		**3.43**	**293**	P	**Pn**	**21 11 19.5**	**-1.2**
ENR	**Entracque**	**3.46**	**271**	P	**Pn**	**21 11 21.9**	**+0.8**
ENR	**Entracque**	**3.46**	**271**	P	**Pn**	**21 11 21.9**	**+0.8**
DAVA	**Damuels**	**3.46**	**332**	⇑*i*Pn	**Pn**	**21 11 23.5**	**+2.3**
	comp=Z,56nm,0.5s,SNR=70						
DAVA	**Damuels**	**3.46**	**332**	⇑*i*Pg	**Pn**	**21 11 33.2**	**+12**
	comp=Z,38nm,0.6s						
DAVA	**Damuels**	**3.46**	**332**	⇑*i*Sn	**Sn**	**21 12 06.6**	**+4.5**
	comp=N,90nm,0.3s						
DAVA	**Damuels**	**3.46**	**332**	⇑*i*Sg	**Sn**	**21 12 21.3**	**+19**
	comp=N,47nm,0.4s						
DAVA	**Damuels**	**3.46**	**332**	Pn	**Pn**	**21 11 23.5**	**+2.3**
	69nm,8.0s						
DAVA				Sn	**Sn**	**21 12 06.6**	**+4.5**
AUTN	**L'Aution**	**3.47**	**268**	Pn	**Pn**	**21 11 22.7**	**+1.5**
SBF	**Sospel**	**3.48**	**265**	*e*Pn	**Pn**	**21 11 21.7**	**+0.3**
SBF				*e*Sn	**Sn**	**21 12 00.1**	**-2.4**
	142nm,0.5s						
STV2	**Anna di Valdie**	**3.52**	**272**	P	**Pn**	**21 11 22.6**	**+0.6**
STV2	**Anna di Valdie**	**3.52**	**272**	P	**Pn**	**21 11 22.6**	**+0.5**
STV	**Sta Anna Valdi**	**3.52**	**272**	P	**Pn**	**21 11 22.4**	**+0.3**
STV	**Sta Anna Valdi**	**3.52**	**272**	P	**Pn**	**21 11 22.4**	**+0.3**
RGNG	**Rignano Grg**	**3.56**	**135**	Pn	**Pn**	**21 11 20.5**	**-2.0**
DOI	**San Damiano**	**3.58**	**276**	Pn	**Pn**	**21 11 22.9**	**0.0**
	36nm,0.4s						
TOUF	**Mont Tournerai**	**3.59**	**268**	Pn	**Pn**	**21 11 24.6**	**+1.6**
BHB	**Bricherasio**	**3.60**	**281**	P	**Pn**	**21 11 22.6**	**-0.6**
BHB	**Bricherasio**	**3.60**	**281**	P	**Pn**	**21 11 22.6**	**-0.6**
LIENZ	**Alp Oberkamor**	**3.61**	**329**	⇓*i*Pn	**Pn**	**21 11 25.4**	**+2.2**
RSP	**Reno Superiore**	**3.66**	**286**	P	**Pn**	**21 11 21.8**	**-2.2**
RSP	**Reno Superiore**	**3.66**	**286**	P	**Pn**	**21 11 21.8**	**-2.2**
MVIF	**Mont Vial**	**3.67**	**266**	Pn	**Pn**	**21 11 26.0**	**+1.8**
MUO	**Muotathal**	**3.71**	**319**	⇑*i*Pn	**Pn**	**21 11 26.7**	**+1.9**
FENE	**Fenestrelle**	**3.77**	**284**	P	**Pn**	**21 11 24.4**	**-1.2**
FENE	**Fenestrelle**	**3.77**	**284**	P	**Pn**	**21 11 24.4**	**-1.2**
ARSA	**Arzberg**	**3.79**	**36**	⇑*i*Pn	**Pn**	**21 11 24.7**	**-1.2**
	comp=Z,1.5nm,0.2s						
ARSA	**Arzberg**	**3.79**	**36**	⇓*i*Pg	**Pn**	**21 11 38.4**	**+12**
	comp=Z,12nm,0.3s						
ARSA	**Arzberg**	**3.79**	**36**	⇑*i*Sn	**Sn**	**21 12 07.3**	**-3.2**
	comp=E,4.2nm,0.3s						
ARSA	**Arzberg**	**3.79**	**36**	Pn	**Pn**	**21 11 24.7**	**-1.2**
ARSA				Sn	**Sn**	**21 12 07.3**	**-3.2**
LSD	**Ceresole Reale**	**3.81**	**290**	P	**Pn**	**21 11 24.9**	**-1.2**
LSD	**Ceresole Reale**	**3.81**	**290**	P	**Pn**	**21 11 24.9**	**-1.2**
OG22	**Abries**	**3.82**	**281**	Pn	**Pn**	**21 11 26.4**	**+0.1**
MOA	**Molln**	**3.88**	**21**	⇓*i*Pn	**Pn**	**21 11 27.5**	**+0.4**
	comp=Z,11nm,0.2s,SNR=34						
MOA	**Molln**	**3.88**	**21**	⇑*i*Sn	**Sn**	**21 12 12.1**	**-0.6**
	comp=E,82nm,0.5s						
MOA	**Molln**	**3.88**	**21**	Pn	**Pn**	**21 11 27.5**	**+0.4**
	33nm,7.0s						
MOA				Sn	**Sn**	**21 12 12.1**	**-0.6**
CALN	**Calern**	**3.88**	**265**	Pn	**Pn**	**21 11 28.2**	**+1.0**
SURF	**Saint Ours**	**3.89**	**275**	Pn	**Pn**	**21 11 28.2**	**+0.9**
MBDF	**Montbardon**	**3.94**	**279**	*e*Pn	**Pn**	**21 11 27.0**	**-0.9**
MBDF				*e*Sn	**Sn**	**21 12 11.4**	**-2.7**
	73nm,0.6s						
RRL	**Cesana Torines**	**3.95**	**282**	P	**Pn**	**21 11 27.9**	**-0.2**
RRL	**Cesana Torines**	**3.95**	**282**	P	**Pn**	**21 11 27.9**	**-0.2**
MRGE	**Morge**	**3.97**	**294**	Pn	**Pn**	**21 11 28.3**	**-0.1**
	174nm,0.7s						
BNI	**Bardonecchia**	**4.04**	**284**	*e*Pn	**Pn**	**21 11 28.9**	**-0.5**
BNI	**Bardonecchia**	**4.04**	**284**	*e*Pn	**Pn**	**21 11 28.9**	**-0.5**
FRF	**La Foret Royal**	**4.09**	**262**	*e*Pn	**Pn**	**21 11 30.0**	**-0.1**
FRF				*e*Sn	**Sn**	**21 12 15.0**	**-3.1**
	58nm,0.5s						
LPG	**La Plagne**	**4.09**	**290**	*e*Pn	**Pn**	**21 11 29.1**	**-1.0**
LPG				*e*Sn	**Sn**	**21 12 15.1**	**-3.0**
	44nm,0.4s						
LPL	**La Plagne**	**4.11**	**290**	*e*Pn	**Pn**	**21 11 29.5**	**-0.9**
LPL				*e*Sn	**Sn**	**21 12 15.7**	**-2.8**
	69nm,0.5s						
STON	**Ston**	**4.21**	**107**	*i* Pn	**Pn**	**21 11 30.3**	**-1.4**
STON				*i* Sn	**Sn**	**21 12 17.6**	**-3.4**
RSL	**Roselend**	**4.23**	**292**	Pn	**Pn**	**21 11 33.0**	**+0.9**
LMR	**La Mourre**	**4.24**	**260**	*e*Pn	**Pn**	**21 11 31.7**	**-0.5**
LMR				*e*Sn	**Sn**	**21 12 18.7**	**-3.1**
	26nm,0.3s						
DGI	**Dorgali Grotta**	**4.38**	**207**	Pn	**Pn**	**21 11 35.0**	**+0.8**
OG25	**Le Caire**	**4.42**	**274**	Pn	**Pn**	**21 11 36.1**	**+1.3**
BALST	**Balsthal**	**4.43**	**316**	⇑*i*Pn	**Pn**	**21 11 34.8**	**-0.2**
BALST	**Balsthal**	**4.43**	**316**	⇑*i*P	**Pn**	**21 11 34.9**	**-0.1**
OG01	**Vacheresse**	**4.44**	**300**	Pn	**Pn**	**21 11 36.5**	**+1.5**
GDM	**Grand'Maison**	**4.46**	**285**	Pn	**Pn**	**21 11 37.1**	**+1.7**
TAVF	**Tavernes**	**4.50**	**264**	Pn	**Pn**	**21 11 36.5**	**+0.6**
RHK1	**Bakonya**	**4.53**	**64**	*e*P	**Pn**	**21 11 33.8**	**-2.5**
ORIF	**Oris-en-Rattie**	**4.59**	**281**	*e*Pn	**Pn**	**21 11 37.7**	**+0.5**
ORIF				*e*Sn	**Sn**	**21 12 26.7**	**-3.9**
	44nm,0.5s						
BBS	**Basel-Blauen**	**4.61**	**316**	Pn	**Pn**	**21 11 37.0**	**-0.5**
BOURR	**Bourrignon**	**4.71**	**314**	*e*Pn	**Pn**	**21 11 38.7**	**-0.2**
GEC2	**GERESS Array S**	**4.72**	**12**	*e*Pn	**Pn**	**21 11 37.9**	**-1.1**
GERES	**GERESS Array B**	**4.72**	**12**	Pn	**Pn**	**21 11 38.0**	**-1.0**
	2.6nm,0.3s,baz=191,slow=15,SNR=74						
GERES				Sn	**Sn**	**21 12 30.7**	**-3.2**
	5.9nm,0.3s,baz=191,slow=20,SNR=4.8						
GRN	**Grenoble**	**4.73**	**284**	Pn	**Pn**	**21 11 39.9**	**+0.8**
PUYF	**Puyloubier**	**4.77**	**264**	Pn	**Pn**	**21 11 40.3**	**+0.5**
SMRF	**Simiane la Rot**	**4.80**	**269**	*e*Pn	**Pn**	**21 11 40.2**	**0.0**
SMRF				*e*Sn	**Sn**	**21 12 31.5**	**-4.5**
	21nm,0.4s						
BERF	**Bertagne**	**4.82**	**261**	Pn	**Pn**	**21 11 41.0**	**+0.5**
BRANT	**Les Verrieres**	**4.86**	**306**	⇑*i*Pn	**Pn**	**21 11 40.9**	**-0.1**
LOMF	**Lomont**	**4.89**	**311**	Pn	**Pn**	**21 11 41.9**	**+0.4**
BFO	**Black Forest**	**4.90**	**328**	*e*Pn	**Pn**	**21 11 41.2**	**-0.4**
WET	**Wettzell**	**4.93**	**5**	*e*Pn	**Pn**	**21 11 40.8**	**-1.2**
WET				*e*Sn	**Sn**	**21 12 34.2**	**-5.0**
CABF	**La Chapelle**	**4.93**	**301**	*e*Pn	**Pn**	**21 11 41.9**	**-0.1**
CABF				*e*Sn	**Sn**	**21 12 34.7**	**-4.6**
	31nm,0.4s						
PKSM	**Moragy**	**4.94**	**64**	⇑*i*P	**Pn**	**21 11 39.3**	**-2.9**
PKSM				*e*S	**Sn**	**21 12 34.6**	**-4.9**
KHC	**Kasperske Hory**	**4.98**	**10**	*e*PN	**Pn**	**21 11 41.6**	**-1.1**
KHC				*e*x	x	21 11 57.0	
KHC				*e*PG	Pn	21 12 03.9	+21
KHC				*e*SN	**Sn**	**21 12 35.9**	**-4.6**
	37nm,0.6s						
KHC	**Kasperske Hory**	**4.98**	**10**	*e*Pn	**Pn**	**21 11 41.6**	**-1.1**
KHC				*e*		21 11 57.0	
KHC	**Kasperske Hory**	**4.98**	**10**	*e*Pn	**Pn**	**21 11 41.6**	**-1.1**
KHC				*e*Sn	**Sn**	**21 12 35.9**	**-4.6**
STU	**Stuttgart**	**4.99**	**336**	*e*Pn	**Pn**	**21 11 40.9**	**-2.0**
STU	**Stuttgart**	**4.99**	**336**	*e*Pn	**Pn**	**21 11 40.9**	**-2.0**
GELF	**Grande-Etoile**	**5.00**	**262**	Pn	**Pn**	**21 11 43.6**	**+0.6**
MOF	**Molkenrain**	**5.06**	**317**	Pn	**Pn**	**21 11 43.8**	**-0.1**
OG05	**Jujurieux**	**5.12**	**293**	Pn	**Pn**	**21 11 44.6**	**0.0**
HINF	**Hinteralfeld**	**5.18**	**316**	*e*Pn	**Pn**	**21 11 44.5**	**-1.0**
HINF				*e*Sn	**Sn**	**21 12 40.6**	**-4.8**
	61nm,0.4s						
VSL	**Villasalto**	**5.20**	**205**	Pn	**Pn**	**21 11 46.5**	**+0.7**
ECH	**Echery**	**5.31**	**320**	Pn	**Pn**	**21 11 47.1**	**-0.2**
WLS	**Welschbruch**	**5.37**	**323**	Pn	**Pn**	**21 11 47.8**	**-0.4**
CDF	**Champ du Feu**	**5.40**	**322**	*e*Pn	**Pn**	**21 11 47.8**	**-0.9**
CDF				*e*Sn	**Sn**	**21 12 45.7**	**-5.4**
	24nm,0.3s						
VIVF	**Saint-Julien-l**	**5.44**	**279**	*e*Pn	**Pn**	**21 11 47.9**	**-1.2**
VIVF				*e*Sn	**Sn**	**21 12 47.1**	**-4.8**
	8.8nm,0.4s						
TREC	**Trest**	**5.53**	**23**	*e*PN	**Pn**	**21 11 48.7**	**-1.8**
HAU	**Haudompre**	**5.56**	**315**	*e*Pn	**Pn**	**21 11 49.8**	**-1.1**
HAU				*e*Sn	**Sn**	**21 12 49.3**	**-5.7**
	138nm,0.5s						
LANF	**Langenberg**	**5.64**	**329**	Pn	**Pn**	**21 11 51.6**	**-0.4**
THEF	**They Montfort**	**5.88**	**315**	Pn	**Pn**	**21 11 54.9**	**-0.6**
VRAC	**Vranov**	**5.89**	**29**	Pn	**Pn**	**21 11 53.5**	**-2.0**
	0.3nm,0.3s,baz=203,slow=13,SNR=4.3						
VRAC				Sn	**Sn**	**21 12 58.9**	**-4.4**
	0.7nm,0.3s,baz=180,slow=20,SNR=2.9						
PRU	**Pruhonice**	**5.96**	**15**	*e*PN	**Pn**	**21 11 54.6**	**-2.0**
PRU				*e*SN	**Sn**	**21 12 59.6**	**-5.6**
	31nm,0.8s						
NKC	**Novy Kostel**	**6.00**	**1**	*e*PN	**Pn**	**21 11 55.9**	**-1.2**
NKC				*e*x	x	21 12 25.7	
NKC				*e*SN	**Sn**	**21 13 00.8**	**-5.2**
	51nm,1.1s						
NKC	**Novy Kostel**	**6.00**	**1**	*e*Pn	**Pn**	**21 11 55.9**	**-1.2**
NKC				*e*Sn	**Sn**	**21 13 00.8**	**-5.2**
LASF	**Ste Croix**	**6.03**	**271**	*e*Pn	**Pn**	**21 11 55.8**	**-1.7**
LASF				*e*Sn	**Sn**	**21 13 01.4**	**-5.3**
	2.0nm,0.3s						
VYHS	**Vyhne**	**6.24**	**45**	*e*SN	**Sn**	**21 13 04.3**	**-7.9**
PLDF	**La Plantade**	**6.33**	**289**	Pn	**Pn**	**21 12 00.1**	**-1.7**
SFTF	**Sexfontaines**	**6.37**	**311**	*e*Pn	**Pn**	**21 12 00.5**	**-1.8**
	baz=130						
SFTF				*e*Sn	**Sn**	**21 13 09.1**	**-6.3**
	15nm,0.3s						
SMF	**Signal de Mont**	**6.37**	**295**	*e*Pn	**Pn**	**21 12 00.8**	**-1.6**
SMF				*e*Sn	**Sn**	**21 13 08.8**	**-6.6**
	32nm,0.4s						
RFYF	**Reffroy**	**6.41**	**316**	*e*Pn	**Pn**	**21 11 59.3**	**-3.5**
	baz=138						
RFYF				*e*Sn	**Sn**	**21 13 09.9**	**-6.3**
	16nm,0.3s						
MOX	**Moxa**	**6.42**	**357**	*i* P	**Pn**	**21 12 00.4**	**-2.7**
MOX				S	**Sn**	**21 13 11.0**	**-5.6**
MOX	**Moxa**	**6.42**	**357**	*e*Pn	**Pn**	**21 12 00.4**	**-2.7**
MOX				*e*Sn	**Sn**	**21 13 11.0**	**-5.6**
LBL	**Lubilhac**	**6.47**	**282**	Pn	**Pn**	**21 12 02.5**	**-1.3**
PVCC	**Panska Ves**	**6.49**	**13**	*e*PN	**Pn**	**21 12 01.5**	**-2.5**
TNS	**Taunus Mts**	**6.51**	**338**	*e*Pn	**Pn**	**21 12 03.0**	**-1.4**
MEZF	**Maizieres J'vi**	**6.54**	**313**	*e*Pn	**Pn**	**21 12 03.2**	**-1.6**
	baz=128						
MEZF				*e*Sn	**Sn**	**21 13 13.1**	**-6.5**
	20nm,0.4s						
LOR	**Lormes**	**6.59**	**300**	*e*Pn	**Pn**	**21 12 03.8**	**-1.7**
	baz=122						
LOR				*e*Sn	**Sn**	**21 13 14.3**	**-6.6**
	32nm,0.3s						
MORC	**Moravsky Berou**	**6.62**	**31**	*e*Pn	**Pn**	**21 12 03.0**	**-2.9**
	3.7nm,0.6s						
MORC	**Moravsky Berou**	**6.62**	**31**	*e*Pn	**Pn**	**21 12 03.0**	**-2.9**
	3.7nm,0.6s						
AGO	**Saint Agoulin**	**6.68**	**289**	Pn	**Pn**	**21 12 05.0**	**-1.8**
PYM	**Petit Puy Mans**	**6.71**	**286**	Pn	**Pn**	**21 12 05.3**	**-1.8**
DPC	**Dobruska-Polom**	**6.72**	**23**	*e*PN	**Pn**	**21 12 04.1**	**-3.1**
DPC				*e*SN	**Sn**	**21 13 17.4**	**-6.6**
SSF	**Saint Saulge**	**6.73**	**298**	*e*Pn	**Pn**	**21 12 05.6**	**-1.8**
SSF				*e*Sn	**Sn**	**21 13 17.7**	**-6.7**
	12nm,0.4s						
AVF	**Avril sur Loir**	**6.74**	**295**	*e*Pn	**Pn**	**21 12 06.1**	**-1.4**
AVF				*e*Sn	**Sn**	**21 13 17.6**	**-6.9**
	14nm,0.5s						
UPC	**Upice**	**6.78**	**21**	*e*PN	**Pn**	**21 12 05.9**	**-2.1**
BGF	**Bois d'Agland**	**7.00**	**293**	*e*Pn	**Pn**	**21 12 08.9**	**-2.3**
BGF				*e*Sn	**Sn**	**21 13 24.2**	**-6.9**
	40nm,0.4s						
CLL	**Collm**	**7.09**	**4**	*i* PN	**Pn**	**21 12 10.3**	**-2.2**
	logA/T=1.6						
CLL				*i*		21 12 19.7	
CLL				*e*SN	**Sn**	**21 13 28.0**	**-5.4**
CLL				*e*		21 13 42.0	
CLL				*i* SG	Sn	21 14 20.8	+47
CLL				*i*		21 14 32.8	
CLL				*e*L		21 14 54.0	
CLL	**Collm**	**7.09**	**4**	*i* Pn	**Pn**	**21 12 10.3**	**-2.2**
	16nm,0.4s						
CLL				*e*Sn	**Sn**	**21 13 28.0**	**-5.4**
CLL				*i* Sg	Sn	21 14 20.8	+47
CLL				*i*		21 14 32.8	
CLL	**Collm**	**7.09**	**4**	*i* P	**Pn**	**21 12 10.3**	**-2.2**
CLL				*e*		21 13 28.0	
CLL				pmax	pmax		
	comp=Z,16nm,0.4s						
CAF	**Calviac**	**7.29**	**279**	*e*Pn	**Pn**	**21 12 13.1**	**-2.2**
MTLF	**Montolieu**	**7.30**	**266**	*e*Pn	**Pn**	**21 12 14.7**	**-0.7**
MTLF				*e*Sn	**Sn**	**21 13 31.7**	**-6.9**
	comp=Z,0.7nm,0.3s						
HYF	**Humbligny**	**7.36**	**298**	*e*Pn	**Pn**	**21 12 13.7**	**-2.5**
HYF				*e*Sn	**Sn**	**21 13 32.9**	**-7.2**
	comp=Z,111nm,0.5s						
TCF	**Toulx Ste Croi**	**7.36**	**290**	*e*Pn	**Pn**	**21 12 13.8**	**-2.4**
TCF				*e*Sn	**Sn**	**21 13 32.8**	**-7.3**
	comp=Z,4.1nm,0.2s						
RJF	**Les Rejaudoux**	**7.70**	**282**	*e*Pn	**Pn**	**21 12 17.9**	**-3.1**
GIVF	**Givet**	**7.73**	**322**	*e*Pn	**Pn**	**21 12 19.1**	**-2.4**
GIVF				*e*Sn	**Sn**	**21 13 42.0**	**-7.4**
	comp=Z,6.2nm,0.3s						
BAIF	**Baives**	**7.98**	**320**	*e*Pn	**Pn**	**21 12 22.5**	**-2.4**
LFF	**La Frestale**	**8.23**	**279**	*e*Pn	**P**	**21 12 25.6**	**-2.8**
LFF				*e*Sn	**Sn**	**21 13 53.6**	**-8.2**
	comp=Z,2.6nm,0.4s						
ETOS	**Mallorca**	**8.31**	**241**	P	**P**	**21 12 29.5**	**0.0**
ETOS	**Mallorca**	**8.31**	**241**	P	**P**	**21 12 29.5**	**0.0**
	comp=Z,8.6nm,0.4s,SNR=16						
EPOB	**Poblet**	**8.69**	**254**	P	**P**	**21 12 35.3**	**+0.6**
EPOB				S	**Sn**	**21 14 10.7**	**-2.6**
EPOB	**Poblet**	**8.69**	**254**	P	**P**	**21 12 35.3**	**+0.5**
	comp=Z,0.2nm,0.1s,SNR=7.9						
EPF	**Esparros**	**8.71**	**266**	*e*Pn	**P**	**21 12 31.3**	**-3.7**
EBIE	**Bielsa**	**8.93**	**264**	P	**P**	**21 12 40.8**	**+2.7**
EBIE				S	**Sn**	**21 14 19.4**	**+0.3**
EBIE	**Bielsa**	**8.93**	**264**	P	**P**	**21 12 40.8**	**+2.7**
	comp=Z,7.4nm,0.6s,SNR=5.6						
EBIE				S	**Sn**	**21 14 19.5**	**+0.4**
EGRA	**Graus**	**8.94**	**261**	P	**P**	**21 12 40.2**	**+2.0**
	comp=Z,2.4nm,0.4s,SNR=7.9						
MFF	**Saint Martin d**	**9.02**	**290**	*e*Pn	**P**	**21 12 35.7**	**-3.6**
MFF				*e*Sn	**Sn**	**21 14 12.6**	**-8.8**
	comp=Z,4.4nm,0.4s						
ETSF	**Etsaut**	**9.38**	**266**	*e*Pn	**P**	**21 12 40.9**	**-3.4**
LDF	**La Druitiere**	**9.57**	**301**	*e*Pn	**P**	**21 12 44.2**	**-2.7**
LDF				*e*Sn	**Sn**	**21 14 25.3**	**-10**
	comp=Z,4.5nm,0.5s						
EIBI	**Ibiza**	**9.67**	**241**	P	**P**	**21 12 48.8**	**+0.5**
EIBI	**Ibiza**	**9.67**	**241**	P	**P**	**21 12 48.8**	**+0.6**
	comp=Z,7.6nm,0.4s,SNR=7.9						
SJPF	**Ste Jean**	**9.81**	**268**	*e*Pn	**P**	**21 12 46.9**	**-3.3**
SJPF				*e*Sn	**Sn**	**21 14 31.6**	**-9.4**
	comp=Z,1.4nm,0.4s						
FLN	**La Foliniere**	**9.86**	**302**	*e*Pn	**P**	**21 12 47.9**	**-2.9**
	baz=120						
FLN				*e*Sn	**Sn**	**21 14 32.4**	**-10**
	comp=Z,7.0nm,0.6s						
GRR	**Gorron**	**9.96**	**299**	*e*Pn	**P**	**21 12 49.1**	**-3.1**
GRR				*e*Sn	**Sn**	**21 14 34.9**	**-10**
	comp=Z,2.3nm,0.3s						
SGMF	**Saint Gilles**	**11.00**	**297**	*e*Pn	**P**	**21 13 02.8**	**-3.6**
SGMF				*e*Sn	**S**	**21 14 59.9**	**-10**
	comp=Z,3.0nm,0.4s						
ROSF	**Rostrenen**	**11.48**	**296**	*e*Pn	**P**	**21 13 09.1**	**-3.9**
ROSF				*e*Sn	**S**	**21 15 11.3**	**-10**
	comp=Z,1.1nm,0.3s						
ESDC	**Sonseca Array**	**12.88**	**255**	Pn	**P**	**21 13 39.6**	**+7.8**
	comp=Z,0.2nm,0.3s,baz=59,slow=13,SNR=4.1						
EKA	**Eskdalemuir Ar**	**14.86**	**324**	Pn	**P**	**21 13 58.2**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=140,slow=14,SNR=4.9						
VSU	**Vasula**	**16.82**	**27**	*i* P	**P**	**21 14 13.8**	**-9.0**
OBN	**Obninsk**	**19.04**	**47**	⇓*e*P	**P**	**21 14 41.8**	**-8.5**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
FINES	**FINESS Array B**	**19.08**	**21**	P	**P**	**21 14 48.5**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=198,slow=13,SNR=3.6						
MKAR	**Makanchi Array**	**47.66**	**61**	P	**P**	**21 19 04.2**	**+0.5**
	comp=Z,0.4nm,0.7s,mb3.5,baz=284,slow=5.9,SNR=4.3						
MKAR	**Makanchi Array**	**47.66**	**61**	P	**P**	**21 19 04.4**	**+0.7**

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*IDC **08** 21:23:14.5±2.5, 4.74S×152.64E, h99^{km}±22^{km}, mb4.2/9, mb1 4.2/11, mb1mx4.1/17, mbtmp4.5/11, MS3.6/9, Ms1 3.6/9, ms1mx3.2/29, Error ellipse: s-maj=22.1km s-min=13.3km az=117.0*

*NEIC **08** 21:23:16.1±1.9, 4.75S×152.60E, h116^{km}±17^{km}, mb4.5/5, Error ellipse: s-maj=14.6km s-min=12.0km az=94.0*

ISC 08 21:23:14.6±3.1**, 4.7S**±0.1×**152.6E**±0.1**, h112**^{km}±27^{km}**, n28, σ0^{s}75**/23**, mb4.3**/14**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.09**	**229**	P	**P**	**21 24 57.0**	**-0.2**
	3.4nm,0.3s,baz=38,slow=15,SNR=8.7						
PMG				S	**S**	**21 26 16.1**	**-0.7**
	3.6nm,0.3s,baz=179,slow=21,SNR=3.2						
CTA	**Charters Tower**	**16.46**	**201**	P	**P**	**21 27 01.1**	**+0.8**
	0.3nm,0.3s,baz=38,slow=12,SNR=4.7						
CTA				LR	LR	21 32 20.6	
	comp=Z,91nm,19.9s,baz=318,slow=33						
CTA	**Charters Tower**	**16.46**	**201**	P	**P**	**21 27 01.1**	**+0.8**
CTA				LR	LR	21 32 20.6	
GUMO	**Guam**	**19.72**	**337**	LR	LR	21 33 31.8	
	comp=Z,136nm,19.4s,baz=85,slow=31						
DZM	**Mont Dzumac**	**21.88**	**143**	P	**P**	**21 27 59.6**	**+0.2**
	9.4nm,0.6s,mb4.3,baz=347,slow=13,SNR=10.0						
DZM				LR	LR	21 35 08.6	
	comp=Z,142nm,19.0s,baz=23,slow=33						
WRAB	**Tennant Creek**	**23.30**	**228**	*e*P	**P**	**21 28 13.9**	**+0.6**
	32nm,0.6s,mb4.8						
WB2	**Warramunga Arr**	**23.30**	**228**	*e*P	**P**	**21 28 14.0**	**+0.6**
WB2				*e*S	**S**	**21 32 21.6**	**+7.6**
WRA	**Warramunga Arr**	**23.31**	**228**	P	**P**	**21 28 14.1**	**+0.6**
	15nm,0.5s,mb4.6,baz=53,slow=9.7,SNR=120						
WRA				S	**S**	**21 32 21.3**	**+7.1**
	0.9nm,0.9s,baz=43,slow=16,SNR=3.5						
ASPA	**Alice Springs**	**26.05**	**222**	*e*P	**P**	**21 28 40.4**	**+1.0**
STKA	**Stephens Creek**	**28.91**	**200**	P	**P**	**21 29 04.1**	**-1.2**
	3.6nm,0.7s,mb4.1,baz=35,slow=12,SNR=11						
STKA	**Stephens Creek**	**28.91**	**200**	P	**P**	**21 29 04.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**29.48**	**241**	P	**P**	**21 29 09.5**	**-1.0**
	6.7nm,0.4s,mb4.7,baz=66,slow=9.2,SNR=21						
FITZ				LR	LR	21 39 33.3	
	comp=Z,278nm,21.2s,baz=155,slow=33						
MBWA	**Marble Bar**	**35.80**	**240**	*e*P	**P**	**21 30 04.6**	**-0.5**
	4.9nm,0.7s,mb4.5						
JOW	**Kunigami**	**39.18**	**324**	LR	LR	21 44 38.2	
	comp=Z,28nm,19.5s,baz=116,slow=33						
JHJ	**Hachijo jima 2**	**39.53**	**343**	LR	LR	21 44 00.2	
	comp=Z,89nm,20.3s,baz=143,slow=32						
JNU	**Nakatsue**	**42.88**	**333**	P	**P**	**21 31 04.0**	**+0.4**
	9.3nm,0.9s,mb4.5,baz=160,slow=15,SNR=7.6						
MJAR	**Matsushiro Arr**	**43.18**	**343**	LR	LR	21 46 35.9	
	comp=Z,95nm,20.0s,baz=245,slow=32						
ASAJ	**Asahikawa**	**49.43**	**351**	LR	LR	21 53 28.0	
	comp=Z,44nm,19.0s,baz=89,slow=37						
SONM	**Songino Array**	**66.12**	**328**	P	**P**	**21 33 53.1**	**+1.0**
	0.5nm,0.5s,mb3.6,baz=137,slow=5.3,SNR=5.3						
SONM				PcP	PcP	21 34 21.7	+0.4
	0.4nm,0.4s,baz=144,slow=3.2,SNR=4.9						
MKAR	**Makanchi Array**	**80.10**	**319**	P	**P**	**21 35 14.2**	**+0.6**
	0.9nm,0.5s,mb3.9,baz=93,slow=7.5,SNR=16						
ILAR	**Eielson Array**	**82.18**	**22**	P	**P**	**21 35 22.8**	**-1.4**
	4.0nm,0.8s,mb4.3,baz=246,slow=5.5,SNR=33						
AAK	**Ala-Archa**	**84.43**	**313**	*e*P	**P**	**21 35 36.3**	**+0.3**
	2.0nm,0.8s,mb4.0						
MAW	**Mawson**	**85.55**	**203**	LR	LR	22 10 57.6	
	comp=Z,58nm,21.0s,baz=240,slow=34						
INK	**Inuvik**	**88.47**	**21**	*e*P	**P**	**21 35 54.8**	**-0.2**
	5.2nm,1.0s,mb4.5						
CHKZ	**Chkalovo**	**89.00**	**324**	*e*P	**P**	**21 35 56.9**	**-0.9**
	1.1nm,0.4s,mb4.2						
BVAR	**Borovoye Array**	**89.03**	**323**	P	**P**	**21 35 57.9**	**-0.1**
	2.0nm,0.5s,mb4.4,baz=108,slow=6.0,SNR=20						
GERES	**GERESS Array B**	**123.86**	**328**	PKP	PKPdf	21 42 02.0	+2.4
	1.3nm,0.7s,baz=90,slow=1.3,SNR=12						
DBIC	**Dimbokro**	**157.44**	**276**	PKPab	PKPab	21 43 31.7	-1.1
	2.9nm,0.9s,baz=48,slow=6.0,SNR=5.3						

WEL 08 21:34:19.0±1.5**, 35.38S×177.96E, h33**^{km}**, ML3.5**/3**, Error ellipse: s-maj=20.7km s-min=10.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.20**	**173**	P*	Pb	21 34 53.8	-4.1
MXZ				S*	Sb	21 35 18.0	-6.9
URZ	**Urewera**	**2.95**	**193**	P*	Pb	21 35 03.4	-7.4
URZ				S*	Sb	21 35 39.3	-7.5
MWZ	**Matawai**	**2.97**	**187**	P*	Pb	21 35 03.9	-7.2
MWZ				S*	Sb	21 35 37.1	-10

IDC 08 21:40:50.4±8.3**, 6.84S×131.58E, h73**^{km}±80^{km}**, mb3.3**/2**, mb1 3.5**/4**, mb1mx3.3**/10**, mbtmp3.6**/4**, ML3.3**/2**, Error ellipse: s-maj=68.8km s-min=34.4km az=55.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.61**	**207**	P	P	21 43 47.7	-0.8
	0.3nm,0.3s,baz=44,slow=22,SNR=12						
FITZ				S	S	21 46 03.8	-3.8

	0.9nm,0.3s,baz=182,slow=14,SNR=7.8						
WRA	Warramunga Arr	13.30	169	P	P	21 43 56.3	-1.3
	0.1nm,0.3s,baz=354,slow=13,SNR=8.0						
WRA				S	S	21 46 22.1	-2.0
	0.2nm,0.3s,baz=349,slow=23,SNR=6.5						
STKA	Stephens Creek	26.61	161	P	P	21 46 22.6	-1.4
	0.8nm,0.4s,baz=328,slow=15,SNR=2.8						
MKAR	Makanchi Array	68.95	326	P	P	21 51 47.7	-2.2
	0.1nm,0.4s,baz=116,slow=7.5,SNR=5.0						

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*IDC **08** 21:42:24.1±10.0, 17.57S×178.72W, h525^{km}±84^{km}, mb2.8/2, mb1 3.2/3, mb1mx3.0/14, mbtmp3.8/3, Error ellipse: s-maj=221.9km s-min=49.1km az=141.0*

*NEIC **08** 21:42:25.4±4.7, 17.57S×178.75W, h550^{km}±49^{km}, mb3.8/1, Error ellipse: s-maj=51.1km s-min=30.0km az=85.0*

ISC 08 21:42:24.5±1.1, **17.6S**±0.3×**178.7W**±0.2, **h550^{km}, n14, σ0^{s}68**/9, **mb3.4**/3, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.68	250	P	P	21 45 31.1	+0.6
	0.4nm,0.3s,baz=98,slow=19,SNR=5.7						
WRA	Warramunga Arr	44.42	259	P	P	21 49 47.7	-0.7
	0.4nm,0.6s,mb3.2,baz=94,slow=7.2,SNR=5.4						
ILAR	Eielson Array	85.62	13	P	P	21 54 05.7	+0.2
	0.4nm,0.5s,mb3.3,baz=214,slow=4.5,SNR=6.6						
SNAA	Sanae	90.94	179		P	21 54 29.4	-0.8
SNAA	Sanae	90.94	179	*e*P	P	21 54 29.2	-1.0
	0.4nm,0.4s,mb3.7						
VNA3	Neumayer Olymp	91.09	176		P	21 54 31.6	+0.7
VNA3	Neumayer Olymp	91.09	176		P	21 54 41.6	+11
VNA2	Neumayer--Watz	91.53	177		P	21 54 33.9	+1.0
VNA2	Neumayer--Watz	91.53	177		P	21 54 44.1	+11
MKAR	Makanchi Array	108.70	314	PKiKP		21 59 51.9	
	0.2nm,0.5s,baz=217,slow=0.6,SNR=7.8						
ARCES	ARCESS Array B	125.94	350	PKP	PKPdf	22 00 25.1	+1.6
	2.4nm,1.0s,baz=45,slow=1.7,SNR=3.6						
BRTR	Keskin Array B	144.35	315	PKP	PKPdf	22 01 00.2	+2.2
	1.4nm,0.7s,baz=66,slow=0.9,SNR=7.9						
CLL	Collm	145.07	347	P	PKPdf	22 01 02.3	+3.4
	logA/T=0.8						
GERES	GERESS Array B	147.22	345	PKPbc	PKPdf	22 01 08.6	+6.0
	1.6nm,0.6s,baz=28,slow=3.1,SNR=15						

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*CSEM **08** 22:03:39.4±1.4, 11.92N×43.85E, h7^{km}, ML4.4, Error ellipse: s-maj=37.7km s-min=31.5km az=103.0, After DHMR*

DHMR 08 22:03:39.4±0.8, **11.92N×43.85E, h8^{km}**±9^{km}, **ML4.4, 4C, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	At Turbah	1.33	11	⇑*i*P	Pb	22 04 04.5	+0.3
TRBA				*i* S	Sb	22 04 23.0	+1.7
TRBA				AML	AML	22 04 27.7	
	comp=E,7µm,0.4s						
UDYN	Al ‘Udayn	2.04	3	*i* P	Pn	22 04 15.5	+1.0
UDYN				*i* S	Sn	22 04 43.3	+2.9
UDYN				AML	AML	22 04 50.6	
	comp=N,5µm,0.4s						
LBOS		2.37	35	⇑*i*P	Pn	22 04 20.8	+1.5
LBOS				*i* S	Sn	22 04 53.7	+4.8
BDHA	Al Bayda’	2.64	39	⇑*i*P	Pn	22 04 24.9	+1.7
BDHA				*i* S	Sn	22 05 00.9	+5.1
DHBB	Dhamar BB	2.69	11	⇑*i*P	Pn	22 04 26.0	+2.2
DHBB				*i* S	Sn	22 05 02.8	+5.8

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*ATH **08** 22:07:03.5, 38.15N×26.62E, h37^{km}±1^{km}, MD3.1/3*

*ISK **08** 22:07:04.7, 38.25N×26.70E, h15^{km}, MD3.0*

*CSEM **08** 22:07:04.4±0.1, 38.24N×26.69E, h12^{km}, MD3.0, Error ellipse: s-maj=2.8km s-min=1.4km az=108.0*

ISC 08 22:07:03.1±1.0, **38.23N**±0.03×**26.60E**±0.06, **h3^{km}**±7^{km}, **n17, σ0^{s}71**/26, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.13	358	*i* P	Pg	22 07 05.6	-0.3
URLA				*i* S	Sg	22 07 07.9	+0.3
BLCB	Balcova	0.38	66	*i* PG	Pg	22 07 11.1	+0.3
BLCB				*i* SG	Sg	22 07 16.2	+0.3
IZM	Izmir	0.55	72	*i* PG	Pg	22 07 14.6	+0.5
IZM				*i* SG	Sg	22 07 21.7	+0.3
SMG	Samos	0.55	160	*e*PB	Pb	22 07 14.0	-1.1
SMG				*e*SB	Sb	22 07 22.5	-0.6
KDAG	Bornova	0.55	71	*i* P	Pg	22 07 13.1	-1.1
KDAG				*i* S	Sg	22 07 21.2	-0.3
PRK	Paraskevi	1.05	346	*e*PN	Pn	22 07 24.1	-0.5
PRK				*e*SN	Sn	22 07 40.0	+0.1
AYVA	Ayvalik	1.08	4	*i* P	Pb	22 07 23.5	-0.7
AYVA				*i* S	Sb	22 07 38.8	+0.3
AKS	Akhisar	1.15	55	PG	Pg	22 07 25.8	-0.3
AYDN	Tasoluk	1.16	119	*i* P	Pb	22 07 25.3	-0.1
AYDN				*i* S	Sb	22 07 40.2	-0.5
BODT	Bodrum	1.29	154	*e*PN	Pn	22 07 28.8	+0.7
MLSB	Milas	1.32	135	*e*PN	Pn	22 07 29.3	+0.9
BDRM	Kayabasi	1.34	150	*i* P	Pb	22 07 30.6	+2.0
BDRM				*i* S	Sb	22 07 45.9	-0.1
APE	Apeiranthos	1.44	217	*e*PN	Pn	22 07 31.9	+1.8
APE	Apeiranthos	1.44	217	*e*PN	Pn	22 07 28.3	-1.8
DAT	Datca	1.69	152	*e*PN	Pn	22 07 34.0	+0.3
YER	Yerkesik	1.72	129	*e*PN	Pn	22 07 33.7	-0.5
BALB	Balikesir	1.73	35	*e*PN	Pn	22 07 34.4	+0.1

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*CSEM **08** 22:13:51.6±1.1, 12.14N×43.50E, h8^{km}, ML4.0, Error ellipse: s-maj=28.2km s-min=23.0km az=109.0, After DHMR*

DHMR 08 22:13:51.6±1.2, **12.14N×43.50E, h9^{km}**±9^{km}, **ML4.0, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	At Turbah	1.24	29	*i* P	Pb	22 14 14.9	+0.2
TRBA				*i* S	Sb	22 14 32.2	+1.5
TRBA				AML	AML	22 14 33.0	
	comp=E,3µm,0.4s						
UDYN	Al ‘Udayn	1.87	14	*i* P	Pn	22 14 25.7	+1.5
UDYN				*i* S	Sn	22 14 51.0	+2.8
UDYN				AML	AML	22 15 02.9	
	comp=N,2µm,0.5s						
UDYN	Al ‘Udayn	1.87	14	*i* P	Pn	22 14 25.7	+1.5
UDYN				*i* S	Sn	22 14 51.0	+2.8
	comp=N,1µm,0.5s						
LBOS		2.42	45	*i* P	Pn	22 14 33.5	+1.5
LBOS				*i* S	Sn	22 15 07.4	+5.2
DHBB	Dhamar BB	2.57	20	*i* P	Pn	22 14 36.1	+2.0
DHBB				*i* S	Sn	22 15 10.8	+4.9
BDHA	Al Bayda’	2.72	48	*i* P	Pn	22 14 37.8	+1.5
BDHA				*i* S	Sn	22 15 15.2	+5.5

CASC 08 22:17:24.3±1.5, **11.87N×88.33W, h2^{km}**±6^{km}, **MD3.8, ML3.1, 3C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	1.49	57	⇑*e*P	Pn	22 17 51.1	-1.2
CRIN				*e*S	Sb	22 18 12.7	+0.9
LEON	Leon	1.50	69	*e*P	Pn	22 17 51.0	-1.4
LEON				*e*S	Sb	22 18 13.0	+1.0
TEL3	Telica 3	1.61	64	*e*P	Pn	22 17 52.7	-1.2
TEL3				*e*S	Sb	22 18 16.2	+1.2
TELN	Telica	1.63	63	*e*P	Pn	22 17 54.1	-0.2
TELN				*e*S	Sb	22 18 16.9	+1.1
MIRN	Miramar	1.68	70	*e*P	Pn	22 17 54.5	-0.4
MIRN				*e*S	Sb	22 18 16.8	-0.3
CNGN	Cerro Negro	1.71	68	*e*P	Pn	22 17 54.9	-0.4
CNGN				*e*S	Sb	22 18 19.3	+1.2
COPN	Copaltepe	1.73	80	⇑*e*P	Pn	22 17 55.0	-0.6
COPN				*e*S	Sn	22 18 19.8	+1.3
MOMJ	Momotombo	1.83	73	*e*P	Pn	22 17 55.8	-1.2
MOMJ				*e*S	Sn	22 18 21.9	+0.8
LCBS	La Ceiba	1.88	340	⇑*e*P	Pn	22 17 58.3	+0.5
LFRS	El Faro	1.88	338	*e*P	Pn	22 17 58.2	+0.4
LFRS				*e*S	Sn	22 18 22.6	+0.1
MGAN	Managua	2.05	82	*e*S	Sn	22 18 25.9	-0.9
	comp=E,159nm,0.2s						
TICN	Ticuantepe	2.06	85	*e*P	Pn	22 18 00.2	-0.1
TICN				*e*S	Sn	22 18 27.3	+0.4
BOQS	Boqueron	2.07	333	*e*P	Pn	22 18 00.0	-0.5

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*IDC **08** 22:51:51.0±0.6, 37.64S×176.31E, h294^{km}±6^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.8/11, mbtmp4.7/6, Error ellipse: s-maj=26.9km s-min=19.5km az=35.0*

*NEIC **08** 22:51:53.8, 37.65S×176.30E, h291^{km}, mb3.9/8, After WEL.*

*WEL **08** 22:51:53.5±0.3, 37.59S×176.29E, h292^{km}±2^{km}, ML5.6/22, Error ellipse: s-maj=2.2km s-min=1.7km az=90.0*

WEL Felt from Hawke’s Bay to Nelson, maximum reported intensity MM 4.

ISC 08 22:51:52.0±0.3, **37.73S**±0.03×**176.06E**±0.06, **h306^{km}**±2^{km}, **n169, σ1^{s}01**/192, **mb4.0**/10, **26C-10D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGRZ	Tauranga	0.16	91	P	P	22 52 30.3	-0.6
TGRZ				S	S	22 53 01.0	-0.3
TGRZ	Tauranga	0.16	91	PN	P	22 52 30.3	-0.5
TGRZ				SN	S	22 52 59.0	-2.3
LIRZ	Lichensteins R	0.38	137	P	P	22 52 31.3	+0.1
LIRZ	Lichensteins R	0.38	137	⇑PN	P	22 52 31.2	0.0
TOZ	Tahuroa Road	0.44	269	⇑PN	P	22 52 31.7	+0.4
TOZ				SN	S	22 53 00.7	-1.4
UTU	Utuhina	0.46	167	P	P	22 52 31.7	+0.3
UTU	Utuhina	0.46	167	PN	P	22 52 31.7	+0.3
MYRZ	Mayor Island	0.47	18	⇓PN	P	22 52 30.7	-0.7
MKRZ	Makatiti	0.53	142	P	P	22 52 32.0	+0.5
MKRZ	Makatiti	0.53	142	PN	P	22 52 31.8	+0.3
MARZ	Manawahe	0.55	118	P	P	22 52 31.2	-0.4
MARZ	Manawahe	0.55	118	⇓PN	P	22 52 31.2	-0.4
TAZ	Tarawera	0.62	145	P	P	22 52 32.0	+0.2
TAZ	Tarawera	0.62	145	⇑PN	P	22 52 32.0	+0.3
EDRZ	Edgecumbe	0.66	125	P	P	22 52 31.7	-0.2
EDRZ	Edgecumbe	0.66	125	PN	P	22 52 31.6	-0.3
PATZ	Paeroa	0.67	166	P	P	22 52 32.5	+0.6
PATZ	Paeroa	0.67	166	PN	P	22 52 32.4	+0.5
WIZ	White Island	0.92	78	P	P	22 52 28.3	-4.5
WIZ	White Island	0.92	78	PN	P	22 52 31.9	-0.9
MKAZ	Moumakai	0.94	311	P	P	22 52 33.0	+0.1
MKAZ	Moumakai	0.94	311	⇓PN	P	22 52 33.0	+0.2
WHTZ	Whakaora	0.94	185	P	P	22 52 34.0	+1.1
WHTZ	Whakaora	0.94	185	PN	P	22 52 34.0	+1.1
URZ	Urewera	0.99	123	P	P	22 52 32.0	-1.1
	205nm,0.3s,baz=258,slow=3.8,SNR=4325						
URZ				S	S	22 53 01.5	-3.8
	680nm,0.3s,baz=249,slow=3.8,SNR=51						
URZ	Urewera	0.99	123	P	P	22 52 32.0	-1.1
URZ	Urewera	0.99	123	⇑PN	P	22 52 32.0	-1.1
URZ				SN	S	22 53 03.5	-1.8
KUZ	Kuaotunu	1.01	345	⇓PN	P	22 52 32.1	-1.1
WATZ	Wairara	1.01	194	P	P	22 52 34.1	+0.9
WATZ	Wairara	1.01	194	PN	P	22 52 34.2	+1.0
WATZ				SN	S	22 53 05.5	0.0
RATZ	Rangitukua	1.16	191	P	P	22 52 34.7	+0.7
RATZ	Rangitukua	1.16	191	⇑PN	P	22 52 34.8	+0.8
RATZ				SN	S	22 53 07.0	+0.2
HATZ	Hinemaiaia	1.16	179	⇑PN	P	22 52 34.4	+0.4
HATZ				SN	S	22 53 06.2	-0.6
OTAZ	Otara	1.19	310	P	P	22 52 34.2	+0.1
OTAZ	Otara	1.19	310	⇓PN	P	22 52 34.2	+0.1
HIZ	Hauiti	1.23	230	P	P	22 52 35.6	+1.2
HIZ				S	S	22 52 58.3	-9.2
HIZ	Hauiti	1.23	230	PN	P	22 52 35.5	+1.1
HIZ				SN	S	22 53 08.1	+0.6
RITZ	Rihia Road	1.26	187	P	P	22 52 35.6	+1.1
RITZ	Rihia Road	1.26	187	PN	P	22 52 35.7	+1.1
KATZ	Kakaramea	1.28	193	⇑PN	P	22 52 35.6	+1.0
KATZ				SN	S	22 53 09.1	+1.1
MTAZ	Motutapu	1.31	315	P	P	22 52 34.6	-0.2
MTAZ	Motutapu	1.31	315	⇓PN	P	22 52 34.7	-0.2
MWZ	Matawai	1.31	118	P	P	22 52 34.0	-0.8
MWZ	Matawai	1.31	118	⇓PN	P	22 52 34.1	-0.8
MWZ				SN	S	22 53 05.7	-2.7
KAAZ	Kauri Point	1.41	309	P	P	22 52 35.4	0.0
KAAZ	Kauri Point	1.41	309	PN	P	22 52 35.3	-0.1
KRVZ	Karewarewa	1.41	193	⇑PN	P	22 52 36.1	+0.7
WTAZ	Waiatarua	1.42	303	P	P	22 52 35.9	+0.4
WTAZ	Waiatarua	1.42	303	⇓PN	P	22 52 35.9	+0.4
TWVZ	Taurewa	1.43	200	P	P	22 52 36.4	+0.9
TWVZ	Taurewa	1.43	200	PN	P	22 52 36.3	+0.8
TWVZ				SN	S	22 53 09.6	0.0
WTVZ	West Tongariro	1.44	195	P	P	22 52 36.3	+0.7
WTVZ	West Tongariro	1.44	195	⇑PN	P	22 52 36.3	+0.8
OTVZ	Oturere	1.47	192	PN	P	22 52 36.8	+1.0
BKZ	Black Stump Fm	1.48	167	P	P	22 52 36.2	+0.3
BKZ	Black Stump Fm	1.48	167	⇑PN	P	22 52 36.2	+0.3
BKZ				SN	S	22 53 09.8	-0.4
NGZ	Ngauruhoe	1.49	194	P	P	22 52 36.8	+0.9
NGZ	Ngauruhoe	1.49	194	PN	P	22 52 36.7	+0.8
CNZ	Chateau	1.52	195	P	P	22 52 37.2	+1.1
CNZ	Chateau	1.52	195	PN	P	22 52 37.2	+1.0
WPVZ	Whakapapa	1.53	195	P	P	22 52 37.1	+0.9
WPVZ	Whakapapa	1.53	195	PN	P	22 52 37.0	+0.8
TUVZ	Tukino	1.57	191	P	P	22 52 37.5	+1.0
TUVZ	Tukino	1.57	191	⇑PN	P	22 52 37.5	+1.1
FWVZ	Far West T-bar	1.58	194	P	P	22 52 37.5	+1.0
FWVZ	Far West T-bar	1.58	194	PN	P	22 52 37.4	+0.9
DRZ	Dome Shelter	1.59	194	P	P	22 52 38.3	+1.7
DRZ	Dome Shelter	1.59	194	PN	P	22 52 38.2	+1.6
TRVZ	Turoa	1.62	194	PN	P	22 52 38.0	+1.2
WNVZ	Wahianoa	1.64	193	P	P	22 52 37.9	+1.0
WNVZ	Wahianoa	1.64	193	PN	P	22 52 37.8	+0.9
WNVZ				SN	S	22 53 13.0	+0.9
PKVZ	Pokaka	1.66	199	⇑PN	P	22 52 38.0	+1.0
MOVZ	Moawhango	1.70	188	PN	P	22 52 37.7	+0.4
MTVZ	Mangateitei	1.72	195	PN	P	22 52 38.3	+0.9
PUZ	Puketiti	1.77	102	P	P	22 52 37.0	-0.8
PUZ				S	S	22 53 09.5	-4.2
PUZ	Puketiti	1.77	102	PN	P	22 52 36.9	-0.9
PUZ				SN	S	22 53 09.5	-4.2
MXZ	Matakaoa Point	1.79	85	P	P	22 52 36.4	-1.6
MXZ	Matakaoa Point	1.79	85	⇑PN	P	22 52 36.4	-1.6
MXZ				SN	S	22 53 10.6	-3.3
KNZ	Kokohu	1.81	136	P	P	22 52 38.1	0.0
KNZ	Kokohu	1.81	136	⇑PN	P	22 52 38.1	0.0
KNZ				SN	S	22 53 12.3	-1.8
RAEZ	Rainy Point	2.03	219	PN	P	22 52 41.5	+1.7
NEZ	North Egmont	2.18	224	PN	P	22 52 43.5	+2.5
PKE	Pukeiti	2.19	227	PN	P	22 52 43.3	+2.2
WAZ	Wanganui	2.19	202	P	P	22 52 42.2	+1.1
WAZ	Wanganui	2.19	202	PN	P	22 52 42.2	+1.1
WCZ	Waipu Caves	2.25	322	P	P	22 52 41.1	-0.5
WCZ	Waipu Caves	2.25	322	⇓PN	P	22 52 41.1	-0.5
TSZ	Takapari Road	2.33	182	⇑PN	P	22 52 43.0	+0.7
PXZ	Pawanui	2.39	165	PN	P	22 52 43.5	+0.7
PXZ				SN	S	22 53 19.8	-2.6
BFZ	Birch Farm	2.95	177	P	P	22 52 48.5	+0.5
BFZ	Birch Farm	2.95	177	PN	P	22 52 48.4	+0.4
MRZ	Mangatainoka R	2.96	187	P	P	22 52 48.2	+0.2
MRZ	Mangatainoka R	2.96	187	PN	P	22 52 48.2	+0.2
OUZ	Omahuta	3.19	321	P	P	22 52 49.6	-0.8
OUZ	Omahuta	3.19	321	⇓PN	P	22 52 49.6	-0.9
KIW	Kapiti Island	3.25	196	P	P	22 52 51.4	+0.3
KIW	Kapiti Island	3.25	196	⇑PN	P	22 52 51.3	+0.3
MTW	Mount Morrison	3.46	187	P	P	22 52 53.1	0.0
MTW	Mount Morrison	3.46	187	PN	P	22 52 53.1	-0.1
CAW	Cannon Point	3.46	192	P	P	22 52 53.4	+0.2
CAW	Cannon Point	3.46	192	PN	P	22 52 53.4	+0.2
DUWZ	D’Urville Isla	3.49	208	⇑PN	P	22 52 53.5	0.0
MRW	Makara Radio	3.65	196	P	P	22 52 55.2	0.0
MRW	Makara Radio	3.65	196	⇑PN	P	22 52 55.2	0.0
TRWZ	Traveller	3.68	184	⇑PN	P	22 52 55.8	+0.3
PAWZ	Paruwai Farm	3.68	187	P	P	22 52 55.5	0.0
PAWZ	Paruwai Farm	3.68	187	⇑PN	P	22 52 55.5	0.0
WEL	Wellington	3.69	195	P	P	22 52 56.0	+0.4
WEL	Wellington	3.69	195	PN	P	22 52 55.9	+0.3
SNZO	South Karori	3.73	196	*e*Pn	P	22 52 55.7	-0.3
SNZO				*e*S	S	22 53 45.6	-0.5
SNZO	South Karori	3.73	196	PN	P	22 52 55.8	-0.2
MSWZ	Moikau Station	3.74	189	P	P	22 52 56.0	-0.1
MSWZ	Moikau Station	3.74	189	PN	P	22 52 56.0	-0.1
TCW	Tory Channel	3.74	201	P	P	22 52 56.4	+0.2
TCW	Tory Channel	3.74	201	⇑PN	P	22 52 56.3	+0.1
BHW	Baring Head	3.79	194	PN	P	22 52 56.4	-0.3
TUWZ	Tuamarina	4.04	203	⇑PN	P	22 52 59.5	+0.1
NNZ	Nelson	4.06	210	P	P	22 52 59.3	-0.2
NNZ	Nelson	4.06	210	⇑PN	P	22 52 59.3	-0.3
QRZ	Quartz Range	4.13	220	P	P	22 52 59.7	-0.7
QRZ	Quartz Range	4.13	220	⇑PN	P	22 52 59.7	-0.7
CMWZ	Cape Campbell	4.26	199	P	P	22 53 02.5	+0.7
CMWZ	Cape Campbell	4.26	199	PN	P	22 53 02.4	+0.6
BSWZ	Blackbirch Sta	4.32	202	P	P	22 53 03.1	+0.6
BSWZ	Blackbirch Sta	4.32	202	PN	P	22 53 03.0	+0.5
KHZ	Kahutara	5.07	202	P	P	22 53 11.0	0.0
KHZ	Kahutara	5.07	202	PN	P	22 53 10.8	-0.2
DSZ	Denniston Nort	5.18	218	P	P	22 53 11.1	-1.2
DSZ	Denniston Nort	5.18	218	PN	P	22 53 11.1	-1.2
LTZ	Lake Taylor	5.82	209	P	P	22 53 19.1	-0.8
LTZ	Lake Taylor	5.82	209	PN	P	22 53 19.1	-0.7
CRLZ	Canterbury Las	6.40	203	*e*P	P	22 53 25.8	-1.0
MQZ	McQueen’s Vall	6.51	202	P	P	22 53 26.8	-1.4
WVZ	Waitaha Valley	6.71	216	P	P	22 53 29.7	-0.9
RPZ	Rata Peaks	7.09	211	P	P	22 53 33.7	-1.4
	25nm,0.3s,baz=123,slow=0.3,SNR=106						
RPZ				S	S	22 54 54.9	-1.2
	59nm,0.3s,baz=329,slow=23,SNR=22						
RPZ	Rata Peaks	7.09	211	P	P	22 53 33.8	-1.4
FOZ	Fox Glacier	7.58	218	*e*P	P	22 53 38.1	-3.1
FOZ				S	S	22 55 01.7	-5.2
FOZ	Fox Glacier	7.58	218	SN	S	22 55 01.7	-5.2
LBZ	Lake Benmore	8.00	212	SN	S	22 55 13.4	-2.7
ODZ	Otahua Downs	8.37	207	*e*P	P	22 53 50.9	+0.1
ODZ				S	S	22 55 22.7	-1.6
JCZ	Jackson Bay	8.41	219	*e*P	P	22 53 49.3	-2.0
JCZ				S	S	22 55 20.9	-4.3
WKZ	Wanaka	8.85	215	*e*P	P	22 53 54.3	-2.5
EAZ	Earnscleugh	9.04	212	P	P	22 53 58.0	-1.1
TUZ	Tuapeka	9.51	208	P	P	22 54 05.1	+0.3
MLZ	Mavora Lakes	9.63	215	*e*P	P	22 54 05.9	-0.4
WHZ	Wether Hill Ro	10.15	214	*e*P	P	22 54 11.2	-1.5
DZM	Mont Dzumac	17.67	329	*e*P	P	22 55 37.7	-1.9
DZM	Mont Dzumac	17.67	329	P	P	22 55 38.2	-1.4
	1.9nm,0.3s,baz=154,slow=9.5,SNR=19						
DZM	Mont Dzumac	17.67	329	*e*P	P	22 55 37.7	-1.9
STKA	Stephens Creek	28.79	271	P	P	22 57 25.3	+1.1
	2.3nm,0.4s,mb3.9,baz=105,slow=11,SNR=9.6						
STKA	Stephens Creek	28.79	271	*e*P	P	22 57 25.1	+1.0
PMG	Port Moresby	38.38	310	P	P	22 58 45.7	-0.2
	7.6nm,0.5s,mb4.3,baz=117,slow=6.8,SNR=4.0						
ASPA	Alice Springs	38.54	279	*e*P	P	22 58 46.9	-0.2
WB2	Warramunga Arr	40.23	284	*e*P	P	22 59 00.5	-0.4
WRAB	Tennant Creek	40.23	284	*e*P	P	22 59 00.3	-0.7
	8.5nm,0.7s,mb4.2						
WRA	Warramunga Arr	40.23	284	P	P	22 59 00.6	-0.4
	3.5nm,0.4s,mb4.1,baz=121,slow=8.4,SNR=128						
VNDA	Vanda	40.36	185	*e*P	P	22 59 03.8	+2.3
	0.8nm,0.8s						
SBA	Scott Base	40.43	183	P	P	22 59 05.2	+3.2
	2.1nm,0.8s,mb3.5						
CASY	Casey	46.36	211	*e*P	P	22 59 59.2	+10
	10nm,0.7s,mb4.3						
QSPA	South Pole Qui	52.40	180	*e*P	P	23 00 36.3	+1.7
	3.2nm,0.4s,mb4.0						
PMSA	Palmer Station	67.59	156	*e*P	P	23 02 17.4	+0.3
	5.3nm,0.8s,mb4.3						
SNAA	Sanae	70.90	180		P	23 02 36.7	-0.4
SNAA	Sanae	70.90	180	*e*P	P	23 02 36.6	-0.5
	0.8nm,0.7s,mb3.5						
VNA3	Neumayer Olymp	71.26	178	⇑*i*	P	23 02 39.6	+0.4
VNA2	Neumayer--Watz	71.63	179	⇑*i*	P	23 02 42.3	+0.9
PLCA	Paso Flores	80.98	135	P	P	23 03 34.0	+0.3
	1.2nm,0.5s,mb3.9,baz=201,slow=10,SNR=4.7						
PLCA	Paso Flores	80.98	135	*e*P	P	23 03 33.6	-0.1
	1.8nm,0.7s,mb3.9						
ARCES	ARCESS Array B	144.41	343	PKP	PKPdf	23 10 48.9	-1.7
	0.8nm,0.4s,baz=35,slow=2.2,SNR=13						
FINES	FINESS Array B	149.80	331	PKPbc	PKPdf	23 11 03.3	+3.8
	2.6nm,1.0s,baz=76,slow=7.9,SNR=3.6						

IDC 08 22:58:14.0±1.4, **12.00N×140.21E, mb3.7**/4, **mb1 3.9**/4, **mb1mx3.6**/18, **mbtmp3.7**/4, **Error ellipse: s-maj=56.2km s-min=29.0km az=87.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.26	190	P	P	23 04 44.5	-2.2
	0.7nm,0.8s,baz=8.8,slow=8.8,SNR=4.6						
MKAR	Makanchi Array	59.53	318	P	P	23 08 19.7	-1.9
	0.6nm,0.7s,baz=91,slow=8.4,SNR=6.8						
BVAR	Borovoye Array	68.38	322	P	P	23 09 17.2	-2.2
	1.4nm,0.6s,baz=100,slow=8.0,SNR=10.0						
ILAR	Eielson Array	71.95	26	P	P	23 09 39.0	-2.0
	0.5nm,0.9s,baz=252,slow=5.9,SNR=4.8						

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*NNC **08** 23:27:19.9±5.3, 41.61N×82.33E, mpv3.6, Error ellipse: s-maj=43.2km s-min=21.8km az=122.0*

BJI 08 23:27:20.7, 41.50N×82.34E, h13^{km}, ML3.7, 5C-4D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	4.58	58	P	Pn	23 28 34.6	+3.2
WMQ				SG	Sg	23 29 45.4	-7.8
WMQ				Smax			
	comp=N,40nm,0.8s						
WMQ				Smax			
	comp=E,80nm,1.0s						
KSH	Kashi	5.24	250	*e*PG	Pg	23 28 51.2	-14
KSH				SG	Sg	23 30 09.3	-5.9
KSH				Smax			
	comp=N,150nm,1.0s						
KSH				Smax			
	comp=E,80nm,0.8s						
MK31	Makanchi Array	5.29	360	⇓Pn	Pn	23 28 39.1	-2.3
	comp=E,1.2nm,0.4s,baz=189,slow=13,SNR=78						
MK31				⇑Pg	Pg	23 28 55.2	-11
	comp=E,7.4nm,0.6s,baz=180,slow=14,SNR=16						
MK31				⇑Sn	Sn	23 29 38.9	-4.1
	comp=E,7.4nm,0.5s,baz=176,slow=26						
MK31				⇓Lg		23 30 01.9	
	comp=E,57nm,0.7s,baz=175,slow=28						
AAK	Ala-Archa	5.95	284	⇓Pn	Pn	23 28 50.0	-0.7
	comp=E,12nm,1.1s						
AAK				⇑Lg		23 30 26.3	
	comp=E,27nm,1.1s						
KURK	Kurchatov	9.57	346	⇑Pn	P	23 29 47.7	+6.5
	comp=E,1.8nm,0.9s						
KURK				⇑Sn	Sn	23 31 28.1	-1.5
	comp=E,5.7nm,0.7s						
KURK				⇓Lg		23 32 20.7	
	comp=E,13nm,1.1s						

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*ATH **08** 23:36:25.8, 38.32N×27.13E, h5^{km}, MD3.6/4, ML3.8*

*ISK **08** 23:36:28.8, 38.25N×26.76E, h22^{km}, MD3.4*

*NEIC **08** 23:36:28.0, 38.25N×26.75E, h22^{km}, MD3.4(ISK), ML3.8(ATH), After ISK.*

*CSEM **08** 23:36:28.8±0.1, 38.25N×26.80E, h20^{km}, MD3.4, Error ellipse: s-maj=2.6km s-min=1.7km az=97.0*

ISC 08 23:36:26.9±0.8, **38.22N**±0.03×**26.60E**±0.04, **h2^{km}**±6^{km}, **n28, σ1^{s}01**/37, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.14	358	*i* P	Pg	23 36 29.4	-0.4
URLA				*i* S	Sg	23 36 32.5	+0.8
BLCB	Balcova	0.38	64	*i* PG	Pg	23 36 35.1	+0.5
BLCB				*i* SG	Sg	23 36 40.7	+1.0
SMG	Samos	0.54	160	*e*PB	Pb	23 36 38.6	-0.2
IZM	Izmir	0.55	71	*i* PG	Pg	23 36 38.0	+0.1
KDAG	Bornova	0.55	71	*i* P	Pg	23 36 37.4	-0.6
KDAG				*i* S	Sg	23 36 45.9	+0.5
PRK	Paraskevi	1.06	346	*e*PB	Pb	23 36 47.6	0.0
AYVA	Ayvalik	1.09	4	*i* P	Pb	23 36 48.0	-0.2
AYVA				*i* S	Sb	23 37 04.9	+2.3
AYDN	Tasoluk	1.15	119	*i* P	Pb	23 36 49.5	+0.3
AYDN				*i* S	Sb	23 37 05.4	+0.9
AKS	Akhisar	1.16	55	PG	Pg	23 36 48.7	-1.3
BODT	Bodrum	1.28	154	PN	Pn	23 36 51.9	+0.1
MLSB	Milas	1.31	134	PN	Pn	23 36 52.0	-0.2
BDRM	Kayabasi	1.33	150	*i* P	Pb	23 36 52.6	+0.3
BDRM				*i* S	Sb	23 37 10.9	+1.3
APE	Apeiranthos	1.43	217	PN	Pn	23 36 55.6	+1.7
MANT	Manisa	1.56	79	*i* P	Pn	23 36 56.6	+0.9
MANT				*i* S	Sb	23 37 17.5	+1.3
EZN	Ezine	1.62	352	*e*PN	Pn	23 36 57.5	+0.9
DAT	Datca	1.68	152	PN	Pn	23 36 56.4	-1.1
YER	Yerkesik	1.72	129	*e*PN	Pn	23 36 57.3	-0.7
BALB	Balikesir	1.73	35	*e*PN	Pn	23 36 57.0	-1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	1.98	103	ePN	Pn	23 36 59.9	-1.8
SANT	Santorini	2.06	207	ePn	Pn	23 37 05.7	+2.8
SANT				eSn	Sn	23 37 29.3	-0.1
SANT	Santorini	2.06	207	ePn	Pn	23 37 05.7	+2.8
SANT				eSn	Sn	23 37 29.3	-0.2
DST	Dursunbey	2.10	48	ePN	Pn	23 37 02.2	-1.3
LPK	Lapseki	2.15	3	ePN	Pn	23 37 03.0	-1.3
DALT	Dalyan (Mudla)	2.17	131	ePN	Pn	23 37 03.4	-1.1
ATH	Athens Observa	2.29	265	ePN	Pn	23 37 13.0	+6.8
ARG	Arkhangelos	2.34	148	ePN	Pn	23 37 06.6	-0.4
FETY	Fethiye	2.53	128	ePN	Pn	23 37 08.9	-0.8
ORLT	Orhaneli	2.55	44	ePN	Pn	23 37 08.7	-1.2

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*ISK **08** 23:58:34.0, 38.13N×26.70E, h20^{km}, MD3.2*
*ATH **08** 23:58:34.1, 38.12N×26.56E, h30^{km}±2^{km}, MD3.2/3*
*NEIC **08** 23:58:34.0, 38.13N×26.69E, h21^{km}, MD3.2(ISK), MD3.2(ATH), After ISK.*
*CSEM **08** 23:58:35.1±0.1, 38.16N×26.78E, h25^{km}, MD3.2, Error ellipse: s-maj=3.2km s-min=2.1km az=69.0*
ISC 08 23:58:34.2±0.7**, 38.14N**±0.03×**26.61E**±0.05**, h15**^{km}±7^{km}**, n23, σ0^{s}.94**/32**, 1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.22	356	i P	Pb	23 58 38.4	-0.9
URLA				i S	Sb	23 58 41.8	-0.9
BLCB	Balcova	0.41	54	i PG	Pb	23 58 42.3	-0.3
BLCB				i SG	Sb	23 58 47.6	-0.8
SMG	Samos	0.47	158⇓	iPB	Pb	23 58 44.3	+0.7
SMG				eSB	Sb	23 58 51.5	+1.5
IZM	Izmir	0.57	63	i PG	Pb	23 58 45.5	+0.2
IZM				i SG	Sb	23 58 53.3	+0.4
KDAG	Bornova	0.57	63	i P	Pb	23 58 44.4	-1.0
KDAG				i S	Sb	23 58 51.7	-1.4
AYDN	Tasoluk	1.11	115	i P	Pb	23 58 55.4	+0.8
AYDN				i S	Sb	23 59 09.5	+0.9
PRK	Paraskevi	1.13	346	ePN	Pn	23 58 55.4	-0.1
PRK				eSN	Sn	23 59 11.5	+0.8
AYVA	Ayvalik	1.16	3	i P	Pb	23 58 56.7	+1.3
AYVA				i S	Sb	23 59 12.0	+1.9
AKS	Akhisar	1.19	52	PN	Pn	23 58 56.0	-0.3
BODT	Bodrum	1.21	153	PN	Pn	23 58 55.7	-0.9
MLSB	Milas	1.25	132	PN	Pn	23 58 56.2	-1.0
APE	Apeiranthos	1.38	219	ePN	Pn	23 58 58.8	-0.1
APE	Apeiranthos	1.38	219	ePN	Pn	23 58 58.5	-0.5
MANT	Manisa	1.57	77	i P	Pn	23 59 03.6	+1.9
MANT				i S	Sn	23 59 23.5	+1.7
DAT	Datca	1.61	151	ePN	Pn	23 59 01.3	-1.0
YER	Yerkesik	1.66	127	ePN	Pn	23 59 02.5	-0.6
EZN	Ezine	1.69	352	ePN	Pn	23 59 03.9	+0.4
BALB	Balikesir	1.79	33	ePN	Pn	23 59 04.4	-0.5
LIA	Limnos Island	2.08	328	ePN	Pn	23 59 09.4	+0.4
ARG	Arkhangelos	2.27	147	ePN	Pn	23 59 11.9	+0.1
FETY	Fethiye	2.48	127	ePN	Pn	23 59 13.5	-1.2
ORLT	Orhaneli	2.60	42	ePN	Pn	23 59 15.5	-1.0
RDO	Rodhopi	3.11	345	ePN	Pn	23 59 23.5	-0.2

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*CASC **08** 23:59:07.3±3.0, 12.86N×90.46W, h18^{km}±13^{km}, MD4.4, ML4.3, mb4.4(NEIC)*
*IDC **08** 23:59:15.0±3.0, 13.60N×89.79W, h53^{km}±27^{km}, mb4.1/17, mb1 4.3/19, mb1mx4.2/23, mbtmp4.3/19, ML4.3/2, MS3.7/9, Ms1 3.7/9, ms1mx3.5/29, Error ellipse: s-maj=25.7km s-min=12.1km az=52.0*
*NEIC **08** 23:59:16.5±0.4, 13.38N×89.98W, mb4.4/30, MD4.2(SNET), Error ellipse: s-maj=12.6km s-min=6.0km az=223.0*
NEIC Felt [II] at San Salvador.
ISC 08 23:59:13.8±0.4**, 13.25N**±0.07×**90.01W**±0.05**, h76**^{km}**, h76**^{km}±3.0^{km}**:pP-P, n95, σ1^{s}.12**/97**, mb4.3**/42**, 5C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	1.01	335⇑	eP	P	23 59 30.4	-2.7
IXG				eS	S	23 59 47.5	+0.1
PCG	Pacaya	1.28	333⇓	eP	P	23 59 33.9	-2.5
FUG	Fuego 3	1.44	326⇓	eP	P	23 59 34.9	-3.7
TP2	Tecpan 2	1.81	327⇑	eP	P	23 59 41.1	-2.5
TP2				eS	S	00 00 06.5	+0.8
TP2				AML	AML	00 00 09.3	
	comp=E,6μm,0.4s						
MRL	Marmol	1.83	10⇑	eP	P	23 59 45.9	+2.0
CRIN	San Cristobal	2.94	100	eP	P	23 59 59.4	+0.1
CRIN				eS	S	00 00 39.4	+5.9
LEON	Leon	3.15	105	eP	P	00 00 01.0	-1.3
LEON				eS	S	00 00 40.0	+1.1
CNGN	Cerro Negro	3.31	103	eP	P	00 00 03.0	-1.6
MOMJ	Momotombo	3.49	104	eP	P	00 00 06.7	-0.3
COPN	Copaltepe	3.50	107	eP	P	00 00 06.5	-0.7
CCIG	Comitan	3.65	326	i P	P	00 00 07.4	-1.9
CCIG				i S	S	00 00 50.6	-0.7
CCIG				i S	S	00 00 55.5	+4.2
MGAN	Managua	3.83	106	eS	S	00 00 55.7	-0.2
MGAN				i		00 00 55.8	
	comp=N,261nm,0.5s						
PYTN	Playitas	3.92	100	eP	P	00 00 12.9	-0.1
JTS	JuntasAbangare	5.76	120	P	P	00 00 37.5	-0.9
	comp=N,10nm,0.3s,baz=308,slow=19,SNR=21						
JTS				Lg		00 02 14.5	
	comp=N,1.8nm,0.3s,baz=305,slow=23,SNR=3.6						
JTS				LR	LR	00 03 13.0	
	comp=N,590nm,21.9s,baz=164,slow=41						
JTS	JuntasAbangare	5.76	120	ePn	P	00 00 38.1	-0.3
	comp=N,29nm,0.4s						
JTS				Lg		00 02 14.4	
JTS				LR	LR	00 03 13.0	
OXX	Oaxaca	7.52	301	eP	P	00 01 00.0	-2.8
PPM	Popocatepetl	10.10	306	eP	P	00 01 36.0	-2.1
PPM				i S	S	00 03 22.6	-7.8
PPM				i S	S	00 03 44.6	+14
PLIG	Platanillo	10.47	300	i P	P	00 01 42.5	-0.6
NATX	Nacogdoches	18.91	348	eP	P	00 03 30.1	-1.0
	comp=N,31nm,0.8s						
JCT	Junction City	19.39	334	eP	P	00 03 32.0	-4.2
	comp=N,8.3nm,0.3s						
SDV	Santo Domingo	19.50	101	P	P	00 03 35.1	-2.5
	comp=N,0.6nm,0.3s,baz=313,slow=9.7,SNR=8.1						
SDV	Santo Domingo	19.50	101	eP	P	00 03 35.0	-2.6
	comp=N,8.0nm,0.7s						
LRAL	Lakeview Retre	19.89	7	P	P	00 03 39.6	-1.9
	comp=N,10nm,0.6s						
LRAL				epP		00 03 57.4	
LTX	Lajitas	20.41	324	eP	P	00 03 47.3	+0.2
	comp=N,11nm,0.8s						
TXAR	Lajitas Array	20.41	324	P	P	00 03 47.0	-0.1
	comp=N,13nm,0.9s,baz=152,slow=12,SNR=89						
TXAR	Lajitas Array	20.41	324	P	P	00 03 47.0	-0.1
SWET	Sewanee	22.18	9	eP	P	00 04 05.5	+0.8
SWET				epP		00 04 22.1	
CPCT	Cooper Cave	22.65	12	eP	P	00 04 11.4	+2.1
WMOK	Wichita Mounta	22.82	341	eP	P	00 04 10.2	-0.8
WVT	Waverly	22.87	5	eP	P	00 04 12.4	+1.0
	comp=N,14nm,0.9s,mb4.3						
MNTX	Cornudas Mount	23.16	325	eP	P	00 04 14.4	0.0
	comp=N,30nm,1.1s,mb4.5						
TZTN	Tazewell	23.91	13	eP	P	00 04 23.0	+1.5
WCI	Wyandotte Cave	25.09	7	eP	P	00 04 33.4	+0.4
	comp=N,43nm,0.7s,mb5.0						
LENM	Lemitar	25.90	326	eP	P	00 04 41.5	+1.0
ANMO	Albuquerque	26.23	328	P	P	00 04 44.4	+0.8
	comp=N,1.4nm,0.6s,mb3.6,baz=158,slow=10,SNR=3.6						
ANMO	Albuquerque	26.23	328	eP	P	00 04 44.3	+0.7
	comp=N,1.0nm,0.4s,mb3.6						
TUC	Tucson	26.86	318	eP	P	00 04 49.3	-0.1
	comp=N,3.6nm,0.8s,mb4.0						
ACSO	Alum Creek Sta	27.58	12	eP	P	00 04 55.8	-0.1
	comp=N,8.1nm,1.0s,mb4.2						
SDCO	Great Sand Dun	28.03	333	eP	P	00 05 00.7	+0.7
	comp=N,1.1nm,0.6s,mb3.6						
WUAZ	Wupatki	29.37	323	eP	P	00 05 12.9	+0.9
	comp=N,13nm,1.1s,mb4.5						
PV10	Paradox Valley	30.20	329	eP	P	00 05 19.4	+0.1
NEN	Nelson	31.59	319	eP	P	00 05 32.0	+0.6
MVU	Marysvale	31.95	326	eP	P	00 05 35.3	+0.7
	comp=N,4.1nm,0.9s,mb4.2						
ARUT	Antelope Range	32.13	324	eP	P	00 05 36.9	+0.6
ARUT				epP	pP	00 05 55.3	+0.9
SADO	Sadowa	32.75	14	P	P	00 05 40.3	-1.2
	comp=N,5.8nm,0.7s,mb4.5,baz=192,slow=8.2,SNR=6.2						
SADO				LR	LR	00 20 05.5	
	comp=N,327nm,18.3s,baz=268,slow=39						
DAU	Daniels Canyon	32.86	329	eP	P	00 05 43.7	+1.2
DAU				epP	pP	00 05 59.6	-1.1
RSSD	Black Hills	33.03	341	eP	P	00 05 44.1	+0.2
	comp=N,3.8nm,0.6s,mb4.4						
DUG	Dugway	33.49	327	eP	P	00 05 48.7	+0.7
	comp=N,4.5nm,1.0s,mb4.2						
HWUT	Hardware Ranch	33.92	330	eP	P	00 05 51.8	+0.1
	comp=N,10nm,1.0s,mb4.6						
HWUT				epP	pP	00 06 12.4	+2.5
PDAR	Pinedale Array	33.92	334	P	P	00 05 51.1	-0.6
	comp=N,1.1nm,0.8s,mb3.7,baz=124,slow=11,SNR=6.7						
PDAR				PcP	PcP	00 08 29.1	+0.3
	comp=N,0.7nm,0.8s,baz=134,slow=3.3,SNR=4.3						
SAML	Samuel	34.58	128	eP	P	00 05 55.7	-1.9
	comp=N,4.4nm,0.8s,mb4.3						
REDW	Red Top Meadow	34.96	333	eP	P	00 06 00.4	-0.1
	comp=N,23nm,1.0s,mb5.0						
REDW				pP	pP	00 06 16.2	-2.6
SNOW	Snow King Moun	35.00	333	eP	P	00 06 01.5	+0.7
	comp=N,29nm,1.1s,mb5.0						
TPAW	Teton Pass	35.11	333	eP	P	00 06 01.5	-0.2
	comp=N,14nm,1.0s,mb4.7						
RRI2	Red Ridge	35.16	333	eP	P	00 06 02.5	+0.3
	comp=N,5.9nm,0.8s,mb4.5						
ELK	Elko	35.18	326	eP	P	00 06 03.4	+1.0
	comp=N,5.4nm,0.8s,mb4.4						
ELK				pP	pP	00 06 20.9	+0.2
MOOW	Moose Ponds	35.23	334	eP	P	00 06 02.6	-0.2
	comp=N,2.0nm,0.8s,mb4.0						
MNV	Mina	35.38	320	eP	P	00 06 05.6	+1.4
	comp=N,13nm,1.1s,mb4.7						
MNV				epP	pP	00 06 24.5	+2.0
NVAR	Mina Array Bea	35.48	320	P	P	00 06 06.4	+1.4
	comp=N,7.4nm,0.7s,mb4.6,baz=144,slow=7.7,SNR=57						
NVAR				PcP	PcP	00 08 34.7	+1.5
	comp=N,1.7nm,0.7s,baz=120,slow=4.8,SNR=7.3						
NVAR				LR	LR	00 22 45.5	
	comp=N,144nm,18.5s,baz=125,slow=40						
NVAR	Mina Array Bea	35.48	320	P	P	00 06 06.4	+1.4
NVAR				PcP	PcP	00 08 34.7	+1.5
NVAR				LR	LR	00 22 45.5	
LPAZ	La Paz	36.46	143	LR	LR	00 21 06.0	
	comp=N,54nm,19.6s,baz=67,slow=36						
HLID	Hailey	36.77	330	eP	P	00 06 16.3	+0.4
	comp=N,3.6nm,0.9s,mb4.3						
MCMT	McKenzie Canyo	37.00	333	eP	P	00 06 19.0	+1.2
BOZ	Bozeman (W)	37.13	335	eP	P	00 06 19.0	+0.2
	comp=N,4.6nm,0.9s,mb4.4						
ULM	Lac du Bonnet	37.21	354	P	P	00 06 17.8	-1.6
	comp=N,10nm,0.7s,mb4.9,baz=168,slow=9.3,SNR=10						
ULM				LR	LR	00 26 13.9	
	comp=N,106nm,18.8s,baz=41,slow=44						
ULM	Lac du Bonnet	37.21	354	P	P	00 06 17.8	-1.6
ULM				LR	LR	00 26 13.8	
WVOR	Wild Horse Val	38.20	325	eP	P	00 06 28.5	+0.7
	comp=N,8.5nm,1.0s,mb4.5						
CHMT	Chamberlain Mo	38.82	334	eP	P	00 06 32.9	+0.1
CHMT				epP	pP	00 06 52.0	+0.7
BMO	Blue Mountains	39.14	329	eP	P	00 06 34.8	-0.8
	comp=N,3.3nm,0.9s,mb4.2						
BMO				epP	pP	00 06 55.0	+0.9
YBH	Yreka Blue Hor	40.15	321	P	P	00 06 43.7	-0.3
	comp=N,3.1nm,0.7s,mb4.2,baz=303,slow=4.3,SNR=4.6						
SIV	San Ignacio	40.78	135	P	P	00 06 49.3	0.0
	comp=N,2.5nm,0.6s,mb4.2,baz=314,slow=9.6,SNR=14						
EDM	Edmonton	43.98	340	eP	P	00 07 14.7	-0.5
SCHQ	Schefferville	45.28	19	P	P	00 07 25.1	-0.4
	comp=N,19nm,0.8s,mb4.9,baz=232,slow=12,SNR=34						
SCHQ				LR	LR	00 26 29.9	
	comp=N,117nm,21.3s,baz=296,slow=36						
CFAA	Coronel Fontan	49.25	155	P	P	00 08 00.6	+3.7
	comp=N,0.2nm,0.6s,mb3.3,baz=337,slow=7.7,SNR=4.4						
CFAA	Coronel Fontan	49.25	155	P	P	00 08 00.6	+3.7
BDFB	Brasilia	50.49	123	P	P	00 08 09.4	+2.8
	comp=N,1.4nm,0.4s,mb4.2,baz=288,slow=6.5,SNR=3.1						
BDFB				LR	LR	00 31 45.0	
	comp=N,87nm,18.4s,baz=79,slow=39						
YKA	Yellowknife Ar	52.21	346	P	P	00 08 17.7	-1.2
	comp=N,5.2nm,0.8s,mb4.6,baz=146,slow=8.2,SNR=21						
YKA				LR	LR	00 34 25.2	
	comp=N,70nm,19.7s,baz=130,slow=41						
YKA	Yellowknife Ar	52.21	346	P	P	00 08 17.7	-1.2
YKA				LR	LR	00 34 25.2	
PLCA	Paso Flores	56.66	162	P	P	00 08 54.1	+2.5
	comp=N,0.8nm,0.5s,mb4.0,baz=338,slow=5.4,SNR=3.4						
ILAR	Eielson Array	64.29	337	P	P	00 09 42.2	-0.9
	comp=N,3.4nm,0.9s,mb4.2,baz=142,slow=4.4,SNR=16						
DAG	Danmarks Havn	72.94	13⇑	iP	P	00 10 35.5	-0.8
	comp=N,1.3nm,0.6s,mb3.9						
DAG	Danmarks Havn	72.94	13⇑	eP	P	00 10 35.5	-0.8
	comp=N,1.3nm,0.6s,mb3.9						
ESDC	Sonseca Array	78.66	52	P	P	00 11 08.7	-0.7
	comp=N,1.3nm,0.7s,mb3.9,baz=285,slow=5.1,SNR=7.1						
DBIC	Dimbokro	83.80	85	P	P	00 11 38.0	+1.0
	comp=N,4.1nm,0.7s,mb4.4,baz=264,slow=5.4,SNR=12						
DBIC	Dimbokro	83.80	85	P	P	00 11 38.0	+1.0
NOA	NORSAR Array B	83.88	29	P	P	00 11 37.2	+1.0
	comp=N,1.3nm,0.7s,mb3.9,baz=290,slow=5.1,SNR=4.6						
NOA				LR	LR	00 48 58.8	
	comp=N,44nm,19.3s,baz=350,slow=36						
ARCES	ARCESS Array B	86.23	19	P	P	00 11 47.7	0.0
	comp=N,1.1nm,0.6s,mb4.0,baz=288,slow=7.7,SNR=4.4						
ARCES	ARCESS Array B	86.23	19	P	P	00 11 47.7	0.0
CLL	Collm	87.73	38	P	P	00 11 57.0	+1.7
GERES	GERESS Array B	88.94	40	P	P	00 12 02.1	+0.9
	comp=N,1.0nm,0.8s,mb3.9,baz=288,slow=4.2,SNR=8.8						
SONM	Songino Array	117.45	348	PKP	PKPdf	00 17 53.6	+2.8
	comp=N,0.4nm,0.6s,baz=30,slow=0.2,SNR=4.2						
BOSA	Boshof	118.29	115	PKP	PKPdf	00 17 58.1	+5.1
	comp=N,2.5nm,0.7s,baz=236,slow=2.4,SNR=6.7						
MKAR	Makanchi Array	119.83	6	PKP	PKPdf	00 17 58.4	+2.9
	comp=N,0.1nm,0.4s,baz=312,slow=3.4,SNR=5.4						
MKAR	Makanchi Array	119.83	6	PKP	PKPdf	00 17 58.4	+2.9
MATP	Matopo	120.99	106	PKP	PKPdf	00 18 03.3	+4.9
	comp=N,2.7nm,0.6s,baz=319,slow=2.2,SNR=13						

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*MOS **09** 00:08:42.1±1.0, 7.41S×106.89E, h78^{km}, mb5.2/3, Error ellipse: s-maj=41.7km s-min=17.6km az=121.8*
*NEIC **09** 00:08:47.8±5.1, 7.38S×106.99E, h109^{km}±46^{km}, mb4.8/3, Error ellipse: s-maj=28.0km s-min=14.1km az=46.0*
*IDC **09** 00:08:57.1±3.8, 7.42S×107.13E, h201^{km}±36^{km}, mb3.7/11, mb1 3.8/11, mb1mx3.7/18, mbtmp4.2/11, Error ellipse: s-maj=28.4km s-min=10.5km az=45.0*
ISC 09 00:08:44.8±5.5**, 7.3S**±0.2×**107.0E**±0.2**, h99**^{km}±50^{km}**, n24, σ0^{s}.82**/20**, mb4.3**/14**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.06	122	eP	P	00 13 31.7	+9.0
	9.6nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	21.06	122	P	P	00 13 24.7	+2.0
	7.8nm,1.2s,mb3.9,baz=261,slow=8.7,SNR=5.4						
FITZ				S	S	00 17 06.3	+0.1
	5.1nm,1.0s,baz=302,slow=15,SNR=2.3						
KAKA	Kakadu	25.57	104	eP	Px	00 14 33.2	
	11nm,0.8s						
WRA	Warramunga Arr	29.30	118	P	P	00 14 40.0	-0.3
	0.4nm,0.7s,mb3.2,baz=289,slow=11,SNR=4.5						
CTA	Charters Tower	40.05	113	P	P	00 16 11.8	-0.2
	2.3nm,0.6s,mb4.2,baz=275,slow=11,SNR=2.9						
STKA	Stephens Creek	40.41	132	P	P	00 16 14.1	-0.8
	2.1nm,0.5s,mb4.2,baz=308,slow=10,SNR=6.6						
STKA	Stephens Creek	40.41	132	P	P	00 16 14.1	-0.8
STKA				eP		00 16 14.3	
SONM	Songino Array	54.90	359	P	P	00 18 08.7	+1.2
	1.1nm,0.6s,mb4.0,baz=182,slow=8.3,SNR=9.6						
SONM				PcP	PcP	00 19 06.9	-1.3
	0.6nm,0.5s,baz=180,slow=3.2,SNR=6.2						
MKAR	Makanchi Array	58.18	340	P	P	00 18 30.1	-0.7
	4.4nm,0.5s,mb4.8,baz=151,slow=8.1,SNR=65						
OPO	Ambohidratompo	59.16	253	P	P	00 18 38.6	+0.6
	1.2nm,0.7s,mb4.0,baz=90,slow=8.1,SNR=3.8						
KURK	Kurchatov	62.80	340	eP	P	00 19 01.6	-0.5
	9.0nm,0.8s,mb4.8						
KURK	Kurchatov	62.80	340	eP	P	00 19 01.6	-0.6
KURK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ZAL	Zalesovo	63.83	346	P	P	00 19 08.1	-0.7
	comp=Z,6.0nm,0.4s,mb4.8,baz=335,slow=3.9,SNR=29						
BRVK	Borovoye	67.73	337	eP	P	00 19 33.8	+0.1
	comp=Z,5.7nm,0.6s,mb4.6						
BRVK	Borovoye	67.73	337	eP	P	00 19 33.8	+0.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
CHKZ	Chkalovo	68.08	338	eP	P	00 19 35.9	0.0
	comp=Z,17nm,0.5s,mb5.1						
CHKZ	Chkalovo	68.08	338	eP	P	00 19 35.9	+0.1
CHKZ				pmax	pmax		
	comp=Z,17nm,0.5s,mb5.1						
BRTR	Keskin Array B	82.06	312	P	P	00 20 54.5	-1.4
	comp=Z,1.0nm,0.7s,mb3.8,baz=149,slow=7.2,SNR=5.7						
FINES	FINESS Array B	92.06	332	P	P	00 21 44.9	+1.2
	comp=Z,1.3nm,0.9s,mb4.2,baz=135,slow=2.7,SNR=5.3						
ARCES	ARCESS Array B	93.83	340	P	P	00 21 52.4	+0.7
	comp=Z,5.0nm,1.1s,mb4.7,baz=100,slow=5.5,SNR=5.9						
TXAR	Lajitas Array	143.74	49	PKP	PKPdf	00 28 10.4	+1.6
	comp=Z,1.9nm,0.8s,baz=301,slow=1.7,SNR=13						
CCM	Cathedral Cave	145.20	26	ePKPdf	PKPdf	00 28 13.5	+2.3
JCT	Junction City	145.88	44	ePKPbc	PKPbc	00 28 17.3	+3.7
WVT	Waverly	148.25	23	ePKPbc	PKPdf	00 28 22.7	+6.4

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*SOF **09** 00:20:43.8, 41.80N×23.28E, h16^{km}, MD2.6*
*CSEM **09** 00:20:44.2±0.1, 41.86N×23.31E, h2^{km}, MD2.6, Error ellipse: s-maj=2.8km s-min=2.0km az=98.0*
*THE **09** 00:20:47.2, 41.71N×23.21E, h6^{km}, ML2.5*
ISC 09 00:20:44.2±0.6**, 41.79N**±0.03×**23.28E**±0.06**, h1**^{km}±9^{km}**, n15, σ0^{s}.91**/21**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	Krupnik	0.17	297	i Pg	Pg	00 20 48.0	+0.5
MMB	Musomiste	0.39	121	i Pg	Pg	00 20 52.8	+0.8
KNT	Kendrikon	0.69	205	ePg	Pg	00 20 58.4	+0.4
KNT				eSg	Sg	00 21 07.5	+0.2
VTS	Vitosha	0.80	356	i Pg	Pg	00 21 00.0	-0.2
SOH	Sokhos	0.97	177	ePg	Pg	00 21 03.5	-0.1
SOH				eSg	Sg	00 21 17.2	+0.7
PGB	Panagyurishte	1.00	41	i Pg	Pg	00 21 04.0	-0.2
GRG	Griva	1.06	219	ePg	Pg	00 21 05.5	+0.1
GRG				eSg	Sg	00 21 19.8	+0.1
RZN	Rozhen	1.08	95	i P	Pb	00 21 04.5	-0.9
PLD	Plovdiv	1.10	73	i Pg	Pg	00 21 07.2	+0.9
THE	Thessaloniki	1.18	192	ePg	Pg	00 21 07.7	-0.1
THE				eSg	Sg	00 21 23.8	+0.2
OUR	Ouranopolis	1.55	160	ePg	Pg	00 21 13.5	-1.6
KDZ	Kurdzhali	1.60	94	i P	Pn	00 21 13.0	-0.9
DIM	Dimitrovgrad	1.70	80	i Pg	Pg	00 21 17.0	-1.1
PAIG	Paliouri	1.89	171	ePb	Pb	00 21 18.2	-1.0
PAIG				eSb	Sb	00 21 42.2	-1.0
ALN	Alexandroupoli	2.26	112	ePn	Pn	00 21 25.5	+2.2
ALN				eSn	Sn	00 21 54.5	+2.2

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*CSEM **09** 00:22:25.0, 30.54S×178.01W, h33^{km}, mb5.8*
*IDC **09** 00:22:25.7±2.2, 30.36S×177.83W, h29^{km}±14^{km}, mb4.6/8, mb1 4.8/10, mb1mx4.8/11, mbtmp4.8/10, ML3.9/2, MS4.4/17, Ms1 4.4/17, ms1mx4.3/21, Error ellipse: s-maj=15.8km s-min=14.3km az=140.0*
*BJI **09** 00:22:26.7, 30.46S×178.23W, h46^{km}, mB5.0, mb5.2, Ms4.8, Msz4.2*
*MOS **09** 00:22:26.2±1.1, 30.33S×177.90W, h40^{km}, mb5.6/17, Error ellipse: s-maj=11.8km s-min=9.5km az=62.5*
*HRVD **09** 00:22:28.1±0.3, 30.55S×177.60W, h52^{km}±1^{km}, MW5.1/51, Centroid moment Tensor Solution. LP body waves: s45,c74;Mantle waves: s51,c85; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.50±.29; M$_{\theta\theta}$0.23±.22; M$_{\phi\phi}$-5.73±.19; M$_{r\theta}$-0.99±.18; M$_{\theta\phi}$-1.20±.21; M$_{\phi r}$2.45±.18; Best double couple: M$_0$6.324×10^{16} NP1:φ$_s$205°, δ36°, λ113°. NP2:φ$_s$357°, δ57°, λ74°. Principal axes: T 6.261, Plg73°, Azm227°; N .129, Plg13°, Azm6°; P -6.386, Plg11°, Azm99°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **09** 00:22:28.1±1.3, 30.32S×177.97W, h48^{km}±10^{km}, mb5.6/18 Error ellipse: s-maj=10.2km s-min=6.4km az=146.0*
ISC 09 00:22:24.9±0.3**, 30.74S**±0.04×**178.00W**±0.06**, h33**^{km}**, n332, σ1^{s}.42**/137**, mb5.5**/32**, MS4.5**/21**, 45C-12D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.49	3	Pn	Pn	00 22 46.1	-3.7
	2μm,0.3s,baz=78,slow=12,SNR=70						
RAO				Sn	Sn	00 23 00.2	-7.9
	17μm,0.3s,baz=240,slow=23,SNR=37						
RAO				LR	LR	00 23 15.3	
	comp=Z,30μm,21.9s,baz=140,slow=45						
PUZ	Puketiti	7.94	202	PN	Pn	00 24 19.5	-1.4
PUZ				SN	Sn	00 25 51.0	+0.5
WCZ	Waipu Caves	8.24	229	ePN	P	00 24 32.1	+7.2
OUZ	Omahuta	8.35	235	PN	P	00 24 35.1	+8.6
MWZ	Matawai	8.42	205	PN	P	00 24 25.5	-1.9
MWZ				SN	Sn	00 26 01.7	-0.9
URZ	Urewera	8.51	207	Pn	P	00 24 26.2	-2.6
	2.8nm,0.3s,baz=272,slow=2.4,SNR=28						
URZ				Sn	Sn	00 26 06.8	+1.9
	16nm,0.3s,baz=202,slow=14,SNR=13						
URZ	Urewera	8.51	207	PN	P	00 24 27.2	-1.5
URZ				SN	Sn	00 26 06.1	+1.3
KNZ	Kokohu	8.99	202	SN	Sn	00 26 16.5	-0.2
BKZ	Black Stump Fm	9.54	207	PN	P	00 24 40.3	-2.6
BKZ				SN	Sn	00 26 30.3	0.0
TSZ	Takapari Road	10.52	206	PN	P	00 24 53.4	-3.0
BFZ	Birch Farm	10.96	204	SN	S	00 26 59.3	-5.6
MRZ	Mangatainoka R	11.19	206	eSN	S	00 27 04.4	-5.9
KIW	Kapiti Island	11.62	208	ePN	P	00 25 06.5	-4.8
KIW				SN	S	00 27 13.8	-7.0
MTW	Mount Morrison	11.65	205	eSN	S	00 27 13.7	-7.9
CAW	Cannon Point	11.77	207	eSN	S	00 27 16.5	-7.9
PAWZ	Paruwai Farm	11.87	205	eSN	S	00 27 19.9	-7.1
MRW	Makara Radio	12.01	207	eSN	S	00 27 24.4	-6.1
TCW	Tory Channel	12.17	209	eSN	S	00 27 27.2	-7.1
QRZ	Quartz Range	12.65	215	SN	S	00 27 41.1	-4.9
THZ	Tophouse	13.21	211	ePN	P	00 25 27.5	-5.1
THZ				eSN	S	00 27 53.3	-6.0
KHZ	Kahutara	13.48	208	SN	S	00 27 57.3	-8.5
MQZ	McQueen's Vall	14.92	207	SN	S	00 28 27.2	-13
RPZ	Rata Peaks	15.59	211	Pn	P	00 26 00.2	-3.5
	1.2nm,0.3s,baz=64,slow=16,SNR=5.7						
RPZ				Sn	S	00 28 44.0	-12
	2.0nm,0.3s,baz=55,slow=4.9,SNR=5.9						
DZM	Mont Dzumac	16.39	298	eP	P	00 26 17.3	+3.4
DZM	Mont Dzumac	16.39	298	Pn	P	00 26 19.4	+5.5
	1.5nm,0.3s,baz=96,slow=15,SNR=16						
DZM				LR	LR	00 31 20.1	
	comp=Z,3μm,19.1s,baz=201,slow=33						
DZM	Mont Dzumac	16.39	298	eP	P	00 26 17.3	+3.4
NOUC	Port Laguerre	16.48	298	eP	P	00 26 19.3	+4.2
NOUC	Port Laguerre	16.48	298	eP	P	00 26 19.2	+4.2
ODZ	Otahua Downs	16.83	209	SN	S	00 29 15.8	-8.5
JCZ	Jackson Bay	16.93	215	ePN	P	00 26 20.0	-0.7
AFI	Afiamalu	17.71	20	P	P	00 26 24.1	-6.5
	4.2nm,0.3s,baz=95,slow=12,SNR=3.4						
AFI				S	S	00 29 19.2	-25
	4.7nm,0.3s,baz=219,slow=22,SNR=3.3						
AFI	Afiamalu	17.71	20	P	P	00 26 24.1	-6.5
AFI				S	S	00 29 19.2	-25
RAR	Rarotonga	18.91	64	P	P	00 26 41.4	-4.1
	2.6nm,0.3s,baz=190,slow=5.8,SNR=4.9						
RAR				S	S	00 29 57.7	-14
	2.8nm,0.3s,baz=88,slow=19,SNR=2.6						
RAR				LR	LR	00 32 39.3	
	comp=Z,305nm,18.1s,baz=168,slow=33						
ARMA	Armidale	26.12	263⇑	iP	P	00 28 01.9	+4.2
RIV	Riverview	26.21	255⇓	iP	P	00 28 03.0	+4.5
TBI	Tubuai	26.41	81	eS	S	00 32 26.0	-3.6
TBI				eLQ		00 33 11.3	
TBI				eLR	LR	00 34 26.4	
	2μm,27.5s,baz=249						
CNB	Canberra Magne	27.67	252⇑	iP	P	00 28 15.5	+3.7
	108nm,0.9s,mb5.5						
PPT	Papeete	28.96	70	eS	S	00 33 05.5	-5.3
PPT				eLQ		00 34 07.4	
PPT				eLR	LR	00 35 31.8	
	2μm,26.5s,baz=238						
PPT	Papeete	28.96	70	LR	LR	00 35 58.0	
	comp=Z,884nm,20.3s,MS4.4,baz=234,slow=28						
HNR	Honiara	29.53	311	LR	LR	00 38 08.3	
	comp=Z,553nm,21.6s,MS4.2,baz=273,slow=32						
TAU	Tasmania Unive	30.09	236	eP	P	00 28 34.8	+1.5
TOO	Toolangi	30.83	247⇑	iP	P	00 28 42.5	+2.5
	54nm,1.1s,mb5.3						
TOO	Toolangi	30.83	247⇑	iP	P	00 28 42.5	+2.5

TOO				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.3						
CTA	Charters Tower	33.86	280	⇑*i*P	P	00 29 08.1	+1.6
	comp=Z,233nm,0.6s,mb6.3						
CTA	Charters Tower	33.86	280	P	P	00 29 08.3	+1.8
	comp=Z,328nm,0.8s,mb6.3,baz=105,slow=10,SNR=435						
CTA	Charters Tower	33.86	280	⇑*i*P	P	00 29 08.1	+1.6
CTA				pmax	pmax		
	comp=Z,233nm,0.6s						
CTAO	Charters Tower	33.86	280	*e*P	P	00 29 08.2	+1.6
	comp=Z,264nm,0.7s,mb6.3						
CTAO	Charters Tower	33.86	280	*e*P	P	00 29 08.2	+1.7
CTAO				pmax	pmax		
	comp=Z,264nm,0.7s,mb6.3						
STKA	Stephens Creek	34.41	257	⇑*i*P	P	00 29 13.6	+2.5
	comp=Z,286nm,0.6s,mb6.4						
STKA	Stephens Creek	34.41	257	P	P	00 29 13.7	+2.6
	comp=Z,428nm,0.8s,mb6.4,baz=97,slow=9.6,SNR=569						
STKA				LR	LR	00 42 26.6	
	comp=Z,1µm,18.0s,MS4.7,baz=283,slow=35						
STKA	Stephens Creek	34.41	257	*e*P	P	00 29 13.5	+2.3
ADE	Adelaide	36.40	252	*e*P	P	00 29 30.6	+2.5
PMG	Port Moresby	38.76	296	P	P	00 29 48.9	+0.9
	comp=Z,13nm,0.7s,mb4.8,baz=114,slow=10,SNR=6.8						
RKT	Rikitea	38.91	89	*e*S	S	00 35 43.6	-1.5
RKT				*e*LQ		00 38 45.0	
RKT				*e*LR	LR	00 40 15.2	
	comp=Z,2µm,30.0s,baz=256						
TAOE	Nuku Hiva Isla	41.44	66	*e*LR	LR	00 41 15.7	
	comp=Z,3µm,26.8s						
ASPA	Alice Springs	43.10	267	⇓*i*P	P	00 30 25.0	+1.2
WB2	Warramunga Arr	44.10	273	⇑*i*P	P	00 30 31.9	0.0
WB2				*e*S	S	00 36 58.6	-3.3
WRAB	Tennant Creek	44.11	273	*e*P	P	00 30 31.9	-0.1
	comp=Z,143nm,0.6s,mb5.9						
WRAB	Tennant Creek	44.11	273	*e*P	P	00 30 31.9	-0.1
WRAB				pmax	pmax		
	comp=Z,143nm,0.6s,mb5.9						
WRA	Warramunga Arr	44.12	272	P	P	00 30 32.0	0.0
	comp=Z,102nm,0.4s,mb5.9,baz=111,slow=8.0,SNR=1039						
WRA				ScP		00 36 05.9	
	comp=Z,2.2nm,1.0s,baz=116,slow=3.9,SNR=4.1						
WRA				S	S	00 37 00.9	-1.2
	comp=Z,3.2nm,0.9s,baz=110,slow=14,SNR=4.6						
WRA				PKiKP		00 39 16.4	
	comp=Z,1.1nm,0.7s,baz=142,slow=0.4,SNR=5.4						
WRA	Warramunga Arr	44.12	272	P	P	00 30 32.0	0.0
WRA				S	S	00 37 00.9	-1.2
FORT	Forrest	45.96	255	*e*P	P	00 30 46.5	-0.2
	comp=Z,58nm,0.5s,mb5.8						
SBA	Scott Base	47.70	184	*e*P	P	00 31 04.9	+5.2
	comp=Z,72nm,0.9s,mb5.7						
SBA	Scott Base	47.70	184	*e*P	P	00 31 04.9	+5.2
SBA				pmax	pmax		
	comp=Z,72nm,0.9s,mb5.7						
VNDA	Vanda	47.75	186	*e*P	P	00 31 04.0	+3.8
	comp=Z,6.5nm,0.6s,mb4.8						
VNDA	Vanda	47.75	186	*e*P	P	00 31 04.0	+3.8
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KAKA	Kakadu	49.00	280	*e*P	P	00 31 26.3	+16
	comp=Z,34nm,0.8s,mb5.4						
FITZ	Fitzroy Crossi	52.36	270	*e*P	P	00 31 35.5	-0.5
	comp=Z,103nm,0.8s,mb5.8						
FITZ	Fitzroy Crossi	52.36	270	P	P	00 31 35.8	-0.2
	comp=Z,157nm,0.9s,mb6.0,baz=146,slow=6.7,SNR=97						
KLBR	Kellerberrin	54.24	251	⇓*i*P	P	00 31 48.8	-1.1
	comp=Z,126nm,1.1s,mb5.8						
CASY	Casey	54.84	208	⇑*i*P	P	00 31 54.2	+0.5
MUN	Mundaring	55.38	250	*e*P	P	00 31 56.9	-1.3
QSPA	South Pole Qui	59.37	180	*e*P	P	00 32 28.8	+3.1
	comp=Z,280nm,0.8s,mb6.3						
MIR	Mirnyy	61.82	207	*c* *i*P	P	00 32 44.2	+1.7
MIR				pmax	pmax		
	comp=Z,123nm,1.0s,mb6.0						
MIR				MLR	MLR		
	comp=N,1µm,16.0s,MS5.4						
MIR				MLR	MLR		
	comp=E,1µm,16.0s,MS5.4						
MIR				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.6						
MAW	Mawson	71.99	201	⇑*i*P	P	00 33 48.4	+1.9
	comp=Z,24nm,0.9s,mb5.1						
MAW	Mawson	71.99	201	P	P	00 33 48.5	+2.0
	comp=Z,24nm,0.8s,mb5.2,baz=122,slow=7.2,SNR=50						
MAW				LR	LR	01 04 09.4	
	comp=Z,431nm,19.2s,MS4.7,baz=91,slow=35						
MAW	Mawson	71.99	201	⇑*i*P	P	00 33 48.4	+1.9
MAW				pmax	pmax		
	comp=Z,24nm,0.9s						
KKM	Kota Kinabalu	72.67	288	*e*P	P	00 33 50.0	-1.6
TGY	Tagaytay City	73.68	298	P	P	00 33 56.3	-1.1
	comp=Z,115nm,0.3s,mb6.2,baz=211,slow=5.9,SNR=6.2						
KSM	Kuching	75.09	281	*e*P	P	00 34 04.5	-1.2
SYO	Syowa Base	76.78	193	⇑P	P	00 34 15.7	+1.5
SYO	Syowa Base	76.78	193	⇑*e*P	P	00 34 15.7	+1.5
JOW	Kunigami	76.89	312	LR	LR	01 01 58.7	
	comp=Z,210nm,20.5s,MS4.4,baz=108,slow=31						
SNAA	Sanae	77.81	178	⇑*i*P	P	00 34 21.7	+1.8
SNAA	Sanae	77.81	178	*e*	P	00 34 27.4	+7.5
SNAA	Sanae	77.81	178	*e*	Px	00 34 43.7	
SNAA	Sanae	77.81	178	*e*	Px	00 34 53.3	
VNA3	Neumayer Olymp	77.96	176	*e*	P	00 34 29.4	+8.7
VNA3	Neumayer Olymp	77.96	176	*e*	Px	00 34 43.8	
VNA3	Neumayer Olymp	77.96	176	*e*	Px	00 34 54.3	
VNA3	Neumayer Olymp	77.96	176	⇑*i*P	P	00 34 22.5	+1.8
VNA3				*e*		00 34 29.4	
VNA3				*e*		00 34 43.8	
VNA3				*e*		00 34 54.3	
VNA3				*e*		00 37 20.0	
VNA3				*e*		00 40 21.6	
VNA3				*e*		00 44 23.4	
VNA3				*e*		00 44 43.4	
VNA2	Neumayer--Watz	78.40	177	*e*	P	00 34 32.5	+9.4
VNA2	Neumayer--Watz	78.40	177	*e*	Px	00 34 45.1	
VNA2	Neumayer--Watz	78.40	177	*e*	Px	00 34 57.2	
VNA2	Neumayer--Watz	78.40	177	⇑*i*P	P	00 34 25.3	+2.2
VNA2				*e*		00 34 32.5	
VNA2				*e*		00 34 45.1	
VNA2				*e*		00 34 57.2	
VNA2				*e*		00 37 24.7	
VNA2				*e*		00 40 24.2	
VNA2				*e*		00 44 23.4	
VNA2				*e*		00 44 42.0	
MJAR	Matsushiro Arr	78.53	325	P	P	00 34 21.6	-2.9
	comp=Z,8.2nm,0.8s,mb4.7,baz=154,slow=5.2,SNR=9.6						
MJAR				LR	LR	01 06 10.0	
	comp=Z,120nm,20.3s,MS4.2,baz=115,slow=34						
NVL	N'lazarevskaya	78.53	183	*e*P	P	00 34 25.5	+1.6
NVL				*e**PP	pP	00 34 30.1	-4.1
NVL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VNA1	Neumayer--Stat	78.63	177	*e*	P	00 34 34.1	+10
VNA1	Neumayer--Stat	78.63	177	*e*	Px	00 34 46.8	
VNA1	Neumayer--Stat	78.63	177	*e*	Px	00 34 58.9	
VNA1	Neumayer--Stat	78.63	177	⇑*i*P	P	00 34 26.9	+2.5
VNA1				*e*		00 34 34.1	
VNA1				*e*		00 34 46.8	
VNA1				*e*		00 34 58.9	
VNA1				*e*		00 37 25.2	
JNU	Nakatsue	79.81	318	LR	LR	01 04 18.4	
	comp=Z,146nm,19.5s,MS4.3,baz=306,slow=32						
PLCA	Paso Flores	82.27	133	P	P	00 34 46.0	+1.6
	comp=Z,10nm,1.0s,mb4.7,baz=230,slow=6.2,SNR=18						
PLCA				LR	LR	01 02 44.6	
	comp=Z,204nm,20.8s,MS4.5,baz=248,slow=29						
PLCA	Paso Flores	82.27	133	P	P	00 34 46.0	+1.6
PLCA				LR	LR	01 02 44.6	
ASAJ	Asahikawa	82.75	333	LR	LR	01 06 55.0	
	comp=Z,312nm,19.7s,MS4.7,baz=113,slow=32						
SSE	Sheshan	84.33	311	*e*P	P	00 34 53.8	-1.3
SSE				S	S	00 45 12.0	-5.0
SSE				SS	SS	00 50 41.8	-8.3
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.7						
SSE				AMB	AMB		
	comp=Z,40nm,3.5s						
SSE				LR	LR		
	comp=N,70nm,23.4s,MS4.1						
SSE				LR	LR		
	comp=E,70nm,23.4s,MS4.1						
SSE				LR	LR		
	comp=Z,130nm,23.0s,MS4.2						
SSE	Sheshan	84.33	311	*e*P	P	00 34 53.8	-1.3
	comp=Z,45nm,0.7s,mb5.7						
SSE				PcP	PcP	00 34 57.3	-1.9
SSE				pP	pP	00 35 17.5	+12
SSE				sP	sP	00 35 27.2	+18
SSE				S	S	00 45 12.0	-5.0
SSE				ScS	ScS	00 45 23.2	-3.9
SSE				sS		00 45 53.6	
SSE				SS	SS	00 50 41.8	-8.3
SSE				LR	LR		
	comp=Z,140nm,23.0s,MS4.3						
YSS	Yuzh-Sakhalins	85.06	334	*e*P	P	00 34 56.7	-1.5
	comp=Z,47nm,0.9s,mb5.6						
YSS	Yuzh-Sakhalins	85.06	334	⇓*i*P	P	00 34 58.0	-0.3
YSS				*e*		00 35 18.4	
PET	Petropavlovsk	85.86	346	*e*P	P	00 35 04.3	+2.2
PET				*e*S	S	00 45 31.6	+0.2
PET				*e*PS	PS	00 46 28.6	-6.2
PET				*e*SS	SS	00 51 14.6	+2.1
PET				*e*SSS	SSS	00 54 40.2	-1.1
PET				pmax	pmax		
	comp=Z,35nm,0.5s,mb5.8						
PFO	Pinyon Flat Ob	86.44	47	*e*P	P	00 35 04.3	-1.0
NJ2	Nanjing	86.47	311	*e*P	P	00 35 04.6	-1.0
NJ2				AP	pP	00 35 14.6	-1.5
NJ2				XP	sP	00 35 18.3	-1.3
NJ2				PP	PP	00 38 27.4	-1.9
NJ2				S	S	00 45 36.0	-1.8
NJ2				XS		00 45 52.0	
NJ2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,50nm,3.8s						
NJ2				LR	LR		
	comp=N,520nm,31.2s						
NJ2				LR	LR		
	comp=E,490nm,26.0s						
NJ2				LR	LR		
	comp=Z,160nm,31.8s,MS4.2						
CMB	Columbia Colle	87.01	42	*e*P	P	00 35 07.7	-0.4
	comp=Z,15nm,1.1s,mb5.1						
CMB	Columbia Colle	87.01	42	*e*P	P	00 35 07.7	-0.4
CMB				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.1						
DAC	Darwin (Calif)	87.48	45	*e*P	P	00 35 10.1	-0.2
WDC	Whiskeytown Da	87.58	39	*e*P	P	00 35 10.8	+0.1
	comp=Z,37nm,1.8s,mb5.3						
MTUM	Tungsten Hills	87.61	43	*e*P	P	00 35 11.2	+0.2
MTUM				*e*pP	pP	00 35 27.0	+5.5
LDFC	Landfair	88.23	47	*e*P	P	00 35 15.2	+1.2
NVAR	Mina Array Bea	88.49	43	P	P	00 35 15.1	0.0
	comp=Z,8.2nm,0.9s,mb5.0,baz=206,slow=6.7,SNR=44						
NVAR				PKKPbc		00 52 58.7	
	comp=Z,1.0nm,0.8s,baz=223,slow=2.5,SNR=7.7						
NVAR				LR	LR	01 08 55.2	
	comp=Z,201nm,18.6s,MS4.6,baz=180,slow=32						
NVAR	Mina Array Bea	88.49	43	P	P	00 35 15.1	0.0
NVAR				PKKPbc		00 52 58.7	
NVAR				LR	LR	01 08 55.2	
TUC	Tucson	89.32	51	*e*P	P	00 35 20.4	+1.2
CN2	Changchun	90.42	323	*e*P	P	00 35 22.1	-2.0
CN2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.6						
KDAK	Kodiak Island	90.74	13	LR	LR	01 11 57.6	
	comp=Z,262nm,19.7s,MS4.7,baz=1.0,slow=33						
WVOR	Wild Horse Val	90.98	40	*e*P	P	00 35 26.5	-0.3
	comp=Z,11nm,1.0s,mb5.1						
WVOR	Wild Horse Val	90.98	40	*e*P	P	00 35 26.5	-0.3
WVOR				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
GYA	Guiyang	91.72	300	P	P	00 35 30.4	-0.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.2						
ENH	Enshi	91.80	304	*e*P	P	00 35 30.4	-0.5
MSU	Marysvale	92.22	46	P	P	00 35 32.7	+0.1
TXAR	Lajitas Array	92.57	57	P	P	00 35 33.8	-0.6
	comp=Z,2.6nm,1.0s,mb4.6,baz=202,slow=6.7,SNR=9.7						
TXAR				LR	LR	01 13 26.3	
	comp=Z,118nm,18.5s,MS4.4,baz=205,slow=33						
MA2	Magadan	93.62	345	*e*P	P	00 35 29.1	-9.4
ANMO	Albuquerque	93.79	51	⇑*i*P	P	00 35 39.8	0.0
HLID	Hailey	94.06	41	*e*P	P	00 35 40.7	-0.1
	comp=Z,5.5nm,1.0s,mb4.9						
HWUT	Hardware Ranch	94.49	44	P	P	00 35 41.3	-1.5
MCMT	McKenzie Canyo	95.73	40	*e*P	P	00 35 48.7	+0.3
PDAR	Pinedale Array	96.38	44	P	P	00 35 50.5	-0.9
	comp=Z,1.1nm,1.0s,baz=207,slow=3.3,SNR=6.4						
PDAR				PKKPbc		00 52 36.8	
	comp=Z,1.9nm,0.7s,baz=73,slow=4.5,SNR=14						
PDAR				LR	LR	01 10 55.6	
	comp=Z,185nm,20.6s,MS4.5,baz=245,slow=30						
QLMT	Earthquake Lak	96.53	41	*e*P	P	00 35 53.4	+1.4
LPAZ	La Paz	98.00	114	P	P	00 36 01.5	+2.2
	comp=Z,0.6nm,0.5s,baz=274,slow=3.7,SNR=4.2						
LPAZ				LR	LR	01 11 55.8	
	comp=Z,80nm,21.4s,MS4.2,baz=43,slow=30						
LPAZ	La Paz	98.00	114	P	P	00 36 01.5	+2.2
LPAZ				LR	LR	01 11 55.8	
ILAR	Eielson Array	98.26	13	PKiKP		00 40 30.5	
	comp=Z,0.4nm,0.8s,baz=284,slow=3.7,SNR=2.7						
ILAR				PKKPbc		00 52 32.2	
	comp=Z,0.5nm,0.7s,baz=356,slow=2.4,SNR=4.1						
ILAR				LR	LR	01 12 20.4	
	comp=Z,105nm,20.7s,MS4.3,baz=198,slow=31						
BILL	Bilibino	99.18	354	*e*P	P	00 36 01.6	-1.9
BILL				pmax	pmax		
	comp=Z,11nm,1.7s,mb5.1						
BILL				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.6						
SONM	Songino Array	103.40	318	PKiKP		00 40 40.0	
	comp=Z,0.9nm,0.8s,baz=117,slow=3.2,SNR=3.3						
YKA	Yellowknife Ar	105.75	26	PKKPbc		00 52 07.4	
	comp=Z,2.8nm,0.9s,baz=41,slow=3.1,SNR=5.7						
BOSA	Boshof	116.95	203	PKP	PKPdf	00 41 08.9	+2.4
	comp=Z,5.5nm,0.9s,baz=215,slow=2.9,SNR=6.9						
MKAR	Makanchi Array	118.00	310	PKP	PKPdf	00 41 07.8	-0.3
	comp=Z,6.1nm,0.8s,baz=202,slow=1.0,SNR=53						
MKAR	Makanchi Array	118.00	310	*i* PKIKP	PKPdf	00 41 07.7	-0.4
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZAL	Zalesovo	118.30	318	PKP	PKPdf	00 41 07.8	-0.7
	comp=Z,2.8nm,0.7s,baz=332,slow=2.4,SNR=17						
THN	Thein Dam	118.40	293	*e*P	PKPdf	00 41 09.5	+0.2
NVS	Novosibirsk	119.40	319	⇑*i*PKIKP	PKPdf	00 41 08.7	-2.0
NVS				pmax	pmax		
	comp=Z,14nm,1.1s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.2s						
KURK	Kurchatov	121.29	314	*e*P	PKPdf	00 41 13.9	-0.5
TKM2	Tokmak 2	121.59	304	P	PKPdf	00 41 15.5	+0.3
	SNR=13						
KZA	Kyzart	121.63	303	P	PKPdf	00 41 16.8	+1.5
	SNR=14						
KBK	Karagaybulak	121.99	304	P	PKPdf	00 41 16.9	+1.0
	SNR=9.3						
UCH	Uchtor	122.19	303	P	PKPdf	00 41 17.8	+1.4
	SNR=31						
CHMS	Chumysh	122.21	304	P	PKPdf	00 41 16.7	+0.3
	SNR=11						
FRU	Bishkek	122.27	304	*e*PKIKP	PKPdf	00 41 17.0	+0.5
AAK	Ala-Archa	122.31	304	P	PKPdf	00 41 17.5	+0.9
	SNR=8.9						
AAK	Ala-Archa	122.31	304	*e*P	PKPdf	00 41 16.0	-0.6
USP	Ospenovka	122.45	304	P	PKPdf	00 41 17.2	+0.3
	SNR=13						
AML	Almayashu	122.76	303	P	PKPdf	00 41 18.5	+1.0
	SNR=27						
EKS2	Erkin-Say	122.83	304	P	PKPdf	00 41 18.4	+0.7
	SNR=12						
MATP	Matopo	123.11	210	PKP	PKPdf	00 41 20.6	+1.9
	comp=E,25nm,1.0s,baz=199,slow=1.6						
KKAR	Karatay Array	125.27	303	*i* PKIKP	PKPdf	00 41 22.5	+0.2
KKAR				pmax	pmax		
	comp=Z,12nm,0.6s						
VOSK	Vostochnaya	126.27	315	PKIKP	PKPdf	00 41 23.6	-0.3
VOSK				pmax	pmax		
	comp=Z,23nm,0.8s						
CHKZ	Chkalovo	126.56	316	*e*P	PKPdf	00 41 24.0	-0.5
BVA0	Borovoye Array	126.65	316	*i* PKIKP	PKPdf	00 41 24.5	-0.2
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	126.72	316	*e*P	PKPdf	00 41 24.4	-0.4
LSZ	Lusaka	127.77	213	*e*P	PKPdf	00 41 30.2	+2.4
TSUM	Tsumeb	128.13	199	PKP	PKPdf	00 41 31.1	+2.6
	comp=Z,3.0nm,0.6s,baz=164,slow=2.7,SNR=3.2						
SVE	Sverdlovsk	132.16	321	*i* PKIKP	PKPdf	00 41 35.0	-0.1
SVE				pmax	pmax		
	comp=Z,40nm,1.5s						
SVE				MLR	MLR		
	comp=N,100nm,14.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,100nm,14.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,300nm,14.0s,MS5.2						
DAG	Danmarks Havn	132.88	6	⇑*i*P	PKPdf	00 41 35.1	-0.9
	comp=Z,2.5nm,0.9s						
DAG	Danmarks Havn	132.88	6	⇑*e*P	PKPdf	00 41 35.1	-0.9
ARU	Arti	133.36	320	*e*P	PKPdf	00 41 37.5	+0.1
ARU	Arti	133.36	320	*i* PKIKP	PKPdf	00 41 37.6	+0.2
ARU				*e*		00 44 03.4	
ARU				*e*SS	SS	01 01 41.4	-6.9
KMBO	Kilima Mbogo	133.87	233	PKP	PKPdf	00 41 41.3	+1.8
	comp=Z,4.5nm,0.9s,baz=47,slow=3.6,SNR=12						
KMBO				SKPbc		00 45 09.3	
	comp=Z,1.2nm,0.8s,baz=69,slow=1.5,SNR=3.8						
AKTO	Aktyubinsk	134.33	312	PKP	PKPdf	00 41 39.5	+0.1
	comp=Z,12nm,1.0s,baz=135,slow=4.2						
AKTO				SKPbc		00 45 07.2	
	comp=Z,1.7nm,0.8s,baz=72,slow=6.4,SNR=3.3						
ORR	Orenburg	136.27	314	⇑*i*PKIKP	PKPdf	00 41 43.8	+1.0
ORR				pmax	pmax		
	comp=Z,40nm,1.2s						
KEV	Kevo	138.46	347	*e*pkp	PKPdf	00 41 43.7	-2.7
KEV	Kevo	138.46	347	P	PKPdf	00 41 39.8	-6.6
KEV				*e*PKP	PKPdf	00 41 43.7	-2.7
APA	Apatity	138.74	342	⇓*i*PKIKP	PKPdf	00 41 48.8	+1.9
APA				pmax	pmax		
	comp=Z,16nm,0.8s						
ARCES	ARCESS Array B	138.93	348	PKhKP		00 41 37.0	
	comp=Z,6.0nm,0.8s,baz=103,slow=1.4,SNR=16						
KLMR	Klimovskoe	141.06	332	*e*PKIKP	PKPdf	00 41 48.9	-2.3
KLMR				pmax	pmax		
	comp=Z,20nm,1.4s						
JOF	Joensuu	142.74	338	*e*pkp	PKPdf	00 41 49.3	-4.7
BHD	Baghdad	144.15	285	*e*x	x	00 41 53.0	
GNI	Garni	144.23	297	PKP	PKPdf	00 41 57.0	-0.3
	comp=Z,6.2nm,0.6s,baz=343,slow=14,SNR=6.5						
VRHR	Novokhopersk	144.39	316	*e*PKIKP	PKPdf	00 41 56.3	-0.9
VRHR				pmax	pmax		
	comp=N,6.0nm,0.6s						
VRHR				pmax	pmax		
	comp=Z,20nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.8s						
MOS	Moscow	144.62	325	*e*PKIKP	PKPdf	00 41 55.2	-2.3
MOS				pmax	pmax		
	comp=Z,74nm,1.2s						
ZEI	Tsey	144.69	302	*e*PKIKP	PKPdf	00 41 56.0	-2.0
KAF	Kangasniemi	144.87	340	*e*pkp	PKPdf	00 41 55.3	-2.4
GOF	Gofitskoye	145.00	306	*e*PKHKP		00 41 54.0	
HAKT	HAKKARI	145.04	293	*i* P	PKPdf	00 41 57.9	-0.9
TVAN	Van	145.29	294	*i* P	PKPdf	00 42 00.8	+1.6
PUL	Pulkovo	145.32	335	*i* PKIKP	PKPdf	00 41 58.6	+0.1
PUL				pmax	pmax		
	comp=N,228nm,0.9s						
PUL				pmax	pmax		
	comp=E,158nm,0.9s						
PUL				pmax	pmax		
	comp=Z,295nm,0.9s						
KIV	Kislovodsk	145.42	304	*e*P	PKPdf	00 41 59.7	+0.5
KIV	Kislovodsk	145.42	304	*e*PKIKP	PKPdf	00 41 59.7	+0.5
OBN	Obninsk	145.45	325	*e*P	PKPdf	00 41 58.9	0.0
OBN	Obninsk	145.45	325	⇑*i*PKIKP	PKPdf	00 41 58.9	0.0
OBN				pmax	pmax		
	comp=Z,171nm,1.3s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.7						
FINES	FINESS Array B	145.47	340	PKPbc	PKPbc	00 41 58.6	-0.8
	comp=Z,145nm,0.8s,baz=63,slow=4.3,SNR=305						
MSL	Mosul	145.49	290	*e*x	x	00 42 07.0	
BEST	Besiri	146.98	293	*i* P	PKPdf	00 42 03.6	+1.6
BNGL	BINGOL	147.05	295	*i* P	PKPdf	00 42 08.4	+6.3
SOC	Sochi	147.61	304	*i* PKP2	PKPab	00 42 07.4	-2.5
SOC				*e*		00 45 30.0	
SOC				pmax	pmax		
	comp=Z,31nm,0.7s						
ELZG	Elazig	148.76	294	*i* P	PKPdf	00 42 04.6	-0.3
ANN	Anapa	148.94	307	*i* PKIKP	PKPdf	00 42 08.6	+3.6
ANN				pmax	pmax		
	comp=Z,152nm,1.1s						
NB2	NORSAR Subarra	149.09	351	PKPabc	PKPdf	00 42 09.2	+4.5
	comp=Z,4.8nm,0.7s,baz=27,slow=3.1						
NOA	NORSAR Array B	149.09	351	PKP	PKPdf	00 42 05.6	+0.9
	comp=Z,39nm,0.9s,baz=16,slow=4.3,SNR=25						
NOA				PKPbc	PKPdf	00 42 09.2	+4.5
	comp=Z,58nm,0.9s,baz=14,slow=4.3,SNR=74						
NAO01	NORSAR Array S	149.32	351	*e*PKPbc	PKPdf	00 42 09.7	+4.6
NAO	NORSAR Subarra	149.35	352	PKPab	PKPab	00 42 09.2	-7.2
IZAR	Zarasai	149.70	333	*e*P	PKPdf	00 42 11.3	+5.4
IZAR				AMb	AMB	00 42 13.8	
	comp=Z,30nm,1.5s						
IDID	Didziasalis	149.81	332	*e*P	PKPdf	00 42 11.5	+5.5
IDID				AMb	AMB	00 42 14.1	
	comp=Z,23nm,1.4s						
ISAL	Salakas	149.88	332	*e*P	PKPdf	00 42 11.6	+5.5
MNK	Minsk	149.91	330	*e*PKHKP		00 42 10.0	
KAHT	Ahir Dag	150.47	293	*i* P	PKPdf	00 42 15.1	+7.5
KONO	Kongsberg	150.64	352	*d* *i*PKIKP	PKPdf	00 42 13.5	+6.3
COBT	Iskenderun	151.01	291	*i* P	PKPdf	00 42 14.2	+5.7
SIM	Simferopol'	151.16	308	*e*PKIKP	PKPdf	00 42 14.8	+6.4
MKRJ	Makawir	151.26	280	P	PKPdf	00 42 16.6	+7.6
KSDI	Kefar Szold	151.41	284	P	PKPdf	00 42 17.4	+8.2
BHL	Bhannes	151.46	285	*e*P	PKPdf	00 42 16.9	+7.7
AQBJ	Aqaba	151.49	276	P	PKPdf	00 42 17.3	+7.9
ZFRI	Zfri	151.51	278	P	PKPdf	00 42 17.3	+7.9
MMLI	Mount Malkishu	151.55	282	P	PKPdf	00 42 17.7	+8.3
HRFI	Mount Harif	151.55	277	P	PKPdf	00 42 17.1	+7.6
EIL	Elat	151.56	276	P	PKPdf	00 42 17.1	+7.6
AKASG	Malin Array Be	151.57	322	PKP	PKPdf	00 42 09.0	+0.2
	comp=Z,2.5nm,0.8s,baz=55,slow=1.6,SNR=10						
AKASG				PKPbc	PKPdf	00 42 15.3	+6.5
	comp=Z,70nm,0.7s,baz=50,slow=2.8,SNR=189						
AKASG	Malin Array Be	151.57	322	PKP	PKPdf	00 42 09.0	+0.2
AKASG				PKPbc	PKPdf	00 42 15.3	+6.5
MBH	Mount Berech	151.61	277	P	PKPdf	00 42 17.7	+8.1
PRNI	Paran	151.63	278	P	PKPdf	00 42 17.6	+8.0
HNTI	Hanita	151.81	283	P	PKPdf	00 42 18.1	+8.3
SLTI	Sal'it	151.85	282	P	PKPdf	00 42 18.1	+8.2
AVNT	Avonos	151.96	296	*i* P	PKPdf	00 42 19.9	+10
SUW	Suwalki	152.18	333	*e*PKPdf	PKPdf	00 42 10.7	+1.0
SUW				⇑*e*PKPb		00 42 17.2	
SUW	Suwalki	152.18	333	*e*PKPdf	PKPdf	00 42 10.7	+1.0
SUW				*e*PKPbc	PKPdf	00 42 17.2	+7.5
KZIT	Kziot	152.23	279	P	PKPdf	00 42 19.1	+8.6
BALT	Daday	152.60	302	*i* P	PKPdf	00 42 19.9	+9.3
MEST	Erdemli	152.70	291	*i* P	PKPdf	00 42 13.2	+2.3
BR131	Keskin Array S	152.76	298	*e*P	PKPdf	00 42 11.6	+0.7
BRTR	Keskin Array B	152.76	298	PKP	PKPdf	00 42 11.4	+0.5
	comp=Z,1.5nm,0.8s,baz=180,slow=3.7,SNR=9.1						
BRTR				PKPbc	PKPdf	00 42 19.1	+8.2
	comp=Z,7.8nm,0.6s,baz=117,slow=3.2,SNR=29						
ANTO	Ankara	153.38	298	*e*P	PKPdf	00 42 12.8	+1.0
CSS	Prodhromos	153.41	287	P	PKPdf	00 42 20.7	+8.7
CSS	Prodhromos	153.41	287	*e*PKPbc	PKPdf	00 42 20.3	+8.3
MUD	Monsted U'grnd	153.81	351	*i* P	PKPdf	00 42 20.1	+8.3
	comp=Z,38nm,1.3s						
MUD	Monsted U'grnd	153.81	351	*e*P	PKPdf	00 42 20.1	+8.3
BSD	Bornholm Skovb	153.96	343	⇓*i*P	PKPdf	00 42 21.1	+9.0
	comp=Z,56nm,0.7s						
BSD				*i*		00 42 24.8	
LIC	Lamto	154.73	163	*e*PKIKP	PKPdf	00 42 19.1	+4.7
	comp=Z,30nm,0.9s						
CFR	Carcaliu	155.00	313	⇑P	PKPdf	00 42 22.6	+8.8
EKA	Eskdalemuir Ar	155.15	7	PKPbc	PKPdf	00 42 22.8	+9.1
	comp=Z,1.7nm,0.7s,slow=2.1,SNR=4.2						
EKA				PKPab	PKPab	00 42 37.1	-3.7
	comp=Z,8.7nm,1.0s,baz=322,slow=2.6,SNR=4.8						
DBIC	Dimbokro	155.20	164	PKP	PKPdf	00 42 16.9	+2.0
	comp=Z,3.8nm,0.9s,baz=241,slow=2.2,SNR=3.8						
BURAR	Bucovina Array	155.50	320	⇑P	PKPdf	00 42 24.7	+10
KWP	Kalwaria	155.52	326	*e*PKPdf	PKPdf	00 42 24.8	+10
KWP				*e*PKPab	PKPab	00 42 40.3	-2.4
KWP	Kalwaria	155.52	326	*e*PKPdf	PKPdf	00 42 24.8	+10
KWP				*e*PKPab	PKPab	00 42 40.3	-2.4
ULDT	Uludag	156.07	300	*i* P	PKPdf	00 42 15.1	-0.2
KOLS	Kolonicke sedl	156.21	326	*e*PKP	PKPdf	00 42 16.7	+1.5
MLR	Muntele Rosu	156.21	315	PKP	PKPdf	00 42 16.4	+1.0
	comp=Z,1.9nm,0.7s,baz=342,slow=3.2,SNR=5.9						
STHS	Stebnicka Huta	156.36	328	*e*PKP	PKPdf	00 42 17.1	+1.7
STHS				*e*		00 42 43.6	
OJC	Ojcow	156.41	331	*e*PKP	PKPdf	00 42 26.5	+11

CRVS	Cervenica-Dubn	156.62	326	ePKP	PKPdf	00 42 17.5	+1.7
CRVS				e		00 42 45.1	
NIE	Niedzica	156.78	329	ePKP	PKPdf	00 42 18.4	+2.4
KSP	Ksiaz	157.27	336	ePKP	PKPdf	00 42 28.7	+12
KSP				epPKPdf		00 42 43.6	
KSP	Ksiaz	157.27	336	ePKPdf	PKPdf	00 42 18.1	+1.4
KSP				epPKPdf		00 42 28.7	
KSP				ePKPab	PKPab	00 42 48.4	-1.8
KSP				epPKPab		00 42 57.8	
KECS	Kecovo	157.37	327	ePKP	PKPdf	00 42 18.2	+1.3
KECS				e		00 42 47.7	
OKC	Ostrava-Krasne	157.39	332	ePKPDF	PKPdf	00 42 18.3	+1.5
OKC				ePKPAB	PKPab	00 42 48.8	-1.9
UPC	Upice	157.65	336	ePKPDF	PKPdf	00 42 18.0	+0.8
UPC				ePKPAB	PKPab	00 42 49.9	-1.9
DPC	Dobruska-Polom	157.67	335	ePKPDF	PKPdf	00 42 18.3	+1.1
DPC				ePKPAB	PKPab	00 42 50.4	-1.5
CLL	Collm	157.89	341	ePKIKP	PKPdf	00 42 21.0	+3.6
CLL				i		00 42 29.5	
CLL				i PKP2	PKPab	00 42 50.5	-2.3
CLL				i *PPKP2		00 42 54.8	
CLL	Collm	157.89	341	⇑iPKP	PKPdf	00 42 29.5	+12
CLZ	Clausthal	158.03	346	ePKP2	PKPab	00 42 51.5	-1.9
PVCC	Panska Ves	158.12	338	ePKPDF	PKPdf	00 42 18.7	+1.0
PVCC				epPKP		00 42 32.3	
PVCC				ePKPAB	PKPab	00 42 52.0	-1.8
VYHS	Vyhne	158.12	329	ePKP	PKPdf	00 42 18.0	+0.2
VYHS				e		00 42 51.8	
VRAC	Vranov	158.42	333	PKPab	PKPab	00 42 52.2	-2.9
	comp=Z,7.1nm,1.0s,baz=82,slow=3.5,SNR=4.7						
PRU	Pruhonice	158.59	337	ePKPDF	PKPdf	00 42 19.8	+1.5
PRU				epPKP		00 42 31.0	
PRU				ePKPAB	PKPab	00 42 53.5	-2.4
SMOL	Smolenice	158.72	331	ePKP	PKPab	00 42 56.0	-0.4
TREC	Trest	158.85	335	ePKPAB	PKPab	00 42 54.9	-2.1
MOX	Moxa	158.86	343	ePKP2	PKPab	00 42 54.5	-2.5
MOX				pmax	pmax		
	comp=Z,18nm,1.1s						
NKC	Novy Kostel	159.01	341	ePKPAB	PKPab	00 42 55.1	-2.6
ZST	Bratislava	159.10	331	ePKP	PKPdf	00 42 20.1	+1.1
ZST				e		00 42 56.5	
KHC	Kasperske Hory	159.65	338	ePKPDF	PKPdf	00 42 20.0	+0.4
KHC				ePKPAB	PKPab	00 42 57.4	-3.0
HGN	Heimansgroeve	159.79	353	ePKP	PKPab	00 42 58.3	-2.6
	comp=Z,36nm,0.9s						
GRF	Grafenberg Arr	159.84	342	ePKP2	PKPab	00 42 59.4	-1.8
GERES	GERESS Array B	159.85	337	PKP	PKPdf	00 42 19.1	-0.7
	comp=Z,2.5nm,0.9s,SNR=14						
GERES				PKPab	PKPab	00 42 58.7	-2.6
	comp=Z,3.4nm,0.7s,baz=34,slow=4.8,SNR=8.8						
WET	Wettzell	159.86	339	ePKP2	PKPab	00 43 00.0	-1.3
TNS	Taunus Mts	159.95	348	ePKP2	PKPab	00 42 59.4	-2.3
ARSA	Arzberg	160.50	332	⇓iP	PKPdf	00 42 25.7	+5.1
	comp=Z,5.9nm,0.9s						
MOA	Molln	160.50	335	⇑iP	PKPdf	00 42 25.2	+4.7
MOA	Molln	160.50	335	⇑iP	PKPab	00 43 02.8	-1.4
	comp=Z,7.7nm,1.1s						
GIVF	Givet	160.55	355	ePKP2	PKPab	00 43 01.7	-2.6
BAIF	Baives	160.63	356	⇑iPKP2	PKPab	00 43 02.3	-2.3
	comp=Z,36nm,1.1s						
FUR	Furstenfeldbru	161.21	340	ePKP2	PKPab	00 43 05.9	-1.3
KBA	Koelnbreinsper	161.49	335	⇓iP	PKPdf	00 42 21.7	+0.2
	comp=Z,9.9nm,1.7s						
KBA	Koelnbreinsper	161.49	335	⇑iP	PKPab	00 43 08.4	-0.1
	comp=Z,3.0nm,0.7s						
LEGS	Legarje	161.62	329	eP	PKPdf	00 42 21.8	+0.1
BFO	Black Forest	161.78	346	ePKP2	PKPab	00 43 07.3	-2.4
WATA	Walderalm	161.87	339	⇓iP	PKPab	00 43 09.3	-0.8
	comp=Z,4.0nm,0.5s						
LJU	Ljubljana	161.88	331	eP	PKPdf	00 42 23.1	+1.2
CDF	Champ du Feu	161.90	349	⇑iPKP2	PKPab	00 43 07.7	-2.5
	comp=Z,16nm,1.0s						
FLN	La Foliniere	161.91	5	ePKP2	PKPab	00 43 07.9	-2.3
	comp=Z,83nm,1.2s						
FLN				eR			
	comp=Z,218nm,19.2s						
WTTA	Wattenberg	161.91	338	⇑iP	PKPdf	00 42 20.5	-1.4
	comp=Z,10nm,1.2s						
WTTA	Wattenberg	161.91	338	⇑iP	PKPab	00 43 09.3	-1.0
	comp=Z,15nm,0.8s						
VISS	Visnje	161.94	330	eP	PKPdf	00 42 22.0	0.0
ROSF	Rostrenen	161.97	11	ePKP2	PKPab	00 43 08.8	-1.8
MOTA	Moosalm	162.00	340	⇑iP	PKPdf	00 42 23.1	+1.1
	comp=Z,2.3nm,0.6s						
MOTA	Moosalm	162.00	340	⇑iP	PKPab	00 43 09.3	-1.4
	comp=Z,22nm,1.0s						
SQTA	Sankt Quirin	162.08	339	⇓iP	PKPdf	00 42 22.8	+0.8
	comp=Z,3.4nm,0.8s						
SQTA	Sankt Quirin	162.08	339	⇑iP	PKPab	00 43 09.9	-1.1
	comp=Z,10nm,0.7s						
LDF	La Druitiere	162.10	5	ePKP2	PKPab	00 43 08.7	-2.4
MEZF	Maizieres J'vi	162.11	353	ePKP2	PKPab	00 43 08.8	-2.4
	comp=Z,43nm,0.9s						
SGMF	Saint Gilles	162.17	10	ePKP2	PKPab	00 43 09.6	-1.8
GRR	Gorron	162.24	6	ePKP2	PKPab	00 43 09.4	-2.3
DAVA	Damuels	162.40	342	⇓iP	PKPab	00 43 11.0	-1.5
	comp=Z,18nm,0.7s						
HAU	Haudompre	162.44	350	⇑iPKP2	PKPab	00 43 10.0	-2.6
	comp=Z,23nm,0.8s						
HAU				eR			
	comp=Z,200nm,19.8s						
HINF	Hinteralfeld	162.55	349	ePKP2	PKPab	00 43 10.3	-2.8
DAVOX	Davos	162.87	341	PKPab	PKPab	00 43 13.2	-1.2
	comp=Z,18nm,0.7s,baz=19,slow=3.6,SNR=12						
LOR	Lormes	163.44	356	⇑iPKP2	PKPab	00 43 14.6	-2.3
	comp=Z,32nm,1.1s						
LOR				eR			
	comp=Z,277nm,21.2s						
SSF	Saint Saulge	163.66	356	⇑iPKP2	PKPab	00 43 15.7	-2.2
	comp=Z,55nm,1.0s						
AVF	Avril sur Loir	163.94	357	ePKP2	PKPab	00 43 16.5	-2.7
	comp=Z,47nm,1.2s						
SMF	Signal de Mont	164.06	355	⇑iPKP2	PKPab	00 43 17.3	-2.4
	comp=Z,57nm,0.9s						
BGF	Bois d'Agland	164.20	358	ePKP2	PKPab	00 43 17.8	-2.5
	comp=Z,18nm,1.0s						
TCF	Toulx Ste Croi	164.48	359	ePKP2	PKPab	00 43 19.0	-2.5
	comp=Z,14nm,1.0s						
LPL	La Plagne	164.79	347	ePKP2	PKPab	00 43 21.4	-1.5
	comp=Z,15nm,0.9s						
LPG	La Plagne	164.81	347	ePKP2	PKPab	00 43 21.6	-1.4
	comp=Z,30nm,0.9s						
RJF	Les Rejaudoux	165.46	1	ePKP2	PKPab	00 43 23.2	-2.6
	comp=Z,45nm,1.2s						
RJF				eR			
	comp=Z,197nm,19.8s						
ORIF	Oris-en-Rattie	165.53	349	⇑iPKP2	PKPab	00 43 24.3	-1.8
	comp=Z,17nm,0.7s						
ORIF				eR			
	comp=Z,144nm,21.8s						
MBDF	Montbardon	165.54	346	ePKP2	PKPab	00 43 24.2	-2.0
	comp=Z,17nm,0.9s						
VIVF	Saint-Julien-l	165.76	352	ePKP2	PKPab	00 43 25.2	-1.9
	comp=Z,22nm,1.0s						
LFF	La Frestale	165.79	4	ePKP2	PKPab	00 43 25.0	-2.3
	comp=Z,26nm,0.9s						
CAF	Calviac	165.84	360	ePKP2	PKPab	00 43 25.2	-2.3
SBF	Sospel	166.22	343	⇑iPKP2	PKPab	00 43 26.7	-2.5
	comp=Z,58nm,0.8s						
SMRF	Simiane la Rot	166.49	349	ePKP2	PKPab	00 43 28.6	-1.7
	comp=Z,42nm,1.3s						
FRF	La Foret Royal	166.69	345	⇑iPKP2	PKPab	00 43 28.8	-2.4
	comp=Z,32nm,1.0s						
LMR	La Mourre	166.93	345	ePKP2	PKPab	00 43 30.1	-2.2
	comp=Z,41nm,1.0s						
PGF	Pioggiola	166.96	336	ePKP2	PKPab	00 43 29.9	-2.5
	comp=Z,27nm,1.2s						
ESDC	Sonseca Array	169.84	27	PKP	PKPdf	00 42 30.1	+1.6
	comp=Z,2.7nm,1.0s,baz=308,slow=4.1,SNR=7.8						
ESDC				PKPab	PKPab	00 43 42.5	-2.6
	comp=Z,2.2nm,0.9s,baz=321,slow=3.7,SNR=5.7						
MDT	Midelt	174.00	68	PKP	PKPdf	00 42 32.9	+2.0
	comp=Z,2.6nm,0.8s,baz=237,slow=1.6,SNR=5.5						

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*NEIC **09** 00:29:30.9, 16.82N×94.84W, h116^{km}, MD3.8(MEX), After MEX.*

MEX 09 00:29:30.9±0.9**, 16.82N×94.84W, h116**^{km}±9^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.27	350	i P	P	00 29 46.2	-1.1
CMIG				i S	S	00 29 57.6	-2.3
HUIG	Huatulco	1.61	229	i P	P	00 29 57.3	-2.6
HUIG				i S	S	00 30 19.7	-2.0
OXX	Oaxaca	1.82	278	i P	P	00 30 01.0	-1.4
OXX				i S	S	00 30 24.0	-2.2
VHO	Vista Hermosa	1.83	278	i P	P	00 30 01.3	-1.2
VHO				i S	S	00 30 23.8	-2.5
SCX	San Cristobal	2.11	92	eS	S	00 30 29.0	-3.6

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*NDI **09** 00:53:44.4±3.3, 34.74N×72.81E, h10^{km}, MD4.0, ML4.1, mb3.8(NEIC)*

*IDC **09** 00:53:45.1±0.9, 34.68N×73.30E, mb4.1/10, mb1 4.2/13, mb1mx4.0/24, mbtmp4.1/13, ML3.8/3, MS2.3/1, Ms1 2.3/1, ms1mx2.1/27, Error ellipse: s-maj=22.2km s-min=19.8km az=60.0*

*MOS **09** 00:53:45.0±1.0, 34.64N×73.34E, h16^{km}, mb4.5/4, Error ellipse: s-maj=14.4km s-min=6.5km az=100.5*

*BJI **09** 00:53:46.8, 34.79N×72.84E, h32^{km}, mb3.9, ML4.0*

*NEIC **09** 00:53:46.1±0.4, 34.61N×73.29E, h10^{km}, mb3.8/4, Error ellipse: s-maj=9.6km s-min=4.3km az=51.0*

*NNC **09** 00:53:54.1±5.0, 34.86N×73.24E, h78^{km}±45^{km}, mpv4.0, Error ellipse: s-maj=42.5km s-min=36.9km az=82.0*

ISC 09 00:53:44.8±0.3**, 34.71N**±0.03×**73.43E**±0.05**, h10**^{km}**, n70, σ1^{s}31**/90**, mb4.0**/13**, 13C-6D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.05	187	⇓P	Pb	00 54 05.9	+1.2
CEP	Cherat	1.53	235	⇑P	Pn	00 54 11.7	-0.7
JMU	Jammu	2.33	148	eS	Sg	00 55 00.0	-2.5
THW	Thamme Wali	2.37	217	⇑P	Pn	00 54 26.0	+1.6
SARP	Sargodha	2.85	193	P	Pn	00 54 33.7	+2.5
THN	Thein Dam	2.96	139	eP	Pn	00 54 37.9	+5.0
THN				ex	Sn	00 55 18.7	+10
DLH	Dalhousie	3.02	135	eP	Pn	00 54 38.0	+4.3
DLH				eS	Sn	00 55 19.0	+8.6
DRP	Derazinda	4.00	223	P	Pn	00 54 48.8	+1.2
BHK	Bhakra	4.13	142	ePG	Pg	00 55 10.2	+2.9
BHK				eSB	Sg	00 55 59.8	-2.5
SDNR	Sundarnagar	4.37	136	eP	Pn	00 54 56.2	+3.4
SDNR				eS	Sn	00 55 48.0	+3.7
SMLA	Simla	4.75	138	eP	Pn	00 54 59.7	+1.4
SMLA				eS	Sn	00 55 56.3	+2.1
KLP	Kalpa	5.14	127	eP	Pn	00 55 07.8	+4.1
KLP				eS	Sn	00 56 06.7	+2.9
KLP				AML	AML	00 56 36.2	
	comp=Z,259nm,0.5s						
KLP				AML	AML	00 56 36.5	
	comp=N,709nm,0.9s						
NDI	New Delhi	6.82	151	eP	Pn	00 55 31.0	+3.6
NDI				eS	Sn	00 56 44.0	-1.8
KHET	Khetri	6.92	162	eP	Pn	00 55 27.5	-1.3
KHET				eS	Sn	00 56 43.5	-4.9
KHET				AML	AML	00 56 50.0	
	comp=E,246nm,0.1s						
KHET				AML	AML	00 56 50.5	
	comp=N,226nm,0.2s						
AYAN	Aya Nagar	6.96	152	eP	Pn	00 55 28.4	-1.0
AYAN				eS	Sn	00 56 47.5	-1.9
KUDL	Kundal	7.04	157	eP	Pn	00 55 29.9	-0.6
KUDL				eS	Sn	00 56 47.5	-4.0
AAK	Ala-Archa	7.96	6	⇑P	Pn	00 55 46.2	+2.8
	comp=N,3.3nm,0.6s						
AAK				⇑S	Sn	00 57 14.4	0.0
	comp=N,9.9nm,0.7s						
AAK	Ala-Archa	7.96	6	⇑P	Pn	00 55 46.2	+2.8
AAK				S	Sn	00 57 14.4	0.0
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AGRA	Agra	8.40	151	ex	Sn	00 57 15.8	-10
AGRA				ex	x	00 58 15.3	
AGRA				AML	AML	00 58 23.7	
	comp=N,57nm,0.1s						
AGRA				AML	AML	00 58 23.7	
	comp=E,69nm,0.4s						
KK31	Karatay Array	8.69	346	P	P	00 55 54.0	+0.5
	comp=E,3.8nm,0.3s,baz=162,slow=12,SNR=156						
KK31				⇑S	Sn	00 57 28.0	-4.5
	comp=E,3.7nm,0.5s,baz=171,slow=23,SNR=6.2						
KK31	Karatay Array	8.69	346	P	P	00 55 54.1	+0.6
KK31				S	Sn	00 57 28.0	-4.6
KK31				pmax	pmax		
	comp=Z,4.0nm,0.3s						
KOLN	Koldanda	11.11	126	ePn	P	00 56 26.4	-0.5
KOLN				eSn	S	00 58 25.3	-7.0
	comp=Z,38nm,0.5s						
GKN	Gorkha	11.68	122	ePn	P	00 56 33.6	-1.0
GKN				eSn	S	00 58 38.2	-7.8
	comp=Z,78nm,0.4s						
DMN	Daman	12.24	122	ePn	P	00 56 41.8	-0.4
DMN				eSn	S	00 58 53.4	-6.4
	comp=Z,36nm,0.6s						
KKN	Kakani	12.26	121	ePn	P	00 56 41.2	-1.2
KKN				eSn	S	00 58 52.9	-7.2
	comp=Z,64nm,0.7s						
PKI	Pulchoki	12.48	121	ePn	P	00 56 44.4	-1.0
PKI				eSn	S	00 58 58.5	-7.0
	comp=Z,76nm,0.8s						
GUN	Gumba	12.61	119	ePn	P	00 56 46.6	-0.6
GUN				eSn	S	00 59 01.0	-7.7
	comp=Z,25nm,0.4s						
JIRN	Jiri	12.98	119	ePn	P	00 56 51.2	-0.9
JIRN				eSn	S	00 59 11.1	-6.5
	comp=Z,43nm,0.4s						
MK02	Makanchi Array	13.79	26	⇑P	P	00 57 04.7	+2.0
MK02				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	Makanchi Array	13.81	26	⇑P	P	00 57 04.7	+1.9
	comp=Z,1.4nm,0.7s,baz=212,slow=13,SNR=5.8						
MKAR	Makanchi Array	13.81	26	Pn	P	00 57 03.4	+0.6
	comp=Z,0.1nm,0.3s,baz=203,slow=13,SNR=5.6						
POO	Poona	16.11	179	ex	S	01 00 22.0	-10
KURK	Kurchatov	16.44	12	⇑P	P	00 57 34.5	-2.6
	comp=Z,2.0nm,0.9s						
AB31	Akbulak array	17.62	330	⇓P	P	00 57 51.5	-0.4
	comp=Z,0.9nm,0.5s,baz=148,slow=12,SNR=22						
AB31	Akbulak array	17.62	330	⇓P	P	00 57 51.5	-0.4
	comp=Z,0.9nm,0.4s						
AB31	Akbulak array	17.62	330	⇓P	P	00 57 51.5	-0.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
VOSK	Vostochnaya	18.10	355	⇑P	P	00 57 56.5	-1.4
	comp=Z,2.9nm,1.2s						
VOSK	Vostochnaya	18.10	355	⇑P	P	00 57 56.5	-1.4
VOSK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BVA0	Borovoye Array	18.44	354	⇓P	P	00 58 02.3	+0.2
	comp=Z,0.4nm,0.6s,baz=165,slow=11,SNR=24						
BVA0	Borovoye Array	18.44	354	⇓P	P	00 58 02.3	+0.2
	comp=Z,0.4nm,0.6s						
BVAR	Borovoye Array	18.44	354	P	P	00 58 01.6	-0.5
	comp=Z,0.7nm,0.3s,baz=163,slow=9.8,SNR=27						
BVAR	Borovoye Array	18.44	354	P	P	00 58 01.6	-0.5
BRVK	Borovoye	18.48	354	eP	P	00 58 02.1	-0.6
	comp=Z,3.3nm,0.9s						
BRVK	Borovoye	18.48	354	eP	P	00 58 02.1	-0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CHKZ	Chkalovo	19.07	355	eP	P	00 58 08.7	-1.0
	comp=Z,1.9nm,0.8s						
CHKZ	Chkalovo	19.07	355	eP	P	00 58 08.7	-1.0
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKTK	Aktyubinsk	19.33	329	⇑P	P	00 58 11.6	-1.2
AKTO	Aktyubinsk	19.33	329	⇑P	P	00 58 11.6	-1.2
	comp=Z,2.2nm,0.8s						
AKTO	Aktyubinsk	19.33	329	P	P	00 58 12.0	-0.8
	comp=Z,0.6nm,0.3s,baz=136,slow=8.7,SNR=16						
ZAL	Zalesovo	20.83	19	P	P	00 58 28.4	-0.5
	comp=Z,7.7nm,0.4s,baz=253,slow=6.6,SNR=40						
GTA	Gaotai	21.54	70	eP	P	00 58 40.0	+3.7
GTA				AP		00 58 44.7	
ORR	Orenburg	21.61	327	eP	P	00 58 36.8	0.0
ORR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.3						
GNI	Garni	23.36	292	P	P	00 58 54.2	0.0
	comp=Z,0.5nm,0.3s,mb3.4,baz=211,slow=19,SNR=2.0						
SONM	Songino Array	27.81	52	P	P	00 59 37.4	+1.5
	comp=Z,0.5nm,0.8s,mb3.2,baz=246,slow=7.6,SNR=4.6						
MLR	Muntele Rosu	37.39	301	P	P	01 00 59.7	+0.2
	comp=Z,2.4nm,0.8s,mb4.1,baz=182,slow=5.8,SNR=4.5						
JOF	Joensuu	38.41	330	ep	P	01 01 07.7	-0.1
FINES	FINESS Array B	40.07	327	P	P	01 01 20.6	-1.0
	comp=Z,2.1nm,0.8s,mb3.9,baz=117,slow=8.5,SNR=4.5						
ARCES	ARCESS Array B	43.55	338	P	P	01 01 50.4	+0.4
	comp=Z,2.6nm,0.6s,mb4.1,baz=108,slow=7.7,SNR=18						
NOA	NORSAR Array B	47.00	324	P	P	01 02 17.1	-0.5
	comp=Z,0.7nm,0.5s,mb3.8,baz=97,slow=7.7,SNR=2.5						
TGY	Tagaytay City	47.38	104	LR	LR	01 21 54.5	
	comp=Z,2.9nm,19.5s,baz=82,slow=36						
KAKA	Kakadu	73.14	119	eP	P	01 05 35.9	+18
	comp=Z,1.7nm,0.4s,mb4.3						
INK	Inuvik	75.34	10	eP	P	01 05 29.5	0.0
	comp=Z,1.1nm,0.6s,mb4.0						
INK	Inuvik	75.34	10	eP	P	01 05 29.5	0.0
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BOSA	Boshof	77.70	222	P	P	01 05 43.1	-0.3
	comp=Z,3.9nm,0.8s,mb4.4,baz=103,slow=3.6,SNR=9.5						
WRA	Warramunga Arr	79.36	123	P	P	01 05 53.6	+0.9
	comp=Z,2.2nm,0.5s,mb4.3,baz=323,slow=5.1,SNR=44						
WRAB	Tennant Creek	79.36	123	eP	P	01 05 52.1	-0.6
	comp=Z,4.5nm,0.6s,mb4.6						
WRAB	Tennant Creek	79.36	123	eP	P	01 05 52.1	-0.6
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
WB2	Warramunga Arr	79.37	123	eP	P	01 05 53.2	+0.4
YKA	Yellowknife Ar	82.92	4	P	P	01 06 11.5	+0.9
	comp=Z,0.9nm,0.5s,mb4.0,baz=347,slow=5.3,SNR=7.4						
YKA	Yellowknife Ar	82.92	4	P	P	01 06 11.5	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

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*CSEM **09** 01:08:35.9±1.3, 45.42N×26.39E, h130^{km}±11^{km}, MD3.3/5, Error ellipse: s-maj=9.8km s-min=7.3km az=14.0, After BUC*

BUC 09 01:08:34.2±1.8**, 45.48N×26.34E, h144**^{km}±16^{km}**, MD3.5**/5**, 8C-2D, Error ellipse: s-maj=13.0km s-min=8.4km az=2.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLR	Muntele Rosu	0.28	272	⇑iP	P	01 08 54.7	+0.2
MLR				i S	S	01 09 09.2	-0.7
ISR	Istrita	0.39	158	⇓iP	P	01 08 55.3	+0.4
ISR				i S	S	01 09 08.9	-1.8
VRI	Vrincioaia	0.47	35	⇑iP	P	01 08 55.2	-0.1
VRI				eS	S	01 09 10.1	-1.3
VRI	Vrincioaia	0.47	35	⇑iP	P	01 08 55.3	0.0
VRI				i S	S	01 09 08.8	-2.6
SNX	Sinaia	0.59	258	i S	S	01 09 11.3	-1.2
VOIR		0.91	268	⇑iP	P	01 08 57.6	-0.3
VOIR				i S	S	01 09 14.9	-1.2
VARR		1.14	69	⇑iP	P	01 09 00.4	+0.5
VARR				i S	S	01 09 18.9	-0.8
BUC1	Bucharest	1.16	191	⇑iP	P	01 09 00.2	+0.1
BUC1				i S	S	01 09 19.4	-0.6
CFR	Carcaliu	1.31	103	⇓iP	P	01 09 01.7	+0.1
CFR				i S	S	01 09 21.1	-1.7
HARR	Harsova	1.38	124	⇑iP	P	01 09 02.6	+0.2
HARR				i S	S	01 09 22.7	-1.4
TIRR	Tirgusor	1.79	124	⇑iP	P	01 09 07.0	+0.1
TIRR				i S	S	01 09 30.1	-2.0

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*NIED **09** 01:20:00, 33.70N×135.50E, h35^{km}, Mw3.5 Best double couple: $M_0$1.93×10^{14} NP1:ϕ_s100°, δ58°, λ131°. NP2: ϕ_s221°, δ51°, λ44°.*

*JMA **09** 01:20:10.1, 33.67N×135.47E, h38^{km}, M3.6 Broadband fault plane solution: P waves. NP1:ϕ_s213°, δ50°, λ41°. NP2:ϕ_s94°, δ60°, λ132°. Principal axes: T Plg54°, Azm58°; N Plg35°, Azm250°; P Plg6°, Azm156°;*

JMA Felt I J1.

ISC 09 01:20:10.1±1.3**, 33.67N**±0.07×**135.47E**±0.06**, h37**^{km}±12^{km}**, n7, σ0^{s}30**/13**, 1C-5D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	Minabe	0.20	332	⇓P	P	01 20 17.2	+0.1
JWM				S	S	01 20 22.0	+0.1
JWZ	Kozaga	0.25	124	⇓P	P	01 20 17.5	-0.1
JWZ				S	S	01 20 22.9	0.0
JWY	Kouya	0.56	11	⇓P	P	01 20 21.5	0.0
JWY				S	S	01 20 29.2	-0.5
JAI	Aioi	0.85	278	⇓P	P	01 20 25.6	-0.1
JKN2	Miekihoku	0.88	50	⇑P	P	01 20 26.2	+0.2
JKN2				eS	S	01 20 37.7	-0.1
JAJ2	Tsuna	0.89	327	⇓P	P	01 20 26.4	+0.2
JAJ2				eS	S	01 20 38.0	0.0
MAT	Matsushiro	3.64	37	P	P	01 21 04.8	-0.7
MAT				eS	S	01 21 48.4	+0.6

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*IDC **09** 01:29:00.0±1.0, 11.83N×125.55E, mb3.9/8, mb1 4.0/8, mb1mx3.9/17, mbtmp3.9/8, MS3.3/1, Ms1 3.3/1, ms1mx2.7/28, Error ellipse: s-maj=126.2km s-min=19.0km az=67.0*

*NEIC **09** 01:29:01.8±0.5, 11.99N×125.79E, h10^{km}, mb4.4/3, Error ellipse: s-maj=40.8km s-min=10.6km az=66.0*

*MAN **09** 01:29:05.3, 12.07N×125.63E, h12^{km}, mb4.9, ML3.8, MS3.9*

ISC 09 01:29:02.4±1.7**, 12.06N**±0.05×**125.96E**±0.09**, h29**^{km}±12^{km}**, n24, σ0^{s}74**/24**, mb4.0**/11**, 1C, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.68	228	eP	Pb	01 29 15.6	-0.1
PLP	Palo	1.31	227	eP	Pn	01 29 24.5	-0.5
PLP				i S	Sn	01 29 40.7	-0.9
SCPH	Surigao	2.31	191	eP	Pn	01 29 39.9	+0.5
SCPH				eS	Sn	01 30 08.0	+0.9
LLP	Lapu-Lapu	2.61	229	eP	Pn	01 29 43.4	-0.2
LLP				eS	Sn	01 30 15.2	+0.5
BUTP	Butuan	3.09	186	eP	Pn	01 29 55.1	+4.7
TBP	Tagbilaran	3.13	221	eP	Pn	01 29 51.1	+0.2
RCP	Roxas	3.18	261	⇑eP	Pn	01 29 52.5	+0.7
GUMO	Guam	18.50	83	LR	LR	01 40 07.6	
	comp=Z,93nm,19.8s,baz=107,slow=35						
WRA	Warramunga Arr	32.85	165	P	P	01 35 34.8	-1.3
	0.3nm,0.6s,mb3.4,baz=348,slow=9.2,SNR=4.2						
WRA				PcP	PcP	01 38 20.7	+0.1
	0.8nm,0.9s,baz=342,slow=2.8,SNR=5.5						
SONM	Songino Array	39.25	339	P	P	01 36 30.5	+0.4
	0.3nm,0.7s,mb3.2,baz=153,slow=6.4,SNR=3.4						
STKA	Stephens Creek	46.18	161	P	P	01 37 24.6	-2.1
	1.2nm,0.6s,mb4.0,baz=338,slow=5.4,SNR=1.9						
STKA	Stephens Creek	46.18	161	eP	P	01 37 27.1	+0.4
MKAR	Makanchi Array	50.43	322	P	P	01 37 59.1	-0.3
	2.3nm,0.7s,mb4.3,baz=118,slow=8.3,SNR=31						
ZAL	Zalesovo	52.92	331	P	P	01 38 18.4	+0.2
	0.5nm,0.5s,mb3.7,slow=3.0,SNR=2.7						
KURK	Kurchatov	54.43	325	eP	P	01 38 29.3	+0.1
	8.6nm,0.8s,mb4.7						
BRVK	Borovoye	60.10	325	eP	P	01 39 08.2	-1.2
	3.3nm,0.9s,mb4.4						
CHKZ	Chkalovo	60.14	326	eP	P	01 39 08.8	-0.9
	0.6nm,0.5s,mb3.9						
ARCES	ARCESS Array B	82.42	340	P	P	01 41 23.9	+1.0
	5.1nm,0.9s,mb4.5,baz=82,slow=6.4,SNR=17						
INK	Inuvik	82.75	22	P	P	01 41 25.5	+0.9
BRTR	Keskin Array B	84.17	309	P	P	01 41 32.5	-0.1
	0.5nm,0.7s,mb3.8,baz=81,slow=3.4,SNR=3.6						
FINES	FINESS Array B	84.18	332	P	P	01 41 32.7	+0.7
	3.9nm,1.0s,mb4.5,baz=90,slow=5.6,SNR=4.9						
FINES	FINESS Array B	84.18	332	P	P	01 41 32.7	+0.6
PLCA	Paso Flores	147.96	156	PKPbc	PKPdf	01 48 48.7	+1.5
	1.0nm,0.7s,baz=306,slow=1.6,SNR=2.9						
PLCA	Paso Flores	147.96	156	PKPbc	PKPdf	01 48 48.7	+1.5

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*ATH **09** 01:32:29.4, 40.63N×23.33E, h10^{km}±3^{km}, MD3.0/3*

*NEIC **09** 01:32:29.4, 40.63N×23.33E, h10^{km}, MD3.0(ATH), After ATH.*

*THE **09** 01:32:30.2, 40.59N×23.50E, h3^{km}, ML2.1*

*CSEM **09** 01:32:30.5±0.1, 40.60N×23.50E, h2^{km}, ML2.1, Error ellipse: s-maj=1.5km s-min=1.1km az=71.0*

ISC 09 01:32:29.5±0.5**, 40.57N**±0.03×**23.49E**±0.05**, h13**^{km}±6^{km}**, n15, σ0^{s}75**/22**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLG	Polygyros	0.20	189	ePG	Pg	01 32 34.8	+0.7
PLG				eSG	Sg	01 32 38.0	+0.9

SOH	Sokhos	0.28	338	ePg	Pg	01 32 35.3	-0.2
SOH				eSg	Sg	01 32 39.2	-0.3
THE	Thessaloniki	0.40	280	ePg	Pg	01 32 37.9	0.0
THE				eSg	Sg	01 32 43.7	+0.3
OUR	Ouranopolis	0.44	121	ePg	Pg	01 32 38.8	+0.1
OUR				eSg	Sg	01 32 45.3	+0.5
PAIG	Paliouri	0.66	167	ePg	Pg	01 32 42.5	-0.2
PAIG	Paliouri	0.66	167	ePg	Pg	01 32 42.5	-0.3
KNT	Kendrikon	0.74	323	ePg	Pg	01 32 43.8	-0.7
KNT				eSg	Sg	01 32 54.1	-0.5
NVR	Nevrokopi	0.83	20	ePB	Pb	01 32 45.4	+0.1
NVR				eSB	Sb	01 32 56.4	+0.3
LIT	Litokhoron	0.89	239	ePg	Pg	01 32 47.9	+0.4
GRG	Griva	0.91	296	ePg	Pg	01 32 47.6	-0.2
GRG				eSg	Sg	01 33 01.0	+0.9
XOR	Xorichti	1.22	191	ePg	Pg	01 32 53.5	-0.5
NEO	Neokhori	1.27	189	ePG	Pg	01 32 54.0	-1.0
AOS	Alonnisos	1.43	168	ePg	Pg	01 32 55.9	-2.1
RDO	Rodhopi	1.66	69	ePN	Pn	01 33 02.0	+3.5
AGG	Agios Georgios	1.78	210	ePb	Pb	01 33 01.9	+0.4

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*IDC **09** 01:47:00.7±1.4, 5.42S×151.68E, mb4.0/7, mb1 4.2/7, mb1mx4.2/12, mbtmp4.0/7, MS3.1/2, Ms1 3.1/2, ms1mx3.0/16, Error ellipse: s-maj=51.5km s-min=22.2km az=114.0*

*NEIC **09** 01:47:10.6±2.8, 5.56S×151.61E, h77^{km}±21^{km}, mb4.2/2, Error ellipse: s-maj=32.5km s-min=15.0km az=105.0*

ISC 09 01:47:07.2±4.4**, 5.6S**±0.2×**151.9E**±0.3**, h68**^{km}±35^{km}**, n17, σ0^{s}.85**/15**, mb3.8**/8**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.01	231	Pn	P	01 48 34.8	-0.5
	6.2nm,0.3s,baz=48,slow=9.9,SNR=13						
PMG				Sn	S	01 49 44.6	+1.0
	6.4nm,0.3s,baz=202,slow=14,SNR=5.6						
HNR	Honiara	8.87	116	LR	LR	01 52 06.0	
	comp=Z,89nm,19.3s,baz=224,slow=34						
KAKA	Kakadu	20.43	248	eP	P	01 51 57.4	+16
	9.8nm,0.6s						
DZM	Mont Dzumac	21.61	141	LR	LR	01 59 00.2	
	comp=Z,74nm,19.3s,baz=3.8,slow=33						
WRAB	Tennant Creek	22.21	229	eP	P	01 51 58.9	-0.3
	6.6nm,0.7s,mb4.1						
WB2	Warramunga Arr	22.22	228	eP	P	01 51 59.4	+0.2
WRA	Warramunga Arr	22.23	229	P	P	01 51 59.5	+0.2
	3.4nm,0.6s,mb3.9,baz=54,slow=9.9,SNR=27						
WRA				PcP	PcP	01 55 55.9	+1.1
	0.4nm,0.6s,baz=38,slow=1.7,SNR=4.2						
ASPA	Alice Springs	24.94	222	eP	P	01 52 25.9	+0.1
STKA	Stephens Creek	27.86	199	P	P	01 52 52.0	-0.6
	1.8nm,0.8s,mb3.6,baz=62,slow=9.6,SNR=3.1						
FITZ	Fitzroy Crossi	28.47	242	eP	P	01 52 56.7	-1.4
	6.4nm,0.9s,mb4.2						
FITZ	Fitzroy Crossi	28.47	242	P	P	01 52 57.2	-1.0
	3.8nm,0.6s,mb4.1,baz=72,slow=9.1,SNR=9.9						
SONM	Songino Array	66.50	328	P	P	01 57 50.1	-1.7
	0.9nm,0.6s,mb3.8,baz=146,slow=4.9,SNR=6.4						
MKAR	Makanchi Array	80.31	319	P	P	01 59 12.5	0.0
	0.2nm,0.5s,mb3.2,baz=97,slow=9.2,SNR=4.9						
ZAL	Zalesovo	81.31	327	P	P	01 59 17.6	+0.1
	0.8nm,0.6s,mb3.8,baz=346,slow=7.9,SNR=5.9						
ILAR	Eielson Array	83.24	22	P	P	01 59 28.8	+1.5
	1.2nm,0.6s,mb3.9,baz=247,slow=5.3,SNR=15						
CHKZ	Chkalovo	89.30	324	eP	P	01 59 58.1	+1.1
SUR	Sutherland	120.10	228	eP	PKPdf	02 05 54.0	+3.2

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*IDC **09** 02:09:58.6±0.6, 6.52S×131.80E, mb4.5/12, mb1 4.7/15, mb1mx4.6/17, mbtmp4.6/15, ML4.6/3, Error ellipse: s-maj=26.2km s-min=12.9km az=69.0*

*BJI **09** 02:10:01.1, 6.51S×131.77E, h25^{km}, mB5.0, mb4.9, Ms4.5, Msz4.3*

*MOS **09** 02:10:01.5±1.4, 6.64S×131.75E, h33^{km}, mb4.9/8, Error ellipse: s-maj=18.7km s-min=8.4km az=117.7*

*NEIC **09** 02:10:03.6±3.0, 6.56S×131.78E, h31^{km}±22^{km}, mb4.7/15, Error ellipse: s-maj=10.3km s-min=6.1km az=59.0*

ISC 09 02:10:01.5±0.3**, 6.63S**±0.05×**131.80E**±0.08**, h33**^{km}**, n66, σ1^{s}.08**/69**, mb4.8**/34**, MS4.4**/4**, 5C-1D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.08	174	eP	P	02 11 51.7	+20
	197nm,0.4s						
KAKA				eS	S	02 12 56.4	+16
FITZ	Fitzroy Crossi	12.89	207	⇓iP	P	02 13 03.6	-1.6
	255nm,0.3s						
FITZ				eS	S	02 15 18.5	-10
FITZ	Fitzroy Crossi	12.89	207	Pn	P	02 13 04.2	-0.9
	109nm,0.3s,baz=35,slow=12,SNR=317						
FITZ				Sn	S	02 15 18.5	-10
	31nm,0.3s,baz=188,slow=15,SNR=5.1						
WRAB	Tennant Creek	13.46	170	eP	P	02 13 10.1	-2.5
	52nm,0.6s						
WRAB				eS	S	02 15 17.3	-25
WRAB	Tennant Creek	13.46	170	eP	P	02 13 10.1	-2.5
WRAB				pmax	pmax		
	comp=Z,52nm,0.6s						
WRA	Warramunga Arr	13.46	170	Pn	P	02 13 10.6	-2.1
	comp=Z,4.2nm,0.3s,baz=359,slow=13,SNR=159						
WRA				Sn	S	02 15 27.0	-15
	comp=Z,15nm,0.3s,baz=348,slow=23,SNR=16						
WB2	Warramunga Arr	13.46	170	eP	P	02 13 10.7	-2.0
WB2				eS	S	02 15 33.2	-9.0
PMG	Port Moresby	15.46	101	Pn	P	02 13 39.4	+0.4
	comp=Z,5.8nm,0.3s,baz=291,slow=8.1,SNR=21						
ASPA	Alice Springs	17.06	173	eP	P	02 13 59.7	+0.5
ASPA				eS	S	02 16 44.1	-22
CTA	Charters Tower	19.39	135	⇑iP	P	02 14 29.7	+2.1
	comp=Z,53nm,1.1s						
CTA	Charters Tower	19.39	135	P	P	02 14 29.1	+1.5
	comp=Z,1.6nm,0.3s,baz=313,slow=14,SNR=22						
CTA	Charters Tower	19.39	135	⇑iP	P	02 14 29.7	+2.1
CTA				pmax	pmax		
	comp=Z,53nm,1.1s						
CTAO	Charters Tower	19.39	135	eP	P	02 14 29.4	+1.8
KKM	Kota Kinabalu	20.01	309	eP	P	02 14 34.4	+0.1
TGY	Tagaytay City	23.25	332	P	P	02 15 08.6	+1.5
	comp=Z,211nm,0.3s,baz=202,slow=3.0,SNR=3.3						
FORT	Forrest	24.28	188	⇑iP	P	02 15 19.3	+2.3
	comp=Z,47nm,0.6s,mb5.1						
STKA	Stephens Creek	26.73	161	eP	P	02 15 40.6	+0.5
	comp=Z,13nm,1.1s,mb4.4						
STKA	Stephens Creek	26.73	161	P	P	02 15 40.9	+0.7
	comp=Z,4.6nm,0.5s,mb4.2,baz=339,slow=9.9,SNR=9.2						
KLBR	Kellerberrin	28.09	206	eP	P	02 15 53.7	+1.2
	comp=Z,20nm,0.8s,mb4.8						
NWAO	Narrogin (SRO)	29.46	205	P	P	02 16 05.0	+0.3
	comp=Z,8.2nm,0.6s,mb4.6,baz=64,slow=11,SNR=8.7						
DZM	Mont Dzumac	36.78	118	P	P	02 17 08.7	+0.5
	comp=Z,10nm,1.1s,mb4.6,baz=61,slow=22,SNR=3.6						
WHN	Wuhan	40.57	337	eP	P	02 17 41.1	+1.4
GYA	Guiyang	40.94	324	⇑iP	P	02 17 43.1	+0.3
GYA				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.9						
KMI	Kunming	42.37	319	P	P	02 17 55.9	+1.2
KMI				AP	pP	02 18 06.5	+1.9
KMI				XP	sP	02 18 10.2	+1.5
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
KMI				AMB	AMB		
	comp=Z,110nm,4.8s						
KMI				LR	LR		
	comp=N,310nm,17.4s,MS4.3						
KMI				LR	LR		
	comp=E,220nm,20.1s,MS4.3						
KMI				LR	LR		
	comp=Z,260nm,20.1s,MS4.1						
KMI	Kunming	42.37	319	P	P	02 17 55.9	+1.2
	comp=Z,16nm,0.8s,mb4.7						
KMI				pP	pP	02 18 06.5	+1.9
KMI				sP	sP	02 18 10.2	+1.5
KMI				S	S	02 24 26.0	+13
KMI				SS	SS	02 27 45.5	+28
KMI				LR	LR		
	comp=Z,270nm,20.1s,MS4.1						
ENH	Enshi	42.48	331	eP	P	02 17 55.1	-0.4
	comp=Z,12nm,0.7s,mb4.6						
MJAR	Matsushiro Arr	43.36	8	P	P	02 18 00.7	-1.9
	comp=Z,1.5nm,0.4s,mb4.1,baz=185,slow=8.3,SNR=4.1						
XAN	Xi’an	45.88	333	P	P	02 18 22.2	-0.7
XAN				AP	pP	02 18 29.4	-3.4
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
XAN				LR	LR		
	comp=N,170nm,22.6s,MS4.2						
XAN				LR	LR		
	comp=E,270nm,20.6s,MS4.2						
XAN				LR	LR		
	comp=Z,360nm,26.5s						
LZH	Lanzhou	49.94	330	eP	P	02 18 56.0	+1.6
LZH				AMB	AMB		
	comp=Z,50nm,1.4s,mb5.3						
LZH				AMB	AMB		
	comp=Z,240nm,5.0s						
LZH				LR	LR		
	comp=E,840nm,17.2s						
LZH				LR	LR		
	comp=Z,580nm,19.1s,MS4.6						
LZH	Lanzhou	49.94	330	eP	P	02 18 56.0	+1.6
	comp=Z,50nm,1.4s,mb5.3						
LZH				pP	pP	02 19 22.0	+18
LZH				sP	sP	02 19 30.6	+22
LZH				LR	LR		
	comp=Z,580nm,19.1s,MS4.6						
SHL	Shillong	50.28	311	⇑iP	P	02 18 57.0	-0.2
RPZ	Rata Peaks	50.45	143	P	P	02 18 57.5	-0.8
	comp=Z,10.0nm,0.8s,mb4.9,baz=126,slow=7.6,SNR=5.8						
HHC	Hu-ho-hao-te	50.77	340	eP	P	02 18 59.0	-1.7
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
LSA	Lhasa	53.18	315	P	P	02 19 20.0	+1.1
LSA	Lhasa	53.18	315	eP	P	02 19 20.1	+1.2
	comp=Z,11nm,0.6s,mb5.0						
LSA	Lhasa	53.18	315	eP	P	02 19 20.1	+1.2
LSA				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
GTA	Gaotai	54.53	330	eP	P	02 19 28.4	-0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
GTA				AMB	AMB		
	comp=Z,110nm,6.5s						
GTA				LR	LR		
	comp=N,310nm,20.3s,MS4.5						
GTA				LR	LR		
	comp=E,280nm,19.1s,MS4.5						
GTA				LR	LR		
	comp=Z,290nm,19.9s,MS4.3						
JIRN	Jiri	55.70	310	eP	P	02 19 37.5	+0.1
	comp=Z,27nm,0.6s,mb5.4						
GUN	Gumba	56.07	310	eP	P	02 19 40.1	+0.1
	comp=Z,88nm,0.8s,mb5.8						
PKI	Pulchoki	56.26	309	eP	P	02 19 40.9	-0.4
	comp=Z,38nm,1.0s,mb5.4						
KKN	Kakani	56.46	310	eP	P	02 19 42.7	-0.1
	comp=Z,51nm,0.9s,mb5.6						
DMN	Daman	56.51	309	eP	P	02 19 43.2	0.0
	comp=Z,57nm,0.9s,mb5.6						
GKN	Gorkha	57.06	309	eP	P	02 19 46.9	-0.2
	comp=Z,76nm,0.9s,mb5.7						
KOLN	Koldanda	57.75	309	eP	P	02 19 51.8	-0.2
	comp=Z,62nm,0.9s,mb5.6						
SONM	Songino Array	58.68	340	P	P	02 19 57.7	-0.4
	comp=Z,2.4nm,0.8s,mb4.3,baz=153,slow=6.6,SNR=16						
ZAK	Zakamensk	61.92	340	eP	P	02 20 18.1	-2.1
MKAR	Makanchi Array	68.91	326	P	P	02 21 05.8	+0.6
	comp=Z,9.5nm,0.6s,mb4.9,baz=114,slow=8.0,SNR=102						
AAK	Ala-Archa	71.42	319	eP	P	02 21 20.4	-0.1
	comp=Z,7.6nm,1.1s,mb4.5						
AAK	Ala-Archa	71.42	319	eP	P	02 21 20.4	-0.1
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
ZAL	Zalesovo	72.05	333	P	P	02 21 23.1	-1.0
	comp=Z,3.6nm,0.6s,mb4.5,baz=354,slow=5.4,SNR=21						
VNDA	Vanda	72.61	173	eP	P	02 21 28.0	+1.1
	comp=Z,2.8nm,0.9s,mb4.2						
VNDA	Vanda	72.61	173	eP	P	02 21 28.0	+1.0
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	73.14	328	eP	P	02 21 30.4	-0.2
	comp=Z,4.5nm,0.7s,mb4.5						
KURK	Kurchatov	73.14	328	eP	P	02 21 30.4	-0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
NVS	Novosibirsk	73.34	333	eP	P	02 21 30.2	-1.5
MAW	Mawson	75.95	202	P	P	02 21 48.4	+1.9
	comp=Z,1.2nm,0.5s,mb4.1,baz=225,slow=2.9,SNR=3.0						
BVAR	Borovoye Array	78.71	327	P	P	02 22 01.6	-0.6
	comp=Z,5.2nm,0.6s,mb4.6,baz=135,slow=8.4,SNR=30						
BRVK	Borovoye	78.78	327	eP	P	02 22 02.5	0.0
	comp=Z,5.2nm,0.8s,mb4.5						
BRVK	Borovoye	78.78	327	eP	P	02 22 02.5	0.0
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
CHKZ	Chkalovo	78.89	328	eP	P	02 22 02.9	-0.2
	comp=Z,5.4nm,0.9s,mb4.5						
CHKZ	Chkalovo	78.89	328	eP	P	02 22 02.9	-0.2
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
QSPA	South Pole Qui	83.34	180	eP	P	02 22 27.4	+1.4
	comp=Z,4.4nm,0.8s,mb4.5						
AKTO	Aktyubinsk	84.88	322	P	P	02 22 34.2	-0.1
	comp=Z,2.7nm,0.7s,mb4.5,baz=111,slow=5.1,SNR=9.4						
ILAR	Eielson Array	92.25	25	P	P	02 23 09.8	+0.6
	comp=Z,0.2nm,0.7s,baz=227,slow=5.0,SNR=4.3						
LPAZ	La Paz	149.88	139	PKP	PKPdf	02 29 48.5	+4.0
	comp=Z,0.9nm,0.9s,baz=27,slow=4.5,SNR=3.9						
LPAZ				PKPbc	PKPdf	02 29 53.1	+8.6
	comp=Z,3.6nm,0.9s,baz=23,slow=5.3,SNR=3.8						
LPAZ	La Paz	149.88	139	PKP	PKPdf	02 29 48.5	+4.0
LPAZ				PKPbc	PKPdf	02 29 53.1	+8.6

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*NEIC **09** 02:12:07.9±4.2, 3.62S×131.57E, h1^{km}±26^{km}, mb4.8/4, Error ellipse: s-maj=14.8km s-min=7.1km az=47.0*

*IDC **09** 02:12:07.7±0.7, 3.63S×131.53E, mb4.6/10, mb1 4.7/11, mb1mx4.6/16, mbtmp4.6/11, ML3.7/1, MS4.3/5, Ms1 4.3/5, ms1mx3.9/17, Error ellipse: s-maj=38.0km s-min=17.5km az=62.0*

*MOS **09** 02:12:11.2±1.0, 3.56S×131.62E, h33^{km}, mb4.7/5, Error ellipse: s-maj=29.7km s-min=13.5km az=122.7*

ISC 09 02:12:06.2±6.1**, 3.60S**±0.10×**131.6E**±0.1**, h2**^{km}±38^{km}**, n38, σ0^{s}.71**/31**, mb4.6**/15**, MS4.3**/5**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.46	171	Sn	S	02 18 49.4	-14
	2.3nm,0.3s,baz=353,slow=22,SNR=3.5						
PMG	Port Moresby	16.51	111	Pn	P	02 16 00.3	-0.4
	0.9nm,0.3s,baz=307,slow=12,SNR=2.7						
KKM	Kota Kinabalu	18.09	302	eP	P	02 16 21.5	+0.9
GUMO	Guam	21.58	37	LR	LR	02 23 27.4	
	comp=Z,688nm,20.4s,MS4.0,baz=90,slow=31						
CTA	Charters Tower	21.75	140	P	P	02 17 02.2	+1.0
	23nm,0.8s,mb4.7,baz=314,slow=10,SNR=5.5						
CTA	Charters Tower	21.75	140	P	P	02 17 02.2	+1.0
KSM	Kuching	21.85	283	eP	P	02 17 01.3	-1.0
STKA	Stephens Creek	29.66	163	P	P	02 18 13.7	-2.0
	17nm,0.8s,mb4.8,baz=326,slow=11,SNR=3.4						
RPZ	Rata Peaks	53.01	145	P	P	02 21 27.5	+0.6
	5.4nm,0.9s,mb4.5,baz=288,slow=11,SNR=2.5						
RPZ	Rata Peaks	53.01	145	P	P	02 21 27.4	+0.6
SONM	Songino Array	55.78	340	P	P	02 21 47.6	+0.6
	6.7nm,1.1s,mb4.6,baz=159,slow=5.9,SNR=7.5						
SONM				LR	LR	02 47 05.3	
	comp=Z,165nm,20.9s,MS4.1,baz=344,slow=38						
HYB	Hyderabad	56.33	294	i P	P	02 21 51.0	-0.4
HYB	Hyderabad	56.33	294	eP	P	02 21 42.0	-9.4
ZAK	Zakamensk	59.03	339	eP	P	02 22 10.7	+0.7
ZAK				e		02 22 55.1	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
MKAR	Makanchi Array	66.30	325	P	P	02 22 58.3	-0.1
	comp=Z,8.3nm,1.0s,mb4.7,baz=121,slow=7.1,SNR=5.1						
MKAR				LR	LR	02 55 38.8	
	comp=Z,153nm,20.5s,MS4.2,baz=227,slow=39						
ZAL	Zalesovo	69.28	333	P	P	02 23 16.5	-0.5
	comp=Z,4.2nm,1.0s,mb4.3,baz=358,slow=7.5,SNR=7.6						
ZAL	Zalesovo	69.28	333	P	P	02 23 16.5	-0.5
KURK	Kurchatov	70.49	327	eP	P	02 23 24.6	+0.2
TIXI	Tiksi	75.13	359	eP	P	02 23 51.2	-0.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
VNDA	Vanda	75.61	174	eP	P	02 23 53.6	-0.4
BVAR	Borovoye Array	76.07	327	P	P	02 23 56.5	-0.5
	comp=Z,7.9nm,1.1s,mb4.5,baz=124,slow=5.3,SNR=4.8						
BRVK	Borovoye	76.14	327	eP	P	02 23 57.0	-0.5
	comp=Z,11nm,1.2s,mb4.7						
BRVK	Borovoye	76.14	327	eP	P	02 23 57.0	-0.5
BRVK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
CHKZ	Chkalovo	76.23	328	eP	P	02 23 57.9	0.0
SBA	Scott Base	76.48	173	eP	P	02 24 00.2	+1.2
	comp=Z,7.6nm,1.0s,mb4.6						
SBA	Scott Base	76.48	173	eP	P	02 24 00.2	+1.3
SBA				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
MAW	Mawson	78.67	201	eP	P	02 24 11.1	-0.1
	comp=Z,3.4nm,0.9s,mb4.3						
MAW	Mawson	78.67	201	P	P	02 24 10.9	-0.2
	comp=Z,3.2nm,0.7s,mb4.4,baz=64,slow=6.1,SNR=4.9						
MAW	Mawson	78.67	201	eP	P	02 24 11.1	-0.1
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OPO	Ambohidratompo	83.56	252	P	P	02 24 38.5	+0.5
	comp=Z,1.3nm,0.7s,mb4.2,baz=130,slow=4.3,SNR=5.1						
KDAK	Kodiak Island	85.52	31	LR	LR	03 00 44.6	
	comp=Z,336nm,20.4s,MS4.7,baz=257,slow=34						
QSPA	South Pole Qui	86.35	180	eP	P	02 24 51.1	+0.5
	comp=Z,40nm,0.7s,mb5.8						
ILAR	Eielson Array	89.62	25	P	P	02 25 06.2	-0.4
	comp=Z,1.9nm,1.0s,mb4.4,baz=264,slow=4.6,SNR=5.8						
KMBO	Kilima Mbogo	94.25	269	LR	LR	03 04 21.6	
	comp=Z,276nm,21.7s,MS4.7,baz=97,slow=33						
TXAR	Lajitas Array	121.81	58	PKP	PKPdf	02 31 04.7	-0.1
	comp=Z,0.3nm,0.6s,baz=244,slow=2.4,SNR=4.1						
TXAR	Lajitas Array	121.81	58	PKP	PKPdf	02 31 04.7	-0.1
JCT	Junction City	124.69	55	eP	PKPdf	02 31 10.4	0.0
LPAZ	La Paz	152.24	136	PKPbc	PKPdf	02 32 07.6	+7.8
	comp=Z,3.2nm,0.8s,baz=44,slow=3.1,SNR=4.3						

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*ISK **09** 02:15:01.5, 38.11N×26.73E, h24^{km}, MD3.0*

*ATH **09** 02:15:01.5, 38.08N×26.72E, h44^{km}±5^{km}, MD3.0/3*

*CSEM **09** 02:15:01.7±0.1, 38.10N×26.77E, h25^{km}, MD3.0, Error ellipse: s-maj=4.2km s-min=2.1km az=98.0*

ISC 09 02:15:02.1±0.6**, 38.17N**±0.03×**26.62E**±0.05**, h16**^{km}±7^{km}**, n17, σ1^{s}.18**/27**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.20	356	i P	Pb	02 15 05.6	-1.2
URLA				i S	Sb	02 15 09.2	-0.9
BLCB	Balcova	0.40	57	i PG	Pb	02 15 09.8	-0.5
BLCB				i SG	Sb	02 15 15.6	-0.3
SMG	Samos	0.49	159	eP	Pb	02 15 11.6	-0.2
SMG				eS	Sb	02 15 18.8	+0.3
IZM	Izmir	0.56	65	i PG	Pb	02 15 12.8	-0.2
IZM				i SG	Sb	02 15 20.8	+0.3
KDAG	Bornova	0.56	65	i P	Pb	02 15 11.9	-1.2
KDAG				i S	Sb	02 15 20.1	-0.6
PRK	Paraskevi	1.11	346	eP	Pb	02 15 23.3	+0.8
PRK				eS	Sb	02 15 38.8	+2.3
AYDN	Tasoluk	1.12	116	i P	Pb	02 15 23.0	+0.4
AYDN				i S	Sb	02 15 37.1	+0.4
AYVA	Ayvalik	1.14	3	i P	Pb	02 15 24.7	+1.7
AYVA				i S	Sb	02 15 41.7	+4.3
AKS	Akhisar	1.18	52	PN	Pn	02 15 22.8	-1.1
BODT	Bodrum	1.23	153	PN	Pn	02 15 22.3	-2.4
BDRM	Kayabasi	1.28	149	i P	Pn	02 15 26.0	+0.6
BDRM				i S	Sb	02 15 43.4	+2.1
APE	Apeiranthos	1.39	219	ePN	Pn	02 15 27.2	+0.2
APE	Apeiranthos	1.39	219	eP	Pn	02 15 25.7	-1.3
APE	Apeiranthos	1.39	219	ePn	Pn	02 15 27.2	+0.2
MANT	Manisa	1.56	77	i P	Pn	02 15 31.2	+1.8
MANT				i S	Sn	02 15 50.2	+0.8
DAT	Datca	1.62	152	ePN	Pn	02 15 27.7	-2.6
BALB	Balikesir	1.77	33	ePN	Pn	02 15 31.7	-0.7

MAN 09 02:27:23.2, 13.50N×123.70E, h1^{km}, mb3.8, ML2.5, MS2.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	Guinayangan	1.29	288	⇓eP	Pb	02 27 47.4	-0.5
GQP				eS	Sb	02 28 06.3	+1.6
BOAC	Boac	1.81	269	eP	Pn	02 27 58.0	+2.2

MAN 09 02:51:13.9, 11.91N×125.30E, h1^{km}, mb3.9, ML2.6, MS2.3, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.34	156	eP	Pg	02 51 20.8	+0.1
PLP	Palo	0.81	203	eP	Pg	02 51 29.7	-0.3
PLP				eS	Sg	02 51 45.2	+4.5

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*NEIC **09** 02:55:08.3, 30.54S×70.46W, h97^{km}, MD3.7(GUC), After GUC.*

GUC 09 02:55:08.3±0.9**, 30.54S×70.46W, h97**^{km}±7^{km}**, MD3.7, ML3.5, 3C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLL	Tololo Astrono	0.47	321	⇓iP	P	02 55 24.5	+0.7
TLL				i S	S	02 55 36.6	+1.3
TLL				AMP		02 55 37.1	
	comp=N,4µm,0.4s						
CMCH	Combarbala	0.79	216	⇑iP	P	02 55 26.1	-0.5
CMCH				i S	S	02 55 40.4	+0.4
CMCH				AMP		02 55 42.7	
	comp=E,3µm,0.4s						
LSCH	La Serena	0.92	313	⇑iP	P	02 55 27.9	0.0
LSCH				i S	S	02 55 42.8	+0.2
LSCH				AMP		02 55 46.3	
	comp=E,1µm,0.3s						
CHNG	Los Chungos	1.61	213	⇑iP	P	02 55 36.0	-0.2
CHNG				i S	S	02 55 57.0	+0.2
CHNG				AMP		02 56 03.8	
	comp=E,540nm,0.4s						
ZON	Zonda	1.83	124	⇓iP	P	02 55 42.7	+3.6
ZON				eS	S	02 56 07.5	+5.7
JACH	Jahuel	2.14	183	eP	P	02 55 43.4	+0.2
JACH				i S	S	02 56 10.0	+1.0
ROCH	El Roble	2.47	191	eP	P	02 55 47.2	-0.6
FCH	Farellones	2.79	177	⇓iP	P	02 55 52.3	+0.2
FCH				eS	S	02 56 26.4	+1.6
FCH				AMP		02 56 37.8	
	comp=E,160nm,0.3s						

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*CSEM **09** 03:01:39.7±0.2, 34.27N×24.05E, h20^{km}, MD3.4, Error ellipse: s-maj=19.8km s-min=4.0km az=67.0*

*ATH **09** 03:01:41.4, 34.61N×24.16E, h20^{km}±3^{km}, MD3.4/5*

*HLW **09** 03:01:41.6, 34.37N×24.08E, h33^{km}, Mb3.2*

*NEIC **09** 03:01:41.4, 34.61N×24.16E, h20^{km}, MD3.8(ATH), After ATH.*

ISC 09 03:01:38.2±2.3**, 34.30N**±0.06×**24.1E**±0.2**, h15**^{km}±28^{km}**, n10, σ1^{s}.60**/12**, 1C-4D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.54	360	ePB	Pb	03 01 47.0	-1.9
VAM	Vamos	1.11	5	ePN	Pn	03 01 57.2	-2.0
XRY	Khrisi	1.44	66	ePN	Pn	03 02 06.0	+2.0
NPS	Neapolis	1.58	52	ePN	Pn	03 02 06.5	+0.6
KYTH	Kithira	2.16	337	ePN	Pn	03 02 15.0	+0.8
SLUM		2.95	161	⇓eP	Pn	03 02 27.5	+2.0
HMAT	Matruh	4.08	141	⇓eP	Pn	03 02 42.7	+1.2
HMAT				S	Sn	03 03 27.1	-2.4
SWA2		5.17	167	⇓eP	Pn	03 02 57.6	+0.6
SWA1		5.21	164	⇓eP	Pn	03 02 58.6	+1.1
SWA1				S	Sn	03 03 54.7	-3.2
HFRF	Wahat Farafira	8.00	152	⇑eP	Pn	03 03 35.7	-1.0

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*IDC **09** 03:21:39.1±23.0, 7.69S×119.02E, h199^{km}±236^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.2/15, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=168.0km s-min=39.4km az=69.0*

ISC 09 03:21:43.5±2.9**, 7.5S**±0.5×**119.3E**±0.6**, h259**^{km}±40^{km}**, n7, σ0^{s}.54**/9**, mb3.4**/3**, Flores Sea**

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

FITZ	**Fitzroy Crossi**	**12.17**	**150**	*e*P	**P**	**03 24 30.6**	**+0.6**
	9.9nm,0.9s						
FITZ				*e*S	**S**	**03 26 47.3**	**+5.9**
KAKA	**Kakadu**	**13.90**	**113**	*e*P	Px	03 25 07.2	
	7.6nm,0.4s						
KAKA				*e*S	Sx	03 27 34.9	
WRA	**Warramunga Arr**	**19.08**	**132**	P	**P**	**03 25 48.2**	**-0.5**
	0.5nm,0.3s,baz=303,slow=12,SNR=40						
WRA				S	**S**	**03 29 07.5**	**+1.0**
	0.1nm,0.3s,baz=300,slow=20,SNR=5.6						
WB2	**Warramunga Arr**	**19.09**	**132**	*e*P	**P**	**03 25 48.3**	**-0.5**
WB2				*e*S	**S**	**03 29 06.2**	**-0.5**
STKA	**Stephens Creek**	**31.89**	**142**	P	**P**	**03 27 46.4**	**-0.5**
	1.6nm,0.6s,mb3.7,baz=294,slow=10.0,SNR=3.4						
SONM	**Songino Array**	**56.31**	**350**	P	**P**	**03 30 59.7**	**+0.3**
	0.4nm,0.7s,mb3.0,baz=173,slow=8.3,SNR=3.2						
MKAR	**Makanchi Array**	**63.31**	**332**	P	**P**	**03 31 46.9**	**0.0**
	0.8nm,0.5s,mb3.6,baz=139,slow=7.4,SNR=13						

IDC 09 03:44:41.6±1.9**, 15.60S**×**57.97W, mb3.6**/1**, mb1 3.9**/4**, mb1mx3.6**/19**, mbtmp3.7**/4**, ML3.9**/2**, Error ellipse: s-maj=65.6km s-min=15.8km az=172.0, Brazil**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIV	**San Ignacio**	**3.01**	**262**	Pn	Pn	03 45 31.9	+0.4
	16nm,0.3s,baz=82,slow=14,SNR=222						
SIV				Pg	Pg	03 45 37.6	-4.2
	25nm,0.3s,baz=91,slow=18,SNR=100						
SIV				Sn	Sn	03 46 06.6	-2.2
	12nm,0.3s,baz=334,slow=22,SNR=4.8						
SIV				Lg		03 46 14.9	
	29nm,0.3s,baz=180,slow=20,SNR=20						
BDFB	**Brasilia**	**9.59**	**92**	Pn	P	03 47 00.5	-3.6
	0.4nm,0.3s,baz=247,slow=7.7,SNR=4.3						
BDFB				Sn	Sn	03 48 45.6	-8.2
	0.7nm,0.3s,baz=100,slow=15,SNR=2.8						
BDFB				Lg		03 49 44.7	
	1.6nm,0.3s,baz=179,slow=27,SNR=3.6						
LPAZ	**La Paz**	**9.80**	**265**	Pn	P	03 47 06.4	-0.5
	0.7nm,0.3s,baz=91,slow=9.4,SNR=20						
LPAZ				Sn	Sn	03 48 55.2	-3.8
	0.2nm,0.3s,baz=32,slow=24,SNR=3.3						
LPAZ				Lg		03 49 47.6	
	0.6nm,0.3s,baz=214,slow=20,SNR=8.3						
PDAR	**Pinedale Array**	**74.92**	**323**	P	P	03 56 24.6	-1.7
	0.2nm,0.6s,baz=121,slow=8.6,SNR=3.7						

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*CSEM **09** 03:49:33.7±0.1, 44.15N×12.34E, h15^{km}, ML2.9/5, Error ellipse: s-maj=1.6km s-min=1.1km az=131.0*

*LDG **09** 03:49:34.3±0.3, 44.24N×12.54E, h10^{km}, Ml2.8/20, Error ellipse: s-maj=5.9km s-min=4.3km az=103.0*

*ROM **09** 03:49:34.2±0.1, 44.16N×12.25E, h22^{km}±2^{km}, Md3.0/5, Ml2.5/14, Error ellipse: s-maj=2.1km s-min=1.6km az=160.0*

*NEIC **09** 03:49:34.2, 44.16N×12.25E, h22^{km}, ML2.8(LDG), ML2.5(ROM), After ROM.*

*VIE **09** 03:49:35.7±1.0, 44.24N×12.54E, h7^{km}±4^{km}, mb2.4/5, ML2.7/8, Error ellipse: s-maj=6.7km s-min=5.2km az=158.0*

ISC 09 03:49:34.9±0.3**, 44.23N**±0.02×**12.21E**±0.02**, h22**^{km}±4^{km}**, n80, σ1**^{s}**19**/121**, 10C-10D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRSN	**Barisano**	**0.11**	**300**	⇑*i*Pg	**Pb**	**03 49 39.8**	**+0.6**
	514nm,0.2s						
SFI	**Santa Sofia**	**0.42**	**219**	⇓*e*Pg	**Pb**	**03 49 42.6**	**-1.0**
SFI				Sg	**Sb**	**03 49 49.6**	**+0.1**
	676nm,0.2s						
PGD	**Poggio Sodo**	**0.50**	**225**	⇓*i*Pg	**Pb**	**03 49 44.2**	**-0.8**
PGD				Sg	**Sb**	**03 49 52.8**	**+1.0**
PESA	**Pesaro**	**0.54**	**122**	Pg	**Pb**	**03 49 44.8**	**-0.8**
PESA				Sg	**Sb**	**03 49 53.1**	**+0.2**
	564nm,0.2s						
VMG	**Vicchio**	**0.55**	**241**	⇑*e*Pg	**Pb**	**03 49 45.3**	**-0.5**
VMG				Sg	**Sb**	**03 49 54.6**	**+1.4**
	294nm,0.2s						
CRE	**Caprese Michel**	**0.64**	**197**	Pg	**Pb**	**03 49 46.0**	**-1.3**
CRE				Sg	**Sb**	**03 49 56.1**	**+0.4**
	352nm,0.4s						
SEI	**Scarperia**	**0.64**	**254**	Pg	**Pb**	**03 49 47.3**	**0.0**
	422nm,0.2s						
FSSB	**Fossombrone**	**0.68**	**142**	Pg	**Pb**	**03 49 46.2**	**-1.7**
	80nm,0.2s						
BADI	**Badiali**	**0.72**	**178**	⇓*e*Pg	**Pb**	**03 49 47.0**	**-1.7**
BADI				Sg	**Sb**	**03 49 58.4**	**+0.3**
	245nm,0.3s						
FNVD	**Fontana Vidola**	**0.78**	**266**	Pg	**Pb**	**03 49 50.2**	**+0.5**
	190nm,0.4s						
ARV	**Arcevia**	**0.90**	**144**	Pg	**Pb**	**03 49 50.7**	**-1.1**
	48nm,0.4s						
ARVD	**Arcevia**	**0.90**	**144**	Pg	**Pb**	**03 49 50.8**	**-1.0**
ARVD				Sg	**Sb**	**03 50 04.8**	**+1.5**
	94nm,0.4s						
MURB	**Monte Urbino**	**0.99**	**167**	Pg	**Pb**	**03 49 52.2**	**-1.1**
	343nm,0.3s						
CSNT	**Castellina Chi**	**1.01**	**222**	Pg	**Pb**	**03 49 53.6**	**+0.1**
	97nm,0.4s						
SNTG	**Esanatoglia**	**1.11**	**151**	Pg	**Pb**	**03 49 54.1**	**-1.2**
SNTG				Sg	**Sb**	**03 50 12.0**	**+2.7**
	53nm,0.2s						
CING	**Cingoli**	**1.11**	**140**	Pg	**Pb**	**03 49 55.1**	**-0.2**
	100nm,0.5s						
GSCL	**Gusciola**	**1.17**	**276**	Pg	**Pn**	**03 49 59.7**	**+3.5**
	24nm,0.8s						
BDI	**Bagni Di Lucca**	**1.17**	**262**	Pg	**Pn**	**03 49 58.2**	**+2.0**
	82nm,0.8s						
AOI	**Ancona**	**1.22**	**124**	Pg	**Pn**	**03 49 57.4**	**+0.6**
	111nm,0.6s						
VLC	**Villacollemand**	**1.31**	**268**	Pg	**Pn**	**03 50 00.3**	**+2.1**
	46nm,0.9s						
PII	**Pisa**	**1.32**	**248**	Pg	**Pn**	**03 49 59.2**	**+0.9**
	29nm,0.2s						
SACS	**San Casciano d**	**1.40**	**189**	Pg	**Pn**	**03 49 59.5**	**+0.1**
	86nm,0.9s						
ARCI	**Arcidosso**	**1.48**	**201**	Pg	**Pn**	**03 50 01.0**	**+0.4**
	46nm,0.7s						
NRCA	**Norcia**	**1.54**	**154**	Pg	**Pn**	**03 50 01.5**	**0.0**
	57nm,0.9s						
CTI	**Castel Tesino**	**1.86**	**348**	⇓*i*Pg	**Pn**	**03 50 06.9**	**+0.8**
MNS	**Montasola**	**1.88**	**169**	Pg	**Pn**	**03 50 06.8**	**+0.5**
	10.0nm,0.5s						
NVLJ	**Novalja**	**1.94**	**79**	*i* Pn	**Pn**	**03 50 06.8**	**-0.4**
NVLJ				*i* Sn	**Sn**	**03 50 30.3**	**-0.7**
NVLJ	**Novalja**	**1.94**	**79**	*i* Pn	**Pn**	**03 50 06.7**	**-0.5**
NVLJ				*i* Sn	**Sn**	**03 50 30.3**	**-0.8**
KNDS	**Knezji Dol**	**2.02**	**49**	*i* Pn	**Pn**	**03 50 07.7**	**-0.6**
VOJS	**Vojsko**	**2.16**	**33**	*i* Pn	**Pn**	**03 50 09.9**	**-0.4**
VOY	**Vojsko**	**2.16**	**33**	*e*Pn	**Pn**	**03 50 09.8**	**-0.6**
VOY				*e*		03 50 10.3	
VOY				*e*		03 50 15.8	
VOY				*e*Sn	**Sn**	**03 50 36.5**	**-0.2**
VOY	**Vojsko**	**2.16**	**33**	*e*P	**Pn**	**03 50 10.3**	**-0.1**
VOY				*e*		03 50 15.8	
VOY				*e*Sn	**Sn**	**03 50 36.5**	**-0.2**
VOY	**Vojsko**	**2.16**	**33**	*e*P	**Pn**	**03 50 10.3**	**-0.1**
VOY				*e*Sn	**Sn**	**03 50 36.5**	**-0.2**
PTCC	**Patocco-Chiusa**	**2.32**	**20**	Pg	**Pn**	**03 50 12.6**	**0.0**
APPI	**Appiano**	**2.35**	**343**	Pg	**Pn**	**03 50 14.6**	**+1.5**
FVI	**Forni Avoltri**	**2.40**	**9**	Pg	**Pn**	**03 50 14.7**	**+0.9**
VISS	**Visnje**	**2.44**	**49**	*i* Pn	**Pn**	**03 50 14.0**	**-0.4**
VISS				*i* Sn	**Sn**	**03 50 44.1**	**+0.3**
BOJS	**Bojanci**	**2.51**	**58**	*i* Pn	**Pn**	**03 50 14.9**	**-0.4**
BRMO	**Bormio**	**2.59**	**331**	Pg	**Pn**	**03 50 18.6**	**+2.1**
	12nm,0.5s						
OBKA	**Obir**	**2.81**	**35**	⇑*i*Pn	**Pn**	**03 50 20.0**	**+0.3**
	comp=Z,1.8nm,0.3s						
OBKA	**Obir**	**2.81**	**35**	⇑*i*Pg	**Pn**	**03 50 26.5**	**+6.8**
	comp=Z,16nm,0.5s						
OBKA	**Obir**	**2.81**	**35**	Pg	**Pn**	**03 50 26.5**	**+6.8**
	16nm,0.5s						
OBKA				Sg	**Sn**	**03 51 05.6**	**+12**
	38nm,0.6s						
PGF	**Pioggiola**	**2.88**	**235**	*e*Pn	**Pn**	**03 50 20.7**	**+0.1**
PGF				*e*Sn	**Sn**	**03 50 56.5**	**+1.5**
	6.6nm,0.3s						
KBA	**Koelnbreinsper**	**2.96**	**15**	⇑*i*Pn	**Pn**	**03 50 22.7**	**+0.9**
	comp=Z,4.4nm,0.3s						
KBA	**Koelnbreinsper**	**2.96**	**15**	⇓*i*Sn	**Sn**	**03 50 57.7**	**+0.8**
	comp=E,3.8nm,0.3s						
KBA	**Koelnbreinsper**	**2.96**	**15**	Pn	**Pn**	**03 50 22.7**	**+1.0**
	4.4nm,0.3s						
KBA				Sn	**Sn**	**03 50 57.7**	**+0.7**
WTTA	**Wattenberg**	**3.06**	**353**	⇑*i*Pn	**Pn**	**03 50 25.4**	**+2.2**
	comp=Z,1.2nm,0.1s						
WTTA	**Wattenberg**	**3.06**	**353**	⇑*i*Sn	**Sn**	**03 51 02.5**	**+3.0**
	comp=Z,3.4nm,0.3s						
WTTA	**Wattenberg**	**3.06**	**353**	Pn	**Pn**	**03 50 25.4**	**+2.2**
	1.2nm,0.1s						
WTTA				Sn	**Sn**	**03 51 02.5**	**+2.9**
WTTA				Sg	**Sn**	**03 51 18.1**	**+19**
	9.4nm,0.5s						
SQTA	**Sankt Quirin**	**3.07**	**347**	⇓*i*Pn	**Pn**	**03 50 26.5**	**+3.1**
	comp=Z,6.6nm,0.2s						
SQTA	**Sankt Quirin**	**3.07**	**347**	⇓*i*Sn	**Sn**	**03 51 04.1**	**+4.3**
	comp=Z,6.2nm,0.2s						
WATA	**Walderalm**	**3.14**	**352**	⇓*i*Pn	**Pn**	**03 50 26.7**	**+2.4**
	comp=Z,3.0nm,0.2s						
WATA	**Walderalm**	**3.14**	**352**	Pn	**Pn**	**03 50 26.7**	**+2.4**
	3.0nm,0.2s						
WATA				Sn	**Sn**	**03 51 06.7**	**+5.2**
	4.4nm,0.3s						
MOTA	**Moosalm**	**3.21**	**346**	⇓*i*Pn	**Pn**	**03 50 27.5**	**+2.1**
	comp=Z,1.4nm,0.1s						
MOTA	**Moosalm**	**3.21**	**346**	Pn	**Pn**	**03 50 27.5**	**+2.2**
	1.4nm,0.1s						
MOTA				Sn	**Sn**	**03 51 08.7**	**+5.4**
	7.8nm,0.5s						
SBF	**Sospel**	**3.46**	**266**	*e*Pn	**Pn**	**03 50 29.3**	**+0.4**
SBF				*e*Sn	**Sn**	**03 51 10.9**	**+1.2**
	4.6nm,0.2s						
DAVA	**Damuels**	**3.46**	**333**	⇑*i*Pn	**Pn**	**03 50 31.5**	**+2.6**
	comp=Z,2.2nm,0.2s						
DAVA	**Damuels**	**3.46**	**333**	⇑*i*Sn	**Sn**	**03 51 13.7**	**+4.0**
	comp=Z,2.2nm,0.2s						
MOA	**Molln**	**3.89**	**21**	⇓*i*Pn	**Pn**	**03 50 35.8**	**+0.8**
	comp=Z,1.1nm,0.2s						
MOA	**Molln**	**3.89**	**21**	⇑*i*Sn	**Sn**	**03 51 20.5**	**-0.1**
	comp=E,2.9nm,0.3s						
MOA	**Molln**	**3.89**	**21**	Pn	**Pn**	**03 50 35.8**	**+0.8**
	1.1nm,0.2s						
MOA				Sn	**Sn**	**03 51 20.5**	**-0.1**
MBDF	**Montbardon**	**3.92**	**279**	*e*Pn	**Pn**	**03 50 36.4**	**+1.0**
MBDF				*e*Sn	**Sn**	**03 51 21.8**	**+0.4**
	3.2nm,0.3s						
FRF	**La Foret Royal**	**4.08**	**262**	*e*Pn	**Pn**	**03 50 37.8**	**+0.2**
FRF				*e*Sn	**Sn**	**03 51 25.4**	**+0.1**
	2.2nm,0.3s						
LPG	**La Plagne**	**4.08**	**290**	*e*Pn	**Pn**	**03 50 38.7**	**+1.0**
LPG				*e*Sn	**Sn**	**03 51 23.6**	**-1.8**
	1.7nm,0.3s						
LPL	**La Plagne**	**4.10**	**290**	*e*Pn	**Pn**	**03 50 38.0**	**0.0**
LPL				*e*Sn	**Sn**	**03 51 24.8**	**-1.1**
	3.7nm,0.5s						
LMR	**La Mourre**	**4.22**	**260**	*e*Pn	**Pn**	**03 50 39.9**	**+0.2**
LMR				*e*Sn	**Sn**	**03 51 28.6**	**-0.4**
	0.9nm,0.2s						
ORIF	**Oris-en-Rattie**	**4.57**	**281**	*e*Pn	**Pn**	**03 50 45.0**	**+0.3**
ORIF				*e*Sn	**Sn**	**03 51 36.9**	**-1.0**
	3.5nm,0.5s						
SMRF	**Simiane la Rot**	**4.79**	**269**	*e*Pn	**Pn**	**03 50 48.7**	**+1.0**
CABF	**La Chapelle**	**4.92**	**301**	*e*Pn	**Pn**	**03 50 48.9**	**-0.7**
CABF				*e*Sn	**Sn**	**03 51 44.3**	**-2.4**
	2.4nm,0.4s						
KHC	**Kasperske Hory**	**4.99**	**10**	*e*PN	**Pn**	**03 50 48.2**	**-2.4**
KHC				*e*SN	**Sn**	**03 51 45.8**	**-2.6**
HINF	**Hinteralfeld**	**5.17**	**316**	*e*Pn	**Pn**	**03 50 52.5**	**-0.7**
HINF				*e*Sn	**Sn**	**03 51 50.3**	**-2.7**
	4.6nm,0.4s						
CDF	**Champ du Feu**	**5.40**	**323**	*e*Pn	**Pn**	**03 50 55.9**	**-0.4**
CDF				*e*Sn	**Sn**	**03 51 54.6**	**-4.0**
	1.3nm,0.3s						
VIVF	**Saint-Julien-l**	**5.42**	**279**	*e*Pn	**Pn**	**03 50 56.2**	**-0.5**
VIVF				*e*Sn	**Sn**	**03 51 57.9**	**-1.3**
	1.8nm,0.3s						
HAU	**Haudompre**	**5.55**	**315**	*e*Pn	**Pn**	**03 50 57.2**	**-1.3**
HAU				*e*Sn	**Sn**	**03 51 59.4**	**-3.1**
	9.7nm,0.4s						
SMF	**Signal de Mont**	**6.36**	**295**	*e*Pn	**Pn**	**03 51 08.8**	**-1.1**
SMF				*e*Sn	**Sn**	**03 52 18.8**	**-3.9**
	1.7nm,0.2s						
LOR	**Lormes**	**6.58**	**300**	*e*Pn	**Pn**	**03 51 12.4**	**-0.7**
	baz=121						
LOR				*e*Sn	**Sn**	**03 52 24.1**	**-4.2**
	4.2nm,0.3s						
SSF	**Saint Saulge**	**6.72**	**298**	*e*Pn	**Pn**	**03 51 13.5**	**-1.5**
SSF				*e*Sn	**Sn**	**03 52 27.9**	**-3.9**
	0.9nm,0.3s						
AVF	**Avril sur Loir**	**6.73**	**295**	*e*Pn	**Pn**	**03 51 14.2**	**-0.9**
AVF				*e*Sn	**Sn**	**03 52 27.9**	**-4.0**
	0.4nm,0.2s						
BGF	**Bois d'Agland**	**6.99**	**293**	*e*Pn	**Pn**	**03 51 17.1**	**-1.7**
BGF				*e*Sn	**Sn**	**03 52 34.7**	**-3.7**
	7.1nm,0.5s						
TCF	**Toulx Ste Croi**	**7.35**	**290**	*e*Pn	**Pn**	**03 51 22.1**	**-1.7**
TCF				*e*Sn	**Sn**	**03 52 41.1**	**-6.3**
	0.6nm,0.2s						

MEX 09 03:52:08.3±0.7**, 16.71N**×**99.75W, h5**^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.23**	**313**	*i* P	Pg	03 52 12.0	-0.9
ACX				*i* S	Sg	03 52 15.5	-0.5
CAIG	**El Cayaco**	**0.60**	**304**	*i* P	Pg	03 52 19.5	-0.8
CAIG				*i* S	Sg	03 52 28.6	+0.2

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*NIED **09** 03:53:00, 28.20N×142.20E, h23^{km}, Mw4.5 Best double couple: M$_0$6.84×10^{15} NP1:φ$_s$120°, δ82°, λ-70°. NP2: φ$_s$232°, δ22°, λ-157°.*

*BJI **09** 03:53:34.8, 28.29N×141.79E, h32^{km}, mB4.6, mb4.5*

*MOS **09** 03:53:34.1±1.1, 28.23N×141.83E, h33^{km}, mb5.0/16, Error ellipse: s-maj=14.0km s-min=6.6km az=107.8*

*NEIC **09** 03:53:36.5±0.2, 28.21N×141.86E, mb4.7/21, MW4.5(NIED), Error ellipse: s-maj=6.1km s-min=5.8km az=69.0*

*IDC **09** 03:53:36.5±0.5, 28.24N×141.87E, h38^{km}±3^{km}, mb4.3/18, mb1 4.5/20, mb1mx4.5/23, mbtmp4.5/20, ML4.1/2, MS3.9/17, Ms1 3.9/17, ms1mx3.8/21, Error ellipse: s-maj=16.1km s-min=11.9km az=60.0*

ISC 09 03:53:34.8±0.2**, 28.20N**±0.04×**141.80E**±0.05**, h39**^{km}**, h39**^{km}±.8^{km}**:pP-P, n146, σ0**^{s}**93**/121**, mb4.6**/54**, MS4.0**/14**, 7C-2D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.15**	**163**	Pn	**P**	**03 53 55.1**	**+0.4**
	395nm,0.3s,baz=94,slow=19,SNR=401						
CBIJ				Sn	**S**	**03 54 07.8**	**-1.7**
	2µm,0.3s,baz=308,slow=19,SNR=42						
JHJ	**Hachijo jima 2**	**5.20**	**341**	Pn	**P**	**03 54 52.5**	**+0.2**
	11nm,0.3s,baz=253,slow=19,SNR=6.7						
JHJ				Sn	**S**	**03 55 46.5**	**-5.4**
	21nm,0.3s,baz=299,slow=18,SNR=2.5						
JHJ				LR	LR	03 56 42.2	
	comp=Z,543nm,19.9s,baz=94,slow=36						
MJAR	**Matsushiro Arr**	**8.85**	**341**	Pn	**P**	**03 55 42.7**	**-0.5**
	3.4nm,0.3s,baz=159,slow=13,SNR=23						
MAJO	**Matsushiro**	**8.86**	**341**	*e*P	**P**	**03 55 42.6**	**-0.6**
	25nm,0.8s						
MAJO	**Matsushiro**	**8.86**	**341**	*e*P	**P**	**03 55 42.6**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,25nm,0.8s						
MAT	**Matsushiro**	**8.86**	**341**	P	**P**	**03 55 42.6**	**-0.6**
MAT				*e*S	**S**	**03 57 10.1**	**-13**
JNU	**Nakatsue**	**10.61**	**300**	Pn	**P**	**03 56 12.9**	**+5.6**
	comp=Z,0.4nm,0.3s,baz=116,slow=14,SNR=6.9						
JNU				LR	LR	03 59 49.1	
	comp=Z,510nm,20.9s,baz=289,slow=35						
JOW	**Kunigami**	**12.08**	**267**	LR	LR	04 00 27.8	
	comp=Z,785nm,21.4s,baz=241,slow=34						
ASAJ	**Asahikawa**	**15.90**	**2**	LR	LR	04 04 29.0	
	comp=Z,125nm,18.4s,baz=163,slow=41						
SSE	**Sheshan**	**18.15**	**284**	*e*P	**P**	**03 57 44.2**	**-1.4**
SSE				AP		03 57 58.9	
SSE				S	**S**	**04 01 07.3**	**+3.7**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s						
SSE				AMB	AMB		
	comp=Z,50nm,4.3s						
SSE	**Sheshan**	**18.15**	**284**	*e*P	**P**	**03 57 44.2**	**-1.4**
	comp=Z,37nm,0.8s						
SSE				pP		03 57 58.9	
SSE				sP		03 58 06.8	
SSE				S	**S**	**04 01 07.3**	**+3.7**
SSE				sS		04 01 28.5	
YHNB	**Yeheng**	**18.62**	**264**	*e*P	**P**	**03 57 53.1**	**+1.6**
YSS	**Yuzh-Sakhalins**	**18.74**	**2**	*e*P	**P**	**03 57 53.1**	**+0.4**
	comp=Z,132nm,1.5s						
YSS	**Yuzh-Sakhalins**	**18.74**	**2**	⇓*i*P	**P**	**03 57 52.8**	**+0.1**
YSS				pmax	pmax		
	comp=N,110nm,1.5s						
YSS				pmax	pmax		
	comp=Z,160nm,1.5s						
MDJ	**Mudanjiang**	**19.07**	**332**	*e*P	**P**	**03 57 55.4**	**-1.2**
NJ2	**Nanjing**	**20.21**	**287**	*e*P	**P**	**03 58 10.5**	**+1.5**
NJ2				PP	PP	03 58 34.2	+4.7
NJ2				S	**S**	**04 01 49.0**	**+0.3**
NJ2				AMB	AMB		
	comp=Z,190nm,1.1s						
NJ2				AMB	AMB		
	comp=Z,100nm,5.3s						
KLR	**Kul'dur**	**22.38**	**343**	*e*P	**P**	**03 58 31.9**	**+1.1**
ENH	**Enshi**	**28.22**	**282**	*e*P	**P**	**03 59 25.8**	**-0.5**
	comp=Z,13nm,0.9s,mb4.5						
MA2	**Magadan**	**31.97**	**9**	*e*P	**P**	**03 59 57.7**	**-1.4**
MA2				*e*S	**S**	**04 05 07.5**	**+0.9**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
CD2	**Chengdu**	**33.10**	**284**	*e*P	**P**	**04 00 08.7**	**-0.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SONM	**Songino Array**	**33.69**	**315**	P	**P**	**04 00 14.5**	**+0.3**
	comp=Z,1.3nm,0.7s,mb4.0,baz=107,slow=7.5,SNR=7.2						
SONM				pP	pP	04 00 26.7	+1.6
	comp=Z,2.1nm,0.7s,baz=119,slow=7.7,SNR=7.1						
SONM				PcP	PcP	04 02 54.2	+0.7
	comp=Z,1.2nm,0.8s,baz=90,slow=2.9,SNR=3.8						
SONM				pPcP		04 03 05.9	
	comp=Z,2.2nm,0.6s,baz=142,slow=1.3,SNR=8.1						
SONM				ScP		04 06 34.6	
	comp=Z,2.1nm,1.0s,baz=128,slow=3.3,SNR=7.1						
SONM				LR	LR	04 14 37.2	
	comp=Z,134nm,19.8s,MS3.7,baz=120,slow=37						
BOD	**Bodaibo**	**35.42**	**334**	*e*P	**P**	**04 00 27.8**	**-1.1**
BOD				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.6						
GTA	**Gaotai**	**36.34**	**299**	*e*P	**P**	**04 00 36.7**	**-0.2**
ZAK	**Zakamensk**	**36.56**	**318**	*e*P	**P**	**04 00 39.6**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
KAKA	**Kakadu**	**41.66**	**194**	*e*P	**P**	**04 01 39.3**	**+18**
	comp=Z,4.2nm,0.6s,mb4.2						
BILL	**Bilibino**	**42.46**	**13**	*e*P	**P**	**04 01 27.2**	**-0.1**
BILL				pmax	pmax		
	comp=Z,33nm,2.5s,mb4.5						
TIXI	**Tiksi**	**44.08**	**354**	*e*P	**P**	**04 01 37.2**	**-3.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
WRAB	**Tennant Creek**	**48.39**	**189**	*e*P	**P**	**04 02 14.6**	**-0.5**
	comp=Z,30nm,0.7s,mb5.4						
WRAB	**Tennant Creek**	**48.39**	**189**	*e*P	**P**	**04 02 14.6**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
WB2	**Warramunga Arr**	**48.40**	**189**	*e*P	**P**	**04 02 15.0**	**-0.2**
WB2				*e*SCP		04 07 32.4	
WB2				*e*PCS		04 09 09.4	
WRA	**Warramunga Arr**	**48.40**	**189**	P	**P**	**04 02 14.8**	**-0.4**
	comp=Z,18nm,0.7s,mb5.2,baz=11,slow=8.4,SNR=118						
WRA				ScP		04 07 32.5	
	comp=Z,1.3nm,0.8s,baz=3.4,slow=4.4,SNR=7.2						
ZAL	**Zalesovo**	**48.45**	**318**	P	**P**	**04 02 15.7**	**+0.6**
	comp=Z,0.8nm,0.4s,mb4.1,baz=324,slow=6.2,SNR=5.7						
ZAL				PcP	PcP	04 03 40.5	-0.8
	comp=Z,1.7nm,0.7s,baz=347,slow=2.9,SNR=5.5						
ZAL				pPcP		04 03 52.4	
	comp=Z,4.0nm,0.6s,baz=3.9,slow=5.2,SNR=8.4						
ZAL				ScP		04 07 31.6	
	comp=Z,0.7nm,0.3s,baz=81,slow=10,SNR=4.9						
ZAL				LR	LR	04 23 41.4	
	comp=Z,110nm,19.1s,MS3.9,baz=79,slow=37						
ZAL	**Zalesovo**	**48.45**	**318**	P	**P**	**04 02 15.7**	**+0.6**
ZAL				PcP	PcP	04 03 40.5	-0.8
ZAL				pPcP		04 03 52.4	
ZAL				ScP		04 07 31.6	
ZAL				LR	LR	04 23 41.4	
FITZ	**Fitzroy Crossi**	**48.61**	**201**	*e*P	**P**	**04 02 17.4**	**+0.5**
	comp=Z,12nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**48.61**	**201**	LR	LR	04 19 20.9	
	comp=Z,120nm,20.2s,MS3.9,baz=230,slow=32						
JIRN	**Jiri**	**48.76**	**283**	*e*P	**P**	**04 02 19.1**	**+1.2**
	comp=Z,7.2nm,0.4s,mb5.0						
GUN	**Gumba**	**48.96**	**284**	*e*P	**P**	**04 02 20.5**	**+1.0**
	comp=Z,40nm,1.0s,mb5.4						
NVS	**Novosibirsk**	**49.48**	**320**	*e*P	**P**	**04 02 32.0**	**+8.9**
KKN	**Kakani**	**49.51**	**284**	*e*P	**P**	**04 02 26.4**	**+2.7**
MKAR	**Makanchi Array**	**49.52**	**309**	P	**P**	**04 02 22.8**	**-0.7**
	comp=Z,0.3nm,0.3s,mb3.7,baz=84,slow=9.0,SNR=8.1						
MKAR				pP	pP	04 02 33.9	-0.8
	comp=Z,1.5nm,0.7s,baz=93,slow=9.5,SNR=11						
MKAR				PcP	PcP	04 03 45.5	+0.2
	comp=Z,4.3nm,0.8s,baz=79,slow=6.2,SNR=11						
MKAR				pPcP		04 03 57.4	
	comp=Z,6.0nm,0.7s,baz=78,slow=6.4,SNR=14						
MKAR				ScP		04 07 36.2	
	comp=Z,1.5nm,0.7s,baz=81,slow=4.9,SNR=9.4						
MKAR				LR	LR	04 24 13.4	
	comp=Z,160nm,19.6s,MS4.0,baz=96,slow=37						
MKAR	**Makanchi Array**	**49.52**	**309**	P	**P**	**04 02 22.8**	**-0.7**
MKAR				pP	pP	04 02 33.9	-0.8
MKAR				PcP	PcP	04 03 45.5	+0.2
MKAR				pPcP		04 03 57.4	
MKAR				ScP		04 07 36.2	
MKAR				LR	LR	04 24 13.4	
KOLN	**Koldanda**	**50.95**	**284**	*e*P	**P**	**04 02 40.8**	**+6.1**
	comp=Z,8.9nm,0.8s,mb4.8						
KURK	**Kurchatov**	**51.97**	**314**	*e*P	**P**	**04 02 41.7**	**-0.3**
	comp=Z,4.6nm,0.9s,mb4.4						
KURK	**Kurchatov**	**51.97**	**314**	*c* *i*P	**P**	**04 02 42.7**	**+0.7**
KDAK	**Kodiak Island**	**53.69**	**37**	P	**P**	**04 02 53.5**	**-1.2**
	comp=Z,12nm,0.7s,mb5.0,baz=246,slow=3.9,SNR=12						
COLA	**College**	**56.51**	**29**	*e*P	**P**	**04 03 14.9**	**-0.2**
CHKZ	**Chkalovo**	**56.83**	**318**	*e*P	**P**	**04 03 16.4**	**-1.2**
	comp=Z,8.1nm,0.8s,mb4.8						
CHKZ	**Chkalovo**	**56.83**	**318**	*e*P	**P**	**04 03 16.4**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
ILAR	**Eielson Array**	**56.91**	**29**	P	**P**	**04 03 16.4**	**-1.7**
	comp=Z,5.3nm,0.9s,mb4.6,baz=259,slow=6.2,SNR=39						
ILAR				pP	pP	04 03 27.4	-2.1
	comp=Z,2.9nm,0.9s,baz=270,slow=6.1,SNR=7.8						
ILAR				LR	LR	04 27 26.9	
	comp=Z,66nm,18.7s,MS3.8,baz=196,slow=36						
BVA0	**Borovoye Array**	**57.01**	**317**	*i* P	**P**	**04 03 18.4**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
BVAR	**Borovoye Array**	**57.01**	**317**	P	**P**	**04 03 17.9**	**-0.9**
	comp=Z,5.3nm,0.5s,mb4.8,baz=90,slow=8.9,SNR=43						
BVAR				pP	pP	04 03 28.6	-1.7
	comp=Z,6.7nm,0.7s,baz=99,slow=7.0,SNR=9.8						
BVAR				pPcP		04 04 24.4	
	comp=Z,5.6nm,0.7s,baz=94,slow=5.1,SNR=4.1						
BRVK	**Borovoye**	**57.07**	**317**	*e*P	**P**	**04 03 19.6**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.7						
BRVK	**Borovoye**	**57.07**	**317**	*e*P	**P**	**04 03 19.6**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
KKAR	**Karatay Array**	**58.17**	**305**	*i* P	**P**	**04 03 26.5**	**-0.6**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**59.74**	**180**	P	**P**	**04 03 37.0**	**-1.2**
	comp=Z,2.4nm,0.7s,mb4.3,baz=318,slow=6.0,SNR=3.5						
STKA	**Stephens Creek**	**59.74**	**180**	P	**P**	**04 03 37.0**	**-1.2**
SVE	**Sverdlovsk**	**62.15**	**322**	*e*P	**P**	**04 03 53.7**	**-0.4**
SVE				*e*		04 04 09.7	
SVE				*e*S	**S**	**04 12 10.0**	**-4.9**
SVE				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.3						
INK	**Inuvik**	**62.17**	**25**	*e*P	**P**	**04 03 52.9**	**-1.2**
	comp=Z,16nm,1.2s,mb5.0						
INK	**Inuvik**	**62.17**	**25**	*e*P	**P**	**04 03 52.9**	**-1.2**
INK				pmax	pmax		
	comp=Z,16nm,1.2s						
ARU	**Arti**	**63.35**	**322**	*e*P	**P**	**04 04 01.7**	**-0.4**
	comp=Z,19nm,0.8s,mb5.3						
ARU	**Arti**	**63.35**	**322**	⇑*i*P	**P**	**04 04 01.9**	**-0.2**

```
ARU                            e     pP      04 04 15.4 +1.7
ARU                            e             04 04 36.8
ARU                            e             04 06 17.5
ARU                            ePPP  PPP     04 07 48.0 -6.6
ARU                            eS    S       04 12 29.4 -0.5
ARU                            eSS   SS      04 16 34.2 -4.5
ARU                             pmax pmax
      comp=Z,16nm,0.8s,mb5.2
AB31  Akbulak array     64.09 314 i P   P       04 04 06.1 -0.9
AB31                            pmax pmax
      comp=Z,4.0nm,0.7s,mb4.6
NWAO  Narrogin (SRO)    65.11 203 eP    P       04 04 13.7 -0.3
YKA   Yellowknife Ar    71.34  28  P    P       04 04 50.8 -1.3
      comp=Z,4.7nm,0.8s,mb4.5,baz=296,slow=6.4,SNR=11
YKA                             LR   LR      04 36 48.4
      comp=Z,86nm,18.8s,MS4.0,baz=275,slow=36
YKA   Yellowknife Ar    71.34  28  P    P       04 04 50.8 -1.3
YKA                             LR   LR      04 36 48.4
KLMR  Klimovskoe        71.46 330 eP    P       04 05 02.5  +10
KLMR                            pmax pmax
      comp=Z,30nm,1.5s,mb5.0
KEV   Kevo              71.83 341 ep    P       04 05 07.9  +13
ARCES ARCESS Array B    72.39 341  P    P       04 04 58.5 +0.3
      comp=Z,4.5nm,0.8s,mb4.4,baz=74,slow=8.8,SNR=10
JOF   Joensuu           73.95 334 ep    P       04 05 06.9 -0.5
OBN   Obninsk           75.43 325⇑eP    P       04 05 16.7 +0.6
OBN                               i     pP      04 05 28.8 +0.9
OBN                             pmax pmax
      comp=Z,23nm,1.2s,mb5.0
OBN                             MLR  MLR
      comp=Z,100nm,17.0s,MS4.2
EDM   Edmonton          76.14  37 eP    P       04 05 19.8 -0.3
KAF   Kangasniemi       76.34 334 ep    P       04 05 20.6 -0.5
FINES FINESS Array B    76.81 334  P    P       04 05 23.9 +0.2
      comp=Z,3.7nm,0.5s,mb4.5,baz=78,slow=5.0,SNR=42
FINES                           pP   pP      04 05 35.6 -0.1
      comp=Z,5.6nm,0.5s,baz=65,slow=5.6,SNR=7.2
KIV   Kislovodsk        77.05 313 eP    P       04 05 28.1 +2.6
      comp=Z,17nm,0.8s,mb5.0
KIV   Kislovodsk        77.05 313 eP    P       04 05 28.1 +2.6
KIV                             pmax pmax
      comp=Z,17nm,0.8s,mb5.0
GNI   Garni             77.36 309d iP   P       04 05 26.8 -0.5
GNI                             pmax pmax
      comp=Z,10.0nm,1.4s
BMO   Blue Mountains    77.78  46 eP    P       04 05 29.6 +0.1
      comp=Z,22nm,1.6s,mb4.8
WVOR  Wild Horse Val    78.03  48 eP    P       04 05 31.2 +0.3
      comp=Z,5.2nm,1.2s,mb4.3
WVOR  Wild Horse Val    78.03  48 eP    P       04 05 31.3 +0.4
WVOR                            pmax pmax
      comp=Z,5.0nm,1.2s,mb4.3
CMB   Columbia Colle    78.83  53 eP    P       04 05 35.3 -0.2
      comp=Z,15nm,1.3s,mb4.8
CMB   Columbia Colle    78.83  53 eP    P       04 05 35.3 -0.2
CMB                             pmax pmax
      comp=Z,15nm,1.3s,mb4.8
ANN   Anapa             79.97 316 eP    P       04 05 39.1 -2.4
ANN                             pmax pmax
      comp=Z,46nm,1.0s,mb5.4
NVAR  Mina Array Bea    80.11  52  P    P       04 05 42.7 +0.4
      comp=Z,4.1nm,0.8s,mb4.4,baz=289,slow=3.7,SNR=22
NVAR                            pP   pP      04 05 54.7 +0.4
      comp=Z,2.2nm,0.7s,baz=280,slow=6.7,SNR=7.4
NVAR                            LR   LR      04 34 17.5
      comp=Z,70nm,19.7s,MS4.0,baz=310,slow=30
PPT   Papeete           80.45 116 eLR   LR      04 30 18.3
      comp=Z,116nm,26.0s
PPT   Papeete           80.45 116  LR   LR      04 33 50.8
      comp=Z,162nm,20.0s,MS4.4,baz=288,slow=30
QLMT  Earthquake Lak    81.43  44 eP    P       04 05 50.5 +1.3
AKASG Malin Array Be    81.53 324  P    P       04 05 49.5 -0.1
      comp=Z,1.4nm,0.3s,mb4.4,baz=52,slow=5.2,SNR=12
AKASG                           pP   pP      04 06 01.4 -0.1
      comp=Z,3.7nm,0.5s,baz=52,slow=5.5,SNR=9.5
AKASG Malin Array Be    81.53 324  P    P       04 05 49.5 -0.1
AKASG                           pP   pP      04 06 01.4 -0.1
YMR   Madison River     81.80  44 eP    P       04 05 52.7 +1.6
      comp=Z,5.2nm,0.9s,mb4.5
IMW   Indian Meadow     82.22  44 eP    P       04 05 54.3 +1.1
      comp=Z,7.1nm,0.9s,mb4.6
HFS   Hagfors           82.28 337  P    P       04 05 53.1 -0.1
      comp=Z,7.6nm,0.7s,mb4.7,SNR=12
HFS                             pP   pP      04 06 04.8 -0.4
      comp=Z,9.7nm,0.9s,baz=45,slow=2.1,SNR=5.4
NB2   NORSAR Subarra    82.46 338  P    P       04 05 53.9 -0.3
      comp=Z,13nm,1.1s,mb4.8,baz=42,slow=4.8
NB2   NORSAR Subarra    82.46 338  P    P       04 05 53.9 -0.3
      baz=42,slow=4.8
NOA   NORSAR Array B    82.46 338  P    P       04 05 54.2  0.0
      comp=Z,6.3nm,0.8s,mb4.6,baz=41,slow=5.2,SNR=13
NOA                             pP   pP      04 06 05.9 -0.3
      comp=Z,5.6nm,0.8s,baz=42,slow=5.2,SNR=6.5
NOA                             LR   LR      04 44 07.6
      comp=Z,53nm,18.5s,MS3.9,baz=25,slow=37
SUW   Suwalki           82.53 328 eP    P       04 05 54.7  0.0
SUW   Suwalki           82.53 328 eP    P       04 05 54.7  0.0
NAO   NORSAR Subarra    82.75 338  P    P       04 05 53.9 -1.7
      comp=Z,13nm,1.1s,mb4.9
NAO   NORSAR Subarra    82.75 338  P    P       04 05 53.9 -1.7
NAO                             pmax pmax
      comp=Z,13nm,1.1s,mb4.9
HWUT  Hardware Ranch    83.02  46 eP    P       04 05 58.5 +1.0
      comp=Z,5.2nm,0.8s,mb4.6
PDAR  Pinedale Array    83.67  45  P    P       04 06 01.1 +0.4
      comp=Z,2.1nm,0.9s,mb4.3,baz=286,slow=3.4,SNR=11
PDAR                            LR   LR      04 40 24.2
      comp=Z,76nm,18.8s,MS4.1,baz=261,slow=34
TBI   Tubuai            83.75 120 eLR   LR      04 31 49.6
      comp=Z,194nm,34.2s
ARUT  Antelope Range    83.76  50 eP    P       04 06 01.8 +0.6
NEN   Nelson            83.88  53 eP    P       04 06 02.5 +0.5
NEN                               epP   pP      04 06 14.1 +0.2
MVU   Marysvale         84.22  49 eP    P       04 06 04.8 +1.2
      comp=Z,3.7nm,1.2s,mb4.4
MSU   Marysvale         84.24  49 eP    P       04 06 04.7 +1.0
BR131 Keskin Array S    85.01 313 eP    P       04 06 07.8 +0.4
      comp=Z,1.3nm,0.7s,mb4.2
BRTR  Keskin Array B    85.01 313  P    P       04 06 09.2 +1.7
      comp=Z,1.9nm,0.8s,mb4.3,baz=100,slow=4.5,SNR=11
BRTR                            pP   pP      04 06 20.7 +1.2
      comp=Z,2.9nm,0.7s,baz=110,slow=4.2,SNR=8.2
SRU   San Rafael        85.02  48 eP    P       04 06 08.3 +0.7
      comp=Z,4.6nm,0.8s,mb4.7
SRU   San Rafael        85.02  48 eP    P       04 06 08.3 +0.7
SRU                             pmax pmax
      comp=Z,5.0nm,0.8s,mb4.7
KWP   Kalwaria          85.52 325 eP    P       04 06 10.4 +0.6
KWP                               e     pP      04 06 22.4 +0.6
KWP   Kalwaria          85.52 325 eP    P       04 06 10.4 +0.6
KWP                               e     pP      04 06 22.4 +0.6
PV10  Paradox Valley    86.39  48 eP    P       04 06 14.7 +0.4
OJC   Ojcow             86.57 327 eP    P       04 06 15.6 +0.7
ULM   Lac du Bonnet     86.71  33  LR   LR      04 40 46.4
      comp=Z,89nm,21.6s,MS4.1,baz=321,slow=33
PV01  Paradox Valley    86.83  48 eP    P       04 06 17.2 +0.7
ANMO  Albuquerque       90.03  50 eP    P       04 06 32.2 +0.4
KHC   Kasperske Hory    90.24 329 eP    P       04 06 32.0 -0.4
GERES GERESS Array B    90.39 329  P    P       04 06 33.0 -0.2
      comp=Z,0.6nm,0.6s,mb4.1,baz=45,slow=3.8,SNR=6.8
GERES                           pP   pP      04 06 45.0 -0.3
      comp=Z,1.7nm,0.8s,baz=45,slow=5.7,SNR=6.9
SCHQ  Schefferville     93.72  16  LR   LR      04 52 04.5
      comp=Z,65nm,18.2s,MS4.1,baz=16,slow=38
RKT   Rikitea           95.03 113 eLR   LR      04 37 03.8
      comp=Z,100nm,32.8s
TXAR  Lajitas Array     95.22  53  P    P       04 06 56.8 +1.0
      comp=Z,2.7nm,0.8s,mb4.8,baz=305,slow=2.7,SNR=35
TXAR                            LR   LR      04 48 48.1
      comp=Z,57nm,18.5s,MS4.1,baz=335,slow=35
SNAA  Sanae            132.35 194⇑iP    PKPdf   04 12 44.2 -0.1
SNAA  Sanae            132.35 194 e     PKPdf   04 12 46.3 +2.0
SNAA  Sanae            132.35 194 e     PKPdf   04 12 54.2  +10
SNAA  Sanae            132.35 194 e     PKPdf   04 12 57.0  +13
SNAA  Sanae            132.35 194 e     PKPdf   04 13 05.2  +21
DBIC  Dimbokro         132.70 312  PKP  PKPdf   04 12 48.9 +2.4
      comp=Z,2.6nm,0.8s,baz=80,slow=6.1,SNR=3.3
DBIC                            pPKP         04 13 01.2
      comp=Z,4.9nm,0.7s,baz=72,slow=1.3,SNR=4.4
VNA2  Neumayer--Watz   133.88 194⇑iP    PKPdf   04 12 48.8 +1.6
VNA2  Neumayer--Watz   133.88 194 e     PKPdf   04 12 50.1 +2.9
VNA2  Neumayer--Watz   133.88 194 e     PKPdf   04 12 59.6  +12
VNA2  Neumayer--Watz   133.88 194 e     PKPdf   04 13 02.1  +15
VNA2  Neumayer--Watz   133.88 194 e     PKPdf   04 13 10.2  +23
VNA3  Neumayer Olymp   134.08 192⇑iP    PKPdf   04 12 48.8 +1.2
VNA3  Neumayer Olymp   134.08 192 e     PKPdf   04 12 50.3 +2.7
VNA3  Neumayer Olymp   134.08 192 e     PKPdf   04 12 59.1  +12
VNA3  Neumayer Olymp   134.08 192 e     PKPdf   04 13 02.1  +15
VNA3  Neumayer Olymp   134.08 192 e     PKPdf   04 13 09.3  +22
VNA1  Neumayer--Stat   134.28 193 e     PKPdf   04 12 50.8 +2.8
VNA1  Neumayer--Stat   134.28 193 e     PKPdf   04 12 59.8  +12
VNA1  Neumayer--Stat   134.28 193 e     PKPdf   04 13 02.9  +15
VNA1  Neumayer--Stat   134.28 193 e     PKPdf   04 13 11.3  +23
VNA1  Neumayer--Stat   134.28 193⇑iPKPdf PKPdf  04 12 48.9 +0.9
VNA1                              e             04 16 37.0
SAML  Samuel           149.66  56 ePKPbc PKPdf  04 13 21.8 +5.5
LPAZ  La Paz           149.96  73  PKP  PKPdf   04 13 19.0 +2.4
      comp=Z,6.3nm,0.9s,baz=16,slow=2.2,SNR=4.0
LPAZ                            PKPbc PKPdf  04 13 24.4 +7.8
      comp=Z,6.3nm,0.9s,baz=340,slow=3.8,SNR=24
LPAZ  La Paz           149.96  73  PKP  PKPdf   04 13 19.0 +2.3
LPAZ                            PKPbc PKPdf  04 13 24.4 +7.7
PLCA  Paso Flores      150.71 124  PKPbc PKPdf  04 13 25.4 +8.2
      comp=Z,5.1nm,0.8s,baz=248,slow=2.9,SNR=12
PLCA                            pPKPbc       04 13 37.6
      comp=Z,11nm,0.9s,baz=222,slow=3.3,SNR=12
```

PRE ***09*** *04:08:27.0±2.6, 26.39S×27.48E, h2^{km}, ML3.8*
IDC ***09*** *04:08:28.9±1.2, 26.30S×27.50E, mb3.8/3, mb1 4.2/9, mb1mx3.9/23, mbtmp4.1/9, ML4.0/5, Error ellipse: s-maj=17.6km s-min=15.4km az=97.0*
ISC 09 04:08:26.7±0.8**, 26.38S**±0.03×**27.46E**±0.04**, h3**^{km}±5^{km}**, n29, σ1^{s}18**/43**, mb3.6**/3**, 4C, South Africa**

```
Code  Station Name       Δ°  AZ°    Phase ID           Time     Res
                                    Op      ISC       h  m  s   ISC
PRYS  Parys             0.56 190 eP      Pg       04 08 37.7 -0.1
PRYS                             eS      Sg       04 08 45.8 +0.6
PRYS                              AML    AML      04 08 51.9
      comp=Z,3μm,0.6s
KSR   Koster            0.73 316 eP      Pg       04 08 42.4 +1.2
KSR                              eS      Sg       04 08 51.3 +0.3
KSR                               AML    AML      04 08 58.9
      comp=Z,6μm,1.0s
SLR   Silverton         0.97  49 eP      Pb       04 08 46.2 +0.3
SLR                              eS      Sb       04 08 58.8 -0.2
SLR                               AML    AML      04 09 06.5
      comp=Z,420nm,0.5s
SEK   Senekal           1.95 176 eS      Sn       04 09 27.2 +0.9
SEK                               AML    AML      04 09 30.4
      comp=Z,1μm,0.3s
SWZ   Schweizer         2.07 247 eP      Pn       04 08 53.1  -10
SWZ                              eS      Sn       04 09 07.5  -22
SWZ                               AML    AML      04 09 09.6
      comp=Z,381nm,0.5s
LBTB  Lobatse           2.16 308  Pn     Pn       04 09 07.3 +3.2
      comp=Z,66nm,0.3s,baz=143,slow=14,SNR=554
LBTB                              Pg     Pg       04 09 08.7 -1.2
      comp=Z,66nm,0.3s,baz=137,slow=16,SNR=575
LBTB                              Lg              04 09 36.1
      comp=Z,312nm,0.3s,baz=239,slow=19,SNR=52
LBTB                              Rg              04 09 44.4
      comp=Z,850nm,0.9s,baz=184,slow=4.5,SNR=21
LBTB  Lobatse           2.16 308 eP      Pn       04 09 05.6 +1.5
LBTB                             eS      Sn       04 09 32.8 +1.0
BOSA  Boshof            2.97 221  Pn     Pn       04 09 16.8 +1.1
      comp=Z,12nm,0.3s,baz=45,slow=13,SNR=317
BOSA                              Pg     Pg       04 09 25.8 -0.2
      comp=Z,10nm,0.3s,baz=60,slow=14,SNR=8.6
BOSA                              Lg              04 09 59.5
      comp=Z,61nm,0.3s,baz=328,slow=16,SNR=20
BOSA  Boshof            2.97 221 eP      Pn       04 09 14.8 -0.9
BOSA                             eS      Sn       04 09 50.9 -1.5
BOSA                              AML    AML      04 09 59.9
      comp=Z,1μm,0.3s
POGA  Pongola           3.83 106 eP      Pn       04 09 28.5 +0.5
POGA                             eS      Sn       04 10 12.8 -1.4
POGA                              AML    AML      04 10 32.2
      comp=Z,106nm,0.6s
PKA   Prieska           5.30 231 eP      Pn       04 09 34.2  -15
PKA                              eS      Sn       04 10 32.0  -19
PKA                               AML    AML      04 10 51.9
      comp=Z,126nm,0.5s
UPI   Upington          5.87 249 eP      Pn       04 09 56.3 -0.4
MATP  Matopo            6.00   9  Pn     Pn       04 09 59.0 +0.4
      comp=Z,4.9nm,0.3s,baz=187,slow=13,SNR=83
MATP                              Sn     Sn       04 11 05.2 -3.5
      comp=Z,3.6nm,0.3s,baz=120,slow=18,SNR=9.1
MATP                              Lg              04 11 33.8
      comp=Z,6.6nm,0.3s,baz=101,slow=16,SNR=4.2
SUR   Sutherland        8.33 223  Pn     P        04 10 30.2 -1.2
      comp=Z,1.8nm,0.3s,baz=49,slow=15,SNR=19
SUR                               Sn     Sn       04 12 01.0 -6.2
      comp=Z,1.8nm,0.3s,baz=131,slow=20,SNR=3.9
SUR                               Lg              04 12 45.4
      comp=Z,7.2nm,0.3s,baz=118,slow=17,SNR=5.3
CVNA  Calvinia          8.45 231 eP      P        04 10 31.5 -1.5
CER   Ceres             9.94 224 eP      P        04 10 49.9 -3.6
LSZ   Lusaka           11.06   4  Pn     P        04 11 06.9 -2.1
      comp=Z,1.2nm,0.3s,baz=170,slow=15,SNR=12
LSZ                               Sn     S        04 13 06.7 -7.8
      comp=Z,0.5nm,0.3s,baz=66,slow=19,SNR=4.2
LSZ                               Lg              04 14 10.8
      comp=Z,0.9nm,0.3s,baz=86,slow=19,SNR=2.5
TSUM  Tsumeb           11.57 306  Pn     P        04 11 14.9 -1.1
      comp=Z,1.7nm,0.3s,baz=114,slow=11,SNR=16
TSUM                              Sn     S        04 13 19.2 -7.7
      comp=Z,0.3nm,0.3s,baz=155,slow=19,SNR=3.0
TSUM                              Lg              04 14 30.5
      comp=Z,0.8nm,0.3s,baz=241,slow=21,SNR=5.7
SNAA  Sanae            48.38 192⇑i       P        04 17 12.3 +0.8
SNAA  Sanae            48.38 192 e       P        04 17 14.6 +3.1
VNA1  Neumayer--Stat   48.75 195⇑i       P        04 17 15.5 +1.2
VNA1  Neumayer--Stat   48.75 195 e       P        04 17 17.8 +3.5
VNA2  Neumayer--Watz   48.75 194⇑i       P        04 17 14.4 +0.1
VNA2  Neumayer--Watz   48.75 194 e       P        04 17 17.1 +2.8
VNA3  Neumayer Olymp   49.50 195⇑i       P        04 17 20.2 +0.1
VNA3  Neumayer Olymp   49.50 195 e       P        04 17 22.5 +2.4
GERES GERESS Array B   75.88 351  P      P        04 20 17.7 +1.5
      comp=Z,0.1nm,0.3s,mb3.2,baz=162,slow=3.1,SNR=5.0
AKASG Malin Array Be   76.75   1  P      P        04 20 21.3 +0.3
      comp=Z,0.2nm,0.3s,mb3.5,baz=166,slow=4.8,SNR=4.1
MKAR  Makanchi Array   88.05  34  P      P        04 21 20.5 +0.8
      comp=Z,0.7nm,0.8s,mb4.0,baz=225,slow=5.1,SNR=5.2
```

NIED 09 04:20:00, 28.00N×142.70E, h83^{km}**, Mw3.7 Best double couple:** M$_0$4.31×10^{14} **NP1:**φ$_s$315°**,** δ85°**,** λ98°. **NP2:**φ$_s$78°**,** δ9°**,** λ33°.**, Bonin Islands region**

MAN 09 04:48:55.3, 12.07N×125.76E, h20^{km}**, mb4.1, ML2.9, MS2.6, Samar**

```
Code  Station Name       Δ°  AZ°    Phase ID           Time     Res
                                    Op      ISC       h  m  s   ISC
BESP  Borongan          0.56 215 eP      Pb       04 49 07.2 +0.9
PLP   Palo              1.18 221 eP      Pb       04 49 15.8 -1.1
PLP                              i S     Sb       04 49 32.5 +0.7
SCPH  Surigao           2.29 187 eP      Pn       04 49 32.5 -0.2
SCPH                             eS      Sn       04 50 00.9 +0.4
```

ISK ***09*** *05:25:22.8, 38.35N×26.53E, h18^{km}, MD3.3*
NEIC ***09*** *05:25:22.0, 38.35N×26.53E, h25^{km}, MD3.5(ATH), MD3.4(ISK), After ISK.*
ATH ***09*** *05:25:23.3, 38.21N×27.10E, h41^{km}±5^{km}, MD3.5/3*
CSEM ***09*** *05:25:26.2±0.1, 38.30N×26.78E, h25^{km}, MD3.3, Error ellipse: s-maj=2.4km s-min=1.4km az=54.0*
ISC 09 05:25:24.5±0.4**, 38.25N**±0.02×**26.61E**±0.04**, h10**^{km}**, n33, σ1^{s}09**/49**, Aegean Sea**

```
Code  Station Name       Δ°  AZ°    Phase ID           Time     Res
                                    Op      ISC       h  m  s   ISC
URLA  Izmir             0.11 355 i P     Pg       05 25 26.7 -0.7
URLA                             i S     Sg       05 25 30.1 +0.8
BLCB  Balcova           0.37  68 i PG    Pg       05 25 31.5 -0.5
BLCB                             i SG    Sg       05 25 37.4 +0.3
IZM   Izmir             0.54  74 i PG    Pg       05 25 34.6 -0.7
IZM                              i SG    Sg       05 25 43.6 +1.0
KDAG  Bornova           0.54  73 i P     Pg       05 25 34.1 -1.4
KDAG                             i S     Sg       05 25 42.3 -0.4
SMG   Samos             0.57 161 eP      Pg       05 25 35.3 -0.7
SMG                              eS      Sg       05 25 44.4 +0.7
PRK   Paraskevi         1.03 345 eP      Pb       05 25 45.2 +1.2
PRK                              eS      Sb       05 26 01.6 +4.3
AYVA  Ayvalik           1.06   3 i P     Pb       05 25 43.8 -0.6
AYVA                             i S     Sb       05 26 04.6 +6.4
AKS   Akhisar           1.14  56  PN     Pn       05 25 45.1 -1.3
AYDN  Tasoluk           1.16 120 i P     Pb       05 25 46.0 -0.2
AYDN                             i S     Sb       05 26 01.7 +0.5
BODT  Bodrum            1.31 155  PN     Pn       05 25 47.7 -1.2
MLSB  Milas             1.33 135  PN     Pn       05 25 49.1  0.0
BDRM  Kayabasi          1.35 150 i P     Pb       05 25 48.9 -0.6
BDRM                             i S     Sb       05 26 07.9 +1.1
APE   Apeiranthos       1.46 216 eP      Pn       05 25 51.5 +0.5
APE                              eS      Sb       05 26 13.2 +3.5
MANT  Manisa            1.55  80 i P     Pn       05 25 53.7 +1.4
MANT                             i S     Sb       05 26 14.8 +2.3
DAT   Datca             1.70 153 ePN     Pn       05 25 54.0 -0.5
BALB  Balikesir         1.71  35 ePN     Pn       05 25 51.9 -2.7
YER   Yerkesik          1.73 129 ePN     Pn       05 25 54.8 -0.1
BTOK  Tokmak            1.87  36 i P     Pn       05 25 58.3 +1.4
BTOK                             i S     Sn       05 26 27.2 +6.3
DENT  Denizli           1.98 104 ePN     Pn       05 25 57.4 -1.0
LIA   Limnos Island     1.99 326 eP      Pn       05 25 59.1 +0.5
DNZL  Cakiroluk         2.01 105 i P     Pn       05 26 02.2 +3.3
DNZL                             i S     Sn       05 26 29.9 +5.7
DALT  Dalyan (Mudla)    2.19 132 ePN     Pn       05 26 00.9 -0.6
BNT   Bandirma          2.34  25 ePN     Pn       05 26 00.2 -3.4
ORLT  Orhaneli          2.53  44 ePN     Pn       05 26 04.3 -2.0
FETY  Fethiye           2.54 129 ePN     Pn       05 26 06.4 -0.2
ULDT  Uludag            2.73  45 i P     Pn       05 26 13.6 +4.4
ULDT                             i S     Sn       05 26 52.3  +10
TKTP  Tekketepe         2.93  93 i P     Pn       05 26 18.9 +6.7
TKTP                             i S     Sn       05 27 06.3  +18
RDO   Rodhopi           3.01 344 eP      Pn       05 26 13.4 +0.2
YLV   Yalova            3.15  42 ePN     Pn       05 26 11.9 -3.3
KDZ   Kurdzhali         3.52 345 i P     Pn       05 26 21.0 +0.6
ESKT  Eskisehir         3.54  68 i P     Pn       05 26 29.9 +9.1
ESKT                             i S     Sn       05 27 20.6  +17
RZN   Rozhen            3.73 338 i P     Pn       05 26 24.0 +0.6
MMB   Musomiste         4.00 327 i P     Pn       05 26 27.0 -0.3
```

ISK ***09*** *05:39:47.1, 38.04N×26.74E, h25^{km}, MD2.8*
ATH ***09*** *05:39:47.8, 38.13N×26.49E, h10^{km}, MD3.1/3*
CSEM ***09*** *05:39:47.8±0.1, 38.07N×26.82E, h30^{km}, MD2.8, Error ellipse: s-maj=3.6km s-min=2.4km az=100.0*
ISC 09 05:39:47.4±0.7**, 38.18N**±0.03×**26.55E**±0.06**, h10**^{km}**, n19, σ1^{s}20**/29**, 1C, Aegean Sea**

```
Code  Station Name       Δ°  AZ°    Phase ID           Time     Res
                                    Op      ISC       h  m  s   ISC
URLA  Izmir             0.18  10 i P     Pg       05 39 50.8 -0.6
URLA                             i S     Sg       05 39 54.6 +0.5
BLCB  Balcova           0.43  62 i PG    Pg       05 39 56.1 -0.2
SMG   Samos             0.52 154⇑iP      Pg       05 39 57.6 -0.3
SMG                              eS      Sg       05 40 05.4 +0.4
IZM   Izmir             0.60  69 i PG    Pg       05 39 58.9 -0.6
IZM                              i SG    Sg       05 40 07.3 -0.2
KDAG  Bornova           0.60  68 i P     Pb       05 39 57.8 -1.7
KDAG                             i S     Sg       05 40 06.5 -1.2
PRK   Paraskevi         1.09 348 eP      Pb       05 40 09.1 +1.3
PRK                              eS      Sb       05 40 26.4 +4.6
AYDN  Tasoluk           1.17 116 i P     Pb       05 40 09.3 +0.1
AYDN                             i S     Sb       05 40 24.4 +0.2
AKS   Akhisar           1.21  54  PN     Pn       05 40 09.0 -1.3
BODT  Bodrum            1.27 151  PN     Pn       05 40 06.9 -4.3
MLSB  Milas             1.31 132 ePN     Pn       05 40 07.6 -4.2
BDRM  Kayabasi          1.32 147 i P     Pb       05 40 11.5 -0.3
BDRM                             i S     Sb       05 40 29.8 +1.2
APE   Apeiranthos       1.38 217 ePN     Pn       05 40 11.7 -1.0
APE   Apeiranthos       1.38 217 eP      Pn       05 40 12.5 -0.2
MANT  Manisa            1.61  78 i P     Pn       05 40 17.3 +1.3
MANT                             i S     Sn       05 40 38.4 +1.4
DAT   Datca             1.66 150 ePN     Pn       05 40 13.1 -3.7
YER   Yerkesik          1.73 127 ePN     Pn       05 40 13.1 -4.6
BALB  Balikesir         1.79  35 ePN     Pn       05 40 17.2 -1.4
BTOK  Tokmak            1.95  36 i P     Pn       05 40 24.1 +3.1
BTOK                             i S     Sn       05 40 49.0 +3.2
DNZL  Cakiroluk         2.03 103 i P     Pn       05 40 25.7 +3.6
DNZL                             i S     Sn       05 40 53.4 +5.7
```

IDC 09 05:43:28.6±1.2**, 10.18N**×**91.73E, mb3.9**/6**, mb1 4.1**/6**, mb1mx3.8**/20**, mbtmp3.9**/6**, Error ellipse: s-maj=59.3km s-min=19.6km az=63.0, Andaman Islands region**

```
Code  Station Name       Δ°  AZ°    Phase ID           Time     Res
                                    Op      ISC       h  m  s   ISC
MKAR  Makanchi Array   37.36 349 P       P        05 50 42.6 -2.1
      0.4nm,0.6s,baz=172,slow=8.8,SNR=4.5
MKAR                             PcP     PcP      05 53 01.8 -2.5
      0.5nm,0.8s,baz=135,slow=2.0,SNR=3.6
SONM  Songino Array    39.52  16 P       P        05 51 01.6 -1.1
      0.5nm,0.7s,baz=194,slow=5.9,SNR=3.1
FITZ  Fitzroy Crossi   43.71 130 P       P        05 51 35.1 -2.4
      4.1nm,0.7s,baz=328,slow=12,SNR=5.0
BVAR  Borovoye Array   46.07 342 P       P        05 51 53.7 -2.2
      0.2nm,0.3s,baz=162,slow=9.1,SNR=2.8
WRA   Warramunga Arr   51.53 126 P       P        05 52 36.7 -2.0
      3.6nm,0.9s,baz=305,slow=8.5,SNR=23
STKA  Stephens Creek   63.41 133 P       P        05 54 00.4 -2.1
      1.7nm,0.6s,baz=298,slow=7.7,SNR=4.7
PLCA  Paso Flores     145.76 204 PKPbc   PKPbc    06 03 09.5 -0.7
      2.3nm,0.9s,baz=124,slow=1.3,SNR=6.2
```

HLW ***09*** *05:44:19.6, 35.06N×26.58E, h25^{km}, Mb3.1*
CSEM ***09*** *05:44:21.5±0.1, 34.56N×26.49E, MD3.5, Error ellipse: s-maj=4.7km s-min=2.6km az=85.0*
ATH ***09*** *05:44:24.8, 34.86N×26.46E, h9^{km}±2^{km}, MD3.5/6*
NEIC ***09*** *05:44:24.8, 34.86N×26.46E, h9^{km}, MD3.5(ATH), After ATH.*
ISC 09 05:44:22.2±1.3**, 34.59N**±0.03×**26.42E**±0.06**, h10**^{km}±9^{km}**, n11, σ1^{s}04**/17**, 1C-3D, Crete**

```
Code  Station Name       Δ°  AZ°    Phase ID           Time     Res
                                    Op      ISC       h  m  s   ISC
XRY   Khrisi            0.67 296 ePG     Pg       05 44 36.6 +1.0
XRY                              eSB     Sb       05 44 45.5 +1.1
NPS   Neapolis          0.95 316 ePG     Pg       05 44 40.3 -0.9
NPS                              eSB     Sb       05 44 50.6 -2.0
KARP  Karpathos         1.14  32 ePB     Pb       05 44 42.2 -1.2
KARP                             eSB     Sb       05 44 53.3 -4.8
GVD   Gavdhos           1.94 278 ePN     Pn       05 45 00.0 +4.4
ARG   Arkhangelos       2.14  40 ePN     Pn       05 45 00.1 +1.6
ARG                              eSN     Sn       05 45 25.5 +0.2
APE   Apeiranthos       2.58 344 ePN     Pn       05 45 05.5 +0.7
SLUM                    3.25 199 eP      Pn       05 45 15.0 +0.8
HMAT  Matruh            3.53 171⇑eP      Pn       05 45 18.5 +0.3
HMAT                              S      Sn       05 46 01.2 +0.8
SWA1                    5.34 187⇓eP      Pn       05 45 43.8 -0.1
SWA1                              S      Sn       05 46 45.3 -0.9
SWA2                    5.39 189⇓eP      Pn       05 45 44.5 -0.1
HFRF  Wahat Farafira    7.59 167⇓eP      Pn       05 46 13.9 -1.6
```

IDC ***09*** *06:11:38.6±0.6, 17.70S×172.82E, mb4.6/12, mb1 4.7/14, mb1mx4.6/18, mbtmp4.6/14, ML3.9/1, MS4.9/19, Ms1 4.9/19, ms1mx4.9/20, Error ellipse: s-maj=14.5km s-min=12.7km az=99.0*
LDG ***09*** *06:11:39.9±0.2, 17.93S×172.58E, h10^{km}, Ms5.1/10, Error ellipse: s-maj=26.9km s-min=4.0km az=133.0*
BJI ***09*** *06:11:39.1, 18.57S×172.84E, h14^{km}, mB5.3, mb4.8, Ms5.2, Msz4.9*
HRVD ***09*** *06:11:40.3±0.2, 17.81S×172.83E, h12^{km}, MW5.5/76, Centroid moment Tensor Solution. LP body waves: s69,c138;Mantle waves: s76,c167; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.50±.03; M$_{\theta\theta}$2.14±.03; M$_{\phi\phi}$-1.64±.03; M$_{r\theta}$-0.03±.07; M$_{\theta\phi}$-1.02±.03; M$_{\phi r}$0.01±.08; Best double couple: M$_0$2.148×10^{17} NP1: φ$_s$239°, δ90°, λ180°. NP2:φ$_s$329°, δ90°, λ0°. Principal axes: T 2.398, Plg1°, Azm194°; N -.496, Plg89°, Azm11°; P -1.898, Plg0°, Azm104°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***09*** *06:11:40.3±0.3, 18.03S×172.92E, h10^{km}, mb5.1/23, MS5.2/137 Error ellipse: s-maj=10.2km s-min=7.2km az=155.0*
MOS ***09*** *06:11:43.1±1.5, 18.13S×172.87E, h33^{km}, mb5.3/14, MS5.1/9, Error ellipse: s-maj=15.4km s-min=11.7km az=171.4*
ISC 09 06:11:40.6±2.2**, 18.11S**±0.06×**172.91E**±0.05**, h19**^{km}±14^{km}**,**

h16^{km}±1.3^{km}:pP-P,n315,σ1^{s}25/112,mb4.9/38,MS5.1/163, 10C-7D,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.24**	**236**	*e*P	**Pn**	**06 13 26.9**	**-1.2**
DZM	**Mont Dzumac**	**7.24**	**236**	Pn	**Pn**	**06 13 29.2**	**+1.1**
	1.7nm,0.3s,baz=67,slow=17,SNR=23						
DZM				Sn	**Sn**	**06 14 43.6**	**-7.1**
	baz=274,slow=22,SNR=1.6						
DZM	**Mont Dzumac**	**7.24**	**236**	*e*P	**Pn**	**06 13 26.9**	**-1.2**
RAO	**Raoul Island**	**13.90**	**145**	LR	LR	06 19 08.1	
	comp=Z,2µm,21.8s,baz=294,slow=32						
HNR	**Honiara**	**15.25**	**303**	LR	LR	06 20 25.6	
	comp=Z,2µm,18.4s,baz=138,slow=35						
HNR	**Honiara**	**15.25**	**303**	Pn	**P**	**06 15 16.9**	**0.0**
AFI	**Afiamalu**	**15.30**	**76**	Pn	**P**	**06 15 17.4**	**-0.1**
	baz=157,slow=15,SNR=4.0						
AFI				Sn	**S**	**06 18 06.3**	**-0.8**
	0.6nm,0.3s,baz=90,slow=20,SNR=2.1						
AFI				LR	LR	06 19 37.7	
	comp=Z,3µm,20.5s,baz=254,slow=31						
AFI	**Afiamalu**	**15.30**	**76**	Pn	**P**	**06 15 17.3**	**-0.1**
	68nm,1.0s						
AFI	**Afiamalu**	**15.30**	**76**	P	**P**	**06 15 17.3**	**-0.2**
AFI				pmax	pmax		
	comp=Z,68nm,1.0s						
URZ	**Urewera**	**20.41**	**170**	P	**P**	**06 16 20.4**	**+1.1**
	comp=Z,63nm,1.1s,baz=355,slow=9.1,SNR=32						
URZ				S	**S**	**06 20 17.4**	**+15**
	comp=Z,3.1nm,0.9s,baz=58,slow=19,SNR=1.7						
URZ				LR	LR	06 22 36.6	
	comp=Z,7µm,18.1s,MS5.1,baz=357,slow=32						
SNZO	**South Karori**	**23.17**	**177**	PFAKE		06 17 00.0	+13
SNZO				LR	LR		
	comp=Z,8µm,22.0s,MS5.1						
CTA	**Charters Tower**	**25.26**	**261**	*e*P	**P**	**06 17 08.1**	**+0.8**
	comp=Z,27nm,0.9s,mb4.8						
CTA	**Charters Tower**	**25.26**	**261**	P	**P**	**06 17 07.0**	**-0.4**
	comp=Z,24nm,0.8s,mb4.8,baz=88,slow=11,SNR=34						
CTA				S	**S**	**06 21 35.5**	**+6.2**
	comp=Z,2.0nm,0.9s,baz=114,slow=10.0,SNR=1.7						
CTA				LR	LR	06 25 55.7	
	comp=Z,4µm,19.2s,MS4.9,baz=317,slow=34						
CTA	**Charters Tower**	**25.26**	**261**	*e*P	**P**	**06 17 08.1**	**+0.8**
CTA				pmax	pmax		
	comp=Z,27nm,0.9s						
CTAO	**Charters Tower**	**25.26**	**261**	*e*P	**P**	**06 17 08.1**	**+0.8**
	comp=Z,330nm,1.4s,mb5.7						
CTAO	**Charters Tower**	**25.26**	**261**	*e*P	**P**	**06 17 08.1**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,330nm,1.4s,mb5.7						
RPZ	**Rata Peaks**	**25.57**	**183**	P	**P**	**06 17 11.7**	**+1.6**
	comp=Z,25nm,0.9s,mb4.7,baz=27,slow=4.2,SNR=10						
RPZ				LR	LR	06 26 01.8	
	comp=Z,6µm,20.0s,MS5.1,baz=359,slow=33						
RAR	**Rarotonga**	**25.90**	**101**	LR	LR	06 25 15.1	
	comp=Z,2µm,20.1s,MS4.6,baz=267,slow=31						
RAR	**Rarotonga**	**25.90**	**101**	PFAKE		06 17 20.0	+6.7
RAR				LR	LR		
	comp=Z,1.0nm,21.0s						
PMG	**Port Moresby**	**26.44**	**286**	LR	LR	06 26 36.4	
	comp=Z,4µm,18.4s,MS5.0,baz=115,slow=34						
PMG	**Port Moresby**	**26.44**	**286**	PFAKE		06 17 30.0	+12
PMG				LR	LR		
	comp=Z,4µm,20.0s,MS5.0						
KWAJ	**Kwajalein Atol**	**27.25**	**349**	PFAKE		06 17 40.0	+14
KWAJ				LR	LR		
	comp=Z,873nm,19.0s,MS4.3						
STKA	**Stephens Creek**	**31.39**	**238**	*e*P	**P**	**06 18 01.7**	**-1.0**
	comp=Z,12nm,0.9s,mb4.7						
STKA	**Stephens Creek**	**31.39**	**238**	P	**P**	**06 18 01.9**	**-0.8**
	comp=Z,7.7nm,0.8s,mb4.6,baz=66,slow=7.8,SNR=15						
STKA				LR	LR	06 30 13.4	
	comp=Z,3µm,18.4s,MS4.9,baz=68,slow=35						
TAU	**Tasmania Unive**	**32.88**	**216**	PFAKE		06 18 30.0	+14
TAU				LR	LR		
	comp=Z,1µm,19.0s,MS4.5						
TBI	**Tubuai**	**35.51**	**105**	*e*S	**S**	**06 24 11.8**	**-0.3**
TBI				*e*LQ		06 26 41.5	
TBI				*e*LR	LR	06 28 08.2	
	comp=Z,6µm,30.0s,baz=278						
PPT	**Papeete**	**35.68**	**95**	*e*S	**S**	**06 24 14.0**	**-0.7**
PPT				*e*LQ		06 26 41.1	
PPT				*e*LR	LR	06 28 10.5	
	comp=Z,7µm,26.8s,baz=262						
PPT	**Papeete**	**35.68**	**95**	LR	LR	06 29 46.7	
	comp=Z,2µm,20.1s,MS4.9,baz=258,slow=30						
WB2	**Warramunga Arr**	**36.45**	**261**	*e*P	**P**	**06 18 44.5**	**-1.9**
WRAB	**Tennant Creek**	**36.45**	**261**	*e*P	**P**	**06 18 44.9**	**-1.5**
	comp=Z,31nm,1.0s,mb5.2						
WRAB				LR	LR		
	comp=Z,707nm,20.0s,MS4.4						
WRAB	**Tennant Creek**	**36.45**	**261**	*e*P	**P**	**06 18 44.9**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.2						
WRAB				MLR	MLR		
	comp=Z,707nm,20.0s,MS4.4						
WRA	**Warramunga Arr**	**36.46**	**261**	P	**P**	**06 18 44.7**	**-1.8**
	comp=Z,13nm,0.9s,mb4.9,baz=90,slow=8.3,SNR=70						
ASPA	**Alice Springs**	**36.78**	**255**	*e*P	**P**	**06 18 48.3**	**-0.8**
WAKE	**Wake Island**	**37.66**	**350**	PFAKE		06 19 10.0	+13
WAKE				LR	LR		
	comp=Z,4µm,20.0s,MS5.2						
GUMO	**Guam**	**41.92**	**317**	PFAKE		06 19 40.0	+8.0
GUMO				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
FORT	**Forrest**	**42.47**	**244**	*e*P	**P**	**06 19 36.3**	**0.0**
	comp=Z,25nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**44.83**	**262**	*e*P	**P**	**06 19 55.9**	**+0.3**
	comp=Z,47nm,1.1s,mb5.2						
TAOE	**Nuku Hiva Isla**	**46.45**	**85**	*e*S	**S**	**06 26 54.3**	**-0.5**
TAOE				*e*LQ		06 31 35.3	
TAOE				*e*LR	LR	06 33 14.2	
	comp=Z,9µm,26.7s						
MIDW	**Midway**	**47.00**	**12**	PFAKE		06 20 20.0	+7.3
MIDW				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
POHA	**Pohakuloa**	**48.74**	**41**	PFAKE		06 20 40.0	+14
POHA				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
RKT	**Rikitea**	**48.83**	**105**	*e*S	**S**	**06 27 28.0**	**-0.3**
RKT				*e*LQ		06 32 09.7	
RKT				*e*LR	LR	06 34 17.5	
	comp=Z,5µm,30.0s,baz=268						
NWAO	**Narrogin (SRO)**	**51.82**	**242**	PFAKE		06 21 00.0	+10
NWAO				LR	LR		
	comp=Z,2µm,19.0s,MS5.2						
DAV	**Davao City (W)**	**52.99**	**294**	PFAKE		06 21 10.0	+11
DAV				LR	LR		
	comp=Z,178nm,19.0s,MS4.1						
VNDA	**Vanda**	**59.69**	**183**	PFAKE		06 22 00.0	+14
VNDA				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
SBA	**Scott Base**	**59.85**	**182**	*e*P	**P**	**06 21 47.3**	**+0.4**
	comp=Z,23nm,1.0s,mb5.2						
SBA				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
SBA	**Scott Base**	**59.85**	**182**	*e*P	**P**	**06 21 47.3**	**+0.3**
SBA				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
SBA				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.3						
JHJ	**Hachijo jima 2**	**59.97**	**328**	LR	LR	06 42 28.5	
	comp=Z,526nm,20.5s,MS4.7,baz=139,slow=31						
CASY	**Casey**	**62.55**	**204**	*e*P	**P**	**06 22 05.1**	**-0.2**
CASY	**Casey**	**62.55**	**204**	*e*P	**P**	**06 22 02.9**	**-2.4**
CASY				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
MJAR	**Matsushiro Arr**	**63.48**	**329**	P	**P**	**06 22 07.2**	**-4.6**
	comp=Z,3.9nm,0.9s,mb4.5,baz=169,slow=6.5,SNR=6.0						
MJAR				LR	LR	06 44 45.2	
	comp=Z,632nm,21.0s,MS4.8,baz=155,slow=32						
MAJO	**Matsushiro**	**63.48**	**329**	PFAKE		06 22 20.0	+8.2
MAJO				LR	LR		
	comp=Z,955nm,20.0s,MS5.0						
KSM	**Kuching**	**64.56**	**281**	*e*P	**P**	**06 22 18.1**	**-1.2**
JNU	**Nakatsue**	**64.86**	**322**	P	**P**	**06 22 17.8**	**-3.2**
	comp=Z,6.9nm,0.8s,mb4.7,baz=143,slow=10.0,SNR=3.7						
YHNB	**Yeheng**	**65.79**	**309**	*e*P	**P**	**06 22 26.3**	**-0.8**
TATO	**Taipei**	**65.89**	**309**	PFAKE		06 22 40.0	+12
TATO				LR	LR		
	comp=Z,698nm,20.0s,MS4.9						
QZH	**Quanzhou**	**68.03**	**307**	⇓*i*P	**P**	**06 22 45.3**	**+4.0**
QZH				S	S	06 31 40.8	+2.7
QZH				PS	PS	06 32 02.0	-3.3
QZH				LR	LR		
	comp=N,950nm,19.2s,MS5.2						
QZH				LR	LR		
	comp=E,1µm,21.5s,MS5.2						
QZH				LR	LR		
	comp=Z,810nm,17.7s,MS5.0						
SSE	**Sheshan**	**69.72**	**314**	*e*P	**P**	**06 22 52.0**	**+0.4**
SSE				AP	pP	06 22 55.2	-2.4
SSE				PCP	PcP	06 23 14.6	+0.1
SSE				PP	PP	06 25 26.0	-1.8
SSE				S	S	06 32 00.9	+2.9
SSE				SCS	ScS	06 32 53.1	+4.4
SSE				SS	SS	06 36 29.7	+1.6
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,90nm,5.3s						
SSE				LR	LR		
	comp=N,680nm,40.6s,MS4.8						
SSE				LR	LR		
	comp=E,720nm,40.7s,MS4.8						
SSE				LR	LR		
	comp=Z,370nm,20.7s						
SSE	**Sheshan**	**69.72**	**314**	*e*P	**P**	**06 22 52.0**	**+0.4**
	comp=Z,22nm,0.7s,mb5.2						
SSE				pP	pP	06 22 55.2	-2.4
SSE				sP	sP	06 22 56.5	-3.2
SSE				PcP	PcP	06 23 14.6	+0.1
SSE				PP	PP	06 25 26.0	-1.8
SSE				S	S	06 32 00.9	+2.9
SSE				sS		06 32 06.4	
SSE				ScS	ScS	06 32 53.1	+4.4
SSE				SS	SS	06 36 29.7	+1.6
SSE				LR	LR		
	comp=Z,380nm,20.7s,MS4.6						
YSS	**Yuzh-Sakhalins**	**70.23**	**339**	PFAKE		06 23 00.0	+5.6
YSS				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
YSS	**Yuzh-Sakhalins**	**70.23**	**339**	P	**P**	**06 22 54.0**	**-0.4**
YSS				S	S	06 32 08.0	+4.3
INCN	**Inchon**	**70.38**	**322**	PFAKE		06 23 10.0	+14
INCN				LR	LR		
	comp=Z,521nm,20.0s,MS4.8						
NJ2	**Nanjing**	**71.89**	**314**	*e*P	**P**	**06 23 05.1**	**+0.4**
NJ2				AP	pP	06 23 10.1	-0.6
NJ2				XP	sP	06 23 13.1	+0.3
NJ2				PP	PP	06 25 48.1	+2.0
NJ2				S	S	06 32 25.0	+1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
NJ2				LR	LR		
	comp=N,940nm,28.7s,MS5.1						
NJ2				LR	LR		
	comp=E,1µm,33.5s,MS5.1						
NJ2				LR	LR		
	comp=Z,370nm,20.2s						
PET	**Petropavlovsk**	**71.90**	**351**	PFAKE		06 23 10.0	+5.6
PET				LR	LR		
	comp=Z,4µm,22.0s,MS5.7						
PET	**Petropavlovsk**	**71.90**	**351**	*e*P	**P**	**06 23 02.9**	**-1.5**
PET				*e*S	S	06 32 13.6	-9.4
QSPA	**South Pole Qui**	**71.94**	**180**	P	**P**	**06 23 04.7**	**+0.5**
	comp=Z,27nm,1.0s,mb5.1						
QSPA				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
QIZ	**Qiongzhong**	**72.10**	**298**	P	**P**	**06 23 04.9**	**-1.2**
QIZ				S	S	06 32 23.9	-1.9
QIZ				LR	LR		
	comp=N,680nm,29.1s						
QIZ				LR	LR		
	comp=Z,820nm,33.6s,MS4.8						
QIZ	**Qiongzhong**	**72.10**	**298**	PFAKE		06 23 20.0	+14
QIZ				LR	LR		
	comp=Z,355nm,19.0s,MS4.7						
COCO	**West Island**	**73.22**	**262**	PFAKE		06 23 20.0	+7.1
COCO				LR	LR		
	comp=Z,492nm,19.0s,MS4.8						
UNV	**Unalaska Valle**	**73.82**	**13**	PFAKE		06 23 30.0	+14
UNV				LR	LR		
	comp=Z,8µm,19.0s,MS6.0						
MDJ	**Mudanjiang**	**73.86**	**329**	P	**P**	**06 23 17.2**	**+1.2**
MDJ				AP	pP	06 23 20.5	-1.6
MDJ				PP	PP	06 26 02.2	-0.5
MDJ				S	S	06 32 50.7	+5.4
MDJ				SCS	ScS	06 33 27.3	+5.9
MDJ				SS	SS	06 37 36.4	+4.4
MDJ				AMB	AMB		
	comp=Z,160nm,5.3s						
MDJ				LR	LR		
	comp=N,910nm,29.3s,MS5.0						
MDJ				LR	LR		
	comp=E,800nm,30.9s,MS5.0						
MDJ				LR	LR		
	comp=Z,640nm,30.1s,MS4.7						
MDJ	**Mudanjiang**	**73.86**	**329**	PFAKE		06 23 30.0	+14
MDJ				LR	LR		
	comp=Z,712nm,21.0s,MS4.9						
CN2	**Changchun**	**75.38**	**327**	*e*P	**P**	**06 23 28.2**	**+3.4**
CN2				*e*XP	sP	06 23 37.0	+4.1
CN2				*e*S	S	06 33 07.4	+5.2
CN2				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2				LR	LR		
	comp=N,550nm,15.0s,MS5.2						
CN2				LR	LR		
	comp=E,610nm,15.0s,MS5.2						
CN2				LR	LR		
	comp=Z,540nm,23.0s						
ENH	**Enshi**	**77.69**	**308**	*e*P	**P**	**06 23 37.7**	**-0.3**
	comp=Z,22nm,1.0s,mb5.0						
ENH				LR	LR		
	comp=Z,153nm,19.0s,MS4.3						
GYA	**Guiyang**	**78.08**	**303**	P	**P**	**06 23 41.0**	**+0.8**
GYA				AP	pP	06 23 45.8	-0.5
GYA				XP	sP	06 23 48.2	-0.2
GYA				PP	PP	06 26 41.0	+2.2
GYA				S	S	06 33 35.7	+3.7
GYA				SKS	SKS	06 33 51.8	-3.2
GYA				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
GYA				AMB	AMB		
	comp=Z,210nm,6.0s						
GYA				LR	LR		
	comp=N,870nm,17.9s,MS5.2						
GYA				LR	LR		
	comp=E,680nm,19.2s,MS5.2						
GYA				LR	LR		
	comp=Z,730nm,18.6s,MS5.0						
MA2	**Magadan**	**79.49**	**349**	PFAKE		06 24 00.0	+13
MA2				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
MA2	**Magadan**	**79.49**	**349**	*e*P	**P**	**06 23 43.2**	**-4.1**
MA2				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.2						
XAN	**Xi’an**	**79.97**	**311**	P	**P**	**06 23 50.6**	**+0.2**
XAN				S	S	06 33 54.0	+2.2
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
XAN				LR	LR		
	comp=N,250nm,29.5s,MS4.5						
XAN				LR	LR		
	comp=E,170nm,28.5s,MS4.5						
XAN				LR	LR		
	comp=Z,440nm,21.1s						
KMI	**Kunming**	**80.67**	**300**	P	**P**	**06 23 56.2**	**+1.9**
KMI				AP	pP	06 24 00.7	+0.3
KMI				XP	sP	06 24 04.4	+2.0
KMI				PP	PP	06 26 57.9	-2.4
KMI				S	S	06 34 05.1	+5.8
KMI				XS		06 34 14.8	
KMI				SS	SS	06 39 17.5	+1.9
KMI				SSS	SSS	06 42 43.2	+5.9
KMI				AMB	AMB		
	comp=Z,100nm,3.1s						
KMI				LR	LR		
	comp=N,300nm,26.4s,MS4.7						
KMI				LR	LR		
	comp=E,320nm,23.4s,MS4.7						
KMI				LR	LR		
	comp=Z,690nm,27.3s,MS4.9						
KMI	**Kunming**	**80.67**	**300**	P	**P**	**06 23 56.2**	**+1.9**
	comp=Z,7.0nm,1.2s,mb4.5						
KMI				pP	pP	06 24 00.7	+0.3
KMI				sP	sP	06 24 04.4	+2.0
KMI				PP	PP	06 26 57.9	-2.4
KMI				S	S	06 34 05.1	+5.8
KMI				sS		06 34 14.8	
KMI				SS	SS	06 39 17.5	+1.9
KMI				SSS	SSS	06 42 43.2	+5.9
KMI				LR	LR		
	comp=Z,700nm,27.3s,MS4.9						
KMI	**Kunming**	**80.67**	**300**	P	**P**	**06 23 56.2**	**+1.9**
KMI				*SP	sP	06 24 04.4	+2.0
KMI						06 26 57.9	
KMI				S	S	06 34 05.1	+5.8
KMI				SS	SS	06 39 17.5	+1.9
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
KMI				MLR	MLR		
	comp=Z,700nm,27.3s,MS4.9						
MAW	**Mawson**	**80.77**	**201**	*e*P	**P**	**06 23 54.8**	**+0.9**
	comp=Z,5.8nm,1.0s,mb4.5						
MAW	**Mawson**	**80.77**	**201**	P	**P**	**06 23 54.6**	**+0.7**
	comp=Z,4.9nm,0.9s,mb4.4,baz=102,slow=6.7,SNR=12						
MAW				LR	LR	06 56 53.0	
	comp=Z,843nm,18.5s,MS5.1,baz=90,slow=34						
MAW	**Mawson**	**80.77**	**201**	*e*P	**P**	**06 23 54.8**	**+0.9**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**81.68**	**318**	⇓P	**P**	**06 24 01.3**	**+2.1**
HHC				AP	pP	06 24 05.7	+0.3
HHC				XP	sP	06 24 08.3	+0.9
HHC				PP	PP	06 27 13.9	+5.6
HHC				S	S	06 34 18.3	+8.9
HHC				XS		06 34 25.5	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
HHC				AMB	AMB		
	comp=Z,300nm,8.4s						
HHC				LR	LR		
	comp=N,390nm,16.8s,MS5.0						
HHC				LR	LR		
	comp=E,430nm,15.6s,MS5.0						
HHC				LR	LR		
	comp=Z,790nm,14.4s,MS5.2						
HIA	**Hailar**	**81.95**	**328**	PFAKE		06 24 10.0	+10
HIA				LR	LR		
	comp=Z,661nm,21.0s,MS5.0						
SNCC	**San Nicolas Is**	**82.21**	**51**	PFAKE		06 24 10.0	+7.9
SNCC				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
CD2	**Chengdu**	**82.36**	**306**	*e*P	**P**	**06 24 04.5**	**+1.5**
CD2				PP	PP	06 27 14.8	+0.9
CD2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
CD2				AMB	AMB		
	comp=Z,90nm,8.4s						
CD2				LR	LR		
	comp=N,200nm,18.0s						
CD2				LR	LR		
	comp=Z,230nm,20.4s,MS4.5						
HOPS	**Hopland**	**82.47**	**45**	PFAKE		06 24 10.0	+6.6
HOPS				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
SAO	**San Andreas Ge**	**82.48**	**48**	PFAKE		06 24 10.0	+6.5
SAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
WDC	**Whiskeytown Da**	**83.62**	**44**	PFAKE		06 24 20.0	+11
WDC				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
CMB	**Columbia Colle**	**83.83**	**47**	*e*P	**P**	**06 24 09.6**	**-0.9**
	comp=Z,13nm,1.2s,mb4.9						
CMB				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
CMB	**Columbia Colle**	**83.83**	**47**	P	**P**	**06 24 10.8**	**+0.4**
CMB				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.9						
ISA	**Isabella**	**84.08**	**50**	PFAKE		06 24 20.0	+8.2
ISA				LR	LR		
	comp=Z,287nm,19.0s,MS4.7						
YBH	**Yreka Blue Hor**	**84.09**	**43**	PFAKE		06 24 20.0	+8.3
YBH				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
FIB	**Fire Island**	**84.35**	**17**	PFAKE		06 24 20.0	+7.5
FIB				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
HUMO	**Hull Mountain**	**84.38**	**42**	PFAKE		06 24 20.0	+6.9
HUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
LZH	**Lanzhou**	**84.60**	**311**	*e*P	**P**	**06 24 16.1**	**+1.7**
LZH				AP	pP	06 24 21.8	+1.3
LZH				XP	sP	06 24 25.2	+2.7
LZH				PP	PP	06 27 35.0	+3.2
LZH				S	S	06 34 32.4	-6.6
LZH				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.4						
LZH				AMB	AMB		
	comp=Z,240nm,4.4s						
LZH				LR	LR		
	comp=E,970nm,19.5s						
LZH				LR	LR		
	comp=Z,740nm,21.0s,MS5.0						
LZH	**Lanzhou**	**84.60**	**311**	*e*P	**P**	**06 24 16.1**	**+1.7**
	comp=Z,40nm,1.2s,mb5.4						
LZH				pP	pP	06 24 21.8	+1.3
LZH				sP	sP	06 24 25.2	+2.7
LZH				PP	PP	06 27 35.0	+3.2
LZH				S	S	06 34 32.4	-6.6
LZH				sS		06 34 40.1	
LZH				PS	PS	06 35 24.3	-13
LZH				SS	SS	06 39 54.0	-19
LZH				LR	LR		
	comp=Z,740nm,21.0s,MS5.0						
LZH	**Lanzhou**	**84.60**	**311**	*e*P	**P**	**06 24 16.1**	**+1.7**
LZH				*SP	sP	06 24 25.2	+2.7
LZH						06 27 35.0	
LZH				S	S	06 34 32.4	-6.6
LZH				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.4						
LZH				MLR	MLR		
	comp=Z,740nm,21.0s,MS5.0						
PFO	**Pinyon Flat Ob**	**84.67**	**52**	PFAKE		06 24 30.0	+15
PFO				LR	LR		
	comp=Z,310nm,20.0s,MS4.7						
TNA	**Tin City**	**84.67**	**8**	PFAKE		06 24 20.0	+6.0
TNA				LR	LR		
	comp=Z,861nm,20.0s,MS5.1						
MTUM	**Tungsten Hills**	**84.79**	**48**	P	**P**	**06 24 11.9**	**-3.3**
PMR	**Palmer**	**84.99**	**17**	PFAKE		06 24 30.0	+14
PMR				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
DAC	**Darwin (Calif)**	**85.00**	**49**	PFAKE		06 24 30.0	+14
DAC				LR	LR		
	comp=Z,146nm,19.0s,MS4.4						
COR	**Corvallis**	**85.18**	**40**	PFAKE		06 24 30.0	+13
COR				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
NVAR	**Mina Array Bea**	**85.47**	**47**	P	**P**	**06 24 18.2**	**-0.4**
	comp=Z,2.3nm,0.9s,mb4.3,baz=220,slow=7.0,SNR=8.9						
NVAR				LR	LR	06 57 04.2	
	comp=Z,1µm,18.4s,MS5.3,baz=275,slow=32						
NVAR	**Mina Array Bea**	**85.47**	**47**	P	**P**	**06 24 18.2**	**-0.4**
NVAR				LR	LR	06 57 04.2	
MNV	**Mina**	**85.57**	**47**	*e*P	**P**	**06 24 18.4**	**-0.7**
	comp=Z,18nm,1.4s,mb5.1						
MNV				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
MNV	**Mina**	**85.57**	**47**	P	**P**	**06 24 19.3**	**+0.2**
MNV				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.1						
DIV	**Divide**	**85.61**	**19**	PFAKE		06 24 30.0	+11
DIV				LR	LR		
	comp=Z,5µm,22.0s,MS5.9						
MOD	**Modoc**	**85.74**	**43**	*e*P	**P**	**06 24 19.3**	**-0.6**
	comp=Z,7.8nm,0.9s,mb4.9						
MOD				LR	LR		
	comp=Z,963nm,22.0s,MS5.2						
BILL	**Bilibino**	**86.04**	**358**	PFAKE		06 24 30.0	+9.2
BILL				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
BILL	**Bilibino**	**86.04**	**358**	⇑*e*P	**P**	**06 24 18.8**	**-2.0**
BILL				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.0						
TPH	**Tonopah**	**86.07**	**48**	PFAKE		06 24 30.0	+8.4
TPH				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
TPNV	**Topopah Spring**	**86.27**	**49**	PFAKE		06 24 30.0	+7.4
TPNV				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						

LDFC	**Landfair**	**86.30**	**51**	*e*P	**P**	**06 24 21.7**	**-1.2**
OCWA	**Octopus Mounta**	**86.31**	**37**	PFAKE		06 24 30.0	+7.4
OCWA				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
SIT	**Sitka**	**86.40**	**25**	PFAKE		06 24 30.0	+7.3
SIT				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
NEN	**Nelson**	**86.74**	**51**	*e*P	**P**	**06 24 23.2**	**-1.8**
NEN				*e*		06 24 45.3	
PMSA	**Palmer Station**	**86.74**	**159**	PFAKE		06 24 40.0	+16
PMSA				LR	LR		
	comp=Z,504nm,21.0s,MS4.9						
YAK	**Yakutsk**	**86.89**	**341**	PFAKE		06 24 40.0	+15
YAK				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
WVOR	**Wild Horse Val**	**87.08**	**44**	PFAKE		06 24 40.0	+14
WVOR				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
COLA	**College**	**87.99**	**16**	P	**P**	**06 24 32.3**	**+2.0**
	comp=Z,9.2nm,1.1s,mb4.9						
COLA				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
COLA	**College**	**87.99**	**16**	*e*P	**P**	**06 24 31.6**	**+1.3**
ILAR	**Eielson Array**	**88.16**	**16**	P	**P**	**06 24 28.2**	**-2.9**
	comp=Z,1.4nm,0.7s,mb4.3,baz=228,slow=5.4,SNR=14						
HAWA	**Hanford**	**88.38**	**40**	PFAKE		06 24 40.0	+7.4
HAWA				LR	LR		
	comp=Z,138nm,20.0s,MS4.4						
SONM	**Songino Array**	**88.45**	**322**	LR	LR	06 59 58.3	
	comp=Z,350nm,22.0s,MS4.7,baz=265,slow=33						
TUC	**Tucson**	**88.49**	**55**	PFAKE		06 24 40.0	+6.5
TUC				LR	LR		
	comp=Z,755nm,20.0s,MS5.1						
ELK	**Elko**	**88.61**	**46**	PFAKE		06 24 40.0	+6.1
ELK				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
ARUT	**Antelope Range**	**88.65**	**50**	*e*P	**P**	**06 24 36.1**	**+2.1**
GTA	**Gaotai**	**88.92**	**312**	*e*P	**P**	**06 24 35.9**	**+0.6**
GTA				AP	pP	06 24 39.9	-1.6
GTA				XP	sP	06 24 43.1	-0.4
GTA				PP	PP	06 28 09.0	+1.7
GTA				PPP	PPP	06 30 11.0	+4.8
GTA				SKS	SKS	06 35 03.5	-4.9
GTA				S	S	06 35 21.9	+1.9
GTA				SS	SS	06 41 19.6	+3.6
GTA				AMB	AMB		
	comp=Z,120nm,5.7s						
GTA				LR	LR		
	comp=N,330nm,14.9s,MS5.0						
GTA				LR	LR		
	comp=E,290nm,16.0s,MS5.0						
GTA				LR	LR		
	comp=Z,420nm,18.7s,MS4.9						
BMO	**Blue Mountains**	**89.05**	**42**	PFAKE		06 24 50.0	+14
BMO				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
WUAZ	**Wupatki**	**89.27**	**52**	PFAKE		06 24 50.0	+13
WUAZ				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
MVU	**Marysvale**	**89.82**	**49**	PFAKE		06 24 50.0	+10
MVU				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
MSU	**Marysvale**	**89.85**	**49**	*e*P	**P**	**06 24 38.1**	**-1.7**
MSU	**Marysvale**	**89.85**	**49**	P	**P**	**06 24 40.9**	**+1.1**
DUG	**Dugway**	**90.07**	**48**	PFAKE		06 24 50.0	+9.3
DUG				LR	LR		
	comp=Z,1µm,22.0s,MS5.4						
HLID	**Hailey**	**90.36**	**44**	*e*P	**P**	**06 24 40.8**	**-1.2**
	comp=Z,13nm,1.4s,mb5.0						
HLID				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
SNAA	**Sanae**	**90.40**	**181**	*e*	**P**	**06 24 46.1**	**+4.6**
SNAA	**Sanae**	**90.40**	**181**	*e*	**P**	**06 24 47.9**	**+6.4**
SNAA	**Sanae**	**90.40**	**181**	⇑*i*P	**P**	**06 24 40.7**	**-0.8**
SNAA				*e*	pP	06 24 46.1	-1.6
SNAA				*e*	pP	06 24 47.9	+0.2
SNAA	**Sanae**	**90.40**	**181**	⇑*i*P	**P**	**06 24 40.7**	**-0.8**
SNAA				*e*	pP	06 24 47.9	+0.2
NEW	**Newport**	**90.70**	**39**	PFAKE		06 24 50.0	+6.6
NEW				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
MPU	**Maple Canyon**	**90.83**	**48**	PFAKE		06 25 00.0	+16
MPU				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
VNA3	**Neumayer Olymp**	**90.86**	**179**	*e*	**P**	**06 24 48.1**	**+4.4**
VNA3	**Neumayer Olymp**	**90.86**	**179**	*e*	**P**	**06 24 49.2**	**+5.5**
VNA3	**Neumayer Olymp**	**90.86**	**179**	⇑*i*P	**P**	**06 24 43.0**	**-0.7**
VNA3				*e*	pP	06 24 48.1	-1.7
VNA3				*e*	pP	06 24 49.2	-0.6
VNA2	**Neumayer--Watz**	**91.20**	**180**	*e*	**P**	**06 24 50.0**	**+4.8**
VNA2	**Neumayer--Watz**	**91.20**	**180**	*e*	**P**	**06 24 51.3**	**+6.1**
VNA2	**Neumayer--Watz**	**91.20**	**180**	⇑*i*P	**P**	**06 24 44.8**	**-0.4**
VNA2				*e*	pP	06 24 50.0	-1.4
VNA2				*e*	pP	06 24 51.3	-0.1
SRU	**San Rafael**	**91.27**	**49**	P	**P**	**06 24 46.2**	**-0.1**
	comp=Z,20nm,1.4s,mb5.3						
SRU				*e*	pP	06 24 52.9	+0.5
SRU	**San Rafael**	**91.27**	**49**	P	**P**	**06 24 48.6**	**+2.3**
SRU				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.2						
TCUT	**Toone Canyon**	**91.42**	**47**	P	**P**	**06 24 47.9**	**+1.0**
TCUT				*e*	pP	06 24 53.6	+0.6
VNA1	**Neumayer--Stat**	**91.47**	**180**	*e*	**P**	**06 24 51.4**	**+4.9**
VNA1	**Neumayer--Stat**	**91.47**	**180**	*e*	**P**	**06 24 53.1**	**+6.6**
VNA1	**Neumayer--Stat**	**91.47**	**180**	⇑*i*P	**P**	**06 24 46.2**	**-0.3**
VNA1				*e*	pP	06 24 51.4	-1.2
VNA1				*e*	pP	06 24 53.1	+0.5
HWUT	**Hardware Ranch**	**91.50**	**47**	PFAKE		06 25 00.0	+13
HWUT				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
LSA	**Lhasa**	**91.93**	**301**	PFAKE		06 25 00.0	+10
LSA				LR	LR		
	comp=Z,268nm,21.0s,MS4.7						
MSO	**Missoula**	**92.02**	**41**	PFAKE		06 25 00.0	+10
MSO				LR	LR		
	comp=Z,919nm,20.0s,MS5.2						
AHID	**Auburn Hatcher**	**92.26**	**46**	PFAKE		06 25 00.0	+9.2
AHID				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
PV01	**Paradox Valley**	**92.33**	**51**	P	**P**	**06 24 53.8**	**+2.6**
LPM	**Los Pinos Moun**	**92.46**	**55**	*e*P	**P**	**06 24 53.8**	**+1.9**
MNTX	**Cornudas Mount**	**92.56**	**58**	*e*P	**P**	**06 24 52.1**	**-0.3**
	comp=Z,4.9nm,1.1s,mb4.8						
MNTX				LR	LR		
	comp=Z,705nm,19.0s,MS5.1						
ANMO	**Albuquerque**	**92.81**	**54**	*e*P	**P**	**06 24 53.7**	**+0.3**
	comp=Z,8.0nm,1.2s,mb5.0						
ANMO				LR	LR		
	comp=Z,761nm,20.0s,MS5.2						
ANMO	**Albuquerque**	**92.81**	**54**	*e*P	**P**	**06 24 53.7**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ANMO				MLR	MLR		
	comp=Z,761nm,20.0s						
BOZ	**Bozeman (W)**	**93.02**	**43**	PFAKE		06 25 10.0	+16
BOZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
YMR	**Madison River**	**93.08**	**44**	PFAKE		06 25 10.0	+16
YMR				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
LTX	**Lajitas**	**93.18**	**60**	*e*P	**P**	**06 24 54.7**	**-0.6**
	comp=Z,9.1nm,1.1s,mb5.1						
LTX				LR	LR		
	comp=Z,986nm,20.0s,MS5.3						
LTX	**Lajitas**	**93.18**	**60**	*e*P	**P**	**06 24 54.7**	**-0.6**
LTX				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb5.1						
LTX				MLR	MLR		
	comp=Z,986nm,20.0s,MS5.3						
TXAR	**Lajitas Array**	**93.18**	**60**	P	**P**	**06 24 55.8**	**+0.5**
	comp=Z,1.6nm,0.8s,mb4.5,baz=215,slow=5.1,SNR=12						
TXAR				LR	LR	06 59 36.6	
	comp=Z,841nm,19.6s,MS5.2,baz=210,slow=31						
BW06	**Boulder Array**	**93.31**	**46**	PFAKE		06 25 10.0	+14
BW06				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
PDAR	**Pinedale Array**	**93.31**	**46**	P	**P**	**06 24 54.9**	**-0.7**
	comp=Z,0.4nm,0.8s,mb3.9,baz=214,slow=3.3,SNR=2.7						
PDAR				LR	LR	06 59 04.2	
	comp=Z,575nm,20.8s,MS5.0,baz=257,slow=31						
LKWY	**Lake**	**93.41**	**44**	PFAKE		06 25 10.0	+14
LKWY				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
GDL2	**Guadalupe Moun**	**93.54**	**57**	*e*P	**P**	**06 24 59.0**	**+2.0**
CPRX	**Cap Rock**	**94.21**	**57**	*e*P	**P**	**06 24 58.5**	**-1.4**
PALK	**Pallekele**	**94.31**	**276**	PFAKE		06 25 10.0	+9.2
PALK				LR	LR		
	comp=Z,117nm,19.0s,MS4.4						
TIXI	**Tiksi**	**94.39**	**347**	PFAKE		06 25 10.0	+10
TIXI				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
TIXI	**Tiksi**	**94.39**	**347**	*e*P	**P**	**06 25 02.4**	**+2.5**
TIXI				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.3						
TIXI				MLR	MLR		
	comp=Z,580nm,19.0s,MS5.1						
SDCO	**Great Sand Dun**	**94.48**	**52**	PFAKE		06 25 10.0	+8.9
SDCO				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
ISCO	**Idaho Springs**	**95.07**	**50**	PFAKE		06 25 10.0	+6.2
ISCO				LR	LR		
	comp=Z,813nm,21.0s,MS5.2						
JCT	**Junction City**	**96.72**	**60**	PFAKE		06 25 20.0	+8.5
JCT				LR	LR		
	comp=Z,936nm,20.0s,MS5.3						
LAO	**LASA Array**	**96.90**	**43**	PFAKE		06 25 20.0	+8.1
LAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
PLCA	**Paso Flores**	**97.02**	**137**	LR	LR	07 03 45.2	
	comp=Z,166nm,18.3s,MS4.6,baz=242,slow=32						
PLCA	**Paso Flores**	**97.02**	**137**	PFAKE		06 25 20.0	+7.4
PLCA				LR	LR		
	comp=Z,436nm,22.0s,MS4.9						
EFI	**East Falkland**	**97.54**	**151**	PFAKE		06 25 30.0	+15
EFI				LR	LR		
	comp=Z,75nm,19.0s,MS4.2						
RSSD	**Black Hills**	**97.56**	**46**	PFAKE		06 25 30.0	+15
RSSD				LR	LR		
	comp=Z,703nm,19.0s,MS5.2						
YKA	**Yellowknife Ar**	**98.09**	**27**	LR	LR	07 01 19.5	
	comp=Z,1µm,21.7s,MS5.4,baz=250,slow=30						
WMOK	**Wichita Mounta**	**98.75**	**56**	PFAKE		06 25 30.0	+9.5
WMOK				LR	LR		
	comp=Z,693nm,20.0s,MS5.2						
DGMT	**Dagmar**	**98.76**	**42**	PFAKE		06 25 30.0	+10
DGMT				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
WMQ	**Urumqi**	**98.96**	**313**	P	**P**	**06 25 22.0**	**+0.8**
WMQ				PP	PP	06 29 26.5	+1.0
WMQ				S	S	06 36 40.5	-6.5
WMQ				AMB	AMB		
	comp=Z,140nm,3.9s						
WMQ				LR	LR		
	comp=N,390nm,35.8s,MS4.7						
WMQ				LR	LR		
	comp=E,190nm,31.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,280nm,21.9s						
CBKS	**Cedar Bluff**	**99.12**	**52**	PFAKE		06 25 30.0	+7.9
CBKS				LR	LR		
	comp=Z,675nm,21.0s,MS5.1						
NATX	**Nacogdoches**	**101.31**	**60**	PFAKE		06 25 40.0	+7.8
NATX				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
MIAR	**Mount Ida**	**102.86**	**58**	PFAKE		06 25 50.0	+11
MIAR				LR	LR		
	comp=Z,831nm,19.0s,MS5.3						
MKAR	**Makanchi Array**	**103.39**	**315**	Pdiff	Pdif	06 25 40.0	-1.1
	comp=Z,1.2nm,0.7s,baz=97,slow=6.4,SNR=9.6						
MKAR	**Makanchi Array**	**103.39**	**315**	*i* P	Pdif	06 25 41.9	+0.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
TRQA	**Tornquist**	**104.02**	**138**	PFAKE		06 26 00.0	+16
TRQA				LR	LR		
	comp=Z,344nm,19.0s,MS4.9						
NVS	**Novosibirsk**	**104.41**	**323**	*e*P	Pdif	06 25 39.3	-6.1
JTS	**JuntasAbangare**	**104.58**	**84**	PFAKE		06 26 00.0	+13
JTS				LR	LR		
	comp=Z,140nm,20.0s,MS4.5						
NNA	**Nana**	**104.97**	**108**	PFAKE		06 26 00.0	+11
NNA				LR	LR		
	comp=Z,127nm,20.0s,MS4.5						
CCM	**Cathedral Cave**	**105.43**	**55**	PFAKE		06 30 20.0	
CCM				LR	LR		
	comp=Z,714nm,21.0s,MS5.2						
OXF	**Oxford**	**106.21**	**58**	PFAKE		06 30 20.0	
OXF				LR	LR		
	comp=Z,863nm,20.0s,MS5.3						
KURK	**Kurchatov**	**106.48**	**319**	PFAKE		06 30 20.0	
KURK				LR	LR		
	comp=Z,93nm,21.0s,MS4.3						
EYMN	**Ely**	**106.92**	**44**	PFAKE		06 30 20.0	
EYMN				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
LVC	**Limon Verde**	**107.27**	**121**	PFAKE		06 30 20.0	
LVC				LR	LR		
	comp=Z,288nm,22.0s,MS4.8						
WVT	**Waverly**	**107.78**	**57**	PFAKE		06 30 20.0	
WVT				LR	LR		
	comp=Z,694nm,19.0s,MS5.2						
LRAL	**Lakeview Retre**	**107.92**	**60**	PFAKE		06 30 20.0	
LRAL				LR	LR		
	comp=Z,908nm,21.0s,MS5.3						
AAK	**Ala-Archa**	**108.13**	**310**	PFAKE		06 30 20.0	
AAK				LR	LR		
	comp=Z,88nm,20.0s,MS4.3						
WCI	**Wyandotte Cave**	**109.31**	**55**	PFAKE		06 30 20.0	
WCI				LR	LR		
	comp=Z,828nm,21.0s,MS5.3						
LPAZ	**La Paz**	**110.86**	**116**	PFAKE		06 30 30.0	+13
LPAZ				LR	LR		
	comp=Z,268nm,22.0s,MS4.8						
GOGA	**Godfrey**	**110.90**	**60**	PFAKE		06 30 30.0	+13
GOGA				LR	LR		
	comp=Z,759nm,20.0s,MS5.3						
DWPF	**Disney**	**111.81**	**66**	PFAKE		06 30 30.0	+11
DWPF				LR	LR		
	comp=Z,369nm,20.0s,MS5.0						
BRVK	**Borovoye**	**111.83**	**321**	PFAKE		06 30 30.0	+12
BRVK				LR	LR		
	comp=Z,66nm,20.0s,MS4.2						
ACSO	**Alum Creek Sta**	**112.10**	**53**	PFAKE		06 30 30.0	+11
ACSO				LR	LR		
	comp=Z,531nm,19.0s,MS5.2						
NHSC	**New Hope**	**113.59**	**61**	PFAKE		06 30 30.0	+7.9
NHSC				LR	LR		
	comp=Z,558nm,19.0s,MS5.2						
BLA	**Blacksburg**	**113.82**	**57**	PFAKE		06 30 30.0	+7.5
BLA				LR	LR		
	comp=Z,625nm,19.0s,MS5.2						
MSEY	**Mahe Island**	**114.31**	**256**	PFAKE		06 30 30.0	+6.1
MSEY				LR	LR		
	comp=Z,158nm,22.0s,MS4.6						
MCWV	**Mont Chateau**	**114.46**	**54**	PFAKE		06 30 30.0	+6.4
MCWV				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
ERPA	**Erie**	**114.49**	**51**	PFAKE		06 30 30.0	+6.4
ERPA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
CBN	**Corbin**	**116.30**	**56**	PFAKE		06 30 40.0	+13
CBN				LR	LR		
	comp=Z,973nm,19.0s,MS5.4						
SDV	**Santo Domingo**	**117.78**	**89**	PFAKE		06 30 40.0	+9.4
SDV				LR	LR		
	comp=Z,159nm,20.0s,MS4.6						
ARU	**Arti**	**118.34**	**325**	PFAKE		06 30 40.0	+9.3
ARU				LR	LR		
	comp=Z,202nm,20.0s,MS4.8						
ARU	**Arti**	**118.34**	**325**	*i* PKIKP	PKPdf	06 30 23.8	-6.9
ARU				MLR	MLR		
	comp=N,300nm,21.0s,MS5.1						
ARU				MLR	MLR		
	comp=Z,700nm,21.0s,MS5.3						
ARU				MLR	MLR		
	comp=E,400nm,20.0s,MS5.1						
SAML	**Samuel**	**118.45**	**111**	PFAKE		06 30 40.0	+8.0
SAML				LR	LR		
	comp=Z,323nm,21.0s,MS4.9						
KBS	**Kingsbay**	**118.49**	**356**	PFAKE		06 30 40.0	+9.4
KBS				LR	LR		
	comp=Z,571nm,22.0s,MS5.2						
NCB	**Newcomb**	**118.72**	**49**	PFAKE		06 30 40.0	+8.2
NCB				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
LSCT	**Lakeside**	**119.53**	**52**	PFAKE		06 30 40.0	+6.6
LSCT				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
LBNH	**Lisbon**	**120.36**	**49**	PFAKE		06 30 40.0	+5.0
LBNH				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
HRV	**Harvard--Oak R**	**120.74**	**51**	PFAKE		06 30 40.0	+4.2
HRV				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
WES	**Weston**	**120.92**	**51**	PFAKE		06 30 40.0	+3.9
WES				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
SCHQ	**Schefferville**	**121.96**	**36**	PFAKE		06 30 50.0	+12
SCHQ				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
SUR	**Sutherland**	**123.13**	**208**	PFAKE		06 30 50.0	+9.4
SUR				LR	LR		
	comp=Z,330nm,19.0s,MS5.0						
EMMW	**East Machias**	**123.50**	**48**	PFAKE		06 30 50.0	+9.0
EMMW				LR	LR		
	comp=Z,8µm,22.0s						
BOSA	**Boshof**	**124.00**	**215**	PFAKE		06 30 50.0	+7.6
BOSA				LR	LR		
	comp=Z,588nm,19.0s,MS5.3						
SJG	**San Juan**	**124.09**	**80**	PFAKE		06 30 50.0	+7.2
SJG				LR	LR		
	comp=Z,296nm,22.0s,MS4.9						
KEV	**Kevo**	**124.32**	**346**	PFAKE		06 30 50.0	+7.9
KEV				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
ARCES	**ARCESS Array B**	**124.82**	**347**	PKP	PKPdf	06 30 38.5	-4.5
	comp=Z,3.6nm,0.9s,baz=58,slow=2.7,SNR=6.1						
ARCES	**ARCESS Array B**	**124.82**	**347**	PKP	PKPdf	06 30 38.5	-4.5
BBSR	**BB Station**	**126.57**	**63**	PFAKE		06 31 00.0	+13
BBSR				LR	LR		
	comp=Z,487nm,22.0s,MS5.1						
LBTB	**Lobatse**	**126.61**	**218**	PFAKE		06 31 00.0	+13
LBTB				LR	LR		
	comp=Z,553nm,22.0s,MS5.2						
OBN	**Obninsk**	**130.41**	**329**	PFAKE		06 31 00.0	+6.0
OBN				LR	LR		
	comp=Z,235nm,20.0s,MS4.9						
GNI	**Garni**	**130.46**	**308**	PFAKE		06 31 00.0	+5.4
GNI				LR	LR		
	comp=Z,314nm,20.0s,MS5.0						
KIV	**Kislovodsk**	**131.09**	**313**	PFAKE		06 31 00.0	+4.3
KIV				LR	LR		
	comp=Z,93nm,21.0s,MS4.5						
LSZ	**Lusaka**	**131.95**	**229**	PFAKE		06 31 10.0	+12
LSZ				LR	LR		
	comp=Z,811nm,20.0s,MS5.4						
SOC	**Sochi**	**133.26**	**313**	*i* PKIKP	PKPdf	06 30 57.9	-1.8
SOC				*e*		06 38 07.6	
SOC				*e*SS	SS	06 50 59.3	-7.7
SOC				pmax	pmax		
	comp=Z,25nm,1.1s						
SOC				MLR	MLR		
	comp=Z,408nm,21.0s,MS5.1						
TSUM	**Tsumeb**	**135.70**	**214**	PFAKE		06 31 10.0	+5.1
TSUM				LR	LR		
	comp=Z,831nm,20.0s,MS5.5						
KONO	**Kongsberg**	**136.79**	**348**	PFAKE		06 31 10.0	+4.3
KONO				LR	LR		
	comp=Z,824nm,19.0s,MS5.5						
ANTO	**Ankara**	**139.37**	**311**	PFAKE		06 31 20.0	+8.9
ANTO				LR	LR		
	comp=Z,273nm,21.0s,MS5.0						
RCBR	**Riachuelo**	**142.93**	**127**	PFAKE		06 31 30.0	+12
RCBR				LR	LR		
	comp=Z,325nm,21.0s,MS5.1						
PVCC	**Panska Ves**	**143.32**	**337**	*e*PKP	PKPdf	06 31 12.8	-4.8
MOX	**Moxa**	**144.27**	**340**	*i* P	PKPbc	06 31 21.3	+6.6
MOX				L		06 32 32.0	
MOX	**Moxa**	**144.27**	**340**	*e*PKP	PKPdf	06 31 21.3	+2.0
MOX				LR	LR		
	comp=Z,500nm,23.0s,MS5.2						
NKC	**Novy Kostel**	**144.34**	**338**	*e*PKP	PKPdf	06 31 20.4	+1.0
VTS	**Vitosha**	**144.56**	**320**	*e*P	PKPbc	06 31 15.5	-0.3
MMB	**Musomiste**	**144.79**	**318**	*e*P	PKPbc	06 31 16.0	-0.5
KHC	**Kasperske Hory**	**144.83**	**336**	*e*PKP	PKPdf	06 31 15.5	-4.8
KHC				x	x	06 31 25.0	
KHC	**Kasperske Hory**	**144.83**	**336**	*e*PKP	PKPdf	06 31 15.5	-4.8
KHC				*e*		06 31 25.0	
GERES	**GERESS Array B**	**145.02**	**336**	PKP	PKPdf	06 31 16.3	-4.3
	comp=Z,0.8nm,0.3s,baz=45,slow=4.2,SNR=8.9						
KKB	**Krupnik**	**145.04**	**319**	*e*P	PKPbc	06 31 16.0	-1.2
GRUS	**Gruza**	**145.25**	**324**	*i* PKP	PKPdf	06 31 17.5	-3.7
ARSA	**Arzberg**	**145.52**	**332**	⇑*i*P	PKPbc	06 31 18.6	+0.5
	comp=Z,8.1nm,1.3s						
ARSA	**Arzberg**	**145.52**	**332**	⇓*i*P	PKPbc	06 31 26.4	+8.2
	comp=Z,19nm,1.0s						
DIVS	**Divcibare**	**145.52**	**325**	⇑*i*PKP	PKPdf	06 31 18.6	-3.0
MOA	**Molln**	**145.59**	**334**	⇓*i*P	PKPbc	06 31 19.0	+0.7
	comp=Z,24nm,1.1s						
MOA	**Molln**	**145.59**	**334**	⇑*i*P	PKPbc	06 31 24.8	+6.4
	comp=Z,34nm,1.7s						
VAY	**Valandovo**	**145.66**	**319**	*i* P	PKPbc	06 31 18.3	-0.5
VAY	**Valandovo**	**145.66**	**319**	*i* PKP	PKPdf	06 31 18.3	-3.7
SKO	**Skopje**	**145.99**	**320**	*e*P	PKPbc	06 31 20.6	+1.0
SKO	**Skopje**	**145.99**	**320**	*i* PKP	PKPdf	06 31 20.6	-1.9
BBLS	**Bajina Basta -**	**145.99**	**325**	*i* PKP	PKPdf	06 31 19.2	-3.3
GROS	**Grobnik**	**146.12**	**332**	*e*PKP	PKPdf	06 31 19.6	-3.0
PERS	**Pernice**	**146.16**	**332**	*e*PKP	PKPdf	06 31 19.8	-2.9
KBA	**Koelnbreinsper**	**146.58**	**334**	⇓*i*P	PKPbc	06 31 21.4	+0.7
	comp=Z,5.4nm,1.1s						
GIVF	**Givet**	**146.68**	**346**	*e*PKP1	PKPbc	06 31 20.9	0.0
	comp=Z,117nm,1.5s						
BAIF	**Baives**	**146.86**	**347**	*e*PKP1	PKPbc	06 31 21.8	+0.5
	comp=Z,54nm,1.2s						
LJU	**Ljubljana**	**146.88**	**332**	*e*PKP	PKPdf	06 31 22.3	-1.6
OHR	**Ohrid**	**146.88**	**320**	*i* P	PKPbc	06 31 24.9	+3.3
OHR	**Ohrid**	**146.88**	**320**	*i* PKP	PKPdf	06 31 24.9	+0.8
WTTA	**Wattenberg**	**147.11**	**336**	⇓*i*P	PKPdf	06 31 23.7	-0.6
	comp=Z,17nm,1.1s						
VOJS	**Vojsko**	**147.18**	**333**	*e*PKP	PKPdf	06 31 22.5	-1.9
SQTA	**Sankt Quirin**	**147.31**	**337**	⇑*i*P	PKPdf	06 31 24.2	-0.4
	comp=Z,3.0nm,0.5s						
CDF	**Champ du Feu**	**147.59**	**342**	*e*PKP1	PKPdf	06 31 23.4	-1.6
	comp=Z,87nm,1.4s						
DAVA	**Damuels**	**147.74**	**338**	⇓*i*P	PKPdf	06 31 25.3	0.0
	comp=Z,23nm,1.1s						
HAU	**Haudompre**	**148.23**	**343**	*e*PKP1	PKPdf	06 31 25.4	-0.6
HAU				*e*R			
	comp=Z,586nm,21.5s						
HINF	**Hinteralfeld**	**148.25**	**342**	*e*PKP1	PKPdf	06 31 25.2	-0.9
	comp=Z,12nm,0.8s						
FLN	**La Foliniere**	**148.96**	**352**	*e*PKP1	PKPdf	06 31 26.8	-0.4
	comp=Z,45nm,0.9s						
FLN				*e*R			
	comp=Z,549nm,21.8s						
LDF	**La Druitiere**	**149.07**	**351**	*e*PKP1	PKPdf	06 31 26.9	-0.5
VAI	**Varese**	**149.35**	**338**	PKP	PKPdf	06 31 29.0	+1.1
GRR	**Gorron**	**149.38**	**352**	*e*PKP1	PKPdf	06 31 28.6	+0.7
	comp=Z,78nm,1.2s						
MCGN	**Macugnaga**	**149.54**	**339**	PKP	PKPdf	06 31 30.2	+2.0
ARV	**Arcevia**	**149.56**	**331**	PKP	PKPdf	06 31 30.5	+2.2
LOR	**Lormes**	**149.56**	**345**	*e*PKP1	PKPdf	06 31 28.6	+0.4
	comp=Z,17nm,0.8s						
LOR				*e*R			
	comp=Z,1µm,23.0s						
CABF	**La Chapelle**	**149.56**	**342**	*e*PKP1	PKPdf	06 31 28.3	+0.1
	comp=Z,37nm,1.0s						
SGMF	**Saint Gilles**	**149.71**	**354**	*e*PKP1	PKPdf	06 31 28.6	+0.2
SNTG	**Esanatoglia**	**149.74**	**330**	PKP	PKPdf	06 31 30.4	+1.8
SSF	**Saint Saulge**	**149.84**	**346**	*e*PKP1	PKPdf	06 31 29.3	+0.7
	comp=Z,72nm,1.3s						
NRCA	**Norcia**	**149.98**	**329**	PKP	PKPdf	06 31 31.0	+2.0
AVF	**Avril sur Loir**	**150.13**	**346**	*e*PKP1	PKPdf	06 31 29.7	+0.6
	comp=Z,22nm,1.1s						
SMF	**Signal de Mont**	**150.15**	**345**	*e*PKP1	PKPdf	06 31 29.8	+0.7
	comp=Z,91nm,1.5s						
LPL	**La Plagne**	**150.35**	**340**	*e*PKP1	PKPdf	06 31 31.1	+1.6
LPG	**La Plagne**	**150.36**	**340**	*e*PKP1	PKPdf	06 31 31.3	+1.8
	comp=Z,77nm,1.5s						
BGF	**Bois d’Agland**	**150.47**	**346**	*e*PKP1	PKPdf	06 31 30.8	+1.2
	comp=Z,46nm,1.0s						
TIP	**Timpagrande**	**150.52**	**320**	*e*PKPdf	PKPdf	06 31 28.4	-1.5
BNI	**Bardonecchia**	**150.78**	**340**	*e*PKPbc	PKPdf	06 31 32.8	+2.7
BNI	**Bardonecchia**	**150.78**	**340**	PKIKP	PKPdf	06 31 33.4	+3.3
TCF	**Toulx Ste Croi**	**150.86**	**347**	*e*PKP1	PKPdf	06 31 31.6	+1.4
	comp=Z,185nm,1.8s						
MBDF	**Montbardon**	**151.03**	**339**	*e*PKP1	PKPdf	06 31 32.2	+1.7
	comp=Z,24nm,1.1s						
ORIF	**Oris-en-Rattie**	**151.15**	**341**	*e*PKP1	PKPdf	06 31 32.6	+1.9
	comp=Z,25nm,0.9s						
ORIF				*e*R			
	comp=Z,700nm,20.2s						
SBF	**Sospel**	**151.56**	**338**	*e*PKP1	PKPdf	06 31 33.0	+1.7
	comp=Z,66nm,1.1s						
VIVF	**Saint-Julien-l**	**151.57**	**342**	*e*PKP1	PKPdf	06 31 33.5	+2.2

PGF	**Pioggiola**	**152.06**	**334**	*e*PKP1	PKPdf	06 31 34.3	+2.2
	comp=Z,49nm,1.0s						
SMRF	**Simiane la Rot**	**152.09**	**340**	*e*PKP1	PKPdf	06 31 34.8	+2.7
	comp=Z,43nm,1.2s						
FRF	**La Foret Royal**	**152.10**	**338**	*e*PKP1	PKPdf	06 31 34.2	+2.0
LMR	**La Mourre**	**152.35**	**338**	*e*PKP1	PKPdf	06 31 34.9	+2.4
ESDC	**Sonseca Array**	**158.34**	**353**	PKPab	PKPab	06 32 11.8	-1.6
	comp=Z,0.2nm,0.3s,baz=270,slow=1.3,SNR=3.1						
ESLA	**Sonseca Array**	**158.34**	**353**	PFAKE		06 31 50.0	+9.3
ESLA				LR	LR		
	comp=Z,4µm,19.0s						

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*MOS **09** 06:16:15.6±1.6, 56.05N×114.59E, h12^{km}, mb4.1/4, Error ellipse: s-maj=12.3km s-min=9.5km az=59.9*

*IDC **09** 06:16:16.1±5.6, 56.13N×114.27E, mb3.6/4, mb1 3.8/5, mb1mx3.6/21, mbtmp3.7/5, ML3.8/1, Error ellipse: s-maj=104.8km s-min=27.6km az=107.0*

*BYKL **09** 06:16:18.2±0.3, 56.07N×114.52E, h15^{km}±12^{km}, FELT I=II MSK at Yanchukan*

ISC 09 06:16:16.8±0.6**, 56.05N**±0.03×**114.57E**±0.04**, h14**^{km}±4^{km}**, n55,** σ**1**$\overset{s}{.}$**28**/97**, mb3.7**/5**, MS3.5**/1**, 9C-8D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVKR	**Severomuysk**	**0.57**	**277**	⇑*i*Pg	**Pg**	**06 16 28.4**	**0.0**
SVKR				⇑*i*Pb	**Pb**	**06 16 29.5**	**+1.5**
SVKR				max		06 16 29.6	
	4µm,0.1s						
SVKR				*e*Sg	**Sg**	**06 16 36.1**	**-0.1**
SVKR				Smax		06 16 36.5	
	21µm,0.6s						
SVKR	**Severomuysk**	**0.57**	**277**	*e*PG	**Pg**	**06 16 28.3**	**-0.1**
SVKR				*e*		06 16 36.0	
SVKR				pmax	pmax		
	comp=Z,4µm,0.1s						
SVKR				smax			
	comp=N,1µm,0.6s						
NLYR	**Nelyaty**	**0.77**	**55**	⇓*i*Pg	**Pg**	**06 16 32.5**	**+0.1**
NLYR				Pmax		06 16 33.1	
	comp=N,743nm,0.3s						
NLYR				*e*Sg	**Sg**	**06 16 43.1**	**+0.3**
NLYR				Smax		06 16 44.1	
	comp=N,6µm,0.9s						
NLYR	**Nelyaty**	**0.77**	**55**	⇑*i*PG	**Pg**	**06 16 32.4**	**0.0**
NLYR				*e*		06 16 42.9	
NLYR				pmax	pmax		
	comp=Z,780nm,0.2s						
NLYR				smax			
	comp=N,6µm,1.0s						
UKT	**Uakit**	**0.78**	**224**	⇓*i*Pg	**Pg**	**06 16 32.2**	**-0.3**
UKT				Pmax		06 16 32.4	
	comp=N,318nm,0.6s						
UKT				*e*Sg	**Sg**	**06 16 42.4**	**-0.6**
UKT				Smax		06 16 43.3	
	comp=N,2µm,0.5s						
UKT				*e*Sb	**Sb**	**06 16 47.5**	**+5.8**
UKT	**Uakit**	**0.78**	**224**	*e*PG	**Pg**	**06 16 32.2**	**-0.3**
UKT				*e*		06 16 43.0	
UKT				pmax	pmax		
	comp=Z,260nm,0.3s						
UKT				smax			
	comp=E,2µm,0.4s						
YOA	**Uoyan**	**1.60**	**274**	⇑*i*Pg	**Pb**	**06 16 46.3**	**+0.7**
YOA				*e*		06 16 50.3	
YOA				*e*Sg	**Sg**	**06 17 08.3**	**-1.8**
YOA	**Uoyan**	**1.60**	**274**	⇓*i*PN	**Pn**	**06 16 46.2**	**+1.4**
YOA				*i*		06 17 07.6	
YOA				pmax	pmax		
	comp=Z,2µm,0.4s						
YOA				smax			
	comp=N,14µm,0.6s						
BOD	**Bodaibo**	**1.80**	**350**	⇓*i*Pg	**Pb**	**06 16 49.1**	**+0.1**
BOD				Pmax		06 16 49.9	
	comp=N,1µm,0.3s						
BOD				*e*Sg	**Sg**	**06 17 12.5**	**-4.2**
BOD				Smax		06 17 13.6	
	comp=N,7µm,0.3s						
BOD	**Bodaibo**	**1.80**	**350**	*e*PN	**Pn**	**06 16 48.8**	**+1.1**
BOD				*e*		06 17 12.0	
BOD				pmax	pmax		
	comp=Z,1µm,0.3s						
BOD				smax			
	comp=E,9µm,0.3s						
KMO	**Kumora**	**1.90**	**266**	⇑*i*Pn	**Pn**	**06 16 49.9**	**+0.7**
KMO				⇑*i*Pg	**Pb**	**06 16 51.2**	**+0.4**
KMO				Pmax		06 16 51.8	
	comp=E,1µm,0.3s						
KMO				*e*		06 16 58.2	
KMO				*e*Sg	**Sb**	**06 17 16.4**	**+2.1**
KMO				Smax		06 17 20.1	
	comp=E,5µm,1.0s						
KMO	**Kumora**	**1.90**	**266**	*e*PN	**Pn**	**06 16 50.2**	**+1.0**
KMO				*e*		06 17 14.4	
KMO				pmax	pmax		
	comp=Z,1µm,0.4s						
KMO				smax			
	comp=N,5µm,1.1s						
CRS	**Chara**	**2.22**	**66**	*e*Pn	**Pn**	**06 16 55.0**	**+1.2**
CRS				⇑*i*Pg	**Pb**	**06 16 58.5**	**+2.2**
CRS				*e*		06 17 05.2	
CRS				Pmax		06 17 05.6	
	comp=N,478nm,0.9s						
CRS				*e*Sg	**Sb**	**06 17 27.9**	**+4.3**
CRS				Smax		06 17 28.9	
	comp=N,2µm,0.5s						
CRS	**Chara**	**2.22**	**66**	*e*PN	**Pn**	**06 16 58.7**	**+4.9**
CRS				*e*		06 17 27.9	
CRS				pmax	pmax		
	comp=Z,227nm,0.6s						
CRS				smax			
	comp=E,2µm,0.6s						
YLYR	**Ulyunkhan**	**2.27**	**240**	⇓*i*Pn	**Pn**	**06 16 55.3**	**+0.8**
YLYR				*e*Pg	**Pb**	**06 16 57.8**	**+0.7**
YLYR				*e*		06 17 04.1	
YLYR				*e*		06 17 07.8	
YLYR				max		06 17 08.0	
	comp=E,228nm,0.3s						
YLYR				*e*Sn	**Sn**	**06 17 23.0**	**+0.5**
YLYR				*e*Sg	**Sg**	**06 17 28.4**	**-4.1**
YLYR				Smax		06 17 29.9	
	comp=E,2µm,0.3s						
YLYR	**Ulyunkhan**	**2.27**	**240**	*e*PN	**Pn**	**06 16 55.4**	**+0.9**
YLYR				*e*		06 16 57.5	
YLYR				*e*S	**Sn**	**06 17 22.3**	**-0.2**
YLYR				*e*		06 17 25.6	
YLYR				pmax	pmax		
	comp=Z,232nm,0.2s						
YLYR				smax			
	comp=E,2µm,0.4s						
NIZ	**Nizh Angarsk**	**2.84**	**266**	⇓*i*Pn	**Pn**	**06 17 03.1**	**+0.4**
NIZ				⇓*i*Pg	**Pb**	**06 17 08.1**	**+1.2**
NIZ				Pmax		06 17 09.1	
	comp=E,103nm,0.4s						
NIZ				*e*		06 17 15.8	
NIZ				*e*Sn	**Sn**	**06 17 37.8**	**+0.8**
NIZ				*e*Sg	**Sg**	**06 17 46.0**	**-5.5**
NIZ				Smax		06 17 47.9	
	comp=E,844nm,0.4s						
NIZ	**Nizh Angarsk**	**2.84**	**266**	*e*PN	**Pn**	**06 17 03.1**	**+0.4**
NIZ				*e*		06 17 08.0	
NIZ				*e*S	**Sn**	**06 17 37.8**	**+0.8**
NIZ				*e*		06 17 45.8	
NIZ				pmax	pmax		
	comp=Z,103nm,0.4s						
NIZ				smax			
	comp=N,824nm,0.4s						
TUP	**Tupik**	**3.49**	**116**	⇑*i*	**Pn**	**06 17 12.3**	**+0.5**
TUP				*e*		06 17 17.0	
TUP				*e*Pg	**Pg**	**06 17 20.1**	**-6.4**
TUP				Pmax		06 17 22.9	
	comp=N,203nm,0.7s						
TUP				*e*Sn	**Sn**	**06 17 52.0**	**-1.3**
TUP				*e*Sg	**Sg**	**06 18 07.2**	**-5.8**
TUP				Smax		06 18 14.8	
	comp=N,1µm,0.9s						
TUP	**Tupik**	**3.49**	**116**	*e*PN	**Pn**	**06 17 12.1**	**+0.3**
TUP				*e*		06 17 20.2	
TUP				*e*S	**Sn**	**06 17 53.4**	**+0.1**
TUP				*e*		06 18 07.2	
TUP				pmax	pmax		
	comp=Z,146nm,0.6s						
TUP				smax			
	comp=N,1µm,0.8s						
SYVR	**Suvo**	**3.57**	**230**	⇓*i*Pn	**Pn**	**06 17 12.8**	**-0.2**
SYVR				*e*Pg	**Pb**	**06 17 20.8**	**+1.5**
SYVR				Pmax		06 17 28.7	
	comp=N,78nm,0.8s						
SYVR				*e*Sn	**Sn**	**06 17 53.7**	**-1.6**
SYVR				*e*Sg	**Sb**	**06 18 08.0**	**+5.3**
SYVR				Smax		06 18 09.7	
	comp=N,757nm,0.5s						
SYVR	**Suvo**	**3.57**	**230**	*e*PN	**Pb**	**06 17 20.0**	**+0.7**
SYVR				*e*		06 18 05.6	
SYVR				pmax	pmax		
	comp=Z,73nm,0.3s						
SYVR				smax			
	comp=E,711nm,0.5s						
CIT	**Chita**	**4.08**	**189**	⇑*i*	**Pn**	**06 17 19.5**	**-0.8**
CIT				*e*Pg	**Pb**	**06 17 31.9**	**+3.7**
CIT				Pmax		06 17 32.5	
	comp=E,124nm,0.4s						
CIT				*e*Sg	**Sg**	**06 18 25.2**	**-7.7**
CIT				Smax		06 18 30.9	
	comp=E,1µm,0.6s						
CIT	**Chita**	**4.08**	**189**	*e*PN	**Pn**	**06 17 19.4**	**-0.9**
CIT				*e*		06 17 32.0	
CIT				*e*		06 18 25.1	
CIT				pmax	pmax		
	comp=Z,123nm,0.4s						
CIT				smax			
	comp=E,1µm,0.6s						
TRTB	**Turuntaevo**	**5.59**	**230**	*e*Pn	**Pn**	**06 17 42.0**	**+0.3**
TRTB				*e*Pg	**Pb**	**06 17 59.3**	**+5.3**
TRTB				Pmax		06 18 12.5	
	comp=E,18nm,0.5s						
TRTB				*e*Sg	x	06 19 11.6	
TRTB				Smax		06 19 15.9	
	comp=E,288nm,1.1s						
TRG	**Tyrgan**	**5.82**	**239**	*e*Pn	**Pn**	**06 17 45.5**	**+0.6**
TRG				*e*Pg	**Pb**	**06 18 02.4**	**+4.5**
TRG				Pmax		06 18 10.0	
	comp=E,11nm,0.6s						
TRG				*e*Sn	**Sn**	**06 18 48.1**	**-4.1**
TRG				*e*Sg	**Sb**	**06 19 17.0**	**+8.8**
TRG				Smax		06 19 23.4	
	comp=E,145nm,0.8s						
FFNB	**Fofonovo**	**6.10**	**232**	*e*Pg	**Pb**	**06 18 08.4**	**+5.8**
FFNB				*e*Sg	**Sb**	**06 19 26.7**	**+10**
FFNB				Smax		06 19 31.7	
	comp=E,512nm,0.9s						
KPC	**Khapcheranga**	**6.50**	**193**	*e*Pn	**Pn**	**06 17 53.5**	**-0.9**
KPC				*e*Pg	**Pb**	**06 18 16.6**	**+7.2**
KPC				Pmax		06 18 23.3	
	comp=E,10.0nm,0.4s						
KPC				*e*		06 19 09.0	
KPC				*e*Sg	**Sb**	**06 19 40.1**	**+12**
KPC				Smax		06 19 54.4	
	comp=E,200nm,0.8s						
KPC	**Khapcheranga**	**6.50**	**193**	*e*PG	**Pb**	**06 18 14.9**	**+5.5**
KPC				*e*		06 19 40.1	
KPC				pmax	pmax		
	comp=Z,12nm,0.4s						
KPC				smax			
	comp=E,168nm,0.7s						
LSTR	**Listvyanka**	**7.11**	**238**	*e*Pg	**Pb**	**06 18 25.5**	**+5.6**
LSTR				Pmax		06 18 31.2	
	comp=E,2.0nm,0.2s						
LSTR				*e*Sg	**Sb**	**06 19 56.4**	**+11**
LSTR				Smax		06 20 04.6	
	comp=E,106nm,1.3s						
KROS	**Kirovskiy**	**7.28**	**98**	*e*Pn	**Pn**	**06 18 05.0**	**-0.3**
KROS				*e*Pg	**Pb**	**06 18 30.0**	**+7.3**
ZEA	**Zeya**	**7.67**	**102**	*e*Sg	**Sb**	**06 20 15.4**	**+14**
TLY	**Talaya**	**7.80**	**240**	*e*Pg	**Pb**	**06 18 38.0**	**+6.3**
TLY				Pmax		06 18 40.8	
	comp=E,8.0nm,0.3s						
TLY				*e*Sn	**Sn**	**06 19 37.8**	**-3.8**
TLY				*e*Sg	**Sb**	**06 20 17.2**	**+12**
TLY				Smax		06 20 24.7	
	comp=E,99nm,1.4s						
TLY	**Talaya**	**7.80**	**240**	*e*PG	**Pb**	**06 18 37.8**	**+6.1**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ARS	**Arshan**	**8.27**	**245**	*e*Pn	**P**	**06 18 19.1**	**-0.1**
ARS				*e*Pg	P	06 18 47.5	+28
ARS				Pmax		06 19 02.2	
	comp=Z,22nm,0.5s						
ARS				*e*Sg	x	06 20 32.7	
ARS				Smax		06 20 40.9	
	comp=Z,594nm,0.7s						
ZAK	**Zakamensk**	**8.83**	**235**	*e*Sg	**Sb**	**06 20 51.9**	**+16**
ZAK				Smax		06 21 03.4	
	comp=Z,51nm,1.1s						
ZAK	**Zakamensk**	**8.83**	**235**	*e*PG	x	06 18 57.9	
ZAK				*e*		06 20 52.8	
ZAK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZAK				smax			
	comp=E,51nm,1.4s						
MOY	**Mondy**	**9.14**	**247**	*e*Pn	**P**	**06 18 30.8**	**-0.5**
MOY				max		06 19 07.8	
	comp=E,3.0nm,0.3s						
MOY				*e*Sn	**Sn**	**06 20 07.2**	**-7.8**
MOY				*e*Sg	**Sb**	**06 21 00.2**	**+16**
MOY				Smax		06 21 16.6	
	comp=E,158nm,1.4s						
MOY	**Mondy**	**9.14**	**247**	*e*P	**P**	**06 18 44.0**	**+13**
MOY				*e*S	**Sn**	**06 20 16.0**	**+1.0**
MOY				pmax	pmax		
	comp=Z,1.0nm,0.1s						
MOY				smax			
	comp=N,157nm,1.5s						
ORL	**Orlik**	**9.32**	**254**	*e*Pn	**P**	**06 18 32.5**	**-1.2**
ORL				max		06 18 48.9	
	comp=N,9.0nm,1.0s						
ORL				*e*Sn	**Sn**	**06 20 12.0**	**-7.3**
ORL				*e*Sg	Sg	06 21 05.5	-22
ORL				Smax		06 21 10.3	
	comp=N,116nm,1.5s						
ORL	**Orlik**	**9.32**	**254**	*e*P	**P**	**06 18 32.3**	**-1.4**
ORL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM	**Songino Array**	**9.65**	**215**	Pn	**P**	**06 18 35.3**	**-2.8**
	comp=Z,0.9nm,0.3s,baz=24,slow=13,SNR=18						
SONM				Lg		06 21 21.0	
	comp=Z,2.9nm,0.3s,baz=26,slow=30,SNR=4.7						
TDJR	**Todzha**	**11.40**	**259**	*e*Sg	x	06 22 08.2	
KRAR	**Krasnoyarsk**	**12.13**	**279**	*e*P	**P**	**06 19 09.7**	**-2.3**
KRAR				*e*		06 21 25.4	
TIXI	**Tiksi**	**16.79**	**16**	*e*P	**P**	**06 20 05.7**	**-6.9**
TIXI				*e*S	**S**	**06 23 11.7**	**-6.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,85nm,7.0s						
KURK	**Kurchatov**	**21.92**	**271**	*e*P	**P**	**06 21 09.0**	**-2.2**
MKAR	**Makanchi Array**	**21.97**	**259**	P	**P**	**06 21 11.0**	**-0.7**
	comp=Z,0.5nm,0.5s,mb3.2,baz=52,slow=10,SNR=5.0						
MKAR	**Makanchi Array**	**21.97**	**259**	*i* P	**P**	**06 21 15.6**	**+3.9**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**25.48**	**282**	P	**P**	**06 21 43.3**	**-2.3**
	comp=Z,0.8nm,0.6s,mb3.4,baz=80,slow=9.0,SNR=4.9						
BVAR	**Borovoye Array**	**25.48**	**282**	P	**P**	**06 21 43.3**	**-2.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BILL	**Bilibino**	**26.13**	**42**	*e*P	**P**	**06 21 48.9**	**-2.6**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.5						
FINES	**FINESS Array B**	**42.85**	**315**	P	**P**	**06 24 13.6**	**-1.8**
	comp=Z,1.5nm,0.6s,mb3.9,baz=53,slow=9.5,SNR=9.5						
FINES	**FINESS Array B**	**42.85**	**315**	*i* P	**P**	**06 24 14.6**	**-0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**48.69**	**321**	P	**P**	**06 25 00.7**	**-1.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=51,slow=7.8,SNR=1.8						
NOA	**NORSAR Array B**	**48.69**	**321**	P	**P**	**06 25 00.7**	**-1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						

IDC 09 06:57:44.4±1.5**, 0.59S**×**124.63E, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.6**/15**, mbtmp3.6**/3**, Error ellipse: s-maj=146.9km s-min=28.2km az=65.0, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.45**	**154**	P	P	07 02 34.6	-2.1
	0.6nm,0.5s,baz=334,slow=11,SNR=8.0						
SONM	**Songino Array**	**50.78**	**344**	P	P	07 06 47.0	-1.4
	0.7nm,0.8s,baz=169,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**59.97**	**328**	P	P	07 07 52.2	-2.8
	0.4nm,0.4s,baz=124,slow=7.4,SNR=9.9						

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*IDC **09** 06:58:19.0±1.1, 0.01N×125.86E, mb4.1/5, mb1 4.3/5, mb1mx4.0/15, mbtmp4.2/5, Error ellipse: s-maj=135.7km s-min=20.1km az=66.0*

*NEIC **09** 06:58:20.0±0.6, 0.06N×126.00E, h10^{km}, mb4.4/4, Error ellipse: s-maj=54.2km s-min=9.5km az=70.0*

ISC 09 06:58:21.3±0.8**, 0.0N**±0.2×**126.0E**±0.4**, h33**^{km}**, n10,** σ**0**$\overset{s}{.}$**61**/10**, mb4.3**/8**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.03**	**181**	*e*P	**P**	**07 02 31.6**	**+0.4**
	6.9nm,0.9s						
WRAB	**Tennant Creek**	**21.48**	**158**	*e*P	**P**	**07 03 08.7**	**-0.7**
	5.9nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**21.49**	**158**	P	**P**	**07 03 09.2**	**-0.2**
	2.8nm,0.6s,mb3.8,baz=337,slow=12,SNR=18						
STKA	**Stephens Creek**	**35.02**	**156**	P	**P**	**07 05 13.9**	**+0.9**
	1.9nm,0.6s,mb4.2,baz=345,slow=8.9,SNR=5.1						
STKA	**Stephens Creek**	**35.02**	**156**	*e*P	**P**	**07 05 13.2**	**+0.2**
SONM	**Songino Array**	**50.55**	**343**	P	**P**	**07 07 19.7**	**+1.0**
	1.8nm,0.7s,mb4.1,baz=158,slow=8.3,SNR=9.1						
MKAR	**Makanchi Array**	**60.17**	**327**	P	**P**	**07 08 28.0**	**-0.3**
	1.9nm,0.4s,mb4.4,baz=123,slow=8.4,SNR=20						
ZAL	**Zalesovo**	**63.53**	**334**	P	**P**	**07 08 51.2**	**+0.5**
	1.2nm,0.4s,mb4.3,baz=349,slow=11,SNR=5.6						
KURK	**Kurchatov**	**64.45**	**329**	*e*P	**P**	**07 08 56.3**	**-0.4**
	4.4nm,0.6s,mb4.7						
ARU	**Arti**	**77.64**	**328**	*e*P	**P**	**07 10 15.1**	**-1.0**
	5.9nm,1.0s,mb4.5						

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*ISK **09** 07:14:56.5, 38.24N×26.57E, h10^{km}, MD2.8*

*ATH **09** 07:14:57.3, 38.15N×26.59E, h36^{km}±1^{km}, MD3.0/3*

*CSEM **09** 07:14:57.3±0.1, 38.23N×26.64E, h10^{km}, MD2.8, Error ellipse: s-maj=3.5km s-min=2.5km az=108.0*

ISC 09 07:14:57.1±0.8**, 38.22N**±0.03×**26.59E**±0.05**, h5**^{km}±5^{km}**, n17,** σ**0**$\overset{s}{.}$**89**/26**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.14**	**2**	*i* P	**Pg**	**07 15 01.8**	**+1.8**
BLCB	**Balcova**	**0.39**	**65**	PG	**Pg**	**07 15 04.4**	**-0.5**
SMG	**Samos**	**0.55**	**159**	*e*PB	**Pg**	**07 15 08.0**	**0.0**
SMG				*e*SB	**Sg**	**07 15 16.1**	**+0.8**
IZM	**Izmir**	**0.56**	**71**	PG	**Pg**	**07 15 08.2**	**0.0**
IZM				SG	**Sg**	**07 15 16.6**	**+0.9**
KDAG	**Bornova**	**0.56**	**71**	*i* P	**Pg**	**07 15 07.0**	**-1.4**
KDAG				*i* S	**Sg**	**07 15 14.6**	**-1.3**
PRK	**Paraskevi**	**1.05**	**346**	*e*PN	**Pn**	**07 15 18.2**	**-0.1**
PRK				*e*SN	**Sn**	**07 15 33.8**	**+0.3**
AKS	**Akhisar**	**1.16**	**55**	PN	**Pn**	**07 15 18.5**	**-1.4**
AKS				SN	**Sn**	**07 15 36.5**	**+0.2**
AYDN	**Tasoluk**	**1.16**	**118**	*i* P	**Pb**	**07 15 19.0**	**-0.2**
AYDN				*i* S	**Sb**	**07 15 34.6**	**+0.2**
BODT	**Bodrum**	**1.29**	**154**	*e*PN	**Pn**	**07 15 22.3**	**+0.6**
BDRM	**Kayabasi**	**1.34**	**149**	*i* P	**Pb**	**07 15 21.9**	**-0.4**
BDRM				*i* S	**Sb**	**07 15 39.8**	**+0.3**
APE	**Apeiranthos**	**1.43**	**217**	*e*PN	**Pn**	**07 15 23.6**	**-0.1**
APE	**Apeiranthos**	**1.43**	**217**	*e*PN	**Pn**	**07 15 21.9**	**-1.8**
MANT	**Manisa**	**1.57**	**80**	*i* P	**Pn**	**07 15 26.2**	**+0.5**
MANT				*i* S	**Sb**	**07 15 46.9**	**+0.6**
DAT	**Datca**	**1.68**	**152**	*e*PN	**Pn**	**07 15 27.5**	**+0.1**
YER	**Yerkesik**	**1.73**	**128**	*e*PN	**Pn**	**07 15 26.8**	**-1.2**
DNZL	**Cakiroluk**	**2.01**	**105**	*i* P	**Pn**	**07 15 34.6**	**+2.5**
DNZL				*i* S	**Sn**	**07 16 04.4**	**+6.5**
DALT	**Dalyan (Mudla)**	**2.18**	**131**	*e*PN	**Pn**	**07 15 33.9**	**-0.6**

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*BJI **09** 07:17:07.0, 63.72N×147.40W, h9^{km}, mB5.1, mb4.9, Ms4.7, Msz4.4*

*MOS **09** 07:17:07.4±0.9, 63.51N×147.68W, h10^{km}, mb4.9/16, Error ellipse: s-maj=18.0km s-min=5.1km az=90.6*

*NEIC **09** 07:17:09.5, 63.45N×147.49W, h8^{km}, mb4.8/21, ML4.8(PMR), ML4.5(AEIC), After AEIC.*

NEIC Felt [III] at Anderson, Cantwell, Denali National Park, Fairbanks and Healy; [II] at Nenana. Also felt at Clear and Eielson AFB.

*IDC **09** 07:17:11.9±2.3, 63.60N×147.68W, h23^{km}±13^{km}, mb4.2/18, mb1 4.4/21, mb1mx4.3/26, mbtmp4.3/21, ML4.2/3, MS3.4/5, Ms1 3.4/5, ms1mx3.1/41, Error ellipse: s-maj=17.5km s-min=9.2km az=51.0*

ISC 09 07:17:07.9±0.1**, 63.56N**±0.01×**147.50W**±0.04**, h8**^{km}**, (h13**^{km}±1.4^{km}**:pP-P), n209,** σ**1**$\overset{s}{.}$**10**/230**, mb4.6**/50**, MS4.2**/6**, 9C-10D, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHY	**Denali Highway**	**0.49**	**173**	P	**Pg**	**07 17 16.8**	**-1.0**
RND	**Reindeer**	**0.62**	**256**	P	**Pg**	**07 17 21.1**	**+0.6**
DDM	**Donnelly Dome**	**0.77**	**72**	P	**Pb**	**07 17 24.3**	**+1.2**
THY	**Trims Highway**	**0.80**	**100**	P	**Pb**	**07 17 24.2**	**+0.6**
THY				S	**Sb**	**07 17 34.4**	**0.0**
HDA	**Harding Lake**	**0.88**	**16**	P	**Pb**	**07 17 28.3**	**+3.2**
WRH	**Wood River Hil**	**0.95**	**345**	P	**Pb**	**07 17 29.5**	**+3.2**
BWN	**Browne**	**1.06**	**306**	P	**Pb**	**07 17 30.1**	**+1.9**
PAX	**Paxson**	**1.09**	**122**	P	**Pb**	**07 17 28.1**	**-0.6**
PAX				S	**Sb**	**07 17 43.1**	**+0.2**
CCB	**Clear Creek Bu**	**1.10**	**353**	P	**Pb**	**07 17 31.9**	**+3.1**
HUR	**Hurricane**	**1.13**	**240**	P	**Pb**	**07 17 29.3**	**0.0**
HUR				S	**Sb**	**07 17 44.3**	**+0.4**
NEA	**Nenana**	**1.23**	**327**	P	**Pb**	**07 17 33.5**	**+2.4**
ILAR	**Eielson Array**	**1.25**	**12**	Pg	**Pg**	**07 17 34.6**	**+1.7**
	300nm,0.3s,baz=192,slow=16,SNR=4260						
ILAR				Lg		07 17 51.9	
	880nm,0.3s,baz=189,slow=28,SNR=71						
ILAR				LR	LR	07 18 08.9	
	comp=Z,140µm,21.6s,baz=313,slow=47						
IL1	**Eielson Array**	**1.25**	**12**	P	**Pb**	**07 17 34.0**	**+2.7**
IL1				S	**Sb**	**07 17 52.9**	**+5.5**
COLA	**College**	**1.33**	**354**	P	**Pb**	**07 17 35.3**	**+2.6**
COLA				S	**Sb**	**07 17 54.8**	**+5.0**
SDG	**Sourdough**	**1.37**	**138**	P	**Pb**	**07 17 32.9**	**-0.5**
MDM	**Murphy Dome**	**1.44**	**348**	P	**Pn**	**07 17 36.9**	**+2.5**
KTH	**Kantishna Hill**	**1.53**	**271**	P	**Pn**	**07 17 37.7**	**+1.9**
KTH				S	**Sb**	**07 17 57.7**	**+2.1**
DOT	**Dot Lake**	**1.54**	**85**	P	**Pn**	**07 17 37.3**	**+1.5**
DOT				S	**Sb**	**07 17 58.0**	**+2.1**
CUT	**Chulitna**	**1.71**	**229**	P	**Pn**	**07 17 37.8**	**-0.6**
SCM	**Sheep Creek Mo**	**1.73**	**177**	P	**Pn**	**07 17 37.9**	**-0.8**
TZL	**Tazlina**	**1.79**	**147**	P	**Pn**	**07 17 40.4**	**+0.8**
SML	**Sawmill**	**1.80**	**193**	P	**Pn**	**07 17 38.8**	**-0.8**
SML				S	**Sn**	**07 18 00.8**	**-1.9**
MENT	**Mentasta**	**1.82**	**108**	P	**Pn**	**07 17 41.5**	**+1.6**
MENT				S	**Sn**	**07 18 05.3**	**+2.0**
GHO	**Glory Hole Cre**	**1.91**	**201**	P	**Pn**	**07 17 40.3**	**-0.8**
MLY	**Manley**	**2.04**	**318**	P	**Pn**	**07 17 44.8**	**+1.7**
PMR	**Palmer**	**2.11**	**202**	P	**Pn**	**07 17 43.7**	**-0.4**
PMR				S	**Sn**	**07 18 10.1**	**-0.7**
KLU	**Klutina**	**2.20**	**160**	P	**Pn**	**07 17 45.5**	**+0.2**
VLZ	**Valdez**	**2.50**	**167**	P	**Pn**	**07 17 49.5**	**-0.1**
JPK	**Jack Peak**	**2.55**	**170**	P	**Pn**	**07 17 50.9**	**+0.6**
JPK				S	**Sn**	**07 18 23.5**	**+1.7**
DIV	**Divide**	**2.57**	**161**	P	**Pn**	**07 17 51.2**	**+0.6**
DIV				S	**Sn**	**07 18 23.3**	**+0.9**
RC01	**Rabbit Creek A**	**2.69**	**204**	P	**Pn**	**07 17 53.0**	**+0.7**
RC01				S	**Sn**	**07 18 26.1**	**+0.7**
GLI	**Glacier Island**	**2.70**	**176**	P	**Pn**	**07 17 52.7**	**+0.3**
FIB	**Fire Island**	**2.71**	**209**	*e*P	**Pn**	**07 17 51.3**	**-1.2**
GLB	**Gilahina Butte**	**2.73**	**139**	P	**Pn**	**07 17 53.2**	**+0.3**
FID	**Port Fidalgo**	**2.86**	**170**	P	**Pn**	**07 17 55.6**	**+0.9**
STLK	**Strandline Lak**	**2.88**	**226**	P	**Pn**	**07 17 54.7**	**-0.3**
BMRM	**Bremner River**	**2.93**	**151**	P	**Pn**	**07 17 56.6**	**+0.8**
BMRM				S	**Sn**	**07 18 32.0**	**+0.4**
EYAK	**Cordova Ski Ar**	**3.13**	**164**	P	**Pn**	**07 17 58.9**	**+0.3**
CRP	**Crater Peak**	**3.16**	**225**	P	**Pn**	**07 17 59.7**	**+0.7**
SPU	**Mount Spurr**	**3.19**	**224**	P	**Pn**	**07 18 00.1**	**+0.6**
HIN	**Hinchinbrook I**	**3.21**	**171**	P	**Pn**	**07 18 00.1**	**+0.3**
HIN				S	**Sn**	**07 18 39.4**	**+0.8**

CKL	**Chakachamna La**	**3.27**	**226**	P	**Pn**	**07 18 01.2**	**+0.6**
CKL				S	**Sn**	**07 18 42.3**	**+2.2**
SLKM	**Skilak Lake**	**3.32**	**204**	P	**Pn**	**07 18 00.5**	**-0.8**
BALM	**Baldy**	**3.49**	**134**	P	**Pn**	**07 18 05.7**	**+1.9**
IM3	**Indian Mountai**	**3.62**	**315**	P	**Pn**	**07 18 06.2**	**+0.8**
DAWY	**Dawson**	**3.63**	**78**	P	**Pn**	**07 18 06.3**	**+0.6**
IMA2	**Indian Mountai**	**3.65**	**316**	*e*P	**Pn**	**07 18 07.0**	**+1.0**
RDT	**Redoubt**	**3.78**	**220**	P	**Pn**	**07 18 08.3**	**+0.5**
TT01	**Tatalina**	**3.91**	**264**	P	**Pn**	**07 18 09.7**	**+0.1**
BM3	**Burnt Mountain**	**4.06**	**16**	P	**Pn**	**07 18 13.8**	**+2.0**
MID	**Middleton Isla**	**4.18**	**172**	P	**Pn**	**07 18 13.8**	**+0.2**
INE	**Iliamna NE**	**4.39**	**219**	P	**Pn**	**07 18 17.2**	**+0.7**
ILW	**Iliamna West**	**4.41**	**220**	P	**Pn**	**07 18 17.7**	**+1.0**
CNPM	**China Poot**	**4.42**	**205**	P	**Pn**	**07 18 17.7**	**+0.8**
SVW2	**Sparrevohn**	**4.50**	**240**	P	**Pn**	**07 18 16.9**	**-1.2**
XLV	**Seldovia**	**4.59**	**208**	P	**Pn**	**07 18 20.0**	**+0.7**
OPT	**Oil Point**	**4.78**	**217**	P	**Pn**	**07 18 23.0**	**+1.0**
OPT				S	**Sn**	**07 19 13.6**	**-4.7**
AUL	**Augustine Lava**	**5.06**	**217**	P	**Pn**	**07 18 26.5**	**+0.5**
AUW	**Augustine West**	**5.08**	**217**	P	**Pn**	**07 18 26.9**	**+0.7**
AUI	**Augustine Isla**	**5.10**	**217**	P	**Pn**	**07 18 27.6**	**+1.0**
PNL	**Peninsula**	**5.49**	**132**	P	**Pn**	**07 18 31.7**	**-0.4**
KAHC	**Katmai Hardscr**	**6.12**	**220**	P	**Pn**	**07 18 40.5**	**-0.4**
KARR	**Katmai Rainbow**	**6.16**	**218**	P	**Pn**	**07 18 41.4**	**-0.1**
KDAK	**Kodiak Island**	**6.31**	**206**	Pn	**Pn**	**07 18 41.4**	**-2.2**
	2.6nm,0.3s,baz=47,slow=9.7,SNR=40						
KDAK				Sn	**Sn**	**07 19 53.5**	**-3.2**
	9.5nm,0.3s,baz=296,slow=24,SNR=8.8						
KDAK				LR	LR	07 21 40.6	
	comp=Z,268nm,21.0s,baz=310,slow=42						
KDAK	**Kodiak Island**	**6.31**	**206**	P	**Pn**	**07 18 41.6**	**-2.0**
KABR	**Katmai Barrier**	**6.55**	**217**	P	**Pn**	**07 18 45.5**	**-1.5**
MGLS	**Mageik LS**	**6.58**	**219**	P	**Pn**	**07 18 47.3**	**-0.1**
MGLS				S	**Sn**	**07 20 02.2**	**-1.3**
WHY	**Whitehorse**	**6.60**	**110**	P	**Pn**	**07 18 47.3**	**-0.4**
CAHL	**Cahill**	**6.71**	**218**	P	**Pn**	**07 18 49.0**	**-0.3**
INK	**Inuvik**	**7.43**	**44**	Pn	**Pn**	**07 18 59.1**	**-0.2**
	8.1nm,0.3s,baz=235,slow=16,SNR=320						
INK				Sn	**Sn**	**07 20 22.3**	**-2.4**
	3.2nm,0.3s,baz=305,slow=9.1,SNR=4.9						
INK				Lg		07 21 05.2	
	0.7nm,0.3s,baz=133,slow=12,SNR=5.6						
INK				LR	LR	07 21 32.9	
	comp=Z,187nm,21.5s,baz=113,slow=35						
INK	**Inuvik**	**7.43**	**44**	*e*P	**Pn**	**07 18 58.8**	**-0.5**
SIT	**Sitka**	**8.88**	**132**	P	**P**	**07 19 18.8**	**-0.7**
DLBC	**Dease Lake**	**9.90**	**113**	Pn	**P**	**07 19 35.4**	**+1.9**
	0.7nm,0.3s,baz=317,slow=13,SNR=5.7						
DLBC				Lg		07 22 19.1	
	0.8nm,0.3s,baz=56,slow=21,SNR=9.7						
DLBC				LR	LR	07 24 04.6	
	comp=Z,105nm,19.9s,baz=306,slow=41						
YKA	**Yellowknife Ar**	**14.87**	**79**	Pn	**P**	**07 20 38.6**	**-1.3**
	0.4nm,0.3s,baz=292,slow=13,SNR=17						
YKA				Lg		07 24 50.2	
	baz=301,slow=20,SNR=2.6						
YKA				LR	LR	07 26 40.6	
	comp=Z,330nm,18.1s,baz=270,slow=38						
BILL	**Bilibino**	**19.09**	**304**	*e*P	**P**	**07 21 34.0**	**+1.0**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
EDM	**Edmonton**	**20.41**	**104**	*e*P	**P**	**07 21 45.7**	**-2.0**
NEW	**Newport**	**22.58**	**118**	P	**P**	**07 22 10.9**	**+1.3**
	comp=Z,1.7nm,0.6s,mb3.6,baz=317,slow=11,SNR=4.1						
NEW	**Newport**	**22.58**	**118**	P	**P**	**07 22 09.7**	**0.0**
	comp=Z,1.9nm,0.7s,mb3.6						
NEW	**Newport**	**22.58**	**118**	P	**P**	**07 22 09.7**	**+0.1**
NEW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CHMT	**Chamberlain Mo**	**25.22**	**115**	P	**P**	**07 22 34.6**	**-0.6**
BMO	**Blue Mountains**	**25.34**	**123**	*e*P	**P**	**07 22 36.5**	**0.0**
HRY	**Holter Researc**	**25.96**	**114**	P	**P**	**07 22 41.6**	**-0.6**
YBH	**Yreka Blue Hor**	**26.21**	**135**	P	**P**	**07 22 45.1**	**+0.6**
	comp=Z,4.0nm,1.0s,mb3.9,baz=238,slow=5.0,SNR=5.0						
YBH				LR	LR	07 33 59.0	
	comp=Z,120nm,18.3s,MS3.5,baz=68,slow=38						
BOZ	**Bozeman (W)**	**26.91**	**115**	P	**P**	**07 22 50.0**	**-0.9**
	comp=Z,8.1nm,0.7s,mb4.4						
IMW	**Indian Meadow**	**28.62**	**116**	P	**P**	**07 23 07.8**	**+1.4**
	comp=Z,3.7nm,0.7s,mb4.2						
ELK	**Elko**	**29.66**	**125**	P	**P**	**07 23 16.7**	**+0.9**
	comp=Z,0.6nm,0.5s,mb3.6,baz=288,slow=14,SNR=4.5						
ELK	**Elko**	**29.66**	**125**	P	**P**	**07 23 14.9**	**-1.0**
PDAR	**Pinedale Array**	**30.12**	**116**	P	**P**	**07 23 20.9**	**+0.9**
	comp=Z,2.0nm,0.9s,mb3.8,baz=341,slow=5.3,SNR=13						
PDAR				PcP	PcP	07 26 20.2	-1.3
	comp=Z,1.2nm,0.7s,baz=79,slow=1.1,SNR=5.7						
TIXI	**Tiksi**	**30.25**	**321**	*e*P	**P**	**07 23 19.1**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
NVAR	**Mina Array Bea**	**30.64**	**131**	P	**P**	**07 23 25.2**	**+0.8**
	comp=Z,1.9nm,0.7s,mb4.1,baz=332,slow=7.6,SNR=20						
NVAR				PcP	PcP	07 26 22.6	-0.3
	comp=Z,1.0nm,0.6s,baz=343,slow=2.2,SNR=6.8						
MNV	**Mina**	**30.68**	**131**	*e*P	**P**	**07 23 23.2**	**-1.7**
	comp=Z,5.8nm,1.3s,mb4.2						
DUG	**Dugway**	**31.04**	**122**	P	**P**	**07 23 27.2**	**-0.8**
MSU	**Marysvale**	**32.75**	**123**	*e*P	**P**	**07 23 41.7**	**-1.3**
EYMN	**Ely**	**33.88**	**90**	*e*P	**P**	**07 23 52.1**	**-0.7**
NEN	**Nelson**	**34.33**	**129**	P	**P**	**07 23 57.0**	**+0.2**
PV01	**Paradox Valley**	**34.46**	**119**	P	**P**	**07 23 56.8**	**-1.1**
WUAZ	**Wupatki**	**35.70**	**124**	*e*P	**P**	**07 24 08.9**	**+0.4**
	comp=Z,4.5nm,0.8s,mb4.5						
SDCO	**Great Sand Dun**	**36.02**	**116**	*e*P	**P**	**07 24 11.9**	**+0.7**
	comp=Z,3.6nm,0.9s,mb4.3						
SUMG	**Summit**	**36.04**	**29**	*e*P	**P**	**07 24 11.3**	**+0.4**
DAG	**Danmarks Havn**	**36.34**	**18**	⇑*i*P	**P**	**07 24 13.9**	**+0.4**
	comp=Z,5.9nm,0.9s,mb4.5						
DAG	**Danmarks Havn**	**36.34**	**18**	⇑*e*P	**P**	**07 24 13.9**	**+0.4**
	comp=Z,5.9nm,0.9s,mb4.5						
DAG	**Danmarks Havn**	**36.34**	**18**	⇑*e*P	**P**	**07 24 13.9**	**+0.4**
DAG				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
ANMO	**Albuquerque**	**38.07**	**119**	P	**P**	**07 24 28.9**	**+0.5**
KSU1	**Kansas State U**	**38.61**	**105**	*e*P	**P**	**07 24 32.0**	**-0.9**
CPRX	**Cap Rock**	**40.77**	**117**	*e*P	**P**	**07 24 50.8**	**-0.1**
WMOK	**Wichita Mounta**	**41.37**	**111**	*e*P	**P**	**07 24 55.7**	**0.0**
	comp=Z,10nm,1.0s,mb4.4						
WMOK	**Wichita Mounta**	**41.37**	**111**	*e*P	**P**	**07 24 55.7**	**-0.1**
WMOK				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.4						
ACSO	**Alum Creek Sta**	**43.72**	**91**	*e*P	**P**	**07 25 14.2**	**-0.6**
	comp=Z,12nm,1.0s,mb4.6						
ALLY	**Alegheny Colle**	**43.85**	**87**	*e*P	**P**	**07 25 16.2**	**+0.4**
BOD	**Bodaibo**	**43.95**	**310**	*e*P	**P**	**07 25 14.7**	**-1.7**
BOD				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
TXAR	**Lajitas Array**	**44.13**	**120**	P	**P**	**07 25 19.5**	**+1.3**
	comp=Z,1.5nm,0.7s,mb3.9,baz=332,slow=6.7,SNR=18						
TXAR				PcP	PcP	07 27 03.6	-0.3
	comp=Z,0.7nm,0.8s,baz=315,slow=3.8,SNR=4.4						
TXAR	**Lajitas Array**	**44.13**	**120**	P	**P**	**07 25 19.5**	**+1.3**
TXAR				PcP	PcP	07 27 03.6	-0.3
JCT	**Junction City**	**44.65**	**115**	*e*P	**P**	**07 25 22.5**	**0.0**
	comp=Z,14nm,0.6s,mb5.0						
JCT	**Junction City**	**44.65**	**115**	*e*P	**P**	**07 25 22.5**	**0.0**
JCT				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.0						
MCWV	**Mont Chateau**	**45.59**	**88**	*e*P	**P**	**07 25 29.4**	**-0.4**
	comp=Z,21nm,0.8s,mb5.1						
OXF	**Oxford**	**45.60**	**101**	P	**P**	**07 25 29.0**	**-0.9**
FWV	**Forest Hill**	**46.86**	**91**	*e*P	**P**	**07 25 39.1**	**-0.7**
KEV	**Kevo**	**46.91**	**3**	*e*p	**P**	**07 25 39.4**	**-0.4**
ARCES	**ARCESS Array B**	**47.10**	**3**	P	**P**	**07 25 40.5**	**-0.8**
	comp=Z,3.9nm,0.6s,mb4.5,baz=353,slow=7.3,SNR=17						
ARCES				PcP	PcP	07 27 12.5	-1.2
	comp=Z,2.1nm,0.6s,slow=4.9,SNR=6.7						
ELN	**Prospectdale**	**47.18**	**91**	*e*P	**P**	**07 25 41.5**	**-0.9**
BLA	**Blacksburg**	**47.34**	**91**	*e*P	**P**	**07 25 43.4**	**-0.3**
	comp=Z,22nm,1.5s,mb4.9						
BLA	**Blacksburg**	**47.34**	**91**	*e*P	**P**	**07 25 43.4**	**-0.3**
BLA				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.9						
CBN	**Corbin**	**47.89**	**87**	*e*P	**P**	**07 25 47.8**	**-0.2**
	comp=Z,40nm,0.6s,mb5.6						
JSC	**Jenkinsville**	**49.41**	**94**	*e*P	**P**	**07 25 58.8**	**-1.0**
CN2	**Changchun**	**50.70**	**291**	*e*P	**P**	**07 26 08.7**	**-0.8**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
MJAR	**Matsushiro Arr**	**51.12**	**275**	P	**P**	**07 26 11.5**	**-1.3**
	comp=Z,4.3nm,0.7s,mb4.5,baz=5.0,slow=7.6,SNR=8.9						
JOF	**Joensuu**	**53.83**	**1**	*e*p	**P**	**07 26 31.9**	**-0.8**
	comp=Z,4.2nm,0.4s,mb4.7						
KAF	**Kangasniemi**	**54.56**	**4**	*e*p	**P**	**07 26 37.2**	**-0.8**
	comp=Z,4.8nm,0.5s,mb4.8,baz=351,slow=7.2						
KAF	**Kangasniemi**	**54.56**	**4**	*e*P	**P**	**07 26 37.2**	**-0.8**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
NB2	**NORSAR Subarra**	**54.68**	**13**	P	**P**	**07 26 38.0**	**-1.0**
	comp=Z,3.7nm,0.6s,mb4.6,baz=348,slow=7.0						
NOA	**NORSAR Array B**	**54.68**	**13**	P	**P**	**07 26 38.4**	**-0.6**
	comp=Z,5.0nm,0.6s,mb4.7,baz=349,slow=7.3,SNR=17						
SONM	**Songino Array**	**54.75**	**308**	P	**P**	**07 26 39.4**	**-0.2**
	comp=Z,2.6nm,0.8s,mb4.3,baz=13,slow=6.0,SNR=9.1						
NAO	**NORSAR Subarra**	**54.86**	**13**	P	**P**	**07 26 38.0**	**-2.3**
	comp=Z,3.7nm,0.6s,mb4.6						
NAO	**NORSAR Subarra**	**54.86**	**13**	P	**P**	**07 26 38.0**	**-2.3**
NAO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
FINES	**FINESS Array B**	**55.22**	**4**	P	**P**	**07 26 41.6**	**-1.3**
	comp=Z,5.7nm,0.4s,mb4.9,baz=0.6,slow=8.4,SNR=52						
FINES	**FINESS Array B**	**55.22**	**4**	⇑*e*P	**P**	**07 26 42.0**	**-0.9**
NVS	**Novosibirsk**	**55.56**	**327**	*e*P	**P**	**07 26 42.2**	**-3.3**
KLMR	**Klimovskoe**	**55.79**	**356**	*e*P	**P**	**07 26 42.4**	**-4.6**
KLMR				pmax	pmax		
	comp=Z,40nm,1.7s,mb5.2						
SVE	**Sverdlovsk**	**58.00**	**342**	*e*P	**P**	**07 27 00.0**	**-2.8**
SVE				*e*		07 27 07.0	
SVE				MLR	MLR		
	comp=N,200nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.3						
ARU	**Arti**	**58.66**	**343**	*e*P	**P**	**07 27 06.0**	**-1.4**
	comp=Z,19nm,0.6s,mb5.3						
ARU	**Arti**	**58.66**	**343**	⇓*i*P	**P**	**07 27 06.4**	**-1.0**
ARU				*e*		07 29 15.2	
ARU				*e*PPP	PPP	07 30 38.2	-4.3
ARU				*e*S	**S**	**07 35 07.1**	**-3.2**
ARU				*e*SS	SS	07 39 02.9	-2.0
ARU				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
HHC	**Hu-ho-hao-te**	**58.79**	**299**	*e*P	**P**	**07 27 10.8**	**+2.3**
HHC				PCP	PcP	07 27 59.7	+1.7
HHC				PP	PP	07 29 22.4	+2.0
HHC				SCP		07 32 00.6	
HHC				S	**S**	**07 35 13.6**	**+1.4**
HHC				XS		07 35 26.8	
HHC				SCS	ScS	07 36 57.9	+2.8
HHC				SS	SS	07 39 07.4	+0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,240nm,6.0s						
HHC				LR	LR		
	comp=N,180nm,13.2s,MS4.5						
HHC				LR	LR		
	comp=E,130nm,10.8s,MS4.5						
HHC				LR	LR		
	comp=Z,270nm,13.2s,MS4.5						
CHKZ	**Chkalovo**	**59.39**	**335**	*e*P	**P**	**07 27 10.3**	**-2.2**
	comp=Z,12nm,0.9s,mb4.9						
CHKZ	**Chkalovo**	**59.39**	**335**	*e*P	**P**	**07 27 10.3**	**-2.2**
CHKZ				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
BRVK	**Borovoye**	**60.04**	**335**	*e*P	**P**	**07 27 15.3**	**-1.7**
	comp=Z,3.5nm,0.6s,mb4.6						
BRVK	**Borovoye**	**60.04**	**335**	*e*P	**P**	**07 27 15.3**	**-1.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
BVA0	**Borovoye Array**	**60.05**	**335**	P	**P**	**07 27 15.7**	**-1.4**
BVAR	**Borovoye Array**	**60.05**	**335**	P	**P**	**07 27 15.8**	**-1.2**
	comp=Z,4.0nm,0.5s,mb4.7,baz=45,slow=6.3,SNR=31						
VOSK	**Vostochnaya**	**60.23**	**334**	P	**P**	**07 27 16.3**	**-1.9**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
KURK	**Kurchatov**	**60.46**	**328**	*c i*P	**P**	**07 27 17.8**	**-2.1**
OBN	**Obninsk**	**61.62**	**357**	*c i*P	**P**	**07 27 26.2**	**-1.5**
OBN				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.6						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.4						
SUW	**Suwalki**	**62.54**	**6**	*e*P	**P**	**07 27 33.0**	**-0.9**
SUW	**Suwalki**	**62.54**	**6**	*e*P	**P**	**07 27 33.0**	**-0.9**
MKAR	**Makanchi Array**	**63.18**	**324**	P	**P**	**07 27 35.8**	**-2.4**
	comp=Z,2.5nm,0.5s,mb4.6,baz=39,slow=7.2,SNR=16						
MKAR	**Makanchi Array**	**63.18**	**324**	⇑*e*P	**P**	**07 27 35.7**	**-2.5**
SSE	**Sheshan**	**63.21**	**286**	*e*P	**P**	**07 27 37.9**	**-0.7**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,20nm,4.9s						
SSE	**Sheshan**	**63.21**	**286**	*e*P	**P**	**07 27 37.9**	**-0.7**
	comp=Z,33nm,0.7s,mb5.6						
NJ2	**Nanjing**	**63.38**	**289**	*e*P	**P**	**07 27 42.0**	**+2.3**
NJ2				AP	pP	07 27 45.0	+2.8
NJ2				XP	sP	07 27 48.3	+5.2
NJ2				PP	PP	07 30 03.3	+2.5
NJ2				S	**S**	**07 36 12.0**	**+1.2**
NJ2				XS		07 36 21.0	
NJ2				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,100nm,4.0s						
NJ2				LR	LR		
	comp=N,720nm,22.7s,MS4.9						
NJ2				LR	LR		
	comp=E,640nm,23.9s,MS4.9						
NJ2				LR	LR		
	comp=Z,220nm,20.7s,MS4.3						
WMQ	**Urumqi**	**64.40**	**319**	⇓P	**P**	**07 27 48.0**	**+1.9**
WMQ				AP	pP	07 27 52.5	+3.9
WMQ				XP	sP	07 27 55.0	+5.5
WMQ				PCP	PcP	07 28 22.2	+1.7
WMQ				PP	PP	07 30 11.5	+1.8
WMQ				S	**S**	**07 36 24.5**	**+1.2**
WMQ				XS		07 36 32.2	
WMQ				PS	PS	07 36 46.0	+2.3
WMQ				AMB	AMB		
	comp=Z,210nm,5.2s						
WMQ				LR	LR		
	comp=N,80nm,18.3s,MS4.2						
WMQ				LR	LR		
	comp=E,130nm,18.3s,MS4.2						
WMQ				LR	LR		
	comp=Z,50nm,16.8s,MS3.8						
GTA	**Gaotai**	**64.43**	**308**	*e*P	**P**	**07 27 45.8**	**-0.6**
GTA				AP	pP	07 27 50.3	+1.4
GTA				XP	sP	07 27 52.9	+3.1
GTA				SCS	ScS	07 37 33.5	-3.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
GTA				AMB	AMB		
	comp=Z,220nm,5.7s						
GTA				LR	LR		
	comp=N,190nm,7.3s						
GTA				LR	LR		
	comp=E,310nm,7.3s						
GTA				LR	LR		
	comp=Z,100nm,8.0s						
CLL	**Collm**	**64.46**	**13**	P	**P**	**07 27 46.0**	**-0.4**
	comp=Z,logA/T=0.9,mb4.7						
CLL	**Collm**	**64.46**	**13**	*e*P	**P**	**07 27 46.0**	**-0.4**
	comp=Z,5.0nm,0.6s,mb4.7						
CLL	**Collm**	**64.46**	**13**	*e*P	**P**	**07 27 46.0**	**-0.4**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
AKTO	**Aktyubinsk**	**64.59**	**342**	P	**P**	**07 27 46.2**	**-1.1**
	comp=Z,6.2nm,0.5s,mb4.9,baz=23,slow=8.0,SNR=12						
AKTO	**Aktyubinsk**	**64.59**	**342**	P	**P**	**07 27 46.1**	**-1.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
MOX	**Moxa**	**64.96**	**15**	P	**P**	**07 27 50.0**	**+0.4**
MOX	**Moxa**	**64.96**	**15**	*i* P	**P**	**07 27 50.0**	**+0.4**
KSP	**Ksiaz**	**65.23**	**11**	*e*P	**P**	**07 27 51.3**	**-0.1**
PVCC	**Panska Ves**	**65.39**	**12**	*e*P	**P**	**07 27 52.0**	**-0.4**
NKC	**Novy Kostel**	**65.46**	**14**	*e*P	**P**	**07 27 52.9**	**+0.1**
AB31	**Akbulak array**	**65.47**	**341**	*i* P	**P**	**07 27 51.7**	**-1.2**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
UPC	**Upice**	**65.54**	**11**	*e*P	**P**	**07 27 52.5**	**-0.8**
DPC	**Dobruska-Polom**	**65.72**	**11**	*e*P	**P**	**07 27 54.9**	**+0.4**
GRA1	**Grafenberg Arr**	**65.86**	**15**	*e*P	**P**	**07 27 55.4**	**0.0**
	comp=Z,11nm,1.3s,mb4.7						
GRF	**Grafenberg Arr**	**65.86**	**15**	*e*P	**P**	**07 27 55.4**	**0.0**
	comp=Z,11nm,1.3s,mb4.7						
GRF	**Grafenberg Arr**	**65.86**	**15**	*e*P	**P**	**07 27 55.4**	**0.0**
GRF				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
GRF	**Grafenberg Arr**	**65.86**	**15**	*e*P	**P**	**07 27 55.4**	**0.0**
GRF				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.7						
PRU	**Pruhonice**	**65.92**	**13**	*e*P	**P**	**07 27 56.1**	**+0.3**
AKASG	**Malin Array Be**	**66.06**	**2**	P	**P**	**07 27 55.6**	**-1.1**
	comp=Z,21nm,0.6s,mb5.3,baz=357,slow=6.4,SNR=92						
OKC	**Ostrava-Krasne**	**66.38**	**10**	*e*P	**P**	**07 27 58.5**	**-0.2**
KHC	**Kasperske Hory**	**66.67**	**13**	*e*P	**P**	**07 28 00.9**	**+0.3**
TREC	**Trest**	**66.69**	**12**	*e*P	**P**	**07 28 00.4**	**-0.3**
KWP	**Kalwaria**	**66.89**	**7**	*e*P	**P**	**07 28 02.1**	**+0.1**
KWP	**Kalwaria**	**66.89**	**7**	*e*P	**P**	**07 28 02.1**	**+0.1**
GERES	**GERESS Array B**	**66.96**	**13**	P	**P**	**07 28 02.5**	**0.0**
	comp=Z,2.9nm,0.7s,mb4.4,baz=342,slow=4.2,SNR=21						
STHS	**Stebnicka Huta**	**67.02**	**8**	*e*P	**P**	**07 28 03.4**	**+0.6**
CRVS	**Cervenica-Dubn**	**67.55**	**8**	*e*P	**P**	**07 28 06.2**	**0.0**
KOLS	**Kolonicke sedl**	**67.56**	**7**	*e*P	**P**	**07 28 06.5**	**+0.2**
VYHS	**Vyhne**	**67.77**	**10**	*e*P	**P**	**07 28 07.5**	**-0.1**
KECS	**Kecovo**	**67.90**	**9**	*i* P	**P**	**07 28 08.3**	**-0.1**
ENH	**Enshi**	**68.82**	**295**	P	**P**	**07 28 12.5**	**-1.9**
BURAR	**Bucovina Array**	**69.02**	**5**	⇓P	**P**	**07 28 15.5**	**+0.1**
BURAR	**Bucovina Array**	**69.02**	**5**	⇓P	**P**	**07 28 15.5**	**+0.1**
GROS	**Grobnik**	**69.50**	**12**	*e*P	**P**	**07 28 18.5**	**+0.1**
DRGR		**69.72**	**7**	⇓P	**P**	**07 28 18.6**	**-1.1**
DRGR		**69.72**	**7**	⇓P	**P**	**07 28 18.6**	**-1.0**
LJU	**Ljubljana**	**69.82**	**13**	*e*P	**P**	**07 28 20.1**	**-0.2**
MLR	**Muntele Rosu**	**71.17**	**5**	⇓P	**P**	**07 28 29.5**	**+1.0**
MLR	**Muntele Rosu**	**71.17**	**5**	⇓P	**P**	**07 28 29.5**	**+1.0**
VOIR		**71.19**	**6**	⇓P	**P**	**07 28 28.1**	**-0.5**
VOIR		**71.19**	**6**	⇓P	**P**	**07 28 28.1**	**-0.5**
TIRR	**Tirgusor**	**72.28**	**3**	⇑P	**P**	**07 28 34.6**	**-0.5**
TIRR	**Tirgusor**	**72.28**	**3**	⇑P	**P**	**07 28 34.6**	**-0.6**
KIV	**Kislovodsk**	**72.53**	**352**	*e*P	**P**	**07 28 35.8**	**-0.7**
KIV				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
ESDC	**Sonseca Array**	**73.10**	**29**	P	**P**	**07 28 40.4**	**+0.5**
	comp=Z,0.4nm,0.3s,mb3.8,baz=350,slow=5.6,SNR=5.2						
BRTR	**Keskin Array B**	**77.06**	**359**	P	**P**	**07 29 03.5**	**+0.9**
	comp=Z,2.2nm,0.9s,mb4.1,slow=3.7,SNR=7.7						
PLCA	**Paso Flores**	**120.29**	**121**	PKP	PKPdf	07 35 58.8	-2.9
	comp=Z,0.9nm,0.6s,baz=338,slow=19,SNR=3.9						
VNDA	**Vanda**	**144.19**	**197**	*e*PKP	PKPdf	07 36 41.2	-3.8
BOSA	**Boshof**	**144.73**	**11**	PKP	PKPdf	07 36 44.5	-2.9
	comp=Z,4.7nm,0.5s,baz=6.4,slow=3.0,SNR=21						

IDC ***09*** *07:20:25.6±1.7, 33.96N×73.69E, mb3.8/5, mb1 3.9/7, mb1mx3.6/21, mbtmp3.7/7, ML3.5/2, MS3.8/2, Ms1 3.8/2, ms1mx3.1/31, Error ellipse: s-maj=58.3km s-min=27.1km az=55.0*

NDI ***09*** *07:20:27.7±2.2, 34.10N×73.59E, h10^{km}, MD3.5, ML3.5*

NNC ***09*** *07:20:35.2±7.5, 34.26N×72.96E, h31^{km}±97^{km}, mpv3.8, Error ellipse: s-maj=92.0km s-min=36.2km az=119.0*

ISC 09 07:20:28.9±0.7**, 34.04N**±0.06×**73.6E**±0.1**, h33^{km}, n21, σ1^{s}15**/25**, mb3.7**/4**, MS3.8**/2**, 4C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**2.42**	**131**	*e*P	**P**	**07 21 09.0**	**+2.2**
THN				*e*SB	**Sb**	**07 21 42.2**	**+1.1**
DLH	**Dalhousie**	**2.51**	**126**	*e*P	**P**	**07 21 10.0**	**+1.9**
DLH				*e*x	x	07 24 20.0	
BHK	**Bhakra**	**3.55**	**136**	*e*SB	**Sb**	**07 22 18.3**	**+4.3**
SDNR	**Sundarnagar**	**3.83**	**130**	*e*P	**P**	**07 21 26.6**	**-0.3**
SDNR				*e*SB	**Sb**	**07 22 24.4**	**+2.5**
SMLA	**Simla**	**4.21**	**133**	*e*P	**P**	**07 21 31.6**	**-0.7**
SMLA				*e*S	**S**	**07 22 19.4**	**-1.5**
KLP	**Kalpa**	**4.67**	**121**	*e*P	**P**	**07 21 38.7**	**-0.3**
KLP				*e*S	**S**	**07 22 30.6**	**-2.2**
KLP				AML	AML	07 22 53.0	
	comp=E,246nm,0.5s						
KLP				AML	AML	07 22 59.7	
	comp=N,176nm,0.4s						
KHET	**Khetri**	**6.25**	**161**	*e*x	x	07 22 10.2	
KHET				*e*x	x	07 23 06.2	
SONA	**Sohna**	**6.51**	**151**	*e*P	**P**	**07 22 03.0**	**-1.8**
SONA				*e*S	**S**	**07 23 14.0**	**-4.8**
SONA				AML	AML	07 23 17.4	
	comp=E,44nm,0.4s						
SONA				AML	AML	07 23 17.9	
	comp=N,18nm,0.2s						
AAK	**Ala-Archa**	**8.62**	**5**	⇑P	**P**	**07 22 34.5**	**+0.4**
	comp=N,7.0nm,1.8s						
AAK				⇑S	**S**	**07 24 11.3**	**+0.1**
	comp=N,2.1nm,0.6s						
KK31	**Karatay Array**	**9.36**	**346**	P	**P**	**07 22 44.0**	**-0.5**
	comp=N,1.3nm,0.2s,baz=151,slow=11,SNR=38						
KK31				⇑S	**S**	**07 24 24.1**	**-5.6**
	comp=N,2.8nm,0.6s,baz=177,slow=28,SNR=13						
MKAR	**Makanchi Array**	**14.36**	**25**	Pn	**P**	**07 23 51.5**	**-0.2**
	comp=N,0.1nm,0.3s,baz=212,slow=14,SNR=3.4						
AB31	**Akbulak array**	**18.25**	**331**	P	**P**	**07 24 41.5**	**+0.3**
	comp=N,1.0nm,0.5s,baz=137,slow=12,SNR=22						
BVAR	**Borovoye Array**	**19.12**	**354**	P	**P**	**07 24 50.4**	**-1.1**
	comp=N,0.8nm,0.3s,baz=159,slow=10,SNR=15						
AKTO	**Aktyubinsk**	**19.96**	**330**	⇑P	**P**	**07 24 59.6**	**-1.2**
	comp=N,0.5nm,0.5s						
AKTO	**Aktyubinsk**	**19.96**	**330**	P	**P**	**07 25 00.9**	**+0.1**
	comp=N,3.3nm,0.4s,baz=129,slow=11,SNR=18						
SONM	**Songino Array**	**28.14**	**51**	LR	LR	07 39 26.8	
	comp=N,150nm,19.0s,MS3.6,baz=18,slow=41						
FINES	**FINESS Array B**	**40.69**	**327**	P	**P**	**07 28 08.2**	**+0.7**
	comp=N,1.4nm,0.6s,mb3.8,baz=141,slow=8.9,SNR=2.5						
ARCES	**ARCESS Array B**	**44.21**	**338**	P	**P**	**07 28 37.2**	**+1.1**
	comp=N,1.8nm,0.8s,mb3.8,baz=114,slow=11,SNR=4.8						
NOA	**NORSAR Array B**	**47.60**	**324**	P	**P**	**07 29 03.3**	**+0.2**
	comp=N,1.1nm,0.8s,mb4.0,baz=96,slow=7.8,SNR=3.6						
JHJ	**Hachijo jima 2**	**54.28**	**71**	LR	LR	07 53 26.2	
	comp=N,106nm,19.7s,MS3.9,baz=107,slow=36						
WRA	**Warramunga Arr**	**78.90**	**123**	P	**P**	**07 32 30.4**	**-0.4**
	comp=N,0.3nm,1.0s,mb3.2,baz=319,slow=5.4,SNR=4.6						

NIED ***09*** *07:20:00, 28.00N×129.00E, h11^{km}, Mw3.8 Best double couple: M$_0$6.21×10^{14} NP1:φ$_s$70°, δ77°, λ-132°. NP2: φ$_s$326°, δ43°, λ-19°.*

JMA 09 07:20:35.7±0.1**, 28.03N×129.04E, h10^{km}**±2^{km}**, M4.0, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**0.26**	**198**	P	Pg	07 20 40.9	-0.2
JTK				S	Sg	07 20 44.6	-0.1
JAM	**Amami Oshima**	**0.63**	**53**	P	Pb	07 20 48.0	-0.3
JAM				S	Sg	07 20 55.9	-0.9
JOW	**Kunigami**	**1.37**	**210**	P	Pn	07 21 00.9	-0.1
JOW				S	Sb	07 21 17.7	-0.8
JIH	**Iheya**	**1.38**	**224**	P	Pn	07 21 01.0	0.0
JIH				S	Sb	07 21 18.3	-0.3
JNN	**Nakanoshima**	**1.95**	**22**	P	Pn	07 21 08.9	-0.3
JNN				S	Sn	07 21 33.2	-0.7
JAGN	**Aguni-jima**	**2.15**	**229**	P	Pn	07 21 12.1	0.0
JAGN				S	Sn	07 21 38.2	-0.9
NAH1	**Naha**	**2.18**	**214**	P	Pn	07 21 15.2	+2.6
NAH1				*e*S	Sn	07 21 41.4	+1.5
JJT2	**Tamagusuku 2**	**2.21**	**212**	P	Pn	07 21 16.2	+3.2
JKC	**Kuchinoerabu**	**2.62**	**22**	P	Pn	07 21 18.8	-0.1
JKC				*e*S	Sn	07 21 49.9	-1.3
JKE	**Kume jima 2**	**2.63**	**230**	P	Pn	07 21 19.0	0.0
JTN	**Tanegashima 3**	**3.12**	**32**	P	Pn	07 21 26.8	+0.9
JTN				S	Sn	07 22 02.2	-1.4

NDI 09 07:22:58.8±3.3**, 34.13N×73.29E, h10^{km}, MD3.7, ML3.8, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**2.65**	**129**	*e*PB	Pb	07 23 44.6	-1.4
THN				*e*SB	Sb	07 24 19.8	+1.2
BHK	**Bhakra**	**3.78**	**135**	*e*SB	Sb	07 24 55.5	+4.0
SDNR	**Sundarnagar**	**4.06**	**129**	*e*P	Pn	07 24 01.6	-0.9
SDNR				*e*S	Sn	07 24 46.6	-4.1
SMLA	**Simla**	**4.44**	**131**	*e*P	Pn	07 24 04.8	-3.0
SMLA				*e*S	Sn	07 24 55.9	-4.2
KLP	**Kalpa**	**4.92**	**120**	*e*P	Pn	07 24 15.4	+0.9
KLP				*e*S	Sn	07 25 05.9	-6.3
KLP				AML	AML	07 25 33.1	
	comp=E,230nm,0.5s						
KLP				AML	AML	07 25 41.7	
	comp=N,221nm,0.7s						
NDI	**New Delhi**	**6.39**	**147**	*e*x	x	07 23 04.5	
NDI				*e*S	Sn	07 25 40.5	-8.6

IDC 09 07:32:01.4±5.5**, 1.08N**×**97.87E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/18**, mbtmp3.7**/4**, Error ellipse: s-maj=271.7km s-min=28.2km az=52.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**41.41**	**122**	P	P	07 39 49.8	-1.6
	0.3nm,0.5s,baz=301,slow=9.1,SNR=5.4						
MKAR	**Makanchi Array**	**47.52**	**346**	P	P	07 40 39.2	-1.1
	0.4nm,0.6s,baz=162,slow=7.8,SNR=6.3						
ZAL	**Zalesovo**	**53.77**	**350**	P	P	07 41 25.3	-2.4
	1.3nm,0.4s,baz=233,slow=4.6,SNR=3.5						
BVAR	**Borovoye Array**	**56.58**	**340**	P	P	07 41 45.0	-3.2
	0.5nm,0.7s,baz=135,slow=10,SNR=2.9						

ATH ***09*** *07:33:58.7, 38.15N×26.78E, h37*^{km}*±6*^{km}*, MD3.2/3*

CSEM ***09*** *07:33:58.8±0.1, 38.17N×26.65E, h12*^{km}*, MD2.8, Error ellipse: s-maj=2.3km s-min=1.6km az=135.0*

ISK ***09*** *07:34:00.3, 38.13N×26.74E, h17*^{km}*, MD2.8*

ISC 09 07:33:58.3±0.9**, 38.21N**±0.03×**26.56E**±0.05**, h4**^{km}±5^{km}**, n18,** σ**1**^{s}**05**/30**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.15**	**12**	*i* P	**Pg**	**07 34 01.4**	**+0.1**
URLA				*i* S	**Sg**	**07 34 04.2**	**+0.7**
SMG	**Samos**	**0.55**	**156**	*e*PB	**Pb**	**07 34 09.0**	**-1.1**
IZM	**Izmir**	**0.58**	**71**	*i* PG	**Pg**	**07 34 10.3**	**+0.3**
IZM				*i* SG	**Sg**	**07 34 18.3**	**+0.5**
KDAG	**Bornova**	**0.59**	**71**	*i* P	**Pg**	**07 34 09.2**	**-0.8**
KDAG				*i* S	**Sg**	**07 34 17.1**	**-0.8**
PRK	**Paraskevi**	**1.05**	**348**	*e*PN	**Pn**	**07 34 20.1**	**+0.4**
PRK				*e*SN	**Sn**	**07 34 35.9**	**+1.0**
AYDN	**Tasoluk**	**1.18**	**117**	*i* P	**Pb**	**07 34 21.1**	**+0.3**
AYDN				*i* S	**Sb**	**07 34 37.0**	**+0.6**
AKS	**Akhisar**	**1.19**	**56**	*e*PN	**Pn**	**07 34 21.5**	**-0.1**
AKS				*e*SN	**Sn**	**07 34 37.8**	**-0.5**
BODT	**Bodrum**	**1.30**	**152**	*e*PN	**Pn**	**07 34 23.0**	**-0.1**
MLSB	**Milas**	**1.33**	**133**	*e*PN	**Pn**	**07 34 22.5**	**-1.1**
BDRM	**Kayabasi**	**1.35**	**148**	*i* P	**Pb**	**07 34 26.7**	**+3.0**
BDRM				*i* S	**Sb**	**07 34 42.9**	**+1.8**
APE	**Apeiranthos**	**1.40**	**216**	*e*PN	**Pn**	**07 34 26.6**	**+1.9**
APE	**Apeiranthos**	**1.40**	**216**	*e*PN	**Pn**	**07 34 24.5**	**-0.2**
APE				*e*SN	**Sn**	**07 34 43.5**	**-0.3**
MANT	**Manisa**	**1.60**	**79**	*i* P	**Pn**	**07 34 28.7**	**+1.3**
MANT				*i* S	**Sb**	**07 34 49.3**	**+0.9**
DAT	**Datca**	**1.69**	**151**	*e*PN	**Pn**	**07 34 27.6**	**-1.2**
YER	**Yerkesik**	**1.74**	**128**	*e*PN	**Pn**	**07 34 28.1**	**-1.4**
BTOK	**Tokmak**	**1.93**	**36**	*i* P	**Pn**	**07 34 29.5**	**-2.6**
BTOK				*i* S	**Sn**	**07 34 56.2**	**-0.9**
DNZL	**Cakiroluk**	**2.04**	**104**	*i* P	**Pn**	**07 34 37.8**	**+4.1**
DNZL				*i* S	**Sn**	**07 35 06.2**	**+6.3**
ULDT	**Uludag**	**2.78**	**45**	*i* P	**Pn**	**07 34 51.6**	**+7.2**
ULDT				*i* S	**Sn**	**07 35 25.4**	**+6.7**

NNC 09 07:52:46.5±2.0**, 44.49N**×**80.99E, h5**^{km}±11^{km}**, mpv3.2, 10C-3D, Error ellipse: s-maj=20.4km s-min=8.9km az=132.0, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**2.48**	**21**	⇑Pn	Pn	07 53 30.4	+2.2
	2.9nm,0.2s,baz=200,slow=13,SNR=380						
MK31				⇑Lg		07 54 03.2	
	9.9nm,0.3s,baz=189,slow=29,SNR=11						
AAK	**Ala-Archa**	**5.08**	**251**	⇑Pg	Pg	07 54 20.2	-7.7
	2.3nm,0.5s						
AAK				⇑Lg		07 55 24.7	
	10nm,0.5s						
KURK	**Kurchatov**	**6.43**	**346**	⇑Pn	Pn	07 54 24.4	+0.2
	1.4nm,0.7s						
KURK				⇓Sn	Sn	07 55 35.9	-3.0
	0.9nm,0.4s						
KURK				⇓Lg		07 56 14.6	
	7.8nm,0.5s						
KK31	**Karatay Array**	**7.71**	**263**	⇑Pn	Pn	07 54 41.9	-0.3
	0.7nm,0.5s,baz=75,slow=17,SNR=5.0						
KK31				⇓Lg		07 56 48.0	
	1.4nm,0.5s,baz=72,slow=29,SNR=8.4						
VOSK	**Vostochnaya**	**10.57**	**325**	⇑Sn	S	07 57 16.5	-4.9
	1.3nm,1.1s						
VOSK				⇑Lg		07 58 22.2	
	13nm,1.4s						
BVA0	**Borovoye Array**	**11.03**	**324**	⇑Lg		07 58 36.4	
	0.8nm,0.9s,baz=137,slow=25,SNR=5.6						
CHKZ	**Chkalovo**	**11.42**	**327**	⇑Lg		07 58 52.3	
	8.3nm,1.1s						

IDC ***09*** *08:00:22.9±0.5, 15.14S×173.66W, mb4.5/14, mb1 4.7/15, mb1mx4.7/16, mbtmp4.5/15, ML4.9/1, MS4.8/21, Ms1 4.8/21, ms1mx4.8/21, Error ellipse: s-maj=26.3km s-min=14.5km az=132.0*

BJI ***09*** *08:00:25.9, 15.30S×173.60W, h31*^{km}*, mB5.4, mb4.9, Ms5.2, Msz5.0*

MOS ***09*** *08:00:27.5±1.1, 15.33S×173.48W, h33*^{km}*, mb5.4/24, MS5.1/12, Error ellipse: s-maj=14.7km s-min=11.0km az=57.5*

NEIC ***09*** *08:00:28.0±0.2, 15.27S×173.64W, mb5.2/56, MS5.3/10, MW5.4, Error ellipse: s-maj=9.0km s-min=4.9km az=138.0, Moment Tensor Solution. s22 Moment tensor: Scale* 10^{17} *Nm;* M_{rr}*0.23;* $M_{\theta\theta}$*0.24;* $M_{\phi\phi}$*-0.46;* $M_{r\theta}$*-1.47;* $M_{\theta\phi}$*0.23;* $M_{\phi r}$*0.22; Best double couple:* M_0*1.5×*10^{17} *NP1:*ϕ_s*187°, δ14°, λ173°. NP2:*ϕ_s*284°, δ88°, λ76°. Principal axes: T 1.7, Plg45°, Azm180°; N -.35, Plg14°, Azm284°; P -1.36, Plg42°, Azm27°;*

HRVD ***09*** *08:00:28.0±0.1, 15.18S×173.46W, h46*^{km}*±2*^{km}*, MW5.4/74, Centroid moment Tensor Solution. LP body waves: s57,c102;Mantle waves: s74,c138; Half duration: 1*^{s}*3 Moment tensor: Scale* 10^{17}*Nm;* M_{rr}*-0.42±.03;* $M_{\theta\theta}$*0.46±.03;* $M_{\phi\phi}$*-0.03±.03;* $M_{r\theta}$*-1.66±.06;* $M_{\theta\phi}$*0.07±.03;* $M_{\phi r}$*-0.02±.02; Best double couple:* M_0*1.718×*10^{17} *NP1:* ϕ_s*252°, δ8°, λ-107°. NP2:*ϕ_s*89°, δ83°, λ-88°. Principal axes: T 1.738, Plg38°, Azm177°; N -.04, Plg2°, Azm269°; P -1.698, Plg52°, Azm2°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ORF ***09*** *08:00:46.2, 9.55S×175.45E, h30*^{km}*, mb6.0*

ISC 09 08:00:26.4±0.2**, 15.20S**±0.06×**173.75W**±0.06**, h31**^{km}**, h31**^{km}±1.2^{km}**:pP-P, n345,** σ**0**^{s}**93**/154**, mb5.0**/72**, MS5.0**/33**, 17C-15D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.30**	**56**	Pn	**Pn**	**08 00 57.3**	**-5.8**
	943nm,0.3s,baz=189,slow=2.3,SNR=432						
AFI				Sn	**Sn**	**08 01 18.6**	**-12**
	3µm,0.3s,baz=356,slow=20,SNR=23						
AFI				LR	LR	08 01 43.2	
	comp=Z,18µm,20.5s,baz=196,slow=37						
AFI	**Afiamalu**	**2.30**	**56**	*e*Pn	**Pn**	**08 00 57.4**	**-5.7**
AFI				*e*S	**Sn**	**08 01 19.0**	**-12**
RAR	**Rarotonga**	**14.55**	**116**	Pn	**P**	**08 03 47.5**	**-4.8**
	5.1nm,0.3s,baz=261,slow=6.0,SNR=4.6						
RAR				LR	LR	08 08 02.5	
	comp=Z,2µm,21.8s,baz=295,slow=32						
DZM	**Mont Dzumac**	**19.96**	**247**	P	**P**	**08 05 00.3**	**+1.0**
	4.2nm,0.9s,baz=275,slow=23,SNR=2.6						
PPT	**Papeete**	**23.30**	**99**	*e*LQ		08 09 51.0	
PPT				*e*LR	LR	08 10 41.7	
	2µm,28.5s						
PPT	**Papeete**	**23.30**	**99**	LR	LR	08 12 32.4	
	comp=Z,361nm,18.2s,MS3.9,baz=267,slow=31						
TBI	**Tubuai**	**24.29**	**113**	*e*LQ		08 10 30.3	
TBI				*e*LR	LR	08 11 16.9	
	3µm,28.2s,baz=286						
URZ	**Urewera**	**24.35**	**198**	P	**P**	**08 05 44.0**	**+1.1**
	12nm,0.5s,mb4.6,baz=132,slow=3.2,SNR=17						
URZ				LR	LR	08 14 29.7	
	comp=Z,6µm,19.2s,MS5.1,baz=304,slow=35						
HNR	**Honiara**	**26.32**	**280**	LR	LR	08 15 28.8	
	comp=Z,419nm,18.2s,MS4.0,baz=131,slow=34						
RPZ	**Rata Peaks**	**31.24**	**202**	P	**P**	**08 06 46.5**	**+0.9**
	4.7nm,0.7s,mb4.4,baz=18,slow=6.4,SNR=2.3						
RPZ				LR	LR	08 18 48.8	
	comp=Z,5µm,19.6s,MS5.2,baz=310,slow=35						
TAOE	**Nuku Hiva Isla**	**33.43**	**83**	*e*LR	LR	08 15 33.7	
	3µm,25.6s,baz=265						
RKT	**Rikitea**	**37.37**	**108**	*e*S	**S**	**08 13 21.8**	**-2.1**
RKT				*e*LQ		08 15 56.4	
RKT				*e*LR	LR	08 17 13.9	
	1µm,28.8s						
CTA	**Charters Tower**	**38.36**	**257**	P	**P**	**08 07 47.1**	**+0.3**
	3.8nm,0.8s,mb4.2,baz=90,slow=7.0,SNR=4.7						
CTAO	**Charters Tower**	**38.36**	**257**	P	**P**	**08 07 45.5**	**-1.2**
	18nm,1.1s,mb4.7						
CTAO	**Charters Tower**	**38.36**	**257**	P	**P**	**08 07 45.5**	**-1.2**
CTAO				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
PMG	**Port Moresby**	**38.59**	**274**	LR	LR	08 21 44.5	
	comp=Z,634nm,18.5s,MS4.5,baz=83,slow=33						
CNB	**Canberra Magne**	**38.61**	**232**	*e*P	**P**	**08 07 50.5**	**+1.8**
	comp=Z,38nm,1.0s,mb5.1						
TOO	**Toolangi**	**42.33**	**230**	*e*P	**P**	**08 08 20.2**	**+0.8**
	comp=Z,29nm,1.1s,mb4.8						
TOO	**Toolangi**	**42.33**	**230**	*e*P	**P**	**08 08 20.2**	**+0.8**
TOO				pmax	pmax		
	comp=Z,29nm,1.1s,mb4.8						
STKA	**Stephens Creek**	**43.85**	**240**	*e*P	**P**	**08 08 30.8**	**-1.0**
	comp=Z,24nm,1.3s,mb4.8						
STKA	**Stephens Creek**	**43.85**	**240**	P	**P**	**08 08 30.1**	**-1.6**
	comp=Z,5.8nm,0.9s,mb4.3,baz=40,slow=9.0,SNR=6.3						
STKA				LR	LR	08 24 32.4	
	comp=Z,1µm,18.7s,MS4.8,baz=61,slow=33						
WB2	**Warramunga Arr**	**49.55**	**257**	*e*P	**P**	**08 09 16.1**	**-0.8**
WRAB	**Tennant Creek**	**49.55**	**257**	*e*P	**P**	**08 09 15.1**	**-1.8**
	comp=Z,47nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	**49.55**	**257**	*e*P	**P**	**08 09 15.1**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.5						
WRA	**Warramunga Arr**	**49.56**	**257**	P	**P**	**08 09 14.8**	**-2.2**
	comp=Z,6.2nm,0.6s,mb4.8,baz=90,slow=7.1,SNR=25						
ASPA	**Alice Springs**	**49.86**	**252**	*e*P	**P**	**08 09 16.8**	**-2.4**
GUMO	**Guam**	**49.95**	**303**	LR	LR	08 27 10.3	
	comp=Z,360nm,18.9s,MS4.4,baz=219,slow=32						
FITZ	**Fitzroy Crossi**	**57.92**	**258**	LR	LR	08 33 24.2	
	comp=Z,1µm,20.7s,MS5.0,baz=96,slow=34						
SBA	**Scott Base**	**63.42**	**185**	*e*P	**P**	**08 10 55.7**	**+0.6**
	comp=Z,31nm,1.1s,mb5.3						
SBA	**Scott Base**	**63.42**	**185**	*e*P	**P**	**08 10 55.7**	**+0.6**
SBA				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.3						
VNDA	**Vanda**	**63.54**	**186**	*e*P	**P**	**08 10 55.0**	**-0.8**
	comp=Z,16nm,1.0s,mb5.0						
VNDA	**Vanda**	**63.54**	**186**	*e*P	**P**	**08 10 55.0**	**-0.8**
VNDA				pmax	pmax		
	comp=Z,16nm,1.0s						
NWAO	**Narrogin (SRO)**	**64.42**	**241**	LR	LR	08 37 00.4	
	comp=Z,944nm,20.2s,MS5.0,baz=252,slow=34						
MJAR	**Matsushiro Arr**	**68.57**	**320**	LR	LR	08 36 18.1	
	comp=Z,765nm,20.9s,MS4.9,baz=135,slow=31						
CASY	**Casey**	**70.45**	**205**	P	**P**	**08 11 39.3**	**-0.2**
	comp=Z,21nm,1.2s,mb5.0						
TGY	**Tagaytay City**	**70.85**	**291**	LR	LR	08 36 36.1	
	comp=Z,4.7nm,20.9s,baz=257,slow=31						
YSS	**Yuzh-Sakhalins**	**73.15**	**330**	⇑*i*P	**P**	**08 11 57.4**	**+1.4**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
MTUM	**Tungsten Hills**	**73.63**	**43**	*e*P	**P**	**08 11 57.9**	**-1.1**
YBH	**Yreka Blue Hor**	**73.64**	**37**	P	**P**	**08 11 57.3**	**-1.7**
	comp=Z,19nm,1.0s,mb5.0,baz=195,slow=1.7,SNR=23						
YBH	**Yreka Blue Hor**	**73.64**	**37**	*e*P	**P**	**08 11 58.8**	**-0.2**
	comp=Z,17nm,1.0s,mb4.9						
HUMO	**Hull Mountain**	**74.05**	**37**	*e*P	**P**	**08 12 00.2**	**-1.2**
	comp=Z,22nm,1.1s,mb5.0						
HUMO				*e*PcP	PcP	08 12 17.2	+0.5
NVAR	**Mina Array Bea**	**74.41**	**42**	P	**P**	**08 12 01.4**	**-2.1**
	comp=Z,12nm,0.9s,mb4.8,baz=223,slow=7.1,SNR=51						
NVAR				LR	LR	08 36 53.9	
	comp=Z,1µm,21.8s,MS5.1,baz=255,slow=30						
MNV	**Mina**	**74.50**	**42**	*e*P	**P**	**08 12 04.0**	**-0.1**
	comp=Z,30nm,1.1s,mb5.1						
MNV				*e*PcP	PcP	08 12 20.9	+2.2
MNV	**Mina**	**74.50**	**42**	*e*P	**P**	**08 12 04.0**	**-0.1**
MNV				*e*		08 12 20.9	
MNV				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
LDFC	**Landfair**	**74.75**	**47**	*e*P	**P**	**08 12 05.9**	**+0.3**
QSPA	**South Pole Qui**	**74.84**	**180**	*e*P	**P**	**08 12 04.5**	**-0.7**
	comp=Z,13nm,1.0s,mb4.8						
TPH	**Tonopah**	**74.92**	**43**	*e*P	**P**	**08 12 06.4**	**-0.1**
	comp=Z,25nm,1.0s,mb5.1						
TPNV	**Topopah Spring**	**74.95**	**44**	*e*P	**P**	**08 12 06.2**	**-0.5**
	comp=Z,7.7nm,0.8s,mb4.7						
TPNV	**Topopah Spring**	**74.95**	**44**	*e*P	**P**	**08 12 06.2**	**-0.5**
TPNV				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
MOD	**Modoc**	**75.17**	**38**	*e*P	**P**	**08 12 08.0**	**+0.1**
	comp=Z,22nm,1.0s,mb5.0						
NEN	**Nelson**	**75.23**	**46**	*e*P	**P**	**08 12 08.0**	**-0.3**
WVOR	**Wild Horse Val**	**76.49**	**39**	*e*P	**P**	**08 12 14.7**	**-0.6**
	comp=Z,28nm,1.1s,mb5.1						
WVOR	**Wild Horse Val**	**76.49**	**39**	*e*P	**P**	**08 12 14.7**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
TUC	**Tucson**	**76.53**	**51**	*e*P	**P**	**08 12 15.3**	**-0.4**
	comp=Z,40nm,1.5s,mb5.1						
TUC	**Tucson**	**76.53**	**51**	*e*P	**P**	**08 12 15.3**	**-0.4**
TUC				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.1						
ARUT	**Antelope Range**	**77.30**	**45**	*e*P	**P**	**08 12 20.5**	**+0.6**
SSE	**Sheshan**	**77.57**	**307**	*e*P	**P**	**08 12 21.9**	**+0.4**
SSE				PCP	PcP	08 12 32.4	+0.3
SSE				PP	PP	08 15 15.6	-2.7
SSE				S	S	08 22 13.5	+4.1
SSE				SCS	ScS	08 22 39.6	+5.4
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,70nm,5.4s						
SSE				LR	LR		
	comp=N,370nm,32.7s,MS4.7						
SSE				LR	LR		
	comp=E,430nm,32.7s,MS4.7						
SSE				LR	LR		
	comp=Z,540nm,31.8s,MS4.7						
SSE	**Sheshan**	**77.57**	**307**	*e*P	**P**	**08 12 21.9**	**+0.4**
	comp=Z,27nm,0.7s,mb5.3						
SSE				pP	pP	08 12 25.1	-6.1
SSE				sP	sP	08 12 26.5	-8.0
SSE				PcP	PcP	08 12 32.4	+0.3
SSE				PP	PP	08 15 15.6	-2.7
SSE				S	S	08 22 13.5	+4.1
SSE				sS		08 22 18.7	
SSE				ScS	ScS	08 22 39.6	+5.4
SSE				LR	LR		
	comp=Z,550nm,31.8s,MS4.7						
WUAZ	**Wupatki**	**77.61**	**48**	*e*P	**P**	**08 12 22.2**	**+0.5**
	comp=Z,46nm,1.4s,mb5.2						
ELK	**Elko**	**77.66**	**42**	*e*P	**P**	**08 12 22.0**	**+0.2**
	comp=Z,15nm,1.1s,mb4.8						
ELK	**Elko**	**77.66**	**42**	*e*P	**P**	**08 12 22.0**	**+0.2**
ELK				pmax	pmax		
	comp=Z,15nm,1.1s						
HAWA	**Hanford**	**78.31**	**35**	*e*P	**P**	**08 12 24.3**	**-0.9**
	comp=Z,2.2nm,1.4s,mb3.9						
MVU	**Marysvale**	**78.49**	**45**	*e*P	**P**	**08 12 26.9**	**+0.5**
	comp=Z,20nm,1.2s,mb4.9						
MSU	**Marysvale**	**78.52**	**45**	*e*P	**P**	**08 12 27.2**	**+0.6**
MDJ	**Mudanjiang**	**78.67**	**323**	P	**P**	**08 12 27.9**	**+0.7**
MDJ				S	S	08 22 26.2	+5.3
MDJ				SS	SS	08 27 26.6	-1.5
MDJ				AMB	AMB		
	comp=Z,280nm,4.7s						
MDJ				LR	LR		
	comp=N,580nm,21.0s,MS5.1						
MDJ				LR	LR		
	comp=E,690nm,23.1s,MS5.1						
MDJ				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
BMO	**Blue Mountains**	**78.67**	**37**	*e*P	**P**	**08 12 26.8**	**-0.5**
	comp=Z,15nm,1.0s,mb4.9						
DUG	**Dugway**	**78.94**	**43**	*e*P	**P**	**08 12 28.0**	**-0.9**
	comp=Z,19nm,1.0s,mb5.0						
DUG	**Dugway**	**78.94**	**43**	*e*P	**P**	**08 12 28.0**	**-0.9**
DUG				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
PMR	**Palmer**	**79.00**	**12**	*e*P	**P**	**08 12 27.9**	**-0.7**
	comp=Z,39nm,1.4s,mb5.1						
PMR	**Palmer**	**79.00**	**12**	*e*P	**P**	**08 12 28.0**	**-0.7**
PMR				pmax	pmax		
	comp=Z,39nm,1.4s,mb5.1						
TMUT	**Trail Mountain**	**79.57**	**44**	*e*P	**P**	**08 12 33.2**	**+1.0**
HLID	**Hailey**	**79.69**	**39**	*e*P	**P**	**08 12 32.7**	**-0.1**
	comp=Z,25nm,0.9s,mb5.2						
HVU	**Hansel Valley**	**79.78**	**42**	*e*P	**P**	**08 12 33.6**	**+0.3**
	comp=Z,19nm,0.9s,mb5.0						
HVU	**Hansel Valley**	**79.78**	**42**	*e*P	**P**	**08 12 33.6**	**+0.2**
HVU				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
NJ2	**Nanjing**	**79.78**	**307**	*e*P	**P**	**08 12 33.3**	**-0.3**
NJ2				PP	PP	08 15 36.5	+0.1
NJ2				S	S	08 22 35.0	+2.1
NJ2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,50nm,10.8s						
NJ2				LR	LR		
	comp=N,990nm,29.3s,MS5.3						
NJ2				LR	LR		
	comp=E,2µm,32.6s,MS5.3						
NJ2				LR	LR		
	comp=Z,630nm,25.9s						
CTU	**Camp Tracy**	**79.89**	**43**	P	**P**	**08 12 33.6**	**-0.4**
	comp=Z,16nm,0.9s,mb5.0						
SRU	**San Rafael**	**79.94**	**45**	*e*P	**P**	**08 12 34.8**	**+0.5**
	comp=Z,23nm,1.1s,mb5.0						
SRU	**San Rafael**	**79.94**	**45**	*e*P	**P**	**08 12 34.8**	**+0.5**
SRU				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
DAU	**Daniels Canyon**	**80.08**	**43**	*e*P	**P**	**08 12 35.4**	**+0.4**
LENM	**Lemitar**	**80.21**	**51**	P	**P**	**08 12 36.7**	**+0.8**
TCUT	**Toone Canyon**	**80.33**	**43**	*e*P	**P**	**08 12 36.2**	**-0.1**
MNTX	**Cornudas Mount**	**80.38**	**53**	*e*P	**P**	**08 12 36.5**	**-0.3**
	comp=Z,34nm,1.4s,mb5.1						
HWUT	**Hardware Ranch**	**80.47**	**42**	*e*P	**P**	**08 12 36.4**	**-0.6**
	comp=Z,19nm,1.2s,mb4.9						
LPM	**Los Pinos Moun**	**80.53**	**51**	*e*P	**P**	**08 12 37.7**	**+0.2**
PV10	**Paradox Valley**	**80.61**	**46**	*e*P	**P**	**08 12 38.4**	**+0.5**
CN2	**Changchun**	**80.72**	**320**	*e*P	**P**	**08 12 38.8**	**+0.5**
CN2				*e*S	S	08 22 45.0	+2.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,480nm,21.0s,MS5.0						
CN2				LR	LR		
	comp=E,520nm,21.0s,MS5.0						
CN2				LR	LR		
	comp=Z,750nm,23.0s,MS5.0						
NEW	**Newport**	**80.73**	**34**	PFAKE		08 12 50.0	+12
NEW				LR	LR		
	comp=Z,987nm,21.0s,MS5.1						
LTX	**Lajitas**	**80.78**	**56**	*e*P	**P**	**08 12 39.1**	**+0.1**
	comp=Z,44nm,1.4s,mb5.2						
LTX	**Lajitas**	**80.78**	**56**	*e*P	**P**	**08 12 39.1**	**+0.2**
LTX				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.2						
TXAR	**Lajitas Array**	**80.78**	**56**	P	**P**	**08 12 38.8**	**-0.2**
	comp=Z,2.2nm,1.0s,mb4.1,baz=226,slow=8.2,SNR=16						
TXAR				LR	LR	08 42 32.3	
	comp=Z,626nm,18.6s,MS5.0,baz=290,slow=31						
PV01	**Paradox Valley**	**80.83**	**46**	*e*P	**P**	**08 12 38.4**	**-0.6**
ANMO	**Albuquerque**	**80.93**	**50**	*e*P	**P**	**08 12 39.3**	**-0.3**
	comp=Z,31nm,1.4s,mb5.0						
ANMO	**Albuquerque**	**80.93**	**50**	*e*P	**P**	**08 12 39.8**	**+0.2**
MCMT	**McKenzie Canyo**	**81.31**	**39**	*e*P	**P**	**08 12 42.1**	**+0.7**
THY	**Trims Highway**	**81.33**	**12**	*e*P	**P**	**08 12 41.1**	**0.0**
GDL2	**Guadalupe Moun**	**81.37**	**53**	*e*P	**P**	**08 12 42.5**	**+0.5**
RRI2	**Red Ridge**	**81.50**	**41**	*e*P	**P**	**08 12 43.0**	**+0.6**
	comp=Z,44nm,1.0s,mb5.3						
MSO	**Missoula**	**81.72**	**37**	*e*P	**P**	**08 12 43.3**	**-0.2**
	comp=Z,12nm,1.1s,mb4.7						
DLMT	**Dillon**	**81.74**	**39**	*e*P	**P**	**08 12 44.1**	**+0.5**
	comp=Z,18nm,1.0s,mb5.0						
CLNB	**Carlsbad**	**81.77**	**53**	P	**P**	**08 12 44.2**	**+0.2**
REDW	**Red Top Meadow**	**81.81**	**41**	*e*P	**P**	**08 12 44.0**	**0.0**
	comp=Z,55nm,1.2s,mb5.4						
REDW				*e*pP	pP	08 12 54.2	+0.5
TPAW	**Teton Pass**	**81.81**	**41**	*e*P	**P**	**08 12 44.4**	**+0.4**
	comp=Z,40nm,1.0s,mb5.3						
SNOW	**Snow King Moun**	**81.92**	**41**	*e*P	**P**	**08 12 44.5**	**0.0**
	comp=Z,31nm,1.0s,mb5.2						
IMW	**Indian Meadow**	**82.02**	**40**	*e*P	**P**	**08 12 45.2**	**+0.2**
	comp=Z,39nm,1.0s,mb5.3						
MOOW	**Moose Ponds**	**82.06**	**41**	*e*P	**P**	**08 12 45.7**	**+0.4**
	comp=Z,4.9nm,1.1s,mb4.3						
LOHW	**Long Hollow**	**82.09**	**41**	*e*P	**P**	**08 12 45.5**	**+0.1**
	comp=Z,26nm,1.2s,mb5.0						
CPRX	**Cap Rock**	**82.09**	**53**	*e*P	**P**	**08 12 46.2**	**+0.6**
CPRX				*e*pP	pP	08 12 55.5	0.0
CHMT	**Chamberlain Mo**	**82.17**	**37**	*e*P	**P**	**08 12 45.4**	**-0.4**
CHMT				*e*pP	pP	08 12 54.5	-1.1
QLMT	**Earthquake Lak**	**82.18**	**39**	*e*P	**P**	**08 12 46.8**	**+0.9**
COLA	**College**	**82.23**	**11**	*e*P	**P**	**08 12 43.1**	**-2.7**
	comp=Z,53nm,1.0s,mb5.4						
COLA	**College**	**82.23**	**11**	*e*P	**P**	**08 12 42.3**	**-3.4**
ILAR	**Eielson Array**	**82.32**	**11**	P	**P**	**08 12 44.2**	**-2.0**
	comp=Z,1.9nm,0.8s,mb4.1,baz=218,slow=7.5,SNR=22						
ILAR				LR	LR	08 42 05.1	
	comp=Z,547nm,21.6s,MS4.9,baz=177,slow=30						
PDAR	**Pinedale Array**	**82.34**	**42**	P	**P**	**08 12 45.5**	**-1.3**
	comp=Z,3.1nm,0.9s,mb4.3,baz=232,slow=3.6,SNR=19						
PDAR				LR	LR	08 44 55.6	
	comp=Z,864nm,18.2s,MS5.2,baz=170,slow=32						
YFT	**Old Faithful**	**82.36**	**40**	*e*P	**P**	**08 12 48.9**	**+2.1**
YMR	**Madison River**	**82.39**	**40**	*e*P	**P**	**08 12 47.7**	**+0.7**
	comp=Z,29nm,1.0s,mb5.2						
SMCO	**Snowmass**	**82.42**	**46**	*e*P	**P**	**08 12 47.9**	**+0.6**
	comp=Z,51nm,1.2s,mb5.3						
BOZ	**Bozeman (W)**	**82.47**	**39**	*e*P	**P**	**08 12 47.0**	**-0.4**
	comp=Z,26nm,1.3s,mb5.0						
BOZ				*e*pP	pP	08 12 56.5	-0.7
LKWY	**Lake**	**82.68**	**40**	P	**P**	**08 12 50.8**	**+2.3**
	comp=Z,30nm,1.0s,mb5.3						
LKWY				*e*pP	pP	08 12 59.4	+1.1
SDCO	**Great Sand Dun**	**82.83**	**48**	*e*P	**P**	**08 12 49.6**	**+0.2**
	comp=Z,23nm,1.1s,mb5.1						
SDCO				*e*pP	pP	08 12 58.8	-0.5
SDCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
HRY	**Holter Researc**	**82.90**	**38**	*e*P	**P**	**08 12 49.0**	**-0.5**
HRY				*e*pP	pP	08 12 59.1	-0.3
DAWY	**Dawson**	**83.31**	**14**	*e*P	**P**	**08 12 52.0**	**+0.6**
RWWY	**Rawlins**	**83.38**	**44**	*e*P	**P**	**08 12 51.0**	**-1.2**
	comp=Z,91nm,1.1s,mb5.7						
RWWY				*e*pP	pP	08 13 01.6	-0.4
ISCO	**Idaho Springs**	**83.63**	**46**	*e*P	**P**	**08 12 53.9**	**+0.3**
	comp=Z,20nm,1.1s,mb5.2						
BILL	**Bilibino**	**84.27**	**353**	*e*P	**P**	**08 12 56.6**	**+0.6**
	comp=Z,22nm,1.0s,mb5.2						
BILL				*e*pP	pP	08 13 08.2	+2.2
BILL	**Bilibino**	**84.27**	**353**	*e*P	**P**	**08 12 56.6**	**+0.5**
BILL				*e**PP	pP	08 13 08.2	+2.3
BILL				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.2						
JCT	**Junction City**	**84.32**	**56**	*e*P	**P**	**08 12 56.1**	**-1.1**
	comp=Z,22nm,1.0s,mb5.2						
JCT				*e*pP	pP	08 13 05.7	-1.4
PHWY	**Pilot Hill**	**84.39**	**45**	*e*P	**P**	**08 12 57.8**	**+0.5**
PHWY				*e*pP	pP	08 13 07.3	+0.1
EDM	**Edmonton**	**85.49**	**32**	*e*P	**P**	**08 12 60.0**	**-2.5**
EDM				*e*pP	pP	08 13 10.4	-1.9
LAO	**LASA Array**	**86.27**	**40**	*e*P	**P**	**08 13 07.7**	**+1.2**
	comp=Z,13nm,1.1s,mb5.1						
LAO				*e*pP	pP	08 13 17.2	+0.8
RSSD	**Black Hills**	**86.54**	**43**	*e*P	**P**	**08 13 07.8**	**-0.2**
	comp=Z,26nm,1.3s,mb5.3						
RSSD				*e*pP	pP	08 13 18.8	+1.0
RSSD	**Black Hills**	**86.54**	**43**	*e*P	**P**	**08 13 07.8**	**-0.1**
RSSD				*e**PP	pP	08 13 18.8	+1.0
RSSD				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.3						
MAW	**Mawson**	**87.87**	**199**	P	**P**	**08 13 12.9**	**-0.9**
	comp=Z,5.9nm,1.0s,mb4.8,baz=135,slow=5.3,SNR=9.1						
MAW				LR	LR	08 49 57.0	
	comp=Z,1µm,20.4s,MS5.4,baz=58,slow=34						
INK	**Inuvik**	**88.16**	**14**	*e*P	**P**	**08 13 15.5**	**+0.4**
	comp=Z,15nm,1.4s,mb5.0						
INK	**Inuvik**	**88.16**	**14**	*e*P	**P**	**08 13 15.5**	**+0.4**
INK				pmax	pmax		
	comp=Z,15nm,1.4s						
NATX	**Nacogdoches**	**88.90**	**57**	P	**P**	**08 13 26.8**	**+7.2**
PLCA	**Paso Flores**	**89.89**	**132**	P	**P**	**08 13 24.3**	**+0.2**
	comp=Z,1.9nm,1.1s,mb4.3,baz=269,slow=9.8,SNR=2.3						
PLCA				LR	LR	08 45 58.1	
	comp=Z,495nm,20.0s,MS4.9,baz=189,slow=30						
PLCA	**Paso Flores**	**89.89**	**132**	P	**P**	**08 13 24.3**	**+0.2**
PLCA				LR	LR	08 45 58.1	

YKA	Yellowknife Ar	90.05	23	P	P	08 13 24.1	-0.1
	comp=Z,1.7nm,0.8s,mb4.4,baz=240,slow=4.4,SNR=6.8						
YKA				LR	LR	08 48 37.7	
	comp=Z,863nm,19.2s,MS5.2,baz=235,slow=32						
YKA	Yellowknife Ar	90.05	23	P	P	08 13 24.1	-0.1
YKA				LR	LR	08 48 37.7	
KMI	Kunming	90.64	296	P	P	08 13 28.9	+1.0
KMI				PP	PP	08 17 07.7	+2.2
KMI				S	S	08 24 25.8	+6.8
KMI				PS	PS	08 25 32.5	-1.5
KMI				AMB	AMB		
	comp=Z,60nm,5.2s						
KMI				LR	LR		
	comp=N,200nm,22.2s,MS4.7						
KMI				LR	LR		
	comp=E,250nm,20.7s,MS4.7						
KMI				LR	LR		
	comp=Z,440nm,31.1s						
KMI	Kunming	90.64	296	P	P	08 13 28.9	+1.0
	comp=Z,4.0nm,0.8s,mb4.8						
KMI				sP	sP	08 13 33.7	-7.2
KMI				PP	PP	08 17 07.7	+2.2
KMI				S	S	08 24 25.8	+6.8
KMI				PS	PS	08 25 32.5	-1.5
KMI				LR	LR		
	comp=Z,450nm,31.1s,MS4.7						
JTS	JuntasAbangare	91.50	80	P	P	08 13 31.3	-0.8
	comp=Z,68nm,1.5s,mb5.8						
JTS	JuntasAbangare	91.50	80	*e*P	P	08 13 41.1	+9.1
SYO	Syowa Base	92.72	191	⇓P	P	08 13 50.7	+14
VNA3	Neumayer Olymp	93.08	175	*e*	P	08 13 40.1	+2.1
VNA3	Neumayer Olymp	93.08	175	*e*	P	08 13 51.9	+14
VNA3	Neumayer Olymp	93.08	175	*e*	P	08 13 55.1	+17
VNA3	Neumayer Olymp	93.08	175	*e*	tx	08 14 18.5	
VNA3	Neumayer Olymp	93.08	175	⇑*i*P	P	08 13 37.1	-0.9
VNA3				*e*		08 13 40.1	
VNA3				*e*		08 13 51.9	
VNA3				*e*		08 13 55.1	
VNA3				*e*		08 14 18.5	
SNAA	Sanae	93.12	177	*e*	P	08 13 40.5	+2.3
SNAA	Sanae	93.12	177	*e*	P	08 13 53.0	+15
SNAA	Sanae	93.12	177	*e*	P	08 13 56.0	+18
SNAA	Sanae	93.12	177	*e*	tx	08 14 18.5	
SNAA	Sanae	93.12	177	⇑*i*P	P	08 13 37.3	-0.9
SNAA				*e*		08 13 40.5	
SNAA				*e*pP	pP	08 13 52.7	+4.7
SNAA				*e*		08 13 53.0	
SNAA				*e*		08 13 56.0	
SNAA				*e*		08 14 18.5	
VNA2	Neumayer--Watz	93.58	176	*e*	P	08 13 41.4	+1.1
VNA2	Neumayer--Watz	93.58	176	*e*	P	08 13 54.6	+14
VNA2	Neumayer--Watz	93.58	176	*e*	P	08 13 58.0	+18
VNA2	Neumayer--Watz	93.58	176	*e*	tx	08 14 22.1	
VNA2	Neumayer--Watz	93.58	176	⇑*i*P	P	08 13 39.1	-1.2
VNA2				*e*		08 13 41.4	
VNA2				*e*		08 13 54.6	
VNA2				*e*		08 13 58.0	
VNA2				*e*		08 14 22.1	
VNA1	Neumayer--Stat	93.78	175	*e*	P	08 13 43.9	+2.7
VNA1	Neumayer--Stat	93.78	175	*e*	P	08 13 55.7	+15
VNA1	Neumayer--Stat	93.78	175	*e*	P	08 13 58.7	+18
VNA1	Neumayer--Stat	93.78	175	*e*	tx	08 14 22.1	
VNA1	Neumayer--Stat	93.78	175	⇑*i*P	P	08 13 41.1	-0.1
VNA1				*e*		08 13 43.9	
VNA1				*e*		08 13 55.7	
VNA1				*e*		08 13 58.7	
VNA1				*e*		08 14 22.1	
ULM	Lac du Bonnet	93.99	39	P	P	08 13 45.4	+2.8
	comp=Z,8.2nm,1.1s,mb5.1,baz=76,slow=20,SNR=2.7						
ULM				LR	LR	08 50 49.0	
	comp=Z,1µm,19.6s,MS5.3,baz=140,slow=32						
SONM	Songino Array	94.48	318	P	P	08 13 45.7	+0.7
	comp=Z,0.1nm,0.4s,baz=63,slow=3.2,SNR=2.8						
SONM				LR	LR	08 51 13.4	
	comp=Z,336nm,21.2s,MS4.8,baz=73,slow=32						
TIXI	Tiksi	94.72	344	*e*P	P	08 13 44.9	-0.6
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb5.0						
GTA	Gaotai	96.80	309	*e*P	P	08 13 59.7	+4.0
GTA				AP	pP	08 14 04.2	-1.4
GTA				XP	sP	08 14 07.2	-1.6
GTA				PP	PP	08 17 56.4	+3.0
GTA				XS		08 25 33.4	
GTA				AMB	AMB		
	comp=Z,90nm,5.0s						
GTA				LR	LR		
	comp=N,230nm,18.0s,MS5.0						
GTA				LR	LR		
	comp=E,400nm,21.8s,MS5.0						
GTA				LR	LR		
	comp=Z,580nm,21.8s,MS5.0						
ZAL	Zalesovo	108.88	322	PKiKP		08 18 52.3	
	comp=Z,14nm,0.3s,baz=345,slow=3.4,SNR=16						
MKAR	Makanchi Array	110.45	315	PKiKP		08 18 55.1	
	comp=Z,0.6nm,0.8s,baz=211,slow=2.7,SNR=5.3						
MKAR	Makanchi Array	110.45	315	*i* PKIKP	PKPdf	08 18 58.2	-2.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	Kurchatov	112.77	319	*i* PKIKP	PKPdf	08 19 00.4	-4.8
BVAR	Borovoye Array	117.52	322	PKP	PKPdf	08 19 10.1	-4.3
	comp=Z,1.4nm,0.9s,baz=90,slow=1.5,SNR=4.6						
ARU	Arti	123.00	328	*i* PKIKP	PKPdf	08 19 20.5	-4.4
ARU				*e*		08 26 14.9	
ARU				MLR	MLR		
	comp=Z,400nm,21.0s,MS5.0						
ARU				MLR	MLR		
	comp=N,100nm,19.0s,MS5.0						
ARU				MLR	MLR		
	comp=E,300nm,21.0s,MS5.0						
ARCES	ARCESS Array B	124.37	352	PKP	PKPdf	08 19 23.3	-4.0
	comp=E,2.7nm,0.7s,baz=326,slow=4.4,SNR=8.6						
ARE0	ARCESS Array S	124.37	352	*e*P	PKPdf	08 19 23.4	-3.9
AKTO	Aktyubinsk	125.62	322	PKP	PKPdf	08 19 27.0	-3.1
	comp=E,0.7nm,0.6s,baz=104,slow=4.2,SNR=3.6						
KLMR	Klimovskoe	128.49	340	*e*PKIKP	PKPdf	08 19 39.4	+4.0
KLMR				pmax	pmax		
	comp=Z,30nm,1.7s						
FINES	FINESS Array B	131.68	347	PKP	PKPdf	08 19 38.8	-2.7
	comp=Z,5.1nm,1.1s,baz=342,slow=4.4,SNR=3.4						
OBN	Obninsk	133.80	336	⇓*i*PKIKP		08 19 58.6	
OBN				*e*		08 20 03.1	
OBN				pmax	pmax		
	comp=Z,27nm,1.1s						
OBN				MLR	MLR		
	comp=Z,300nm,21.0s,MS5.0						
NB2	NORSAR Subarra	134.09	357	PKPdf	PKPdf	08 19 54.7	+8.8
	comp=Z,6.8nm,1.1s,baz=7.0,slow=1.8						
NB2	NORSAR Subarra	134.09	357	PKPd	PKPdf	08 19 54.7	+8.8
	baz=6.6,slow=1.8						
NOA	NORSAR Array B	134.09	357	PKP	PKPdf	08 19 43.9	-2.0
	comp=Z,1.0nm,0.7s,baz=100,slow=5.4,SNR=2.6						
HFS	Hagfors	134.81	355	PKP	PKPdf	08 19 44.8	-2.5
	comp=Z,2.2nm,0.7s,baz=38,slow=16,SNR=2.4						
KIV	Kislovodsk	137.84	320	*i* PKIKP	PKPdf	08 19 49.3	-4.0
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,311nm,19.0s,MS5.1						
GNI	Garni	138.30	314	*i* PKIKP	PKPdf	08 19 50.5	-3.8
GNI				MLR	MLR		
	comp=Z,300nm,19.0s						
AKASG	Malin Array Be	140.03	337	PKP	PKPdf	08 19 54.4	-2.8
	comp=Z,1.3nm,0.7s,baz=32,slow=2.3,SNR=4.7						
ANN	Anapa	140.45	325	*i* PKHKP		08 19 44.7	
ANN				pmax	pmax		
	comp=Z,82nm,1.5s						
LSZ	Lusaka	142.76	217	PKP	PKPdf	08 20 01.1	-1.7
	comp=Z,1.4nm,0.7s,baz=180,slow=3.0,SNR=2.2						
LSZ	Lusaka	142.76	217	PKP	PKPdf	08 20 01.1	-1.7
OJC	Ojcow	143.38	345	*e*PKP		08 20 13.1	
KSP	Ksiaz	143.54	349	*e*PKP	PKPdf	08 20 10.0	+6.8
CLL	Collm	143.58	353	*e*PKIKP	PKPdf	08 19 59.0	-4.2
CLL				*e*		08 20 11.0	
CLL				*e*PP	PP	08 23 18.0	+3.8
CLL	Collm	143.58	353	*e*PKP	PKPdf	08 19 58.0	-5.2
CLL				*e*		08 20 11.0	
STHS	Stebnicka Huta	143.75	343	*e*PKP	PKPdf	08 19 57.2	-6.4
STHS				*e*		08 20 08.9	
KOLS	Kolonicke sedl	143.89	342	*e*PKP	PKPdf	08 19 59.1	-4.7
UPC	Upice	143.91	349	*e*x	PKPdf	08 20 06.3	+2.5
DPC	Dobruska-Polom	144.01	349	*e*PKP	PKPdf	08 19 59.6	-4.4
DPC				*e*pPKP		08 20 08.9	
DPC				AMS	AMS	09 19 40.0	
	comp=Z,800nm,23.1s						
CRVS	Cervenica-Dubn	144.15	343	*e*PKP	PKPdf	08 20 00.0	-4.3
CRVS				*e*		08 20 16.4	
MORC	Moravsky Berou	144.31	347	*e*PKPdf	PKPdf	08 20 01.2	-3.4
MOX	Moxa	144.38	354	*i* P	PKPbc	08 20 00.6	+1.5
	comp=Z,logA/T=1.4						
MOX				pPKP		08 20 12.0	
MOX				*e*		08 51 00.0	
MOX				L		09 25 51.0	
MOX	Moxa	144.38	354	*e*PKP	PKPdf	08 20 00.6	-4.1
MOX				*e*pPKP		08 20 12.0	
MOX				*e*SSSS		08 51 00.0	
MOX				LR	LR		
	comp=Z,200nm,19.0s,MS4.9						
MOX	Moxa	144.38	354	*e*PKIKP	PKPdf	08 20 00.6	-4.1
MOX				*e*		08 20 12.0	
MOX				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.9						
HGN	Heimansgroeve	144.53	0	*e*PKP	PKPdf	08 20 05.8	+0.8
	comp=Z,43nm,1.7s						
PRU	Pruhonice	144.66	351	*e*PKP	PKPdf	08 20 01.4	-3.8
PRU				*e*pPKP		08 20 11.4	
PRU				AMS	AMS	09 22 30.0	
	comp=Z,900nm,20.9s						
NKC	Novy Kostel	144.70	353	*e*PKP	PKPdf	08 20 01.4	-3.8
NKC				*e*pPKP		08 20 11.0	
KECS	Kecovo	144.80	344	*i* PKP	PKPdf	08 20 02.0	-3.5
KECS				*e*		08 20 14.1	
KAHT	Ahir Dag	144.89	315	*i* P	PKPbc	08 20 03.2	+2.3
VRAC	Vranov	144.95	348	PKP	PKPdf	08 20 01.9	-3.8
	comp=Z,2.9nm,0.4s,baz=79,slow=3.2,SNR=5.8						
TNS	Taunus Mts	145.03	358	*e*PKPbc	PKPbc	08 20 02.3	+1.4
TNS				*e*sPKPbc		08 20 19.2	
TREC	Trest	145.17	349	*e*PKP	PKPdf	08 20 02.6	-3.5
TREC				*e*pPKP		08 20 14.8	
GIVF	Givet	145.17	2	*e*PKP1	PKPbc	08 20 01.5	+0.3
BAIF	Baives	145.20	2	*e*PKP1	PKPbc	08 20 01.8	+0.5
VYHS	Vyhne	145.22	345	*e*PKP	PKPdf	08 20 03.5	-2.7
VYHS				*e*		08 20 15.1	
TIRR	Tirgusor	145.31	332	⇑P	PKPbc	08 20 01.5	-0.3
TIRR	Tirgusor	145.31	332	*e*PKPbc	PKPbc	08 20 03.0	+1.2
GRA1	Grafenberg Arr	145.37	354	*e*PKPbc	PKPbc	08 20 03.5	+1.8
GRA1				*e*pPKPbc		08 20 15.2	
GRA1				LR	LR		
	comp=Z,500nm,20.8s,MS5.3						
GRF	Grafenberg Arr	145.37	354	*e*PKP	PKPdf	08 20 03.5	-2.9
GRF				pPKPbc		08 20 15.2	
GRF				LR	LR		
	comp=Z,500nm,20.8s,MS5.3						
GRF	Grafenberg Arr	145.37	354	*e*PKP2	PKPab	08 20 03.5	+0.2
GRF				MLR	MLR		
	comp=Z,500nm,20.8s,MS5.3						
GRF	Grafenberg Arr	145.37	354	*e*PKP2	PKPab	08 20 03.5	+0.2
GRF				MLR	MLR		
	comp=Z,500nm,20.8s,MS5.3						
ABH	Alteburg	145.40	359	PKP		08 20 19.2	
CDAG	Cicekdag	145.41	320	*i* P	PKPbc	08 20 04.0	+1.8
PSZ	Piszkesteto	145.48	344	*e*PKPbc	PKPbc	08 20 04.2	+2.2
MLR	Muntele Rosu	145.55	335	PKPbc	PKPbc	08 20 03.0	+0.7
	comp=Z,10.0nm,0.8s,baz=91,slow=1.3,SNR=16						
MLR	Muntele Rosu	145.55	335	⇓P	PKPbc	08 20 04.0	+1.7
AVNT	Avonos	145.60	319	*i* P	PKPbc	08 20 04.7	+2.0
TOD	Tromm	145.63	357	PKP		08 20 19.9	
WLF	Walferdange	145.63	0	*e*PKPdf	PKPdf	08 20 04.6	-2.3
KHC	Kasperske Hory	145.64	351	*e*PKP	PKPdf	08 20 04.3	-2.6
KHC				*e*pPKP		08 20 14.1	
KHC				AMS	AMS	09 22 40.0	
	comp=Z,900nm,20.7s						
KHC	Kasperske Hory	145.64	351	*e*PKP2	PKPab	08 20 04.3	-0.1
KHC				MLR	MLR		
	comp=Z,900nm,20.7s,MS5.5						
DRGR		145.64	340	⇑P	PKPbc	08 20 03.4	+0.9
DRGR		145.64	340	⇑P	PKPbc	08 20 03.4	+0.9
WET	Wettzell	145.72	352	*e*PKPbc	PKPbc	08 20 04.7	+2.1
WET				*e*pPKPbc		08 20 16.3	
BR131	Keskin Array S	145.79	321	*e*PKPdf	PKPdf	08 20 03.8	-3.7
BRTR	Keskin Array B	145.79	321	PKPbc	PKPbc	08 20 05.2	+2.0
	comp=Z,12nm,0.9s,baz=114,slow=2.1,SNR=32						
COBT	Iskenderun	145.89	314	*i* P	PKPbc	08 20 06.0	+2.5
GEC2	GERESS Array S	145.90	351	*e*PKPbc	PKPbc	08 20 05.4	+2.3
GERES	GERESS Array B	145.90	351	PKPbc	PKPbc	08 20 04.9	+1.9
	comp=Z,7.0nm,0.9s,baz=27,slow=3.0,SNR=21						
ZST	Bratislava	145.90	347	*e*PKP	PKPdf	08 20 18.2	+11
ZST				*e*L		08 22 59.3	
ZST	Bratislava	145.90	347	*e*PKP	PKPdf	08 20 06.4	-1.0
ZST				*e*		08 20 18.2	
KTD	Kalmit	145.94	358	PKP		08 20 20.8	
VOIR		145.95	336	⇓P	PKPbc	08 20 05.8	+2.5
VOIR		145.95	336	⇓P	PKPbc	08 20 05.8	+2.5
SRO	Srobarova	145.98	345	*e*PKP		08 20 18.1	
SRO2	Moca	146.01	345	*e*PKP	PKPdf	08 20 19.2	+12
FLN	La Foliniere	146.08	8	*e*PKP1	PKPbc	08 20 03.9	+0.4
FLN				*e*R			
	comp=Z,1µm,22.0s						
SGKT	Sivrigoynuk	146.19	323	*i* P	PKPbc	08 20 01.7	-2.4
ANTO	Ankara	146.22	322	*e*PKPdf	PKPdf	08 20 07.2	-1.0
ANTO				*e*pPKPdf		08 20 18.7	
LANF	Langenberg	146.29	358	PKP		08 20 21.1	
LDF	La Druitiere	146.29	8	*e*PKP1	PKPbc	08 20 04.6	+0.6
	comp=Z,380nm,1.8s						
GRR	Gorron	146.39	9	*e*PKP1	PKPbc	08 20 05.1	+0.8
	comp=Z,351nm,1.8s						
MOA	Molln	146.78	350	⇓*i*P	PKPbc	08 20 07.8	+2.6
	comp=Z,8.5nm,0.8s						
MOA	Molln	146.78	350	⇓*i*P	PKPbc	08 20 22.0	+17
	comp=Z,27nm,0.9s						
MEZF	Maizieres J'vi	146.78	1	*e*PKP1	PKPbc	08 20 07.0	+1.9
FUR	Furstenfeldbru	146.87	354	*e*PKPbc	PKPbc	08 20 08.4	+3.0
FUR				*e*pPKPbc		08 20 20.1	
WLS	Welschbruch	146.87	359	PKP		08 20 21.5	
CDF	Champ du Feu	146.87	359	*e*PKP1	PKPbc	08 20 07.1	+1.7
	comp=Z,131nm,1.2s						
BFO	Black Forest	146.92	357	*e*PKPbc	PKPbc	08 20 08.1	+2.6
BFO				*e*pPKPbc		08 20 20.3	
BFO				*e*sPKPbc		08 20 24.7	
THEF	They Montfort	147.07	0	PKP		08 20 23.0	
ECH	Echery	147.07	359	PKP		08 20 22.1	
ARSA	Arzberg	147.13	348	⇓*i*P	PKPdf	08 20 07.2	-2.3
	comp=Z,1.5nm,0.5s						
ARSA	Arzberg	147.13	348	⇑*i*P	PKPdf	08 20 21.9	+12
	comp=Z,24nm,1.2s						
HAU	Haudompre	147.29	360	*e*PKP1	PKPdf	08 20 08.2	-1.5
	comp=Z,124nm,1.2s						
HAU				*e*R			
	comp=Z,498nm,21.2s						
PKSM	Moragy	147.39	344	*e*P	PKPdf	08 20 09.2	-0.7
FELD	Feldberg	147.39	358	PKP		08 20 21.8	
MOF	Molkenrain	147.44	359	PKP		08 20 23.1	
HINF	Hinteralfeld	147.48	359	*e*PKP1	PKPdf	08 20 08.5	-1.5
	comp=Z,158nm,1.6s						
WATA	Walderalm	147.66	353	⇓*i*P	PKPdf	08 20 10.7	+0.4
	comp=Z,3.7nm,0.6s						
WATA	Walderalm	147.66	353	⇑*i*P	PKPdf	08 20 23.4	+13
	comp=Z,34nm,1.1s						
KBA	Koelnbreinsper	147.68	351	⇑*i*P	PKPdf	08 20 09.1	-1.3
	comp=Z,11nm,1.1s						
KBA	Koelnbreinsper	147.68	351	⇓*i*P	PKPdf	08 20 22.8	+12
	comp=Z,29nm,1.3s						
MOTA	Moosalm	147.70	354	⇑*i*P	PKPdf	08 20 10.6	+0.2
	comp=Z,10nm,1.0s						
MOTA	Moosalm	147.70	354	⇓*i*P	PKPdf	08 20 23.7	+13
	comp=Z,60nm,1.4s						
WTTA	Wattenberg	147.72	353	⇑*i*P	PKPdf	08 20 10.8	+0.4
	comp=Z,5.1nm,0.6s						
WTTA	Wattenberg	147.72	353	⇓*i*P	PKPdf	08 20 23.3	+13
	comp=Z,82nm,1.5s						
PERS	Pernice	147.80	349	*e*PKP	PKPdf	08 20 10.1	-0.5
PERS				*e*		08 20 22.3	
SQTA	Sankt Quirin	147.81	354	⇑*i*P	PKPdf	08 20 10.7	+0.1
	comp=Z,6.8nm,0.9s						
SQTA	Sankt Quirin	147.81	354	⇑*i*P	PKPdf	08 20 23.8	+13
	comp=Z,30nm,1.0s						
BBS	Basel-Blauen	147.82	358	PKP		08 20 24.2	
DAVA	Damuels	147.87	355	⇓*i*P	PKPdf	08 20 10.7	+0.1
	comp=Z,18nm,1.1s						
DAVA	Damuels	147.87	355	⇓*i*P	PKPdf	08 20 23.9	+13
	comp=Z,73nm,1.4s						
LOMF	Lomont	147.94	359	PKP		08 20 23.5	
LOR	Lormes	147.97	3	*e*PKP1	PKPdf	08 20 10.0	-0.8
	comp=Z,166nm,1.5s						
LOR				*e*R			
	comp=Z,1µm,21.2s						
OBKA	Obir	148.03	349	⇑*i*P	PKPdf	08 20 09.8	-1.2
OBKA	Obir	148.03	349	⇑*i*P	PKPdf	08 20 23.9	+13
	comp=Z,16nm,1.0s						
ULDT	Uludag	148.12	326	*i* P	PKPdf	08 20 11.1	-0.2
SSF	Saint Saulge	148.15	4	*e*PKP1	PKPdf	08 20 10.7	-0.4
	comp=Z,220nm,1.6s						
SEST	Monte Rota	148.16	352	PKP	PKPdf	08 20 12.9	+1.8
MFF	Saint Martin d	148.24	8	*e*PKP1	PKPdf	08 20 10.4	-0.9
	comp=Z,128nm,1.4s						
DAVOX	Davos	148.37	355	PKPbc	PKPdf	08 20 12.4	+0.9
	comp=Z,9.0nm,0.6s,baz=96,slow=3.8,SNR=9.2						
AVF	Avril sur Loir	148.41	4	*e*PKP1	PKPdf	08 20 10.9	-0.6
	comp=Z,109nm,1.4s						
GMNA	Gemona	148.47	351	PKP	PKPdf	08 20 11.8	+0.1
LJU	Ljubljana	148.48	349	*e*PKP	PKPdf	08 20 12.3	+0.6
LJU				*e*		08 20 24.0	
SMF	Signal de Mont	148.59	3	*e*PKP1	PKPdf	08 20 11.6	-0.2
	comp=Z,151nm,1.4s						
VOY	Vojsko	148.60	350	*e*PKP	PKPdf	08 20 12.1	+0.2
VOY				*e*		08 20 26.1	
BGF	Bois d'Agland	148.61	5	*e*PKP1	PKPdf	08 20 11.7	-0.2
	comp=Z,174nm,1.4s						
BRMO	Bormio	148.63	355	PKP	PKPdf	08 20 13.1	+1.2
VISS	Visnje	148.65	348	*e*PKP	PKPdf	08 20 12.6	+0.7
CABF	La Chapelle	148.69	0	*e*PKP1	PKPdf	08 20 12.7	+0.7
	comp=Z,289nm,1.4s						
TCF	Toulx Ste Croi	148.82	5	*e*PKP1	PKPdf	08 20 12.9	+0.7
	comp=Z,196nm,1.7s						
KDZ	Kurdzhali	148.87	332	*e*P	PKPdf	08 20 13.0	+0.6
ISP	Isparta	148.88	321	*i* PKP2	PKPab	08 20 13.6	-3.9
DIVS	Divcibare	148.92	341	⇓*i*PKP	PKPdf	08 20 13.3	+0.9
CTI	Castel Tesino	148.92	353	PKP	PKPdf	08 20 13.5	+1.1
BTOK	Tokmak	148.99	326	*i* P	PKPdf	08 20 13.2	+0.5
VTS	Vitosha	149.06	335	*e*P	PKPdf	08 20 14.0	+1.3
VAI	Varese	149.36	357	PKP	PKPdf	08 20 14.4	+1.3
MMB	Musomiste	149.67	334	*e*P	PKPdf	08 20 15.0	+1.3
KKB	Krupnik	149.71	335	*e*P	PKPdf	08 20 15.0	+1.2
RJF	Les Rejaudoux	149.73	7	*e*PKP1	PKPdf	08 20 14.7	+1.0
RJF				*e*R			
	comp=Z,955nm,22.8s						
LPL	La Plagne	149.78	359	*e*PKP1	PKPdf	08 20 15.8	+2.0
	comp=Z,105nm,1.2s						
LPG	La Plagne	149.80	359	*e*PKP1	PKPdf	08 20 16.0	+2.2
	comp=Z,54nm,0.9s						
LFF	La Frestale	149.99	8	*e*PKP1	PKPdf	08 20 15.3	+1.2
GRN	Grenoble	150.05	1	PKP	PKPdf	08 20 29.6	+15
GDM	Grand'Maison	150.09	0	PKP	PKPdf	08 20 29.4	+15
CAF	Calviac	150.16	6	*e*PKP1	PKPdf	08 20 15.8	+1.4
	comp=Z,176nm,1.5s						
BNI	Bardonecchia	150.24	359	*e*PKPbc	PKPdf	08 20 17.9	+3.4
SKO	Skopje	150.28	337	*i* PKP		08 20 30.4	
SKO	Skopje	150.28	337	*i* PKP		08 20 30.4	
ORIF	Oris-en-Rattie	150.38	1	*e*PKP1	PKPdf	08 20 16.8	+2.1
	comp=Z,167nm,1.4s						
ORIF				*e*R			
	comp=Z,616nm,21.8s						
VAY	Valandovo	150.38	335	*i* PKP		08 20 31.6	
VIVF	Saint-Julien-l	150.41	2	*e*PKP1	PKPdf	08 20 16.8	+2.0
	comp=Z,165nm,1.4s						
MBDF	Montbardon	150.57	359	*e*PKP1	PKPdf	08 20 17.2	+2.2
	comp=Z,186nm,1.5s						
SURF	Saint Ours	150.81	359	PKP	PKPdf	08 20 31.1	+16
LASF	Ste Croix	151.15	4	*e*PKP1	PKPdf	08 20 18.5	+2.6
	comp=Z,140nm,1.3s						
OHR	Ohrid	151.26	337	*i* PKP		08 20 32.1	
TOUF	Mont Tournerai	151.27	359	PKP		08 20 30.9	
AUTN	L'Aution	151.29	358	PKP		08 20 31.2	
SAOF	Saorge	151.29	358	PKP		08 20 31.6	
STOF	St-Etienne Org	151.30	1	PKP		08 20 31.0	
SMRF	Simiane la Rot	151.32	1	*e*PKP1	PKPdf	08 20 19.3	+3.1
	comp=Z,149nm,1.3s						
MVIF	Mont Vial	151.39	359	PKP		08 20 31.9	
SBF	Sospel	151.42	358	*e*PKP1	PKPdf	08 20 18.4	+2.1
	comp=Z,188nm,1.5s						
VILF	Villemus	151.44	1	PKP		08 20 31.1	
PRAF	Pradon	151.48	2	PKP		08 20 31.5	
CALN	Calern	151.54	359	PKP		08 20 31.6	
REVF	Revere	151.54	358	PKP		08 20 32.1	
FRF	La Foret Royal	151.74	359	*e*PKP1	PKPdf	08 20 19.4	+2.6
MTLF	Montolieu	151.75	6	*e*PKP1	PKPdf	08 20 19.5	+2.7
	comp=Z,129nm,1.7s						
PUYF	Puyloubier	151.76	1	PKP		08 20 32.5	
ETSF	Etsaut	151.79	11	*e*PKP1	PKPdf	08 20 20.0	+3.1
	comp=Z,202nm,1.6s						
LMR	La Mourre	151.96	360	*e*PKP1	PKPdf	08 20 19.9	+2.8
	comp=Z,136nm,1.3s						
BERF	Bertagne	151.98	1	PKP		08 20 32.2	
PGF	Pioggiola	152.65	356	*e*PKP1	PKPdf	08 20 21.2	+3.1
	comp=Z,101nm,1.3s						
ESDC	Sonseca Array	154.03	18	PKPbc	PKPdf	08 20 26.9	+6.7
	comp=Z,0.6nm,0.5s,baz=315,slow=3.6,SNR=3.0						
ESDC				PKPab	PKPab	08 20 37.8	-1.1
	comp=Z,0.4nm,0.3s,baz=341,slow=2.6,SNR=6.3						

NDI ***09*** *08:02:05.4±4.2,34.35N×73.47E,h10^{km},MD3.5,ML3.5, mb3.6(NEIC)*

MOS ***09*** *08:02:06.9±1.3,34.43N×73.62E,h10^{km},mb4.4/1,Error ellipse: s-maj=18.8km s-min=7.0km az=97.7*

IDC ***09*** *08:02:06.5±3.5,34.45N×73.79E,mb3.9/6,mb1 4.2/8, mb1mx3.9/23,mbtmp4.1/8,ML4.5/2,Error ellipse: s-maj=65.3km s-min=28.2km az=168.0*

NEIC ***09*** *08:02:07.5±1.6,34.26N×73.50E,h10^{km},mb3.6/7,Error ellipse: s-maj=29.3km s-min=14.3km az=214.0*

NNC ***09*** *08:02:12.2±6.4,34.19N×73.21E,h50^{km}±59^{km},mpv4.0, Error ellipse: s-maj=55.5km s-min=45.7km az=85.0*

ISC 09 08:02:06.8±0.4**,34.07N**±0.04×**73.31E**±0.07**,h33^{km},n55,** σ**1^{s}26**/68**,mb3.9**/7**,8C-3D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.60	128	*e*P	P	08 02 50.0	+2.6
THN				*e*SB	Sb	08 03 25.3	+0.9
DLH	Dalhousie	2.70	124	*e*P	P	08 02 52.0	+3.1
DLH				*e*SB	Sb	08 03 29.0	+1.7
BHK	Bhakra	3.73	134	*e*PG	P	08 03 17.0	+14
SDNR	Sundarnagar	4.01	129	*e*P	P	08 03 07.6	+0.1
SDNR				*e*SB	Sb	08 04 10.4	+5.2
SMLA	Simla	4.39	131	*e*P	P	08 03 12.6	-0.3
SMLA				*e*S	S	08 04 02.3	-1.1
KLP	Kalpa	4.87	120	*e*P	P	08 03 19.6	-0.1
KLP				*e*S	S	08 04 15.1	-0.6
KLP				AML	AML	08 04 38.4	
	comp=E,327nm,0.5s						
KLP				AML	AML	08 04 39.5	
	comp=N,275nm,0.5s						
NDI	New Delhi	6.33	147	*e*x	x	08 04 04.0	
NDI				*e*S	S	08 04 50.5	-1.7
KHET	Khetri	6.35	160	*e*P	P	08 03 41.1	+0.6
KHET				*e*S	S	08 04 50.9	-1.9
KHET				AML	AML	08 05 30.4	
	comp=N,15nm,0.4s						
KHET				AML	AML	08 05 31.3	
	comp=E,31nm,0.4s						
KUDL	Kundal	6.51	154	*e*P	P	08 03 42.1	-0.6
KUDL				*e*S	S	08 04 57.1	+0.4
SONA	Sohna	6.65	150	*e*P	P	08 03 43.3	-1.4
SONA				*e*S	S	08 05 00.1	0.0
SONA				AML	AML	08 05 45.1	
	comp=E,29nm,0.8s						
SONA				AML	AML	08 05 47.2	
	comp=N,26nm,0.6s						
AML	Almayashu	8.05	2	P	P	08 04 04.8	+0.5
	SNR=32						
UCH	Uchtor	8.20	6	P	P	08 04 06.7	+0.4
	SNR=27						
EKS2	Erkin-Say	8.58	2	P	P	08 04 12.1	+0.4
	SNR=16						
AAK	Ala-Archa	8.60	6	P	P	08 04 10.7	-1.1
	SNR=6.8						
AAK	Ala-Archa	8.60	6	P	P	08 04 11.6	-0.2
	comp=N,6.3nm,0.8s						
AAK				⇑S	S	08 05 48.5	-0.2
	comp=N,2.2nm,0.5s						
AAK	Ala-Archa	8.60	6	P	P	08 04 11.6	-0.2
AAK				S	S	08 05 48.5	-0.2
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHMS	Chumysh	8.98	7	P	P	08 04 17.5	+0.3
	SNR=5.7						
TKM2	Tokmak 2	9.01	11	P	P	08 04 18.1	+0.5
	SNR=11						
KK31	Karatay Array	9.28	347	P	P	08 04 21.1	-0.1
	comp=Z,4.9nm,0.3s,baz=159,slow=11,SNR=98						
KK31				⇑S	S	08 06 03.6	-2.0
	comp=Z,2.4nm,0.5s,baz=175,slow=23,SNR=5.0						

KK31	Karatay Array	9.28	347	P	P	08 04 21.1	-0.1
	comp=Z,4.9nm,0.3s						
KK31				S	S	08 06 03.6	-2.0
KK31	Karatay Array	9.28	347	P	P	08 04 21.2	0.0
KK31				S	S	08 06 03.6	-2.0
KK31				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KKAR	Karatay Array	9.28	347	*e*P	P	08 04 21.1	-0.1
KKAR						08 06 03.6	
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KKAR				smax			
	comp=Z,1.0nm,0.3s						
MK02	Makanchi Array	14.40	26	⇓P	P	08 05 35.6	+5.5
MK02				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	14.42	26	⇓P	P	08 05 35.5	+5.2
	comp=Z,1.9nm,0.7s,baz=205,slow=10,SNR=12						
MKAR	Makanchi Array	14.42	26	Pn	P	08 05 25.6	-4.8
	comp=Z,0.1nm,0.3s,baz=214,slow=14,SNR=3.1						
LSA	Lhasa	15.77	101	*e*P	P	08 05 50.4	+2.4
	comp=Z,8.2nm,0.7s						
LSA	Lhasa	15.77	101	*e*P	P	08 05 50.4	+2.4
LSA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KURK	Kurchatov	17.08	12	⇓P	P	08 06 06.5	+2.0
	comp=Z,3.3nm,1.1s						
AB31	Akbulak array	18.12	331	⇑P	P	08 06 18.6	+1.2
	comp=Z,2.0nm,0.5s						
AB31	Akbulak array	18.12	331	⇑P	P	08 06 18.6	+1.2
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
VOSK	Vostochnaya	18.72	356	⇑P	P	08 06 23.4	-1.5
	comp=Z,2.0nm,0.5s						
VOSK	Vostochnaya	18.72	356	⇑P	P	08 06 23.4	-1.5
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BVA0	Borovoye Array	19.06	355	P	P	08 06 27.8	-1.1
	comp=Z,0.6nm,0.8s,baz=159,slow=11,SNR=24						
BVA0	Borovoye Array	19.06	355	P	P	08 06 27.8	-1.1
	comp=Z,0.6nm,0.8s						
BVA0	Borovoye Array	19.06	355	*i* P	P	08 06 27.7	-1.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	Borovoye Array	19.06	355	P	P	08 06 26.9	-2.0
	comp=Z,1.2nm,0.3s,baz=163,slow=10,SNR=23						
BRVK	Borovoye	19.10	354	*e*P	P	08 06 28.6	-0.7
	comp=Z,4.0nm,0.9s						
BRVK	Borovoye	19.10	354	*e*P	P	08 06 28.6	-0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CHKZ	Chkalovo	19.69	355	*e*P	P	08 06 34.2	-1.6
	comp=Z,2.6nm,0.6s						
CHKZ	Chkalovo	19.69	355	*e*P	P	08 06 34.2	-1.6
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTK	Aktyubinsk	19.82	330	⇑P	P	08 06 38.2	+0.9
AKTO	Aktyubinsk	19.82	330	⇑P	P	08 06 38.2	+0.9
	comp=Z,1.5nm,0.6s						
AKTO	Aktyubinsk	19.82	330	P	P	08 06 38.5	+1.3
	comp=Z,1.8nm,0.3s,baz=134,slow=10,SNR=44						
ZAL	Zalesovo	21.46	19	P	P	08 06 51.2	-2.9
	comp=Z,4.9nm,0.4s,mb4.2,baz=272,slow=8.6,SNR=13						
ZAL	Zalesovo	21.46	19	P	P	08 06 51.2	-2.9
NVS	Novosibirsk	21.90	16	*e*P	P	08 06 57.6	-1.0
ARU	Arti	24.54	340	*e*P	P	08 07 26.9	+2.5
	comp=Z,3.9nm,0.4s,mb4.3						
ARU	Arti	24.54	340	*e*P	P	08 07 27.0	+2.6
ARU				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.3						
SONM	Songino Array	28.28	51	P	P	08 07 57.2	-1.9
	comp=Z,0.3nm,0.6s,mb3.1,baz=254,slow=11,SNR=4.4						
MLR	Muntele Rosu	37.64	302	P	P	08 09 25.8	+5.5
	comp=Z,2.2nm,0.7s,mb4.0,baz=107,slow=11,SNR=4.6						
ARCES	ARCESS Array B	44.10	338	P	P	08 10 14.5	+1.4
	comp=Z,1.8nm,0.8s,mb3.8,baz=113,slow=8.3,SNR=8.1						
ARCES	ARCESS Array B	44.10	338	P	P	08 10 14.5	+1.4
HFS	Hagfors	46.14	323	P	P	08 10 30.5	+1.0
	comp=Z,2.5nm,0.6s,mb4.4,baz=100,slow=9.0,SNR=8.7						
NOA	NORSAR Array B	47.45	324	P	P	08 10 40.9	+1.1
	comp=Z,0.6nm,0.5s,mb3.8,baz=97,slow=7.6,SNR=2.9						
NOA	NORSAR Array B	47.45	324	P	P	08 10 40.9	+1.1

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*MOS **09** 08:08:54.8±1.2, 54.48N×164.74E, h41^{km}, mb4.3/1, Error ellipse: s-maj=30.5km s-min=25.0km az=50.2*

KRSC 09 08:08:54.4±0.6**, 54.45N×164.97E, h43**^{km}±22^{km}**, ML4.2, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.95	37	*i* P	P	08 09 11.1	-0.4
BKI				*i* S	S	08 09 23.1	-1.0
BKI				Smax			
	2µm,0.3s						
KBTR	Krutoberegovo	2.15	326	P	P	08 09 27.3	-1.2
KBTR				S	S	08 09 51.2	-2.9
KBTR	Krutoberegovo	2.15	326	*e*P	P	08 09 27.1	-1.4
KBTR				*e*S	S	08 09 52.1	-2.0
KBG	Krutoberegovo	2.22	325	*e*S	S	08 09 55.7	-0.3
KBG				Smax			
	680nm,1.0s						
ZLN	Zelenaya	2.86	305	*e*P	P	08 09 39.1	+0.5
ZLN				*e*S	S	08 10 11.7	-0.4
TUMR	Tumrok	2.91	289	*e*P	P	08 09 39.7	+0.3
TUMR				*e*S	S	08 10 12.6	-0.8
SMKR	Semkarok	2.92	318	*e*P	P	08 09 39.7	+0.2
SMKR				*e*S	S	08 10 13.4	-0.3
CIRR	Tsirk	2.94	306	*e*P	P	08 09 39.9	+0.1
CIRR				*e*S	S	08 10 14.2	+0.1
LGNR	Loginova	2.94	305	*i* P	P	08 09 40.5	+0.6
LGNR				*e*S	S	08 10 13.9	-0.4
KMNR	Kamenistaya	3.02	298	*i* P	P	08 09 41.3	+0.4
KMNR				*i* S	S	08 10 15.0	-1.2
KRSR	Krestovskiy	3.08	307	*i* P	P	08 09 41.6	-0.2
KRSR				*i* S	S	08 10 16.5	-1.2
SRKR	Sorokina	3.09	317	*e*P	P	08 09 42.3	+0.4
SRKR				*e*S	S	08 10 16.9	-1.1
KLY	Klyuchi	3.09	309	*i* S	S	08 10 15.7	-2.3
KPT	Kopyto	3.12	301	*e*P	P	08 09 42.8	+0.5
KPT				*e*S	S	08 10 17.9	-0.8
SPN	Mys Shipunski	3.23	247	P	P	08 09 43.5	-0.5
SPN				S	S	08 10 18.2	-3.4
SPN	Mys Shipunski	3.23	247	*e*P	P	08 09 44.0	0.0
KII	Karymskiy	3.27	265	*e*P	P	08 09 44.8	+0.4
KOZR	Kozyr	3.33	301	PN	P	08 09 45.8	+0.5
KOZR				S	S	08 10 23.0	-1.0
KOZ	Kozyrevsk	3.33	301	P	P	08 09 45.8	+0.4
KOZ				S	S	08 10 23.0	-1.2
KOZ	Kozyrevsk	3.33	301	*e*P	P	08 09 45.9	+0.5
KOZ				*e*S	S	08 10 22.9	-1.3
SRDR	Sredinnyy	3.53	304	*e*P	P	08 09 48.5	+0.3
SRDR				*e*S	S	08 10 28.2	-1.0
NLC	Nalytchevo	3.57	251	P	P	08 09 48.5	-0.3
NLC				S	S	08 10 27.6	-2.6
NLC	Nalytchevo	3.57	251	*i* P	P	08 09 48.7	-0.1
SMAR	Somma	3.84	254	*e*P	P	08 09 53.1	+0.5
AVH	Avacha	3.88	255	*e*P	P	08 09 53.4	+0.3
ESO	Esso	3.89	295	*e*P	P	08 09 52.2	-1.0
ESO				Smax			
	50nm,0.5s						
KOK	Koryaka	3.92	255	*e*P	P	08 09 54.4	+0.6
PET	Petropavlovsk	4.01	252	P	P	08 09 55.3	+0.3
PET				S	S	08 10 38.5	-2.9
PET	Petropavlovsk	4.01	252	*e*P	P	08 09 54.9	-0.1
PET				*e*S	S	08 10 39.2	-2.2
GNL	Ganaly	4.21	263	*i* P	P	08 09 58.9	+1.1
RUS	Russkaya	4.36	245	P	P	08 09 59.6	-0.3
RUS				S	S	08 10 45.7	-4.4
RUS	Russkaya	4.36	245	*e*P	P	08 09 59.7	-0.2
KRMR	Karymshinskiy	4.38	251	*i* P	P	08 10 00.4	+0.2
GRL	Gorelyy	4.54	248	*i* P	P	08 10 03.2	+0.8
APC	Apacha	4.89	255	*e*P	P	08 10 08.2	+0.8
PAU	Pauzhetka	5.76	242	*e*P	P	08 10 21.2	+1.6

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*BJI **09** 08:17:33.3, 11.09N×92.54E, h30^{km}, mB4.8, mb4.8, Ms3.8, Msz3.6*
*IDC **09** 08:17:35.4±0.5, 11.77N×92.44E, mb4.3/19, mb1 4.5/19, mb1mx4.3/24, mbtmp4.3/19, Error ellipse: s-maj=27.5km s-min=12.5km az=62.0*
*MOS **09** 08:17:38.7±0.9, 11.77N×92.44E, h33^{km}, mb4.5/9, Error ellipse: s-maj=20.1km s-min=8.1km az=106.5*
*NEIC **09** 08:17:40.1±0.2, 11.79N×92.44E, h30^{km}, mb4.6/9, Error ellipse: s-maj=10.7km s-min=4.7km az=64.0*

ISC 09 08:17:38.6±0.4**, 11.72N**±0.05×**92.24E**±0.04**, h33**^{km}**, n79,** σ1^{s}**09**/74**, mb4.4**/33**, MS3.8**/1**, 1C, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBA	Port Blair	0.50	97	*e*P	P	08 17 50.1	+1.1
PBA				*e*S	S	08 17 58.7	+2.2
NNT	Nongplab	7.38	82	P	P	08 19 26.3	-0.3
NST	Nakhon Sawan	8.62	62	P	P	08 19 44.0	+0.1
CHG	Chiang Mai	9.57	42	P	P	08 20 00.9	+3.8
	18nm,0.8s						
VIS	Vishakhapatnam	10.48	306	*e*P	P	08 20 07.7	-2.0
VIS				AMb	AMB	08 20 15.2	
	comp=Z,85nm,2.5s						
VIS				*e*S	S	08 21 53.4	-14
VIS				*i* x	x	08 24 55.9	
KULM	Kulim	10.48	127	*e*P	P	08 20 03.3	-6.5
CAL	Calcutta	11.39	341	*e*x	x	08 23 06.1	
BOK	Bokaro	13.44	334	*e*P	P	08 20 48.2	-1.3
BOK				AMb	AMB	08 20 56.1	
	comp=Z,12nm,0.5s						
BOK				*e*x	x	08 23 00.7	
SHL	Shillong	13.78	359	*e*P	P	08 20 58.0	+4.1
SHL				*e*x	x	08 23 16.0	
BLSP	Bilaspur	14.16	318	*e*P	P	08 20 58.7	-0.3
BLSP				AMb	AMB	08 21 09.3	
	comp=Z,16nm,0.8s						
BLSP				*e*S	S	08 23 35.5	-0.3
HYB	Hyderabad	14.40	295	*i* P	P	08 21 11.0	+8.8
HYB				*e*S	S	08 23 39.0	-2.7
HYB	Hyderabad	14.40	295	*e*P	P	08 21 11.0	+8.8
HYB				*e*		08 23 25.0	
HYB				*e*S	S	08 23 39.0	-2.7
LATR	Latur	16.53	296	*e*x	x	08 24 19.3	
JIRN	Jiri	16.84	341	*e*P	P	08 21 34.0	+0.5
	comp=Z,25nm,0.5s						
PKI	Pulchoki	17.02	339	*e*P	P	08 21 36.0	+0.3
	comp=Z,31nm,0.6s						
DMN	Daman	17.16	338	*e*P	P	08 21 38.1	+0.6
	comp=Z,41nm,0.7s						
GKN	Gorkha	17.70	337	*e*P	P	08 21 44.9	+0.7
	comp=Z,32nm,0.4s						
KOLN	Koldanda	17.91	334	*e*P	P	08 21 47.3	+0.5
	comp=Z,49nm,0.7s						
LSA	Lhasa	17.92	357	P	P	08 21 50.2	+3.3
LSA	Lhasa	17.92	357	*e*P	P	08 21 48.0	+1.1
POO	Poona	18.99	293	*e*x	x	08 21 55.0	
GYA	Guiyang	19.99	41	P	P	08 22 10.1	-1.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CD2	Chengdu	21.87	27	*e*P	P	08 22 29.6	-0.8
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
KLP	Kalpa	23.57	329	*e*x	x	08 22 45.5	
KLP				*e*x	x	08 24 34.8	
SDNR	Sundarnagar	24.21	327	*e*P	P	08 22 57.0	+3.6
ENH	Enshi	24.43	38	*e*P	P	08 22 54.9	-0.7
	comp=Z,62nm,1.0s,mb5.0						
DLH	Dalhousie	25.56	327	*e*P	P	08 23 08.0	+1.8
DLH				*e*x	x	08 23 46.0	
THN	Thein Dam	25.61	326	*e*x	x	08 23 04.6	
THN				*e*x	x	08 23 51.2	
XAN	Xi’an	26.93	32	P	P	08 23 16.7	-2.3
XAN				AP	pP	08 23 25.7	-2.7
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
XAN				LR	LR		
	comp=E,220nm,21.0s						
XAN				LR	LR		
	comp=Z,290nm,23.1s,MS3.8						
MKAR	Makanchi Array	35.96	348	P	P	08 24 38.4	+0.3
	comp=Z,4.6nm,0.7s,mb4.5,baz=168,slow=8.5,SNR=42						
MKAR	Makanchi Array	35.96	348	*i* P	P	08 24 38.3	+0.2
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SONM	Songino Array	37.91	16	P	P	08 24 54.7	+0.3
	comp=Z,3.9nm,0.7s,mb4.2,baz=206,slow=7.2,SNR=24						
ZAK	Zakamensk	39.60	11	*e*P	P	08 25 08.8	+0.3
KURK	Kurchatov	40.45	347	*e*P	P	08 25 15.3	-0.2
	comp=Z,3.7nm,0.9s,mb4.1						
KURK	Kurchatov	40.45	347	*e*P	P	08 25 15.4	-0.2
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
ZAL	Zalesovo	42.52	353	P	P	08 25 32.7	+0.1
	comp=Z,3.0nm,0.5s,mb4.3,baz=280,slow=6.7,SNR=11						
ZAL	Zalesovo	42.52	353	P	P	08 25 32.7	+0.1
CN2	Changchun	42.90	36	*e*P	P	08 25 35.2	-0.6
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
FITZ	Fitzroy Crossi	44.33	131	*e*P	P	08 25 46.4	-1.2
	comp=Z,9.9nm,1.0s,mb4.5						
FITZ	Fitzroy Crossi	44.33	131	P	P	08 25 45.9	-1.8
	comp=Z,11nm,0.8s,mb4.7,baz=313,slow=4.5,SNR=9.8						
BVAR	Borovoye Array	44.77	341	P	P	08 25 51.1	+0.4
	comp=Z,2.2nm,0.9s,mb4.0,baz=117,slow=6.6,SNR=6.9						
CHKZ	Chkalovo	45.26	342	*e*P	P	08 25 54.9	+0.2
	comp=Z,7.7nm,0.8s,mb4.6						
CHKZ	Chkalovo	45.26	342	*e*P	P	08 25 54.9	+0.3
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
AB31	Akbulak array	45.98	331	*i* P	P	08 26 01.3	+0.8
AB31				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
AKTO	Aktyubinsk	47.70	331	P	P	08 26 14.1	+0.2
	comp=Z,1.5nm,0.8s,mb4.1,baz=144,slow=3.6,SNR=6.4						
AKTO	Aktyubinsk	47.70	331	P	P	08 26 14.1	+0.2
AKTO				pmax	pmax		
	comp=Z,3.0nm,2.0s,mb4.0						
BOD	Bodaibo	48.91	15	*e*P	P	08 26 22.9	-0.3
BOD				pmax	pmax		
	comp=Z,7.0nm,2.0s,mb4.3						
NWAO	Narrogin (SRO)	50.40	153	P	P	08 26 34.2	-0.8
	comp=Z,3.8nm,0.5s,mb4.7,baz=329,slow=11,SNR=4.2						
WRA	Warramunga Arr	52.03	127	P	P	08 26 45.8	-1.6
	comp=Z,5.4nm,0.5s,mb4.7,baz=305,slow=8.5,SNR=50						
WRA				PcP	PcP	08 27 59.3	-0.2
	comp=Z,0.8nm,0.5s,baz=308,slow=3.3,SNR=3.5						
WRAB	Tennant Creek	52.03	127	*e*P	P	08 26 46.3	-1.2
	comp=Z,12nm,0.6s,mb5.0						
WRAB	Tennant Creek	52.03	127	*e*P	P	08 26 46.3	-1.2
WRAB				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
WB2	Warramunga Arr	52.04	127	*e*P	P	08 26 46.3	-1.2
FORT	Forrest	54.50	142	*e*P	P	08 27 06.1	+0.5
	comp=Z,20nm,0.7s,mb5.2						
BRTR	Keskin Array B	58.53	309	P	P	08 27 33.5	-0.8
	comp=Z,0.7nm,0.7s,mb3.8,baz=141,slow=9.2,SNR=3.5						
TIXI	Tiksi	63.87	12	⇑*i*P	P	08 28 07.4	-2.4
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
STKA	Stephens Creek	64.11	134	P	P	08 28 11.2	-0.9
	comp=Z,5.1nm,0.8s,mb4.6,baz=297,slow=7.7,SNR=5.3						
MLR	Muntele Rosu	65.14	315	P	P	08 28 19.4	+0.9
	comp=Z,2.7nm,0.9s,mb4.3,baz=107,slow=5.7,SNR=3.7						
JOF	Joensuu	66.59	334	*e*p	P	08 28 27.8	+0.4
FINES	FINESS Array B	68.46	332	P	P	08 28 39.3	+0.1
	comp=Z,4.0nm,0.9s,mb4.4,baz=108,slow=6.0,SNR=8.0						
KAF	Kangasniemi	68.54	333	*e*p	P	08 28 40.7	+1.1
ARCES	ARCESS Array B	71.03	340	P	P	08 28 55.2	+0.4
	comp=Z,3.5nm,0.7s,mb4.4,baz=89,slow=6.3,SNR=16						
GERES	GERESS Array B	73.73	318	P	P	08 29 11.9	+0.8
	comp=Z,0.6nm,0.3s,mb4.0,baz=117,slow=3.0,SNR=5.0						
HFS	Hagfors	74.21	329	P	P	08 29 13.4	-0.3
	comp=Z,3.9nm,0.7s,mb4.4,baz=180,slow=3.0,SNR=5.7						
LBTB	Lobatse	74.49	240	*e*P	P	08 29 17.8	+1.8
	comp=Z,2.4nm,0.8s,mb4.2						
LBTB	Lobatse	74.49	240	*e*P	P	08 29 17.8	+1.8
LBTB				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
NB2	NORSAR Subarra	75.48	330	P	P	08 29 20.7	-0.3
	comp=Z,2.8nm,0.8s,mb4.2,baz=92,slow=5.8						
NOA	NORSAR Array B	75.48	330	P	P	08 29 21.2	+0.3
	comp=Z,2.1nm,0.7s,mb4.2,baz=91,slow=5.7,SNR=5.5						
NAO	NORSAR Subarra	75.66	330	P	P	08 29 20.7	-1.3
	comp=Z,2.8nm,0.8s,mb4.2						
NAO	NORSAR Subarra	75.66	330	P	P	08 29 20.7	-1.3
NAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BOSA	Boshof	76.08	236	P	P	08 29 27.3	+2.3
	comp=Z,2.7nm,0.9s,mb4.2,baz=90,slow=4.0,SNR=3.8						
MAW	Mawson	81.91	191	P	P	08 29 57.6	+1.7
	comp=Z,1.7nm,0.8s,mb4.0,baz=321,slow=10,SNR=4.5						
EKA	Eskdalemuir Ar	83.51	325	P	P	08 30 05.6	+1.3
	comp=Z,1.6nm,0.7s,mb4.2,baz=90,slow=5.8,SNR=3.9						
ILAR	Eielson Array	91.89	22	P	P	08 30 43.5	-1.0
	comp=Z,1.3nm,0.7s,mb4.4,baz=310,slow=4.5,SNR=15						
INK	Inuvik	93.83	15	*e*P	P	08 30 53.7	+0.5
PDAR	Pinedale Array	122.22	19	PKP	PKPdf	08 36 31.9	+1.5
	comp=Z,0.3nm,0.7s,baz=326,slow=3.3,SNR=2.9						
PDAR	Pinedale Array	122.22	19	PKP	PKPdf	08 36 31.9	+1.5
TXAR	Lajitas Array	136.40	20	PKP	PKPdf	08 36 59.5	+1.7
	comp=Z,0.2nm,0.6s,baz=186,slow=0.9,SNR=5.1						
TXAR	Lajitas Array	136.40	20	PKP	PKPdf	08 36 59.5	+1.7
PLCA	Paso Flores	147.37	205	PKPbc	PKPdf	08 37 22.0	+5.3
	comp=Z,1.6nm,0.8s,baz=174,slow=8.5,SNR=4.0						

MAN 09 08:37:39.2, 9.78N×123.05E, h25^{km}**, mb4.1, ML2.9, MS2.6, 1D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	0.81	96	*e*P	Pb	08 37 54.6	+0.1
TBP				*e*S	Sb	08 38 06.5	+1.5
GUIM	Jordan	0.96	332	*e*P	Pb	08 37 56.5	-0.5
LLP	Lapu-Lapu	1.05	59	*e*P	Pn	08 37 58.6	+0.1
LLP				*e*S	Sb	08 38 12.5	+0.5
DCPH	Dipolog City	1.22	166	⇓*i*P	Pn	08 38 00.4	-0.6
DCPH				*e*S	Sn	08 38 17.1	+0.3

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*IDC **09** 08:43:11.3±5.5, 34.46N×72.92E, mb3.8/3, mb1 4.0/4, mb1mx3.7/20, mbtmp3.9/4, ML3.9/1, Error ellipse: s-maj=103.2km s-min=66.1km az=2.0*
*NNC **09** 08:43:24.8±3.4, 35.06N×72.86E, h81^{km}±40^{km}, mpv3.5, Error ellipse: s-maj=41.3km s-min=25.0km az=95.0*

ISC 09 08:43:17.8±1.5**, 34.90N**±0.07×**73.1E**±0.2**, h40**^{km}±19^{km}**, n13,** σ1^{s}**10**/19**, mb3.7**/2**, 3C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.27	138	*e*P	P	08 44 10.3	+2.4
THN				*e*S	S	08 44 55.7	+10
SDNR	Sundarnagar	4.68	135	*e*P	P	08 44 28.0	+0.2
SDNR				*e*S	S	08 45 22.4	+0.8
SMLA	Simla	5.07	137	*e*P	P	08 44 32.5	-0.7
SMLA				*e*S	S	08 45 30.2	-1.1
KLP	Kalpa	5.45	127	*e*P	P	08 44 30.5	-8.2
KLP				*e*x	S	08 45 39.7	-1.3
KLP				AML	AML	08 46 08.5	
	comp=N,77nm,0.6s						
KLP				AML	AML	08 46 11.8	
	comp=E,100nm,0.5s						
KHET	Khetri	7.18	161	*e*x	S	08 46 16.2	-7.8
KHET				AML	AML	08 46 19.3	
	comp=E,14nm,0.3s						
KHET				AML	AML	08 46 19.6	
	comp=N,9.6nm,0.2s						
AAK	Ala-Archa	7.80	7	⇑P	P	08 45 14.6	+3.1
	comp=N,1.5nm,0.7s						
AAK				⇓S	S	08 46 39.5	0.0
	comp=N,2.6nm,0.9s						
KK31	Karatay Array	8.44	347	P	P	08 45 20.7	+0.3
	comp=N,1.0nm,0.4s,baz=160,slow=12,SNR=18						
KK31				⇑S	S	08 46 54.1	-1.4
	comp=N,1.2nm,0.4s,baz=168,slow=22,SNR=5.6						
AB31	Akbulak array	17.33	330	⇑P	P	08 47 18.0	-0.1
	comp=N,0.4nm,0.5s,baz=154,slow=14,SNR=5.8						
AKTO	Aktyubinsk	19.03	329	⇓P	P	08 47 37.6	-1.5
	comp=N,0.7nm,0.9s						
AKTO	Aktyubinsk	19.03	329	P	P	08 47 37.4	-1.6
	comp=N,0.3nm,0.3s,baz=120,slow=11,SNR=11						
ZAL	Zalesovo	20.73	20	P	P	08 47 58.2	+1.0
	comp=N,2.0nm,0.3s,baz=322,slow=5.0,SNR=5.6						
ARCES	ARCESS Array B	43.28	338	P	P	08 51 17.2	+0.5
	comp=N,0.8nm,0.5s,mb3.7,baz=114,slow=7.3,SNR=9.7						
YKA	Yellowknife Ar	82.75	4	P	P	08 55 38.8	+0.5
	comp=N,0.6nm,0.9s,mb3.6,baz=350,slow=5.2,SNR=4.5						

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*NEIC **09** 08:56:54.2, 15.71N×93.91W, h76^{km}, MD4.2(MEX), After MEX.*

MEX 09 08:56:54.8±1.3**, 15.62N×93.90W, h44**^{km}±198^{km}**, MD4.2, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCX	San Cristobal	1.65	47	*i* P	P	08 57 20.0	-1.9
SCX				*i* S	S	08 57 40.0	-2.0
CCIG	Comitan	1.82	68	*i* P	P	08 57 22.8	-1.5
CCIG				*i* S	S	08 57 42.4	-3.9
HUIG	Huatulco	2.13	274	*i* P	P	08 57 26.6	-2.0
HUIG				*i* S	S	08 57 50.1	-3.8
OXX	Oaxaca	3.07	299	*e*P	P	08 57 41.0	-1.1
VHO	Vista Hermosa	3.08	298	*i* P	P	08 57 39.0	-3.2
VHO				*i* S	S	08 58 14.4	-3.7
SCIG		4.22	38	*i* P	P	08 57 52.9	-5.5
SCIG				*i* S	S	08 58 37.1	-10

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*IDC **09** 09:28:49.0±3.2, 28.53S×177.40W, h48^{km}±28^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.6/11, mbtmp4.0/3, MS2.8/1, Ms1 2.8/1, ms1mx2.3/21, Error ellipse: s-maj=48.2km s-min=36.0km az=136.0*

ISC 09 09:28:55.5±0.7**, 29.45S**±0.07×**178.1W**±0.2**, h77**^{km}±7^{km}**, n29,** σ1^{s}**38**/19**, mb3.9**/3**, 3C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.25	39	P	P	09 29 05.2	-2.0
	2µm,0.3s,baz=78,slow=5.2,SNR=251						
RAO				S	S	09 29 17.1	+1.2
	5µm,0.3s,baz=105,slow=23,SNR=90						
MXZ	Matakaoa Point	8.63	199	SN	S	09 32 43.9	+7.5
PUZ	Puketiti	9.12	198	SN	S	09 32 51.3	+2.9
MWZ	Matawai	9.58	201	PN	P	09 31 09.8	-2.9
MWZ				SN	S	09 33 06.8	+7.4
MRZ	Mangatainoka R	12.33	203	SN	S	09 34 05.4	-0.2
TCW	Tory Channel	13.28	206	SN	S	09 34 27.7	-0.5
NNZ	Nelson	13.64	208	SN	S	09 34 37.5	+0.8
KHZ	Kahutara	14.60	205	SN	S	09 34 57.6	-1.9
DZM	Mont Dzumac	15.74	294	LR	LR	09 37 33.3	
	comp=Z,32nm,18.6s,baz=207,slow=33						
MQZ	McQueen’s Vall	16.04	205	SN	S	09 35 27.8	-4.8
STKA	Stephens Creek	34.62	256	P	P	09 35 41.2	+2.0
	1.1nm,0.6s,mb3.9,baz=85,slow=12,SNR=2.9						
ASPA	Alice Springs	43.09	266	*e*P	P	09 36 49.6	-0.1
WB2	Warramunga Arr	43.98	271	*e*P	P	09 36 56.4	-0.6
WRA	Warramunga Arr	43.99	271	P	P	09 36 56.5	-0.5
	1.2nm,0.4s,mb4.0,baz=109,slow=7.7,SNR=18						
MAW	Mawson	73.17	200	P	P	09 40 20.9	+1.9
	0.4nm,0.3s,mb3.7,baz=101,slow=3.2,SNR=3.6						
SNAA	Sanae	79.11	178	⇑*i*	P	09 40 56.8	+4.3
SNAA	Sanae	79.11	178	*e*	PcP	09 41 01.8	+0.8
VNA3	Neumayer Olymp	79.26	176	⇑*i*	P	09 40 52.6	-0.8
VNA3	Neumayer Olymp	79.26	176	*e*	PcP	09 40 57.4	-4.3
VNA3	Neumayer Olymp	79.26	176	*e*	pP	09 41 10.5	-3.6
VNA2	Neumayer--Watz	79.69	177	⇑*i*	P	09 40 55.5	-0.2
VNA2	Neumayer--Watz	79.69	177	*e*	PcP	09 41 00.0	-3.5
VNA2	Neumayer--Watz	79.69	177	*e*	tx	09 41 15.2	
FINES	FINESS Array B	144.22	340	PKP	PKPdf	09 48 14.8	-6.9
	1.8nm,0.8s,baz=45,slow=7.9,SNR=4.4						
NB2	NORSAR Subarra	147.80	352	PKPabc	PKPdf	09 48 25.9	-1.9
	2.3nm,0.9s,baz=17,slow=2.6						
NOA	NORSAR Array B	147.80	352	PKPbc	PKPdf	09 48 25.3	-2.4
	0.8nm,0.4s,baz=14,slow=4.4,SNR=3.0						
HFS	Hagfors	148.30	349	PKPbc	PKPdf	09 48 26.9	-1.7
	2.1nm,0.6s,baz=45,slow=2.1,SNR=6.6						
AKASG	Malin Array Be	150.49	324	PKPbc	PKPdf	09 48 33.9	+1.5
	0.9nm,0.4s,baz=45,slow=2.8,SNR=4.3						
BRTR	Keskin Array B	152.06	300	PKPbc	PKPdf	09 48 38.3	+3.2
	0.9nm,0.5s,baz=113,slow=3.7,SNR=3.8						

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*NDI **09** 09:42:46.8±2.6, 34.95N×73.14E, h10^{km}, ML3.3*
*NNC **09** 09:42:51.3±20.0, 35.05N×72.11E, mpv3.3, Error ellipse: s-maj=1193.4km s-min=182.6km az=81.0*

ISC 09 09:42:44.3±1.6**, 34.9N**±0.1×**73.1E**±0.3**, h10**^{km}**, n5,** σ1^{s}**41**/10**, 2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.29	138	*e*P	Pn	09 43 39.8	+2.7
THN				*e*SB	Sb	09 44 26.7	+3.8
SDNR	Sundarnagar	4.70	135	*e*P	Pn	09 43 58.4	+1.4

SDNR				eS	Sn	09 44 51.4	-0.9
KLP	Kalpa	5.48	126	eP	Pn	09 44 07.3	-0.7
KLP				eS	Sn	09 45 07.1	-4.7
KLP				AML	AML	09 45 40.9	
	comp=E,54nm,0.6s						
KLP				AML	AML	09 45 41.5	
	comp=N,44nm,0.7s						
KUDL	Kundal	7.33	156	eP	Pn	09 44 32.6	-1.5
KUDL				eS	Sn	09 45 51.8	-6.4
KK31	Karatay Array	8.43	347	⇑P	P	09 44 50.7	+1.2
	comp=N,0.5nm,0.3s,baz=167,slow=13,SNR=10						
KK31				⇑S	Sn	09 46 24.7	-1.0
	comp=N,1.7nm,0.6s,baz=175,slow=24,SNR=5.0						

IDC ***09*** *10:04:53.1±0.7,28.17N×140.05E,h411^{km}±10^{km}, mb3.3/10,mb1 3.4/12,mb1mx3.3/22,mbtmp4.1/12,Error ellipse: s-maj=31.4km s-min=12.4km az=73.0*
JMA ***09*** *10:04:53.9±0.1,28.32N×140.48E,h426^{km},M3.8*
ISC 09 10:04:52.8±0.5,**28.23N**±0.06×**140.2E**±0.2,**h426**^{km}±7^{km}, **n29,σ0^{s}94**/33,**mb3.6**/11,**Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.09	122	P	P	10 05 52.2	+0.2
	39nm,0.3s,baz=56,slow=1.9,SNR=30						
CBIJ				S	S	10 06 38.0	-0.8
	77nm,0.3s,baz=277,slow=21,SNR=14						
CBIJ	Chichi jima	2.09	122	P	P	10 05 52.2	+0.1
CBIJ				S	S	10 06 37.9	-0.9
JHHJ	Haha-jima-NKT	2.37	132	P	P	10 05 54.4	+0.5
JHHJ				S	S	10 06 42.0	0.0
JHJ2	Mitsune	4.88	356	P	P	10 06 15.9	+0.4
JHJ	Hachijo jima 2	4.88	356	P	P	10 06 16.3	+0.8
	9.7nm,0.3s,baz=240,slow=24,SNR=8.0						
JHJ				S	S	10 07 21.6	+1.0
	9.2nm,0.3s,baz=241,slow=22,SNR=3.8						
BSO1	Boso 1	6.44	6	eS	S	10 07 50.0	+0.2
BSO3	Boso 3	6.55	2	eS	S	10 07 51.2	-0.9
BSO4	Boso 4	6.74	1	eS	S	10 07 56.9	+1.2
JIE	Ise	6.83	335	P	P	10 06 37.5	+1.5
JOD2	Odawara 2	7.07	353	eS	S	10 08 00.1	-2.3
JHU	Hanno	7.64	354	eS	S	10 08 10.2	-3.4
JYT	Yasato	7.97	360	eS	S	10 08 19.7	-0.7
JAG	Ashikaga	8.19	356	P	P	10 06 50.8	-0.5
SONM	Songino Array	32.68	316	P	P	10 10 49.1	+0.1
	1.4nm,0.5s,mb3.5,baz=120,slow=8.3,SNR=7.6						
WRA	Warramunga Arr	48.23	187	P	P	10 12 54.0	-0.9
	0.8nm,0.3s,mb3.5,baz=5.3,slow=7.6,SNR=5.2						
MKAR	Makanchi Array	48.40	309	P	P	10 12 55.2	-0.6
	0.6nm,0.5s,mb3.2,baz=78,slow=14,SNR=8.9						
STKA	Stephens Creek	59.79	179	P	P	10 14 17.0	-0.1
	1.8nm,0.8s,mb3.5,baz=58,slow=2.9,SNR=3.3						
INK	Inuvik	62.73	25	P	P	10 14 37.0	+0.9
	1.1nm,1.0s,mb3.3,baz=259,slow=5.2,SNR=4.4						
AKTO	Aktyubinsk	63.99	315	P	P	10 14 43.5	-0.8
	2.5nm,0.6s,mb4.0,baz=76,slow=14,SNR=10						
ARCES	ARCESS Array B	71.89	340	P	P	10 15 33.0	+0.9
	1.6nm,0.5s,mb3.8,baz=68,slow=8.6,SNR=17						
JOF	Joensuu	73.28	333	ep	P	10 15 40.1	-0.2
DGRG	David-gareji	75.26	309	P	P	10 15 55.3	+3.5
MTA	Mtatsminda	75.55	310	S	P	10 15 53.7	+0.2
TBLG	Delisi	75.57	310	S	P	10 15 50.5	-3.1
KAF	Kangasniemi	75.69	334	ep	P	10 15 53.8	0.0
FINES	FINESS Array B	76.15	333	P	P	10 15 56.6	+0.3
	1.4nm,0.3s,mb4.0,baz=73,slow=5.4,SNR=20						
AKASG	Malin Array Be	80.66	323	P	P	10 16 19.8	-0.9
	0.4nm,0.3s,mb3.6,baz=47,slow=5.9,SNR=4.3						
NOA	NORSAR Array B	81.90	338	P	P	10 16 26.8	-0.1
	0.8nm,0.6s,mb3.6,baz=46,slow=5.2,SNR=3.3						
BRTR	Keskin Array B	83.94	312	P	P	10 16 38.9	+1.3
	0.9nm,0.6s,mb3.7,baz=127,slow=2.3,SNR=4.8						

BJI ***09*** *10:05:01.4,21.95N×111.58E,h30^{km},ML4.3*
PLV ***09*** *10:05:06.5±1.0,21.85N×111.09E,MD4.1*
ISC 09 10:05:08.1±1.3,**21.72N**±0.07×**110.92E**±0.06,**h10**^{km},**n7, σ1^{s}18**/20,**Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QIZ	Qiongzhong	2.86	201	PG	Pg	10 06 00.4	-4.7
QIZ				SG	Sg	10 06 43.2	0.0
QIZ				Smax			
	comp=N,270nm,0.6s						
QIZ				Smax			
	comp=E,320nm,0.6s						
YTV	Yen Tu	3.95	263	ePn	Pn	10 06 11.3	+1.1
YTV				ePg	Pg	10 06 25.6	-1.4
YTV				eSg	Sg	10 07 19.7	+0.1
PLV	Phu-Lien	4.10	258	ePN	Pn	10 06 13.1	+0.8
PLV				ePg	Pg	10 06 28.4	-1.6
PLV				eSg	Sg	10 07 25.0	+0.4
MTZV	Met	4.26	269	ePN	Pn	10 06 15.0	+0.5
MTZV				ePg	Pg	10 06 30.6	-2.5
MTZV				eSg	Sg	10 07 29.5	-0.4
BGV	Bac-Giang	4.38	265	ePn	Pn	10 06 17.1	+0.8
BGV				ePg	Pg	10 06 34.2	-1.4
BGV				eSg	Sg	10 07 34.0	-0.1
DSV	Doi Son	4.75	257	ePN	Pn	10 06 22.2	+0.7
DSV				ePG	Pg	10 06 41.2	-1.7
DSV				eSg	Sg	10 07 45.8	-0.4
HNV	Hanoi	4.82	263	ePn	Pn	10 06 25.0	+2.6
HNV				ePg	Pg	10 06 44.6	+0.4
HNV				eSg	Sg	10 07 50.5	+2.1

HLW ***09*** *10:11:23.0,34.77N×24.79E,h20^{km},Mb3.1*
CSEM ***09*** *10:11:23.6±0.2,34.57N×24.76E,h30^{km},MD3.3,Error ellipse: s-maj=6.1km s-min=5.0km az=71.0*
ATH ***09*** *10:11:24.5,34.78N×24.74E,h56^{km}±5^{km},MD3.3/5*
NEIC ***09*** *10:11:24.5,34.78N×24.74E,h56^{km},MD3.3(ATH),After ATH.*
ISC 09 10:11:23.5±1.1,**34.60N**±0.07×**24.76E**±0.08,**h57**^{km}±28^{km}, **n9,σ0^{s}96**/14,**3C,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.60	293	eP	P	10 11 37.0	+0.6
GVD				eS	S	10 11 46.5	+0.5
XRY	Khrisi	0.81	70	eP	P	10 11 40.0	+0.9
VAM	Vamos	0.93	330	eP	P	10 11 40.3	-0.3
VAM				eS	S	10 11 51.5	-1.9
NPS	Neapolis	0.96	46	eP	P	10 11 41.4	+0.3
NPS				eS	S	10 11 53.2	-1.0
KARP	Karpathos	2.18	64	eP	P	10 11 59.2	+1.0
SLUM		3.12	173	⇑P	P	10 12 12.7	+1.2
HMAT	Matruh	4.01	150	⇑P	P	10 12 24.0	0.0
HMAT				S	S	10 13 09.3	-0.9
SWA2		5.38	174	P	P	10 12 43.5	+0.4
SWA1		5.38	171	⇑P	P	10 12 43.8	+0.6
SWA1				S	S	10 13 42.7	-1.9

IDC 09 10:16:57.1±4.7,**47.11N**×**152.57E**,**h121**^{km}±54^{km},**mb3.4**/6, **mb1 3.7**/7,**mb1mx3.4**/22,**mbtmp3.8**/7,**Error ellipse: s-maj=52.5km s-min=33.8km az=4.0,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	7.61	250	P	P	10 18 45.1	-1.5
	0.8nm,0.3s,baz=74,slow=15,SNR=5.7						
ILAR	Eielson Array	36.50	39	P	P	10 23 49.9	-1.9
	0.2nm,0.4s,baz=275,slow=5.2,SNR=4.6						
INK	Inuvik	41.55	33	P	P	10 24 32.1	-1.3
	0.6nm,0.6s,baz=298,slow=3.9,SNR=8.4						
NVAR	Mina Array Bea	62.60	62	P	P	10 27 08.8	-1.6
	0.7nm,0.9s,baz=286,slow=6.6,SNR=4.0						
FINES	FINESS Array B	63.55	334	P	P	10 27 14.2	-2.1
	3.1nm,1.0s,baz=31,slow=8.1,SNR=6.5						
PDAR	Pinedale Array	64.83	54	P	P	10 27 23.1	-1.9
	0.6nm,0.8s,baz=315,slow=1.3,SNR=4.6						
TXAR	Lajitas Array	77.64	60	P	P	10 28 40.1	-1.3
	1.3nm,0.5s,baz=298,slow=4.7,SNR=33						

ISK ***09*** *10:44:11.5,35.40N×29.46E,h31^{km},MD3.5*
CSEM ***09*** *10:44:12.5±0.1,35.53N×29.54E,h25^{km},MD3.6,Error ellipse: s-maj=1.7km s-min=1.4km az=85.0*
ATH ***09*** *10:44:15.9,35.78N×29.32E,h31^{km}±4^{km},MD3.6/5*
NEIC ***09*** *10:44:15.9,35.78N×29.32E,h31^{km},MD3.6(ATH), ML3.5(ISK),After ATH.*
HLW ***09*** *10:44:20.7,35.15N×29.48E,h23^{km},Mb3.6*
ISC 09 10:44:13.1±0.8,**35.53N**±0.03×**29.54E**±0.04,**h27**^{km}±8^{km}, **n37,σ0^{s}90**/48,**4D,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.62	3	ePB	Pb	10 44 25.5	+0.2
AKAS	Kas	0.70	4	i P	Pb	10 44 26.6	-0.1
AKAS				i S	Sb	10 44 36.1	+0.1
FETY	Fethiye	1.16	342	i PN	Pn	10 44 33.0	-0.8
FETY				i SN	Sn	10 44 48.8	-0.1
ELL	Elmali	1.25	14	i PN	Pn	10 44 35.1	0.0
ELL				i SN	Sn	10 44 52.8	+1.7
ARG	Arkhangelos	1.34	301	ePN	Pn	10 44 35.9	-0.4
DALT	Dalyan (Mudla)	1.44	330	i PN	Pn	10 44 37.9	+0.2
DALT				i SN	Sn	10 44 56.1	+0.3
GOLH	Golhisar	1.70	1	i P	Pn	10 44 41.8	+0.2
GOLH				i S	Sn	10 45 13.5	+11
YER	Yerkesik	1.90	328	PN	Pn	10 44 43.5	-0.8
KARP	Karpathos	1.94	271	ePN	Pn	10 44 46.3	+1.4
KARP				eSN	Sn	10 45 08.9	+0.3
DAT	Datca	1.99	308	i PN	Pn	10 44 44.8	-0.8
BCK	Bucak	2.10	23	PN	Pn	10 44 47.7	+0.4
DNZL	Cakiroluk	2.19	350	i P	Pn	10 44 50.4	+1.9
DNZL				i S	Sn	10 45 19.4	+4.4
DENT	Denizli	2.26	350	ePN	Pn	10 44 49.7	+0.2
MLSB	Milas	2.26	322	ePN	Pn	10 44 49.1	-0.5
BODT	Bodrum	2.36	311	PN	Pn	10 44 49.1	-1.9
ISP	Isparta	2.44	18	ePN	Pn	10 44 51.8	-0.2
LEF	Lefka	2.77	98	ePN	Pn	10 44 55.3	-1.5
SMG	Samos	3.07	316	ePN	Pn	10 45 00.1	-1.0
SMG				eSN	Sn	10 45 33.1	-4.3
CSS	Prodhromos	3.15	99	ePN	Pn	10 45 00.9	-1.4
XRY	Khrisi	3.22	259	ePN	Pn	10 45 05.5	+2.4
NPS	Neapolis	3.22	266	ePN	Pn	10 45 05.0	+1.8
NPS				eSN	Sn	10 45 39.5	-1.6
IZM	Izmir	3.39	328	ePN	Pn	10 45 05.1	-0.5
IKL	Isikli	3.44	77	ePN	Pn	10 45 05.8	-0.5
KIZT	Kizilcal	3.83	29	ePN	Pn	10 45 12.0	+0.2
HMAT	Matruh	4.88	205	⇓eP	Pn	10 45 26.9	+0.3
HMAT				S	Sn	10 46 15.0	-7.9
KAMT	Kaman	5.07	40	ePN	Pn	10 45 29.4	0.0
BR131	Keskin Array S	5.30	37	eP	Pn	10 45 32.6	0.0
	1.6nm,0.3s						
BR131	Keskin Array S	5.30	37	eP	Pn	10 45 32.7	0.0
	1.6nm,0.3s						
SLUM		5.41	223	⇓eP	Pn	10 45 34.9	+0.6
SLUM				S	Sn	10 46 29.6	-6.8
SLUM		5.41	223	P	Pn	10 45 34.8	+0.6
AMAG	Maghara	5.76	147	⇓eP	Pn	10 45 40.4	+1.2
HNKL	Nakhl	6.72	145	P	Pn	10 45 53.6	+0.9
SWA1		7.04	208	P	Pn	10 45 56.6	-0.5
SWA2		7.16	210	⇓P	Pn	10 45 58.5	-0.3
AWBH		7.21	184	P	Pn	10 45 59.0	-0.5
HFRF	Wahat Farafira	8.42	187	P	P	10 46 16.2	-0.2
HHRG	Al Ghardaqah	8.97	156	P	P	10 46 24.4	+0.3

MOS ***09*** *11:11:27.8±1.1,34.91N×71.34E,h15^{km},mb4.7/12,Error ellipse: s-maj=9.4km s-min=5.1km az=102.1*
BJI ***09*** *11:11:28.7,35.04N×71.23E,h10^{km},mB4.9,mb4.7,ML4.8, Ms4.6,Msz4.0*
NEIC ***09*** *11:11:28.9±0.3,34.88N×71.30E,h10^{km},mb4.7/15,Error ellipse: s-maj=6.9km s-min=4.2km az=221.0*
IDC ***09*** *11:11:34.8±3.2,35.12N×71.20E,h46^{km}±29^{km},mb4.2/15, mb1 4.4/18,mb1mx4.3/23,mbtmp4.5/18,ML4.5/3,MS3.4/5, Ms1 3.4/5,ms1mx3.3/30,Error ellipse: s-maj=15.3km s-min=12.7km az=141.0*
NNC ***09*** *11:11:40.8±5.4,35.21N×70.97E,h135^{km}±40^{km},mpv5.2, Error ellipse: s-maj=54.4km s-min=34.8km az=62.0*
ISC 09 11:11:31.5±0.5,**34.81N**±0.02×**71.38E**±0.04,**h50**^{km}±6^{km}, **n144,σ1^{s}44**/177,**mb4.5**/35,**MS3.6**/9,**17C-7D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	1.07	156	⇓P	P	11 11 50.7	+0.2
CHCP	Chirah Chowk	1.93	126	⇓P	P	11 12 07.5	+4.9
THW	Thamme Wali	2.03	171	P	P	11 12 07.5	+3.5
SBDP	Sheikh Budin	2.55	191	⇑P	P	11 12 14.3	+2.9
SRNI	Srinagar	2.95	103	ex	S	11 13 04.2	+13
SRNI				ex	x	11 13 28.5	
DRP	Derazinda	3.21	198	P	P	11 12 23.0	+2.2
JMU	Jammu	3.59	124	ex	S	11 13 17.5	+10
THN	Thein Dam	4.32	122	eP	P	11 12 40.6	+4.2
THN				eSB	S	11 13 46.8	+21
DLH	Dalhousie	4.44	119	ex	P	11 12 43.0	+4.9
DLH				ex	S	11 13 37.0	+7.9
BHK	Bhakra	5.41	127	eP	P	11 12 57.0	+5.4
BHK				eS	S	11 13 59.9	+6.5
SDNR	Sundarnagar	5.73	124	eP	P	11 12 58.2	+2.1
SDNR				ex	S	11 14 06.2	+4.8
KLP	Kalpa	6.62	118	eP	P	11 13 10.7	+2.1
KLP				AMb	AMB	11 13 16.0	
	comp=Z,31nm,0.3s						
KLP				eS	S	11 14 21.9	-1.6
AML	Almayashu	7.53	13	P	P	11 13 22.7	+1.4
	SNR=160						
KHET	Khetri	7.70	149	eP	P	11 13 22.9	-0.7
KHET				AMb	AMB	11 13 25.7	
	comp=Z,26nm,0.3s						
KHET				eS	S	11 14 47.1	-3.3
UCH	Uchtor	7.80	17	P	P	11 13 26.2	+1.2
	SNR=206						
KZA	Kyzart	7.87	22	P	P	11 13 26.7	+0.8
	SNR=36						
NDI	New Delhi	7.87	139	eP	P	11 13 25.0	-0.9
NDI				eS	S	11 14 52.0	-2.5
JASL	Jaisalmer	7.87	183	eP	P	11 13 25.7	-0.2
KUDL	Kundal	7.94	145	eP	P	11 13 27.1	+0.1
AYAN	Aya Nagar	7.98	141	eP	P	11 13 28.7	+1.2
EKS2	Erkin-Say	8.06	13	P	P	11 13 30.1	+1.5
	SNR=22						
SONA	Sohna	8.15	142	eP	P	11 13 30.6	+0.8
SONA				eS	S	11 14 57.5	-3.9
KALG	Kalgarh	8.18	128	eP	P	11 13 30.2	-0.1
KALG				AMb	AMB	11 13 32.4	
	comp=Z,39nm,0.5s						
KALG				eS	S	11 15 00.1	-2.2
AAK	Ala-Archa	8.18	16	P	P	11 13 31.5	+1.2
	SNR=160						
AAK	Ala-Archa	8.18	16	⇑P	P	11 13 31.3	+1.0
	comp=Z,62nm,0.5s						
AAK				⇑S	S	11 15 02.7	+0.3
	comp=Z,122nm,1.1s						
AAK	Ala-Archa	8.18	16	⇑P	P	11 13 31.3	+1.0
	comp=Z,62nm,0.4s						
AAK				S	S	11 15 02.7	+0.3
AAK	Ala-Archa	8.18	16	⇑P	P	11 13 31.3	+1.0
AAK				S	S	11 15 02.7	+0.4
AAK				pmax	pmax		
	comp=Z,62nm,0.4s						
KK31	Karatay Array	8.31	356	P	P	11 13 31.1	-0.9
	comp=Z,31nm,0.2s,baz=186,slow=15,SNR=778						
KK31				⇓S	S	11 15 02.8	-2.8
	comp=Z,47nm,0.6s,baz=187,slow=25,SNR=7.6						
KK31	Karatay Array	8.31	356	P	P	11 13 31.2	-0.9
KK31				S	S	11 15 02.8	-2.8
KK31				pmax	pmax		
	comp=Z,31nm,0.3s						
KKAR	Karatay Array	8.31	356	i P	P	11 13 31.1	-1.0
KKAR				i		11 15 02.7	
KKAR				pmax	pmax		
	comp=Z,57nm,0.5s						
KKAR				smax			
	comp=Z,61nm,0.7s						
KBK	Karagaybulak	8.32	18	P	P	11 13 34.9	+2.8
	SNR=28						
ULHL	Ulahol	8.34	26	P	P	11 13 33.6	+1.1
	SNR=30						
FRU	Bishkek	8.40	16	⇑eP	P	11 13 34.8	+1.5
FRU				eS	S	11 15 12.0	+4.2
FRU				pmax	pmax		
	comp=Z,120nm,1.6s						
FRU				smax			
	comp=E,160nm,1.8s						
FRU				pmax	pmax		
	comp=N,720nm,2.2s						
CHMS	Chumysh	8.59	17	P	P	11 13 36.9	+1.0
	SNR=14						
TKM2	Tokmak 2	8.74	21	P	P	11 13 38.6	+0.6
	SNR=54						
AJM	Ajmer	8.76	160	eP	P	11 13 38.4	+0.2
AJM				AMb	AMB	11 13 40.3	
	comp=Z,15nm,0.4s						
AJM				eS	S	11 15 13.5	-3.2
USP	Ospenovka	8.79	15	P	P	11 13 40.4	+1.8
	SNR=16						
BHJ	Bhuj	11.61	188	eP	P	11 14 15.8	-1.4
BHJ				ex	x	11 16 22.4	
KOLN	Koldanda	12.58	121	ePn	P	11 14 29.1	-1.0
KOLN				eSn	S	11 16 45.3	-4.2
	comp=Z,124nm,0.8s						
BHPL	Bhopal	12.67	154	eP	P	11 14 28.7	-2.7
BHPL				eS	S	11 16 47.8	-4.0
ALBI	Allahabad	13.07	134	eP	P	11 14 33.5	-3.2
GKN	Gorkha	13.19	117	ePn	P	11 14 37.5	-0.7
GKN				eSn	S	11 16 59.7	-4.4
	comp=Z,159nm,0.6s						
DMN	Daman	13.75	118	ePn	P	11 14 44.6	-1.0
DMN				eSn	S	11 17 14.1	-3.5
	comp=Z,153nm,0.8s						
KKN	Kakani	13.78	117	ePn	P	11 14 45.1	-0.8
KKN				eSn	S	11 17 14.4	-3.8
	comp=Z,114nm,0.7s						
PKI	Pulchoki	14.00	117	ePn	P	11 14 47.7	-1.1
PKI				eSn	S	11 17 19.0	-4.4
	comp=Z,66nm,0.5s						
GUN	Gumba	14.16	115	ePn	P	11 14 51.0	+0.1
GUN				eSn	S	11 17 23.6	-3.6
	comp=Z,115nm,0.8s						
MK02	Makanchi Array	14.52	31	P	P	11 14 54.3	-1.1
MK02				pmax	pmax		
	comp=Z,13nm,0.6s						
JIRN	Jiri	14.52	115	ePn	P	11 14 54.8	-0.9
JIRN				eSn	S	11 17 31.6	-4.3
	comp=Z,71nm,0.5s						
MK31	Makanchi Array	14.53	31	P	P	11 14 54.3	-1.3
	comp=Z,13nm,0.6s,baz=200,slow=9.2,SNR=97						
MK31	Makanchi Array	14.53	31	P	P	11 14 54.3	-1.3
	comp=Z,13nm,0.6s						
MKAR	Makanchi Array	14.53	31	P	P	11 14 54.9	-0.7
	comp=Z,0.9nm,0.3s,baz=214,slow=13,SNR=47						
MKAR	Makanchi Array	14.53	31	i P	P	11 14 54.3	-1.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BLSP	Bilaspur	15.76	140	eP	P	11 15 10.9	-0.7
BLSP				AMb	AMB	11 15 15.1	
	comp=Z,18nm,0.6s						
POO	Poona	16.36	172	ex	P	11 15 25.0	+5.8
POO				ex	x	11 18 56.0	
AB31	Akbulak array	16.72	333	P	P	11 15 21.2	-2.4
	comp=Z,22nm,0.5s,baz=146,slow=12,SNR=341						
AB31				⇑S	S	11 18 18.1	-8.7
	comp=Z,14nm,0.6s,baz=164,slow=21,SNR=7.1						
AB31	Akbulak array	16.72	333	P	P	11 15 21.2	-2.4
AB31				S	S	11 18 18.1	-8.6
AB31				pmax	pmax		
	comp=Z,22nm,0.5s						
BOK	Bokaro	16.72	127	eP	P	11 15 24.8	+1.1
BOK				AMb	AMB	11 15 30.5	
	comp=Z,35nm,0.9s						
BOK				ex	x	11 18 22.4	
KURK	Kurchatov	16.75	16	⇑P	P	11 15 20.6	-3.3
	comp=Z,18nm,1.2s						
KURK	Kurchatov	16.75	16	⇑P	P	11 15 20.6	-3.3
KURK	Kurchatov	16.75	16	i P	P	11 15 20.7	-3.2
LSA	Lhasa	17.47	101	P	P	11 15 34.4	+1.3
LSA	Lhasa	17.47	101	eP	P	11 15 34.3	+1.1
	comp=Z,12nm,0.6s						
LSA	Lhasa	17.47	101	eP	P	11 15 34.3	+1.2
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
KAD	Karad	17.61	171	eP	P	11 15 37.1	+2.2
KAD				AMb	AMB	11 15 39.0	
	comp=Z,9.9nm,0.8s						
VOSK	Vostochnaya	17.91	359	⇑P	P	11 15 35.7	-2.8
	comp=Z,13nm,0.9s						
VOSK	Vostochnaya	17.91	359	⇑P	P	11 15 35.7	-2.8
VOSK				pmax	pmax		
	comp=Z,13nm,0.9s						
BVA0	Borovoye Array	18.23	358	P	P	11 15 40.8	-1.5
	comp=Z,2.8nm,0.8s,baz=166,slow=12,SNR=80						
BVA0	Borovoye Array	18.23	358	P	P	11 15 40.8	-1.6
	comp=Z,2.8nm,0.8s						
BVA0	Borovoye Array	18.23	358	P	P	11 15 40.8	-1.5
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVAR	Borovoye Array	18.23	358	P	P	11 15 40.6	-1.7
	comp=Z,2.1nm,0.3s,baz=173,slow=12,SNR=60						
BRVK	Borovoye	18.26	358	eP	P	11 15 40.1	-2.7
	comp=Z,13nm,0.8s						
BRVK	Borovoye	18.26	358	eP	P	11 15 40.1	-2.7
BRVK				pmax	pmax		
	comp=Z,13nm,0.8s						
AKTK	Aktyubinsk	18.41	332	⇓P	P	11 15 42.8	-1.8
AKTK				S	S	11 18 58.2	-6.6
AKTO	Aktyubinsk	18.41	332	⇓P	P	11 15 42.8	-1.8
	comp=Z,7.4nm,0.8s						
AKTO				⇑S	S	11 18 58.2	-6.6
	comp=Z,5.2nm,0.9s						
AKTO	Aktyubinsk	18.41	332	P	P	11 15 43.0	-1.6
	comp=Z,2.1nm,0.3s,baz=145,slow=12,SNR=58						
AKTO				S	S	11 19 01.4	-3.4
	comp=Z,0.2nm,0.3s,baz=224,slow=20,SNR=4.9						
AKTO				LR	LR	11 23 13.8	
	comp=Z,121nm,19.5s,slow=39						
AKTO	Aktyubinsk	18.41	332	P	P	11 15 43.0	-1.6
AKTO				S	S	11 19 01.4	-3.5
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,121nm,19.5s						
HYB	Hyderabad	18.46	158	i P	P	11 15 47.5	+2.0
HYB				eS	S	11 19 05.0	-1.3
HYB	Hyderabad	18.46	158	eP	P	11 15 47.5	+2.0
HYB				eS	S	11 19 25.0	+19
CHKZ	Chkalovo	18.87	359	⇑P	P	11 15 48.4	-1.6
	comp=Z,8.9nm,0.8s						
CHKZ	Chkalovo	18.87	359	⇑P	P	11 15 48.4	-1.6
SHL	Shillong	19.94	112	eP	P	11 16 04.0	+2.0
SHL				ex	x	11 19 39.0	
ORR	Orenburg	20.64	330	eP	P	11 16 08.1	-0.9
ORR				eS	S	11 19 55.0	+3.2
ORR				pmax	pmax		
	comp=Z,20nm,1.0s						
ORR				MLR	MLR		
	comp=Z,130nm,17.0s,MS3.4						
ZAL	Zalesovo	21.33	22	P	P	11 16 15.7	-0.4
	comp=Z,30nm,0.6s,mb4.8,baz=252,slow=9.9,SNR=131						
ZAL				S	S	11 20 08.0	+3.1
	comp=Z,0.9nm,0.4s,baz=129,slow=12,SNR=3.1						
ZAL				LR	LR	11 25 33.2	
	comp=Z,142nm,19.2s,MS3.4,baz=152,slow=40						
NVS	Novosibirsk	21.66	19	⇓iP	P	11 16 18.6	-0.8
NVS				eS	S	11 20 14.0	+2.8
NVS				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.7						
NVS				pmax	pmax		
	comp=N,35nm,0.9s						
NVS				smax			
	comp=E,24nm,1.6s						
GNI	Garni	21.77	292	P	P	11 16 21.0	+0.5
	comp=E,26nm,0.8s,mb4.7,baz=17,slow=7.9,SNR=7.4						
GNI				LR	LR	11 25 51.5	
	comp=E,44nm,20.4s,MS2.9,baz=92,slow=40						
GNI	Garni	21.77	292	P	P	11 16 21.0	+0.5
GNI				LR	LR	11 25 51.5	
ZEI	Tsey	22.78	299	i P	P	11 16 30.0	-0.5
ZEI				i		11 16 56.7	
ZEI				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.1						
GTA	Gaotai	23.09	70	P	P	11 16 39.1	+5.6
GTA				AP		11 16 46.5	
GTA				XP		11 16 49.8	
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
ARU	Arti	23.33	342	eP	P	11 16 35.7	+0.1
	comp=Z,27nm,0.6s,mb4.8						
ARU	Arti	23.33	342	⇓iP	P	11 16 34.0	-1.7
ARU				ePPP	PPP	11 17 08.0	-11
ARU				eS	S	11 20 44.9	+3.9
ARU				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.7						
KIV	Kislovodsk	23.89	301	eP	P	11 16 42.4	+1.2
KIV				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.3						
KIV				MLR	MLR		

	comp=Z,58nm,17.0s,MS3.1						
ANN	**Anapa**	27.75	301	*e*P	**P**	**11 17 09.4**	**-8.0**
ANN				*e*S	**S**	**11 21 50.7**	**-4.0**
ANN				pmax	pmax		
	comp=Z,110nm,1.6s,mb5.2						
ZAK	**Zakamensk**	27.90	46	*e*P	**P**	**11 17 16.4**	**-2.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.7						
SONM	**Songino Array**	29.07	53	P	**P**	**11 17 31.7**	**+2.5**
	comp=Z,3.0nm,0.7s,mb4.1,baz=255,slow=9.1,SNR=15						
BR131	**Keskin Array S**	30.29	291	P	**P**	**11 17 36.4**	**-3.6**
BRTR	**Keskin Array B**	30.29	291	P	**P**	**11 17 39.9**	**-0.1**
	comp=Z,2.0nm,0.8s,mb3.9,baz=90,slow=9.9,SNR=8.2						
OBN	**Obninsk**	31.44	321	*e*P	**P**	**11 17 50.2**	**+0.2**
OBN				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.5						
ENH	**Enshi**	32.31	87	*e*P	**P**	**11 17 59.0**	**+1.1**
	comp=Z,12nm,0.8s,mb4.8						
AKASG	**Malin Array Be**	34.27	311	P	**P**	**11 18 13.8**	**-0.8**
	comp=Z,3.4nm,0.5s,mb4.5,baz=83,slow=7.8,SNR=15						
AKASG	**Malin Array Be**	34.27	311	P	**P**	**11 18 13.8**	**-0.8**
JOF	**Joensuu**	37.49	331	*e*p	**P**	**11 18 41.5**	**-0.3**
KWP	**Kalwaria**	38.28	308	*e*P	**P**	**11 18 50.1**	**+1.6**
FINES	**FINESS Array B**	39.07	327	P	**P**	**11 18 55.1**	**+0.3**
	comp=Z,4.6nm,0.6s,mb4.4,baz=105,slow=10,SNR=10						
FINES				LR	LR	11 36 24.9	
	comp=Z,101nm,19.4s,MS3.7,baz=80,slow=38						
KAF	**Kangasniemi**	39.22	328	*e*p	**P**	**11 18 56.0**	**-0.2**
NJ2	**Nanjing**	39.43	80	*e*P	**P**	**11 19 01.1**	**+2.9**
NJ2				AP	pP	11 19 11.0	-0.6
NJ2				XP	sP	11 19 14.1	-3.6
NJ2				PP	PP	11 20 35.8	+2.7
NJ2				S	**S**	**11 25 01.0**	**+4.9**
NJ2				XS		11 25 18.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,90nm,7.0s						
NJ2				LR	LR		
	comp=N,710nm,24.5s,MS4.7						
NJ2				LR	LR		
	comp=E,930nm,22.0s,MS4.7						
NJ2				LR	LR		
	comp=Z,200nm,17.2s,MS4.0						
SSE	**Sheshan**	41.62	81	*e*P	**P**	**11 19 17.5**	**+1.2**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,100nm,5.2s						
SSE	**Sheshan**	41.62	81	*e*P	**P**	**11 19 17.5**	**+1.2**
	comp=Z,39nm,0.7s,mb5.2						
KEV	**Kevo**	42.49	339	*e*p	**P**	**11 19 22.7**	**-0.2**
ARCES	**ARCESS Array B**	42.83	338	P	**P**	**11 19 26.1**	**+0.4**
	comp=Z,6.0nm,0.6s,mb4.5,baz=113,slow=7.4,SNR=26						
YAK	**Yakutsk**	45.17	34	*e*P	**P**	**11 19 45.5**	**+0.8**
	comp=Z,24nm,0.6s,mb5.2						
YAK	**Yakutsk**	45.17	34	*e*P	**P**	**11 19 45.5**	**+0.8**
YAK				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.2						
NB2	**NORSAR Subarra**	45.92	324	P	**P**	**11 19 49.7**	**-1.0**
	comp=Z,7.9nm,0.6s,mb4.8,baz=98,slow=7.9						
NOA	**NORSAR Array B**	45.92	324	P	**P**	**11 19 50.0**	**-0.7**
	comp=Z,9.4nm,0.7s,mb4.8,baz=97,slow=7.8,SNR=21						
NOA				LR	LR	11 40 19.8	
	comp=Z,44nm,18.2s,MS3.4,baz=320,slow=38						
NOA	**NORSAR Array B**	45.92	324	P	**P**	**11 19 50.0**	**-0.7**
NOA				LR	LR	11 40 19.8	
NAO	**NORSAR Subarra**	46.09	324	P	**P**	**11 19 49.7**	**-2.3**
	comp=Z,7.9nm,0.6s,mb4.8						
NAO	**NORSAR Subarra**	46.09	324	P	**P**	**11 19 49.7**	**-2.3**
NAO				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
TIXI	**Tiksi**	47.23	21	*e*P	**P**	**11 19 59.8**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
JNU	**Nakatsue**	48.73	74	P	**P**	**11 20 15.6**	**+2.5**
	comp=Z,6.6nm,0.9s,mb4.7,baz=220,slow=16,SNR=4.1						
LPG	**La Plagne**	49.32	303	*e*P	**P**	**11 20 17.9**	**+0.5**
	comp=Z,4.1nm,0.6s,mb4.3						
LPG	**La Plagne**	49.32	303	*e*P	**P**	**11 20 17.9**	**+0.5**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
LPL	**La Plagne**	49.33	303	*e*P	**P**	**11 20 18.3**	**+0.8**
MBDF	**Montbardon**	49.46	302	*e*P	**P**	**11 20 19.0**	**+0.5**
	comp=Z,6.9nm,0.7s,mb4.5						
MBDF	**Montbardon**	49.46	302	*e*P	**P**	**11 20 19.0**	**+0.5**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KBS	**Kingsbay**	50.33	348	*e*P	**P**	**11 20 24.6**	**-0.2**
	comp=Z,17nm,0.7s,mb5.2						
KBS	**Kingsbay**	50.33	348	*e*P	**P**	**11 20 24.6**	**-0.2**
KBS				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2						
SMF	**Signal de Mont**	51.07	305	*e*P	**P**	**11 20 30.1**	**-0.6**
	comp=Z,20nm,0.8s,mb4.8						
SMF	**Signal de Mont**	51.07	305	*e*P	**P**	**11 20 30.1**	**-0.6**
SMF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
MJAR	**Matsushiro Arr**	53.30	67	P	**P**	**11 20 48.9**	**+1.3**
	comp=Z,2.6nm,0.6s,mb4.3,baz=292,slow=9.9,SNR=6.1						
DAG	**Danmarks Havn**	56.44	344	⇑*i*P	**P**	**11 21 09.7**	**-0.2**
	comp=Z,3.7nm,0.8s,mb4.5						
DAG	**Danmarks Havn**	56.44	344	⇑*e*P	**P**	**11 21 09.7**	**-0.2**
	comp=Z,3.7nm,0.8s,mb4.5						
DAG	**Danmarks Havn**	56.44	344	⇑*e*P	**P**	**11 21 09.7**	**-0.2**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
LSZ	**Lusaka**	64.52	227	*e*P	**P**	**11 22 05.6**	**0.0**
	comp=Z,5.6nm,0.8s,mb4.7						
LSZ	**Lusaka**	64.52	227	*e*P	**P**	**11 22 05.6**	**-0.1**
LSZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
DBIC	**Dimbokro**	74.93	268	P	**P**	**11 23 09.4**	**+0.1**
	comp=Z,3.8nm,0.8s,mb4.4,baz=269,slow=3.6,SNR=4.2						
ILAR	**Eielson Array**	76.32	16	P	**P**	**11 23 15.3**	**-0.9**
	comp=Z,0.3nm,0.4s,mb3.5,baz=280,slow=5.8,SNR=5.5						
BOSA	**Boshof**	76.66	221	P	**P**	**11 23 20.9**	**+2.0**
	comp=Z,3.3nm,0.7s,mb4.4,baz=19,slow=8.5,SNR=8.1						
WRA	**Warramunga Arr**	80.83	122	P	**P**	**11 23 44.4**	**+2.6**
	comp=Z,2.6nm,0.8s,mb4.2,baz=320,slow=5.4,SNR=4.9						
YKA	**Yellowknife Ar**	82.92	3	P	**P**	**11 23 52.4**	**+0.7**
	comp=Z,2.3nm,0.6s,mb4.4,baz=348,slow=5.4,SNR=14						
YKA	**Yellowknife Ar**	82.92	3	P	**P**	**11 23 52.4**	**+0.7**
SCHQ	**Schefferville**	83.77	337	LR	LR	12 02 32.2	
	comp=Z,704nm,21.3s,baz=18,slow=37						
EDM	**Edmonton**	92.24	3	*e*P	**P**	**11 24 38.6**	**+1.9**
NEW	**Newport**	96.95	6	LR	LR	12 09 58.1	
	comp=Z,362nm,18.9s,MS4.9,baz=127,slow=36						
CFAA	**Coronel Fontan**	146.22	264	PKPbc	PKPbc	11 31 10.4	+3.9
	comp=Z,0.8nm,0.6s,baz=81,slow=4.3,SNR=6.0						
PLCA	**Paso Flores**	149.50	247	PKPbc	PKPdf	11 31 18.6	+8.2
	comp=Z,3.4nm,0.9s,baz=138,slow=5.6,SNR=5.1						

*MOS **09** 11:13:26.5±0.8, 19.93S×177.62W, h535^{km}, mb5.3/3, Error ellipse: s-maj=28.0km s-min=16.5km az=156.0*

*IDC **09** 11:13:26.6±1.6, 20.24S×177.41W, h532^{km}±18^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.7/16, mbtmp4.6/11, Error ellipse: s-maj=19.2km s-min=10.9km az=129.0*

*NEIC **09** 11:13:28.1±1.0, 19.95S×177.56W, h546^{km}±12^{km}, mb5.2/4, Error ellipse: s-maj=15.8km s-min=10.3km az=150.0*

ISC 09 11:13:25.9±1.0**, 20.0S**±0.1×**177.60W**±0.09**, h525**^{km}±14^{km}**, n42,** σ**0^{s}87**/37**, mb4.3**/12**, 5C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	8.21	44	P	**P**	**11 15 26.4**	**+0.3**
	8.4nm,0.3s,baz=261,slow=1.7,SNR=13						
AFI				S	**S**	**11 17 00.9**	**-0.8**
	18nm,0.3s,baz=12,slow=23,SNR=14						
AFI	**Afiamalu**	8.21	44	P	**P**	**11 15 26.4**	**+0.3**
AFI				S	**S**	**11 17 00.9**	**-0.8**
DZM	**Mont Dzumac**	15.04	259	*e*P	**P**	**11 16 38.6**	**+2.5**
DZM	**Mont Dzumac**	15.04	259	P	**P**	**11 16 38.8**	**+2.7**
	5.7nm,0.3s,baz=83,slow=13,SNR=67						
DZM	**Mont Dzumac**	15.04	259	*e*P	**P**	**11 16 38.6**	**+2.5**
NOUC	**Port Laguerre**	15.18	259	*e*P	**P**	**11 16 42.2**	**+4.8**
URZ	**Urewera**	18.78	193	P	**P**	**11 17 11.4**	**-1.0**
	1.5nm,0.3s,baz=280,slow=3.7,SNR=11						
URZ				S	**S**	**11 20 10.2**	**-4.8**
	0.4nm,0.3s,baz=201,slow=23,SNR=12						
CTA	**Charters Tower**	33.92	263	⇓*i*P	**P**	**11 19 27.1**	**+0.7**
	38nm,0.4s,mb5.3						
CTA	**Charters Tower**	33.92	263	⇓*i*P	**P**	**11 19 27.1**	**+0.7**
CTA				pmax	pmax		
	comp=Z,38nm,0.4s						
CTAO	**Charters Tower**	33.92	263	*e*P	**P**	**11 19 26.8**	**+0.4**
	comp=Z,45nm,0.4s,mb5.3						
CTAO	**Charters Tower**	33.92	263	*e*P	**P**	**11 19 26.8**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,45nm,0.4s,mb5.3						
PMG	**Port Moresby**	35.60	282	P	**P**	**11 19 41.1**	**+0.7**
	comp=Z,28nm,0.8s,mb4.8,baz=96,slow=7.2,SNR=8.5						
STKA	**Stephens Creek**	38.35	244	⇓*i*P	**P**	**11 20 03.7**	**+1.0**
	comp=Z,11nm,0.6s,mb4.6						
STKA	**Stephens Creek**	38.35	244	P	**P**	**11 20 03.7**	**+1.0**
	comp=Z,14nm,0.5s,mb4.7,baz=93,slow=9.2,SNR=45						
STKA	**Stephens Creek**	38.35	244	*e*P	**P**	**11 20 03.6**	**+0.8**
STKA				⇓*i*P		11 20 03.7	
ASPA	**Alice Springs**	45.01	256	⇓*i*P	**P**	**11 20 55.6**	**-0.3**
ASPA				*e*S	**S**	**11 26 52.6**	**-3.6**
WB2	**Warramunga Arr**	45.04	261	⇓*i*P	**P**	**11 20 55.3**	**-0.8**
WRAB	**Tennant Creek**	45.04	261	*e*P	**P**	**11 20 55.0**	**-1.1**
	comp=Z,29nm,0.5s,mb5.1						
WRAB	**Tennant Creek**	45.04	261	*e*P	**P**	**11 20 55.0**	**-1.1**
WRAB				pmax	pmax		
	comp=Z,29nm,0.5s,mb5.1						
WRA	**Warramunga Arr**	45.05	261	P	**P**	**11 20 55.4**	**-0.8**
	comp=Z,24nm,0.5s,mb5.0,baz=97,slow=8.1,SNR=224						
KAKA	**Kakadu**	48.34	271	*e*P	**P**	**11 21 38.1**	**+17**
	comp=Z,27nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	53.47	262	⇓*i*P	**P**	**11 21 58.0**	**-0.8**
	comp=Z,18nm,0.5s,mb4.7						
SBA	**Scott Base**	58.41	184	*e*P	**P**	**11 22 33.1**	**+0.9**
MUN	**Mundaring**	59.89	244	*e*P	**P**	**11 22 42.3**	**-0.3**
NVAR	**Mina Array Bea**	80.39	43	P	**P**	**11 24 44.5**	**+1.0**
	comp=Z,1.0nm,0.7s,mb3.2,baz=233,slow=7.9,SNR=7.9						
MAW	**Mawson**	82.18	200	P	**P**	**11 24 52.0**	**0.0**
	comp=Z,2.2nm,0.6s,mb3.7,baz=92,slow=5.6,SNR=9.2						
TXAR	**Lajitas Array**	86.46	57	P	**P**	**11 25 14.9**	**+1.1**
	comp=Z,0.4nm,0.6s,mb3.2,baz=218,slow=7.0,SNR=7.9						
ILAR	**Eielson Array**	87.73	13	P	**P**	**11 25 17.9**	**-1.0**
	comp=Z,0.7nm,0.6s,mb3.6,baz=221,slow=6.6,SNR=8.5						
PDAR	**Pinedale Array**	88.33	43	P	**P**	**11 25 22.5**	**+0.2**
	comp=Z,0.6nm,0.5s,mb3.5,baz=208,slow=2.7,SNR=6.2						
SNAA	**Sanae**	88.52	178	⇑*i*P	**P**	**11 25 21.7**	**-0.8**
VNA3	**Neumayer Olymp**	88.63	176	⇑*i*P	**P**	**11 25 22.9**	**-0.1**
VNA2	**Neumayer--Watz**	89.08	177	⇑*i*P	**P**	**11 25 25.3**	**+0.2**
VNA1	**Neumayer--Stat**	89.30	176	⇑*i*P	**P**	**11 25 26.6**	**+0.4**
MKAR	**Makanchi Array**	111.12	314	PKiKP		11 30 58.4	
	comp=Z,0.4nm,0.6s,baz=196,slow=1.5,SNR=4.9						
MKAR	**Makanchi Array**	111.12	314	PKPdf	PKPdf	11 30 58.4	-0.7
BVAR	**Borovoye Array**	118.92	320	PKP	PKPdf	11 31 13.6	-0.5
	comp=Z,0.7nm,0.5s,baz=102,slow=4.7,SNR=4.8						
ARCES	**ARCESS Array B**	128.48	350	PKP	PKPdf	11 31 32.1	-0.1
	comp=Z,1.7nm,0.8s,slow=3.6,SNR=4.1						
APA	**Apatity**	128.54	345	⇑*i*PKHKP		11 31 06.7	
APA				pmax	pmax		
	comp=Z,14nm,0.6s						
AKASG	**Malin Array Be**	142.74	332	PKhKP		11 31 54.9	
	comp=Z,0.5nm,0.3s,baz=46,slow=4.3,SNR=4.5						
AKASG	**Malin Array Be**	142.74	332	PKP	PKPdf	11 31 54.9	-3.7
BRTR	**Keskin Array B**	146.77	313	PKPbc	PKPbc	11 32 08.4	+0.4
	comp=Z,1.2nm,0.5s,baz=150,slow=4.4,SNR=5.1						
GERES	**GERESS Array B**	149.80	345	PKPbc	PKPdf	11 32 16.8	+6.4
	comp=Z,0.9nm,0.5s,baz=207,slow=6.0,SNR=6.7						

NNC 09 11:18:27.9±3.8**, 34.83N**×**70.99E, h65**^{km}±92^{km}**, mpv3.8, 3D, Error ellipse: s-maj=48.9km s-min=28.3km az=110.0, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	8.26	18	⇓P	P	11 20 25.1	-2.3
	2.4nm,0.4s						
AAK				S	S	11 21 57.7	-2.4
	8.8nm,1.2s						
KK31	**Karatay Array**	8.27	358	⇓P	P	11 20 25.3	-2.3
	1.5nm,0.4s,baz=172,slow=11,SNR=11						
KK31				⇓S	S	11 21 57.9	-2.5
	1.7nm,0.5s,baz=185,slow=24,SNR=4.1						
AB31	**Akbulak array**	16.56	334	P	P	11 22 15.8	-1.3
	0.6nm,0.4s,baz=146,slow=12,SNR=14						

*NEIC **09** 11:24:29.4, 15.61N×93.95W, h37^{km}, MD3.9(MEX), After MEX.*

MEX 09 11:24:29.4±0.9**, 15.61N**×**93.95W, h35**^{km}±84^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	**San Cristobal**	1.69	48	*e*P	P	11 24 56.0	-0.9
SCX				*i* S	S	11 25 15.0	-2.5
CMIG	**Matias Romero**	1.72	329	*i* P	P	11 24 55.1	-2.3
CMIG				*i* S	S	11 25 15.6	-2.9
CCIG	**Comitan**	1.86	69	*i* P	P	11 24 57.4	-2.1
CCIG				*i* S	S	11 25 18.6	-3.4
HUIG	**Huatulco**	2.09	275	*i* P	P	11 25 00.5	-2.1
HUIG				*i* S	S	11 25 23.4	-4.3
OXX	**Oaxaca**	3.04	299	*i* P	P	11 25 15.5	-0.7
OXX				*e*S	S	11 25 48.0	-3.8

*ATH **09** 11:26:28.8, 38.14N×27.05E, h37^{km}±4^{km}, MD3.1/3*
*ISK **09** 11:26:30.2, 38.18N×26.65E, h20^{km}, MD3.2*
*CSEM **09** 11:26:30.9±0.2, 38.17N×26.73E, h21^{km}±1^{km}, MD3.2, Error ellipse: s-maj=4.2km s-min=2.3km az=107.0*

ISC 09 11:26:29.9±0.8**, 38.14N**±0.03×**26.64E**±0.04**, h4**^{km}±6^{km}**, n20,** σ**0^{s}94**/32**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.22	352	*i* P	**Pg**	**11 26 34.1**	**-0.3**
URLA				*i* S	**Sg**	**11 26 37.9**	**+0.6**
BLCB	**Balcova**	0.40	53	*i* PG	**Pg**	**11 26 38.5**	**+0.5**
BLCB				*i* SG	**Sg**	**11 26 43.9**	**+0.6**
SMG	**Samos**	0.46	160	*e*PB	**Pb**	**11 26 39.8**	**-0.4**
SMG				*e*SB	**Sb**	**11 26 46.9**	**-0.2**
IZM	**Izmir**	0.56	62	*i* PG	**Pg**	**11 26 41.5**	**+0.5**
IZM				*i* SG	**Sg**	**11 26 49.7**	**+1.2**
KDAG	**Bornova**	0.56	62	*i* P	**Pg**	**11 26 40.2**	**-0.9**
KDAG				*i* S	**Sg**	**11 26 47.9**	**-0.8**
AYDN	**Tasoluk**	1.09	116	*i* P	**Pb**	**11 26 51.0**	**0.0**
AYDN				*i* S	**Sb**	**11 27 05.9**	**+0.4**
PRK	**Paraskevi**	1.14	346	*e*PN	**Pn**	**11 26 51.5**	**-1.0**
PRK				*e*SN	**Sn**	**11 27 08.5**	**-0.3**
AYVA	**Ayvalik**	1.17	2	*i* P	**Pb**	**11 26 53.1**	**+0.9**
AYVA				*i* S	**Sb**	**11 27 08.9**	**+1.3**
AKS	**Akhisar**	1.18	51	PN	**Pn**	**11 26 52.1**	**-1.1**
BODT	**Bodrum**	1.20	153	PN	**Pn**	**11 26 52.6**	**-0.9**
BDRM	**Kayabasi**	1.25	149	*i* P	**Pb**	**11 26 53.5**	**-0.2**
BDRM				*i* S	**Sb**	**11 27 11.1**	**+1.0**
APE	**Apeiranthos**	1.38	220	*e*PN	**Pn**	**11 26 55.0**	**-1.1**
APE	**Apeiranthos**	1.38	220	*e*PN	**Pn**	**11 26 56.8**	**+0.7**
APE				*e*SN	**Sn**	**11 27 17.2**	**+2.2**
MANT	**Manisa**	1.55	76	*i* P	**Pn**	**11 26 59.4**	**+1.0**
MANT				*i* S	**Sb**	**11 27 19.1**	**+0.3**
DAT	**Datca**	1.60	152	*e*PN	**Pn**	**11 26 58.9**	**-0.2**
YER	**Yerkesik**	1.65	127	*e*PN	**Pn**	**11 26 59.9**	**0.0**
BALB	**Balikesir**	1.78	33	*e*PN	**Pn**	**11 26 59.9**	**-1.9**
DNZL	**Cakiroluk**	1.96	103	*i* P	**Pn**	**11 27 07.7**	**+3.4**
DNZL				*i* S	**Sn**	**11 27 34.3**	**+4.7**
DALT	**Dalyan (Mudla)**	2.10	130	*e*PN	**Pn**	**11 27 05.3**	**-1.0**
DST	**Dursunbey**	2.13	46	*e*PN	**Pn**	**11 27 05.3**	**-1.5**

*IGQ **09** 11:33:09.4, 1.11S×77.30W, h277^{km}±7^{km}, mb5.3, Error ellipse: s-maj=3.0km s-min=2.3km az=33.9*
*CRAAG **09** 11:33:10.8, 1.07S×77.01W, Mb5.5*
*BGS **09** 11:33:12.2, 1.02S×76.94W, h248^{km}, mb5.3*
*BJI **09** 11:33:12.1, 1.00S×76.90W, h248^{km}, mB5.5*
*MOS **09** 11:33:12.8±0.8, 0.98S×77.01W, h254^{km}, mb5.5/60, Error ellipse: s-maj=7.9km s-min=4.7km az=101.6*
*HRVD **09** 11:33:13.2±0.1, 1.20S×77.10W, h247^{km}, MW5.9/73, Centroid moment Tensor Solution. LP body waves: s65,c141;Mantle waves: s73,c184; Half duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.05±.08; M$_{\theta\theta}$-0.03±.08; M$_{\phi\phi}$2.08±.10; M$_{r\theta}$5.85±.07; M$_{\theta\phi}$-2.10±.07; M$_{\phi r}$-4.48±.08; Best double couple: M$_{0}$7.906×10^{17} NP1: ϕ_s179°, δ14°, λ-39°. NP2: ϕ_s308°, δ81°, λ-101°. Principal axes: T 8.296, Plg35°, Azm47°; N -.781, Plg11°, Azm309°; P -7.517, Plg53°, Azm204°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **09** 11:33:13.2±0.1, 1.02S×76.94W, mb5.4/192, MW5.9, MD5.5(IGQ) Error ellipse: s-maj=3.1km s-min=2.2km az=47.0, Moment Tensor Solution. s44 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-2.09; M$_{\theta\theta}$-0.19; M$_{\phi\phi}$2.28; M$_{r\theta}$6.10; M$_{\theta\phi}$-1.44; M$_{\phi r}$-4.34; Best double couple: M$_{0}$7.9×10^{17} NP1: ϕ_s184°, δ14°, λ-34°. NP2: ϕ_s307°, δ82°, λ-102°. Principal axes: T 7.93, Plg36°, Azm47°; N 0, Plg12°, Azm309°; P -7.93, Plg51°, Azm204°;*
NEIC Felt in El Oro, Guayas and Manabi.
*IDC **09** 11:33:13.2±0.3, 0.98S×76.94W, h247^{km}±2^{km}, mb5.1/31, mb1 5.2/33, mb1mx5.2/33, mbtmp5.6/33 Error ellipse: s-maj=8.2km s-min=4.5km az=68.0*

ISC 09 11:33:11.8±0.1**, 1.04S**±0.02×**76.98W**±0.02**, h248**^{km}**, h248**^{km}±.4^{km}**:pP-P, n934,** σ**0^{s}89**/723**, mb5.4**/252**, 120C-48D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAV3	**Lava3-Reventad**	1.14	325	⇓P	**P**	**11 33 48.2**	**+0.5**
CONE	**Cono NE Rev Vo**	1.17	326	⇓P	**P**	**11 33 48.5**	**+0.7**
ANTI	**Antisana**	1.32	297	⇑P	**P**	**11 33 49.5**	**+0.6**
PISA	**Pisayambo**	1.40	269	⇑P	**P**	**11 33 49.4**	**-0.1**
TAMB	**Tambo**	1.43	284	⇑P	**P**	**11 33 49.7**	**+0.1**
CAYR	**Refugio Cayamb**	1.47	316	⇓P	**P**	**11 33 51.0**	**+1.0**
VC1	**Cotopaxi 1**	1.47	286	⇑P	**P**	**11 33 50.2**	**+0.2**
RUN5	**Runtun**	1.49	256	⇓P	**P**	**11 33 49.3**	**-0.8**
ANGU	**Angureal**	1.49	317	⇓P	**P**	**11 33 51.1**	**+1.0**
CAYA	**Cayambe**	1.50	318	⇓P	**P**	**11 33 51.1**	**+0.9**
PATA	**Patacocha**	1.52	252	⇓P	**P**	**11 33 51.0**	**+0.6**
JUIV	**Juive**	1.53	256	⇑P	**P**	**11 33 49.4**	**-1.0**
ARRY	**Arrayan**	1.54	253	⇓P	**P**	**11 33 49.2**	**-1.3**
CUSU	**Cusua**	1.55	255	P	**P**	**11 33 49.8**	**-0.8**
IGUA	**Igualata**	1.71	255	⇑P	**P**	**11 33 50.9**	**-1.0**
JUA2	**San Juan 2**	1.82	297	⇑P	**P**	**11 33 52.5**	**-0.3**
GGP	**Refugio Guagua**	1.83	298	⇑P	**P**	**11 33 52.6**	**-0.2**
YANA	**Yana**	1.83	300	⇑P	**P**	**11 33 52.8**	**-0.1**
TERV	**Terraza Guagua**	1.83	298	⇑P	**P**	**11 33 52.8**	**-0.1**
PINO	**Pino**	1.85	298	⇑P	**P**	**11 33 52.9**	**-0.1**
COTA	**Cotacachi**	1.92	315	⇓P	**P**	**11 33 54.1**	**+0.4**
QIL1	**Quilotoa**	1.96	276	⇑P	**P**	**11 33 53.4**	**-0.6**
JAMA	**Jama**	3.31	284	⇑P	**P**	**11 34 04.9**	**-3.2**
JAMA				S	**S**	**11 34 44.3**	**-7.4**
ROSC	**El Rosal**	6.43	24	P	**P**	**11 34 48.6**	**+2.7**
	51nm,0.3s,baz=196,slow=2.0,SNR=46						
ROSC				S	**S**	**11 36 05.0**	**+5.5**
	baz=262,slow=22,SNR=2.3						
NNA	**Nana**	10.88	179	P	**P**	**11 35 40.9**	**-1.5**
NNA				S	**S**	**11 37 44.8**	**+4.0**
NNA	**Nana**	10.88	179	*e*Pn	**P**	**11 35 40.9**	**-1.5**
	930nm,0.3s						
NNA				*e*S	**S**	**11 37 44.8**	**+4.0**
SDV	**Santo Domingo**	11.72	33	P	**P**	**11 35 55.1**	**+2.1**
	75nm,0.3s,baz=221,slow=10,SNR=570						
SDV				S	**S**	**11 38 04.4**	**+4.5**
	baz=312,slow=15,SNR=1.4						
SDV	**Santo Domingo**	11.72	33	*e*Pn	**P**	**11 35 55.2**	**+2.2**
	2µm,0.6s						
SJS	**Escuela Geolog**	12.98	327	⇑*e*P	**P**	**11 36 10.9**	**+2.3**
PAYG	**Puerto Ayora**	13.30	271	*e*P	**P**	**11 36 11.8**	**-0.9**
	777nm,0.9s						
PAYG				*e*S	**S**	**11 38 44.3**	**+8.7**
JTS	**JuntasAbangare**	13.77	325	P	**P**	**11 36 19.9**	**+1.4**
	5.1nm,0.3s,baz=138,slow=6.9,SNR=50						
JTS				S	**S**	**11 38 55.6**	**+10**
	0.6nm,0.3s,baz=207,slow=14,SNR=1.6						
JTS	**JuntasAbangare**	13.77	325	*e*Pn	**P**	**11 36 20.3**	**+1.8**
	2µm,1.9s						
JTS				*e*S	**S**	**11 38 52.7**	**+6.7**
JTS	**JuntasAbangare**	13.77	325	*e*P	**P**	**11 36 20.3**	**+1.8**
JTS				*e*S	**S**	**11 38 52.7**	**+6.7**
JTS				pmax	pmax		
	comp=Z,2µm,1.9s						
MADN	**Villa Maderas**	15.01	326	*e*P	**P**	**11 36 34.9**	**+1.2**
SSNN	**San Juan del S**	15.09	325	*e*P	**P**	**11 36 36.6**	**+1.9**
CONN	**Concepcion**	15.19	326	*e*P	**P**	**11 36 37.2**	**+1.3**
APON	**Apoyo**	15.72	325	*e*P	**P**	**11 36 43.7**	**+1.6**
WILN	**Americas 2**	15.99	325	*e*P	**P**	**11 36 46.1**	**+0.9**
MGAN	**Managua**	16.01	325	*e*P	**P**	**11 36 46.1**	**+0.7**
XAVN	**Gruta Xavier**	16.06	325	*e*P	**P**	**11 36 47.9**	**+1.9**
PYTN	**Playitas**	16.22	327	*e*P	**P**	**11 36 48.0**	**+0.2**
COPN	**Copaltepe**	16.23	324	*e*P	**P**	**11 36 48.4**	**+0.3**
ARE	**Arequipa**	16.25	161	⇓*i*P	**P**	**11 36 48.9**	**+0.7**
ARE				*e*		11 37 23.0	
ARE				*e*		11 39 54.0	
MOMJ	**Momotombo**	16.39	325	*e*P	**P**	**11 36 49.4**	**-0.3**
MIRN	**Miramar**	16.51	324	*e*P	**P**	**11 36 51.8**	**+0.6**
CNGN	**Cerro Negro**	16.55	325	*e*P	**P**	**11 36 51.9**	**+0.3**
TEL3	**Telica 3**	16.70	324	*e*P	**P**	**11 36 54.0**	**+0.9**
TELN	**Telica**	16.71	325	*e*P	**P**	**11 36 54.2**	**+0.9**
CRIN	**San Cristobal**	16.92	324	*e*P	**P**	**11 36 55.6**	**+0.1**
LPAZ	**La Paz**	17.48	151	P	**P**	**11 37 01.6**	**+0.1**
	comp=Z,46nm,0.3s,baz=338,slow=11,SNR=904						
LPAZ				S	**S**	**11 40 10.7**	**+5.0**
	comp=Z,1.5nm,0.3s,baz=188,slow=15,SNR=3.2						
LPAZ				ScS	ScS	11 48 22.1	+4.0
	comp=Z,0.1nm,0.3s,baz=294,slow=20,SNR=3.5						
LPAZ	**La Paz**	17.48	151	*e*P	**P**	**11 37 01.6**	**+0.1**
	comp=Z,50nm,1.0s						
LPAZ	**La Paz**	17.48	151	*e*P	**P**	**11 37 01.6**	**+0.1**
LPAZ				pmax	pmax		
	comp=Z,50nm,1.0s						
TPP	**Pointe-a-Pierr**	19.14	53	*e*P	**P**	**11 37 22.7**	**+4.2**
TRN	**Trinidad (W)**	19.37	53	⇓*i*P	**P**	**11 37 23.9**	**+3.1**
GRW	**Mount Saint Ca**	20.09	49	*e*P	**P**	**11 37 30.0**	**+2.0**
IXG	**Ixpaco**	20.16	319	*e*P	**P**	**11 37 30.9**	**+2.1**
TPR	**Prospect**	20.18	53	*e*P	**P**	**11 37 32.0**	**+3.1**
BOT	**Bacolet**	20.21	53	*e*P	**P**	**11 37 32.5**	**+3.2**
MRL	**Marmol**	20.35	322	*e*P	**P**	**11 37 32.8**	**+2.3**
RCC	**Rio Carpintero**	20.94	3	*e*P	**P**	**11 37 38.6**	**+2.2**
RCC				*e*S	**S**	**11 41 14.3**	**+4.3**
	comp=N,1µm,15.2s						
	comp=E,3µm,18.6s						
LMGC	**Las Mercedes**	20.98	360	*e*P	**P**	**11 37 39.1**	**+2.4**
LMGC				*e*S	S	11 40 48.2	-22
	comp=N,2µm,18.8s						
	comp=E,3µm,20.1s						
MASC	**Masc**	21.26	7	*e*P	**P**	**11 37 42.9**	**+3.5**
SIV	**San Ignacio**	21.61	134	P	**P**	**11 37 44.1**	**+1.3**
	comp=E,226nm,1.0s,mb5.7,baz=306,slow=9.8,SNR=260						
SIV				S	**S**	**11 41 29.8**	**+8.3**
	comp=E,139nm,1.0s,baz=266,slow=22,SNR=4.1						
MOAC	**Moa**	21.66	5	*e*P	**P**	**11 37 45.9**	**+2.6**
HLGC	**Holguin**	21.82	2	*e*P	**P**	**11 37 47.1**	**+2.2**
SJG	**San Juan**	21.82	29	P	**P**	**11 37 45.5**	**+0.6**
	comp=E,1µm,0.6s,baz=198,slow=5.7,SNR=178						
SJG				S	**S**	**11 41 30.2**	**+5.0**
	comp=E,7.0nm,0.3s,baz=320,slow=20,SNR=2.3						
SJG				ScP		11 44 50.1	
	comp=E,6.8nm,0.3s,baz=4.2,slow=5.7,SNR=3.0						
SJG				ScS	ScS	11 48 33.9	+1.4
	comp=E,5.3nm,0.3s,baz=63,slow=23,SNR=7.3						
SJG	**San Juan**	21.82	29	*e*P	**P**	**11 37 45.3**	**+0.4**
	comp=E,873nm,0.6s						
SJG	**San Juan**	21.82	29	*e*P	**P**	**11 37 45.3**	**+0.4**
SJG				pmax	pmax		
	comp=Z,873nm,0.6s						
CPD	**Cerro la Pandu**	21.87	29	*e*P	**P**	**11 37 45.4**	**0.0**
MTP	**Monte Pirata**	22.09	30	*e*P	**P**	**11 37 47.9**	**+0.3**
CCCC	**Cccc**	22.12	358	*e*P	**P**	**11 38 00.6**	**+13**
FDF	**Fort de France**	22.16	44	*e*P	**P**	**11 37 48.5**	**+0.2**
MVM	**Montagne Vaucl**	22.22	45	*e*P	**P**	**11 37 47.6**	**-1.2**
CRM	**Caravelle**	22.34	45	*e*P	**P**	**11 37 49.0**	**-1.0**
BBL	**Barber's Block**	22.50	42	*e*P	**P**	**11 37 52.7**	**+1.2**
TBG	**Guadaloupe-3**	22.61	41	*e*P	**P**	**11 37 54.0**	**+1.3**
DWS	**Wesley**	22.64	43	*e*P	**P**	**11 37 54.9**	**+2.0**
SCG	**Saint Claude**	22.72	41	*e*P	**P**	**11 37 55.5**	**+1.8**
LZG	**Guadaloupe-1**	22.74	41	*e*P	**P**	**11 37 55.5**	**+1.6**
DOG	**Dongo Capester**	22.76	41	*e*P	**P**	**11 37 56.0**	**+1.8**
BCG	**Bois Riant Cap**	22.80	41	*e*P	**P**	**11 37 56.4**	**+1.9**
CCIG	**Comitan**	22.81	320	*i* P	**P**	**11 37 55.3**	**+0.7**
LVC	**Limon Verde**	22.83	160	P	**P**	**11 37 56.7**	**+1.9**
	comp=Z,3µm,1.2s,baz=345,slow=6.9,SNR=434						
LVC				S	**S**	**11 41 46.6**	**+3.9**
	comp=Z,24nm,1.1s,baz=71,slow=16,SNR=1.4						
LVC				ScP		11 44 54.8	
	comp=Z,24nm,1.0s,baz=319,slow=4.6,SNR=3.8						
LVC				ScS	ScS	11 48 40.6	+4.2
	comp=Z,2.9nm,0.8s,baz=285,slow=21,SNR=7.1						
LVC	**Limon Verde**	22.83	160	*e*P	**P**	**11 37 56.6**	**+1.8**
	comp=Z,2µm,1.0s						
MGG	**Marie-Galante**	22.88	42	*e*P	**P**	**11 37 56.0**	**+0.7**

CEN1	Los Morros	23.17	164	⇑iP	P	11 38 00.5	+2.5
BPA	Boggy Peak	23.36	39	eP	P	11 38 00.3	+0.6
BPA	Boggy Peak	23.36	39	e		11 38 49.0	
ANCH	Antofagasta	23.39	165	eP	P	11 38 04.6	+4.5
CPB	Codrington	23.82	38	eP	P	11 38 03.4	-0.8
CPB	Codrington	23.82	38	e		11 38 54.0	
CPN1	Cerro Paranal	24.29	165	⇓eP	P	11 38 09.1	+0.7
SOR	Soroa	24.41	346	eP	P	11 38 10.0	+0.5
SOR				eS	S	11 42 10.9	+2.1
	comp=N,3.3nm,4.9s						
	comp=E,5.8nm,9.7s						
HUIG	Huatulco	25.22	312	i P	P	11 38 17.0	0.0
VHO	Vista Hermosa	26.52	314	i P	P	11 38 29.7	+0.8
CAIG	El Cayaco	29.16	309	i P	P	11 38 52.1	-0.3
PPM	Popocatepetl	29.18	314	i P	P	11 38 54.0	+1.3
DWPF	Disney	29.30	352	eP	P	11 38 53.9	+0.3
	comp=E,369nm,0.6s,mb6.2						
YAIG	Yautepec	29.36	313	i P	P	11 38 54.9	+0.6
PLIG	Platanillo	29.38	312	i P	P	11 38 55.2	+0.7
TLL	Tololo Astrono	29.55	169	⇓eP	P	11 38 56.3	+0.4
UNM	Universidad Na	29.74	314	i P	P	11 38 59.3	+1.6
MOIG	Morelia	31.43	312	i P	P	11 39 13.2	+0.9
CPUP	Villa Florida	31.46	145	eP	P	11 39 10.5	-2.1
	comp=E,304nm,0.9s,mb5.9						
CPUP	Villa Florida	31.46	145	P	P	11 39 10.7	-1.9
CPUP				pmax	pmax		
	comp=Z,300nm,0.9s						
CFAA	Coronel Fontan	31.50	166	P	P	11 39 13.1	+0.2
	comp=Z,74nm,0.7s,mb5.3,baz=340,slow=8.2,SNR=568						
CFAA				S	S	11 44 02.1	+0.4
	comp=Z,2.0nm,1.0s,baz=246,slow=19,SNR=6.0						
CFAA				ScP		11 45 19.2	
	comp=Z,5.7nm,1.2s,baz=357,slow=3.4,SNR=7.2						
JACH	Jahuel	32.04	170	eP	P	11 39 17.7	+0.1
BDFB	Brasilia	32.05	118	P	P	11 39 18.0	+0.3
	comp=Z,174nm,0.4s,mb5.9,baz=290,slow=8.9,SNR=212						
BDFB				S	S	11 44 09.8	-0.5
	comp=Z,21nm,0.6s,baz=55,slow=19,SNR=2.3						
BAO	Brasilia Array	32.07	118	P	P	11 39 18.0	+0.1
MDZ	Mendoza	32.58	167	eP	P	11 39 23.4	+1.2
FCH	Farellones	32.73	170	eP	P	11 39 24.2	+0.8
TACH	Talagante	32.93	171	⇑eP	P	11 39 25.2	+0.1
LNV	Longovilo	33.16	172	⇓eP	P	11 39 26.7	-0.4
CHCH	Chadas Angostu	33.25	170	⇑eP	P	11 39 28.0	+0.1
SFJM	Santa Fe	33.30	311	i P	P	11 39 28.0	-0.4
CACH	El Canelo	33.44	170	⇓eP	P	11 39 30.2	+0.7
CICH	Cipreses	33.67	170	eP	P	11 39 31.8	+0.4
SFDO	San Fernando	33.86	171	⇑eP	P	11 39 33.1	0.0
RGRS	Roger Stewart	33.90	355	eP	P	11 39 41.9	+8.5
NHSC	New Hope	34.10	355	eP	P	11 39 35.7	+0.6
	comp=Z,1µm,1.3s,mb6.3						
GOGA	Godfrey	34.81	350	eP	P	11 39 40.7	-0.4
	comp=Z,142nm,0.7s,mb5.6						
GOGA	Godfrey	34.81	350	P	P	11 39 40.9	-0.2
GOGA				pmax	pmax		
	comp=Z,140nm,0.7s,mb5.6						
LRAL	Lakeview Retre	35.19	345	eP	P	11 39 43.4	-0.8
	comp=Z,151nm,0.8s,mb5.6						
LRAL				ePcP	PcP	11 42 09.2	-0.7
BBSR	BB Station	35.21	18	eP	P	11 39 45.3	+0.8
	comp=Z,20nm,0.7s,mb4.8						
BBSR				epP	pP	11 40 35.1	0.0
JSC	Jenkinsville	35.37	354	eP	P	11 39 45.7	-0.1
JSC				ePcP	PcP	11 42 09.2	-1.2
CCHI	Chillan	35.67	173	⇓iP	P	11 39 48.7	+0.4
NATX	Nacogdoches	36.67	334	eP	P	11 39 56.1	-0.7
	comp=Z,162nm,0.9s,mb5.6						
CPCT	Cooper Cave	36.98	350	eP	P	11 39 59.0	-0.3
SWET	Sewanee	37.03	348	eP	P	11 39 57.7	-2.1
SWET				ePcP	PcP	11 42 12.8	-2.6
OXF	Oxford	37.24	343	eP	P	11 39 60.0	-1.5
	comp=Z,115nm,1.0s,mb5.4						
OXF				ePcP	PcP	11 42 15.0	-1.0
OXF	Oxford	37.24	343	eP	P	11 40 00.0	-1.5
OXF				e		11 42 15.0	
OXF				pmax	pmax		
	comp=Z,115nm,1.0s,mb5.4						
MAIG	Mazatlaan	37.42	312	i P	P	11 40 04.2	+1.0
TZTN	Tazewell	37.89	351	eP	P	11 40 06.6	-0.3
MET	Memphis--Engin	37.96	343	eP	P	11 40 07.0	-0.4
LPA	La Plata	38.09	154	αeP	P	11 40 09.1	+0.5
	comp=Z,145µm,1.0s						
LPA				epP	pP	11 41 02.0	+2.2
LPA				ePP	PP	11 41 47.0	+4.5
LPA				eSCP		11 45 38.0	
LPA				eS	S	11 45 42.0	-0.5
JCT	Junction City	38.14	327	eP	P	11 40 09.1	+0.1
	comp=Z,160nm,0.8s,mb5.6						
JCT				ePcP	PcP	11 42 18.1	-0.7
JCT	Junction City	38.14	327	eP	P	11 40 09.1	+0.1
JCT				e		11 42 18.2	
JCT				pmax	pmax		
	comp=Z,160nm,0.8s,mb5.6						
BLA	Blacksburg	38.19	356	eP	P	11 40 09.8	+0.5
	comp=Z,224nm,0.9s,mb5.7						
BLA				ePcP	PcP	11 42 18.1	-0.8
BLA	Blacksburg	38.19	356	eP	P	11 40 09.8	+0.4
BLA				e		11 42 18.2	
BLA				pmax	pmax		
	comp=Z,224nm,0.9s,mb5.7						
ELN	Prospectdale	38.24	355	eP	P	11 40 10.6	+0.8
ELN				epP	pP	11 41 02.1	+1.1
ELN				ePcP	PcP	11 42 18.5	-0.6
WVT	Waverly	38.34	346	eP	P	11 40 08.6	-1.9
	comp=Z,100nm,0.6s,mb5.5						
WVT				ePcP	PcP	11 42 17.9	-1.5
WVT	Waverly	38.34	346	eP	P	11 40 08.6	-2.0
WVT				e		11 42 17.9	
WVT				pmax	pmax		
	comp=Z,99nm,0.6s,mb5.5						
UALR	University of	38.43	339	eP	P	11 40 09.9	-1.4
	comp=Z,239nm,0.7s,mb5.8						
UALR				ePcP	PcP	11 42 19.3	-0.5
HALT	Halls	38.53	344	eP	P	11 40 10.3	-1.8
HALT				ePcP	PcP	11 42 19.4	-0.6
HBAR	Harrisburg	38.58	342	eP	P	11 40 11.1	-1.5
HBAR				ePcP	PcP	11 42 20.1	-0.1
FWV	Forest Hill	38.59	355	eP	P	11 40 13.0	+0.3
FWV				epP	pP	11 41 04.6	+0.7
FWV				ePcP	PcP	11 42 19.1	-1.1
MIAR	Mount Ida	38.67	338	eP	P	11 40 12.0	-1.3
	comp=Z,21nm,0.7s,mb4.8						
MIAR				ePcP	PcP	11 42 20.3	-0.2
MIAR	Mount Ida	38.67	338	eP	P	11 40 12.0	-1.3
MIAR				e		11 42 20.3	
MIAR				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.8						
GNAR	Gosnell	38.77	343	eP	P	11 40 12.8	-1.3
	comp=Z,488nm,1.0s,mb6.0						
GNAR				ePcP	PcP	11 42 20.0	-0.8
UTMT	University of	38.80	345	eP	P	11 40 12.3	-2.1
	comp=Z,232nm,0.8s,mb5.8						
GLAT	Glass	38.85	344	eP	P	11 40 13.3	-1.5
CBN	Corbin	39.05	360	eP	P	11 40 16.9	+0.4
	comp=Z,260nm,1.0s,mb5.7						
TRQA	Tornquist	39.33	161	eP	P	11 40 18.4	-0.3
	comp=Z,898nm,1.3s,mb6.1						
PARMO	Parma	39.35	344	eP	P	11 40 17.5	-1.3
PARMO				ePcP	PcP	11 42 22.0	-0.6
LTX	Lajitas	39.53	322	eP	P	11 40 20.8	+0.3
	comp=Z,80nm,1.1s,mb5.1						
LTX				ePcP	PcP	11 42 22.8	-0.5
LTX	Lajitas	39.53	322	eP	P	11 40 20.8	+0.3
LTX				e		11 42 22.8	
LTX				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.1						
TXAR	Lajitas Array	39.53	322	P	P	11 40 21.1	+0.6
	comp=Z,28nm,0.8s,mb4.8,baz=146,slow=6.6,SNR=177						
TXAR				PcP	PcP	11 42 23.4	+0.1
	comp=Z,41nm,0.9s,baz=152,slow=6.6,SNR=18						
TXAR				ScP		11 45 48.3	
	comp=Z,2.7nm,0.6s,baz=148,slow=6.3,SNR=7.4						
TXAR				ScS	ScS	11 50 01.6	+2.9
	comp=Z,0.3nm,0.9s,baz=117,slow=4.0,SNR=3.0						
TXAR	Lajitas Array	39.53	322	P	P	11 40 21.1	+0.6
TXAR						11 42 23.4	
TXAR						11 50 01.6	
CAM4	Nova Friburgo	39.61	125	eP	P	11 40 21.6	+0.4
CAM4				i		11 40 22.0	
CAM4				i		11 40 24.8	
CAM4				i		11 40 28.9	
PLCA	Paso Flores	39.94	172	P	P	11 40 23.9	+0.2
	comp=Z,724nm,1.0s,mb6.1,baz=345,slow=9.4,SNR=714						
PLCA				pP	pP	11 41 15.2	0.0
	comp=Z,117nm,0.8s,baz=343,slow=8.4,SNR=2.8						
PLCA				ScP		11 45 49.5	
	comp=Z,7.8nm,0.9s,baz=350,slow=6.6,SNR=3.1						
PLCA				S	S	11 46 11.6	+1.6
	comp=Z,4.9nm,1.1s,baz=253,slow=19,SNR=2.8						
PLCA				PKiKP		11 49 34.3	
	comp=Z,2.0nm,0.8s,baz=45,slow=3.2,SNR=3.2						
PLCA				ScS	ScS	11 50 01.9	+0.9
	comp=Z,1.5nm,1.0s,baz=229,slow=20,SNR=1.9						
PLCA	Paso Flores	39.94	172	P	P	11 40 23.9	+0.2
PLCA				pP	pP	11 41 15.2	0.0
PLCA				ScP		11 45 49.5	
PLCA				S	S	11 46 11.6	+1.6
PLCA	Paso Flores	39.94	172	P	P	11 40 23.9	+0.2
PLCA				*PP	pP	11 41 15.3	+0.1
PLCA				S	S	11 46 11.6	+1.6
WCI	Wyandotte Cave	40.01	349	eP	P	11 40 22.9	-1.3
	comp=Z,111nm,0.8s,mb5.3						
WCI	Wyandotte Cave	40.01	349	P	P	11 40 23.1	-1.2
WCI				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.3						
SIUC	Southern Illin	40.19	345	eP	P	11 40 24.1	-1.7
	comp=Z,559nm,1.3s,mb5.8						
SIUC				ePcP	PcP	11 42 24.2	-1.1
SDMD	Soldier's Deli	40.26	0	eP	P	11 40 15.5	-11
RPN	Rapa Nui	40.45	227	P	P	11 40 27.8	-0.2
	comp=Z,180nm,0.6s,mb5.7,baz=34,slow=4.4,SNR=13						
MCWV	Mont Chateau	40.59	357	eP	P	11 40 29.1	+0.1
	comp=Z,202nm,0.9s,mb5.5						
MVL	Millersville	40.85	1	eP	P	11 40 31.7	+0.5
MVL				epP	pP	11 41 23.9	+1.1
MVL				ePcP	PcP	11 42 26.3	-1.1
MVL				eScP		11 45 53.1	
WMOK	Wichita Mounta	41.03	332	P	P	11 40 31.8	-0.9
WMOK				pmax	pmax		
	comp=Z,230nm,1.2s,mb5.5						
CCM	Cathedral Cave	41.07	343	eP	P	11 40 30.9	-2.1
	comp=Z,150nm,0.7s,mb5.5						
CCM				ePcP	PcP	11 42 27.8	-0.3
CCM	Cathedral Cave	41.07	343	P	P	11 40 30.3	-2.7
CCM				pmax	pmax		
	comp=Z,150nm,0.7s,mb5.5						
RCBR	Riachuelo	41.27	98	eP	P	11 40 34.7	-0.1
	comp=Z,586nm,1.1s,mb5.9						
RCBR				ePP	PP	11 42 17.1	+1.1
SLM	Saint Louis	41.33	344	eP	P	11 40 33.0	-2.1
	comp=Z,137nm,0.8s,mb5.4						
SLM				eScP		11 45 54.3	
SLM	Saint Louis	41.33	344	P	P	11 40 33.0	-2.1
SLM				pmax	pmax		
	comp=Z,140nm,0.8s,mb5.4						
ACSO	Alum Creek Sta	41.44	353	eP	P	11 40 35.0	-1.0
	comp=Z,83nm,0.8s,mb5.2						
ACSO				epP	pP	11 41 25.0	-2.8
ACSO				ePcP	PcP	11 42 28.6	-0.8
BRNJ	Basking Ridge	41.59	3	eP	P	11 40 38.1	+0.9
CLNB	Carlsbad	41.77	325	eP	P	11 40 39.4	+0.6
CLNB				eScP		11 45 57.5	
PAL	Palisades	41.94	3	eP	P	11 40 39.9	-0.2
	comp=Z,87nm,0.8s,mb5.2						
PAL				epP	pP	11 41 31.5	-0.5
PAL				ePcP	PcP	11 42 29.4	-1.7
PAL	Palisades	41.94	3	P	P	11 40 40.1	0.0
PAL				pmax	pmax		
	comp=Z,87nm,0.8s,mb5.2						
GDL2	Guadalupe Moun	42.00	324	eP	P	11 40 41.5	+0.8
MNTX	Cornudas Mount	42.25	323	eP	P	11 40 42.5	-0.2
	comp=Z,133nm,0.9s,mb5.4						
MNTX				eScP		11 45 58.0	
CPRX	Cap Rock	42.32	326	eP	P	11 40 44.0	+0.7
CPRX				ePcP	PcP	11 42 32.3	-0.2
CPRX				eScP		11 45 59.3	
ALLY	Alegheny Colle	42.59	356	eP	P	11 40 45.1	-0.2
LSCT	Lakeside	42.66	4	eP	P	11 40 46.0	+0.2
	comp=Z,238nm,1.3s,mb5.5						
LSCT				epP	pP	11 41 39.0	+1.1
ERPA	Erie	43.05	357	eP	P	11 40 48.5	-0.4
	comp=Z,309nm,0.7s,mb5.8						
ERPA				epP	pP	11 41 41.2	+0.2
QUA2	Belchertown	43.32	5	eP	P	11 40 50.9	-0.3
	comp=Z,121nm,0.8s,mb5.4						
QUA2				epP	pP	11 41 44.2	+0.9
WES	Weston	43.53	6	eP	P	11 40 52.9	0.0
	comp=Z,252nm,1.3s,mb5.4						
WES				epP	pP	11 41 45.4	+0.4
WES	Weston	43.53	6	eP	P	11 40 52.9	+0.1
WES				e*PP	pP	11 41 45.4	+0.4
WES				pmax	pmax		
	comp=Z,252nm,1.3s,mb5.4						
GENY	Geneseo	43.62	359	eP	P	11 40 57.9	+4.4
GENY				e		11 42 40.1	
HRV	Harvard--Oak R	43.62	6	eP	P	11 40 53.5	-0.1
	comp=Z,474nm,1.7s,mb5.5						
HRV				epP	pP	11 41 47.9	+2.1
HRV	Harvard--Oak R	43.62	6	eP	P	11 40 53.5	-0.1
HRV				e*PP	pP	11 41 47.9	+2.1
HRV				pmax	pmax		
	comp=Z,474nm,1.7s,mb5.5						
KSU1	Kansas State U	43.83	338	eP	P	11 40 53.6	-1.6
ACCN	Adirondack Com	44.33	3	eP	P	11 40 59.3	+0.2
ACCN				epP	pP	11 41 52.6	+1.2
ACCN				ePcP	PcP	11 42 39.1	-0.1
ACCN				eScP		11 46 07.2	
FFD	Franklin Falls	44.57	6	eP	P	11 41 01.4	+0.3
	comp=Z,146nm,1.0s,mb5.3						
FFD				epP	pP	11 41 53.3	-0.2
HNH	Hanover	44.75	5	eP	P	11 41 02.6	+0.1
	comp=Z,28nm,1.4s,mb4.4						
HNH				epP	pP	11 41 55.9	+1.0
LPM	Los Pinos Moun	44.84	324	eP	P	11 41 03.8	+0.5
LPM				ePcP	PcP	11 42 41.0	0.0
LPM				eScP		11 46 08.8	
CBKS	Cedar Bluff	44.84	335	eP	P	11 41 03.1	-0.2
	comp=Z,338nm,0.7s,mb5.8						
CBKS				ePcP	PcP	11 42 41.7	+0.7
CBKS	Cedar Bluff	44.84	335	P	P	11 41 03.3	0.0
CBKS				pmax	pmax		
	comp=Z,340nm,0.7s,mb5.8						
NCB	Newcomb	44.88	3	eP	P	11 41 03.5	0.0
	comp=Z,389nm,1.5s,mb5.5						
NCB				epP	pP	11 41 54.9	-1.0
LENM	Lemitar	44.93	324	eP	P	11 41 04.9	+0.9
LENM				ePcP	PcP	11 42 41.7	+0.3
LENM				eScP		11 46 10.1	
MIV	Mineville/With	45.02	4	eP	P	11 41 04.4	-0.2
ANMO	Albuquerque	45.19	325	P	P	11 41 06.7	+0.6
	comp=Z,453nm,0.7s,mb5.9,baz=137,slow=8.5,SNR=1008						
ANMO				ScP		11 46 11.3	
	comp=Z,5.4nm,0.9s,baz=166,slow=6.5,SNR=4.9						
ANMO				S	S	11 47 27.9	+1.6
	comp=Z,4.7nm,1.1s,baz=22,slow=23,SNR=15						
ANMO				P4KPbc		12 18 52.8	
	comp=Z,0.8nm,0.8s,baz=119,slow=5.0,SNR=3.6						
ANMO	Albuquerque	45.19	325	P	P	11 41 06.7	+0.6
ANMO				ScP		11 46 11.3	
ANMO				S	S	11 47 27.9	+1.6
ANMO	Albuquerque	45.19	325	P	P	11 41 06.7	+0.6
ANMO				S	S	11 47 27.9	+1.6
LAZ	Ladron	45.20	324	eP	P	11 41 07.6	+1.5
LBNH	Lisbon	45.31	5	eP	P	11 41 07.2	+0.3
	comp=Z,164nm,1.0s,mb5.3						
LBNH	Lisbon	45.31	5	P	P	11 41 07.4	+0.5
LBNH				pmax	pmax		
	comp=Z,160nm,1.0s,mb5.3						
LOZ	Lake Ozonia	45.51	2	eP	P	11 41 07.9	-0.5
SADO	Sadowa	45.65	358	P	P	11 41 08.6	-1.0
	comp=Z,133nm,0.8s,mb5.3,baz=195,slow=7.5,SNR=72						
SADO				pP	pP	11 42 01.9	-0.3
	comp=Z,90nm,0.9s,baz=202,slow=5.8,SNR=5.3						
SADO				ScP		11 46 11.2	
	comp=Z,14nm,1.0s,baz=201,slow=5.8,SNR=3.1						
SADO				S	S	11 47 30.5	-2.2
	comp=Z,16nm,1.1s,baz=81,slow=19,SNR=5.1						
FRNY	Flat Rock	45.78	3	eP	P	11 41 10.6	0.0
FRNY				epP	pP	11 42 02.4	-0.9
FRNY				eScP		11 46 13.0	
TUC	Tucson	46.06	319	eP	P	11 41 12.9	0.0
	comp=Z,108nm,0.9s,mb5.2						
TUC				epP	pP	11 42 06.3	+0.7
TUC				eScP		11 46 14.4	
TUC	Tucson	46.06	319	P	P	11 41 12.2	-0.7
TUC				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.1						
SDCO	Great Sand Dun	46.73	329	eP	P	11 41 18.8	+0.7
	comp=Z,247nm,0.9s,mb5.5						
ISCO	Idaho Springs	48.35	330	eP	P	11 41 30.5	0.0
	comp=Z,57nm,0.8s,mb5.0						
ISCO				ePcP	PcP	11 42 53.9	+0.4
ISCO				eScP		11 46 24.4	
ISCO	Idaho Springs	48.35	330	P	P	11 41 30.8	+0.3
ISCO				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.0						
WUAZ	Wupatki	48.50	322	eP	P	11 41 32.4	+0.6
	comp=Z,480nm,0.9s,mb5.8						
WUAZ				epP	pP	11 42 24.8	-0.3
WUAZ				eScP		11 46 25.3	
SMCO	Snowmass	48.57	329	eP	P	11 41 32.3	+0.1
	comp=Z,45nm,0.8s,mb4.8						
SMCO				ePcP	PcP	11 42 54.2	-0.1
SMCO				eScP		11 46 25.5	
PV01	Paradox Valley	48.66	327	eP	P	11 41 33.1	+0.2
PV10	Paradox Valley	49.09	326	eP	P	11 41 35.6	-0.6
GLA	Glamis	49.21	317	eP	P	11 41 37.2	+0.1
GLA	Glamis	49.21	317	P	P	11 41 43.6	+6.4
PHWY	Pilot Hill	49.43	332	eP	P	11 41 38.6	-0.1
PHWY				ePcP	PcP	11 42 57.1	-0.3
BAR	Barrett	50.27	316	eP	P	11 41 45.1	-0.1
BAR				ePcP	PcP	11 42 59.2	-1.4
BAR				eScP		11 46 32.1	
EYMN	Ely	50.40	347	eP	P	11 41 43.7	-2.2
	comp=Z,176nm,0.6s,mb5.6						
EYMN				ePcP	PcP	11 42 59.7	-1.2
SRU	San Rafael	50.43	326	eP	P	11 41 46.0	-0.2
	comp=Z,120nm,1.0s,mb5.2						
SRU				eScP		11 46 31.1	
SRU	San Rafael	50.43	326	P	P	11 41 46.2	-0.1
SRU				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.2						
RWWY	Rawlins	50.57	331	eP	P	11 41 47.1	-0.2
	comp=Z,93nm,0.9s,mb5.2						
RWWY				ePcP	PcP	11 43 00.8	-0.8
RWWY				eScP		11 46 33.4	
LDFC	Landfair	50.60	319	eP	P	11 41 48.3	+0.8
LDFC				eScP		11 46 33.9	
PFO	Pinyon Flat Ob	50.64	317	eP	P	11 41 48.2	+0.3
	comp=Z,64nm,1.1s,mb5.0						
PFO				epP	pP	11 42 43.9	+2.0
PFO				ePcP	PcP	11 43 00.7	-1.3
PFO				eScP		11 46 34.0	
PFO	Pinyon Flat Ob	50.64	317	P	P	11 41 48.4	+0.5
PFO				pmax	pmax		
	comp=Z,64nm,1.1s,mb5.0						
NEN	Nelson	50.77	320	eP	P	11 41 48.9	+0.1
NEN				eScP		11 46 33.5	
TMUT	Trail Mountain	50.94	326	eP	P	11 41 50.1	0.0
TMUT				ePcP	PcP	11 43 02.8	-0.2
TMUT				eScP		11 46 34.9	
MSU	Marysvale	50.96	324	eP	P	11 41 50.5	+0.3
MSU				ePcP	PcP	11 43 03.5	+0.4
MSU				eScP		11 46 35.5	
MSU	Marysvale	50.96	324	P	P	11 41 50.6	+0.4
MVU	Marysvale	50.98	324	eP	P	11 41 50.6	+0.3
	comp=Z,143nm,0.9s,mb5.4						
MVU				ePcP	PcP	11 43 03.3	+0.1
MVU				eScP		11 46 35.1	
RSSD	Black Hills	51.04	335	eP	P	11 41 50.7	0.0
	comp=Z,177nm,1.0s,mb5.5						
RSSD	Black Hills	51.04	335	P	P	11 41 50.8	+0.1
RSSD				pmax	pmax		
	comp=Z,180nm,1.0s,mb5.5						
ARUT	Antelope Range	51.24	323	eP	P	11 41 53.2	+0.9
ARUT				eScP		11 46 35.5	
MPU	Maple Canyon	51.67	326	eP	P	11 41 55.5	0.0
	comp=Z,125nm,0.9s,mb5.3						
MPU				eScP		11 46 38.2	
DAU	Daniels Canyon	51.74	327	eP	P	11 41 56.1	+0.2
DAU				ePcP	PcP	11 43 06.2	+0.2
DAU				eScP		11 46 38.8	
DAU	Daniels Canyon	51.74	327	P	P	11 41 56.4	+0.4
GSC	Goldstone	51.85	318	eP	P	11 41 57.3	+0.5
GSC				epP	pP	11 42 51.5	+0.5
NLU	North Lily Min	51.88	326	eP	P	11 41 57.7	+0.7
MWC	Mount Wilson	52.09	316	eP	P	11 41 59.2	+0.6
CTU	Camp Tracy	52.21	327	eP	P	11 41 59.5	+0.1
	comp=Z,90nm,1.2s,mb5.1						
TCUT	Toone Canyon	52.32	327	eP	P	11 42 00.1	-0.1
TCUT				ePcP	PcP	11 43 07.3	-0.8
TCUT				eScP		11 46 40.4	
NOQ	North Oquirrh	52.38	326	eP	P	11 42 00.7	0.0
	comp=Z,83nm,0.8s,mb5.2						
TPNV	Topopah Spring	52.46	320	eP	P	11 42 02.1	+0.8
	comp=Z,202nm,0.8s,mb5.6						
TPNV				eScP		11 46 42.2	
TPNV	Topopah Spring	52.46	320	P	P	11 42 02.3	+1.0
TPNV				pmax	pmax		
	comp=Z,200nm,0.9s,mb5.5						
DUG	Dugway	52.46	326	eP	P	11 42 01.4	+0.2
	comp=Z,170nm,0.9s,mb5.5						
DUG	Dugway	52.46	326	P	P	11 42 01.7	+0.4
DUG				pmax	pmax		
	comp=Z,170nm,0.9s,mb5.5						
BW06	Boulder Array	52.54	330	eP	P	11 42 00.7	-1.1
	comp=Z,7.8nm,0.1s,mb5.1						
BW06				ePcP	PcP	11 43 07.8	-1.1
PDAR	Pinedale Array	52.54	330	P	P	11 42 01.1	-0.6
	comp=Z,22nm,0.8s,mb4.6,baz=126,slow=8.6,SNR=111						
PDAR				PcP	PcP	11 43 07.8	-1.1
	comp=Z,34nm,1.0s,baz=129,slow=6.7,SNR=12						
PDAR				ScP		11 46 41.1	
	comp=Z,2.9nm,0.8s,baz=130,slow=5.7,SNR=3.8						
PDAR				ScS	ScS	11 51 22.2	-0.4
	comp=Z,1.1nm,1.0s,baz=70,slow=11,SNR=4.3						
PDAR				P4KPbc		12 19 23.9	
	comp=Z,2.0nm,1.0s,baz=114,slow=6.0,SNR=9.9						
HWUT	Hardware Ranch	52.74	328	eP	P	11 42 02.7	-0.6
	comp=Z,103nm,0.7s,mb5.4						
HWUT				ePcP	PcP	11 43 08.4	-1.2
EFI	East Falkland	52.91	165	eP	P	11 42 04.0	-0.4
EFI				epP	pP	11 42 58.6	-0.2
EFI	East Falkland	52.91	165	P	P	11 42 04.0	-0.4
EFI				pmax	pmax		
	comp=Z,650nm,1.0s,mb6.0						
DAC	Darwin (Calif)	52.94	319	eP	P	11 42 04.7	-0.1
	comp=Z,43nm,0.9s,mb4.9						
DAC				ePcP	PcP	11 43 10.6	+0.1
DAC				eScP		11 46 44.1	
DAC	Darwin (Calif)	52.94	319	P	P	11 42 05.0	+0.2
DAC				pmax	pmax		
	comp=Z,43nm,1.0s,mb4.8						
SPUT	South Promonto	53.01	327	eP	P	11 42 05.1	-0.2
BGU	Big Grassy Mou	53.07	326	eP	P	11 42 06.1	+0.4
ISA	Isabella	53.17	318	eP	P	11 42 06.7	+0.2
	comp=Z,128nm,1.8s,mb5.0						
AHID	Auburn Hatcher	53.32	329	eP	P	11 42 06.8	-0.7
	comp=Z,109nm,1.0s,mb5.2						
AHID				epP	pP	11 43 02.1	+0.1
HVU	Hansel Valley	53.52	327	eP	P	11 42 09.1	+0.1
	comp=Z,56nm,0.9s,mb5.1						
HVU				epP	pP	11 43 03.2	-0.3
HVU	Hansel Valley	53.52	327	eP	P	11 42 09.1	+0.2
HVU				e*PP	pP	11 43 03.3	-0.2
HVU				pmax	pmax		
	comp=Z,56nm,0.9s,mb5.1						
ULM	Lac du Bonnet	53.60	345	P	P	11 42 07.2	-2.2
	comp=Z,216nm,0.5s,mb5.9,baz=155,slow=7.8,SNR=298						
ULM				PcP	PcP	11 43 11.4	-1.3
	comp=Z,29nm,0.5s,baz=84,slow=5.3,SNR=3.5						
ULM				ScP		11 46 45.2	
	comp=Z,8.5nm,1.0s,baz=318,slow=3.4,SNR=3.6						
ULM				S	S	11 49 19.2	-2.8
	comp=Z,4.5nm,0.9s,baz=240,slow=22,SNR=4.0						
ULM				ScS	ScS	11 51 29.1	-0.8
	comp=Z,3.5nm,0.9s,baz=17,slow=20,SNR=2.1						
ULM				P4KPbc		12 19 27.1	
	comp=Z,5.4nm,0.9s,baz=173,slow=8.1,SNR=4.5						
ULM	Lac du Bonnet	53.60	345	P	P	11 42 07.2	-2.2
ULM				PcP	PcP	11 43 11.4	-1.3
ULM				ScP		11 46 45.2	
ULM				S	S	11 49 19.2	-2.8
ULM				ScS	ScS	11 51 29.1	-0.8
REDW	Red Top Meadow	53.62	330	eP	P	11 42 09.1	-0.6
	comp=Z,258nm,1.2s,mb5.6						
REDW				epP	pP	11 43 05.8	+1.5
SNOW	Snow King Moun	53.64	330	eP	P	11 42 10.0	+0.1
	comp=Z,232nm,1.1s,mb5.6						
LOHW	Long Hollow	53.68	330	eP	P	11 42 09.4	-0.6
	comp=Z,161nm,1.1s,mb5.5						

LOHW				*e*pP	pP	11 43 08.2	+3.5
TPH	**Tonopah**	**53.75**	**321**	*e*P	**P**	**11 42 11.1**	**+0.4**
	comp=Z,118nm,1.0s,mb5.4						
TPH				*e*pP	pP	11 43 05.8	+0.5
TPH				*e*ScP		11 46 47.4	
TPH	**Tonopah**	**53.75**	**321**	P	**P**	**11 42 11.3**	**+0.6**
TPH				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.4						
TPAW	**Teton Pass**	**53.76**	**330**	*e*P	**P**	**11 42 10.3**	**-0.4**
	comp=Z,68nm,0.8s,mb5.2						
TPAW				*e*pP	pP	11 43 09.2	+3.9
MOOW	**Moose Ponds**	**53.85**	**330**	*e*P	**P**	**11 42 10.6**	**-0.8**
	comp=Z,124nm,1.2s,mb5.3						
RRI2	**Red Ridge**	**53.85**	**329**	*e*P	**P**	**11 42 11.1**	**-0.2**
	comp=Z,221nm,1.1s,mb5.6						
LAO	**LASA Array**	**54.02**	**335**	*e*P	**P**	**11 42 11.6**	**-0.9**
	comp=Z,102nm,0.8s,mb5.4						
IMW	**Indian Meadow**	**54.05**	**330**	*e*P	**P**	**11 42 12.4**	**-0.3**
	comp=Z,102nm,0.8s,mb5.4						
USHA	**Ushuaia**	**54.07**	**174**	P	**P**	**11 42 12.2**	**-0.6**
	comp=Z,254nm,1.0s,mb5.7,baz=334,slow=5.3,SNR=81						
USHA				pP	pP	11 43 07.5	0.0
	comp=Z,134nm,0.8s,baz=342,slow=5.5,SNR=6.4						
USHA				S	**S**	**11 49 32.7**	**+4.4**
	comp=Z,5.4nm,0.8s,baz=12,slow=23,SNR=6.1						
MTUM	**Tungsten Hills**	**54.19**	**319**	*e*P	**P**	**11 42 14.3**	**+0.4**
MTUM				*e*ScP		11 46 49.1	
ELK	**Elko**	**54.21**	**325**	P	**P**	**11 42 13.8**	**-0.1**
	comp=Z,15nm,0.7s,mb4.7,baz=106,slow=4.4,SNR=60						
ELK				pP	pP	11 43 08.8	+0.1
	comp=Z,5.8nm,0.8s,baz=98,slow=6.5,SNR=1.5						
ELK				ScP		11 46 49.4	
	comp=Z,10.0nm,0.8s,baz=123,slow=3.9,SNR=11						
ELK				S	**S**	**11 49 35.0**	**+4.6**
	comp=Z,0.2nm,0.3s,baz=238,slow=19,SNR=5.7						
ELK				P4KPbc		12 19 31.9	
	comp=Z,2.3nm,0.8s,baz=158,slow=3.6,SNR=14						
ELK	**Elko**	**54.21**	**325**	P	**P**	**11 42 13.8**	**-0.1**
ELK				pP	pP	11 43 08.8	+0.1
ELK				ScP		11 46 49.4	
ELK				S	**S**	**11 49 35.0**	**+4.6**
ELK	**Elko**	**54.21**	**325**	P	**P**	**11 42 13.7**	**-0.3**
ELK				pmax	pmax		
	comp=Z,73nm,1.2s						
LKWY	**Lake**	**54.27**	**331**	*e*P	**P**	**11 42 14.8**	**+0.4**
	comp=Z,87nm,0.8s,mb5.3						
LKWY	**Lake**	**54.27**	**331**	P	**P**	**11 42 15.4**	**+1.0**
LKWY				pmax	pmax		
	comp=Z,87nm,0.8s,mb5.3						
PTRM	**Twissleman Ran**	**54.35**	**317**	*e*P	**P**	**11 42 15.4**	**+0.4**
YFT	**Old Faithful**	**54.40**	**331**	*e*P	**P**	**11 42 16.8**	**+1.4**
MNV	**Mina**	**54.55**	**321**	*e*P	**P**	**11 42 16.7**	**+0.2**
	comp=Z,78nm,0.8s,mb5.3						
MNV				*e*pP	pP	11 43 11.8	+0.5
MNV	**Mina**	**54.55**	**321**	P	**P**	**11 42 17.2**	**+0.7**
MNV				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.3						
YMR	**Madison River**	**54.62**	**331**	*e*P	**P**	**11 42 17.2**	**+0.3**
	comp=Z,203nm,0.7s,mb5.8						
NVAR	**Mina Array Bea**	**54.65**	**321**	P	**P**	**11 42 17.8**	**+0.6**
	comp=Z,74nm,0.8s,mb5.3,baz=128,slow=7.7,SNR=417						
NVAR				pP	pP	11 43 12.5	+0.5
	comp=Z,25nm,0.9s,baz=125,slow=7.2,SNR=3.0						
NVAR				ScP		11 46 51.3	
	comp=Z,5.1nm,0.8s,baz=131,slow=5.5,SNR=5.4						
NVAR				PKPPKP		12 12 21.2	
	comp=Z,1.2nm,1.0s,baz=256,slow=3.7,SNR=3.9						
NVAR				P4KPbc		12 19 34.6	
	comp=Z,0.5nm,0.6s,baz=139,slow=6.0,SNR=5.1						
DGMT	**Dagmar**	**54.67**	**338**	*e*P	**P**	**11 42 16.8**	**-0.4**
	comp=Z,87nm,0.7s,mb5.4						
GCMT	**Greycliff**	**54.84**	**332**	*e*P	**P**	**11 42 18.1**	**-0.4**
QLMT	**Earthquake Lak**	**54.97**	**331**	*e*P	**P**	**11 42 20.1**	**+0.7**
QLMT				*e*	pP	11 43 14.9	+0.6
LRV	**Little Rabbit**	**55.31**	**317**	*e*P	**P**	**11 42 22.2**	**+0.2**
HLID	**Hailey**	**55.61**	**328**	*e*P	**P**	**11 42 23.6**	**-0.4**
	comp=Z,49nm,0.7s,mb5.2						
BOZ	**Bozeman (W)**	**55.66**	**331**	*e*P	**P**	**11 42 23.6**	**-0.7**
	comp=Z,428nm,1.3s,mb5.8						
BOZ				*e*	pP	11 43 17.8	-1.5
BOZ	**Bozeman (W)**	**55.66**	**331**	*e*P	**P**	**11 42 23.8**	**-0.5**
BOZ				pmax	pmax		
	comp=Z,430nm,1.2s,mb5.8						
MCMT	**McKenzie Canyo**	**55.67**	**330**	*e*P	**P**	**11 42 24.6**	**+0.2**
CMB	**Columbia Colle**	**55.77**	**319**	*e*P	**P**	**11 42 24.8**	**-0.4**
	comp=Z,52nm,0.8s,mb5.1						
CMB				*e*ScP		11 46 55.6	
CMB	**Columbia Colle**	**55.77**	**319**	P	**P**	**11 42 24.8**	**-0.4**
CMB				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.1						
SAO	**San Andreas Ge**	**55.79**	**317**	*e*P	**P**	**11 42 25.1**	**-0.2**
	comp=Z,58nm,0.9s,mb5.1						
SAO	**San Andreas Ge**	**55.79**	**317**	P	**P**	**11 42 25.4**	**+0.1**
SAO				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.1						
DLMT	**Dillon**	**55.93**	**330**	*e*P	**P**	**11 42 25.7**	**-0.5**
	comp=Z,214nm,1.4s,mb5.5						
PAHR	**Pah Rah Range**	**56.08**	**321**	*e*P	**P**	**11 42 27.9**	**+0.5**
	comp=Z,29nm,0.8s,mb4.9						
SCHQ	**Schefferville**	**56.31**	**7**	P	**P**	**11 42 27.6**	**-1.2**
	comp=Z,57nm,1.0s,mb5.0,baz=200,slow=5.7,SNR=17						
SCHQ				pP	pP	11 43 23.2	-0.8
	comp=Z,23nm,0.8s,baz=171,slow=3.5,SNR=3.7						
SCHQ	**Schefferville**	**56.31**	**7**	P	**P**	**11 42 27.6**	**-1.2**
SCHQ				pP	pP	11 43 23.2	-0.8
HRY	**Holter Researc**	**56.53**	**332**	*e*P	**P**	**11 42 29.8**	**-0.6**
WVOR	**Wild Horse Val**	**57.25**	**324**	P	**P**	**11 42 36.0**	**+0.4**
WVOR	**Wild Horse Val**	**57.25**	**324**	P	**P**	**11 42 35.3**	**-0.3**
WVOR				pmax	pmax		
	comp=Z,320nm,1.0s,mb5.9						
CHMT	**Chamberlain Mo**	**57.35**	**331**	*e*P	**P**	**11 42 35.3**	**-0.9**
NSHM	**Saint Helena R**	**57.50**	**318**	*e*P	**P**	**11 42 37.5**	**+0.2**
MSO	**Missoula**	**57.62**	**331**	*e*P	**P**	**11 42 37.6**	**-0.6**
	comp=Z,132nm,1.2s,mb5.4						
MOD	**Modoc**	**57.92**	**323**	*e*P	**P**	**11 42 39.5**	**-0.8**
	comp=Z,82nm,1.1s,mb5.3						
BMO	**Blue Mountains**	**58.03**	**327**	*e*P	**P**	**11 42 39.6**	**-1.3**
	comp=Z,29nm,0.9s,mb4.9						
HOPS	**Hopland**	**58.06**	**319**	*e*P	**P**	**11 42 41.4**	**+0.1**
	comp=Z,55nm,1.0s,mb5.1						
WDC	**Whiskeytown Da**	**58.56**	**320**	*e*P	**P**	**11 42 42.5**	**-2.3**
	comp=Z,82nm,0.6s,mb5.5						
WDC	**Whiskeytown Da**	**58.56**	**320**	P	**P**	**11 42 42.6**	**-2.2**
WDC				pmax	pmax		
	comp=Z,82nm,0.6s,mb5.5						
KIPM	**Iron Peak**	**58.76**	**319**	*e*P	**P**	**11 42 46.4**	**+0.3**
KCPM	**Cahto Peak**	**58.76**	**319**	*e*P	**P**	**11 42 46.1**	**0.0**
VSP	**Spence Mountai**	**59.18**	**322**	P	**P**	**11 42 49.4**	**+0.5**
YBH	**Yreka Blue Hor**	**59.31**	**321**	P	**P**	**11 42 48.2**	**-1.6**
	comp=Z,81nm,0.8s,mb5.4,baz=90,slow=3.4,SNR=140						
YBH				pP	pP	11 43 44.0	-1.7
	comp=Z,12nm,0.7s,baz=118,slow=7.4,SNR=1.6						
YBH	**Yreka Blue Hor**	**59.31**	**321**	P	**P**	**11 42 48.4**	**-1.4**
YBH				pmax	pmax		
	comp=Z,79nm,0.9s						
BUOR	**Burton Butte**	**59.32**	**322**	P	**P**	**11 42 49.8**	**-0.2**
KHMM	**Horse Mountain**	**59.48**	**320**	*e*P	**P**	**11 42 51.4**	**+0.3**
KHMM				*e*pP	pP	11 43 47.1	+0.2
HUMO	**Hull Mountain**	**59.94**	**322**	*e*P	**P**	**11 42 52.4**	**-1.8**
	comp=Z,24nm,0.7s,mb4.9						
NEW	**Newport**	**60.18**	**330**	P	**P**	**11 42 55.1**	**-0.6**
	comp=Z,88nm,0.9s,mb5.4,baz=132,slow=6.8,SNR=172						
NEW	**Newport**	**60.18**	**330**	P	**P**	**11 42 54.5**	**-1.2**
NEW				pmax	pmax		
	comp=Z,100nm,0.9s						
HAWA	**Hanford**	**60.21**	**327**	*e*P	**P**	**11 42 55.2**	**-0.7**
	comp=Z,6.0nm,0.7s,mb4.3						
RKT	**Rikitea**	**60.33**	**244**	⇓*i*P	**P**	**11 42 56.4**	**-0.6**
	comp=Z,449nm,1.1s,mb6.0						
RKT				*e*pP	pP	11 43 52.2	-0.9
	comp=Z,261nm,1.4s						
RKT	**Rikitea**	**60.33**	**244**	*e*LR	LR	12 00 54.0	
	comp=Z,555nm,29.5s						
ADH	**Angra Heroismo**	**60.36**	**43**	*e*LR	LR	12 02 22.5	
OD2	**Odessa Site #2**	**60.41**	**329**	P	**P**	**11 42 56.9**	**-0.3**
KBO	**Bosley Butte**	**60.52**	**321**	*e*P	**P**	**11 42 58.4**	**+0.4**
KBO				*e*pP	pP	11 43 54.7	+0.5
EUO	**Eugene**	**60.81**	**323**	P	**P**	**11 42 59.5**	**-0.4**
KEBM	**Edson Butte**	**60.94**	**322**	*e*P	**P**	**11 43 01.0**	**+0.2**
FCC	**Fort Churchill**	**61.14**	**350**	*e*P	**P**	**11 42 59.5**	**-2.4**
	comp=Z,234nm,0.9s,mb5.8						
FCC				*e*PcP	PcP	11 43 41.4	-1.0
FCC	**Fort Churchill**	**61.14**	**350**	P	**P**	**11 42 59.6**	**-2.4**
FCC				pmax	pmax		
	comp=Z,230nm,1.0s,mb5.8						
COR	**Corvallis**	**61.26**	**324**	*e*P	**P**	**11 43 03.1**	**+0.1**
	comp=Z,249nm,0.9s,mb5.8						
COR	**Corvallis**	**61.26**	**324**	P	**P**	**11 43 03.3**	**+0.3**
COR				pmax	pmax		
	comp=Z,250nm,1.0s,mb5.8						
MPOR	**Mary's Peak**	**61.36**	**324**	P	**P**	**11 43 04.4**	**+0.8**
LON	**Longmire**	**61.67**	**327**	P	**P**	**11 43 05.8**	**+0.2**
EDM	**Edmonton**	**61.98**	**336**	*e*P	**P**	**11 43 05.8**	**-1.9**
EDM	**Edmonton**	**61.98**	**336**	P	**P**	**11 43 06.0**	**-1.6**
OSD	**Olympics--Snow**	**63.34**	**327**	P	**P**	**11 43 17.9**	**+1.2**
CHIE	**El Hierro**	**63.40**	**58**	P	**P**	**11 43 17.3**	**0.0**
	comp=Z,164nm,0.6s,mb5.8						
CHIE				pP	pP	11 44 13.1	-0.9
OCWA	**Octopus Mounta**	**63.56**	**326**	*e*P	**P**	**11 43 18.3**	**+0.2**
	comp=Z,72nm,0.8s,mb5.3						
PGC	**Sidney**	**63.69**	**328**	*e*P	**P**	**11 43 18.6**	**-0.3**
	comp=Z,232nm,0.8s,mb5.9						
EGOM	**La Gomera**	**64.16**	**58**	P	**P**	**11 43 22.4**	**+0.1**
	comp=Z,157nm,0.6s,mb5.8						
EGOM				pP	pP	11 44 17.7	-1.5
PMSA	**Palmer Station**	**64.28**	**174**	*e*P	**P**	**11 43 22.2**	**-0.3**
	comp=Z,271nm,1.3s,mb5.7						
PMSA				*e*pP	pP	11 44 18.9	-0.5
CCAN	**Las Canadas**	**64.69**	**58**	P	**P**	**11 43 26.1**	**+0.4**
	comp=Z,29nm,0.7s,mb5.0						
EBAJ	**Bajamar**	**64.99**	**58**	P	**P**	**11 43 26.5**	**-1.1**
	comp=Z,115nm,0.7s,mb5.6						
CFTV	**Fuerteventura**	**66.88**	**59**	P	**P**	**11 43 37.8**	**-1.7**
	comp=Z,61nm,1.0s,mb5.2						
EFAM	**Famara**	**67.53**	**58**	P	**P**	**11 43 43.0**	**-0.6**
	comp=Z,251nm,0.8s,mb5.9						
YKA	**Yellowknife Ar**	**69.41**	**342**	P	**P**	**11 43 52.5**	**-2.0**
	comp=Z,27nm,0.6s,mb5.0,baz=138,slow=5.6,SNR=91						
YKA	**Yellowknife Ar**	**69.41**	**342**	P	**P**	**11 43 52.5**	**-2.0**
YKW3	**Yellowknife Ar**	**69.46**	**342**	*e*P	**P**	**11 43 52.9**	**-1.9**
SFJD	**Kangerlussuaq**	**70.40**	**11**	P	**P**	**11 43 58.9**	**-1.5**
	comp=Z,14nm,0.9s,mb4.6,baz=254,slow=9.1,SNR=3.6						
SFJD				pP	pP	11 44 56.8	-1.5
	comp=Z,39nm,0.9s,baz=184,slow=8.0,SNR=6.8						
SFJD	**Kangerlussuaq**	**70.40**	**11**	*i* P	pP	11 44 57.2	-1.1
	comp=Z,86nm,1.3s						
VAH	**Vaihoa**	**71.06**	**254**	⇓*i*P	**P**	**11 44 05.3**	**+0.1**
	comp=Z,482nm,1.2s,mb6.0						
VAH				*e*pP	pP	11 45 02.9	-0.3
	comp=Z,299nm,1.4s						
PMOR	**Pomariorio Ree**	**71.30**	**255**	⇓*i*P	**P**	**11 44 06.9**	**+0.2**
	comp=Z,360nm,1.2s,mb5.9						
PMOR				*e*pP	pP	11 45 04.5	-0.1
	comp=Z,164nm,1.2s						
MEH	**Mehetia**	**71.69**	**252**	⇓*i*P	**P**	**11 44 09.0**	**0.0**
LIC	**Lamto**	**72.19**	**83**	⇑*i*P	**P**	**11 44 11.5**	**-0.6**
	comp=Z,625nm,0.7s,mb6.1						
DBIC	**Dimbokro**	**72.38**	**83**	P	**P**	**11 44 12.8**	**-0.4**
	comp=Z,396nm,0.8s,mb6.1,baz=256,slow=4.9,SNR=374						
DBIC				pP	pP	11 45 09.8	-1.5
	comp=Z,68nm,1.1s,baz=254,slow=10,SNR=2.0						
DBIC				S	S	11 53 14.9	-0.3
	comp=Z,11nm,1.2s,baz=24,slow=20,SNR=12						
DBIC	**Dimbokro**	**72.38**	**83**	P	**P**	**11 44 12.8**	**-0.4**
DBIC				pP	pP	11 45 09.8	-1.5
DBIC				S	S	11 53 14.9	-0.3
DLBC	**Dease Lake**	**72.49**	**334**	*e*P	**P**	**11 44 13.3**	**+0.2**
TVO	**Taravao**	**72.80**	**252**	⇓*i*P	**P**	**11 44 15.8**	**+0.1**
	comp=Z,614nm,1.4s,mb6.0						
PPT	**Papeete**	**73.10**	**252**	⇓*i*P	**P**	**11 44 17.5**	**0.0**
	comp=Z,246nm,1.4s,mb5.7						
PPT	**Papeete**	**73.10**	**252**	*e*LR	LR	12 07 04.2	
	comp=Z,472nm,26.2s						
PPT	**Papeete**	**73.10**	**252**	P	**P**	**11 44 17.2**	**-0.3**
	comp=Z,102nm,1.0s,mb5.4,baz=84,slow=8.8,SNR=10						
PAE	**Paea**	**73.11**	**252**	⇓*i*P	**P**	**11 44 17.6**	**+0.1**
	comp=Z,1µm,1.3s,mb6.4						
PAE				*e*pP	pP	11 45 15.3	-0.4
	comp=Z,384nm,1.4s						
TBI	**Tubuai**	**73.51**	**246**	⇓*i*P	**P**	**11 44 19.9**	**+0.1**
	comp=Z,254nm,1.0s,mb5.8						
PTEO	**Sao Teotonio**	**73.54**	**50**	*e*P	**P**	**11 44 20.3**	**+0.6**
	comp=Z,145nm,1.2s,mb5.5						
PTEO				*e*pP	pP	11 45 18.1	+0.3
PLOU	**Loures**	**73.55**	**49**	*e*P	**P**	**11 44 20.0**	**+0.3**
	comp=Z,280nm,1.3s,mb5.7						
PLOU				*e*pP	pP	11 45 17.6	-0.3
PTOM	**Tomar**	**74.30**	**48**	*e*P	**P**	**11 44 23.8**	**-0.2**
	comp=Z,150nm,1.6s,mb5.4						
PTOM				*e*pP	pP	11 45 21.7	-0.6
PBEJ	**Beja**	**74.31**	**50**	*e*P	**P**	**11 44 24.3**	**+0.2**
	comp=Z,86nm,1.5s,mb5.2						
PBEJ				*e*pP	pP	11 45 22.9	+0.5
EVO	**Evora**	**74.33**	**49**	*e*P	**P**	**11 44 23.0**	**-1.2**
EVO				*e*pP	pP	11 45 20.5	-1.9
EVO				*e*R			
	comp=Z,987nm,19.8s						
EZAM	**Zamans**	**74.75**	**46**	P	**P**	**11 44 24.2**	**-2.3**
	comp=Z,2.1nm,0.4s						
EZAM				pP	pP	11 45 23.1	-1.8
PVIS	**Viseu**	**74.96**	**47**	*e*P	**P**	**11 44 27.2**	**-0.5**
	comp=Z,94nm,1.3s,mb5.3						
PVIS				*e*pP	pP	11 45 25.6	-0.5
STS	**Santiago**	**75.06**	**45**	P	**P**	**11 44 25.4**	**-2.9**
STS				pP	pP	11 45 25.5	-1.1
PCAB	**Cabril**	**75.12**	**46**	*e*P	**P**	**11 44 28.3**	**-0.3**
	comp=Z,133nm,1.7s,mb5.3						
PCAB				*e*pP	pP	11 45 26.4	-0.5
ELOB	**Lobios**	**75.13**	**46**	P	**P**	**11 44 26.1**	**-2.6**
ELOB				pP	pP	11 45 26.4	-0.6
EBAD	**Badajoz**	**75.14**	**49**	P	**P**	**11 44 26.8**	**-2.0**
	comp=Z,105nm,1.8s,mb5.2						
EBAD				pP	pP	11 45 25.2	-1.9
MTE	**Manteigas**	**75.14**	**48**	*e*P	**P**	**11 44 27.8**	**-0.9**
	comp=Z,72nm,1.4s,mb5.1						
MTE				*e*pP	pP	11 45 26.6	-0.5
EMIN	**Mina Concepcio**	**75.17**	**51**	P	**P**	**11 44 29.3**	**+0.3**
	comp=Z,80nm,1.7s,mb5.1						
EMIN				pP	pP	11 45 24.8	-2.5
PVRL	**Vila Real**	**75.23**	**47**	*e*P	**P**	**11 44 29.9**	**+0.6**
	comp=Z,99nm,1.4s,mb5.2						
PVRL				*e*pP	pP	11 45 27.2	-0.4
ESPR	**Espera**	**75.61**	**52**	P	**P**	**11 44 31.4**	**-0.1**
	comp=Z,262nm,1.8s,mb5.6						
ESPR				pP	pP	11 45 29.1	-0.7
MDT	**Midelt**	**75.80**	**56**	P	**P**	**11 44 33.0**	**+0.3**
	comp=Z,50nm,1.0s,mb5.1,baz=268,slow=5.5,SNR=38						
MDT				pP	pP	11 45 31.0	-0.1
	comp=Z,13nm,0.9s,baz=272,slow=7.0,SNR=3.2						
EJIF	**Jimena Fronter**	**75.82**	**52**	P	**P**	**11 44 34.1**	**+1.4**
	comp=Z,57nm,1.0s,mb5.2						
EJIF				pP	pP	11 45 32.2	+1.1
ERUA	**La Rua**	**75.93**	**46**	P	**P**	**11 44 33.4**	**+0.3**
	comp=Z,36nm,0.9s,mb5.0						
ERUA				pP	pP	11 45 30.5	-1.1
PBRG	**Braganca**	**76.07**	**46**	*e*P	**P**	**11 44 34.1**	**+0.2**
	comp=Z,79nm,1.9s,mb5.0						
PBRG				*e*pP	pP	11 45 32.5	+0.1
ECAL	**Calabor**	**76.11**	**46**	P	**P**	**11 44 34.4**	**+0.2**
	comp=Z,42nm,1.4s,mb4.9						
ECAL				pP	pP	11 45 32.8	+0.2
EPON	**Pontenova**	**76.16**	**45**	P	**P**	**11 44 34.2**	**-0.2**
	comp=Z,221nm,1.4s,mb5.6						
EPON				pP	pP	11 45 31.4	-1.5
ECAB	**El Cabril**	**76.21**	**50**	P	**P**	**11 44 34.6**	**-0.2**
	comp=Z,340nm,1.9s,mb5.7						
ECAB				pP	pP	11 45 31.9	-1.4
EMIJ	**Mijas**	**76.40**	**52**	P	**P**	**11 44 36.2**	**+0.4**
	comp=Z,183nm,1.3s,mb5.5						
EMIJ				pP	pP	11 45 34.8	+0.5
EADA	**Adamuz**	**76.87**	**50**	P	**P**	**11 44 38.6**	**+0.2**
	comp=Z,126nm,1.5s,mb5.3						
EADA				pP	pP	11 45 35.5	-1.6
ELUQ	**Luque**	**76.99**	**51**	P	**P**	**11 44 39.9**	**+0.8**
	comp=Z,33nm,0.8s,mb5.0						
ELUQ				pP	pP	11 45 37.6	-0.1
ELOJ	**Sierra Loja**	**77.00**	**52**	P	**P**	**11 44 39.6**	**+0.4**
	comp=Z,120nm,1.0s,mb5.5						
ELOJ				pP	pP	11 45 39.1	+1.3
ERON	**Agron**	**77.25**	**52**	P	**P**	**11 44 41.2**	**+0.7**
	comp=Z,62nm,0.9s,mb5.2						
ERON				pP	pP	11 45 40.2	+1.0
SUMG	**Summit**	**77.38**	**11**	*e*P	**P**	**11 44 40.0**	**-0.5**
	comp=Z,87nm,0.8s,mb5.4						
SUMG				*e*pP	pP	11 45 37.9	-1.3
ECOG	**Cogollos-Vega**	**77.48**	**52**	P	**P**	**11 44 42.0**	**+0.2**
	comp=Z,64nm,0.9s,mb5.2						
ECOG				pP	pP	11 45 40.0	-0.5
EBAN	**Banos Encina**	**77.48**	**51**	P	**P**	**11 44 41.3**	**-0.5**
	comp=Z,18nm,0.8s,mb4.8						
EBAN				pP	pP	11 45 38.9	-1.5
EARI	**Arriondas**	**77.53**	**45**	P	**P**	**11 44 41.0**	**-0.9**
	comp=Z,306nm,2.2s,mb5.5						
EARI				pP	pP	11 45 41.2	+0.6
ESDC	**Sonseca Array**	**77.65**	**49**	P	**P**	**11 44 42.3**	**-0.3**
	comp=Z,8.3nm,0.6s,mb4.5,baz=264,slow=5.5,SNR=37						
ESDC				pP	pP	11 45 40.6	-0.8
	comp=Z,34nm,0.7s,baz=263,slow=5.5,SNR=21						
ESDC	**Sonseca Array**	**77.65**	**49**	P	**P**	**11 44 42.5**	**-0.2**
	comp=Z,67nm,1.3s,mb5.1						
ESDC				pP	pP	11 45 40.6	-0.8
GUD	**Guadarrama**	**77.71**	**48**	P	**P**	**11 44 42.2**	**-0.8**
	comp=Z,89nm,1.4s,mb5.2						
GUD				pP	pP	11 45 41.5	-0.2
EHUE	**Huescar**	**78.34**	**51**	P	**P**	**11 44 46.5**	**+0.1**
	comp=Z,112nm,1.0s,mb5.5						
EHUE				pP	pP	11 45 45.9	+0.6
EVIA	**Vianos**	**78.56**	**50**	P	**P**	**11 44 47.9**	**+0.3**
	comp=Z,63nm,0.9s,mb5.2						
EVIA				pP	pP	11 45 46.6	+0.1
DCN	**Croghan**	**78.84**	**35**	⇑*i*P	**P**	**11 44 48.2**	**-0.6**
INK	**Inuvik**	**79.15**	**342**	S	S	11 54 27.8	+0.2
	comp=Z,4.0nm,1.2s,baz=48,slow=21,SNR=14						
INK				PKPPKP		12 11 43.9	
	comp=Z,2.4nm,1.0s,baz=241,slow=3.6,SNR=4.3						
INK	**Inuvik**	**79.15**	**342**	*e*P	**P**	**11 44 49.8**	**-0.4**
	comp=Z,256nm,0.6s,mb6.0						
INK	**Inuvik**	**79.15**	**342**	P	**P**	**11 44 50.2**	**0.0**
INK				pmax	pmax		
	comp=Z,260nm,0.6s						
DAWY	**Dawson**	**79.20**	**337**	*e*P	**P**	**11 44 49.7**	**-0.7**
DLF	**Lyons Farm**	**79.26**	**35**	⇑*i*P	**P**	**11 44 50.1**	**-0.9**
ECRI	**Cripan**	**79.32**	**46**	P	**P**	**11 44 51.3**	**-0.3**
	comp=Z,56nm,1.2s,mb5.1						
ECRI				pP	pP	11 45 50.6	0.0
SCO	**Scoresbysund**	**79.89**	**16**	*i* P	**P**	**11 44 52.9**	**-1.1**
SCO				*e*	pP	11 45 54.4	+1.2
SCO	**Scoresbysund**	**79.89**	**16**	*e*P	**P**	**11 44 52.9**	**-1.1**
SCO				*e*	pP	11 45 54.4	+1.2
ECHE	**Chera**	**79.91**	**50**	P	**P**	**11 44 56.5**	**+1.7**
	comp=Z,48nm,1.2s,mb5.0						
ECHE				pP	pP	11 45 55.3	+1.4
QUIF	**Quistinic**	**79.97**	**41**	⇑*i*P	**P**	**11 44 54.5**	**-0.4**
	comp=Z,108nm,1.3s,mb5.0						
QUIF				*e*pP	pP	11 45 54.3	+0.2
ROSF	**Rostrenen**	**80.00**	**41**	⇑*i*P	**P**	**11 44 54.4**	**-0.6**
OSSF	**Osses**	**80.34**	**46**	*e*P	pP	11 45 55.3	-0.9
SJPF	**Ste Jean**	**80.34**	**46**	⇑*i*P	**P**	**11 44 56.9**	**-0.1**
	comp=Z,288nm,1.4s,mb5.4						
SJPF				*e*pP	pP	11 45 56.8	+0.6
SGMF	**Saint Gilles**	**80.45**	**41**	⇑*i*P	**P**	**11 44 56.7**	**-0.7**
	comp=Z,180nm,1.3s,mb5.2						
LARF	**Larrau**	**80.50**	**46**	*e*P	pP	11 45 57.0	0.0
ETSF	**Etsaut**	**80.78**	**46**	⇑*i*P	**P**	**11 44 59.3**	**0.0**
DIV	**Divide**	**80.81**	**333**	*e*P	**P**	**11 44 59.3**	**+0.3**
	comp=Z,314nm,1.2s,mb5.8						
KPL	**Plockton**	**80.89**	**31**	*e*P	**P**	**11 44 58.0**	**-1.6**
REYF	**Montagne du Re**	**80.93**	**46**	*e*P	pP	11 45 59.4	+0.1
EANR	**'Ain N'Sour**	**80.97**	**54**	P	**P**	**11 45 02.0**	**+1.6**
KSB	**Sheil Bridge**	**80.97**	**32**	*e*P	**P**	**11 44 59.0**	**-0.9**
ETRT	**Tiaret**	**81.06**	**54**	P	**P**	**11 45 01.0**	**+0.1**
KAC	**Achnashellach**	**81.12**	**31**	*e*P	**P**	**11 44 60.0**	**-0.7**
ECHF	**Ech Chlef**	**81.19**	**53**	P	**P**	**11 45 03.0**	**+1.4**
VIEF	**Viey**	**81.20**	**46**	*e*P	pP	11 46 01.0	+0.2
ECHA	**Ech Chlef**	**81.21**	**53**	P	**P**	**11 45 03.0**	**+1.3**
EBIE	**Bielsa**	**81.25**	**47**	P	**P**	**11 45 02.1**	**+0.4**
	comp=Z,17nm,0.8s,mb4.7						
EBIE				pP	pP	11 46 01.4	+0.3
EAB	**Aberfoyle**	**81.27**	**33**	*e*P	**P**	**11 45 00.8**	**-0.8**
EAB				AMb	AMB	11 45 08.9	
	comp=Z,182nm,1.7s,mb5.4						
EGRA	**Graus**	**81.30**	**47**	P	**P**	**11 45 02.2**	**+0.2**
	comp=Z,15nm,0.6s,mb4.8						
EGRA				pP	pP	11 46 01.9	+0.5
EBNR	**Beni Rached**	**81.36**	**53**	P	**P**	**11 45 05.0**	**+2.6**
RESF	**Ens**	**81.42**	**47**	*e*P	pP	11 46 02.2	+0.3
EPF	**Esparros**	**81.45**	**46**	⇑*i*P	**P**	**11 45 02.9**	**+0.1**
	comp=Z,538nm,1.7s,mb5.6						
THY	**Trims Highway**	**81.56**	**335**	*e*P	**P**	**11 45 02.9**	**0.0**
GRR	**Gorron**	**81.58**	**41**	⇑*i*P	**P**	**11 45 02.6**	**-0.7**
	comp=Z,101nm,1.1s,mb5.1						
MDO	**Dochfour**	**81.59**	**31**	⇑*e*P	**P**	**11 45 02.5**	**-0.6**
EAU	**Auchinoon**	**81.67**	**33**	*e*P	**P**	**11 45 02.6**	**-1.0**
EAU				AMb	AMB	11 45 03.9	
	comp=Z,173nm,1.8s,mb5.4						
ESK	**Eskdalemuir**	**81.67**	**34**	*e*P	**P**	**11 45 02.7**	**-0.9**
ESK				AMb	AMB	11 45 13.3	
	comp=Z,198nm,1.8s,mb5.4						
ESK	**Eskdalemuir**	**81.67**	**34**	*e*P	**P**	**11 45 02.9**	**-0.8**
	comp=Z,112nm,1.5s,mb5.3						
ESK				*e*pP	pP	11 46 03.1	+0.1
ESK	**Eskdalemuir**	**81.67**	**34**	P	**P**	**11 45 03.5**	**-0.1**
ESK				pmax	pmax		
	comp=Z,110nm,1.5s,mb5.3						
ECK	**Cauldkaine Hil**	**81.68**	**34**	⇑*e*P	**P**	**11 45 02.3**	**-1.4**
MFF	**Saint Martin d**	**81.73**	**43**	⇑*i*P	**P**	**11 45 03.7**	**-0.4**
EPOB	**Poblet**	**81.73**	**48**	P	**P**	**11 45 04.2**	**0.0**
EPOB				pP	pP	11 46 02.7	-0.9
MELF	**Melles**	**81.73**	**47**	*e*P	pP	11 46 04.3	+0.7
MVH1	**Achvaich**	**81.81**	**31**	⇑*e*P	**P**	**11 45 03.7**	**-0.6**
VNA3	**Neumayer Olymp**	**81.85**	**162**	⇓*i*P	**P**	**11 45 04.5**	**+0.3**
VNA3	**Neumayer Olymp**	**81.85**	**162**	⇑*i*	**P**	**11 45 08.9**	**+4.7**
VNA3	**Neumayer Olymp**	**81.85**	**162**		pP	11 46 00.8	-2.8
VNA3	**Neumayer Olymp**	**81.85**	**162**	⇑*i*	pP	11 46 04.9	+1.3
VNA3	**Neumayer Olymp**	**81.85**	**162**		pP	11 46 11.1	+7.5
VNA3	**Neumayer Olymp**	**81.85**	**162**	S	S	11 54 58.2	+3.0
EBL	**Broad Law**	**81.87**	**33**	*e*P	**P**	**11 45 03.8**	**-0.8**
FLN	**La Foliniere**	**81.90**	**41**	⇑*i*P	**P**	**11 45 04.4**	**-0.5**
	comp=Z,85nm,0.9s,mb5.1						
FLN				*e*pP	pP	11 46 04.8	+0.5
FLN				*e*R			
	comp=Z,314nm,21.0s						
KWE	**Weaver Farm**	**81.92**	**36**	⇑*e*P	**P**	**11 45 04.5**	**-0.5**
KWE				AMb	AMB	11 45 08.3	
	comp=Z,176nm,1.7s,mb5.4						
SALF	**Salau**	**82.03**	**47**	*e*P	pP	11 46 05.4	+0.3
KIP	**Kipapa**	**82.03**	**292**	⇑*e*P	**P**	**11 45 06.9**	**+0.8**
LHO	**Holmfirth**	**82.03**	**36**	⇑*e*P	**P**	**11 45 05.1**	**-0.4**
LHO				AMb	AMB	11 45 14.8	
	comp=Z,197nm,1.7s,mb5.5						
LFF	**La Frestale**	**82.05**	**44**	⇑*i*P	**P**	**11 45 05.4**	**-0.4**
VNA1	**Neumayer--Stat**	**82.07**	**162**	⇓*i*P	**P**	**11 45 06.2**	**+0.8**
VNA1	**Neumayer--Stat**	**82.07**	**162**	⇑*i*	**P**	**11 45 09.2**	**+3.8**
VNA1	**Neumayer--Stat**	**82.07**	**162**		pP	11 46 02.0	-2.8
VNA1	**Neumayer--Stat**	**82.07**	**162**		pP	11 46 07.0	+2.2
VNA1	**Neumayer--Stat**	**82.07**	**162**		pP	11 46 12.9	+8.1
LDF	**La Druitiere**	**82.10**	**41**	⇑*i*P	**P**	**11 45 05.4**	**-0.6**
	comp=Z,108nm,1.0s,mb5.1						
EMIR	**Miracle**	**82.15**	**48**	P	**P**	**11 45 07.0**	**+0.6**
	comp=Z,40nm,1.1s,mb5.0						
EMIR				pP	pP	11 46 06.0	+0.2
KBI1	**Birley Grange**	**82.16**	**36**	*e*P	**P**	**11 45 04.9**	**-1.3**
KBI1				AMb	AMB	11 45 10.7	
	comp=Z,124nm,1.4s,mb5.3						
MCD	**Coleburn Disti**	**82.20**	**31**	⇑*e*P	**P**	**11 45 05.9**	**-0.4**
MLA1	**Latheron**	**82.33**	**31**	*e*P	**P**	**11 45 06.6**	**-0.3**
VNA2	**Neumayer--Watz**	**82.43**	**162**	⇓*i*P	**P**	**11 45 07.5**	**+0.2**
VNA2	**Neumayer--Watz**	**82.43**	**162**	⇑*i*	**P**	**11 45 11.6**	**+4.3**
VNA2	**Neumayer--Watz**	**82.43**	**162**		pP	11 46 03.7	-3.0
VNA2	**Neumayer--Watz**	**82.43**	**162**	⇑*i*	pP	11 46 07.7	+1.0
VNA2	**Neumayer--Watz**	**82.43**	**162**		pP	11 46 14.4	+7.7
VNA2	**Neumayer--Watz**	**82.43**	**162**	S	S	11 55 02.6	+1.5
ILAR	**Eielson Array**	**82.48**	**336**	P	**P**	**11 45 07.1**	**-0.5**
	comp=Z,71nm,0.8s,mb5.4,baz=115,slow=3.6,SNR=292						
ILAR				PP	PP	11 48 20.4	-1.4
	comp=Z,10nm,0.9s,baz=106,slow=6.9,SNR=8.3						
ILAR				S	S	11 55 03.0	+1.4
	comp=Z,0.2nm,0.7s,baz=159,slow=27,SNR=3.0						
PMR	**Palmer**	**82.49**	**333**	*e*P	**P**	**11 45 08.1**	**+0.4**
	comp=Z,181nm,1.8s,mb5.4						
PMR	**Palmer**	**82.49**	**333**	P	**P**	**11 45 03.2**	**-4.5**
PMR				pmax	pmax		
	comp=Z,99nm,1.3s,mb5.3						
EMHD	**Djebel Mahouad**	**82.49**	**53**	P	**P**	**11 45 09.0**	**+0.7**
VALF	**Valcebollere**	**82.58**	**47**	*e*P	pP	11 46 07.6	-0.5
ABA	**Alger-Bouzarea**	**82.63**	**53**	P	**P**	**11 45 09.4**	**+0.5**
RJF	**Les Rejaudoux**	**82.65**	**44**	⇑*i*P	**P**	**11 45 08.3**	**-0.6**
	comp=Z,487nm,1.6s,mb5.7						
RJF				*e*R			
	comp=Z,871nm,19.2s						
SLKM	**Skilak Lake**	**82.70**	**331**	*e*P	**P**	**11 45 08.4**	**-0.4**
SLKM	**Skilak Lake**	**82.70**	**331**	*e*P	**P**	**11 45 08.9**	**+0.1**
ETOS	**Mallorca**	**82.82**	**50**	P	**P**	**11 45 10.6**	**+0.8**
	comp=Z,58nm,1.1s,mb5.2						
ETOS				pP	pP	11 46 08.9	-0.4

MTLF	Montolieu	82.86	46⇑	iP	P	11 45 09.5	-0.5
	comp=Z,409nm,1.4s,mb5.7						
ADJB	Djebel Djouab	82.88	54	P	P	11 45 11.2	+1.0
RAR	Rarotonga	82.90	249	P	P	11 45 11.0	+0.3
	comp=Z,50nm,1.2s,mb5.1,baz=299,slow=4.8,SNR=4.3						
COLA	College	82.90	336⇑	iP	P	11 45 09.3	-0.5
CAF	Calviac	82.98	45⇑	iP	P	11 45 10.1	-0.5
	comp=Z,445nm,1.6s,mb5.6						
FILF	Fillols	83.00	47	eP	pP	11 46 09.9	-0.4
AKET	Djebel Ketaf	83.22	54	P	P	11 45 13.1	+1.1
EJON	La Jonquera	83.22	47	P	P	11 45 13.5	+1.6
	comp=Z,26nm,1.0s,mb4.9						
EJON				pP	pP	11 46 11.1	-0.3
TCF	Toulx Ste Croi	83.28	43⇑	iP	P	11 45 11.3	-0.8
	comp=Z,99nm,1.1s,mb5.2						
TCF				epP	pP	11 46 11.7	+0.1
ATAF	Djebel Tarf	83.52	54	P	P	11 45 14.1	+0.5
HYF	Humbligny	83.72	42⇑	iP	P	11 45 13.9	-0.4
PYM	Petit Puy Mans	83.76	44	eP	pP	11 46 14.0	-0.1
BGF	Bois d'Agland	83.76	43⇑	iP	P	11 45 13.8	-0.7
	comp=Z,683nm,1.6s,mb5.8						
BGF				epP	pP	11 46 14.3	+0.2
LBL	Lubilhac	83.85	44	eP	pP	11 46 14.9	+0.3
AGO	Saint Agoulin	83.88	44	eP	pP	11 46 14.2	-0.5
SNAA	Sanae	84.06	162⇓	iP	P	11 45 15.6	+0.2
SNAA	Sanae	84.06	162		P	11 45 20.1	+4.7
SNAA	Sanae	84.06	162⇑	i	pP	11 46 15.8	+0.8
SNAA	Sanae	84.06	162	P	P	11 45 15.7	+0.3
	comp=Z,29nm,0.9s,mb5.0,baz=264,slow=9.0,SNR=244						
SNAA				pP	pP	11 46 15.4	+0.3
	comp=Z,11nm,0.7s,baz=280,slow=8.8,SNR=5.6						
SNAA				PP	PP	11 48 31.8	-2.4
	comp=Z,24nm,1.2s,baz=276,slow=7.0,SNR=7.6						
SNAA				S	S	11 55 13.4	-3.7
	comp=Z,0.6nm,1.1s,baz=179,slow=18,SNR=3.4						
DAG	Danmarks Havn	84.07	11⇓	iP	P	11 45 14.7	-0.7
	comp=Z,83nm,1.5s,mb5.2						
DAG	Danmarks Havn	84.07	11⇓	eP	P	11 45 14.7	-0.7
	comp=Z,83nm,1.5s,mb5.2						
DAG	Danmarks Havn	84.07	11⇓	eP	P	11 45 14.7	-0.7
DAG				pmax	pmax		
	comp=Z,83nm,1.5s,mb5.2						
AVF	Avril sur Loir	84.13	43⇑	iP	P	11 45 15.4	-0.9
	comp=Z,157nm,1.3s,mb5.3						
AVF				epP	pP	11 46 15.8	-0.2
LASF	Ste Croix	84.14	46⇑	iP	P	11 45 16.5	+0.1
	comp=Z,135nm,1.2s,mb5.2						
LASF				epP	pP	11 46 16.8	+0.7
PLDF	La Plantade	84.21	44	eP	pP	11 46 16.3	-0.1
SSF	Saint Saulge	84.28	43⇑	iP	P	11 45 16.0	-1.0
	comp=Z,235nm,1.5s,mb5.4						
SMF	Signal de Mont	84.45	43⇑	iP	P	11 45 17.1	-0.8
	comp=Z,320nm,1.4s,mb5.5						
SET	Setif	84.46	54	P	P	11 45 19.0	+0.8
CKHR	Kef el Ahmar	84.53	54	P	P	11 45 20.0	+1.4
LOR	Lormes	84.54	42⇑	iP	P	11 45 17.4	-1.0
	comp=Z,436nm,1.9s,mb5.6						
LOR				epP	pP	11 46 17.9	-0.1
LOR				eR			
	comp=Z,477nm,21.5s						
VIVF	Saint-Julien-l	84.81	45⇑	iP	P	11 45 19.8	0.0
	comp=Z,291nm,1.6s,mb5.5						
DFRA	Djebel Bou Aff	84.87	53	P	P	11 45 21.8	+1.5
PRAF	Pradon	85.05	46	eP	pP	11 46 21.5	+0.8
BAIF	Baives	85.13	40⇑	iP	P	11 45 20.6	-0.6
	comp=Z,39nm,0.9s,mb4.8						
GELF	Grande-Etoile	85.19	46	eP	pP	11 46 21.7	+0.3
CTEI	Djebel Teioual	85.26	54	P	P	11 45 22.4	+0.2
CASM	Ain Smara	85.34	54	P	P	11 45 23.0	+0.4
SMRF	Simiane la Rot	85.36	46⇑	iP	P	11 45 22.7	+0.2
	comp=Z,263nm,1.7s,mb5.4						
SMRF				epP	pP	11 46 23.1	+0.8
BERF	Bertagne	85.37	47	eP	pP	11 46 22.4	0.0
PUYF	Puyloubier	85.40	46	eP	pP	11 46 22.7	+0.2
VILF	Villemus	85.44	46	eP	pP	11 46 22.9	+0.2
MEZF	Maizieres J'vi	85.49	41	eP	P	11 45 22.4	-0.7
	comp=Z,67nm,0.7s,mb5.2						
GIVF	Givet	85.53	40⇑	iP	P	11 45 22.9	-0.3
STOF	St-Etienne Org	85.60	46	eP	pP	11 46 23.6	+0.1
TAVF	Tavernes	85.67	46	eP	pP	11 46 23.8	-0.1
ORIF	Oris-en-Rattie	85.67	45⇑	iP	P	11 45 24.2	+0.2
	comp=Z,128nm,1.2s,mb5.2						
ORIF				eR			
	comp=Z,587nm,22.8s						
CAEH	'Ain El Ouahch	85.67	53	P	P	11 45 25.0	+0.7
LMR	La Mourre	85.97	47⇑	iP	P	11 45 25.0	-0.5
	comp=Z,527nm,1.9s,mb5.6						
CABF	La Chapelle	85.98	43⇑	iP	P	11 45 25.1	-0.4
	comp=Z,300nm,1.5s,mb5.5						
CABF	La Chapelle	85.98	43⇑	iP	P	11 45 25.1	-0.4
CABF				pmax	pmax		
	comp=Z,150nm,1.5s,mb5.5						
THEF	They Montfort	86.08	42	eP	pP	11 46 25.3	-0.5
FRF	La Foret Royal	86.09	46⇑	iP	P	11 45 25.3	-0.8
	comp=Z,76nm,1.1s,mb5.0						
FRF	La Foret Royal	86.09	46⇑	iP	P	11 45 25.3	-0.8
FRF				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.0						
CGMA	Guelma	86.10	54	P	P	11 45 29.0	+2.7
CMAH	Djebel Manchou	86.12	53	P	P	11 45 25.0	-1.4
ABSA	Djebel Ababsia	86.14	54	P	P	11 45 26.4	-0.1
BNI	Bardonecchia	86.25	45	eP	P	11 45 27.4	+0.5
	comp=Z,68nm,1.5s,mb5.2						
BNI				epP	pP	11 46 27.4	+0.8
BNI	Bardonecchia	86.25	45	eP	P	11 45 27.4	+0.6
BNI				e*PP	pP	11 46 27.5	+0.8
BNI				pmax	pmax		
	comp=Z,68nm,1.5s,mb5.2						
CALN	Calern	86.28	46	eP	pP	11 46 26.5	-0.4
MBDF	Montbardon	86.28	45⇑	iP	P	11 45 26.9	-0.1
	comp=Z,218nm,1.9s,mb5.2						
MBDF				epP	pP	11 46 27.7	+0.8
MBDF	Montbardon	86.28	45⇑	iP	P	11 45 26.9	-0.1
MBDF				e*PP	pP	11 46 27.7	+0.8
MBDF				pmax	pmax		
	comp=Z,109nm,1.9s,mb5.3						
HAU	Haudompre	86.30	42	eP	P	11 45 26.2	-0.8
	comp=Z,92nm,1.3s,mb5.1						
HAU				eR			
	comp=Z,432nm,21.8s						
RRL	Cesana Torines	86.31	45	P	P	11 45 27.4	+0.2
HGN	Heimansgroeve	86.31	39⇑	eP	P	11 45 26.9	-0.1
	comp=Z,118nm,1.8s,mb5.3						
HGN				epP	pP	11 46 25.4	-1.5
HGN				eS	S	11 55 31.4	-7.8
LPL	La Plagne	86.33	44⇑	iP	P	11 45 27.4	+0.2
	comp=Z,84nm,1.3s,mb5.0						
LPL	La Plagne	86.33	44⇑	iP	P	11 45 27.4	+0.2
LPL				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.0						
WLF	Walferdange	86.34	40	eP	P	11 45 27.2	+0.1
	comp=Z,196nm,1.4s,mb5.7						
WLF				epP	pP	11 46 26.8	-0.2
WLF	Walferdange	86.34	40	eP	P	11 45 27.3	+0.2
WLF				e*PP	pP	11 46 26.8	-0.2
WLF				pmax	pmax		
	comp=Z,196nm,1.4s,mb5.7						
LPG	La Plagne	86.34	44⇑	iP	P	11 45 27.6	+0.3
	comp=Z,218nm,1.7s,mb5.3						
LPG	La Plagne	86.34	44⇑	iP	P	11 45 27.6	+0.3
LPG				pmax	pmax		
	comp=Z,109nm,1.7s,mb5.3						
MVIF	Mont Vial	86.48	46	eP	pP	11 46 28.0	+0.1
FENE	Fenestrelle	86.51	45	P	P	11 45 27.9	-0.2
TOUF	Mont Tournerai	86.56	46	eP	pP	11 46 27.8	-0.5
LSD	Ceresole Reale	86.62	45	P	P	11 45 29.1	+0.5
HINF	Hinteralfeld	86.62	42⇑	iP	P	11 45 27.4	-1.1
REVF	Revere	86.62	46	eP	pP	11 46 28.3	-0.3
STV	Sta Anna Valdi	86.63	46	P	P	11 45 28.2	-0.5
STV2	Anna di Valdie	86.64	46	P	P	11 45 28.2	-0.6
BHB	Bricherasio	86.64	45	P	P	11 45 27.6	-1.1
RSP	Reno Superiore	86.66	45	P	P	11 45 29.0	+0.2
SBF	Sospel	86.68	46⇑	iP	P	11 45 28.3	-0.7
	comp=Z,71nm,1.1s,mb5.0						
SBF	Sospel	86.68	46⇑	iP	P	11 45 28.3	-0.7
SBF				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.0						
AUTN	L'Aution	86.69	46	eP	pP	11 46 28.9	0.0
ENR	Entracque	86.70	46	P	P	11 45 27.8	-1.3
SAOF	Saorge	86.78	46	eP	pP	11 46 29.1	-0.3
ECH	Echery	86.86	42	eP	pP	11 46 29.5	-0.1
NEGI	Negi	86.88	46	P	P	11 45 28.7	-1.2
MONE	Monesi	86.93	46	P	P	11 45 28.3	-1.8
CDF	Champ du Feu	86.95	42⇑	iP	P	11 45 29.5	-0.6
	comp=Z,226nm,1.5s,mb5.4						
CDF				epP	pP	11 46 30.1	0.0
CDF	Champ du Feu	86.95	42⇑	iP	P	11 45 29.5	-0.6
CDF				e*PP	pP	11 46 30.1	0.0
CDF				pmax	pmax		
	comp=Z,113nm,1.5s,mb5.4						
WTSB	Winterswijk	86.97	38⇑	eP	P	11 45 30.4	+0.2
	comp=Z,190nm,0.9s,mb5.8						
WTSB				epP	pP	11 46 30.4	+0.3
	comp=Z,341nm,1.9s						
WLS	Welschbruch	87.00	42	eP	pP	11 46 30.0	-0.3
IMI	Imperia	87.01	46	P	P	11 45 28.7	-1.8
BBS	Basel-Blauen	87.03	43	eP	P	11 45 29.2	-1.3
ROB	Roburent	87.03	46	P	P	11 45 28.9	-1.7
TRAV		87.03	45	P	P	11 45 29.8	-0.8
LIBD	Limburg	87.15	42	eP	P	11 45 30.6	-0.5
ORX	Oropa	87.21	44	P	P	11 45 30.1	-1.4
MCGN	Macugnaga	87.24	44	P	P	11 45 32.8	+1.3
ABH	Alteburg	87.26	40	eP	P	11 45 31.9	+0.4
FIN	Finale Ligure	87.27	46	P	P	11 45 30.2	-1.5
KIZ	Kirchzarten	87.34	42	eP	P	11 45 31.1	-0.9
LANF	Langenberg	87.35	41	eP	pP	11 46 32.1	+0.1
FELD	Feldberg	87.39	42	eP	P	11 45 31.8	-0.4
PCP	Pian Castagno	87.53	46	P	P	11 45 31.6	-1.4
KTD	Kalmit	87.56	41	eP	P	11 45 32.9	-0.1
BFO	Black Forest	87.65	42	eP	P	11 45 32.7	-0.7
	comp=Z,56nm,1.7s,mb5.1						
BFO				epP	pP	11 46 33.2	-0.2
BFO	Black Forest	87.65	42	eP	P	11 45 32.7	-0.7
BFO				e*PP	pP	11 46 33.2	-0.2
BFO				pmax	pmax		
	comp=Z,56nm,1.7s,mb5.1						
PGF	Pioggiola	87.73	48⇑	iP	P	11 45 33.2	-0.7
	comp=Z,84nm,1.4s,mb5.1						
PGF				epP	pP	11 46 34.0	0.0
VAI	Varese	87.78	44	P	P	11 45 33.6	-0.5
VSL	Villasalto	87.84	51	P	P	11 45 34.6	+0.1
TNS	Taunus Mts	87.86	40	eP	P	11 45 34.3	0.0
	comp=Z,137nm,1.5s,mb5.6						
TNS				epP	pP	11 46 34.7	+0.3
TNS	Taunus Mts	87.86	40	eP	P	11 45 34.3	0.0
TNS				e*PP	pP	11 46 34.7	+0.3
TNS				pmax	pmax		
	comp=Z,137nm,1.5s,mb5.6						
SPAK	Spaichingen	87.94	42	eP	P	11 45 34.5	-0.2
SWS	Schriesheim	87.97	41	eP	P	11 45 34.3	-0.6
LBG	Lerchenberg	87.98	41	eP	P	11 45 34.5	-0.4
TOD	Tromm	88.05	40	eP	P	11 45 34.9	-0.3
DGI	Dorgali Grotta	88.06	50	P	P	11 45 35.5	0.0
GUT	Gutenstein	88.15	42	eP	P	11 45 35.3	-0.5
TUE	Stuetta	88.21	44	P	P	11 45 36.5	+0.4
BUCH	Bad Urach	88.33	42	eP	P	11 45 36.5	-0.1
CODM		88.45	46	P	P	11 45 35.5	-1.8
SIND	Sindeldorf	88.55	41	eP	P	11 45 37.7	+0.1
DAVOX	Davos	88.60	43	S	S	11 55 43.7	-17
	comp=Z,2.2nm,0.9s,baz=146,slow=21,SNR=3.4						
BACM		88.61	46	P	P	11 45 36.7	-1.3
GRAM		88.61	46	P	P	11 45 37.4	-0.7
DAVA	Damuels	88.62	43⇑	iP	P	11 45 38.7	+0.7
	comp=Z,81nm,1.3s,mb5.4,SNR=10						
DAVA	Damuels	88.62	43⇑	iP	pP	11 46 38.6	+0.5
	comp=Z,106nm,1.2s						
NVL	N'lazarevskaya	88.63	161⇓	iP	P	11 45 37.7	+0.2
NVL				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.5						
MUD	Monsted U'grnd	88.73	34	i P	pP	11 46 40.2	+1.8
	comp=Z,131nm,1.4s						
UBR	Uberruh	88.80	42	eP	P	11 45 38.9	+0.1
VLC	Villacollemand	88.83	46	eP	P	11 45 38.8	-0.3
	comp=Z,34nm,1.1s,mb5.1						
VLC				epP	pP	11 46 38.8	-0.4
SARO	Sassorosso	88.84	46	P	P	11 45 37.2	-1.9
PII	Pisa	88.91	46	P	P	11 45 39.1	-0.3
HDH	Heidenheim	88.91	42	eP	P	11 45 39.3	0.0
GSCL	Gusciola	88.98	46	P	P	11 45 40.3	+0.5
SAL	Salo	88.99	45	P	P	11 45 40.2	+0.4
QSPA	South Pole Qui	89.02	180⇑	iP	P	11 45 40.5	+1.3
	comp=Z,655nm,1.3s,mb6.3						
CLZ	Clausthal	89.17	38	eP	P	11 45 41.0	+0.5
	comp=Z,133nm,1.6s,mb5.5						
CLZ				epP	pP	11 46 41.3	+0.6
CLZ	Clausthal	89.17	38	eP	P	11 45 41.0	+0.5
CLZ				e*PP	pP	11 46 41.3	+0.6
CLZ				pmax	pmax		
	comp=Z,133nm,1.6s,mb5.5						
GRFL	Gerfalco	89.21	47	P	P	11 45 40.9	0.0
ZCCA	Zocca	89.26	46	P	P	11 45 41.3	+0.2
FNVD	Fontana Vidola	89.36	46	P	P	11 45 41.2	-0.3
CSNT	Castellina Chi	89.45	47	P	P	11 45 41.9	-0.1
MOTA	Moosalm	89.46	43	i P	P	11 45 42.4	+0.4
	comp=Z,54nm,1.2s,mb5.3,SNR=17						
MOTA	Moosalm	89.46	43⇑	iP	pP	11 46 42.2	0.0
	comp=Z,39nm,0.8s						
SQTA	Sankt Quirin	89.53	43	i P	P	11 45 42.6	+0.3
	comp=Z,22nm,0.7s,mb5.1,SNR=15						
SQTA	Sankt Quirin	89.53	43⇑	iP	pP	11 46 42.0	-0.6
	comp=Z,48nm,0.8s						
FUR	Furstenfeldbru	89.60	42	eP	P	11 45 42.5	-0.1
	comp=Z,117nm,1.3s,mb5.5						
FUR	Furstenfeldbru	89.60	42	eP	P	11 45 42.5	-0.1
FUR				pmax	pmax		
	comp=Z,117nm,1.3s,mb5.5						
GRA1	Grafenberg Arr	89.62	40	eP	P	11 45 42.9	+0.3
	comp=Z,87nm,1.5s,mb5.4						
GRA1				epP	pP	11 46 43.2	+0.3
GRA1				ePP	PP	11 49 06.8	-13
GRF	Grafenberg Arr	89.62	40	eP	P	11 45 42.9	+0.3
	comp=Z,87nm,1.5s,mb5.4						
GRF				epP	pP	11 46 43.2	+0.3
GRF				ePP	PP	11 49 06.8	-13
GRF	Grafenberg Arr	89.62	40	eP	P	11 45 42.9	+0.3
GRF				e*PP	pP	11 46 43.2	+0.3
GRF				pmax	pmax		
	comp=Z,87nm,1.5s,mb5.4						
PGD	Poggio Sodo	89.78	46	P	P	11 45 42.5	-1.0
	comp=Z,39nm,1.2s,mb5.1						
WATA	Walderalm	89.78	43⇑	iP	P	11 45 44.5	+1.1
	comp=Z,18nm,0.8s,mb4.9						
WATA	Walderalm	89.78	43⇑	iP	pP	11 46 44.5	+0.8
	comp=Z,34nm,0.9s						
WTTA	Wattenberg	89.82	43	i P	P	11 45 44.0	+0.3
	comp=Z,97nm,1.7s,mb5.4,SNR=16						
WTTA	Wattenberg	89.82	43⇓	iP	pP	11 46 44.5	+0.6
	comp=Z,93nm,0.9s						
NAO	NORSAR Subarra	89.83	29	P	P	11 45 44.2	+0.8
	comp=Z,61nm,1.7s,mb5.2						
NAO	NORSAR Subarra	89.83	29	P	P	11 45 44.2	+0.8
NAO				pmax	pmax		
	comp=Z,61nm,1.7s,mb5.2						
BRES	Bressanone	89.87	43	P	P	11 45 43.9	0.0
SFI	Santa Sofia	89.87	46	P	P	11 45 43.1	-0.9
	comp=Z,168nm,2.1s,mb5.5						
MOX	Moxa	89.91	40⇑	iP	P	11 45 44.1	+0.1
MOX				pP	pP	11 46 44.0	-0.2
MOX				S	SKS	11 55 47.0	-2.0
MOX				LR	LR	12 10 43.0	
MOX	Moxa	89.91	40⇑	eP	P	11 45 44.1	+0.1
	comp=Z,160nm,1.8s,mb5.5						
MOX				epP	pP	11 46 44.0	-0.2
MOX				eS	SKS	11 55 47.0	-2.0
MOX				eLR	LR	12 10 43.0	
MOX	Moxa	89.91	40⇑	eP	P	11 45 44.1	+0.1
MOX				e*PP	pP	11 46 44.0	-0.2
MOX				eS	SKS	11 55 47.0	-2.0
MOX				pmax	pmax		
	comp=Z,160nm,1.8s,mb5.5						
TOLF	Tolfa	89.94	48	P	P	11 45 44.3	0.0
	comp=Z,81nm,1.4s,mb5.4						
NB2	NORSAR Subarra	90.03	29	P	P	11 45 44.2	-0.1
	comp=Z,61nm,1.7s,mb5.2,baz=269,slow=4.6						
NB2	NORSAR Subarra	90.03	29	P	P	11 45 44.2	-0.1
	baz=269,slow=4.8						
NOA	NORSAR Array B	90.03	29	P	P	11 45 44.6	+0.4
	comp=Z,5.9nm,0.9s,mb4.4,baz=268,slow=4.5,SNR=9.7						
NOA				pP	pP	11 46 45.1	+0.5
	comp=Z,5.1nm,0.7s,baz=268,slow=4.6,SNR=5.5						
SEST	Monte Rota	90.20	43	P	P	11 45 46.3	+0.9
MURB	Monte Urbino	90.35	47	P	P	11 45 45.0	-1.2
PIEI	Pieia	90.36	47	P	P	11 45 45.5	-0.7
NKC	Novy Kostel	90.43	40	eP	P	11 45 46.7	+0.3
NKC				epP	pP	11 46 47.0	+0.3
NKC				eSKS	SKS	11 55 56.4	+4.4
MNS	Montasola	90.45	48	P	P	11 45 46.5	-0.2
SNTG	Esanatoglia	90.65	47	P	P	11 45 46.8	-0.8
ARV	Arcevia	90.66	47	P	P	11 45 47.2	-0.4
WET	Wettzell	90.69	41	eP	P	11 45 48.0	+0.4
	comp=Z,146nm,1.6s,mb5.7						
WET				epP	pP	11 46 48.5	+0.5
WET	Wettzell	90.69	41	eP	P	11 45 48.0	+0.4
WET				e*PP	pP	11 46 48.5	+0.5
WET				pmax	pmax		
	comp=Z,146nm,1.6s,mb5.7						
NRCA	Norcia	90.77	47	P	P	11 45 48.0	-0.2
CLL	Collm	90.80	39 ⇑	P	P	11 45 48.5	+0.5
	comp=Z,logA/T=1.8,mb5.5						
CLL				i		11 45 56.3	
CLL				i *PP	pP	11 46 48.4	0.0
CLL				e*SP	sP	11 47 17.0	+3.2
CLL				e*PPP		11 50 15.0	
CLL				eSKS	SKS	11 55 57.0	+2.9
CLL				eS	S	11 56 20.0	-0.3
CLL				eSP	SP	11 57 25.0	-9.1
CLL				ePS	PS	11 58 15.0	+8.9
CLL				ePPS	PPS	11 58 42.0	-1.6
CLL				eSS	SS	12 02 42.0	+9.3
CLL				ePKKP	PKKP	12 03 12.0	+33
CLL				e*SSS		12 04 06.0	
CLL	Collm	90.80	39⇑	iP	P	11 45 48.5	+0.5
	comp=Z,105nm,1.6s,mb5.5						
CLL				i		11 45 56.3	
CLL				i pP	pP	11 46 48.4	0.0
CLL				eSKS	SKS	11 55 57.0	+2.9
CLL				eS	S	11 56 20.0	-0.3
CLL	Collm	90.80	39⇑	iP	P	11 45 48.5	+0.5
CLL				i *PP	pP	11 46 48.4	0.0
CLL				e		11 55 57.0	
CLL				eS	S	11 56 20.0	-0.3
CLL				pmax	pmax		
	comp=Z,105nm,1.6s,mb5.5						
KBS	Kingsbay	90.81	11	e	pP	11 46 50.3	+2.4
KBS				e		11 55 57.2	
KBS	Kingsbay	90.81	11⇑	eP	P	11 45 48.3	+0.7
KBS				epP	pP	11 46 49.6	+1.7
PTQR	Pietraquaria	90.98	48	P	P	11 45 49.4	+0.3
KBA	Koelnbreinsper	90.98	43	i P	P	11 45 49.1	+0.1
	comp=Z,53nm,1.7s,mb5.2,SNR=16						
KBA	Koelnbreinsper	90.98	43⇓	iP	pP	11 46 49.8	+0.5
	comp=Z,47nm,1.0s						
AQU	L'Aquila	90.98	48	eP	P	11 45 49.9	+0.8
	comp=Z,45nm,0.6s,mb5.6						
PTCC	Patocco-Chiusa	90.98	44	P	P	11 45 49.1	+0.1
VVLD	Villa Vallelon	91.14	48	P	P	11 45 49.9	0.0
KHC	Kasperske Hory	91.15	41	eP	P	11 45 49.9	+0.2
KHC				x	x	11 45 57.5	
KHC				epP	pP	11 46 50.4	+0.3
KHC				sP	sP	11 47 15.0	-0.5
KHC				eSKS	SKS	11 55 58.7	+2.5
KHC	Kasperske Hory	91.15	41	eP	P	11 45 49.9	+0.2
KHC				e		11 45 57.5	
KHC				epP	pP	11 46 50.4	+0.3
KHC				e		11 47 15.0	
KHC				eSKS	SKS	11 55 58.7	+2.5
KHC	Kasperske Hory	91.15	41	eP	P	11 45 49.9	+0.2
KHC				e*PP	pP	11 46 50.4	+0.3
KHC				e		11 47 15.0	
KHC				e		11 55 58.7	
GEC2	GERESS Array S	91.23	41	eP	P	11 45 50.4	+0.3
	comp=Z,36nm,1.6s,mb5.0						
GEC2				epP	pP	11 46 50.4	-0.1
GEC2				ePP	PP	11 49 19.1	-13
GEC2	GERESS Array S	91.23	41	eP	P	11 45 50.4	+0.3
GEC2				e*PP	pP	11 46 50.4	-0.1
GEC2				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.0						
GERES	GERESS Array B	91.23	41	P	P	11 45 50.1	0.0
	comp=Z,3.8nm,0.8s,mb4.4,baz=252,slow=4.2,SNR=14						
GERES				pP	pP	11 46 51.1	+0.6
	comp=Z,3.5nm,0.7s,baz=252,slow=4.2,SNR=4.4						
GERES				PP	PP	11 49 32.3	-0.1
	comp=Z,0.8nm,0.5s,baz=243,slow=3.0,SNR=3.5						
CADS	Cadrg	91.25	44	eP	P	11 45 49.7	-0.6
CADS				epP	pP	11 46 50.0	-0.6
CADS				ePP	PP	11 49 30.1	-2.5
CADS				epPP		11 50 23.8	
CADS				eS	S	11 55 59.7	-25
CADS				e		11 56 32.0	
CADS				e		11 57 53.3	
RUE	Ruedersdorf	91.29	38	eP	P	11 45 51.0	+0.8
VOJS	Vojsko	91.35	44	eP	P	11 45 51.1	+0.4
VOJS				e		11 45 58.3	
VOJS				epP	pP	11 46 50.7	-0.4
VOJS				e		11 47 07.2	
INTR	Introdacqua	91.35	48	P	P	11 45 50.7	-0.2
RFI	Roccamonfina	91.41	49	P	P	11 45 52.5	+1.3
	comp=Z,47nm,2.0s,mb5.1						
RNI2	Rionero Sannit	91.54	48	P	P	11 45 52.5	+0.8
MOA	Molln	91.61	42⇑	iP	P	11 45 52.0	+0.1
	comp=Z,57nm,1.4s,mb5.3,SNR=8.1						
MOA	Molln	91.61	42⇓	iP	pP	11 46 52.7	+0.4
	comp=Z,89nm,1.6s						
MIDA	Miranda	91.61	49	P	P	11 45 52.5	+0.4
	comp=Z,189nm,2.0s,mb5.7						
CII	Carovilli	91.65	48	eP	P	11 45 52.7	+0.4
	comp=Z,41nm,0.3s,mb5.8						
SGG	Gregorio Mates	91.71	49	P	P	11 45 53.2	+0.7
	comp=Z,133nm,2.4s,mb5.4						
PRU	Pruhonice	91.78	40	eP	P	11 45 52.9	+0.3
PRU				epP	pP	11 46 53.5	+0.5
PRU				eSKS	SKS	11 56 02.9	+3.1
PVCC	Panska Ves	91.79	40	eP	P	11 45 53.1	+0.4
PVCC				epP	pP	11 46 52.5	-0.6
LJU	Ljubljana	91.80	44	eP	P	11 45 53.0	+0.2
LJU				i pP	pP	11 46 53.4	+0.2
LJU				ePP	PP	11 49 35.1	-1.9
LJU				epPP		11 50 28.3	
LJU				eS	SKS	11 56 02.4	+2.4
LJU				e		11 57 54.9	
LJU	Ljubljana	91.80	44	eP	P	11 45 53.0	+0.2
LJU				i *PP	pP	11 46 53.4	+0.2
LJU				e		11 49 35.1	
LJU				eS	SKS	11 56 02.4	+2.4
OBKA	Obir	91.81	44⇑	iP	P	11 45 53.0	+0.2
	comp=Z,28nm,1.3s,mb5.0,SNR=7.1						
OBKA	Obir	91.81	44⇓	iP	pP	11 46 53.7	+0.4
	comp=Z,34nm,1.0s						
PDKS	Podkum	92.12	44	eP	P	11 45 54.5	+0.1
TREC	Trest	92.40	41	eP	P	11 45 55.8	+0.2
TREC				epP	pP	11 46 56.3	+0.3
SGO	Sicignano	92.42	50	P	P	11 45 55.7	-0.2
ARSA	Arzberg	92.47	43⇑	iP	P	11 45 55.8	-0.1
	comp=Z,29nm,1.2s,mb5.1						
ARSA	Arzberg	92.47	43	i P	pP	11 46 56.6	+0.3
	comp=Z,51nm,1.3s,SNR=8.7						
GROS	Grobnik	92.47	44	eP	P	11 45 55.4	-0.5
GROS				epP	pP	11 46 56.0	-0.4
MRLC	Muro Lucano	92.55	49	P	P	11 45 56.4	-0.1
MGR	Morigerati	92.61	50	P	P	11 45 57.0	+0.2
SLCN	Sala Consilina	92.67	50	P	P	11 45 57.6	+0.6
UPC	Upice	92.71	40	eP	P	11 45 57.0	0.0
UPC				epP	pP	11 46 58.3	+0.9
KSP	Ksiaz	92.88	39	eP	P	11 45 58.8	+1.0
KSP				epP	pP	11 46 59.2	+1.0
KSP	Ksiaz	92.88	39⇑	eP	P	11 45 58.4	+0.7
KSP				e		11 46 02.8	
KSP				epP	pP	11 46 58.8	+0.7
KSP				eSKS	SKS	11 56 09.0	+3.1
KSP				eSP	SP	11 57 48.0	-10
KSP	Ksiaz	92.88	39⇑	eP	P	11 45 58.4	+0.7
KSP				e*PP	pP	11 46 58.8	+0.7
KSP				e		11 56 09.0	
DPC	Dobruska-Polom	92.91	40	eP	P	11 45 58.5	+0.6
DPC				epP	pP	11 46 58.7	+0.4
DPC				eSKS	SKS	11 56 09.5	+3.3
VRAC	Vranov	93.12	41	PP	PP	11 49 45.7	-1.8
	comp=Z,2.2nm,0.4s,baz=218,slow=13,SNR=4.2						
TDS	Terranova Siba	93.22	51	P	P	11 45 59.6	0.0
GRI	Girifalco	93.31	51	P	P	11 45 56.9	-3.1
ZST	Bratislava	93.50	42	eP	P	11 46 01.2	+0.6
ZST				epP	pP	11 47 01.3	+0.2
TIP	Timpagrande	93.56	51	eP	P	11 45 58.9	-2.3
MORC	Moravsky Berou	93.72	40	eP	P	11 46 02.4	+0.8
	comp=Z,78nm,1.6s,mb5.5						
MORC				epP	pP	11 47 02.5	+0.5
MORC	Moravsky Berou	93.72	40	eP	P	11 46 02.4	+0.8
MORC				e*PP	pP	11 47 02.5	+0.5
MORC				pmax	pmax		

	comp=Z,78nm,1.6s,mb5.5						
TSUM	**Tsumeb**	**93.98**	**109**	eP	**P**	**11 46 04.3**	**+0.9**
	comp=Z,96nm,1.3s,mb5.7						
OKC	**Ostrava-Krasne**	**94.11**	**40**	eP	**P**	**11 46 04.7**	**+1.4**
OKC				epP	pP	11 47 04.3	+0.6
SBA	**Scott Base**	**94.36**	**191**	eP	**P**	**11 46 04.5**	**+0.6**
	comp=Z,65nm,1.2s,mb5.5						
SBA				epP	pP	11 47 01.3	-3.0
SBA	**Scott Base**	**94.36**	**191**	eP	**P**	**11 46 04.5**	**+0.6**
SBA				e*PP	pP	11 47 01.3	-3.0
SBA				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.5						
VYHS	**Vyhne**	**94.64**	**42**	eP	**P**	**11 46 06.2**	**+0.4**
VYHS				e		11 46 11.2	
VYHS				epP	pP	11 47 06.7	+0.5
VYHS				eS	SKS	11 56 19.8	+4.2
VYHS				eSP	SP	11 58 11.2	-5.7
VYHS	**Vyhne**	**94.64**	**42**	eP	**P**	**11 46 06.2**	**+0.4**
VYHS				e*PP	pP	11 47 06.7	+0.5
VYHS				eS	SKS	11 56 19.8	+4.2
VYHS				eSP	SP	11 58 11.2	-5.7
PKSM	**Moragy**	**94.65**	**44**	⇑eP	**P**	**11 46 06.2**	**+0.3**
PKSM				i	pP	11 47 06.4	+0.1
OJC	**Ojcow**	**95.15**	**40**	eP	**P**	**11 46 09.0**	**+0.9**
OJC				e	pP	11 47 09.3	+0.8
ARCES	**ARCESS Array B**	**95.33**	**20**	P	**P**	**11 46 07.7**	**-0.8**
	comp=Z,3.0nm,0.6s,mb4.6,baz=278,slow=2.9,SNR=15						
ARCES				pP	pP	11 47 08.8	-0.1
	comp=Z,4.3nm,0.6s,baz=288,slow=3.1,SNR=5.1						
ARCES				S	SKS	11 56 20.7	+1.8
	comp=Z,1.4nm,0.8s,baz=31,slow=5.3,SNR=2.4						
ARCES				PKKP	PKKP	12 02 59.1	+28
	comp=Z,1.2nm,0.6s,baz=124,slow=4.4,SNR=6.1						
ARCES	**ARCESS Array B**	**95.33**	**20**	P	**P**	**11 46 07.7**	**-0.8**
ARCES				pP	pP	11 47 08.8	-0.1
ARCES				S	SKS	11 56 20.7	+1.8
ARCES				PKKP	PKKP	12 02 59.1	+28
PSZ	**Piszkesteto**	**95.39**	**42**	⇓eP	**P**	**11 46 10.6**	**+1.4**
PSZ				i	pP	11 47 10.6	+1.0
VNDA	**Vanda**	**95.45**	**191**	eP	**P**	**11 46 09.2**	**+0.3**
	comp=Z,39nm,1.3s,mb5.4						
VNDA				epP	pP	11 47 05.2	-4.0
VNDA	**Vanda**	**95.45**	**191**	eP	**P**	**11 46 09.2**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,39nm,1.3s						
NIE	**Niedzica**	**95.54**	**41**	eP	**P**	**11 46 12.3**	**+2.4**
KECS	**Kecovo**	**95.74**	**42**	eP	**P**	**11 46 11.2**	**+0.4**
KECS				e		11 46 16.5	
KECS				epP	pP	11 47 12.1	+0.9
KECS	**Kecovo**	**95.74**	**42**	eP	**P**	**11 46 11.2**	**+0.4**
KECS				e*PP	pP	11 47 12.1	+0.9
DIVS	**Divcibare**	**95.74**	**46**	⇓iP	**P**	**11 46 11.4**	**+0.5**
STHS	**Stebnicka Huta**	**96.15**	**41**	eP	**P**	**11 46 14.4**	**+1.8**
STHS				epP	pP	11 47 14.5	+1.5
STHS				eS	SKS	11 56 27.9	+4.2
CRVS	**Cervenica-Dubn**	**96.34**	**41**	eP	**P**	**11 46 14.6**	**+1.1**
CRVS				e		11 46 20.0	
CRVS				epP	pP	11 47 15.0	+1.1
CRVS	**Cervenica-Dubn**	**96.34**	**41**	eP	**P**	**11 46 14.6**	**+1.1**
CRVS				e*PP	pP	11 47 15.0	+1.1
OHR	**Ohrid**	**96.55**	**49**	⇓iP	**P**	**11 46 16.6**	**+1.9**
OHR				i		11 46 34.4	
OHR				i	pP	11 47 15.6	+0.5
OHR				i		11 47 31.5	
OHR				i		11 47 32.6	
OHR				i		11 50 09.6	
SUW	**Suwalki**	**96.82**	**36**	ePcP	PcP	11 46 15.9	+0.1
SUW				epP	pP	11 47 18.4	+2.5
SUW	**Suwalki**	**96.82**	**36**	eP	**P**	**11 46 15.9**	**+0.3**
SUW				epP	pP	11 47 18.4	+2.4
SKO	**Skopje**	**96.97**	**48**	i P	**P**	**11 46 16.2**	**-0.4**
KWP	**Kalwaria**	**97.08**	**40**	eP	**P**	**11 46 18.3**	**+1.4**
	comp=Z,2.9nm,0.6s,mb4.7						
KWP				epP	pP	11 47 18.9	+1.6
KWP	**Kalwaria**	**97.08**	**40**	eP	**P**	**11 46 18.3**	**+1.4**
KWP				e*PP	pP	11 47 18.9	+1.6
KWP				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7						
FINES	**FINESS Array B**	**97.15**	**28**	P	**P**	**11 46 16.4**	**-0.4**
	comp=Z,3.8nm,0.7s,mb4.7,baz=263,slow=3.2,SNR=11						
FINES				pP	pP	11 47 16.6	-0.7
	comp=Z,3.7nm,0.7s,baz=315,slow=5.4,SNR=4.0						
VAY	**Valandovo**	**97.87**	**49**	i P	**P**	**11 46 20.2**	**-0.4**
VAY				i		11 46 43.8	
VAY				i	pP	11 47 19.9	-1.1
VAY				i		11 50 20.4	
VAY	**Valandovo**	**97.87**	**49**	i P	**P**	**11 46 20.2**	**-0.4**
VAY				i	pP	11 47 19.9	-1.1
VAY				i		11 50 20.4	
MNK	**Minsk**	**99.43**	**35**	eP	**P**	**11 46 24.0**	**-3.4**
MLR	**Muntele Rosu**	**99.80**	**44**	P	**P**	**11 46 29.8**	**+0.5**
	comp=Z,3.7nm,0.8s,mb4.8,baz=330,slow=1.9,SNR=7.9						
MLR				pP	pP	11 47 29.5	-0.3
	comp=Z,3.8nm,0.8s,baz=276,slow=3.8,SNR=3.6						
MLR				PP	PP	11 50 37.2	-1.5
	comp=Z,21nm,1.2s,baz=271,slow=2.0,SNR=7.0						
MLR				S		11 56 43.0	
	comp=Z,1.5nm,0.7s,baz=74,slow=23,SNR=7.9						
BOSA	**Boshof**	**100.24**	**119**	P	P	11 46 32.6	+0.9
	comp=Z,8.9nm,0.8s,baz=282,slow=4.6,SNR=16						
BOSA				PP	PP	11 50 36.1	-6.6
	comp=Z,9.9nm,1.0s,baz=244,slow=3.9,SNR=4.2						
BOSA				PKKPbc		12 02 46.8	
	comp=Z,3.3nm,0.5s,baz=335,slow=2.6,SNR=10						
IDI	**Anoyia**	**100.29**	**54**	P	P	11 46 32.7	+0.9
	comp=Z,4.5nm,0.3s,baz=273,slow=6.8,SNR=4.4						
IDI				PP	PP	11 50 38.8	-4.1
	comp=Z,6.6nm,0.8s,baz=338,slow=5.6,SNR=4.2						
IDI				S		11 56 48.5	
	comp=Z,2.9nm,0.6s,baz=261,slow=23,SNR=7.2						
BILL	**Bilibino**	**100.72**	**340**	eP	P	11 46 31.9	-1.1
	comp=Z,12nm,0.8s						
BILL	**Bilibino**	**100.72**	**340**	⇓eP	P	11 46 31.4	-1.5
BILL				pmax	pmax		
	comp=Z,19nm,1.1s						
AKASG	**Malin Array Be**	**101.03**	**38**	P	P	11 46 34.5	-0.3
	comp=Z,0.4nm,0.5s,baz=264,slow=5.1,SNR=8.2						
AKASG				pP		11 47 34.5	
	comp=Z,0.1nm,0.3s,baz=267,slow=5.9,SNR=1.7						
AKASG				PP	PP	11 50 43.2	-5.1
	comp=Z,0.3nm,0.3s,baz=270,slow=7.7,SNR=6.9						
AKASG				PKKPbc		12 02 44.1	
	comp=Z,0.3nm,0.3s,baz=83,slow=2.7,SNR=5.8						
AKASG				PKKPab		12 03 08.6	
	comp=Z,0.8nm,0.6s,baz=87,slow=4.2,SNR=8.2						
AKASG	**Malin Array Be**	**101.03**	**38**	P	P	11 46 34.5	-0.3
AKASG				pP		11 47 34.5	
AKASG				PP	PP	11 50 43.2	-5.1
AKASG				PKKPbc		12 02 44.1	
AKASG				PKKPab		12 03 08.6	
AKASG	**Malin Array Be**	**101.03**	**38**	P	P	11 46 34.5	-0.3
AKASG						11 50 43.3	
MATP	**Matopo**	**104.13**	**111**	PKKPab		12 02 56.9	
	comp=Z,5.5nm,1.0s,baz=68,slow=3.5,SNR=5.3						
LSZ	**Lusaka**	**104.35**	**106**	PKKPbc		12 02 34.8	
	comp=Z,3.5nm,0.8s,baz=99,slow=3.1,SNR=8.9						
LSZ				PKKPab		12 02 56.1	
	comp=Z,0.7nm,0.3s,baz=80,slow=5.8,SNR=4.8						
MAW	**Mawson**	**106.03**	**165**	PP	PP	11 51 19.8	-4.9
	comp=Z,8.3nm,1.1s,baz=227,slow=6.7,SNR=4.6						
MAW				PKKPbc		12 02 29.5	
	comp=Z,5.6nm,0.7s,baz=41,slow=3.1,SNR=23						
BRTR	**Keskin Array B**	**106.44**	**49**	PKiKP		11 51 09.2	
	comp=Z,3.1nm,0.8s,baz=79,slow=0.7,SNR=6.9						
BRTR				PP	PP	11 51 23.8	-4.9
	comp=Z,4.1nm,1.0s,baz=270,slow=4.9,SNR=5.6						
BRTR				PKKPbc		12 02 28.8	
	comp=Z,2.8nm,1.0s,baz=135,slow=1.7,SNR=6.8						
BRTR				PKKPab		12 02 45.5	
	comp=Z,4.0nm,1.0s,baz=146,slow=4.5,SNR=9.9						
TIXI	**Tiksi**	**107.59**	**352**	⇑iP	Pdif	11 47 02.9	-0.2
TIXI				eS	SKS	11 57 13.4	-4.0
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	**Kislovodsk**	**111.71**	**42**	ePKP	PKPdf	11 51 18.4	+1.4
KIV	**Kislovodsk**	**111.71**	**42**	i PKIKP	PKPdf	11 51 18.5	+1.5
KIV				e		11 52 04.3	
KIV				e		11 57 39.3	
KIV				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KIV				MLR	MLR		
	comp=Z,232nm,17.0s						
ARU	**Arti**	**114.30**	**25**	ePKIKP	PKPdf	11 51 23.2	+1.5
GNI	**Garni**	**114.50**	**46**	PKiKP		11 51 24.3	
	comp=Z,7.7nm,0.5s,baz=14,slow=10,SNR=5.0						
GNI	**Garni**	**114.50**	**46**	PKPdf	PKPdf	11 51 24.3	+1.7
MSL	**Mosul**	**114.55**	**50**	ex	x	11 52 26.5	
HILS	**Ha’il**	**115.86**	**60**	P	PKPdf	11 51 28.2	+2.6
YAK	**Yakutsk**	**115.92**	**346**	⇑ePKP	PKPdf	11 51 25.1	+0.3
LTHS	**Al Lith**	**115.98**	**68**	P	PKPdf	11 51 28.6	+2.6
BLJS	**Baljurashi**	**117.15**	**68**	P	PKPdf	11 51 31.7	+3.5
AFFS	**‘Afif**	**117.68**	**64**	P	PKPdf	11 51 31.2	+2.1
AKTO	**Aktyubinsk**	**117.78**	**31**	PKP	PKPdf	11 51 30.2	+1.6
	comp=Z,13nm,0.6s,baz=102,slow=1.0,SNR=43						
AKTO				SKSac		11 58 02.5	
	comp=Z,0.4nm,0.3s,baz=115,slow=22,SNR=11						
AKTO				PKKPbc		12 01 51.2	
	comp=Z,4.8nm,0.8s,baz=120,slow=4.9,SNR=10						
TATS	**Tathlith**	**118.95**	**68**	P	PKPdf	11 51 34.7	+3.0
DJNS	**Zahran al Janu**	**119.31**	**70**	P	PKPdf	11 51 34.9	+2.5
ATD	**Arta Tunnel**	**119.41**	**77**	PKP	PKPdf	11 51 36.3	+3.6
	comp=Z,16nm,0.7s,baz=279,slow=16,SNR=7.2						
AB31	**Akbulak array**	**119.48**	**31**	i PKIKP	PKPdf	11 51 33.3	+1.3
AB31				pmax	pmax		
	comp=Z,18nm,0.6s						
MZLS	**Mizel**	**119.63**	**63**	P	PKPdf	11 51 34.6	+1.7
KAMS	**Al Khamasin**	**119.83**	**67**	P	PKPdf	11 51 35.1	+1.7
MIB	**Mutribah**	**119.93**	**56**	eP	PKPdf	11 51 34.9	+1.6
MIB				AMb	AMB	11 51 36.1	
	comp=Z,100nm,0.6s						
NAY	**Al-Naaiem**	**120.02**	**57**	eP	PKPdf	11 51 34.9	+1.4
NAY				AMb	AMB	11 51 36.0	
	comp=Z,44nm,0.7s						
UMR	**Umm Al-Rimmam**	**120.32**	**56**	eP	PKPdf	11 51 36.2	+2.1
UMR				AMb	AMB	11 51 36.9	
	comp=Z,133nm,0.6s						
RDF	**Al-Radifah**	**120.37**	**57**	eP	PKPdf	11 51 35.7	+1.5
RDF				AMb	AMB	11 51 36.7	
	comp=Z,74nm,0.7s						
QRN	**Al-Qurain**	**120.73**	**57**	eP	PKPdf	11 51 36.2	+1.2
CHKZ	**Chkalovo**	**121.11**	**22**	eP	PKPdf	11 51 35.7	+0.6
BRVK	**Borovoye**	**121.47**	**22**	⇑ePKP	PKPdf	11 51 36.8	+1.0
BVA0	**Borovoye Array**	**121.54**	**22**	i PKIKP	PKPdf	11 51 37.0	+1.1
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	**Borovoye Array**	**121.54**	**22**	PKP	PKPdf	11 51 37.0	+1.1
	comp=Z,19nm,0.6s,baz=262,slow=1.8,SNR=107						
BVAR				PKKPbc		12 01 36.6	
	comp=Z,2.3nm,0.8s,baz=180,slow=1.5,SNR=8.3						
BVAR				SKKPbc		12 04 54.6	
	comp=Z,1.4nm,0.9s,baz=108,slow=4.7,SNR=4.1						
VOSK	**Vostochnaya**	**122.00**	**22**	PKIKP	PKPdf	11 51 37.3	+0.5
VOSK				pmax	pmax		
	comp=Z,11nm,0.7s						
YSS	**Yuzh-Sakhalins**	**122.67**	**329**	⇑ePKP	PKPdf	11 51 38.8	+0.6
BOD	**Bodaibo**	**122.72**	**353**	ePKIKP	PKPdf	11 51 38.4	+0.4
BOD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HASS	**Wahat al Ahsa’**	**123.28**	**60**	P	PKPdf	11 51 41.5	+1.5
CNB	**Canberra Magne**	**123.64**	**225**	eP	PKPdf	11 51 41.7	+1.3
	comp=Z,28nm,1.0s						
NVS	**Novosibirsk**	**123.98**	**14**	i PKIKP	PKPdf	11 51 39.6	-1.0
NVS				i		11 58 18.7	
NVS				pmax	pmax		
	comp=Z,41nm,1.0s						
NVS				pmax	pmax		
	comp=E,10.0nm,0.8s						
TOO	**Toolangi**	**125.10**	**221**	eP	PKPdf	11 51 44.1	+0.9
	comp=E,6.4nm,0.5s						
ZAL	**Zalesovo**	**125.18**	**13**	PKP	PKPdf	11 51 43.4	+0.5
	comp=E,64nm,0.6s,baz=140,slow=1.9,SNR=219						
ZAL				pPKP		11 52 46.5	
	comp=E,4.1nm,0.7s,baz=249,slow=3.9,SNR=2.3						
ZAL				SKP		11 54 56.1	
	comp=E,6.8nm,1.1s,baz=220,slow=2.9,SNR=4.4						
ZAL				PKKPbc		12 01 21.9	
	comp=E,1.8nm,0.5s,baz=43,slow=1.9,SNR=8.1						
ZAL	**Zalesovo**	**125.18**	**13**	PKP	PKPdf	11 51 43.4	+0.5
ZAL				pPKP		11 52 46.5	
ZAL				SKP		11 54 56.1	
ZAL				PKKPbc		12 01 21.9	
KLR	**Kul’dur**	**126.04**	**337**	ePKIKP	PKPdf	11 51 45.8	+1.1
KLR				e		11 53 42.0	
KLR				pmax	pmax		
	comp=Z,32nm,0.6s						
KURK	**Kurchatov**	**126.36**	**19**	eP	PKPdf	11 51 46.4	+1.2
KURK	**Kurchatov**	**126.36**	**19**	⇑iPKIKP	PKPdf	11 51 46.3	+1.1
ABTO	**Aybut**	**128.51**	**69**	⇓P	PKPdf	11 51 52.5	+2.2
	SNR=22						
BANOM	**Banah**	**128.69**	**57**	⇑P	PKPdf	11 51 51.2	+0.8
WHFO	**Wadi Hawf**	**128.83**	**68**	⇑P	PKPdf	11 51 52.4	+1.5
	SNR=32						
ASHO	**Ashiyiah**	**128.93**	**59**	⇓P	PKPdf	11 51 52.4	+1.4
	SNR=10						
IRK	**Irkutsk**	**128.97**	**359**	ePKIKP	PKPdf	11 51 51.2	+1.0
IRK				e		11 52 53.5	
IRK				pmax	pmax		
	comp=Z,141nm,0.6s						
KKAR	**Karatay Array**	**129.04**	**30**	i PKIKP	PKPdf	11 51 51.4	+0.7
KKAR				pmax	pmax		
	comp=Z,20nm,1.0s						
RBK	**Rabkut**	**129.32**	**68**	⇑P	PKPdf	11 51 53.3	+1.5
	SNR=7.8						
MOY	**Mondy**	**129.53**	**2**	ePKIKP	PKPdf	11 51 54.1	+2.8
MOY				pmax	pmax		
	comp=Z,77nm,1.6s						
ARQ	**Araqi**	**129.78**	**60**	⇑P	PKPdf	11 51 53.7	+1.1
	SNR=9.8						
HIA	**Hailar**	**129.86**	**346**	eP	PKPdf	11 51 53.0	+1.0
HIA				ePP	PP	11 54 04.5	-5.9
HIA				eSKPdf		11 54 52.3	
HOQ	**Hoqain**	**130.38**	**60**	⇑P	PKPdf	11 51 54.3	+0.6
	SNR=6.9						
SHAO	**Shalim**	**130.51**	**67**	⇑P	PKPdf	11 51 53.7	-0.4
BSY	**Bisya**	**130.56**	**61**	⇑P	PKPdf	11 51 55.4	+1.3
	SNR=30						
MDJ	**Mudanjiang**	**130.64**	**335**	ePKP	PKPdf	11 51 54.3	+0.7
MDJ				XPKP		11 53 26.3	
MDJ				PP	PP	11 54 12.3	-3.5
MDJ				PS	PS	12 04 27.3	+0.8
MDJ				SS	SS	12 11 20.3	-1.1
MDJ				PP	PP		
	comp=Z,470nm,7.0s						
MDJ				LR	LR		
	comp=N,210nm,30.2s						
MDJ				LR	LR		
	comp=E,630nm,30.2s						
MDJ				LR	LR		
	comp=Z,230nm,27.0s						
MDJ	**Mudanjiang**	**130.64**	**335**	ePKPdf	PKPdf	11 51 54.3	+0.7
MDJ				eSKP		11 54 54.9	
VLA	**Vladivostok**	**130.80**	**332**	i PKIKP	PKPdf	11 51 54.3	+0.3
ZAK	**Zakamensk**	**130.84**	**360**	ePKHKP		11 51 41.1	
ZAK				e		11 51 55.8	
ZAK				e		11 52 55.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
USP	**Ospenovka**	**130.85**	**27**	P	PKPdf	11 51 56.1	+2.0
	SNR=61						
STKA	**Stephens Creek**	**130.96**	**225**	ePKP	PKPdf	11 51 55.3	+0.7
	comp=Z,35nm,1.0s						
STKA				epPKP		11 52 57.1	
STKA				ePP	PP	11 54 12.3	-6.1
STKA				eSKP		11 54 55.1	
STKA				ePKS	PKS	11 55 20.4	-8.9
STKA	**Stephens Creek**	**130.96**	**225**	PKP	PKPdf	11 51 55.5	+0.9
	comp=Z,44nm,1.0s,baz=91,slow=1.8,SNR=32						
STKA				pPKP		11 52 57.3	
	comp=Z,9.2nm,0.7s,baz=127,slow=2.8,SNR=3.6						
STKA				PP	PP	11 54 12.4	-6.0
	comp=Z,38nm,1.3s,baz=119,slow=6.0,SNR=8.7						
STKA				SKPbc		11 54 55.6	
	comp=Z,38nm,1.1s,baz=126,slow=5.2,SNR=13						
MKAR	**Makanchi Array**	**130.97**	**19**	PKP	PKPdf	11 51 54.7	+0.5
	comp=Z,21nm,0.5s,baz=349,slow=2.3,SNR=36						
MKAR				pPKP		11 52 56.7	
	comp=Z,5.7nm,0.8s,baz=27,slow=2.7,SNR=2.3						
MKAR				SKPbc		11 54 56.8	
	comp=Z,32nm,0.9s,baz=342,slow=3.8,SNR=29						
MKAR				SKKPbc		12 04 25.3	
	comp=Z,1.5nm,0.9s,baz=146,slow=5.2,SNR=2.8						
MKAR	**Makanchi Array**	**130.97**	**19**	PKP	PKPdf	11 51 54.7	+0.5
MKAR				pPKP		11 52 56.7	
MKAR				SKPbc		11 54 56.8	
MKAR				SKKPbc		12 04 25.3	
EKS2	**Erkin-Say**	**130.98**	**29**	P	PKPdf	11 51 56.8	+2.4
	SNR=55						
BIDO	**Bidbid**	**131.10**	**59**	⇓P	PKPdf	11 51 55.4	+0.3
	SNR=8.1						
CHMS	**Chumysh**	**131.17**	**27**	P	PKPdf	11 51 57.9	+3.1
	SNR=16						
SMDO	**Samad**	**131.19**	**60**	⇓P	PKPdf	11 51 56.0	+0.7
	SNR=22						
FRU	**Bishkek**	**131.24**	**28**	⇑ePKIKP	PKPdf	11 51 56.9	+2.0
FRU				e		11 53 00.0	
FRU				pmax	pmax		
	comp=Z,160nm,1.7s						
AAK	**Ala-Archa**	**131.34**	**28**	P	PKPdf	11 51 57.4	+2.3
	SNR=43						
AAK	**Ala-Archa**	**131.34**	**28**	eP	PKPdf	11 51 56.1	+1.1
AAK				eSKP		11 54 59.0	
AML	**Almayashu**	**131.34**	**29**	P	PKPdf	11 51 57.8	+2.7
	SNR=22						
JMDO	**Jabal Madar**	**131.47**	**61**	⇑P	PKPdf	11 51 55.3	-0.5
	SNR=11						
KBK	**Karagaybulak**	**131.53**	**28**	P	PKPdf	11 51 57.7	+2.3
	SNR=20						
TKM2	**Tokmak 2**	**131.62**	**27**	P	PKPdf	11 51 58.5	+2.9
	SNR=5.3						
UCH	**Uchtor**	**131.66**	**28**	P	PKPdf	11 51 58.4	+2.8
	SNR=54						
MJAR	**Matsushiro Arr**	**131.97**	**321**	PKhKP		11 51 50.9	
	comp=Z,9.4nm,1.0s,baz=56,slow=4.5,SNR=4.2						
MJAR				PKP	PKPdf	11 51 57.2	+0.8
	comp=Z,14nm,0.6s,baz=98,slow=1.0,SNR=26						
MJAR				SKPbc		11 54 59.9	
	comp=Z,13nm,0.6s,baz=63,slow=3.8,SNR=23						
MAJO	**Matsushiro**	**131.97**	**321**	ePKPdf	PKPdf	11 51 57.0	+0.5
MAJO				eSKP		11 55 00.1	
MAT	**Matsushiro**	**131.97**	**321**	PKP	PKPdf	11 51 56.0	-0.4
WBK	**Wadi Bani Khal**	**132.14**	**60**	⇓P	PKPdf	11 51 58.3	+1.2
	SNR=10						
ULHL	**Ulahol**	**132.45**	**27**	P	PKPdf	11 51 59.7	+2.6
	SNR=54						
CTA	**Charters Tower**	**132.72**	**241**	ePKP	PKPdf	11 51 58.7	+0.5
	comp=Z,18nm,0.9s						
CTA				epPKP		11 53 02.4	
CTA				ePP	PP	11 54 26.3	-2.9
CTA				eSKP		11 55 02.8	
CTAO	**Charters Tower**	**132.72**	**241**	ePKPdf	PKPdf	11 51 58.2	0.0
CTAO				epPKPdf		11 53 00.2	
CN2	**Changchun**	**132.97**	**338**	ePKP	PKPdf	11 51 56.5	-1.6
CN2				PP	PP	11 54 28.3	-1.8
CN2				PP	PP		
	comp=Z,300nm,8.0s						
SONM	**Songino Array**	**133.30**	**357**	PKhKP		11 51 50.9	
	comp=Z,3.0nm,0.7s,baz=339,slow=4.2,SNR=11						
SONM				PKP	PKPdf	11 52 00.1	+1.5
	comp=Z,13nm,0.6s,baz=336,slow=1.5,SNR=37						
SONM				PP	PP	11 54 27.6	-4.7
	comp=Z,3.2nm,0.9s,baz=347,slow=3.2,SNR=4.9						
SONM				SKPbc		11 55 05.1	
	comp=Z,24nm,1.1s,baz=342,slow=3.0,SNR=12						
SONM				SKKPbc		12 04 26.3	
	comp=Z,1.5nm,0.9s,baz=183,slow=4.3,SNR=4.2						
SONM	**Songino Array**	**133.30**	**357**	PKHKP		11 51 50.9	
SONM						11 52 00.1	
SONM						11 54 27.6	
SONM				S		12 04 26.3	
KSH	**Kashi**	**134.45**	**30**	i PKP	PKPdf	11 52 03.9	+3.0
KSH				XPKP		11 53 25.0	
KSH				PKS	PKS	11 55 39.1	+3.6
KSH				LR	LR		
	comp=N,470nm,5.4s						
KSH				LR	LR		
	comp=E,610nm,4.8s						
WMQ	**Urumqi**	**135.27**	**16**	⇓PKP	PKPdf	11 52 03.8	+1.5
WMQ				PP	PP	11 54 46.8	+2.1
WMQ				PKS	PKS	11 55 38.8	+1.9
WMQ				PPP	PPP	11 57 47.3	+3.1
WMQ				SKS	SKS	11 58 44.8	-1.9
WMQ				SKKS		12 01 07.3	
WMQ				PP	PP		
	comp=Z,180nm,5.6s						
WMQ				LR	LR		
	comp=N,350nm,29.8s						
WMQ				LR	LR		
	comp=E,420nm,27.6s						
WMQ				LR	LR		
	comp=Z,290nm,26.4s						
KS15	**Wonju Array Si**	**137.13**	**331**	ePKPdf	PKPdf	11 52 06.0	+0.1
KS15				eSKP		11 55 17.2	
JNU	**Nakatsue**	**138.73**	**324**	PKP	PKPdf	11 52 10.1	+1.1
	comp=Z,13nm,0.9s,baz=255,slow=0.3,SNR=5.7						
THN	**Thein Dam**	**139.55**	**37**	eP	PKPdf	11 52 12.5	+2.1
HHC	**Hu-ho-hao-te**	**139.62**	**350**	ePKP	PKPdf	11 52 05.2	-5.1
HHC				PP	PP	11 55 09.5	-2.2
HHC				SS	SS	12 13 08.5	0.0
HHC				PP	PP		
	comp=Z,510nm,12.0s						
HHC				LR	LR		
	comp=N,230nm,32.4s						
HHC				LR	LR		
	comp=E,510nm,28.8s						
HHC				LR	LR		
	comp=Z,230nm,18.0s						
BTO	**Baotou**	**140.11**	**352**	ePKP	PKPdf	11 52 06.1	-5.1
BHJ	**Bhuj**	**140.82**	**53**	eP	PKPdf	11 52 14.8	+1.8
BHJ				ex	x	11 53 19.6	
SDNR	**Sundarnagar**	**140.96**	**37**	ex	x	11 52 08.4	
SDNR				ex	x	11 55 52.6	
ASPA	**Alice Springs**	**141.22**	**229**	eP	PKPdf	11 52 07.5	-6.2
ASPA				e		11 55 27.7	
KLP	**Kalpa**	**141.69**	**35**	eP	PKPdf	11 52 12.1	-2.2
KLP				ex	x	11 52 20.2	
KLP				AML	AML	11 52 25.0	
	comp=E,290nm,0.9s						
KLP				AML	AML	11 52 25.1	
	comp=N,198nm,0.8s						
GTA	**Gaotai**	**141.70**	**4**	PKP	PKPdf	11 52 08.9	-5.1
GTA				SKS	SKS	11 58 55.2	-2.4
GTA				SKKS		12 01 44.4	
GTA				PP	PP		
	comp=Z,700nm,8.4s						
GTA				LR	LR		
	comp=N,210nm,7.3s						
GTA				LR	LR		
	comp=E,210nm,6.5s						
GTA				LR	LR		
	comp=Z,320nm,9.0s						
KHET	**Khetri**	**142.58**	**42**	eP	PKPdf	11 52 13.8	-2.1
TIA	**Tai’an**	**142.64**	**341**	ePKP	PKPdf	11 52 12.1	-3.6
AJM	**Ajmer**	**142.80**	**45**	ex	x	11 53 15.9	
AJM				i x	x	11 55 32.4	
WB2	**Warramunga Arr**	**142.87**	**234**	⇓iPKP	PKPdf	11 52 12.4	-4.2
WB2				eSKIKP		11 55 31.8	
WB2				eSKKS		12 01 52.6	
WRAB	**Tennant Creek**	**142.88**	**234**	ePKPpre		11 52 13.7	
WRAB				eSKP		11 55 31.0	
WRA	**Warramunga Arr**	**142.88**	**234**	PKhKP		11 52 13.5	
	comp=Z,61nm,1.0s,baz=120,slow=2.9,SNR=378						
WRA				pPKP		11 53 20.3	
	comp=Z,18nm,0.9s,baz=114,slow=2.5,SNR=2.5						
WRA				PP	PP	11 55 26.6	-5.2
	comp=Z,16nm,1.2s,baz=128,slow=4.5,SNR=11						
WRA				SKPbc		11 55 31.9	
	comp=Z,31nm,0.8s,baz=114,slow=2.0,SNR=22						
WRA				SKKPbc		12 03 47.4	
	comp=Z,4.9nm,1.1s,baz=302,slow=3.7,SNR=5.8						
WRA	**Warramunga Arr**	**142.88**	**234**	PKHKP		11 52 13.5	
WRA						11 55 31.9	
KUDL	**Kundal**	**142.98**	**41**	eP	PKPdf	11 52 15.4	-1.1
KUDL				ex	x	11 53 13.1	
NDI	**New Delhi**	**143.09**	**40**	eP	PKPbc	11 52 13.5	-1.6
NDI				ex	x	11 55 33.0	
JOSI	**Joshimath**	**143.16**	**35**	ex	x	11 51 31.8	
AYAN	**Aya Nagar**	**143.17**	**40**	eP	PKPbc	11 52 15.4	+0.1
SONA	**Sohna**	**143.30**	**40**	eP	PKPbc	11 52 15.6	-0.1
KALG	**Kalgarh**	**143.46**	**37**	eP	PKPbc	11 52 15.4	-0.8
NWAO	**Narrogin (SRO)**	**143.65**	**200**	ePKPpre		11 52 15.8	
NWAO				e		11 55 33.7	
PTH	**Pithoragarh**	**144.29**	**35**	eP	PKPbc	11 52 19.2	+0.6
PTH				ex	x	11 55 37.4	
KLBR	**Kellerberrin**	**144.66**	**202**	⇓iPKP	PKPdf	11 52 19.1	-0.3
	comp=Z,308nm,0.9s						
KLBR				i pPKP		11 53 22.2	
KLBR				eSKP		11 55 36.8	
JOW	**Kunigami**	**144.70**	**319**	PKP	PKPdf	11 52 20.4	+0.8
	comp=Z,246nm,0.7s,baz=79,slow=2.6,SNR=56						

MUN	**Mundaring**	**144.86**	**200**	*e*P	PKPdf	11 52 20.0	+0.3
MUN				*e*pPKP		11 53 23.6	
MUN				*e*SKP		11 55 37.3	
LZH	**Lanzhou**	**145.12**	**359**	⇑PKP	PKPdf	11 52 22.0	+1.9
LZH				APKP		11 53 24.8	
LZH				SKKS		12 02 08.3	
LZH				LR	LR		
	comp=N,1µm,19.0s						
LZH				LR	LR		
	comp=Z,750nm,21.0s						
LZH	**Lanzhou**	**145.12**	**359**	⇑PKP	PKPdf	11 52 22.0	+1.9
LZH				pPKP		11 53 24.8	
LZH				sPKP		11 53 55.3	
LZH				PP	PP	11 55 37.0	-7.7
LZH				SKKS		12 02 08.3	
LZH				SS	SS	12 14 02.1	-10
LZH				LR	LR		
	comp=Z,750nm,21.0s						
BOM	**Bombay**	**145.48**	**57**	*e*P	PKPdf	11 52 22.2	+1.1
SSE	**Sheshan**	**145.51**	**332**	⇑PKP	PKPdf	11 52 22.3	+1.4
SSE				PP	PP	11 55 43.3	-3.8
SSE				SS	SS	12 14 16.5	+0.1
SSE				PP	PP		
	comp=Z,170nm,12.0s						
SSE				LR	LR		
	comp=N,130nm,32.8s						
SSE				LR	LR		
	comp=E,310nm,32.8s						
SSE				LR	LR		
	comp=Z,260nm,26.3s						
NJ2	**Nanjing**	**145.72**	**336**	*e*PKP	PKPdf	11 52 22.6	+1.4
NJ2				PKP2	PKPab	11 52 25.6	+0.3
NJ2				PP	PP	11 55 48.0	-0.4
NJ2				PKS	PKS	11 55 56.0	+1.1
NJ2				PP	PP		
	comp=Z,170nm,6.9s						
NJ2				LR	LR		
	comp=N,310nm,26.6s						
NJ2				LR	LR		
	comp=E,390nm,25.3s						
NJ2				LR	LR		
	comp=Z,270nm,23.8s						
POO	**Poona**	**146.52**	**57**	*e*x	x	11 52 26.6	
POO				*i* x	x	11 53 28.4	
XAN	**Xi'an**	**146.71**	**351**	PKP	PKPdf	11 52 25.1	+2.1
XAN				APKP		11 53 27.0	
BHPL	**Bhopal**	**146.78**	**46**	*e*P	PKPdf	11 52 24.4	+1.0
BHPL				*i* pP		11 53 27.9	
KAD	**Karad**	**147.36**	**59**	*e*P	PKPdf	11 52 25.5	+1.1
KAD				*i* pP		11 53 30.2	
KOLN	**Koldanda**	**147.56**	**33**	*e*P	PKPdf	11 52 25.9	+1.4
	comp=Z,477nm,1.0s						
KAKA	**Kakadu**	**147.76**	**244**	*e*PKP	PKPdf	11 52 43.8	+19
	comp=Z,202nm,1.0s						
KAKA				*e*pPKP		11 53 48.7	
GKN	**Gorkha**	**147.93**	**32**	*e*P	PKPdf	11 52 26.5	+1.5
	comp=Z,1µm,1.2s						
AKL	**Akola**	**147.96**	**51**	*e*x	x	11 52 38.8	
ALBI	**Allahabad**	**148.36**	**39**	*e*P	PKPdf	11 52 25.5	-0.3
DGAR	**Diego Garcia**	**148.38**	**106**	*e*PKPbc	PKPdf	11 52 32.0	+5.9
KKN	**Kakani**	**148.44**	**31**	*e*P	PKPdf	11 52 27.5	+1.7
	comp=Z,656nm,0.7s						
DMN	**Daman**	**148.50**	**31**	*e*P	PKPdf	11 52 27.7	+1.8
	comp=Z,837nm,1.0s						
GUN	**Gumba**	**148.65**	**30**	*e*P	PKPdf	11 52 28.0	+1.9
	comp=Z,688nm,0.8s						
PKI	**Pulchoki**	**148.68**	**31**	*e*P	PKPdf	11 52 27.7	+1.5
	comp=Z,532nm,0.9s						
WHN	**Wuhan**	**148.75**	**341**	*e*PKP	PKPdf	11 52 27.9	+1.7
LATR	**Latur**	**148.82**	**55**	*e*P	PKPdf	11 52 29.3	+2.6
LSA	**Lhasa**	**149.34**	**21**	PKP	PKPdf	11 52 26.7	-0.5
LSA	**Lhasa**	**149.34**	**21**	*e*PKPdf	PKPdf	11 52 30.3	+3.1
LSA				*e*PKPbc	PKPdf	11 52 35.4	+8.2
MNGI	**Mangalore**	**149.67**	**66**	*e*x	x	11 52 34.7	
TATO	**Taipei**	**150.26**	**325**	*e*PKPbc	PKPdf	11 52 34.7	+5.9
CD2	**Chengdu**	**150.29**	**359**	*e*PKP	PKPdf	11 52 31.3	+2.7
CD2				PKP2	PKPab	11 52 45.7	+2.1
CD2				PP	PP	11 56 10.5	-4.1
CD2				SKKS		12 02 32.3	
CD2				PP	PP		
	comp=Z,190nm,8.4s						
CD2				LR	LR		
	comp=N,170nm,18.0s						
CD2				LR	LR		
	comp=Z,220nm,20.4s						
ENH	**Enshi**	**150.29**	**349**	*e*PKPdf	PKPdf	11 52 30.1	+1.5
ENH				*e*PKPbc	PKPdf	11 52 35.6	+7.0
YHNB	**Yeheng**	**150.56**	**324**	*e*PKPbc	PKPdf	11 52 35.1	+5.9
FITZ	**Fitzroy Crossi**	**150.72**	**228**	*e*PKP	PKPdf	11 52 30.9	+1.3
	comp=Z,539nm,1.1s						
FITZ				*e*pPKP		11 53 36.2	
BLSP	**Bilaspur**	**150.80**	**43**	*e*P	PKPdf	11 52 30.8	+1.2
BLSP				*i* x	x	11 52 36.9	
BLSP				*i* pP		11 53 35.5	
NACB	**Ninganchiao**	**150.80**	**323**	*e*PKPbc	PKPdf	11 52 35.5	+6.0
HYB	**Hyderabad**	**150.96**	**55**	*i* PKP	PKPdf	11 52 31.0	+1.1
	comp=Z,150nm,1.0s						
HYB				*e*		11 52 37.0	
HYB				*e*		11 53 39.0	
HYB	**Hyderabad**	**150.96**	**55**	*e*PKP	PKPdf	11 52 31.0	+1.1
HYB				*e*		11 52 37.0	
HYB				*e*		11 53 39.0	
HYB	**Hyderabad**	**150.96**	**55**	*e*PKIKP	PKPdf	11 52 31.0	+1.1
HYB				*e*		11 53 39.0	
BOK	**Bokaro**	**151.94**	**35**	*e*P	PKPdf	11 52 33.8	+2.6
BOK				*i* pP		11 53 36.7	
TRD	**Trivandrum**	**153.01**	**73**	*e*x	x	11 53 47.7	
SALM	**Salem**	**153.21**	**66**	*e*x	x	11 52 43.0	
SHL	**Shillong**	**153.36**	**23**	*e*P	PKPdf	11 52 35.0	+1.8
SHL				*e*x	x	12 02 52.0	
CAL	**Calcutta**	**154.30**	**33**	*e*x	x	11 53 48.6	
GYA	**Guiyang**	**154.49**	**352**	*i* PKP	PKPdf	11 52 37.1	+2.4
GYA				PP	PP		
	comp=Z,270nm,9.7s						
GYA				LR	LR		
	comp=N,2µm,21.8s						
GYA				LR	LR		
	comp=E,2µm,22.9s						
GYA				LR	LR		
	comp=Z,3µm,22.4s						
VIS	**Vishakhapatnam**	**154.52**	**48**	*e*P	PKPdf	11 52 37.5	+2.6
VIS				*i* pP		11 53 40.7	
GZH	**Guangzhou**	**155.90**	**336**	PKP	PKPdf	11 52 38.6	+2.0
KMI	**Kunming**	**156.06**	**1**	PKP	PKPdf	11 52 38.2	+1.4
KMI				PKP2	PKPab	11 53 06.4	-1.7
KMI				XPKP		11 54 07.9	
KMI				PP	PP	11 56 44.5	-2.8
KMI				PPP	PPP	12 00 14.8	-10
KMI				SKKS		12 03 07.9	
KMI				SS	SS	12 16 07.6	-5.3
KMI				SSS	SSS	12 22 15.7	+0.4
KMI				PP	PP		
	comp=Z,310nm,7.7s						
KMI				LR	LR		
	comp=N,190nm,22.3s						
KMI				LR	LR		
	comp=E,200nm,20.9s						
KMI				LR	LR		
	comp=Z,280nm,26.4s						
KMI	**Kunming**	**156.06**	**1**	PKP	PKPdf	11 52 38.2	+1.4
KMI				PKPab	PKPab	11 53 06.4	-1.7
KMI				pPKP		11 53 46.1	
KMI				sPKP		11 54 07.9	
KMI				PP	PP	11 56 44.5	-2.8
KMI				PPP	PPP	12 00 14.8	-10
KMI				SKKS		12 03 07.9	
KMI				SS	SS	12 16 07.6	-5.3
KMI				SSS	SSS	12 22 15.7	+0.4
KMI				LR	LR		
	comp=Z,280nm,26.4s						
KMI	**Kunming**	**156.06**	**1**	PKIKP	PKPdf	11 52 38.2	+1.4
KMI						11 53 06.4	
KMI						11 53 46.1	
KMI						11 54 07.9	
KMI						11 56 44.5	
KMI				SS	SS	12 16 07.6	-5.3
KMI				SSS	SSS	12 22 15.7	+0.4
KMI				MLR	MLR		
	comp=Z,280nm,26.4s						
TGY	**Tagaytay City**	**158.03**	**307**	PKPab	PKPab	11 53 17.0	+0.2
	comp=Z,89nm,0.3s,baz=157,slow=6.9,SNR=5.2						
QIZ	**Qiongzhong**	**160.91**	**340**	PKP	PKPdf	11 52 44.8	+2.1
QIZ	**Qiongzhong**	**160.91**	**340**	*e*PKPdf	PKPdf	11 52 44.8	+2.1
QIZ				*e*PKPab	PKPab	11 53 27.6	-1.5
CHG	**Chiang Mai**	**161.89**	**12**	P	PKPdf	11 52 45.6	+1.9
	comp=Z,22nm,0.8s						
NST	**Nakhon Sawan**	**165.19**	**11**	P	PKPdf	11 52 49.0	+2.0
KKM	**Kota Kinabalu**	**165.92**	**291**	*e*PKPdf	PKPdf	11 52 48.9	+1.2
KKM				*e*PKPab	PKPab	11 53 50.8	-0.3
KSM	**Kuching**	**172.70**	**273**	*e*PKPdf	PKPdf	11 52 52.9	+1.1
KSM				*e*pPKPdf		11 53 58.2	
KSM				*e*PKPab	PKPab	11 54 20.4	-0.6
KULM	**Kulim**	**175.16**	**29**	*e*PKPdf	PKPdf	11 52 53.1	+0.5

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*ATH **09** 11:54:53.3, 38.03N×26.25E, h44^{km}±5^{km}, MD2.9/3*
*CSEM **09** 11:54:54.1±0.1, 38.21N×26.60E, h10^{km}, MD2.7, Error ellipse: s-maj=3.9km s-min=2.7km az=77.0*
*ISK **09** 11:54:55.2, 38.17N×26.65E, h10^{km}, MD2.7*
ISC 09 11:54:56.5±1.0, **38.20N**±0.04×**26.6E**±0.1, **h23**^{km}±10^{km}, **n8,** σ**0^{s}85**/11, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	**0.52**	**163**	*e*P	**Pb**	**11 55 05.9**	**-1.0**
SMG				*e*S	**Sb**	**11 55 14.8**	**+0.8**
IZM	**Izmir**	**0.53**	**68**	PG	**Pb**	**11 55 05.8**	**-1.2**
IZM				SG	**Sb**	**11 55 14.3**	**+0.1**
PRK	**Paraskevi**	**1.08**	**345**	*e*P	**Pn**	**11 55 15.0**	**-1.3**
PRK				*e*S	**Sb**	**11 55 31.0**	**+1.0**
AKS	**Akhisar**	**1.14**	**53**	*e*PN	**Pn**	**11 55 18.2**	**+1.1**
BODT	**Bodrum**	**1.26**	**155**	*e*PN	**Pn**	**11 55 19.5**	**+0.7**
APE	**Apeiranthos**	**1.44**	**218**	*e*P	**Pn**	**11 55 13.7**	**-7.7**
DAT	**Datca**	**1.65**	**153**	*e*PN	**Pn**	**11 55 24.2**	**-0.3**
YER	**Yerkesik**	**1.68**	**129**	*e*PN	**Pn**	**11 55 24.9**	**0.0**

IDC 09 12:00:35.4±5.9, **23.82S**×**115.15W, mb3.7**/2, **mb1 4.2**/2, **mb1mx3.8**/15, **mbtmp3.7**/2, **Error ellipse: s-maj=501.0km s-min=85.0km az=103.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NVAR	**Mina Array Bea**	**61.99**	**357**	P	P	12 10 57.4	-2.3
	1.1nm,0.9s,baz=177,slow=7.7,SNR=7.8						
PDAR	**Pinedale Array**	**66.45**	**4**	P	P	12 11 26.8	-1.9
	0.5nm,0.7s,baz=157,slow=6.9,SNR=4.4						
MKAR	**Makanchi Array**	**153.14**	**333**	PKPbc	PKPdf	12 20 35.0	+5.9
	0.7nm,0.7s,baz=49,slow=1.9,SNR=8.4						

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*ISK **09** 12:09:00.5, 38.18N×26.63E, h15^{km}, MD3.1*
*ATH **09** 12:09:00.3, 38.19N×27.06E, h42^{km}±1^{km}, MD3.2/3*
*CSEM **09** 12:09:00.9±0.1, 38.17N×26.67E, h15^{km}, MD3.1, Error ellipse: s-maj=3.1km s-min=2.1km az=113.0*
ISC 09 12:09:01.2±0.7, **38.22N**±0.02×**26.63E**±0.04, **h2**^{km}±6^{km}, **n19,** σ**1^{s}16**/30, **2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.15**	**349**	*i* P	**Pg**	**12 09 03.5**	**-0.6**
URLA				*i* S	**Sg**	**12 09 06.3**	**+0.2**
BLCB	**Balcova**	**0.36**	**62**	PG	**Pg**	**12 09 08.5**	**0.0**
IZM	**Izmir**	**0.53**	**70**	PG	**Pg**	**12 09 12.0**	**+0.3**
IZM				SG	**Sg**	**12 09 19.9**	**+1.1**
SMG	**Samos**	**0.53**	**162**	⇓*i*P	**Pg**	**12 09 11.9**	**+0.1**
SMG				*e*S	**Sg**	**12 09 20.4**	**+1.5**
KDAG	**Bornova**	**0.53**	**69**	*i* P	**Pg**	**12 09 10.6**	**-1.2**
KDAG				*i* S	**Sg**	**12 09 19.2**	**+0.3**
PRK	**Paraskevi**	**1.07**	**345**	⇓*i*P	**Pb**	**12 09 22.3**	**+0.3**
PRK				*e*S	**Sb**	**12 09 38.1**	**+1.9**
AYVA	**Ayvalik**	**1.09**	**2**	*i* P	**Pb**	**12 09 21.4**	**-1.0**
AYVA				*i* S	**Sb**	**12 09 37.2**	**+0.3**
AYDN	**Tasoluk**	**1.13**	**119**	*i* P	**Pb**	**12 09 23.0**	**-0.1**
AYDN				*i* S	**Sb**	**12 09 37.4**	**-0.7**
AKS	**Akhisar**	**1.14**	**54**	PN	**Pn**	**12 09 23.0**	**-1.0**
BODT	**Bodrum**	**1.27**	**155**	PN	**Pn**	**12 09 24.0**	**-1.9**
BDRM	**Kayabasi**	**1.32**	**150**	*i* P	**Pb**	**12 09 25.8**	**-0.5**
BDRM				*i* S	**Sb**	**12 09 44.5**	**+1.0**
APE	**Apeiranthos**	**1.44**	**218**	*e*PN	**Pn**	**12 09 26.1**	**-2.2**
APE	**Apeiranthos**	**1.44**	**218**	*e*P	**Pn**	**12 09 28.3**	**0.0**
APE				*e*S	**Sb**	**12 09 49.0**	**+1.9**
APE	**Apeiranthos**	**1.44**	**218**	*e*P	**Pn**	**12 09 28.3**	**0.0**
APE				*e*S	**Sb**	**12 09 49.0**	**+1.9**
MANT	**Manisa**	**1.54**	**79**	*i* P	**Pn**	**12 09 30.4**	**+0.7**
MANT				*i* S	**Sb**	**12 09 51.3**	**+1.3**
DAT	**Datca**	**1.67**	**153**	*e*PN	**Pn**	**12 09 28.7**	**-2.8**
YER	**Yerkesik**	**1.70**	**129**	*e*PN	**Pn**	**12 09 30.3**	**-1.7**
DNZL	**Cakiroluk**	**1.98**	**105**	*i* P	**Pn**	**12 09 38.0**	**+1.9**
DST	**Dursunbey**	**2.09**	**48**	*e*PN	**Pn**	**12 09 36.0**	**-1.6**

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*SNSN **09** 12:14:14.5, 31.22N×37.33E, h10^{km}, Ml3.3*
*HLW **09** 12:14:33.8, 29.84N×36.76E, h18^{km}, Mb3.2*
*CSEM **09** 12:14:35.8±0.2, 29.78N×36.24E, h2^{km}, ML2.1, Error ellipse: s-maj=3.6km s-min=2.5km az=104.0, Mining explosion.*
ISC 09 12:14:34.3±0.9, **29.89N**±0.05×**36.33E**±0.06, **n18,** σ**0^{s}82**/24, **1C-1D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFRI	**Zfri**	**1.20**	**304**	Pg	**Pg**	**12 14 57.1**	**-1.0**
EIL	**Elat**	**1.22**	**260**	Pg	**Pg**	**12 14 58.2**	**-0.4**
EIL				Sg	**Sg**	**12 15 14.9**	**0.0**
MBH	**Mount Berech**	**1.23**	**266**	Pg	**Pg**	**12 14 58.5**	**-0.4**
MBH				Sg	**Sg**	**12 15 15.3**	**0.0**
PRNI	**Paran**	**1.24**	**292**	Pg	**Pg**	**12 14 57.7**	**-1.3**
PRNI				Sg	**Sg**	**12 15 13.9**	**-1.5**
ALWS	**Ilw as Safayha**	**1.25**	**243**	P	**Pb**	**12 14 58.3**	**0.0**
JMOS	**Jabal al Moall**	**1.28**	**236**	P	**Pb**	**12 14 59.2**	**+0.1**
HAQS	**Haql**	**1.48**	**236**	P	**Pn**	**12 15 02.4**	**+0.2**
HBST	**Basata**	**1.55**	**245**	P	**Pn**	**12 15 04.2**	**+1.0**
MZDA	**Masada**	**1.64**	**330**	Pn	**Pn**	**12 15 05.6**	**+1.1**
TBKS	**Tabuk**	**1.67**	**173**	P	**Pn**	**12 15 03.2**	**-1.8**
MASH	**Mash'abbe Sade**	**1.73**	**310**	Pn	**Pn**	**12 15 06.0**	**+0.2**
MASH				Sn	**Sn**	**12 15 29.3**	**+0.4**
BDAS	**Al Bad'**	**1.81**	**217**	P	**Pn**	**12 15 07.5**	**+0.6**
HDHB	**Dhahab**	**1.90**	**232**	P	**Pn**	**12 15 07.7**	**-0.5**
KZIT	**Kziot**	**1.95**	**302**	Pn	**Pn**	**12 15 09.4**	**+0.4**
KZIT				Sn	**Sn**	**12 15 34.0**	**-0.5**
HNKL	**Nakhl**	**2.04**	**272**	⇑*e*P	**Pn**	**12 15 11.3**	**+1.1**
HNKL				S	**Sn**	**12 15 38.7**	**+1.9**
HKAT	**Jabal Katrina**	**2.46**	**237**	⇓*e*P	**Pn**	**12 15 15.9**	**-0.3**
AMAG	**Maghara**	**2.80**	**286**	P	**Pn**	**12 15 21.7**	**+0.5**
SUZ		**3.04**	**270**	P	**Pn**	**12 15 24.7**	**+0.2**

CASC 09 12:15:19.7±1.5, **13.56N**×**90.72W, h22**^{km}±10^{km}, **MD4.0, ML4.3, 3C-8D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.66**	**23**	⇓*e*P	Pb	12 15 32.7	+0.2
IXG				*e*S	Sb	12 15 42.1	+0.8
IXG				AML	AML	12 15 45.9	
	comp=E,40µm,0.5s						
PCG	**Pacaya**	**0.84**	**8**	⇓*e*P	Pb	12 15 35.1	-0.3
RTR	**El Retiro**	**1.10**	**72**	⇓*e*P	Pb	12 15 52.8	+13
RTR				*e*S	Sb	12 16 08.4	+15
SBLS	**San Blas**	**1.10**	**75**	⇓*e*P	Pb	12 15 52.3	+12
SBLS				*e*S	Sb	12 16 07.7	+14
RBDL	**Robledal**	**1.15**	**61**	⇓*e*P	Pn	12 15 58.8	+18
RBDL				*e*S	Sb	12 16 15.2	+20
BOQS	**Boqueron**	**1.41**	**83**	⇑*e*P	Pn	12 15 57.3	+13
BOQS				*e*S	Sn	12 16 15.9	+13
MTO2	**Montecristo 2**	**1.56**	**58**	⇓*e*P	Pn	12 15 58.8	+12
MTO2				*e*S	Sn	12 16 20.7	+14
LFRS	**El Faro**	**1.62**	**88**	⇑*e*P	Pn	12 16 00.4	+13
LFRS				*e*S	Sn	12 16 21.0	+13
LCBS	**La Ceiba**	**1.70**	**87**	⇑*e*P	Pn	12 16 01.7	+13
LCBS				*e*S	Sn	12 16 23.7	+14
MRL	**Marmol**	**1.80**	**34**	⇓*e*P	Pn	12 15 49.7	-0.2
SNVI	**San Vicente**	**1.83**	**88**	⇓*e*P	Pn	12 16 03.7	+13
SNVI				*e*S	Sn	12 16 27.4	+14

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*IDC **09** 12:34:55.6±6.8, 7.41S×123.34E, h427^{km}±84^{km}, mb3.2/3, mb1 3.3/4, mb1mx3.1/15, mbtmp4.1/4, Error ellipse: s-maj=145.8km s-min=27.0km az=62.0*
ISC 09 12:35:00.4±0.9, **6.9S**±0.2×**124.4E**±0.4, **h500**^{km}, **n10,** σ**0^{s}78**/8, **mb3.5**/3, **1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**9.86**	**127**	*e*P	Px	12 37 37.9	
	6.4nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.24**	**174**	*e*P	**P**	**12 37 32.5**	**+0.4**
	3.4nm,0.4s						
WRA	**Warramunga Arr**	**16.22**	**144**	P	**P**	**12 38 23.7**	**+0.6**
	2.0nm,0.3s,baz=312,slow=13,SNR=48						
WB2	**Warramunga Arr**	**16.22**	**144**	*e*P	**P**	**12 38 24.1**	**+0.9**
ASPA	**Alice Springs**	**19.06**	**152**	⇓*i*P	**P**	**12 38 50.5**	**-0.4**
STKA	**Stephens Creek**	**29.64**	**149**	*e*P	**P**	**12 40 24.4**	**-1.7**
	3.2nm,0.6s,mb3.9						
STKA	**Stephens Creek**	**29.64**	**149**	P	**P**	**12 40 24.3**	**-1.8**
	2.6nm,0.3s,mb4.1,baz=323,slow=8.6,SNR=11						
SONM	**Songino Array**	**56.73**	**346**	P	**P**	**12 43 57.9**	**+0.1**
	0.4nm,0.6s,mb2.9,baz=153,slow=6.4,SNR=3.5						
MKAR	**Makanchi Array**	**65.15**	**330**	P	**P**	**12 44 53.1**	**0.0**
	0.9nm,0.6s,mb3.6,baz=127,slow=7.6,SNR=11						
TXAR	**Lajitas Array**	**129.63**	**57**	PKP	PKPdf	12 53 19.3	+6.5
	0.6nm,1.0s,baz=225,slow=2.6,SNR=4.2						

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*IDC **09** 12:37:27.4±0.7, 46.99S×33.34E, mb4.2/10, mb1 4.4/12, mb1mx4.3/17, mbtmp4.3/12, ML4.2/2, MS4.1/9, Ms1 4.0/9, ms1mx3.8/16, Error ellipse: s-maj=27.2km s-min=15.2km az=75.0*
*HRVD **09** 12:37:29.1±0.6, 47.01S×33.58E, h12^{km}, MW5.0/43, Centroid moment Tensor Solution. LP body waves: s7,c7; Mantle waves: s43,c56; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.04±.29; $M_{\theta\theta}$2.37±.26; $M_{\phi\phi}$-2.33±.32; $M_{r\theta}$1.32±.81; $M_{\theta\phi}$2.58±.23; $M_{\phi r}$1.45±.80; Best double couple: $M_0$3.969×10^{16} NP1:ϕ_s113°,δ63°,λ7°. NP2:ϕ_s20°, δ84°,λ153°. Principal axes: T 4.271, Plg23°, Azm334°; N -.6, Plg63°, Azm189°; P -3.667, Plg14°, Azm70°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **09** 12:37:29.1±0.3, 46.94S×33.41E, h10^{km}, mb4.9/5 Error ellipse: s-maj=15.2km s-min=6.7km az=80.0*
ISC 09 12:37:27.5±0.5, **46.97S**±0.07×**33.3E**±0.2, **h10**^{km}, **n46,** σ**0^{s}70**/35, **mb4.4**/15, **MS4.0**/7, **9C-3D, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	**17.42**	**322**	P	**P**	**12 41 31.5**	**-0.6**
	1.3nm,0.3s,baz=140,slow=14,SNR=9.9						
SUR				LR	LR	12 47 05.2	
	comp=Z,830nm,18.4s,baz=55,slow=33						
SUR	**Sutherland**	**17.42**	**322**	*e*P	**P**	**12 41 31.1**	**-1.1**
SUR				LR	LR	12 47 05.2	
BOSA	**Boshof**	**19.38**	**338**	P	**P**	**12 41 56.1**	**+0.1**
	0.3nm,0.3s,baz=165,slow=10,SNR=9.6						
BOSA				LR	LR	12 47 49.7	
	comp=Z,510nm,21.0s,baz=134,slow=32						
SYO	**Syowa Base**	**22.33**	**174**	⇑P	**P**	**12 42 26.3**	**-0.2**
SYO	**Syowa Base**	**22.33**	**174**	⇓P		12 42 38.7	
SYO	**Syowa Base**	**22.33**	**174**	⇑*e*P	**P**	**12 42 26.3**	**-0.2**
LBTB	**Lobatse**	**22.75**	**342**	P	**P**	**12 42 31.4**	**+0.5**
	26nm,1.1s,mb4.6,baz=184,slow=11,SNR=8.6						
LBTB				LR	LR	12 50 03.7	
	comp=Z,466nm,21.5s,MS3.9,baz=124,slow=33						
LBTB	**Lobatse**	**22.75**	**342**	P	**P**	**12 42 31.4**	**+0.5**
LBTB				LR	LR	12 50 03.7	
MAW	**Mawson**	**25.67**	**154**	⇑*i*P	**P**	**12 42 58.5**	**-0.1**
	19nm,0.8s,mb4.7						
MAW	**Mawson**	**25.67**	**154**	P	**P**	**12 42 58.5**	**-0.1**
	21nm,0.8s,mb4.7,baz=305,slow=10.0,SNR=46						
MAW				LR	LR	12 50 16.5	
	comp=Z,408nm,19.6s,MS4.0,baz=263,slow=30						
MATP	**Matopo**	**26.76**	**350**	P	**P**	**12 43 14.4**	**+5.2**
	6.4nm,0.9s,mb4.1,baz=184,slow=9.7,SNR=7.7						
MATP				LR	LR	12 52 24.1	
	comp=Z,247nm,18.7s,MS3.8,baz=227,slow=34						
SNAA	**Sanae**	**29.98**	**202**		**P**	**12 43 38.0**	**+0.2**
SNAA	**Sanae**	**29.98**	**202**		**P**	**12 43 48.8**	**+11**
SNAA	**Sanae**	**29.98**	**202**	P	**P**	**12 43 37.9**	**+0.2**
	1.6nm,0.8s,mb3.8,baz=78,slow=6.3,SNR=24						
SNAA	**Sanae**	**29.98**	**202**	P	**P**	**12 43 38.0**	**+0.2**
VNA2	**Neumayer--Watz**	**30.81**	**205**	⇑*i*	**P**	**12 43 45.7**	**+0.6**
VNA2	**Neumayer--Watz**	**30.81**	**205**	⇑*i*	**P**	**12 43 55.1**	**+10**
VNA2	**Neumayer--Watz**	**30.81**	**205**	⇑*i*	**P**	**12 44 02.7**	**+18**
VNA1	**Neumayer--Stat**	**30.93**	**205**	⇑*i*	**P**	**12 43 47.3**	**+1.2**
VNA1	**Neumayer--Stat**	**30.93**	**205**	⇑*i*	**P**	**12 43 56.5**	**+10**
VNA3	**Neumayer Olymp**	**31.61**	**205**	⇑*i*	**P**	**12 43 52.5**	**+0.3**
VNA3	**Neumayer Olymp**	**31.61**	**205**	⇓*i*	**P**	**12 44 02.9**	**+11**
LSZ	**Lusaka**	**31.88**	**351**	P	**P**	**12 43 54.0**	**-1.0**
	1.8nm,0.6s,mb4.1,baz=141,slow=11,SNR=3.3						
QSPA	**South Pole Qui**	**43.25**	**180**	⇓*i*P	**P**	**12 45 29.8**	**-0.1**
	22nm,1.0s,mb4.8						
KMBO	**Kilima Mbogo**	**45.78**	**6**	P	**P**	**12 45 51.6**	**+0.5**
	1.8nm,0.9s,mb4.0,baz=246,slow=21,SNR=4.5						
KMBO				LR	LR	13 01 13.5	
	comp=Z,146nm,21.0s,MS3.9,baz=89,slow=31						
KMBO	**Kilima Mbogo**	**45.78**	**6**	P	**P**	**12 45 51.6**	**+0.5**
KMBO				LR	LR	13 01 13.5	
VNDA	**Vanda**	**51.80**	**167**	*e*P	**P**	**12 46 36.2**	**-0.7**
	12nm,0.8s,mb4.9						
SBA	**Scott Base**	**52.24**	**169**	*e*P	**P**	**12 46 40.4**	**+0.2**
	25nm,1.0s,mb5.1						
DBIC	**Dimbokro**	**63.20**	**317**	P	**P**	**12 47 57.8**	**-0.4**
	3.1nm,0.7s,mb4.5,baz=176,slow=15,SNR=2.9						
DBIC				LR	LR	13 10 24.5	
	comp=Z,110nm,21.9s,MS4.0,baz=131,slow=31						
TRQA	**Tornquist**	**66.58**	**239**	*e*P	**P**	**12 48 20.0**	**+0.3**
	8.2nm,1.1s,mb4.7						
PLCA	**Paso Flores**	**69.58**	**232**	P	**P**	**12 48 37.9**	**-0.4**
	1.5nm,0.9s,mb3.9,baz=122,slow=13,SNR=2.5						
PLCA	**Paso Flores**	**69.58**	**232**	P	**P**	**12 48 37.9**	**-0.4**
BDFB	**Brasilia**	**72.85**	**265**	LR	LR	13 16 27.2	
	comp=Z,84nm,19.5s,MS4.0,baz=284,slow=32						
STKA	**Stephens Creek**	**78.46**	**124**	P	**P**	**12 49 29.1**	**-0.9**
	5.7nm,1.0s,mb4.5,baz=18,slow=3.0,SNR=4.0						
STKA				LR	LR	13 15 26.6	
	comp=Z,201nm,20.5s,MS4.4,baz=209,slow=29						
STKA	**Stephens Creek**	**78.46**	**124**	*e*P	**P**	**12 49 28.9**	**-1.0**
STKA				P		12 49 29.1	
STKA				LR	LR	13 15 26.6	
WRA	**Warramunga Arr**	**82.89**	**111**	P	**P**	**12 49 54.0**	**+0.3**
	0.7nm,0.8s,mb3.8,baz=216,slow=4.5,SNR=7.5						
BRTR	**Keskin Array B**	**86.31**	**0**	P	**P**	**12 50 12.5**	**+2.1**
	0.5nm,0.6s,mb4.0,baz=194,slow=5.9,SNR=2.3						
TXAR	**Lajitas Array**	**142.40**	**258**	PKhKP		12 56 58.8	
	0.9nm,0.8s,baz=148,slow=5.1,SNR=8.1						
TXAR				PKP	PKPdf	12 57 02.5	-0.7
	1.5nm,1.0s,baz=149,slow=5.3,SNR=8.2						
CLNB	**Carlsbad**	**144.36**	**261**	*e*P	PKPbc	12 57 04.6	+1.6
GDL2	**Guadalupe Moun**	**144.65**	**261**	*e*P	PKPbc	12 57 06.0	+2.1
ANMO	**Albuquerque**	**147.68**	**263**	P	PKPdf	12 57 11.4	-0.7
RSSD	**Black Hills**	**150.26**	**280**	*e*PKPbc	PKPdf	12 57 20.6	+4.7
PV10	**Paradox Valley**	**151.24**	**266**	*e*PKPbc	PKPdf	12 57 21.5	+3.9
WUAZ	**Wupatki**	**151.32**	**259**	*e*PKPbc	PKPdf	12 57 24.2	+6.5
PDAR	**Pinedale Array**	**153.51**	**275**	PKPbc	PKPdf	12 57 26.4	+5.7
	0.3nm,0.6s,baz=90,slow=0.9,SNR=2.8						
PDAR				PKPab	PKPab	12 57 37.6	-2.6
	0.8nm,0.8s,baz=117,slow=3.3,SNR=6.1						
NVAR	**Mina Array Bea**	**157.55**	**258**	PKPab	PKPab	12 57 59.1	+1.5
	1.0nm,0.9s,baz=169,slow=4.6,SNR=4.4						

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*ISK **09** 12:51:30.6, 38.25N×26.56E, h12^{km}, MD2.6*
*ATH **09** 12:51:30.2, 38.27N×27.05E, h33^{km}±1^{km}, MD3.0/3*
*CSEM **09** 12:51:31.4±0.2, 38.24N×26.62E, h13^{km}±1^{km}, MD2.6, Error ellipse: s-maj=2.9km s-min=1.8km az=76.0*
ISC 09 12:51:31.2±0.8, **38.25N**±0.03×**26.57E**±0.05, **h6**^{km}±4^{km}, **n14,** σ**0^{s}73**/24, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.11**	**12**	*i* P	**Pg**	**12 51 33.5**	**-0.1**
URLA				*i* S	**Sg**	**12 51 35.8**	**+0.6**
BLCB	**Balcova**	**0.40**	**70**	PG	**Pg**	**12 51 39.2**	**0.0**
BLCB				SG	**Sg**	**12 51 44.7**	**+0.2**
IZM	**Izmir**	**0.56**	**75**	PG	**Pg**	**12 51 42.7**	**+0.2**
IZM				SG	**Sg**	**12 51 50.9**	**+0.8**
KDAG	**Bornova**	**0.57**	**75**	*i* P	**Pg**	**12 51 41.2**	**-1.4**
KDAG				*i* S	**Sg**	**12 51 49.7**	**-0.5**
SMG	**Samos**	**0.58**	**159**	*e*PN	**Pg**	**12 51 42.6**	**-0.3**
SMG				*e*SN	**Sg**	**12 51 51.3**	**+0.6**
PRK	**Paraskevi**	**1.02**	**347**	*e*PN	**Pn**	**12 51 51.7**	**-0.2**
PRK				*e*SN	**Sn**	**12 52 07.3**	**+0.6**
AKS	**Akhisar**	**1.16**	**57**	PN	**Pn**	**12 51 53.5**	**-0.4**
AKS				SN	**Sn**	**12 52 09.9**	**-0.4**

BODT	Bodrum	1.33	153	ePN	Pn	12 51 56.1	-0.2
BDRM	Kayabasi	1.38	149	iP	Pb	12 51 56.9	-0.1
BDRM				iS	Sb	12 52 15.7	+1.0
APE	Apeiranthos	1.44	215	ePN	Pn	12 51 56.4	-1.6
APE	Apeiranthos	1.44	215	ePN	Pn	12 51 59.5	+1.5
APE				eSN	Sn	12 52 21.1	+3.7
MANT	Manisa	1.58	81	iP	Pn	12 52 00.6	+0.6
MANT				iS	Sb	12 52 21.1	+0.4
DAT	Datca	1.72	152	ePN	Pn	12 52 00.8	-1.2
YER	Yerkesik	1.76	129	ePN	Pn	12 52 01.8	-0.7

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*IDC **09** 13:10:26.5±1.6, 4.95S×134.46E, mb4.2/5, mb1 4.2/5, mb1mx4.1/9, mbtmp4.2/5, Error ellipse: s-maj=118.3km s-min=22.0km az=77.0*

*NEIC **09** 13:10:29.1±0.8, 5.08S×133.92E, h10^{km}, mb4.3/4, Error ellipse: s-maj=25.2km s-min=14.0km az=82.0*

ISC 09 13:10:30.5±3.1, **5.41S**±0.07×**133.5E**±0.1, **h36**^{km}±30^{km}, **n18**, σ**0^{s}64**/19, **mb4.1**/6, **1C**, **Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	7.33	188	eP	Px	13 12 40.5	
	16nm,0.4s						
KAKA				eS	Sx	13 14 03.0	
WRAB	Tennant Creek	14.46	177	eP	P	13 13 55.0	+0.3
	47nm,0.6s						
WRA	Warramunga Arr	14.47	177	Pn	P	13 13 53.9	-1.0
	0.7nm,0.3s,baz=358,slow=13,SNR=20						
WRA				Sn	S	13 16 29.8	-5.0
	0.9nm,0.3s,baz=0.3,slow=23,SNR=5.4						
WB2	Warramunga Arr	14.47	177	eP	P	13 13 55.4	+0.6
WB2				i		13 14 05.2	
WB2				eS	S	13 16 29.8	-5.1
FITZ	Fitzroy Crossi	14.75	211	eP	P	13 14 03.7	+5.2
	4.7nm,0.2s						
FITZ				eS	S	13 16 41.5	0.0
ASPA	Alice Springs	18.16	179	eP	P	13 14 46.6	+4.9
ASPA				eS	S	13 17 59.6	-0.3
CTA	Charters Tower	19.17	141	⇑iP	P	13 14 53.9	0.0
	4.6nm,0.4s						
MBWA	Marble Bar	20.55	219	eP	P	13 15 15.6	+6.9
STKA	Stephens Creek	27.41	165	P	P	13 16 15.7	+0.8
	7.8nm,1.3s,mb4.1,baz=331,slow=13,SNR=3.0						
STKA	Stephens Creek	27.41	165	eP	P	13 16 15.0	+0.1
SONM	Songino Array	58.12	339	P	P	13 20 22.4	-0.5
	0.4nm,0.5s,mb3.7,baz=158,slow=7.8,SNR=3.5						
SONM				PcP	PcP	13 21 13.7	-0.4
	0.8nm,0.6s,baz=166,slow=3.4,SNR=5.4						
MKAR	Makanchi Array	68.85	325	P	P	13 21 34.3	+0.9
	1.9nm,0.5s,mb4.3,baz=115,slow=7.9,SNR=40						
ZAL	Zalesovo	71.74	332	P	P	13 21 49.8	-1.0
	0.7nm,0.3s,mb4.0,baz=335,slow=9.0,SNR=4.3						
KURK	Kurchatov	73.01	327	eP	P	13 21 58.8	+0.4
	3.8nm,1.3s,mb4.2						
MAW	Mawson	77.69	202	eP	P	13 22 28.8	+4.0
	2.8nm,0.9s,mb4.2						
MAW	Mawson	77.69	202	P	P	13 22 29.3	+4.5
	2.0nm,0.6s,mb4.2,baz=77,slow=6.1,SNR=8.4						
ARCES	ARCESS Array B	101.28	340	P	P	13 24 17.3	-1.3
	2.8nm,0.8s,baz=74,slow=8.8,SNR=4.4						
ARCES	ARCESS Array B	101.28	340	P	P	13 24 17.3	-1.3

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*ISK **09** 13:20:32.5, 38.22N×26.63E, h20^{km}, MD2.9*

*ATH **09** 13:20:32.5, 38.18N×26.61E, h36^{km}±5^{km}, MD3.1/3*

*CSEM **09** 13:20:33.0±0.1, 38.21N×26.70E, h25^{km}, MD2.9, Error ellipse: s-maj=4.1km s-min=2.6km az=115.0*

ISC 09 13:20:31.1±1.0, **38.18N**±0.04×**26.54E**±0.05, **h5**^{km}±7^{km}, **n15**, σ**0^{s}92**/25, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.19	15	iP	Pg	13 20 34.9	+0.1
URLA				iS	Sg	13 20 37.5	+0.1
BLCB	Balcova	0.45	63	iPG	Pg	13 20 40.6	+0.5
BLCB				iSG	Sg	13 20 45.8	-0.3
SMG	Samos	0.53	153	⇑iPN	Pn	13 20 43.4	-1.5
SMG				eSN	Sn	13 20 51.9	-2.4
IZM	Izmir	0.61	69	iPG	Pg	13 20 43.7	+0.4
IZM				iSG	Sg	13 20 52.2	+0.7
KDAG	Bornova	0.62	69	iP	Pg	13 20 42.6	-0.8
KDAG				iS	Sg	13 20 50.2	-1.4
PRK	Paraskevi	1.08	349	ePN	Pn	13 20 52.9	0.0
PRK				eSN	Sn	13 21 08.5	+0.1
AYDN	Tasoluk	1.18	116	iP	Pb	13 20 55.2	+1.6
AYDN				iS	Sb	13 21 10.5	+1.3
AKS	Akhisar	1.22	55	PN	Pn	13 20 54.1	-0.7
BODT	Bodrum	1.27	151	PN	Pn	13 20 55.6	0.0
APE	Apeiranthos	1.37	216	ePN	Pn	13 20 57.4	+0.5
APE				eSN	Sn	13 21 15.9	+0.3
APE	Apeiranthos	1.37	216	ePn	Pn	13 20 58.1	+1.2
APE				eSn	Sn	13 21 15.9	+0.3
MANT	Manisa	1.62	78	iP	Pn	13 21 02.1	+1.5
MANT				iS	Sb	13 21 22.2	+0.3
DAT	Datca	1.67	150	ePN	Pn	13 21 01.0	-0.2
BALB	Balikesir	1.80	35	ePN	Pn	13 21 02.0	-1.1
DALT	Dalyan (Mudla)	2.19	129	ePN	Pn	13 21 08.9	+0.3

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*IDC **09** 13:22:08.6±2.3, 10.08N×91.51E, mb4.0/5, mb1 4.2/5, mb1mx3.8/19, mbtmp4.0/5, Error ellipse: s-maj=98.3km s-min=21.2km az=71.0*

*NEIC **09** 13:22:12.7±0.6, 10.06N×91.49E, h30^{km}, mb4.5/3, Error ellipse: s-maj=21.8km s-min=8.4km az=56.0*

ISC 09 13:22:10.3±0.7, **9.98N**±0.09×**91.4E**±0.1, **h30**^{km}, **n19**, σ**0^{s}80**/21, **mb4.2**/6, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HYB	Hyderabad	14.47	302	iP	P	13 25 35.0	-0.3
HYB				eS	S	13 28 15.0	-0.5
HYB	Hyderabad	14.47	302	eP	P	13 25 35.0	-0.3
HYB				eS	S	13 28 15.0	-0.5
PKI	Pulchoki	18.38	343	eP	P	13 26 25.9	+1.1
DMN	Daman	18.50	342	eP	P	13 26 27.3	+0.9
	40nm,0.7s						
KKN	Kakani	18.62	343	eP	P	13 26 29.1	+1.3
GKN	Gorkha	19.01	341	eP	P	13 26 32.1	-0.4
	19nm,0.3s						
KOLN	Koldanda	19.15	339	eP	P	13 26 33.9	-0.2
	26nm,0.6s						
LSA	Lhasa	19.62	359	eP	P	13 26 39.2	-0.2
	18nm,0.6s						
ENH	Enshi	26.32	37	P	P	13 27 42.5	-3.1
MKAR	Makanchi Array	37.49	350	P	P	13 29 23.2	0.0
	0.6nm,0.6s,mb3.6,baz=170,slow=8.4,SNR=7.9						
MKAR	Makanchi Array	37.49	350	P	P	13 29 23.2	0.0
SONM	Songino Array	39.80	16	P	P	13 29 42.5	0.0
	0.5nm,0.6s,mb3.4,baz=207,slow=6.4,SNR=3.0						
CHKZ	Chkalovo	46.65	343	eP	P	13 30 36.7	-1.1
NWAO	Narrogin (SRO)	49.28	151	P	P	13 30 59.7	+1.1
	3.8nm,0.6s,mb4.6,baz=358,slow=8.3,SNR=4.8						
NWAO	Narrogin (SRO)	49.28	151	P	P	13 30 59.7	+1.1
WRA	Warramunga Arr	51.71	125	P	P	13 31 17.4	+0.1
	3.4nm,0.9s,mb4.3,baz=305,slow=8.5,SNR=28						
WRAB	Tennant Creek	51.71	125	eP	P	13 31 16.7	-0.6
	6.5nm,0.7s,mb4.7						
WB2	Warramunga Arr	51.72	125	eP	P	13 31 17.1	-0.2
STKA	Stephens Creek	63.53	133	P	P	13 32 40.7	+0.1
	2.9nm,0.6s,mb4.5,baz=305,slow=8.4,SNR=6.6						

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*GUC **09** 14:17:53.9±1.1, 27.98S×71.42W, h8^{km}±9^{km}, ML4.6*

*NEIC **09** 14:17:53.9, 27.98S×71.42W, h8^{km}, ML4.6(GUC), After GUC.*

*IDC **09** 14:17:53.5±0.7, 27.95S×71.18W, mb4.3/8, mb1 4.3/11, mb1mx4.3/17, mbtmp4.2/11, ML3.7/2, MS4.0/4, Ms1 3.9/4, ms1mx3.5/16, Error ellipse: s-maj=27.3km s-min=18.3km az=77.0*

ISC 09 14:17:52.6±1.6, **27.93S**±0.03×**71.47W**±0.07, **h8**^{km}±11^{km}, **n45**, σ**1^{s}24**/49, **mb4.1**/8, **MS4.0**/3, **6C-3D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDCH	Caldera	1.02	34	⇓iP	Pb	14 18 13.6	+1.5
CDCH				iS	Sb	14 18 27.4	+1.8
CPCH	Copiapo	1.14	60	⇓eP	Pb	14 18 14.1	-0.1
CPCH				iS	Sb	14 18 30.3	+1.4
CPCH				AMP		14 18 33.8	
	comp=E,8μm,0.2s						
CRCH	Chaqaral	1.75	26	⇓eP	Pn	14 18 24.6	+1.1
CRCH				iS	Sn	14 18 45.0	-1.2
CRCH				AMP		14 18 55.8	
	comp=E,4μm,0.5s						
LSCH	La Serena	1.98	174	eP	Pn	14 18 27.1	+0.2
LSCH				iS	Sn	14 18 52.2	+0.1
LSCH				AMP		14 19 00.2	
	comp=N,13μm,0.5s						
TLL	Tololo Astrono	2.31	166	eP	Pn	14 18 33.5	+2.0
TLL				iS	Sn	14 19 03.4	+3.0
TLL				AMP		14 19 11.4	
	comp=N,21μm,0.7s						
CPN1	Cerro Paranal	3.42	16	eP	Pn	14 18 47.4	-0.1
CPN1				AMP		14 19 54.5	
	comp=E,1μm,0.4s						
CHNG	Los Chungos	3.94	180	eP	Pn	14 18 53.7	-1.1
ANCH	Antofagasta	4.33	13	eP	Pn	14 18 58.7	-1.7
CFAA	Coronel Fontan	4.62	143	Pn	Pn	14 19 06.5	+2.1
	comp=E,3.6nm,0.3s,baz=319,slow=13,SNR=104						
CFAA				Sn	Sn	14 19 57.9	-0.9
	comp=E,5.7nm,0.3s,baz=101,slow=20,SNR=3.9						
CFAA				Lg		14 20 04.8	
	comp=E,11nm,0.3s,baz=138,slow=20,SNR=9.1						
CFAA	Coronel Fontan	4.62	143	Pn	Pn	14 19 06.5	+2.1
CFAA				Sn	Sn	14 19 57.9	-1.0
CFAA				Lg		14 20 04.8	
CEN1	Los Morros	4.66	14	eP	Pn	14 19 00.3	-4.7
JACH	Jahuel	4.80	171	eP	Pn	14 19 06.7	-0.2
FCH	Farellones	5.48	170	eP	Pn	14 19 17.5	+0.9
FCH				iS	Sn	14 20 20.1	-0.4
TACH	Talagante	5.72	176	eP	Pn	14 19 18.9	-1.2
LVC	Limon Verde	5.78	24	Pn	Pn	14 19 20.5	-0.3
	comp=E,6.8nm,0.3s,baz=209,slow=8.3,SNR=26						
LVC				Sn	Sn	14 20 33.2	+5.1
	comp=E,9.3nm,0.3s,baz=193,slow=12,SNR=4.2						
LVC				Lg		14 20 43.3	
	comp=E,22nm,0.3s,baz=104,slow=24,SNR=7.1						
CHCH	Chadas Angostu	6.03	174	eP	Pn	14 19 23.8	-0.5
ARE	Arequipa	11.41	360	P	P	14 20 34.0	-5.1
LPAZ	La Paz	11.99	16	Pn	P	14 20 45.2	-1.7
	comp=E,0.4nm,0.3s,baz=206,slow=6.9,SNR=11						
LPAZ				LR	LR	14 24 36.5	
	comp=E,36nm,20.0s,baz=356,slow=34						
LPAZ	La Paz	11.99	16	Pn	P	14 20 45.2	-1.7
LPAZ				LR	LR	14 24 36.5	
CPUP	Villa Florida	12.69	86	eP	P	14 20 54.3	-2.0
	comp=E,8.1nm,0.7s						
PLCA	Paso Flores	12.79	177	Pn	P	14 20 58.1	+0.4
	comp=E,0.1nm,0.3s,baz=318,slow=14,SNR=2.0						
PLCA				LR	LR	14 26 09.7	
	comp=E,382nm,20.2s,baz=353,slow=39						
TRQA	Tornquist	12.85	144	eP	P	14 20 56.4	-2.0
	comp=E,10nm,0.6s						
SIV	San Ignacio	15.29	41	Pn	P	14 21 23.4	-7.2
	comp=E,1.7nm,0.3s,baz=244,slow=9.6,SNR=23						
BDFB	Brasilia	24.92	66	P	P	14 23 15.8	-2.0
	comp=E,7.2nm,0.9s,mb4.2,baz=253,slow=11,SNR=6.8						
BDFB				LR	LR	14 34 28.9	
	comp=E,481nm,18.6s,MS4.0,baz=262,slow=40						
BAO	Brasilia Array	24.94	66	P	P	14 23 17.5	-0.5
USHA	Ushuaia	26.97	176	LR	LR	14 35 08.4	
	comp=E,278nm,18.8s,MS3.9,baz=241,slow=38						
VNA3	Neumayer Olymp	54.82	160	⇑i	P	14 27 26.3	+1.2
VNA3	Neumayer Olymp	54.82	160	⇑i	P	14 27 33.2	+8.1
VNA1	Neumayer--Stat	55.09	159	⇑i	P	14 27 28.6	+1.5
VNA1	Neumayer--Stat	55.09	159		P	14 27 33.6	+6.5
VNA2	Neumayer--Watz	55.45	159	⇑i	P	14 27 30.7	+1.1
VNA2	Neumayer--Watz	55.45	159		P	14 27 38.2	+8.6
SNAA	Sanae	57.04	159	⇑i	P	14 27 39.7	-1.4
SNAA	Sanae	57.04	159	⇑i	P	14 27 46.9	+5.8
SNAA	Sanae	57.04	159	P	P	14 27 40.0	-1.1
	comp=E,2.5nm,0.6s,mb4.4,baz=284,slow=6.6,SNR=54						
TXAR	Lajitas Array	64.74	329	P	P	14 28 35.5	+1.5
	comp=E,0.3nm,0.3s,mb3.7,baz=169,slow=6.4,SNR=4.9						
DBIC	Dimbokro	72.83	73	P	P	14 29 23.2	-1.1
	comp=E,9.3nm,0.7s,mb4.8,baz=206,slow=7.4,SNR=17						
DBIC				LR	LR	15 00 24.9	
	comp=E,80nm,18.5s,MS4.0,baz=133,slow=35						
PDAR	Pinedale Array	78.60	332	P	P	14 29 57.8	+1.3
	comp=E,0.6nm,0.5s,mb3.8,baz=128,slow=7.4,SNR=4.8						
MAW	Mawson	78.85	164	P	P	14 29 57.5	+0.2
	comp=E,1.3nm,0.8s,mb3.9,baz=267,slow=12,SNR=3.8						
NVAR	Mina Array Bea	79.22	324	P	P	14 30 00.1	+0.2
	comp=E,0.7nm,0.8s,mb3.7,baz=155,slow=6.8,SNR=6.4						
BOSA	Boshof	82.48	118	P	P	14 30 17.0	-0.3
	comp=E,4.5nm,0.5s,mb4.6,baz=244,slow=5.8,SNR=15						
WRA	Warramunga Arr	126.26	211	PKP	PKPdf	14 36 58.2	-1.2
	comp=E,1.7nm,0.5s,baz=159,slow=1.8,SNR=14						
ZAL	Zalesovo	148.72	27	PKP	PKPdf	14 37 38.7	-0.3
	comp=E,4.7nm,0.8s,baz=177,slow=4.2,SNR=12						
ZAL				PKPbc	PKPdf	14 37 42.0	+3.0
	comp=E,4.7nm,0.8s,baz=180,slow=3.8,SNR=23						
MKAR	Makanchi Array	152.10	40	PKP	PKPdf	14 37 43.6	-0.9
	comp=E,6.0nm,0.9s,SNR=3.6						
MKAR				PKPbc	PKPdf	14 37 50.1	+5.7
	comp=E,4.4nm,0.8s,baz=309,slow=1.7,SNR=35						
SONM	Songino Array	160.06	4	PKPab	PKPab	14 38 35.8	+1.7
	comp=E,0.3nm,0.4s,baz=297,slow=3.2,SNR=3.5						

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*IDC **09** 14:25:09.7±3.2, 28.65N×139.33E, h447^{km}±42^{km}, mb2.8/5, mb1 2.9/6, mb1mx2.8/21, mbtmp3.6/6, Error ellipse: s-maj=80.7km s-min=22.6km az=74.0*

*JMA **09** 14:25:09.5, 28.88N×140.29E, h473^{km}, M3.3*

ISC 09 14:25:08.6±0.7, **28.7N**±0.1×**140.0E**±0.3, **h476**^{km}±13^{km}, **n15**, σ**0^{s}78**/16, **mb3.1**/5, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.55	130	P	P	14 26 15.2	+0.1
CBIJ				eS	S	14 27 07.4	-0.4
JIE	Ise	6.29	334	P	P	14 26 48.7	+1.0
JKN2	Miekihoku	6.33	331	P	P	14 26 48.9	+0.8
JOD2	Odawara 2	6.54	354	P	P	14 26 50.3	0.0
JNY	Yasuok	6.84	345	P	P	14 26 53.8	+0.5
JHU	Hanno	7.11	355	P	P	14 26 55.5	-0.7
JRY	Ryogami san	7.31	353	P	P	14 26 58.2	-0.1
JAG	Ashikaga	7.67	357	P	P	14 27 01.4	-0.7
JHO	Hitachi	7.86	3	P	P	14 27 05.0	+0.9
MJAR	Matsushiro Arr	7.92	350	P	P	14 27 04.0	-0.8
	0.5nm,0.3s,baz=172,slow=10,SNR=4.1						
SONM	Songino Array	32.18	316	P	P	14 30 56.8	-0.4
	0.3nm,0.4s,mb3.1,baz=116,slow=7.0,SNR=2.4						
MKAR	Makanchi Array	47.93	309	P	P	14 33 02.8	-1.3
	0.2nm,0.5s,mb2.7,baz=95,slow=9.7,SNR=3.6						
WRA	Warramunga Arr	48.71	187	P	P	14 33 10.7	+0.4
	0.2nm,0.3s,mb3.0,baz=0.9,slow=7.6,SNR=4.8						
BVAR	Borovoye Array	55.51	317	P	P	14 33 58.5	-0.8
	0.4nm,0.5s,mb3.0,baz=77,slow=9.3,SNR=3.7						
FINES	FINESS Array B	75.61	333	P	P	14 36 06.2	+1.7
	2.7nm,0.9s,mb3.8,baz=79,slow=7.1,SNR=5.4						

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*IDC **09** 14:39:14.5±3.1, 10.84S×123.37E, mb4.0/3, mb1 4.0/4, mb1mx3.8/12, mbtmp3.8/4, ML3.6/1, Error ellipse: s-maj=196.3km s-min=42.2km az=50.0*

ISC 09 14:39:26.2±3.5, **10.7S**±0.2×**124.1E**±0.2, **h121**^{km}±41^{km}, **n7**, σ**0^{s}59**/9, **mb3.8**/3, **1D**, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	7.49	169	⇓iP	P	14 41 13.5	-0.6
	21nm,0.9s						
FITZ				eS	S	14 42 38.2	+0.3
KAKA	Kakadu	8.39	104	eP	Px	14 41 45.6	
	4.7nm,0.4s						
KAKA				eS	Sx	14 43 20.8	
WRA	Warramunga Arr	13.46	134	Pn	P	14 42 33.4	+0.1
	0.3nm,0.3s,baz=303,slow=14,SNR=9.1						
WRA				Sn	S	14 44 59.2	-1.1
	0.9nm,0.3s,baz=310,slow=20,SNR=8.5						
WB2	Warramunga Arr	13.47	134	eP	P	14 42 33.9	+0.5
WB2				eS	S	14 45 01.3	+0.8
SONM	Songino Array	60.38	346	P	P	14 49 24.9	-0.1
	0.4nm,0.6s,mb3.6,baz=149,slow=8.4,SNR=2.3						
MKAR	Makanchi Array	68.35	330	P	P	14 50 17.2	+0.6
	2.2nm,0.8s,mb4.1,baz=135,slow=7.6,SNR=21						
ZAL	Zalesovo	72.51	337	P	P	14 50 41.0	-0.5
	1.1nm,0.6s,mb3.8,baz=321,slow=5.2,SNR=8.0						

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*BUG **09** 14:41:24.5, 51.53N×6.82E, h1^{km}, ML1.6*

*LDG **09** 14:41:25.8±0.3, 51.59N×6.87E, h1^{km}, Ml2.8/3, Error ellipse: s-maj=5.0km s-min=2.9km az=15.0, Suspected Mining induced.*

*CSEM **09** 14:41:25.9±0.1, 51.60N×6.85E, h2^{km}, ML2.7/3, Error ellipse: s-maj=3.5km s-min=2.0km az=126.0*

*BNS **09** 14:41:26.3±1.0, 51.57N×6.85E, h1^{km}, ML1.8*

*BGR **09** 14:41:26.6±0.7, 51.50N×6.88E, h1^{km}, ML1.8/2, Error ellipse: s-maj=10.0km s-min=5.6km az=125.0*

*NEIC **09** 14:41:27.7±8.6, 51.40N×6.79E, h10^{km}, ML2.8(LDG), Error ellipse: s-maj=96.0km s-min=17.0km az=190.0*

ISC 09 14:41:24.4±0.6, **51.53N**±0.03×**6.71E**±0.05, **n19**, σ**1^{s}32**/35, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BZER	Hlnxe	0.13	48	Pg	Pg	14 41 26.2	-0.8
BZER				Sg	Sg	14 41 27.7	-1.1
LAUG	Laupendahl	0.23	141	ePg	Pg	14 41 30.1	+1.1
LAUG				eSg	Sg	14 41 34.5	+2.4
	93nm,1.3s						
BUG	Bochum--Univer	0.36	105	ePg	Pg	14 41 32.2	+0.6
	SNR=2.7						
HOBG	Hohbusch	0.67	144	ePg	Pg	14 41 39.3	+1.4
HOBG				eSg	Sg	14 41 48.1	+1.2
HGN	Heimansgroeve	0.91	213	ePg	Pg	14 41 45.0	+2.4
	10.0nm,0.2s						
HGN				eSg	Sg	14 41 59.0	+4.2
KLL	Kalltalsperre	0.92	196	ePg	Pg	14 41 45.0	+2.2
KLL				eSg	Sg	14 41 58.6	+3.5
	36nm,0.6s						
IBBN	Ibbenburen	1.01	39	ePg	Pg	14 41 44.7	+0.1
	SNR=1.7						
BGG	Burgeitz	1.39	163	ePg	Pg	14 41 51.6	-0.4
BGG				eSg	Sg	14 42 10.6	+0.1
TNS	Taunus Mts	1.71	139	eSg	Sg	14 42 17.9	-3.4
GIVF	Givet	1.87	221	ePn	Pn	14 41 58.8	+0.9
GIVF				ePg	Pg	14 42 02.7	+1.0
GIVF				eSn	Sn	14 42 22.2	-0.3
GIVF				eSg	Sg	14 42 27.6	+1.0
	14nm,0.3s						
WLF	Walferdange	1.90	191	ePg	Pg	14 42 02.6	+0.2
	SNR=1.0						
WLF				eSg	Sg	14 42 26.3	-1.4
BAIF	Baives	2.17	228	ePg	Pg	14 42 08.2	+0.5
BAIF				eSn	Sn	14 42 29.3	-0.9
BAIF				eSg	Sg	14 42 37.0	+0.4
CLZ	Clausthal	2.30	81	eSg	Sg	14 42 35.9	-5.0
RFYF	Reffroy	3.01	196	ePn	Pn	14 42 14.0	-0.3
CDF	Champ du Feu	3.15	173	ePn	Pn	14 42 15.3	-0.8
CDF				eSg	Sg	14 43 05.9	-3.2
	2.4nm,0.3s						
MEZF	Maizieres J'vi	3.22	200	ePn	Pn	14 42 16.9	-0.3
SFTF	Sexfontaines	3.50	199	ePn	Pn	14 42 20.7	-0.5
SFTF				eSn	Sn	14 43 01.6	-2.4
SFTF				eSg	Sg	14 43 18.5	-2.5
	9.1nm,0.4s						
LOR	Lormes	4.66	205	ePn	Pn	14 42 36.5	-1.1
	baz=30						
LOR				eSn	Sn	14 43 29.3	-3.9
GRR	Gorron	5.81	240	eSn	Sn	14 43 56.6	-5.6

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*IDC **09** 15:07:18.7±0.6, 52.72S×18.67E, mb4.4/11, mb1 4.5/11, mb1mx4.4/15, mbtmp4.5/11, MS4.2/11, Ms1 4.1/11, ms1mx4.0/18, Error ellipse: s-maj=21.4km s-min=17.7km az=82.0*

*MOS **09** 15:07:19.1±1.5, 52.61S×18.63E, h10^{km}, mb4.9/4, Error ellipse: s-maj=31.7km s-min=12.3km az=91.8*

*HRVD **09** 15:07:20.4±0.4, 52.81S×19.15E, h12^{km}, MW5.0/52, Centroid moment Tensor Solution. LP body waves: s24,c27;Mantle waves: s52,c81; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.38±.16; M$_{\theta\theta}$2.66±.14; M$_{\phi\phi}$0.72±.14; M$_{r\theta}$0.85±.46; M$_{\theta\phi}$-1.23±.14; M$_{\phi r}$-1.99±.53; Best double couple: M$_0$3.936×10^{16} NP1:φ$_s$101°,δ34°, λ-119°. NP2:φ$_s$315°,δ61°,λ-72°. Principal axes: T 3.67, Plg14°, Azm32°; N .536, Plg16°, Azm126°; P -4.203, Plg68°, Azm262°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **09** 15:07:20.4±0.3, 52.66S×18.53E, h10^{km}, mb5.0/6 Error ellipse: s-maj=13.3km s-min=9.9km az=76.0*

ISC 09 15:07:19.2±0.4, **52.69S**±0.06×**18.4E**±0.1, **h10**^{km}, **n74**, σ**0^{s}85**/45, **mb4.6**/16, **MS4.2**/13, **13C**, **Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVL	N'lazarevskaya	18.39	187	eP	P	15 11 36.5	+0.9
NVL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NVL				MLR	MLR		
	comp=Z,16nm,17.6s						
SYO	Syowa Base	19.17	157	⇑P	P	15 11 45.4	+0.3
SYO	Syowa Base	19.17	157	⇑eP	P	15 11 45.4	+0.3
SUR	Sutherland	20.37	6	P	P	15 11 58.1	-0.4
	comp=Z,18nm,1.0s,baz=180,slow=8.1,SNR=4.2						
SUR				LR	LR	15 17 59.8	
	comp=Z,1μm,20.3s,MS4.2,baz=16,slow=31						
SNAA	Sanae	21.23	198	⇑i	P	15 12 07.4	+0.2
SNAA	Sanae	21.23	198	⇑i	P	15 12 11.1	+3.9
SNAA	Sanae	21.23	198		P	15 12 14.3	+7.1
SNAA	Sanae	21.23	198		P	15 12 23.7	+17
SNAA	Sanae	21.23	198	P	P	15 12 07.6	+0.4
	comp=Z,12nm,0.9s,mb4.2,baz=44,slow=9.2,SNR=67						
SNAA				LR	LR	15 18 09.6	
	comp=Z,280nm,21.3s,MS3.6,baz=26,slow=31						
SNAA	Sanae	21.23	198	⇑iP	P	15 12 11.1	+3.9
VNA2	Neumayer--Watz	21.65	203	⇑i	P	15 12 13.7	+2.3
VNA2	Neumayer--Watz	21.65	203	⇑i	P	15 12 17.7	+6.3
VNA2	Neumayer--Watz	21.65	203		P	15 12 26.2	+15
VNA1	Neumayer--Stat	21.67	204	⇑i	P	15 12 14.2	+2.6
VNA1	Neumayer--Stat	21.67	204	⇑i	P	15 12 18.5	+6.9
VNA1	Neumayer--Stat	21.67	204		P	15 12 22.1	+11
VNA1	Neumayer--Stat	21.67	204		P	15 12 30.3	+19
VNA3	Neumayer Olymp	22.41	204	⇑i	P	15 12 21.4	+2.4
VNA3	Neumayer Olymp	22.41	204	⇑i	P	15 12 24.0	+5.0
VNA3	Neumayer Olymp	22.41	204		P	15 12 33.8	+15
VNA3	Neumayer Olymp	22.41	204		P	15 12 39.2	+20
BOSA	Boshof	24.58	15	P	P	15 12 40.6	+0.2
	comp=Z,7.1nm,0.9s,mb4.2,baz=181,slow=7.0,SNR=5.3						
BOSA				LR	LR	15 20 27.4	
	comp=Z,984nm,19.8s,MS4.3,baz=203,slow=32						
MAW	Mawson	25.95	142	P	P	15 12 51.3	-1.6
	comp=Z,8.8nm,0.9s,mb4.3,baz=276,slow=7.6,SNR=13						
MAW				LR	LR	15 21 08.7	
	comp=Z,305nm,18.7s,MS3.9,baz=52,slow=32						
LBTB	Lobatse	28.17	14	LR	LR	15 22 45.9	
	comp=Z,868nm,19.4s,MS4.4,baz=193,slow=33						
QSPA	South Pole Qui	37.55	180	eP	P	15 14 34.5	-0.2
	comp=Z,33nm,1.2s,mb4.9						
QSPA				LR	LR		
	comp=Z,769nm,20.0s,MS4.5						
VNDA	Vanda	48.09	170	eP	P	15 15 59.5	-0.7
	comp=Z,16nm,1.4s,mb4.8						
VNDA				LR	LR		
	comp=Z,555nm,21.0s,MS4.5						
VNDA	Vanda	48.09	170	eP	P	15 15 59.5	-0.7
VNDA				pmax	pmax		
	comp=Z,16nm,1.4s						
VNDA				MLR	MLR		
	comp=Z,555nm,21.0s						
USHA	Ushuaia	48.20	231	P	P	15 15 59.7	-1.6
	comp=Z,7.4nm,0.8s,mb4.8,baz=122,slow=4.7,SNR=4.9						
SBA	Scott Base	48.28	171	eP	P	15 16 02.1	+0.5
	comp=Z,24nm,1.5s,mb5.0						
SBA	Scott Base	48.28	171	eP	P	15 16 02.1	+0.5
SBA				pmax	pmax		
	comp=Z,24nm,1.5s,mb5.0						
KMBO	Kilima Mbogo	53.74	24	LR	LR	15 37 40.2	
	comp=Z,301nm,21.2s,MS4.3,baz=109,slow=34						
TRQA	Tornquist	55.43	251	eP	P	15 16 55.4	-0.5
	comp=Z,3.4nm,0.7s,mb4.5						
PLCA	Paso Flores	58.38	243	P	P	15 17 16.2	-0.5
	comp=Z,1.6nm,0.7s,mb4.2,baz=118,slow=12,SNR=2.9						
PLCA				LR	LR	15 40 24.3	
	comp=Z,103nm,18.9s,MS4.0,baz=149,slow=34						
CPUP	Villa Florida	61.00	264	eP	P	15 17 34.2	-0.8
	comp=Z,14nm,0.3s,mb5.6						
CPUP	Villa Florida	61.00	264	eP	P	15 17 34.2	-0.8
CPUP				pmax	pmax		
	comp=Z,14nm,0.3s						
DBIC	Dimbokro	62.35	334	P	P	15 17 43.1	-1.1
	comp=Z,11nm,0.7s,mb5.1,baz=151,slow=7.6,SNR=20						
DBIC				LR	LR	15 38 09.0	
	comp=Z,177nm,20.4s,MS4.2,baz=96,slow=30						
BDFB	Brasilia	63.42	279	P	P	15 17 51.8	+0.5

	comp=Z,2.8nm,0.5s,mb4.6,baz=108,slow=5.7,SNR=4.4						
BDFB				LR	LR	15 40 19.4	
	comp=Z,116nm,18.8s,MS4.1,baz=237,slow=31						
LPAZ	**La Paz**	**75.13**	**263**	P	**P**	**15 19 04.5**	**+1.2**
	comp=Z,2.2nm,0.7s,mb4.2,baz=114,slow=4.8,SNR=16						
LPAZ				LR	LR	15 47 17.3	
	comp=Z,129nm,21.9s,MS4.2,baz=285,slow=32						
ABTO	**Aybut**	**76.02**	**34**	⇑P	**P**	**15 19 09.0**	**+0.7**
WHFO	**Wadi Hawf**	**76.70**	**35**	P	**P**	**15 19 12.9**	**+0.7**
	SNR=6.6						
SAML	**Samuel**	**77.83**	**271**	*e*P	**P**	**15 19 18.8**	**+0.3**
	comp=Z,9.8nm,0.8s,mb4.8						
STKA	**Stephens Creek**	**82.34**	**134**	P	**P**	**15 19 41.9**	**-0.4**
	comp=Z,5.8nm,0.8s,mb4.6,baz=251,slow=5.1,SNR=9.0						
BSY	**Bisya**	**82.36**	**36**	P	**P**	**15 19 42.9**	**+0.4**
	SNR=9.7						
SMDO	**Samad**	**82.95**	**36**	P	**P**	**15 19 45.6**	**0.0**
	SNR=8.0						
HOQ	**Hoqain**	**83.17**	**35**	P	**P**	**15 19 47.3**	**+0.6**
	SNR=6.1						
ASHO	**Ashiyiah**	**83.75**	**34**	⇑P	**P**	**15 19 50.1**	**+0.5**
WRA	**Warramunga Arr**	**88.95**	**122**	P	**P**	**15 20 14.2**	**-1.0**
	comp=Z,1.8nm,0.7s,mb4.5,baz=214,slow=4.3,SNR=12						
ROSC	**El Rosal**	**95.48**	**271**	LR	LR	16 01 32.0	
	comp=Z,107nm,18.7s,MS4.3,baz=206,slow=34						
RKT	**Rikitea**	**101.03**	**205**	*e*SS	SS	15 39 54.3	+6.3
RKT				*e*LR	LR	15 54 28.3	
	comp=Z,227nm,35.0s						
TBI	**Tubuai**	**103.55**	**191**	*e*LR	LR	15 55 35.3	
	comp=Z,193nm,28.5s						
PPT	**Papeete**	**109.27**	**192**	*e*LR	LR	15 58 15.6	
	comp=Z,169nm,26.0s						
MKAR	**Makanchi Array**	**113.11**	**42**	PKiKP		15 25 56.1	
	comp=Z,0.6nm,0.7s,baz=188,slow=1.5,SNR=9.2						
BVAR	**Borovoye Array**	**113.94**	**31**	PKiKP		15 25 58.4	
	comp=Z,1.9nm,0.7s,baz=213,slow=1.7,SNR=15						
TAOE	**Nuku Hiva Isla**	**116.01**	**204**	*e*LR	LR	16 01 25.4	
	comp=Z,492nm,34.1s						
ZAL	**Zalesovo**	**119.72**	**39**	PKP	PKPdf	15 26 07.9	-3.8
	comp=Z,1.7nm,0.4s,baz=49,slow=3.5,SNR=6.0						
ARCES	**ARCESS Array B**	**122.02**	**3**	PKP	PKPdf	15 26 12.3	-3.6
	comp=Z,2.4nm,0.7s,baz=153,slow=2.7,SNR=7.0						
SONM	**Songino Array**	**124.89**	**55**	PKP	PKPdf	15 26 18.8	-3.1
	comp=Z,2.1nm,0.7s,baz=216,slow=2.1,SNR=18						
ZAK	**Zakamensk**	**125.08**	**51**	*e*PKIKP	PKPdf	15 26 15.7	-6.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
PDAR	**Pinedale Array**	**144.33**	**275**	PKP	PKPdf	15 26 54.2	-3.5
	comp=Z,7.9nm,0.7s,baz=130,slow=5.0,SNR=51						
LAO	**LASA Array**	**144.44**	**283**	*e*P	PKPbc	15 26 55.6	+1.2
TCUT	**Toone Canyon**	**144.50**	**271**	*e*P	PKPbc	15 26 55.0	+0.2
DUG	**Dugway**	**144.80**	**269**	*e*P	PKPbc	15 26 56.8	+1.1
TPNV	**Topopah Spring**	**144.83**	**262**	*e*P	PKPbc	15 26 57.2	+1.3
HWUT	**Hardware Ranch**	**144.88**	**272**	*e*P	PKPbc	15 26 56.5	+0.7
TIXI	**Tiksi**	**145.08**	**31**	*e*PKIKP	PKPdf	15 26 53.7	-4.5
TIXI				*i*		15 27 01.9	
TIXI				pmax	pmax		
	comp=Z,13nm,0.7s						
TIXI				pmax	pmax		
	comp=Z,24nm,1.4s						
DAC	**Darwin (Calif)**	**145.19**	**260**	*e*P	PKPbc	15 26 58.2	+1.4
LOHW	**Long Hollow**	**145.44**	**276**	*e*P	PKPbc	15 26 57.8	+0.6
RRI2	**Red Ridge**	**145.72**	**275**	*e*P	PKPbc	15 26 59.6	+1.7
IMW	**Indian Meadow**	**145.80**	**276**	*e*P	PKPbc	15 26 59.8	+1.7
ELK	**Elko**	**146.61**	**268**	*e*P	PKPbc	15 27 01.9	+1.9
MNV	**Mina**	**146.94**	**262**	*e*P	PKPbc	15 27 02.9	+2.0
NVAR	**Mina Array Bea**	**147.03**	**262**	PKPbc	PKPdf	15 27 03.9	+1.3
	comp=Z,9.5nm,0.8s,baz=129,slow=5.4,SNR=18						
INK	**Inuvik**	**159.41**	**330**	PKPab	PKPab	15 27 56.2	0.0
	comp=Z,1.7nm,0.7s,baz=86,slow=5.9,SNR=5.7						
ILAR	**Eielson Array**	**165.72**	**334**	PKPab	PKPab	15 28 24.8	+1.1
	comp=Z,3.7nm,0.8s,baz=18,slow=3.7,SNR=29						

*NDI **09** 15:40:13.0±3.8, 34.89N×72.63E, h10^{km}, MD3.6, ML3.5*
*NNC **09** 15:40:20.6±8.9, 34.92N×73.49E, h66^{km}±102^{km}, mpv3.5, Error ellipse: s-maj=112.4km s-min=65.1km az=91.0*
ISC 09 15:40:12.9±1.0, **34.81N**±0.08×**72.7E**±0.2, **h10**^{km}, **n13**, σ**1^{s}41**/20, **4C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**3.44**	**133**	*e*P	**Pn**	**15 41 09.1**	**+1.4**
THN				*e*S	**Sn**	**15 41 50.4**	**+1.5**
DLH	**Dalhousie**	**3.52**	**129**	*e*P	**Pn**	**15 41 10.0**	**+1.2**
DLH				*e*S	**Sn**	**15 41 51.0**	**0.0**
BHK	**Bhakra**	**4.58**	**137**	*e*S	**Sn**	**15 42 18.4**	**+0.5**
SDNR	**Sundarnagar**	**4.85**	**132**	*e*P	**Pn**	**15 41 26.8**	**-0.9**
SDNR				*e*S	**Sn**	**15 42 19.6**	**-5.1**
KLP	**Kalpa**	**5.66**	**124**	*e*P	**Pn**	**15 41 38.3**	**-0.9**
KLP				*e*S	**Sn**	**15 42 39.4**	**-5.7**
KLP				AML	AML	15 42 45.0	
	comp=E,122nm,0.5s						
KLP				AML	AML	15 42 47.9	
	comp=N,132nm,0.8s						
NDI	**New Delhi**	**7.20**	**147**	*e*x	x	15 43 17.0	
KHET	**Khetri**	**7.21**	**158**	*e*P	**Pn**	**15 41 58.5**	**-2.5**
KHET				*e*S	**Sn**	**15 43 16.2**	**-7.6**
KHET				AML	AML	15 43 21.8	
	comp=E,24nm,0.4s						
KHET				AML	AML	15 43 22.1	
	comp=N,17nm,0.4s						
KUDL	**Kundal**	**7.38**	**153**	*e*P	**Pn**	**15 42 02.4**	**-1.0**
KUDL				*e*S	**Sn**	**15 43 20.9**	**-7.1**
SONA	**Sohna**	**7.52**	**149**	*e*S	**Sn**	**15 43 24.0**	**-7.6**
SONA				AML	AML	15 43 26.8	
	comp=N,19nm,0.5s						
SONA				AML	AML	15 43 27.1	
	comp=E,27nm,0.3s						
AAK	**Ala-Archa**	**7.93**	**9**	⇑P	**Pn**	**15 42 09.8**	**-1.3**
	comp=E,1.3nm,0.7s						
AAK				⇑S	**Sn**	**15 43 38.3**	**-3.4**
	comp=E,4.8nm,1.1s						
KK31	**Karatay Array**	**8.46**	**349**	⇓P	**P**	**15 42 22.0**	**+3.6**
	comp=E,1.3nm,0.3s,baz=155,slow=11,SNR=43						
KK31				⇑S	**Sn**	**15 43 55.4**	**+0.5**
	comp=E,1.1nm,0.3s,baz=166,slow=20,SNR=5.9						
AB31	**Akbulak array**	**17.24**	**331**	⇓P	**P**	**15 44 16.3**	**+1.0**
	comp=E,0.4nm,0.5s,baz=148,slow=12,SNR=5.3						
AKTO	**Aktyubinsk**	**18.94**	**330**	⇑P	**P**	**15 44 39.9**	**+3.6**
	comp=E,0.2nm,0.4s						

*NEIC **09** 15:44:15.3, 44.07N×6.92E, h6^{km}, MD2.5(ROM), ML2.4(GEN), After GEN.*
*CSEM **09** 15:44:15.3±0.5, 44.12N×7.04E, h20^{km}, ML2.0, Error ellipse: s-maj=10.9km s-min=4.0km az=53.0*
*GEN **09** 15:44:15.3, 44.07N×6.92E, h6^{km}, ML2.0*
*ROM **09** 15:44:16.3±0.5, 44.13N×7.05E, h12^{km}, Md2.5/3, Error ellipse: s-maj=7.1km s-min=2.0km az=119.0*
ISC 09 15:44:15.2±1.1, **44.08N**±0.04×**6.95E**±0.06, **h12**^{km}±3^{km}, **n39**, σ**0^{s}24**/65, **France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STV	**Sta Anna Valdi**	**0.32**	**59**	P	**Pg**	**15 44 21.9**	**0.0**
STV				S	**Sg**	**15 44 26.5**	**+0.2**
STV	**Sta Anna Valdi**	**0.32**	**59**	P	**Pg**	**15 44 21.9**	**0.0**
STV2	**Anna di Valdie**	**0.32**	**59**	P	**Pg**	**15 44 21.8**	**-0.1**
STV2				S	**Sg**	**15 44 26.4**	**0.0**
STV2	**Anna di Valdie**	**0.32**	**59**	P	**Pg**	**15 44 21.8**	**-0.1**
ENR	**Entracque**	**0.37**	**67**	P	**Pg**	**15 44 22.9**	**0.0**
ENR				S	**Sg**	**15 44 28.1**	**+0.1**
ENR	**Entracque**	**0.37**	**67**	P	**Pg**	**15 44 22.9**	**0.0**
PZZ	**Prazzo**	**0.44**	**15**	P	**Pg**	**15 44 24.1**	**0.0**
PZZ	**Prazzo**	**0.44**	**15**	P	**Pg**	**15 44 24.1**	**0.0**
DOI	**San Damiano**	**0.47**	**27**	Pg	**Pg**	**15 44 24.8**	**-0.1**
DOI				Sg	**Sg**	**15 44 31.2**	**-0.1**
	23nm,0.2s						
MONE	**Monesi**	**0.58**	**90**	P	**Pb**	**15 44 26.7**	**-0.2**
MONE				S	**Sb**	**15 44 34.5**	**-0.3**
MONE	**Monesi**	**0.58**	**90**	P	**Pb**	**15 44 26.7**	**-0.1**
NEGI	**Negi**	**0.60**	**113**	P	**Pb**	**15 44 26.9**	**-0.1**
NEGI				S	**Sb**	**15 44 34.9**	**-0.2**
NEGI	**Negi**	**0.60**	**113**	P	**Pb**	**15 44 26.9**	**-0.1**
ROB	**Roburent**	**0.70**	**72**	P	**Pb**	**15 44 28.7**	**-0.1**
ROB				S	**Sb**	**15 44 38.1**	**0.0**
ROB	**Roburent**	**0.70**	**72**	P	**Pb**	**15 44 28.7**	**-0.1**
ROB				S	**Sb**	**15 44 38.1**	**0.0**
IMI	**Imperia**	**0.70**	**104**	Pg	**Pg**	**15 44 29.5**	**+0.1**
IMI				Sg	**Sg**	**15 44 38.8**	**0.0**
	21nm,0.4s						
IMI	**Imperia**	**0.70**	**104**	P	**Pb**	**15 44 29.1**	**+0.2**
IMI	**Imperia**	**0.70**	**104**	Pg	**Pg**	**15 44 29.5**	**+0.1**
IMI				S	**Sb**	**15 44 38.5**	**+0.3**
IMI				Sg	**Sg**	**15 44 38.8**	**0.0**
	21nm,0.4s						
BHB	**Bricherasio**	**0.79**	**17**	P	**Pb**	**15 44 30.4**	**0.0**
BHB				S	**Sb**	**15 44 40.5**	**-0.3**
BHB	**Bricherasio**	**0.79**	**17**	P	**Pb**	**15 44 30.4**	**0.0**
BHB				S	**Sb**	**15 44 40.5**	**-0.3**
RORO		**0.81**	**88**	P	**Pb**	**15 44 30.8**	**+0.1**
RORO				S	**Sb**	**15 44 41.6**	**+0.3**
RORO		**0.81**	**88**	P	**Pb**	**15 44 30.8**	**+0.1**
RORO				S	**Sb**	**15 44 41.6**	**+0.3**
RRL	**Cesana Torines**	**0.84**	**352**	P	**Pb**	**15 44 31.4**	**+0.1**
RRL				S	**Sb**	**15 44 42.5**	**+0.2**
RRL	**Cesana Torines**	**0.84**	**352**	P	**Pb**	**15 44 31.5**	**+0.2**
RRL				S	**Sb**	**15 44 42.5**	**+0.2**
FIN	**Finale Ligure**	**0.92**	**82**	Pg	**Pg**	**15 44 33.2**	**-0.4**
FIN				Sg	**Sg**	**15 44 46.1**	**+0.2**
	33nm,0.6s						
FIN	**Finale Ligure**	**0.92**	**82**	P	**Pb**	**15 44 32.7**	**+0.1**
FIN	**Finale Ligure**	**0.92**	**82**	Pg	**Pg**	**15 44 33.2**	**-0.4**
FIN				S	**Sb**	**15 44 44.5**	**0.0**
FIN				Sg	**Sg**	**15 44 46.1**	**+0.2**
	33nm,0.6s						
FENE	**Fenestrelle**	**0.95**	**5**	P	**Pb**	**15 44 33.3**	**+0.2**
FENE				S	**Sb**	**15 44 45.3**	**-0.1**
FENE	**Fenestrelle**	**0.95**	**5**	P	**Pb**	**15 44 33.3**	**+0.2**
FENE				S	**Sb**	**15 44 45.3**	**-0.1**
RSP	**Reno Superiore**	**1.09**	**12**	P	**Pb**	**15 44 35.5**	**0.0**
RSP				S	**Sb**	**15 44 49.2**	**-0.3**
RSP	**Reno Superiore**	**1.09**	**12**	P	**Pb**	**15 44 35.5**	**0.0**
RSP				S	**Sb**	**15 44 49.2**	**-0.3**
PCP	**Pian Castagno**	**1.24**	**68**	P	**Pb**	**15 44 38.0**	**0.0**
PCP	**Pian Castagno**	**1.24**	**68**	P	**Pb**	**15 44 38.0**	**0.0**
LSD	**Ceresole Reale**	**1.38**	**6**	P	**Pn**	**15 44 41.0**	**+0.6**
LSD				S	**Sb**	**15 44 58.5**	**+0.5**
LSD	**Ceresole Reale**	**1.38**	**6**	P	**Pn**	**15 44 41.0**	**+0.6**
LSD				S	**Sb**	**15 44 58.5**	**+0.5**
TRAV		**1.54**	**21**	P	**Pn**	**15 44 42.1**	**-0.5**
TRAV		**1.54**	**21**	P	**Pn**	**15 44 42.1**	**-0.5**
ORX	**Oropa**	**1.71**	**25**	P	**Pn**	**15 44 44.7**	**-0.5**
ORX	**Oropa**	**1.71**	**25**	P	**Pn**	**15 44 44.7**	**-0.5**

*IDC **09** 17:03:42.8±8.8, 19.72N×108.86W, mb3.4/4, mb1 4.0/6, mb1mx3.9/20, mbtmp3.6/6, ML4.0/1, MS3.7/10, Ms1 3.8/10, ms1mx3.6/18, Error ellipse: s-maj=136.6km s-min=63.1km az=152.0*
*NEIC **09** 17:03:49.0±1.3, 20.13N×109.16W, h10^{km}, mb4.2/6, Error ellipse: s-maj=20.3km s-min=15.3km az=119.0*
ISC 09 17:03:43.1±3.5, **19.8N**±0.3×**108.9W**±0.2, **h10**^{km}, **n29**, σ**0^{s}52**/20, **mb3.8**/6, **MS3.6**/8, **Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTX	**Lajitas**	**10.66**	**26**	*e*P	**P**	**17 06 19.3**	**+0.2**
	24nm,1.4s						
TXAR	**Lajitas Array**	**10.66**	**26**	Pn	**P**	**17 06 18.9**	**-0.2**
	0.3nm,0.3s,baz=200,slow=15,SNR=15						
TXAR				LR	LR	17 09 59.6	
	comp=Z,724nm,18.8s,baz=240,slow=35						
GDL2	**Guadalupe Moun**	**13.05**	**17**	*e*P	**P**	**17 06 51.5**	**+0.3**
BNM	**Barren Site**	**14.48**	**8**	*e*P	**P**	**17 07 09.9**	**-0.2**
LAZ	**Ladron**	**14.67**	**6**	*e*P	**P**	**17 07 12.4**	**-0.2**
ANMO	**Albuquerque**	**15.29**	**8**	Pn	**P**	**17 07 20.7**	**0.0**
	baz=170,slow=13,SNR=4.5						
ANMO				LR	LR	17 12 51.0	
	comp=Z,411nm,19.6s,slow=36						
WUAZ	**Wupatki**	**15.84**	**353**	*e*P	**P**	**17 07 27.2**	**-0.7**
	33nm,1.4s						
NEN	**Nelson**	**16.66**	**343**	*e*P	**P**	**17 07 39.6**	**+1.2**
SDCO	**Great Sand Dun**	**18.17**	**9**	*e*P	**P**	**17 07 57.3**	**+0.1**
	15nm,1.3s						
PV01	**Paradox Valley**	**18.31**	**1**	*e*P	**P**	**17 07 58.7**	**-0.3**
NVAR	**Mina Array Bea**	**20.30**	**338**	P	**P**	**17 08 21.2**	**-0.8**
	0.4nm,0.6s,baz=161,slow=16,SNR=4.8						
DUG	**Dugway**	**20.64**	**352**	*e*P	**P**	**17 08 24.9**	**-0.5**
	17nm,1.4s						
DAU	**Daniels Canyon**	**20.68**	**355**	*e*P	**P**	**17 08 27.0**	**+1.1**
ELK	**Elko**	**21.60**	**347**	P	**P**	**17 08 35.3**	**+0.1**
	2.1nm,1.0s,mb3.5,baz=168,slow=10,SNR=5.5						
ELK				LR	LR	17 16 23.9	
	comp=Z,130nm,19.4s,MS3.3,baz=163,slow=35						
HWUT	**Hardware Ranch**	**21.89**	**355**	*e*P	**P**	**17 08 37.7**	**-0.4**
	13nm,1.2s,mb4.2						
PDAR	**Pinedale Array**	**22.94**	**359**	P	**P**	**17 08 48.7**	**+0.2**
	2.0nm,0.9s,mb3.6,baz=172,slow=10,SNR=9.5						
LOHW	**Long Hollow**	**23.82**	**357**	*e*P	**P**	**17 08 57.5**	**+0.4**
	14nm,1.5s,mb4.2						
YBH	**Yreka Blue Hor**	**24.83**	**335**	LR	LR	17 18 28.9	
	comp=Z,140nm,18.9s,MS3.5,baz=148,slow=36						
JTS	**JuntasAbangare**	**24.97**	**109**	LR	LR	17 18 51.9	
	comp=Z,60nm,18.7s,MS3.1,baz=123,slow=36						
MCMT	**McKenzie Canyo**	**25.21**	**353**	*e*P	**P**	**17 09 11.1**	**+0.6**
BOZ	**Bozeman (W)**	**25.91**	**356**	*e*P	**P**	**17 09 16.6**	**-0.5**
	9.4nm,1.6s,mb4.1						
NEW	**Newport**	**29.20**	**349**	LR	LR	17 22 19.7	
	comp=Z,87nm,18.8s,MS3.4,baz=172,slow=38						
ULM	**Lac du Bonnet**	**32.15**	**16**	LR	LR	17 23 03.6	
	comp=Z,205nm,18.7s,MS3.8,baz=273,slow=36						
YKA	**Yellowknife Ar**	**42.88**	**356**	LR	LR	17 29 32.1	
	comp=Z,145nm,19.2s,MS3.9,baz=180,slow=36						
ILAR	**Eielson Array**	**51.54**	**340**	P	**P**	**17 12 50.9**	**-0.2**
	0.3nm,0.6s,mb3.4,baz=148,slow=6.3,SNR=4.9						
LPAZ	**La Paz**	**53.77**	**129**	LR	LR	17 33 39.8	
	comp=Z,62nm,19.7s,MS3.7,baz=106,slow=34						
PPT	**Papeete**	**54.49**	**230**	*e*LR	LR	17 28 49.9	
	130nm,27.0s						
TBI	**Tubuai**	**58.30**	**225**	*e*LR	LR	17 30 36.3	
	156nm,34.2s						
NOA	**NORSAR Array B**	**86.36**	**25**	LR	LR	17 54 01.3	
	comp=Z,69nm,18.3s,MS4.1,baz=255,slow=35						

*MOS **09** 17:09:00.4±1.4, 8.15S×117.82E, h33^{km}, mb4.7/4, Error ellipse: s-maj=23.6km s-min=10.9km az=121.4*
*NEIC **09** 17:09:01.0±0.3, 8.23S×117.67E, mb4.7/8, Error ellipse: s-maj=14.7km s-min=5.8km az=60.0*
*IDC **09** 17:09:00.9±0.7, 8.22S×117.65E, h21^{km}±4^{km}, mb4.3/9, mb1 4.3/11, mb1mx4.2/18, mbtmp4.3/11, ML4.1/2, MS3.9/1, Ms1 3.9/1, ms1mx2.9/16, Error ellipse: s-maj=26.6km s-min=15.0km az=64.0*
*BJI **09** 17:09:02.2, 8.20S×117.70E, h22^{km}, mB4.9, mb4.5*
ISC 09 17:08:58.7±0.3, **8.15S**±0.07×**117.83E**±0.09, **h21**^{km}, **h21**^{km}±1.4^{km}**:pP-P**, **n51**, σ**1^{s}01**/54, **mb4.6**/22, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.48**	**143**	*e*P	**P**	**17 11 57.3**	**-0.8**
	13nm,0.6s						
FITZ				*e*S	**S**	**17 14 13.3**	**-4.2**
FITZ	**Fitzroy Crossi**	**12.48**	**143**	Pn	**P**	**17 11 56.9**	**-1.2**
	0.8nm,0.3s,baz=312,slow=8.8,SNR=13						
FITZ				Sn	**S**	**17 14 13.2**	**-4.4**
	1.2nm,0.3s,baz=210,slow=20,SNR=3.3						
FITZ				LR	LR	17 17 42.1	
	comp=Z,570nm,19.3s,baz=64,slow=42						
MBWA	**Marble Bar**	**13.07**	**172**	*e*P	**P**	**17 12 04.0**	**-2.0**
	13nm,0.6s						
WRA	**Warramunga Arr**	**19.83**	**128**	P	**P**	**17 13 30.4**	**-0.9**
	0.7nm,0.3s,baz=306,slow=9.6,SNR=42						
WRA				S	**S**	**17 17 07.1**	**-0.8**
	0.0nm,0.3s,baz=290,slow=24,SNR=2.5						
WRAB	**Tennant Creek**	**19.83**	**128**	*e*P	**P**	**17 13 30.9**	**-0.4**
	23nm,0.9s						
WRAB	**Tennant Creek**	**19.83**	**128**	*e*P	**P**	**17 13 30.9**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,23nm,0.9s						
WB2	**Warramunga Arr**	**19.84**	**128**	*e*P	**P**	**17 13 31.1**	**-0.2**
ASPA	**Alice Springs**	**21.80**	**137**	*e*P	**P**	**17 13 53.0**	**+1.5**
KLBR	**Kellerberrin**	**23.33**	**180**	*e*P	**P**	**17 14 07.2**	**+0.6**
	comp=Z,30nm,1.3s,mb4.6						
FORT	**Forrest**	**24.46**	**158**	*e*P	**P**	**17 14 18.8**	**+1.2**
	comp=Z,22nm,0.9s,mb4.6						
NWAO	**Narrogin (SRO)**	**24.66**	**181**	P	**P**	**17 14 19.8**	**+0.2**
	comp=Z,11nm,0.7s,mb4.5,baz=6.9,slow=11,SNR=9.2						
NWAO	**Narrogin (SRO)**	**24.66**	**181**	*e*P	**P**	**17 14 17.0**	**-2.5**
CTA	**Charters Tower**	**29.95**	**116**	P	**P**	**17 15 09.4**	**+1.3**
	comp=Z,5.3nm,0.9s,mb4.3,baz=299,slow=10,SNR=5.2						
STKA	**Stephens Creek**	**32.34**	**140**	*e*P	**P**	**17 15 30.1**	**+1.1**
	comp=Z,7.4nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**32.34**	**140**	P	**P**	**17 15 29.7**	**+0.7**
	comp=Z,7.8nm,0.5s,mb4.8,baz=313,slow=9.6,SNR=39						
ENH	**Enshi**	**39.03**	**349**	*e*P	**P**	**17 16 25.8**	**-0.1**
LSA	**Lhasa**	**45.55**	**327**	P	**P**	**17 17 21.6**	**+2.5**
LSA	**Lhasa**	**45.55**	**327**	*e*P	**P**	**17 17 22.1**	**+2.9**
	comp=Z,7.1nm,0.8s,mb4.7						
LSA	**Lhasa**	**45.55**	**327**	*e*P	**P**	**17 17 22.1**	**+3.0**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
GUN	**Gumba**	**47.32**	**320**	*e*P	**P**	**17 17 33.5**	**+0.3**
	comp=Z,19nm,0.6s,mb5.2						
PKI	**Pulchoki**	**47.38**	**320**	*e*P	**P**	**17 17 33.8**	**+0.1**
DMN	**Daman**	**47.60**	**319**	*e*P	**P**	**17 17 35.3**	**-0.1**
	comp=Z,19nm,1.0s,mb5.1						
KKN	**Kakani**	**47.62**	**320**	*e*P	**P**	**17 17 35.3**	**-0.2**
	comp=Z,10nm,0.8s,mb4.9						
GKN	**Gorkha**	**48.18**	**319**	*e*P	**P**	**17 17 39.1**	**-0.8**
	comp=Z,10.0nm,0.7s,mb4.9						
KOLN	**Koldanda**	**48.69**	**318**	*e*P	**P**	**17 17 44.1**	**+0.3**
	comp=Z,11nm,0.8s,mb4.9						
GTA	**Gaotai**	**50.18**	**342**	*e*P	**P**	**17 18 03.6**	**+8.5**
GTA				AP	pP	17 18 08.3	+6.8
GTA				XP	sP	17 18 11.0	+7.0
MDJ	**Mudanjiang**	**53.58**	**10**	P	**P**	**17 18 20.8**	**+0.2**
MDJ				AMB	AMB		
	comp=Z,170nm,5.8s						
MDJ	**Mudanjiang**	**53.58**	**10**	*e*P	**P**	**17 18 21.3**	**+0.7**
SONM	**Songino Array**	**56.65**	**351**	P	**P**	**17 18 43.7**	**+0.9**
	comp=Z,3.6nm,0.7s,mb4.5,baz=170,slow=9.1,SNR=36						
SONM				pP	pP	17 18 50.1	+0.9
	comp=Z,6.3nm,0.8s,baz=170,slow=7.9,SNR=20						
MK02	**Makanchi Array**	**63.15**	**333**	P	**P**	**17 19 27.0**	**-0.4**
MK02				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
MKAR	**Makanchi Array**	**63.18**	**333**	P	**P**	**17 19 27.2**	**-0.4**
	comp=Z,1.3nm,0.6s,mb4.2,baz=155,slow=7.1,SNR=22						
MKAR				pP	pP	17 19 34.0	-0.2
	comp=Z,6.5nm,0.8s,baz=141,slow=8.0,SNR=25						
MKAR	**Makanchi Array**	**63.18**	**333**	P	**P**	**17 19 27.2**	**-0.4**
MKAR				pP	pP	17 19 34.0	-0.2
AAK	**Ala-Archa**	**64.12**	**326**	*e*P	**P**	**17 19 31.7**	**-2.2**
	comp=Z,4.1nm,0.9s,mb4.5						
AAK	**Ala-Archa**	**64.12**	**326**	*e*P	**P**	**17 19 31.7**	**-2.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
BOD	**Bodaibo**	**65.81**	**358**	*e*P	**P**	**17 19 43.6**	**-1.0**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KURK	**Kurchatov**	**67.73**	**334**	*e*P	**P**	**17 20 02.9**	**+6.0**
	comp=Z,2.9nm,0.9s,mb4.3						
KURK	**Kurchatov**	**67.73**	**334**	*e*P	**P**	**17 20 02.9**	**+6.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
ZAL	**Zalesovo**	**67.84**	**340**	P	**P**	**17 19 56.5**	**-1.0**
	comp=Z,1.5nm,0.4s,mb4.4,baz=22,slow=7.3,SNR=3.3						
ZAL				pP	pP	17 20 03.6	-0.4
	comp=Z,1.5nm,0.4s,baz=316,slow=3.0,SNR=5.0						
ZAL	**Zalesovo**	**67.84**	**340**	P	**P**	**17 19 56.5**	**-1.0**
ZAL				pP	pP	17 20 03.6	-0.4
MAW	**Mawson**	**69.64**	**200**	P	**P**	**17 20 08.4**	**0.0**
	comp=Z,3.9nm,0.6s,mb4.5,baz=73,slow=7.1,SNR=16						
VNDA	**Vanda**	**73.01**	**171**	*e*P	**P**	**17 20 29.0**	**+0.5**
CHKZ	**Chkalovo**	**73.32**	**333**	*e*P	**P**	**17 20 30.8**	**+0.1**
SBA	**Scott Base**	**74.02**	**170**	*e*P	**P**	**17 20 36.0**	**+1.7**
AB31	**Akbulak array**	**76.20**	**325**	*i* P	**P**	**17 20 51.3**	**+4.0**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
KMBO	**Kilima Mbogo**	**80.51**	**270**	P	**P**	**17 21 11.0**	**-0.6**
	comp=Z,1.4nm,0.9s,mb3.9,baz=45,slow=12,SNR=4.4						
KMBO				pP	pP	17 21 18.3	0.0
	comp=Z,0.8nm,0.7s,baz=47,slow=24,SNR=3.1						
BOSA	**Boshof**	**88.40**	**241**	P	**P**	**17 21 51.2**	**+0.1**
	comp=Z,1.3nm,0.6s,mb4.3,baz=45,slow=8.6,SNR=2.8						
BOSA	**Boshof**	**88.40**	**241**	P	**P**	**17 21 51.2**	**+0.1**
SNAA	**Sanae**	**91.50**	**196**		**P**	**17 22 06.0**	**+1.4**
SNAA	**Sanae**	**91.50**	**196**		**P**	**17 22 13.3**	**+8.7**
VNA2	**Neumayer--Watz**	**93.14**	**196**		**P**	**17 22 16.3**	**+4.2**
VNA2	**Neumayer--Watz**	**93.14**	**196**		**P**	**17 22 26.2**	**+14**

*MOS **09** 17:58:38.4±1.5, 36.81N×73.61E, h10^{km}, mb4.0/1, Error ellipse: s-maj=14.3km s-min=6.0km az=102.0*
*BJI **09** 17:58:40.4, 36.70N×73.50E, h10^{km}, mb4.3, ML4.8, Ms4.5*
*NEIC **09** 17:58:40.4±0.6, 36.70N×73.46E, h10^{km}, mb3.7/4, Error ellipse: s-maj=14.7km s-min=6.8km az=50.0*
*IDC **09** 17:58:49.9±5.1, 37.20N×73.70E, h78^{km}±46^{km}, mb3.6/8, mb1 3.9/12, mb1mx3.8/22, mbtmp4.1/12, ML4.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.8/25, Error ellipse: s-maj=24.5km s-min=17.3km az=177.0*
*NNC **09** 17:58:54.4±5.8, 37.38N×73.26E, h166^{km}±52^{km}, mpv4.5, Error ellipse: s-maj=51.2km s-min=31.5km az=16.0*
ISC 09 17:58:47.5±0.3, **36.88N**±0.02×**73.90E**±0.06, **h121**^{km}±7^{km}, **n90**, σ**1^{s}42**/116, **mb3.8**/9, **13C-7D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRNI	**Srinagar**	**2.88**	**164**	*e*SG	**S**	**18 00 13.0**	**+5.4**
SRNI				*e*x	**S**	**18 00 13.0**	**+5.4**
KSH	**Kashi**	**3.10**	**31**	P	**P**	**17 59 38.5**	**+2.4**
KSH				S	**S**	**18 00 15.4**	**+2.5**
KSH				Smax			
	comp=N,4µm,1.0s						
KSH				Smax			
	comp=E,4µm,1.3s						
CHCP	**Chirah Chowk**	**3.25**	**189**	P	**P**	**17 59 40.5**	**+2.4**
CEP	**Cherat**	**3.45**	**209**	P	**P**	**17 59 41.1**	**+0.3**
JMU	**Jammu**	**4.23**	**168**	*e*x	**S**	**18 00 40.5**	**+0.4**
THW	**Thamme Wali**	**4.44**	**204**	P	**P**	**17 59 53.8**	**-0.3**
DLH	**Dalhousie**	**4.65**	**158**	*e*P	**P**	**17 59 59.0**	**+2.1**
DLH				*e*x	x	18 01 50.0	
THN	**Thein Dam**	**4.68**	**161**	*e*P	**P**	**17 59 58.9**	**+1.6**
THN				*e*x	**S**	**18 00 50.7**	**-0.3**
SARP	**Sargodha**	**5.05**	**192**	P	**P**	**18 00 02.1**	**-0.1**
SARP				S	**S**	**18 00 56.0**	**-3.8**
SBDP	**Sheikh Budin**	**5.23**	**210**	P	**P**	**18 00 04.8**	**+0.1**
AML	**Almayashu**	**5.25**	**358**	P	**P**	**18 00 04.3**	**-0.7**
	SNR=262						
KZA	**Kyzart**	**5.30**	**11**	P	**P**	**18 00 05.9**	**+0.3**
	SNR=43						
UCH	**Uchtor**	**5.36**	**5**	P	**P**	**18 00 06.8**	**+0.3**
	SNR=194						
ULHL	**Ulahol**	**5.66**	**18**	P	**P**	**18 00 11.0**	**+0.5**
	SNR=29						
AAK	**Ala-Archa**	**5.77**	**4**	P	**P**	**18 00 12.2**	**+0.3**
	SNR=87						
AAK	**Ala-Archa**	**5.77**	**4**	⇑P	**P**	**18 00 12.0**	**+0.1**
	comp=E,21nm,0.4s						
AAK				⇓S	**S**	**18 01 15.3**	**-2.1**
	comp=E,96nm,0.8s						
AAK	**Ala-Archa**	**5.77**	**4**	⇑P	**P**	**18 00 12.0**	**+0.1**
	comp=E,21nm,0.4s						
AAK				S	**S**	**18 01 15.3**	**-2.1**
AAK	**Ala-Archa**	**5.77**	**4**	⇑PN	**P**	**18 00 12.0**	**+0.1**
AAK				S	**S**	**18 01 15.3**	**-2.1**
AAK				pmax	pmax		
	comp=Z,21nm,0.4s						
EKS2	**Erkin-Say**	**5.78**	**359**	P	**P**	**18 00 11.8**	**-0.3**
	SNR=297						
KBK	**Karagaybulak**	**5.83**	**8**	P	**P**	**18 00 13.3**	**+0.5**
	SNR=103						
BHK	**Bhakra**	**5.83**	**158**	*e*x	**S**	**18 01 21.1**	**+2.1**
BHK				*e*x	x	18 02 01.0	
SDNR	**Sundarnagar**	**5.94**	**154**	*e*P	**P**	**18 00 15.0**	**+0.8**
SDNR				*e*S	**S**	**18 01 18.6**	**-2.9**
DRP	**Derazinda**	**5.96**	**212**	P	**P**	**18 00 15.2**	**+0.6**
FRU	**Bishkek**	**5.97**	**5**	*e*PN	**P**	**18 00 19.0**	**+4.3**
FRU				*e*		18 00 41.0	
FRU				*e*S	**S**	**18 01 23.0**	**+0.6**
FRU				*i*		18 02 00.0	
FRU				pmax	pmax		
	comp=Z,190nm,1.6s						
FRU				smax			
	comp=N,180nm,1.8s						
FRU				pmax	pmax		
	comp=N,1µm,1.9s						
CHMS	**Chumysh**	**6.15**	**6**	P	**P**	**18 00 17.1**	**0.0**
	SNR=32						
TKM2	**Tokmak 2**	**6.17**	**12**	P	**P**	**18 00 18.1**	**+0.6**
	SNR=45						
SMLA	**Simla**	**6.34**	**154**	*e*P	**P**	**18 00 19.6**	**-0.2**
SMLA				*e*S	**S**	**18 01 24.7**	**-6.7**
USP	**Ospenovka**	**6.40**	**4**	P	**P**	**18 00 20.4**	**-0.2**
	SNR=9.1						
KLP	**Kalpa**	**6.43**	**145**	*e*P	**P**	**18 00 22.5**	**+1.4**

KLP				*e*S	S	18 01 31.2	-2.4
KLP				AML	AML	18 02 39.5	
	comp=N,214nm,0.8s						
KLP				AML	AML	18 02 39.7	
	comp=E,339nm,0.8s						
KK31	**Karatay Array**	6.74	338	⇑P	P	18 00 22.4	-2.9
	comp=E,16nm,0.3s,baz=153,slow=14,SNR=228						
KK31				⇑S	S	18 01 31.9	-9.1
	comp=E,46nm,0.4s,baz=167,slow=18,SNR=7.4						
KK31	**Karatay Array**	6.74	338	⇑P	P	18 00 22.4	-2.9
	comp=E,16nm,0.3s						
KK31				S	S	18 01 31.9	-9.1
KKAR	**Karatay Array**	6.74	338	PN	P	18 00 22.4	-2.8
KKAR				pmax	pmax		
	comp=Z,16nm,0.4s						
KALG	**Kalgarh**	8.40	150	*e*P	P	18 00 48.5	+0.9
KALG				*e*S	S	18 02 15.5	-5.8
NDI	**New Delhi**	8.63	160	*e*P	P	18 00 51.8	+1.0
NDI				*e*S	S	18 02 15.6	-11
NDI				AML	AML	18 02 28.0	
	comp=E,124nm,0.5s						
NDI				AML	AML	18 02 32.1	
	comp=N,52nm,0.4s						
AYAN	**Aya Nagar**	8.80	161	*e*P	P	18 00 53.4	+0.4
AYAN				*e*S	S	18 02 22.0	-9.0
KHET	**Khetri**	8.93	169	*e*P	P	18 00 54.5	-0.1
KHET				*e*S	S	18 02 22.2	-12
KHET				AML	AML	18 02 31.7	
	comp=E,68nm,0.3s						
KHET				AML	AML	18 02 32.2	
	comp=N,43nm,0.2s						
KUDL	**Kundal**	8.98	165	*e*P	P	18 00 54.0	-1.4
KUDL				*e*S	S	18 02 26.5	-8.7
SONA	**Sohna**	9.01	162	*e*P	P	18 00 55.3	-0.5
SONA				*e*S	S	18 02 27.3	-8.7
SONA				AML	AML	18 02 38.2	
	comp=E,112nm,0.3s						
SONA				AML	AML	18 02 38.6	
	comp=N,59nm,0.3s						
PTH	**Pithoragarh**	9.02	142	*e*S	S	18 02 27.6	-8.6
AJM	**Ajmer**	10.39	176	*e*x	S	18 03 02.5	-6.4
MK02	**Makanchi Array**	11.70	30	P	P	18 01 32.4	+0.9
MK02				pmax	pmax		
	comp=Z,12nm,1.1s						
MK31	**Makanchi Array**	11.71	30	P	P	18 01 32.4	+0.8
	comp=Z,12nm,1.1s,baz=212,slow=14,SNR=16						
MKAR	**Makanchi Array**	11.71	30	P	P	18 01 31.6	-0.1
	comp=Z,0.3nm,0.3s,baz=210,slow=14,SNR=16						
KOLN	**Koldanda**	12.23	135	*e*Pn	P	18 01 38.4	-0.1
KOLN				*e*Sn	S	18 03 46.6	-6.0
	comp=Z,47nm,0.4s						
GKN	**Gorkha**	12.66	131	*e*Pn	P	18 01 42.6	-1.6
GKN				*e*Sn	S	18 03 54.9	-7.9
	comp=Z,119nm,0.5s						
KKN	**Kakani**	13.21	130	*e*Pn	P	18 01 49.6	-1.7
KKN				*e*Sn	S	18 04 07.9	-7.7
	comp=Z,85nm,0.7s						
DMN	**Daman**	13.23	131	*e*Pn	P	18 01 50.9	-0.7
DMN				*e*Sn	S	18 04 10.2	-6.0
	comp=Z,127nm,0.6s						
PKI	**Pulchoki**	13.44	130	*e*Pn	P	18 01 53.5	-0.8
PKI				*e*Sn	S	18 04 14.3	-6.8
	comp=Z,40nm,0.3s						
GUN	**Gumba**	13.49	128	*e*Pn	P	18 01 54.2	-0.7
GUN				*e*Sn	S	18 04 13.5	-8.8
	comp=Z,40nm,0.5s						
BHJ	**Bhuj**	14.06	196	*e*x	x	18 04 27.5	
KURK	**Kurchatov**	14.24	12	⇑P	P	18 02 02.1	-2.3
	comp=Z,4.4nm,0.8s						
KURK	**Kurchatov**	14.24	12	⇑P	P	18 02 02.1	-2.3
VOSK	**Vostochnaya**	15.98	354	⇑P	P	18 02 21.7	-4.5
	comp=Z,1.5nm,0.5s						
VOSK	**Vostochnaya**	15.98	354	⇑P	P	18 02 21.7	-4.5
	comp=Z,1.5nm,0.5s						
VOSK	**Vostochnaya**	15.98	354	⇑P	P	18 02 21.7	-4.6
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AB31	**Akbulak array**	16.00	325	P	P	18 02 23.0	-3.6
	comp=Z,5.1nm,0.5s,baz=134,slow=12,SNR=96						
AB31				⇓S	S	18 05 06.1	-14
	comp=Z,14nm,0.7s						
AB31	**Akbulak array**	16.00	325	P	P	18 02 23.0	-3.6
	comp=Z,5.1nm,0.5s						
AB31				S	S	18 05 06.1	-14
LSA	**Lhasa**	16.09	111	P	P	18 02 27.8	-0.1
NGP	**Nagpur**	16.30	163	*e*x	x	18 04 58.2	
BVA0	**Borovoye Array**	16.33	352	⇓P	P	18 02 29.0	-1.7
	comp=Z,0.9nm,0.5s						
BVA0	**Borovoye Array**	16.33	352	⇓P	P	18 02 29.0	-1.7
	comp=Z,0.9nm,0.4s						
BVA0	**Borovoye Array**	16.33	352	⇓P	P	18 02 29.0	-1.7
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	16.33	352	P	P	18 02 29.1	-1.6
	comp=Z,3.7nm,0.3s,baz=156,slow=13,SNR=32						
BLSP	**Bilaspur**	16.34	152	*e*x	x	18 05 21.3	
BRVK	**Borovoye**	16.38	352	*e*P	P	18 02 28.7	-2.6
	comp=Z,6.1nm,0.6s						
BRVK	**Borovoye**	16.38	352	*e*P	P	18 02 28.7	-2.6
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CHKZ	**Chkalovo**	16.95	353	⇓P	P	18 02 35.9	-2.5
	comp=Z,3.8nm,0.8s						
AKTK	**Aktyubinsk**	17.71	325	⇑P	P	18 02 44.9	-2.8
AKTO	**Aktyubinsk**	17.71	325	⇑P	P	18 02 44.9	-2.8
	comp=Z,1.7nm,0.6s						
AKTO	**Aktyubinsk**	17.71	325	P	P	18 02 46.4	-1.3
	comp=Z,2.4nm,0.3s,baz=115,slow=9.2,SNR=46						
AKTO				S	S	18 05 50.1	-8.3
	comp=Z,0.4nm,0.3s,baz=163,slow=22,SNR=5.9						
AKTO				LR	LR	18 10 02.6	
	comp=Z,72nm,21.3s,slow=39						
POO	**Poona**	18.28	180	*e*x	x	18 06 23.0	
ZAL	**Zalesovo**	18.66	20	P	P	18 02 59.3	+1.0
	comp=Z,9.9nm,0.3s,baz=257,slow=8.1,SNR=77						
ZAL				S	S	18 06 23.1	+4.2
	comp=Z,0.2nm,0.3s,baz=66,slow=19,SNR=3.2						
SHL	**Shillong**	19.04	121	*e*x	x	18 03 30.0	
NVS	**Novosibirsk**	19.07	17	⇓*i*P	P	18 03 03.0	+0.3
NVS				*e*S	S	18 06 30.1	+2.7
NVS				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NVS				pmax	pmax		
	comp=N,6.0nm,0.4s						
NVS				smax			
	comp=N,24nm,2.0s						
HYB	**Hyderabad**	19.82	167	*i* P	P	18 03 15.0	+4.2
ORR	**Orenburg**	20.04	323	*e*P	P	18 03 13.0	+0.2
ORR				*e*S	S	18 06 44.4	-1.8
ORR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
GTA	**Gaotai**	20.52	75	*e*P	P	18 03 22.9	+5.1
GTA				AP		18 03 27.1	
GTA				XP		18 03 30.6	
ARU	**Arti**	22.11	337	*e*P	P	18 03 35.0	+1.5
ZAK	**Zakamensk**	25.00	48	*e*P	P	18 03 53.6	-7.6
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.8						
SONM	**Songino Array**	26.21	55	P	P	18 04 18.6	+6.1
	comp=Z,1.8nm,0.9s,mb3.5,baz=254,slow=10,SNR=11						
SONM				pP	pP	18 04 37.2	-1.0
	comp=Z,3.8nm,0.9s,baz=256,slow=10.0,SNR=5.0						
BRTR	**Keskin Array B**	31.54	288	P	P	18 05 01.6	+1.4
	comp=Z,0.6nm,0.5s,mb3.6,baz=102,slow=4.6,SNR=4.7						
AKASG	**Malin Array Be**	34.54	308	P	P	18 05 27.1	+1.2
	comp=Z,1.0nm,0.4s,mb4.0,baz=80,slow=8.0,SNR=10						
JOF	**Joensuu**	36.73	329	*e*p	P	18 05 46.2	+1.9
FINES	**FINESS Array B**	38.49	325	P	P	18 06 01.6	+2.6
	comp=Z,1.9nm,0.5s,mb4.2,baz=117,slow=9.4,SNR=20						
KAF	**Kangasniemi**	38.59	326	*e*p	P	18 06 04.7	+4.9
ARCES	**ARCESS Array B**	41.70	337	P	P	18 06 28.4	+3.2
	comp=Z,3.8nm,0.5s,mb4.3,baz=115,slow=8.6,SNR=40						
GERES	**GERESS Array B**	44.61	305	P	P	18 06 52.5	+3.5
	comp=Z,0.2nm,0.4s,mb3.2,baz=101,slow=10.0,SNR=3.2						
NB2	**NORSAR Subarra**	45.49	323	P	P	18 06 58.0	+2.2
	comp=Z,1.7nm,0.5s,mb4.0,baz=91,slow=7.9						
NOA	**NORSAR Array B**	45.49	323	P	P	18 06 57.8	+2.0
	comp=Z,2.7nm,0.6s,mb4.2,baz=93,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	80.24	124	P	P	18 10 52.6	+6.2
	comp=Z,0.7nm,0.8s,mb3.5,baz=321,slow=4.9,SNR=5.9						

NEIC 09 18:02:08.1, 64.93N×155.61W, h52^{km}, ML3.6(PMR), **ML3.3**(AEIC)**, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCSA	**Galena City Sc**	0.57	252	P	P	18 02 20.0	-0.4
GCSA				S	S	18 02 28.4	-1.0
IMA2	**Indian Mountai**	1.40	34	*e*P	P	18 02 34.3	+2.5
TT01	**Tatalina**	2.04	185	P	P	18 02 40.1	-0.5
MLY	**Manley**	2.08	85	P	P	18 02 41.0	-0.2
MLY				S	S	18 03 06.3	+0.4
KTH	**Kantishna Hill**	2.47	122	P	P	18 02 46.5	-0.4
NEA	**Nenana**	2.83	94	P	P	18 02 51.0	-0.9
MDM	**Murphy Dome**	3.14	86	P	P	18 02 55.5	-0.9
WRH	**Wood River Hil**	3.26	95	P	P	18 02 56.8	-1.3
COLA	**College**	3.31	87	P	P	18 02 57.8	-1.0
CCB	**Clear Creek Bu**	3.35	91	P	P	18 02 58.1	-1.3
CUT	**Chulitna**	3.48	134	P	P	18 03 01.2	+0.1
IL1	**Eielson Array**	3.73	88	P	P	18 03 02.7	-1.9
HDA	**Harding Lake**	3.76	94	P	P	18 03 04.0	-1.0
STLK	**Strandline Lak**	3.85	152	P	P	18 03 06.0	-0.3
SVW2	**Sparrevohn**	3.85	180	P	P	18 03 05.6	-0.8
DHY	**Denali Highway**	4.08	113	P	P	18 03 09.4	-0.1
SPU	**Mount Spurr**	4.10	155	P	P	18 03 10.2	+0.4
GHO	**Glory Hole Cre**	4.37	133	P	P	18 03 13.8	+0.1
PMR	**Palmer**	4.45	136	*e*P	P	18 03 14.6	-0.2
THY	**Trims Highway**	4.57	105	P	P	18 03 15.9	-0.6
PAX	**Paxson**	4.88	109	P	P	18 03 20.8	-0.1
BM3	**Burnt Mountain**	5.11	56	P	P	18 03 24.1	+0.1

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*NEIC **09** 18:02:33.7, 33.31S×70.13W, h7^{km}, ML3.7(GUC), After GUC.*

GUC 09 18:02:33.7±1.0**, 33.31S×70.13W, h7^{km}±3^{km}, MD4.0, ML3.7, 9C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	0.13	263	*e*P	Pg	18 02 37.0	+0.4
FCH				*i* S	Sg	18 02 39.4	+0.8
FCH				AMP		18 02 39.7	
	comp=E,83μm,0.3s						
CLCH	**Cerro Calan**	0.35	256	⇑*i*P	Pg	18 02 41.7	+0.9
CLCH				*i* S	Sg	18 02 47.0	+1.6
CLCH				AMP		18 02 50.2	
	comp=E,15μm,0.4s						
SJCH	**San Jose de Ma**	0.38	209	*e*P	Pg	18 02 40.2	-1.1
SJCH				*i* S	Sg	18 02 45.5	-0.9
SJCH				AMP		18 02 47.0	
	comp=E,3μm,0.4s						
PCH	**Pirque**	0.44	226	⇓*i*P	Pg	18 02 42.6	0.0
SAN	**Santiago**	0.46	252	*e*P	Pg	18 02 43.0	-0.1
SAN				*i* S	Sg	18 02 49.6	+0.3
SAN				AMP		18 02 50.1	
	comp=E,7μm,0.3s						
ANTU	**Antumapu**	0.49	238	⇑*i*P	Pg	18 02 43.4	-0.2
ANTU				*i* S	Sg	18 02 50.2	0.0
ANTU				AMP		18 02 50.5	
	comp=E,4μm,0.3s						
PEL	**Peldehue**	0.49	290	*i* S	Sg	18 02 50.7	+0.5
RCDM	**Rinconada Maip**	0.59	252	⇑*i*P	Pg	18 02 45.4	-0.1
RCDM				*i* S	Sg	18 02 53.9	+0.5
RCDM				AMP		18 02 54.1	
	comp=E,9μm,0.1s						
JACH	**Jahuel**	0.74	328	⇓*i*P	Pb	18 02 48.1	-0.3
JACH				*i* S	Sg	18 02 58.0	-0.3
TACH	**Talagante**	0.75	243	⇓*i*P	Pb	18 02 48.0	-0.7
TACH				*i* S	Sg	18 02 58.1	-0.7
CHCH	**Chadas Angostu**	0.76	215	⇓*i*P	Pb	18 02 47.9	-0.9
CHCH				*i* S	Sg	18 02 58.4	-0.5
ROCH	**El Roble**	0.81	294	*e*P	Pb	18 02 49.2	-0.5
ROCH				*i* S	Sb	18 03 00.6	+0.1
CACH	**El Canelo**	0.89	206	⇑*i*P	Pb	18 02 50.9	-0.2
CACH				*i* S	Sb	18 03 03.6	+0.6
CICH	**Cipreses**	1.03	193	⇑*i*P	Pb	18 02 52.9	-0.6
MDZ	**Mendoza**	1.16	69	*e*P	Pb	18 02 55.5	-0.2
MDZ				*e*		18 03 08.4	
MDZ				*e*S	Sb	18 03 16.5	+5.8
MDZ				*e*		18 03 18.1	
LCCH	**Las Cruces**	1.21	262	⇓*i*P	Pb	18 02 55.9	-0.6
LCCH				*i* S	Sb	18 03 12.2	0.0
LNV	**Longovilo**	1.24	239	⇑*i*P	Pb	18 02 55.8	-1.3
LNV				*i* S	Sb	18 03 12.1	-1.1
IHA	**Instituto Hidr**	1.30	282	*e*P	Pb	18 02 57.5	-0.5
IHA				*i* S	Sb	18 03 14.8	+0.1
SFDO	**San Fernando**	1.49	209	⇑*i*P	Pn	18 03 00.8	-0.3
CHNG	**Los Chungos**	1.83	321	⇑*i*P	Pn	18 03 06.8	+0.8
CHNG				*i* S	Sn	18 03 31.2	+1.6
CHNG				AMP		18 03 34.5	
	comp=E,734nm,0.5s						
ILCH	**Illapel**	1.89	332	*e*P	Pn	18 03 07.9	+1.2
ILCH				*i* S	Sn	18 03 33.7	+2.8
ILCH				AMP		18 03 39.0	
	comp=E,2μm,0.1s						
CMCH	**Combarbala**	2.25	341	*e*P	Pn	18 03 13.4	+1.4
CMCH				*i* S	Sn	18 03 44.1	+3.8
CMCH				AMP		18 03 49.7	
	comp=N,2μm,1.0s						
TALC	**Talca**	2.42	210	⇑*i*P	Pn	18 03 16.1	+1.8

WEL 09 18:19:33.2±0.1**, 41.64S×174.27E, h13^{km}±1^{km}, ML3.5**/23**, 5C-4D, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	0.12	203	⇑PG	Pg	18 19 36.6	+0.1
CMWZ				SG	Sg	18 19 39.0	+0.3
CMWZ				SG	Sg	18 19 39.3	+0.6
TUWZ	**Tuamarina**	0.33	310	⇓PG	Pg	18 19 40.1	-0.1
TUWZ				SG	Sg	18 19 45.0	+0.2
TCW	**Tory Channel**	0.43	0	⇓PG	Pg	18 19 41.8	-0.3
TCW				SG	Sg	18 19 47.2	-0.9
SNZO	**South Karori**	0.47	44	⇑PG	Pg	18 19 42.6	-0.2
SNZO				SG	Sg	18 19 49.8	+0.6
BHW	**Baring Head**	0.51	63	PG	Pg	18 19 43.4	-0.2
BHW				SG	Sg	18 19 49.5	-1.1
WEL	**Wellington**	0.52	46	PG	Pg	18 19 43.6	-0.1
MRW	**Makara Radio**	0.52	38	⇑P*	Pb	18 19 43.5	-0.3
MRW				SG	Sg	18 19 51.0	0.0
MSWZ	**Moikau Station**	0.77	73	P*	Pb	18 19 48.2	+0.3
MSWZ				SG	Sg	18 20 00.2	+1.1
NNZ	**Nelson**	0.80	302	⇓P*	Pb	18 19 48.2	-0.2
NNZ				S*	Sb	18 19 59.2	+0.4
CAW	**Cannon Point**	0.80	49	P*	Pb	18 19 48.4	-0.2
CAW				SG	Sg	18 19 59.2	-1.0
DUWZ	**D'Urville Isla**	0.88	342	P*	Pb	18 19 49.6	-0.3
DUWZ				SG	Sg	18 20 02.2	-0.5
PAWZ	**Paruwai Farm**	0.91	74	P*	Pb	18 19 50.6	+0.3
PAWZ				SG	Sg	18 20 04.8	+1.2
KIW	**Kapiti Island**	0.92	32	P*	Pb	18 19 50.3	-0.2
KIW				SG	Sg	18 20 03.3	-0.7
KHZ	**Kahutara**	0.95	215	⇑P*	Pb	18 19 51.3	+0.3
KHZ				SG	Sg	18 20 04.3	-0.7
THZ	**Tophouse**	1.03	263	P*	Pb	18 19 52.4	-0.1
THZ				SG	Sg	18 20 06.4	-1.4
MTW	**Mount Morrison**	1.04	63	P*	Pb	18 19 52.5	-0.2
TRWZ	**Traveller**	1.09	78	P*	Pb	18 19 53.0	-0.5
MRZ	**Mangatainoka R**	1.39	46	⇑P*	Pb	18 19 57.7	-0.9
QRZ	**Quartz Range**	1.55	301	⇓PN	Pn	18 20 01.2	+0.5
BFZ	**Birch Farm**	1.77	58	PN	Pn	18 20 02.7	-1.2
LTZ	**Lake Taylor**	1.87	232	PN	Pn	18 20 04.2	-1.2
WAZ	**Wanganui**	1.96	16	PN	Pn	18 20 09.2	+2.5
NRZ	**Ngariki Road**	2.32	353	PN	Pn	18 20 14.5	+2.8
MQZ	**McQueen's Vall**	2.38	210	PN	Pn	18 20 09.1	-3.6

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*IDC **09** 18:45:45.6±2.1, 6.38S×129.05E, mb4.1/3, mb1 4.2/4, mb1mx4.0/12, mbtmp4.1/4, ML4.1/1, Error ellipse: s-maj=126.9km s-min=42.3km az=69.0*

ISC 09 18:45:58.5±3.0**, 6.54S**±0.10×**129.8E**±0.2**, h151^{km}**±31^{km}**, n8, σ1^{s}20**/13**, mb3.8**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	6.66	157	*e*P	P	18 47 52.0	+17
	12nm,0.2s						
KAKA				*e*S	S	18 49 03.5	+14
FITZ	**Fitzroy Crossi**	12.19	199	*e*P	P	18 48 49.1	+1.0
	4.4nm,0.2s						
FITZ				*e*S	S	18 51 00.5	-0.8
WRA	**Warramunga Arr**	14.03	162	Pn	P	18 49 11.3	-0.6
	0.9nm,0.3s,baz=341,slow=13,SNR=27						
WRA				Sn	S	18 51 40.1	-4.0
	2.4nm,0.3s,baz=344,slow=22,SNR=12						
WB2	**Warramunga Arr**	14.04	162	*e*P	P	18 49 10.2	-1.7
WB2				*e*S	S	18 51 40.2	-3.9
ASPA	**Alice Springs**	17.48	167	*e*P	P	18 49 57.0	+2.5
ASPA				*e*S	S	18 53 01.9	0.0
SONM	**Songino Array**	57.95	342	P	P	18 55 36.9	-0.4
	0.4nm,0.4s,mb3.6,baz=162,slow=6.9,SNR=10						
MKAR	**Makanchi Array**	67.74	327	P	P	18 56 42.7	+0.8
	2.2nm,0.6s,mb4.1,baz=126,slow=7.4,SNR=25						
ZAL	**Zalesovo**	71.09	334	P	P	18 57 01.2	-0.9
	0.5nm,0.3s,mb3.7,baz=285,slow=7.1,SNR=3.8						

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*CASC **09** 19:03:59.5±2.2, 7.30N×81.83W, h30^{km}±56^{km}, MD4.5, MW5.3, mb4.8(NEIC)*

*IDC **09** 19:04:03.9±0.9, 7.32N×82.59W, mb4.0/8, mb1 4.3/11, mb1mx4.1/23, mbtmp4.1/11, ML2.8/2, MS3.9/12, Ms1 3.9/12, ms1mx3.8/19, Error ellipse: s-maj=42.6km s-min=15.6km az=45.0*

*NEIC **09** 19:04:07.0±6.3, 7.30N×82.57W, h18^{km}±40^{km}, mb4.8/5, Error ellipse: s-maj=28.7km s-min=8.4km az=222.0*

ISC 09 19:04:07.1±0.5**, 7.46N**±0.08×**82.47W**±0.08**, h30^{km}, n45, σ1^{s}21**/39**, mb4.2**/13**, MS3.9**/10**, 6C-4D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	**Volcan**	1.34	351	⇑*e*P	Pn	19 04 28.2	-1.9
BRU2				*e*S	Sn	19 04 48.9	+2.0
ACR	**Cerro Adams**	1.37	330	⇑*i*P	Pn	19 04 28.6	-1.9
ACR				*e*S	Sn	19 04 54.6	+6.9
BUS	**Buena Vista**	2.44	329	⇑*e*P	Pn	19 04 45.0	-0.7
URSC	**Urasca**	2.69	331	⇑*e*P	Pn	19 04 48.8	-0.5
LCR2	**La Lucha 2**	2.72	326	⇑*e*P	Pn	19 04 49.0	-0.8
LAJ	**Bijagual**	2.89	326	⇓*e*P	Pn	19 04 52.7	+0.5
SJS	**Escuela Geolog**	2.92	328	⇑*e*P	Pn	19 04 51.3	-1.2
SJS				⇓*e*P		19 04 52.1	
SJS				*e*S	Sn	19 05 32.7	+5.7
PRS1	**Puriscal**	3.10	324	⇓*e*P	Pn	19 04 53.2	-1.9
CGA2	**Cerro Gallo 2**	3.21	322	⇓*e*P	Pn	19 04 55.7	-1.1
JTS	**JuntasAbangare**	3.73	319	Pn	Pn	19 05 02.2	-1.9
	33nm,0.3s,baz=101,slow=11,SNR=69						
VCR	**Vista de Mar**	4.09	311	*e*P	Pn	19 05 07.9	-1.4
ROSC	**El Rosal**	8.50	107	Pn	P	19 06 11.6	+0.4
	1.2nm,0.3s,baz=261,slow=23,SNR=3.6						
ROSC				LR	LR	19 08 57.0	
	comp=Z,757nm,19.8s,baz=198,slow=34						
ROSC	**El Rosal**	8.50	107	Pn	P	19 06 11.6	+0.4
ROSC				LR	LR	19 08 57.0	
SDV	**Santo Domingo**	11.80	82	Pn	P	19 06 56.3	-0.3
	0.1nm,0.3s,baz=298,slow=18,SNR=2.4						
SDV				LR	LR	19 11 57.5	
	comp=Z,1μm,20.7s,baz=283,slow=40						
SAML	**Samuel**	25.20	130	*e*P	P	19 09 30.4	-1.6
	5.5nm,1.0s,mb4.0						
LPAZ	**La Paz**	27.54	149	P	P	19 09 54.0	+0.5
	1.0nm,0.7s,mb3.6,baz=305,slow=7.6,SNR=4.1						
LPAZ				LR	LR	19 22 10.3	
	comp=Z,319nm,18.4s,MS3.9,baz=76,slow=40						
LPAZ	**La Paz**	27.54	149	P	P	19 09 54.0	+0.5
LPAZ				LR	LR	19 22 10.3	
TXAR	**Lajitas Array**	29.52	320	P	P	19 10 11.4	+0.1
	0.6nm,0.3s,mb3.7,baz=146,slow=3.3,SNR=4.8						
TXAR				LR	LR	19 23 38.8	
	comp=Z,159nm,20.5s,MS3.6,baz=120,slow=40						
SIV	**San Ignacio**	31.50	138	P	P	19 10 26.9	-1.9
	1.8nm,0.8s,mb3.9,baz=319,slow=10.0,SNR=9.0						
BNM	**Barren Site**	34.67	323	*e*P	P	19 10 57.0	+0.8
ANMO	**Albuquerque**	35.13	325	P	P	19 11 00.7	+0.5
	4.2nm,1.0s,mb4.3,baz=136,slow=11,SNR=4.6						
LAZ	**Ladron**	35.15	323	*e*P	P	19 11 01.0	+0.7
PV10	**Paradox Valley**	39.02	326	*e*P	P	19 11 33.3	+0.5
SRU	**San Rafael**	40.37	326	*e*P	P	19 11 44.9	+1.0
NEN	**Nelson**	40.80	318	*e*P	P	19 11 49.3	+1.8
BDFB	**Brasilia**	41.13	124	LR	LR	19 29 06.1	
	comp=Z,291nm,20.4s,MS4.1,baz=309,slow=36						
DAU	**Daniels Canyon**	41.67	326	*e*P	P	19 11 54.5	-0.2
TPNV	**Topopah Spring**	42.48	319	*e*P	P	19 12 03.5	+2.1
	14nm,1.1s,mb4.5						
PDAR	**Pinedale Array**	42.49	330	P	P	19 12 00.7	-0.7
	1.4nm,1.1s,mb3.5,baz=135,slow=15,SNR=8.2						
PDAR				PcP	PcP	19 13 54.3	-0.1
	0.8nm,1.1s,baz=72,slow=5.7,SNR=3.7						
PDAR				LR	LR	19 34 16.6	
	comp=Z,113nm,18.3s,MS3.8,baz=308,slow=43						
TPH	**Tonopah**	43.76	319	*e*P	P	19 12 13.8	+2.0
	26nm,1.1s,mb4.9						
MTUM	**Tungsten Hills**	44.23	318	*e*P	P	19 12 17.4	+1.8
MNV	**Mina**	44.56	319	*e*P	P	19 12 19.6	+1.4
	21nm,1.1s,mb4.9						
NVAR	**Mina Array Bea**	44.66	319	P	P	19 12 20.6	+1.6
	10nm,1.0s,mb4.6,baz=121,slow=8.9,SNR=34						
NVAR				LR	LR	19 33 23.2	
	comp=Z,103nm,18.1s,MS3.8,baz=130,slow=39						
WVOR	**Wild Horse Val**	47.20	323	*e*P	P	19 12 39.0	-0.2
	33nm,1.2s,mb5.1						
OHCM	**Honcut**	47.23	318	*e*P	P	19 12 39.6	+0.2
YKA	**Yellowknife Ar**	59.72	343	LR	LR	19 41 55.9	
	comp=Z,77nm,19.1s,MS3.9,baz=95,slow=38						
ILAR	**Eielson Array**	72.54	336	P	P	19 15 32.5	-0.4
	1.2nm,0.9s,mb3.8,baz=117,slow=2.8,SNR=6.8						
ESDC	**Sonseca Array**	76.44	51	P	P	19 15 56.3	+0.5
	0.2nm,0.5s,mb3.3,baz=234,slow=11,SNR=3.3						
DBIC	**Dimbokro**	76.93	85	LR	LR	19 50 17.6	
	comp=Z,58nm,18.3s,MS3.9,baz=192,slow=36						
NOA	**NORSAR Array B**	85.31	29	LR	LR	19 54 09.3	
	comp=Z,55nm,18.2s,MS4.0,baz=135,slow=35						
ARCES	**ARCESS Array B**	89.25	20	LR	LR	19 55 29.8	
	comp=Z,79nm,20.2s,MS4.1,baz=275,slow=34						
FINES	**FINESS Array B**	92.20	27	LR	LR	19 54 55.0	
	comp=Z,42nm,18.8s,MS3.9,baz=11,slow=33						
STKA	**Stephens Creek**	132.38	233	PKP	PKPdf	19 23 18.4	-6.0
	3.5nm,0.9s,baz=82,slow=7.1,SNR=3.7						
WB2	**Warramunga Arr**	142.24	247	*e*P	PKPdf	19 23 48.3	+5.6
WB2				*e*		19 23 54.1	
WRA	**Warramunga Arr**	142.25	247	PKP	PKPdf	19 23 36.2	-6.5
	1.3nm,1.1s,baz=108,slow=2.7,SNR=5.5						

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*MOS **09** 20:00:44.4±1.3, 49.65N×87.79E, h15^{km}, mb4.4/1, Error ellipse: s-maj=9.0km s-min=6.8km az=96.4*

*NEIC **09** 20:00:46.5±1.0, 49.76N×87.79E, h10^{km}, mb3.2/1, Error ellipse: s-maj=13.2km s-min=12.0km az=170.0*

*IDC **09** 20:00:46.2±2.0, 49.81N×87.96E, h10^{km}±14^{km}, mb3.8/2, mb1 3.8/7, mb1mx3.6/24, mbtmp3.8/7, ML3.5/5, Error ellipse: s-maj=15.8km s-min=10.0km az=110.0*

*NNC **09** 20:00:48.2±3.4, 49.55N×87.63E, h23^{km}±26^{km}, mpv4.2, Error ellipse: s-maj=33.1km s-min=18.2km az=97.0*

ISC 09 20:00:46.5±0.9**, 49.77N**±0.04×**87.54E**±0.09**, h10^{km}, n41, σ1^{s}44**/67**, mb4.0**/2**, 12C-6D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAR	**Aktash**	0.55	6	*i* PG	Pg	20 00 57.1	-0.6
AKAR				*i* S	Sg	20 01 05.4	+0.3
ELDR	**Elanda**	1.72	328	*i* PN	Pn	20 01 19.0	+2.3
ELDR				*e*S	Sn	20 01 43.9	+5.0
UKR	**Ust'-Kan**	2.12	304	*e*PN	Pn	20 01 27.1	+4.6
UKR				*i* S	Sn	20 01 57.6	+8.5
TASR	**Tashtagol**	3.00	4	*e*PN	Pn	20 01 40.3	+5.2
TASR				*e*S	Sn	20 02 18.8	+7.3
ELT	**Yel'tsovka**	3.59	347	*e*PN	Pn	20 01 45.6	+2.2
ELT				*e*		20 01 54.2	
ELT				*e*		20 02 29.4	
ELT				*e*S	Sn	20 02 40.7	+14
CERR	**Cheremushki**	3.93	37	*i* PN	Pn	20 01 56.3	+8.0
CERR				*i* S	Sn	20 02 47.0	+12
ZAL	**Zalesovo**	4.50	339	Pn	Pn	20 01 56.5	+0.1
	5.7nm,0.3s,baz=324,slow=9.2,SNR=40						
ZAL				Sn	Sn	20 02 50.7	+1.2
	8.2nm,0.3s,baz=253,slow=23,SNR=4.9						
ZAL				Lg		20 03 10.1	
	21nm,0.3s,baz=48,slow=16,SNR=7.6						
ZAL	**Zalesovo**	4.50	339	Pn	Pn	20 01 56.5	+0.1
ZAL				Sn	Sn	20 02 50.7	+1.2
ZAL				Lg		20 03 10.1	
MK31	**Makanchi Array**	4.60	232	⇑Pn	Pn	20 01 59.7	+2.0
	9.7nm,0.5s,baz=55,slow=13,SNR=584						
MK31				⇑Pg	Pg	20 02 11.7	-6.6
	111nm,0.8s,baz=55,slow=18,SNR=41						
MK31				⇓Sn	Sn	20 02 52.7	+0.8

	11nm,0.3s,baz=54,slow=31,SNR=4.0						
MK31				⇑Lg		20 03 14.1	
	149nm,0.7s,baz=54,slow=31,SNR=4.0						
MK31	**Makanchi Array**	**4.60**	**232**	⇑Pn	**Pn**	**20 01 59.7**	**+2.0**
MK31				⇑Pg	**Pg**	**20 02 11.7**	**-6.6**
MK31				Sn	**Sn**	**20 02 52.7**	**+0.8**
MK31				Lg		20 03 14.1	
MKAR	**Makanchi Array**	**4.60**	**232**	Pn	**Pn**	**20 01 59.5**	**+1.8**
	4.4nm,0.3s,baz=53,slow=14,SNR=209						
MKAR				Pg	**Pg**	**20 02 11.8**	**-6.5**
	34nm,0.3s,baz=53,slow=18,SNR=52						
MKAR				Sn	**Sn**	**20 02 56.5**	**+4.5**
	18nm,0.3s,baz=56,slow=26,SNR=7.2						
MKAR				Lg		20 03 16.5	
	45nm,0.3s,baz=50,slow=27,SNR=14						
MK02	**Makanchi Array**	**4.61**	**231**	⇑PN	**Pn**	**20 01 59.7**	**+1.8**
MK02						20 02 11.7	
MK02						20 02 52.7	
NVS	**Novosibirsk**	**5.72**	**334**	*e*PN	**Pn**	**20 02 13.8**	**+0.2**
NVS				*e*		20 02 31.5	
NVS				*e*		20 03 20.2	
KURK	**Kurchatov**	**5.80**	**283**	⇑Pn	**Pn**	**20 02 15.4**	**+0.7**
	11nm,0.6s						
KURK				⇑Sn	**Sn**	**20 03 24.2**	**+2.1**
	24nm,0.8s						
KURK				⇓Lg		20 03 52.1	
	78nm,0.7s						
KURK	**Kurchatov**	**5.80**	**283**	⇑Pn	**Pn**	**20 02 15.4**	**+0.7**
KURK				Sn	**Sn**	**20 03 24.2**	**+2.1**
KURK				Lg		20 03 52.1	
KRAR	**Krasnoyarsk**	**7.03**	**25**	*e*PN	**Pn**	**20 02 28.9**	**-3.2**
KRAR				*e*		20 02 52.9	
VOSK	**Vostochnaya**	**10.79**	**292**	Pn	**P**	**20 03 22.3**	**-1.7**
	1.0nm,0.4s						
VOSK				⇑Sn	**S**	**20 05 24.2**	**-1.8**
	3.2nm,0.5s						
VOSK	**Vostochnaya**	**10.79**	**292**	Pn	**P**	**20 03 22.3**	**-1.7**
	1.0nm,0.4s						
VOSK				Sn	**S**	**20 05 24.2**	**-1.8**
VOSK	**Vostochnaya**	**10.79**	**292**	P	**P**	**20 03 22.3**	**-1.7**
VOSK						20 05 24.2	
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVA0	**Borovoye Array**	**11.19**	**293**	Pn	**P**	**20 03 28.4**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=104,slow=15,SNR=46						
BVA0				⇓Sn	**S**	**20 05 35.1**	**-0.8**
	comp=Z,1.9nm,0.7s						
BVA0	**Borovoye Array**	**11.19**	**293**	Pn	**P**	**20 03 28.4**	**-1.1**
	comp=Z,0.7nm,0.6s						
BVA0				Sn	**S**	**20 05 35.0**	**-0.8**
BVA0	**Borovoye Array**	**11.19**	**293**	P	**P**	**20 03 28.4**	**-1.2**
BVA0						20 05 35.1	
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**11.19**	**293**	Pn	**P**	**20 03 28.2**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=99,slow=15,SNR=19						
BVAR				Sn	**S**	**20 05 31.3**	**-4.5**
	comp=Z,1.1nm,0.3s,baz=94,slow=22,SNR=10						
BVAR				Lg		20 06 46.7	
	baz=87,slow=26,SNR=2.6						
CHKZ	**Chkalovo**	**11.20**	**297**	Pn	**P**	**20 03 28.9**	**-0.6**
	comp=Z,1.4nm,0.6s						
CHKZ				⇑Sn	**S**	**20 05 34.7**	**-1.1**
	comp=Z,9.0nm,0.9s						
CHKZ	**Chkalovo**	**11.20**	**297**	Pn	**P**	**20 03 28.9**	**-0.6**
CHKZ				Sn	**S**	**20 05 34.7**	**-1.1**
BRVK	**Borovoye**	**11.26**	**294**	*e*P	**P**	**20 03 30.1**	**-0.4**
	comp=Z,7.9nm,0.6s						
BRVK	**Borovoye**	**11.26**	**294**	*e*P	**P**	**20 03 30.1**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AAK	**Ala-Archa**	**11.51**	**237**	⇓Pn	**P**	**20 03 31.9**	**-1.9**
	comp=Z,1.9nm,0.5s						
AAK				⇓Lg		20 06 48.2	
	comp=Z,19nm,1.1s						
AAK	**Ala-Archa**	**11.51**	**237**	⇓Pn	**P**	**20 03 31.9**	**-1.9**
	comp=Z,1.9nm,0.5s						
AAK				Lg		20 06 48.2	
SONM	**Songino Array**	**12.58**	**92**	Pn	**P**	**20 03 43.1**	**-5.3**
	comp=Z,0.0nm,0.3s,baz=297,slow=13,SNR=4.9						
SONM				Pg	P	20 04 31.5	+43
	comp=Z,0.1nm,0.3s,baz=278,slow=17,SNR=6.2						
SONM				Lg		20 07 17.1	
	comp=Z,0.3nm,0.3s,baz=282,slow=28,SNR=16						
KK31	**Karatay Array**	**13.49**	**247**	Pn	**P**	**20 03 57.0**	**-3.3**
	comp=Z,0.7nm,0.3s,baz=52,slow=13,SNR=30						
KK31				⇑Sn	**S**	**20 06 31.5**	**+0.2**
	comp=Z,1.9nm,0.6s,baz=57,slow=26,SNR=4.1						
KK31	**Karatay Array**	**13.49**	**247**	Pn	**P**	**20 03 57.0**	**-3.3**
	comp=Z,0.7nm,0.3s						
KK31				Sn	**S**	**20 06 31.5**	**+0.1**
KK31	**Karatay Array**	**13.49**	**247**	P	**P**	**20 03 57.0**	**-3.3**
KK31						20 06 31.5	
KK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KKAR	**Karatay Array**	**13.49**	**247**	*e*P	**P**	**20 03 57.0**	**-3.3**
AB31	**Akbulak array**	**17.89**	**279**	P	**P**	**20 04 56.5**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=82,slow=10,SNR=6.7						
AB31	**Akbulak array**	**17.89**	**279**	P	**P**	**20 04 56.6**	**-0.3**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**18.53**	**302**	*e*P	**P**	**20 05 08.8**	**+4.0**
ARU				*e*S	**S**	**20 08 30.0**	**+1.6**
AKTO	**Aktyubinsk**	**18.90**	**283**	P	**P**	**20 05 10.1**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=90,slow=12,SNR=15						
FINES	**FINESS Array B**	**35.26**	**313**	P	**P**	**20 07 42.7**	**-0.2**
	comp=Z,3.8nm,1.1s,mb4.2,baz=83,slow=11,SNR=2.9						
FINES	**FINESS Array B**	**35.26**	**313**	P	**P**	**20 07 42.7**	**-0.2**
AKASG	**Malin Array Be**	**36.47**	**294**	P	**P**	**20 07 51.1**	**-2.1**
	comp=Z,0.3nm,0.3s,mb3.8,baz=63,slow=9.1,SNR=3.0						

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*ATH **09** 20:16:09.9, 38.01N×25.93E, h10^{km}, MD3.1/3*
*CSEM **09** 20:16:12.6±0.4, 38.17N×26.56E, h8^{km}, MD2.6, Error ellipse: s-maj=9.0km s-min=7.4km az=33.0*
*ISK **09** 20:16:14.1, 38.26N×26.67E, h29^{km}, MD2.6*
ISC 09 20:16:13.9±0.9**, 38.24N**±0.06×**26.57E**±0.07**, h19**^{km}±9^{km}**,**
n10, σ$0\overset{s}{.}$77/17**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.12**	**8**	*i* P	**Pb**	**20 16 17.2**	**-0.7**
URLA				*i* S	**Sb**	**20 16 20.9**	**+0.3**
BLCB	**Balcova**	**0.39**	**69**	PG	**Pb**	**20 16 22.1**	**0.0**
BLCB				SG	**Sb**	**20 16 27.5**	**-0.1**
IZM	**Izmir**	**0.56**	**74**	PG	**Pb**	**20 16 25.3**	**+0.3**
IZM				SG	**Sb**	**20 16 33.5**	**+1.0**
KDAG	**Bornova**	**0.57**	**73**	*i* P	**Pb**	**20 16 24.2**	**-0.9**
KDAG				*i* S	**Sb**	**20 16 32.0**	**-0.7**
SMG	**Samos**	**0.57**	**159**	*e*PB	**Pb**	**20 16 24.7**	**-0.4**
PRK	**Paraskevi**	**1.03**	**347**	*e*P	**Pb**	**20 16 33.7**	**+0.8**
PRK				*e*S	**Sb**	**20 16 51.0**	**+5.0**
BODT	**Bodrum**	**1.32**	**153**	*e*PN	**Pn**	**20 16 36.0**	**-1.5**
MLSB	**Milas**	**1.34**	**134**	*e*PN	**Pn**	**20 16 37.8**	**-0.1**
BDRM	**Kayabasi**	**1.36**	**149**	*i* P	**Pn**	**20 16 39.5**	**+1.3**
BDRM				*i* S	**Sb**	**20 16 56.5**	**+0.8**
APE	**Apeiranthos**	**1.44**	**216**	*e*P	**Pn**	**20 16 28.9**	**-10**
APE				*e*S	**Sn**	**20 16 42.3**	**-15**

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*IDC **09** 20:21:48.0±0.9, 14.71N×123.72E, mb4.0/9, mb1 4.2/10, mb1mx4.0/20, mbtmp4.1/10, ML4.9/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/26, Error ellipse: s-maj=42.2km s-min=16.6km az=70.0*
*MAN **09** 20:21:49.3, 14.80N×123.21E, h1^{km}, mb5.4, ML4.3, MS4.6*
*NEIC **09** 20:21:50.0±0.7, 14.64N×123.50E, h10^{km}, mb4.3/4, Error ellipse: s-maj=23.3km s-min=11.8km az=61.0*
*MOS **09** 20:21:51.3±1.2, 14.55N×123.43E, h33^{km}, mb4.6/3, Error ellipse: s-maj=52.8km s-min=14.0km az=122.6*
ISC 09 20:21:49.0±2.3**, 14.78N**±0.04×**123.28E**±0.07**, h6**^{km}±15^{km}**,**
n36, σ$1\overset{s}{.}$19/38**, mb4.2**/15**, 2C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**1.19**	**223**	⇑*e*P	**Pb**	**20 22 10.0**	**-1.6**
GQP				*e*S	**Sb**	**20 22 27.2**	**+0.2**
POLP	**Polilio Island**	**1.30**	**268**	*e*P	**Pb**	**20 22 12.6**	**-0.9**
AUQP	**San Andres**	**1.56**	**202**	*e*P	**Pn**	**20 22 18.4**	**+0.9**
BALP	**Baler**	**1.90**	**300**	*e*P	**Pn**	**20 22 21.2**	**-1.2**
PCPH	**Palayan**	**2.25**	**291**	⇓*e*P	**Pn**	**20 22 26.4**	**-1.0**
PCPH				*e*S	**Sn**	**20 22 55.3**	**-0.4**
TGY	**Tagaytay City**	**2.37**	**254**	Pn	**Pn**	**20 22 32.9**	**+3.8**
	181nm,0.3s,baz=32,slow=0.9,SNR=19						
TGY				Sn	**Sn**	**20 23 04.2**	**+5.4**
	161nm,0.3s,baz=265,slow=21,SNR=6.4						
SJMP	**San Jose**	**3.12**	**223**	*e*P	**Pn**	**20 22 40.5**	**+0.7**
KALP	**Kalibo**	**3.21**	**197**	*e*P	**Sb**	**20 23 27.2**	**+1.2**
CVP	**Callao Caves**	**3.23**	**334**	⇑*e*P	**Pn**	**20 22 42.0**	**+0.7**
APYP	**Conner**	**3.64**	**328**	*e*P	**Pn**	**20 22 46.6**	**-0.5**
ABRA	**Dolores**	**3.77**	**320**	*e*P	**Pn**	**20 22 49.8**	**+0.7**
GUIM	**Jordan**	**4.18**	**189**	*e*P	**Pn**	**20 22 56.7**	**+1.8**
ENH	**Enshi**	**19.97**	**323**	*e*P	**P**	**20 26 27.1**	**+2.1**
	24nm,1.7s						
CBIJ	**Chichi jima**	**21.46**	**52**	LR	LR	20 33 20.0	
	comp=Z,39nm,19.4s,baz=202,slow=33						
FITZ	**Fitzroy Crossi**	**32.75**	**176**	P	**P**	**20 28 23.5**	**-1.7**
	2.3nm,0.5s,mb4.4,baz=35,slow=14,SNR=4.1						
LSA	**Lhasa**	**33.10**	**302**	*e*P	**P**	**20 28 29.0**	**+0.9**
	1.3nm,0.3s,mb4.3						
LSA	**Lhasa**	**33.10**	**302**	*e*P	**P**	**20 28 29.0**	**+0.9**
LSA				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
SONM	**Songino Array**	**35.81**	**340**	P	**P**	**20 28 51.0**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.4,baz=161,slow=11,SNR=26						
SONM				LR	LR	20 44 51.2	
	comp=Z,59nm,21.0s,baz=132,slow=38						
WRAB	**Tennant Creek**	**36.17**	**162**	P	**P**	**20 28 51.7**	**-2.8**
WRA	**Warramunga Arr**	**36.18**	**162**	P	**P**	**20 28 49.9**	**-4.6**
	comp=Z,1.5nm,0.7s,mb4.0,baz=345,slow=9.1,SNR=14						
GUN	**Gumba**	**37.05**	**297**	*e*P	**P**	**20 29 02.1**	**+0.3**
KKN	**Kakani**	**37.54**	**296**	*e*P	**P**	**20 29 05.7**	**-0.3**
	comp=Z,40nm,1.8s,mb4.8						
KKN	**Kakani**	**37.54**	**296**	*e*P	**P**	**20 29 05.7**	**-0.3**
KKN				pmax	pmax		
	comp=Z,20nm,1.8s,mb4.5						
DMN	**Daman**	**37.66**	**296**	*e*P	**P**	**20 29 06.6**	**-0.3**
	comp=Z,17nm,1.1s,mb4.7						
GKN	**Gorkha**	**38.14**	**297**	*e*P	**P**	**20 29 10.0**	**-1.0**
	comp=Z,13nm,1.0s,mb4.6						
KOLN	**Koldanda**	**39.00**	**296**	*e*P	**P**	**20 29 18.1**	**-0.1**
	comp=Z,11nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**46.70**	**322**	P	**P**	**20 30 20.4**	**-0.2**
	comp=Z,1.1nm,0.8s,mb3.8,baz=124,slow=8.7,SNR=7.7						
ZAL	**Zalesovo**	**49.30**	**331**	P	**P**	**20 30 41.6**	**+0.9**
	comp=Z,0.6nm,0.8s,mb3.7,baz=142,slow=11,SNR=3.5						
STKA	**Stephens Creek**	**49.60**	**159**	P	**P**	**20 30 39.7**	**-3.7**
	comp=Z,3.0nm,0.9s,mb4.3,baz=332,slow=17,SNR=2.7						
STKA	**Stephens Creek**	**49.60**	**159**	P	**P**	**20 30 39.9**	**-3.5**
KURK	**Kurchatov**	**50.72**	**325**	*e*P	**P**	**20 30 53.3**	**+1.6**
	comp=Z,3.3nm,0.8s,mb4.3						
KURK	**Kurchatov**	**50.72**	**325**	*e*P	**P**	**20 30 53.3**	**+1.6**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BVAR	**Borovoye Array**	**56.32**	**325**	P	**P**	**20 31 34.4**	**+1.4**
	comp=Z,0.2nm,0.5s,mb3.4,baz=130,slow=11,SNR=3.2						
BRVK	**Borovoye**	**56.39**	**325**	*e*P	**P**	**20 31 35.1**	**+1.6**
ARCES	**ARCESS Array B**	**78.97**	**339**	P	**P**	**20 33 54.0**	**-0.9**
	comp=Z,2.5nm,0.8s,mb4.2,baz=67,slow=9.2,SNR=4.0						
FINES	**FINESS Array B**	**80.56**	**331**	P	**P**	**20 34 02.0**	**-1.6**
	comp=Z,2.5nm,0.9s,mb4.1,baz=79,slow=7.1,SNR=3.5						

MAN 09 20:29:31, 12.54N×121.44E, h6^{km}**, mb3.7, ML2.4, MS2.0,**
Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.32**	**256**	*e*P	Pg	20 29 38.1	+0.6
OTRP	**Odiongan**	**0.59**	**107**	*e*P	Pg	20 29 42.6	-0.3

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*IDC **09** 20:30:38.0±1.2, 3.81S×128.22E, mb3.9/5, mb1 4.1/7, mb1mx4.0/17, mbtmp4.0/7, Error ellipse: s-maj=95.6km s-min=22.0km az=71.0*
*NEIC **09** 20:30:43.7±4.3, 3.87S×128.22E, h42^{km}±43^{km}, mb3.8/3, Error ellipse: s-maj=53.9km s-min=14.0km az=52.0*
ISC 09 20:30:44.7±4.0**, 3.9S**±0.2×**128.4E**±0.3**, h70**^{km}±38^{km}**, n16,**
σ$0\overset{s}{.}$65/17**, mb3.9**/9**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.36**	**191**	Pn	**P**	**20 34 04.6**	**-1.3**
	0.0nm,0.3s,baz=360,slow=15,SNR=3.5						
WRAB	**Tennant Creek**	**16.96**	**160**	*e*P	**P**	**20 34 39.1**	**+0.3**
	3.6nm,0.4s						
WRA	**Warramunga Arr**	**16.96**	**160**	P	**P**	**20 34 39.2**	**+0.3**
	1.2nm,0.3s,baz=341,slow=13,SNR=58						
WRA				S	**S**	**20 37 43.6**	**-0.2**
	0.2nm,0.3s,baz=350,slow=24,SNR=4.0						
WB2	**Warramunga Arr**	**16.97**	**160**	*e*P	**P**	**20 34 39.4**	**+0.5**
ASPA	**Alice Springs**	**20.35**	**165**	*e*P	**P**	**20 35 18.0**	**+0.1**
STKA	**Stephens Creek**	**30.47**	**157**	P	**P**	**20 36 53.5**	**+0.4**
	7.3nm,1.2s,mb4.2,baz=312,slow=12,SNR=2.8						
KKN	**Kakani**	**52.12**	**310**	*e*P	**P**	**20 39 50.3**	**+0.1**
DMN	**Daman**	**52.16**	**310**	*e*P	**P**	**20 39 50.9**	**+0.4**
GKN	**Gorkha**	**52.72**	**310**	*e*P	**P**	**20 39 55.7**	**+1.0**
	6.1nm,0.8s,mb4.7						
KOLN	**Koldanda**	**53.41**	**309**	*e*P	**P**	**20 40 01.1**	**+1.3**
	3.7nm,0.4s,mb4.8						
SONM	**Songino Array**	**55.02**	**342**	P	**P**	**20 40 10.7**	**-0.6**
	0.2nm,0.5s,mb3.4,baz=162,slow=8.5,SNR=3.3						
MKAR	**Makanchi Array**	**64.77**	**327**	P	**P**	**20 41 17.9**	**-0.3**
	1.0nm,0.5s,mb3.9,baz=117,slow=8.4,SNR=16						
ZAL	**Zalesovo**	**68.12**	**334**	P	**P**	**20 41 37.9**	**-1.2**
	0.7nm,0.4s,mb3.8,baz=61,slow=1.2,SNR=3.9						
BVAR	**Borovoye Array**	**74.61**	**328**	P	**P**	**20 42 17.9**	**0.0**
	0.4nm,0.5s,mb3.4,baz=141,slow=9.2,SNR=5.4						
BRVK	**Borovoye**	**74.68**	**328**	*e*P	**P**	**20 42 18.2**	**-0.1**
	0.6nm,0.7s,mb3.4						
CHKZ	**Chkalovo**	**74.80**	**329**	*e*P	**P**	**20 42 18.5**	**-0.6**
	2.2nm,1.1s,mb3.8						

GUC 09 20:39:57.4±0.7**, 28.28S**×**70.59W, h80**^{km}±10^{km}**, ML3.8, 1D,**
Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**0.94**	**13**	⇓*i*P	P	20 40 16.1	+0.1
CPCH				*i* S	S	20 40 29.9	+0.1
CDCH	**Caldera**	**1.22**	**350**	*i* P	P	20 40 18.4	-1.0
CDCH				*e*S	S	20 40 35.5	-0.5
LSCH	**La Serena**	**1.73**	**199**	*e*P	P	20 40 25.5	-0.7
LSCH				*i* S	S	20 40 47.7	+0.3
LSCH				AMP		20 40 51.8	
	comp=E,1μm,0.4s						
TLL	**Tololo Astrono**	**1.89**	**186**	*e*P	P	20 40 29.1	+0.7
TLL				*i* S	S	20 40 52.9	+1.6
TLL				AMP		20 40 58.4	
	comp=N,1μm,0.3s						
CRCH	**Chaqaral**	**1.92**	**359**	*e*P	P	20 40 28.5	-0.3

IDC 09 20:49:20.0±1.6**, 23.69N**×**94.71E, mb3.4**/3**, mb1 3.7**/3**,**
mb1mx3.4/19**, mbtmp3.4**/3**, Error ellipse:**
s-maj=128.9km s-min=26.8km az=54.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**25.12**	**340**	P	P	20 54 46.5	-1.5
	0.4nm,0.5s,baz=149,slow=11,SNR=14						
WRA	**Warramunga Arr**	**58.08**	**135**	P	P	20 59 15.3	-2.3
	0.7nm,0.8s,baz=322,slow=7.5,SNR=8.3						
GERES	**GERESS Array B**	**66.76**	**315**	P	P	21 00 13.4	-1.8
	0.4nm,0.6s,baz=68,slow=5.3,SNR=4.3						

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*IDC **09** 20:52:52.0±0.9, 22.07S×67.81W, h106^{km}±14^{km}, mb4.1/1, mb1 3.8/4, mb1mx3.6/15, mbtmp4.2/4, Error ellipse: s-maj=28.4km s-min=14.7km az=128.0*
*GUC **09** 20:52:54.2±0.6, 21.91S×68.56W, h130^{km}, ML4.2*
*NEIC **09** 20:52:54.2, 21.91S×68.56W, h130^{km}, mb4.4/2, After GUC.*
ISC 09 20:52:50.8±0.6**, 21.67S**±0.05×**68.27W**±0.08**, h134**^{km}±7^{km}**,**
n28, σ$1\overset{s}{.}$15/33**, mb4.2**/1**, 11C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.11**	**212**	P	**P**	**20 53 15.7**	**+0.4**
	212nm,0.3s,baz=5.0,slow=8.3,SNR=424						
LVC				S	**S**	**20 53 32.2**	**-1.8**
	90nm,0.3s,baz=80,slow=12,SNR=50						
SPCH	**San Pedro de A**	**1.23**	**177**	⇑*i*P	**P**	**20 53 18.4**	**+1.7**
SPCH				*i* S	**S**	**20 53 37.4**	**+1.1**
SPCH				AMP		20 53 51.0	
	comp=N,2μm,0.9s						
CEN1	**Los Morros**	**2.47**	**226**	*e*P	**P**	**20 53 33.2**	**+1.8**
CEN1				*i* S	**S**	**20 54 03.1**	**+0.7**
CEN1				AMP		20 54 09.7	
	comp=E,979nm,0.8s						
ANCH	**Antofagasta**	**2.81**	**224**	⇓*i*P	**P**	**20 53 34.7**	**-1.2**
ANCH				*i* S	**S**	**20 54 05.6**	**-4.6**
ANCH				AMP		20 54 07.9	
	comp=N,1μm,0.5s						
CPN1	**Cerro Paranal**	**3.54**	**213**	*e*P	**P**	**20 53 44.2**	**-1.3**
CPN1				*i* S	**S**	**20 54 22.5**	**-4.7**
CPN1				AMP		20 54 24.7	
	comp=E,585nm,0.4s						
LPAZ	**La Paz**	**5.36**	**1**	P	**P**	**20 54 14.8**	**+5.1**
	comp=E,1.1nm,0.3s,baz=192,slow=7.3,SNR=23						
LPAZ	**La Paz**	**5.36**	**1**	P	**P**	**20 54 14.8**	**+5.1**
ARE	**Arequipa**	**6.01**	**329**	*e*P	**P**	**20 54 18.0**	**-0.5**
ARE				*e*S	**S**	**20 55 27.0**	**+0.4**
SIV	**San Ignacio**	**8.85**	**52**	P	**P**	**20 54 56.3**	**-0.4**
	comp=E,3.4nm,0.3s,baz=240,slow=11,SNR=53						
SIV				S	**S**	**20 56 30.9**	**-4.2**
	comp=E,0.4nm,0.3s,baz=287,slow=19,SNR=3.3						
CFAA	**Coronel Fontan**	**9.89**	**180**	P	**P**	**20 55 04.7**	**-5.9**
	comp=E,0.1nm,0.3s,baz=342,slow=13,SNR=4.4						
CFAA				S	**S**	**20 56 49.8**	**-10**
	comp=E,0.2nm,0.3s,baz=280,slow=23,SNR=3.8						
CPUP	**Villa Florida**	**11.02**	**117**	*e*P	**P**	**20 55 24.8**	**-0.8**
	comp=E,10nm,0.8s						
TRQA	**Tornquist**	**17.21**	**163**	*e*P	**P**	**20 56 43.8**	**-0.5**
	comp=E,9.7nm,0.6s						
BDFB	**Brasilia**	**20.10**	**76**	P	**P**	**20 57 15.9**	**-0.1**
	comp=E,1.0nm,0.3s,baz=244,slow=9.1,SNR=6.6						
VNA3	**Neumayer Olymp**	**59.72**	**161**	⇑	**P**	**21 02 52.0**	**+8.8**
VNA3	**Neumayer Olymp**	**59.72**	**161**	⇑	**P**	**21 02 54.6**	**+11**
VNA1	**Neumayer--Stat**	**59.92**	**161**	⇑	**P**	**21 02 45.7**	**+1.1**
VNA2	**Neumayer--Watz**	**60.29**	**161**	⇑	**P**	**21 02 45.5**	**-1.6**
VNA2	**Neumayer--Watz**	**60.29**	**161**	⇑	**P**	**21 02 49.4**	**+2.3**
VNA2	**Neumayer--Watz**	**60.29**	**161**	⇑	**P**	**21 02 53.3**	**+6.2**
VNA2	**Neumayer--Watz**	**60.29**	**161**	⇑P	**P**	**21 02 49.4**	**+2.3**
SNAA	**Sanae**	**61.92**	**161**	⇑	**P**	**21 02 49.3**	**-8.8**
SNAA	**Sanae**	**61.92**	**161**	⇑	**P**	**21 02 56.2**	**-1.9**
SNAA	**Sanae**	**61.92**	**161**	⇑P	**P**	**21 02 56.2**	**-1.9**
DBIC	**Dimbokro**	**68.21**	**73**	P	**P**	**21 03 40.2**	**+0.8**
	comp=E,3.4nm,0.7s,mb4.2,baz=215,slow=8.5,SNR=6.2						
DBIC	**Dimbokro**	**68.21**	**73**	P	**P**	**21 03 40.2**	**+0.8**
WRA	**Warramunga Arr**	**133.10**	**210**	PKP	PKPdf	21 11 54.4	+3.1
	comp=E,0.7nm,0.8s,baz=155,slow=1.8,SNR=5.4						
ZAL	**Zalesovo**	**141.85**	**26**	PKP	PKPdf	21 12 09.5	+3.2
	comp=E,0.6nm,0.3s,baz=283,slow=4.0,SNR=3.0						
MKAR	**Makanchi Array**	**145.42**	**37**	PKPbc	PKPbc	21 12 16.8	+3.5
	comp=E,0.3nm,0.3s,baz=12,slow=1.9,SNR=6.2						

WEL 09 21:13:01.1±0.1**, 40.17S**×**174.97E, h12**^{km}**, ML3.7**/34**,**
3C-9D, Error ellipse: s-maj=1.2km s-min=0.5km az=90.0,
Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	**Wanganui**	**0.42**	**2**	P*	Pb	21 13 10.1	+0.2
WAZ				*e*S*	Sb	21 13 16.0	+0.1
WAZ				S*	Sb	21 13 16.2	+0.4
MRZ	**Mangatainoka R**	**0.68**	**136**	⇑P*	Pb	21 13 14.5	+0.2
MRZ				S*	Sb	21 13 23.1	-0.2
KIW	**Kapiti Island**	**0.69**	**184**	⇓P*	Pb	21 13 13.8	-0.8
KIW				S*	Sb	21 13 22.5	-1.2
TSZ	**Takapari Road**	**0.77**	**82**	⇓P*	Pb	21 13 16.0	+0.1
TSZ				S*	Sb	21 13 25.5	-0.6
MTVZ	**Mangateitei**	**0.88**	**26**	⇓P*	Pb	21 13 17.1	-0.7
PKVZ	**Pokaka**	**0.93**	**18**	P*	Pb	21 13 18.0	-0.7
PKVZ				S*	Sb	21 13 30.1	-0.6
CAW	**Cannon Point**	**0.94**	**175**	⇓P*	Pb	21 13 18.5	-0.2
CAW				S*	Sb	21 13 30.3	-0.6
WNVZ	**Wahianoa**	**0.97**	**30**	P*	Pb	21 13 18.7	-0.7
MOVZ	**Moawhango**	**0.97**	**39**	⇓P*	Pb	21 13 18.3	-1.2
MOVZ				S*	Sb	21 13 31.4	-0.6
TRVZ	**Turoa**	**0.98**	**27**	P*	Pb	21 13 18.8	-0.8
RAEZ	**Rainy Point**	**0.99**	**333**	P*	Pb	21 13 20.0	+0.3
DRZ	**Dome Shelter**	**1.01**	**27**	P*	Pb	21 13 19.7	-0.3
DRZ				S*	Sb	21 13 32.7	-0.3
DUWZ	**D'Urville Isla**	**1.02**	**231**	P*	Pb	21 13 19.2	-1.0
FWVZ	**Far West T-bar**	**1.02**	**26**	⇑P*	Pb	21 13 19.4	-0.9
FWVZ				S*	Sb	21 13 32.6	-0.8
TUVZ	**Tukino**	**1.05**	**31**	P*	Pb	21 13 20.0	-0.7
VRZ	**Vera Road**	**1.06**	**351**	P*	Pb	21 13 20.8	0.0
VRZ				S*	Sb	21 13 35.3	+0.8
MTW	**Mount Morrison**	**1.06**	**158**	P*	Pb	21 13 21.1	+0.1
MTW				S*	Sb	21 13 35.0	+0.4
WPVZ	**Whakapapa**	**1.06**	**25**	⇓P*	Pb	21 13 20.2	-0.8
WPVZ				S*	Sb	21 13 34.6	0.0
CNZ	**Chateau**	**1.07**	**25**	P*	Pb	21 13 20.3	-0.8
MRW	**Makara Radio**	**1.07**	**191**	⇓P*	Pb	21 13 20.4	-0.8
MRW				S*	Sb	21 13 34.0	-0.9
DFE	**Dawson Falls**	**1.08**	**321**	P*	Pb	21 13 21.5	+0.3
BFZ	**Birch Farm**	**1.10**	**118**	P*	Pb	21 13 21.7	+0.1
NGZ	**Ngauruhoe**	**1.11**	**26**	P*	Pb	21 13 20.9	-0.9
NGZ				S*	Sb	21 13 35.0	-0.9
WEL	**Wellington**	**1.12**	**188**	P*	Pb	21 13 21.4	-0.5
NEZ	**North Egmont**	**1.12**	**323**	P*	Pb	21 13 22.2	+0.2
OTVZ	**Oturere**	**1.14**	**28**	⇓P*	Pb	21 13 21.6	-0.7
OTVZ				S*	Sb	21 13 36.7	-0.2
SNZO	**South Karori**	**1.15**	**190**	P*	Pb	21 13 21.7	-0.8
SNZO				*e*S*	Sb	21 13 35.7	-1.5
NRZ	**Ngariki Road**	**1.16**	**316**	P*	Pb	21 13 22.5	0.0
TWVZ	**Taurewa**	**1.16**	**18**	P*	Pb	21 13 21.2	-1.3
WTVZ	**West Tongariro**	**1.16**	**25**	P*	Pb	21 13 21.5	-1.0
TCW	**Tory Channel**	**1.16**	**207**	⇓P*	Pb	21 13 21.3	-1.4
KRVZ	**Karewarewa**	**1.20**	**26**	P*	Pb	21 13 22.1	-1.1
KRVZ				S*	Sb	21 13 38.1	-0.4
BHW	**Baring Head**	**1.24**	**183**	P*	Pb	21 13 23.4	-0.5
NWEZ	**Newall Road**	**1.24**	**316**	P*	Pb	21 13 24.0	+0.1
PKE	**Pukeiti**	**1.24**	**322**	P*	Pb	21 13 23.7	-0.2
PAWZ	**Paruwai Farm**	**1.26**	**164**	P*	Pb	21 13 24.0	-0.2
MSWZ	**Moikau Station**	**1.26**	**170**	P*	Pb	21 13 23.8	-0.5
KATZ	**Kakaramea**	**1.32**	**25**	PN	Pn	21 13 24.0	-1.4
RITZ	**Rihia Road**	**1.38**	**30**	PN	Pn	21 13 25.7	-0.5
RATZ	**Rangitukua**	**1.44**	**26**	PN	Pn	21 13 25.7	-1.5
TUWZ	**Tuamarina**	**1.48**	**211**	⇑PN	Pn	21 13 26.9	-0.7
BKZ	**Black Stump Fm**	**1.55**	**50**	PN	Pn	21 13 28.0	-0.7
HATZ	**Hinemaiaia**	**1.55**	**35**	PN	Pn	21 13 27.9	-0.7
WATZ	**Wairara**	**1.58**	**22**	PN	Pn	21 13 27.4	-1.7
NNZ	**Nelson**	**1.60**	**229**	PN	Pn	21 13 28.8	-0.6
HIZ	**Hauiti**	**1.66**	**357**	PN	Pn	21 13 29.1	-1.2
HIZ				SN	Sn	21 13 50.0	-1.6
BSWZ	**Blackbirch Sta**	**1.75**	**208**	PN	Pn	21 13 31.2	-0.3
QRZ	**Quartz Range**	**1.97**	**250**	PN	Pn	21 13 33.4	-1.3
THZ	**Tophouse**	**2.23**	**224**	PN	Pn	21 13 37.4	-1.0
KHZ	**Kahutara**	**2.49**	**205**	PN	Pn	21 13 39.9	-2.2
URZ	**Urewera**	**2.53**	**42**	PN	Pn	21 13 40.9	-1.9
MWZ	**Matawai**	**2.71**	**48**	PN	Pn	21 13 43.9	-1.3

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*ATH **09** 21:29:59.7, 38.22N×26.89E, h24^{km}±1^{km}, MD3.2/3*
*ISK **09** 21:30:00.0, 38.22N×26.72E, h18^{km}, MD3.2*
*NEIC **09** 21:30:00.0, 38.22N×26.72E, h18^{km}, MD3.2(ATH), MD3.2(ISK), After ISK.*
*CSEM **09** 21:30:01.1±0.1, 38.21N×26.80E, h20^{km}, MD3.2, Error ellipse: s-maj=2.4km s-min=1.5km az=90.0*
ISC 09 21:30:00.0±0.6**, 38.19N**±0.02×**26.68E**±0.04**, h9**^{km}±4^{km}**,**
n28, σ$0\overset{s}{.}$99/40**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.18**	**339**	*i* P	**Pg**	**21 30 04.0**	**+0.1**
URLA				*i* S	**Sg**	**21 30 06.5**	**0.0**
BLCB	**Balcova**	**0.35**	**56**	*i* PG	**Pg**	**21 30 07.2**	**+0.1**
BLCB				*i* SG	**Sg**	**21 30 11.5**	**-0.3**
SMG	**Samos**	**0.50**	**165**	⇑*i*PN	**Pg**	**21 30 10.3**	**+0.2**
SMG				*e*SN	**Sg**	**21 30 17.7**	**+0.8**
IZM	**Izmir**	**0.51**	**66**	*i* PG	**Pg**	**21 30 10.2**	**0.0**
IZM				*i* SG	**Sg**	**21 30 17.3**	**+0.3**
AYDN	**Tasoluk**	**1.09**	**119**	*i* P	**Pb**	**21 30 20.7**	**0.0**
AYDN				*i* S	**Sb**	**21 30 34.5**	**-0.3**
PRK	**Paraskevi**	**1.10**	**343**	*e*PN	**Pn**	**21 30 21.7**	**+0.2**
PRK				*e*SN	**Sn**	**21 30 36.8**	**-0.1**
AYVA	**Ayvalik**	**1.11**	**1**	*i* P	**Pb**	**21 30 21.5**	**+0.5**
AYVA				*i* S	**Sb**	**21 30 38.5**	**+3.0**
AKS	**Akhisar**	**1.12**	**52**	PN	**Pn**	**21 30 21.2**	**-0.7**
BODT	**Bodrum**	**1.24**	**156**	*e*PN	**Pn**	**21 30 23.5**	**0.0**
MLSB	**Milas**	**1.25**	**135**	PN	**Pn**	**21 30 22.5**	**-1.2**
BDRM	**Kayabasi**	**1.28**	**151**	*i* P	**Pb**	**21 30 23.5**	**-0.4**
BDRM				*i* S	**Sb**	**21 30 41.4**	**+1.0**

APE	Apeiranthos	1.44	219	*e*PN	Pn	21 30 26.2	-0.3
APE	Apeiranthos	1.44	219	*e*PN	Pn	21 30 28.3	+1.8
APE				*e*SN	Sn	21 30 49.5	+3.8
MANT	Manisa	1.51	78	*i* P	Pn	21 30 28.3	+0.9
MANT				*i* S	Sb	21 30 46.8	-0.2
DAT	Datca	1.63	154	*e*PN	Pn	21 30 28.3	-0.8
YER	Yerkesik	1.66	129	*e*PN	Pn	21 30 29.3	-0.2
BALB	Balikesir	1.72	33	*e*PN	Pn	21 30 29.3	-1.2
BTOK	Tokmak	1.89	34	*i* P	Pn	21 30 35.6	+2.7
DENT	Denizli	1.91	103	*e*PN	Pn	21 30 32.5	-0.7
DNZL	Cakiroluk	1.94	104	*i* P	Pn	21 30 35.1	+1.5
DST	Dursunbey	2.08	47	*e*PN	Pn	21 30 34.6	-0.9
KCT	Karacabey	2.45	32	*e*PN	Pn	21 30 39.3	-1.5
FETY	Fethiye	2.47	128	*e*PN	Pn	21 30 40.3	-0.9
ORLT	Orhaneli	2.53	42	*e*PN	Pn	21 30 41.4	-0.7
ULDT	Uludag	2.73	44	*i* P	Pg	21 30 50.5	-4.1
ULDT				*i* S	Sb	21 31 24.0	+1.6
TKTP	Tekketepe	2.88	92	*i* P	Pg	21 30 54.4	-3.1
TKTP				*i* S	Sg	21 31 36.9	+1.0
RDO	Rodhopi	3.08	344	*e*PN	Pn	21 30 49.4	-0.4
ESKT	Eskisehir	3.52	67	*i* P	Pn	21 31 06.2	+10

IDC 09 21:35:03.9±2.3**, 5.21N×94.70E, mb3.9**/6**, mb1 4.1**/6**, mb1mx3.7**/18**, mbtmp3.9**/6**, Error ellipse: s-maj=97.7km s-min=24.8km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	42.79	347	P	P	21 43 03.9	-1.2
	0.8nm,0.4s,baz=167,slow=7.4,SNR=19						
SONM	Songino Array	43.63	11	P	P	21 43 10.0	-1.8
	0.6nm,0.8s,baz=192,slow=8.2,SNR=5.6						
WRA	Warramunga Arr	46.30	124	P	P	21 43 31.7	-1.8
	1.4nm,0.7s,baz=303,slow=9.2,SNR=14						
ZAL	Zalesovo	49.24	352	P	P	21 43 54.5	-1.6
	2.1nm,0.3s,baz=322,slow=6.5,SNR=8.7						
BVAR	Borovoye Array	51.67	342	P	P	21 44 11.4	-3.3
	0.5nm,0.6s,baz=140,slow=11,SNR=3.4						
ARCES	ARCESS Array B	77.94	340	P	P	21 47 03.7	-1.5
	2.9nm,1.1s,baz=102,slow=7.1,SNR=7.0						

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*ATH **09** 21:42:51.0, 38.20N×27.04E, h28^{km}±2^{km}, MD3.1/3*
*ISK **09** 21:42:53.0, 38.23N×26.78E, h19^{km}, MD2.9*
*NEIC **09** 21:42:53.0, 38.23N×26.78E, h19^{km}, MD3.1(ATH), MD2.9(ISK), After ISK.*
*CSEM **09** 21:42:53.2±0.1, 38.20N×26.83E, h15^{km}, MD2.9, Error ellipse: s-maj=3.0km s-min=1.6km az=118.0*
ISC 09 21:42:53.1±1.1**, 38.20N**±0.04×**26.8E**±0.1**, h14**^{km}±10^{km}**, n11, σ1^{s}03**/17**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLCB	Balcova	0.28	49	*i* PG	Pg	21 42 59.2	0.0
BLCB				*i* SG	Sg	21 43 03.5	+0.3
IZM	Izmir	0.43	63	*i* PG	Pg	21 43 02.2	+0.2
IZM				*i* SG	Sg	21 43 09.0	+1.0
SMG	Samos	0.49	175	⇑*i*PN	Pn	21 43 02.3	-3.1
SMG				*e*SN	Sn	21 43 09.7	-4.0
AKS	Akhisar	1.06	50	PG	Pg	21 43 13.2	-1.1
PRK	Paraskevi	1.11	339	*e*PN	Pn	21 43 13.5	-0.8
PRK				*e*SN	Sn	21 43 30.2	+0.8
MLSB	Milas	1.20	139	*e*PN	Pn	21 43 15.9	+0.4
BODT	Bodrum	1.21	159	PN	Pn	21 43 15.9	+0.2
APE	Apeiranthos	1.50	222	*e*PB	Pb	21 43 19.8	-0.5
APE				*e*SN	Sn	21 43 41.9	+2.6
APE	Apeiranthos	1.50	222	*e*Pn	Pn	21 43 20.6	+0.8
APE				*e*Sn	Sn	21 43 41.9	+2.6
DAT	Datca	1.60	156	*e*PN	Pn	21 43 21.1	-0.1
RDO	Rodhopi	3.09	342	*e*PN	Pn	21 43 41.6	-0.9

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*CSEM **09** 21:51:01.9±0.1, 38.20N×26.72E, h10^{km}, MD2.8, Error ellipse: s-maj=3.6km s-min=2.3km az=115.0*
*ISK **09** 21:51:02.2, 38.25N×26.71E, h19^{km}, MD2.8*
*ATH **09** 21:51:02.0, 38.13N×26.68E, h34^{km}±9^{km}, MD3.0/3*
ISC 09 21:51:01.5±0.7**, 38.18N**±0.02×**26.65E**±0.04**, h4**^{km}±5^{km}**, n18, σ0^{s}92**/32**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.19	347	*i* P	Pg	21 51 05.4	0.0
URLA				*i* S	Sg	21 51 08.5	+0.6
BLCB	Balcova	0.37	56	*i* PG	Pg	21 51 09.1	+0.1
BLCB				*i* SG	Sg	21 51 13.8	-0.2
SMG	Samos	0.49	162	⇑*i*PB	Pg	21 51 11.9	+0.6
SMG				*e*SB	Sg	21 51 19.4	+1.6
IZM	Izmir	0.53	65	*i* PG	Pg	21 51 12.3	+0.2
IZM				*i* SG	Sg	21 51 19.4	+0.2
KDAG	Bornova	0.54	65	*i* P	Pg	21 51 11.2	-1.0
KDAG				*i* S	Sg	21 51 17.9	-1.4
AYDN	Tasoluk	1.10	117	*i* P	Pb	21 51 23.5	+0.8
AYDN				*i* S	Sb	21 51 36.6	-0.7
PRK	Paraskevi	1.11	345	*e*PN	Pn	21 51 23.2	-0.5
PRK				*e*SN	Sn	21 51 39.8	+0.2
AYVA	Ayvalik	1.13	2	*i* P	Pb	21 51 23.8	+0.5
AYVA				*i* S	Sb	21 51 39.1	+1.0
AKS	Akhisar	1.15	52	PG	Pg	21 51 22.9	-1.6
BODT	Bodrum	1.23	155	PN	Pn	21 51 25.9	+0.5
MLSB	Milas	1.25	134	*e*PN	Pn	21 51 25.4	-0.3
BDRM	Kayabasi	1.27	150	*i* P	Pb	21 51 25.8	+0.1
BDRM				*i* S	Sb	21 51 42.0	-0.3
APE	Apeiranthos	1.42	219	*e*PN	Pn	21 51 26.9	-1.2
APE				*e*SN	Sn	21 51 45.4	-2.0
APE	Apeiranthos	1.42	219	*e*Pn	Pn	21 51 28.5	+0.4
APE				*e*Sn	Sn	21 51 45.4	-2.0
MANT	Manisa	1.53	78	*i* P	Pn	21 51 30.2	+0.5
MANT				*i* S	Sb	21 51 49.8	0.0
DAT	Datca	1.62	153	*e*PN	Pn	21 51 30.5	-0.5
DNZL	Cakiroluk	1.96	104	*i* P	Pn	21 51 39.3	+3.5
DNZL				*i* S	Sn	21 52 04.4	+3.3
ULDT	Uludag	2.76	44	*i* P	Pn	21 51 53.4	+6.1
ULDT				*i* S	Sn	21 52 26.8	+5.4

NNC 09 21:53:51.9±4.2**, 34.85N×70.91E, h44**^{km}±107^{km}**, mpv3.5, 3C-1D, Error ellipse: s-maj=55.4km s-min=32.9km az=108.0, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	8.25	358	⇑P	P	21 55 49.4	-2.3
	0.5nm,0.3s,baz=176,slow=12,SNR=38						
KK31				⇑S	S	21 57 21.0	-3.5
	1.4nm,0.7s,baz=187,slow=25,SNR=5.3						
AAK	Ala-Archa	8.26	19	⇓P	P	21 55 48.5	-3.4
	1.4nm,0.5s						
AAK				⇑S	S	21 57 22.3	-2.6
	1.3nm,0.6s						
AB31	Akbulak array	16.51	334	P	P	21 57 40.1	-1.6
	0.9nm,0.8s,baz=153,slow=12,SNR=8.9						

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*IDC **09** 21:56:28.4±0.9, 65.18S×178.14E, mb4.7/7, mb1 4.8/7, mb1mx4.5/12, mbtmp4.7/7, MS4.6/10, Ms1 4.6/10, ms1mx4.6/11, Error ellipse: s-maj=40.1km s-min=19.0km az=73.0*
*HRVD **09** 21:56:29.7±0.2, 64.90S×177.84E, h12^{km}±1^{km}, MW5.3/66, Centroid moment Tensor Solution. LP body waves: s50,c82;Mantle waves: s66,c112; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.05±.03; $M_{\theta\theta}$0.88±.03; $M_{\phi\phi}$-0.82±.03; $M_{r\theta}$-0.12±.06; $M_{\theta\phi}$-0.25±.03; $M_{\phi r}$0.34±.09; Best double couple: M_0.957×10^{17} NP1: ϕ_s235°, δ69°, λ-173°. NP2:ϕ_s142°, δ84°, λ-21°. Principal axes: T .943, Plg10°, Azm190°; N .027, Plg68°, Azm306°; P -.97, Plg19°, Azm97°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **09** 21:56:29.7±0.5, 65.12S×178.24E, h10^{km}, mb4.9/8 Error ellipse: s-maj=19.7km s-min=9.1km az=78.0*
ISC 09 21:56:29.5±0.5**, 65.15S**±0.06×**177.5E**±0.2**, h10**^{km}**, n41, σ1^{s}30**/28**, mb4.7**/13**, MS4.6**/10**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	Scott Base	13.17	190	*e*P	P	21 59 38.7	-0.3
	26nm,0.8s						
VNDA	Vanda	13.31	195	*e*P	P	21 59 40.5	-0.3
	25nm,0.9s						
RPZ	Rata Peaks	21.78	347	P	P	22 01 22.4	-0.6
	52nm,1.0s,mb4.9,baz=170,slow=8.8,SNR=15						
RPZ				LR	LR	22 08 03.2	
	comp=Z,2µm,19.5s,MS4.5,baz=264,slow=32						
QSPA	South Pole Qui	24.94	180	*e*P	P	22 01 55.9	+2.4
	18nm,1.0s,mb4.6						
URZ	Urewera	26.93	359	P	P	22 02 10.7	-1.7
	28nm,1.2s,mb4.7,baz=184,slow=3.8,SNR=7.5						
URZ				LR	LR	22 10 55.8	
	comp=Z,2µm,19.9s,MS4.6,baz=188,slow=32						
TOO	Toolangi	33.38	310	*e*P	P	22 03 11.4	+1.6
	17nm,1.2s,mb4.8						
CNB	Canberra Magne	34.28	317	*e*P	P	22 03 18.5	+1.0
	38nm,1.0s,mb5.3						
MAW	Mawson	39.68	213	LR	LR	22 20 28.3	
	comp=Z,4µm,18.1s,MS5.3,baz=138,slow=36						
STKA	Stephens Creek	39.87	309	*e*P	P	22 04 06.2	+1.5
	16nm,1.2s,mb4.6						
STKA	Stephens Creek	39.87	309	P	P	22 04 06.2	+1.6
	16nm,1.0s,mb4.7,baz=134,slow=7.3,SNR=9.1						
SNAA	Sanae	43.44	180		P	22 04 34.1	+0.8
SNAA	Sanae	43.44	180		P	22 04 40.8	+7.5
SNAA	Sanae	43.44	180		P	22 04 50.4	+17
SNAA	Sanae	43.44	180	P	P	22 04 31.0	-2.4
	0.8nm,0.9s,mb3.5,baz=162,slow=6.8,SNR=5.9						
NOUC	Port Laguerre	43.66	345	*e*P	P	22 04 34.9	-0.8
DZM	Mont Dzumac	43.67	345	P	P	22 04 34.8	-1.0
	15nm,0.8s,mb4.8,baz=183,slow=4.5,SNR=10						
DZM				LR	LR	22 19 19.1	
	comp=Z,723nm,21.0s,MS4.6,baz=191,slow=31						
DZM	Mont Dzumac	43.67	345	*e*P	P	22 04 33.8	-2.0
VNA3	Neumayer Olymp	43.79	177		P	22 04 41.7	+5.6
VNA3	Neumayer Olymp	43.79	177		P	22 04 47.3	+11
VNA3	Neumayer Olymp	43.79	177		P	22 04 54.0	+18
RAR	Rarotonga	46.39	30	LR	LR	22 19 59.3	
	comp=Z,809nm,19.0s,MS4.7,baz=183,slow=30						
TBI	Tubuai	46.94	43	*e*S	S	22 11 53.6	+1.5
TBI				*e*LQ		22 15 44.6	
TBI				*e*LR	LR	22 17 39.9	
	2µm,29.0s,baz=199						
CTA	Charters Tower	49.53	320	*e*P	P	22 05 21.9	-0.2
	13nm,0.9s,mb5.0						
CTA	Charters Tower	49.53	320	P	P	22 05 22.2	+0.1
	14nm,0.9s,mb5.0,baz=166,slow=8.2,SNR=10.0						
RKT	Rikitea	51.93	60	*e*S	S	22 13 03.1	+1.3
RKT				*e*LQ		22 17 42.4	
RKT				*e*LR	LR	22 20 09.6	
	450nm,28.0s,baz=194						
PPT	Papeete	52.39	41	*e*S	S	22 13 09.8	+1.7
PPT				*e*LQ		22 17 47.9	
PPT				*e*LR	LR	22 20 07.3	
	1µm,28.5s,baz=198						
PPT	Papeete	52.39	41	LR	LR	22 22 56.1	
	comp=Z,436nm,18.6s,MS4.5,baz=204,slow=30						
WRA	Warramunga Arr	53.32	307	P	P	22 05 50.0	-0.8
	7.4nm,1.0s,mb4.6,baz=160,slow=6.5,SNR=12						
HNR	Honiara	56.97	339	LR	LR	22 27 21.0	
	comp=Z,380nm,18.4s,MS4.5,baz=178,slow=32						
PLCA	Paso Flores	62.03	127	LR	LR	22 26 52.7	
	comp=Z,138nm,21.7s,MS4.1,baz=208,slow=30						
TAOE	Nuku Hiva Isla	63.43	48	*e*LR	LR	22 25 19.2	
	2µm,28.4s,baz=195						
LVC	Limon Verde	79.03	120	*e*P	P	22 08 32.0	-3.0
	11nm,1.0s,mb4.7						
CPUP	Villa Florida	79.55	132	*e*P	P	22 08 36.2	-1.4
	24nm,1.1s,mb5.0						
BOSA	Boshof	84.09	204	LR	LR	22 42 52.9	
	comp=Z,740nm,21.1s,MS5.0,baz=156,slow=33						
LPAZ	La Paz	85.11	119	P	P	22 09 06.7	+0.1
	1.4nm,0.9s,mb4.1,baz=197,slow=3.4,SNR=4.3						
LPAZ				LR	LR	22 37 59.3	
	comp=Z,114nm,20.1s,MS4.3,baz=32,slow=29						
LSA	Lhasa	115.05	287	*e*P	Pdif	22 11 23.0	+1.0
IDI	Anoyia	145.91	222	PKPbc	PKPbc	22 16 07.4	-1.1
	15nm,0.9s,baz=44,slow=3.4,SNR=5.1						
AKTO	Aktyubinsk	146.08	274	PKPbc	PKPbc	22 16 09.9	+1.5
	1.7nm,0.9s,baz=135,slow=6.0,SNR=4.9						
BRTR	Keskin Array B	147.15	237	PKPbc	PKPdf	22 16 12.9	+0.3
	4.1nm,0.9s,baz=155,slow=5.4,SNR=20						
BR131	Keskin Array S	147.16	237	*e*PKPbc	PKPdf	22 16 12.2	-0.3
ARCES	ARCESS Array B	168.42	305	PKPab	PKPab	22 17 45.3	+0.1
	3.1nm,0.8s,baz=63,slow=5.4,SNR=4.5						

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*BJI **09** 22:00:11.8, 5.96S×155.51E, h51^{km}, mb4.3, Msz3.6*
*IDC **09** 22:00:12.5±2.6, 6.70S×155.17E, h63^{km}±24^{km}, mb4.1/10, mb1 4.3/13, mb1mx4.2/17, mbtmp4.4/13, ML3.9/3, MS3.6/5, Ms1 3.6/5, ms1mx3.2/23, Error ellipse: s-maj=22.5km s-min=13.6km az=1.0*
*NEIC **09** 22:00:13.7±1.4, 6.67S×155.22E, h72^{km}±13^{km}, mb4.4/2, Error ellipse: s-maj=14.0km s-min=9.6km az=182.0*
ISC 09 22:00:11.2±1.9**, 6.8S**±0.1×**155.17E**±0.05**, h62**^{km}±18^{km}**, n38, σ0^{s}89**/35**, mb4.6**/18**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.42	120	P	P	22 01 32.3	+1.1
	9.3nm,0.3s,baz=202,slow=3.3,SNR=7.7						
HNR				S	S	22 02 32.3	-0.7
	baz=257,slow=12,SNR=1.7						
HNR				LR	LR	22 03 34.9	
	comp=Z,689nm,19.4s,baz=320,slow=37						
HNR	Honiara	5.42	120	P	P	22 01 32.3	+1.1
HNR				S	S	22 02 32.3	-0.7
HNR				LR	LR	22 03 34.9	
PMG	Port Moresby	8.36	251	P	P	22 02 12.3	+0.3
	3.5nm,0.3s,baz=47,slow=8.6,SNR=8.9						
PMG				S	S	22 03 44.1	-1.7
	0.5nm,0.3s,baz=272,slow=14,SNR=2.6						
PMG				LR	LR	22 05 18.2	
	comp=Z,421nm,18.9s,baz=39,slow=36						
CTA	Charters Tower	15.82	212	P	P	22 03 55.4	+3.9
	0.2nm,0.3s,baz=40,slow=14,SNR=8.9						
CTA				LR	LR	22 09 04.6	
	comp=Z,248nm,19.0s,baz=222,slow=34						
CTA	Charters Tower	15.82	212	P	P	22 03 55.4	+3.9
CTA				LR	LR	22 09 04.6	
DZM	Mont Dzumac	18.70	146	P	P	22 04 26.9	-0.3
	0.4nm,0.3s,baz=48,slow=19,SNR=3.8						
GUMO	Guam	22.67	333	LR	LR	22 12 15.2	
	comp=Z,91nm,18.9s,baz=123,slow=32						
WRAB	Tennant Creek	24.07	235	*e*P	P	22 05 22.6	+0.6
	12nm,0.8s,mb4.4						
WB2	Warramunga Arr	24.08	235	*e*P	P	22 05 22.7	+0.7
WRA	Warramunga Arr	24.09	235	P	P	22 05 22.8	+0.7
	5.5nm,0.6s,mb4.1,baz=59,slow=9.4,SNR=64						
WRA				PcP	PcP	22 09 03.2	-0.5
	1.5nm,0.6s,baz=61,slow=2.6,SNR=13						
FITZ	Fitzroy Crossi	30.91	246	*e*P	P	22 06 23.0	-1.5
	12nm,0.7s,mb4.8						
FITZ	Fitzroy Crossi	30.91	246	P	P	22 06 23.1	-1.4
	12nm,0.8s,mb4.8,baz=174,slow=10,SNR=8.4						
MBWA	Marble Bar	37.13	244	*e*P	P	22 07 26.3	+8.4
ASAJ	Asahikawa	51.91	349	LR	LR	22 27 30.4	
	comp=Z,37nm,21.4s,baz=169,slow=32						
KMI	Kunming	60.04	304	P	P	22 10 15.3	+0.9
	5.0nm,1.3s,mb4.4						
KMI				pP	pP	22 10 24.3	-6.5
KMI				LR	LR		
	comp=Z,80nm,31.8s						
GTA	Gaotai	68.70	317	*e*P	P	22 11 11.1	+0.6
SONM	Songino Array	69.24	327	P	P	22 11 13.4	-0.3
	comp=Z,2.6nm,0.8s,mb4.2,baz=141,slow=5.3,SNR=15						
LSA	Lhasa	71.29	304	P	P	22 11 27.6	+1.2
GUN	Gumba	75.15	301	*e*P	P	22 11 49.8	+0.7
	comp=Z,26nm,0.6s,mb5.3						
PKI	Pulchoki	75.46	301	*e*P	P	22 11 51.3	+0.4
	comp=Z,9.2nm,0.6s,mb4.9						
KKN	Kakani	75.63	301	*e*P	P	22 11 52.2	+0.4
	comp=Z,14nm,0.6s,mb5.1						
DMN	Daman	75.73	301	*e*P	P	22 11 53.1	+0.7
	comp=Z,22nm,0.6s,mb5.2						
GKN	Gorkha	76.24	301	*e*P	P	22 11 55.6	+0.3
	comp=Z,3.5nm,0.2s,mb5.0						
KOLN	Koldanda	77.06	300	*e*P	P	22 12 00.0	+0.1
	comp=Z,13nm,0.9s,mb4.8						
HYB	Hyderabad	79.36	289	*i* P	P	22 12 12.0	-0.7
HYB	Hyderabad	79.36	289	*e*P	P	22 12 12.0	-0.7
ILAR	Eielson Array	83.10	21	P	P	22 12 29.8	-1.5
	comp=Z,2.0nm,0.9s,mb4.2,baz=258,slow=5.2,SNR=14						
MKAR	Makanchi Array	83.35	319	P	P	22 12 32.3	-0.7
	comp=Z,2.3nm,0.9s,mb4.2,baz=108,slow=5.8,SNR=11						
ZAL	Zalesovo	84.10	326	P	P	22 12 35.0	-1.6
	comp=Z,0.9nm,0.3s,mb4.3,baz=350,slow=4.9,SNR=3.9						
MAW	Mawson	84.67	203	P	P	22 12 39.4	+0.3
	comp=Z,1.1nm,0.5s,mb4.2,baz=151,slow=5.5,SNR=4.9						
INK	Inuvik	89.45	21	P	P	22 13 02.0	-0.2
	comp=Z,2.3nm,0.5s,mb4.7,baz=254,slow=6.4,SNR=16						
INK	Inuvik	89.45	21	*e*P	P	22 13 00.5	-1.8
NVAR	Mina Array Bea	91.44	52	P	P	22 13 12.9	+0.7
	comp=Z,1.0nm,0.7s,mb4.2,baz=250,slow=9.7,SNR=5.4						
PDAR	Pinedale Array	98.42	48	P	P	22 13 43.4	-0.5
	comp=Z,0.4nm,0.9s,mb4.0,baz=225,slow=2.6,SNR=2.1						
GERES	GERESS Array B	126.95	329	PKP	PKPdf	22 19 09.7	+1.3
	comp=Z,0.5nm,0.7s,baz=63,slow=3.0,SNR=4.5						
LPAZ	La Paz	131.41	119	PKP	PKPdf	22 19 19.6	+1.8
	comp=Z,0.7nm,0.5s,baz=18,slow=5.8,SNR=4.1						
BDFB	Brasilia	148.01	134	PKPbc	PKPdf	22 19 51.1	+3.7
	comp=Z,8.4nm,0.6s,baz=325,slow=1.6,SNR=16						
BAO	Brasilia Array	148.03	134	P	PKPdf	22 19 51.0	+3.5

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*TIR **09** 22:05:14.9, 40.44N×21.98E, h12^{km}*
*THE **09** 22:05:20.9, 40.54N×21.68E, h8^{km}, ML2.8*
*CSEM **09** 22:05:20.5±0.1, 40.55N×21.63E, h15^{km}, MD3.1, Error ellipse: s-maj=1.3km s-min=1.1km az=158.0*
*ATH **09** 22:05:21.2, 40.54N×21.72E, h13^{km}±1^{km}, MD3.1/3*
*NEIC **09** 22:05:21.2, 40.54N×21.72E, h13^{km}, MD3.1(ATH), After ATH.*
ISC 09 22:05:20.3±0.4**, 40.54N**±0.02×**21.69E**±0.03**, h14**^{km}±6^{km}**, n21, σ1^{s}09**/36**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.24	164	*e*PG	Pg	22 05 26.0	+0.2
KZN				*e*SG	Sg	22 05 30.5	+1.1
FNA	Florina	0.34	316	*e*Pg	Pg	22 05 27.4	0.0
FNA				*e*Sg	Sg	22 05 32.5	+0.3
BIA	Bitola	0.55	330	*i* Pg	Pg	22 05 30.7	-0.9
BIA				*i* Sg	Sg	22 05 40.2	+1.1
GRG	Griva	0.69	52	*e*Pg	Pg	22 05 33.8	-0.3
KBN	Korca	0.69	277	*i* Pg	Pg	22 05 33.8	-0.4
KBN				*i* Sg	Sg	22 05 44.3	+0.7
KBN	Korca	0.69	277	*e*Pg	Pg	22 05 33.8	-0.4
KBN				*i* Sg	Sg	22 05 44.3	+0.7
LIT	Litokhoron	0.76	125	*e*Pg	Pg	22 05 35.6	0.0
LIT				*e*Sg	Sg	22 05 46.7	+0.9
MEV	Metsovon	0.83	205	*e*Pg	Pg	22 05 36.0	-1.1
MEV				*e*Sg	Sg	22 05 48.8	+0.5
LSK	Leskovik	0.92	245	*i* Pg	Pg	22 05 37.1	-1.6
LSK				*i* Sg	Sg	22 05 51.4	+0.3
LSK	Leskovik	0.92	245	*e*Pg	Pg	22 05 37.1	-1.6
LSK				*i* Sg	Sg	22 05 51.4	+0.3
THE	Thessaloniki	0.98	84	*e*Pg	Pg	22 05 39.8	-0.2
THE				*e*Sg	Sg	22 05 53.4	+0.3
VAY	Valandovo	1.03	40	*i* Pg	Pg	22 05 40.1	-0.9
VAY				*i* Sg	Sg	22 05 57.1	+2.3
KNT	Kendrikon	1.11	56	*e*Pg	Pg	22 05 41.7	-0.9
SOH	Sokhos	1.30	77	*e*Pg	Pg	22 05 44.8	-1.6
SOH				*e*Sg	Sg	22 06 03.4	-0.3
PLG	Polygyros	1.35	97	*e*PB	Pb	22 05 45.9	+1.0
PLG				*e*SB	Sb	22 06 03.7	+1.8
SKO	Skopje	1.44	353	*e*Pg	Pg	22 05 45.0	-4.2
SKO				*e*Sg	Sg	22 06 09.1	+0.6
AGG	Agios Georgios	1.60	162	*e*Pg	Pg	22 05 49.1	-3.1
EVR	Evrytania	1.63	177	*e*PB	Pb	22 05 51.8	+2.2
EVR				*e*SB	Sb	22 06 13.6	+3.8
PAIG	Paliouri	1.65	111	*e*Pb	Pb	22 05 48.8	-1.1
XOR	Xorichti	1.65	135	*e*Pb	Pb	22 05 49.0	-1.0
OUR	Ouranopolis	1.77	96	*e*Pb	Pb	22 05 50.6	-1.3

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*NDI **09** 22:44:12.9±2.5, 33.97N×72.66E, h5^{km}, MD3.5, ML3.3*
*NNC **09** 22:44:26.3±96.0, 34.53N×72.76E, mpv3.4, Error ellipse: s-maj=1028.8km s-min=872.8km az=79.0*
ISC 09 22:44:17.4±2.3**, 34.3N**±0.2×**73.4E**±0.3**, h10**^{km}**, n4, σ1^{s}38**/8**, 2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.69	132	*e*P	Pn	22 45 02.6	+1.1
THN				*e*S	Sn	22 45 35.6	+1.2
SDNR	Sundarnagar	4.10	131	*e*P	Pn	22 45 20.4	-1.2
SDNR				*e*S	Sn	22 46 09.2	-1.0
KLP	Kalpa	4.93	122	*e*P	Pn	22 45 31.2	-2.2
KLP				*e*S	Sn	22 46 32.2	+1.0
KLP				AML	AML	22 46 44.9	
	comp=N,51nm,0.8s						
KLP				AML	AML	22 46 46.7	
	comp=E,40nm,0.6s						
KK31	Karatay Array	9.10	347	⇑P	P	22 46 33.9	+2.1
	comp=E,0.5nm,0.3s,baz=162,slow=12,SNR=34						
KK31				⇑S	Sn	22 48 14.4	-0.9
	comp=E,0.7nm,0.6s,baz=169,slow=23,SNR=4.8						

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*THE **09** 22:45:40.5, 40.56N×21.71E, h6^{km}, ML2.7*
*CSEM **09** 22:45:40.0±0.1, 40.58N×21.67E, h10^{km}, MD3.1, Error ellipse: s-maj=1.8km s-min=1.5km az=163.0*
*ATH **09** 22:45:41.3, 40.44N×21.81E, h20^{km}±2^{km}, MD3.1/6*
*NEIC **09** 22:45:41.3, 40.44N×21.81E, h20^{km}, MD3.1(ATH), After ATH.*
ISC 09 22:45:39.3±0.4**, 40.54N**±0.03×**21.72E**±0.03**, h8**^{km}±5^{km}**, n29, σ0^{s}99**/45**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.24	171	⇑*i*PB	Pb	22 45 45.4	0.0
FNA	Florina	0.36	313	*e*Pg	Pg	22 45 46.6	+0.1
FNA				*e*Sg	Sg	22 45 52.0	+0.6
BIA	Bitola	0.56	328	*i* Pg	Pg	22 45 50.0	-0.7
BIA				*i* Sg	Sg	22 45 59.0	+0.8
GRG	Griva	0.66	51	*e*Pg	Pg	22 45 52.7	+0.1
KBN	Korca	0.72	277	*i* Pg	Pg	22 45 53.3	-0.4
KBN				*i* Sg	Sg	22 46 03.6	+0.3
KBN	Korca	0.72	277	*e*Pg	Pg	22 45 53.3	-0.4
KBN				*i* Sg	Sg	22 46 03.6	+0.3
LIT	Litokhoron	0.73	127	*e*Pg	Pg	22 45 54.6	+0.5
MEV	Metsovon	0.84	207	*e*Pg	Pg	22 45 55.5	-0.7
MEV				*e*Sg	Sg	22 46 09.7	+2.2
LSK	Leskovik	0.94	246	*i* Pg	Pg	22 45 56.2	-2.0
LSK				*i* Sg	Sg	22 46 10.6	-0.2
LSK	Leskovik	0.94	246	*e*Pg	Pg	22 45 56.2	-2.0
LSK				*i* Sg	Sg	22 46 10.6	-0.2
THE	Thessaloniki	0.95	84	*e*Pg	Pg	22 45 58.8	+0.4
THE				*e*Sg	Sg	22 46 13.4	+2.3
VAY	Valandovo	1.01	39	*i* Pg	Pg	22 45 59.0	-0.5
VAY				*i* Sg	Sg	22 46 14.7	+1.6
KNT	Kendrikon	1.09	55	*e*Pg	Pg	22 46 00.7	-0.3
JAN	Janina	1.11	217	*e*PN	Pn	22 46 01.9	+0.9
SOH	Sokhos	1.27	77	*e*Pg	Pg	22 46 03.9	-0.9
SOH				*e*Sg	Sg	22 46 22.2	+0.4
PLG	Polygyros	1.33	97	*e*PN	Pn	22 46 04.5	+0.3
PLG				*e*SN	Sn	22 46 21.7	-0.4
SKO	Skopje	1.45	352	*e*Pg	Pg	22 46 06.8	-1.4
IGT	Igoumenitsa	1.47	227	*e*Pg	Pg	22 46 08.0	-0.6
IGT				*e*Sg	Sg	22 46 28.1	-0.2
IGT	Igoumenitsa	1.47	227	*e*Pg	Pg	22 46 08.0	-0.6
IGT				*e*Sg	Sg	22 46 28.0	-0.2
SRN	Sarande	1.47	244	*i* Pg	Pg	22 46 08.5	-0.3
SRN				*i* Sg	Sg	22 46 29.1	+0.7
SRN	Sarande	1.47	244	*e*Pg	Pg	22 46 08.5	-0.3
SRN				*i* Sg	Sg	22 46 29.1	+0.7
AGG	Agios Georgios	1.59	163	*e*Pg	Pg	22 46 08.2	-2.9
PAIG	Paliouri	1.62	112	*e*Pb	Pb	22 46 07.9	-1.2
EVR	Evrytania	1.62	178	*e*PN	Pn	22 46 09.5	+1.1
EVR				*e*SN	Sn	22 46 30.2	+0.5
XOR	Xorichti	1.63	136	*e*Pb	Pb	22 46 08.2	-1.0
KEK	Kerkira	1.69	241	*e*PN	Pn	22 46 12.2	+2.8
NEO	Neokhori	1.69	136	*e*PN	Pn	22 46 09.4	0.0
OUR	Ouranopolis	1.74	96	*e*Pb	Pb	22 46 10.3	-0.8
DIVS	Divcibare	3.78	341	*e*Pn	Pn	22 46 38.6	-0.5

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*CSEM **09** 22:53:39.5, 27.48N×52.27E, h10^{km}, mb2.9, Error ellipse: s-maj=29.8km s-min=6.7km az=312.0, After OMAN*
OMAN 09 22:53:39.5, 27.48N×52.27E, h10^{km}**, 3C-4D, Error ellipse: s-maj=29.8km s-min=6.7km az=312.0, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANOM	Banah	3.93	112	P	Pn	22 54 39.8	-1.4
	SNR=16						
ASHO	Ashiyiah	4.40	128	P	Pn	22 54 46.3	-1.6
	SNR=19						
ARQ	Araqi	5.64	136	⇓P	Pn	22 55 03.4	-2.1

HOQ	**Hoqain**	**5.99**	**129**	⇓P	Pn	22 55 08.5	-1.8
BSY	**Bisya**	**6.50**	**135**	⇑P	Pn	22 55 16.1	-1.4
BSYO	**Bisya**	**6.53**	**135**	P	Pn	22 55 16.1	-1.9
SMDO	**Samad**	**6.84**	**129**	P	Pn	22 55 20.3	-2.0
	SNR=8.3						
JMDO	**Jabal Madar**	**7.34**	**133**	⇑P	Pn	22 55 26.1	-3.3
WHFO	**Wadi Hawf**	**9.62**	**171**	⇓P	P	22 55 58.5	-2.6
RBK	**Rabkut**	**10.09**	**169**	⇑P	P	22 56 04.6	-3.0
ABTO	**Aybut**	**10.12**	**174**	⇓P	P	22 56 06.0	-2.0

MAN 09 23:00:02.0, 8.57N×124.82E, h4^{km}, mb4.5, ML3.4, MS3.3, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**0.17**	**227**	⇑*i*P	Pg	23 00 05.9	+0.4
CGP				*i* S	Sg	23 00 08.6	+0.8
SCPH	**Surigao**	**1.37**	**29**	*e*P	Pb	23 00 28.9	+1.0
SCPH				*e*S	Sb	23 00 46.2	+0.6
DCPH	**Dipolog City**	**1.45**	**271**	⇑*e*P	Pn	23 00 27.8	-1.3
DCPH				*e*S	Sb	23 00 49.3	+1.3
IPIL	**Ipil**	**2.36**	**251**	*e*P	Pn	23 00 42.8	+0.7

ATH ***09*** *23:18:53.4, 40.53N×21.68E, h19^{km}±1^{km}, MD3.0/4*
THE ***09*** *23:18:53.8, 40.54N×21.68E, h10^{km}, ML2.7*
NEIC ***09*** *23:18:53.4, 40.53N×21.68E, h19^{km}, MD3.0(ATH), After ATH.*
CSEM ***09*** *23:18:53.6±0.1, 40.54N×21.63E, h20^{km}, MD3.0, Error ellipse: s-maj=2.1km s-min=1.9km az=54.0*
ISC 09 23:18:52.8±0.5**, 40.51N**±0.03×**21.72E**±0.04**, h4^{km}**±7^{km}**, n19, σ1^{s}03**/28**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.21**	**168**	⇑*i*PB	**Pb**	**23 18 58.8**	**+0.1**
KZN				*e*SB	**Sb**	**23 19 03.3**	**+0.7**
FNA	**Florina**	**0.38**	**317**	*e*Pg	**Pg**	**23 19 00.2**	**-0.1**
FNA				*e*Sg	**Sg**	**23 19 05.8**	**+0.4**
FNA	**Florina**	**0.38**	**317**	*e*Pg	**Pg**	**23 19 00.2**	**-0.1**
FNA				*e*Sg	**Sg**	**23 19 05.8**	**+0.4**
BIA	**Bitola**	**0.59**	**330**	*i* Pg	**Pg**	**23 19 03.4**	**-1.2**
BIA				*i* Sg	**Sg**	**23 19 13.1**	**+0.6**
BIA				*i* Sg	**Sg**	**23 19 13.1**	**+0.7**
GRG	**Griva**	**0.69**	**49**	*e*Pg	**Pg**	**23 19 06.7**	**+0.2**
LIT	**Litokhoron**	**0.72**	**124**	*e*Pg	**Pg**	**23 19 08.2**	**+1.0**
LIT				*e*Sg	**Sg**	**23 19 19.3**	**+2.5**
MEV	**Metsovon**	**0.81**	**207**	*e*Pg	**Pg**	**23 19 09.0**	**0.0**
OHR	**Ohrid**	**0.92**	**311**	*i* Pg	**Pg**	**23 19 10.8**	**-0.3**
OHR				*i* Sg	**Sg**	**23 19 25.3**	**+1.9**
THE	**Thessaloniki**	**0.96**	**82**	*e*Pg	**Pg**	**23 19 12.3**	**+0.4**
VAY	**Valandovo**	**1.04**	**38**	*i* Pg	**Pg**	**23 19 11.9**	**-1.6**
VAY				*i* Sg	**Sg**	**23 19 28.5**	**+1.2**
JAN	**Janina**	**1.08**	**218**	*e*PN	**Pn**	**23 19 14.0**	**-0.6**
KNT	**Kendrikon**	**1.11**	**54**	*e*Pg	**Pg**	**23 19 14.2**	**-0.8**
SOH	**Sokhos**	**1.28**	**75**	*e*Pg	**Pg**	**23 19 17.6**	**-0.9**
PLG	**Polygyros**	**1.33**	**95**	*e*PN	**Pn**	**23 19 18.5**	**+0.4**
PLG				*e*SN	**Sn**	**23 19 37.0**	**+0.6**
SKO	**Skopje**	**1.48**	**352**	*e*Pn	**Pn**	**23 19 19.3**	**-0.9**
AGG	**Agios Georgios**	**1.56**	**162**	*e*Pg	**Pg**	**23 19 21.7**	**-2.3**
EVR	**Evrytania**	**1.59**	**177**	*e*PN	**Pn**	**23 19 23.0**	**+1.1**
XOR	**Xorichti**	**1.61**	**135**	*e*Pb	**Pb**	**23 19 22.0**	**-0.8**
PAIG	**Paliouri**	**1.61**	**111**	*e*Pb	**Pb**	**23 19 21.5**	**-1.2**

IDC 09 23:25:49.8±1.9**, 2.50N×126.87E, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/15**, mbtmp3.8**/3**, Error ellipse: s-maj=180.6km s-min=24.9km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.48**	**162**	P	P	23 31 01.4	-0.8
	1.1nm,0.4s,baz=342,slow=11,SNR=17						
STKA	**Stephens Creek**	**36.94**	**159**	P	P	23 33 00.8	-1.6
	3.5nm,0.9s,baz=6.5,slow=11,SNR=2.8						
MKAR	**Makanchi Array**	**58.64**	**326**	P	P	23 35 48.6	-2.5
	0.4nm,0.5s,baz=119,slow=7.2,SNR=9.1						

JMA 10 00:09:11.7±0.6**, 33.53N×142.22E, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.52**	**318**	P	Pn	00 09 40.2	-0.1
BSO3	**Boso 3**	**1.90**	**312**	P	Pn	00 09 46.8	+1.1
JHJ2	**Mitsune**	**2.06**	**259**	P	Pn	00 09 48.6	+0.7
BSO4	**Boso 4**	**2.13**	**314**	P	Pn	00 09 49.0	0.0
JAG	**Ashikaga**	**3.67**	**323**	P	Pn	00 10 10.9	-0.1

NIED ***10*** *00:37:00, 42.90N×146.70E, h20^{km}, Mw4.0 Best double couple: M$_0$9.7×10^{14} NP1:φ$_s$222°, δ86°, λ-134°. NP2: φ$_s$128°, δ44°, λ-6°.*
JMA ***10*** *00:37:29.8±0.1, 42.91N×146.70E, h50^{km}±3^{km}, M4.1*
MOS ***10*** *00:37:32.3±1.9, 43.53N×146.57E, h33^{km}, mb4.4/5, Error ellipse: s-maj=15.8km s-min=11.2km az=98.1*
NEIC ***10*** *00:37:35.6±0.7, 43.80N×146.28E, mb4.4/4, Error ellipse: s-maj=18.5km s-min=9.1km az=128.0*
IDC ***10*** *00:37:36.0±1.5, 43.80N×146.26E, h34^{km}±6^{km}, mb3.8/11, mb1 4.0/12, mb1mx3.8/22, mbtmp4.0/12, ML3.8/1, MS3.3/2, Ms1 3.4/2, ms1mx2.7/30, Error ellipse: s-maj=40.1km s-min=19.0km az=166.0*
ISC 10 00:37:30.3±1.2**, 42.95N**±0.07×**146.68E**±0.09**, h52^{km}**±8^{km}**, h33^{km}**±3.0^{km}**:pP-P, n43, σ0^{s}91**/51**, mb4.0**/14**, MS3.5**/1**, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.80**	**302**	P	**P**	**00 37 45.4**	**-0.1**
NEM2				*e*S	**S**	**00 37 57.1**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**1.24**	**332**	*e*PN	**P**	**00 37 50.3**	**-1.3**
YUK				pmax	pmax		
	comp=N,190nm,0.5s						
YUK				pmax	pmax		
	comp=E,140nm,0.5s						
YUK				pmax	pmax		
	comp=Z,1µm,0.5s						
YUK				pmax	pmax		
	comp=E,2µm,1.0s						
YUK				pmax	pmax		
	comp=Z,2µm,1.0s						
JAK	**Akkeshi**	**1.45**	**272**	P	**P**	**00 37 54.5**	**-0.3**
JAK				*e*S	**S**	**00 38 12.4**	**-0.5**
JRA	**Rausu**	**1.50**	**312**	P	**P**	**00 37 55.3**	**-0.1**
JRA				*e*S	**S**	**00 38 14.5**	**+0.5**
JNK	**Nakash**	**1.56**	**295**	P	**P**	**00 37 55.9**	**-0.4**
JNK				*e*S	**S**	**00 38 15.2**	**-0.3**
JOB	**Onbets**	**2.09**	**270**	P	**P**	**00 38 03.4**	**-0.2**
JOB				*e*S	**S**	**00 38 27.9**	**-0.5**
JAR	**Ashorobuto**	**2.16**	**280**	P	**P**	**00 38 04.3**	**-0.3**
JAR				*e*S	**S**	**00 38 29.3**	**-0.8**
JTKR	**Abashiri--Toko**	**2.26**	**298**	P	**P**	**00 38 06.6**	**+0.5**
JTKR				*e*S	**S**	**00 38 34.6**	**+1.8**
JCH	**Churui**	**2.46**	**263**	P	**P**	**00 38 08.9**	**-0.1**
JCH				*e*S	**S**	**00 38 37.7**	**-0.2**
JMP	**Maruseppu**	**2.63**	**295**	P	**P**	**00 38 11.9**	**+0.5**
JEM	**Erimo**	**2.77**	**251**	P	**P**	**00 38 14.1**	**+0.8**
JNBK	**Urakawa-nobuka**	**2.97**	**258**	P	**P**	**00 38 15.6**	**-0.6**
JFR	**Furan**	**3.00**	**275**	*e*S	**S**	**00 38 51.0**	**-0.6**
JKK2	**Kamakawa 2**	**3.01**	**289**	P	**P**	**00 38 18.8**	**+2.1**
ASAJ	**Asahikawa**	**3.19**	**293**	Pn	**P**	**00 38 20.1**	**+0.9**
	comp=Z,2.9nm,0.3s,baz=104,slow=12,SNR=5.6						
ASAJ				LR	LR	00 39 48.6	
	comp=Z,404nm,18.5s,baz=169,slow=50						
ASAJ	**Asahikawa**	**3.19**	**293**	PN	**P**	**00 38 20.2**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,404nm,18.5s						
MAJO	**Matsushiro**	**9.13**	**228**	*e*Pn	**P**	**00 39 50.0**	**+7.9**
MJAR	**Matsushiro Arr**	**9.13**	**228**	Pn	**P**	**00 39 50.2**	**+8.1**
	comp=Z,0.9nm,0.3s,baz=28,slow=13,SNR=5.1						
MA2	**Magadan**	**16.84**	**7**	P	**P**	**00 41 22.0**	**-1.6**
	comp=Z,98nm,1.4s						
MA2	**Magadan**	**16.84**	**7**	P	**P**	**00 41 22.0**	**-1.6**
MA2				pmax	pmax		
	comp=Z,98nm,1.4s						
SONM	**Songino Array**	**28.47**	**294**	P	**P**	**00 43 23.1**	**+0.8**
	comp=Z,5.6nm,0.6s,mb4.3,baz=87,slow=8.4,SNR=56						
ILAR	**Eielson Array**	**42.34**	**36**	P	**P**	**00 45 21.4**	**+1.1**
	comp=Z,0.5nm,0.7s,mb3.2,baz=264,slow=5.4,SNR=5.8						
ILAR				pP	pP	00 45 33.0	-1.1
	comp=Z,3.8nm,0.9s,baz=271,slow=6.4,SNR=16						
MKAR	**Makanchi Array**	**44.65**	**298**	P	**P**	**00 45 40.0**	**+0.7**
	comp=Z,3.4nm,0.6s,mb4.3,baz=82,slow=9.7,SNR=34						
KURK	**Kurchatov**	**45.70**	**305**	*e*P	**P**	**00 45 47.4**	**-0.2**
	comp=Z,3.3nm,0.5s,mb4.5						
KURK	**Kurchatov**	**45.70**	**305**	*e*P	**P**	**00 45 47.4**	**-0.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
INK	**Inuvik**	**47.27**	**30**	P	**P**	**00 46 01.1**	**+1.4**
	comp=Z,2.3nm,0.7s,mb4.2,baz=308,slow=4.3,SNR=16						
INK	**Inuvik**	**47.27**	**30**	*e*P	**P**	**00 46 00.7**	**+0.9**
	comp=Z,2.1nm,0.6s,mb4.2						
INK	**Inuvik**	**47.27**	**30**	P	**P**	**00 46 01.1**	**+1.4**
INK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AB31	**Akbulak array**	**57.30**	**309**	*i* P	**P**	**00 47 15.0**	**+0.1**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
AKTO	**Aktyubinsk**	**57.80**	**311**	P	**P**	**00 47 18.2**	**-0.1**
	comp=Z,2.0nm,0.6s,mb4.3,baz=57,slow=8.2,SNR=12						
AKTO	**Aktyubinsk**	**57.80**	**311**	P	**P**	**00 47 18.3**	**0.0**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ARCES	**ARCESS Array B**	**59.88**	**340**	P	**P**	**00 47 31.1**	**-1.4**
	comp=Z,2.3nm,0.8s,mb4.2,baz=47,slow=7.5,SNR=7.1						
JOF	**Joensuu**	**62.63**	**332**	*e*p	**P**	**00 47 48.9**	**-2.3**
FINES	**FINESS Array B**	**65.43**	**333**	P	**P**	**00 48 09.2**	**-0.1**
	comp=Z,2.6nm,0.7s,mb4.3,baz=45,slow=8.1,SNR=12						
FINES				pP	pP	00 48 18.9	-4.9
	comp=Z,1.5nm,0.7s,baz=56,slow=6.9,SNR=1.6						
NB2	**NORSAR Subarra**	**70.22**	**339**	P	**P**	**00 48 39.2**	**0.0**
	comp=Z,1.2nm,0.7s,mb3.9,baz=32,slow=6.2						
NOA	**NORSAR Array B**	**70.22**	**339**	P	**P**	**00 48 39.2**	**+0.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=32,slow=6.3,SNR=5.4						
NOA				LR	LR	01 22 48.1	
	comp=Z,28nm,18.1s,MS3.5,baz=270,slow=39						
NAO	**NORSAR Subarra**	**70.51**	**339**	P	**P**	**00 48 39.2**	**-1.7**
	comp=Z,1.2nm,0.7s,mb3.9						
NAO	**NORSAR Subarra**	**70.51**	**339**	P	**P**	**00 48 39.2**	**-1.7**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
AKASG	**Malin Array Be**	**72.02**	**324**	P	**P**	**00 48 50.4**	**+0.3**
	comp=Z,1.0nm,0.5s,mb4.0,baz=39,slow=5.9,SNR=9.1						
AKASG	**Malin Array Be**	**72.02**	**324**	P	**P**	**00 48 50.4**	**+0.3**
BRTR	**Keskin Array B**	**77.84**	**313**	P	**P**	**00 49 25.4**	**+1.7**
	comp=Z,0.4nm,0.7s,mb3.5,baz=34,slow=5.2,SNR=2.7						
BRTR	**Keskin Array B**	**77.84**	**313**	P	**P**	**00 49 25.4**	**+1.7**
TXAR	**Lajitas Array**	**83.38**	**56**	P	**P**	**00 49 59.1**	**+5.8**
	comp=Z,0.2nm,0.8s,mb3.2,baz=323,slow=4.5,SNR=2.4						
TXAR				pP	pP	00 50 08.9	+0.7
	comp=Z,0.6nm,0.8s,baz=296,slow=4.0,SNR=4.9						

BJI ***10*** *01:15:33.8, 40.03N×100.63E, h10^{km}, ML4.6, Ms4.4, Msz4.2*
MOS ***10*** *01:15:33.4±1.0, 40.24N×100.71E, h10^{km}, mb4.5/2, Error ellipse: s-maj=34.5km s-min=16.5km az=110.7*
NEIC ***10*** *01:15:35.5±0.6, 40.21N×100.64E, h10^{km}, mb4.4/5, Error ellipse: s-maj=16.3km s-min=11.0km az=63.0*
IDC ***10*** *01:15:36.5±4.3, 40.50N×100.54E, mb3.8/2, mb1 3.8/4, mb1mx3.5/22, mbtmp3.8/4, ML3.7/2, Error ellipse: s-maj=62.3km s-min=27.9km az=152.0*
ISC 10 01:15:31.4±0.6**, 40.06N**±0.05×**100.91E**±0.09**, h10^{km}, n18, σ1^{s}56**/24**, mb4.3**/6**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**1.06**	**233**	PG	**Pg**	**01 15 50.8**	**-1.9**
GTA				SG	**Sg**	**01 16 02.8**	**-4.2**
GTA				Smax			
	comp=N,2µm,1.0s						
GTA				Smax			
	comp=E,1µm,0.9s						
LZH	**Lanzhou**	**4.60**	**149**	*e*P	**Pn**	**01 16 48.0**	**+5.4**
LZH				PG	**Pg**	**01 17 00.1**	**-3.1**
LZH				S	**Sn**	**01 17 38.0**	**+1.3**
LZH				SG	**Sg**	**01 17 57.5**	**-6.9**
LZH				Smax			
	comp=N,2µm,0.6s						
LZH				Smax			
	comp=E,1µm,0.8s						
LZH				LR	LR		
	comp=N,2µm,4.5s						
LZH				LR	LR		
	comp=Z,2µm,6.5s						
LZH	**Lanzhou**	**4.60**	**149**	*e*P	**Pn**	**01 16 48.0**	**+5.4**
LZH						01 17 38.0	
BTO	**Baotou**	**6.99**	**83**	PG	**Pg**	**01 17 44.6**	**-6.2**
BTO				SG	**Sg**	**01 19 13.1**	**-11**
BTO				Smax			
	comp=N,70nm,0.8s						
BTO				Smax			
	comp=E,30nm,0.4s						
SONM	**Songino Array**	**8.72**	**25**	Pn	**P**	**01 17 41.1**	**+0.6**
	comp=E,3.8nm,0.3s,baz=207,slow=15,SNR=171						
SONM				Sn	**Sn**	**01 19 16.4**	**-3.4**
	comp=E,2.5nm,0.3s,baz=201,slow=28,SNR=6.2						
SONM				Lg		01 20 05.2	
	comp=E,3.9nm,0.3s,baz=216,slow=30,SNR=9.0						
MKAR	**Makanchi Array**	**15.09**	**303**	Pn	**P**	**01 19 02.2**	**-4.0**
	comp=E,0.1nm,0.3s,baz=114,slow=15,SNR=4.8						
MKAR				Lg		01 23 20.7	
	comp=E,0.1nm,0.3s,baz=121,slow=25,SNR=3.5						
KURK	**Kurchatov**	**18.86**	**312**	P	**P**	**01 19 51.2**	**-2.5**
	comp=E,3.4nm,0.9s						
KURK	**Kurchatov**	**18.86**	**312**	P	**P**	**01 19 51.2**	**-2.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YHNB	**Yeheng**	**23.04**	**126**	*e*P	**P**	**01 20 37.3**	**-0.4**
BVAR	**Borovoye Array**	**24.46**	**312**	P	**P**	**01 20 52.1**	**+0.9**
	comp=Z,1.5nm,0.7s,mb3.5,baz=106,slow=10,SNR=3.7						
CHKZ	**Chkalovo**	**24.56**	**314**	*e*P	**P**	**01 20 53.2**	**+1.0**
	comp=Z,1.9nm,0.5s,mb3.9						
CHKZ	**Chkalovo**	**24.56**	**314**	*e*P	**P**	**01 20 53.2**	**+1.0**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
ARCES	**ARCESS Array B**	**48.08**	**333**	P	**P**	**01 24 12.7**	**+0.2**
	comp=Z,1.3nm,0.8s,mb4.0,baz=90,slow=9.0,SNR=2.4						
CSS	**Prodhromos**	**52.69**	**287**	*e*P	**P**	**01 24 47.6**	**-0.5**
	comp=Z,32nm,1.4s,mb5.0						
KWP	**Kalwaria**	**53.91**	**308**	*e*P	**P**	**01 24 58.2**	**+1.3**
	comp=Z,6.9nm,1.1s,mb4.5						
KWP	**Kalwaria**	**53.91**	**308**	*e*P	**P**	**01 24 58.2**	**+1.3**
KWP				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
DGAR	**Diego Garcia**	**54.05**	**216**	P	**P**	**01 25 00.5**	**+2.1**
CII	**Carovilli**	**62.67**	**303**	P	**P**	**01 25 59.5**	**+1.1**
	comp=Z,4.2nm,0.9s,mb4.6						

NIED ***10*** *01:26:00, 31.30N×142.00E, h5^{km}, Mw3.8 Best double couple: M$_0$6.13×10^{14} NP1:φ$_s$19°, δ67°, λ118°. NP2:φ$_s$145°, δ36°, λ42°.*
MOS ***10*** *01:26:38.7±0.9, 31.16N×141.71E, h33^{km}, mb4.3/6, Error ellipse: s-maj=29.5km s-min=10.2km az=116.5*
JMA ***10*** *01:26:38.5±0.3, 31.29N×141.97E, h41^{km}, M3.9*
NEIC ***10*** *01:26:40.5±2.9, 31.19N×141.84E, h32^{km}±20^{km}, mb4.3/4, Error ellipse: s-maj=12.3km s-min=8.0km az=93.0*
IDC ***10*** *01:26:41.3±4.4, 31.22N×141.84E, h36^{km}±37^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.9/21, mbtmp4.0/12, ML3.9/2, Error ellipse: s-maj=28.4km s-min=17.8km az=69.0*
ISC 10 01:26:38.4±2.0**, 31.24N**±0.04×**141.8E**±0.1**, h29^{km}**±15^{km}**, n40, σ0^{s}87**/42**, mb4.1**/15**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**3.71**	**344**	P	**Pn**	**01 27 34.2**	**-1.0**
BSO4	**Boso 4**	**3.93**	**342**	P	**Pn**	**01 27 38.9**	**+0.6**
CBIJ	**Chichi jima**	**4.15**	**175**	Pn	**Pn**	**01 27 41.5**	**0.0**
	13nm,0.3s,baz=288,slow=20,SNR=17						
CBIJ				Sn	**Sn**	**01 28 30.1**	**+0.5**
	12nm,0.3s,baz=125,slow=23,SNR=3.8						
CBIJ	**Chichi jima**	**4.15**	**175**	P	**Pn**	**01 27 41.6**	**+0.1**
JOD2	**Odawara 2**	**4.60**	**331**	P	**Pn**	**01 27 49.6**	**+1.7**
JHU	**Hanno**	**5.05**	**336**	P	**Pn**	**01 27 53.8**	**-0.4**
JRY	**Ryogami san**	**5.33**	**334**	P	**Pn**	**01 27 59.1**	**+0.9**
JHO	**Hitachi**	**5.45**	**350**	P	**Pn**	**01 27 58.3**	**-1.6**
JAG	**Ashikaga**	**5.52**	**340**	P	**Pn**	**01 27 59.8**	**-1.1**
MJAR	**Matsushiro Arr**	**6.06**	**332**	Pn	**Pn**	**01 28 08.8**	**+0.3**
	2.6nm,0.3s,baz=153,slow=11,SNR=22						
MJAR	**Matsushiro Arr**	**6.06**	**332**	Pn	**Pn**	**01 28 08.8**	**+0.3**
MAJO	**Matsushiro**	**6.06**	**332**	*e*Pn	**Pn**	**01 28 08.9**	**+0.3**
	11nm,0.5s						
MAJO	**Matsushiro**	**6.06**	**332**	*e*P	**Pn**	**01 28 08.9**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,11nm,0.5s						
MAT	**Matsushiro**	**6.06**	**332**	P	**Pn**	**01 28 08.9**	**+0.4**
MAT				*e*S	**Sn**	**01 29 16.9**	**-0.8**
MAT	**Matsushiro**	**6.06**	**332**	*e*P	**Pn**	**01 28 09.0**	**+0.5**
	comp=Z,11nm,0.5s						
MAT	**Matsushiro**	**6.06**	**332**	*e*P	**Pn**	**01 28 09.0**	**+0.5**
MAT				pmax	pmax		
	comp=Z,11nm,0.5s						
JNB	**Noboribetsu**	**11.22**	**357**	P	**P**	**01 29 15.9**	**-4.1**
YHNB	**Yeheng**	**19.16**	**255**	P	**P**	**01 31 02.4**	**0.0**
HIA	**Hailar**	**24.49**	**324**	P	**P**	**01 31 57.3**	**+1.1**
	comp=Z,7.4nm,0.9s,mb4.1						
HIA	**Hailar**	**24.49**	**324**	P	**P**	**01 31 57.3**	**+1.1**
HIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONM	**Songino Array**	**31.59**	**312**	P	**P**	**01 33 01.5**	**+0.9**
	comp=Z,1.7nm,0.8s,mb3.9,baz=108,slow=8.1,SNR=13						
MKAR	**Makanchi Array**	**47.64**	**307**	P	**P**	**01 35 13.9**	**+0.1**
	comp=Z,1.2nm,0.5s,mb4.2,baz=89,slow=10.0,SNR=22						
KURK	**Kurchatov**	**49.89**	**312**	*e*P	**P**	**01 35 31.0**	**-0.1**
	comp=Z,3.3nm,0.8s,mb4.4						
KURK	**Kurchatov**	**49.89**	**312**	*e*P	**P**	**01 35 31.0**	**-0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WRAB	**Tennant Creek**	**51.38**	**189**	*e*P	**P**	**01 35 41.0**	**-1.8**
	comp=Z,6.4nm,1.0s,mb4.5						
WRAB	**Tennant Creek**	**51.38**	**189**	*e*P	**P**	**01 35 41.0**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
WB2	**Warramunga Arr**	**51.39**	**189**	*e*P	**P**	**01 35 42.2**	**-0.7**
WRA	**Warramunga Arr**	**51.39**	**189**	P	**P**	**01 35 42.2**	**-0.7**
	comp=Z,2.1nm,0.3s,mb4.5,baz=6.0,slow=7.6,SNR=78						
AAK	**Ala-Archa**	**53.68**	**302**	P	**P**	**01 35 59.3**	**-0.3**
	comp=Z,1.2nm,0.9s,mb3.8						
AAK	**Ala-Archa**	**53.68**	**302**	P	**P**	**01 35 59.3**	**-0.3**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
ILAR	**Eielson Array**	**54.28**	**30**	P	**P**	**01 36 03.1**	**-0.7**
	comp=Z,0.4nm,0.7s,mb3.5,baz=251,slow=6.3,SNR=4.5						
BVAR	**Borovoye Array**	**54.80**	**316**	P	**P**	**01 36 07.8**	**0.0**
	comp=Z,0.8nm,0.5s,mb4.0,baz=113,slow=6.8,SNR=6.2						
ASPA	**Alice Springs**	**55.12**	**189**	*e*P	**P**	**01 36 10.6**	**+0.1**
KKAR	**Karatay Array**	**56.44**	**304**	*i* P	**P**	**01 36 19.5**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
AB31	**Akbulak array**	**61.99**	**313**	P	**P**	**01 36 56.5**	**-1.6**
ARCES	**ARCESS Array B**	**69.53**	**340**	P	**P**	**01 37 45.9**	**0.0**
	comp=Z,3.1nm,0.9s,mb4.2,baz=51,slow=7.8,SNR=4.4						
FINES	**FINESS Array B**	**74.09**	**333**	P	**P**	**01 38 13.4**	**+0.2**
	comp=Z,3.3nm,0.9s,mb4.2,baz=56,slow=6.9,SNR=4.0						
NVAR	**Mina Array Bea**	**78.25**	**52**	P	**P**	**01 38 37.8**	**+0.7**
	comp=Z,0.4nm,0.7s,mb3.5,baz=267,slow=6.1,SNR=3.9						
BRTR	**Keskin Array B**	**82.94**	**312**	P	**P**	**01 39 03.7**	**+1.8**
	comp=Z,0.5nm,0.8s,mb3.6,baz=90,slow=3.7,SNR=3.6						
TXAR	**Lajitas Array**	**93.40**	**53**	P	**P**	**01 39 53.6**	**+1.3**
	comp=Z,0.7nm,0.7s,mb4.2,baz=297,slow=2.4,SNR=10						

NIED ***10*** *01:27:00, 45.80N×151.60E, h125^{km}, Mw4.5 Best double couple: M$_0$6.37×10^{15} NP1:φ$_s$60°, δ79°, λ-145°. NP2: φ$_s$323°, δ56°, λ-13°.*
ISC 10 01:27:17.8±2.1**, 45.3N**±0.5×**151.8E**±0.4**, h193^{km}**±39^{km}**, n8, σ0^{s}62**/13**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**4.74**	**249**	P	**P**	**01 28 28.6**	**-0.7**
NEM2				*e*S	**S**	**01 29 24.1**	**-0.6**
JNK	**Nakash**	**5.33**	**254**	P	**P**	**01 28 36.9**	**-0.1**
JAK	**Akkeshi**	**5.58**	**249**	P	**P**	**01 28 39.7**	**-0.6**
JAK				*e*S	**S**	**01 29 45.2**	**+0.8**
JAR	**Ashorobuto**	**6.08**	**254**	P	**P**	**01 28 47.2**	**+0.4**
JOB	**Onbets**	**6.20**	**250**	P	**P**	**01 28 48.5**	**+0.3**
JCH	**Churui**	**6.63**	**249**	P	**P**	**01 28 53.9**	**-0.1**
JCH				*e*S	**S**	**01 30 10.0**	**+1.1**
JKB	**Kayabe**	**8.51**	**250**	P	**P**	**01 29 18.8**	**+0.3**
JKB				*e*S	**S**	**01 30 51.6**	**-1.2**
JANG	**Nango**	**8.99**	**241**	P	**P**	**01 29 25.2**	**+0.4**
JANG				*e*S	**S**	**01 31 03.9**	**-0.2**

IDC ***10*** *02:00:57.6±1.2, 57.35N×120.77E, mb3.7/9, mb1 3.9/9, mb1mx3.7/21, mbtmp3.7/9, Error ellipse: s-maj=28.8km s-min=25.4km az=19.0*
MOS ***10*** *02:00:58.2±1.6, 57.59N×120.59E, h11^{km}, mb4.2/5, Error ellipse: s-maj=15.0km s-min=10.5km az=79.0*
BYKL ***10*** *02:00:58.6±0.5, 57.41N×120.77E, h9^{km}±34^{km}, MS3.2*
NEIC ***10*** *02:00:58.3±0.8, 57.32N×120.81E, h5^{km}, mb4.4/4, Error ellipse: s-maj=20.0km s-min=16.8km az=73.0*
ISC 10 02:00:57.8±0.3**, 57.39N**±0.04×**120.55E**±0.04**, h9^{km}, n62, σ1^{s}32**/73**, mb4.0**/15**, 1C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.33**	**250**	*e*Pg	**Pg**	**02 01 22.7**	**-1.8**
CRS				*e*		02 01 25.4	
CRS				max		02 01 26.1	
	518nm,0.7s						
CRS				*e*Sg	**Sg**	**02 01 41.4**	**-0.9**
CRS				Smax		02 01 46.6	
	1µm,1.1s						
CRS	**Chara**	**1.33**	**250**	*e*P	**Pb**	**02 01 23.2**	**+0.6**
CRS				*e*		02 01 41.3	
CRS				pmax	pmax		
	comp=Z,529nm,0.7s						
CRS				smax			
	comp=E,879nm,0.4s						
NRGR	**Nerungri**	**2.40**	**106**	*e*P	**Pn**	**02 01 38.7**	**+0.8**
NRGR				*e*S	**Sn**	**02 02 07.0**	**-0.6**
CLNS	**Chul'man**	**2.43**	**101**	*e*Pg	**Pb**	**02 01 41.0**	**-0.4**
CLNS				Pmax		02 01 43.5	
	comp=E,685nm,0.5s						
CLNS				*e*Sg	**Sb**	**02 02 11.6**	**+0.1**
CLNS				Smax		02 02 12.3	
	comp=E,23µm,1.0s						
CLNS	**Chul'man**	**2.43**	**101**	*e*P	**Pn**	**02 01 40.6**	**+2.2**
CLNS				*e*S	**Sn**	**02 02 11.5**	**+2.9**
NLYR	**Nelyaty**	**2.80**	**253**	*e*Pg	**Pb**	**02 01 49.6**	**+1.9**
NLYR				*e*PgPg		02 01 52.7	
NLYR				max		02 01 53.7	
	comp=E,350nm,0.8s						
NLYR				*e*		02 02 12.9	
NLYR				*e*Sg	**Sb**	**02 02 25.6**	**+3.4**
NLYR				Smax		02 02 32.3	
	comp=E,1µm,1.3s						
ALDR	**Aldan**	**2.87**	**63**	*e*Pg	**Pb**	**02 01 47.1**	**-1.6**
ALDR				*e*		02 01 52.2	
ALDR				max		02 01 54.9	
	comp=E,11nm,0.2s						
ALDR				*e*		02 02 04.1	
ALDR				*e*Sg	**Sb**	**02 02 23.1**	**-0.9**
ALDR				Smax		02 02 26.5	
	comp=E,2µm,0.1s						
TUP	**Tupik**	**2.99**	**187**	*e*Pn	**Pn**	**02 01 47.5**	**+1.2**
TUP				*e*		02 01 50.0	
TUP				*e*Pg	**Pg**	**02 01 52.0**	**-5.4**
TUP				*e*PgPg		02 01 54.1	
TUP				max		02 01 54.8	
	comp=E,508nm,0.6s						
TUP				*e*		02 02 12.8	
TUP				*e*Sg	**Sg**	**02 02 30.7**	**-6.5**
TUP				Smax		02 02 31.9	
	comp=E,1µm,0.7s						
TUP				*e*LR	LR	02 02 50.1	
TUP				LRmax		02 02 55.0	
	comp=E,487nm,3.6s						
TUP	**Tupik**	**2.99**	**187**	*e*P	**Pn**	**02 01 52.9**	**+6.6**
TUP				*e*S	**Sn**	**02 02 22.4**	**-0.2**
TUP				pmax	pmax		
	comp=Z,470nm,0.4s						
TUP				smax			
	comp=E,1µm,0.7s						
TNDR	**Tynda**	**3.23**	**132**	*e*Pn	**Pn**	**02 01 49.8**	**0.0**
TNDR				*e*Pg	**Pg**	**02 01 55.7**	**-6.6**
TNDR				Pmax		02 02 02.8	
	comp=E,882nm,0.6s						
TNDR				*e*Sn	**Sn**	**02 02 27.6**	**-1.2**
TNDR				*e*Sg	**Sg**	**02 02 36.2**	**-9.2**

TNDR				Smax		02 02 41.6	
	comp=E,5μm,0.6s						
BOD	Bodaibo	3.55	280	ePn	Pn	02 01 56.4	+2.1
BOD				ePg	Pg	02 02 06.3	-2.3
BOD				Pmax		02 02 08.4	
	comp=E,79nm,0.7s						
BOD				e		02 02 31.7	
BOD				eSg	Sg	02 02 50.0	-6.0
BOD				Smax		02 02 59.5	
	comp=E,615nm,1.3s						
BOD				eLR	LR	02 03 12.2	
BOD				LRmax		02 03 17.2	
	comp=E,298nm,3.2s						
BOD	Bodaibo	3.55	280	eP	Pn	02 01 58.8	+4.5
BOD				pmax	pmax		
	comp=Z,81nm,0.5s						
SVKR	Severomuysk	4.05	255	ePg	Pg	02 02 14.0	-4.7
SVKR				Pmax		02 02 18.6	
	comp=Z,136nm,0.5s						
SVKR				eSn	Sn	02 02 50.5	+0.9
SVKR				eSg	Sg	02 03 08.1	-4.6
SVKR				Smax		02 03 19.9	
	comp=Z,665nm,0.9s						
UKT	Uakit	4.29	247	ePn	Pn	02 02 06.9	+2.2
UKT				⇑iPg	Pg	02 02 17.6	-5.8
UKT				Pmax		02 02 22.2	
	comp=Z,68nm,1.2s						
UKT				eSn	Sn	02 02 59.1	+3.6
UKT				eSg	Sg	02 03 13.8	-6.7
UKT				Smax		02 03 21.0	
	comp=Z,229nm,1.4s						
UKT	Uakit	4.29	247	eP	Px	02 02 19.8	
UKT				pmax	pmax		
	comp=Z,39nm,0.6s						
KROS	Kirovskiy	4.67	127	ePn	Pn	02 02 04.8	-5.4
KROS				ePg	Px	02 02 21.7	
YOA	Uoyan	5.01	259	eSg	Sg	02 03 39.1	-5.7
YOA				Smax		02 03 55.2	
	comp=Z,2μm,1.4s						
KMO	Kumora	5.37	258	ePn	Pn	02 02 20.0	-0.1
KMO				ePg	Px	02 02 36.5	
KMO				Pmax		02 02 46.6	
	comp=Z,31nm,0.6s						
KMO				eSn	Sn	02 03 19.9	-3.0
KMO				eSg	Px	02 03 47.6	
KMO				Smax		02 03 58.3	
	comp=Z,424nm,1.3s						
KMO	Kumora	5.37	258	eP	Pn	02 02 20.7	+0.6
KMO				eS	Sn	02 03 22.4	-0.5
KMO				pmax	pmax		
	comp=Z,20nm,0.5s						
KMO				smax			
	comp=N,421nm,1.4s						
YLYR	Ulyunkhan	5.82	248	ePn	Pn	02 02 29.2	+2.8
YLYR				ePg	Px	02 02 46.0	
YLYR				Pmax		02 02 54.4	
	comp=N,16nm,0.8s						
YLYR				eSn	Sn	02 03 33.5	-0.6
YLYR				eSg	Sx	02 04 02.6	
YLYR				Smax		02 04 16.9	
	comp=N,247nm,1.3s						
YLYR	Ulyunkhan	5.82	248	eP	Pn	02 02 27.4	+1.0
NIZ	Nizh Angarsk	6.29	260	ePg	Px	02 02 53.8	
NIZ				Pmax		02 03 02.8	
	comp=N,13nm,1.0s						
NIZ				eSn	Sn	02 03 44.8	-1.1
NIZ				eSg	Sx	02 04 16.1	
NIZ				Smax		02 04 29.7	
	comp=N,160nm,1.0s						
YAK	Yakutsk	6.56	41	eSn	Sn	02 03 45.8	-6.8
YAK				eSg	Sx	02 04 16.1	
YAK				Smax		02 04 17.7	
	comp=N,1μm,0.8s						
YAK	Yakutsk	6.56	41	Pn	Px	02 02 44.8	
	comp=N,26nm,0.6s						
YAK				eSn	Sn	02 03 43.7	-8.8
YAK	Yakutsk	6.56	41	P	Px	02 02 44.8	
YAK				e		02 03 43.7	
YAK				pmax	pmax		
	comp=Z,26nm,0.6s						
CIT	Chita	6.73	220	ePn	Pn	02 02 37.3	-2.0
CIT				ePg	Px	02 03 01.0	
CIT				Pmax		02 03 04.2	
	comp=Z,40nm,0.9s						
CIT				e		02 03 10.3	
CIT				eSg	Sx	02 04 28.3	
CIT				Smax		02 04 39.5	
	comp=Z,634nm,1.4s						
CIT	Chita	6.73	220	eP	Pn	02 02 41.7	+2.4
CIT				pmax	pmax		
	comp=Z,39nm,0.8s						
SYVR	Suvo	7.06	243	ePn	Pn	02 02 47.1	+3.3
SYVR				ePg	Px	02 03 08.8	
SYVR				Pmax		02 03 12.3	
	comp=Z,18nm,1.0s						
SYVR				eSn	Sx	02 04 26.5	
SYVR				eSg	Sx	02 04 41.4	
SYVR				Smax		02 04 48.1	
	comp=Z,325nm,1.5s						
KPC	Khapcheranga	9.10	216	ePn	P	02 03 11.4	-0.9
KPC				e		02 05 21.9	
KPC				eSg	Sx	02 05 39.2	
KPC				Smax		02 06 00.7	
	comp=Z,128nm,1.3s						
TRG	Tyrgan	9.37	246	eSg	Sx	02 05 53.8	
TRG				Smax		02 06 02.7	
	comp=Z,74nm,1.6s						
KAB	Kabansk	9.64	242	eSg	Sx	02 06 01.5	
KAB				Smax		02 06 33.4	
	comp=Z,1μm,1.7s						
LSTR	Listvyanka	10.64	245	eSg	Sx	02 06 29.7	
LSTR				Smax		02 06 48.9	
	comp=Z,298nm,0.9s						
TLY	Talaya	11.35	247	eSg	Sx	02 06 54.7	
TLY				Smax		02 07 03.0	
	comp=Z,45nm,2.5s						
ARS	Arshan	11.82	250	eSg	Sx	02 07 10.0	
ARS				Smax		02 07 28.9	
	comp=Z,100nm,0.8s						
ZAK	Zakamensk	12.34	243	eSg	Sx	02 07 27.1	
ZAK				Smax		02 07 35.7	
	comp=Z,40nm,1.7s						
MOY	Mondy	12.70	252	eSg	Sx	02 07 35.4	
MOY				Smax		02 08 06.3	
	comp=Z,71nm,1.9s						
SONM	Songino Array	12.83	228	Lg		02 07 41.7	
	comp=Z,0.8nm,0.3s,baz=48,slow=26,SNR=5.8						
ORL	Orlik	12.84	257	eSn	S	02 06 24.5	-2.8
ORL				eSg	Sx	02 07 39.5	
ORL				Smax		02 08 06.5	
	comp=Z,47nm,1.4s						
UNR	Ust'-Nera	13.09	47	eSg	Sx	02 07 39.2	
TIXI	Tiksi	14.74	10	eP	P	02 04 22.9	-4.9
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
NVS	Novosibirsk	20.79	279	eP	P	02 05 42.8	+1.4
BILL	Bilibino	22.91	44	P	P	02 06 02.0	-0.4
BILL						02 06 26.0	
BILL				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.2						
KURK	Kurchatov	25.17	273	eP	P	02 06 24.4	-0.1
	comp=Z,3.6nm,1.2s,mb3.8						
KURK	Kurchatov	25.17	273	eP	P	02 06 25.1	+0.7
MKAR	Makanchi Array	25.45	262	P	P	02 06 29.8	+2.7
	comp=Z,1.7nm,0.9s,mb3.6,baz=58,slow=8.0,SNR=5.8						
MKAR	Makanchi Array	25.45	262	i P	P	02 06 30.1	+3.0
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SSE	Sheshan	26.29	179	eP	P	02 06 31.3	-3.8
	comp=Z,18nm,0.8s,mb4.7						
BVAR	Borovoye Array	28.41	283	P	P	02 06 54.5	+0.3
	comp=Z,0.4nm,0.7s,mb3.2,baz=72,slow=9.4,SNR=3.6						
AAK	Ala-Archa	32.36	263	eP	P	02 07 29.4	0.0
	comp=Z,1.2nm,0.8s,mb3.8						
AAK	Ala-Archa	32.36	263	eP	P	02 07 29.4	0.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
NIKO	Nikolski	38.90	65	P	P	02 08 28.2	+3.3
ILAR	Eielson Array	41.48	40	P	P	02 08 46.1	0.0
	comp=Z,0.5nm,0.6s,mb3.4,baz=289,slow=4.5,SNR=11						
FINES	FINESS Array B	44.20	317	P	P	02 09 08.1	-0.1
	comp=Z,2.1nm,0.7s,mb4.0,baz=59,slow=11,SNR=7.9						
FINES	FINESS Array B	44.20	317	i P	P	02 09 10.6	+2.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KIV	Kislovodsk	48.42	289	eP	P	02 09 37.2	-4.5
KIV				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
HFS	Hagfors	49.52	321	P	P	02 09 49.7	-0.3
	comp=Z,1.2nm,0.5s,mb4.2,baz=53,slow=7.4,SNR=8.4						
NOA	NORSAR Array B	49.68	323	P	P	02 09 50.9	-0.3
	comp=Z,1.1nm,0.8s,mb4.0,baz=43,slow=7.9,SNR=3.2						
AKASG	Malin Array Be	50.15	304	P	P	02 09 54.6	-0.3
	comp=Z,0.6nm,0.5s,mb3.9,baz=43,slow=8.8,SNR=4.4						
GERES	GERESS Array B	58.17	312	P	P	02 10 53.7	-0.2
	comp=Z,1.0nm,0.9s,mb3.8,baz=37,slow=6.7,SNR=6.8						
PALK	Pallekele	58.79	228	eP	P	02 10 59.4	+0.7
	comp=Z,18nm,1.1s,mb5.0						
WRAB	Tennant Creek	77.88	167	i P	P	02 12 56.9	-0.4
WRA	Warramunga Arr	77.89	167	P	P	02 12 56.0	-1.4
	comp=Z,0.4nm,0.7s,mb3.5,baz=349,slow=6.7,SNR=6.0						

OTT 10 02:40:23.9±0.7**,76.25N×108.17W,h18^{km},MN2.5**/1**,**
300km east from Mould Bay, Nt Gustaf-Lougheed Arch Seismic Zone.,Queen Elizabeth Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RES	Resolute Bay	3.69	109	PN	Pn	02 41 19.8	-1.7
RES				SN	Sn	02 42 00.8	-4.2
RES				SG	Sn	02 42 15.6	+11
RES				Trac		02 42 22.4	
	comp=Z,4.5nm,0.2s						
EUNU	Eureka	5.84	39	PN	Pn	02 41 46.5	-5.4
EUNU				SN	Sn	02 42 47.2	-12
LUPN	Lupin Mine	10.61	187	PN	P	02 42 56.3	-1.7
INK	Inuvik	10.97	237	PN	P	02 43 00.1	-2.7
COWN	Contwyoto Lake	11.08	187	PN	P	02 43 00.7	-3.7
COWN				SN	S	02 44 56.0	-13
COWN				Trac		02 45 09.2	
	comp=Z,0.2nm,0.1s						
YNEN	Yamba Lake Nor	11.26	186	PN	P	02 43 03.0	-3.8
YNEN				SN	S	02 45 01.8	-11
GLWN	Glow Worm Lake	11.59	182	PN	P	02 43 06.5	-4.9
GLWN				SN	S	02 45 05.7	-16
QILN	Qililugaq Expl	11.75	133	PN	P	02 43 08.1	-5.5
QILN				SN	S	02 45 06.6	-19
QILN				SN	S	02 45 12.3	-13
QILN				LG		02 46 13.1	
YKW3	Yellowknife Ar	13.92	192	PN	P	02 43 39.4	-2.8
YKW3				SN	S	02 46 02.7	-15

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*NDI **10** 02:52:18.3±4.4,34.94N×72.91E,h10^{km},MD3.9,ML3.9, mb4.0(NEIC)*
*IDC **10** 02:52:19.9±0.8,34.72N×73.20E,mb4.0/11,mb1 4.2/14, mb1mx4.0/21,mbtmp4.0/14,ML4.1/3,Error ellipse: s-maj=20.5km s-min=18.5km az=90.0*
*MOS **10** 02:52:20.4±1.6,34.62N×73.26E,h19^{km},mb4.5/4,Error ellipse: s-maj=12.5km s-min=6.3km az=99.8*
*NEIC **10** 02:52:20.4±0.4,34.54N×73.19E,h10^{km},mb4.0/8,Error ellipse: s-maj=9.8km s-min=5.2km az=49.0*
*BJI **10** 02:52:26.3,34.79N×73.86E,h12^{km},mB4.8,mb4.3,ML4.0, Ms4.1,Msz3.6*
*NNC **10** 02:52:30.9±5.2,34.97N×72.72E,h68^{km}±46^{km},mpv4.2, Error ellipse: s-maj=39.9km s-min=30.6km az=39.0*
ISC 10 02:52:19.4±0.3**,34.68N**±0.03×**73.37E**±0.05**,h10^{km},n80,**
σ**1^{s}45**/107**,mb4.0**/16**,MS3.8**/1**,15C-7D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CEP	Cherat	1.48	235	⇑P	Pn	02 52 47.1	+0.9
JMU	Jammu	2.33	146	eS	Sg	02 53 38.5	+1.4
SARP	Sargodha	2.81	192	P	Pn	02 53 07.9	+2.7
THN	Thein Dam	2.97	138	eP	Pn	02 53 12.7	+5.1
THN				ex	x	02 54 58.1	
DLH	Dalhousie	3.04	134	eP	Pn	02 53 12.0	+3.5
DLH				ex	Sg	02 53 59.0	-1.5
BHK	Bhakra	4.13	141	eP	Pg	02 53 41.6	-0.4
BHK				eS	Sg	02 54 34.4	-2.7
SDNR	Sundarnagar	4.38	135	eP	Pn	02 53 31.2	+3.7
SDNR				eS	Sn	02 54 24.6	+5.4
SMLA	Simla	4.76	137	eP	Pn	02 53 34.8	+1.7
SMLA				eS	Sn	02 54 32.0	+3.0
SMLA				AML	AML	02 54 54.0	
	comp=E,415nm,0.3s						
SMLA				AML	AML	02 54 54.3	
	comp=N,334nm,0.7s						
KLP	Kalpa	5.16	126	eP	Pn	02 53 41.9	+3.3
KSH	Kashi	5.26	23	ePG	Pg	02 53 56.7	-7.7
KSH				S	Sn	02 54 48.0	+6.5
KSH				Smax			
	comp=N,190nm,0.4s						
KSH				Smax			
	comp=E,150nm,0.3s						
NDI	New Delhi	6.81	150	ePN	Pn	02 54 05.5	+3.6
NDI				eP		02 54 06.5	
NDI				eS	Sn	02 55 17.9	-2.5
NDI				eSN	Sn	02 55 18.0	-2.3
KHET	Khetri	6.90	162	eP	Pn	02 54 03.7	+0.6
KHET				eS	Sn	02 55 21.5	-1.1
KHET				AML	AML	02 56 09.6	
	comp=E,32nm,0.5s						
KHET				AML	AML	02 56 12.0	
	comp=N,30nm,0.4s						
AYAN	Aya Nagar	6.96	152	eP	Pn	02 54 06.4	+2.5
KUDL	Kundal	7.04	157	eP	Pn	02 54 05.8	+0.8
KUDL				eS	Sn	02 55 25.3	-0.6
AAK	Ala-Archa	7.99	6	⇑P	Pn	02 54 22.5	+4.0
	comp=N,5.5nm,0.6s						
AAK				⇑S	Sn	02 55 49.0	-0.9
	comp=N,20nm,0.8s						
AAK	Ala-Archa	7.99	6	ePn	Pn	02 54 18.8	+0.4
	comp=N,9.4nm,0.6s						
AAK				S	Sn	02 55 49.0	-0.9
AAK	Ala-Archa	7.99	6	eP	Pn	02 54 18.8	+0.3
AAK				S	Sn	02 55 49.0	-0.9
AAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JASL	Jaisalmer	8.01	196	ex	P	02 54 19.9	+1.2
AJM	Ajmer	8.24	172	eP	P	02 54 22.1	+0.2
AJM				eS	Sn	02 55 52.5	-3.6
AJM				AML	AML	02 55 55.1	
	comp=N,48nm,0.2s						
AJM				AML	AML	02 56 12.3	
	comp=E,80nm,0.5s						
AGRA	Agra	8.39	151	eP	P	02 54 25.2	+1.1
AGRA				eS	Sn	02 55 57.8	-2.0
KK31	Karatay Array	8.71	346	⇑P	P	02 54 28.3	-0.1
	comp=E,4.9nm,0.3s,baz=151,slow=11,SNR=201						
KK31				⇓S	Sn	02 56 02.3	-5.3
	comp=E,9.3nm,0.4s,baz=178,slow=25,SNR=9.2						
KK31	Karatay Array	8.71	346	⇑P	P	02 54 28.3	-0.1
	comp=E,4.9nm,0.3s						
KK31				S	Sn	02 56 02.3	-5.3
KK31	Karatay Array	8.71	346	⇑P	P	02 54 28.3	0.0
KK31				S	Sn	02 56 02.3	-5.3
KK31				pmax	pmax		
	comp=Z,5.0nm,0.3s						
GKN	Gorkha	11.70	122	ePn	P	02 55 07.4	-2.1
GKN				eSn	S	02 57 14.5	-6.7
	comp=Z,48nm,0.4s						
BHPL	Bhopal	11.93	162	eS	S	02 57 19.2	-7.6
DMN	Daman	12.27	122	ePn	P	02 55 15.7	-1.4
DMN				eSn	S	02 57 27.8	-7.2
	comp=Z,44nm,0.7s						
KKN	Kakani	12.28	121	ePn	P	02 55 15.5	-1.8
KKN				eSn	S	02 57 28.0	-7.3
	comp=Z,60nm,0.8s						
PKI	Pulchoki	12.50	121	ePn	P	02 55 19.2	-1.1
PKI				eSn	S	02 57 35.9	-4.8
	comp=Z,44nm,0.7s						
GUN	Gumba	12.64	119	ePn	P	02 55 21.3	-0.8
GUN				eSn	S	02 57 38.6	-5.3
	comp=Z,26nm,0.7s						
JIRN	Jiri	13.01	119	ePn	P	02 55 26.3	-0.7
JIRN				eSn	S	02 57 47.2	-5.6
	comp=Z,56nm,0.7s						
MK02	Makanchi Array	13.84	27	⇑P	P	02 55 39.4	+1.5
MK02				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	Makanchi Array	13.85	26	⇑P	P	02 55 39.4	+1.3
	comp=Z,0.9nm,0.4s,baz=210,slow=16,SNR=7.5						
MK31	Makanchi Array	13.85	26	⇑P	P	02 55 39.4	+1.3
	comp=Z,0.9nm,0.4s						
MKAR	Makanchi Array	13.85	26	Pn	P	02 55 39.3	+1.3
	comp=Z,0.2nm,0.3s,baz=206,slow=14,SNR=6.9						
POO	Poona	16.09	178	ex	S	02 58 53.0	-13
KURK	Kurchatov	16.48	12	P	P	02 56 16.3	+4.2
AB31	Akbulak array	17.62	330	⇑P	P	02 56 25.2	-1.3
	comp=Z,0.8nm,0.3s,baz=101,slow=32,SNR=51						
AB31				⇑S	S	02 59 32.9	-7.8
	comp=Z,1.1nm,0.5s,baz=150,slow=22,SNR=3.4						
AB31	Akbulak array	17.62	330	⇑P	P	02 56 25.1	-1.3
	comp=Z,0.8nm,0.3s						
AB31				S	S	02 59 32.9	-7.9
AB31	Akbulak array	17.62	330	⇑P	P	02 56 25.2	-1.3
AB31				S	S	02 59 32.9	-7.9
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VOSK	Vostochnaya	18.12	355	⇓P	P	02 56 32.9	+0.1
	comp=Z,3.0nm,0.9s						
VOSK	Vostochnaya	18.12	355	⇓P	P	02 56 32.9	+0.2
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVA0	Borovoye Array	18.47	354	⇓P	P	02 56 37.8	+0.8
	comp=Z,0.3nm,0.5s,baz=163,slow=9.1,SNR=16						
BVA0	Borovoye Array	18.47	354	⇓P	P	02 56 37.8	+0.8
	comp=Z,0.3nm,0.5s						
BVAR	Borovoye Array	18.47	354	P	P	02 56 37.4	+0.4
	comp=Z,1.0nm,0.3s,baz=158,slow=9.3,SNR=10						
BRVK	Borovoye	18.51	354	eP	P	02 56 37.5	-0.1
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	18.51	354	eP	P	02 56 37.5	0.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CHKZ	Chkalovo	19.10	355	⇓P	P	02 56 43.9	-0.7
	comp=Z,2.0nm,0.7s						
CHKZ	Chkalovo	19.10	355	⇓P	P	02 56 43.9	-0.7
AKTK	Aktyubinsk	19.33	329	⇑P	P	02 56 46.0	-1.4
AKTO	Aktyubinsk	19.33	329	⇑P	P	02 56 46.0	-1.4
	comp=Z,1.5nm,0.8s						
AKTO	Aktyubinsk	19.33	329	P	P	02 56 46.0	-1.3
	comp=Z,1.3nm,0.3s,baz=144,slow=12,SNR=16						
GTA	Gaotai	21.60	70	eP	P	02 57 14.7	+3.3
GTA				AP		02 57 18.9	
GTA				XP		02 57 22.1	
GNI	Garni	23.33	292	eP	P	02 57 31.0	+2.5
	comp=Z,5.9nm,0.8s,mb4.1						
GNI	Garni	23.33	292	eP	P	02 57 31.0	+2.5
GNI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZAK	Zakamensk	26.82	45	eP	P	02 58 04.8	+3.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.4						
SONM	Songino Array	27.86	52	P	P	02 58 13.6	+2.6
	comp=Z,1.6nm,1.1s,mb3.6,baz=254,slow=11,SNR=5.5						
HHC	Hu-ho-hao-te	30.64	67	eP	P	02 58 40.7	+4.7
HHC				PP	PP	02 59 41.3	+4.8
HHC				PCP	PcP	03 01 38.7	+4.4
HHC				S	S	03 03 46.8	+10
HHC				SCP		03 05 19.0	
HHC				SCS	ScS	03 09 13.8	+3.1
HHC				AMB	AMB		
	comp=Z,90nm,7.2s						
HHC				LR	LR		
	comp=N,170nm,12.0s,MS4.0						
HHC				LR	LR		
	comp=E,140nm,16.8s,MS4.0						
HHC				LR	LR		
	comp=Z,100nm,14.4s,MS3.6						
BR131	Keskin Array S	31.86	291	P	P	02 58 43.8	-2.9
	comp=Z,1.8nm,1.0s,mb3.9						
BRTR	Keskin Array B	31.86	291	P	P	02 58 46.4	-0.3
	comp=Z,0.6nm,0.8s,mb3.5,baz=104,slow=10,SNR=4.3						
AKASG	Malin Array Be	35.59	310	P	P	02 59 17.1	-1.8
	comp=Z,1.5nm,0.5s,mb4.2,baz=83,slow=7.8,SNR=10						
JOF	Joensuu	38.41	330	ep	P	02 59 42.0	-0.4
KWP	Kalwaria	39.65	308	P	P	02 59 52.8	-0.1
	comp=Z,6.6nm,1.1s,mb4.3						
KWP	Kalwaria	39.65	308	P	P	02 59 52.8	-0.1
KWP				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
FINES	FINESS Array B	40.07	327	P	P	02 59 55.5	-0.8
	comp=Z,1.7nm,0.6s,mb4.0,baz=115,slow=10.0,SNR=11						
KAF	Kangasniemi	40.20	328	ep	P	02 59 49.7	-7.6
ARCES	ARCESS Array B	43.56	338	P	P	03 00 24.8	+0.1
	comp=Z,3.1nm,0.6s,mb4.2,baz=120,slow=7.9,SNR=32						
CII	Carovilli	46.16	297	P	P	03 00 48.9	+3.1
NB2	NORSAR Subarra	46.99	324	P	P	03 00 50.5	-1.6
	comp=Z,1.5nm,0.7s,mb4.0,baz=97,slow=7.4						
NOA	NORSAR Array B	46.99	324	P	P	03 00 50.4	-1.8
	comp=Z,1.3nm,0.6s,mb4.0,baz=98,slow=7.7,SNR=4.3						
NAO	NORSAR Subarra	47.16	324	P	P	03 00 50.5	-3.0
	comp=Z,1.5nm,0.7s,mb4.0						
NAO	NORSAR Subarra	47.16	324	P	P	03 00 50.5	-3.0
NAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
KMBO	Kilima Mbogo	49.11	231	P	P	03 01 10.8	+1.5
	comp=Z,1.3nm,0.7s,mb4.1,baz=34,slow=11,SNR=5.1						
KMBO	Kilima Mbogo	49.11	231	P	P	03 01 10.8	+1.5
ILAR	Eielson Array	75.99	17	P	P	03 04 07.0	-0.8
	comp=Z,0.6nm,0.8s,mb3.5,baz=297,slow=4.0,SNR=4.9						
DBIC	Dimbokro	76.56	269	P	P	03 04 11.2	-0.9
	comp=Z,1.8nm,0.6s,mb4.2,baz=12,slow=11,SNR=3.1						
BOSA	Boshof	77.64	222	P	P	03 04 17.9	+0.1
	comp=Z,4.1nm,0.7s,mb4.5,baz=23,slow=4.1,SNR=9.9						
WRA	Warramunga Arr	79.38	123	P	P	03 04 28.4	+1.0
	comp=Z,1.6nm,0.6s,mb4.1,baz=322,slow=4.9,SNR=47						
WRAB	Tennant Creek	79.38	123	eP	P	03 04 28.0	+0.6
	comp=Z,5.5nm,0.8s,mb4.5						
WRAB	Tennant Creek	79.38	123	eP	P	03 04 28.0	+0.6
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WB2	Warramunga Arr	79.39	123	eP	P	03 04 28.1	+0.6

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*NEIC **10** 02:59:23.6,18.16N×102.11W,h23^{km},MD3.8(MEX),After MEX.*
MEX 10 02:59:23.6±1.1**,18.15N×102.11W,h25^{km}**±52^{km}**,MD3.8,**
Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.82	132	i P	Pb	02 59 35.8	-3.2
ZIIG				i S	Sb	02 59 47.0	-2.6
MOIG	Morelia	1.75	30	eP	Pn	02 59 50.2	-2.7
MOIG				i S	Sn	03 00 10.6	-4.0
CAIG	El Cayaco	2.07	122	i P	Pn	02 59 55.4	-2.1
CAIG				i S	Sn	03 00 17.2	-5.4
ACX	Acapulco	2.45	121	eP	Pn	03 00 01.5	-1.4
ACX				i S	Sn	03 00 32.0	-0.3
SFJM	Santa Fe	2.48	339	i P	Pn	03 00 00.5	-2.9
PPM	Popocatepetl	3.42	74	i S	Sn	03 00 51.0	-5.9

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*IDC **10** 03:59:46.1±1.1,49.54N×156.30E,mb3.9/7,mb1 4.3/8, mb1mx3.9/21,mbtmp4.0/8,ML4.1/1,MS3.6/2,Ms1 3.6/2, ms1mx2.8/38,Error ellipse: s-maj=36.8km s-min=20.2km az=139.0*
*MOS **10** 03:59:50.3±1.6,49.41N×156.76E,h43^{km},mb4.1/5,Error ellipse: s-maj=50.6km s-min=13.8km az=70.8*
*KRSC **10** 03:59:50.2±1.6,49.38N×156.73E,h41^{km}±32^{km},ML4.5*
ISC 10 03:59:52.2±1.2**,49.45N**±0.07×**157.1E**±0.2**,h44^{km}**±13^{km}**,**
n41,σ**0^{s}83**/51**,mb3.9**/7**,MS3.6**/2**,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.37	334	i P	P	04 00 11.3	-4.0
SKR				i S	S	04 00 28.4	-4.1
ALID	Alaid	1.71	326	eP	P	04 00 18.9	-1.3
PAU	Pauzhetka	2.02	356	i P	P	04 00 24.8	+0.3
PAU				i S	S	04 00 49.1	+0.4
PAU				Smax			
	3μm,0.2s						
MIPR	Malaya Ipel'ka	2.83	356	eP	P	04 00 36.2	+0.1
RUS	Russkaya	3.12	17	P	P	04 00 40.2	-0.1
RUS				S	S	04 01 15.8	-0.9
RUS	Russkaya	3.12	17	eP	P	04 00 40.4	+0.1
RUS				eS	S	04 01 16.4	-0.3
GRL	Gorelyy	3.17	11	i P	P	04 00 41.5	+0.6
KRMR	Karymshinskiy	3.45	11	eP	P	04 00 44.5	-0.4
KRMR				eS	S	04 01 24.3	-0.6
APC	Apacha	3.48	1	eP	P	04 00 46.3	+1.1
PET	Petropavlovsk	3.71	15	P	P	04 00 49.1	+0.5
PET				S	S	04 01 30.3	-1.3
PET	Petropavlovsk	3.71	15	eP	P	04 00 48.8	+0.2
PET				eS	S	04 01 30.8	-0.8
PET	Petropavlovsk	3.71	15	ePN	P	04 00 49.0	+0.4
PET				eS	S	04 01 31.8	+0.2
PET				pmax	pmax		

	comp=Z,96nm,0.7s						
PET				smax			
	comp=N,205nm,0.6s						
PET				smax			
	comp=E,212nm,0.7s						
UGLR	**Uglovaya**	**3.92**	**16**	*e*P	**P**	**04 00 52.4**	**+0.9**
AVH	**Avacha**	**3.96**	**15**	*e*P	**P**	**04 00 53.1**	**+1.0**
AVH				*e*S	**S**	**04 01 38.1**	**+0.2**
KOK	**Koryaka**	**3.97**	**14**	*i* P	**P**	**04 00 53.4**	**+1.2**
SMAR	**Somma**	**3.97**	**15**	*e*P	**P**	**04 00 53.5**	**+1.3**
NLC	**Nalytchevo**	**3.99**	**20**	*e*P	**P**	**04 00 52.3**	**-0.2**
SPN	**Mys Shipunski**	**4.10**	**26**	P	**P**	**04 00 53.8**	**-0.3**
SPN				S	**S**	**04 01 40.4**	**-1.0**
SPN	**Mys Shipunski**	**4.10**	**26**	*e*P	**P**	**04 00 53.9**	**-0.2**
SPN				*e*S	**S**	**04 01 40.6**	**-0.8**
GNL	**Ganaly**	**4.28**	**7**	*e*P	**P**	**04 00 56.3**	**-0.4**
TUMR	**Tumrok**	**6.14**	**17**	*e*P	**P**	**04 01 21.8**	**-0.9**
ESO	**Esso**	**6.56**	**8**	*e*P	**P**	**04 01 28.8**	**+0.2**
ZLN	**Zelenaya**	**6.96**	**18**	*e*P	**P**	**04 01 34.7**	**+0.5**
KBTR	**Krutoberegovo**	**7.61**	**25**	*e*P	**P**	**04 01 42.1**	**-1.2**
SMKR	**Semkarok**	**7.62**	**19**	*e*P	**P**	**04 01 43.1**	**-0.3**
BKI	**Bering**	**7.94**	**40**	*e*S	**S**	**04 03 07.9**	**-9.3**
FX1	**Attu Island--F**	**10.69**	**65**	Pn	**P**	**04 02 24.3**	**-1.2**
	comp=E,4.6nm,0.3s,baz=40,slow=3.0,SNR=5.9						
FX1				Sn	**S**	**04 04 16.9**	**-7.9**
	comp=E,11nm,0.3s,baz=30,slow=21,SNR=11						
ILAR	**Eielson Array**	**32.78**	**41**	P	**P**	**04 06 22.2**	**-0.6**
	comp=E,0.9nm,1.0s,mb3.7,baz=269,slow=8.8,SNR=4.6						
ILAR	**Eielson Array**	**32.78**	**41**	P	**P**	**04 06 22.3**	**-0.6**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
INK	**Inuvik**	**37.94**	**34**	P	**P**	**04 07 07.5**	**+0.8**
	comp=Z,0.9nm,0.5s,mb3.8,baz=322,slow=11,SNR=8.2						
INK	**Inuvik**	**37.94**	**34**	P	**P**	**04 07 07.5**	**+0.8**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**48.05**	**297**	LR	LR	04 29 49.3	
	comp=Z,46nm,18.3s,MS3.5,baz=170,slow=38						
ARCES	**ARCESS Array B**	**56.15**	**342**	P	**P**	**04 09 24.6**	**-4.4**
	comp=Z,3.5nm,1.0s,mb4.3,baz=39,slow=7.8,SNR=5.2						
ARCES	**ARCESS Array B**	**56.15**	**342**	P	**P**	**04 09 24.6**	**-4.4**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NVAR	**Mina Array Bea**	**58.88**	**66**	P	**P**	**04 09 49.2**	**+0.4**
	comp=Z,0.4nm,0.6s,mb3.7,baz=291,slow=5.5,SNR=4.2						
ELK	**Elko**	**59.18**	**62**	LR	LR	04 33 55.2	
	comp=Z,52nm,18.9s,MS3.7,baz=220,slow=34						
PDAR	**Pinedale Array**	**61.04**	**57**	P	**P**	**04 10 04.5**	**+1.0**
	comp=Z,0.9nm,0.8s,mb3.9,baz=333,slow=3.3,SNR=6.8						
WRA	**Warramunga Arr**	**71.97**	**202**	P	**P**	**04 11 11.0**	**-2.1**
	comp=Z,1.7nm,1.0s,mb3.9,baz=17,slow=6.4,SNR=54						
WRA	**Warramunga Arr**	**71.97**	**202**	P	**P**	**04 11 11.0**	**-2.0**
WRA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TXAR	**Lajitas Array**	**73.90**	**64**	P	**P**	**04 11 25.1**	**+0.9**
	comp=Z,0.8nm,0.6s,mb3.9,baz=295,slow=4.3,SNR=14						
TXAR	**Lajitas Array**	**73.90**	**64**	P	**P**	**04 11 25.1**	**+0.9**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

IDC 10 04:02:06.0±2.0**, 1.73N**×**126.74E, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/13**, mbtmp3.7**/3**, Error ellipse: s-maj=179.0km s-min=26.4km az=64.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.80**	**161**	P	P	04 07 09.9	-1.8
	0.4nm,0.4s,baz=340,slow=11,SNR=12						
STKA	**Stephens Creek**	**36.28**	**158**	P	P	04 09 11.9	-1.2
	3.4nm,0.8s,slow=6.1,SNR=3.0						
MKAR	**Makanchi Array**	**59.20**	**326**	P	P	04 12 08.8	-2.4
	0.4nm,0.5s,baz=117,slow=8.2,SNR=5.6						

BJI 10 04:45:39.2, 40.19N×**100.74E, h19**^{km}**, ML3.8, Ms3.6, Msz3.3, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTA	**Gaotai**	**1.06**	**223**	PG	Pb	04 45 55.9	-2.7
GTA				SG	Sb	04 46 05.3	-6.7
GTA				Smax			
	comp=N,370nm,0.6s						
GTA				Smax			
	comp=E,600nm,0.7s						
LZH	**Lanzhou**	**4.77**	**148**	*e*P	Pn	04 46 54.2	+2.2
LZH				PG	Pn	04 47 07.1	+15
LZH				S	Sn	04 47 43.0	-4.5
LZH				SG	Sn	04 48 02.5	+15
LZH				Smax			
	comp=N,390nm,0.7s						
LZH				Smax			
	comp=E,210nm,0.7s						

*HLW **10** 04:47:38.6, 35.57N×27.50E, h6*^{km}*, Mb3.5*
*CSEM **10** 04:47:38.4±0.1, 35.41N×27.46E, h10*^{km}*, MD3.7, Error ellipse: s-maj=2.3km s-min=1.8km az=106.0*
*ISK **10** 04:47:40.1, 35.52N×27.11E, h83*^{km}*, MD3.6*
*NEIC **10** 04:47:40.8, 35.57N×27.24E, h21*^{km}*, mb3.4/1, MD3.7(ATH), After ATH.*
*ATH **10** 04:47:40.8, 35.57N×27.24E, h21*^{km}*, MD3.7/10*
*IDC **10** 04:47:44.5±2.0, 35.40N×27.35E, h58*^{km}*±19*^{km}*, mb3.7/5, mb1 3.7/10, mb1mx3.5/25, mbtmp3.7/10, ML3.5/5, Error ellipse: s-maj=24.2km s-min=10.4km az=152.0*
ISC 10 04:47:39.5±0.6**, 35.42N**±0.02×**27.35E**±0.03**, h18**^{km}±6^{km}**, n68, σ1**^{s}.**36**/91**, mb3.7**/6**, 1C-5D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.20**	**310**	*e*PB	**Pb**	**04 47 44.3**	**-0.2**
KARP				*e*SB	**Sb**	**04 47 47.7**	**-0.2**
ARG	**Arkhangelos**	**1.02**	**38**	*e*PN	**Pn**	**04 47 59.4**	**+0.5**
ARG				*e*SN	**Sn**	**04 48 12.9**	**+0.2**
NISR	**Nisiros**	**1.21**	**351**	*e*PN	**Pn**	**04 48 00.5**	**-1.1**
DAT	**Datca**	**1.32**	**8**	*i* PN	**Pn**	**04 48 03.0**	**-0.3**
DAT				*i* SN	**Sn**	**04 48 20.3**	**-0.2**
NPS	**Neapolis**	**1.43**	**264**	*e*PN	**Pn**	**04 48 07.0**	**+2.2**
NPS				*e*SN	**Sn**	**04 48 24.9**	**+1.6**
XRY	**Khrisi**	**1.46**	**249**	*e*PN	**Pn**	**04 48 07.8**	**+2.6**
BODT	**Bodrum**	**1.64**	**359**	*i* PN	**Pn**	**04 48 07.3**	**-0.6**
BDRM	**Kayabasi**	**1.65**	**3**	*i* P	**Pn**	**04 48 08.0**	**+0.1**
BDRM				*i* S	**Sn**	**04 48 25.4**	**-3.4**
DALT	**Dalyan (Mudla)**	**1.71**	**37**	*i* PN	**Pn**	**04 48 10.6**	**+1.9**
DALT				*i* SN	**Sn**	**04 48 31.8**	**+1.6**
SANT	**Santorini**	**1.81**	**302**	*e*Pn	**Pn**	**04 48 10.8**	**+0.6**
SANT				*e*Sn	**Sn**	**04 48 29.5**	**-3.4**
SANT	**Santorini**	**1.81**	**302**	*e*Pn	**Pn**	**04 48 10.8**	**+0.6**
SANT				*e*Sn	**Sn**	**04 48 29.5**	**-3.4**
FETY	**Fethiye**	**1.86**	**49**	*i* PN	**Pn**	**04 48 12.8**	**+1.9**
YER	**Yerkesik**	**1.87**	**23**	*i* PN	**Pn**	**04 48 12.4**	**+1.3**
MLSB	**Milas**	**1.91**	**10**	*i* PN	**Pn**	**04 48 11.8**	**+0.2**
KSL	**Kastellorizon**	**1.96**	**67**	*e*PN	**Pn**	**04 48 15.5**	**+3.2**
AKAS	**Kas**	**2.00**	**65**	*i* P	**Pn**	**04 48 14.0**	**+1.0**
AKAS				*i* S	**Sn**	**04 48 40.9**	**+3.1**
IDI	**Anoyia**	**2.02**	**267**	P	**Pn**	**04 48 14.4**	**+1.2**
	23nm,0.3s,baz=51,slow=14,SNR=91						
IDI				S	**Sn**	**04 48 41.2**	**+3.0**
	52nm,0.3s,baz=325,slow=22,SNR=8.9						
APE	**Apeiranthos**	**2.21**	**319**	*i* PN	**Pn**	**04 48 13.2**	**-2.8**
APE	**Apeiranthos**	**2.21**	**319**	*e*PB	**Pb**	**04 48 15.9**	**-2.7**
AYDN	**Tasoluk**	**2.28**	**11**	*i* P	**Pn**	**04 48 17.5**	**+0.5**
AYDN				*i* S	**Sn**	**04 48 42.4**	**-2.5**
SMG	**Samos**	**2.33**	**350**	*e*PN	**Pn**	**04 48 18.5**	**+0.9**
ELL	**Elmali**	**2.46**	**57**	*i* PN	**Pn**	**04 48 20.9**	**+1.4**
GOLH	**Golhisar**	**2.55**	**44**	*i* P	**Pn**	**04 48 22.7**	**+1.9**
GOLH				*i* S	**Sn**	**04 49 02.7**	**+11**
VAM	**Vamos**	**2.58**	**271**	*e*PN	**Pn**	**04 48 22.4**	**+1.2**
DNZL	**Cakiroluk**	**2.65**	**30**	*i* P	**Pn**	**04 48 24.3**	**+2.1**
DNZL				*i* S	**Sn**	**04 49 03.0**	**+8.8**
DENT	**Denizli**	**2.70**	**30**	*i* PN	**Pn**	**04 48 22.9**	**0.0**
GVD	**Gavdhos**	**2.74**	**259**	*e*PN	**Pn**	**04 48 25.5**	**+2.0**
IZM	**Izmir**	**2.98**	**359**	*i* PN	**Pn**	**04 48 25.7**	**-1.2**
KDAG	**Bornova**	**2.98**	**359**	*i* P	**Pn**	**04 48 26.7**	**-0.2**
KDAG				*i* S	**Sn**	**04 49 22.2**	**+20**
MANT	**Manisa**	**3.22**	**17**	*i* P	**Pn**	**04 48 30.8**	**+0.5**
MANT				*i* S	**Sn**	**04 49 08.4**	**-0.2**
BCK	**Bucak**	**3.31**	**51**	PN	**Pn**	**04 48 32.0**	**+0.3**
KHL	**Karahalli**	**3.38**	**30**	PN	**Pn**	**04 48 32.7**	**0.0**
AKS	**Akhisar**	**3.48**	**6**	PN	**Pn**	**04 48 32.4**	**-1.6**
ISP	**Isparta**	**3.51**	**45**	*e*PN	**Pn**	**04 48 34.1**	**-0.4**
TKTP	**Tekketepe**	**3.54**	**41**	*i* P	**Pn**	**04 48 35.6**	**+0.7**
TKTP				*i* S	**Sn**	**04 49 33.5**	**+17**
KYTH	**Kithira**	**3.61**	**285**	*e*PN	**Pn**	**04 48 36.5**	**+0.6**
ALT	**Altintas**	**4.25**	**30**	*e*PN	**Pn**	**04 48 44.6**	**-0.3**
SLUM		**4.30**	**205**	⇓*e*P	**Pn**	**04 48 46.5**	**+0.8**
DST	**Dursunbey**	**4.30**	**13**	*e*PN	**Pn**	**04 48 43.9**	**-1.9**
HMAT	**Matruh**	**4.31**	**183**	P	**Pn**	**04 48 46.5**	**+0.6**
HMAT				S	**Sn**	**04 49 36.1**	**-0.2**
ERMK	**Ermenek**	**4.67**	**73**	*i* P	**Pn**	**04 48 52.2**	**+1.3**
ERMK				*i* S	**Sn**	**04 49 46.2**	**+0.8**
ORLT	**Orhaneli**	**4.78**	**14**	*e*PN	**Pn**	**04 48 50.5**	**-2.0**
ULDT	**Uludag**	**4.93**	**16**	*i* P	**Pn**	**04 48 53.5**	**-1.1**
ULDT				*i* S	**Sn**	**04 49 48.8**	**-3.0**
ESKT	**Eskisehir**	**4.95**	**33**	*e*PN	**Pn**	**04 48 53.6**	**-1.3**
KIZT	**Kizilcal**	**5.00**	**45**	*e*PN	**Pn**	**04 48 54.9**	**-0.7**
SWA1		**6.29**	**193**	⇓*e*P	**Pn**	**04 49 14.3**	**+0.5**
SWA1				S	**Sn**	**04 50 24.0**	**-1.9**
SWA2		**6.36**	**195**	⇓*e*P	**Pn**	**04 49 15.2**	**+0.4**
BR131	**Keskin Array S**	**6.59**	**47**	*e*Pn	**Pn**	**04 49 18.5**	**+0.4**
	1.2nm,0.4s						
BR131	**Keskin Array S**	**6.59**	**47**	*e*Pn	**Pn**	**04 49 18.5**	**+0.5**
	1.2nm,0.4s						
BRTR	**Keskin Array B**	**6.59**	**47**	P	**Pn**	**04 49 18.1**	**+0.1**
	0.2nm,0.3s,baz=221,slow=14,SNR=13						
BRTR				S	**Sn**	**04 50 35.3**	**+1.8**
	0.1nm,0.3s,baz=216,slow=20,SNR=2.1						
BRTR	**Keskin Array B**	**6.59**	**47**	P	**Pn**	**04 49 18.1**	**+0.1**
BRTR				S	**Sn**	**04 50 35.2**	**+1.7**
AMAG	**Maghara**	**6.84**	**132**	⇓P	**Pn**	**04 49 19.8**	**-1.8**
AWBH		**7.19**	**169**	⇓P	**Pn**	**04 49 26.2**	**-0.3**
SUZ		**7.23**	**139**	P	**Pn**	**04 49 25.5**	**-1.5**
COBT	**Iskenderun**	**7.30**	**79**	*i* P	**Pn**	**04 49 25.8**	**-2.2**
COBT				*i* S	**Sn**	**04 50 47.4**	**-3.9**
HNKL	**Nakhl**	**7.82**	**133**	P	**Pn**	**04 49 33.0**	**-2.2**
HFRF	**Wahat Farafira**	**8.28**	**174**	⇑P	**P**	**04 49 40.9**	**-0.8**
HKAT	**Jabal Katrina**	**8.89**	**139**	P	**P**	**04 49 48.5**	**-1.5**
MLR	**Muntele Rosu**	**10.12**	**354**	P	**P**	**04 50 05.6**	**-1.5**
	0.1nm,0.3s,baz=106,slow=22,SNR=2.8						
AKASG	**Malin Array Be**	**15.34**	**5**	P	**P**	**04 51 18.4**	**+1.8**
	0.5nm,0.3s,baz=194,slow=12,SNR=3.3						
GERES	**GERESS Array B**	**16.77**	**327**	P	**P**	**04 51 35.0**	**-0.1**
	0.1nm,0.3s,baz=130,slow=10,SNR=4.1						
ESDC	**Sonseca Array**	**25.12**	**289**	P	**P**	**04 53 04.5**	**-0.3**
	2.0nm,0.5s,mb3.9,baz=83,slow=9.6,SNR=22						
ESLA	**Sonseca Array**	**25.12**	**289**	*e*P	**P**	**04 53 04.3**	**-0.5**
	0.4nm,0.5s,mb3.2						
ESLA	**Sonseca Array**	**25.12**	**289**	*e*P	**P**	**04 53 04.3**	**-0.5**
HFS	**Hagfors**	**26.27**	**345**	P	**P**	**04 53 13.9**	**-1.4**
	3.3nm,1.0s,mb3.8,baz=135,slow=8.2,SNR=4.3						
ARCES	**ARCESS Array B**	**34.19**	**359**	P	**P**	**04 54 22.9**	**-2.8**
	1.4nm,0.7s,mb4.0,baz=179,slow=8.7,SNR=6.3						
MKAR	**Makanchi Array**	**42.13**	**57**	P	**P**	**04 55 32.1**	**-0.2**
	0.2nm,0.4s,mb3.1,baz=272,slow=9.8,SNR=3.9						
TSUM	**Tsumeb**	**55.10**	**191**	P	**P**	**04 57 10.2**	**-2.8**
	1.0nm,0.4s,mb4.2,baz=106,slow=2.0,SNR=7.0						

IDC 10 05:18:23.4±1.1**, 28.11N**×**141.54E, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.7**/20**, mbtmp4.0**/4**, Error ellipse: s-maj=73.3km s-min=18.9km az=66.0, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.16**	**150**	Pn	Pn	05 18 46.4	-0.4
	27nm,0.3s,baz=156,slow=20,SNR=53						
CBIJ				Sn	Sn	05 18 59.0	-4.6
	115nm,0.3s,baz=273,slow=22,SNR=20						
WRA	**Warramunga Arr**	**48.27**	**189**	P	P	05 27 06.8	-1.6
	1.1nm,0.6s,baz=10,slow=8.3,SNR=8.5						
BVAR	**Borovoye Array**	**56.91**	**317**	P	P	05 28 09.4	-3.1
	0.4nm,0.4s,baz=90,slow=4.3,SNR=3.5						
ARCES	**ARCESS Array B**	**72.40**	**341**	P	P	05 29 52.3	-0.5
	2.8nm,0.9s,baz=67,slow=6.9,SNR=3.8						
FINES	**FINESS Array B**	**76.79**	**334**	P	P	05 30 15.8	-2.4
	1.3nm,1.0s,baz=63,slow=6.2,SNR=5.2						

GUC 10 05:19:42.5±0.6**, 30.09S**×**70.53W, h45**^{km}±8^{km}**, MD4.0, ML3.2, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.16**	**201**	*e*P	P	05 20 03.0	+0.5
CMCH				*i* S	S	05 20 18.8	+1.4
CMCH				AMP		05 20 20.6	
	comp=E,1µm,0.5s						
CHNG	**Los Chungos**	**1.98**	**205**	*e*P	P	05 20 14.5	+0.3
CHNG				*i* S	S	05 20 37.9	+0.1
CHNG				AMP		05 20 42.6	
	comp=E,186nm,0.4s						
CPCH	**Copiapo**	**2.72**	**3**	*e*P	P	05 20 24.4	-0.4
CPCH				*i* S	S	05 20 56.4	-0.4
FCH	**Farellones**	**3.24**	**176**	*e*P	P	05 20 32.0	-0.1
FCH				*i* S	S	05 21 10.2	+0.4

*BJI **10** 05:28:16.6, 57.17N×120.53E, h5*^{km}*, mB4.6, mb4.4, ML4.6, Ms4.3*
*IDC **10** 05:28:18.0±1.0, 57.42N×120.64E, mb3.9/11, mb1 4.0/12, mb1mx3.9/23, mbtmp3.9/12, ML2.9/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/27, Error ellipse: s-maj=24.0km s-min=20.3km az=157.0*
*BYKL **10** 05:28:19.3±0.6, 57.46N×120.70E, MS3.4*
*NEIC **10** 05:28:19.6±0.5, 57.40N×120.56E, h5*^{km}*, mb4.3/9, Error ellipse: s-maj=13.3km s-min=8.7km az=158.0*
*MOS **10** 05:28:23.0±3.3, 57.26N×120.49E, h16*^{km}*, mb4.2/6, Error ellipse: s-maj=11.6km s-min=9.4km az=73.2*
ISC 10 05:28:19.1±0.3**, 57.39N**±0.03×**120.69E**±0.04**, h10**^{km}**, n80, σ1**^{s}.**51**/85**, mb4.1**/19**, 1C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**1.41**	**251**	*e*Pg	**Pg**	**05 28 43.9**	**-3.3**
CRS				*e*		05 28 46.1	
CRS				max		05 28 46.8	
	734nm,0.9s						
CRS				*e*Sg	**Sg**	**05 29 02.1**	**-4.0**
CRS				Smax		05 29 05.4	
	1µm,1.4s						
NRGR	**Nerungri**	**2.32**	**107**	*e*P	**Pn**	**05 29 00.0**	**+2.0**
NRGR				*e*S	**Sn**	**05 29 28.0**	**+1.2**
CLNS	**Chul'man**	**2.36**	**102**	*e*Pn	**Pn**	**05 29 00.3**	**+1.8**
CLNS				*e*Pg	**Pg**	**05 29 02.9**	**-3.3**
CLNS				Pmax		05 29 03.9	
	419nm,0.3s						
CLNS				*e*Sg	**Sg**	**05 29 32.0**	**-5.6**
CLNS				Smax		05 29 32.9	
	41µm,1.0s						
CLNS	**Chul'man**	**2.36**	**102**	*e*P	**Pn**	**05 29 00.4**	**+1.9**
CLNS				*e*S	**Sn**	**05 29 26.6**	**-1.1**
CLNS				pmax	pmax		
	comp=Z,50nm,0.3s						
CLNS				pmax	pmax		
	comp=N,28nm,0.4s						
CLNS				pmax	pmax		
	comp=E,17nm,0.3s						
CLNS				pmax	pmax		
	comp=N,30nm,0.3s						
CLNS				pmax	pmax		
	comp=E,46nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,65nm,0.3s						
CLNS				smax			
	comp=E,73nm,0.3s						
CLNS				smax			
	comp=N,122nm,0.4s						
CLNS				smax			
	comp=Z,139nm,0.4s						
CLNS				smax			
	comp=N,3µm,0.7s						
CLNS				smax			
	comp=Z,1µm,0.6s						
CLNS				smax			
	comp=E,3µm,0.8s						
CLNS				MLR	MLR		
	comp=Z,100nm,10.0s						
ALDR	**Aldan**	**2.79**	**62**	*e*Pn	**Pn**	**05 29 03.3**	**-1.4**
ALDR				*e*Pg	**Pb**	**05 29 07.7**	**-1.0**
ALDR				*e*		05 29 13.3	
ALDR				max		05 29 14.6	
	comp=Z,1µm,0.6s						
ALDR				*e*Sn	**Sn**	**05 29 36.4**	**-2.4**
ALDR				*e*Sg	**Sb**	**05 29 43.9**	**+0.8**
ALDR				Smax		05 29 44.2	
	comp=Z,17µm,0.6s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*Pn	**Pn**	**05 29 07.4**	**+1.5**
NLYR				*e*Pg	**Pb**	**05 29 12.1**	**+2.0**
NLYR				*e*PgPg		05 29 14.0	
NLYR				max		05 29 14.7	
	comp=Z,627nm,0.8s						
NLYR				*e*Sg	**Sb**	**05 29 48.1**	**+2.6**
NLYR				Smax		05 29 53.2	
	comp=Z,1µm,1.4s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*P	**Pn**	**05 29 11.9**	**+6.0**
NLYR				*e*		05 29 47.0	
NLYR				pmax	pmax		
	comp=Z,618nm,0.3s						
NLYR				smax			
	comp=N,1µm,1.3s						
TUP	**Tupik**	**3.00**	**188**	*e*Pn	**Pn**	**05 29 07.7**	**+0.1**
TUP				*e*		05 29 10.6	
TUP				*e*Pg	**Pb**	**05 29 14.3**	**+2.1**
TUP				Pmax		05 29 15.5	
	comp=N,606nm,0.6s						
TUP				*e*Sn	**Sn**	**05 29 41.2**	**-2.8**
TUP				*e*Sg	**Sb**	**05 29 52.2**	**+3.1**
TUP				Smax		05 29 59.7	
	comp=N,2µm,1.2s						
TUP				*e*LR	LR	05 30 10.5	
TUP				LRmax		05 30 16.3	
	comp=N,833nm,3.6s						
TUP				LRmax		05 30 16.3	
	comp=N,721nm,3.6s						
TUP	**Tupik**	**3.00**	**188**	*e*P	**Pn**	**05 29 08.3**	**+0.7**
TUP				*e*		05 29 52.1	
TUP				pmax	pmax		
	comp=Z,603nm,0.4s						
TUP				smax			
	comp=E,2µm,0.8s						
TNDR	**Tynda**	**3.18**	**133**	*e*Pn	**Pn**	**05 29 10.4**	**+0.3**
TNDR				*e*		05 29 13.2	
TNDR				*e*PgPg		05 29 19.2	
TNDR				max		05 29 19.9	
	comp=E,2µm,0.6s						
TNDR				*e*Sn	**Sn**	**05 29 48.4**	**-0.1**
TNDR				*e*Sg	**Sg**	**05 29 57.0**	**-7.9**
TNDR				Smax		05 30 05.2	
	comp=E,10µm,0.6s						
TNDR				*e*LR	LR	05 30 16.0	
BOD	**Bodaibo**	**3.62**	**280**	*e*Pn	**Pn**	**05 29 17.4**	**+0.9**
BOD				*e*Pg	**Pb**	**05 29 26.6**	**+3.7**
BOD				Pmax		05 29 29.2	
	comp=E,124nm,0.6s						
BOD				*e*Sn	**Sn**	**05 29 59.0**	**-0.8**
BOD				*e*Sg	**Sb**	**05 30 12.2**	**+5.0**
BOD				Smax		05 30 16.7	
	comp=E,676nm,1.3s						
BOD				*e*LR	LR	05 30 32.8	
BOD				LRmax		05 30 36.6	
	comp=E,566nm,3.6s						
BOD	**Bodaibo**	**3.62**	**280**	*e*P	**Pb**	**05 29 24.7**	**+1.8**
SVKR	**Severomuysk**	**4.13**	**255**	Pg	Px	05 29 35.4	
SVKR				Pmax		05 29 39.3	
	comp=E,130nm,0.4s						
SVKR				*e*Sn	**Sn**	**05 30 10.1**	**-2.5**
SVKR				*e*Sg	Sx	05 30 28.7	
SVKR				Smax		05 30 35.0	
	comp=E,1µm,1.3s						
UKT	**Uakit**	**4.36**	**247**	*e*Pn	**Pn**	**05 29 28.5**	**+1.6**
UKT				*e*Pg	Px	05 29 38.4	
UKT				Pmax		05 29 43.1	
	comp=E,72nm,1.2s						
UKT				*e*Sg	Sx	05 30 35.0	
UKT				Smax		05 30 47.3	
	comp=E,395nm,1.4s						
UKT	**Uakit**	**4.36**	**247**	*e*P	Px	05 29 39.8	
UKT				pmax	pmax		
	comp=Z,35nm,0.6s						
KROS	**Kirovskiy**	**4.61**	**127**	*e*Pn	**Pn**	**05 29 32.1**	**+1.6**
KROS				⇓*i*Pg	Px	05 29 42.6	
KROS				Pmax		05 29 46.6	
	comp=Z,89nm,0.6s						
KROS				*i* Sn	**Sn**	**05 30 22.9**	**-1.9**
KROS				*i* Sg	Sx	05 30 43.6	
KROS				Smax		05 30 48.2	
	comp=Z,680nm,0.8s						
YOA	**Uoyan**	**5.09**	**259**	*e*	Px	05 29 53.2	
YOA				*e*Sg	Sx	05 30 56.4	
YOA				Smax		05 31 16.9	
	comp=Z,2µm,1.8s						
KMO	**Kumora**	**5.45**	**258**	*e*Pn	**Pn**	**05 29 45.2**	**+2.8**
KMO				*e*Pg	Px	05 29 58.9	
KMO				Pmax		05 30 12.6	
	comp=Z,32nm,0.6s						
KMO				*e*Sg	Sx	05 31 08.6	
KMO				Smax		05 31 19.1	
	comp=Z,660nm,1.4s						
KMO	**Kumora**	**5.45**	**258**	*e*P	**Pn**	**05 29 42.8**	**+0.4**
KMO				pmax	pmax		
	comp=Z,125nm,0.5s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*Pn	**Pn**	**05 29 49.3**	**+0.7**
YLYR				*e*Pg	Px	05 30 06.5	
YLYR				Pmax		05 30 15.1	
	comp=Z,24nm,0.8s						
YLYR				*e*Sn	**Sn**	**05 30 55.4**	**-1.6**
YLYR				*e*Sg	Sx	05 31 23.3	
YLYR				Smax		05 31 27.0	
	comp=Z,286nm,1.4s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*P	Px	05 30 06.1	
NIZ	**Nizh Angarsk**	**6.37**	**260**	*e*Pg	Px	05 30 14.5	
NIZ				Pmax		05 30 23.3	
	comp=Z,21nm,0.9s						
NIZ				*e*		05 31 14.4	
NIZ				*e*Sg	Sx	05 31 36.3	
NIZ				Smax		05 31 49.6	
	comp=Z,229nm,1.6s						
YAK	**Yakutsk**	**6.50**	**41**	*e*Pn	**Pn**	**05 29 57.4**	**+0.2**
YAK				*e*Pg	Px	05 30 14.6	
YAK				Pmax		05 30 18.0	
	comp=Z,369nm,0.8s						
YAK				*e*Sn	Sx	05 31 03.1	
YAK				*e*Sg	Sx	05 31 36.4	
YAK				Smax		05 31 38.6	
	comp=Z,3µm,0.8s						
YAK	**Yakutsk**	**6.50**	**41**	Pn	**Pn**	**05 30 01.0**	**+3.8**
	comp=Z,39nm,0.8s						
YAK				*e*Lg		05 31 34.1	
YAK	**Yakutsk**	**6.50**	**41**	*e*P	**Pn**	**05 29 58.4**	**+1.2**
YAK				*e*S	**Sn**	**05 31 20.2**	**+7.9**
CIT	**Chita**	**6.78**	**221**	*e*	Px	05 30 12.6	
CIT				*e*Pg	Sx	05 30 22.2	
CIT				Pmax		05 30 26.4	
	comp=Z,58nm,1.3s						
CIT				*e*Sg	Sx	05 31 49.0	
CIT				Smax		05 32 00.3	
	comp=Z,953nm,1.4s						
CIT	**Chita**	**6.78**	**221**	*e*P	Px	05 30 22.0	
CIT				pmax	pmax		
	comp=Z,56nm,0.9s						
SYVR	**Suvo**	**7.13**	**243**	*e*	**Pn**	**05 30 14.8**	**+8.8**
SYVR				*e*Pg	Px	05 30 29.8	
SYVR				Pmax		05 30 33.1	
	comp=Z,30nm,1.1s						
SYVR				*e*Sg	Sx	05 32 02.4	
SYVR				Smax		05 32 08.9	
	comp=Z,444nm,1.4s						
KPC	**Khapcheranga**	**9.14**	**216**	*e*Pg	Px	05 31 04.3	
KPC				Pmax		05 31 14.1	
	comp=Z,4.0nm,0.9s						
KPC				*e*Sg	Sx	05 33 01.5	
KPC				Smax		05 33 08.1	
	comp=Z,194nm,1.4s						
TRG	**Tyrgan**	**9.44**	**247**	*e*Sg	Sx	05 33 11.7	
TRG				Smax		05 33 24.3	
	comp=Z,89nm,1.9s						
KLR	**Kul'dur**	**10.50**	**136**	*e*P	Px	05 30 45.7	
LSTR	**Listvyanka**	**10.72**	**246**	*e*Sg	Sx	05 33 49.1	
LSTR				Smax		05 34 08.2	
	comp=Z,81nm,1.4s						
IRK	**Irkutsk**	**10.78**	**248**	*e*Sg	Sx	05 33 51.6	
IRK				Smax		05 34 07.2	
	comp=Z,232nm,0.3s						
TLY	**Talaya**	**11.42**	**247**	*e*Sg	Sx	05 34 12.8	
TLY				Smax		05 34 27.2	
	comp=Z,56nm,1.9s						
ARS	**Arshan**	**11.90**	**250**	*e*Sg	Sx	05 34 30.8	
ARS				Smax		05 35 02.7	
	comp=Z,94nm,0.9s						

ZAK	Zakamensk	12.41	243	eSg	Sx	05 34 46.7	
ZAK				Smax		05 35 17.2	
	comp=Z,55nm,1.6s						
MOY	Mondy	12.77	252	eSg	Sx	05 34 52.9	
MOY				Smax		05 35 32.4	
	comp=Z,109nm,1.7s						
SONM	Songino Array	12.89	228	Pn	P	05 31 22.4	-2.6
	comp=Z,0.1nm,0.3s,baz=38,slow=15,SNR=2.7						
SONM				Lg		05 35 06.1	
	comp=Z,1.2nm,0.3s,baz=32,slow=28,SNR=7.4						
SONM				LR	LR	05 36 40.4	
	comp=Z,70nm,21.8s,baz=348,slow=39						
ORL	Orlik	12.92	257	ePn	P	05 31 27.0	+1.6
ORL				eSg	Sx	05 34 58.2	
ORL				Smax		05 35 15.6	
	comp=Z,54nm,1.5s						
UNR	Ust'-Nera	13.03	47	eSg	Sx	05 34 59.6	
MA2	Magadan	15.81	69	P	P	05 31 59.8	-3.3
	comp=Z,53nm,1.1s						
MA2	Magadan	15.81	69	P	P	05 31 59.8	-3.2
MA2				pmax	pmax		
	comp=Z,53nm,1.1s						
HHC	Hu-ho-hao-te	17.57	203	eP	P	05 32 17.2	-8.2
HHC				PP	PP	05 32 31.8	-8.3
HHC				S	S	05 35 28.5	-11
HHC				PCP	PcP	05 37 03.3	-2.7
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s						
HHC				AMB	AMB		
	comp=Z,110nm,5.0s						
HHC				LR	LR		
	comp=N,190nm,9.0s						
HHC				LR	LR		
	comp=E,450nm,9.0s						
ASAJ	Asahikawa	19.08	125	LR	LR	05 39 23.1	
	comp=E,56nm,20.4s,baz=127,slow=35						
ZAL	Zalesovo	20.39	276	P	P	05 32 57.0	-1.3
	comp=E,1.5nm,0.5s,baz=46,slow=11,SNR=9.8						
NVS	Novosibirsk	20.87	279	eP	P	05 33 05.0	+1.7
NVS				e		05 37 26.7	
BILL	Bilibino	22.85	44	P	P	05 33 25.0	+2.0
KURK	Kurchatov	25.25	273	eP	P	05 33 44.9	-1.4
	comp=E,4.2nm,1.0s,mb3.9						
KURK	Kurchatov	25.25	273	⇑iP	P	05 33 45.7	-0.6
NJ2	Nanjing	25.37	184	eP	P	05 33 48.8	+1.2
MKAR	Makanchi Array	25.52	262	P	P	05 33 49.2	+0.3
	comp=E,2.0nm,0.8s,mb3.7,baz=56,slow=8.7,SNR=10						
MKAR	Makanchi Array	25.52	262	P	P	05 33 49.2	+0.3
MKAR	Makanchi Array	25.52	262	i P	P	05 33 51.7	+2.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SSE	Sheshan	26.29	179	eP	P	05 33 56.9	+0.7
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,60nm,4.7s						
SSE	Sheshan	26.29	179	eP	P	05 33 56.9	+0.7
	comp=Z,44nm,0.7s,mb5.1						
BVAR	Borovoye Array	28.49	283	P	P	05 34 14.7	-1.3
	comp=Z,0.6nm,0.6s,mb3.4,baz=45,slow=10,SNR=4.2						
AAK	Ala-Archa	32.44	263	eP	P	05 34 50.8	-0.3
	comp=Z,2.9nm,1.0s,mb4.1						
AAK	Ala-Archa	32.44	263	eP	P	05 34 50.8	-0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
ARCES	ARCESS Array B	39.67	327	P	P	05 35 51.8	-0.5
	comp=Z,2.0nm,0.8s,mb3.9,baz=90,slow=9.9,SNR=2.8						
COLA	College	41.03	41	P	P	05 36 03.9	+0.4
	comp=Z,3.3nm,0.9s,mb4.0						
COLA	College	41.03	41	P	P	05 36 03.9	+0.4
COLA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.9						
JOF	Joensuu	41.40	316	ep	P	05 36 07.1	+0.6
KAF	Kangasniemi	43.74	317	ep	P	05 36 27.2	+1.7
FINES	FINESS Array B	44.25	317	P	P	05 36 28.5	-1.2
	comp=Z,3.7nm,0.8s,mb4.2,baz=41,slow=13,SNR=6.7						
FINES	FINESS Array B	44.25	317	i P	P	05 36 34.4	+4.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HFS	Hagfors	49.57	321	P	P	05 37 08.5	-3.0
	comp=Z,2.4nm,0.6s,mb4.4,baz=59,slow=8.6,SNR=12						
AKASG	Malin Array Be	50.21	304	P	P	05 37 13.1	-3.5
	comp=Z,0.4nm,0.3s,mb3.9,baz=41,slow=8.9,SNR=10						
AKASG	Malin Array Be	50.21	304	P	P	05 37 13.1	-3.5
AKASG	Malin Array Be	50.21	304	i P	P	05 37 15.1	-1.4
KWP	Kalwaria	53.86	307	eP	P	05 37 43.2	-0.7
	comp=Z,9.1nm,1.0s,mb4.7						
KWP	Kalwaria	53.86	307	eP	P	05 37 43.2	-0.7
KWP				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
GERES	GERESS Array B	58.22	312	P	P	05 38 12.4	-2.9
	comp=Z,0.7nm,0.6s,mb3.9,baz=30,slow=11,SNR=6.8						
GVD	Gavdhos	64.73	295	P	P	05 38 54.8	-4.5
	comp=Z,56nm,1.0s,mb5.5						
HLID	Hailey	69.38	40	eP	P	05 39 28.7	+0.1
	comp=Z,1.8nm,0.9s,mb4.0						
PDAR	Pinedale Array	71.71	37	P	P	05 39 41.8	-0.9
	comp=Z,0.6nm,0.6s,mb3.7,baz=21,slow=3.0,SNR=5.1						
HWUT	Hardware Ranch	72.09	39	eP	P	05 39 45.3	+0.4
	comp=Z,3.6nm,0.9s,mb4.3						
NVAR	Mina Array Bea	72.47	45	P	P	05 39 47.5	+0.3
	comp=Z,0.6nm,0.9s,mb3.5,baz=289,slow=7.8,SNR=4.1						
DUG	Dugway	72.92	40	eP	P	05 39 49.9	+0.1
	comp=Z,1.2nm,0.8s,mb3.9						
DUG	Dugway	72.92	40	eP	P	05 39 49.9	+0.1
DUG				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
WRA	Warramunga Arr	77.88	167	P	P	05 40 16.9	-1.5
	comp=Z,0.3nm,0.3s,mb3.7,baz=351,slow=6.5,SNR=6.5						

PRU **10** *05:43:11.7,50.00N×7.55E*

CSEM **10** *05:43:11.8±0.0,49.98N×7.49E,h12^{km},ML3.5/32,Error ellipse: s-maj=0.7km s-min=0.7km az=32.0*

LDG **10** *05:43:12.1±0.1,49.98N×7.45E,h10^{km},Md3.2/3,Ml3.5/30, Error ellipse: s-maj=1.3km s-min=1.1km az=73.0*

BGR **10** *05:43:12.3±0.2,50.00N×7.54E,h10^{km},ML3.1/15,Error ellipse: s-maj=3.3km s-min=2.2km az=140.0*

NEIC **10** *05:43:12.4,49.89N×7.41E,h10^{km},ML3.5(LDG), ML3.1(SZGRF),ML3.1(STR),ML3.0(LEDBW),After STR.*

LEDBW **10** *05:43:12.2±0.9,50.00N×7.50E,h15^{km},ML3.0,Error ellipse: s-maj=30.0km s-min=8.0km az=125.0*

STR **10** *05:43:12.4±0.3,49.89N×7.41E,h10^{km}±1^{km},Ml3.1,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

UCC **10** *05:43:13.4±0.2,49.97N×7.42E,h20^{km}±1^{km},ML2.8*

BNS **10** *05:43:14.1±0.4,50.07N×7.53E,h12^{km}±6^{km},ML2.8, GESPUERT IN DILLENDORF I=III*

ISC 10 05:43:09.9±0.2,**49.930N**±0.010×**7.40E**±0.02,**h15^{km},n148,** σ**1^{s}60**/316,**14C-14D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABH	Alteburg	0.11	117	⇓iP	Pb	05 43 15.8	+2.7
ABH	Alteburg	0.11	117	ePg	Pg	05 43 15.8	+2.4
ABH	Alteburg	0.11	117	Pg	Pg	05 43 15.7	+2.4
BGG	Burgeitz	0.28	352	⇓iPg	Pg	05 43 18.1	+2.0
BGG				eSg	Sg	05 43 21.1	+0.9
	1µm,0.2s						
HILG	Hillesheim	0.59	308	⇑ePg	Pg	05 43 25.0	+3.0
HILG				eSg	Sg	05 43 33.5	+3.5
	1µm,0.4s						
TNS	Taunus Mts	0.73	66	⇑eP	Pb	05 43 24.7	+0.9
TNS				⇓iP		05 43 25.3	
TNS	Taunus Mts	0.73	66	ePg	Pg	05 43 24.6	-0.2
TNS				⇓iPmP		05 43 25.3	
TNS				eSg	Sg	05 43 33.1	-1.7
	SNR=1.4						
TNS	Taunus Mts	0.73	66	ePg	Pg	05 43 24.6	-0.2
TNS				eSg	Sg	05 43 33.8	-1.0
TNS	Taunus Mts	0.73	66	Pg	Pg	05 43 24.6	-0.2
TNS				Sg	Sg	05 43 33.1	-1.7
	SNR=1.4						
KTD	Kalmit	0.76	144	S	Sg	05 43 37.5	+2.0
KTD	Kalmit	0.76	144	ePg	Pg	05 43 27.0	+1.8
KTD				Sg	Sg	05 43 37.5	+2.0
STB	Steinbach	0.76	332	⇓ePg	Pg	05 43 26.9	+1.7
STB				eSg	Sg	05 43 36.8	+1.3
	338nm,0.2s						
WLF	Walferdange	0.85	252	ePg	Pg	05 43 29.9	+2.8
WLF				eSg	Sg	05 43 42.9	+4.3
	SNR=4.5						
WLF	Walferdange	0.85	252	ePg	Pg	05 43 29.7	+2.6
WLF				eSg	Sg	05 43 41.3	+2.7
WLF	Walferdange	0.85	252	ePg	Pg	05 43 29.7	+2.6
WLF				eSg	Sg	05 43 41.3	+2.7
SWS	Schriesheim	0.95	117	eP	Pb	05 43 29.6	+2.0
TOD	Tromm	0.97	109	P	Pb	05 43 29.7	+1.9
TOD				S	Sg	05 43 42.7	+0.3
TOD	Tromm	0.97	109	ePg	Pg	05 43 29.5	+0.1
TOD				Sg	Sg	05 43 42.7	+0.3
TOD	Tromm	0.97	109	Pg	Pg	05 43 29.7	+0.3
TOD				Sg	Sg	05 43 43.3	+0.9
LANF	Langenberg	0.99	164	Pg	Pg	05 43 30.8	+1.0
LANF				Sg	Sg	05 43 44.0	+1.0
LANF	Langenberg	0.99	164	⇑ePn	Pn	05 43 31.5	+2.4
LANF				ePg	Pg	05 43 31.6	+1.8
LANF	Langenberg	0.99	164	Pn	Pn	05 43 31.5	+2.4
LANF				Sg	Sg	05 43 44.0	+1.0
KLL	Kalltalsperre	1.00	316	⇓ePg	Pg	05 43 31.2	+1.1
KLL				eSg	Sg	05 43 44.6	+1.1
	99nm,0.5s						
BNS	Bensberg	1.04	352	⇓ePg	Pg	05 43 31.2	+0.2
BNS				eSg	Sg	05 43 43.4	-1.6
	495nm,0.6s						
HOBG	Hohbusch	1.06	358	⇓ePg	Pg	05 43 31.2	0.0
HOBG				eSg	Sg	05 43 43.5	-1.9
	470nm,0.4s						
MEM	Membach	1.12	308	P	Pb	05 43 33.3	+2.8
MEM				S	Sb	05 43 47.8	+3.1
JUE	Julich	1.17	327	ePg	Pg	05 43 34.3	+0.9
JUE				eSg	Sg	05 43 50.7	+1.6
HGN	Heimansgroeve	1.26	312	⇓ePg	Pg	05 43 35.2	0.0
	63nm,0.2s,baz=120						
HGN				eSg	Sg	05 43 51.6	-0.4
STR	Strasbourg	1.37	170	eSg	Sg	05 43 57.5	+1.9
	SNR=4.9						
BEBN	Eben Emael	1.40	309	P	Pn	05 43 37.6	+2.5
BEBN				S	Sb	05 43 55.5	+2.6
RODG	Roetgen-Dahlhe	1.44	328	eSg	Sg	05 43 56.2	-2.0
LAUG	Laupendahl	1.45	349	⇑ePg	Pg	05 43 37.3	-1.7
LAUG				eSg	Sg	05 43 54.3	-4.2
	154nm,0.7s						
BUG	Bochum--Univer	1.52	357	ePn	Pn	05 43 38.0	+1.3
	SNR=2.8						
BUG				eSg	Sg	05 43 56.2	-4.3
	SNR=5.2						
WLS	Welschbruch	1.52	181	Pg	Pg	05 43 40.7	+0.4
WLS				Sg	Sg	05 44 01.0	+0.4
WLS	Welschbruch	1.52	181	P	Pg	05 43 40.6	+0.3
WLS	Welschbruch	1.52	181	ePn	Pn	05 43 39.5	+2.8
	SNR=4.5						
WLS				Pg	Pg	05 43 40.6	+0.3
WLS	Welschbruch	1.52	181	Pg	Pg	05 43 40.7	+0.4
WLS				Sg	Sg	05 44 01.0	+0.4
CDF	Champ du Feu	1.52	183	ePn	Pn	05 43 38.6	+1.8
CDF				ePg	Pg	05 43 41.0	+0.6
CDF				eSn	Sn	05 43 57.7	+1.4
CDF				eSg	Sg	05 44 02.3	+1.6
	139nm,0.2s						
SIND	Sindeldorf	1.55	111	P	Pn	05 43 38.3	+1.2
LBG	Lerchenberg	1.56	144	Pn	Pn	05 43 40.0	+2.7
GIVF	Givet	1.67	277	ePn	Pn	05 43 39.6	+0.7
GIVF				eP		05 43 41.9	
GIVF				ePg	Pg	05 43 43.7	+0.3
GIVF				eSn	Sn	05 44 00.5	+0.4
GIVF				eSg	Sg	05 44 05.9	+0.2
	153nm,0.3s						
BFO	Black Forest	1.71	159	P	Pn	05 43 45.6	+6.1
BFO				S	Sn	05 44 05.8	+4.6
BFO	Black Forest	1.71	159	ePn	Pn	05 43 42.2	+2.7
	SNR=7.3						
BFO				ePg	Pg	05 43 45.4	+1.2
BFO				eSg	Sg	05 44 06.0	-1.1
	SNR=5.5						
BFO	Black Forest	1.71	159	ePg	Pg	05 43 45.5	+1.3
BFO	Black Forest	1.71	159	Pg	Pg	05 43 45.4	+1.2
BFO				Sg	Sg	05 44 06.0	-1.1
	SNR=5.5						
ECH	Echery	1.72	185	Pg	Pg	05 43 44.0	-0.4
ECH				Sg	Sg	05 44 07.1	-0.3
ECH	Echery	1.72	185	P	Pn	05 43 42.2	+2.6
ECH				P		05 43 44.4	
ECH	Echery	1.72	185	ePn	Pn	05 43 42.2	+2.6
	SNR=1.6						
ECH				Pg	Pg	05 43 44.4	0.0
ECH	Echery	1.72	185	Pg	Pg	05 43 44.0	-0.4
ECH				Sg	Sg	05 44 07.1	-0.3
LIBD	Limburg	1.79	176	P	Pn	05 43 46.8	+6.3
LIBD	Limburg	1.79	176	Pg	Pg	05 43 45.4	-0.2
TUBL	Tuebingen Lnz	1.79	141	S	Sn	05 44 09.5	+6.3
RFYF	Reffroy	1.81	225	ePn	Pn	05 43 43.3	+2.4
	baz=54						
RFYF				ePg	Pg	05 43 47.2	+1.0
	baz=41						
RFYF				eSn	Sn	05 44 04.8	+1.1
RFYF				eSg	Sg	05 44 11.4	+1.0
	121nm,0.2s						
RFYF	Reffroy	1.81	225	ePg	Pg	05 43 47.2	+1.0
RFYF				eSn	Sn	05 44 04.8	+1.1
RFYF				eSg	Sg	05 44 11.4	+1.0
	60nm,0.2s						
DOU	Dourbes	1.82	276	P	Pn	05 43 43.6	+2.6
DOU				S	Sn	05 44 06.1	+2.2
HROE	Hohe Rhon--Fla	1.87	70	⇓iPn	Pn	05 43 42.0	+0.2
UBBA	Unterbreizbach	1.89	61	ePg	Pg	05 43 45.2	-2.4
UBBA				eSg	Sg	05 44 09.1	-3.8
	SNR=3.4						
THEF	They Montfort	1.94	209	Pg	Pg	05 43 48.0	-0.7
THEF				Sg	Sg	05 44 14.5	-0.2
THEF	They Montfort	1.94	209	ePn	Pn	05 43 45.2	+2.4
	SNR=5.0						
THEF	They Montfort	1.94	209	Pg	Pg	05 43 48.0	-0.7
THEF				Sg	Sg	05 44 14.5	-0.2
BUCH	Bad Urach	1.96	138	P	Pn	05 43 45.3	+2.3
BUCH				S	Sn	05 44 14.4	+7.0
KIZ	Kirchzarten	2.00	170	P	Pn	05 43 45.7	+2.0
KIZ				S	Sn	05 44 16.0	+7.4
SPAK	Spaichingen	2.04	153	S	Sn	05 44 17.5	+7.8
HAU	Haudompre	2.05	200	ePn	Pn	05 43 45.6	+1.3
HAU				ePg	Pg	05 43 50.8	0.0
HAU				eSn	Sn	05 44 10.4	+0.7
HAU				eSg	Sg	05 44 18.3	+0.1
	88nm,0.2s						
BAIF	Baives	2.06	275	ePn	Pn	05 43 45.3	+0.8
BAIF				eP		05 43 47.7	
BAIF				ePg	Pg	05 43 51.1	-0.1
BAIF				eSn	Sn	05 44 09.8	-0.3
BAIF				eSg	Sg	05 44 17.8	-1.0
	99nm,0.3s						
WTSB	Winterswijk	2.08	350	ePg	Pg	05 43 46.3	-5.1
WTSB				eSg	Sg	05 44 15.2	-3.9
MOF	Molkenrain	2.09	185	Pg	Pg	05 43 51.1	-0.6
MOF				Sg	Sg	05 44 18.7	-0.8
MOF	Molkenrain	2.09	185	P	Pg	05 43 51.3	-0.3
MOF				S	Sg	05 44 17.6	-1.9
MOF	Molkenrain	2.09	185	ePn	Pn	05 43 46.9	+2.1
	SNR=1.5						
MOF				Pg	Pg	05 43 51.3	-0.3
MOF				Sg	Sg	05 44 17.6	-1.9
FELD	Feldberg	2.09	169	P	Pn	05 43 52.6	+7.7
FELD				S	Sn	05 44 19.5	+8.6
MEZF	Maizieres J'vi	2.10	228	ePn	Pn	05 43 47.1	+2.0
	baz=39						
MEZF				ePg	Pg	05 43 52.2	+0.3
	baz=45						
MEZF				eSn	Sn	05 44 11.7	+0.6
MEZF				eSg	Sg	05 44 19.9	-0.1
	112nm,0.5s						
MEZF	Maizieres J'vi	2.10	228	ePg	Pg	05 43 52.2	+0.3
MEZF				eSn	Sn	05 44 11.7	+0.6
MEZF				eSg	Sg	05 44 19.9	-0.1
	56nm,0.5s						
HINF	Hinteralfeld	2.15	190	ePn	Pn	05 43 46.8	+1.1
HINF				ePg	Pg	05 43 52.7	-0.1
HINF				eSn	Sn	05 44 12.1	-0.1
	120nm,0.2s						
GUT	Gutenstein	2.18	148	P	Pn	05 43 48.2	+2.1
HDH	Heidenheim	2.28	125	S	Sn	05 44 22.8	+7.2
SFTF	Sexfontaines	2.32	223	ePn	Pn	05 43 49.7	+1.5
	baz=50						
SFTF				ePg	Pg	05 43 56.4	+0.1
	baz=40						
SFTF				eSn	Sn	05 44 17.1	+0.4
SFTF				eSg	Sg	05 44 28.8	+1.5
	43nm,0.2s						
SFTF	Sexfontaines	2.32	223	ePg	Pg	05 43 56.4	+0.1
SFTF				eSn	Sn	05 44 17.1	+0.4
SFTF				eSg	Sg	05 44 28.8	+1.5
	22nm,0.2s						
IBBN	Ibbenburen	2.39	5	ePn	Pn	05 43 49.9	+0.7
	SNR=1.6						
IBBN				ePg	Pg	05 43 55.4	-2.3
IBBN				eSg	Sg	05 44 24.3	-5.3
	SNR=3.9						
SISB	Singen-Sch Ber	2.47	155	S	Sg	05 44 30.4	-1.9
GRA1	Grafenberg Arr	2.49	94	ePg	Pg	05 43 57.2	-2.4
GRA1				eSg	Sg	05 44 29.2	-3.6
GRF	Grafenberg Arr	2.49	94	ePg	Pg	05 43 57.6	-2.0
GRF				eSg	Sg	05 44 28.3	-4.5
	SNR=7.0						
GRF	Grafenberg Arr	2.49	94	ePg	Pg	05 43 57.2	-2.4
GRF				eSg	Sg	05 44 29.2	-3.6
LOMF	Lomont	2.61	189	Pg	Pg	05 44 01.2	-0.8
LOMF	Lomont	2.61	189	S	Sg	05 44 35.4	-1.5
LOMF	Lomont	2.61	189	ePg	Pg	05 44 01.6	-0.4
LOMF				Sg	Sg	05 44 35.4	-1.5
CLZ	Clausthal	2.68	43	ePn	Pn	05 43 53.0	-0.4
	SNR=2.8						
CLZ				eSg	Sg	05 44 33.9	-5.5
	SNR=2.2						
MOX	Moxa	2.80	74	i P	Pn	05 43 55.4	+0.4
MOX				Pg	Pg	05 44 02.0	-3.8
MOX				Sg	Sg	05 44 38.0	-5.1
MOX	Moxa	2.80	74	ePn	Pn	05 43 56.2	+1.2
	SNR=1.6						
MOX				ePg	Pg	05 44 02.3	-3.5
MOX				eSn	Sn	05 44 26.4	-2.3
	SNR=2.0						
MOX				eSg	Sg	05 44 38.5	-4.6
	SNR=1.9						
MOX	Moxa	2.80	74	ePn	Pn	05 43 55.4	+0.4
MOX				ePg	Pg	05 44 02.3	-3.5
MOX				eSg	Sg	05 44 38.2	-4.9
UBR	Uberruh	2.88	140	S	Sg	05 44 43.7	-2.0
UBR	Uberruh	2.88	140	Pn	Pn	05 43 57.8	+1.7
UBR				Sg	Sg	05 44 43.7	-2.0
NOTT	Nottersdorf	3.06	90	ePn	Pn	05 44 00.0	+1.3
	SNR=3.3						
NOTT				ePg	Pg	05 44 08.1	-2.9
NOTT				eSg	Sg	05 44 45.2	-6.6
	SNR=3.4						
NEUB	Neuenburg	3.07	64	ePg	Pg	05 44 06.4	-4.8
NEUB				eSg	Sg	05 44 46.5	-5.6
	SNR=2.7						
NRDL	Niedersach Rie	3.08	32	ePn	Pn	05 43 59.6	+0.5
	SNR=1.0						
NRDL				eSg	Sg	05 44 46.2	-6.3
	SNR=2.1						
DAVA	Damuels	3.12	147	⇑iPn	Pn	05 44 02.4	+2.9
DAVA	Damuels	3.12	147	⇑iSg	Sg	05 44 54.2	+0.5
	comp=Z,5.0nm,0.2s						
DAVA	Damuels	3.12	147	Pn	Pn	05 44 02.4	+2.9
DAVA				Sg	Sg	05 44 54.2	+0.5
ROTZ	Rotzenmuhle	3.12	91	ePn	Pn	05 44 00.7	+1.2
WERD	Werda	3.19	79	ePn	Pn	05 44 01.0	+0.4
	SNR=3.0						
WERD				ePg	Pg	05 44 08.9	-4.8
WERD				eSg	Sg	05 44 48.7	-7.6
	SNR=4.0						
GUNZ	Gunzen	3.20	80	ePn	Pn	05 44 01.1	+0.4
	SNR=3.4						
GUNZ				ePg	Pg	05 44 10.1	-3.7
GUNZ				eSg	Sg	05 44 50.5	-6.1
	SNR=2.4						
NKC	Novy Kostel	3.27	83	ePN	Pn	05 44 02.3	+0.7
NKC				ePG	Pg	05 44 11.2	-3.9
NKC				eSG	Sg	05 44 51.5	-7.2
	46nm,0.4s						
TANN	Tannenbergstha	3.29	80	ePn	Pn	05 44 02.4	+0.4
	SNR=4.1						
TANN				ePg	Pg	05 44 10.9	-4.7
	SNR=19						
TANN				eSg	Sg	05 44 53.2	-6.3
	SNR=3.1						
CABF	La Chapelle	3.44	195	ePn	Pn	05 44 04.8	+0.7
CABF				ePg	Pg	05 44 17.0	-1.5
CABF				eSn	Sn	05 44 43.5	-1.4
CABF				eSg	Sg	05 45 02.4	-1.9
	51nm,0.6s						
LOR	Lormes	3.55	223	ePn	Pn	05 44 06.0	+0.3
	baz=50						
LOR				ePg	Pg	05 44 19.3	-1.6
	baz=41						
LOR				eSn	Sn	05 44 46.5	-1.3
LOR				eSg	Sg	05 45 06.6	-1.6
	51nm,0.4s						
LOR	Lormes	3.55	223	ePg	Pg	05 44 19.3	-1.6
LOR				eSn	Sn	05 44 46.5	-1.3
LOR				eSg	Sg	05 45 06.6	-1.6
	26nm,0.4s						
MOTA	Moosalm	3.57	135	⇑iPn	Pn	05 44 08.7	+2.7
	comp=Z,0.6nm,0.1s						
MOTA	Moosalm	3.57	135	⇑iSn	Sn	05 44 51.1	+2.9
	comp=Z,2.6nm,0.1s						
WET	Wettzell	3.65	100	ePn	Pn	05 44 08.8	+1.6
	SNR=7.8						
WET				eSg	Sg	05 45 04.2	-7.4
	SNR=4.2						
WET	Wettzell	3.65	100	ePn	Pn	05 44 08.3	+1.1
SQTA	Sankt Quirin	3.71	136	⇑iPn	Pn	05 44 10.2	+2.3
	comp=Z,1.3nm,0.2s						
SQTA	Sankt Quirin	3.71	136	⇑iSn	Sn	05 44 53.7	+1.9
	comp=Z,6.9nm,0.2s						
WATA	Walderalm	3.79	132	⇑iPn	Pn	05 44 11.8	+2.6
WATA	Walderalm	3.79	132	⇓iSn	Sn	05 44 53.6	-0.3
	comp=Z,2.0nm,0.1s						
WATA	Walderalm	3.79	132	Pn	Pn	05 44 11.8	+2.6
WATA				Sn	Sn	05 44 53.6	-0.4
CLL	Collm	3.83	67	ePG	Pg	05 44 22.0	-4.3
CLL				eSG	Sg	05 45 11.0	-6.3
SSF	Saint Saulge	3.87	224	ePn	Pn	05 44 10.2	0.0
SSF				ePg	Pg	05 44 25.0	-2.1
SSF				eSn	Sn	05 44 53.5	-2.3
SSF				eSg	Sg	05 45 15.5	-3.2
	21nm,0.3s						
WTTA	Wattenberg	3.88	132	⇓iPn	Pn	05 44 10.8	+0.5
	comp=Z,2.6nm,0.3s						
WTTA	Wattenberg	3.88	132	⇑iSg	Sg	05 45 16.3	-2.7
	comp=N,5.2nm,0.3s						
WTTA	Wattenberg	3.88	132	Pn	Pn	05 44 10.8	+0.5
WTTA				Sg	Sg	05 45 16.3	-2.7
SMF	Signal de Mont	4.06	217	ePn	Pn	05 44 12.7	-0.2
SMF				ePg	Pg	05 44 28.5	-2.4
SMF				eSn	Sn	05 44 58.0	-2.6
SMF				eSg	Sg	05 45 21.2	-3.8
	29nm,0.4s						
SCE	Schlegeis	4.07	134	⇑iPn	Pn	05 44 15.7	+2.6
KHC	Kasperske Hory	4.10	99	ePN	Pn	05 44 14.3	+0.8
KHC				ePG	Pg	05 44 24.2	-7.6
KHC				eSN	Sn	05 45 00.2	-1.6
KHC				eSG	Sg	05 45 17.5	-9.0
	20nm,0.5s						
HYF	Humbligny	4.13	232	ePn	Pn	05 44 14.0	0.0
HYF				ePg	Pg	05 44 29.1	-3.3
HYF				eSn	Sn	05 45 00.9	-1.6
HYF				eSg	Sg	05 45 25.5	-2.0
AVF	Avril sur Loir	4.14	222	ePn	Pn	05 44 13.4	-0.7
AVF				ePg	Pg	05 44 29.8	-2.8
AVF				eSn	Sn	05 44 59.5	-3.3
AVF				eSg	Sg	05 45 25.2	-2.6
	8.8nm,0.3s						
GEC2	GERESS Array S	4.26	102	ePn	Pn	05 44 16.9	+1.1
	SNR=7.6						
GEC2				eSn	Sn	05 45 03.3	-2.4
	SNR=2.5						
GEC2				eSg	Sg	05 45 24.9	-6.7
	SNR=3.3						
LPL	La Plagne	4.44	186	ePn	Pn	05 44 18.6	+0.3
LPL				ePg	Pg	05 44 35.0	-3.5
LPL				eSn	Sn	05 45 07.5	-2.8
LPL				eSg	Sg	05 45 33.2	-4.5
	20nm,0.8s						
LPG	La Plagne	4.46	186	ePn	Pn	05 44 18.6	0.0
LPG				ePg	Pg	05 44 34.0	-4.9
LPG				eSn	Sn	05 45 08.3	-2.4
LPG				eSg	Sg	05 45 33.6	-4.7
	12nm,0.6s						
BGF	Bois d'Agland	4.54	224	ePn	Pn	05 44 19.8	0.0
BGF				ePg	Pg	05 44 37.4	-3.2
BGF				eSn	Sn	05 45 08.5	-4.4

BGF				*e*Sg	**Sg**	**05 45 36.3**	**-4.9**
	44nm,0.4s						
KBA	**Koelnbreinsper**	**4.87**	**124**	⇓*i*Pn	**Pn**	**05 44 27.1**	**+2.6**
	comp=Z,1.2nm,0.1s						
KBA	**Koelnbreinsper**	**4.87**	**124**	⇓*i*Sn	**Sn**	**05 45 20.5**	**-0.7**
	comp=Z,2.1nm,0.2s						
MOA	**Molln**	**4.98**	**112**	⇑*i*Pn	**Pn**	**05 44 27.4**	**+1.4**
MOA	**Molln**	**4.98**	**112**	⇑*i*Sn	**Sn**	**05 45 24.1**	**+0.1**
	comp=Z,4.0nm,0.3s						
TCF	**Toulx Ste Croi**	**5.04**	**226**	*e*Pn	**Pn**	**05 44 25.9**	**-0.9**
TCF				*e*Pg	**Pg**	**05 44 46.6**	**-3.9**
TCF				*e*Sn	**Sn**	**05 45 20.6**	**-4.7**
TCF				*e*Sg	**Sg**	**05 45 51.9**	**-5.7**
	18nm,0.5s						
LDF	**La Druitiere**	**5.10**	**258**	*e*Pn	**Pn**	**05 44 27.2**	**-0.5**
LDF				*e*Sn	**Sn**	**05 45 22.0**	**-5.1**
LDF				*e*Sg	**Sg**	**05 45 53.3**	**-6.6**
	14nm,0.4s						
ORIF	**Oris-en-Rattie**	**5.12**	**192**	*e*Pn	**Pn**	**05 44 27.6**	**-0.3**
ORIF				*e*Pg	**Pg**	**05 44 48.4**	**-3.7**
ORIF				*e*Sg	**Sg**	**05 45 54.4**	**-6.0**
	18nm,0.7s						
MBDF	**Montbardon**	**5.22**	**185**	*e*Pn	**Pn**	**05 44 28.9**	**-0.5**
MBDF				*e*Sn	**Sn**	**05 45 25.9**	**-4.1**
MBDF				*e*Sg	**Sg**	**05 45 58.3**	**-5.5**
	6.6nm,0.5s						
FLN	**La Foliniere**	**5.28**	**260**	*e*Pn	**Pn**	**05 44 28.9**	**-1.4**
FLN				*e*Pg	**Pg**	**05 44 49.9**	**-5.5**
	baz=74						
FLN				*e*Sn	**Sn**	**05 45 26.6**	**-5.0**
FLN				*e*Sg	**Sg**	**05 45 59.3**	**-6.5**
	17nm,0.5s						
FLN	**La Foliniere**	**5.28**	**260**	*e*Pg	**Pg**	**05 44 49.9**	**-5.5**
FLN				*e*Sn	**Sn**	**05 45 26.6**	**-5.0**
FLN				*e*Sg	**Sg**	**05 45 59.3**	**-6.5**
	8.5nm,0.5s						
VIVF	**Saint-Julien-l**	**5.40**	**201**	*e*Pn	**Pn**	**05 44 32.0**	**0.0**
VIVF				*e*Sn	**Sn**	**05 45 31.8**	**-2.8**
VIVF				*e*Sg	**Sg**	**05 46 03.3**	**-6.5**
	4.0nm,0.4s						
GRR	**Gorron**	**5.63**	**257**	*e*Pn	**Pn**	**05 44 34.3**	**-0.9**
GRR				*e*Sn	**Sn**	**05 45 34.4**	**-6.0**
	6.0nm,0.2s						
CAF	**Calviac**	**6.18**	**218**	*e*Pn	**Pn**	**05 44 41.5**	**-1.4**
CAF				*e*Sg	**Sg**	**05 46 27.3**	**-8.3**
	6.6nm,0.4s						
LASF	**Ste Croix**	**6.34**	**204**	*e*Pn	**Pn**	**05 44 44.3**	**-0.8**
LASF				*e*Sn	**Sn**	**05 45 53.0**	**-4.9**
LASF				*e*Sg	**Sg**	**05 46 32.2**	**-8.7**
	4.4nm,0.4s						
LFF	**La Frestale**	**6.73**	**225**	*e*Pn	**Pn**	**05 44 48.7**	**-2.0**
LFF				*e*Sg	**Sg**	**05 46 44.3**	**-10**
	14nm,0.5s						
SGMF	**Saint Gilles**	**6.75**	**259**	*e*Pn	**Pn**	**05 44 49.7**	**-1.3**
SGMF				*e*Sn	**Sn**	**05 45 59.7**	**-8.6**
SGMF				*e*Sg	**Sg**	**05 46 44.8**	**-10**
	2.0nm,0.4s						
ROSF	**Rostrenen**	**7.18**	**261**	*e*Pn	**Pn**	**05 44 55.5**	**-1.5**
ROSF				*e*Sn	**Sn**	**05 46 09.7**	**-9.4**
	5.0nm,0.4s						
QUIF	**Quistinic**	**7.25**	**258**	*e*Pn	**Pn**	**05 44 55.6**	**-2.3**
QUIF				*e*Pg	**Pg**	**05 45 26.1**	**-8.5**
QUIF				*e*Sn	**Sn**	**05 46 11.2**	**-10**
	5.9nm,0.5s						
STHS	**Stebnicka Huta**	**8.99**	**88**	*e*	**Sg**	**05 47 52.6**	**-17**
STHS	**Stebnicka Huta**	**8.99**	**88**	*e*Sg	**Sg**	**05 47 52.6**	**-17**

NNC ***10*** *05:53:46.7±23.0, 34.95N×72.81E, mpv3.5, Error ellipse: s-maj=553.0km s-min=172.0km az=87.0*

ISC 10 05:53:41.6±1.6,**34.8N**±0.2×**73.3E**±0.3,**h10**^{km}**,n7,** σ**1**^{s}**16**/10**,1C,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLH	**Dalhousie**	**3.21**	**135**	*e*S	**Sn**	**05 55 14.0**	**+2.3**
SDNR	**Sundarnagar**	**4.55**	**136**	*e*P	**Pn**	**05 54 51.0**	**-1.1**
SDNR				*e*x	**Sb**	**05 56 01.0**	**+4.5**
KLP	**Kalpa**	**5.31**	**127**	*e*P	**Pn**	**05 55 01.7**	**-1.2**
KLP				*e*S	**Sn**	**05 56 04.3**	**-0.6**
KLP				AML	AML	05 56 36.0	
	comp=E,50nm,0.6s						
KLP				AML	AML	05 56 36.6	
	comp=N,45nm,1.0s						
JOSI	**Joshimath**	**6.80**	**127**	*e*P	**Pn**	**05 55 18.5**	**-5.4**
JOSI				*e*S	**Sn**	**05 56 42.4**	**+0.3**
KUDL	**Kundal**	**7.22**	**157**	*e*x	x	05 56 38.8	
KK31	**Karatay Array**	**8.53**	**346**	P	**P**	**05 55 49.7**	**+1.6**
	comp=N,1.0nm,0.4s,baz=150,slow=11,SNR=29						
KK31				⇑S	**Sn**	**05 57 24.8**	**-0.6**
	comp=N,0.4nm,0.3s,baz=168,slow=22,SNR=5.7						
AB31	**Akbulak array**	**17.44**	**330**	P	**P**	**05 57 46.3**	**-0.1**
	comp=N,0.5nm,0.6s,baz=171,slow=8.5,SNR=9.5						

NEIC ***10*** *06:01:32.6±0.9, 19.65S×177.47W, h544*^{km}*±14*^{km}*, mb3.9/2, Error ellipse: s-maj=21.7km s-min=12.2km az=134.0*

IDC ***10*** *06:01:32.5±2.0, 19.67S×177.46W, h542*^{km}*±26*^{km}*, mb3.2/5, mb1 3.5/7, mb1mx3.3/17, mbtmp4.2/7, Error ellipse: s-maj=28.2km s-min=16.8km az=144.0*

ISC 10 06:01:30.9±1.0,**19.6S**±0.1×**177.5W**±0.2,**h534**^{km}±19^{km}, **n14,**σ**0**^{s}**85**/15,**mb3.7**/6,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.87**	**45**	P	**P**	**06 03 29.3**	**+1.5**
	2.5nm,0.3s,baz=73,slow=19,SNR=4.1						
AFI				S	**S**	**06 04 59.7**	**-1.1**
	4.3nm,0.3s,baz=213,slow=22,SNR=8.0						
AFI	**Afiamalu**	**7.87**	**45**	P	**P**	**06 03 29.3**	**+1.5**
AFI				S	**S**	**06 04 59.7**	**-1.1**
RAO	**Raoul Island**	**9.65**	**182**	Pn	**P**	**06 03 46.0**	**+0.1**
URZ	**Urewera**	**19.20**	**193**	P	**P**	**06 05 20.3**	**-0.7**
	1.7nm,0.3s,baz=284,slow=1.8,SNR=9.4						
CTA	**Charters Tower**	**34.04**	**263**	P	**P**	**06 07 32.6**	**+0.8**
	5.0nm,0.5s,mb4.3,baz=85,slow=13,SNR=8.8						
WB2	**Warramunga Arr**	**45.17**	**261**	*e*P	**P**	**06 09 01.7**	**+0.1**
WRAB	**Tennant Creek**	**45.17**	**261**	*e*P	**P**	**06 09 01.1**	**-0.4**
	3.5nm,0.6s,mb4.1						
WRA	**Warramunga Arr**	**45.18**	**261**	P	**P**	**06 09 01.5**	**-0.1**
	1.3nm,0.3s,mb3.9,baz=97,slow=7.3,SNR=64						
FITZ	**Fitzroy Crossi**	**53.60**	**262**	*e*P	**P**	**06 10 04.1**	**0.0**
	2.3nm,0.5s,mb3.8						
FITZ	**Fitzroy Crossi**	**53.60**	**262**	P	**P**	**06 10 03.5**	**-0.5**
	2.8nm,0.5s,mb3.8,baz=80,slow=2.1,SNR=9.5						
TXAR	**Lajitas Array**	**86.18**	**57**	P	**P**	**06 13 18.0**	**+1.3**
	0.3nm,0.6s,mb3.1,baz=202,slow=6.7,SNR=4.9						
TXAR	**Lajitas Array**	**86.18**	**57**	P	**P**	**06 13 18.0**	**+1.3**
ILAR	**Eielson Array**	**87.31**	**13**	P	**P**	**06 13 20.0**	**-1.2**
	0.4nm,0.6s,mb3.2,baz=207,slow=5.9,SNR=5.4						
GERES	**GERESS Array B**	**149.42**	**345**	PKPbc	PKPdf	06 20 20.9	+6.9
	0.3nm,0.3s,baz=27,slow=3.0,SNR=6.5						

LDG ***10*** *06:16:40.8±0.1, 49.98N×7.46E, h10*^{km}*, Md2.9/3, Ml2.9/20, Error ellipse: s-maj=1.5km s-min=1.3km az=72.0*

STR ***10*** *06:16:40.8±0.5, 49.89N×7.39E, h10*^{km}*±1*^{km}*, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

CSEM ***10*** *06:16:40.7±0.1, 49.98N×7.48E, h12*^{km}*, ML2.9/20, Error ellipse: s-maj=1.0km s-min=0.9km az=61.0*

NEIC ***10*** *06:16:40.8, 49.89N×7.39E, h10*^{km}*, ML2.9(LDG), ML2.5(STR), ML2.4(LEDBW), ML2.2(SZGRF), After STR.*

LEDBW ***10*** *06:16:41.0±0.6, 50.00N×7.50E, h15*^{km}*, ML2.4, Error ellipse: s-maj=24.0km s-min=4.0km az=127.0*

BNS ***10*** *06:16:42.5±0.6, 50.05N×7.53E, h13*^{km}*±3*^{km}*, ML2.1*

UCC ***10*** *06:16:42.3±0.2, 49.98N×7.41E, h19*^{km}*±1*^{km}*, ML2.0*

BGR 10 06:16:41.0±0.3,**49.98N×7.54E,h10**^{km}**,ML2.5**/13**,1C-6D, Error ellipse: s-maj=3.3km s-min=2.2km az=144.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABH	**Alteburg**	**0.10**	**178**	⇓*i*P	Pg	06 16 44.5	+0.9
ABH				S	Sg	06 16 46.3	+0.9
ABH	**Alteburg**	**0.10**	**178**	*e*Pg	Pg	06 16 44.5	+0.8
	SNR=186						
ABH				S*	Sb	06 16 46.3	-0.4
ABH	**Alteburg**	**0.10**	**178**	Pg	Pg	06 16 44.4	+0.7
BGG	**Burgeitz**	**0.27**	**330**	⇓*i*Pg	Pg	06 16 46.9	+0.2
BGG				*i* Sg	Sg	06 16 50.0	-0.4
	179nm,0.4s						
TNS	**Taunus Mts**	**0.63**	**67**	P	Pb	06 16 53.5	-0.2
TNS				⇓*i*P		06 16 54.1	
TNS	**Taunus Mts**	**0.63**	**67**	*e*Pg	Pg	06 16 53.7	-0.1
	SNR=18						
TNS				⇓*i*PmP		06 16 54.1	
TNS				*e*Sg	Sg	06 17 02.9	+0.6
	SNR=106						
TNS	**Taunus Mts**	**0.63**	**67**	*e*Pg	Pg	06 16 53.6	-0.2
TNS				*e*Sg	Sg	06 17 02.7	+0.4
TNS				*e*Sg	Sg	06 17 02.9	+0.6
TNS	**Taunus Mts**	**0.63**	**67**	Pg	Pg	06 16 53.7	-0.1
	SNR=18						
TNS				*e*Sg	Sg	06 17 02.7	+0.4
HILG	**Hillesheim**	**0.64**	**300**	⇑*e*Pg	Pg	06 16 53.7	-0.2
HILG				*e*Sg	Sg	06 17 02.3	-0.2
	239nm,0.4s						
KTD	**Kalmit**	**0.75**	**152**	*e*Pg	Pg	06 16 56.3	+0.2
	SNR=1.9						
STB	**Steinbach**	**0.77**	**324**	*e*Pg	Pg	06 16 55.8	-0.7
STB				*e*Sg	Sg	06 17 06.0	-0.6
	78nm,0.5s						
TOD	**Tromm**	**0.90**	**114**	S	Sb	06 17 11.4	+1.4
TOD	**Tromm**	**0.90**	**114**	*e*Pg	Pg	06 16 58.4	-0.6
	SNR=5.1						
TOD				Sg	Sg	06 17 11.4	+0.3
TOD	**Tromm**	**0.90**	**114**	Pg	Pg	06 16 58.5	-0.6
TOD				Sg	Sg	06 17 12.1	+1.0
SWS	**Schriesheim**	**0.90**	**123**	P	Pb	06 16 58.3	0.0
SWS				S	Sb	06 17 10.6	+0.5
WLF	**Walferdange**	**0.95**	**251**	*e*Pg	Pg	06 16 58.7	-1.4
	SNR=5.2						
WLF				*e*Sg	Sg	06 17 11.6	-1.3
	SNR=25						
WLF	**Walferdange**	**0.95**	**251**	*e*Pg	Pg	06 16 58.5	-1.7
WLF				*e*Sg	Sg	06 17 09.3	-3.6
WLF	**Walferdange**	**0.95**	**251**	*e*Pg	Pg	06 16 58.5	-1.7
WLF				*e*Sg	Sg	06 17 09.3	-3.6
WLF				S	Sb	06 17 10.2	-1.4
LANF	**Langenberg**	**1.01**	**170**	Pg	Pg	06 16 59.5	-1.8
LANF				Sg	Sg	06 17 12.5	-2.4
LANF	**Langenberg**	**1.01**	**170**	P	Pb	06 17 00.7	+0.4
LANF	**Langenberg**	**1.01**	**170**	*e*Pg	Pg	06 17 00.5	-0.9
	SNR=10						
LANF				*e*Sg	Sg	06 17 13.3	-1.6
	SNR=4.1						
BNS	**Bensberg**	**1.02**	**347**	*e*Sg	Sg	06 17 12.2	-2.8
HOBG	**Hohbusch**	**1.02**	**353**	⇓*e*Pg	Pg	06 16 59.8	-1.6
HOBG				*e*Sg	Sg	06 17 12.0	-3.0
	101nm,0.7s						
KLL	**Kalltalsperre**	**1.04**	**311**	⇓*e*Pg	Pg	06 16 59.8	-2.0
KLL				*e*Sg	Sg	06 17 13.5	-2.2
	19nm,0.5s						
MEM	**Membach**	**1.17**	**303**	P	Pb	06 17 02.1	-0.8
MEM				S	Sb	06 17 16.6	-1.4
HGN	**Heimansgroeve**	**1.30**	**308**	*e*Pg	Pg	06 17 03.9	-3.1
	18nm,0.1s						
HGN				*e*Sg	Sg	06 17 20.3	-4.0
LAUG	**Laupendahl**	**1.43**	**345**	*e*Sg	Sg	06 17 23.2	-5.4
	28nm,0.8s						
BUG	**Bochum--Univer**	**1.48**	**353**	*e*Sn	Sn	06 17 24.9	-2.3
SIND	**Sindeldorf**	**1.48**	**114**	Pn	Pn	06 17 07.0	-0.9
WLS	**Welschbruch**	**1.57**	**185**	Pg	Pg	06 17 09.2	-3.2
WLS				Sg	Sg	06 17 29.7	-3.7
WLS	**Welschbruch**	**1.57**	**185**	S	Sb	06 17 29.5	-0.1
CDF	**Champ du Feu**	**1.58**	**186**	*e*Pn	Pn	06 17 07.2	-2.1
CDF				*e*Pg	Pg	06 17 09.7	-2.9
CDF				*e*Sn	Sn	06 17 26.5	-3.3
CDF				*e*Sg	Sg	06 17 30.9	-2.7
	25nm,0.2s						
BFO	**Black Forest**	**1.73**	**162**	S	Sn	06 17 34.8	+1.1
BFO	**Black Forest**	**1.73**	**162**	*e*Pg	Pg	06 17 14.4	-1.1
	SNR=4.2						
BFO				*e*Sg	Sg	06 17 34.8	-3.8
	SNR=9.5						
BFO	**Black Forest**	**1.73**	**162**	*e*Pg	Pg	06 17 11.9	-3.7
BFO				*e*Pg	Pg	06 17 14.4	-1.2
BFO				*e*Sg	Sg	06 17 34.8	-3.8
BFO				*e*Sg	Sg	06 17 35.2	-3.4
GIVF	**Givet**	**1.76**	**275**	*e*Pn	Pn	06 17 08.2	-3.7
GIVF				*e*P		06 17 10.6	
GIVF				*e*Pg	Pg	06 17 12.9	-3.3
GIVF				*e*Sn	Sn	06 17 29.2	-5.3
GIVF				*e*Sg	Sg	06 17 34.6	-5.0
	26nm,0.3s						
ECH	**Echery**	**1.78**	**188**	Pg	Pg	06 17 13.0	-3.6
ECH				Sg	Sg	06 17 35.8	-4.6
ECH	**Echery**	**1.78**	**188**	S	Sn	06 17 34.7	-0.3
UBBA	**Unterbreizbach**	**1.79**	**61**	*e*Pg	Pg	06 17 14.1	-2.6
	SNR=1.9						
UBBA				*e*Sg	Sg	06 17 37.9	-2.7
	SNR=6.9						
DOU	**Dourbes**	**1.91**	**275**	P	Pn	06 17 13.2	-0.7
DOU				S	Sn	06 17 34.8	-3.4
RFYF	**Reffroy**	**1.91**	**226**	*e*Pn	Pn	06 17 12.0	-2.0
	baz=50						
RFYF				*e*Pg	Pg	06 17 15.7	-3.5
	baz=36						
RFYF				*e*Sn	Sn	06 17 33.5	-4.9
RFYF				*e*Sg	Sg	06 17 40.0	-4.8
	22nm,0.2s						
RFYF	**Reffroy**	**1.91**	**226**	*e*Pg	Pg	06 17 15.7	-3.5
RFYF				*e*Sn	Sn	06 17 33.5	-4.9
RFYF				*e*Sg	Sg	06 17 40.0	-4.8
	11nm,0.2s						
BUCH	**Bad Urach**	**1.94**	**141**	S	Sn	06 17 42.8	+3.8
THEF	**They Montfort**	**2.03**	**211**	Pg	Pg	06 17 17.2	-4.4
THEF				Sg	Sg	06 17 42.2	-6.4
THEF	**They Montfort**	**2.03**	**211**	P	Pn	06 17 13.9	-1.8
THEF	**They Montfort**	**2.03**	**211**	*e*Pn	Pn	06 17 14.8	-1.0
	SNR=1.2						
KIZ	**Kirchzarten**	**2.04**	**173**	S	Sn	06 17 44.5	+2.9
HAU	**Haudompre**	**2.12**	**202**	*e*Pn	Pn	06 17 14.4	-2.7
HAU				*e*Pg	Pg	06 17 19.4	-4.1
HAU				*e*Sn	Sn	06 17 38.6	-5.2
HAU				*e*Sg	Sg	06 17 47.1	-4.7
	31nm,0.4s						
MOF	**Molkenrain**	**2.14**	**187**	Pg	Pg	06 17 18.5	-5.4
MOF				Sg	Sg	06 17 47.4	-5.1
MOF	**Molkenrain**	**2.14**	**187**	*e*Pg	Pg	06 17 20.1	-3.8
	SNR=3.4						
BAIF	**Baives**	**2.15**	**273**	*e*Pn	Pn	06 17 14.1	-3.4
BAIF				*e*P		06 17 16.3	
BAIF				*e*Pg	Pg	06 17 19.7	-4.4
BAIF				*e*Sn	Sn	06 17 38.5	-6.0
BAIF				*e*Sg	Sg	06 17 46.6	-6.2
	17nm,0.2s						
MEZF	**Maizieres J’vi**	**2.20**	**229**	*e*Pn	Pn	06 17 15.7	-2.5
	baz=47						
MEZF				*e*Pg	Pg	06 17 21.2	-3.8
	baz=45						
MEZF				*e*Sn	Sn	06 17 40.5	-5.2
MEZF				*e*Sg	Sg	06 17 48.3	-6.1
	14nm,0.2s						
MEZF	**Maizieres J’vi**	**2.20**	**229**	*e*Pg	Pg	06 17 21.2	-3.8
MEZF				*e*Sn	Sn	06 17 40.5	-5.2
MEZF				*e*Sg	Sg	06 17 48.3	-6.1
	7.2nm,0.2s						
HINF	**Hinteralfeld**	**2.21**	**192**	*e*Pn	Pn	06 17 15.6	-2.7
HINF				*e*Pg	Pg	06 17 21.2	-4.0
HINF				*e*Sn	Sn	06 17 40.9	-5.0
	21nm,0.2s						
GRF	**Grafenberg Arr**	**2.40**	**95**	*e*Sg	Sg	06 17 57.9	-3.1
	SNR=5.8						
SFTF	**Sexfontaines**	**2.42**	**224**	*e*Pn	Pn	06 17 18.5	-2.8
SFTF				*e*Pg	Pg	06 17 25.1	-4.3
SFTF				*e*Sn	Sn	06 17 45.9	-5.4
SFTF				*e*Sg	Sg	06 17 57.4	-4.3
	10nm,0.2s						
CLZ	**Clausthal**	**2.59**	**43**	*e*Pg	Pg	06 17 28.4	-4.4
	SNR=2.9						
CLZ				*e*Sg	Sg	06 18 03.7	-3.6
	SNR=4.4						
MOX	**Moxa**	**2.69**	**74**	*e*Pg	Pg	06 17 31.4	-3.4
	SNR=1.8						
MOX				*e*Sg	Sg	06 18 07.5	-3.3
	SNR=3.4						
MOX	**Moxa**	**2.69**	**74**	*e*Pn	Pn	06 17 30.0	+4.7
MOX				*e*Sn	Sn	06 18 04.0	+5.7
NOTT	**Nottersdorf**	**2.97**	**91**	*e*Pg	Pg	06 17 37.2	-3.1
	SNR=2.4						
NOTT				*e*Sg	Sg	06 18 13.9	-5.9
	SNR=5.5						
WERD	**Werda**	**3.10**	**79**	*e*Pg	Pg	06 17 39.8	-3.1
	SNR=2.8						
WERD				*e*Sg	Sg	06 18 18.5	-5.7
	SNR=2.6						
GUNZ	**Gunzen**	**3.10**	**81**	*e*Sg	Sg	06 18 17.8	-6.6
	SNR=2.8						
TANN	**Tannenbergstha**	**3.19**	**80**	*e*Pg	Pg	06 17 40.6	-4.1
	SNR=1.9						
TANN				*e*Sg	Sg	06 18 21.8	-5.5
	SNR=5.9						
CABF	**La Chapelle**	**3.51**	**197**	*e*Pn	Pn	06 17 33.1	-3.7
CABF				*e*Pg	Pg	06 17 46.0	-5.0
CABF				*e*Sn	Sn	06 18 11.9	-6.9
CABF				*e*Sg	Sg	06 18 30.9	-6.9
	3.5nm,0.4s						
WET	**Wettzell**	**3.57**	**101**	*e*Sg	Sg	06 18 34.9	-5.1
	SNR=3.6						
LOR	**Lormes**	**3.65**	**223**	*e*Pn	Pn	06 17 35.0	-3.8
	baz=39						
LOR				*e*Pg	Pg	06 17 48.0	-5.9
	baz=47						
LOR				*e*Sn	Sn	06 18 15.3	-7.1
LOR				*e*Sg	Sg	06 18 35.4	-7.2
	4.9nm,0.2s						
LOR	**Lormes**	**3.65**	**223**	*e*Pg	Pg	06 17 48.0	-5.9
LOR				*e*Sn	Sn	06 18 15.3	-7.1
LOR				*e*Sg	Sg	06 18 35.4	-7.2
	2.5nm,0.2s						
SSF	**Saint Saulge**	**3.96**	**224**	*e*Pn	Pn	06 17 38.9	-4.4
SSF				*e*Pg	Pg	06 17 53.5	-6.7
SSF				*e*Sn	Sn	06 18 22.3	-8.1
SSF				*e*Sg	Sg	06 18 43.9	-9.1
	4.7nm,0.4s						
SMF	**Signal de Mont**	**4.15**	**218**	*e*Pn	Pn	06 17 41.6	-4.3
SMF				*e*Pg	Pg	06 17 57.4	-6.5
SMF				*e*Sn	Sn	06 18 27.0	-8.1
SMF				*e*Sg	Sg	06 18 49.5	-10
	2.0nm,0.3s						
GEC2	**GERESS Array S**	**4.18**	**103**	*e*Sg	Sg	06 18 53.8	-6.3
	SNR=1.8						
AVF	**Avril sur Loir**	**4.24**	**223**	*e*Pn	Pn	06 17 41.9	-5.3
AVF				*e*Pg	Pg	06 17 58.5	-7.2
AVF				*e*Sn	Sn	06 18 28.3	-9.0
AVF				*e*Sg	Sg	06 18 53.9	-8.3
	1.0nm,0.2s						
BGF	**Bois d’Agland**	**4.64**	**224**	*e*Pn	Pn	06 17 48.4	-4.5
BGF				*e*Pg	Pg	06 18 06.4	-7.3
BGF				*e*Sn	Sn	06 18 37.3	-10
BGF				*e*Sg	Sg	06 19 05.1	-10
	12nm,0.5s						
TCF	**Toulx Ste Croi**	**5.13**	**226**	*e*Pn	Pn	06 17 54.8	-5.1
TCF				*e*Pg	Pg	06 18 15.6	-8.0
TCF				*e*Sn	Sn	06 18 49.3	-11
	1.9nm,0.4s						
LDF	**La Druitiere**	**5.20**	**257**	*e*Pn	Pn	06 17 56.2	-4.7
LDF				*e*Sn	Sn	06 18 50.6	-11
	4.9nm,0.7s						
FLN	**La Foliniere**	**5.38**	**260**	*e*Pn	Pn	06 17 57.5	-5.9
FLN				*e*Sn	Sn	06 18 55.5	-11
	3.5nm,0.4s						
GRR	**Gorron**	**5.73**	**257**	*e*Pn	Pn	06 18 02.1	-6.2
GRR				*e*Sn	Sn	06 19 03.2	-12
	2.1nm,0.2s						

GUC 10 06:18:15.5±0.5,**21.78S×67.79W,h225**^{km}±7^{km}**,MD3.7, ML3.6,1C-2D,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**1.19**	**199**	⇑*i*P	P	06 18 50.7	+1.3
CEN1	**Los Morros**	**2.75**	**234**	⇓*i*P	P	06 19 07.9	+3.8
CEN1				*i* S	S	06 19 47.8	+6.0
CEN1				AMP		06 19 50.2	
	comp=N,81nm,0.1s						
ANCH	**Antofagasta**	**3.08**	**231**	*e*P	P	06 19 09.4	+1.6
ANCH				*i* S	S	06 19 49.9	+1.5
CPN1	**Cerro Paranal**	**3.72**	**220**	⇓*e*P	P	06 19 18.2	+2.8
CPN1				*i* S	S	06 20 05.7	+3.9
CRCH	**Chaqaral**	**5.23**	**209**	*e*P	P	06 19 36.7	+2.6

NEIC ***10*** *06:21:59.4±2.5, 4.05S×152.45E, h146*^{km}*±22*^{km}*, mb4.7/3, Error ellipse: s-maj=19.0km s-min=15.5km az=106.0*

IDC ***10*** *06:22:04.1±3.4, 4.16S×152.40E, h189*^{km}*±32*^{km}*, mb3.7/8, mb1 3.9/9, mb1mx3.8/15, mbtmp4.1/9, Error ellipse: s-maj=22.1km s-min=14.8km az=124.0*

ISC 10 06:21:57.7±2.2,**4.0S**±0.1×**152.4E**±0.1,**h140**^{km}±19^{km}**,n16,** σ**0**^{s}**92**/17,**mb4.0**/10,**New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.46**	**223**	S	**S**	**06 25 07.0**	**-1.4**
	2.3nm,0.3s,baz=190,slow=22,SNR=5.8						
PMG	**Port Moresby**	**7.46**	**223**	*e*Pn	**P**	**06 23 45.5**	**+0.6**
PMG				*e*Sn	**S**	**06 25 07.8**	**-0.5**
CTA	**Charters Tower**	**17.07**	**200**	P	**P**	**06 25 49.4**	**0.0**
	0.2nm,0.3s,baz=26,slow=11,SNR=8.7						
DZM	**Mont Dzumac**	**22.59**	**144**	P	**P**	**06 26 48.0**	**+0.9**
	6.3nm,0.5s,mb4.3,baz=342,slow=6.8,SNR=14						
WRAB	**Tennant Creek**	**23.65**	**226**	*e*P	**P**	**06 26 57.7**	**+0.4**
	16nm,0.6s,mb4.7						
WB2	**Warramunga Arr**	**23.65**	**226**	*e*P	**P**	**06 26 57.8**	**+0.4**
WRA	**Warramunga Arr**	**23.66**	**226**	P	**P**	**06 26 57.8**	**+0.4**
	9.3nm,0.6s,mb4.5,baz=51,slow=9.7,SNR=175						
WRA				S	**S**	**06 30 58.9**	**+0.3**
	1.0nm,1.0s,baz=47,slow=16,SNR=5.2						
FITZ	**Fitzroy Crossi**	**29.67**	**240**	*e*P	**P**	**06 27 51.4**	**-1.2**
	9.5nm,0.4s,mb4.9						
FITZ	**Fitzroy Crossi**	**29.67**	**240**	P	**P**	**06 27 51.0**	**-1.6**
	13nm,0.5s,mb4.9,baz=73,slow=8.8,SNR=38						
SONM	**Songino Array**	**65.40**	**328**	P	**P**	**06 32 28.6**	**+1.1**
	0.5nm,0.7s,mb3.4,baz=127,slow=7.2,SNR=2.6						
BILL	**Bilibino**	**72.52**	**5**	P	**P**	**06 33 10.0**	**-0.7**
	4.6nm,0.6s,mb4.4						
MKAR	**Makanchi Array**	**79.42**	**319**	P	**P**	**06 33 51.6**	**+1.8**
	0.3nm,0.5s,mb3.1,baz=94,slow=8.6,SNR=3.4						
ILAR	**Eielson Array**	**81.58**	**22**	P	**P**	**06 33 59.5**	**-1.5**
	0.7nm,0.8s,mb3.3,baz=262,slow=5.7,SNR=5.6						
MAW	**Mawson**	**86.15**	**203**	P	**P**	**06 34 23.3**	**-0.5**
	0.8nm,0.5s,mb3.7,baz=180,slow=24,SNR=7.0						
PDAR	**Pinedale Array**	**98.63**	**48**	P	**P**	**06 35 21.3**	**-0.8**
	0.4nm,1.0s,mb3.8,baz=270,slow=4.5,SNR=2.6						
BDFB	**Brasilia**	**151.96**	**135**	PKPbc	PKPdf	06 41 37.7	+7.4
	2.0nm,0.5s,baz=34,slow=1.4,SNR=4.1						

IDC ***10*** *06:34:29.4±1.0, 57.44N×120.81E, mb3.8/8, mb1 4.1/9, mb1mx3.9/20, mbtmp3.8/9, ML3.2/1, MS3.2/3, Ms1 3.2/3, ms1mx2.8/30, Error ellipse: s-maj=26.2km s-min=23.0km az=158.0*

BYKL ***10*** *06:34:30.7±0.4, 57.40N×120.81E, h2*^{km}*±11*^{km}*, MS3.4*

NEIC ***10*** *06:34:30.9±0.5, 57.49N×120.72E, h5*^{km}*, mb4.2/3, Error ellipse: s-maj=12.9km s-min=10.3km az=118.0*

MOS ***10*** *06:34:31.6±1.4, 57.44N×120.67E, h15*^{km}*, mb4.0/4, Error ellipse: s-maj=13.7km s-min=12.3km az=85.0*

BJI ***10*** *06:34:37.9, 56.70N×120.84E, h10*^{km}*, mB4.7, mb4.7, ML4.4, Ms4.1*

ISC 10 06:34:33.0±0.6,**57.44N**±0.03×**120.73E**±0.04,**h32**^{km}±5^{km}, **n64,**σ**1**^{s}**18**/68,**mb4.0**/12,**MS3.3**/4,**1C,Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.44**	**249**	*e*Pg	**Pn**	**06 34 55.5**	**-1.9**
CRS				*e*		06 34 57.8	
CRS				max		06 34 58.3	
	738nm,0.9s						
CRS				*e*Sg	**Sn**	**06 35 13.8**	**-1.6**
CRS				Smax		06 35 19.0	
	2µm,1.2s						
NRGR	**Nerungri**	**2.32**	**108**	*e*P	**Pn**	**06 35 11.4**	**+1.4**
NRGR				*e*S	**Sn**	**06 35 37.0**	**-0.7**
NRGR				smax			
	comp=N,1.0nm,0.2s						
CLNS	**Chul’man**	**2.35**	**103**	*e*Pg	**Pn**	**06 35 11.9**	**+1.5**
CLNS				Pmax		06 35 16.0	
	comp=N,684nm,0.4s						
CLNS				*e*Sn	**Sn**	**06 35 39.7**	**+1.2**
CLNS				*e*Sg	**Sn**	**06 35 43.3**	**+4.8**
CLNS				Smax		06 35 45.1	
	comp=N,18µm,0.5s						
CLNS	**Chul’man**	**2.35**	**103**	*e*P	**Pn**	**06 35 11.8**	**+1.4**
CLNS				*e*S	**Sn**	**06 35 40.2**	**+1.7**
CLNS				pmax	pmax		
	comp=Z,43nm,0.3s						
CLNS				pmax	pmax		

	comp=N,58nm,0.5s						
CLNS				pmax	pmax		
	comp=E,17nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,50nm,0.2s						
CLNS				pmax	pmax		
	comp=N,50nm,0.3s						
CLNS				pmax	pmax		
	comp=E,48nm,0.3s						
CLNS				smax			
	comp=N,70nm,0.3s						
CLNS				smax			
	comp=Z,20nm,0.3s						
CLNS				smax			
	comp=E,18nm,0.2s						
CLNS				smax			
	comp=E,1µm,0.4s						
CLNS				smax			
	comp=Z,628nm,0.4s						
CLNS				smax			
	comp=N,2µm,0.5s						
CLNS				MLR	MLR		
	comp=Z,300nm,11.0s						
ALDR	**Aldan**	**2.75**	**63**	*e*Pn	**Pn**	**06 35 16.2**	**+0.1**
ALDR				*e*Pg	**Pb**	**06 35 19.0**	**-2.4**
ALDR				*e*		06 35 24.2	
ALDR				max		06 35 30.3	
	comp=Z,2µm,0.6s						
ALDR				*e*Sn	**Sn**	**06 35 44.8**	**-3.8**
ALDR				*e*Sg	**Sb**	**06 35 55.1**	**0.0**
ALDR				Smax		06 35 55.8	
	comp=Z,4µm,0.3s						
ALDR				*e*LR	LR	06 36 09.9	
NLYR	**Nelyaty**	**2.91**	**253**	*e*Pn	**Pn**	**06 35 18.8**	**+0.5**
NLYR				*e*Pg	**Pb**	**06 35 23.5**	**-0.6**
NLYR				*e*PgPg		06 35 25.9	
NLYR				max		06 35 26.4	
	comp=Z,468nm,0.8s						
NLYR				*e*Sn	**Sn**	**06 35 53.7**	**+1.1**
NLYR				*e*Sg	**Sb**	**06 36 01.6**	**+2.0**
NLYR				Smax		06 36 05.0	
	comp=Z,2µm,1.0s						
NLYR	**Nelyaty**	**2.91**	**253**	*e*P	**Pn**	**06 35 18.6**	**+0.3**
TUP	**Tupik**	**3.06**	**188**	*e*Pn	**Pn**	**06 35 19.5**	**-0.9**
TUP				*e*		06 35 22.0	
TUP				*e*Pg	**Pb**	**06 35 25.0**	**-1.6**
TUP				Pmax		06 35 27.0	
	comp=Z,701nm,0.6s						
TUP				*e*		06 35 31.2	
TUP				*e*Sn	**Sn**	**06 35 56.0**	**-0.3**
TUP				*e*Sg	**Sb**	**06 36 03.4**	**-0.4**
TUP				Smax		06 36 10.8	
	comp=Z,2µm,1.5s						
TUP				*e*LR	LR	06 36 22.4	
TUP				LRmax		06 36 25.0	
	comp=Z,738nm,4.5s						
TUP	**Tupik**	**3.06**	**188**	*e*P	**Pn**	**06 35 19.5**	**-0.9**
TUP				*e*		06 36 03.5	
TUP				pmax	pmax		
	comp=Z,587nm,0.4s						
TUP				smax			
	comp=E,2µm,0.7s						
TNDR	**Tynda**	**3.20**	**134**	*e*Pn	**Pn**	**06 35 21.9**	**-0.6**
TNDR				*e*		06 35 23.0	
TNDR				*e*Pg	**Pb**	**06 35 25.3**	**-3.8**
TNDR				Pmax		06 35 25.6	
	comp=E,943nm,0.3s						
TNDR				*e*		06 35 30.8	
TNDR				*e*Sn	**Sn**	**06 35 59.8**	**-0.2**
TNDR				*e*Sg	**Sb**	**06 36 08.2**	**+0.2**
TNDR				Smax		06 36 16.8	
	comp=E,8µm,0.4s						
BOD	**Bodaibo**	**3.63**	**279**	*e*Pn	**Pn**	**06 35 28.8**	**+0.2**
BOD				*e*Pg	**Pb**	**06 35 37.4**	**+0.9**
BOD				Pmax		06 35 41.0	
	comp=E,90nm,0.7s						
BOD				*e*Sn	**Sn**	**06 36 09.9**	**-1.0**
BOD				*e*Sg	**Sb**	**06 36 22.8**	**+2.3**
BOD				Smax		06 36 27.9	
	comp=E,1µm,1.3s						
BOD				*e*LR	LR	06 36 45.4	
BOD				LRmax		06 36 50.0	
	comp=E,562nm,3.2s						
BOD	**Bodaibo**	**3.63**	**279**	*e*P	**Pn**	**06 35 28.5**	**-0.1**
SVKR	**Severomuysk**	**4.16**	**254**	*e*Pn	**Pn**	**06 35 34.7**	**-1.4**
SVKR				*e*Pg	Px	06 35 47.9	
SVKR				Pmax		06 35 51.2	
	comp=E,162nm,0.5s						
SVKR				*e*Sg	Sx	06 36 41.2	
SVKR				Smax		06 36 56.8	
	comp=E,1µm,1.3s						
UKT	**Uakit**	**4.40**	**247**	*e*Pn	**Pn**	**06 35 38.9**	**-0.6**
UKT				⇑*i*Pg	Px	06 35 50.0	
UKT				Pmax		06 35 59.4	
	comp=E,55nm,1.0s						
UKT				*e*Sg	Sx	06 36 46.3	
UKT				Smax		06 36 58.3	
	comp=E,364nm,1.5s						
UKT	**Uakit**	**4.40**	**247**	*e*P	Px	06 35 52.0	
UKT				pmax	pmax		
	comp=Z,43nm,0.4s						
YOA	**Uoyan**	**5.12**	**259**	*e*	Px	06 36 19.4	
YOA				*e*Sg	Sx	06 37 09.9	
YOA				Smax		06 37 27.9	
	comp=Z,4µm,1.4s						
YOA	**Uoyan**	**5.12**	**259**	*e*P	Px	06 36 07.4	
YOA				pmax	pmax		
	comp=Z,200nm,0.6s						
KMO	**Kumora**	**5.48**	**257**	*e*Pn	**Pn**	**06 35 53.8**	**-0.9**
KMO				*e*Pg	Px	06 36 11.0	
KMO				Pmax		06 36 16.3	
	comp=Z,29nm,0.7s						
KMO				*e*Sg	Sx	06 37 21.6	
KMO				Smax		06 37 30.7	
	comp=Z,636nm,1.4s						
KMO	**Kumora**	**5.48**	**257**	*e*P	**Pn**	**06 35 56.3**	**+1.6**
KMO				pmax	pmax		
	comp=Z,36nm,0.7s						
YLYR	**Ulyunkhan**	**5.93**	**248**	*e*Pn	**Pn**	**06 36 00.6**	**-0.5**
YLYR				*e*Pg	Px	06 36 17.0	
YLYR				Pmax		06 36 26.5	
	comp=Z,19nm,0.7s						
YLYR				*e*Sg	Sx	06 37 35.4	
YLYR				Smax		06 37 38.9	
	comp=Z,391nm,1.5s						
YLYR	**Ulyunkhan**	**5.93**	**248**	*e*P	**Pn**	**06 36 00.7**	**-0.4**
NIZ	**Nizh Angarsk**	**6.40**	**260**	*e*	**Pn**	**06 36 13.4**	**+5.7**
NIZ				*e*Pg	Px	06 36 27.7	
NIZ				Pmax		06 36 34.5	
	comp=Z,16nm,0.8s						
NIZ				*e*		06 37 20.4	
NIZ				*e*Sg	Sx	06 37 49.6	
NIZ				Smax		06 38 13.3	
	comp=Z,251nm,1.5s						
YAK	**Yakutsk**	**6.45**	**41**	*e*Pg	Px	06 36 27.6	
YAK				Pmax		06 36 28.9	
	comp=Z,275nm,0.9s						
YAK				*e*Sn	Sx	06 37 16.5	
YAK				*e*Sg	Sx	06 37 48.8	
YAK				Smax		06 37 50.5	
	comp=Z,2µm,1.1s						
YAK	**Yakutsk**	**6.45**	**41**	*e*Pn	Px	06 36 17.1	
YAK				*e*Sn	Sx	06 37 31.9	
CIT	**Chita**	**6.84**	**220**	*e*	**Pn**	**06 36 15.3**	**+1.5**
CIT				*e*Pg	Px	06 36 33.5	
CIT				Pmax		06 36 37.1	
	comp=Z,57nm,1.0s						
CIT				*e*Sg	Sx	06 37 59.7	
CIT				Smax		06 38 12.2	
	comp=Z,877nm,1.4s						
SYVR	**Suvo**	**7.17**	**243**	*e*	**Pn**	**06 36 19.8**	**+1.3**
SYVR				*e*Pg	Px	06 36 41.7	
SYVR				Pmax		06 36 45.0	
	comp=Z,39nm,1.3s						
SYVR				*e*Sg	Sx	06 38 14.0	
SYVR				Smax		06 38 20.7	
	comp=Z,494nm,1.8s						
HIA	**Hailar**	**8.21**	**185**	Pn	**P**	**06 36 28.1**	**-5.0**
KPC	**Khapcheranga**	**9.20**	**216**	*e*	**P**	**06 36 44.9**	**-1.8**
KPC				*e*		06 38 16.6	
KPC				*e*Sg	Sx	06 39 13.2	
KPC				Smax		06 39 32.7	
	comp=Z,199nm,1.6s						
TRG	**Tyrgan**	**9.48**	**246**	*e*	Px	06 38 48.3	
TRG				*e*Sg	Sx	06 39 22.8	
TRG				Smax			
	comp=Z,96nm,2.2s						
KAB	**Kabansk**	**9.76**	**242**	*e*Sg	Sx	06 39 34.0	
KAB				Smax		06 40 06.3	
	comp=Z,1µm,1.8s						
KLR	**Kul'dur**	**10.53**	**137**	*e*P	**P**	**06 37 06.3**	**+1.5**
LSTR	**Listvyanka**	**10.76**	**245**	*e*Sg	Sx	06 40 04.6	
LSTR				Smax		06 40 24.1	
	comp=Z,95nm,1.4s						
TLY	**Talaya**	**11.46**	**247**	*e*Sg	Sx	06 40 25.5	
TLY				Smax		06 40 37.9	
	comp=Z,67nm,2.1s						
ARS	**Arshan**	**11.93**	**250**	*e*Sg	Sx	06 40 41.2	
ARS				Smax		06 41 03.6	
	comp=Z,111nm,1.1s						
ZAK	**Zakamensk**	**12.46**	**243**	*e*Sg	Sx	06 40 58.6	
ZAK				Smax		06 41 08.4	
	comp=Z,59nm,1.5s						
MOY	**Mondy**	**12.81**	**252**	*e*Sg	Sx	06 41 06.8	
MOY				Smax		06 41 39.0	
	comp=Z,124nm,1.9s						
SONM	**Songino Array**	**12.94**	**228**	Pn	**P**	**06 37 36.6**	**-0.8**
	comp=Z,0.1nm,0.3s,baz=27,slow=6.4,SNR=3.6						
ORL	**Orlik**	**12.95**	**257**	*e*	Px	06 40 41.4	
ORL				*e*Sg	Sx	06 41 10.5	
ORL				Smax		06 41 39.2	
	comp=Z,75nm,1.3s						
UNR	**Ust'-Nera**	**12.98**	**47**	*e*Sg	Sx	06 41 10.6	
SEY	**Seymchan**	**16.55**	**57**	*i* P	**P**	**06 38 26.5**	**+2.5**
HHC	**Hu-ho-hao-te**	**17.63**	**204**	*e*P	**P**	**06 38 38.5**	**+0.8**
HHC				AP		06 38 42.3	
HHC				XP		06 38 45.9	
HHC				PP	PP	06 38 53.1	+0.9
HHC				S	**S**	**06 41 51.7**	**+1.0**
HHC				PCP	PcP	06 43 19.2	+2.6
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s						
HHC				AMB	AMB		
	comp=Z,110nm,4.8s						
HHC				LR	LR		
	comp=N,190nm,10.8s						
HHC				LR	LR		
	comp=E,380nm,9.6s						
NVS	**Novosibirsk**	**20.88**	**279**	*e*P	**P**	**06 39 14.4**	**-0.2**
NVS				*e*		06 43 53.8	
MJAR	**Matsushiro Arr**	**23.93**	**143**	LR	LR	06 48 33.5	
	comp=E,52nm,18.4s,MS3.0,baz=335,slow=35						
KURK	**Kurchatov**	**25.26**	**273**	*e*P	**P**	**06 39 58.5**	**+0.9**
	comp=E,3.6nm,0.9s,mb3.9						
KURK	**Kurchatov**	**25.26**	**273**	*e*P	**P**	**06 39 58.5**	**+1.0**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
NJ2	**Nanjing**	**25.42**	**184**	*e*P	**P**	**06 40 00.8**	**+1.6**
MKAR	**Makanchi Array**	**25.55**	**262**	P	**P**	**06 40 00.4**	**+0.2**
	comp=Z,0.7nm,0.5s,mb3.4,baz=31,slow=8.4,SNR=4.6						
MKAR	**Makanchi Array**	**25.55**	**262**	*i* P	**P**	**06 40 05.3**	**+5.0**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SSE	**Sheshan**	**26.34**	**179**	*e*P	**P**	**06 40 08.2**	**+0.4**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.9						
SSE				AMB	AMB		
	comp=Z,110nm,3.5s						
SSE	**Sheshan**	**26.34**	**179**	*e*P	**P**	**06 40 08.2**	**+0.4**
	comp=Z,30nm,0.8s,mb4.9						
JHJ	**Hachijo jima 2**	**27.58**	**144**	LR	LR	06 50 36.1	
	comp=Z,49nm,18.9s,MS3.1,baz=189,slow=35						
AAK	**Ala-Archa**	**32.47**	**263**	P	**P**	**06 40 58.6**	**-3.8**
	comp=Z,1.1nm,0.7s,mb3.8						
AAK	**Ala-Archa**	**32.47**	**263**	P	**P**	**06 40 58.6**	**-3.8**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
ARCES	**ARCESS Array B**	**39.63**	**327**	LR	LR	07 02 34.9	
	comp=Z,35nm,19.2s,MS3.2,baz=257,slow=42						
ILAR	**Eielson Array**	**41.38**	**40**	P	**P**	**06 42 17.2**	**-0.1**
	comp=Z,0.9nm,0.8s,mb3.5,baz=298,slow=4.4,SNR=12						
FINES	**FINESS Array B**	**44.22**	**317**	P	**P**	**06 42 40.5**	**+0.1**
	comp=Z,3.0nm,0.8s,mb4.0,baz=45,slow=8.1,SNR=8.3						
KIV	**Kislovodsk**	**48.49**	**289**	*e*P	**P**	**06 43 16.6**	**+2.3**
KIV				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
KIV				MLR	MLR		
	comp=Z,111nm,17.0s,MS3.9						
NOA	**NORSAR Array B**	**49.69**	**323**	P	**P**	**06 43 22.2**	**-1.1**
	comp=Z,0.7nm,0.5s,mb4.0,baz=43,slow=7.9,SNR=2.7						
AKASG	**Malin Array Be**	**50.19**	**304**	P	**P**	**06 43 26.2**	**-1.1**
	comp=Z,0.8nm,0.4s,mb4.1,baz=42,slow=8.7,SNR=6.9						
AKASG	**Malin Array Be**	**50.19**	**304**	*i* P	**P**	**06 43 27.3**	**0.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KHC	**Kasperske Hory**	**58.02**	**312**	*e*P	**P**	**06 44 24.5**	**-0.2**
GERES	**GERESS Array B**	**58.20**	**312**	P	**P**	**06 44 24.8**	**-1.2**
	comp=Z,0.9nm,0.7s,mb3.9,baz=37,slow=6.7,SNR=6.2						
PDAR	**Pinedale Array**	**71.66**	**37**	P	**P**	**06 45 52.2**	**-0.9**
	comp=Z,0.5nm,0.7s,mb3.6,baz=1.9,slow=2.5,SNR=4.3						
WRA	**Warramunga Arr**	**77.92**	**167**	P	**P**	**06 46 28.5**	**-0.8**
	comp=Z,1.1nm,0.9s,mb3.8,baz=351,slow=6.6,SNR=7.4						

IGQ 10 06:40:12.6, 2.78S×79.21W, h12^{km}±4^{km}, mb4.0, 2C-2D, Error ellipse: s-maj=11.2km s-min=3.0km az=33.5, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	**Igualata**	**1.40**	**24**	⇓P	Pn	06 40 39.1	+1.0
IGUA				S	Sb	06 40 57.7	+1.7
ARRY	**Arrayan**	**1.47**	**31**	⇑P	Pn	06 40 40.6	+1.5
ARRY				S	Sb	06 41 00.8	+2.8
PISA	**Pisayambo**	**1.90**	**26**	P	Pn	06 40 47.0	+1.9
PISA				S	Sn	06 41 13.3	+4.1
QIL1	**Quilotoa**	**1.94**	**8**	P	Pn	06 40 44.1	-1.8
TAMB	**Tambo**	**2.24**	**22**	P	Pn	06 40 53.6	+3.6
VC1	**Cotopaxi 1**	**2.27**	**21**	P	Pn	06 40 53.0	+2.5
JUA2	**San Juan 2**	**2.62**	**13**	⇑P	Pn	06 40 58.3	+2.8
TERV	**Terraza Guagua**	**2.66**	**13**	P	Pn	06 40 57.9	+1.8
TERV				S	Sn	06 41 31.3	+2.8
PINO	**Pino**	**2.67**	**13**	P	Pn	06 40 58.3	+2.0
PINO				S	Sn	06 41 31.9	+3.0
YANA	**Yana**	**2.72**	**14**	⇓P	Pn	06 40 59.3	+2.4
YANA				S	Sn	06 41 33.4	+3.3
MAG1	**Magdalena**	**2.75**	**348**	P	Pn	06 40 52.7	-4.6
ANGU	**Angureal**	**3.05**	**23**	P	Pn	06 41 08.1	+6.4
CAYA	**Cayambe**	**3.08**	**23**	P	Pn	06 41 09.4	+7.3
COTA	**Cotacachi**	**3.21**	**16**	P	Pn	06 41 07.8	+3.8

BJI ***10*** *06:47:28.7, 5.91S×68.65E, h8^{km}, mB5.1, mb4.7, Ms4.7*

MOS ***10*** *06:47:28.7±1.3, 5.76S×68.39E, h10^{km}, mb4.9/9, Error ellipse: s-maj=15.0km s-min=11.1km az=87.1*

IDC ***10*** *06:47:29.6±1.0, 5.64S×68.46E, mb4.2/12, mb1 4.3/12, mb1mx4.2/20, mbtmp4.2/12, MS4.0/14, Ms1 4.0/14, ms1mx3.8/22, Error ellipse: s-maj=33.7km s-min=19.5km az=32.0*

NEIC ***10*** *06:47:31.1±0.4, 5.77S×68.41E, h10^{km}, mb4.8/13, Error ellipse: s-maj=11.2km s-min=9.4km az=220.0*

ISC 10 06:47:28.4±0.6, **5.87S**±0.08×**68.32E**±0.08, **h10^{km}, (h16^{km}**±3.3^{km}**:pP-P), n75,** σ**1ˢ24**/56, **mb4.6**/35, **MS4.0**/14, **2C, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.38**	**111**	*e*Pn	**Pn**	**06 48 35.5**	**-1.2**
DGAR				*e*Sn	**Sn**	**06 49 23.2**	**-5.3**
PALK	**Pallekele**	**17.98**	**44**	*e*P	**P**	**06 51 42.0**	**+1.6**
	16nm,1.0s						
POO	**Poona**	**24.85**	**13**	*e*x	**P**	**06 52 53.0**	**+0.3**
ATD	**Arta Tunnel**	**30.67**	**304**	LR	LR	07 03 19.7	
	comp=Z,212nm,20.6s,MS3.8,baz=101,slow=31						
KMBO	**Kilima Mbogo**	**31.35**	**277**	P	**P**	**06 53 53.3**	**+1.5**
	0.8nm,0.5s,mb3.8,baz=63,slow=17,SNR=4.1						
KMBO				LR	LR	07 04 09.0	
	comp=Z,403nm,21.0s,MS4.1,baz=94,slow=32						
KULM	**Kulim**	**34.13**	**72**	*e*P	**P**	**06 54 16.5**	**+0.5**
KHET	**Khetri**	**34.51**	**12**	*e*P	**P**	**06 54 19.6**	**+0.5**
KHET				AMb	AMB	06 54 22.0	
	comp=Z,11nm,1.0s,mb4.7						
KUDL	**Kundal**	**34.72**	**13**	*e*P	**P**	**06 54 21.7**	**+0.8**
KUDL				AMb	AMB	06 54 24.6	
	comp=Z,14nm,1.3s,mb4.7						
SONA	**Sohna**	**34.96**	**14**	*e*P	**P**	**06 54 22.1**	**-0.8**
SONA				AMb	AMB	06 54 24.0	
	comp=Z,9.5nm,0.6s,mb4.9						
AYAN	**Aya Nagar**	**35.19**	**14**	*e*P	**P**	**06 54 23.8**	**-1.1**
AYAN				AMb	AMB	06 54 28.1	
	comp=Z,11nm,1.0s,mb4.7						
KOLN	**Koldanda**	**36.56**	**23**	*e*P	**P**	**06 54 36.5**	**+0.1**
	comp=Z,45nm,1.2s,mb5.2						
DMN	**Daman**	**37.03**	**25**	*e*P	**P**	**06 54 41.3**	**+0.9**
	comp=Z,58nm,1.0s,mb5.4						
PKI	**Pulchoki**	**37.12**	**26**	*e*P	**P**	**06 54 41.9**	**+0.7**
GKN	**Gorkha**	**37.18**	**24**	*e*P	**P**	**06 54 42.2**	**+0.5**
	comp=Z,55nm,0.9s,mb5.4						
KKN	**Kakani**	**37.26**	**25**	*e*P	**P**	**06 54 42.8**	**+0.5**
	comp=Z,34nm,0.8s,mb5.2						
JIRN	**Jiri**	**37.54**	**27**	*e*P	**P**	**06 54 45.2**	**+0.5**
	comp=Z,19nm,1.0s,mb4.8						
GUN	**Gumba**	**37.62**	**26**	*e*P	**P**	**06 54 46.5**	**+1.1**
	comp=Z,90nm,1.2s,mb5.4						
KLP	**Kalpa**	**38.38**	**14**	*e*P	**P**	**06 54 54.0**	**+2.3**
KLP				AMb	AMB	06 54 58.5	
	comp=Z,25nm,1.3s,mb4.8						
KLP				AML	AML	06 55 07.0	
	comp=N,23nm,1.2s						
KLP				AML	AML	06 55 11.4	
	comp=E,19nm,0.6s						
THN	**Thein Dam**	**38.73**	**10**	*e*x	**P**	**06 54 55.7**	**+1.0**
LSA	**Lhasa**	**41.61**	**31**	*e*P	**P**	**06 55 19.9**	**+1.3**
	comp=E,18nm,1.5s,mb4.5						
LSA	**Lhasa**	**41.61**	**31**	*e*P	**P**	**06 55 19.9**	**+1.3**
LSA				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.5						
BOSA	**Boshof**	**46.57**	**236**	LR	LR	07 13 39.6	
	comp=Z,163nm,18.8s,MS4.0,baz=280,slow=34						
AAK	**Ala-Archa**	**48.60**	**6**	*e*P	**P**	**06 56 13.8**	**-0.4**
	comp=Z,7.0nm,1.1s,mb4.6						
AAK	**Ala-Archa**	**48.60**	**6**	*e*P	**P**	**06 56 13.8**	**-0.4**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
NWAO	**Narrogin (SRO)**	**52.79**	**127**	LR	LR	07 13 04.3	
	comp=Z,179nm,19.8s,MS4.1,baz=4.9,slow=29						
ENH	**Enshi**	**53.35**	**45**	*e*P	**P**	**06 56 48.7**	**-1.8**
	comp=Z,17nm,1.4s,mb4.8						
LZH	**Lanzhou**	**53.40**	**36**	*e*P	**P**	**06 56 52.1**	**+1.3**
LZH				AP	pP	06 56 56.0	+2.2
LZH				XP	sP	06 57 00.5	+5.5
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
LZH	**Lanzhou**	**53.40**	**36**	*e*P	**P**	**06 56 52.1**	**+1.3**
	comp=Z,20nm,1.4s,mb4.8						
LZH				pP	pP	06 56 56.0	+2.2
LZH				sP	sP	06 57 00.5	+5.5
LZH	**Lanzhou**	**53.40**	**36**	*e*P	**P**	**06 56 52.1**	**+1.3**
LZH				*PP	pP	06 56 56.0	+2.2
LZH				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
GTA	**Gaotai**	**53.64**	**30**	*e*P	**P**	**06 56 52.0**	**-0.4**
GTA				AP	pP	06 56 59.0	+3.5
GTA				XP	sP	06 57 02.1	+5.4
MKAR	**Makanchi Array**	**53.88**	**12**	P	**P**	**06 56 53.0**	**-1.1**
	comp=Z,1.1nm,0.7s,mb3.9,baz=195,slow=7.4,SNR=8.8						
MKAR				LR	LR	07 20 19.9	
	comp=Z,94nm,20.7s,MS3.8,baz=92,slow=37						
BRTR	**Keskin Array B**	**55.51**	**328**	P	**P**	**06 57 04.8**	**-1.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=122,slow=14,SNR=3.8						
AKTO	**Aktyubinsk**	**56.78**	**352**	P	**P**	**06 57 12.5**	**-2.6**
	comp=Z,2.9nm,0.8s,mb4.3,baz=222,slow=5.5,SNR=10						
AKTO				LR	LR	07 20 32.2	
	comp=Z,73nm,20.9s,MS3.8,slow=35						
KURK	**Kurchatov**	**57.05**	**8**	*e*P	**P**	**06 57 15.1**	**-2.0**
	comp=Z,6.9nm,1.0s,mb4.6						
KURK	**Kurchatov**	**57.05**	**8**	*e*P	**P**	**06 57 15.1**	**-2.0**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
FITZ	**Fitzroy Crossi**	**57.16**	**108**	P	**P**	**06 57 16.7**	**-1.5**
	comp=Z,4.8nm,0.7s,mb4.6,baz=292,slow=5.7,SNR=5.0						
BVAR	**Borovoye Array**	**58.70**	**1**	P	**P**	**06 57 26.8**	**-1.7**
	comp=Z,2.9nm,0.9s,mb4.3,baz=166,slow=6.1,SNR=12						
BRVK	**Borovoye**	**58.73**	**1**	*e*P	**P**	**06 57 26.7**	**-2.1**
	comp=Z,6.9nm,1.2s,mb4.6						
BRVK	**Borovoye**	**58.73**	**1**	*e*P	**P**	**06 57 26.7**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
CHKZ	**Chkalovo**	**59.35**	**2**	*e*P	**P**	**06 57 32.0**	**-1.1**
	comp=Z,12nm,1.0s,mb4.9						
CHKZ	**Chkalovo**	**59.35**	**2**	*e*P	**P**	**06 57 32.0**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
HHC	**Hu-ho-hao-te**	**61.08**	**36**	*e*P	**P**	**06 57 47.3**	**+2.2**
HHC				AP	pP	06 57 51.4	+3.2
HHC				XP	sP	06 57 54.5	+5.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.9						
ZAL	**Zalesovo**	**61.18**	**11**	LR	LR	07 24 58.1	
	comp=Z,120nm,20.0s,MS4.0,baz=256,slow=37						
MAW	**Mawson**	**61.75**	**182**	LR	LR	07 16 49.8	
	comp=Z,126nm,20.0s,MS4.1,baz=57,slow=28						
ARU	**Arti**	**62.60**	**354**	*e*P	**P**	**06 57 53.7**	**-1.4**
	comp=Z,6.0nm,0.8s,mb4.8						
ARU	**Arti**	**62.60**	**354**	*e*P	**P**	**06 57 53.7**	**-1.4**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
SONM	**Songino Array**	**63.09**	**28**	P	**P**	**06 57 58.4**	**-0.1**
	comp=Z,5.7nm,0.7s,mb4.8,baz=222,slow=6.7,SNR=41						
SONM				LR	LR	07 25 07.6	
	comp=Z,235nm,19.1s,MS4.4,baz=19,slow=36						
WRA	**Warramunga Arr**	**65.50**	**109**	P	**P**	**06 58 15.2**	**+0.6**
	comp=Z,2.4nm,0.8s,mb4.3,baz=284,slow=6.0,SNR=17						
WRAB	**Tennant Creek**	**65.50**	**109**	*e*P	**P**	**06 58 15.2**	**+0.6**
	comp=Z,12nm,1.0s,mb4.9						
WRAB	**Tennant Creek**	**65.50**	**109**	*e*P	**P**	**06 58 15.2**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
AKASG	**Malin Array Be**	**65.63**	**334**	P	**P**	**06 58 14.2**	**-0.7**
	comp=Z,0.2nm,0.3s,mb3.7,baz=129,slow=6.1,SNR=6.1						
SYO	**Syowa Base**	**65.85**	**191**	⇑P	**P**	**06 58 17.2**	**+1.2**
SYO	**Syowa Base**	**65.85**	**191**	⇑*e*P	**P**	**06 58 17.2**	**+1.2**
HIA	**Hailar**	**70.76**	**33**	P	**P**	**06 58 46.4**	**-0.6**
	comp=Z,14nm,1.0s,mb4.8						
HIA	**Hailar**	**70.76**	**33**	P	**P**	**06 58 46.4**	**-0.5**
HIA				pmax	pmax		
	comp=Z,13nm,1.0s						
VRAC	**Vranov**	**70.94**	**327**	LR	LR	07 27 01.6	
	comp=Z,63nm,19.8s,MS3.9,baz=111,slow=34						
GERES	**GERESS Array B**	**72.28**	**326**	P	**P**	**06 58 56.4**	**+0.3**
	comp=Z,0.9nm,0.7s,mb3.8,baz=203,slow=44,SNR=5.2						
DBIC	**Dimbokro**	**74.08**	**279**	LR	LR	07 27 35.7	
	comp=Z,94nm,20.4s,MS4.1,baz=6.7,slow=32						
FINES	**FINESS Array B**	**74.64**	**340**	LR	LR	07 34 24.8	
	comp=Z,79nm,19.7s,MS4.0,baz=136,slow=38						
MJAR	**Matsushiro Arr**	**77.57**	**51**	P	**P**	**06 59 23.6**	**-3.0**
	comp=Z,1.7nm,0.7s,mb4.1,baz=252,slow=7.9,SNR=5.5						
HFS	**Hagfors**	**78.44**	**335**	P	**P**	**06 59 31.2**	**+0.3**
	comp=Z,6.4nm,0.9s,mb4.6,baz=72,slow=4.7,SNR=4.3						
NOA	**NORSAR Array B**	**79.97**	**335**	LR	LR	07 34 01.4	
	comp=Z,64nm,18.3s,MS4.0,baz=290,slow=35						
ESDC	**Sonseca Array**	**80.26**	**312**	P	**P**	**06 59 44.0**	**+2.8**
	comp=Z,0.2nm,0.3s,baz=146,slow=23,SNR=3.1						
ARCES	**ARCESS Array B**	**80.70**	**346**	LR	LR	07 33 02.8	
	comp=Z,106nm,19.9s,MS4.2,baz=290,slow=34						
QSPA	**South Pole Qui**	**84.15**	**180**	P	**P**	**07 00 09.4**	**+8.9**
	comp=Z,12nm,1.4s,mb4.8						
PDAR	**Pinedale Array**	**143.21**	**357**	PKP	PKPdf	07 07 03.3	-2.9
	comp=Z,0.3nm,0.7s,baz=63,slow=2.0,SNR=2.6						
DAU	**Daniels Canyon**	**145.61**	**359**	*e*PKPdf	PKPdf	07 07 10.1	-0.4
DUG	**Dugway**	**145.81**	**2**	*e*PKPdf	PKPdf	07 07 10.8	0.0
SMCO	**Snowmass**	**146.57**	**353**	*e*PKPdf	PKPdf	07 07 13.2	+1.1
NVAR	**Mina Array Bea**	**147.04**	**10**	PKPbc	PKPdf	07 07 15.3	+2.4
	comp=Z,1.7nm,0.9s,baz=32,slow=2.6,SNR=9.2						
MSU	**Marysvale**	**147.50**	**1**	*e*PKPbc	PKPdf	07 07 17.4	+3.8
PV10	**Paradox Valley**	**147.55**	**356**	*e*PKPbc	PKPdf	07 07 17.4	+3.6
PV01	**Paradox Valley**	**147.76**	**355**	*e*PKPdf	PKPdf	07 07 17.2	+3.1
DAC	**Darwin (Calif)**	**149.25**	**9**	*e*PKPbc	PKPdf	07 07 20.8	+4.3
TXAR	**Lajitas Array**	**155.46**	**343**	PKPbc	PKPdf	07 07 35.7	+10
	comp=Z,0.4nm,0.9s,slow=0.9,SNR=3.3						

ISK ***10*** *07:12:19.7, 38.28N×26.51E, h28^{km}, MD3.1*

CSEM ***10*** *07:12:19.9±0.1, 38.31N×26.61E, h40^{km}, MD3.1, Error ellipse: s-maj=3.1km s-min=2.0km az=101.0*

ATH ***10*** *07:12:22.2, 38.14N×26.77E, h51^{km}, MD3.1/3*

ISC 10 07:12:20.4±0.6, **38.18N**±0.03×**26.52E**±0.05, **h10^{km}, n21,** σ**1ˢ48**/29, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.19**	**17**	*i* P	**Pg**	**07 12 25.4**	**+0.7**
URLA				*i* S	**Sg**	**07 12 29.4**	**+1.9**
BLCB	**Balcova**	**0.46**	**63**	PG	**Pg**	**07 12 29.5**	**-0.2**

BLCB				SG	Sg	07 12 36.3	+0.3
SMG	**Samos**	0.53	152	eP	Pg	07 12 33.3	+2.2
IZM	**Izmir**	0.62	69	PG	Pg	07 12 33.5	+0.5
IZM				SG	Sg	07 12 42.1	+0.8
KDAG	**Bornova**	0.63	69	i P	Pb	07 12 32.8	-0.2
KDAG				i S	Sg	07 12 41.3	-0.2
PRK	**Paraskevi**	1.09	350	eP	Pg	07 12 43.4	+1.2
PRK				eS	Sg	07 12 58.8	+2.1
AKS	**Akhisar**	1.23	55	PN	Pn	07 12 41.4	-2.3
BODT	**Bodrum**	1.27	150	PN	Pn	07 12 43.9	-0.4
MLSB	**Milas**	1.33	131	PN	Pn	07 12 43.9	-1.1
BDRM	**Kayabasi**	1.33	146	i P	Pg	07 12 48.5	+1.5
BDRM				i S	Sg	07 13 06.3	+1.6
APE	**Apeiranthos**	1.36	216	ePN	Pn	07 12 44.5	-1.0
APE	**Apeiranthos**	1.36	216	eP	Pb	07 12 47.3	+1.8
DAT	**Datca**	1.67	150	ePN	Pn	07 12 48.3	-1.7
YER	**Yerkesik**	1.74	126	ePN	Pn	07 12 49.5	-1.5
BALB	**Balikesir**	1.81	35	ePN	Pn	07 12 47.8	-4.1
DNZL	**Cakiroluk**	2.05	103	i P	Pg	07 13 03.9	+2.4
DNZL				i S	Sg	07 13 29.1	+0.3
DST	**Dursunbey**	2.18	48	ePN	Pn	07 12 53.4	-3.8
DALT	**Dalyan (Mudla)**	2.19	129	ePN	Pn	07 12 55.8	-1.6
LPK	**Lapseki**	2.20	5	ePN	Pn	07 12 53.7	-3.9
FETY	**Fethiye**	2.55	126	ePN	Pn	07 13 01.3	-1.3
ULDT	**Uludag**	2.83	45	i P	Pb	07 13 10.2	-0.4
ULDT				i S	Sg	07 13 51.0	-3.5

ATH ***10*** *07:14:36.7, 38.16N×26.92E, h40^{km}, MD3.1/4*
ISK ***10*** *07:14:37.1, 38.15N×26.59E, h13^{km}, MD3.3*
NEIC ***10*** *07:14:37.0, 38.16N×26.59E, h15^{km}, MD3.3(ISK), MD3.1(ATH), After ISK.*
CSEM ***10*** *07:14:37.0±0.1, 38.14N×26.61E, h10^{km}, MD3.3, Error ellipse: s-maj=2.8km s-min=2.0km az=106.0*
ISC 10 07:14:36.6±0.8, **38.15N**±0.03×**26.50E**±0.04, **h3**^{km}±6^{km}, **n27**, σ**1^{s}07**/39, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.22	20	i P	Pg	07 14 41.5	+0.4
URLA				i S	Sg	07 14 45.2	+1.1
BLCB	**Balcova**	0.49	61	i PG	Pg	07 14 46.1	-0.3
BLCB				i SG	Sg	07 14 52.0	-0.9
SMG	**Samos**	0.52	149	eP	Pg	07 14 47.4	+0.4
IZM	**Izmir**	0.65	67	i PG	Pg	07 14 49.5	-0.1
IZM				i SG	Sg	07 14 58.1	-0.1
KDAG	**Bornova**	0.65	67	i P	Pg	07 14 48.5	-1.2
KDAG				i S	Sg	07 15 00.2	+1.7
PRK	**Paraskevi**	1.11	351	eP	Pb	07 14 59.4	+1.3
AYDN	**Tasoluk**	1.20	114	i P	Pb	07 15 00.1	+0.5
AYDN				i S	Sb	07 15 14.5	-0.9
AKS	**Akhisar**	1.26	54	PN	Pn	07 15 00.4	-0.8
BODT	**Bodrum**	1.26	149	PN	Pn	07 14 59.9	-1.3
BDRM	**Kayabasi**	1.32	145	i P	Pb	07 15 03.4	+1.7
BDRM				i S	Sb	07 15 20.4	+1.4
MLSB	**Milas**	1.32	130	PN	Pn	07 15 01.3	-0.8
APE	**Apeiranthos**	1.33	216	PN	Pn	07 15 02.4	+0.3
APE	**Apeiranthos**	1.33	216	eP	Pb	07 15 02.6	+0.7
APE				eS	Sb	07 15 23.3	+4.1
APE	**Apeiranthos**	1.33	216	ePn	Pn	07 15 02.4	+0.3
APE				eS	Sb	07 15 23.3	+4.1
MANT	**Manisa**	1.65	78	i P	Pn	07 15 07.8	+1.0
MANT				i S	Sb	07 15 27.9	-0.7
DAT	**Datca**	1.66	149	ePN	Pn	07 15 05.9	-1.0
EZN	**Ezine**	1.68	355	ePN	Pn	07 15 07.2	+0.1
YER	**Yerkesik**	1.74	125	ePN	Pn	07 15 07.8	-0.3
BALB	**Balikesir**	1.83	36	ePN	Pn	07 15 08.7	-0.7
DENT	**Denizli**	2.04	100	ePN	Pn	07 15 11.1	-1.2
DNZL	**Cakiroluk**	2.07	102	i P	Pn	07 15 12.4	-0.3
DNZL				i S	Sn	07 15 41.9	+2.6
DALT	**Dalyan (Mudla)**	2.19	128	ePN	Pn	07 15 13.4	-1.1
DST	**Dursunbey**	2.21	48	ePN	Pn	07 15 14.6	-0.1
GDZ	**Gediz**	2.52	67	i P	Pn	07 15 23.8	+4.7
GDZ				i S	Sn	07 15 54.2	+3.5
FETY	**Fethiye**	2.55	126	ePN	Pn	07 15 19.4	-0.3
ULDT	**Uludag**	2.85	45	i P	Pn	07 15 28.6	+4.6
ULDT				i S	Sn	07 16 06.1	+6.7
RDO	**Rodhopi**	3.08	346	eP	Pn	07 15 24.8	-2.4

GUC 10 07:15:09.6±0.9, **23.09S**×**68.17W**, **h140**^{km}±9^{km}, **MD3.8, ML3.0, 1C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	0.18	352	⇑iP	P	07 15 29.1	0.0
SPCH				i S	S	07 15 45.0	+1.1
SPCH				AMP		07 15 53.0	
	comp=E,224nm,0.8s						
CEN1	**Los Morros**	1.89	260	eP	P	07 15 45.8	+2.6
CEN1				i S	S	07 16 12.7	+3.8
CEN1				AMP		07 16 21.8	
	comp=N,208nm,0.4s						
ANCH	**Antofagasta**	2.14	253	eP	P	07 15 46.9	+0.6
ANCH				i S	S	07 16 15.1	+0.7
CPN1	**Cerro Paranal**	2.56	233	eP	P	07 15 54.2	+2.6
CPN1				i S	S	07 16 26.6	+2.9

NEIC ***10*** *07:56:49.4, 34.78S×71.80W, h37^{km}, MD3.5(GUC), After GUC.*
GUC 10 07:56:49.4±0.6, **34.78S**×**71.80W**, **h37**^{km}±5^{km}, **MD3.5, ML2.3, 2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNV	**Longovilo**	0.88	22	eP	P	07 57 05.3	-0.1
CACH	**El Canelo**	1.19	57	eP	P	07 57 10.8	+1.0
CACH				i S	S	07 57 27.6	+2.5
CICH	**Cipreses**	1.23	69	eP	P	07 57 11.3	+0.9
CICH				i S	S	07 57 27.5	+1.5
CHCH	**Chadas Angostu**	1.27	49	⇓iP	P	07 57 12.2	+1.3
CHCH				i S	S	07 57 28.8	+1.8
RCDM	**Rinconada Maip**	1.53	33	⇓iP	P	07 57 15.4	+0.8
RCDM				i S	S	07 57 35.0	+1.5
RCDM				AMP		07 57 42.7	
	comp=E,72nm,0.6s						

ATH ***10*** *08:04:34.5, 38.16N×26.83E, h36^{km}±13^{km}, MD3.0/3*
ISK ***10*** *08:04:35.6, 38.15N×26.82E, h21^{km}, MD2.8*
CSEM ***10*** *08:04:35.6±0.1, 38.19N×26.84E, h25^{km}, MD2.8, Error ellipse: s-maj=2.9km s-min=1.6km az=96.0*
ISC 10 08:04:34.4±0.8, **38.18N**±0.04×**26.71E**±0.05, **h9**^{km}±6^{km}, **n13**, σ**0^{s}68**/20, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.20	335	i P	Pg	08 04 38.4	-0.5
URLA				i S	Sg	08 04 41.8	0.0
SMG	**Samos**	0.48	167	ePB	Pb	08 04 44.8	+0.3
SMG				eSB	Sb	08 04 52.2	+0.9
IZM	**Izmir**	0.49	63	PG	Pg	08 04 45.0	+0.6
IZM				SG	Sg	08 04 51.8	+0.8
KDAG	**Bornova**	0.50	63	i P	Pg	08 04 44.1	-0.3
KDAG				i S	Sg	08 04 50.6	-0.6
AYDN	**Tasoluk**	1.06	119	i P	Pb	08 04 55.3	+0.8
AYDN				i S	Sb	08 05 08.5	+0.2
AKS	**Akhisar**	1.12	51	PG	Pg	08 04 55.9	-0.9
PRK	**Paraskevi**	1.12	343	ePN	Pn	08 04 56.3	+0.1
PRK				eSN	Sn	08 05 11.5	-0.3
BODT	**Bodrum**	1.21	156	ePN	Pn	08 04 57.4	-0.1
BODT				eSN	Sn	08 05 12.4	-1.7
MLSB	**Milas**	1.22	136	ePN	Pn	08 04 57.0	-0.7
APE	**Apeiranthos**	1.45	221	ePN	Pn	08 05 01.1	+0.2
APE	**Apeiranthos**	1.45	221	ePN	Pn	08 05 01.0	+0.1
DAT	**Datca**	1.60	154	ePN	Pn	08 05 03.1	0.0
EZN	**Ezine**	1.68	350	ePN	Pn	08 05 05.4	+1.3

MAN 10 08:16:44.5, 8.92N×122.46E, h35^{km}, mb3.9, ML2.7, MS2.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	0.95	111	⇑eP	P	08 17 02.0	+0.6
DCPH				eS	S	08 17 14.1	+0.1
IPIL	**Ipil**	1.13	174	eP	P	08 17 04.0	0.0
IPIL				eS	S	08 17 14.5	-4.1
PAGZ	**Pagadian**	1.41	139	eP	P	08 17 08.2	+0.2
PAGZ				eS	S	08 17 20.3	-5.3
GUIM	**Jordan**	1.70	4	eP	P	08 17 12.2	0.0
GUIM				eS	S	08 17 49.3	+16

ATH ***10*** *08:37:20.6, 40.57N×21.74E, h23^{km}±2^{km}, MD3.2/4*
NEIC ***10*** *08:37:20.6, 40.57N×21.74E, h23^{km}, MD3.2(ATH), After ATH.*
THE ***10*** *08:37:22.4, 40.54N×21.66E, h11^{km}, ML3.0*
CSEM ***10*** *08:37:22.1±0.1, 40.54N×21.67E, h15^{km}, ML3.0, Error ellipse: s-maj=1.9km s-min=1.7km az=5.0*
TIR ***10*** *08:37:22.2, 40.56N×21.68E, h5^{km}*
ISC 10 08:37:21.5±0.4, **40.50N**±0.03×**21.73E**±0.03, **h6**^{km}±5^{km}, **n22**, σ**0^{s}95**/31, **2C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	**Kozani**	0.20	172	⇑iPB	Pb	08 37 27.5	+0.4
KZN				eSB	Sb	08 37 31.7	+1.0
FNA	**Florina**	0.39	316	ePg	Pg	08 37 29.1	-0.3
BIA	**Bitola**	0.60	329	i Pg	Pg	08 37 32.3	-1.3
BIA				i Sg	Sg	08 37 41.9	+0.2
GRG	**Griva**	0.68	48	ePg	Pg	08 37 35.4	+0.3
GRG				eSg	Sg	08 37 46.6	+2.4
LIT	**Litokhoron**	0.70	124	ePg	Pg	08 37 36.5	+1.0
LIT				eSg	Sg	08 37 48.6	+3.6
KBN	**Korca**	0.73	280	i Pg	Pg	08 37 35.7	-0.4
KBN				i Sg	Sg	08 37 46.3	+0.4
KBN	**Korca**	0.73	280	ePg	Pg	08 37 35.7	-0.4
KBN				i Sg	Sg	08 37 46.3	+0.4
MEV	**Metsovon**	0.81	209	ePg	Pg	08 37 37.7	-0.1
LSK	**Leskovik**	0.94	248	ePg	Pg	08 37 40.2	0.0
LSK				i Sg	Sg	08 37 53.7	+1.0
THE	**Thessaloniki**	0.95	82	ePg	Pg	08 37 41.1	+0.6
VAY	**Valandovo**	1.04	37	i Pg	Pg	08 37 41.6	-0.6
VAY				i Sg	Sg	08 37 56.2	+0.2
KNT	**Kendrikon**	1.10	53	ePg	Pg	08 37 42.8	-0.8
SOH	**Sokhos**	1.27	75	ePg	Pg	08 37 46.3	-0.6
SKO	**Skopje**	1.49	352	i Pn	Pn	08 37 50.4	+1.5
SKO				i Sn	Sn	08 38 09.8	+1.0
AGG	**Agios Georgios**	1.55	163	ePg	Pg	08 37 50.6	-1.8
EVR	**Evrytania**	1.58	178	ePN	Pn	08 37 50.2	-0.1
XOR	**Xorichti**	1.59	135	ePb	Pb	08 37 50.6	-0.4
PAIG	**Paliouri**	1.60	110	ePb	Pb	08 37 50.3	-0.7
NEO	**Neokhori**	1.65	136	ePN	Pn	08 37 51.1	-0.2
OUR	**Ouranopolis**	1.72	95	ePb	Pb	08 37 52.8	-0.4
NVR	**Nevrokopi**	1.82	62	ePN	Pn	08 37 52.1	-1.6
DIVS	**Divcibare**	3.82	341	⇑iPn	Pn	08 38 21.0	-1.2

NIED ***10*** *08:44:00, 33.20N×141.80E, h5^{km}, Mw4.6 Best double couple: M$_0$9.73×10^{15} NP1:φ$_s$238°, δ65°, λ112°. NP2:φ$_s$14°, δ33°, λ51°.*
IDC ***10*** *08:44:35.5±0.6, 33.25N×141.83E, mb4.2/14, mb1 4.4/18, mb1mx4.3/24, mbtmp4.2/18, ML3.9/4, MS3.9/9, Ms1 3.9/9, ms1mx3.6/27, Error ellipse: s-maj=16.3km s-min=14.6km az=178.0*
JMA ***10*** *08:44:38.2±0.5, 33.25N×141.84E, h100^{km}, M3.7*
BJI ***10*** *08:44:40.7, 33.45N×142.02E, h72^{km}, mB4.7, mb4.6, Ms4.6, Msz4.3*
MOS ***10*** *08:44:40.0±1.0, 33.23N×141.64E, h40^{km}, mb4.7/20, Error ellipse: s-maj=16.1km s-min=8.1km az=120.0*
NEIC ***10*** *08:44:42.6±1.1, 33.28N×141.68E, h48^{km}±9^{km}, mb4.6/21, MW4.6(NIED), Error ellipse: s-maj=8.7km s-min=7.3km az=140.0*
ISC 10 08:44:38.1±1.5, **33.17N**±0.03×**141.78E**±0.05, **h28**^{km}±11^{km}, **n113**, σ**1^{s}10**/124, **mb4.5**/40, **MS4.2**/11, **1C-2D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	1.62	336	eS	Sn	08 45 26.5	+1.1
JHJ2	**Mitsune**	1.65	268	P	Pn	08 45 07.3	+1.7
JHJ	**Hachijo jima 2**	1.67	269	Pn	Pn	08 45 07.3	+1.3
	68nm,0.3s,baz=161,slow=8.9,SNR=31						
JHJ				Sn	Sn	08 45 31.2	+4.5
	161nm,0.3s,baz=221,slow=14,SNR=6.7						
BSO2	**Boso 2**	1.79	332	eS	Sn	08 45 31.5	+1.8
BSO3	**Boso 3**	1.94	327	P	Pn	08 45 10.4	+0.6
BSO3				S	Sn	08 45 35.6	+2.2
JMY	**Miyakejima3**	2.09	296	P	Pn	08 45 12.9	+0.9
BSO4	**Boso 4**	2.17	327	P	Pn	08 45 13.2	0.0
BSO4				eS	Sn	08 45 40.7	+1.3
NJJJ	**Nii jima 2**	2.41	301	P	Pn	08 45 16.8	+0.2
JIM2	**Oshima 3**	2.49	309	P	Pn	08 45 16.8	-0.9
JIM2				eS	Sn	08 45 46.7	-0.7
JIZS	**Izushimoda**	2.86	303	P	Pn	08 45 22.9	-0.1
JIZS				S	Sn	08 45 57.3	+0.4
JOD2	**Odawara 2**	3.05	314	P	Pn	08 45 24.9	-0.8
SHZ3	**Shizuoka 3**	3.51	304	P	Pn	08 45 33.3	+1.1
JYN	**Shimob**	3.54	312	P	Pn	08 45 31.8	-0.8
JRY	**Ryogami san**	3.70	321	P	Pn	08 45 34.9	0.0
JAG	**Ashikaga**	3.77	330	P	Pn	08 45 34.9	-0.9
JAG				S	Sn	08 46 17.3	-2.5
MJAR	**Matsushiro Arr**	4.46	320	Pn	Pn	08 45 45.0	-0.7
	3.8nm,0.3s,baz=150,slow=12,SNR=16						
MJAR				Sn	Sn	08 46 36.7	-0.7
	4.2nm,0.3s,baz=200,slow=19,SNR=8.0						
MJAR	**Matsushiro Arr**	4.46	320	Pn	Pn	08 45 45.0	-0.7
MJAR				Sn	Sn	08 46 36.7	-0.7
MAJO	**Matsushiro**	4.46	320	ePn	Pn	08 45 45.1	-0.6
MAT	**Matsushiro**	4.46	320	P	Pn	08 45 45.5	-0.3
MAT				S	Sn	08 46 35.8	-1.6
MAT	**Matsushiro**	4.46	320	P	Pn	08 45 46.0	+0.2
MAT	**Matsushiro**	4.46	320	eP	Pn	08 45 46.0	+0.2
MAT				eS	Sn	08 46 36.0	-1.4
JMM	**Marumori**	4.75	351	P	Pn	08 45 46.5	-3.3
JMM				S	Sn	08 46 36.5	-8.2
JGM	**Miyama**	4.88	302	P	Pn	08 45 52.9	+1.2
CBIJ	**Chichi jima**	6.07	177	Pn	Pn	08 46 06.9	-1.5
	24nm,0.3s,baz=116,slow=21,SNR=21						
CBIJ				Sn	Sn	08 47 14.2	-3.4
	7.8nm,0.3s,baz=95,slow=23,SNR=3.3						
CBIJ				LR	LR	08 48 03.3	
	comp=Z,416nm,20.1s,baz=126,slow=34						
JNU	**Nakatsue**	9.14	273	Pn	P	08 46 50.7	-0.6
	0.7nm,0.3s,baz=192,slow=2.7,SNR=6.9						
ASAJ	**Asahikawa**	10.95	3	Pn	P	08 47 11.9	-4.1
	0.8nm,0.3s,baz=144,slow=31,SNR=5.1						
ASAJ				Sn	S	08 49 07.0	-12
	0.6nm,0.3s,baz=0.7,slow=32,SNR=3.4						
YSS	**Yuzh-Sakhalins**	13.79	3	eP	P	08 47 48.0	-6.0
CN2	**Changchun**	16.59	315	eP	P	08 48 31.3	+1.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CN2				AMB	AMB		
	comp=Z,300nm,8.0s						
CN2				LR	LR		
	comp=N,850nm,12.0s						
CN2				LR	LR		
	comp=E,1μm,12.0s						
CN2				LR	LR		
	comp=Z,750nm,16.0s						
SSE	**Sheshan**	17.56	269	eP	P	08 48 45.5	+2.9
SSE				PP	PP	08 49 01.2	+4.1
SSE				AMB	AMB		
	comp=Z,40nm,0.6s						
SSE				AMB	AMB		
	comp=Z,180nm,10.4s						
SSE				LR	LR		
	comp=N,690nm,13.5s						
SSE				LR	LR		
	comp=E,220nm,13.5s						
SSE				LR	LR		
	comp=Z,1μm,14.1s						
SSE	**Sheshan**	17.56	269	eP	P	08 48 45.5	+2.9
	comp=Z,48nm,0.6s						
SSE				pP		08 48 52.4	
SSE				sP		08 48 56.0	
SSE				PP	PP	08 49 01.2	+4.1
SSE				PPP	PPP	08 49 06.4	+0.8
SSE				S	S	08 51 46.0	-9.1
SSE				sS		08 51 58.6	
SSE				ScS	ScS	09 00 51.0	+18
NJ2	**Nanjing**	19.34	273	eP	P	08 49 07.6	+3.4
NJ2				AP		08 49 15.5	
NJ2				PP	PP	08 49 22.6	+1.1
NJ2				AMB	AMB		
	comp=Z,30nm,1.1s						
NJ2				AMB	AMB		
	comp=Z,280nm,3.8s						
NJ2				LR	LR		
	comp=N,410nm,12.8s						
NJ2				LR	LR		
	comp=E,450nm,11.0s						
NJ2				LR	LR		
	comp=Z,580nm,11.5s						
HIA	**Hailar**	22.96	321	P	P	08 49 42.1	+0.9
	comp=Z,15nm,1.0s,mb4.4						
HIA	**Hailar**	22.96	321	P	P	08 49 42.1	+0.9
HIA				pmax	pmax		
	comp=Z,15nm,1.0s						
WHN	**Wuhan**	23.42	271	eP	P	08 49 46.4	+0.6
HHC	**Hu-ho-hao-te**	25.23	296	⇓P	P	08 50 03.3	+0.2
HHC				AP	pP	08 50 14.3	+3.1
HHC				PP	PP	08 50 42.0	+0.4
HHC				PCP	PcP	08 53 38.6	+1.6
HHC				S	S	08 54 28.9	+4.8
HHC				SS	SS	08 55 21.8	-3.6
HHC				SCP		08 57 10.5	
HHC				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.5						
HHC				AMB	AMB		
	comp=Z,180nm,4.4s						
HHC				LR	LR		
	comp=N,230nm,6.3s						
HHC				LR	LR		
	comp=E,380nm,6.9s						
HHC				LR	LR		
	comp=Z,220nm,7.6s						
BTO	**Baotou**	26.36	296	eP	P	08 50 13.5	-0.1
BTO				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
ENH	**Enshi**	27.56	273	eP	P	08 50 22.7	-2.0
	comp=Z,18nm,0.9s,mb4.7						
CIT	**Chita**	27.77	321	eP	P	08 50 26.9	+0.5
CIT				e		08 56 43.2	
CIT				pmax	pmax		
	comp=Z,25nm,2.2s,mb4.5						
FX1	**Attu Island--F**	29.88	39	LR	LR	09 02 24.9	
	comp=Z,23nm,18.4s,baz=250,slow=36						
SONM	**Songino Array**	30.33	309	P	P	08 50 49.7	+0.3
	comp=Z,11nm,0.9s,mb4.6,baz=109,slow=7.1,SNR=47						
SONM				LR	LR	09 03 20.9	
	comp=Z,339nm,18.9s,MS4.0,baz=276,slow=37						
SEY	**Seymchan**	30.53	10	i P	P	08 50 50.5	-0.5
BOD	**Bodaibo**	31.00	331	eP	P	08 50 52.9	-2.3
BOD				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
LZH	**Lanzhou**	31.22	286	eP	P	08 50 56.6	-0.8
LZH				XS		08 56 28.0	
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,170nm,4.5s						
LZH				LR	LR		
	comp=E,2μm,13.2s						
LZH				LR	LR		
	comp=Z,2μm,14.4s,MS4.9						
LZH	**Lanzhou**	31.22	286	eP	P	08 50 56.6	-0.8
	comp=Z,29nm,1.4s,mb4.9						
LZH				pP	pP	08 51 00.5	-5.1
LZH				sP	sP	08 51 04.2	-5.0
LZH				PP	PP	08 52 10.0	+9.4
LZH				eS	S	08 56 20.4	+20
LZH				sS		08 56 28.0	
LZH				eSS	SS	08 58 30.0	+43
LZH				LR	LR		
	comp=Z,2μm,14.4s,MS4.9						
LZH	**Lanzhou**	31.22	286	eP	P	08 50 56.6	-0.8
LZH				*SP	sP	08 51 04.2	-5.0
LZH						08 52 10.0	
LZH				pmax	pmax		
	comp=Z,29nm,1.4s,mb4.9						
LZH				MLR	MLR		
	comp=Z,2μm,14.4s,MS4.9						
GTA	**Gaotai**	34.16	293	eP	P	08 51 21.9	-1.0
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
TIXI	**Tiksi**	39.15	354	eP	P	08 52 00.7	-4.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb3.9						
TIXI				MLR	MLR		
	comp=Z,254nm,12.0s,MS4.3						
WMQ	**Urumqi**	42.96	301	P	P	08 52 37.6	+1.3
ZAL	**Zalesovo**	44.81	315	P	P	08 52 50.3	-0.8
	comp=Z,1.5nm,0.3s,mb4.3,baz=36,slow=6.5,SNR=4.4						
ZAL				LR	LR	09 13 05.4	
	comp=Z,204nm,18.9s,MS4.1,baz=18,slow=38						
NVS	**Novosibirsk**	45.78	316	eP	P	08 53 03.5	+4.7
MKAR	**Makanchi Array**	46.51	305	P	P	08 53 04.5	-0.1
	comp=Z,4.2nm,0.8s,mb4.4,baz=89,slow=8.8,SNR=26						
MKAR				LR	LR	09 13 14.4	
	comp=Z,175nm,18.0s,MS4.0,baz=72,slow=37						
MKAR	**Makanchi Array**	46.51	305	i P	P	08 53 04.5	-0.1
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
JIRN	**Jiri**	47.79	279	eP	P	08 53 14.7	-0.3
	comp=Z,56nm,1.2s,mb5.5						
GUN	**Gumba**	47.95	279	eP	P	08 53 16.2	-0.1
PKI	**Pulchoki**	48.46	279	eP	P	08 53 19.7	-0.6
KURK	**Kurchatov**	48.61	311	eP	P	08 53 19.9	-1.2
	comp=Z,8.5nm,0.9s,mb4.8						
KURK	**Kurchatov**	48.61	311	⇑eP	P	08 53 20.0	-1.1
GKN	**Gorkha**	48.95	280	eP	P	08 53 23.1	-0.9
KOLN	**Koldanda**	49.89	280	eP	P	08 53 30.9	-0.3
	comp=Z,7.2nm,0.6s,mb4.9						
ILAR	**Eielson Array**	52.62	31	P	P	08 53 50.5	-0.9
	comp=Z,1.4nm,0.8s,mb3.9,baz=262,slow=6.2,SNR=9.2						
ILAR				LR	LR	09 16 23.3	
	comp=Z,80nm,18.5s,MS3.8,baz=180,slow=36						
AAK	**Ala-Archa**	52.66	301	eP	P	08 53 51.5	-0.6
	comp=Z,3.5nm,0.9s,mb4.3						
AAK	**Ala-Archa**	52.66	301	eP	P	08 53 51.5	-0.5
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
CHKZ	**Chkalovo**	53.21	315	eP	P	08 53 54.7	-1.2
	comp=Z,7.4nm,0.8s,mb4.7						
CHKZ				e		08 54 08.8	
CHKZ	**Chkalovo**	53.21	315	eP	P	08 53 54.7	-1.2
CHKZ				e		08 54 08.8	
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	53.27	199	eP	P	08 53 57.5	+0.7
	comp=Z,16nm,0.6s,mb5.1						
FITZ				e		08 54 09.6	
WRAB	**Tennant Creek**	53.28	189	eP	P	08 53 56.2	-0.7
	comp=Z,7.5nm,0.7s,mb4.7						
WRAB	**Tennant Creek**	53.28	189	eP	P	08 53 56.2	-0.7
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
WB2	**Warramunga Arr**	53.29	189	eP	P	08 53 56.6	-0.4
WRA	**Warramunga Arr**	53.29	189	P	P	08 53 56.7	-0.3
	comp=Z,4.6nm,0.5s,mb4.6,baz=6.5,slow=7.7,SNR=119						
BRVK	**Borovoye**	53.50	315	eP	P	08 53 57.2	-0.8
	comp=Z,3.2nm,0.9s,mb4.2						
BRVK	**Borovoye**	53.50	315	eP	P	08 53 57.2	-0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
ASPA	**Alice Springs**	57.02	189	eP	P	08 54 24.6	+0.6
INK	**Inuvik**	57.70	26	P	P	08 54 27.5	-0.7
	comp=Z,1.1nm,0.8s,mb3.9,baz=249,slow=8.6,SNR=2.5						
INK	**Inuvik**	57.70	26	eP	P	08 54 27.8	-0.3
	comp=Z,5.0nm,1.2s,mb4.4						
INK	**Inuvik**	57.70	26	eP	P	08 54 27.8	-0.4
INK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ARU	**Arti**	59.48	320	eP	P	08 54 39.4	-1.3
	comp=Z,11nm,1.1s,mb4.8						
ARU	**Arti**	59.48	320	⇓iP	P	08 54 39.3	-1.4
ARU				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
ARU				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
BBB	**Bella Bella**	64.65	43	P	P	08 55 15.4	+0.1
	comp=Z,52nm,1.0s,mb5.5,baz=243,slow=4.5,SNR=2.2						
STKA	**Stephens Creek**	64.70	180	P	P	08 55 15.6	-0.4
	comp=Z,4.8nm,1.1s,mb4.5,baz=302,slow=4.4,SNR=3.3						
STKA	**Stephens Creek**	64.70	180	eP	P	08 55 16.0	0.0
NWAO	**Narrogin (SRO)**	69.69	202	eP	P	08 55 49.7	+2.3
	comp=Z,7.6nm,0.7s,mb4.7						
NWAO	**Narrogin (SRO)**	69.69	202	eP	P	08 55 49.7	+2.3
NWAO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
FINES	**FINESS Array B**	72.37	333	P	P	08 56 02.2	-0.8
	comp=Z,3.5nm,0.8s,mb4.3,baz=124,slow=6.9,SNR=5.1						
FINES				LR	LR	09 29 03.6	

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       comp=Z,101nm,18.3s,MS4.1,baz=14,slow=37
YBH    Yreka Blue Hor     72.49  51   LR      LR        09 22 25.8
       comp=Z,152nm,19.2s,MS4.3,baz=324,slow=31
NEW    Newport            72.71  43   P       P         08 56 06.6 +1.4
       comp=Z,5.0nm,1.1s,mb4.4
NEW    Newport            72.71  43   P       P         08 56 06.6 +1.4
NEW                                   pmax    pmax
       comp=Z,5.0nm,1.1s
KIV    Kislovodsk         73.68 312  eP       P         08 56 12.2 +1.2
       comp=Z,20nm,0.9s,mb5.0
KIV    Kislovodsk         73.68 312  eP       P         08 56 12.1 +1.1
KIV                                  e                  08 56 32.4
KIV                                   pmax    pmax
       comp=Z,9.0nm,0.6s,mb4.9
KIV                                   MLR     MLR
       comp=Z,166nm,16.0s,MS4.4
CMB    Columbia Colle     75.89  54   P       P         08 56 24.6 +0.8
       comp=Z,3.0nm,0.8s,mb4.3
CMB    Columbia Colle     75.89  54   P       P         08 56 24.6 +0.8
CMB                                   pmax    pmax
       comp=Z,3.0nm,0.8s,mb4.3
HRY    Holter Researc     76.57  43  eP       P         08 56 26.6 -0.8
NVAR   Mina Array Bea     77.08  53   P       P         08 56 30.4 -0.1
       comp=Z,1.2nm,0.8s,mb3.9,baz=302,slow=3.9,SNR=9.2
AKASG  Malin Array Be     77.54 323   P       P         08 56 31.1 -1.7
       comp=Z,0.7nm,0.4s,mb3.9,baz=49,slow=5.8,SNR=7.6
AKASG  Malin Array Be     77.54 323  i P      P         08 56 33.0 +0.3
AKASG                                 pmax    pmax
       comp=Z,1.0nm,0.4s
NOA    NORSAR Array B     77.86 338   P       P         08 56 32.5 -1.7
       comp=Z,3.0nm,0.9s,mb4.2,baz=40,slow=5.6,SNR=5.2
NOA                                   LR      LR        09 35 31.8
       comp=Z,128nm,18.5s,MS4.3,baz=30,slow=39
TPNV   Topopah Spring     79.25  53  eP       P         08 56 44.8 +2.4
       comp=Z,3.6nm,1.1s,mb4.2
TPNV   Topopah Spring     79.25  53  eP       P         08 56 44.8 +2.4
TPNV                                  pmax    pmax
       comp=Z,4.0nm,1.1s,mb4.3
DUG    Dugway             79.67  49  eP       P         08 56 45.0 +0.4
       comp=Z,2.5nm,0.8s,mb4.2
DUG    Dugway             79.67  49  eP       P         08 56 45.0 +0.4
DUG                                   pmax    pmax
       comp=Z,3.0nm,0.8s,mb4.3
PDAR   Pinedale Array     80.17  45   P       P         08 56 47.3 +0.1
       comp=Z,0.6nm,0.7s,mb3.7,baz=304,slow=2.7,SNR=5.5
NEN    Nelson             80.92  53  eP       P         08 56 51.7 +0.4
BR131  Keskin Array S     81.65 312  eP       P         08 56 54.8 -0.3
       comp=Z,2.7nm,0.7s,mb4.3
BRTR   Keskin Array B     81.65 312   P       P         08 56 55.0  0.0
       comp=Z,3.7nm,0.8s,mb4.4,baz=90,slow=2.5,SNR=14
SRU    San Rafael         81.73  48  eP       P         08 56 56.9 +1.4
       comp=Z,6.0nm,0.7s,mb4.6
SRU    San Rafael         81.73  48  eP       P         08 56 56.9 +1.4
SRU                                   pmax    pmax
       comp=Z,6.0nm,0.7s,mb4.6
PV10   Paradox Valley     83.10  48  eP       P         08 57 04.8 +2.1
PV01   Paradox Valley     83.54  48  eP       P         08 57 06.1 +1.2
CLL    Collm              84.59 331   P       P         08 57 10.0 +0.2
CLL                                  ePCP     PcP       08 57 14.0 +0.2
TXAR   Lajitas Array      92.23  53   P       P         08 57 47.2 +0.4
       comp=Z,0.3nm,0.7s,mb3.7,baz=256,slow=5.2,SNR=4.4
TXAR   Lajitas Array      92.23  53   P       P         08 57 47.2 +0.4
SAML   Samuel            146.66  49  ePKPdf   PKPdf     09 04 17.0 -4.1
LPAZ   La Paz            148.21  65   PKPbc   PKPdf     09 04 25.1 +1.6
       comp=Z,2.1nm,0.9s,baz=342,slow=7.0,SNR=7.9
LPAZ   La Paz            148.21  65  ePKPbc   PKPdf     09 04 25.2 +1.7
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*MOS **10** 08:55:27.4±0.9, 57.21N×155.74W, h33^{km}, mb4.9/4, Error ellipse: s-maj=28.1km s-min=10.4km az=78.8*

*IDC **10** 08:55:33.7±2.5, 57.51N×155.35W, h61^{km}±20^{km}, mb4.0/17, mb1 4.1/20, mb1mx4.0/26, mbtmp4.2/20, MS3.2/3, Ms1 3.2/3, ms1mx2.9/28, Error ellipse: s-maj=23.1km s-min=13.2km az=31.0*

*NEIC **10** 08:55:34.0, 57.17N×155.20W, h40^{km}, mb3.9/8, ML3.7(AEIC), After AEIC.*

ISC 10 08:55:33.3±0.5**, 57.39N**±0.04×**155.32W**±0.06**, h78**^{km}±4^{km}**, n107, σ1^{s}12**/111**, mb4.3**/33**, 2C-2D, Alaska Peninsula**

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Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
CAHL   Cahill              0.67   1   P       P         08 55 49.3 +0.6
KJL    Kejulik             0.68 349   P       P         08 55 49.6 +0.8
KABR   Katmai Barrier      0.77  14   P       P         08 55 50.4 +0.6
MGLS   Mageik LS           0.83 360   P       P         08 55 50.3 -0.1
KAPH   Katmai Pasha        1.32  23   P       P         08 55 58.0 +1.3
KDAK   Kodiak Island       1.53  74   P       P         08 55 58.5 -1.0
       52nm,0.3s,baz=231,slow=6.6,SNR=1008
KDAK                                  S       S         08 56 17.1 -1.5
       139nm,0.3s,baz=254,slow=5.5,SNR=50
KDAK   Kodiak Island       1.53  74   P       P         08 55 58.4 -1.1
KDAK                                  S       S         08 56 17.5 -1.1
ANPK   Aniakchak Peak      1.63 252   P       P         08 55 59.3 -1.4
AUI    Augustine Isla      2.19  26   P       P         08 56 09.8 +1.3
AGU    Augustine-Summ      2.21  26   P       P         08 56 11.0 +2.2
AUP    Augustine Pinn      2.22  26   P       P         08 56 10.6 +1.8
OPT    Oil Point           2.52  25   P       P         08 56 14.8 +1.7
XLV    Seldovia            2.81  41   P       P         08 56 18.6 +1.5
ILW    Iliamna West        2.91  22   P       P         08 56 19.7 +1.2
INE    Iliamna NE          2.93  23   P       P         08 56 20.3 +1.5
CNPM   China Poot          3.03  43   P       P         08 56 20.6 +0.4
RSO    Redoubt South       3.36  22   P       P         08 56 26.4 +1.7
SDPT   Sand Point          3.52 237   P       P         08 56 27.0  0.0
SVW2   Sparrevohn          3.72 358  eP       P         08 56 30.5 +0.7
SLKM   Skilak Lake         4.09  38  eP       P         08 56 34.5 -0.5
SEW    Seward              4.09  46   P       P         08 56 33.7 -1.2
CKL    Chakachamna La      4.12  21   P       P         08 56 36.5 +1.3
SPU    Mount Spurr         4.16  22   P       P         08 56 36.6 +0.8
PN7A   Pavlof North-7      4.20 245   P       P         08 56 34.9 -1.4
STLK   Strandline Lak      4.49  22   P       P         08 56 41.8 +1.3
RC01   Rabbit Creek A      4.69  35   P       P         08 56 42.9 -0.3
PMR    Palmer              5.26  34  eP       P         08 56 51.9 +0.8
GHO    Glory Hole Cre      5.47  34   P       P         08 56 52.9 -1.0
HIN    Hinchinbrook I      5.48  53   P       P         08 56 52.6 -1.4
TT01   Tatalina            5.55 357   P       P         08 56 56.1 +1.1
SML    Sawmill             5.68  36  eP       P         08 56 56.5 -0.3
EYAK   Cordova Ski Ar      5.88  53   P       P         08 56 57.8 -1.8
VLZ    Valdez              5.94  47   P       P         08 56 59.1 -1.3
SCM    Sheep Creek Mo      6.03  39   P       P         08 57 00.7 -0.9
KLU    Klutina             6.32  45   P       P         08 57 04.6 -1.1
KTH    Kantishna Hill      6.55  18   P       P         08 57 09.4 +0.4
BMRM   Bremner River       6.57  52   P       P         08 57 07.8 -1.4
GCSA   Galena City Sc      7.42 355   P       P         08 57 21.6 +0.6
BALM   Baldy               7.59  56   P       P         08 57 21.7 -1.6
WRH    Wood River Hil      7.93  23   P       P         08 57 25.6 -2.3
CCB    Clear Creek Bu      8.14  23   P       P         08 57 28.8 -1.9
MDM    Murphy Dome         8.33  21   P       P         08 57 31.6 -1.7
IL1    Eielson Array       8.45  25   P       P         08 57 33.4 -1.7
ILAR   Eielson Array       8.45  25   P       P         08 57 32.8 -2.3
       0.8nm,0.3s,baz=215,slow=14,SNR=35
ILAR                                  S       S         08 59 03.7 -6.0
       0.5nm,0.3s,baz=355,slow=25,SNR=5.0
ILAR                                  LR      LR        09 01 11.3
       comp=Z,69nm,18.4s,baz=184,slow=40
PNL    Peninsula           8.64  68   P       P         08 57 34.6 -3.0
IM3    Indian Mountai      8.66   4   P       P         08 57 37.6 -0.2
DAWY   Dawson             10.26  43   P       P         08 57 58.7 -0.6
BM3    Burnt Mountain     11.20  22   P       P         08 58 08.7 -3.4
DLBC   Dease Lake         13.46  75   P       P         08 58 43.2 +1.2
       0.1nm,0.3s,baz=232,slow=12,SNR=3.3
DLBC                                  S       S         09 01 05.9 -4.2
       0.1nm,0.3s,baz=311,slow=26,SNR=2.8
DLBC                                  LR      LR        09 03 18.9
       comp=Z,122nm,19.0s,baz=114,slow=35
DLBC   Dease Lake         13.46  75   P       P         08 58 43.2 +1.2
DLBC                                  S       S         09 01 05.9 -4.2
DLBC                                  LR      LR        09 03 18.9
INK    Inuvik             14.68  33   P       P         08 58 57.1 -0.5
       0.2nm,0.3s,baz=240,slow=16,SNR=10
INK    Inuvik             14.68  33  eP       P         08 58 58.6 +1.0
       3.9nm,0.4s
INK    Inuvik             14.68  33  eP       P         08 58 58.6 +1.0
INK                                   pmax    pmax
       comp=Z,4.0nm,0.4s
BILL   Bilibino           20.19 317⇓iP       P         09 00 03.3 -0.2
BILL                                  pmax    pmax
       comp=Z,19nm,1.4s
BILL                                  MLR     MLR
       comp=Z,200nm,17.0s
BILL                                  MLR     MLR
       comp=Z,200nm,16.0s
YKA    Yellowknife Ar     20.75  59   P       P         09 00 09.0 -0.2
       comp=Z,2.1nm,0.6s,baz=272,slow=9.9,SNR=3.6
EDM    Edmonton           23.96  82  eP       P         09 00 42.2 +1.5
NEW    Newport            24.52  95   LR      LR        09 09 22.8
       comp=Z,62nm,18.4s,baz=82,slow=34
NEW    Newport            24.52  95   P       P         09 00 47.1 +1.0
       comp=Z,1.2nm,0.6s,mb3.5
NEW    Newport            24.52  95   P       P         09 00 47.2 +1.0
NEW                                   pmax    pmax
       comp=Z,1.0nm,0.6s
HLID   Hailey             28.98 101  eP       P         09 01 27.6 +0.4
       comp=Z,1.1nm,0.9s,mb3.5
ELK    Elko               30.53 106  eP       P         09 01 41.6 +0.7
       comp=Z,0.8nm,0.5s,mb3.7
ELK    Elko               30.53 106  eP       P         09 01 41.7 +0.7
ELK                                   pmax    pmax
       comp=Z,1.0nm,0.5s
NVAR   Mina Array Bea     30.69 112   P       P         09 01 43.3 +0.8
       comp=Z,1.0nm,0.5s,mb3.8,baz=312,slow=7.9,SNR=12
BW06   Boulder Array      32.12  97  eP       P         09 01 54.9  0.0
       comp=Z,1.5nm,0.4s,mb4.1
PDAR   Pinedale Array     32.12  97   P       P         09 01 55.5 +0.6
       comp=Z,2.4nm,0.6s,mb4.1,baz=318,slow=5.2,SNR=27
DUG    Dugway             32.20 104   P       P         09 01 56.2 +0.6
TPNV   Topopah Spring     32.86 111  eP       P         09 02 02.2 +0.7
TIXI   Tiksi              32.92 326  i P      P         09 02 00.8 -0.8
TIXI                                  pmax    pmax
       comp=Z,3.0nm,0.8s,mb4.2
ULM    Lac du Bonnet      34.78  76   P       P         09 02 18.0 +0.2
       comp=Z,3.3nm,0.7s,mb4.3,baz=286,slow=7.3,SNR=6.0
YAK    Yakutsk            36.15 309  i P      P         09 02 28.4 -0.9
YAK                                   pmax    pmax
       comp=Z,12nm,0.6s,mb5.0
YAK                                   MLR     MLR
       comp=Z,100nm,14.0s
SDCO   Great Sand Dun     37.87  99  eP       P         09 02 45.3 +1.4
       comp=Z,1.0nm,0.7s,mb3.8
ASAJ   Asahikawa          40.02 278   P       P         09 03 01.4 -0.3
       comp=Z,5.4nm,0.7s,mb4.5,baz=102,slow=32,SNR=4.4
WMOK   Wichita Mounta     43.72  96  eP       P         09 03 31.9 -0.1
       comp=Z,1.8nm,0.6s,mb4.0
WMOK   Wichita Mounta     43.72  96  eP       P         09 03 31.9 -0.1
WMOK                                  pmax    pmax
       comp=Z,2.0nm,0.6s,mb4.0
TXAR   Lajitas Array      45.32 106   P       P         09 03 45.5 +0.6
       comp=Z,1.0nm,0.7s,mb3.6,baz=315,slow=5.6,SNR=13
TXAR   Lajitas Array      45.32 106   P       P         09 03 45.5 +0.6
ARCES  ARCESS Array B     53.38 360   P       P         09 04 45.4 -0.9
       comp=Z,2.6nm,0.8s,mb4.3,baz=9.5,slow=7.4,SNR=6.9
SONM   Songino Array      55.34 306   P       P         09 05 00.7 -0.1
       comp=Z,4.9nm,0.7s,mb4.7,baz=41,slow=6.9,SNR=38
ZAL    Zalesovo           58.77 323   P       P         09 05 24.4 -0.5
       comp=Z,2.3nm,0.6s,mb4.4,baz=70,slow=7.2,SNR=7.0
JOF    Joensuu            59.92 356  ep       P         09 05 31.6 -1.1
KAF    Kangasniemi        60.83 359  ep       P         09 05 38.2 -0.7
NB2    NORSAR Subarra     61.44   7   P       P         09 05 42.9 -0.2
       comp=Z,2.7nm,0.7s,mb4.4,baz=352,slow=7.0
NOA    NORSAR Array B     61.44   7   P       P         09 05 43.2 +0.2
       comp=Z,4.6nm,0.8s,mb4.6,baz=353,slow=6.8,SNR=10
NOA    NORSAR Array B     61.44   7   P       P         09 05 43.2 +0.1
FINES  FINESS Array B     61.50 359   P       P         09 05 42.5 -0.9
       comp=Z,3.5nm,0.8s,mb4.4,baz=11,slow=9.7,SNR=8.3
CHKZ   Chkalovo           63.15 331  eP       P         09 05 52.4 -2.2
       comp=Z,7.2nm,1.0s,mb4.6
CHKZ   Chkalovo           63.15 331  eP       P         09 05 52.4 -2.2
CHKZ                                  pmax    pmax
       comp=Z,7.0nm,1.0s,mb4.5
ARU    Arti               63.30 340⇑iP       P         09 05 54.4 -1.2
ARU                                  e                  09 08 10.0
ARU                                  eS       S         09 14 22.7 +2.9
ARU                                  eSS      SS        09 18 27.2 -2.2
ARU                                   pmax    pmax
       comp=Z,6.0nm,0.8s,mb4.6
KURK   Kurchatov          63.49 325  i P      P         09 05 56.3 -0.6
BVAR   Borovoye Array     63.80 331   P       P         09 05 58.3 -0.4
       comp=Z,7.0nm,0.6s,mb4.7,baz=37,slow=6.4,SNR=36
MKAR   Makanchi Array     65.70 320   P       P         09 06 10.2 -0.9
       comp=Z,1.7nm,0.5s,mb4.1,baz=37,slow=7.1,SNR=20
AKTO   Aktyubinsk         69.09 338   P       P         09 06 31.4 -0.8
       comp=Z,4.8nm,0.7s,mb4.5,baz=31,slow=6.6,SNR=18
AAK    Ala-Archa          71.97 324  eP       P         09 06 49.1 -0.7
       comp=Z,4.8nm,0.7s,mb4.4
AAK    Ala-Archa          71.97 324  eP       P         09 06 49.1 -0.7
AAK                                   pmax    pmax
       comp=Z,5.0nm,0.7s,mb4.5
AKASG  Malin Array Be     72.21 357   P       P         09 06 50.2 -0.8
       comp=Z,5.5nm,0.5s,mb4.6,baz=5.2,slow=5.8,SNR=23
AKASG  Malin Array Be     72.21 357  i P      P         09 06 50.7 -0.3
AKASG                                 pmax    pmax
       comp=Z,6.0nm,0.5s
KHC    Kasperske Hory     73.45   8⇓iP       P         09 07 00.0 +1.9
GERES  GERESS Array B     73.74   8   P       P         09 07 00.6 +0.8
       comp=Z,0.5nm,0.5s,mb3.5,baz=342,slow=4.2,SNR=3.7
KIV    Kislovodsk         77.91 347⇑eP       P         09 07 24.9 +1.4
KIV                                   MLR     MLR
       comp=Z,100nm,15.0s
GUN    Gumba              80.76 308  eP       P         09 07 40.0 +0.7
       comp=Z,6.3nm,0.4s,mb4.8
JIRN   Jiri               80.85 308  eP       P         09 07 41.0 +1.2
       comp=Z,22nm,0.7s,mb5.1
GKN    Gorkha             81.20 309  eP       P         09 07 42.2 +0.5
       comp=Z,11nm,0.6s,mb4.8
PKI    Pulchoki           81.26 308  eP       P         09 07 42.6 +0.7
       comp=Z,11nm,0.8s,mb4.8
DMN    Daman              81.35 309  eP       P         09 07 43.0 +0.6
       comp=Z,13nm,0.7s,mb4.9
KOLN   Koldanda           81.84 310  eP       P         09 07 45.5 +0.5
       comp=Z,8.4nm,0.7s,mb4.7
BRTR   Keskin Array B     82.96 353   P       P         09 07 52.2 +1.8
       comp=Z,1.1nm,0.5s,mb3.9,baz=18,slow=3.9,SNR=5.7
QSPA   South Pole Qui    147.18 180  ePKP     PKPdf     09 15 07.2 +4.2
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*SOF **10** 08:56:47.5, 40.15N×21.41E, h10^{km}, MD3.0*

*PDG **10** 08:56:53.6±0.2, 40.38N×21.74E, h10^{km}±6^{km}*

*ATH **10** 08:56:55.0, 40.52N×21.90E, h16^{km}±3^{km}, MD3.7/5*

*NEIC **10** 08:56:55.0, 40.52N×21.90E, h16^{km}, MD3.7(ATH), MD3.4(PDG), After ATH.*

*THE **10** 08:56:55.7, 40.52N×21.69E, h8^{km}, ML3.5*

*CSEM **10** 08:56:56.8±0.1, 40.49N×21.86E, h12^{km}, MD3.7, Error ellipse: s-maj=1.8km s-min=1.8km az=129.0*

ISC 10 08:56:56.2±0.3**, 40.51N**±0.02×**21.79E**±0.03**, h16**^{km}**, n49, σ1^{s}38**/69**, 2C-6D, Greece**

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Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
KZN    Kozani              0.20 185⇑iPB      Pb        08 57 01.0 -0.1
KZN                                  eSB      Sb        08 57 05.2 +0.9
FNA    Florina             0.42 311  ePg      Pb        08 57 02.5 -2.3
BIA    Bitola              0.62 325  i Pg     Pb        08 57 05.7 -2.6
BIA                                  i Sg     Sb        08 57 14.9 -1.6
BIA                                  i Sg     Sb        08 57 14.9 -1.6
GRG    Griva               0.64  46  ePg      Pb        08 57 08.6  0.0
GRG                                  eSg      Sb        08 57 19.5 +2.4
LIT    Litokhoron          0.67 127  ePg      Pb        08 57 09.7 +0.6
MEV    Metsovon            0.84 211  ePg      Pb        08 57 10.9 -1.1
THE    Thessaloniki        0.90  82  ePg      Pb        08 57 14.4 +1.4
THE                                  eSg      Sb        08 57 28.2 +3.7
VAY    Valandovo           1.00  36  i Pg     Pb        08 57 14.8 +0.1
VAY                                  i Sg     Sb        08 57 31.1 +3.7
KNT    Kendrikon           1.06  52  ePg      Pb        08 57 16.4 +0.7
JAN    Janina              1.12 221  ePN      Pn        08 57 17.2  0.0
JAN                                  eSN      Sn        08 57 33.3 +1.1
SOH    Sokhos              1.23  75  ePg      Pb        08 57 19.4 +0.8
PLG    Polygyros           1.27  95  ePB      Pb        08 57 16.2 -3.0
SKO    Skopje              1.49 350  i Pn     Pn        08 57 22.8 +0.3
SKO                                  eSn      Sn        08 57 43.0 +1.4
SRN    Sarande             1.51 246  ePn      Pn        08 57 24.3 +1.5
AGG    Agios Georgios      1.54 164  ePg      Pn        08 57 23.9 +0.6
PAIG   Paliouri            1.56 111  ePb      Pb        08 57 23.6 -0.5
XOR    Xorichti            1.57 136  ePb      Pb        08 57 23.8 -0.6
EVR    Evrytania           1.59 180  ePN      Pn        08 57 24.7 +0.8
NEO    Neokhori            1.63 137  ePN      Pn        08 57 24.5  0.0
KKB    Krupnik             1.67  35   P       Pn        08 57 25.0 -0.1
OUR    Ouranopolis         1.68  95  ePb      Pb        08 57 25.9 -0.3
KEK    Kerkira             1.72 243  ePN      Pn        08 57 27.1 +1.2
NVR    Nevrokopi           1.78  61  ePN      Pn        08 57 26.6 -0.1
MMB    Musomiste           1.82  53   P       Pn        08 57 26.0 -1.2
AOS    Alonnisos           2.09 129  ePn      Pn        08 57 30.6 -0.5
BARS   Barje               2.31   1⇑iPn      Pn        08 57 33.0 -1.2
VTS    Vitosha             2.34  27   P       Pn        08 57 34.5 -0.2
ULC    Ulcinj              2.41 308  ePn      Pn        08 57 35.0 -0.6
ULC                                  eSn      Sn        08 58 07.3 +2.2
PVY    Plav                2.49 327  ePn      Pn        08 57 36.2 -0.7
PVY                                  eSn      Sn        08 58 09.7 +2.4
PVY    Plav                2.49 327  ePn      Pn        08 57 36.2 -0.7
PVY                                  eSn      Sn        08 58 09.6 +2.4
RZN    Rozhen              2.50  61   P       Pn        08 57 37.0  0.0
VLS    Valsamata           2.51 202  ePN      Pn        08 57 39.1 +2.0
TTG    Podgorica           2.70 316  ePn      Pn        08 57 39.4 -0.5
TTG                                  eSn      Sn        08 58 15.0 +2.4
PGB    Panagyurishte       2.71  40   P       Pn        08 57 44.0 +4.0
IVA    Berane              2.76 330  ePn      Pn        08 57 39.9 -0.7
IVA                                  eSn      Sn        08 58 16.4 +2.5
BUM    Brajici-Budva       2.82 310  ePn      Pn        08 57 40.7 -0.8
BUM                                  eSn      Sn        08 58 17.5 +2.0
KDZ    Kurdzhali           2.97  66  eP       Pn        08 57 49.0 +5.3
NKY    Niksic              3.11 319⇓iPn      Pn        08 57 44.1 -1.6
NKY                                  eSn      Sn        08 58 24.5 +1.5
HCY    Herceg Novi         3.14 309⇓iPn      Pn        08 57 44.9 -1.3
HCY                                  eSn      Sn        08 58 24.9 +1.2
NVSS   Nova Varos 2        3.38 333⇓iPn      Pn        08 57 47.1 -2.4
NVSS                                  Sn      Sn        08 58 27.3 -2.4
BRY    Bratogost           3.41 316⇓iPn      Pn        08 57 49.1 -0.8
BRY                                  eSn      Sn        08 58 31.9 +1.5
UPM    Unac-Piva           3.45 322⇓iPn      Pn        08 57 50.0 -0.5
UPM                                  eSn      Sn        08 58 32.3 +0.9
DIVS   Divcibare           3.83 340⇓iPn      Pn        08 57 54.1 -1.7
DIVS                                  Sn      Sn        08 58 35.7 -5.3
GRI    Girifalco           4.47 250   Pn      Pn        08 58 07.8 +2.7
CUC    Castrocucco         4.60 266   Pn      Pn        08 58 06.8 -0.1
SLCN   Sala Consilina      4.70 271   Pn      Pn        08 58 06.5 -1.8
MGR    Morigerati          4.78 268   Pn      Pn        08 58 07.9 -1.5
SGO    Sicignano           4.94 273   Pn      Pn        08 58 09.3 -2.4
       9.4nm,0.3s
SGG    Gregorio Mates      5.68 281   Pn      Pn        08 58 19.4 -2.7
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*BJI **10** 09:23:15.8, 10.65S×161.77E, h68^{km}, mB5.4, mb4.9, Ms5.1, Msz4.9*

*IDC **10** 09:23:18.3±1.6, 10.50S×161.21E, h51^{km}±14^{km}, mb4.7/19, mb1 4.8/22, mb1mx4.7/23, mbtmp4.9/22, ML4.6/3, MS5.0/19, Ms1 5.0/19, ms1mx5.0/20, Error ellipse: s-maj=13.6km s-min=9.5km az=65.0*

*MOS **10** 09:23:19.8±0.8, 10.44S×160.95E, h71^{km}, mb5.5/27, MS5.0/14, Error ellipse: s-maj=9.4km s-min=8.7km az=77.5*

*HRVD **10** 09:23:20.8±0.2, 10.66S×161.03E, h37^{km}, MW5.5/74, Centroid moment Tensor Solution. LP body waves: s64,c107;Mantle waves: s74,c156; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}1.34±.05; $M_{\theta\theta}$-1.29±.04; $M_{\phi\phi}$-0.05±.04; $M_{r\theta}$-1.09±.05; $M_{\theta\phi}$1.62±.03; $M_{\phi r}$-0.97±.05; Best double couple: $M_0$2.541×10^{17} NP1: ϕ_s158°, δ53°, λ146°. NP2: ϕ_s270°, δ63°, λ42°. Principal axes: T 2.639, Plg48°, Azm129°; N -.199, Plg41°, Azm297°; P -2.443, Plg6°, Azm32°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 09:23:20.8±0.1, 10.51S×161.04E, mb5.3/53 Error ellipse: s-maj=5.1km s-min=4.4km az=136.0*

*CRAAG **10** 09:23:34.4, 10.68S×160.72E, Mb5.1*

ISC 10 09:23:18.7±0.2**, 10.56S**±0.04×**161.04E**±0.03**, h62**^{km}**, h62**^{km}±2.3^{km}**:pP-P, n238, σ1^{s}03**/208**, mb5.2**/87**, 10C-6D, Bougainville - Solomon Islands region**

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Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
HNR    Honiara             1.55 316   P       P         09 23 44.8 +0.1
       2µm,0.3s,baz=165,slow=2.2,SNR=146
HNR                                   S       S         09 24 04.8 +1.0
       6µm,0.3s,baz=13,slow=21,SNR=22
HNR    Honiara             1.55 316⇑iPn      P         09 23 44.6  0.0
DZM    Mont Dzumac        12.57 156  eP       P         09 26 15.3 -1.4
DZM                                  eS       S         09 28 28.6 -7.1
DZM    Mont Dzumac        12.57 156   P       P         09 26 15.1 -1.6
       19nm,0.3s,baz=36,slow=22,SNR=286
DZM                                   S       S         09 28 27.9 -7.8
       6.5nm,0.3s,baz=268,slow=21,SNR=7.9
DZM                                   LR      LR        09 30 25.4
       comp=Z,9µm,18.2s,baz=328,slow=34
DZM    Mont Dzumac        12.57 156  eP       P         09 26 15.3 -1.4
DZM                                  eS       S         09 28 28.6 -7.1
PMG    Port Moresby       13.72 274   P       P         09 26 31.3 -0.6
       0.6nm,0.3s,baz=66,slow=13,SNR=2.3
PMG                                   S       S         09 29 12.3 +9.2
       0.4nm,0.3s,baz=292,slow=19,SNR=1.7
PMG    Port Moresby       13.72 274   P       P         09 26 31.3 -0.6
PMG                                 ⇓iPn      P         09 26 34.6 +2.8
PMG                                   S       S         09 29 12.3 +9.2
CTA    Charters Tower     17.11 235⇓iP       P         09 27 16.4 +1.2
       114nm,1.0s
CTA    Charters Tower     17.11 235   P       P         09 27 16.1 +1.0
       5.9nm,0.3s,baz=62,slow=13,SNR=48
CTA                                   S       S         09 30 29.2 +7.4
       1.3nm,0.3s,baz=163,slow=19,SNR=3.8
CTA                                   LR      LR        09 33 28.9
       comp=Z,5µm,18.4s,baz=54,slow=35
CTA    Charters Tower     17.11 235⇓iP       P         09 27 16.4 +1.2
CTA                                   pmax    pmax
       comp=Z,114nm,1.0s
KWAJ   Kwajalein Atol     20.31  19  eP       P         09 27 50.7 -1.5
       comp=Z,604nm,0.9s
AFI    Afiamalu           26.77 100   P       P         09 28 51.1 -3.8
       comp=Z,55nm,0.9s,mb5.1,baz=189,slow=18,SNR=5.4
AFI                                   LR      LR        09 37 16.3
       comp=Z,4µm,21.1s,baz=276,slow=32
AFI    Afiamalu           26.77 100   P       P         09 28 51.1 -3.8
AFI                                   LR      LR        09 37 16.2
CNB    Canberra Magne     26.84 201  eP       P         09 28 56.5 +1.1
       comp=Z,93nm,1.2s,mb5.2
RAO    Raoul Island       27.07 136   LR      LR        09 37 37.8
       comp=Z,2µm,18.9s,baz=338,slow=32
WRAB   Tennant Creek      27.35 247  eP       P         09 28 59.7 -0.4
       comp=Z,169nm,1.1s,mb5.5
WRAB                                  LR      LR
       comp=Z,928nm,19.0s
WRAB   Tennant Creek      27.35 247  eP       P         09 28 59.7 -0.5
WRAB                                  pmax    pmax
       comp=Z,169nm,1.1s,mb5.5
WRAB                                  MLR     MLR
       comp=Z,928nm,19.0s
WB2    Warramunga Arr     27.35 247  eP       P         09 29 00.3 +0.1
WRA    Warramunga Arr     27.36 247   P       P         09 29 00.1 -0.2
       comp=Z,27nm,1.1s,mb4.7,baz=74,slow=9.3,SNR=69
STKA   Stephens Creek     27.81 217⇓iP       P         09 29 05.0 +0.8
       comp=Z,25nm,0.6s,mb5.0
STKA   Stephens Creek     27.81 217   P       P         09 29 03.9 -0.3
       comp=Z,10nm,0.9s,mb4.5,baz=25,slow=9.3,SNR=11
STKA                                  LR      LR        09 39 48.9
       comp=Z,7µm,19.1s,baz=130,slow=35
KAKA   Kakadu             28.09 263  eP       P         09 29 24.3  +17
       comp=Z,22nm,0.5s,mb5.0
GUMO   Guam               28.86 326   PFAKE             09 29 20.0 +6.3
GUMO                                  LR      LR
       comp=Z,4µm,21.0s
ASPA   Alice Springs      28.96 240  eP       P         09 29 14.0 -0.6
TOO    Toolangi           30.32 205  eP       P         09 29 27.2 +0.7
       comp=Z,30nm,0.7s,mb5.1
TOO    Toolangi           30.32 205  eP       P         09 29 27.2 +0.7
TOO                                   pmax    pmax
       comp=Z,30nm,0.7s,mb5.1
URZ    Urewera            31.12 155   P       P         09 29 31.9 -1.7
       comp=Z,43nm,1.0s,mb5.2,baz=334,slow=4.0,SNR=15
URZ                                   LR      LR        09 39 35.1
       comp=Z,3µm,21.7s,baz=141,slow=31
RPZ    Rata Peaks         34.16 167   P       P         09 29 58.4 -1.6
       comp=Z,42nm,0.7s,mb5.5,baz=313,slow=3.2,SNR=27
TAU    Tasmania Unive     34.38 198   PFAKE             09 30 10.0 +8.2
TAU                                   LR      LR
       comp=Z,596nm,19.0s
FITZ   Fitzroy Crossi     35.06 254⇑iP       P         09 30 07.6 -0.2
       comp=Z,36nm,0.6s,mb5.5
FITZ   Fitzroy Crossi     35.06 254   P       P         09 30 07.7 -0.2
       comp=Z,37nm,0.8s,mb5.4,baz=77,slow=8.8,SNR=30
FORT   Forrest            36.62 232  eP       P         09 30 22.6 +1.6
       comp=Z,37nm,0.6s,mb5.4
RAR    Rarotonga          39.05 111   P       P         09 30 38.2 -3.1
       comp=Z,30nm,1.1s,mb5.0,baz=352,slow=14,SNR=3.1
DAV    Davao City (W)     39.41 295   PFAKE             09 31 00.0  +16
DAV                                   LR      LR
       comp=Z,545nm,21.0s
CBIJ   Chichi jima        41.66 334   P       P         09 31 01.0 -1.8
       comp=Z,68nm,0.7s,mb5.4,baz=274,slow=15,SNR=3.6
KLBR   Kellerberrin       45.11 236  eP       P         09 31 30.9 +0.1
       comp=Z,18nm,0.9s,mb4.9
NWAO   Narrogin (SRO)     45.95 234   P       P         09 31 38.4 +1.0
       comp=Z,11nm,0.9s,mb4.8,baz=67,slow=5.9,SNR=5.3
NWAO   Narrogin (SRO)     45.95 234  eP       P         09 31 37.7 +0.3
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	comp=Z,27nm,0.8s,mb5.2						
NWAO				LR	LR		
	comp=Z,2µm,20.0s						
NWAO	**Narrogin (SRO)**	**45.95**	**234**	*e*P	**P**	**09 31 37.7**	**+0.3**
NWAO				pmax	pmax		
	comp=Z,27nm,0.8s						
NWAO				MLR	MLR		
	comp=Z,2µm,20.0s						
MUN	**Mundaring**	**46.48**	**236**	*e*P	**P**	**09 31 42.7**	**+1.0**
KKM	**Kota Kinabalu**	**47.58**	**288**	*e*P	**P**	**09 31 50.1**	**-0.4**
PAE	**Paea**	**48.30**	**104**	*e*P	**P**	**09 31 55.2**	**-0.8**
	comp=Z,84nm,1.2s,mb5.7						
PPT	**Papeete**	**48.30**	**104**	*e*P	**P**	**09 31 55.4**	**-0.7**
	comp=Z,43nm,1.2s,mb5.3						
PPT	**Papeete**	**48.30**	**104**	*e*S	**S**	**09 38 52.7**	**+2.5**
PPT				*e*LQ		09 43 34.1	
PPT				*e*LR	LR	09 45 38.6	
	comp=Z,4µm,27.0s						
PPT	**Papeete**	**48.30**	**104**	LR	LR	09 47 34.3	
	comp=Z,1µm,19.9s,baz=272,slow=30						
TVO	**Taravao**	**48.62**	**104**	*e*P	**P**	**09 31 57.9**	**-0.6**
	comp=Z,79nm,1.1s,mb5.7						
TBI	**Tubuai**	**48.81**	**112**	*e*S	**S**	**09 38 56.4**	**-0.8**
TBI				*e*LQ		09 43 48.9	
TBI				*e*LR	LR	09 45 50.6	
	comp=Z,2µm,30.0s						
MEH	**Mehetia**	**49.75**	**104**	*e*P	**P**	**09 32 06.4**	**-0.8**
PMOR	**Pomariorio Ree**	**49.92**	**101**	*e*P	**P**	**09 32 08.2**	**-0.3**
	comp=Z,92nm,1.4s,mb5.6						
VAH	**Vaihoa**	**50.17**	**101**	*e*P	**P**	**09 32 09.9**	**-0.6**
	comp=Z,111nm,1.5s,mb5.7						
MJAR	**Matsushiro Arr**	**51.54**	**336**	P	**P**	**09 32 18.5**	**-2.1**
	comp=Z,5.8nm,0.7s,mb4.6,baz=165,slow=7.1,SNR=13						
MJAR				LR	LR	09 53 06.2	
	comp=Z,858nm,20.3s,baz=145,slow=35						
MAJO	**Matsushiro**	**51.54**	**336**	*e*P	**P**	**09 32 18.2**	**-2.4**
	comp=Z,23nm,0.9s,mb5.1						
MAJO				LR	LR		
	comp=Z,979nm,20.0s						
MAJO	**Matsushiro**	**51.54**	**336**	*e*P	**P**	**09 32 18.2**	**-2.4**
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
MAJO				MLR	MLR		
	comp=Z,979nm,20.0s						
MAT	**Matsushiro**	**51.54**	**336**	P	**P**	**09 32 18.8**	**-1.8**
MAT				S	**S**	**09 39 33.0**	**-1.9**
MAT	**Matsushiro**	**51.54**	**336**	*e*P	**P**	**09 32 19.0**	**-1.6**
	comp=Z,23nm,1.0s,mb5.1						
MAT				*e*S	**S**	**09 39 34.0**	**-0.9**
MAT				LR	LR		
	comp=Z,1µm,20.0s						
MAT	**Matsushiro**	**51.54**	**336**	*e*P	**P**	**09 32 19.0**	**-1.6**
MAT				*e*S	**S**	**09 39 34.0**	**-0.9**
MAT				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s						
NACB	**Ninganchiao**	**51.72**	**312**	*e*P	**P**	**09 32 21.2**	**-0.9**
KSM	**Kuching**	**51.86**	**280**	*e*P	**P**	**09 32 22.6**	**-0.7**
YHNB	**Yeheng**	**52.18**	**313**	*e*P	**P**	**09 32 24.6**	**-1.0**
QZH	**Quanzhou**	**54.38**	**311**	*e*P	**P**	**09 32 42.1**	**+0.3**
QZH				S	**S**	**09 40 17.6**	**+4.0**
QZH				LR	LR		
	comp=N,940nm,17.0s						
QZH				LR	LR		
	comp=E,710nm,16.0s						
QZH				LR	LR		
	comp=Z,1µm,22.3s						
SSE	**Sheshan**	**56.35**	**319**	*e*P	**P**	**09 32 56.5**	**+0.5**
SSE				AP	pP	09 33 15.3	+2.8
SSE				XP	sP	09 33 22.7	+3.1
SSE				PCP	PcP	09 33 52.7	+0.3
SSE				PP	PP	09 35 02.2	-1.2
SSE				S	**S**	**09 40 42.3**	**+2.5**
SSE				XS		09 41 13.7	
SSE				SCS	ScS	09 42 39.9	+4.2
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,50nm,3.5s						
SSE				LR	LR		
	comp=N,370nm,22.2s						
SSE				LR	LR		
	comp=E,490nm,22.2s						
SSE				LR	LR		
	comp=Z,650nm,26.4s						
SSE	**Sheshan**	**56.35**	**319**	*e*P	**P**	**09 32 56.5**	**+0.5**
	comp=Z,38nm,0.7s,mb5.5						
SSE				pP	pP	09 33 15.3	+2.8
SSE				sP	sP	09 33 22.7	+3.1
SSE				PcP	PcP	09 33 52.7	+0.3
SSE				PP	PP	09 35 02.2	-1.2
SSE				S	**S**	**09 40 42.3**	**+2.5**
SSE				sS		09 41 13.7	
SSE				ScS	ScS	09 42 39.9	+4.2
SSE				LR	LR		
	comp=Z,660nm,26.4s						
KS15	**Wonju Array Si**	**56.97**	**329**	P	**P**	**09 32 59.8**	**-0.5**
GZH	**Guangzhou**	**57.42**	**306**	P	**P**	**09 33 04.9**	**+1.3**
GZH				S	**S**	**09 41 01.6**	**+7.7**
GZH				LR	LR		
	comp=N,410nm,23.9s						
GZH				LR	LR		
	comp=E,410nm,18.0s						
GZH				LR	LR		
	comp=Z,720nm,20.8s						
TAOE	**Nuku Hiva Isla**	**57.93**	**94**	*e*S	**S**	**09 41 05.2**	**+4.5**
TAOE				*e*LQ		09 47 32.9	
TAOE				*e*LR	LR	09 49 50.8	
	comp=Z,6µm,26.4s						
QIZ	**Qiongzhong**	**58.40**	**300**	*e*P	**P**	**09 33 10.7**	**+0.2**
QIZ				AP	pP	09 33 28.0	+0.9
QIZ				XP	sP	09 33 38.9	+4.6
QIZ				S	**S**	**09 41 06.6**	**-0.2**
QIZ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
QIZ				LR	LR		
	comp=N,310nm,19.8s						
QIZ				LR	LR		
	comp=E,650nm,25.8s						
QIZ				LR	LR		
	comp=Z,1µm,27.6s						
QIZ	**Qiongzhong**	**58.40**	**300**	*e*P	**P**	**09 33 09.6**	**-0.9**
	comp=Z,22nm,1.0s,mb5.1						
QIZ				LR	LR		
	comp=Z,559nm,21.0s						
NJ2	**Nanjing**	**58.49**	**318**	*e*P	**P**	**09 33 10.3**	**-0.7**
NJ2				PP	PP	09 35 21.7	-0.9
NJ2				S	**S**	**09 41 11.0**	**+3.1**
NJ2				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,680nm,5.8s						
NJ2				LR	LR		
	comp=N,1µm,17.8s						
NJ2				LR	LR		
	comp=E,750nm,18.0s						
NJ2				LR	LR		
	comp=Z,7µm,17.5s						
YSS	**Yuzh-Sakhalins**	**59.53**	**346**	*e*P	**P**	**09 33 16.9**	**-1.1**
	comp=Z,70nm,1.2s,mb5.6						
YSS				LR	LR		
	comp=Z,3µm,20.0s						
YSS	**Yuzh-Sakhalins**	**59.53**	**346**	P	**P**	**09 33 09.0**	**-9.0**
YSS				*e*	pP	09 33 25.0	-10
YSS				*e*		09 41 31.0	
YSS				MLR	MLR		
	comp=Z,2µm,18.0s						
YSS				MLR	MLR		
	comp=N,2µm,19.0s						
YSS				MLR	MLR		
	comp=E,1µm,19.0s						
WHN	**Wuhan**	**60.66**	**314**	*e*P	**P**	**09 33 30.8**	**+4.8**
MDJ	**Mudanjiang**	**61.85**	**335**	P	**P**	**09 33 33.3**	**-0.5**
MDJ				AP	pP	09 33 49.5	-1.0
MDJ				XP	sP	09 33 56.4	-1.2
MDJ				PCP	PcP	09 34 13.4	-0.5
MDJ				PP	PP	09 35 49.8	-2.9
MDJ				SCP		09 38 10.1	
MDJ				PCS		09 38 16.7	
MDJ				S	**S**	**09 41 52.8**	**+2.0**
MDJ				XS		09 42 19.8	
MDJ				SCS	ScS	09 43 19.1	+3.1
MDJ				AMB	AMB		
	comp=Z,20nm,1.6s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,120nm,4.0s						
MDJ				LR	LR		
	comp=N,780nm,27.2s						
MDJ				LR	LR		
	comp=E,480nm,22.3s						
MDJ				LR	LR		
	comp=Z,1µm,24.8s						
MDJ	**Mudanjiang**	**61.85**	**335**	*e*P	**P**	**09 33 33.4**	**-0.3**
	comp=Z,48nm,1.2s,mb5.5						
MDJ				LR	LR		
	comp=Z,752nm,20.0s						
RKT	**Rikitea**	**62.09**	**111**	*e*P	**P**	**09 33 34.3**	**-1.4**
	comp=Z,75nm,1.3s,mb5.7						
RKT	**Rikitea**	**62.09**	**111**	*e*S	**S**	**09 41 56.3**	**+2.2**
RKT				*e*LQ		09 49 15.9	
RKT				*e*LR	LR	09 51 58.2	
	comp=Z,3µm,27.5s						
KULM	**Kulim**	**62.15**	**282**	*e*P	**P**	**09 33 34.5**	**-1.7**
CN2	**Changchun**	**63.03**	**332**	*e*P	**P**	**09 33 41.2**	**-0.5**
CN2				*e*AP	pP	09 34 01.1	+2.6
CN2				*e*XP	sP	09 34 09.9	+4.4
CN2				*e*S	**S**	**09 42 09.0**	**+3.3**
CN2				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.4						
CN2				LR	LR		
	comp=N,840nm,14.0s						
CN2				LR	LR		
	comp=E,750nm,14.0s						
CN2				LR	LR		
	comp=Z,810nm,13.0s						
FX1	**Attu Island--F**	**64.03**	**8**	LR	LR	09 59 02.7	
	comp=Z,52nm,19.8s,baz=220,slow=34						
ENH	**Enshi**	**64.04**	**311**	*e*P	**P**	**09 33 47.9**	**-0.6**
	comp=Z,49nm,1.1s,mb5.5						
ENH				LR	LR		
	comp=Z,508nm,21.0s						
KLR	**Kul'dur**	**64.86**	**339**	*e*P	**P**	**09 33 53.7**	**+0.2**
KLR				*e*		09 34 18.0	
KLR				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.2						
CASY	**Casey**	**65.20**	**200**	PFAKE		09 34 10.0	+15
CASY				LR	LR		
	comp=Z,2µm,21.0s						
NST	**Nakhon Sawan**	**65.69**	**293**	P	**P**	**09 34 00.0**	**+0.7**
XAN	**Xi'an**	**66.42**	**314**	P	**P**	**09 34 03.5**	**-0.2**
XAN				S	S	09 42 44.3	-3.2
XAN				LR	LR		
	comp=N,290nm,21.5s						
XAN				LR	LR		
	comp=E,370nm,22.3s						
XAN				LR	LR		
	comp=Z,950nm,23.1s						
KMI	**Kunming**	**66.95**	**303**	P	**P**	**09 34 07.0**	**-0.2**
KMI				PP	PP	09 36 34.9	-2.1
KMI				S	S	09 42 52.7	-1.3
KMI				SKS	SKS	09 43 57.0	+2.5
KMI				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.6						
KMI				AMB	AMB		
	comp=Z,130nm,5.5s						
KMI				LR	LR		
	comp=N,190nm,22.0s						
KMI				LR	LR		
	comp=E,540nm,21.4s						
KMI				LR	LR		
	comp=Z,820nm,26.6s						
KMI	**Kunming**	**66.95**	**303**	P	**P**	**09 34 07.0**	**-0.2**
	comp=Z,13nm,1.6s,mb4.7						
KMI				pP	pP	09 34 19.1	-5.0
KMI				sP	sP	09 34 25.2	-5.7
KMI				PcP	PcP	09 34 40.1	+4.8
KMI				PP	PP	09 36 34.9	-2.1
KMI				S	S	09 42 52.7	-1.3
KMI				PS	PS	09 43 20.2	-5.3
KMI				SKS	SKS	09 43 57.0	+2.5
KMI				SS	SS	09 47 04.5	-11
KMI				LR	LR		
	comp=Z,820nm,26.6s						
KMI	**Kunming**	**66.95**	**303**	P	**P**	**09 34 07.0**	**-0.2**
KMI				*SP	sP	09 34 25.2	-5.7
KMI						09 34 40.1	
KMI						09 36 34.9	
KMI				S	S	09 42 52.7	-1.3
KMI				PS	PS	09 43 20.2	-5.3
KMI						09 43 57.0	
KMI				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.7						
KMI				MLR	MLR		
	comp=Z,820nm,26.6s						
VNDA	**Vanda**	**66.95**	**180**	*e*P	**P**	**09 34 05.9**	**-0.5**
	comp=Z,44nm,1.4s,mb5.3						
VNDA				LR	LR		
	comp=Z,994nm,21.0s						
VNDA	**Vanda**	**66.95**	**180**	*e*P	**P**	**09 34 05.9**	**-0.5**
VNDA				pmax	pmax		
	comp=Z,44nm,1.4s						
VNDA				MLR	MLR		
	comp=Z,994nm,21.0s						
SBA	**Scott Base**	**67.35**	**179**	*e*P	**P**	**09 34 09.1**	**+0.3**
	comp=Z,58nm,1.2s,mb5.5						
SBA				LR	LR		
	comp=Z,925nm,21.0s						
SBA	**Scott Base**	**67.35**	**179**	*e*P	**P**	**09 34 09.1**	**+0.2**
SBA				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.5						
SBA				MLR	MLR		
	comp=Z,925nm,21.0s						
CHG	**Chiang Mai**	**67.81**	**295**	P	**P**	**09 34 13.0**	**+0.3**
	comp=Z,27nm,0.6s,mb5.5						
HHC	**Hu-ho-hao-te**	**68.52**	**322**	*e*P	**P**	**09 34 18.6**	**+1.9**
HHC				AP	pP	09 34 31.7	-2.1
HHC				PCP	PcP	09 34 42.5	+0.9
HHC				PP	PP	09 36 53.2	+2.4
HHC				SCP		09 38 41.1	
HHC				S	S	09 43 19.2	+6.6
HHC				SCS	ScS	09 44 11.9	+4.6
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,200nm,8.4s						
HHC				LR	LR		
	comp=N,650nm,22.8s						
HHC				LR	LR		
	comp=E,660nm,22.8s						
HHC				LR	LR		
	comp=Z,970nm,28.8s						
CD2	**Chengdu**	**68.67**	**309**	*e*P	**P**	**09 34 18.5**	**+0.7**
BTO	**Baotou**	**69.33**	**321**	*e*P	**P**	**09 34 21.1**	**-0.6**
HIA	**Hailar**	**69.73**	**333**	*e*P	**P**	**09 34 23.6**	**-0.4**
	comp=Z,24nm,0.9s,mb5.1						
HIA				LR	LR		
	comp=Z,1µm,22.0s						
HIA	**Hailar**	**69.73**	**333**	*e*P	**P**	**09 34 23.6**	**-0.4**
HIA				pmax	pmax		
	comp=Z,24nm,0.9s						
HIA				MLR	MLR		
	comp=Z,1µm,22.0s						
MA2	**Magadan**	**70.38**	**354**	P	**P**	**09 34 27.7**	**-0.1**
MA2				*e*	pP	09 34 46.1	+1.2
MA2				*e*		09 37 02.1	
MA2				S	S	09 43 41.9	+7.8
MA2				MLR	MLR		
	comp=Z,1µm,19.0s						
LZH	**Lanzhou**	**71.05**	**314**	*e*P	**P**	**09 34 36.0**	**+3.8**
LZH				AP	pP	09 34 53.4	+4.1
LZH				XP	sP	09 35 00.9	+4.9
LZH				PP	PP	09 37 18.0	+5.5
LZH				PPP	PPP	09 38 58.0	+4.4
LZH				*e*S	S	09 43 44.0	+1.8
LZH				XS		09 44 17.0	
LZH				PS	PS	09 44 23.0	+3.8
LZH				SKS	SKS	09 44 30.0	+5.2
LZH				*e*SS	SS	09 48 23.0	+4.5
LZH				AMB	AMB		
	comp=Z,100nm,1.5s,mb5.5						
LZH				AMB	AMB		
	comp=Z,250nm,4.2s						
LZH				LR	LR		
	comp=N,1µm,17.0s						
LZH				LR	LR		
	comp=Z,2µm,20.6s						
LZH	**Lanzhou**	**71.05**	**314**	*e*P	**P**	**09 34 36.0**	**+3.8**
	comp=Z,100nm,1.5s,mb5.5						
LZH				pP	pP	09 34 53.4	+4.1
LZH				sP	sP	09 35 00.9	+4.9
LZH				PP	PP	09 37 18.0	+5.5
LZH				PPP	PPP	09 38 58.0	+4.4
LZH				*e*S	S	09 43 44.0	+1.8
LZH				sS		09 44 17.0	
LZH				PS	PS	09 44 23.0	+3.8
LZH				SKS	SKS	09 44 30.0	+5.2
LZH				*e*SS	SS	09 48 23.0	+4.5
LZH				LR	LR		
	comp=Z,2µm,20.6s						
CIT	**Chita**	**74.48**	**332**	*e*P	**P**	**09 34 51.0**	**-1.1**
GTA	**Gaotai**	**75.42**	**315**	*e*P	**P**	**09 34 58.2**	**+0.4**
GTA				AP	pP	09 35 14.6	-0.5
GTA				XP	sP	09 35 21.5	-0.3
GTA				PP	PP	09 37 50.3	+0.9
GTA				S	S	09 44 30.3	-1.2
GTA				AMB	AMB		
	comp=Z,120nm,5.4s						
GTA				LR	LR		
	comp=N,500nm,22.5s						
GTA				LR	LR		
	comp=E,420nm,24.1s						
GTA				LR	LR		
	comp=Z,710nm,21.8s						
SONM	**Songino Array**	**75.59**	**325**	P	**P**	**09 34 58.9**	**+0.3**
	comp=Z,16nm,0.9s,mb4.9,baz=140,slow=5.5,SNR=52						
YAK	**Yakutsk**	**76.39**	**345**	*e*P	**P**	**09 35 02.0**	**-0.8**
	comp=Z,41nm,0.4s,mb5.7						
YAK				LR	LR		
	comp=Z,2µm,22.0s						
BOD	**Bodaibo**	**78.17**	**336**	*e*P	**P**	**09 35 11.4**	**-1.4**
BOD				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.8						
LSA	**Lhasa**	**78.20**	**303**	*e*P	**P**	**09 35 18.6**	**+5.1**
LSA	**Lhasa**	**78.20**	**303**	*e*P	**P**	**09 35 13.3**	**-0.3**
	comp=Z,11nm,0.7s,mb4.9						
LSA				LR	LR		
	comp=Z,621nm,22.0s						
LSA	**Lhasa**	**78.20**	**303**	*e*P	**P**	**09 35 13.3**	**-0.2**
LSA				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
LSA				MLR	MLR		
	comp=Z,621nm,22.0s						
BILL	**Bilibino**	**78.48**	**2**	*e*P	**P**	**09 35 13.7**	**-0.6**
	comp=Z,56nm,1.0s,mb5.5						
BILL				*e*		09 35 22.1	
BILL				LR	LR		
	comp=Z,985nm,22.0s						
BILL	**Bilibino**	**78.48**	**2κ**	*i*P	**P**	**09 35 14.6**	**+0.3**
BILL				*i*		09 35 21.9	
BILL				*e*	pP	09 35 30.0	-1.6
BILL				*e*		09 35 45.4	
BILL						09 38 12.0	
BILL				*e*		09 45 49.8	
BILL				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.3						
ZAK	**Zakamensk**	**78.69**	**326**	*e*P	**P**	**09 35 15.9**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
IRK	**Irkutsk**	**79.17**	**328**	*e*P	**P**	**09 35 16.5**	**-1.9**
IRK				*e*	pP	09 35 38.4	+2.7
IRK				pmax	pmax		
	comp=Z,120nm,0.1s						
QSPA	**South Pole Qui**	**79.44**	**180⇑**	*i*P	**P**	**09 35 19.9**	**+0.5**
	comp=Z,46nm,0.9s,mb5.4						
QSPA				LR	LR		
	comp=Z,666nm,20.0s						
MOY	**Mondy**	**80.59**	**327**	*e*P	**P**	**09 35 26.3**	**+0.3**
JIRN	**Jiri**	**81.72**	**300**	*e*P	**P**	**09 35 32.9**	**+0.4**
PMR	**Palmer**	**81.75**	**22**	*e*P	**P**	**09 35 29.9**	**-1.9**
	comp=Z,59nm,1.5s,mb5.3						
PMR				LR	LR		
	comp=Z,3µm,22.0s						
PMR	**Palmer**	**81.75**	**22**	*e*P	**P**	**09 35 29.9**	**-2.0**
PMR				pmax	pmax		
	comp=Z,59nm,1.5s,mb5.3						
PMR				MLR	MLR		
	comp=Z,3µm,22.0s						
PALK	**Pallekele**	**81.90**	**279**	*e*P	**P**	**09 35 34.9**	**+1.3**
	comp=Z,43nm,1.4s,mb5.2						
PALK				LR	LR		
	comp=Z,125nm,21.0s						
GUN	**Gumba**	**82.06**	**300**	*e*P	**P**	**09 35 34.7**	**+0.5**
	comp=Z,69nm,1.1s,mb5.5						
PKI	**Pulchoki**	**82.36**	**300**	*e*P	**P**	**09 35 36.1**	**+0.3**
	comp=Z,16nm,0.5s,mb5.2						
KKN	**Kakani**	**82.53**	**300**	*e*P	**P**	**09 35 36.4**	**-0.2**
	comp=Z,9.9nm,0.4s,mb5.2						
DMN	**Daman**	**82.63**	**300**	*e*P	**P**	**09 35 37.7**	**+0.6**
	comp=Z,50nm,0.9s,mb5.5						
GKN	**Gorkha**	**83.14**	**300**	*e*P	**P**	**09 35 39.8**	**+0.1**
	comp=Z,29nm,0.4s,mb5.6						
MAW	**Mawson**	**83.42**	**202**	*e*P	**P**	**09 35 41.2**	**+0.9**
	comp=Z,12nm,0.6s,mb5.1						
MAW	**Mawson**	**83.42**	**202**	P	**P**	**09 35 41.3**	**+1.0**
	comp=Z,13nm,0.8s,mb5.0,baz=100,slow=5.1,SNR=24						
MAW				LR	LR	10 07 12.4	
	comp=Z,1µm,22.0s,baz=84,slow=32						
MAW	**Mawson**	**83.42**	**202**	*e*P	**P**	**09 35 41.2**	**+0.9**
MAW				pmax	pmax		
	comp=Z,12nm,0.6s						
KOLN	**Koldanda**	**83.96**	**300**	*e*P	**P**	**09 35 43.8**	**-0.1**
	comp=Z,30nm,0.8s,mb5.5						
COLA	**College**	**84.32**	**20**	*e*P	**P**	**09 35 43.3**	**-1.5**
	comp=Z,25nm,0.9s,mb5.3						
COLA				LR	LR		
	comp=Z,2µm,21.0s						
COLA	**College**	**84.32**	**20**	*i* P	**P**	**09 35 43.5**	**-1.3**
ILAR	**Eielson Array**	**84.57**	**20**	P	**P**	**09 35 45.2**	**-0.9**
	comp=Z,4.2nm,0.9s,mb4.6,baz=249,slow=4.9,SNR=26						
ILAR				LR	LR	10 10 17.0	
	comp=Z,1µm,19.4s,baz=188,slow=33						
TIXI	**Tiksi**	**84.78**	**350**	*e*P	**P**	**09 35 43.9**	**-3.1**
TIXI				*e*S	S	09 45 58.8	-10
TIXI				pmax	pmax		
	comp=Z,14nm,1.1s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,617nm,18.0s						
WMQ	**Urumqi**	**85.50**	**316**	⇑P	**P**	**09 35 51.6**	**+0.4**
WMQ				AP	pP	09 36 09.7	+0.9
WMQ				XP	sP	09 36 17.9	+2.5
WMQ				PP	PP	09 39 12.0	+0.3
WMQ				SKS	SKS	09 46 07.2	-0.4
WMQ				S	S	09 46 15.7	-0.4
WMQ				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,130nm,4.8s						
WMQ				LR	LR		
	comp=N,430nm,25.4s						
WMQ				LR	LR		
	comp=E,400nm,24.0s						
WMQ				LR	LR		
	comp=Z,500nm,23.6s						
KCPM	**Cahto Peak**	**85.66**	**48**	*e*P	**P**	**09 35 53.4**	**+1.3**
HYB	**Hyderabad**	**86.06**	**288**	*i* P	**P**	**09 35 56.0**	**+1.5**
HYB	**Hyderabad**	**86.06**	**288**	*e*P	**P**	**09 35 56.0**	**+1.5**
DAWY	**Dawson**	**86.82**	**22**	*e*P	**P**	**09 35 57.8**	**+0.6**
BBB	**Bella Bella**	**86.84**	**36**	LR	LR	10 05 59.1	
	comp=Z,926nm,20.1s,baz=250,slow=30						
YBH	**Yreka Blue Hor**	**86.89**	**47**	*e*P	**P**	**09 35 59.0**	**+0.9**
	comp=Z,22nm,1.2s,mb5.3						
YBH	**Yreka Blue Hor**	**86.89**	**47**	*e*P	**P**	**09 35 59.0**	**+0.9**
YBH				pmax	pmax		
	comp=Z,22nm,1.1s						
HUMO	**Hull Mountain**	**86.97**	**46**	*e*P	**P**	**09 35 59.6**	**+1.1**
	comp=Z,23nm,1.0s,mb5.4						
PTRM	**Twissleman Ran**	**87.10**	**53**	*e*P	**P**	**09 35 59.8**	**+0.5**
CMB	**Columbia Colle**	**87.59**	**51**	*e*P	**P**	**09 36 01.5**	**0.0**
	comp=Z,25nm,1.4s,mb5.2						
CMB	**Columbia Colle**	**87.59**	**51**	*e*P	**P**	**09 36 01.5**	**0.0**
CMB				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.2						
MWC	**Mount Wilson**	**88.46**	**55**	*e*P	**P**	**09 36 05.8**	**0.0**
MOD	**Modoc**	**88.67**	**47**	*e*P	**P**	**09 36 06.8**	**+0.3**
	comp=Z,35nm,1.5s,mb5.5						
MTUM	**Tungsten Hills**	**88.81**	**52**	*e*P	**P**	**09 36 08.4**	**+1.1**
BAR	**Barrett**	**89.23**	**57**	*e*P	**P**	**09 36 10.0**	**+0.5**
NVAR	**Mina Array Bea**	**89.27**	**51**	P	**P**	**09 36 10.0**	**+0.5**
	comp=Z,15nm,1.2s,mb5.2,baz=226,slow=4.9,SNR=29						
NVAR				LR	LR	10 10 08.4	
	comp=Z,846nm,19.2s,baz=255,slow=32						
DAC	**Darwin (Calif)**	**89.31**	**53**	*e*P	**P**	**09 36 10.2**	**+0.4**
	comp=Z,26nm,1.1s,mb5.5						
DAC	**Darwin (Calif)**	**89.31**	**53**	*e*P	**P**	**09 36 10.2**	**+0.5**

DAC				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.5						
TPH	**Tonopah**	**90.02**	**51**	P	**P**	**09 36 13.4**	**+0.4**
	comp=Z,18nm,1.0s,mb5.3						
TPH	**Tonopah**	**90.02**	**51**	P	**P**	**09 36 13.4**	**+0.4**
TPH				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.4						
MKAR	**Makanchi Array**	**90.02**	**318**	P	**P**	**09 36 12.6**	**-0.2**
	comp=Z,3.2nm,0.5s,mb4.9,baz=92,slow=6.0,SNR=46						
MKAR				LR	LR	10 16 23.1	
	comp=Z,492nm,21.6s,baz=96,slow=35						
ZAL	**Zalesovo**	**90.48**	**325**	P	**P**	**09 36 13.3**	**-1.4**
	comp=Z,2.8nm,0.9s,mb4.6,baz=346,slow=4.1,SNR=14						
ZAL				LR	LR	10 18 25.2	
	comp=Z,567nm,20.3s,baz=12,slow=36						
TPNV	**Topopah Spring**	**90.52**	**53**	*e*P	**P**	**09 36 15.6**	**+0.2**
	comp=Z,20nm,1.1s,mb5.4						
TPNV	**Topopah Spring**	**90.52**	**53**	*e*P	**P**	**09 36 15.6**	**+0.2**
TPNV				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.4						
SYO	**Syowa Base**	**90.86**	**198**	⇑P	**P**	**09 36 15.8**	**-0.5**
SYO	**Syowa Base**	**90.86**	**198**	⇑*e*P	**P**	**09 36 15.8**	**-0.5**
LDFC	**Landfair**	**91.02**	**55**	*e*P	**P**	**09 36 18.6**	**+0.8**
NEN	**Nelson**	**91.35**	**54**	*e*P	**P**	**09 36 19.6**	**+0.3**
BMO	**Blue Mountains**	**91.52**	**45**	*e*P	**P**	**09 36 19.8**	**0.0**
	comp=Z,15nm,1.2s,mb5.2						
BMO	**Blue Mountains**	**91.52**	**45**	*e*P	**P**	**09 36 19.8**	**0.0**
BMO				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.2						
NVS	**Novosibirsk**	**91.62**	**326**	*e*P	**P**	**09 36 18.1**	**-2.0**
NVS				pmax	pmax		
	comp=Z,32nm,1.8s,mb5.3						
NVS				pmax	pmax		
	comp=E,25nm,2.0s						
ELK	**Elko**	**92.10**	**49**	*e*P	**P**	**09 36 23.0**	**+0.4**
	comp=E,17nm,1.1s,mb5.3						
ELK	**Elko**	**92.10**	**49**	*e*P	**P**	**09 36 23.0**	**+0.4**
ELK				pmax	pmax		
	comp=Z,17nm,1.1s						
NEW	**Newport**	**92.42**	**41**	LR	LR	10 11 07.2	
	comp=Z,1µm,19.7s,baz=246,slow=31						
NEW	**Newport**	**92.42**	**41**	*e*P	**P**	**09 36 23.6**	**-0.3**
	comp=Z,19nm,1.1s,mb5.3						
NEW	**Newport**	**92.42**	**41**	*e*P	**P**	**09 36 23.6**	**-0.3**
NEW				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH	**Kashi**	**92.86**	**309**	*e*P	**P**	**09 36 24.1**	**-2.0**
KSH				*e*SKS	SKS	09 46 49.2	-3.6
KSH				*e*S	S	09 47 15.3	-8.4
KSH				AMB	AMB		
	comp=Z,350nm,6.3s						
KSH				LR	LR		
	comp=N,540nm,5.6s						
KSH				LR	LR		
	comp=E,570nm,5.2s						
ARUT	**Antelope Range**	**92.88**	**52**	P	**P**	**09 36 26.8**	**+0.6**
HLID	**Hailey**	**93.27**	**46**	*e*P	**P**	**09 36 28.9**	**+1.0**
	comp=E,17nm,1.0s,mb5.4						
HLID				*e*PP	PP	09 40 03.1	-12
KURK	**Kurchatov**	**93.32**	**321**	PFAKE		09 36 40.0	+12
KURK				LR	LR		
	comp=Z,156nm,20.0s						
DUG	**Dugway**	**93.81**	**50**	*e*P	**P**	**09 36 31.9**	**+1.5**
	comp=Z,6.0nm,1.1s,mb4.9						
DUG	**Dugway**	**93.81**	**50**	*e*P	**P**	**09 36 31.9**	**+1.5**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.9						
MVU	**Marysvale**	**93.96**	**52**	*e*P	**P**	**09 36 32.9**	**+1.7**
	comp=Z,9.4nm,1.2s,mb5.1						
MSU	**Marysvale**	**93.99**	**52**	*e*P	**P**	**09 36 32.4**	**+1.1**
HVU	**Hansel Valley**	**94.12**	**48**	*e*P	**P**	**09 36 33.1**	**+1.3**
	comp=Z,14nm,1.1s,mb5.3						
HVU	**Hansel Valley**	**94.12**	**48**	*e*P	**P**	**09 36 33.1**	**+1.3**
HVU				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.3						
AAK	**Ala-Archa**	**94.53**	**312**	PFAKE		09 36 50.0	+16
AAK				LR	LR		
	comp=Z,117nm,21.0s						
MCMT	**McKenzie Canyo**	**94.61**	**45**	*e*P	**P**	**09 36 32.7**	**-1.3**
CHMT	**Chamberlain Mo**	**94.71**	**43**	*e*P	**P**	**09 36 34.5**	**+0.1**
DLMT	**Dillon**	**94.88**	**45**	*e*P	**P**	**09 36 36.1**	**+0.9**
	comp=Z,26nm,1.3s,mb5.5						
RRI2	**Red Ridge**	**95.45**	**47**	*e*P	**P**	**09 36 39.3**	**+1.5**
	comp=Z,3.5nm,0.8s,mb4.8						
BOZ	**Bozeman (W)**	**95.60**	**45**	*e*P	**P**	**09 36 39.0**	**+0.5**
	comp=Z,12nm,1.2s,mb5.2						
BOZ	**Bozeman (W)**	**95.60**	**45**	*e*P	**P**	**09 36 39.0**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,12nm,1.2s,mb5.2						
QLMT	**Earthquake Lak**	**95.61**	**46**	*e*P	**P**	**09 36 41.0**	**+2.5**
HRY	**Holter Researc**	**95.64**	**44**	*e*P	**P**	**09 36 39.5**	**+0.9**
IMW	**Indian Meadow**	**95.81**	**47**	*e*P	**P**	**09 36 40.6**	**+1.1**
	comp=Z,7.7nm,1.0s,mb5.1						
MOOW	**Moose Ponds**	**95.93**	**47**	*e*P	**P**	**09 36 41.8**	**+1.9**
	comp=Z,9.2nm,1.3s,mb5.0						
PDAR	**Pinedale Array**	**96.64**	**48**	P	**P**	**09 36 44.1**	**+0.9**
	comp=Z,0.8nm,0.8s,mb4.2,baz=213,slow=1.8,SNR=6.8						
PDAR				LR	LR	10 15 16.7	
	comp=Z,818nm,19.8s,baz=290,slow=32						
YKA	**Yellowknife Ar**	**96.68**	**28**	P	**P**	**09 36 41.8**	**-1.1**
	comp=Z,2.0nm,0.8s,mb4.6,baz=265,slow=4.9,SNR=5.3						
YKA				LR	LR	10 12 50.9	
	comp=Z,1µm,21.8s,baz=250,slow=31						
SNAA	**Sanae**	**97.25**	**185**	⇑*i*P	**P**	**09 36 45.0**	**-0.4**
SNAA				*e*	pP	09 37 01.2	-2.0
SNAA				*e*		09 37 09.6	
SNAA				*e*		09 40 49.1	
ANMO	**Albuquerque**	**97.99**	**56**	*e*P	**P**	**09 36 49.3**	**-0.3**
	comp=Z,4.1nm,1.0s,mb4.9						
ANMO	**Albuquerque**	**97.99**	**56**	*e*P	**P**	**09 36 49.3**	**-0.3**
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNA3	**Neumayer Olymp**	**98.15**	**183**	⇑*i*P	**P**	**09 36 49.0**	**-0.4**
VNA3				*e*	pP	09 37 06.8	-0.5
VNA3				*e*		09 37 14.3	
VNA3				*e*		09 40 48.6	
VNA3				*e*		09 41 15.8	
VNA2	**Neumayer--Watz**	**98.33**	**184**	⇑*i*P	**P**	**09 36 50.0**	**-0.2**
VNA2				*e*	pP	09 37 08.1	0.0
VNA2				*e*		09 37 16.2	
VNA2				*e*		09 40 49.8	
VNA2				*e*		09 41 18.3	
VNA1	**Neumayer--Stat**	**98.66**	**184**	⇑*i*P	**P**	**09 36 51.7**	**0.0**
VNA1				*e*	pP	09 37 09.6	0.0
VNA1				*e*		09 37 18.4	
VNA1				*e*		09 40 52.4	
CHKZ	**Chkalovo**	**98.66**	**323**	*e*P	**P**	**09 36 50.3**	**-1.8**
	comp=Z,6.0nm,0.8s,mb5.2						
CHKZ	**Chkalovo**	**98.66**	**323**	*e*P	**P**	**09 36 52.1**	**0.0**
BRVK	**Borovoye**	**98.80**	**322**	PFAKE		09 37 00.0	+7.2
BRVK				LR	LR		
	comp=Z,79nm,20.0s						
LAO	**LASA Array**	**99.46**	**44**	*e*P	**P**	**09 36 57.4**	**+1.4**
	comp=Z,15nm,1.1s,mb5.4						
TXAR	**Lajitas Array**	**99.67**	**62**	P	**P**	**09 36 57.3**	**0.0**
	comp=Z,0.3nm,0.6s,baz=213,slow=5.9,SNR=4.0						
TXAR				PP	PP	09 41 00.8	-3.5
	comp=Z,0.7nm,1.0s,baz=207,slow=8.4,SNR=4.9						
TXAR				PKKPbc		09 53 19.4	
	comp=Z,0.7nm,0.8s,baz=94,slow=3.3,SNR=6.8						
TXAR				LR	LR	10 13 09.0	
	comp=Z,1µm,21.9s,baz=250,slow=30						
ARU	**Arti**	**105.62**	**326**	PFAKE		09 41 50.0	
ARU				LR	LR		
	comp=Z,225nm,20.0s						
ARCES	**ARCESS Array B**	**114.66**	**344**	PKP	PKPdf	09 41 51.4	-0.2
	comp=Z,2.4nm,0.9s,baz=75,slow=1.2,SNR=7.9						
ARCES	**ARCESS Array B**	**114.66**	**344**	PKP	PKPdf	09 41 51.4	-0.2
GNI	**Garni**	**116.79**	**310**	PFAKE		09 42 10.0	+14
GNI				LR	LR		
	comp=Z,345nm,19.0s						
KIV	**Kislovodsk**	**117.59**	**314**	PFAKE		09 42 10.0	+12
KIV				LR	LR		
	comp=Z,133nm,22.0s						
KIV	**Kislovodsk**	**117.59**	**314**	*i* PKIKP	PKPdf	09 41 49.3	-8.5
KIV				*e*		09 48 39.8	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KIV				MLR	MLR		
	comp=Z,487nm,19.0s						
OBN	**Obninsk**	**117.95**	**328**	PFAKE		09 42 10.0	+12
OBN				LR	LR		
	comp=Z,185nm,19.0s						
FINES	**FINESS Array B**	**119.57**	**337**	PKP	PKPdf	09 42 02.0	+0.7
	comp=Z,2.1nm,0.9s,baz=108,slow=6.0,SNR=3.8						
SOC	**Sochi**	**119.77**	**314**	*i* PKIKP	PKPdf	09 42 04.5	+2.4
SOC				*e*		09 43 35.4	
SOC				*e*		09 48 56.3	
SOC				*e*PS	PS	09 53 14.0	-2.0
SOC				*e*		09 59 37.6	
SOC				pmax	pmax		
	comp=Z,13nm,0.8s						
SOC				MLR	MLR		
	comp=Z,585nm,22.0s						
BOSA	**Boshof**	**122.20**	**226**	PFAKE		09 42 20.0	+13
BOSA				LR	LR		
	comp=Z,1µm,19.0s						
SUR	**Sutherland**	**122.85**	**220**	PFAKE		09 42 20.0	+12
SUR				LR	LR		
	comp=Z,307nm,20.0s						
KMBO	**Kilima Mbogo**	**122.90**	**262**	PFAKE		09 42 20.0	+11
KMBO				LR	LR		
	comp=Z,305nm,22.0s						
AKASG	**Malin Array Be**	**123.87**	**325**	PKP	PKPdf	09 42 09.9	0.0
	comp=Z,2.4nm,0.6s,baz=68,slow=2.2,SNR=21						
LBTB	**Lobatse**	**124.00**	**230**	PFAKE		09 42 20.0	+9.3
LBTB				LR	LR		
	comp=Z,831nm,20.0s						
LPAZ	**La Paz**	**124.52**	**118**	PKP	PKPdf	09 42 13.7	+1.7
	comp=Z,0.7nm,0.4s,baz=334,slow=2.0,SNR=6.2						
LPAZ	**La Paz**	**124.52**	**118**	*e*PKPdf	PKPdf	09 42 13.6	+1.6
BRTR	**Keskin Array B**	**125.20**	**311**	PKP	PKPdf	09 42 12.8	0.0
	comp=Z,1.2nm,0.5s,baz=117,slow=2.8,SNR=6.8						
LSZ	**Lusaka**	**126.71**	**242**	PFAKE		09 42 30.0	+14
LSZ				LR	LR		
	comp=Z,606nm,19.0s						
OKC	**Ostrava-Krasne**	**130.27**	**329**	AMS	AMS	10 36 50.0	
	comp=Z,1µm,25.1s						
DPC	**Dobruska-Polom**	**130.84**	**331**	AMS	AMS	10 39 50.0	
	comp=Z,1µm,18.4s						
PVCC	**Panska Ves**	**131.55**	**332**	AMS	AMS	10 40 20.0	
	comp=Z,2µm,26.3s						
PRU	**Pruhonice**	**131.93**	**331**	AMS	AMS	10 41 20.0	
	comp=Z,1µm,20.0s						
TREC	**Trest**	**131.94**	**330**	AMS	AMS	10 40 30.0	
	comp=Z,2µm,20.4s						
NKC	**Novy Kostel**	**132.72**	**333**	AMS	AMS	10 41 10.0	
	comp=Z,1µm,24.9s						
KHC	**Kasperske Hory**	**132.98**	**331**	AMS	AMS	10 42 00.0	
	comp=Z,2µm,18.7s						
GERES	**GERESS Array B**	**133.12**	**331**	PKP	PKPdf	09 42 29.0	+1.4
	comp=Z,1.0nm,0.7s,baz=90,slow=1.3,SNR=5.9						
TSUM	**Tsumeb**	**133.40**	**231**	PFAKE		09 42 40.0	+11
TSUM				LR	LR		
	comp=Z,726nm,20.0s						
ABSA	**Djebel Ababsia**	**144.95**	**321**	P	PKPdf	09 42 49.0	-0.2
CKFL	**Kef-Lekhel**	**145.33**	**322**	P	PKPdf	09 42 51.0	+1.1
CASM	**Ain Smara**	**145.56**	**322**	P	PKPdf	09 42 52.0	+1.7
DFRA	**Djebel Bou Aff**	**145.74**	**323**	P	PKPdf	09 42 53.5	+2.9
SET	**Setif**	**146.26**	**323**	P	PKPdf	09 42 55.0	+3.5
ATAF	**Djebel Tarf**	**147.14**	**324**	P	PKPdf	09 42 57.4	+4.4
AKET	**Djebel Ketaf**	**147.25**	**324**	P	PKPdf	09 42 58.2	+5.1
ADJB	**Djebel Djouab**	**147.42**	**325**	P	PKPdf	09 42 58.0	+4.6
ESLA	**Sonseca Array**	**148.08**	**338**	PFAKE		09 43 10.0	+16
ESLA				LR	LR		
	comp=Z,5µm,20.0s						
DBIC	**Dimbokro**	**165.53**	**256**	PKPab	PKPab	09 44 17.1	-0.7
	comp=Z,4.9nm,0.9s,baz=195,slow=9.2,SNR=4.3						

*ATH **10** 10:57:07.7, 39.85N×20.78E, h25^{km}±2^{km}, MD3.5/5*
*NEIC **10** 10:57:07.7, 39.85N×20.78E, h25^{km}, MD3.5(ATH), After ATH.*
*THE **10** 10:57:08.4, 39.87N×20.67E, h2^{km}, ML3.3*
*CSEM **10** 10:57:08.7±0.1, 39.87N×20.65E, h10^{km}, MD3.5, Error ellipse: s-maj=3.2km s-min=2.5km az=133.0*
ISC 10 10:57:07.0±0.8, **39.84N**±0.03×**20.71E**±0.04, **h0**^{km}±6^{km}, **n25**, σ1^{s}**04**/31, **1C-2D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	**Janina**	**0.22**	**148**	⇑*i*PB	**Pb**	**10 57 13.2**	**-0.3**
JAN				*e*SB	**Sb**	**10 57 17.4**	**-0.2**
LSK	**Leskovik**	**0.32**	**345**	*i* Pg	**Pg**	**10 57 11.9**	**-1.5**
LSK				*i* Sg	**Sg**	**10 57 24.1**	**+6.5**
LSK	**Leskovik**	**0.32**	**345**	*e*Pg	**Pg**	**10 57 11.9**	**-1.5**
IGT	**Igoumenitsa**	**0.42**	**223**	*e*Pg	**Pg**	**10 57 16.5**	**+1.1**
SRN	**Sarande**	**0.54**	**274**	*i* Pg	**Pg**	**10 57 19.3**	**+1.5**
SRN	**Sarande**	**0.54**	**274**	*e*Pg	**Pg**	**10 57 19.3**	**+1.5**
KEK	**Kerkira**	**0.71**	**260**	*e*PB	**Pb**	**10 57 21.5**	**-0.4**
KEK				*e*SN	**Sn**	**10 57 34.4**	**-1.3**
KZN	**Kozani**	**0.94**	**60**	⇓*i*PN	**Pn**	**10 57 25.2**	**-2.0**
FNA	**Florina**	**1.07**	**28**	*e*Pg	**Pg**	**10 57 28.4**	**0.0**
EVR	**Evrytania**	**1.26**	**137**	*e*PN	**Pn**	**10 57 31.0**	**-0.8**
BIA	**Bitola**	**1.27**	**22**	*i* Pn	**Pn**	**10 57 31.5**	**-0.4**
BIA				*i* Sn	**Sn**	**10 57 51.0**	**+1.1**
OHR	**Ohrid**	**1.27**	**3**	*e*Pn	**Pn**	**10 57 33.5**	**+1.5**
AGG	**Agios Georgios**	**1.50**	**122**	*e*Pg	**Pg**	**10 57 35.8**	**-1.2**
AGG				*e*Sg	**Sg**	**10 57 57.6**	**+0.6**
VLS	**Valsamata**	**1.66**	**183**	⇓*i*PN	**Pn**	**10 57 37.4**	**-0.2**
VLS				*e*SN	**Sn**	**10 58 00.7**	**+0.8**
GRG	**Griva**	**1.71**	**49**	*e*Pb	**Pb**	**10 57 38.3**	**-0.7**
XOR	**Xorichti**	**1.98**	**103**	*e*Pn	**Pn**	**10 57 42.5**	**+0.5**
XOR	**Xorichti**	**1.98**	**103**	*e*Pn	**Pn**	**10 57 42.5**	**+0.4**
VAY	**Valandovo**	**2.05**	**43**	*i* Pn	**Pn**	**10 57 46.0**	**+2.9**
KNT	**Kendrikon**	**2.13**	**51**	*e*Pn	**Pn**	**10 57 44.4**	**+0.1**
SKO	**Skopje**	**2.20**	**14**	*e*Pn	**Pn**	**10 57 48.7**	**+3.4**
SOH	**Sokhos**	**2.25**	**63**	*e*Pn	**Pn**	**10 57 46.1**	**+0.1**
PAIG	**Paliouri**	**2.29**	**87**	*e*Pn	**Pn**	**10 57 46.1**	**-0.4**
AOS	**Alonnisos**	**2.55**	**104**	*e*Pn	**Pn**	**10 57 50.9**	**+0.6**
AOS	**Alonnisos**	**2.55**	**104**	*e*Pn	**Pn**	**10 57 50.8**	**+0.6**
DIVS	**Divcibare**	**4.29**	**353**	*e*Pn	**Pn**	**10 58 14.0**	**-1.0**

NEIC 10 11:15:50.2±3.0, **40.90N**×**126.45W, h10**^{km}**, mb3.1**/1**, Error ellipse: s-maj=35.1km s-min=8.6km az=76.0, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	**Horse Mountain**	**2.06**	**90**	*e*P	Pn	11 16 24.0	-1.4
KCPM	**Cahto Peak**	**2.50**	**118**	*e*P	Pn	11 16 30.8	-0.9
KIPM	**Iron Peak**	**2.52**	**115**	*e*P	Pn	11 16 31.4	-0.5
KTRM	**Thompson Ridge**	**2.52**	**65**	P	Pn	11 16 30.5	-1.4
YBH	**Yreka Blue Hor**	**2.94**	**72**	*e*P	Pn	11 16 37.1	-0.8
WDC	**Whiskeytown Da**	**2.99**	**95**	*e*P	Pn	11 16 37.5	-1.1
HUMO	**Hull Mountain**	**3.12**	**56**	*e*P	Pn	11 16 38.4	-2.1
DBO	**Dodson Butte**	**3.26**	**46**	P	Pn	11 16 40.6	-1.8
LHEM	**Herd Peak**	**3.27**	**76**	P	Pn	11 16 43.1	+0.5
BUOR	**Burton Butte**	**3.44**	**65**	P	Pn	11 16 45.3	+0.3
HSO	**Harness Mounta**	**3.62**	**42**	P	Pn	11 16 45.7	-1.9
VSP	**Spence Mountai**	**3.67**	**65**	P	Pn	11 16 48.1	-0.1
HBO	**Huckleberry Mo**	**4.25**	**45**	P	Pn	11 16 55.4	-1.0
IRO	**Indian Ridge**	**4.39**	**44**	P	Pn	11 16 57.2	-1.3
MOD	**Modoc**	**4.73**	**76**	*e*P	Pn	11 17 01.0	-2.4
BKCOR	**Black Crater**	**4.88**	**44**	P	Pn	11 17 03.8	-1.7
BEND	**Bend**	**4.94**	**48**	P	Pn	11 17 04.7	-1.5
BMO	**Blue Mountains**	**7.79**	**57**	*e*P	Pn	11 17 44.2	-2.2
EDM	**Edmonton**	**15.19**	**31**	*e*P	P	11 19 24.7	-1.5
SDCO	**Great Sand Dun**	**16.51**	**94**	P	P	11 19 41.8	-1.5
	1.4nm,0.9s						
WMOK	**Wichita Mounta**	**22.65**	**97**	P	P	11 20 52.3	-0.3

*PRU **10** 11:18:53.4, 50.46N×18.75E*
WAR 10 11:18:55.7, 50.26N×18.86E, h0^{km}**, ML2.5, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.60**	**93**	*e*PG	Pg	11 19 07.0	-0.8
OJC				*e*SG	Sg	11 19 16.0	+0.2
OKC	**Ostrava-Krasne**	**0.62**	**228**	*e*PG	Pg	11 19 07.4	-0.8
OKC				*e*SG	Sg	11 19 19.0	+2.5
	141nm,2.2s						
NIE	**Niedzica**	**1.26**	**131**	*e*PG	Pg	11 19 21.0	+0.1
NIE				*e*SG	Sg	11 19 39.0	+1.3
KSP	**Ksiaz**	**1.74**	**291**	*e*PG	Pg	11 19 27.0	-3.4
KSP				*e*SG	Sg	11 19 50.0	-3.6
STHS	**Stebnicka Huta**	**1.76**	**118**	*e*PN	Pn	11 19 29.2	+1.6
STHS				*e*SG	Sg	11 19 56.2	+2.0
VYHS	**Vyhne**	**1.77**	**181**	*e*SN	Sn	11 19 49.5	-1.7
PRU	**Pruhonice**	**2.79**	**266**	*e*SG	Sg	11 20 20.7	-8.0
KHC	**Kasperske Hory**	**3.61**	**254**	*e*SG	Sg	11 20 48.9	-7.0
CLL	**Collm**	**3.86**	**288**	*e*SG	Sg	11 21 02.0	-2.3
NKC	**Novy Kostel**	**4.12**	**272**	*e*SG	Sg	11 21 01.2	-12

WEL 10 11:22:35.4±0.3, **36.78S**×**177.51E, h187**^{km}±2^{km}**, ML3.9**/8**, Error ellipse: s-maj=2.5km s-min=2.5km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.01**	**141**	PN	P	11 23 03.6	-0.5
MXZ				SN	S	11 23 25.9	-0.2
PUZ	**Puketiti**	**1.43**	**155**	PN	P	11 23 07.4	-0.2
PUZ				SN	S	11 23 31.7	-0.8
KUZ	**Kuaotunu**	**1.44**	**271**	PN	P	11 23 07.4	-0.3
KUZ				SN	S	11 23 31.3	-1.3
URZ	**Urewera**	**1.51**	**192**	PN	P	11 23 08.1	-0.4
URZ				SN	S	11 23 33.3	-0.6
MWZ	**Matawai**	**1.56**	**179**	PN	P	11 23 08.7	-0.1
MWZ				SN	S	11 23 33.9	-0.7
KNZ	**Kokohu**	**2.25**	**177**	PN	P	11 23 15.2	-0.8
BKZ	**Black Stump Fm**	**2.52**	**198**	PN	P	11 23 18.0	-1.2
CNZ	**Chateau**	**2.87**	**212**	PN	P	11 23 22.7	-0.6
WNVZ	**Wahianoa**	**2.96**	**210**	PN	P	11 23 23.5	-0.9
TSZ	**Takapari Road**	**3.50**	**200**	PN	P	11 23 28.6	-2.4
BFZ	**Birch Farm**	**4.02**	**194**	PN	P	11 23 35.4	-2.2
MRZ	**Mangatainoka R**	**4.16**	**201**	PN	P	11 23 36.3	-3.1

*PDG **10** 11:37:36.6±0.2, 42.57N×20.03E, h10^{km}±1^{km}*
*NEIC **10** 11:37:36.6, 42.57N×20.03E, h10^{km}, MD3.1(PDG), After PDG.*
*CSEM **10** 11:37:36.0±0.2, 42.58N×20.07E, h5^{km}, ML3.4, Error ellipse: s-maj=4.2km s-min=3.4km az=21.0*
*THE **10** 11:37:38.2, 42.76N×20.32E, h16^{km}, ML3.4*
ISC 10 11:37:36.6±0.3, **42.58N**±0.02×**20.03E**±0.03, **h10**^{km}, **n33**, σ**1**^{s}**41**/58, **8C-4D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCI	**Bajram Curri**	**0.21**	**172**	*i* Pg	**Pg**	**11 37 39.3**	**-1.9**
BCI				*i* Sg	**Sg**	**11 37 41.2**	**-3.1**
BCI	**Bajram Curri**	**0.21**	**172**	*e*Pg	**Pg**	**11 37 39.3**	**-1.9**
BCI				*i* Sg	**Sg**	**11 37 41.2**	**-3.1**
TTG	**Podgorica**	**0.59**	**255**	⇑*i*Pg	**Pg**	**11 37 46.6**	**-1.7**
TTG				*e*Sg	**Sg**	**11 37 56.1**	**-0.2**
SDA	**Shkodra**	**0.66**	**217**	*i* Pg	**Pg**	**11 37 48.1**	**-1.7**
SDA				*i* Sg	**Sg**	**11 37 58.0**	**-0.6**
SDA	**Shkodra**	**0.66**	**217**	*e*Pg	**Pg**	**11 37 48.1**	**-1.7**
SDA				*i* Sg	**Sg**	**11 37 58.0**	**-0.6**
NKY	**Niksic**	**0.79**	**287**	⇑*i*Pg	**Pg**	**11 37 51.2**	**-1.2**
NKY				*e*Sg	**Sg**	**11 38 03.8**	**+0.6**
NKY	**Niksic**	**0.79**	**287**	⇑*i*Pg	**Pg**	**11 37 51.2**	**-1.3**
NKY				*e*Sg	**Sg**	**11 38 03.8**	**+0.7**
ULC	**Ulcinj**	**0.84**	**223**	⇓*i*Pg	**Pg**	**11 37 52.2**	**-1.3**
ULC				*e*Sg	**Sg**	**11 38 05.2**	**+0.4**
BUM	**Brajici-Budva**	**0.88**	**252**	⇑*i*Pg	**Pg**	**11 37 52.3**	**-2.0**
BUM				*e*Sg	**Sg**	**11 38 06.5**	**+0.4**
BUM	**Brajici-Budva**	**0.88**	**252**	⇑*i*Pg	**Pg**	**11 37 52.3**	**-1.9**
BUM				*e*Sg	**Sg**	**11 38 06.4**	**+0.4**
NVSS	**Nova Varos 2**	**0.96**	**346**	⇓*i*Pg	**Pg**	**11 37 53.9**	**-1.9**
NVSS				Sg	**Sg**	**11 38 06.6**	**-2.0**
UPM	**Unac-Piva**	**1.03**	**308**	⇓*i*Pg	**Pg**	**11 37 56.3**	**-0.9**
UPM				*e*Sg	**Sg**	**11 38 11.8**	**+0.8**
HCY	**Herceg Novi**	**1.14**	**264**	⇓*i*Pg	**Pg**	**11 37 57.7**	**-1.6**
HCY				*e*Sg	**Sg**	**11 38 15.5**	**+0.9**
BRY	**Bratogost**	**1.14**	**287**	⇑*i*Pg	**Pg**	**11 37 57.4**	**-2.0**
BRY				*e*Sg	**Sg**	**11 38 15.7**	**+1.1**
SKO	**Skopje**	**1.21**	**120**	*e*Pn	**Pn**	**11 37 58.3**	**-1.3**
SKO				*e*Sn	**Sn**	**11 38 16.6**	**+0.5**
BARS	**Barje**	**1.35**	**79**	⇑*i*Pg	**Pg**	**11 38 01.4**	**-2.1**
BARS				Sg	**Sg**	**11 38 17.6**	**-3.9**
BBLS	**Bajina Basta -**	**1.36**	**341**	*i* Pn	**Pn**	**11 38 02.9**	**+1.2**
BBLS				Sg	**Sg**	**11 38 23.4**	**+1.3**
DIVS	**Divcibare**	**1.52**	**359**	⇑*i*Pn	**Pn**	**11 38 05.5**	**+1.5**
DIVS				Sn	**Sn**	**11 38 24.6**	**+0.7**
OHR	**Ohrid**	**1.58**	**158**	*i* Pn	**Pn**	**11 38 06.3**	**+1.6**
OHR				*i* Sn	**Sn**	**11 38 28.1**	**+2.8**
OHR	**Ohrid**	**1.58**	**158**	*i* Pn	**Pn**	**11 38 06.3**	**+1.5**
OHR				*e*Sn	**Sn**	**11 38 28.1**	**+2.7**
STON	**Ston**	**1.74**	**280**	*i* Pn	**Pn**	**11 38 08.4**	**+1.3**
STON				*i* Sn	**Sn**	**11 38 34.5**	**+5.1**
BIA	**Bitola**	**1.84**	**148**	*e*Pn	**Pn**	**11 38 16.7**	**+8.3**
BIA				*i* Sn	**Sn**	**11 38 35.6**	**+3.7**
FNA	**Florina**	**2.06**	**150**	*e*Pn	**Pn**	**11 38 12.7**	**+1.0**
FNA				*e*Sn	**Sn**	**11 38 39.3**	**+1.7**
VAY	**Valandovo**	**2.28**	**123**	*i* Pn	**Pn**	**11 38 17.1**	**+2.3**
VAY				*i* Sn	**Sn**	**11 38 48.5**	**+5.4**
VTS	**Vitosha**	**2.35**	**89**	*e*P	**Pn**	**11 38 16.0**	**+0.2**
KKB	**Krupnik**	**2.38**	**106**	*e*P	**Pn**	**11 38 21.0**	**+4.7**
GRG	**Griva**	**2.41**	**132**	*e*Pn	**Pn**	**11 38 16.5**	**-0.2**
KNT	**Kendrikon**	**2.57**	**122**	*e*Pn	**Pn**	**11 38 17.7**	**-1.3**
MMB	**Musomiste**	**2.93**	**109**	*e*P	**Pn**	**11 38 29.0**	**+4.9**
LIT	**Litokhoron**	**3.09**	**142**	*e*Pn	**Pn**	**11 38 26.0**	**-0.4**
RGNG	**Rignano Grg**	**3.42**	**256**	Pn	**Pn**	**11 38 31.6**	**+0.5**
RGNG				Sn	**Sn**	**11 39 12.8**	**+0.6**
MGR	**Morigerati**	**4.16**	**236**	Pn	**Pn**	**11 38 44.2**	**+2.6**
SGG	**Gregorio Mates**	**4.38**	**256**	Pn	**Pn**	**11 38 46.5**	**+1.8**

*BJI **10** 11:40:40.5, 43.60N×127.00W, h10^{km}, mB5.0, mb4.6, Ms4.8, Msz4.5*
*IDC **10** 11:40:40.3±1.4, 43.56N×126.97W, mb3.7/6, mb1 4.0/14, mb1mx3.9/30, mbtmp3.8/14, ML3.7/7, MS3.6/6, Ms1 3.5/6, ms1mx3.2/34, Error ellipse: s-maj=24.7km s-min=10.5km az=47.0*
*NEIC **10** 11:40:42.5±0.7, 43.56N×127.04W, h10^{km}, mb4.3/4, Error ellipse: s-maj=9.2km s-min=4.8km az=66.0*
ISC 10 11:40:41.5±0.5, **43.56N**±0.04×**126.94W**±0.06, **h10**^{km}, **n77**, σ1^{s}**05**/78, **mb4.0**/8, **MS3.7**/4, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RNO	**Roman Nose**	**2.34**	**80**	P	**Pn**	**11 41 20.6**	**-0.2**
DBO	**Dodson Butte**	**2.73**	**98**	P	**Pn**	**11 41 25.1**	**-1.2**
HSO	**Harness Mounta**	**2.80**	**89**	P	**Pn**	**11 41 26.6**	**-0.7**
COR	**Corvallis**	**2.81**	**67**	*e*P	**Pn**	**11 41 27.6**	**+0.1**
EUO	**Eugene**	**2.84**	**79**	P	**Pn**	**11 41 27.9**	**0.0**
HUMO	**Hull Mountain**	**3.07**	**107**	*e*P	**Pn**	**11 41 29.3**	**-1.8**
BBOR	**Butler Butte**	**3.19**	**101**	P	**Pn**	**11 41 32.0**	**-0.7**
BROR	**Big Rock Looko**	**3.32**	**76**	P	**Pn**	**11 41 35.0**	**+0.4**
HBO	**Huckleberry Mo**	**3.36**	**84**	P	**Pn**	**11 41 35.6**	**+0.4**
IRO	**Indian Ridge**	**3.42**	**81**	P	**Pn**	**11 41 36.2**	**+0.1**
SSOR	**Sweet Springs**	**3.47**	**67**	P	**Pn**	**11 41 37.9**	**+1.1**
FRIS	**Frissel Point**	**3.56**	**78**	P	**Pn**	**11 41 38.5**	**+0.5**
YBH	**Yreka Blue Hor**	**3.62**	**119**	Pn	**Pn**	**11 41 38.4**	**-0.4**
	1.7nm,0.3s,baz=264,slow=7.7,SNR=38						
YBH				Sn	**Sn**	**11 42 21.6**	**-0.5**
	0.7nm,0.3s,baz=132,slow=18,SNR=3.6						
YBH	**Yreka Blue Hor**	**3.62**	**119**	*e*P	**Pn**	**11 41 38.0**	**-0.8**
BKCOR	**Black Crater**	**3.86**	**77**	P	**Pn**	**11 41 43.1**	**+0.8**
BMW	**Boistfort Moun**	**3.92**	**41**	P	**Pn**	**11 41 43.5**	**+0.3**
BPO	**Bald Peter**	**3.94**	**72**	P	**Pn**	**11 41 44.4**	**+1.0**
VLMM	**Larch Mountain**	**4.02**	**59**	P	**Pn**	**11 41 45.9**	**+1.3**
TDH	**Tom, Dick, Har**	**4.07**	**63**	P	**Pn**	**11 41 46.5**	**+1.2**
LVP	**Lakeview Peak**	**4.08**	**51**	P	**Pn**	**11 41 46.7**	**+1.2**
FL2	**Flat Top 2**	**4.19**	**50**	P	**Pn**	**11 41 48.5**	**+1.5**
VLL	**Laurance Lake**	**4.21**	**61**	P	**Pn**	**11 41 48.7**	**+1.4**
GHW	**Garrison Hill**	**4.79**	**42**	P	**Pn**	**11 41 56.2**	**+0.7**
HDW	**Hoodsport**	**4.91**	**32**	P	**Pn**	**11 41 57.5**	**+0.2**
FMW	**Mount Fremont**	**5.02**	**46**	P	**Pn**	**11 41 59.8**	**+1.0**
MOD	**Modoc**	**5.16**	**106**	*e*P	**Pn**	**11 41 59.5**	**-1.2**
TTW	**Tolt Reservoir**	**5.53**	**40**	P	**Pn**	**11 42 06.5**	**+0.5**
HTW	**Haystack Looko**	**5.58**	**39**	P	**Pn**	**11 42 06.7**	**+0.1**
EBG	**Ellensburg**	**5.61**	**51**	P	**Pn**	**11 42 08.2**	**+1.2**
PGC	**Sidney**	**5.64**	**24**	*e*P	**Pn**	**11 42 06.9**	**-0.5**
HAWA	**Hanford**	**5.97**	**59**	*e*P	**Pn**	**11 42 12.2**	**+0.1**
BMO	**Blue Mountains**	**7.04**	**76**	*e*P	**Pn**	**11 42 25.8**	**-1.5**
CMB	**Columbia Colle**	**7.43**	**136**	*e*P	**Pn**	**11 42 32.0**	**-0.7**
NVAR	**Mina Array Bea**	**8.30**	**125**	Pn	**P**	**11 42 43.6**	**-1.3**
	0.2nm,0.3s,baz=301,slow=12,SNR=4.8						
NEW	**Newport**	**8.30**	**52**	Pn	**P**	**11 42 43.6**	**-1.2**
	1.0nm,0.3s,baz=219,slow=9.7,SNR=19						
NEW				LR	LR	11 46 03.7	
	comp=Z,404nm,20.0s,baz=104,slow=39						
NEW	**Newport**	**8.30**	**52**	*e*P	**P**	**11 42 43.2**	**-1.6**
	15nm,0.9s						
BBB	**Bella Bella**	**8.66**	**355**	Pn	**P**	**11 42 47.9**	**-2.0**
	0.9nm,0.3s,baz=210,slow=14,SNR=3.3						
BBB				LR	LR	11 45 43.6	
	comp=Z,198nm,18.3s,baz=132,slow=35						
ELK	**Elko**	**9.14**	**104**	Pn	**P**	**11 42 57.1**	**+0.7**
	0.1nm,0.3s,baz=307,slow=12,SNR=9.2						

MSO	Missoula	9.74	66	eP	P	11 43 03.5	-1.2
MCMT	McKenzie Canyo	10.20	78	eP	P	11 43 10.7	-0.3
CHMT	Chamberlain Mo	10.22	66	eP	P	11 43 09.8	-1.5
DLMT	Dillon	10.41	75	eP	P	11 43 12.9	-1.0
DUG	Dugway	11.06	103	P	P	11 43 21.2	-1.6
QLMT	Earthquake Lak	11.21	78	P	P	11 43 24.1	-0.8
RRI2	Red Ridge	11.36	86	eP	P	11 43 26.2	-0.6
YMR	Madison River	11.54	79	eP	P	11 43 29.0	-0.3
TPAW	Teton Pass	11.61	85	eP	P	11 43 30.9	+0.6
ARUT	Antelope Range	11.76	115	eP	P	11 43 31.8	-0.5
NEN	Nelson	12.22	126	eP	P	11 43 39.6	+1.1
MSU	Marysvale	12.23	109	eP	P	11 43 38.3	-0.4
LDFC	Landfair	12.47	129	eP	P	11 43 42.2	+0.3
BW06	Boulder Array	12.72	88	eP	P	11 43 45.0	-0.3
PDAR	Pinedale Array	12.72	88	Pn	P	11 43 46.1	+0.9
	0.1nm,0.3s,baz=280,slow=11,SNR=22						
EDM	Edmonton	13.20	38	eP	P	11 43 50.6	-1.0
WUAZ	Wupatki	14.44	119	P	P	11 44 09.7	+1.8
	6.3nm,0.9s						
PV01	Paradox Valley	14.91	105	P	P	11 44 14.9	+0.8
LAO	LASA Array	14.95	71	eP	P	11 44 14.1	-0.4
	29nm,1.5s						
DLBC	Dease Lake	15.02	354	Pn	P	11 44 13.6	-1.7
	0.3nm,0.3s,baz=172,slow=19,SNR=3.4						
ISCO	Idaho Springs	16.36	96	eP	P	11 44 32.4	-0.4
	9.5nm,1.1s						
SDCO	Great Sand Dun	17.26	102	eP	P	11 44 43.7	-0.4
	26nm,1.5s						
ANMO	Albuquerque	18.01	112	P	P	11 44 53.8	+0.3
	baz=303,slow=11,SNR=9.3						
ANMO				LR	LR	11 51 44.7	
	comp=Z,140nm,19.3s,slow=37						
YKA	Yellowknife Ar	20.29	17	P	P	11 45 19.2	-0.7
	1.0nm,0.5s,baz=204,slow=9.6,SNR=3.9						
CPRX	Cap Rock	20.88	112	P	P	11 45 27.4	+1.2
GDL2	Guadalupe Moun	21.05	115	eP	P	11 45 28.3	+0.3
CLNB	Carlsbad	21.34	114	P	P	11 45 33.0	+2.2
ULM	Lac du Bonnet	22.14	62	P	P	11 45 38.4	-0.4
	6.8nm,0.8s,mb4.1,baz=286,slow=8.1,SNR=6.5						
ULM				LR	LR	11 54 37.3	
	comp=Z,199nm,18.3s,MS3.6,baz=44,slow=38						
TXAR	Lajitas Array	23.39	120	P	P	11 45 52.2	+0.9
	0.9nm,0.8s,mb3.2,baz=292,slow=7.8,SNR=11						
TXAR				LR	LR	11 55 54.5	
	comp=Z,101nm,18.7s,MS3.3,baz=10.0,slow=39						
WMOK	Wichita Mounta	23.46	103	eP	P	11 45 52.3	+0.4
	11nm,1.0s,mb4.2						
ILAR	Eielson Array	24.03	339	P	P	11 45 56.7	-0.4
	3.9nm,0.8s,mb3.9,baz=155,slow=8.6,SNR=37						
INK	Inuvik	25.05	354	P	P	11 46 05.7	-1.1
	2.3nm,0.8s,mb3.8,baz=169,slow=13,SNR=7.0						
INK				LR	LR	11 55 39.7	
	comp=Z,183nm,19.4s,MS3.6,baz=110,slow=36						
MDJ	Mudanjiang	68.92	312	P	P	11 51 46.5	-1.9
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.0s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,100nm,6.8s						
CN2	Changchun	71.68	313	eP	P	11 52 06.8	+1.6
SONM	Songino Array	77.58	326	P	P	11 52 37.2	-1.7
	comp=Z,0.8nm,0.9s,mb3.6,baz=297,slow=3.3,SNR=4.8						
HHC	Hu-ho-hao-te	80.83	319	eP	P	11 52 58.9	+2.2
HHC				AP	pP	11 53 03.5	+3.6
HHC				XP	sP	11 53 05.9	+5.0
HHC				PP	PP	11 56 06.9	+3.7
HHC				S	S	12 03 10.1	+6.6
HHC				SKS	SKS	12 03 14.9	-0.6
HHC				XS		12 03 18.5	
HHC				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,150nm,4.8s						
HHC				LR	LR		
	comp=N,140nm,9.6s						
HHC				LR	LR		
	comp=E,160nm,12.0s						
HHC				LR	LR		
	comp=Z,110nm,10.8s,MS4.5						
SSE	Sheshan	83.07	307	eP	P	11 53 08.8	+0.2
SSE				AMB	AMB		
	comp=Z,20nm,0.7s						
SSE				AMB	AMB		
	comp=Z,40nm,5.8s						
NJ2	Nanjing	83.71	309	eP	P	11 53 14.8	+3.0
WMQ	Urumqi	87.66	336	eP	P	11 53 34.0	+3.0
WMQ				AP	pP	11 53 38.4	+4.2
WMQ				XP	sP	11 53 41.0	+5.7

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*ATH **10** 11:44:53.7, 38.28N×22.36E, h24^{km}±3^{km}, MD3.2/12, ML3.1*
*NEIC **10** 11:44:53.7, 38.28N×22.36E, h24^{km}, ML3.1(ATH), After ATH.*
*THE **10** 11:44:54.1, 38.28N×22.28E, h12^{km}, ML2.8*
*CSEM **10** 11:44:54.0±0.1, 38.27N×22.38E, h10^{km}, ML3.1, Error ellipse: s-maj=2.5km s-min=2.1km az=150.0*
ISC 10 11:44:53.0±0.9**, 38.30N**±0.04×**22.32E**±0.05**, h10**^{km}±7^{km}**, n15, σ1^{s}05**/21**, 1C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	Lokris	0.64	57	ePB	Pb	11 45 05.5	-0.4
LKR				eSN	Sn	11 45 15.0	-3.1
RLS	Riolos of Patr	0.71	250	ePN	Pn	11 45 07.9	-1.0
RLS				eSN	Sn	11 45 18.9	-1.0
AGG	Agios Georgios	0.72	1	ePg	Pg	11 45 07.6	0.0
AGG				eSg	Sg	11 45 19.4	+2.1
EVR	Evrytania	0.73	327	ePN	Pn	11 45 08.0	-1.2
EVR				eSN	Sn	11 45 20.5	0.0
NAIG	Nisos Aigina	1.07	120	ePN	Pn	11 45 14.2	+0.1
MPAR	Parnis Oros	1.13	97	ePN	Pn	11 45 15.0	+0.1
ATH	Athens Observa	1.15	106	ePN	Pn	11 45 15.5	+0.3
ITM	Ithomi	1.16	196	ePN	Pn	11 45 15.0	-0.3
NEO	Neokhori	1.23	35	⇑iPN	Pn	11 45 17.2	+0.9
NEO				eSN	Sn	11 45 33.9	+0.8
PTL	Penteli	1.25	101	ePN	Pn	11 45 17.0	+0.4
XOR	Xorichti	1.27	32	ePg	Pg	11 45 17.7	-0.7
XOR				eSg	Sg	11 45 34.9	-0.4
VLS	Valsamata	1.36	265	ePN	Pn	11 45 19.8	+1.6
AOS	Alonnisos	1.50	54	ePg	Pg	11 45 20.5	-2.5
VLI	Veliai	1.65	162	ePN	Pn	11 45 23.0	+0.6
KYTH	Kithira	2.10	164	ePN	Pn	11 45 30.0	+1.3

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*ISK **10** 12:09:53.0, 37.88N×38.00E, h4^{km}, MD3.4*
*CSEM **10** 12:09:55.8±0.1, 37.86N×37.97E, h40^{km}, MD3.4, Error ellipse: s-maj=3.1km s-min=2.5km az=166.0*
ISC 10 12:09:53.9±0.5**, 37.85N**±0.02×**37.97E**±0.03**, h13**^{km}±4^{km}**, n38, σ1^{s}06**/58**, 6D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.46	146	i P	Pg	12 10 03.1	-0.2
ATAB				i S	Sg	12 10 10.3	+0.8
GZT	Gaziantep	0.59	214	i P	Pb	12 10 05.2	-0.5
GZT				i S	Sb	12 10 13.3	-0.3
MYA	Malataya	0.59	37	i PG	Pg	12 10 04.4	-1.6
MYA				i SG	Sg	12 10 12.6	-1.4
URFA	Urfa	0.79	121	i PG	Pg	12 10 08.1	-1.7
URFA				i SG	Sg	12 10 20.6	+0.2
KAHT	Ahir Dag	0.90	256	i P	Pb	12 10 10.7	-0.2
KAHT				i S	Sb	12 10 27.8	+5.2
GAZ	Gaziantep	0.91	222	i PG	Pg	12 10 11.8	-0.4
GAZ				i SG	Sg	12 10 24.9	+0.5
ELZG	Elazig	1.03	51	i P	Pb	12 10 11.4	-1.7
ELZG				i S	Sb	12 10 26.7	+0.4
PTK	Pertek	1.52	47	i PN	Pn	12 10 20.9	-0.2
DRWC	Darouich	1.61	221	⇑iP	Pn	12 10 22.5	+0.2
DRWC				⇑iS	Sn	12 10 41.8	-1.3
KOZT	Kozan	1.74	258	PN	Pn	12 10 25.8	+1.6
DRBT	Darb Altahta	1.77	124	⇑iP	Pn	12 10 20.8	-3.8
DIY	Diyarbakir	1.78	88	PN	Pn	12 10 25.3	+0.5
COBT	Iskenderun	1.91	226	i P	Pn	12 10 25.7	-0.9
COBT				i S	Sn	12 10 48.9	-1.8
BNN	Bunyan	1.95	302	PN	Pn	12 10 28.3	+1.1
CEYT	Ceyhan	1.96	245	ePN	Pn	12 10 29.1	+1.8
SVST	Sivas	2.08	338	i P	Pn	12 10 29.6	+0.6
SVST				i S	Sn	12 11 00.4	+5.4
MNKR	ALMNKUR	2.17	151	⇓iP	Pn	12 10 31.1	+0.8
MNKR				⇓iS	Sn	12 10 57.6	+0.3
BTCH	Batrach	2.18	214	⇑iP	Pn	12 10 30.2	-0.3
BTCH				⇑iS	Sn	12 10 56.3	-1.2
JHLN	Al Jahlan	2.21	170	⇑iP	Pn	12 10 31.9	+1.1
BINT	Bingol	2.23	62	ePN	Pn	12 10 31.6	+0.4
SFNV	Sufian	2.23	129	⇑iP	Pn	12 10 31.5	+0.3
SFNV				⇑iS	Sn	12 10 58.9	+0.1
HTY	Hatay	2.27	221	ePN	Pn	12 10 32.7	+1.0
MARD	Mardin	2.29	103	i P	Pn	12 10 31.4	-0.7
MARD				i S	Sn	12 11 08.0	+7.6
KARA	Karaisali	2.39	257	ePN	Pn	12 10 35.3	+1.8
BEST	Besiri	2.61	88	i P	Pn	12 10 41.2	+4.6
BEST				i S	Sn	12 11 15.3	+6.9
AVNT	Avonos	2.62	292	i P	Pn	12 10 35.8	-1.1
AVNT				i S	Sn	12 11 16.0	+7.2
BSHR	Al Beshri	2.63	145	⇓iP	Pn	12 10 38.8	+1.8
BSHR				⇓iS	Sn	12 11 10.8	+1.7
SLNF	Slenfeh	2.65	213	⇑iP	Pn	12 10 37.5	+0.2
SLNF				⇑iS	Sn	12 11 08.0	-1.6
WRDH	Warideh	2.65	209	⇓iP	Pn	12 10 38.0	+0.8
WRDH				⇓iS	Sn	12 11 07.8	-1.8
NIG	Nigde	2.67	277	ePN	Pn	12 10 38.7	+1.2
TOKT	Tokat	2.71	336	ePN	Pn	12 10 38.3	+0.3
BTMT	Batman	2.80	82	ePN	Pn	12 10 37.8	-1.5
GUMT	Gumushane	2.86	24	ePN	Pn	12 10 39.9	-0.3
MERS	Mersin	2.92	251	ePN	Pn	12 10 42.4	+1.3
BIDA	Albida	3.13	206	⇑iP	Pn	12 10 43.7	-0.3
BIDA				⇑iS	Sn	12 11 19.2	-2.4
SIRT	Sirnak	3.56	94	ePN	Pn	12 10 50.8	+0.7
KAMT	Kaman	3.67	296	ePN	Pn	12 10 52.0	+0.3
HWQ	Hawqa	3.92	205	ePn	Pn	12 10 56.0	+0.6

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*IDC **10** 12:10:18.1±1.1, 9.00N×126.29E, mb3.8/4, mb1 4.1/4, mb1mx3.7/17, mbtmp3.8/4, Error ellipse: s-maj=69.6km s-min=26.7km az=70.0*
*MAN **10** 12:10:25.2, 8.86N×126.40E, h33^{km}, mb4.5, ML3.4, MS3.2*
ISC 10 12:10:24.2±0.7**, 8.91N**±0.03×**126.48E**±0.05**, h58**^{km}±8^{km}**, n22, σ1^{s}13**/36**, mb3.8**/4**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.73	189	⇑iP	P	12 10 38.8	0.0
BIPH				i S	S	12 10 47.9	-1.7
BUTP	Butuan	0.85	274	eP	P	12 10 40.1	-0.2
BUTP				eS	S	12 10 50.8	-1.6
SCPH	Surigao	1.31	312	eP	P	12 10 46.8	0.0
SCPH				eS	S	12 11 03.8	+0.3
BUKP	Musuan	1.74	234	eP	P	12 10 53.3	+0.6
BUKP				eS	S	12 11 14.8	+1.1
CGP	Cagayan de Oro	1.82	256	⇓eP	P	12 10 52.6	-1.2
CGP				eS	S	12 11 13.7	-2.1
MATI	Mati	1.96	187	eP	P	12 10 56.5	+0.8
MATI				eS	S	12 11 20.9	+1.9
MSLP	Maasin	2.01	307	eP	P	12 10 57.6	+1.2
MSLP				eS	S	12 11 22.1	+1.8
PLP	Palo	2.69	327	eP	P	12 11 07.2	+1.2
PLP				eS	S	12 11 42.8	+5.2
TBP	Tagbilaran	2.70	287	eP	P	12 11 05.5	-0.7
TBP				eS	S	12 11 37.8	0.0
LLP	Lapu-Lapu	2.85	300	eP	P	12 11 09.4	+1.1
LLP				eS	S	12 11 42.8	+1.2
BESP	Borongan	2.87	339	eP	P	12 11 08.4	-0.2
BESP				eS	S	12 11 47.4	+5.3
DCPH	Dipolog City	3.11	264	⇓eP	P	12 11 11.4	-0.7
DCPH				eS	S	12 11 47.0	-1.2
SNPH	Sibulan	3.23	278	eP	P	12 11 15.0	+1.2
PAGZ	Pagadian	3.24	251	eP	P	12 11 13.5	-0.3
PAGZ				eS	S	12 11 53.5	+2.0
CNP	Catarman	4.00	334	eP	P	12 11 25.2	+0.7
CNP				eS	S	12 12 11.1	+0.4
GUIM	Jordan	4.20	294	eP	P	12 11 26.4	-0.9
PVCP	Virac	5.19	334	eP	P	12 11 40.0	-1.2
PVCP				eS	S	12 12 37.6	-2.8
WRA	Warramunga Arr	29.69	165	P	P	12 16 26.8	-0.2
	0.4nm,0.6s,mb3.3,baz=346,slow=9.7,SNR=5.4						
MKAR	Makanchi Array	53.23	323	P	P	12 19 37.6	-1.5
	1.0nm,0.7s,mb3.9,baz=116,slow=7.9,SNR=10						
ILAR	Eielson Array	80.57	26	P	P	12 22 32.4	+0.8
	0.4nm,0.7s,mb3.5,baz=251,slow=4.6,SNR=5.3						
FINES	FINESS Array B	87.18	332	P	P	12 23 03.9	-1.1
	2.6nm,0.9s,mb4.4,baz=90,slow=7.6,SNR=5.5						
PLCA	Paso Flores	144.88	157	PKPbc	PKPbc	12 29 57.6	+2.5
	1.1nm,0.7s,baz=254,slow=7.0,SNR=3.0						

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*NDI **10** 12:17:33.5±2.6, 30.63N×71.82E, h10^{km}, MD3.6, ML3.3*
*NNC **10** 12:17:44.2±48.0, 34.92N×73.10E, mpv3.4, Error ellipse: s-maj=2043.0km s-min=438.8km az=76.0*
ISC 10 12:17:48.0±0.9**, 35.6N**±0.1×**75.0E**±0.3**, h33**^{km}**, n5, σ1^{s}80**/9**, 1C-1D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	Dalhousie	3.12	164	eP	P	12 18 35.0	-1.0
DLH				eS	S	12 19 18.0	+5.4
THN	Thein Dam	3.18	168	ex	P	12 18 31.9	-4.9
THN				eS	S	12 19 16.1	+2.1
SDNR	Sundarnagar	4.38	157	ePB	P	12 18 51.8	-2.1
SDNR				ex	S	12 19 41.0	-3.5
KLP	Kalpa	4.86	145	eS	S	12 19 58.0	+1.4
KLP				AML	AML	12 20 03.4	
	comp=E,37nm,0.2s						
KLP				AML	AML	12 20 04.7	
	comp=N,44nm,0.1s						
KK31	Karatay Array	8.29	337	⇓P	P	12 19 47.4	-1.4
	comp=N,0.6nm,0.3s,baz=158,slow=12,SNR=15						
KK31				⇑S	S	12 21 24.3	+2.1
	comp=N,0.3nm,0.3s,baz=171,slow=23,SNR=4.5						

CASC 10 12:41:08.4±1.7**, 13.20N**×**90.34W, h20**^{km}±9^{km}**, MD3.9, 4C-4D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.94	48	⇑eP	Pb	12 41 49.0	+23
SBLS				eS	Sb	12 42 02.4	+24
RTR	El Retiro	0.97	44	⇑eP	Pb	12 41 49.5	+23
RTR				eS	Sb	12 42 03.7	+25
IXG	Ixpaco	0.97	354	⇓eP	Pb	12 41 26.0	-0.4
IXG				eS	Sb	12 41 40.1	+1.2
BOQS	Boqueron	1.16	63	⇓eP	Pb	12 41 52.1	+22
BOQS				eS	Sb	12 42 08.3	+24
SNET	Serv Nac Est T	1.18	66	⇓eP	Pb	12 42 00.6	+31
SNET				eS	Sb	12 42 17.5	+33
LCBS	La Ceiba	1.40	71	⇑eP	Pn	12 41 55.5	+22
LCBS				eS	Sn	12 42 13.7	+23
SNVI	San Vicente	1.52	74	eP	Pn	12 41 57.5	+23
SNVI				eS	Sn	12 42 18.7	+25
MTO2	Montecristo 2	1.53	39	⇑eP	Pn	12 41 57.7	+23
MTO2				eS	Sn	12 42 17.1	+23
MRL	Marmol	1.96	19	eP	Pn	12 41 41.7	+0.6
MRL				eS	Sn	12 42 05.7	+0.4
VSM	San Miguel	2.03	83	eP	Pn	12 42 04.4	+22
VSM				eS	Sn	12 42 30.6	+24
CNCH	Conchagua	2.44	88	⇓eP	Pn	12 42 10.0	+22
CNCH				eS	Sn	12 42 41.0	+23
CRIN	San Cristobal	3.25	98	eS	Sn	12 42 37.5	-0.5
TEL3	Telica 3	3.47	100	eP	Pn	12 42 01.1	-1.5
MIRN	Miramar	3.62	102	eP	Pn	12 42 03.5	-1.3
MIRN				eS	Sn	12 42 46.7	-0.8
COPN	Copaltepe	3.80	105	eP	Pn	12 42 05.3	-2.0

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*NEIC **10** 13:06:26.3, 16.67N×94.33W, h122^{km}, MD3.9(MEX), After MEX.*
MEX 10 13:06:26.3±1.3**, 16.67N**×**94.33W, h122**^{km}±18^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.67	309	i P	P	13 06 44.3	-1.4
CMIG				i S	S	13 06 58.3	-2.4
HUIG	Huatulco	1.93	243	i P	P	13 06 56.8	-2.6
HUIG				i S	S	13 07 22.7	-1.7
CCIG	Comitan	2.14	100	i P	P	13 07 01.0	-1.2
CCIG				i S	S	13 07 27.7	-1.6
OXX	Oaxaca	2.32	280	eP	P	13 07 04.0	-0.6
OXX				i S	S	13 07 32.5	-1.0
VHO	Vista Hermosa	2.33	280	i P	P	13 07 02.6	-2.1
VHO				i S	S	13 07 32.7	-1.0

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*BJI **10** 13:06:48.1, 49.00S×123.50E, h10^{km}, mB5.3, mb4.8, Ms5.0, Msz4.8*
*IDC **10** 13:06:48.4±0.8, 49.05S×123.61E, mb4.3/9, mb1 4.5/10, mb1mx4.4/13, mbtmp4.4/10, ML2.5/1, MS4.1/8, Ms1 4.0/8, ms1mx4.0/9, Error ellipse: s-maj=38.5km s-min=17.2km az=113.0*
*NEIC **10** 13:06:49.9±0.3, 49.03S×123.49E, h10^{km}, mb4.8/17, Error ellipse: s-maj=13.4km s-min=7.0km az=97.0*
ISC 10 13:06:47.8±5.9**, 49.02S**±0.06×**123.6E**±0.2**, h7**^{km}±36^{km}**, h21**^{km}±4.8^{km}**:pP-P, n72, σ0^{s}95**/58**, mb4.7**/25**, MS4.1**/8**, 14C-3D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	16.76	341	Pn	P	13 10 44.6	+0.1
	0.8nm,0.3s,baz=163,slow=13,SNR=9.2						
NWAO				LR	LR	13 15 43.3	
	comp=Z,2μm,20.3s,baz=120,slow=32						
NWAO	Narrogin (SRO)	16.76	341	eP	P	13 10 46.4	+1.9
	24nm,1.0s						
KLBR	Kellerberrin	17.95	344	eP	P	13 11 00.0	+0.6
	39nm,1.3s						
STKA	Stephens Creek	21.85	45	eP	P	13 11 43.3	+0.5
	6.1nm,0.8s,mb4.1						
STKA	Stephens Creek	21.85	45	P	P	13 11 42.1	-0.7
	3.2nm,0.6s,mb3.9,baz=193,slow=8.5,SNR=11						
STKA				LR	LR	13 18 28.8	
	comp=Z,396nm,21.1s,MS3.8,baz=210,slow=32						
ASPA	Alice Springs	26.59	22	eP	P	13 12 26.7	-1.7
WRA	Warramunga Arr	30.27	20	P	P	13 13 00.6	-1.1
	0.7nm,0.7s,mb3.5,baz=197,slow=12,SNR=5.7						
FITZ	Fitzroy Crossi	30.88	4	P	P	13 13 06.4	-0.7
	7.7nm,0.9s,mb4.5,baz=183,slow=11,SNR=4.2						
RPZ	Rata Peaks	32.77	99	LR	LR	13 23 29.0	
	comp=Z,162nm,19.4s,MS3.7,baz=112,slow=31						
SBA	Scott Base	33.15	165	P	P	13 13 25.5	-0.8
	14nm,1.4s,mb4.7						
MAW	Mawson	35.04	216	eP	P	13 13 42.3	-0.4
	7.6nm,1.1s,mb4.5						
MAW	Mawson	35.04	216	P	P	13 13 42.6	-0.1
	4.8nm,0.9s,mb4.4,baz=73,slow=9.9,SNR=7.0						
MAW				LR	LR	13 26 49.9	
	comp=Z,122nm,18.7s,MS3.7,baz=299,slow=34						
KAKA	Kakadu	36.94	15	eP	P	13 14 17.1	+18
	6.0nm,0.6s,mb4.6						
QSPA	South Pole Qui	41.11	180	⇓iP	P	13 14 33.7	+0.3
	15nm,1.2s,mb4.5						
SYO	Syowa Base	43.36	211	⇑P	P	13 14 53.2	+1.5
SYO	Syowa Base	43.36	211	⇓sP	sP	13 14 58.4	+3.8
SYO	Syowa Base	43.36	211	⇑eP	P	13 14 53.2	+1.5
SYO				⇓eSP		13 14 58.4	
PMG	Port Moresby	44.15	35	eP	P	13 15 00.2	+1.3
	13nm,1.0s,mb4.6						
KSM	Kuching	51.58	343	eP	P	13 15 56.3	-0.6
KSM				e		13 16 03.8	
SNAA	Sanae	53.81	198	⇑i	P	13 16 11.3	-1.4
SNAA	Sanae	53.81	198	⇑i	P	13 16 17.4	+4.7
SNAA	Sanae	53.81	198	⇑i	P	13 16 31.2	+18
SNAA	Sanae	53.81	198	P	P	13 16 11.0	-1.7
	6.0nm,0.9s,mb4.5,baz=141,slow=8.1,SNR=66						
SNAA	Sanae	53.81	198	eP	P	13 16 11.0	-1.7
	64nm,1.3s,mb5.4						
SNAA				e		13 16 17.9	
SNAA				e		13 16 31.2	
KKM	Kota Kinabalu	55.20	351	P	P	13 16 23.3	-0.4
VNA2	Neumayer--Watz	55.32	198	⇑i	P	13 16 23.6	-0.2
VNA2	Neumayer--Watz	55.32	198	⇑i	P	13 16 29.5	+5.7
VNA2	Neumayer--Watz	55.32	198		P	13 16 36.6	+13
VNA2	Neumayer--Watz	55.32	198		P	13 16 43.7	+20
VNA3	Neumayer Olymp	55.50	197	⇑i	P	13 16 24.4	-0.7
VNA3	Neumayer Olymp	55.50	197	⇑i	P	13 16 29.1	+4.0
VNA3	Neumayer Olymp	55.50	197	⇑i	P	13 16 37.3	+12
VNA3	Neumayer Olymp	55.50	197	⇑i	P	13 16 44.2	+19
VNA1	Neumayer--Stat	55.71	197	⇑i	P	13 16 26.6	0.0
VNA1	Neumayer--Stat	55.71	197	⇑i	P	13 16 33.0	+6.4
VNA1	Neumayer--Stat	55.71	197	⇑i	P	13 16 46.1	+19
KULM	Kulim	57.66	333	eP	P	13 16 35.8	-5.4
KULM				e		13 16 46.9	
OPO	Ambohidratompo	67.33	268	P	P	13 17 45.7	+0.1
	1.8nm,0.8s,mb4.2,baz=142,slow=3.9,SNR=3.5						
QIZ	Qiongzhong	68.83	346	P	P	13 17 54.1	-0.8
	15nm,1.2s,mb4.8						
BOSA	Boshof	74.03	245	P	P	13 18 26.1	+0.1
PPT	Papeete	74.92	99	eLR	LR	13 41 42.8	
	72nm,28.5s						
LBTB	Lobatse	76.48	248	P	P	13 18 38.2	-1.8
	11nm,1.4s,mb4.6						
GYA	Guiyang	76.63	344	P	P	13 18 41.5	+0.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
ENH	Enshi	79.92	348	eP	P	13 18 58.7	-0.1
	comp=Z,13nm,1.3s,mb4.7						
RKT	Rikitea	80.02	114	eLR	LR	13 44 03.8	
	comp=Z,293nm,27.8s						
LSZ	Lusaka	82.09	256	eP	P	13 19 11.2	+0.8
	comp=Z,9.4nm,1.3s,mb4.6						
LSZ				e		13 19 17.9	
PKI	Pulchoki	83.51	327	eP	P	13 19 17.0	-0.5
LSA	Lhasa	83.54	332	P	P	13 19 18.0	+0.4
LSA	Lhasa	83.54	332	eP	P	13 19 18.6	+0.9
	comp=Z,9.2nm,0.7s,mb5.0						
GUN	Gumba	83.65	327	eP	P	13 19 18.4	+0.2
DMN	Daman	83.65	326	eP	P	13 19 17.2	-1.1
	comp=Z,36nm,1.3s,mb5.3						
KKN	Kakani	83.75	326	eP	P	13 19 18.4	-0.4
GKN	Gorkha	84.18	326	eP	P	13 19 19.8	-1.1
	comp=Z,34nm,1.0s,mb5.4						
KOLN	Koldanda	84.36	325	eP	P	13 19 21.1	-0.7
	comp=Z,25nm,1.0s,mb5.3						
MJAR	Matsushiro Arr	86.17	12	P	P	13 19 31.8	+1.1
	comp=Z,3.9nm,0.9s,mb4.6,baz=193,slow=6.8,SNR=8.4						
MJAR				LR	LR	13 55 56.5	
	comp=Z,56nm,18.6s,MS4.0,baz=270,slow=34						
LZH	Lanzhou	86.52	344	eP	P	13 19 28.0	-4.4
	comp=Z,26nm,1.2s,mb5.3						
LZH				pP	pP	13 19 38.5	+3.9
LZH				sP	sP	13 19 46.5	+11
KMBO	Kilima Mbogo	86.72	272	LR	LR	13 49 39.7	
	comp=Z,84nm,18.1s,MS4.2,baz=92,slow=30						
PLCA	Paso Flores	89.77	169	P	P	13 19 48.9	+1.0
	comp=Z,2.0nm,1.0s,mb4.4,baz=231,slow=8.3,SNR=2.9						
PLCA				LR	LR	13 56 18.0	
	comp=Z,152nm,20.2s,MS4.4,baz=198,slow=33						
PLCA	Paso Flores	89.77	169	P	P	13 19 48.7	+0.9
	comp=Z,14nm,1.4s,mb5.1						
HHC	Hu-ho-hao-te	90.11	351	eP	P	13 19 51.7	+2.3
HHC				AP	pP	13 19 56.3	+4.7
HHC				XP	sP	13 20 01.1	+8.8
HHC				PP	PP	13 23 29.7	+4.5
HHC				SKS	SKS	13 30 20.9	-2.2
HHC				S	S	13 30 44.9	+4.0
HHC				XS		13 30 53.3	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,150nm,9.6s						
HHC				LR	LR		
	comp=N,160nm,14.4s,MS4.7						
HHC				LR	LR		
	comp=E,150nm,15.6s,MS4.7						
HHC				LR	LR		
	comp=Z,230nm,14.4s,MS4.8						
GTA	Gaotai	90.52	342	eP	P	13 19 52.2	+0.8
GTA				AP	pP	13 19 58.0	+4.5
GTA				XP	sP	13 20 00.9	+6.7
MDJ	Mudanjiang	93.40	4	P	P	13 20 05.2	+0.8
	comp=Z,22nm,1.2s,mb5.5						
SONM	Songino Array	97.61	348	P	P	13 20 24.1	+0.6
	comp=Z,0.8nm,0.9s,mb4.3,baz=138,slow=2.5,SNR=5.2						
SONM				LR	LR	14 03 45.8	
	comp=Z,119nm,18.9s,MS4.4,baz=166,slow=35						
NVAR	Mina Array Bea	135.22	79	PKP	PKPdf	13 26 11.2	+0.5
	comp=Z,0.9nm,0.7s,baz=207,slow=3.0,SNR=7.3						
TXAR	Lajitas Array	139.22	101	PKP	PKPdf	13 26 17.1	-1.1
	comp=Z,1.0nm,0.3s,baz=207,slow=4.0,SNR=9.0						
PDAR	Pinedale Array	143.15	79	PKP	PKPdf	13 26 20.9	-3.6
	comp=Z,0.3nm,0.5s,baz=194,slow=3.7,SNR=3.3						
EDM	Edmonton	144.84	61	ePKPdf	PKPdf	13 26 24.7	-2.5
WMOK	Wichita Mounta	145.87	99	ePKPdf	PKPdf	13 26 28.1	-1.4
WMOK				e		13 26 35.5	
YKA	Yellowknife Ar	145.88	45	PKPbc	PKPbc	13 26 27.8	+0.9
	comp=Z,2.2nm,0.7s,baz=268,slow=3.3,SNR=6.8						
YKA	Yellowknife Ar	145.88	45	PKPbc	PKPbc	13 26 27.8	+0.9
RSSD	Black Hills	147.35	80	ePKPdf	PKPdf	13 26 32.8	+1.1

KSU1	**Kansas State U**	149.80	94	*e*PKPbc	PKPdf	13 26 39.6	+3.8
KSU1				*e*		13 26 46.8	

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*ISK **10** 13:17:43.2, 38.20N×26.57E, h16^{km}, MD3.3*
*ATH **10** 13:17:43.7, 38.16N×26.52E, h27^{km}, MD3.4/4*
*NEIC **10** 13:17:43.3, 38.12N×26.83E, h54^{km}, MD3.4(ATH), MD3.3(ISK), After ATH.*
*CSEM **10** 13:17:43.0±0.2, 38.20N×26.58E, h12^{km}±1^{km}, MD3.4, Error ellipse: s-maj=2.6km s-min=1.8km az=81.0*
ISC 10 13:17:43.6±0.7**, 38.21N**±0.03×**26.54E**±0.04**, h13**^{km}±5^{km}**, n25, σ0^{s}93**/37**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.16	16	*i* P	Pg	13 17 47.0	-0.5
URLA				*i* S	Sg	13 17 51.9	+1.7
SMG	**Samos**	0.55	155	⇑*i*P	Pb	13 17 54.3	-0.3
SMG				*e*S	Sb	13 18 02.5	+0.3
IZM	**Izmir**	0.60	71	*i* PG	Pg	13 17 55.2	-0.6
IZM				*i* SG	Sg	13 18 03.7	-0.2
KDAG	**Bornova**	0.60	71	*i* P	Pb	13 17 54.2	-1.3
KDAG				*i* S	Sb	13 18 02.4	-1.3
PRK	**Paraskevi**	1.06	349	*e*P	Pb	13 18 05.2	+1.9
PRK				*e*S	Sb	13 18 20.6	+3.8
AYDN	**Tasoluk**	1.19	117	*i* P	Pb	13 18 06.2	+0.6
AYDN				*i* S	Sb	13 18 20.9	+0.2
AKS	**Akhisar**	1.20	56	PN	Pn	13 18 06.3	+0.1
BODT	**Bodrum**	1.30	152	PN	Pn	13 18 06.4	-1.1
BODT				SN	Sn	13 18 24.4	-0.4
MLSB	**Milas**	1.34	133	PN	Pn	13 18 08.0	-0.1
BDRM	**Kayabasi**	1.35	148	*i* P	Pn	13 18 09.1	+0.9
BDRM				*i* S	Sb	13 18 26.5	+1.2
APE	**Apeiranthos**	1.39	215	PN	Pn	13 18 08.4	-0.5
APE				SN	Sn	13 18 27.3	+0.1
APE	**Apeiranthos**	1.39	215	*e*P	Pn	13 18 08.9	0.0
APE				*e*Sn	Sn	13 18 27.3	+0.1
MANT	**Manisa**	1.61	79	*i* P	Pn	13 18 13.5	+1.5
MANT				*i* S	Sn	13 18 33.7	+0.9
EZN	**Ezine**	1.62	354	*e*PN	Pn	13 18 12.0	-0.2
DAT	**Datca**	1.69	150	PN	Pn	13 18 12.8	-0.4
YER	**Yerkesik**	1.75	127	*e*PN	Pn	13 18 13.8	-0.2
BALB	**Balikesir**	1.77	36	*e*PN	Pn	13 18 13.2	-1.1
LIA	**Limnos Island**	1.99	328	*e*PN	Pn	13 18 17.7	+0.2
DNZL	**Cakiroluk**	2.05	104	*i* P	Pn	13 18 22.7	+4.4
DNZL				*i* S	Sn	13 18 46.2	+2.4
LPK	**Lapseki**	2.17	4	*e*PN	Pn	13 18 20.1	+0.1
DALT	**Dalyan (Mudla)**	2.20	130	*e*PN	Pn	13 18 20.3	-0.2
BNT	**Bandirma**	2.40	26	*e*PN	Pn	13 18 22.2	-1.1
FETY	**Fethiye**	2.56	127	*e*PN	Pn	13 18 24.4	-1.2
YLV	**Yalova**	3.22	42	*e*PN	Pn	13 18 34.0	-1.0
EDRB	**Edirne**	3.64	2	*e*PN	Pn	13 18 40.7	-0.2

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*ROM **10** 13:26:28.0±0.1, 44.17N×12.24E, h22^{km}±2^{km}, Md2.9/20, Ml2.6/13, Error ellipse: s-maj=1.9km s-min=1.4km az=175.0*
*NEIC **10** 13:26:28.0, 44.17N×12.24E, h22^{km}, ML3.0(LDG), ML2.6(ROM), After ROM.*
*LDG **10** 13:26:30.1±0.2, 44.15N×12.32E, h10^{km}, Ml3.0/11, Error ellipse: s-maj=5.6km s-min=3.8km az=55.0*
*CSEM **10** 13:26:30.1±0.1, 44.11N×12.41E, h40^{km}, ML3.0/11, Error ellipse: s-maj=1.5km s-min=1.3km az=150.0*
ISC 10 13:26:29.1±0.3**, 44.19N**±0.02×**12.25E**±0.02**, h22**^{km}±4^{km}**, n88, σ1^{s}17**/125**, 12C-6D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRSN	**Barisano**	0.16	307	Pg	Pb	13 26 33.8	-0.2
	1μm,0.2s						
RSM	**Repubblica di**	0.30	151	Pg	Pb	13 26 34.5	-1.4
SFI	**Santa Sofia**	0.41	226	Pg	Pb	13 26 36.6	-1.1
SFI				Sg	Sb	13 26 43.3	-0.2
	966nm,0.3s						
PESA	**Pesaro**	0.49	120	Pg	Pb	13 26 38.8	-0.2
PESA				Sg	Sb	13 26 47.5	+1.7
	636nm,0.3s						
PGD	**Poggio Sodo**	0.50	231	⇓*i*Pg	Pb	13 26 38.1	-1.0
PGD				Sg	Sb	13 26 46.2	+0.3
VMG	**Vicchio**	0.56	246	⇑*i*Pg	Pb	13 26 39.3	-0.9
VMG				Sg	Sb	13 26 48.5	+0.8
	382nm,0.2s						
CRE	**Caprese Michel**	0.61	201	Pg	Pb	13 26 40.0	-1.0
CRE				Sg	Sb	13 26 49.8	+0.6
	336nm,0.3s						
FSSB	**Fossombrone**	0.62	143	Pg	Pb	13 26 41.0	-0.3
	99nm,0.2s						
SEI	**Scarperia**	0.66	258	Pg	Pb	13 26 41.1	-0.8
SEI				Sg	Sb	13 26 52.1	+1.5
	587nm,0.2s						
PIEI	**Pieia**	0.69	163	Pg	Pb	13 26 41.1	-1.2
PIEI				Sg	Sb	13 26 51.9	+0.6
	89nm,0.3s						
FNVD	**Fontana Vidola**	0.81	269	Pg	Pb	13 26 44.1	-0.4
	223nm,0.5s						
ARV	**Arcevia**	0.85	144	Pg	Pb	13 26 45.0	-0.1
	52nm,0.3s						
ARVD	**Arcevia**	0.85	144	Pg	Pb	13 26 45.1	0.0
	23μm,12.0s						
MURB	**Monte Urbino**	0.95	168	Pg	Pb	13 26 46.5	-0.2
	456nm,0.6s						
CSNT	**Castellina Chi**	1.00	224	Pg	Pb	13 26 47.6	0.0
	132nm,0.6s						
PZZT	**Monte Pizzetto**	1.00	267	Pg	Pb	13 26 47.5	-0.2
	264nm,0.5s						
SNTG	**Esanatoglia**	1.06	152	Pg	Pb	13 26 48.5	-0.1
	38nm,0.2s						
CING	**Cingoli**	1.06	140	Pg	Pb	13 26 49.9	+1.2
	101nm,0.5s						
SARO	**Sassorosso**	1.33	270	P	Pn	13 26 54.6	+1.9
SARO				S	Sb	13 27 11.3	+1.3
SARO	**Sassorosso**	1.33	270	P	Pn	13 26 54.6	+1.9
SARO	**Sassorosso**	1.33	270	P	Pn	13 26 54.6	+1.9
SARO				S	Sb	13 27 11.3	+1.3
PII	**Pisa**	1.33	250	Pg	Pn	13 26 53.6	+0.9
	56nm,0.2s						
VLC	**Villacollemand**	1.34	269	*e*Pn	Pn	13 26 54.4	+1.6
SACS	**San Casciano d**	1.36	191	Pg	Pn	13 26 53.6	+0.5
	106nm,1.0s						
GRFL	**Gerfalco**	1.39	222	Pg	Pn	13 26 54.5	+0.9
	36nm,0.9s						
VALM		1.45	277	P	Pn	13 26 56.3	+1.9
VALM		1.45	277	P	Pn	13 26 56.3	+1.9
ARCI	**Arcidosso**	1.45	203	Pg	Pn	13 26 55.2	+0.8
	79nm,0.9s						
VINC	**Vinca**	1.51	269	P	Pn	13 26 56.8	+1.5
VINC				S	Sn	13 27 15.4	+1.0
VINC	**Vinca**	1.51	269	P	Pn	13 26 56.8	+1.5
VINC				S	Sn	13 27 15.4	+1.0
BACM		1.57	274	P	Pn	13 26 57.8	+1.7
BACM				S	Sn	13 27 17.1	+1.2
BACM		1.57	274	P	Pn	13 26 57.8	+1.7
BACM				S	Sn	13 27 17.1	+1.2
GRAM		1.60	282	P	Pn	13 26 59.0	+2.5
GRAM		1.60	282	P	Pn	13 26 59.0	+2.5
CODM		1.74	277	P	Pn	13 27 00.5	+2.0
CODM				S	Sn	13 27 21.4	+1.3
CODM		1.74	277	P	Pn	13 27 00.5	+2.0
CODM				S	Sn	13 27 21.4	+1.3
TRI	**Trieste**	1.86	35	Pg	Pn	13 26 59.4	-0.8
	37nm,0.5s						
CTI	**Castel Tesino**	1.91	347	Pg	Pn	13 27 01.0	+0.1
NVLJ	**Novalja**	1.91	78	*i* Pn	Pn	13 27 00.6	-0.4
NVLJ				*i* Sn	Sn	13 27 24.9	+0.3
SC2M	**Scurtabr**	1.96	277	P	Pn	13 27 03.5	+1.8
VOY	**Vojsko**	2.18	32	*e*Pn	Pn	13 27 04.4	-0.4
VOY				*e*Sn	Sn	13 27 31.4	+0.1
ROBS	**Robic**	2.24	23	*i* Pn	Pn	13 27 05.1	-0.6
ROBS				*i* Sn	Sn	13 27 32.6	-0.3
PTCC	**Patocco-Chiusa**	2.35	19	Pg	Pn	13 27 06.5	-0.7
FVI	**Forni Avoltri**	2.44	9	Pg	Pn	13 27 08.6	+0.1
VISS	**Visnje**	2.44	48	*i* Pn	Pn	13 27 08.1	-0.5
VISS				*i* Sn	Sn	13 27 38.5	+0.5
LJU	**Ljubljana**	2.46	40	*e*Pn	Pn	13 27 16.0	+7.2
LJU				*e*Sn	Sn	13 27 52.2	+14
SEST	**Monte Rota**	2.56	359	Pg	Pn	13 27 11.0	+0.8
OBKA	**Obir**	2.83	34	⇑*i*Pn	Pn	13 27 14.1	0.0
	comp=Z,1.5nm,0.2s						
OBKA	**Obir**	2.83	34	⇑*i*Sn	Sn	13 27 46.2	-1.7
	comp=Z,25nm,0.6s						
OBKA	**Obir**	2.83	34	Pn	Pn	13 27 14.1	0.0
OBKA				Sn	Sn	13 27 46.2	-1.6
PGF	**Pioggiola**	2.88	236	*e*Pn	Pn	13 27 14.7	-0.2
PGF				*e*Sn	Sn	13 27 47.1	-2.2
	10nm,0.3s						
KBA	**Koelnbreinsper**	2.99	14	⇑*i*Pn	Pn	13 27 17.0	+0.6
KBA	**Koelnbreinsper**	2.99	14	⇑*i*Sn	Sn	13 27 51.5	-0.4
	comp=Z,3.8nm,0.2s						
KBA	**Koelnbreinsper**	2.99	14	Pn	Pn	13 27 17.0	+0.6
KBA				Sn	Sn	13 27 51.5	-0.4
WTTA	**Wattenberg**	3.10	352	⇑*i*Pn	Pn	13 27 19.4	+1.4
WTTA	**Wattenberg**	3.10	352	⇓*i*Sn	Sn	13 27 56.5	+1.6
WTTA	**Wattenberg**	3.10	352	Pn	Pn	13 27 19.4	+1.4
WTTA				Sn	Sn	13 27 56.5	+1.7
SQTA	**Sankt Quirin**	3.12	347	⇑*i*Pn	Pn	13 27 19.8	+1.6
	comp=Z,8.9nm,0.1s						
SQTA	**Sankt Quirin**	3.12	347	⇑*i*Sn	Sn	13 27 57.9	+2.7
	comp=Z,8.7nm,0.2s						
SQTA	**Sankt Quirin**	3.12	347	Pn	Pn	13 27 19.8	+1.6
SQTA				Sn	Sn	13 27 57.9	+2.7
WATA	**Walderalm**	3.18	352	⇓*i*Pn	Pn	13 27 21.7	+2.6
	comp=Z,5.1nm,0.1s						
WATA	**Walderalm**	3.18	352	⇑*i*Sn	Sn	13 27 56.4	-0.4
	comp=Z,5.0nm,0.3s						
WATA	**Walderalm**	3.18	352	Pn	Pn	13 27 21.7	+2.6
WATA				Sn	Sn	13 27 56.4	-0.4
MOTA	**Moosalm**	3.26	346	⇑*i*Pn	Pn	13 27 22.0	+1.9
	comp=Z,2.7nm,0.2s						
MOTA	**Moosalm**	3.26	346	⇑*i*Sn	Sn	13 27 59.2	+0.5
	comp=Z,4.8nm,0.3s						
MOTA	**Moosalm**	3.26	346	Pn	Pn	13 27 22.0	+1.9
MOTA				Sn	Sn	13 27 59.2	+0.5
SBF	**Sospel**	3.49	266	*e*Pn	Pn	13 27 24.1	+0.6
SBF				*e*Sn	Sn	13 28 03.2	-1.4
	15nm,0.4s						
DAVA	**Damuels**	3.52	333	⇓*i*Pn	Pn	13 27 23.2	-0.6
	comp=Z,1.0nm,0.1s						
DAVA	**Damuels**	3.52	333	⇑*i*Sn	Sn	13 28 05.5	+0.3
	comp=N,10nm,0.4s						
DAVA	**Damuels**	3.52	333	Pn	Pn	13 27 23.2	-0.6
DAVA				Sn	Sn	13 28 05.5	+0.3
MOA	**Molln**	3.92	20	⇓*i*Pn	Pn	13 27 26.6	-3.0
MOA	**Molln**	3.92	20	⇓*i*Sn	Sn	13 28 15.8	+0.4
	comp=Z,2.0nm,0.2s						
MBDF	**Montbardon**	3.96	280	*e*Pn	Pn	13 27 29.2	-1.0
MBDF				*e*Sn	Sn	13 28 14.6	-1.9
	5.1nm,0.4s						
FRF	**La Foret Royal**	4.10	263	*e*Pn	Pn	13 27 31.7	-0.5
LPG	**La Plagne**	4.13	290	*e*Pn	Pn	13 27 32.1	-0.4
LPL	**La Plagne**	4.14	291	*e*Pn	Pn	13 27 32.4	-0.4
LPL				*e*Sn	Sn	13 28 18.9	-2.3
	7.2nm,0.4s						
LMR	**La Mourre**	4.25	260	*e*Pn	Pn	13 27 33.5	-0.7
LMR				*e*Sn	Sn	13 28 20.5	-3.3
	7.1nm,0.5s						
ORIF	**Oris-en-Rattie**	4.61	281	*e*Pn	Pn	13 27 37.9	-1.5
CABF	**La Chapelle**	4.97	301	*e*Sn	Sn	13 28 38.2	-3.8
	2.0nm,0.3s						
KHC	**Kasperske Hory**	5.03	10	*e*PN	Pn	13 27 39.3	-6.0
HINF	**Hinteralfeld**	5.22	316	*e*Pn	Pn	13 27 46.9	-1.2
HINF				*e*Sn	Sn	13 28 44.7	-3.7
	4.3nm,0.3s						
CDF	**Champ du Feu**	5.45	323	*e*Pn	Pn	13 27 49.8	-1.4
CDF				*e*Sn	Sn	13 28 50.1	-4.0
	2.6nm,0.3s						
VIVF	**Saint-Julien-l**	5.46	280	*e*Pn	Pn	13 27 50.2	-1.2
HAU	**Haudompre**	5.61	315	*e*Pn	Pn	13 27 51.8	-1.6
HAU				*e*Sn	Sn	13 28 53.5	-4.4
	7.8nm,0.3s						
PRU	**Pruhonice**	6.01	14	*e*PN	Pn	13 27 49.7	-9.4
SMF	**Signal de Mont**	6.41	295	*e*Pn	Pn	13 28 02.9	-1.9
SMF				*e*Sn	Sn	13 29 11.9	-6.1
	3.4nm,0.4s						
LOR	**Lormes**	6.63	301	*e*Pn	Pn	13 28 06.4	-1.5
LOR				*e*Sn	Sn	13 29 18.3	-5.3
	4.8nm,0.3s						
AVF	**Avril sur Loir**	6.78	296	*e*Pn	Pn	13 28 08.1	-1.8

WEL 10 13:29:04.3±0.3**, 36.76S×177.47E, h162**^{km}±4^{km}**, ML3.6**/11**, Error ellipse: s-maj=4.4km s-min=3.3km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	1.05	141	PN	P	13 29 30.4	-0.3
MXZ				SN	S	13 29 51.4	+0.3
PUZ	**Puketiti**	1.46	155	PN	P	13 29 34.4	-0.2
PUZ				SN	S	13 29 56.9	-1.3
URZ	**Urewera**	1.53	191	PN	P	13 29 35.2	-0.2
URZ				SN	S	13 29 58.7	-0.7
MWZ	**Matawai**	1.58	178	PN	P	13 29 35.6	-0.3
MWZ				SN	S	13 29 59.7	-0.6
KNZ	**Kokohu**	2.27	176	PN	P	13 29 42.8	-0.9
KNZ				SN	S	13 30 12.5	-1.5
BKZ	**Black Stump Fm**	2.53	197	PN	P	13 29 47.2	+0.3
CNZ	**Chateau**	2.87	211	PN	P	13 29 50.9	-0.2
TUVZ	**Tukino**	2.89	209	PN	P	13 29 51.2	-0.2
FWVZ	**Far West T-bar**	2.92	211	PN	P	13 29 51.4	-0.3
WNVZ	**Wahianoa**	2.96	209	PN	P	13 29 51.7	-0.6
MOVZ	**Moawhango**	2.98	207	PN	P	13 29 50.8	-1.6
PXZ	**Pawanui**	3.31	188	PN	P	13 29 54.3	-2.4
TSZ	**Takapari Road**	3.51	199	PN	P	13 29 56.6	-2.7
MRZ	**Mangatainoka R**	4.17	200	PN	P	13 30 04.6	-3.3

MEX 10 13:29:35.1±0.6**, 18.33N×104.06W, h13**^{km}±16^{km}**, MD4.0, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	1.49	321	*i* P	Pn	13 29 58.2	-3.5
CJM				*i* S	Sb	13 30 15.8	-5.0
SFJM	**Santa Fe**	2.35	24	*e*P	Pn	13 30 09.0	-5.1
SFJM				*i* S	Sn	13 30 39.5	-3.5
MOIG	**Morelia**	3.03	63	*i* P	Pn	13 30 19.6	-4.2
MOIG				*i* S	Sn	13 30 55.7	-4.5
PLIG	**Platanillo**	4.33	88	*i* S	Sn	13 31 29.6	-3.6
ZAIG	**Zacatecas**	4.63	17	*i* P	Pn	13 30 41.7	-4.8
ZAIG				*i* S	Sn	13 31 35.2	-5.6

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*NEIC **10** 13:42:55.6, 41.66S×174.19E, h7^{km}, ML4.0(WEL), After WEL.*
WEL 10 13:42:55.8±0.1**, 41.66S×174.17E, h12**^{km}**, ML4.1**/39**, Error ellipse: s-maj=1.0km s-min=0.8km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.10	160	P	Pg	13 42 57.6	-1.1
CMWZ				S	Sg	13 42 59.9	-0.8
CMWZ	**Cape Campbell**	0.10	160	PG	Pg	13 42 57.6	-1.1
CMWZ				SG	Sg	13 42 59.9	-0.8
BSWZ	**Blackbirch Sta**	0.23	255	P	Pg	13 43 00.2	-0.6
BSWZ				S	Sg	13 43 04.4	+0.2
BSWZ	**Blackbirch Sta**	0.23	255	PG	Pg	13 43 00.2	-0.7
BSWZ				SG	Sg	13 43 04.4	+0.2
BSWZ				SG	Sg	13 43 04.4	+0.2
TUWZ	**Tuamarina**	0.28	323	PG	Pg	13 43 01.6	-0.2
TUWZ				SG	Sg	13 43 06.6	+0.7
TCW	**Tory Channel**	0.45	10	P	Pg	13 43 04.5	-0.6
TCW	**Tory Channel**	0.45	10	PG	Pg	13 43 04.5	-0.6
TCW				SG	Sg	13 43 10.8	-0.4
SNZO	**South Karori**	0.53	49	P	Pb	13 43 06.1	-0.5
SNZO	**South Karori**	0.53	49	PG	Pg	13 43 06.1	-0.5
BHW	**Baring Head**	0.58	65	P*	Pb	13 43 07.1	-0.3
BHW				SG	Sg	13 43 16.0	+0.5
WEL	**Wellington**	0.58	51	P*	Pb	13 43 07.1	-0.4
WEL				SG	Sg	13 43 15.5	0.0
MRW	**Makara Radio**	0.58	43	P	Pb	13 43 06.9	-0.6
MRW	**Makara Radio**	0.58	43	P*	Pb	13 43 06.9	-0.5
MSWZ	**Moikau Station**	0.85	74	P	Pb	13 43 12.0	0.0
MSWZ	**Moikau Station**	0.85	74	P*	Pb	13 43 12.0	+0.1
CAW	**Cannon Point**	0.87	51	P	Pb	13 43 12.0	-0.4
CAW	**Cannon Point**	0.87	51	P*	Pb	13 43 12.0	-0.4
CAW				SG	Sg	13 43 26.1	+1.1
DUWZ	**D’Urville Isla**	0.87	348	P*	Pb	13 43 12.0	-0.4
DUWZ				SG	Sg	13 43 24.3	-0.8
KHZ	**Kahutara**	0.89	211	P	Pb	13 43 13.0	+0.2
KHZ	**Kahutara**	0.89	211	P*	Pb	13 43 13.0	+0.3
KIW	**Kapiti Island**	0.97	35	P	Pb	13 43 13.7	-0.4
KIW	**Kapiti Island**	0.97	35	P*	Pb	13 43 13.8	-0.3
KIW				SG	Sg	13 43 28.4	+0.1
PAWZ	**Paruwai Farm**	0.98	74	P	Pb	13 43 15.0	+0.7
PAWZ	**Paruwai Farm**	0.98	74	P*	Pb	13 43 15.0	+0.7
MTW	**Mount Morrison**	1.12	64	P	Pb	13 43 16.6	0.0
MTW	**Mount Morrison**	1.12	64	P*	Pb	13 43 16.6	0.0
TRWZ	**Traveller**	1.17	78	P*	Pb	13 43 17.1	-0.3
MRZ	**Mangatainoka R**	1.46	47	P	Pn	13 43 21.8	-0.3
MRZ	**Mangatainoka R**	1.46	47	P*	Pb	13 43 21.8	-0.6
QRZ	**Quartz Range**	1.49	303	P	Pn	13 43 22.7	+0.1
QRZ	**Quartz Range**	1.49	303	PN	Pn	13 43 22.7	+0.1
DSZ	**Denniston Nort**	1.77	266	P	Pn	13 43 25.6	-1.0
DSZ	**Denniston Nort**	1.77	266	PN	Pn	13 43 25.6	-1.1
LTZ	**Lake Taylor**	1.81	231	*e*P	Pn	13 43 26.8	-0.3
LTZ	**Lake Taylor**	1.81	231	PN	Pn	13 43 26.6	-0.5
BFZ	**Birch Farm**	1.85	59	*e*P	Pn	13 43 26.0	-1.7
BFZ	**Birch Farm**	1.85	59	PN	Pn	13 43 26.6	-1.0
WAZ	**Wanganui**	2.00	18	P	Pn	13 43 32.2	+2.4
TSZ	**Takapari Road**	2.10	41	*e*P	Pn	13 43 30.3	-0.9
TSZ	**Takapari Road**	2.10	41	PN	Pn	13 43 30.3	-0.9
CRLZ	**Canterbury Las**	2.23	210	*e*P	Pn	13 43 30.8	-2.4
CRLZ	**Canterbury Las**	2.23	210	PN	Pn	13 43 30.8	-2.4
NRZ	**Ngariki Road**	2.32	355	P	Pn	13 43 38.7	+4.2
MQZ	**McQueen’s Vall**	2.33	208	*e*P	Pn	13 43 31.8	-2.9
MQZ	**McQueen’s Vall**	2.33	208	PN	Pn	13 43 31.8	-2.9
RAEZ	**Rainy Point**	2.37	4	P	Pn	13 43 39.0	+3.8
NEZ	**North Egmont**	2.38	359	P	Pn	13 43 38.8	+3.4
NWEZ	**Newall Road**	2.39	354	P	Pn	13 43 38.0	+2.5
PKE	**Pukeiti**	2.46	357	P	Pn	13 43 39.1	+2.6
MOVZ	**Moawhango**	2.55	29	P	Pn	13 43 38.0	+0.3
VRZ	**Vera Road**	2.57	10	P	Pn	13 43 39.8	+1.8
WNVZ	**Wahianoa**	2.57	26	P	Pn	13 43 39.7	+1.7
DRZ	**Dome Shelter**	2.60	25	P	Pn	13 43 43.3	+4.8
FWVZ	**Far West T-bar**	2.62	24	*e*P	Pn	13 43 41.3	+2.6
TUVZ	**Tukino**	2.64	26	P	Pn	13 43 39.6	+0.6
WPVZ	**Whakapapa**	2.66	24	P	Pn	13 43 41.1	+1.7
CNZ	**Chateau**	2.67	24	P	Pn	13 43 41.4	+1.9
NGZ	**Ngauruhoe**	2.71	24	P	Pn	13 43 40.9	+0.9
NGZ	**Ngauruhoe**	2.71	24	PN	Pn	13 43 40.6	+0.6
TWVZ	**Taurewa**	2.76	21	P	Pn	13 43 43.5	+2.8
WTVZ	**West Tongariro**	2.76	24	P	Pn	13 43 42.3	+1.6
WTVZ	**West Tongariro**	2.76	24	PN	Pn	13 43 41.3	+0.6
WVZ	**Waitaha Valley**	2.91	240	*e*P	Pn	13 43 37.4	-5.5
KATZ	**Kakaramea**	2.92	24	P	Pn	13 43 47.5	+4.5
RITZ	**Rihia Road**	2.97	26	P	Pn	13 43 49.6	+5.9
RATZ	**Rangitukua**	3.04	24	P	Pn	13 43 50.3	+5.5
RPZ	**Rata Peaks**	3.08	227	*e*P	Pn	13 43 42.8	-2.5
HATZ	**Hinemaiaia**	3.13	29	P	Pn	13 43 51.0	+5.0
WATZ	**Wairara**	3.18	23	P	Pn	13 43 52.8	+6.1
HIZ	**Hauiti**	3.18	10	*e*P	Pn	13 43 48.4	+1.7
HIZ	**Hauiti**	3.18	10	PN	Pn	13 43 47.9	+1.1
WHTZ	**Whakaora**	3.29	25	P	Pn	13 43 55.7	+7.5
PATZ	**Paeroa**	3.64	27	P	Pn	13 44 01.8	+8.5
UTU	**Utuhina**	3.81	25	P	Pn	13 44 04.3	+8.7
FOZ	**Fox Glacier**	3.82	239	*e*P	Pn	13 43 47.6	-8.2
TAZ	**Tarawera**	3.86	28	P	Pn	13 44 04.3	+7.9
LBZ	**Lake Benmore**	4.00	226	PN	Pn	13 43 57.6	-0.7
EDRZ	**Edgecumbe**	4.06	30	P	Pn	13 44 09.1	+10
ODZ	**Otahua Downs**	4.25	216	*e*P	Pn	13 43 58.5	-3.4
TUZ	**Tuapeka**	5.41	216	*e*P	Pn	13 44 14.4	-3.9

WEL 10 13:49:09.7±0.1**, 41.66S×174.19E, h5**^{km}**, ML3.8**/34**, Error ellipse: s-maj=0.8km s-min=0.6km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	0.09	170	P*	Pb	13 49 11.8	-1.7
CMWZ				SG	Sg	13 49 14.2	+1.1
CMWZ				SG	Sg	13 49 14.2	+1.2
BSWZ	**Blackbirch Sta**	0.24	257	P*	Pb	13 49 14.6	-1.6
BSWZ				SG	Sg	13 49 18.3	+0.4
BSWZ				SG	Sg	13 49 18.5	+0.6
TUWZ	**Tuamarina**	0.29	321	PG	Pg	13 49 15.9	+0.3
TUWZ				SG	Sg	13 49 20.3	+0.7
TCW	**Tory Channel**	0.45	8	PG	Pg	13 49 18.6	0.0
TCW				SG	Sg	13 49 25.3	+0.6
SNZO	**South Karori**	0.52	48	PG	Pg	13 49 20.3	+0.2
BHW	**Baring Head**	0.57	64	PG	Pg	13 49 21.4	+0.4
WEL	**Wellington**	0.57	49	PG	Pg	13 49 21.3	+0.2
MRW	**Makara Radio**	0.57	42	PG	Pg	13 49 21.2	0.0
MRW				SG	Sg	13 49 28.9	0.0
NNZ	**Nelson**	0.75	306	P*	Pb	13 49 23.9	-0.9
NNZ				S*	Sb	13 49 34.9	-0.3
MSWZ	**Moikau Station**	0.83	73	PG	Pg	13 49 26.3	+0.1
CAW	**Cannon Point**	0.86	50	PG	Pg	13 49 26.2	-0.6
DUWZ	**D’Urville Isla**	0.88	346	PG	Pg	13 49 26.4	-0.8
DUWZ				SG	Sg	13 49 38.7	-0.3
KHZ	**Kahutara**	0.90	212	PG	Pg	13 49 27.4	-0.2
KIW	**Kapiti Island**	0.96	34	P*	Pb	13 49 27.9	-0.5
PAWZ	**Paruwai Farm**	0.97	74	P*	Pb	13 49 29.1	+0.5
MTW	**Mount Morrison**	1.10	64	P*	Pb	13 49 31.0	+0.2
TRWZ	**Traveller**	1.15	77	P*	Pb	13 49 31.4	-0.3
MRZ	**Mangatainoka R**	1.45	47	P*	Pb	13 49 36.1	-0.6
DSZ	**Denniston Nort**	1.79	266	PN	Pn	13 49 41.8	+0.3
LTZ	**Lake Taylor**	1.82	231	PN	Pn	13 49 41.0	-0.9
BFZ	**Birch Farm**	1.83	58	PN	Pn	13 49 40.6	-1.5
TSZ	**Takapari Road**	2.09	41	PN	Pn	13 49 44.7	-1.1
CRLZ	**Canterbury Las**	2.24	211	PN	Pn	13 49 45.2	-2.7
NRZ	**Ngariki Road**	2.33	355	PN	Pn	13 49 52.9	+3.7
MQZ	**McQueen’s Vall**	2.34	209	PN	Pn	13 49 46.1	-3.3
MTVZ	**Mangateitei**	2.47	24	PN	Pn	13 49 54.6	+3.3
WPVZ	**Whakapapa**	2.66	23	PN	Pn	13 49 56.0	+2.1

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*STR **10** 13:52:55.8±0.3, 49.32N×6.77E, h1^{km}±1^{km}, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*BGR **10** 13:52:55.6±0.2, 49.37N×6.84E, h1^{km}, ML2.9/9, Error ellipse: s-maj=4.4km s-min=3.3km az=105.0*
*NEIC **10** 13:52:55.8, 49.32N×6.77E, h1^{km}, ML3.3(LDG), ML2.8(STR), ML2.8(LEDBW), ML2.6(SZGRF), After STR.*
*LDG **10** 13:52:56.2±0.1, 49.33N×6.84E, h1^{km}, Md3.3/2, Ml3.3/21, Error ellipse: s-maj=1.3km s-min=1.2km az=103.0, Suspected Mining induced.*
*BNS **10** 13:52:56.5±0.6, 49.34N×6.88E, h1^{km}, ML2.6*
*LEDBW **10** 13:52:56.3±0.4, 49.33N×6.83E, h1^{km}, ML2.8, Error ellipse: s-maj=10.0km s-min=6.0km az=112.0*
*CSEM **10** 13:52:56.1±0.0, 49.33N×6.84E, h2^{km}, ML3.4/21, Error ellipse: s-maj=0.8km s-min=0.7km az=100.0*
ISC 10 13:52:54.2±0.2**, 49.30N**±0.01×**6.71E**±0.02**, n88, σ1^{s}23**/170**, 4D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	**Walferdange**	0.51	315	*e*Pg	Pg	13 53 07.1	+2.6
	SNR=13						
WLF				*e*Sg	Sg	13 53 12.4	+1.1
	SNR=23						
WLF	**Walferdange**	0.51	315	*e*Pg	Pg	13 53 06.9	+2.4
WLF				*e*Sg	Sg	13 53 13.4	+2.1
WLF	**Walferdange**	0.51	315	Pg	Pg	13 53 07.1	+2.6
	SNR=13						
WLF				*e*Sg	Sg	13 53 13.4	+2.1
LANF	**Langenberg**	0.79	114	Pg	Pg	13 53 09.4	-0.5
LANF	**Langenberg**	0.79	114	P	Pg	13 53 09.8	-0.2
LANF	**Langenberg**	0.79	114	*e*Pg	Pg	13 53 09.7	-0.3
	SNR=20						
LANF				P*	Pg	13 53 09.8	-0.2
ABH	**Alteburg**	0.80	43	⇓*i*P	Pg	13 53 09.7	-0.4
ABH	**Alteburg**	0.80	43	*e*Pg	Pg	13 53 09.7	-0.4
	SNR=32						
ABH				⇓*i*P*	Pg	13 53 09.7	-0.4
ABH	**Alteburg**	0.80	43	Pg	Pg	13 53 09.7	-0.4
	SNR=32						
ABH				Sg	Sg	13 53 20.2	-0.5
KTD	**Kalmit**	0.90	88	*e*Pg	Pg	13 53 11.6	-0.6
	SNR=13						
KTD	**Kalmit**	0.90	88	Pg	Pg	13 53 12.2	0.0
KTD				Sg	Sg	13 53 25.1	+0.9
KTD	**Kalmit**	0.90	88	Pg	Pg	13 53 11.6	-0.6
	SNR=13						
KTD				Sg	Sg	13 53 25.1	+0.9
CDF	**Champ du Feu**	0.97	157	*e*Pg	Pg	13 53 13.6	+0.1
CDF				*e*Pn	Pn	13 53 14.9	+0.1
CDF				*e*Sg	Sg	13 53 25.9	-0.5
CDF				*e*Sn	Sn	13 53 28.2	-1.2
	209nm,0.2s						
WLS	**Welschbruch**	0.99	154	Pg	Pg	13 53 14.9	+1.0
WLS				Sg	Sg	13 53 27.2	+0.2
WLS	**Welschbruch**	0.99	154	P	Pb	13 53 15.4	+1.5
WLS	**Welschbruch**	0.99	154	*e*Pg	Pg	13 53 14.2	+0.3
	SNR=29						

HILG	Hillesheim	0.99	359	ePg	Pg	13 53 14.5	+0.5
HILG				eSg	Sg	13 53 28.2	+1.0
BGG	Burgeitz	0.99	24	ePg	Pg	13 53 13.7	-0.3
BGG				eSg	Sg	13 53 26.9	-0.4
	266nm,0.5s						
STR	Strasbourg	1.00	135	eSg	Sg	13 53 30.0	+2.5
	SNR=4.0						
RFYF	Reffroy	1.06	231	ePg	Pg	13 53 17.7	+2.4
	baz=54						
RFYF				eSn	Sn	13 53 33.4	+1.7
	147nm,0.2s						
ECH	Echery	1.13	165	Pg	Pg	13 53 17.5	+0.8
ECH				Sg	Sg	13 53 32.3	+0.6
ECH	Echery	1.13	165	P	Pb	13 53 17.8	+1.5
ECH	Echery	1.13	165	ePg	Pg	13 53 17.6	+0.9
	SNR=41						
THEF	They Montfort	1.18	204	Pg	Pg	13 53 18.7	+1.0
THEF				Sg	Sg	13 53 35.2	+1.8
THEF	They Montfort	1.18	204	⇓iP	Pb	13 53 18.9	+1.8
THEF	They Montfort	1.18	204	ePg	Pg	13 53 18.8	+1.1
	SNR=74						
THEF				⇓iP		13 53 18.9	
THEF	They Montfort	1.18	204	Pg	Pg	13 53 18.8	+1.1
	SNR=74						
THEF				Sg	Sg	13 53 35.2	+1.8
LIBD	Limburg	1.29	152	PG	Pg	13 53 21.1	+1.0
LIBD	Limburg	1.29	152	ePg	Pg	13 53 20.6	+0.5
	SNR=5.2						
LIBD				P*	Pg	13 53 21.1	+1.0
STB	Steinbach	1.30	4	ePg	Pg	13 53 19.6	-0.5
STB				eSg	Sg	13 53 36.8	-0.6
	131nm,0.6s						
SWS	Schriesheim	1.31	81	P	Pb	13 53 18.4	-1.0
SWS				S	Sb	13 53 36.6	-0.2
HAU	Haudompre	1.32	191	ePn	Pn	13 53 20.4	+0.5
HAU				ePg	Pg	13 53 21.5	+1.0
HAU				eSn	Sn	13 53 38.0	-0.4
HAU				eSg	Sg	13 53 39.2	+1.1
	150nm,0.3s						
MEZF	Maizieres J'vi	1.35	234	ePn	Pn	13 53 21.9	+1.5
	baz=50						
MEZF				ePg	Pg	13 53 23.2	+1.9
	baz=53						
MEZF				eSn	Sn	13 53 40.1	+0.8
MEZF				eSg	Sg	13 53 42.0	+2.7
	52nm,0.3s						
MEZF	Maizieres J'vi	1.35	234	ePg	Pg	13 53 23.2	+1.9
MEZF				eSn	Sn	13 53 40.1	+0.8
MEZF				eSg	Sg	13 53 42.0	+2.7
	26nm,0.3s						
KLL	Kalltalsperre	1.37	349	ePg	Pg	13 53 21.3	-0.3
KLL				eSg	Sg	13 53 39.2	-0.6
TOD	Tromm	1.40	77	P	Pb	13 53 20.9	-0.1
TOD				S	Sb	13 53 39.2	0.0
BFO	Black Forest	1.45	132	P	Pn	13 53 23.3	+1.6
BFO				S	Sb	13 53 41.4	+0.8
BFO	Black Forest	1.45	132	ePg	Pg	13 53 22.8	-0.3
	SNR=10						
BFO				eSg	Sg	13 53 39.9	-2.4
	SNR=66						
BFO	Black Forest	1.45	132	ePg	Pg	13 53 21.6	-1.5
BFO				eSg	Sg	13 53 41.3	-1.1
TNS	Taunus Mts	1.46	50	ePg	Pg	13 53 20.6	-2.7
	SNR=4.7						
TNS				eSg	Sg	13 53 40.2	-2.5
	SNR=56						
TNS	Taunus Mts	1.46	50	ePg	Pg	13 53 20.5	-2.8
TNS				eSg	Sg	13 53 40.4	-2.3
GIVF	Givet	1.46	304	ePn	Pn	13 53 23.3	+1.4
GIVF				eSn	Sn	13 53 42.9	+0.8
	71nm,0.4s						
MOF	Molkenrain	1.48	169	Pg	Pg	13 53 23.9	+0.2
MOF				Sg	Sg	13 53 44.0	+0.6
MOF	Molkenrain	1.48	169	P	Pn	13 53 24.4	+2.3
MOF				S	Sg	13 53 44.3	+0.8
MOF	Molkenrain	1.48	169	ePn	Pn	13 53 23.4	+1.2
	SNR=3.1						
MOF				ePg	Pg	13 53 24.3	+0.6
	SNR=30						
MOF				Sg	Sg	13 53 44.3	+0.8
HINF	Hinteralfeld	1.49	176	ePn	Pn	13 53 22.6	+0.3
HINF				ePg	Pg	13 53 24.2	+0.3
HINF				eSn	Sn	13 53 41.3	-1.4
HINF				eSg	Sg	13 53 43.6	-0.2
	164nm,0.2s						
LBG	Lerchenberg	1.51	114	P	Pn	13 53 23.6	+1.0
LBG				S	Sb	13 53 42.6	0.0
HGN	Heimansgroeve	1.55	341	ePn	Pn	13 53 23.5	+0.4
	5.0nm,0.1s						
HGN				ePg	Pg	13 53 25.3	+0.2
HGN				eSn	Sn	13 53 43.3	-0.9
HGN				eSg	Sg	13 53 45.5	-0.2
HGN				ex	x	14 01 37.7	
	17nm,0.7s						
SFTF	Sexfontaines	1.56	226	ePn	Pn	13 53 24.5	+1.2
	baz=44						
SFTF				eSn	Sn	13 53 45.1	+0.6
SFTF				eSg	Sg	13 53 47.9	+1.8
	48nm,0.3s						
KIZ	Kirchzarten	1.57	149	P	Pn	13 53 25.1	+1.7
KIZ				S	Sb	13 53 45.2	+1.1
FELD	Feldberg	1.67	148	S	Sg	13 53 48.4	-1.2
FELD	Feldberg	1.67	148	ePg	Pg	13 53 27.4	-0.1
	SNR=1.8						
FELD				Sg	Sg	13 53 48.4	-1.2
STU	Stuttgart	1.72	107	eSg	Sg	13 53 46.6	-4.8
	SNR=2.9						
BAIF	Baives	1.79	296	ePn	Pn	13 53 27.8	+1.2
BAIF				ePg	Pg	13 53 30.4	+0.4
BAIF				eSn	Sn	13 53 50.8	+0.4
BAIF				eSg	Sg	13 53 55.2	+1.3
	42nm,0.3s						
SIND	Sindeldorf	1.90	87	P	Pn	13 53 26.8	-1.3
SIND				S	Sn	13 53 48.9	-4.2
BUCH	Bad Urach	1.94	115	P	Pn	13 53 32.4	+3.6
BUCH				S	Sn	13 53 56.0	+1.8
LOMF	Lomont	1.95	178	P	Pn	13 53 33.5	+4.5
LOMF	Lomont	1.95	178	ePn	Pn	13 53 29.3	+0.4
	SNR=2.0						
LOMF				ePg	Pg	13 53 33.1	-0.2
	SNR=8.1						
LOMF	Lomont	1.95	178	Pg	Pg	13 53 33.3	+0.1
GUT	Gutenstein	2.02	127	P	Pn	13 53 33.8	+4.0
GUT				S	Sn	13 53 57.9	+1.8
LAUG	Laupendahl	2.06	4	eSg	Sg	13 53 56.4	-6.3
BUG	Bochum--Univer	2.17	9	eSg	Sg	13 53 59.4	-7.1
	SNR=2.7						
SISB	Singen-Sch Ber	2.21	136	S	Sn	13 54 05.9	+4.9
UBBA	Unterbreizbach	2.61	53	eSg	Sg	13 54 14.7	-6.3
	SNR=2.4						
CABF	La Chapelle	2.73	189	ePn	Pn	13 53 39.8	-0.2
CABF				ePg	Pg	13 53 47.4	-1.2
CABF				eSn	Sn	13 54 11.9	-2.2
CABF				eSg	Sg	13 54 23.1	-1.8
	39nm,0.6s						
UBR	Uberruh	2.78	124	P	Pn	13 53 41.8	+1.0
UBR				S	Sn	13 54 23.3	+7.7
LOR	Lormes	2.79	224	ePn	Pn	13 53 40.9	+0.1
	baz=49						
LOR				eSn	Sn	13 54 14.4	-1.3
LOR				eSg	Sg	13 54 26.2	-0.8
	35nm,0.4s						
SSF	Saint Saulge	3.10	225	ePn	Pn	13 53 44.9	-0.4
SSF				eSn	Sn	13 54 22.1	-1.6
SSF				eSg	Sg	13 54 37.2	-0.2
	9.9nm,0.4s						
SMF	Signal de Mont	3.28	217	ePn	Pn	13 53 47.1	-0.8
SMF				eSn	Sn	13 54 25.1	-3.2
SMF				eSg	Sg	13 54 40.7	-2.8
	15nm,0.3s						
AVF	Avril sur Loir	3.37	223	ePn	Pn	13 53 48.3	-0.9
AVF				eSn	Sn	13 54 28.7	-1.9
	6.2nm,0.2s						
AVF				eSg	Sg	13 54 45.1	-1.4
	10.0nm,0.4s						
HYF	Humbligny	3.40	235	ePn	Pn	13 53 49.5	0.0
HYF				eSn	Sn	13 54 29.1	-2.0
HYF				eSg	Sg	13 54 45.8	-1.4
MOX	Moxa	3.44	65	ePg	Pg	13 53 58.1	-4.8
	SNR=1.8						
MOX	Moxa	3.44	65	eSg	Sg	13 54 43.9	-4.8
CLZ	Clausthal	3.45	41	eSg	Sg	13 54 41.9	-7.2
	SNR=3.2						
BGF	Bois d'Agland	3.78	225	ePn	Pn	13 53 54.2	-0.8
BGF				eSn	Sn	13 54 38.2	-2.6
BGF				eSg	Sg	13 54 57.0	-3.0
	41nm,0.4s						
LPL	La Plagne	3.79	180	ePn	Pn	13 53 53.4	-1.7
WERD	Werda	3.80	70	eSg	Sg	13 54 51.2	-9.4
	SNR=2.0						
LPG	La Plagne	3.81	180	ePn	Pn	13 53 54.1	-1.2
TANN	Tannenbergstha	3.88	71	ePg	Pg	13 54 06.0	-5.8
	SNR=3.1						
TANN				eSg	Sg	13 54 55.8	-7.7
	SNR=3.3						
TCF	Toulx Ste Croi	4.28	227	ePn	Pn	13 54 00.9	-1.1
TCF				ePg	Pg	13 54 17.6	-2.0
TCF				eSg	Sg	13 55 12.9	-3.7
	6.1nm,0.4s						
ORIF	Oris-en-Rattie	4.42	188	ePn	Pn	13 54 02.1	-2.0
CLL	Collm	4.51	61	eSG	Sg	13 55 18.0	-6.2
LDF	La Druitiere	4.56	264	ePn	Pn	13 54 05.8	-0.2
GEC2	GERESS Array S	4.62	93	ePn	Pn	13 54 05.6	-1.3
	SNR=4.2						
GEC2				eSn	Sn	13 54 53.9	-8.2
	SNR=2.2						
FLN	La Foliniere	4.76	266	ePn	Pn	13 54 08.7	-0.2
	baz=82						
FLN				eSn	Sn	13 55 01.8	-3.9
	14nm,0.4s						
GRR	Gorron	5.08	262	ePn	Pn	13 54 13.1	-0.3
GRR				eSn	Sn	13 55 09.3	-4.4
	13nm,0.5s						
MFF	Saint Martin d	5.34	242	ePn	Pn	13 54 15.6	-1.5
MFF				eSn	Sn	13 55 13.9	-6.3
	4.0nm,0.4s						
SGMF	Saint Gilles	6.21	264	ePn	Pn	13 54 27.8	-1.6

GUC 10 13:53:20.5±0.6, 30.77S×71.77W, h24^{km}±5^{km}, MD4.2, ML3.5, 1C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OVCH	Ovalle	0.52	72	⇓iP	Pb	13 53 30.9	0.0
OVCH				i S	Sb	13 53 38.3	+0.4
OVCH				AMP		13 53 38.9	
	comp=N,4µm,0.1s						
CMCH	Combarbala	0.78	122	⇑iP	Pb	13 53 35.2	-0.1
CMCH				i S	Sb	13 53 46.1	+0.7
CMCH				AMP		13 53 51.6	
	comp=E,6µm,0.6s						
ILCH	Illapel	1.01	149	eP	Pb	13 53 38.3	-0.9
ILCH				i S	Sb	13 53 52.0	-0.1
ILCH				AMP		13 53 53.9	
	comp=E,2µm,0.4s						
TLL	Tololo Astrono	1.03	55	⇓iP	Pb	13 53 39.2	-0.2
TLL				i S	Sb	13 53 53.1	+0.6
TLL				AMP		13 53 57.3	
	comp=E,4µm,0.4s						
CHNG	Los Chungos	1.14	168	⇓iP	Pn	13 53 40.5	-0.6
CHNG				i S	Sb	13 53 55.2	-0.6
CHNG				AMP		13 53 59.6	
	comp=E,755nm,0.8s						
JACH	Jahuel	2.16	153	⇓iP	Pn	13 53 56.5	+0.8
FCH	Farellones	2.85	154	eP	Pn	13 54 06.4	+0.8
FCH				i S	Sn	13 54 42.2	+2.7
TACH	Talagante	2.96	166	i P	Pn	13 54 10.0	+2.8
PCH	Pirque	3.04	160	eP	Pn	13 54 08.4	+0.1
CHCH	Chadas Angostu	3.30	164	eP	Pn	13 54 12.0	+0.1
CACH	El Canelo	3.49	164	eP	Pn	13 54 15.6	+1.0

PRE 10 13:58:08.4±3.2, 19.04S×29.14E, h5^{km}, ML3.8, Zimbabwe

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSNA	Messina	3.39	166	eS	Sn	13 59 42.4	-1.8
MSNA				AML	AML	13 59 59.1	
	comp=Z,62nm,0.4s						
LBTB	Lobatse	6.79	208	eP	Pn	13 59 49.8	-1.4
LBTB				eS	Sn	14 01 04.7	-5.1
SWZ	Schweizer	8.82	203	eS	Sn	14 02 32.5	+32
SWZ				AML	AML	14 02 37.2	
	comp=Z,16nm,0.5s						
BOSA	Boshof	10.17	200	eP	P	14 00 34.8	-3.4
BOSA				eS	S	14 02 29.7	-4.0
BOSA				AML	AML	14 03 38.3	
	comp=Z,60nm,0.5s						

MAN 10 14:50:30.8, 13.75N×121.25E, h1^{km}, mb3.6, ML2.3, MS1.8, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.38	230	eP	Pg	14 50 37.0	-1.4
PGP				eS	Sg	14 50 39.0	-4.4
BOAC	Boac	0.64	116	eP	Pg	14 50 42.2	-1.5
BOAC				eS	Sg	14 50 59.3	+7.1
LUBP	Lubang	0.98	269	eP	Pb	14 50 49.6	-0.6
LUBP				eS	Sg	14 51 01.1	-2.2
SJMP	San Jose	1.28	186	eP	Pb	14 50 55.0	-0.4
SJMP				eS	Sb	14 51 10.7	-1.6
OTRP	Odiongan	1.57	151	eP	Pn	14 51 00.5	+0.6
OTRP				eS	Sb	14 51 16.2	-4.3
BUSP	Coron	2.01	211	eS	Sn	14 51 26.5	-5.9

NAO 10 15:17:28.5±7.4, 84.63N×16.62E, ML2.5, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	5.78	189	Pn	Pn	15 18 55.8	-1.8
KBS				Sn	Sn	15 20 01.6	-3.9
SPA0	Spitsbergen Ar	6.49	180	Pn	Pn	15 19 03.7	-4.0
	baz=15,slow=14						
SPA0				Sn	Sn	15 20 19.3	-4.2
ARA0	ARCESS Array S	15.27	168	Pn	P	15 21 00.2	-6.3
	baz=355,slow=11						
ARA0				Sn	S	15 23 40.2	-17
	baz=13,slow=22						

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*BJI **10** 15:57:32.9, 17.56S×178.17W, h482^{km}, mB4.7, mb4.7*

*MOS **10** 15:57:33.4±1.2, 17.87S×178.41W, h488^{km}, mb4.7/15, Error ellipse: s-maj=11.7km s-min=9.9km az=81.0*

*NEIC **10** 15:57:34.0±0.8, 17.92S×178.32W, h491^{km}±8^{km}, mb4.7/39, Error ellipse: s-maj=8.2km s-min=5.6km az=149.0*

*IDC **10** 15:57:33.5±1.1, 17.97S×178.37W, h487^{km}±12^{km}, mb4.2/14, mb1 4.4/16, mb1mx4.4/17, mbtmp5.0/16, Error ellipse: s-maj=14.4km s-min=9.7km az=150.0*

*BGS **10** 15:57:34.5±2.5, 17.92S×178.32W, h491^{km}*

ISC 10 15:57:32.1±0.8, 17.91S±0.06×178.36W±0.05, h479^{km}±9^{km}, h495^{km}±8.9^{km}:pP-P, n327, σ0^{s}97/128, mb4.6/61, 40C-19D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.48	59	P	P	15 59 24.9	+1.1
	baz=180						
AFI				S	S	16 00 52.1	-0.2
	3.4nm,0.3s,baz=40,slow=19,SNR=3.3						
AFI	Afiamalu	7.48	59	ePn	P	15 59 24.6	+0.9
	124nm,0.8s						
AFI				eSn	S	16 00 51.8	-0.5
AFI	Afiamalu	7.48	59	eP	P	15 59 24.7	+1.0
AFI				e		16 00 51.8	
AFI				pmax	pmax		
	comp=Z,124nm,0.8s						
RAO	Raoul Island	11.29	178	P	P	16 00 04.5	-0.1
	baz=72,slow=19						
RAR	Rarotonga	17.82	104	P	P	16 01 13.5	+2.0
	comp=Z,1.0nm,0.3s,baz=244,slow=5.6,SNR=13						
URZ	Urewera	20.66	190	P	P	16 01 36.4	-2.2
	comp=Z,12nm,0.4s,baz=321,slow=2.4,SNR=24						
PAE	Paea	27.39	94	eP	P	16 02 39.1	-0.5
	comp=Z,133nm,1.2s,mb5.2						
PPT	Papeete	27.41	94	eP	P	16 02 39.4	-0.3
	comp=Z,66nm,1.3s,mb4.9						
PPT				epP		16 04 00.7	
	comp=Z,32nm,1.4s						
PPT	Papeete	27.41	94	P	P	16 02 37.9	-1.9
	comp=Z,26nm,0.7s,mb4.8,baz=225,slow=9.4,SNR=4.5						
TBI	Tubuai	27.55	106	eP	P	16 02 40.0	-1.0
	comp=Z,169nm,1.1s,mb5.4						
TVO	Taravao	27.70	94	eP	P	16 02 42.0	-0.3
	comp=Z,76nm,0.9s,mb5.1						
CNB	Canberra Magne	33.46	232	⇑iP	P	16 03 33.1	+1.6
	comp=Z,40nm,0.6s,mb5.0						
PMG	Port Moresby	34.51	280	eP	P	16 03 41.6	+1.1
	comp=Z,26nm,0.9s,mb4.7						
PMG	Port Moresby	34.51	280	eP	P	16 03 41.6	+1.1
PMG				pmax	pmax		
	comp=Z,26nm,0.9s						
TOO	Toolangi	37.20	231	eP	P	16 04 04.2	+1.5
	comp=Z,46nm,0.5s,mb5.2						
TOO	Toolangi	37.20	231	eP	P	16 04 04.2	+1.5
TOO				pmax	pmax		
	comp=Z,46nm,0.5s,mb5.2						
TAU	Tasmania Unive	38.27	222	P	P	16 04 16.2	+4.8
STKA	Stephens Creek	38.67	241	⇓iP	P	16 04 16.0	+1.2
	comp=Z,32nm,0.7s,mb4.9						
STKA	Stephens Creek	38.67	241	P	P	16 04 16.1	+1.3
	comp=Z,42nm,0.6s,mb5.0,baz=87,slow=9.7,SNR=103						
WB2	Warramunga Arr	44.67	260	⇓iP	P	16 05 02.1	-0.8
WB2				eS	S	16 10 59.1	-4.7
WRAB	Tennant Creek	44.67	260	eP	P	16 05 02.1	-0.8
	comp=Z,52nm,0.5s,mb5.2						
WRAB	Tennant Creek	44.67	260	⇓iP	P	16 05 02.5	-0.4
WRA	Warramunga Arr	44.68	260	P	P	16 05 02.3	-0.7
	comp=Z,35nm,0.5s,mb5.1,baz=95,slow=6.8,SNR=912						
WRA				PcP	PcP	16 06 34.8	-1.1
	comp=Z,3.9nm,0.4s,baz=88,slow=3.8,SNR=6.4						
WRA				S	S	16 10 58.9	-5.1
	comp=Z,0.7nm,0.7s,baz=99,slow=14,SNR=4.2						
ASPA	Alice Springs	44.84	254	⇓iP	P	16 05 04.2	0.0
ASPA				eS	S	16 11 01.8	-4.4
KAKA	Kakadu	47.63	269	⇑iP	P	16 05 43.5	+18
	comp=Z,27nm,0.5s,mb4.8						
GUMO	Guam	47.92	308	P	P	16 05 27.7	-0.2
	comp=Z,118nm,1.1s,mb5.1,baz=147,slow=17,SNR=3.9						
FORT	Forrest	50.05	245	⇓iP	P	16 05 42.5	-1.2
	comp=Z,57nm,0.5s,mb5.2						
FITZ	Fitzroy Crossi	53.08	261	eP	P	16 06 05.9	0.0
	comp=Z,17nm,0.5s,mb4.6						
KLBR	Kellerberrin	58.87	244	eP	P	16 06 44.4	-1.5
	comp=Z,50nm,1.0s,mb4.8						
NWAO	Narrogin (SRO)	59.25	242	eP	P	16 06 47.5	-0.9
	comp=Z,38nm,1.2s,mb4.6						
NWAO	Narrogin (SRO)	59.25	242	eP	P	16 06 47.5	-0.9
NWAO				pmax	pmax		
	comp=Z,38nm,1.2s						
MUN	Mundaring	60.16	243	eP	P	16 06 53.8	-0.7
SBA	Scott Base	60.42	184	eP	P	16 06 56.2	+0.6
	comp=Z,2.8nm,0.9s,mb3.7						
SBA	Scott Base	60.42	184	eP	P	16 06 56.2	+0.6
SBA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
VNDA	Vanda	60.44	185	eP	P	16 06 55.1	-0.7
	comp=Z,3.6nm,1.1s,mb3.7						
VNDA	Vanda	60.44	185	eP	P	16 06 55.1	-0.7
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DAV	Davao City (W)	60.65	289	P	P	16 06 59.0	+1.0
MJAR	Matsushiro Arr	67.94	323	P	P	16 07 43.2	-0.7
	comp=Z,27nm,0.8s,mb4.9,baz=159,slow=5.8,SNR=43						
MJAR				PcP	PcP	16 08 06.2	-0.4
	comp=Z,5.2nm,0.8s,baz=160,slow=2.8,SNR=4.5						
MAJO	Matsushiro	67.94	323	eP	P	16 07 43.7	-0.2
	comp=Z,37nm,0.9s,mb5.0						
MAJO				ePcP	PcP	16 08 06.0	-0.6
MAJO	Matsushiro	67.94	323	eP	P	16 07 43.7	-0.3
MAJO				e		16 08 06.0	
MAJO				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.0						
MAT	Matsushiro	67.94	323	P	P	16 07 42.9	-1.1
MAT	Matsushiro	67.94	323	eP	P	16 07 43.0	-1.0
	comp=Z,25nm,0.8s,mb4.9						
MAT	Matsushiro	67.94	323	eP	P	16 07 43.0	-1.0
MAT				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.9						
KKM	Kota Kinabalu	68.79	284	eP	P	16 07 49.4	0.0
KSM	Kuching	72.73	277	eP	P	16 08 13.4	+0.6
YSS	Yuzh-Sakhalins	73.44	333	eP	P	16 08 16.1	-0.1
	comp=Z,44nm,1.0s,mb4.9						
YSS	Yuzh-Sakhalins	73.44	333	⇓iP	P	16 08 16.4	+0.2
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.1						
SSE	Sheshan	75.78	310	eP	P	16 08 29.9	+0.3
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,70nm,5.3s						
SSE	Sheshan	75.78	310	eP	P	16 08 29.9	+0.3
	comp=Z,28nm,0.7s,mb4.9						
ISA	Isabella	77.78	46	eP	P	16 08 40.8	+0.4
	comp=Z,6.3nm,0.3s,mb4.5						
ISA	Isabella	77.78	46	eP	P	16 08 40.8	+0.4
ISA				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb4.5						
CMB	Columbia Colle	77.81	43	eP	P	16 08 40.2	-0.3
	comp=Z,11nm,0.9s,mb4.3						
CMB	Columbia Colle	77.81	43	eP	P	16 08 40.2	-0.3
CMB				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.3						
NJ2	Nanjing	77.98	309	eP	P	16 08 40.2	-1.3
NJ2				PP	PP	16 11 47.1	+0.7
NJ2				S	S	16 17 45.0	-10
NJ2				AMB	AMB		
	comp=Z,20nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,1µm,7.2s						
MDJ	Mudanjiang	78.22	325	P	P	16 08 43.7	+1.2
MDJ				AP	pP	16 10 29.7	+2.0
MDJ				XP	sP	16 11 20.8	+4.1
MDJ				S	S	16 17 58.9	+1.6
MDJ				SCS	ScS	16 18 17.0	+1.1
MDJ				SS	SS	16 23 15.5	-0.1
MDJ				AMB	AMB		
	comp=Z,50nm,0.9s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,90nm,4.7s						
MDJ	Mudanjiang	78.22	325	eP	P	16 08 43.5	+1.0
	comp=Z,59nm,1.0s,mb5.0						
MTUM	Tungsten Hills	78.64	45	eP	P	16 08 44.9	0.0
NVAR	Mina Array Bea	79.39	44	P	P	16 08 49.2	+0.3
	comp=Z,9.8nm,0.9s,mb4.3,baz=213,slow=7.3,SNR=53						
NVAR				pP	pP	16 10 40.8	+6.4
	comp=Z,0.6nm,0.7s,baz=232,slow=7.6,SNR=4.5						
MNV	Mina	79.49	44	eP	P	16 08 49.6	+0.2
	comp=Z,11nm,1.0s,mb4.3						
MNV	Mina	79.49	44	eP	P	16 08 49.6	+0.2
MNV				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.3						
TPH	Tonopah	79.92	45	eP	P	16 08 51.5	-0.1
	comp=Z,9.2nm,0.9s,mb4.3						
TPH	Tonopah	79.92	45	eP	P	16 08 51.5	-0.1
TPH				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
CN2	Changchun	80.06	322	eP	P	16 08 52.5	+0.3
CN2				AP	pP	16 10 44.0	+6.1
CN2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.0						
MOD	Modoc	80.06	40	eP	P	16 08 52.6	+0.3
	comp=Z,11nm,0.9s,mb4.4						
KLR	Kul'dur	80.14	329	eP	P	16 08 52.8	+0.3
WVOR	Wild Horse Val	81.38	40	eP	P	16 08 59.0	-0.1
	comp=Z,16nm,0.9s,mb4.6						
WVOR	Wild Horse Val	81.38	40	eP	P	16 08 59.0	-0.1
WVOR				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
ARUT	Antelope Range	82.34	46	eP	P	16 09 04.9	+0.8
PMR	Palmer	82.60	14	eP	P	16 09 03.3	-1.5
	comp=Z,7.3nm,0.5s,mb4.5						
PMR	Palmer	82.60	14	eP	P	16 09 03.3	-1.5
PMR				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
ELK	Elko	82.63	43	eP	P	16 09 05.7	+0.3
	comp=Z,9.1nm,0.9s,mb4.3						
ELK	Elko	82.63	43	eP	P	16 09 05.7	+0.3
ELK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WUAZ	Wupatki	82.71	49	eP	P	16 09 07.0	+1.1
	comp=Z,6.9nm,0.8s,mb4.2						
KULM	Kulim	83.08	278	eP	P	16 09 06.2	-2.0
SEY	Seymchan	83.79	347	⇑iP	P	16 09 10.5	-0.2
MAW	Mawson	83.87	200	P	P	16 09 10.9	-0.1
	comp=Z,2.1nm,0.4s,mb4.0,baz=131,slow=6.0,SNR=18						
ENH	Enshi	84.31	304	eP	P	16 09 15.1	+1.0
	comp=Z,72nm,1.4s,mb5.0						
HLID	Hailey	84.60	41	eP	P	16 09 15.9	+0.8
	comp=Z,5.3nm,0.8s,mb4.2						

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SRU   San Rafael        84.98  46 eP      P       16 09 17.2 +0.1
      comp=Z,4.0nm,0.7s,mb4.2
NEW   Newport           85.49  36 eP      P       16 09 18.9 -0.5
PV10  Paradox Valley    85.68  48  P      P       16 09 16.8 -3.8
COLA  College           85.77  13 eP      P       16 09 18.8 -1.5
      comp=Z,26nm,1.0s,mb4.8
COLA  College           85.77  13⇓iP      P       16 09 19.3 -1.0
ILAR  Eielson Array     85.88  13  P      P       16 09 19.4 -1.4
      comp=Z,4.6nm,0.4s,mb4.5,baz=222,slow=5.2,SNR=123
PV01  Paradox Valley    85.91  48 eP      P       16 09 20.0 -1.6
TXAR  Lajitas Array     85.96  58  P      P       16 09 23.2 +1.2
      comp=Z,5.2nm,0.7s,mb4.2,baz=225,slow=5.3,SNR=15
ANMO  Albuquerque       86.06  52 eP      P       16 09 22.6 +0.2
      comp=Z,2.6nm,0.9s,mb3.9
ANMO  Albuquerque       86.06  52 eP      P       16 09 22.6 +0.2
ANMO                               pmax   pmax
      comp=Z,3.0nm,0.9s
MCMT  McKenzie Canyo    86.21  40 eP      P       16 09 23.7 +0.8
XAN   Xi'an             86.30 307  P      P       16 09 24.5 +0.9
XAN                                AMB    AMB
      comp=Z,30nm,1.3s,mb4.8
HIA   Hailar            86.40 325 eP      P       16 09 24.3 +0.6
      comp=Z,6.6nm,0.8s,mb4.3
HIA   Hailar            86.40 325 eP      P       16 09 24.3 +0.6
HIA                                pmax   pmax
      comp=Z,7.0nm,0.8s
BILL  Bilibino          86.44 354 eP      P       16 09 22.9 -0.5
      comp=Z,10.0nm,0.8s,mb4.5
BILL  Bilibino          86.44 354 i P     P       16 09 23.4  0.0
BILL                               pmax   pmax
      comp=Z,16nm,0.8s,mb4.7
RRI2  Red Ridge         86.45  42 eP      P       16 09 24.7 +0.6
      comp=Z,16nm,0.9s,mb4.7
GDL2  Guadalupe Moun    86.53  55 eP      P       16 09 25.3 +0.6
IMW   Indian Meadow     86.96  42 eP      P       16 09 27.2 +0.7
      comp=Z,11nm,0.8s,mb4.7
QLMT  Earthquake Lak    87.09  41 eP      P       16 09 26.6 -0.6
CPRX  Cap Rock          87.25  54  P      P       16 09 26.9 -1.2
CPRX                              e               16 09 38.0
YMR   Madison River     87.31  41 eP      P       16 09 29.2 +1.1
      comp=Z,6.8nm,0.7s,mb4.5
HHC   Hu-ho-hao-te      87.31 314 ⇓P      P       16 09 29.7 +1.5
HHC                                SKS    SKS     16 19 08.3 -0.4
HHC                                S      S       16 19 31.1 +4.5
HHC                                AMB    AMB
      comp=Z,20nm,1.2s,mb4.7
HHC                                AMB    AMB
      comp=Z,100nm,8.4s
PDAR  Pinedale Array    87.32  43  P      P       16 09 27.9 -0.4
      comp=Z,3.7nm,0.8s,mb4.2,baz=224,slow=2.2,SNR=28
KMI   Kunming           87.88 297  P      P       16 09 33.2 +1.9
KMI                                AMB    AMB
      comp=Z,10.0nm,1.7s,mb4.3
SDCO  Great Sand Dun    87.93  49 eP      P       16 09 31.5 +0.3
      comp=Z,1.2nm,0.8s,mb3.7
SYO   Syowa Base        89.16 193 ⇑P      P       16 09 35.4 -0.9
YAK   Yakutsk           89.60 338 eP      P       16 09 37.1 -1.3
      comp=Z,20nm,0.8s,mb5.0
YAK   Yakutsk           89.60 338⇑iP      P       16 09 37.5 -0.9
YAK                                pmax   pmax
      comp=Z,29nm,1.2s,mb5.0
SNAA  Sanae             90.59 179⇑iP      P       16 09 41.9 -0.9
VNA3  Neumayer Olymp    90.73 176⇑iP      P       16 09 43.7 +0.3
VNA3  Neumayer Olymp    90.73 176⇑i       P       16 09 45.5 +2.1
VNA3  Neumayer Olymp    90.73 176  S      S       16 19 53.4 -3.2
LZH   Lanzhou           90.93 308  P      P       16 09 46.6 +1.4
LZH                                XP     sP      16 12 18.0 -3.8
LZH                                AMB    AMB
      comp=Z,30nm,1.0s,mb5.2
VNA2  Neumayer--Watz    91.17 177⇑iP      P       16 09 46.2 +0.7
VNA2  Neumayer--Watz    91.17 177⇑i       P       16 09 46.6 +1.1
VNA2  Neumayer--Watz    91.17 177  S      S       16 19 59.5 -0.9
PLCA  Paso Flores       91.29 134  P      P       16 09 47.4 +0.6
      comp=Z,1.6nm,0.8s,mb4.0,baz=283,slow=8.1,SNR=3.7
VNA1  Neumayer--Stat    91.40 177⇑iP      P       16 09 47.4 +0.9
VNA1  Neumayer--Stat    91.40 177⇑i       P       16 09 48.9 +2.4
INK   Inuvik            91.88  15 eP      P       16 09 47.0 -1.8
      comp=Z,25nm,1.2s,mb5.0
INK   Inuvik            91.88  15 eP      P       16 09 47.0 -1.8
INK                                pmax   pmax
      comp=Z,25nm,1.2s
SONM  Songino Array     93.59 319  P      P       16 09 57.2 +0.1
      comp=Z,2.2nm,0.8s,mb4.3,baz=128,slow=4.2,SNR=18
YKA   Yellowknife Ar    94.32  25  P      P       16 09 59.3 -0.8
      comp=Z,4.3nm,0.9s,mb4.5,baz=237,slow=4.7,SNR=6.9
YKA   Yellowknife Ar    94.32  25  P      P       16 09 59.3 -0.8
GTA   Gaotai            95.08 310 eP      P       16 10 04.8 +0.7
GTA                                AP     pP      16 11 53.0 +0.3
GTA                                XP     sP      16 12 41.7 +1.1
TIXI  Tiksi             96.17 345⇓iP      P       16 10 05.7 -2.6
TIXI                               pmax   pmax
      comp=Z,5.0nm,0.8s,mb4.7
BLA   Blacksburg       106.80  56 ePKPdf          16 15 04.0
ZAL   Zalesovo         108.28 322  PKiKP          16 15 03.4
      comp=Z,1.7nm,0.3s,baz=38,slow=2.6,SNR=4.5
MKAR  Makanchi Array   109.17 314  PKiKP          16 15 06.1
      comp=Z,1.4nm,0.5s,baz=76,slow=1.5,SNR=11
KURK  Kurchatov        111.86 318⇑iPKIKP  PKPdf   16 15 11.1 -0.4
CHKZ  Chkalovo         116.68 322 ePKPdf  PKPdf   16 15 19.8 -1.1
ARU   Arti             122.88 326 i PKIKP PKPdf   16 15 32.9 +0.1
ARU                               e               16 17 20.8
ARCES ARCESS Array B   126.33 350  PKP    PKPdf   16 15 39.0  0.0
      comp=Z,11nm,0.7s,baz=313,slow=0.3,SNR=36
ORR   Orenburg         126.54 322c iPKIKP PKPdf   16 15 40.1 +0.2
ORR                                pmax   pmax
      comp=Z,20nm,1.2s
BOSA  Boshof           128.42 207  PKP    PKPdf   16 15 45.3 +1.1
      comp=Z,1.5nm,0.8s,baz=266,slow=13,SNR=3.1
JOF   Joensuu          130.58 343 epkp    PKPdf   16 15 47.3 -0.1
KAF   Kangasniemi      132.58 345 epkp    PKPdf   16 15 50.2 -0.9
FINES FINESS Array B   133.21 344  PKhKP          16 15 35.7
      comp=Z,3.1nm,0.9s,baz=90,slow=3.8,SNR=4.3
FINES                              PKP    PKPdf   16 15 51.5 -0.8
      comp=Z,1.6nm,0.6s,baz=106,slow=4.6,SNR=6.9
FINES                              SKPbc          16 18 34.2
      comp=Z,1.5nm,0.7s,baz=45,slow=3.9,SNR=3.8
FINES FINESS Array B   133.21 344  PKP            16 15 35.7
FINES                              PKP    PKPdf   16 15 51.5 -0.8
FINES                              SKPbc          16 18 34.2
MOS   Moscow           133.46 333 ePKIKP  PKPdf   16 15 53.2 +0.3
VRHR  Novokhopersk     134.21 326 ePKIKP  PKPdf   16 15 54.0 -0.5
VRHR                               pmax   pmax
      comp=Z,3.0nm,0.4s
VRHR                               pmax   pmax
      comp=N,7.0nm,0.9s
VRHR                               pmax   pmax
      comp=E,9.0nm,0.6s
OBN   Obninsk          134.32 333⇑iPKIKP  PKPdf   16 15 56.0 +1.5
OBN                                pmax   pmax
      comp=Z,9.0nm,0.5s
NB2   NORSAR Subarra136.39 353     PKPabc PKPdf   16 15 48.4  -10
      comp=Z,2.8nm,0.9s,baz=17,slow=2.6
NOA   NORSAR Array B 136.39 353    PKhKP          16 15 49.5
      comp=Z,1.6nm,0.7s,baz=25,slow=3.9,SNR=4.8
NOA                                PKP    PKPdf   16 15 59.3 +1.1
      comp=Z,2.7nm,0.6s,baz=14,slow=4.1,SNR=8.2
NOA                                SKP            16 18 47.4
      comp=Z,0.7nm,0.7s,baz=253,slow=5.5,SNR=3.6
ANN   Anapa            139.87 320 i PKIKP PKPdf   16 16 15.1  +10
ANN                                pmax   pmax
      comp=Z,79nm,1.5s
KMBO  Kilima Mbogo     140.17 245  PKhKP          16 16 00.8
      comp=Z,0.8nm,0.6s,baz=228,slow=23,SNR=4.0
KMBO                               PKP    PKPdf   16 16 08.7 +2.4
      comp=Z,2.1nm,1.0s,baz=81,slow=7.7,SNR=4.0
AKASG Malin Array Be   140.59 332  PKhKP          16 15 58.6
      comp=Z,1.9nm,0.3s,baz=40,slow=4.0,SNR=16
AKASG                              PKP    PKPdf   16 16 07.8 +1.7
      comp=Z,2.6nm,0.4s,baz=47,slow=3.1,SNR=11
HILS  Ha'il            141.91 292  P      PKPdf   16 16 06.6 -2.5
KIS   Kishinev         143.38 328 ePKIKP  PKPdf   16 16 10.0 -1.0
DMUB  Kingscourt       143.48   9 eP      PKPbc   16 16 08.6 -1.3
DCN   Croghan          143.97   9 eP      PKPbc   16 16 10.4 -1.0
KWP   Kalwaria         144.10 337⇓ePKP    PKPdf   16 16 12.4 +0.3
KWP   Kalwaria         144.10 337⇓ePKP    PKPdf   16 16 12.4 +0.3
DLF   Lyons Farm       144.12   8 eP      PKPbc   16 16 11.0 -0.8
RUE   Ruedersdorf      144.21 347 ePKPdf  PKPdf   16 16 12.4 +0.2
WCB1  Church Bay       144.28   6⇑eP      PKPbc   16 16 12.1 -0.2
WCB1                               AMb    AMB     16 16 13.3
      comp=Z,112nm,1.2s
KBRS  Khaybar          144.31 289  P      PKPdf   16 16 14.4 +1.2
WLF1  Llynfaes         144.38   6⇑eP      PKPdf   16 16 12.6  0.0
WLF1                               AMb    AMB     16 16 13.7
      comp=Z,154nm,1.1s
YRC   Rhoscolyn        144.40   6⇑eP      PKPdf   16 16 12.5  0.0
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YRC                                AMb    AMB     16 16 13.7
      comp=Z,127nm,1.0s
WPM1  Penmaenmawr      144.46   6⇑eP      PKPdf   16 16 13.0 +0.3
WPM1                               AMb    AMB     16 16 14.1
      comp=Z,88nm,1.0s
YLL   Llanberis        144.56   6 eP      PKPdf   16 16 13.3 +0.4
YLL                                AMb    AMB     16 16 14.4
      comp=Z,202nm,1.2s
OJC   Ojcow            144.63 340 ePKP    PKPdf   16 16 13.9 +0.8
YRE   Yr Eifl          144.69   6⇑eP      PKPdf   16 16 13.5 +0.4
YRE                                AMb    AMB     16 16 17.0
      comp=Z,124nm,1.6s
STHS  Stebnicka Huta   144.81 338 i PKP   PKPdf   16 16 15.4 +2.0
BR131 Keskin Array S   144.82 315 ePKPdf  PKPdf   16 16 14.7 +0.9
BRTR  Keskin Array B   144.82 315  PKP    PKPdf   16 16 13.8 +0.1
      comp=Z,23nm,0.9s,baz=135,slow=3.5,SNR=100
KOLS  Kolonicke sedl   144.83 336 i PKP   PKPdf   16 16 15.3 +1.8
SBD1  Bryn Du          144.87   5 eP      PKPdf   16 16 14.5 +1.1
SBD1                               AMb    AMB     16 16 15.6
      comp=Z,149nm,1.3s
WIT   Witteveen        144.95 355 ePKP    PKPdf   16 16 16.0 +2.5
KSP   Ksiaz            145.13 344 ePKP    PKPdf   16 16 16.2 +2.3
KSP   Ksiaz            145.13 344 ePKP    PKPdf   16 16 15.0 +1.1
KSP                               e               16 16 15.9
NIE   Niedzica         145.14 339⇓ePKP    PKPdf   16 16 16.2 +2.2
CRVS  Cervenica-Dubn   145.16 337 ePKP    PKPdf   16 16 15.8 +1.8
CRVS                              e               16 18 14.5
VRI   Vrincioaia       145.21 329  PKIKP  PKPdf   16 16 16.0 +1.8
RAC   Raciborz         145.26 341 ePKPdf  PKPdf   16 16 16.5 +2.3
HLM1  Long Mynd        145.29   5 eP      PKPdf   16 16 15.6 +1.5
TIRR  Tirgusor         145.30 325 ⇓P      PKPdf   16 16 16.6 +2.2
TIRR  Tirgusor         145.30 325  PKP2   PKPab   16 16 16.7 -2.2
ANTO  Ankara           145.32 316 ePKPdf  PKPdf   16 16 15.8 +1.2
SSP1  Stoney Pound     145.37   5 eP      PKPdf   16 16 15.9 +1.6
HARR  Harsova          145.40 326 ⇓P      PKPdf   16 16 16.3 +1.7
CLZ   Clausthal        145.45 350 ePKPbc  PKPbc   16 16 16.9 +1.4
CLL   Collm            145.48 347⇓iPKIKP  PKPdf   16 16 16.4 +1.9
CLL                               i PKP1  PKPbc   16 16 16.9 +1.3
CLL                               e               16 16 21.0
CLL   Collm            145.48 347⇑iPKP2   PKPab   16 16 16.9 -2.4
CLL                                pmax   pmax
      comp=Z,110nm,0.9s
OKC   Ostrava-Krasne   145.50 341 ePKP    PKPdf   16 16 17.1 +2.5
UPC   Upice            145.51 344 ePKP    PKPdf   16 16 17.3 +2.7
DPC   Dobruska-Polom   145.57 343 ePKP    PKPdf   16 16 15.7 +1.0
DPC                               ex      x       16 16 17.7
HTR   Trewern Hill     145.69   5 eP      PKPdf   16 16 16.5 +1.7
HTR                                AMb    AMB     16 16 17.8
      comp=Z,96nm,1.3s
MORC  Moravsky Berou   145.73 342 ePKPdf  PKPdf   16 16 15.6 +0.7
MORC  Moravsky Berou   145.73 342  PKP2   PKPab   16 16 18.3 -2.0
WTSB  Winterswijk      145.78 354 ePKP    PKPdf   16 16 16.3 +1.3
      comp=Z,106nm,0.8s
MCH1  Michaelchurch    145.79   5 eP      PKPdf   16 16 16.9 +1.9
MCH1                               AMb    AMB     16 16 18.0
      comp=Z,93nm,1.0s
PVCC  Panska Ves       145.86 345⇑ePKPB   PKPbc   16 16 18.3 +1.8
PVCC                              ePKPAB  PKPab   16 16 21.3 +0.5
MLR   Muntele Rosu     145.86 329 ⇑P      PKPdf   16 16 17.4 +2.1
MLR   Muntele Rosu     145.86 329  PKP2   PKPab   16 16 18.2 -2.8
KECS  Kecovo           145.87 337 i PKP   PKPdf   16 16 18.0 +2.7
KECS                              eSKSDF          16 22 45.2
HGH   Gray Hill        146.17   5 eP      PKPdf   16 16 17.3 +1.7
HGH                                AMb    AMB     16 16 19.6
      comp=Z,161nm,1.7s
PRU   Pruhonice        146.36 345 ePKPDF  PKPdf   16 16 17.3 +1.3
PRU                              ⇑ePKPB   PKPbc   16 16 19.6 +1.8
PRU                               ePKPAB  PKPab   16 16 22.2 -0.6
PRU   Pruhonice        146.36 345 ePKIKP  PKPdf   16 16 17.3 +1.3
PRU                               e               16 16 22.2
DRGR                   146.37 334 ⇑P      PKPdf   16 16 18.6 +2.5
DRGR                   146.37 334  PKIKP  PKPdf   16 16 18.5 +2.4
MOX   Moxa             146.39 349 i P     PKPdf   16 16 17.0 +1.0
      comp=Z,logA/T=1.6
MOX   Moxa             146.39 349 ePKIKP  PKPdf   16 16 17.0 +1.0
MOX                                pmax   pmax
      comp=Z,69nm,1.6s
VRAC  Vranov           146.43 342  PKP2   PKPab   16 16 20.0 -3.0
VYHS  Vyhne            146.44 339 ePKP    PKPdf   16 16 19.7 +3.5
MTUR  Matau            146.48 329  PKIKP  PKPdf   16 16 18.8 +2.5
PSZ   Piszkesteto      146.56 338 i PKP/Bc PKPbc  16 16 20.1 +1.8
PSZ   Piszkesteto      146.56 338⇑iP      PKPdf   16 16 20.1 +3.7
PSZ   Piszkesteto      146.56 338  PKP2   PKPab   16 16 19.9 -3.7
NKC   Novy Kostel      146.61 347 ePKPDF  PKPdf   16 16 17.6 +1.2
NKC                              ⇑ePKPB   PKPbc   16 16 20.2 +1.9
NKC                               ePKPAB  PKPab   16 16 23.6 -0.1
NKC   Novy Kostel      146.61 347 ePKIKP  PKPdf   16 16 17.6 +1.2
NKC                               e               16 16 23.6
PRD   Provadia         146.68 325 eP      PKPdf   16 16 20.0 +3.3
TREC  Trest            146.75 343⇑ePKPB   PKPbc   16 16 20.5 +1.8
TREC                              ePKPAB  PKPab   16 16 23.7 -0.6
SMOL  Smolenice        146.88 341 ePKP    PKPdf   16 16 22.0 +5.1
HGN   Heimansgroeve    147.05 355 ePKP    PKPdf   16 16 16.9 -0.1
      comp=Z,49nm,1.0s
CSS   Prodhromos       147.12 307 ePKPdf  PKPdf   16 16 18.8 +1.1
ZST   Bratislava       147.27 341 i PKP   PKPdf   16 16 22.7 +5.2
TNS   Taunus Mts       147.31 352 ePKPbc  PKPdf   16 16 22.0 +4.5
GRA1  Grafenberg Arr   147.37 348 ePKPbc  PKPdf   16 16 22.5 +4.9
GRA1                              ePKPab  PKPab   16 16 25.7 -1.0
GRF   Grafenberg Arr   147.37 348 ePKP    PKPdf   16 16 22.5 +4.9
GRF                               ePKP    PKPdf   16 16 25.7 +8.1
GRF   Grafenberg Arr   147.37 348 ePKP2   PKPab   16 16 25.7 -1.0
KHC   Kasperske Hory   147.40 345 ePKPDF  PKPdf   16 16 19.0 +1.3
KHC                              ⇑ePKPB   PKPdf   16 16 22.5 +4.8
KHC                               ePKPAB  PKPab   16 16 26.8  0.0
KHC   Kasperske Hory   147.40 345 ePKIKP  PKPdf   16 16 19.0 +1.3
KHC                               e               16 16 26.8
SZH   Strazhica        147.43 326 eP      PKPdf   16 16 22.0 +4.1
JMOS  Jabal al Moall   147.45 296  P      PKPdf   16 16 22.9 +4.5
ALWS  Ilw as Safayha   147.45 297  P      PKPdf   16 16 22.5 +4.1
WET   Wettzell         147.55 346 ePKPdf  PKPdf   16 16 19.5 +1.6
WET                               ePKPbc  PKPdf   16 16 22.6 +4.7
WET                               ePKPab  PKPab   16 16 26.3 -1.1
WET   Wettzell         147.55 346 ePKP2   PKPab   16 16 26.3 -1.1
BDAS  Al Bad'          147.61 295  P      PKPdf   16 16 23.2 +4.5
JMB   Yambol           147.61 324 eP      PKPdf   16 16 23.0 +4.8
HAQS  Haql             147.62 296  P      PKPdf   16 16 23.4 +4.7
GEC2  GERESS Array S   147.63 345 ePKPbc  PKPdf   16 16 22.8 +4.7
GEC2                              ePKPab  PKPab   16 16 26.5 -1.2
GERES GERESS Array B   147.63 345  PKPbc  PKPdf   16 16 22.5 +4.4
      comp=Z,18nm,0.4s,baz=27,slow=3.0,SNR=67
ABH   Alteburg         147.76 353 eP      PKPdf   16 16 23.0 +4.8
ABH   Alteburg         147.76 353  PKP    PKPdf   16 16 23.2 +5.0
GIVF  Givet            147.79 356 ePKP1   PKPdf   16 16 22.8 +4.5
      comp=Z,139nm,0.8s
TOD   Tromm            147.86 351 eP      PKPdf   16 16 23.1 +4.7
TOD   Tromm            147.86 351  PKP    PKPdf   16 16 23.4 +5.0
BAIF  Baives           147.87 357 ePKP1   PKPdf   16 16 23.1 +4.7
      comp=Z,54nm,0.6s
SIND  Sindeldorf       147.99 350 eP      PKPdf   16 16 23.5 +4.9
SWS   Schriesheim      148.00 351 eP      PKPdf   16 16 23.2 +4.6
WLF   Walferdange      148.12 354 ePKPdf  PKPdf   16 16 20.0 +1.1
WLF                               ePKPbc  PKPdf   16 16 23.6 +4.7
MOA   Molln            148.41 344⇑iP      PKPdf   16 16 24.6 +5.3
      comp=Z,22nm,0.8s,SNR=11
PKSM  Moragy           148.46 337  PKHKP          16 16 24.2
ARSA  Arzberg          148.59 342⇑iP      PKPdf   16 16 24.8 +5.2
      comp=Z,24nm,1.1s,SNR=9.0
LANF  Langenberg       148.61 352  PKP    PKPdf   16 16 25.4 +5.8
STU   Stuttgart        148.62 350 ePKPdf  PKPdf   16 16 19.9 +0.3
HDH   Heidenheim       148.62 349 eP      PKPdf   16 16 24.9 +5.2
LBG   Lerchenberg      148.78 351 eP      PKPdf   16 16 25.5 +5.6
FUR   Furstenfeldbru   148.82 348 ePKPbc  PKPdf   16 16 25.9 +5.9
FUR                               ePKPab  PKPab   16 16 31.7 -0.9
BEO   Belgrade         148.89 334⇑iPKP    PKPdf   16 16 25.3 +5.1
BUCH  Bad Urach        148.90 350 eP      PKPdf   16 16 25.9 +5.8
SVIS  Svilajnac        148.97 332⇑iPKP    PKPdf   16 16 26.0 +5.6
RZN   Rozhen           149.16 325 eP      PKPdf   16 16 26.0 +5.2
BFO   Black Forest     149.18 351 ePKPdf  PKPdf   16 16 21.1 +0.5
BFO                               ePKPbc  PKPdf   16 16 26.6 +6.0
BFO                               ePKPab  PKPab   16 16 32.6 -1.4
BFO   Black Forest     149.18 351 ePKHKP          16 16 26.6
BFO   Black Forest     149.18 351 ePKP2   PKPab   16 16 32.6 -1.4
FLN   La Foliniere     149.18   3 ePKP1   PKPdf   16 16 26.0 +5.4
      comp=Z,148nm,0.9s
WLS   Welschbruch      149.23 353  PKP    PKPdf   16 16 26.7 +6.1
CDF   Champ du Feu     149.24 353 ePKP1   PKPdf   16 16 26.5 +5.8
      comp=Z,57nm,0.6s
PERS  Pernice          149.27 342 ePKPbc  PKPdf   16 16 25.6 +4.9
PERS                              i PKPab PKPab   16 16 33.5 -1.0
GUT   Gutenstein       149.31 350 eP      PKPdf   16 16 26.4 +5.6
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VTS   Vitosha          149.32 328 eP      PKPdf   16 16 27.0 +6.0
SPAK  Spaichingen      149.33 351 eP      PKPdf   16 16 26.4 +5.6
SPAK  Spaichingen      149.33 351  PKP    PKPdf   16 16 26.9 +6.1
KBA   Koelnbreinsper   149.36 344⇑iP      PKPdf   16 16 26.4 +5.5
      comp=Z,24nm,0.5s,SNR=12
MEZF  Maizieres J'vi   149.37 356 ePKP1   PKPdf   16 16 26.9 +6.0
      comp=Z,26nm,0.4s
LDF   La Druitiere     149.37   2 ePKP1   PKPdf   16 16 26.2 +5.3
      comp=Z,39nm,0.5s
ROSF  Rostrenen        149.39   6 ePKP1   PKPdf   16 16 26.2 +5.3
      comp=Z,18nm,0.6s
ECH   Echery           149.44 353  PKP    PKPdf   16 16 26.9 +5.9
LIBD  Limburg          149.45 352 eP      PKPdf   16 16 27.0 +6.0
LIBD  Limburg          149.45 352  PKP    PKPdf   16 16 27.1 +6.1
UBR   Uberruh          149.51 349 eP      PKPdf   16 16 27.0 +5.9
GRUS  Gruza            149.52 332 i PKP   PKPdf   16 16 27.4 +6.1
GRR   Gorron           149.54   3 ePKP1   PKPdf   16 16 26.9 +5.8
      comp=Z,45nm,0.4s
WATA  Walderalm        149.54 347⇑iP      PKPdf   16 16 27.2 +6.0
      comp=Z,21nm,0.5s
SGMF  Saint Gilles     149.55   6 ePKP1   PKPdf   16 16 26.7 +5.5
      comp=Z,118nm,0.9s
OBKA  Obir             149.55 342⇑iP      PKPdf   16 16 26.6 +5.4
      comp=Z,27nm,1.3s
OBKA  Obir             149.55 342⇓iP      PKPdf   16 16 34.7  +13
      comp=Z,16nm,0.9s
THEF  They Montfort    149.56 354  PKP    PKPdf   16 16 27.5 +6.3
WTTA  Wattenberg       149.60 346⇓iP      PKPdf   16 16 27.3 +6.0
      comp=Z,66nm,0.7s,SNR=21
KIZ   Kirchzarten      149.60 352 eP      PKPdf   16 16 27.1 +5.8
MOTA  Moosalm          149.64 347⇓iP      PKPdf   16 16 27.4 +6.1
      comp=Z,49nm,1.0s
MOTA  Moosalm          149.64 347⇑iP      PKPdf   16 16 34.4  +13
      comp=Z,11nm,0.6s
FELD  Feldberg         149.67 352 eP      PKPdf   16 16 27.3 +5.9
DIVS  Divcibare        149.67 333⇓iPKP    PKPdf   16 16 27.9 +6.4
SQTA  Sankt Quirin     149.73 347⇑iP      PKPdf   16 16 27.9 +6.4
      comp=Z,30nm,0.5s
HAU   Haudompre        149.74 354 ePKP1   PKPdf   16 16 27.5 +6.0
      comp=Z,40nm,0.5s
MMB   Musomiste        149.77 326 eP      PKPdf   16 16 27.5 +5.8
MOF   Molkenrain       149.81 353  PKP    PKPdf   16 16 27.8 +6.2
QUIF  Quistinic        149.82   6 ePKP1   PKPdf   16 16 26.4 +4.8
      comp=Z,75nm,1.1s
BARS  Barje            149.83 330⇑iPKP    PKPdf   16 16 27.8 +6.0
HINF  Hinteralfeld     149.87 353 ePKP1   PKPdf   16 16 27.8 +6.1
      comp=Z,41nm,0.8s
KKB   Krupnik          149.91 327 eP      PKPdf   16 16 28.3 +6.4
DAVA  Damuels          149.93 349 i P     PKPdf   16 16 28.5 +6.7
      comp=Z,49nm,0.8s,SNR=13
LJU   Ljubljana        149.98 342 ePKPdf  PKPdf   16 16 20.3 -1.6
LJU                               ePKPbc  PKPdf   16 16 28.0 +6.1
LJU                               ePKPab  PKPab   16 16 35.4 -2.0
ROBS  Robic            150.09 343 ePKPbc  PKPdf   16 16 26.9 +4.9
BBS   Basel-Blauen     150.14 352 eP      PKPdf   16 16 28.5 +6.4
BBS   Basel-Blauen     150.14 352  PKP    PKPdf   16 16 29.1 +7.0
VOY   Vojsko           150.17 343 ePKPdf  PKPdf   16 16 22.7 +0.5
VOY                               ePKPbc  PKPdf   16 16 28.5 +6.3
VOY                               ePKPab  PKPab   16 16 32.7 -5.5
BOJS  Bojanci          150.24 341 ePKPbc  PKPdf   16 16 28.5 +6.2
BOJS                              ePKPab  PKPab   16 16 37.5 -1.0
NVSS  Nova Varos 2     150.27 333⇑iPKP    PKPdf   16 16 32.1  +10
LOMF  Lomont           150.34 353  PKP    PKPdf   16 16 29.3 +6.9
LOR   Lormes           150.67 357 ePKP1   PKPdf   16 16 29.8 +6.9
      comp=Z,58nm,0.5s
HYF   Humbligny        150.71 359 ePKP1   PKPdf   16 16 30.3 +7.3
SSF   Saint Saulge     150.89 357 ePKP1   PKPdf   16 16 30.4 +7.1
      comp=Z,74nm,0.8s
CABF  La Chapelle      151.15 354 ePKP1   PKPdf   16 16 31.5 +7.9
      comp=Z,142nm,1.1s
AVF   Avril sur Loir   151.17 358 ePKP1   PKPdf   16 16 30.5 +6.8
SMF   Signal de Mont   151.29 357 ePKP1   PKPdf   16 16 31.0 +7.2
      comp=Z,8.0nm,0.4s
MFF   Saint Martin d   151.35   3 ePKP1   PKPdf   16 16 31.0 +7.1
      comp=Z,79nm,0.9s
BGF   Bois d'Agland    151.42 358 ePKP1   PKPdf   16 16 31.5 +7.5
      comp=Z,54nm,0.7s
TCF   Toulx Ste Croi   151.70 359 ePKP1   PKPdf   16 16 31.8 +7.4
      comp=Z,66nm,0.9s
AGO   Saint Agoulin    151.91 358  PKP    PKPdf   16 16 33.1 +8.4
PLDF  La Plantade      151.98 357  PKP    PKPdf   16 16 33.3 +8.5
LPL   La Plagne        152.15 352 ePKP1   PKPdf   16 16 33.7 +8.6
      comp=Z,37nm,1.1s
LPG   La Plagne        152.17 352 ePKP1   PKPdf   16 16 34.0 +8.9
PYM   Petit Puy Mans   152.22 358  PKP    PKPdf   16 16 34.0 +8.8
RJF   Les Rejaudoux    152.69   0 ePKP1   PKPdf   16 16 34.6 +8.8
ORIF  Oris-en-Rattie   152.84 353 ePKP1   PKPdf   16 16 34.9 +8.8
      comp=Z,16nm,0.7s
MBDF  Montbardon       152.92 352 ePKP1   PKPdf   16 16 35.0 +8.8
      comp=Z,39nm,0.9s
VIVF  Saint-Julien-l   153.02 355 ePKP1   PKPdf   16 16 35.3 +9.0
      comp=Z,48nm,1.1s
LFF   La Frestale      153.04   1 ePKP1   PKPdf   16 16 35.4 +9.1
CAF   Calviac          153.07 359 ePKP1   PKPdf   16 16 35.2 +8.8
      comp=Z,14nm,0.7s
SBF   Sospel           153.67 351 ePKP1   PKPdf   16 16 37.1  +10
PGF   Pioggiola        154.66 347 ePKP1   PKPdf   16 16 38.5  +10
ESDC  Sonseca Array    157.78  11  PKPab  PKPab   16 17 09.8 -0.8
      comp=Z,0.5nm,0.4s,baz=349,slow=3.0,SNR=5.9
EVO   Evora            157.79  20 ePKIKP  PKPdf   16 16 33.2 +0.4
      comp=Z,6.4nm,0.6s
MDT   Midelt           164.13  20  PKP    PKPdf   16 16 41.6 +2.0
      comp=Z,7.4nm,1.0s,baz=65,slow=5.3,SNR=7.3
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*ATH **10** 16:14:27.9, 38.18N×26.58E, h30^{km}, MD3.3/3*
*ISK **10** 16:14:28.7, 38.15N×26.72E, h23^{km}, MD2.9*
*NEIC **10** 16:14:28.0, 38.15N×26.72E, h23^{km}, MD3.3(ATH), MD2.9(ISK), After ISK.*
*CSEM **10** 16:14:28.1±0.1, 38.15N×26.69E, h20^{km}, MD2.9, Error ellipse: s-maj=1.8km s-min=1.1km az=100.0*
ISC 10 16:14:29.7±0.8**, 38.15N**±0.04×**26.72E**±0.09**, h30**^{km}±8^{km}**,**
n15, σ0^{s}67/18**, 3C-1D, Aegean Sea**

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Code  Station Name         Δ°  AZ°   Phase ID       Time       Res
                                    Op      ISC     h  m  s    ISC
SMG   Samos               0.45 168⇑iP      Pb      16 14 38.7 -0.7
SMG                               eS      Sb      16 14 47.0 +0.9
IZM   Izmir               0.49  60 i PG   Pb      16 14 39.3 -0.8
IZM                               i SG    Sb      16 14 47.4 +0.3
AKS   Akhisar             1.12  49  PN    Pn      16 14 49.8 +0.2
PRK   Paraskevi           1.15 342 eP     Pn      16 14 48.7 -1.2
PRK                               eS      Sn      16 15 04.7  0.0
BODT  Bodrum              1.19 156  PN    Pn      16 14 50.3 -0.2
MLSB  Milas               1.20 135 ePN    Pn      16 14 50.8 +0.1
APE   Apeiranthos         1.44 221 ePN    Pn      16 14 54.2 +0.1
APE   Apeiranthos         1.44 221 eP     Pn      16 14 53.3 -0.8
APE   Apeiranthos         1.44 221 ePn    Pn      16 14 54.2 +0.1
DAT   Datca               1.58 154 ePN    Pn      16 14 56.2 +0.1
YER   Yerkesik            1.60 129 ePN    Pn      16 14 56.2 -0.3
BALB  Balikesir           1.74  31 ePN    Pn      16 14 58.2 -0.2
CFR   Carcaliu            7.10   8 ⇓P     Pn      16 16 14.8 +0.5
VOIR                      7.38 351 ⇑P     Pn      16 16 20.0 +1.7
VOIR                      7.38 351 ⇑P     Pn      16 16 20.0 +1.6
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*NEIC **10** 16:14:45.1±1.6, 16.75S×179.46W, h481^{km}±23^{km}, mb3.6/1, Error ellipse: s-maj=46.1km s-min=19.8km az=152.0*
*IDC **10** 16:14:45.2±2.0, 17.43S×179.03W, h513^{km}±32^{km}, mb3.3/4, mb1 3.5/6, mb1mx3.3/15, mbtmp4.2/6, Error ellipse: s-maj=63.7km s-min=18.2km az=143.0*
ISC 10 16:14:42.6±1.6**, 16.2S**±0.2×**179.8W**±0.1**, h447**^{km}±22^{km}**,**
n16, σ1^{s}61/15**, mb3.8**/6**, 1D, Fiji Islands region**

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Code  Station Name         Δ°  AZ°   Phase ID       Time       Res
                                    Op      ISC     h  m  s    ISC
AFI   Afiamalu            8.11  75  P     P       16 16 40.1 -0.3
      5.5nm,0.3s,baz=50,slow=23,SNR=8.7
AFI   Afiamalu            8.11  75  P     P       16 16 40.1 -0.3
DZM   Mont Dzumac        14.22 244  P     P       16 17 49.8 +2.7
      0.3nm,0.3s,baz=86,slow=18,SNR=6.4
STKA  Stephens Creek     38.30 239  P     P       16 21 22.3 -2.1
      3.9nm,0.4s,mb4.2,baz=94,slow=10,SNR=25
STKA  Stephens Creek     38.30 239 eP     P       16 21 22.1 -2.4
WB2   Warramunga Arr     43.62 258 eP     P       16 22 07.1 -0.4
WRA   Warramunga Arr     43.63 258  P     P       16 22 07.3 -0.4
      1.4nm,0.7s,mb3.5,baz=95,slow=7.7,SNR=29
ASPA  Alice Springs      43.97 253⇓iP     P       16 22 09.6 -0.7
KAKA  Kakadu             46.27 268 eP     P       16 22 48.4  +20
      4.4nm,0.4s,mb4.2
FITZ  Fitzroy Crossi     51.98 260 eP     P       16 23 10.9 -0.2
      4.8nm,1.7s,mb3.5
MJAR  Matsushiro Arr     65.74 324  P     P       16 24 48.5 +4.7
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	1.5nm,0.5s,mb3.9,baz=151,slow=5.9,SNR=4.0						
ILAR	**Eielson Array**	84.56	14	P	P	16 26 27.7	-0.3
	0.5nm,0.4s,mb3.5,baz=225,slow=5.2,SNR=6.8						
SNAA	**Sanae**	92.31	179		P	16 27 06.3	+2.0
VNA3	**Neumayer Olymp**	92.50	177		P	16 27 06.8	+1.6
VNA2	**Neumayer--Watz**	92.93	178		P	16 27 05.2	-1.9
GERES	**GERESS Array B**	145.63	344	PKPbc	PKPbc	16 33 29.9	0.0
	0.5nm,0.5s,baz=34,slow=3.5,SNR=4.8						

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*CASC **10** 16:17:20.1±1.4, 12.14N×87.64W, h22^{km}±5^{km}, MD4.0, mb4.1(NEIC)*

*NEIC **10** 16:17:20.8±2.3, 12.19N×87.57W, h56^{km}±23^{km}, mb4.1/6, Error ellipse: s-maj=32.0km s-min=10.9km az=55.0*

*IDC **10** 16:17:20.2±3.3, 12.35N×87.44W, h50^{km}±39^{km}, mb3.8/5, mb1 4.0/6, mb1mx3.6/20, mbtmp4.0/6, ML3.9/1, Error ellipse: s-maj=60.8km s-min=20.6km az=53.0*

ISC 10 16:17:19.6±1.0**, 12.15N**±0.06×**87.68W**±0.09**, h61**^{km}±10^{km}**, n41, σ0^{s}81**/46**, mb4.1**/10**, 2C-7D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	**Leon**	0.81	71	⇓iP	P	16 17 35.0	-0.5
CRIN	**San Cristobal**	0.82	48	⇓eP	P	16 17 35.9	+0.3
TEL3	**Telica 3**	0.92	62	⇓eP	P	16 17 36.5	-0.3
TELN	**Telica**	0.94	61	⇓eP	P	16 17 36.7	-0.4
MIRN	**Miramar**	0.99	73	⇓eP	P	16 17 37.5	-0.2
CNGN	**Cerro Negro**	1.02	70	⇓eP	P	16 17 38.4	+0.2
CNGN				eS	S	16 17 51.2	-0.8
COPN	**Copaltepe**	1.06	88	⇑eP	P	16 17 38.3	-0.5
COPN				eS	S	16 17 52.9	-0.1
CNCH	**Conchagua**	1.13	352	eP	Px	16 18 02.6	
CNCH				eS	Sx	16 18 19.6	
MOMJ	**Momotombo**	1.14	77	⇑eP	P	16 17 39.4	-0.4
MOMJ				eS	S	16 17 54.9	0.0
XAVN	**Gruta Xavier**	1.32	90	eP	P	16 17 42.4	-0.1
XAVN				eS	S	16 17 59.5	+0.2
MGAN	**Managua**	1.40	90	eP	P	16 17 43.4	-0.1
MGAN				eS	S	16 18 01.7	+0.5
TICN	**Ticuantepe**	1.42	94	eP	P	16 17 43.7	-0.1
WILN	**Americas 2**	1.46	89	eP	P	16 17 44.0	-0.3
WILN				eS	S	16 18 04.6	+2.0
APON	**Apoyo**	1.59	98	eP	P	16 17 46.2	+0.1
PYTN	**Playitas**	1.63	76	⇓eP	P	16 17 46.8	+0.1
SNVI	**San Vicente**	1.84	322	eP	Px	16 18 13.0	
SNVI				eS	Sx	16 18 36.3	
LCBS	**La Ceiba**	1.96	320	eP	Px	16 18 13.4	
LCBS				eS	Sx	16 18 38.0	
SSNN	**San Juan del S**	1.98	115	eP	P	16 17 52.4	+0.9
LBRS	**Las Brisas**	2.07	320	eP	Px	16 18 16.8	
CONN	**Concepcion**	2.09	106	eP	P	16 17 53.8	+0.7
MADN	**Villa Maderas**	2.22	109	eP	P	16 17 55.4	+0.5
VCR	**Vista de Mar**	2.84	135	eP	P	16 18 03.6	-0.1
JTS	**JuntasAbangare**	3.25	124	P	P	16 18 07.9	-1.5
	12nm,0.3s,baz=308,slow=8.3,SNR=22						
JTS				S	S	16 18 59.0	+12
	baz=300,slow=20						
JTS	**JuntasAbangare**	3.25	124	P	P	16 18 08.0	-1.5
JTS				ePn	P	16 18 08.1	-1.3
JTS				S	S	16 18 59.0	+12
CGA2	**Cerro Gallo 2**	3.80	124	eP	P	16 18 16.9	-0.2
PRS1	**Puriscal**	3.94	123	eP	P	16 18 20.1	+0.9
LAJ	**Bijagual**	4.16	123	eP	P	16 18 18.0	-4.3
LCR2	**La Lucha 2**	4.33	123	eP	P	16 18 24.4	-0.1
BUS	**Buena Vista**	4.63	123	eP	P	16 18 28.7	-0.2
SDV	**Santo Domingo**	17.07	99	P	P	16 21 16.0	+0.3
	4.3nm,0.9s						
OXF	**Oxford**	22.32	356	eP	P	16 22 15.1	+1.8
	32nm,1.1s,mb4.7						
TXAR	**Lajitas Array**	22.67	321	P	P	16 22 17.1	+0.3
	4.4nm,0.7s,mb4.0,baz=143,slow=14,SNR=11						
WMOK	**Wichita Mounta**	24.65	338	eP	P	16 22 36.4	+0.4
	4.3nm,0.9s,mb4.0						
SAML	**Samuel**	32.12	130	eP	P	16 23 41.4	-2.3
	1.9nm,0.9s,mb3.9						
PDAR	**Pinedale Array**	35.93	332	P	P	16 24 16.2	+0.1
	0.6nm,0.5s,mb3.8,baz=126,slow=10.0,SNR=5.5						
HWUT	**Hardware Ranch**	36.02	329	eP	P	16 24 17.3	+0.4
	2.0nm,0.6s,mb4.2						
REDW	**Red Top Meadow**	36.99	332	eP	P	16 24 26.1	+1.0
	8.9nm,1.0s,mb4.5						
SIV	**San Ignacio**	38.40	136	P	P	16 24 36.8	-0.2
	1.6nm,0.8s,mb3.8,baz=314,slow=11,SNR=6.3						
ULM	**Lac du Bonnet**	38.59	352	P	P	16 24 36.6	-1.6
	3.7nm,0.9s,mb4.1,baz=160,slow=11,SNR=3.7						
SCHQ	**Schefferville**	45.63	17	P	P	16 25 33.5	-2.3
	1.2nm,0.5s,mb4.1,baz=213,slow=17,SNR=3.1						
EFI	**East Falkland**	68.54	161	eP	P	16 28 18.8	+0.9
	92nm,1.2s						

KRSC 10 16:23:19.9±1.2**, 49.66N×156.25E, ML4.1, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	1.03	355	eP	Pb	16 23 40.7	+0.4
SKR				i S	Sg	16 23 57.0	+2.9
ALID	**Alaid**	1.29	340	i P	Pb	16 23 46.9	+2.1
ALID				i S	Sb	16 24 05.9	+4.1
PAU	**Pauzhetka**	1.84	11	eP	Pn	16 23 55.3	+2.2
PAU				eS	Sn	16 24 20.5	+3.1
PAU				Smax			
	1µm,0.3s						
MIPR	**Malaya Ipel'ka**	2.64	7	eP	Pn	16 24 06.0	+1.5
GRL	**Gorelyy**	3.12	21	eP	Pn	16 24 13.3	+2.1
GRL				eS	Sn	16 24 51.8	+2.1
RUS	**Russkaya**	3.12	26	P	Pn	16 24 11.1	-0.2
RUS				S	Sn	16 24 49.5	-0.4
APC	**Apacha**	3.32	10	i P	Pn	16 24 16.8	+2.7
APC				Smax			
	20nm,0.6s						
KRMR	**Karymshinskiy**	3.39	20	eS	Sn	16 24 58.8	+2.2
PET	**Petropavlovsk**	3.69	23	P	Pn	16 24 20.4	+1.0
PET				S	Sn	16 25 03.7	-0.6
PET	**Petropavlovsk**	3.69	23	eP	Pn	16 24 20.5	+1.1
PET				eS	Sn	16 25 05.0	+0.7
UGLR	**Uglovaya**	3.90	23	eP	Pn	16 24 24.2	+1.8
AVH	**Avacha**	3.93	22	eP	Pn	16 24 25.2	+2.4
AVH				eS	Sn	16 25 12.2	+1.8
KOK	**Koryaka**	3.93	21	eP	Pn	16 24 25.2	+2.4
GNL	**Ganaly**	4.18	14	eP	Pn	16 24 28.5	+2.2
SPN	**Mys Shipunski**	4.18	33	P	Pn	16 24 26.4	+0.1
SPN				S	Sn	16 25 13.6	-3.0
SPN	**Mys Shipunski**	4.18	33	eS	Sn	16 25 15.4	-1.2
BKI	**Bering**	8.13	43	eS	Sn	16 26 44.3	-11

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*PRU **10** 16:55:12.3, 42.67N×17.60E, M4.1*

*IDC **10** 16:55:12.8±2.7, 42.81N×17.91E, mb3.5/2, mb1 3.7/6, mb1mx3.6/21, mbtmp3.5/6, ML3.7/3, Error ellipse: s-maj=40.8km s-min=13.7km az=29.0*

*LDG **10** 16:55:13.9±0.1, 42.79N×17.95E, h10^{km}, Ml3.8/4, Error ellipse: s-maj=3.9km s-min=2.9km az=30.0*

*PDG **10** 16:55:13.6±0.6, 42.81N×17.82E, h3^{km}±2^{km}*

*CSEM **10** 16:55:13.4±0.0, 42.87N×17.89E, h2^{km}, ML4.1/2, Error ellipse: s-maj=1.2km s-min=1.1km az=8.0*

*NEIC **10** 16:55:13.6, 42.81N×17.82E, h3^{km}, mb4.1/1, ML3.5(PDG), ML3.3(ROM), After PDG.*

*MOS **10** 16:55:13.0±1.2, 42.82N×17.74E, h10^{km}, mb4.0/1, Error ellipse: s-maj=5.6km s-min=4.8km az=100.9*

*ROM **10** 16:55:15.3±0.4, 42.60N×17.83E, h12^{km}, Ml3.3/18, Error ellipse: s-maj=6.2km s-min=4.1km az=133.0*

ISC 10 16:55:13.5±0.2**, 42.83N**±0.01×**17.81E**±0.02**, h3**^{km}**, n160, σ1^{s}35**/206**, mb3.5**/2**, 28C-13D, Adriatic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	**Ston**	0.09	295	i Pg	Pg	16 55 15.7	+0.2
STON				i Sg	Sg	16 55 17.3	+0.6
STON	**Ston**	0.09	295	i Pg	Pg	16 55 15.6	+0.1
STON				i Sg	Sg	16 55 17.3	+0.6
BRY	**Bratogost**	0.54	83	⇓iPg	Pg	16 55 23.0	-1.4
BRY				eSg	Sg	16 55 31.5	-0.1
HCY	**Herceg Novi**	0.64	127	⇑iPg	Pg	16 55 25.2	-1.0
HCY				eSg	Sg	16 55 35.3	+0.6
NKY	**Niksic**	0.87	91	⇑iPg	Pg	16 55 29.1	-1.8
NKY				eSg	Sg	16 55 43.7	+1.2
UPM	**Unac-Piva**	0.89	65	⇑iPg	Pg	16 55 29.1	-2.1
UPM				eSg	Sg	16 55 43.6	+0.6
BUM	**Brajici-Budva**	0.96	123	⇑iPg	Pg	16 55 31.3	-1.4
BUM				eSg	Sg	16 55 46.8	+1.2
TTG	**Podgorica**	1.14	110	⇑iPg	Pg	16 55 33.7	-2.6
TTG				eSg	Sg	16 55 52.8	+1.3
PLE	**Pljevlja**	1.26	66	⇑iPg	Pg	16 55 36.7	-2.0
PLE				eSg	Sg	16 55 56.0	+0.5
ULC	**Ulcinj**	1.37	129	⇑iPg	Pg	16 55 38.6	-2.4
ULC				eSg	Sg	16 56 00.2	+1.0
IVA	**Berane**	1.53	88	⇑iPg	Pg	16 55 42.0	-2.2
IVA				eSg	Sg	16 56 06.2	+1.6
NVSS	**Nova Varos 2**	1.54	63	⇓iPn	Pn	16 55 42.9	+0.9
NVSS				Sn	Sn	16 56 04.4	+1.7
BBLS	**Bajina Basta -**	1.56	48	i Pn	Pn	16 55 43.8	+1.5
BBLS				Sn	Sn	16 56 06.7	+3.5
PVY	**Plav**	1.61	98	⇓iPn	Pn	16 55 43.3	+0.3
PVY				eSn	Sn	16 56 08.7	+4.2
BCI	**Bajram Curri**	1.73	105	i Pn	Pn	16 55 46.0	+1.3
BCI				i Sn	Sn	16 56 14.0	+6.5
BCI	**Bajram Curri**	1.73	105	ePn	Pn	16 55 46.0	+1.3
PUK	**Puka**	1.73	116	i Pn	Pn	16 55 46.9	+2.2
PUK				i Sn	Sn	16 56 14.8	+7.2
PUK	**Puka**	1.73	116	ePn	Pn	16 55 46.9	+2.2
FGMS	**Monte Sant'Ang**	1.78	231	Pn	Pn	16 55 45.8	+0.4
FGMS				Sn	Sn	16 56 10.8	+1.9
	254nm,0.5s						
MS1	**Monte Sant'Ang**	1.79	232	ePn	Pn	16 55 45.6	0.0
BAI	**Bari**	1.86	202	ePn	Pn	16 55 46.9	+0.3
BRT	**Bari-Castellan**	2.01	193	Pn	Pn	16 55 47.8	-0.9
	90nm,0.2s						
RGNG	**Rignano Grg**	2.02	236	Pn	Pn	16 55 48.6	-0.2
DIVS	**Divcibare**	2.03	51	⇑iPn	Pn	16 55 49.4	+0.4
DIVS				Sn	Sn	16 56 14.1	-1.1
PE1	**Pezze di Greco**	2.05	188	ePn	Pn	16 55 48.7	-0.6
CDT	**Castel del Mon**	2.09	214	ePn	Pn	16 55 49.2	-0.7
NOCI	**Noci**	2.12	196	Pn	Pn	16 55 49.2	-1.1
NOCI				Sn	Sn	16 56 15.7	-1.7
	501nm,0.6s						
AMUR	**Altamura**	2.12	206	Pn	Pn	16 55 49.2	-1.2
AMUR				Sn	Sn	16 56 15.8	-1.8
	85nm,0.5s						
TIR	**Tirane**	2.13	133	Pn	Pn	16 55 51.0	+0.6
	574nm,0.9s						
FG2	**Serracapriola**	2.22	243	Pn	Pn	16 55 54.6	+2.9
	853nm,1.0s						
GRUS	**Gruza**	2.37	62	i Pn	Pn	16 55 53.8	0.0
GRUS				S	Sn	16 56 25.2	+1.5
FG4	**Candela**	2.41	226	Pn	Pn	16 55 57.0	+2.5
CIGN	**Sant'Elia a Pi**	2.46	242	Pn	Pn	16 55 56.4	+1.2
CAFE	**Carife**	2.64	228	Pn	Pn	16 55 59.7	+2.0
	234nm,0.8s						
TRIV	**Trivento**	2.65	247	Pn	Pn	16 56 00.6	+2.8
MRLC	**Muro Lucano**	2.71	221	Pn	Pn	16 55 58.2	-0.5
BSSO	**Busso**	2.72	243	Pn	Pn	16 56 00.2	+1.4
SACR	**S. Croce Del S**	2.72	239	Pn	Pn	16 55 59.5	+0.6
	112nm,0.8s						
NVLJ	**Novalja**	2.75	310	i Pn	Pn	16 55 59.6	+0.4
NVLJ				i Sn	Sn	16 56 35.5	+2.1
BEO	**Belgrade**	2.76	43	⇓iPn	Pn	16 55 56.0	-3.4
CII	**Carovilli**	2.83	248	Pn	Pn	16 56 02.3	+1.8
	123nm,0.6s						
MCRV	**Calabrutti - M**	2.85	225	Pn	Pn	16 56 01.3	+0.6
	97nm,0.5s						
CSSN	**Cassano Irpino**	2.87	228	Pn	Pn	16 56 00.8	-0.2
	24nm,0.3s						
SVIS	**Svilajnac**	2.88	58	⇑iPn	Pn	16 56 01.1	-0.1
MIDA	**Miranda**	2.90	247	Pn	Pn	16 56 02.7	+1.3
	106nm,0.7s						
SGG	**Gregorio Mates**	2.94	242	Pn	Pn	16 56 03.2	+1.2
SLCN	**Sala Consilina**	2.94	215	Pn	Pn	16 56 01.3	-0.7
	57nm,0.6s						
SGO	**Sicignano**	2.94	220	Pn	Pn	16 56 01.2	-0.9
	14nm,0.2s						
BARS	**Barje**	2.95	89	⇓iPn	Pn	16 56 02.4	+0.2
BARS				Sn	Sn	16 56 35.2	-3.3
VCEL	**Villa Celiera**	2.96	263	Pn	Pn	16 56 03.8	+1.4
CDRU	**Civita di Ruta**	3.00	220	Pn	Pn	16 56 02.6	-0.3
	45nm,0.5s						
INTR	**Introdacqua**	3.01	255	Pn	Pn	16 56 04.1	+1.1
	275nm,0.7s						
VAGA	**Valle Agricola**	3.02	243	Pn	Pn	16 56 04.0	+0.9
RHK3	**Tenkes**	3.07	6	⇑iP	Pn	16 56 03.8	-0.1
TERO	**Teramo**	3.11	268	Pn	Pn	16 56 04.2	-0.2
	88nm,0.7s						
CMPR	**Campora**	3.14	218	Pn	Pn	16 56 03.5	-1.4
	71nm,0.6s						
FAGN	**Fagnano**	3.18	261	Pn	Pn	16 56 07.9	+2.5
	185nm,0.6s						
MGR	**Morigerati**	3.18	213	Pn	Pn	16 56 05.7	+0.2
	26nm,0.6s						
BOLS	**Boljevac**	3.19	70	ePn	Pn	16 56 08.5	+3.0
BOLS				Sn	Sn	16 56 51.4	+6.9
RFI	**Roccamonfina**	3.24	243	Pn	Pn	16 56 06.9	+0.7
	27nm,1.3s						
BOJS	**Bojanci**	3.25	326	ePn	Pn	16 56 07.2	+0.8
BOJS				eSn	Sn	16 56 48.8	+2.8
VVLD	**Villa Vallelon**	3.25	254	Pn	Pn	16 56 07.4	+0.9
	176nm,0.8s						
AQU	**L'Aquila**	3.29	263	ePn	Pn	16 56 05.8	-1.3
AQU	**L'Aquila**	3.29	263	ePn	Pn	16 56 05.8	-1.2
TDS	**Terranova Siba**	3.36	200	Pn	Pn	16 56 06.8	-1.2
	45nm,0.6s						
PKSM	**Moragy**	3.43	10	⇓iP	Pn	16 56 08.1	-0.9
PKSM				eS	Sn	16 56 48.1	-2.6
ISOR	**Termini**	3.44	230	Pn	Pn	16 56 08.1	-1.0
NRCA	**Norcia**	3.46	272	Pn	Pn	16 56 09.0	-0.4
	16nm,0.5s						
LNSS	**Leonessa**	3.52	268	Pn	Pn	16 56 10.0	-0.3
	96nm,0.7s						
SNTG	**Esanatoglia**	3.60	278	Pn	Pn	16 56 11.1	-0.3
GIUL	**Giuliano Di Ro**	3.62	251	Pn	Pn	16 56 11.6	-0.1
	36nm,0.8s						
ARV	**Arcevia**	3.63	282	Pn	Pn	16 56 13.4	+1.6
	15nm,0.6s						
TIP	**Timpagrande**	3.74	193	ePn	Pn	16 56 11.7	-1.6
TIP	**Timpagrande**	3.74	193	ePn	Pn	16 56 11.7	-1.6
FSSB	**Fossombrone**	3.78	285	Pn	Pn	16 56 13.9	0.0
KOGS	**Kog**	3.78	343	ePn	Pn	16 56 14.1	+0.1
KOGS				eSn	Sn	16 56 59.8	+0.1
PDKS	**Podkum**	3.81	329	i Pn	Pn	16 56 14.6	+0.3
PDKS				eSn	Sn	16 57 01.6	+1.4
MNS	**Montasola**	3.81	265	Pn	Pn	16 56 14.1	-0.4
	21nm,0.4s						
LJU	**Ljubljana**	3.98	325	ePn	Pn	16 56 17.6	+0.8
LJU				eSn	Sn	16 57 21.0	+16
VTS	**Vitosha**	3.98	92	P	Pn	16 56 17.0	+0.2
KKB	**Krupnik**	4.02	102	P	Pn	16 56 18.5	+1.1
VOY	**Vojsko**	4.26	320	ePn	Pn	16 56 20.7	0.0
VOY				e		16 56 33.6	
VOY				eSn	Sn	16 57 12.4	+0.8
VOY				e		16 57 31.7	
VOY	**Vojsko**	4.26	320	ePn	Pn	16 56 20.7	0.0
VOY				eSn	Sn	16 57 12.4	+0.8
PERS	**Pernice**	4.26	334	ePn	Pn	16 56 20.6	-0.2
PERS				eSn	Sn	16 57 10.4	-1.3
PERS	**Pernice**	4.26	334	ePn	Pn	16 56 20.5	-0.3
PERS				eSn	Sn	16 57 10.4	-1.3
OBKA	**Obir**	4.35	329	⇑iPn	Pn	16 56 22.3	+0.2
	comp=Z,2.5nm,0.2s						
OBKA	**Obir**	4.35	329	⇑iPg	Pg	16 56 36.7	-3.7
OBKA	**Obir**	4.35	329	⇑iSn	Sn	16 57 15.1	+1.1
	comp=N,21nm,0.5s						
OBKA	**Obir**	4.35	329	⇓iSg	Sg	16 57 41.0	+2.6
	comp=N,86nm,0.7s						
TOLF	**Tolfa**	4.37	262	Pn	Pn	16 56 21.8	-0.5
	21nm,0.6s						
SFI	**Santa Sofia**	4.48	286	Pn	Pn	16 56 26.3	+2.4
	23nm,0.6s						
PLAC	**Placanica**	4.50	194	Pn	Pn	16 56 22.9	-1.3
	12nm,0.5s						
MMB	**Musomiste**	4.56	104	eP	Pn	16 56 26.5	+1.4
PKSG		4.58	5	eP	Pn	16 56 24.4	-0.9
ROBS	**Robic**	4.59	319	i Pn	Pn	16 56 25.0	-0.5
ROBS				i Sn	Sn	16 57 19.1	-1.1
PGB	**Panagyurishte**	4.69	91	eP	Pn	16 56 30.0	+3.1
ARSA	**Arzberg**	4.71	341	⇑iPn	Pn	16 56 27.2	+0.1
	comp=Z,21nm,0.4s,SNR=18						
ARSA	**Arzberg**	4.71	341	⇓iSn	Sn	16 57 20.7	-2.4
	comp=Z,24nm,0.7s						
ARSA	**Arzberg**	4.71	341	Pn	Pn	16 56 27.2	+0.1
	18nm,1.0s						
ARSA				Sn	Sn	16 57 20.7	-2.3
SOI	**Samo**	4.94	196	Pn	Pn	16 56 28.9	-1.5
	30nm,0.8s						
FVI	**Forni Avoltri**	5.20	318	Pn	Pn	16 56 35.3	+1.2
PSZ	**Piszkesteto**	5.29	15	ePn	Pn	16 56 32.8	-2.7
	9.1nm,0.5s						
PSZ	**Piszkesteto**	5.29	15	eP	Pn	16 56 32.8	-2.6
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
PSZ	**Piszkesteto**	5.29	15	ePn	Pn	16 56 32.8	-2.6
	comp=Z,9.1nm,0.5s						
ZST	**Bratislava**	5.39	355	ePN	Pn	16 56 36.0	-0.7
PVL	**Pavlikeni**	5.53	83	eP	Pn	16 56 39.0	+0.3
MOA	**Molln**	5.61	335	⇑iPn	Pn	16 56 41.3	+1.4
MOA	**Molln**	5.61	335	⇑iSn	Sn	16 57 46.9	+1.3
VYHS	**Vyhne**	5.71	7	ePN	Pn	16 56 41.4	+0.1
VYHS				eSN	Sn	16 57 46.6	-1.6
VOIR		5.82	61	⇓P	Pn	16 56 45.0	+2.1
KECS	**Kecovo**	5.95	17	ePN	Pn	16 56 46.0	+1.3
WTTA	**Wattenberg**	6.23	317	⇑iPn	Pn	16 56 50.6	+2.0
	comp=Z,6.1nm,0.3s						
WTTA	**Wattenberg**	6.23	317	⇓iSn	Sn	16 58 01.6	+0.4
	comp=Z,7.1nm,0.4s						
WTTA	**Wattenberg**	6.23	317	⇑iSg	Sg	16 58 35.3	-5.5
	comp=Z,25nm,0.6s						
WTTA	**Wattenberg**	6.23	317	Pn	Pn	16 56 50.6	+2.0
WTTA				Sg	Sg	16 58 35.3	-5.5
WATA	**Walderalm**	6.30	318	⇓iPn	Pn	16 56 52.3	+2.6
WATA	**Walderalm**	6.30	318	⇑iSn	Sn	16 58 06.9	+3.7
WATA	**Walderalm**	6.30	318	Pn	Pn	16 56 52.3	+2.6
WATA				Sn	Sn	16 58 06.9	+3.8
SQTA	**Sankt Quirin**	6.41	315	⇑iPn	Pn	16 56 50.8	-0.4
	comp=Z,3.8nm,0.3s						
SQTA	**Sankt Quirin**	6.41	315	⇑iSn	Sn	16 58 07.7	+1.8
	comp=Z,12nm,0.5s						
MLR	**Muntele Rosu**	6.42	63	Pn	Pn	16 56 49.8	-1.5
	baz=233,slow=15,SNR=3.7						
PGF	**Pioggiola**	6.50	270	ePn	Pn	16 56 50.6	-1.9
MOTA	**Moosalm**	6.55	316	⇓iPn	Pn	16 56 52.8	-0.4
MOTA	**Moosalm**	6.55	316	⇓iSn	Sn	16 58 07.1	-2.2
	comp=Z,8.3nm,0.5s						
MOTA	**Moosalm**	6.55	316	⇑iSg	Sg	16 58 47.6	-4.0
	comp=Z,16nm,0.6s						
CRVS	**Cervenica-Dubn**	6.58	21	ePN	Pn	16 56 52.4	-1.2
GERES	**GERESS Array B**	6.66	336	Pn	Pn	16 56 53.5	-1.2
	comp=Z,0.9nm,0.3s,baz=158,slow=14,SNR=14						
GERES				Sn	Sn	16 58 09.4	-2.7
	comp=Z,1.4nm,0.3s,baz=147,slow=23,SNR=9.0						
KOLS	**Kolonicke sedl**	6.85	25	ePN	Pn	16 56 56.3	-1.0
DAVOX	**Davos**	6.88	308	Pn	Pn	16 56 57.3	-0.6
	comp=Z,1.0nm,0.3s,baz=106,slow=18,SNR=7.8						
DAVOX				Sn	Sn	16 58 16.6	-1.0
	comp=Z,0.9nm,0.3s,baz=156,slow=20,SNR=2.7						
KHC	**Kasperske Hory**	6.96	336	ePN	Pn	16 56 57.3	-1.5
KHC				x	x	16 57 08.0	
KHC				eSN	Sn	16 58 13.8	-5.6
KHC				x	x	16 58 20.0	
KHC	**Kasperske Hory**	6.96	336	ePn	Pn	16 56 57.3	-1.5
KHC				e		16 57 08.0	
KHC				eSn	Sn	16 58 13.8	-5.6
KHC				e		16 58 20.0	
KHC	**Kasperske Hory**	6.96	336	eP	Pn	16 56 57.3	-1.5
KHC				eS	Sn	16 58 20.0	+0.6
STHS	**Stebnicka Huta**	7.00	19	ePN	Pn	16 57 00.5	+1.0
DAVA	**Damuels**	7.17	311	⇑iPn	Pn	16 57 03.5	+1.7
	comp=Z,3.1nm,0.4s						
DAVA	**Damuels**	7.17	311	⇑iSn	Sn	16 58 24.1	-0.6
	comp=Z,8.9nm,0.5s						
DAVA	**Damuels**	7.17	311	⇑iSg	Sg	16 59 08.0	-4.1
	comp=Z,17nm,0.6s						
PRU	**Pruhonice**	7.51	344	eSN	Sn	16 58 27.3	-5.9
DPC	**Dobruska-Polom**	7.59	353	eSN	Sn	16 58 27.9	-7.4
SBF	**Sospel**	7.64	281	ePn	Pn	16 57 05.9	-2.5
SBF				eSn	Sn	16 58 27.9	-8.5
	comp=Z,8.2nm,0.4s						
TIRR	**Tirgusor**	7.86	74	⇑P	Pn	16 57 11.9	+0.4
TIRR	**Tirgusor**	7.86	74	ePn	Pn	16 57 10.8	-0.6
TIRR	**Tirgusor**	7.86	74	eP	Pn	16 57 10.9	-0.6
FRF	**La Foret Royal**	8.19	279	ePn	P	16 57 11.9	-4.3
MBDF	**Montbardon**	8.21	287	ePn	P	16 57 13.0	-3.4
MBDF				eSn	Sn	16 58 40.5	-10
	comp=Z,9.7nm,0.6s						
NKC	**Novy Kostel**	8.27	335	eSN	Sn	16 58 44.7	-7.6
LPG	**La Plagne**	8.39	292	ePn	P	16 57 16.0	-2.9
LPG				eSn	Sn	16 58 44.1	-11
	comp=Z,8.7nm,0.5s						
ORIF	**Oris-en-Rattie**	8.87	288	ePn	P	16 57 21.2	-4.4
CABF	**La Chapelle**	9.16	298	ePn	P	16 57 25.9	-3.7
CDF	**Champ du Feu**	9.25	311	ePn	P	16 57 26.4	-4.4
VIVF	**Saint-Julien-l**	9.71	287	ePn	P	16 57 32.2	-4.9
MEZF	**Maizieres J'vi**	10.57	307	ePn	P	16 57 44.0	-5.0
LOR	**Lormes**	10.82	299	eSn	S	16 59 42.4	-13
	comp=Z,7.8nm,0.6s						
OBN	**Obninsk**	17.32	38	⇑eP	P	16 59 21.3	+3.6
OBN				pmax	pmax		
	comp=Z,12nm,0.8s						
KONO	**Kongsberg**	17.58	346	P	P	16 59 20.2	-0.7
	comp=Z,17nm,1.0s						
KONO	**Kongsberg**	17.58	346	P	P	16 59 20.2	-0.7
KONO				pmax	pmax		
	comp=Z,17nm,1.0s						
KONO	**Kongsberg**	17.58	346	P	P	16 59 20.2	-0.7
	comp=Z,17nm,1.0s						
FINES	**FINESS Array B**	19.29	12	P	P	16 59 39.7	-2.1
	comp=Z,0.3nm,0.3s,baz=180,slow=9.5,SNR=7.1						
FINES	**FINESS Array B**	19.29	12	P	P	16 59 39.7	-2.1
MKAR	**Makanchi Array**	44.77	62	P	P	17 03 26.8	-3.0
	comp=Z,0.3nm,0.6s,mb3.3,baz=290,slow=8.1,SNR=3.5						
SONM	**Songino Array**	59.15	52	P	P	17 05 14.3	-3.3
	comp=Z,0.5nm,0.8s,mb3.6,baz=289,slow=7.7,SNR=5.9						

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*ATH **10** 17:29:04.3, 38.19N×26.60E, h30^{km}, MD3.4/3*

*ISK **10** 17:29:05.2, 38.15N×26.72E, h3^{km}, MD3.2*

*CSEM **10** 17:29:05.8±0.2, 38.13N×26.70E, h8^{km}, MD3.2, Error ellipse: s-maj=4.7km s-min=2.2km az=80.0*

ISC 10 17:29:04.8±0.8**, 38.22N**±0.02×**26.62E**±0.05**, h1**^{km}±6^{km}**, n24, σ1^{s}00**/33**, 1C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.14	352	i P	Pg	17 29 06.5	-1.2
URLA				i S	Sg	17 29 09.8	+0.2
SMG	**Samos**	0.54	161	⇑iP	Pg	17 29 15.3	-0.2
SMG				eS	Sg	17 29 23.9	+1.3
IZM	**Izmir**	0.54	70	i PG	Pg	17 29 15.6	+0.1
IZM				i SG	Sg	17 29 23.8	+1.1
KDAG	**Bornova**	0.54	70	i P	Pg	17 29 14.5	-1.1
KDAG				i S	Sg	17 29 22.6	-0.2
PRK	**Paraskevi**	1.06	345	⇓iP	Pb	17 29 24.9	-0.8
PRK				eS	Sb	17 29 40.8	+0.8
AYVA	**Ayvalik**	1.09	3	i P	Pb	17 29 25.0	-1.2
AYVA				i S	Sb	17 29 39.1	-1.7
AYDN	**Tasoluk**	1.14	119	i P	Pb	17 29 27.5	+0.5
AYDN				i S	Sb	17 29 41.9	-0.3
AKS	**Akhisar**	1.15	54	i PN	Pn	17 29 26.6	-1.3
BODT	**Bodrum**	1.28	154	i PN	Pn	17 29 27.8	-2.0
MLSB	**Milas**	1.30	135	PN	Pn	17 29 29.1	-1.0
BDRM	**Kayabasi**	1.32	150	i P	Pb	17 29 29.9	-0.2
BDRM				i S	Sb	17 29 47.9	+0.4
APE	**Apeiranthos**	1.44	217	PN	Pn	17 29 33.0	+0.9
APE	**Apeiranthos**	1.44	217	ePn	Pn	17 29 33.0	+0.9
MANT	**Manisa**	1.55	79	i P	Pn	17 29 34.7	+1.0
MANT				i S	Sb	17 29 53.6	-0.5
EZN	**Ezine**	1.62	352	ePN	Pn	17 29 36.7	+1.9
DAT	**Datca**	1.67	153	ePN	Pn	17 29 35.5	+0.1
YER	**Yerkesik**	1.71	129	ePN	Pn	17 29 35.5	-0.4
BALB	**Balikesir**	1.73	34	ePN	Pn	17 29 37.5	+1.2
DENT	**Denizli**	1.96	103	ePN	Pn	17 29 39.5	-0.1
DST	**Dursunbey**	2.09	48	ePN	Pn	17 29 42.9	+1.4
DALT	**Dalyan (Mudla)**	2.16	131	ePN	Pn	17 29 41.9	-0.5
EDC	**Edincik**	2.33	24	ePN	Pn	17 29 46.3	+1.3
FETY	**Fethiye**	2.52	128	ePN	Pn	17 29 46.8	-0.8
ORLT	**Orhaneli**	2.54	43	ePN	Pn	17 29 49.3	+1.4

MAN 10 17:46:24.8, 13.72N×120.58E, h106^{km}, mb4.0, ML2.8, MS2.5, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	0.33	273	eP	P	17 46 42.5	+2.1
LUBP				eS	S	17 46 54.9	+2.9
PGP	**Puerto Galera**	0.42	121	eP	P	17 46 42.1	+1.3
PGP				eS	S	17 46 46.8	-6.0
BOAC	**Boac**	1.25	102	eP	P	17 46 49.2	+0.3
SJMP	**San Jose**	1.35	157	eP	P	17 46 50.5	+0.4
SJMP				eS	S	17 47 09.3	+0.4

POLP	**Polilio Island**	**1.66**	**52**	*e*P	P	17 46 54.8	+1.1
BUSP	**Coron**	**1.74**	**192**	*e*P	P	17 46 54.9	+0.1
BUSP				*e*S	S	17 47 17.9	+0.7
OTRP	**Odiongan**	**1.94**	**134**	*e*P	P	17 46 56.8	-0.5
SCZP	**Santa Cruz**	**2.15**	**342**	*e*P	P	17 47 00.5	+0.4
SCZP				*e*S	S	17 47 26.2	-0.2
BOLP	**Bolinao**	**2.73**	**346**	*e*P	P	17 47 08.3	+0.4
BOLP				*e*S	S	17 47 39.7	-0.7
ENPP	**El Nido**	**2.74**	**205**	*e*P	P	17 47 08.4	+0.3
ENPP				*e*S	S	17 47 39.6	-1.2
CUYO	**Cuyo Island**	**2.88**	**171**	*e*P	P	17 47 09.3	-0.7
CUYO				*e*S	S	17 47 43.6	-0.5
GUIM	**Jordan**	**3.65**	**147**	*e*P	P	17 47 20.8	+0.3

*IDC **10** 17:49:12.7±11.0, 20.34S×177.96W, h588^{km}±118^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.2/12, mbtmp4.4/3, Error ellipse: s-maj=128.0km s-min=57.4km az=136.0*

ISC 10 17:49:04.3±1.1**, 20.2S**±0.2×**177.9W**±0.2**, h500**^{km}**, n13, σ0^{s}31**/10**, mb4.2**/5**, 3C-2D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.05**	**244**	P	**P**	**17 55 41.1**	**+0.7**
	7.2nm,0.8s,mb4.1,baz=86,slow=8.4,SNR=9.5						
ASPA	**Alice Springs**	**44.73**	**256**	*e*P	**P**	**17 56 34.0**	**+0.1**
WB2	**Warramunga Arr**	**44.77**	**262**	⇓*i*P	**P**	**17 56 34.0**	**-0.3**
WRA	**Warramunga Arr**	**44.78**	**262**	P	**P**	**17 56 34.0**	**-0.4**
	9.8nm,0.6s,mb4.4,baz=98,slow=7.9,SNR=192						
KAKA	**Kakadu**	**48.11**	**271**	⇓*i*P	**P**	**17 57 17.8**	**+18**
	3.2nm,0.2s,mb4.3						
FITZ	**Fitzroy Crossi**	**53.21**	**262**	*e*P	**P**	**17 57 37.3**	**-0.1**
	7.6nm,0.5s,mb4.3						
ILAR	**Eielson Array**	**87.99**	**13**	P	**P**	**18 01 01.1**	**+0.2**
	0.9nm,0.7s,mb3.6,baz=225,slow=10,SNR=7.2						
VNA3	**Neumayer Olymp**	**88.43**	**176**	⇑*i*	**P**	**18 01 02.7**	**-0.2**
VNA2	**Neumayer--Watz**	**88.88**	**177**	⇑*i*	**P**	**18 01 04.8**	**-0.2**
VNA1	**Neumayer--Stat**	**89.10**	**177**	⇑*i*	**P**	**18 01 06.2**	**+0.2**
AKASG	**Malin Array Be**	**142.82**	**331**	PKP	PKPdf	18 07 37.0	-2.8
	0.8nm,0.4s,baz=44,slow=4.9,SNR=8.3						
BRTR	**Keskin Array B**	**146.74**	**313**	PKPbc	PKPbc	18 07 50.3	+1.4
	0.7nm,0.6s,baz=90,slow=4.3,SNR=4.0						
GERES	**GERESS Array B**	**149.95**	**345**	PKPbc	PKPdf	18 07 58.0	+6.3
	0.2nm,0.4s,slow=2.7,SNR=5.5						

*NEIC **10** 17:51:38.1, 40.98S×172.89E, h203^{km}, MG3.7(WEL), After WEL.*

WEL 10 17:51:40.0±0.3**, 40.99S×172.95E, h185**^{km}±2^{km}**, ML3.5**/6**, 2C, Error ellipse: s-maj=3.0km s-min=2.4km az=0.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.36**	**297**	P	P	17 52 04.7	-0.6
QRZ	**Quartz Range**	**0.36**	**297**	⇑PN	P	17 52 04.7	-0.6
QRZ				SN	S	17 52 22.8	-1.9
NNZ	**Nelson**	**0.40**	**125**	P	P	17 52 05.1	-0.3
NNZ	**Nelson**	**0.40**	**125**	⇑PN	P	17 52 05.1	-0.3
NNZ				SN	S	17 52 23.8	-1.1
DUWZ	**D'Urville Isla**	**0.76**	**76**	PN	P	17 52 06.8	-0.2
DUWZ				SN	S	17 52 26.5	-1.3
THZ	**Tophouse**	**0.77**	**182**	P	P	17 52 06.9	-0.1
THZ				S	S	17 52 27.0	-0.9
THZ	**Tophouse**	**0.77**	**182**	PN	P	17 52 06.9	-0.1
THZ				SN	S	17 52 26.5	-1.4
TUWZ	**Tuamarina**	**0.87**	**121**	PN	P	17 52 07.7	+0.1
TUWZ				SN	S	17 52 27.9	-1.0
BSWZ	**Blackbirch Sta**	**1.01**	**136**	P	P	17 52 08.7	+0.3
BSWZ	**Blackbirch Sta**	**1.01**	**136**	PN	P	17 52 08.7	+0.2
BSWZ				SN	S	17 52 30.1	-0.3
TCW	**Tory Channel**	**1.03**	**103**	P	P	17 52 08.6	0.0
TCW	**Tory Channel**	**1.03**	**103**	PN	P	17 52 08.6	0.0
TCW				SN	S	17 52 29.0	-1.7
DSZ	**Denniston Nort**	**1.15**	**228**	P	P	17 52 08.7	-0.9
DSZ	**Denniston Nort**	**1.15**	**228**	PN	P	17 52 08.7	-0.9
DSZ				SN	S	17 52 29.6	-2.9
MRW	**Makara Radio**	**1.35**	**101**	P	P	17 52 10.9	-0.5
MRW	**Makara Radio**	**1.35**	**101**	PN	P	17 52 10.9	-0.5
SNZO	**South Karori**	**1.36**	**104**	P	P	17 52 11.0	-0.6
SNZO	**South Karori**	**1.36**	**104**	PN	P	17 52 11.0	-0.6
WEL	**Wellington**	**1.41**	**103**	P	P	17 52 11.4	-0.5
WEL	**Wellington**	**1.41**	**103**	PN	P	17 52 11.4	-0.5
KHZ	**Kahutara**	**1.49**	**163**	P	P	17 52 12.1	-0.6
KHZ	**Kahutara**	**1.49**	**163**	PN	P	17 52 12.1	-0.7
KIW	**Kapiti Island**	**1.49**	**86**	P	P	17 52 12.2	-0.5
KIW	**Kapiti Island**	**1.49**	**86**	PN	P	17 52 12.2	-0.6
CAW	**Cannon Point**	**1.61**	**95**	P	P	17 52 13.2	-0.6
CAW	**Cannon Point**	**1.61**	**95**	PN	P	17 52 13.2	-0.6
MSWZ	**Moikau Station**	**1.79**	**104**	P	P	17 52 14.9	-0.7
MSWZ	**Moikau Station**	**1.79**	**104**	PN	P	17 52 14.9	-0.7
LTZ	**Lake Taylor**	**1.86**	**196**	*e*P	P	17 52 15.7	-0.6
LTZ	**Lake Taylor**	**1.86**	**196**	PN	P	17 52 15.7	-0.7
MTW	**Mount Morrison**	**1.94**	**96**	P	P	17 52 16.5	-0.7
MTW	**Mount Morrison**	**1.94**	**96**	PN	P	17 52 16.5	-0.7
WAZ	**Wanganui**	**1.99**	**52**	*e*P	P	17 52 17.3	-0.4
WAZ	**Wanganui**	**1.99**	**52**	PN	P	17 52 17.3	-0.3
MRZ	**Mangatainoka R**	**2.02**	**82**	P	P	17 52 17.1	-1.0
MRZ	**Mangatainoka R**	**2.02**	**82**	PN	P	17 52 17.1	-0.9
TSZ	**Takapari Road**	**2.48**	**69**	*e*P	P	17 52 22.2	-1.1
TSZ	**Takapari Road**	**2.48**	**69**	PN	P	17 52 22.2	-1.1
PKVZ	**Pokaka**	**2.50**	**48**	PN	P	17 52 22.0	-1.6
BFZ	**Birch Farm**	**2.52**	**84**	*e*P	P	17 52 22.8	-1.0
BFZ	**Birch Farm**	**2.52**	**84**	PN	P	17 52 22.8	-1.0
TRVZ	**Turoa**	**2.61**	**51**	PN	P	17 52 23.0	-1.9
WNVZ	**Wahianoa**	**2.62**	**52**	P	P	17 52 23.3	-1.7
WNVZ	**Wahianoa**	**2.62**	**52**	PN	P	17 52 23.3	-1.6
WVZ	**Waitaha Valley**	**2.66**	**218**	*e*P	P	17 52 23.4	-1.9
WVZ	**Waitaha Valley**	**2.66**	**218**	PN	P	17 52 23.4	-1.9
WPVZ	**Whakapapa**	**2.67**	**49**	P	P	17 52 23.7	-1.9
WPVZ	**Whakapapa**	**2.67**	**49**	PN	P	17 52 23.7	-1.9
CNZ	**Chateau**	**2.68**	**49**	P	P	17 52 23.6	-2.0
TUVZ	**Tukino**	**2.70**	**51**	P	P	17 52 24.3	-1.5
MQZ	**McQueen's Vall**	**2.72**	**185**	*e*P	P	17 52 23.7	-2.5
FOZ	**Fox Glacier**	**3.53**	**222**	*e*P	P	17 52 32.1	-3.9
JCZ	**Jackson Bay**	**4.37**	**224**	*e*P	P	17 52 43.6	-3.1
ODZ	**Otahua Downs**	**4.39**	**202**	*e*P	P	17 52 44.7	-2.2

*THE **10** 18:06:08.5, 40.52N×21.69E, h5^{km}, ML2.8*

*CSEM **10** 18:06:08.3±0.1, 40.53N×21.67E, h10^{km}, ML2.8, Error ellipse: s-maj=1.8km s-min=1.4km az=23.0*

*TIR **10** 18:06:10.6, 40.83N×21.60E, h26^{km}*

ISC 10 18:06:07.3±0.6**, 40.47N**±0.04×**21.70E**±0.04**, h4**^{km}±8^{km}**, n20, σ1^{s}07**/27**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	**Florina**	**0.40**	**322**	*e*Pg	**Pg**	**18 06 15.1**	**-0.3**
BIA	**Bitola**	**0.62**	**333**	*i* Pg	**Pg**	**18 06 18.3**	**-1.4**
	comp=Z,0.0nm,0.2s						
BIA				*i* Sg	**Sg**	**18 06 27.4**	**-0.7**
LIT	**Litokhoron**	**0.71**	**121**	*e*Pg	**Pg**	**18 06 22.7**	**+1.2**
KBN	**Korca**	**0.71**	**283**	*i* Pg	**Pg**	**18 06 24.6**	**+3.1**
KBN				*i* Sg	**Sg**	**18 06 38.0**	**+6.9**
GRG	**Griva**	**0.72**	**47**	*e*Pg	**Pg**	**18 06 21.6**	**-0.2**
MEV	**Metsovon**	**0.77**	**208**	*e*Pg	**Pg**	**18 06 23.7**	**+1.0**
OHR	**Ohrid**	**0.94**	**314**	*i* Pg	**Pg**	**18 06 25.2**	**-0.9**
OHR				*i* Sg	**Sg**	**18 06 40.0**	**+1.4**
THE	**Thessaloniki**	**0.98**	**80**	*e*Pg	**Pg**	**18 06 27.0**	**+0.1**
THE				*e*Sg	**Sg**	**18 06 40.6**	**+0.7**
VAY	**Valandovo**	**1.08**	**37**	*e*Pg	**Pg**	**18 06 28.1**	**-0.8**
VAY				*i* Sg	**Sg**	**18 06 44.5**	**+1.2**
KNT	**Kendrikon**	**1.15**	**52**	*e*Pg	**Pg**	**18 06 29.3**	**-0.9**
SOH	**Sokhos**	**1.31**	**74**	*e*Pg	**Pg**	**18 06 32.7**	**-0.7**
SOH				*e*Sg	**Sg**	**18 06 51.0**	**+0.2**
SOH	**Sokhos**	**1.31**	**74**	*e*Pg	**Pg**	**18 06 32.7**	**-0.7**
SOH				*e*Sg	**Sg**	**18 06 51.0**	**+0.1**
SKO	**Skopje**	**1.52**	**353**	*e*Pn	**Pn**	**18 06 36.5**	**+1.1**
AGG	**Agios Georgios**	**1.52**	**161**	*e*Pg	**Pg**	**18 06 36.4**	**-1.3**
XOR	**Xorichti**	**1.59**	**133**	*e*Pb	**Pb**	**18 06 36.7**	**-0.2**
PAIG	**Paliouri**	**1.61**	**109**	*e*Pb	**Pb**	**18 06 36.5**	**-0.7**
KKB	**Krupnik**	**1.75**	**36**	*e*P	**Pn**	**18 06 38.0**	**-0.6**
MMB	**Musomiste**	**1.90**	**53**	*e*P	**Pn**	**18 06 44.0**	**+3.1**
VTS	**Vitosha**	**2.41**	**28**	*e*P	**Pn**	**18 06 49.0**	**+0.9**
DIVS	**Divcibare**	**3.84**	**341**	*e*Pn	**Pn**	**18 07 07.0**	**-1.5**

*NEIC **10** 18:14:22.0, 37.17S×177.48E, h12^{km}, ML4.5(WEL), After WEL.*

NEIC Felt at Opotiki.

WEL 10 18:14:21.8±0.2**, 37.21S×177.47E, h5**^{km}**, ML4.3**/26**, Error ellipse: s-maj=2.2km s-min=1.2km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.39**	**215**	PG	Pg	18 14 29.9	+0.3
MXZ	**Matakaoa Point**	**0.75**	**118**	P	Pg	18 14 35.9	-0.9
MXZ				S	Sg	18 14 46.5	-0.4
MXZ	**Matakaoa Point**	**0.75**	**118**	P*	Pb	18 14 35.9	-1.1
MXZ				S*	Sb	18 14 46.5	-0.8
MYRZ	**Mayor Island**	**0.98**	**265**	P*	Pb	18 14 39.7	-1.3
MYRZ				S*	Sb	18 14 51.9	-2.2
MARZ	**Manawahe**	**1.00**	**219**	P	Pb	18 14 39.7	-1.5
MARZ	**Manawahe**	**1.00**	**219**	P*	Pb	18 14 39.7	-1.6
MARZ				S*	Sb	18 14 52.5	-2.0
PUZ	**Puketiti**	**1.06**	**144**	P	Pb	18 14 42.0	-0.3
PUZ	**Puketiti**	**1.06**	**144**	P*	Pb	18 14 42.0	-0.3
EDRZ	**Edgecumbe**	**1.07**	**213**	P	Pb	18 14 40.7	-1.7
EDRZ	**Edgecumbe**	**1.07**	**213**	P*	Pb	18 14 40.5	-1.9
URZ	**Urewera**	**1.09**	**195**	P	Pb	18 14 40.9	-1.8
URZ	**Urewera**	**1.09**	**195**	P*	Pb	18 14 40.9	-1.8
TGRZ	**Tauranga**	**1.09**	**241**	P	Pb	18 14 41.2	-1.6
TGRZ				S	Sb	18 14 47.6	-10
TGRZ	**Tauranga**	**1.09**	**241**	P*	Pb	18 14 41.2	-1.7
MWZ	**Matawai**	**1.12**	**178**	P	Pb	18 14 41.3	-2.0
MWZ	**Matawai**	**1.12**	**178**	P*	Pb	18 14 41.3	-2.0
MKRZ	**Makatiti**	**1.22**	**220**	P	Pb	18 14 43.9	-1.1
MKRZ	**Makatiti**	**1.22**	**220**	P*	Pb	18 14 43.9	-1.1
TAZ	**Tarawera**	**1.28**	**217**	P*	Pb	18 14 44.3	-1.6
UTU	**Utuhina**	**1.40**	**226**	P	Pn	18 14 46.7	-1.4
UTU	**Utuhina**	**1.40**	**226**	P*	Pb	18 14 46.5	-1.6
KUZ	**Kuaotunu**	**1.48**	**288**	P	Pn	18 14 47.0	-2.2
KUZ	**Kuaotunu**	**1.48**	**288**	PN	Pn	18 14 46.7	-2.4
PATZ	**Paeroa**	**1.51**	**219**	P	Pn	18 14 48.1	-1.6
PATZ	**Paeroa**	**1.51**	**219**	P*	Pb	18 14 47.8	-2.2
TOZ	**Tahuroa Road**	**1.65**	**251**	P*	Pb	18 14 49.2	-3.2
KNZ	**Kokohu**	**1.81**	**175**	P	Pn	18 14 52.5	-1.5
KNZ	**Kokohu**	**1.81**	**175**	PN	Pn	18 14 52.5	-1.4
MKAZ	**Moumakai**	**1.84**	**272**	P	Pn	18 14 52.3	-2.1
MKAZ	**Moumakai**	**1.84**	**272**	PN	Pn	18 14 52.3	-2.1
HATZ	**Hinemaiaia**	**2.00**	**213**	P	Pn	18 14 54.5	-2.2
MTAZ	**Motutapu**	**2.09**	**281**	P	Pn	18 14 56.4	-1.6
MTAZ	**Motutapu**	**2.09**	**281**	PN	Pn	18 14 56.4	-1.5
BKZ	**Black Stump Fm**	**2.10**	**201**	P	Pn	18 14 55.5	-2.6
BKZ	**Black Stump Fm**	**2.10**	**201**	P*	Pb	18 14 55.5	-4.6
KAAZ	**Kauri Point**	**2.25**	**279**	P	Pn	18 14 59.1	-1.1
KAAZ	**Kauri Point**	**2.25**	**279**	PN	Pn	18 14 59.1	-1.1
WTAZ	**Waiatarua**	**2.33**	**276**	P	Pn	18 14 59.9	-1.5
WTAZ	**Waiatarua**	**2.33**	**276**	PN	Pn	18 14 59.4	-2.0
WTVZ	**West Tongariro**	**2.41**	**217**	P	Pn	18 15 04.4	+1.8
OTVZ	**Oturere**	**2.42**	**216**	P*	Pb	18 15 00.9	-4.5
HIZ	**Hauiti**	**2.45**	**237**	P	Pn	18 15 00.9	-2.1
HIZ	**Hauiti**	**2.45**	**237**	PN	Pn	18 15 00.9	-2.2
NGZ	**Ngauruhoe**	**2.46**	**216**	P	Pn	18 15 02.0	-1.1
CNZ	**Chateau**	**2.50**	**217**	P	Pn	18 15 02.7	-1.1
WPVZ	**Whakapapa**	**2.50**	**217**	*e*P	Pn	18 15 03.7	-0.2
WPVZ	**Whakapapa**	**2.50**	**217**	P*	Pb	18 15 03.4	-3.6
TUVZ	**Tukino**	**2.50**	**214**	P	Pn	18 15 02.8	-1.1
FWVZ	**Far West T-bar**	**2.54**	**216**	P	Pn	18 15 03.8	-0.6
MOVZ	**Moawhango**	**2.58**	**211**	P	Pn	18 15 02.5	-2.4
MOVZ	**Moawhango**	**2.58**	**211**	P*	Pb	18 15 02.5	-5.7
WNVZ	**Wahianoa**	**2.58**	**214**	P	Pn	18 15 03.7	-1.2
MTVZ	**Mangateitei**	**2.68**	**215**	P*	Pb	18 15 05.5	-4.5
WCZ	**Waipu Caves**	**2.82**	**296**	P	Pn	18 15 06.4	-1.9
TSZ	**Takapari Road**	**3.08**	**202**	P	Pn	18 15 09.4	-2.7
TSZ	**Takapari Road**	**3.08**	**202**	PN	Pn	18 15 09.1	-3.0
RAEZ	**Rainy Point**	**3.19**	**228**	P	Pn	18 15 15.4	+1.8
WAZ	**Wanganui**	**3.21**	**217**	P	Pn	18 15 12.9	-0.9
NEZ	**North Egmont**	**3.36**	**231**	P	Pn	18 15 15.4	-0.7
NEZ	**North Egmont**	**3.36**	**231**	PN	Pn	18 15 14.9	-1.1
BFZ	**Birch Farm**	**3.60**	**195**	*e*P	Pn	18 15 14.9	-4.5
OUZ	**Omahuta**	**3.71**	**301**	P	Pn	18 15 19.3	-1.7
MRZ	**Mangatainoka R**	**3.75**	**203**	P	Pn	18 15 17.7	-3.9
MRZ	**Mangatainoka R**	**3.75**	**203**	PN	Pn	18 15 17.7	-3.8
KIW	**Kapiti Island**	**4.16**	**208**	P	Pn	18 15 23.6	-3.8
KIW	**Kapiti Island**	**4.16**	**208**	PN	Pn	18 15 23.6	-3.7
TCW	**Tory Channel**	**4.71**	**211**	P	Pn	18 15 30.2	-4.9
TCW	**Tory Channel**	**4.71**	**211**	PN	Pn	18 15 30.3	-4.9
QRZ	**Quartz Range**	**5.28**	**225**	*e*P	Pn	18 15 40.4	-2.8
QRZ	**Quartz Range**	**5.28**	**225**	PN	Pn	18 15 40.4	-2.8
KHZ	**Kahutara**	**6.02**	**209**	*e*P	Pn	18 15 47.4	-6.3
MQZ	**McQueen's Vall**	**7.46**	**208**	*e*P	Pn	18 16 05.2	-8.7

MAN 10 18:41:04.8, 5.79N×125.62E, h84^{km}**, mb4.4, ML3.2, MS3.0, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**1.31**	**29**	*e*P	P	18 41 28.5	+0.1
MATI				*e*S	S	18 41 47.3	+1.4
BUKP	**Musuan**	**2.15**	**345**	*e*P	P	18 41 40.6	+1.1
BUKP				*e*S	S	18 42 08.1	+2.9
BIPH	**Bislig**	**2.49**	**17**	⇑*i*P	P	18 41 40.5	-3.8
BIPH				*i* S	S	18 42 06.8	-6.9
PAGZ	**Pagadian**	**3.02**	**313**	*e*P	P	18 41 51.5	-0.2
BUTP	**Butuan**	**3.16**	**360**	*e*P	P	18 41 43.9	-10
IPIL	**Ipil**	**3.63**	**303**	*e*P	P	18 42 00.5	+0.5
IPIL				*e*S	S	18 42 42.5	+0.6

*MOS **10** 19:04:05.2±1.3, 55.76N×110.20E, h14^{km}, mb4.2/1, Error ellipse: s-maj=16.2km s-min=10.6km az=52.4*

BYKL 10 19:04:05.5±0.3**, 55.76N×110.23E, 11C-3D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIZ	**Nizh Angarsk**	**0.39**	**272**	⇑*i*Pg	Pg	19 04 12.9	-0.4
NIZ				*e*Sg	Sg	19 04 18.8	+0.3
NIZ				Pmax			
	274nm,0.4s						
NIZ				Smax			
	1μm,0.2s						
NIZ	**Nizh Angarsk**	**0.39**	**272**	*e*PG	Pg	19 04 12.8	-0.5
NIZ				*e*		19 04 18.6	
NIZ				pmax	pmax		
	comp=Z,251nm,0.4s						
NIZ				smax			
	comp=E,918nm,0.5s						
KMO	**Kumora**	**0.56**	**77**	⇑*i*Pg	Pg	19 04 15.6	-1.1
KMO				*e*Sg	Sg	19 04 23.3	-0.9
KMO				Pmax			
	comp=E,469nm,0.3s						
KMO				Smax			
	comp=E,1μm,1.0s						
YOA	**Uoyan**	**0.92**	**65**	⇑*i*Pg	Pg	19 04 21.9	-2.0
YOA				*e*Sg	Sg	19 04 35.7	-0.4
YOA				Pmax			
	comp=E,292nm,0.2s						
YOA				Smax			
	comp=E,1μm,0.3s						
YOA	**Uoyan**	**0.92**	**65**	⇑*i*PG	Pg	19 04 21.8	-2.1
YOA				*i*		19 04 35.9	
YOA				pmax	pmax		
	comp=Z,228nm,0.3s						
YOA				smax			
	comp=N,1μm,0.4s						
YLYR	**Ulyunkhan**	**1.03**	**149**	⇑*i*Pg	Pg	19 04 24.0	-2.1
YLYR				*e*Pb	Pb	19 04 25.3	-0.7
YLYR				*e*Sg	Sg	19 04 38.1	-1.8
YLYR				max			
	comp=N,39nm,0.2s						
YLYR				Smax			
	comp=N,332nm,0.3s						
YLYR	**Ulyunkhan**	**1.03**	**149**	⇑*i*PG	Pg	19 04 24.0	-2.1
YLYR				*e*		19 04 37.3	
YLYR				pmax	pmax		
	comp=Z,48nm,0.2s						
YLYR				smax			
	comp=E,338nm,0.3s						
SVKR	**Severomuysk**	**1.91**	**78**	⇓*i*Pg	Pg	19 04 39.9	-3.7
SVKR				*e*Sg	Sg	19 05 06.4	-2.6
SVKR	**Severomuysk**	**1.91**	**78**	*e*PN	Pn	19 04 39.9	+0.3
UKT	**Uakit**	**1.95**	**97**	⇑*i*Pg	Pg	19 04 40.4	-3.9
UKT				*e*Sg	Sg	19 05 06.5	-3.8
UKT				Pmax			
	comp=E,214nm,0.9s						
UKT				Smax			
	comp=E,464nm,0.4s						
UKT	**Uakit**	**1.95**	**97**	*e*PN	Pn	19 04 40.4	+0.3
UKT				*e*		19 05 06.4	
UKT				pmax	pmax		
	comp=Z,97nm,0.4s						
UKT				smax			
	comp=N,398nm,0.4s						
SYVR	**Suvo**	**2.11**	**184**	*e*Pg	Pg	19 04 43.4	-4.2
SYVR				*e*Sg	Sg	19 05 12.6	-3.2
SYVR				Pmax			
	comp=N,50nm,0.5s						
SYVR				Smax			
	comp=N,391nm,0.6s						
SYVR	**Suvo**	**2.11**	**184**	*e*PN	Pn	19 04 43.0	+0.5
SYVR				*e*		19 05 11.7	
SYVR				pmax	pmax		
	comp=Z,20nm,0.1s						
SYVR				smax			
	comp=E,369nm,0.6s						
OGRR	**Ongureny**	**2.62**	**217**	*e*Pn	Pn	19 04 49.5	-0.2
OGRR				*e*Pg	Pg	19 04 52.5	-5.2
OGRR				*e*Sn	Sn	19 05 19.7	-2.9
OGRR				*e*Sg	Sg	19 05 26.2	-6.4
OGRR				Pmax			
	comp=E,16nm,0.4s						
OGRR				Smax			
	comp=E,101nm,0.4s						
BOD	**Bodaibo**	**2.93**	**44**	*e*	Pn	19 04 51.4	-2.8
BOD				*e*Pg	Pg	19 04 56.9	-7.0
BOD				*e*Sn	Sn	19 05 26.7	-3.9
BOD				*e*Sg	Sg	19 05 35.6	-7.4
BOD				Pmax			
	comp=E,13nm,0.3s						
BOD				Smax			
	comp=E,186nm,0.5s						
BOD	**Bodaibo**	**2.93**	**44**	*e*PN	Pn	19 04 50.6	-3.6
BOD				*e*		19 04 56.5	
BOD				*e*		19 05 34.6	
BOD				pmax	pmax		
	comp=Z,18nm,0.4s						
BOD				smax			
	comp=N,187nm,0.5s						
NLYR	**Nelyaty**	**3.15**	**74**	⇑*i*Pn	Pn	19 04 56.3	-1.0
NLYR				*e*Pg	Pg	19 05 01.6	-6.8
NLYR				*e*PgPg		19 05 05.9	
NLYR				*e*Sn	Sn	19 05 32.5	-3.7
NLYR				*e*Sg	Sg	19 05 42.2	-8.2
NLYR				max			
	comp=N,70nm,0.9s						
NLYR				Smax			
	comp=N,271nm,0.8s						
NLYR	**Nelyaty**	**3.15**	**74**	*e*PN	Pn	19 04 56.4	-0.9
NLYR				*e*		19 05 01.4	
NLYR				*e*		19 05 40.9	
NLYR				pmax	pmax		
	comp=Z,51nm,0.7s						
NLYR				smax			
	comp=N,269nm,0.9s						
ZRHB	**Zarechye**	**3.69**	**211**	*e*Sg	Sg	19 06 01.5	-6.7
ZRHB				Smax			
	comp=N,253nm,1.0s						
TRG	**Tyrgan**	**3.77**	**219**	⇑*i*Pn	Pn	19 05 05.0	-1.1
TRG				*e*Sn	Sn	19 05 47.8	-4.1
TRG				*e*Sg	Sg	19 06 02.4	-8.6
TRG				max			
	comp=N,15nm,0.5s						
TRG				Smax			
	comp=N,75nm,0.4s						
TRTB	**Turuntaevo**	**3.85**	**205**	*e*Pn	Pn	19 05 06.3	-1.0
TRTB				*e*		19 05 48.1	
TRTB				*e*Sg	Sg	19 06 04.0	-10
TRTB				max			
	comp=N,6.0nm,0.4s						
TRTB				Smax			
	comp=N,49nm,1.1s						
FFNB	**Fofonovo**	**4.25**	**210**	*e*Sg	Sg	19 06 15.9	-11
FFNB				Smax			
	comp=N,149nm,0.8s						
CRS	**Chara**	**4.62**	**72**	⇑*i*Pn	Pn	19 05 16.6	-1.6
CRS				⇑*i*Pg	Pg	19 05 27.8	-10
CRS				*e*Sg	Sg	19 06 28.8	-10
CRS				Pmax			
	comp=N,70nm,1.4s						
CRS				Smax			
	comp=N,120nm,1.9s						
LSTR	**Listvyanka**	**5.04**	**222**	*e*Pn	Pn	19 05 24.6	+0.4
LSTR				*e*Sn	Sn	19 06 20.1	-4.0
LSTR				*e*Sg	Sg	19 06 40.5	-13
LSTR				max			
	comp=N,2.0nm,0.3s						
LSTR				Smax			
	comp=N,56nm,1.9s						
TLY	**Talaya**	**5.66**	**226**	*e*Pn	Pn	19 05 30.0	-2.8
TLY				*e*Sn	Sn	19 06 32.7	-6.7
TLY				*e*Sg	Sg	19 06 58.9	-15
TLY				max			
	comp=N,8.0nm,0.3s						
TLY				Smax			
	comp=N,43nm,1.5s						
TLY	**Talaya**	**5.66**	**226**	*e*PN	Pn	19 05 29.9	-2.9
TLY				*e*		19 05 45.8	
TLY				*e*S	Sn	19 06 32.6	-6.8
TLY				*e*		19 06 57.8	
TLY				pmax	pmax		
	comp=Z,8.0nm,0.4s						
TLY				smax			
	comp=E,44nm,1.3s						
TUP	**Tupik**	**5.74**	**99**	*e*Pn	Pn	19 05 31.4	-2.7
TUP				*e*Pg	Pg	19 05 48.2	-12
TUP				*e*Sn	Sn	19 06 34.8	-6.8
TUP				*e*Sg	Sg	19 07 03.5	-13
TUP				Pmax			
	comp=E,14nm,0.6s						
TUP				Smax			
	comp=E,72nm,1.3s						
TUP	**Tupik**	**5.74**	**99**	*e*PN	Pn	19 05 31.3	-2.8
TUP				*e*		19 05 48.4	
TUP				*e*		19 07 04.8	
TUP				pmax	pmax		
	comp=Z,11nm,0.5s						
TUP				smax			
	comp=N,58nm,1.2s						
ARS	**Arshan**	**6.01**	**233**	*e*Pn	Pn	19 05 35.4	-2.5
ARS				*e*		19 06 40.3	
ARS				*e*Sg	Sg	19 07 11.2	-14
ARS				max			
	comp=N,18nm,0.5s						
ARS				Smax			
	comp=N,116nm,1.0s						
KPC	**Khapcheranga**	**6.21**	**167**	*e*Pn	Pn	19 05 38.5	-2.1
KPC				*e*Pg	Pg	19 05 57.1	-12
KPC				*e*Sn	Sn	19 06 47.0	-6.2
KPC				*e*Sg	Sg	19 07 17.2	-15
KPC				Pmax			
	comp=N,2.0nm,0.5s						
KPC				Smax			
	comp=N,44nm,1.7s						
ZAK	**Zakamensk**	**6.82**	**221**	*e*Pn	Pn	19 05 48.5	-0.8
ZAK				*e*Sn	Sn	19 07 00.3	-8.3
ZAK				*e*Sg	Sg	19 07 36.8	-16
ZAK				max			
	comp=N,4.0nm,0.8s						
ZAK				Smax			
	comp=N,19nm,1.3s						
ZAK	**Zakamensk**	**6.82**	**221**	*e*PN	Pn	19 05 47.1	-2.2
ZAK				*e*		19 06 10.3	
ZAK				*e*		19 07 34.8	
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ZAK				smax			
	comp=E,20nm,1.3s						
MOY	**Mondy**	**6.84**	**237**	⇓*i*Pn	Pn	19 05 48.4	-1.2
MOY				*e*Sn	Sn	19 07 03.7	-5.5
MOY				*e*Sg	Sg	19 07 36.5	-17
MOY				max			
	comp=E,10.0nm,0.7s						
MOY				Smax			
	comp=E,59nm,2.0s						
MOY	**Mondy**	**6.84**	**237**	*e*PG	Pg	19 06 09.6	-13
MOY				*e*		19 07 36.3	
MOY				pmax	pmax		
	comp=Z,11nm,0.4s						
MOY				smax			
	comp=N,58nm,1.1s						
ORL	**Orlik**	**6.92**	**247**	⇓*i*Pn	Pn	19 05 49.0	-1.6

ORL				*e*Sn	Sn	19 07 03.7	-7.3
ORL				*e*Sg	Sg	19 07 38.0	-18
ORL				max			
	comp=N,4.0nm,0.5s						
ORL				Smax			
	comp=N,38nm,1.4s						
ORL	**Orlik**	**6.92**	**247**	*e*PN	Pn	19 05 48.2	-2.4
ORL				*e*		19 06 09.9	
ORL				*e*S	Sn	19 07 03.7	-7.3
ORL				*e*		19 07 37.8	
ORL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ORL				smax			
	comp=N,24nm,1.1s						
TDJR	**Todzha**	**8.96**	**254**	*e*Pn	P	19 06 15.9	-3.3
TDJR				*e*Sg	Sg	19 08 42.2	-22

BJI ***10*** *19:21:11.2, 57.50N×120.70E, h5^{km}, mB4.6, mb3.9, ML4.5*

MOS ***10*** *19:21:13.1±1.4, 57.53N×120.69E, h15^{km}, mb4.4/8, Error ellipse: s-maj=11.3km s-min=8.8km az=86.9*

NEIC ***10*** *19:21:13.8±0.7, 57.49N×120.66E, h5^{km}, mb4.2/9, Error ellipse: s-maj=17.3km s-min=11.3km az=135.0*

IDC ***10*** *19:21:13.2±1.0, 57.42N×120.73E, mb3.9/11, mb1 4.1/12, mb1mx3.9/22, mbtmp3.9/12, ML3.1/1, Error ellipse: s-maj=24.2km s-min=19.8km az=166.0*

BYKL ***10*** *19:21:14.1±0.3, 57.40N×120.80E, h5^{km}±16^{km}, MS3.3*

ISC 10 19:21:11.7±0.3**, 57.42N**±0.04×**120.78E**±0.04**, h5**^{km}**, n92,** σ**1**^{s}**51**/95**, mb4.2**/24**, 4C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.46**	**250**	⇑*i*Pg	**Pg**	**19 21 40.2**	**-0.7**
CRS				Pmax		19 21 43.0	
	551nm,1.1s						
CRS				*e*Sg	**Sg**	**19 21 58.5**	**-1.9**
CRS				Smax		19 22 03.9	
	2µm,1.1s						
CRS	**Chara**	**1.46**	**250**	*e*P	**Pn**	**19 21 40.4**	**+1.5**
CRS				*e*		19 21 58.7	
CRS				pmax	pmax		
	comp=Z,467nm,0.9s						
CRS				smax			
	comp=N,2µm,1.1s						
NRGR	**Nerungri**	**2.29**	**108**	*e*P	**Pn**	**19 21 54.0**	**+3.3**
NRGR				*e*S	**Sn**	**19 22 23.0**	**+3.4**
NRGR				smax			
	comp=N,1.0nm,0.4s						
CLNS	**Chul'man**	**2.32**	**103**	*e*Pn	**Pn**	**19 21 54.2**	**+3.0**
CLNS				*e*Pg	**Pg**	**19 21 56.3**	**-1.7**
CLNS				Pmax		19 22 07.5	
	comp=N,1µm,0.6s						
CLNS				*e*		19 22 24.1	
CLNS				*e*Sg	**Sg**	**19 22 26.6**	**-2.4**
CLNS				Smax		19 22 27.6	
	comp=N,41µm,1.1s						
CLNS	**Chul'man**	**2.32**	**103**	*e*P	**Pn**	**19 21 54.3**	**+3.1**
CLNS				*e*S	**Sn**	**19 22 17.0**	**-3.4**
CLNS				pmax	pmax		
	comp=N,45nm,0.5s						
CLNS				pmax	pmax		
	comp=Z,124nm,0.5s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,23nm,0.2s						
CLNS				pmax	pmax		
	comp=N,30nm,0.4s						
CLNS				pmax	pmax		
	comp=E,19nm,0.3s						
CLNS				smax			
	comp=N,105nm,0.4s						
CLNS				smax			
	comp=Z,10.0nm,0.2s						
CLNS				smax			
	comp=E,83nm,0.6s						
CLNS				smax			
	comp=N,2µm,0.6s						
CLNS				smax			
	comp=E,2µm,0.7s						
CLNS				smax			
	comp=Z,971nm,0.7s						
CLNS				MLR	MLR		
	comp=Z,200nm,11.0s						
ALDR	**Aldan**	**2.74**	**62**	*e*Pn	**Pn**	**19 21 59.4**	**+2.3**
ALDR				*e*Pg	**Pg**	**19 22 02.3**	**-4.1**
ALDR				*e*		19 22 07.9	
ALDR				max		19 22 09.1	
	comp=Z,709nm,0.5s						
ALDR				*e*Sn	**Sn**	**19 22 30.7**	**-0.3**
ALDR				*e*Sg	**Sg**	**19 22 38.4**	**-4.5**
ALDR				Smax		19 22 38.8	
	comp=Z,21µm,0.6s						
ALDR				*e*LR	LR	19 29 05.2	
NLYR	**Nelyaty**	**2.93**	**254**	*e*Pn	**Pn**	**19 22 01.9**	**+2.0**
NLYR				*e*Pg	**Pg**	**19 22 06.3**	**-3.9**
NLYR				*e*PgPg		19 22 08.3	
NLYR				max		19 22 09.1	
	comp=Z,381nm,0.8s						
NLYR				*e*Sn	**Sn**	**19 22 36.3**	**+0.4**
NLYR				*e*Sg	**Sg**	**19 22 42.9**	**-6.4**
NLYR				Smax		19 22 48.3	
	comp=Z,2µm,1.2s						
NLYR	**Nelyaty**	**2.93**	**254**	*e*P	**Pn**	**19 22 01.8**	**+1.9**
TUP	**Tupik**	**3.04**	**189**	*e*Pn	**Pn**	**19 22 02.0**	**+0.6**
TUP				*e*Pg	**Pg**	**19 22 07.0**	**-5.4**
TUP				Pmax		19 22 09.9	
	comp=Z,392nm,0.6s						
TUP				*e*Sg	**Sg**	**19 22 46.1**	**-6.8**
TUP				Smax		19 22 54.1	
	comp=Z,2µm,1.2s						
TUP				*e*LR	LR	19 23 05.6	
TUP				LRmax		19 23 10.6	
	comp=Z,609nm,3.4s						
TUP	**Tupik**	**3.04**	**189**	*e*P	**Pn**	**19 22 01.9**	**+0.5**
TUP				*e*S	**Sn**	**19 22 37.5**	**-1.1**
TUP				pmax	pmax		
	comp=Z,398nm,0.5s						
TUP				smax			
	comp=E,1µm,0.8s						
TNDR	**Tynda**	**3.17**	**134**	*e*Pn	**Pn**	**19 22 04.5**	**+1.3**
TNDR				*e*		19 22 14.3	
TNDR				max		19 22 15.5	
	comp=E,1µm,0.6s						
TNDR				*e*Sn	**Sn**	**19 22 42.8**	**+0.9**
TNDR				*i* Sg	**Sg**	**19 22 51.5**	**-5.7**
TNDR				Smax		19 22 58.7	
	comp=E,11µm,0.6s						
BOD	**Bodaibo**	**3.66**	**279**	*e*Pn	**Pn**	**19 22 11.4**	**+1.1**
BOD				*e*Pg	**Pg**	**19 22 20.6**	**-4.3**
BOD				Pmax		19 22 23.6	
	comp=E,75nm,0.6s						
BOD				*e*Sg	**Sg**	**19 23 06.7**	**-7.0**
BOD				Smax		19 23 11.4	
	comp=E,789nm,0.8s						
BOD				*e*LR	LR	19 23 28.2	
BOD	**Bodaibo**	**3.66**	**279**	*e*P	**Pn**	**19 22 11.2**	**+0.9**
BOD				pmax	pmax		
	comp=Z,72nm,0.7s						
SVKR	**Severomuysk**	**4.18**	**255**	*e*Pn	**Pn**	**19 22 19.0**	**+1.4**
SVKR				⇑*i*Pg	Px	19 22 30.7	
SVKR				Pmax		19 22 33.7	
	comp=Z,133nm,0.6s						
SVKR				*e*Sg	Sx	19 23 23.1	
SVKR				Smax		19 23 29.2	
	comp=Z,967nm,1.2s						
SVKR	**Severomuysk**	**4.18**	**255**	*e*P	Px	19 22 30.7	
SVKR				pmax	pmax		
	comp=Z,121nm,0.6s						
UKT	**Uakit**	**4.41**	**247**	*e*Pn	**Pn**	**19 22 22.2**	**+1.3**
UKT				*e*Pg	Px	19 22 32.5	
UKT				Pmax		19 22 37.2	
	comp=Z,631nm,0.6s						
UKT				*e*Sg	Sx	19 23 29.0	
UKT				Smax		19 23 35.8	
	comp=Z,2µm,0.8s						
UKT	**Uakit**	**4.41**	**247**	*e*P	Px	19 22 32.5	
UKT				pmax	pmax		
	comp=Z,56nm,0.6s						
YOA	**Uoyan**	**5.14**	**259**	*e*	**Pn**	**19 22 36.4**	**+5.1**
YOA				*e*Pg	Px	19 22 47.0	
YOA				Pmax		19 22 55.1	
	comp=Z,271nm,1.3s						
YOA				*e*Sn	**Sn**	**19 23 29.0**	**-2.8**
YOA				*e*Sg	Sx	19 23 53.7	
YOA				Smax		19 24 11.2	
	comp=Z,3µm,1.6s						
YOA	**Uoyan**	**5.14**	**259**	⇑*i*P	Px	19 22 50.0	
YOA				pmax	pmax		
	comp=Z,241nm,1.1s						
KMO	**Kumora**	**5.50**	**258**	*e*Pg	Px	19 22 53.3	
KMO				Pmax		19 23 01.9	
	comp=Z,29nm,0.5s						
KMO				*e*Sg	Sx	19 24 03.5	
KMO				Smax		19 24 13.4	
	comp=Z,628nm,1.3s						
KMO	**Kumora**	**5.50**	**258**	*e*P	**Pn**	**19 22 36.8**	**+0.5**
KMO				*e*S	**Sn**	**19 23 38.9**	**-2.0**
KMO				pmax	pmax		
	comp=Z,30nm,1.0s						
KMO				smax			
	comp=N,627nm,1.3s						
YLYR	**Ulyunkhan**	**5.95**	**249**	*e*Pn	**Pn**	**19 22 43.8**	**+1.2**
YLYR				*e*Pg	Px	19 23 00.3	
YLYR				Pmax		19 23 09.5	
	comp=N,27nm,0.8s						
YLYR				*e*Sg	Sx	19 24 17.7	
YLYR				Smax		19 24 32.0	
	comp=N,351nm,1.3s						
YLYR	**Ulyunkhan**	**5.95**	**249**	*e*P	**Pn**	**19 22 43.9**	**+1.3**
NIZ	**Nizh Angarsk**	**6.42**	**260**	*e*	**Pn**	**19 22 52.3**	**+3.0**
NIZ				*e*Pg	Px	19 23 10.9	
NIZ				Pmax		19 23 16.2	
	comp=N,31nm,1.5s						
NIZ				*e*Sg	Sx	19 24 32.8	
NIZ				Smax		19 24 37.2	
	comp=N,187nm,1.4s						
YAK	**Yakutsk**	**6.45**	**41**	*e*Pn	**Pn**	**19 22 49.8**	**+0.1**
YAK				*e*Pg	Px	19 23 09.4	
YAK				Pmax		19 23 12.4	
	comp=N,291nm,0.7s						
YAK				*e*Sn	**Sn**	**19 24 00.5**	**-4.1**
YAK				*e*Sg	Sx	19 24 32.1	
YAK				Smax		19 24 35.2	
	comp=N,3µm,0.5s						
YAK	**Yakutsk**	**6.45**	**41**	*e*Pn	**Pn**	**19 22 49.0**	**-0.8**
	comp=N,56nm,0.7s						
YAK	**Yakutsk**	**6.45**	**41**	*e*P	**Pn**	**19 22 49.0**	**-0.7**
YAK				pmax	pmax		
	comp=Z,56nm,0.7s						
CIT	**Chita**	**6.84**	**221**	*e*Pn	**Pn**	**19 22 54.0**	**-1.2**
CIT				*e*Pg	Px	19 23 15.8	
CIT				Pmax		19 23 17.5	
	comp=Z,52nm,1.3s						
CIT				*e*		19 24 28.4	
CIT				*e*Sg	Sx	19 24 43.7	
CIT				Smax		19 24 54.6	
	comp=Z,1µm,1.4s						
CIT	**Chita**	**6.84**	**221**	*e*P	**Pn**	**19 22 53.9**	**-1.3**
CIT				pmax	pmax		
	comp=Z,50nm,1.4s						
SYVR	**Suvo**	**7.18**	**243**	*e*Pg	Px	19 23 23.0	
SYVR				Pmax		19 23 37.5	
	comp=Z,16nm,0.8s						
SYVR				*e*		19 24 34.6	
SYVR				*e*Sg	Sx	19 24 55.9	
SYVR				Smax		19 25 03.8	
	comp=Z,515nm,1.5s						
HIA	**Hailar**	**8.19**	**185**	*e*Pn	**P**	**19 23 10.0**	**-4.1**
OGRR	**Ongureny**	**8.38**	**249**	*e*Pg	Px	19 23 46.6	
OGRR				Pmax		19 23 52.3	
	comp=Z,9.0nm,1.0s						
OGRR				*e*Sg	Sx	19 25 33.8	
OGRR				Smax		19 25 43.9	
	comp=Z,79nm,1.8s						
KPC	**Khapcheranga**	**9.20**	**216**	*e*Sn	Sx	19 25 06.0	
KPC				*e*Sg	Sx	19 25 56.4	
KPC				Smax		19 26 15.1	
	comp=Z,1µm,0.8s						
TRG	**Tyrgan**	**9.49**	**247**	*e*Sg	Sx	19 26 09.2	
TRG				Smax		19 26 17.7	
	comp=Z,107nm,1.7s						
KAB	**Kabansk**	**9.77**	**243**	*e*	Px	19 24 31.8	
KAB				*e*Sg	Sx	19 26 18.0	
KAB				Smax		19 26 48.6	
	comp=Z,2µm,1.5s						
KLR	**Kul'dur**	**10.49**	**137**	*e*P	**P**	**19 23 48.0**	**+2.2**
LSTR	**Listvyanka**	**10.77**	**246**	*e*Sg	Sx	19 26 47.3	
LSTR				Smax		19 26 55.7	
	comp=Z,105nm,1.8s						
IRK	**Irkutsk**	**10.83**	**248**	*e*Sg	Sx	19 26 49.4	
IRK				Smax		19 27 05.4	
	comp=Z,151nm,1.3s						
TLY	**Talaya**	**11.47**	**247**	*e*Sg	Sx	19 27 10.4	
TLY				Smax		19 27 21.4	
	comp=Z,60nm,1.7s						
ARS	**Arshan**	**11.95**	**250**	*e*Sg	Sx	19 27 24.2	
ARS				Smax		19 27 47.2	
	comp=Z,119nm,1.4s						
BTGS	**Batagay**	**12.05**	**26**	*e*Sg	Sx	19 27 27.4	
BTGS				Smax		19 27 47.2	
	comp=Z,367nm,1.3s						
ZAK	**Zakamensk**	**12.47**	**243**	*e*Sg	Sx	19 27 41.2	
ZAK				Smax		19 27 52.1	
	comp=Z,16nm,1.7s						
MOY	**Mondy**	**12.82**	**252**	*e*	Px	19 27 16.5	
MOY				*e*Sg	Sx	19 27 49.8	
MOY				Smax		19 28 26.7	
	comp=Z,100nm,1.6s						
SONM	**Songino Array**	**12.95**	**228**	Pn	**P**	**19 24 19.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=37,slow=11,SNR=5.3						
ORL	**Orlik**	**12.97**	**257**	*e*Sg	Sx	19 27 56.3	
ORL				Smax		19 28 21.7	
	comp=Z,56nm,1.4s						
UNR	**Ust'-Nera**	**12.98**	**47**	*e*Sg	Sx	19 27 55.0	
TIXI	**Tiksi**	**14.68**	**10**	*e*P	**P**	**19 24 35.0**	**-6.5**
TIXI				pmax	pmax		
	comp=Z,21nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,180nm,14.0s						
HHC	**Hu-ho-hao-te**	**17.62**	**204**	*e*P	**P**	**19 25 17.1**	**-2.2**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s						
ZAL	**Zalesovo**	**20.43**	**276**	P	**P**	**19 25 52.3**	**+0.1**
	comp=Z,1.9nm,0.8s,baz=41,slow=15,SNR=6.7						
NVS	**Novosibirsk**	**20.91**	**279**	*e*P	**P**	**19 25 57.8**	**+0.7**
NVS				pmax	pmax		
	comp=N,18nm,1.0s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA	**Gaotai**	**22.60**	**226**	*e*P	**P**	**19 26 19.8**	**+5.6**
GTA				AP		19 26 25.1	
KURK	**Kurchatov**	**25.29**	**273**	*e*P	**P**	**19 26 39.4**	**-0.8**
	comp=Z,1.8nm,0.7s,mb3.7						
KURK	**Kurchatov**	**25.29**	**273**	*e*P	**P**	**19 26 39.4**	**-0.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.8						
MKAR	**Makanchi Array**	**25.57**	**262**	P	**P**	**19 26 44.3**	**+1.5**
	comp=Z,1.4nm,0.6s,mb3.7,baz=58,slow=8.6,SNR=13						
BVAR	**Borovoye Array**	**28.53**	**283**	P	**P**	**19 27 08.9**	**-0.9**
	comp=Z,0.7nm,0.5s,mb3.6,baz=90,slow=8.9,SNR=6.3						
AAK	**Ala-Archa**	**32.49**	**263**	*e*P	**P**	**19 27 41.3**	**-3.7**
	comp=Z,2.6nm,0.9s,mb4.1						
AAK	**Ala-Archa**	**32.49**	**263**	*e*P	**P**	**19 27 41.3**	**-3.7**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
APA	**Apatity**	**38.18**	**322**	⇑*i*P	**P**	**19 28 41.5**	**+8.2**
APA				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.2						
KKN	**Kakani**	**38.71**	**235**	*e*P	**P**	**19 28 39.2**	**+1.0**
	comp=Z,8.1nm,0.7s,mb4.5						
KKN	**Kakani**	**38.71**	**235**	*e*P	**P**	**19 28 39.2**	**+1.0**
KKN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
GKN	**Gorkha**	**38.82**	**236**	*e*P	**P**	**19 28 40.9**	**+1.8**
	comp=Z,15nm,0.7s,mb4.8						
DMN	**Daman**	**38.95**	**235**	*e*P	**P**	**19 28 39.8**	**-0.3**
	comp=Z,7.3nm,0.8s,mb4.4						
KOLN	**Koldanda**	**39.49**	**237**	*e*P	**P**	**19 28 46.7**	**+2.1**
	comp=Z,14nm,1.0s,mb4.7						
ARCES	**ARCESS Array B**	**39.67**	**327**	P	**P**	**19 28 45.3**	**-0.4**
	comp=Z,3.8nm,0.9s,mb4.1,baz=62,slow=13,SNR=3.3						
ILAR	**Eielson Array**	**41.38**	**40**	P	**P**	**19 29 01.4**	**+1.6**
	comp=Z,1.1nm,0.6s,mb3.7,baz=292,slow=4.7,SNR=19						
JOF	**Joensuu**	**41.41**	**316**	*e*p	**P**	**19 28 59.9**	**-0.2**
KAF	**Kangasniemi**	**43.75**	**317**	*e*p	**P**	**19 29 15.5**	**-3.5**
FINES	**FINESS Array B**	**44.26**	**317**	P	**P**	**19 29 23.4**	**+0.3**
	comp=Z,4.7nm,0.8s,mb4.2,baz=56,slow=6.9,SNR=10						
FINES	**FINESS Array B**	**44.26**	**317**	P	**P**	**19 29 23.4**	**+0.3**
NB2	**NORSAR Subarra**	**49.72**	**323**	P	**P**	**19 30 05.6**	**-0.5**
	comp=Z,0.4nm,0.7s,mb3.6,baz=39,slow=6.5						
NOA	**NORSAR Array B**	**49.72**	**323**	P	**P**	**19 30 06.3**	**+0.1**
	comp=Z,0.9nm,0.5s,mb4.1,baz=40,slow=7.0,SNR=4.1						
AKH	**Akhalkalaki**	**49.93**	**286**	P	**P**	**19 29 48.9**	**-19**
NAO	**NORSAR Subarra**	**50.01**	**323**	P	**P**	**19 30 05.6**	**-2.7**
	comp=Z,0.4nm,0.7s,mb3.6						
GNI	**Garni**	**50.19**	**284**	P	**P**	**19 30 08.1**	**-1.9**
	comp=Z,11nm,1.1s,mb4.8						
GNI	**Garni**	**50.19**	**284**	P	**P**	**19 30 08.1**	**-1.9**
GNI				pmax	pmax		
	comp=Z,11nm,1.1s						
AKASG	**Malin Array Be**	**50.23**	**304**	P	**P**	**19 30 09.5**	**-0.6**
	comp=Z,0.9nm,0.5s,mb4.1,baz=41,slow=8.7,SNR=9.7						
AKASG	**Malin Array Be**	**50.23**	**304**	P	**P**	**19 30 09.5**	**-0.6**
MORC	**Moravsky Berou**	**55.94**	**310**	P	**P**	**19 30 48.6**	**-4.0**
	comp=Z,2.4nm,0.9s,mb4.2						
MORC	**Moravsky Berou**	**55.94**	**310**	P	**P**	**19 30 48.7**	**-3.9**
MORC				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
DPC	**Dobruska-Polom**	**56.00**	**312**	*e*P	**P**	**19 30 53.0**	**0.0**
CLL	**Collm**	**56.56**	**314**	P	**P**	**19 30 55.0**	**-2.0**
PRU	**Pruhonice**	**57.00**	**312**	*e*P	**P**	**19 31 02.6**	**+2.4**
KHC	**Kasperske Hory**	**58.06**	**312**	*e*P	**P**	**19 31 08.0**	**+0.4**
GERES	**GERESS Array B**	**58.24**	**312**	P	**P**	**19 31 08.9**	**+0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=37,slow=6.7,SNR=9.8						
PALK	**Pallekele**	**58.90**	**228**	P	**P**	**19 31 11.0**	**-3.0**
	comp=Z,34nm,1.4s,mb5.2						
HLID	**Hailey**	**69.33**	**40**	P	**P**	**19 32 23.0**	**+1.3**
	comp=Z,1.3nm,0.8s,mb3.9						
PDAR	**Pinedale Array**	**71.66**	**37**	P	**P**	**19 32 36.6**	**+0.7**
	comp=Z,0.5nm,0.6s,mb3.7,baz=45,slow=4.2,SNR=5.5						
RSSD	**Black Hills**	**72.12**	**32**	P	**P**	**19 32 35.3**	**-3.3**
	comp=Z,1.5nm,0.7s,mb4.0						
RSSD	**Black Hills**	**72.12**	**32**	P	**P**	**19 32 35.3**	**-3.3**
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	**77.89**	**167**	*e*P	**P**	**19 33 11.9**	**0.0**
	comp=Z,4.9nm,0.9s,mb4.4						
WRAB	**Tennant Creek**	**77.89**	**167**	*e*P	**P**	**19 33 11.9**	**0.0**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
WRA	**Warramunga Arr**	**77.90**	**167**	P	**P**	**19 33 11.9**	**0.0**
	comp=Z,0.9nm,0.7s,mb3.8,baz=350,slow=6.2,SNR=8.8						

BJI ***10*** *19:27:22.7, 57.71N×121.00E, h5^{km}, mB4.5, mb4.3, Ms4.7, Msz4.5*

MOS ***10*** *19:27:25.5±0.9, 57.42N×120.63E, h15^{km}, mb4.8/36, Error ellipse: s-maj=9.8km s-min=5.6km az=111.7*

IDC ***10*** *19:27:25.4±0.6, 57.42N×120.62E, mb4.2/20, mb1 4.4/22, mb1mx4.4/26, mbtmp4.2/22, ML3.6/2, Error ellipse: s-maj=15.0km s-min=13.1km az=16.0*

NEIC ***10*** *19:27:26.4±0.2, 57.46N×120.62E, h5^{km}, mb4.8/50, Error ellipse: s-maj=4.8km s-min=3.9km az=199.0*

ISC 10 19:27:28.3±0.2**, 57.40N**±0.03×**120.63E**±0.05**, h33**^{km}**, n178,** σ**0**^{s}**93**/186**, mb4.6**/79**, MS5.7**/1**, 4C-9D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NRGR	**Nerungri**	**2.36**	**107**	*e*P	**P**	**19 28 05.8**	**+0.4**
NRGR				*e*S	**S**	**19 28 33.0**	**-0.5**
NRGR				smax			
	comp=N,1.0nm,0.1s						
CLNS	**Chul'man**	**2.39**	**102**	*e*P	**P**	**19 28 06.1**	**+0.2**
CLNS				*e*S	**S**	**19 28 32.3**	**-2.0**
CLNS				pmax	pmax		
	comp=E,26nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,44nm,0.3s						
CLNS				pmax	pmax		
	comp=N,49nm,0.4s						
CLNS				smax			
	comp=N,191nm,0.4s						
CLNS				smax			
	comp=E,118nm,0.3s						
CLNS				smax			
	comp=Z,46nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,600nm,11.0s						
NLYR	**Nelyaty**	**2.85**	**253**	*e*P	**P**	**19 28 14.0**	**+1.6**
NLYR				*e*		19 28 52.5	
NLYR				pmax	pmax		
	comp=Z,2µm,0.8s						
NLYR				smax			
	comp=N,7µm,1.3s						
TUP	**Tupik**	**3.01**	**188**	*e*P	**P**	**19 28 14.0**	**-0.7**
TUP				*e*S	**S**	**19 28 49.6**	**-0.4**
TUP				pmax	pmax		
	comp=Z,1µm,0.6s						
TUP				smax			
	comp=E,4µm,0.9s						
BOD	**Bodaibo**	**3.59**	**279**	*e*P	**P**	**19 28 23.4**	**+0.4**
BOD				pmax	pmax		
	comp=Z,309nm,0.9s						
UKT	**Uakit**	**4.33**	**247**	*e*P	**P**	**19 28 44.4**	**+11**
UKT				pmax	pmax		
	comp=Z,178nm,0.7s						
YOA	**Uoyan**	**5.06**	**259**	⇑*i*P	**P**	**19 29 01.8**	**+18**
YOA				pmax	pmax		
	comp=Z,895nm,1.3s						
KMO	**Kumora**	**5.42**	**258**	*e*P	**P**	**19 28 49.8**	**+0.9**
KMO				*e*S	**S**	**19 29 51.0**	**0.0**
KMO				pmax	pmax		
	comp=Z,75nm,0.7s						
KMO				smax			
	comp=N,3µm,1.2s						
YLYR	**Ulyunkhan**	**5.87**	**248**	*e*P	**P**	**19 28 57.4**	**+2.3**
YLYR				pmax	pmax		
	comp=Z,123nm,0.7s						
YAK	**Yakutsk**	**6.52**	**41**	*e*Pn	**Pn**	**19 28 58.6**	**-5.9**
	comp=Z,303nm,0.4s						
YAK	**Yakutsk**	**6.52**	**41**	*e*P	**P**	**19 29 01.6**	**-2.7**
YAK				*e*S	**S**	**19 30 12.2**	**-6.1**
YAK				pmax	pmax		
	comp=N,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				smax			
	comp=N,82nm,1.1s						
YAK				smax			
	comp=E,72nm,1.0s						
YAK				smax			
	comp=Z,51nm,1.0s						
YAK				MLR	MLR		
	comp=Z,495nm,7.0s						
CIT	**Chita**	**6.77**	**220**	*e*P	**P**	**19 29 06.2**	**-1.7**
CIT				*e*S	**S**	**19 30 22.2**	**-2.5**
CIT				pmax	pmax		
	comp=Z,220nm,1.2s						
CIT				smax			
	comp=N,4µm,1.2s						
HIA	**Hailar**	**8.17**	**184**	*e*Pn	**P**	**19 29 22.1**	**-5.2**
KLR	**Kul'dur**	**10.53**	**136**	*e*P	**P**	**19 29 58.1**	**-1.8**
SONM	**Songino Array**	**12.88**	**228**	Pn	**P**	**19 30 30.6**	**-1.0**
	comp=N,0.3nm,0.3s,baz=35,slow=14,SNR=6.1						
SONM				Lg		19 34 14.6	
	comp=N,7.2nm,0.3s,baz=28,slow=28,SNR=5.8						
TIXI	**Tiksi**	**14.71**	**10**	*i* P	**P**	**19 30 49.7**	**-5.6**
TIXI				pmax	pmax		
	comp=Z,20nm,0.6s						
HHC	**Hu-ho-hao-te**	**17.57**	**203**	*e*P	**P**	**19 31 35.5**	**+3.6**
HHC				AP		19 31 39.3	
HHC				XP		19 31 42.9	
HHC				PP	PP	19 31 51.3	+4.8
HHC				S	**S**	**19 34 52.3**	**+8.0**
HHC				XS		19 34 58.3	
HHC				AMB	AMB		
	comp=Z,180nm,8.4s						
HHC				LR	LR		
	comp=N,970nm,9.6s						
HHC				LR	LR		
	comp=E,1µm,9.6s						
HHC				LR	LR		
	comp=Z,1µm,10.8s						
ASAJ	**Asahikawa**	**19.11**	**125**	P	**P**	**19 31 51.4**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=171,slow=19,SNR=3.6						
INCN	**Inchon**	**20.32**	**166**	P	**P**	**19 32 05.8**	**+1.8**
	comp=Z,34nm,0.8s						
ZAL	**Zalesovo**	**20.35**	**276**	P	**P**	**19 32 03.8**	**-0.3**

	comp=Z,6.8nm,0.9s,baz=41,slow=11,SNR=16						
KS15	Wonju Array Si	20.54	163	*e*P	P	19 32 07.6	+1.3
PET	Petropavlovsk	21.93	85	P	P	19 32 21.1	+1.0
	comp=Z,132nm,1.5s,mb5.2						
PET	Petropavlovsk	21.93	85	P	P	19 32 21.1	+1.0
PET				pmax	pmax		
	comp=Z,132nm,1.5s,mb5.1						
GTA	Gaotai	22.53	226	*e*P	P	19 32 29.7	+3.5
GTA				AP		19 32 34.4	
GTA				XP		19 32 37.0	
BILL	Bilibino	22.86	44	*e*P	P	19 32 30.1	+0.9
	comp=Z,18nm,1.1s,mb4.4						
BILL	Bilibino	22.86	44	⇑*e*P	P	19 32 30.4	+1.3
BILL						19 32 55.0	
BILL				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
MAJO	Matsushiro	23.93	143	P	P	19 32 39.2	-0.6
	comp=Z,17nm,1.3s,mb4.3						
MAJO	Matsushiro	23.93	143	P	P	19 32 39.2	-0.6
MAJO				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.3						
MJAR	Matsushiro Arr	23.93	143	P	P	19 32 41.0	+1.1
	comp=Z,3.4nm,0.9s,mb3.8,baz=338,slow=13,SNR=5.9						
KURK	Kurchatov	25.21	273	*e*P	P	19 32 52.5	+0.5
	comp=Z,8.8nm,0.9s,mb4.3						
KURK	Kurchatov	25.21	273	*e*P	P	19 32 52.5	+0.4
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
JNU	Nakatsue	25.27	160	P	P	19 32 53.9	+1.1
	comp=Z,8.9nm,0.9s,mb4.3,baz=117,slow=7.1,SNR=5.5						
MKAR	Makanchi Array	25.49	262	P	P	19 32 55.5	+0.8
	comp=Z,7.0nm,0.8s,mb4.3,baz=56,slow=8.7,SNR=24						
CHKZ	Chkalovo	28.02	284	*e*P	P	19 33 17.0	-0.9
	comp=Z,5.6nm,0.8s,mb4.2						
CHKZ	Chkalovo	28.02	284	*e*P	P	19 33 17.0	-0.9
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
ENH	Enshi	28.21	201	*e*P	P	19 33 20.3	+0.4
	comp=Z,3.5nm,0.7s,mb4.1						
BVAR	Borovoye Array	28.45	283	P	P	19 33 21.6	-0.2
	comp=Z,3.2nm,0.7s,mb4.1,baz=56,slow=11,SNR=14						
BRVK	Borovoye	28.49	283	*e*P	P	19 33 21.6	-0.5
	comp=Z,5.6nm,0.8s,mb4.2						
BRVK				*e*		19 33 41.4	
BRVK	Borovoye	28.49	283	*e*P	P	19 33 21.6	-0.5
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
AAK	Ala-Archa	32.41	263	*e*P	P	19 33 57.1	+0.1
	comp=Z,7.0nm,1.0s,mb4.5						
AAK	Ala-Archa	32.41	263	*e*P	P	19 33 57.1	+0.2
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
ARU	Arti	32.86	295	*e*P	P	19 34 01.1	+0.4
	comp=Z,5.3nm,0.9s,mb4.5						
ARU	Arti	32.86	295	⇓*i*P	P	19 34 01.6	+0.9
ARU				*e*		19 35 10.2	
ARU				*e*PPP	PPP	19 35 24.6	-2.2
ARU				*e*S	S	19 39 23.2	+8.4
ARU				*e*		19 44 24.2	
ARU				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
AKTO	Aktyubinsk	36.33	287	P	P	19 34 28.9	-1.5
	comp=Z,0.8nm,0.4s,mb4.0,baz=69,slow=13,SNR=3.9						
AKTO	Aktyubinsk	36.33	287	P	P	19 34 29.0	-1.4
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ORR	Orenburg	37.31	290	*e*P	P	19 34 40.0	+1.3
ORR				MLR	MLR		
	comp=Z,10µm,15.0s,MS5.7						
KLMR	Klimovskoe	39.28	310	*e*P	P	19 34 54.5	-0.4
KLMR				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.1						
ARCES	ARCESS Array B	39.64	327	P	P	19 34 57.7	-0.2
	comp=Z,4.7nm,0.8s,mb4.3,baz=53,slow=12,SNR=7.4						
ARCES	ARCESS Array B	39.64	327	P	P	19 34 57.7	-0.2
COLA	College	41.04	41	*e*P	P	19 35 10.3	+0.7
	comp=Z,6.1nm,0.9s,mb4.2						
COLA	College	41.04	41	*e*P	P	19 35 10.3	+0.7
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
ILAR	Eielson Array	41.44	40	P	P	19 35 13.5	+0.7
	comp=Z,2.5nm,0.9s,mb3.9,baz=297,slow=9.0,SNR=23						
INK	Inuvik	43.48	31	P	P	19 35 30.7	+1.4
	comp=Z,3.7nm,1.0s,mb4.1,baz=297,slow=11,SNR=5.4						
OBN	Obninsk	43.92	305	P	P	19 35 33.5	+0.6
	comp=Z,22nm,1.0s,mb4.8						
OBN	Obninsk	43.92	305	⇑*e*P	P	19 35 33.2	+0.2
OBN				*e*		19 37 24.5	
OBN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
VRHR	Novokhopersk	44.14	297	*e*P	P	19 35 34.3	-0.5
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.7s						
FINES	FINESS Array B	44.22	317	P	P	19 35 35.5	+0.2
	comp=E,13nm,0.8s,mb4.7,baz=59,slow=11,SNR=16						
VSU	Vasula	45.90	313	*e*P	P	19 35 49.4	+0.6
NB2	NORSAR Subarra	49.69	323	P	P	19 36 18.3	0.0
	comp=E,2.1nm,0.6s,mb4.3,baz=39,slow=7.0						
NOA	NORSAR Array B	49.69	323	P	P	19 36 18.2	-0.1
	comp=E,4.7nm,0.9s,mb4.5,baz=36,slow=7.1,SNR=8.9						
NAO	NORSAR Subarra	49.98	323	P	P	19 36 18.3	-2.2
	comp=E,2.1nm,0.6s,mb4.3						
NAO	NORSAR Subarra	49.98	323	P	P	19 36 18.3	-2.2
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
AKASG	Malin Array Be	50.17	304	P	P	19 36 22.4	+0.2
	comp=Z,3.2nm,0.6s,mb4.5,baz=42,slow=8.6,SNR=20						
SUW	Suwalki	50.41	311	*e*P	P	19 36 19.6	-4.3
	comp=Z,26nm,0.9s,mb5.3						
SUW	Suwalki	50.41	311	*e*P	P	19 36 19.6	-4.3
SUW				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.3						
YKA	Yellowknife Ar	53.03	29	P	P	19 36 42.3	-1.2
	comp=Z,1.5nm,0.8s,mb4.0,baz=331,slow=7.4,SNR=3.6						
YKA	Yellowknife Ar	53.03	29	P	P	19 36 42.3	-1.2
KWP	Kalwaria	53.82	307	*e*P	P	19 36 49.9	+0.4
	comp=Z,13nm,0.8s,mb4.9						
KWP	Kalwaria	53.82	307	*e*P	P	19 36 49.9	+0.4
KWP				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
KOLS	Kolonicke sedl	54.54	307	*e*P	P	19 36 54.9	+0.1
STHS	Stebnicka Huta	54.62	308	*e*P	P	19 36 57.2	+1.9
CRVS	Cervenica-Dubn	54.91	307	*e*P	P	19 36 59.1	+1.6
KECS	Kecovo	55.65	308	*e*P	P	19 37 03.0	+0.2
MORC	Moravsky Berou	55.90	310	*e*P	P	19 37 03.2	-1.4
	comp=Z,6.4nm,1.0s,mb4.6						
MORC	Moravsky Berou	55.90	310	*e*P	P	19 37 03.2	-1.4
MORC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
DPC	Dobruska-Polom	55.95	311	*e*P	P	19 37 05.4	+0.4
DPC				*e*pP	pP	19 37 08.0	-7.1
UPC	Upice	55.95	312	*e*P	P	19 37 05.3	+0.3
UPC				*e*pP	pP	19 37 08.0	-7.1
BRTR	Keskin Array B	56.14	292	P	P	19 37 06.8	+0.3
	comp=Z,0.5nm,0.6s,mb3.7,baz=23,slow=6.0,SNR=4.3						
PSZ	Piszkesteto	56.34	307	*e*P	P	19 37 07.1	-0.7
	comp=Z,11nm,0.8s,mb5.0						
PSZ	Piszkesteto	56.34	307	*e*P	P	19 37 07.1	-0.7
PSZ				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
VYHS	Vyhne	56.34	309	*e*P	P	19 37 08.5	+0.7
CLL	Collm	56.52	314	P	P	19 37 08.3	-0.8
	comp=Z,logA/T=1.1,mb4.9						
CLL	Collm	56.52	314	*i* P	P	19 37 08.3	-0.8
	comp=Z,8.0nm,0.7s,mb4.9						
CLL	Collm	56.52	314	*i* P	P	19 37 08.3	-0.8
CLL				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
PRU	Pruhonice	56.95	312	*e*P	P	19 37 12.3	+0.1
ZST	Bratislava	57.31	309	*e*P	P	19 37 15.0	+0.3
MOX	Moxa	57.58	315	*i* P	P	19 37 16.4	-0.2
	comp=Z,logA/T=1.2,mb5.0						
MOX	Moxa	57.58	315	*e*P	P	19 37 16.4	-0.2
	comp=Z,13nm,0.9s,mb5.0						
MOX	Moxa	57.58	315	*e*P	P	19 37 16.4	-0.2
MOX				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
NKC	Novy Kostel	57.59	314	*e*P	P	19 37 16.5	-0.2
NKC				*e*pP	pP	19 37 19.4	-7.4
KHC	Kasperske Hory	58.01	312	*e*P	P	19 37 19.9	+0.3
KHC				*e*pP	pP	19 37 22.4	-7.4
GEC2	GERESS Array S	58.19	312	*e*P	P	19 37 20.5	-0.4
	comp=Z,6.0nm,0.9s,mb4.6						
GEC2	GERESS Array S	58.19	312	*e*P	P	19 37 20.5	-0.4
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
GERES	GERESS Array B	58.19	312	P	P	19 37 21.0	+0.1
	comp=Z,4.1nm,0.8s,mb4.5,baz=37,slow=6.7,SNR=25						
WET	Wettzell	58.28	313	*e*P	P	19 37 21.8	+0.3
	comp=Z,9.0nm,1.0s,mb4.8						
WET	Wettzell	58.28	313	*e*P	P	19 37 21.8	+0.3
WET				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
GRA1	Grafenberg Arr	58.50	314	*e*P	P	19 37 23.2	+0.2
GRA1				*e*pP	pP	19 37 25.7	-7.4
GRF	Grafenberg Arr	58.50	314	*e*P	P	19 37 23.2	+0.2
GRF				*e*pP	pP	19 37 25.7	-7.4
ARSA	Arzberg	58.71	310	⇓*i*P	P	19 37 25.0	+0.4
	comp=Z,5.4nm,1.1s,mb4.5						
MOA	Molln	58.75	311	⇓*i*P	P	19 37 25.1	+0.3
	comp=Z,6.6nm,0.9s,mb4.7						
TNS	Taunus Mts	59.13	316	*e*P	P	19 37 27.2	-0.2
	comp=Z,5.0nm,0.8s,mb4.6						
TNS	Taunus Mts	59.13	316	*e*P	P	19 37 27.2	-0.2
TNS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
OBKA	Obir	59.70	310	⇓*i*P	P	19 37 32.0	+0.6
	comp=Z,9.7nm,0.9s,mb4.8						
KBA	Koelnbreinsper	59.74	311	⇓*i*P	P	19 37 32.9	+1.2
	comp=Z,12nm,0.8s,mb5.0						
CSS	Prodhromos	59.96	289	P	P	19 37 34.3	+0.9
	comp=Z,42nm,1.4s,mb5.3						
WATA	Walderalm	60.25	312	⇓*i*P	P	19 37 36.1	+0.9
	comp=Z,3.6nm,0.5s,mb4.6						
WTTA	Wattenberg	60.29	312	⇓*i*P	P	19 37 36.2	+0.7
	comp=Z,10.0nm,1.2s,mb4.7						
MOTA	Moosalm	60.44	313	⇓*i*P	P	19 37 36.7	+0.3
	comp=Z,6.9nm,0.7s,mb4.8						
SQTA	Sankt Quirin	60.49	312	⇓*i*P	P	19 37 37.9	+1.0
	comp=Z,3.9nm,0.6s,mb4.6						
BFO	Black Forest	60.72	315	*e*P	P	19 37 38.3	0.0
	comp=Z,13nm,1.3s,mb4.9						
BFO	Black Forest	60.72	315	*e*P	P	19 37 38.3	0.0
BFO				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.9						
BAIF	Baives	60.82	319	*e*P	P	19 37 37.5	-1.5
	comp=Z,27nm,1.1s,mb5.0						
BAIF	Baives	60.82	319	*e*P	P	19 37 37.5	-1.5
BAIF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
DAVA	Damuels	60.97	313	⇑*i*P	P	19 37 35.6	-4.5
	comp=Z,6.2nm,1.2s,mb4.6						
CDF	Champ du Feu	61.05	316	*e*P	P	19 37 39.3	-1.3
	comp=Z,2.2nm,0.6s,mb4.2						
CDF	Champ du Feu	61.05	316	*e*P	P	19 37 39.3	-1.3
CDF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1						
HINF	Hinteralfeld	61.70	316	*e*P	P	19 37 43.5	-1.5
HAU	Haudompre	61.74	316	*e*P	P	19 37 44.8	-0.4
MEZF	Maizieres J'vi	61.81	317	*e*P	P	19 37 45.6	-0.1
LOR	Lormes	63.28	317	*e*P	P	19 37 54.6	-0.9
	comp=Z,6.3nm,0.7s,mb4.5						
LOR	Lormes	63.28	317	*e*P	P	19 37 54.6	-0.9
LOR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.5						
VLC	Villacollemand	63.33	311	*e*P	P	19 37 54.2	-1.6
	comp=Z,25nm,0.9s,mb5.3						
AQU	L'Aquila	63.54	308	*e*P	P	19 37 56.0	-1.1
	comp=Z,21nm,0.8s,mb5.2						
AQU	L'Aquila	63.54	308	*e*P	P	19 37 56.1	-1.1
AQU				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
FLN	La Foliniere	63.55	321	*e*P	P	19 37 56.6	-0.6
	comp=Z,38nm,1.1s,mb5.0						
FLN	La Foliniere	63.55	321	*e*P	P	19 37 56.6	-0.6
FLN				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.0						
SSF	Saint Saulge	63.58	317	*e*P	P	19 37 56.7	-0.7
	comp=Z,20nm,1.5s,mb4.9						
SSF	Saint Saulge	63.58	317	*e*P	P	19 37 56.7	-0.7
SSF				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.9						
LPL	La Plagne	63.66	314	*e*P	P	19 37 57.6	-0.3
	comp=Z,37nm,1.3s,mb5.0						
LPL	La Plagne	63.66	314	*e*P	P	19 37 57.6	-0.3
LPL				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
CII	Carovilli	63.67	307	*e*P	P	19 37 58.0	-0.1
	comp=Z,48nm,1.6s,mb5.3						
LPG	La Plagne	63.67	314	*e*P	P	19 37 57.7	-0.2
	comp=Z,14nm,0.9s,mb4.7						
LPG	La Plagne	63.67	314	*e*P	P	19 37 57.7	-0.2
LPG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
AVF	Avril sur Loir	63.87	317	*e*P	P	19 37 58.6	-0.6
GRR	Gorron	64.00	321	*e*P	P	19 37 59.7	-0.4
MBDF	Montbardon	64.30	314	*e*P	P	19 38 01.7	-0.4
	comp=Z,9.5nm,0.7s,mb4.6						
MBDF	Montbardon	64.30	314	*e*P	P	19 38 01.7	-0.4
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
ORIF	Oris-en-Rattie	64.49	314	*e*P	P	19 38 02.9	-0.4
	comp=Z,5.1nm,0.6s,mb4.4						
ORIF	Oris-en-Rattie	64.49	314	*e*P	P	19 38 02.9	-0.4
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
TCF	Toulx Ste Croi	64.71	318	*e*P	P	19 38 04.1	-0.6
	comp=Z,89nm,1.7s,mb5.2						
TCF	Toulx Ste Croi	64.71	318	*e*P	P	19 38 04.1	-0.6
TCF				pmax	pmax		
	comp=Z,45nm,1.7s,mb5.2						
SBF	Sospel	64.76	313	*e*P	P	19 38 05.0	-0.1
	comp=Z,70nm,1.3s,mb5.2						
SBF	Sospel	64.76	313	*e*P	P	19 38 05.0	-0.1
SBF				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.2						
VIVF	Saint-Julien-l	65.01	315	*e*P	P	19 38 06.3	-0.3
QUIF	Quistinic	65.19	322	*e*P	P	19 38 06.6	-1.2
	comp=Z,171nm,1.8s,mb5.5						
QUIF	Quistinic	65.19	322	*e*P	P	19 38 06.6	-1.2
QUIF				pmax	pmax		
	comp=Z,86nm,1.8s,mb5.5						
PGF	Pioggiola	65.23	311	*e*P	P	19 38 07.4	-0.7
	comp=Z,29nm,0.9s,mb5.0						
PGF	Pioggiola	65.23	311	*e*P	P	19 38 07.4	-0.7
PGF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
FRF	La Foret Royal	65.33	313	*e*P	P	19 38 08.3	-0.4
SMRF	Simiane la Rot	65.40	314	*e*P	P	19 38 08.5	-0.7
LMR	La Mourre	65.57	313	*e*P	P	19 38 10.0	-0.3
RJF	Les Rejaudoux	65.81	317	*e*P	P	19 38 11.7	-0.1
LASF	Ste Croix	65.98	315	*e*P	P	19 38 12.2	-0.7
	comp=Z,99nm,1.4s,mb5.3						
CHMT	Chamberlain Mo	66.83	37	*e*P	P	19 38 18.6	+0.4
SCHQ	Schefferville	67.96	5	P	P	19 38 24.2	-1.0
	comp=Z,5.0nm,0.8s,mb4.6,baz=6.9,slow=8.2,SNR=3.3						
SCHQ	Schefferville	67.96	5	P	P	19 38 24.2	-1.0
HLID	Hailey	69.39	40	*e*P	P	19 38 34.7	+0.5
	comp=Z,2.3nm,0.8s,mb4.2						
ELK	Elko	71.58	42	*e*P	P	19 38 49.3	+1.8
	comp=Z,2.7nm,1.0s,mb4.1						
ELK	Elko	71.58	42	*e*P	P	19 38 49.3	+1.8
ELK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PDAR	Pinedale Array	71.72	37	P	P	19 38 48.6	+0.3
	comp=Z,0.9nm,0.7s,mb3.8,baz=23,slow=3.0,SNR=8.1						
HWUT	Hardware Ranch	72.10	39	*e*P	P	19 38 51.0	+0.5
	comp=Z,11nm,1.0s,mb4.7						
RSSD	Black Hills	72.18	32	P	P	19 38 49.7	-1.3
	comp=Z,2.8nm,0.7s,mb4.3						
RSSD	Black Hills	72.18	32	P	P	19 38 49.7	-1.3
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NVAR	Mina Array Bea	72.48	45	P	P	19 38 54.4	+1.5
	comp=Z,2.1nm,0.9s,mb4.1,baz=337,slow=3.6,SNR=8.5						
ESDC	Sonseca Array	72.70	318	P	P	19 38 54.7	+0.6
	comp=Z,2.6nm,0.7s,mb4.3,baz=22,slow=6.4,SNR=7.0						
ESLA	Sonseca Array	72.70	318	*e*P	P	19 38 53.1	-1.0
	comp=Z,3.2nm,1.1s,mb4.2						
DUG	Dugway	72.93	40	P	P	19 38 55.9	+0.5
	comp=Z,7.5nm,1.2s,mb4.5						
DUG	Dugway	72.93	40	P	P	19 38 55.9	+0.5
DUG				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
TPH	Tonopah	73.20	44	P	P	19 38 57.5	+0.4
	comp=Z,12nm,1.2s,mb4.7						
TPH	Tonopah	73.20	44	P	P	19 38 57.5	+0.4
TPH				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
TPNV	Topopah Spring	74.56	44	P	P	19 39 04.8	-0.2
	comp=Z,3.1nm,1.0s,mb4.2						
TPNV	Topopah Spring	74.56	44	P	P	19 39 04.8	-0.2
TPNV				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.2						
WRAB	Tennant Creek	77.89	167	*e*P	P	19 39 22.6	-1.5
	comp=Z,13nm,1.1s,mb4.8						
WRAB	Tennant Creek	77.89	167	*e*P	P	19 39 22.6	-1.6
WRAB				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
WRA	Warramunga Arr	77.90	167	P	P	19 39 23.7	-0.5
	comp=Z,3.6nm,0.9s,mb4.3,baz=350,slow=6.4,SNR=23						
BAR	Barrett	78.16	46	*e*P	P	19 39 25.4	0.0
ANMO	Albuquerque	79.82	38	P	P	19 39 36.3	+1.9
	comp=Z,3.8nm,1.1s,mb4.2						
LPM	Los Pinos Moun	80.34	38	*e*P	P	19 39 38.5	+1.2

CRAAG ***10*** *19:29:52.7,57.48N×120.37E,Mw6.0*

BJI ***10*** *19:29:52.7,57.40N×120.84E,h11*^{km}*,mB6.2,mb5.6,ML6.6,Ms6.4,Msz6.2*

MOS ***10*** *19:29:53.9±0.9,57.48N×120.54E,h17*^{km}*,mb5.9/129,MS5.7/66,Error ellipse: s-maj=6.4km s-min=3.3km az=110.7*

IDC ***10*** *19:29:53.0±0.4,57.48N×120.64E,mb5.5/28,mb1 5.6/30,mb1mx5.6/30,mbtmp5.5/30,ML4.7/2,MS5.5/21,Ms1 5.5/21,ms1mx5.5/24,Error ellipse: s-maj=11.4km s-min=10.1km az=27.0*

BGS ***10*** *19:29:54.3,57.47N×120.59E,h6*^{km}*,mb5.6*

HRVD ***10*** *19:29:54.1±0.1,57.48N×120.63E,h12*^{km}*,MW5.8/73, Centroid moment Tensor Solution. LP body waves: s69,c149;Mantle waves: s73,c262; Half duration: 2*^{s}*0 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-6.37±.06;* $M_{\theta\theta}$*6.81±.06;* $M_{\phi\phi}$*-0.43±.07;* $M_{r\theta}$*-1.78±.18;* $M_{\theta\phi}$*0.02±.06;* $M_{\phi r}$*1.43±.20; Best double couple:* M_0*6.984×10*^{17} *NP1:* ϕ_s*258°,δ39°,λ-110°. NP2:*ϕ_s*102°,δ54°,λ-75°. Principal axes: T 7.05, Plg8°, Azm181°; N -.131, Plg12°, Azm273°; P -6.918, Plg76°, Azm60°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***10*** *19:29:54.1±0.1,57.47N×120.59E,h6*^{km}*,mb5.9/223, ME5.6,MS5.7/115,MW5.9,MW6.1(MOS) Error ellipse: s-maj=2.5km s-min=1.9km az=183.0 Broadband fault plane solution: P waves. NP1:*ϕ_s*95°,δ60°,λ-90°. NP2:* ϕ_s*275°,δ30°,λ-90°. Principal axes: T Plg15°, Azm185°; N Plg0°, Azm0°; P Plg75°, Azm5°; Moment Tensor Solution. s63 Moment tensor: Scale 10*^{17} *Nm;* M_{rr}*-7.98;* $M_{\theta\theta}$*8.01;* $M_{\phi\phi}$*-0.04;* $M_{r\theta}$*-2.07;* $M_{\theta\phi}$*-0.96;* $M_{\phi r}$*1.42; Best double couple:* M_0*8.4×10*^{17} *NP1:*ϕ_s*269°,δ38°,λ-103°. NP2:*ϕ_s*105°,δ53°,λ-80°. Principal axes: T 8.43, Plg8°, Azm188°; N .01, Plg8°, Azm279°; P -8.44, Plg79°, Azm53°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Khani and Olekma, [III] at Chara and Novaya Chara and [II] at Bodaybo and Chita.

ISC 10 19:29:53.3±0.1**,57.48N**±0.01×**120.53E**±0.03**,h12**^{km}**,**
h12^{km}±1.2^{km}**:pP-P,n1108,**σ**0**^{s}**91**/1099**,mb5.8**/320**,**
MS5.7/167**,48C-177D,Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	Chara	1.36	246	*e*P	Pn	19 30 20.3	+2.1
NRGR	Nerungri	2.44	108	*e*P	Pn	19 30 33.5	-0.1
NRGR				*e*S	Sn	19 31 03.0	-0.6
NRGR				smax			
	comp=N,62nm,0.3s						
CLNS	Chul'man	2.47	103	*e*P	Pn	19 30 34.4	+0.4
CLNS				*e*S	Sn	19 30 58.7	-5.6
CLNS				pmax	pmax		
	comp=E,507nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,2µm,0.3s						
CLNS				pmax	pmax		
	comp=N,1µm,0.4s						
CLNS				smax			
	comp=N,1µm,0.3s						
CLNS				smax			
	comp=Z,1µm,0.3s						
CLNS				smax			
	comp=E,3µm,0.4s						
CLNS				MLR	MLR		
	comp=Z,165µm,13.0s						
NLYR	Nelyaty	2.82	251	*e*P	Pn	19 30 42.6	+3.5
NLYR				*e*		19 31 20.1	
TUP	Tupik	3.08	186	*e*P	Pn	19 30 41.7	-1.1
TUP				*e*S	Sn	19 31 15.6	-4.3
TUP				pmax	pmax		
	comp=Z,20µm,0.8s						
BOD	Bodaibo	3.52	278	*e*P	Pn	19 30 52.6	+3.5
SVKR	Severomuysk	4.07	253	*e*P	Pn	19 31 01.7	+4.9
SVKR				pmax	pmax		
	comp=Z,19µm,1.7s						
UKT	Uakit	4.31	245	*e*P	Pn	19 31 12.4	+12
UKT				pmax	pmax		
	comp=Z,4µm,0.7s						
YOA	Uoyan	5.02	258	⇓*i*P	Pn	19 31 28.9	+19
YOA				pmax	pmax		
	comp=Z,3µm,1.4s						
KMO	Kumora	5.38	257	*e*P	Pn	19 31 33.9	+18
KMO				*e*S	Sn	19 32 15.8	-2.3
YLYR	Ulyunkhan	5.84	247	*e*P	Pn	19 31 25.6	+3.7
YLYR				pmax	pmax		
	comp=Z,5µm,1.6s						
YAK	Yakutsk	6.50	42	*e*Pn	Pn	19 31 30.8	-0.4
YAK	Yakutsk	6.50	42	*e*P	Pn	19 31 31.8	+0.7
YAK				*e*S	Sn	19 32 40.0	-5.9
YAK				pmax	pmax		
	comp=Z,151nm,0.6s						
YAK				pmax	pmax		
	comp=N,150nm,1.0s						
YAK				pmax	pmax		
	comp=E,160nm,1.1s						
YAK				smax			
	comp=N,2µm,0.9s						
YAK				smax			
	comp=E,1µm,0.9s						
YAK				smax			
	comp=Z,2µm,1.0s						
YAK				MLR	MLR		
	comp=Z,44µm,7.0s						
OGRR	Ongureny	8.27	248	*e*P	P	19 31 57.8	+1.8
OGRR				pmax	pmax		
	comp=Z,2µm,2.1s						
KPC	Khapcheranga	9.17	215	*e*P	P	19 32 08.6	+0.2
TRG	Tyrgan	9.39	246	*e*P	P	19 32 14.6	+3.1
IRK	Irkutsk	10.72	248	*e*P	P	19 32 30.9	+1.2
SONM	Songino Array	12.89	228	Pn	P	19 32 59.3	+0.4
	comp=Z,3.3nm,0.3s,baz=29,slow=15,SNR=51						
SONM				Lg		19 36 39.2	
	comp=Z,51nm,0.3s,baz=36,slow=28,SNR=14						
SONM				LR	LR	19 38 25.7	
	comp=Z,45µm,20.3s,baz=35,slow=40						
SONM	Songino Array	12.89	228	Pn	P	19 32 59.3	+0.4
SONM				Lg		19 36 39.2	
SONM				LR	LR	19 38 25.7	
CN2	Changchun	14.04	165	*e*P	P	19 33 12.2	-1.8
CN2				*e*XP		19 33 19.0	
CN2				PP	PP	19 33 23.9	-1.3
CN2				*e*S	S	19 35 48.5	-2.2
CN2				AMB	AMB		
	comp=Z,70nm,1.2s						
CN2				AMB	AMB		
	comp=Z,5µm,7.0s						
CN2				LR	LR		
	comp=N,135µm,10.0s						
CN2				LR	LR		
	comp=E,125µm,10.0s						
CN2				LR	LR		
	comp=Z,139µm,13.0s						
MDJ	Mudanjiang	14.07	152	P	P	19 33 11.6	-2.8
MDJ				AP		19 33 14.0	
MDJ				XP		19 33 15.6	
MDJ				S	S	19 35 46.2	-5.1
MDJ				SCP		19 42 07.3	
MDJ				PCS		19 42 08.5	
MDJ				SCS	ScS	19 45 44.5	+1.6
MDJ				AMB	AMB		
	comp=Z,4µm,10.1s						
MDJ				LR	LR		

	comp=N,43µm,10.6s						
MDJ				LR	LR		
	comp=E,144µm,10.4s						
MDJ				LR	LR		
	comp=Z,77µm,7.5s						
MDJ	**Mudanjiang**	**14.07**	**152**	*e*Pn	**P**	**19 33 10.4**	**-4.0**
	comp=Z,72nm,0.8s						
TIXI	**Tiksi**	**14.64**	**10**	⇑*i*P	**P**	**19 33 18.4**	**-3.4**
TIXI	**Tiksi**	**14.64**	**10**	*e*P	**P**	**19 33 15.2**	**-6.6**
TIXI				*e*S	**S**	**19 35 59.6**	**-5.3**
TIXI				pmax	pmax		
	comp=Z,1µm,0.7s						
TIXI				pmax	pmax		
	comp=N,604nm,0.8s						
TIXI				pmax	pmax		
	comp=E,571nm,1.8s						
TIXI				MLR	MLR		
	comp=Z,82µm,15.0s						
TIXI				MLR	MLR		
	comp=N,59µm,13.0s						
TIXI				MLR	MLR		
	comp=E,9µm,10.0s						
SNY	**Shenyang**	**15.79**	**172**	⇑P	**P**	**19 33 36.9**	**0.0**
SNY				AP		19 33 44.9	
SNY				XP		19 33 47.8	
SNY				S	**S**	**19 36 32.7**	**+0.7**
SNY				AMB	AMB		
	comp=Z,300nm,1.8s						
SNY				AMB	AMB		
	comp=Z,3µm,13.2s						
SNY				LR	LR		
	comp=N,71µm,6.9s						
SNY				LR	LR		
	comp=E,81µm,7.2s						
SNY				LR	LR		
	comp=Z,41µm,14.4s						
MA2	**Magadan**	**15.87**	**70**	*e*P	**P**	**19 33 34.7**	**-3.0**
	comp=Z,670nm,0.9s						
MA2	**Magadan**	**15.87**	**70**	*ce*P	**P**	**19 33 35.9**	**-1.8**
MA2				S	**S**	**19 36 30.7**	**-2.9**
MA2				pmax	pmax		
	comp=E,300nm,0.9s						
MA2				pmax	pmax		
	comp=Z,400nm,0.9s						
MA2				pmax	pmax		
	comp=N,70nm,0.8s						
VLA	**Vladivostok**	**16.07**	**149**	⇓*i*P	**P**	**19 33 40.4**	**-0.1**
SEY	**Seymchan**	**16.62**	**58**	⇓*i*P	**P**	**19 33 48.3**	**+1.0**
YSS	**Yuzh-Sakhalins**	**17.14**	**118**	⇓*e*Pn	**P**	**19 33 52.9**	**-1.0**
	comp=N,239nm,1.2s						
YSS	**Yuzh-Sakhalins**	**17.14**	**118**	*d i*P	**P**	**19 33 52.0**	**-1.9**
YSS				*e*S	**S**	**19 36 58.0**	**-5.0**
YSS				pmax	pmax		
	comp=Z,410nm,1.8s						
YSS				pmax	pmax		
	comp=N,7µm,4.0s						
YSS				pmax	pmax		
	comp=E,6µm,4.0s						
YSS				pmax	pmax		
	comp=Z,6µm,4.0s						
YSS				MLR	MLR		
	comp=N,25µm,11.0s						
YSS				MLR	MLR		
	comp=Z,27µm,11.0s						
YSS				MLR	MLR		
	comp=E,40µm,10.0s						
BTO	**Baotou**	**18.20**	**206**	*e*P	**P**	**19 34 08.6**	**+1.3**
DL2	**Dalian**	**18.60**	**177**	⇑*i*P	**P**	**19 34 12.3**	**+0.1**
DL2				S	**S**	**19 37 38.1**	**+1.7**
DL2				AMB	AMB		
	comp=Z,170nm,1.1s						
DL2				AMB	AMB		
	comp=Z,7µm,6.2s						
DL2				LR	LR		
	comp=N,41µm,8.0s						
DL2				LR	LR		
	comp=E,20µm,7.2s						
DL2				LR	LR		
	comp=Z,42µm,15.8s						
ASAJ	**Asahikawa**	**19.21**	**125**	P	**P**	**19 34 18.6**	**-0.8**
	comp=Z,4.7nm,0.3s,baz=320,slow=12,SNR=26						
ASAJ				Lg		19 39 44.5	
	baz=56,slow=24,SNR=2.5						
ZAL	**Zalesovo**	**20.29**	**275**	P	**P**	**19 34 31.1**	**-0.2**
	comp=Z,108nm,0.8s,baz=46,slow=13,SNR=36						
ZAL				Lg		19 40 34.5	
	comp=Z,104nm,1.1s,baz=353,slow=13,SNR=2.4						
INCN	**Inchon**	**20.41**	**166**	*e*P	**P**	**19 34 33.1**	**+0.3**
	comp=Z,763nm,0.9s						
INCN				LR	LR		
	comp=Z,13µm,19.0s,MS5.3						
TIY	**Taiyuan**	**20.49**	**199**	⇑P	**P**	**19 34 33.0**	**-0.5**
TIY				LR	LR		
	comp=N,60µm,14.0s						
KS15	**Wonju Array Si**	**20.63**	**163**	*e*P	**P**	**19 34 34.3**	**-0.7**
YUK	**Yuzh-Kuril’sk**	**20.77**	**119**	P	**P**	**19 34 35.0**	**-1.3**
YUK				*i* S	**S**	**19 38 29.9**	**+7.0**
YUK				pmax	pmax		
	comp=Z,10µm,5.0s						
YUK				pmax	pmax		
	comp=N,5µm,4.0s						
YUK				pmax	pmax		
	comp=E,8µm,3.0s						
YUK				smax			
	comp=N,17µm,5.0s						
YUK				smax			
	comp=E,10µm,4.0s						
YUK				MLR	MLR		
	comp=Z,28µm,14.0s,MS5.8						
YUK				MLR	MLR		
	comp=N,46µm,13.0s,MS6.0						
YUK				MLR	MLR		
	comp=E,20µm,17.0s,MS6.0						
PET	**Petropavlovsk**	**21.98**	**85**	*e*P	**P**	**19 34 48.5**	**0.0**
	comp=E,828nm,1.0s,mb6.1						
PET				LR	LR		
	comp=Z,3µm,20.0s,MS4.8						
PET	**Petropavlovsk**	**21.98**	**85**	*e*P	**P**	**19 34 47.2**	**-1.3**
PET				*e*S	**S**	**19 38 49.8**	**+4.0**
PET				pmax	pmax		
	comp=Z,4µm,6.2s						
PET				pmax	pmax		
	comp=Z,771nm,1.0s,mb6.1						
PET				pmax	pmax		
	comp=Z,8µm,5.1s						
PET				smax			
	comp=E,10µm,11.3s						
PET				smax			
	comp=N,9µm,7.7s						
PET				smax			
	comp=N,12µm,8.6s						
PET				smax			
	comp=E,8µm,11.5s						
PET				MLR	MLR		
	comp=Z,9µm,13.0s,MS5.4						
PET				MLR	MLR		
	comp=Z,11µm,11.0s						
GTA	**Gaotai**	**22.55**	**226**	P	**P**	**19 34 55.2**	**+1.0**
GTA				AP		19 34 59.3	
GTA				XP		19 35 02.4	
GTA				S	**S**	**19 38 58.2**	**+2.0**
GTA				XS		19 39 03.2	
GTA				SS	SS	19 39 36.4	-1.6
GTA				SCP		19 42 28.2	
GTA				SCS	ScS	19 46 10.1	+1.1
GTA				AMB	AMB		
	comp=Z,3µm,7.3s						
GTA				LR	LR		
	comp=N,79µm,13.0s,MS6.5						
GTA				LR	LR		
	comp=E,99µm,16.1s,MS6.5						
GTA				LR	LR		
	comp=Z,87µm,13.8s,MS6.3						
BILL	**Bilibino**	**22.85**	**44**	⇓*e*P	**P**	**19 34 57.0**	**+0.1**
	comp=Z,344nm,1.0s,mb5.7						
BILL				LR	LR		
	comp=Z,26µm,21.0s,MS5.7						
BILL	**Bilibino**	**22.85**	**44**	κ *i*P	**P**	**19 34 57.5**	**+0.6**
BILL				*e*		19 35 06.8	
BILL				*e*		19 35 20.0	
BILL				*e*S	**S**	**19 39 03.8**	**+2.4**
BILL				*e*		19 39 14.9	
BILL				*e*		19 39 58.6	
BILL				pmax	pmax		
	comp=Z,485nm,1.2s,mb5.8						
BILL				pmax	pmax		
	comp=Z,7µm,3.7s						
BILL				MLR	MLR		
	comp=Z,14µm,18.0s,MS5.5						
MAT	**Matsushiro**	**24.02**	**143**	P	**P**	**19 35 07.7**	**-1.0**
MAT				S	**S**	**19 39 23.0**	**+0.7**
MAT	**Matsushiro**	**24.02**	**143**	*e*P	**P**	**19 35 08.0**	**-0.7**
	comp=Z,27nm,1.0s						
MAT				*e*S	**S**	**19 39 23.0**	**+0.7**
MAT				LR	LR		
	comp=Z,18µm,18.0s,MS5.6						
MAT	**Matsushiro**	**24.02**	**143**	*e*P	**P**	**19 35 08.0**	**-0.7**
MAT				*e*S	**S**	**19 39 23.0**	**+0.7**
MAT				pmax	pmax		
	comp=Z,27nm,1.0s						
MAT				MLR	MLR		
	comp=Z,18µm,18.0s,MS5.6						
MAJO	**Matsushiro**	**24.03**	**143**	*e*P	**P**	**19 35 06.4**	**-2.3**
	comp=Z,83nm,0.9s,mb5.2						
MAJO				LR	LR		
	comp=Z,19µm,19.0s,MS5.6						
MAJO	**Matsushiro**	**24.03**	**143**	*e*P	**P**	**19 35 06.4**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,83nm,0.9s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,19µm,19.0s,MS5.6						
MJAR	**Matsushiro Arr**	**24.03**	**143**	P	**P**	**19 35 08.3**	**-0.4**
	comp=Z,80nm,1.0s,mb5.1,baz=332,slow=9.9,SNR=29						
MJAR				LR	LR	19 43 30.2	
	comp=Z,13µm,18.9s,MS5.4,baz=335,slow=34						
LZH	**Lanzhou**	**24.13**	**215**	P	**P**	**19 35 12.7**	**+3.0**
LZH				S	**S**	**19 39 33.0**	**+9.0**
LZH				AMB	AMB		
	comp=Z,770nm,1.5s,mb5.9						
LZH				AMB	AMB		
	comp=Z,14µm,4.2s						
LZH				LR	LR		
	comp=E,112µm,13.3s						
LZH				LR	LR		
	comp=Z,96µm,18.2s,MS6.3						
LZH	**Lanzhou**	**24.13**	**215**	P	**P**	**19 35 12.7**	**+3.0**
	comp=Z,770nm,1.5s,mb5.9						
LZH				pP		19 35 23.0	
LZH				sP		19 35 28.2	
LZH				PP	PP	19 35 52.0	+7.7
LZH				S	**S**	**19 39 33.0**	**+9.0**
LZH				sS		19 39 50.0	
LZH				SS	SS	19 40 35.0	+19
LZH				LR	LR		
	comp=Z,96µm,18.2s,MS6.3						
LZH	**Lanzhou**	**24.13**	**215**	P	**P**	**19 35 12.7**	**+3.0**
LZH				*PP		19 35 23.0	
LZH						19 35 52.0	
LZH				S	**S**	**19 39 33.0**	**+9.0**
LZH				SS	SS	19 40 35.0	+19
LZH				pmax	pmax		
	comp=Z,770nm,1.5s,mb5.9						
LZH				MLR	MLR		
	comp=Z,96µm,18.2s,MS6.3						
WMQ	**Urumqi**	**24.61**	**250**	⇑P	**P**	**19 35 16.2**	**+2.0**
WMQ				PP	PP	19 35 52.2	+1.8
WMQ				PPP	PPP	19 36 02.7	+1.7
WMQ				PCP	PcP	19 38 55.0	+1.8
WMQ				*e*S	**S**	**19 39 34.7**	**+2.6**
WMQ				XS		19 39 41.2	
WMQ				SS	SS	19 40 29.7	+1.8
WMQ				AMB	AMB		
	comp=Z,200nm,1.4s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,7µm,4.4s						
WMQ				LR	LR		
	comp=N,20µm,20.8s,MS5.7						
WMQ				LR	LR		
	comp=E,16µm,22.8s,MS5.7						
WMQ				LR	LR		
	comp=Z,14µm,13.8s						
XAN	**Xi’an**	**24.73**	**204**	P	**P**	**19 35 16.9**	**+1.4**
XAN				S	**S**	**19 39 39.1**	**+4.8**
XAN				AMB	AMB		
	comp=Z,220nm,2.4s,mb5.3						
XAN				AMB	AMB		
	comp=Z,4µm,9.4s						
XAN				LR	LR		
	comp=E,36µm,13.1s						
XAN				LR	LR		
	comp=Z,39µm,15.4s,MS6.0						
JNU	**Nakatsue**	**25.36**	**159**	P	**P**	**19 35 21.6**	**+0.1**
	comp=Z,158nm,0.9s,mb5.5,baz=58,slow=5.6,SNR=52						
JNU				Lg		19 43 19.9	
	comp=Z,20nm,1.3s,baz=257,slow=32,SNR=3.4						
JNU				LR	LR	19 45 35.2	
	comp=Z,8µm,20.4s,MS5.2,baz=348,slow=37						
MKAR	**Makanchi Array**	**25.45**	**262**	P	**P**	**19 35 22.9**	**+0.7**
	comp=Z,150nm,0.7s,mb5.6,baz=49,slow=7.5,SNR=41						
MKAR				Lg		19 43 24.1	
	comp=Z,34nm,1.1s,baz=56,slow=26,SNR=6.3						
MKAR				LR	LR	19 45 51.8	
	comp=Z,12µm,21.7s,MS5.4,baz=216,slow=38						
NJ2	**Nanjing**	**25.45**	**183**	*e*P	**P**	**19 35 22.6**	**+0.2**
NJ2				AP	pP	19 35 27.1	+1.1
NJ2				XP	sP	19 35 30.9	+3.3
NJ2				PP	PP	19 36 01.5	0.0
NJ2				S	**S**	**19 39 45.0**	**-1.4**
NJ2				XS		19 39 52.0	
NJ2				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.3						
NJ2				LR	LR		
	comp=N,69µm,13.6s,MS6.4						
NJ2				LR	LR		
	comp=E,37µm,12.1s,MS6.4						
NJ2				LR	LR		
	comp=Z,119µm,11.3s,MS6.7						
SSE	**Sheshan**	**26.38**	**179**	⇓P	**P**	**19 35 29.6**	**-1.5**
SSE				AP	pP	19 35 33.7	-0.9
SSE				XP	sP	19 35 36.3	+0.1
SSE				PP	PP	19 36 09.8	-4.2
SSE				S	**S**	**19 40 03.4**	**+1.5**
SSE				XS		19 40 09.8	
SSE				SCS	ScS	19 46 24.7	+0.3
SSE				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,1µm,5.5s						
SSE				LR	LR		
	comp=N,21µm,16.2s,MS5.8						
SSE				LR	LR		
	comp=E,9µm,16.2s,MS5.8						
SSE				LR	LR		
	comp=Z,26µm,16.4s,MS5.9						
SSE	**Sheshan**	**26.38**	**179**	⇓P	**P**	**19 35 29.6**	**-1.5**
	comp=Z,46nm,0.8s,mb5.1						
SSE				pP	pP	19 35 33.7	-0.9
SSE				sP	sP	19 35 36.3	+0.1
SSE				PP	PP	19 36 09.8	-4.2
SSE				S	**S**	**19 40 03.4**	**+1.5**
SSE				sS		19 40 09.8	
SSE				ScS	ScS	19 46 24.7	+0.3
SSE				LR	LR		
	comp=Z,26µm,16.4s,MS5.9						
WHN	**Wuhan**	**27.27**	**192**	P	**P**	**19 35 40.0**	**+0.8**
WHN				LR	LR		
	comp=Z,95µm,15.7s,MS6.5						
JHJ	**Hachijo jima 2**	**27.68**	**143**	P	**P**	**19 35 43.2**	**+0.4**
	comp=Z,389nm,0.8s,mb6.1,baz=287,slow=4.7,SNR=9.5						
JHJ				LR	LR	19 46 56.0	
	comp=Z,16µm,18.0s,MS5.7,baz=216,slow=37						
CHKZ	**Chkalovo**	**27.95**	**284**	⇓*e*P	**P**	**19 35 44.1**	**-1.0**
	comp=Z,102nm,0.9s,mb5.5						
CHKZ	**Chkalovo**	**27.95**	**284**	P	**P**	**19 35 43.8**	**-1.3**
CHKZ				pmax	pmax		
	comp=Z,101nm,0.9s,mb5.5						
ENH	**Enshi**	**28.27**	**200**	*e*P	**P**	**19 35 47.6**	**-0.6**
	comp=Z,175nm,1.1s,mb5.6						
BVAR	**Borovoye Array**	**28.38**	**283**	P	**P**	**19 35 48.8**	**-0.2**
	comp=Z,39nm,0.7s,mb5.1,baz=65,slow=8.3,SNR=28						
BRVK	**Borovoye**	**28.42**	**283**	⇓*e*P	**P**	**19 35 48.6**	**-0.7**
	comp=Z,116nm,0.9s,mb5.5						
BRVK	**Borovoye**	**28.42**	**283**	⇓*e*P	**P**	**19 35 48.6**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,116nm,0.9s,mb5.5						
CD2	**Chengdu**	**28.99**	**211**	⇑*i*P	**P**	**19 35 55.7**	**+1.0**
CD2				PP	PP	19 36 49.6	+1.0
CD2				PPP	PPP	19 37 01.6	+0.1
CD2				S	**S**	**19 40 44.9**	**+0.8**
CD2				SS	SS	19 42 13.9	+1.2
CD2				AMB	AMB		
	comp=Z,80nm,1.7s,mb5.2						
CD2				AMB	AMB		
	comp=Z,1µm,9.8s						
CD2				LR	LR		
	comp=E,18µm,9.0s						
CD2				LR	LR		
	comp=Z,12µm,12.0s,MS5.7						
FX1	**Attu Island--F**	**29.77**	**76**	P	**P**	**19 36 00.3**	**-1.2**
	comp=Z,195nm,0.9s,mb5.8,baz=336,slow=3.7,SNR=15						
FX1	**Attu Island--F**	**29.77**	**76**	*e*P	**P**	**19 35 59.4**	**-2.1**
FX1	**Attu Island--F**	**29.77**	**76**	P	**P**	**19 36 00.3**	**-1.2**
FX1				pmax	pmax		
	comp=Z,195nm,0.9s						
AAA	**Alma-Ata**	**30.61**	**261**	*i* P	**P**	**19 36 10.7**	**+1.6**
JOW	**Kunigami**	**31.12**	**167**	LR	LR	19 49 51.5	
	comp=Z,25µm,18.4s,MS5.9,baz=5.7,slow=38						
TKM2	**Tokmak 2**	**31.58**	**262**	P	**P**	**19 36 18.6**	**+1.1**
	SNR=43						
USP	**Ospenovka**	**31.93**	**264**	P	**P**	**19 36 21.5**	**+0.9**
	SNR=35						
CHMS	**Chumysh**	**31.98**	**263**	P	**P**	**19 36 21.9**	**+0.8**
	SNR=40						
KBK	**Karagaybulak**	**32.10**	**262**	P	**P**	**19 36 23.2**	**+1.1**
	SNR=46						
FRU	**Bishkek**	**32.16**	**263**	⇓*i*P	**P**	**19 36 23.5**	**+0.8**
FRU				*e*S	**S**	**19 41 39.0**	**+5.1**
FRU				pmax	pmax		
	comp=Z,2µm,3.0s						
FRU				pmax	pmax		
	comp=Z,3µm,5.0s						
FRU				smax			
	comp=E,2µm,9.0s						
AAK	**Ala-Archa**	**32.36**	**263**	P	**P**	**19 36 25.3**	**+0.9**
	SNR=43						
AAK	**Ala-Archa**	**32.36**	**263**	⇓*e*P	**P**	**19 36 24.0**	**-0.4**
	comp=E,66nm,0.8s,mb5.5						
AAK	**Ala-Archa**	**32.36**	**263**	⇓*e*P	**P**	**19 36 24.0**	**-0.4**
AAK				pmax	pmax		
	comp=Z,66nm,0.8s,mb5.5						
TATO	**Taipei**	**32.48**	**178**	*e*P	**P**	**19 36 25.3**	**-0.3**
	comp=Z,303nm,1.7s,mb5.8						
TATO				LR	LR		
	comp=Z,13µm,19.0s,MS5.7						
GYA	**Guiyang**	**32.53**	**204**	⇓*i*P	**P**	**19 36 25.9**	**-0.2**
GYA				AP	pP	19 36 30.4	+0.7
GYA				XP	sP	19 36 32.8	+1.5
GYA				PP	PP	19 37 30.4	-4.3
GYA				S	**S**	**19 41 34.0**	**-5.9**
GYA				SCP		19 42 59.6	
GYA				SCS	ScS	19 46 56.1	+2.8
GYA				AMB	AMB		
	comp=Z,200nm,1.6s,mb5.8						
GYA				AMB	AMB		
	comp=Z,2µm,5.7s						
GYA				LR	LR		
	comp=N,32µm,14.1s,MS6.2						
GYA				LR	LR		
	comp=E,10µm,11.4s,MS6.2						
GYA				LR	LR		
	comp=Z,30µm,14.1s,MS6.1						
QZH	**Quanzhou**	**32.54**	**183**	⇑*i*P	**P**	**19 36 25.3**	**-0.8**
QZH				S	**S**	**19 41 34.4**	**-5.6**
QZH				AMB	AMB		
	comp=Z,240nm,1.4s,mb5.9						
QZH				AMB	AMB		
	comp=Z,2µm,4.5s						
QZH				LR	LR		
	comp=N,28µm,11.2s						
QZH				LR	LR		
	comp=E,11µm,7.5s						
QZH				LR	LR		
	comp=Z,47µm,14.7s,MS6.3						
UCH	**Uchtor**	**32.63**	**262**	P	**P**	**19 36 28.0**	**+1.2**
	SNR=22						
EKS2	**Erkin-Say**	**32.73**	**264**	P	**P**	**19 36 28.6**	**+1.0**
	SNR=40						
ARU	**Arti**	**32.77**	**295**	⇓*e*P	**P**	**19 36 27.2**	**-0.6**
	comp=Z,5.1nm,2.8s						
ARU	**Arti**	**32.77**	**295**	⇑*i*P	**P**	**19 36 27.1**	**-0.8**
ARU				pmax	pmax		
	comp=Z,88nm,1.2s,mb5.6						
ARU				MLR	MLR		
	comp=Z,9µm,14.0s,MS5.6						
YHNB	**Yeheng**	**32.79**	**179**	*e*P	**P**	**19 36 27.5**	**-0.8**
AML	**Almayashu**	**33.14**	**263**	P	**P**	**19 36 32.5**	**+1.3**
	SNR=14						
TNA	**Tin City**	**33.24**	**46**	*e*P	**P**	**19 36 31.4**	**-0.4**
	comp=Z,84nm,1.0s,mb5.6						
TNA				LR	LR		
	comp=Z,10µm,22.0s,MS5.5						
KSH	**Kashi**	**33.79**	**257**	*i* PR	**P**	**19 36 38.7**	**+1.8**
KSH				AP	pP	19 36 44.3	+3.8
KSH				XP	sP	19 36 47.3	+5.2
KSH				PP	PP	19 37 53.3	+3.3
KSH				PPP	PPP	19 38 11.3	+3.7
KSH				PCP	PcP	19 39 18.4	+2.2
KSH				S	**S**	**19 42 00.7**	**+1.5**
KSH				XS		19 42 11.3	
KSH				SCP		19 43 01.1	
KSH				PCS		19 43 03.0	
KSH				SS	SS	19 44 11.2	+6.2
KSH				SCS	ScS	19 47 01.5	+1.8
KSH				AMB	AMB		
	comp=Z,4µm,3.9s						
KSH				LR	LR		
	comp=N,9µm,7.0s						
KSH				LR	LR		
	comp=E,10µm,6.6s						
CBIJ	**Chichi jima**	**34.02**	**144**	LR	LR	19 49 31.5	
	comp=E,6µm,20.9s,MS5.3,baz=346,slow=35						
KKAR	**Karatay Array**	**34.19**	**267**	*e*P	**P**	**19 36 40.5**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.4						
LSA	**Lhasa**	**34.47**	**229**	P	**P**	**19 36 44.1**	**+1.2**
LSA				AP	pP	19 36 55.1	+8.6
LSA				S	**S**	**19 42 15.9**	**+6.0**
LSA				PCS		19 42 58.1	
LSA				SCS	ScS	19 46 59.1	-4.3
LSA				AMB	AMB		
	comp=Z,80nm,1.7s,mb5.4						
LSA				AMB	AMB		
	comp=Z,1µm,5.8s						
LSA				LR	LR		
	comp=N,22µm,16.2s,MS6.4						
LSA				LR	LR		
	comp=E,53µm,16.2s,MS6.4						
LSA				LR	LR		
	comp=Z,25µm,15.1s,MS6.1						
LSA	**Lhasa**	**34.47**	**229**	*e*P	**P**	**19 36 44.9**	**+2.0**
	comp=Z,167nm,1.5s,mb5.8						
LSA	**Lhasa**	**34.47**	**229**	*e*P	**P**	**19 36 44.9**	**+2.0**
LSA				pmax	pmax		
	comp=Z,167nm,1.5s,mb5.8						
KMI	**Kunming**	**34.76**	**209**	P	**P**	**19 36 44.8**	**-0.5**
KMI				AP	pP	19 36 49.3	+0.3
KMI				XP	sP	19 36 52.1	+1.6
KMI				PP	PP	19 38 00.2	-2.3
KMI				PPP	PPP	19 38 15.8	-4.7
KMI				S	**S**	**19 42 07.6**	**-6.8**
KMI				AMB	AMB		
	comp=Z,150nm,1.6s,mb5.7						
KMI				AMB	AMB		
	comp=Z,2µm,3.5s						
KMI				LR	LR		
	comp=N,18µm,11.0s,MS6.3						
KMI				LR	LR		
	comp=E,24µm,11.3s,MS6.3						
KMI				LR	LR		
	comp=Z,29µm,12.4s,MS6.2						
KMI	**Kunming**	**34.76**	**209**	P	**P**	**19 36 44.8**	**-0.5**
	comp=Z,154nm,1.6s,mb5.7						
KMI				pP	pP	19 36 49.3	+0.3
KMI				sP	sP	19 36 52.1	+1.6
KMI				PP	PP	19 38 00.2	-2.3
KMI				PPP	PPP	19 38 15.8	-4.7
KMI				S	**S**	**19 42 07.6**	**-6.8**
KMI				sS		19 42 15.5	
KMI				SS	SS	19 44 17.5	-10
KMI				SSS	SSS	19 44 40.8	-13
KMI				LR	LR		
	comp=Z,29µm,12.4s,MS6.2						
HKC	**Hong Kong**	**35.44**	**190**	⇑*i*P	**P**	**19 36 52.0**	**+0.8**
HKC				*i* S	**S**	**19 42 24.0**	**-1.0**
TAS	**Tashkent**	**36.06**	**266**	*e*P	**P**	**19 36 57.0**	**+0.7**
AKTO	**Aktyubinsk**	**36.25**	**286**	P	**P**	**19 36 57.6**	**-0.1**

	comp=Z,52nm,0.6s,mb5.6,baz=75,slow=11,SNR=34						
KBS	**Kingsbay**	**37.59**	**343**⇓	*i*P	**P**	**19 37 08.2**	**-0.6**
KBS				AMb	AMB	19 37 17.0	
	comp=Z,102nm,2.0s,mb5.2						
KBS				*e*S	**S**	**19 43 01.0**	**+3.5**
KBS				*e*SS	SS	19 45 47.3	+16
KBS				AMS	AMS	19 53 51.7	
	comp=Z,9µm,18.5s,MS5.6						
KBS	**Kingsbay**	**37.59**	**343**⇓	*i*P	**P**	**19 37 08.2**	**-0.6**
	comp=Z,102nm,2.0s,mb5.2						
KBS				LR	LR		
	comp=Z,9229µm,18.5s						
SHL	**Shillong**	**37.87**	**225**⇓	*i*P	**P**	**19 37 12.5**	**+0.9**
SHL				*e*S	**S**	**19 43 04.0**	**+1.7**
HSP	**Hornsund**	**37.99**	**339**	*e*P	**P**	**19 37 12.8**	**+0.7**
GUN	**Gumba**	**38.27**	**234**	*e*P	**P**	**19 37 16.6**	**+1.6**
	comp=Z,510nm,1.0s,mb6.2						
IMA2	**Indian Mountai**	**38.32**	**41**	P	**P**	**19 37 15.4**	**+0.4**
BJO	**Bjornoya**	**38.55**	**335**	*e*P	**P**	**19 37 16.8**	**-0.1**
BJO				AMb	AMB	19 37 22.3	
	comp=Z,322nm,0.9s,mb6.1						
BJO				AMS	AMS	19 56 31.3	
	comp=Z,16µm,18.5s,MS5.9						
BJO1	**Bjornoya**	**38.60**	**335**	*e*P	**P**	**19 37 16.8**	**-0.5**
	comp=Z,2µm,1.5s,mb6.6						
KKN	**Kakani**	**38.63**	**235**	*e*P	**P**	**19 37 19.5**	**+1.4**
	comp=Z,2µm,1.6s,mb6.6						
GKN	**Gorkha**	**38.74**	**236**	*e*P	**P**	**19 37 20.3**	**+1.4**
	comp=Z,389nm,0.6s,mb6.3						
PKI	**Pulchoki**	**38.77**	**235**	*e*P	**P**	**19 37 20.5**	**+1.3**
	comp=Z,826nm,1.6s,mb6.2						
DMN	**Daman**	**38.87**	**235**	*e*P	**P**	**19 37 21.5**	**+1.5**
	comp=Z,1µm,1.5s,mb6.4						
KEV	**Kevo**	**38.98**	**326**	*e*p	**P**	**19 37 21.5**	**+1.0**
KEV	**Kevo**	**38.98**	**326**	P	**P**	**19 37 21.1**	**+0.6**
KEV				pmax	pmax		
	comp=Z,190nm,0.7s,mb5.9						
QIZ	**Qiongzhong**	**39.20**	**196**	P	**P**	**19 37 23.5**	**+0.6**
QIZ				AP	pP	19 37 27.4	+0.9
QIZ				PP	PP	19 39 00.0	+3.2
QIZ				S	**S**	**19 43 23.6**	**+1.1**
QIZ				XS		19 43 30.5	
QIZ				SS	SS	19 46 08.7	+1.2
QIZ				AMB	AMB		
	comp=Z,2µm,10.5s						
QIZ				LR	LR		
	comp=E,26µm,14.6s						
QIZ				LR	LR		
	comp=Z,21µm,16.1s,MS6.1						
QIZ	**Qiongzhong**	**39.20**	**196**	*e*P	**P**	**19 37 23.0**	**+0.1**
	comp=Z,139nm,1.2s,mb5.6						
QIZ				*e*PP	PP	19 38 59.0	+2.2
THN	**Thein Dam**	**39.35**	**250**	*e*P	**P**	**19 37 24.2**	**+0.2**
KOLN	**Koldanda**	**39.40**	**237**	*e*P	**P**	**19 37 25.9**	**+1.4**
	comp=Z,342nm,0.9s,mb6.1						
SDNR	**Sundarnagar**	**39.47**	**248**	*e*P	**P**	**19 37 25.8**	**+0.8**
PTH	**Pithoragarh**	**39.48**	**242**	*e*P	**P**	**19 37 22.0**	**-3.1**
PTH				*e*x	x	19 40 30.0	
UNV	**Unalaska Valle**	**39.50**	**63**	PFAKE		19 37 40.0	+15
UNV				LR	LR		
	comp=Z,16µm,20.0s,MS5.8						
ARCES	**ARCESS Array B**	**39.54**	**327**	P	**P**	**19 37 25.2**	**0.0**
	comp=Z,74nm,0.7s,mb5.5,baz=59,slow=7.1,SNR=36						
ARCES				LR	LR	19 57 46.9	
	comp=Z,12µm,19.6s,MS5.7,baz=69,slow=42						
ARE0	**ARCESS Array S**	**39.54**	**327**	*e*P	**P**	**19 37 25.0**	**-0.1**
APYP	**Conner**	**39.56**	**179**	*e*P	**P**	**19 37 26.0**	**+0.2**
PECR	**Pechory**	**39.70**	**302***c*	*i*P	**P**	**19 37 26.6**	**0.0**
PECR				*i*		19 38 57.0	
PECR				*e*S	**S**	**19 43 24.4**	**-5.2**
PECR				*e*		19 47 36.0	
PECR				pmax	pmax		
	comp=Z,3µm,7.0s						
PECR				pmax	pmax		
	comp=N,2µm,5.0s						
PECR				pmax	pmax		
	comp=E,2µm,6.6s						
PECR				pmax	pmax		
	comp=Z,4µm,8.0s						
PECR				pmax	pmax		
	comp=N,3µm,7.0s						
PECR				pmax	pmax		
	comp=E,3µm,7.0s						
PECR				smax			
	comp=E,2µm,6.0s						
PECR				smax			
	comp=N,3µm,8.0s						
PECR				MLR	MLR		
	comp=E,8µm,14.0s,MS5.8						
PECR				MLR	MLR		
	comp=Z,8µm,14.0s,MS5.7						
PECR				MLR	MLR		
	comp=N,6µm,13.0s,MS5.8						
ABRA	**Dolores**	**39.77**	**180**	*e*P	**P**	**19 37 28.8**	**+1.2**
BHK	**Bhakra**	**39.81**	**248**	*e*x	x	19 37 53.6	
SVW2	**Sparrevohn**	**40.23**	**48**	*e*P	**P**	**19 37 31.9**	**+1.0**
CAUP	**Cauayan**	**40.48**	**178**	*e*P	**P**	**19 37 35.1**	**+1.7**
KTK1	**Kautokeino**	**40.51**	**327**	*e*P	**P**	**19 37 34.5**	**+1.4**
KTK1				*e*pP	pP	19 37 35.5	-1.2
CHRT	**Chiangrai**	**40.55**	**211**	⇓P	**P**	**19 37 35.0**	**+1.0**
	comp=N,474nm,1.1s,mb6.0						
COLA	**College**	**41.02**	**41**⇓	*e*P	**P**	**19 37 37.6**	**+0.2**
	comp=N,110nm,0.8s,mb5.5						
COLA				*e*PP	PP	19 39 14.3	-0.9
COLA				LR	LR		
	comp=Z,8µm,20.0s,MS5.6						
COLA	**College**	**41.02**	**41**⇓	*e*P	**P**	**19 37 37.6**	**+0.2**
COLA				*e*		19 39 14.3	
COLA				pmax	pmax		
	comp=Z,109nm,0.8s,mb5.5						
COLA				MLR	MLR		
	comp=Z,8µm,20.0s,MS5.6						
JOF	**Joensuu**	**41.27**	**316**	*e*p	**P**	**19 37 39.0**	**-0.4**
TRO	**Tromso**	**41.39**	**329**⇓	*i*P	**P**	**19 37 39.5**	**-0.9**
TRO				AMb	AMB	19 37 47.2	
	comp=Z,349nm,1.7s,mb5.7						
TRO				*e*PP	PP	19 39 16.5	-2.6
TRO				*e*S	**S**	**19 43 55.9**	**+1.3**
TRO				*e*SS	SS	19 47 01.0	+7.4
TRO				AMS	AMS	19 59 38.2	
	comp=Z,5µm,18.4s,MS5.4						
TRO	**Tromso**	**41.39**	**329**⇓	*i*P	**P**	**19 37 39.5**	**-0.9**
	comp=Z,349nm,1.7s,mb5.7						
TRO				*e*		19 43 55.1	
TRO				LR	LR		
	comp=Z,4960µm,18.4s						
ILAR	**Eielson Array**	**41.42**	**40**	P	**P**	**19 37 40.9**	**+0.3**
	comp=Z,64nm,0.9s,mb5.2,baz=300,slow=8.8,SNR=132						
ILAR				LR	LR	19 56 15.5	
	comp=Z,7µm,18.3s,MS5.6,baz=126,slow=38						
NDI	**New Delhi**	**41.65**	**245**	*e*x	x	19 37 42.0	
NDI				*e*x	x	19 47 00.0	
CHG	**Chiang Mai**	**41.79**	**212**	⇓P	**P**	**19 37 44.3**	**+0.2**
	comp=Z,124nm,1.3s,mb5.4						
BOK	**Bokaro**	**41.87**	**231**	*e*P	**P**	**19 37 46.3**	**+1.6**
BOK				AMb	AMB	19 37 49.7	
	comp=Z,202nm,1.3s,mb5.6						
CAL	**Calcutta**	**41.98**	**227**	*e*P	**P**	**19 37 48.1**	**+2.5**
CAL				*e*S	**S**	**19 44 05.6**	**+1.8**
ALBI	**Allahabad**	**42.33**	**237**	*e*P	**P**	**19 37 48.0**	**-0.5**
FIB	**Fire Island**	**42.33**	**46**	PFAKE		19 38 00.0	+12
FIB				LR	LR		
	comp=Z,8µm,22.0s,MS5.6						
PMR	**Palmer**	**42.48**	**45**	*e*P	**P**	**19 37 49.5**	**+0.3**
	comp=Z,131nm,0.8s,mb5.6						
PMR	**Palmer**	**42.48**	**45**	*e*P	**P**	**19 37 49.5**	**+0.3**
PMR				pmax	pmax		
	comp=Z,131nm,0.8s,mb5.6						
THY	**Trims Highway**	**42.63**	**42**	*e*P	**P**	**19 37 50.4**	**0.0**
SML	**Sawmill**	**42.65**	**44**	*e*P	**P**	**19 37 50.9**	**+0.3**
POLP	**Polilio Island**	**42.68**	**178**	*e*P	**P**	**19 37 52.6**	**+1.1**
SLKM	**Skilak Lake**	**42.71**	**47**	*e*P	**P**	**19 37 50.0**	**-1.1**
MOS	**Moscow**	**42.96**	**305**κ	*i*P	**P**	**19 37 53.8**	**+0.6**
MOS				*e*		19 39 32.1	
MOS				*i* S	**S**	**19 44 22.1**	**+4.3**
MOS				*e*SS	SS	19 47 21.9	-1.5
MOS				pmax	pmax		
	comp=Z,439nm,1.5s,mb6.0						
MOS				pmax	pmax		
	comp=N,266nm,1.2s						
MOS				pmax	pmax		
	comp=E,86nm,1.0s						
MOS				smax			
	comp=N,2µm,3.5s						
MOS				smax			
	comp=E,1µm,3.5s						
MOS				MLR	MLR		
	comp=N,18µm,12.6s,MS6.2						
MOS				MLR	MLR		
	comp=E,5µm,12.6s,MS6.2						
MOS				MLR	MLR		
	comp=Z,9µm,12.6s,MS5.9						
KKTK	**Khon Kaen**	**43.17**	**205**	P	**P**	**19 37 53.0**	**-2.4**
	comp=Z,1µm,0.7s,mb6.7						
TGY	**Tagaytay City**	**43.29**	**179**	P	**P**	**19 37 57.6**	**+1.1**
	comp=Z,204nm,0.4s,mb6.2,baz=136,slow=12,SNR=4.9						
TGY				LR	LR	19 56 50.5	
	comp=Z,26nm,18.6s,baz=22,slow=37						
KDAK	**Kodiak Island**	**43.42**	**51**	P	**P**	**19 37 56.5**	**-0.4**
	comp=Z,29nm,0.8s,mb5.0,baz=250,slow=3.0,SNR=17						
INK	**Inuvik**	**43.45**	**31**	P	**P**	**19 37 57.5**	**+0.5**
	comp=Z,69nm,1.0s,mb5.3,baz=323,slow=7.9,SNR=60						
INK				LR	LR	19 57 42.9	
	comp=Z,6µm,21.4s,MS5.5,baz=292,slow=38						
INK	**Inuvik**	**43.45**	**31**	*e*P	**P**	**19 37 57.1**	**+0.1**
	comp=Z,1.6nm,1.3s						
INK				*e*PP	PP	19 39 39.4	-0.8
INK	**Inuvik**	**43.45**	**31**	P	**P**	**19 37 57.5**	**+0.5**
INK				pmax	pmax		
	comp=Z,69nm,1.0s						
INK				MLR	MLR		
	comp=Z,6µm,21.4s						
PUL	**Pulkovo**	**43.54**	**313**⇑	*i*P	**P**	**19 37 57.7**	**-0.2**
PUL	**Pulkovo**	**43.54**	**313**	*i* P	**P**	**19 37 58.4**	**+0.5**
PUL				*i*		19 39 44.2	
PUL				*i* S	**S**	**19 44 29.5**	**+3.3**
PUL				*i*		19 47 57.8	
PUL				*i* SSS	SSS	19 48 24.6	-0.4
PUL				pmax	pmax		
	comp=E,937nm,1.1s						
PUL				pmax	pmax		
	comp=Z,548nm,1.1s,mb6.2						
PUL				pmax	pmax		
	comp=N,810nm,1.0s						
PUL				smax			
	comp=N,555nm,2.0s						
PUL				smax			
	comp=Z,961nm,3.2s						
PUL				smax			
	comp=E,2µm,3.5s						
PUL				smax			
	comp=N,3µm,15.9s						
PUL				smax			
	comp=Z,466nm,8.6s						
PUL				smax			
	comp=E,2µm,12.1s						
PUL				MLR	MLR		
	comp=N,5µm,14.0s,MS5.9						
PUL				MLR	MLR		
	comp=E,10µm,16.0s,MS5.9						
PUL				MLR	MLR		
	comp=Z,9µm,16.0s,MS5.8						
DAG	**Danmarks Havn**	**43.55**	**347**⇑	*i*P	**P**	**19 37 57.0**	**-0.8**
	comp=Z,125nm,0.8s,mb5.7						
DAG	**Danmarks Havn**	**43.55**	**347**⇑	*e*P	**P**	**19 37 57.0**	**-0.8**
	comp=Z,125nm,0.8s,mb5.7						
DAG	**Danmarks Havn**	**43.55**	**347**⇑	*e*P	**P**	**19 37 57.0**	**-0.8**
DAG				pmax	pmax		
	comp=Z,125nm,0.8s,mb5.7						
KAF	**Kangasniemi**	**43.61**	**317**	*e*p	**P**	**19 37 58.2**	**-0.2**
MENT	**Mentasta**	**43.65**	**41**	*e*P	**P**	**19 37 59.4**	**+0.7**
LUBP	**Lubang**	**43.66**	**180**	*e*P	**P**	**19 37 59.1**	**-0.3**
OBN	**Obninsk**	**43.83**	**304**	*e*P	**P**	**19 37 59.1**	**-1.1**
	comp=Z,93nm,2.3s,mb5.1						
OBN				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
OBN	**Obninsk**	**43.83**	**304***d*	*i*P	**P**	**19 37 59.7**	**-0.5**
OBN				*e*		19 39 46.8	
OBN				*e*PPP	PPP	19 40 18.7	-2.3
OBN				*i* S	**S**	**19 44 34.2**	**+3.9**
OBN				*e*SS	SS	19 47 43.2	+4.4
OBN				pmax	pmax		
	comp=Z,174nm,1.2s,mb5.7						
OBN				pmax	pmax		
	comp=Z,3µm,4.7s						
OBN				MLR	MLR		
	comp=Z,8µm,16.0s,MS5.7						
LOF	**Lofoten**	**43.85**	**329**	*e*P	**P**	**19 38 03.1**	**+2.8**
LOF				AMb	AMB	19 38 07.5	
	comp=Z,227nm,1.7s,mb5.6						
LOF	**Lofoten**	**43.85**	**329**	*e*P	**P**	**19 38 03.1**	**+2.8**
	comp=Z,227nm,1.7s,mb5.6						
PVCP	**Virac**	**43.88**	**175**	*e*P	**P**	**19 38 01.3**	**0.0**
BOAC	**Boac**	**43.94**	**178**	*e*P	**P**	**19 38 02.6**	**+0.9**
DIV	**Divide**	**44.04**	**44**	*e*P	**P**	**19 38 03.6**	**+1.8**
	comp=Z,135nm,0.9s,mb5.7						
DIV				LR	LR		
	comp=Z,25µm,20.0s,MS6.1						
VRHR	**Novokhopersk**	**44.05**	**297**	*e*P	**P**	**19 38 00.8**	**-1.3**
VRHR				*e**PP	pP	19 38 05.7	-0.1
VRHR				*e*		19 39 47.5	
VRHR				*e*S	**S**	**19 44 30.7**	**-2.9**
VRHR				*e*SS	SS	19 47 41.9	-1.0
VRHR				*e*		19 47 54.3	
VRHR				pmax	pmax		
	comp=Z,320nm,0.7s,mb6.2						
VRHR				pmax	pmax		
	comp=N,100nm,0.6s						
VRHR				pmax	pmax		
	comp=E,110nm,0.6s						
VRHR				smax			
	comp=N,640nm,2.9s						
VRHR				smax			
	comp=Z,840nm,4.9s						
VRHR				smax			
	comp=E,660nm,3.0s						
VRHR				MLR	MLR		
	comp=E,2µm,11.0s,MS5.8						
VRHR				MLR	MLR		
	comp=Z,6µm,11.0s,MS5.8						
VRHR				MLR	MLR		
	comp=N,5µm,10.0s,MS5.8						
FINES	**FINESS Array B**	**44.12**	**317**	P	**P**	**19 38 02.8**	**+0.2**
	comp=N,220nm,0.7s,mb6.0,baz=37,slow=9.5,SNR=113						
FINES				LR	LR	19 57 03.3	
	comp=N,7µm,20.2s,MS5.5,baz=241,slow=37						
DAWY	**Dawson**	**44.42**	**38**	*e*P	**P**	**19 38 05.5**	**+0.5**
NST	**Nakhon Sawan**	**44.47**	**209**	⇑P	**P**	**19 38 07.2**	**+1.2**
	comp=N,267nm,0.9s,mb6.0						
AJM	**Ajmer**	**44.74**	**246**	*e*P	**P**	**19 38 08.2**	**+0.1**
AJM				AMb	AMB	19 38 13.9	
	comp=Z,146nm,1.5s,mb5.6						
MOR8	**Moi Rana**	**44.91**	**326**	*e*P	**P**	**19 38 07.4**	**-1.6**
MOR8				AMb	AMB	19 38 13.1	
	comp=Z,229nm,0.6s,mb6.2						
MOR8	**Moi Rana**	**44.91**	**326**	*e*P	**P**	**19 38 07.4**	**-1.6**
	comp=Z,229nm,0.6s,mb6.2						
SJMP	**San Jose**	**44.93**	**179**	*e*P	**P**	**19 38 09.3**	**-0.3**
BLSP	**Bilaspur**	**44.95**	**235**	*e*P	**P**	**19 38 10.2**	**+0.4**
BLSP				AMb	AMB	19 38 13.6	
	comp=Z,392nm,1.3s,mb6.1						
CNP	**Catarman**	**44.99**	**174**	*e*P	**P**	**19 38 10.0**	**-0.1**
OTRP	**Odiongan**	**45.04**	**178**	*e*P	**P**	**19 38 12.3**	**+1.8**
STOK	**Stokkvaagen**	**45.23**	**327**	*e*P	**P**	**19 38 12.3**	**+0.9**
BUSP	**Coron**	**45.38**	**180**	*e*P	**P**	**19 38 10.8**	**-2.5**
VSU	**Vasula**	**45.80**	**313**	*i* P	**P**	**19 38 16.2**	**+0.2**
BHPL	**Bhopal**	**46.13**	**241**	*e*P	**P**	**19 38 19.6**	**+0.5**
BHPL				AMb	AMB	19 38 24.8	
	comp=Z,268nm,1.0s,mb6.1						
ENPP	**El Nido**	**46.18**	**181**	*e*P	**P**	**19 38 20.9**	**+1.3**
CUYO	**Cuyo Island**	**46.53**	**179**	*e*P	**P**	**19 38 20.4**	**-1.9**
MAK	**Makhachkala**	**46.59**	**285***d*	*i*P	**P**	**19 38 22.0**	**-0.4**
MAK				*i*		19 40 10.0	
MAK				*e*PPP	PPP	19 40 54.0	-3.1
MAK				*e*S	**S**	**19 45 08.0**	**-2.2**
MAK				*i*		19 48 14.0	
MAK				pmax	pmax		
	comp=Z,3µm,7.0s						
MAK				pmax	pmax		
	comp=N,2µm,7.0s						
MAK				pmax	pmax		
	comp=E,2µm,7.0s						
MAK				pmax	pmax		
	comp=Z,5µm,7.0s						
MAK				smax			
	comp=N,2µm,9.0s						
MAK				smax			
	comp=E,3µm,9.0s						
MAK				MLR	MLR		
	comp=Z,21µm,11.0s,MS6.3						
NSS	**Namsos**	**46.81**	**326**	*e*P	**P**	**19 38 23.0**	**-0.8**
NSS				AMb	AMB	19 38 25.9	
	comp=Z,163nm,1.9s,mb5.6						
NSS				AMS	AMS	20 01 01.9	
	comp=Z,12µm,20.5s,MS5.8						
NSS	**Namsos**	**46.81**	**326**	*e*P	**P**	**19 38 23.0**	**-0.8**
	comp=Z,163nm,1.9s,mb5.6						
JMIC	**Jan Mayen**	**46.88**	**340**	P	**P**	**19 38 25.5**	**+1.2**
	comp=Z,93nm,0.8s,mb5.7,baz=86,slow=5.2,SNR=2.4						
JMIC				LR	LR	19 58 42.0	
	comp=Z,4µm,19.6s,MS5.4,baz=78,slow=37						
JMIC	**Jan Mayen**	**46.88**	**340**	*e*S	**S**	**19 45 15.9**	**+1.9**
JMIC				AMS	AMS	19 58 23.4	
	comp=Z,4µm,22.9s,MS5.4						
MSLP	**Maasin**	**47.35**	**174**	*e*P	**P**	**19 38 27.5**	**-1.4**
GOF	**Gofitskoye**	**47.42**	**290**⇑	*i*P	**P**	**19 38 29.7**	**+0.7**
GOF				*e*S	**S**	**19 45 25.6**	**+3.6**
GOF				pmax	pmax		
	comp=Z,158nm,1.7s,mb5.7						
GUMO	**Guam**	**47.54**	**147**	LR	LR	19 56 16.5	
	comp=Z,5µm,21.5s,MS5.5,baz=174,slow=33						
GUMO	**Guam**	**47.54**	**147**	PFAKE		19 38 40.0	+10
GUMO				LR	LR		
	comp=Z,4µm,20.0s,MS5.4						
TBP	**Tagbilaran**	**47.75**	**176**	*e*P	**P**	**19 38 28.7**	**-3.3**
IZAR	**Zarasai**	**47.83**	**310**	*e*P	**P**	**19 38 32.5**	**+0.4**
IZAR				AMb	AMB	19 38 35.9	
	comp=Z,52nm,1.3s,mb5.4						
IDID	**Didziasalis**	**47.93**	**310**	*e*P	**P**	**19 38 33.4**	**+0.5**
IDID				AMb	AMB	19 38 36.7	
	comp=Z,56nm,2.0s,mb5.2						
ISAL	**Salakas**	**48.00**	**310**	*e*P	**P**	**19 38 33.9**	**+0.4**
ISAL				AMb	AMB	19 38 37.3	
	comp=Z,64nm,0.9s,mb5.6						
MNK	**Minsk**	**48.03**	**308**	*e*P	**P**	**19 38 32.0**	**-1.6**
VIS	**Vishakhapatnam**	**48.34**	**230**	*e*P	**P**	**19 38 37.5**	**+1.0**
VIS				AMb	AMB	19 38 42.4	
	comp=Z,94nm,1.4s,mb5.6						
AKL	**Akola**	**48.51**	**239**⇓	*i*x	x	19 37 45.6	
AKL				*i* x	x	19 39 40.3	
ZEI	**Tsey**	**48.59**	**287**	*e*P	**P**	**19 38 35.9**	**-2.3**
ZEI				*i* *PP	pP	19 38 39.4	-2.5
BATP	**Bataraza**	**48.61**	**184**	*e*P	**P**	**19 38 36.5**	**-2.2**
DGRG	**David-gareji**	**48.77**	**285**	P	**P**	**19 38 39.2**	**-0.4**
DGRG				S	S	19 45 13.2	-28
TI2	**Plekhanov**	**48.90**	**286**⇓	*i*P	**P**	**19 38 41.0**	**+0.5**
TI2				*i*		19 40 38.0	
TI2				*i* S	**S**	**19 45 50.0**	**+7.2**
TI2				MLR	MLR		
	comp=E,7µm,11.0s						
TI2				MLR	MLR		
	comp=Z,7µm,11.0s,MS5.9						
MTA	**Mtatsminda**	**48.90**	**286**	P	**P**	**19 38 40.8**	**+0.2**
MTA				S	**S**	**19 45 52.7**	**+10**
TBLG	**Delisi**	**48.90**	**286**	P	**P**	**19 38 40.3**	**-0.3**
ONI	**Oni**	**48.96**	**287**	P	**P**	**19 38 42.1**	**+1.1**
ONI				S	PP	19 40 37.6	+2.9
SUMG	**Summit**	**49.42**	**352**	*e*P	**P**	**19 38 44.7**	**+0.6**
	comp=Z,76nm,0.8s,mb5.8						
HFA0	**Hagfors New Ar**	**49.44**	**321**	P	**P**	**19 38 43.4**	**-1.0**
DOMB	**Dombas**	**49.53**	**325**	*e*P	**P**	**19 38 43.7**	**-1.4**
PAGZ	**Pagadian**	**49.56**	**176**	*e*P	**P**	**19 38 44.9**	**-1.1**
SCO	**Scoresbysund**	**49.56**	**344**	*i* P	**P**	**19 38 46.9**	**+1.6**
	comp=Z,35nm,0.8s,mb5.4						
SCO	**Scoresbysund**	**49.56**	**344**	*i* P	**P**	**19 38 46.9**	**+1.6**
SCO				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.4						
MOL	**Molde**	**49.59**	**326**	*e*P	**P**	**19 38 46.8**	**+1.2**
MOL				AMb	AMB	19 38 54.1	
	comp=Z,370nm,1.7s,mb6.1						
MOL	**Molde**	**49.59**	**326**	*e*P	**P**	**19 38 46.8**	**+1.2**
	comp=Z,370nm,1.7s,mb6.1						
NB2	**NORSAR Subarra**	**49.59**	**323**	P	**P**	**19 38 45.1**	**-0.5**
	comp=Z,181nm,0.8s,mb6.2,baz=41,slow=7.4						
NB2	**NORSAR Subarra**	**49.59**	**323**	P	**P**	**19 38 45.1**	**-0.5**
	baz=41,slow=7.4						
NB2	**NORSAR Subarra**	**49.59**	**323**	P	**P**	**19 38 45.1**	**-0.5**
NB2				LR	LR		
	comp=Z,41µm,15.2s,MS6.5						
NOA	**NORSAR Array B**	**49.59**	**323**	P	**P**	**19 38 45.2**	**-0.4**
	comp=Z,101nm,0.7s,mb6.0,baz=43,slow=7.9,SNR=56						
NOA				PP	PP	19 40 46.0	+5.3
	comp=Z,26nm,1.0s,baz=43,slow=9.7,SNR=3.4						
NOA				LR	LR	20 01 04.9	
	comp=Z,7µm,18.5s,MS5.7,baz=50,slow=38						
IPIL	**Ipil**	**49.59**	**177**	*e*P	**P**	**19 38 45.9**	**-0.3**
BUKP	**Musuan**	**49.60**	**174**	*e*P	**P**	**19 38 44.8**	**-1.5**
NAO01	**NORSAR Array S**	**49.85**	**323**	*e*P	**P**	**19 38 46.9**	**-0.7**
	comp=Z,88nm,0.6s,mb6.0						
NAO	**NORSAR Subarra**	**49.88**	**323**	P	**P**	**19 38 45.1**	**-2.7**
	comp=Z,181nm,0.8s,mb6.2						
NAO	**NORSAR Subarra**	**49.88**	**323**	P	**P**	**19 38 45.1**	**-2.7**
NAO				pmax	pmax		
	comp=Z,181nm,0.8s,mb6.2						
GNI	**Garni**	**50.05**	**284**	P	**P**	**19 38 50.1**	**+0.7**
	comp=Z,6.6nm,0.6s,mb4.8,baz=42,slow=3.3,SNR=9.2						
GNI	**Garni**	**50.05**	**284**⇓	*e*P	**P**	**19 38 50.3**	**+0.9**
	comp=Z,142nm,2.3s,mb5.6						
GNI				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						
GNI	**Garni**	**50.05**	**284***d*	*i*P	**P**	**19 38 48.6**	**-0.8**
GNI				pmax	pmax		
	comp=Z,131nm,2.2s						
AKASG	**Malin Array Be**	**50.08**	**304**	P	**P**	**19 38 48.9**	**-0.6**
	comp=Z,45nm,0.6s,mb5.7,baz=42,slow=8.7,SNR=90						
KIEV	**Kiev**	**50.09**	**304**	P	**P**	**19 38 49.0**	**-0.6**
SOC	**Sochi**	**50.15**	**291***d*	*i*P	**P**	**19 38 50.4**	**+0.3**
SOC				*e**PP	pP	19 38 56.9	+3.0
SOC				*e*		19 40 10.5	
SOC				*i*		19 40 49.8	
SOC				*i* S	**S**	**19 46 03.8**	**+3.6**
SOC				*i* *SS		19 46 07.6	
SOC				*i*		19 48 42.9	
SOC				*e*SSS	SSS	19 51 03.7	+3.6
SOC				pmax	pmax		
	comp=Z,2µm,4.8s						
SOC				pmax	pmax		
	comp=Z,145nm,1.6s,mb5.8						
SOC				MLR	MLR		
	comp=Z,9µm,15.0s,MS5.9						
SUW	**Suwalki**	**50.31**	**310**⇓	*e*P	**P**	**19 38 50.6**	**-0.6**
SUW				*e*S	**S**	**19 46 06.5**	**+4.2**
SUW				MLR	MLR	19 59 58.3	
	comp=Z,7µm,24.2s,MS5.6						
SUW	**Suwalki**	**50.31**	**310**⇓	*e*P	**P**	**19 38 50.6**	**-0.6**
SUW				*e*S	**S**	**19 46 06.6**	**+4.3**
ANN	**Anapa**	**50.41**	**293**	*e*P	**P**	**19 38 51.3**	**-0.8**
ANN	**Anapa**	**50.41**	**293***d*	*i*P	**P**	**19 38 51.9**	**-0.2**
ANN				*i*		19 40 09.7	
ANN				*i*		19 40 47.9	
ANN				*e*S	**S**	**19 46 07.1**	**+3.2**
ANN				pmax	pmax		
	comp=Z,139nm,1.8s,mb5.7						
DAV	**Davao City (W)**	**50.44**	**173**	*e*P	**P**	**19 38 53.8**	**+1.1**
DAV	**Davao City (W)**	**50.44**	**173**	PFAKE		19 39 00.0	+7.3
DAV				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
OSL	**Oslo**	**50.58**	**322**	*e*P	**P**	**19 38 52.8**	**-0.4**
OSL				AMb	AMB	19 38 58.7	
	comp=Z,262nm,1.0s,mb6.1						
OSL	**Oslo**	**50.58**	**322**	*e*P	**P**	**19 38 52.8**	**-0.4**
	comp=Z,262nm,1.0s,mb6.1						
MATI	**Mati**	**50.60**	**173**	*e*P	**P**	**19 38 52.4**	**-1.6**
HYB	**Hyderabad**	**50.67**	**236**	*i* P	**P**	**19 38 53.5**	**-0.9**
	comp=Z,500nm,2.0s,mb6.1						
HYB				*e*sP	sP	19 38 58.0	-1.6
HYB				*e*PcP	PcP	19 40 11.5	-0.6
HYB				*e*PP	PP	19 40 52.0	+0.6
HYB				*e*S	**S**	**19 46 10.0**	**+2.2**
HYB				*e*SP	SP	19 46 15.0	-0.7
HYB				*e*SS	SS	19 49 40.0	+0.3
HYB	**Hyderabad**	**50.67**	**236**	*e*P	**P**	**19 38 53.5**	**-0.9**
	comp=Z,500nm,2.0s,mb6.1						
HYB				*e*S	**S**	**19 46 10.0**	**+2.2**
HYB				*e*LR	LR	20 01 36.0	
HYB	**Hyderabad**	**50.67**	**236**	*e*P	**P**	**19 38 53.5**	**-0.9**
HYB				*e*S	**S**	**19 46 10.0**	**+2.2**
HYB				pmax	pmax		
	comp=Z,500nm,2.0s,mb6.1						
LATR	**Latur**	**50.70**	**238**	*e*P	**P**	**19 38 55.9**	**+1.3**
SIT	**Sitka**	**50.75**	**43**	PFAKE		19 39 10.0	+15
SIT				LR	LR		
	comp=Z,14µm,21.0s,MS6.0						
WAKE	**Wake Island**	**50.96**	**119**	PFAKE		19 39 10.0	+13
WAKE				LR	LR		

	comp=Z,2µm,20.0s,MS5.2						
KONO	**Kongsberg**	**51.17**	**322**	*e*P	**P**	**19 38 57.8**	**+0.1**
KONO				*e*S	**S**	**19 46 15.1**	**+0.9**
KONO				*e*SS	SS	19 49 57.7	+10
KONO	**Kongsberg**	**51.17**	**322**	P	**P**	**19 38 57.6**	**-0.1**
KONO				pmax	pmax		
	comp=Z,230nm,1.1s,mb6.0						
KKM	**Kota Kinabalu**	**51.41**	**185**	*e*P	**P**	**19 38 59.2**	**-0.9**
KKM	**Kota Kinabalu**	**51.41**	**185**	P	**P**	**19 39 01.7**	**+1.6**
POO	**Poona**	**51.87**	**241**	*e*P	**P**	**19 39 03.1**	**-0.4**
POO				AMb	AMB	19 39 10.0	
	comp=Z,108nm,1.5s,mb5.5						
SIM	**Simferopol'**	**51.94**	**296**	*i* P	**P**	**19 39 03.6**	**-0.1**
BER	**Bergen**	**51.96**	**325**	*e*S	**S**	**19 46 26.4**	**+1.4**
BER				*e*SS	SS	19 50 05.0	+4.9
BER				AMS	AMS	20 03 33.5	
	comp=Z,9µm,20.7s,MS5.8						
MACK	**Trabzon**	**52.04**	**289**	*i* P	**P**	**19 39 03.4**	**-1.1**
BOM	**Bombay**	**52.05**	**243**	*e*P	**P**	**19 39 02.7**	**-2.1**
BOM				*e*S	**S**	**19 46 31.6**	**+4.9**
HAKT	**HAKKARI**	**52.50**	**283**	*i* P	**P**	**19 39 06.8**	**-1.2**
BSD	**Bornholm Skovb**	**52.75**	**316**	*i* P	**P**	**19 39 09.3**	**-0.4**
	comp=Z,152nm,0.8s,mb6.0						
BSD	**Bornholm Skovb**	**52.75**	**316**	*i* P	**P**	**19 39 09.3**	**-0.4**
BSD				pmax	pmax		
	comp=Z,152nm,0.8s,mb6.0						
KAD	**Karad**	**52.77**	**240**	*e*P	**P**	**19 39 09.9**	**-0.3**
KAD				AMb	AMB	19 39 13.1	
	comp=Z,131nm,1.1s,mb5.8						
BNGL	**BINGOL**	**52.80**	**286**	*i* P	**P**	**19 39 09.8**	**-0.5**
GRSN	**GIRESUNGRSN**	**52.82**	**290**	*i* P	**P**	**19 39 06.4**	**-4.0**
KMPD	**K-Podol'skiy**	**52.87**	**304**	P	**P**	**19 39 10.0**	**-0.7**
KELT	**Kelkit**	**52.89**	**288**	*i* P	**P**	**19 39 09.0**	**-2.0**
YKW3	**Yellowknife Ar**	**52.93**	**28**	*e*P	**P**	**19 39 09.6**	**-1.3**
KIS	**Kishinev**	**52.95**	**301**	κ*e*P	**P**	**19 39 10.0**	**-1.3**
KIS				*e*		19 39 20.0	
KIS				*e*		19 41 10.0	
KIS				*e*S	**S**	**19 46 37.0**	**-1.6**
KIS				*e*PS	PS	19 46 50.0	-0.1
KIS				*e*SSS	SSS	19 52 11.0	+7.5
KIS				pmax	pmax		
	comp=E,210nm,1.5s						
KIS				pmax	pmax		
	comp=Z,540nm,1.5s,mb6.3						
KIS				pmax	pmax		
	comp=N,280nm,1.6s						
KIS				pmax	pmax		
	comp=Z,2µm,5.6s						
KIS				pmax	pmax		
	comp=N,1µm,5.0s						
KIS				pmax	pmax		
	comp=E,700nm,4.5s						
KIS				pmax	pmax		
	comp=Z,2µm,7.2s						
KIS				MLR	MLR		
	comp=Z,10µm,10.0s,MS6.2						
KIS				MLR	MLR		
	comp=N,6µm,9.0s						
KIS				MLR	MLR		
	comp=E,7µm,11.0s						
KIS				MLR	MLR		
	comp=Z,10µm,11.0s						
YKA	**Yellowknife Ar**	**52.99**	**28**	P	**P**	**19 39 10.2**	**-1.1**
	comp=Z,40nm,1.0s,mb5.3,baz=331,slow=7.4,SNR=40						
YKA				LR	LR	20 05 29.2	
	comp=Z,4µm,19.4s,MS5.5,baz=345,slow=40						
YKA	**Yellowknife Ar**	**52.99**	**28**	P	**P**	**19 39 10.2**	**-1.2**
YKA				LR	LR	20 05 29.2	
LVV	**L'vov**	**53.02**	**306**	*i* P	**P**	**19 39 11.0**	**-0.7**
COP	**Copenhagen**	**53.23**	**318**	⇑*i*P	**P**	**19 39 15.3**	**+2.1**
	comp=Z,86nm,0.9s,mb5.7						
COP				*i* S	**S**	**19 46 46.8**	**+4.5**
COP				*i*		19 50 34.0	
	comp=Z,3µm,19.0s						
COP	**Copenhagen**	**53.23**	**318**	⇑*i*P	**P**	**19 39 15.3**	**+2.1**
COP				*i* S	**S**	**19 46 46.8**	**+4.5**
COP				pmax	pmax		
	comp=Z,86nm,0.9s,mb5.7						
COP				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.4						
IAS	**Iasi**	**53.38**	**302**	P	**P**	**19 39 14.1**	**-0.4**
KWP	**Kalwaria**	**53.73**	**307**	⇓*e*P	**P**	**19 39 17.4**	**+0.5**
KWP				*e*pP	pP	19 39 21.9	+1.3
KWP				*e*S	**S**	**19 46 55.9**	**+6.7**
KWP				MLR	MLR	20 03 48.0	
	comp=Z,9µm,18.5s,MS5.8						
KWP	**Kalwaria**	**53.73**	**307**	⇓*e*P	**P**	**19 39 17.4**	**+0.5**
KWP				*e*pP	pP	19 39 21.9	+1.2
KWP				*e*S	**S**	**19 46 55.9**	**+6.7**
RGN	**Rugen**	**53.78**	**316**	*e*P	**P**	**19 39 17.0**	**-0.2**
	comp=Z,351nm,1.1s,mb6.2						
MSL	**Mosul**	**53.78**	**282**	*e*x	x	19 39 24.0	
MSL				*e*x	x	19 41 20.0	
MSL				*e*x	x	19 42 29.0	
MSL				*e*x	x	19 47 02.5	
MSL				*e*x	x	19 49 07.0	
MUD	**Monsted U'grnd**	**53.79**	**320**	⇑*i*P	**P**	**19 39 16.2**	**-1.1**
	comp=Z,251nm,1.0s,mb6.1						
MUD				*i* S	**S**	**19 46 55.4**	**+5.5**
MUD				*i*		19 50 45.6	
	comp=Z,7µm,18.0s						
LRW	**Lerwick**	**54.09**	**328**	*e*P	**P**	**19 39 19.3**	**-0.1**
KULM	**Kulim**	**54.34**	**205**	*e*P	**P**	**19 39 21.3**	**-0.6**
KOLS	**Kolonicke sedl**	**54.44**	**307**	*i* P	**P**	**19 39 22.4**	**+0.2**
STHS	**Stebnicka Huta**	**54.52**	**308**	*e*P	**P**	**19 39 23.3**	**+0.6**
OJC	**Ojcow**	**54.52**	**309**	*e*P	**P**	**19 39 22.3**	**-0.4**
OJC				*e*S	**S**	**19 47 03.4**	**+3.5**
OJC				MLR	MLR	20 05 25.2	
	comp=Z,6µm,18.6s,MS5.7						
CFR	**Carcaliu**	**54.62**	**300**	⇑P	**P**	**19 39 23.0**	**-0.5**
CFR	**Carcaliu**	**54.62**	**300**	⇑P	**P**	**19 39 23.0**	**-0.5**
UZH	**Uzhgorod**	**54.66**	**306**	*i* P	**P**	**19 39 24.0**	**+0.2**
VRI	**Vrincioaia**	**54.76**	**301**	⇓P	**P**	**19 39 25.5**	**+1.0**
VRI	**Vrincioaia**	**54.76**	**301**	⇓P	**P**	**19 39 25.5**	**+1.0**
CTKT	**Corum**	**54.80**	**292**	*i* P	**P**	**19 39 24.1**	**-0.8**
CRVS	**Cervenica-Dubn**	**54.82**	**307**	*i* P	**P**	**19 39 24.6**	**-0.3**
CRVS				*e*PP	PP	19 41 25.7	-3.6
BALT	**Daday**	**54.82**	**293**	*i* P	**P**	**19 39 21.9**	**-3.1**
NIE	**Niedzica**	**54.92**	**308**	⇓*i*P	**P**	**19 39 26.1**	**+0.4**
IPM	**Ipoh**	**54.95**	**204**	P	**P**	**19 39 27.6**	**+1.3**
TIRR	**Tirgusor**	**55.03**	**299**	⇑P	**P**	**19 39 27.7**	**+1.1**
TIRR	**Tirgusor**	**55.03**	**299**	⇓*e*P	**P**	**19 39 25.6**	**-1.0**
HARR	**Harsova**	**55.08**	**300**	⇑P	**P**	**19 39 28.4**	**+1.4**
HARR	**Harsova**	**55.08**	**300**	⇑P	**P**	**19 39 28.4**	**+1.4**
RUE	**Ruedersdorf**	**55.21**	**315**	⇓*e*P	**P**	**19 39 26.8**	**-1.0**
	comp=Z,131nm,0.7s,mb6.1						
RUE				*e*PP	PP	19 41 31.8	-1.0
RAC	**Raciborz**	**55.30**	**310**	*e*P	**P**	**19 39 28.3**	**-0.1**
RAC				*e*pP	pP	19 39 31.0	-1.2
RAC				*e*S	**S**	**19 47 13.4**	**+3.2**
RAC				LMN		20 00 05.5	
RAC				LME		20 01 00.2	
RAC				MLR	MLR	20 04 38.7	
	comp=Z,11µm,19.8s,MS5.9						
RAC	**Raciborz**	**55.30**	**310**	*e*P	**P**	**19 39 28.3**	**-0.1**
RAC				*e*pP	pP	19 39 31.0	-1.2
RAC				*e*S	**S**	**19 47 13.4**	**+3.2**
RAC				LR	LR		
	comp=Z,11µm,19.8s,MS5.9						
BHD	**Baghdad**	**55.40**	**279**	*i* x	x	19 39 25.0	
BHD				*e*x	x	19 40 26.0	
BHD				*e*x	x	19 41 30.0	
BHD				*e*x	x	19 44 15.0	
BHD				*e*x	x	19 47 13.5	
BHD				*e*x	x	19 49 17.0	
BHD				*e*x	x	19 51 04.0	
BHD				*e*x	x	19 53 23.5	
ISR	**Istrita**	**55.41**	**301**	⇓P	**P**	**19 39 29.7**	**+0.4**
ISR	**Istrita**	**55.41**	**301**	⇓P	**P**	**19 39 29.7**	**+0.4**
KSP	**Ksiaz**	**55.49**	**312**	⇓*e*P	**P**	**19 39 29.8**	**0.0**
KSP				*e*pP	pP	19 39 34.5	+1.0
KSP				*e*PP	PP	19 41 34.4	-0.9
KSP				*e*S	**S**	**19 47 16.7**	**+3.9**
KSP				*e*SS	SS	19 51 10.6	+13
KSP				MLR	MLR	20 03 25.5	
	comp=Z,14µm,21.7s,MS6.0						
KSP	**Ksiaz**	**55.49**	**312**	⇓*e*P	**P**	**19 39 29.8**	**0.0**
KSP				*e*pP	pP	19 39 31.8	-1.7
KSP				*e*PP	PP	19 41 26.5	-8.8
KSP				*e*S	**S**	**19 47 13.0**	**+0.2**
KSP				*e*SS	SS	19 50 59.0	+1.4
KSP				LR	LR		
	comp=Z,17µm,21.8s,MS6.1						
KSP	**Ksiaz**	**55.49**	**312**	⇓*e*P	**P**	**19 39 29.8**	**0.0**
KSP				*e**PP	pP	19 39 31.8	-1.7
KSP				*e*S	**S**	**19 47 13.0**	**+0.2**
KSP				*e*SS	SS	19 50 59.0	+1.4
KSP				MLR	MLR		
	comp=Z,17µm,21.8s,MS6.1						
OKC	**Ostrava-Krasne**	**55.50**	**310**	*e*P	**P**	**19 39 29.8**	**-0.1**
OKC				*e*pP	pP	19 39 31.1	-2.6
OKC				*e*sP	sP	19 39 33.2	-1.9
OKC				*e*PP	PP	19 41 33.9	-1.6
OKC				*e*S	**S**	**19 47 18.7**	**+5.7**
OKC				*e*SS	SS	19 51 08.1	+10
OKC				AMS	AMS	20 04 30.0	
	comp=Z,10µm,17.0s						
OKC	**Ostrava-Krasne**	**55.50**	**310**	*e*P	**P**	**19 39 29.8**	**-0.1**
OKC				*e**PP	pP	19 39 33.2	-0.5
OKC				*e*		19 41 33.9	
OKC				*e*S	**S**	**19 47 18.7**	**+5.7**
OKC				MLR	MLR		
	comp=Z,10µm,17.0s,MS6.0						
KECS	**Kecovo**	**55.56**	**307**	*i* P	**P**	**19 39 30.6**	**+0.3**
ELDT	**Eldivan**	**55.59**	**293**	*i* P	**P**	**19 39 30.2**	**-0.5**
SFJD	**Kangerlussuaq**	**55.66**	**356**	*i* P	**P**	**19 39 30.3**	**-0.5**
	comp=Z,153nm,1.2s,mb5.9						
SFJD				*i* S	**S**	**19 47 14.0**	**-0.9**
SFJD				*i*		19 51 22.8	
	comp=Z,3µm,21.0s						
SFJD	**Kangerlussuaq**	**55.66**	**356**	*e*P	**P**	**19 39 30.3**	**-0.5**
	comp=Z,153nm,1.2s,mb5.9						
SFJD				*i* S	**S**	**19 47 14.0**	**-0.9**
SFJD				*i*		19 51 22.8	
SFJD				LR	LR		
	comp=Z,3µm,21.0s,MS5.4						
SFJD	**Kangerlussuaq**	**55.66**	**356**	*e*P	**P**	**19 39 30.3**	**-0.5**
SFJD				*i* S	**S**	**19 47 14.0**	**-0.9**
SFJD				pmax	pmax		
	comp=Z,153nm,1.2s,mb5.9						
SFJD				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.4						
SNX	**Sinaia**	**55.70**	**302**	⇑P	**P**	**19 39 32.3**	**+0.9**
SNX	**Sinaia**	**55.70**	**302**	⇑P	**P**	**19 39 32.3**	**+0.9**
LIKS	**Likavka**	**55.71**	**309**	*e*P	**P**	**19 39 31.5**	**+0.1**
PSN	**Preselentsi**	**55.73**	**299**	P	**P**	**19 39 33.0**	**+1.4**
CDAG	**Cicekdag**	**55.77**	**291**	*i* P	**P**	**19 39 30.3**	**-1.7**
MORC	**Moravsky Berou**	**55.80**	**310**	⇓*e*P	**P**	**19 39 31.8**	**-0.2**
	comp=Z,1µm,2.6s,mb6.5						
MORC	**Moravsky Berou**	**55.80**	**310**	⇓*e*P	**P**	**19 39 31.8**	**-0.3**
MORC				pmax	pmax		
	comp=Z,1µm,2.6s,mb6.5						
ASHO	**Ashiyiah**	**55.85**	**263**	P	**P**	**19 39 32.3**	**-0.5**
	SNR=16						
VOIR		**55.85**	**302**	⇓P	**P**	**19 39 33.3**	**+0.8**
VOIR		**55.85**	**302**	⇓P	**P**	**19 39 33.3**	**+0.8**
DPC	**Dobruska-Polom**	**55.86**	**311**	*e*P	**P**	**19 39 32.7**	**+0.3**
DPC				*e*pP	pP	19 39 34.2	-2.0
DPC				*e*sP	sP	19 39 37.4	-0.2
DPC				*e*PP	PP	19 41 39.1	+0.4
DPC				*e*S	**S**	**19 47 23.9**	**+6.2**
DPC				*e*SS	SS	19 51 11.5	+8.0
DPC				AMS	AMS	20 04 50.0	
	comp=Z,10µm,14.5s						
DPC	**Dobruska-Polom**	**55.86**	**311**	*e*P	**P**	**19 39 32.7**	**+0.3**
DPC				*e**PP	sP	19 39 37.4	-0.2
DPC				*e*		19 41 39.1	
DPC				*e*S	**S**	**19 47 23.9**	**+6.2**
DPC				MLR	MLR		
	comp=Z,10µm,14.5s,MS6.0						
UPC	**Upice**	**55.86**	**312**	*e*P	**P**	**19 39 32.7**	**+0.2**
UPC				*e*pP	pP	19 39 34.1	-2.1
UPC				*e*sP	sP	19 39 37.0	-0.7
UPC				*e*PP	PP	19 41 35.3	-3.4
UPC	**Upice**	**55.86**	**312**	*e*P	**P**	**19 39 32.7**	**+0.2**
UPC				*e**PP	sP	19 39 37.0	-0.7
UPC				*e*		19 41 35.3	
GZT	**Gaziantep**	**55.86**	**287**	*i* P	**P**	**19 39 32.1**	**-0.6**
DRGR		**55.88**	**305**	⇓P	**P**	**19 39 33.2**	**+0.6**
DRGR		**55.88**	**305**	⇓P	**P**	**19 39 33.1**	**+0.5**
DRGR		**55.88**	**305**	P	**P**	**19 39 32.4**	**-0.2**
WBK	**Wadi Bani Khal**	**55.98**	**259**	P	**P**	**19 39 34.5**	**+0.8**
	SNR=7.0						
KAHT	**Ahir Dag**	**56.01**	**288**	*i* P	**P**	**19 39 34.0**	**+0.3**
MTUR	**Matau**	**56.01**	**302**	⇑P	**P**	**19 39 35.4**	**+1.8**
MTUR	**Matau**	**56.01**	**302**	⇑P	**P**	**19 39 35.4**	**+1.8**
MTUR	**Matau**	**56.01**	**302**	P	**P**	**19 39 34.0**	**+0.4**
BR131	**Keskin Array S**	**56.06**	**292**	PFAKE		19 39 50.0	+16
BR131				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
BRTR	**Keskin Array B**	**56.06**	**292**	P	**P**	**19 39 34.0**	**-0.1**
	comp=Z,16nm,0.7s,mb5.2,baz=66,slow=3.8,SNR=30						
BRTR				PKP2bc		20 09 46.8	
	comp=Z,0.8nm,0.9s,baz=180,slow=3.7,SNR=3.6						
BRTR	**Keskin Array B**	**56.06**	**292**	P	**P**	**19 39 34.0**	**-0.1**
BRTR				⇑*e*		20 09 46.8	
AVNT	**Avonos**	**56.16**	**290**	*i* P	**P**	**19 39 34.5**	**-0.4**
SGKT	**Sivrigoynuk**	**56.20**	**294**	*i* P	**P**	**19 39 32.3**	**-2.8**
BUC1	**Bucharest**	**56.23**	**301**	P	**P**	**19 39 35.2**	**0.0**
PSZ	**Piszkesteto**	**56.24**	**307**	⇓*e*P	**P**	**19 39 35.5**	**+0.2**
PSZ	**Piszkesteto**	**56.24**	**307**	P	**P**	**19 39 35.6**	**+0.3**
PSZ				pmax	pmax		
	comp=Z,290nm,1.4s,mb6.1						
VYHS	**Vyhne**	**56.25**	**308**	*i* P	**P**	**19 39 35.3**	**0.0**
VYHS				*e*PP	PP	19 41 38.3	-3.9
MNGI	**Mangalore**	**56.28**	**237**	*e*P	**P**	**19 39 36.2**	**+0.2**
MNGI				*e*S	**S**	**19 47 26.0**	**+2.1**
ANTO	**Ankara**	**56.37**	**293**	⇓*e*P	**P**	**19 39 36.2**	**-0.1**
	comp=Z,164nm,1.8s,mb5.8						
ANTO				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
ANTO	**Ankara**	**56.37**	**293**	⇓*e*P	**P**	**19 39 36.2**	**-0.1**
ANTO				pmax	pmax		
	comp=Z,164nm,1.8s,mb5.8						
ANTO				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.2						
PVCC	**Panska Ves**	**56.42**	**313**	*e*P	**P**	**19 39 36.6**	**+0.1**
PVCC				*e*pP	pP	19 39 41.2	+0.9
PVCC				*e*PP	PP	19 41 41.6	-2.1
PVCC				*e*S	**S**	**19 47 31.1**	**+5.9**
PVCC				*e*SS	SS	19 51 20.0	+7.0
PVCC				AMS	AMS	20 05 50.0	
	comp=Z,12µm,13.3s						
CLL	**Collm**	**56.43**	**314**	⇓P	**P**	**19 39 35.8**	**-0.7**
	comp=Z,logA/T=2.0,mb5.8						
CLL				*i* *SP	sP	19 39 40.1	-1.6
CLL				*i* PCP	PcP	19 40 34.3	+0.9
CLL				*e*PP	PP	19 41 38.0	-5.8
CLL				*e**SPP		19 42 46.0	
CLL				*e*S	**S**	**19 47 25.0**	**-0.3**
CLL				*e*SCS	ScS	19 49 35.0	+13
CLL				*e*SS	SS	19 51 14.0	+0.9
CLL				*e*		19 52 00.0	
CLL	**Collm**	**56.43**	**314**	⇓*i*P	**P**	**19 39 35.8**	**-0.7**
	comp=Z,74nm,0.7s,mb5.8						
CLL				*i*	pP	19 39 40.1	-0.2
CLL				*i* PcP	PcP	19 40 34.3	+0.9
CLL				*e*S	**S**	**19 47 25.0**	**-0.3**
CLL				*e*ScS	ScS	19 49 35.0	+13
CLL	**Collm**	**56.43**	**314**	⇓*i*P	**P**	**19 39 35.8**	**-0.7**
CLL				*i*	pP	19 39 40.1	-0.2
CLL				*i*		19 40 34.3	
CLL				*e*S	**S**	**19 47 25.0**	**-0.3**
CLL				pmax	pmax		
	comp=Z,74nm,0.7s,mb5.8						
KSM	**Kuching**	**56.43**	**192**	*e*P	**P**	**19 39 36.1**	**-1.0**
PRD	**Provadia**	**56.46**	**299**	*e*P	**P**	**19 39 37.5**	**+0.6**
UMR	**Umm Al-Rimmam**	**56.49**	**273**	*e*P	**P**	**19 39 36.6**	**-0.7**
UMR				AMb	AMB	19 39 41.7	
	comp=Z,157nm,0.8s,mb6.1						
MIB	**Mutribah**	**56.50**	**274**	*e*P	**P**	**19 39 36.6**	**-0.7**
MIB				AMb	AMB	19 39 41.9	
	comp=Z,176nm,1.0s,mb6.1						
VRAC	**Vranov**	**56.55**	**310**	P	**P**	**19 39 37.6**	**+0.1**
JMDO	**Jabal Madar**	**56.64**	**259**	P	**P**	**19 39 38.4**	**-0.1**
	SNR=12						
ARQ	**Araqi**	**56.69**	**261**	P	**P**	**19 39 39.3**	**+0.4**
	SNR=10.0						
KBD	**Kabd**	**56.80**	**273**	*e*P	**P**	**19 39 38.6**	**-1.0**
KBD				AMb	AMB	19 39 43.2	
	comp=Z,482nm,0.6s,mb6.7						
SMOL	**Smolenice**	**56.83**	**309**	*i* P	**P**	**19 39 40.2**	**+0.7**
PRA	**Prague**	**56.84**	**312**	P	**P**	**19 39 42.0**	**+2.5**
PRA				AMS	AMS	20 10 40.0	
PRU	**Pruhonice**	**56.86**	**312**	*e*P	**P**	**19 39 39.7**	**+0.1**
PRU				*e*pP	pP	19 39 41.1	-2.3
PRU				*e*sP	sP	19 39 44.1	-0.7
PRU				*e*PP	PP	19 41 42.2	-5.5
PRU				*e*S	**S**	**19 47 37.2**	**+6.2**
PRU				*e*SS	SS	19 51 27.6	+7.2
PRU				AMS	AMS	20 05 30.0	
	comp=Z,10µm,15.3s						
PRU	**Pruhonice**	**56.86**	**312**	*e*P	**P**	**19 39 39.7**	**+0.1**
PRU				*e**PP	sP	19 39 44.1	-0.7
PRU				*e*		19 41 42.2	
PRU				*e*S	**S**	**19 47 37.2**	**+6.2**
PRU				*e*SS	SS	19 51 27.6	+7.2
PRU				MLR	MLR		
	comp=Z,10µm,15.3s,MS6.0						
BUD	**Budapest**	**56.95**	**308**	*e*P	**P**	**19 39 41.0**	**+0.6**
KGM	**Kluang**	**56.97**	**201**	P	**P**	**19 39 41.5**	**+0.5**
NAY	**Al-Naaiem**	**56.98**	**273**	*e*P	**P**	**19 39 39.8**	**-1.0**
NAY				AMb	AMB	19 39 44.3	
	comp=Z,111nm,0.5s,mb6.1						
SRO	**Srobarova**	**57.00**	**308**	*e*P	**P**	**19 39 42.2**	**+1.5**
CLZ	**Clausthal**	**57.01**	**316**	*e*P	**P**	**19 39 40.8**	**+0.1**
	comp=Z,87nm,0.9s,mb5.8						
CLZ				*e*PcP	PcP	19 40 35.4	-0.2
CLZ	**Clausthal**	**57.01**	**316**	*e*P	**P**	**19 39 40.8**	**+0.1**
CLZ				*e*		19 40 35.4	
CLZ				pmax	pmax		
	comp=Z,87nm,0.9s,mb5.8						
TREC	**Trest**	**57.02**	**311**	*e*P	**P**	**19 39 41.0**	**+0.2**
TREC				*e*pP	pP	19 39 45.6	+1.0
TREC				*e*PP	PP	19 41 49.6	+0.5
TREC				*e*S	**S**	**19 47 36.6**	**+3.5**
TREC				*e*SS	SS	19 51 27.1	+3.9
TREC				AMS	AMS	20 05 00.0	
	comp=Z,16µm,21.0s						
RDF	**Al-Radifah**	**57.07**	**273**	*e*P	**P**	**19 39 40.9**	**-0.6**
RDF				AMb	AMB	19 39 45.2	
	comp=Z,180nm,0.5s,mb6.3						
SZH	**Strazhica**	**57.10**	**300**	P	**P**	**19 39 41.0**	**-0.5**
COBT	**Iskenderun**	**57.17**	**287**	*i* P	**P**	**19 39 40.7**	**-1.4**
ZST	**Bratislava**	**57.21**	**309**	*e*P	**P**	**19 39 42.2**	**0.0**
ZST				*e*PP	PP	19 41 50.5	-0.4
ZST				*e*		19 51 54.2	
ZST				*e*L		20 03 21.7	
PKS7	**Kunszentmiklos**	**57.23**	**307**	⇑*e*P	**P**	**19 39 43.1**	**+0.7**
PKSG		**57.30**	**308**	⇑*e*P	**P**	**19 39 43.5**	**+0.7**
JMB	**Yambol**	**57.41**	**299**	P	**P**	**19 39 44.0**	**+0.3**
JMB	**Yambol**	**57.41**	**299**	P	**P**	**19 39 43.7**	**0.0**
PVL	**Pavlikeni**	**57.42**	**300**	*e*P	**P**	**19 39 44.0**	**+0.3**
KAC	**Achnashellach**	**57.47**	**329**	*e*P	**P**	**19 39 43.6**	**-0.3**
KAC				AMb	AMB	19 39 50.3	
	comp=Z,119nm,1.6s,mb5.7						
MOX	**Moxa**	**57.49**	**314**	*i* P	**P**	**19 39 43.8**	**-0.3**
	comp=Z,logA/T=2.5,mb6.3						
MOX				S	**S**	**19 47 41.0**	**+1.7**
MOX				SS	SS	19 51 38.0	+7.4
MOX				QM		20 03 06.0	
MOX				RM		20 06 56.0	
MOX	**Moxa**	**57.49**	**314**	*e*P	**P**	**19 39 43.8**	**-0.3**
	comp=Z,256nm,0.8s,mb6.3						
MOX				LR	LR		
	comp=Z,6µm,18.0s,MS5.7						
MOX	**Moxa**	**57.49**	**314**	*e*P	**P**	**19 39 43.8**	**-0.3**
MOX				pmax	pmax		
	comp=Z,256nm,0.8s,mb6.3						
MOX				MLR	MLR		
	comp=Z,6µm,18.0s,MS5.7						
NKC	**Novy Kostel**	**57.49**	**314**	*e*P	**P**	**19 39 43.8**	**-0.3**
NKC				*e*pP	pP	19 39 48.3	+0.4
NKC				*e*PP	PP	19 41 51.9	-1.5
NKC				*e*S	**S**	**19 47 40.2**	**+0.9**
NKC				*e*SS	SS	19 51 35.5	+4.8
NKC				AMS	AMS	20 07 40.0	
	comp=Z,9µm,12.6s						
ELBA	**Catalca**	**57.54**	**297**	*i* P	**P**	**19 39 43.2**	**-1.4**
WIT	**Witteveen**	**57.58**	**319**	*e*P	**P**	**19 39 45.2**	**+0.6**
ESKT	**Eskisehir**	**57.61**	**294**	*i* P	**P**	**19 39 42.9**	**-2.2**
KPL	**Plockton**	**57.71**	**329**	*e*P	**P**	**19 39 45.3**	**-0.3**
KPL				AMb	AMB	19 39 48.5	
	comp=Z,119nm,2.0s,mb5.6						
KSB	**Sheil Bridge**	**57.76**	**329**	*e*P	**P**	**19 39 45.9**	**0.0**
KSB				AMb	AMB	19 39 52.2	
	comp=Z,129nm,1.8s,mb5.7						
SOP	**Sopron**	**57.84**	**309**	⇓*e*P	**P**	**19 39 47.3**	**+0.7**
KHC	**Kasperske Hory**	**57.92**	**312**	*e*P	**P**	**19 39 47.3**	**+0.2**
KHC				*e*pP	pP	19 39 48.9	-2.0
KHC				*e*sP	sP	19 39 51.4	-0.9
KHC				*e*PP	PP	19 41 53.4	-3.8
KHC				*e*S	**S**	**19 47 49.8**	**+4.8**
KHC				*e*SS	SS	19 51 43.1	+5.5
KHC				AMS	AMS	20 06 30.0	
	comp=Z,12µm,15.4s						
KHC	**Kasperske Hory**	**57.92**	**312**	*e*P	**P**	**19 39 47.3**	**+0.2**
KHC				*e**PP	pP	19 39 51.4	+0.5
KHC				*e*		19 41 53.4	
KHC				*e*S	**S**	**19 47 49.8**	**+4.8**
KHC				*e*SS	SS	19 51 43.1	+5.5
KHC				MLR	MLR		
	comp=Z,12µm,15.4s,MS6.1						
ULDT	**Uludag**	**57.97**	**295**	*i* P	**P**	**19 39 45.4**	**-2.2**
PKS9	**Tamasi**	**57.97**	**307**	⇓*e*P	**P**	**19 39 47.2**	**-0.3**
GEC2	**GERESS Array S**	**58.10**	**312**	*e*P	**P**	**19 39 48.5**	**+0.1**
	comp=Z,99nm,1.0s,mb5.8						
GEC2				*e*PP	PP	19 41 55.8	-3.0
GEC2	**GERESS Array S**	**58.10**	**312**	*e*P	**P**	**19 39 48.5**	**+0.1**
GEC2				*e*		19 41 55.8	
GEC2				pmax	pmax		
	comp=Z,99nm,1.0s,mb5.8						
GERES	**GERESS Array B**	**58.10**	**312**	P	**P**	**19 39 48.3**	**-0.1**
	comp=Z,65nm,0.8s,mb5.7,baz=39,slow=6.0,SNR=125						
GERES				LR	LR	20 05 20.2	
	comp=Z,7µm,18.8s,MS5.8,baz=31,slow=37						
PKSM	**Moragy**	**58.11**	**307**	⇓*e*P	**P**	**19 39 48.0**	**-0.5**
PKSM				*e*		19 43 13.8	
KAR1	**Arisaig**	**58.12**	**329**	*e*P	**P**	**19 39 48.4**	**0.0**
KAR1				AMb	AMB	19 39 55.1	
	comp=Z,142nm,1.3s,mb5.8						
WET	**Wettzell**	**58.19**	**313**	*e*P	**P**	**19 39 49.4**	**+0.4**
	comp=Z,160nm,1.0s,mb6.0						
WET				*e*PP	PP	19 41 56.6	-3.1
WET	**Wettzell**	**58.19**	**313**	*e*P	**P**	**19 39 49.4**	**+0.4**
WET				*e*		19 41 56.6	
WET				pmax	pmax		
	comp=Z,160nm,1.0s,mb6.0						
MEST	**Erdemli**	**58.21**	**289**	*i* P	**P**	**19 39 45.0**	**-4.3**
EDI	**Edinburgh**	**58.21**	**327**	*e*P	**P**	**19 39 48.3**	**-0.8**
EDI				AMb	AMB	19 39 55.4	
	comp=Z,139nm,2.3s,mb5.6						
WTSB	**Winterswijk**	**58.22**	**318**	*e*P	**P**	**19 39 48.6**	**-0.6**
	comp=Z,256nm,1.6s,mb6.0						
WTSB				*e*x	x	19 40 56.0	
WTSB				*e*x	x	19 41 57.6	
DIM	**Dimitrovgrad**	**58.23**	**299**	*e*P	**P**	**19 39 50.0**	**+0.6**
EBL	**Broad Law**	**58.30**	**326**	*e*P	**P**	**19 39 49.3**	**-0.3**
EBL				AMb	AMB	19 39 53.0	
	comp=Z,102nm,2.2s,mb5.5						
EAB	**Aberfoyle**	**58.32**	**327**	*e*P	**P**	**19 39 49.9**	**+0.1**
EAB				AMb	AMB	19 39 59.3	
	comp=Z,117nm,1.4s,mb5.7						
EAU	**Auchinoon**	**58.35**	**327**	*e*P	**P**	**19 39 49.6**	**-0.4**
EAU				AMb	AMB	19 39 52.1	
	comp=Z,153nm,1.2s,mb5.9						
BEO	**Belgrade**	**58.40**	**305**	⇓*i*P	**P**	**19 39 50.3**	**-0.2**
GRA1	**Grafenberg Arr**	**58.40**	**314**	*e*P	**P**	**19 39 50.7**	**+0.2**
	comp=Z,90nm,0.8s,mb5.8						
GRA1				*e*PP	PP	19 42 05.9	+4.3
GRA1				LR	LR		
	comp=Z,6µm,20.5s,MS5.7						
GRF	**Grafenberg Arr**	**58.40**	**314**	*e*P	**P**	**19 39 50.7**	**+0.2**
	comp=Z,90nm,0.8s,mb5.8						
GRF				*e*PP	PP	19 42 05.9	+4.3
GRF				LR	LR		
	comp=Z,6µm,20.5s,MS5.7						
GRF	**Grafenberg Arr**	**58.40**	**314**	*e*P	**P**	**19 39 50.7**	**+0.2**
GRF				*e*		19 42 05.9	
GRF				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.8						
GRF				MLR	MLR		
	comp=Z,6µm,20.5s,MS5.7						
GRF	**Grafenberg Arr**	**58.40**	**314**	*e*P	**P**	**19 39 50.7**	**+0.2**
GRF				*e*		19 42 05.9	
GRF				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.8						
GRF				MLR	MLR		
	comp=Z,6µm,20.5s,MS5.7						

RHK1	Bakonya	58.45	307	⇓eP	P	19 39 50.8	0.0
SVIS	Svilajnac	58.47	304	⇑iP	P	19 39 50.4	-0.6
PGB	Panagyurishte	58.48	301	P	P	19 39 51.0	-0.1
BOLS	Boljevac	58.50	303	⇓iP	P	19 39 49.3	-1.9
KDZ	Kurdzhali	58.59	299	P	P	19 39 52.0	+0.1
ARSA	Arzberg	58.61	310	i P	P	19 39 52.5	+0.4
	comp=Z,73nm,0.9s,mb5.7,SNR=41						
ARSA	Arzberg	58.61	310	P	P	19 39 52.4	+0.4
GDZ	Gediz	58.61	294	i P	P	19 39 48.1	-4.0
MOA	Molln	58.66	311	i P	P	19 39 52.4	+0.1
	comp=Z,144nm,1.5s,mb5.8,SNR=48						
MOA	Molln	58.66	311	P	P	19 39 52.3	0.0
ESK	Eskdalemuir	58.73	326	eP	P	19 39 53.1	+0.4
ESK				AMb	AMB	19 39 57.1	
	comp=Z,97nm,0.8s,mb5.9						
ESK	Eskdalemuir	58.73	326	eP	P	19 39 52.4	-0.4
	comp=Z,64nm,0.7s,mb5.8						
ESK				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
ESK	Eskdalemuir	58.73	326	eP	P	19 39 52.4	-0.3
ESK				pmax	pmax		
	comp=Z,65nm,0.7s,mb5.8						
ESK				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.2						
LWH	Whinny Nab	58.78	324	eP	P	19 39 52.8	-0.3
ERMK	Ermenek	58.79	290	i P	P	19 39 52.3	-1.1
ECK	Cauldkaine Hil	58.83	326	eP	P	19 39 53.7	+0.3
ECK				AMb	AMB	19 39 55.3	
	comp=Z,120nm,1.3s,mb5.8						
PALK	Pallekele	58.84	228	eP	P	19 39 53.1	-0.9
	comp=Z,131nm,1.8s,mb5.7						
HASS	Wahat al Ahsa’	58.88	269	P	P	19 39 53.1	-1.0
ALN	Alexandroupoli	58.88	298	eP	P	19 39 53.7	-0.2
VTS	Vitosha	58.89	301	P	P	19 39 53.5	-0.5
VTS	Vitosha	58.89	301	P	P	19 39 53.9	-0.1
KOGS	Kog	58.95	309	P	P	19 39 54.6	+0.3
TKTP	Tekketepe	59.01	293	i P	P	19 39 52.8	-2.1
GRUS	Gruza	59.01	304	i P	P	19 39 54.1	-0.8
TNS	Taunus Mts	59.03	316	eP	P	19 39 54.8	-0.1
	comp=Z,67nm,1.1s,mb5.6						
TNS	Taunus Mts	59.03	316	eP	P	19 39 54.8	-0.1
TNS				pmax	pmax		
	comp=Z,67nm,1.1s,mb5.6						
ISP	Isparta	59.07	293	P	P	19 39 55.6	+0.3
DIVS	Divcibare	59.17	304	⇑iP	P	19 39 55.2	-0.8
GROS	Grobnik	59.25	309	⇓iP	P	19 39 56.3	-0.1
PERS	Pernice	59.27	309	eP	P	19 39 56.9	+0.3
PERS				ePP	PP	19 42 10.6	+1.1
PERS				eS	S	19 48 09.9	+7.2
PERS				eSS	SS	19 51 59.2	+0.2
TRD	Trivandrum	59.28	232	eP	P	19 39 56.1	-1.0
TRD				AMb	AMB	19 39 59.9	
	comp=Z,47nm,1.7s,mb5.2						
SIND	Sindeldorf	59.30	315	eP	P	19 39 56.3	-0.5
SIND	Sindeldorf	59.30	315	P	P	19 39 56.5	-0.3
BARS	Barje	59.35	302	⇓iP	P	19 39 55.8	-1.4
TOD	Tromm	59.40	315	⇓eP	P	19 39 57.0	-0.4
TOD	Tromm	59.40	315	eP	P	19 39 57.3	-0.1
GMK	Mull of Kintyr	59.41	328	eP	P	19 39 56.9	-0.5
MMB	Musomiste	59.43	300	P	P	19 39 57.0	-0.8
BHL	Bhannes	59.51	286	eP	P	19 39 57.4	-1.0
KKB	Krupnik	59.52	301	P	P	19 39 58.0	-0.4
HGN	Heimansgroeve	59.52	318	eP	P	19 39 57.3	-0.9
	comp=Z,152nm,1.4s,mb5.8						
HGN				eS	S	19 48 12.4	+6.6
SWS	Schriesheim	59.54	315	eP	P	19 39 57.9	-0.5
SWS	Schriesheim	59.54	315	P	P	19 39 58.7	+0.3
GAL1	Galloway	59.57	327	eP	P	19 39 58.2	-0.3
FUR	Furstenfeldbru	59.61	313	eP	P	19 39 59.1	+0.2
	comp=Z,257nm,1.1s,mb6.2						
FUR	Furstenfeldbru	59.61	313	eP	P	19 39 59.1	+0.2
FUR				pmax	pmax		
	comp=Z,257nm,1.1s,mb6.2						
OBKA	Obir	59.61	310	i P	P	19 39 59.3	+0.3
	comp=Z,110nm,0.7s,mb6.0,SNR=86						
OBKA	Obir	59.61	310	P	P	19 39 59.2	+0.3
ABH	Alteburg	59.65	316	⇓eP	P	19 39 58.8	-0.3
KBA	Koelnbreinsper	59.65	311	i P	P	19 40 00.1	+0.9
	comp=Z,266nm,1.1s,mb6.2,SNR=33						
KBA	Koelnbreinsper	59.65	311	P	P	19 40 00.1	+0.9
HDH	Heidenheim	59.69	314	eP	P	19 39 58.9	-0.5
HDH	Heidenheim	59.69	314	P	P	19 39 59.4	0.0
NVSS	Nova Varos 2	59.77	304	⇓iP	P	19 39 59.7	-0.4
CRES	Cresnjev	59.77	309	P	P	19 40 00.0	-0.1
GCL	Cushendall	59.80	328	eP	P	19 39 59.9	-0.2
LHO	Holmfirth	59.83	324	eP	P	19 39 59.7	-0.6
CSS	Prodhromos	59.88	288	⇓eP	P	19 39 59.9	-1.1
	comp=Z,59nm,0.7s,mb5.7						
STU	Stuttgart	59.93	315	eP	P	19 40 00.8	-0.3
	comp=Z,104nm,1.1s,mb5.8						
STU	Stuttgart	59.93	315	eP	P	19 40 00.8	-0.3
STU				pmax	pmax		
	comp=Z,104nm,1.1s,mb5.8						
KBI1	Birley Grange	59.97	324	eP	P	19 40 01.1	-0.2
LJU	Ljubljana	59.99	309	eP	P	19 40 01.2	-0.4
LJU				ePP	PP	19 42 14.8	-1.1
LJU				e		19 43 34.5	
LJU				eS	S	19 48 22.9	+11
LJU	Ljubljana	59.99	309	eP	P	19 40 01.2	-0.4
LJU				ePP	PP	19 42 14.8	-1.1
LJU				eS	S	19 48 22.9	+11
GOLH	Golhisar	60.01	293	i P	P	19 39 56.8	-5.0
PLE	Pljevlja	60.05	304	⇑iP	P	19 40 03.0	+1.1
BOJS	Bojanci	60.12	309	eP	P	19 40 02.0	-0.4
BOJS				ePP	PP	19 42 15.2	-1.9
BOJS				eS	S	19 48 09.0	-4.6
BUCH	Bad Urach	60.13	314	eP	P	19 40 02.1	-0.4
BUCH	Bad Urach	60.13	314	P	P	19 40 02.5	0.0
KNT	Kendrikon	60.16	300	eP	P	19 40 03.6	+0.9
WATA	Walderalm	60.16	312	i P	P	19 40 03.2	+0.5
	comp=Z,48nm,0.5s,mb5.7,SNR=29						
WATA	Walderalm	60.16	312	P	P	19 40 03.2	+0.5
LBG	Lerchenberg	60.17	315	eP	P	19 40 02.2	-0.5
LBG	Lerchenberg	60.17	315	P	P	19 40 02.7	0.0
IVA	Berane	60.18	304	⇑iP	P	19 40 02.4	-0.6
VAY	Valandovo	60.18	301	⇓iP	P	19 40 02.4	-0.5
VAY				i		19 42 18.4	
VAY				i		19 43 46.7	
PTCC	Patocco-Chiusa	60.19	310	P	P	19 40 02.5	-0.4
SKO	Skopje	60.19	302	⇓eP	P	19 40 03.1	+0.1
SKO				e		19 43 45.9	
WTTA	Wattenberg	60.19	312	⇓iP	P	19 40 03.7	+0.8
	comp=Z,113nm,0.8s,mb6.0,SNR=67						
WTTA	Wattenberg	60.19	312	P	P	19 40 03.2	+0.3
SOH	Sokhos	60.21	300	eP	P	19 40 02.7	-0.4
ROBS	Robic	60.25	310	eP	P	19 40 02.5	-0.9
VOY	Vojsko	60.26	310	eP	P	19 40 03.2	-0.2
VOY				e	pP	19 40 07.5	+0.3
FVI	Forni Avoltri	60.27	311	P	P	19 40 03.0	-0.4
	comp=Z,233nm,2.4s,mb5.8						
FVI	Forni Avoltri	60.27	311	P	P	19 40 03.0	-0.4
FVI				pmax	pmax		
	comp=Z,233nm,2.4s,mb5.8						
KWE	Weaver Farm	60.27	324	eP	P	19 40 03.1	-0.3
KWE				AMb	AMB	19 40 10.1	
	comp=Z,363nm,1.7s,mb6.1						
LANF	Langenberg	60.29	316	eP	P	19 40 03.1	-0.4
OUR	Ouranopolis	60.30	299	eP	P	19 40 03.4	-0.3
GMNA	Gemona	60.34	310	P	P	19 40 03.5	-0.4
MOTA	Moosalm	60.34	312	i P	P	19 40 04.2	+0.3
	comp=Z,98nm,0.7s,mb5.9,SNR=72						
MOTA	Moosalm	60.34	312	P	P	19 40 04.2	+0.3
WLF	Walferdange	60.34	317	eP	P	19 40 03.8	-0.1
	comp=Z,30nm,0.8s,mb5.4						
WLF	Walferdange	60.34	317	eP	P	19 40 03.8	-0.1
WLF				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
UPM	Unac-Piva	60.36	305	⇑iP	P	19 40 02.7	-1.4
PVY	Plav	60.37	303	⇑iP	P	19 40 03.5	-0.6
SEST	Monte Rota	60.38	311	P	P	19 40 04.3	+0.1
	comp=Z,266nm,1.5s,mb6.0						
SQTA	Sankt Quirin	60.40	312	i P	P	19 40 04.9	+0.5
	comp=Z,58nm,0.6s,mb5.8,SNR=36						
SQTA	Sankt Quirin	60.40	312	P	P	19 40 04.8	+0.5
UBR	Uberruh	60.46	313	eP	P	19 40 04.6	-0.1
UBR	Uberruh	60.46	313	P	P	19 40 04.8	+0.1
GIVF	Givet	60.46	318	⇓iP	P	19 40 03.9	-0.8
GMM	Mts of Mourne	60.48	327	eP	P	19 40 04.2	-0.5
GUT	Gutenstein	60.53	314	eP	P	19 40 04.8	-0.4
GUT	Gutenstein	60.53	314	P	P	19 40 05.0	-0.2
GRG	Griva	60.55	301	eP	P	19 40 05.5	0.0
KWAJ	Kwajalein Atol	60.56	124	PFAKE		19 40 20.0	+14
KWAJ				LR	LR		
	comp=Z,709nm,19.0s,MS4.8						
TRI	Trieste	60.58	310	P	P	19 40 05.2	-0.4
	comp=Z,705nm,1.0s,mb6.8						
TRI	Trieste	60.58	310	P	P	19 40 05.2	-0.4
TRI				pmax	pmax		
	comp=Z,705nm,1.0s,mb6.8						
QURS	Qurayyt al Mil	60.60	283	P	P	19 40 06.2	+0.2
BFO	Black Forest	60.62	315	eP	P	19 40 05.4	-0.4
	comp=Z,155nm,1.3s,mb6.0						
BFO				ePcP	PcP	19 40 48.5	-1.5
BFO				ePP	PP	19 42 20.5	-1.1
BFO	Black Forest	60.62	315	eP	P	19 40 05.4	-0.4
BFO				e		19 40 48.5	
BFO				e		19 42 20.5	
BFO				pmax	pmax		
	comp=Z,155nm,1.3s,mb6.0						
STR	Strasbourg	60.63	315	eP	P	19 40 05.7	-0.2
NKY	Niksic	60.63	304	⇑iP	P	19 40 04.6	-1.4
SPAK	Spaichingen	60.63	314	eP	P	19 40 05.7	-0.2
SPAK	Spaichingen	60.63	314	eP	P	19 40 05.3	-0.6
WPM1	Penmaenmawr	60.71	325	eP	P	19 40 06.3	-0.1
HAF	Haifa	60.72	286	P	P	19 40 05.9	-0.8
BAIF	Baives	60.72	319	⇓iP	P	19 40 05.5	-1.0
	comp=Z,88nm,0.9s,mb5.6						
BAIF	Baives	60.72	319	⇓iP	P	19 40 05.5	-1.0
BAIF				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.6						
BRY	Bratogost	60.77	305	⇑iP	P	19 40 05.7	-1.2
MMLI	Mount Malkishu	60.78	285	P	P	19 40 06.7	-0.4
WCB1	Church Bay	60.80	326	eP	P	19 40 06.3	-0.7
TTG	Podgorica	60.82	304	⇑iP	P	19 40 06.1	-1.2
WLF1	Llynfaes	60.83	326	eP	P	19 40 07.0	-0.2
OFRI	‘Ofer	60.86	286	P	P	19 40 07.0	-0.7
DAVA	Damuels	60.87	313	⇓iP	P	19 40 07.7	+0.2
	comp=Z,86nm,1.0s,mb5.8,SNR=25						
DAVA	Damuels	60.87	313	P	P	19 40 08.0	+0.5
FCC	Fort Churchill	60.89	20	eP	P	19 40 05.7	-1.8
	comp=Z,102nm,1.4s,mb5.8						
FCC	Fort Churchill	60.89	20	eP	P	19 40 05.7	-1.8
FCC				pmax	pmax		
	comp=Z,102nm,1.4s,mb5.8						
YLL	Llanberis	60.89	325	eP	P	19 40 06.3	-1.2
SISB	Singen-Sch Ber	60.90	314	P	P	19 40 07.7	0.0
WLS	Welschbruch	60.92	316	eP	P	19 40 07.4	-0.5
CDF	Champ du Feu	60.95	316	⇓iP	P	19 40 07.4	-0.7
	comp=Z,150nm,1.1s,mb5.8						
CDF	Champ du Feu	60.95	316	⇓iP	P	19 40 07.4	-0.7
CDF				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.7						
APPI	Appiano	60.99	312	P	P	19 40 07.3	-1.1
	comp=Z,137nm,1.4s,mb5.9						
SLE	Schleitheim	61.02	314	⇓P	P	19 40 07.6	-0.9
MENF	Mencas	61.03	320	eP	P	19 40 08.1	-0.4
NVLJ	Novalja	61.03	308	i P	P	19 40 06.3	-2.4
LIBD	Limburg	61.05	315	eP	P	19 40 08.5	-0.2
LIBD	Limburg	61.05	315	eP	P	19 40 08.3	-0.4
DMUB	Kingscourt	61.05	328	eP	P	19 40 08.0	-0.6
BUM	Brajici-Budva	61.08	304	⇑iP	P	19 40 08.2	-0.9
KIZ	Kirchzarten	61.09	315	eP	P	19 40 08.3	-0.7
YRE	Yr Eifl	61.11	326	eP	P	19 40 08.0	-1.0
FELD	Feldberg	61.12	315	eP	P	19 40 08.6	-0.6
SLTI	Sal’it	61.13	285	P	P	19 40 08.8	-0.7
HCY	Herceg Novi	61.15	304	⇑iP	P	19 40 08.2	-1.3
WILA	Wila	61.15	314	⇓P	P	19 40 09.0	-0.4
FNA	Florina	61.16	301	eP	P	19 40 09.4	-0.2
ECH	Echery	61.16	316	eP	P	19 40 08.7	-0.8
STON	Ston	61.16	305	i P	P	19 40 06.0	-3.5
OHR	Ohrid	61.17	302	⇓iP	P	19 40 09.6	0.0
OHR				i		19 42 27.0	
OHR				i		19 43 57.4	
CTI	Castel Tesino	61.17	311	P	P	19 40 08.7	-0.9
	comp=Z,64nm,0.7s,mb5.9						
ULC	Ulcinj	61.20	303	⇑iP	P	19 40 08.9	-0.9
EDM	Edmonton	61.26	34	eP	P	19 40 08.7	-1.3
DAVOX	Davos	61.29	313	P	P	19 40 11.0	+0.7
ZUR	Zurich	61.31	314	⇓P	P	19 40 10.3	-0.2
BRMO	Bormio	61.34	312	P	P	19 40 11.1	+0.4
MKRJ	Makawir	61.36	284	P	P	19 40 10.8	-0.3
SULZ	Sulz-Cheisache	61.36	314	⇓P	P	19 40 10.3	-0.6
HILS	Ha’il	61.39	277	P	P	19 40 10.9	-0.4
DLF	Lyons Farm	61.47	327	eP	P	19 40 09.0	-2.5
MOF	Molkenrain	61.47	315	eP	P	19 40 10.7	-0.9
SHAO	Shalim	61.52	259	P	P	19 40 12.2	-0.2
	SNR=11						
LLS	Linth-Limmern	61.57	313	⇓P	P	19 40 12.0	-0.3
THEF	They Montfort	61.59	316	eP	P	19 40 11.5	-0.9
HINF	Hinteralfeld	61.61	315	⇓iP	P	19 40 11.5	-1.0
	comp=Z,61nm,0.7s,mb5.5						
HINF	Hinteralfeld	61.61	315	⇓iP	P	19 40 11.5	-1.0
HINF				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.5						
MUO	Muotathal	61.62	314	⇓P	P	19 40 12.2	-0.4
MABI	Malga Bissina	61.63	312	P	P	19 40 11.9	-0.8
	comp=Z,288nm,2.9s,mb5.9						
HAU	Haudompre	61.64	316	⇓iP	P	19 40 11.7	-1.0
HAU				eR			
	comp=Z,5µm,17.0s						
DCN	Croghan	61.64	327	eP	P	19 40 10.2	-2.5
BBS	Basel-Blauen	61.65	315	eP	P	19 40 12.5	-0.3
BBS	Basel-Blauen	61.65	315	eP	P	19 40 12.2	-0.6
VDL	Val di Lei	61.69	313	⇓P	P	19 40 13.5	+0.4
MZDA	Masada	61.70	284	P	P	19 40 12.9	-0.5
MEZF	Maizieres J’vi	61.71	317	⇓iP	P	19 40 12.6	-0.6
	comp=Z,138nm,0.9s,mb5.8						
TUE	Stuetta	61.75	313	P	P	19 40 14.1	+0.6
	comp=Z,101nm,0.9s,mb6.0						
PGC	Sidney	61.79	43	eP	P	19 40 13.3	-0.5
	comp=Z,108nm,0.8s,mb6.0						
SAL	Salo	61.99	312	P	P	19 40 14.3	-0.8
LOMF	Lomont	62.00	315	eP	P	19 40 14.8	-0.4
AGG	Agios Georgios	62.11	299	eP	P	19 40 14.8	-1.3
MZLS	Mizel	62.23	272	P	P	19 40 15.9	-1.2
RTMM	Retamin	62.25	285	P	P	19 40 16.3	-0.8
OCWA	Octopus Mounta	62.27	44	PFAKE		19 40 30.0	+13
OCWA				LR	LR		
	comp=Z,6µm,20.0s,MS5.8						
MUGIO	Muggio	62.32	313	P	P	19 40 16.7	-0.7
ZFRI	Zfri	62.39	284	P	P	19 40 17.6	-0.4
AOI	Ancona	62.39	308	P	P	19 40 17.3	-0.5
PESA	Pesaro	62.39	309	P	P	19 40 18.4	+0.5
	comp=Z,296nm,2.2s,mb6.0						
RAVA	Ravarino	62.44	311	P	P	19 40 19.0	+0.8
	comp=Z,4µm,4.0s						
VAI	Varese	62.48	313	P	P	19 40 17.6	-0.8
	comp=Z,122nm,0.7s,mb6.1						
VAI	Varese	62.48	313	P	P	19 40 17.6	-0.8
VAI				pmax	pmax		
	comp=Z,122nm,0.7s,mb6.1						
LKBD	Leukerbad	62.49	314	⇓P	P	19 40 18.3	-0.2
KZIT	Kziot	62.52	285	P	P	19 40 17.6	-1.3
HEX	Exmoor	62.57	324	eP	P	19 40 18.6	-0.3
WHFO	Wadi Hawf	62.59	260	P	P	19 40 18.0	-1.5
	SNR=30						
FSSB	Fossombrone	62.62	309	P	P	19 40 18.8	-0.6
MMK	Mattmark	62.64	314	P	P	19 40 19.9	+0.5
PRNI	Paran	62.64	284	P	P	19 40 19.4	-0.3
RPW	Rockport	62.66	41	P	P	19 40 18.9	-0.6
RBK	Rabkut	62.70	260	P	P	19 40 19.7	-0.5
	SNR=13						
CING	Cingoli	62.70	308	P	P	19 40 19.4	-0.5
KEK	Kerkira	62.74	302	P	P	19 40 19.5	-0.7
CABF	La Chapelle	62.90	315	⇓iP	P	19 40 20.4	-0.7
	comp=Z,53nm,0.9s,mb5.4						
CABF	La Chapelle	62.90	315	⇓iP	P	19 40 20.4	-0.7
CABF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.4						
SNTG	Esanatoglia	62.91	309	P	P	19 40 20.9	-0.4
PGD	Poggio Sodo	62.91	310	P	P	19 40 22.2	+0.9
	comp=Z,130nm,1.2s,mb5.9						
PGD	Poggio Sodo	62.91	310	P	P	19 40 22.2	+0.9
PGD				pmax	pmax		
	comp=Z,131nm,1.2s,mb5.9						
VMG	Vicchio	62.92	310	P	P	19 40 22.4	+1.1
SEI	Scarperia	62.92	310	P	P	19 40 22.6	+1.3
FNVD	Fontana Vidola	62.92	310	P	P	19 40 22.0	+0.7
	comp=Z,423nm,1.6s,mb6.3						
GSCL	Gusciola	62.99	311	P	P	19 40 22.5	+0.7
BADI	Badiali	63.00	309	P	P	19 40 22.3	+0.5
	comp=Z,2µm,3.6s						
ERBM	Eremo	63.01	311	P	P	19 40 23.0	+1.1
CRE	Caprese Michel	63.03	309	P	P	19 40 22.4	+0.4
	comp=Z,554nm,2.0s,mb6.3						
CRE	Caprese Michel	63.03	309	P	P	19 40 22.4	+0.4
CRE				pmax	pmax		
	comp=Z,554nm,2.0s,mb6.3						
EMV	Vieux Emosson	63.05	314	P	P	19 40 22.0	-0.1
RGNG	Rignano Grg	63.06	306	P	P	19 40 21.6	-0.6
MURB	Monte Urbino	63.08	309	P	P	19 40 22.8	+0.4
	comp=Z,308nm,1.5s,mb6.2						
AQBJ	Aqaba	63.11	284	P	P	19 40 22.6	-0.2
BOB	Bobbio (Coli)	63.11	312	P	P	19 40 22.7	+0.1
	comp=Z,64nm,0.7s,mb5.9						
BOB	Bobbio (Coli)	63.11	312	P	P	19 40 22.7	+0.1
BOB				pmax	pmax		
	comp=Z,64nm,0.7s,mb5.9						
MBH	Mount Berech	63.13	284	P	P	19 40 22.7	-0.2
NRCA	Norcia	63.18	308	P	P	19 40 23.2	+0.1
LOR	Lormes	63.18	317	⇓iP	P	19 40 21.6	-1.4
	comp=Z,104nm,0.7s,mb5.8						
LOR				eR			
	comp=Z,10µm,20.2s						
LOR	Lormes	63.18	317	⇓iP	P	19 40 21.6	-1.4
LOR				pmax	pmax		
	comp=Z,52nm,0.7s,mb5.8						
LOR				MLR	MLR		
	comp=Z,10µm,20.3s,MS6.0						
EIL	Elat	63.21	284	P	P	19 40 23.1	-0.3
BDI	Bagni Di Lucca	63.23	311	P	P	19 40 23.1	-0.2
	comp=Z,145nm,1.0s,mb6.1						
BDI	Bagni Di Lucca	63.23	311	P	P	19 40 23.1	-0.2
BDI				pmax	pmax		
	comp=Z,145nm,1.0s,mb6.1						
VLC	Villacollemand	63.23	311	P	P	19 40 23.5	+0.1
	comp=Z,215nm,1.0s,mb6.2						
ABTO	Aybut	63.31	260	P	P	19 40 22.8	-1.5
	SNR=12						
CIGN	Sant’Elia a Pi	63.37	306	P	P	19 40 24.4	+0.1
	comp=Z,2µm,5.0s						
CSNT	Castellina Chi	63.42	310	P	P	19 40 23.3	-1.3
ALWS	Ilw as Safayha	63.44	283	P	P	19 40 24.8	-0.1
AQU	L’Aquila	63.45	308	P	P	19 40 25.4	+0.6
	comp=Z,163nm,0.7s,mb6.3						
AQU	L’Aquila	63.45	308	eP	P	19 40 24.9	+0.1
AQU				pmax	pmax		
	comp=Z,220nm,1.7s,mb6.0						
FLN	La Foliniere	63.46	321	⇓iP	P	19 40 23.3	-1.5
	comp=Z,119nm,0.8s,mb5.8						
FLN				eR			
	comp=Z,10µm,21.0s						
FLN	La Foliniere	63.46	321	⇓iP	P	19 40 23.3	-1.5
FLN				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.8						
FLN				MLR	MLR		
	comp=Z,10µm,21.0s,MS6.0						
RSL	Roselend	63.46	314	eP	P	19 40 24.0	-0.9
LDF	La Druitiere	63.48	320	⇓iP	P	19 40 23.5	-1.4
	comp=Z,134nm,0.8s,mb5.8						
LDF	La Druitiere	63.48	320	⇓iP	P	19 40 23.5	-1.4
LDF				pmax	pmax		
	comp=Z,67nm,0.8s,mb5.8						
SSF	Saint Saulge	63.49	317	⇓iP	P	19 40 23.8	-1.2
	comp=Z,45nm,0.8s,mb5.7						
SSF	Saint Saulge	63.49	317	⇓iP	P	19 40 23.8	-1.2
SSF				pmax	pmax		
	comp=Z,45nm,0.8s,mb5.7						
AFFS	‘Afif	63.50	273	P	P	19 40 24.7	-0.6
INTR	Introdacqua	63.51	307	P	P	19 40 24.8	-0.3
	comp=Z,143nm,0.9s,mb6.0						
TBKS	Tabuk	63.52	281	P	P	19 40 25.6	+0.2
JMOS	Jabal al Moall	63.52	283	P	P	19 40 25.5	0.0
FG4	Candela	63.53	305	P	P	19 40 25.1	-0.2
PII	Pisa	63.53	310	P	P	19 40 24.7	-0.6
	comp=Z,95nm,0.9s,mb5.8						
PII	Pisa	63.53	310	P	P	19 40 24.7	-0.6
PII				pmax	pmax		
	comp=Z,95nm,0.9s,mb5.8						
LPL	La Plagne	63.56	314	⇓iP	P	19 40 25.5	+0.1
	comp=Z,358nm,1.1s,mb6.0						
LPL	La Plagne	63.56	314	⇓iP	P	19 40 25.5	+0.1
LPL				pmax	pmax		
	comp=Z,179nm,1.1s,mb6.0						
LPG	La Plagne	63.57	314	⇓iP	P	19 40 25.8	+0.3
	comp=Z,484nm,1.3s,mb6.1						
LPG	La Plagne	63.57	314	⇓iP	P	19 40 25.8	+0.3
LPG				pmax	pmax		
	comp=Z,242nm,1.3s,mb6.1						
CII	Carovilli	63.58	307	P	P	19 40 26.5	+0.9
OG05	Jujurieux	63.62	315	eP	P	19 40 25.5	-0.3
HYF	Humbligny	63.63	318	eP	P	19 40 25.0	-0.8
FIAM	Fiamignano	63.64	308	P	P	19 40 26.1	+0.1
RNI2	Rionero Sannit	63.66	307	P	P	19 40 26.3	+0.2
	comp=Z,850nm,2.4s,mb6.3						
MIDA	Miranda	63.66	307	P	P	19 40 26.2	+0.1
	comp=Z,2µm,4.4s						
HAQS	Haql	63.71	283	P	P	19 40 26.9	+0.3
SMF	Signal de Mont	63.72	317	⇓iP	P	19 40 25.3	-1.1
	comp=Z,101nm,0.7s,mb5.6						
SMF	Signal de Mont	63.72	317	⇓iP	P	19 40 25.3	-1.1
SMF				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.7						
PTQR	Pietraquaria	63.72	307	P	P	19 40 26.7	+0.2
MNS	Montasola	63.73	308	P	P	19 40 25.9	-0.7
	comp=Z,56nm,1.4s,mb5.4						
MNS	Montasola	63.73	308	P	P	19 40 25.9	-0.7
MNS				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.4						
VVLD	Villa Vallelon	63.75	307	P	P	19 40 26.7	0.0
	comp=Z,630nm,2.3s,mb6.2						
AVF	Avril sur Loir	63.77	317	⇓iP	P	19 40 25.5	-1.3
	comp=Z,67nm,0.9s,mb5.4						
AVF	Avril sur Loir	63.77	317	⇓iP	P	19 40 25.5	-1.3
AVF				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.4						
SGG	Gregorio Mates	63.82	306	P	P	19 40 26.8	-0.4
	comp=Z,201nm,1.7s,mb5.9						
GRFL	Gerfalco	63.82	310	P	P	19 40 27.0	-0.2
MRLC	Muro Lucano	63.84	305	P	P	19 40 27.3	-0.1
GRR	Gorron	63.91	321	⇓iP	P	19 40 26.2	-1.4
	comp=Z,89nm,0.7s,mb5.6						
GRR	Gorron	63.91	321	⇓iP	P	19 40 26.2	-1.4
GRR				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.6						
GUAR	Guarcino	63.95	307	P	P	19 40 28.0	0.0
	comp=Z,505nm,2.6s,mb6.1						
CERT	Cerreto	63.96	308	P	P	19 40 27.7	-0.4
	comp=Z,154nm,1.5s,mb5.8						
ORI	Oriolo Calabro	63.98	304	P	P	19 40 28.9	+0.6
KBRS	Khaybar	64.02	278	P	P	19 40 29.4	+0.6
RFI	Roccamonfina	64.06	307	P	P	19 40 28.9	+0.1
	comp=Z,63nm,1.5s,mb5.4						
OG22	Abries	64.06	314	eP	P	19 40 28.4	-0.3
GDM	Grand’Maison	64.06	314	eP	P	19 40 28.4	-0.3
SLCN	Sala Consilina	64.08	305	P	P	19 40 29.2	+0.3
SGO	Sicignano	64.08	305	P	P	19 40 29.0	+0.1
	comp=Z,104nm,1.0s,mb5.8						
SGO	Sicignano	64.08	305	P	P	19 40 29.0	+0.1
SGO				pmax	pmax		
	comp=Z,104nm,1.0s,mb5.8						
BDAS	Al Bad‘	64.12	283	P	P	19 40 29.2	-0.2
MSC	Monte Massico	64.15	307	P	P	19 40 29.3	-0.1
BGF	Bois d’Agland	64.16	317	⇓iP	P	19 40 28.3	-1.0
	comp=Z,38nm,0.6s,mb5.3						
BGF	Bois d’Agland	64.16	317	⇓iP	P	19 40 28.3	-1.0
BGF				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.3						
GRN	Grenoble	64.17	315	eP	P	19 40 29.0	-0.4
DOI	San Damiano	64.21	313	P	P	19 40 27.8	-1.9
MBDF	Montbardon	64.21	314	⇓iP	P	19 40 29.0	-0.7
	comp=Z,166nm,0.6s,mb5.9						
MBDF	Montbardon	64.21	314	⇓iP	P	19 40 29.0	-0.7
MBDF				pmax	pmax		
	comp=Z,83nm,0.6s,mb5.9						
AYUS	‘Aynunah	64.22	282	P	P	19 40 29.8	-0.3
MA9	Marino	64.25	308	P	P	19 40 30.0	0.0
TOLF	Tolfa	64.28	308	P	P	19 40 29.5	-0.7
	comp=Z,63nm,0.9s,mb5.7						
MGR	Morigerati	64.32	305	P	P	19 40 30.0	-0.5
	comp=Z,212nm,1.6s,mb5.9						
CUC	Castrocucco	64.32	304	P	P	19 40 30.2	-0.3
	comp=Z,110nm,0.8s,mb5.9						
NEW	Newport	64.34	39	PFAKE		19 40 40.0	+10
NEW				LR	LR		
	comp=Z,15µm,20.0s,MS6.2						
TDS	Terranova Siba	64.36	304	P	P	19 40 31.4	+0.7
	comp=Z,380nm,0.9s,mb6.4						
TDS	Terranova Siba	64.36	304	P	P	19 40 31.4	+0.7
TDS				pmax	pmax		

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      comp=Z,380nm,0.9s,mb6.4
PLDF  La Plantade       64.37 316 eP     P     19 40 30.6 -0.1
ORIF  Oris-en-Rattie    64.39 314⇓iP     P     19 40 30.6 -0.3
      comp=Z,150nm,0.9s,mb5.7
ORIF                              eR
      comp=Z,8µm,19.0s
SURF  Saint Ours        64.40 313 eP     P     19 40 30.6 -0.3
IMI   Imperia           64.45 312 P      P     19 40 31.1 -0.1
AGO   Saint Agoulin     64.48 317 eP     P     19 40 31.1 -0.3
SAOF  Saorge            64.52 313 eP     P     19 40 30.9 -0.8
OD2   Odessa Site #2    64.55  40 P      P     19 40 31.4 -0.4
TIP   Timpagrande       64.56 303⇓eP     P     19 40 31.6 -0.5
AUTN  L’Aution          64.56 313 eP     P     19 40 32.2 +0.2
SGMF  Saint Gilles      64.60 322⇓iP     P     19 40 31.5 -0.6
      comp=Z,134nm,0.8s,mb5.7
SGMF  Saint Gilles      64.60 322⇓iP     P     19 40 31.5 -0.6
SGMF                              pmax   pmax
      comp=Z,67nm,0.8s,mb5.7
TOUF  Mont Tournerai    64.62 313 eP     P     19 40 32.0 -0.3
TCF   Toulx Ste Croi    64.62 317⇓iP     P     19 40 31.5 -0.8
      comp=Z,57nm,0.9s,mb5.3
TCF   Toulx Ste Croi    64.62 317⇓iP     P     19 40 31.5 -0.8
TCF                               pmax   pmax
      comp=Z,28nm,0.9s,mb5.3
SBF   Sospel            64.67 313⇓iP     P     19 40 31.8 -0.9
      comp=Z,171nm,0.7s,mb5.9
SBF   Sospel            64.67 313⇓iP     P     19 40 31.8 -0.9
SBF                               pmax   pmax
      comp=Z,85nm,0.7s,mb5.9
COLF  Collangettes      64.72 316 eP     P     19 40 32.4 -0.6
MVIF  Mont Vial         64.75 313 eP     P     19 40 32.7 -0.5
ROSF  Rostrenen         64.77 322⇓iP     P     19 40 32.6 -0.6
      comp=Z,107nm,1.0s,mb5.5
ROSF  Rostrenen         64.77 322⇓iP     P     19 40 32.6 -0.6
ROSF                              pmax   pmax
      comp=Z,53nm,1.0s,mb5.5
OG25  Le Caire          64.78 314 eP     P     19 40 33.2 -0.2
PYM   Petit Puy Mans    64.78 317 eP     P     19 40 33.4  0.0
WAH2  Wahluke Slope     64.79  41 P      P     19 40 34.3 +0.9
REVF  Revere            64.80 313 eP     P     19 40 32.7 -0.8
VIVF  Saint-Julien-l    64.91 315⇓iP     P     19 40 33.7 -0.5
      comp=Z,126nm,0.9s,mb5.7
VIVF  Saint-Julien-l    64.91 315⇓iP     P     19 40 33.7 -0.5
VIVF                              pmax   pmax
      comp=Z,63nm,0.9s,mb5.7
VERF  Verneugheol       64.98 317 eP     P     19 40 34.0 -0.6
CALN  Calern            64.98 313 eP     P     19 40 34.0 -0.7
GRI   Girifalco         65.00 303 P      P     19 40 35.2 +0.3
QUIF  Quistinic         65.09 322⇓iP     P     19 40 34.7 -0.7
      comp=Z,163nm,0.9s,mb5.8
QUIF  Quistinic         65.09 322⇓iP     P     19 40 34.7 -0.7
QUIF                              pmax   pmax
      comp=Z,82nm,0.9s,mb5.8
HAWA  Hanford           65.12  41⇓eP     P     19 40 34.7 -0.8
      comp=Z,5.3nm,1.1s
HAWA                              LR     LR
      comp=Z,284nm,21.0s
LBL   Lubilhac          65.13 316 eP     P     19 40 35.2 -0.4
PGF   Pioggiola         65.13 311⇓iP     P     19 40 35.3 -0.4
      comp=Z,200nm,0.7s,mb5.9
PGF   Pioggiola         65.13 311⇓iP     P     19 40 35.3 -0.4
PGF                               pmax   pmax
      comp=Z,100nm,0.7s,mb6.0
STOF  St-Etienne Org    65.16 314 eP     P     19 40 36.6 +0.8
MFF   Saint Martin d    65.19 319⇓iP     P     19 40 35.2 -0.8
      comp=Z,86nm,0.7s,mb5.6
MFF   Saint Martin d    65.19 319⇓iP     P     19 40 35.2 -0.8
MFF                               pmax   pmax
      comp=Z,43nm,0.7s,mb5.6
FRF   La Foret Royal    65.23 313⇓iP     P     19 40 35.3 -1.0
      comp=Z,153nm,0.9s,mb5.7
FRF   La Foret Royal    65.23 313⇓iP     P     19 40 35.3 -1.0
FRF                               pmax   pmax
      comp=Z,77nm,0.9s,mb5.7
TDH   Tom, Dick, Har    65.23  44 P      P     19 40 36.7 +0.4
COR   Corvallis         65.26  45 eP     P     19 40 37.2 +0.7
      comp=Z,108nm,0.9s,mb5.9
COR                               LR     LR
      comp=Z,1µm,22.0s,MS5.1
COR   Corvallis         65.26  45 eP     P     19 40 37.2 +0.7
COR                               pmax   pmax
      comp=Z,109nm,0.9s,mb5.9
COR                               MLR    MLR
      comp=Z,1µm,22.0s,MS5.1
SMRF  Simiane la Rot    65.31 314⇓iP     P     19 40 36.5 -0.3
      comp=Z,109nm,0.7s,mb5.7
LCHF  La Chataignera    65.35 320 eP     P     19 40 37.3 +0.3
TAVF  Tavernes          65.42 313 eP     P     19 40 38.1 +0.6
LMR   La Mourre         65.48 313⇓iP     P     19 40 37.2 -0.7
      comp=Z,156nm,0.9s,mb5.7
LMR   La Mourre         65.48 313⇓iP     P     19 40 37.2 -0.7
LMR                               pmax   pmax
      comp=Z,78nm,0.9s,mb5.7
UMJS  Umm Lajj          65.50 279 P      P     19 40 39.4 +1.0
KAMS  Al Khamasin       65.58 270 P      P     19 40 37.6 -1.3
PRAF  Pradon            65.61 314 eP     P     19 40 39.8 +1.1
PUYF  Puyloubier        65.63 314 eP     P     19 40 39.2 +0.3
RJF   Les Rejaudoux     65.71 317⇓iP     P     19 40 38.7 -0.6
      comp=Z,88nm,1.0s,mb5.4
RJF                               eR
      comp=Z,14µm,22.5s
RJF   Les Rejaudoux     65.71 317⇓iP     P     19 40 38.7 -0.6
RJF                               pmax   pmax
      comp=Z,44nm,1.0s,mb5.4
RJF                               MLR    MLR
      comp=Z,14µm,22.5s,MS6.1
SOI   Samo              65.78 303 P      P     19 40 39.7 -0.2
      comp=Z,529nm,2.9s,mb6.1
SOI   Samo              65.78 303 P      P     19 40 39.7 -0.2
SOI                               pmax   pmax
      comp=Z,529nm,2.9s,mb6.1
BERF  Bertagne          65.82 313 eP     P     19 40 40.7 +0.6
CAF   Calviac           65.83 317⇓iP     P     19 40 40.0 -0.1
GELF  Grande-Etoile     65.86 314 eP     P     19 40 41.2 +0.9
YNBS  Yanbu‘ al Bahr    65.86 278 P      P     19 40 41.1 +0.5
LASF  Ste Croix         65.88 315⇓iP     P     19 40 39.7 -0.8
LFF   La Frestale       66.31 318⇓iP     P     19 40 42.2 -1.0
      comp=Z,88nm,0.8s,mb5.5
LFF   La Frestale       66.31 318⇓iP     P     19 40 42.2 -1.0
LFF                               pmax   pmax
      comp=Z,44nm,0.8s,mb5.5
KEBM  Edson Butte       66.31  47 eP     P     19 40 44.2 +1.0
MSO   Missoula          66.66  37 eP     P     19 40 45.3  0.0
      comp=Z,25nm,0.7s,mb5.4
MSO                               LR     LR
      comp=Z,4µm,19.0s,MS5.6
TATS  Tathlith          66.80 270 P      P     19 40 46.1 -0.6
CHMT  Chamberlain Mo    66.81  37 eP     P     19 40 45.9 -0.4
HUMO  Hull Mountain     67.07  46 eP     P     19 40 47.9 -0.2
      comp=Z,67nm,1.2s,mb5.5
HUMO                              LR     LR
      comp=Z,4µm,22.0s,MS5.6
MTLF  Montolieu         67.13 316⇓iP     P     19 40 46.9 -1.6
BMO   Blue Mountains    67.24  41⇓eP     P     19 40 49.1 +0.1
      comp=Z,90nm,0.8s,mb5.8
BMO                               LR     LR
      comp=Z,4µm,22.0s,MS5.6
HRY   Holter Researc    67.44  36 eP     P     19 40 50.0 -0.4
BLJS  Baljurashi        67.53 272 P      P     19 40 50.8 -0.6
SJAF  Saint Jean de     67.61 315 eP     P     19 40 51.6 +0.1
KRMB  Red Mountain      67.62  47 eP     P     19 40 52.8 +1.3
EJON  La Jonquera       67.64 315 P      P     19 40 52.0 +0.3
      comp=Z,260nm,1.3s,mb6.1
CARF  Carcanieres       67.71 316 eP     P     19 40 53.5 +1.4
LTHS  Al Lith           67.86 273 P      P     19 40 53.0 -0.4
MLS   Moulis            67.88 316 eP     P     19 40 53.7 +0.5
SCHQ  Schefferville     67.89   5 P      P     19 40 52.0 -1.0
      comp=Z,97nm,1.0s,mb5.8,baz=7.5,slow=7.6,SNR=34
SCHQ  Schefferville     67.89   5 P      P     19 40 52.0 -1.0
YBH   Yreka Blue Hor    67.91  46 eP     P     19 40 54.0 +0.5
      comp=Z,51nm,1.2s,mb5.4
YBH                               LR     LR
      comp=Z,4µm,22.0s,MS5.6
YBH   Yreka Blue Hor    67.91  46 eP     P     19 40 54.0 +0.6
YBH                               pmax   pmax
      comp=Z,51nm,1.2s
YBH                               MLR    MLR
      comp=Z,4µm,22.0s
VALF  Valcebollere      68.01 315 eP     P     19 40 54.7 +0.7
EPF   Esparros          68.10 317⇓iP     P     19 40 54.0 -0.5
      comp=Z,93nm,0.8s,mb5.6
EPF   Esparros          68.10 317⇓iP     P     19 40 54.0 -0.5
EPF                               pmax   pmax
      comp=Z,47nm,0.8s,mb5.6
LABF  Labassere         68.18 317 eP     P     19 40 54.1 -1.0
LHEM  Herd Peak         68.19  46 P      P     19 40 55.8 +0.7
KHMM  Horse Mountain    68.24  47 eP     P     19 40 57.1 +1.6
DJNS  Zahran al Janu    68.26 269 P      P     19 40 56.2 +0.2
RESF  Ens               68.29 317 eP     P     19 40 55.7  0.0
VIEF  Viey              68.34 317 eP     P     19 40 56.2 +0.1
BOZ   Bozeman (W)       68.45  37 eP     P     19 40 56.5 -0.2
      comp=Z,35nm,0.8s,mb5.5
BOZ                               LR     LR
      comp=Z,8µm,21.0s,MS5.9
BOZ   Bozeman (W)       68.45  37 eP     P     19 40 56.5 -0.2
BOZ                               pmax   pmax
      comp=Z,35nm,0.8s,mb5.4
BOZ                               MLR    MLR
      comp=Z,8µm,21.0s,MS5.9
EBIE  Bielsa            68.47 317 P      P     19 40 58.3 +1.4
      comp=Z,618nm,2.1s,mb6.3
ULM   Lac du Bonnet     68.53  24 P      P     19 40 55.6 -1.5
      comp=Z,18nm,0.9s,mb5.0,baz=339,slow=7.7,SNR=15
ULM                               PKPPKP       20 09 11.1
      comp=Z,2.4nm,0.8s,baz=222,slow=2.2,SNR=4.3
ULM                               LR     LR    20 12 24.7
      comp=Z,5µm,21.0s,MS5.7,baz=346,slow=37
SJPF  Ste Jean          68.60 318⇓iP     P     19 40 57.0 -0.6
      comp=Z,98nm,1.0s,mb5.4
SJPF  Ste Jean          68.60 318⇓iP     P     19 40 57.0 -0.6
SJPF                              pmax   pmax
      comp=Z,49nm,1.0s,mb5.4
EALK  Alkurruntz        68.61 318 P      P     19 40 58.1 +0.4
      comp=Z,392nm,2.0s,mb6.0
FDAF  Les Forges d’A    68.61 317 eP     P     19 40 57.9 +0.2
EMIR  Miracle           68.62 315 P      P     19 40 58.2 +0.5
      comp=Z,511nm,2.3s,mb6.0
MOD   Modoc             68.69  44 eP     P     19 40 58.7 +0.5
      comp=Z,104nm,1.1s,mb5.7
MOD                               LR     LR
      comp=Z,4µm,21.0s,MS5.6
MCMT  McKenzie Canyo    68.78  38 eP     P     19 40 59.4 +0.7
EGRA  Graus             68.83 316 P      P     19 41 00.8 +1.7
      comp=Z,240nm,1.5s,mb5.9
WVOR  Wild Horse Val    68.85  43 eP     P     19 40 60.0 +0.7
      comp=Z,38nm,0.9s,mb5.3
WVOR                              LR     LR
      comp=Z,4µm,20.0s,MS5.7
WVOR  Wild Horse Val    68.85  43 P      P     19 40 59.8 +0.6
WVOR                              pmax   pmax
      comp=Z,38nm,0.9s,mb5.3
GCMT  Greycliff         68.94  35 eP     P     19 41 00.1 +0.4
WDC   Whiskeytown Da    68.97  47 eP     P     19 41 00.0 +0.1
      comp=Z,97nm,1.1s,mb5.7
WDC                               LR     LR
      comp=Z,2µm,20.0s,MS5.4
WDC   Whiskeytown Da    68.97  47 eP     P     19 41 00.0  0.0
WDC                               pmax   pmax
      comp=Z,97nm,1.1s,mb5.7
WDC                               MLR    MLR
      comp=Z,2µm,20.0s,MS5.4
LAO   LASA Array        69.17  32 eP     P     19 41 00.5 -0.6
      comp=Z,38nm,1.2s,mb5.2
LAO                               LR     LR
      comp=Z,9µm,19.0s,MS6.0
QLMT  Earthquake Lak    69.24  37 eP     P     19 41 02.0 +0.4
KIPM  Iron Peak         69.25  48 eP     P     19 41 02.7 +1.0
EPOB  Poblet            69.27 315 P      P     19 41 01.8  0.0
      comp=Z,544nm,1.7s,mb6.2
KCPM  Cahto Peak        69.31  48 eP     P     19 41 03.3 +1.2
HLID  Hailey            69.37  39 eP     P     19 41 02.4 +0.1
      comp=Z,45nm,0.8s,mb5.5
HLID                              LR     LR
      comp=Z,9µm,22.0s,MS6.0
ESAC  San Caprasio      69.53 317 P      P     19 41 05.0 +1.6
      comp=Z,1µm,2.2s,mb6.4
YMR   Madison River     69.54  37⇓eP     P     19 41 03.3 -0.1
      comp=Z,2µm,2.0s,mb6.6
YMR                               LR     LR
      comp=Z,9µm,21.0s,MS6.0
YFT   Old Faithful      69.77  37 eP     P     19 41 06.4 +1.5
LKWY  Lake              69.81  36⇓eP     P     19 41 06.3 +1.2
      comp=Z,50nm,0.8s,mb5.5
LKWY                              LR     LR
      comp=Z,8µm,19.0s,MS6.0
LKWY  Lake              69.81  36⇓eP     P     19 41 06.3 +1.3
LKWY                              pmax   pmax
      comp=Z,51nm,0.8s,mb5.5
LKWY                              MLR    MLR
      comp=Z,8µm,19.0s,MS6.0
EARI  Arriondas         69.83 321 P      P     19 41 05.4 +0.2
      comp=Z,614nm,2.4s,mb6.1
ETOS  Mallorca          69.97 313 P      P     19 41 06.4 +0.3
      comp=Z,4µm,3.6s
HOPS  Hopland           70.11  48 PFAKE        19 41 20.0  +13
HOPS                              LR     LR
      comp=Z,3µm,20.0s,MS5.6
PMG   Port Moresby      70.13 152 eP     P     19 41 06.0 -1.5
      comp=Z,493nm,2.3s,mb6.0
PMG                               LR     LR
      comp=Z,2µm,20.0s,MS5.4
PMG   Port Moresby      70.13 152 eP     P     19 41 06.0 -1.5
PMG                               pmax   pmax
      comp=Z,493nm,2.3s
PMG                               MLR    MLR
      comp=Z,2µm,20.0s
IMW   Indian Meadow     70.23  37 eP     P     19 41 08.4 +0.8
      comp=Z,24nm,0.8s,mb5.2
MOOW  Moose Ponds       70.43  37 eP     P     19 41 09.3 +0.5
      comp=Z,33nm,0.8s,mb5.3
OHCM  Honcut            70.45  47 eP     P     19 41 08.4 -0.6
EPON  Pontenova         70.46 322 P      P     19 41 08.9 -0.2
      comp=Z,1µm,2.6s,mb6.3
TPAW  Teton Pass        70.59  37 eP     P     19 41 10.7 +0.9
      comp=Z,242nm,1.3s,mb6.0
LOHW  Long Hollow       70.60  37 eP     P     19 41 09.5 -0.4
      comp=Z,63nm,0.9s,mb5.5
RRI2  Red Ridge         70.60  37 eP     P     19 41 10.9 +1.1
      comp=Z,63nm,0.9s,mb5.5
KAKA  Kakadu            70.62 168 eP     P     19 41 26.5  +16
      comp=Z,55nm,0.5s,mb5.7
NSHM  Saint Helena R    70.70  48 eP     P     19 41 11.3 +0.7
EMOS  Mosqueruela       70.71 316 P      P     19 41 11.4 +0.8
      comp=Z,1µm,2.9s,mb6.4
REDW  Red Top Meadow    70.74  37⇓iP     P     19 41 11.2 +0.4
      comp=Z,4.1nm,0.6s
CMAH  Djebel Manchou    70.77 308 P      P     19 41 11.5 +0.5
CAEH  ’Ain El Ouahch    70.88 309 P      P     19 41 13.0 +1.3
PAHR  Pah Rah Range     70.94  45 eP     P     19 41 13.0 +1.0
      comp=Z,46nm,1.1s,mb5.3
ABSA  Djebel Ababsia    71.05 308 P      P     19 41 13.0 +0.3
AHID  Auburn Hatcher    71.19  38 eP     P     19 41 13.8 +0.3
AHID                              LR     LR
      comp=Z,7µm,20.0s,MS5.9
CKFL  Kef-Lekhel        71.26 309 P      P     19 41 14.5 +0.5
ERUA  La Rua            71.29 322 P      P     19 41 14.4 +0.3
      comp=Z,57nm,0.8s,mb5.5
ERUA  La Rua            71.29 322 P      P     19 41 14.4 +0.3
ERUA                              pmax   pmax
      comp=Z,57nm,0.8s,mb5.5
STS   Santiago          71.31 323 P      P     19 41 15.2 +1.0
      comp=Z,98nm,1.4s,mb5.5
STS   Santiago          71.31 323 P      P     19 41 15.2 +1.0
STS                               pmax   pmax
      comp=Z,98nm,1.4s,mb5.5
EMAZ  Mazaricos         71.40 323 P      P     19 41 16.8 +2.1
      comp=Z,362nm,2.1s,mb5.9
CASM  Ain Smara         71.47 309 P      P     19 41 15.5 +0.2
DFRA  Djebel Bou Aff    71.49 309 P      P     19 41 17.0 +1.6
HVU   Hansel Valley     71.51  39 eP     P     19 41 16.2 +0.8
ECAL  Calabor           71.56 321 P      P     19 41 16.5 +0.8
      comp=Z,492nm,1.9s,mb6.1
ELK   Elko              71.56  41 eP     P     19 41 16.3 +0.6
      comp=Z,59nm,0.9s,mb5.5
ELK                               LR     LR
      comp=Z,6µm,22.0s,MS5.8
ELK   Elko              71.56  41 eP     P     19 41 16.3 +0.5
ELK                               pmax   pmax
      comp=Z,59nm,0.9s
ELK                               MLR    MLR
      comp=Z,6µm,22.0s
ECHE  Chera             71.57 316 P      P     19 41 16.6 +0.8
      comp=Z,20nm,0.6s,mb5.2
ECHE  Chera             71.57 316 P      P     19 41 16.6 +0.8
ECHE                              pmax   pmax
      comp=Z,20nm,0.6s,mb5.2
SAC   San Andreas       71.59  48 eP     P     19 41 16.3 +0.4
CTEI  Djebel Teioual    71.68 309 P      P     19 41 16.0 -0.5
PBRG  Braganca          71.68 321 eP     P     19 41 17.2 +0.8
      comp=Z,96nm,1.2s,mb5.6
BW06  Boulder Array     71.69  37 PFAKE        19 41 30.0  +14
BW06                              LR     LR
      comp=Z,5µm,19.0s,MS5.8
PDAR  Pinedale Array    71.69  37 P      P     19 41 16.0 -0.5
      comp=Z,15nm,0.6s,mb5.1,baz=18,slow=2.9,SNR=86
PDAR                              LR     LR    20 15 06.4
      comp=Z,5µm,18.7s,MS5.8,baz=250,slow=38
GUD   Guadarrama        71.81 319 P      P     19 41 17.9 +0.7
      comp=Z,48nm,0.7s,mb5.5
GUD   Guadarrama        71.81 319 P      P     19 41 17.9 +0.7
GUD                               pmax   pmax
      comp=Z,48nm,0.7s,mb5.5
SET   Setif             71.98 310 P      P     19 41 20.0 +1.7
CMB   Columbia Colle    72.00  47 eP     P     19 41 18.2 -0.2
      comp=Z,276nm,2.1s,mb5.8
CMB                               LR     LR
      comp=Z,3µm,22.0s,MS5.5
CMB   Columbia Colle    72.00  47 eP     P     19 41 18.2 -0.2
CMB                               pmax   pmax
      comp=Z,276nm,2.1s,mb5.8
CMB                               MLR    MLR
      comp=Z,3µm,22.0s,MS5.5
EZAM  Zamans            72.02 323 P      P     19 41 19.2 +0.8
      comp=Z,41nm,0.7s,mb5.5
EZAM  Zamans            72.02 323 P      P     19 41 19.2 +0.7
EZAM                              pmax   pmax
      comp=Z,41nm,0.7s,mb5.5
SPUT  South Promonto    72.04  39 eP     P     19 41 19.1 +0.5
EBEN  Beniarda          72.06 315 P      P     19 41 19.0 +0.2
      comp=Z,575nm,2.3s,mb6.1
ELOB  Lobios            72.07 322 P      P     19 41 18.6 -0.1
      comp=Z,382nm,2.2s,mb5.9
HWUT  Hardware Ranch    72.07  38⇓eP     P     19 41 19.0 +0.3
      comp=Z,112nm,0.9s,mb5.8
HWUT                              LR     LR
      comp=Z,4µm,20.0s,MS5.7
CKHR  Kef el Ahmar      72.09 309 P      P     19 41 19.0  0.0
COCO  West Island       72.12 204 PFAKE        19 41 30.0  +11
COCO                              LR     LR
      comp=Z,1µm,21.0s,MS5.2
RSSD  Black Hills       72.14  32 eP     P     19 41 18.6 -0.6
      comp=Z,50nm,0.8s,mb5.5
RSSD                              LR     LR
      comp=Z,2µm,19.0s,MS5.3
RSSD  Black Hills       72.14  32 eP     P     19 41 18.6 -0.6
RSSD                              pmax   pmax
      comp=Z,50nm,0.8s,mb5.5
RSSD                              MLR    MLR
      comp=Z,2µm,19.0s,MS5.3
BGU   Big Grassy Mou    72.18  40 eP     P     19 41 20.1 +0.7
PCAB  Cabril            72.20 322 eP     P     19 41 20.5 +1.0
      comp=Z,124nm,1.4s,mb5.7
ABA   Alger-Bouzarea    72.43 312 P      P     19 41 21.6 +0.6
NVAR  Mina Array Bea    72.46  45 P      P     19 41 21.6 +0.4
      comp=Z,38nm,1.0s,mb5.3,baz=336,slow=3.2,SNR=89
NVAR                              LR     LR    20 16 22.2
      comp=Z,4µm,19.1s,MS5.7,baz=345,slow=38
PVRL  Vila Real         72.48 322 eP     P     19 41 22.2 +1.0
      comp=Z,116nm,1.4s,mb5.6
MNV   Mina              72.52  45⇓eP     P     19 41 21.2 -0.2
      comp=Z,66nm,1.2s,mb5.4
MNV                               LR     LR
      comp=Z,4µm,20.0s,MS5.7
MNV   Mina              72.52  45⇓eP     P     19 41 21.2 -0.2
MNV                               pmax   pmax
      comp=Z,66nm,1.2s,mb5.4
MNV                               MLR    MLR
      comp=Z,4µm,20.0s,MS5.7
TCUT  Toone Canyon      72.56  39⇓eP     P     19 41 22.5 +0.9
ESDC  Sonseca Array     72.60 318 P      P     19 41 22.2 +0.3
      comp=Z,52nm,0.8s,mb5.5,baz=18,slow=6.1,SNR=63
ESDC  Sonseca Array     72.60 318 P      P     19 41 22.2 +0.4
      comp=Z,35nm,0.6s,mb5.5
ESLA  Sonseca Array     72.60 318 PFAKE        19 41 30.0 +8.2
ESLA                              LR     LR
      comp=Z,57µm,22.0s,MS6.8
ETOB  Tobarra           72.62 316 P      P     19 41 23.5 +1.6
      comp=Z,1µm,3.2s
SAO   San Andreas Ge    72.68  48 eP     P     19 41 23.6 +1.2
      comp=Z,54nm,1.0s,mb5.4
SAO                               LR     LR
      comp=Z,5µm,20.0s,MS5.8
SAO   San Andreas Ge    72.68  48 eP     P     19 41 23.6 +1.2
SAO                               pmax   pmax
      comp=Z,54nm,1.0s,mb5.4
SAO                               MLR    MLR
      comp=Z,5µm,20.0s,MS5.8
NOQ   North Oquirrh     72.74  39 eP     P     19 41 23.5 +0.8
      comp=Z,88nm,0.7s,mb5.8
ADJB  Djebel Djouab     72.83 311 P      P     19 41 24.0 +0.8
CTU   Camp Tracy        72.83  39⇓eP     P     19 41 23.5 +0.4
      comp=Z,123nm,1.3s,mb5.7
DUG   Dugway            72.91  40⇓eP     P     19 41 24.2 +0.5
      comp=Z,46nm,0.9s,mb5.4
DUG                               LR     LR
      comp=Z,5µm,22.0s,MS5.8
DUG   Dugway            72.91  40⇓eP     P     19 41 24.2 +0.6
DUG                               pmax   pmax
      comp=Z,46nm,0.9s,mb5.4
DUG                               MLR    MLR
      comp=Z,5µm,22.0s,MS5.8
EVIA  Vianos            72.98 317 P      P     19 41 25.6 +1.5
      comp=Z,51nm,0.7s,mb5.6
EVIA  Vianos            72.98 317 P      P     19 41 25.6 +1.5
EVIA                              pmax   pmax
      comp=Z,51nm,0.7s,mb5.6
EMHD  Djebel Mahouad    72.98 311 P      P     19 41 25.5 +1.3
PVIS  Viseu             73.04 321 eP     P     19 41 25.5 +1.1
      comp=Z,96nm,1.5s,mb5.5
LRV   Little Rabbit     73.15  48 eP     P     19 41 26.3 +1.2
TPH   Tonopah           73.18  44 PFAKE        19 41 40.0  +15
TPH                               LR     LR
      comp=Z,4µm,20.0s,MS5.7
EMUR  La Murta          73.20 315 P      P     19 41 26.2 +0.8
      comp=Z,737nm,2.9s,mb6.1
MTE   Manteigas         73.21 321 eP     P     19 41 25.7 +0.3
      comp=Z,160nm,1.2s,mb5.8
MTE                               eS     S     19 50 57.7 +5.9
MTE                               eLQ          19 59 01.4
MTE                               eLR    LR    20 04 50.5
      comp=Z,5µm,18.0s
MTUM  Tungsten Hills    73.31  46 eP     P     19 41 27.0 +1.0
NLU   North Lily Min    73.38  40 eP     P     19 41 27.4 +1.0
RWWY  Rawlins           73.41  35 eP     P     19 41 26.2 -0.3
      comp=Z,38nm,0.8s,mb5.4
MPU   Maple Canyon      73.47  39 eP     P     19 41 27.8 +0.9
      comp=Z,20nm,0.7s,mb5.2
EBNR  Beni Rached       73.48 313 P      P     19 41 28.0 +1.0
ECHA  Ech Chlef         73.67 313 P      P     19 41 29.0 +0.9
ECHF  Ech Chlef         73.67 313 P      P     19 41 29.0 +0.8
PCBR  Castelo Branco    73.69 321 eP     P     19 41 29.2 +1.0
      comp=Z,91nm,1.5s,mb5.5
EHUE  Huescar           73.74 316 P      P     19 41 30.2 +1.7
      comp=Z,88nm,1.4s,mb5.5
EHUE  Huescar           73.74 316 P      P     19 41 30.2 +1.7
EHUE                              pmax   pmax
      comp=Z,88nm,1.4s,mb5.5
EBAN  Banos Encina      73.87 317 P      P     19 41 30.4 +1.2
      comp=Z,189nm,1.6s,mb5.8
EBAN  Banos Encina      73.87 317 P      P     19 41 30.4 +1.1
EBAN                              pmax   pmax
      comp=Z,189nm,1.6s,mb5.8
EQES  Quesada           73.92 317 P      P     19 41 31.1 +1.5
      comp=Z,1µm,3.2s
EANR  ’Ain N’Sour       73.95 313 P      P     19 41 30.0 +0.3
HNR   Honiara           74.06 139⇓eP     P     19 41 29.3 -1.5
      comp=Z,102nm,1.0s,mb5.7
HNR                               LR     LR
      comp=Z,2µm,21.0s,MS5.4
HNR   Honiara           74.06 139⇓eP     P     19 41 29.3 -1.5
HNR                               pmax   pmax
      comp=Z,102nm,1.0s,mb5.7
HNR                               MLR    MLR
      comp=Z,2µm,21.0s,MS5.4
EADA  Adamuz            74.16 318 P      P     19 41 32.2 +1.3
      comp=Z,522nm,2.2s,mb6.1
PTOM  Tomar             74.20 321 eP     P     19 41 32.3 +1.2
      comp=Z,101nm,1.2s,mb5.6
ETRT  Tiaret            74.35 312 P      P     19 41 33.0 +0.9
EBAD  Badajoz           74.50 320 P      P     19 41 33.5 +0.6
      comp=Z,663nm,2.6s,mb6.1
TPNV  Topopah Spring    74.54  44 eP     P     19 41 33.4 +0.2
      comp=Z,44nm,0.9s,mb5.4
TPNV                              LR     LR
      comp=Z,3µm,20.0s,MS5.6
TPNV  Topopah Spring    74.54  44 eP     P     19 41 33.4 +0.2
TPNV                              pmax   pmax
      comp=Z,44nm,0.9s,mb5.4
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TPNV				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.6						
ECOG	**Cogollos-Vega**	**74.57**	**317**	P	**P**	**19 41 34.8**	**+1.4**
	comp=Z,40nm,0.6s,mb5.5						
ECOG	**Cogollos-Vega**	**74.57**	**317**	P	**P**	**19 41 34.8**	**+1.4**
ECOG				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.5						
ELUQ	**Luque**	**74.58**	**317**	P	**P**	**19 41 34.8**	**+1.5**
	comp=Z,92nm,1.1s,mb5.6						
ELUQ	**Luque**	**74.58**	**317**	P	**P**	**19 41 34.8**	**+1.4**
ELUQ				pmax	pmax		
	comp=Z,92nm,1.1s,mb5.6						
MSU	**Marysvale**	**74.63**	**40**	*e*P	**P**	**19 41 34.8**	**+1.2**
EBER	**Berja**	**74.66**	**316**	P	**P**	**19 41 34.0**	**+0.1**
	comp=Z,238nm,1.9s,mb5.8						
SRU	**San Rafael**	**74.66**	**39**	*e*P	**P**	**19 41 33.6**	**-0.2**
	comp=Z,45nm,1.0s,mb5.3						
SRU	**San Rafael**	**74.66**	**39**	*e*P	**P**	**19 41 33.6**	**-0.2**
SRU				pmax	pmax		
	comp=Z,45nm,1.0s,mb5.3						
ERON	**Agron**	**74.89**	**317**	P	**P**	**19 41 35.5**	**+0.3**
	comp=Z,53nm,0.7s,mb5.6						
ELOJ	**Sierra Loja**	**74.90**	**317**	P	**P**	**19 41 35.9**	**+0.7**
	comp=Z,40nm,0.8s,mb5.4						
ELOJ	**Sierra Loja**	**74.90**	**317**	P	**P**	**19 41 35.9**	**+0.6**
ELOJ				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
EVO	**Evora**	**75.04**	**321**	⇓*i*P	**P**	**19 41 36.5**	**+0.5**
	comp=Z,74nm,0.7s,mb5.4						
EVO				*e*R			
	comp=Z,12μm,21.8s						
PLOU	**Loures**	**75.11**	**322**	*e*P	**P**	**19 41 37.7**	**+1.3**
EMIN	**Mina Concepcio**	**75.26**	**319**	P	**P**	**19 41 37.9**	**+0.6**
	comp=Z,737nm,2.7s,mb6.1						
FITZ	**Fitzroy Crossi**	**75.41**	**175**	*e*P	**P**	**19 41 36.9**	**-1.6**
	comp=Z,73nm,0.6s,mb5.8						
PBEJ	**Beja**	**75.44**	**320**	*e*P	**P**	**19 41 39.4**	**+1.0**
	comp=Z,115nm,1.2s,mb5.7						
DGAR	**Diego Garcia**	**75.52**	**230**	PFAKE		19 41 50.0	+11
DGAR				LR	LR		
	comp=Z,814nm,19.0s,MS5.0						
ISCO	**Idaho Springs**	**75.63**	**35**	*e*P	**P**	**19 41 40.0**	**+0.6**
	comp=Z,32nm,0.8s,mb5.3						
ISCO				LR	LR		
	comp=Z,9μm,20.0s,MS6.1						
ISCO	**Idaho Springs**	**75.63**	**35**	*e*P	**P**	**19 41 40.0**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.3						
ISCO				MLR	MLR		
	comp=Z,9μm,20.0s,MS6.1						
EMIJ	**Mijas**	**75.65**	**317**	P	**P**	**19 41 40.2**	**+0.6**
	comp=Z,377nm,2.2s,mb5.9						
SMCO	**Snowmass**	**75.77**	**36**	*e*P	**P**	**19 41 41.2**	**+1.1**
	comp=Z,181nm,1.2s,mb5.9						
ESPR	**Espera**	**75.77**	**318**	P	**P**	**19 41 42.5**	**+2.2**
	comp=Z,641nm,2.1s,mb6.2						
PV10	**Paradox Valley**	**75.82**	**38**	*e*P	**P**	**19 41 41.8**	**+1.3**
EJIF	**Jimena Fronter**	**76.00**	**318**	P	**P**	**19 41 42.4**	**+0.9**
	comp=Z,52nm,0.8s,mb5.5						
EJIF	**Jimena Fronter**	**76.00**	**318**	P	**P**	**19 41 42.4**	**+0.8**
EJIF				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.5						
PTEO	**Sao Teotonio**	**76.17**	**321**	*e*P	**P**	**19 41 43.7**	**+1.2**
	comp=Z,165nm,1.6s,mb5.7						
RW3	**Ridgway**	**76.38**	**37**	P	**P**	**19 41 44.9**	**+1.2**
SNCC	**San Nicolas Is**	**76.51**	**48**	PFAKE		19 42 00.0	+16
SNCC				LR	LR		
	comp=Z,3μm,21.0s,MS5.6						
LDFC	**Landfair**	**76.62**	**44**	⇓*e*P	**P**	**19 41 45.6**	**+0.6**
PFO	**Pinyon Flat Ob**	**77.41**	**46**	PFAKE		19 42 00.0	+11
PFO				LR	LR		
	comp=Z,1μm,21.0s,MS5.2						
LOZ	**Lake Ozonia**	**77.49**	**11**	*e*P	**P**	**19 41 49.6**	**0.0**
SDCO	**Great Sand Dun**	**77.55**	**36**	*e*P	**P**	**19 41 50.5**	**+0.4**
	comp=Z,71nm,1.1s,mb5.5						
SDCO				LR	LR		
	comp=Z,6μm,21.0s,MS5.9						
WUAZ	**Wupatki**	**77.60**	**41**	*e*P	**P**	**19 41 51.7**	**+1.2**
	comp=Z,70nm,1.1s,mb5.5						
WUAZ				LR	LR		
	comp=Z,5μm,21.0s,MS5.8						
WRAB	**Tennant Creek**	**77.98**	**167**	⇓*i*P	**P**	**19 41 51.8**	**-1.0**
WRAB				LR	LR		
	comp=Z,669nm,20.0s,MS5.0						
WRA	**Warramunga Arr**	**77.99**	**167**	P	**P**	**19 41 51.3**	**-1.6**
	comp=Z,42nm,0.7s,mb5.5,baz=351,slow=6.5,SNR=94						
WB2	**Warramunga Arr**	**77.99**	**167**	⇓*i*P	**P**	**19 41 51.0**	**-1.9**
LBNH	**Lisbon**	**78.11**	**9**	PFAKE		19 42 10.0	+17
LBNH				LR	LR		
	comp=Z,9μm,21.0s,MS6.1						
MIV	**Mineville/With**	**78.13**	**10**	*e*P	**P**	**19 41 53.6**	**+0.4**
NCB	**Newcomb**	**78.17**	**11**	*e*P	**P**	**19 41 53.7**	**+0.3**
	comp=Z,226nm,1.7s,mb5.8						
NCB				LR	LR		
	comp=Z,6μm,20.0s,MS5.9						
CBKS	**Cedar Bluff**	**78.27**	**31**	*e*P	**P**	**19 41 54.4**	**+0.3**
	comp=Z,200nm,1.4s,mb5.9						
CBKS				LR	LR		
	comp=Z,6μm,21.0s,MS5.9						
CBKS	**Cedar Bluff**	**78.27**	**31**	*e*P	**P**	**19 41 54.4**	**+0.3**
CBKS				pmax	pmax		
	comp=Z,200nm,1.4s,mb5.8						
CBKS				MLR	MLR		
	comp=Z,6μm,21.0s,MS5.9						
KSU1	**Kansas State U**	**78.84**	**29**	*e*P	**P**	**19 41 56.6**	**-0.6**
GENY	**Geneseo**	**78.94**	**14**	*e*P	**P**	**19 42 01.6**	**+3.9**
ERPA	**Erie**	**79.29**	**15**	PFAKE		19 42 10.0	+10
ERPA				LR	LR		
	comp=Z,5μm,20.0s,MS5.9						
ALLY	**Alegheny Colle**	**79.72**	**16**	*e*P	**P**	**19 42 02.0**	**0.0**
ANMO	**Albuquerque**	**79.79**	**38**	*e*P	**P**	**19 42 03.3**	**+0.8**
	comp=Z,39nm,1.1s,mb5.2						
ANMO				LR	LR		
	comp=Z,4μm,22.0s,MS5.7						
ANMO	**Albuquerque**	**79.79**	**38**	*e*P	**P**	**19 42 03.3**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,39nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,4μm,22.0s						
HRV	**Harvard--Oak R**	**79.87**	**9**	PFAKE		19 42 10.0	+7.3
HRV				LR	LR		
	comp=Z,5μm,20.0s,MS5.8						
CTA	**Charters Tower**	**80.21**	**156**	*e*P	**P**	**19 42 03.0**	**-1.9**
	comp=Z,24nm,1.5s,mb4.9						
CTA	**Charters Tower**	**80.21**	**156**	*e*P	**P**	**19 42 03.0**	**-1.9**
CTA				pmax	pmax		
	comp=Z,24nm,1.5s						
ADH	**Angra Heroismo**	**80.46**	**335**	*i* LR	LR	20 08 22.0	
ACSO	**Alum Creek Sta**	**80.67**	**18**	*e*P	**P**	**19 42 07.0**	**0.0**
	comp=Z,56nm,1.1s,mb5.4						
ACSO				LR	LR		
	comp=Z,5μm,20.0s,MS5.8						
TUC	**Tucson**	**80.69**	**42**	*e*P	**P**	**19 42 08.4**	**+1.1**
	comp=Z,50nm,1.4s,mb5.2						
TUC				LR	LR		
	comp=Z,3μm,22.0s,MS5.6						
TUC	**Tucson**	**80.69**	**42**	*e*P	**P**	**19 42 08.4**	**+1.1**
TUC				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.2						
TUC				MLR	MLR		
	comp=Z,3μm,22.0s,MS5.6						
PAL	**Palisades**	**81.13**	**11**	*e*P	**P**	**19 42 10.0**	**+0.6**
	comp=Z,134nm,1.3s,mb5.7						
PAL	**Palisades**	**81.13**	**11**	*e*P	**P**	**19 42 10.0**	**+0.6**
PAL				pmax	pmax		
	comp=Z,134nm,1.3s,mb5.7						
CCM	**Cathedral Cave**	**81.14**	**25**	*e*P	**P**	**19 42 09.2**	**-0.3**
	comp=Z,47nm,0.9s,mb5.4						
CCM				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
CCM	**Cathedral Cave**	**81.14**	**25**	*e*P	**P**	**19 42 09.2**	**-0.3**
CCM				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.4						
CCM				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.3						
CPNY	**Central Park**	**81.34**	**11**	*e*P	**P**	**19 42 10.9**	**+0.4**
AMTX	**Amarillo**	**81.36**	**34**	PFAKE		19 42 20.0	+9.2
AMTX				LR	LR		
	comp=Z,4μm,19.0s,MS5.8						
ASPA	**Alice Springs**	**81.61**	**168**	⇑*i*P	**P**	**19 42 11.1**	**-1.1**
MCWV	**Mont Chateau**	**81.72**	**16**	PFAKE		19 42 20.0	+7.5
MCWV				LR	LR		
	comp=Z,5μm,20.0s,MS5.9						
WCI	**Wyandotte Cave**	**82.02**	**21**	*e*P	**P**	**19 42 14.7**	**+0.6**
	comp=Z,49nm,0.8s,mb5.5						
WCI				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
WCI	**Wyandotte Cave**	**82.02**	**21**	*e*P	**P**	**19 42 14.7**	**+0.6**
WCI				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.5						
WCI				MLR	MLR		
	comp=Z,2μm,19.0s,MS5.4						
WMOK	**Wichita Mounta**	**82.35**	**32**	*e*P	**P**	**19 42 16.5**	**+0.6**
	comp=Z,70nm,0.8s,mb5.6						
WMOK				LR	LR		
	comp=Z,5μm,20.0s,MS5.9						
WMOK	**Wichita Mounta**	**82.35**	**32**	*e*P	**P**	**19 42 16.5**	**+0.6**
WMOK				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.6						
WMOK				MLR	MLR		
	comp=Z,5μm,20.0s,MS5.9						
MNTX	**Cornudas Mount**	**83.13**	**38**	*e*P	**P**	**19 42 20.6**	**+0.6**
	comp=Z,77nm,1.3s,mb5.6						
MNTX				LR	LR		
	comp=Z,4μm,20.0s,MS5.8						
CBN	**Corbin**	**83.49**	**14**	PFAKE		19 42 30.0	+8.3
CBN				LR	LR		
	comp=Z,8μm,19.0s,MS6.1						
FWV	**Forest Hill**	**83.61**	**17**	*e*P	**P**	**19 42 22.6**	**+0.4**
HBAR	**Harrisburg**	**83.67**	**25**	*e*P	**P**	**19 42 23.3**	**+0.7**
WVT	**Waverly**	**83.73**	**23**	*e*P	**P**	**19 42 23.5**	**+0.6**
	comp=Z,66nm,0.9s,mb5.8						
WVT				LR	LR		
	comp=Z,3μm,20.0s,MS5.7						
WVT	**Waverly**	**83.73**	**23**	*e*P	**P**	**19 42 23.5**	**+0.6**
WVT				pmax	pmax		
	comp=Z,66nm,0.9s,mb5.8						
WVT				MLR	MLR		
	comp=Z,3μm,20.0s,MS5.7						
MIAR	**Mount Ida**	**83.93**	**28**	PFAKE		19 42 40.0	+16
MIAR				LR	LR		
	comp=Z,4μm,19.0s,MS5.9						
ELN	**Prospectdale**	**83.96**	**17**	*e*P	**P**	**19 42 24.1**	**+0.1**
BLA	**Blacksburg**	**84.03**	**17**	*e*P	**P**	**19 42 24.6**	**+0.2**
	comp=Z,99nm,1.3s,mb5.8						
BLA				LR	LR		
	comp=Z,4μm,19.0s,MS5.8						
BLA	**Blacksburg**	**84.03**	**17**	*e*P	**P**	**19 42 24.6**	**+0.2**
BLA				pmax	pmax		
	comp=Z,99nm,1.3s,mb5.8						
BLA				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.8						
OXF	**Oxford**	**84.95**	**24**	*e*P	**P**	**19 42 27.9**	**-1.1**
	comp=Z,92nm,1.0s,mb5.9						
OXF				LR	LR		
	comp=Z,5μm,19.0s,MS5.9						
OXF	**Oxford**	**84.95**	**24**	*e*P	**P**	**19 42 27.9**	**-1.1**
OXF				pmax	pmax		
	comp=Z,92nm,1.0s,mb5.9						
OXF				MLR	MLR		
	comp=Z,5μm,19.0s,MS5.9						
LTX	**Lajitas**	**85.87**	**38**	*e*P	**P**	**19 42 34.4**	**+0.6**
	comp=Z,35nm,1.2s,mb5.5						
LTX				LR	LR		
	comp=Z,4μm,20.0s,MS5.8						
LTX	**Lajitas**	**85.87**	**38**	*e*P	**P**	**19 42 34.4**	**+0.6**
LTX				pmax	pmax		
	comp=Z,35nm,1.2s,mb5.5						
LTX				MLR	MLR		
	comp=Z,4μm,20.0s,MS5.8						
TXAR	**Lajitas Array**	**85.87**	**38**	P	**P**	**19 42 35.2**	**+1.4**
	comp=Z,8.7nm,0.9s,mb5.0,baz=303,slow=4.0,SNR=34						
TXAR				LR	LR	20 24 18.1	
	comp=Z,4μm,19.2s,MS5.8,slow=38						
JCT	**Junction City**	**86.03**	**34**	*e*P	**P**	**19 42 35.5**	**+1.0**
	comp=Z,104nm,1.3s,mb5.9						
JCT				LR	LR		
	comp=Z,8μm,19.0s,MS6.1						
JCT	**Junction City**	**86.03**	**34**	*e*P	**P**	**19 42 35.5**	**+1.0**
JCT				pmax	pmax		
	comp=Z,104nm,1.3s,mb5.9						
JCT				MLR	MLR		
	comp=Z,8μm,19.0s,MS6.1						
NATX	**Nacogdoches**	**86.29**	**29**	*e*P	**P**	**19 42 37.5**	**+1.8**
	comp=Z,127nm,0.9s,mb6.2						
NATX				LR	LR		
	comp=Z,5μm,19.0s,MS5.9						
LRAL	**Lakeview Retre**	**86.89**	**23**	*e*P	**P**	**19 42 38.5**	**-0.2**
	comp=Z,19nm,0.8s,mb5.4						
LRAL				LR	LR		
	comp=Z,5μm,21.0s,MS5.9						
EOSO	**Osorio**	**87.13**	**322**	P	**P**	**19 42 42.3**	**+2.4**
	comp=Z,2μm,2.9s,mb6.8						
GOGA	**Godfrey**	**87.22**	**20**	*e*P	**P**	**19 42 40.3**	**0.0**
	comp=Z,47nm,1.0s,mb5.7						
GOGA				LR	LR		
	comp=Z,9μm,20.0s,MS6.2						
GOGA	**Godfrey**	**87.22**	**20**	*e*P	**P**	**19 42 40.3**	**0.0**
GOGA				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.7						
GOGA				MLR	MLR		
	comp=Z,9μm,20.0s,MS6.2						
KMBO	**Kilima Mbogo**	**87.32**	**264**	P	**P**	**19 42 42.5**	**+1.3**
	comp=Z,2.0nm,0.7s,baz=32,slow=7.8,SNR=16						
KMBO	**Kilima Mbogo**	**87.32**	**264**	P	**P**	**19 42 42.5**	**+1.3**
KMBO				LR	LR		
	comp=Z,942nm,20.0s,MS5.2						
CCAN	**Las Canadas**	**87.33**	**323**	P	**P**	**19 42 43.2**	**+2.3**
	comp=Z,70nm,0.9s,mb5.9						
DZM	**Mont Dzumac**	**88.04**	**138**	*e*P	**P**	**19 42 42.1**	**-2.4**
NHSC	**New Hope**	**88.09**	**17**	PFAKE		19 43 00.0	+16
NHSC				LR	LR		
	comp=Z,3μm,22.0s,MS5.7						
KLBR	**Kellerberrin**	**88.75**	**182**	*e*P	**P**	**19 42 46.1**	**-1.6**
	comp=Z,67nm,1.5s,mb5.8						
MUN	**Mundaring**	**89.18**	**184**	*e*P	**P**	**19 42 49.9**	**+0.2**
NWAO	**Narrogin (SRO)**	**90.10**	**183**	PFAKE		19 43 10.0	+16
NWAO				LR	LR		
	comp=Z,1μm,22.0s,MS5.3						
AFI	**Afiamalu**	**90.11**	**116**	*e*P	**P**	**19 42 55.0**	**+0.6**
	comp=Z,77nm,0.8s,mb6.1						
AFI				LR	LR		
	comp=Z,1μm,21.0s,MS5.3						
AFI	**Afiamalu**	**90.11**	**116**	*e*P	**P**	**19 42 55.0**	**+0.6**
AFI				pmax	pmax		
	comp=Z,77nm,0.8s,mb6.1						
AFI				MLR	MLR		
	comp=Z,1μm,21.0s,MS5.3						
BBSR	**BB Station**	**90.39**	**4**	PFAKE		19 43 10.0	+15
BBSR				LR	LR		
	comp=Z,3μm,19.0s,MS5.8						
STKA	**Stephens Creek**	**90.77**	**162**	*e*P	**P**	**19 42 57.8**	**+0.7**
	comp=Z,19nm,1.6s,mb5.2						
STKA	**Stephens Creek**	**90.77**	**162**	P	**P**	**19 42 56.8**	**-0.3**
	comp=Z,9.3nm,0.8s,mb5.2,baz=340,slow=6.1,SNR=25						
DWPF	**Disney**	**92.76**	**19**	PFAKE		19 43 20.0	+14
DWPF				LR	LR		
	comp=Z,1μm,19.0s,MS5.4						
DBIC	**Dimbokro**	**102.33**	**304**	P	Pdif	19 43 51.8	+1.6
	comp=Z,2.4nm,0.8s,baz=351,slow=3.3,SNR=3.2						
DBIC	**Dimbokro**	**102.33**	**304**	P	Pdif	19 43 51.8	+1.6
DBIC				LR	LR		
	comp=Z,4μm,22.0s,MS5.9						
TAOE	**Nuku Hiva Isla**	**102.43**	**87**	*e*PS	PS	19 57 03.9	-6.2
TAOE	**Nuku Hiva Isla**	**102.43**	**87**	*e*LR	LR	20 17 21.9	
	comp=Z,3μm,22.2s						
TAU	**Tasmania Unive**	**102.51**	**160**	PFAKE		19 44 00.0	+10
TAU				LR	LR		
	comp=Z,330nm,20.0s,MS4.9						
LSZ	**Lusaka**	**103.98**	**264**	PFAKE		19 44 10.0	+13
LSZ				LR	LR		
	comp=Z,1μm,20.0s,MS5.5						
SJG	**San Juan**	**104.49**	**7**	PFAKE		19 44 10.0	+10
SJG				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
PPT	**Papeete**	**104.57**	**100**	*e*PP	PP	19 48 05.4	-16
PPT	**Papeete**	**104.57**	**100**	*e*PS	PS	19 57 21.6	-10
PPT	**Papeete**	**104.57**	**100**	*e*LR	LR	20 18 12.7	
	comp=Z,1μm,23.8s						
SNZO	**South Karori**	**108.38**	**140**	PFAKE		19 48 30.0	
SNZO				LR	LR		
	comp=Z,2μm,19.0s,MS5.6						
JTS	**JuntasAbangare**	**109.30**	**27**	PFAKE		19 48 40.0	
JTS				LR	LR		
	comp=Z,691nm,22.0s,MS5.2						
TBI	**Tubuai**	**109.38**	**103**	*e*LR	LR	20 20 25.3	
	comp=Z,1μm,33.5s						
TSUM	**Tsumeb**	**112.92**	**270**	PFAKE		19 48 40.0	+6.7
TSUM				LR	LR		
	comp=Z,2μm,22.0s,MS5.6						
SDV	**Santo Domingo**	**113.24**	**12**	*e*PKPdf	PKPdf	19 48 32.5	-1.5
SDV				LR	LR		
	comp=Z,2μm,22.0s,MS5.7						
RKT	**Rikitea**	**116.94**	**91**	*e*PP	PP	19 49 39.5	-12
RKT	**Rikitea**	**116.94**	**91**	*e*PS	PS	19 59 29.5	-1.2
RKT	**Rikitea**	**116.94**	**91**	*e*LR	LR	20 23 56.8	
	comp=Z,609nm,24.2s						
PAYG	**Puerto Ayora**	**118.28**	**36**	PFAKE		19 48 50.0	+6.1
PAYG				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
PTCN	**Pitcairn Islan**	**121.14**	**88**	PFAKE		19 49 00.0	+11
PTCN				LR	LR		
	comp=Z,30nm,20.0s						
SUR	**Sutherland**	**121.71**	**259**	PFAKE		19 49 00.0	+10
SUR				LR	LR		
	comp=Z,673nm,21.0s,MS5.3						
CASY	**Casey**	**123.67**	**185**	PFAKE		19 49 00.0	+6.9
CASY				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
SAML	**Samuel**	**131.50**	**5**	*e*PKPdf	PKPdf	19 49 06.4	-2.9
SAML				*e*PP	PP	19 51 23.9	-5.5
SAML				*e*SKP		19 52 34.8	
SAML				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
MAW	**Mawson**	**131.80**	**206**	PKP	PKPdf	19 49 06.3	-2.1
	comp=Z,5.3nm,0.8s,baz=292,slow=8.8,SNR=9.5						
NNA	**Nana**	**132.70**	**23**	PFAKE		19 49 20.0	+8.5
NNA				LR	LR		
	comp=Z,355nm,22.0s,MS5.0						
VNDA	**Vanda**	**137.15**	**168**	*e*PKPpre		19 49 07.1	
VNDA				*e*PKPdf	PKPdf	19 49 16.8	-1.3
BAO	**Brasilia Array**	**137.34**	**344**	PKPdf	PKPdf	19 49 19.0	-1.0
BDFB	**Brasilia**	**137.35**	**344**	PKP	PKPdf	19 49 18.6	-1.3
	comp=Z,18nm,1.0s,baz=285,slow=3.5,SNR=11						
SBA	**Scott Base**	**138.01**	**167**	PFAKE		19 49 30.0	+10
SBA				LR	LR		
	comp=Z,1μm,22.0s,MS5.5						
SYO	**Syowa Base**	**138.97**	**213**	⇓Pdiff	Pdif	19 46 35.6	+5.7
SYO	**Syowa Base**	**138.97**	**213**	⇑PKPdf	PKPdf	19 49 20.3	-1.3
SYO	**Syowa Base**	**138.97**	**213**	⇑*e*PKPdf	PKPdf	19 49 20.3	-1.3
QSPA	**South Pole Qui**	**147.24**	**180**	*e*P	PKPdf	19 49 34.4	-1.1
QSPA				LR	LR		
	comp=Z,2μm,22.0s,MS5.8						
NVL	**N’lazarevskaya**	**148.36**	**217**	*e*PKIKP	PKPdf	19 49 36.6	-0.9
NVL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAIT	**Maitri**	**148.39**	**217**	*e*PKPdf	PKPdf	19 49 36.5	-1.1
CPUP	**Villa Florida**	**148.84**	**356**	*e*PKPdf	PKPdf	19 49 36.2	-3.4
CPUP				*e*PKPbc	PKPdf	19 49 41.1	+1.5
CPUP				*e*PKPab	PKPab	19 49 44.7	-1.7
CPUP				LR	LR		
	comp=Z,225nm,20.0s,MS5.0						
SNAA	**Sanae**	**153.16**	**216**	P	PKPdf	19 49 48.0	+3.2
SNAA	**Sanae**	**153.16**	**216**		PKPdf	19 49 51.1	+6.3
SNAA	**Sanae**	**153.16**	**216**		PKPdf	19 49 53.8	+9.0
SNAA	**Sanae**	**153.16**	**216**		PKPdf	19 50 02.6	+18
SNAA	**Sanae**	**153.16**	**216**		PKPdf	19 50 13.5	+29
SNAA	**Sanae**	**153.16**	**216**		PKPdf	19 50 27.5	+43
SNAA	**Sanae**	**153.16**	**216**	PKP	PKPdf	19 49 41.8	-3.0
	comp=Z,1.6nm,1.3s,baz=145,slow=3.8,SNR=8.0						
SNAA				PKPbc	PKPdf	19 49 51.2	+6.4
	comp=Z,3.0nm,0.9s,baz=60,slow=2.3,SNR=19						
SNAA	**Sanae**	**153.16**	**216**	*e*PKPdf	PKPdf	19 49 42.9	-1.9
SNAA				*e*PKPbc	PKPdf	19 49 50.6	+5.9
CFAA	**Coronel Fontan**	**153.43**	**17**	PKP	PKPdf	19 49 46.6	+0.3
	comp=Z,0.3nm,0.4s,baz=300,slow=8.4,SNR=6.3						
CFAA				PKPbc	PKPdf	19 49 51.9	+5.6
	comp=Z,3.3nm,0.7s,baz=296,slow=1.7,SNR=8.8						
CFAA				PKPab	PKPab	19 50 04.8	-0.6
	comp=Z,5.3nm,1.1s,baz=308,slow=2.6,SNR=13						
CFAA	**Coronel Fontan**	**153.43**	**17**	PKP	PKPdf	19 49 46.6	+0.3
CFAA				PKPbc	PKPdf	19 49 51.9	+5.6
CFAA				PKPab	PKPab	19 50 04.8	-0.6
VNA2	**Neumayer--Watz**	**154.68**	**217**	⇑*i*P	PKPdf	19 49 47.6	+0.8
VNA2	**Neumayer--Watz**	**154.68**	**217**	⇑*i*	PKPdf	19 49 56.2	+9.4
VNA2	**Neumayer--Watz**	**154.68**	**217**		PKPdf	19 50 10.0	+23
VNA2	**Neumayer--Watz**	**154.68**	**217**		PKPdf	19 50 12.9	+26
VNA2	**Neumayer--Watz**	**154.68**	**217**		PKPdf	19 50 18.0	+31
VNA1	**Neumayer--Stat**	**154.99**	**218**	P	PKPdf	19 49 56.2	+9.0
VNA1	**Neumayer--Stat**	**154.99**	**218**		PKPdf	19 49 59.0	+12
VNA1	**Neumayer--Stat**	**154.99**	**218**		PKPdf	19 50 07.2	+20
VNA1	**Neumayer--Stat**	**154.99**	**218**		PKPdf	19 50 12.5	+25
VNA3	**Neumayer Olymp**	**155.38**	**216**	P	PKPdf	19 49 51.1	+3.4
VNA3	**Neumayer Olymp**	**155.38**	**216**		PKPdf	19 49 57.8	+10
VNA3	**Neumayer Olymp**	**155.38**	**216**		PKPdf	19 49 59.8	+12
VNA3	**Neumayer Olymp**	**155.38**	**216**		PKPdf	19 50 14.8	+27
VNA3	**Neumayer Olymp**	**155.38**	**216**		PKPdf	19 50 19.4	+32
LPA	**La Plata**	**157.40**	**357**	*ce*PKP	PKPdf	19 49 47.0	-4.5
LPA	**La Plata**	**157.40**	**357**	*e*PKP	PKPab	19 50 22.0	-0.2
LPA				*e*PP	PP	19 54 03.0	+0.8
	comp=Z,2μm,22.0s						
TRQA	**Tornquist**	**160.50**	**6**	*e*PKPdf	PKPdf	19 49 54.4	-0.7
TRQA				*e*PKPab	PKPab	19 50 35.2	-0.2
PLCA	**Paso Flores**	**161.78**	**28**	PKP	PKPdf	19 49 53.6	-2.6
	comp=Z,4.2nm,0.9s,baz=203,slow=1.3,SNR=6.0						
PLCA				PKPab	PKPab	19 50 40.4	-0.6
	comp=Z,11nm,0.9s,baz=349,slow=4.6,SNR=5.8						
PLCA	**Paso Flores**	**161.78**	**28**	*e*PKPdf	PKPdf	19 49 54.4	-1.9
PLCA				*e*PKPab	PKPab	19 50 40.6	-0.3
PLCA				*e*PP	PP	19 54 21.3	-4.2
PLCA	**Paso Flores**	**161.78**	**28**	*e*PKIKP	PKPdf	19 49 54.4	-1.8
PLCA				*e*		19 54 21.3	

BYKL 10 19:46:49.4±0.3,57.37N×120.70E,h3^{km}±16^{km}, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.41**	**251**	*e*Pg	Pg	19 47 15.4	-2.1
CRS				*e*Sg	Sg	19 47 33.4	-2.8
CRS				Pmax			
	163nm,0.3s						
CRS				Smax			
	387nm,0.3s						
CLNS	**Chul’man**	**2.35**	**101**	*e*Sg	Sg	19 48 02.4	-5.2
CLNS				Smax			
	946nm,0.6s						
ALDR	**Aldan**	**2.80**	**62**	*e*Pg	Pg	19 47 39.2	-6.1
ALDR				*e*Sg	Sg	19 48 16.2	-6.4
ALDR				Pmax			
	61nm,0.5s						
ALDR				Smax			
	1μm,0.4s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*Pg	Pg	19 47 41.5	-5.3
NLYR				*e*Sg	Sg	19 48 17.7	-7.5
NLYR				Pmax			
	165nm,0.5s						
NLYR				Smax			
	323nm,0.8s						
TUP	**Tupik**	**2.98**	**188**	*e*Pn	Pn	19 47 38.0	-0.5
TUP				*e*Pg	Pg	19 47 42.2	-6.7
TUP				*e*Sg	Sg	19 48 21.0	-7.7
TUP				Pmax			
	159nm,0.4s						
TUP				Smax			
	641nm,0.6s						
TNDR	**Tynda**	**3.16**	**133**	*e*Pn	Pn	19 47 40.2	-0.9
TNDR				*e*Pg	Pg	19 47 45.8	-6.7
TNDR				*e*Sg	Sg	19 48 27.5	-7.2
TNDR				Pmax			
	68nm,0.3s						
TNDR				Smax			
	523nm,0.7s						
BOD	**Bodaibo**	**3.63**	**280**	*e*Pg	Pg	19 47 55.1	-6.8
BOD				*e*Sg	Sg	19 48 41.0	-9.3
BOD				Pmax			
	46nm,0.5s						
BOD				Smax			
	184nm,0.4s						
SVKR	**Severomuysk**	**4.13**	**255**	*e*Sg	Sg	19 48 55.3	-12
SVKR				Smax			
	255nm,0.5s						
UKT	**Uakit**	**4.36**	**247**	*e*Pg	Pg	19 48 07.3	-9.1
UKT				*e*Sg	Sg	19 49 03.9	-11
UKT				Pmax			
	15nm,0.3s						
UKT				Smax			
	61nm,0.6s						
KMO	**Kumora**	**5.45**	**258**	*e*Sg	Sg	19 49 38.5	-12
KMO				Smax			
	82nm,0.7s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*Sg	Sg	19 49 52.7	-13
YLYR				Smax			
	46nm,0.8s						
YAK	**Yakutsk**	**6.52**	**40**	*e*Sg	Sg	19 50 10.6	-16
YAK				Smax			

	194nm,0.8s						
UNR	**Ust'-Nera**	**13.04**	**47**	*e*Sg	Sx	19 53 31.6	

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*IDC **10** 19:47:46.3±1.2, 57.37N×120.72E, mb3.9/7, mb1 4.1/7, mb1mx3.8/20, mbtmp3.9/7, Error ellipse: s-maj=30.3km s-min=28.9km az=47.0*
*MOS **10** 19:47:47.6±1.3, 57.64N×120.58E, h15^{km}, mb4.4/1, Error ellipse: s-maj=28.9km s-min=15.0km az=92.9*
*BYKL **10** 19:47:47.0±0.4, 57.44N×120.72E*
*NEIC **10** 19:47:47.7±0.8, 57.45N×120.66E, h5^{km}, mb4.2/1, Error ellipse: s-maj=19.7km s-min=18.4km az=57.0*
ISC 10 19:47:44.8±0.5**, 57.23N**±0.04×**120.77E**±0.06**, h10^{km}, n36, $\sigma 1^{s}07$**/32**, mb3.9**/8**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.41**	**257**	*e*Pg	**Pg**	**19 48 13.9**	**+1.0**
CRS				Pmax		19 48 15.3	
	329nm,0.9s						
CRS				*e*Sg	**Sg**	**19 48 31.5**	**-0.2**
CRS				Smax		19 48 32.8	
	2µm,0.5s						
CRS	**Chara**	**1.41**	**257**	*e*P	**Pg**	**19 48 13.9**	**+1.0**
CRS				*e*		19 48 31.5	
CRS				pmax	pmax		
	comp=Z,769nm,0.8s						
CRS				smax			
	comp=E,2µm,0.6s						
CLNS	**Chul'man**	**2.29**	**98**	*e*Pg	**Pg**	**19 48 30.5**	**-0.1**
CLNS				*e*		19 48 34.8	
CLNS				max		19 48 36.2	
	comp=E,872nm,0.3s						
CLNS				*e*Sg	**Sg**	**19 49 00.5**	**-0.6**
CLNS				Smax		19 49 05.3	
	comp=E,7µm,0.4s						
ALDR	**Aldan**	**2.84**	**59**	*e*Pg	**Pg**	**19 48 37.2**	**-4.3**
ALDR				Pmax		19 48 44.2	
	comp=E,132nm,0.2s						
ALDR				*e*Sg	**Sg**	**19 49 12.6**	**-6.7**
ALDR				Smax		19 49 13.7	
	comp=E,4µm,0.3s						
TUP	**Tupik**	**2.85**	**190**	*e*	**Pn**	**19 48 35.8**	**+4.5**
TUP				*e*Pg	**Pg**	**19 48 40.8**	**-0.9**
TUP				Pmax		19 48 44.2	
	comp=E,411nm,0.5s						
TUP				*e*Sn	**Sn**	**19 49 11.6**	**+5.6**
TUP				*e*Sg	**Sg**	**19 49 20.1**	**+0.3**
TUP				Smax		19 49 21.0	
	comp=E,1µm,0.8s						
TUP				*e*L		19 49 47.0	
TUP	**Tupik**	**2.85**	**190**	*e*P	**Pn**	**19 48 40.9**	**+10**
TUP				*e*S	**Sn**	**19 49 11.2**	**+5.2**
TUP				pmax	pmax		
	comp=Z,451nm,0.3s						
TUP				smax			
	comp=E,1µm,0.8s						
NLYR	**Nelyaty**	**2.88**	**257**	*e*Pg	**Pg**	**19 48 40.7**	**-1.6**
NLYR				Pmax		19 48 41.5	
	comp=E,360nm,0.5s						
NLYR				*e*Sg	**Sg**	**19 49 16.0**	**-4.7**
NLYR				Smax		19 49 19.7	
	comp=E,2µm,1.3s						
TNDR	**Tynda**	**3.04**	**132**	*e*	Px	19 49 18.8	
TNDR				*e*Sg	**Sg**	**19 49 25.8**	**-0.3**
TNDR				Smax		19 49 28.5	
	comp=E,4µm,0.4s						
BOD	**Bodaibo**	**3.69**	**282**	*e*Sg	**Sg**	**19 49 39.3**	**-8.6**
BOD				Smax		19 49 46.8	
	comp=E,415nm,0.5s						
BOD				*e*L		19 49 49.0	
SVKR	**Severomuysk**	**4.13**	**257**	*e*Sg	**Sg**	**19 49 56.2**	**-6.2**
SVKR				Smax		19 50 07.2	
	comp=E,970nm,1.1s						
UKT	**Uakit**	**4.34**	**249**	*e*Pg	Px	19 49 05.0	
UKT				Pmax		19 49 07.5	
	comp=E,124nm,1.0s						
UKT				*e*Sg	Sx	19 50 01.2	
UKT				Smax		19 50 07.6	
	comp=E,204nm,0.7s						
UKT	**Uakit**	**4.34**	**249**	*e*P	Px	19 49 05.7	
UKT				pmax	pmax		
	comp=Z,81nm,0.6s						
YOA	**Uoyan**	**5.11**	**261**	*e*Sg	Sx	19 50 24.1	
YOA				Smax		19 50 33.8	
	comp=Z,1µm,0.7s						
KMO	**Kumora**	**5.46**	**260**	*e*Sg	Sx	19 50 36.0	
KMO				Smax		19 50 43.8	
	comp=Z,735nm,2.8s						
YLYR	**Ulyunkhan**	**5.88**	**250**	*e*	Px	19 49 53.3	
YLYR				max		19 49 54.9	
	comp=Z,89nm,1.2s						
YLYR				*e*Sg	Sx	19 50 51.0	
YLYR				Smax		19 51 03.5	
	comp=Z,174nm,0.8s						
NIZ	**Nizh Angarsk**	**6.39**	**262**	*e*Sg	Sx	19 51 04.4	
NIZ				Smax		19 51 12.6	
	comp=Z,521nm,2.6s						
YAK	**Yakutsk**	**6.60**	**39**	*e*Sg	Sx	19 51 05.5	
YAK				Smax		19 51 21.3	
	comp=Z,2µm,0.8s						
YAK	**Yakutsk**	**6.60**	**39**	P	Px	19 49 35.6	
CIT	**Chita**	**6.69**	**222**	*e*Sg	Sx	19 51 18.0	
CIT				Smax		19 51 24.6	
	comp=Z,700nm,2.4s						
SYVR	**Suvo**	**7.09**	**244**	*e*Sg	Sx	19 51 29.2	
SYVR				Smax		19 51 45.4	
	comp=Z,604nm,2.2s						
KPC	**Khapcheranga**	**9.04**	**217**	*e*Sg	Sx	19 52 32.2	
KPC				Smax		19 52 39.6	
	comp=Z,92nm,0.8s						
UNR	**Ust'-Nera**	**13.11**	**47**	*e*Sg	Sx	19 54 26.8	
MKAR	**Makanchi Array**	**25.54**	**263**	P	**P**	**19 53 18.3**	**+3.4**
	comp=Z,0.9nm,0.6s,mb3.5,baz=47,slow=6.3,SNR=5.4						
ILAR	**Eielson Array**	**41.52**	**40**	P	**P**	**19 55 35.0**	**+1.9**
	comp=Z,0.4nm,0.5s,mb3.3,baz=296,slow=4.9,SNR=6.2						
JOF	**Joensuu**	**41.54**	**316**	*e*p	**P**	**19 55 33.0**	**-0.3**
KAF	**Kangasniemi**	**43.88**	**317**	*e*p	**P**	**19 55 52.3**	**-0.1**
FINES	**FINESS Array B**	**44.39**	**317**	P	**P**	**19 55 56.7**	**+0.1**
	comp=Z,2.1nm,0.5s,mb4.1,baz=34,slow=10.0,SNR=12						
FINES	**FINESS Array B**	**44.39**	**317**	P	**P**	**19 55 56.7**	**+0.1**
NB2	**NORSAR Subarra**	**49.87**	**323**	P	**P**	**19 56 39.5**	**-0.1**
	comp=Z,1.7nm,0.6s,mb4.2,baz=40,slow=7.4						
NOA	**NORSAR Array B**	**49.87**	**323**	P	**P**	**19 56 39.2**	**-0.4**
	comp=Z,1.0nm,0.5s,mb4.2,baz=44,slow=8.0,SNR=3.0						
NAO	**NORSAR Subarra**	**50.16**	**323**	P	**P**	**19 56 39.5**	**-2.3**
	comp=Z,1.7nm,0.6s,mb4.2						
NAO	**NORSAR Subarra**	**50.16**	**323**	P	**P**	**19 56 39.5**	**-2.3**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
KHC	**Kasperske Hory**	**58.18**	**312**	*e*P	**P**	**19 57 40.5**	**-0.3**
GERES	**GERESS Array B**	**58.36**	**312**	P	**P**	**19 57 41.7**	**-0.4**
	comp=Z,0.9nm,0.7s,mb3.9,baz=31,slow=7.8,SNR=7.1						
WRA	**Warramunga Arr**	**77.71**	**167**	P	**P**	**19 59 44.9**	**+1.7**
	comp=Z,0.3nm,0.5s,mb3.5,baz=352,slow=6.7,SNR=5.1						
KMBO	**Kilima Mbogo**	**87.42**	**264**	P	**P**	**20 00 35.1**	**+1.5**
	comp=Z,0.7nm,0.5s,mb4.2,baz=52,slow=18,SNR=3.6						

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*IDC **10** 19:50:33.8±1.1, 57.29N×120.57E, mb3.9/8, mb1 4.1/8, mb1mx3.8/20, mbtmp3.9/8, Error ellipse: s-maj=29.1km s-min=26.3km az=8.0*
*BYKL **10** 19:50:34.5±0.3, 57.40N×120.67E*
*MOS **10** 19:50:36.0±0.2, 57.49N×120.31E, h15^{km}, mb4.1/6, Error ellipse: s-maj=41.9km s-min=24.3km az=97.9*
ISC 10 19:50:35.6±0.4**, 57.42N**±0.04×**120.66E**±0.04**, h10^{km}, n30, $\sigma 1^{s}29$**/39**, mb3.7**/8**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.40**	**249**	*e*Pg	**Pb**	**19 51 00.7**	**-0.7**
CRS				*e*Sg	**Sb**	**19 51 18.5**	**-0.7**
CRS				Pmax			
	158nm,0.8s						
CRS				Smax			
	741nm,0.4s						
CLNS	**Chul'man**	**2.38**	**102**	*e*Pg	**Pb**	**19 51 17.5**	**-0.7**
CLNS				*e*Sg	**Sb**	**19 51 48.6**	**+0.9**
CLNS				Pmax			
	87nm,0.3s						
CLNS				Smax			
	654nm,0.3s						
CLNS	**Chul'man**	**2.38**	**102**	*e*P	**Pn**	**19 51 18.7**	**+3.4**
CLNS				*e*S	**Sn**	**19 51 44.8**	**-0.1**
CLNS				pmax	pmax		
	comp=N,36nm,0.3s						
CLNS				pmax	pmax		
	comp=E,20nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,39nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,47nm,0.3s						
CLNS				pmax	pmax		
	comp=N,15nm,0.2s						
CLNS				pmax	pmax		
	comp=E,96nm,0.4s						
CLNS				smax			
	comp=N,135nm,0.3s						
CLNS				smax			
	comp=E,218nm,0.3s						
CLNS				smax			
	comp=Z,56nm,0.3s						
CLNS				smax			
	comp=N,653nm,0.4s						
CLNS				smax			
	comp=Z,386nm,0.4s						
CLNS				smax			
	comp=E,633nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,2µm,12.0s						
ALDR	**Aldan**	**2.80**	**63**	*e*Pg	**Pb**	**19 51 24.8**	**-0.5**
ALDR				*e*Sg	**Sb**	**19 52 01.4**	**+1.6**
ALDR				Pmax			
	comp=Z,135nm,0.4s						
ALDR				Smax			
	comp=Z,755nm,0.3s						
NLYR	**Nelyaty**	**2.87**	**253**	*e*Pg	**Pb**	**19 51 26.9**	**+0.4**
NLYR				*e*Sg	**Sb**	**19 52 03.1**	**+1.3**
NLYR				Pmax			
	comp=Z,189nm,0.4s						
NLYR				Smax			
	comp=Z,265nm,0.8s						
TUP	**Tupik**	**3.02**	**188**	*e*Pg	**Pb**	**19 51 27.8**	**-1.4**
TUP				*e*		19 51 50.2	
TUP				*e*Sg	**Sb**	**19 52 06.4**	**0.0**
TUP				Pmax			
	comp=Z,195nm,0.7s						
TUP				Smax			
	comp=Z,979nm,0.6s						
TNDR	**Tynda**	**3.21**	**133**	*e*Pg	**Pb**	**19 51 32.1**	**-0.3**
TNDR				*e*Sg	**Sb**	**19 52 12.5**	**+0.8**
TNDR				Pmax			
	comp=Z,114nm,0.4s						
TNDR				Smax			
	comp=Z,851nm,0.8s						
BOD	**Bodaibo**	**3.60**	**279**	*e*Sg	**Sb**	**19 52 25.6**	**+2.5**
BOD				Smax			
	comp=Z,262nm,0.6s						
SVKR	**Severomuysk**	**4.12**	**255**	*e*Sg	**Sb**	**19 52 41.8**	**+3.7**
SVKR				Smax			
	comp=Z,294nm,0.5s						
UKT	**Uakit**	**4.35**	**247**	*e*Pg	**Pb**	**19 51 53.1**	**+1.2**
UKT				*e*Sg	**Sb**	**19 52 49.2**	**+4.3**
UKT				Pmax			
	comp=Z,24nm,0.7s						
UKT				Smax			
	comp=Z,65nm,0.5s						
KMO	**Kumora**	**5.44**	**258**	*e*Sg	**Sb**	**19 53 22.1**	**+5.7**
KMO				Smax			
	comp=Z,87nm,0.8s						
YLYR	**Ulyunkhan**	**5.89**	**248**	*e*Sg	**Sb**	**19 53 35.9**	**+6.5**
YLYR				Smax			
	comp=Z,58nm,0.5s						
YAK	**Yakutsk**	**6.50**	**41**	*e*Pg	**Pb**	**19 52 30.9**	**+2.3**
YAK				*e*Sg	**Sb**	**19 53 54.7**	**+7.6**
YAK				Pmax			
	comp=Z,47nm,0.6s						
YAK				Smax			
	comp=Z,227nm,0.6s						
YAK	**Yakutsk**	**6.50**	**41**	*e*P	**Pn**	**19 52 24.5**	**+11**
YAK				*e*S	**Sn**	**19 53 23.9**	**-4.7**
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=N,22nm,0.9s						
YAK				pmax	pmax		
	comp=E,25nm,1.2s						
YAK				pmax	pmax		
	comp=Z,56nm,0.9s						
YAK				pmax	pmax		
	comp=N,35nm,1.0s						
YAK				pmax	pmax		
	comp=E,43nm,1.1s						
YAK				smax			
	comp=N,29nm,0.8s						
YAK				smax			
	comp=E,19nm,0.8s						
YAK				smax			
	comp=Z,19nm,0.8s						
YAK				smax			
	comp=N,178nm,0.8s						
YAK				smax			
	comp=Z,144nm,0.9s						
YAK				smax			
	comp=E,243nm,1.0s						
YAK				MLR	MLR		
	comp=Z,2µm,13.0s						
UNR	**Ust'-Nera**	**13.03**	**47**	*e*Sg	Sx	19 57 16.1	
TIXI	**Tiksi**	**14.69**	**10**	*e*P	**P**	**19 54 04.3**	**-0.7**
TIXI				pmax	pmax		
	comp=Z,20nm,0.7s						
MKAR	**Makanchi Array**	**25.51**	**262**	P	**P**	**19 56 04.8**	**-0.6**
	comp=Z,1.0nm,0.6s,mb3.5,baz=59,slow=9.2,SNR=5.2						
MKAR	**Makanchi Array**	**25.51**	**262**	P	**P**	**19 56 04.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**39.63**	**327**	P	**P**	**19 58 06.9**	**-1.7**
	comp=Z,4.3nm,1.0s,mb4.2,baz=40,slow=9.5,SNR=3.8						
ARCES	**ARCESS Array B**	**39.63**	**327**	P	**P**	**19 58 06.9**	**-1.6**
ARCES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ILAR	**Eielson Array**	**41.42**	**40**	P	**P**	**19 58 23.5**	**+0.3**
	comp=Z,0.4nm,0.6s,mb3.2,baz=293,slow=6.9,SNR=6.9						
FINES	**FINESS Array B**	**44.21**	**317**	P	**P**	**19 58 44.6**	**-1.3**
	comp=Z,3.2nm,0.9s,mb4.0,baz=37,slow=9.5,SNR=5.2						
FINES	**FINESS Array B**	**44.21**	**317**	P	**P**	**19 58 44.6**	**-1.3**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**49.69**	**323**	P	**P**	**19 59 25.4**	**-3.5**
	comp=Z,1.2nm,0.8s,mb4.0,baz=42,slow=10,SNR=2.6						
NOA	**NORSAR Array B**	**49.69**	**323**	P	**P**	**19 59 25.4**	**-3.5**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	**GERESS Array B**	**58.19**	**312**	P	**P**	**20 00 30.0**	**-1.6**
	comp=Z,0.9nm,0.8s,mb3.9,baz=53,slow=6.7,SNR=6.3						
GERES	**GERESS Array B**	**58.19**	**312**	P	**P**	**20 00 30.0**	**-1.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	**Pinedale Array**	**71.70**	**37**	P	**P**	**20 01 58.4**	**-0.8**
	comp=Z,0.3nm,0.6s,mb3.4,baz=342,slow=4.7,SNR=3.7						
WRA	**Warramunga Arr**	**77.91**	**167**	P	**P**	**20 02 31.7**	**-3.3**
	comp=Z,1.0nm,0.9s,mb3.7,baz=352,slow=6.4,SNR=5.0						
WRA	**Warramunga Arr**	**77.91**	**167**	P	**P**	**20 02 31.7**	**-3.4**
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						

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*MOS **10** 20:04:23.0±2.3, 57.30N×120.50E, h21^{km}, mb4.3/1, Error ellipse: s-maj=32.0km s-min=22.5km az=53.3*
BYKL 10 20:04:19.9±0.4**, 57.36N**×**120.71E, 1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.41**	**252**	⇓*i*Pg	Pg	20 04 45.9	-2.1
CRS				*i* Sg	Sg	20 05 03.9	-2.9
CRS				Pmax			
	241nm,0.8s						
CRS				Smax			
	417nm,0.4s						
CRS	**Chara**	**1.41**	**252**	*e*P	Pb	20 04 45.9	-0.9
CRS				*e*		20 05 03.9	
CRS				pmax	pmax		
	comp=Z,240nm,0.5s						
CRS				smax			
	comp=E,400nm,1.4s						
NRGR	**Nerungri**	**2.31**	**106**	*e*P	Pn	20 05 00.0	+0.3
NRGR				*e*S	Sn	20 05 30.0	+0.8
CLNS	**Chul'man**	**2.34**	**101**	*e*Pn	Pn	20 05 00.5	+0.3
CLNS				*e*Pg	Pg	20 05 02.5	-4.2
CLNS				*e*Sg	Sg	20 05 31.8	-6.1
CLNS				Pmax			
	comp=E,169nm,0.3s						
CLNS				Smax			
	comp=E,770nm,0.3s						
CLNS	**Chul'man**	**2.34**	**101**	*e*P	Pn	20 05 02.4	+2.2
CLNS				*e*S	Sn	20 05 31.0	+0.9
CLNS				pmax	pmax		
	comp=Z,24nm,0.4s						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.3s						
CLNS				pmax	pmax		
	comp=N,21nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,20nm,0.3s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.2s						
CLNS				smax			
	comp=E,22nm,0.3s						
CLNS				smax			
	comp=Z,4.0nm,0.2s						
CLNS				smax			
	comp=N,17nm,0.3s						
CLNS				smax			
	comp=E,96nm,0.3s						
CLNS				smax			
	comp=Z,66nm,0.4s						
CLNS				smax			
	comp=N,74nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,400nm,11.0s						
ALDR	**Aldan**	**2.80**	**61**	*e*	Pn	20 05 08.6	+1.9
ALDR				*e*Sg	Sg	20 05 45.5	-7.6
ALDR				Smax			
	comp=Z,980nm,0.4s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*Pn	Pn	20 05 07.2	-0.7
NLYR				*e*Pg	Pg	20 05 11.6	-5.8
NLYR				*e*		20 05 13.8	
NLYR				*e*Sg	Sg	20 05 48.4	-7.4
NLYR				max			
	comp=Z,202nm,0.3s						
NLYR				Smax			
	comp=Z,218nm,1.0s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*P	Pn	20 05 11.2	+3.3
NLYR				*e*		20 05 45.3	
NLYR				pmax	pmax		
	comp=Z,202nm,0.3s						
NLYR				smax			
	comp=N,215nm,1.2s						
TUP	**Tupik**	**2.97**	**189**	*e*Pn	Pn	20 05 08.8	-0.4
TUP				*e*Pg	Pg	20 05 13.0	-6.2
TUP				*e*Sn	Sn	20 05 43.4	-2.7
TUP				*e*Sg	Sg	20 05 51.7	-7.2
TUP				*e*L		20 06 09.4	
TUP				Pmax			
	comp=N,60nm,0.7s						
TUP				Smax			
	comp=N,512nm,0.8s						
TUP	**Tupik**	**2.97**	**189**	*e*P	Pn	20 05 08.0	-1.2
TUP				*e*S	Sn	20 05 43.3	-2.8
TUP				pmax	pmax		
	comp=Z,70nm,0.4s						
TUP				smax			
	comp=E,449nm,0.7s						
TNDR	**Tynda**	**3.15**	**133**	*e*Pn	Pn	20 05 11.6	-0.1
TNDR				*e*Pg	Pg	20 05 16.5	-6.3
TNDR				*e*Sn	Sn	20 05 48.6	-2.0
TNDR				*e*Sg	Sg	20 05 57.1	-7.7
TNDR				Pmax			
	comp=E,134nm,0.2s						
TNDR				Smax			
	comp=E,993nm,0.3s						
SVKR	**Severomuysk**	**4.13**	**255**	*e*Pg	Pg	20 05 33.9	-8.5
SVKR				*e*Sg	Sg	20 06 27.5	-10
SVKR				Pmax			
	comp=E,46nm,0.4s						
SVKR				Smax			
	comp=E,156nm,0.7s						
SVKR	**Severomuysk**	**4.13**	**255**	*e*P	Pn	20 05 35.7	+10
SVKR				pmax	pmax		
	comp=Z,29nm,0.5s						
UKT	**Uakit**	**4.36**	**247**	*e*Pg	Pg	20 05 37.9	-9.0
UKT				*e*Sg	Sg	20 06 33.3	-12
UKT				Pmax			
	comp=Z,18nm,0.6s						
UKT				Smax			
	comp=Z,62nm,1.0s						
YOA	**Uoyan**	**5.10**	**260**	*e*Sg	Sg	20 06 57.6	-12
YOA				Smax			
	comp=Z,228nm,0.8s						
KMO	**Kumora**	**5.46**	**258**	Pg	Pg	20 05 58.5	-10
KMO				*e*Sg	Sg	20 07 07.8	-14
KMO				Pmax			
	comp=Z,9.0nm,0.5s						
KMO				Smax			
	comp=Z,81nm,1.3s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*	Pn	20 05 45.2	-5.4
YLYR				*e*Sg	Sg	20 07 23.2	-13
YLYR				max			
	comp=Z,8.0nm,1.3s						
YLYR				Smax			
	comp=Z,69nm,1.4s						
NIZ	**Nizh Angarsk**	**6.38**	**260**	*e*Sg	Sg	20 07 36.3	-16
NIZ				Smax			
	comp=Z,77nm,2.5s						
YAK	**Yakutsk**	**6.52**	**40**	*e*	Pb	20 07 23.2	+69
YAK				*e*Sg	Sg	20 07 39.7	-17
YAK				Smax			
	comp=Z,226nm,0.6s						
YAK	**Yakutsk**	**6.52**	**40**	*e*P	Pn	20 06 04.9	+5.4
YAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,31nm,0.9s						
YAK				pmax	pmax		
	comp=E,23nm,0.9s						
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
CIT	**Chita**	**6.77**	**221**	*e*Pg	Pg	20 06 20.8	-14
CIT				*e*Sg	Sg	20 07 48.3	-17
CIT				Pmax			
	comp=Z,13nm,0.8s						
CIT				Smax			
	comp=Z,83nm,1.4s						
SYVR	**Suvo**	**7.12**	**243**	*e*	Pn	20 06 26.3	+18
SYVR				*e*Sg	Sg	20 08 01.1	-16
SYVR				max			
	comp=Z,10.0nm,1.4s						
SYVR				Smax			
	comp=Z,33nm,1.0s						
KPC	**Khapcheranga**	**9.13**	**216**	*e*	P	20 07 20.8	+45
KPC				*e*Sg	Sg	20 09 00.8	-23
KPC				max			
	comp=Z,5.0nm,0.7s						
KPC				Smax			
	comp=Z,22nm,1.0s						
UNR	**Ust'-Nera**	**13.04**	**47**	*e*Sg	S	20 11 04.1	+68

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*NEIC **10** 20:04:54.6, 45.55S×167.23E, h5^{km}, ML3.9(WEL), After WEL.*
WEL 10 20:04:51.9±0.8**, 45.65S**×**166.99E, h5^{km}, ML4.1**/10**, Error ellipse: s-maj=6.7km s-min=2.8km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.21**	**34**	P	Pg	20 04 56.7	+0.6
DCZ	**Deep Cove**	**0.21**	**34**	PG	Pg	20 04 56.7	+0.6
DCZ				SG	Sg	20 04 59.4	+0.4
WHZ	**Wether Hill Ro**	**0.71**	**110**	P	Pg	20 05 05.8	-0.3
WHZ	**Wether Hill Ro**	**0.71**	**110**	P*	Pb	20 05 05.8	-0.6
WHZ				S*	Sb	20 05 15.6	-0.6
MLZ	**Mavora Lakes**	**0.89**	**70**	P	Pb	20 05 08.1	-1.2
MLZ	**Mavora Lakes**	**0.89**	**70**	P*	Pb	20 05 08.1	-1.3
MLZ				S*	Sb	20 05 19.7	-1.5
MSZ	**Milford Sound**	**1.18**	**34**	P	Pb	20 05 12.9	-1.5
MSZ	**Milford Sound**	**1.18**	**34**	P*	Pb	20 05 12.8	-1.6
MSZ				S*	Sb	20 05 27.9	-1.9

WKZ	**Wanaka**	**1.65**	**61**	P	Pn	20 05 22.0	+0.3
WKZ	**Wanaka**	**1.65**	**61**	PN	Pn	20 05 21.7	0.0
WKZ				SN	Sn	20 05 42.9	-0.7
EAZ	**Earnscleugh**	**1.69**	**76**	P	Pn	20 05 22.3	+0.1
EAZ	**Earnscleugh**	**1.69**	**76**	PN	Pn	20 05 22.3	+0.1
TUZ	**Tuapeka**	**1.87**	**100**	P	Pn	20 05 25.1	+0.2
TUZ	**Tuapeka**	**1.87**	**100**	*e*PN	Pn	20 05 24.1	-0.7
TUZ				SN	Sn	20 05 49.0	-0.2
JCZ	**Jackson Bay**	**2.02**	**39**	*e*P	Pn	20 05 27.4	+0.5
JCZ	**Jackson Bay**	**2.02**	**39**	PN	Pn	20 05 27.2	+0.2
LBZ	**Lake Benmore**	**2.59**	**62**	*e*P	Pn	20 05 34.4	-0.8
LBZ	**Lake Benmore**	**2.59**	**62**	PN	Pn	20 05 33.9	-1.3
ODZ	**Otahua Downs**	**2.65**	**78**	P	Pn	20 05 34.7	-1.3
ODZ	**Otahua Downs**	**2.65**	**78**	PN	Pn	20 05 34.7	-1.3
FOZ	**Fox Glacier**	**2.84**	**44**	*e*P	Pn	20 05 40.4	+1.7
FOZ	**Fox Glacier**	**2.84**	**44**	PN	Pn	20 05 40.4	+1.7
RPZ	**Rata Peaks**	**3.48**	**58**	*e*P	Pn	20 05 46.0	-1.9

NEIC ***10*** *20:09:53.0, 38.14N×26.58E, h9^{km}, MD3.8(ATH), ML3.8(ISK), After ISK.*
ISK ***10*** *20:09:54.5, 38.15N×26.60E, h13^{km}, ML3.9*
ATH ***10*** *20:09:55.5, 38.16N×26.68E, h33^{km}±3^{km}, MD3.8/9*
CSEM ***10*** *20:09:55.9±0.1, 38.15N×26.63E, h25^{km}, MD3.8, Error ellipse: s-maj=2.4km s-min=1.6km az=86.0*
ISC 10 20:09:54.6±0.5**, 38.16N**±0.02×**26.54E**±0.03**, h9**^{km}±4^{km}**, n70,** σ1^{s}**10**/90**, 6C-4D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.20**	**12**	*i* P	**Pg**	**20 09 58.7**	**-0.2**
URLA				*i* S	**Sg**	**20 10 02.8**	**+1.1**
SMG	**Samos**	**0.51**	**153**	⇑*i*PB	**Pg**	**20 10 05.6**	**+0.7**
SMG				*e*SB	**Sg**	**20 10 13.5**	**+1.7**
IZM	**Izmir**	**0.61**	**67**	*i* PG	**Pg**	**20 10 06.9**	**0.0**
KDAG	**Bornova**	**0.62**	**67**	*i* P	**Pg**	**20 10 05.7**	**-1.2**
KDAG				*i* S	**Sg**	**20 10 14.2**	**-1.1**
PRK	**Paraskevi**	**1.10**	**349**	⇓*i*PN	**Pn**	**20 10 16.6**	**+0.5**
PRK				*e*SN	**Sn**	**20 10 32.2**	**+0.6**
AYDN	**Tasoluk**	**1.17**	**115**	*i* P	**Pb**	**20 10 17.3**	**+0.7**
AYDN				*i* S	**Sb**	**20 10 31.8**	**+0.1**
AKS	**Akhisar**	**1.23**	**54**	*i* PN	**Pn**	**20 10 17.9**	**0.0**
BODT	**Bodrum**	**1.26**	**151**	*i* PN	**Pn**	**20 10 17.6**	**-0.8**
BODT				*i* SN	**Sn**	**20 10 35.6**	**0.0**
MLSB	**Milas**	**1.31**	**131**	PN	**Pn**	**20 10 18.4**	**-0.7**
BDRM	**Kayabasi**	**1.31**	**147**	*i* P	**Pb**	**20 10 20.0**	**+1.1**
BDRM				*i* S	**Sb**	**20 10 37.8**	**+2.1**
APE	**Apeiranthos**	**1.36**	**217**	PN	**Pn**	**20 10 19.9**	**+0.1**
APE				SN	**Sn**	**20 10 38.9**	**+0.8**
APE	**Apeiranthos**	**1.36**	**217**	*e*Pb	**Pb**	**20 10 20.1**	**+0.3**
APE				*e*Sn	**Sn**	**20 10 38.9**	**+0.8**
MANT	**Manisa**	**1.62**	**78**	*i* P	**Pn**	**20 10 24.9**	**+1.4**
MANT				*i* S	**Sb**	**20 10 45.1**	**+0.4**
DAT	**Datca**	**1.65**	**150**	PN	**Pn**	**20 10 23.1**	**-0.9**
EZN	**Ezine**	**1.67**	**354**	PN	**Pn**	**20 10 25.0**	**+0.8**
YER	**Yerkesik**	**1.72**	**126**	PN	**Pn**	**20 10 24.4**	**-0.6**
BALB	**Balikesir**	**1.81**	**35**	PN	**Pn**	**20 10 26.4**	**+0.2**
SANT	**Santorini**	**1.99**	**206**	*e*Pn	**Pn**	**20 10 28.3**	**-0.6**
SANT				*e*Pg	**Pg**	**20 10 33.7**	**-0.6**
SANT				*e*Sn	**Sn**	**20 11 01.4**	**+7.4**
SANT	**Santorini**	**1.99**	**206**	*e*Pn	**Pn**	**20 10 28.3**	**-0.5**
SANT	**Santorini**	**1.99**	**206**	*e*Pg	**Pg**	**20 10 33.7**	**-0.6**
DENT	**Denizli**	**2.01**	**101**	PN	**Pn**	**20 10 28.3**	**-0.9**
LIA	**Limnos Island**	**2.03**	**329**	*e*PN	**Pn**	**20 10 29.3**	**-0.1**
DNZL	**Cakiroluk**	**2.04**	**103**	*i* P	**Pn**	**20 10 30.4**	**+0.9**
DNZL				*i* S	**Sn**	**20 11 03.6**	**+8.2**
PTL	**Penteli**	**2.12**	**268**	*e*PN	**Pn**	**20 10 32.0**	**+1.3**
DALT	**Dalyan (Mudla)**	**2.17**	**129**	*e*PN	**Pn**	**20 10 31.0**	**-0.5**
DST	**Dursunbey**	**2.17**	**48**	*e*PN	**Pn**	**20 10 31.6**	**+0.1**
LPK	**Lapseki**	**2.21**	**4**	*e*PN	**Pn**	**20 10 32.3**	**+0.3**
MPAR	**Parnis Oros**	**2.21**	**271**	*e*PN	**Pn**	**20 10 34.0**	**+1.9**
ARG	**Arkhangelos**	**2.32**	**146**	*e*PN	**Pn**	**20 10 32.6**	**-1.0**
KHL	**Karahalli**	**2.35**	**85**	*e*PN	**Pn**	**20 10 32.9**	**-1.1**
EDC	**Edincik**	**2.41**	**25**	*e*PN	**Pn**	**20 10 34.3**	**-0.6**
BNT	**Bandirma**	**2.44**	**26**	*e*PN	**Pn**	**20 10 35.6**	**+0.4**
GDZ	**Gediz**	**2.48**	**67**	*i* P	**Pb**	**20 10 40.8**	**+1.8**
GDZ				*i* S	**Sb**	**20 11 13.7**	**+4.0**
KCT	**Karacabey**	**2.53**	**33**	*e*PN	**Pn**	**20 10 36.2**	**-0.4**
FETY	**Fethiye**	**2.53**	**126**	*e*PN	**Pn**	**20 10 35.6**	**-1.1**
GOLH	**Golhisar**	**2.57**	**110**	*i* P	**Pn**	**20 10 34.6**	**-2.5**
GOLH				*i* S	**Sg**	**20 11 21.7**	**+1.6**
MRMT	**Marmara Adasi**	**2.57**	**18**	*e*PN	**Pn**	**20 10 37.6**	**+0.5**
ORLT	**Orhaneli**	**2.62**	**44**	*e*PN	**Pn**	**20 10 37.6**	**-0.3**
KARP	**Karpathos**	**2.66**	**169**	*e*PB	**Pb**	**20 10 39.0**	**-3.0**
MFT	**Murefte**	**2.68**	**12**	*e*PN	**Pn**	**20 10 38.0**	**-0.7**
ULDT	**Uludag**	**2.82**	**45**	*i* P	**Pb**	**20 10 45.0**	**+0.2**
ULDT				*i* S	**Sb**	**20 11 21.7**	**+2.0**
ALT	**Altintas**	**2.93**	**71**	*e*PN	**Pn**	**20 10 40.9**	**-1.4**
TKTP	**Tekketepe**	**2.98**	**91**	*i* P	**Pn**	**20 10 42.7**	**-0.4**
TKTP				*i* S	**Sg**	**20 11 32.9**	**-1.0**
ELL	**Elmali**	**3.03**	**117**	*e*PN	**Pn**	**20 10 42.2**	**-1.5**
RDO	**Rodhopi**	**3.08**	**346**	*e*PN	**Pn**	**20 10 45.0**	**+0.6**
ISP	**Isparta**	**3.15**	**95**	*e*PN	**Pn**	**20 10 45.5**	**+0.1**
YLV	**Yalova**	**3.25**	**42**	*e*PN	**Pn**	**20 10 46.8**	**-0.1**
CTT	**Catalca**	**3.32**	**25**	*e*PN	**Pn**	**20 10 48.1**	**+0.3**
ISK	**Istanbul-Kandi**	**3.49**	**33**	*e*PN	**Pn**	**20 10 49.4**	**-0.8**
HRT	**Hereke**	**3.59**	**41**	*e*PN	**Pn**	**20 10 50.8**	**-0.9**
ESKT	**Eskisehir**	**3.63**	**67**	*e*PN	**Pn**	**20 10 52.7**	**+0.5**
ESKT	**Eskisehir**	**3.63**	**67**	*i* P	**Pb**	**20 11 01.7**	**+3.1**
ESKT				*i* S	**Sb**	**20 11 45.6**	**+2.6**
EDRB	**Edirne**	**3.68**	**2**	*e*PN	**Pn**	**20 10 52.7**	**-0.3**
KIZT	**Kizilcal**	**4.25**	**79**	*e*PN	**Pn**	**20 11 00.0**	**-1.0**
KONT	**Konya--Tatoy**	**4.60**	**91**	*e*PN	**Pn**	**20 11 05.3**	**-0.7**
SGKT	**Sivrigoynuk**	**4.90**	**59**	*i* P	**Pb**	**20 11 25.6**	**+5.1**
SGKT				*i* S	**Sb**	**20 12 24.7**	**+4.6**
ANTO	**Ankara**	**5.16**	**69**	*e*Pn	**Pn**	**20 11 16.4**	**+2.5**
	9.2nm,0.8s						
ANTO				*e*Sn	**Sg**	**20 12 40.7**	**-5.6**
BR131	**Keskin Array S**	**5.75**	**72**	Pn	**Pn**	**20 11 21.6**	**-0.7**
	6.7nm,0.8s						
BR131	**Keskin Array S**	**5.75**	**72**	Pn	**Pn**	**20 11 21.6**	**-0.6**
	6.7nm,0.8s						
TIRR	**Tirgusor**	**6.44**	**12**	⇑P	**Pn**	**20 11 30.5**	**-1.6**
TIRR	**Tirgusor**	**6.44**	**12**	⇑P	**Pn**	**20 11 30.5**	**-1.6**
HARR	**Harsova**	**6.60**	**9**	⇑P	**Pn**	**20 11 31.8**	**-2.5**
HARR	**Harsova**	**6.60**	**9**	⇑P	**Pn**	**20 11 31.8**	**-2.5**
BOLS	**Boljevac**	**6.64**	**330**	⇓*i*Pn	**Pn**	**20 11 34.2**	**-0.5**
BOLS	**Boljevac**	**6.64**	**330**	Pn	**Pn**	**20 11 34.2**	**-0.6**
CFR	**Carcaliu**	**7.11**	**9**	⇑P	**Pn**	**20 11 38.2**	**-3.2**
VRI	**Vrincioaia**	**7.70**	**1**	⇓P	**Pn**	**20 11 51.8**	**+2.1**
VRI	**Vrincioaia**	**7.70**	**1**	⇓P	**Pn**	**20 11 51.9**	**+2.2**
TIP	**Timpagrande**	**7.72**	**281**	*e*Pn	**Pn**	**20 11 50.4**	**+0.4**
KHC	**Kasperske Hory**	**14.41**	**324**	*e*P	**P**	**20 13 19.0**	**-1.6**

NEIC ***10*** *20:15:06.0±0.8, 57.33N×121.14E, h5^{km}, mb4.2/2, Error ellipse: s-maj=18.8km s-min=11.3km az=134.0*
IDC ***10*** *20:15:05.5±1.1, 57.15N×120.88E, mb3.7/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.8/8, Error ellipse: s-maj=28.6km s-min=24.7km az=6.0*
MOS ***10*** *20:15:06.6±1.3, 57.43N×120.72E, h10^{km}, mb4.3/2, Error ellipse: s-maj=15.4km s-min=10.7km az=81.9*
BYKL ***10*** *20:15:07.9±0.4, 57.32N×120.76E, h14^{km}±26^{km}*
ISC 10 20:15:05.6±0.4**, 57.19N**±0.03×**120.86E**±0.04**, h14**^{km}**, n59,** σ1^{s}**40**/63**, mb3.9**/9**, 1C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.44**	**259**	⇑*i*Pg	**Pg**	**20 15 33.8**	**-0.7**
CRS				Pmax		20 15 36.3	
	493nm,0.8s						
CRS				*e*Sg	**Sg**	**20 15 52.3**	**-1.5**
CRS				Smax		20 15 55.8	
	1µm,0.7s						
CRS	**Chara**	**1.44**	**259**	*e*P	**Pg**	**20 15 33.8**	**-0.7**
CRS				*e*		20 15 52.2	
CRS				pmax	pmax		
	comp=Z,469nm,0.6s						
CRS				smax			
	comp=E,139nm,0.4s						
NRGR	**Nerungri**	**2.19**	**103**	*e*P	**Pn**	**20 15 47.4**	**+5.3**
NRGR				*e*S	**Sn**	**20 16 17.0**	**+7.9**
NRGR				smax			
	comp=N,1.0nm,0.1s						
CLNS	**Chul'man**	**2.24**	**98**	*e*Pg	**Pg**	**20 15 49.4**	**-0.9**
CLNS				Pmax		20 15 51.6	
	comp=N,5µm,0.8s						
CLNS				*e*Sn	**Sn**	**20 16 11.1**	**+0.7**
CLNS				*e*Sg	**Sg**	**20 16 19.8**	**-0.4**
CLNS				Smax		20 16 20.6	
	comp=N,20µm,0.4s						
CLNS	**Chul'man**	**2.24**	**98**	*e*P	**Pn**	**20 15 38.3**	**-4.5**
CLNS				*e*S	**Sn**	**20 16 10.7**	**+0.3**
CLNS				pmax	pmax		
	comp=N,4.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,6.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,64nm,0.2s						
CLNS				pmax	pmax		
	comp=N,44nm,0.3s						
CLNS				pmax	pmax		
	comp=E,67nm,0.3s						
CLNS				smax			
	comp=N,76nm,0.3s						
CLNS				smax			
	comp=Z,72nm,0.3s						
CLNS				smax			
	comp=E,256nm,0.4s						
CLNS				smax			
	comp=N,743nm,0.3s						
CLNS				smax			
	comp=Z,414nm,0.3s						
CLNS				smax			
	comp=E,2µm,0.4s						
CLNS				MLR	MLR		
	comp=Z,700nm,12.0s						
ALDR	**Aldan**	**2.81**	**58**	*e*Pn	**Pn**	**20 15 51.0**	**-0.1**
ALDR				*e*Pg	**Pg**	**20 15 56.1**	**-5.7**
ALDR				*e*		20 16 01.0	
ALDR				max		20 16 03.5	
	comp=Z,597nm,0.3s						
ALDR				*e*Sn	**Sn**	**20 16 23.2**	**-1.9**
ALDR				*e*Sg	**Sg**	**20 16 32.1**	**-7.3**
ALDR				Smax		20 16 32.4	
	comp=Z,27µm,0.4s						
TUP	**Tupik**	**2.82**	**191**	*e*	**Pn**	**20 15 57.7**	**+6.5**
TUP				*e*Pg	**Pg**	**20 16 00.3**	**-1.7**
TUP				Pmax		20 16 02.8	
	comp=Z,599nm,0.7s						
TUP				*e*Sn	**Sn**	**20 16 27.5**	**+2.3**
TUP				*e*Sg	**Sg**	**20 16 39.2**	**-0.4**
TUP				Smax		20 16 42.1	
	comp=Z,1µm,0.9s						
TUP				*e*L		20 16 57.7	
TUP	**Tupik**	**2.82**	**191**	*e*P	**Pn**	**20 15 54.2**	**+3.0**
TUP				*e*S	**Sn**	**20 16 29.2**	**+4.0**
TUP				pmax	pmax		
	comp=Z,601nm,0.6s						
TUP				smax			
	comp=E,1µm,0.8s						
NLYR	**Nelyaty**	**2.92**	**258**	*e*	**Pn**	**20 15 55.2**	**+2.7**
NLYR				*e*Pg	**Pg**	**20 15 58.4**	**-5.5**
NLYR				Pmax		20 16 01.5	
	comp=E,350nm,0.4s						
NLYR				*e*Sn	**Sn**	**20 16 25.0**	**-2.7**
NLYR				*e*Sg	**Sg**	**20 16 36.8**	**-6.0**
NLYR				Smax		20 16 41.4	
	comp=E,1µm,0.9s						
NLYR	**Nelyaty**	**2.92**	**258**	*e*P	**Pn**	**20 15 59.6**	**+7.1**
NLYR				*e*		20 16 34.9	
NLYR				pmax	pmax		
	comp=Z,308nm,0.4s						
NLYR				smax			
	comp=N,1µm,1.6s						
TNDR	**Tynda**	**2.98**	**132**	*e*Pn	**Pn**	**20 15 56.6**	**+3.2**
TNDR				*e*Pg	**Pg**	**20 16 04.0**	**-1.1**
TNDR				Pmax		20 16 09.9	
	comp=N,1µm,0.4s						
TNDR				*e*		20 16 26.3	
TNDR				*e*		20 16 35.9	
TNDR				*e*Sg	**Sg**	**20 16 44.9**	**0.0**
TNDR				Smax		20 16 47.1	
	comp=N,5µm,0.3s						
BOD	**Bodaibo**	**3.75**	**282**	*e*Pg	**Pg**	**20 16 13.1**	**-7.4**
BOD				Pmax		20 16 16.4	
	comp=N,82nm,1.0s						
BOD				*e*Sg	**Sg**	**20 16 59.7**	**-11**
BOD				Smax		20 17 07.8	
	comp=N,541nm,1.0s						
BOD				*e*L		20 17 23.1	
BOD	**Bodaibo**	**3.75**	**282**	*e*P	**Pn**	**20 16 13.2**	**+8.9**
SVKR	**Severomuysk**	**4.17**	**258**	*e*Pn	**Pn**	**20 16 10.6**	**+0.3**
SVKR				*e*Pg	**Pg**	**20 16 22.3**	**-6.6**
SVKR				Pmax		20 16 26.6	
	comp=N,101nm,0.6s						
SVKR				*e*Sg	**Sg**	**20 17 16.5**	**-8.0**
SVKR				Smax		20 17 23.1	
	comp=N,995nm,1.3s						
SVKR	**Severomuysk**	**4.17**	**258**	*e*P	Px	20 16 25.1	
SVKR				pmax	pmax		
	comp=Z,88nm,0.6s						
UKT	**Uakit**	**4.37**	**250**	*e*Pg	Px	20 16 26.0	
UKT				Pmax		20 16 35.2	
	comp=Z,40nm,0.7s						
UKT				*e*Sg	Sx	20 17 22.7	
UKT				Smax		20 17 28.1	
	comp=Z,293nm,1.0s						
UKT	**Uakit**	**4.37**	**250**	*e*P	Px	20 16 25.7	
UKT				pmax	pmax		
	comp=Z,33nm,0.5s						
YOA	**Uoyan**	**5.15**	**262**	*e*Pg	Px	20 16 39.3	
YOA				Pmax		20 16 55.4	
	comp=Z,147nm,1.7s						
YOA				*e*Sn	**Sn**	**20 17 20.6**	**-3.5**
YOA				*e*Sg	Sx	20 17 46.8	
YOA				Smax		20 17 55.8	
	comp=Z,1µm,2.3s						
KMO	**Kumora**	**5.50**	**260**	*e*Pn	**Pn**	**20 16 31.3**	**+2.2**
KMO				*e*Pg	Px	20 16 46.1	
KMO				Pmax		20 16 55.6	
	comp=Z,20nm,0.6s						
KMO				*e*Sg	Sx	20 17 57.5	
KMO				Smax		20 18 06.7	
	comp=Z,505nm,1.0s						
KMO	**Kumora**	**5.50**	**260**	*e*P	**Pn**	**20 16 32.5**	**+3.4**
KMO				*e*S	**Sn**	**20 17 32.7**	**-0.2**
KMO				pmax	pmax		
	comp=Z,15nm,0.5s						
KMO				smax			
	comp=N,512nm,1.0s						
YLYR	**Ulyunkhan**	**5.91**	**251**	*e*	Px	20 16 55.8	
YLYR				max		20 17 08.8	
	comp=N,13nm,0.8s						
YLYR				*e*		20 17 57.5	
YLYR				*e*Sg	Sx	20 18 10.0	
YLYR				Smax		20 18 17.0	
	comp=N,343nm,1.2s						
YLYR	**Ulyunkhan**	**5.91**	**251**	*e*P	Px	20 16 56.0	
YLYR				pmax	pmax		
	comp=Z,31nm,0.7s						
NIZ	**Nizh Angarsk**	**6.43**	**262**	*e*Sg	Sx	20 18 25.4	
NIZ				Smax		20 18 37.6	
	comp=Z,168nm,1.6s						
YAK	**Yakutsk**	**6.60**	**39**	*e*Pn	**Pn**	**20 16 40.5**	**-4.1**
	comp=Z,87nm,0.8s						
YAK	**Yakutsk**	**6.60**	**39**	*e*P	**Pn**	**20 16 43.4**	**-1.2**
YAK				*e*S	**Sn**	**20 17 52.8**	**-7.6**
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,23nm,0.9s						
YAK				pmax	pmax		
	comp=N,22nm,1.0s						
YAK				pmax	pmax		
	comp=E,19nm,1.0s						
YAK				smax			
	comp=N,32nm,0.9s						
YAK				smax			
	comp=Z,26nm,0.9s						
YAK				smax			
	comp=E,21nm,0.7s						
YAK				smax			
	comp=N,189nm,0.9s						
YAK				smax			
	comp=Z,143nm,1.0s						
YAK				smax			
	comp=E,87nm,0.8s						
YAK				MLR	MLR		
	comp=Z,209nm,8.0s						
CIT	**Chita**	**6.70**	**222**	*e*Pg	Px	20 17 09.9	
CIT				Pmax		20 17 12.2	
	comp=Z,71nm,1.3s						
CIT				*e*		20 18 25.2	
CIT				*e*Sg	Sx	20 18 36.7	
CIT				Smax		20 18 42.8	
	comp=Z,390nm,1.1s						
SYVR	**Suvo**	**7.12**	**245**	*e*	Px	20 18 01.9	
SYVR				*e*Sg	Sx	20 18 48.8	
SYVR				Smax		20 19 03.3	
	comp=Z,351nm,1.8s						
SYVR	**Suvo**	**7.12**	**245**	*e*P	Px	20 17 13.7	
HIA	**Hailar**	**7.97**	**185**	*e*Pn	**Pn**	**20 17 01.7**	**-2.1**
OGRR	**Ongureny**	**8.34**	**250**	*e*Sg	Sx	20 19 26.3	
OGRR				Smax		20 19 43.6	
	comp=Z,83nm,1.8s						
KPC	**Khapcheranga**	**9.04**	**218**	*e*Pn	**P**	**20 17 20.5**	**+1.8**
KPC				*e*		20 17 23.7	
KPC				max		20 17 37.1	
KPC				*e*Sg	Sx	20 19 49.0	
KPC				Smax		20 19 59.3	
	comp=Z,219nm,1.1s						
KPC	**Khapcheranga**	**9.04**	**218**	*e*P	**P**	**20 17 22.4**	**+3.7**
KPC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TRG	**Tyrgan**	**9.45**	**248**	*e*Sg	Sx	20 19 59.9	
TRG				Smax		20 20 12.0	
	comp=Z,90nm,1.9s						
KLR	**Kul'dur**	**10.30**	**136**	*e*P	**P**	**20 17 40.8**	**+4.9**
LSTR	**Listvyanka**	**10.72**	**247**	*e*Sg	Sx	20 20 39.9	
LSTR				Smax		20 20 48.9	
	comp=Z,70nm,1.5s						
IRK	**Irkutsk**	**10.79**	**250**	*e*Sg	Sx	20 20 42.6	
IRK				Smax		20 21 12.6	
	comp=Z,118nm,1.2s						
TLY	**Talaya**	**11.43**	**248**	*e*Sg	Sx	20 21 02.3	
TLY				Smax		20 21 13.7	
	comp=Z,42nm,1.9s						
BTGS	**Batagay**	**12.24**	**25**	*e*Sg	Sx	20 21 26.1	
ZAK	**Zakamensk**	**12.41**	**244**	*e*Sg	Sx	20 21 29.6	
ZAK				Smax		20 22 03.8	
	comp=Z,39nm,1.6s						
MOY	**Mondy**	**12.80**	**253**	*e*Sg	Sx	20 21 43.2	
MOY				Smax		20 21 52.5	
	comp=Z,58nm,2.0s						
SONM	**Songino Array**	**12.83**	**229**	Pn	**P**	**20 18 13.5**	**+3.3**
	comp=Z,0.1nm,0.3s,baz=34,slow=12,SNR=4.4						
SONM				Lg		20 21 44.0	
	comp=Z,0.5nm,0.3s,slow=22,SNR=6.1						
ORL	**Orlik**	**12.96**	**258**	*e*Sg	Sx	20 21 48.7	
ORL				Smax		20 21 59.8	
	comp=Z,44nm,2.3s						
TIXI	**Tiksi**	**14.89**	**10**	⇓*i*P	**P**	**20 18 29.9**	**-7.2**
TIXI				pmax	pmax		
	comp=Z,11nm,0.9s						
ZAL	**Zalesovo**	**20.49**	**276**	P	**P**	**20 19 45.6**	**+0.2**
	comp=Z,1.3nm,0.8s,baz=54,slow=9.6,SNR=7.6						
KURK	**Kurchatov**	**25.35**	**273**	*e*P	**P**	**20 20 33.7**	**+0.6**
	comp=Z,3.2nm,0.9s,mb3.9						
KURK	**Kurchatov**	**25.35**	**273**	*e*P	**P**	**20 20 33.7**	**+0.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
MKAR	**Makanchi Array**	**25.59**	**263**	P	**P**	**20 20 37.6**	**+2.1**
	comp=Z,1.3nm,0.7s,mb3.6,baz=55,slow=7.4,SNR=9.3						
AAK	**Ala-Archa**	**32.51**	**264**	*e*P	**P**	**20 21 37.1**	**-0.6**
	comp=Z,8.1nm,1.5s,mb4.4						
AAK	**Ala-Archa**	**32.51**	**264**	*e*P	**P**	**20 21 37.1**	**-0.5**
AAK				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.4						
ILAR	**Eielson Array**	**41.52**	**40**	P	**P**	**20 22 55.1**	**+1.9**
	comp=Z,1.0nm,0.7s,mb3.5,baz=291,slow=4.6,SNR=14						
JOF	**Joensuu**	**41.60**	**316**	*e*p	**P**	**20 22 54.0**	**+0.1**
KAF	**Kangasniemi**	**43.94**	**318**	*e*p	**P**	**20 23 05.4**	**-7.7**
FINES	**FINESS Array B**	**44.45**	**317**	P	**P**	**20 23 16.5**	**-0.7**
	comp=Z,2.8nm,0.7s,mb4.1,baz=90,slow=9.5,SNR=6.7						
NOA	**NORSAR Array B**	**49.93**	**323**	P	**P**	**20 24 00.2**	**0.0**
	comp=Z,1.1nm,0.8s,mb3.9,baz=24,slow=4.8,SNR=3.0						
AKASG	**Malin Array Be**	**50.39**	**304**	P	**P**	**20 24 04.2**	**+0.4**
	comp=Z,0.4nm,0.4s,mb3.8,baz=41,slow=8.9,SNR=6.2						
DPC	**Dobruska-Polom**	**56.18**	**312**	*e*P	**P**	**20 24 48.8**	**+2.1**
KHC	**Kasperske Hory**	**58.24**	**312**	*e*P	**P**	**20 25 01.7**	**+0.4**
GERES	**GERESS Array B**	**58.42**	**312**	P	**P**	**20 25 02.7**	**+0.1**
	comp=Z,1.0nm,0.7s,mb3.9,baz=45,slow=5.7,SNR=6.8						
WRA	**Warramunga Arr**	**77.67**	**167**	P	**P**	**20 27 02.6**	**-0.4**
	comp=Z,0.9nm,0.8s,mb3.7,baz=353,slow=6.7,SNR=6.8						

ISK ***10*** *20:18:46.5, 35.48N×27.15E, h32^{km}, MD3.5*
ATH ***10*** *20:18:46.8, 35.47N×27.46E, h14^{km}±7^{km}, MD3.4/5*
NEIC ***10*** *20:18:46.8, 35.47N×27.46E, h14^{km}, MD3.4(ATH), After ATH.*
CSEM ***10*** *20:18:49.1±0.1, 35.61N×27.41E, h26^{km}±1^{km}, MD3.4, Error ellipse: s-maj=7.0km s-min=2.3km az=152.0*
ISC 10 20:18:48.1±1.0**, 35.58N**±0.09×**27.38E**±0.09**, h19**^{km}±11^{km}**, n13,** σ0^{s}**72**/14**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.18**	**261**	*e*PG	**Pb**	**20 18 52.0**	**-1.0**
ARG	**Arkhangelos**	**0.88**	**43**	*e*PB	**Pb**	**20 19 04.3**	**-0.2**
NISR	**Nisiros**	**1.05**	**349**	*e*PB	**Pb**	**20 19 09.0**	**+1.5**
DAT	**Datca**	**1.16**	**8**	*e*PN	**Pn**	**20 19 08.7**	**-0.8**
DAT				*e*SN	**Sn**	**20 19 24.9**	**0.0**
NPS	**Neapolis**	**1.48**	**258**	*e*PB	**Pb**	**20 19 15.0**	**+0.2**
BODT	**Bodrum**	**1.48**	**358**	*e*PN	**Pn**	**20 19 12.5**	**-1.6**
XRY	**Khrisi**	**1.55**	**244**	*e*PB	**Pb**	**20 19 16.5**	**+0.5**
DALT	**Dalyan (Mudla)**	**1.56**	**40**	PN	**Pn**	**20 19 15.2**	**-0.1**
YER	**Yerkesik**	**1.72**	**25**	*e*PN	**Pn**	**20 19 18.2**	**+0.8**
FETY	**Fethiye**	**1.74**	**52**	PN	**Pn**	**20 19 18.2**	**+0.5**
MLSB	**Milas**	**1.74**	**10**	*e*PN	**Pn**	**20 19 18.0**	**+0.2**
ELL	**Elmali**	**2.35**	**60**	*e*PN	**Pn**	**20 19 26.5**	**-0.1**
VAM	**Vamos**	**2.60**	**267**	*e*PN	**Pn**	**20 19 30.3**	**+0.2**

MOS ***10*** *20:23:45.4±2.2, 56.94N×120.59E, h15^{km}, mb4.3/1, Error ellipse: s-maj=41.0km s-min=26.8km az=155.8*
BYKL 10 20:23:41.5±0.4**, 57.40N×120.71E, h6**^{km}±12^{km}**, 1C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.42**	**250**	*e*Pg	Pg	20 24 07.7	-2.2
CRS				⇑*i*		20 24 08.3	
CRS				*e*Sg	Sg	20 24 25.7	-3.2
CRS				max			
	190nm,0.8s						
CRS				Smax			
	350nm,0.4s						
CRS	**Chara**	**1.42**	**250**	*e*P	Pn	20 24 08.2	+0.2
CRS				*e*		20 24 25.8	
CRS				pmax	pmax		
	comp=Z,124nm,0.2s						
CRS				smax			
	comp=E,537nm,0.4s						
NRGR	**Nerungri**	**2.32**	**107**	*e*P	Pn	20 24 22.2	+1.4
NRGR				*e*S	Sn	20 24 52.0	+2.1
CLNS	**Chul'man**	**2.35**	**102**	*e*	Pn	20 24 22.6	+1.4
CLNS				*e*Pg	Pg	20 24 23.7	-4.7
CLNS				*e*Sg	Sg	20 24 55.3	-4.5
CLNS				Pmax			
	comp=E,210nm,0.3s						
CLNS				Smax			
	comp=E,3µm,0.5s						
CLNS	**Chul'man**	**2.35**	**102**	*e*P	Pn	20 24 23.5	+2.3
CLNS				*e*		20 24 53.7	
CLNS				pmax	pmax		
	comp=N,32nm,0.3s						
CLNS				pmax	pmax		
	comp=E,25nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,29nm,0.3s						
CLNS				smax			
	comp=E,232nm,0.4s						
CLNS				smax			
	comp=Z,139nm,0.5s						
CLNS				smax			
	comp=N,201nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,700nm,13.0s						
ALDR	**Aldan**	**2.78**	**62**	*e*Pn	Pn	20 24 26.4	-1.0
ALDR				*e*		20 24 35.3	
ALDR				*e*Sg	Sg	20 25 07.7	-6.4
ALDR				max			
	comp=Z,796nm,0.5s						

ALDR				Smax			
	comp=Z,3μm,0.3s						
NLYR	**Nelyaty**	**2.89**	**254**	*e*Pn	Pn	20 24 28.2	-0.8
NLYR				⇓*i*Pg	Pg	20 24 33.9	-5.3
NLYR				*i* Sg	Sg	20 25 09.4	-8.3
NLYR				Pmax			
	comp=Z,118nm,0.3s						
NLYR				Smax			
	comp=Z,475nm,0.8s						
NLYR	**Nelyaty**	**2.89**	**254**	*e*P	Pn	20 24 33.2	+4.2
NLYR				*e*		20 25 09.2	
NLYR				pmax	pmax		
	comp=Z,118nm,0.3s						
NLYR				smax			
	comp=N,474nm,1.1s						
TUP	**Tupik**	**3.01**	**188**	*e*Pn	Pn	20 24 30.3	-0.4
TUP				*e*Pg	Pg	20 24 34.7	-7.0
TUP				*e*Sg	Sg	20 25 13.3	-8.5
TUP				*e*L		20 25 30.8	
TUP				Pmax			
	comp=N,110nm,0.6s						
TUP				Smax			
	comp=N,483nm,0.9s						
TUP	**Tupik**	**3.01**	**188**	*e*P	Pn	20 24 30.5	-0.2
TUP				*e*		20 25 04.7	
TUP				pmax	pmax		
	comp=Z,107nm,0.4s						
TUP				smax			
	comp=E,359nm,0.7s						
TNDR	**Tynda**	**3.18**	**134**	*e*Pn	Pn	20 24 33.2	+0.1
TNDR				*e*Sn	Sn	20 25 10.7	-1.0
TNDR				*e*Sg	Sg	20 25 20.1	-7.2
TNDR				*e*SgSg		20 25 23.3	
TNDR				max			
	comp=E,110nm,0.4s						
TNDR				max			
	comp=E,1μm,0.3s						
SVKR	**Severomuysk**	**4.14**	**255**	*e*Sg	Sg	20 25 50.2	-9.2
SVKR				Smax			
	comp=E,189nm,0.9s						
SVKR	**Severomuysk**	**4.14**	**255**	*e*P	Pn	20 24 57.4	+11
SVKR				pmax	pmax		
	comp=Z,38nm,0.4s						
UKT	**Uakit**	**4.37**	**247**	*e*Pg	Pg	20 25 00.0	-8.8
UKT				*e*Sg	Sg	20 25 55.6	-11
UKT				Pmax			
	comp=Z,14nm,1.0s						
UKT				Smax			
	comp=Z,98nm,1.6s						
UKT	**Uakit**	**4.37**	**247**	*e*P	Pn	20 24 59.9	+10
UKT				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YOA	**Uoyan**	**5.10**	**259**	*e*Sg	Sg	20 26 20.3	-11
YOA				Smax			
	comp=Z,404nm,1.7s						
KMO	**Kumora**	**5.46**	**258**	*e*	rx	20 25 48.0	
KMO				*e*Sg	Sg	20 26 30.2	-13
KMO				Smax			
	comp=Z,110nm,1.0s						
YLYR	**Ulyunkhan**	**5.91**	**249**	*e*Pg	Pg	20 25 28.8	-11
YLYR				*e*Sg	Sg	20 26 44.0	-14
YLYR				Pmax			
	comp=Z,7.0nm,0.8s						
YLYR				Smax			
	comp=Z,76nm,1.2s						
YLYR	**Ulyunkhan**	**5.91**	**249**	*e*P	Pn	20 25 29.1	+17
YLYR				pmax	pmax		
	comp=Z,11nm,0.5s						
NIZ	**Nizh Angarsk**	**6.38**	**260**	*e*Sg	Sg	20 26 58.9	-15
NIZ				Smax			
	comp=Z,49nm,1.8s						
YAK	**Yakutsk**	**6.49**	**41**	*e*Sg	Sg	20 27 00.5	-17
YAK				Smax			
	comp=Z,538nm,0.5s						
CIT	**Chita**	**6.80**	**221**	*e*Pn	Pn	20 25 22.5	-1.8
CIT				*e*Sn	Sn	20 26 32.6	-10
CIT				*e*Sg	Sg	20 27 11.0	-17
CIT				max			
	comp=Z,11nm,0.5s						
CIT				Smax			
	comp=Z,109nm,1.5s						
SYVR	**Suvo**	**7.14**	**243**	*e*Sn	Sn	20 26 44.1	-7.3
SYVR				*e*Sg	Sg	20 27 23.8	-15
SYVR				Smax			
	comp=Z,68nm,1.4s						
OGRR	**Ongureny**	**8.34**	**249**	*e*Sg	Sg	20 27 59.7	-19
KPC	**Khapcheranga**	**9.16**	**216**	*e*	rx	20 27 48.1	
KPC				*e*Sg	Sg	20 28 23.6	-23
KPC				Smax			
	comp=Z,34nm,1.1s						
UNR	**Ust'-Nera**	**13.02**	**47**	*e*Sg	S	20 30 23.1	+67

MOS ***10*** *20:43:24.0±2.0, 57.30N×120.50E, h29^{km}, mb4.2/1, Error ellipse: s-maj=39.5km s-min=31.1km az=135.7*

BYKL 10 20:43:20.7±0.4**, 57.40N×120.68E, 1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.41**	**250**	*e*Pg	Pg	20 43 47.1	-1.7
CRS				*e*		20 43 49.0	
CRS				*e*Sg	Sg	20 44 04.8	-2.7
CRS				max			
	211nm,0.8s						
CRS				Smax			
	303nm,0.5s						
CRS	**Chara**	**1.41**	**250**	*e*P	Pb	20 43 47.2	-0.3
CRS				*e*		20 44 04.7	
CRS				pmax	pmax		
	comp=Z,209nm,0.4s						
CRS				smax			
	comp=E,304nm,0.4s						
NRGR	**Nerungri**	**2.33**	**107**	*e*P	Pn	20 44 04.1	+3.2
NRGR				*e*S	Sn	20 44 34.0	+3.3
CLNS	**Chul'man**	**2.37**	**102**	*e*	Pn	20 44 02.1	+0.8
CLNS				*e*Pg	Pg	20 44 04.4	-3.5
CLNS				*e*Sg	Sg	20 44 34.8	-4.7
CLNS				Pmax			
	comp=E,319nm,0.3s						
CLNS				Smax			
	comp=E,616nm,0.6s						
CLNS	**Chul'man**	**2.37**	**102**	*e*P	Pn	20 44 02.3	+1.0
CLNS				*e*S	Sn	20 44 33.1	+1.6
CLNS				pmax	pmax		
	comp=Z,37nm,0.5s						
CLNS				pmax	pmax		
	comp=N,28nm,0.2s						
CLNS				pmax	pmax		
	comp=E,13nm,0.3s						
CLNS				smax			
	comp=N,25nm,0.3s						
CLNS				smax			
	comp=Z,72nm,0.5s						
CLNS				smax			
	comp=E,65nm,0.3s						
CLNS				smax			
	comp=N,57nm,0.3s						
CLNS				smax			
	comp=Z,73nm,0.4s						
CLNS				smax			
	comp=E,38nm,0.2s						
CLNS				MLR	MLR		
	comp=Z,200nm,14.0s						
ALDR	**Aldan**	**2.79**	**62**	*e*Pg	Pg	20 44 10.4	-6.1
ALDR				*e*Sg	Sg	20 44 47.2	-6.5
ALDR				Pmax			
	comp=Z,45nm,0.3s						
ALDR				Smax			
	comp=Z,394nm,0.2s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*Pg	Pg	20 44 12.2	-5.9
NLYR				*e*Sg	Sg	20 44 48.3	-8.1
NLYR				Pmax			
	comp=Z,112nm,0.4s						
NLYR				Smax			
	comp=Z,241nm,1.1s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*P	Pn	20 44 11.1	+2.5
NLYR				*e*		20 44 46.9	
NLYR				pmax	pmax		
	comp=Z,112nm,0.3s						
NLYR				smax			
	comp=N,240nm,0.7s						
TUP	**Tupik**	**3.01**	**188**	*e*Pn	Pn	20 44 09.9	-0.6
TUP				⇓*i*Pg	Pg	20 44 14.1	-6.7
TUP				*i* Sg	Sg	20 44 52.8	-8.1
TUP				*e*LR	LR	20 45 06.1	
TUP				Pmax			
	comp=N,63nm,0.3s						
TUP				Smax			
	comp=N,232nm,0.8s						
TUP	**Tupik**	**3.01**	**188**	*e*P	Pn	20 44 08.3	-2.2
TUP				*e*S	Sn	20 44 43.9	-4.0
TUP				pmax	pmax		
	comp=Z,51nm,0.3s						
TUP				smax			
	comp=E,128nm,0.6s						
TNDR	**Tynda**	**3.19**	**133**	*e*	Pn	20 43 59.7	-13
TNDR				*e*Pg	Pg	20 44 17.2	-7.2
TNDR				*e*		20 44 42.8	
TNDR				*e*Sn	Sn	20 44 50.3	-2.1
TNDR				*e*Sg	Sg	20 44 59.6	-7.3
TNDR				Pmax			
	comp=E,92nm,0.3s						
TNDR				Smax			
	comp=E,455nm,0.3s						
SVKR	**Severomuysk**	**4.12**	**255**	*e*Pg	Pg	20 44 35.3	-7.8
SVKR				*e*Sg	Sg	20 45 28.9	-9.1
SVKR				Pmax			
	comp=E,2.0nm,0.6s						
SVKR				Smax			
	comp=E,148nm,0.9s						
UKT	**Uakit**	**4.36**	**247**	*e*Pg	Pg	20 44 39.4	-8.3
UKT				*e*Sg	Sg	20 45 34.3	-11
UKT				Pmax			
	comp=E,9.0nm,0.6s						
UKT				Smax			
	comp=E,69nm,1.8s						
YOA	**Uoyan**	**5.09**	**259**	*e*Sg	Sg	20 45 57.3	-13
YOA				Smax			
	comp=E,158nm,0.7s						
KMO	**Kumora**	**5.45**	**258**	*e*Sg	Sg	20 46 08.3	-14
KMO				Smax			
	comp=E,77nm,1.1s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*Sg	Sg	20 46 22.0	-15
YLYR				Smax			
	comp=E,79nm,1.6s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*P	Pn	20 45 08.8	+17
YLYR				pmax	pmax		
	comp=Z,15nm,0.6s						
NIZ	**Nizh Angarsk**	**6.37**	**260**	*e*Sg	Sg	20 46 37.4	-15
NIZ				Smax			
	comp=Z,25nm,0.9s						
YAK	**Yakutsk**	**6.50**	**41**	*e*Sg	Sg	20 46 39.8	-17
YAK				Smax			
	comp=Z,381nm,0.7s						
CIT	**Chita**	**6.79**	**220**	*e*	Pn	20 45 15.3	+11
CIT				*e*Sg	Sg	20 46 50.5	-16
CIT				max			
	comp=Z,12nm,0.8s						
CIT				Smax			
	comp=Z,87nm,1.5s						
SYVR	**Suvo**	**7.13**	**243**	*e*Sg	Sg	20 47 01.0	-17
SYVR				Smax			
	comp=Z,64nm,1.3s						
OGRR	**Ongureny**	**8.32**	**249**	*e*Sg	Sg	20 47 40.3	-17
OGRR				Smax			
	comp=Z,7.0nm,1.3s						
KPC	**Khapcheranga**	**9.15**	**216**	*e*Sg	Sg	20 48 03.8	-22
KPC				Smax			
	comp=Z,14nm,0.8s						

IDC ***10*** *21:06:24.0±1.2, 57.26N×120.66E, mb3.8/11, mb1 4.1/11, mb1mx3.9/21, mbtmp3.9/11, Error ellipse: s-maj=27.7km s-min=24.7km az=4.0*

BYKL ***10*** *21:06:24.8±0.3, 57.33N×120.75E, h1^{km}±13^{km}, MS3.4*

NEIC ***10*** *21:06:24.9±0.7, 57.42N×120.78E, h5^{km}, mb4.1/3, Error ellipse: s-maj=16.9km s-min=9.9km az=141.0*

MOS ***10*** *21:06:25.4±1.6, 57.48N×120.65E, h19^{km}, mb4.0/4, Error ellipse: s-maj=13.4km s-min=8.7km az=87.7*

ISC 10 21:06:27.9±0.3**, 57.33N**±0.04×**120.54E**±0.04**, h33**^{km}**, n70, σ1§14**/69**, mb3.9**/12**, 2C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.31**	**252**	⇑*i*Pg	**P**	**21 06 50.5**	**+0.5**
CRS				Pmax		21 07 00.3	
	591nm,0.7s						
CRS				*e*Sg	**S**	**21 07 08.4**	**+2.0**
CRS				Smax		21 07 09.5	
	3μm,0.4s						
CRS	**Chara**	**1.31**	**252**	*e*P	**P**	**21 06 50.6**	**+0.6**
CRS				*e*		21 07 08.5	
CRS				pmax	pmax		
	comp=Z,528nm,0.4s						
CRS				smax			
	comp=E,3μm,0.4s						
NRGR	**Nerungri**	**2.39**	**105**	*e*P	**P**	**21 07 05.6**	**+0.2**
NRGR				*e*S	**S**	**21 07 35.0**	**+1.2**
CLNS	**Chul'man**	**2.43**	**100**	*e*Pg	**P**	**21 07 06.2**	**+0.2**
CLNS				*e*		21 07 07.8	
CLNS				max		21 07 09.7	
	comp=E,2μm,0.4s						
CLNS				*e*		21 07 11.1	
CLNS				*e*Sg	**S**	**21 07 37.0**	**+2.2**
CLNS				*e*		21 07 38.6	
CLNS				max		21 07 39.3	
	comp=E,13μm,0.3s						
CLNS	**Chul'man**	**2.43**	**100**	*e*P	**P**	**21 07 06.5**	**+0.5**
CLNS				*e*S	**S**	**21 07 33.9**	**-0.9**
CLNS				pmax	pmax		
	comp=N,2.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,15nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,181nm,0.4s						
CLNS				pmax	pmax		
	comp=N,27nm,0.3s						
CLNS				pmax	pmax		
	comp=E,41nm,0.3s						
CLNS				smax			
	comp=E,55nm,0.3s						
CLNS				smax			
	comp=Z,10.0nm,0.2s						
CLNS				smax			
	comp=N,116nm,0.4s						
CLNS				smax			
	comp=N,1μm,0.7s						
CLNS				smax			
	comp=E,1μm,0.6s						
CLNS				smax			
	comp=Z,597nm,0.6s						
CLNS				MLR	MLR		
	comp=Z,80nm,13.0s						
NLYR	**Nelyaty**	**2.78**	**255**	*e*Pn	**Pn**	**21 07 12.0**	**+0.8**
NLYR				⇑*i*Pg	**P**	**21 07 16.6**	**+5.6**
NLYR				Pmax		21 07 18.3	
	comp=Z,431nm,0.7s						
NLYR				*e*Sg	**S**	**21 07 52.5**	**+8.7**
NLYR				Smax		21 07 56.2	
	comp=Z,3μm,0.9s						
NLYR				*e*		21 07 59.9	
NLYR	**Nelyaty**	**2.78**	**255**	*e*P	**P**	**21 07 12.6**	**+1.6**
NLYR				*e*		21 07 51.1	
NLYR				pmax	pmax		
	comp=Z,422nm,0.4s						
NLYR				smax			
	comp=N,3μm,1.0s						
ALDR	**Aldan**	**2.90**	**62**	*e*Pn	**Pn**	**21 07 11.2**	**-1.7**
ALDR				*e*Pg	**P**	**21 07 14.4**	**+1.7**
ALDR				*e*		21 07 19.5	
ALDR				max		21 07 22.4	
	comp=N,1μm,0.4s						
ALDR				*e*Sg	**S**	**21 07 50.9**	**+4.1**
ALDR				Smax		21 07 51.5	
	comp=N,13μm,0.3s						
TUP	**Tupik**	**2.92**	**187**	*e*Pn	**Pn**	**21 07 12.9**	**-0.3**
TUP				*e*Pg	**P**	**21 07 17.4**	**+4.3**
TUP				Pmax		21 07 18.3	
	comp=N,442nm,0.6s						
TUP				*i* Sg	**S**	**21 07 56.2**	**+8.7**
TUP				Smax		21 07 59.3	
	comp=N,3μm,1.0s						
TUP				*e*LR	LR	21 08 16.1	
TUP				LRmax		21 08 20.5	
	comp=N,730nm,3.4s						
TUP	**Tupik**	**2.92**	**187**	*e*P	**P**	**21 07 17.6**	**+4.5**
TUP				*e*S	**S**	**21 07 47.9**	**+0.4**
TUP				pmax	pmax		
	comp=Z,327nm,0.6s						
TUP				smax			
	comp=E,2μm,1.0s						
TNDR	**Tynda**	**3.20**	**131**	*e*	**P**	**21 07 16.3**	**-0.6**
TNDR				max		21 07 18.0	
	comp=E,720nm,0.4s						
TNDR				*e*Sn	**Sn**	**21 07 53.8**	**-0.7**
TNDR				*e*Sg	**S**	**21 08 01.1**	**+6.7**
TNDR				Smax		21 08 12.3	
	comp=E,13μm,0.4s						
SVKR	**Severomuysk**	**4.03**	**255**	*e*Pg	**P**	**21 07 38.7**	**+10**
SVKR				Pmax		21 07 42.5	
	comp=E,138nm,0.6s						
SVKR				*e*Sn	**Sn**	**21 08 14.2**	**-1.4**
SVKR				*e*Sg	**S**	**21 08 33.0**	**+17**
SVKR				Smax		21 08 46.0	
	comp=E,1μm,1.0s						
UKT	**Uakit**	**4.26**	**247**	*e*Pn	**Pn**	**21 07 32.8**	**+0.6**
UKT				*e*Pg	Px	21 07 42.7	
UKT				Pmax		21 07 46.6	
	comp=E,62nm,1.2s						
UKT				*e*Sg	Sx	21 08 38.8	
UKT				Smax		21 08 46.2	
	comp=E,443nm,1.3s						
UKT	**Uakit**	**4.26**	**247**	*e*P	Px	21 07 42.9	
UKT				pmax	pmax		
	comp=Z,40nm,0.5s						
YOA	**Uoyan**	**5.00**	**260**	*e*Pn	**Pn**	**21 07 42.2**	**-0.5**
YOA				*e*Pg	Px	21 07 56.9	
YOA				Pmax		21 08 05.5	
	comp=Z,123nm,1.4s						
YOA				*e*Sn	**Sn**	**21 08 37.2**	**-2.8**
YOA				*e*Sg	Sx	21 09 03.0	
YOA				Smax		21 09 18.8	
	comp=Z,1μm,1.0s						
YOA	**Uoyan**	**5.00**	**260**	*e*P	Px	21 07 57.3	
KMO	**Kumora**	**5.36**	**258**	*e*Pn	**Pn**	**21 07 48.3**	**+0.6**
KMO				*e*Pg	Px	21 08 02.4	
KMO				Pmax		21 08 14.9	
	comp=Z,28nm,0.7s						
KMO				*e*		21 08 53.2	
KMO				*e*Sg	Sx	21 09 13.1	
KMO				Smax		21 09 17.5	
	comp=Z,600nm,1.0s						
YLYR	**Ulyunkhan**	**5.79**	**249**	*e*Pn	**Pn**	**21 07 54.2**	**+0.4**
YLYR				*e*Pg	Px	21 08 10.6	
YLYR				Pmax		21 08 15.0	
	comp=Z,21nm,1.0s						
YLYR				*e*Sg	Sx	21 09 27.2	
YLYR				Smax		21 09 33.5	
	comp=Z,435nm,1.1s						
YLYR	**Ulyunkhan**	**5.79**	**249**	*e*P	**P**	**21 07 55.6**	**+2.0**
YLYR				pmax	pmax		
	comp=Z,34nm,0.7s						
NIZ	**Nizh Angarsk**	**6.28**	**260**	*e*Pn	**Pn**	**21 08 00.6**	**-0.1**
NIZ				*e*		21 08 13.6	
NIZ				*e*Pg	Px	21 08 18.9	
NIZ				*e*		21 08 20.8	
NIZ				max		21 08 27.1	
	comp=Z,21nm,1.3s						
NIZ				*e*Sg	Sx	21 09 41.4	
NIZ				Smax		21 09 53.9	
	comp=Z,217nm,2.2s						
YAK	**Yakutsk**	**6.61**	**41**	*e*Pn	**Pn**	**21 08 01.3**	**-4.0**
YAK				*e*		21 08 19.7	
YAK				max		21 08 23.3	
	comp=Z,371nm,0.6s						
YAK				*e*Sn	**Sn**	**21 09 12.0**	**-8.3**
YAK				*e*Sg	Sx	21 09 44.6	
YAK				Smax		21 09 47.6	
	comp=Z,2μm,0.5s						
YAK	**Yakutsk**	**6.61**	**41**	*e*Pn	**Pn**	**21 07 59.1**	**-6.2**
	comp=Z,64nm,0.6s						
YAK	**Yakutsk**	**6.61**	**41**	*e*P	Px	21 08 12.0	
YAK				*e*S	**S**	**21 09 13.8**	**-6.4**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,41nm,1.0s						
YAK				pmax	pmax		
	comp=N,36nm,1.1s						
YAK				pmax	pmax		
	comp=E,28nm,1.0s						
YAK				smax			
	comp=N,35nm,1.1s						
YAK				smax			
	comp=Z,22nm,0.9s						
YAK				smax			
	comp=E,34nm,0.8s						
YAK				smax			
	comp=N,286nm,0.9s						
YAK				smax			
	comp=Z,242nm,1.0s						
YAK				smax			
	comp=E,169nm,0.9s						
YAK				MLR	MLR		
	comp=Z,51nm,6.0s						
CIT	**Chita**	**6.68**	**220**	*e*Pg	Px	21 08 26.1	
CIT				Pmax		21 08 28.5	
	comp=Z,82nm,1.4s						
CIT				*e*Sg	Sx	21 09 53.8	
CIT				Smax		21 10 04.0	
	comp=Z,663nm,2.0s						
CIT	**Chita**	**6.68**	**220**	*e*P	Px	21 08 25.4	
CIT				pmax	pmax		
	comp=Z,80nm,1.2s						
SYVR	**Suvo**	**7.02**	**243**	*e*	Px	21 08 22.4	
SYVR				*e*Pg	Px	21 08 33.1	
SYVR				Pmax		21 08 36.3	
	comp=Z,40nm,1.4s						
SYVR				*e*Sg	Sx	21 10 04.5	
SYVR				Smax		21 10 13.8	
	comp=Z,399nm,1.4s						
HIA	**Hailar**	**8.09**	**184**	*e*Pn	**P**	**21 08 20.0**	**-5.8**
HIA	**Hailar**	**8.09**	**184**	*i* P	**P**	**21 08 24.0**	**-1.8**
OGRR	**Ongureny**	**8.22**	**249**	*e*Pg	Px	21 08 55.6	
OGRR				Pmax		21 08 59.8	
	comp=Z,7.0nm,1.1s						
OGRR				*e*Sg	Sx	21 10 41.8	
OGRR				*e*		21 10 57.5	
OGRR				Smax		21 11 00.1	
	comp=Z,110nm,2.2s						
KPC	**Khapcheranga**	**9.04**	**216**	*e*Pn	**P**	**21 08 37.7**	**-1.4**
KPC				max		21 08 50.1	
	comp=Z,30nm,0.6s						
KPC				*e*Sg	Sx	21 11 05.3	
KPC				Smax		21 11 16.0	
	comp=Z,183nm,1.1s						
TRG	**Tyrgan**	**9.34**	**247**	*e*Sg	Sx	21 11 18.5	
TRG				Smax		21 11 29.4	
	comp=Z,125nm,1.6s						
KAB	**Kabansk**	**9.61**	**243**	*e*Sg	Sx	21 11 27.4	
KAB				Smax		21 11 56.3	
	comp=Z,1μm,1.8s						
KLR	**Kul'dur**	**10.51**	**136**	*e*P	**P**	**21 08 57.9**	**-1.3**
LSTR	**Listvyanka**	**10.61**	**246**	*e*Sg	Sx	21 11 57.2	
LSTR				Smax		21 12 05.2	
	comp=Z,90nm,2.5s						
IRK	**Irkutsk**	**10.67**	**248**	*e*Sg	Sx	21 11 59.8	
IRK				Smax		21 12 18.6	
	comp=Z,122nm,0.9s						
TLY	**Talaya**	**11.32**	**247**	*e*Sg	Sx	21 12 19.5	
TLY				Smax		21 12 26.5	
	comp=Z,56nm,2.0s						
ARS	**Arshan**	**11.79**	**250**	*e*Sg	Sx	21 12 33.8	
ARS				Smax		21 12 47.4	
	comp=Z,99nm,1.1s						
BTGS	**Batagay**	**12.20**	**26**	*e*Sg	Sx	21 12 38.5	
BTGS				Smax		21 12 56.2	
	comp=Z,238nm,1.1s						
ZAK	**Zakamensk**	**12.31**	**243**	*e*Sg	Sx	21 12 50.3	
ZAK				Smax		21 13 21.2	
	comp=Z,49nm,1.7s						
MOY	**Mondy**	**12.67**	**252**	*e*Sg	Sx	21 12 59.8	
MOY				Smax		21 13 34.3	
	comp=Z,63nm,2.0s						
SONM	**Songino Array**	**12.79**	**228**	Pn	**P**	**21 09 30.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=18,slow=18,SNR=4.1						
SONM				Lg		21 13 07.5	

	comp=Z,0.9nm,0.3s,baz=25,slow=21,SNR=5.5						
ORL	Orlik	12.82	257	eSg	Sx	21 13 05.1	
ORL				Smax		21 13 15.3	
	comp=Z,58nm,2.6s						
UNR	Ust'-Nera	13.14	47	eSg	Sx	21 13 06.4	
MOMR	Moma	13.98	40	eSg	Sx	21 13 36.5	
TIXI	Tiksi	14.80	10	iP	P	21 09 50.3	-5.7
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MA2	Magadan	15.91	69	eP	P	21 10 12.7	+2.2
	comp=Z,24nm,0.9s						
MA2	Magadan	15.91	69	eP	P	21 10 12.7	+2.2
MA2				pmax	pmax		
	comp=Z,24nm,0.9s						
ZAL	Zalesovo	20.31	276	P	P	21 11 02.4	-0.9
	comp=Z,1.1nm,0.7s,baz=37,slow=13,SNR=6.4						
NVS	Novosibirsk	20.79	279	eP	P	21 11 08.8	+0.5
NVS				pmax	pmax		
	comp=N,1.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	Kurchatov	25.17	273	eP	P	21 11 51.1	-0.1
	comp=Z,2.3nm,0.8s,mb3.8						
KURK	Kurchatov	25.17	273	iP	P	21 11 51.5	+0.3
MKAR	Makanchi Array	25.43	262	P	P	21 11 54.5	+0.7
	comp=Z,1.8nm,0.7s,mb3.7,baz=56,slow=8.3,SNR=15						
MKAR	Makanchi Array	25.43	262	iP	P	21 11 56.4	+2.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	Borovoye Array	28.42	283	P	P	21 12 20.9	-0.2
	comp=Z,0.6nm,0.6s,mb3.4,baz=68,slow=8.0,SNR=4.9						
ARCES	ARCESS Array B	39.67	327	P	P	21 13 57.3	-0.4
	comp=Z,2.6nm,0.8s,mb4.0,baz=56,slow=8.7,SNR=6.6						
ILAR	Eielson Array	41.53	40	P	P	21 14 13.3	+0.3
	comp=Z,1.2nm,0.8s,mb3.6,baz=309,slow=11,SNR=6.9						
FINES	FINESS Array B	44.24	317	P	P	21 14 34.7	-0.3
	comp=Z,4.7nm,0.8s,mb4.2,baz=53,slow=8.6,SNR=13						
FINES	FINESS Array B	44.24	317	P	P	21 14 34.7	-0.3
NB2	NORSAR Subarra	49.72	323	P	P	21 15 17.5	-0.6
	comp=Z,1.2nm,0.5s,mb4.2,baz=40,slow=7.0						
NOA	NORSAR Array B	49.72	323	P	P	21 15 17.1	-1.1
	comp=Z,1.6nm,0.4s,mb4.4,baz=43,slow=7.9,SNR=4.7						
NAO	NORSAR Subarra	50.01	323	P	P	21 15 17.5	-2.8
	comp=Z,1.2nm,0.5s,mb4.2						
NAO	NORSAR Subarra	50.01	323	P	P	21 15 17.5	-2.8
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
AKASG	Malin Array Be	50.18	304	P	P	21 15 20.8	-1.0
	comp=Z,0.5nm,0.3s,mb4.0,baz=40,slow=8.6,SNR=6.9						
AKASG	Malin Array Be	50.18	304	P	P	21 15 20.8	-1.0
AKASG	Malin Array Be	50.18	304	iP	P	21 15 21.7	-0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ANN	Anapa	50.48	294	eP	P	21 15 33.9	+10
KHC	Kasperske Hory	58.03	312	eP	P	21 16 19.0	-0.3
GERES	GERESS Array B	58.20	312	P	P	21 16 20.3	-0.3
	comp=Z,0.8nm,0.7s,mb3.8,baz=37,slow=6.7,SNR=7.5						
ESDC	Sonseca Array	72.72	318	P	P	21 17 54.6	+0.8
	comp=Z,0.7nm,0.6s,mb3.8,baz=16,slow=6.4,SNR=4.3						
WRA	Warramunga Arr	77.83	167	P	P	21 18 22.0	-1.5
	comp=Z,0.9nm,0.8s,mb3.7,baz=354,slow=7.2,SNR=5.3						

*BYKL **10** 21:10:32.5±0.3, 57.38N×120.67E, MS3.2*
*MOS **10** 21:10:33.9±0.8, 57.63N×120.43E, h16^{km}, mb4.2/4, Error ellipse: s-maj=15.7km s-min=11.6km az=100.6*
*IDC **10** 21:10:33.3±3.0, 57.52N×120.50E, mb3.9/9, mb1 4.1/9, mb1mx3.9/21, mbtmp3.9/9, Error ellipse: s-maj=67.6km s-min=26.4km az=154.0*
*NEIC **10** 21:10:34.2±0.5, 57.61N×120.45E, h5^{km}, mb4.1/3, Error ellipse: s-maj=10.2km s-min=8.6km az=146.0*
ISC 10 21:10:35.3±2.6**, 57.56N**±0.06×**120.48E**±0.06**, h28^{km}**±21^{km}**, n68, $\sigma 0^{s}99$**/56**, mb4.0**/14**, 1C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	Chara	1.37	242	ePg	Pn	21 10 58.4	-0.5
CRS				Pmax		21 11 02.6	
	734nm,1.0s						
CRS				eSg	Sn	21 11 16.4	+0.1
CRS				Smax		21 11 18.5	
	2µm,1.3s						
CRS	Chara	1.37	242	eP	Pn	21 10 58.3	-0.6
CRS				e		21 11 16.2	
CRS				pmax	pmax		
	comp=Z,711nm,1.0s						
CRS				smax			
	comp=N,2µm,1.2s						
NRGR	Nerungri	2.49	110	eP	Pn	21 11 15.6	+0.7
NRGR				eS	Sn	21 11 44.0	-0.6
NRGR				smax			
	comp=N,1.0nm,0.2s						
CLNS	Chul'man	2.51	105	ePn	Pn	21 11 14.1	-1.1
CLNS				ePg	Pn	21 11 16.0	+0.8
CLNS				Pmax		21 11 18.6	
	comp=N,1µm,0.4s						
CLNS				eSg	Sn	21 11 46.5	+1.3
CLNS				Smax		21 11 47.1	
	comp=N,7µm,0.4s						
CLNS	Chul'man	2.51	105	eP	Pn	21 11 15.3	+0.1
CLNS				eS	Sn	21 11 41.7	-3.5
CLNS				pmax	pmax		
	comp=Z,89nm,0.3s						
CLNS				pmax	pmax		
	comp=N,87nm,0.4s						
CLNS				pmax	pmax		
	comp=E,23nm,0.2s						
CLNS				pmax	pmax		
	comp=N,43nm,0.3s						
CLNS				pmax	pmax		
	comp=E,50nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,75nm,0.3s						
CLNS				smax			
	comp=N,110nm,0.4s						
CLNS				smax			
	comp=E,51nm,0.3s						
CLNS				smax			
	comp=Z,60nm,0.3s						
CLNS				smax			
	comp=N,151nm,0.2s						
CLNS				smax			
	comp=Z,782nm,0.7s						
CLNS				smax			
	comp=E,257nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,600nm,12.0s						
NLYR	Nelyaty	2.82	250	ePn	Pn	21 11 20.2	+0.6
NLYR				ePg	Pn	21 11 24.5	+4.8
NLYR				Pmax		21 11 28.2	
	comp=Z,266nm,1.2s						
NLYR				eSg	Sn	21 12 00.5	+7.4
NLYR				Smax		21 12 05.3	
	comp=Z,3µm,1.2s						
NLYR	Nelyaty	2.82	250	eP	Pn	21 11 19.9	+0.2
NLYR				ePg	Pn	21 11 23.8	+4.2
NLYR				eS	Sn	21 11 52.5	-0.6
NLYR				eSg	Sn	21 11 59.2	+6.1
NLYR	Nelyaty	2.82	250	eP	Pn	21 11 19.9	+0.2
NLYR				eS	Sn	21 11 52.5	-0.6
NLYR				pmax	pmax		
	comp=Z,260nm,0.7s						
NLYR				smax			
	comp=N,3µm,1.5s						
ALDR	Aldan	2.82	66	e	Pn	21 11 20.6	+0.9
ALDR				ePg	Pn	21 11 22.9	+3.2
ALDR				e		21 11 29.1	
ALDR				max		21 11 30.1	
	comp=N,262nm,0.2s						
ALDR				eSn	Sn	21 11 51.9	-1.2
ALDR				eSg	Sn	21 11 58.7	+5.6
ALDR				Smax		21 11 59.6	
	comp=N,2µm,0.2s						
TUP	Tupik	3.16	186	ePn	Pn	21 11 20.9	-3.5
TUP				ePg	Px	21 11 25.9	
TUP				Pmax		21 11 31.1	
	comp=N,512nm,0.8s						
TUP				eSn	Sx	21 11 54.5	
TUP				eSg	Sx	21 12 04.4	
TUP				Smax		21 12 16.8	
	comp=N,2µm,1.4s						
TUP				eLR	LR	21 12 21.8	
TUP				LRmax		21 12 29.7	
	comp=N,1µm,3.1s						
TUP	Tupik	3.16	186	eP	Pn	21 11 26.6	+2.2
TUP				e		21 12 05.1	
TUP				pmax	pmax		
	comp=Z,516nm,0.6s						
TUP				smax			
	comp=E,2µm,1.0s						
TNDR	Tynda	3.38	134	ePn	Pn	21 11 24.4	-3.2
TNDR				ePg	Px	21 11 30.3	
TNDR				Pmax		21 11 34.0	
	comp=E,2µm,0.6s						
TNDR				e		21 11 53.9	
TNDR				eSg	Sx	21 12 11.2	
TNDR				Smax		21 12 18.2	
	comp=E,14µm,0.8s						
SVKR	Severomuysk	4.07	252	e	Px	21 12 16.8	
SVKR				eSg	Sx	21 12 39.3	
SVKR				Smax		21 12 47.5	
	comp=E,1µm,1.8s						
UKT	Uakit	4.33	244	ePg	Px	21 11 50.5	
UKT				e		21 11 54.4	
UKT				max		21 11 55.9	
	comp=E,75nm,1.1s						
UKT				eSg	Sx	21 12 46.6	
UKT				Smax		21 12 53.1	
	comp=E,435nm,2.1s						
YOA	Uoyan	5.01	257	ePg	Px	21 12 06.2	
YOA				eSg	Sx	21 13 10.2	
YOA	Uoyan	5.01	257	eP	Px	21 12 06.2	
YOA				pmax	pmax		
	comp=Z,327nm,1.3s						
KMO	Kumora	5.38	256	ePg	Px	21 12 10.0	
KMO				Pmax		21 12 15.6	
	comp=Z,67nm,1.4s						
KMO				eSg	Sx	21 13 21.1	
KMO				Smax		21 13 30.4	
	comp=Z,783nm,1.3s						
YLYR	Ulyunkhan	5.85	247	eSg	Sx	21 13 34.4	
YLYR				Smax		21 13 39.2	
	comp=Z,459nm,2.0s						
YLYR	Ulyunkhan	5.85	247	ePg	Px	21 12 18.5	
NIZ	Nizh Angarsk	6.29	258	eSg	Sx	21 13 48.5	
NIZ				Smax		21 13 58.9	
	comp=Z,250nm,1.0s						
YAK	Yakutsk	6.45	42	eSn	Sx	21 13 20.0	
YAK				eSg	Sx	21 13 51.8	
YAK				Smax		21 13 52.8	
	comp=Z,4µm,1.1s						
YAK	Yakutsk	6.45	42	eP	Px	21 12 25.9	
YAK				pmax	pmax		
	comp=N,17nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,1.0s						
YAK				pmax	pmax		
	comp=Z,12nm,1.0s						
CIT	Chita	6.84	219	e	Px	21 12 35.2	
CIT				eSg	Sx	21 14 00.4	
CIT				Smax		21 14 19.2	
	comp=Z,886nm,1.5s						
SYVR	Suvo	7.11	241	eSg	Sx	21 14 13.1	
SYVR				Smax		21 14 21.8	
	comp=Z,560nm,1.4s						
SYVR				e		21 14 38.1	
OGRR	Ongureny	8.28	247	eSg	Sx	21 14 50.8	
OGRR				Smax		21 14 57.7	
	comp=Z,142nm,2.0s						
HIA	Hailar	8.32	183	P	P	21 12 48.2	+11
KPC	Khapcheranga	9.22	215	eSg	Sx	21 15 13.6	
KPC				Smax		21 15 20.9	
	comp=Z,280nm,1.4s						
TRG	Tyrgan	9.40	245	eSg	Sx	21 15 23.1	
TRG				Smax		21 15 39.7	
	comp=Z,156nm,2.0s						
LSTR	Listvyanka	10.68	244	eSg	Sx	21 16 03.0	
LSTR				Smax		21 16 14.3	
	comp=Z,98nm,1.4s						
IRK	Irkutsk	10.73	247	eSg	Sx	21 16 06.1	
IRK				Smax		21 16 32.4	
	comp=Z,178nm,0.9s						
TLY	Talaya	11.38	246	eSg	Sx	21 16 25.6	
TLY				Smax		21 16 56.8	
	comp=Z,79nm,1.9s						
ARS	Arshan	11.85	249	eSg	Sx	21 16 40.7	
ARS				Smax		21 17 06.6	
	comp=Z,169nm,1.1s						
BTGS	Batagay	12.00	27	eSg	Sx	21 16 46.1	
BTGS				Smax		21 17 02.5	
	comp=Z,345nm,1.1s						
ZAK	Zakamensk	12.39	242	eSg	Sx	21 16 55.5	
ZAK				Smax		21 17 11.7	
	comp=Z,64nm,1.9s						
MOY	Mondy	12.72	251	eSg	Sx	21 17 07.5	
MOY				Smax		21 17 32.7	
	comp=Z,120nm,1.7s						
ORL	Orlik	12.85	256	eSg	Sx	21 17 10.4	
ORL				Smax		21 17 25.2	
	comp=Z,71nm,1.4s						
SONM	Songino Array	12.93	227	Lg		21 17 17.7	
	comp=Z,0.6nm,0.3s,baz=29,slow=27,SNR=12						
UNR	Ust'-Nera	13.00	48	eSg	Sx	21 17 14.7	
MOMR	Moma	13.82	41	eSg	Sx	21 17 44.1	
TIXI	Tiksi	14.57	11	eP	P	21 14 00.1	-1.0
	comp=Z,20nm,0.8s						
TIXI	Tiksi	14.57	11	eP	P	21 14 00.1	-1.0
TIXI				pmax	pmax		
	comp=Z,20nm,0.8s						
TIXI				MLR	MLR		
	comp=Z,349nm,15.0s						
ZAL	Zalesovo	20.25	275	P	P	21 15 10.4	-0.5
	comp=Z,2.4nm,0.9s,baz=47,slow=11,SNR=9.6						
ZAL	Zalesovo	20.25	275	P	P	21 15 10.4	-0.5
NVS	Novosibirsk	20.73	278	eP	P	21 15 15.4	-0.4
	comp=Z,20nm,1.5s						
NVS	Novosibirsk	20.73	278	eP	P	21 15 15.4	-0.4
NVS				pmax	pmax		
	comp=N,20nm,1.5s						
NVS				pmax	pmax		
	comp=E,28nm,1.5s						
NVS				pmax	pmax		
	comp=Z,20nm,1.5s						
KURK	Kurchatov	25.12	272	P	P	21 15 58.1	-0.8
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.0						
MKAR	Makanchi Array	25.43	262	P	P	21 16 02.4	+0.5
	comp=Z,1.4nm,0.7s,mb3.6,baz=56,slow=8.7,SNR=7.6						
MKAR	Makanchi Array	25.43	262	P	P	21 16 02.4	+0.5
BVAR	Borovoye Array	28.34	283	P	P	21 16 28.5	+0.1
	comp=Z,0.5nm,0.6s,mb3.3,baz=68,slow=7.8,SNR=3.1						
BVAR	Borovoye Array	28.34	283	P	P	21 16 28.5	+0.1
BRVK	Borovoye	28.38	283	P	P	21 16 30.0	+1.2
	comp=Z,2.0nm,0.8s,mb3.8						
BRVK	Borovoye	28.38	283	P	P	21 16 30.0	+1.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
KKN	Kakani	38.66	235	eP	P	21 17 55.5	-2.5
GKN	Gorkha	38.76	236	eP	P	21 17 59.4	+0.5
	comp=Z,8.7nm,0.8s,mb4.5						
PKI	Pulchoki	38.79	234	eP	P	21 17 52.5	-6.6
KLMR	Klimovskoe	39.11	310c	iP	P	21 18 02.0	+0.6
KLMR				pmax	pmax		
	comp=Z,20nm,1.9s,mb4.5						
KOLN	Koldanda	39.43	237	eP	P	21 18 05.1	+0.7
	comp=Z,6.9nm,1.0s,mb4.3						
ARCES	ARCESS Array B	39.46	327	P	P	21 18 04.8	+0.5
	comp=Z,3.2nm,0.9s,mb4.1,baz=31,slow=7.1,SNR=3.6						
ILAR	Eielson Array	41.38	40	P	P	21 18 20.6	+0.6
	comp=Z,0.6nm,0.6s,mb3.4,baz=293,slow=4.1,SNR=5.1						
FINES	FINESS Array B	44.04	316	P	P	21 18 42.4	+0.7
	comp=Z,5.9nm,0.8s,mb4.4,baz=45,slow=8.1,SNR=11						
NB2	NORSAR Subarra	49.51	323	P	P	21 19 24.9	+0.2
	comp=Z,1.7nm,0.7s,mb4.2,baz=53,slow=7.9						
NOA	NORSAR Array B	49.51	323	P	P	21 19 25.1	+0.3
	comp=Z,1.8nm,0.8s,mb4.2,baz=42,slow=7.7,SNR=3.3						
NAO	NORSAR Subarra	49.80	323	P	P	21 19 24.9	-2.0
	comp=Z,1.7nm,0.7s,mb4.2						
AKASG	Malin Array Be	50.02	304	P	P	21 19 28.9	+0.2
	comp=Z,0.2nm,0.3s,mb3.6,baz=42,slow=8.9,SNR=4.4						
KWP	Kalwaria	53.66	307	eP	P	21 20 01.1	+5.0
KHC	Kasperske Hory	57.85	312	eP	P	21 20 26.0	-0.3
GERES	GERESS Array B	58.02	312	P	P	21 20 28.0	+0.5
	comp=Z,1.3nm,0.7s,mb4.1,baz=37,slow=6.7,SNR=11						
GERES	GERESS Array B	58.02	312	P	P	21 20 28.0	+0.5
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*BYKL **10** 21:13:09.7±0.5, 57.42N×120.69E, MS3.2*
*NEIC **10** 21:13:09.3±1.4, 57.59N×121.17E, h5^{km}, mb4.1/2, Error ellipse: s-maj=33.1km s-min=12.3km az=134.0*
*MOS **10** 21:13:10.5±1.5, 57.82N×120.62E, h15^{km}, mb4.3/2, Error ellipse: s-maj=19.3km s-min=13.5km az=89.4*
*IDC **10** 21:13:16.4±7.2, 57.99N×119.27E, mb3.9/5, mb1 4.0/7, mb1mx3.7/21, mbtmp3.8/7, ML3.4/2, Error ellipse: s-maj=139.1km s-min=28.6km az=115.0*
ISC 10 21:13:09.1±0.5**, 57.44N**±0.06×**120.53E**±0.06**, h10^{km}, n46, $\sigma 1^{s}35$**/41**, mb3.9**/8**, 1C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	Chara	1.35	247	ePg	Pg	21 13 35.3	-0.7
CRS				e		21 13 39.2	
CRS				max		21 13 40.0	
	372nm,0.9s						
CRS				iSg	Sg	21 13 53.5	-0.5
CRS				Smax		21 13 54.9	
	2µm,0.5s						
NRGR	Nerungri	2.42	107	eP	Pn	21 13 52.6	+3.2
NRGR				eS	Sn	21 14 21.0	+1.6
NRGR				smax			
	comp=N,1.0nm,0.2s						
CLNS	Chul'man	2.45	103	e	Pn	21 13 52.0	+2.1
CLNS				ePg	Pg	21 13 53.8	-4.3
CLNS				Pmax		21 13 57.5	
	comp=N,498nm,0.3s						
CLNS				eSg	Sg	21 14 24.4	-6.4
CLNS				Smax		21 14 28.7	
	comp=N,2µm,0.3s						
CLNS	Chul'man	2.45	103	eP	Pn	21 13 53.7	+3.8
CLNS				eS	Sn	21 14 20.7	+0.5
CLNS				pmax	pmax		
	comp=N,18nm,0.3s						
CLNS				pmax	pmax		
	comp=E,42nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,35nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,58nm,0.3s						
CLNS				pmax	pmax		
	comp=N,68nm,0.4s						
CLNS				pmax	pmax		
	comp=E,49nm,0.3s						
CLNS				smax			
	comp=N,54nm,0.3s						
CLNS				smax			
	comp=E,22nm,0.3s						
CLNS				smax			
	comp=Z,31nm,0.3s						
CLNS				smax			
	comp=E,136nm,0.2s						
CLNS				smax			
	comp=Z,182nm,0.4s						
CLNS				smax			
	comp=N,292nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,300nm,11.0s						
NLYR	Nelyaty	2.81	252	ePn	Pn	21 13 57.9	+2.9
NLYR				⇑iPg	Pg	21 14 01.9	-3.3
NLYR				Pmax		21 14 05.1	
	comp=Z,242nm,1.0s						
NLYR				eSn	Sn	21 14 30.9	+1.7
NLYR				iSg	Sg	21 14 38.2	-4.5
NLYR				Smax		21 14 47.5	
	comp=Z,1µm,1.1s						
NLYR	Nelyaty	2.81	252	eP	Pn	21 14 00.4	+5.4
ALDR	Aldan	2.85	64	ePn	Pn	21 13 55.7	+0.2
ALDR				ePg	Pg	21 13 58.6	-7.3
ALDR				Pmax		21 14 06.8	
	comp=Z,149nm,0.2s						
ALDR				eSg	Sg	21 14 36.3	-7.6
ALDR				Smax		21 14 37.2	
	comp=Z,2µm,0.3s						
TUP	Tupik	3.04	186	ePn	Pn	21 13 57.9	-0.4
TUP				ePg	Pg	21 14 02.8	-7.1
TUP				Pmax		21 14 04.0	
	comp=Z,350nm,0.7s						
TUP				e		21 14 13.6	
TUP				e		21 14 35.5	
TUP				eSg	Sg	21 14 42.3	-8.2
TUP				Smax		21 14 43.3	
	comp=Z,2µm,0.8s						
TUP				eLR	LR	21 15 03.6	
TUP				LRmax		21 15 06.9	
	comp=Z,457nm,3.5s						
TUP	Tupik	3.04	186	eP	Pn	21 14 03.4	+5.1
TUP				e		21 14 42.0	
TUP				pmax	pmax		
	comp=Z,345nm,0.5s						
TUP				smax			
	comp=E,2µm,0.8s						
TNDR	Tynda	3.28	133	ePn	Pn	21 14 01.9	+0.3
TNDR				ePg	Pg	21 14 05.2	-9.4
TNDR				e		21 14 08.5	
TNDR				max		21 14 11.3	
	comp=E,1µm,0.6s						
TNDR				eSn	Sn	21 14 40.2	-0.9
TNDR				eSg	Sg	21 14 48.9	-9.4
TNDR				Smax		21 14 51.2	
	comp=E,7µm,0.6s						
SVKR	Severomuysk	4.06	254	eSg	Sx	21 15 16.7	
SVKR				Smax		21 15 30.4	
	comp=E,862nm,0.8s						
UKT	Uakit	4.30	246	eSg	Sx	21 15 22.8	
UKT				Smax		21 15 24.9	
	comp=E,259nm,0.8s						
UKT	Uakit	4.30	246	eP	Pn	21 14 28.7	+13
UKT				pmax	pmax		
	comp=Z,33nm,0.6s						
YOA	Uoyan	5.02	259	eSg	Sx	21 15 46.4	
YOA				Smax		21 15 58.6	
	comp=Z,1µm,1.9s						
KMO	Kumora	5.38	257	eSg	Sx	21 15 57.5	
KMO				Smax		21 16 18.6	
	comp=Z,473nm,1.2s						
YLYR	Ulyunkhan	5.83	248	eSg	Sx	21 16 11.6	
YLYR				Smax		21 16 23.1	
	comp=Z,251nm,1.2s						
YLYR	Ulyunkhan	5.83	248	eP	Px	21 14 57.2	
YLYR				pmax	pmax		
	comp=Z,36nm,0.3s						
NIZ	Nizh Angarsk	6.29	259	eSg	Sx	21 16 25.0	
NIZ				Smax		21 16 30.1	
	comp=Z,152nm,1.7s						
YAK	Yakutsk	6.52	41	eSn	Sn	21 15 56.7	-6.0
YAK				eSg	Sx	21 16 27.8	
YAK				Smax		21 16 29.9	
	comp=Z,3µm,1.4s						
YAK				e		21 16 40.2	
YAK				eL		21 17 06.3	
YAK	Yakutsk	6.52	41	P	Pn	21 14 41.7	-5.8
CIT	Chita	6.77	220	eSg	Sx	21 16 39.3	
CIT				Smax		21 16 43.4	
	comp=Z,445nm,1.6s						
SYVR	Suvo	7.08	242	eSg	Sx	21 16 51.0	
SYVR				Smax		21 16 58.4	
	comp=Z,308nm,1.3s						
OGRR	Ongureny	8.26	248	eSg	Sx	21 17 27.7	
OGRR				Smax		21 17 45.2	
	comp=Z,311nm,0.8s						
KPC	Khapcheranga	9.14	215	eSg	Sx	21 17 51.7	
KPC				Smax		21 18 10.1	
	comp=Z,162nm,1.3s						
TRG	Tyrgan	9.38	246	eSg	Sx	21 18 01.5	
TRG				Smax		21 18 13.5	
	comp=Z,84nm,1.9s						
KAB	Kabansk	9.66	242	eSg	Sx	21 18 11.9	
KAB				Smax		21 18 42.9	
	comp=Z,1µm,1.6s						
IRK	Irkutsk	10.71	248	eSg	Sx	21 18 43.6	
IRK				Smax		21 19 03.6	
	comp=Z,151nm,1.0s						
ARS	Arshan	11.83	250	eSg	Sx	21 19 20.6	
ARS				Smax		21 19 47.0	
	comp=Z,94nm,1.7s						
BTGS	Batagay	12.09	26	eSg	Sx	21 19 23.2	
BTGS				Smax		21 19 39.7	
	comp=Z,285nm,1.6s						
ZAK	Zakamensk	12.36	242	eSg	Sx	21 19 35.3	
ZAK				Smax		21 19 48.1	
	comp=Z,39nm,1.7s						

MOY	**Mondy**	**12.71**	**251**	*e*Sg	Sx	21 19 48.0	
MOY				Smax		21 20 21.3	
	comp=Z,66nm,1.9s						
ORL	**Orlik**	**12.85**	**256**	*e*Sg	Sx	21 19 50.5	
ORL				Smax		21 20 01.3	
	comp=Z,45nm,1.5s						
SONM	**Songino Array**	**12.87**	**228**	Pn	**P**	**21 16 19.9**	**+5.2**
	comp=Z,0.1nm,0.3s,baz=47,slow=14,SNR=2.5						
SONM				Lg		21 19 58.2	
	comp=Z,1.1nm,0.3s,baz=34,slow=29,SNR=4.1						
UNR	**Ust'-Nera**	**13.06**	**48**	*e*Sg	Sx	21 19 50.8	
ZAL	**Zalesovo**	**20.29**	**275**	P	**P**	**21 17 46.3**	**-1.2**
	comp=Z,0.3nm,0.3s,baz=40,slow=9.3,SNR=4.9						
MKAR	**Makanchi Array**	**25.45**	**262**	P	**P**	**21 18 41.0**	**+2.7**
	comp=Z,1.2nm,0.6s,mb3.6,baz=57,slow=8.8,SNR=5.8						
AAK	**Ala-Archa**	**32.36**	**263**	*e*P	**P**	**21 19 40.2**	**-0.3**
	comp=Z,5.8nm,0.8s,mb4.5						
AAK	**Ala-Archa**	**32.36**	**263**	*e*P	**P**	**21 19 40.2**	**-0.3**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
ARCES	**ARCESS Array B**	**39.57**	**327**	P	**P**	**21 20 41.1**	**-0.4**
	comp=Z,2.5nm,0.8s,mb4.0,baz=45,slow=10,SNR=4.3						
FINES	**FINESS Array B**	**44.15**	**317**	P	**P**	**21 21 19.3**	**+0.5**
	comp=Z,2.8nm,0.7s,mb4.1,baz=56,slow=6.9,SNR=6.2						
NB2	**NORSAR Subarra**	**49.62**	**323**	P	**P**	**21 22 02.2**	**+0.3**
	comp=Z,0.5nm,0.5s,mb3.8,baz=41,slow=7.0						
NAO	**NORSAR Subarra**	**49.91**	**323**	P	**P**	**21 22 02.2**	**-1.9**
	comp=Z,0.5nm,0.5s,mb3.8						
NAO	**NORSAR Subarra**	**49.91**	**323**	P	**P**	**21 22 02.2**	**-1.9**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
AKASG	**Malin Array Be**	**50.11**	**304**	P	**P**	**21 22 06.0**	**+0.2**
	comp=Z,0.2nm,0.3s,mb3.6,baz=42,slow=8.7,SNR=4.1						
AKASG	**Malin Array Be**	**50.11**	**304**	P	**P**	**21 22 06.0**	**+0.2**
GERES	**GERESS Array B**	**58.12**	**312**	P	**P**	**21 23 04.9**	**+0.3**
	comp=Z,0.6nm,0.7s,mb3.7,baz=45,slow=7.5,SNR=6.2						

*NEIC **10** 21:21:40.9±0.8, 17.42S×69.15W, h147^{km}±8^{km}, mb4.2/13, Error ellipse: s-maj=10.6km s-min=7.5km az=50.0*

*IDC **10** 21:21:43.5±1.3, 17.45S×69.04W, h173^{km}±9^{km}, mb3.9/10, mb1 4.1/11, mb1mx4.0/17, mbtmp4.4/11, Error ellipse: s-maj=19.2km s-min=14.1km az=42.0*

ISC 10 21:21:40.1±0.7**, 17.41S**±0.05×**69.12W**±0.05**, h154**^{km}±6^{km}**, n34,** σ**0^{s}95**/37**, mb4.0**/17**, 1C, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.47**	**40**	P	**P**	**21 22 15.3**	**+5.5**
	320nm,0.3s,baz=236,slow=6.0,SNR=7069						
LPAZ				S	**S**	**21 22 39.5**	**+6.6**
	26nm,0.3s,baz=308,slow=24,SNR=4.5						
ARE	**Arequipa**	**2.46**	**292**	⇑*i*P	**P**	**21 22 22.4**	**+1.0**
ARE				*i* S	**S**	**21 22 53.0**	**-0.1**
SIV	**San Ignacio**	**7.84**	**81**	P	**P**	**21 23 32.7**	**+0.4**
	17nm,0.3s,baz=269,slow=11,SNR=83						
SIV				S	**S**	**21 24 58.8**	**-1.0**
	3.7nm,0.3s,baz=336,slow=17,SNR=9.6						
NNA	**Nana**	**9.21**	**305**	*e*Pn	**P**	**21 23 48.8**	**-1.7**
	12nm,0.4s						
NNA				*e*Sn	**S**	**21 25 21.6**	**-11**
SAML	**Samuel**	**10.20**	**35**	*e*Pn	**P**	**21 24 03.7**	**+0.1**
	3.4nm,0.5s						
SAML				*e*Sn	**S**	**21 25 56.9**	**+0.8**
CPUP	**Villa Florida**	**14.08**	**131**	*e*Pn	**P**	**21 24 51.7**	**-2.1**
	11nm,0.3s						
CFAA	**Coronel Fontan**	**14.15**	**177**	P	**P**	**21 24 57.0**	**+2.3**
	0.1nm,0.3s,baz=359,slow=9.4,SNR=8.6						
BDFB	**Brasilia**	**20.31**	**88**	P	**P**	**21 26 06.0**	**+0.2**
	26nm,0.4s,baz=268,slow=8.3,SNR=42						
BAO	**Brasilia Array**	**20.33**	**88**	P	**P**	**21 26 09.0**	**+3.0**
TRQA	**Tornquist**	**21.50**	**164**	*e*P	**P**	**21 26 16.9**	**-0.6**
	3.4nm,0.6s,mb3.9						
PLCA	**Paso Flores**	**23.27**	**183**	P	**P**	**21 26 34.4**	**-0.3**
	3.0nm,0.7s,mb3.8,baz=359,slow=11,SNR=6.4						
PLCA	**Paso Flores**	**23.27**	**183**	*e*P	**P**	**21 26 34.0**	**-0.7**
	8.0nm,1.1s,mb4.1						
SDV	**Santo Domingo**	**26.17**	**357**	P	**P**	**21 27 01.3**	**-0.9**
	1.7nm,0.5s,mb4.0,baz=64,slow=1.6,SNR=4.3						
TXAR	**Lajitas Array**	**57.20**	**324**	P	**P**	**21 31 13.1**	**-0.5**
	0.5nm,0.4s,mb3.7,baz=142,slow=10,SNR=2.3						
VNA3	**Neumayer Olymp**	**64.00**	**162**		**P**	**21 31 59.7**	**+0.8**
VNA2	**Neumayer--Watz**	**64.56**	**161**		**P**	**21 32 02.8**	**+0.3**
SDCO	**Great Sand Dun**	**64.66**	**329**	*e*P	**P**	**21 32 03.5**	**-0.3**
	6.4nm,1.2s,mb4.3						
SNAA	**Sanae**	**66.19**	**162**	*e*P	**P**	**21 32 12.0**	**-1.1**
	1.3nm,0.7s,mb3.9						
PV01	**Paradox Valley**	**66.52**	**327**	P	**P**	**21 32 14.8**	**-0.9**
DBIC	**Dimbokro**	**67.82**	**75**	P	**P**	**21 32 23.4**	**-0.7**
	18nm,0.7s,mb4.9,baz=229,slow=6.1,SNR=39						
DBIC	**Dimbokro**	**67.82**	**75**	*e*P	**P**	**21 32 23.5**	**-0.6**
	18nm,0.7s,mb4.9						
RSSD	**Black Hills**	**69.05**	**334**	*e*P	**P**	**21 32 32.1**	**+0.9**
TPNV	**Topopah Spring**	**69.98**	**321**	*e*P	**P**	**21 32 37.5**	**+0.5**
	5.4nm,0.9s,mb4.3						
PDAR	**Pinedale Array**	**70.50**	**330**	P	**P**	**21 32 39.8**	**-0.2**
	0.5nm,0.4s,mb3.6,baz=119,slow=8.5,SNR=7.5						
HWUT	**Hardware Ranch**	**70.64**	**328**	*e*P	**P**	**21 32 40.2**	**-0.6**
	2.6nm,0.7s,mb4.1						
ULM	**Lac du Bonnet**	**71.38**	**342**	P	**P**	**21 32 44.3**	**-0.8**
	3.9nm,0.3s,mb4.6,baz=150,slow=7.0,SNR=18						
NVAR	**Mina Array Bea**	**72.18**	**321**	P	**P**	**21 32 50.9**	**+0.8**
	0.5nm,0.5s,mb3.5,baz=132,slow=6.0,SNR=5.8						
HLID	**Hailey**	**73.50**	**327**	*e*P	**P**	**21 32 58.4**	**+0.7**
	1.5nm,0.6s,mb3.9						
VNDA	**Vanda**	**80.82**	**190**	*e*P	**P**	**21 33 37.8**	**+0.3**
	1.7nm,1.0s,mb3.6						
TSUM	**Tsumeb**	**81.42**	**107**	*e*P	**P**	**21 33 41.3**	**-0.5**
	2.4nm,0.6s,mb4.0						
ESDC	**Sonseca Array**	**83.08**	**45**	P	**P**	**21 33 51.0**	**+1.1**
	1.9nm,0.8s,mb3.9,baz=250,slow=5.9,SNR=6.0						
YKA	**Yellowknife Ar**	**87.29**	**341**	P	**P**	**21 34 10.6**	**+0.6**
	2.5nm,0.5s,mb4.3,baz=133,slow=4.7,SNR=26						
WRA	**Warramunga Arr**	**136.31**	**213**	PKP	PKPdf	21 40 45.4	+1.2
	0.3nm,0.3s,baz=141,slow=1.5,SNR=6.7						
SONM	**Songino Array**	**149.44**	**6**	PKPbc	PKPdf	21 41 11.1	+4.9
	0.7nm,0.4s,baz=312,slow=2.0,SNR=5.2						

*MOS **10** 21:31:24.9±1.5, 57.40N×120.60E, h8^{km}, mb4.0/1, Error ellipse: s-maj=41.7km s-min=33.7km az=51.1*

BYKL 10 21:31:25.4±0.5**, 57.43N×120.66E, 2C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.41**	**249**	⇑*i*Pg	Pg	21 31 51.2	-2.3
CRS				*i* Sg	Sg	21 32 09.0	-3.2
CRS				Pmax			
	105nm,0.9s						
CRS				Smax			
	457nm,0.4s						
CRS	**Chara**	**1.41**	**249**	*e*P	Pb	21 31 51.2	-1.0
CRS				*e*		21 32 09.0	
CRS				pmax	pmax		
	comp=Z,62nm,0.3s						
CRS				smax			
	comp=E,457nm,0.5s						
CLNS	**Chul'man**	**2.38**	**103**	*e*Pg	Pg	21 32 08.6	-4.4
CLNS				*e*Sg	Sg	21 32 39.5	-5.2
CLNS				*e*L		21 33 05.8	
CLNS				Pmax			
	comp=E,186nm,0.4s						
CLNS				Smax			
	comp=E,3µm,0.8s						
CLNS	**Chul'man**	**2.38**	**103**	*e*P	Pn	21 32 08.1	+1.8
CLNS				*e*		21 32 37.2	
CLNS				pmax	pmax		
	comp=N,8.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,4.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,16nm,0.3s						
CLNS				smax			
	comp=N,153nm,0.4s						
CLNS				smax			
	comp=E,84nm,0.4s						
CLNS				smax			
	comp=Z,64nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,80nm,13.0s						
ALDR	**Aldan**	**2.79**	**63**	*e*Pg	Pg	21 32 15.8	-5.3
ALDR				*e*		21 32 20.5	
ALDR				*e*Sn	Sn	21 32 40.8	-6.2
ALDR				*e*Sg	Sg	21 32 51.2	-7.1
ALDR				max			
	comp=Z,392nm,0.4s						
ALDR				Smax			
	comp=Z,1µm,0.3s						
NLYR	**Nelyaty**	**2.87**	**253**	*e*Pn	Pn	21 32 12.5	-0.8
NLYR				⇑*i*Pg	Pg	21 32 17.2	-5.6
NLYR				*e*PgPg		21 32 19.6	
NLYR				*i* Sg	Sg	21 32 53.4	-7.7
NLYR				max			
	comp=Z,64nm,0.9s						
NLYR				Smax			
	comp=Z,227nm,0.9s						
NLYR	**Nelyaty**	**2.87**	**253**	*e*P	Pn	21 32 10.7	-2.6
NLYR				*e*		21 32 51.1	
NLYR				pmax	pmax		
	comp=Z,66nm,0.3s						
NLYR				smax			
	comp=N,215nm,0.5s						
TUP	**Tupik**	**3.04**	**188**	*e*P	Pn	21 32 12.8	-2.8
TUP				*e*S	Sn	21 32 48.9	-4.4
TUP				pmax	pmax		
	comp=Z,72nm,0.3s						
TUP				smax			
	comp=E,176nm,0.8s						
TNDR	**Tynda**	**3.22**	**134**	*e*Pn	Pn	21 32 16.8	-1.4
TNDR				*e*Sg	Sg	21 33 03.9	-8.7
TNDR				Smax			
	comp=E,2µm,0.9s						
BOD	**Bodaibo**	**3.60**	**279**	*e*Pn	Pn	21 32 22.6	-1.0
BOD				*e*Pg	Pg	21 32 30.0	-7.3
BOD				*e*		21 32 49.5	
BOD				*e*Sg	Sg	21 33 15.1	-10
BOD				Pmax			
	comp=E,18nm,0.6s						
BOD				Smax			
	comp=E,118nm,0.3s						
BOD	**Bodaibo**	**3.60**	**279**	*e*P	Pn	21 32 21.3	-2.3
BOD				*e*		21 33 12.5	
BOD				pmax	pmax		
	comp=Z,24nm,0.5s						
BOD				smax			
	comp=N,146nm,0.3s						
SVKR	**Severomuysk**	**4.12**	**254**	*e*Sg	Sg	21 33 32.9	-10
SVKR				Smax			
	comp=N,157nm,0.5s						
UKT	**Uakit**	**4.36**	**246**	*e*Pn	Pn	21 32 33.6	-0.8
UKT				*e*Pg	Pg	21 32 43.4	-9.0
UKT				*e*Sg	Sg	21 33 38.7	-12
UKT				Pmax			
	comp=N,9.0nm,0.6s						
UKT				Smax			
	comp=N,41nm,0.8s						
YOA	**Uoyan**	**5.08**	**259**	*e*Sn	Sn	21 33 37.4	-7.6
YOA				*e*Sg	Sg	21 34 00.9	-14
YOA				Smax			
	comp=N,257nm,0.7s						
ZEA	**Zeya**	**5.26**	**132**	*e*Pg	Pg	21 33 00.5	-10
ZEA				*e*Sg	Sg	21 34 06.5	-14
ZEA				Pmax			
	comp=N,19nm,0.4s						
ZEA				Smax			
	comp=N,71nm,1.0s						
KMO	**Kumora**	**5.44**	**257**	*e*Pg	Pg	21 33 01.7	-12
KMO				*e*Sn	Sn	21 33 48.3	-5.7
KMO				*e*Sg	Sg	21 34 12.0	-15
KMO				Pmax			
	comp=N,7.0nm,1.1s						
KMO				Smax			
	comp=N,78nm,1.3s						
YLYR	**Ulyunkhan**	**5.89**	**248**	*e*Sn	Sn	21 33 59.3	-6.0
YLYR				*e*Sg	Sg	21 34 27.1	-14
YLYR				Smax			
	comp=N,66nm,1.4s						
NIZ	**Nizh Angarsk**	**6.36**	**260**	*e*Sg	Sg	21 34 41.3	-16
NIZ				Smax			
	comp=N,56nm,2.0s						
YAK	**Yakutsk**	**6.49**	**41**	*e*Sg	Sg	21 34 45.6	-16
YAK				Smax			
	comp=N,323nm,0.9s						
CIT	**Chita**	**6.80**	**220**	*e*Sg	Sg	21 34 55.9	-16
CIT				*e*LQ		21 35 19.0	
CIT				Smax			
	comp=N,95nm,1.7s						
SYVR	**Suvo**	**7.13**	**243**	Pg	Pg	21 33 34.1	-14
SYVR				*e*Sg	Sg	21 35 05.4	-17
SYVR				Smax			
	comp=N,34nm,1.1s						
OGRR	**Ongureny**	**8.32**	**248**	*e*Sg	Sg	21 35 43.4	-19
KPC	**Khapcheranga**	**9.17**	**216**	*e*Sg	Sg	21 36 07.6	-23
KPC				*e*		21 36 52.6	
KPC				Smax			
	comp=N,19nm,0.8s						
ARS	**Arshan**	**11.89**	**250**	*e*Sg	S	21 37 35.8	+62
ZAK	**Zakamensk**	**12.42**	**243**	*e*Sg	S	21 37 52.6	+66
ZAK				Smax			
	comp=N,9.0nm,1.0s						

*IDC **10** 21:38:47.1±2.5, 56.79N×121.47E, mb3.6/7, mb1 3.7/8, mb1mx3.6/22, mbtmp3.6/8, Error ellipse: s-maj=57.2km s-min=22.7km az=146.0*

*MOS **10** 21:38:52.7±1.7, 57.69N×120.57E, h10^{km}, mb4.2/1, Error ellipse: s-maj=15.6km s-min=14.7km az=38.9*

*BYKL **10** 21:38:53.3±0.4, 57.37N×120.73E, MS3.2*

*NEIC **10** 21:38:53.2±0.8, 57.16N×120.38E, h5^{km}, mb4.0/1, Error ellipse: s-maj=13.1km s-min=11.3km az=179.0*

ISC 10 21:38:51.9±0.4**, 57.43N**±0.05×**120.71E**±0.05**, h10**^{km}**, n70,** σ**1^{s}54**/74**, mb4.0**/12**, 3D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.43**	**249**	⇓*i*Pg	**Pg**	**21 39 19.6**	**-0.9**
CRS				*e*		21 39 21.4	
CRS				max		21 39 22.2	
	793nm,1.0s						
CRS				*i* Sg	**Sg**	**21 39 37.4**	**-2.3**
CRS				Smax		21 39 38.5	
	2µm,0.4s						
NRGR	**Nerungri**	**2.33**	**108**	*e*P	**Pn**	**21 39 35.3**	**+4.4**
NRGR				*e*S	**Sn**	**21 40 04.0**	**+4.2**
CLNS	**Chul'man**	**2.36**	**103**	Pn	**Pn**	**21 39 33.5**	**+2.2**
CLNS				*e*Pg	**Pg**	**21 39 36.2**	**-2.8**
CLNS				Pmax		21 39 41.9	
	302nm,0.3s						
CLNS				*e*Sg	**Sg**	**21 40 06.4**	**-4.1**
CLNS				Smax		21 40 09.7	
	15µm,0.9s						
CLNS	**Chul'man**	**2.36**	**103**	*e*P	**Pn**	**21 39 35.0**	**+3.7**
CLNS				*e*S	**Sn**	**21 40 00.0**	**-0.6**
CLNS				pmax	pmax		
	comp=Z,46nm,0.4s						
CLNS				pmax	pmax		
	comp=N,12nm,0.3s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,31nm,0.3s						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,25nm,0.3s						
CLNS				smax			
	comp=E,36nm,0.3s						
CLNS				smax			
	comp=Z,10.0nm,0.2s						
CLNS				smax			
	comp=N,26nm,0.3s						
CLNS				smax			
	comp=E,705nm,0.5s						
CLNS				smax			
	comp=Z,412nm,0.6s						
CLNS				smax			
	comp=N,857nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,200nm,12.0s						
ALDR	**Aldan**	**2.77**	**63**	*e*Pg	**Pg**	**21 39 42.3**	**-4.9**
ALDR				*e*PgPg		21 39 44.2	
ALDR				max		21 39 49.8	
	comp=Z,112nm,0.2s						
ALDR				*e*Sn	**Sn**	**21 40 12.8**	**+1.8**
ALDR				*e*Sg	**Sg**	**21 40 18.6**	**-5.5**
ALDR				Smax		21 40 20.3	
	comp=Z,6µm,0.5s						
NLYR	**Nelyaty**	**2.90**	**253**	*e*Pn	**Pn**	**21 39 40.7**	**+1.7**
NLYR				*e*Pg	**Pg**	**21 39 45.2**	**-4.6**
NLYR				*e*PgPg		21 39 47.1	
NLYR				max		21 39 47.4	
	comp=Z,593nm,0.4s						
NLYR				*i* Sg	**Sg**	**21 40 21.3**	**-7.1**
NLYR				Smax		21 40 30.6	
	comp=Z,2µm,1.0s						
NLYR	**Nelyaty**	**2.90**	**253**	*e*P	**Pn**	**21 39 41.3**	**+2.3**
NLYR				*e*		21 40 18.9	
NLYR				pmax	pmax		
	comp=Z,589nm,0.4s						
NLYR				smax			
	comp=N,2µm,1.7s						
TUP	**Tupik**	**3.04**	**188**	*e*Pn	**Pn**	**21 39 41.4**	**+0.3**
TUP				⇓*i*Pg	**Pn**	**21 39 46.2**	**+5.1**
TUP				Pmax		21 39 48.5	
	comp=N,351nm,0.7s						
TUP				*e*Sg	**Sg**	**21 40 24.3**	**-9.0**
TUP				Smax		21 40 28.7	
	comp=N,2µm,1.0s						
TUP				*e*LR	LR	21 40 43.8	
TUP				LRmax		21 40 49.3	
	comp=N,575nm,3.4s						
TUP	**Tupik**	**3.04**	**188**	*e*P	**Pn**	**21 39 46.2**	**+5.1**
TUP				*e*		21 40 24.3	
TUP				pmax	pmax		
	comp=Z,348nm,0.4s						
TUP				smax			
	comp=E,2µm,1.0s						
TNDR	**Tynda**	**3.20**	**134**	*e*	**Pn**	**21 39 36.2**	**-7.2**
TNDR				*e*Pn	**Pn**	**21 39 44.6**	**+1.2**
TNDR				max		21 39 56.2	
	comp=E,644nm,0.3s						
TNDR				*e*Sn	**Sn**	**21 40 21.7**	**-0.3**
TNDR				*e*Sg	**Sg**	**21 40 30.5**	**-8.1**
TNDR				Smax		21 40 32.5	
	comp=E,5µm,0.6s						
BOD	**Bodaibo**	**3.62**	**279**	*e*Pn	**Pn**	**21 39 51.2**	**+1.8**
BOD				*e*Pg	**Pg**	**21 39 58.5**	**-5.8**
BOD				Pmax		21 40 02.7	
	comp=E,63nm,0.7s						
BOD				*e*Sg	**Sg**	**21 40 44.7**	**-7.9**
BOD				Smax		21 40 50.9	
	comp=E,430nm,0.8s						
BOD				*e*LR	LR	21 41 05.8	
BOD				LRmax		21 41 10.7	
	comp=E,284nm,3.5s						
BOD	**Bodaibo**	**3.62**	**279**	*e*P	**Pn**	**21 39 49.7**	**+0.3**
BOD				pmax	pmax		
	comp=Z,74nm,1.0s						
SVKR	**Severomuysk**	**4.15**	**254**	*e*Pn	**Pn**	**21 39 58.4**	**+1.6**
SVKR				*e*Pg	Px	21 40 08.2	
SVKR				Pmax		21 40 11.1	
	comp=Z,147nm,0.6s						
SVKR				*e*Sg	Sx	21 41 01.0	
SVKR				Smax		21 41 11.3	
	comp=Z,1µm,1.1s						
SVKR	**Severomuysk**	**4.15**	**254**	*e*Pg	**Pb**	**21 40 08.3**	**+3.6**
SVKR				*e*Sg	Sx	21 40 59.3	
SVKR	**Severomuysk**	**4.15**	**254**	*e*P	**Pb**	**21 40 08.3**	**+3.6**
SVKR				pmax	pmax		
	comp=Z,139nm,0.6s						
UKT	**Uakit**	**4.38**	**247**	*e*	**Pn**	**21 40 02.0**	**+1.9**
UKT				⇓*i*Pg	Px	21 40 11.9	
UKT				Pmax		21 40 15.8	
	comp=Z,58nm,0.6s						
UKT				*e*Sg	Sx	21 41 07.6	
UKT				*e*		21 41 14.3	
UKT				Smax		21 41 15.3	
	comp=Z,391nm,1.0s						
UKT	**Uakit**	**4.38**	**247**	*e*P	Px	21 40 11.9	
UKT				pmax	pmax		
	comp=Z,45nm,0.4s						
YOA	**Uoyan**	**5.11**	**259**	*e*	**Pb**	**21 40 22.1**	**+0.9**
YOA				*e*Pg	Px	21 40 25.8	
YOA				Pmax		21 40 28.5	
	comp=Z,107nm,0.6s						
YOA				*e*Sg	Sx	21 41 31.7	
YOA				Smax		21 41 42.0	
	comp=Z,2µm,1.0s						
YOA	**Uoyan**	**5.11**	**259**	*e*P	**Pb**	**21 40 25.6**	**+4.4**
YOA				pmax	pmax		
	comp=Z,111nm,0.8s						
ZEA	**Zeya**	**5.24**	**132**	*e*Pg	Px	21 40 26.2	
ZEA				Pmax		21 40 30.0	
	comp=Z,22nm,0.5s						
ZEA				*e*Sn	Sx	21 41 07.3	
ZEA				*e*Sg	Sx	21 41 32.6	
ZEA				Smax		21 41 39.0	
	comp=Z,390nm,1.0s						
KMO	**Kumora**	**5.47**	**258**	*e*Pn	**Pn**	**21 40 16.4**	**+0.9**
KMO				*e*Pg	Px	21 40 30.6	
KMO				Pmax		21 40 34.3	
	comp=Z,25nm,0.7s						
KMO				Smax		21 40 44.5	
	comp=Z,452nm,1.1s						
KMO				*e*Sn	**Sn**	**21 41 18.2**	**-1.0**
KMO				*e*Sg	Sx	21 41 40.4	
KMO	**Kumora**	**5.47**	**258**	*e*P	**Pn**	**21 40 14.6**	**-0.9**
	comp=Z,36nm,0.8s						
KMO				*e*S	**Sn**	**21 41 16.0**	**-3.2**
KMO	**Kumora**	**5.47**	**258**	*e*P	**Pn**	**21 40 14.6**	**-0.9**
KMO				*e*S	**Sn**	**21 41 16.0**	**-3.2**
KMO				pmax	pmax		
	comp=Z,36nm,0.8s						
KMO				smax			
	comp=E,455nm,1.0s						
YLYR	**Ulyunkhan**	**5.92**	**248**	*e*	**Pn**	**21 40 29.1**	**+7.3**
YLYR				*e*Pg	Px	21 40 39.7	
YLYR				Pmax		21 40 50.0	
	comp=E,18nm,0.7s						
YLYR				*i* Sg	Sx	21 41 56.5	
YLYR				Smax		21 42 02.5	
	comp=E,347nm,1.8s						
YLYR	**Ulyunkhan**	**5.92**	**248**	*e*P	**Pn**	**21 40 24.7**	**+2.9**
	comp=E,26nm,0.5s						
YLYR	**Ulyunkhan**	**5.92**	**248**	*e*P	**Pn**	**21 40 24.7**	**+2.9**
YLYR				pmax	pmax		
	comp=Z,26nm,0.5s						
NIZ	**Nizh Angarsk**	**6.39**	**260**	*e*	**Pn**	**21 40 32.4**	**+4.0**
NIZ				*e*Pg	Px	21 40 47.0	
NIZ				Pmax		21 40 55.2	
	comp=Z,20nm,1.3s						
NIZ				*e*Sg	Sx	21 42 08.4	
NIZ				Smax		21 42 18.7	
	comp=Z,119nm,0.8s						
NIZ	**Nizh Angarsk**	**6.39**	**260**	*e*Pg	Px	21 40 49.3	
NIZ				*e*Sg	Sx	21 42 07.9	
YAK	**Yakutsk**	**6.47**	**41**	*e*Sn	Sx	21 41 39.1	
YAK				*e*Sg	Sx	21 42 11.5	
YAK				Smax		21 42 14.5	
	comp=Z,1µm,0.7s						
YAK	**Yakutsk**	**6.47**	**41**	*e*P	**Pb**	**21 40 42.4**	**-2.0**
	comp=Z,4.0nm,0.8s						
YAK				*e*S	**Sn**	**21 41 43.8**	**-0.4**
YAK	**Yakutsk**	**6.47**	**41**	*e*P	**Pb**	**21 40 42.4**	**-2.0**
YAK				*e*S	**Sn**	**21 41 43.8**	**-0.4**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.0s						
YAK				smax			
	comp=N,18nm,0.9s						
YAK				smax			
	comp=Z,16nm,0.9s						
YAK				smax			
	comp=E,14nm,0.8s						
YAK				smax			
	comp=N,128nm,0.9s						
YAK				smax			
	comp=E,104nm,0.9s						
YAK				smax			
	comp=Z,118nm,0.9s						
YAK				MLR	MLR		
	comp=Z,54nm,6.0s						
CIT	**Chita**	**6.82**	**220**	*e*Pg	**Pb**	**21 40 55.3**	**+4.8**
CIT				Pmax		21 40 58.0	
	comp=Z,63nm,1.0s						
CIT				*e*Sg	Sx	21 42 22.5	
CIT				Smax		21 42 33.2	
	comp=Z,427nm,1.9s						
CIT				*e*L		21 42 54.6	

SYVR	**Suvo**	**7.15**	**243**	*e*	**Pb**	**21 40 54.6**	**-1.5**
SYVR				*e*Pg	Px	21 41 02.8	
SYVR				Pmax		21 41 05.3	
	comp=Z,34nm,1.5s						
SYVR				*e*Sg	Sx	21 42 35.4	
SYVR				Smax		21 42 42.7	
	comp=Z,394nm,1.4s						
OGRR	**Ongureny**	**8.35**	**249**	*e*	Px	21 42 37.7	
OGRR				*e*Sg	Sx	21 43 09.5	
OGRR				Smax		21 43 18.8	
	comp=Z,61nm,2.2s						
KPC	**Khapcheranga**	**9.19**	**216**	*e*Sn	**Sn**	**21 42 44.4**	**-7.6**
KPC				*e*Sg	Sx	21 43 35.0	
KPC				Smax		21 43 45.6	
	comp=Z,128nm,1.0s						
KPC	**Khapcheranga**	**9.19**	**216**	*e*P	**P**	**21 41 06.3**	**-1.2**
	comp=Z,4.0nm,1.1s						
KPC	**Khapcheranga**	**9.19**	**216**	*e*P	**P**	**21 41 06.3**	**-1.2**
KPC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TRG	**Tyrgan**	**9.46**	**246**	*e*Sg	Sx	21 43 46.0	
TRG				Smax		21 43 59.9	
	comp=Z,94nm,2.2s						
KAB	**Kabansk**	**9.74**	**242**	*e*Sg	Sx	21 43 56.8	
KAB				Smax		21 44 19.2	
	comp=Z,1µm,1.4s						
KLR	**Kul'dur**	**10.53**	**137**	*e*P	Px	21 41 38.8	
LSTR	**Listvyanka**	**10.74**	**246**	*e*Sg	Sx	21 44 26.8	
LSTR				Smax		21 44 57.3	
	comp=Z,64nm,1.5s						
IRK	**Irkutsk**	**10.80**	**248**	*e*Sg	Sx	21 44 28.0	
IRK				Smax		21 44 39.6	
	comp=Z,99nm,1.3s						
TLY	**Talaya**	**11.44**	**247**	*e*Sg	Sx	21 44 46.2	
TLY				Smax		21 44 55.5	
	comp=Z,39nm,1.4s						
ARS	**Arshan**	**11.92**	**250**	*e*Sg	Sx	21 45 01.5	
ARS				Smax		21 45 30.9	
	comp=Z,123nm,1.0s						
ZAK	**Zakamensk**	**12.44**	**243**	*e*Sg	Sx	21 45 17.9	
ZAK				Smax		21 45 49.2	
	comp=Z,34nm,2.0s						
MOY	**Mondy**	**12.79**	**252**	*e*Sg	Sx	21 45 28.7	
MOY				Smax		21 45 36.2	
	comp=Z,53nm,2.7s						
SONM	**Songino Array**	**12.93**	**228**	Pn	**P**	**21 41 51.3**	**-7.0**
	baz=70,slow=17,SNR=2.7						
SONM				Lg		21 45 35.9	
	comp=Z,0.9nm,0.3s,baz=38,slow=23,SNR=12						
ORL	**Orlik**	**12.94**	**257**	*e*Sn	Sx	21 44 15.2	
ORL				*e*Sg	Sx	21 45 35.6	
ORL				Smax		21 45 53.3	
	comp=Z,54nm,2.3s						
UNR	**Ust'-Nera**	**13.00**	**47**	*e*Sg	Sx	21 45 36.4	
MOMR	**Moma**	**13.84**	**40**	*e*Sg	Sx	21 46 01.0	
ZAL	**Zalesovo**	**20.39**	**276**	P	**P**	**21 43 30.0**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=43,slow=14,SNR=5.5						
ZAL	**Zalesovo**	**20.39**	**276**	P	**P**	**21 43 30.0**	**-1.3**
NVS	**Novosibirsk**	**20.87**	**279**	*e*P	**P**	**21 43 35.2**	**-1.0**
KURK	**Kurchatov**	**25.25**	**273**	*e*P	**P**	**21 44 20.1**	**+0.9**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
MKAR	**Makanchi Array**	**25.54**	**262**	P	**P**	**21 44 19.8**	**-2.1**
	comp=Z,1.0nm,0.7s,mb3.4,baz=309,slow=1.6,SNR=7.8						
BVAR	**Borovoye Array**	**28.49**	**283**	P	**P**	**21 44 48.4**	**-0.4**
	comp=Z,0.7nm,0.7s,mb3.4,baz=72,slow=9.1,SNR=3.9						
BVAR	**Borovoye Array**	**28.49**	**283**	P	**P**	**21 44 48.4**	**-0.5**
YHNB	**Yeheng**	**32.74**	**179**	P	**P**	**21 45 17.4**	**-9.4**
KKN	**Kakani**	**38.69**	**235**	*e*P	**P**	**21 46 19.0**	**+1.6**
	comp=Z,5.8nm,0.7s,mb4.4						
GKN	**Gorkha**	**38.79**	**236**	*e*P	**P**	**21 46 20.1**	**+1.8**
	comp=Z,7.1nm,0.7s,mb4.5						
DMN	**Daman**	**38.92**	**235**	*e*P	**P**	**21 46 22.0**	**+2.6**
KOLN	**Koldanda**	**39.46**	**237**	*e*P	**P**	**21 46 26.3**	**+2.4**
	comp=Z,7.8nm,1.0s,mb4.4						
JOF	**Joensuu**	**41.37**	**316**	*e*p	**P**	**21 46 39.3**	**+0.1**
ILAR	**Eielson Array**	**41.39**	**40**	P	**P**	**21 46 36.0**	**-3.3**
	comp=Z,0.4nm,0.6s,mb3.2,baz=290,slow=5.6,SNR=5.5						
KAF	**Kangasniemi**	**43.71**	**317**	*e*p	**P**	**21 46 50.9**	**-7.2**
FINES	**FINESS Array B**	**44.22**	**317**	P	**P**	**21 47 03.1**	**+0.8**
	comp=Z,2.7nm,0.6s,mb4.2,baz=53,slow=9.5,SNR=12						
NB2	**NORSAR Subarra**	**49.69**	**323**	P	**P**	**21 47 45.8**	**+0.5**
	comp=Z,0.9nm,0.5s,mb4.1,baz=44,slow=7.9						
NAO	**NORSAR Subarra**	**49.98**	**323**	P	**P**	**21 47 45.8**	**-1.7**
	comp=Z,0.9nm,0.5s,mb4.1						
AKASG	**Malin Array Be**	**50.19**	**304**	P	**P**	**21 47 49.5**	**+0.2**
	comp=Z,0.8nm,0.4s,mb4.1,baz=41,slow=9.0,SNR=5.4						
GERES	**GERESS Array B**	**58.20**	**312**	P	**P**	**21 48 48.5**	**+0.5**
	comp=Z,0.7nm,0.7s,mb3.8,baz=37,slow=6.7,SNR=6.6						

NEIC ***10*** *22:01:44.5±1.1, 5.01S×152.23E, h64^{km}±10^{km}, mb4.6/10,*
Error ellipse: s-maj=9.0km s-min=7.1km az=155.0
IDC ***10*** *22:01:45.8±2.1, 5.05S×152.17E, h74^{km}±18^{km}, mb4.3/11,*
mb1 4.5/14, mb1mx4.4/17, mbtmp4.7/14, MS3.9/8,
Ms1 3.9/8, ms1mx3.6/21, Error ellipse: s-maj=18.2km
s-min=11.5km az=133.0
ISC 10 22:01:42.3±2.0**, 4.99S**±0.09×**152.20E**±0.07**, h56**^{km}±17^{km}**,**
n47, σ0^{s}99/39**, mb4.5**/21**, MS4.0**/6**, 2C-4D, New Britain**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.65**	**228**	P	**P**	**22 03 21.0**	**+1.2**
	144nm,0.3s,baz=62,slow=6.6,SNR=120						
PMG				S	**S**	**22 04 33.1**	**-1.9**
	baz=285,slow=11,SNR=2.5						
PMG				LR	LR	22 05 14.5	
	comp=Z,231nm,19.6s,baz=188,slow=32						
PMG	**Port Moresby**	**6.65**	**228**	*e*Pn	**P**	**22 03 20.0**	**+0.2**
	320nm,0.5s						
HNR	**Honiara**	**8.86**	**120**	P	**P**	**22 03 50.8**	**+0.5**
	20nm,0.3s,baz=201,slow=11,SNR=6.3						
HNR	**Honiara**	**8.86**	**120**	*e*Pn	**P**	**22 03 48.8**	**-1.4**
	57nm,0.8s						
CTA	**Charters Tower**	**16.08**	**201**	P	**P**	**22 05 28.4**	**+2.0**
	0.3nm,0.3s,baz=30,slow=13,SNR=5.7						
CTA				LR	LR	22 09 49.9	
	comp=Z,220nm,18.3s,baz=8.6,slow=30						
KAKA	**Kakadu**	**20.96**	**247**	⇑*i*P	**P**	**22 06 40.8**	**+18**
	20nm,0.4s						
DZM	**Mont Dzumac**	**21.88**	**142**	*e*P	**P**	**22 06 32.5**	**+0.3**
DZM	**Mont Dzumac**	**21.88**	**142**	P	**P**	**22 06 32.8**	**+0.7**
	24nm,0.6s,mb4.8,baz=335,slow=9.9,SNR=41						
DZM	**Mont Dzumac**	**21.88**	**142**	*e*P	**P**	**22 06 32.5**	**+0.3**
WRAB	**Tennant Creek**	**22.86**	**228**	*e*P	**P**	**22 06 42.4**	**+0.4**
	40nm,0.8s,mb4.9						
WB2	**Warramunga Arr**	**22.86**	**228**	⇑*i*P	**P**	**22 06 42.8**	**+0.8**
WRA	**Warramunga Arr**	**22.87**	**228**	P	**P**	**22 06 42.9**	**+0.9**
	12nm,0.4s,mb4.7,baz=53,slow=9.8,SNR=46						
WRA				S	**S**	**22 10 47.1**	**+3.7**
	15nm,1.3s,baz=55,slow=17,SNR=14						
ASPA	**Alice Springs**	**25.61**	**222**	*e*P	**P**	**22 07 11.1**	**+2.7**
STKA	**Stephens Creek**	**28.53**	**199**	*e*P	**P**	**22 07 33.8**	**-1.2**
	3.0nm,0.9s,mb4.0						
STKA	**Stephens Creek**	**28.53**	**199**	P	**P**	**22 07 33.6**	**-1.4**
	2.1nm,0.4s,mb4.2,baz=21,slow=14,SNR=12						
STKA				LR	LR	22 17 02.0	
	comp=Z,232nm,20.5s,MS3.8,baz=21,slow=32						
FITZ	**Fitzroy Crossi**	**29.05**	**241**	*e*P	**P**	**22 07 38.7**	**-1.0**
	22nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**29.05**	**241**	P	**P**	**22 07 38.7**	**-1.0**
	32nm,0.6s,mb5.2,baz=66,slow=7.2,SNR=82						
FORT	**Forrest**	**34.26**	**219**	*e*P	**P**	**22 08 24.4**	**-0.9**
	16nm,0.5s,mb5.2						
KLBR	**Kellerberrin**	**41.74**	**226**	*e*P	**P**	**22 09 26.4**	**-1.4**
	8.9nm,0.9s,mb4.4						
RPZ	**Rata Peaks**	**42.00**	**160**	LR	LR	22 24 01.1	
	comp=Z,229nm,20.6s,MS4.0,baz=205,slow=32						
KSM	**Kuching**	**42.34**	**278**	*e*P	**P**	**22 09 32.9**	**-0.1**
NWAO	**Narrogin (SRO)**	**42.83**	**225**	LR	LR	22 28 16.5	
	comp=Z,215nm,20.7s,MS4.0,baz=17,slow=37						
PPT	**Papeete**	**58.24**	**107**	LR	LR	22 32 32.7	
	comp=Z,104nm,20.1s,MS3.9,baz=203,slow=32						
SONM	**Songino Array**	**66.17**	**328**	P	**P**	**22 12 27.0**	**+0.7**
	0.4nm,0.5s,mb3.7,baz=144,slow=5.6,SNR=5.8						
VNDA	**Vanda**	**72.66**	**178**	*e*P	**P**	**22 13 05.0**	**-0.5**
	3.7nm,0.9s,mb4.3						
MKAR	**Makanchi Array**	**80.08**	**319**	P	**P**	**22 13 48.4**	**+0.6**
	0.5nm,0.7s,mb3.5,baz=97,slow=8.9,SNR=6.9						
MKAR				LR	LR	22 47 02.9	
	comp=Z,87nm,19.2s,MS4.1,baz=84,slow=34						
ZAL	**Zalesovo**	**80.99**	**326**	P	**P**	**22 13 51.9**	**-0.6**
	0.7nm,0.5s,mb3.8,baz=66,slow=7.2,SNR=2.6						
COLA	**College**	**82.25**	**22**	*e*P	**P**	**22 13 57.7**	**-1.1**
	10nm,1.0s,mb4.7						
ILAR	**Eielson Array**	**82.56**	**22**	P	**P**	**22 13 59.1**	**-1.3**
	3.4nm,0.8s,mb4.4,baz=253,slow=5.1,SNR=19						
KURK	**Kurchatov**	**83.55**	**322**	*e*P	**P**	**22 14 06.3**	**+0.5**
	5.9nm,1.3s,mb4.6						
AAK	**Ala-Archa**	**84.36**	**314**	*e*P	**P**	**22 14 09.5**	**-0.5**
	3.5nm,1.1s,mb4.4						
QSPA	**South Pole Qui**	**84.97**	**180**	*e*P	**P**	**22 14 12.0**	**-0.3**
	3.2nm,0.4s,mb4.8						
MAW	**Mawson**	**85.17**	**203**	P	**P**	**22 14 13.4**	**0.0**
	4.2nm,0.5s,mb4.8,baz=97,slow=5.7,SNR=20						
INK	**Inuvik**	**88.85**	**21**	P	**P**	**22 14 30.7**	**-0.6**
	3.2nm,1.0s,mb4.6,baz=231,slow=6.9,SNR=4.8						
BVAR	**Borovoye Array**	**89.03**	**323**	P	**P**	**22 14 33.5**	**+1.0**
	0.7nm,0.4s,mb4.3,baz=108,slow=4.6,SNR=5.2						
BRVK	**Borovoye**	**89.10**	**323**	*e*P	**P**	**22 14 33.2**	**+0.4**
NVAR	**Mina Array Bea**	**92.67**	**52**	P	**P**	**22 14 51.1**	**+1.3**
	0.7nm,0.3s,mb4.6,baz=257,slow=4.7,SNR=7.5						
SYO	**Syowa Base**	**93.29**	**199**	⇓P	**P**	**22 14 52.0**	**+0.1**
SYO	**Syowa Base**	**93.29**	**199**	⇓pP	pP	22 15 10.5	+2.4
SYO	**Syowa Base**	**93.29**	**199**	⇓*e*P	**P**	**22 14 52.0**	**+0.1**
SYO				⇓*e*PP	pP	22 15 10.5	+2.4
PDAR	**Pinedale Array**	**99.42**	**48**	P	**P**	**22 15 20.4**	**0.0**
	0.9nm,0.8s,mb4.3,baz=270,slow=3.0,SNR=6.7						
PDAR				LR	LR	22 53 38.2	
	comp=Z,78nm,19.9s,MS4.2,baz=119,slow=31						
NOA	**NORSAR Array B**	**116.89**	**340**	PKP	PKPdf	22 20 21.3	+0.7
	0.5nm,0.5s,baz=359,slow=1.4,SNR=2.5						
GERES	**GERESS Array B**	**123.90**	**328**	PKP	PKPdf	22 20 35.6	+1.1
	1.0nm,0.4s,baz=79,slow=1.9,SNR=17						
LPAZ	**La Paz**	**134.85**	**119**	PKP	PKPdf	22 20 58.9	+2.7
	1.1nm,0.4s,baz=33,slow=3.3,SNR=9.2						
BDFB	**Brasilia**	**151.35**	**136**	PKPbc	PKPdf	22 21 32.4	+7.8
	3.8nm,0.4s,baz=251,slow=2.4,SNR=9.6						
BDFB				PKPab	PKPab	22 21 40.1	-1.2
	1.7nm,0.4s,baz=245,slow=4.5,SNR=3.2						
DBIC	**Dimbokro**	**157.12**	**275**	PKPbc	PKPdf	22 21 46.9	+14
	1.6nm,0.5s,baz=136,slow=6.2,SNR=5.9						
DBIC				PKPab	PKPab	22 22 05.2	-0.6
	1.0nm,0.4s,baz=140,slow=2.8,SNR=6.6						
DBIC	**Dimbokro**	**157.12**	**275**	PKPab	PKPab	22 22 05.2	-0.6

BJI ***10*** *22:04:28.9, 18.00S×178.00W, h461^{km}, mB4.8, mb4.7*
NEIC ***10*** *22:04:28.9±0.7, 18.02S×178.02W, h462^{km}±7^{km}, mb4.7/46,*
Error ellipse: s-maj=7.0km s-min=4.3km az=149.0
IDC ***10*** *22:04:29.4±1.0, 18.18S×177.96W, h469^{km}±10^{km},*
mb4.2/25, mb1 4.2/28, mb1mx4.2/29, mbtmp5.0/28, Error
ellipse: s-maj=10.5km s-min=8.7km az=149.0
ISC 10 22:04:27.3±0.8**, 18.02S**±0.06×**178.04W**±0.05**,**
h453^{km}±9^{km}**, n180, σ0^{s}87**/112**, mb4.5**/63**, 14C-14D, Fiji**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.28**	**57**	P	**P**	**22 06 17.0**	**+0.8**
	28nm,0.3s,baz=58,slow=2.0,SNR=22						
AFI				S	**S**	**22 07 40.9**	**-1.5**
	20nm,0.3s,baz=20,slow=20,SNR=6.0						
AFI	**Afiamalu**	**7.28**	**57**	*e*Pn	**P**	**22 06 16.7**	**+0.5**
	224nm,0.8s						
AFI				*e*Sn	**S**	**22 07 40.8**	**-1.6**
RAO	**Raoul Island**	**11.18**	**179**	*e*Pn	**P**	**22 06 50.1**	**-8.9**
DZM	**Mont Dzumac**	**15.12**	**252**	P	**P**	**22 07 42.3**	**+1.5**
	1.4nm,0.3s,baz=86,slow=19,SNR=6.3						
DZM				ScP		22 15 06.6	
	0.1nm,0.3s,baz=11,slow=23,SNR=4.8						
RAR	**Rarotonga**	**17.50**	**103**	P	**P**	**22 08 06.4**	**+1.6**
	3.0nm,0.3s,baz=266,slow=9.2,SNR=5.8						
URZ	**Urewera**	**20.61**	**191**	P	**P**	**22 08 32.9**	**-1.8**
	14nm,0.5s,baz=32,slow=2.2,SNR=15						
URZ				S	**S**	**22 11 50.5**	**-3.5**
	7.5nm,0.9s,baz=88,slow=24,SNR=3.5						
HNR	**Honiara**	**23.00**	**289**	P	**P**	**22 08 59.8**	**+2.6**
	34nm,0.3s,mb5.2,baz=185,slow=14,SNR=3.5						
SNZO	**South Karori**	**24.03**	**194**	P	**P**	**22 09 05.2**	**-1.0**
PPT	**Papeete**	**27.10**	**93**	P	**P**	**22 09 34.0**	**+0.1**
	41nm,0.5s,mb5.1,baz=222,slow=6.9,SNR=5.5						
CNB	**Canberra Magne**	**33.64**	**233**	⇓*i*P	**P**	**22 10 31.2**	**+1.3**
	41nm,0.9s,mb4.8						
CTA	**Charters Tower**	**33.77**	**261**	⇓*i*P	**P**	**22 10 31.7**	**+0.5**
	49nm,0.8s,mb5.0						
CTA				*e*SCP		22 15 58.7	
CTA	**Charters Tower**	**33.77**	**261**	P	**P**	**22 10 31.8**	**+0.6**
	54nm,0.7s,mb5.1,baz=91,slow=10,SNR=74						
CTA				PcP	PcP	22 12 57.6	-1.1
	3.9nm,0.7s,baz=206,slow=4.1,SNR=3.7						
CTA				ScP		22 15 58.4	
	10nm,1.0s,baz=99,slow=2.2,SNR=6.9						
PMG	**Port Moresby**	**34.82**	**280**	P	**P**	**22 10 41.3**	**+1.2**
	23nm,0.9s,mb4.6,baz=125,slow=5.2,SNR=10						
PMG				ScP		22 16 01.7	
	5.0nm,0.6s,baz=207,slow=2.2,SNR=3.2						
PMG	**Port Moresby**	**34.82**	**280**	*e*P	**P**	**22 10 40.2**	**+0.1**
	58nm,1.1s,mb4.9						
TOO	**Toolangi**	**37.37**	**231**	*e*P	**P**	**22 11 02.4**	**+1.4**
	30nm,0.7s,mb4.8						
STKA	**Stephens Creek**	**38.88**	**241**	⇓*i*P	**P**	**22 11 14.6**	**+1.1**
	39nm,0.9s,mb4.8						
STKA	**Stephens Creek**	**38.88**	**241**	P	**P**	**22 11 14.7**	**+1.2**
	31nm,0.5s,mb5.0,baz=90,slow=9.4,SNR=58						
STKA				PcP	PcP	22 13 13.5	-0.6
	3.8nm,0.7s,baz=61,slow=8.1,SNR=3.2						
STKA				ScP		22 16 17.2	
	4.2nm,0.9s,baz=75,slow=7.3,SNR=3.8						
WB2	**Warramunga Arr**	**44.94**	**260**	⇓*i*P	**P**	**22 12 01.2**	**-0.9**
WB2				*e*		22 12 04.2	
WB2				*e*PCP	PcP	22 13 33.7	-0.9
WB2				*e*sS		22 21 06.3	
WRAB	**Tennant Creek**	**44.95**	**260**	*e*P	**P**	**22 12 01.0**	**-1.1**
	44nm,0.7s,mb5.0						
WRA	**Warramunga Arr**	**44.95**	**260**	P	**P**	**22 12 01.2**	**-1.0**
	22nm,0.7s,mb4.7,baz=96,slow=7.0,SNR=79						
WRA				PcP	PcP	22 13 33.6	-1.0
	3.0nm,0.4s,baz=90,slow=3.8,SNR=6.1						
WRA				ScP		22 16 41.1	
	4.9nm,1.1s,baz=99,slow=4.2,SNR=8.7						
ASPA	**Alice Springs**	**45.10**	**254**	⇓*i*P	**P**	**22 12 03.2**	**-0.1**
ASPA				*e*PCP	PcP	22 13 34.0	-1.1
ASPA				*e*S	**S**	**22 18 04.1**	**-4.3**
KAKA	**Kakadu**	**47.93**	**269**	⇓*i*P	**P**	**22 12 42.7**	**+18**
	82nm,0.6s,mb5.2						
KAKA				*e*SCP		22 17 10.9	
GUMO	**Guam**	**48.22**	**308**	P	**P**	**22 12 27.8**	**+0.5**
	42nm,0.5s,mb5.0,baz=116,slow=7.9,SNR=5.8						
GUMO	**Guam**	**48.22**	**308**	*e*P	**P**	**22 12 28.1**	**+0.8**
	84nm,0.6s,mb5.2						
FORT	**Forrest**	**50.27**	**245**	*e*P	**P**	**22 12 41.5**	**-1.1**
	42nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**53.35**	**261**	*e*P	**P**	**22 13 04.4**	**-0.8**
	27nm,0.8s,mb4.6						
FITZ	**Fitzroy Crossi**	**53.35**	**261**	P	**P**	**22 13 04.4**	**-0.8**
	28nm,0.7s,mb4.7,baz=128,slow=4.9,SNR=24						
KLBR	**Kellerberrin**	**59.09**	**244**	⇓*i*P	**P**	**22 13 43.4**	**-1.3**
	38nm,0.8s,mb4.8						
NWAO	**Narrogin (SRO)**	**59.47**	**242**	P	**P**	**22 13 46.2**	**-1.0**
	16nm,0.9s,mb4.4,baz=92,slow=5.0,SNR=5.8						
NWAO	**Narrogin (SRO)**	**59.47**	**242**	*e*P	**P**	**22 13 45.7**	**-1.5**
	16nm,0.9s,mb4.4						
SBA	**Scott Base**	**60.33**	**184**	*e*P	**P**	**22 13 53.8**	**+1.5**
VNDA	**Vanda**	**60.36**	**185**	*e*P	**P**	**22 13 52.9**	**+0.3**
	8.3nm,1.0s,mb4.1						
MUN	**Mundaring**	**60.38**	**243**	*e*P	**P**	**22 13 52.7**	**-0.6**
JHJ	**Hachijo jima 2**	**64.87**	**322**	P	**P**	**22 14 21.5**	**-0.9**
	96nm,0.9s,mb5.4,baz=78,slow=18,SNR=3.7						
CASY	**Casey**	**66.18**	**205**	P	**P**	**22 14 29.5**	**-0.5**
	36nm,1.0s,mb5.0						
MJAR	**Matsushiro Arr**	**68.20**	**323**	P	**P**	**22 14 42.9**	**-0.1**
	8.0nm,0.7s,mb4.5,baz=159,slow=5.7,SNR=18						
MAJO	**Matsushiro**	**68.21**	**323**	*e*P	**P**	**22 14 42.6**	**-0.3**
	12nm,0.9s,mb4.5						
JOW	**Kunigami**	**68.56**	**309**	P	**P**	**22 14 45.4**	**+0.1**
	14nm,0.8s,mb4.5,baz=177,slow=14,SNR=4.7						
KKM	**Kota Kinabalu**	**69.11**	**284**	*e*P	**P**	**22 14 48.4**	**-0.3**
JNU	**Nakatsue**	**70.46**	**316**	P	**P**	**22 14 56.4**	**-0.1**
	4.5nm,0.8s,mb4.0,baz=167,slow=13,SNR=3.2						
ASAJ	**Asahikawa**	**71.54**	**331**	P	**P**	**22 15 03.1**	**+0.4**
	5.3nm,0.6s,mb4.2,baz=251,slow=21,SNR=5.5						
QSPA	**South Pole Qui**	**72.03**	**180**	*e*P	**P**	**22 15 05.8**	**+0.8**
	47nm,0.6s,mb5.2						
KSM	**Kuching**	**73.05**	**277**	*e*P	**P**	**22 15 09.2**	**-2.8**
SAO	**San Andreas Ge**	**76.26**	**44**	*e*P	**P**	**22 15 29.1**	**-0.5**
	19nm,0.8s,mb4.7						
ISA	**Isabella**	**77.64**	**46**	*e*P	**P**	**22 15 37.3**	**+0.1**
	18nm,0.9s,mb4.5						
CMB	**Columbia Colle**	**77.68**	**43**	*e*P	**P**	**22 15 37.0**	**-0.3**
	15nm,0.9s,mb4.4						
YBH	**Yreka Blue Hor**	**78.39**	**39**	*e*P	**P**	**22 15 40.8**	**-0.3**
	7.9nm,0.9s,mb4.1						
MDJ	**Mudanjiang**	**78.48**	**325**	*e*P	**P**	**22 15 42.3**	**+0.9**
	19nm,1.0s,mb4.5						
MTUM	**Tungsten Hills**	**78.50**	**44**	*e*P	**P**	**22 15 42.3**	**+0.6**
NVAR	**Mina Array Bea**	**79.26**	**44**	P	**P**	**22 15 46.2**	**+0.5**
	13nm,0.7s,mb4.5,baz=217,slow=7.7,SNR=41						
NVAR	**Mina Array Bea**	**79.26**	**44**	P	**P**	**22 15 46.2**	**+0.5**
MNV	**Mina**	**79.36**	**44**	*e*P	**P**	**22 15 46.1**	**-0.1**
	26nm,1.3s,mb4.6						
TPH	**Tonopah**	**79.79**	**44**	*e*P	**P**	**22 15 48.3**	**-0.1**
	5.0nm,0.7s,mb4.2						
MOD	**Modoc**	**79.94**	**40**	*e*P	**P**	**22 15 49.2**	**0.0**
	11nm,0.6s,mb4.5						
NEN	**Nelson**	**80.15**	**48**	*e*P	**P**	**22 15 50.4**	**0.0**
WVOR	**Wild Horse Val**	**81.27**	**40**	*e*P	**P**	**22 15 55.9**	**-0.1**
	22nm,1.0s,mb4.6						
TUC	**Tucson**	**81.49**	**52**	*e*P	**P**	**22 15 57.1**	**-0.3**
	20nm,0.9s,mb4.7						
ARUT	**Antelope Range**	**82.20**	**46**	*e*P	**P**	**22 16 01.4**	**+0.5**
ELK	**Elko**	**82.50**	**43**	*e*P	**P**	**22 16 02.4**	**+0.1**
WUAZ	**Wupatki**	**82.55**	**49**	*e*P	**P**	**22 16 03.2**	**+0.4**
	18nm,1.0s,mb4.5						
HAWA	**Hanford**	**82.99**	**36**	*e*P	**P**	**22 16 04.1**	**-0.5**
	1.0nm,0.9s						
MVU	**Marysvale**	**83.39**	**46**	*e*P	**P**	**22 16 07.6**	**+0.7**
	13nm,1.1s,mb4.4						
KULM	**Kulim**	**83.39**	**278**	*e*P	**P**	**22 16 07.2**	**-0.1**
BMO	**Blue Mountains**	**83.41**	**39**	*e*P	**P**	**22 16 06.1**	**-0.7**
	4.8nm,0.8s,mb4.1						
PMSA	**Palmer Station**	**83.57**	**157**	*e*P	**P**	**22 16 05.1**	**-2.1**
DUG	**Dugway**	**83.81**	**44**	*e*P	**P**	**22 16 08.7**	**-0.3**
	5.9nm,1.0s,mb4.1						
MAW	**Mawson**	**83.87**	**200**	P	**P**	**22 16 08.7**	**+0.1**
	3.6nm,0.4s,mb4.2,baz=180,slow=1.7,SNR=18						
TMUT	**Trail Mountain**	**84.46**	**46**	*e*P	**P**	**22 16 12.5**	**+0.3**
HLID	**Hailey**	**84.48**	**41**	*e*P	**P**	**22 16 12.8**	**+0.6**
	6.4nm,0.8s,mb4.2						
SRU	**San Rafael**	**84.84**	**46**	*e*P	**P**	**22 16 13.9**	**-0.1**
	5.0nm,0.6s,mb4.3						
TCUT	**Toone Canyon**	**85.20**	**44**	*e*P	**P**	**22 16 16.1**	**+0.3**
MNTX	**Cornudas Mount**	**85.36**	**55**	*e*P	**P**	**22 16 17.0**	**+0.3**
	10nm,1.1s,mb4.4						
NEW	**Newport**	**85.39**	**36**	*e*P	**P**	**22 16 15.8**	**-0.7**
PV10	**Paradox Valley**	**85.53**	**47**	*e*P	**P**	**22 16 17.2**	**-0.2**
PV01	**Paradox Valley**	**85.75**	**48**	*e*P	**P**	**22 16 17.8**	**-0.6**
LTX	**Lajitas**	**85.76**	**57**	*e*P	**P**	**22 16 19.7**	**+1.0**
	30nm,1.2s,mb4.8						
TXAR	**Lajitas Array**	**85.76**	**57**	P	**P**	**22 16 19.9**	**+1.2**
	14nm,0.8s,mb4.7,baz=225,slow=5.3,SNR=84						
TXAR	**Lajitas Array**	**85.76**	**57**	P	**P**	**22 16 19.9**	**+1.2**
DLBC	**Dease Lake**	**85.80**	**23**	P	**P**	**22 16 18.1**	**-0.1**
	2.0nm,0.6s,mb3.9,baz=251,slow=25,SNR=4.5						
COLA	**College**	**85.81**	**12**	*e*P	**P**	**22 16 15.9**	**-2.1**
	8.8nm,0.9s,mb4.4						
ANMO	**Albuquerque**	**85.89**	**51**	*e*P	**P**	**22 16 19.0**	**-0.2**
	5.3nm,1.0s,mb4.1						
ILAR	**Eielson Array**	**85.92**	**13**	P	**P**	**22 16 17.1**	**-1.5**
	0.7nm,0.6s,mb3.5,baz=358,slow=25,SNR=4.4						
RRI2	**Red Ridge**	**86.33**	**42**	*e*P	**P**	**22 16 21.3**	**+0.2**
	17nm,0.9s,mb4.7						
GDL2	**Guadalupe Moun**	**86.35**	**55**	*e*P	**P**	**22 16 21.8**	**+0.3**
DLMT	**Dillon**	**86.52**	**40**	*e*P	**P**	**22 16 22.2**	**+0.2**
	19nm,1.1s,mb4.8						
XAN	**Xi'an**	**86.61**	**307**	P	**P**	**22 16 24.2**	**+1.5**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
REDW	**Red Top Meadow**	**86.64**	**42**	*e*P	**P**	**22 16 22.7**	**+0.1**
	comp=Z,22nm,1.3s,mb4.7						
IMW	**Indian Meadow**	**86.83**	**42**	*e*P	**P**	**22 16 24.0**	**+0.5**
	comp=Z,15nm,0.9s,mb4.7						
QLMT	**Earthquake Lak**	**86.98**	**41**	*e*P	**P**	**22 16 25.1**	**+0.9**
YMR	**Madison River**	**87.19**	**41**	*e*P	**P**	**22 16 26.1**	**+0.9**
	comp=Z,11nm,0.9s,mb4.6						
BW06	**Boulder Array**	**87.19**	**43**	*e*P	**P**	**22 16 24.8**	**-0.5**
	comp=Z,4.3nm,0.8s,mb4.2						
PDAR	**Pinedale Array**	**87.19**	**43**	P	**P**	**22 16 24.9**	**-0.3**
	comp=Z,4.8nm,0.7s,mb4.3,baz=220,slow=2.3,SNR=37						
PDAR				PP	PP	22 19 55.5	-2.6
	comp=Z,0.4nm,0.9s,baz=243,slow=3.3,SNR=4.8						
SDCO	**Great Sand Dun**	**87.77**	**49**	*e*P	**P**	**22 16 27.2**	**-0.8**
GCMT	**Greycliff**	**88.53**	**41**	*e*P	**P**	**22 16 32.1**	**+0.7**
SYO	**Syowa Base**	**89.12**	**193**	⇑P	**P**	**22 16 33.0**	**-0.7**
SYO	**Syowa Base**	**89.12**	**193**	⇑*e*P	**P**	**22 16 33.0**	**-0.7**
SNAA	**Sanae**	**90.48**	**178**	*e*P	**P**	**22 16 39.3**	**-0.6**
	comp=Z,4.9nm,0.5s,mb4.6						
VNA3	**Neumayer Olymp**	**90.61**	**176**	⇑*i*	**P**	**22 16 41.0**	**+0.5**
PLCA	**Paso Flores**	**91.00**	**134**	P	**P**	**22 16 43.6**	**+0.6**
	comp=Z,2.3nm,0.7s,mb4.2,baz=289,slow=7.5,SNR=6.0						
PLCA	**Paso Flores**	**91.00**	**134**	*e*P	**P**	**22 16 43.4**	**+0.4**
	comp=Z,4.9nm,1.0s,mb4.4						
VNA2	**Neumayer--Watz**	**91.05**	**177**	⇑*i*	**P**	**22 16 43.5**	**+1.0**
MAIT	**Maitri**	**91.17**	**183**	⇑*i*P	**P**	**22 16 42.9**	**-0.2**
LZH	**Lanzhou**	**91.23**	**308**	*e*P	**P**	**22 16 45.4**	**+1.2**
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
VNA1	**Neumayer--Stat**	**91.28**	**177**	⇑*i*	**P**	**22 16 44.7**	**+1.1**
INK	**Inuvik**	**91.90**	**15**	P	**P**	**22 16 45.2**	**-1.3**
	comp=Z,5.0nm,0.8s,mb4.5,baz=219,slow=6.5,SNR=9.2						
INK	**Inuvik**	**91.90**	**15**	*e*P	**P**	**22 16 45.2**	**-1.3**
	comp=Z,9.2nm,1.0s,mb4.7						
SONM	**Songino Array**	**93.86**	**319**	P	**P**	**22 16 56.7**	**+0.7**
	comp=Z,0.2nm,0.4s,mb3.5,baz=70,slow=21,SNR=5.4						
YKA	**Yellowknife Ar**	**94.29**	**25**	P	**P**	**22 16 56.6**	**-0.9**
	comp=Z,2.8nm,0.8s,mb4.4,baz=234,slow=4.9,SNR=7.6						
LPAZ	**La Paz**	**103.03**	**112**	P	Pdif	22 17 39.0	+1.2
	comp=Z,0.8nm,0.8s,baz=332,slow=5.0,SNR=4.4						
MKAR	**Makanchi Array**	**109.46**	**314**	PKKPbc		22 33 11.4	
	comp=Z,0.5nm,0.7s,baz=256,slow=5.0,SNR=4.4						
BVAR	**Borovoye Array**	**117.15**	**321**	PKP	PKPdf	22 22 18.8	-0.7
	comp=Z,0.9nm,0.4s,baz=109,slow=2.3,SNR=8.8						
ARCES	**ARCESS Array B**	**126.49**	**350**	PKP	PKPdf	22 22 37.2	0.0
	comp=Z,3.5nm,0.8s,baz=45,slow=1.7,SNR=7.2						
ARCES	**ARCESS Array B**	**126.49**	**350**	PKP	PKPdf	22 22 37.2	0.0
NOA	**NORSAR Array B**	**136.53**	**353**	PKP	PKPdf	22 22 58.0	+1.7
	comp=Z,1.0nm,0.8s,baz=14,slow=3.8,SNR=3.1						
KMBO	**Kilima Mbogo**	**140.40**	**245**	PKhKP		22 22 59.9	
	comp=Z,1.0nm,0.6s,baz=85,slow=8.6,SNR=5.7						
KMBO	**Kilima Mbogo**	**140.40**	**245**	PKP	PKPdf	22 22 59.9	-4.7
STHS	**Stebnicka Huta**	**145.03**	**338**	*e*P	PKPdf	22 23 13.3	+1.7
KOLS	**Kolonicke sedl**	**145.05**	**336**	*e*	PKPdf	22 23 13.1	+1.4
BRTR	**Keskin Array B**	**145.11**	**315**	PKPbc	PKPbc	22 23 13.7	+0.8
	comp=Z,3.4nm,0.5s,baz=117,slow=2.8,SNR=25						
BRTR				SKPbc		22 26 07.8	
	comp=Z,1.0nm,0.8s,baz=153,slow=3.2,SNR=4.6						
CFR	**Carcaliu**	**145.22**	**327**	⇓P	PKPdf	22 23 12.8	+0.7
CFR	**Carcaliu**	**145.22**	**327**	⇓P	PKPdf	22 23 12.8	+0.8
CRVS	**Cervenica-Dubn**	**145.38**	**337**	*e*P	PKPdf	22 23 13.7	+1.5
VRI	**Vrincioaia**	**145.46**	**329**	⇓P	PKPdf	22 23 14.5	+2.0
VRI	**Vrincioaia**	**145.46**	**329**	⇓P	PKPdf	22 23 14.5	+2.0
TIRR	**Tirgusor**	**145.56**	**326**	⇓P	PKPdf	22 23 16.2	+3.5
TIRR	**Tirgusor**	**145.56**	**326**	⇓P	PKPdf	22 23 16.2	+3.5
CLZ	**Clausthal**	**145.60**	**351**	*e*PKPbc	PKPbc	22 23 14.6	+0.9
CLL	**Collm**	**145.65**	**348**	⇓P	PKPdf	22 23 24.6	+12
	comp=Z,logA/T=0.8						
CLL	**Collm**	**145.65**	**348**	⇑*i*P	PKPdf	22 23 14.4	+1.8
CLL				*i*		22 23 19.0	
CLL				*i*		22 23 24.6	
HARR	**Harsova**	**145.66**	**326**	⇑P	PKPdf	22 23 14.4	+1.6
HARR	**Harsova**	**145.66**	**326**	⇑P	PKPdf	22 23 14.4	+1.6
OKC	**Ostrava-Krasne**	**145.69**	**341**	*e*PKP	PKPdf	22 23 15.0	+2.3
UPC	**Upice**	**145.69**	**344**	*e*PKP	PKPdf	22 23 15.3	+2.6
DPC	**Dobruska-Polom**	**145.75**	**344**	*e*PKP	PKPdf	22 23 15.6	+2.8
PVCC	**Panska Ves**	**146.03**	**346**	*e*PKP	PKPdf	22 23 15.7	+2.4
KECS	**Kecovo**	**146.08**	**338**	*e*	PKPdf	22 23 16.2	+2.8
KECS				*e*		22 25 13.0	
PRU	**Pruhonice**	**146.54**	**345**	*e*PKP	PKPdf	22 23 17.2	+3.1
VYHS	**Vyhne**	**146.65**	**339**	*e*	PKPdf	22 23 16.9	+2.6
VYHS				*e*		22 25 14.5	
NKC	**Novy Kostel**	**146.78**	**348**	*e*PKP	PKPdf	22 23 17.7	+3.2
TREC	**Trest**	**146.94**	**344**	*e*PKP	PKPdf	22 23 18.2	+3.4
TNS	**Taunus Mts**	**147.46**	**352**	*e*PKPbc	PKPdf	22 23 19.5	+3.9
ZST	**Bratislava**	**147.47**	**341**	*e*	PKPdf	22 23 19.8	+4.1
GRA1	**Grafenberg Arr**	**147.53**	**349**	*e*PKPbc	PKPdf	22 23 20.1	+4.4
GRF	**Grafenberg Arr**	**147.53**	**349**	*e*PKP	PKPdf	22 23 20.1	+4.4
KHC	**Kasperske Hory**	**147.57**	**346**	*e*PKP	PKPdf	22 23 20.1	+4.3
WET	**Wettzell**	**147.72**	**347**	*e*PKPbc	PKPdf	22 23 21.1	+5.1
GEC2	**GERESS Array S**	**147.81**	**345**	*e*PKPbc	PKPdf	22 23 20.4	+4.2
GERES	**GERESS Array B**	**147.81**	**345**	PKPbc	PKPdf	22 23 20.7	+4.5
	comp=Z,4.4nm,0.7s,baz=26,slow=2.8,SNR=29						
GIVF	**Givet**	**147.91**	**357**	*e*PKP1	PKPdf	22 23 20.2	+3.9
	comp=Z,34nm,0.8s						
BAIF	**Baives**	**147.99**	**357**	*e*PKP1	PKPdf	22 23 20.6	+4.2
FUR	**Furstenfeldbru**	**148.99**	**348**	*e*PKPbc	PKPdf	22 23 23.9	+5.8

FLN	La Foliniere	149.27	3	ePKP1	PKPdf	22 23 23.2	+4.7
BFO	Black Forest	149.33	352	ePKPbc	PKPdf	22 23 24.1	+5.5
CDF	Champ du Feu	149.38	353	ePKP1	PKPdf	22 23 23.9	+5.2
	comp=Z,9.0nm,0.7s						
LDF	La Druitiere	149.46	3	ePKP1	PKPdf	22 23 23.5	+4.6
	comp=Z,58nm,1.3s						
MEZF	Maizieres J'vi	149.49	356	ePKP1	PKPdf	22 23 24.5	+5.6
	comp=Z,47nm,1.2s						
SGMF	Saint Gilles	149.62	6	ePKP1	PKPdf	22 23 23.4	+4.3
GRR	Gorron	149.62	4	ePKP1	PKPdf	22 23 24.2	+5.1
	comp=Z,9.2nm,0.5s						
WATA	Walderalm	149.71	347	⇑iP	PKPdf	22 23 24.9	+5.5
	comp=Z,4.0nm,0.5s						
WTTA	Wattenberg	149.77	347	⇑iP	PKPdf	22 23 25.5	+6.1
	comp=Z,10nm,0.6s						
MOTA	Moosalm	149.80	348	⇑iP	PKPdf	22 23 25.1	+5.7
	comp=Z,4.3nm,0.7s						
HAU	Haudompre	149.88	354	ePKP1	PKPdf	22 23 24.9	+5.4
	comp=Z,12nm,0.8s						
QUIF	Quistinic	149.89	7	ePKP1	PKPdf	22 23 24.1	+4.5
SQTA	Sankt Quirin	149.90	347	⇑iP	PKPdf	22 23 25.6	+6.0
	comp=Z,6.4nm,0.6s						
HINF	Hinteralfeld	150.01	353	ePKP1	PKPdf	22 23 25.1	+5.3
	comp=Z,6.5nm,0.7s						
DAVA	Damuels	150.09	349	⇑iP	PKPdf	22 23 26.2	+6.3
	comp=Z,14nm,1.2s						
LOR	Lormes	150.79	357	ePKP1	PKPdf	22 23 27.2	+6.3
	comp=Z,15nm,0.8s						
HYF	Humbligny	150.83	359	ePKP1	PKPdf	22 23 27.5	+6.5
SSF	Saint Saulge	151.01	358	ePKP1	PKPdf	22 23 27.9	+6.6
	comp=Z,16nm,0.9s						
AVF	Avril sur Loir	151.29	358	ePKP1	PKPdf	22 23 27.9	+6.2
SMF	Signal de Mont	151.41	357	ePKP1	PKPdf	22 23 28.2	+6.3
MFF	Saint Martin d	151.44	3	ePKP1	PKPdf	22 23 28.3	+6.4
	comp=Z,7.6nm,0.6s						
BGF	Bois d'Agland	151.53	359	ePKP1	PKPdf	22 23 28.8	+6.8
	comp=Z,12nm,0.6s						
TCF	Toulx Ste Croi	151.81	360	ePKP1	PKPdf	22 23 29.3	+6.9
LPL	La Plagne	152.30	353	ePKP1	PKPdf	22 23 31.4	+8.3
LPG	La Plagne	152.31	353	ePKP1	PKPdf	22 23 31.5	+8.3
ORIF	Oris-en-Rattie	152.98	354	ePKP1	PKPdf	22 23 32.3	+8.2
MBDF	Montbardon	153.07	352	ePKP1	PKPdf	22 23 32.5	+8.3
	comp=Z,5.0nm,0.6s						
SMRF	Simiane la Rot	153.94	354	ePKP1	PKPdf	22 23 33.8	+8.4
FRF	La Foret Royal	154.23	352	ePKP1	PKPdf	22 23 34.6	+8.8

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*NEIC **10** 22:09:34.5±2.5, 24.79N×98.70E, h1^{km}±16^{km}, mb4.5/10, Error ellipse: s-maj=10.1km s-min=5.9km az=199.0*
*IDC **10** 22:09:34.6±0.7, 24.82N×98.74E, mb4.2/17, mb1 4.3/17, mb1mx4.2/25, mbtmp4.2/17, Error ellipse: s-maj=24.8km s-min=14.1km az=47.0*
*BJI **10** 22:09:35.4, 24.65N×98.72E, h27^{km}, mB4.5, mb4.1, ML4.3, Ms4.3, Msz3.7*
*MOS **10** 22:09:37.0±0.9, 24.68N×98.61E, h33^{km}, mb4.8/9, Error ellipse: s-maj=14.8km s-min=7.1km az=129.4*
ISC 10 22:09:34.3±2.4**, 24.77N**±0.05×**98.64E**±0.04**, h10^{km}**±16^{km}**, n84, σ1^{s}00**/84**, mb4.4**/33**, 2C-1D, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	3.74	84	P	Pn	22 10 34.2	+0.9
KMI				PG	Pg	22 10 43.4	-5.5
KMI				SG	Sg	22 11 29.0	-10
KMI				Smax			
	comp=N,1μm,0.9s						
KMI				Smax			
	comp=E,560nm,1.1s						
KMI				LR	LR		
	comp=N,5μm,6.6s						
KMI				LR	LR		
	comp=E,2μm,5.7s						
KMI				LR	LR		
	comp=Z,1μm,8.5s						
CHRT	Chiangrai	4.98	168	⇑PN	Pn	22 10 51.0	0.0
CHRT				PG	Pg	22 11 08.0	-5.8
CHRT				SG	Sg	22 12 11.0	-9.2
SHL	Shillong	6.18	279	eP	Pn	22 11 10.5	+2.7
GYA	Guiyang	7.43	75	⇑iP	Pn	22 11 23.4	-2.1
GYA				LR	LR		
	comp=N,3μm,11.7s						
GYA				LR	LR		
	comp=E,1μm,11.4s						
GYA				LR	LR		
	comp=Z,470nm,10.8s						
CD2	Chengdu	7.61	35	eP	Pn	22 11 27.6	-0.4
CD2				ePG	Pg	22 11 53.0	-13
CD2				SG	Sg	22 13 29.0	-19
CD2				Smax			
	comp=N,210nm,1.6s						
CD2				LR	LR		
	comp=E,700nm,7.8s						
CD2				LR	LR		
	comp=Z,330nm,7.2s						
LSA	Lhasa	8.28	308	P	P	22 11 38.4	+1.0
LSA	Lhasa	8.28	308	ePn	P	22 11 37.8	+0.4
	comp=Z,14nm,0.5s						
LSA	Lhasa	8.28	308	eP	P	22 11 37.8	+0.4
LSA				pmax	pmax		
	comp=Z,14nm,0.5s						
ENH	Enshi	11.07	58	eP	P	22 12 11.7	-4.2
	comp=Z,17nm,0.8s						
BOK	Bokaro	11.68	268	eP	P	22 12 24.0	-0.1
BOK				AMb	AMB	22 12 24.8	
	comp=Z,5.8nm,0.5s						
GUN	Gumba	11.87	288	eP	P	22 12 26.3	-0.4
	comp=Z,30nm,0.5s						
PKI	Pulchoki	12.21	286	eP	P	22 12 30.3	-1.0
	comp=Z,18nm,0.4s						
KKN	Kakani	12.36	287	eP	P	22 12 32.3	-1.0
	comp=Z,36nm,0.8s						
DMN	Daman	12.48	286	eP	P	22 12 33.6	-1.3
	comp=Z,18nm,0.6s						
GKN	Gorkha	12.96	287	eP	P	22 12 40.1	-1.2
	comp=Z,18nm,0.5s						
KOLN	Koldanda	13.83	286	eP	P	22 12 51.1	-1.7
	comp=Z,28nm,1.0s						
BLSP	Bilaspur	15.38	264	i P	P	22 13 13.8	+0.6
JOSI	Joshimath	17.86	293	ex	x	22 13 20.5	
KALG	Kalgarh	18.32	289	ex	x	22 13 49.1	
NJ2	Nanjing	19.19	63	eP	P	22 13 56.0	-4.8
NJ2				AP		22 14 03.6	
NJ2				XP		22 14 08.5	
NJ2				PP	PP	22 14 13.4	-4.4
NJ2				S	S	22 17 24.0	-7.4
NJ2				XS		22 17 36.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,40nm,4.0s						
NJ2				LR	LR		
	comp=N,2μm,13.2s						
NJ2				LR	LR		
	comp=E,740nm,12.1s						
KLP	Kalpa	19.19	295	ex	x	22 13 41.9	
HHC	Hu-ho-hao-te	19.33	31	i P	P	22 14 04.7	+2.3
HHC				AMB	AMB		
	comp=Z,120nm,5.0s						
HHC				LR	LR		
	comp=N,170nm,13.0s						
HHC				LR	LR		
	comp=E,210nm,15.0s						
HHC				LR	LR		
	comp=Z,120nm,13.0s						
BHPL	Bhopal	19.45	270	eP	P	22 14 05.3	+1.4
BHPL				AMb	AMB	22 14 05.8	
	comp=Z,29nm,0.7s						
KULM	Kulim	19.46	174	eP	P	22 14 07.7	+3.7
KUDL	Kundal	20.11	284	eP	P	22 14 11.3	+0.1
KUDL				AMb	AMB	22 14 12.0	
	comp=Z,10nm,0.5s						
KHET	Khetri	20.71	284	eP	P	22 14 18.0	+0.6
KHET				AMb	AMB	22 14 19.7	
	comp=Z,24nm,1.1s						
WMQ	Urumqi	21.02	337	eP	P	22 14 20.6	+0.2
THN	Thein Dam	21.50	296	eP	P	22 14 25.8	+0.4
AJM	Ajmer	21.70	280	eP	P	22 14 26.6	-0.9
TGY	Tagaytay City	23.51	113	P	P	22 14 47.0	+1.6
	comp=Z,50nm,0.3s,mb5.3,baz=240,slow=11,SNR=3.0						
SONM	Songino Array	23.83	13	P	P	22 14 49.0	+0.7
	comp=Z,1.7nm,0.9s,mb3.5,baz=200,slow=8.5,SNR=7.6						
MKAR	Makanchi Array	25.57	333	P	P	22 15 06.3	+1.3
	comp=Z,14nm,0.7s,mb4.6,baz=145,slow=10,SNR=65						
ZAK	Zakamensk	25.83	7	eP	P	22 15 09.2	+1.9
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
AAK	Ala-Archa	26.71	318	eP	P	22 15 16.3	+0.8
	comp=Z,2.7nm,0.8s,mb3.8						
AAK	Ala-Archa	26.71	318	eP	P	22 15 16.3	+0.7
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.9						
KURK	Kurchatov	30.17	334	eP	P	22 15 45.6	-1.0
	comp=Z,3.8nm,0.9s,mb4.1						
KURK	Kurchatov	30.17	334	eP	P	22 15 45.6	-1.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
ZAL	Zalesovo	30.92	344	P	P	22 15 53.1	-0.2
	comp=Z,2.0nm,0.8s,mb4.0,baz=304,slow=11,SNR=9.6						
NVS	Novosibirsk	32.14	343	eP	P	22 16 02.4	-1.6
BVAR	Borovoye Array	35.34	330	P	P	22 16 32.2	+0.5
	comp=Z,3.0nm,0.6s,mb4.4,baz=136,slow=10,SNR=12						
BRVK	Borovoye	35.41	330	eP	P	22 16 32.7	+0.5
	comp=Z,10nm,1.1s,mb4.7						
BRVK	Borovoye	35.41	330	eP	P	22 16 32.7	+0.4
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
CHKZ	Chkalovo	35.68	331	eP	P	22 16 35.0	+0.4
	comp=Z,14nm,1.5s,mb4.7						
CHKZ	Chkalovo	35.68	331	eP	P	22 16 35.0	+0.4
CHKZ				pmax	pmax		
	comp=Z,15nm,1.5s,mb4.7						
ASAJ	Asahikawa	40.50	50	P	P	22 17 14.4	-0.6
	comp=Z,7.0nm,0.7s,mb4.4,baz=260,slow=12,SNR=4.2						
ORR	Orenburg	42.76	320	⇓iP	P	22 17 34.8	+1.4
ORR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
ARU	Arti	42.88	328	eP	P	22 17 34.7	+0.4
	comp=Z,9.3nm,0.8s,mb4.6						
ARU	Arti	42.88	328	eP	P	22 17 34.7	+0.4
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
UMR	Umm Al-Rimmam	45.28	288	eP	P	22 17 54.7	+0.7
UMR				AMb	AMB	22 17 55.5	
	comp=Z,35nm,0.6s,mb5.3						
MIB	Mutribah	45.57	288	eP	P	22 17 57.0	+0.6
MIB				AMb	AMB	22 17 58.0	
	comp=Z,68nm,0.6s						
NAY	Al-Naaiem	45.72	287	eP	P	22 17 58.1	+0.6
NAY				AMb	AMB	22 17 59.1	
	comp=Z,28nm,0.7s,mb5.3						
GNI	Garni	47.30	303	P	P	22 18 11.3	+1.3
	comp=Z,5.1nm,0.7s,mb4.6,baz=162,slow=3.8,SNR=5.3						
GNI	Garni	47.30	303	eP	P	22 18 10.8	+0.9
GNI	Garni	47.30	303	i P	P	22 18 10.9	+1.0
ZEI	Tsey	48.07	306	eP	P	22 18 16.1	+0.2
ZEI				i		22 19 42.5	
ZEI				i		22 20 07.7	
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
GOF	Gofitskoye	48.87	309	eP	P	22 18 21.6	-0.4
GOF				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.1						
FITZ	Fitzroy Crossi	50.07	146	P	P	22 18 32.2	+0.6
	comp=Z,4.5nm,0.7s,mb4.6,baz=342,slow=13,SNR=3.6						
BR131	Keskin Array S	55.85	302	eP	P	22 19 14.0	-0.2
	comp=Z,1.8nm,0.9s,mb4.1						
BRTR	Keskin Array B	55.85	302	P	P	22 19 14.2	-0.1
	comp=Z,1.4nm,0.9s,mb4.0,baz=113,slow=7.0,SNR=7.3						
WRA	Warramunga Arr	56.40	139	P	P	22 19 17.4	-1.1
	comp=Z,4.6nm,0.9s,mb4.5,baz=329,slow=7.6,SNR=9.5						
WRAB	Tennant Creek	56.40	139	eP	P	22 19 17.2	-1.3
	comp=Z,13nm,1.1s,mb4.9						
WRAB	Tennant Creek	56.40	139	eP	P	22 19 17.2	-1.3
WRAB				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.9						
JOF	Joensuu	57.95	330	epkp	P	22 19 28.4	-0.5
AKASG	Malin Array Be	58.35	316	P	P	22 19 30.9	-1.0
	comp=Z,3.3nm,0.6s,mb4.5,baz=79,slow=7.0,SNR=13						
KAF	Kangasniemi	60.18	329	epkp	P	22 19 43.3	-1.0
FINES	FINESS Array B	60.25	328	P	P	22 19 44.2	-0.7
	comp=Z,1.7nm,0.6s,mb4.3,baz=90,slow=5.7,SNR=7.8						
FINES	FINESS Array B	60.25	328	P	P	22 19 44.2	-0.7
ARCES	ARCESS Array B	61.14	337	P	P	22 19 49.8	-1.0
	comp=Z,1.7nm,0.6s,mb4.4,baz=80,slow=7.4,SNR=10						
KWP	Kalwaria	62.60	315	eP	P	22 20 00.8	-0.2
	comp=Z,19nm,1.0s,mb5.2						
KWP	Kalwaria	62.60	315	eP	P	22 20 00.8	-0.1
KWP				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
CTA	Charters Tower	64.29	130	P	P	22 20 11.5	-1.0
	comp=Z,3.5nm,1.0s,mb4.3,baz=329,slow=5.9,SNR=3.0						
KMBO	Kilima Mbogo	64.72	256	P	P	22 20 16.1	+0.7
	comp=Z,1.1nm,0.8s,mb3.9,baz=51,slow=15,SNR=4.6						
MORC	Moravsky Berou	65.90	315	P	P	22 20 22.3	-0.1
	comp=Z,4.1nm,1.2s,mb4.3						
MORC	Moravsky Berou	65.90	315	P	P	22 20 22.3	0.0
MORC				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
NOA	NORSAR Array B	67.43	328	P	P	22 20 30.7	-1.3
	comp=Z,1.5nm,0.8s,mb4.1,baz=80,slow=5.0,SNR=4.0						
NOA	NORSAR Array B	67.43	328	P	P	22 20 30.7	-1.3
GERES	GERESS Array B	68.55	315	P	P	22 20 39.5	+0.3
	comp=Z,1.3nm,0.8s,mb3.9,baz=59,slow=5.7,SNR=6.8						
GERES	GERESS Array B	68.55	315	P	P	22 20 39.5	+0.3
STKA	Stephens Creek	69.68	142	P	P	22 20 46.9	+0.5
ILAR	Eielson Array	77.59	24	P	P	22 21 27.6	-4.1
	comp=Z,0.4nm,0.8s,mb3.4,baz=293,slow=6.9,SNR=3.3						
INK	Inuvik	79.67	17	P	P	22 21 42.3	-0.8
	comp=Z,3.1nm,0.9s,mb4.2,baz=348,slow=6.2,SNR=5.5						
INK	Inuvik	79.67	17	eP	P	22 21 42.1	-1.0
	comp=Z,4.6nm,1.0s,mb4.4						
INK	Inuvik	79.67	17	eP	P	22 21 42.1	-1.0
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SDV	Santo Domingo	144.96	341	ePKPdf	PKPdf	22 29 12.0	-3.6

MAN 10 22:28:30.6, 8.95N×125.69E, h14^{km}, mb4.7, ML3.6, MS3.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.85	347	eP	Pb	22 28 47.9	+1.3
SCPH				eS	Sb	22 29 00.1	+2.5
BIPH	Bislig	1.01	139	⇓iP	Pb	22 28 47.4	-1.9
BIPH				i S	Sb	22 29 00.7	-1.5
BUKP	Musuan	1.23	210	eP	Pb	22 28 52.7	-0.4
BUKP				eS	Sb	22 29 11.0	+2.4
MSLP	Maasin	1.43	325	eP	Pn	22 28 54.2	-2.0
TBP	Tagbilaran	1.95	292	eP	Pn	22 29 02.8	-0.9
TBP				eS	Sn	22 29 28.9	+0.9
MATI	Mati	2.07	164	eP	Pn	22 29 04.5	-0.9
MATI				eS	Sn	22 29 33.0	+1.9
PAGZ	Pagadian	2.53	245	eP	Pn	22 29 12.0	+0.1
PAGZ				eS	Sn	22 29 43.2	+0.4

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*ISK **10** 23:22:52.3, 36.99N×27.95E, h18^{km}, MD3.3*
*CSEM **10** 23:22:52.1±0.2, 37.01N×27.95E, h8^{km}, MD3.3, Error ellipse: s-maj=4.1km s-min=3.4km az=179.0*
*ATH **10** 23:22:55.2, 36.94N×27.69E, h19^{km}±6^{km}, MD3.2/4*
ISC 10 23:22:53.0±0.5**, 37.01N**±0.03×**27.94E**±0.03**, h12^{km}**±4^{km}**, n23, σ1^{s}07**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.30	66	i PG	Pg	23 22 59.3	-0.1
YER				i SG	Sg	23 23 04.5	+0.8
MLSB	Milas	0.31	336	PG	Pg	23 22 59.6	0.0
MLSB				SG	Sg	23 23 05.3	+1.4
BDRM	Kayabasi	0.40	278	i P	Pg	23 23 01.2	0.0
BDRM				i S	Sg	23 23 08.1	+1.4
DAT	Datca	0.40	226	PG	Pg	23 23 01.1	-0.2
BODT	Bodrum	0.50	276	ePG	Pg	23 23 02.5	-0.8
DALT	Dalyan (Mudla)	0.61	113	ePG	Pg	23 23 04.1	-1.3
AYDN	Tasoluk	0.65	356	i P	Pb	23 23 06.0	+0.2
AYDN				i S	Sb	23 23 14.9	+0.3
NISR	Nisiros	0.76	239	ePN	Pn	23 23 06.0	-3.4
ARG	Arkhangelos	0.81	169	ePN	Pn	23 23 09.3	-0.8
ARG				eSN	Sn	23 23 23.1	+1.1
FETY	Fethiye	0.99	112	ePG	Pg	23 23 11.5	-1.5
DNZL	Cakiroluk	1.11	52	i P	Pb	23 23 14.3	+0.6
DNZL				i S	Sb	23 23 29.0	+0.9
SMG	Samos	1.12	309	ePN	Pn	23 23 14.8	+0.3
DENT	Denizli	1.15	49	ePN	Pn	23 23 14.4	-0.5
GOLH	Golhisar	1.32	80	i P	Pb	23 23 18.9	+1.6
GOLH				i S	Sb	23 23 38.5	+4.5
IZM	Izmir	1.48	339	ePN	Pn	23 23 19.4	-0.3
KDAG	Bornova	1.49	339	i P	Pn	23 23 18.0	-1.8
KDAG				i S	Sb	23 23 36.1	-2.8
BLCB	Balcova	1.54	333	ePN	Pn	23 23 20.3	-0.3
AKAS	Kas	1.55	120	i P	Pn	23 23 22.7	+2.0
AKAS				i S	Sb	23 23 45.3	+4.5
MANT	Manisa	1.56	18	i P	Pn	23 23 21.3	+0.5
MANT				i S	Sb	23 23 41.6	+0.7
KARP	Karpathos	1.59	203	ePN	Pn	23 23 21.8	+0.5
KARP				eSN	Sn	23 23 42.9	+1.0
ELL	Elmali	1.60	99	ePN	Pn	23 23 19.8	-1.7
AKS	Akhisar	1.87	357	ePN	Pn	23 23 24.8	-0.4
BCK	Bucak	2.17	77	ePN	Pn	23 23 28.2	-1.3

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*NEIC **10** 23:38:57.4, 30.61S×72.10W, h5^{km}, ML3.3(GUC), After GUC.*
GUC 10 23:38:57.4±0.7**, 30.61S×72.10W, h5^{km}, MD3.5, ML3.3, 1C, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	1.10	121	i P	Pb	23 39 17.6	-0.9
CMCH				i S	Sb	23 39 33.2	+0.2
CMCH				AMP		23 39 37.8	
	comp=E,3μm,0.7s						
TLL	Tololo Astrono	1.20	69	i P	Pb	23 39 20.2	0.0
TLL				i S	Sb	23 39 37.3	+1.4
TLL				AMP		23 39 40.7	
	comp=E,1μm,0.4s						
ILCH	Illapel	1.30	142	i P	Pb	23 39 21.1	-0.9
ILCH				i S	Sb	23 39 38.9	+0.2
ILCH				AMP		23 39 40.0	
	comp=E,830nm,0.4s						
CHNG	Los Chungos	1.37	158	⇑iP	Pb	23 39 21.7	-1.5
CHNG				i S	Sb	23 39 41.0	+0.1
CHNG				AMP		23 39 47.8	
	comp=N,245nm,0.4s						
JACH	Jahuel	2.44	149	i P	Pn	23 39 38.9	+0.4
JACH				i S	Sn	23 40 11.0	+2.0
PEL	Peldehue	2.80	155	AMP		23 40 29.9	
	comp=E,272nm,0.4s						
FCH	Farellones	3.12	151	i P	Pn	23 39 49.0	+0.8
FCH				i S	Sn	23 40 28.5	+2.2
FCH				AMP		23 40 43.0	
	comp=E,86nm,0.7s						
TACH	Talagante	3.19	162	i P	Pn	23 39 49.3	0.0
TACH				i S	Sn	23 40 29.2	+0.9

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*IDC **11** 00:04:26.7±1.3, 16.01N×121.48E, mb4.0/3, mb1 4.2/3, mb1mx3.6/17, mbtmp4.0/3, Error ellipse: s-maj=58.6km s-min=21.7km az=80.0*
*MAN **11** 00:04:28.6, 15.34N×119.35E, h9^{km}, mb4.6, ML3.5, MS3.3*
ISC 11 00:04:27.8±0.8**, 15.36N**±0.03×**119.29E**±0.06**, h10^{km}, n19, σ0^{s}98**/26**, mb3.8**/3**, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCZP	Santa Cruz	0.73	55	eP	Pb	00 04 42.0	-0.2
SCZP				eS	Sb	00 04 52.0	0.0
BOLP	Bolinao	1.18	31	eP	Pb	00 04 50.1	+0.2
BOLP				eS	Sb	00 05 04.6	-0.5
PCPH	Palayan	1.76	83	⇑iP	Pn	00 04 58.1	-0.5
PCPH				i S	Sn	00 05 19.9	-1.3
LUBP	Lubang	1.86	150	eP	Pn	00 05 00.1	0.0
TGY	Tagaytay City	2.03	128	Pn	Pn	00 05 01.2	-1.3
	58nm,0.3s,baz=131,slow=9.3,SNR=2.0						
TGY				Sn	Sn	00 05 28.1	0.0
	276nm,0.3s,baz=323,slow=18,SNR=7.4						
BALP	Baler	2.24	80	eP	Pn	00 05 05.8	+0.2
BALP				eS	Sn	00 05 33.2	-0.3
POLP	Polilio Island	2.64	103	eP	Pn	00 05 12.1	+0.8
POLP				eS	Sn	00 05 44.7	+1.1
ABRA	Dolores	2.66	31	eP	Pn	00 05 11.6	+0.1
CAUP	Cauayan	2.90	57	eP	Pn	00 05 17.2	+2.2
APYP	Conner	3.12	37	eP	Pn	00 05 18.7	+0.6
APYP				eS	Sn	00 05 55.3	-0.5
SJMP	San Jose	3.39	148	eP	Pn	00 05 23.1	+1.2
SJMP				eS	Sn	00 06 02.5	0.0
BUSP	Coron	3.45	165	eP	Pn	00 05 22.5	-0.3
OTRP	Odiongan	3.99	138	eP	Pn	00 05 32.9	+2.4
ENPP	El Nido	4.13	178	eP	Pn	00 05 32.1	-0.3
CUYO	Cuyo Island	4.79	159	eP	Pn	00 05 39.3	-2.5
WRA	Warramunga Arr	38.07	157	P	P	00 11 45.2	-3.5
	1.5nm,0.6s,mb3.9,baz=337,slow=9.4,SNR=9.0						
MKAR	Makanchi Array	43.89	323	P	P	00 12 42.1	+5.8
	0.3nm,0.7s,mb3.1,baz=121,slow=8.4,SNR=4.3						
FINES	FINESS Array B	78.18	331	P	P	00 16 28.8	0.0
	3.6nm,1.0s,mb4.3,baz=90,slow=3.8,SNR=3.7						
PLCA	Paso Flores	153.31	163	PKPbc	PKPdf	00 24 28.5	+6.8
	1.5nm,0.7s,baz=207,slow=4.5,SNR=4.0						

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*JMA **11** 00:12:29.3±0.2, 42.94N×146.75E, h54^{km}±3^{km}, M3.3*
*IDC **11** 00:12:48.1±2.1, 45.73N×144.37E, mb3.9/5, mb1 4.1/5, mb1mx3.7/20, mbtmp3.9/5, Error ellipse: s-maj=47.5km s-min=25.7km az=141.0*
ISC 11 00:12:29.6±1.9**, 42.9N**±0.1×**146.7E**±0.1**, h45^{km}**±13^{km}**, n13, σ0^{s}46**/19**, mb4.1**/4**, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.85	302	P	P	00 12 45.4	0.0
NEM2				eS	S	00 12 57.1	+0.1
JAK	Akkeshi	1.50	274	P	P	00 12 54.6	0.0
JAK				eS	S	00 13 13.5	+0.4
JRA	Rausu	1.56	311	P	P	00 12 55.1	-0.3
JRA				eS	S	00 13 14.4	-0.1
JNK	Nakash	1.62	295	P	P	00 12 56.1	-0.1
JNK				eS	S	00 13 15.2	-0.8
JAR	Ashorobuto	2.21	281	P	P	00 13 04.6	0.0
JAR				eS	S	00 13 30.3	-0.4
JTKR	Abashiri--Toko	2.31	298	P	P	00 13 06.5	+0.4
JTKR				eS	S	00 13 34.4	+0.9
JCH	Churui	2.50	264	eS	S	00 13 38.0	-0.3
ASAJ	Asahikawa	3.24	293	Pn	P	00 13 23.2	+3.9
	1.4nm,0.3s,baz=94,slow=15,SNR=3.6						
ASAJ				Sn	S	00 13 45.0	-12
	1.9nm,0.3s,baz=72,slow=18,SNR=5.8						
SONM	Songino Array	28.52	294	P	P	00 18 23.1	+0.3
	1.6nm,0.6s,mb3.9,baz=89,slow=8.5,SNR=16						
ILAR	Eielson Array	42.34	36	P	pP	00 20 33.6	+1.0
	1.0nm,1.0s,baz=282,slow=8.3,SNR=6.9						
MKAR	Makanchi Array	44.71	298	P	P	00 20 40.1	+0.4
	0.9nm,0.6s,mb3.8,baz=84,slow=9.7,SNR=18						
ARCES	ARCESS Array B	59.92	340	P	P	00 22 32.4	-0.4
	2.5nm,0.8s,mb4.3,baz=34,slow=6.5,SNR=2.9						
FINES	FINESS Array B	65.48	333	P	P	00 23 09.4	-0.2
	3.0nm,1.0s,mb4.3,baz=342,slow=8.8,SNR=4.1						

IDC 11 00:13:32.7±8.3**, 2.41N×97.74E, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/17**, mbtmp3.7**/3**, Error ellipse: s-maj=396.4km s-min=29.5km az=55.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.23	123	P	P	00 21 27.8	-1.7
	0.2nm,0.4s,baz=301,slow=9.1,SNR=4.8						
MKAR	Makanchi Array	46.21	345	P	P	00 21 59.4	-1.9
	0.8nm,0.6s,baz=158,slow=8.6,SNR=11						
ZAL	Zalesovo	52.45	350	P	P	00 22 46.9	-2.4
	1.7nm,0.7s,baz=308,slow=7.2,SNR=8.6						

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*IDC **11** 00:15:36.3±2.3, 57.26N×120.47E, mb3.6/6, mb1 3.8/7, mb1mx3.6/21, mbtmp3.6/7, ML2.9/1, Error ellipse: s-maj=53.9km s-min=22.8km az=143.0*
*BYKL **11** 00:15:37.1±0.3, 57.39N×120.68E, h3^{km}±19^{km}*
*NEIC **11** 00:15:37.9±0.6, 57.38N×120.44E, h5^{km}, Error ellipse: s-maj=12.4km s-min=8.5km az=171.0*
*MOS **11** 00:15:38.8±2.6, 57.34N×120.55E, h15^{km}, mb4.1/3, Error ellipse: s-maj=17.6km s-min=15.0km az=54.5*
ISC 11 00:15:34.7±0.4**, 57.35N**±0.04×**120.71E**±0.04**, h3^{km}, n39, σ1^{s}64**/58**, mb3.6**/5**, 4D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	Chara	1.41	252	⇓iPg	Pg	00 16 03.5	+0.6
CRS				e		00 16 05.5	

CRS				max		00 16 06.8	
	169nm,1.1s						
CRS				*e*		00 16 07.3	
CRS				*e*Sg	**Sg**	**00 16 21.3**	**-0.4**
CRS				Smax		00 16 22.1	
	449nm,0.5s						
CRS	**Chara**	**1.41**	**252**	*e*P	**Pb**	**00 16 03.4**	**+2.1**
CRS				*e*		00 16 21.1	
CRS				pmax	pmax		
	comp=Z,119nm,0.3s						
CRS				smax			
	comp=E,451nm,0.5s						
NRGR	**Nerungri**	**2.30**	**106**	*e*P	**Pn**	**00 16 19.7**	**+5.6**
NRGR				S	**Sn**	**00 16 48.3**	**+5.0**
CLNS	**Chul'man**	**2.34**	**101**	*e*Pn	**Pn**	**00 16 16.7**	**+2.1**
CLNS				*e*Pg	**Pg**	**00 16 21.5**	**+0.1**
CLNS				Pmax		00 16 24.0	
	comp=E,302nm,0.2s						
CLNS				*e*Sn	**Sn**	**00 16 46.0**	**+1.7**
CLNS				*e*Sg	**Sg**	**00 16 51.1**	**-1.5**
CLNS				Smax		00 16 51.7	
	comp=E,2µm,0.3s						
CLNS	**Chul'man**	**2.34**	**101**	*e*P	**Pn**	**00 16 19.5**	**+4.9**
CLNS				*e*S	**Sn**	**00 16 48.9**	**+4.6**
CLNS				pmax	pmax		
	comp=N,10.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,18nm,0.2s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,48nm,0.3s						
CLNS				pmax	pmax		
	comp=N,12nm,0.2s						
CLNS				pmax	pmax		
	comp=E,23nm,0.3s						
CLNS				smax			
	comp=E,26nm,0.2s						
CLNS				smax			
	comp=Z,17nm,0.2s						
CLNS				smax			
	comp=N,45nm,0.3s						
CLNS				smax			
	comp=N,180nm,0.3s						
CLNS				smax			
	comp=E,260nm,0.3s						
CLNS				smax			
	comp=Z,79nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,100nm,17.0s						
ALDR	**Aldan**	**2.80**	**61**	*e*Pn	**Pn**	**00 16 23.2**	**+2.0**
ALDR				*e*Pg	**Pg**	**00 16 28.6**	**-2.0**
ALDR				*e*		00 16 31.7	
ALDR				max		00 16 32.4	
	comp=Z,157nm,0.2s						
ALDR				*e*Sn	**Sn**	**00 16 54.2**	**-1.8**
ALDR				*e*Sg	**Sg**	**00 17 03.0**	**-4.9**
ALDR				Smax		00 17 03.2	
	comp=Z,2µm,0.2s						
NLYR	**Nelyaty**	**2.88**	**255**	*e*Pn	**Pn**	**00 16 24.8**	**+2.4**
NLYR				⇓*i*Pg	**Pg**	**00 16 29.3**	**-2.9**
NLYR				*e*		00 16 31.4	
NLYR				max		00 16 32.5	
	comp=Z,130nm,0.6s						
NLYR				*e*Sg	**Sg**	**00 17 05.6**	**-5.0**
NLYR				Smax		00 17 10.9	
	comp=Z,499nm,1.2s						
NLYR	**Nelyaty**	**2.88**	**255**	*e*P	**Pn**	**00 16 29.1**	**+6.7**
NLYR				*e*		00 17 04.2	
NLYR				pmax	pmax		
	comp=Z,129nm,0.5s						
NLYR				smax			
	comp=E,499nm,1.1s						
TUP	**Tupik**	**2.97**	**189**	⇓*i*Pn	**Pn**	**00 16 25.6**	**+2.0**
TUP				*e*		00 16 26.4	
TUP				*e*Pg	**Pg**	**00 16 30.4**	**-3.6**
TUP				Pmax		00 16 33.6	
	comp=E,186nm,0.7s						
TUP				*e*Sn	**Sn**	**00 17 00.7**	**+0.5**
TUP				*e*Sg	**Sg**	**00 17 09.4**	**-4.1**
TUP				Smax		00 17 10.5	
	comp=E,586nm,0.7s						
TUP	**Tupik**	**2.97**	**189**	*e*P	**Pn**	**00 16 25.5**	**+1.9**
TUP				*e*S	**Sn**	**00 17 00.7**	**+0.5**
TUP				pmax	pmax		
	comp=Z,149nm,0.6s						
TUP				smax			
	comp=E,589nm,0.7s						
TNDR	**Tynda**	**3.15**	**133**	*e*Pn	**Pn**	**00 16 26.8**	**+0.7**
TNDR				*e*Pg	**Pg**	**00 16 33.3**	**-4.2**
TNDR				Pmax		00 16 35.9	
	comp=E,299nm,0.2s						
TNDR				*e*Sn	**Sn**	**00 17 05.0**	**+0.3**
TNDR				*e*Sg	**Sg**	**00 17 15.6**	**-3.8**
TNDR				Smax		00 17 20.0	
	comp=E,4µm,0.4s						
BOD	**Bodaibo**	**3.64**	**280**	*e*Pn	**Pn**	**00 16 33.2**	**0.0**
BOD				max		00 16 47.9	
	comp=E,16nm,0.4s						
BOD				*e*Sg	**Sg**	**00 17 27.3**	**-8.7**
BOD				Smax		00 17 36.9	
	comp=E,183nm,0.9s						
BOD	**Bodaibo**	**3.64**	**280**	*e*P	**Pn**	**00 16 34.1**	**+0.9**
BOD				*e*Pg	**Pg**	**00 16 41.8**	**-5.7**
BOD				*e*		00 17 26.3	
BOD	**Bodaibo**	**3.64**	**280**	*e*P	**Pn**	**00 16 34.1**	**+0.9**
BOD				*e*		00 17 26.3	
BOD				pmax	pmax		
	comp=Z,19nm,0.4s						
BOD				smax			
	comp=N,181nm,0.5s						
SVKR	**Severomuysk**	**4.13**	**256**	*e*Pn	**Pn**	**00 16 39.5**	**-0.7**
SVKR				*e*Pg	**Pg**	**00 16 50.0**	**-7.2**
SVKR				Pmax		00 16 55.2	
	comp=N,75nm,0.3s						
SVKR				*e*Sg	**Sg**	**00 17 44.5**	**-7.8**
SVKR				Smax		00 17 59.2	
	comp=N,309nm,0.9s						
UKT	**Uakit**	**4.36**	**248**	*e*Pn	**Pn**	**00 16 45.5**	**+2.1**
UKT				⇓*i*Pg	**Pg**	**00 16 55.7**	**-6.0**
UKT				Pmax		00 16 58.8	
	comp=N,15nm,0.6s						
UKT				*e*Sg	**Sg**	**00 17 50.9**	**-8.9**
UKT				Smax		00 18 04.2	
	comp=N,101nm,1.9s						
YOA	**Uoyan**	**5.10**	**260**	*e*Sg	Sx	00 18 13.1	
YOA				Smax		00 18 34.0	
	comp=N,693nm,1.8s						
ZEA	**Zeya**	**5.19**	**132**	*e*Sg	Sx	00 18 18.1	
KMO	**Kumora**	**5.46**	**258**	*e*Pn	**Pn**	**00 16 59.2**	**+0.3**
KMO				*e*Pg	Px	00 17 14.5	
KMO				Pmax		00 17 23.8	
	comp=N,8.0nm,0.5s						
KMO				*e*Sg	Sx	00 18 25.0	
KMO				Smax		00 18 35.2	
	comp=N,164nm,1.4s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*Pn	**Pn**	**00 17 06.8**	**+1.7**
YLYR				*e*Pg	Px	00 17 24.6	
YLYR				Pmax		00 17 35.9	
	comp=N,4.0nm,0.5s						
YLYR				*e*Sn	**Sn**	**00 18 10.2**	**-3.8**
YLYR				*e*Sg	Sx	00 18 38.9	
YLYR				Smax		00 18 43.8	
	comp=N,99nm,1.7s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*Pg	**Pg**	**00 17 25.6**	**-6.8**
YLYR				*e*Sg	Sx	00 18 36.6	
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*P	Px	00 17 25.6	
YLYR				pmax	pmax		
	comp=Z,14nm,0.8s						
NIZ	**Nizh Angarsk**	**6.38**	**260**	*e*Pg	Px	00 17 31.2	
NIZ				Pmax		00 17 49.5	
	comp=Z,4.0nm,0.8s						
NIZ				*e*Sg	Sx	00 18 52.8	
NIZ				Smax		00 19 04.7	
	comp=Z,55nm,1.1s						
YAK	**Yakutsk**	**6.52**	**40**	*e*Pg	Px	00 17 35.1	
YAK				Pmax		00 17 41.0	
	comp=Z,50nm,0.3s						
YAK				*e*Sn	**Sn**	**00 18 24.7**	**-5.1**
YAK				*e*Sg	Sx	00 18 56.0	
YAK				Smax		00 19 00.3	
	comp=Z,818nm,0.7s						
CIT	**Chita**	**6.76**	**221**	*e*Pg	Px	00 17 38.6	
CIT				Pmax		00 17 42.8	
	comp=Z,9.0nm,0.3s						
CIT				*e*Sg	Sx	00 19 05.2	
CIT				Smax		00 19 17.8	
	comp=Z,196nm,1.6s						
SYVR	**Suvo**	**7.12**	**243**	*e*Pn	**Pn**	**00 17 23.9**	**+1.5**
SYVR				*e*Pg	Px	00 17 46.1	
SYVR				Pmax		00 17 52.0	
	comp=Z,4.0nm,0.9s						
SYVR				*e*Sg	Sx	00 19 17.0	
SYVR				Smax		00 19 38.0	
	comp=Z,81nm,1.3s						
OGRR	**Ongureny**	**8.32**	**249**	*e*Sg	Sx	00 19 54.4	
OGRR				Smax		00 20 00.8	
	comp=Z,38nm,1.6s						
KPC	**Khapcheranga**	**9.12**	**216**	*e*	**P**	**00 17 47.6**	**-2.7**
KPC				*e*Sg	Sx	00 20 19.9	
KPC				Smax		00 20 25.7	
	comp=Z,63nm,1.5s						
SONM	**Songino Array**	**12.88**	**228**	Pn	**P**	**00 18 36.9**	**-4.4**
	comp=Z,0.1nm,0.3s,baz=28,slow=13,SNR=2.7						
SONM				Lg		00 22 21.8	
	comp=Z,0.4nm,0.3s,baz=38,slow=24,SNR=5.7						
ZAL	**Zalesovo**	**20.40**	**276**	P	**P**	**00 20 12.7**	**-2.5**
	comp=Z,0.4nm,0.2s,baz=18,slow=20,SNR=2.5						
MKAR	**Makanchi Array**	**25.53**	**262**	P	**P**	**00 21 05.6**	**-0.1**
	comp=Z,0.8nm,0.8s,mb3.3,baz=55,slow=7.6,SNR=4.3						
MKAR	**Makanchi Array**	**25.53**	**262**	P	**P**	**00 21 05.6**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**41.45**	**40**	P	**P**	**00 23 25.4**	**+1.7**
	comp=Z,0.4nm,0.6s,mb3.2,baz=298,slow=4.3,SNR=6.9						
FINES	**FINESS Array B**	**44.28**	**317**	P	**P**	**00 23 46.7**	**0.0**
	comp=Z,6.6nm,1.1s,mb4.3,baz=51,slow=8.9,SNR=6.3						
FINES	**FINESS Array B**	**44.28**	**317**	P	**P**	**00 23 46.7**	**0.0**
FINES	**FINESS Array B**	**44.28**	**317**	P	**P**	**00 23 46.7**	**0.0**
FINES				pmax	pmax		
	comp=Z,7.0nm,1.1s						
NOA	**NORSAR Array B**	**49.76**	**323**	P	**P**	**00 24 29.6**	**-0.1**
	comp=Z,0.7nm,0.6s,mb3.9,baz=51,slow=8.5,SNR=2.7						
NOA	**NORSAR Array B**	**49.76**	**323**	P	**P**	**00 24 29.6**	**-0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	**58.26**	**312**	P	**P**	**00 25 32.1**	**-0.2**
	comp=Z,0.2nm,0.5s,mb3.4,baz=30,slow=7.9,SNR=5.1						

JMA ***11*** *00:21:26.3±0.2, 42.92N×146.78E, h55^{km}±4^{km}, M3.4*
IDC ***11*** *00:21:30.5±9.0, 41.54N×145.69E, h56^{km}±66^{km}, mb3.5/3, mb1 3.6/4, mb1mx3.3/21, mbtmp3.7/4, ML3.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/27, Error ellipse: s-maj=69.4km s-min=31.5km az=174.0*
ISC 11 00:21:27.0±2.1**, 42.9N**±0.1×**146.7E**±0.1**, h45**^{km}±16^{km}**, n12,** σ**0^{s}40**/15**, mb3.7**/2**, MS3.2**/1**, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.86**	**304**	P	**P**	**00 21 42.7**	**-0.1**
NEM2				*e*S	**S**	**00 21 54.9**	**+0.5**
JAK	**Akkeshi**	**1.48**	**275**	P	**P**	**00 21 51.9**	**+0.1**
JRA	**Rausu**	**1.57**	**313**	P	**P**	**00 21 52.6**	**-0.3**
JRA				*e*S	**S**	**00 22 12.3**	**+0.1**
JNK	**Nakash**	**1.62**	**296**	P	**P**	**00 21 53.5**	**-0.1**
JNK				*e*S	**S**	**00 22 12.4**	**-1.0**
JAR	**Ashorobuto**	**2.19**	**282**	P	**P**	**00 22 01.8**	**0.0**
JAR				*e*S	**S**	**00 22 28.4**	**+0.5**
JTKR	**Abashiri--Toko**	**2.31**	**299**	P	**P**	**00 22 03.9**	**+0.4**
JCH	**Churui**	**2.48**	**265**	*e*S	**S**	**00 22 35.0**	**-0.2**
ASAJ	**Asahikawa**	**3.24**	**294**	P	**P**	**00 22 21.4**	**+4.7**
	1.2nm,0.3s,baz=114,slow=12,SNR=3.3						
ASAJ				S	**S**	**00 23 01.4**	**+7.1**
	2.9nm,0.3s,baz=310,slow=26,SNR=5.6						
SONM	**Songino Array**	**28.52**	**294**	P	**P**	**00 27 19.9**	**-0.3**
	1.2nm,0.8s,mb3.7,baz=101,slow=7.3,SNR=3.5						
GUMO	**Guam**	**29.23**	**184**	LR	LR	00 37 42.0	
	comp=Z,58nm,19.3s,MS3.2,baz=76,slow=35						
ILAR	**Eielson Array**	**42.38**	**36**	P	pP	00 29 31.1	+0.7
	1.1nm,1.0s,baz=268,slow=6.3,SNR=6.9						
MKAR	**Makanchi Array**	**44.71**	**298**	P	**P**	**00 29 37.4**	**+0.3**
	0.7nm,0.6s,mb3.7,baz=82,slow=9.0,SNR=11						

GUC ***11*** *00:25:57.9±0.7, 23.46S×68.80W, h80^{km}±11^{km}, ML4.6*
NEIC ***11*** *00:25:57.9, 23.46S×68.80W, h80^{km}, mb4.0/1, After GUC.*
IDC ***11*** *00:25:57.9±0.7, 23.14S×68.71W, h97^{km}±6^{km}, mb3.8/8, mb1 3.9/11, mb1mx3.8/17, mbtmp4.1/11, Error ellipse: s-maj=24.7km s-min=17.0km az=84.0*
ISC 11 00:25:56.8±0.4**, 23.35S**±0.05×**68.80W**±0.05**, h103**^{km}±5^{km}**, n40,** σ**1^{s}06**/46**, mb3.9**/8**, 1C-6D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**0.71**	**51**	⇓*i*P	**P**	**00 26 15.3**	**+0.5**
SPCH				*i* S	**S**	**00 26 28.4**	**+0.2**
SPCH				AMP		00 26 29.2	
	comp=E,32µm,0.4s						
CEN1	**Los Morros**	**1.29**	**268**	⇓*i*P	**P**	**00 26 22.6**	**+1.5**
CEN1				*i* S	**S**	**00 26 41.0**	**+1.6**
CEN1				AMP		00 26 45.7	
	comp=E,12µm,0.6s						
ANCH	**Antofagasta**	**1.52**	**257**	⇑*i*P	**P**	**00 26 23.4**	**-0.5**
ANCH				*i* S	**S**	**00 26 43.3**	**-0.7**
ANCH				AMP		00 26 47.5	
	comp=N,17µm,0.3s						
CPN1	**Cerro Paranal**	**1.94**	**229**	*e*P	**P**	**00 26 29.7**	**+0.5**
CPN1				*i* S	**S**	**00 26 53.3**	**0.0**
CPN1				AMP		00 27 02.4	
	comp=E,6µm,0.3s						
CRCH	**Chaqaral**	**3.41**	**209**	*e*P	**P**	**00 26 48.6**	**-0.6**
CRCH				*i* S	**S**	**00 27 27.5**	**-1.4**
CDCH	**Caldera**	**4.13**	**206**	*i* P	**P**	**00 26 57.0**	**-2.0**
LPAZ	**La Paz**	**7.06**	**5**	P	**P**	**00 27 36.9**	**-2.2**
	comp=E,1.4nm,0.3s,baz=198,slow=7.3,SNR=33						
LPAZ	**La Paz**	**7.06**	**5**	*e*Pn	**P**	**00 27 39.4**	**+0.3**
	comp=E,40nm,1.2s						
ARE	**Arequipa**	**7.31**	**339**	*e*P	**P**	**00 27 50.0**	**+7.5**
ARE				*e*S	**S**	**00 28 54.0**	**-10**
CFAA	**Coronel Fontan**	**8.23**	**177**	P	**P**	**00 27 54.4**	**-0.6**
	comp=E,0.5nm,0.3s,baz=356,slow=14,SNR=37						
CFAA				S	**S**	**00 29 16.1**	**-11**
	comp=E,0.4nm,0.3s,baz=120,slow=17,SNR=17						
SIV	**San Ignacio**	**10.32**	**46**	P	**P**	**00 28 19.6**	**-3.6**
	comp=E,6.4nm,0.3s,baz=250,slow=10.0,SNR=131						
SIV				S	**S**	**00 30 04.3**	**-13**
	comp=E,0.8nm,0.3s,baz=329,slow=19,SNR=3.2						
SIV	**San Ignacio**	**10.32**	**46**	P	**P**	**00 28 19.6**	**-3.6**
SIV				S	**S**	**00 30 04.3**	**-13**
CPUP	**Villa Florida**	**10.83**	**108**	*e*Pn	**P**	**00 28 30.2**	**+0.2**
	comp=E,62nm,0.6s						
TRQA	**Tornquist**	**15.78**	**160**	*e*P	**P**	**00 29 35.3**	**+1.1**
	comp=E,8.2nm,0.8s						
PLCA	**Paso Flores**	**17.39**	**184**	P	**P**	**00 29 54.9**	**+0.6**
	comp=E,0.2nm,0.3s,baz=350,slow=15,SNR=2.5						
BDFB	**Brasilia**	**21.02**	**72**	P	**P**	**00 30 32.0**	**-1.9**
	comp=E,12nm,1.1s,mb4.1,baz=244,slow=13,SNR=6.3						
VNA3	**Neumayer Olymp**	**58.30**	**161**	*e*	**P**	**00 35 48.9**	**+6.2**
VNA3	**Neumayer Olymp**	**58.30**	**161**	*e*	**P**	**00 35 56.2**	**+14**
VNA3	**Neumayer Olymp**	**58.30**	**161**	⇓*i*P	**P**	**00 35 43.9**	**+1.2**
VNA3				*e*		00 35 48.9	
VNA3				*e*		00 35 56.2	
VNA1	**Neumayer--Stat**	**58.51**	**160**	*e*	**P**	**00 35 50.3**	**+6.1**
VNA1	**Neumayer--Stat**	**58.51**	**160**	*e*	**P**	**00 36 00.1**	**+16**
VNA1	**Neumayer--Stat**	**58.51**	**160**	⇓*i*P	**P**	**00 35 45.9**	**+1.7**
VNA1				*e*		00 35 50.3	
VNA1				*e*		00 36 00.1	
VNA2	**Neumayer--Watz**	**58.88**	**160**	*e*	**P**	**00 35 52.8**	**+6.1**
VNA2	**Neumayer--Watz**	**58.88**	**160**	*e*	**P**	**00 36 00.1**	**+13**
VNA2	**Neumayer--Watz**	**58.88**	**160**	⇓*i*P	**P**	**00 35 48.1**	**+1.4**
VNA2				*e*		00 35 52.8	
VNA2				*e*		00 36 00.1	
SNAA	**Sanae**	**60.50**	**161**	*e*	**P**	**00 36 02.9**	**+5.1**
SNAA	**Sanae**	**60.50**	**161**	*e*	**P**	**00 36 12.3**	**+14**
SNAA	**Sanae**	**60.50**	**161**	P	**P**	**00 35 58.4**	**+0.6**
	comp=E,0.5nm,0.7s,mb3.6,baz=273,slow=6.6,SNR=6.8						
SNAA	**Sanae**	**60.50**	**161**	⇓*i*P	**P**	**00 35 58.4**	**+0.6**
SNAA				*e*		00 36 02.9	
SNAA				*e*		00 36 12.3	
DBIC	**Dimbokro**	**69.17**	**73**	P	**P**	**00 36 54.5**	**-0.1**
	comp=E,3.3nm,1.0s,mb4.1,baz=175,slow=9.7,SNR=4.5						
DBIC	**Dimbokro**	**69.17**	**73**	P	**P**	**00 36 54.5**	**-0.1**
PDAR	**Pinedale Array**	**75.76**	**330**	P	**P**	**00 37 32.6**	**-0.3**
	comp=E,0.4nm,0.6s,mb3.4,baz=90,slow=7.4,SNR=3.6						
NVAR	**Mina Array Bea**	**77.01**	**322**	P	**P**	**00 37 39.9**	**-0.1**
	comp=E,0.4nm,0.6s,mb3.3,baz=154,slow=7.1,SNR=4.0						
ULM	**Lac du Bonnet**	**77.11**	**343**	P	**P**	**00 37 39.1**	**-1.2**
	comp=E,1.5nm,0.5s,mb4.0,baz=162,slow=8.2,SNR=6.6						
BOSA	**Boshof**	**82.49**	**118**	P	**P**	**00 38 10.3**	**+0.8**
	comp=E,2.9nm,1.0s,mb4.1,baz=274,slow=8.8,SNR=3.6						
BOSA	**Boshof**	**82.49**	**118**	P	**P**	**00 38 10.3**	**+0.7**
MAW	**Mawson**	**82.53**	**163**	P	**P**	**00 38 10.6**	**+1.7**
	comp=E,2.9nm,0.5s,mb4.3,baz=219,slow=4.4,SNR=12						
MAW				pP	pP	00 38 37.0	+1.0
	comp=E,1.7nm,0.5s,baz=194,slow=2.9,SNR=2.9						
WRA	**Warramunga Arr**	**131.41**	**210**	PKP	PKPdf	00 45 00.4	+2.5
	comp=E,0.6nm,0.4s,baz=154,slow=1.7,SNR=24						
WRA				pPKP		00 45 26.9	
	comp=E,0.8nm,0.7s,baz=187,slow=1.6,SNR=4.9						
ZAL	**Zalesovo**	**143.57**	**26**	PKP	PKPdf	00 45 18.6	-0.3
	comp=E,1.0nm,0.5s,baz=334,slow=0.5,SNR=5.4						
ZAL				pPKP		00 45 45.3	
	comp=E,0.5nm,0.7s,baz=119,slow=3.0,SNR=2.4						
MKAR	**Makanchi Array**	**147.05**	**38**	PKPbc	PKPdf	00 45 27.9	+2.7
	comp=E,2.8nm,0.8s,baz=312,slow=1.6,SNR=16						
MKAR				pPKPbc		00 45 54.3	
	comp=E,2.6nm,0.7s,baz=323,slow=2.5,SNR=8.7						

MOS ***11*** *00:45:22.5±0.8, 57.26N×120.55E, h14^{km}, mb4.4/1, Error ellipse: s-maj=28.1km s-min=23.3km az=167.8*
BYKL 11 00:45:21.4±0.4**, 57.33N**×**120.65E, h8**^{km}±16^{km}**, 1C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.37**	**253**	*e*Pg	Pg	00 45 46.1	-2.7
CRS				*e*Pb	Pb	00 45 47.8	+1.0
CRS				max		00 45 48.2	
	231nm,1.0s						
CRS				*e*Sg	Sg	00 46 04.1	-2.9
CRS				Smax		00 46 05.2	
	685nm,0.4s						
CRS	**Chara**	**1.37**	**253**	*e*P	Pb	00 45 46.1	-0.7
CRS				*e*		00 46 04.1	
CRS				pmax	pmax		
	comp=Z,222nm,0.5s						
CRS				smax			
	comp=E,687nm,0.3s						
NRGR	**Nerungri**	**2.33**	**105**	*e*P	Pn	00 46 02.6	+2.0
NRGR				S	Sn	00 46 32.6	+2.9
CLNS	**Chul'man**	**2.37**	**100**	*e*Pn	Pn	00 46 02.6	+1.4
CLNS				*e*Pg	Pg	00 46 04.6	-4.1
CLNS				Pmax		00 46 07.5	
	comp=E,303nm,0.2s						
CLNS				*e*Sn	Sn	00 46 30.5	-0.2
CLNS				*e*Sg	Sg	00 46 35.5	-4.8
CLNS				Smax		00 46 38.5	
	comp=E,6µm,0.6s						
CLNS	**Chul'man**	**2.37**	**100**	*e*P	Pn	00 46 02.6	+1.4
CLNS				*e*S	Sn	00 46 31.5	+0.8
CLNS				pmax	pmax		
	comp=N,4.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,53nm,0.3s						
CLNS				pmax	pmax		
	comp=N,11nm,0.2s						
CLNS				pmax	pmax		
	comp=E,27nm,0.3s						
CLNS				smax			
	comp=E,34nm,0.3s						
CLNS				smax			
	comp=Z,8.0nm,0.3s						
CLNS				smax			
	comp=N,11nm,0.2s						
CLNS				smax			
	comp=N,292nm,0.4s						
CLNS				smax			
	comp=E,135nm,0.3s						
CLNS				smax			
	comp=Z,41nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,60nm,9.0s						
NLYR	**Nelyaty**	**2.84**	**255**	*e*Pn	Pn	00 46 07.6	-0.3
NLYR				⇑*i*Pg	Pg	00 46 12.3	-5.8
NLYR				Pmax		00 46 13.2	
	comp=Z,102nm,0.5s						
NLYR				*e*Sg	Sg	00 46 47.9	-8.1
NLYR				Smax		00 46 51.6	
	comp=Z,1µm,1.5s						
ALDR	**Aldan**	**2.84**	**61**	*e*Pn	Pn	00 46 07.4	-0.5
ALDR				*e*Pg	Pg	00 46 12.9	-5.3
ALDR				Pmax		00 46 17.8	
	comp=Z,73nm,0.2s						
ALDR				*e*Sn	Sn	00 46 42.3	-0.4
ALDR				*e*Sg	Sg	00 46 47.4	-8.6
ALDR				Smax		00 46 47.8	
	comp=Z,9µm,0.6s						
TUP	**Tupik**	**2.94**	**188**	*e*Pn	Pn	00 46 08.3	-1.0
TUP				*e*Pg	Pg	00 46 13.3	-6.8
TUP				Pmax		00 46 14.8	
	comp=Z,183nm,0.8s						
TUP				*e*Sn	Sn	00 46 43.9	-1.3
TUP				*e*Sg	Sg	00 46 52.1	-7.2
TUP				Smax		00 46 54.7	
	comp=Z,814nm,0.8s						
TUP	**Tupik**	**2.94**	**188**	*e*P	Pn	00 46 08.9	-0.4
TUP				*e*S	Sn	00 46 43.6	-1.6
TUP				pmax	pmax		
	comp=Z,89nm,0.6s						
TUP				smax			
	comp=E,624nm,0.8s						
TNDR	**Tynda**	**3.15**	**132**	*e*Pn	Pn	00 46 12.4	0.0
TNDR				max		00 46 14.5	
	comp=E,320nm,0.2s						
TNDR				*e*Pg	Pg	00 46 18.4	-6.0
TNDR				*e*Sn	Sn	00 46 47.2	-3.4
TNDR				*e*Sg	Sg	00 46 58.5	-7.9
TNDR				Smax		00 47 06.3	
	comp=E,3µm,0.6s						
BOD	**Bodaibo**	**3.61**	**281**	*e*Pn	Pn	00 46 17.7	-1.2
BOD				*e*Pg	Pg	00 46 25.6	-7.9
BOD				Pmax		00 46 28.0	
	comp=E,48nm,1.3s						
BOD				*e*Sn	Sn	00 46 59.9	-2.3
BOD				*e*Sg	Sg	00 47 11.5	-10
BOD				Smax		00 47 16.1	
	comp=E,371nm,0.9s						
BOD	**Bodaibo**	**3.61**	**281**	*e*P	Pn	00 46 18.4	-0.5
BOD				*e*		00 47 10.3	
BOD				pmax	pmax		
	comp=Z,38nm,0.4s						
BOD				smax			
	comp=N,374nm,0.9s						
SVKR	**Severomuysk**	**4.09**	**256**	*e*Pg	Pg	00 46 35.9	-7.2
SVKR				Pmax		00 46 38.7	
	comp=N,40nm,0.4s						
SVKR				*e*Sg	Sg	00 47 27.2	-10
SVKR				Smax		00 47 34.3	
	comp=N,486nm,1.0s						
UKT	**Uakit**	**4.32**	**248**	*e*Pn	Pn	00 46 28.2	-0.7
UKT				*e*Pg	Pg	00 46 38.7	-8.9
UKT				Pmax		00 46 50.7	
	comp=N,20nm,1.0s						
UKT				*e*Sg	Sg	00 47 34.0	-11
UKT				Smax		00 47 44.7	
	comp=N,168nm,1.5s						
UKT	**Uakit**	**4.32**	**248**	*e*P	Pn	00 46 38.2	+9.3
UKT				pmax	pmax		
	comp=Z,11nm,0.4s						
KROS	**Kirovskiy**	**4.59**	**127**	*i* Pg	Pg	00 46 44.5	-8.6
YOA	**Uoyan**	**5.06**	**260**	*e*Pg	Pg	00 46 53.1	-9.3
YOA				Pmax		00 46 58.4	
	comp=Z,118nm,0.4s						
YOA				*e*Sg	Sg	00 47 58.3	-12
YOA				Smax		00 48 07.2	
	comp=Z,1µm,2.1s						
YOA	**Uoyan**	**5.06**	**260**	*e*P	Pn	00 46 54.4	+15
YOA				pmax	pmax		
	comp=Z,164nm,1.3s						
ZEA	**Zeya**	**5.20**	**131**	*e*Sg	Sg	00 48 00.5	-14
KMO	**Kumora**	**5.42**	**258**	*e*Pn	Pn	00 46 43.3	-1.2
KMO				max		00 46 47.2	
	comp=Z,13nm,0.3s						
KMO				*e*Pg	Pg	00 46 59.8	-10
KMO				*e*Sn	Sn	00 47 43.1	-4.7
KMO				*e*Sg	Sg	00 48 07.7	-14

KMO				Smax		00 48 20.9	
	comp=Z,239nm,1.4s						
KMO	**Kumora**	**5.42**	**258**	*e*P	Pn	00 46 43.4	-1.1
KMO				*e*S	Sn	00 47 42.3	-5.5
KMO				pmax	pmax		
	comp=Z,20nm,0.4s						
KMO				smax			
	comp=N,241nm,1.1s						
YLYR	**Ulyunkhan**	**5.85**	**249**	*e*	Pn	00 46 51.0	+0.4
YLYR				*e*Pg	Pg	00 47 07.8	-10
YLYR				Pmax		00 47 12.9	
	comp=N,4.0nm,0.5s						
YLYR				*e*Sg	Sg	00 48 21.3	-15
YLYR				Smax		00 48 28.8	
	comp=N,181nm,1.8s						
YLYR	**Ulyunkhan**	**5.85**	**249**	*e*P	Pn	00 47 09.1	+19
YLYR				pmax	pmax		
	comp=Z,21nm,0.8s						
NIZ	**Nizh Angarsk**	**6.34**	**260**	*e*Pg	Pg	00 47 16.1	-12
NIZ				*e*Sg	Sg	00 48 36.2	-16
NIZ				Smax		00 49 02.9	
	comp=Z,81nm,2.4s						
NIZ	**Nizh Angarsk**	**6.34**	**260**	*e*P	Pn	00 46 58.2	+0.7
NIZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
YAK	**Yakutsk**	**6.56**	**40**	*e*Pn	Pn	00 46 57.8	-2.9
YAK				max		00 47 08.1	
	comp=Z,66nm,0.3s						
YAK				*e*Pg	Pg	00 47 19.1	-13
YAK				*e*Sn	Sn	00 48 09.2	-7.3
YAK				*e*Sg	Sg	00 48 43.0	-17
YAK				Smax		00 48 43.3	
	comp=Z,619nm,0.6s						
YAK	**Yakutsk**	**6.56**	**40**	*e*P	Pn	00 47 16.9	+16
YAK				*e*S	Sn	00 48 21.9	+5.4
YAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				smax			
	comp=N,20nm,0.8s						
YAK				smax			
	comp=Z,8.0nm,1.0s						
YAK				smax			
	comp=E,12nm,0.9s						
YAK				smax			
	comp=N,75nm,0.9s						
YAK				smax			
	comp=Z,52nm,0.9s						
YAK				smax			
	comp=E,46nm,1.0s						
YAK				MLR	MLR		
	comp=Z,36nm,6.0s						
CIT	**Chita**	**6.72**	**221**	*e*Pg	Pg	00 47 23.3	-12
CIT				Pmax		00 47 34.3	
	comp=Z,3.0nm,0.3s						
CIT				*e*Sg	Sg	00 48 48.0	-17
CIT				Smax		00 48 59.4	
	comp=Z,226nm,1.6s						
SYVR	**Suvo**	**7.08**	**243**	*e*Pg	Pg	00 47 30.3	-12
SYVR				*e*Sg	Sg	00 49 01.2	-16
SYVR				Smax		00 49 10.9	
	comp=Z,196nm,1.7s						
OGRR	**Ongureny**	**8.28**	**249**	*e*Sg	Sg	00 49 38.8	-18
OGRR				Smax		00 49 46.0	
	comp=Z,45nm,1.4s						
KPC	**Khapcheranga**	**9.08**	**216**	*e*Sg	Sg	00 50 00.4	-23
KPC				Smax		00 50 11.9	
	comp=Z,74nm,1.3s						

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*NEIC **11** 00:55:57.2±1.6, 30.00S×179.83W, h500^{km}, mb4.0/1, Error ellipse: s-maj=46.6km s-min=28.9km az=168.0*

IDC 11 00:55:57.0±13.0**, 30.07S**×**179.83W, h494**^{km}±120^{km}**, mb3.5**/3**, mb1 3.5**/4**, mb1mx3.2**/13**, mbtmp4.3**/4**, Error ellipse: s-maj=126.4km s-min=56.9km az=126.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**14.67**	**300**	P	P	00 59 03.6	-0.7
	0.4nm,0.3s,baz=126,slow=18,SNR=6.7						
CTA	**Charters Tower**	**32.18**	**280**	P	P	01 01 44.3	-0.4
	3.7nm,0.5s,baz=99,slow=9.8,SNR=9.6						
STKA	**Stephens Creek**	**33.01**	**257**	P	P	01 01 50.1	-1.5
	2.5nm,0.5s,baz=87,slow=17,SNR=5.5						
WRAB	**Tennant Creek**	**42.50**	**273**	*e*P	P	01 03 08.3	-1.1
	2.8nm,0.6s						
WRA	**Warramunga Arr**	**42.50**	**273**	P	P	01 03 07.9	-1.5
	2.5nm,0.4s,baz=111,slow=7.9,SNR=35						
FINES	**FINESS Array B**	**144.28**	**339**	PKP	PKPdf	01 14 33.8	-1.2
	3.2nm,0.9s,baz=63,slow=3.1,SNR=8.4						
AKASG	**Malin Array Be**	**150.07**	**322**	PKPbc	PKPdf	01 14 51.3	+6.5
	0.6nm,0.5s,baz=45,slow=2.9,SNR=4.5						

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*NEIC **11** 01:04:06.3, 27.77S×71.09W, h47^{km}, MD3.9(GUC), After GUC.*

GUC 11 01:04:06.3±0.7**, 27.77S**×**71.09W, h47**^{km}±3^{km}**, MD3.9, ML3.9, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDCH	**Caldera**	**0.73**	**18**	⇓*i*P	P	01 04 20.8	+0.4
CDCH				*i* S	S	01 04 31.4	+0.7
CPCH	**Copiapo**	**0.77**	**58**	⇓*i*P	P	01 04 21.4	+0.5
CPCH				*i* S	S	01 04 32.6	+1.0
CPCH				AMP		01 04 33.3	
	comp=E,23µm,0.1s						
CRCH	**Chaqaral**	**1.48**	**16**	⇑*i*P	P	01 04 31.2	+0.2
CRCH				*i* S	S	01 04 49.3	0.0
CRCH				AMP		01 04 49.8	
	comp=N,679nm,0.1s						
TLL	**Tololo Astrono**	**2.40**	**174**	*e*P	P	01 04 44.4	+0.3
TLL				*i* S	S	01 05 13.1	+0.7
CPN1	**Cerro Paranal**	**3.19**	**11**	*e*P	P	01 04 53.6	-1.6
CMCH	**Combarbala**	**3.39**	**179**	⇑*i*P	P	01 04 56.2	-1.9
CMCH				*i* S	S	01 05 34.9	-2.7
CMCH				AMP		01 05 55.2	
	comp=E,250nm,0.8s						

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*NEIC **11** 01:11:28.8, 25.84S×70.14W, h74^{km}, MD3.8(GUC), After GUC.*

GUC 11 01:11:28.8±0.9**, 25.84S**×**70.14W, h74**^{km}±16^{km}**, MD3.8, ML3.8, 1C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRCH	**Chaqaral**	**0.67**	**220**	⇓*i*P	P	01 11 44.5	+0.6
CRCH				*i* S	S	01 11 54.8	-0.2
CRCH				AMP		01 11 55.7	
	comp=E,7µm,0.3s						
CPN1	**Cerro Paranal**	**1.23**	**349**	*e*P	P	01 11 51.5	+0.7
CPN1				*i* S	S	01 12 08.9	+1.7
CPN1				AMP		01 12 10.1	
	comp=E,2µm,0.1s						
CDCH	**Caldera**	**1.38**	**206**	⇑*i*P	P	01 11 52.5	-0.4
CDCH				*i* S	S	01 12 10.6	+0.1
CPCH	**Copiapo**	**1.53**	**187**	*e*P	P	01 11 54.9	+0.1
CPCH				*i* S	S	01 12 13.9	-0.1
ANCH	**Antofagasta**	**2.16**	**353**	⇓*i*P	P	01 12 02.9	-0.5
CEN1	**Los Morros**	**2.44**	**359**	*e*P	P	01 12 04.3	-3.1
SPCH	**San Pedro de A**	**3.41**	**32**	*e*P	P	01 12 23.6	+2.7
TLL	**Tololo Astrono**	**4.35**	**188**	*e*P	P	01 12 34.1	0.0

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*BYKL **11** 01:12:34.9±0.3, 57.40N×120.69E, h3^{km}±16^{km}*

*MOS **11** 01:12:35.9±1.9, 57.30N×120.62E, h18^{km}, mb4.0/2, Error ellipse: s-maj=14.2km s-min=11.0km az=50.6*

*IDC **11** 01:12:35.5±1.8, 57.44N×120.58E, mb3.7/8, mb1 3.9/9, mb1mx3.7/22, mbtmp3.7/9, ML2.9/1, Error ellipse: s-maj=45.7km s-min=18.9km az=151.0*

*NEIC **11** 01:12:36.2±0.7, 57.39N×120.32E, h5^{km}, mb4.0/2, Error ellipse: s-maj=13.7km s-min=8.8km az=156.0*

ISC 11 01:12:32.8±0.4**, 57.28N**±0.04×**120.59E**±0.04**, h3**^{km}**, n54,** σ**1§77**/80**, mb3.7**/8**, 3C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.32**	**254**	⇑*i*Pg	**Pg**	**01 13 01.0**	**+1.8**
CRS				*e*Pb	**Pb**	**01 13 01.8**	**+3.9**
CRS				max		01 13 02.0	
	505nm,1.2s						
CRS				*e*Sg	**Sg**	**01 13 18.9**	**+2.1**
CRS				Smax		01 13 20.8	
	936nm,1.5s						
CRS	**Chara**	**1.32**	**254**	*e*P	**Pg**	**01 13 01.0**	**+1.8**
CRS				*e*		01 13 18.8	
CRS				pmax	pmax		
	comp=Z,505nm,1.1s						
CRS				smax			
	comp=E,922nm,0.9s						
NRGR	**Nerungri**	**2.35**	**104**	*e*P	**Pn**	**01 13 16.8**	**+3.9**
NRGR				S	**Sn**	**01 13 46.5**	**+3.9**
CLNS	**Chul'man**	**2.39**	**99**	*e*Pn	**Pn**	**01 13 15.3**	**+1.8**
CLNS				*e*Pg	**Pg**	**01 13 18.3**	**-2.3**
CLNS				Pmax		01 13 22.4	
	comp=E,666nm,0.3s						
CLNS				*e*Sn	**Sn**	**01 13 43.7**	**0.0**
CLNS				*e*Sg	**Sg**	**01 13 48.0**	**-4.5**
CLNS				Smax		01 13 51.1	
	comp=E,10µm,0.5s						
CLNS	**Chul'man**	**2.39**	**99**	*e*P	**Pn**	**01 13 19.3**	**+5.8**
CLNS				*e*		01 13 47.9	
CLNS				pmax	pmax		
	comp=Z,74nm,0.3s						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,17nm,0.2s						
CLNS				smax			
	comp=E,823nm,0.4s						
CLNS				smax			
	comp=Z,395nm,0.4s						
CLNS				smax			
	comp=N,948nm,0.5s						
CLNS				MLR	MLR		
	comp=Z,100nm,13.0s						
NLYR	**Nelyaty**	**2.79**	**256**	⇑*i*Pn	**Pn**	**01 13 21.7**	**+2.5**
NLYR				⇑*i*Pg	**Pg**	**01 13 26.7**	**-1.9**
NLYR				max		01 13 28.2	
	comp=Z,322nm,0.8s						
NLYR				*i*		01 13 31.0	
NLYR				*e*Sg	**Sg**	**01 14 03.4**	**-2.5**
NLYR				Smax		01 14 07.6	
	comp=Z,1µm,1.3s						
NLYR	**Nelyaty**	**2.79**	**256**	*e*P	**Pn**	**01 13 26.2**	**+7.0**
NLYR				*e*		01 14 00.8	
NLYR				pmax	pmax		
	comp=Z,341nm,0.3s						
NLYR				smax			
	comp=N,1µm,1.3s						
TUP	**Tupik**	**2.89**	**187**	*e*Pn	**Pn**	**01 13 23.5**	**+3.0**
TUP				⇓*i*Pg	**Pg**	**01 13 28.0**	**-2.4**
TUP				Pmax		01 13 29.1	
	comp=N,298nm,0.7s						
TUP				*e*Sn	**Sn**	**01 13 57.4**	**+1.2**
TUP				*e*Sg	**Sg**	**01 14 07.1**	**-1.8**
TUP				Smax		01 14 19.4	
	comp=N,1µm,1.3s						
TUP	**Tupik**	**2.89**	**187**	*e*Pn	**Pn**	**01 13 22.5**	**+2.0**
TUP				*e*Pg	**Pg**	**01 13 27.8**	**-2.6**
TUP				*e*Sn	**Sn**	**01 13 57.2**	**+1.0**
TUP				*e*Sg	**Sg**	**01 14 05.1**	**-3.8**
TUP	**Tupik**	**2.89**	**187**	*e*P	**Pn**	**01 13 22.5**	**+2.0**
TUP				*e*S	**Sn**	**01 13 57.2**	**+1.0**
TUP				pmax	pmax		
	comp=Z,217nm,0.5s						
TUP				smax			
	comp=E,874nm,1.1s						
ALDR	**Aldan**	**2.90**	**61**	*e*Pn	**Pn**	**01 13 20.0**	**-0.6**
ALDR				*e*Pg	**Pg**	**01 13 24.6**	**-6.0**
ALDR				*e*		01 13 31.0	
ALDR				max		01 13 31.5	
	comp=E,1µm,0.5s						
ALDR				*e*Sn	**Sn**	**01 13 53.3**	**-3.1**
ALDR				*e*Sg	**Sg**	**01 14 01.9**	**-7.3**
ALDR				Smax		01 14 02.3	
	comp=E,4µm,0.4s						
TNDR	**Tynda**	**3.15**	**131**	*e*Pn	**Pn**	**01 13 27.0**	**+2.8**
TNDR				*e*Pg	**Pg**	**01 13 33.1**	**-2.5**
TNDR				Pmax		01 13 38.0	
	comp=E,390nm,0.2s						
TNDR				*e*Sg	**Sg**	**01 14 14.6**	**-3.0**
TNDR				Smax		01 14 24.3	
	comp=E,6µm,0.7s						
BOD	**Bodaibo**	**3.59**	**281**	*e*Pn	**Pn**	**01 13 32.7**	**+2.2**
BOD				*e*Pg	**Pg**	**01 13 40.6**	**-3.8**
BOD				Pmax		01 13 42.8	
	comp=E,54nm,0.7s						
BOD				*e*Sn	**Sn**	**01 14 11.3**	**-2.7**
BOD				*e*Sg	**Sg**	**01 14 26.2**	**-6.1**
BOD				Smax		01 14 33.0	
	comp=E,555nm,1.4s						
BOD	**Bodaibo**	**3.59**	**281**	*e*P	**Pn**	**01 13 30.3**	**-0.2**
BOD				pmax	pmax		
	comp=Z,64nm,0.8s						
SVKR	**Severomuysk**	**4.05**	**256**	*e*Pn	**Pn**	**01 13 37.6**	**+0.6**
SVKR				*e*Pg	**Pg**	**01 13 49.0**	**-4.6**
SVKR				Pmax		01 13 59.2	
	comp=Z,77nm,0.6s						
SVKR				*e*Sg	**Sg**	**01 14 42.8**	**-4.7**
SVKR				Smax		01 14 57.4	
	comp=Z,553nm,1.6s						
UKT	**Uakit**	**4.27**	**248**	*e*Pn	**Pn**	**01 13 43.7**	**+3.6**
UKT				*e*Pg	**Pg**	**01 13 53.3**	**-4.7**
UKT				Pmax		01 13 55.3	
	comp=Z,55nm,1.1s						
UKT				*e*Sn	**Sn**	**01 14 29.6**	**-1.6**
UKT				*e*Sg	**Sg**	**01 14 48.8**	**-6.0**
UKT				Smax		01 15 00.3	
	comp=Z,176nm,1.5s						
UKT	**Uakit**	**4.27**	**248**	*e*Pg	**Pg**	**01 13 53.2**	**-4.8**
UKT				*e*Sg	**Sg**	**01 14 48.6**	**-6.2**
UKT	**Uakit**	**4.27**	**248**	*e*P	Px	01 13 53.2	
UKT				pmax	pmax		
	comp=Z,40nm,0.6s						
YOA	**Uoyan**	**5.02**	**260**	*e*Sg	Sx	01 15 13.0	
YOA				Smax		01 15 40.8	
	comp=Z,2µm,1.6s						
YOA	**Uoyan**	**5.02**	**260**	*e*Pg	**Pg**	**01 14 09.1**	**-3.9**
YOA				*i* Sg	**Sg**	**01 15 13.0**	**-6.9**
YOA	**Uoyan**	**5.02**	**260**	*e*P	Px	01 14 09.1	
YOA				pmax	pmax		
	comp=Z,237nm,1.5s						
ZEA	**Zeya**	**5.19**	**130**	*e*Pn	**Pn**	**01 13 53.4**	**+0.2**
ZEA				*e*Pg	Px	01 14 08.8	
ZEA				*e*Sg	Sx	01 15 15.4	
KMO	**Kumora**	**5.37**	**259**	*e*Pn	**Pn**	**01 13 57.0**	**+1.2**
KMO				*e*Pg	**Pg**	**01 14 12.9**	**-7.2**
KMO				Pmax		01 14 15.9	
	comp=Z,9.0nm,0.6s						
KMO				*e*Sg	**Sg**	**01 15 22.6**	**-9.1**
KMO				Smax		01 15 37.5	
	comp=Z,369nm,1.6s						
KMO	**Kumora**	**5.37**	**259**	*e*P	**Pn**	**01 13 56.7**	**+0.9**
	comp=Z,15nm,0.8s						
KMO				*e*S	**Sn**	**01 14 57.0**	**-2.1**
KMO	**Kumora**	**5.37**	**259**	*e*P	**Pn**	**01 13 56.7**	**+0.9**
KMO				*e*S	**Sn**	**01 14 57.0**	**-2.1**
KMO				pmax	pmax		
	comp=Z,15nm,0.8s						
KMO				smax			
	comp=E,371nm,1.6s						
YLYR	**Ulyunkhan**	**5.80**	**249**	*e*Pn	**Pn**	**01 14 04.6**	**+2.7**
YLYR				*e*Pg	Px	01 14 21.1	
YLYR				Pmax		01 14 32.6	
	comp=E,7.0nm,0.7s						
YLYR				*e*Sg	Sx	01 15 35.8	
YLYR				Smax		01 15 49.4	
	comp=E,252nm,1.4s						
NIZ	**Nizh Angarsk**	**6.30**	**261**	*e*Pg	Px	01 14 29.1	
NIZ				*e*Sg	Sx	01 15 51.6	
NIZ				Smax		01 16 14.1	
	comp=E,126nm,1.6s						
YAK	**Yakutsk**	**6.62**	**40**	*e*Pg	Px	01 14 31.0	
YAK				Pmax		01 14 33.0	
	comp=E,153nm,0.5s						
YAK				*e*Sn	Sx	01 15 23.1	
YAK				*e*Sg	Sx	01 15 53.9	
YAK				Smax		01 15 59.7	
	comp=E,2µm,1.1s						
YAK	**Yakutsk**	**6.62**	**40**	*e*P	Px	01 14 31.3	
YAK				*e*S	Sx	01 15 24.1	
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=N,20nm,1.0s						
YAK				pmax	pmax		
	comp=E,20nm,1.2s						
YAK				smax			
	comp=N,15nm,1.0s						
YAK				smax			
	comp=Z,11nm,0.8s						
YAK				smax			
	comp=E,10.0nm,1.0s						
YAK				smax			
	comp=E,89nm,0.9s						
YAK				smax			
	comp=Z,98nm,0.8s						
YAK				smax			
	comp=N,154nm,0.9s						
YAK				MLR	MLR		
	comp=Z,81nm,9.0s						
CIT	**Chita**	**6.67**	**221**	*e*Pg	Px	01 14 38.3	
CIT				Pmax		01 14 38.8	
	comp=Z,29nm,1.0s						
CIT				*e*Sg	Sx	01 16 03.9	
CIT				Smax		01 16 21.4	
	comp=Z,416nm,1.6s						
SYVR	**Suvo**	**7.03**	**243**	*e*Pn	**Pn**	**01 14 21.0**	**+1.9**
SYVR				*e*Pg	Px	01 14 43.6	
SYVR				Pmax		01 14 46.5	
	comp=Z,30nm,2.3s						
SYVR				*e*Sn	**Sn**	**01 15 36.8**	**-3.7**
SYVR				*e*Sg	Sx	01 16 16.0	
SYVR				Smax		01 16 28.2	
	comp=Z,247nm,1.8s						
OGRR	**Ongureny**	**8.23**	**249**	*e*Sg	Sx	01 16 53.3	
OGRR				Smax		01 17 21.5	
	comp=Z,56nm,1.9s						
KPC	**Khapcheranga**	**9.03**	**216**	*e*Pn	**P**	**01 14 48.2**	**+1.2**
KPC				*e*Pg	Px	01 15 20.5	
KPC				*e*Sn	**Sn**	**01 16 24.6**	**-5.7**
KPC				*e*Sg	Sx	01 17 17.2	
KPC				Smax		01 17 35.0	
	comp=Z,116nm,1.7s						
KPC	**Khapcheranga**	**9.03**	**216**	*e*P	**P**	**01 14 47.6**	**+0.6**
	comp=Z,2.0nm,0.5s						
KPC	**Khapcheranga**	**9.03**	**216**	*e*P	**P**	**01 14 47.6**	**+0.6**
KPC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
TRG	**Tyrgan**	**9.34**	**247**	*e*Sg	Sx	01 17 27.5	
TRG				Smax		01 17 45.6	
	comp=Z,46nm,1.9s						
SONM	**Songino Array**	**12.78**	**228**	Pn	**P**	**01 15 39.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=35,slow=14,SNR=2.6						
SONM				Lg		01 19 20.5	
	comp=Z,0.6nm,0.3s,baz=46,slow=28,SNR=8.7						
UNR	**Ust'-Nera**	**13.15**	**47**	*e*Sg	Sx	01 19 16.5	
ZAL	**Zalesovo**	**20.34**	**276**	P	**P**	**01 17 14.7**	**+2.1**
	comp=Z,0.9nm,0.4s,baz=65,slow=15,SNR=7.1						
ZAL	**Zalesovo**	**20.34**	**276**	P	**P**	**01 17 14.7**	**+2.1**
NVS	**Novosibirsk**	**20.83**	**279**	*e*P	**P**	**01 17 18.5**	**+0.8**
	comp=Z,14nm,1.7s						
NVS	**Novosibirsk**	**20.83**	**279**	*e*P	**P**	**01 17 18.5**	**+0.8**
NVS				pmax	pmax		
	comp=N,12nm,1.7s						
NVS				pmax	pmax		
	comp=E,12nm,1.7s						
NVS				pmax	pmax		
	comp=Z,14nm,1.7s						
MKAR	**Makanchi Array**	**25.45**	**262**	P	**P**	**01 18 05.5**	**+2.5**
	comp=Z,0.7nm,0.6s,mb3.4,baz=56,slow=8.7,SNR=7.6						
MKAR	**Makanchi Array**	**25.45**	**262**	P	**P**	**01 18 05.5**	**+2.4**
CHKZ	**Chkalovo**	**28.03**	**284**	P	**P**	**01 18 26.6**	**-0.1**
BVAR	**Borovoye Array**	**28.46**	**283**	P	**P**	**01 18 31.2**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.0,baz=27,slow=6.4,SNR=2.7						
BVAR	**Borovoye Array**	**28.46**	**283**	P	**P**	**01 18 31.2**	**+0.7**
ILAR	**Eielson Array**	**41.55**	**40**	P	**P**	**01 20 23.6**	**+1.3**
	comp=Z,0.9nm,0.5s,mb3.6,baz=291,slow=5.6,SNR=13						
FINES	**FINESS Array B**	**44.29**	**317**	P	**P**	**01 20 44.1**	**-0.6**
	comp=Z,2.2nm,0.7s,mb4.0,baz=76,slow=7.9,SNR=9.5						
NB2	**NORSAR Subarra**	**49.77**	**323**	P	**P**	**01 21 27.8**	**-0.1**
	comp=Z,1.2nm,0.6s,mb4.1,baz=45,slow=7.9						
NOA	**NORSAR Array B**	**49.77**	**323**	P	**P**	**01 21 28.3**	**+0.4**
	comp=Z,0.7nm,0.5s,mb4.0,baz=44,slow=8.1,SNR=3.0						
NAO	**NORSAR Subarra**	**50.06**	**323**	P	**P**	**01 21 27.8**	**-2.3**
	comp=Z,1.2nm,0.6s,mb4.1						
GERES	**GERESS Array B**	**58.25**	**312**	P	**P**	**01 22 30.4**	**0.0**
	comp=Z,0.6nm,0.8s,mb3.7,baz=18,slow=8.4,SNR=3.7						
PDAR	**Pinedale Array**	**71.83**	**37**	P	**P**	**01 23 58.6**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.6,baz=68,slow=2.3,SNR=5.6						

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*NDI **11** 01:23:57.5±3.5, 32.83N×72.16E, h10^{km}, MD3.5, ML3.4*

*NNC **11** 01:24:10.0±25.0, 35.09N×72.75E, mpv3.4, Error ellipse: s-maj=2121.8km s-min=303.9km az=78.0*

ISC 11 01:24:02.4±1.3**, 34.9N**±0.1×**74.0E**±0.3**, h10**^{km}**, n5,** σ**1§47**/10**, 1C-1D, Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**2.78**	**149**	*e*P	**Pn**	**01 24 46.7**	**-1.2**
THN				*e*S	**Sn**	**01 25 22.9**	**+1.0**
DLH	**Dalhousie**	**2.81**	**145**	*e*P	**Pn**	**01 24 46.0**	**-2.2**
DLH				*e*S	**Sn**	**01 25 25.0**	**+2.5**
SDNR	**Sundarnagar**	**4.14**	**143**	*e*P	**Pn**	**01 25 03.2**	**-4.1**
SDNR				*e*S	**Sn**	**01 25 51.4**	**-5.0**
KLP	**Kalpa**	**4.83**	**132**	*e*P	**Pn**	**01 25 18.2**	**+1.2**
KLP				*e*S	**Sn**	**01 26 13.0**	**-0.8**
KLP				AML	AML	01 26 39.1	
	comp=E,64nm,0.5s						
KLP				AML	AML	01 26 40.9	
	comp=N,54nm,0.3s						
KK31	**Karatay Array**	**8.69**	**343**	⇓Pn	**P**	**01 26 12.6**	**+1.5**
	comp=N,0.9nm,0.5s,baz=155,slow=11,SNR=30						
KK31				⇑Sn	**Sn**	**01 27 49.6**	**-0.6**
	comp=N,0.6nm,0.5s,baz=171,slow=23,SNR=6.2						

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*PRU **11** 01:24:31.0, 50.30N×18.68E*

*NEIC **11** 01:24:31.4±0.9, 50.26N×18.64E, h5^{km}, MG2.5(WAR), Error ellipse: s-maj=14.0km s-min=6.6km az=188.0*

WAR 11 01:24:29.4, 50.26N×**18.86E, h0**^{km}**, ML2.6, Mining Induced, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.46**	**248**	*e*PG	Pg	01 24 39.0	+0.4
RAC				*e*SG	Sg	01 24 46.0	+1.2
OJC	**Ojcow**	**0.60**	**93**	*e*PG	Pg	01 24 41.0	-0.4
OJC				*e*SG	Sg	01 24 50.0	+0.5
OKC	**Ostrava-Krasne**	**0.62**	**228**	*e*PG	Pg	01 24 41.3	-0.5
OKC				*e*SG	Sg	01 24 51.1	+1.0
	16nm,0.3s						
MORC	**Moravsky Berou**	**0.98**	**241**	*e*Pg	Pg	01 24 47.4	-1.5
MORC				*e*Sg	Sg	01 25 00.2	-1.7
LIKS	**Likavka**	**1.22**	**172**	*e*SN	Sn	01 25 10.6	-0.3
NIE	**Niedzica**	**1.26**	**131**	*e*PG	Pg	01 24 54.0	-0.5
NIE				*e*SG	Sg	01 25 11.0	-0.3
DPC	**Dobruska-Polom**	**1.63**	**274**	*e*PG	Pg	01 24 58.3	-3.7
DPC				*e*SG	Sg	01 25 16.8	-6.9
	17nm,0.2s						
KSP	**Ksiaz**	**1.74**	**291**	*e*PG	Pg	01 25 02.0	-2.2
KSP				*e*SG	Sg	01 25 24.0	-3.4
KSP	**Ksiaz**	**1.74**	**291**	*e*Pg	Pg	01 25 01.7	-2.5
KSP				*e*Sg	Sg	01 25 24.1	-3.3
STHS	**Stebnicka Huta**	**1.76**	**118**	*e*PN	Pn	01 25 03.1	+1.9
STHS				*e*SN	Sn	01 25 27.2	+2.6
VYHS	**Vyhne**	**1.76**	**181**	*e*PN	Pn	01 25 02.6	+1.2
VYHS				*e*SN	Sn	01 25 25.3	+0.5
UPC	**Upice**	**1.84**	**279**	*e*SG	Sg	01 25 25.1	-5.6
KECS	**Kecovo**	**2.07**	**148**	*e*PN	Pn	01 25 08.2	+2.5
KECS				*e*SN	Sn	01 25 33.4	+0.9
CRVS	**Cervenica-Dubn**	**2.17**	**128**	*e*PN	Pn	01 25 10.5	+3.4
CRVS				*e*SN	Sn	01 25 38.0	+2.9
KWP	**Kalwaria**	**2.56**	**103**	*e*PG	Pg	01 25 19.0	-1.5
KWP				*e*SG	Sg	01 26 00.0	+5.3
KWP	**Kalwaria**	**2.56**	**103**	*e*Pn	Pn	01 25 19.2	+6.4
KWP				*e*Sg	Sg	01 25 59.6	+4.9
KOLS	**Kolonicke sedl**	**2.58**	**119**	*e*PN	Pn	01 25 15.5	+2.4
PRU	**Pruhonice**	**2.79**	**266**	*e*SG	Sg	01 25 54.6	-7.8
KHC	**Kasperske Hory**	**3.61**	**254**	*e*SG	Sg	01 26 20.5	-9.1
CLL	**Collm**	**3.87**	**288**	*e*SG	Sg	01 26 33.0	-5.1

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*NIED **11** 01:42:00, 46.90N×148.20E, h400^{km}, Mw4.6 Best double couple: $M_0 7.65\times10^{15}$ NP1:ϕ_s157°, δ77°, λ49°. NP2:ϕ_s53°,* *δ43°,λ161°.*

SKHL ***11*** *01:42:25.9±2.1,47.60N×147.84E,h358^{km}±16^{km},mb6.0/2,msh5.1/5*

BJI ***11*** *01:42:26.6,47.72N×147.43E,h364^{km},mB4.5,mb4.7*

MOS ***11*** *01:42:26.3±0.8,47.75N×147.50E,h367^{km},mb4.7/65, Error ellipse: s-maj=8.4km s-min=4.6km az=96.4*

JMA ***11*** *01:42:26.8±0.5,46.94N×148.17E,h406^{km},M4.7*

IDC ***11*** *01:42:27.6±0.5,47.68N×147.55E,h372^{km}±5^{km},mb4.0/24, mb1 4.2/28,mb1mx4.2/30,mbtmp4.8/28,Error ellipse: s-maj=10.5km s-min=7.2km az=150.0*

NEIC ***11*** *01:42:28.1±0.1,47.73N×147.54E,mb4.7/119,Error ellipse: s-maj=3.9km s-min=2.2km az=165.0*

ISC 11 01:42:26.7±0.1**,47.59N**±0.02×**147.58E**±0.03**,h377^{km}, h377^{km}**±2.8^{km}**:pP-P,n406,**σ**0.94**/430**,mb4.6**/151**,92C-10D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.37**	**175**	*i* P	**P**	**01 43 19.7**	**-3.8**
KUR				*i* P		01 43 19.7	
KUR				AMB	AMB	01 43 20.3	
	150nm,0.8s						
KUR				AMB	AMB	01 43 20.3	
	190nm,0.8s						
KUR				AMB	AMB	01 43 20.3	
	2µm,0.8s						
KUR				AMB	AMB	01 43 20.4	
	5µm,2.0s						
KUR				*i* S	**S**	**01 44 04.0**	**-4.0**
KUR				A		01 44 06.0	
	2µm,3.0s						
KUR				A		01 44 06.0	
	8µm,3.0s						
KUR				A		01 44 06.0	
	320nm,1.0s						
KUR				A		01 44 06.0	
	510nm,1.0s						
KUR	**Kuril'sk**	**2.37**	**175**	α *i*PN	**P**	**01 43 19.7**	**-3.8**
KUR				*i* S	**S**	**01 44 04.0**	**-4.0**
KUR				pmax	pmax		
	comp=N,150nm,0.8s						
KUR				pmax	pmax		
	comp=E,190nm,0.8s						
KUR				pmax	pmax		
	comp=Z,2µm,0.8s						
KUR				pmax	pmax		
	comp=Z,5µm,1.5s						
KUR				smax			
	comp=N,320nm,1.0s						
KUR				smax			
	comp=E,510nm,1.0s						
KUR				smax			
	comp=N,2µm,2.5s						
KUR				smax			
	comp=E,8µm,2.5s						
YSS	**Yuzh-Sakhalins**	**3.34**	**261**	⇑*i*P	**P**	**01 43 33.0**	**+1.4**
YSS				AMB	AMB	01 43 35.8	
	comp=E,80nm,0.8s						
YSS				*i* S	**S**	**01 44 24.0**	**+1.5**
YSS				A		01 44 26.0	
	comp=E,400nm,1.1s						
YSS				A		01 44 26.0	
	comp=E,320nm,1.1s						
YSS				A		01 44 28.0	
	comp=E,2µm,4.0s						
YSS	**Yuzh-Sakhalins**	**3.34**	**261**	*e*P	**P**	**01 43 33.2**	**+1.7**
YSS	**Yuzh-Sakhalins**	**3.34**	**261**	⇑*i*PN	**P**	**01 43 33.0**	**+1.4**
YSS				*i* S	**S**	**01 44 24.0**	**+1.5**
YSS				pmax	pmax		
	comp=Z,80nm,0.8s						
YSS				smax			
	comp=Z,400nm,1.0s						
YSS				smax			
	comp=E,320nm,1.1s						
YSS				smax			
	comp=N,2µm,4.0s						
YSS				smax			
	comp=E,2µm,4.0s						
YUK	**Yuzh-Kuril'sk**	**3.75**	**199**	*i* P	**P**	**01 43 34.9**	**-0.5**
YUK				*i* P		01 43 34.9	
YUK				AMB	AMB	01 43 35.5	
	comp=E,2µm,1.0s						
YUK				AMB	AMB	01 43 36.2	
	comp=E,760nm,0.5s						
YUK				AMB	AMB	01 43 36.2	
	comp=E,950nm,0.5s						
YUK				AMB	AMB	01 43 36.2	
	comp=E,2µm,0.5s						
YUK				*e*S	**S**	**01 44 28.0**	**-1.4**
YUK				A		01 44 32.0	
	comp=E,3µm,2.0s						
YUK				A		01 44 32.0	
	comp=E,2µm,2.0s						
YUK				A		01 44 40.0	
	comp=E,700nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**3.75**	**199**	α *i*PN	**P**	**01 43 34.9**	**-0.5**
YUK				*e*S	**S**	**01 44 28.0**	**-1.4**
YUK				pmax	pmax		
	comp=Z,2µm,1.0s						
YUK				pmax	pmax		
	comp=N,760nm,0.5s						
YUK				pmax	pmax		
	comp=E,950nm,0.5s						
YUK				pmax	pmax		
	comp=Z,2µm,0.5s						
YUK				smax			
	comp=N,3µm,1.5s						
YUK				smax			
	comp=E,2µm,1.5s						
YUK				smax			
	comp=N,700nm,0.6s						
YUK				smax			
	comp=E,700nm,0.6s						
UGL	**Uglegorsk**	**3.96**	**294**	*e*P	**P**	**01 43 38.5**	**+1.1**
UGL				AMB	AMB	01 43 40.0	
	comp=E,120nm,0.5s						
UGL				*e*S	**S**	**01 44 35.0**	**+2.0**
UGL	**Uglegorsk**	**3.96**	**294**	*e*PN	**P**	**01 43 48.5**	**+11**
JRA	**Rausu**	**4.04**	**206**	P	**P**	**01 43 36.8**	**-1.4**
JSE	**Soyaes**	**4.35**	**235**	P	**P**	**01 43 42.6**	**+1.2**
JSE				*e*S	**S**	**01 44 41.8**	**+1.9**
NEM2	**Nemuro 2**	**4.42**	**198**	P	**P**	**01 43 38.2**	**-3.9**
NEM2				*e*S	**S**	**01 44 35.2**	**-6.0**
JTKR	**Abashiri--Toko**	**4.44**	**217**	P	**P**	**01 43 42.0**	**-0.3**
JTKR				*e*S	**S**	**01 44 41.1**	**-0.4**
JWK2	**Keihoku**	**4.54**	**242**	P	**P**	**01 43 45.5**	**+2.2**
TYV	**Tymovskoe**	**4.59**	**317**	*e*P	**P**	**01 43 41.5**	**-2.4**
TYV				AMB	AMB	01 43 42.0	
	comp=E,105nm,0.6s						
TYV				AMB	AMB	01 43 42.0	
	comp=E,142nm,0.6s						
TYV				*e*S	**S**	**01 44 42.5**	**-1.9**
TYV				A		01 44 46.0	
	comp=E,141nm,1.0s						
TYV				A		01 44 46.0	
	comp=E,92nm,1.0s						
TYV				A		01 44 48.0	
	comp=E,1µm,5.0s						
ASAJ	**Asahikawa**	**4.92**	**227**	P	**P**	**01 43 48.2**	**+1.0**
	comp=E,73nm,0.3s,baz=57,slow=8.5,SNR=206						
ASAJ				S	**S**	**01 44 52.1**	**+1.7**
	comp=E,6.1nm,0.3s,baz=165,slow=33,SNR=8.1						
ASAJ	**Asahikawa**	**4.92**	**227**	PN	**P**	**01 43 48.3**	**+1.0**
ASAJ				S	**S**	**01 44 52.1**	**+1.7**
ASAJ				pmax	pmax		
	comp=Z,73nm,0.3s						
ASAJ				smax			
	comp=N,6.0nm,0.3s						
JAK	**Akkeshi**	**5.03**	**205**	P	**P**	**01 43 45.1**	**-3.3**
JAK				*e*S	**S**	**01 44 47.3**	**-5.2**
JKK2	**Kamakawa 2**	**5.03**	**224**	P	**P**	**01 43 48.8**	**+0.4**
JKK2				*e*S	**S**	**01 44 52.8**	**+0.3**
JAR	**Ashorobuto**	**5.06**	**213**	P	**P**	**01 43 47.8**	**-1.0**
JAR				*e*S	**S**	**01 44 51.6**	**-1.6**
JHR	**Hokuryu**	**5.62**	**229**	P	**P**	**01 43 56.0**	**+1.1**
JFR	**Furan**	**5.65**	**220**	P	**P**	**01 43 54.9**	**-0.3**
JFR				*e*S	**S**	**01 45 04.5**	**-0.1**
JCH	**Churui**	**5.80**	**212**	P	**P**	**01 43 54.1**	**-2.7**
JCH				*e*S	**S**	**01 45 02.4**	**-5.2**
JNBK	**Urakawa-nobuka**	**6.32**	**215**	P	**P**	**01 43 59.5**	**-3.2**
JNBK				*e*S	**S**	**01 45 12.6**	**-5.6**
SKR	**Severo-Kuril's**	**6.40**	**58**	AMB	AMB	01 43 49.4	
	comp=N,150nm,0.5s						
SKR				AMB	AMB	01 43 49.4	
	comp=N,540nm,0.5s						
SKR				*e*P		01 43 58.5	
SKR				*e*S	**S**	**01 45 12.7**	**-7.1**
SKR				A		01 45 24.0	
	comp=N,90nm,0.5s						
SKR				A		01 45 24.0	
	comp=N,150nm,0.5s						
SKR				A		01 45 24.0	
	comp=N,60nm,0.5s						
SKR				AMS	AMS	01 46 56.0	
	comp=N,5µm,12.0s						
JEW	**Eniwo**	**6.42**	**225**	*e*S	**S**	**01 45 19.2**	**-1.2**
JSK	**Shakotan**	**6.55**	**232**	P	**P**	**01 44 05.8**	**+0.5**
PAU	**Pauzhetka**	**7.15**	**54**	*i* P	**P**	**01 44 10.4**	**-1.9**
JKB	**Kayabe**	**7.36**	**222**	P	**P**	**01 44 11.9**	**-2.8**
JKB				*e*S	**S**	**01 45 32.9**	**-6.9**
JOT	**Ohata**	**7.76**	**219**	P	**P**	**01 44 16.0**	**-3.4**
JOT				*e*S	**S**	**01 45 40.3**	**-7.9**
JOSM	**Okushiri--Mats**	**7.96**	**229**	*e*S	**S**	**01 45 47.7**	**-4.7**
GRNR	**Gornyy**	**7.97**	**298**	*e*P	**P**	**01 44 19.0**	**-2.8**
GRNR				AMB	AMB	01 44 20.6	
	comp=N,160nm,1.0s						
GRNR				AMB	AMB	01 44 20.6	
	comp=N,56nm,1.0s						
GRNR				AMB	AMB	01 44 20.6	
	comp=N,420nm,1.0s						
TEY	**Ternei**	**8.02**	**255**	*e*P	**P**	**01 44 22.0**	**-0.3**
TEY				*e*S	**S**	**01 45 55.0**	**+1.6**
TEY				A		01 45 56.0	
	comp=N,1µm,4.0s						
TEY				A		01 45 58.0	
	comp=N,50nm,1.0s						
TEY				A		01 45 58.0	
	comp=N,220nm,1.8s						
JANG	**Nango**	**8.43**	**213**	P	**P**	**01 44 23.3**	**-3.9**
JANG				*e*S	**S**	**01 45 54.1**	**-8.1**
JOM	**Ohasama**	**9.31**	**212**	P	**P**	**01 44 34.3**	**-3.2**
JOM				*e*S	**S**	**01 46 13.3**	**-7.5**
JMK	**Ichinoseki**	**9.80**	**210**	P	**P**	**01 44 40.6**	**-2.6**
JYK	**Kaneyama**	**10.14**	**214**	P	**P**	**01 44 45.1**	**-2.2**
JYK				*e*S	**S**	**01 46 30.2**	**-8.3**
KLR	**Kul'dur**	**10.65**	**285**	*e*P	**P**	**01 44 54.8**	**+1.5**
KLR				AMB	AMB	01 44 55.8	
	comp=N,100nm,0.8s						
KLR				AMB	AMB	01 44 55.8	
	comp=N,120nm,0.8s						
EKMR	**Ekimchan**	**10.83**	**306**	*e*P	**P**	**01 44 56.8**	**+1.4**
EKMR				AMB	AMB	01 44 57.8	
	comp=N,50nm,0.7s						
VLA	**Vladivostok**	**11.90**	**254**	*i* PN	**P**	**01 45 07.0**	**-1.0**
MA2	**Magadan**	**12.15**	**8**	*e*P	**P**	**01 45 09.4**	**-1.4**
	comp=N,114nm,0.9s						
MA2	**Magadan**	**12.15**	**8**	*e*PN	**P**	**01 45 10.0**	**-0.8**
MA2				pmax	pmax		
	comp=Z,70nm,1.0s						
MDJ	**Mudanjiang**	**12.83**	**263**	P	**P**	**01 45 17.9**	**-0.8**
MDJ				AMB	AMB		
	comp=Z,40nm,1.2s						
MDJ				AMB	AMB		
	comp=Z,80nm,4.9s						
MDJ	**Mudanjiang**	**12.83**	**263**	*e*P	**P**	**01 45 18.0**	**-0.7**
	comp=Z,25nm,0.7s						
MAJO	**Matsushiro**	**13.04**	**216**	*e*P	**P**	**01 45 20.6**	**-0.5**
	comp=Z,40nm,0.6s						
MAJO	**Matsushiro**	**13.04**	**216**	*e*PN	**P**	**01 45 20.6**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,39nm,0.6s						
MAT	**Matsushiro**	**13.04**	**216**	P	**P**	**01 45 20.6**	**-0.5**
MAT				S	**S**	**01 47 43.4**	**+3.4**
MAT	**Matsushiro**	**13.04**	**216**	*e*P	**P**	**01 45 21.0**	**-0.1**
	comp=Z,40nm,0.7s						
MAT				*e*S	**S**	**01 47 43.0**	**+3.0**
MAT	**Matsushiro**	**13.04**	**216**	*e*PN	**P**	**01 45 21.0**	**-0.1**
MAT				*e*S	**S**	**01 47 43.0**	**+3.0**
MAT				pmax	pmax		
	comp=Z,40nm,0.7s						
MJAR	**Matsushiro Arr**	**13.04**	**216**	P	**P**	**01 45 21.0**	**-0.1**
	comp=Z,7.8nm,0.3s,baz=17,slow=11,SNR=64						
YASR	**Yasnyy**	**13.71**	**302**	*e*P	**P**	**01 45 24.8**	**-3.6**
YASR				AMB	AMB	01 45 29.0	
	comp=Z,7.0nm,0.6s						
YASR				AMB	AMB	01 45 29.0	
	comp=Z,60nm,0.6s						
YASR				AMB	AMB	01 45 29.0	
	comp=Z,80nm,0.6s						
BMKR	**Bomnak**	**13.72**	**308**	*e*P	**P**	**01 45 28.0**	**-0.6**
BMKR				AMB	AMB	01 45 28.5	
	comp=Z,10.0nm,0.5s						
ZEA	**Zeya**	**14.26**	**303**	*e*P	**P**	**01 45 35.3**	**+0.9**
ZEA				AMB	AMB	01 45 36.2	
	comp=Z,40nm,0.9s						
SEY	**Seymchan**	**15.61**	**8**	*i* P	**P**	**01 45 47.8**	**-0.6**
CN2	**Changchun**	**15.91**	**264**	⇑P	**P**	**01 45 50.3**	**-1.3**
CN2				*e*XP		01 47 22.8	
CN2				*e*S	**S**	**01 48 34.4**	**-2.5**
CN2				AMB	AMB		
	comp=Z,30nm,0.9s						
CN2				AMB	AMB		
	comp=Z,500nm,4.0s						
FX1	**Attu Island--F**	**17.16**	**63**	P	**P**	**01 46 05.0**	**+0.7**
	comp=Z,7.5nm,0.3s,baz=260,slow=19,SNR=9.6						
FX1				S	**S**	**01 49 16.9**	**+17**
	comp=Z,7.5nm,0.3s,baz=126,slow=19,SNR=8.2						
FX1	**Attu Island--F**	**17.16**	**63**	*e*P	**P**	**01 46 05.1**	**+0.8**
KS15	**Wonju Array Si**	**17.66**	**242**	*e*P	**P**	**01 46 10.9**	**+1.2**
YAK	**Yakutsk**	**17.67**	**331**	*e*P	**P**	**01 46 09.2**	**-0.3**
	comp=Z,83nm,0.3s						
YAK	**Yakutsk**	**17.67**	**331**	*e*P	**P**	**01 46 09.0**	**-0.5**
YAK				*e*S	**S**	**01 49 10.6**	**+0.8**
YAK				pmax	pmax		
	comp=Z,24nm,1.1s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				smax			
	comp=E,27nm,1.0s						
YAK				smax			
	comp=Z,11nm,0.9s						
YAK				smax			
	comp=N,19nm,1.0s						
SNY	**Shenyang**	**17.97**	**260**	⇑P	**P**	**01 46 13.2**	**+0.5**
SNY				AMB	AMB		
	comp=Z,60nm,0.7s						
SNY				LR	LR		
	comp=N,370nm,16.5s						
SNY				LR	LR		
	comp=E,190nm,10.8s						
SNY				LR	LR		
	comp=Z,260nm,14.7s						
HIA	**Hailar**	**18.51**	**286**	*e*P	**P**	**01 46 18.1**	**+0.2**
	comp=Z,10.0nm,0.4s						
HIA	**Hailar**	**18.51**	**286**	*e*P	**P**	**01 46 18.1**	**+0.1**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
JNU	**Nakatsue**	**19.20**	**227**	P	**P**	**01 46 26.5**	**+1.6**
	comp=Z,2.7nm,0.3s,baz=82,slow=9.4,SNR=12						
TIXI	**Tiksi**	**25.67**	**346**	*i* P	**P**	**01 47 23.3**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,21nm,0.8s,mb4.4						
SSE	**Sheshan**	**26.05**	**240**	P	**P**	**01 47 30.6**	**+1.8**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.5						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
SSE	**Sheshan**	**26.05**	**240**	P	**P**	**01 47 30.6**	**+1.8**
	comp=Z,25nm,0.7s,mb4.5						
HHC	**Hu-ho-hao-te**	**26.50**	**269**	⇓P	**P**	**01 47 33.3**	**+0.6**
HHC				AP		01 48 39.6	
HHC				XP	sP	01 49 26.0	+1.5
HHC				PCP	PcP	01 50 48.3	+1.6
HHC				S	**S**	**01 51 37.9**	**-0.6**
HHC				SCP		01 53 51.3	
HHC				PCS		01 54 28.1	
HHC				AMB	AMB		
	comp=Z,60nm,0.9s,mb4.8						
HHC				AMB	AMB		
	comp=Z,100nm,4.8s						
HHC				LR	LR		
	comp=N,130nm,7.2s						
HHC				LR	LR		
	comp=E,190nm,8.0s						
HHC				LR	LR		
	comp=Z,130nm,7.2s						
NJ2	**Nanjing**	**26.77**	**245**	*e*P	**P**	**01 47 35.2**	**0.0**
NJ2				AP		01 48 43.2	
NJ2				XP	sP	01 49 28.1	+0.9
NJ2				PCP	PcP	01 50 47.7	+0.3
NJ2				S	**S**	**01 51 42.0**	**-0.9**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.0						
NJ2				AMB	AMB		
	comp=Z,40nm,4.0s						
NJ2				LR	LR		
	comp=N,430nm,12.0s						
NJ2				LR	LR		
	comp=E,480nm,12.0s						
NJ2				LR	LR		
	comp=Z,2µm,13.1s						
SONM	**Songino Array**	**27.48**	**286**	P	**P**	**01 47 41.3**	**-0.1**
	comp=Z,2.0nm,0.5s,mb3.6,baz=79,slow=7.4,SNR=18						
SONM				pP		01 48 49.2	
	comp=Z,0.5nm,0.6s,baz=92,slow=9.3,SNR=1.1						
SONM				ScP		01 53 52.3	
	comp=Z,0.9nm,0.7s,baz=63,slow=2.9,SNR=5.6						
SONM	**Songino Array**	**27.48**	**286**	P	**P**	**01 47 41.3**	**-0.1**
SONM				pP		01 48 49.1	
SONM				ScP		01 53 52.3	
ZAK	**Zakamensk**	**28.88**	**292**	*e*P	**P**	**01 47 53.6**	**0.0**
ZAK				*e*		01 49 05.5	
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.5						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.6						
XAN	**Xi'an**	**31.89**	**259**	P	**P**	**01 48 20.0**	**+0.2**
XAN				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.5						
ENH	**Enshi**	**33.89**	**253**	*e*P	**P**	**01 48 37.1**	**+0.1**
	comp=Z,13nm,0.4s,mb4.5						
KRAR	**Krasnoyarsk**	**34.03**	**305**	*e*P	**P**	**01 48 36.1**	**-1.7**
LZH	**Lanzhou**	**34.12**	**267**	*e*P	**P**	**01 48 40.7**	**+1.9**
LZH				AP	pP	01 49 52.8	+2.0
LZH				XP	sP	01 50 34.6	+1.2
LZH				PCP	PcP	01 51 09.0	+2.2
LZH				*e*S	**S**	**01 53 36.1**	**-1.1**
LZH				SCP		01 54 15.5	
LZH				PCS		01 54 56.0	
LZH				XS		01 55 44.3	
LZH				SS	SS	01 56 19.5	-0.2
LZH				SCS	ScS	01 58 17.0	+0.5
LZH				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,340nm,4.7s						
LZH	**Lanzhou**	**34.12**	**267**	*e*P	**P**	**01 48 40.7**	**+1.9**
	comp=Z,101nm,1.0s,mb5.0						
LZH				pP	pP	01 49 52.8	+2.0
LZH				sP	sP	01 50 34.6	+1.2
LZH				PcP	PcP	01 51 09.0	+2.2
LZH				*e*S	**S**	**01 53 36.1**	**-1.1**
LZH				ScP		01 54 15.5	
LZH				PcS		01 54 56.0	
LZH				sS		01 55 44.3	
LZH				SS	SS	01 56 19.5	-0.2
LZH				ScS	ScS	01 58 17.0	+0.5
LZH	**Lanzhou**	**34.12**	**267**	*e*P	**P**	**01 48 40.7**	**+1.9**
LZH				*PP	pP	01 49 52.8	+2.0
LZH				*SP	sP	01 50 34.6	+1.2
LZH						01 51 09.0	
LZH				*e*S	**S**	**01 53 36.1**	**-1.1**
LZH				*SS		01 55 44.3	
LZH				SS	SS	01 56 19.5	-0.2
LZH						01 58 17.0	
LZH				pmax	pmax		
	comp=Z,101nm,1.0s,mb5.0						
GTA	**Gaotai**	**35.12**	**274**	*e*P	**P**	**01 48 47.8**	**+0.6**
GTA				AP	pP	01 50 02.8	+3.3
GTA				PP	PP	01 50 22.1	+5.7
GTA				PCP	PcP	01 51 10.7	+1.0
GTA				S	**S**	**01 53 54.0**	**+1.6**
GTA				SCP		01 54 18.6	
GTA				PCS		01 54 57.2	
GTA				SCS	ScS	01 58 21.3	-0.6
GTA				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb3.8						
GTA				AMB	AMB		
	comp=Z,90nm,9.3s						
GTA				LR	LR		
	comp=N,180nm,19.7s						
GTA				LR	LR		
	comp=E,300nm,17.0s						
GTA				LR	LR		
	comp=Z,280nm,15.8s						
CD2	**Chengdu**	**37.25**	**259**	⇓*i*P	**P**	**01 49 06.0**	**+1.0**
CD2				AP	pP	01 50 19.6	+1.6
CD2				PP	PP	01 50 43.8	+4.0
CD2				S	**S**	**01 54 24.9**	**+0.4**
CD2				SS	SS	01 57 20.9	+0.4
CD2				SCS	ScS	01 58 34.5	+0.6
CD2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.5						
CD2				LR	LR		
	comp=E,120nm,16.8s						
CD2				LR	LR		
	comp=Z,100nm,18.0s						
COLA	**College**	**37.84**	**39**	*e*P	**P**	**01 49 09.0**	**-0.5**
	comp=Z,40nm,0.7s,mb4.8						
COLA	**College**	**37.84**	**39**	*i* P	**P**	**01 49 09.2**	**-0.3**
ILAR	**Eielson Array**	**38.26**	**39**	P	**P**	**01 49 12.6**	**-0.3**
	comp=Z,19nm,0.6s,mb4.5,baz=263,slow=7.3,SNR=5.0						
GYA	**Guiyang**	**38.30**	**251**	⇓*i*P	**P**	**01 49 14.8**	**+1.1**
GYA				AP	pP	01 50 28.6	+1.6
GYA				S	**S**	**01 54 39.4**	**-0.9**
GYA				XS		01 56 51.4	
GYA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.5						
GYA				AMB	AMB		
	comp=Z,120nm,7.5s						
ZAL	**Zalesovo**	**39.04**	**303**	P	**P**	**01 49 17.9**	**-1.6**
	comp=Z,1.4nm,0.5s,mb3.5,baz=30,slow=7.1,SNR=3.8						
ZAL				PcP	PcP	01 51 20.6	-1.0
	comp=Z,2.9nm,0.7s,baz=28,slow=3.7,SNR=12						
WMQ	**Urumqi**	**41.08**	**288**	P	**P**	**01 49 38.1**	**+1.9**
WMQ				AP	pP	01 50 53.0	+2.7
WMQ				XP	sP	01 51 34.0	+2.2
WMQ				SCP		01 54 42.5	
WMQ				S	**S**	**01 55 22.0**	**+1.0**
WMQ				XS		01 57 34.5	
WMQ				SS	SS	01 58 34.5	+0.9
WMQ				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,260nm,5.0s						
KMI	**Kunming**	**41.76**	**254**	P	**P**	**01 49 43.2**	**+1.3**
KMI				AP	pP	01 50 57.8	+1.7
KMI				PP	PP	01 51 30.5	+3.9
KMI				S	**S**	**01 55 32.1**	**+1.1**
KMI				SS	SS	01 58 45.3	-0.2
KMI				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.3						
KMI				AMB	AMB		
	comp=Z,40nm,3.1s						
KMI				LR	LR		
	comp=N,170nm,9.9s						
KMI				LR	LR		
	comp=E,240nm,17.6s						
KMI				LR	LR		
	comp=Z,220nm,28.2s						
KMI	**Kunming**	**41.76**	**254**	P	**P**	**01 49 43.2**	**+1.3**
	comp=Z,23nm,0.8s,mb4.4						
KMI				pP	pP	01 50 57.8	+1.7
KMI				PP	PP	01 51 30.5	+3.9
KMI				S	**S**	**01 55 32.1**	**+1.1**
KMI				sS		01 57 46.4	
KMI				SS	SS	01 58 45.3	-0.2
KMI				LR	LR		
	comp=Z,230nm,28.2s						
INK	**Inuvik**	**42.97**	**32**	P	**P**	**01 49 50.1**	**-0.8**
	comp=Z,14nm,0.3s,mb4.6,baz=293,slow=6.3,SNR=34						
INK	**Inuvik**	**42.97**	**32**	*e*P	**P**	**01 49 49.8**	**-1.1**
MKAR	**Makanchi Array**	**43.17**	**294**	P	**P**	**01 49 53.0**	**+0.1**
	comp=Z,1.6nm,0.4s,mb3.5,baz=71,slow=6.8,SNR=35						
MKAR				PcP	PcP	01 51 34.5	-0.8
	comp=Z,1.1nm,0.6s,baz=63,slow=5.4,SNR=4.0						
MKAR				ScP		01 54 49.2	
	comp=Z,0.8nm,0.7s,baz=54,slow=4.0,SNR=4.5						
KURK	**Kurchatov**	**43.72**	**301**	*e*P	**P**	**01 49 56.7**	**-0.5**
	comp=Z,5.8nm,0.8s,mb3.8						
KURK				*e*PcP	PcP	01 51 36.1	-1.0

KURK	Kurchatov	43.72	301	eP	P	01 49 56.7	-0.5
KURK				e		01 51 36.1	
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb3.8						
LSA	Lhasa	46.48	268	P	P	01 50 21.5	+2.3
LSA				AMB	AMB		
	comp=Z,60nm,0.6s,mb4.9						
LSA	Lhasa	46.48	268	eP	P	01 50 21.5	+2.3
	comp=Z,37nm,0.6s,mb4.7						
LSA	Lhasa	46.48	268	eP	P	01 50 21.5	+2.3
LSA				pmax	pmax		
	comp=Z,37nm,0.6s,mb4.7						
CHKZ	Chkalovo	46.96	308	eP	P	01 50 21.2	-1.2
CHKZ				ePcP	PcP	01 51 46.8	-1.6
BVAR	Borovoye Array	47.37	307	P	P	01 50 25.9	+0.3
	comp=Z,0.8nm,0.4s,baz=48,slow=8.8,SNR=7.5						
BVAR				PcP	PcP	01 51 48.9	-0.9
	comp=Z,2.4nm,0.5s,baz=77,slow=3.1,SNR=12						
BVAR				ScP		01 55 06.3	
	comp=Z,2.0nm,0.6s,baz=52,slow=3.5,SNR=8.6						
BRVK	Borovoye	47.41	307	P	P	01 50 25.4	-0.5
BRVK				ePcP	PcP	01 51 48.9	-1.2
DLBC	Dease Lake	47.69	45	P	P	01 50 28.8	+0.8
	comp=Z,12nm,0.5s,mb4.4,baz=287,slow=6.4,SNR=19						
KIP	Kipapa	50.63	101	i P	P	01 50 52.1	+1.5
KBS	Kingsbay	51.05	350	i P	P	01 50 51.7	-1.3
JIRN	Jiri	51.14	270	eP	P	01 50 55.7	+1.4
	comp=Z,98nm,0.6s,mb5.2						
GUN	Gumba	51.19	270	eP	P	01 50 55.7	+1.0
	comp=Z,50nm,0.5s,mb5.0						
KKN	Kakani	51.67	271	eP	P	01 50 59.2	+0.9
	comp=Z,55nm,0.5s,mb5.1						
PKI	Pulchoki	51.72	270	eP	P	01 50 59.6	+0.9
	comp=Z,33nm,0.5s,mb4.9						
ARU	Arti	51.79	315	eP	P	01 50 57.2	-1.5
	comp=Z,5.0nm,0.4s,mb4.2						
ARU				ePcP	PcP	01 52 04.7	-1.4
ARU	Arti	51.79	315	⇓iP	P	01 50 57.9	-0.8
ARU				i		01 52 04.9	
ARU				e	pP	01 52 15.0	-1.4
ARU				e		01 52 59.5	
ARU				eSS	SS	02 01 31.8	-1.7
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
DMN	Daman	51.91	271	eP	P	01 51 01.0	+1.0
	comp=Z,121nm,0.9s,mb5.2						
GKN	Gorkha	51.97	271	eP	P	01 51 01.4	+0.9
	comp=Z,122nm,0.7s,mb5.3						
YKW3	Yellowknife Ar	52.43	35	⇑eP	P	01 51 01.9	-1.5
YKA	Yellowknife Ar	52.47	35	P	P	01 51 01.9	-1.8
	comp=Z,15nm,0.6s,mb4.5,baz=303,slow=7.1,SNR=40						
YKA				PcP	PcP	01 52 07.8	-0.8
	comp=Z,2.5nm,0.5s,baz=306,slow=3.6,SNR=6.2						
YKA	Yellowknife Ar	52.47	35	P	P	01 51 01.9	-1.8
YKA				PcP	PcP	01 52 07.8	-0.8
KOLN	Koldanda	52.82	272	eP	P	01 51 07.7	+1.0
	comp=Z,96nm,0.8s,mb5.2						
KEV	Kevo	55.23	339	ep	P	01 51 21.6	-1.8
	comp=Z,1.7nm,0.2s,mb4.0						
KEV	Kevo	55.23	339	eP	P	01 51 21.6	-1.8
KEV				pmax	pmax		
	comp=Z,2.0nm,0.2s,mb4.1						
AKTO	Aktyubinsk	55.30	309	P	P	01 51 24.9	+0.8
	comp=Z,1.1nm,0.5s,mb3.5,baz=76,slow=4.0,SNR=5.1						
AKTO				PcP	PcP	01 52 18.7	-0.9
	comp=Z,1.9nm,0.6s,baz=68,slow=6.2,SNR=6.3						
AKTO	Aktyubinsk	55.30	309	P	P	01 51 24.9	+0.8
AKTO						01 52 18.7	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
DAG	Danmarks Havn	55.60	356	⇓iP	P	01 51 24.0	-2.0
	comp=Z,5.6nm,0.5s,mb4.2						
DAG	Danmarks Havn	55.60	356	⇓eP	P	01 51 24.0	-2.0
	comp=Z,5.6nm,0.5s,mb4.2						
DAG	Danmarks Havn	55.60	356	⇓eP	P	01 51 24.0	-2.0
DAG				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.2						
ARCES	ARCESS Array B	55.76	339	P	P	01 51 25.7	-1.4
	comp=Z,2.9nm,0.7s,mb3.7,baz=43,slow=6.7,SNR=25						
ARCES				PcP	PcP	01 52 19.9	-1.2
	comp=Z,0.9nm,0.3s,baz=60,slow=4.7,SNR=5.2						
NLW	Nelson Butte	58.03	52	P	P	01 51 43.1	+0.1
EDM	Edmonton	58.40	44	eP	P	01 51 44.7	-0.8
TBM	Table Mountain	58.44	53	P	P	01 51 45.5	-0.4
WTV	Waterville	58.46	52	P	P	01 51 45.4	-0.6
JOF	Joensuu	58.84	331	ep	P	01 51 46.7	-1.7
	comp=Z,4.0nm,0.2s,mb4.5						
EPH	Ephrata	58.87	53	P	P	01 51 48.2	-0.5
OD2	Odessa Site #2	59.32	52	P	P	01 51 51.3	-0.5
NEW	Newport	59.61	50	P	P	01 51 53.4	-0.3
	comp=Z,15nm,0.7s,mb4.5,baz=311,slow=5.5,SNR=17						
NEW	Newport	59.61	50	eP	P	01 51 53.7	-0.1
	comp=Z,19nm,0.9s,mb4.5						
NEW	Newport	59.61	50	eP	P	01 51 53.7	0.0
NEW				pmax	pmax		
	comp=Z,19nm,0.9s						
VTHM	Trough	59.68	55	P	P	01 51 54.6	+0.4
SUMG	Summit	60.06	2	eP	P	01 51 56.1	-0.3
	comp=Z,56nm,0.4s,mb5.3						
VIPM	Ingram Point	60.07	56	P	P	01 51 57.3	+0.4
KAF	Kangasniemi	61.02	333	ep	P	01 52 01.3	-1.6
	comp=Z,2.1nm,0.3s,mb4.0,baz=38,slow=5.9						
KAF	Kangasniemi	61.02	333	eP	P	01 52 01.3	-1.6
KAF				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.0						
FINES	FINESS Array B	61.60	332	P	P	01 52 05.3	-1.4
	comp=Z,16nm,0.6s,mb4.7,baz=36,slow=7.4,SNR=92						
FINES				PcP	PcP	01 52 43.0	-1.5
	comp=Z,1.1nm,0.3s,baz=40,slow=4.5,SNR=4.5						
FINES	FINESS Array B	61.60	332	P	P	01 52 05.3	-1.4
FINES				PcP	PcP	01 52 43.0	-1.5
BMO	Blue Mountains	61.68	54	eP	P	01 52 07.5	+0.1
	comp=Z,5.7nm,0.6s,mb4.3						
MOD	Modoc	61.90	58	eP	P	01 52 08.9	0.0
	comp=Z,18nm,1.3s,mb4.4						
MSO	Missoula	62.19	50	eP	P	01 52 10.6	-0.2
	comp=Z,21nm,1.2s,mb4.5						
OBN	Obninsk	62.41	323	⇓eP	P	01 52 11.1	-1.0
OBN				i		01 54 07.3	
OBN				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.3						
CHMT	Chamberlain Mo	62.49	50	eP	P	01 52 12.3	-0.4
WVOR	Wild Horse Val	62.50	56	eP	P	01 52 13.1	+0.2
	comp=Z,14nm,1.0s,mb4.5						
WVOR	Wild Horse Val	62.50	56	eP	P	01 52 13.1	+0.2
WVOR				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
FCC	Fort Churchill	62.56	31	⇑iP	P	01 52 11.6	-1.4
	comp=Z,31nm,0.6s,mb5.0						
FCC	Fort Churchill	62.56	31	⇑iP	P	01 52 11.6	-1.4
FCC				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.0						
HRY	Holter Researc	63.35	49	eP	P	01 52 18.5	+0.2
DLMT	Dillon	63.86	51	eP	P	01 52 22.2	+0.7
	comp=Z,27nm,0.8s,mb4.9						
HLID	Hailey	64.09	53	eP	P	01 52 23.4	+0.4
	comp=Z,4.6nm,0.7s,mb4.2						
HLID				ePcP	PcP	01 52 54.8	-0.1
BOZ	Bozeman (W)	64.17	50	⇑iP	P	01 52 24.1	+0.6
	comp=Z,24nm,0.7s,mb4.9						
BOZ	Bozeman (W)	64.17	50	⇑iP	P	01 52 24.1	+0.6
BOZ				pmax	pmax		
	comp=Z,24nm,0.7s,mb4.9						
CMB	Columbia Colle	64.36	61	eP	P	01 52 24.8	-0.1
	comp=Z,8.3nm,0.9s,mb4.4						
CMB				ePcP	PcP	01 52 55.6	-0.5
CMB	Columbia Colle	64.36	61	eP	P	01 52 24.8	-0.1
CMB				e		01 52 55.6	
CMB				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.3						
QLMT	Earthquake Lak	64.83	51	eP	P	01 52 28.3	+0.6
YMR	Madison River	65.18	50	eP	P	01 52 31.0	+1.0
	comp=Z,39nm,1.2s,mb4.9						
NVAR	Mina Array Bea	65.33	60	P	P	01 52 31.5	+0.5
	comp=Z,8.0nm,0.8s,mb4.4,baz=308,slow=5.0,SNR=45						
NVAR	Mina Array Bea	65.33	60	P	P	01 52 31.5	+0.5
YFT	Old Faithful	65.40	51	eP	P	01 52 33.6	+2.3
ELK	Elko	65.53	56	eP	P	01 52 32.7	+0.4
	comp=Z,3.3nm,0.7s,mb4.2						
ELK	Elko	65.53	56	eP	P	01 52 32.7	+0.5
ELK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
IMW	Indian Meadow	65.72	51	eP	P	01 52 34.6	+1.2
	comp=Z,22nm,1.1s,mb4.8						
DGMT	Dagmar	65.89	44	eP	P	01 52 34.4	0.0
	comp=Z,13nm,0.4s,mb5.0						
RRI2	Red Ridge	65.90	52	⇑iP	P	01 52 35.6	+1.1
	comp=Z,39nm,0.7s,mb5.2						
MOOW	Moose Ponds	65.93	51	eP	P	01 52 35.6	+0.9
	comp=Z,22nm,1.2s,mb4.8						
TPAW	Teton Pass	66.00	51	eP	P	01 52 36.1	+1.0
	comp=Z,30nm,1.1s,mb4.9						
LOHW	Long Hollow	66.09	51	eP	P	01 52 36.7	+1.0
	comp=Z,17nm,1.1s,mb4.7						
NB2	NORSAR Subarra	66.13	338	P	P	01 52 34.6	-1.1
	comp=Z,13nm,0.5s,mb4.9,baz=30,slow=6.5						
NB2	NORSAR Subarra	66.13	338	P	P	01 52 34.6	-1.1
	baz=30,slow=6.5						
NOA	NORSAR Array B	66.13	338	P	P	01 52 34.8	-0.9
	comp=Z,12nm,0.5s,mb4.9,baz=30,slow=6.4,SNR=36						
REDW	Red Top Meadow	66.14	51	eP	P	01 52 36.9	+0.9
	comp=Z,14nm,1.0s,mb4.7						
LAO	LASA Array	66.18	46	eP	P	01 52 36.5	+0.3
	comp=Z,20nm,1.1s,mb4.8						
HVU	Hansel Valley	66.19	54	eP	P	01 52 36.8	+0.4
	comp=Z,13nm,1.2s,mb4.5						
HVU	Hansel Valley	66.19	54	eP	P	01 52 36.8	+0.4
HVU				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
NAO01	NORSAR Array S	66.38	338	eP	P	01 52 35.9	-1.3
	comp=Z,6.2nm,0.7s,mb4.5						
NAO	NORSAR Subarra	66.41	339	P	P	01 52 34.6	-2.8
	comp=Z,13nm,0.5s,mb4.9						
NAO	NORSAR Subarra	66.41	339	P	P	01 52 34.6	-2.8
NAO				pmax	pmax		
	comp=Z,13nm,0.5s,mb4.9						
SPUT	South Promonto	66.69	54	eP	P	01 52 40.1	+0.6
HWUT	Hardware Ranch	66.96	53	eP	P	01 52 41.9	+0.7
	comp=Z,14nm,0.9s,mb4.7						
BW06	Boulder Array	67.23	51	⇑iP	P	01 52 42.8	-0.1
	comp=Z,16nm,0.6s,mb4.9						
PDAR	Pinedale Array	67.23	51	P	P	01 52 43.0	+0.2
	comp=Z,14nm,0.5s,mb4.9,baz=12,slow=0.9,SNR=143						
PDAR				pP	pP	01 54 04.0	-2.0
	comp=Z,0.7nm,0.8s,slow=5.9,SNR=2.2						
DUG	Dugway	67.25	55	eP	P	01 52 43.7	+0.7
	comp=Z,13nm,0.8s,mb4.7						
DUG	Dugway	67.25	55	eP	P	01 52 43.7	+0.7
DUG				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
TCUT	Toone Canyon	67.39	53	eP	P	01 52 44.3	+0.5
TPNV	Topopah Spring	67.53	60	eP	P	01 52 44.8	0.0
	comp=Z,16nm,1.1s,mb4.7						
TPNV	Topopah Spring	67.53	60	eP	P	01 52 44.8	0.0
TPNV				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
NLU	North Lily Min	67.83	55	eP	P	01 52 46.9	+0.3
MPU	Maple Canyon	68.03	54	⇑eP	P	01 52 48.4	+0.7
	comp=Z,17nm,1.0s,mb4.7						
WRAB	Tennant Creek	68.26	193	eP	P	01 52 49.1	-0.4
	comp=Z,3.2nm,0.7s,mb4.2						
WRAB	Tennant Creek	68.26	193	eP	P	01 52 49.1	-0.3
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
WRA	Warramunga Arr	68.27	193	P	P	01 52 49.2	-0.3
	comp=Z,1.8nm,0.5s,mb4.0,baz=8.9,slow=6.6,SNR=21						
WRA				pP	pP	01 54 11.3	-1.7
	comp=Z,1.1nm,0.7s,baz=6.6,slow=6.6,SNR=5.7						
ULM	Lac du Bonnet	68.28	38	P	P	01 52 48.0	-1.0
	comp=Z,10nm,0.5s,mb4.8,baz=317,slow=6.5,SNR=25						
FITZ	Fitzroy Crossi	68.29	202	P	P	01 52 50.2	+0.5
	comp=Z,6.0nm,0.8s,mb4.4,baz=53,slow=9.1,SNR=4.3						
ARUT	Antelope Range	68.57	57	eP	P	01 52 51.3	+0.2
AKASG	Malin Array Be	68.67	323	P	P	01 52 50.3	-1.1
	comp=Z,5.4nm,0.4s,mb4.6,baz=36,slow=6.2,SNR=26						
AKASG	Malin Array Be	68.67	323	i P	P	01 52 50.5	-1.0
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MVU	Marysvale	68.76	56	eP	P	01 52 53.1	+0.9
	comp=Z,4.4nm,0.8s,mb4.2						
TMUT	Trail Mountain	68.77	55	eP	P	01 52 53.1	+0.8
MSU	Marysvale	68.78	56	eP	P	01 52 53.1	+0.8
RSSD	Black Hills	69.09	47	eP	P	01 52 54.0	-0.1
	comp=Z,8.0nm,0.6s,mb4.6						
RSSD	Black Hills	69.09	47	eP	P	01 52 54.0	-0.2
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
NEN	Nelson	69.25	60	eP	P	01 52 55.3	0.0
SRU	San Rafael	69.28	54	⇑eP	P	01 52 55.7	+0.3
	comp=Z,21nm,0.7s,mb5.0						
SRU	San Rafael	69.28	54	⇑eP	P	01 52 55.7	+0.3
SRU				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.0						
LDFC	Landfair	69.49	60	eP	P	01 52 56.4	-0.3
PV10	Paradox Valley	70.61	54	eP	P	01 53 04.4	+1.0
PV01	Paradox Valley	71.04	54	eP	P	01 53 06.1	+0.1
SMCO	Snowmass	71.16	52	eP	P	01 53 07.1	+0.5
	comp=Z,9.0nm,0.8s,mb4.5						
ISCO	Idaho Springs	71.43	51	eP	P	01 53 09.1	+0.8
	comp=Z,16nm,1.3s,mb4.6						
ISCO	Idaho Springs	71.43	51	eP	P	01 53 09.1	+0.9
ISCO				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.6						
EYMN	Ely	71.88	37	⇑iP	P	01 53 09.7	-1.0
	comp=Z,51nm,0.9s,mb5.2						
KWP	Kalwaria	72.08	326	eP	P	01 53 12.3	+0.4
KWP	Kalwaria	72.08	326	eP	P	01 53 12.3	+0.4
STHS	Stebnicka Huta	72.81	327	eP	P	01 53 16.2	+0.2
KOLS	Kolonicke sedl	72.82	326	eP	P	01 53 15.7	-0.4
KOLS				e		01 53 21.9	
SDCO	Great Sand Dun	72.99	52	eP	P	01 53 17.8	+0.4
	comp=Z,9.4nm,1.2s,mb4.4						
CFR	Carcaliu	73.44	320	⇑P	P	01 53 18.6	-1.2
OKC	Ostrava-Krasne	73.58	329	eP	P	01 53 20.5	0.0
UPC	Upice	73.75	330	eP	P	01 53 21.5	0.0
DPC	Dobruska-Polom	73.78	330	eP	P	01 53 21.5	-0.1
MORC	Moravsky Berou	73.85	329	eP	P	01 53 22.0	0.0
	comp=Z,7.6nm,0.7s,mb4.5						
MORC	Moravsky Berou	73.85	329	eP	P	01 53 22.0	0.0
MORC				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
KECS	Kecovo	73.86	326	eP	P	01 53 21.9	-0.2
SCHQ	Schefferville	73.90	20	P	P	01 53 21.2	-1.0
	comp=Z,4.8nm,0.6s,mb4.4,baz=307,slow=1.4,SNR=16						
SCHQ	Schefferville	73.90	20	P	P	01 53 21.2	-1.0
HARR	Harsova	73.91	320	⇑P	P	01 53 21.5	-1.0
HARR	Harsova	73.91	320	⇑P	P	01 53 21.5	-1.0
TUC	Tucson	73.98	60	eP	P	01 53 23.1	0.0
	comp=Z,2.4nm,0.9s,mb3.9						
TUC	Tucson	73.98	60	eP	P	01 53 23.1	-0.1
TUC				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
CLL	Collm	74.05	332	⇑P	P	01 53 22.4	-0.7
	comp=Z,logA/T=1.5,mb5.0						
CLL	Collm	74.05	332	⇑iP	P	01 53 22.4	-0.7
	comp=Z,26nm,0.9s,mb5.0						
CLL	Collm	74.05	332	⇑iP	P	01 53 22.4	-0.7
CLL				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.0						
BRG	Berggiesshubel	74.12	332	eP	P	01 53 22.9	-0.7
	comp=Z,6.1nm,0.9s,mb4.3						
BRG	Berggiesshubel	74.12	332	eP	P	01 53 22.9	-0.7
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
MLR	Muntele Rosu	74.13	321	P	P	01 53 24.0	+0.3
	comp=Z,3.1nm,0.3s,mb4.5,baz=180,slow=1.2,SNR=13						
PVCC	Panska Ves	74.22	331	eP	P	01 53 23.9	-0.2
CLZ	Clausthal	74.39	334	eP	P	01 53 25.1	+0.1
	comp=Z,14nm,0.6s,mb4.9						
CLZ	Clausthal	74.39	334	eP	P	01 53 25.1	+0.1
CLZ				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.9						
DRGR		74.40	324	⇑P	P	01 53 24.5	-0.7
DRGR		74.40	324	⇑P	P	01 53 24.5	-0.7
VYHS	Vyhne	74.46	327	i P	P	01 53 25.7	+0.2
ANMO	Albuquerque	74.52	55	eP	P	01 53 26.9	+0.7
	comp=Z,2.0nm,0.7s,mb4.0						
ANMO	Albuquerque	74.52	55	eP	P	01 53 26.9	+0.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VOIR		74.55	322	⇑P	P	01 53 27.2	+1.1
VOIR		74.55	322	⇑P	P	01 53 27.2	+1.1
VRAC	Vranov	74.57	329	⇓P	P	01 53 26.9	+0.8
VRAC	Vranov	74.57	329	⇓P	P	01 53 26.9	+0.7
PRU	Pruhonice	74.69	331	eP	P	01 53 26.7	-0.1
TREC	Trest	74.97	330	eP	P	01 53 28.5	+0.1
MOX	Moxa	75.06	333	i P	P	01 53 28.4	-0.4
MOX	Moxa	75.06	333	eP	P	01 53 28.4	-0.4
BR131	Keskin Array S	75.12	313	eP	P	01 53 29.8	+0.3
	comp=Z,0.5nm,0.5s,mb3.5						
BRTR	Keskin Array B	75.12	313	P	P	01 53 29.7	+0.3
	comp=Z,2.0nm,0.8s,mb3.9,baz=74,slow=4.3,SNR=12						
NKC	Novy Kostel	75.16	332	eP	P	01 53 28.6	-0.8
ZST	Bratislava	75.34	328	eP	P	01 53 30.6	+0.1
KHC	Kasperske Hory	75.75	331	eP	P	01 53 32.9	+0.2
GEC2	GERESS Array S	75.95	331	eP	P	01 53 33.7	-0.2
	comp=Z,6.0nm,0.8s,mb4.4						
GEC2	GERESS Array S	75.95	331	eP	P	01 53 33.7	-0.2
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
GERES	GERESS Array B	75.95	331	P	P	01 53 33.7	-0.2
	comp=Z,5.7nm,0.6s,mb4.5,baz=36,slow=5.4,SNR=58						
WET	Wettzell	75.97	331	eP	P	01 53 34.1	+0.1
	comp=Z,9.0nm,0.8s,mb4.5						
WET	Wettzell	75.97	331	eP	P	01 53 34.1	+0.1
WET				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
GRA1	Grafenberg Arr	76.02	332	eP	P	01 53 34.6	+0.4
	comp=Z,35nm,0.8s,mb5.1						
GRF	Grafenberg Arr	76.02	332	eP	P	01 53 34.6	+0.4
	comp=Z,35nm,0.8s,mb5.1						
GRF	Grafenberg Arr	76.02	332	eP	P	01 53 34.6	+0.4
GRF				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.1						
GRF	Grafenberg Arr	76.02	332	eP	P	01 53 34.6	+0.4
GRF				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.1						
TNS	Taunus Mts	76.39	334	eP	P	01 53 36.2	-0.1
	comp=Z,10.0nm,0.7s,mb4.7						
TNS	Taunus Mts	76.39	334	eP	P	01 53 36.2	-0.1
TNS				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
MOA	Molln	76.62	330	⇑iP	P	01 53 37.8	+0.2
	comp=Z,7.9nm,0.8s,mb4.5						
MOA	Molln	76.62	330	⇑P	P	01 53 37.8	+0.2
	comp=Z,7.9nm,0.8s,mb4.5						
ARSA	Arzberg	76.70	329	⇑iP	P	01 53 38.5	+0.4
	comp=Z,1.6nm,0.4s,mb4.1						
AMTX	Amarillo	77.17	52	eP	P	01 53 41.1	+0.2
	comp=Z,14nm,0.8s,mb4.8						
CPRX	Cap Rock	77.39	55	eP	P	01 53 42.1	0.0
GROS	Grobnik	77.39	328	eP	P	01 53 41.7	-0.2
GIVF	Givet	77.52	336	eP	P	01 53 41.9	-0.5
MNTX	Cornudas Mount	77.54	57	eP	P	01 53 43.3	+0.3
	comp=Z,5.1nm,0.9s,mb4.2						
KBA	Koelnbreinsper	77.61	330	⇑iP	P	01 53 43.9	+0.9
	comp=Z,13nm,0.5s,mb5.0						
KBA	Koelnbreinsper	77.61	330	⇑P	P	01 53 43.9	+0.9
	comp=Z,13nm,0.4s,mb5.0						
KBA	Koelnbreinsper	77.61	330	⇑P	P	01 53 43.9	+0.9
KBA				pmax	pmax		
	comp=Z,13nm,0.4s,mb5.0						
OBKA	Obir	77.68	329	⇑iP	P	01 53 43.5	+0.1
	comp=Z,5.5nm,0.7s,mb4.4						
OBKA	Obir	77.68	329	⇑P	P	01 53 43.5	+0.1
	comp=Z,5.5nm,0.7s,mb4.4						
BAIF	Baives	77.72	337	⇑iP	P	01 53 43.1	-0.4
	comp=Z,7.1nm,0.5s,mb4.3						
BAIF	Baives	77.72	337	⇑iP	P	01 53 43.1	-0.4
BAIF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
GOLS	Golise	77.73	328	eP	P	01 53 43.5	-0.2
GDL2	Guadalupe Moun	77.73	56	eP	P	01 53 44.4	+0.4
WATA	Walderalm	77.97	331	⇑iP	P	01 53 45.4	+0.5
	comp=Z,17nm,0.4s,mb5.1						
WATA	Walderalm	77.97	331	⇑P	P	01 53 45.4	+0.5
WATA				pmax	pmax		
	comp=Z,17nm,0.4s,mb5.1						
WTTA	Wattenberg	78.01	331	⇑iP	P	01 53 45.9	+0.8
	comp=Z,20nm,0.4s,mb5.2						
WTTA	Wattenberg	78.01	331	⇑P	P	01 53 45.9	+0.8
	comp=Z,20nm,0.4s,mb5.2						
WTTA	Wattenberg	78.01	331	⇑P	P	01 53 45.9	+0.7
WTTA				pmax	pmax		
	comp=Z,20nm,0.4s,mb5.2						
BFO	Black Forest	78.11	334	eP	P	01 53 45.3	-0.4
	comp=Z,7.0nm,0.9s,mb4.4						
BFO	Black Forest	78.11	334	eP	P	01 53 45.3	-0.4
BFO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
MOTA	Moosalm	78.11	331	⇑iP	P	01 53 46.1	+0.4
	comp=Z,8.2nm,0.4s,mb4.8						
MOTA	Moosalm	78.11	331	⇑P	P	01 53 46.1	+0.4
	comp=Z,8.2nm,0.4s,mb4.8						
MOTA	Moosalm	78.11	331	⇑P	P	01 53 46.1	+0.4
MOTA				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.8						
SQTA	Sankt Quirin	78.19	331	⇑iP	P	01 53 46.6	+0.5
	comp=Z,5.7nm,0.5s,mb4.6						
SQTA	Sankt Quirin	78.19	331	⇑P	P	01 53 46.6	+0.5
SQTA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
BOJS	Bojanci	78.30	328	eP	P	01 53 46.4	-0.4
CDF	Champ du Feu	78.35	334	⇑iP	P	01 53 46.7	-0.2
	comp=Z,15nm,0.8s,mb4.5						
CDF	Champ du Feu	78.35	334	⇑iP	P	01 53 46.7	-0.2
CDF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
DAVA	Damuels	78.56	332	⇑iP	P	01 53 48.1	+0.1
	comp=Z,7.7nm,0.5s,mb4.7						
DAVA	Damuels	78.56	332	⇑P	P	01 53 48.1	+0.1
	comp=Z,7.7nm,0.5s,mb4.7						
WMOK	Wichita Mounta	78.81	50	eP	P	01 53 49.5	-0.2
	comp=Z,5.4nm,0.7s,mb4.4						
WMOK	Wichita Mounta	78.81	50	eP	P	01 53 49.6	-0.1
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
MEZF	Maizieres J'vi	78.91	336	⇑iP	P	01 53 49.9	0.0
	comp=Z,18nm,0.6s,mb4.7						
CSS	Prodhromos	78.95	310	eP	P	01 53 50.7	+0.2
	comp=Z,6.0nm,0.6s,mb4.5						
HAU	Haudompre	78.99	335	⇑iP	P	01 53 49.9	-0.4
	comp=Z,11nm,0.5s,mb4.5						
HAU	Haudompre	78.99	335	⇑iP	P	01 53 49.9	-0.4
HAU				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
HINF	Hinteralfeld	79.01	334	eP	P	01 53 49.9	-0.5
	comp=Z,5.0nm,0.6s,mb4.1						
HINF	Hinteralfeld	79.01	334	eP	P	01 53 49.9	-0.5
HINF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
CCM	Cathedral Cave	79.91	43	eP	P	01 53 54.8	-0.6
	comp=Z,6.2nm,0.5s,mb4.6						
CCM	Cathedral Cave	79.91	43	eP	P	01 53 54.8	-0.6
CCM				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
FLN	La Foliniere	80.10	339	⇑iP	P	01 53 55.9	-0.3
	comp=Z,21nm,0.5s,mb4.8						
FLN	La Foliniere	80.10	339	⇑iP	P	01 53 55.9	-0.3
FLN				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.8						
LDF	La Druitiere	80.17	339	⇑iP	P	01 53 56.2	-0.4
	comp=Z,8.3nm,0.4s,mb4.5						
LDF	La Druitiere	80.17	339	⇑iP	P	01 53 56.2	-0.4
LDF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
LTX	Lajitas	80.29	57	eP	P	01 53 58.3	+0.7
	comp=Z,11nm,1.0s,mb4.5						
LTX	Lajitas	80.29	57	eP	P	01 53 58.3	+0.7
LTX				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
TXAR	Lajitas Array	80.29	57	P	P	01 53 58.2	+0.6
	comp=Z,8.7nm,0.7s,mb4.6,baz=291,slow=3.8,SNR=86						
CABF	La Chapelle	80.32	334	eP	P	01 53 57.5	+0.1
	comp=Z,6.5nm,0.6s,mb4.2						
CABF	La Chapelle	80.32	334	eP	P	01 53 57.5	+0.1
CABF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
LOR	Lormes	80.36	336	⇑iP	P	01 53 57.3	-0.3
	comp=Z,13nm,0.4s,mb4.7						
LOR	Lormes	80.36	336	⇑iP	P	01 53 57.3	-0.3
LOR				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.7						
GRR	Gorron	80.54	339	⇑iP	P	01 53 58.5	0.0
	comp=Z,31nm,0.5s,mb5.0						
GRR	Gorron	80.54	339	⇑iP	P	01 53 58.5	0.0
GRR				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.0						
SSF	Saint Saulge	80.65	336	⇑iP	P	01 53 58.8	-0.3
	comp=Z,3.9nm,0.4s,mb4.5						
SSF	Saint Saulge	80.65	336	⇑iP	P	01 53 58.8	-0.3
SSF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.5						
HYF	Humbligny	80.69	337	eP	P	01 53 59.6	+0.3
SMF	Signal de Mont	80.94	336	⇑iP	P	01 54 00.5	-0.1
	comp=Z,32nm,0.8s,mb4.8						

SMF	**Signal de Mont**	**80.94**	**336**	⇑*i*P	**P**	**01 54 00.5**	**-0.1**
SMF				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
AVF	**Avril sur Loir**	**80.94**	**336**	⇑*i*P	**P**	**01 54 00.5**	**-0.1**
	comp=Z,12nm,0.4s,mb4.7						
AVF	**Avril sur Loir**	**80.94**	**336**	⇑*i*P	**P**	**01 54 00.5**	**-0.1**
AVF				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.7						
SGMF	**Saint Gilles**	**81.07**	**340**	⇑*i*P	**P**	**01 54 01.4**	**+0.2**
	comp=Z,27nm,0.5s,mb4.9						
SGMF	**Saint Gilles**	**81.07**	**340**	⇑*i*P	**P**	**01 54 01.4**	**+0.2**
SGMF				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
LPL	**La Plagne**	**81.12**	**333**	⇑*i*P	**P**	**01 54 02.1**	**+0.5**
LPG	**La Plagne**	**81.13**	**333**	⇑*i*P	**P**	**01 54 02.3**	**+0.7**
	comp=Z,10nm,0.6s,mb4.4						
LPG	**La Plagne**	**81.13**	**333**	⇑*i*P	**P**	**01 54 02.3**	**+0.7**
LPG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
ROSF	**Rostrenen**	**81.15**	**341**	⇑*i*P	**P**	**01 54 01.8**	**+0.1**
	comp=Z,14nm,0.5s,mb4.7						
ROSF	**Rostrenen**	**81.15**	**341**	⇑*i*P	**P**	**01 54 01.8**	**+0.1**
ROSF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.7						
BGF	**Bois d'Agland**	**81.29**	**336**	⇑*i*P	**P**	**01 54 03.0**	**+0.6**
	comp=Z,8.0nm,0.5s,mb4.4						
BGF	**Bois d'Agland**	**81.29**	**336**	⇑*i*P	**P**	**01 54 03.0**	**+0.6**
BGF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
QUIF	**Quistinic**	**81.52**	**341**	⇑*i*P	**P**	**01 54 03.5**	**-0.1**
	comp=Z,19nm,0.6s,mb4.8						
QUIF	**Quistinic**	**81.52**	**341**	⇑*i*P	**P**	**01 54 03.5**	**-0.1**
QUIF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.8						
JCT	**Junction City**	**81.56**	**54**	*e*P	**P**	**01 54 04.6**	**+0.5**
	comp=Z,8.4nm,0.6s,mb4.8						
JCT	**Junction City**	**81.56**	**54**	*e*P	**P**	**01 54 04.6**	**+0.4**
JCT				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
AQU	**L'Aquila**	**81.69**	**328**	*e*P	**P**	**01 54 05.4**	**+0.8**
	comp=Z,10nm,0.7s,mb4.8						
AQU	**L'Aquila**	**81.69**	**328**	*e*P	**P**	**01 54 05.4**	**+0.8**
AQU				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
ACSO	**Alum Creek Sta**	**81.70**	**37**	*e*P	**P**	**01 54 04.5**	**-0.2**
	comp=Z,14nm,0.6s,mb5.0						
TCF	**Toulx Ste Croi**	**81.71**	**337**	⇑*i*P	**P**	**01 54 04.7**	**+0.1**
	comp=Z,25nm,0.9s,mb4.7						
TCF	**Toulx Ste Croi**	**81.71**	**337**	⇑*i*P	**P**	**01 54 04.7**	**+0.1**
TCF				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.8						
MBDF	**Montbardon**	**81.82**	**333**	*e*P	**P**	**01 54 05.1**	**-0.1**
	comp=Z,5.7nm,0.4s,mb4.5						
MBDF	**Montbardon**	**81.82**	**333**	*e*P	**P**	**01 54 05.1**	**-0.1**
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.5						
ORIF	**Oris-en-Rattie**	**81.92**	**334**	⇑*i*P	**P**	**01 54 06.2**	**+0.5**
	comp=Z,22nm,0.9s,mb4.7						
ORIF	**Oris-en-Rattie**	**81.92**	**334**	⇑*i*P	**P**	**01 54 06.2**	**+0.5**
ORIF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
WCI	**Wyandotte Cave**	**81.99**	**40**	*e*P	**P**	**01 54 06.1**	**-0.1**
	comp=Z,11nm,0.6s,mb4.9						
WCI	**Wyandotte Cave**	**81.99**	**40**	*e*P	**P**	**01 54 06.1**	**-0.1**
WCI				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.9						
MFF	**Saint Martin d**	**82.03**	**338**	⇑*i*P	**P**	**01 54 06.6**	**+0.3**
	comp=Z,17nm,0.6s,mb4.8						
MFF	**Saint Martin d**	**82.03**	**338**	⇑*i*P	**P**	**01 54 06.6**	**+0.3**
MFF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
VIVF	**Saint-Julien-l**	**82.33**	**334**	*e*P	**P**	**01 54 08.1**	**+0.3**
	comp=Z,13nm,0.7s,mb4.5						
VIVF	**Saint-Julien-l**	**82.33**	**334**	*e*P	**P**	**01 54 08.1**	**+0.3**
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
SBF	**Sospel**	**82.39**	**332**	*e*P	**P**	**01 54 07.6**	**-0.5**
	comp=Z,15nm,0.4s,mb4.9						
SBF	**Sospel**	**82.39**	**332**	*e*P	**P**	**01 54 07.6**	**-0.5**
SBF				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.9						
RJF	**Les Rejaudoux**	**82.81**	**337**	*e*P	**P**	**01 54 10.1**	**-0.1**
FRF	**La Foret Royal**	**82.91**	**333**	*e*P	**P**	**01 54 11.0**	**+0.3**
CAF	**Calviac**	**83.01**	**336**	*e*P	**P**	**01 54 12.1**	**+0.9**
	comp=Z,20nm,0.5s,mb4.9						
CAF	**Calviac**	**83.01**	**336**	*e*P	**P**	**01 54 12.1**	**+0.9**
CAF				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
WVT	**Waverly**	**83.05**	**42**	*e*P	**P**	**01 54 11.7**	**+0.1**
	comp=Z,6.0nm,0.6s,mb4.6						
WVT	**Waverly**	**83.05**	**42**	*e*P	**P**	**01 54 11.7**	**+0.1**
WVT				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
PGF	**Pioggiola**	**83.06**	**330**	*e*P	**P**	**01 54 11.2**	**-0.3**
TIP	**Timpagrande**	**83.15**	**324**	*e*P	**P**	**01 54 12.1**	**+0.1**
LMR	**La Mourre**	**83.16**	**332**	*e*P	**P**	**01 54 11.8**	**-0.2**
	comp=Z,13nm,0.5s,mb4.7						
LMR	**La Mourre**	**83.16**	**332**	*e*P	**P**	**01 54 11.8**	**-0.2**
LMR				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
LASF	**Ste Croix**	**83.28**	**335**	*e*P	**P**	**01 54 13.2**	**+0.6**
NATX	**Nacogdoches**	**83.28**	**49**	*e*P	**P**	**01 54 13.5**	**+0.6**
	comp=Z,30nm,0.6s,mb5.3						
LFF	**La Frestale**	**83.35**	**337**	⇑*i*P	**P**	**01 54 13.6**	**+0.6**
	comp=Z,23nm,0.5s,mb5.0						
LFF	**La Frestale**	**83.35**	**337**	⇑*i*P	**P**	**01 54 13.6**	**+0.6**
LFF				pmax	pmax		
	comp=Z,12nm,0.5s,mb5.0						
OXF	**Oxford**	**83.65**	**44**	*e*P	**P**	**01 54 14.4**	**-0.2**
	comp=Z,15nm,0.6s,mb5.0						
OXF	**Oxford**	**83.65**	**44**	*e*P	**P**	**01 54 14.4**	**-0.2**
OXF				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
PLAL	**Pickwick Lake**	**83.89**	**43**	*e*P	**P**	**01 54 15.4**	**-0.4**
	comp=Z,10nm,0.8s,mb4.7						
MTLF	**Montolieu**	**84.43**	**335**	*e*P	**P**	**01 54 18.6**	**+0.3**
	comp=Z,10nm,0.7s,mb4.4						
MTLF	**Montolieu**	**84.43**	**335**	*e*P	**P**	**01 54 18.6**	**+0.3**
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
TZTN	**Tazewell**	**84.59**	**39**	*e*P	**P**	**01 54 19.5**	**+0.2**
SWET	**Sewanee**	**84.67**	**41**	*e*P	**P**	**01 54 18.5**	**-1.1**
FWV	**Forest Hill**	**84.84**	**37**	*e*P	**P**	**01 54 20.6**	**+0.1**
EPF	**Esparros**	**85.23**	**337**	*e*P	**P**	**01 54 22.5**	**+0.3**
SJPF	**Ste Jean**	**85.57**	**338**	*e*P	**P**	**01 54 24.2**	**+0.4**
	comp=Z,8.3nm,0.7s,mb4.4						
SJPF	**Ste Jean**	**85.57**	**338**	*e*P	**P**	**01 54 24.2**	**+0.4**
SJPF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
ESDC	**Sonseca Array**	**89.50**	**338**	P	**P**	**01 54 41.7**	**-0.8**
	comp=Z,0.3nm,0.4s,mb3.5,baz=11,slow=5.0,SNR=6.2						
DBIC	**Dimbokro**	**120.73**	**328**	PKP	PKPdf	02 00 34.9	+0.3
	comp=Z,1.0nm,0.3s,baz=354,slow=16,SNR=9.3						
LSZ	**Lusaka**	**120.88**	**282**	*e*PKPdf	PKPdf	02 00 36.4	+1.7
MAW	**Mawson**	**130.99**	**210**	PKP	PKPdf	02 00 54.1	+1.2
	comp=Z,1.0nm,0.7s,baz=306,slow=8.7,SNR=2.6						
MAW				SKPbc		02 03 43.2	
	comp=Z,0.4nm,0.2s,baz=71,slow=0.8,SNR=3.6						
BOSA	**Boshof**	**131.98**	**272**	PKP	PKPdf	02 00 57.1	+1.3
	comp=Z,2.0nm,0.9s,baz=317,slow=1.9,SNR=1.6						
BOSA				SKPbc		02 03 47.2	
	comp=Z,4.0nm,0.9s,baz=38,slow=7.1,SNR=3.9						
BOSA	**Boshof**	**131.98**	**272**	PKP	PKPdf	02 00 57.1	+1.3
BOSA				SKPbc		02 03 47.2	
SAML	**Samuel**	**133.50**	**44**	*e*PKPdf	PKPdf	02 00 59.9	+0.9
LPAZ	**La Paz**	**137.14**	**55**	PKP	PKPdf	02 01 08.2	+2.6
	comp=Z,1.3nm,0.6s,baz=347,slow=5.0,SNR=8.7						
LPAZ				SKPbc		02 04 03.7	
	comp=Z,0.5nm,0.5s,baz=22,slow=5.4,SNR=3.5						
LPAZ	**La Paz**	**137.14**	**55**	*e*PKPdf	PKPdf	02 01 07.7	+2.1
LPAZ	**La Paz**	**137.14**	**55**	PKIKP	PKPdf	02 01 08.2	+2.6
LPAZ						02 04 03.7	
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LPAZ				pmax	pmax		
	comp=N,1.0nm,0.5s						
BDFB	**Brasilia**	**145.62**	**27**	PKPbc	PKPbc	02 01 23.3	+1.8
	comp=N,6.1nm,0.5s,baz=329,slow=1.5,SNR=13						
CPUP	**Villa Florida**	**151.13**	**52**	*e*PKPbc	PKPdf	02 01 36.4	+7.4
CPUP				*e*PKPab	PKPab	02 01 45.8	-1.2
PLCA	**Paso Flores**	**152.02**	**90**	PKPbc	PKPdf	02 01 38.6	+8.8
	comp=N,4.9nm,0.6s,baz=265,slow=1.6,SNR=16						
PLCA	**Paso Flores**	**152.02**	**90**	*e*PKPbc	PKPdf	02 01 38.3	+8.5
SNAA	**Sanae**	**152.19**	**200**	PKPbc	PKPdf	02 01 37.7	+8.6
	comp=N,0.3nm,0.3s,baz=232,slow=3.6,SNR=9.4						
SNAA				pPKPbc		02 03 09.1	
	comp=N,0.6nm,0.8s,baz=204,slow=2.1,SNR=4.6						
SNAA	**Sanae**	**152.19**	**200**	⇑*i*PKPdf	PKPdf	02 01 37.4	+8.2
SNAA				*e*		02 03 05.4	
SNAA				*e*		02 03 12.2	
SNAA				*e*		02 03 20.3	
SNAA				*e*		02 03 32.8	
VNA2	**Neumayer--Watz**	**153.74**	**198**	⇑*i*PKPdf	PKPdf	02 01 41.4	+10
VNA2				*e*		02 03 08.6	
VNA2				*e*		02 03 16.1	
VNA2				*e*		02 03 25.0	
VNA2				*e*		02 03 37.0	
VNA3	**Neumayer Olymp**	**153.96**	**197**	⇑*i*PKPdf	PKPdf	02 01 41.0	+9.4
VNA3				*e*		02 03 09.0	
VNA3				*e*		02 03 17.1	
VNA3				*e*		02 03 25.1	
VNA3				*e*		02 03 36.9	
VNA1	**Neumayer--Stat**	**154.14**	**198**	PKPdf	PKPdf	02 01 40.3	+8.4
VNA1				*e*		02 03 08.4	

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*THR **11** 01:44:07.2±0.6, 27.14N×59.27E, h15^{km}, ML3.1*
*CSEM **11** 01:44:08.8±0.2, 27.01N×59.33E, h45^{km}, ML3.1, Error ellipse: s-maj=6.7km s-min=3.5km az=95.0*
*OMAN **11** 01:44:13.7, 26.98N×59.12E, h34^{km}±8^{km}, Error ellipse: s-maj=18.5km s-min=2.4km az=38.0*
ISC 11 01:44:07.3±0.8**, 27.09N**±0.05×**59.23E**±0.08**, h10**^{km}**, n16, σ1^{s}11**/19**, 3D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**2.74**	**277**	*e*PN	**Pn**	**01 44 53.4**	**+1.3**
ZHSF	**Zahedan**	**2.86**	**28**	*e*PN	**Pn**	**01 44 53.6**	**-0.2**
ZHSF				AML	AML	01 45 27.5	
	comp=N,43nm,0.6s						
BANOM	**Banah**	**2.87**	**247**	P	**Pn**	**01 44 54.5**	**+0.5**
	SNR=46						
BANOM				⇓S	**Sn**	**01 45 27.8**	**-1.1**
KRBR	**Kerman**	**3.60**	**324**	*e*PN	**Pn**	**01 45 05.0**	**+0.5**
KRBR				AML	AML	01 46 09.9	
	comp=N,50nm,0.6s						
BIDO	**Bidbid**	**3.69**	**196**	P	**Pn**	**01 45 04.6**	**-1.1**
	SNR=15						
BIDO				⇓S	**Sn**	**01 45 45.0**	**-4.8**
ASHO	**Ashiyiah**	**3.73**	**231**	P	**Pn**	**01 45 06.9**	**+0.7**
	SNR=38						
HOQ	**Hoqain**	**3.90**	**207**	P	**Pn**	**01 45 07.5**	**-1.1**
	SNR=8.3						
HOQ				⇓S	**Sn**	**01 45 51.1**	**-3.9**
SMDO	**Samad**	**4.15**	**195**	P	**Pn**	**01 45 11.8**	**-0.5**
	SNR=14						
WBK	**Wadi Bani Khal**	**4.47**	**183**	P	**Pn**	**01 45 15.7**	**-1.0**
	SNR=86						
ARQ	**Araqi**	**4.47**	**214**	P	**Pn**	**01 45 19.1**	**+2.4**
	SNR=14						
BSYO	**Bisya**	**4.70**	**203**	P	**Pn**	**01 45 21.2**	**+1.2**
	SNR=13						
BSY	**Bisya**	**4.70**	**203**	P	**Pn**	**01 45 21.2**	**+1.2**
	SNR=13						
JMDO	**Jabal Madar**	**4.81**	**192**	P	**Pn**	**01 45 22.1**	**+0.5**
	SNR=20						
GHIR	**Ghir-Karzin**	**5.66**	**284**	*e*PN	**Pn**	**01 45 33.1**	**-0.4**
NASN	**Na'in**	**7.96**	**317**	*e*Pn	**Pn**	**01 46 04.5**	**-1.4**
NASN	**Na'in**	**7.96**	**317**	*e*Pn	**Pn**	**01 46 04.4**	**-1.4**
	SNR=52						

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*BJI **11** 01:45:52.9, 61.45N×151.40W, h90^{km}, mB4.8, mb4.2*
*IDC **11** 01:45:52.7±2.3, 62.24N×151.42W, h74^{km}±22^{km}, mb3.8/8, mb1 4.0/12, mb1mx3.8/24, mbtmp4.0/12, Error ellipse: s-maj=24.0km s-min=16.8km az=49.0*
*NEIC **11** 01:45:54.4, 62.12N×151.08W, h78^{km}, mb4.2/6, After AEIC.*
NEIC Felt at Skwentna and Talkeetna.
ISC 11 01:45:52.4±0.2**, 62.14N**±0.02×**151.06W**±0.05**, h87**^{km}±3^{km}**, n93, σ0^{s}91**/108**, mb4.1**/14**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUT	**Chulitna**	**0.46**	**54**	P	**P**	**01 46 07.1**	**+0.4**
STLK	**Strandline Lak**	**0.74**	**210**	P	**P**	**01 46 09.6**	**+0.2**
NCG	**North Capps Gl**	**0.90**	**216**	P	**P**	**01 46 11.9**	**+0.9**
CRP	**Crater Peak**	**1.01**	**211**	P	**P**	**01 46 12.9**	**+0.6**
CRP				S	**S**	**01 46 27.2**	**-0.1**
FIB	**Fire Island**	**1.06**	**156**	P	**P**	**01 46 14.4**	**+1.5**
PMR	**Palmer**	**1.07**	**120**	P	**P**	**01 46 13.2**	**+0.2**
PMR				S	**S**	**01 46 28.8**	**+0.3**
SPU	**Mount Spurr**	**1.07**	**207**	P	**P**	**01 46 13.2**	**+0.2**
HUR	**Hurricane**	**1.07**	**37**	P	**P**	**01 46 13.9**	**+0.8**
GHO	**Glory Hole Cre**	**1.07**	**109**	P	**P**	**01 46 13.9**	**+0.9**
CKL	**Chakachamna La**	**1.12**	**213**	P	**P**	**01 46 13.9**	**+0.3**
CKL				S	**S**	**01 46 29.3**	**-0.3**
RC01	**Rabbit Creek A**	**1.23**	**148**	P	**P**	**01 46 15.1**	**+0.1**
SML	**Sawmill**	**1.33**	**103**	P	**P**	**01 46 17.0**	**+0.6**
SML				S	**S**	**01 46 34.6**	**+0.5**
NKA	**Nikishka**	**1.40**	**183**	P	**P**	**01 46 19.3**	**+2.0**
KTH	**Kantishna Hill**	**1.43**	**3**	P	**P**	**01 46 18.5**	**+1.0**
KTH				S	**S**	**01 46 36.6**	**+0.4**
RND	**Reindeer**	**1.63**	**38**	P	**P**	**01 46 21.0**	**+0.8**
RND				S	**S**	**01 46 40.7**	**0.0**
SLKM	**Skilak Lake**	**1.68**	**166**	*e*P	**P**	**01 46 20.6**	**-0.2**
RDT	**Redoubt**	**1.69**	**203**	P	**P**	**01 46 21.5**	**+0.5**
RDT				S	**S**	**01 46 42.8**	**+0.7**
SCM	**Sheep Creek Mo**	**1.79**	**98**	P	**P**	**01 46 22.7**	**+0.4**
MPA	**Moose Pass**	**1.84**	**153**	P	**P**	**01 46 22.8**	**-0.2**
MPA				S	**S**	**01 46 44.5**	**-1.0**
RSO	**Redoubt South**	**1.87**	**207**	P	**P**	**01 46 24.2**	**+0.9**
DHY	**Denali Highway**	**1.95**	**59**	P	**P**	**01 46 25.3**	**+0.9**
BWN	**Browne**	**2.17**	**19**	P	**P**	**01 46 28.3**	**+0.8**
SEW	**Seward**	**2.18**	**158**	P	**P**	**01 46 27.6**	**0.0**
SEW				S	**S**	**01 46 52.1**	**-1.6**
GLI	**Glacier Island**	**2.28**	**122**	P	**P**	**01 46 28.1**	**-0.9**
GLI				S	**S**	**01 46 55.5**	**-0.7**
INE	**Iliamna NE**	**2.30**	**206**	P	**P**	**01 46 28.5**	**-0.7**
ILW	**Iliamna West**	**2.31**	**207**	P	**P**	**01 46 29.9**	**+0.5**
SVW2	**Sparrevohn**	**2.40**	**246**	P	**P**	**01 46 30.2**	**-0.3**
TT01	**Tatalina**	**2.42**	**291**	P	**P**	**01 46 30.8**	**-0.2**
VLZ	**Valdez**	**2.47**	**112**	P	**P**	**01 46 30.9**	**-0.8**
VLZ				S	**S**	**01 47 01.0**	**+0.1**
KLU	**Klutina**	**2.53**	**103**	P	**P**	**01 46 32.0**	**-0.4**
SDG	**Sourdough**	**2.61**	**79**	P	**P**	**01 46 34.0**	**+0.5**
CNPM	**China Poot**	**2.62**	**182**	P	**P**	**01 46 33.2**	**-0.5**
TZL	**Tazlina**	**2.66**	**89**	P	**P**	**01 46 34.6**	**+0.4**
WRH	**Wood River Hil**	**2.70**	**28**	P	**P**	**01 46 34.8**	**0.0**
WRH				S	**S**	**01 47 05.3**	**-1.3**
DIV	**Divide**	**2.72**	**109**	P	**P**	**01 46 34.5**	**-0.6**
DIV				S	**S**	**01 47 06.3**	**-0.8**
PAX	**Paxson**	**2.72**	**70**	P	**P**	**01 46 35.6**	**+0.5**
PAX				S	**S**	**01 47 08.1**	**+1.0**
THY	**Trims Highway**	**2.76**	**60**	P	**P**	**01 46 37.1**	**+1.4**
HIN	**Hinchinbrook I**	**2.81**	**126**	P	**P**	**01 46 35.2**	**-1.1**
MLY	**Manley**	**2.91**	**3**	P	**P**	**01 46 37.9**	**+0.1**
CCB	**Clear Creek Bu**	**2.92**	**29**	P	**P**	**01 46 37.6**	**-0.2**
EYAK	**Cordova Ski Ar**	**3.02**	**119**	P	**P**	**01 46 37.9**	**-1.3**
COLA	**College**	**3.10**	**26**	P	**P**	**01 46 40.3**	**-0.1**
MDM	**Murphy Dome**	**3.10**	**23**	P	**P**	**01 46 40.4**	**-0.1**
ILAR	**Eielson Array**	**3.24**	**33**	P	**P**	**01 46 42.1**	**-0.2**
	14nm,0.3s,baz=224,slow=14,SNR=863						
ILAR				S	**S**	**01 47 16.3**	**-3.7**
	33nm,0.3s,baz=218,slow=16,SNR=26						
ILAR	**Eielson Array**	**3.24**	**33**	P	**P**	**01 46 42.1**	**-0.2**
ILAR				S	**S**	**01 47 16.3**	**-3.7**
SGAM	**Sherman Glacie**	**3.27**	**118**	P	**P**	**01 46 42.1**	**-0.6**
BMRM	**Bremner River**	**3.31**	**108**	P	**P**	**01 46 42.3**	**-0.9**
MENT	**Mentasta**	**3.50**	**73**	P	**P**	**01 46 45.6**	**-0.3**
GLB	**Gilahina Butte**	**3.52**	**98**	P	**P**	**01 46 45.4**	**-0.7**
DOT	**Dot Lake**	**3.55**	**62**	P	**P**	**01 46 46.3**	**-0.2**
MID	**Middleton Isla**	**3.57**	**137**	P	**P**	**01 46 46.9**	**+0.1**
GCSA	**Galena City Sc**	**3.70**	**318**	P	**P**	**01 46 48.6**	**0.0**
KAPH	**Katmai Pasha**	**3.91**	**206**	P	**P**	**01 46 50.3**	**-1.2**
IM02	**Indian Mountai**	**4.06**	**344**	P	**P**	**01 46 53.1**	**-0.5**
IMA2	**Indian Mountai**	**4.11**	**345**	*e*P	**P**	**01 46 54.1**	**-0.2**
PRP	**Porcupine Dome**	**4.19**	**33**	P	**P**	**01 46 55.5**	**+0.1**
KDAK	**Kodiak Island**	**4.43**	**191**	P	**P**	**01 46 57.2**	**-1.6**
	1.1nm,0.3s,baz=131,slow=9.8,SNR=13						
KDAK	**Kodiak Island**	**4.43**	**191**	P	**P**	**01 46 57.8**	**-0.9**
CAHL	**Cahill**	**4.61**	**209**	P	**P**	**01 46 59.7**	**-1.5**
CTGM	**Chitina Glacie**	**4.80**	**100**	P	**P**	**01 47 03.2**	**-0.6**
DAWY	**Dawson**	**5.64**	**65**	P	**P**	**01 47 14.7**	**-0.6**
BM3	**Burnt Mountain**	**5.98**	**25**	P	**P**	**01 47 19.3**	**-0.6**
PNL	**Peninsula**	**6.21**	**108**	P	**P**	**01 47 22.1**	**-1.1**
WHY	**Whitehorse**	**7.91**	**94**	P	**P**	**01 47 44.4**	**-2.2**
INK	**Inuvik**	**9.59**	**42**	P	**P**	**01 48 08.4**	**-0.8**
	1.0nm,0.3s,baz=240,slow=16,SNR=35						
INK	**Inuvik**	**9.59**	**42**	*e*P	**P**	**01 48 07.7**	**-1.4**
YKA	**Yellowknife Ar**	**16.81**	**73**	P	**P**	**01 49 42.7**	**-0.3**
	0.3nm,0.3s,baz=281,slow=10,SNR=12						
YKA	**Yellowknife Ar**	**16.81**	**73**	P	**P**	**01 49 42.7**	**-0.3**
EDM	**Edmonton**	**21.75**	**97**	*e*P	**P**	**01 50 38.4**	**+0.8**
CMB	**Columbia Colle**	**30.60**	**128**	P	**P**	**01 51 59.8**	**-0.1**
NVAR	**Mina Array Bea**	**31.05**	**125**	P	**P**	**01 52 05.8**	**+2.1**
	2.1nm,0.7s,mb4.0,baz=328,slow=8.3,SNR=19						
PDAR	**Pinedale Array**	**31.09**	**109**	P	**P**	**01 52 05.6**	**+1.5**
	0.4nm,0.4s,mb3.5,baz=325,slow=4.6,SNR=7.1						
DUG	**Dugway**	**31.78**	**116**	*e*P	**P**	**01 52 10.3**	**+0.2**
	0.9nm,0.6s,mb3.7						
TPNV	**Topopah Spring**	**33.14**	**123**	*e*P	**P**	**01 52 22.8**	**+0.9**
MSU	**Marysvale**	**33.45**	**117**	P	**P**	**01 52 25.8**	**+1.1**
SRU	**San Rafael**	**33.66**	**114**	*e*P	**P**	**01 52 28.1**	**+1.7**
	2.0nm,0.7s,mb4.1						
NEN	**Nelson**	**34.82**	**123**	*e*P	**P**	**01 52 37.6**	**+1.2**
LDFC	**Landfair**	**35.22**	**123**	P	**P**	**01 52 40.6**	**+0.8**
EYMN	**Ely**	**35.56**	**85**	*e*P	**P**	**01 52 42.3**	**-0.3**
	2.7nm,0.6s,mb4.3						
SDCO	**Great Sand Dun**	**36.98**	**110**	*e*P	**P**	**01 52 55.7**	**+1.1**
	0.9nm,0.6s,mb3.9						
AMTX	**Amarillo**	**41.06**	**108**	*e*P	**P**	**01 53 30.1**	**+1.7**
WMOK	**Wichita Mounta**	**42.49**	**105**	*e*P	**P**	**01 53 40.8**	**+0.7**
	5.7nm,0.8s,mb4.3						
MDJ	**Mudanjiang**	**47.16**	**287**	P	**P**	**01 54 17.6**	**+0.3**
MDJ				AMB	AMB		
	comp=Z,160nm,6.2s						
CN2	**Changchun**	**49.65**	**289**	*e*P	**P**	**01 54 38.0**	**+1.4**
SONM	**Songino Array**	**54.30**	**306**	P	**P**	**01 55 10.6**	**-0.6**
	comp=Z,1.7nm,0.8s,mb4.2,baz=29,slow=7.1,SNR=11						
ZAL	**Zalesovo**	**56.22**	**324**	P	**P**	**01 55 23.6**	**-1.5**
	comp=Z,2.6nm,0.3s,mb4.7,baz=78,slow=7.3,SNR=5.7						
BVAR	**Borovoye Array**	**60.61**	**333**	P	**P**	**01 55 53.9**	**-1.7**
	comp=Z,0.5nm,0.3s,mb4.0,baz=37,slow=7.2,SNR=4.2						
KURK	**Kurchatov**	**60.78**	**326**	*e*P	**P**	**01 55 56.2**	**-0.6**
	comp=Z,3.5nm,0.8s,mb4.4						
SSE	**Sheshan**	**62.00**	**284**	P	**P**	**01 56 07.0**	**+1.7**
SSE				AMB	AMB		
	comp=Z,60nm,6.0s						
MKAR	**Makanchi Array**	**63.34**	**322**	P	**P**	**01 56 11.6**	**-2.3**
	comp=Z,1.3nm,0.4s,mb4.2,baz=38,slow=7.0,SNR=19						
AKTO	**Aktyubinsk**	**65.42**	**340**	P	**P**	**01 56 25.5**	**-1.7**
	comp=Z,1.0nm,0.5s,mb3.9,baz=58,slow=6.2,SNR=4.0						
AKASG	**Malin Array Be**	**67.51**	**360**	P	**P**	**01 56 39.2**	**-1.3**
	comp=Z,0.6nm,0.3s,mb3.9,baz=1.3,slow=6.5,SNR=5.9						
BOSA	**Boshof**	**146.39**	**6**	PKPbc	PKPbc	02 05 23.4	+1.1
	comp=Z,3.2nm,0.9s,baz=34,slow=7.3,SNR=3.1						

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*MOS **11** 01:48:16.5±0.8, 17.03N×147.19E, h19^{km}, mb5.3/35, MS4.4/4, Error ellipse: s-maj=11.0km s-min=6.3km az=106.1*
*IDC **11** 01:48:17.8±3.1, 16.98N×147.34E, h17^{km}±18^{km}, mb4.8/28, mb1 4.9/30, mb1mx4.9/32, mbtmp4.9/30, ML4.6/2, MS4.1/18, Ms1 4.1/18, ms1mx3.8/32, Error ellipse: s-maj=15.0km s-min=8.7km az=89.0*
*CSEM **11** 01:48:18.1, 16.96N×147.28E, h33^{km}, mb5.7*
*BJI **11** 01:48:19.3, 16.96N×147.61E, h58^{km}, mB5.2, mb5.0, Ms4.8, Msz4.3*
*HRVD **11** 01:48:21.2±0.6, 17.14N×147.75E, h12^{km}, MW4.9/46, Centroid moment Tensor Solution. LP body waves: s11,c13;Mantle waves: s46,c66; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.65±.12; $M_{\theta\theta}$0.20±.12; $M_{\phi\phi}$-1.85±.09; $M_{r\theta}$-2.22±.53; $M_{\theta\phi}$-0.24±.10; $M_{\phi r}$0.87±.33; Best double couple: $M_0$2.761×10^{16} NP1:ϕ_s204°, δ35°, λ146°. NP2:ϕ_s323°, δ71°, λ60°. Principal axes: T 3.397, Plg54°, Azm196°; N -1.275, Plg29°, Azm333°; P -2.125, Plg21°, Azm75°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **11** 01:48:21.2±0.9, 17.01N×147.29E, h41^{km}±8^{km}, mb5.1/74 Error ellipse: s-maj=3.8km s-min=3.4km az=100.0*
ISC 11 01:48:16.6±1.4**, 17.01N**±0.03×**147.24E**±0.03**, h18**^{km}±9^{km}**, h41**^{km}±2.6^{km}**:pP-P, n303, σ0^{s}84**/277**, mb5.0**/128**, MS4.2**/25**, 15C-5D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.09**	**214**	Pn	**Pn**	**01 49 21.9**	**+2.0**
	74nm,0.3s,baz=120,slow=3.8,SNR=12						
GUMO				Sn	**Sn**	**01 50 08.3**	**+0.3**
	50nm,0.3s,baz=156,slow=21,SNR=4.2						
GUMO	**Guam**	**4.09**	**214**	*e*Pn	**Pn**	**01 49 21.5**	**+1.6**
GUMO				*e*Sn	**Sn**	**01 50 08.9**	**+1.0**
CBIJ	**Chichi jima**	**11.07**	**336**	Pn	**P**	**01 50 55.6**	**-1.8**
	14nm,0.3s,baz=292,slow=20,SNR=6.0						
CBIJ				Sn	**S**	**01 52 57.4**	**-4.4**
	7.6nm,0.3s,baz=311,slow=19,SNR=2.9						
JHJ	**Hachijo jima 2**	**17.39**	**339**	P	**P**	**01 52 24.4**	**+4.3**
	7.4nm,0.3s,baz=69,slow=8.6,SNR=2.8						
JOW	**Kunigami**	**20.10**	**302**	P	**P**	**01 52 52.5**	**+0.2**
	28nm,0.8s,baz=115,slow=25,SNR=3.9						
JOW				LR	LR	01 59 48.3	
	comp=Z,494nm,21.1s,MS3.8,baz=254,slow=34						
MJAR	**Matsushiro Arr**	**21.04**	**339**	P	**P**	**01 53 01.5**	**-0.5**
	39nm,0.8s,mb4.8,baz=173,slow=12,SNR=56						
MJAR				S	**S**	**01 56 57.1**	**+6.5**
	1.7nm,0.4s,baz=107,slow=21,SNR=4.9						
MJAR				LR	LR	01 59 13.8	
	comp=Z,154nm,21.0s,MS3.4,baz=145,slow=31						
MJAR	**Matsushiro Arr**	**21.04**	**339**	P	**P**	**01 53 01.5**	**-0.5**
MJAR				S	**S**	**01 56 57.1**	**+6.5**
MJAR				LR	LR	01 59 13.8	
MAJO	**Matsushiro**	**21.04**	**339**	*e*P	**P**	**01 53 01.6**	**-0.4**
	74nm,0.8s,mb5.1						
MAJO	**Matsushiro**	**21.04**	**339**	*e*P	**P**	**01 53 01.6**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.1						
MAT	**Matsushiro**	**21.04**	**339**	P	**P**	**01 53 01.6**	**-0.4**
MAT				S	**S**	**01 56 49.0**	**-1.6**
MAT	**Matsushiro**	**21.04**	**339**	*e*P	**P**	**01 53 02.0**	**0.0**
	comp=Z,61nm,0.8s,mb5.0						
MAT				*e*S	**S**	**01 56 50.0**	**-0.6**
MAT	**Matsushiro**	**21.04**	**339**	*e*P	**P**	**01 53 02.0**	**0.0**
MAT				*e*S	**S**	**01 56 50.0**	**-0.6**
MAT				pmax	pmax		
	comp=Z,61nm,0.8s,mb5.0						
JNU	**Nakatsue**	**21.79**	**320**	P	**P**	**01 53 11.2**	**+1.6**
	comp=Z,11nm,0.9s,mb4.3,baz=152,slow=18,SNR=4.5						
JNU				LR	LR	02 00 43.3	
	comp=Z,73nm,19.8s,baz=257,slow=34						
YHNB	**Yeheng**	**25.31**	**292**	*e*P	**P**	**01 53 45.1**	**+1.0**
PMG	**Port Moresby**	**26.24**	**180**	P	**P**	**01 53 51.8**	**-1.1**
	comp=Z,73nm,0.7s,mb5.3,baz=3.6,slow=6.6,SNR=28						
PMG	**Port Moresby**	**26.24**	**180**	*e*P	**P**	**01 53 51.9**	**-0.9**
	comp=Z,86nm,0.8s,mb5.3						
PMG	**Port Moresby**	**26.24**	**180***c*	*i*P	**P**	**01 53 51.8**	**-1.0**
KS15	**Wonju Array Si**	**26.55**	**324**	*e*P	**P**	**01 53 54.2**	**-1.3**
ASAJ	**Asahikawa**	**27.31**	**353**	P	**P**	**01 54 03.0**	**+0.8**
	comp=Z,15nm,0.8s,mb4.6,baz=254,slow=15,SNR=5.1						
SSE	**Sheshan**	**27.52**	**305**	P	**P**	**01 54 06.0**	**+1.6**
	comp=Z,22nm,0.8s,mb4.8						
SSE				pP	pP	01 54 18.9	+9.3
SSE				sP	sP	01 54 25.2	+13
SSE				PcP	PcP	01 57 23.5	+0.8
SSE				S	**S**	**01 58 42.7**	**-0.1**
SSE				sS		01 59 05.2	
SSE				PcS		02 01 05.5	
SSE				LR	LR		
	comp=Z,300nm,19.8s,MS3.9						
HNR	**Honiara**	**29.12**	**154**	LR	LR	02 04 35.6	
	comp=Z,331nm,19.4s,MS4.0,baz=327,slow=34						
NJ2	**Nanjing**	**29.73**	**306**	*e*P	**P**	**01 54 23.6**	**-0.7**
NJ2				PP	PP	01 55 21.5	+0.3
NJ2				S	**S**	**01 59 17.0**	**-1.2**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,280nm,4.2s						
NJ2				LR	LR		
	comp=N,1µm,16.0s,MS4.8						
NJ2				LR	LR		
	comp=E,1µm,17.0s,MS4.8						
NJ2				LR	LR		
	comp=Z,1µm,18.1s,MS4.6						
YSS	**Yuzh-Sakhalins**	**30.09**	**354**	*i* P	**P**	**01 54 24.3**	**-3.0**
YSS	**Yuzh-Sakhalins**	**30.09**	**354**	*e*P	**P**	**01 54 24.0**	**-3.3**
YSS				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.2						
MDJ	**Mudanjiang**	**31.28**	**335**	P	**P**	**01 54 38.6**	**+0.8**

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MDJ                              PCP     PcP     01 57 31.5 -0.6
MDJ                              S       S       01 59 44.1 +1.7
MDJ                              AMB     AMB
      comp=Z,10.0nm,0.8s,mb4.7
MDJ                              AMB     AMB
      comp=Z,90nm,5.2s
KKM   Kota Kinabalu    32.23 254 eP      P       01 54 46.8 +0.4
CN2   Changchun        32.45 330 eP      P       01 54 51.3 +3.2
CN2                              eS      S       02 00 02.7 +1.9
CN2                              AMB     AMB
      comp=Z,10.0nm,0.5s,mb4.9
CN2                              AMB     AMB
      comp=Z,300nm,3.0s
CN2                              LR      LR
      comp=N,500nm,15.0s,MS4.4
CN2                              LR      LR
      comp=E,300nm,15.0s,MS4.4
CN2                              LR      LR
      comp=Z,500nm,16.0s,MS4.3
KAKA  Kakadu           32.95 207 eP      P       01 55 09.1  +16
      comp=Z,24nm,0.6s,mb5.3
KLR   Kul'dur          34.51 342 eP      P       01 55 06.0 +0.1
QIZ   Qiongzhong       35.57 279 P       P       01 55 16.8 +1.5
QIZ                              S       S       02 00 50.3 +0.8
QIZ                              AMB     AMB
      comp=Z,10.0nm,1.3s,mb4.6
QIZ                              LR      LR
      comp=E,160nm,15.8s
QIZ                              LR      LR
      comp=Z,230nm,17.6s,MS4.0
ENH   Enshi            36.84 298 eP      P       01 55 26.3 +0.5
      comp=Z,17nm,0.9s,mb4.9
HHC   Hu-ho-hao-te     38.83 315 eP      P       01 55 42.9 +0.5
HHC                              AP      pP      01 55 57.4  +10
HHC                              XP      sP      01 56 05.2  +15
HHC                              AMB     AMB
      comp=Z,10.0nm,0.7s,mb4.7
WRAB  Tennant Creek    38.83 200 eP      P       01 55 42.1 -0.5
      comp=Z,63nm,0.7s,mb5.5
WRAB  Tennant Creek    38.83 200 i P     P       01 55 41.3 -1.3
WB2   Warramunga Arr   38.84 200 eP      P       01 55 42.1 -0.6
WB2                              eS      S       02 01 39.1 -0.2
WRA   Warramunga Arr   38.84 200 P       P       01 55 42.2 -0.6
      comp=Z,30nm,0.7s,mb5.2,baz=22,slow=9.0,SNR=119
WRA                              PcP     PcP     01 57 54.0 -0.3
      comp=Z,4.4nm,0.6s,baz=17,slow=3.3,SNR=7.4
WRA                              S       S       02 01 40.0 +0.7
      comp=Z,1.3nm,0.9s,baz=21,slow=16,SNR=4.6
HIA   Hailar           39.14 331 eP      P       01 55 45.0  0.0
      comp=Z,20nm,0.7s,mb5.0
HIA   Hailar           39.14 331 eP      P       01 55 45.0 +0.1
HIA                              pmax    pmax
      comp=Z,20nm,0.7s
KSM   Kuching          39.46 251 eP      P       01 55 47.7 -0.3
FITZ  Fitzroy Crossi   40.85 212 eP      P       01 55 59.5 +0.1
      comp=Z,15nm,1.0s,mb4.6
FITZ  Fitzroy Crossi   40.85 212 P       P       01 55 58.9 -0.4
      comp=Z,20nm,0.9s,mb4.8,baz=40,slow=11,SNR=21
FITZ                             PcP     PcP     01 58 01.0 +0.2
      comp=Z,16nm,0.8s,baz=357,slow=2.7,SNR=3.8
KMI   Kunming          42.15 289 P       P       01 56 12.8 +2.8
      comp=Z,15nm,1.1s,mb4.5
KMI                              pP      pP      01 56 24.3 +9.0
KMI                              sP      sP      01 56 28.6  +11
KMI                              PP      PP      01 57 55.0 +4.2
KMI                              S       S       02 02 27.7 -1.0
KMI                              SS      SS      02 05 28.1 -3.0
KMI                              LR      LR
      comp=Z,160nm,12.2s,MS4.1
KMI   Kunming          42.15 289 P       P       01 56 12.8 +2.8
KMI                              *PP     pP      01 56 24.3 +9.0
KMI                                              01 57 55.0
KMI                              S       S       02 02 27.7 -1.0
KMI                              SS      SS      02 05 28.1 -3.0
KMI                              pmax    pmax
      comp=Z,15nm,1.1s,mb4.5
KMI                              MLR     MLR
      comp=Z,160nm,12.2s,MS4.1
ASPA  Alice Springs    42.47 198 eP      P       01 56 11.9 -0.8
LZH   Lanzhou          42.80 305 eP      P       01 56 15.4 +0.1
      comp=Z,23nm,1.0s,mb4.9
LZH                              pP      pP      01 56 26.0 +5.4
LZH                              sP      sP      01 56 30.2 +7.4
LZH                              pP      pP      01 56 47.0  +26
LZH                              PP      PP      01 57 57.5 +0.3
LZH                              eS      S       02 02 35.5 -2.7
LZH                              sS              02 02 54.8
LZH                              SS      SS      02 05 40.0 -3.3
LZH                              LR      LR
      comp=Z,960nm,14.0s,MS4.8
LZH   Lanzhou          42.80 305 eP      P       01 56 15.4 +0.1
LZH                              *PP     pP      01 56 26.0 +5.4
LZH                                              01 57 57.5
LZH                              eS      S       02 02 35.5 -2.7
LZH                              SS      SS      02 05 40.0 -3.3
LZH                              pmax    pmax
      comp=Z,23nm,1.0s,mb4.9
LZH                              MLR     MLR
      comp=Z,960nm,14.0s,MS4.8
NOUC  Port Laguerre    43.12 154 eP      P       01 56 17.4 -0.5
NOUC  Port Laguerre    43.12 154 eP      P       01 56 17.4 -0.5
DZM   Mont Dzumac      43.15 154 P       P       01 56 16.9 -1.4
      comp=Z,17nm,1.1s,mb4.7,baz=24,slow=9.3,SNR=8.6
NST   Nakhon Sawan     45.14 275 P       P       01 56 34.7 +0.4
      comp=Z,43nm,1.0s,mb5.2
SONM  Songino Array    45.37 322 P       P       01 56 36.1 +0.3
      comp=Z,12nm,0.6s,mb4.9,baz=137,slow=8.0,SNR=52
SONM                             PcP     PcP     01 58 15.6  0.0
      comp=Z,8.2nm,0.8s,baz=131,slow=2.8,SNR=6.6
SONM                             LR      LR      02 14 13.0
      comp=Z,232nm,19.8s,MS4.1,baz=9.2,slow=34
CHG   Chiang Mai       45.88 280 P       P       01 56 41.4 +1.2
      comp=Z,14nm,0.8s,mb5.0
SEY   Seymchan         46.02   3 i P     P       01 56 41.5 +0.8
SNG   Songkhla         46.51 264 P       P       01 56 48.0 +2.7
MBWA  Marble Bar       46.54 216 eP      P       01 56 44.6 -0.8
      comp=Z,14nm,0.6s,mb5.1
YAK   Yakutsk          46.65 349 eP      P       01 56 44.1 -1.6
      comp=Z,106nm,0.9s,mb5.8
YAK   Yakutsk          46.65 349⇑eP      P       01 56 46.4 +0.7
YAK                              pmax    pmax
      comp=Z,102nm,1.1s,mb5.7
KULM  Kulim            47.04 261 eP      P       01 56 50.9 +1.4
BOD   Bodaibo          47.63 337 eP      P       01 56 50.4 -3.1
BOD                              pmax    pmax
      comp=Z,14nm,1.1s,mb4.9
ZAK   Zakamensk        48.37 324⇑iP      P       01 56 59.0 -0.4
ZAK                              e               01 57 08.4
ZAK                              pmax    pmax
      comp=Z,11nm,1.1s,mb4.8
ZAK                              pmax    pmax
      comp=Z,7.0nm,1.0s,mb4.7
STKA  Stephens Creek   48.90 186 eP      P       01 57 02.0 -1.7
      comp=Z,6.1nm,0.8s,mb4.7
STKA  Stephens Creek   48.90 186 P       P       01 57 02.1 -1.6
      comp=Z,7.0nm,0.7s,mb4.8,baz=4.9,slow=10,SNR=10
STKA                             LR      LR      02 18 23.4
      comp=Z,172nm,18.3s,MS4.1,baz=21,slow=37
FORT  Forrest          50.97 201 eP      P       01 57 19.5  0.0
      comp=Z,29nm,0.6s,mb5.4
SHL   Shillong         51.97 289 eP      P       01 57 28.0 +0.8
CNB   Canberra Magne   52.07 178 eP      P       01 57 27.5 -0.3
      comp=Z,29nm,0.9s,mb5.2
BILL  Bilibino         52.44   9 eP      P       01 57 29.9 -0.3
      comp=Z,15nm,0.9s,mb4.9
BILL  Bilibino         52.44   9 eP      P       01 57 29.9 -0.3
BILL                             pmax    pmax
      comp=Z,15nm,0.9s,mb4.9
LSA   Lhasa            52.57 295 P       P       01 57 33.1 +1.4
LSA   Lhasa            52.57 295 eP      P       01 57 32.6 +1.0
      comp=Z,31nm,0.9s,mb5.2
LSA   Lhasa            52.57 295 eP      P       01 57 32.6 +0.9
LSA                              pmax    pmax
      comp=Z,31nm,0.9s,mb5.2
TIXI  Tiksi            55.71 353 i P     P       01 57 52.3 -1.8
KLBR  Kellerberrin     56.00 210 eP      P       01 57 55.5 -1.2
      comp=Z,24nm,0.7s,mb5.3
JIRN  Jiri             56.97 292 eP      P       01 58 04.2 +0.4
      comp=Z,36nm,0.6s,mb5.6
MUN   Mundaring        57.07 211 eP      P       01 58 04.0 -0.4
GUN   Gumba            57.23 293 eP      P       01 58 06.7 +1.1
      comp=Z,59nm,1.0s,mb5.6
NWAO  Narrogin (SRO)   57.34 210 eP      P       01 58 05.4 -0.9
      comp=Z,24nm,0.6s,mb5.4
NWAO                             epP     pP      01 58 16.6 +4.8
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NWAO  Narrogin (SRO)   57.34 210 eP      P       01 58 05.4 -0.9
NWAO                             e*PP    pP      01 58 16.6 +4.8
NWAO                             pmax    pmax
      comp=Z,24nm,0.6s
BOK   Bokaro           57.53 288 eP      P       01 58 08.6 +0.8
BOK                              AMb     AMB     01 58 09.9
      comp=Z,34nm,0.9s,mb5.3
PKI   Pulchoki         57.66 292 eP      P       01 58 08.9 +0.3
      comp=Z,18nm,0.6s,mb5.3
KKN   Kakani           57.77 292 eP      P       01 58 09.3  0.0
      comp=Z,25nm,0.8s,mb5.3
DMN   Daman            57.93 292 eP      P       01 58 10.7 +0.2
      comp=Z,34nm,0.8s,mb5.4
GKN   Gorkha           58.32 293 eP      P       01 58 13.5 +0.3
      comp=Z,44nm,0.8s,mb5.6
KOLN  Koldanda         59.25 293 eP      P       01 58 19.6 -0.1
      comp=Z,32nm,0.8s,mb5.4
KDAK  Kodiak Island    59.98  32 P       P       01 58 22.6 -1.7
      comp=Z,27nm,1.2s,mb5.2,baz=288,slow=13,SNR=8.1
ZAL   Zalesovo         60.25 323 P       P       01 58 24.9 -1.2
      comp=Z,11nm,0.8s,mb4.9,baz=1.6,slow=7.6,SNR=47
ZAL                              PcP     PcP     01 59 10.5 -0.8
      comp=Z,5.0nm,0.6s,baz=348,slow=4.2,SNR=4.3
ZAL                              LR      LR      02 23 55.0
      comp=Z,142nm,21.8s,MS4.1,baz=12,slow=35
MKAR  Makanchi Array   60.68 314 P       P       01 58 28.9 -0.3
      comp=Z,11nm,0.8s,mb5.0,baz=89,slow=8.0,SNR=48
MKAR                             LR      LR      02 24 06.4
      comp=Z,70nm,18.4s,MS3.8,baz=248,slow=35
MKAR  Makanchi Array   60.68 314⇑eP      P       01 58 28.8 -0.4
NVS   Novosibirsk      61.33 324 eP      P       01 58 31.7 -1.8
NVS                              pmax    pmax
      comp=Z,27nm,1.2s,mb5.2
NVS                              pmax    pmax
      comp=N,6.0nm,0.7s
NVS                              pmax    pmax
      comp=E,13nm,0.7s
KURK  Kurchatov        63.50 319 eP      P       01 58 46.9 -1.1
      comp=E,61nm,1.1s,mb5.5
KURK  Kurchatov        63.50 319c iP     P       01 58 47.2 -0.8
ILAR  Eielson Array    64.52  26 LR      LR      02 25 57.2
      comp=E,98nm,18.0s,MS4.0,baz=204,slow=35
NDI   New Delhi        64.78 294 eP      P       01 58 56.0 -0.8
HYB   Hyderabad        65.26 282 i P     P       01 59 00.0  0.0
HYB   Hyderabad        65.26 282 eP      P       01 59 00.0  0.0
BHPL  Bhopal           65.31 288 eP      P       01 58 58.3 -2.0
BHPL                             AMb     AMB     01 58 58.7
      comp=Z,107nm,0.3s
AAK   Ala-Archa        66.07 310 eP      P       01 59 04.1 -0.7
      comp=Z,12nm,1.3s,mb4.8
AAK   Ala-Archa        66.07 310 eP      P       01 59 04.1 -0.7
AAK                              pmax    pmax
      comp=Z,12nm,1.3s,mb4.8
AJM   Ajmer            67.33 292 eP      P       01 59 08.3 -4.8
AJM                              AMb     AMB     01 59 09.3
      comp=Z,26nm,0.2s,mb6.0
VOSK  Vostochnaya      68.34 321 P       P       01 59 16.9 -2.1
VOSK                             pmax    pmax
      comp=Z,4.0nm,1.0s,mb4.4
CHKZ  Chkalovo         68.57 322 eP      P       01 59 18.9 -1.4
      comp=Z,8.6nm,0.7s,mb4.8
CHKZ  Chkalovo         68.57 322 eP      P       01 59 18.9 -1.5
CHKZ                             pmax    pmax
      comp=Z,9.0nm,0.7s,mb4.8
BVA0  Borovoye Array   68.70 321 i P     P       01 59 20.6 -0.6
BVA0                             pmax    pmax
      comp=Z,3.0nm,0.6s,mb4.4
BVAR  Borovoye Array   68.70 321 P       P       01 59 21.0 -0.3
      comp=Z,30nm,0.7s,mb5.3,baz=94,slow=7.8,SNR=128
BRVK  Borovoye         68.77 321 eP      P       01 59 20.7 -0.9
      comp=Z,22nm,0.9s,mb5.1
BRVK  Borovoye         68.77 321 eP      P       01 59 20.7 -0.9
BRVK                             pmax    pmax
      comp=Z,22nm,0.9s,mb5.1
KKAR  Karatay Array    68.97 310 i P     P       01 59 22.5 -0.5
KKAR                             pmax    pmax
      comp=Z,4.0nm,0.6s,mb4.5
KAD   Karad            69.37 282 eP      P       01 59 25.7 -0.2
KAD                              AMb     AMB     01 59 27.1
      comp=Z,32nm,0.5s,mb5.5
POO   Poona            69.43 284 eP      P       01 59 25.0 -1.2
INK   Inuvik           70.35  23 P       P       01 59 30.0 -1.0
      comp=Z,8.6nm,0.7s,mb4.8,baz=263,slow=7.1,SNR=26
INK   Inuvik           70.35  23 eP      P       01 59 29.7 -1.3
      comp=Z,15nm,1.0s,mb4.9
INK   Inuvik           70.35  23 eP      P       01 59 29.7 -1.3
INK                              pmax    pmax
      comp=Z,15nm,1.0s
PPT   Papeete          71.06 116 LR      LR      02 27 30.9
      comp=Z,295nm,18.9s,MS4.6,baz=251,slow=33
DLBC  Dease Lake       71.89  33 P       P       01 59 40.6 +0.2
      comp=Z,13nm,1.1s,mb4.8,baz=255,slow=6.0,SNR=8.6
BBB   Bella Bella      73.50  40 LR      LR      02 29 46.3
      comp=Z,277nm,18.7s,MS4.6,baz=75,slow=34
SVE   Sverdlovsk       74.09 325 eP      P       01 59 53.7 +0.3
SVE                              e               02 00 04.6
SVE                              e               02 09 52.0
SVE                              pmax    pmax
      comp=Z,56nm,1.0s,mb5.5
SVE                              MLR     MLR
      comp=N,200nm,14.0s,MS4.7
SVE                              MLR     MLR
      comp=E,200nm,14.0s,MS4.7
SVE                              MLR     MLR
      comp=Z,300nm,14.0s,MS4.7
ARU   Arti             75.28 325 eP      P       02 00 00.0 -0.3
      comp=Z,39nm,1.0s,mb5.3
ARU   Arti             75.28 325⇑iP      P       02 00 00.1 -0.2
ARU                              pmax    pmax
      comp=Z,48nm,1.2s,mb5.3
AB31  Akbulak array    75.57 317 i P     P       02 00 01.1 -0.9
AB31                             pmax    pmax
      comp=Z,2.0nm,0.4s,mb4.4
AKTO  Aktyubinsk       76.59 319 P       P       02 00 07.5 -0.4
      comp=Z,4.7nm,0.7s,mb4.6,baz=87,slow=7.0,SNR=19
AKTO                             LR      LR      02 33 50.7
      comp=Z,173nm,18.0s,MS4.4,baz=217,slow=36
TDL   Tradedollar La   78.27  45 P       P       02 00 17.9 +0.8
KHMM  Horse Mountain   78.36  51 eP      P       02 00 18.6 +0.8
KTRM  Thompson Ridge   78.40  50 P       P       02 00 18.7 +0.8
HUMO  Hull Mountain    78.55  49 eP      P       02 00 19.1 +0.3
      comp=Z,16nm,1.0s,mb4.9
KCPM  Cahto Peak       78.73  52 eP      P       02 00 20.1 +0.3
YKW3  Yellowknife Ar   78.77  28 eP      P       02 00 18.9 -0.6
KIPM  Iron Peak        78.78  52 eP      P       02 00 20.2 +0.1
YKA   Yellowknife Ar   78.79  28 P       P       02 00 18.6 -1.1
      comp=Z,3.9nm,0.5s,mb4.6,baz=282,slow=5.7,SNR=20
YKA                              LR      LR      02 33 30.8
      comp=Z,114nm,21.8s,MS4.2,baz=300,slow=34
YKA   Yellowknife Ar   78.79  28 P       P       02 00 18.6 -1.1
YKA                              LR      LR      02 33 30.8
YKA   Yellowknife Ar   78.79  28⇑eP      P       02 00 19.1 -0.6
YBH   Yreka Blue Hor   78.92  50 eP      P       02 00 21.0 +0.2
      comp=Z,16nm,0.9s,mb5.0
BUOR  Burton Butte     79.14  49 P       P       02 00 22.5 +0.5
WDC   Whiskeytown Da   79.31  51 eP      P       02 00 22.8 -0.1
      comp=Z,30nm,1.5s,mb5.0
WDC   Whiskeytown Da   79.31  51 eP      P       02 00 22.8 -0.1
WDC                              pmax    pmax
      comp=Z,30nm,1.5s,mb5.0
VIPM  Ingram Point     79.78  47 P       P       02 00 25.5 +0.1
EPH   Ephrata          79.79  44 P       P       02 00 25.5 +0.1
HAWA  Hanford          80.07  45 eP      P       02 00 26.6 -0.3
      comp=Z,2.4nm,1.4s
OD2   Odessa Site #2   80.37  43 P       P       02 00 28.5  0.0
MOD   Modoc            80.63  49 eP      P       02 00 29.9 -0.1
      comp=Z,15nm,1.0s,mb4.9
SAO   San Andreas Ge   81.05  54 eP      P       02 00 32.6 +0.2
      comp=Z,13nm,1.0s,mb4.8
NEW   Newport          81.17  42 P       P       02 00 32.6 -0.1
      comp=Z,21nm,1.0s,mb5.0,baz=271,slow=3.5,SNR=26
NEW   Newport          81.17  42 eP      P       02 00 32.4 -0.3
      comp=Z,34nm,1.2s,mb5.2
NEW   Newport          81.17  42 eP      P       02 00 32.4 -0.3
NEW                              pmax    pmax
      comp=Z,34nm,1.2s
LRV   Little Rabbit    81.47  55 eP      P       02 00 33.7 -0.8
CMB   Columbia Colle   81.55  53 eP      P       02 00 34.8 -0.1
      comp=Z,15nm,0.8s,mb5.0
CMB   Columbia Colle   81.55  53 eP      P       02 00 34.8 -0.1
CMB                              pmax    pmax
      comp=Z,15nm,0.8s,mb5.0
WVOR  Wild Horse Val   81.69  48 eP      P       02 00 35.5 -0.1
      comp=Z,32nm,1.1s,mb5.2
WVOR  Wild Horse Val   81.69  48 eP      P       02 00 35.5  0.0
WVOR                             pmax    pmax
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      comp=Z,32nm,1.1s,mb5.2
BMO   Blue Mountains   81.98  46 eP      P       02 00 36.9  0.0
      comp=Z,20nm,1.0s,mb5.0
EDM   Edmonton         82.06  37 eP      P       02 00 36.5 -0.7
PTRM  Twissleman Ran   82.30  55 eP      P       02 00 38.7 -0.2
BIDO  Bidbid           82.59 292 P       P       02 00 42.5 +1.9
      SNR=7.0
NVAR  Mina Array Bea   83.02  52 P       P       02 00 43.0 +0.4
      comp=Z,9.0nm,0.7s,mb4.9,baz=268,slow=4.5,SNR=63
PECR  Pechory          83.10 327 eP      P       02 00 43.0 +0.5
MTUM  Tungsten Hills   83.12  53 eP      P       02 00 43.2 +0.2
MNV   Mina             83.13  52 eP      P       02 00 43.2 +0.1
      comp=Z,16nm,1.0s,mb5.0
MNV                              pP      pP      02 00 57.2 +8.4
HOQ   Hoqain           83.29 293 P       P       02 00 45.9 +1.7
      SNR=7.8
BSY   Bisya            83.62 292 ⇑P      P       02 00 46.3 +0.3
KLMR  Klimovskoe       83.63 332c iP     P       02 00 45.0 -0.1
KLMR                             pmax    pmax
      comp=Z,60nm,1.4s,mb5.5
KEV   Kevo             83.98 342 ep      P       02 00 46.3 -0.4
      comp=Z,1.1nm,0.4s,mb4.3
KEV   Kevo             83.98 342 eP      P       02 00 46.3 -0.4
KEV                              pmax    pmax
      comp=Z,1.0nm,0.4s,mb4.3
ARQ   Araqi            84.06 292 ⇓P      P       02 00 50.0 +1.8
CHMT  Chamberlain Mo   84.08  43 eP      P       02 00 47.0 -0.7
DAC   Darwin (Calif)   84.17  54 eP      P       02 00 48.4 -0.1
      comp=Z,20nm,1.3s,mb5.1
DAC   Darwin (Calif)   84.17  54 eP      P       02 00 48.4 -0.1
DAC                              pmax    pmax
      comp=Z,20nm,1.3s,mb5.1
HLID  Hailey           84.34  46 eP      P       02 00 49.1  0.0
      comp=Z,23nm,1.5s,mb5.1
MWC   Mount Wilson     84.39  56 eP      P       02 00 49.3 -0.3
ARCES ARCESS Array B   84.54 343 P       P       02 00 49.8 +0.3
      comp=Z,9.7nm,0.6s,mb5.1,baz=59,slow=4.5,SNR=26
ARE0  ARCESS Array S   84.54 343 eP      P       02 00 50.0 +0.5
ELK   Elko             84.62  49 eP      P       02 00 51.1 +0.5
      comp=Z,24nm,1.0s,mb5.3
ELK   Elko             84.62  49 eP      P       02 00 51.1 +0.5
ELK                              pmax    pmax
      comp=Z,24nm,1.0s
TPNV  Topopah Spring   85.01  53 eP      P       02 00 51.9 -0.8
      comp=Z,5.4nm,0.6s,mb4.8
TPNV  Topopah Spring   85.01  53 eP      P       02 00 51.9 -0.7
TPNV                             pmax    pmax
      comp=Z,5.0nm,0.6s,mb4.8
HRY   Holter Researc   85.06  43 eP      P       02 00 52.7  0.0
BOZ   Bozeman (W)      85.55  44 eP      P       02 00 55.5 +0.3
      comp=Z,9.2nm,0.8s,mb5.1
PFO   Pinyon Flat Ob   85.85  56 eP      P       02 00 56.2 -0.7
      comp=Z,16nm,1.1s,mb5.2
QLMT  Earthquake Lak   85.96  44 eP      P       02 00 57.7 +0.5
DAG   Danmarks Havn    86.03 357⇓iP      P       02 00 57.0 +0.1
      comp=Z,20nm,1.2s,mb5.2
DAG   Danmarks Havn    86.03 357⇓eP      P       02 00 57.0 +0.1
      comp=Z,20nm,1.2s,mb5.2
DAG   Danmarks Havn    86.03 357⇓eP      P       02 00 57.0 +0.1
DAG                              pmax    pmax
      comp=Z,20nm,1.2s,mb5.2
HVU   Hansel Valley    86.05  48 eP      P       02 00 57.9 +0.1
      comp=Z,29nm,1.3s,mb5.3
JOF   Joensuu          86.16 336 ep      P       02 00 57.0 -0.7
      comp=Z,2.4nm,0.5s,mb4.7
JOF   Joensuu          86.16 336 eP      P       02 00 57.0 -0.7
JOF                              pmax    pmax
      comp=Z,2.0nm,0.5s,mb4.6
YMR   Madison River    86.33  44 eP      P       02 01 00.1 +1.2
      comp=Z,21nm,0.7s,mb5.5
SPUT  South Promonto   86.44  48 eP      P       02 01 00.1 +0.5
LDFC  Landfair         86.46  55 eP      P       02 00 59.7 -0.2
NEN   Nelson           86.49  54 eP      P       02 00 59.6 -0.4
YFT   Old Faithful     86.49  45 eP      P       02 01 01.6 +1.8
RRI2  Red Ridge        86.54  46 eP      P       02 01 01.0 +0.9
      comp=Z,29nm,1.1s,mb5.4
DUG   Dugway           86.55  49 eP      P       02 01 00.4 +0.2
      comp=Z,15nm,0.8s,mb5.3
IMW   Indian Meadow    86.61  45 eP      P       02 01 01.5 +1.1
      comp=Z,17nm,0.8s,mb5.3
TPAW  Teton Pass       86.75  46 eP      P       02 01 01.7 +0.7
      comp=Z,9.5nm,0.8s,mb5.1
GCMT  Greycliff        86.79  43 eP      P       02 01 01.5 +0.3
MOOW  Moose Ponds      86.80  45 eP      P       02 01 01.6 +0.3
      comp=Z,9.9nm,0.8s,mb5.1
ARUT  Antelope Range   86.87  52 eP      P       02 01 02.2 +0.3
AHID  Auburn Hatcher   86.89  46 eP      P       02 01 02.0 +0.2
      comp=Z,22nm,0.8s,mb5.4
LOHW  Long Hollow      86.94  45 eP      P       02 01 02.5 +0.5
      comp=Z,4.5nm,0.8s,mb4.8
HWUT  Hardware Ranch   86.97  47 eP      P       02 01 02.1 -0.1
      comp=Z,16nm,0.9s,mb5.3
CTU   Camp Tracy       87.15  48 eP      P       02 01 03.2 +0.1
      comp=Z,10nm,0.9s,mb5.1
NLU   North Lily Min   87.16  49 eP      P       02 01 03.5 +0.3
TCUT  Toone Canyon     87.24  48 eP      P       02 01 03.8 +0.2
MPU   Maple Canyon     87.46  49 eP      P       02 01 04.8 +0.2
      comp=Z,9.8nm,0.8s,mb5.1
OBN   Obninsk          87.48 327 eP      P       02 01 03.4 -0.9
      comp=Z,21nm,1.1s,mb5.3
OBN   Obninsk          87.48 327c iP     P       02 01 03.9 -0.4
OBN                              pmax    pmax
      comp=Z,28nm,0.9s,mb5.5
MVU   Marysvale        87.55  51 eP      P       02 01 05.7 +0.6
      comp=Z,8.8nm,0.8s,mb5.0
MSU   Marysvale        87.57  51 eP      P       02 01 05.5 +0.3
DAU   Daniels Canyon   87.59  48 eP      P       02 01 05.9 +0.7
RBK   Rabkut           87.79 288 P       P       02 01 07.6 +0.9
      SNR=7.7
BW06  Boulder Array    87.95  46 eP      P       02 01 06.7 -0.2
      comp=Z,1.8nm,0.6s,mb4.5
PDAR  Pinedale Array   87.95  46 P       P       02 01 06.8 -0.2
      comp=Z,1.9nm,0.5s,mb4.6,baz=245,slow=2.5,SNR=16
PDAR                             LR      LR      02 36 08.5
      comp=Z,90nm,19.7s,MS4.2,baz=191,slow=33
TMUT  Trail Mountain   88.02  50 eP      P       02 01 07.8 +0.5
ZEI   Tsey             88.04 314 eP      P       02 01 04.7 -2.6
ZEI                              i               02 04 31.6
ZEI                              pmax    pmax
      comp=Z,13nm,1.0s,mb5.1
WHFO  Wadi Hawf        88.06 288 P       P       02 01 08.6 +0.6
      SNR=6.4
GNI   Garni            88.39 312 LR      LR      02 43 43.6
      comp=Z,66nm,19.1s,MS4.1,baz=261,slow=38
GNI   Garni            88.39 312 i P     P       02 01 09.0 -0.1
KAF   Kangasniemi      88.55 336 ep      P       02 01 05.2 -4.1
      comp=Z,0.6nm,0.3s,mb4.4
KAF   Kangasniemi      88.55 336 eP      P       02 01 05.2 -4.1
KAF                              pmax    pmax
      comp=Z,1.0nm,0.3s,mb4.6
SRU   San Rafael       88.58  50 eP      P       02 01 09.9 -0.1
      comp=Z,23nm,0.8s,mb5.5
ABTO  Aybut            88.66 288 P       P       02 01 11.0 +0.2
      SNR=11
LAO   LASA Array       88.66  41 eP      P       02 01 10.7 +0.5
      comp=Z,7.5nm,0.8s,mb5.1
FINES FINESS Array B   89.02 336 P       P       02 01 11.0 -0.5
      comp=Z,16nm,0.7s,mb5.5,baz=63,slow=5.1,SNR=68
FINES                            LR      LR      02 42 24.7
      comp=Z,147nm,19.8s,MS4.4,baz=346,slow=36
FINES FINESS Array B   89.02 336 P       P       02 01 11.0 -0.5
FINES                            LR      LR      02 42 24.7
WUAZ  Wupatki          89.20  53 eP      P       02 01 13.7 +0.7
      comp=Z,38nm,1.0s,mb5.7
PV10  Paradox Valley   89.93  50 eP      P       02 01 17.0 +0.6
MIB   Mutribah         89.95 301 eP      P       02 01 16.1 -0.6
MIB                              AMb     AMB     02 01 16.8
      comp=Z,39nm,0.7s,mb5.8
RWWY  Rawlins          89.97  46 eP      P       02 01 16.7 +0.2
      comp=Z,22nm,1.2s,mb5.3
RDF   Al-Radifah       90.07 300 eP      P       02 01 16.4 -0.9
NAY   Al-Naaiem        90.22 301 eP      P       02 01 17.1 -0.9
NAY                              AMb     AMB     02 01 20.7
      comp=Z,23nm,0.7s,mb5.6
PV01  Paradox Valley   90.36  50 eP      P       02 01 18.6 +0.2
VSU   Vasula           90.46 333 i P     P       02 01 17.9 -0.4
VSU   Vasula           90.46 333 i P     P       02 01 17.8 -0.5
SUMG  Summit           90.55   2 eP      P       02 01 19.6 +1.1
TUC   Tucson           90.78  56 eP      P       02 01 21.3 +0.8
      comp=Z,14nm,1.3s,mb5.1
SMCO  Snowmass         91.12  48 eP      P       02 01 22.4 +0.6
      comp=Z,22nm,1.0s,mb5.4
RSSD  Black Hills      91.12  43 eP      P       02 01 20.8 -0.9
      comp=Z,13nm,1.2s,mb5.1
RSSD  Black Hills      91.12  43 eP      P       02 01 20.8 -0.9
RSSD                             pmax    pmax
```

	comp=Z,13nm,1.2s,mb5.1						
PHWY	Pilot Hill	91.34	46	*e*P	P	02 01 22.3	-0.5
ISCO	Idaho Springs	91.84	47	*e*P	P	02 01 25.9	+0.8
	comp=Z,6.5nm,1.1s,mb4.9						
IZAR	Zarasai	92.22	331	*e*P	P	02 01 26.7	+0.2
IZAR				AMb	AMB	02 01 28.0	
	comp=Z,15nm,0.9s,mb5.3						
IDID	Didziasalis	92.24	330	⇓*i*P	P	02 01 26.8	+0.2
IDID				AMb	AMB	02 01 28.1	
	comp=Z,15nm,0.9s,mb5.3						
ISAL	Salakas	92.38	331	*e*P	P	02 01 27.4	+0.2
ISAL				AMb	AMB	02 01 28.8	
	comp=Z,15nm,1.0s,mb5.3						
IIGN	Ignalina	92.46	331	*e*P	P	02 01 28.0	+0.3
SDCO	Great Sand Dun	92.75	49	*e*P	P	02 01 29.8	+0.4
	comp=Z,13nm,1.5s,mb5.1						
ANMO	Albuquerque	93.15	52	*e*P	P	02 01 32.1	+0.8
	comp=Z,6.9nm,1.0s,mb5.0						
ANMO	Albuquerque	93.15	52	*e*P	P	02 01 32.1	+0.8
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ULM	Lac du Bonnet	93.15	35	P	P	02 01 30.7	-0.2
	comp=Z,6.2nm,0.9s,mb5.0,baz=297,slow=6.5,SNR=6.5						
ULM	Lac du Bonnet	93.15	35	P	P	02 01 30.7	-0.2
AKASG	Malin Array Be	93.52	326	P	P	02 01 31.6	-1.1
	comp=Z,0.8nm,0.5s,mb4.5,baz=52,slow=4.4,SNR=12						
NB2	NORSAR Subarra	94.66	340	P	P	02 01 37.5	-0.1
	comp=Z,2.0nm,0.6s,mb4.7,baz=48,slow=4.6						
NOA	NORSAR Array B	94.66	340	P	P	02 01 37.2	-0.3
	comp=Z,2.6nm,0.7s,mb4.8,baz=43,slow=4.4,SNR=5.6						
SUW	Suwalki	94.68	331	*e*P	P	02 01 37.8	-0.1
SUW	Suwalki	94.68	331	*e*P	P	02 01 37.8	0.0
VNDA	Vanda	94.72	177	*e*P	P	02 01 37.9	+0.3
	comp=Z,2.7nm,1.2s,mb4.5						
VNDA	Vanda	94.72	177	*e*P	P	02 01 37.9	+0.3
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NAO	NORSAR Subarra	94.94	340	P	P	02 01 37.5	-1.4
	comp=Z,2.0nm,0.6s,mb4.7						
NAO	NORSAR Subarra	94.94	340	P	P	02 01 37.5	-1.4
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.7						
MNTX	Cornudas Mount	95.26	55	*e*P	P	02 01 41.4	+0.3
	comp=Z,7.7nm,1.2s,mb5.0						
GDL2	Guadalupe Moun	95.85	54	*e*P	P	02 01 44.1	+0.3
BR131	Keskin Array S	96.33	315	*e*P	P	02 01 45.1	-0.7
	comp=Z,5.3nm,1.0s,mb4.9						
BRTR	Keskin Array B	96.33	315	P	P	02 01 45.2	-0.6
	comp=Z,3.7nm,0.9s,mb4.8,baz=90,slow=3.7,SNR=18						
BRTR				PP	PP	02 05 32.6	-9.3
	comp=Z,0.7nm,0.8s,baz=67,slow=9.4,SNR=3.6						
AMTX	Amarillo	96.75	51	*e*P	P	02 01 47.9	+0.1
TXAR	Lajitas Array	97.57	56	P	P	02 01 51.6	0.0
	comp=Z,0.9nm,1.0s,mb4.2,baz=270,slow=3.8,SNR=5.8						
TXAR				LR	LR	02 46 35.6	
	comp=Z,125nm,18.2s,MS4.4,baz=90,slow=36						
KWP	Kalwaria	97.57	327	*e*P	P	02 01 51.9	+0.8
KWP	Kalwaria	97.57	327	*e*P	P	02 01 51.9	+0.8
MLR	Muntele Rosu	98.22	323	LR	LR	02 50 11.9	
	comp=Z,114nm,18.8s,MS4.4,baz=276,slow=38						
CLL	Collm	101.11	333	P	P	02 02 06.7	-0.4
CLL	Collm	101.11	333	*i* P	P	02 02 06.7	-0.4
PRU	Pruhonice	101.35	331	*e*PP	PP	02 06 18.5	-1.9
PRU	Pruhonice	101.35	331	*e*PP	PP	02 06 18.5	-1.9
MOX	Moxa	102.19	333	*i* P	PP	02 06 20.3	-6.2
	comp=Z,logA/T=0.9						
KHC	Kasperske Hory	102.40	331	*e*PDIF	Pdif	02 02 12.0	-0.9
KHC				*e*PP	PP	02 06 26.0	-2.1
GERES	GERESS Array B	102.54	331	P	Pdif	02 02 12.8	-0.7
	comp=Z,0.7nm,0.7s,baz=45,slow=3.8,SNR=4.9						
GERES				PP	PP	02 06 26.8	-2.5
	comp=Z,0.2nm,0.3s,baz=45,slow=3.8,SNR=4.6						
ESDC	Sonseca Array	117.53	335	PP	PP	02 08 10.8	-8.2
	comp=Z,1.9nm,0.9s,baz=9.5,slow=7.8,SNR=3.5						
LSZ	Lusaka	121.63	262	*e*PKPdf	PKPdf	02 07 12.3	-2.0
SNAA	Sanae	122.56	191	*e*	PKPdf	02 07 12.6	-2.1
SNAA	Sanae	122.56	191	*e*	PKPdf	02 07 13.9	-0.8
SNAA	Sanae	122.56	191	*e*	PKPdf	02 07 22.0	+7.3
SNAA	Sanae	122.56	191	PKP	PKPdf	02 07 11.9	-2.8
	comp=Z,1.8nm,0.7s,baz=203,slow=3.1,SNR=23						
SNAA	Sanae	122.56	191	⇑*i*PKPdf	PKPdf	02 07 11.3	-3.4
SNAA				*e*		02 07 12.6	
SNAA				*e*		02 07 13.9	
SNAA				*e*		02 07 22.0	
SNAA	Sanae	122.56	191	⇑*i*PKIKP	PKPdf	02 07 11.3	-3.4
SNAA				*e*		02 07 13.9	
SNAA				*e*		02 07 22.0	
VNA2	Neumayer--Watz	123.97	190	*e*	PKPdf	02 07 15.7	-1.8
VNA2	Neumayer--Watz	123.97	190	*e*	PKPdf	02 07 17.2	-0.3
VNA2	Neumayer--Watz	123.97	190	*e*	PKPdf	02 07 25.6	+8.1
VNA2	Neumayer--Watz	123.97	190	⇑*i*PKPdf	PKPdf	02 07 14.8	-2.7
VNA2				*e*		02 07 15.7	
VNA2				*e*		02 07 17.2	
VNA2				*e*		02 07 25.6	
VNA3	Neumayer Olymp	124.04	189	*e*	PKPdf	02 07 15.7	-1.9
VNA3	Neumayer Olymp	124.04	189	*e*	PKPdf	02 07 17.0	-0.6
VNA3	Neumayer Olymp	124.04	189	*e*	PKPdf	02 07 25.4	+7.8
VNA3	Neumayer Olymp	124.04	189	⇑*i*PKPdf	PKPdf	02 07 14.7	-2.9
VNA3				*e*		02 07 15.7	
VNA3				*e*		02 07 17.0	
VNA3				*e*		02 07 25.4	
VNA1	Neumayer--Stat	124.35	190	*e*	PKPdf	02 07 17.0	-1.2
VNA1	Neumayer--Stat	124.35	190	*e*	PKPdf	02 07 18.7	+0.5
VNA1	Neumayer--Stat	124.35	190	*e*	PKPdf	02 07 25.3	+7.1
VNA1	Neumayer--Stat	124.35	190	⇑*i*PKPdf	PKPdf	02 07 15.8	-2.4
VNA1				*e*		02 07 17.0	
VNA1				*e*		02 07 18.7	
VNA1				*e*		02 07 25.3	
LBTB	Lobatse	125.28	251	*e*PKPdf	PKPdf	02 07 18.9	-2.2
BOSA	Boshof	125.73	247	PKP	PKPdf	02 07 20.0	-2.0
	comp=Z,2.8nm,0.7s,baz=40,slow=9.2,SNR=5.3						
BOSA	Boshof	125.73	247	*e*PKPdf	PKPdf	02 07 19.9	-2.1
PLCA	Paso Flores	139.78	134	PKP	PKPdf	02 07 45.6	-2.3
	comp=Z,3.2nm,0.8s,baz=256,slow=4.3,SNR=6.0						
PLCA	Paso Flores	139.78	134	*e*PKPdf	PKPdf	02 07 45.6	-2.3
DBIC	Dimbokro	143.74	308	PKP	PKPdf	02 07 51.0	-4.5
	comp=Z,8.8nm,0.8s,baz=331,slow=1.4,SNR=18						
DBIC	Dimbokro	143.74	308	*e*PKPdf	PKPdf	02 07 51.0	-4.6
LPAZ	La Paz	146.14	94	PKPbc	PKPbc	02 07 58.8	+1.9
	comp=Z,8.8nm,0.5s,baz=350,slow=2.6,SNR=66						
LPAZ	La Paz	146.14	94	*e*PKPdf	PKPdf	02 07 58.3	-1.3
LPAZ				*e*PKPbc	PKPbc	02 07 59.3	+2.4
TRQA	Tornquist	146.90	135	*e*PKPbc	PKPbc	02 07 59.2	+1.2
SAML	Samuel	149.33	79	*e*PKPdf	PKPdf	02 08 02.2	-2.7
SAML				*e*PKPbc	PKPdf	02 08 06.4	+1.4
CPUP	Villa Florida	155.40	116	*e*PKPab	PKPab	02 08 36.2	-1.2

*MOS **11** 01:51:48.7±1.9,57.34N×120.59E,h7^{km},mb4.4/1,Error ellipse: s-maj=30.4km s-min=22.8km az=145.8*

BYKL 11 01:51:48.0±0.3,57.36N×120.72E,1C-2D,Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	Chara	1.41	252	*e*Pg	Pg	01 52 14.0	-2.2
CRS				*e*Pb	Pb	01 52 15.7	+0.7
CRS				*e*Sg	Sg	01 52 32.1	-3.0
CRS				max			
	236nm,1.1s						
CRS				Smax			
	610nm,0.5s						
CRS	Chara	1.41	252	*e*P	Pb	01 52 14.1	-0.9
CRS				*e*		01 52 32.0	
CRS				pmax	pmax		
	comp=Z,194nm,0.7s						
CRS				smax			
	comp=E,609nm,0.4s						
NRGR	Nerungri	2.30	106	*e*P	Pn	01 52 30.7	+3.0
NRGR				S	Sn	01 52 58.5	+1.4
CLNS	Chul’man	2.34	101	*e*Pg	Pg	01 52 29.9	-4.8
CLNS				*e*Sn	Sn	01 52 55.2	-2.9
CLNS				*e*Sg	Sg	01 53 00.1	-5.7
CLNS				Pmax			
	comp=E,182nm,0.2s						
CLNS				Smax			
	comp=E,5μm,0.5s						
CLNS	Chul’man	2.34	101	*e*P	Pn	01 52 29.9	+1.7
CLNS				*e*S	Sn	01 52 59.7	+1.6
CLNS				pmax	pmax		
	comp=N,3.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,29nm,0.3s						
CLNS				pmax	pmax		
	comp=N,12nm,0.2s						
CLNS				pmax	pmax		
	comp=E,21nm,0.3s						
CLNS				smax			
	comp=N,62nm,0.3s						
CLNS				smax			
	comp=Z,19nm,0.2s						
CLNS				smax			
	comp=E,65nm,0.3s						
CLNS				smax			
	comp=E,522nm,0.5s						
CLNS				smax			
	comp=Z,253nm,0.5s						
CLNS				smax			
	comp=N,130nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,40nm,12.0s						
ALDR	Aldan	2.79	61	*e*Pn	Pn	01 52 34.8	0.0
ALDR				*e*Pg	Pg	01 52 39.1	-4.7
ALDR				*e*Sn	Sn	01 53 07.8	-1.9
ALDR				*e*Sg	Sg	01 53 14.1	-6.9
ALDR				Pmax			
	comp=Z,186nm,0.3s						
ALDR				Smax			
	comp=Z,2μm,0.2s						
NLYR	Nelyaty	2.88	255	*e*Pn	Pn	01 52 35.8	-0.3
NLYR				⇓*i*Pg	Pg	01 52 40.2	-5.4
NLYR				*e*Sn	Sn	01 53 09.8	-2.2
NLYR				*e*Sg	Sg	01 53 16.4	-7.6
NLYR				Pmax			
	comp=Z,90nm,0.8s						
NLYR				Smax			
	comp=Z,637nm,0.9s						
NLYR	Nelyaty	2.88	255	*e*P	Pn	01 52 39.6	+3.5
NLYR				*e*		01 53 15.2	
NLYR				pmax	pmax		
	comp=Z,341nm,0.3s						
NLYR				smax			
	comp=N,1μm,1.3s						
TUP	Tupik	2.97	189	⇑*i*Pn	Pn	01 52 36.3	-1.0
TUP				*e*Pg	Pg	01 52 41.0	-6.4
TUP				*e*Sn	Sn	01 53 11.5	-2.7
TUP				*e*Sg	Sg	01 53 19.5	-7.5
TUP				Pmax			
	comp=N,68nm,0.3s						
TUP				Smax			
	comp=N,518nm,0.8s						
TUP	Tupik	2.97	189	*e*P	Pn	01 52 36.2	-1.1
TUP				*e*S	Sn	01 53 11.5	-2.7
TUP				pmax	pmax		
	comp=Z,69nm,0.3s						
TUP				smax			
	comp=E,444nm,0.7s						
TNDR	Tynda	3.15	133	⇓*i*Pn	Pn	01 52 39.6	-0.2
TNDR				*e*Sg	Sg	01 53 25.8	-7.0
TNDR				max			
	comp=E,176nm,0.2s						
TNDR				Smax			
	comp=E,1μm,0.2s						
BOD	Bodaibo	3.65	280	*e*Pn	Pn	01 52 45.8	-1.1
BOD				*e*Pg	Pg	01 52 54.6	-6.2
BOD				*e*Sg	Sg	01 53 39.4	-10
BOD				Pmax			
	comp=E,33nm,0.6s						
BOD				Smax			
	comp=E,236nm,1.0s						
BOD	Bodaibo	3.65	280	*e*P	Pn	01 52 45.1	-1.8
BOD				*e*		01 53 38.0	
BOD				pmax	pmax		
	comp=Z,33nm,0.6s						
BOD				smax			
	comp=N,236nm,0.7s						
SVKR	Severomuysk	4.14	255	*e*Pg	Pg	01 53 03.6	-7.0
SVKR				*e*Sg	Sg	01 53 55.4	-10
SVKR				Pmax			
	comp=N,50nm,0.3s						
SVKR				Smax			
	comp=N,309nm,1.0s						
UKT	Uakit	4.36	248	*e*Pn	Pn	01 52 56.4	-0.7
UKT				*e*Pg	Pg	01 53 06.4	-8.7
UKT				*e*Sg	Sg	01 54 01.3	-12
UKT				Pmax			
	comp=N,12nm,0.6s						
UKT				Smax			
	comp=N,89nm,1.2s						
UKT	Uakit	4.36	248	*e*P	Pn	01 53 07.4	+10
UKT				pmax	pmax		
	comp=Z,11nm,0.8s						
YOA	Uoyan	5.10	260	*e*Sg	Sg	01 54 26.5	-11
YOA				Smax			
	comp=Z,520nm,2.2s						
ZEA	Zeya	5.19	132	*e*Sg	Sg	01 54 28.4	-12
KMO	Kumora	5.46	258	*e*Pn	Pn	01 53 10.6	-2.0
KMO				*e*Pg	Pg	01 53 27.1	-10
KMO				*e*Sg	Sg	01 54 35.5	-14
KMO				Pmax			
	comp=Z,8.0nm,0.5s						
KMO				Smax			
	comp=Z,140nm,1.0s						
YLYR	Ulyunkhan	5.90	249	*e*	Pn	01 53 18.5	-0.3
YLYR				*e*Pg	Pg	01 53 34.5	-11
YLYR				*e*Sn	Sn	01 54 22.4	-5.6
YLYR				*e*Sg	Sg	01 54 50.3	-14
YLYR				Pmax			
	comp=Z,4.0nm,0.5s						
YLYR				Smax			
	comp=Z,81nm,1.0s						
YLYR	Ulyunkhan	5.90	249	*e*P	Pn	01 53 31.8	+13
NIZ	Nizh Angarsk	6.38	260	*e*Sg	Sg	01 55 03.8	-17
NIZ				Smax			
	comp=Z,43nm,0.9s						
YAK	Yakutsk	6.52	40	*e*Pg	Pg	01 53 45.8	-12
YAK				*e*Sn	Sn	01 54 35.2	-8.3
YAK				*e*Sg	Sg	01 55 08.3	-17
YAK				Pmax			
	comp=Z,139nm,0.5s						
YAK				Smax			
	comp=Z,383nm,0.5s						
CIT	Chita	6.77	221	*e*Pg	Pg	01 53 49.6	-14
CIT				*e*Sg	Sg	01 55 17.1	-16
CIT				Pmax			
	comp=Z,5.0nm,0.1s						
CIT				Smax			
	comp=Z,179nm,2.0s						
SYVR	Suvo	7.13	243	*e*	Pn	01 53 58.6	+23
SYVR				*e*Sg	Sg	01 55 29.7	-16
SYVR				Smax			
	comp=Z,97nm,1.9s						
OGRR	Ongureny	8.33	249	*e*Sg	Sg	01 56 05.0	-20
OGRR				Smax			
	comp=Z,26nm,1.9s						
KPC	Khapcheranga	9.13	216	*e*Pn	P	01 54 01.9	-2.1
KPC				*e*Sg	Sg	01 56 29.5	-22
KPC				Smax			
	comp=Z,57nm,0.9s						
TRG	Tyrgan	9.44	247	*e*Sg	Sg	01 56 39.6	-23
TRG				Smax			
	comp=Z,31nm,2.3s						

*IDC **11** 02:00:44.8±13.0,52.54N×174.33W,h108^{km}±106^{km}, mb3.6/6,mb1 4.0/8,mb1mx3.5/26,mbtmp4.0/8,ML4.7/2, Error ellipse: s-maj=82.4km s-min=27.6km az=34.0*

*NEIC **11** 02:00:52.2±0.3,52.73N×174.04W,h166^{km}±8^{km},mb3.8/2, Error ellipse: s-maj=15.1km s-min=11.5km az=150.0*

ISC 11 02:00:51.0±0.4,52.8N±0.2×174.1W±0.1,h167^{km}±8^{km},n25, σ0^{s}83/30,mb3.7/8,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.60	188	P	P	02 01 15.5	+0.4
ATKA				S	S	02 01 33.1	-0.6
GSTR	Great Sitkin T	1.41	241	P	P	02 01 22.4	+1.0
GSMY	Great Sitkin M	1.44	239	P	P	02 01 22.2	+0.5
GSSP	Great Sitkin S	1.48	242	P	P	02 01 22.7	+0.8
GSTD	Great Sitkin T	1.48	241	P	P	02 01 22.6	+0.6
GSTD				S	S	02 01 45.1	-0.9
GSCK	Great Sitkin C	1.51	239	P	P	02 01 22.9	+0.6
GSCK				S	S	02 01 46.2	-0.3
ADAG	Mount Adagdak	1.76	243	P	P	02 01 25.8	+0.9
ADK	Adak	1.85	241	P	P	02 01 26.1	+0.3
ADK				S	S	02 01 51.5	-1.3
KIRH	Kanaga Island	2.07	245	P	P	02 01 29.2	+0.9
KIKV	Kanaga Island	2.12	245	P	P	02 01 29.7	+0.8
KIMD	Kanaga Island	2.21	243	P	P	02 01 30.1	+0.1
KIMD				S	S	02 01 58.1	-1.9
KDAK	Kodiak Island	13.19	59	P	P	02 03 50.7	-1.9
	2.1nm,0.3s,baz=308,slow=10,SNR=18						
KDAK	Kodiak Island	13.19	59	P	P	02 03 50.7	-1.9
ILAR	Eielson Array	18.31	39	P	P	02 04 53.5	-0.9
	1.7nm,0.3s,baz=231,slow=10,SNR=47						
DAWY	Dawson	21.06	44	*e*P	P	02 05 23.5	+0.9
INK	Inuvik	24.61	35	P	P	02 05 57.4	+0.8
	1.0nm,0.4s,mb3.7,baz=234,slow=8.0,SNR=12						
NEW	Newport	35.66	74	P	P	02 07 34.3	-0.1
	1.6nm,0.4s,mb4.0,baz=315,slow=4.8,SNR=5.3						
HLID	Hailey	39.77	79	P	P	02 08 08.8	+0.2
NVAR	Mina Array Bea	40.52	88	P	P	02 08 15.4	+0.6
	0.8nm,0.7s,mb3.5,baz=304,slow=5.8,SNR=7.0						
ELK	Elko	40.94	83	P	P	02 08 19.1	+0.9
TPNV	Topopah Spring	42.72	88	*e*P	P	02 08 32.7	0.0
	1.8nm,0.6s,mb3.9						
BW06	Boulder Array	43.11	77	*e*P	P	02 08 35.2	-0.6
	1.0nm,0.5s,mb3.7						
PDAR	Pinedale Array	43.11	77	P	P	02 08 35.5	-0.3
	1.3nm,0.6s,mb3.7,baz=315,slow=4.3,SNR=13						
TXAR	Lajitas Array	55.59	86	P	P	02 10 10.2	-1.0
	0.9nm,0.7s,mb3.7,baz=292,slow=5.5,SNR=10.0						
AKTO	Aktyubinsk	68.15	327	P	P	02 11 33.6	-0.8
	0.8nm,0.5s,mb3.7,baz=55,slow=5.1,SNR=4.0						

*THE **11** 02:03:13.6,37.34N×20.46E,h10^{km},ML3.5*

*ATH **11** 02:03:14.1,37.52N×20.26E,h9^{km}±5^{km},MD3.7/6*

*NEIC **11** 02:03:14.1,37.52N×20.26E,h9^{km},MD3.7(ATH),After ATH.*

*CSEM **11** 02:03:18.9±0.3,37.66N×20.59E,h8^{km},MD3.7,Error ellipse: s-maj=7.7km s-min=3.1km az=56.0*

ISC 11 02:03:13.0±1.3,37.38N±0.08×20.30E±0.09,h9^{km},n29, σ1^{s}28/34,1C-1D,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	0.83	16	*e*PB	Pb	02 03 27.8	-1.4
RLS	Riolos of Patr	1.15	53	⇑*i*PG	Pg	02 03 34.0	-1.9
RLS				*e*SB	Sb	02 03 50.6	+1.2
ITM	Ithomi	1.31	98	*e*PB	Pb	02 03 39.9	+2.5
EVR	Evrytania	1.94	37	⇓*i*PG	Pg	02 03 48.7	-3.1
EVR				*e*SN	Sn	02 04 12.9	+1.6
IGT	Igoumenitsa	2.15	1	*e*Pn	Pn	02 03 50.7	+1.1
IGT				*e*Sn	Sn	02 04 20.3	+3.6
VLI	Veliai	2.21	107	*e*PG	Pg	02 03 58.0	+0.9
AGG	Agios Georgios	2.29	44	*e*Pn	Pn	02 03 51.9	+0.3
AGG				*e*Sn	Sn	02 04 20.4	+0.2
AGG	Agios Georgios	2.29	44	*e*Pn	Pn	02 03 51.8	+0.2
AGG				*e*Sn	Sn	02 04 20.4	+0.2
JAN	Janina	2.32	10	*e*PN	Pn	02 03 53.3	+1.3
KEK	Kerkira	2.37	351	*e*PN	Pn	02 03 53.3	+0.6
LKR	Lokris	2.48	58	*e*PB	Pb	02 03 54.8	-2.6
NEO	Neokhori	3.00	49	*e*PN	Pn	02 04 01.5	-0.2
XOR	Xorichti	3.02	48	*e*Pn	Pn	02 04 02.9	+0.9
XOR	Xorichti	3.02	48	*e*Pn	Pn	02 04 02.8	+0.9
LIT	Litokhoron	3.21	31	*e*Pn	Pn	02 04 04.5	-0.2
AOS	Alonnisos	3.34	56	*e*Pn	Pn	02 04 05.8	-0.6
AOS	Alonnisos	3.34	56	*e*Pn	Pn	02 04 05.8	-0.7
FNA	Florina	3.50	13	*e*Pn	Pn	02 04 09.2	+0.3
PAIG	Paliouri	3.67	45	*e*Pn	Pn	02 04 10.4	-0.8
BIA	Bitola	3.72	12	*e*Pn	Pn	02 04 14.7	+2.8
GRG	Griva	3.93	24	*e*Pn	Pn	02 04 14.0	-0.9
OUR	Ouranopolis	4.12	43	*e*Pn	Pn	02 04 16.8	-0.8
SOH	Sokhos	4.18	34	*e*Pn	Pn	02 04 18.2	-0.2
SOH	Sokhos	4.18	34	*e*Pn	Pn	02 04 18.2	-0.2
KNT	Kendrikon	4.28	27	*e*Pn	Pn	02 04 19.1	-0.8
VAY	Valandovo	4.31	23	*e*Pn	Pn	02 04 29.4	+9.1
SKO	Skopje	4.67	10	*e*Pn	Pn	02 04 35.0	+10
KKB	Krupnik	4.97	25	P	Pn	02 04 29.0	-0.7
MMB	Musomiste	4.97	31	P	Pn	02 04 28.0	-1.7

OTT 11 02:08:26.4±0.3,60.89N×69.02W,h18^{km},MN2.6/2,35km southeast from Quaqtaq, Qc Boothia Ungava Seismic Zone.,Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUQ	Kuujjuuaa	2.80	173	PN	Pn	02 09 10.3	-1.0
KUQ				PG	Pn	02 09 16.4	+5.1
KUQ				SN	Sn	02 09 42.8	-2.2
KUQ				SG	Sn	02 09 51.7	+6.7
KUQ				Trac		02 09 59.5	
	comp=Z,4.2nm,0.1s						
FRB	Frobisher Bay	2.88	4	PN	Pn	02 09 11.3	-1.1
FRB				PG	Pn	02 09 16.9	+4.5
FRB				SN	Sn	02 09 43.0	-3.9
FRB				SG	Sn	02 09 53.2	+6.3
FRB				Trac		02 09 54.9	
	comp=Z,5.1nm,0.1s						
SCHQ	Schefferville	6.18	168	PN	Pn	02 09 55.4	-3.8
SCHQ				SN	Sn	02 11 02.6	-7.5
SCHQ				Trac		02 11 20.4	
	comp=Z,0.6nm,0.1s						
LG4Q	La Grande 4	7.78	203	PN	Pn	02 10 18.0	-3.6
LG4Q				SN	Sn	02 11 38.8	-11
YOSQ	Ashton Mining	8.23	194	PN	P	02 10 26.9	-0.9
YOSQ				SN	Sn	02 11 51.6	-10
WEMQ	Wemindji, Queb	9.24	216	SN	Sn	02 12 20.4	-6.0
QILN	Qililugaq Expl	9.59	314	SN	Sn	02 12 25.2	-10
QILN				LG		02 13 20.9	
SRLN	Sarcpa Lake, N	9.80	328	PN	P	02 10 46.9	-2.4
SRLN				SN	Sn	02 12 29.6	-10
SRLN				LG		02 13 28.6	
ILON	Igloolik, Nuna	10.05	333	SN	S	02 12 31.4	-15
GIFN	Gifford Fjord,	10.51	336	PN	P	02 10 53.8	-5.3
GIFN				SN	S	02 12 41.4	-16
SILO	Sutton Inlier	10.64	240	SN	S	02 12 51.5	-9.0

*BJI **11** 02:13:55.8,35.82N×81.10E,h25^{km},ML4.4,Ms4.0*

*IDC **11** 02:13:55.9±1.4,35.80N×80.76E,mb3.7/8,mb1 4.0/10, mb1mx3.8/21,mbtmp3.8/10,ML4.3/2,Error ellipse: s-maj=37.2km s-min=23.1km az=37.0*

*MOS **11** 02:13:58.6±1.5,35.91N×80.85E,h33^{km},mb3.8/1,Error ellipse: s-maj=25.8km s-min=8.0km az=105.0*

*NEIC **11** 02:13:58.0±0.4,35.87N×80.72E,h10^{km},mb3.6/2,Error ellipse: s-maj=16.5km s-min=4.9km az=66.0*

*NNC **11** 02:14:04.7±4.6,36.51N×80.92E,h14^{km}±37^{km},Error ellipse: s-maj=36.6km s-min=26.8km az=157.0*

ISC 11 02:13:57.0±2.1,36.00N±0.04×81.14E±0.08,h18^{km}±19^{km}, n37,σ1^{s}22/40,mb3.6/8,7C-3D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	5.40	312	*e*P	Pn	02 15 20.2	+1.5
KSH				S	Sn	02 16 22.8	+1.7
KSH				Smax			
	comp=N,400nm,0.5s						
KSH				Smax			
	comp=E,400nm,0.4s						
AAK	Ala-Archa	8.39	324	⇑Lg		02 18 17.6	
	comp=E,31nm,0.9s						
AAK	Ala-Archa	8.39	324	*e*Pn	P	02 15 59.5	-1.2
	comp=E,9.8nm,0.7s						
AAK	Ala-Archa	8.39	324	*e*P	P	02 15 59.5	-1.2
AAK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KOLN	Koldanda	8.46	165	*e*P	P	02 15 59.0	-2.7
	comp=Z,11nm,0.5s						
GKN	Gorkha	8.50	159	*e*P	P	02 16 02.7	+0.5
	comp=Z,15nm,0.4s						
KKN	Kakani	8.90	156	*e*P	P	02 16 07.5	-0.3
	comp=Z,15nm,0.5s						
GUN	Gumba	9.01	152	*e*P	P	02 16 10.6	+1.4
	comp=Z,15nm,0.4s						
PKI	Pulchoki	9.15	155	*e*P	P	02 16 10.4	-0.8
	comp=Z,13nm,0.4s						
WMQ	Urumqi	9.29	31	*e*P	P	02 16 15.9	+2.7
WMQ				S	Sn	02 17 58.1	-0.2
WMQ				Smax			
	comp=N,30nm,0.9s						
WMQ				Smax			
	comp=E,30nm,0.9s						
JIRN	Jiri	9.35	151	*e*P	P	02 16 14.2	+0.2

	comp=E,18nm,0.3s						
MK31	Makanchi Array	10.82	4	⇓Pn	P	02 16 34.4	+0.2
	comp=E,1.5nm,0.5s,baz=184,slow=13,SNR=51						
MK31				⇑Sn	S	02 18 33.1	-2.8
	comp=E,5.5nm,0.7s,baz=190,slow=24,SNR=7.8						
MKAR	Makanchi Array	10.82	4	Pn	P	02 16 33.9	-0.3
	comp=E,1.4nm,0.3s,baz=186,slow=13,SNR=50						
MKAR				Sn	S	02 18 30.0	-5.8
	comp=E,0.3nm,0.3s,baz=180,slow=13,SNR=3.4						
KK31	Karatay Array	10.85	314	⇑Pn	P	02 16 32.6	-1.9
	comp=E,0.3nm,0.3s,baz=128,slow=13,SNR=15						
KK31				⇑Lg		02 19 33.9	
	comp=E,7.9nm,1.1s						
KURK	Kurchatov	14.83	354	⇑P	P	02 17 25.1	-2.4
	comp=E,4.4nm,1.9s						
KURK	Kurchatov	14.83	354	*e*Pn	P	02 17 26.1	-1.3
	comp=E,2.9nm,0.6s						
KURK	Kurchatov	14.83	354	*e*P	P	02 17 26.1	-1.3
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZAL	Zalesovo	18.12	7	P	P	02 18 08.6	-0.8
	comp=Z,0.3nm,0.3s,baz=290,slow=14,SNR=3.8						
VOSK	Vostochnaya	18.20	340	⇓P	P	02 18 12.5	+2.1
	comp=Z,4.9nm,1.6s						
BVA0	Borovoye Array	18.64	339	⇑P	P	02 18 17.2	+1.5
	comp=Z,0.8nm,1.1s,baz=148,slow=11,SNR=21						
BVAR	Borovoye Array	18.64	339	P	P	02 18 16.2	+0.6
	comp=Z,1.1nm,0.3s,baz=145,slow=10,SNR=15						
BRVK	Borovoye	18.70	339	*e*P	P	02 18 16.7	+0.3
	comp=Z,2.8nm,0.5s						
BRVK	Borovoye	18.70	339	*e*P	P	02 18 16.7	+0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CHKZ	Chkalovo	19.15	341	⇑P	P	02 18 21.6	-0.3
	comp=Z,9.6nm,2.3s						
CHKZ	Chkalovo	19.15	341	*e*P	P	02 18 21.4	-0.4
	comp=Z,1.9nm,0.7s						
CHKZ	Chkalovo	19.15	341	*e*P	P	02 18 21.4	-0.4
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AB31	Akbulak array	20.38	317	⇓P	P	02 18 34.0	-1.4
	comp=Z,0.9nm,0.5s,baz=116,slow=11,SNR=22						
AKTO	Aktyubinsk	22.06	318	P	P	02 18 52.4	0.0
	comp=Z,1.3nm,0.5s,mb3.6,baz=106,slow=8.4,SNR=5.2						
SONM	Songino Array	22.10	50	P	P	02 18 57.9	+5.1
	comp=Z,0.4nm,0.6s,mb3.0,baz=252,slow=9.4,SNR=4.7						
AKASG	Malin Array Be	39.68	308	P	P	02 21 28.4	-1.1
	comp=Z,0.2nm,0.3s,mb3.3,baz=76,slow=9.2,SNR=4.2						
FINES	FINESS Array B	42.58	324	P	P	02 21 53.0	-0.2
	comp=Z,2.0nm,0.6s,mb4.0,baz=101,slow=9.7,SNR=9.5						
ARCES	ARCESS Array B	44.87	336	P	P	02 22 12.3	+0.7
	comp=Z,1.4nm,0.7s,mb3.9,baz=80,slow=7.4,SNR=5.2						
ARCES	ARCESS Array B	44.87	336	P	P	02 22 12.3	+0.7
NB2	NORSAR Subarra	49.71	323	P	P	02 22 48.7	-0.9
	comp=Z,4.7nm,0.9s,mb4.5,baz=90,slow=7.9						
NOA	NORSAR Array B	49.71	323	P	P	02 22 48.7	-0.9
	comp=Z,2.0nm,0.7s,mb4.3,baz=89,slow=7.7,SNR=4.1						
ILAR	Eielson Array	72.77	19	P	P	02 25 27.1	+1.5
	comp=Z,0.4nm,0.8s,mb3.4,baz=329,slow=5.0,SNR=4.2						
WRA	Warramunga Arr	75.01	129	P	P	02 25 40.0	+0.6
	comp=Z,0.4nm,0.6s,mb3.5,baz=319,slow=6.0,SNR=4.9						

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*IDC **11** 02:49:13.8±2.5, 23.76S×179.88E, h503^{km}±26^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.5/14, mbtmp4.3/9, Error ellipse: s-maj=24.4km s-min=19.1km az=160.0*

*NEIC **11** 02:49:14.8±1.4, 23.79S×179.85E, h519^{km}±14^{km}, mb4.5/7, Error ellipse: s-maj=13.2km s-min=10.5km az=223.0*

ISC 11 02:49:15.0±2.4, **23.73S**±0.10×**179.7E**±0.1, **h527**^{km}±27^{km}, **n31**, σ**0^{s}72**/29, **mb4.1**/14, **4C-3D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.35	275	P	P	02 51 57.8	0.0
	0.1nm,0.3s,baz=86,slow=19,SNR=2.1						
URZ	Urewera	14.66	188	P	P	02 52 20.6	-0.6
	3.6nm,0.3s,baz=46,slow=2.4,SNR=16						
URZ				S	S	02 54 51.6	+0.2
	1.6nm,0.3s,baz=54,slow=23,SNR=11						
PMG	Port Moresby	34.20	289	P	P	02 55 17.9	+0.1
	19nm,0.7s,mb4.7,baz=99,slow=6.0,SNR=9.9						
PMG	Port Moresby	34.20	289	*e*P	P	02 55 18.4	+0.6
	22nm,0.8s,mb4.7						
STKA	Stephens Creek	34.55	248	P	P	02 55 21.8	+1.3
	0.8nm,0.4s,mb3.6,baz=102,slow=16,SNR=5.7						
STKA	Stephens Creek	34.55	248	P	P	02 55 21.5	+1.0
ASPA	Alice Springs	41.82	260	*e*P	P	02 56 20.2	+0.4
WB2	Warramunga Arr	42.16	266	⇓*i*P	P	02 56 22.4	-0.1
WB2				*e*S	S	03 02 01.2	-3.7
WRAB	Tennant Creek	42.16	266	*e*P	P	02 56 22.3	-0.3
	9.3nm,0.8s,mb4.4						
WRA	Warramunga Arr	42.17	266	P	P	02 56 22.5	-0.1
	10nm,0.6s,mb4.5,baz=103,slow=8.3,SNR=102						
WRA				ScP		03 01 07.9	
	1.9nm,0.9s,baz=98,slow=3.9,SNR=11						
KAKA	Kakadu	46.04	275	⇓*i*P	P	02 57 10.4	+17
	4.7nm,0.3s,mb4.5						
FORT	Forrest	46.13	249	*e*P	P	02 56 53.0	-0.4
	15nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	50.59	266	*e*P	P	02 57 27.2	+0.2
	9.2nm,0.7s,mb4.2						
MBWA	Marble Bar	55.15	260	*e*P	P	02 57 58.9	-0.7
	9.5nm,1.0s,mb4.0						
QSPA	South Pole Qui	66.35	180	*e*P	P	02 59 11.9	-0.3
	8.6nm,0.1s,mb5.2						
MAW	Mawson	77.82	200	P	P	03 00 18.1	-0.2
	1.1nm,0.5s,mb3.4,baz=124,slow=7.3,SNR=4.6						
NVAR	Mina Array Bea	84.80	44	P	P	03 00 54.5	0.0
	0.7nm,0.8s,mb3.3,baz=210,slow=7.1,SNR=6.6						
SNAA	Sanae	84.84	179	⇑*i*	P	03 01 13.7	+20
SNAA	Sanae	84.84	179	*e*P	P	03 00 52.6	-1.4
	0.8nm,0.5s,mb3.5						
VNA3	Neumayer Olymp	85.06	177	*e*	P	03 00 56.3	+1.2
VNA3	Neumayer Olymp	85.06	177	⇑*i*P	P	03 00 54.0	-1.1
VNA3				*e*		03 00 56.3	
VNA2	Neumayer--Watz	85.47	178	*e*	P	03 00 59.3	+2.2
VNA2	Neumayer--Watz	85.47	178	⇑*i*P	P	03 00 56.4	-0.7
VNA2				*e*		03 00 59.3	
VNA1	Neumayer--Stat	85.72	177	*e*	P	03 01 00.4	+2.2
VNA1	Neumayer--Stat	85.72	177	⇑*i*P	P	03 00 58.3	+0.1
VNA1				*e*		03 01 00.4	
TXAR	Lajitas Array	90.56	58	P	P	03 01 22.3	+0.5
	1.1nm,0.7s,mb3.9,baz=213,slow=6.1,SNR=16						
PDAR	Pinedale Array	92.74	44	P	P	03 01 31.1	-0.5
	0.5nm,0.8s,mb3.6,baz=243,slow=3.3,SNR=4.5						
ARCES	ARCESS Array B	131.67	348	PKP	PKPdf	03 07 27.7	+0.6
	1.1nm,0.7s,baz=34,slow=3.3,SNR=4.2						
ARCES	ARCESS Array B	131.67	348	PKP	PKPdf	03 07 27.7	+0.6
AKASG	Malin Array Be	144.69	327	PKP	PKPdf	03 07 51.9	+1.0
	0.6nm,0.5s,baz=41,slow=3.3,SNR=4.9						
CLL	Collm	150.62	343	⇓*i*PKP1	PKPdf	03 08 07.8	+7.3

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*NEIC **11** 03:03:14.0±0.8, 14.20S×71.99W, h88^{km}±10^{km}, mb4.2/2, Error ellipse: s-maj=11.9km s-min=8.8km az=48.0*

*IDC **11** 03:03:17.4±3.7, 14.21S×71.85W, h117^{km}±38^{km}, mb3.5/4, mb1 3.7/7, mb1mx3.6/19, mbtmp3.9/7, MS3.3/1, Ms1 3.2/1, ms1mx2.6/15, Error ellipse: s-maj=36.4km s-min=22.8km az=67.0*

ISC 11 03:03:12.2±1.0, **14.18S**±0.08×**72.03W**±0.07, **h88**^{km}±13^{km}, **n16**, σ**1^{s}00**/18, **mb3.8**/6, **2C, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	2.33	167	⇑*i*P	P	03 03 51.7	+2.3
LPAZ	La Paz	4.31	120	P	P	03 04 21.1	+4.3
	9.6nm,0.3s,baz=308,slow=11,SNR=284						
LPAZ				S	S	03 05 12.1	+6.0
	1.7nm,0.3s,baz=205,slow=25,SNR=13						
LPAZ	La Paz	4.31	120	⇑*i*Pn	P	03 04 20.9	+4.2
NNA	Nana	5.17	294	*e*Pn	P	03 04 28.5	-0.1
	46nm,0.4s						
NNA				*e*Sn	S	03 05 26.5	-1.1
SAML	Samuel	10.10	60	*e*Pn	P	03 05 35.8	-0.3
	14nm,0.9s						
SAML				Sn	S	03 07 23.6	-4.7
SIV	San Ignacio	10.73	101	P	P	03 05 44.2	-0.4
	1.2nm,0.3s,baz=295,slow=11,SNR=39						
SIV				S	S	03 07 39.3	-4.2
	0.4nm,0.3s,baz=244,slow=16,SNR=7.7						
CFAA	Coronel Fontan	17.69	169	P	P	03 07 13.7	-0.7
	0.0nm,0.3s,baz=341,slow=11,SNR=8.2						
CPUP	Villa Florida	18.32	134	*e*P	P	03 07 20.9	-0.9
	61nm,0.6s						
BDFB	Brasilia	23.25	97	P	P	03 08 13.1	+0.6
	1.5nm,0.4s,mb3.6,baz=276,slow=9.7,SNR=6.0						
BDFB				LR	LR	03 17 11.3	
	comp=Z,84nm,20.7s,baz=115,slow=36						
TRQA	Tornquist	25.40	161	*e*P	P	03 08 31.7	-1.4
	2.9nm,0.6s,mb3.9						
PLCA	Paso Flores	26.49	177	P	P	03 08 43.3	+0.2
	1.7nm,0.7s,mb3.6,baz=354,slow=11,SNR=4.1						
TXAR	Lajitas Array	52.95	325	P	P	03 12 22.9	+0.8
	1.9nm,0.9s,mb4.1,baz=150,slow=8.8,SNR=15						
SDCO	Great Sand Dun	60.46	330	*e*P	P	03 13 16.3	+1.1
	4.6nm,1.2s,mb4.4						
PDAR	Pinedale Array	66.31	331	P	P	03 13 53.9	+0.4
	0.5nm,0.8s,mb3.4,baz=131,slow=9.6,SNR=3.7						
WRA	Warramunga Arr	137.31	218	PKP	PKPdf	03 22 29.3	+3.0
	0.5nm,0.6s,baz=137,slow=1.7,SNR=7.2						
MJAR	Matsushiro Arr	145.00	315	PKPbc	PKPbc	03 22 41.7	+1.9
	2.3nm,0.8s,baz=107,slow=3.8,SNR=5.5						

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*PRU **11** 03:14:07.8, 44.30N×11.54E*

*ROM **11** 03:14:08.7±0.2, 44.21N×12.20E, h12^{km}, Md2.9/6, Ml2.6/9, Error ellipse: s-maj=2.7km s-min=2.0km az=170.0*

*NEIC **11** 03:14:08.7, 44.21N×12.20E, h12^{km}, ML2.8(LDG), ML2.6(ROM), After ROM.*

*CSEM **11** 03:14:11.0±0.1, 44.13N×12.35E, h30^{km}, ML2.9/23, Error ellipse: s-maj=3.0km s-min=2.4km az=152.0*

*VIE **11** 03:14:11.5±1.1, 44.26N×12.35E, h10^{km}, mb2.3/4, ML2.7/8, Error ellipse: s-maj=8.0km s-min=6.2km az=7.0*

*LDG **11** 03:14:12.0±0.2, 44.21N×12.23E, h10^{km}, Ml2.8/16, Error ellipse: s-maj=4.1km s-min=2.7km az=91.0*

ISC 11 03:14:08.3±0.3, **44.25N**±0.02×**12.14E**±0.02, **h10**^{km}, **n64**, σ**1^{s}39**/107, **16C-3D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PESA	Pesaro	0.59	121	Pg	Pg	03 14 19.9	-0.4
PESA				Sg	Sg	03 14 28.2	0.0
	882nm,0.4s						
CRE	Caprese Michel	0.64	192	Pg	Pg	03 14 21.1	-0.2
CRE				Sg	Sg	03 14 31.3	+1.4
	355nm,0.5s						
BADI	Badiali	0.74	174	Pg	Pg	03 14 22.1	-1.1
BADI				Sg	Sg	03 14 33.1	-0.1
	254nm,0.4s						
CSNT	Castellina Chi	0.99	219	Pg	Pg	03 14 29.3	+1.1
CSNT				Sg	Sg	03 14 43.1	+1.7
	160nm,0.8s						
VLC	Villacollemand	1.26	267	*e*Pn	Pn	03 14 37.1	+5.0
VLC	Villacollemand	1.26	267	*e*Pn	Pn	03 14 37.1	+5.0
AOI	Ancona	1.27	123	Pg	Pg	03 14 32.4	-1.3
AOI				Sg	Sg	03 14 50.7	+0.1
	174nm,0.8s						
LNSS	Leonessa	1.77	158	Pg	Pg	03 14 40.8	-2.9
	63nm,0.5s						
CTI	Castel Tesino	1.83	349	Pg	Pg	03 14 42.0	-3.0
MNS	Montasola	1.90	168	Pg	Pg	03 14 41.8	-4.6
	12nm,0.5s						
CAMP	Campotosto	1.94	151	Pg	Pg	03 14 43.0	-4.2
	6μm,10.0s						
NVLJ	Novalja	1.98	80	*i* Pn	Pn	03 14 41.8	-0.5
NVLJ				*i* Sn	Sn	03 15 05.6	-1.9
NVLJ	Novalja	1.98	80	*i* Pn	Pn	03 14 41.8	-0.6
NVLJ				*i* Sn	Sn	03 15 05.5	-2.0
VOJS	Vojsko	2.17	34	*i* Pn	Pn	03 14 45.0	0.0
VOY	Vojsko	2.17	34	*e*Pn	Pn	03 14 44.9	-0.2
VOY				*e*		03 14 51.4	
VOY				*e*Sn	Sn	03 15 11.8	-0.5
VOY				*e*		03 15 21.5	
CEY	Cerknica	2.20	47	*i* Pn	Pn	03 14 44.9	-0.7
CADS	Cadrg	2.28	29	*i* Pn	Pn	03 14 46.3	-0.3
CADS				*i* Sn	Sn	03 15 14.9	-0.2
SEST	Monte Rota	2.50	1	Pg	Pg	03 14 52.0	-6.3
	28nm,0.7s						
OBKA	Obir	2.83	36	⇑*i*Pn	Pn	03 14 55.1	+0.6
	comp=Z,0.9nm,0.2s						
OBKA	Obir	2.83	36	⇑Pn	Pn	03 14 55.1	+0.6
OBKA				Sg	Sg	03 15 42.3	-0.2
OBKA	Obir	2.83	36	Pn	Pn	03 14 55.1	+0.6
	0.9nm,0.2s						
OBKA				Sg	Sg	03 15 42.3	-0.2
	30nm,0.6s						
PGF	Pioggiola	2.85	235	*e*Pn	Pn	03 14 56.3	+1.5
PGF				*e*Sn	Sn	03 15 29.6	+0.1
	3.7nm,0.3s						
WTTA	Wattenberg	3.04	354	⇓*i*Pn	Pn	03 15 00.3	+2.8
	comp=Z,1.9nm,0.2s						
WTTA	Wattenberg	3.04	354	⇓Pn	Pn	03 15 00.3	+2.8
WTTA				Sn	Sn	03 15 37.5	+3.3
WTTA				Sg	Sg	03 15 52.6	+3.1
WTTA	Wattenberg	3.04	354	Pn	Pn	03 15 00.3	+2.9
	1.9nm,0.2s						
WTTA				Sn	Sn	03 15 37.6	+3.4
	5.1nm,0.3s						
WTTA				Sg	Sg	03 15 52.6	+3.1
	13nm,0.7s						
SQTA	Sankt Quirin	3.04	348	⇑*i*Pn	Pn	03 15 01.9	+4.4
SQTA	Sankt Quirin	3.04	348	⇑Pn	Pn	03 15 01.9	+4.3
SQTA				Sn	Sn	03 15 39.0	+4.6
SQTA	Sankt Quirin	3.04	348	Pn	Pn	03 15 01.9	+4.4
SQTA				Sn	Sn	03 15 39.0	+4.6
	7.6nm,0.4s						
WATA	Walderalm	3.11	353	⇑*i*Pn	Pn	03 15 00.6	+2.1
WATA	Walderalm	3.11	353	⇑Pn	Pn	03 15 00.6	+2.1
WATA				Sg	Sg	03 15 55.5	+3.5
WATA	Walderalm	3.11	353	Pn	Pn	03 15 00.6	+2.1
WATA				Sg	Sg	03 15 55.5	+3.4
	2.7nm,0.2s						
MOTA	Moosalm	3.18	347	⇑*i*Pn	Pn	03 15 02.7	+3.2
	comp=Z,3.1nm,0.5s						
MOTA	Moosalm	3.18	347	⇑Pn	Pn	03 15 02.7	+3.2
MOTA				Sg	Sg	03 15 57.2	+2.9
MOTA	Moosalm	3.18	347	Pn	Pn	03 15 02.7	+3.2
	3.1nm,0.5s						
MOTA				Sg	Sg	03 15 57.2	+2.9
	5.8nm,0.5s						
SBF	Sospel	3.41	265	*e*Pn	Pn	03 15 04.8	+2.0
SBF				*e*Sn	Sn	03 15 42.6	-1.1
	11nm,0.5s						
DAVA	Damuels	3.43	333	⇑*i*Pn	Pn	03 15 06.6	+3.6
DAVA	Damuels	3.43	333	⇑Pn	Pn	03 15 06.6	+3.6
DAVA				Sn	Sn	03 15 49.9	+5.8
DAVA	Damuels	3.43	333	Pn	Pn	03 15 06.6	+3.6
DAVA				Sn	Sn	03 15 49.9	+5.8
	7.4nm,0.4s						
ARSA	Arzberg	3.83	37	⇑*i*Pn	Pn	03 15 10.3	+1.6
	comp=Z,1.2nm,0.4s						
ARSA	Arzberg	3.83	37	⇑*i*Sn	Sn	03 15 53.2	-1.0
	comp=E,0.9nm,0.2s						
ARSA	Arzberg	3.83	37	⇑Pn	Pn	03 15 10.2	+1.6
ARSA				Sn	Sn	03 15 53.2	-1.0
ARSA	Arzberg	3.83	37	⇑Pn	Pn	03 15 10.2	+1.6
MBDF	Montbardon	3.87	279	*e*Pn	Pn	03 15 10.6	+1.3
MBDF				*e*Sn	Sn	03 15 52.7	-2.6
	4.8nm,0.4s						
MOA	Molln	3.90	22	⇑*i*Pn	Pn	03 15 11.6	+2.0
	comp=Z,2.8nm,0.6s						
MOA	Molln	3.90	22	⇓*i*Sn	Sn	03 15 55.4	-0.5
	comp=E,2.1nm,0.3s						
MOA	Molln	3.90	22	⇑Pn	Pn	03 15 11.6	+2.0
MOA				Sn	Sn	03 15 55.4	-0.5
FRF	La Foret Royal	4.03	262	*e*Pn	Pn	03 15 12.4	+0.9
FRF				*e*Sn	Sn	03 15 58.3	-1.0
	1.6nm,0.3s						
LPG	La Plagne	4.03	290	*e*Pn	Pn	03 15 12.8	+1.3
LPG				*e*Sn	Sn	03 15 58.1	-1.2
	5.2nm,0.4s						
LPL	La Plagne	4.05	290	*e*Pn	Pn	03 15 12.8	+1.0
LPL				*e*Sn	Sn	03 15 58.4	-1.4
	6.0nm,0.4s						
LMR	La Mourre	4.18	259	*e*Pn	Pn	03 15 14.3	+0.7
LMR				*e*Sn	Sn	03 16 00.9	-2.2
	0.8nm,0.3s						
ORIF	Oris-en-Rattie	4.52	281	*e*Pn	Pn	03 15 20.1	+1.6
ORIF				*e*Sn	Sn	03 16 09.9	-1.9
	5.0nm,0.4s						
CABF	La Chapelle	4.87	301	*e*Pn	Pn	03 15 24.4	+0.9
CABF				*e*Sn	Sn	03 16 17.9	-2.7
KHC	Kasperske Hory	4.99	11	*e*PN	Pn	03 15 24.3	-0.8
KHC				*e*SN	Sn	03 16 21.1	-2.4
HINF	Hinteralfeld	5.13	316	*e*Pn	Pn	03 15 26.9	-0.2
HINF				*e*Sn	Sn	03 16 24.3	-2.8
	4.9nm,0.4s						
CDF	Champ du Feu	5.36	323	*e*Pn	Pn	03 15 31.0	+0.7
CDF				*e*Sn	Sn	03 16 29.8	-3.0
	0.7nm,0.2s						
VIVF	Saint-Julien-l	5.37	279	*e*Pn	Pn	03 15 31.0	+0.5
VIVF				*e*Sn	Sn	03 16 29.9	-3.3
	0.9nm,0.3s						
HAU	Haudompre	5.51	315	*e*Pn	Pn	03 15 31.8	-0.6
HAU				*e*Sn	Sn	03 16 33.2	-3.4
	7.7nm,0.4s						
LASF	Ste Croix	5.96	271	*e*Pn	Pn	03 15 38.8	0.0
SMF	Signal de Mont	6.31	295	*e*Pn	Pn	03 15 43.8	0.0
SMF				*e*Sn	Sn	03 16 53.1	-3.6
	2.0nm,0.3s						
LOR	Lormes	6.53	300	*e*Pn	Pn	03 15 47.5	+0.6
LOR				*e*Sn	Sn	03 16 58.1	-4.2
	3.0nm,0.3s						
SSF	Saint Saulge	6.67	298	*e*Pn	Pn	03 15 48.6	-0.3
SSF				*e*Sn	Sn	03 17 00.9	-4.9
	1.6nm,0.4s						
AVF	Avril sur Loir	6.68	295	*e*Pn	Pn	03 15 49.2	+0.3
BGF	Bois d'Agland	6.94	293	*e*Pn	Pn	03 15 51.9	-0.7
BGF				*e*Sn	Sn	03 17 07.4	-5.0
	4.2nm,0.3s						
MTLF	Montolieu	7.24	266	*e*Pn	Pn	03 15 56.6	-0.2

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*IDC **11** 03:32:32.3±1.4, 4.59N×127.38E, mb3.8/6, mb1 3.9/6, mb1mx3.8/18, mbtmp3.8/6, Error ellipse: s-maj=143.9km s-min=19.5km az=67.0*

*NEIC **11** 03:32:36.0±1.1, 4.54N×127.26E, h25^{km}, mb4.2/2, Error ellipse: s-maj=149.0km s-min=11.9km az=68.0*

ISC 11 03:32:35.2±1.3, **4.6N**±0.5×**12 7E**± , **h33**^{km}, **n9**, σ**0^{s}83**/9, **mb3.9**/8, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	Tennant Creek	25.32	164	*e*P	P	03 38 00.8	0.0
	2.3nm,0.5s,mb4.0						
WRA	Warramunga Arr	25.32	164	P	P	03 38 01.0	+0.1
	1.3nm,0.5s,mb3.7,baz=344,slow=9.8,SNR=8.0						
STKA	Stephens Creek	38.72	160	P	P	03 39 57.8	-0.2
	3.1nm,0.8s,mb4.1,baz=320,slow=9.4,SNR=5.9						
SONM	Songino Array	46.69	341	P	P	03 41 02.8	+0.1
	0.4nm,0.5s,mb3.6,baz=164,slow=8.0,SNR=4.3						
MKAR	Makanchi Array	57.21	325	P	P	03 42 20.0	-1.6
	0.7nm,0.5s,mb3.9,baz=112,slow=8.3,SNR=6.3						
MKAR	Makanchi Array	57.21	325	P	P	03 42 20.0	-1.6
KURK	Kurchatov	61.36	327	*e*P	P	03 42 49.6	-0.6
	2.3nm,0.7s,mb4.4						
BVAR	Borovoye Array	66.95	327	P	P	03 43 27.4	+0.9
	1.1nm,0.7s,mb4.0,baz=132,slow=8.8,SNR=5.6						
AKTO	Aktyubinsk	73.38	321	P	P	03 44 07.1	+1.3
	0.7nm,0.6s,mb3.8,baz=96,slow=10,SNR=3.0						

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*IDC **11** 03:38:55.9±5.5, 4.54N×95.68E, mb3.9/4, mb1 4.1/4, mb1mx3.7/19, mbtmp3.9/4, Error ellipse: s-maj=274.5km s-min=25.7km az=55.0*

*NEIC **11** 03:38:57.9±0.8, 4.04N×95.05E, h30^{km}, mb4.3/3, Error ellipse: s-maj=24.5km s-min=10.1km az=224.0*

ISC 11 03:38:56.0±1.1, **4.1N**±0.2×**95.1E**±0.2, **h30**^{km}, **n9**, σ**0^{s}45**/9, **mb4.1**/7, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.70	78	*e*Pn	Pn	03 40 20.9	0.0
MKAR	Makanchi Array	43.97	347	P	P	03 47 02.9	+0.6
	1.2nm,0.8s,mb3.7,baz=166,slow=7.5,SNR=9.5						
WRA	Warramunga Arr	45.38	123	P	P	03 47 14.3	+0.3
	3.6nm,0.8s,mb4.3,baz=303,slow=9.1,SNR=32						
WRAB	Tennant Creek	45.38	123	*e*P	P	03 47 14.2	+0.2
	6.4nm,0.8s,mb4.5						
WB2	Warramunga Arr	45.39	123	*e*P	P	03 47 13.5	-0.5
KURK	Kurchatov	48.49	346	*e*P	P	03 47 38.5	+0.5
	1.7nm,0.6s,mb4.2						
ZAL	Zalesovo	50.41	352	P	P	03 47 51.9	-0.8
	0.7nm,0.4s,mb4.1,baz=75,slow=9.4,SNR=3.2						
BVAR	Borovoye Array	52.85	342	P	P	03 48 10.8	-0.4
	0.6nm,0.7s,mb3.6,baz=170,slow=8.8,SNR=3.4						
CHKZ	Chkalovo	53.34	342	*e*P	P	03 48 14.8	+0.1
	1.6nm,0.5s,mb4.2						

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*IDC **11** 03:40:34.6±1.4, 29.82N×140.72E, h105^{km}±24^{km}, mb3.5/6, mb1 3.5/9, mb1mx3.4/23, mbtmp3.8/9, Error ellipse: s-maj=83.7km s-min=11.7km az=70.0*

*NEIC **11** 03:40:35.1±2.1, 29.81N×140.61E, h107^{km}±21^{km}, mb4.1/1, Error ellipse: s-maj=75.6km s-min=19.6km az=73.0*

*JMA **11** 03:40:36.1±0.4, 30.21N×141.25E, h124^{km}, M3.6*

ISC 11 03:40:33.1±0.6, **30.01N**±0.05×**141.0E**±0.2, **h113**^{km}±9^{km}, **n24**, σ**1^{s}21**/37, **mb3.8**/7, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.08	161	P	P	03 41 21.4	+0.1
	11nm,0.3s,baz=307,slow=22,SNR=16						
CBIJ				S	S	03 41 56.1	-1.5
	95nm,0.3s,baz=290,slow=22,SNR=20						
JHJ2	Mitsune	3.26	342	P	P	03 41 24.9	+1.2
JHJ2				S	S	03 42 01.7	-0.3
JHJ	Hachijo jima 2	3.28	341	P	P	03 41 25.1	+1.2
	10nm,0.3s,baz=73,slow=19,SNR=11						
JHJ				S	S	03 42 00.8	-1.7
	37nm,0.3s,baz=89,slow=21,SNR=5.5						
BSO1	Boso 1	4.63	359	P	P	03 41 42.7	+0.5
BSO1				S	S	03 42 34.8	-0.4
BSO2	Boso 2	4.73	357	S	S	03 42 38.1	+0.4
BSO3	Boso 3	4.79	355	P	P	03 41 44.6	+0.1
BSO3				S	S	03 42 37.7	-1.6
JIM2	Oshima 3	4.88	344	P	P	03 41 47.1	+1.4
BSO4	Boso 4	5.00	353	P	P	03 41 48.0	+0.8
BSO4				S	S	03 42 44.0	-0.2
JOD2	Odawara 2	5.49	343	P	P	03 41 55.5	+1.7
JOD2				S	S	03 42 55.5	-0.7
JYN	Shimob	5.86	340	P	P	03 42 03.3	+4.5
JYN				S	S	03 43 09.4	+4.1
JRY	Ryogami san	6.25	344	P	P	03 42 06.0	+1.8
JRY				S	S	03 43 12.0	-2.8
JAG	Ashikaga	6.53	349	P	P	03 42 06.6	-1.5
JAG				S	S	03 43 16.5	-5.1
MJAR	Matsushiro Arr	6.93	341	P	P	03 42 15.3	+1.8
	1.1nm,0.3s,baz=160,slow=16,SNR=5.1						
MJAR				S	S	03 43 28.4	-3.0
	0.9nm,0.3s,baz=170,slow=22,SNR=4.8						
MAJO	Matsushiro	6.93	341	Pn	P	03 42 14.8	+1.3
JMM	Marumori	7.83	359	P	P	03 42 25.4	-0.4
JMM				S	S	03 43 45.9	-7.5
JMK	Ichinoseki	8.92	1	P	P	03 42 40.5	+0.1
JMK				S	S	03 44 12.2	-7.5
SONM	Songino Array	31.95	314	P	P	03 46 50.1	-0.1
	0.5nm,0.7s,mb3.4,baz=120,slow=8.4,SNR=3.5						
MKAR	Makanchi Array	47.87	308	P	P	03 48 59.8	-1.6
	0.3nm,0.6s,mb3.3,baz=86,slow=10,SNR=3.5						
WRA	Warramunga Arr	50.08	188	P	P	03 49 17.3	-1.4
	0.3nm,0.4s,mb3.6,baz=2.6,slow=7.7,SNR=11						
CHKZ	Chkalovo	55.05	317	*e*P	P	03 49 54.4	-0.7
	1.3nm,0.7s,mb4.1						
BVAR	Borovoye Array	55.23	316	P	P	03 49 56.5	0.0
	1.9nm,0.6s,mb4.3,baz=92,slow=7.9,SNR=11						
FINES	FINESS Array B	74.90	333	P	P	03 52 03.2	+0.5
	3.9nm,1.0s,mb4.1,baz=63,slow=6.2,SNR=8.5						
FINES	FINESS Array B	74.90	333	P	P	03 52 03.2	+0.5
BRTR	Keskin Array B	83.30	312	P	P	03 52 50.4	+1.9
	1.5nm,0.8s,mb3.9,baz=108,slow=4.0,SNR=11						

MAN 11 04:15:37.1, 8.58N×124.57E, h32^{km}, mb4.1, ML2.9, MS2.6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGP	Cagayan de Oro	0.18	136	⇑*i*P	Pn	04 15 44.6	+1.3
CGP				*e*S	Sn	04 15 49.5	+2.3
BUKP	Musuan	0.85	145	*e*P	Pn	04 15 53.4	+0.5
BUKP				*e*S	Sn	04 16 06.6	+2.3
DCPH	Dipolog City	1.21	270	⇑*e*P	Pn	04 15 57.4	-0.6
PAGZ	Pagadian	1.39	238	*e*P	Pn	04 16 00.2	-0.4
PAGZ				*e*S	Sn	04 16 16.5	-1.4

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*MOS **11** 04:21:39.9±0.8, 48.30S×10.19W, h10^{km}, mb5.1/9, Error ellipse: s-maj=22.5km s-min=15.8km az=98.4*

*IDC **11** 04:21:39.2±0.5, 48.30S×10.16W, mb4.4/14, mb1 4.5/14, mb1mx4.4/19, mbtmp4.4/14, MS4.4/13, Ms1 4.4/13, ms1mx4.4/13, Error ellipse: s-maj=20.0km s-min=13.0km*

az=163.0

BJI ***11*** *04:21:40.8, 48.30S×10.10W, h10^{km}, mB5.0, Ms5.3, Msz4.8*

NEIC ***11*** *04:21:40.8±0.2, 48.29S×10.15W, h10^{km}, mb4.8/17, Error ellipse: s-maj=6.7km s-min=6.6km az=57.0*

ISC 11 04:21:39.5±0.4**, 48.30S**±0.08×**10.16W**±0.10**, h10^{km}, n90,** σ**0^{s}.75**/57**, mb4.6**/26**, MS4.4**/15**, 4C, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**22.44**	**178**	*e*	**P**	**04 26 46.1**	**+6.5**
VNA1	**Neumayer--Stat**	**22.44**	**178**	*e*	**P**	**04 26 50.2**	**+11**
VNA1	**Neumayer--Stat**	**22.44**	**178**	⇑*i*P	**P**	**04 26 40.6**	**+1.0**
VNA1				*e*		04 26 46.1	
VNA1				*e*		04 26 50.2	
VNA2	**Neumayer--Watz**	**22.74**	**178**	*e*	**P**	**04 26 48.8**	**+6.5**
VNA2	**Neumayer--Watz**	**22.74**	**178**	*e*	**P**	**04 26 52.9**	**+11**
VNA2	**Neumayer--Watz**	**22.74**	**178**	⇑*i*P	**P**	**04 26 43.0**	**+0.7**
VNA2				*e*		04 26 48.8	
VNA2				*e*		04 26 52.9	
VNA3	**Neumayer Olymp**	**23.02**	**180**	*e*	**P**	**04 26 51.8**	**+6.7**
VNA3	**Neumayer Olymp**	**23.02**	**180**	*e*	**P**	**04 26 55.1**	**+10**
VNA3	**Neumayer Olymp**	**23.02**	**180**	⇑*i*P	**P**	**04 26 45.6**	**+0.5**
VNA3				*e*		04 26 51.8	
VNA3				*e*		04 26 55.1	
SNAA	**Sanae**	**23.69**	**174**	*e*	**P**	**04 26 59.0**	**+7.3**
SNAA	**Sanae**	**23.69**	**174**	*e*	**P**	**04 27 03.3**	**+12**
SNAA	**Sanae**	**23.69**	**174**	P	**P**	**04 26 52.5**	**+0.9**
	4.3nm,0.9s,mb3.9,baz=348,slow=9.7,SNR=34						
SNAA				LR	LR	04 34 02.9	
	comp=Z,183nm,18.7s,MS3.6,baz=25,slow=31						
SNAA	**Sanae**	**23.69**	**174**	⇑*i*P	**P**	**04 26 52.2**	**+0.5**
SNAA				*e*		04 26 59.0	
SNAA				*e*		04 27 03.3	
NVL	**N'lazarevskaya**	**24.84**	**163**	*e*P	**P**	**04 27 08.7**	**+5.9**
NVL				*e**PP		04 27 15.9	
NVL				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.3						
SUR	**Sutherland**	**28.22**	**67**	P	**P**	**04 27 38.0**	**+3.6**
	comp=Z,20nm,0.9s,mb4.8,baz=220,slow=4.7,SNR=5.5						
SUR				LR	LR	04 36 11.6	
	comp=Z,1μm,19.1s,MS4.5,baz=193,slow=31						
BOSA	**Boshof**	**33.58**	**67**	P	**P**	**04 28 21.2**	**-0.6**
	comp=Z,18nm,1.0s,mb5.0,baz=229,slow=8.6,SNR=9.3						
BOSA				LR	LR	04 38 55.7	
	comp=Z,896nm,20.8s,MS4.5,baz=224,slow=31						
BOSA	**Boshof**	**33.58**	**67**	*e*P	**P**	**04 28 21.8**	**0.0**
	comp=Z,23nm,1.1s,mb5.0						
BOSA	**Boshof**	**33.58**	**67**	*e*P	**P**	**04 28 21.8**	**0.0**
BOSA				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
USHA	**Ushuaia**	**35.87**	**237**	P	**P**	**04 28 40.3**	**-0.8**
	comp=Z,6.7nm,1.1s,mb4.5,baz=50,slow=7.9,SNR=2.5						
USHA				LR	LR	04 38 39.3	
	comp=Z,183nm,20.9s,MS3.8,baz=82,slow=28						
LBTB	**Lobatse**	**36.42**	**63**	P	**P**	**04 28 45.9**	**-0.2**
	comp=Z,8.9nm,0.9s,mb4.7,baz=239,slow=9.6,SNR=12						
LBTB	**Lobatse**	**36.42**	**63**	*e*P	**P**	**04 28 46.0**	**-0.1**
	comp=Z,14nm,1.0s,mb4.8						
TSUM	**Tsumeb**	**36.69**	**47**	P	**P**	**04 28 48.4**	**0.0**
	comp=Z,4.5nm,0.7s,mb4.4,baz=208,slow=9.4,SNR=12						
TSUM	**Tsumeb**	**36.69**	**47**	*e*P	**P**	**04 28 48.9**	**+0.5**
	comp=Z,7.0nm,0.8s,mb4.5						
TRQA	**Tornquist**	**38.48**	**266**	*e*P	**P**	**04 29 03.1**	**-0.2**
	comp=Z,15nm,1.0s,mb4.7						
MAW	**Mawson**	**40.34**	**146**	*e*P	**P**	**04 29 18.8**	**+0.4**
	comp=Z,9.9nm,1.0s,mb4.5						
MAW	**Mawson**	**40.34**	**146**	P	**P**	**04 29 18.2**	**-0.1**
	comp=Z,11nm,0.9s,mb4.6,baz=260,slow=9.2,SNR=18						
MAW				LR	LR	04 42 46.2	
	comp=Z,414nm,21.3s,MS4.2,baz=253,slow=31						
MAW	**Mawson**	**40.34**	**146**	*e*P	**P**	**04 29 18.8**	**+0.4**
MAW				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MATP	**Matopo**	**41.65**	**62**	P	**P**	**04 29 28.8**	**-0.8**
	comp=Z,4.4nm,0.7s,mb4.2,baz=220,slow=7.3,SNR=16						
MATP	**Matopo**	**41.65**	**62**	P	**P**	**04 29 28.8**	**-0.8**
QSPA	**South Pole Qui**	**41.96**	**180**	*e*P	**P**	**04 29 30.6**	**-0.8**
	comp=Z,18nm,1.1s,mb4.6						
CPUP	**Villa Florida**	**42.62**	**284**	*e*P	**P**	**04 29 37.1**	**-0.5**
	comp=Z,14nm,0.6s,mb4.9						
CPUP	**Villa Florida**	**42.62**	**284**	*e*P	**P**	**04 29 37.1**	**-0.4**
CPUP				pmax	pmax		
	comp=Z,14nm,0.6s						
PLCA	**Paso Flores**	**42.73**	**257**	P	**P**	**04 29 38.9**	**+0.7**
	comp=Z,10nm,1.1s,mb4.5,baz=126,slow=6.6,SNR=7.0						
PLCA				LR	LR	04 44 45.6	
	comp=Z,561nm,20.7s,MS4.4,baz=123,slow=32						
PLCA	**Paso Flores**	**42.73**	**257**	*e*P	**P**	**04 29 38.7**	**+0.5**
	comp=Z,18nm,1.2s,mb4.7						
PLCA	**Paso Flores**	**42.73**	**257**	*e*P	**P**	**04 29 38.7**	**+0.5**
PLCA				pmax	pmax		
	comp=Z,18nm,1.2s						
BAO	**Brasilia Array**	**44.97**	**303**	P	**P**	**04 29 57.5**	**+0.9**
BDFB	**Brasilia**	**44.98**	**303**	P	**P**	**04 29 57.7**	**+1.0**
	comp=Z,18nm,0.8s,mb5.0,baz=132,slow=6.2,SNR=27						
BDFB				LR	LR	04 45 34.3	
	comp=Z,1μm,18.7s,MS4.8,baz=330,slow=32						
LSZ	**Lusaka**	**45.55**	**57**	P	**P**	**04 30 01.9**	**+0.6**
	comp=Z,3.1nm,0.6s,mb4.4,baz=214,slow=9.1,SNR=9.0						
LSZ	**Lusaka**	**45.55**	**57**	*e*P	**P**	**04 30 02.4**	**+1.1**
	comp=Z,16nm,1.4s,mb4.8						
LSZ	**Lusaka**	**45.55**	**57**	*e*P	**P**	**04 30 02.4**	**+1.2**
LSZ				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.8						
CFAA	**Coronel Fontan**	**46.41**	**269**	P	**P**	**04 30 07.7**	**-0.2**
	comp=Z,0.6nm,0.4s,mb3.9,baz=136,slow=11,SNR=12						
SBA	**Scott Base**	**54.11**	**179**	*e*P	**P**	**04 31 06.2**	**+0.2**
	comp=Z,14nm,1.0s,mb4.9						
SBA	**Scott Base**	**54.11**	**179**	*e*P	**P**	**04 31 06.2**	**+0.2**
SBA				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
VNDA	**Vanda**	**54.36**	**178**	*e*P	**P**	**04 31 07.0**	**-0.8**
	comp=Z,13nm,1.3s,mb4.7						
VNDA	**Vanda**	**54.36**	**178**	*e*P	**P**	**04 31 07.0**	**-0.8**
VNDA				pmax	pmax		
	comp=Z,13nm,1.3s						
DBIC	**Dimbokro**	**54.93**	**6**	P	**P**	**04 31 11.6**	**-1.4**
	comp=Z,6.3nm,1.0s,mb4.6,baz=176,slow=8.3,SNR=3.7						
DBIC				LR	LR	04 49 17.0	
	comp=Z,175nm,19.8s,MS4.1,baz=139,slow=30						
LPAZ	**La Paz**	**56.80**	**283**	P	**P**	**04 31 25.7**	**-0.6**
	comp=Z,2.3nm,0.8s,mb4.2,baz=112,slow=3.5,SNR=12						
LPAZ				LR	LR	04 54 16.0	
	comp=Z,358nm,19.9s,MS4.5,baz=117,slow=34						
LPAZ	**La Paz**	**56.80**	**283**	*e*P	**P**	**04 31 25.5**	**-0.8**
	comp=Z,14nm,1.4s,mb4.8						
LPAZ	**La Paz**	**56.80**	**283**	*e*P	**P**	**04 31 25.5**	**-0.8**
LPAZ				pmax	pmax		
	comp=Z,14nm,1.4s						
ARE	**Arequipa**	**58.87**	**280**	*e*P	**P**	**04 31 42.0**	**+1.2**
SAML	**Samuel**	**59.21**	**293**	*e*P	**P**	**04 31 42.2**	**-1.1**
	comp=Z,30nm,1.3s,mb5.2						
KMBO	**Kilima Mbogo**	**62.21**	**56**	LR	LR	04 57 08.1	
	comp=Z,1μm,19.3s,MS5.0,baz=273,slow=34						
NNA	**Nana**	**65.65**	**280**	*e*P	**P**	**04 32 26.6**	**+0.4**
	comp=Z,6.6nm,0.8s,mb4.7						
ROSC	**El Rosal**	**76.86**	**293**	P	**P**	**04 33 33.3**	**-0.3**
	comp=Z,2.6nm,0.7s,mb4.3,baz=141,slow=5.8,SNR=5.9						
ROSC				LR	LR	05 05 21.5	
	comp=Z,328nm,18.9s,MS4.7,baz=180,slow=34						
SDV	**Santo Domingo**	**77.82**	**298**	*e*P	**P**	**04 33 39.1**	**+0.3**
	comp=Z,12nm,1.3s,mb4.7						
SJG	**San Juan**	**82.81**	**307**	P	**P**	**04 34 04.8**	**-0.4**
	comp=Z,25nm,1.0s,mb5.2						
SJG	**San Juan**	**82.81**	**307**	P	**P**	**04 34 04.8**	**-0.5**
SJG				pmax	pmax		
	comp=Z,25nm,1.0s						
JTS	**JuntasAbangare**	**87.69**	**288**	*e*P	**P**	**04 34 30.4**	**+0.7**
	comp=Z,24nm,1.1s,mb5.3						
RKT	**Rikitea**	**93.46**	**229**	*e*LR	LR	05 05 02.3	
	comp=Z,281nm,28.0s						
STKA	**Stephens Creek**	**96.27**	**156**	LR	LR	05 11 37.4	
	comp=Z,157nm,20.4s,MS4.5,baz=204,slow=31						
GERES	**GERESS Array B**	**98.94**	**16**	LR	LR	05 14 58.6	
	comp=Z,146nm,19.3s,MS4.5,baz=332,slow=32						
TBI	**Tubuai**	**99.90**	**217**	*e*LR	LR	05 08 02.5	
	comp=Z,241nm,27.8s						
PPT	**Papeete**	**105.09**	**220**	*e*SS	SS	04 55 06.2	+1.8
PPT				*e*LR	LR	05 10 26.8	
	comp=Z,609nm,30.2s						
TXAR	**Lajitas Array**	**113.48**	**288**	PKiKP		04 40 18.9	
	comp=Z,0.2nm,0.7s,baz=90,slow=5.0,SNR=3.6						
TXAR	**Lajitas Array**	**113.48**	**288**	PKPdf	PKPdf	04 40 18.9	-1.8
ARCES	**ARCESS Array B**	**120.40**	**14**	PKP	PKPdf	04 40 29.8	-3.4
	comp=Z,2.3nm,0.7s,baz=45,slow=1.7,SNR=12						
CHKZ	**Chkalovo**	**122.32**	**44**	*e*PKPdf	PKPdf	04 40 34.6	-2.6
KMI	**Kunming**	**123.36**	**89**	PKIKP	PKPdf	04 40 37.8	-2.1
KMI						04 40 41.9	
KMI				SS	SS	04 59 11.0	+5.7
KMI				MLR	MLR		
	comp=Z,180nm,32.9s,MS4.5						
MKAR	**Makanchi Array**	**124.09**	**56**	PKP	PKPdf	04 40 38.2	-2.7
	comp=Z,1.1nm,0.9s,baz=243,slow=2.7,SNR=8.0						
MKAR	**Makanchi Array**	**124.09**	**56**	PKP	PKPdf	04 40 38.2	-2.7
WMQ	**Urumqi**	**125.43**	**62**	*e*PKP	PKPdf	04 40 44.5	+1.1
WMQ				LR	LR		
	comp=N,280nm,24.6s,MS5.0						
WMQ				LR	LR		
	comp=E,260nm,19.7s,MS5.0						
WMQ				LR	LR		
	comp=Z,230nm,21.2s,MS4.8						
BW06	**Boulder Array**	**125.72**	**297**	*e*PKPdf	PKPdf	04 40 41.1	-2.9
PDAR	**Pinedale Array**	**125.72**	**297**	PKP	PKPdf	04 40 41.1	-2.9
	comp=Z,1.3nm,0.9s,baz=108,slow=4.7,SNR=7.8						
DUG	**Dugway**	**126.20**	**292**	*e*PKPdf	PKPdf	04 40 43.0	-2.0
HWUT	**Hardware Ranch**	**126.26**	**294**	*e*PKPdf	PKPdf	04 40 43.1	-1.9
LOHW	**Long Hollow**	**126.84**	**297**	*e*PKPdf	PKPdf	04 40 44.3	-1.7
TPAW	**Teton Pass**	**126.97**	**297**	*e*PKPdf	PKPdf	04 40 44.9	-1.4
MOOW	**Moose Ponds**	**127.00**	**297**	*e*PKPdf	PKPdf	04 40 44.3	-2.0
ELK	**Elko**	**128.02**	**291**	*e*PKPdf	PKPdf	04 40 47.7	-0.8
NVAR	**Mina Array Bea**	**128.61**	**287**	PKP	PKPdf	04 40 47.0	-2.7
	comp=Z,1.1nm,0.8s,baz=122,slow=4.8,SNR=10						
HRY	**Holter Researc**	**129.28**	**299**	*e*PKPdf	PKPdf	04 40 47.5	-3.2
ZAL	**Zalesovo**	**129.38**	**50**	PKP	PKPdf	04 40 47.9	-2.9
	comp=Z,1.2nm,0.3s,baz=14,slow=3.9,SNR=4.5						
LZH	**Lanzhou**	**131.04**	**79**	*e*P	Pdif	04 37 35.0	-7.7
LZH				pP		04 37 41.3	
LZH				sP		04 37 43.7	
SONM	**Songino Array**	**138.70**	**66**	PKP	PKPdf	04 41 06.5	-1.7
	comp=Z,1.1nm,0.7s,baz=187,slow=1.4,SNR=6.2						
INK	**Inuvik**	**145.85**	**326**	*e*PKPbc	PKPbc	04 41 18.6	+0.7
BOD	**Bodaibo**	**146.05**	**52**	*e*PKP2	PKPab	04 41 18.8	-2.3
BOD				pmax	pmax		
	comp=Z,14nm,1.3s						
DAWY	**Dawson**	**148.68**	**319**	*e*PKPbc	PKPdf	04 41 25.9	+1.1
TIXI	**Tiksi**	**149.97**	**25**	*e*PKHKP		04 41 27.0	
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ILAR	**Eielson Array**	**151.75**	**322**	PKP	PKPdf	04 41 27.6	-1.9
	comp=Z,1.5nm,0.9s,baz=333,slow=3.2,SNR=6.2						
ILAR				PKPbc	PKPdf	04 41 34.0	+4.5
	comp=Z,7.5nm,0.9s,baz=11,slow=0.8,SNR=28						
COLA	**College**	**152.12**	**322**	*e*PKPbc	PKPdf	04 41 33.7	+3.6

IDC ***11*** *04:42:19.2±1.7, 3.60S×144.34E, mb4.0/4, mb1 4.1/5, mb1mx3.9/13, mbtmp3.9/5, ML3.4/1, Error ellipse: s-maj=66.6km s-min=27.3km az=114.0*

NEIC ***11*** *04:42:20.5±1.1, 3.61S×144.38E, h10^{km}, mb3.8/2, Error ellipse: s-maj=44.2km s-min=11.6km az=108.0*

ISC 11 04:42:21.9±1.6**, 3.8S**±0.2×**144.5E**±0.4**, h33^{km}, n9,** σ**0^{s}.30**/8**, mb3.9**/5**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**14.88**	**233**	*e*P	Px	04 46 11.4	
	5.8nm,1.0s						
WRAB	**Tennant Creek**	**18.88**	**211**	P	**P**	**04 46 42.2**	**0.0**
	2.9nm,0.8s						
WB2	**Warramunga Arr**	**18.89**	**211**	*e*P	**P**	**04 46 42.7**	**+0.4**
WRA	**Warramunga Arr**	**18.90**	**211**	P	**P**	**04 46 41.9**	**-0.5**
	0.1nm,0.3s,baz=32,slow=12,SNR=12						
WRA				PcP	PcP	04 51 09.1	+1.4
	0.0nm,0.3s,baz=20,slow=1.9,SNR=5.4						
FITZ	**Fitzroy Crossi**	**23.33**	**231**	P	**P**	**04 47 28.3**	**+0.1**
	3.6nm,0.9s,mb3.8,baz=63,slow=11,SNR=3.4						
MKAR	**Makanchi Array**	**74.19**	**321**	P	**P**	**04 53 56.8**	**-0.3**
	0.6nm,0.9s,mb3.5,baz=111,slow=6.3,SNR=5.2						
BVAR	**Borovoye Array**	**83.49**	**324**	P	**P**	**04 54 48.0**	**+0.4**
	1.6nm,0.8s,mb4.1,baz=90,slow=5.9,SNR=7.5						
CHKZ	**Chkalovo**	**83.53**	**325**	*e*P	**P**	**04 54 47.6**	**-0.2**
	0.3nm,0.3s,mb3.9						
ILAR	**Eielson Array**	**84.42**	**24**	P	**P**	**04 54 52.0**	**0.0**
	0.9nm,0.9s,mb3.9,baz=245,slow=5.7,SNR=4.8						

KNET ***11*** *04:51:44.7±0.4, 41.16N×72.79E, h6^{km}±2^{km}, ml2.5, Error ellipse: s-maj=4.3km s-min=2.4km az=122.0*

NNC ***11*** *04:51:49.4±6.5, 41.39N×72.31E, h32^{km}±27^{km}, mpv2.6, Error ellipse: s-maj=66.3km s-min=23.4km az=3.0*

ISC 11 04:51:44.1±1.7**, 41.1N**±0.1×**72.5E**±0.1**, h10^{km}, n8,** σ**0^{s}.97**/15**, 11C-5D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**1.39**	**40**	⇑P	**Pn**	**04 52 07.8**	**-1.8**
	14nm,0.1s,SNR=49						
AML				⇑S	**Sb**	**04 52 25.3**	**-2.2**
	54nm,0.2s						
EKS2	**Erkin-Say**	**1.86**	**31**	⇑P	**Pn**	**04 52 15.9**	**-0.4**
	2.2nm,0.1s,SNR=8.2						
EKS2				⇑S	**Sn**	**04 52 40.7**	**+0.7**
	12nm,0.2s						
UCH	**Uchtor**	**1.91**	**52**	⇓P	**Pn**	**04 52 16.8**	**-0.2**
	9.0nm,0.1s,SNR=14						
UCH				⇓S	**Sn**	**04 52 41.2**	**-0.1**
	31nm,0.2s						
AAK	**Ala-Archa**	**2.16**	**43**	⇑P	**Pn**	**04 52 21.0**	**+0.3**
	4.2nm,0.2s,SNR=10						
AAK				⇑S	**Sn**	**04 52 48.6**	**+0.8**
	24nm,0.2s						
AAK	**Ala-Archa**	**2.16**	**43**	⇑P	**Pn**	**04 52 21.4**	**+0.7**
	2.2nm,0.4s						
AAK				⇑S	**Sn**	**04 52 48.1**	**+0.3**
	20nm,0.7s						
KZA	**Kyzart**	**2.30**	**63**	⇑P	**Pn**	**04 52 22.6**	**-0.1**
	34nm,0.3s						
KBK	**Karagaybulak**	**2.42**	**48**	⇓P	**Pn**	**04 52 25.0**	**+0.5**
	5.5nm,0.2s,SNR=7.4						
KBK				⇓S	**Sn**	**04 52 56.0**	**+1.6**
	43nm,0.3s						
KK31	**Karatay Array**	**2.51**	**325**	⇓Pn	**Pn**	**04 52 26.0**	**+0.4**
	0.9nm,0.2s,baz=124,slow=14						
KK31				⇑Pg	**Pg**	**04 52 29.3**	**-5.0**
	baz=137,slow=18						
KK31				⇑Lg		04 52 59.8	
	4.3nm,0.2s,baz=124,slow=26						

IGQ 11 05:00:12.2, 1.98S×79.93W, h16^{km}±4^{km}, mb4.0, 4C-1D, Error ellipse: s-maj=6.0km s-min=4.6km az=59.7, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGUA	**Igualata**	**1.38**	**69**	⇑P	Pn	05 00 38.2	+1.3
IGUA				S	Sb	05 00 57.3	+3.1
QIL1	**Quilotoa**	**1.50**	**41**	⇑P	Pn	05 00 39.1	+0.5
QIL1				S	Sb	05 00 59.5	+1.7
ARRY	**Arrayan**	**1.54**	**72**	⇓P	Pn	05 00 39.9	+0.6
PISA	**Pisayambo**	**1.79**	**59**	P	Pn	05 00 45.2	+2.5
PISA				S	Sn	05 01 10.7	+5.4
TAMB	**Tambo**	**2.01**	**51**	P	Pn	05 00 48.7	+2.7
VC1	**Cotopaxi 1**	**2.02**	**49**	P	Pn	05 00 48.9	+2.8
JUA2	**San Juan 2**	**2.19**	**37**	P	Pn	05 00 51.0	+2.4
TERV	**Terraza Guagua**	**2.22**	**36**	P	Pn	05 00 51.3	+2.3
TERV				S	Sn	05 01 21.4	+5.0
GGP	**Refugio Guagua**	**2.23**	**37**	⇑P	Pn	05 00 50.9	+1.8
PINO	**Pino**	**2.24**	**36**	P	Pn	05 00 51.0	+1.8
YANA	**Yana**	**2.29**	**36**	P	Pn	05 00 51.8	+1.9
YANA				S	Sn	05 01 21.1	+3.1
ANTI	**Antisana**	**2.33**	**49**	⇑P	Pn	05 00 53.6	+3.1
CAYR	**Refugio Cayamb**	**2.76**	**44**	P	Pn	05 01 00.2	+3.6
ANGU	**Angureal**	**2.78**	**44**	P	Pn	05 01 00.2	+3.3
ANGU				S	Sn	05 01 36.9	+6.5
COTA	**Cotacachi**	**2.79**	**35**	P	Pn	05 00 59.8	+2.7
CAYA	**Cayambe**	**2.81**	**44**	P	Pn	05 01 02.0	+4.7

MOS ***11*** *05:03:10.5±0.9, 57.13N×120.26E, h22^{km}, mb4.3/1, Error ellipse: s-maj=55.9km s-min=37.1km az=148.5*

BYKL 11 05:03:03.6±0.3**, 57.41N×120.81E, h2^{km}**±19^{km}**, 1C-2D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.48**	**251**	*e*Pg	Pg	05 03 30.9	-2.2
CRS				*e*		05 03 33.3	
CRS				*i* Sg	Sg	05 03 49.5	-3.2
CRS				max			
	125nm,1.0s						
CRS				Smax			
	358nm,0.5s						
CRS	**Chara**	**1.48**	**251**	*e*P	Pn	05 03 30.8	-0.5
NRGR	**Nerungri**	**2.27**	**108**	*e*P	Pn	05 03 44.3	+1.7
NRGR				S	Sn	05 04 12.9	+1.4
CLNS	**Chul'man**	**2.30**	**103**	*e*Pg	Pg	05 03 44.6	-4.9
CLNS				*e*Sn	Sn	05 04 09.2	-3.1
CLNS				*e*Sg	Sg	05 04 14.8	-5.4
CLNS				Pmax			
	179nm,0.2s						
CLNS				Smax			
	913nm,0.2s						
CLNS	**Chul'man**	**2.30**	**103**	*e*P	Pn	05 03 44.8	+1.7
CLNS				*e*S	Sn	05 04 13.7	+1.4
CLNS				pmax	pmax		
	comp=Z,12nm,0.3s						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,16nm,0.2s						
CLNS				pmax	pmax		
	comp=N,17nm,0.3s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.2s						
CLNS				smax			
	comp=E,21nm,0.2s						
CLNS				smax			
	comp=Z,9.0nm,0.2s						
CLNS				smax			
	comp=N,24nm,0.3s						
CLNS				smax			
	comp=E,167nm,0.3s						
CLNS				smax			
	comp=Z,207nm,0.6s						
CLNS				smax			
	comp=N,121nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,50nm,17.0s						
ALDR	**Aldan**	**2.73**	**62**	*e*Pn	Pn	05 03 46.5	-2.7
ALDR				*e*Pg	Pg	05 03 52.1	-6.0
ALDR				*e*Sn	Sn	05 04 21.0	-2.2
ALDR				*e*Sg	Sg	05 04 27.8	-6.6
ALDR				Pmax			
	comp=Z,127nm,0.2s						
ALDR				Smax			
	comp=Z,2μm,0.2s						
NLYR	**Nelyaty**	**2.94**	**254**	*e*Pn	Pn	05 03 52.0	-0.3
NLYR				*e*Pg	Pg	05 03 56.3	-6.1
NLYR				*e*		05 03 58.7	
NLYR				*e*Sg	Sg	05 04 33.7	-8.0
NLYR				*e*SgSg		05 04 43.9	
NLYR				max			
	comp=Z,170nm,0.4s						
NLYR				Smax			
	comp=Z,347nm,1.3s						
NLYR	**Nelyaty**	**2.94**	**254**	*e*P	Pn	05 03 52.2	-0.1
NLYR				*e*		05 04 30.7	
NLYR				pmax	pmax		
	comp=Z,117nm,0.4s						
NLYR				smax			
	comp=E,342nm,1.3s						
TUP	**Tupik**	**3.03**	**190**	*e*Pn	Pn	05 03 52.7	-0.8
TUP				⇓*i*Pg	Pg	05 03 57.3	-6.8
TUP				⇑*i*		05 04 04.3	
TUP				*e*Sg	Sg	05 04 36.1	-8.4
TUP				*e*SgSg		05 04 45.6	
TUP				Pmax			
	comp=E,99nm,0.4s						
TUP				Smax			
	comp=E,369nm,1.3s						
TUP	**Tupik**	**3.03**	**190**	*e*P	Pn	05 03 52.7	-0.8
TUP				*e*S	Sn	05 04 27.6	-3.3
TUP				pmax	pmax		
	comp=Z,100nm,0.4s						
TUP				smax			
	comp=E,243nm,0.9s						
TNDR	**Tynda**	**3.15**	**134**	*e*Pn	Pn	05 03 55.1	-0.1
TNDR				*e*Sn	Sn	05 04 30.9	-2.9
TNDR				*e*Sg	Sg	05 04 41.9	-6.5
TNDR				max			
	comp=E,309nm,0.2s						
TNDR				Smax			
	comp=E,2μm,0.2s						
BOD	**Bodaibo**	**3.68**	**279**	*e*Pn	Pn	05 04 01.8	-1.0
BOD				*e*Pg	Pg	05 04 10.3	-6.9
BOD				*e*Sn	Sn	05 04 44.5	-2.9
BOD				*e*Sg	Sg	05 04 56.7	-10
BOD				Pmax			
	comp=E,24nm,1.0s						
BOD				Smax			
	comp=E,151nm,1.0s						
SVKR	**Severomuysk**	**4.20**	**255**	*e*Pg	Pg	05 04 20.0	-7.4
SVKR				*e*Sg	Sg	05 05 12.3	-11
SVKR				Pmax			
	comp=E,104nm,0.5s						
SVKR				Smax			
	comp=E,254nm,0.7s						
UKT	**Uakit**	**4.43**	**247**	⇓*i*Pg	Pg	05 04 23.2	-8.8
UKT				*e*Sg	Sg	05 05 20.0	-11
UKT				Pmax			
	comp=E,21nm,1.2s						
UKT				Smax			
	comp=E,76nm,1.0s						
UKT	**Uakit**	**4.43**	**247**	*e*P	Pn	05 04 22.9	+10
UKT				pmax	pmax		
	comp=Z,13nm,0.5s						
YOA	**Uoyan**	**5.16**	**259**	*e*Sg	Sg	05 05 41.2	-14
YOA				Smax			
	comp=Z,574nm,2.8s						
ZEA	**Zeya**	**5.18**	**132**	*e*Pg	Pg	05 04 37.8	-9.3
ZEA				*e*Sg	Sg	05 05 43.2	-13
KMO	**Kumora**	**5.52**	**258**	*e*Pn	Pn	05 04 27.9	-0.9
KMO				*e*Pg	Pg	05 04 43.0	-11
KMO				*e*Sg	Sg	05 05 52.9	-14
KMO				Pmax			
	comp=Z,20nm,0.5s						
KMO				Smax			
	comp=Z,117nm,1.5s						
KMO	**Kumora**	**5.52**	**258**	*e*P	Pn	05 04 27.7	-1.1
KMO				*e*S	Sn	05 05 28.2	-5.5
KMO				pmax	pmax		
	comp=Z,21nm,0.5s						
KMO				smax			
	comp=N,117nm,1.3s						
YLYR	**Ulyunkhan**	**5.96**	**249**	*e*Pn	Pn	05 04 33.8	-1.2
YLYR				*e*Pg	Pg	05 04 52.6	-10
YLYR				*e*		05 05 40.9	
YLYR				*e*Sg	Sg	05 06 08.1	-14
YLYR				Pmax			
	comp=N,2.0nm,0.4s						
YLYR				Smax			
	comp=N,91nm,1.4s						
YLYR	**Ulyunkhan**	**5.96**	**249**	*e*P	Pn	05 04 51.9	+17
YLYR				pmax	pmax		
	comp=Z,16nm,0.5s						
NIZ	**Nizh Angarsk**	**6.44**	**260**	*e*Sg	Sg	05 06 21.2	-17
NIZ				Smax			
	comp=Z,50nm,1.8s						
YAK	**Yakutsk**	**6.45**	**40**	*e*Pg	Pg	05 04 59.8	-13
YAK				*e*Sn	Sn	05 05 49.5	-7.5
YAK				*e*Sg	Sg	05 06 21.9	-16
YAK				Pmax			
	comp=Z,62nm,0.3s						
YAK				Smax			
	comp=Z,543nm,0.5s						
CIT	**Chita**	**6.84**	**221**	*e*Pg	Pg	05 05 07.3	-13
CIT				*e*Sg	Sg	05 06 35.3	-16
CIT				Pmax			
	comp=Z,4.0nm,0.1s						
CIT				Smax			
	comp=Z,203nm,2.2s						
SYVR	**Suvo**	**7.19**	**243**	*e*Pg	Pg	05 05 14.5	-13
SYVR				*e*Sg	Sg	05 06 47.1	-16
SYVR				Smax			
	comp=Z,99nm,1.4s						
OGRR	**Ongureny**	**8.39**	**249**	*e*Sg	Sg	05 07 22.3	-21
OGRR				Smax			
	comp=Z,29nm,1.8s						

KPC	**Khapcheranga**	**9.20**	**217**	*e*Pn	P	05 05 18.0	-2.3
KPC				*e*Sg	Sg	05 07 47.1	-23
KPC				Smax			
	comp=Z,37nm,1.2s						
TRG	**Tyrgan**	**9.51**	**247**	*e*Sg	Sg	05 07 58.5	-21
TRG				Smax			
	comp=Z,17nm,1.3s						

IDC 11 05:15:39.9±14.0**, 17.50N×144.28E, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/17**, mbtmp3.9**/4**, Error ellipse: s-maj=418.1km s-min=55.5km az=172.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**58.33**	**315**	P	P	05 25 37.0	-2.1
	0.1nm,0.3s,baz=90,slow=8.6,SNR=4.0						
ILAR	**Eielson Array**	**65.31**	**26**	P	P	05 26 23.6	-2.0
	0.4nm,0.8s,baz=264,slow=5.4,SNR=5.6						
ARCES	**ARCESS Array B**	**83.21**	**342**	P	P	05 28 07.5	-1.5
	3.4nm,1.0s,baz=68,slow=7.6,SNR=6.6						
FINES	**FINESS Array B**	**87.40**	**335**	P	P	05 28 28.9	-1.1
	2.9nm,0.9s,baz=45,slow=3.9,SNR=11						

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*NNC **11** 05:41:20.8±0.7, 43.51N×75.66E, mpv3.0, Error ellipse: s-maj=16.8km s-min=5.6km az=148.0*

*KNET **11** 05:41:22.8±0.3, 43.51N×75.39E, h11^{km}±1^{km}, ml2.0, Error ellipse: s-maj=2.5km s-min=1.2km az=9.0*

ISC 11 05:41:21.6±0.8**, 43.61N**±0.05×**75.48E**±0.07**, h11**^{km}**, n12, σ0^{s}91**/19**, 20C-1D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**0.69**	**173**	⇑P	**Pb**	**05 41 34.7**	**-0.5**
	46nm,0.1s,SNR=137						
TKM2				⇑S	**Sb**	**05 41 44.1**	**-0.5**
	151nm,0.1s						
USP	**Ospenovka**	**0.79**	**245**	⇑P	**Pb**	**05 41 35.9**	**-1.0**
	4.8nm,0.1s,SNR=8.4						
USP				⇑S	**Sb**	**05 41 46.1**	**-1.3**
	54nm,0.2s						
CHMS	**Chumysh**	**0.81**	**221**	⇑P	**Pb**	**05 41 36.4**	**-0.9**
	17nm,0.2s,SNR=6.1						
CHMS				⇓S	**Sb**	**05 41 46.9**	**-1.0**
	30nm,0.2s						
KBK	**Karagaybulak**	**1.03**	**202**	⇑P	**Pb**	**05 41 40.8**	**-0.2**
	15nm,0.1s,SNR=23						
KBK				⇑S	**Sb**	**05 41 54.9**	**+0.6**
	30nm,0.2s						
AAK	**Ala-Archa**	**1.21**	**217**	⇑P	**Pb**	**05 41 44.0**	**-0.2**
	9.3nm,0.1s,SNR=33						
AAK				⇑S	**Sb**	**05 42 00.2**	**+0.5**
	18nm,0.2s						
AAK	**Ala-Archa**	**1.21**	**217**	⇑P	**Pb**	**05 41 44.0**	**-0.2**
	3.2nm,0.3s						
AAK				⇑S	**Sb**	**05 41 59.8**	**+0.1**
	5.5nm,0.3s						
UCH	**Uchtor**	**1.55**	**207**	⇑P	**Pn**	**05 41 50.2**	**+0.8**
	7.9nm,0.2s,SNR=32						
EKS2	**Erkin-Say**	**1.56**	**233**	⇑P	**Pn**	**05 41 50.4**	**+0.8**
	20nm,0.1s,SNR=46						
EKS2				⇑S	**Sb**	**05 42 11.1**	**+1.2**
	50nm,0.2s						
AML	**Almayashu**	**1.98**	**222**	⇑P	**Pn**	**05 41 57.8**	**+2.4**
	22nm,0.2s,SNR=10						
KK31	**Karatay Array**	**3.66**	**264**	⇑Pg	**Pg**	**05 42 29.2**	**-5.4**
	1.9nm,0.3s,baz=74,slow=15						
KK31				⇑Lg		05 43 20.5	
	2.1nm,0.3s,baz=76,slow=27						
MK31	**Makanchi Array**	**5.77**	**54**	⇑Pn	**Pn**	**05 42 50.0**	**+0.7**
	0.8nm,0.4s,baz=233,slow=13,SNR=51						
MK31				⇑Sn	**Sn**	**05 43 55.7**	**-0.7**
	0.3nm,0.3s,baz=232,slow=32,SNR=4.5						
KURK	**Kurchatov**	**7.42**	**16**	⇑Lg		05 45 15.8	
	1.8nm,1.3s						

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*MOS **11** 05:57:12.8±1.1, 57.22N×120.11E, h24^{km}, mb4.4/1, Error ellipse: s-maj=86.6km s-min=37.0km az=164.2*

BYKL 11 05:57:05.5±0.4**, 57.40N×120.75E, 2C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.44**	**251**	*e*Pg	Pg	05 57 32.4	-1.9
CRS				*e*Pb	Pb	05 57 33.9	+1.0
CRS				max		05 57 34.5	
	101nm,0.5s						
CRS				*e*Sg	Sg	05 57 50.9	-2.6
CRS				Smax		05 57 51.6	
	407nm,0.4s						
CRS	**Chara**	**1.44**	**251**	*e*P	Pn	05 57 32.5	-0.4
NRGR	**Nerungri**	**2.30**	**107**	*e*P	Pn	05 57 46.9	+1.8
NRGR				S	Sn	05 58 16.0	+1.5
CLNS	**Chul'man**	**2.33**	**102**	*e*Pn	Pn	05 57 44.5	-1.1
CLNS				*e*Pg	Pg	05 57 48.4	-3.6
CLNS				Pmax		05 57 50.1	
	304nm,0.2s						
CLNS				*e*Sn	Sn	05 58 10.7	-4.7
CLNS				*e*Sg	Sg	05 58 19.3	-3.7
CLNS				Smax		05 58 19.5	
	2µm,0.3s						
CLNS	**Chul'man**	**2.33**	**102**	*e*P	Pn	05 57 46.4	+0.8
CLNS				*e*		05 58 18.0	
CLNS				pmax	pmax		
	comp=N,9.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,20nm,0.3s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,31nm,0.2s						
CLNS				pmax	pmax		
	comp=N,21nm,0.3s						
CLNS				pmax	pmax		
	comp=E,24nm,0.3s						
CLNS				smax			
	comp=E,155nm,0.3s						
CLNS				smax			
	comp=N,453nm,0.4s						
CLNS				smax			
	comp=Z,179nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,50nm,15.0s						
ALDR	**Aldan**	**2.76**	**62**	Pmax		05 57 10.3	
	comp=Z,133nm,0.1s						
ALDR				*e*Pn	Pn	05 57 51.7	-0.1
ALDR				*e*Pg	Pg	05 57 54.6	-6.0
ALDR				*e*Sn	Sn	05 58 22.2	-4.1
ALDR				*e*Sg	Sg	05 58 30.8	-6.6
ALDR				Smax		05 58 31.0	
	comp=Z,8µm,0.4s						
NLYR	**Nelyaty**	**2.91**	**254**	*e*Pn	Pn	05 57 53.5	-0.4
NLYR				⇑*i*Pg	Pg	05 57 58.5	-5.1
NLYR				Pmax		05 58 00.2	
	comp=Z,124nm,0.4s						
NLYR				*e*Sg	Sg	05 58 34.3	-8.1
NLYR				Smax		05 58 38.5	
	comp=Z,944nm,1.5s						
NLYR	**Nelyaty**	**2.91**	**254**	*e*P	Pn	05 57 53.8	-0.1
NLYR				*e*		05 58 32.6	
NLYR				pmax	pmax		
	comp=Z,117nm,0.3s						
NLYR				smax			
	comp=N,944nm,1.5s						
TUP	**Tupik**	**3.02**	**189**	*e*Pn	Pn	05 57 54.8	-0.6
TUP				⇑*i*Pg	Pg	05 57 59.2	-6.5
TUP				Pmax		05 58 01.3	
	comp=N,119nm,0.9s						
TUP				*e*Sn	Sn	05 58 28.8	-4.0
TUP				*e*Sg	Sg	05 58 38.4	-7.5
TUP				Smax		05 58 39.0	
	comp=N,391nm,1.3s						
TNDR	**Tynda**	**3.16**	**134**	*e*Pn	Pn	05 57 57.4	-0.1
TNDR				max		05 58 06.8	
	comp=N,432nm,0.2s						
TNDR				*e*		05 58 35.0	
TNDR				*e*Sg	Sg	05 58 43.2	-7.6
TNDR				Smax			
	comp=N,2µm,0.3s						
BOD	**Bodaibo**	**3.65**	**279**	*e*Pn	Pn	05 58 03.8	-0.7
BOD				*e*Pg	Pg	05 58 11.0	-7.4
BOD				Pmax		05 58 15.1	
	comp=N,30nm,0.7s						
BOD				*e*Sg	Sg	05 58 57.9	-9.2
BOD				Smax		05 59 03.1	
	comp=N,175nm,1.6s						
BOD	**Bodaibo**	**3.65**	**279**	*e*P	Pn	05 58 03.7	-0.8
BOD				pmax	pmax		
	comp=Z,31nm,0.3s						
SVKR	**Severomuysk**	**4.16**	**255**	*e*Pg	Pg	05 58 19.8	-8.8
SVKR				Pmax		05 58 23.9	
	comp=Z,112nm,0.4s						
SVKR				*e*Sg	Sg	05 59 12.8	-11
SVKR				Smax		05 59 27.3	
	comp=Z,389nm,1.0s						
UKT	**Uakit**	**4.39**	**247**	*e*Pn	Pn	05 58 15.2	+0.2
UKT				⇓*i*Pg	Pg	05 58 25.5	-7.7
UKT				Pmax		05 58 27.0	
	comp=Z,15nm,0.7s						
UKT				*e*Sg	Sg	05 59 20.8	-11
UKT				Smax		05 59 31.8	
	comp=Z,119nm,1.4s						
UKT	**Uakit**	**4.39**	**247**	*e*P	Pn	05 58 25.5	+11
KROS	**Kirovskiy**	**4.59**	**128**	*e*Pn	Pn	05 58 15.8	-2.0
KROS				*e*Pg	Pg	05 58 28.5	-8.7
YOA	**Uoyan**	**5.13**	**259**	*e*Sg	Sg	05 59 43.6	-13
YOA				Smax		05 59 55.6	
	comp=Z,635nm,1.3s						
ZEA	**Zeya**	**5.20**	**132**	*e*Pg	Pg	05 58 37.9	-11
ZEA				*e*Sn	Sn	05 59 20.7	-7.4
ZEA				*e*Sg	Sg	05 59 45.2	-13
KMO	**Kumora**	**5.48**	**258**	*e*Pn	Pn	05 58 29.7	-0.7
KMO				*e*Pg	Pg	05 58 43.6	-11
KMO				Pmax		05 58 48.9	
	comp=Z,7.0nm,0.5s						
KMO				*e*Sn	Sn	05 59 30.1	-5.1
KMO				*e*Sg	Sg	05 59 53.8	-14
KMO				Smax		06 00 00.7	
	comp=Z,166nm,1.0s						
KMO	**Kumora**	**5.48**	**258**	*e*P	Pn	05 58 28.4	-2.0
KMO				*e*S	Sn	05 59 28.9	-6.3
KMO				pmax	pmax		
	comp=Z,14nm,0.6s						
KMO				smax			
	comp=N,166nm,1.0s						
YLYR	**Ulyunkhan**	**5.93**	**249**	*e*Pn	Pn	05 58 35.7	-1.0
YLYR				*e*Pg	Pg	05 58 51.8	-12
YLYR				Pmax		05 58 55.6	
	comp=N,2.0nm,0.3s						
YLYR				*e*Sg	Sg	06 00 07.6	-15
YLYR				Smax		06 00 14.8	
	comp=N,130nm,1.8s						
YLYR	**Ulyunkhan**	**5.93**	**249**	*e*P	Pn	05 58 51.1	+14
YLYR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NIZ	**Nizh Angarsk**	**6.40**	**260**	*e*	Pn	05 59 04.4	+21
NIZ				*e*Sg	Sg	06 00 23.3	-15
NIZ				Smax		06 00 41.7	
	comp=Z,62nm,1.0s						
YAK	**Yakutsk**	**6.48**	**40**	*e*Pg	Pg	05 59 00.4	-14
YAK				Pmax		05 59 08.6	
	comp=Z,138nm,0.6s						
YAK				*e*Sn	Sn	05 59 50.1	-10
YAK				*e*Sg	Sg	06 00 24.3	-17
YAK				Smax		06 00 34.5	
	comp=Z,580nm,0.6s						
CIT	**Chita**	**6.81**	**221**	*e*Pg	Pg	05 59 08.0	-13
CIT				Pmax		05 59 08.6	
	comp=Z,8.0nm,0.5s						
CIT				*e*Sg	Sg	06 00 35.8	-16
CIT				Smax		06 00 38.9	
	comp=Z,102nm,1.8s						
SYVR	**Suvo**	**7.16**	**243**	*e*Pn	Pn	05 58 52.1	-1.9
SYVR				*e*Pg	Pg	05 59 15.9	-13
SYVR				Pmax		05 59 29.4	
	comp=Z,2.0nm,0.5s						
SYVR				*e*		06 00 10.7	
SYVR				*e*Sg	Sg	06 00 47.6	-16
SYVR				Smax		06 00 55.9	
	comp=Z,141nm,1.8s						
OGRR	**Ongureny**	**8.36**	**249**	*e*Sg	Sg	06 01 25.8	-18
OGRR				Smax		06 01 30.1	
	comp=Z,36nm,2.3s						
KPC	**Khapcheranga**	**9.17**	**216**	*e*Pn	P	05 59 19.3	-2.8
KPC				*e*Pg	P	05 59 50.0	+28
KPC				*e*		06 01 00.2	
KPC				*e*Sg	Sg	06 01 47.3	-24
KPC				Smax		06 01 58.4	
	comp=Z,53nm,2.1s						
TRG	**Tyrgan**	**9.47**	**247**	*e*Sg	Sg	06 01 59.9	-21
TRG				Smax		06 02 12.7	
	comp=Z,46nm,2.0s						

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*BJI **11** 06:03:07.2, 19.60S×69.10W, h107^{km}, mB5.0*

*NEIC **11** 06:03:07.3±0.2, 19.56S×69.10W, mb4.7/22, Error ellipse: s-maj=8.7km s-min=4.9km az=63.0*

NEIC Felt [III] at Camina, Huara, Pica, Pisagua and Pozo Almonte.

*IDC **11** 06:03:07.4±0.5, 19.60S×69.04W, h109^{km}±4^{km}, mb4.1/13, mb1 4.2/14, mb1mx4.2/18, mbtmp4.5/14, MS3.4/3, Ms1 3.4/3, ms1mx3.0/19, Error ellipse: s-maj=17.9km s-min=12.2km az=61.0*

ISC 11 06:03:05.4±0.3**, 19.61S**±0.04×**69.14W**±0.06**, h107**^{km}**, h107**^{km}±1.3^{km}**:pP-P, n83, σ1^{s}20**/69**, mb4.4**/28**, 7C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**3.40**	**165**	*e*P	**P**	**06 04 00.9**	**+3.2**
SPCH				*i* S	**S**	**06 04 33.7**	**-3.7**
LPAZ	**La Paz**	**3.44**	**16**	P	**P**	**06 04 02.7**	**+4.5**
	27nm,0.3s,baz=189,slow=10.0,SNR=518						
LPAZ				LR	LR	06 05 41.4	
	comp=Z,588nm,20.4s,baz=286,slow=45						
LPAZ	**La Paz**	**3.44**	**16**	⇑*i*Pn	**P**	**06 04 02.8**	**+4.6**
ARE	**Arequipa**	**3.85**	**324**	⇑*i*P	**P**	**06 04 03.1**	**-0.7**
ARE				*i* S	**S**	**06 04 48.7**	**+0.4**
CEN1	**Los Morros**	**3.89**	**195**	⇑*i*P	**P**	**06 04 05.0**	**+0.6**
ANCH	**Antofagasta**	**4.23**	**196**	*e*P	**P**	**06 04 06.7**	**-2.3**
CPN1	**Cerro Paranal**	**5.13**	**193**	*e*P	**P**	**06 04 18.4**	**-2.9**
CRCH	**Chaqaral**	**6.85**	**191**	*e*P	**P**	**06 04 39.0**	**-5.7**
SIV	**San Ignacio**	**8.48**	**66**	P	**P**	**06 05 06.0**	**-0.9**
	10nm,0.3s,baz=257,slow=12,SNR=452						
NNA	**Nana**	**10.60**	**314**	*e*Pn	**P**	**06 05 35.7**	**+0.3**
	9.9nm,0.7s						
CFAA	**Coronel Fontan**	**11.98**	**176**	P	**P**	**06 05 49.0**	**-4.6**
	0.1nm,0.3s,baz=347,slow=13,SNR=12						
CPUP	**Villa Florida**	**12.76**	**124**	*e*Pn	**P**	**06 06 03.5**	**-0.5**
	56nm,0.7s						
TRQA	**Tornquist**	**19.41**	**163**	*e*P	**P**	**06 07 24.3**	**-1.2**
	86nm,1.0s						
BDFB	**Brasilia**	**20.51**	**82**	P	**P**	**06 07 35.4**	**-1.6**
	10nm,0.5s,baz=266,slow=9.1,SNR=28						
BAO	**Brasilia Array**	**20.53**	**82**	P	**P**	**06 07 39.0**	**+1.8**
PLCA	**Paso Flores**	**21.09**	**183**	P	**P**	**06 07 42.5**	**-0.2**
	23nm,0.9s,mb4.5,baz=358,slow=12,SNR=25						
PLCA				PcP	PcP	06 11 46.1	+0.3
	2.7nm,0.8s,baz=343,slow=3.0,SNR=4.1						
PLCA	**Paso Flores**	**21.09**	**183**	*e*P	**P**	**06 07 42.6**	**-0.2**
	37nm,1.0s,mb4.7						
ROSC	**El Rosal**	**24.84**	**348**	P	**P**	**06 08 20.0**	**+0.6**
	4.9nm,0.7s,mb4.1,baz=240,slow=5.6,SNR=5.2						
ROSC				LR	LR	06 19 15.7	
	comp=Z,65nm,21.0s,baz=7.3,slow=39						
SDV	**Santo Domingo**	**28.35**	**357**	P	**P**	**06 08 50.6**	**-1.0**
	18nm,0.9s,mb4.6,baz=195,slow=12,SNR=26						
SDV				LR	LR	06 21 09.0	
	comp=Z,102nm,21.6s,baz=208,slow=38						
SDV	**Santo Domingo**	**28.35**	**357**	*e*P	**P**	**06 08 50.6**	**-1.0**
	13nm,0.8s,mb4.5						
JTS	**JuntasAbangare**	**33.55**	**331**	P	**P**	**06 09 38.5**	**+1.3**
	5.1nm,0.8s,mb4.4,baz=319,slow=11,SNR=3.2						
RCBR	**Riachuelo**	**35.10**	**71**	*e*P	**P**	**06 09 51.8**	**+1.3**
	18nm,0.6s,mb5.1						
USHA	**Ushuaia**	**35.17**	**179**	P	**P**	**06 09 50.0**	**-0.6**
	9.6nm,0.8s,mb4.7,baz=351,slow=5.8,SNR=8.3						
PMSA	**Palmer Station**	**45.27**	**177**	*e*P	**P**	**06 11 13.5**	**-0.1**
	19nm,0.9s,mb4.8						
ELN	**Prospectdale**	**57.58**	**349**	*e*P	**P**	**06 12 46.0**	**-0.4**
ELN				*e*pP	pP	06 13 12.6	0.0
WVT	**Waverly**	**58.19**	**342**	*e*P	**P**	**06 12 48.8**	**-1.8**
	8.9nm,1.1s,mb4.7						
WVT				*e*pP	pP	06 13 15.3	-1.5
TXAR	**Lajitas Array**	**58.96**	**325**	P	**P**	**06 12 54.1**	**-2.0**
	0.2nm,0.7s,mb3.3,baz=137,slow=6.0,SNR=3.6						
TXAR				pP	pP	06 13 22.3	-0.1
	0.5nm,0.6s,baz=139,slow=8.3,SNR=5.0						
WCI	**Wyandotte Cave**	**59.74**	**344**	*e*P	**P**	**06 12 59.7**	**-1.7**
	4.5nm,0.7s,mb4.6						
WCI				*e*pP	pP	06 13 26.7	-1.0
FVM	**French Village**	**60.68**	**341**	*e*P	**P**	**06 13 06.5**	**-1.2**
	9.4nm,0.8s,mb4.9						
FVM				*e*pP	pP	06 13 32.5	-1.7
ACSO	**Alum Creek Sta**	**60.91**	**348**	*e*P	**P**	**06 13 08.1**	**-1.1**
	4.9nm,0.6s,mb4.7						
ACSO				*e*pP	pP	06 13 34.9	-0.9
CCM	**Cathedral Cave**	**61.00**	**340**	*e*P	**P**	**06 13 08.2**	**-1.7**
	8.5nm,0.8s,mb4.8						
CCM				*e*pP	pP	06 13 35.0	-1.4
GDL2	**Guadalupe Moun**	**61.58**	**326**	P	**P**	**06 13 14.5**	**+0.6**
GDL2				*e*pP	pP	06 13 38.0	-2.4
MNTX	**Cornudas Mount**	**61.73**	**325**	*e*P	**P**	**06 13 13.3**	**-1.5**
	4.4nm,1.1s,mb4.4						
MNTX				*e*pP	pP	06 13 38.4	-3.0
VNA3	**Neumayer Olymp**	**61.93**	**162**	⇓*i*	**P**	**06 13 15.8**	**+0.1**
VNA3	**Neumayer Olymp**	**61.93**	**162**	*e*	**P**	**06 13 17.7**	**+2.0**
VNA3	**Neumayer Olymp**	**61.93**	**162**	*e*	**P**	**06 13 28.8**	**+13**
VNA1	**Neumayer--Stat**	**62.13**	**161**	⇓*i*	**P**	**06 13 17.6**	**+0.6**
VNA1	**Neumayer--Stat**	**62.13**	**161**	*e*	**P**	**06 13 19.6**	**+2.6**
VNA1	**Neumayer--Stat**	**62.13**	**161**	*e*	**P**	**06 13 34.3**	**+17**
VNA2	**Neumayer--Watz**	**62.50**	**161**	⇓*i*	**P**	**06 13 19.7**	**+0.2**
VNA2	**Neumayer--Watz**	**62.50**	**161**	*e*	**P**	**06 13 21.7**	**+2.2**
VNA2	**Neumayer--Watz**	**62.50**	**161**	*e*	**P**	**06 13 32.0**	**+13**
SNAA	**Sanae**	**64.13**	**161**	⇓*i*	**P**	**06 13 30.1**	**0.0**
SNAA	**Sanae**	**64.13**	**161**	*e*	**P**	**06 13 31.9**	**+1.8**
SNAA	**Sanae**	**64.13**	**161**	*e*	**P**	**06 13 42.7**	**+13**
SDCO	**Great Sand Dun**	**66.52**	**329**	*e*P	**P**	**06 13 47.6**	**+1.6**
	2.5nm,0.6s,mb4.2						
SDCO				*e*pP	pP	06 14 13.1	+0.3
SMCO	**Snowmass**	**68.36**	**329**	P	**P**	**06 13 58.6**	**+1.2**
DBIC	**Dimbokro**	**68.41**	**74**	P	**P**	**06 13 57.4**	**-0.8**
	7.0nm,0.7s,mb4.6,baz=207,slow=5.9,SNR=11						
DBIC				pP	pP	06 14 25.2	+0.1
	9.9nm,0.7s,baz=221,slow=7.6,SNR=5.9						
DBIC				sP	sP	06 14 37.1	+0.3
	7.0nm,0.7s,baz=225,slow=6.8,SNR=4.4						
DBIC	**Dimbokro**	**68.41**	**74**	*e*P	**P**	**06 13 57.0**	**-1.2**
	8.1nm,0.8s,mb4.6						
DBIC				*e*pP	pP	06 14 25.2	0.0
DBIC				*e*sP	sP	06 14 37.1	+0.4
MSU	**Marysvale**	**70.51**	**325**	*e*P	**P**	**06 14 11.4**	**+0.9**
MSU				*e*pP	pP	06 14 38.4	+0.7
QSPA	**South Pole Qui**	**70.58**	**180**	*e*P	**P**	**06 14 11.2**	**+0.9**
	20nm,0.9s,mb4.9						
PDAR	**Pinedale Array**	**72.37**	**330**	P	**P**	**06 14 22.0**	**+0.4**
	0.3nm,0.5s,mb3.4,baz=127,slow=7.4,SNR=3.7						
ULM	**Lac du Bonnet**	**73.45**	**342**	P	**P**	**06 14 27.6**	**-0.1**
	2.7nm,0.5s,mb4.3,baz=153,slow=5.1,SNR=4.9						
ULM				pP	pP	06 14 55.2	+0.1
	4.7nm,0.7s,baz=88,slow=8.3,SNR=4.7						
RRI2	**Red Ridge**	**73.65**	**329**	*e*P	**P**	**06 14 29.7**	**+0.7**
	2.9nm,0.7s,mb4.1						
NVAR	**Mina Array Bea**	**73.88**	**322**	P	**P**	**06 14 31.3**	**+0.9**
	0.4nm,0.8s,mb3.2,baz=132,slow=8.0,SNR=6.4						
NVAR				pP	pP	06 14 58.6	+0.7
	1.8nm,0.9s,baz=122,slow=7.2,SNR=6.8						
HLID	**Hailey**	**75.33**	**328**	*e*P	**P**	**06 14 40.1**	**+1.4**
	12nm,1.7s,mb4.3						
SBA	**Scott Base**	**77.64**	**190**	*e*P	**P**	**06 14 52.5**	**+1.6**
	7.4nm,1.4s,mb4.2						
SYO	**Syowa Base**	**78.34**	**160**	⇑P	**P**	**06 14 55.1**	**+0.2**
SYO	**Syowa Base**	**78.34**	**160**	⇑sP	sP	06 15 34.1	-0.3
SYO	**Syowa Base**	**78.34**	**160**	⇑*e*P	**P**	**06 14 55.1**	**+0.2**
SYO				⇑*e*sP	sP	06 15 34.1	-0.3
VNDA	**Vanda**	**78.67**	**190**	*e*P	**P**	**06 14 57.5**	**+0.9**
	2.9nm,1.1s,mb4.0						
TSUM	**Tsumeb**	**80.79**	**107**	*e*P	**P**	**06 15 09.9**	**+0.8**
	4.2nm,0.8s,mb4.3						
EDM	**Edmonton**	**81.96**	**335**	*e*P	**P**	**06 15 13.5**	**-1.1**
EDM				*e*pP	pP	06 15 41.7	-0.7
BOSA	**Boshof**	**84.52**	**118**	P	**P**	**06 15 28.1**	**0.0**
	3.7nm,0.9s,mb4.3,baz=249,slow=5.4,SNR=5.2						
BOSA				pP	pP	06 15 57.3	+1.2
	6.4nm,1.1s,baz=266,slow=6.5,SNR=2.6						
BOSA	**Boshof**	**84.52**	**118**	*e*P	**P**	**06 15 28.6**	**+0.6**
	6.2nm,0.9s,mb4.5						
MAW	**Mawson**	**86.20**	**163**	P	**P**	**06 15 36.3**	**+1.0**
	3.5nm,0.8s,mb4.3,baz=221,slow=6.5,SNR=6.8						
YKA	**Yellowknife Ar**	**89.34**	**341**	P	**P**	**06 15 51.2**	**+0.7**
	3.5nm,0.7s,mb4.5,baz=132,slow=5.3,SNR=6.9						
YKA				pP	pP	06 16 19.2	+0.4
	2.6nm,0.6s,baz=132,slow=4.4,SNR=3.0						
YKA				sP	sP	06 16 31.4	+1.0
	4.8nm,0.9s,baz=134,slow=4.5,SNR=3.1						
YKA	**Yellowknife Ar**	**89.34**	**341**	P	**P**	**06 15 51.2**	**+0.7**
YKA				pP	pP	06 16 19.2	+0.4
YKA				sP	sP	06 16 31.4	+1.1
STKA	**Stephens Creek**	**120.94**	**210**	PKP	PKPdf	06 21 47.1	+1.5
	1.3nm,0.6s,baz=51,slow=6.5,SNR=3.1						
AKTO	**Aktyubinsk**	**128.35**	**41**	PKP	PKPdf	06 22 01.4	+2.0
	0.5nm,0.5s,baz=45,slow=4.3,SNR=2.7						
BVAR	**Borovoye Array**	**134.35**	**33**	PKP	PKPdf	06 22 13.6	+2.9
	0.6nm,0.8s,baz=315,slow=2.0,SNR=3.0						
BVAR	**Borovoye Array**	**134.35**	**33**	PKP	PKPdf	06 22 13.6	+2.9
WRA	**Warramunga Arr**	**134.46**	**212**	PKP	PKPdf	06 22 13.3	+1.5
	2.6nm,0.6s,baz=160,slow=1.8,SNR=36						
WRAB	**Tennant Creek**	**134.46**	**212**	*e*PKPdf	PKPdf	06 22 13.4	+1.6
FITZ	**Fitzroy Crossi**	**139.82**	**202**	PKP	PKPdf	06 22 23.3	+1.6
	6.2nm,0.7s,baz=163,slow=6.6,SNR=5.6						
MKAR	**Makanchi Array**	**144.21**	**34**	PKP	PKPdf	06 22 28.8	+0.3
	1.0nm,0.7s,baz=297,slow=2.7,SNR=5.6						
MKAR	**Makanchi Array**	**144.21**	**34**	PKP	PKPdf	06 22 28.8	+0.3
WMQ	**Urumqi**	**149.03**	**34**	*e*PKP	PKPdf	06 22 39.5	+2.8
MJAR	**Matsushiro Arr**	**150.71**	**311**	PKPbc	PKPdf	06 22 47.0	+7.5
	4.8nm,0.7s,baz=81,slow=1.7,SNR=13						
MAJO	**Matsushiro**	**150.71**	**311**	*e*PKPbc	PKPdf	06 22 47.1	+7.6
MAT	**Matsushiro**	**150.71**	**311**	PKP	PKPdf	06 22 47.3	+7.8
MAT	**Matsushiro**	**150.71**	**311**	*e*PKP	PKPdf	06 22 47.0	+7.5
SONM	**Songino Array**	**151.61**	**6**	PKPbc	PKPdf	06 22 49.6	+9.2
	4.4nm,0.5s,baz=296,slow=1.3,SNR=6.9						
SONM				pPKPbc		06 23 18.5	
	7.6nm,0.9s,baz=343,slow=0.9,SNR=6.8						

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*NIED **11** 06:06:00, 23.90N×122.80E, h20^{km}, Mw4.2 Best double couple: M$_0$2.64×10^{15} NP1:φ$_s$200°, δ56°, λ-66°. NP2: φ$_s$341°, δ41°, λ-121°.*

*IDC **11** 06:06:50.1±0.7, 23.98N×122.81E, mb4.0/13, mb1 4.2/14, mb1mx4.1/22, mbtmp4.1/14, ML3.9/1, MS3.6/5, Ms1 3.6/5, ms1mx3.4/22, Error ellipse: s-maj=28.6km s-min=15.1km az=68.0*

*BJI **11** 06:06:51.2, 23.89N×122.86E, h18^{km}, mB4.4, mb4.4, ML4.0, Ms4.0, Msz3.7*

*NEIC **11** 06:06:51.8±0.4, 23.96N×122.81E, h10^{km}, mb4.4/6, Error ellipse: s-maj=11.1km s-min=7.1km az=50.0*

*JMA **11** 06:06:54.0±0.3, 23.90N×122.77E, h18^{km}, M4.4*

ISC 11 06:06:53.3±1.2**, 23.89N**±0.06×**122.69E**±0.03**, h29**^{km}±9^{km}**, n42, σ1^{s}12**/46**, mb4.0**/16**, MS3.7**/3**, 2C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.64**	**27**	P	**Pb**	**06 07 05.7**	**-0.2**
YOJ				*e*S	**Sb**	**06 07 13.3**	**-1.3**
HATJ	**Hateruma jima**	**1.03**	**80**	P	**Pn**	**06 07 11.5**	**-0.4**
HATJ				*e*S	**Sn**	**06 07 25.3**	**-0.2**
NACB	**Ninganchiao**	**1.04**	**286**	⇑*e*Pn	**Pn**	**06 07 12.9**	**+0.8**
IRIF	**Iriomote-Funau**	**1.05**	**65**	P	**Pn**	**06 07 11.9**	**-0.3**
IRIF				*e*S	**Sn**	**06 07 26.2**	**+0.3**
JKRS	**Kuro-shima**	**1.25**	**74**	P	**Pn**	**06 07 15.4**	**+0.3**
JIJ	**Ishigaki jima**	**1.41**	**70**	P	**Pn**	**06 07 17.5**	**+0.2**
JIJ				*e*S	**Sn**	**06 07 35.3**	**+0.3**
YHNB	**Yeheng**	**1.43**	**303**	⇑*e*Pn	**Pn**	**06 07 19.6**	**+1.9**
YHNB				*e*Sg	**Sn**	**06 07 41.8**	**+6.1**
TATO	**Taipei**	**1.54**	**315**	*e*Pn	**Pn**	**06 07 21.4**	**+2.1**
TATO				*e*Sg	**Sn**	**06 07 45.0**	**+6.5**
JTJ	**Tarama**	**1.98**	**67**	P	**Pn**	**06 07 25.8**	**+0.3**
JTJ				*e*S	**Sn**	**06 07 52.3**	**+2.7**
JMJ	**Miyako jima 2**	**2.54**	**68**	P	**Pn**	**06 07 34.5**	**+0.9**
JOGS	**Gusukube**	**2.62**	**70**	P	**Pn**	**06 07 37.4**	**+2.7**
QZH	**Quanzhou**	**3.88**	**287**	⇓*i*P	**Pn**	**06 07 53.1**	**+0.5**
QZH				S	**Sn**	**06 08 36.7**	**-1.1**
QZH				Smax			
	comp=N,240nm,0.8s						
QZH				Smax			
	comp=E,170nm,0.8s						
JKE	**Kume jima 2**	**4.43**	**56**	P	**Pn**	**06 07 59.6**	**-0.8**
JAGN	**Aguni-jima**	**4.92**	**56**	P	**Pn**	**06 08 08.2**	**+0.9**
JOW	**Kunigami**	**5.84**	**59**	Pn	**Pn**	**06 08 17.9**	**-2.3**
	comp=E,7.5nm,0.3s,baz=184,slow=13,SNR=7.3						

JNU	**Nakatsue**	11.68	36	LR	LR	06 14 57.1	
	comp=E,155nm,18.5s,baz=42,slow=42						
JHJ	**Hachijo jima 2**	17.59	55	LR	LR	06 16 48.1	
	comp=E,133nm,19.7s,baz=61,slow=34						
CD2	**Chengdu**	18.20	297	P	P	06 11 06.2	+0.5
LZH	**Lanzhou**	20.31	311	eP	P	06 11 28.5	-1.3
LZH				AP		06 11 37.5	
LZH				XP		06 11 41.5	
LZH				AMB	AMB		
	comp=Z,20nm,1.6s						
LZH	**Lanzhou**	20.31	311	eP	P	06 11 28.5	-1.3
	comp=Z,21nm,1.6s						
LZH				pP		06 11 37.5	
LZH				sP		06 11 41.5	
GTA	**Gaotai**	24.78	314	eP	P	06 12 16.4	+2.4
GTA				AP		06 12 20.4	
GTA				XP		06 12 22.7	
ASAJ	**Asahikawa**	25.94	34	LR	LR	06 23 15.5	
	comp=Z,84nm,18.2s,MS3.3,baz=168,slow=38						
SONM	**Songino Array**	27.19	336	P	P	06 12 34.8	-1.5
	comp=Z,0.6nm,0.5s,mb3.4,baz=136,slow=8.9,SNR=4.2						
SONM				LR	LR	06 24 54.5	
	comp=Z,214nm,18.1s,MS3.8,baz=96,slow=40						
MKAR	**Makanchi Array**	39.51	316	P	P	06 14 22.4	-0.7
	comp=Z,0.9nm,0.5s,mb3.8,baz=100,slow=11,SNR=16						
ZAL	**Zalesovo**	41.25	327	P	P	06 14 35.9	-1.4
	comp=Z,0.7nm,0.5s,mb3.5,baz=56,slow=9.2,SNR=3.4						
ZAL				LR	LR	06 33 46.8	
	comp=Z,178nm,18.8s,MS4.0,baz=8.0,slow=39						
FITZ	**Fitzroy Crossi**	41.83	176	eP	P	06 14 42.1	-0.4
	comp=Z,5.1nm,1.1s,mb4.1						
FITZ	**Fitzroy Crossi**	41.83	176	P	P	06 14 41.5	-1.0
	comp=Z,3.8nm,0.7s,mb4.2,slow=10,SNR=6.9						
WRAB	**Tennant Creek**	45.01	164	eP	P	06 15 07.8	-0.6
	comp=Z,4.7nm,0.9s,mb4.3						
WRA	**Warramunga Arr**	45.02	164	P	P	06 15 07.9	-0.5
	comp=Z,3.9nm,0.8s,mb4.3,baz=347,slow=8.6,SNR=31						
WB2	**Warramunga Arr**	45.02	164	eP	P	06 15 08.0	-0.4
BVAR	**Borovoye Array**	48.78	321	P	P	06 15 37.6	+0.2
	comp=Z,0.6nm,0.6s,mb3.8,baz=153,slow=6.4,SNR=2.9						
BVAR				PcP	PcP	06 17 01.2	-1.2
	comp=Z,1.1nm,0.7s,baz=117,slow=3.3,SNR=4.8						
CHKZ	**Chkalovo**	48.83	321	eP	P	06 15 38.1	+0.3
	comp=Z,0.7nm,0.4s,mb4.0						
FORT	**Forrest**	54.60	174	eP	P	06 16 21.8	+0.2
	comp=Z,7.1nm,0.6s,mb4.9						
STKA	**Stephens Creek**	58.32	161	eP	P	06 16 48.2	+0.1
	comp=Z,7.4nm,0.6s,mb4.9						
STKA	**Stephens Creek**	58.32	161	P	P	06 16 47.8	-0.3
	comp=Z,11nm,0.7s,mb5.0,baz=339,slow=6.5,SNR=26						
ILAR	**Eielson Array**	68.84	27	P	P	06 17 54.8	-2.0
	comp=Z,0.3nm,0.8s,mb3.3,baz=270,slow=5.4,SNR=5.0						
FINES	**FINESS Array B**	72.39	330	P	P	06 18 17.1	-1.2
	comp=Z,2.9nm,0.9s,mb4.2,baz=117,slow=8.5,SNR=3.5						
BRTR	**Keskin Array B**	74.46	307	P	P	06 18 32.2	+1.5
	comp=Z,1.1nm,0.9s,mb3.8,baz=53,slow=6.2,SNR=3.5						
NOA	**NORSAR Array B**	79.13	333	P	P	06 18 55.6	-0.8
	comp=Z,0.9nm,0.6s,mb3.9,baz=56,slow=5.5,SNR=3.0						
YKA	**Yellowknife Ar**	82.70	23	P	P	06 19 14.9	-0.3
	comp=Z,1.5nm,0.8s,mb4.0,baz=323,slow=6.2,SNR=4.4						
KMBO	**Kilima Mbogo**	86.28	267	P	P	06 19 35.9	+1.5
	comp=Z,0.6nm,0.4s,mb4.1,baz=73,slow=13,SNR=4.1						
SDV	**Santo Domingo**	144.92	23	PKP	PKPdf	06 26 28.7	-4.8
	comp=Z,1.4nm,0.4s,baz=292,slow=5.4,SNR=3.9						

*IDC **11** 06:12:46.8±0.9, 57.36N×120.71E, mb3.9/11, mb1 4.1/12, mb1mx3.9/21, mbtmp3.9/12, ML3.6/1, MS3.3/1, Ms1 3.3/1, ms1mx2.8/19, Error ellipse: s-maj=23.3km s-min=18.2km az=156.0*

*BYKL **11** 06:12:47.7±0.3, 57.42N×120.75E, h3^{km}±16^{km}, FELT I=II MSK at Khani*

*NEIC **11** 06:12:47.8±0.4, 57.41N×120.75E, h5^{km}, mb4.7/2, Error ellipse: s-maj=8.3km s-min=5.9km az=160.0*

NEIC Felt [II] at Khani.

*MOS **11** 06:12:49.2±2.5, 57.38N×120.48E, h7^{km}, mb4.1/6, Error ellipse: s-maj=10.7km s-min=7.6km az=71.2*

MOS Felt (II) at Hani.

ISC 11 06:12:46.0±0.3**, 57.37N**±0.03×**120.72E**±0.04**, h3^{km}, n77, σ1§40**/88**, mb3.9**/14**, MS3.1**/1**, 2C-3D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	1.42	252	ePg	Pg	06 13 14.2	-0.1
CRS				Pmax		06 13 15.9	
	645nm,1.0s						
CRS				eSg	Sg	06 13 32.4	-0.8
CRS				Smax		06 13 34.6	
	2µm,0.8s						
CRS	**Chara**	1.42	252	eP	Pn	06 13 14.1	+1.3
NRGR	**Nerungri**	2.30	106	eP	Pn	06 13 28.5	+3.0
NRGR				S	Sn	06 13 58.1	+3.4
CLNS	**Chul'man**	2.34	101	ePg	Pg	06 13 28.8	-4.0
CLNS				e		06 13 30.6	
CLNS				max		06 13 30.9	
	396nm,0.2s						
CLNS				eSg	Sg	06 14 00.8	-3.1
CLNS				Smax		06 14 01.9	
	32µm,0.6s						
CLNS	**Chul'man**	2.34	101	eP	Pn	06 13 28.9	+2.9
CLNS				eS	Sn	06 13 58.2	+2.6
CLNS				pmax	pmax		
	comp=Z,38nm,0.3s						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.2s						
CLNS				pmax	pmax		
	comp=N,30nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,81nm,0.3s						
CLNS				pmax	pmax		
	comp=E,27nm,0.2s						
CLNS				smax			
	comp=N,101nm,0.3s						
CLNS				smax			
	comp=E,152nm,0.3s						
CLNS				smax			
	comp=Z,72nm,0.3s						
CLNS				smax			
	comp=E,2µm,0.5s						
CLNS				smax			
	comp=Z,1µm,0.6s						
CLNS				smax			
	comp=N,3µm,0.5s						
CLNS				MLR	MLR		
	comp=Z,200nm,11.0s						
ALDR	**Aldan**	2.79	62	ePn	Pn	06 13 32.9	+0.5
ALDR				ePg	Pg	06 13 36.3	-5.5
ALDR				Pmax		06 13 36.7	
	comp=Z,264nm,0.2s						
ALDR				eSn	Sn	06 14 03.8	-3.2
ALDR				eSg	Sg	06 14 12.6	-6.3
ALDR				Smax		06 14 13.5	
	comp=Z,2µm,0.1s						
NLYR	**Nelyaty**	2.89	254	ePn	Pn	06 13 35.5	+1.7
NLYR				⇑iPg	Pg	06 13 40.2	-3.5
NLYR				e		06 13 44.1	
NLYR				max		06 13 45.1	
	comp=Z,351nm,1.1s						
NLYR				eSn	Sn	06 14 09.5	0.0
NLYR				eSg	Sg	06 14 16.7	-5.4
NLYR				Smax		06 14 30.3	
	comp=Z,2µm,1.1s						
NLYR	**Nelyaty**	2.89	254	eP	Pn	06 13 37.0	+3.2
NLYR				e		06 14 14.1	
NLYR				pmax	pmax		
	comp=Z,184nm,0.5s						
NLYR				smax			
	comp=N,2µm,1.1s						
TUP	**Tupik**	2.98	189	⇓iPn	Pn	06 13 36.0	+0.8
TUP				ePg	Pg	06 13 41.7	-3.9
TUP				e		06 13 44.4	
TUP				max		06 13 44.9	
	comp=N,672nm,0.7s						
TUP				eSn	Sn	06 14 12.0	+0.1
TUP				eSg	Sg	06 14 20.6	-4.8
TUP				Smax		06 14 22.0	
	comp=N,4µm,0.5s						
TUP	**Tupik**	2.98	189	eP	Pn	06 13 36.1	+0.9
TUP				eS	Sn	06 14 11.9	0.0
TUP				pmax	pmax		
	comp=Z,513nm,0.4s						
TUP				smax			
	comp=E,4µm,0.5s						
TNDR	**Tynda**	3.15	133	ePn	Pn	06 13 39.0	+1.4
TNDR				max		06 13 41.6	
	comp=E,1µm,0.3s						
TNDR				eSn	Sn	06 14 16.7	+0.4
TNDR				eSg	Sg	06 14 26.7	-4.4
TNDR				Smax		06 14 34.7	
	comp=E,14µm,0.5s						
BOD	**Bodaibo**	3.64	280	ePn	Pn	06 13 45.4	+0.9
BOD				ePg	Pg	06 13 53.9	-4.8
BOD				e		06 13 57.3	
BOD				Pmax		06 13 57.7	
	comp=E,74nm,0.5s						
BOD				eSn	Sn	06 14 27.8	-0.8
BOD				eSg	Sg	06 14 39.3	-8.0
BOD				Smax		06 14 46.1	
	comp=E,1µm,1.1s						
BOD	**Bodaibo**	3.64	280	eP	Pn	06 13 45.4	+0.9
BOD				pmax	pmax		
	comp=Z,75nm,0.5s						
SVKR	**Severomuysk**	4.14	255	ePg	Px	06 14 01.8	
SVKR				Pmax		06 14 08.5	
	comp=Z,163nm,0.3s						
SVKR				e		06 14 49.5	
SVKR				eSg	Sx	06 14 56.1	
SVKR				Smax		06 15 08.3	
	comp=Z,1µm,1.1s						
UKT	**Uakit**	4.37	247	ePn	Pn	06 13 56.9	+2.1
UKT				ePg	Px	06 14 06.4	
UKT				Pmax		06 14 08.8	
	comp=Z,57nm,0.7s						
UKT				eSg	Sx	06 15 02.4	
UKT				Smax		06 15 11.1	
	comp=Z,538nm,1.0s						
UKT	**Uakit**	4.37	247	ePg	Px	06 14 06.4	
UKT				eSg	Sx	06 15 02.5	
UKT	**Uakit**	4.37	247	eP	Px	06 14 06.4	
UKT				pmax	pmax		
	comp=Z,45nm,0.5s						
YOA	**Uoyan**	5.10	260	ePg	Px	06 14 19.7	
YOA				Pmax		06 14 31.0	
	comp=Z,259nm,0.3s						
YOA				eSg	Sx	06 15 26.1	
YOA				Smax		06 15 39.6	
	comp=Z,3µm,1.4s						
KMO	**Kumora**	5.46	258	ePn	Pn	06 14 11.4	+1.1
KMO				ePg	Px	06 14 26.9	
KMO				Pmax		06 14 34.2	
	comp=Z,47nm,1.1s						
KMO				eSn	Sn	06 15 09.2	-5.3
KMO				eSg	Sx	06 15 36.8	
KMO				Smax		06 15 46.5	
	comp=Z,602nm,1.3s						
KMO	**Kumora**	5.46	258	eP	Pn	06 14 10.1	-0.2
	comp=Z,47nm,0.6s						
KMO				eS	Sn	06 15 09.8	-4.7
KMO	**Kumora**	5.46	258	eP	Pn	06 14 10.1	-0.2
KMO				eS	Sn	06 15 09.8	-4.7
KMO				pmax	pmax		
	comp=Z,47nm,0.6s						
KMO				smax			
	comp=E,603nm,1.2s						
YLYR	**Ulyunkhan**	5.90	249	⇓iPn	Pn	06 14 17.2	+0.7
YLYR				ePg	Px	06 14 34.0	
YLYR				Pmax		06 14 55.3	
	comp=E,32nm,1.2s						
YLYR				eSn	Sn	06 15 22.7	-2.8
YLYR				eSg	Sx	06 15 51.8	
YLYR				Smax		06 16 07.3	
	comp=E,437nm,1.4s						
YLYR	**Ulyunkhan**	5.90	249	eP	Pn	06 14 17.4	+0.9
NIZ	**Nizh Angarsk**	6.38	260	e	Pn	06 14 25.8	+2.5
NIZ				eSg	Sx	06 16 07.3	
NIZ				Smax		06 16 28.5	
	comp=E,305nm,1.3s						
YAK	**Yakutsk**	6.51	40	ePn	Pn	06 14 24.4	-0.7
YAK				ePg	Px	06 14 43.0	
YAK				Pmax		06 14 43.6	
	comp=E,290nm,0.7s						
YAK				eSn	Sn	06 15 33.8	-7.0
YAK				eSg	Sx	06 16 05.4	
YAK				Smax		06 16 07.9	
	comp=E,2µm,0.5s						
YAK	**Yakutsk**	6.51	40	i P	Pn	06 14 24.6	-0.5
YAK				ePb	Pb	06 14 40.0	+0.1
YAK				eSb	Sb	06 16 01.1	+2.1
CIT	**Chita**	6.78	221	ePg	Px	06 14 50.8	
CIT				Pmax		06 14 53.4	
	comp=E,88nm,1.2s						
CIT				eSg	Sx	06 16 19.0	
CIT				Smax		06 16 21.1	
	comp=E,938nm,1.8s						
CIT	**Chita**	6.78	221	eP	Px	06 14 49.4	
CIT				pmax	pmax		
	comp=Z,87nm,1.2s						
SYVR	**Suvo**	7.13	243	ePn	Pn	06 14 34.1	+0.3
SYVR				ePg	Px	06 14 56.0	
SYVR				Pmax		06 15 01.6	
	comp=Z,40nm,1.4s						
SYVR				eSg	Sx	06 16 29.8	
SYVR				Smax		06 16 48.7	
	comp=Z,432nm,2.0s						
SYVR	**Suvo**	7.13	243	eP	Pn	06 14 33.7	-0.1
HIA	**Hailar**	8.14	185	ePn	P	06 14 43.1	-4.8
	comp=Z,21nm,0.8s						
HIA	**Hailar**	8.14	185	eP	P	06 14 43.1	-4.8
HIA				pmax	pmax		
	comp=Z,21nm,0.8s						
KPC	**Khapcheranga**	9.14	216	⇑iPn	P	06 14 59.7	-2.1
KPC				ePg	Px	06 15 33.6	
KPC				Pmax		06 15 37.1	
	comp=Z,3.0nm,0.3s						
KPC				e		06 16 44.5	
KPC				eSg	Sx	06 17 30.4	
KPC				Smax		06 17 54.2	
	comp=Z,282nm,1.5s						
KPC	**Khapcheranga**	9.14	216	eP	P	06 15 00.0	-1.8
	comp=Z,7.0nm,2.0s						
KPC	**Khapcheranga**	9.14	216	eP	P	06 15 00.0	-1.8
KPC				pmax	pmax		
	comp=Z,7.0nm,2.0s						
TRG	**Tyrgan**	9.44	247	ePg	Px	06 15 40.1	
TRG				Pmax		06 15 55.8	
	comp=Z,20nm,2.8s						
TRG				eSg	Sx	06 17 41.0	
TRG				Smax		06 18 10.8	
	comp=Z,104nm,1.8s						
KAB	**Kabansk**	9.72	243	eSg	Sx	06 17 48.0	
KAB				Smax		06 18 16.7	
	comp=Z,2µm,1.5s						
KLR	**Kul'dur**	10.48	136	eP	P	06 15 17.3	-2.8
LSTR	**Listvyanka**	10.72	246	ePg	Px	06 16 02.7	
LSTR				Pmax		06 16 19.4	
	comp=Z,1.0nm,0.1s						
LSTR				eSg	Sx	06 18 20.9	
LSTR				Smax		06 18 27.8	
	comp=Z,88nm,2.1s						
TLY	**Talaya**	11.43	247	eSg	Sx	06 18 41.2	
TLY				Smax		06 18 53.6	
	comp=Z,52nm,1.9s						
ARS	**Arshan**	11.90	250	eSg	Sx	06 18 55.7	
ARS				Smax		06 19 29.9	
	comp=Z,143nm,1.3s						
BTGS	**Batagay**	12.11	26	eSg	Sx	06 19 00.8	
BTGS				Smax		06 19 25.7	
	comp=Z,318nm,1.1s						
ZAK	**Zakamensk**	12.42	243	eSg	Sx	06 19 14.0	
ZAK				Smax		06 19 36.6	
	comp=Z,62nm,1.7s						
MOY	**Mondy**	12.78	252	eSg	Sx	06 19 25.1	
MOY				Smax		06 19 51.0	
	comp=Z,96nm,1.9s						
SONM	**Songino Array**	12.89	228	Pn	P	06 15 52.7	-0.1
	comp=Z,0.3nm,0.3s,baz=28,slow=12,SNR=7.5						
SONM				Lg		06 19 34.3	
	comp=Z,2.4nm,0.3s,baz=34,slow=28,SNR=17						
ORL	**Orlik**	12.93	257	ePn	P	06 15 53.8	+0.5
ORL				max		06 16 39.0	
	comp=Z,2.0nm,0.7s						
ORL				e		06 18 26.8	
ORL				eSg	Sx	06 19 28.2	
ORL				Smax		06 19 35.0	
	comp=Z,66nm,1.6s						
UNR	**Ust'-Nera**	13.03	47	eSg	Sx	06 19 30.2	
MOMR	**Moma**	13.89	40	eSg	Sx	06 19 54.4	
TIXI	**Tiksi**	14.73	10	⇓eP	P	06 16 11.0	-5.8
KRAR	**Krasnoyarsk**	15.31	277	eP	P	06 16 25.5	+1.0
KRAR				e		06 19 17.3	
SEY	**Seymchan**	16.59	57	i P	P	06 16 40.1	-0.7
KURK	**Kurchatov**	25.26	273	i P	P	06 18 16.6	+2.1
MKAR	**Makanchi Array**	25.54	262	P	P	06 18 17.9	+0.8
	comp=Z,1.5nm,0.7s,mb3.7,baz=62,slow=8.7,SNR=5.5						
MKAR	**Makanchi Array**	25.54	262	i P	P	06 18 22.6	+5.5
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
JHJ	**Hachijo jima 2**	27.52	144	LR	LR	06 28 15.1	
	comp=Z,58nm,19.8s,MS3.1,baz=331,slow=34						
CHKZ	**Chkalovo**	28.08	284	P	P	06 18 40.3	0.0
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
BVAR	**Borovoye Array**	28.51	283	P	P	06 18 43.6	-0.7
	comp=Z,0.3nm,0.3s,mb3.4,baz=50,slow=11,SNR=2.1						
BVAR	**Borovoye Array**	28.51	283	P	P	06 18 43.6	-0.6
ARCES	**ARCESS Array B**	39.69	327	P	P	06 20 19.7	-0.9
	comp=Z,2.5nm,0.7s,mb4.0,baz=50,slow=9.5,SNR=8.7						
ARCES	**ARCESS Array B**	39.69	327	P	P	06 20 19.7	-0.9
ILAR	**Eielson Array**	41.44	40	P	P	06 20 35.0	+0.1
	comp=Z,1.2nm,0.7s,mb3.7,baz=311,slow=8.3,SNR=18						
FINES	**FINESS Array B**	44.27	317	P	P	06 20 57.1	-0.8
	comp=Z,2.5nm,0.7s,mb4.1,baz=46,slow=9.9,SNR=7.4						
FINES	**FINESS Array B**	44.27	317	i P	P	06 20 57.4	-0.5
FINES				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NB2	**NORSAR Subarra**	49.74	323	P	P	06 21 39.8	-1.1
	comp=Z,2.6nm,0.6s,mb4.4,baz=40,slow=7.0						
NOA	**NORSAR Array B**	49.74	323	P	P	06 21 39.4	-1.6
	comp=Z,2.5nm,0.7s,mb4.3,baz=41,slow=7.7,SNR=5.7						
NAO	**NORSAR Subarra**	50.03	323	P	P	06 21 39.8	-3.3
	comp=Z,2.6nm,0.6s,mb4.4						
AKASG	**Malin Array Be**	50.23	304	P	P	06 21 43.9	-0.9
	comp=Z,0.8nm,0.4s,mb4.1,baz=41,slow=8.5,SNR=4.0						
AKASG	**Malin Array Be**	50.23	304	i P	P	06 21 48.5	+3.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ANN	**Anapa**	50.55	294	eP	P	06 21 46.8	-0.5
	comp=Z,9.0nm,0.5s,mb5.0						
ANN				epP	pP	06 21 52.6	+4.3
ANN				eS	S	06 28 59.7	-1.3
ANN	**Anapa**	50.55	294	eP	P	06 21 46.8	-0.5
ANN				e*PP	pP	06 21 52.6	+4.3
ANN				eS	S	06 28 59.7	-1.3
ANN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
KHC	**Kasperske Hory**	58.07	312	eP	P	06 22 44.0	+1.7
GERES	**GERESS Array B**	58.25	312	P	P	06 22 42.9	-0.7
	comp=Z,1.0nm,0.6s,mb4.0,baz=45,slow=5.7,SNR=5.9						
GERES	**GERESS Array B**	58.25	312	P	P	06 22 42.9	-0.7
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PDAR	**Pinedale Array**	71.72	37	P	P	06 24 10.0	-0.8
	comp=Z,0.3nm,0.5s,mb3.5,baz=19,slow=3.1,SNR=4.2						
NVAR	**Mina Array Bea**	72.47	45	P	P	06 24 16.1	+0.7
	comp=Z,0.2nm,0.6s,mb3.2,baz=297,slow=5.2,SNR=4.3						
WRA	**Warramunga Arr**	77.86	167	P	P	06 24 45.2	-1.2
	comp=Z,0.5nm,0.6s,mb3.6,baz=351,slow=6.7,SNR=9.2						
WRA	**Warramunga Arr**	77.86	167	P	P	06 24 45.2	-1.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

TRN 11 07:06:29.3, 14.23N×60.52W, h80^{km}, MD3.9, M3.7(FDF)**, Md2.9**(FDF)**, 2C-4D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLW	**Petit Monier**	0.45	243	eP	P	07 06 43.8	+1.1
SLW				eS	S	07 06 54.0	+1.2
MVM	**Montagne Vaucl**	0.49	312	⇓iP	P	07 06 44.1	+1.1
CRM	**Caravelle**	0.65	324	⇓iP	P	07 06 45.4	+0.8
CRM				i S	S	07 06 57.4	+1.4
FDF	**Fort de France**	0.79	310	⇓iP	P	07 06 47.1	+0.9
FDF				i S	S	07 07 00.4	+1.7
SVB	**Belmont**	1.18	217	eP	P	07 06 51.6	+0.7
SVB				eS	S	07 07 08.2	+1.1
DSHT	**Scott's Head**	1.28	320	eP	P	07 06 53.0	+0.8
DSHT				eS	S	07 07 10.0	+0.7
DBCT	**Belle View Cho**	1.31	323	eP	P	07 06 53.2	+0.5
DBCT				eS	S	07 07 10.4	+0.5
MDN	**Morne-Daniel**	1.37	322	eP	P	07 06 54.2	+0.7
MDN				eS	S	07 07 13.0	+1.7
DWS	**Wesley**	1.54	330	eP	P	07 06 56.9	+1.3
DWS				eS	S	07 07 16.7	+1.7
BBL	**Barber's Block**	1.58	325	⇑eP	P	07 06 56.9	+0.7
MGG	**Marie-Galante**	1.85	336	⇓eP	P	07 06 59.7	-0.1
TBG	**Guadaloupe-3**	1.95	326	eP	P	07 07 01.7	+0.7
DOG	**Dongo Capester**	2.08	330	eP	P	07 07 03.4	+0.5
SCG	**Saint Claude**	2.11	328	eP	P	07 07 04.0	+0.7
SCG				eS	S	07 07 29.5	+1.0
BCG	**Bois Riant Cap**	2.13	330	eP	P	07 07 04.0	+0.4
DEG	**La Desirade**	2.14	346	eP	P	07 07 02.9	-0.8
LZG	**Guadaloupe-1**	2.25	328	⇑eP	P	07 07 05.9	+0.5
LZG				eS	S	07 07 33.3	+1.2
GRW	**Mount Saint Ca**	2.33	208	eP	P	07 07 07.2	+0.8
GRW				eS	S	07 07 34.7	+0.7
TPR	**Prospect**	3.03	185	eP	P	07 07 16.7	+0.4
TPR				eS	S	07 07 44.2	-7.3
NVBH	**Bath Hotel, Ne**	3.51	325	eP	P	07 07 25.7	+2.8
NVBH				eS	S	07 08 03.9	+0.5
TRN	**Trinidad (W)**	3.66	194	eP	P	07 07 25.8	+0.8
TRN				eS	S	07 08 05.1	-2.0

*NDI **11** 07:11:20.3±4.8, 34.79N×72.95E, h10^{km}, MD3.8, ML3.6*

*NNC **11** 07:11:27.4±1.3, 35.30N×72.43E, mpv3.8, Error ellipse: s-maj=20.8km s-min=9.4km az=107.0*

ISC 11 07:11:17.5±0.8**, 34.51N**±0.07×**72.8E**±0.1**, h10^{km}, n14, σ1§11**/22**, 3C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	3.19	130	eP	Pn	07 12 13.7	+5.0
THN				ex	Sn	07 12 55.3	+8.1
DLH	**Dalhousie**	3.28	126	eP	Pn	07 12 14.0	+3.9
DLH				eSB	Sb	07 13 00.0	+4.3
BHK	**Bhakra**	4.32	135	ex	Sn	07 13 24.3	+8.4
SDNR	**Sundarnagar**	4.60	130	eP	Pn	07 12 31.0	+2.2
SDNR				eS	Sn	07 13 23.4	+0.4
SMLA	**Simla**	4.98	131	eP	Pn	07 12 35.4	+1.3
SMLA				eS	Sn	07 13 31.2	-1.3
KLP	**Kalpa**	5.44	122	eP	Pn	07 12 44.2	+3.5
KLP				eS	Sn	07 13 42.8	-1.4
KLP				AML	AML	07 14 15.9	
	comp=E,206nm,0.6s						
KLP				AML	AML	07 14 16.2	
	comp=N,101nm,0.5s						
KHET	**Khetri**	6.91	157	eP	Pn	07 13 01.8	+0.5
KHET				eS	Sn	07 14 19.7	-1.1
KHET				AML	AML	07 14 26.8	
	comp=N,153nm,0.1s						
KHET				AML	AML	07 14 26.9	
	comp=E,144nm,0.1s						
NDI	**New Delhi**	6.91	146	ex	Sn	07 14 16.0	-5.0
KUDL	**Kundal**	7.08	153	eP	Pn	07 13 03.6	-0.2
KUDL				eS	Sn	07 14 25.5	+0.4
SONA	**Sohna**	7.23	149	eS	Sn	07 14 28.4	-0.4
SONA				AML	AML	07 14 30.6	
	comp=E,17nm,0.5s						
SONA				AML	AML	07 14 31.1	
	comp=N,10nm,0.5s						
AAK	**Ala-Archa**	8.22	9	⇑Sn	Sn	07 14 45.6	-7.9
	comp=N,4.8nm,0.8s						
KK31	**Karatay Array**	8.77	349	⇓Pn	P	07 13 26.6	-0.7
	comp=N,1.7nm,0.3s,baz=155,slow=11,SNR=23						
KK31				⇑Sn	Sn	07 15 00.9	-6.4
	comp=N,0.8nm,0.3s,baz=164,slow=22,SNR=6.3						
AB31	**Akbulak array**	17.54	331	⇓P	P	07 15 23.5	-0.1
	comp=N,0.5nm,0.5s,baz=149,slow=13,SNR=13						
AKTO	**Aktyubinsk**	19.24	330	⇑P	P	07 15 44.0	-0.4
	comp=N,0.9nm,1.1s						

*ATH **11** 07:23:47.7, 40.30N×25.23E, h25^{km}±1^{km}*

*NEIC **11** 07:23:47.7, 40.30N×25.23E, h25^{km}, MD3.1(ISK), After ATH.*

*THE **11** 07:23:48.7, 40.24N×25.30E, h16^{km}*

*ISK **11** 07:23:49.9, 40.17N×25.26E, h40^{km}, MD3.1*

*CSEM **11** 07:23:49.5±0.1, 40.22N×25.28E, h40^{km}, MD3.1, Error ellipse: s-maj=2.7km s-min=1.5km az=2.0*

ISC 11 07:23:48.4±0.5**, 40.29N**±0.03×**25.22E**±0.03**, h20**^{km}±6^{km}**, n51,** σ**1**^{s}**06**/59**, 4C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOS	Limnos	0.37	197	ePg	Pb	07 23 56.1	0.0
LIA	Limnos Island	0.39	184	⇑iPB	Pb	07 23 56.8	+0.3
LIA				eSB	Sb	07 24 02.7	+0.8
ALN	Alexandroupoli	0.88	46	ePg	Pb	07 24 04.0	-0.7
ALN				eSg	Sb	07 24 17.4	+1.4
RDO	Rodhopi	0.89	16	ePN	Pn	07 24 04.6	-1.3
RDO				eSN	Sn	07 24 17.2	-1.1
OUR	Ouranopolis	0.95	273	ePg	Pb	07 24 07.0	+1.0
EZN	Ezine	0.97	118	i PG	Pb	07 24 06.1	-0.2
EZN				i SG	Sb	07 24 18.8	+0.2
LPK	Lapseki	1.18	85	PN	Pn	07 24 10.0	0.0
PAIG	Paliouri	1.23	254	ePg	Pn	07 24 10.9	+0.2
PRK	Paraskevi	1.32	142	ePN	Pn	07 24 12.3	+0.4
PRK				eSN	Sn	07 24 30.8	+1.8
PLG	Polygyros	1.36	274	ePN	Pn	07 24 12.9	+0.4
NVR	Nevrokopi	1.48	316	ePN	Pn	07 24 14.5	+0.3
AYVA	Ayvalik	1.50	130	i P	Pn	07 24 15.2	+0.7
AOS	Alonnisos	1.52	223	ePg	Pn	07 24 14.6	-0.1
SOH	Sokhos	1.52	291	ePg	Pn	07 24 15.1	+0.3
SART	Tekirdag	1.55	74	i P	Pn	07 24 13.2	-2.0
MFT	Murefte	1.65	72	PN	Pn	07 24 17.6	+0.9
MFT				SN	Sn	07 24 36.7	-0.8
THE	Thessaloniki	1.75	282	ePb	Pb	07 24 18.4	-1.2
XOR	Xorichti	1.81	240	ePb	Pb	07 24 18.6	-2.1
XOR	Xorichti	1.81	240	ePb	Pb	07 24 18.5	-2.1
NEO	Neokhori	1.82	238	ePB	Pb	07 24 18.6	-2.2
MRMT	Marmara Adasi	1.84	79	PN	Pn	07 24 20.4	+1.0
MRMT				SN	Sn	07 24 40.0	-2.4
EDRB	Edirne	1.94	36	PN	Pn	07 24 22.6	+1.8
EDRB				SN	Sn	07 24 46.7	+1.8
KNT	Kendrikon	1.97	297	ePn	Pn	07 24 21.8	+0.6
EDC	Edincik	2.02	87	ePN	Pn	07 24 22.6	+0.6
BNT	Bandirma	2.07	87	ePN	Pn	07 24 22.6	0.0
LIT	Litokhoron	2.10	266	ePn	Pn	07 24 23.6	+0.5
BALB	Balikesir	2.15	107	ePN	Pn	07 24 23.8	0.0
URLA	Izmir	2.20	150	i P	Pn	07 24 13.8	-11
BTOK	Tokmak	2.22	103	i P	Pn	07 24 30.0	+5.1
GRG	Griva	2.25	288	ePn	Pn	07 24 25.9	+0.7
VAY	Valandovo	2.26	298	i Pn	Pn	07 24 32.2	+6.8
BLCB	Balcova	2.37	143	ePN	Pn	07 24 26.0	-0.9
KCT	Karacabey	2.40	89	ePN	Pn	07 24 27.1	-0.3
AKS	Akhisar	2.45	124	ePN	Pn	07 24 26.6	-1.5
IZM	Izmir	2.46	139	ePN	Pn	07 24 27.7	-0.6
AGG	Agios Georgios	2.56	241	ePn	Pn	07 24 29.8	+0.1
CTT	Catalca	2.59	70	ePN	Pn	07 24 30.5	+0.4
ELBA	Catalca	2.59	70	i P	Pn	07 24 28.4	-1.7
FNA	Florina	2.97	281	ePn	Pn	07 24 36.3	+0.8
ULDT	Uludag	3.00	91	i P	Pn	07 24 36.6	+0.6
BIA	Bitola	3.05	285	ePn	Pn	07 24 45.2	+8.5
YLV	Yalova	3.18	84	ePN	Pn	07 24 39.4	+0.8
TIRR	Tirgusor	4.79	29	⇓P	Pb	07 25 15.0	+3.4
HARR	Harsova	4.84	24	⇓P	Pn	07 24 59.9	-2.1
HARR	Harsova	4.84	24	⇓P	Pn	07 24 59.9	-2.2
VOIR		5.15	359	⇓P	Pn	07 25 17.0	+11
MLR	Muntele Rosu	5.23	6	⇑P	Pn	07 25 07.2	-0.4
MLR	Muntele Rosu	5.23	6	⇑P	Pn	07 25 07.2	-0.3
CFR	Carcaliu	5.34	23	⇑P	Pn	07 25 13.5	+4.4
VRI	Vrincioaia	5.69	11	⇓P	Pn	07 25 14.5	+0.5
VRI	Vrincioaia	5.69	11	⇓P	Pn	07 25 14.5	+0.5

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*THE **11** 07:24:28.0, 40.31N×25.32E, h10^{km}, ML3.9*

*ATH **11** 07:24:28.1, 40.31N×25.29E, h17^{km}±5^{km}, MD3.9/3*

*NEIC **11** 07:24:28.1, 40.31N×25.29E, h17^{km}, MD3.9(ATH), After ATH.*

*CSEM **11** 07:24:28.2±0.1, 40.30N×25.30E, h7^{km}±1^{km}, ML3.9, Error ellipse: s-maj=3.2km s-min=2.2km az=129.0*

ISC 11 07:24:26.8±0.7**, 40.37N**±0.03×**25.24E**±0.04**, h6**^{km}±5^{km}**, n16,** σ**1**^{s}**21**/25**, 4C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOS	Limnos	0.45	195	ePg	Pg	07 24 35.9	+0.1
LIA	Limnos Island	0.47	185	⇑iPB	Pb	07 24 36.5	-0.5
LIA				eSB	Sb	07 24 42.7	-1.2
RDO	Rodhopi	0.81	16	ePN	Pn	07 24 45.1	+0.6
RDO				eSN	Sn	07 24 55.9	-1.0
ALN	Alexandroupoli	0.81	49	ePg	Pg	07 24 43.3	+0.2
ALN				eSg	Sg	07 24 54.9	+1.0
OUR	Ouranopolis	0.96	268	ePg	Pg	07 24 46.8	+0.8
PAIG	Paliouri	1.27	250	ePg	Pg	07 24 52.9	+0.7
PLG	Polygyros	1.37	271	ePB	Pb	07 24 52.7	+0.3
PLG				eSN	Sn	07 25 14.2	+3.2
PRK	Paraskevi	1.37	144	ePN	Pn	07 24 52.7	+0.2
PRK				eSN	Sn	07 25 10.7	-0.5
NVR	Nevrokopi	1.43	314	ePN	Pn	07 24 56.6	+3.2
SOH	Sokhos	1.50	288	ePg	Pg	07 24 56.3	-0.5
THE	Thessaloniki	1.75	279	ePb	Pb	07 25 00.1	+1.1
KZN	Kozani	2.65	270	ePN	Pn	07 25 10.7	-0.1
BARS	Barje	3.54	315	⇑iPn	Pg	07 25 41.4	+3.9
BARS				Sn	Sg	07 26 21.8	-2.9
BOLS	Boljevac	4.23	326	⇑iPn	Pg	07 25 49.7	-1.7
BOLS				Sn	Sg	07 26 43.8	-4.0
NVSS	Nova Varos 2	5.18	309	⇑iPn	Pg	07 26 08.8	-1.6
NVSS				Sn	Sb	07 27 08.2	+7.4
DIVS	Divcibare	5.39	315	i Pn	Pn	07 25 53.0	+3.3
DIVS				Sn	Sn	07 26 52.1	-0.8

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*NIED **11** 07:40:00, 35.30N×135.80E, h5^{km}, Mw3.3 Best double couple: $M_0 8.84\times10^{13}$ NP1:ϕ_s330°, δ69°, λ38°. NP2:ϕ_s224°, δ55°, λ155°.*

*JMA **11** 07:40:35.7, 35.31N×135.78E, h6^{km}±1^{km}, M3.4*

JMA Felt II J1.

ISC 11 07:40:35.7±0.7**, 35.30N**±0.04×**135.76E**±0.06**, h6**^{km}**, n5,** σ**0**^{s}**39**/9**, 2C-2D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFM	Mihama	0.29	38	⇑P	Pg	07 40 41.6	0.0
JFM				S	Sg	07 40 45.3	-0.3
JWT	Wachi	0.29	267	⇓P	Pg	07 40 41.7	0.0
JWT				S	Sg	07 40 45.9	+0.2
JKY	Yasaka	0.63	302	⇓P	Pg	07 40 48.0	-0.3
JHE	Heguri	0.65	186	⇑P	Pg	07 40 48.6	-0.1
JHE				S	Sg	07 40 57.2	-0.1
MAT	Matsushiro	2.34	57	P	Pn	07 41 15.8	+0.5
MAT				S	Sn	07 41 48.8	+4.1

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*SOF **11** 07:42:11.9, 40.26N×25.20E, h2^{km}, MD3.0*

*ISK **11** 07:42:14.1, 40.30N×25.33E, h2^{km}, MD3.2*

*ATH **11** 07:42:14.0, 40.31N×25.24E, h25^{km}, MD3.2/3*

*NEIC **11** 07:42:14.0, 40.31N×25.24E, h25^{km}, MD3.2(ATH), After ATH.*

*CSEM **11** 07:42:14.5±0.1, 40.32N×25.24E, h8^{km}, ML3.3, Error ellipse: s-maj=2.2km s-min=2.0km az=104.0*

*THE **11** 07:42:14.8, 40.24N×25.34E, h17^{km}, ML3.3*

*SKO **11** 07:42:16.2, 40.15N×25.36E*

ISC 11 07:42:13.5±0.7**, 40.31N**±0.03×**25.25E**±0.03**, h6**^{km}±6^{km}**, n43,** σ**1**^{s}**01**/54**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOS	Limnos	0.39	199	ePg	Pg	07 42 22.2	+0.8
LIA	Limnos Island	0.41	187	ePB	Pb	07 42 22.9	+0.1
ALN	Alexandroupoli	0.85	45	ePg	Pg	07 42 30.6	+0.1
ALN				eSg	Sg	07 42 42.5	+0.8
ALN	Alexandroupoli	0.85	45	ePg	Pg	07 42 30.5	+0.1
ALN				eSg	Sg	07 42 42.5	+0.8
RDO	Rodhopi	0.87	14	ePN	Pn	07 42 30.8	-1.3
EZN	Ezine	0.95	120	PG	Pg	07 42 32.0	-0.5
OUR	Ouranopolis	0.97	272	ePg	Pg	07 42 33.2	+0.3
LPK	Lapseki	1.16	86	PN	Pn	07 42 35.6	-0.6
LPK				SN	Sn	07 42 52.3	-0.2
PAIG	Paliouri	1.26	253	ePg	Pg	07 42 37.1	-1.6
PRK	Paraskevi	1.32	143	ePN	Pn	07 42 38.5	0.0
PRK				eSN	Sn	07 42 57.1	+0.5
KDZ	Kurdzhali	1.35	5	i P	Pb	07 42 38.5	-0.3
PLG	Polygyros	1.38	273	ePN	Pn	07 42 39.0	-0.4
RZN	Rozhen	1.44	344	i P	Pn	07 42 40.3	0.0
NVR	Nevrokopi	1.48	315	ePN	Pn	07 42 40.9	0.0
AYVA	Ayvalik	1.49	131	i P	Pn	07 42 41.2	+0.2
AYVA				i S	Sb	07 42 59.4	-0.9
SART	Tekirdag	1.52	75	i P	Pn	07 42 39.6	-1.8
SART				i S	Sb	07 42 59.2	-2.0
SOH	Sokhos	1.54	290	ePb	Pb	07 42 41.5	-0.5
AOS	Alonnisos	1.55	223	ePg	Pg	07 42 40.9	-3.6
MFT	Murefte	1.62	72	ePN	Pn	07 42 41.7	-1.1
MMB	Musomiste	1.73	319	i P	Pn	07 42 44.0	-0.3
DIM	Dimitrovgrad	1.76	7	i P	Pn	07 42 47.0	+2.2
PLD	Plovdiv	1.84	347	P	Pn	07 42 50.5	+4.4
EDRB	Edirne	1.91	36	ePN	Pn	07 42 48.9	+1.9
KNT	Kendrikon	1.98	296	ePn	Pn	07 42 48.2	+0.1
EDC	Edincik	2.00	88	ePN	Pn	07 42 48.6	+0.4
BNT	Bandirma	2.04	88	ePN	Pn	07 42 48.8	-0.1
LIT	Litokhoron	2.12	265	ePn	Pn	07 42 49.8	-0.2
BALB	Balikesir	2.13	107	ePN	Pn	07 42 51.3	+1.2
BTOK	Tokmak	2.20	103	i P	Pn	07 42 49.0	-2.2
BTOK				i S	Sn	07 43 18.7	-0.4
KKB	Krupnik	2.26	314	i P	Pn	07 42 51.7	-0.3
GRG	Griva	2.26	288	ePn	Pn	07 42 52.6	+0.5
VAY	Valandovo	2.27	297	ePn	Pn	07 42 57.5	+5.3
VAY				eSn	Sn	07 43 27.4	+6.5
VAY	Valandovo	2.27	297	ePn	Pn	07 42 57.4	+5.2
VAY				eSn	Sn	07 43 27.4	+6.5
BLCB	Balcova	2.37	144	ePN	Pn	07 42 55.2	+1.7
KCT	Karacabey	2.38	90	ePN	Pn	07 42 54.6	+0.9
JMB	Yambol	2.38	24	P	Pn	07 42 54.5	+0.8
AKS	Akhisar	2.44	125	ePN	Pn	07 42 55.9	+1.4
IZM	Izmir	2.46	140	ePN	Pn	07 42 55.8	+0.9
CTT	Catalca	2.56	70	ePN	Pn	07 42 57.8	+1.5
ELBA	Catalca	2.56	70	i P	Pn	07 42 54.8	-1.5
ELBA				i S	Sn	07 43 35.5	+7.4
VTS	Vitosha	2.75	327	P	Pn	07 43 03.5	+4.5
ULDT	Uludag	2.98	92	i P	Pn	07 43 07.3	+5.1
ULDT				i S	Sn	07 43 47.5	+8.7
YLV	Yalova	3.16	84	ePN	Pn	07 43 04.8	0.0

MOS 11 07:45:47.9±2.1**, 56.11N**×**111.14E, h25**^{km}**, mb4.2**/1**, Error ellipse: s-maj=46.7km s-min=25.7km az=57.8, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOA	Uoyan	0.33	86	ePG	Pb	07 45 55.0	-0.3
YOA				e		07 46 01.0	
YOA				pmax	pmax		
	comp=Z,268nm,0.3s						
YOA				smax			
	comp=E,5μm,0.4s						
YLYR	Ulyunkhan	1.24	179	ePN	Pn	07 46 09.2	-0.6
YLYR				e		07 46 27.6	
YLYR				pmax	pmax		
	comp=Z,98nm,0.3s						
YLYR				smax			
	comp=E,235nm,0.4s						
NLYR	Nelyaty	2.57	80	ePN	Pn	07 46 32.1	+3.2
NLYR				e		07 47 07.0	
NLYR				pmax	pmax		
	comp=Z,28nm,0.6s						
NLYR				smax			
	comp=N,229nm,0.9s						
CRS	Chara	4.03	76	ePN	Pn	07 47 01.8	+12
CRS				e		07 47 53.2	
CRS				pmax	pmax		
	comp=Z,31nm,0.8s						
CRS				smax			
	comp=N,137nm,1.7s						
ZAK	Zakamensk	7.42	223	ePN	Pn	07 47 40.5	+3.0
ZAK				e		07 49 36.7	
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MOY	Mondy	7.46	238	ePN	Pn	07 47 37.2	-0.9
MOY				e		07 48 02.3	
MOY				e		07 49 40.7	
MOY				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MOY				smax			
	comp=E,36nm,1.2s						

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*CSEM **11** 07:55:30.9±0.1, 35.20N×32.65E, h73^{km}±1^{km}, Mw3.2, Error ellipse: s-maj=2.4km s-min=2.0km az=148.0*

*ISK **11** 07:55:31.8, 35.17N×32.64E, h64^{km}, MD3.3*

*HLW **11** 07:55:32.1, 35.19N×32.58E, h20^{km}, Mb3.3*

*NIC **11** 07:55:33.4±0.1, 35.24N×32.73E, h61^{km}, ML3.2, MW3.2*

*GII **11** 07:55:37.7±0.4, 34.70N×32.97E, h5^{km}±24^{km}, ML2.8/4, Mw2.8/5*

ISC 11 07:55:32.0±0.4**, 35.10N**±0.03×**32.69E**±0.04**, h77**^{km}±5^{km}**, n42,** σ**1**^{s}**03**/59**, 4C-3D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALFC	Alevga	0.09	307	⇑eP	P	07 55 42.9	-0.2
	57nm,0.2s						
ALFC				S	S	07 55 49.9	-1.4
LEF	Lefka	0.17	84	PG	P	07 55 42.9	-0.3
AKMC	Akamas	0.30	256	⇓iP	P	07 55 44.5	+0.5
PPCY	Paphos	0.35	232	⇓eP	P	07 55 45.2	+0.8
SZAC	Souni-Zanaja	0.38	155	⇑eP	P	07 55 45.5	+1.0
	25nm,0.2s						
SZAC				S	S	07 55 55.1	+1.2
MAMC	Mammari	0.44	81	P	P	07 55 45.3	+0.3
CSS	Prodhromos	0.55	105	⇑P	P	07 55 46.4	+0.4
	8.0nm,0.3s						
CSS				S	S	07 55 56.3	-0.1
CSS	Prodhromos	0.55	105	PG	P	07 55 45.6	-0.4
CSS				SG	S	07 55 55.6	-0.8
CSS	Prodhromos	0.55	105	Pg	P	07 55 46.4	+0.4
CSS	Prodhromos	0.55	105	⇑eP	P	07 55 46.4	+0.4
	8.0nm,0.3s						
CSS				eSg	S	07 55 55.6	-0.8
CSS				S	S	07 55 56.3	-0.1
PHNC	Paralimni	1.11	95	P	P	07 55 55.1	+2.7
IKL	Isikli	1.39	35	PN	P	07 55 55.7	-0.6
IKL				SN	S	07 56 12.8	-1.5
MERS	Mersin	2.31	40	ePN	P	07 56 08.7	0.0
ELL	Elmali	2.79	307	ePN	P	07 56 14.2	-1.3
HWQ	Hawqa	2.81	106	ePn	P	07 56 16.6	+0.8
HWQ	Hawqa	2.81	106	ePn	P	07 56 16.5	+0.8
KARA	Karaisali	2.88	41	ePN	P	07 56 16.9	+0.2
HNTI	Hanita	2.88	134	Pn	P	07 56 17.5	+0.7
HNTI				Sn	S	07 56 48.9	-1.5
HTY	Hatay	2.99	69	ePN	P	07 56 18.8	+0.5
MMA0	Mount Meron ar	3.07	132	Pn	P	07 56 20.4	+1.0
MMA0				Sn	S	07 56 53.9	-1.1
KSDI	Kefar Szold	3.12	127	Pn	P	07 56 21.1	+1.1
KSDI				Sn	S	07 56 55.1	-1.1
OFRI	‘Ofer	3.13	142	Pn	P	07 56 20.9	+0.7
OFRI				Sn	S	07 56 55.2	-1.3
FETY	Fethiye	3.30	299	ePN	P	07 56 22.6	0.0
SLTI	Sal’it	3.46	145	Sn	S	07 57 03.2	-1.7
KOZT	Kozan	3.47	46	ePN	P	07 56 25.0	0.0
MMLI	Mount Malkishu	3.50	139	Pn	P	07 56 26.4	+1.0
MMLI				Sn	S	07 57 04.5	-1.3
DALT	Dalyan (Mudla)	3.68	298	ePN	P	07 56 26.7	-1.2
YER	Yerkesik	4.10	301	ePN	P	07 56 33.3	-0.4
MKRJ	Makawir	4.32	144	Pn	P	07 56 38.8	+2.1
DAT	Datca	4.45	293	ePN	P	07 56 38.1	-0.5
AMAG	Maghara	4.47	174	P	P	07 56 39.4	+0.6
PRNI	Paran	5.12	157	Pn	P	07 56 48.7	+0.9
PRNI				Sn	S	07 57 44.7	-1.5
SUZ		5.25	179	P	P	07 56 50.2	+0.6
HNKL	Nakhl	5.27	168	P	P	07 56 50.6	+0.8
GLL	Jalalah	5.57	189	P	P	07 56 54.7	+0.7
MBH	Mount Berech	5.62	160	Pn	P	07 56 56.5	+1.9
MBH				Sn	S	07 57 57.5	-1.0
EIL	Elat	5.75	160	Pn	P	07 56 58.0	+1.6
EIL				Sn	S	07 58 00.4	-1.3
HMAT	Matruh	6.16	231	P	P	07 57 02.0	-0.2
HMAT				S	S	07 58 06.7	-5.2
HKAT	Jabal Katrina	6.65	170	P	P	07 57 09.6	+0.6
SWA1		8.30	227	⇓P	P	07 57 30.9	-0.7
SWA1				S	S	07 58 58.0	-6.6
SWA2		8.46	228	P	P	07 57 32.9	-1.0
SWA2		8.46	228	P	P	07 57 32.8	-1.1

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*IDC **11** 08:23:33.4±0.8, 6.75N×72.97W, h158^{km}±13^{km}, mb3.5/6, mb1 3.8/8, mb1mx3.5/23, mbtmp4.0/8, Error ellipse: s-maj=39.1km s-min=7.8km az=132.0*

*NEIC **11** 08:23:34.5±0.7, 6.76N×72.98W, h170^{km}±7^{km}, mb3.7/1, Error ellipse: s-maj=14.1km s-min=10.5km az=103.0*

ISC 11 08:23:33.2±0.7**, 7.02N**±0.09×**73.2W**±0.1**, h150**^{km}**, n11,** σ**0**^{s}**79**/12**, mb3.7**/6**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	El Rosal	2.41	207	P	P	08 24 14.9	+1.1
	79nm,0.3s,baz=88,slow=23,SNR=680						
ROSC				S	S	08 24 44.0	-0.9
	189nm,0.3s,baz=96,slow=18,SNR=16						
SDV	Santo Domingo	3.17	54	P	P	08 24 24.7	+1.2
	baz=268,slow=7.4						
SDV				S	S	08 25 01.2	-0.7
	28nm,0.3s,baz=339,slow=9.6,SNR=9.4						
SAML	Samuel	18.75	148	P	P	08 27 37.1	-6.2
	0.9nm,0.3s						
TXAR	Lajitas Array	36.26	312	P	P	08 30 24.6	+0.7
	0.4nm,0.4s,mb3.4,baz=124,slow=9.2,SNR=14						
ULM	Lac du Bonnet	47.07	340	P	P	08 31 51.4	-0.2
	1.7nm,0.3s,mb4.1,baz=144,slow=7.6,SNR=11						
PDAR	Pinedale Array	47.86	324	P	P	08 31 58.5	+0.6
	0.5nm,0.5s,mb3.4,baz=126,slow=11,SNR=4.5						
YKA	Yellowknife Ar	63.05	340	P	P	08 33 45.6	-0.9
	1.0nm,0.4s,mb4.0,baz=133,slow=6.4,SNR=6.5						
DLBC	Dease Lake	67.11	331	P	P	08 34 12.1	-0.5
	0.9nm,0.7s,mb3.7,baz=153,slow=14,SNR=4.1						
DLBC	Dease Lake	67.11	331	P	P	08 34 12.1	-0.5
INK	Inuvik	72.81	340	P	P	08 34 46.3	-0.5
	0.6nm,0.5s,mb3.6,baz=116,slow=18,SNR=6.1						
WRA	Warramunga Arr	150.34	242	PKPbc	PKPdf	08 43 06.6	+4.5
	0.2nm,0.4s,baz=108,slow=2.7,SNR=6.3						

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*NEIC **11** 08:31:47.3, 17.89N×101.87W, h72^{km}, MD3.8(MEX), After MEX.*

MEX 11 08:31:49.1±0.4**, 17.98N**×**101.84W, h47**^{km}±9^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.52	136	i P	P	08 31 58.8	-1.6
ZIIG				i S	S	08 32 06.7	-1.8
ZIIG	Zihuatanejo	0.52	136	i P	P	08 31 58.8	-1.6
ZIIG				i S	S	08 32 07.6	-0.8
CAIG	El Cayaco	1.77	121	i P	P	08 32 15.8	-2.0
CAIG				i S	S	08 32 36.2	-2.9
CAIG	El Cayaco	1.77	121	i P	P	08 32 13.2	-4.6
CAIG				i S	S	08 32 35.8	-3.4
MOIG	Morelia	1.80	20	i P	P	08 32 16.6	-1.8
MOIG				i S	S	08 32 36.8	-3.2
MOIG	Morelia	1.80	20	i P	P	08 32 16.6	-1.7
MOIG				i S	S	08 32 38.4	-1.7
ACX	Acapulco	2.15	121	i P	P	08 32 24.5	+1.3
ACX				i S	S	08 32 52.0	+3.3
SFJM	Santa Fe	2.74	336	eP	P	08 32 30.0	-1.7
PPM	Popocatepetl	3.24	70	eP	P	08 32 38.0	-0.7
VHO	Vista Hermosa	4.96	100	i S	S	08 34 10.9	+11

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*IDC **11** 08:56:48.0±1.2, 26.51S×64.68W, mb3.7/3, mb1 3.9/7, mb1mx3.8/16, mbtmp3.7/7, ML3.8/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/19, Error ellipse: s-maj=39.1km s-min=18.5km az=113.0*

*NEIC **11** 08:56:54.0±1.0, 26.50S×64.57W, h45^{km}±13^{km}, mb4.3/3, Error ellipse: s-maj=16.3km s-min=9.8km az=107.0*

NEIC Felt [IV] at San Miguel de Tucuman.

ISC 11 08:56:51.1±1.1**, 26.49S**±0.06×**64.59W**±0.10**, h35**^{km}±15^{km}**, n19,** σ**0**^{s}**92**/18**, mb4.0**/5**, MS3.5**/1**, Tucuman Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CFAA	Coronel Fontan	6.01	211	Pn	P	08 58 18.6	-1.4
	0.3nm,0.3s,baz=25,slow=11,SNR=40						
CFAA				Sn	S	08 59 28.8	+0.2
	2.1nm,0.3s,baz=329,slow=20,SNR=4.3						
CFAA				Lg		08 59 56.1	
	4.7nm,0.3s,baz=312,slow=16,SNR=4.1						
ZON	Zonda	6.18	214	eP	P	08 58 26.5	+4.2
CPUP	Villa Florida	6.51	90	ePn	P	08 58 27.8	+0.8
	16nm,1.3s						
TLL	Tololo Astrono	6.59	235	eP	P	08 58 28.4	+0.3
CMCH	Combarbala	7.31	229	eP	P	08 58 29.6	-8.5
FCH	Farellones	8.42	215	eP	P	08 58 54.8	+1.2
LPAZ	La Paz	10.67	341	Pn	P	08 59 24.8	+0.1
	0.2nm,0.3s,baz=171,slow=9.0,SNR=24						
LPAZ	La Paz	10.67	341	ePn	P	08 59 26.2	+1.5
SIV	San Ignacio	10.95	18	Pn	P	08 59 27.7	-0.8
	1.3nm,0.3s,baz=197,slow=12,SNR=32						
TRQA	Tornquist	11.75	170	ePn	P	08 59 36.7	-2.6
	13nm,0.7s						
PLCA	Paso Flores	15.04	198	Pn	P	09 00 23.1	+0.3
	0.1nm,0.3s,baz=27,slow=14,SNR=2.0						
PLCA				LR	LR	09 06 06.6	
	comp=Z,83nm,18.7s,baz=342,slow=37						
SAML	Samuel	17.49	5	eP	P	09 00 54.2	+0.1
	7.5nm,0.8s						
USHA	Ushuaia	28.46	185	LR	LR	09 15 35.5	
	comp=Z,109nm,18.4s,MS3.5,baz=239,slow=40						
SDV	Santo Domingo	35.65	350	eP	P	09 03 47.1	-0.9
	1.5nm,0.3s,mb4.4						
QSPA	South Pole Qui	63.73	180	eP	P	09 07 21.8	+0.9
	3.2nm,0.7s,mb4.5						
DBIC	Dimbokro	66.58	69	P	P	09 07 40.8	+0.5
	2.2nm,0.9s,mb4.2,baz=61,slow=10,SNR=2.8						
TXAR	Lajitas Array	66.96	323	P	P	09 07 41.9	-0.6
	0.2nm,0.8s,mb3.2,baz=141,slow=5.8,SNR=2.8						
PDAR	Pinedale Array	80.39	328	P	P	09 09 00.8	+0.2
	0.3nm,0.5s,mb3.5,baz=114,slow=6.4,SNR=4.5						
MKAR	Makanchi Array	146.94	43	PKPbc	PKPbc	09 16 31.9	+2.5
	0.4nm,0.8s,baz=282,slow=3.8,SNR=3.7						

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*NIED **11** 09:10:00, 27.00N×130.30E, h5^{km}, Mw3.9 Best double couple: $M_0 8.77\times10^{14}$ NP1:ϕ_s253°, δ47°, λ-78°. NP2:ϕ_s57°, δ44°, λ-102°.*

JMA 11 09:10:04.0±0.1**, 27.01N**×**130.30E, h50**^{km}**, M3.6, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JZK	Kikaishima	1.33	347	P	P	09 10 27.1	+0.4
JZK				eS	S	09 10 44.3	+0.7
JTK	Tokunoshima	1.43	303	P	P	09 10 27.8	-0.2
JTK				S	S	09 10 45.1	-0.7
JMZ	Minamidaito 2	1.45	145	P	P	09 10 28.2	-0.1
JMZ				eS	S	09 10 45.7	-0.6
JAM	Amami Oshima	1.53	336	P	P	09 10 29.1	-0.3
JAM				eS	S	09 10 46.3	-1.9
JOW	Kunigami	1.82	265	P	P	09 10 34.2	+0.7
JOW				S	S	09 10 55.1	-0.2
JIH	Iheya	2.08	271	P	P	09 10 37.7	+0.5
JIH				eS	S	09 11 01.9	0.0
JJT2	Tamagusuku 2	2.44	250	P	P	09 10 42.6	+0.2
JJT2				eS	S	09 11 11.3	+0.2
NAH1	Naha	2.47	252	P	P	09 10 42.8	0.0
NAH1				eS	S	09 11 11.2	-0.6
JAGN	Aguni-jima	2.77	262	P	P	09 10 47.5	+0.6
JAGN				eS	S	09 11 17.8	-1.5
JKE	Kume jima 2	3.22	259	eS	S	09 11 29.8	-0.9

PRE 11 09:49:55.3±5.7**, 26.04S**×**29.21E, ML3.7, Explosion, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLR	Silverton	0.88	290	eP	Pg	09 50 12.6	-0.3
SLR				eS	Sg	09 50 24.8	+0.1
SLR				AML	AML	09 50 37.1	
	comp=Z,1μm,0.8s						
PRYS	Parys	1.88	241	eP	Pn	09 50 29.4	+0.5
PRYS				eS	Sn	09 50 52.5	-1.2
PRYS				AML	AML	09 50 57.5	
	comp=Z,407nm,0.4s						
KSR	Koster	2.09	275	eP	Pn	09 50 32.8	+0.9
KSR				eS	Sn	09 50 58.6	-0.4
KSR				AML	AML	09 51 02.2	
	comp=Z,838nm,0.4s						
POGA	Pongola	2.53	122	eP	Pn	09 50 43.2	+4.9
POGA				eS	Sn	09 51 11.2	+0.9
POGA				AML	AML	09 51 23.3	
	comp=Z,252nm,0.4s						

SWZ	**Schweizer**	**3.65**	**251**	*e*P	Pn	09 50 49.2	-5.0
SWZ				*e*S	Sn	09 51 13.0	-26
SWZ				AML	AML	09 51 17.4	
	comp=Z,87nm,0.4s						
MSNA	**Messina**	**3.75**	**12**	*e*S	Sn	09 50 53.3	-48
MSNA				AML	AML	09 51 02.2	
	comp=Z,70nm,0.4s						
BOSA	**Boshof**	**4.35**	**233**	*e*P	Pn	09 51 00.9	-3.3
BOSA				*e*S	Sn	09 51 55.8	-0.6
BOSA				AML	AML	09 52 15.0	
	comp=Z,477nm,0.5s						
PKA	**Prieska**	**6.76**	**236**	*e*S	Sn	09 52 28.8	-28
PKA				AML	AML	09 52 53.5	
	comp=Z,18nm,0.5s						
UPI	**Upington**	**7.45**	**250**	*e*P	Pn	09 52 55.5	+68
UPI				*e*S	Sn	09 53 32.8	+19
UPI				AML	AML	09 53 50.2	
	comp=Z,25nm,0.4s						
SUR	**Sutherland**	**9.68**	**227**	*e*P	P	09 52 10.2	-8.7
SUR				*e*S	Sn	09 53 55.5	-14
CVNA	**Calvinia**	**9.90**	**235**	*e*S		09 52 04.1	
CVNA				AML	AML	09 52 20.9	
	comp=Z,3.6nm,0.3s						

NAO 11 10:00:11.0±1.3,59.83N×22.26E,ML2.0

HEL 11 10:00:11.3±0.1,59.84N×22.32E,ML2.3(UPP), ML2.0(NAO),Explosion

BER 11 10:00:11.7±2.9,59.86N×22.27E,ML2.0(NAO), Suspected explosion

IDC 11 10:00:11.4±1.8,59.86N×22.40E,mb1 3.0/4, mb1mx2.9/22,mbtmp2.9/4,ML2.6/3,Error ellipse: s-maj=23.3km s-min=6.3km az=161.0

ISC 11 10:00:10.3±0.5,**59.93N**±0.05×**22.31E**±0.05,**n31**,σ**1^{s}13**/45,
Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	**1.19**	**283**	*e*P	**Pb**	**10 00 33.2**	**-0.2**
AAL				*e*S	**Sb**	**10 00 49.0**	**-0.2**
PVF	**Pernaja**	**1.88**	**69**	*e*P	**Pn**	**10 00 45.0**	**+1.1**
PVF				*e*S	**Sn**	**10 01 07.9**	**-0.8**
NRTU	**Norrtaelje**	**1.88**	**264**	*e*P	**Pn**	**10 00 44.2**	**+0.2**
NRTU				*e*S	**Sn**	**10 01 09.4**	**+0.7**
GRAU	**Graesoe**	**1.93**	**284**	*e*P	**Pn**	**10 00 45.1**	**+0.4**
FORU	**Forsmark**	**2.12**	**284**	*e*P	**Pn**	**10 00 47.4**	**+0.1**
FLYU	**Flymyra**	**2.23**	**277**	*e*P	**Pn**	**10 00 49.6**	**+0.6**
UPP	**Uppsala**	**2.36**	**270**	*e*P	**Pn**	**10 00 51.4**	**+0.5**
NYNU	**Nynaeshamn**	**2.39**	**249**	*e*P	**Pn**	**10 00 51.3**	**0.0**
FIA0	**FINESS Array S**	**2.40**	**49**	*e*P	**Pn**	**10 00 53.5**	**+2.1**
FIA0				*e*S	**Sn**	**10 01 22.5**	**+0.6**
FIA0	**FINESS Array S**	**2.40**	**49**	Pn	**Pn**	**10 00 53.5**	**+2.1**
	baz=230,slow=16						
FIA0				Lg		10 01 26.6	
	baz=240,slow=28						
FINES	**FINESS Array B**	**2.40**	**49**	Pn	**Pn**	**10 00 53.5**	**+2.1**
	1.3nm,0.3s,baz=231,slow=14,SNR=27						
FINES				Lg		10 01 26.3	
	3.1nm,0.3s,baz=246,slow=25,SNR=12						
KEF	**Keuruu**	**2.57**	**28**	*e*SB	**Sb**	**10 01 31.4**	**+2.1**
OSTU	**Oestervaala**	**2.61**	**279**	*e*P	**Pn**	**10 00 54.9**	**+0.4**
BACU	**Backbrunna**	**2.62**	**271**	*e*P	**Pn**	**10 00 55.1**	**+0.5**
VJF	**Virojoki**	**2.69**	**75**	*e*P	**Pn**	**10 00 55.9**	**+0.3**
VJF				*e*S	**Sn**	**10 01 27.8**	**-1.4**
VSU	**Vasula**	**2.71**	**121**	*e*P	**Pn**	**10 00 55.3**	**-0.5**
VSU				*e*SG	**Sg**	**10 01 33.4**	**-7.2**
ESKU	**Eskilstuna**	**3.09**	**259**	*e*P	**Pn**	**10 01 01.3**	**0.0**
ESKU				*e*S	**Sn**	**10 01 41.4**	**+1.9**
VIKU	**Vikbolandet**	**3.22**	**246**	*e*P	**Pn**	**10 01 02.4**	**-0.8**
VIKU				*e*S	**Sn**	**10 01 44.7**	**+1.9**
SUF	**Sumiainen**	**3.36**	**32**	*e*SB	**Sb**	**10 01 52.9**	**+0.8**
NRAU	**Nora**	**3.70**	**268**	*e*P	**Pn**	**10 01 10.2**	**+0.3**
VSTU	**Vaestervik**	**3.77**	**235**	*e*P	**Pn**	**10 01 10.3**	**-0.6**
LNKU	**Linkoeping**	**3.91**	**247**	*e*P	**Pn**	**10 01 12.4**	**-0.5**
HFS	**Hagfors**	**4.33**	**276**	*e*P	**Pn**	**10 01 17.8**	**-1.0**
HFS				*e*PG	**Pg**	**10 01 27.6**	**-9.1**
HFS				*e*SG		10 02 25.2	
HFS	**Hagfors**	**4.33**	**276**	Pn	**Pn**	**10 01 17.9**	**-0.9**
	0.0nm,0.3s,baz=108,slow=12,SNR=13						
HFS				Pg	**Pg**	**10 01 27.5**	**-9.2**
	0.1nm,0.3s,baz=85,slow=18,SNR=5.8						
HFS				Sn	**Sn**	**10 02 10.4**	**-0.4**
	0.1nm,0.3s,baz=96,slow=28,SNR=2.6						
HFS				Lg		10 02 26.8	
	0.2nm,0.3s,baz=102,slow=29,SNR=9.7						
HFS	**Hagfors**	**4.33**	**276**	Pn	**Pn**	**10 01 17.8**	**-1.0**
	baz=98,slow=9.3						
HFS				Pg	**Pg**	**10 01 27.6**	**-9.1**
HFS				Lg		10 02 25.2	
	baz=93,slow=28						
NB2	**NORSAR Subarra**	**5.60**	**286**	*e*P	**Pn**	**10 01 34.9**	**-1.9**
NB2				*e*SG		10 03 03.3	
NB2	**NORSAR Subarra**	**5.60**	**286**	Pn	**Pn**	**10 01 34.9**	**-1.9**
	baz=97,slow=12						
NB2				Lg		10 03 03.3	
NOA	**NORSAR Array B**	**5.60**	**286**	Pn	**Pn**	**10 01 34.4**	**-2.5**
	0.2nm,0.3s,baz=117,slow=12,SNR=2.6						
NOA				Sn	**Sn**	**10 02 40.3**	**-2.5**
	0.1nm,0.3s,baz=128,slow=15,SNR=2.8						
NOA				Lg		10 03 05.8	
	0.4nm,0.3s,baz=101,slow=19,SNR=3.0						
ARA0	**ARCESS Array S**	**9.74**	**7**	Pn	**P**	**10 02 32.2**	**-2.3**
	baz=181,slow=14						
ARA0	**ARCESS Array S**	**9.74**	**7**	*e*P	**P**	**10 02 32.2**	**-2.3**
ARCES	**ARCESS Array B**	**9.74**	**7**	Pn	**P**	**10 02 31.9**	**-2.6**
	baz=184,slow=14,SNR=2.4						
ARCES				Sn	**Sn**	**10 04 16.4**	**-9.5**
	0.1nm,0.3s,baz=192,slow=22,SNR=2.3						

BJI 11 10:21:04.6,45.63S×97.00E,h19^{km}*,mB5.4,mb4.8,Ms4.9, Msz4.5*

IDC 11 10:21:05.4±0.6,45.32S×97.22E,mb4.5/10,mb1 4.6/10, mb1mx4.5/14,mbtmp4.5/10,MS3.9/10,Ms1 3.9/10, ms1mx3.8/12,Error ellipse: s-maj=26.7km s-min=16.2km az=154.0

MOS 11 10:21:07.7±1.1,45.35S×97.14E,h24^{km}*,mb4.9/7,Error ellipse: s-maj=25.6km s-min=14.8km az=77.5*

NEIC 11 10:21:07.3±0.2,45.29S×97.13E,h10^{km}*,mb4.8/14,Error ellipse: s-maj=9.4km s-min=7.0km az=131.0*

ISC 11 10:21:05.6±0.3,**45.30S**±0.07×**97.15E**±0.10,**h10**^{km}**,**
(h27^{km}±6.2^{km}**:pP-P),n91,**σ**0^{s}88**/60,**mb4.7**/26,**MS4.0**/11,
2C-6D,Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**19.82**	**58**	LR	LR	10 31 41.1	
	comp=Z,129nm,21.7s,baz=255,slow=32						
MUN	**Mundaring**	**19.90**	**55**	*e*P	**P**	**10 25 44.5**	**+4.4**
KLBR	**Kellerberrin**	**21.08**	**57**	*e*P	**P**	**10 25 52.4**	**0.0**
	17nm,0.9s,mb4.4						
MAW	**Mawson**	**28.62**	**207**	P	**P**	**10 27 02.8**	**-1.0**
	3.1nm,0.9s,mb4.0,baz=39,slow=16,SNR=4.7						
FITZ	**Fitzroy Crossi**	**36.02**	**50**	*e*P	**P**	**10 28 08.9**	**-0.1**
	11nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	**36.02**	**50**	P	**P**	**10 28 07.8**	**-1.2**
	14nm,0.8s,mb4.9,baz=215,slow=9.3,SNR=8.2						
ASPA	**Alice Springs**	**36.75**	**66**	*e*P	**P**	**10 28 15.0**	**0.0**
STKA	**Stephens Creek**	**36.78**	**84**	*e*P	**P**	**10 28 15.3**	**+0.1**
	9.4nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**36.78**	**84**	P	**P**	**10 28 13.9**	**-1.2**
	12nm,0.8s,mb4.8,baz=230,slow=6.9,SNR=23						
STKA				PcP	PcP	10 30 36.5	-1.3
	3.9nm,0.9s,baz=269,slow=3.7,SNR=4.3						
STKA				LR	LR	10 40 34.6	
	comp=Z,168nm,18.6s,MS3.9,baz=25,slow=32						
SYO	**Syowa Base**	**37.13**	**210**	⇑P	**P**	**10 28 15.3**	**-2.5**
SYO	**Syowa Base**	**37.13**	**210**	⇑*e*P	**P**	**10 28 15.3**	**-2.5**
WRA	**Warramunga Arr**	**39.72**	**63**	P	**P**	**10 28 39.7**	**-0.2**
	21nm,0.9s,mb4.9,baz=224,slow=8.5,SNR=146						
WRA				PcP	PcP	10 30 45.4	-1.7
	1.0nm,0.8s,baz=229,slow=2.2,SNR=5.6						
WB2	**Warramunga Arr**	**39.73**	**63**	*e*P	**P**	**10 28 39.8**	**-0.2**
WRAB	**Tennant Creek**	**39.74**	**63**	*e*P	**P**	**10 28 40.0**	**-0.1**
	35nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**39.74**	**63**	*d* *i*P	**P**	**10 28 40.1**	**0.0**
VNDA	**Vanda**	**40.80**	**162**	*e*P	**P**	**10 28 48.2**	**-0.1**
	4.5nm,0.8s,mb4.2						
VNDA	**Vanda**	**40.80**	**162**	*e*P	**P**	**10 28 48.2**	**0.0**
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SBA	**Scott Base**	**41.89**	**163**	*e*P	**P**	**10 28 58.3**	**+1.3**
	comp=Z,27nm,1.7s,mb4.6						
SBA	**Scott Base**	**41.89**	**163**	*e*P	**P**	**10 28 58.3**	**+1.3**
SBA				pmax	pmax		
	comp=Z,27nm,1.7s,mb4.6						
KAKA	**Kakadu**	**44.19**	**54**	*e*P	**P**	**10 29 34.8**	**+18**
	comp=Z,8.9nm,0.9s,mb4.5						
ARMA	**Armidale**	**44.68**	**90**	*e*P	**P**	**10 29 22.2**	**+1.9**
QSPA	**South Pole Qui**	**44.85**	**180**	*e*P	**P**	**10 29 21.4**	**+0.3**
	comp=Z,15nm,0.9s,mb4.8						
CTA	**Charters Tower**	**47.46**	**75**	*e*P	**P**	**10 29 41.9**	**-0.6**
	comp=Z,6.1nm,1.0s,mb4.5						
CTA	**Charters Tower**	**47.46**	**75**	*e*P	**P**	**10 29 41.9**	**-0.6**
CTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SNAA	**Sanae**	**50.71**	**204**	*e*	**P**	**10 30 13.5**	**+6.7**
SNAA	**Sanae**	**50.71**	**204**	*e*	**P**	**10 30 18.2**	**+11**
SNAA	**Sanae**	**50.71**	**204**	P	**P**	**10 30 06.2**	**-0.6**
	comp=Z,5.8nm,0.8s,mb4.6,baz=129,slow=8.4,SNR=87						
SNAA	**Sanae**	**50.71**	**204**	⇓*i*P	**P**	**10 30 06.6**	**-0.2**
SNAA				*e*		10 30 13.5	
SNAA				*e*		10 30 18.2	
VNA2	**Neumayer--Watz**	**52.36**	**204**	*e*	**P**	**10 30 26.0**	**+6.7**
VNA2	**Neumayer--Watz**	**52.36**	**204**	*e*	**P**	**10 30 30.7**	**+11**
VNA2	**Neumayer--Watz**	**52.36**	**204**	⇓*i*P	**P**	**10 30 19.1**	**-0.2**
VNA2				*e*		10 30 26.0	
VNA2				*e*		10 30 30.7	
VNA1	**Neumayer--Stat**	**52.74**	**204**	*e*	**P**	**10 30 29.3**	**+7.1**
VNA1	**Neumayer--Stat**	**52.74**	**204**	*e*	**P**	**10 30 34.0**	**+12**
VNA1	**Neumayer--Stat**	**52.74**	**204**	⇓*i*P	**P**	**10 30 22.3**	**+0.1**
VNA1				*e*		10 30 29.3	
VNA1				*e*		10 30 34.0	
VNA3	**Neumayer Olymp**	**52.83**	**203**	*e*	**P**	**10 30 29.7**	**+6.9**
VNA3	**Neumayer Olymp**	**52.83**	**203**	*e*	**P**	**10 30 34.2**	**+11**
VNA3	**Neumayer Olymp**	**52.83**	**203**	⇓*i*P	**P**	**10 30 22.6**	**-0.2**
VNA3				*e*		10 30 29.7	
VNA3				*e*		10 30 34.2	
BOSA	**Boshof**	**57.97**	**260**	LR	LR	10 50 28.2	
	comp=Z,75nm,18.4s,MS3.8,baz=319,slow=30						
LBTB	**Lobatse**	**59.96**	**264**	P	**P**	**10 31 14.5**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.2,baz=124,slow=8.2,SNR=3.8						
MATP	**Matopo**	**60.87**	**270**	P	**P**	**10 31 20.1**	**-0.7**
	comp=Z,2.3nm,0.8s,mb4.3,baz=107,slow=10,SNR=4.2						
LSZ	**Lusaka**	**64.53**	**274**	*e*P	**P**	**10 31 46.7**	**+1.6**
	comp=Z,7.7nm,1.1s,mb4.7						
LSZ	**Lusaka**	**64.53**	**274**	*e*P	**P**	**10 31 46.7**	**+1.6**
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
KMBO	**Kilima Mbogo**	**68.42**	**292**	P	**P**	**10 32 10.0**	**+0.1**
	comp=Z,2.8nm,0.9s,mb4.3,baz=201,slow=4.3,SNR=6.3						
KMBO				LR	LR	10 54 41.4	
	comp=Z,95nm,21.5s,MS4.0,baz=90,slow=29						
TSUM	**Tsumeb**	**69.36**	**263**	*e*P	**P**	**10 32 17.9**	**+2.2**
	comp=Z,115nm,2.6s,mb5.3						
KMI	**Kunming**	**70.26**	**5**	P	**P**	**10 32 22.3**	**+1.3**
	comp=Z,11nm,1.0s,mb4.7						
KMI				pP	pP	10 32 27.8	+3.7
KMI				sP	sP	10 32 30.1	+4.8
KMI				LR	LR		
	comp=Z,10.0nm,32.1s,MS2.9						
KMI	**Kunming**	**70.26**	**5**	P	**P**	**10 32 22.3**	**+1.3**
KMI				*PP	pP	10 32 27.8	+3.7
KMI				*SP	sP	10 32 30.1	+4.8
KMI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
KMI				MLR	MLR		
	comp=Z,10.0nm,32.1s,MS2.9						
JIRN	**Jiri**	**73.29**	**350**	*e*P	**P**	**10 32 38.4**	**-0.6**
KKN	**Kakani**	**73.53**	**349**	*e*P	**P**	**10 32 40.1**	**-0.4**
GUN	**Gumba**	**73.58**	**350**	*e*P	**P**	**10 32 40.5**	**-0.2**
	comp=Z,42nm,1.0s,mb5.3						
KOLN	**Koldanda**	**73.76**	**348**	*e*P	**P**	**10 32 41.2**	**-0.5**
	comp=Z,50nm,1.6s,mb5.2						
GKN	**Gorkha**	**73.83**	**348**	*e*P	**P**	**10 32 41.6**	**-0.6**
	comp=Z,46nm,1.2s,mb5.3						
XAN	**Xi’an**	**79.68**	**10**	P	**P**	**10 33 14.9**	**+0.1**
LZH	**Lanzhou**	**81.23**	**5**	*e*P	**P**	**10 33 19.0**	**-4.0**
LZH				AP	pP	10 33 29.5	+3.3
LZH				XP	sP	10 33 34.5	+7.3
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.8						
LZH	**Lanzhou**	**81.23**	**5**	*e*P	**P**	**10 33 19.0**	**-4.0**
	comp=Z,21nm,1.6s,mb4.8						
LZH				pP	pP	10 33 29.5	+3.3
LZH				sP	sP	10 33 34.5	+7.3
LZH	**Lanzhou**	**81.23**	**5**	*e*P	**P**	**10 33 19.0**	**-4.0**
LZH				*PP	pP	10 33 29.5	+3.3
LZH				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.8						
GTA	**Gaotai**	**84.36**	**2**	*e*P	**P**	**10 33 39.3**	**+0.4**
GTA				AP	pP	10 33 49.2	+7.0
GTA				XP	sP	10 33 54.0	+11
WMQ	**Urumqi**	**89.13**	**353**	*e*P	**P**	**10 34 03.2**	**+1.1**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,100nm,4.2s						
WMQ				LR	LR		
	comp=N,180nm,19.6s,MS4.7						
WMQ				LR	LR		
	comp=E,210nm,18.1s,MS4.7						
WMQ				LR	LR		
	comp=Z,150nm,17.6s,MS4.5						
AAK	**Ala-Archa**	**89.85**	**343**	*e*P	**P**	**10 34 04.7**	**-0.9**
	comp=Z,9.9nm,1.3s,mb5.0						
AAK	**Ala-Archa**	**89.85**	**343**	*e*P	**P**	**10 34 04.7**	**-0.8**
AAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb5.0						
MKAR	**Makanchi Array**	**92.63**	**350**	P	**P**	**10 34 18.0**	**-0.2**
	comp=Z,1.0nm,0.8s,mb4.3,baz=162,slow=3.8,SNR=8.9						
MKAR				LR	LR	11 14 09.3	
	comp=Z,66nm,19.0s,MS4.1,baz=57,slow=34						
MKAR	**Makanchi Array**	**92.63**	**350**	P	**P**	**10 34 18.0**	**-0.2**
MKAR				LR	LR	11 14 09.3	
PPT	**Papeete**	**93.07**	**119**	LR	LR	11 07 59.3	
	comp=Z,78nm,18.8s,MS4.2,baz=247,slow=30						
SONM	**Songino Array**	**93.10**	**6**	P	**P**	**10 34 20.5**	**+0.1**
	comp=Z,1.8nm,1.1s,mb4.4,baz=188,slow=4.1,SNR=7.5						
SONM				LR	LR	11 15 30.2	
	comp=Z,77nm,20.8s,MS4.1,baz=300,slow=35						
PLCA	**Paso Flores**	**93.65**	**189**	LR	LR	11 18 32.2	
	comp=Z,43nm,18.3s,MS3.9,baz=199,slow=37						
GNI	**Garni**	**97.17**	**322**	LR	LR	11 13 42.9	
	comp=Z,61nm,18.6s,MS4.1,baz=49,slow=32						
ZAL	**Zalesovo**	**99.42**	**353**	LR	LR	11 19 20.7	
	comp=Z,119nm,18.6s,MS4.4,baz=52,slow=35						
GERES	**GERESS Array B**	**118.59**	**312**	PKP	PKPdf	10 39 53.8	-2.6
	comp=Z,1.2nm,0.9s,baz=153,slow=3.0,SNR=5.0						
KHC	**Kasperske Hory**	**118.83**	**312**	⇓*e*P	Pdif	10 36 09.0	-5.9
ILAR	**Eielson Array**	**140.58**	**37**	PKhKP		10 40 28.8	
	comp=Z,0.5nm,0.8s,baz=289,slow=3.3,SNR=4.5						
ILAR				PKP	PKPdf	10 40 34.6	-2.6
	comp=Z,0.8nm,0.8s,baz=305,slow=4.3,SNR=5.7						
SDV	**Santo Domingo**	**142.22**	**200**	*e*PKPdf	PKPdf	10 40 38.5	-3.1
DAWY	**Dawson**	**143.84**	**38**	*e*PKPdf	PKPdf	10 40 39.6	-3.3
JTS	**JuntasAbangare**	**145.07**	**176**	*e*PKPdf	PKPdf	10 40 44.9	-1.7
INK	**Inuvik**	**145.48**	**30**	PKPbc	PKPbc	10 40 43.6	+0.4
	comp=Z,14nm,0.8s,baz=250,slow=0.8,SNR=28						
INK	**Inuvik**	**145.48**	**30**	*e*PKPbc	PKPbc	10 40 43.6	+0.5
SUMG	**Summit**	**145.83**	**338**	*e*PKPdf	PKPdf	10 40 46.2	+0.1
DLBC	**Dease Lake**	**148.74**	**48**	PKPbc	PKPdf	10 40 52.7	+1.5
	comp=Z,5.9nm,1.0s,baz=85,slow=9.4,SNR=6.0						
DLBC	**Dease Lake**	**148.74**	**48**	PKPbc	PKPdf	10 40 52.7	+1.4
MWC	**Mount Wilson**	**150.98**	**100**	*e*PKPbc	PKPdf	10 41 00.6	+5.0
HUMO	**Hull Mountain**	**151.21**	**81**	*e*PKPbc	PKPdf	10 41 00.8	+5.2
ISA	**Isabella**	**151.45**	**97**	*e*PKPbc	PKPdf	10 41 01.8	+5.6
MTUM	**Tungsten Hills**	**152.21**	**94**	*e*PKPbc	PKPdf	10 41 03.8	+6.5
NVAR	**Mina Array Bea**	**152.88**	**92**	PKP	PKPdf	10 40 58.4	+0.2
	comp=Z,0.8nm,0.9s,baz=226,slow=7.4,SNR=5.3						
NVAR				PKPbc	PKPdf	10 41 04.8	+6.6
	comp=Z,5.9nm,0.7s,baz=230,slow=5.3,SNR=54						
NVAR	**Mina Array Bea**	**152.88**	**92**	PKP	PKPdf	10 40 58.4	+0.2
NVAR				PKPbc	PKPdf	10 41 04.8	+6.6
WVOR	**Wild Horse Val**	**154.17**	**84**	*e*PKPbc	PKPdf	10 41 07.3	+7.5
TXAR	**Lajitas Array**	**157.12**	**127**	PKP	PKPdf	10 41 02.7	-1.5
	comp=Z,1.0nm,1.0s,baz=180,slow=1.3,SNR=6.8						
TXAR				PKPab	PKPab	10 41 32.3	-2.0
	comp=Z,0.7nm,1.0s,baz=204,slow=8.9,SNR=2.9						
MNTX	**Cornudas Mount**	**157.84**	**120**	*e*PKPdf	PKPdf	10 41 03.6	-1.4
PV10	**Paradox Valley**	**159.36**	**100**	*e*PKPab	PKPab	10 41 43.6	0.0
TPAW	**Teton Pass**	**159.88**	**85**	*e*PKPdf	PKPdf	10 41 06.8	-0.2
LOHW	**Long Hollow**	**160.15**	**85**	*e*PKPdf	PKPdf	10 41 07.1	-0.2
PDAR	**Pinedale Array**	**160.66**	**88**	PKPab	PKPab	10 41 48.9	-0.2
	comp=Z,0.9nm,0.9s,baz=270,slow=3.0,SNR=4.9						
SMCO	**Snowmass**	**161.16**	**100**	*e*PKPab	PKPab	10 41 51.4	+0.1

SKO 11 10:33:59.2,40.02N×25.40E

THE 11 10:34:02.8,40.24N×25.36E,h17^{km}*,ML2.8*

CSEM 11 10:34:02.7±0.1,40.27N×25.31E,h20^{km}*,ML2.8,Error ellipse: s-maj=3.6km s-min=1.8km az=141.0*

ISC 11 10:34:02.6±1.2,**40.3N**±0.1×**25.3E**±0.2,**h18**^{km}±24^{km}**,n6,**
σ**0^{s}49**/8,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOS	**Limnos**	**0.36**	**209**	*e*Pg	**Pb**	**10 34 10.4**	**+0.2**
ALN	**Alexandroupoli**	**0.86**	**41**	*e*Pg	**Pb**	**10 34 18.2**	**-0.5**
ALN				*e*Sg	**Sb**	**10 34 29.9**	**+0.3**
OUR	**Ouranopolis**	**1.02**	**275**	*e*Pg	**Pb**	**10 34 21.3**	**-0.1**
PAIG	**Paliouri**	**1.29**	**256**	*e*Pg	**Pn**	**10 34 25.8**	**-0.2**
KNT	**Kendrikon**	**2.05**	**297**	*e*Pn	**Pn**	**10 34 36.4**	**-0.3**
VAY	**Valandovo**	**2.34**	**298**	*e*Pn	**Pn**	**10 34 41.5**	**+0.6**
VAY				*e*Sn	**Sn**	**10 35 17.0**	**+7.6**

MOS 11 11:03:14.6±1.8,57.20N×120.30E,h19^{km}*,mb4.4/1,Error ellipse: s-maj=37.6km s-min=27.4km az=51.1*

BYKL 11 11:03:10.3±0.3,**57.40N**×**120.68E,h4**^{km}±22^{km}**,1C,**
Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.41**	**250**	*e*Pg	Pg	11 03 36.4	-2.0
CRS				*e*Sg	Sg	11 03 54.0	-3.1
CRS				*e*Sb	Sb	11 03 56.8	+1.9
CRS				Pmax			
	189nm,1.1s						
CRS				Smax			
	480nm,0.5s						
CRS	**Chara**	**1.41**	**250**	*e*P	Pn	11 03 36.5	-0.3
CLNS	**Chul’man**	**2.37**	**102**	*e*Pg	Pg	11 03 52.4	-5.1
CLNS				*e*Sn	Sn	11 04 19.8	-0.5
CLNS				*e*Sg	Sg	11 04 24.3	-4.8
CLNS				Pmax			
	85nm,0.2s						
CLNS				Smax			
	2μm,0.4s						
CLNS	**Chul’man**	**2.37**	**102**	*e*P	Pn	11 03 52.5	+2.0
CLNS				*e*		11 04 24.1	
CLNS				pmax	pmax		
	comp=Z,13nm,0.3s						
CLNS				pmax	pmax		
	comp=N,15nm,0.4s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.2s						
CLNS				smax			
	comp=E,537nm,1.1s						
CLNS				smax			
	comp=Z,29nm,0.3s						
CLNS				smax			
	comp=N,191nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,10.0nm,14.0s						
ALDR	**Aldan**	**2.79**	**62**	*e*Pn	Pn	11 03 54.5	-2.1
ALDR				*e*Pg	Pg	11 03 59.4	-6.7
ALDR				*e*Sn	Sn	11 04 26.6	-4.6
ALDR				*e*Sg	Sg	11 04 36.4	-6.9
ALDR				Pmax			
	comp=Z,99nm,0.3s						
ALDR				Smax			
	comp=Z,715nm,0.2s						
NLYR	**Nelyaty**	**2.88**	**254**	⇑*i*Pn	Pn	11 03 57.9	+0.1
NLYR				*e*Pg	Pg	11 04 02.1	-5.6
NLYR				*e*		11 04 04.2	
NLYR				*e*Sg	Sg	11 04 38.4	-7.6
NLYR				*e*		11 04 49.9	
NLYR				max			
	comp=Z,95nm,0.9s						
NLYR				Smax			
	comp=Z,354nm,1.3s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*P	Pn	11 03 57.5	-0.3
NLYR				*e*		11 04 37.2	
NLYR				pmax	pmax		
	comp=Z,99nm,0.6s						
NLYR				smax			
	comp=N,353nm,1.3s						
TUP	**Tupik**	**3.01**	**188**	*e*Pn	Pn	11 03 58.7	-1.0
TUP				*e*Pg	Pg	11 04 03.5	-6.9
TUP				*e*Sn	Sn	11 04 32.6	-4.1
TUP				*e*Sg	Sg	11 04 42.1	-8.4
TUP				Pmax			
	comp=N,90nm,0.8s						
TUP				Smax			
	comp=N,795nm,0.7s						
TUP	**Tupik**	**3.01**	**188**	*e*P	Pn	11 03 58.5	-1.2
TUP				*e*S	Sn	11 04 33.7	-3.0
TUP				pmax	pmax		
	comp=Z,57nm,0.4s						
TUP				smax			
	comp=E,798nm,0.7s						
TNDR	**Tynda**	**3.19**	**133**	*e*Pn	Pn	11 04 02.2	0.0
TNDR				*e*Pg	Pg	11 04 08.8	-5.2
TNDR				*e*		11 04 34.0	
TNDR				*e*		11 04 41.6	
TNDR				*e*Sg	Sg	11 04 49.7	-6.8
TNDR				Pmax			
	comp=E,129nm,0.2s						
TNDR				Smax			
	comp=E,1μm,0.4s						
BOD	**Bodaibo**	**3.62**	**279**	*e*Pn	Pn	11 04 07.6	-0.7
BOD				*e*Pg	Pg	11 04 16.8	-5.7
BOD				*e*Sn	Sn	11 04 49.2	-2.8
BOD				*e*Sg	Sg	11 05 01.8	-8.9
BOD				Pmax			
	comp=E,13nm,0.4s						
BOD				Smax			
	comp=E,169nm,0.6s						
BOD	**Bodaibo**	**3.62**	**279**	*e*P	Pn	11 04 07.7	-0.6
BOD				pmax	pmax		
	comp=Z,14nm,0.4s						
SVKR	**Severomuysk**	**4.12**	**255**	*e*Pg	Pg	11 04 25.5	-7.2
SVKR				*e*Sg	Sg	11 05 17.8	-10
SVKR				Pmax			
	comp=Z,53nm,0.2s						
SVKR				Smax			
	comp=Z,236nm,0.8s						
UKT	**Uakit**	**4.36**	**247**	*e*Pn	Pn	11 04 18.8	0.0
UKT				*e*Pg	Pg	11 04 29.3	-8.0
UKT				*e*Sg	Sg	11 05 23.3	-12
UKT				Pmax			
	comp=Z,13nm,1.0s						
UKT				Smax			
	comp=Z,94nm,2.3s						
YOA	**Uoyan**	**5.09**	**259**	*e*Sg	Sg	11 05 45.1	-15
YOA				Smax			
	comp=Z,588nm,0.9s						
ZEA	**Zeya**	**5.23**	**132**	*e*Pg	Pg	11 04 46.4	-8.3
ZEA				*e*Sn	Sn	11 05 25.4	-7.4
ZEA				*e*Sg	Sg	11 05 51.6	-13
KMO	**Kumora**	**5.45**	**258**	*e*Pn	Pn	11 04 33.2	-1.0
KMO				*e*Pg	Pg	11 04 49.7	-9.3
KMO				*e*Sn	Sn	11 05 32.1	-6.1
KMO				*e*Sg	Sg	11 05 58.3	-13
KMO				Pmax			
	comp=Z,5.0nm,0.5s						
KMO				Smax			
	comp=Z,127nm,1.7s						
KMO	**Kumora**	**5.45**	**258**	*e*P	Pn	11 04 49.1	+15
KMO				*e*S	Sn	11 05 32.0	-6.2
KMO				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMO				smax			
	comp=N,128nm,1.1s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*Pn	Pn	11 04 40.0	-0.5
YLYR				*e*Pg	Pg	11 04 57.6	-10
YLYR				*e*Sg	Sg	11 06 12.7	-14
YLYR				Pmax			
	comp=N,2.0nm,0.3s						
YLYR				Smax			
	comp=N,86nm,1.5s						
NIZ	**Nizh Angarsk**	**6.37**	**260**	*e*Pg	Pg	11 05 05.5	-12
NIZ				*e*Sg	Sg	11 06 27.6	-15
NIZ				Pmax			
	comp=N,2.0nm,0.3s						
NIZ				Smax			
	comp=N,48nm,2.2s						
YAK	**Yakutsk**	**6.50**	**41**	*e*Pg	Pg	11 05 05.9	-14
YAK				*e*Sn	Sn	11 05 58.3	-6.3
YAK				*e*Sg	Sg	11 06 30.2	-17

YAK				Pmax			
	comp=N,46nm,0.4s						
YAK				Smax			
	comp=N,492nm,0.8s						
YAK	**Yakutsk**	**6.50**	**41**	*e*P	Pn	11 05 08.4	+19
YAK				*e*S	Sn	11 06 11.1	+6.5
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,1.0nm,0.6s						
YAK				smax			
	comp=N,8.0nm,0.9s						
YAK				smax			
	comp=Z,8.0nm,1.0s						
YAK				smax			
	comp=E,4.0nm,0.9s						
YAK				smax			
	comp=E,34nm,1.1s						
YAK				smax			
	comp=Z,24nm,0.9s						
YAK				smax			
	comp=N,55nm,1.0s						
YAK				MLR	MLR		
	comp=Z,27nm,5.0s						
CIT	**Chita**	**6.79**	**220**	*e*Pg	Pg	11 05 12.1	-14
CIT				*e*Sg	Sg	11 06 38.9	-17
CIT				Pmax			
	comp=Z,3.0nm,0.1s						
CIT				Smax			
	comp=Z,157nm,1.7s						
SYVR	**Suvo**	**7.13**	**243**	*e*Pn	Pn	11 04 53.8	-4.1
SYVR				*e*Pg	Pg	11 05 17.7	-15
SYVR				*e*Sn	Sn	11 06 13.3	-7.0
SYVR				*e*Sg	Sg	11 06 49.2	-18
SYVR				Smax			
	comp=Z,91nm,1.8s						
OGRR	**Ongureny**	**8.32**	**249**	*e*Sg	Sg	11 07 28.3	-19
OGRR				Smax			
	comp=Z,38nm,2.6s						
KPC	**Khapcheranga**	**9.15**	**216**	*e*Pn	P	11 05 23.4	-2.7
KPC				*e*Sn	Sn	11 06 59.3	-11
KPC				*e*Sg	Sg	11 07 52.6	-22
KPC				Smax			
	comp=Z,48nm,2.3s						
UNR	**Ust'-Nera**	**13.03**	**47**	*e*Sg	S	11 09 52.3	+67

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*MOS **11** 11:08:32.0±1.9, 57.30N×120.54E, h8^{km}, mb4.3/1, Error ellipse: s-maj=27.8km s-min=21.3km az=160.7*

BYKL 11 11:08:29.7±0.3**, 57.39N**×**120.70E, h1**^{km}±17^{km}**, 1C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**1.41**	**251**	⇑*i*Pg	Pg	11 08 55.8	-2.1
CRS				*e*		11 08 58.0	
CRS				*e*Sg	Sg	11 09 13.1	-3.7
CRS				max			
	141nm,0.8s						
CRS				Smax			
	299nm,1.3s						
CRS	**Chara**	**1.41**	**251**	*e*P	Pb	11 08 55.9	-0.7
CRS				*e*		11 09 13.1	
CRS				pmax	pmax		
	comp=Z,42nm,0.3s						
CRS				smax			
	comp=E,301nm,0.8s						
NRGR	**Nerungri**	**2.32**	**107**	*e*P	Pn	11 09 12.5	+2.9
NRGR				S	Sn	11 09 42.6	+3.5
CLNS	**Chul'man**	**2.35**	**102**	*e*Pg	Pg	11 09 11.5	-5.2
CLNS				*e*Sn	Sn	11 09 38.3	-1.7
CLNS				*e*Sg	Sg	11 09 44.0	-4.0
CLNS				Pmax			
	comp=E,224nm,0.2s						
CLNS				Smax			
	comp=E,5μm,0.4s						
CLNS	**Chul'man**	**2.35**	**102**	*e*P	Pn	11 09 11.4	+1.3
CLNS				*e*S	Sn	11 09 36.6	-3.4
CLNS				pmax	pmax		
	comp=N,4.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,20nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,37nm,0.3s						
CLNS				pmax	pmax		
	comp=N,17nm,0.3s						
CLNS				pmax	pmax		
	comp=E,20nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,26nm,0.3s						
CLNS				smax			
	comp=E,223nm,0.4s						
CLNS				smax			
	comp=Z,72nm,0.4s						
CLNS				smax			
	comp=N,59nm,0.3s						
CLNS				smax			
	comp=N,574nm,0.4s						
CLNS				smax			
	comp=Z,48nm,0.2s						
CLNS				smax			
	comp=E,546nm,0.4s						
ALDR	**Aldan**	**2.79**	**62**	*e*Pn	Pn	11 09 15.9	-0.4
ALDR				*e*Pg	Pg	11 09 19.3	-6.1
ALDR				*e*Sg	Sg	11 09 56.1	-6.5
ALDR				Pmax			
	comp=E,91nm,0.1s						
ALDR				Smax			
	comp=E,2μm,0.2s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*	Pn	11 09 08.5	-9.1
NLYR				*e*Pg	Pg	11 09 22.3	-4.9
NLYR				*e*		11 09 23.8	
NLYR				*e*Sg	Sg	11 09 58.0	-7.7
NLYR				max			
	comp=E,100nm,0.4s						
NLYR				Smax			
	comp=E,292nm,1.6s						
NLYR	**Nelyaty**	**2.88**	**254**	*e*P	Pn	11 09 22.4	+4.8
NLYR				*e*		11 09 57.6	
NLYR				pmax	pmax		
	comp=Z,99nm,0.3s						
NLYR				smax			
	comp=N,294nm,0.9s						
TUP	**Tupik**	**3.00**	**188**	*e*Pn	Pn	11 09 18.8	-0.5
TUP				⇓*i*Pg	Pg	11 09 23.1	-6.5
TUP				*e*Sn	Sn	11 09 52.6	-3.9
TUP				*e*Sg	Sg	11 10 01.7	-7.9
TUP				Pmax			
	comp=N,137nm,0.6s						
TUP				Smax			
	comp=N,685nm,0.7s						
TUP	**Tupik**	**3.00**	**188**	*e*P	Pn	11 09 18.6	-0.7
TUP				*e*S	Sn	11 09 52.7	-3.8
TUP				pmax	pmax		
	comp=Z,103nm,0.5s						
TUP				smax			
	comp=E,673nm,0.9s						
TNDR	**Tynda**	**3.17**	**133**	*e*Pn	Pn	11 09 21.7	-0.1
TNDR				*e*Pg	Pg	11 09 27.9	-5.2
TNDR				*e*Sn	Sn	11 09 58.4	-2.4
TNDR				*e*Sg	Sg	11 10 08.1	-7.3
TNDR				Pmax			
	comp=E,334nm,0.2s						
TNDR				Smax			
	comp=E,2μm,0.1s						
BOD	**Bodaibo**	**3.63**	**280**	*e*Pn	Pn	11 09 27.1	-1.1
BOD				*e*Pg	Pg	11 09 36.3	-5.8
BOD				*e*Sn	Sn	11 10 09.1	-3.2
BOD				*e*Sg	Sg	11 10 21.3	-9.2
BOD				Pmax			
	comp=E,15nm,0.5s						
BOD				Smax			
	comp=E,198nm,1.2s						
BOD	**Bodaibo**	**3.63**	**280**	*e*P	Pn	11 09 27.4	-0.8
BOD				*e*S	Sn	11 10 08.6	-3.7
BOD				pmax	pmax		
	comp=Z,16nm,0.3s						
BOD				smax			
	comp=N,198nm,0.9s						
SVKR	**Severomuysk**	**4.13**	**255**	*e*	Pn	11 09 46.3	+11
SVKR				*e*Sg	Sg	11 10 38.0	-9.3
SVKR				Smax			
	comp=N,168nm,0.9s						
UKT	**Uakit**	**4.36**	**247**	*e*Pn	Pn	11 09 36.0	-2.7
UKT				*e*Pg	Pg	11 09 48.1	-8.7
UKT				*e*Sn	Sn	11 10 25.7	-5.2
UKT				*e*Sg	Sg	11 10 43.2	-12
UKT				Pmax			
	comp=N,12nm,0.6s						
UKT				Smax			
	comp=N,63nm,1.7s						
YOA	**Uoyan**	**5.10**	**259**	*e*Pg	Pg	11 10 01.3	-10
YOA				*e*Sg	Sg	11 11 05.8	-14
YOA				Pmax			
	comp=N,26nm,0.3s						
YOA				Smax			
	comp=N,495nm,1.7s						
ZEA	**Zeya**	**5.22**	**132**	*e*Sn	Sn	11 10 45.1	-7.3
ZEA				*e*Sg	Sg	11 11 09.4	-14
KMO	**Kumora**	**5.46**	**258**	*e*Pn	Pn	11 09 52.7	-1.4
KMO				*e*Pg	Pg	11 10 09.2	-9.4
KMO				*e*Sg	Sg	11 11 17.5	-14
KMO				Pmax			
	comp=N,10.0nm,0.5s						
KMO				Smax			
	comp=N,112nm,1.2s						
KMO	**Kumora**	**5.46**	**258**	*e*P	Pn	11 09 53.6	-0.5
KMO				*e*S	Sn	11 10 51.6	-6.8
YLYR	**Ulyunkhan**	**5.90**	**249**	*e*	Pn	11 10 00.3	-0.1
YLYR				*e*Pg	Pg	11 10 15.1	-12
YLYR				*e*		11 11 04.6	
YLYR				*e*Sg	Sg	11 11 31.9	-14
YLYR				Pmax			
	comp=N,3.0nm,0.6s						
YLYR				Smax			
	comp=N,86nm,2.1s						
NIZ	**Nizh Angarsk**	**6.38**	**260**	*e*Pg	Pg	11 10 23.7	-13
NIZ				*e*Sg	Sg	11 11 45.9	-16
NIZ				Pmax			
	comp=N,1.0nm,0.1s						
NIZ				Smax			
	comp=N,52nm,1.2s						
NIZ	**Nizh Angarsk**	**6.38**	**260**	*e*P	Pn	11 10 26.7	+20
NIZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
YAK	**Yakutsk**	**6.50**	**41**	*e*Pg	Pg	11 10 26.5	-13
YAK				*e*Sn	Sn	11 11 17.4	-7.2
YAK				*e*Sg	Sg	11 11 48.8	-17
YAK				Pmax			
	comp=Z,112nm,0.7s						
YAK				Smax			
	comp=Z,620nm,0.7s						
CIT	**Chita**	**6.79**	**221**	*e*Sg	Sg	11 11 59.1	-17
CIT				Smax			
	comp=Z,150nm,1.4s						
SYVR	**Suvo**	**7.13**	**243**	*e*Pg	Pg	11 10 38.5	-14
SYVR				*e*Sg	Sg	11 12 10.8	-16
SYVR				Smax			
	comp=Z,80nm,1.7s						
OGRR	**Ongureny**	**8.33**	**249**	*e*Sg	Sg	11 12 48.5	-18
OGRR				Smax			
	comp=Z,30nm,1.8s						
KPC	**Khapcheranga**	**9.15**	**216**	*e*Sg	Sg	11 13 12.2	-22
KPC				Smax			
	comp=Z,48nm,1.6s						
ARS	**Arshan**	**11.90**	**250**	*e*Sg	S	11 14 37.4	+59
ARS				Smax			
	comp=Z,34nm,1.9s						
UNR	**Ust'-Nera**	**13.03**	**47**	*e*Sg	S	11 15 11.7	+66

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*IDC **11** 11:10:25.3±1.0, 58.52N×152.62W, mb3.5/6, mb1 3.9/9, mb1mx3.8/22, mbtmp3.6/9, ML3.8/3, MS3.2/1, Ms1 3.2/1, ms1mx2.6/25, Error ellipse: s-maj=21.1km s-min=7.8km az=93.0*

*NEIC **11** 11:10:31.6, 58.32N×152.48W, h37^{km}, ML4.0(PMR), ML3.8(AEIC), After AEIC.*

ISC 11 11:10:29.4±0.3**, 58.32N**±0.03×**152.41W**±0.05**, h56**^{km}±5^{km}**, n83, σ0^{s}95**/98**, mb3.4**/6**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SYI	**Shuyak Island**	**0.29**	**2**	P	**P**	**11 10 38.9**	**-0.2**
KDAK	**Kodiak Island**	**0.55**	**190**	Pg	**P**	**11 10 42.0**	**+0.3**
	511nm,0.3s,baz=22,slow=11,SNR=5533						
KDAK				Lg		11 10 50.2	
	2μm,0.3s,baz=216,slow=20,SNR=110						
KDAK	**Kodiak Island**	**0.55**	**190**	P	**P**	**11 10 42.0**	**+0.3**
KDAK				S	**S**	**11 10 50.7**	**0.0**
KAPH	**Katmai Pasha**	**1.05**	**286**	P	**P**	**11 10 48.4**	**+0.1**
KAPH				S	**S**	**11 11 01.8**	**-0.4**
KAHG	**Katmai Hook Gl**	**1.14**	**280**	P	**P**	**11 10 49.6**	**+0.2**
KAHG				S	**S**	**11 11 03.8**	**-0.5**
AUI	**Augustine Isla**	**1.15**	**333**	P	**P**	**11 10 50.2**	**+0.7**
AUI				S	**S**	**11 11 03.1**	**-1.3**
AUE	**Augustine Isla**	**1.15**	**335**	P	**P**	**11 10 50.6**	**+1.0**
AUP	**Augustine Pinn**	**1.17**	**334**	P	**P**	**11 10 50.8**	**+1.0**
AGU	**Augustine-Summ**	**1.17**	**333**	P	**P**	**11 10 50.8**	**+1.0**
AUH	**Augustine H**	**1.18**	**333**	P	**P**	**11 10 50.9**	**+1.0**
AUW	**Augustine West**	**1.19**	**333**	P	**P**	**11 10 50.9**	**+0.9**
AUL	**Augustine Lava**	**1.19**	**334**	P	**P**	**11 10 51.0**	**+0.9**
XLV	**Seldovia**	**1.19**	**17**	P	**P**	**11 10 51.6**	**+1.5**
KAWH	**Katmai**	**1.26**	**274**	P	**P**	**11 10 51.4**	**+0.3**
KAWH				S	**S**	**11 11 07.4**	**+0.1**
MCNL	**McNeil River**	**1.33**	**312**	P	**P**	**11 10 52.5**	**+0.3**
CNPM	**China Poot**	**1.35**	**26**	P	**P**	**11 10 53.8**	**+1.3**
KABR	**Katmai Barrier**	**1.37**	**263**	P	**P**	**11 10 52.8**	**0.0**
KABR				S	**S**	**11 11 09.2**	**-0.8**
OPT	**Oil Point**	**1.40**	**343**	P	**P**	**11 10 54.2**	**+1.0**
OPT				S	**S**	**11 11 09.5**	**-1.3**
MGLS	**Mageik LS**	**1.55**	**267**	P	**P**	**11 10 54.3**	**-0.9**
MGLS				S	**S**	**11 11 12.6**	**-1.6**
CAHL	**Cahill**	**1.56**	**261**	P	**P**	**11 10 55.6**	**+0.3**
KJL	**Kejulik**	**1.70**	**262**	P	**P**	**11 10 57.7**	**+0.4**
KJL				S	**S**	**11 11 17.6**	**-0.3**
INE	**Iliamna NE**	**1.78**	**349**	P	**P**	**11 10 58.9**	**+0.5**
INE				S	**S**	**11 11 22.0**	**+2.2**
ILW	**Iliamna West**	**1.78**	**348**	P	**P**	**11 10 58.9**	**+0.5**
ILW				S	**S**	**11 11 22.4**	**+2.4**
CNTC	**Contact Creek**	**1.84**	**270**	P	**P**	**11 10 59.4**	**+0.2**
RSO	**Redoubt South**	**2.15**	**355**	P	**P**	**11 11 04.3**	**+0.6**
RDT	**Redoubt**	**2.26**	**0**	P	**P**	**11 11 05.7**	**+0.6**
RDT				S	**S**	**11 11 34.0**	**+2.2**
SEW	**Seward**	**2.35**	**39**	P	**P**	**11 11 08.4**	**+2.0**
SLKM	**Skilak Lake**	**2.46**	**26**	*e*P	**P**	**11 11 08.0**	**-0.1**
MPA	**Moose Pass**	**2.67**	**34**	P	**P**	**11 11 11.2**	**+0.1**
SPU	**Mount Spurr**	**2.87**	**3**	P	**P**	**11 11 14.1**	**+0.2**
CKL	**Chakachamna La**	**2.88**	**1**	P	**P**	**11 11 14.5**	**+0.4**
BGL	**Barrier Glacie**	**2.95**	**0**	P	**P**	**11 11 15.7**	**+0.7**
FIB	**Fire Island**	**3.07**	**21**	P	**P**	**11 11 17.1**	**+0.5**
RC01	**Rabbit Creek A**	**3.09**	**25**	P	**P**	**11 11 16.8**	**-0.1**
STLK	**Strandline Lak**	**3.20**	**5**	P	**P**	**11 11 19.0**	**+0.5**
SVW2	**Sparrevohn**	**3.21**	**331**	P	**P**	**11 11 17.9**	**-0.7**
ANPK	**Aniakchak Peak**	**3.42**	**247**	P	**P**	**11 11 21.6**	**+0.1**
HIN	**Hinchinbrook I**	**3.67**	**53**	P	**P**	**11 11 25.2**	**+0.1**
PMR	**Palmer**	**3.67**	**25**	P	**P**	**11 11 24.2**	**-0.9**
GLI	**Glacier Island**	**3.72**	**44**	P	**P**	**11 11 24.9**	**-0.9**
GHO	**Glory Hole Cre**	**3.88**	**25**	P	**P**	**11 11 27.4**	**-0.6**
SML	**Sawmill**	**4.05**	**29**	*e*P	**P**	**11 11 30.3**	**-0.1**
EYAK	**Cordova Ski Ar**	**4.07**	**54**	P	**P**	**11 11 30.0**	**-0.7**
VLZ	**Valdez**	**4.17**	**45**	P	**P**	**11 11 31.7**	**-0.4**
VLZ				S	**S**	**11 12 15.4**	**-4.7**
CUT	**Chulitna**	**4.23**	**14**	P	**P**	**11 11 32.9**	**-0.1**
SCM	**Sheep Creek Mo**	**4.34**	**34**	P	**P**	**11 11 34.3**	**-0.3**
DIV	**Divide**	**4.38**	**47**	P	**P**	**11 11 34.6**	**-0.5**
RAGM	**Ragged Mountai**	**4.47**	**59**	P	**P**	**11 11 36.2**	**-0.1**
KLU	**Klutina**	**4.56**	**43**	P	**P**	**11 11 37.3**	**-0.3**
BMRM	**Bremner River**	**4.77**	**53**	P	**P**	**11 11 39.5**	**-1.0**
TT01	**Tatalina**	**4.93**	**340**	P	**P**	**11 11 41.6**	**-1.1**
TZL	**Tazlina**	**5.11**	**40**	P	**P**	**11 11 45.5**	**+0.3**
KTH	**Kantishna Hill**	**5.30**	**7**	P	**P**	**11 11 47.4**	**-0.4**
SDPT	**Sand Point**	**5.34**	**240**	P	**P**	**11 11 48.0**	**-0.4**
GLB	**Gilahina Butte**	**5.34**	**51**	P	**P**	**11 11 47.7**	**-0.8**
DHY	**Denali Highway**	**5.37**	**25**	P	**P**	**11 11 48.8**	**-0.1**
PAX	**Paxson**	**5.78**	**33**	P	**P**	**11 11 53.7**	**-0.8**
BALM	**Baldy**	**5.78**	**58**	P	**P**	**11 11 53.8**	**-0.7**
THY	**Trims Highway**	**6.05**	**30**	*e*P	**P**	**11 11 58.1**	**-0.3**
CTGM	**Chitina Glacie**	**6.21**	**60**	P	**P**	**11 12 00.3**	**-0.3**
NEA	**Nenana**	**6.48**	**13**	P	**P**	**11 12 02.4**	**-2.0**
PCA	**Pinnacle**	**6.49**	**69**	P	**P**	**11 12 04.6**	**+0.1**
WRH	**Wood River Hil**	**6.51**	**17**	P	**P**	**11 12 03.2**	**-1.6**
DOT	**Dot Lake**	**6.71**	**34**	P	**P**	**11 12 06.8**	**-0.8**
GCSA	**Galena City Sc**	**6.79**	**344**	P	**P**	**11 12 07.7**	**-1.1**
PNL	**Peninsula**	**6.86**	**73**	P	**P**	**11 12 08.9**	**-0.8**
COLA	**College**	**6.92**	**16**	P	**P**	**11 12 08.9**	**-1.7**
IL1	**Eielson Array**	**6.99**	**20**	P	**P**	**11 12 09.8**	**-1.6**
ILAR	**Eielson Array**	**6.99**	**20**	Pn	**P**	**11 12 07.9**	**-3.6**
	1.3nm,0.3s,baz=214,slow=14,SNR=47						
ILAR				Sn	**S**	**11 13 21.1**	**-9.2**
	baz=215,slow=15,SNR=2.8						
IM02	**Indian Mountai**	**7.73**	**356**	P	**P**	**11 12 20.5**	**-1.3**
BM3	**Burnt Mountain**	**9.79**	**18**	P	**P**	**11 12 45.5**	**-4.3**
DLBC	**Dease Lake**	**11.74**	**80**	Pn	**P**	**11 13 16.5**	**+0.2**
	0.7nm,0.3s,baz=294,slow=14,SNR=15						
DLBC				Sn	**S**	**11 15 21.6**	**-5.0**
	0.3nm,0.3s,baz=320,slow=6.2,SNR=5.0						
INK	**Inuvik**	**13.05**	**32**	Pn	**P**	**11 13 32.8**	**-0.9**
	0.1nm,0.3s,baz=211,slow=14,SNR=4.7						
INK				LR	LR	11 19 21.1	
	comp=Z,98nm,20.0s,baz=7.3,slow=41						
INK	**Inuvik**	**13.05**	**32**	*e*P	**P**	**11 13 32.2**	**-1.5**
YKA	**Yellowknife Ar**	**18.93**	**61**	P	**P**	**11 14 48.1**	**+0.2**
	0.2nm,0.3s,baz=271,slow=9.8,SNR=5.0						
EDM	**Edmonton**	**22.32**	**86**	P	**P**	**11 15 24.3**	**+1.3**
NVAR	**Mina Array Bea**	**29.66**	**117**	P	**P**	**11 16 33.9**	**+2.3**
	0.4nm,0.9s,mb3.2,baz=323,slow=8.3,SNR=4.3						
PDAR	**Pinedale Array**	**30.73**	**101**	P	**P**	**11 16 42.9**	**+1.9**
	0.3nm,0.5s,mb3.4,baz=330,slow=5.3,SNR=6.6						
TXAR	**Lajitas Array**	**44.12**	**109**	P	**P**	**11 18 36.6**	**+2.9**
	0.2nm,0.7s,mb2.9,baz=307,slow=6.3,SNR=3.5						
ARCES	**ARCESS Array B**	**52.43**	**1**	P	**P**	**11 19 36.9**	**-0.7**
	0.6nm,0.5s,mb3.8,baz=341,slow=16,SNR=5.3						
ARCES	**ARCESS Array B**	**52.43**	**1**	P	**P**	**11 19 36.9**	**-0.7**
SONM	**Songino Array**	**56.04**	**307**	P	**P**	**11 20 05.4**	**+1.2**
	0.4nm,0.5s,mb3.7,baz=44,slow=8.7,SNR=3.1						
MKAR	**Makanchi Array**	**65.94**	**322**	P	**P**	**11 21 10.1**	**-1.0**
	0.2nm,0.5s,mb3.4,baz=26,slow=5.9,SNR=2.8						

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*NEIC **11** 11:40:35.8±1.1, 57.24N×121.19E, h5^{km}, mb3.9/2, Error ellipse: s-maj=17.8km s-min=7.0km az=89.0*

*IDC **11** 11:40:36.1±7.5, 57.31N×121.00E, mb3.8/6, mb1 3.9/7, mb1mx3.7/21, mbtmp3.7/7, ML3.4/1, Error ellipse: s-maj=144.8km s-min=28.5km az=121.0*

*MOS **11** 11:40:38.4±1.2, 57.73N×120.71E, h11^{km}, mb4.4/4, Error ellipse: s-maj=13.4km s-min=12.2km az=88.4*

*BYKL **11** 11:40:38.7±0.3, 57.36N×120.75E, h2^{km}±20^{km}*

ISC 11 11:40:35.8±0.3**, 57.39N**±0.04×**120.78E**±0.04**, h2**^{km}**, n70, σ1^{s}38**/73**, mb4.0**/8**, 4C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**1.46**	**251**	⇓*i*Pg	**Pg**	**11 41 05.0**	**+0.2**
CRS				⇑*i*		11 41 06.8	
CRS				max		11 41 07.2	
	757nm,1.0s						
CRS				*e*Sg	**Sg**	**11 41 23.2**	**-1.0**
CRS				Smax		11 41 24.0	
	1μm,0.4s						
CRS	**Chara**	**1.46**	**251**	*e*P	**Pg**	**11 41 05.0**	**+0.2**
CRS				*e*		11 41 23.2	
CRS				pmax	pmax		
	comp=Z,755nm,0.4s						
CRS				smax			
	comp=E,1μm,0.4s						
NRGR	**Nerungri**	**2.28**	**107**	*e*P	**Pn**	**11 41 20.3**	**+5.4**
NRGR				S	**Sn**	**11 41 50.3**	**+6.4**
CLNS	**Chul'man**	**2.31**	**102**	*e*Pg	**Pg**	**11 41 21.1**	**-0.8**
CLNS				Pmax		11 41 23.0	
	comp=E,414nm,0.3s						
CLNS				*e*Sn	**Sn**	**11 41 46.6**	**+1.9**
CLNS				*e*Sg	**Sg**	**11 41 52.0**	**-0.6**
CLNS				Smax		11 41 53.1	
	comp=E,3μm,0.3s						
CLNS	**Chul'man**	**2.31**	**102**	*e*P	**Pn**	**11 41 19.5**	**+4.1**
CLNS				*e*		11 41 52.0	
CLNS				pmax	pmax		
	comp=N,14nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,45nm,0.3s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.2s						
CLNS				smax			
	comp=N,306nm,0.3s						
CLNS				smax			
	comp=Z,264nm,0.4s						
CLNS				smax			
	comp=E,230nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,100nm,11.0s						
ALDR	**Aldan**	**2.75**	**62**	*e*Pn	**Pn**	**11 41 22.1**	**+0.4**
ALDR				*e*Pg	**Pg**	**11 41 27.5**	**-3.2**
ALDR				Pmax		11 41 36.7	
	comp=Z,279nm,0.2s						
ALDR				*e*Sn	**Sn**	**11 41 56.1**	**+0.1**
ALDR				*e*Sg	**Sg**	**11 42 04.0**	**-3.4**
ALDR				Smax		11 42 04.3	
	comp=Z,7μm,0.3s						
NLYR	**Nelyaty**	**2.92**	**254**	*e*Pn	**Pn**	**11 41 26.9**	**+2.7**
NLYR				*i* Pg	**Pg**	**11 41 32.0**	**-2.1**
NLYR				Pmax		11 41 32.4	
	comp=Z,459nm,0.6s						
NLYR				*e*Sg	**Sg**	**11 42 07.8**	**-5.3**
NLYR				Smax		11 42 14.4	
	comp=Z,2μm,1.1s						
NLYR	**Nelyaty**	**2.92**	**254**	*e*Pn	**Pn**	**11 41 27.1**	**+2.9**
NLYR				*e*Pg	**Pg**	**11 41 30.6**	**-3.5**
NLYR				*e*Sg	**Sg**	**11 42 06.2**	**-6.9**
NLYR	**Nelyaty**	**2.92**	**254**	*e*P	**Pn**	**11 41 27.1**	**+2.9**
NLYR				*e*		11 42 06.2	
NLYR				pmax	pmax		
	comp=Z,458nm,0.4s						
NLYR				smax			
	comp=E,2μm,1.1s						
TUP	**Tupik**	**3.01**	**189**	⇑*i*Pn	**Pn**	**11 41 26.9**	**+1.6**
TUP				⇑*i*Pg	**Pg**	**11 41 31.5**	**-4.3**
TUP				Pmax		11 41 33.6	
	comp=E,164nm,0.7s						
TUP				*e*Sn	**Sn**	**11 42 02.3**	**-0.1**
TUP				*e*Sg	**Sg**	**11 42 10.0**	**-5.9**
TUP				Smax		11 42 15.9	
	comp=E,1μm,1.3s						
TUP	**Tupik**	**3.01**	**189**	*e*Pg	**Pg**	**11 41 31.7**	**-4.1**
TUP				*e*Sn	**Sn**	**11 42 02.0**	**-0.4**
TUP				*e*Sg	**Sg**	**11 42 10.0**	**-5.9**
TUP	**Tupik**	**3.01**	**189**	*e*P	**Pg**	**11 41 31.7**	**-4.1**
TUP				*e*		11 42 10.0	
TUP				pmax	pmax		
	comp=Z,240nm,0.3s						
TUP				smax			
	comp=E,1μm,1.2s						
TNDR	**Tynda**	**3.14**	**134**	*e*Pn	**Pn**	**11 41 30.4**	**+3.2**
TNDR				max		11 41 31.3	
	comp=E,453nm,0.2s						
TNDR				*e*Pg	**Pg**	**11 41 36.5**	**-2.0**
TNDR				*e*Sn	**Sn**	**11 42 05.3**	**-0.6**
TNDR				*e*Sg	**Sg**	**11 42 15.8**	**-4.6**
TNDR				Smax		11 42 17.4	
	comp=E,7μm,0.6s						
BOD	**Bodaibo**	**3.67**	**280**	⇑*i*Pn	**Pn**	**11 41 36.5**	**+1.7**
BOD				*e*Pg	**Pg**	**11 41 44.0**	**-5.1**
BOD				Pmax		11 41 45.9	
	comp=E,62nm,0.8s						
BOD				*e*Sn	**Sn**	**11 42 18.6**	**-0.7**
BOD				*e*Sg	**Sg**	**11 42 31.1**	**-6.9**
BOD				Smax		11 42 32.3	
	comp=E,493nm,0.8s						
SVKR	**Severomuysk**	**4.18**	**255**	*e*Pg	Px	11 41 54.5	
SVKR				Pmax		11 41 58.6	
	comp=E,106nm,0.4s						
SVKR				*e*Sg	Sx	11 42 45.3	
SVKR				Smax		11 42 54.2	
	comp=E,962nm,0.9s						
UKT	**Uakit**	**4.40**	**247**	*e*Pn	**Pn**	**11 41 44.9**	**-0.3**
UKT				*e*Pg	Px	11 41 57.2	
UKT				Pmax		11 42 00.6	
	comp=E,52nm,0.7s						
UKT				*e*Sg	Sx	11 42 52.5	
UKT				Smax		11 43 00.8	
	comp=E,317nm,1.3s						
UKT	**Uakit**	**4.40**	**247**	*e*Pg	Px	11 41 57.1	
UKT				*e*Sg	Sx	11 42 52.7	

UKT	Uakit	4.40	247	eP	Px	11 41 57.1	
UKT				pmax	pmax		
	comp=Z,36nm,0.5s						
YOA	Uoyan	5.14	260	ePg	Px	11 42 11.9	
YOA				Pmax		11 42 20.2	
	comp=Z,226nm,1.2s						
YOA				eSg	Sx	11 43 17.3	
YOA				Smax		11 43 41.6	
	comp=Z,2μm,1.9s						
YOA	Uoyan	5.14	260	ePg	Px	11 42 13.6	
YOA				i Sg	Sx	11 43 17.7	
YOA	Uoyan	5.14	260	eP	Px	11 42 13.6	
YOA				pmax	pmax		
	comp=Z,225nm,1.3s						
KMO	Kumora	5.50	258	ePn	Pn	11 42 02.3	+1.6
KMO				ePg	Px	11 42 17.7	
KMO				Pmax		11 42 25.3	
	comp=Z,34nm,1.3s						
KMO				eSg	Sx	11 43 27.8	
KMO				Smax		11 43 32.5	
	comp=Z,521nm,1.0s						
KMO	Kumora	5.50	258	ePn	Pn	11 42 03.7	+3.0
KMO				ePg	Px	11 42 18.5	
KMO				eSn	Sn	11 43 02.6	-2.8
KMO				eSg	Sx	11 43 25.4	
KMO	Kumora	5.50	258	eP	Pn	11 42 03.7	+3.0
KMO				eS	Sn	11 43 02.6	-2.8
KMO				pmax	pmax		
	comp=Z,30nm,0.5s						
KMO				smax			
	comp=N,121nm,1.0s						
YLYR	Ulyunkhan	5.94	249	ePn	Pn	11 42 07.5	+0.6
YLYR				ePg	Px	11 42 24.4	
YLYR				Pmax		11 42 29.7	
	comp=N,40nm,1.3s						
YLYR				eSg	Sx	11 43 41.3	
YLYR				Smax		11 43 44.6	
	comp=N,294nm,1.8s						
NIZ	Nizh Angarsk	6.42	260	ePn	Pn	11 42 15.2	+1.6
NIZ				ePg	Px	11 42 34.9	
NIZ				Pmax		11 42 39.1	
	comp=N,22nm,1.0s						
NIZ				eSg	Sx	11 43 56.7	
NIZ				Smax		11 44 01.6	
	comp=N,111nm,1.6s						
NIZ	Nizh Angarsk	6.42	260	ePn	Pn	11 42 17.1	+3.5
NIZ				ePg	Px	11 42 36.9	
NIZ				eSg	Sx	11 43 56.8	
NIZ	Nizh Angarsk	6.42	260	eP	Pn	11 42 17.1	+3.5
NIZ				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK	Yakutsk	6.47	40	ePn	Pn	11 42 16.6	+2.2
YAK				ePg	Px	11 42 34.2	
YAK				Pmax		11 42 36.7	
	comp=Z,112nm,0.4s						
YAK				eSn	Sn	11 43 24.9	-4.9
YAK				eSg	Sx	11 43 57.2	
YAK				Smax		11 44 00.5	
	comp=Z,2μm,0.6s						
YAK	Yakutsk	6.47	40	ePg	Px	11 42 31.8	
	comp=Z,24nm,0.5s						
YAK				eSg	Sx	11 43 55.8	
YAK	Yakutsk	6.47	40	i P	Pn	11 42 19.2	+4.8
CIT	Chita	6.81	221	ePn	Pn	11 42 19.3	+0.1
CIT				ePg	Px	11 42 40.3	
CIT				Pmax		11 42 42.6	
	comp=Z,77nm,1.3s						
CIT				eSg	Sx	11 44 08.2	
CIT				Smax		11 44 18.3	
	comp=Z,518nm,1.9s						
CIT	Chita	6.81	221	ePg	Px	11 42 40.5	
CIT				eSg	Sx	11 44 07.5	
CIT	Chita	6.81	221	eP	Px	11 42 40.5	
CIT				pmax	pmax		
	comp=Z,77nm,1.2s						
SYVR	Suvo	7.17	243	ePn	Pn	11 42 24.1	-0.1
SYVR				ePg	Px	11 42 47.6	
SYVR				Pmax		11 42 51.1	
	comp=Z,36nm,1.2s						
SYVR				eSg	Sx	11 44 18.7	
SYVR				Smax		11 44 34.4	
	comp=Z,273nm,1.8s						
SYVR	Suvo	7.17	243	ePg	Px	11 42 46.6	
SYVR				eSg	Sx	11 44 17.4	
SYVR	Suvo	7.17	243	eP	Px	11 42 46.6	
SYVR				pmax	pmax		
	comp=Z,24nm,1.0s						
HIA	Hailar	8.16	185	eSg	Sx	11 44 52.8	
	comp=Z,107nm,1.1s						
OGRR	Ongureny	8.37	249	ePn	P	11 42 42.2	+1.2
OGRR				ePg	Px	11 43 10.8	
OGRR				eSg	Sx	11 44 55.6	
OGRR				Smax		11 45 14.7	
	comp=Z,87nm,1.9s						
KPC	Khapcheranga	9.17	217	e	Px	11 43 58.2	
KPC				eSg	Sx	11 45 20.2	
KPC				Smax		11 45 30.4	
	comp=Z,184nm,1.1s						
TRG	Tyrgan	9.48	247	eSg	Sx	11 45 31.2	
TRG				Smax		11 45 43.1	
	comp=Z,86nm,2.6s						
LSTR	Listvyanka	10.76	246	eSg	Sx	11 46 11.6	
LSTR				Smax		11 46 38.7	
	comp=Z,58nm,2.6s						
TLY	Talaya	11.46	247	eSg	Sx	11 46 32.5	
TLY				Smax		11 46 54.2	
	comp=Z,31nm,2.1s						
ARS	Arshan	11.94	251	eSg	Sx	11 46 47.2	
ARS				Smax		11 47 20.4	
	comp=Z,95nm,1.2s						
BTGS	Batagay	12.08	26	eSg	Sx	11 46 53.7	
BTGS				Smax		11 47 10.0	
	comp=Z,84nm,0.6s						
ZAK	Zakamensk	12.46	243	eSg	Sx	11 47 01.6	
MOY	Mondy	12.82	252	eSg	Sx	11 47 15.3	
SONM	Songino Array	12.93	228	Pn	P	11 43 42.6	-0.6
	comp=Z,0.2nm,0.3s,baz=49,slow=13,SNR=2.8						
SONM				Sn	S	11 46 02.1	-6.7
	comp=Z,0.3nm,0.3s,baz=43,slow=26,SNR=5.1						
SONM				Lg		11 47 24.3	
	comp=Z,1.0nm,0.3s,baz=38,slow=26,SNR=9.4						
ORL	Orlik	12.97	257	eSg	Sx	11 47 18.2	
UNR	Ust'-Nera	13.00	47	eSg	Sx	11 47 19.7	
MOMR	Moma	13.85	40	eSg	Sx	11 47 47.7	
TIXI	Tiksi	14.71	10	i P	P	11 44 02.5	-3.8
TIXI				MLR	MLR		
	comp=Z,100nm,13.0s						
TDJR	Todzha	15.01	261	eSg	Sx	11 48 21.1	
KRAR	Krasnoyarsk	15.35	277	eP	P	11 44 14.3	-0.5
ZAL	Zalesovo	20.43	276	P	P	11 45 16.9	+0.1
	comp=Z,1.1nm,0.4s,baz=33,slow=12,SNR=5.3						
NVS	Novosibirsk	20.91	279	eP	P	11 45 23.2	+1.5
KURK	Kurchatov	25.30	273	i P	P	11 46 06.8	+2.2
MKAR	Makanchi Array	25.57	262	P	P	11 46 08.0	+0.7
	comp=Z,1.0nm,0.7s,mb3.5,baz=58,slow=8.5,SNR=5.6						
MKAR	Makanchi Array	25.57	262	i P	P	11 46 10.3	+3.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CHKZ	Chkalovo	28.11	284	P	P	11 46 30.3	-0.2
	comp=Z,0.9nm,0.5s,mb3.7						
CHKZ	Chkalovo	28.11	284	P	P	11 46 30.3	-0.2
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
ARCES	ARCESS Array B	39.70	327	P	P	11 48 10.5	+0.1
	comp=Z,1.3nm,0.6s,mb3.8,baz=50,slow=9.5,SNR=7.6						
FINES	FINESS Array B	44.28	317	P	P	11 48 47.6	-0.2
	comp=Z,1.7nm,0.6s,mb4.0,baz=39,slow=9.5,SNR=7.6						
FINES	FINESS Array B	44.28	317	i P	P	11 48 49.0	+1.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	NORSAR Subarra	49.75	323	P	P	11 49 31.4	+0.6
	comp=Z,0.8nm,0.4s,mb4.1,baz=40,slow=7.4						
NOA	NORSAR Array B	49.75	323	P	P	11 49 31.2	+0.3
	comp=Z,0.8nm,0.4s,mb4.1,baz=43,slow=7.8,SNR=3.4						
NOA	NORSAR Array B	49.75	323	P	P	11 49 31.2	+0.3
NAO	NORSAR Subarra	50.04	323	P	P	11 49 31.4	-1.6
	comp=Z,0.8nm,0.4s,mb4.1						
ANN	Anapa	50.58	294	eP	P	11 49 35.4	-2.0
ANN				eS	S	11 56 48.8	-2.6
ANN				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
GERES	GERESS Array B	58.26	312	P	P	11 50 32.0	-1.5
	comp=Z,0.6nm,0.7s,mb3.7,baz=45,slow=5.7,SNR=3.5						

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*ATH **11** 11:50:03.7,38.42N×21.96E,h5^{km},MD3.3/5*
*THE **11** 11:50:03.6,38.31N×22.20E,h10^{km}*
*SKO **11** 11:50:04.0,38.11N×22.33E,h30^{km}*
*NEIC **11** 11:50:03.7,38.42N×21.96E,h5^{km},MD3.3(ATH),After ATH.*
*CSEM **11** 11:50:04.0±0.1,38.35N×22.01E,h8^{km},MD3.3,Error ellipse: s-maj=2.8km s-min=1.8km az=120.0*
ISC 11 11:50:03.1±0.7**,38.30N**±0.04×**22.13E**±0.05**,h5^{km},n16,** σ**1^{s}12**/24**,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.57	245	ePG	Pg	11 50 13.9	-0.7
EVR	Evrytania	0.66	338	ePB	Pb	11 50 13.9	-2.8
AGG	Agios Georgios	0.74	13	ePg	Pg	11 50 16.3	-1.5
AGG				eSg	Sg	11 50 27.6	0.0
LKR	Lokris	0.77	63	ePG	Pg	11 50 19.7	+1.3
ITM	Ithomi	1.13	188	ePN	Pn	11 50 26.5	+1.0
VLS	Valsamata	1.22	265	ePG	Pg	11 50 23.7	-3.6
VLS				eSB	Sb	11 50 42.0	0.0
NEO	Neokhori	1.32	40	ePB	Pb	11 50 29.4	+1.5
XOR	Xorichti	1.35	38	ePg	Pg	11 50 28.4	-1.6
XOR				eSg	Sg	11 50 48.0	0.0
MEV	Metsovon	1.64	335	ePb	Pb	11 50 32.7	-0.6
MEV				eSb	Sb	11 50 57.0	+2.7
VLI	Veliai	1.71	158	ePN	Pn	11 50 40.6	+6.9
LIT	Litokhoron	1.82	9	ePb	Pb	11 50 35.1	-1.4
LIT				eSb	Sb	11 50 59.3	-0.2
PAIG	Paliouri	2.02	36	ePn	Pn	11 50 37.8	-0.4
FNA	Florina	2.54	347	ePn	Pn	11 50 45.9	+0.2
BIA	Bitola	2.78	347	ePn	Pn	11 50 49.8	+0.7
BIA				eSn	Sn	11 51 24.6	+1.2
OHR	Ohrid	2.98	340	ePn	Pn	11 50 52.4	+0.4
OHR				eSn	Sn	11 51 29.7	+1.1
VAY	Valandovo	3.03	6	ePn	Pn	11 50 53.2	+0.5
VAY				eSn	Sn	11 51 29.0	-0.8

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*NAO **11** 12:23:24.3±3.5,60.88N×29.60E,ML2.1*
*IDC **11** 12:23:24.9±1.9,61.07N×29.75E,mb1 3.4/3, mb1mx3.1/21,mbtmp3.3/3,ML2.8/3,Error ellipse: s-maj=21.0km s-min=11.5km az=170.0*
*BER **11** 12:23:25.3±2.2,61.01N×29.65E,ML2.1(NAO), Suspected explosion*
ISC 11 12:23:26.5±4.7**,61.5N**±0.3×**28.7E**±0.6**,n7,**σ**0^{s}33**/8**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	FINESS Array S	1.28	268	Pn	Pg	12 23 56.5	+4.4
	baz=110,slow=16						
FIA0				Lg		12 24 21.0	
	baz=95,slow=28						
FIA0				Rg		12 24 30.9	
	baz=101,slow=28						
FINES	FINESS Array B	1.28	268	Pg	Pg	12 23 56.5	+4.4
	1.4nm,0.3s,baz=104,slow=17,SNR=43						
FINES				Lg		12 24 22.1	
	5.3nm,0.3s,baz=96,slow=28,SNR=40						
FINES				Rg		12 24 30.3	
	60nm,0.9s,baz=101,slow=29,SNR=33						
HFS	Hagfors	7.49	266	Pn	Pn	12 25 19.5	-0.2
	0.0nm,0.3s,baz=82,slow=12,SNR=3.6						
HFS				Sn	Sn	12 26 46.3	0.0
	0.0nm,0.3s,baz=82,slow=31,SNR=4.3						
HFS	Hagfors	7.49	266	Pn	Pn	12 25 20.0	+0.3
	baz=80,slow=10						
ARCES	ARCESS Array B	8.15	352	Pn	P	12 25 29.0	0.0
	0.1nm,0.3s,baz=163,slow=14,SNR=7.2						
NB2	NORSAR Subarra	8.46	274	Pn	P	12 25 32.8	-0.4
	baz=80,slow=16						
NOA	NORSAR Array B	8.46	274	Pn	P	12 25 33.3	+0.1
	0.2nm,0.3s,baz=86,slow=14,SNR=3.0						

IDC 11 12:32:20.1±2.6**,46.95N**×**97.53E,mb1 3.4**/3**, mb1mx3.3**/22**,mbtmp3.4**/3**,ML3.1**/3**,Error ellipse: s-maj=52.0km s-min=16.4km az=4.0,Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	6.08	78	Pn	Pn	12 33 52.5	-1.0
	0.4nm,0.3s,baz=261,slow=14,SNR=9.0						
SONM				Pg	Pg	12 34 11.8	-10
	4.4nm,0.3s,baz=261,slow=18,SNR=18						
SONM				Lg		12 35 30.1	
	20nm,0.3s,baz=260,slow=26,SNR=26						
MKAR	Makanchi Array	10.44	275	Pn	P	12 34 51.2	-2.8
	0.1nm,0.3s,baz=90,slow=13,SNR=5.7						
MKAR				Lg		12 37 48.3	
	0.6nm,0.3s,baz=83,slow=25,SNR=5.6						
ZAL	Zalesovo	10.71	315	Pg	Px	12 35 37.0	
	0.2nm,0.3s,baz=335,slow=13,SNR=6.3						
ZAL				Lg		12 38 00.0	
	0.4nm,0.3s,baz=226,slow=21,SNR=6.1						
BVAR	Borovoye Array	18.41	299	P	P	12 36 37.5	-0.7
	0.2nm,0.3s,baz=104,slow=12,SNR=11						

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*WEL **11** 12:46:34.7±0.3,36.77S×179.22E,h5^{km},ML3.5/5,Error ellipse: s-maj=3.3km s-min=1.2km az=90.0*
ISC 11 12:46:34.9±2.8**,36.7S**±0.1×**179.3E**±0.3**,h47^{km}**±20^{km}**,n8,** σ**0^{s}52**/11**,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.18	220	P*	P	12 46 54.1	-1.0
MXZ				S*	S	12 47 09.6	-0.7
PUZ	Puketiti	1.61	210	PN	P	12 47 01.7	+0.2
PUZ				SN	S	12 47 22.0	+0.8
MWZ	Matawai	2.16	219	PN	P	12 47 09.5	+0.3
MWZ				SN	S	12 47 34.8	0.0
URZ	Urewera	2.34	227	PN	P	12 47 11.9	+0.2
KUZ	Kuaotunu	2.85	267	PN	P	12 47 19.6	+0.6
MQZ	McQueen's Vall	8.66	214	eSN	S	12 50 02.3	-15
ASPA	Alice Springs	40.95	275	eP	P	12 54 14.6	0.0
WB2	Warramunga Arr	42.50	281	eP	P	12 54 27.1	-0.3

GUC 11 12:58:17.6±0.5**,35.02S**×**70.47W,h20^{km}**±3^{km}**,MD3.7, ML2.4,1C-3D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.60	312	⇓iP	Pb	12 58 29.1	-0.2
SFDO				i S	Sb	12 58 37.7	+0.3
CICH	Cipreses	0.70	4	⇓iP	Pb	12 58 30.7	-0.2
CICH				i S	Sb	12 58 41.1	+1.0
CACH	El Canelo	0.91	353	⇑iP	Pb	12 58 34.5	0.0
CACH				i S	Sb	12 58 47.4	+1.3
CHCH	Chadas Angostu	1.09	352	eP	Pb	12 58 36.5	-1.2
LNV	Longovilo	1.31	324	eP	Pn	12 58 41.3	+0.2
LNV				i S	Sb	12 58 59.3	+1.4
TACH	Talagante	1.42	344	⇓iP	Pn	12 58 42.8	+0.3
TACH				i S	Sn	12 59 02.1	+1.5
RCDM	Rinconada Maip	1.55	350	i P	Pn	12 58 46.0	+1.6
RCDM				i S	Sn	12 59 06.9	+2.8
RCDM				AMP		12 59 08.2	
	comp=E,81nm,0.1s						

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*NEIC **11** 13:15:29.6±2.1,20.01S×68.73W,h117^{km}±26^{km},mb3.8/1, Error ellipse: s-maj=32.6km s-min=25.4km az=85.0*
*IDC **11** 13:15:29.8±3.2,20.03S×68.68W,h127^{km}±47^{km},mb3.4/1, mb1 3.8/3,mb1mx3.4/17,mbtmp4.2/3,Error ellipse: s-maj=54.7km s-min=37.1km az=96.0*
ISC 11 13:15:27.8±3.6**,20.2S**±0.3×**68.6W**±0.3**,h102^{km}**±55^{km}**,n10,** σ**0^{s}11**/11**,4C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	3.91	7	P	P	13 16 27.1	+0.1
	5.2nm,0.3s,baz=185,slow=9.1,SNR=88						
LPAZ				S	S	13 17 05.4	-6.7
	0.6nm,0.3s,baz=191,slow=10,SNR=1.9						
LPAZ	La Paz	3.91	7	ePn	P	13 16 26.9	-0.1
LPAZ				S	S	13 17 05.4	-6.7
SIV	San Ignacio	8.29	61	P	P	13 17 26.8	0.0
	baz=265,slow=11						
PLCA	Paso Flores	20.54	184	P	P	13 20 00.0	0.0
	2.9nm,0.7s,slow=10,SNR=8.6						
PLCA	Paso Flores	20.54	184	eP	P	13 19 59.9	0.0
	3.4nm,0.7s						
VNA3	Neumayer Olymp	61.22	162	⇑i	P	13 25 33.9	+0.1
VNA1	Neumayer--Stat	61.42	161	⇑i	P	13 25 41.3	+6.1
VNA2	Neumayer--Watz	61.78	161	⇑i	P	13 25 37.8	+0.2
SNAA	Sanae	63.42	161	⇑i	P	13 25 48.3	-0.2
WRA	Warramunga Arr	134.22	211	PKP	PKPdf	13 34 33.2	-1.1
	0.2nm,0.5s,baz=153,slow=1.7,SNR=5.9						

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*BJI **11** 13:19:09.6,15.40S×75.50W,h1^{km},mB5.2,Ms5.3,Msz4.8*
*HRVD **11** 13:19:09.7±0.3,15.33S×75.75W,h12^{km},MW5.2/61, Centroid moment Tensor Solution. LP body waves: s38,c58;Mantle waves: s61,c103; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.00±.20; $M_{\theta\theta}$-0.18±.13; $M_{\phi\phi}$-4.82±.20; $M_{r\theta}$0.89±.34; $M_{\theta\phi}$2.43±.12; $M_{\phi r}$-4.77±.58; Best double couple: $M_0$7.294×10^{16} NP1: ϕ_s326°,δ25°,λ71°. NP2:ϕ_s166°,δ66°,λ99°. Principal axes: T 6.937, Plg68°, Azm92°; N .712, Plg8°, Azm342°; P -7.651, Plg21°, Azm250°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **11** 13:19:09.7±3.4,15.41S×75.51W,h2^{km}±21^{km},mb4.9/11 Error ellipse: s-maj=11.4km s-min=5.1km az=65.0*
*IDC **11** 13:19:09.3±0.7,15.42S×75.52W,mb4.1/10,mb1 4.2/12, mb1mx4.1/20,mbtmp4.1/12,MS4.5/19,Ms1 4.5/19, ms1mx4.3/30,Error ellipse: s-maj=26.6km s-min=15.7km az=65.0*
ISC 11 13:19:09.2±0.3**,15.40S**±0.05×**75.58W**±0.08**,h10^{km},n73,** σ**0^{s}82**/53**,mb4.4**/17**,MS4.6**/19**,6C,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.61	340	ePn	Pn	13 20 07.2	+0.8
NNA				eSn	Sn	13 20 48.3	-1.2
ARE	Arequipa	4.07	106	eP	Pn	13 20 13.0	0.0
ARE				e		13 20 16.0	
ARE				i S	Sn	13 21 20.8	+20
LPAZ	La Paz	7.22	98	Pn	Pn	13 21 00.4	+2.9
	13nm,0.3s,baz=283,slow=9.3,SNR=180						
LPAZ				Sn	Sn	13 22 32.4	+12
	baz=138,slow=12,SNR=1.2						
LPAZ				LR	LR	13 23 23.7	
	comp=Z,1μm,18.2s,baz=281,slow=36						
LPAZ	La Paz	7.22	98	ePn	Pn	13 21 01.2	+3.8
	74nm,0.4s						
SAML	Samuel	13.70	64	ePn	P	13 22 25.6	-0.5
	12nm,0.7s						
SIV	San Ignacio	13.98	94	Pn	P	13 22 26.0	-3.8
	baz=274,slow=13						
CFAA	Coronel Fontan	17.47	159	P	P	13 23 14.3	-0.4
	0.1nm,0.3s,baz=343,slow=9.3,SNR=12						
CFAA				S	S	13 26 35.0	+7.7
	0.1nm,0.3s,baz=22,slow=11,SNR=2.6						
CFAA	Coronel Fontan	17.47	159	P	P	13 23 14.3	-0.4
CFAA				S	S	13 26 35.0	+7.7
FCH	Farellones	18.48	166	eP	P	13 23 27.0	-0.2
ROSC	El Rosal	20.16	4	P	P	13 23 46.7	0.0
	3.2nm,0.4s,baz=107,slow=19,SNR=1.8						
CPUP	Villa Florida	20.20	126	eP	P	13 23 46.4	-0.7
	272nm,1.6s						
SDV	Santo Domingo	24.62	12	P	P	13 24 32.3	+1.1
	12nm,1.0s,mb4.4,baz=246,slow=5.3,SNR=7.8						
SDV	Santo Domingo	24.62	12	eP	P	13 24 31.3	+0.1
	23nm,1.0s,mb4.7						
LPA	La Plata	25.07	144	ceP	P	13 24 36.0	+0.6
LPA				esP	sP	13 24 44.0	+4.4
LPA				ePP	PP	13 25 07.0	-6.1
LPA				eS	S	13 29 01.0	+4.1
LPA				eSP		13 29 08.0	
TRQA	Tornquist	25.57	155	eP	P	13 24 38.4	-1.7
	55nm,1.5s,mb4.9						
PLCA	Paso Flores	25.62	171	P	P	13 24 39.5	-0.9
	4.8nm,1.0s,mb4.0,baz=344,slow=9.9,SNR=8.6						
PLCA	Paso Flores	25.62	171	eP	P	13 24 39.8	-0.6
	103nm,2.0s,mb5.0						
BDFB	Brasilia	26.55	94	P	P	13 24 49.1	-0.3
	3.4nm,0.4s,mb4.2,baz=261,slow=7.8,SNR=6.6						
BDFB				LR	LR	13 34 25.4	
	comp=Z,1μm,22.0s,MS4.3,baz=67,slow=35						
USHA	Ushuaia	39.74	174	P	P	13 26 43.7	+0.1
	11nm,1.1s,mb4.5,baz=340,slow=3.5,SNR=3.5						
TXAR	Lajitas Array	52.09	329	P	P	13 28 21.6	-0.2
	0.9nm,0.6s,mb3.9,baz=141,slow=8.0,SNR=12						
TXAR				LR	LR	13 49 11.0	
	comp=Z,511nm,18.1s,MS4.6,baz=155,slow=35						
CPRX	Cap Rock	55.23	331	eP	P	13 28 45.4	+0.4
RKT	Rikitea	56.28	252	eS	S	13 36 50.5	+10
RKT				eLR	LR	13 45 11.4	
	baz=96						
ANMO	Albuquerque	58.03	330	eP	P	13 29 04.6	-0.2
	30nm,2.0s,mb5.0						
SDCO	Great Sand Dun	59.88	333	eP	P	13 29 17.9	+0.2
	22nm,1.6s,mb4.9						
SMCO	Snowmass	61.71	333	eP	P	13 29 30.9	+0.8
TAOE	Nuku Hiva Isla	63.28	268	eLR	LR	13 48 20.2	
	2μm,23.7s,baz=111						
DUG	Dugway	65.25	329	eP	P	13 29 53.9	+0.5
	5.2nm,0.9s,mb4.6						
HWUT	Hardware Ranch	65.75	331	eP	P	13 29 56.4	-0.2
	3.6nm,0.7s,mb4.5						
PDAR	Pinedale Array	65.77	333	P	P	13 29 56.1	-0.5
	0.5nm,1.0s,mb3.5,baz=156,slow=8.9,SNR=3.1						
PDAR				LR	LR	13 59 12.4	
	comp=Z,325nm,18.1s,MS4.6,baz=3.3,slow=36						
NVAR	Mina Array Bea	66.85	325	P	P	13 30 02.6	-1.0
	1.0nm,0.9s,mb3.8,baz=121,slow=5.4,SNR=6.7						
NVAR				LR	LR	13 58 06.0	
	comp=Z,252nm,18.4s,MS4.5,baz=115,slow=35						
ELK	Elko	66.88	328	P	P	13 30 04.6	+0.8
	0.3nm,0.3s,mb3.8,baz=148,slow=15,SNR=2.8						
RRI2	Red Ridge	67.01	332	eP	P	13 30 04.7	+0.2
	12nm,1.2s,mb4.8						
ULM	Lac du Bonnet	67.76	346	LR	LR	14 03 05.2	
	comp=Z,296nm,20.7s,MS4.5,baz=358,slow=39						
VNA3	Neumayer Olymp	67.85	161	e	P	13 30 17.3	+7.9
VNA3	Neumayer Olymp	67.85	161	e	P	13 30 29.8	+20
VNA3	Neumayer Olymp	67.85	161	⇑iP	P	13 30 09.0	-0.4
VNA3				e		13 30 17.3	
VNA3				e		13 30 29.8	
VNA3				e		13 31 19.7	
VNA1	Neumayer--Stat	68.11	161	e	P	13 30 18.9	+7.8
VNA1	Neumayer--Stat	68.11	161	⇑iP	P	13 30 11.1	0.0
VNA1				e		13 30 18.9	
VNA2	Neumayer--Watz	68.47	161	e	P	13 30 21.1	+7.8
VNA2	Neumayer--Watz	68.47	161	e	P	13 30 31.9	+19
VNA2	Neumayer--Watz	68.47	161	⇑iP	P	13 30 12.7	-0.6
VNA2				e		13 30 21.1	
VNA2				e		13 30 31.9	
VNA2				e		13 31 23.3	
HLID	Hailey	68.59	331	eP	P	13 30 15.2	+0.6
	1.8nm,0.7s,mb4.1						
TBI	Tubuai	69.51	250	eS	S	13 39 34.7	+8.0
TBI				eLR	LR	13 51 12.1	
	628nm,28.5s,baz=102						
SNAA	Sanae	70.07	161	e	P	13 30 29.5	+6.4
SNAA	Sanae	70.07	161	e	P	13 30 43.4	+20
SNAA	Sanae	70.07	161	⇑iP	P	13 30 22.5	-0.6
SNAA				e		13 30 29.5	
SNAA				e		13 30 43.4	
SNAA				e		13 31 35.6	
SCHQ	Schefferville	70.34	5	LR	LR	13 58 26.4	
	comp=Z,252nm,20.4s,MS4.5,baz=201,slow=34						
PPT	Papeete	70.56	257	eS	S	13 39 47.0	+7.9
PPT				eLR	LR	13 51 36.2	
	598nm,27.2s,baz=109						
PPT	Papeete	70.56	257	LR	LR	13 53 05.4	
	comp=Z,410nm,18.9s,MS4.7,baz=96,slow=29						
DBIC	Dimbokro	73.39	78	P	P	13 30 43.3	-0.7
	2.4nm,0.8s,mb4.2,baz=266,slow=6.0,SNR=2.5						
DBIC				LR	LR	14 01 25.3	
	comp=Z,1μm,18.3s,MS5.2,baz=216,slow=35						
QSPA	South Pole Qui	74.75	180	eP	P	13 30 51.4	+0.8
	8.8nm,0.9s,mb4.7						
EDM	Edmonton	75.66	338	eP	P	13 30 55.8	-0.6
VNDA	Vanda	81.69	191	eP	P	13 31 30.1	+1.4
MDT	Midelt	82.96	53	LR	LR	14 08 36.4	
	comp=Z,473nm,18.4s,MS4.9,baz=255,slow=36						
YKA	Yellowknife Ar	83.44	343	LR	LR	14 11 48.7	
	comp=Z,348nm,18.4s,MS4.8,baz=160,slow=38						
SYO	Syowa Base	84.36	161	⇑pP	pP	13 31 42.5	-3.1
BORG	Borgarnes	89.81	20	LR	LR	14 07 56.2	
	comp=Z,347nm,21.9s,MS4.7,baz=39,slow=33						
MAW	Mawson	91.88	165	LR	LR	14 10 52.9	
	comp=Z,171nm,19.2s,MS4.5,baz=58,slow=34						

BOSA	**Boshof**	**91.93**	**120**	LR	LR	14 09 18.1	
	comp=Z,262nm,19.5s,MS4.7,baz=257,slow=33						
URZ	**Urewera**	**93.63**	**229**	LR	LR	14 01 37.4	
	comp=Z,44nm,21.7s,MS3.9,baz=62,slow=27						
RPZ	**Rata Peaks**	**95.49**	**222**	LR	LR	14 08 08.3	
	comp=Z,147nm,18.8s,MS4.5,baz=30,slow=31						
ILAR	**Eielson Array**	**96.08**	**336**	LR	LR	14 17 17.5	
	comp=Z,281nm,21.0s,MS4.7,baz=359,slow=36						
JMIC	**Jan Mayen**	**97.24**	**18**	LR	LR	14 12 56.5	
	comp=Z,226nm,21.7s,MS4.6,baz=34,slow=33						
DAVOX	**Davos**	**98.00**	**44**	LR	LR	14 14 44.1	
	comp=Z,379nm,19.5s,MS4.9,baz=256,slow=34						
STKA	**Stephens Creek**	**121.01**	**217**	PKP	PKPdf	13 38 05.7	-0.1
	2.8nm,1.0s,baz=103,slow=6.8,SNR=3.1						
WRA	**Warramunga Arr**	**134.19**	**221**	PKP	PKPdf	13 38 29.7	-1.5
	1.0nm,0.7s,baz=137,slow=1.8,SNR=15						
WRAB	**Tennant Creek**	**134.19**	**221**	*e*PKPdf	PKPdf	13 38 31.1	-0.1
ZAL	**Zalesovo**	**138.59**	**17**	PKP	PKPdf	13 38 37.8	-0.6
	0.6nm,0.4s,baz=214,slow=0.7,SNR=5.0						
MKAR	**Makanchi Array**	**143.67**	**26**	PKP	PKPdf	13 38 46.9	-0.6
	0.3nm,0.8s,baz=225,slow=2.0,SNR=2.9						
SONM	**Songino Array**	**147.62**	**358**	PKPbc	PKPdf	13 38 55.6	+1.4
	1.3nm,0.6s,baz=343,slow=2.2,SNR=7.1						
WMQ	**Urumqi**	**148.29**	**23**	PKP	PKPdf	13 38 56.0	+0.6
WMQ				PKP2	PKPab	13 39 04.5	+3.5
WMQ				*e*PP	PP	13 42 32.0	+3.6
WMQ				PPP	PPP	13 45 53.0	+4.1
WMQ				PP	PP		
	comp=Z,180nm,5.6s						
WMQ				LR	LR		
	comp=N,280nm,22.4s,MS5.2						
WMQ				LR	LR		
	comp=E,310nm,24.6s,MS5.2						
WMQ				LR	LR		
	comp=Z,360nm,22.5s,MS5.1						
POO	**Poona**	**150.61**	**80**	*e*x	x	13 38 57.5	
KMI	**Kunming**	**170.20**	**9**	PKP	PKPdf	13 39 18.6	-2.0
KMI				pPKP		13 39 31.5	
KMI				PP	PP	13 44 23.6	-2.9
KMI				SS	SS	14 05 17.8	-6.3
KMI				LR	LR		
	comp=Z,130nm,24.2s						

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*CSEM **11** 13:23:11.9±0.4, 67.57N×34.57E, h2^{km}, ML2.6, Error ellipse: s-maj=10.8km s-min=5.3km az=78.0, Mining explosion.*

*NAO **11** 13:23:16.1±2.2, 67.64N×33.89E, ML2.6*

HEL 11 13:23:15.3±0.2**, 67.63N×34.06E, ML2.5, ML2.4**(BER)**, ML2.6**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.41**	**267**	*i* P	Pg	13 23 23.0	-0.5
APA0				*i* S	Sg	13 23 27.9	-1.0
APA0				*e*RG		13 23 30.3	
APA0	**Apatity Array**	**0.41**	**267**	Pg	Pg	13 23 23.0	-0.5
	baz=79,slow=16						
APA0				Lg		13 23 27.9	
	baz=86,slow=37						
APA0				Rg		13 23 30.3	
	baz=86,slow=37						
KU4	**Liikasenvaara**	**2.17**	**236**	*e*P	Pn	13 23 53.2	+0.1
KU4				*e*S	Sn	13 24 19.2	-1.9
SGF	**Sodankyl**	**2.90**	**270**	*e*P	Pn	13 24 02.8	-0.8
SGF				*e*S	Sn	13 24 37.8	-1.8
SGF	**Sodankyl**	**2.90**	**270**	P	Pn	13 24 02.8	-0.8
SGF				S	Sn	13 24 37.7	-1.9
KEV	**Kevo**	**3.34**	**313**	*e*P	Pn	13 24 08.4	-1.4
KEV				*e*S	Sn	13 24 48.6	-2.3
KEV				*e*SG	Sg	13 24 57.7	-9.0
KEV				MSG		13 24 58.0	
	comp=Z,18nm,0.3s						
KEV	**Kevo**	**3.34**	**313**	P	Pn	13 24 08.4	-1.5
KEV				S	Sn	13 24 48.5	-2.4
KEV				Sg	Sg	13 24 57.6	-9.0
ARA0	**ARCESS Array S**	**3.67**	**305**	*e*P	Pn	13 24 13.3	-1.2
ARA0				*e*PG	Pg	13 24 21.3	-7.4
ARA0				*e*S	Sn	13 24 55.0	-4.3
ARA0				*e*SG		13 25 07.5	
ARA0	**ARCESS Array S**	**3.67**	**305**	Pn	Pn	13 24 13.3	-1.2
	baz=122,slow=16						
ARA0				Pg	Pg	13 24 21.3	-7.4
	baz=115,slow=14						
ARA0				Sn	Sn	13 24 55.0	-4.3
	baz=123,slow=28						
ARA0				Lg		13 25 07.5	
	baz=120,slow=28						
ARA0	**ARCESS Array S**	**3.67**	**305**	P	Pn	13 24 13.3	-1.3
OUL	**Oulu**	**4.16**	**236**	*e*P	Pn	13 24 20.2	-1.3
OUL				*e*S	Sn	13 25 06.4	-5.2
OUL				*e*SG	Sg	13 25 24.9	-8.9
OUL				MSG		13 25 29.7	
	comp=Z,7.4nm,0.2s						
OUL	**Oulu**	**4.16**	**236**	P	Pn	13 24 20.2	-1.3
OUL				S	Sn	13 25 06.4	-5.2
OUL				Sg	Sg	13 25 24.9	-8.9
	comp=Z,7.4nm,0.2s						
KTK1	**Kautokeino**	**4.25**	**294**	*e*P	Pn	13 24 22.0	-0.7
KTK1				AML	AML	13 25 29.0	
	comp=Z,18nm,0.6s						
KTK1	**Kautokeino**	**4.25**	**294**	P	Pn	13 24 21.9	-0.8
	comp=Z,18nm,0.6s						
KJN	**Kajaani**	**4.41**	**219**	*e*P	Pn	13 24 23.1	-1.9
KJN				*e*S	Sn	13 25 13.7	-4.1
KJN				*e*SG	Sg	13 25 30.4	-12
KJN				MSG		13 25 34.4	
	comp=Z,5.9nm,0.3s						
KJN	**Kajaani**	**4.41**	**219**	P	Pn	13 24 23.1	-1.9
KJN				S	Sn	13 25 13.7	-4.2
KJN				Sg	Sg	13 25 30.3	-12
	comp=Z,5.9nm,0.3s						
JOF	**Joensuu**	**4.87**	**195**	*e*P	Pn	13 24 27.6	-3.9
JOF				*e*S	Sn	13 25 23.9	-5.6
JOF				*e*SG	Sg	13 25 44.9	-13
JOF	**Joensuu**	**4.87**	**195**	P	Pn	13 24 27.6	-3.9
JOF				S	Sn	13 25 23.8	-5.7
JOF				Sg	Sg	13 25 44.8	-13
FIA0	**FINESS Array S**	**7.09**	**213**	Pn	Pn	13 24 59.8	-3.1
	baz=24,slow=14						
FIA0				Sn	Sn	13 26 17.7	-7.5
	baz=37,slow=22						
FIA0				Lg		13 26 50.7	
	baz=26,slow=28						
FIA0	**FINESS Array S**	**7.09**	**213**	*e*P	Pn	13 24 59.8	-3.1
FIA0				*e*S	Sn	13 26 17.7	-7.5
FIA0				*e*SG		13 26 50.7	
SPA0	**Spitsbergen Ar**	**11.71**	**342**	Pn	P	13 25 59.5	-7.0
	baz=144,slow=14						
SPA0	**Spitsbergen Ar**	**11.71**	**342**	*e*P	P	13 25 59.5	-7.0

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*ISK **11** 13:38:08.8, 38.13N×26.70E, h13^{km}, ML3.8*

*ATH **11** 13:38:08.8, 38.15N×26.65E, h31^{km}, MD3.5/4*

*NEIC **11** 13:38:08.0, 38.14N×26.66E, h8^{km}, MD3.5(ATH), ML3.7(ISK), After ISK.*

*CSEM **11** 13:38:09.1±0.2, 38.15N×26.73E, h12^{km}, MD3.5, Error ellipse: s-maj=4.2km s-min=2.1km az=90.0*

ISC 11 13:38:07.9±0.6**, 38.13N**±0.02×**26.63E**±0.03**, h1**^{km}±4^{km}**, n44, σ0**^{s}**94**/66**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.23**	**354**	*i* P	**Pg**	**13 38 12.6**	**0.0**
URLA				*i* S	**Sg**	**13 38 15.9**	**+0.3**
SMG	**Samos**	**0.45**	**158**	*e*PB	**Pg**	**13 38 19.0**	**+2.0**
IZM	**Izmir**	**0.57**	**62**	*i* PG	**Pg**	**13 38 19.1**	**-0.2**
KDAG	**Bornova**	**0.57**	**61**	*i* P	**Pg**	**13 38 18.0**	**-1.3**
KDAG				*i* S	**Sg**	**13 38 25.3**	**-1.7**
AYDN	**Tasoluk**	**1.10**	**115**	*i* P	**Pb**	**13 38 29.8**	**+0.4**
AYDN				*i* S	**Sb**	**13 38 43.6**	**-0.3**
PRK	**Paraskevi**	**1.15**	**346**	*e*PN	**Pn**	**13 38 30.1**	**-0.9**
AYVA	**Ayvalik**	**1.18**	**2**	*i* P	**Pb**	**13 38 30.7**	**-0.1**
AYVA				*i* S	**Sb**	**13 38 48.0**	**+1.7**
AKS	**Akhisar**	**1.19**	**51**	PN	**Pn**	**13 38 30.4**	**-1.2**
AKS				SN	**Sn**	**13 38 47.2**	**-1.5**
BODT	**Bodrum**	**1.20**	**153**	PN	**Pn**	**13 38 31.9**	**+0.2**
BODT				SN	**Sn**	**13 38 47.6**	**-1.2**
MLSB	**Milas**	**1.23**	**132**	PN	**Pn**	**13 38 32.0**	**-0.2**
MLSB				SN	**Sn**	**13 38 48.4**	**-1.3**
BDRM	**Kayabasi**	**1.25**	**148**	*i* P	**Pb**	**13 38 32.8**	**+0.9**
BDRM				*i* S	**Sb**	**13 38 49.9**	**+1.6**
APE	**Apeiranthos**	**1.37**	**220**	PN	**Pn**	**13 38 34.4**	**+0.2**
APE	**Apeiranthos**	**1.37**	**220**	*e*PN	**Pn**	**13 38 34.1**	**-0.1**
MANT	**Manisa**	**1.56**	**76**	*i* P	**Pn**	**13 38 37.5**	**+0.5**
MANT				*i* S	**Sb**	**13 38 56.4**	**-1.0**
DAT	**Datca**	**1.59**	**151**	PN	**Pn**	**13 38 36.8**	**-0.5**
YER	**Yerkesik**	**1.65**	**127**	PN	**Pn**	**13 38 38.2**	**+0.1**
EZN	**Ezine**	**1.71**	**352**	PN	**Pn**	**13 38 38.8**	**-0.2**
BALB	**Balikesir**	**1.80**	**33**	PN	**Pn**	**13 38 40.9**	**+0.6**
DENT	**Denizli**	**1.94**	**100**	*e*PN	**Pn**	**13 38 41.6**	**-0.7**
BTOK	**Tokmak**	**1.96**	**33**	*i* P	**Pn**	**13 38 44.0**	**+1.3**
BTOK				*i* S	**Sn**	**13 39 13.6**	**+5.4**
DNZL	**Cakiroluk**	**1.96**	**102**	*i* P	**Pn**	**13 38 42.4**	**-0.3**
DNZL				*i* S	**Sn**	**13 39 10.6**	**+2.3**
SANT	**Santorini**	**1.99**	**208**	*e*Pg	**Pg**	**13 38 47.5**	**-0.2**
SANT				*e*Sg	**Sg**	**13 39 14.1**	**-0.1**
SANT	**Santorini**	**1.99**	**208**	*e*Pg	**Pg**	**13 38 47.5**	**-0.1**
SANT				*e*Sg	**Sg**	**13 39 14.1**	**0.0**
DALT	**Dalyan (Mudla)**	**2.10**	**130**	*e*PN	**Pn**	**13 38 44.5**	**-0.1**
DST	**Dursunbey**	**2.15**	**46**	*e*PN	**Pn**	**13 38 45.3**	**0.0**
LPK	**Lapseki**	**2.24**	**3**	*e*PN	**Pn**	**13 38 47.5**	**+0.9**
ARG	**Arkhangelos**	**2.25**	**147**	*e*PN	**Pn**	**13 38 46.2**	**-0.6**
KHL	**Karahalli**	**2.29**	**84**	*e*PN	**Pn**	**13 38 46.4**	**-0.9**
EDC	**Edincik**	**2.41**	**23**	*e*PN	**Pn**	**13 38 49.4**	**+0.3**
GDZ	**Gediz**	**2.43**	**66**	*i* P	**Pb**	**13 38 52.4**	**+0.2**
GDZ				*i* S	**Sb**	**13 39 24.1**	**+1.4**
BNT	**Bandirma**	**2.44**	**24**	*e*PN	**Pn**	**13 38 49.0**	**-0.5**
FETY	**Fethiye**	**2.46**	**127**	*e*PN	**Pn**	**13 38 49.8**	**0.0**
GOLH	**Golhisar**	**2.49**	**110**	*i* P	**Pn**	**13 38 50.0**	**-0.2**
GOLH				*i* S	**Sg**	**13 39 30.8**	**-0.1**
KCT	**Karacabey**	**2.52**	**32**	*e*PN	**Pn**	**13 38 49.8**	**-0.8**
MRMT	**Marmara Adasi**	**2.58**	**17**	*e*PN	**Pn**	**13 38 51.8**	**+0.3**
SART	**Tekirdag**	**2.59**	**9**	*i* P	**Pn**	**13 38 51.2**	**-0.5**
SART				*i* S	**Sn**	**13 39 20.7**	**-3.5**
MFT	**Murefte**	**2.70**	**11**	*e*PN	**Pn**	**13 38 53.5**	**+0.3**
ULDT	**Uludag**	**2.80**	**43**	*i* P	**Pn**	**13 38 54.4**	**-0.2**
ULDT				*i* S	**Sn**	**13 39 31.9**	**+2.4**
TKTP	**Tekketepe**	**2.92**	**91**	*i* P	**Pn**	**13 38 55.0**	**-1.3**
TKTP				*i* S	**Sg**	**13 39 46.5**	**+1.5**
AKAS	**Kas**	**3.04**	**128**	*i* P	**Pn**	**13 38 57.9**	**-0.1**
AKAS				*i* S	**Sn**	**13 39 39.2**	**+3.6**
ESKT	**Eskisehir**	**3.58**	**66**	*i* P	**Pb**	**13 39 12.6**	**+0.8**
ESKT				*i* S	**Sb**	**13 40 02.2**	**+6.2**
KIZT	**Kizilcal**	**4.19**	**78**	*e*PN	**Pn**	**13 39 14.2**	**-0.2**
HENT	**Hendek**	**4.26**	**50**	*i* P	**Pg**	**13 39 27.8**	**-5.2**
HENT				*i* S	**Sg**	**13 40 24.5**	**-5.3**
SGKT	**Sivrigoynuk**	**4.86**	**58**	*i* P	**Pg**	**13 39 38.5**	**-6.5**
SGKT				*i* S	**Sg**	**13 40 44.6**	**-5.3**

DHMR 11 13:44:50.5±0.7**, 12.39N×45.81E, h21**^{km}±12^{km}**, ML3.8, 2C-2D, Western Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBOS		**1.57**	**340**	⇑*i*P	Pn	13 45 18.3	+0.8
LBOS				*i* S	Sn	13 45 40.0	+2.7
BDHA	**Al Bayda’**	**1.59**	**352**	⇑*i*P	Pn	13 45 18.1	+0.2
BDHA				*i* S	Sn	13 45 40.2	+2.3
BDHA				AML	AML	13 45 41.0	
	comp=E,1µm,0.4s						
TRBA	**At Turbah**	**1.85**	**297**	⇓*i*P	Pn	13 45 22.8	+1.2
TRBA				*i* S	Sn	13 45 47.4	+2.8
TRBA				AML	AML	13 45 48.8	
	comp=N,1µm,0.4s						
DHBB	**Dhamar BB**	**2.57**	**328**	⇓*i*P	Pn	13 45 34.2	+2.4
DHBB				*i* S	Sn	13 46 08.0	+5.3

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*BJI **11** 13:52:00.0, 57.30N×120.70E, h5^{km}, ML3.9*

*IDC **11** 13:52:02.1±1.2, 57.43N×120.86E, mb3.7/10, mb1 3.8/11, mb1mx3.7/23, mbtmp3.7/11, ML3.1/1, MS3.9/1, Ms1 3.9/1, ms1mx2.5/38, Error ellipse: s-maj=26.4km s-min=24.7km az=143.0*

*BYKL **11** 13:52:03.4±0.3, 57.37N×120.74E, h4^{km}±16^{km}*

*NEIC **11** 13:52:03.0±0.7, 57.35N×120.75E, h5^{km}, mb3.7/1, Error ellipse: s-maj=15.9km s-min=8.5km az=141.0*

*MOS **11** 13:52:05.5±1.7, 57.30N×120.52E, h26^{km}, mb4.5/5, Error ellipse: s-maj=13.1km s-min=11.3km az=158.5*

ISC 11 13:52:05.1±0.3**, 57.34N**±0.03×**120.73E**±0.04**, h33**^{km}**, n63, σ1**^{s}**29**/88**, mb3.7**/10**, MS4.1**/2**, 5C-2D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.41**	**253**	⇓*i*Pg	**P**	**13 52 29.5**	**+0.8**
CRS				⇑*i*Pb	**Pb**	**13 52 30.9**	**+0.1**
CRS				max		13 52 31.5	
	449nm,0.9s						
CRS				*e*Sg	**S**	**13 52 47.7**	**+1.4**
CRS				Smax		13 52 48.5	
	1µm,0.4s						
CRS	**Chara**	**1.41**	**253**	*e*P	**P**	**13 52 29.7**	**+1.0**
CRS				*e*		13 52 47.6	
CRS				pmax	pmax		
	comp=Z,384nm,0.4s						
CRS				smax			
	comp=E,1µm,0.4s						
NRGR	**Nerungri**	**2.29**	**106**	*e*P	**P**	**13 52 44.2**	**+2.9**
NRGR				S	**S**	**13 53 13.6**	**+4.9**
CLNS	**Chul’man**	**2.33**	**101**	*e*Pn	**Pn**	**13 52 42.2**	**+0.1**
CLNS				*e*Pg	**P**	**13 52 45.8**	**+3.9**
CLNS				Pmax		13 52 57.7	
	comp=E,149nm,0.2s						
CLNS				*e*Sn	**Sn**	**13 53 10.1**	**+0.2**
CLNS				*e*Sg	**S**	**13 53 16.4**	**+6.8**
CLNS				Smax		13 53 25.9	
	comp=E,3µm,0.4s						
CLNS	**Chul’man**	**2.33**	**101**	*e*P	**P**	**13 52 45.7**	**+3.8**
CLNS				*e*		13 53 16.3	
CLNS				pmax	pmax		
	comp=N,4.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,16nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,26nm,0.3s						
CLNS				smax			
	comp=N,105nm,0.3s						
CLNS				smax			
	comp=E,118nm,0.3s						
CLNS				smax			
	comp=Z,27nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,100nm,12.0s						
ALDR	**Aldan**	**2.80**	**61**	*e*Pn	**Pn**	**13 52 49.9**	**+1.1**
ALDR				*e*Pg	**P**	**13 52 53.4**	**+4.8**
ALDR				Pmax		13 53 00.8	
	comp=Z,96nm,0.2s						
ALDR				*e*Sn	**Sn**	**13 53 19.5**	**-2.3**
ALDR				*e*Sg	**S**	**13 53 28.5**	**+6.9**
ALDR				Smax		13 53 30.3	
	comp=Z,2µm,0.2s						
ALDR				*e*SgSg		13 53 39.3	
NLYR	**Nelyaty**	**2.88**	**255**	⇑*i*Pn	**Pn**	**13 52 51.2**	**+1.3**
NLYR				⇑*i*Pg	**P**	**13 52 55.5**	**+5.7**
NLYR				Pmax		13 52 57.9	
	comp=Z,335nm,0.8s						
NLYR				*e*Sn	**Sn**	**13 53 24.7**	**+0.9**
NLYR				*e*Sg	**S**	**13 53 31.3**	**+7.7**
NLYR				Smax		13 53 35.3	
	comp=Z,1µm,1.6s						
NLYR	**Nelyaty**	**2.88**	**255**	*e*P	**P**	**13 52 51.0**	**+1.2**
NLYR				*e*		13 53 30.9	
NLYR				pmax	pmax		
	comp=Z,345nm,0.4s						
NLYR				smax			
	comp=N,1µm,1.5s						
TUP	**Tupik**	**2.95**	**189**	⇑*i*Pn	**Pn**	**13 52 51.2**	**+0.3**
TUP				⇑*i*Pg	**P**	**13 52 55.9**	**+5.1**
TUP				Pmax		13 52 58.1	
	comp=N,220nm,0.9s						
TUP				*e*Sn	**Sn**	**13 53 25.8**	**+0.2**
TUP				*e*Sg	**S**	**13 53 35.0**	**+10**
TUP				Smax		13 53 37.3	
	comp=N,1µm,1.0s						
TUP	**Tupik**	**2.95**	**189**	*e*P	**Pn**	**13 52 51.2**	**+0.3**
TUP				*e*S	**S**	**13 53 26.1**	**+0.7**
TUP				pmax	pmax		
	comp=Z,171nm,0.4s						
TUP				smax			
	comp=E,1µm,0.6s						
TNDR	**Tynda**	**3.13**	**133**	*e*Pn	**Pn**	**13 52 54.3**	**+0.9**
TNDR				*e*Pg	**P**	**13 53 00.5**	**+7.2**
TNDR				Pmax		13 53 05.5	
	comp=E,381nm,0.2s						
TNDR				*e*Sn	**Sn**	**13 53 28.4**	**-1.7**
TNDR				*e*Sg	**S**	**13 53 40.2**	**+10**
TNDR				*e*SgSg		13 53 48.5	
TNDR				max		13 53 49.2	
	comp=E,2µm,0.3s						
BOD	**Bodaibo**	**3.65**	**280**	⇓*i*Pn	**Pn**	**13 53 01.0**	**+0.2**
BOD				*e*Pg	**P**	**13 53 08.5**	**+7.8**
BOD				Pmax		13 53 12.4	
	comp=E,60nm,0.6s						
BOD				*e*Sg	**S**	**13 53 55.1**	**+12**
BOD				Smax		13 54 02.7	
	comp=E,281nm,0.8s						
BOD				*e*LR	LR	13 54 16.7	
BOD	**Bodaibo**	**3.65**	**280**	*e*P	**P**	**13 53 00.8**	**+0.1**
BOD				pmax	pmax		
	comp=Z,61nm,0.5s						
SVKR	**Severomuysk**	**4.13**	**256**	*e*Pn	**Pn**	**13 53 07.7**	**0.0**
SVKR				*e*Pg	**P**	**13 53 18.1**	**+11**
SVKR				Pmax		13 53 19.7	
	comp=Z,99nm,0.6s						
SVKR				*e*Sg	**S**	**13 54 11.7**	**+16**
SVKR				Smax		13 54 18.7	
	comp=Z,814nm,1.2s						
UKT	**Uakit**	**4.36**	**248**	*e*Pn	**Pn**	**13 53 11.7**	**+0.8**
UKT				*e*Pg	Px	13 53 21.6	
UKT				Pmax		13 53 30.7	
	comp=Z,35nm,1.0s						
UKT				*e*Sg	Sx	13 54 17.4	
UKT				Smax		13 54 25.2	
	comp=Z,232nm,1.1s						
UKT	**Uakit**	**4.36**	**248**	*e*P	Px	13 53 21.0	
UKT				pmax	pmax		
	comp=Z,31nm,0.5s						
KROS	**Kirovskiy**	**4.56**	**127**	*e*Pn	**Pn**	**13 53 13.3**	**-0.5**
KROS				*i* Pg	Px	13 53 25.8	
KROS				*e*Sn	**Sn**	**13 54 04.3**	**-2.1**
YOA	**Uoyan**	**5.10**	**260**	*e*Pn	**Pn**	**13 53 21.9**	**+0.5**
YOA				*e*Pg	Px	13 53 35.9	
YOA				Pmax		13 53 44.8	
	comp=Z,143nm,1.2s						
YOA				*e*Sg	Sx	13 54 41.9	
YOA				Smax		13 54 48.3	
	comp=Z,1µm,0.8s						
YOA	**Uoyan**	**5.10**	**260**	*e*P	Px	13 53 37.6	
YOA				pmax	pmax		
	comp=Z,152nm,0.6s						
ZEA	**Zeya**	**5.17**	**131**	*e*Pn	**Pn**	**13 53 21.6**	**-0.8**
ZEA				*e*Pg	Px	13 53 36.4	
ZEA				*e*Sn	**Sn**	**13 54 17.2**	**-4.4**
ZEA				*e*Sg	Sx	13 54 41.8	
KMO	**Kumora**	**5.46**	**259**	*e*Pn	**Pn**	**13 53 26.3**	**-0.1**
KMO				*e*Pg	Px	13 53 42.7	
KMO				Pmax		13 53 43.0	
	comp=Z,20nm,0.6s						
KMO				*e*Sn	**Sn**	**13 54 27.0**	**-1.8**
KMO				*e*Sg	Sx	13 54 51.8	
KMO				Smax		13 54 57.1	
	comp=Z,403nm,1.0s						
KMO	**Kumora**	**5.46**	**259**	*e*P	**P**	**13 53 28.0**	**+1.8**
KMO				*e*S	**S**	**13 54 27.4**	**-1.4**
KMO				pmax	pmax		
	comp=Z,21nm,0.4s						
KMO				smax			
	comp=N,403nm,0.9s						
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*Pn	**Pn**	**13 53 32.9**	**+0.4**
YLYR				*e*Pg	Px	13 53 49.2	
YLYR				Pmax		13 53 55.7	
	comp=N,8.0nm,0.6s						
YLYR				*e*Sn	**Sn**	**13 54 35.4**	**-4.3**
YLYR				*e*Sg	Sx	13 55 06.2	
YLYR				Smax		13 55 12.4	
	comp=N,237nm,1.6s						
NIZ	**Nizh Angarsk**	**6.38**	**261**	*e*Pn	**Pn**	**13 53 38.9**	**-0.5**
NIZ				*e*Pg	Px	13 53 59.5	
NIZ				Pmax		13 54 01.6	
	comp=N,14nm,1.1s						
NIZ				*e*Sg	Sx	13 55 20.0	
NIZ				Smax		13 55 39.1	
	comp=N,105nm,1.4s						
YAK	**Yakutsk**	**6.53**	**40**	*e*Pn	**Pn**	**13 53 39.5**	**-2.1**
YAK				*e*Pg	Px	13 54 00.3	
YAK				Pmax		13 54 00.9	
	comp=N,89nm,0.6s						
YAK				*e*Sn	**Sn**	**13 54 50.1**	**-5.6**
YAK				*e*Sg	Sx	13 55 22.6	
YAK				Smax		13 55 25.3	
	comp=N,1µm,0.6s						
YAK	**Yakutsk**	**6.53**	**40**	*e*Pb	**Pb**	**13 53 57.6**	**-0.3**
	comp=N,20nm,0.6s						
YAK				*e*Sb	**Sb**	**13 55 16.6**	**+0.2**
YAK	**Yakutsk**	**6.53**	**40**	*e*P	Px	13 54 00.7	
YAK				*e*S	**S**	**13 55 05.2**	**+10**
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				smax			
	comp=N,17nm,0.9s						
YAK				smax			
	comp=E,19nm,0.9s						
YAK				smax			
	comp=Z,11nm,0.9s						
YAK				MLR	MLR		
	comp=Z,22nm,6.0s						
CIT	**Chita**	**6.76**	**221**	*e*Pg	Px	13 54 05.2	
CIT				Pmax		13 54 07.8	
	comp=Z,61nm,1.9s						
CIT				*e*Sg	Sx	13 55 32.3	
CIT				Smax		13 55 38.3	
	comp=Z,307nm,1.7s						
SYVR	**Suvo**	**7.12**	**243**	*e*Pn	**Pn**	**13 53 49.7**	**-0.1**
SYVR				*e*Pg	Px	13 54 12.5	
SYVR				Pmax		13 54 15.1	
	comp=Z,32nm,1.7s						
SYVR				*e*Sn	**Sn**	**13 55 07.0**	**-3.4**
SYVR				*e*Sg	Sx	13 55 45.1	
SYVR				Smax		13 55 52.7	
	comp=Z,248nm,2.0s						
OGRR	**Ongureny**	**8.32**	**249**	*e*Pn	**P**	**13 54 04.0**	**-2.3**
OGRR				*e*Pg	Px	13 54 34.0	
OGRR				Pmax		13 54 43.5	
	comp=Z,15nm,1.4s						
OGRR				*e*Sn	**Sn**	**13 55 36.7**	**-3.7**
OGRR				*e*Sg	Sx	13 56 21.5	
OGRR				Smax		13 56 39.0	
	comp=Z,75nm,2.1s						
KPC	**Khapcheranga**	**9.12**	**217**	*e*Pn	**P**	**13 54 15.5**	**-1.8**
KPC				*e*Pg	Px	13 54 48.9	
KPC				Pmax		13 54 53.4	
	comp=Z,1.0nm,0.3s						
KPC				*e*Sn	**Sn**	**13 55 55.5**	**-4.5**
KPC				*e*Sg	Sx	13 56 44.5	
KPC				Smax		13 56 54.8	
	comp=Z,147nm,1.3s						
KPC	**Khapcheranga**	**9.12**	**217**	*e*P	**P**	**13 54 16.0**	**-1.3**
KPC				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TRG	**Tyrgan**	**9.43**	**247**	*e*Sg	Sx	13 56 54.4	
TRG				Smax		13 57 07.6	
	comp=Z,72nm,1.8s						
LSTR	**Listvyanka**	**10.71**	**246**	*e*Sg	Sx	13 57 36.3	
LSTR				Smax		13 57 47.8	
	comp=Z,39nm,1.8s						
ARS	**Arshan**	**11.89**	**251**	*e*Sg	Sx	13 58 12.5	
ARS				Smax		13 58 40.8	
	comp=Z,98nm,1.0s						
ZAK	**Zakamensk**	**12.41**	**243**	*e*Sg	Sx	13 58 29.0	
ZAK				Smax		13 58 38.1	
	comp=Z,27nm,2.1s						
MOY	**Mondy**	**12.77**	**252**	*e*Sg	Sx	13 58 39.3	
MOY				Smax		13 59 14.1	
	comp=Z,53nm,1.8s						
SONM	**Songino Array**	**12.87**	**228**	Pn	**P**	**13 55 06.1**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=2.2						
SONM				Lg		13 58 47.6	
	comp=Z,1.2nm,0.3s,baz=28,slow=32,SNR=12						
ORL	**Orlik**	**12.93**	**257**	*e*Pn	**P**	**13 55 09.4**	**+0.4**
ORL				*e*Sg	Sx	13 58 41.7	
ORL				Smax		13 59 02.3	
	comp=Z,33nm,2.1s						

UNR	**Ust'-Nera**	**13.05**	**47**	*e*Sg	Sx	13 58 45.5	
TDJR	**Todzha**	**14.97**	**261**	*e*Sg	Sx	13 59 46.2	
ZAL	**Zalesovo**	**20.41**	**276**	P	**P**	**13 56 41.2**	**-0.5**
	comp=Z,1.1nm,0.5s,baz=47,slow=11,SNR=8.7						
ZAL	**Zalesovo**	**20.41**	**276**	P	**P**	**13 56 41.2**	**-0.5**
KURK	**Kurchatov**	**25.27**	**273**	*i* P	**P**	**13 57 31.6**	**+2.1**
NJ2	**Nanjing**	**25.32**	**184**	*e*P	**P**	**13 57 31.2**	**+1.1**
MKAR	**Makanchi Array**	**25.53**	**262**	P	**P**	**13 57 33.0**	**+1.0**
	comp=Z,1.2nm,0.6s,mb3.6,baz=58,slow=9.1,SNR=9.2						
MKAR	**Makanchi Array**	**25.53**	**262**	*i* P	**P**	**13 57 35.7**	**+3.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CHKZ	**Chkalovo**	**28.09**	**284**	*e*P	**P**	**13 57 54.8**	**-0.6**
	comp=Z,0.6nm,0.5s,mb3.5						
CHKZ	**Chkalovo**	**28.09**	**284**	*e*P	**P**	**13 57 54.8**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
BVAR	**Borovoye Array**	**28.52**	**283**	P	**P**	**13 57 59.5**	**+0.3**
	comp=Z,0.7nm,0.6s,mb3.5,baz=63,slow=9.7,SNR=3.7						
BVAR	**Borovoye Array**	**28.52**	**283**	P	**P**	**13 57 59.5**	**+0.3**
ARCES	**ARCESS Array B**	**39.72**	**327**	P	**P**	**13 59 35.5**	**0.0**
	comp=Z,2.0nm,0.8s,mb3.9,baz=56,slow=8.7,SNR=7.6						
ARCES				LR	LR	14 18 16.5	
	comp=Z,154nm,18.8s,MS3.9,baz=257,slow=40						
ARCES	**ARCESS Array B**	**39.72**	**327**	P	**P**	**13 59 35.5**	**0.0**
ARCES				LR	LR	14 18 16.5	
ILAR	**Eielson Array**	**41.46**	**40**	P	**P**	**13 59 48.6**	**-1.2**
	comp=Z,0.3nm,0.6s,mb3.1,baz=280,slow=5.2,SNR=5.2						
FINES	**FINESS Array B**	**44.30**	**317**	P	**P**	**14 00 13.0**	**+0.2**
	comp=Z,1.2nm,0.6s,mb3.8,baz=54,slow=8.8,SNR=10						
FINES	**FINESS Array B**	**44.30**	**317**	P	**P**	**14 00 13.0**	**+0.2**
HFS	**Hagfors**	**49.62**	**321**	P	**P**	**14 00 54.7**	**+0.1**
	comp=Z,1.3nm,0.4s,mb4.3,baz=63,slow=6.4,SNR=6.3						
NOA	**NORSAR Array B**	**49.77**	**323**	P	**P**	**14 00 55.6**	**-0.2**
	comp=Z,1.6nm,0.8s,mb4.1,baz=36,slow=6.8,SNR=3.1						
SOC	**Sochi**	**50.30**	**291**	*e*P	**P**	**14 00 57.3**	**-2.8**
SOC				*e*S	**S**	**14 08 06.9**	**-2.2**
SOC				pmax	pmax		
	comp=Z,42nm,1.2s						
SOC				MLR	MLR		
	comp=Z,228nm,16.0s,MS4.3						
ANN	**Anapa**	**50.57**	**294**	*e*P	**P**	**14 01 05.3**	**+3.2**
ANN				*e*	pP	14 01 15.6	+3.6
ANN				*e*S	**S**	**14 08 22.7**	**+10**
ANN				pmax	pmax		
	comp=Z,16nm,0.6s						
GERES	**GERESS Array B**	**58.27**	**312**	P	**P**	**14 01 57.2**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.6,baz=108,slow=4.2,SNR=4.3						
WRA	**Warramunga Arr**	**77.82**	**167**	P	**P**	**14 04 01.9**	**+1.2**
	comp=Z,0.2nm,0.5s,mb3.3,baz=352,slow=6.6,SNR=4.7						
WRA	**Warramunga Arr**	**77.82**	**167**	*i* P	**P**	**14 04 01.2**	**+0.5**

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*IDC **11** 13:53:36.1±1.2,11.79N×46.01E,mb4.1/5,mb1 4.2/7,mb1mx3.9/20,mbtmp4.0/7,ML3.6/2,MS3.3/1,Ms1 3.3/1,ms1mx2.6/24,Error ellipse: s-maj=29.8km s-min=24.1km az=165.0*

*NEIC **11** 13:53:37.2±0.8,12.05N×45.86E,h10^{km},ML4.2(DHMR),Error ellipse: s-maj=14.9km s-min=13.3km az=84.0*

*DHMR **11** 13:53:39.1±1.6,12.39N×45.83E,h19^{km}±100^{km},ML4.2*

ISC 11 13:53:36.7±2.2, **12.20N**±0.06×**45.95E**±0.06, **h14**^{km}±15^{km}, **n20**, σ**1^{s}12**/26, **mb4.0**/5, **5C-3D, Western Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBOS		**1.80**	**338**	⇑*i*P	**Pn**	**13 54 07.2**	**-0.4**
LBOS				*i* S	**Sn**	**13 54 28.5**	**-1.8**
LBOS		**1.80**	**338**	⇑*i*P	**Pn**	**13 54 07.2**	**-0.4**
LBOS				*i* S	**Sn**	**13 54 29.2**	**-1.1**
BDHA	**Al Bayda'**	**1.81**	**348**	⇑*i*P	**Pn**	**13 54 07.1**	**-0.6**
BDHA				AML	AML	13 54 21.5	
	comp=N,8µm,0.3s						
BDHA				*i* S	**Sn**	**13 54 29.2**	**-1.3**
BDHA	**Al Bayda'**	**1.81**	**348**	⇑*i*P	**Pn**	**13 54 07.1**	**-0.6**
BDHA				*i* S	**Sn**	**13 54 28.6**	**-1.9**
TRBA	**At Turbah**	**2.06**	**300**	⇓*i*P	**Pn**	**13 54 11.7**	**+0.3**
TRBA				*i* S	**Sn**	**13 54 36.2**	**-0.8**
TRBA				AML	AML	13 54 37.7	
	comp=N,4µm,0.5s						
TRBA	**At Turbah**	**2.06**	**300**	⇓*i*P	**Pn**	**13 54 11.7**	**+0.3**
TRBA				*i* S	**Sn**	**13 54 36.3**	**-0.7**
UDYN	**Al 'Udayn**	**2.61**	**313**	⇑*i*P	**Pn**	**13 54 20.6**	**+1.3**
UDYN				*i* S	**Sn**	**13 54 51.5**	**+0.6**
UDYN				AML	AML	13 55 03.0	
	comp=N,853nm,0.4s						
DHBB	**Dhamar BB**	**2.81**	**327**	⇓*i*P	**Pn**	**13 54 22.5**	**+0.5**
DHBB				*i* S	**Sn**	**13 54 58.2**	**+2.3**
ATD	**Arta Tunnel**	**3.11**	**258**	Pn	**Pn**	**13 54 25.0**	**-1.2**
	comp=N,15nm,0.3s,baz=58,slow=19,SNR=18						
ATD				Sn	**Sn**	**13 55 03.8**	**+0.3**
	comp=N,19nm,0.3s,baz=107,slow=23,SNR=4.1						
KMBO	**Kilima Mbogo**	**15.80**	**214**	Pn	**P**	**13 57 16.7**	**-3.9**
	comp=N,0.1nm,0.3s,baz=39,slow=19,SNR=2.1						
KMBO				LR	LR	14 02 42.5	
	comp=N,112nm,19.5s,baz=88,slow=35						
KMBO	**Kilima Mbogo**	**15.80**	**214**	Pn	**P**	**13 57 16.7**	**-3.9**
KMBO				LR	LR	14 02 42.5	
BRTR	**Keskin Array B**	**29.50**	**340**	P	**P**	**13 59 47.0**	**+4.2**
	comp=N,0.7nm,0.6s,mb3.6,baz=153,slow=11,SNR=4.7						
MLR	**Muntele Rosu**	**37.30**	**337**	P	**P**	**14 00 55.2**	**+5.1**
	comp=N,3.0nm,0.8s,mb4.2,baz=176,slow=9.6,SNR=3.6						
MKAR	**Makanchi Array**	**46.08**	**34**	P	**P**	**14 02 03.3**	**+1.3**
	comp=N,1.4nm,0.9s,mb3.9,baz=225,slow=8.6,SNR=5.8						
ZAL	**Zalesovo**	**51.72**	**28**	P	**P**	**14 02 45.4**	**-0.1**
	comp=N,0.6nm,0.4s,mb3.9,baz=244,slow=14,SNR=3.3						
ZAL	**Zalesovo**	**51.72**	**28**	P	**P**	**14 02 45.4**	**-0.1**
WRA	**Warramunga Arr**	**92.60**	**110**	P	**P**	**14 06 49.8**	**0.0**
	comp=N,1.6nm,0.7s,mb4.5,baz=293,slow=3.5,SNR=17						
STKA	**Stephens Creek**	**101.08**	**120**	P	P	14 07 28.8	+0.7
	comp=N,1.2nm,0.7s,baz=297,slow=11,SNR=4.2						
STKA	**Stephens Creek**	**101.08**	**120**	P	P	14 07 28.8	+0.7
PDAR	**Pinedale Array**	**120.88**	**339**	PKP	PKPdf	14 12 30.9	-1.5
	comp=N,0.2nm,0.5s,baz=326,slow=3.3,SNR=3.7						

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*IDC **11** 14:15:21.8±1.2,29.29N×69.00E,mb3.9/13,mb1 4.1/13,mb1mx4.0/25,mbtmp4.0/13,MS3.9/2,Ms1 3.9/2,ms1mx3.3/35,Error ellipse: s-maj=29.4km s-min=21.2km az=29.0*

*NEIC **11** 14:15:23.9±0.7,29.44N×69.00E,h10^{km},mb4.0/3,Error ellipse: s-maj=15.4km s-min=7.0km az=208.0*

*MOS **11** 14:15:25.4±1.2,29.51N×69.11E,h30^{km},mb3.9/6,Error ellipse: s-maj=15.1km s-min=8.6km az=88.6*

*NNC **11** 14:15:28.5±3.5,29.93N×68.86E,h7^{km}±26^{km},Error ellipse: s-maj=28.5km s-min=20.7km az=127.0*

*BJI **11** 14:15:32.2,30.00N×69.49E,h10^{km},mB4.7,mb4.3,Ms4.5*

ISC 11 14:15:25.8±0.5, **29.48N**±0.05×**69.05E**±0.06, **h33**^{km}, **n67**, σ**1^{s}28**/63, **mb3.9**/18, **MS3.9**/2, **10C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JASL	**Jaisalmer**	**3.03**	**147**	*e*P	**P**	**14 16 13.1**	**+0.6**
SBDP	**Sheikh Budin**	**3.19**	**28**	⇑P	**P**	**14 16 18.8**	**+4.0**
THW	**Thamme Wali**	**4.03**	**34**	P	**P**	**14 16 29.0**	**+2.2**
CEP	**Cherat**	**4.97**	**29**	P	**P**	**14 16 42.0**	**+1.9**
CEP				S	**S**	**14 17 41.0**	**+3.9**
KHET	**Khetri**	**6.09**	**102**	*e*x	x	14 17 15.9	
THN	**Thein Dam**	**6.44**	**61**	*e*P	**P**	**14 17 03.1**	**+2.4**
THN				*e*x	x	14 18 17.8	
BHK	**Bhakra**	**6.65**	**71**	*e*x	x	14 18 27.1	
KUDL	**Kundal**	**6.66**	**100**	*e*P	**P**	**14 17 03.6**	**-0.2**
DLH	**Dalhousie**	**6.68**	**61**	*e*x	x	14 18 10.0	
DLH				*e*x	x	14 18 25.0	
SDNR	**Sundarnagar**	**7.13**	**72**	*e*x	x	14 17 12.0	
SDNR				*e*x	x	14 19 40.2	
AYAN	**Aya Nagar**	**7.15**	**96**	*e*P	**P**	**14 17 10.2**	**-0.5**
SONA	**Sohna**	**7.15**	**98**	*e*P	**P**	**14 17 10.7**	**0.0**
SONA				*e*x	x	14 19 21.8	
SONA				*e*x	x	14 19 30.1	
SONA				AML	AML	14 19 34.0	
	comp=E,40nm,0.7s						
SONA				AML	AML	14 19 34.6	
	comp=N,30nm,0.6s						
NDI	**New Delhi**	**7.19**	**94**	*e*P	**P**	**14 17 10.5**	**-0.8**
NDI				*e*x	x	14 18 28.5	
AGRA	**Agra**	**8.15**	**104**	*e*x	x	14 17 47.0	
AGRA				*e*x	x	14 19 18.2	
AGRA				AML	AML	14 19 19.3	
	comp=E,73nm,0.1s						
AGRA				AML	AML	14 19 59.7	
	comp=N,68nm,0.4s						
KLP	**Kalpa**	**8.20**	**73**	*e*P	**P**	**14 17 26.5**	**+1.2**
KLP				*e*x	x	14 20 39.1	
KALG	**Kalgarh**	**8.46**	**87**	*e*P	**P**	**14 17 28.8**	**-0.1**
KALG				*e*x	x	14 20 15.2	
POO	**Poona**	**11.75**	**157**	*e*x	x	14 20 19.0	
KOLN	**Koldanda**	**12.90**	**94**	*e*P	**P**	**14 18 28.1**	**-1.4**
	comp=N,27nm,0.8s						
KK31	**Karatay Array**	**13.65**	**5**	⇑P	**P**	**14 18 36.5**	**-2.7**
	comp=N,5.7nm,0.8s,baz=189,slow=12,SNR=28						
KK31				⇑S	**S**	**14 21 03.9**	**-6.8**
	comp=N,2.9nm,0.8s,baz=183,slow=14,SNR=4.8						
KKAR	**Karatay Array**	**13.65**	**5**	*i* P	**P**	**14 18 36.5**	**-2.8**
KKAR				S	**S**	**14 21 05.4**	**-5.3**
GKN	**Gorkha**	**13.76**	**92**	*e*P	**P**	**14 18 41.8**	**+1.0**
	comp=N,19nm,0.7s						
AAK	**Ala-Archa**	**13.84**	**17**	⇓P	**P**	**14 18 40.9**	**-0.9**
	comp=N,5.9nm,0.6s						
AAK				⇑S	**S**	**14 21 12.6**	**-2.7**
	comp=N,4.3nm,0.7s						
AAK	**Ala-Archa**	**13.84**	**17**	*e*Pn	**P**	**14 18 40.0**	**-1.8**
	comp=N,9.2nm,0.8s						
AAK	**Ala-Archa**	**13.84**	**17**	*e*P	**P**	**14 18 40.0**	**-1.8**
AAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DMN	**Daman**	**14.24**	**94**	*e*P	**P**	**14 18 45.3**	**-1.8**
	comp=Z,28nm,0.7s						
KKN	**Kakani**	**14.36**	**93**	*e*P	**P**	**14 18 47.6**	**-1.1**
	comp=Z,18nm,0.6s						
PKI	**Pulchoki**	**14.51**	**94**	*e*P	**P**	**14 18 49.1**	**-1.6**
	comp=Z,20nm,0.6s						
GUN	**Gumba**	**14.86**	**92**	*e*P	**P**	**14 18 56.1**	**+0.9**
	comp=Z,54nm,0.6s						
CAL	**Calcutta**	**18.65**	**107**	*e*x	x	14 21 48.4	
CAL				*e*x	x	14 25 24.8	
MK31	**Makanchi Array**	**20.13**	**27**	⇑P	**P**	**14 19 59.7**	**0.0**
	comp=Z,4.6nm,0.8s						
MKAR	**Makanchi Array**	**20.13**	**27**	P	**P**	**14 19 59.2**	**-0.5**
	comp=Z,3.4nm,0.8s,baz=209,slow=11,SNR=22						
MKAR	**Makanchi Array**	**20.13**	**27**	P	**P**	**14 19 59.2**	**-0.5**
MKAR	**Makanchi Array**	**20.13**	**27**	P	**P**	**14 19 59.6**	**0.0**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SHL	**Shillong**	**20.62**	**95**	*e*P	**P**	**14 20 06.0**	**+1.1**
WMQ	**Urumqi**	**20.64**	**41**	⇑*i*P	**P**	**14 20 07.9**	**+2.9**
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,200nm,5.7s						
AB31	**Akbulak array**	**20.94**	**343**	⇑P	**P**	**14 20 06.5**	**-1.5**
	comp=Z,3.4nm,0.6s,baz=154,slow=10,SNR=65						
AB31	**Akbulak array**	**20.94**	**343**	*i* P	**P**	**14 20 06.2**	**-1.8**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	**Kurchatov**	**22.40**	**16**	⇓P	**P**	**14 20 23.6**	**+1.0**
	comp=Z,5.1nm,2.0s,mb3.6						
KURK	**Kurchatov**	**22.40**	**16**	*e*P	**P**	**14 20 22.5**	**-0.2**
	comp=Z,3.0nm,0.8s,mb3.8						
KURK	**Kurchatov**	**22.40**	**16**	*e*P	**P**	**14 20 22.5**	**-0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
AKTO	**Aktyubinsk**	**22.52**	**341**	⇑P	**P**	**14 20 26.2**	**+2.4**
	comp=Z,1.3nm,1.2s,mb3.2						
AKTO	**Aktyubinsk**	**22.52**	**341**	P	**P**	**14 20 25.6**	**+1.8**
	comp=Z,4.2nm,0.8s,mb4.0,baz=167,slow=12,SNR=13						
VOSK	**Vostochnaya**	**23.27**	**3**	⇑P	**P**	**14 20 31.3**	**+0.3**
	comp=Z,4.3nm,0.8s,mb3.9						
BVA0	**Borovoye Array**	**23.55**	**2**	⇓P	**P**	**14 20 34.2**	**+0.4**
	comp=Z,1.3nm,1.1s,mb3.3						
BVA0	**Borovoye Array**	**23.55**	**2**	P	**P**	**14 20 34.4**	**+0.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.2						
BVAR	**Borovoye Array**	**23.55**	**2**	P	**P**	**14 20 34.8**	**+1.0**
	comp=Z,4.3nm,0.8s,mb3.9,baz=170,slow=9.0,SNR=24						
BRVK	**Borovoye**	**23.58**	**2**	*e*P	**P**	**14 20 34.5**	**+0.5**
	comp=Z,3.5nm,0.8s,mb3.8						
BRVK	**Borovoye**	**23.58**	**2**	*e*P	**P**	**14 20 34.6**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
CHKZ	**Chkalovo**	**24.20**	**2**	⇑P	**P**	**14 20 41.0**	**+0.8**
	comp=Z,4.8nm,1.4s,mb3.7						
CHKZ	**Chkalovo**	**24.20**	**2**	*e*P	**P**	**14 20 40.1**	**-0.1**
	comp=Z,2.8nm,0.6s,mb3.9						
CHKZ	**Chkalovo**	**24.20**	**2**	*e*P	**P**	**14 20 40.1**	**-0.1**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
ZAL	**Zalesovo**	**27.00**	**21**	P	**P**	**14 21 06.7**	**+0.3**
	comp=Z,0.9nm,0.8s,mb3.4,baz=264,slow=11,SNR=4.5						
SONM	**Songino Array**	**34.02**	**47**	P	**P**	**14 22 10.1**	**+1.5**
	comp=Z,1.5nm,0.7s,mb4.0,baz=270,slow=5.9,SNR=3.5						
AKASG	**Malin Array Be**	**36.51**	**317**	P	**P**	**14 22 29.6**	**-0.2**
	comp=Z,0.5nm,0.3s,mb3.8,baz=109,slow=6.5,SNR=7.9						
MLR	**Muntele Rosu**	**37.27**	**307**	P	**P**	**14 22 37.2**	**+1.0**
	comp=Z,3.4nm,0.8s,mb4.2,baz=42,slow=9.7,SNR=4.4						
FINES	**FINESS Array B**	**42.61**	**331**	P	**P**	**14 23 20.4**	**+0.2**
	comp=Z,2.1nm,0.9s,mb3.9,baz=108,slow=18,SNR=2.4						
ARCES	**ARCESS Array B**	**47.11**	**341**	P	**P**	**14 23 54.5**	**-1.5**
	comp=Z,1.9nm,0.6s,mb4.2,baz=127,slow=6.1,SNR=11						
NB2	**NORSAR Subarra**	**49.18**	**327**	P	**P**	**14 24 13.6**	**+1.3**
	comp=Z,1.5nm,0.7s,mb4.1,baz=105,slow=7.4						
NOA	**NORSAR Array B**	**49.18**	**327**	P	**P**	**14 24 13.7**	**+1.4**
	comp=Z,1.3nm,0.7s,mb4.1,baz=105,slow=7.5,SNR=4.3						
NOA				LR	LR	14 49 41.8	
	comp=Z,108nm,19.7s,MS3.9,baz=285,slow=42						
NOA	**NORSAR Array B**	**49.18**	**327**	P	**P**	**14 24 13.7**	**+1.4**
NOA				LR	LR	14 49 41.8	
TIXI	**Tiksi**	**52.90**	**20**	*e*P	**P**	**14 24 38.6**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
ESDC	**Sonseca Array**	**59.47**	**301**	P	**P**	**14 25 26.3**	**-1.6**
	comp=Z,0.4nm,0.4s,mb3.9,baz=62,slow=7.4,SNR=2.9						
CBIJ	**Chichi jima**	**63.43**	**73**	LR	LR	14 54 01.3	
	comp=Z,98nm,19.3s,MS4.0,baz=207,slow=36						
WRA	**Warramunga Arr**	**79.81**	**120**	P	**P**	**14 27 32.0**	**-0.8**
	comp=Z,1.5nm,0.8s,mb4.0,baz=318,slow=4.9,SNR=15						
WB2	**Warramunga Arr**	**79.82**	**120**	*e*P	**P**	**14 27 32.2**	**-0.6**
INK	**Inuvik**	**81.08**	**8**	P	**P**	**14 27 39.2**	**+0.7**
	comp=Z,1.3nm,0.7s,mb4.0,baz=11,slow=13,SNR=5.8						
ASPA	**Alice Springs**	**81.70**	**123**	*e*P	**P**	**14 27 43.2**	**+0.5**

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*NEIC **11** 14:18:02.7,41.45S×175.86E,h19^{km},ML3.9(WEL),After WEL.*

WEL 11 14:18:02.9±0.2, **41.43S**×**175.84E**, **h20**^{km}±1^{km}, **ML3.8**/31, **Error ellipse: s-maj=1.8km s-min=1.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRWZ	**Traveller**	**0.12**	**286**	P*	Pb	14 18 06.9	-0.1
TRWZ				S*	Sb	14 18 09.7	-0.1
PAWZ	**Paruwai Farm**	**0.31**	**279**	P	Pb	14 18 10.1	+0.3
PAWZ				S	Sb	14 18 15.4	+0.9
PAWZ	**Paruwai Farm**	**0.31**	**279**	P*	Pb	14 18 10.1	+0.2
PAWZ				S*	Sb	14 18 15.4	+0.9
MTW	**Mount Morrison**	**0.37**	**317**	P	Pb	14 18 10.6	-0.2
MTW	**Mount Morrison**	**0.37**	**317**	P*	Pb	14 18 10.6	-0.2
MTW				S*	Sb	14 18 16.3	+0.2
MSWZ	**Moikau Station**	**0.44**	**272**	P	Pb	14 18 12.4	+0.4
MSWZ	**Moikau Station**	**0.44**	**272**	P*	Pb	14 18 12.4	+0.5
CAW	**Cannon Point**	**0.66**	**299**	P	Pb	14 18 16.2	+0.5
CAW	**Cannon Point**	**0.66**	**299**	P*	Pb	14 18 16.2	+0.5
CAW				S*	Sb	14 18 25.4	+0.9
BHW	**Baring Head**	**0.73**	**271**	P	Pb	14 18 17.1	+0.3
BHW	**Baring Head**	**0.73**	**271**	P*	Pb	14 18 17.1	+0.3
MRZ	**Mangatainoka R**	**0.79**	**346**	P	Pb	14 18 18.1	+0.2
MRZ	**Mangatainoka R**	**0.79**	**346**	P*	Pb	14 18 18.1	+0.2
MRZ				S*	Sb	14 18 29.0	+0.8
BFZ	**Birch Farm**	**0.81**	**22**	P*	Pb	14 18 18.7	+0.5
WEL	**Wellington**	**0.82**	**280**	P	Pb	14 18 18.3	0.0
WEL	**Wellington**	**0.82**	**280**	P*	Pb	14 18 18.3	0.0
WEL				S*	Sb	14 18 29.7	+0.8
SNZO	**South Karori**	**0.86**	**278**	P	Pb	14 18 19.1	0.0
SNZO	**South Karori**	**0.86**	**278**	P*	Pb	14 18 19.1	0.0
SNZO				S*	Sb	14 18 30.3	+0.2
MRW	**Makara Radio**	**0.88**	**283**	P	Pb	14 18 19.4	0.0
MRW	**Makara Radio**	**0.88**	**283**	P*	Pb	14 18 19.4	+0.1
KIW	**Kapiti Island**	**0.90**	**309**	P	Pb	14 18 19.9	+0.1
KIW	**Kapiti Island**	**0.90**	**309**	P*	Pb	14 18 19.9	+0.2
TCW	**Tory Channel**	**1.20**	**280**	P	Pn	14 18 23.9	-0.8
TCW	**Tory Channel**	**1.20**	**280**	P*	Pb	14 18 23.9	-0.8
TSZ	**Takapari Road**	**1.37**	**4**	P	Pn	14 18 27.0	-0.2
TSZ	**Takapari Road**	**1.37**	**4**	P*	Pb	14 18 26.8	-1.0
TUWZ	**Tuamarina**	**1.43**	**269**	P*	Pb	14 18 26.9	-1.8
BSWZ	**Blackbirch Sta**	**1.50**	**258**	P	Pn	14 18 28.1	-1.0
BSWZ	**Blackbirch Sta**	**1.50**	**258**	PN	Pn	14 18 28.0	-1.0
DUWZ	**D'Urville Isla**	**1.58**	**293**	PN	Pn	14 18 30.1	-0.1
PXZ	**Pawanui**	**1.60**	**29**	PN	Pn	14 18 29.0	-1.5
WAZ	**Wanganui**	**1.79**	**339**	P	Pn	14 18 35.4	+2.1
WAZ	**Wanganui**	**1.79**	**339**	PN	Pn	14 18 35.2	+1.9
NNZ	**Nelson**	**1.86**	**276**	*e*P	Pn	14 18 33.7	-0.6
KHZ	**Kahutara**	**1.98**	**239**	*e*P	Pn	14 18 34.2	-1.7
MOVZ	**Moawhango**	**2.02**	**358**	P	Pn	14 18 36.6	+0.1
WNVZ	**Wahianoa**	**2.11**	**355**	P	Pn	14 18 38.3	+0.5
TUVZ	**Tukino**	**2.16**	**356**	P	Pn	14 18 39.2	+0.6
FWVZ	**Far West T-bar**	**2.18**	**354**	P	Pn	14 18 39.6	+0.7
WPVZ	**Whakapapa**	**2.23**	**354**	P	Pn	14 18 40.3	+0.7
CNZ	**Chateau**	**2.24**	**354**	P	Pn	14 18 40.5	+0.8
NGZ	**Ngauruhoe**	**2.26**	**355**	P	Pn	14 18 40.7	+0.8
BKZ	**Black Stump Fm**	**2.32**	**13**	P	Pn	14 18 39.5	-1.2
WTVZ	**West Tongariro**	**2.32**	**355**	P	Pn	14 18 41.5	+0.7
TWVZ	**Taurewa**	**2.38**	**352**	P	Pn	14 18 42.1	+0.5
RAEZ	**Rainy Point**	**2.41**	**332**	P	Pn	14 18 47.8	+5.7
VRZ	**Vera Road**	**2.45**	**340**	*e*P	Pn	14 18 44.0	+1.4
KATZ	**Kakaramea**	**2.46**	**357**	P	Pn	14 18 43.4	+0.7
NRZ	**Ngariki Road**	**2.55**	**325**	P	Pn	14 18 49.4	+5.3
QRZ	**Quartz Range**	**2.57**	**282**	*e*P	Pn	14 18 44.1	-0.3
PKE	**Pukeiti**	**2.64**	**327**	P	Pn	14 18 49.3	+3.9
LTZ	**Lake Taylor**	**2.98**	**242**	*e*P	Pn	14 18 48.1	-2.1
HIZ	**Hauiti**	**3.01**	**345**	P	Pn	14 18 50.8	+0.2
DSZ	**Denniston Nort**	**3.04**	**263**	*e*P	Pn	14 18 49.3	-1.8
CRLZ	**Canterbury Las**	**3.20**	**227**	*e*P	Pn	14 18 50.5	-2.9
MQZ	**McQueen's Vall**	**3.27**	**225**	*e*P	Pn	14 18 51.2	-3.2
URZ	**Urewera**	**3.31**	**18**	P	Pn	14 18 52.1	-2.9
MWZ	**Matawai**	**3.35**	**23**	*e*P	Pn	14 18 52.2	-3.3
PUZ	**Puketiti**	**3.84**	**30**	*e*P	Pn	14 18 58.3	-4.1
ODZ	**Otahua Downs**	**5.24**	**225**	*e*P	Pn	14 19 18.6	-3.6
TUZ	**Tuapeka**	**6.38**	**223**	*e*P	Pn	14 19 34.5	-3.8

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*ISK **11** 14:34:18.4,38.14N×26.76E,h16^{km},MD3.2*

*ATH **11** 14:34:19.0,38.14N×26.54E,h10^{km},MD3.3/3*

*CSEM **11** 14:34:19.0±0.1,38.14N×26.77E,h20^{km},MD3.2,Error ellipse: s-maj=2.5km s-min=1.7km az=94.0*

ISC 11 14:34:18.8±0.5, **38.17N**±0.03×**26.64E**±0.04, **h17**^{km}±5^{km}, **n31**, σ**1^{s}13**/43, **1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.19**	**350**	*i* P	**Pb**	**14 34 22.2**	**-1.3**
URLA				*i* S	**Sb**	**14 34 25.9**	**-0.9**
BLCB	**Balcova**	**0.38**	**56**	*i* PG	**Pb**	**14 34 25.8**	**-0.9**
BLCB				*i* SG	**Sb**	**14 34 30.5**	**-1.6**
SMG	**Samos**	**0.49**	**161**	⇑*i*PB	**Pb**	**14 34 28.5**	**0.0**
IZM	**Izmir**	**0.54**	**65**	*i* PG	**Pb**	**14 34 28.5**	**-0.9**
IZM				*i* SG	**Sb**	**14 34 36.0**	**-0.7**
KDAG	**Bornova**	**0.55**	**65**	*i* P	**Pb**	**14 34 27.9**	**-1.7**
KDAG				*i* S	**Sb**	**14 34 34.9**	**-2.0**
AYDN	**Tasoluk**	**1.11**	**117**	*i* P	**Pb**	**14 34 39.5**	**+0.5**
AYDN				*i* S	**Sb**	**14 34 53.5**	**+0.5**
PRK	**Paraskevi**	**1.11**	**345**	*e*PB	**Pb**	**14 34 40.3**	**+1.2**
AKS	**Akhisar**	**1.16**	**52**	PN	**Pn**	**14 34 39.8**	**-0.5**
AKS				SN	**Sn**	**14 34 55.0**	**-0.8**
BODT	**Bodrum**	**1.23**	**154**	PN	**Pn**	**14 34 39.8**	**-1.5**
MLSB	**Milas**	**1.26**	**134**	*e*PN	**Pn**	**14 34 40.7**	**-1.0**
BDRM	**Kayabasi**	**1.28**	**150**	*i* P	**Pn**	**14 34 43.0**	**+1.0**
BDRM				*i* S	**Sb**	**14 34 60.0**	**+2.0**
APE	**Apeiranthos**	**1.41**	**219**	*e*PN	**Pn**	**14 34 43.8**	**0.0**
APE	**Apeiranthos**	**1.41**	**219**	*e*Pb	**Pb**	**14 34 44.2**	**0.0**
MANT	**Manisa**	**1.54**	**77**	*i* P	**Pb**	**14 34 47.2**	**+0.7**
MANT				*i* S	**Sb**	**14 35 07.6**	**+1.9**
DAT	**Datca**	**1.62**	**152**	*e*PN	**Pn**	**14 34 45.8**	**-1.1**
YER	**Yerkesik**	**1.67**	**128**	*e*PN	**Pn**	**14 34 46.5**	**-1.0**
EZN	**Ezine**	**1.67**	**352**	*e*PN	**Pn**	**14 34 48.7**	**+1.1**
BALB	**Balikesir**	**1.76**	**33**	*e*PN	**Pn**	**14 34 48.7**	**-0.1**
DNZL	**Cakiroluk**	**1.96**	**103**	*i* P	**Pn**	**14 34 55.8**	**+4.0**
DNZL				*i* S	**Sn**	**14 35 22.0**	**+5.8**
DST	**Dursunbey**	**2.11**	**47**	*e*PN	**Pn**	**14 34 54.2**	**+0.3**
DALT	**Dalyan (Mudla)**	**2.12**	**131**	*e*PN	**Pn**	**14 34 53.1**	**-0.9**
LPK	**Lapseki**	**2.20**	**2**	*e*PN	**Pn**	**14 34 55.5**	**+0.3**
KHL	**Karahalli**	**2.28**	**85**	*e*PN	**Pn**	**14 34 55.8**	**-0.5**
EDC	**Edincik**	**2.37**	**23**	*e*PN	**Pn**	**14 34 58.1**	**+0.5**
FETY	**Fethiye**	**2.48**	**127**	*e*PN	**Pn**	**14 34 58.8**	**-0.4**
ORLT	**Orhaneli**	**2.57**	**42**	*e*PN	**Pn**	**14 35 00.7**	**+0.3**
MFT	**Murefte**	**2.66**	**11**	*e*PN	**Pn**	**14 35 02.3**	**+0.6**
ULDT	**Uludag**	**2.77**	**44**	*i* P	**Pb**	**14 35 09.2**	**+1.9**
ULDT				*i* S	**Sb**	**14 35 43.8**	**+2.7**
TKTP	**Tekketepe**	**2.91**	**91**	*i* P	**Pb**	**14 35 13.0**	**+3.2**
TKTP				*i* S	**Sb**	**14 35 55.5**	**+10**
YLV	**Yalova**	**3.20**	**41**	*e*PN	**Pn**	**14 35 09.5**	**+0.1**
ESKT	**Eskisehir**	**3.55**	**66**	*i* P	**Pb**	**14 35 22.7**	**+1.9**
ESKT				*i* S	**Sb**	**14 36 12.0**	**+8.1**

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*NEIC **11** 14:39:25.4±0.4,9.82S×28.24E,h10^{km},mb4.1/2,Error ellipse: s-maj=16.6km s-min=6.4km az=103.0*

*IDC **11** 14:39:28.3±0.8,9.88S×28.29E,h31^{km}±5^{km},mb3.7/6,mb1 4.0/12,mb1mx3.9/21,mbtmp4.1/12,ML3.7/6,MS3.3/6,Ms1 3.3/6,ms1mx3.1/32,Error ellipse: s-maj=38.6km s-min=12.6km az=94.0*

ISC 11 14:39:23.5±3.2, **9.83S**±0.05×**28.2E**±0.1, **h13**^{km}±21^{km}, **h32**^{km}±1.2^{km}**:pP-P, n17**, σ**0^{s}92**/22, **mb4.0**/6, **Zaire**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSZ	**Lusaka**	**5.41**	**181**	Pn	**Pn**	**14 40 48.2**	**+2.3**
	2.2nm,0.3s,baz=359,slow=13,SNR=14						
LSZ				Sn	**Sn**	**14 41 48.5**	**-0.3**
	20nm,0.3s,baz=105,slow=22,SNR=7.2						
LSZ				Lg		14 42 18.0	
	25nm,0.3s,baz=286,slow=23,SNR=7.4						
LSZ				LR	LR	14 43 10.9	
	comp=Z,271nm,18.6s,baz=17,slow=42						
LSZ	**Lusaka**	**5.41**	**181**	*e*Pn	**Pn**	**14 40 47.1**	**+1.2**
LSZ				*e*Sg	Sg	14 42 17.3	-6.4
LSZ				Lg		14 42 18.0	
LSZ				LR	LR	14 43 10.9	
MATP	**Matopo**	**10.54**	**179**	Pn	**P**	**14 41 57.2**	**-0.2**
	1.6nm,0.3s,baz=358,slow=14,SNR=18						
MATP				Sn	**S**	**14 43 49.0**	**-7.3**
	3.3nm,0.3s,baz=279,slow=12,SNR=5.2						
MATP				Lg		14 45 00.9	
	3.0nm,0.3s,baz=281,slow=18,SNR=7.5						
MATP				LR	LR	14 46 01.8	
	comp=Z,112nm,18.1s,baz=343,slow=38						
KMBO	**Kilima Mbogo**	**12.46**	**47**	Pn	**P**	**14 42 22.2**	**-1.3**
	1.4nm,0.3s,baz=224,slow=19,SNR=19						
KMBO				Sn	**S**	**14 44 29.1**	**-14**
	1.7nm,0.3s,baz=277,slow=14,SNR=8.9						
KMBO				Lg		14 45 56.9	
	2.6nm,0.3s,baz=319,slow=23,SNR=5.6						
KMBO				LR	LR	14 46 25.5	
	comp=Z,111nm,18.1s,baz=267,slow=34						
TSUM	**Tsumeb**	**13.89**	**227**	Pn	**P**	**14 42 41.8**	**-0.8**
	2.8nm,0.3s,baz=30,slow=14,SNR=45						
TSUM				Sn	**S**	**14 45 12.8**	**-4.9**
	1.3nm,0.3s,baz=273,slow=22,SNR=3.2						
TSUM				LR	LR	14 48 43.2	
	comp=Z,178nm,20.6s,baz=323,slow=40						
TSUM	**Tsumeb**	**13.89**	**227**	*e*Pn	**P**	**14 42 42.1**	**-0.5**
TSUM				*e*Sn	**S**	**14 45 17.3**	**-0.4**
LBTB	**Lobatse**	**15.31**	**189**	Pn	**P**	**14 43 00.8**	**-0.3**
	0.3nm,0.3s,baz=13,slow=12,SNR=3.7						
LBTB				Lg		14 47 27.7	
	0.4nm,0.3s,baz=138,slow=9.3,SNR=4.3						
LBTB				LR	LR	14 48 59.0	
	comp=Z,128nm,18.2s,baz=345,slow=37						
LBTB	**Lobatse**	**15.31**	**189**	*e*Pn	**P**	**14 43 01.8**	**+0.6**
LBTB				Lg		14 47 27.6	
LBTB				LR	LR	14 48 59.0	
BOSA	**Boshof**	**18.89**	**188**	P	**P**	**14 43 45.5**	**-0.8**
	0.4nm,0.3s,baz=358,slow=14,SNR=7.6						
BOSA				LR	LR	14 51 05.9	
	comp=Z,133nm,18.3s,baz=152,slow=37						
BOSA	**Boshof**	**18.89**	**188**	*e*P	**P**	**14 43 46.1**	**-0.1**
	7.7nm,0.8s						
BRTR	**Keskin Array B**	**49.56**	**5**	P	**P**	**14 48 17.4**	**+1.1**
	1.5nm,0.6s,mb4.2,baz=181,slow=9.4,SNR=8.1						
BRTR				pP	pP	14 48 26.9	+6.7
	0.7nm,0.6s,baz=176,slow=13,SNR=3.0						
BR131	**Keskin Array S**	**49.56**	**5**	*e*P	**P**	**14 48 16.8**	**+0.5**
	1.6nm,0.6s,mb4.2						
ESDC	**Sonseca Array**	**57.61**	**331**	P	**P**	**14 49 15.8**	**+0.1**
	0.3nm,0.3s,mb3.8,baz=130,slow=10.0,SNR=3.5						
ESDC				pP	pP	14 49 26.2	+6.6
	0.7nm,0.4s,baz=140,slow=8.0,SNR=2.6						
GERES	**GERESS Array B**	**59.81**	**349**	P	**P**	**14 49 31.7**	**+0.7**
	0.6nm,0.6s,mb3.8,baz=169,slow=6.8,SNR=4.3						
GERES				pP	pP	14 49 40.4	+5.6

	0.5nm,0.6s,baz=170,slow=8.1,SNR=3.1						
AKASG	**Malin Array Be**	60.28	1	P	**P**	**14 49 32.3**	**-1.9**
	1.8nm,0.6s,mb4.2,baz=180,slow=6.6,SNR=5.2						
AKASG				pP	pP	14 49 42.6	+4.5
	1.1nm,0.5s,baz=184,slow=6.6,SNR=3.2						
MKAR	**Makanchi Array**	74.08	35	P	**P**	**14 51 01.9**	**+0.6**
	0.9nm,0.8s,mb3.8,baz=234,slow=4.9,SNR=10.0						
ARCES	**ARCESS Array B**	79.20	359	P	**P**	**14 51 30.4**	**+0.9**
	1.7nm,0.7s,mb4.1,baz=166,slow=5.0,SNR=16						

*IDC **11** 14:54:41.6±1.1, 55.34N×164.44E, mb3.5/8, mb1 3.8/8, mb1mx3.7/23, mbtmp3.5/8, Error ellipse: s-maj=41.2km s-min=18.5km az=164.0*

*NEIC **11** 14:54:43.1±0.8, 55.39N×164.30E, $h10^{km}$, mb3.8/4, Error ellipse: s-maj=28.2km s-min=13.1km az=166.0*

*KRSC **11** 14:54:44.9±0.5, 55.78N×164.54E, $h9^{km}\pm 3^{km}$, ML4.3*

*MOS **11** 14:54:48.0±1.0, 55.79N×164.46E, $h42^{km}$, mb4.0/5, Error ellipse: s-maj=15.3km s-min=10.5km az=61.0*

ISC 11 14:54:47.2±0.5**, 55.76N**±0.03×**164.64E**±0.04**, $h33^{km}\pm 7^{km}$, n71, $\sigma 1^{s}07$**/99**, mb3.7**/13**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	0.94	126	iP	**P**	**14 55 03.9**	**-0.1**
BKI				eS	**S**	**14 55 17.2**	**+0.8**
BKI				Smax			
	2μm,0.7s						
KBTR	**Krutoberegovo**	1.12	294	P	**P**	**14 55 03.9**	**-2.6**
KBTR				S	**S**	**14 55 17.7**	**-3.3**
KBTR	**Krutoberegovo**	1.12	294	iP	**P**	**14 55 03.9**	**-2.6**
KBTR				eS	**S**	**14 55 18.8**	**-2.2**
KBG	**Krutoberegovo**	1.20	295	eP	**P**	**14 55 05.1**	**-2.5**
KBG				Smax			
	7μm,1.1s						
SMKR	**Semkarok**	1.96	296	iP	**P**	**14 55 18.0**	**-0.6**
SMKR				eS	**S**	**14 55 42.2**	**0.0**
MKZ	**Mys Kozlova**	2.06	235	P	**P**	**14 55 19.4**	**-0.7**
MKZ				S	**S**	**14 55 44.5**	**-0.3**
MKZ	**Mys Kozlova**	2.06	235	eP	**P**	**14 55 19.4**	**-0.7**
MKZ				eS	**S**	**14 55 44.4**	**-0.4**
SRKR	**Sorokina**	2.14	296	iP	**P**	**14 55 20.4**	**-0.8**
SRKR				eS	**S**	**14 55 46.4**	**-0.4**
ZLN	**Zelenaya**	2.18	278	iP	**P**	**14 55 21.8**	**+0.1**
ZLN				eS	**S**	**14 55 48.8**	**+1.0**
CIRR	**Tsirk**	2.22	281	iP	**P**	**14 55 22.1**	**-0.2**
CIRR				eS	**S**	**14 55 49.7**	**+0.8**
LGNR	**Loginova**	2.25	280	iP	**P**	**14 55 22.9**	**+0.2**
LGNR				iS	**S**	**14 55 50.8**	**+1.2**
KLY	**Klyuchi**	2.31	286	P	**P**	**14 55 21.6**	**-2.0**
KLY				S	**S**	**14 55 48.4**	**-2.7**
KLY	**Klyuchi**	2.31	286	iP	**P**	**14 55 21.4**	**-2.2**
KLY				eS	**S**	**14 55 48.2**	**-2.9**
KRSR	**Krestovskiy**	2.34	283	eP	**P**	**14 55 23.8**	**-0.2**
KRSR				eS	**S**	**14 55 51.9**	**+0.1**
KMNR	**Kamenistaya**	2.49	272	eP	**P**	**14 55 26.9**	**+0.7**
KMNR				eS	**S**	**14 55 57.3**	**+1.6**
TUMR	**Tumrok**	2.60	261	eP	**P**	**14 55 28.6**	**+0.8**
TUMR				eS	**S**	**14 56 00.6**	**+2.1**
KOZR	**Kozyr**	2.69	278	PN	**P**	**14 55 29.9**	**+0.9**
KOZR				S	**S**	**14 56 03.3**	**+2.5**
KOZ	**Kozyrevsk**	2.70	278	P	**P**	**14 55 29.9**	**+0.7**
KOZ				S	**S**	**14 56 03.3**	**+2.2**
KOZ	**Kozyrevsk**	2.70	278	eP	**P**	**14 55 29.9**	**+0.7**
KOZ				eS	**S**	**14 56 02.7**	**+1.6**
SRDR	**Sredinnyy**	2.82	283	eP	**P**	**14 55 31.4**	**+0.5**
SRDR				eS	**S**	**14 56 05.1**	**+1.0**
ESO	**Esso**	3.36	275	eP	**P**	**14 55 38.5**	**0.0**
ESO				Smax			
	150nm,1.5s						
OSSR	**Ossora**	3.60	347	P	**P**	**14 55 39.5**	**-2.5**
OSSR				Smax			
	90nm,0.8s						
SPN	**Mys Shipunski**	3.79	227	P	**P**	**14 55 43.6**	**-1.1**
SPN				S	**S**	**14 56 26.6**	**-2.3**
SPN	**Mys Shipunski**	3.79	227	eP	**P**	**14 55 43.9**	**-0.8**
SPN				eS	**S**	**14 56 26.4**	**-2.5**
NLC	**Nalytchevo**	4.04	232	P	**P**	**14 55 47.6**	**-0.6**
NLC				S	**S**	**14 56 33.2**	**-1.8**
NLC	**Nalytchevo**	4.04	232	eP	**P**	**14 55 47.5**	**-0.7**
NLC				eS	**S**	**14 56 33.3**	**-1.7**
SMAR	**Somma**	4.22	236	eP	**P**	**14 55 50.9**	**0.0**
SMAR				eS	**S**	**14 56 39.2**	**-0.5**
UGLR	**Uglovaya**	4.25	235	iP	**P**	**14 55 51.5**	**+0.3**
UGLR				eS	**S**	**14 56 40.1**	**-0.2**
AVH	**Avacha**	4.25	236	iP	**P**	**14 55 51.7**	**+0.4**
AVH				eS	**S**	**14 56 40.0**	**-0.5**
KOK	**Koryaka**	4.29	237	iP	**P**	**14 55 51.9**	**+0.2**
GNL	**Ganaly**	4.40	245	eP	**P**	**14 55 53.6**	**+0.2**
GNL				eS	**S**	**14 56 44.0**	**-0.2**
PET	**Petropavlovsk**	4.45	234	P	**P**	**14 55 53.8**	**-0.2**
PET				S	**S**	**14 56 44.3**	**-1.0**
PET	**Petropavlovsk**	4.45	234	iP	**P**	**14 55 53.8**	**-0.2**
PET				eS	**S**	**14 56 43.9**	**-1.4**
PET	**Petropavlovsk**	4.45	234	ePn	**P**	**14 55 53.2**	**-0.8**
PET				eSn	**S**	**14 56 41.8**	**-3.6**
PET	**Petropavlovsk**	4.45	234	ePN	**P**	**14 55 53.6**	**-0.4**
PET				eS	**S**	**14 56 44.5**	**-0.8**
PET				pmax	pmax		
	comp=Z,55nm,0.7s						
PET				smax			
	comp=E,171nm,1.3s						
PET				smax			
	comp=N,135nm,0.9s						
KRMR	**Karymshinskiy**	4.81	235	P	**P**	**14 55 59.9**	**+0.7**
RUS	**Russkaya**	4.91	230	P	**P**	**14 56 01.4**	**+0.8**
GRL	**Gorelyy**	5.02	233	eP	**P**	**14 56 02.8**	**+0.6**
APC	**Apacha**	5.22	240	eP	**P**	**14 56 05.7**	**+0.8**
FX1	**Attu Island--F**	5.76	117	Pn	**P**	**14 56 13.6**	**+1.1**
	comp=N,1.0nm,0.3s,baz=248,slow=19,SNR=4.2						
FX1				Sn	**S**	**14 57 14.0**	**-4.3**
	comp=N,1.3nm,0.3s,baz=306,slow=18,SNR=2.1						
MIPR	**Malaya Ipel'ka**	5.81	236	eP	**P**	**14 56 13.8**	**+0.6**
PAU	**Pauzhetka**	6.34	231	eP	**P**	**14 56 20.6**	**-0.1**
ASAJ	**Asahikawa**	18.27	240	P	**P**	**14 58 60.0**	**+0.4**
	comp=N,0.7nm,0.3s,baz=34,slow=5.8,SNR=9.4						
ASAJ	**Asahikawa**	18.27	240	P	**P**	**14 59 00.0**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TIXI	**Tiksi**	21.92	330	eP	**P**	**14 59 38.9**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.1						
KDAK	**Kodiak Island**	23.24	67	P	**P**	**15 00 00.6**	**+8.8**
	comp=Z,3.6nm,0.8s,mb3.9,baz=172,slow=22,SNR=4.6						
COLA	**College**	24.64	49	eP	**P**	**15 00 06.7**	**+1.4**
	comp=Z,1.1nm,0.5s,mb3.6						
COLA	**College**	24.64	49	eP	**P**	**15 00 13.4**	**+8.2**
	comp=Z,6.9nm,1.0s,mb4.1						
COLA	**College**	24.64	49	eP	**P**	**15 00 06.7**	**+1.4**
COLA				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.6						
ILAR	**Eielson Array**	25.05	49	P	**P**	**15 00 08.9**	**-0.4**
	comp=Z,1.7nm,0.8s,mb3.7,baz=268,slow=9.3,SNR=16						
MJAR	**Matsushiro Arr**	26.28	234	P	**P**	**15 00 14.0**	**-7.1**
	comp=Z,0.6nm,0.7s,mb3.2,baz=32,slow=7.3,SNR=2.8						
MJAR	**Matsushiro Arr**	26.28	234	P	**P**	**15 00 22.2**	**+1.1**
	comp=Z,3.3nm,0.9s,mb3.9,baz=20,slow=10,SNR=5.9						
MJAR	**Matsushiro Arr**	26.28	234	P	**P**	**15 00 22.2**	**+1.1**
DAWY	**Dawson**	28.36	50	P	**P**	**15 00 40.0**	**+0.3**
INK	**Inuvik**	30.12	41	P	**P**	**15 00 54.4**	**-0.9**
	comp=Z,1.2nm,0.5s,mb3.9,baz=285,slow=4.7,SNR=5.9						
INK	**Inuvik**	30.12	41	eP	**P**	**15 00 57.2**	**+1.8**
	comp=Z,0.7nm,0.4s,mb3.7						
INK	**Inuvik**	30.12	41	eP	**P**	**15 00 57.2**	**+1.9**
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	49.38	296	P	**P**	**15 03 34.2**	**-0.8**
	comp=Z,0.2nm,0.7s,mb3.3,baz=83,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	49.38	296	P	**P**	**15 03 34.2**	**-0.8**
CHKZ	**Chkalovo**	50.25	309	eP	**P**	**15 03 39.3**	**-2.2**
	comp=Z,1.3nm,0.7s,mb4.1						
CHKZ	**Chkalovo**	50.25	309	eP	**P**	**15 03 39.3**	**-2.3**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
BVAR	**Borovoye Array**	50.80	309	P	**P**	**15 03 44.7**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.7,baz=56,slow=7.8,SNR=5.0						
BRVK	**Borovoye**	50.82	309	eP	**P**	**15 03 41.8**	**-4.1**
	comp=Z,0.5nm,0.6s,mb3.6						
BRVK	**Borovoye**	50.82	309	eP	**P**	**15 03 41.8**	**-4.1**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
NVAR	**Mina Array Bea**	52.41	75	P	**P**	**15 03 57.8**	**-0.2**
	comp=Z,0.2nm,0.7s,mb3.2,baz=307,slow=9.0,SNR=2.7						
PDAR	**Pinedale Array**	53.94	65	P	**P**	**15 04 09.2**	**-0.2**
	comp=Z,0.1nm,0.4s,mb3.1,baz=34,slow=3.3,SNR=4.3						
TXAR	**Lajitas Array**	67.20	71	P	**P**	**15 05 40.6**	**+0.9**
	comp=Z,0.5nm,0.3s,mb4.0,baz=323,slow=4.5,SNR=3.3						
VNA3	**Neumayer Olymp**	164.26	187		PKPdf	15 14 51.1	+6.1
VNA3	**Neumayer Olymp**	164.26	187	P	PKPdf	15 14 51.1	+6.1
VNA2	**Neumayer--Watz**	164.39	190		PKPdf	15 14 52.0	+6.8
VNA2	**Neumayer--Watz**	164.39	190	P	PKPdf	15 14 52.0	+6.8

*IDC **11** 14:54:49.9±0.8, 55.24N×164.56E, mb3.9/10, mb1 4.2/12, mb1mx4.0/26, mbtmp4.0/12, ML3.4/2, Error ellipse: s-maj=22.3km s-min=11.8km az=15.0*

*NEIC **11** 14:54:50.7±5.9, 55.13N×164.65E, $h12^{km}\pm 38^{km}$, mb4.2/4, Error ellipse: s-maj=21.0km s-min=9.6km az=158.0*

ISC 11 14:54:52.6±1.8**, 55.9N**±0.4×**164.6E**±0.2**, $h10^{km}$, n22, $\sigma 0^{s}45$**/18**, mb3.9**/10**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	24.97	49	P	**P**	**15 00 17.3**	**+0.2**
	3.6nm,0.8s,mb3.9,baz=263,slow=9.0,SNR=21						
ILAR	**Eielson Array**	24.97	49	P	**P**	**15 00 17.3**	**+0.2**
DAWY	**Dawson**	28.27	50	eP	**P**	**15 00 47.6**	**+0.1**
INK	**Inuvik**	30.02	41	P	**P**	**15 01 02.6**	**-0.6**
	1.2nm,0.5s,mb3.9,baz=288,slow=6.7,SNR=13						
INK	**Inuvik**	30.02	41	eP	**P**	**15 01 02.6**	**-0.7**
	1.5nm,0.5s,mb4.0						
MKAR	**Makanchi Array**	49.31	296	P	**P**	**15 03 43.2**	**0.0**
	0.4nm,0.7s,mb3.6,baz=62,slow=7.4,SNR=5.6						
MKAR	**Makanchi Array**	49.31	296	P	**P**	**15 03 43.2**	**0.0**
CHKZ	**Chkalovo**	50.16	309	eP	**P**	**15 03 49.2**	**-0.5**
	2.4nm,0.7s,mb4.3						
BVAR	**Borovoye Array**	50.70	309	P	**P**	**15 03 53.8**	**-0.1**
	1.1nm,0.6s,mb4.0,baz=55,slow=8.5,SNR=9.2						
BVAR	**Borovoye Array**	50.70	309	P	**P**	**15 03 53.8**	**-0.1**
BRVK	**Borovoye**	50.72	309	eP	**P**	**15 03 53.9**	**-0.1**
	1.2nm,0.6s,mb4.0						
NVAR	**Mina Array Bea**	52.38	75	P	**P**	**15 04 06.2**	**-0.6**
	0.5nm,0.6s,mb3.7,baz=313,slow=6.9,SNR=6.4						
NVAR	**Mina Array Bea**	52.38	75	P	**P**	**15 04 06.2**	**-0.6**
PDAR	**Pinedale Array**	53.89	65	P	**P**	**15 04 18.0**	**+0.1**
	1.1nm,0.8s,mb3.9,baz=328,slow=3.5,SNR=8.4						
PDAR	**Pinedale Array**	53.89	65	P	**P**	**15 04 18.0**	**+0.1**
TXAR	**Lajitas Array**	67.16	71	P	**P**	**15 05 49.0**	**+0.4**
	0.7nm,0.5s,mb3.9,baz=288,slow=4.0,SNR=4.9						
TXAR	**Lajitas Array**	67.16	71	P	**P**	**15 05 49.0**	**+0.5**
GERES	**GERESS Array B**	72.83	340	P	**P**	**15 06 23.7**	**+1.0**
	0.2nm,0.4s,mb3.4,baz=225,slow=1.9,SNR=3.7						
SNAA	**Sanae**	163.30	194		PKPdf	15 14 55.8	-0.4
SNAA	**Sanae**	163.30	194		PKPdf	15 15 03.8	+7.6
VNA3	**Neumayer Olymp**	164.40	187		PKPdf	15 14 57.2	-0.2
VNA2	**Neumayer--Watz**	164.53	190		PKPdf	15 15 01.9	+4.4

*MOS **11** 14:58:49.9±1.1, 55.77S×27.11W, $h33^{km}$, mb5.9/23, MS5.6/12, Error ellipse: s-maj=19.3km s-min=9.9km az=106.9*

*BJI **11** 14:58:50.0, 55.70S×27.10W, $h28^{km}$, mB5.8, Ms5.8, Msz5.6*

*HRVD **11** 14:58:50.0±0.1, 55.65S×26.97W, $h15^{km}$, MW5.8/70, Centroid moment Tensor Solution. LP body waves: s69,c145;Mantle waves: s70,c212; Half duration: $2^{s}0$ Moment tensor: Scale 10^{17}Nm; M_{rr}3.29±.06; $M_{\theta\theta}$-0.56±.06; $M_{\phi\phi}$-2.73±.05; $M_{r\theta}$-2.10±.20; $M_{\theta\phi}$2.81±.05; $M_{\phi r}$5.56±.17; Best double couple: $M_0$7.182×10^{17} NP1: ϕ_s125°,δ19°,λ58°. NP2:ϕ_s339°,δ74°,λ100°. Principal axes: T 6.624, Plg60°, Azm263°; N 1.117, Plg10°, Azm156°; P -7.74, Plg28°, Azm60°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **11** 14:58:50.0±2.2, 55.70S×27.06W, $h29^{km}\pm 14^{km}$, mb5.7/29, MS5.4/12, MW5.9 Error ellipse: s-maj=6.9km s-min=4.7km az=218.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M_{rr}3.38; $M_{\theta\theta}$-5.47; $M_{\phi\phi}$2.09; $M_{r\theta}$-4.66; $M_{\theta\phi}$2.46; $M_{\phi r}$3.61; Best double couple: $M_0$7.8×10^{17} NP1: ϕ_s73°,δ28°,λ38°. NP2:ϕ_s309°,δ73°,λ113°. Principal axes: T 6.83, Plg56°, Azm248°; N 1.94, Plg22°, Azm122°; P -8.77, Plg25°, Azm21°;*

*IDC **11** 14:58:50.5±1.5, 55.76S×27.14W, $h32^{km}\pm 10^{km}$, mb4.7/15, mb1 4.6/16, mb1mx4.6/17, mbtmp4.8/16, ML4.0/1, MS5.5/17, Ms1 5.5/17, ms1mx5.5/18 Error ellipse: s-maj=17.2km s-min=11.5km az=16.0*

ISC 11 14:58:46.0±0.2**, 55.72S**±0.05×**27.09W**±0.09**, $h10^{km}$, n337, $\sigma 1^{s}09$**/110**, mb5.5**/39**, MS5.5**/43**, 20C-12D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	17.09	159	⇑iP	**P**	**15 02 50.3**	**+4.1**
VNA3	**Neumayer Olymp**	17.29	161	⇑iP	**P**	**15 02 51.0**	**+2.3**
VNA3	**Neumayer Olymp**	17.29	161		**P**	**15 03 01.7**	**+13**
VNA2	**Neumayer--Watz**	17.48	158	⇑iP	**P**	**15 02 53.2**	**+2.1**
EFI	**East Falkland**	18.69	270	eP	**P**	**15 03 06.0**	**-0.3**
	260nm,1.1s						
EFI	**East Falkland**	18.69	270	eP	**P**	**15 03 06.0**	**-0.2**
EFI				pmax	pmax		
	comp=Z,260nm,1.1s						
SNAA	**Sanae**	19.03	157	⇑iP	**P**	**15 03 09.4**	**-0.7**
SNAA	**Sanae**	19.03	157	P	**P**	**15 03 09.1**	**-1.0**
	comp=Z,0.5nm,0.3s,baz=314,slow=8.8,SNR=127						
SNAA				LR	LR	15 09 41.7	
	comp=Z,3μm,18.2s,baz=322,slow=34						
SNAA				ScP		15 11 06.9	
	comp=Z,0.2nm,0.3s,baz=300,slow=1.1,SNR=11						
SNAA	**Sanae**	19.03	157	c iP	**P**	**15 03 09.3**	**-0.8**
PMSA	**Palmer Station**	20.16	228	eP	**P**	**15 03 22.6**	**-0.4**
	comp=Z,412nm,0.9s						
TRIS	**Tristan da Cun**	21.17	34	P	**P**	**15 03 38.0**	**+4.4**
	comp=Z,507nm,1.3s,mb5.7						
MAIT	**Maitri**	22.49	147	eP	**P**	**15 03 40.1**	**-6.4**
MAIT				eS	**S**	**15 07 51.8**	**+3.5**
NVL	**N'lazarevskaya**	22.51	147	eP	**P**	**15 03 47.2**	**+0.6**
NVL				e*SP		15 03 52.7	
NVL				e		15 04 09.3	
NVL				eS	**S**	**15 07 47.0**	**-1.6**
NVL				MLR	MLR		
	comp=Z,347nm,16.8s						
USHA	**Ushuaia**	23.32	255	P	**P**	**15 03 54.8**	**+0.2**
	comp=Z,74nm,0.8s,mb5.1,baz=84,slow=9.8,SNR=31						
USHA				ScP		15 11 14.7	
	comp=Z,12nm,0.9s,baz=97,slow=7.5,SNR=4.3						
USHA				LR	LR	15 11 18.7	
	comp=Z,11μm,19.0s,MS5.3,baz=76,slow=32						
TRQA	**Tornquist**	29.24	292	eP	**P**	**15 04 49.2**	**-0.7**
	comp=Z,156nm,0.8s,mb5.8						
TRQA				LR	LR		
	comp=Z,4μm,19.0s,MS5.0						
LPA	**La Plata**	29.66	302	deP	**P**	**15 04 51.0**	**-2.7**
LPA				epP	pP	15 04 55.0	-1.7
LPA				eS	**S**	**15 09 49.0**	**+1.1**
LPA				esS		15 09 54.0	
LPA				eSP		15 10 10.0	
SYO	**Syowa Base**	31.81	141	⇑P	**P**	**15 05 11.1**	**-1.3**
SYO	**Syowa Base**	31.81	141	⇑pP	pP	15 05 13.2	-2.1
SYO	**Syowa Base**	31.81	141	⇑eP	**P**	**15 05 11.1**	**-1.3**
PLCA	**Paso Flores**	32.00	279	P	**P**	**15 05 12.3**	**-2.0**
	comp=Z,10.0nm,0.9s,mb4.6,baz=139,slow=8.7,SNR=22						
PLCA				PcP	PcP	15 08 02.7	-1.6
	comp=Z,7.8nm,0.9s,baz=158,slow=3.8,SNR=3.0						
PLCA				ScP		15 11 41.4	
	comp=Z,8.2nm,0.9s,baz=63,slow=1.6,SNR=9.5						
PLCA				LR	LR	15 17 36.3	
	comp=Z,4μm,20.1s,MS5.1,baz=126,slow=35						
PLCA	**Paso Flores**	32.00	279	eP	**P**	**15 05 13.2**	**-1.2**
	comp=Z,54nm,1.4s,mb5.2						
PLCA				ePcP	PcP	15 08 03.5	-0.9
PLCA				eScP		15 11 42.0	
PLCA	**Paso Flores**	32.00	279	eP	**P**	**15 05 13.2**	**-1.1**
PLCA				e		15 08 03.5	
PLCA				pmax	pmax		
	comp=Z,54nm,1.4s						
QSPA	**South Pole Qui**	34.54	180	P	**P**	**15 05 35.7**	**-0.3**
	comp=Z,92nm,0.7s,mb5.8						
CPUP	**Villa Florida**	36.63	311	⇑eP	**P**	**15 05 53.5**	**-0.7**
	comp=Z,709nm,1.0s,mb6.5						
CPUP				eScP		15 12 02.5	
CPUP				LR	LR		
	comp=Z,716nm,19.0s,MS4.5						
CPUP	**Villa Florida**	36.63	311	⇑eP	**P**	**15 05 53.6**	**-0.7**
CPUP				pmax	pmax		
	comp=Z,709nm,1.0s						
CPUP				MLR	MLR		
	comp=Z,716nm,19.0s						
FCH	**Farellones**	37.23	289	eP	**P**	**15 05 58.2**	**-1.0**
CFAA	**Coronel Fontan**	37.48	293	P	**P**	**15 05 59.8**	**-1.5**
	comp=Z,12nm,0.7s,mb4.8,baz=146,slow=8.5,SNR=124						
CFAA				ScP		15 12 00.4	
	comp=Z,0.9nm,0.8s,baz=239,slow=5.9,SNR=4.8						
CFAA				LR	LR	15 19 56.6	
	comp=Z,267nm,18.2s,baz=136,slow=34						
PEL	**Peldehue**	37.58	288	eP	**P**	**15 06 01.1**	**-1.1**
TLL	**Tololo Astrono**	39.96	291	eP	**P**	**15 06 21.9**	**-0.2**
MAW	**Mawson**	40.39	144	eP	**P**	**15 06 25.1**	**-0.1**
	comp=Z,57nm,1.1s,mb5.2						
MAW	**Mawson**	40.39	144	eP		15 12 14.1	
	comp=Z,16nm,0.9s						
MAW	**Mawson**	40.39	144	P	**P**	**15 06 25.2**	**0.0**
	comp=Z,16nm,0.6s,mb5.0,baz=242,slow=8.8,SNR=32						
MAW				ScP		15 12 11.9	
	comp=Z,3.9nm,0.7s,baz=344,slow=7.4,SNR=2.5						
MAW				LR	LR	15 21 04.4	
	comp=Z,4μm,18.1s,MS5.4,baz=257,slow=33						
MAW	**Mawson**	40.39	144	eP	**P**	**15 06 25.1**	**-0.1**
MAW				pmax	pmax		
	comp=Z,57nm,1.1s						
SUR	**Sutherland**	40.50	75	P	**P**	**15 06 26.6**	**+0.1**
	comp=Z,5.8nm,0.7s,baz=173,slow=8.1,SNR=4.9						
SUR				LR	LR	15 19 20.0	
	comp=Z,11μm,20.8s,MS5.7,baz=210,slow=30						
SUR	**Sutherland**	40.50	75	eP	**P**	**15 06 25.5**	**-1.0**
	comp=Z,280nm,1.8s,mb5.7						
SUR				LR	LR		
	comp=Z,3μm,21.0s,MS5.1						
BAO	**Brasilia Array**	43.10	330	P	**P**	**15 06 48.0**	**+0.1**
BDFB	**Brasilia**	43.10	330	P	**P**	**15 06 48.3**	**+0.4**
	comp=Z,44nm,1.0s,mb5.1,baz=160,slow=5.3,SNR=26						
BDFB				LR	LR	15 22 14.5	
	comp=Z,8μm,20.1s,MS5.6,baz=162,slow=33						
CEN1	**Los Morros**	45.17	298	eP	**P**	**15 07 03.5**	**-1.0**
BOSA	**Boshof**	45.83	76	P	**P**	**15 07 08.5**	**-1.3**
	comp=Z,6.7nm,0.6s,mb4.7,baz=208,slow=10.0,SNR=20						
BOSA				PcP	PcP	15 08 47.6	0.0
	comp=Z,22nm,1.1s,baz=186,slow=2.9,SNR=1.8						
BOSA				LR	LR	15 22 42.6	
	comp=Z,15μm,20.2s,MS5.9,baz=203,slow=31						
BOSA	**Boshof**	45.83	76	eP	**P**	**15 07 09.3**	**-0.5**
	comp=Z,115nm,1.2s,mb5.7						
BOSA				ePcP	PcP	15 08 47.8	+0.1
BOSA	**Boshof**	45.83	76	eP	**P**	**15 07 09.3**	**-0.5**
BOSA				e		15 08 47.8	
BOSA				pmax	pmax		
	comp=Z,115nm,1.2s,mb5.7						
SBA	**Scott Base**	46.42	184	eP	**P**	**15 07 13.9**	**+0.1**
	comp=Z,54nm,0.8s,mb5.5						
SBA				eScP		15 12 39.9	
SBA				LR	LR		
	comp=Z,4μm,19.0s,MS5.4						
SBA	**Scott Base**	46.42	184	eP	**P**	**15 07 13.9**	**+0.1**
SBA				pmax	pmax		
	comp=Z,54nm,0.8s,mb5.5						
SBA				MLR	MLR		
	comp=Z,4μm,19.0s,MS5.4						
VNDA	**Vanda**	46.91	183	eP	**P**	**15 07 17.5**	**-0.2**
	comp=Z,76nm,0.8s,mb5.7						
VNDA				LR	LR		
	comp=Z,3μm,19.0s,MS5.3						
VNDA	**Vanda**	46.91	183	eP	**P**	**15 07 17.5**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,76nm,0.8s						
VNDA				MLR	MLR		
	comp=Z,3μm,19.0s						
LBTB	**Lobatse**	48.86	73	P	**P**	**15 07 32.4**	**-1.1**
	comp=Z,9.2nm,0.7s,mb5.0,baz=234,slow=8.7,SNR=21						
LBTB				LR	LR	15 24 38.2	
	comp=Z,3μm,20.6s,MS5.2,baz=222,slow=32						
LBTB	**Lobatse**	48.86	73	eP	**P**	**15 07 32.2**	**-1.3**
	comp=Z,131nm,1.1s,mb5.9						
LBTB	**Lobatse**	48.86	73	P	**P**	**15 07 32.5**	**-1.0**
LBTB				pmax	pmax		
	comp=Z,130nm,1.1s,mb5.9						
TSUM	**Tsumeb**	49.47	61	P	**P**	**15 07 36.8**	**-1.5**
	comp=Z,2.1nm,0.8s,baz=197,slow=9.6,SNR=6.0						
TSUM				LR	LR	15 23 32.1	
	comp=Z,5μm,20.9s,MS5.5,baz=192,slow=30						
TSUM	**Tsumeb**	49.47	61	eP	**P**	**15 07 39.3**	**+1.1**
	comp=Z,86nm,1.3s,mb5.6						
TSUM				LR	LR		
	comp=Z,4μm,20.0s,MS5.4						
LPAZ	**La Paz**	50.23	305	P	**P**	**15 07 45.0**	**+0.8**
	comp=Z,147nm,1.0s,mb6.0,baz=151,slow=6.6,SNR=326						
LPAZ				ScP		15 12 53.7	
	comp=Z,5.6nm,1.0s,baz=153,slow=10,SNR=3.1						
LPAZ				LR	LR	15 27 13.5	
	comp=Z,2μm,20.8s,MS5.0,baz=151,slow=34						
LPAZ	**La Paz**	50.23	305	⇑iP	**P**	**15 07 45.0**	**+0.8**
	comp=Z,324nm,1.1s,mb6.3						
LPAZ	**La Paz**	50.23	305	⇑iP	**P**	**15 07 45.0**	**+0.9**
LPAZ				pmax	pmax		
	comp=Z,324nm,1.1s						
RCBR	**Riachuelo**	50.24	349	eP	**P**	**15 07 43.7**	**-0.6**
	comp=Z,92nm,1.4s,mb5.6						
ARE	**Arequipa**	51.67	301	eP	**P**	**15 07 55.0**	**-0.1**
CASY	**Casey**	54.21	160	eP	**P**	**15 08 13.3**	**0.0**
	comp=Z,72nm,1.0s,mb5.6						
SAML	**Samuel**	54.61	314	⇑iP	**P**	**15 08 15.4**	**-1.5**
	comp=Z,216nm,1.0s,mb6.1						
SAML				LR	LR		
	comp=Z,3μm,22.0s,MS5.4						
DRV	**Dumont d'Urvil**	57.56	174	P	**P**	**15 08 33.0**	**-4.4**
DRV				SP	SP	15 16 39.0	-6.7
DRV				SS	SS	15 20 31.0	+6.2
NNA	**Nana**	58.14	298	eP	**P**	**15 08 41.3**	**-0.9**
	comp=Z,207nm,1.3s,mb6.0						
LSZ	**Lusaka**	58.20	69	eP	**P**	**15 08 40.5**	**-2.1**
	comp=Z,108nm,1.1s,mb5.8						
LSZ	**Lusaka**	58.20	69	P	**P**	**15 08 40.9**	**-1.7**
LSZ				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.8						
DBIC	**Dimbokro**	64.84	25	P	**P**	**15 09 25.8**	**-1.5**
	comp=Z,11nm,0.8s,mb4.9,baz=177,slow=6.1,SNR=15						
DBIC				LR	LR	15 30 54.8	
	comp=Z,7μm,21.7s,MS5.8,baz=176,slow=30						
DBIC	**Dimbokro**	64.84	25	eP	**P**	**15 09 26.3**	**-1.0**
	comp=Z,116nm,1.2s,mb5.8						
DBIC				LR	LR		
	comp=Z,8μm,22.0s,MS5.9						
DBIC	**Dimbokro**	64.84	25	P	**P**	**15 09 26.4**	**-0.9**
DBIC				pmax	pmax		
	comp=Z,120nm,1.2s						
ROSC	**El Rosal**	71.73	310	P	**P**	**15 10 10.2**	**-0.1**
	comp=Z,21nm,0.5s,mb5.4,baz=122,slow=3.7,SNR=35						
ROSC				LR	LR	15 42 02.4	
	comp=Z,2μm,18.4s,MS5.5,baz=185,slow=36						
SDV	**Santo Domingo**	73.81	315	⇑iP	**P**	**15 10 21.8**	**-0.7**
	comp=Z,240nm,1.1s,mb6.0						
PAYG	**Puerto Ayora**	74.64	292	eP	**P**	**15 10 27.7**	**+0.4**
	comp=Z,90nm,1.1s,mb5.6						
KMBO	**Kilima Mbogo**	74.86	69	P	**P**	**15 10 29.5**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=240,slow=20,SNR=2.5						
KMBO				LR	LR	15 40 24.8	
	comp=Z,6μm,20.3s,MS5.9,baz=189,slow=33						
KMBO	**Kilima Mbogo**	74.86	69	P	**P**	**15 10 29.5**	**+0.9**
KMBO				LR	LR	15 40 24.8	
BBL	**Barber's Block**	76.65	326	eP	**P**	**15 10 39.8**	**+1.1**
MGG	**Marie-Galante**	76.97	326	eP	**P**	**15 10 41.5**	**+1.0**
TBG	**Guadaloupe-3**	77.01	326	eP	**P**	**15 10 41.5**	**+0.9**
DOG	**Dongo Capester**	77.17	326	⇓eP	**P**	**15 10 42.8**	**+1.3**
SCG	**Saint Claude**	77.19	326	⇓eP	**P**	**15 10 43.2**	**+1.6**
DEG	**La Desirade**	77.26	327	⇓eP	**P**	**15 10 42.7**	**+0.7**
LZG	**Guadaloupe-1**	77.32	326	⇓eP	**P**	**15 10 43.6**	**+1.2**
SJG	**San Juan**	80.61	323	eP	**P**	**15 10 58.6**	**-1.6**
	comp=Z,97nm,1.2s,mb5.6						
SJG	**San Juan**	80.61	323	P	**P**	**15 10 59.7**	**-0.5**
SJG				pmax	pmax		
	comp=Z,97nm,1.2s						
RKT	**Rikitea**	80.68	243	eP	**P**	**15 11 05.9**	**+5.4**
	comp=Z,110nm,1.2s,mb5.7						
RKT	**Rikitea**	80.68	243	eLQ		15 32 31.2	
RKT	**Rikitea**	80.68	243	ePP	PP	15 13 30.2	-36
RKT	**Rikitea**	80.68	243	eS	S	15 21 02.0	-4.6
RKT				eLR	LR	15 36 15.2	
	comp=Z,3μm,29.2s,baz=148						
JTS	**JuntasAbangare**	81.38	303	⇑iP	**P**	**15 11 04.3**	**0.0**
JTS	**JuntasAbangare**	81.38	303	c iP	**P**	**15 11 04.7**	**+0.4**
TAU	**Tasmania Unive**	81.63	176	eP	**P**	**15 11 04.0**	**-1.0**

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             comp=Z,193nm,1.1s,mb5.9
TAU    Tasmania Unive    81.63 176  P       P         15 11 04.2  -0.9
TAU                                 pmax    pmax
             comp=Z,190nm,1.1s,mb5.9
MASC   Masc              85.47 316  e       P         15 11 26.7  +1.6
RCC    Rio Carpintero    85.89 315  e       P         15 11 27.8  +0.7
MOAC   Moa               86.20 316  e       P         15 11 29.9  +1.3
LMGC   Las Mercedes      86.48 314  e       P         15 11 31.3  +1.3
NWAO   Narrogin (SRO)    86.59 151  P       P         15 11 29.6  -0.7
             comp=Z,4.5nm,0.6s,mb4.9,baz=90,slow=1.0,SNR=3.4
HLGC   Holguin           86.84 315  e       P         15 11 33.7  +1.9
TOO    Toolangi          86.86 174  eP      P         15 11 32.8  +1.3
             comp=Z,12nm,0.8s,mb5.2
TOO    Toolangi          86.86 174  eP      P         15 11 32.8  +1.3
TOO                                 pmax    pmax
             comp=Z,12nm,0.8s,mb5.2
MUN    Mundaring         87.20 149  eP      P         15 11 33.6  +0.3
TBI    Tubuai            87.34 231  eS      S         15 22 07.7  -5.0
TBI                                 eLQ               15 35 20.7
TBI                                 eLR     LR        15 39 15.9
             comp=Z,4µm,29.8s,baz=156
CCCC   Cccc              87.81 314  e       P         15 11 37.0  +0.6
KLBR   Kellerberrin      88.00 151  eP      P         15 11 37.0  -0.1
             comp=Z,27nm,0.7s,mb5.6
ATD    Arta Tunnel       88.48  67  P       P         15 11 38.6  -1.2
             comp=Z,2.3nm,0.3s,mb4.9,baz=248,slow=19,SNR=1.9
ATD                                 LR      LR        15 47 57.2
             comp=Z,3µm,21.7s,MS5.7,baz=204,slow=33
ADE    Adelaide          88.87 168  P       P         15 11 41.2   0.0
CNB    Canberra Magne    89.28 177  eP      P         15 11 44.6  +1.4
             comp=Z,69nm,1.4s,mb5.8
MDT    Midelt            90.25  19  LR      LR        15 49 18.4
             comp=Z,4µm,18.2s,MS5.9,baz=185,slow=34
FORT   Forrest           91.27 159  eP      P         15 11 52.2  -0.3
             comp=Z,35nm,0.8s,mb5.7
TVO    Taravao           92.11 234  eP      P         15 12 03.4  +6.8
             comp=Z,148nm,1.2s,mb6.2
STKA   Stephens Creek    92.22 170  eP      P         15 11 59.4  +2.5
             comp=Z,10nm,0.8s,mb5.2
STKA   Stephens Creek    92.22 170  P       P         15 11 56.1  -0.8
             comp=Z,8.9nm,0.8s,mb5.1,baz=174,slow=6.1,SNR=13
STKA                                LR      LR        15 54 15.8
             comp=Z,4µm,18.0s,MS5.8,baz=180,slow=36
STKA   Stephens Creek    92.22 170  eP      P         15 11 59.4  +2.5
STKA                                LR      LR        15 54 15.8
PPT    Papeete           92.44 234  eLQ               15 37 34.1
PPT    Papeete           92.44 234  ePP     PP        15 15 35.6  -6.3
PPT    Papeete           92.44 234  ePS     PS        15 24 20.1  +3.6
PPT    Papeete           92.44 234  eLR     LR        15 41 38.3
             comp=Z,6µm,32.0s,baz=156
PPT    Papeete           92.44 234  LR      LR        15 45 21.1
             comp=Z,944nm,18.6s,MS5.3,baz=192,slow=30
DJNS   Zahran al Janu    94.03  64  P       P         15 12 13.9  +8.4
PTEO   Sao Teotonio      94.21  15  eP      P         15 12 08.1  +2.2
             comp=Z,53nm,1.4s,mb5.8
BLJS   Baljurashi        94.89  62  P       P         15 12 17.7  +8.4
TAOE   Nuku Hiva Isla    95.33 246  eLR     LR        15 43 10.6
             comp=Z,5µm,29.4s,baz=163
TATS   Tathlith          95.54  63  P       P         15 12 21.8  +9.4
ESDC   Sonseca Array     97.04  18  P       P         15 12 20.2  +1.5
             comp=Z,1.2nm,0.5s,mb4.5,baz=188,slow=3.6,SNR=4.2
MTE    Manteigas         97.18  15  eP      P         15 12 17.1  -2.2
             comp=Z,16nm,1.8s,mb5.2
MTE    Manteigas         97.18  15  eS                15 22 57.0
MTE    Manteigas         97.18  15  eLQ               15 39 23.1
MTE                                 eLR     LR        15 44 27.2
             comp=Z,2µm,20.0s
ASPA   Alice Springs     99.29 162  eP      P         15 12 28.5  -0.7
ASPA   Alice Springs     99.29 162  eP      PP        15 16 31.1  -3.5
MYNC   Murphy           102.66 315  P       Pdif      15 12 46.4  +2.2
WRA    Warramunga Arr   103.01 162  P       Pdif      15 12 44.9  -1.2
             comp=Z,2.5nm,0.9s,baz=196,slow=4.1,SNR=10
WRA                                 PP      PP        15 16 59.9  -3.5
             comp=Z,0.7nm,0.5s,baz=190,slow=6.2,SNR=7.8
WRA                                 PKKPbc            15 28 41.3
             comp=Z,2.2nm,0.8s,baz=357,slow=3.4,SNR=12
WRA                                 PKPPKP            15 36 58.8
             comp=Z,0.6nm,0.9s,baz=22,slow=2.1,SNR=5.0
WB2    Warramunga Arr   103.01 162  eP      Pdif      15 12 44.9  -1.2
WB2    Warramunga Arr   103.01 162  eP      PP        15 16 59.7  -3.7
WB2    Warramunga Arr   103.01 162  eP                15 28 42.1
TXAR   Lajitas Array    106.69 298  PKiKP             15 17 13.7
             comp=Z,0.5nm,0.2s,baz=153,slow=2.8,SNR=4.4
TXAR                                PKKPbc            15 28 31.1
             comp=Z,0.3nm,0.3s,baz=270,slow=2.7,SNR=2.0
LJU    Ljubljana        107.27  29  ePP     PP        15 17 34.5  -0.1
LEGS   Legarje          107.40  30  ePP     PP        15 17 36.8  +1.2
BR131  Keskin Array S   108.14  45  ePKP              15 17 15.8
BRTR   Keskin Array B   108.14  45  PKiKP             15 17 14.9
             comp=Z,1.0nm,1.0s,baz=90,slow=2.9,SNR=3.2
BRTR                                PP      PP        15 17 37.9  -3.2
             comp=Z,1.6nm,0.8s,baz=180,slow=6.2,SNR=4.7
GERES  GERESS Array B   109.63  27  PKiKP             15 17 16.4
             comp=Z,0.6nm,0.7s,baz=225,slow=3.8,SNR=4.0
GERES                               PP      PP        15 17 47.1  -5.0
             comp=Z,3.4nm,1.0s,baz=214,slow=4.8,SNR=4.4
KHC    Kasperske Hory   109.86  27  ePP     PP        15 17 48.0  -5.7
KHC                                 ex      x         15 17 55.4
ZST    Bratislava       109.95  30  ePP     PP        15 17 49.7  -4.6
TREC   Trest            110.51  28  ePP     PP        15 18 00.3  +2.1
VYHS   Vyhne            110.72  31  ePP     PP        15 18 01.2  +1.5
PRU    Pruhonice        110.90  27  ePP     PP        15 17 54.3  -6.6
KECS   Kecovo           111.19  32  ePP     PP        15 18 04.8  +1.8
PVCC   Panska Ves       111.40  27  ePP     PP        15 18 03.8  -0.6
BRG    Berggiesshubel   111.56  27  eP      PKPdf     15 17 12.2   -10
BRG                                 e                 15 17 27.1
BRG                                 SS      SS        15 33 32.0  -4.9
BRG                                 LR      LR
             comp=Z,3µm,20.5s,MS5.8
BRG    Berggiesshubel   111.56  27  ePKIKP  PKPdf     15 17 12.2   -10
BRG                                 e                 15 17 27.1
BRG                                 SS      SS        15 33 32.0  -4.9
BRG                                 pmax    pmax
             comp=Z,2.0nm,0.8s
BRG                                 pmax    pmax
             comp=Z,3.0nm,0.9s
BRG                                 MLR     MLR
             comp=N,1µm,17.6s,MS5.7
BRG                                 MLR     MLR
             comp=E,1µm,21.8s,MS5.7
BRG                                 MLR     MLR
             comp=Z,3µm,20.5s,MS5.8
DPC    Dobruska-Polom   111.70  28  ePP     PP        15 18 01.9  -4.6
CLL    Collm            111.72  26  ePP     PP        15 18 01.0  -5.6
CLL                                 ePS     PS        15 27 36.0  +1.9
CLL                                 ePPS    PPS       15 28 50.0  +4.5
CLL                                 eSS     SS        15 33 39.0   0.0
OKC    Ostrava-Krasne   111.73  30  ePP     PP        15 18 07.3  +0.6
CRVS   Cervenica-Dubn   111.86  32  ePP     PP        15 18 04.3  -3.4
HYB    Hyderabad        113.01  93  i P     PKPdf     15 17 24.0  -2.3
HYB                                 ePKKP   PKKP      15 28 24.0  -3.1
HYB                                 ePPS    PPS       15 29 00.0  -0.8
HYB    Hyderabad        113.01  93  eP      PKPdf     15 17 24.0  -2.3
SOC    Sochi            113.86  47  i PKIKP PKPdf     15 17 24.2  -3.2
SOC                                 ePPP    PPP       15 20 42.4  -4.2
SOC                                 e                 15 24 12.3
SOC                                 MLR     MLR
             comp=Z,1µm,18.0s,MS5.5
ANN    Anapa            113.93  45  i PKIKP PKPdf     15 17 23.6  -4.0
ANN                                 e                 15 24 08.2
ANN                                 pmax    pmax
             comp=Z,34nm,1.1s
SDCO   Great Sand Dun   114.36 302  ePKP    PKPdf     15 17 27.2  -1.3
SCHQ   Schefferville    114.88 336  PKP     PKPdf     15 17 24.5  -4.6
             comp=Z,4.6nm,1.0s,baz=227,slow=15,SNR=3.0
AKASG  Malin Array Be   115.89  36  PKP     PKPdf     15 17 28.1  -3.1
             comp=Z,2.4nm,0.7s,baz=240,slow=1.9,SNR=13
AKASG                               PP      PP        15 18 34.1  -2.7
             comp=Z,0.7nm,0.4s,baz=211,slow=6.7,SNR=6.8
GOF    Gofitskoye       116.44  48  ePKIKP  PKPdf     15 17 27.4  -5.0
PV10   Paradox Valley   116.58 300  ePKPdf  PKPdf     15 17 30.3  -2.5
SRU    San Rafael       117.88 299  ePKPdf  PKPdf     15 17 32.9  -2.4
MSU    Marysvale        118.25 297  ePKPdf  PKPdf     15 17 34.6  -1.4
MSU    Marysvale        118.25 297  PKIKP   PKPdf     15 17 35.1  -1.0
MVU    Marysvale        118.26 297  ePKPdf  PKPdf     15 17 35.1  -0.9
TMUT   Trail Mountain   118.36 299  ePKPdf  PKPdf     15 17 34.9  -1.4
RSSD   Black Hills      118.68 307  ePKPdf  PKPdf     15 17 33.9  -2.9
TPNV   Topopah Spring   119.13 294  ePKPdf  PKPdf     15 17 36.8  -1.0
KHET   Khetri           119.84  83  eP      PKPdf     15 17 36.9  -2.4
DUG    Dugway           119.85 298  ePKPdf  PKPdf     15 17 37.3  -1.7
TCUT   Toone Canyon     119.85 300  ePKPdf  PKPdf     15 17 37.8  -1.2
NAO    NORSAR Subarra   120.00  20  PKPdf   PKPdf     15 17 36.9  -1.9
NAO01  NORSAR Array S   120.03  20  ePKPdf  PKPdf     15 17 36.7  -2.2
ULM    Lac du Bonnet    120.04 316  PKP     PKPdf     15 17 35.3  -3.9
             comp=Z,4.3nm,0.9s,baz=302,slow=16,SNR=3.3
ULM                                 PP      PP        15 18 58.9  -6.1
             comp=Z,14nm,1.1s,baz=121,slow=6.7,SNR=4.6
BW06   Boulder Array    120.21 302  ePKPdf  PKPdf     15 17 37.1  -2.6
PDAR   Pinedale Array   120.21 302  PKP     PKPdf     15 17 36.9  -2.8
             comp=Z,2.1nm,1.1s,baz=180,slow=3.0,SNR=8.2
PDAR                                PKKPbc            15 27 44.8
             comp=Z,1.1nm,0.8s,baz=78,slow=1.0,SNR=7.7
NB2    NORSAR Subarra   120.27  20  PKPdf   PKPdf     15 17 36.9  -2.5
             comp=Z,9.9nm,1.1s,baz=202,slow=1.9
NB2    NORSAR Subarra   120.27  20  PKPd    PKPdf     15 17 36.9  -2.5
             baz=202,slow=1.9
NB2    NORSAR Subarra   120.27  20 ⇓PKP     PKPdf     15 17 36.9  -2.5
NOA    NORSAR Array B   120.27  20  PKP     PKPdf     15 17 36.6  -2.8
             comp=Z,4.9nm,0.8s,baz=204,slow=1.9,SNR=11
NOA                                 PKKPbc            15 27 43.5
             comp=Z,1.9nm,1.0s,baz=27,slow=3.0,SNR=2.5
KUDL   Kundal           120.28  84  eP      PKPdf     15 17 37.3  -2.9
HWUT   Hardware Ranch   120.30 300  ePKPdf  PKPdf     15 17 37.1  -2.9
VRHR   Novokhopersk     120.69  43  ePKIKP  PKPdf     15 17 38.0  -2.5
VRHR                                pmax    pmax
             comp=Z,20nm,0.9s
VRHR                                pmax    pmax
             comp=N,5.0nm,0.8s
VRHR                                pmax    pmax
             comp=E,4.0nm,0.5s
SONA   Sohna            120.69  84  eP      PKPdf     15 17 35.4  -5.6
AYAN   Aya Nagar        120.89  84  eP      PKPdf     15 17 38.0  -3.4
AYAN                                AMb     AMB       15 17 40.7
             comp=Z,16nm,1.6s
HVU    Hansel Valley    121.03 300  ePKPdf  PKPdf     15 17 38.4  -3.0
HVU    Hansel Valley    121.03 300  PKIKP   PKPdf     15 17 40.2  -1.2
BISR   Bishrakh         121.14  84  ex      x         15 17 46.1
NVAR   Mina Array Bea   121.31 293  PKP     PKPdf     15 17 40.0  -2.0
             comp=Z,2.5nm,0.8s,baz=133,slow=3.9,SNR=10
NVAR                                PP      PP        15 19 08.7  -5.5
             comp=Z,0.8nm,0.8s,baz=131,slow=8.3,SNR=2.1
NVAR                                PKKPbc            15 27 41.5
             comp=Z,0.4nm,0.7s,baz=328,slow=1.5,SNR=4.1
LOHW   Long Hollow      121.35 302  ePKPdf  PKPdf     15 17 39.2  -2.8
TPAW   Teton Pass       121.42 302  ePKPdf  PKPdf     15 17 39.0  -3.1
ELK    Elko             121.48 297  ePKPdf  PKPdf     15 17 39.9  -2.4
RRI2   Red Ridge        121.49 302  ePKPdf  PKPdf     15 17 39.1  -3.2
MOOW   Moose Ponds      121.52 302  ePKPdf  PKPdf     15 17 39.9  -2.4
MOOW                                eSKPdf            15 21 13.4
LAO    LASA Array       121.64 307  ePKPdf  PKPdf     15 17 39.8  -2.7
IMW    Indian Meadow    121.72 302  ePKPdf  PKPdf     15 17 40.5  -2.2
VSU    Vasula           121.72  30  i PKP   PKPdf     15 17 40.2  -2.1
VSU    Vasula           121.72  30  i PKIKP PKPdf     15 17 40.1  -2.2
OBN    Obninsk          122.04  37  i PKP   PKPdf     15 17 41.2  -1.8
OBN                                 LR      LR
             comp=Z,2µm,22.0s,MS5.6
OBN    Obninsk          122.04  37⇓iPKIKP  PKPdf     15 17 39.8  -3.2
OBN                                 i                 15 17 46.9
OBN                                 i                 15 17 53.2
OBN                                 pmax    pmax
             comp=Z,30nm,1.1s
YMR    Madison River    122.31 303  ePKPdf  PKPdf     15 17 41.8  -2.0
GCMT   Greycliff        122.54 305  ePKPdf  PKPdf     15 17 41.1  -3.0
GCMT                                ePP     PP        15 19 19.8  -2.7
QLMT   Earthquake Lak   122.66 303  ePKPdf  PKPdf     15 17 43.5  -0.8
MOS    Moscow           122.90  38  ePKIKP  PKPdf     15 17 40.5  -4.0
MOS                                 e                 15 19 23.1
MOS                                 MLR     MLR
             comp=Z,2µm,23.6s,MS5.7
MOS                                 MLR     MLR
             comp=N,4µm,22.3s,MS6.0
MOS                                 MLR     MLR
             comp=E,1µm,21.4s,MS6.0
THN    Thein Dam        123.10  80  eP      PKPdf     15 17 43.0  -2.5
HLID   Hailey           123.16 300  ePKPdf  PKPdf     15 17 43.7  -1.7
MCMT   McKenzie Canyo   123.33 302  ePKPdf  PKPdf     15 17 43.2  -2.5
BOZ    Bozeman (W)      123.35 303  ePKPdf  PKPdf     15 17 43.9  -1.9
BOZ                                 ePP     PP        15 19 22.5  -5.7
FRB    Frobisher Bay    123.35 339  PKP     PKPdf     15 17 42.6  -2.7
             comp=E,22nm,0.9s,baz=125,slow=3.0,SNR=5.9
NST    Nakhon Sawan     123.44 113  P       PKPdf     15 17 39.0  -7.6
DLMT   Dillon           123.60 302  ePKPdf  PKPdf     15 17 44.8  -1.5
DLMT                                ePP     PP        15 19 25.8  -4.2
SFJD   Kangerlussuaq    123.66 349  PKP     PKPdf     15 17 43.3  -2.6
             comp=E,19nm,1.0s,baz=54,slow=1.7,SNR=4.6
SFJD   Kangerlussuaq    123.66 349  i P     PKPdf     15 17 43.1  -2.8
             comp=E,21nm,1.0s
             comp=Z,2µm,17.0s
SFJD   Kangerlussuaq    123.66 349  i PKIKP PKPdf     15 17 43.1  -2.8
SFJD                                pmax    pmax
             comp=Z,21nm,1.0s
SFJD                                MLR     MLR
             comp=Z,2µm,17.0s,MS5.8
JOSI   Joshimath        123.84  84  ex      x         15 17 01.0
JOSI                                ex      x         15 17 09.5
KLP    Kalpa            123.84  83  eP      PKPdf     15 17 46.0  -1.1
KLP                                 ex      x         15 18 00.5
KOLN   Koldanda         124.01  90  eP      PKPdf     15 17 43.8  -3.7
             comp=Z,111nm,0.9s
FINES  FINESS Array B   124.06  28  PKP     PKPdf     15 17 44.3  -2.5
             comp=Z,11nm,0.8s,baz=152,slow=1.4,SNR=31
FINES  FINESS Array B   124.06  28  i PKIKP PKPdf     15 17 44.2  -2.6
FINES                               pmax    pmax
             comp=Z,11nm,0.8s
HRY    Holter Researc   124.23 304  ePKPdf  PKPdf     15 17 44.7  -2.8
WVOR   Wild Horse Val   124.44 296  ePKPdf  PKPdf     15 17 44.9  -3.1
WVOR   Wild Horse Val   124.44 296  PKIKP   PKPdf     15 17 47.2  -0.8
KAF    Kangasniemi      124.68  27  ep      PKPdf     15 17 44.8  -3.0
             comp=Z,9.7nm,0.6s
DMN    Daman            124.73  91  eP      PKPdf     15 17 45.9  -3.0
             comp=Z,102nm,1.0s
GKN    Gorkha           124.77  90  eP      PKPdf     15 17 46.5  -2.4
             comp=Z,88nm,0.9s
PKI    Pulchoki         124.88  91  eP      PKPdf     15 17 46.5  -2.6
             comp=Z,71nm,0.9s
MOD    Modoc            124.91 295  ePKPdf  PKPdf     15 17 46.6  -2.2
MOD                                 ePP     PP        15 19 34.5  -3.6
KKN    Kakani           124.97  91  eP      PKPdf     15 17 46.5  -2.8
             comp=Z,34nm,0.8s
CHMT   Chamberlain Mo   125.05 303  ePKPdf  PKPdf     15 17 46.5  -2.4
WDC    Whiskeytown Da   125.11 292  ePKPdf  PKPdf     15 17 47.4  -1.9
WDC    Whiskeytown Da   125.11 292  PKIKP   PKPdf     15 17 47.7  -1.5
MSO    Missoula         125.31 303  ePKPdf  PKPdf     15 17 47.1  -2.4
KKTK   Khon Kaen        125.39 115  P       PKPdf     15 17 53.5  +3.2
GUN    Gumba            125.40  91  eP      PKPdf     15 17 48.6  -1.5
             comp=Z,108nm,0.9s
CHG    Chiang Mai       125.42 110 ⇓P       PKPdf     15 17 48.4  -2.0
             comp=Z,11nm,1.2s
BMO    Blue Mountains   125.52 299  ePKPdf  PKPdf     15 17 47.2  -2.7
BMO    Blue Mountains   125.52 299  PKIKP   PKPdf     15 17 47.6  -2.3
JOF    Joensuu          126.68  29  ep      PKPdf     15 17 48.4  -3.1
             comp=Z,6.2nm,0.6s
CHRT   Chiangrai        126.74 110 ⇓P       PKPdf     15 17 50.5  -2.2
             comp=Z,197nm,1.0s
HUMO   Hull Mountain    126.78 294  ePKPdf  PKPdf     15 17 51.2  -1.0
AKTO   Aktyubinsk       127.08  53  PKP     PKPdf     15 17 50.2  -2.3
             comp=Z,15nm,1.0s,baz=193,slow=2.9,SNR=38
KLMR   Klimovskoe       127.51  35  ePKIKP  PKPdf     15 17 50.8  -2.4
KLMR                                e                 15 19 53.5
KLMR                                eSS     SS        15 36 58.6  -3.8
KLMR                                pmax    pmax
             comp=Z,80nm,1.6s
NEW    Newport          127.85 302  PKP     PKPdf     15 17 51.6  -2.6
             comp=Z,2.7nm,0.7s,baz=73,slow=2.3,SNR=4.4
KKAR   Karatay Array    128.04  67  i PKIKP PKPdf     15 17 52.0  -2.8
KKAR                                pmax    pmax
             comp=Z,23nm,0.8s
SUMG   Summit           128.24 356  ePKPdf  PKPdf     15 17 52.8  -1.6
SUMG                                eSKPdf            15 21 17.0
KSH    Kashi            128.42  74  ePKP    PKPdf     15 17 55.0  -0.6
KSH                                 eXPKP             15 18 10.0
KSH                                 ePP     PP        15 20 01.2  -0.6
KSH                                 ePKS    PKS       15 21 31.1  +3.1
KSH                                 ePPP    PPP       15 22 45.0  -2.2
KSH                                 eSKS    SKS       15 25 02.1  -1.0
KSH                                 eSKKS             15 26 49.1
KSH                                 LR      LR
             comp=N,1µm,10.0s,MS6.2
KSH                                 LR      LR
             comp=E,2µm,13.5s,MS6.2
AML    Almayashu        129.03  70  P       PKPdf     15 17 56.4  -0.3
             SNR=9.4
EKS2   Erkin-Say        129.45  70  P       PKPdf     15 17 56.9  -0.6
             SNR=16
EDM    Edmonton         129.54 309  ePKPdf  PKPdf     15 17 54.4  -2.9
EDM                                 eSKPdf            15 21 12.8
EDM    Edmonton         129.54 309  PKIKP   PKPdf     15 17 55.2  -2.1
UCH    Uchtor           129.54  71  P       PKPdf     15 17 57.6   0.0
             SNR=16
LSA    Lhasa            129.75  95  PKP     PKPdf     15 17 56.0  -2.4
LSA                                 XPKP              15 18 13.6
LSA                                 PP      PP        15 20 10.4  -0.1
LSA                                 LR      LR
             comp=N,550nm,22.0s,MS5.3
LSA                                 LR      LR
             comp=E,330nm,20.0s,MS5.3
LSA                                 LR      LR
             comp=Z,1µm,27.0s
LSA    Lhasa            129.75  95  ePKPdf  PKPdf     15 17 57.0  -1.4
LSA                                 eSKPdf            15 21 17.9
AAK    Ala-Archa        129.81  70  P       PKPdf     15 17 56.1  -2.0
             SNR=16
AAK    Ala-Archa        129.81  70  ePKPdf  PKPdf     15 17 55.0  -3.2
AAK                                 eSKPdf            15 21 29.6
FRU    Bishkek          130.01  70⇓iPKIKP  PKPdf     15 17 57.0  -1.6
FRU                                 pmax    pmax
             comp=Z,130nm,2.0s
KBK    Karagaybulak     130.07  71  P       PKPdf     15 17 57.6  -1.0
             SNR=9.2
CHMS   Chumysh          130.20  70  P       PKPdf     15 17 57.7  -1.2
             SNR=5.5
USP    Ospenovka        130.25  70  P       PKPdf     15 17 56.5  -2.5
             SNR=10
ARCES  ARCESS Array B   130.61  22  PKhKP             15 17 41.5
             comp=Z,1.7nm,0.8s,baz=270,slow=0.9,SNR=3.4
ARCES                               PKP     PKPdf     15 17 55.9  -3.1
             comp=Z,30nm,0.8s,baz=207,slow=2.7,SNR=29
ARCES                               PP      PP        15 20 15.2  -0.1
             comp=Z,18nm,1.1s,baz=225,slow=5.1,SNR=4.5
ARCES  ARCESS Array B   130.61  22  PKP               15 17 41.5
ARCES                               PKP     PKPdf     15 17 55.9  -3.1
ARCES                               PP      PP        15 20 15.2  -0.1
ARE0   ARCESS Array S   130.61  22  ePKPdf  PKPdf     15 17 56.1  -2.9
APA    Apatity          130.87  26⇑iPKIKP  PKPdf     15 17 57.6  -1.9
APA                                 i                 15 18 04.4
APA                                 ePPS    PPS       15 32 04.0  +0.3
APA                                 pmax    pmax
             comp=Z,42nm,1.1s
APA                                 MLR     MLR
             comp=Z,2µm,20.0s,MS5.7
KEV    Kevo             131.10  22  ep      PKPdf     15 17 55.1  -4.8
             comp=Z,5.9nm,0.7s
ARU    Arti             131.43  48  ePKPdf  PKPdf     15 17 58.0  -2.9
ARU    Arti             131.43  48  i PKIKP PKPdf     15 17 58.5  -2.4
ARU                                 e                 15 20 17.6
ARU                                 eSS     SS        15 37 56.2  +5.3
ARU                                 eSSS    SSS       15 42 47.4  +3.0
ARU                                 MLR     MLR
             comp=Z,2µm,22.0s,MS5.8
ARU                                 MLR     MLR
             comp=N,1µm,21.0s,MS5.7
ARU                                 MLR     MLR
             comp=E,1µm,21.0s,MS5.7
LVZ    Lovozero         131.43  26  i PKIKP PKPdf     15 17 58.8  -1.8
LVZ                                 pmax    pmax
             comp=Z,51nm,1.0s
LVZ                                 pmax    pmax
             comp=N,14nm,1.3s
LVZ                                 pmax    pmax
             comp=E,7.0nm,0.9s
DAG    Danmarks Havn    132.33   3⇑iP      PKPdf     15 18 00.0  -2.1
             comp=E,44nm,1.2s
DAG    Danmarks Havn    132.33   3⇑iPKIKP  PKPdf     15 18 00.0  -2.1
DAG                                 pmax    pmax
             comp=Z,44nm,1.2s
SVE    Sverdlovsk       132.56  48⇓iPKIKP  PKPdf     15 18 01.6  -1.4
SVE                                 e                 15 18 18.4
SVE                                 e                 15 20 28.1
SVE                                 e                 15 23 15.0
SVE                                 pmax    pmax
             comp=Z,220nm,2.0s
SVE                                 MLR     MLR
             comp=N,600nm,24.0s,MS5.4
SVE                                 MLR     MLR
             comp=E,700nm,24.0s,MS5.4
SVE                                 MLR     MLR
             comp=Z,2µm,24.0s,MS5.7
KMI    Kunming          132.59 109  PKP     PKPdf     15 18 02.3  -1.6
KMI                                 sPKP              15 18 07.9
KMI                                 PP      PP        15 20 31.4  +2.7
KMI                                 PKS     PKS       15 21 38.3  +2.3
KMI                                 PPP     PPP       15 23 24.1  +2.6
KMI                                 SKS     SKS       15 25 12.0  -2.0
KMI                                 SKKS              15 27 21.5
KMI                                 SS      SS        15 38 08.7  +2.5
KMI                                 SSS     SSS       15 43 05.1  +3.0
KMI                                 LR      LR
             comp=Z,970nm,26.1s,MS5.4
KMI    Kunming          132.59 109  PKIKP   PKPdf     15 18 02.3  -1.6
KMI                                                   15 18 07.9
KMI                                                   15 20 31.4
KMI                                 PPP     PPP       15 23 24.1  +2.6
KMI                                                   15 25 12.0
KMI                                 SS      SS        15 38 08.7  +2.5
KMI                                 SSS     SSS       15 43 05.1  +3.0
KMI                                 MLR     MLR
             comp=Z,970nm,26.1s,MS5.4
BRVK   Borovoye         134.52  57  ePKPdf  PKPdf     15 18 04.1  -2.6
BVA0   Borovoye Array   134.55  57  i PKIKP PKPdf     15 18 04.1  -2.7
BVA0                                pmax    pmax
             comp=Z,7.0nm,1.1s
BVAR   Borovoye Array   134.55  57  PKhKP             15 17 52.9
             comp=Z,1.2nm,0.8s,baz=270,slow=2.9,SNR=5.6
BVAR                                PKP     PKPdf     15 18 04.5  -2.3
             comp=Z,20nm,0.9s,baz=270,slow=1.5,SNR=45
BVAR                                SKPbc             15 21 32.0
             comp=Z,1.3nm,0.8s,baz=236,slow=5.2,SNR=2.8
VOSK   Vostochnaya      134.65  58  PKIKP   PKPdf     15 18 04.3  -2.7
VOSK                                pmax    pmax
             comp=Z,37nm,1.4s
CHKZ   Chkalovo         135.06  57  ePKPpre           15 17 58.1
CHKZ                                ePKPdf  PKPdf     15 18 05.7  -2.0
GYA    Guiyang          135.74 112  PKP     PKPdf     15 18 07.6  -2.1
GYA                                 PP      PP        15 20 46.4  -2.2
GYA                                 PKS     PKS       15 21 40.7  -1.1
GYA                                 SKKS              15 27 36.6
GYA                                 SS      SS        15 38 41.7  -2.3
GYA                                 PP      PP
             comp=Z,320nm,5.7s
GYA                                 LR      LR
             comp=N,1µm,19.2s,MS5.6
GYA                                 LR      LR
             comp=E,430nm,20.7s,MS5.6
GYA                                 LR      LR
             comp=Z,650nm,18.3s,MS5.4
YKA    Yellowknife Ar   135.96 318  PKP     PKPdf     15 18 06.4  -2.7
             comp=Z,16nm,0.9s,baz=140,slow=2.0,SNR=13
YKA                                 PP      PP        15 20 43.7  -5.2
             comp=Z,14nm,1.2s,baz=123,slow=6.0,SNR=6.3
YKA    Yellowknife Ar   135.96 318  PKP     PKPdf     15 18 06.5  -2.6
YKA                                 PP      PP        15 20 43.7  -5.2
YKW3   Yellowknife Ar   136.00 318  ePKPdf  PKPdf     15 18 07.1  -2.0
KBS    Kingsbay         136.38  10  i PKIKP PKPdf     15 18 10.3  +0.8
MKAR   Makanchi Array   136.72  71  PKhKP             15 17 55.9
             comp=Z,0.7nm,0.6s,baz=211,slow=1.7,SNR=6.5
MKAR                                PKP     PKPdf     15 18 06.2  -4.6
             comp=Z,4.5nm,0.7s,baz=238,slow=3.8,SNR=15
MKAR                                SKPbc             15 21 38.5
             comp=Z,1.6nm,0.8s,baz=243,slow=3.2,SNR=3.2
MKAR   Makanchi Array   136.72  71  PKP               15 17 55.9
MKAR                                PKP     PKPdf     15 18 06.2  -4.6
MKAR                                SKPbc             15 21 38.5
KURK   Kurchatov        137.21  64  ePKPdf  PKPdf     15 18 08.0  -3.6
KURK                                eSKPbc            15 21 40.9
CD2    Chengdu          137.69 105  ePKP    PKPdf     15 18 06.7  -6.5
CD2                                 PP      PP        15 21 04.1  +3.2
CD2                                 PKS     PKS       15 21 46.8  +1.7
CD2                                 SKKS              15 27 50.1
CD2                                 PP      PP
             comp=Z,150nm,14.4s
CD2                                 LR      LR
             comp=N,390nm,20.4s
CD2                                 LR      LR
             comp=Z,390nm,19.2s,MS5.2
WMQ    Urumqi           137.78  78  ePKP    PKPdf     15 18 07.5  -5.5
WMQ                                 XPKP              15 18 20.0
WMQ                                 PP      PP        15 20 58.0  -3.1
WMQ                                 PKS     PKS       15 21 42.5  -2.4
WMQ                                 SKS     SKS       15 25 15.0  -7.8
WMQ                                 SKKS              15 27 46.0
WMQ                                 SS      SS        15 39 03.0  -4.9
WMQ                                 PP      PP
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	comp=Z,710nm,10.2s						
WMQ				LR	LR		
	comp=N,1µm,30.0s,MS5.5						
WMQ				LR	LR		
	comp=E,810nm,28.2s,MS5.5						
WMQ				LR	LR		
	comp=Z,1µm,24.4s,MS5.5						
DLBC	**Dease Lake**	**140.16**	**307**	PKhKP		15 18 06.3	
	comp=Z,3.5nm,0.8s,baz=192,slow=5.6,SNR=4.7						
DLBC				PKP	PKPdf	15 18 14.6	-2.3
	comp=Z,7.3nm,1.0s,baz=265,slow=3.6,SNR=4.8						
DLBC				SKPbc		15 21 47.5	
	comp=Z,4.5nm,0.9s,baz=96,slow=4.1,SNR=5.2						
DLBC	**Dease Lake**	**140.16**	**307**	PKP		15 18 06.3	
DLBC				PKP	PKPdf	15 18 14.6	-2.3
DLBC				SKPbc		15 21 47.5	
ENH	**Enshi**	**140.27**	**111**	*e*PKPdf	PKPdf	15 18 14.2	-3.7
LZH	**Lanzhou**	**141.61**	**100**	*e*PKP	PKPdf	15 18 14.0	-6.0
LZH				PP	PP	15 21 22.0	-2.5
LZH				PKS	PKS	15 21 48.0	-3.5
LZH				SKKS		15 28 08.0	
LZH				PP	PP		
	comp=Z,460nm,8.9s						
LZH				LR	LR		
	comp=E,1µm,19.0s						
LZH				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
LZH	**Lanzhou**	**141.61**	**100**	*e*PKP	PKPdf	15 18 14.0	-6.0
LZH				pPKP		15 18 17.3	
LZH				sPKP		15 18 19.3	
LZH				PP	PP	15 21 22.0	-2.5
LZH				PKS	PKS	15 21 48.0	-3.5
LZH				*e*SKS	SKS	15 25 18.0	-11
LZH				SKKS		15 28 08.0	
LZH				SS	SS	15 39 47.1	-5.8
LZH				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
LZH	**Lanzhou**	**141.61**	**100**	*e*PKIKP	PKPdf	15 18 14.0	-6.0
LZH						15 18 19.3	
LZH						15 21 22.0	
LZH				*e*		15 25 18.0	
LZH				SS	SS	15 39 47.1	-5.8
LZH				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.8						
GTA	**Gaotai**	**141.68**	**92**	PKP	PKPdf	15 18 13.6	-6.4
GTA				PPP	PPP	15 24 30.1	-3.1
GTA				SKS	SKS	15 25 18.8	-10
GTA				PP	PP		
	comp=Z,200nm,9.7s						
GTA				LR	LR		
	comp=N,830nm,18.5s,MS5.7						
GTA				LR	LR		
	comp=E,960nm,17.8s,MS5.7						
GTA				LR	LR		
	comp=Z,1µm,20.5s,MS5.6						
NVS	**Novosibirsk**	**141.84**	**61**	*e*PKHKP		15 18 10.7	
NVS				pmax	pmax		
	comp=N,11nm,1.1s						
NVS				pmax	pmax		
	comp=Z,51nm,1.1s						
NVS				pmax	pmax		
	comp=E,16nm,1.4s						
ZAL	**Zalesovo**	**142.15**	**63**	PKhKP		15 18 13.1	
	comp=E,3.0nm,0.8s,baz=222,slow=4.1,SNR=12						
ZAL				PKP	PKPdf	15 18 19.7	-0.6
	comp=E,11nm,0.9s,baz=266,slow=2.4,SNR=18						
XAN	**Xi’an**	**142.89**	**107**	PKP	PKPdf	15 18 17.5	-4.7
XAN				APKP		15 18 27.0	
XAN				LR	LR		
	comp=N,200nm,21.4s,MS5.1						
XAN				LR	LR		
	comp=E,250nm,20.0s,MS5.1						
XAN				LR	LR		
	comp=Z,650nm,22.9s,MS5.3						
WHN	**Wuhan**	**143.00**	**117**	*e*PKP	PKPdf	15 18 23.5	+1.0
INK	**Inuvik**	**145.58**	**321**	PKPbc	PKPbc	15 18 24.1	+0.6
	comp=Z,150nm,1.0s,baz=89,slow=3.2,SNR=265						
INK	**Inuvik**	**145.58**	**321**	*e*PKPbc	PKPbc	15 18 23.7	+0.2
INK	**Inuvik**	**145.58**	**321**	PKIKP	PKPdf	15 18 22.6	-3.2
JOW	**Kunigami**	**146.08**	**138**	PKPbc	PKPbc	15 18 27.5	+1.5
	comp=Z,26nm,0.7s,baz=99,slow=7.1,SNR=4.8						
NJ2	**Nanjing**	**146.47**	**121**	*e*PKP	PKPdf	15 18 24.3	-4.2
NJ2				PKP2	PKPab	15 18 28.4	-1.5
NJ2				APKP		15 18 34.4	
NJ2				XPKP		15 18 38.5	
NJ2				PKS	PKS	15 21 59.0	-0.5
NJ2				PP	PP		
	comp=Z,1µm,10.2s						
NJ2				LR	LR		
	comp=N,240nm,27.4s						
NJ2				LR	LR		
	comp=E,130nm,21.7s						
NJ2				LR	LR		
	comp=Z,7µm,23.6s,MS6.4						
DAWY	**Dawson**	**146.61**	**312**	*e*PKPbc	PKPbc	15 18 26.6	+0.5
SSE	**Sheshan**	**146.79**	**125**	PKP	PKPdf	15 18 29.0	-0.1
SSE				PP	PP	15 21 58.4	+2.7
SSE				SS	SS	15 40 56.2	+4.0
SSE				LR	LR		
	comp=N,500nm,20.3s,MS5.5						
SSE				LR	LR		
	comp=E,670nm,20.3s,MS5.5						
SSE				LR	LR		
	comp=E,1µm,19.0s						
BTO	**Baotou**	**148.23**	**100**	*e*PKP	PKPdf	15 18 33.3	+2.2
DIV	**Divide**	**148.50**	**305**	*e*PKPbc	PKPdf	15 18 32.7	+1.9
TIA	**Tai’an**	**148.89**	**114**	*e*PKP	PKPdf	15 18 30.0	-2.3
THY	**Trims Highway**	**149.14**	**310**	*e*PKPbc	PKPdf	15 18 34.4	+2.6
HHC	**Hu-ho-hao-te**	**149.26**	**101**	*e*PKP	PKPdf	15 18 30.3	-2.4
HHC				APKP		15 18 40.7	
HHC				XPKP		15 18 44.4	
HHC				PKS	PKS	15 22 05.7	+2.3
HHC				SKS	SKS	15 25 33.1	-7.0
HHC				SKKS		15 29 00.5	
HHC				SS	SS	15 41 19.6	+0.3
HHC				LR	LR		
	comp=N,630nm,24.0s,MS5.5						
HHC				LR	LR		
	comp=E,590nm,21.6s,MS5.5						
HHC				LR	LR		
	comp=Z,1µm,19.2s,MS5.7						
MOY	**Mondy**	**149.59**	**76**	*e*PKHKP		15 18 30.7	
MOY				pmax	pmax		
	comp=Z,260nm,2.7s						
SML	**Sawmill**	**149.88**	**306**	*e*PKPdf	PKPdf	15 18 31.5	-1.5
SML				*e*PKPbc	PKPdf	15 18 35.6	+2.5
SML				*e*PKPab	PKPab	15 18 42.2	-0.4
SML	**Sawmill**	**149.88**	**306**	*e*PKHKP		15 18 31.5	
SML				*e*		15 18 42.2	
ILAR	**Eielson Array**	**149.93**	**312**	PKP	PKPdf	15 18 28.1	-4.9
	comp=Z,3.0nm,0.9s,baz=332,slow=1.4,SNR=6.8						
ILAR				PKPbc	PKPdf	15 18 35.6	+2.6
	comp=Z,94nm,0.9s,baz=132,slow=1.4,SNR=102						
PMR	**Palmer**	**150.19**	**305**	*e*P	PKPdf	15 18 36.2	+2.7
ZAK	**Zakamensk**	**150.23**	**79**	*e*PKIKP	PKPdf	15 18 31.6	-2.3
ZAK				*e*		15 18 44.6	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,60nm,1.0s						
COLA	**College**	**150.36**	**312**	*e*PKPbc	PKPdf	15 18 36.1	+2.5
SLKM	**Skilak Lake**	**150.40**	**303**	*e*PKPbc	PKPdf	15 18 37.2	+3.4
SLKM				*e*PKPab	PKPab	15 18 44.7	-0.1
SONM	**Songino Array**	**150.65**	**86**	PKP	PKPdf	15 18 32.6	-2.1
	comp=Z,6.1nm,0.9s,baz=220,slow=2.3,SNR=24						
SONM				PKPbc	PKPdf	15 18 38.5	+3.8
	comp=Z,44nm,0.7s,baz=224,slow=2.5,SNR=76						
SONM				PKPab	PKPab	15 18 45.0	-1.2
	comp=Z,76nm,0.8s,baz=236,slow=2.7,SNR=28						
KDAK	**Kodiak Island**	**150.72**	**297**	PKPbc	PKPdf	15 18 38.2	+3.8
	comp=Z,38nm,0.6s,baz=112,slow=4.1,SNR=36						
IRK	**Irkutsk**	**151.66**	**76**	*e*PKIKP	PKPdf	15 18 32.8	-3.2
IRK				pmax	pmax		
	comp=Z,168nm,0.1s						
JNU	**Nakatsue**	**152.70**	**137**	PKPbc	PKPdf	15 18 43.5	+5.3
	comp=Z,22nm,0.9s,baz=172,slow=13,SNR=3.6						
IMA2	**Indian Mountai**	**152.92**	**314**	*e*PKPbc	PKPdf	15 18 43.6	+6.2
CIT	**Chita**	**156.72**	**83**	*e*PKIKP	PKPdf	15 18 41.1	-1.8
CIT				pmax	pmax		
	comp=Z,147nm,2.5s						
MAJO	**Matsushiro**	**158.37**	**146**	*e*PKPdf	PKPdf	15 18 43.6	-2.0
MAT	**Matsushiro**	**158.37**	**146**	PKP	PKPdf	15 18 42.5	-3.1
MAT	**Matsushiro**	**158.37**	**146**	*e*P	PKPdf	15 18 43.0	-2.6
MAT				LR	LR		
	comp=Z,710nm,20.0s,MS5.5						
MJAR	**Matsushiro Arr**	**158.37**	**146**	PKP	PKPdf	15 18 43.0	-2.6
	comp=Z,2.7nm,1.1s,baz=180,slow=1.2,SNR=3.8						
MJAR				PKPab	PKPab	15 19 17.1	-2.3
	comp=Z,3.4nm,0.8s,baz=197,slow=3.4,SNR=4.7						
BOD	**Bodaibo**	**158.77**	**68**	*e*PKIKP	PKPdf	15 18 41.3	-4.0
BOD				*e*		15 19 17.2	
BOD				pmax	pmax		
	comp=Z,19nm,1.9s						
BOD				pmax	pmax		
	comp=Z,34nm,1.4s						
CN2	**Changchun**	**158.79**	**113**	*e*PKP	PKPdf	15 18 43.3	-2.5
CN2				*e*XPKP		15 18 57.0	
CN2				*e*PP	PP	15 23 03.5	+1.0
CN2				*e*SS	SS	15 43 01.9	-1.1
CN2				PP	PP		
	comp=Z,300nm,10.0s						
CN2				LR	LR		
	comp=N,800nm,19.0s,MS5.8						
CN2				LR	LR		
	comp=E,900nm,19.0s,MS5.8						
CN2				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
HIA	**Hailar**	**158.95**	**94**	*e*PKPdf	PKPdf	15 18 43.8	-2.0
HIA				*e*PKPab	PKPab	15 19 21.0	-0.5
TIXI	**Tiksi**	**161.03**	**23**	*i* PKIKP	PKPdf	15 18 46.8	-0.6
MDJ	**Mudanjiang**	**161.49**	**117**	PKP	PKPdf	15 18 46.9	-1.7
MDJ				APKP		15 18 51.8	
MDJ				PP	PP	15 23 17.0	0.0
MDJ				SS	SS	15 43 33.6	+2.9
MDJ				LR	LR		
	comp=N,660nm,19.0s						
MDJ				LR	LR		
	comp=E,260nm,22.0s						
MDJ				LR	LR		
	comp=Z,790nm,22.0s						
MDJ	**Mudanjiang**	**161.49**	**117**	*e*PKPdf	PKPdf	15 18 46.7	-2.0
KLR	**Kul’dur**	**165.60**	**108**	*e*PKIKP	PKPdf	15 18 50.7	-1.8
BILL	**Bilibino**	**166.17**	**339**	⇓*e*PKIKP	PKPdf	15 18 46.1	-6.4
BILL				*e*		15 19 52.8	
BILL				pmax	pmax		
	comp=Z,32nm,2.1s						
BILL				pmax	pmax		
	comp=Z,34nm,1.3s						
YAK	**Yakutsk**	**166.47**	**53**	*i* PKIKP	PKPdf	15 18 49.8	-3.0
YSS	**Yuzh-Sakhalins**	**169.18**	**140**	*e*PKPdf	PKPdf	15 18 52.8	-2.2
YSS	**Yuzh-Sakhalins**	**169.18**	**140**	⇑*i*PKIKP	PKPdf	15 18 52.0	-3.0
YSS				*e*PPP	PPP	15 28 06.0	+6.3
YSS				*e*PS		15 37 47.0	
YSS				*e*SS	SS	15 44 50.0	+0.9
YSS				pmax	pmax		
	comp=Z,110nm,1.8s						
SEY	**Seymchan**	**172.75**	**2**	*i* PKIKP	PKPdf	15 18 53.1	-3.5
PET	**Petropavlovsk**	**175.69**	**234**	*i* PKIKP	PKPdf	15 18 55.0	-2.8
PET				pmax	pmax		
	comp=Z,300nm,16.1s						
PET				pmax	pmax		
	comp=Z,300nm,17.3s						
PET				pmax	pmax		
	comp=Z,400nm,19.3s						
PET				pmax	pmax		
	comp=Z,400nm,19.0s						
PET				pmax	pmax		
	comp=N,300nm,19.6s						
PET				pmax	pmax		
	comp=N,800nm,21.3s						
MA2	**Magadan**	**175.96**	**16**	*e*PKIKP	PKPdf	15 18 50.7	-7.0
MA2				*e*		15 24 38.5	

IDC ***11*** *15:15:06.8±0.6, 55.60S×27.00W, mb4.4/11, mb1 4.4/12, mb1mx4.4/16, mbtmp4.3/12, ML3.5/1, MS4.6/2, Ms1 4.6/2, ms1mx4.1/18, Error ellipse: s-maj=23.6km s-min=15.4km az=13.0*

NEIC ***11*** *15:15:08.2±0.3, 55.60S×27.01W, h10^{km}, mb4.8/12, Error ellipse: s-maj=11.7km s-min=8.3km az=203.0*

MOS ***11*** *15:15:10.3±1.6, 55.76S×27.11W, h33^{km}, mb5.0/5, Error ellipse: s-maj=36.5km s-min=16.6km az=107.3*

ISC 11 15:15:06.6±0.5**, 55.57S**±0.09×**27.0W**±0.1**, h10**^{km}**, n48,** σ1^{s}**00**/32**, mb4.5**/16**, MS4.7**/2**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	**Sanae**	**19.13**	**157**	P	**P**	**15 19 30.3**	**-1.7**
	0.1nm,0.3s,baz=324,slow=9.6,SNR=11						
SNAA	**Sanae**	**19.13**	**157**	*e*P	**P**	**15 19 30.3**	**-1.7**
	8.5nm,0.8s						
SNAA	**Sanae**	**19.13**	**157**	*e*P	**P**	**15 19 30.3**	**-1.7**
SNAA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
USHA	**Ushuaia**	**23.43**	**254**	P	**P**	**15 20 16.4**	**+0.1**
	comp=Z,6.5nm,0.7s,mb4.1,baz=80,slow=9.3,SNR=5.4						
TRQA	**Tornquist**	**29.25**	**292**	*e*P	**P**	**15 21 11.1**	**+0.5**
	comp=Z,27nm,1.0s,mb4.9						
PLCA	**Paso Flores**	**32.04**	**279**	P	**P**	**15 21 33.4**	**-1.8**
	comp=Z,1.5nm,0.7s,mb3.9,baz=154,slow=4.9,SNR=3.7						
PLCA	**Paso Flores**	**32.04**	**279**	P	**P**	**15 21 33.4**	**-1.9**
	comp=Z,2.6nm,0.9s,mb4.1						
PLCA	**Paso Flores**	**32.04**	**279**	P	**P**	**15 21 33.4**	**-1.9**
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CPUP	**Villa Florida**	**36.59**	**310**	*e*P	**P**	**15 22 14.8**	**+0.3**
	comp=Z,27nm,0.8s,mb5.1						
CPUP	**Villa Florida**	**36.59**	**310**	*e*P	**P**	**15 22 14.8**	**+0.3**
CPUP				pmax	pmax		
	comp=Z,27nm,0.8s						
CFAA	**Coronel Fontan**	**37.48**	**292**	P	**P**	**15 22 20.9**	**-1.0**
	comp=Z,2.5nm,0.7s,mb4.2,baz=139,slow=9.2,SNR=14						
MAW	**Mawson**	**40.47**	**144**	P	**P**	**15 22 46.8**	**+0.4**
	comp=Z,2.3nm,0.7s,mb4.0,baz=246,slow=10.0,SNR=4.4						
MAW				LR	LR	15 38 57.4	
	comp=Z,719nm,18.3s,MS4.6,baz=226,slow=35						
BDFB	**Brasilia**	**43.01**	**330**	P	**P**	**15 23 08.0**	**+0.2**
	comp=Z,1.6nm,0.5s,mb4.0,baz=95,slow=11,SNR=2.1						
BOSA	**Boshof**	**45.74**	**76**	P	**P**	**15 23 29.5**	**-0.1**
	comp=Z,8.1nm,1.1s,mb4.6,baz=250,slow=6.8,SNR=6.7						
BOSA	**Boshof**	**45.74**	**76**	*e*P	**P**	**15 23 29.3**	**-0.3**
	comp=Z,5.0nm,0.8s,mb4.5						
BOSA	**Boshof**	**45.74**	**76**	*e*P	**P**	**15 23 29.3**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
VNDA	**Vanda**	**47.06**	**183**	*e*P	**P**	**15 23 39.3**	**-0.1**
	comp=Z,4.8nm,0.7s,mb4.5						
VNDA	**Vanda**	**47.06**	**183**	*e*P	**P**	**15 23 39.3**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LBTB	**Lobatse**	**48.75**	**73**	P	**P**	**15 23 53.3**	**0.0**
	comp=Z,7.9nm,0.9s,mb4.7,baz=202,slow=11,SNR=7.5						
LBTB	**Lobatse**	**48.75**	**73**	*e*P	**P**	**15 23 53.0**	**-0.4**
	comp=Z,9.7nm,1.0s,mb4.8						
LBTB	**Lobatse**	**48.75**	**73**	*e*P	**P**	**15 23 53.0**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
TSUM	**Tsumeb**	**49.34**	**61**	P	**P**	**15 23 57.9**	**0.0**
	comp=Z,4.5nm,1.1s,mb4.4,baz=168,slow=9.0,SNR=4.1						
TSUM	**Tsumeb**	**49.34**	**61**	*e*P	**P**	**15 23 58.4**	**+0.5**
	comp=Z,3.6nm,1.1s,mb4.3						
LPAZ	**La Paz**	**50.20**	**305**	P	**P**	**15 24 06.3**	**+1.8**
	comp=Z,12nm,0.7s,mb5.1,baz=140,slow=6.9,SNR=24						
LPAZ	**La Paz**	**50.20**	**305**	*e*P	**P**	**15 24 05.5**	**+1.0**
	comp=Z,16nm,0.8s,mb5.1						
LPAZ	**La Paz**	**50.20**	**305**	*e*P	**P**	**15 24 05.5**	**+1.0**
LPAZ				pmax	pmax		
	comp=Z,16nm,0.8s						
SAML	**Samuel**	**54.55**	**314**	*e*P	**P**	**15 24 36.7**	**-0.4**
	comp=Z,16nm,1.1s,mb5.0						
LSZ	**Lusaka**	**58.09**	**69**	*e*P	**P**	**15 25 01.6**	**-0.7**
	comp=Z,8.6nm,1.1s,mb4.7						
DBIC	**Dimbokro**	**64.68**	**24**	P	**P**	**15 25 46.6**	**-0.3**
	comp=Z,4.3nm,0.8s,mb4.5,baz=149,slow=8.4,SNR=5.7						
DBIC	**Dimbokro**	**64.68**	**24**	*e*P	**P**	**15 25 46.8**	**-0.2**
	comp=Z,7.3nm,1.0s,mb4.7						
JTS	**JuntasAbangare**	**81.36**	**302**	LR	LR	15 59 29.5	
	comp=Z,385nm,20.4s,MS4.8,baz=352,slow=33						
STKA	**Stephens Creek**	**92.36**	**170**	P	**P**	**15 28 20.7**	**+2.6**
	comp=Z,1.2nm,0.7s,mb4.3,baz=348,slow=5.7,SNR=4.0						
ASPA	**Alice Springs**	**99.41**	**162**	*e*P	**P**	**15 28 52.2**	**+1.8**
WRAB	**Tennant Creek**	**103.14**	**162**	*e*P	Pdif	15 29 03.8	-3.5
	comp=Z,44nm,1.7s						
WRAB	**Tennant Creek**	**103.14**	**162**	*e*P	Pdif	15 29 03.8	-3.4
WRAB				pmax	pmax		
	comp=Z,44nm,1.7s						
FINES	**FINESS Array B**	**123.90**	**28**	PKP	PKPdf	15 34 06.2	-0.9
	comp=Z,2.7nm,0.8s,baz=180,slow=3.8,SNR=6.1						
ARCES	**ARCESS Array B**	**130.45**	**22**	PKP	PKPdf	15 34 17.3	-2.0
	comp=Z,1.9nm,0.7s,baz=180,slow=1.2,SNR=11						
ARCES	**ARCESS Array B**	**130.45**	**22**	PKP	PKPdf	15 34 17.3	-2.0
BVAR	**Borovoye Array**	**134.42**	**57**	PKP	PKPdf	15 34 25.8	-1.3
	comp=Z,1.1nm,0.7s,baz=221,slow=2.6,SNR=6.3						
CHKZ	**Chkalovo**	**134.92**	**56**	*e*PKPdf	PKPdf	15 34 27.0	-1.1
MKAR	**Makanchi Array**	**136.62**	**71**	PKP	PKPdf	15 34 28.3	-2.9
	comp=Z,0.3nm,0.7s,baz=180,slow=1.4,SNR=3.4						
INK	**Inuvik**	**145.50**	**321**	PKPbc	PKPbc	15 34 45.5	+1.7
	comp=Z,16nm,0.8s,baz=78,slow=3.7,SNR=30						
INK	**Inuvik**	**145.50**	**321**	*e*PKPbc	PKPbc	15 34 44.8	+0.9
DAWY	**Dawson**	**146.56**	**312**	*e*PKPbc	PKPbc	15 34 47.9	+1.4
ILAR	**Eielson Array**	**149.88**	**312**	PKPbc	PKPdf	15 34 57.1	+3.6
	comp=Z,9.2nm,0.8s,baz=142,slow=1.5,SNR=23						
COLA	**College**	**150.31**	**312**	*e*PKPdf	PKPdf	15 34 53.3	-0.9
COLA				*e*PKPbc	PKPdf	15 34 57.8	+3.6
SONM	**Songino Array**	**150.57**	**85**	PKPbc	PKPdf	15 34 57.3	+2.2
	comp=Z,1.8nm,0.5s,baz=213,slow=2.2,SNR=9.2						
SONM				PKPab	PKPab	15 35 06.0	-0.6
	comp=Z,7.3nm,1.0s,baz=233,slow=2.1,SNR=12						
KDAK	**Kodiak Island**	**150.71**	**297**	PKPbc	PKPdf	15 34 59.6	+4.6
	comp=Z,7.4nm,0.6s,baz=144,slow=4.7,SNR=9.9						

MAN 11 15:25:30.6, 14.07N×122.94E, h1^{km}, mb3.9, ML2.6, MS2.3, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	**Guinayangan**	**0.50**	**251**	*e*P	Pg	15 25 40.3	-0.4
GQP				*e*S	Sg	15 25 48.1	+0.7
AUQP	**San Andres**	**0.78**	**199**	*e*P	Pg	15 25 45.9	-0.4
AUQP				*e*S	Sg	15 25 59.4	+2.6
POLP	**Polilio Island**	**1.17**	**304**	*e*P	Pb	15 25 53.3	0.0
POLP				*e*S	Sb	15 26 10.0	+1.2
BOAC	**Boac**	**1.22**	**240**	*e*P	Pb	15 25 53.7	-0.5
BOAC				*e*S	Sb	15 26 10.6	+0.3
PVCP	**Virac**	**1.27**	**112**	*e*P	Pb	15 25 54.9	-0.3
PVCP				*e*S	Sb	15 26 11.4	-0.5
BALP	**Baler**	**2.12**	**322**	*e*P	Pn	15 26 09.2	+1.5
BALP				*e*S	Sn	15 26 37.6	+2.7
SJMP	**San Jose**	**2.38**	**228**	*e*P	Pn	15 26 12.7	+1.3
SJMP				*e*S	Sn	15 26 45.3	+3.6

SNSN ***11*** *15:34:07.4, 27.32N×34.38E, h10^{km}, Ml3.8*

HLW ***11*** *15:34:08.4, 27.28N×34.48E, h10^{km}, Mb3.9*

CSEM ***11*** *15:34:08.5±0.1, 27.28N×34.47E, h25^{km}, ML3.8, Error ellipse: s-maj=2.3km s-min=1.4km az=79.0*

IDC ***11*** *15:34:09.5±1.6, 27.57N×35.09E, mb4.0/7, mb1 4.2/9, mb1mx3.9/22, mbtmp3.9/9, ML4.7/1, Error ellipse: s-maj=87.0km s-min=23.9km az=80.0*

GII ***11*** *15:34:11.1±0.5, 27.51N×34.75E, h6^{km}±30^{km}, mb4.3/5, ML4.2/5, Mw3.7/3*

ISC 11 15:34:08.1±0.8**, 27.30N**±0.03×**34.51E**±0.05**, h18**^{km}±7^{km}**, n57,** σ0^{s}**90**/62**, mb3.8**/7**, 11C-9D, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHRM		**0.68**	**330**	⇓*i*P	**Pb**	**15 34 21.7**	**+0.5**
SHRM				S	**Sb**	**15 34 29.6**	**-0.5**
HHRG	**Al Ghardaqah**	**0.84**	**265**	⇑*e*P	**Pb**	**15 34 24.5**	**+0.6**
TR1		**0.86**	**325**	⇑*i*P	**Pb**	**15 34 25.1**	**+0.8**
HSFG		**0.90**	**216**	⇓*i*P	**Pb**	**15 34 25.1**	**+0.3**
ZEIT		**1.03**	**304**	⇑*i*P	**Pb**	**15 34 27.1**	**0.0**
ZEIT		**1.03**	**304**	P	**Pb**	**15 34 27.1**	**0.0**
BDAS	**Al Bad‘**	**1.24**	**25**	P	**Pn**	**15 34 30.8**	**+0.1**
TR2		**1.29**	**327**	⇑*i*P	**Pn**	**15 34 31.5**	**+0.1**
HKAT	**Jabal Katrina**	**1.30**	**339**	⇑*i*P	**Pn**	**15 34 32.0**	**+0.4**
HQSR		**1.54**	**184**	⇓*i*P	**Pn**	**15 34 34.5**	**-0.4**
HQSR		**1.54**	**184**	P	**Pn**	**15 34 34.5**	**-0.5**
HAQS	**Haql**	**1.79**	**12**	P	**Pn**	**15 34 38.5**	**+0.1**
JMOS	**Jabal al Moall**	**1.94**	**16**	P	**Pn**	**15 34 40.9**	**+0.3**
TBKS	**Tabuk**	**2.03**	**62**	P	**Pn**	**15 34 43.2**	**+1.3**
ALWS	**Ilw as Safayha**	**2.06**	**14**	P	**Pn**	**15 34 42.6**	**+0.2**
EMRS	**Mersa Alam**	**2.30**	**173**	⇓*e*P	**Pn**	**15 34 45.3**	**-0.5**
EIL	**Elat**	**2.39**	**9**	Pn	**Pn**	**15 34 46.9**	**-0.3**
AQBJ	**Aqaba**	**2.46**	**11**	Pn	**Pn**	**15 34 47.8**	**-0.4**
MBH	**Mount Berech**	**2.51**	**8**	Pn	**Pn**	**15 34 48.9**	**+0.1**
ZNM		**2.52**	**325**	P	**Pn**	**15 34 49.8**	**+0.8**
ASUT		**2.63**	**273**	⇓P	**Pn**	**15 34 51.1**	**+0.6**
ZAF		**2.63**	**319**	⇑*e*P	**Pn**	**15 34 50.7**	**+0.2**
HNKL	**Nakhl**	**2.66**	**350**	⇑*e*P	**Pn**	**15 34 51.8**	**+0.8**
HNKL				S	**Sn**	**15 35 23.5**	**+0.4**
HRFI	**Mount Harif**	**2.77**	**9**	Pn	**Pn**	**15 34 51.4**	**-1.1**
HRFI				Sn	**Sn**	**15 35 24.0**	**-1.7**
KMTI	**Karmit**	**2.80**	**4**	Pn	**Pn**	**15 34 52.6**	**-0.4**
SUZ		**2.93**	**330**	⇑P	**Pn**	**15 34 55.6**	**+0.8**
PRNI	**Paran**	**3.07**	**8**	Pn	**Pn**	**15 34 57.0**	**+0.2**
PRNI				Sn	**Sn**	**15 35 32.2**	**-1.3**
UMJS	**Umm Lajj**	**3.25**	**129**	P	**Pn**	**15 34 59.5**	**+0.1**
RMNI	**Mount Ramon**	**3.29**	**4**	Pn	**Pn**	**15 34 59.9**	**-0.1**
ZFRI	**Zfri**	**3.29**	**10**	Pn	**Pn**	**15 35 00.1**	**+0.1**
AMAG	**Maghara**	**3.52**	**341**	⇑P	**Pn**	**15 35 03.0**	**-0.2**
KZIT	**Kziot**	**3.59**	**358**	Pn	**Pn**	**15 35 04.7**	**+0.4**
KZIT				Sn	**Sn**	**15 35 45.5**	**-1.2**
MASH	**Mash‘abbe Sade**	**3.69**	**4**	Pn	**Pn**	**15 35 06.3**	**+0.7**
RTMM	**Retamin**	**3.74**	**2**	Pn	**Pn**	**15 35 06.7**	**+0.4**
AKRG	**Al Kharijah**	**4.02**	**244**	⇓P	**Pn**	**15 35 09.2**	**-1.1**
MZDA	**Masada**	**4.06**	**10**	Pn	**Pn**	**15 35 10.5**	**-0.4**
HMYD	**Mayadein**	**4.10**	**308**	⇑P	**Pn**	**15 35 12.0**	**+0.5**
HNAT	**Natroun**	**4.14**	**305**	⇑P	**Pn**	**15 35 12.3**	**+0.3**
HSHL	**Bi’r Shalatayn**	**4.25**	**169**	P	**Pn**	**15 35 12.9**	**-0.7**
YNBS	**Yanbu‘ al Bahr**	**4.30**	**132**	P	**Pn**	**15 35 14.5**	**+0.2**
DSI	**Dead Sea**	**4.32**	**10**	Pn	**Pn**	**15 35 14.2**	**-0.4**
MKRJ	**Makawir**	**4.35**	**13**	Pn	**Pn**	**15 35 14.4**	**-0.6**
SLTI	**Sal’it**	**4.95**	**5**	Pn	**Pn**	**15 35 22.5**	**-0.9**
HMSM	**Jabal Masmas**	**5.00**	**209**	P	**Pn**	**15 35 23.4**	**-0.8**
AWBH		**5.07**	**283**	⇓P	**Pn**	**15 35 24.2**	**-1.0**
MMLI	**Mount Malkishu**	**5.18**	**9**	Pn	**Pn**	**15 35 25.8**	**-0.9**
SWA1		**8.00**	**286**	⇓P	**P**	**15 36 04.0**	**-2.4**
SWA2		**8.22**	**286**	⇓P	**P**	**15 36 06.8**	**-2.6**
BRTR	**Keskin Array B**	**12.41**	**357**	Pn	**P**	**15 37 06.2**	**-0.7**
	0.1nm,0.3s,baz=180,slow=12,SNR=4.6						
MLR	**Muntele Rosu**	**19.40**	**342**	P	**P**	**15 38 37.5**	**+1.6**
	0.4nm,0.3s,baz=170,slow=6.1,SNR=2.3						
AKASG	**Malin Array Be**	**23.71**	**352**	P	**P**	**15 39 20.7**	**+1.0**
	1.5nm,0.7s,mb3.6,baz=160,slow=9.4,SNR=7.2						
VRAC	**Vranov**	**25.96**	**333**	P	**P**	**15 39 43.6**	**+2.4**
	2.8nm,0.5s,mb4.0,baz=141,slow=7.9,SNR=3.5						
GERES	**GERESS Array B**	**26.88**	**329**	P	**P**	**15 39 52.2**	**+2.6**
	1.3nm,0.7s,mb3.6,baz=135,slow=9.4,SNR=9.1						
KMBO	**Kilima Mbogo**	**28.38**	**174**	P	**P**	**15 40 08.1**	**+4.5**
	0.2nm,0.3s,mb3.2,baz=69,slow=8.6,SNR=3.3						
FINES	**FINESS Array B**	**34.61**	**353**	P	**P**	**15 40 57.2**	**-0.7**
	2.7nm,0.7s,mb4.3,baz=162,slow=12,SNR=9.3						
NOA	**NORSAR Array B**	**37.22**	**341**	P	**P**	**15 41 21.9**	**+1.9**
	1.8nm,1.0s,mb3.9,baz=141,slow=9.2,SNR=3.0						
ARCES	**ARCESS Array B**	**42.59**	**355**	P	**P**	**15 42 05.4**	**+1.1**
	2.0nm,0.5s,mb4.1,baz=172,slow=6.5,SNR=23						

NIED ***11*** *15:35:00, 42.80N×145.50E, h32^{km}, Mw4.1 Best double couple: M$_0$1.69×10^{15} NP1:φ$_s$18°, δ66°, λ60°. NP2:φ$_s$253°, δ38°, λ139°.*

MOS ***11*** *15:35:12.0±0.8, 42.60N×145.55E, h33^{km}, mb4.4/8, Error ellipse: s-maj=13.9km s-min=8.8km az=96.8*

BJI ***11*** *15:35:14.8, 42.98N×145.72E, h61^{km}, mB5.1, mb4.5, Ms4.4, Msz4.1*

JMA ***11*** *15:35:14.4±0.1, 42.75N×145.53E, h43^{km}±2^{km}, M4.1 Broadband fault plane solution: P waves. NP1:φ$_s$210°, δ13°, λ78°. NP2:φ$_s$42°, δ77°, λ93°. Principal axes: T Plg58°, Azm316°; N Plg3°, Azm222°; P Plg32°, Azm130°;*

NEIC ***11*** *15:35:15.7±1.1, 42.63N×145.47E, h49^{km}±10^{km}, mb4.3/5 Error ellipse: s-maj=11.7km s-min=8.2km az=100.0*

IDC ***11*** *15:35:16.9±2.5, 42.58N×145.52E, h60^{km}±21^{km}, mb3.7/16, mb1 3.9/18, mb1mx3.9/24, mbtmp4.0/18, ML3.8/2, MS3.2/2, Ms1 3.2/2, ms1mx2.8/30, Error ellipse: s-maj=17.9km s-min=15.9km az=64.0*

ISC 11 15:35:12.8±0.8**, 42.65N**±0.04×**145.57E**±0.07**, h40**^{km}±6^{km}**, n53,** σ0^{s}**93**/62**, mb4.1**/25**, MS4.6**/1**, 7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.73**	**10**	⇓P	**P**	**15 35 26.9**	**+0.2**
NEM2				*e*S	**S**	**15 35 36.0**	**-0.8**
JAK	**Akkeshi**	**0.73**	**299**	⇓P	**P**	**15 35 27.6**	**+0.9**
JAK				*e*S	**S**	**15 35 36.2**	**-0.7**
JNK	**Nakash**	**1.12**	**327**	⇓P	**P**	**15 35 32.5**	**+0.2**
JNK				*e*S	**S**	**15 35 45.8**	**-1.0**
JOB	**Onbets**	**1.30**	**282**	⇓P	**P**	**15 35 35.8**	**+0.8**

JRA	**Rausu**	**1.33**	**346**	⇓P	**P**	**15 35 35.6**	**+0.3**
JRA				*e*S	**S**	**15 35 50.9**	**-1.1**
YUK	**Yuzh-Kuril'sk**	**1.40**	**9**	PN	**P**	**15 35 36.0**	**-0.3**
YUK				*i* S	**S**	**15 35 53.0**	**-0.8**
YUK				smax			
	comp=N,5µm,1.0s						
YUK				smax			
	comp=E,8µm,1.0s						
YUK				smax			
	comp=N,5µm,0.5s						
YUK				smax			
	comp=E,4µm,0.5s						
JAR	**Ashorobuto**	**1.47**	**297**	⇓P	**P**	**15 35 37.8**	**+0.5**
JCH	**Churui**	**1.63**	**269**	P	**P**	**15 35 41.0**	**+1.4**
JTKR	**Abashiri--Toko**	**1.79**	**318**	⇓P	**P**	**15 35 42.7**	**+0.8**
JTKR				*e*S	**S**	**15 36 03.8**	**+0.2**
ASAJ	**Asahikawa**	**2.62**	**305**	P	**P**	**15 35 55.4**	**+1.7**
	comp=E,15nm,0.3s,baz=127,slow=9.9,SNR=151						
ASAJ				S	**S**	**15 36 28.6**	**+4.1**
	comp=E,44nm,0.3s,baz=260,slow=30,SNR=14						
ASAJ				LR	LR	15 37 11.2	
	comp=E,552nm,18.6s,baz=193,slow=44						
ASAJ	**Asahikawa**	**2.62**	**305**	PN	**P**	**15 35 55.4**	**+1.7**
ASAJ				S	**S**	**15 36 28.6**	**+4.1**
ASAJ				pmax	pmax		
	comp=Z,15nm,0.3s						
ASAJ				smax			
	comp=N,44nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,552nm,18.6s						
YSS	**Yuzh-Sakhalins**	**4.75**	**336**	*e*Pn	**P**	**15 36 24.5**	**+0.7**
MAJO	**Matsushiro**	**8.33**	**225**	*e*Pn	**P**	**15 37 12.9**	**-1.1**
	comp=Z,29nm,0.7s						
MAJO				*e*		15 37 23.7	
MAJO	**Matsushiro**	**8.33**	**225**	*e*PN	**P**	**15 37 12.9**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,29nm,0.7s						
MAT	**Matsushiro**	**8.33**	**225**	P	**P**	**15 37 12.6**	**-1.4**
MAT				*e*S	**S**	**15 38 55.6**	**+7.7**
MAT	**Matsushiro**	**8.33**	**225**	*e*P	**P**	**15 37 13.0**	**-1.0**
	comp=Z,17nm,0.6s						
MAT	**Matsushiro**	**8.33**	**225**	*e*PN	**P**	**15 37 13.0**	**-1.0**
MAT				pmax	pmax		
	comp=Z,17nm,0.6s						
MJAR	**Matsushiro Arr**	**8.33**	**225**	P	**P**	**15 37 12.7**	**-1.3**
	comp=Z,0.8nm,0.3s,baz=31,slow=13,SNR=9.3						
MJAR				LR	LR	15 40 44.7	
	comp=Z,155nm,21.9s,baz=65,slow=40						
SONM	**Songino Array**	**27.85**	**294**	P	**P**	**15 41 01.0**	**+0.5**
	comp=Z,10nm,0.8s,mb4.5,baz=80,slow=8.4,SNR=35						
ZAL	**Zalesovo**	**40.76**	**308**	P	**P**	**15 42 51.4**	**0.0**
	comp=Z,1.7nm,0.8s,mb3.8,baz=20,slow=8.6,SNR=9.5						
WMQ	**Urumqi**	**41.43**	**292**	*e*P	**P**	**15 42 57.8**	**+0.8**
WMQ				AMB	AMB		
	comp=Z,190nm,7.0s						
WMQ				LR	LR		
	comp=N,680nm,23.8s,MS4.6						
WMQ				LR	LR		
	comp=E,740nm,24.5s,MS4.6						
WMQ				LR	LR		
	comp=Z,490nm,18.9s						
ILAR	**Eielson Array**	**43.06**	**35**	P	**P**	**15 43 11.0**	**+1.1**
	comp=Z,0.8nm,0.8s,mb3.5,baz=276,slow=9.2,SNR=8.9						
MKAR	**Makanchi Array**	**44.08**	**298**	P	**P**	**15 43 18.8**	**+0.3**
	comp=Z,3.7nm,0.6s,mb4.3,baz=82,slow=8.6,SNR=30						
MKAR	**Makanchi Array**	**44.08**	**298**	P	**P**	**15 43 18.8**	**+0.3**
MKAR	**Makanchi Array**	**44.08**	**298**	*i* P	**P**	**15 43 18.6**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURK	**Kurchatov**	**45.19**	**304**	*e*P	**P**	**15 43 27.0**	**-0.3**
	comp=Z,6.4nm,0.8s,mb4.5						
KURK	**Kurchatov**	**45.19**	**304**	*e*P	**P**	**15 43 27.0**	**-0.3**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
INK	**Inuvik**	**47.93**	**30**	P	**P**	**15 43 49.4**	**+0.6**
	comp=Z,0.9nm,0.5s,mb4.0,baz=256,slow=11,SNR=9.6						
INK	**Inuvik**	**47.93**	**30**	*e*P	**P**	**15 43 49.5**	**+0.8**
	comp=Z,1.3nm,0.7s,mb4.1						
INK	**Inuvik**	**47.93**	**30**	*e*P	**P**	**15 43 49.6**	**+0.9**
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VOSK	**Vostochnaya**	**49.08**	**309**	P	**P**	**15 43 57.5**	**-0.2**
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
BVAR	**Borovoye Array**	**49.31**	**310**	P	**P**	**15 43 59.7**	**+0.2**
	comp=Z,1.6nm,0.5s,mb4.3,baz=81,slow=9.6,SNR=8.8						
KKAR	**Karatay Array**	**53.21**	**298**	P	**P**	**15 44 28.7**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
AB31	**Akbulak array**	**56.85**	**309**	P	**P**	**15 44 55.1**	**-0.4**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
KEV	**Kevo**	**59.33**	**339**	*e*p	**P**	**15 45 02.8**	**-10**
	comp=Z,2.6nm,0.7s,mb4.4						
ARCES	**ARCESS Array B**	**59.87**	**339**	P	**P**	**15 45 15.4**	**-0.9**
	comp=Z,2.2nm,0.8s,mb4.2,baz=42,slow=7.1,SNR=11						
JOF	**Joensuu**	**62.52**	**332**	*e*p	**P**	**15 45 33.4**	**-0.8**
	comp=Z,2.0nm,0.4s,mb4.6						
WRA	**Warramunga Arr**	**63.13**	**192**	P	**P**	**15 45 38.7**	**-0.3**
	comp=Z,0.3nm,0.7s,mb3.5,baz=9.7,slow=6.5,SNR=3.5						
KAF	**Kangasniemi**	**64.77**	**333**	*e*p	**P**	**15 45 46.5**	**-2.4**
	comp=Z,0.9nm,0.4s,mb4.2,baz=41,slow=5.8						
KAF	**Kangasniemi**	**64.77**	**333**	*e*P	**P**	**15 45 46.5**	**-2.4**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
FINES	**FINESS Array B**	**65.33**	**333**	P	**P**	**15 45 52.1**	**-0.4**
	comp=Z,5.7nm,0.5s,mb4.8,baz=43,slow=7.7,SNR=63						
NVAR	**Mina Array Bea**	**69.15**	**57**	P	**P**	**15 46 18.3**	**+1.4**
	comp=Z,0.2nm,0.4s,mb3.4,baz=303,slow=5.5,SNR=3.7						
NB2	**NORSAR Subarra**	**70.20**	**338**	P	**P**	**15 46 23.0**	**+0.1**
	comp=Z,1.8nm,0.6s,mb4.2,baz=33,slow=6.2						
NOA	**NORSAR Array B**	**70.20**	**338**	P	**P**	**15 46 23.1**	**+0.2**
	comp=Z,3.2nm,0.7s,mb4.3,baz=35,slow=6.1,SNR=7.4						
NAO	**NORSAR Subarra**	**70.49**	**338**	P	**P**	**15 46 23.0**	**-1.6**
	comp=Z,1.8nm,0.6s,mb4.2						
NAO	**NORSAR Subarra**	**70.49**	**338**	P	**P**	**15 46 23.0**	**-1.6**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
PDAR	**Pinedale Array**	**71.50**	**49**	P	**P**	**15 46 31.2**	**+0.2**
	comp=Z,0.4nm,0.7s,mb3.5,slow=1.5,SNR=3.6						
AKASG	**Malin Array Be**	**71.77**	**323**	P	**P**	**15 46 32.4**	**-0.1**
	comp=Z,1.3nm,0.4s,mb4.2,baz=40,slow=5.8,SNR=15						
STKA	**Stephens Creek**	**74.25**	**184**	P	**P**	**15 46 46.0**	**-1.4**
	comp=Z,1.6nm,0.9s,mb4.0,baz=324,slow=18,SNR=2.9						
BRTR	**Keskin Array B**	**77.46**	**313**	P	**P**	**15 47 06.8**	**+1.3**
	comp=Z,0.7nm,0.6s,mb3.8,baz=78,slow=4.0,SNR=4.3						
CLL	**Collm**	**77.75**	**332**	P	**P**	**15 47 03.0**	**-3.8**
	comp=Z,logA/T=0.9,mb4.6						
KHC	**Kasperske Hory**	**79.35**	**330**	*e*P	**P**	**15 47 16.5**	**+0.8**
TXAR	**Lajitas Array**	**84.22**	**55**	P	**P**	**15 47 43.2**	**+1.8**
	comp=Z,0.2nm,0.3s,mb3.8,baz=323,slow=4.5,SNR=2.6						

JMA 11 15:36:13.6±0.3**,44.03N**×**148.08E,M4.2,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.82**	**249**	P	Pn	15 36 46.6	+0.2
NEM2				*e*S	Sn	15 37 10.7	+0.2
JRA	**Rausu**	**2.14**	**269**	P	Pn	15 36 50.9	-0.1
JRA				*e*S	Sn	15 37 18.8	+0.2
JNK	**Nakash**	**2.47**	**261**	P	Pn	15 36 55.9	+0.1
JNK				*e*S	Sn	15 37 26.8	-0.3
JAK	**Akkeshi**	**2.67**	**248**	P	Pn	15 36 59.4	+0.8
JAK				*e*S	Sn	15 37 32.3	+0.2
JKB	**Kayabe**	**5.60**	**250**	P	Pn	15 37 39.8	-0.3
JKB				*e*S	Sn	15 38 43.7	-2.4
JOT	**Ohata**	**5.82**	**245**	*e*S	Sn	15 38 48.1	-3.5

WEL 11 15:44:16.8±0.6**,35.93S**×**178.37E,h212**^{km}±6^{km}**,ML3.5**/12**, Error ellipse: s-maj=9.6km s-min=7.9km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.63**	**182**	PN	P	15 44 52.5	-0.6
MXZ				SN	S	15 45 21.2	+0.1
PUZ	**Puketiti**	**2.14**	**182**	PN	P	15 44 57.9	-0.2
PUZ				SN	S	15 45 28.2	-1.7
MWZ	**Matawai**	**2.49**	**195**	PN	P	15 45 01.9	0.0
URZ	**Urewera**	**2.53**	**203**	PN	P	15 45 01.9	-0.4
URZ				SN	S	15 45 37.4	-0.1
KNZ	**Kokohu**	**3.13**	**190**	PN	P	15 45 08.6	-0.5
BKZ	**Black Stump Fm**	**3.56**	**204**	PN	P	15 45 14.2	0.0
PXZ	**Pawanui**	**4.26**	**196**	PN	P	15 45 21.6	-1.3
PXZ				SN	S	15 46 11.8	-2.3
TSZ	**Takapari Road**	**4.54**	**204**	PN	P	15 45 25.0	-1.3
BFZ	**Birch Farm**	**5.03**	**199**	PN	P	15 45 31.2	-1.3
MRZ	**Mangatainoka R**	**5.21**	**204**	PN	P	15 45 33.0	-1.8
MRZ				SN	S	15 46 31.3	-4.2
KIW	**Kapiti Island**	**5.62**	**208**	PN	P	15 45 38.1	-2.1
CAW	**Cannon Point**	**5.78**	**206**	PN	P	15 45 39.8	-2.3
TCW	**Tory Channel**	**6.17**	**210**	PN	P	15 45 44.1	-3.1
TUWZ	**Tuamarina**	**6.49**	**211**	PN	P	15 45 48.6	-2.7
THZ	**Tophouse**	**7.22**	**215**	PN	P	15 45 58.5	-2.2
KHZ	**Kahutara**	**7.48**	**209**	PN	P	15 46 01.2	-3.0

IDC ***11*** *16:17:12.1±0.8,7.89N×94.11E,mb3.9/13,mb1 4.1/13, mb1mx4.0/20,mbtmp3.9/13,Error ellipse: s-maj=34.3km s-min=17.8km az=65.0*

MOS ***11*** *16:17:15.0±1.2,7.92N×94.15E,h30*^{km}*,mb4.4/4,Error ellipse: s-maj=32.0km s-min=12.1km az=109.5*

NEIC ***11*** *16:17:16.7±0.6,7.75N×94.16E,h30*^{km}*,mb4.3/4,Error ellipse: s-maj=23.6km s-min=10.7km az=56.0*

BJI ***11*** *16:17:18.7,7.70N×94.20E,h30*^{km}*,mb4.4*

ISC 11 16:17:15.3±0.6**,7.8N**±0.1×**94.2E**±0.1**,h33**^{km}**,n30, σ1**^{s}**32**/29**,mb4.1**/23**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.86**	**110**	*e*Pn	**Pn**	**16 18 55.8**	**-0.4**
GUN	**Gumba**	**21.54**	**340**	*e*P	**P**	**16 22 05.2**	**+1.4**
	20nm,0.7s,mb4.7						
DMN	**Daman**	**21.55**	**338**	*e*P	**P**	**16 22 06.3**	**+2.4**
	22nm,0.8s,mb4.7						
KKN	**Kakani**	**21.65**	**338**	*e*P	**P**	**16 22 07.3**	**+2.5**
	18nm,1.0s,mb4.5						
LSA	**Lhasa**	**22.02**	**353**	*e*P	**P**	**16 22 11.4**	**+2.8**
LSA	**Lhasa**	**22.02**	**353**	*e*P	**P**	**16 22 11.0**	**+2.4**
	7.7nm,0.8s,mb4.2						
LSA	**Lhasa**	**22.02**	**353**	*e*P	**P**	**16 22 11.0**	**+2.4**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
GYA	**Guiyang**	**22.06**	**31**	P	**P**	**16 22 14.8**	**+5.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
GKN	**Gorkha**	**22.08**	**337**	*e*P	**P**	**16 22 09.3**	**+0.1**
	comp=Z,25nm,0.9s,mb4.7						
KOLN	**Koldanda**	**22.30**	**335**	*e*P	**P**	**16 22 12.1**	**+0.8**
	comp=Z,19nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**38.84**	**337**	*e*P	**P**	**16 24 39.4**	**+0.4**
	comp=Z,1.7nm,0.6s,mb4.0						
AAK	**Ala-Archa**	**38.84**	**337**	*e*P	**P**	**16 24 39.4**	**+0.4**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	**40.22**	**347**	P	**P**	**16 24 49.6**	**-0.8**
	comp=Z,1.7nm,0.8s,mb3.8,baz=164,slow=8.8,SNR=8.7						
SONM	**Songino Array**	**41.27**	**12**	P	**P**	**16 24 58.0**	**-1.1**
	comp=Z,0.5nm,0.7s,mb3.2,baz=198,slow=9.1,SNR=2.4						
NWAO	**Narrogin (SRO)**	**46.01**	**153**	P	**P**	**16 25 39.6**	**+2.0**
	comp=Z,4.9nm,0.8s,mb4.5,baz=300,slow=20,SNR=2.1						
ZAL	**Zalesovo**	**46.68**	**352**	P	**P**	**16 25 40.1**	**-2.4**
	comp=Z,1.4nm,0.3s,mb4.3,baz=272,slow=5.2,SNR=4.2						
NVS	**Novosibirsk**	**47.78**	**351**	*e*P	**P**	**16 25 48.4**	**-2.8**
WRA	**Warramunga Arr**	**48.14**	**125**	P	**P**	**16 25 54.7**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=304,slow=8.7,SNR=8.3						
BVAR	**Borovoye Array**	**49.13**	**341**	P	**P**	**16 26 00.4**	**-1.3**
	comp=Z,0.9nm,0.8s,mb3.9,baz=153,slow=6.6,SNR=3.5						
CHKZ	**Chkalovo**	**49.61**	**342**	*e*P	**P**	**16 26 04.7**	**-0.7**
	comp=Z,3.0nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	**49.61**	**342**	*e*P	**P**	**16 26 04.7**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BRTR	**Keskin Array B**	**62.55**	**311**	P	**P**	**16 27 36.5**	**-1.9**
	comp=Z,0.5nm,0.7s,mb3.8,baz=121,slow=6.6,SNR=2.9						
TIXI	**Tiksi**	**67.34**	**11**	*e*P	**P**	**16 28 09.7**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
AKASG	**Malin Array Be**	**68.29**	**322**	P	**P**	**16 28 13.7**	**-1.4**
	comp=Z,0.1nm,0.2s,mb3.4,baz=87,slow=5.7,SNR=5.1						
FINES	**FINESS Array B**	**72.85**	**332**	P	**P**	**16 28 42.1**	**-0.2**
	comp=Z,2.4nm,0.8s,mb4.2,baz=114,slow=6.6,SNR=12						
ARCES	**ARCESS Array B**	**75.40**	**340**	P	**P**	**16 28 57.5**	**+0.4**
	comp=Z,1.9nm,0.8s,mb4.0,baz=101,slow=6.5,SNR=9.0						
BOSA	**Boshof**	**75.57**	**238**	P	**P**	**16 28 58.9**	**0.0**
	comp=Z,1.1nm,0.5s,mb4.0,baz=97,slow=18,SNR=3.9						
GERES	**GERESS Array B**	**77.96**	**318**	P	**P**	**16 29 12.1**	**+0.3**
	comp=Z,0.8nm,0.7s,mb3.8,baz=90,slow=4.0,SNR=5.8						
NOA	**NORSAR Array B**	**79.87**	**331**	P	**P**	**16 29 21.0**	**-1.0**
	comp=Z,1.0nm,0.7s,mb3.9,baz=94,slow=5.5,SNR=3.3						
PLCA	**Paso Flores**	**144.45**	**200**	PKP	PKPdf	16 36 50.8	+2.3
	comp=Z,1.8nm,0.8s,baz=214,slow=3.6,SNR=3.2						

IDC ***11*** *16:18:30.8±1.0,7.90N×94.28E,mb4.0/8,mb1 4.2/8, mb1mx3.9/19,mbtmp4.0/8,MS4.4/1,Ms1 4.4/1, ms1mx3.3/17,Error ellipse: s-maj=44.9km s-min=25.3km az=62.0*

NEIC ***11*** *16:18:35.1±0.6,7.96N×94.40E,h30*^{km}*,mb4.1/5,Error ellipse: s-maj=23.0km s-min=10.9km az=48.0*

ISC 11 16:18:33.2±0.8**,8.0N**±0.1×**94.4E**±0.2**,h30**^{km}**,n16, σ0**^{s}**83**/16**,mb4.0**/14**,MS4.4**/1**,Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.71**	**113**	*e*Pn	**Pn**	**16 20 11.9**	**-0.5**
LSA	**Lhasa**	**21.85**	**352**	P	**P**	**16 23 25.0**	**-0.3**
	6.2nm,0.7s,mb4.2						
MKAR	**Makanchi Array**	**40.07**	**347**	P	**P**	**16 26 08.2**	**+0.5**
	1.0nm,0.5s,mb3.8,baz=176,slow=7.6,SNR=5.8						
KURK	**Kurchatov**	**44.60**	**346**	*e*P	**P**	**16 26 45.0**	**+0.4**
	1.6nm,0.6s,mb4.0						
ZAL	**Zalesovo**	**46.51**	**352**	P	**P**	**16 27 00.8**	**+1.2**
	1.5nm,0.3s,mb4.3,baz=292,slow=4.1,SNR=4.1						
ZAL				LR	LR	16 46 35.8	
	comp=Z,434nm,20.9s,MS4.4,baz=88,slow=36						
ZAL	**Zalesovo**	**46.51**	**352**	P	**P**	**16 27 00.8**	**+1.2**
ZAL				LR	LR	16 46 35.8	
WRA	**Warramunga Arr**	**48.06**	**126**	P	**P**	**16 27 13.0**	**+0.7**
	0.7nm,0.8s,mb3.8,baz=303,slow=8.9,SNR=3.4						
CHKZ	**Chkalovo**	**49.49**	**342**	*e*P	**P**	**16 27 22.6**	**-0.2**
	1.6nm,0.6s,mb4.2						
JOF	**Joensuu**	**70.90**	**334**	*e*p	**P**	**16 29 47.2**	**-2.2**
	0.3nm,0.3s,mb3.7						
FINES	**FINESS Array B**	**72.78**	**332**	P	**P**	**16 30 00.2**	**-0.3**
	0.7nm,0.4s,mb4.0,baz=107,slow=6.6,SNR=8.9						
KAF	**Kangasniemi**	**72.85**	**333**	*e*p	**P**	**16 29 59.5**	**-1.5**
	0.4nm,0.3s,mb3.8						
KEV	**Kevo**	**74.86**	**341**	*e*p	**P**	**16 30 03.1**	**-9.4**
	1.7nm,0.7s,mb4.1						
ARCES	**ARCESS Array B**	**75.29**	**340**	P	**P**	**16 30 15.7**	**+0.7**
	1.8nm,0.9s,mb4.0,baz=96,slow=6.0,SNR=8.1						
BOSA	**Boshof**	**75.88**	**238**	P	**P**	**16 30 19.4**	**+0.2**
	3.9nm,1.1s,mb4.3,baz=71,slow=15,SNR=3.9						
GERES	**GERESS Array B**	**77.97**	**318**	P	**P**	**16 30 30.5**	**+0.2**
	0.4nm,0.7s,mb3.5,baz=63,slow=4.4,SNR=2.8						
HFS	**Hagfors**	**78.54**	**330**	P	**P**	**16 30 33.6**	**+0.5**
	1.8nm,0.5s,mb4.3,baz=90,slow=5.9,SNR=12						

IDC ***11*** *16:33:28.8±0.8,67.09N×21.15E,mb1 2.9/4, mb1mx2.9/22,mbtmp2.9/4,ML2.5/4,Error ellipse: s-maj=15.1km s-min=6.3km az=113.0*

NAO ***11*** *16:33:29.3±1.2,67.09N×20.95E,ML2.0*

HEL ***11*** *16:33:29.3±0.1,67.07N×20.89E,ML1.7,ML2.4(UPP), ML1.5(BER),Explosion*

BER ***11*** *16:33:31.1±2.9,67.11N×20.84E,ML1.5,ML2.0(NAO), Suspected explosion*

ISC 11 16:33:27.7±0.3**,67.07N**±0.02×**20.87E**±0.07**,n40,**σ**1**^{s}**09**/62**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUNU	**Dundret**	**0.13**	**294**	*i* P	**Pg**	**16 33 31.7**	**+1.5**
MASU	**Masugnsbyn**	**0.58**	**48**	*i* P	**Pg**	**16 33 39.3**	**0.0**
ERTU	**Ertsjaerv**	**0.74**	**134**	*i* P	**Pg**	**16 33 41.1**	**-1.2**
PAJU	**Pajala**	**0.88**	**92**	*i* P	**Pg**	**16 33 44.5**	**-0.8**
KUA	**Kurravaara**	**0.91**	**347**	*e*P	**Pg**	**16 33 45.5**	**-0.4**
SALU	**Saltoluokta**	**0.97**	**290**	*e*P	**Pg**	**16 33 47.1**	**0.0**
NIKU	**Nikkaluokta**	**1.07**	**319**	*e*P	**Pb**	**16 33 48.5**	**-0.2**
LANU	**Lannavaara**	**1.07**	**23**	*e*P	**Pb**	**16 33 47.9**	**-0.9**
SJUU	**Sjulsmark**	**1.60**	**169**	*e*P	**Pn**	**16 33 57.8**	**+0.5**
LILU	**Lilltraesk**	**1.84**	**194**	*e*P	**Pn**	**16 34 01.8**	**+1.0**
LILU				*e*S	**Sn**	**16 34 27.1**	**+1.9**
KIF	**Kilpisjarvi**	**1.94**	**359**	*e*P	**Pn**	**16 34 03.9**	**+1.6**
KIF				*e*S	**Sn**	**16 34 30.3**	**+2.5**
KTK1	**Kautokeino**	**2.14**	**23**	*e*P	**Pn**	**16 34 06.7**	**+1.6**
KTK1				*e*SG	**Sg**	**16 34 35.3**	**-3.7**
KTK1				AML	AML	16 34 36.8	
	comp=Z,6.5nm,0.3s						
SGF	**Sodankyl**	**2.23**	**78**	*e*P	**Pn**	**16 34 07.5**	**+1.1**
SGF				*e*S	**Sn**	**16 34 36.3**	**+1.2**
MOR8	**Moi Rana**	**2.72**	**254**	*e*P	**Pn**	**16 34 12.8**	**-0.6**
MOR8				*e*SG	**Sg**	**16 34 51.3**	**-6.9**
OUL	**Oulu**	**2.86**	**132**	*e*P	**Pn**	**16 34 16.3**	**+0.9**
OUL				*e*S	**Sn**	**16 34 51.1**	**+0.1**
LOF	**Lofoten**	**3.00**	**294**	*e*PB	**Pb**	**16 34 20.7**	**-1.1**
LOF	**Lofoten**	**3.00**	**294**	*e*	**Pb**	**16 34 20.7**	**-1.1**
ARCES	**ARCESS Array B**	**3.02**	**33**	Pn	**Pn**	**16 34 17.3**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=212,slow=14,SNR=97						
ARCES				Sn	**Sn**	**16 34 54.8**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=212,slow=22,SNR=7.2						
ARCES				Lg		16 34 59.6	
	comp=Z,0.9nm,0.3s,baz=211,slow=28,SNR=8.9						
ARA0	**ARCESS Array S**	**3.02**	**33**	Pn	**Pn**	**16 34 17.4**	**-0.2**
	baz=218,slow=14						
ARA0				Sn	**Sn**	**16 34 54.5**	**-0.5**
	baz=213,slow=22						
ARA0	**ARCESS Array S**	**3.02**	**33**	*e*P	**Pn**	**16 34 17.4**	**-0.2**
ARA0				*e*S	**Sn**	**16 34 54.5**	**-0.5**
UMAU	**Umeaa**	**3.20**	**182**	*e*P	**Pn**	**16 34 20.7**	**+0.5**
STOK	**Stokkvaagen**	**3.21**	**260**	*e*SG	**Sg**	**16 35 10.4**	**-4.1**
BREU	**Bredtraesk**	**3.33**	**198**	*e*P	**Pn**	**16 34 22.3**	**+0.2**
KEV	**Kevo**	**3.52**	**37**	*e*P	**Pn**	**16 34 24.7**	**-0.1**
KEV				*e*S	**Sn**	**16 35 06.2**	**-1.6**
KEV				*e*SG	**Sg**	**16 35 19.4**	**-5.6**
KU4	**Liikasenvaara**	**3.53**	**98**	*e*P	**Pn**	**16 34 26.1**	**+1.2**
KU4				*e*S	**Sn**	**16 35 07.4**	**-0.6**
HUSU	**Husum**	**3.81**	**191**	*e*P	**Pn**	**16 34 29.1**	**+0.3**
KJN	**Kajaani**	**4.13**	**133**	*e*P	**Pn**	**16 34 33.9**	**+0.5**
KJN				*e*S	**Sn**	**16 35 21.1**	**-2.0**
KJN				*e*SB	**Sb**	**16 35 33.2**	**+1.2**
KJN				MSG		16 35 35.4	
	comp=Z,1.1nm,0.2s						
SOLU	**Sollefteaa**	**4.13**	**203**	*e*P	**Pn**	**16 34 33.3**	**-0.1**
NOD	**Norderasen**	**4.43**	**218**	*e*P	**Pn**	**16 34 38.0**	**+0.2**
HEMU	**Hemsoen**	**4.58**	**197**	*e*P	**Pn**	**16 34 39.9**	**+0.1**
JOF	**Joensuu**	**6.08**	**128**	*e*P	**Pn**	**16 35 00.2**	**-0.7**
JOF				*e*S	**Sn**	**16 36 07.9**	**-4.2**
FIA0	**FINESS Array S**	**6.09**	**156**	Pn	**Pn**	**16 35 00.4**	**-0.7**
	baz=345,slow=14						
FIA0				Sn	**Sn**	**16 36 07.8**	**-4.6**
	baz=348,slow=28						
FIA0				Lg		16 36 40.1	
	baz=346,slow=28						
FIA0	**FINESS Array S**	**6.09**	**156**	*e*P	**Pn**	**16 34 59.6**	**-1.5**
FIA0				*e*S	**Sn**	**16 36 06.7**	**-5.7**
FIA0				MSG		16 36 11.5	
	comp=Z,0.7nm,0.2s						
FINES	**FINESS Array B**	**6.09**	**156**	Pn	**Pn**	**16 35 00.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=348,slow=13,SNR=14						
FINES				Sn	**Sn**	**16 36 07.9**	**-4.5**
	comp=Z,0.4nm,0.3s,baz=345,slow=22,SNR=9.1						
FINES				Lg		16 36 40.2	
	comp=Z,0.2nm,0.3s,baz=342,slow=28,SNR=3.2						
NB2	**NORSAR Subarra**	**7.38**	**219**	Pn	**Pn**	**16 35 16.9**	**-2.4**
	baz=30,slow=12						
NB2	**NORSAR Subarra**	**7.38**	**219**	*e*P	**Pn**	**16 35 16.9**	**-2.4**
NOA	**NORSAR Array B**	**7.38**	**219**	Pn	**Pn**	**16 35 15.8**	**-3.5**
	comp=Z,0.1nm,0.3s,baz=173,slow=7.6,SNR=2.8						
NOA				Sn	**Sn**	**16 36 39.1**	**-5.7**
	comp=Z,0.1nm,0.3s,baz=63,slow=20,SNR=2.5						
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**16 35 21.0**	**-2.2**
	baz=13,slow=14						
HFS				Sn	**Sn**	**16 36 47.1**	**-4.6**
	baz=24,slow=28						
HFS	**Hagfors**	**7.66**	**208**	*e*P	**Pn**	**16 35 21.0**	**-2.2**
HFS				*e*S	**Sn**	**16 36 47.1**	**-4.6**
HFS	**Hagfors**	**7.66**	**208**	Pn	**Pn**	**16 35 20.9**	**-2.3**
	comp=Z,0.0nm,0.3s,baz=24,slow=13,SNR=8.6						
HFS				Sn	**Sn**	**16 36 45.8**	**-5.9**
	comp=Z,0.0nm,0.3s,baz=28,slow=24,SNR=2.6						

SKHL 11 16:35:40.5±0.9**,50.02N**×**134.24E,h5**^{km}**,mb3.8**/3**,1C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRNR	**Gornyy**	**1.58**	**61**	⇑*i*Pg	Pg	16 36 09.0	-3.2
GRNR				AMB	AMB	16 36 10.4	
	120nm,0.5s						
GRNR				*e*Sg	Sg	16 36 29.8	-3.5
GRNR				A		16 36 30.6	
	130nm,0.5s						
KLR	**Kul'dur**	**1.80**	**245**	*e*Pg	Pg	16 36 13.3	-3.2
KLR				*e*Sg	Sg	16 36 36.0	-4.5
EKMR	**Ekimchan**	**3.16**	**346**	*e*Pn	Pn	16 36 33.6	+1.7
EKMR				AMB	AMB	16 36 34.7	
	6.0nm,0.2s						
EKMR				*e*rx	rx	16 36 41.3	
EKMR				*e*Sg	Sg	16 37 20.0	-5.7
EKMR				A		16 37 28.6	
	20nm,0.5s						
EKMR				A		16 37 28.6	
	18nm,0.5s						
YASR	**Yasnyy**	**5.09**	**312**	*e*Pn	Pn	16 36 58.2	-1.1
YASR				AMB	AMB	16 36 59.2	
	3.0nm,0.5s						
YASR				*e*Sg	Sg	16 38 18.8	-11
YASR				A		16 38 24.4	
	5.0nm,0.5s						
NKL	**Nikolayevsk**	**5.09**	**50**	*e*Sg	Sg	16 38 20.0	-10
ZEA	**Zeya**	**5.71**	**313**	*e*Sg	Sg	16 38 39.0	-12
BMKR	**Bomnak**	**5.74**	**327**	*e*Sg	Sg	16 38 39.2	-13
BMKR				A		16 38 45.9	
	5.0nm,0.5s						

IDC ***11*** *17:10:48.6±0.6,39.69S×15.86W,mb4.0/15,mb1 4.0/15, mb1mx4.0/19,mbtmp4.0/15,MS4.3/11,Ms1 4.3/11, ms1mx4.3/15,Error ellipse: s-maj=21.0km s-min=14.7km az=170.0*

NEIC ***11*** *17:10:50.4±0.4,39.59S×15.87W,h10*^{km}*,mb4.8/6,Error ellipse: s-maj=10.1km s-min=9.2km az=160.0*

ISC 11 17:10:48.7±0.4**,39.66S**±0.09×**15.85W**±0.09**,h10**^{km}**,n44, σ0**^{s}**86**/38**,mb4.1**/18**,MS4.3**/11**,26C,Tristan da Cunha region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**30.37**	**88**	LR	LR	17 25 57.9	
	comp=Z,1µm,21.6s,MS4.5,baz=182,slow=30						
VNA1	**Neumayer--Stat**	**31.31**	**175**	⇑*i*	**P**	**17 17 19.2**	**+8.4**
VNA1	**Neumayer--Stat**	**31.31**	**175**	⇑*i*	**P**	**17 17 23.5**	**+13**
VNA1	**Neumayer--Stat**	**31.31**	**175**	⇑*i*	**P**	**17 17 29.7**	**+19**
VNA1	**Neumayer--Stat**	**31.31**	**175**	⇑*i*P	**P**	**17 17 12.2**	**+1.4**
VNA1				⇑*i*P		17 17 19.2	
VNA1				⇑*i*P		17 17 23.5	
VNA1				⇑*i*P		17 17 29.7	
VNA2	**Neumayer--Watz**	**31.64**	**175**	⇑*i*	**P**	**17 17 19.9**	**+6.2**
VNA2	**Neumayer--Watz**	**31.64**	**175**	⇑*i*	**P**	**17 17 22.1**	**+8.4**
VNA2	**Neumayer--Watz**	**31.64**	**175**	⇑*i*	**P**	**17 17 28.6**	**+15**
VNA2	**Neumayer--Watz**	**31.64**	**175**	⇑*i*	**P**	**17 17 32.2**	**+18**
VNA2	**Neumayer--Watz**	**31.64**	**175**	⇑*i*P	**P**	**17 17 15.1**	**+1.4**
VNA2				⇑*i*P	pP	17 17 19.9	+3.2
VNA2				⇑*i*P		17 17 22.1	
VNA2				⇑*i*P		17 17 28.6	
VNA2				⇑*i*P		17 17 32.2	
VNA3	**Neumayer Olymp**	**31.82**	**176**	⇑*i*	**P**	**17 17 19.8**	**+4.5**
VNA3	**Neumayer Olymp**	**31.82**	**176**	⇑*i*	**P**	**17 17 24.1**	**+8.8**
VNA3	**Neumayer Olymp**	**31.82**	**176**	⇑*i*	**P**	**17 17 30.0**	**+15**
VNA3	**Neumayer Olymp**	**31.82**	**176**	⇑*i*	**P**	**17 17 34.4**	**+19**
VNA3	**Neumayer Olymp**	**31.82**	**176**	⇑*i*P	**P**	**17 17 15.4**	**+0.1**
VNA3				⇑*i*P	pP	17 17 19.8	+1.6
VNA3				⇑*i*P		17 17 24.1	
VNA3				⇑*i*P		17 17 30.0	
VNA3				⇑*i*P		17 17 34.4	
SNAA	**Sanae**	**32.76**	**172**	P	**P**	**17 17 22.6**	**-0.8**
	1.5nm,0.9s,mb3.9,baz=329,slow=7.6,SNR=12						
SNAA				PcP	PcP	17 20 07.2	-1.7
	0.4nm,1.0s,baz=285,slow=3.0,SNR=5.9						
SNAA				LR	LR	17 27 28.6	
	comp=Z,83nm,18.1s,MS3.5,baz=233,slow=31						
SNAA	**Sanae**	**32.76**	**172**	*e*P	**P**	**17 17 22.9**	**-0.6**
SNAA				PcP	PcP	17 20 07.2	-1.7
SNAA				LR	LR	17 27 28.6	
TSUM	**Tsumeb**	**35.25**	**64**	P	**P**	**17 17 45.4**	**-0.1**
	2.2nm,0.6s,mb4.3,baz=216,slow=11,SNR=10						
BOSA	**Boshof**	**35.48**	**85**	P	**P**	**17 17 46.6**	**-0.8**

	2.0nm,0.7s,mb4.1,baz=326,slow=14,SNR=4.0						
BOSA				LR	LR	17 29 22.3	
	comp=Z,578nm,19.8s,MS4.3,baz=234,slow=31						
BDFB	**Brasilia**	**36.88**	**301**	P	**P**	**17 17 58.9**	**-0.4**
	3.3nm,0.6s,mb4.3,baz=124,slow=9.3,SNR=4.3						
BDFB				LR	LR	17 30 09.2	
	comp=Z,369nm,20.1s,MS4.2,baz=155,slow=32						
LBTB	**Lobatse**	**37.60**	**80**	P	**P**	**17 18 04.9**	**-0.3**
	2.4nm,0.8s,mb4.0,baz=270,slow=16,SNR=3.4						
LBTB	**Lobatse**	**37.60**	**80**	*e*P	**P**	**17 18 05.0**	**-0.2**
	3.7nm,0.9s,mb4.1						
USHA	**Ushuaia**	**37.83**	**229**	P	**P**	**17 18 06.1**	**-0.8**
	6.9nm,1.0s,mb4.3,baz=75,slow=15,SNR=3.1						
PLCA	**Paso Flores**	**41.22**	**250**	P	**P**	**17 18 35.4**	**+0.2**
	0.6nm,0.6s,mb3.4,baz=303,slow=12,SNR=3.6						
PLCA				LR	LR	17 33 25.8	
	comp=Z,392nm,19.0s,MS4.3,baz=105,slow=33						
MATP	**Matopo**	**42.41**	**76**	P	**P**	**17 18 44.9**	**-0.2**
	0.9nm,0.6s,mb3.6,baz=215,slow=15,SNR=4.1						
MATP	**Matopo**	**42.41**	**76**	P	**P**	**17 18 44.9**	**-0.2**
CFAA	**Coronel Fontan**	**42.82**	**264**	P	**P**	**17 18 48.7**	**+0.3**
	0.2nm,0.3s,mb3.3,baz=120,slow=12,SNR=3.7						
CFAA	**Coronel Fontan**	**42.82**	**264**	P	**P**	**17 18 48.7**	**+0.3**
LSZ	**Lusaka**	**45.41**	**70**	*e*P	**P**	**17 19 09.9**	**+0.5**
	7.7nm,1.1s,mb4.5						
SIV	**San Ignacio**	**45.81**	**288**	P	**P**	**17 19 13.4**	**+0.8**
	1.5nm,1.1s,mb3.9,baz=133,slow=8.0,SNR=6.6						
DBIC	**Dimbokro**	**47.20**	**15**	P	**P**	**17 19 22.4**	**-1.3**
	2.1nm,0.6s,mb4.2,baz=157,slow=12,SNR=3.2						
MAW	**Mawson**	**49.84**	**151**	P	**P**	**17 19 43.1**	**-0.2**
	2.7nm,0.9s,mb4.3,baz=272,slow=12,SNR=3.4						
MAW				LR	LR	17 36 15.6	
	comp=Z,236nm,21.3s,MS4.2,baz=235,slow=31						
QSPA	**South Pole Qui**	**50.60**	**180**	⇑*i*P	**P**	**17 19 50.2**	**+1.1**
	110nm,1.8s						
LPAZ	**La Paz**	**50.90**	**282**	P	**P**	**17 19 50.3**	**-1.8**
	0.6nm,0.5s,mb3.8,baz=150,slow=6.3,SNR=7.1						
LPAZ				LR	LR	17 41 33.5	
	comp=Z,261nm,18.4s,MS4.3,baz=281,slow=36						
LPAZ	**La Paz**	**50.90**	**282**	*e*P	**P**	**17 19 50.8**	**-1.4**
	7.3nm,1.3s,mb4.5						
LPAZ				LR	LR	17 41 33.5	
SAML	**Samuel**	**52.04**	**293**	*e*P	**P**	**17 20 01.0**	**+0.2**
	28nm,1.5s,mb5.0						
KMBO	**Kilima Mbogo**	**61.59**	**65**	LR	LR	17 45 56.7	
	comp=Z,556nm,18.5s,MS4.8,baz=273,slow=34						
VNDA	**Vanda**	**63.09**	**179**	*e*P	**P**	**17 21 17.6**	**-0.4**
	41nm,1.8s,mb5.3						
ROSC	**El Rosal**	**69.59**	**295**	LR	LR	17 51 05.0	
	comp=Z,667nm,19.6s,MS4.9,baz=198,slow=35						
SJG	**San Juan**	**74.18**	**310**	LR	LR	17 52 44.4	
	comp=Z,195nm,21.1s,MS4.4,baz=161,slow=34						
ESDC	**Sonseca Array**	**79.70**	**9**	P	**P**	**17 22 59.1**	**+1.1**
	0.3nm,0.4s,mb3.6,baz=153,slow=6.6,SNR=5.7						
JTS	**JuntasAbangare**	**80.90**	**291**	LR	LR	17 58 20.1	
	comp=Z,220nm,20.8s,MS4.5,baz=156,slow=35						
BRTR	**Keskin Array B**	**91.02**	**36**	P	**P**	**17 23 56.2**	**+2.0**
	0.7nm,0.8s,mb4.1,baz=180,slow=4.9,SNR=6.0						
ILAR	**Eielson Array**	**142.33**	**328**	PKP	PKPdf	17 30 20.0	-3.5
	0.5nm,0.7s,baz=27,slow=2.0,SNR=5.0						

MEX 11 17:16:47.7±1.0**,16.97N**×**99.71W,h6**^{km}±28^{km}**,MD3.5,1C,**
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.23**	**242**	*i* P	Pg	17 16 51.5	-0.9
ACX				*i* S	Sg	17 16 55.0	-0.5
CAIG	**El Cayaco**	**0.54**	**278**	⇑*i*P	Pg	17 16 58.6	0.0
CAIG				*i* S	Sg	17 17 05.5	-0.3
PLIG	**Platanillo**	**1.42**	**8**	*i* P	Pn	17 17 10.4	-3.8
PLIG				*e*S	Sb	17 17 27.7	-4.8

CASC 11 17:19:43.1±2.6**,13.08N**×**89.65W,h37**^{km}±999^{km}**,MD4.1,**
ML3.4,5C-10D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOQS	**Boqueron**	**0.75**	**29**	⇓*e*P	P	17 20 03.4	+6.2
BOQS				*e*S	S	17 20 13.1	+5.6
SBLS	**San Blas**	**0.76**	**2**	⇓*e*P	P	17 20 03.6	+6.3
SBLS				*e*S	S	17 20 15.4	+7.7
SNJE	**San Jose**	**0.79**	**3**	*e*P	P	17 20 04.1	+6.3
SNJE				*e*S	S	17 20 16.3	+7.8
RTR	**El Retiro**	**0.81**	**0**	⇑*e*P	P	17 20 04.8	+6.6
RTR				*e*S	S	17 20 18.0	+8.9
LCBS	**La Ceiba**	**0.87**	**49**	⇓*e*P	P	17 20 05.0	+6.1
LCBS				*e*S	S	17 20 17.8	+7.2
LBRS	**Las Brisas**	**0.88**	**42**	⇓*e*P	P	17 20 05.5	+6.4
LBRS				*e*S	S	17 20 18.8	+7.9
SNVI	**San Vicente**	**0.95**	**56**	⇑*e*P	P	17 20 06.2	+6.0
SNVI				*e*S	S	17 20 18.3	+5.6
IXG	**Ixpaco**	**1.34**	**324**	⇓*e*P	P	17 20 05.4	-0.3
IXG				*e*S	S	17 20 21.2	-1.3
VSM	**San Miguel**	**1.39**	**75**	⇑*e*P	P	17 20 12.6	+6.3
VSM				*e*S	S	17 20 30.2	+6.5
BLLM	**Bellamira**	**1.42**	**75**	⇓*e*P	P	17 20 13.1	+6.2
BLLM				*e*S	S	17 20 30.5	+5.9
CAHU	**Cacacuatique**	**1.56**	**64**	⇑*e*P	P	17 20 14.7	+5.8
CAHU				*e*S	S	17 20 35.4	+7.4
PCG	**Pacaya**	**1.60**	**325**	*e*S	S	17 20 29.8	+0.7
CNCH	**Conchagua**	**1.78**	**83**	⇓*e*P	P	17 20 17.8	+5.8
CNCH				*e*S	S	17 20 39.4	+5.8
MRL	**Marmol**	**1.98**	**359**	⇑*e*P	P	17 20 15.1	+0.3
MRL				*e*S	S	17 20 40.5	+2.0
TP2	**Tecpan 2**	**2.15**	**322**	⇓*e*P	P	17 20 18.3	+1.0
TP2				*e*S	S	17 20 44.5	+1.5
CRIN	**San Cristobal**	**2.56**	**98**	*e*P	P	17 20 23.2	0.0
CRIN				*e*S	S	17 20 54.3	+0.8
LEON	**Leon**	**2.77**	**103**	*e*P	P	17 20 25.6	-0.5
TEL3	**Telica 3**	**2.78**	**100**	*e*P	P	17 20 26.0	-0.3
TEL3				*e*S	S	17 20 57.6	-1.4
CNGN	**Cerro Negro**	**2.94**	**101**	⇓*e*P	P	17 20 28.4	-0.1
CNGN				*e*S	S	17 21 01.5	-1.5
MIRN	**Miramar**	**2.94**	**102**	*e*P	P	17 20 27.5	-1.0
MIRN				*e*S	S	17 20 59.4	-3.6
MOMJ	**Momotombo**	**3.11**	**102**	*e*P	P	17 20 30.5	-0.4
COPN	**Copaltepe**	**3.12**	**106**	⇓*e*P	P	17 20 29.7	-1.3
COPN				*e*S	S	17 21 04.2	-3.3
MGAN	**Managua**	**3.45**	**105**	*e*S	S	17 21 14.1	-1.8
	comp=E,142nm,0.2s						
TICN	**Ticuantepe**	**3.50**	**107**	*e*P	P	17 20 35.5	-0.9

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*IDC **11** 17:40:03.3±26.0,19.01N×108.20W,mb3.5/3,mb1 4.0/4,*
mb1mx3.8/19,mbtmp3.6/4,ML4.1/1,Error ellipse:
s-maj=366.8km s-min=79.6km az=165.0

NEIC 11 17:40:03.7±2.8**,18.87N**×**108.49W,h10**^{km}**,mb3.9**/10**,**
Error ellipse: s-maj=39.2km s-min=23.0km az=156.0,
Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**11.31**	**22**	Pn	P	17 42 44.2	-4.4
	0.3nm,0.3s,baz=200,slow=13,SNR=2.7						
TXAR	**Lajitas Array**	**11.31**	**22**	Pn	P	17 42 44.2	-4.4
MNTX	**Cornudas Mount**	**13.08**	**12**	Pn	P	17 43 10.6	-1.8
TUC	**Tucson**	**13.55**	**352**	*e*Pn	P	17 43 15.8	-2.7
	3.3nm,0.9s						
BNM	**Barren Site**	**15.31**	**6**	*e*P	P	17 43 41.0	-0.7
NEN	**Nelson**	**17.64**	**343**	*e*P	P	17 44 08.4	-2.8
PV01	**Paradox Valley**	**19.20**	**360**	*e*P	P	17 44 29.0	-1.4
SMCO	**Snowmass**	**20.28**	**3**	*e*P	P	17 44 40.7	-1.7
MNV	**Mina**	**21.23**	**339**	P	P	17 44 49.4	-2.7
	8.5nm,1.2s						
NVAR	**Mina Array Bea**	**21.29**	**338**	P	P	17 44 52.2	-0.5
	4.6nm,1.0s,baz=168,slow=13,SNR=14						
DUG	**Dugway**	**21.58**	**351**	*e*P	P	17 44 53.6	-2.1
	2.9nm,0.8s						
ELK	**Elko**	**22.56**	**347**	P	P	17 45 03.7	-1.7
	2.0nm,0.9s,baz=175,slow=9.0,SNR=6.3						
ELK	**Elko**	**22.56**	**347**	*e*P	P	17 45 03.5	-1.9
	1.6nm,0.9s						
HWUT	**Hardware Ranch**	**22.82**	**354**	*e*P	P	17 45 07.9	-0.1
	2.9nm,0.8s						
BW06	**Boulder Array**	**23.84**	**358**	P	P	17 45 17.1	-0.8
	1.0nm,0.8s						
PDAR	**Pinedale Array**	**23.84**	**358**	P	P	17 45 17.2	-0.8
	1.0nm,0.8s,baz=171,slow=8.1,SNR=6.8						
RRI2	**Red Ridge**	**24.52**	**355**	*e*P	P	17 45 24.0	-0.6
	8.8nm,1.1s						
TPAW	**Teton Pass**	**24.64**	**356**	*e*P	P	17 45 25.2	-0.5
	3.0nm,0.9s						
LOHW	**Long Hollow**	**24.74**	**356**	*e*P	P	17 45 24.9	-1.7
	18nm,1.6s						
MOOW	**Moose Ponds**	**24.88**	**356**	*e*P	P	17 45 26.3	-1.7
	3.3nm,1.1s						
HLID	**Hailey**	**25.12**	**350**	*e*P	P	17 45 29.5	-0.8
	3.0nm,0.9s						

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*IDC **11** 17:40:11.2±0.7,29.38N×68.89E,mb4.4/21,mb1 4.5/21,*
mb1mx4.5/25,mbtmp4.4/21,MS4.3/19,Ms1 4.3/19,
ms1mx4.2/25,Error ellipse: s-maj=17.2km s-min=15.6km
az=155.0

*BJI **11** 17:40:12.9,29.39N×68.74E,h30^{km},mB4.8,mb4.7,Ms4.9,*
Msz4.6

*MOS **11** 17:40:12.4±1.5,29.27N×69.12E,h21^{km},mb4.8/31,*
MS4.4/10,Error ellipse: s-maj=7.6km s-min=5.1km
az=117.3

*NEIC **11** 17:40:12.1±0.3,29.33N×69.06E,h10^{km},mb4.7/44,Error*
ellipse: s-maj=8.0km s-min=4.4km az=196.0

*NNC **11** 17:40:19.3±7.1,30.21N×68.67E,h1^{km}±60^{km},Error*
ellipse: s-maj=58.3km s-min=48.0km az=132.0

ISC 11 17:40:10.6±0.9**,29.18N**±0.03×**68.95E**±0.02**,h12**^{km}±5^{km}**,**
h11^{km}±2.0^{km}**:pP-P,n275,**σ**1**$\overset{s}{.}$**37**/287**,mb4.6**/80**,MS4.5**/37**,**
27C-14D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRP	**Derazinda**	**2.77**	**23**	P	**Pn**	**17 40 57.3**	**+1.7**
SBDP	**Sheikh Budin**	**3.49**	**27**	⇓P	**Pn**	**17 41 06.8**	**+0.9**
SARP	**Sargodha**	**4.21**	**49**	P	**Pn**	**17 41 17.0**	**+0.9**
THW	**Thamme Wali**	**4.33**	**33**	P	**Pn**	**17 41 18.1**	**+0.4**
CEP	**Cherat**	**5.27**	**28**	P	**Pn**	**17 41 31.0**	**-0.1**
CEP				S	**Sn**	**17 42 29.0**	**-3.4**
AJM	**Ajmer**	**5.72**	**117**	*e*P	**Pn**	**17 41 40.1**	**+2.8**
AJM				*e*x	x	17 42 53.3	
CHCP	**Chirah Chowk**	**5.79**	**38**	P	**Pn**	**17 41 38.3**	**0.0**
BHJ	**Bhuj**	**5.94**	**174**	*e*P	**Pn**	**17 41 41.5**	**+1.0**
BHJ				*e*S	**Sn**	**17 42 48.2**	**-1.0**
THN	**Thein Dam**	**6.66**	**59**	*e*P	**Pn**	**17 41 52.1**	**+1.4**
THN				*e*x	**Sn**	**17 43 06.3**	**-0.9**
BHK	**Bhakra**	**6.83**	**69**	*e*x	**Pg**	**17 42 22.7**	**-4.2**
BHK				*e*x	**Sg**	**17 43 58.5**	**+0.6**
DLH	**Dalhousie**	**6.90**	**59**	*e*P	**Pn**	**17 41 55.0**	**+1.0**
DLH				*e*x	**Sn**	**17 43 14.0**	**+0.8**
NDI	**New Delhi**	**7.26**	**92**	*e*P	**Pn**	**17 42 00.5**	**+1.4**
NDI				*e*x	**Sn**	**17 43 22.0**	**-0.3**
SDNR	**Sundarnagar**	**7.31**	**70**	*e*P	**Pn**	**17 42 00.0**	**+0.3**
SDNR				*e*x	**Sn**	**17 43 24.2**	**+0.8**
SMLA	**Simla**	**7.37**	**73**	*e*P	**Pn**	**17 42 00.2**	**-0.5**
SMLA				*e*x	**Sn**	**17 43 21.3**	**-3.8**
BHPL	**Bhopal**	**9.64**	**126**	*e*P	**P**	**17 42 32.4**	**+0.3**
BHPL				AMb	AMB	17 42 41.7	
	comp=Z,22nm,1.3s						
BHPL				*e*x	**Sn**	**17 44 18.0**	**-3.4**
PTH	**Pithoragarh**	**9.84**	**85**	*e*x	**P**	**17 42 40.4**	**+5.5**
PTH				*e*x	**Sn**	**17 44 30.0**	**+3.7**
BOM	**Bombay**	**10.83**	**160**	*e*x	x	17 43 12.1	
WBK	**Wadi Bani Khal**	**11.11**	**236**	⇓P	**P**	**17 42 46.7**	**-5.7**
AKL	**Akola**	**11.17**	**137**	⇑*i*x	x	17 44 02.8	
AKL				*i* x	**S**	**17 44 52.1**	**-6.9**
BIDO	**Bidbid**	**11.22**	**242**	⇑P	**P**	**17 42 49.1**	**-4.8**
POO	**Poona**	**11.51**	**156**	*e*x	**P**	**17 43 02.0**	**+4.1**
POO				AMb	AMB	17 43 12.1	
	comp=Z,29nm,1.2s						
SMDO	**Samad**	**11.53**	**241**	⇑P	**P**	**17 42 53.1**	**-5.0**
BANOM	**Banah**	**11.68**	**257**	⇓P	**P**	**17 42 55.5**	**-4.6**
KSH	**Kashi**	**11.82**	**27**	P	**P**	**17 43 02.9**	**+0.9**
KSH				AP		17 43 06.0	
KSH				XP		17 43 09.4	
KSH				PP	PP	17 43 12.1	+0.7
KSH				PPP	PPP	17 43 19.2	+0.6
KSH				S	**S**	**17 45 15.8**	**+1.0**
KSH				XS		17 45 20.0	
KSH				SS	SS	17 45 29.1	-0.1
KSH				AMB	AMB		
	comp=Z,120nm,1.2s						
KSH				LR	LR		
	comp=N,7µm,7.0s						
KSH				LR	LR		
	comp=E,9µm,11.5s						
HOQ	**Hoqain**	**11.83**	**245**	⇑P	**P**	**17 42 56.5**	**-5.6**
JMDO	**Jabal Madar**	**11.89**	**238**	P	**P**	**17 42 59.0**	**-3.9**
	SNR=16						
ALBI	**Allahabad**	**12.07**	**106**	*e*P	**P**	**17 43 02.0**	**-3.4**
ASHO	**Ashiyiah**	**12.34**	**252**	P	**P**	**17 43 06.7**	**-2.4**
	SNR=5.6						
BSY	**Bisya**	**12.36**	**241**	⇓P	**P**	**17 43 05.6**	**-3.7**
ARQ	**Araqi**	**12.58**	**245**	P	**P**	**17 43 09.5**	**-2.7**
	SNR=17						
KAD	**Karad**	**12.76**	**157**	*e*P	**P**	**17 43 15.0**	**+0.4**
LATR	**Latur**	**12.78**	**145**	*e*x	x	17 45 40.5	
KOLN	**Koldanda**	**12.97**	**93**	*e*P	**P**	**17 43 16.8**	**-0.5**
	comp=E,148nm,0.9s						
KOLN				*e*S	**S**	**17 45 34.3**	**-8.2**
AML	**Almayashu**	**13.48**	**15**	P	**P**	**17 43 21.4**	**-2.6**
	SNR=13						
UCH	**Uchtor**	**13.77**	**18**	P	**P**	**17 43 24.6**	**-3.3**
	SNR=27						
BLSP	**Bilaspur**	**13.80**	**118**	*e*x	**P**	**17 43 34.7**	**+6.3**
BLSP				*e*S	**S**	**17 46 00.1**	**-2.5**
GKN	**Gorkha**	**13.84**	**91**	*e*P	**P**	**17 43 26.9**	**-2.0**
	comp=E,15nm,0.4s						
KK31	**Karatay Array**	**13.95**	**5**	Pn	**P**	**17 43 25.7**	**-4.5**
	comp=E,14nm,0.6s,baz=195,slow=13,SNR=129						
KK31				⇑Sn	**S**	**17 45 52.4**	**-14**
	comp=E,27nm,0.9s,baz=196,slow=23,SNR=8.5						
KKAR	**Karatay Array**	**13.95**	**5**	*e*P	**P**	**17 43 25.7**	**-4.5**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
EKS2	**Erkin-Say**	**14.00**	**15**	P	**P**	**17 43 27.9**	**-3.1**
	SNR=14						
AAK	**Ala-Archa**	**14.15**	**17**	P	**P**	**17 43 32.0**	**-0.8**
	SNR=17						
AAK	**Ala-Archa**	**14.15**	**17**	⇑Pn	**P**	**17 43 30.1**	**-2.7**
	comp=Z,38nm,0.9s						
AAK				⇓Sn	**S**	**17 46 00.7**	**-10**
	comp=Z,40nm,0.9s						
AAK	**Ala-Archa**	**14.15**	**17**	*e*P	**P**	**17 43 28.2**	**-4.7**
	comp=Z,32nm,0.8s						
AAK	**Ala-Archa**	**14.15**	**17**	P	**P**	**17 43 30.6**	**-2.3**
AAK				S	**S**	**17 46 00.7**	**-10**
AAK				pmax	pmax		
	comp=Z,53nm,1.0s						
DMN	**Daman**	**14.31**	**92**	*e*P	**P**	**17 43 34.5**	**-0.6**
	comp=Z,36nm,0.6s						
FRU	**Bishkek**	**14.37**	**17**	*i* P	**P**	**17 43 38.5**	**+2.8**
FRU				*e*S	**S**	**17 46 08.0**	**-7.9**
FRU				pmax	pmax		
	comp=Z,170nm,2.1s						
KKN	**Kakani**	**14.43**	**92**	*e*P	**P**	**17 43 34.8**	**-1.9**
	comp=Z,40nm,0.5s						
CHMS	**Chumysh**	**14.55**	**17**	P	**P**	**17 43 34.2**	**-4.0**
	SNR=14						
PKI	**Pulchoki**	**14.58**	**92**	*e*P	**P**	**17 43 37.3**	**-1.3**
	comp=Z,59nm,0.9s						
HYB	**Hyderabad**	**14.65**	**141**	*i* P	**P**	**17 43 39.0**	**-0.6**
HYB				*e*		17 43 45.0	
HYB				*e*S	**S**	**17 46 18.0**	**-4.8**
TKM2	**Tokmak 2**	**14.72**	**20**	P	**P**	**17 43 38.4**	**-1.9**
	SNR=12						
GUN	**Gumba**	**14.94**	**91**	*e*P	**P**	**17 43 41.5**	**-1.8**
	comp=Z,343nm,0.8s						
BOK	**Bokaro**	**16.08**	**106**	*e*P	**P**	**17 43 56.1**	**-2.1**
BOK				*e*x	x	17 46 50.9	
MNGI	**Mangalore**	**17.06**	**160**	*e*x	x	17 44 24.0	
MNGI				*e*x	x	17 48 47.6	
UMR	**Umm Al-Rimmam**	**18.51**	**276**	*e*P	**P**	**17 44 23.1**	**-5.5**
UMR				AMb	AMB	17 44 30.9	
	comp=Z,68nm,0.5s						
CAL	**Calcutta**	**18.64**	**106**	*e*x	x	17 44 36.4	
CAL				*e*x	x	17 48 24.3	
RDF	**Al-Radifah**	**18.71**	**274**	*e*P	**P**	**17 44 26.3**	**-4.8**
RDF				AMb	AMB	17 44 31.7	
	comp=Z,37nm,0.5s						
NAY	**Al-Naaiem**	**18.95**	**276**	*e*P	**P**	**17 44 28.2**	**-5.7**
NAY				AMb	AMB	17 44 36.1	
	comp=Z,28nm,1.2s						
LSA	**Lhasa**	**19.34**	**83**	P	**P**	**17 44 40.6**	**+2.1**
LSA				S	**S**	**17 48 13.8**	**+3.2**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
LSA				AMB	AMB		
	comp=Z,130nm,4.0s						
LSA				LR	LR		
	comp=N,770nm,10.0s						
LSA				LR	LR		
	comp=E,1µm,10.0s						
LSA				LR	LR		
	comp=Z,1µm,11.0s						
LSA	**Lhasa**	**19.34**	**83**	*e*P	**P**	**17 44 37.4**	**-1.1**
	comp=Z,21nm,0.8s						
LSA	**Lhasa**	**19.34**	**83**	*e*P	**P**	**17 44 37.4**	**-1.1**
LSA				pmax	pmax		
	comp=Z,21nm,0.8s						
MK31	**Makanchi Array**	**20.43**	**27**	⇑P	**P**	**17 44 48.9**	**-1.4**
	comp=Z,13nm,0.6s,baz=210,slow=11,SNR=132						
MKAR	**Makanchi Array**	**20.43**	**27**	P	**P**	**17 44 48.8**	**-1.5**
	comp=Z,13nm,0.7s,baz=209,slow=11,SNR=39						
MKAR				LR	LR	17 53 19.0	
	comp=Z,351nm,18.9s,MS3.7,baz=215,slow=39						
MKAR	**Makanchi Array**	**20.43**	**27**	⇑*e*P	**P**	**17 44 49.0**	**-1.3**
RYDS	**Riyadh**	**20.54**	**261**	P	**P**	**17 44 48.8**	**-2.7**
SHL	**Shillong**	**20.68**	**95**	*e*P	**P**	**17 44 55.0**	**+2.0**
SHL				*e*x	x	17 48 27.0	
SHL				*e*x	x	17 51 48.0	
WMQ	**Urumqi**	**20.92**	**41**	⇓*i*P	**P**	**17 44 57.0**	**+1.7**
WMQ				AP		17 45 01.0	
WMQ				XP		17 45 04.0	
WMQ				PP	PP	17 45 19.0	+1.1
WMQ				S	**S**	**17 48 43.0**	**-0.3**
WMQ				PCS		17 52 42.0	
WMQ				AMB	AMB		
	comp=Z,60nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,470nm,6.7s						
WMQ				LR	LR		
	comp=N,5µm,20.2s,MS4.9						
WMQ				LR	LR		
	comp=E,2µm,19.9s,MS4.9						
WMQ				LR	LR		
	comp=Z,2µm,19.2s,MS4.5						
AB31	**Akbulak array**	**21.19**	**344**	⇓P	**P**	**17 44 55.6**	**-2.5**
	comp=Z,19nm,0.8s,mb4.5,baz=154,slow=9.9,SNR=205						
AB31	**Akbulak array**	**21.19**	**344**	*i* P	**P**	**17 44 55.5**	**-2.6**
AB31				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.4						
BHD	**Baghdad**	**21.39**	**287**	*e*x	x	17 44 52.0	
BHD				*e*x	x	17 48 50.0	
MZLS	**Mizel**	**21.83**	**262**	P	**P**	**17 45 02.9**	**-1.7**
GNI	**Garni**	**22.65**	**305**	P	**P**	**17 45 13.7**	**+1.0**
	comp=Z,8.1nm,0.7s,mb4.3,baz=74,slow=15,SNR=4.3						
GNI	**Garni**	**22.65**	**305**	*e*P	**P**	**17 45 14.1**	**+1.4**
	comp=Z,31nm,1.0s,mb4.7						
GNI	**Garni**	**22.65**	**305**	*e*P	**P**	**17 45 14.1**	**+1.4**
GNI				pmax	pmax		
	comp=Z,31nm,1.0s						
KURK	**Kurchatov**	**22.71**	**16**	⇑P	**P**	**17 45 14.3**	**+1.1**
	comp=Z,13nm,1.0s,mb4.3						
KURK	**Kurchatov**	**22.71**	**16**	*e*P	**P**	**17 45 11.5**	**-1.7**
	comp=Z,18nm,0.8s,mb4.6						
KURK	**Kurchatov**	**22.71**	**16**	*c* *i*P	**P**	**17 45 14.1**	**+0.9**
AKTO	**Aktyubinsk**	**22.78**	**342**	⇑P	**P**	**17 45 16.4**	**+2.5**
	comp=Z,6.1nm,1.4s,mb3.9						
AKTO	**Aktyubinsk**	**22.78**	**342**	P	**P**	**17 45 14.0**	**+0.1**
	comp=Z,22nm,0.9s,mb4.6,baz=159,slow=11,SNR=23						
AKTO				LR	LR	17 55 45.5	
	comp=Z,451nm,18.4s,MS3.9,slow=41						
AKTO	**Aktyubinsk**	**22.78**	**342**	P	**P**	**17 45 16.3**	**+2.4**
AKTO				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.2						
MSL	**Mosul**	**22.84**	**295**	*e*x	x	17 45 24.0	
MSL				*e*x	x	17 49 29.0	
MSL				*e*x	x	17 53 06.0	
MSL				*e*x	x	17 54 07.0	
TI2	**Plekhanov**	**23.26**	**309**	*e*P	**P**	**17 45 19.2**	**+0.5**
VOSK	**Vostochnaya**	**23.57**	**3**	⇓P	**P**	**17 45 18.3**	**-3.2**
	comp=Z,35nm,1.1s,mb4.7						
AFFS	**‘Afif**	**23.77**	**263**	P	**P**	**17 45 24.2**	**+0.3**
KAMS	**Al Khamasin**	**23.79**	**254**	P	**P**	**17 45 23.6**	**-0.5**
BVA0	**Borovoye Array**	**23.84**	**2**	⇓P	**P**	**17 45 23.5**	**-0.7**
	comp=Z,6.0nm,1.0s,mb4.0,baz=225,slow=38,SNR=116						
BVA0	**Borovoye Array**	**23.84**	**2**	P	**P**	**17 45 23.5**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
BVAR	**Borovoye Array**	**23.84**	**2**	P	**P**	**17 45 23.9**	**-0.3**
	comp=Z,22nm,1.0s,mb4.6,baz=180,slow=7.4,SNR=40						
BRVK	**Borovoye**	**23.87**	**2**	*e*P	**P**	**17 45 23.6**	**-0.9**
	comp=Z,21nm,0.9s,mb4.6						
BRVK	**Borovoye**	**23.87**	**2**	*e*P	**P**	**17 45 23.6**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.6						
HILS	**Ha’il**	**23.97**	**272**	P	**P**	**17 45 25.9**	**+0.2**
ZEI	**Tsey**	**24.28**	**311**	*e*P	**P**	**17 45 31.2**	**+2.6**
ZEI				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.5						
CHKZ	**Chkalovo**	**24.50**	**2**	⇑P	**P**	**17 45 31.1**	**+0.5**
	comp=Z,18nm,0.9s,mb4.6						
CHKZ	**Chkalovo**	**24.50**	**2**	*e*P	**P**	**17 45 29.2**	**-1.4**
	comp=Z,16nm,0.7s,mb4.7						
CHKZ	**Chkalovo**	**24.50**	**2**	*e*P	**P**	**17 45 29.2**	**-1.4**
CHKZ				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.7						
TATS	**Tathlith**	**25.07**	**253**	P	**P**	**17 45 37.4**	**+1.1**
KIV	**Kislovodsk**	**25.59**	**312**	*e*P	**P**	**17 45 42.5**	**+1.4**
	comp=Z,18nm,0.8s,mb4.7						
KIV	**Kislovodsk**	**25.59**	**312**	⇓*i*P	**P**	**17 45 42.7**	**+1.6**
KIV				pmax	pmax		
	comp=Z,37nm,1.5s,mb4.7						
KIV				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.0						
GOF	**Gofitskoye**	**25.88**	**315**	*e*P	**P**	**17 45 46.4**	**+2.6**
GOF				pmax	pmax		
	comp=Z,45nm,1.3s,mb4.8						
DJNS	**Zahran al Janu**	**25.90**	**249**	P	**P**	**17 45 45.3**	**+1.1**
BLJS	**Baljurashi**	**26.50**	**256**	P	**P**	**17 45 51.2**	**+1.5**
KBRS	**Khaybar**	**26.52**	**270**	P	**P**	**17 45 49.7**	**-0.2**
ZAL	**Zalesovo**	**27.30**	**21**	P	**P**	**17 45 55.2**	**-1.5**
	comp=Z,1.7nm,0.4s,mb4.0,baz=261,slow=11,SNR=8.6						
ZAL				LR	LR	17 58 22.7	
	comp=Z,616nm,21.5s,MS4.1,baz=254,slow=40						
GTA	**Gaotai**	**27.35**	**60**	*e*P	**P**	**17 45 59.7**	**+2.4**
GTA				AP	pP	17 46 04.0	+3.1
GTA				XP	sP	17 46 06.9	+4.4
GTA				PP	PP	17 46 49.2	+4.6
GTA				S	**S**	**17 50 41.2**	**+6.2**
GTA				XS		17 50 48.9	
GTA				SCS	ScS	17 56 46.3	+0.3
GTA				AMB	AMB		
	comp=Z,130nm,7.7s						
GTA				LR	LR		
	comp=N,570nm,13.9s,MS4.4						
GTA				LR	LR		
	comp=E,420nm,11.2s,MS4.4						
GTA				LR	LR		
	comp=Z,730nm,11.2s,MS4.5						
ARU	**Arti**	**28.21**	**348**	*i* P	**P**	**17 46 08.1**	**+3.1**
ARU				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.6						
ARU				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.3						
SVE	**Sverdlovsk**	**28.25**	**350**	*e*P	**P**	**17 46 07.5**	**+2.2**
SVE				*e*		17 46 50.3	
SVE				*e*PPP	PPP	17 47 12.6	+4.2
SVE				*e*		17 49 12.0	
SVE				*e*S	**S**	**17 50 49.0**	**-0.4**
SVE				MLR	MLR		
	comp=N,12µm,14.0s,MS5.6						
SVE				MLR	MLR		
	comp=E,1µm,14.0s,MS5.6						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s,MS4.7						
ATD	**Arta Tunnel**	**30.01**	**240**	LR	LR	17 59 27.2	
	comp=Z,349nm,18.2s,MS4.0,baz=310,slow=38						
LZH	**Lanzhou**	**30.07**	**68**	*e*P	**P**	**17 46 17.8**	**-4.0**
	comp=Z,19nm,1.4s,mb4.6						
LZH				pP	pP	17 46 20.9	-4.5
LZH				sP	sP	17 46 22.7	-4.3
LZH				PP	PP	17 47 14.5	-5.5
LZH				*e*S	**S**	**17 51 14.0**	**-4.6**
LZH				sS		17 51 19.2	
LZH				SS	SS	17 52 44.5	-11
LZH				LR	LR		
	comp=Z,2µm,14.0s,MS4.8						
LZH	**Lanzhou**	**30.07**	**68**	*e*P	**P**	**17 46 17.8**	**-4.0**
LZH				*SP	sP	17 46 22.7	-4.3
LZH						17 47 14.5	
LZH				*e*S	**S**	**17 51 14.0**	**-4.6**

LZH				*SS		17 51 19.2	
LZH				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.6						
LZH				MLR	MLR		
	comp=Z,2μm,14.0s,MS4.8						
CD2	**Chengdu**	30.11	78	*e*P	P	17 46 19.5	-2.8
CD2				S	S	17 51 14.4	-5.0
CD2				LR	LR		
	comp=N,620nm,10.8s						
CD2				LR	LR		
	comp=Z,820nm,12.0s,MS4.6						
KMI	**Kunming**	30.28	90	P	P	17 46 23.9	+0.1
KMI				PP	PP	17 47 22.8	0.0
KMI				S	S	17 51 22.2	+0.1
KMI				AMB	AMB		
	comp=Z,110nm,5.6s						
KMI				LR	LR		
	comp=N,810nm,13.8s,MS4.6						
KMI				LR	LR		
	comp=E,600nm,14.9s,MS4.6						
KMI				LR	LR		
	comp=Z,820nm,13.2s,MS4.5						
KMI	**Kunming**	30.28	90	P	P	17 46 23.9	+0.1
	comp=Z,6.0nm,1.2s,mb4.2						
KMI				pP	pP	17 46 26.0	-1.4
KMI				sP	sP	17 46 28.2	-0.8
KMI				PP	PP	17 47 22.8	0.0
KMI				PPP	PPP	17 47 37.1	0.0
KMI				S	S	17 51 22.2	+0.1
KMI				sS		17 51 26.1	
KMI				SS	SS	17 52 58.4	-2.4
KMI				LR	LR		
	comp=Z,830nm,13.2s,MS4.6						
KMI	**Kunming**	30.28	90	P	P	17 46 23.9	+0.1
KMI				*SP	sP	17 46 28.2	-0.8
KMI						17 47 22.8	
KMI				PPP	PPP	17 47 37.1	0.0
KMI				S	S	17 51 22.2	+0.1
KMI				SS	SS	17 52 58.4	-2.4
KMI				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.2						
KMI				MLR	MLR		
	comp=Z,830nm,13.2s,MS4.6						
BR131	**Keskin Array S**	30.78	299	*e*P	P	17 46 27.4	-0.7
	comp=Z,2.2nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	30.78	299	P	P	17 46 27.1	-0.9
	comp=Z,3.3nm,0.8s,mb4.2,baz=108,slow=7.8,SNR=12						
SIM	**Simferopol’**	31.65	309	*e*P	P	17 46 39.0	+3.3
SIM				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
GYA	**Guiyang**	33.37	85	P	P	17 46 53.1	+2.2
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				LR	LR		
	comp=N,760nm,14.1s,MS4.6						
GYA				LR	LR		
	comp=E,450nm,15.6s,MS4.6						
GYA				LR	LR		
	comp=Z,550nm,12.9s,MS4.5						
ZAK	**Zakamensk**	33.39	41	*e*P	P	17 46 52.1	+1.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
SONM	**Songino Array**	34.29	47	P	P	17 47 00.1	+1.5
	comp=Z,2.9nm,0.7s,mb4.3,baz=249,slow=8.4,SNR=22						
SONM				LR	LR	18 04 14.6	
	comp=Z,554nm,19.9s,MS4.3,baz=251,slow=42						
OBN	**Obninsk**	34.78	327	⇑*i*P	P	17 47 03.2	+0.4
OBN				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
OBN				MLR	MLR		
	comp=Z,600nm,16.0s,MS4.4						
ENH	**Enshi**	35.09	78	*e*P	P	17 47 07.5	+1.8
	comp=Z,16nm,0.9s,mb5.0						
BTO	**Baotou**	35.27	60	*e*P	P	17 47 09.6	+2.5
TIRR	**Tirgusor**	35.46	307	⇑P	P	17 47 07.0	-1.7
CFR	**Carcaliu**	35.80	308	⇑P	P	17 47 12.3	+0.7
CFR	**Carcaliu**	35.80	308	⇑P	P	17 47 12.3	+0.8
AKASG	**Malin Array Be**	36.67	317	P	P	17 47 16.8	-2.0
	comp=Z,7.1nm,0.8s,mb4.6,baz=100,slow=7.1,SNR=20						
AKASG	**Malin Array Be**	36.67	317	*i* P	P	17 47 18.8	0.0
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VRI	**Vrincioaia**	36.91	309	⇓P	P	17 47 27.2	+6.3
VRI	**Vrincioaia**	36.91	309	⇓P	P	17 47 27.2	+6.2
KLMR	**Klimovskoe**	37.27	337	*e*P	P	17 47 23.1	-0.6
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.5						
KLMR				MLR	MLR		
	comp=Z,1μm,19.0s,MS4.8						
RZN	**Rozhen**	37.75	301	P	P	17 47 28.0	0.0
VOIR		37.99	308	⇑P	P	17 47 30.4	+0.5
VOIR		37.99	308	⇑P	P	17 47 30.4	+0.4
PGB	**Panagyurishte**	38.23	303	P	P	17 47 33.5	+1.5
KULM	**Kulim**	38.25	122	*e*P	P	17 47 31.1	-1.4
VTS	**Vitosha**	38.94	303	P	P	17 47 38.0	0.0
KKB	**Krupnik**	38.98	302	P	P	17 47 40.0	+1.7
WHN	**Wuhan**	39.19	76	*e*P	P	17 47 42.7	+2.5
VAY	**Valandovo**	39.33	301	*e*P	P	17 47 30.8	-10
VAY	**Valandovo**	39.33	301	*e*P	P	17 47 30.8	-10
BOLS	**Boljevac**	39.96	305	⇑*i*P	P	17 47 45.1	-1.4
SKO	**Skopje**	40.21	302	*e*P	P	17 47 40.4	-8.1
SKO	**Skopje**	40.21	302	*e*P	P	17 47 40.4	-8.1
BIA	**Bitola**	40.26	300	*e*P	P	17 47 40.7	-8.2
KWP	**Kalwaria**	40.38	314	*e*P	P	17 47 49.8	+0.1
	comp=Z,15nm,0.9s,mb4.7						
KWP	**Kalwaria**	40.38	314	*e*P	P	17 47 49.8	0.0
KWP				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
KOLS	**Kolonicke sedl**	40.51	312	*e*pP	pP	17 47 54.7	+0.2
OHR	**Ohrid**	40.66	300	*e*P	P	17 47 43.6	-8.6
OHR	**Ohrid**	40.66	300	*e*P	P	17 47 43.6	-8.6
TIA	**Tai’an**	40.80	67	*e*P	P	17 47 55.0	+1.6
GRUS	**Gruza**	40.87	304	*i* P	P	17 47 52.6	-1.2
CRVS	**Cervenica-Dubn**	41.02	312	*e*P	P	17 47 56.1	+1.0
DIVS	**Divcibare**	41.40	305	⇓*i*P	P	17 47 58.9	+0.7
JOF	**Joensuu**	41.56	335	*e*p	P	17 47 55.9	-3.3
	comp=Z,1.6nm,0.4s,mb4.0						
KECS	**Kecovo**	41.59	311	*e*P	P	17 48 01.8	+2.1
PSZ	**Piszkesteto**	41.89	310	*e*P	P	17 48 01.3	-0.8
	comp=Z,9.6nm,0.8s,mb4.5						
PSZ	**Piszkesteto**	41.89	310	*e*P	P	17 48 01.3	-0.9
PSZ				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
BOD	**Bodaibo**	42.23	34	*e*P	P	17 48 03.9	-1.0
BOD				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.8						
NJ2	**Nanjing**	42.74	73	*e*P	P	17 48 11.5	+2.1
NJ2				AP	pP	17 48 21.5	+8.5
NJ2				XP	sP	17 48 25.2	+11
NJ2				PP	PP	17 49 54.0	+2.8
NJ2				S	S	17 54 32.0	-0.5
NJ2				XS		17 54 48.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,400nm,6.2s						
NJ2				LR	LR		
	comp=N,1μm,18.0s,MS5.1						
NJ2				LR	LR		
	comp=E,1μm,16.0s,MS5.1						
NJ2				LR	LR		
	comp=Z,1μm,17.1s,MS4.9						
KMBO	**Kilima Mbogo**	42.74	231	P	P	17 48 10.7	+1.0
	comp=Z,1.3nm,0.9s,mb3.7,baz=31,slow=14,SNR=8.3						
KMBO				LR	LR	18 04 33.2	
	comp=Z,177nm,18.2s,MS4.0,baz=277,slow=34						
KMBO	**Kilima Mbogo**	42.74	231	⇑*e*P	P	17 48 11.6	+2.0
FINES	**FINESS Array B**	42.83	331	P	P	17 48 09.5	-0.2
	comp=Z,3.3nm,0.7s,mb4.2,baz=135,slow=8.1,SNR=10.0						
FINES				LR	LR	18 08 51.6	
	comp=Z,523nm,18.6s,MS4.5,baz=289,slow=40						
FINES	**FINESS Array B**	42.83	331	P	P	17 48 09.5	-0.2
FINES				LR	LR	18 08 51.6	
KAF	**Kangasniemi**	43.06	332	*e*p	P	17 48 10.8	-0.8
	comp=Z,2.1nm,0.4s,mb4.2,baz=121,slow=7.7						
KAF	**Kangasniemi**	43.06	332	*e*P	P	17 48 10.8	-0.8
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
MORC	**Moravsky Berou**	43.70	313	P	P	17 48 16.9	0.0
	comp=Z,4.5nm,1.0s,mb4.2						
MORC	**Moravsky Berou**	43.70	313	P	P	17 48 16.9	0.0
MORC				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
TIP	**Timpagrande**	43.79	297	*e*P	P	17 48 18.1	+0.3
DPC	**Dobruska-Polom**	44.56	313	*e*P	P	17 48 24.9	+1.0
KSP	**Ksiaz**	44.65	314	*e*P	P	17 48 28.5	+3.9
UPC	**Upice**	44.78	314	*e*P	P	17 48 26.4	+0.8
LEGS	**Legarje**	44.82	307	*e*P	P	17 48 26.7	+0.6
SGO	**Sicignano**	44.83	300	P	P	17 48 28.4	+2.2
	comp=Z,16nm,1.3s,mb4.7						
SGO	**Sicignano**	44.83	300	P	P	17 48 28.4	+2.2
SGO				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.7						
SSE	**Sheshan**	44.87	74	P	P	17 48 24.6	-2.1
SSE				S	S	17 54 59.3	-4.1
SSE				SS	SS	17 58 16.8	+0.5
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
SSE				LR	LR		
	comp=N,200nm,16.8s,MS4.3						
SSE				LR	LR		
	comp=E,220nm,16.8s,MS4.3						
SSE				LR	LR		
	comp=Z,290nm,15.8s,MS4.3						
SSE	**Sheshan**	44.87	74	P	P	17 48 24.6	-2.1
	comp=Z,29nm,0.7s,mb5.2						
SSE				pP	pP	17 48 27.7	-2.6
SSE				sP	sP	17 48 29.0	-2.9
SSE				PP	PP	17 50 08.0	-4.6
SSE				S	S	17 54 59.3	-4.1
SSE				sS		17 55 05.0	
SSE				SS	SS	17 58 16.8	+0.5
SSE				LR	LR		
	comp=Z,300nm,15.8s,MS4.3						
PDKS	**Podkum**	45.05	307	*e*P	P	17 48 29.4	+1.6
CII	**Carovilli**	45.54	301	*e*P	P	17 48 32.1	+0.3
	comp=Z,12nm,0.8s,mb4.9						
PVCC	**Panska Ves**	45.69	314	*e*P	P	17 48 36.1	+3.2
GERES	**GERESS Array B**	46.09	311	P	P	17 48 35.6	-0.5
	comp=Z,1.9nm,0.7s,mb4.1,baz=101,slow=6.8,SNR=14						
BRG	**Berggiesshubel**	46.13	314	*e*P	P	17 48 40.3	+4.0
	comp=Z,6.4nm,0.8s,mb4.6						
BRG	**Berggiesshubel**	46.13	314	*e*P	P	17 48 40.3	+4.0
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
KHC	**Kasperske Hory**	46.20	312	*e*P	P	17 48 42.2	+5.3
KHC				x	x	17 49 25.0	
KHC	**Kasperske Hory**	46.20	312	*e*P	P	17 48 42.2	+5.3
KHC				*e*		17 49 25.0	
PTQR	**Pietraquaria**	46.20	302	P	P	17 48 41.9	+4.9
ARV	**Arcevia**	46.49	304	P	P	17 48 39.3	0.0
	comp=Z,15nm,0.8s,mb5.0						
SNTG	**Esanatoglia**	46.50	303	P	P	17 48 40.7	+1.4
CN2	**Changchun**	46.84	56	*e*P	P	17 48 40.6	-1.4
KEV	**Kevo**	47.06	341	*e*p	P	17 48 36.7	-6.8
	comp=Z,1.9nm,0.6s,mb4.2						
KEV	**Kevo**	47.06	341	*e*P	P	17 48 36.7	-6.8
KEV				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SFI	**Santa Sofia**	47.27	304	P	P	17 48 46.9	+1.4
ARCES	**ARCESS Array B**	47.36	341	P	P	17 48 43.7	-2.1
	comp=Z,3.0nm,0.4s,mb4.6,baz=127,slow=6.8,SNR=28						
ARCES				LR	LR	18 08 32.1	
	comp=Z,458nm,19.1s,MS4.5,baz=130,slow=36						
ARE0	**ARCESS Array S**	47.36	341	P	P	17 48 44.2	-1.6
PGD	**Poggio Sodo**	47.36	304	P	P	17 48 48.5	+2.3
VMG	**Vicchio**	47.49	304	P	P	17 48 49.3	+2.1
MOX	**Moxa**	47.58	313	*i* P	P	17 48 48.9	+1.1
	comp=Z,logA/T=1.1,mb4.9						
MOX	**Moxa**	47.58	313	*e*P	P	17 48 48.9	+1.1
	comp=Z,21nm,1.5s,mb5.0						
MOX	**Moxa**	47.58	313	*e*P	P	17 48 48.9	+1.1
MOX				pmax	pmax		
	comp=Z,21nm,1.5s,mb5.0						
GRA1	**Grafenberg Arr**	47.77	312	*e*P	P	17 48 50.8	+1.5
	comp=Z,6.0nm,1.1s,mb4.5						
GRF	**Grafenberg Arr**	47.77	312	*e*P	P	17 48 50.8	+1.5
	comp=Z,6.0nm,1.1s,mb4.5						
GRF	**Grafenberg Arr**	47.77	312	*e*P	P	17 48 50.8	+1.5
GRF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
GRF	**Grafenberg Arr**	47.77	312	*e*P	P	17 48 50.8	+1.5
GRF				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
KS15	**Wonju Array Si**	49.24	64	*e*P	P	17 49 01.3	+0.4
NB2	**NORSAR Subarra**	49.38	327	P	P	17 49 00.9	-0.7
	comp=Z,6.1nm,0.7s,mb4.7,baz=107,slow=7.4						
NOA	**NORSAR Array B**	49.38	327	P	P	17 48 59.3	-2.3
	comp=Z,6.5nm,0.7s,mb4.8,baz=106,slow=7.6,SNR=17						
NOA				LR	LR	18 12 21.3	
	comp=Z,359nm,21.6s,MS4.3,baz=110,slow=39						
PGF	**Pioggiola**	49.43	303	*e*P	P	17 49 00.6	-1.6
VSL	**Villasalto**	49.46	299	*e*P	P	17 49 04.0	+1.5
	comp=Z,16nm,0.8s,mb5.1						
NAO	**NORSAR Subarra**	49.52	327	P	P	17 49 00.9	-1.8
	comp=Z,6.1nm,0.7s,mb4.7						
NAO	**NORSAR Subarra**	49.52	327	P	P	17 49 00.9	-1.8
NAO				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
MDJ	**Mudanjiang**	49.78	55	P	P	17 49 02.0	-2.9
MDJ				AMB	AMB		
	comp=Z,90nm,7.7s						
MDJ				LR	LR		
	comp=N,280nm,19.0s,MS4.3						
MDJ				LR	LR		
	comp=E,150nm,20.8s,MS4.3						
MDJ				LR	LR		
	comp=Z,230nm,17.7s,MS4.2						
KONO	**Kongsberg**	49.89	325	*i* P	P	17 49 01.4	-4.1
SBF	**Sospel**	50.46	304	*e*P	P	17 49 08.7	-1.4
	comp=Z,32nm,0.9s,mb5.1						
LPG	**La Plagne**	50.82	307	*e*P	P	17 49 12.6	-0.2
	comp=Z,13nm,0.8s,mb4.6						
LPL	**La Plagne**	50.84	307	*e*P	P	17 49 12.5	-0.4
	comp=Z,9.2nm,0.8s,mb4.5						
MBDF	**Montbardon**	50.87	306	*e*P	P	17 49 12.7	-0.5
	comp=Z,24nm,0.9s,mb4.8						
YAK	**Yakutsk**	51.00	32	⇑*e*P	P	17 49 13.6	-0.3
YAK				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
YAK				MLR	MLR		
	comp=Z,400nm,22.0s,MS4.4						
FRF	**La Foret Royal**	51.05	304	*e*P	P	17 49 13.9	-0.7
KLR	**Kul’dur**	51.07	49	*e*P	P	17 49 12.2	-2.5
KLR				MLR	MLR		
	comp=N,2μm,15.0s,MS5.3						
KLR				MLR	MLR		
	comp=E,500nm,15.0s,MS5.3						
LMR	**La Mourre**	51.18	304	*e*P	P	17 49 14.4	-1.1
CABF	**La Chapelle**	51.22	308	*e*P	P	17 49 15.2	-0.6
	comp=E,64nm,1.3s,mb5.1						
ORIF	**Oris-en-Rattie**	51.48	306	*e*P	P	17 49 17.3	-0.5
ORIF				*e*R			
	comp=E,438nm,18.0s						
SMRF	**Simiane la Rot**	51.79	305	*e*P	P	17 49 19.6	-0.6
VIVF	**Saint-Julien-l**	52.34	306	*e*P	P	17 49 23.0	-1.4
	comp=E,26nm,1.1s,mb4.8						
LOR	**Lormes**	52.70	309	*e*P	P	17 49 26.1	-0.9
LOR				*e*R			
	comp=E,415nm,20.5s						
SMF	**Signal de Mont**	52.76	308	*e*P	P	17 49 26.2	-1.2
	comp=E,22nm,1.0s,mb4.8						
SSF	**Saint Saulge**	52.95	309	*e*P	P	17 49 27.8	-1.1
	comp=E,10.0nm,0.8s,mb4.5						
LASF	**Ste Croix**	53.01	305	*e*P	P	17 49 28.4	-0.9
	comp=E,41nm,1.3s,mb4.9						
TIXI	**Tiksi**	53.20	20	⇑*e*P	P	17 49 29.0	-1.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.3						
CAF	**Calviac**	54.18	306	*e*P	P	17 49 37.0	-0.9
	comp=Z,35nm,1.2s,mb4.9						
EPF	**Esparros**	55.69	304	*e*P	P	17 49 48.2	-0.8
SJPF	**Ste Jean**	56.80	305	*e*P	P	17 49 56.1	-0.9
MJAR	**Matsushiro Arr**	57.52	63	P	P	17 50 02.9	+0.7
	comp=Z,2.3nm,0.8s,mb4.3,baz=287,slow=11,SNR=4.9						
MJAR				LR	LR	18 17 47.1	
	comp=Z,200nm,18.8s,MS4.2,baz=260,slow=39						
YSS	**Yuzh-Sakhalins**	58.64	50	*e*P	P	17 50 10.0	+0.2
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.3						
LSZ	**Lusaka**	59.19	227	P	P	17 50 14.4	+0.4
ESDC	**Sonseca Array**	59.55	301	P	P	17 50 16.8	+0.5
	comp=Z,4.3nm,0.6s,mb4.7,baz=64,slow=7.2,SNR=20						
ESLA	**Sonseca Array**	59.55	301	*e*P	P	17 50 14.2	-2.0
	comp=Z,3.2nm,1.0s,mb4.3						
DAG	**Danmarks Havn**	61.28	345	⇑*i*P	P	17 50 28.6	+1.0
	comp=Z,8.0nm,0.6s,mb5.0						
DAG	**Danmarks Havn**	61.28	345	⇑*i*P	P	17 50 28.6	+1.0
DAG				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb5.0						
SEY	**Seymchan**	61.50	31	⇑*e*P	P	17 50 29.0	-0.2
MTE	**Manteigas**	62.02	303	*e*P	P	17 50 32.3	-0.7
	comp=Z,5.0nm,0.5s,mb4.9						
EVO	**Evora**	62.89	301	*e*P	P	17 50 37.8	-1.0
	comp=Z,25nm,1.0s,mb5.0						
BILL	**Bilibino**	65.95	24	⇓*e*P	P	17 50 58.6	+0.4
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
BILL				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.6						
SUMG	**Summit**	67.43	342	*e*P	P	17 51 07.3	-0.3
	comp=Z,18nm,0.7s,mb5.2						
LBTB	**Lobatse**	68.11	222	*e*P	P	17 51 13.0	+0.4
	comp=Z,4.7nm,0.9s,mb4.5						
LBTB	**Lobatse**	68.11	222	*e*P	P	17 51 13.0	+0.4
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
TSUM	**Tsumeb**	69.06	232	*e*P	P	17 51 19.5	+0.9
	comp=Z,8.0nm,1.2s,mb4.5						
BOSA	**Boshof**	71.05	220	P	P	17 51 31.8	+1.2
	comp=Z,5.6nm,1.1s,mb4.4,baz=60,slow=13,SNR=3.2						
BOSA				LR	LR	18 22 19.5	
	comp=Z,122nm,18.4s,MS4.2,baz=49,slow=36						
FITZ	**Fitzroy Crossi**	72.12	123	*e*P	P	17 51 40.3	+3.1
	comp=Z,10nm,0.9s,mb4.8						
FITZ	**Fitzroy Crossi**	72.12	123	LR	LR	18 22 33.7	
	comp=Z,236nm,20.6s,MS4.4,baz=129,slow=35						
DBIC	**Dimbokro**	72.65	268	P	P	17 51 41.8	+1.3
	comp=Z,5.1nm,1.1s,mb4.4,baz=37,slow=8.9,SNR=3.3						
DBIC				LR	LR	18 28 34.1	
	comp=Z,229nm,19.2s,MS4.5,baz=302,slow=40						
KAKA	**Kakadu**	74.05	115	*e*P	P	17 52 07.5	+19
	comp=Z,11nm,0.7s,mb4.9						
WRA	**Warramunga Arr**	79.74	120	P	P	17 52 21.4	+1.1
	comp=Z,13nm,0.9s,mb4.9,baz=318,slow=5.1,SNR=66						
WRAB	**Tennant Creek**	79.74	120	*e*P	P	17 52 20.9	+0.7
	comp=Z,25nm,0.9s,mb5.1						
WRAB	**Tennant Creek**	79.74	120	*c* *i*P	P	17 52 21.4	+1.1
WB2	**Warramunga Arr**	79.75	120	⇑*i*P	P	17 52 21.4	+1.1
INK	**Inuvik**	81.38	8	P	P	17 52 28.0	+0.1
	comp=Z,2.7nm,0.6s,mb4.3,baz=33,slow=6.9,SNR=14						
INK	**Inuvik**	81.38	8	*e*P	P	17 52 27.5	-0.5
	comp=Z,6.0nm,0.7s,mb4.6						
INK	**Inuvik**	81.38	8	*e*P	P	17 52 27.5	-0.5
INK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ASPA	**Alice Springs**	81.61	123	*e*P	P	17 52 31.2	+1.1
COLA	**College**	81.97	15	P	P	17 52 31.4	+0.3
	comp=Z,4.7nm,0.8s,mb4.5						
COLA	**College**	81.97	15	P	P	17 52 31.4	+0.3
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ILAR	**Eielson Array**	82.27	15	P	P	17 52 32.7	0.0
	comp=Z,1.8nm,1.0s,mb4.0,baz=319,slow=7.2,SNR=5.9						
ILAR				PP	PP	17 55 42.0	-1.4
	comp=Z,0.9nm,1.0s,baz=325,slow=7.7,SNR=5.2						
ILAR				LR	LR	18 35 09.5	
	comp=Z,220nm,19.2s,MS4.5,baz=351,slow=40						
DAWY	**Dawson**	84.42	12	*e*P	P	17 52 43.1	-0.5
SCHQ	**Schefferville**	88.11	336	LR	LR	18 33 58.3	
	comp=Z,172nm,18.3s,MS4.5,baz=254,slow=37						
YKA	**Yellowknife Ar**	88.60	2	P	P	17 53 05.5	+1.4
	comp=Z,7.5nm,0.8s,mb5.0,baz=350,slow=5.2,SNR=3.1						
YKA				LR	LR	18 37 29.5	
	comp=Z,317nm,20.0s,MS4.7,baz=310,slow=39						
YKA	**Yellowknife Ar**	88.60	2	P	P	17 53 05.5	+1.4
YKA				LR	LR	18 37 29.5	
STKA	**Stephens Creek**	91.89	126	LR	LR	18 35 43.6	
	comp=Z,193nm,19.3s,MS4.6,baz=27,slow=36						
MAW	**Mawson**	96.60	182	LR	LR	18 33 02.9	
	comp=Z,162nm,18.0s,MS4.5,baz=162,slow=33						
ULM	**Lac du Bonnet**	99.78	350	LR	LR	18 40 31.1	
	comp=Z,180nm,19.8s,MS4.6,baz=9.7,slow=36						
VNA2	**Neumayer--Watz**	112.97	200		PKPdf	17 58 54.6	+4.5
VNA2	**Neumayer--Watz**	112.97	200		PKPdf	17 59 00.7	+11
VNA3	**Neumayer Olymp**	113.78	200		PKPdf	17 58 58.7	+7.0
VNA3	**Neumayer Olymp**	113.78	200		PKPdf	17 59 02.0	+10
PLCA	**Paso Flores**	145.15	240	PKPbc	PKPbc	17 59 51.7	+3.4
	comp=Z,2.4nm,0.9s,baz=50,slow=9.3,SNR=5.5						
PLCA	**Paso Flores**	145.15	240	PKPbc	PKPbc	17 59 51.7	+3.4

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*NEIC **11** 17:42:55.3, 17.21N×100.93W, h16^{km}, MD3.7(MEX), After MEX.*

MEX 11 17:42:55.3±0.9**, 17.21N×100.93W, h16^{km}**±8^{km}**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	0.65	308	*i* P	Pb	17 43 05.5	-2.2
ZIIG				*e*S	Sb	17 43 14.2	-2.0
CAIG	**El Cayaco**	0.66	104	*i* P	Pb	17 43 05.7	-2.2
CAIG				*e*S	Sb	17 43 13.8	-2.7
ACX	**Acapulco**	1.03	109	*i* P	Pb	17 43 12.0	-2.2
ACX				*i* S	Sb	17 43 24.0	-3.3
PPM	**Popocatepetl**	2.87	50	*e*P	Pn	17 43 38.0	-3.3

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*IDC **11** 17:49:04.9±1.6, 29.19N×68.91E, mb3.6/8, mb1 3.8/8, mb1mx3.6/24, mbtmp3.6/8, Error ellipse: s-maj=41.3km s-min=24.9km az=49.0*

*MOS **11** 17:49:05.1±1.1, 29.30N×68.94E, h10^{km}, mb4.0/2, Error ellipse: s-maj=37.8km s-min=14.2km az=83.6*

*NEIC **11** 17:49:06.8±1.1, 29.33N×68.92E, h10^{km}, mb3.9/2, Error ellipse: s-maj=21.9km s-min=19.1km az=69.0*

ISC 11 17:49:06.0±1.4**, 29.3N**±0.2×**69.2E**±0.2**, h10^{km}, n14, σ1^{s}10**/14**, mb3.7**/9**, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	13.95	17	*e*Pn	P	17 52 25.0	-0.9
	4.2nm,0.7s						
AAK	**Ala-Archa**	13.95	17	*e*P	P	17 52 25.0	-0.9
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	**Makanchi Array**	20.21	27	P	P	17 53 42.5	-1.2
	comp=Z,0.7nm,0.5s,baz=216,slow=10,SNR=11						
AKTO	**Aktyubinsk**	22.69	341	P	P	17 54 10.5	+1.7
	comp=Z,1.9nm,0.7s,mb3.7,baz=159,slow=12,SNR=6.6						
BVAR	**Borovoye Array**	23.68	2	P	P	17 54 19.1	+0.7
	comp=Z,1.1nm,0.6s,mb3.5,baz=169,slow=7.6,SNR=6.5						
BRVK	**Borovoye**	23.71	2	*e*P	P	17 54 19.4	+0.7
	comp=Z,6.6nm,1.3s,mb3.9						
BRVK	**Borovoye**	23.71	2	*e*P	P	17 54 19.4	+0.7
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb3.9						
CHKZ	**Chkalovo**	24.34	2	*e*P	P	17 54 24.4	-0.4
	comp=Z,1.6nm,0.8s,mb3.5						
CHKZ	**Chkalovo**	24.34	2	*e*P	P	17 54 24.5	-0.3
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
SONM	**Songino Array**	34.04	47	P	P	17 55 53.2	+0.9
	comp=Z,0.2nm,0.6s,mb3.2,baz=247,slow=11,SNR=2.2						
AKASG	**Malin Array Be**	36.69	317	P	P	17 56 11.4	-3.3
	comp=Z,0.7nm,0.7s,mb3.6,baz=105,slow=6.8,SNR=4.6						
ARCES	**ARCESS Array B**	47.28	341	P	P	17 57 40.5	-0.5
	comp=Z,1.9nm,1.0s,mb4.0,baz=131,slow=8.3,SNR=7.4						
WRA	**Warramunga Arr**	79.65	120	P	P	18 01 15.2	-0.3
	comp=Z,1.1nm,0.7s,mb3.9,baz=320,slow=4.9,SNR=11						
INK	**Inuvik**	81.20	8	P	P	18 01 23.6	+0.8
	comp=Z,1.0nm,0.8s,mb3.8,baz=35,slow=4.3,SNR=4.9						

IDC 11 17:49:47.3±1.7**, 2.95N×128.08E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/16**, mbtmp3.7**/4**, Error ellipse: s-maj=156.2km s-min=20.8km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.56	165	P	P	17 55 00.3	-0.2
	0.6nm,0.5s,baz=344,slow=10,SNR=19						
STKA	**Stephens Creek**	36.94	161	P	P	17 56 57.1	-2.9
	0.6nm,0.3s,baz=346,slow=8.1,SNR=8.4						
MKAR	**Makanchi Array**	58.97	325	P	P	17 59 49.5	-1.5
	0.5nm,0.4s,baz=113,slow=8.3,SNR=12						
BVAR	**Borovoye Array**	68.71	327	P	P	18 00 52.2	-2.7
	0.5nm,0.4s,baz=127,slow=7.4,SNR=5.6						

IDC 11 18:07:30.1±3.6**, 29.36N×68.79E, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/22**, mbtmp3.4**/4**, Error ellipse: s-maj=95.6km**

s-min=35.4km az=80.0,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**20.34**	**27**	P	P	18 12 06.7	-3.9
	0.7nm,0.7s,baz=201,slow=10,SNR=7.3						
BVAR	**Borovoye Array**	**23.67**	**2**	P	P	18 12 43.4	-0.5
	0.6nm,0.5s,baz=170,slow=9.0,SNR=5.9						
SONM	**Songino Array**	**34.27**	**47**	P	P	18 14 18.7	-1.2
	0.5nm,0.8s,baz=263,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**79.95**	**120**	P	P	18 19 41.3	-1.7
	0.5nm,0.8s,baz=318,slow=5.0,SNR=5.1						

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*NEIC **11** 18:19:40.1±0.7, 15.51S×70.29W, h202^{km}±7^{km}, mb4.3/13, Error ellipse: s-maj=11.6km s-min=6.4km az=64.0*

*IDC **11** 18:19:40.5±1.3, 15.56S×70.24W, h208^{km}±13^{km}, mb3.8/8, mb1 4.0/10, mb1mx3.7/21, mbtmp4.3/10, Error ellipse: s-maj=25.4km s-min=11.5km az=72.0*

ISC 11 18:19:39.3±0.6**, 15.59S**±0.06×**70.37W**±0.06**, h212**^{km}±6^{km}**, n40,** σ**0**^{s}**95**/40**, mb4.1**/17**, 1C-1D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.26**	**108**	P	**P**	**18 20 23.5**	**+1.7**
	baz=320,slow=8.6						
LPAZ				S	**S**	**18 20 54.2**	**-0.3**
	52nm,0.3s,baz=197,slow=19,SNR=12						
LPAZ	**La Paz**	**2.26**	**108**	⇑*i*Pn	**P**	**18 20 23.5**	**+1.8**
LPAZ				*e*Sn	**S**	**18 20 54.6**	**+0.1**
NNA	**Nana**	**7.24**	**299**	*e*Pn	**P**	**18 21 23.4**	**0.0**
	25nm,0.7s						
NNA				*e*S	**S**	**18 22 44.9**	**+0.2**
SIV	**San Ignacio**	**8.96**	**94**	P	**P**	**18 21 43.4**	**-2.3**
	3.0nm,0.3s,baz=284,slow=11,SNR=74						
SIV				S	**S**	**18 23 25.6**	**+1.0**
	0.3nm,0.3s,baz=220,slow=21,SNR=3.2						
SAML	**Samuel**	**9.63**	**48**	⇓*i*Pn	**P**	**18 21 53.0**	**-1.5**
	16nm,1.0s						
CFAA	**Coronel Fontan**	**16.06**	**173**	P	**P**	**18 23 15.0**	**-0.1**
	0.1nm,0.3s,baz=152,slow=22,SNR=6.5						
CFAA				S	**S**	**18 26 04.5**	**-2.0**
	0.1nm,0.3s,baz=239,slow=18,SNR=2.9						
TRQA	**Tornquist**	**23.57**	**163**	*e*P	**P**	**18 24 32.5**	**+0.6**
	5.0nm,0.8s,mb4.2						
PLCA	**Paso Flores**	**25.05**	**180**	P	**P**	**18 24 45.8**	**0.0**
	4.2nm,0.5s,mb4.3,baz=353,slow=12,SNR=16						
PLCA	**Paso Flores**	**25.05**	**180**	*e*P	**P**	**18 24 45.6**	**-0.2**
	3.9nm,0.5s,mb4.3						
USHA	**Ushuaia**	**39.19**	**178**	P	**P**	**18 26 48.6**	**+0.4**
	5.7nm,0.6s,mb4.3,baz=341,slow=6.3,SNR=6.6						
JCT	**Junction City**	**53.86**	**328**	*e*P	**P**	**18 28 42.0**	**-0.7**
	5.4nm,0.3s,mb4.6						
TXAR	**Lajitas Array**	**55.03**	**324**	P	**P**	**18 28 51.0**	**-0.1**
	1.4nm,0.6s,mb3.7,baz=150,slow=9.5,SNR=17						
LTX	**Lajitas**	**55.03**	**324**	*e*P	**P**	**18 28 50.9**	**-0.3**
	2.7nm,0.7s,mb3.9						
MNTX	**Cornudas Mount**	**57.78**	**325**	*e*P	**P**	**18 29 09.9**	**-0.8**
	4.5nm,1.0s,mb4.0						
CBKS	**Cedar Bluff**	**60.70**	**334**	*e*P	**P**	**18 29 30.4**	**-0.1**
	16nm,1.0s,mb4.6						
SDCO	**Great Sand Dun**	**62.49**	**329**	*e*P	**P**	**18 29 42.6**	**+0.2**
	5.3nm,1.0s,mb4.1						
VNA3	**Neumayer Olymp**	**66.09**	**162**		**P**	**18 30 09.1**	**+3.9**
VNA3	**Neumayer Olymp**	**66.09**	**162**		**P**	**18 30 11.3**	**+6.1**
VNA3	**Neumayer Olymp**	**66.09**	**162**	P	**P**	**18 30 06.9**	**+1.7**
VNA3				P		18 30 09.1	
VNA3				P		18 30 11.3	
VNA1	**Neumayer--Stat**	**66.29**	**161**		**P**	**18 30 10.1**	**+3.6**
VNA1	**Neumayer--Stat**	**66.29**	**161**		**P**	**18 30 13.8**	**+7.3**
VNA1	**Neumayer--Stat**	**66.29**	**161**	P	**P**	**18 30 08.1**	**+1.6**
VNA1				P		18 30 10.1	
VNA1				P		18 30 13.8	
VNA2	**Neumayer--Watz**	**66.66**	**161**		**P**	**18 30 12.1**	**+3.3**
VNA2	**Neumayer--Watz**	**66.66**	**161**		**P**	**18 30 14.9**	**+6.1**
VNA2	**Neumayer--Watz**	**66.66**	**161**	P	**P**	**18 30 09.8**	**+1.0**
VNA2				P		18 30 12.1	
VNA2				P		18 30 14.9	
RSSD	**Black Hills**	**66.90**	**334**	*e*P	**P**	**18 30 10.9**	**+0.2**
	4.5nm,0.8s,mb4.2						
SNAA	**Sanae**	**68.29**	**162**	P	**P**	**18 30 18.7**	**-0.2**
	2.2nm,0.5s,mb4.0,baz=283,slow=7.1,SNR=112						
SNAA	**Sanae**	**68.29**	**162**	*e*P	**P**	**18 30 18.7**	**-0.2**
	5.7nm,0.6s,mb4.4						
PDAR	**Pinedale Array**	**68.33**	**330**	P	**P**	**18 30 19.8**	**+0.2**
	0.7nm,0.5s,mb3.6,baz=126,slow=8.5,SNR=8.7						
ULM	**Lac du Bonnet**	**69.29**	**343**	P	**P**	**18 30 23.9**	**-1.5**
	3.0nm,0.4s,mb4.2,baz=155,slow=11,SNR=8.0						
RRI2	**Red Ridge**	**69.62**	**329**	*e*P	**P**	**18 30 28.2**	**+0.7**
	5.0nm,0.7s,mb4.2						
ELK	**Elko**	**69.80**	**325**	*e*P	**P**	**18 30 28.6**	**0.0**
	1.8nm,0.8s,mb3.8						
NVAR	**Mina Array Bea**	**70.02**	**322**	P	**P**	**18 30 31.3**	**+1.4**
	0.6nm,0.6s,mb3.4,baz=122,slow=7.4,SNR=5.8						
YKA	**Yellowknife Ar**	**85.18**	**341**	P	**P**	**18 31 53.0**	**+0.4**
	3.4nm,0.6s,mb4.3,baz=134,slow=5.0,SNR=12						
YKA	**Yellowknife Ar**	**85.18**	**341**	P	**P**	**18 31 53.0**	**+0.4**
ZAL	**Zalesovo**	**137.09**	**21**	SKPbc		18 41 52.8	
	2.0nm,1.0s,baz=102,slow=2.0,SNR=7.0						
WRA	**Warramunga Arr**	**137.14**	**215**	PKP	PKPdf	18 38 39.8	+1.8
	0.7nm,0.5s,baz=142,slow=1.7,SNR=15						
WRA				SKPbc		18 41 52.5	
	0.7nm,0.6s,baz=144,slow=2.5,SNR=18						
MKAR	**Makanchi Array**	**141.46**	**30**	SKPbc		18 42 04.7	
	0.7nm,1.0s,baz=225,slow=1.7,SNR=4.4						
HIA	**Hailar**	**145.41**	**348**	*e*PKPbc	PKPbc	18 38 54.5	+2.0
SONM	**Songino Array**	**147.74**	**4**	PKPbc	PKPdf	18 39 01.2	+5.6
	1.3nm,0.6s,baz=330,slow=2.2,SNR=9.9						

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*MOS **11** 19:10:24.3±0.7, 3.78S×77.04W, h33^{km}, mb5.2/23, Error ellipse: s-maj=15.1km s-min=7.4km az=112.5*

*BJI **11** 19:10:31.8, 3.70S×77.00W, h87^{km}, mB5.4, Ms5.5, Msz5.1*

*HRVD **11** 19:10:31.9±0.5, 3.92S×77.12W, h78^{km}±7^{km}, MW4.8/38, Centroid moment Tensor Solution. LP body waves: s11,c13;Mantle waves: s38,c57; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.42±.18; M$_{\theta\theta}$0.60±.17; M$_{\phi\phi}$0.81±.19; M$_{r\theta}$-0.99±.09; M$_{\theta\phi}$-1.07±.12; M$_{\phi r}$0.74±.11; Best double couple: M$_0$2.03×10^{16} NP1:ϕ_s329°,δ27°,λ-73°. NP2:ϕ_s130°,δ64°,λ-98°. Principal axes: T 2.195, Plg19°, Azm226°; N -.335, Plg8°, Azm133°; P -1.864, Plg70°, Azm22°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **11** 19:10:31.9±0.1, 3.75S×77.00W, mb5.0/107 Error ellipse: s-maj=5.1km s-min=2.9km az=49.0*

*IDC **11** 19:10:32.0±0.6, 3.75S×77.03W, h88^{km}±4^{km}, mb4.5/27, mb1 4.6/31, mb1mx4.6/33, mbtmp4.8/31, MS3.7/2, Ms1 3.6/2, ms1mx3.0/24, Error ellipse: s-maj=17.1km s-min=9.7km az=57.0*

ISC 11 19:10:30.3±0.2**, 3.76S**±0.04×**77.08W**±0.04**, h87**^{km}**, h87**^{km}±.8^{km}**:pP-P, n286,** σ**0**^{s}**73**/242**, mb4.8**/130**, 12C-14D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**8.17**	**178**	*e*P	**P**	**19 12 28.0**	**0.0**
	304nm,0.6s						
ROSC	**El Rosal**	**8.99**	**18**	P	**P**	**19 12 43.1**	**+4.0**
	1.9nm,0.3s,baz=288,slow=23,SNR=7.4						
ARE	**Arequipa**	**13.76**	**157**	*e*P	**P**	**19 13 54.0**	**+11**
SDV	**Santo Domingo**	**14.11**	**27**	P	**P**	**19 13 49.1**	**+1.7**
	6.9nm,0.3s,baz=224,slow=9.9,SNR=20						
SDV	**Santo Domingo**	**14.11**	**27**	*e*P	**P**	**19 13 48.5**	**+1.0**
	47nm,0.6s						
SAML	**Samuel**	**14.73**	**111**	*e*P	**P**	**19 13 51.4**	**-4.1**
	503nm,0.9s						
LPAZ	**La Paz**	**15.24**	**145**	P	**P**	**19 14 03.3**	**+1.4**
	0.4nm,0.3s,baz=329,slow=12,SNR=4.1						
LPAZ	**La Paz**	**15.24**	**145**	*e*P	**P**	**19 14 02.7**	**+0.8**
	465nm,1.1s						
LPAZ	**La Paz**	**15.24**	**145**	*e*P	**P**	**19 14 02.7**	**+0.8**
LPAZ				pmax	pmax		
	comp=Z,465nm,1.1s						
JTS	**JuntasAbangare**	**16.01**	**331**	P	**P**	**19 14 14.2**	**+2.5**
	comp=Z,1.0nm,0.3s,baz=128,slow=7.0,SNR=7.0						
JTS	**JuntasAbangare**	**16.01**	**331**	*e*P	**P**	**19 14 13.1**	**+1.4**
	comp=Z,43nm,1.0s						
JTS	**JuntasAbangare**	**16.01**	**331**	⇓*e*P	**P**	**19 14 15.3**	**+3.6**
SIV	**San Ignacio**	**19.88**	**129**	P	**P**	**19 14 57.0**	**-0.2**
	comp=Z,1.8nm,0.3s,baz=301,slow=11,SNR=46						
SJG	**San Juan**	**24.26**	**26**	P	**P**	**19 15 41.7**	**+1.2**
	comp=Z,90nm,0.6s,mb5.3,baz=195,slow=5.5,SNR=34						
SJG	**San Juan**	**24.26**	**26**	*e*P	**P**	**19 15 40.9**	**+0.4**
	comp=Z,85nm,0.8s,mb5.1						
SJG	**San Juan**	**24.26**	**26**	*e*P	**P**	**19 15 40.9**	**+0.4**
SJG				pmax	pmax		
	comp=Z,85nm,0.8s						
CFAA	**Coronel Fontan**	**28.92**	**164**	P	**P**	**19 16 22.8**	**-0.6**
	comp=Z,0.3nm,0.8s,baz=288,slow=6.4,SNR=2.6						
CFAA				pP	pP	19 16 43.5	+0.2
	comp=Z,1.2nm,1.0s,baz=322,slow=22,SNR=2.0						
CPUP	**Villa Florida**	**29.35**	**142**	*e*P	**P**	**19 16 25.6**	**-1.7**
	comp=Z,14nm,0.7s,mb4.7						
CPUP	**Villa Florida**	**29.35**	**142**	*e*P	**P**	**19 16 25.6**	**-1.7**
CPUP				pmax	pmax		
	comp=Z,14nm,0.7s						
BDFB	**Brasilia**	**30.93**	**114**	P	**P**	**19 16 40.9**	**-0.4**
	comp=Z,8.0nm,0.8s,mb4.5,baz=267,slow=8.4,SNR=7.8						
BDFB				LR	LR	19 31 10.0	
	comp=Z,63nm,21.1s,baz=90,slow=40						
BAO	**Brasilia Array**	**30.95**	**114**	P	**P**	**19 16 41.0**	**-0.5**
TRQA	**Tornquist**	**36.81**	**160**	*e*P	**P**	**19 17 30.8**	**-0.8**
	comp=Z,7.9nm,1.0s,mb4.6						
PLCA	**Paso Flores**	**37.27**	**172**	P	**P**	**19 17 35.9**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.0,baz=352,slow=9.9,SNR=3.8						
PLCA				pP	pP	19 17 56.0	-0.1
	comp=Z,4.7nm,0.5s,baz=342,slow=9.2,SNR=5.4						
PLCA				PcP	PcP	19 19 52.4	-1.3
	comp=Z,1.1nm,0.5s,baz=356,slow=20,SNR=3.4						
PLCA				pPcP		19 20 17.2	
	comp=Z,1.3nm,0.7s,baz=317,slow=5.1,SNR=3.0						
PLCA	**Paso Flores**	**37.27**	**172**	*e*P	**P**	**19 17 35.4**	**0.0**
	comp=Z,12nm,0.9s,mb4.8						
PLCA	**Paso Flores**	**37.27**	**172**	*e*P	**P**	**19 17 35.4**	**0.0**
PLCA				pmax	pmax		
	comp=Z,12nm,0.9s						
LRAL	**Lakeview Retre**	**37.78**	**346**	*e*P	**P**	**19 17 38.9**	**-0.9**
	comp=Z,36nm,1.1s,mb5.1						
CPCT	**Cooper Cave**	**39.63**	**350**	*e*P	**P**	**19 17 54.9**	**-0.2**
SWET	**Sewanee**	**39.66**	**349**	*e*P	**P**	**19 17 53.6**	**-1.6**
JCT	**Junction City**	**40.39**	**329**	*e*P	**P**	**19 18 02.4**	**+1.0**
	comp=Z,47nm,1.0s,mb5.3						
JCT	**Junction City**	**40.39**	**329**	*e*P	**P**	**19 18 02.4**	**+1.1**
JCT				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.3						
TZTN	**Tazewell**	**40.55**	**352**	*e*P	**P**	**19 18 02.3**	**-0.3**
BLA	**Blacksburg**	**40.88**	**356**	*e*P	**P**	**19 18 06.1**	**+0.7**
ELN	**Prospectdale**	**40.92**	**356**	*e*P	**P**	**19 18 06.5**	**+0.8**
UALR	**University of**	**40.94**	**341**	*e*P	**P**	**19 18 05.1**	**-0.7**
	comp=Z,31nm,0.9s,mb5.1						
WVT	**Waverly**	**40.94**	**347**	*e*P	**P**	**19 18 04.3**	**-1.6**
	comp=Z,15nm,0.5s,mb5.1						
WVT	**Waverly**	**40.94**	**347**	*e*P	**P**	**19 18 04.3**	**-1.5**
WVT				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.1						
FWV	**Forest Hill**	**41.28**	**356**	*e*P	**P**	**19 18 09.2**	**+0.6**
LTX	**Lajitas**	**41.64**	**324**	*e*P	**P**	**19 18 12.5**	**+0.8**
	comp=Z,6.4nm,0.7s,mb4.5						
LTX	**Lajitas**	**41.64**	**324**	*e*P	**P**	**19 18 12.5**	**+0.8**
LTX				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
TXAR	**Lajitas Array**	**41.64**	**324**	P	**P**	**19 18 12.5**	**+0.8**
	comp=Z,3.7nm,0.6s,mb4.3,baz=143,slow=9.9,SNR=19						
TXAR				PcP	PcP	19 20 07.5	-0.3
	comp=Z,3.4nm,0.8s,baz=143,slow=6.3,SNR=8.4						
TXAR				pPcP		19 20 32.0	
	comp=Z,1.2nm,0.8s,baz=146,slow=9.0,SNR=2.5						
TXAR	**Lajitas Array**	**41.64**	**324**	P	**P**	**19 18 12.5**	**+0.8**
TXAR				PcP	PcP	19 20 07.5	-0.3
TXAR				pPcP		19 20 32.0	
WCI	**Wyandotte Cave**	**42.65**	**349**	*e*P	**P**	**19 18 18.5**	**-1.4**
	comp=Z,18nm,0.9s,mb4.8						
FVM	**French Village**	**43.34**	**345**	*e*P	**P**	**19 18 24.1**	**-1.4**
	comp=Z,24nm,0.6s,mb5.1						
FVM				*e*pP	pP	19 18 45.7	-0.8
FVM	**French Village**	**43.34**	**345**	*e*P	**P**	**19 18 24.1**	**-1.5**
FVM				pmax	pmax		
	comp=Z,24nm,0.6s,mb5.1						
WMOK	**Wichita Mounta**	**43.40**	**334**	*e*P	**P**	**19 18 26.1**	**0.0**
	comp=Z,23nm,0.9s,mb4.9						
WMOK				*e*pP	pP	19 18 46.6	-0.5
WMOK	**Wichita Mounta**	**43.40**	**334**	*e*P	**P**	**19 18 26.1**	**0.0**
WMOK				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
MVL	**Millersville**	**43.55**	**1**	*e*P	**P**	**19 18 28.1**	**+0.8**
CCM	**Cathedral Cave**	**43.63**	**344**	*e*P	**P**	**19 18 26.5**	**-1.5**
	comp=Z,16nm,0.6s,mb4.9						
CCM				*e*pP	pP	19 18 48.9	0.0
CCM	**Cathedral Cave**	**43.63**	**344**	*e*P	**P**	**19 18 26.5**	**-1.4**
CCM				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.9						
GDL2	**Guadalupe Moun**	**44.17**	**326**	*e*P	**P**	**19 18 33.5**	**+1.2**
MNTX	**Cornudas Mount**	**44.37**	**325**	*e*P	**P**	**19 18 32.7**	**-1.2**
	comp=Z,12nm,0.9s,mb4.6						
MNTX				*e*pP	pP	19 18 55.5	+0.6
CPRX	**Cap Rock**	**44.53**	**327**	*e*P	**P**	**19 18 36.3**	**+1.1**
CPRX				*e*pP	pP	19 18 55.9	-0.3
AMTX	**Amarillo**	**44.87**	**331**	*e*P	**P**	**19 18 38.3**	**+0.5**
	comp=Z,7.0nm,0.5s,mb4.7						
AMTX				*e*pP	pP	19 18 59.4	+0.5
KSU1	**Kansas State U**	**46.30**	**339**	*e*P	**P**	**19 18 48.4**	**-0.8**
BNM	**Barren Site**	**46.88**	**326**	*e*P	**P**	**19 18 54.6**	**+0.8**
CBKS	**Cedar Bluff**	**47.26**	**336**	*e*P	**P**	**19 18 57.1**	**+0.4**
	comp=Z,24nm,1.0s,mb4.9						
CBKS	**Cedar Bluff**	**47.26**	**336**	*e*P	**P**	**19 18 57.1**	**+0.4**
CBKS				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.9						
LAZ	**Ladron**	**47.36**	**326**	*e*P	**P**	**19 18 58.6**	**+1.1**
ANMO	**Albuquerque**	**47.38**	**327**	P	**P**	**19 18 58.8**	**+1.0**
	comp=Z,22nm,0.7s,mb5.0,baz=146,slow=9.0,SNR=35						
ANMO	**Albuquerque**	**47.38**	**327**	*e*P	**P**	**19 18 58.5**	**+0.8**
	comp=Z,25nm,0.9s,mb4.9						
ANMO	**Albuquerque**	**47.38**	**327**	*e*P	**P**	**19 18 58.5**	**+0.8**
ANMO				pmax	pmax		
	comp=Z,25nm,0.9s						
MIV	**Mineville/With**	**47.73**	**3**	*e*P	**P**	**19 19 00.3**	**0.0**
TUC	**Tucson**	**48.07**	**321**	*e*P	**P**	**19 19 03.4**	**+0.3**
	comp=Z,9.2nm,0.8s,mb4.7						
TUC				*e*pP	pP	19 19 25.1	+0.7
TUC	**Tucson**	**48.07**	**321**	*e*P	**P**	**19 19 03.4**	**+0.3**
TUC				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
LOZ	**Lake Ozonia**	**48.22**	**2**	*e*P	**P**	**19 19 03.8**	**-0.3**
SADO	**Sadowa**	**48.35**	**358**	P	**P**	**19 19 04.0**	**-1.1**
	comp=Z,9.5nm,0.5s,mb4.9,baz=220,slow=7.9,SNR=5.0						
FRNY	**Flat Rock**	**48.48**	**3**	*e*P	**P**	**19 19 06.4**	**+0.3**
SDCO	**Great Sand Dun**	**49.01**	**330**	*e*P	**P**	**19 19 11.0**	**+0.8**
	comp=Z,23nm,0.9s,mb5.1						
SDCO				*e*pP	pP	19 19 32.4	+0.8
WUAZ	**Wupatki**	**50.59**	**323**	*e*P	**P**	**19 19 23.3**	**+0.9**
	comp=Z,41nm,1.0s,mb5.4						
WUAZ				*e*pP	pP	19 19 43.3	-0.6
ISCO	**Idaho Springs**	**50.67**	**332**	*e*P	**P**	**19 19 23.3**	**+0.3**
	comp=Z,3.4nm,0.6s,mb4.5						
ISCO				*e*pP	pP	19 19 44.0	-0.4
ISCO				*e*PcP	PcP	19 20 38.9	-0.4
SMCO	**Snowmass**	**50.85**	**330**	*e*P	**P**	**19 19 24.6**	**+0.2**
	comp=Z,2.3nm,0.6s,mb4.4						
SMCO				*e*PcP	PcP	19 20 39.5	-0.5
PV01	**Paradox Valley**	**50.88**	**328**	*e*P	**P**	**19 19 25.2**	**+0.6**
PV01				*e*pP	pP	19 19 47.5	+1.4
PV10	**Paradox Valley**	**51.31**	**328**	*e*P	**P**	**19 19 27.7**	**-0.2**
PHWY	**Pilot Hill**	**51.79**	**333**	*e*P	**P**	**19 19 31.1**	**-0.2**
PHWY				*e*PcP	PcP	19 20 42.6	-0.8
SRU	**San Rafael**	**52.64**	**327**	*e*P	**P**	**19 19 37.5**	**-0.2**
	comp=Z,30nm,1.3s,mb5.2						
SRU				*e*PcP	PcP	19 20 45.9	-0.8
NEN	**Nelson**	**52.80**	**321**	*e*P	**P**	**19 19 39.1**	**+0.1**
EYMN	**Ely**	**53.02**	**348**	*e*P	**P**	**19 19 38.2**	**-2.3**
	comp=Z,4.1nm,0.6s,mb4.6						
EYMN				*e*pP	pP	19 19 59.8	-2.3
MSU	**Marysvale**	**53.13**	**326**	*e*P	**P**	**19 19 41.8**	**+0.3**
MSU				*e*PcP	PcP	19 20 48.7	+0.3
MVU	**Marysvale**	**53.14**	**326**	*e*P	**P**	**19 19 41.6**	**+0.1**
	comp=Z,9.4nm,0.9s,mb4.8						
MVU				*e*pP	pP	19 20 03.8	+0.6
MVU				*e*PcP	PcP	19 20 48.2	-0.3
ARUT	**Antelope Range**	**53.35**	**324**	*e*P	**P**	**19 19 43.5**	**+0.3**
RSSD	**Black Hills**	**53.46**	**336**	*e*P	**P**	**19 19 44.2**	**+0.4**
	comp=Z,15nm,0.8s,mb5.1						
RSSD	**Black Hills**	**53.46**	**336**	*e*P	**P**	**19 19 44.2**	**+0.4**
RSSD				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
DAU	**Daniels Canyon**	**53.97**	**328**	*e*P	**P**	**19 19 48.0**	**+0.5**
DAU				*e*PcP	PcP	19 20 51.4	-0.2
TPNV	**Topopah Spring**	**54.50**	**322**	*e*P	**P**	**19 19 51.3**	**-0.2**
	comp=Z,15nm,0.9s,mb5.0						
TPNV	**Topopah Spring**	**54.50**	**322**	*e*P	**P**	**19 19 51.3**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
TCUT	**Toone Canyon**	**54.56**	**328**	*e*P	**P**	**19 19 52.3**	**+0.4**
DUG	**Dugway**	**54.65**	**327**	*e*P	**P**	**19 19 52.9**	**+0.3**
	comp=Z,5.1nm,0.6s,mb4.7						
DUG	**Dugway**	**54.65**	**327**	*e*P	**P**	**19 19 52.9**	**+0.4**
DUG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
BW06	**Boulder Array**	**54.85**	**331**	*e*P	**P**	**19 19 53.3**	**-0.6**
	comp=Z,17nm,1.2s,mb5.0						
BW06				*e*PcP	PcP	19 20 54.0	-0.9
PDAR	**Pinedale Array**	**54.85**	**331**	P	**P**	**19 19 53.3**	**-0.6**
	comp=Z,7.6nm,0.7s,mb4.8,baz=129,slow=8.8,SNR=55						
PDAR				PcP	PcP	19 20 53.9	-1.1
	comp=Z,2.8nm,0.5s,baz=124,slow=6.7,SNR=8.1						
HWUT	**Hardware Ranch**	**54.99**	**329**	*e*P	**P**	**19 19 54.5**	**-0.5**
	comp=Z,20nm,0.8s,mb5.2						
HWUT				*e*PcP	PcP	19 20 54.8	-0.7
SNOW	**Snow King Moun**	**55.95**	**331**	*e*P	**P**	**19 20 01.6**	**-0.3**
	comp=Z,13nm,0.7s,mb5.1						
LOHW	**Long Hollow**	**55.99**	**331**	*e*P	**P**	**19 20 01.6**	**-0.5**
	comp=Z,14nm,1.1s,mb4.9						
TPAW	**Teton Pass**	**56.06**	**331**	*e*P	**P**	**19 20 02.2**	**-0.5**
	comp=Z,20nm,1.2s,mb5.0						
RRI2	**Red Ridge**	**56.14**	**330**	*e*P	**P**	**19 20 03.0**	**-0.2**
	comp=Z,27nm,0.9s,mb5.3						
RRI2				*e*pP	pP	19 20 24.8	-0.3
MOOW	**Moose Ponds**	**56.16**	**331**	*e*P	**P**	**19 20 02.6**	**-0.7**
	comp=Z,4.2nm,0.7s,mb4.6						
MOOW				*e*PcP	PcP	19 20 59.0	-0.9
ULM	**Lac du Bonnet**	**56.19**	**346**	P	**P**	**19 20 01.3**	**-2.1**
	comp=Z,14nm,0.8s,mb5.0,baz=149,slow=7.3,SNR=11						
ULM				pP	pP	19 20 23.1	-2.2
	comp=Z,5.9nm,0.7s,baz=166,slow=7.3,SNR=4.3						
MTUM	**Tungsten Hills**	**56.20**	**321**	*e*P	**P**	**19 20 04.1**	**+0.3**
IMW	**Indian Meadow**	**56.36**	**331**	*e*P	**P**	**19 20 04.5**	**-0.3**
	comp=Z,9.1nm,0.7s,mb4.9						
IMW				*e*pP	pP	19 20 26.1	-0.5
IMW				*e*PcP	PcP	19 21 00.1	-0.7
ELK	**Elko**	**56.38**	**326**	P	**P**	**19 20 04.8**	**-0.1**
	comp=Z,1.8nm,0.4s,mb4.4,baz=131,slow=3.7,SNR=4.4						
ELK	**Elko**	**56.38**	**326**	*e*P	**P**	**19 20 04.8**	**-0.2**
	comp=Z,9.2nm,1.0s,mb4.8						
ELK	**Elko**	**56.38**	**326**	*e*P	**P**	**19 20 04.8**	**-0.2**
ELK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LAO	**LASA Array**	**56.45**	**336**	*e*P	**P**	**19 20 04.7**	**-0.7**
	comp=Z,6.5nm,0.8s,mb4.7						
MNV	**Mina**	**56.60**	**322**	*e*P	**P**	**19 20 06.7**	**+0.1**
	comp=Z,14nm,1.2s,mb4.9						
MNV	**Mina**	**56.60**	**322**	*e*P	**P**	**19 20 06.7**	**+0.1**
MNV				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.9						
NVAR	**Mina Array Bea**	**56.70**	**322**	P	**P**	**19 20 07.6**	**+0.3**
	comp=Z,8.8nm,0.8s,mb4.9,baz=138,slow=7.0,SNR=18						
NVAR	**Mina Array Bea**	**56.70**	**322**	P	**P**	**19 20 07.6**	**+0.3**
YMR	**Madison River**	**56.95**	**332**	*e*P	**P**	**19 20 09.6**	**+0.6**
	comp=Z,14nm,0.8s,mb5.0						
GCMT	**Greycliff**	**57.20**	**333**	*e*P	**P**	**19 20 10.3**	**-0.4**
GCMT				*e*pP	pP	19 20 32.3	-0.3
LRV	**Little Rabbit**	**57.25**	**318**	*e*P	**P**	**19 20 11.2**	**0.0**
QLMT	**Earthquake Lak**	**57.29**	**331**	*e*P	**P**	**19 20 12.1**	**+0.7**
MCMT	**McKenzie Canyo**	**57.97**	**331**	*e*P	**P**	**19 20 16.5**	**+0.3**
BOZ	**Bozeman (W)**	**57.99**	**332**	*e*P	**P**	**19 20 15.5**	**-0.7**
	comp=Z,26nm,1.1s,mb5.2						
BOZ				*e*pP	pP	19 20 38.0	-0.2
BOZ	**Bozeman (W)**	**57.99**	**332**	*e*P	**P**	**19 20 15.5**	**-0.7**
BOZ				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.2						
SCHQ	**Schefferville**	**59.01**	**7**	P	**P**	**19 20 22.4**	**-0.7**
	comp=Z,17nm,0.7s,mb5.2,baz=185,slow=5.1,SNR=16						
WVOR	**Wild Horse Val**	**59.41**	**325**	*e*P	**P**	**19 20 25.7**	**-0.4**
	comp=Z,6.6nm,0.7s,mb4.8						
WVOR	**Wild Horse Val**	**59.41**	**325**	*e*P	**P**	**19 20 25.7**	**-0.4**
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
NEW	**Newport**	**62.49**	**331**	P	**P**	**19 20 46.4**	**-0.5**
	comp=Z,10.0nm,0.6s,mb5.0,baz=125,slow=7.3,SNR=14						
NEW				pP	pP	19 21 08.9	-0.2
	comp=Z,2.4nm,0.6s,baz=154,slow=11,SNR=1.7						
NEW	**Newport**	**62.49**	**331**	*e*P	**P**	**19 20 46.1**	**-0.7**
	comp=Z,6.3nm,0.6s,mb4.8						
NEW				*e*pP	pP	19 21 08.6	-0.5
NEW	**Newport**	**62.49**	**331**	*e*P	**P**	**19 20 46.1**	**-0.8**
NEW				pmax	pmax		
	comp=Z,6.0nm,0.6s						
EDM	**Edmonton**	**64.43**	**337**	*e*P	**P**	**19 20 57.5**	**-2.0**
EDM				*e*pP	pP	19 21 20.1	-1.8
YKA	**Yellowknife Ar**	**71.96**	**343**	P	**P**	**19 21 44.9**	**-1.1**
	comp=Z,4.5nm,0.7s,mb4.4,baz=140,slow=6.1,SNR=13						
YKA				LR	LR	19 54 20.1	
	comp=Z,102nm,19.8s,baz=240,slow=36						
YKA	**Yellowknife Ar**	**71.96**	**343**	P	**P**	**19 21 44.9**	**-1.1**
YKA				LR	LR	19 54 20.1	
LIC	**Lamto**	**72.62**	**82**	*e*P	**P**	**19 21 49.6**	**-1.3**
	comp=Z,18nm,0.8s,mb4.7						
DBIC	**Dimbokro**	**72.83**	**82**	P	**P**	**19 21 51.5**	**-0.6**
	comp=Z,19nm,0.8s,mb5.0,baz=254,slow=5.4,SNR=21						
DBIC				pP	pP	19 22 13.7	-1.3
	comp=Z,7.4nm,0.7s,baz=255,slow=4.1,SNR=2.9						
DBIC	**Dimbokro**	**72.83**	**82**	*e*P	**P**	**19 21 51.3**	**-0.8**
	comp=Z,22nm,1.0s,mb5.0						
DBIC				*e*pP	pP	19 22 13.1	-1.9
DBIC	**Dimbokro**	**72.83**	**82**	*e*P	**P**	**19 21 51.3**	**-0.8**
DBIC				*e**PP	pP	19 22 13.1	-1.9
DBIC				pmax	pmax		
	comp=Z,22nm,1.0s						
DLBC	**Dease Lake**	**74.88**	**334**	P	**P**	**19 22 03.8**	**+0.7**
	comp=Z,6.6nm,0.7s,mb4.5,baz=117,slow=7.6,SNR=11						
PTEO	**Sao Teotonio**	**75.34**	**50**	*e*P	**P**	**19 22 06.7**	**+0.5**
	comp=Z,26nm,1.3s,mb4.8						
PBEJ	**Beja**	**76.13**	**50**	*e*P	**P**	**19 22 11.2**	**+0.6**
	comp=Z,13nm,1.7s,mb4.4						
EVO	**Evora**	**76.16**	**49**	*e*P	**P**	**19 22 09.5**	**-1.3**
	comp=Z,10nm,0.6s,mb4.4						
PVIS	**Viseu**	**76.87**	**47**	*e*P	**P**	**19 22 14.4**	**-0.3**
	comp=Z,41nm,1.1s,mb5.1						
EMIN	**Mina Concepcio**	**76.97**	**50**	P	**P**	**19 22 14.6**	**-0.7**
MTE	**Manteigas**	**77.03**	**47**	*e*P	**P**	**19 22 15.4**	**-0.2**
	comp=Z,30nm,0.8s,mb5.1						
ELOB	**Lobios**	**77.08**	**46**	P	**P**	**19 22 15.3**	**-0.6**
	comp=Z,420nm,4.1s						
PVRL	**Vila Real**	**77.16**	**46**	*e*P	**P**	**19 22 16.5**	**+0.2**
	comp=Z,30nm,1.5s,mb4.8						
ESPR	**Espera**	**77.37**	**51**	P	**P**	**19 22 17.9**	**+0.3**
	comp=Z,188nm,2.8s,mb5.3						
MDT	**Midelt**	**77.41**	**55**	P	**P**	**19 22 18.1**	**+0.2**
	comp=Z,1.9nm,0.7s,mb4.0,baz=256,slow=5.2,SNR=6.2						
EJIF	**Jimena Fronter**	**77.57**	**52**	P	**P**	**19 22 18.9**	**+0.2**
	comp=Z,8.9nm,0.8s,mb4.5						
PBRG	**Braganca**	**78.01**	**46**	*e*P	**P**	**19 22 21.0**	**0.0**
	comp=Z,13nm,0.8s,mb4.7						
ECAL	**Calabor**	**78.05**	**46**	P	**P**	**19 22 21.6**	**+0.5**
	comp=Z,159nm,3.2s						
EMIJ	**Mijas**	**78.14**	**52**	P	**P**	**19 22 22.4**	**+0.6**
	comp=Z,197nm,4.2s						
EPON	**Pontenova**	**78.15**	**44**	P	**P**	**19 22 20.8**	**-0.9**
	comp=Z,179nm,2.8s,mb5.3						
ELOJ	**Sierra Loja**	**78.76**	**51**	P	**P**	**19 22 26.7**	**+1.5**
	comp=Z,6.0nm,0.7s,mb4.5						
ERON	**Agron**	**79.00**	**51**	P	**P**	**19 22 27.6**	**+1.0**
	comp=Z,7.1nm,0.4s,mb4.8						
ECOG	**Cogollos-Vega**	**79.25**	**51**	P	**P**	**19 22 28.0**	**+0.1**
	comp=Z,10nm,0.5s,mb4.9						
VNA3	**Neumayer Olymp**	**79.30**	**162**	⇓*i*P	**P**	**19 22 28.5**	**+1.0**
VNA3	**Neumayer Olymp**	**79.30**	**162**	⇑*i*	pP	19 22 54.4	+3.8
VNA3	**Neumayer Olymp**	**79.30**	**162**	⇑*i*	sP	19 23 01.1	+0.8
ESDC	**Sonseca Array**	**79.50**	**49**	P	**P**	**19 22 29.2**	**0.0**
	comp=Z,3.7nm,0.8s,mb4.3,baz=258,slow=6.2,SNR=13						
ESDC	**Sonseca Array**	**79.50**	**49**	P	**P**	**19 22 29.4**	**+0.2**
	comp=Z,11nm,1.1s,mb4.6						
EARI	**Arriondas**	**79.50**	**45**	P	**P**	**19 22 29.5**	**+0.4**
	comp=Z,59nm,1.2s,mb5.3						
VNA1	**Neumayer--Stat**	**79.53**	**162**	⇓*i*P	**P**	**19 22 30.1**	**+1.4**
VNA1	**Neumayer--Stat**	**79.53**	**162**	⇑*i*	pP	19 22 54.9	+3.0
VNA1	**Neumayer--Stat**	**79.53**	**162**	⇑*i*	sP	19 23 04.3	+2.7
GUD	**Guadarrama**	**79.59**	**48**	P	**P**	**19 22 30.1**	**+0.5**
	comp=Z,6.3nm,0.7s,mb4.5						
EBER	**Berja**	**79.69**	**52**	P	**P**	**19 22 31.0**	**+0.7**
	comp=Z,34nm,1.0s,mb5.1						
EQES	**Quesada**	**79.75**	**51**	P	**P**	**19 22 31.2**	**+0.6**
	comp=Z,8.2nm,0.6s,mb4.7						
VNA2	**Neumayer--Watz**	**79.89**	**162**	⇓*i*P	**P**	**19 22 31.7**	**+1.0**
VNA2	**Neumayer--Watz**	**79.89**	**162**	⇑*i*	pP	19 22 55.3	+1.4
VNA2	**Neumayer--Watz**	**79.89**	**162**	⇑*i*	sP	19 23 00.2	-3.3
SUMG	**Summit**	**80.06**	**11**	*e*P	**P**	**19 22 31.4**	**-0.2**
	comp=Z,25nm,0.9s,mb5.0						

SUMG				epP	pP	19 22 54.1	-0.6
EHUE	Huescar	80.12	51	P	P	19 22 33.2	+0.6
	comp=Z,12nm,1.0s,mb4.7						
EVIA	Vianos	80.37	50	P	P	19 22 34.0	+0.1
	comp=Z,14nm,0.8s,mb4.8						
SNAA	Sanae	81.51	162	eP	P	19 22 38.3	-0.9
	comp=Z,11nm,1.0s,mb4.6						
SNAA				epP	pP	19 23 02.2	-0.2
INK	Inuvik	81.69	342	P	P	19 22 40.2	0.0
	comp=Z,23nm,0.9s,mb5.0,baz=121,slow=5.6,SNR=53						
INK	Inuvik	81.69	342	eP	P	19 22 40.4	+0.2
	comp=Z,32nm,1.0s,mb5.1						
INK				epP	pP	19 23 03.5	0.0
ROSF	Rostrenen	82.12	40	eP	P	19 22 41.9	-0.9
	comp=Z,17nm,0.7s,mb4.7						
EMOS	Mosqueruela	82.27	49	P	P	19 22 44.2	+0.5
	comp=Z,22nm,0.8s,mb5.0						
SJPF	Ste Jean	82.29	46	eP	P	19 22 43.4	-0.4
	comp=Z,17nm,0.8s,mb4.7						
DIV	Divide	83.17	333	eP	P	19 22 47.9	0.0
	comp=Z,14nm,0.6s,mb5.0						
EBIE	Bielsa	83.18	46	P	P	19 22 48.6	+0.3
	comp=Z,5.8nm,0.6s,mb4.6						
EGRA	Graus	83.21	47	P	P	19 22 51.6	+3.1
	comp=Z,14nm,0.8s,mb4.8						
EPF	Esparros	83.39	46	eP	P	19 22 49.1	-0.3
	comp=Z,48nm,1.1s,mb5.0						
GRR	Gorron	83.69	41	eP	P	19 22 50.7	-0.1
MFF	Saint Martin d	83.78	43	eP	P	19 22 51.3	0.0
	comp=Z,32nm,0.7s,mb5.0						
EKA	Eskdalemuir Ar	84.00	34	P	P	19 22 52.1	-0.1
	comp=Z,8.5nm,0.9s,mb4.6,baz=243,slow=4.5,SNR=11						
FLN	La Foliniere	84.02	40	eP	P	19 22 51.9	-0.5
	comp=Z,65nm,0.8s,mb5.2						
EMIR	Miracle	84.04	47	P	P	19 22 53.5	+0.8
	comp=Z,22nm,0.8s,mb5.0						
LFF	La Frestale	84.05	44	eP	P	19 22 52.4	-0.2
	comp=Z,38nm,0.8s,mb5.0						
LDF	La Druitiere	84.22	41	eP	P	19 22 52.5	-0.9
	comp=Z,77nm,0.9s,mb5.2						
RJF	Les Rejaudoux	84.66	44	eP	P	19 22 55.5	-0.2
	comp=Z,46nm,1.1s,mb5.0						
MTLF	Montolieu	84.80	46	eP	P	19 22 56.0	-0.4
	comp=Z,39nm,1.1s,mb5.0						
ILAR	Eielson Array	84.91	336	P	P	19 22 56.2	-0.2
	comp=Z,6.1nm,0.8s,mb4.6,baz=127,slow=3.2,SNR=30						
ILAR				pP	pP	19 23 20.2	+0.3
	comp=Z,2.7nm,1.0s,baz=89,slow=3.7,SNR=3.4						
ILAR				PP	PP	19 26 14.7	-0.7
	comp=Z,0.9nm,0.7s,baz=117,slow=7.0,SNR=5.5						
CAF	Calviac	84.97	44	eP	P	19 22 56.9	-0.4
	comp=Z,18nm,0.8s,mb4.8						
TCF	Toulx Ste Croi	85.32	43	eP	P	19 22 58.8	-0.1
	comp=Z,13nm,0.9s,mb4.6						
COLA	College	85.33	336	eP	P	19 22 58.9	+0.4
	comp=Z,5.6nm,0.6s,mb4.7						
COLA	College	85.33	336	⇑eP	P	19 22 59.2	+0.6
HYF	Humbligny	85.78	42	eP	P	19 23 00.8	-0.4
BGF	Bois d'Agland	85.80	43	eP	P	19 23 01.0	-0.3
AVF	Avril sur Loir	86.18	43	eP	P	19 23 02.2	-0.9
QSPA	South Pole Qui	86.31	180	eP	pP	19 23 27.9	+1.3
SSF	Saint Saulge	86.33	43	eP	P	19 23 03.6	-0.3
SMF	Signal de Mont	86.49	43	eP	P	19 23 04.2	-0.4
	comp=Z,16nm,0.9s,mb4.6						
LOR	Lormes	86.60	42	eP	P	19 23 04.7	-0.5
VIVF	Saint-Julien-l	86.79	45	eP	P	19 23 05.8	-0.4
SMRF	Simiane la Rot	87.30	46	eP	P	19 23 08.4	-0.3
MEZF	Maizieres J'vi	87.58	41	eP	P	19 23 09.0	-0.9
	comp=Z,7.2nm,0.5s,mb4.6						
ORIF	Oris-en-Rattie	87.65	45	eP	P	19 23 10.2	-0.1
	comp=Z,17nm,0.9s,mb4.8						
GIVF	Givet	87.67	40	eP	P	19 23 10.1	-0.2
LMR	La Mourre	87.89	47	eP	P	19 23 10.6	-0.9
CABF	La Chapelle	88.01	43	eP	P	19 23 11.9	-0.1
	comp=Z,32nm,1.0s,mb5.0						
FRF	La Foret Royal	88.02	46	eP	P	19 23 11.8	-0.3
	comp=Z,18nm,0.8s,mb4.8						
BNI	Bardonecchia	88.23	45	eP	P	19 23 13.5	+0.4
	comp=Z,6.8nm,0.8s,mb4.7						
MBDF	Montbardon	88.25	45	eP	P	19 23 13.2	0.0
	comp=Z,10nm,0.8s,mb4.6						
LPL	La Plagne	88.32	44	eP	P	19 23 13.7	+0.2
	comp=Z,7.1nm,0.7s,mb4.5						
LPG	La Plagne	88.33	44	eP	P	19 23 14.0	+0.4
	comp=Z,14nm,0.9s,mb4.7						
HAU	Haudompre	88.37	42	eP	P	19 23 12.4	-1.3
	comp=Z,10nm,0.7s,mb4.7						
WLF	Walferdange	88.46	40	eP	P	19 23 14.7	+0.6
	comp=Z,12nm,0.9s,mb4.9						
SBF	Sospel	88.62	46	eP	P	19 23 14.8	-0.2
	comp=Z,25nm,0.9s,mb5.0						
HINF	Hinteralfeld	88.69	42	eP	P	19 23 14.6	-0.6
	comp=Z,26nm,1.2s,mb4.8						
CDF	Champ du Feu	89.04	42	eP	P	19 23 16.4	-0.4
	comp=Z,25nm,0.9s,mb5.0						
PGF	Pioggiola	89.62	47	eP	P	19 23 19.2	-0.5
	comp=Z,38nm,1.2s,mb5.1						
DAVOX	Davos	90.63	43	P	P	19 23 25.2	+0.9
	comp=Z,12nm,0.8s,mb5.1,baz=271,slow=3.2,SNR=14						
DAVA	Damuels	90.67	43	⇓iP	P	19 23 25.0	+0.5
	comp=Z,8.3nm,0.7s,mb5.0						
DAVA	Damuels	90.67	43	⇓P	P	19 23 25.0	+0.5
	comp=Z,8.3nm,0.7s,mb5.0						
MOTA	Moosalm	91.50	43	⇓iP	P	19 23 28.7	+0.3
	comp=Z,13nm,1.0s,mb5.1						
MOTA	Moosalm	91.50	43	⇓P	P	19 23 28.7	+0.3
	comp=Z,13nm,1.0s,mb5.1						
SQTA	Sankt Quirin	91.57	43	⇑iP	P	19 23 29.1	+0.4
	comp=Z,10.0nm,0.7s,mb5.1						
SQTA	Sankt Quirin	91.57	43	⇑P	P	19 23 29.1	+0.4
	comp=Z,10.0nm,0.7s,mb5.2						
GRA1	Grafenberg Arr	91.74	40	eP	P	19 23 30.3	+0.9
	comp=Z,9.0nm,1.2s,mb4.9						
GRF	Grafenberg Arr	91.74	40	eP	P	19 23 30.3	+0.9
	comp=Z,9.0nm,1.2s,mb4.9						
GRF	Grafenberg Arr	91.74	40	eP	P	19 23 30.3	+0.9
GRF				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.9						
WTTA	Wattenberg	91.86	43	⇓iP	P	19 23 30.6	+0.5
	comp=Z,12nm,0.9s,mb5.1						
WTTA	Wattenberg	91.86	43	⇓P	P	19 23 30.6	+0.5
	comp=Z,12nm,0.9s,mb5.1						
NOA	NORSAR Array B	92.43	29	P	P	19 23 32.9	+0.6
	comp=Z,3.2nm,1.1s,mb4.5,baz=265,slow=4.2,SNR=2.8						
CLL	Collm	92.96	39	P	P	19 23 35.8	+0.8
CLL				i		19 23 51.2	
CLL				i *PP	pP	19 23 57.7	-1.1
CLL	Collm	92.96	39	i P	P	19 23 35.8	+0.8
CLL				i pP	x	19 23 51.2	
KBA	Koelnbreinsper	93.02	43	⇓iP	P	19 23 35.6	+0.3
	comp=Z,4.7nm,0.9s,mb4.8						
TSUM	Tsumeb	93.17	109	eP	P	19 23 37.3	+0.7
	comp=Z,13nm,1.2s,mb5.1						
KHC	Kasperske Hory	93.25	41	eP	P	19 23 36.8	+0.5
KHC	Kasperske Hory	93.25	41	i P	P	19 23 37.3	+1.0
GERES	GERESS Array B	93.32	41	P	P	19 23 36.8	+0.2
	comp=Z,1.5nm,0.6s,mb4.5,baz=259,slow=3.3,SNR=15						
BRG	Berggiesshubel	93.54	39	i P	P	19 23 37.8	+0.2
	comp=Z,6.7nm,1.0s,mb4.9						
BRG	Berggiesshubel	93.54	39	i P	P	19 23 37.8	+0.2
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
HFS	Hagfors	93.62	30	P	P	19 23 37.8	+0.1
	comp=Z,1.1nm,0.6s,mb4.4,baz=315,slow=4.1,SNR=3.5						
MOA	Molln	93.67	42	⇓iP	P	19 23 38.5	+0.3
	comp=Z,5.0nm,0.9s,mb4.8						
PRU	Pruhonice	93.90	40	eP	P	19 23 40.1	+0.9
PVCC	Panska Ves	93.93	40	eP	P	19 23 39.3	0.0
TREC	Trest	94.50	41	eP	P	19 23 42.9	+0.9
ARSA	Arzberg	94.51	43	⇓iP	P	19 23 42.0	-0.1
	comp=Z,3.6nm,0.7s,mb4.9						
UPC	Upice	94.85	40	eP	P	19 23 44.7	+1.1
DPC	Dobruska-Polom	95.05	40	eP	P	19 23 45.4	+0.9
VRAC	Vranov	95.23	41	P	P	19 23 46.0	+0.7
	comp=Z,5.6nm,0.8s,mb5.0,baz=235,slow=6.0,SNR=7.0						
SYO	Syowa Base	95.77	161	⇑P	P	19 23 47.0	-0.3
SYO	Syowa Base	95.77	161	⇑eP	P	19 23 47.0	-0.3
MORC	Moravsky Berou	95.84	41	eP	P	19 23 48.7	+0.7
	comp=Z,2.6nm,0.6s,mb4.8						
ARCES	ARCESS Array B	97.90	20	P	P	19 23 56.3	-0.7
	comp=Z,2.4nm,0.5s,mb5.0,baz=279,slow=4.1,SNR=24						
FINES	FINESS Array B	99.57	28	P	P	19 24 03.8	-0.9
	comp=Z,2.2nm,1.0s,mb4.8,baz=207,slow=4.3,SNR=4.5						
ARU	Arti	116.78	26	ePKPdf	PKPdf	19 29 05.4	+0.9
ARU	Arti	116.78	26	i PKIKP	PKPdf	19 29 08.1	+3.6
ARU				e		19 30 18.5	
ARU				ePPP	PPP	19 32 43.9	-4.2
ARU				e		19 35 51.0	
ARU				ePS	PS	19 40 01.3	+3.2
ARU				eSS	SS	19 46 21.4	+6.9
AKTO	Aktyubinsk	120.14	31	PKP	PKPdf	19 29 12.2	+1.1
	comp=Z,1.0nm,0.8s,baz=357,slow=4.1,SNR=4.7						
CHKZ	Chkalovo	123.65	22	ePKPdf	PKPdf	19 29 18.6	+0.8
BRVK	Borovoye	124.00	23	ePKPdf	PKPdf	19 29 19.7	+1.1
BVAR	Borovoye Array	124.06	23	PKP	PKPdf	19 29 19.4	+0.7
	comp=Z,2.7nm,0.6s,baz=273,slow=1.9,SNR=26						
KURK	Kurchatov	128.94	20	ePKPdf	PKPdf	19 29 29.3	+1.2
KURK	Kurchatov	128.94	20	d iPKIKP	PKPdf	19 29 29.1	+1.0
STKA	Stephens Creek	128.94	223	PKP	PKPdf	19 29 29.1	+0.4
	comp=Z,3.4nm,0.8s,baz=127,slow=5.7,SNR=7.6						
STKA				pPKP		19 29 55.6	
	comp=Z,3.0nm,0.8s,baz=51,slow=3.6,SNR=3.3						
MKAR	Makanchi Array	133.55	20	PKP	PKPdf	19 29 37.7	+0.7
	comp=Z,2.4nm,0.6s,baz=294,slow=2.6,SNR=39						
MKAR	Makanchi Array	133.55	20	PKP	PKPdf	19 29 37.7	+0.7
AAK	Ala-Archa	133.76	29	ePKPdf	PKPdf	19 29 38.7	+1.2
CN2	Changchun	135.43	337	ePKP	PKPdf	19 29 40.7	+0.2
SONM	Songino Array	135.99	357	PKP	PKPdf	19 29 42.7	+1.3
	comp=Z,2.6nm,0.9s,baz=323,slow=1.9,SNR=8.5						
WMQ	Urumqi	137.90	16	ePKP	PKPdf	19 29 44.5	-0.6
WMQ				XPKP		19 30 22.0	
WMQ				PP	PP	19 32 37.0	-0.2
WMQ				PKS	PKS	19 33 19.0	-1.2
WMQ				PPP	PPP	19 35 39.0	0.0
WMQ				SKS	SKS	19 36 43.5	-1.4
WMQ				SKKS		19 39 16.2	
WMQ				PP	PP		
	comp=Z,310nm,5.1s						
WMQ				LR	LR		
	comp=N,540nm,19.8s						
WMQ				LR	LR		
	comp=E,290nm,18.8s						
WMQ				LR	LR		
	comp=Z,270nm,19.8s						
WB2	Warramunga Arr	141.16	231	eP	PKPdf	19 29 45.5	-6.2
WRAB	Tennant Creek	141.17	231	c iPKIKP	PKPdf	19 29 52.2	+0.5
WRA	Warramunga Arr	141.17	231	PKhKP		19 29 46.1	
	comp=Z,1.5nm,0.7s,baz=118,slow=2.8,SNR=22						
WRA				PKP	PKPdf	19 29 54.5	+2.8
	comp=Z,2.8nm,0.6s,baz=121,slow=2.1,SNR=5.0						
WRA				pPKP		19 30 17.3	
	comp=Z,2.2nm,0.6s,baz=114,slow=2.3,SNR=4.3						
HHC	Hu-ho-hao-te	142.27	349	ePKP	PKPdf	19 29 48.7	-4.2
HHC				SKS	SKS	19 36 57.9	+5.8
HHC				PP	PP		
	comp=Z,70nm,10.8s						
HHC				LR	LR		
	comp=N,190nm,18.0s						
HHC				LR	LR		
	comp=E,210nm,18.0s						
HHC				LR	LR		
	comp=Z,160nm,14.4s						
GTA	Gaotai	144.41	4	PKP	PKPdf	19 29 56.6	-0.1
GTA				APKP		19 30 23.0	
GTA				XPKP		19 30 32.7	
GTA				PP	PP	19 33 18.2	+1.8
GTA				PKS	PKS	19 33 31.0	-0.3
GTA				PPP	PPP	19 36 34.4	+3.4
GTA				SKKS		19 39 56.7	
GTA				SS	SS	19 51 59.8	+5.8
GTA				PP	PP		
	comp=Z,100nm,8.5s						
GTA				LR	LR		
	comp=N,250nm,16.6s						
GTA				LR	LR		
	comp=E,200nm,20.5s						
GTA				LR	LR		
	comp=Z,130nm,15.4s						
NDI	New Delhi	145.20	42	ex	x	19 29 59.0	
SSE	Sheshan	147.82	330	PKP	PKPdf	19 30 01.6	-1.1
LZH	Lanzhou	147.82	359	ePKP	PKPdf	19 30 07.8	+5.2
LZH				APKP		19 30 31.3	
LZH				XPKP		19 30 37.3	
LZH				PP	PP	19 33 41.0	+4.0
LZH				PPP	PPP	19 37 00.8	+3.3
LZH				SKS	SKS	19 37 04.4	+4.1
LZH				SKKS		19 40 19.5	
LZH				SS	SS	19 52 35.0	+2.3
LZH				PP	PP		
	comp=Z,230nm,6.9s						
LZH				LR	LR		
	comp=N,230nm,18.8s						
LZH				LR	LR		
	comp=Z,470nm,19.9s						
LZH	Lanzhou	147.82	359	ePKP	PKPdf	19 30 07.8	+5.2
LZH				PKP	PKPdf	19 30 15.4	+13
LZH				pPKP		19 30 31.3	
LZH				sPKP		19 30 37.3	
LZH				PP	PP	19 33 41.0	+4.0
LZH				PPP	PPP	19 37 00.8	+3.3
LZH				SKS	SKS	19 37 04.4	+4.1
LZH				SKKS		19 40 19.5	
LZH				SS	SS	19 52 35.0	+2.3
LZH				LR	LR		
	comp=Z,470nm,19.9s						
NJ2	Nanjing	148.13	334	ePKP	PKPdf	19 30 03.1	-0.1
NJ2				PKP2	PKPab	19 30 12.1	+0.3
NJ2				APKP		19 30 29.5	
NJ2				XPKP		19 30 36.5	
NJ2				PKS	PKS	19 33 37.0	-0.3
NJ2				PP	PP		
	comp=Z,660nm,10.0s						
NJ2				LR	LR		
	comp=N,1µm,22.4s						
NJ2				LR	LR		
	comp=E,1µm,22.7s						
NJ2				LR	LR		
	comp=Z,2µm,23.6s						
FITZ	Fitzroy Crossi	148.80	225	eP	PKPdf	19 30 09.2	+4.6
	comp=Z,13nm,0.7s						
XAN	Xi'an	149.36	350	PKP	PKPdf	19 30 06.0	+0.9
KOLN	Koldanda	149.84	36	eP	PKPdf	19 30 07.4	+1.4
	comp=Z,96nm,1.4s						
GKN	Gorkha	150.25	34	eP	PKPdf	19 30 08.3	+1.6
	comp=Z,239nm,1.3s						
KKN	Kakani	150.78	33	eP	PKPdf	19 30 09.0	+1.5
	comp=Z,67nm,0.6s						
DMN	Daman	150.82	34	eP	PKPdf	19 30 09.0	+1.5
	comp=Z,40nm,0.6s						
GUN	Gumba	151.01	32	eP	PKPdf	19 30 10.1	+2.3
	comp=Z,92nm,1.1s						
PKI	Pulchoki	151.02	33	eP	PKPdf	19 30 09.0	+1.2
LSA	Lhasa	151.90	22	ePKIKP	PKPdf	19 30 12.1	+3.0
LSA				e		19 30 18.0	
LSA				e		19 30 27.2	
HYB	Hyderabad	152.52	59	i P	PKPdf	19 30 11.5	+1.2
HYB				e		19 30 19.0	
HYB	Hyderabad	152.52	59	eP	PKPdf	19 30 11.5	+1.2
HYB				e		19 30 29.0	
ENH	Enshi	152.91	347	ePKPdf	PKPdf	19 30 11.6	+1.1
ENH				ePKPbc	PKPdf	19 30 18.7	+8.2
ENH				ePKPab	PKPab	19 30 29.8	-1.9

NNC ***11*** *19:29:45.5±5.5,44.10N×82.19E,mpv3.2,Error ellipse: s-maj=47.2km s-min=15.8km az=119.0*

BJI 11 19:29:45.1,44.04N×82.65E,h13^{km},ML3.6,9C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	2.77	355	⇑Pn	Pn	19 30 30.3	+0.3
	1.9nm,0.3s,baz=172,slow=17,SNR=302						
MK31				⇑Lg		19 31 10.4	
	130nm,0.7s,baz=168,slow=29						
AAK	Ala-Archa	6.11	260	⇓Pg	Pg	19 31 39.6	-7.5
	4.8nm,0.9s						
KURK	Kurchatov	7.22	339	Lg		19 33 35.6	
KK31	Karatay Array	8.86	268	⇓Lg		19 34 20.4	
	1.3nm,0.4s,baz=68,slow=30,SNR=4.2						
VOSK	Vostochnaya	11.63	322	⇑Pn	P	19 32 29.5	-4.3
	1.5nm,0.5s						
VOSK				⇑Sn	S	19 34 35.4	-9.2
	3.4nm,1.9s						
VOSK				⇑Lg		19 35 52.0	
	7.2nm,1.2s						
BVA0	Borovoye Array	12.10	322	Pn	P	19 32 36.1	-4.0
	0.1nm,0.5s,baz=213,slow=40,SNR=11						
BVA0				⇑Sn	S	19 34 46.8	-9.1
	0.6nm,1.5s						
BVA0				⇑Lg		19 36 03.8	
	2.1nm,1.3s						
CHKZ	Chkalovo	12.46	325	⇓Pn	P	19 32 40.6	-4.3
	1.5nm,0.7s						
CHKZ				⇑Sn	S	19 34 51.6	-13
	5.7nm,2.2s						
CHKZ				⇑Lg		19 36 17.6	
	9.7nm,1.5s						

MOS ***11*** *19:43:38.6±1.0,55.77N×164.36E,h10^{km},mb4.3/1,Error ellipse: s-maj=25.4km s-min=16.4km az=55.0*

KRSC 11 19:43:38.0±0.3,55.78N×164.51E,h14^{km}±3^{km},ML4.1, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.01	124	i P	Pb	19 43 56.2	-0.6
BKI				eS	Sb	19 44 09.6	-0.1
BKI				Smax			
	1µm,0.8s						
KBTR	Krutoberegovo	1.04	295	P	Pb	19 43 56.2	-1.1
KBTR				S	Sb	19 44 08.0	-2.6
KBTR	Krutoberegovo	1.04	295	i P	Pb	19 43 56.3	-1.0
KBTR				eS	Sb	19 44 10.1	-0.5
KBG	Krutoberegovo	1.12	296	i P	Pb	19 43 58.0	-0.6
KBG				eS	Sb	19 44 13.0	+0.1
KBG				Smax			
	3µm,0.4s						
MKZ	Mys Kozlova	2.01	234	P	Pn	19 44 11.4	-0.6
MKZ				S	Sn	19 44 36.0	-1.1
MKZ	Mys Kozlova	2.01	234	i P	Pn	19 44 11.2	-0.8
MKZ				eS	Sn	19 44 35.5	-1.6
ZLN	Zelenaya	2.10	278	i P	Pn	19 44 14.0	+0.7
ZLN				i S	Sn	19 44 40.3	+0.9
CIRR	Tsirk	2.14	281	i P	Pn	19 44 14.6	+0.7
CIRR				eS	Sn	19 44 41.4	+1.0
LGNR	Loginova	2.17	280	eP	Pn	19 44 15.0	+0.7
LGNR				eS	Sn	19 44 42.0	+0.9
KLY	Klyuchi	2.23	285	P	Pn	19 44 13.7	-1.4
KLY				S	Sn	19 44 39.4	-3.2
KLY	Klyuchi	2.23	285	eP	Pn	19 44 13.8	-1.3
KLY				eS	Sn	19 44 39.7	-2.9
KRSR	Krestovskiy	2.26	283	i P	Pn	19 44 16.1	+0.6
KRSR				eS	Sn	19 44 43.6	+0.2
KMNR	Kamenistaya	2.42	271	eP	Pn	19 44 18.6	+0.8
KMNR				eS	Sn	19 44 48.0	+0.7
KPT	Kopyto	2.42	276	eP	Pn	19 44 18.7	+0.8
KPT				eS	Sn	19 44 48.2	+0.6
TUMR	Tumrok	2.53	260	i P	Pn	19 44 21.0	+1.6
TUMR				eS	Sn	19 44 52.1	+1.8
KOZR	Kozyr	2.61	278	PN	Pn	19 44 21.6	+1.0
KOZR				S	Sn	19 44 52.9	+0.5
KOZ	Kozyrevsk	2.62	278	P	Pn	19 44 21.6	+0.8
KOZ				S	Sn	19 44 52.9	+0.2
KOZ	Kozyrevsk	2.62	278	eP	Pn	19 44 21.7	+0.9
KOZ				eS	Sn	19 44 53.2	+0.5
SRDR	Sredinnyy	2.74	283	i P	Pn	19 44 23.9	+1.5
SRDR				eS	Sn	19 44 57.5	+1.9
ESO	Esso	3.28	275	eP	Pn	19 44 31.4	+1.3
ESO				eS	Sn	19 45 10.7	+1.5
ESO				Smax			
	70nm,1.7s						
SPN	Mys Shipunski	3.75	226	eP	Pn	19 44 35.6	-1.2
SPN				eS	Sn	19 45 17.9	-3.3
NLC	Nalytchevo	3.99	231	P	Pn	19 44 39.8	-0.3
NLC	Nalytchevo	3.99	231	eP	Pn	19 44 39.6	-0.5
SMAR	Somma	4.17	235	i P	Pn	19 44 43.3	+0.5
SMAR				eS	Sn	19 45 30.8	-1.1
UGLR	Uglovaya	4.20	234	i P	Pn	19 44 43.7	+0.6
UGLR				eS	Sn	19 45 31.8	-0.7
AVH	Avacha	4.20	236	i P	Pn	19 44 43.9	+0.7
AVH				eS	Sn	19 45 32.0	-0.6
KOK	Koryaka	4.23	236	eP	Pn	19 44 44.1	+0.5
GNL	Ganaly	4.34	244	eP	Pn	19 44 45.8	+0.6
PET	Petropavlovsk	4.40	234	P	Pn	19 44 46.2	+0.2
PET				S	Sn	19 45 35.7	-1.8
PET	Petropavlovsk	4.40	234	i P	Pn	19 44 46.0	0.0
PET				i S	Sn	19 45 35.5	-2.0
PET	Petropavlovsk	4.40	234	ePN	Pn	19 44 45.7	-0.3
PET				pmax	pmax		
	comp=Z,21nm,0.5s						
RUS	Russkaya	4.87	229	eP	Pn	19 44 53.6	+1.0
GRL	Gorelyy	4.97	232	eP	Pn	19 44 54.7	+0.5
APC	Apacha	5.16	239	eP	Pn	19 44 57.6	+0.8
MIPR	Malaya Ipel'ka	5.76	236	eP	Pn	19 45 05.2	0.0
PAU	Pauzhetka	6.29	230	eP	Pn	19 45 12.7	-0.1

MAN 11 19:53:58.9,13.26N×120.24E,h29^{km},mb4.0,ML2.8, MS2.5,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.47	0	eP	Pb	19 54 09.1	+0.2
LUBP				eS	Sb	19 54 16.1	+0.5
PGP	Puerto Galera	0.73	71	eP	Pb	19 54 13.3	+0.3
PGP				eS	Sb	19 54 23.4	+0.7
SJMP	San Jose	1.17	133	eP	Pn	19 54 19.8	+0.3
SJMP				eS	Sn	19 54 34.5	0.0
BUSP	Coron	1.25	182	eP	Pn	19 54 20.8	+0.1
BUSP				eS	Sn	19 54 36.8	+0.1

MAN ***11*** *19:58:48.4,12.49N×123.62E,h8^{km},mb5.1,ML4.1,MS4.2*

IDC ***11*** *19:58:48.1±0.9,11.80N×123.17E,mb3.7/7,mb1 3.9/8, mb1mx3.8/19,mbtmp3.8/8,ML4.0/1,MS3.5/2,Ms1 3.5/2, ms1mx2.9/21,Error ellipse: s-maj=51.4km s-min=14.8km az=57.0*

NEIC ***11*** *19:58:50.1±0.7,11.81N×123.14E,h10^{km},mb4.2/5,Error ellipse: s-maj=22.8km s-min=11.4km az=66.0*

ISC 11 19:58:49.2±0.6,**12.46N**±0.03×**123.60E**±0.03,**h11**^{km}±4^{km}, **n44,**$\sigma 1^{s}$**33**/60,**mb3.9**/12,**MS3.2**/3,**2C,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.11	169	i P	Pg	19 58 52.2	0.0
MMPH				i S	Sg	19 58 54.6	+0.6
RCP	Roxas	1.23	223	eP	Pb	19 59 12.0	0.0
RCP				eS	Sb	19 59 29.9	+2.2
KALP	Kalibo	1.46	238	eP	Pn	19 59 17.6	+1.8
OTRP	Odiongan	1.55	266	eP	Pn	19 59 16.5	-0.5
OTRP				eS	Sb	19 59 35.9	-1.1
GQP	Guinayangan	1.82	322	eP	Pn	19 59 20.5	-0.4
GQP				eS	Sn	19 59 51.3	+7.2
PLP	Palo	1.86	134	eP	Pn	19 59 20.3	-1.2
PLP				i S	Sn	19 59 45.0	-0.2
BOAC	Boac	1.98	300	eP	Pn	19 59 22.4	-0.7
BOAC				eS	Sn	19 59 53.5	+5.5
BESP	Borongan	1.99	115	eP	Pn	19 59 22.6	-0.7
BESP				eS	Sn	19 59 47.7	-0.6
GUIM	Jordan	2.08	209	eP	Pn	19 59 24.9	+0.4
GUIM				eS	Sn	19 59 52.8	+2.2
LLP	Lapu-Lapu	2.16	170	⇑eP	Pn	19 59 24.9	-0.8
LLP				eS	Sn	19 59 52.9	+0.1
SJMP	San Jose	2.43	270	eP	Pn	19 59 29.1	-0.4
SJMP				eS	Sn	20 00 01.8	+2.3
MSLP	Maasin	2.62	152	eP	Pn	19 59 31.2	-1.1
MSLP				eS	Sn	20 00 06.0	+1.6
TBP	Tagbilaran	2.77	175	eP	Pn	19 59 33.4	-1.0
TBP				eS	Sn	20 00 04.6	-3.4
POLP	Polilio Island	2.77	324	eP	Pn	19 59 36.0	+1.5
CUYO	Cuyo Island	3.00	238	eP	Pn	19 59 37.2	-0.5
CUYO				eS	Sn	20 00 12.1	-1.8
TGY	Tagaytay City	3.06	302	Pn	Pn	19 59 39.2	+0.6
	17nm,0.3s,baz=97,slow=9.1,SNR=8.2						
TGY				Lg		20 00 30.3	
	7.7nm,0.3s,baz=155,slow=19,SNR=2.7						
SNPH	Sibulan	3.12	187	eP	Pn	19 59 41.0	+1.6
BUSP	Coron	3.36	263	eP	Pn	19 59 42.3	-0.5
BUSP				eS	Sn	20 00 22.1	-0.9
LUBP	Lubang	3.51	291	eP	Pn	19 59 43.1	-1.8
BALP	Baler	3.81	329	eP	Pn	19 59 47.1	-2.0
DCPH	Dipolog City	3.86	184	⇑eP	Pn	19 59 48.2	-1.7
DCPH				eS	Sn	20 00 31.8	-4.0
BUTP	Butuan	4.00	150	eP	Pn	19 59 55.1	+3.3
ENPP	El Nido	4.28	253	eP	Pn	19 59 54.7	-1.1
ENPP				eS	Sn	20 00 42.1	-4.2
PAGZ	Pagadian	4.59	183	eP	Pn	20 00 00.9	+0.6
IPIL	Ipil	4.75	192	eP	Pn	20 00 03.7	+1.1
IPIL				eS	Sn	20 00 57.1	-1.3

BUKP	**Musuan**	**4.78**	**162**	*e*P	**Pn**	**20 00 03.4**	**+0.5**
CAUP	**Cauayan**	**4.78**	**339**	*e*P	**Pn**	**20 00 00.8**	**-2.1**
APYP	**Conner**	**5.83**	**337**	*e*P	**Pn**	**20 00 15.1**	**-2.7**
ABRA	**Dolores**	**5.86**	**332**	*e*P	**Pn**	**20 00 19.2**	**+1.0**
MATI	**Mati**	**6.07**	**154**	*e*P	**Pn**	**20 00 14.9**	**-6.4**
KSM	**Kuching**	**17.11**	**231**	*e*P	**P**	**20 02 39.8**	**-10**
JNU	**Nakatsue**	**21.61**	**17**	LR	LR	20 12 51.5	
	comp=Z,64nm,18.7s,MS3.0,baz=333,slow=38						
ENH	**Enshi**	**22.02**	**326**	*e*P	**P**	**20 03 47.3**	**+1.8**
	3.1nm,0.8s,mb3.8						
KMI	**Kunming**	**23.38**	**306**	P	**P**	**20 04 00.5**	**+1.5**
	5.0nm,1.3s,mb3.8						
KMI				LR	LR		
	comp=Z,80nm,26.7s,MS3.0						
WRAB	**Tennant Creek**	**33.88**	**162**	*e*P	**P**	**20 05 29.9**	**-4.5**
	comp=Z,3.3nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	**33.89**	**162**	P	**P**	**20 05 30.2**	**-4.2**
	comp=Z,1.3nm,0.7s,mb4.0,baz=337,slow=9.6,SNR=12						
SONM	**Songino Array**	**38.09**	**341**	P	**P**	**20 06 11.2**	**+1.4**
	comp=Z,0.3nm,0.4s,mb3.4,baz=153,slow=6.4,SNR=3.2						
SONM				LR	LR	20 21 44.6	
	comp=Z,91nm,19.1s,MS3.6,baz=84,slow=36						
STKA	**Stephens Creek**	**47.34**	**159**	P	**P**	**20 07 18.8**	**-6.4**
	comp=Z,1.7nm,0.9s,mb4.0,baz=294,slow=20,SNR=2.2						
MKAR	**Makanchi Array**	**48.71**	**323**	P	**P**	**20 07 35.3**	**-0.3**
	comp=Z,1.0nm,0.9s,mb3.9,baz=127,slow=7.2,SNR=6.4						
KURK	**Kurchatov**	**52.79**	**326**	*e*P	**P**	**20 08 09.3**	**+2.6**
	comp=Z,8.7nm,1.3s,mb4.5						
BVAR	**Borovoye Array**	**58.39**	**325**	P	**P**	**20 08 49.0**	**+2.0**
	comp=Z,1.0nm,0.9s,mb3.8,baz=121,slow=8.4,SNR=5.2						
BRVK	**Borovoye**	**58.46**	**325**	*e*P	**P**	**20 08 48.3**	**+0.8**
	comp=Z,4.4nm,1.6s,mb4.2						
AKTO	**Aktyubinsk**	**64.97**	**320**	P	**P**	**20 09 30.6**	**-0.7**
	comp=Z,1.4nm,0.8s,mb4.0,baz=74,slow=18,SNR=2.2						
ILAR	**Eielson Array**	**78.62**	**26**	P	**P**	**20 10 57.0**	**+4.6**
	comp=Z,0.3nm,0.6s,mb3.4,baz=259,slow=4.6,SNR=4.4						

*NDI **11** 20:02:18.5±5.5, 31.96N×71.73E, h10^{km}, MD3.6, ML3.5*
*NNC **11** 20:02:28.6±1.1, 35.08N×73.93E, h88^{km}±91^{km}, mpv4.2, Error ellipse: s-maj=302.5km s-min=7.7km az=74.0*
ISC 11 20:02:19.3±1.2**, 34.7N**±0.2×**73.3E**±0.3**, h10^{km}, n7, σ1^{s}27**/11**, 2C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.03**	**139**	*e*P	**Pn**	**20 03 09.5**	**+1.2**
THN				*e*S	**Sn**	**20 03 53.7**	**+8.6**
SDNR	**Sundarnagar**	**4.44**	**136**	*e*P	**Pn**	**20 03 26.6**	**-1.6**
SDNR				*e*SB	**Sb**	**20 04 31.4**	**+0.4**
SMLA	**Simla**	**4.83**	**137**	*e*P	**Pn**	**20 03 32.2**	**-1.6**
SMLA				*e*S	**Sn**	**20 04 23.6**	**-6.8**
KLP	**Kalpa**	**5.21**	**126**	*e*P	**Pn**	**20 03 40.0**	**+0.8**
KLP				*e*x	x	20 04 33.1	
KLP				AML	AML	20 05 03.8	
	comp=E,72nm,0.4s						
KLP				AML	AML	20 05 04.3	
	comp=N,71nm,0.6s						
KK31	**Karatay Array**	**8.64**	**346**	⇓Pn	**P**	**20 04 29.2**	**+1.9**
	comp=N,3.5nm,0.3s,baz=163,slow=12,SNR=197						
KK31				⇑Sn	**Sn**	**20 06 04.7**	**-1.1**
	comp=N,1.7nm,0.5s,baz=163,slow=22,SNR=9.8						
AB31	**Akbulak array**	**17.56**	**330**	⇑P	**P**	**20 06 26.7**	**+1.1**
	comp=N,0.6nm,0.7s,baz=164,slow=11,SNR=8.8						
AKTO	**Aktyubinsk**	**19.26**	**329**	⇓P	**P**	**20 06 45.3**	**-1.1**
	comp=N,1.4nm,1.6s						

NDI 11 20:25:30.4±3.2**, 34.70N×72.86E, h5^{km}, MD3.5, ML3.2, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.29**	**133**	*e*P	Pn	20 26 23.2	-0.4
THN				*e*SB	Sb	20 27 09.0	-0.5
DLH	**Dalhousie**	**3.37**	**129**	*e*P	Pn	20 26 25.0	+0.2
DLH				*e*S	Sn	20 27 05.0	-0.7
SDNR	**Sundarnagar**	**4.70**	**132**	*e*P	Pn	20 26 41.2	-2.5
SDNR				*e*S	Sn	20 27 35.0	-4.4
SMLA	**Simla**	**5.08**	**133**	*e*P	Pn	20 26 46.0	-3.1
SMLA				*e*S	Sn	20 27 44.2	-4.7
KLP	**Kalpa**	**5.52**	**123**	*e*P	Pn	20 26 53.0	-2.2
KLP				*e*S	Sn	20 27 53.2	-6.7
KLP				AML	AML	20 28 25.8	
	comp=N,75nm,0.7s						
KLP				AML	AML	20 28 27.3	
	comp=E,94nm,0.6s						
KHET	**Khetri**	**7.07**	**158**	*e*P	Pn	20 27 13.8	-3.3
KHET				*e*S	Sn	20 28 29.7	-9.1
KHET				AML	AML	20 28 31.2	
	comp=N,9.9nm,0.1s						
KHET				AML	AML	20 28 31.3	
	comp=E,10nm,0.2s						
KUDL	**Kundal**	**7.24**	**154**	*e*P	Pn	20 27 16.0	-3.4
KUDL				*e*S	Sn	20 28 33.8	-9.1
SONA	**Sohna**	**7.37**	**150**	*e*S	Sn	20 28 37.6	-8.7
SONA				AML	AML	20 28 40.2	
	comp=E,14nm,0.4s						
SONA				AML	AML	20 28 40.2	
	comp=N,7.3nm,0.4s						

MAN 11 20:33:00.9, 10.66N×125.55E, h22^{km}, mb4.3, ML3.2, MS3.0, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.75**	**312**	*i* P	Pb	20 33 15.3	+0.2
PLP				*i* S	Sb	20 33 26.3	+1.4
MSLP	**Maasin**	**0.85**	**232**	*e*P	Pb	20 33 17.9	+1.0
MSLP				*e*S	Sb	20 33 31.8	+3.8
SCPH	**Surigao**	**0.88**	**184**	*e*P	Pb	20 33 16.4	-1.0
SCPH				*e*S	Sb	20 33 28.4	-0.2
BESP	**Borongan**	**0.94**	**354**	*e*P	Pb	20 33 17.7	-0.7
BESP				*e*S	Sb	20 33 30.0	-0.4
CNP	**Catarman**	**2.03**	**335**	*e*P	Pn	20 33 34.8	+0.3
CNP				*e*S	Sn	20 34 00.9	+1.5
BUKP	**Musuan**	**2.81**	**190**	*e*P	Pn	20 33 45.1	-0.4
PVCP	**Virac**	**3.22**	**335**	*e*P	Pn	20 33 51.4	0.0
PVCP				*e*S	Sn	20 34 36.6	+7.1

*NIED **11** 20:41:00, 33.70N×130.20E, h11^{km}, Mw3.4 Best double couple: M$_0$1.48×10^{14} NP1:φ$_s$145°, δ86°, λ-12°. NP2: φ$_s$236°, δ78°, λ-176°.*
JMA 11 20:41:18.0, 33.74N×130.18E, h15^{km}, M3.7, 2C-3D, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFI	**Itaya**	**0.36**	**151**	⇑P	Pb	20 41 25.2	-0.3
JFI				S	Sb	20 41 30.0	-0.6
JII	**Iki**	**0.38**	**279**	⇓P	Pb	20 41 25.7	-0.1
JFA	**Akaike**	**0.51**	**93**	⇓P	Pb	20 41 27.8	-0.4
JFA				S	Sb	20 41 35.1	0.0
JTA	**Tamana**	**0.83**	**159**	⇑P	Pb	20 41 33.3	-0.3
JTA				S	Sb	20 41 44.4	+0.1
JTU	**Tsushima**	**1.02**	**321**	⇓P	Pb	20 41 36.6	-0.2
JTU				S	Sb	20 41 50.3	+0.6

*IDC **11** 20:46:36.4±0.7, 5.09N×94.35E, mb4.3/11, mb1 4.4/11, mb1mx4.2/19, mbtmp4.3/11, Error ellipse: s-maj=32.7km s-min=15.7km az=47.0*
*MOS **11** 20:46:38.7±1.5, 4.90N×94.40E, h33^{km}, mb4.6/8, Error ellipse: s-maj=34.4km s-min=11.0km az=105.5*
*BJI **11** 20:46:39.4, 5.36N×94.38E, h13^{km}, mB4.7, mb4.5, Ms4.1, Msz3.8*
*NEIC **11** 20:46:41.2±0.5, 5.06N×94.33E, h30^{km}, mb4.5/11, Error ellipse: s-maj=14.1km s-min=7.4km az=46.0*
ISC 11 20:46:38.9±0.5**, 4.96N**±0.07×**94.26E**±0.05**, h30^{km}, n50, σ1^{s}08**/53**, mb4.4**/26**, MS3.5**/1**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKT	**Phuket**	**4.99**	**51**	P	**Pn**	**20 47 55.0**	**+1.2**
KULM	**Kulim**	**6.38**	**87**	*e*Pn	**Pn**	**20 48 13.7**	**+0.3**
KULM				*e*Sn	**Sn**	**20 49 25.5**	**-0.4**
SNG	**Songkhla**	**6.70**	**70**	P	**Pn**	**20 48 19.0**	**+1.1**
CHG	**Chiang Mai**	**14.51**	**18**	P	**P**	**20 50 09.4**	**+5.0**
KMI	**Kunming**	**21.64**	**21**	P	**P**	**20 51 29.2**	**+0.3**
KMI				AP		20 51 37.0	
KMI				XP		20 51 40.7	
KMI				PP	PP	20 51 54.0	+0.2
KMI				AMB	AMB		
	comp=Z,60nm,4.1s						
KMI				LR	LR		
	comp=N,80nm,13.5s,MS3.5						
KMI				LR	LR		
	comp=E,90nm,13.5s,MS3.5						
KMI				LR	LR		
	comp=Z,130nm,14.9s,MS3.5						
KMI	**Kunming**	**21.64**	**21**	P	**P**	**20 51 29.2**	**+0.3**
	comp=Z,6.0nm,0.9s,mb4.0						
KMI				pP		20 51 37.0	
KMI				sP		20 51 40.7	
KMI				PP	PP	20 51 54.0	+0.2
KMI				S	**S**	**20 55 24.8**	**+2.9**
KMI				sS		20 55 36.1	
KMI				SS	SS	20 56 03.2	+4.6
KMI				LR	LR		
	comp=Z,130nm,14.9s,MS3.5						
KMI	**Kunming**	**21.64**	**21**	P	**P**	**20 51 29.2**	**+0.3**
KMI				*SP		20 51 40.7	
KMI						20 51 54.0	
KMI				S	**S**	**20 55 24.8**	**+2.9**
KMI				*SS		20 55 36.1	
KMI				SS	SS	20 56 03.2	+4.6
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.0						
KMI				MLR	MLR		
	comp=Z,130nm,14.9s,MS3.5						
PKI	**Pulchoki**	**24.01**	**340**	*e*P	**P**	**20 51 53.5**	**+1.2**
DMN	**Daman**	**24.15**	**340**	*e*P	**P**	**20 51 54.5**	**+0.8**
	comp=Z,3.0nm,0.3s,mb4.2						
GUN	**Gumba**	**24.18**	**342**	*e*P	**P**	**20 51 53.7**	**-0.2**
	comp=Z,25nm,0.8s,mb4.7						
KKN	**Kakani**	**24.26**	**340**	*e*P	**P**	**20 51 55.0**	**+0.3**
	comp=Z,20nm,0.9s,mb4.5						
GYA	**Guiyang**	**24.45**	**28**	P	**P**	**20 51 56.1**	**-0.5**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
GKN	**Gorkha**	**24.68**	**339**	*e*P	**P**	**20 51 59.3**	**+0.6**
	comp=Z,12nm,0.5s,mb4.7						
LSA	**Lhasa**	**24.78**	**354**	P	**P**	**20 52 01.0**	**+1.3**
LSA	**Lhasa**	**24.78**	**354**	*e*P	**P**	**20 52 01.1**	**+1.3**
	comp=Z,6.3nm,0.4s,mb4.5						
LSA	**Lhasa**	**24.78**	**354**	*e*P	**P**	**20 52 01.1**	**+1.4**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.5						
KOLN	**Koldanda**	**24.85**	**337**	*e*P	**P**	**20 52 01.2**	**+0.8**
	comp=Z,14nm,0.5s,mb4.7						
ENH	**Enshi**	**28.99**	**28**	*e*P	**P**	**20 52 35.2**	**-3.1**
	comp=Z,4.6nm,0.3s,mb4.7						
XAN	**Xi'an**	**31.98**	**23**	P	**P**	**20 53 02.0**	**-2.8**
XAN				AP	pP	20 53 08.3	-5.3
XAN				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
GTA	**Gaotai**	**34.66**	**8**	*e*P	**P**	**20 53 26.5**	**-1.5**
GTA				AP	pP	20 53 31.3	-5.6
GTA				XP	sP	20 53 34.2	-6.5
FITZ	**Fitzroy Crossi**	**38.51**	**127**	*e*P	**P**	**20 54 00.4**	**-0.3**
	comp=Z,3.4nm,0.4s,mb4.4						
FITZ	**Fitzroy Crossi**	**38.51**	**127**	P	**P**	**20 54 00.5**	**-0.2**
	comp=Z,4.2nm,0.4s,mb4.5,baz=84,slow=16,SNR=15						
MKAR	**Makanchi Array**	**42.94**	**348**	P	**P**	**20 54 36.9**	**0.0**
	comp=Z,4.8nm,0.5s,mb4.5,baz=159,slow=8.2,SNR=79						
SONM	**Songino Array**	**43.97**	**12**	P	**P**	**20 54 44.0**	**-1.2**
	comp=Z,1.9nm,0.5s,mb4.0,baz=192,slow=7.3,SNR=14						
SONM				PcP	PcP	20 56 31.1	-0.1
	comp=Z,1.7nm,0.6s,baz=194,slow=3.7,SNR=6.5						
WRA	**Warramunga Arr**	**46.53**	**123**	P	**P**	**20 55 06.2**	**+0.2**
	comp=Z,7.5nm,0.6s,mb4.8,baz=302,slow=9.4,SNR=109						
WRAB	**Tennant Creek**	**46.53**	**123**	*e*P	**P**	**20 55 06.0**	**+0.1**
	comp=Z,8.5nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**46.53**	**123**	*e*P	**P**	**20 55 06.1**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
WB2	**Warramunga Arr**	**46.54**	**123**	*e*P	**P**	**20 55 06.2**	**+0.2**
KURK	**Kurchatov**	**47.45**	**347**	*e*P	**P**	**20 55 12.6**	**-0.2**
	comp=Z,3.6nm,0.8s,mb4.3						
KURK	**Kurchatov**	**47.45**	**347**	*e*P	**P**	**20 55 12.6**	**-0.2**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ASPA	**Alice Springs**	**48.00**	**128**	*e*P	**P**	**20 55 17.7**	**+0.2**
NVS	**Novosibirsk**	**50.52**	**352**	*e*P	**P**	**20 55 34.4**	**-2.1**
BRVK	**Borovoye**	**51.83**	**342**	*e*P	**P**	**20 55 45.5**	**-1.0**
	comp=Z,1.8nm,0.6s,mb4.2						
BRVK	**Borovoye**	**51.83**	**342**	*e*P	**P**	**20 55 45.5**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
CHKZ	**Chkalovo**	**52.26**	**342**	*e*P	**P**	**20 55 49.2**	**-0.5**
	comp=Z,3.9nm,0.6s,mb4.5						
CHKZ	**Chkalovo**	**52.26**	**342**	*e*P	**P**	**20 55 49.2**	**-0.5**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KMBO	**Kilima Mbogo**	**57.26**	**265**	P	**P**	**20 56 27.5**	**+0.9**
	comp=Z,1.3nm,0.3s,mb4.5,baz=61,slow=14,SNR=4.7						
KMBO	**Kilima Mbogo**	**57.26**	**265**	P	**P**	**20 56 27.5**	**+0.9**
STKA	**Stephens Creek**	**58.04**	**132**	P	**P**	**20 56 31.7**	**-0.1**
	comp=Z,1.5nm,0.9s,mb4.0,baz=297,slow=6.8,SNR=2.5						
BRTR	**Keskin Array B**	**64.43**	**312**	P	**P**	**20 57 15.0**	**+0.1**
	comp=Z,1.1nm,0.7s,mb4.0,baz=128,slow=5.2,SNR=6.2						
AKASG	**Malin Array Be**	**70.50**	**322**	P	**P**	**20 57 51.0**	**-1.9**
	comp=Z,1.0nm,0.5s,mb4.0,baz=90,slow=5.8,SNR=7.7						
FINES	**FINESS Array B**	**75.33**	**333**	P	**P**	**20 58 20.9**	**-0.1**
	comp=Z,4.4nm,1.1s,mb4.3,baz=108,slow=7.8,SNR=8.4						
FINES	**FINESS Array B**	**75.33**	**333**	P	**P**	**20 58 20.9**	**-0.1**
ARCES	**ARCESS Array B**	**78.03**	**340**	P	**P**	**20 58 35.8**	**-0.2**
	comp=Z,2.8nm,0.9s,mb4.2,baz=90,slow=6.1,SNR=6.0						
GERES	**GERESS Array B**	**80.07**	**319**	P	**P**	**20 58 48.9**	**+1.4**
	comp=Z,2.7nm,0.7s,mb4.3,baz=104,slow=5.5,SNR=24						
KHC	**Kasperske Hory**	**80.17**	**319**	*e*P	**P**	**20 58 45.0**	**-3.0**
GRA1	**Grafenberg Arr**	**81.73**	**319**	*e*P	**P**	**20 58 58.6**	**+2.4**
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**81.73**	**319**	*e*P	**P**	**20 58 58.6**	**+2.4**
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**81.73**	**319**	*e*P	**P**	**20 58 58.6**	**+2.4**
GRF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
GRF	**Grafenberg Arr**	**81.73**	**319**	*e*P	**P**	**20 58 58.6**	**+2.4**
GRF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						

*BJI **11** 20:53:42.9, 3.39S×128.67E, h30^{km}, mb4.6*
*NEIC **11** 20:53:54.4±0.4, 2.40S×127.77E, mb4.2/10, Error ellipse: s-maj=21.0km s-min=7.1km az=64.0*
*IDC **11** 20:54:06.6±4.4, 2.49S×127.86E, h150^{km}±43^{km}, mb3.7/6, mb1 3.7/8, mb1mx3.6/17, mbtmp4.1/8, Error ellipse: s-maj=44.2km s-min=10.3km az=69.0*
ISC 11 20:53:52.5±0.4**, 2.30S**±0.07×**127.9E**±0.1**, h29^{km}, h29^{km}**±2.5^{km}**:pP-P, n25, σ1^{s}04**/28**, mb4.2**/12**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.86**	**188**	P	**P**	**20 57 39.9**	**+4.3**
	0.7nm,0.3s,baz=9.8,slow=8.9,SNR=7.4						
FITZ	**Fitzroy Crossi**	**15.86**	**188**	*e*P	**P**	**20 57 39.7**	**+4.1**
	5.0nm,0.6s						
WRAB	**Tennant Creek**	**18.62**	**161**	*e*P	**P**	**20 58 08.9**	**-1.2**
	11nm,0.6s						
WRA	**Warramunga Arr**	**18.63**	**161**	P	**P**	**20 58 09.2**	**-1.0**
	0.6nm,0.3s,baz=341,slow=12,SNR=21						
WRA				S	**S**	**21 01 34.3**	**+0.8**
	0.2nm,0.3s,baz=338,slow=21,SNR=3.5						
WB2	**Warramunga Arr**	**18.63**	**161**	*e*P	**P**	**20 58 08.3**	**-1.9**
WB2				*e*S	**S**	**21 01 34.5**	**+0.9**
PMG	**Port Moresby**	**20.40**	**111**	*e*P	**P**	**20 58 30.0**	**0.0**
	6.3nm,0.6s						
ASPA	**Alice Springs**	**22.02**	**165**	*e*P	**P**	**20 58 46.7**	**+0.3**
ASPA				*e*S	**S**	**21 02 45.1**	**+2.5**
CTA	**Charters Tower**	**25.17**	**136**	P	**P**	**20 59 18.8**	**+1.6**
	2.2nm,0.9s,mb3.7,baz=302,slow=19,SNR=2.5						
CTA	**Charters Tower**	**25.17**	**136**	P	**P**	**20 59 18.8**	**+1.6**
KKTK	**Khon Kaen**	**30.94**	**308**	P	**P**	**21 00 10.5**	**+1.1**
STKA	**Stephens Creek**	**32.12**	**158**	P	**P**	**21 00 18.5**	**-1.2**
	1.7nm,0.6s,mb4.1,baz=337,slow=9.2,SNR=9.4						
STKA	**Stephens Creek**	**32.12**	**158**	*e*P	**P**	**21 00 19.9**	**+0.2**
	3.0nm,0.6s,mb4.3						
MJAR	**Matsushiro Arr**	**39.81**	**13**	P	**P**	**21 01 25.9**	**+0.9**
	0.7nm,0.5s,mb3.7,baz=180,slow=10,SNR=4.6						
LSA	**Lhasa**	**47.40**	**315**	*e*P	**P**	**21 02 27.9**	**+1.5**
	2.9nm,0.7s,mb4.3						
LSA				*e*pP	pP	21 02 35.7	+0.4
GTA	**Gaotai**	**48.88**	**331**	*e*P	**P**	**21 02 38.1**	**+0.4**
GTA				AP	pP	21 02 44.3	-2.3
GTA				XP	sP	21 02 48.2	-1.9
SONM	**Songino Array**	**53.35**	**342**	P	**P**	**21 03 11.5**	**0.0**
	3.1nm,0.9s,mb4.2,baz=147,slow=9.3,SNR=14						
SONM	**Songino Array**	**53.35**	**342**	P	**P**	**21 03 11.5**	**0.0**
MKAR	**Makanchi Array**	**63.18**	**327**	P	**P**	**21 04 20.1**	**-0.1**
	3.1nm,0.8s,mb4.5,baz=124,slow=8.1,SNR=35						
MKAR	**Makanchi Array**	**63.18**	**327**	P	**P**	**21 04 20.1**	**-0.1**
YAK	**Yakutsk**	**64.17**	**1**	P	**P**	**21 04 26.3**	**-0.2**
	9.9nm,0.7s,mb5.0						
ZAL	**Zalesovo**	**66.47**	**334**	P	**P**	**21 04 40.5**	**-0.9**
	0.6nm,0.5s,mb3.9,baz=320,slow=7.7,SNR=3.6						
KURK	**Kurchatov**	**67.44**	**329**	*e*P	**P**	**21 04 46.2**	**-1.5**
	6.7nm,0.9s,mb4.7						
KURK				*e*pP	pP	21 04 57.1	+0.3
BRVK	**Borovoye**	**73.07**	**328**	*e*P	**P**	**21 05 21.7**	**-0.1**
	2.8nm,1.2s,mb4.1						
BRVK				*e*pP	pP	21 05 31.8	+0.8
CHKZ	**Chkalovo**	**73.19**	**328**	P	**P**	**21 05 22.6**	**+0.2**
	1.0nm,0.7s,mb3.9						
CHKZ				*e*pP	pP	21 05 32.6	+0.9
VNDA	**Vanda**	**77.34**	**173**	*e*P	**P**	**21 05 44.1**	**-1.6**
	0.6nm,0.6s,mb3.7						

*IDC **11** 20:54:10.4±10.0, 2.36S×128.06E, h89^{km}±100^{km}, mb3.9/4, mb1 4.1/6, mb1mx3.8/16, mbtmp4.3/6, ML4.4/1, MS3.9/3, Ms1 3.9/3, ms1mx3.3/22, Error ellipse: s-maj=62.3km s-min=17.3km az=63.0*
ISC 11 20:54:02.9±0.8**, 2.2S**±0.1×**128.3E**±0.2**, h33^{km}, n14, σ0^{s}88**/15**, mb4.1**/4**, MS3.9**/2**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**16.03**	**189**	P	**P**	**20 57 48.7**	**+1.1**
	1.1nm,0.3s,baz=29,slow=12,SNR=8.1						
FITZ				LR	LR	21 04 18.0	
	comp=Z,603nm,20.8s,baz=6.2,slow=38						
FITZ	**Fitzroy Crossi**	**16.03**	**189**	P	**P**	**20 57 48.7**	**+1.1**
WRAB	**Tennant Creek**	**18.61**	**162**	*e*pP	**P**	**20 58 19.5**	**-0.5**
WRA	**Warramunga Arr**	**18.62**	**162**	P	**P**	**20 58 19.2**	**-0.9**
	1.2nm,0.3s,baz=340,slow=12,SNR=8.9						
WRA				S	**S**	**21 01 47.5**	**+4.4**
	0.2nm,0.3s,baz=342,slow=16,SNR=5.9						
CTA	**Charters Tower**	**25.00**	**137**	P	**P**	**20 59 26.9**	**+1.5**
	2.8nm,0.7s,mb3.9,baz=314,slow=11,SNR=7.4						
CTA	**Charters Tower**	**25.00**	**137**	P	**P**	**20 59 26.9**	**+1.5**
STKA	**Stephens Creek**	**32.09**	**158**	P	**P**	**21 00 28.3**	**-1.0**
	3.8nm,0.7s,mb4.3,baz=345,slow=9.3,SNR=8.4						
STKA				LR	LR	21 14 33.6	
	comp=Z,229nm,21.8s,MS3.8,baz=14,slow=38						
STKA	**Stephens Creek**	**32.09**	**158**	P	**P**	**21 00 28.3**	**-1.0**
CHG	**Chiang Mai**	**35.61**	**307**	P	**P**	**21 00 59.5**	**-0.2**
LZH	**Lanzhou**	**44.38**	**331**	*e*P	**P**	**21 02 13.0**	**+0.8**
LZH				pP	pP	21 02 21.1	-1.0
SONM	**Songino Array**	**53.36**	**342**	P	**P**	**21 03 21.4**	**0.0**
	1.2nm,0.8s,mb3.9,baz=160,slow=7.6,SNR=4.3						
SONM	**Songino Array**	**53.36**	**342**	P	**P**	**21 03 21.4**	**0.0**
MKAR	**Makanchi Array**	**63.29**	**326**	P	**P**	**21 04 30.1**	**-0.7**
	1.4nm,0.6s,mb4.3,baz=122,slow=7.8,SNR=13						
MKAR				LR	LR	21 32 44.8	
	comp=Z,92nm,20.3s,MS4.0,baz=109,slow=37						
MKAR	**Makanchi Array**	**63.29**	**326**	P	**P**	**21 04 30.1**	**-0.7**

*NIED **11** 21:02:00, 36.50N×140.90E, h56^{km}, Mw4.6 Best double couple: M$_0$1.02×10^{16} NP1:φ$_s$56°, δ63°, λ105°. NP2:φ$_s$205°, δ31°, λ62°.*
*MOS **11** 21:02:04.3±1.0, 36.57N×140.79E, h39^{km}, mb4.9/24, Error ellipse: s-maj=11.0km s-min=6.1km az=104.1*
*BJI **11** 21:02:06.3, 36.55N×140.87E, h71^{km}, mB4.8, mb4.5, Ms4.1, Msz3.8*
*JMA **11** 21:02:07.3±0.1, 36.48N×140.86E, h57^{km}±1^{km}, M4.6 Broadband fault plane solution: P waves. NP1:φ$_s$220°, δ6°, λ68°. NP2:φ$_s$62°, δ84°, λ92°. Principal axes: T Plg51°, Azm335°; N Plg2°, Azm242°; P Plg39°, Azm150°;*
JMA Felt III J1.
*NEIC **11** 21:02:08.0±0.7, 36.55N×140.83E, h59^{km}±6^{km}, mb4.6/35, MW4.6(NIED) Error ellipse: s-maj=7.2km s-min=4.9km az=152.0*
NEIC Recorded [3 JMA] in Fukushima, Ibaraki and Tochigi; [2 JMA] in Saitama; [1 JMA] in Chiba, Gumma, Kanagawa, Miyagi and Tokyo Prefectures.
*IDC **11** 21:02:09.9±0.7, 36.42N×140.70E, h78^{km}±6^{km}, mb4.1/19, mb1 4.2/20, mb1mx4.2/24, mbtmp4.4/20, MS3.9/11, Ms1 3.9/11, ms1mx3.6/30, Error ellipse: s-maj=13.6km s-min=9.4km az=99.0*
*SKO **11** 21:02:16.1, 37.40N×138.64E*
ISC 11 21:02:06.6±0.4**, 36.52N**±0.03×**140.85E**±0.04**, h61^{km}**±2^{km}**, h67^{km}**±3.7^{km}**:pP-P, n174, σ1^{s}06**/194**, mb4.6**/66**, 6C-15D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.25**	**292**	⇓P	**P**	**21 02 16.9**	**+0.3**
JHO				*e*S	**S**	**21 02 23.4**	**-0.4**
ONAJ	**Iwakimizuishiy**	**0.58**	**356**	⇓P	**P**	**21 02 20.0**	**+0.2**
ONAJ				*e*S	**S**	**21 02 29.5**	**+0.1**
JYT	**Yasato**	**0.60**	**242**	⇑P	**P**	**21 02 20.1**	**+0.1**
JYT				*e*S	**S**	**21 02 29.1**	**-0.7**
JFK	**Kawauchi**	**0.85**	**1**	⇓P	**P**	**21 02 23.1**	**+0.2**
JFT	**Otama**	**1.08**	**338**	⇓P	**P**	**21 02 27.3**	**+1.2**
JAG	**Ashikaga**	**1.13**	**266**	⇓P	**P**	**21 02 27.3**	**+0.6**
JAG				*e*S	**S**	**21 02 41.5**	**-0.2**
JFY	**Yanaizu**	**1.28**	**314**	⇓P	**P**	**21 02 29.9**	**+1.1**
JKT	**Katashina**	**1.31**	**281**	⇓P	**P**	**21 02 30.4**	**+1.0**
JMM	**Marumori**	**1.35**	**358**	⇓P	**P**	**21 02 30.4**	**+0.5**
JMM				*e*S	**S**	**21 02 47.6**	**+0.6**
MJAR	**Matsushiro Arr**	**2.13**	**271**	P	**P**	**21 02 41.5**	**+0.9**
	123nm,0.3s,baz=340,slow=19,SNR=678						
MJAR				S	**S**	**21 03 11.6**	**+5.8**
	146nm,0.3s,baz=95,slow=28,SNR=12						
MJAR				LR	LR	21 03 38.4	
	comp=Z,2μm,21.2s,baz=75,slow=45						
MAJO	**Matsushiro**	**2.13**	**271**	*e*P	**P**	**21 02 41.8**	**+1.1**
MAT	**Matsushiro**	**2.13**	**271**	P	**P**	**21 02 41.7**	**+1.1**
MAT				S	**S**	**21 03 11.3**	**+5.4**
MAT	**Matsushiro**	**2.13**	**271**	*e*P	**P**	**21 02 42.0**	**+1.4**
MAT				*e*S	**S**	**21 03 11.0**	**+5.1**
JHJ	**Hachijo jima 2**	**3.50**	**195**	P	**P**	**21 02 59.5**	**-0.6**
	31nm,0.3s,baz=85,slow=22,SNR=24						
JHJ				S	**S**	**21 03 39.5**	**-1.0**
	144nm,0.3s,baz=97,slow=22,SNR=7.4						
ASAJ	**Asahikawa**	**7.71**	**9**	P	**P**	**21 03 55.6**	**-2.9**
	22nm,0.3s,baz=222,slow=10,SNR=123						
ASAJ				S	**S**	**21 05 22.2**	**-3.0**
	3.2nm,0.3s,baz=65,slow=34,SNR=3.8						
ASAJ				LR	LR	21 07 05.8	
	comp=Z,241nm,21.7s,baz=178,slow=38						
ASAJ	**Asahikawa**	**7.71**	**9**	P	**P**	**21 03 55.7**	**-2.9**
ASAJ				S	**S**	**21 05 22.3**	**-2.9**
ASAJ				pmax	pmax		
	comp=Z,22nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,241nm,21.7s						
YUK	**Yuzh-Kuril'sk**	**8.43**	**25**	P	**P**	**21 04 05.0**	**-3.5**
YUK				*e*S	**S**	**21 05 33.2**	**-10**
YUK				smax			
	comp=N,660nm,0.5s						
YUK				smax			
	comp=E,180nm,0.5s						
YUK				smax			
	comp=N,2μm,0.7s						
YUK				smax			
	comp=E,2μm,0.8s						
JNU	**Nakatsue**	**8.87**	**250**	LR	LR	21 07 52.2	
	comp=E,316nm,20.1s,baz=248,slow=39						
CBIJ	**Chichi jima**	**9.46**	**173**	P	**P**	**21 04 18.0**	**-4.6**
	comp=E,29nm,0.3s,baz=289,slow=21,SNR=9.9						
CBIJ				S	**S**	**21 05 55.7**	**-13**
	comp=E,13nm,0.3s,baz=309,slow=20,SNR=3.0						
VLA	**Vladivostok**	**9.53**	**316**	⇓*e*P	**P**	**21 04 27.0**	**+3.4**
KUR	**Kuril'sk**	**10.20**	**29**	P	**P**	**21 04 26.5**	**-6.1**
KUR				*e*S	**S**	**21 06 18.0**	**-8.3**
KUR				smax			
	comp=N,100nm,0.5s						
KUR				smax			
	comp=E,60nm,0.5s						
YSS	**Yuzh-Sakhalins**	**10.52**	**7**	*e*P	**P**	**21 04 33.8**	**-3.2**
	comp=E,35nm,0.7s						

YSS	**Yuzh-Sakhalins**	**10.52**	**7**	*e*P	**P**	**21 04 34.0**	**-3.1**
YSS				*e*S	**S**	**21 06 32.0**	**-2.3**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				smax			
	comp=E,60nm,1.3s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
MDJ	**Mudanjiang**	**11.77**	**317**	P	**P**	**21 04 56.9**	**+3.0**
MDJ				PP	PP	21 05 06.7	+3.1
MDJ				XP		21 05 13.0	
MDJ				S	**S**	**21 07 10.6**	**+6.2**
MDJ				SS	SS	21 07 23.7	+3.6
MDJ				PCS		21 14 12.5	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.5s						
MDJ				AMB	AMB		
	comp=Z,80nm,5.3s						
MDJ				LR	LR		
	comp=N,160nm,23.4s						
MDJ				LR	LR		
	comp=E,250nm,21.2s						
MDJ				LR	LR		
	comp=Z,430nm,23.4s						
MDJ	**Mudanjiang**	**11.77**	**317**	*e*P	**P**	**21 04 51.6**	**-2.2**
	comp=Z,16nm,0.9s						
CN2	**Changchun**	**13.83**	**306**	*e*P	**P**	**21 05 21.0**	**-0.1**
CN2				*e*XP		21 05 39.8	
CN2				*e*S	**S**	**21 07 52.7**	**-0.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s						
CN2				LR	LR		
	comp=E,300nm,13.0s						
CN2				LR	LR		
	comp=Z,300nm,14.0s						
KLR	**Kul'dur**	**14.34**	**335**	*e*P	**P**	**21 05 33.2**	**+5.6**
SSE	**Sheshan**	**17.21**	**257**	P	**P**	**21 06 04.7**	**+0.5**
SSE				AP		21 06 18.7	
SSE				XP		21 06 26.2	
SSE				S	**S**	**21 09 14.3**	**+2.5**
SSE				AMB	AMB		
	comp=Z,40nm,0.7s						
SSE				AMB	AMB		
	comp=Z,40nm,5.7s						
SSE				LR	LR		
	comp=N,100nm,20.1s						
SSE				LR	LR		
	comp=E,140nm,20.1s						
SSE				LR	LR		
	comp=Z,130nm,18.5s						
SSE	**Sheshan**	**17.21**	**257**	P	**P**	**21 06 04.7**	**+0.5**
	comp=Z,46nm,0.7s						
SSE				pP		21 06 18.7	
SSE				sP		21 06 26.2	
SSE				S	**S**	**21 09 14.3**	**+2.5**
SSE				sS		21 09 42.3	
NJ2	**Nanjing**	**18.71**	**263**	*e*P	**P**	**21 06 22.3**	**-0.2**
NJ2				AP		21 06 33.8	
NJ2				PP	PP	21 06 40.6	+1.3
NJ2				XP		21 06 42.3	
NJ2				S	**S**	**21 09 43.0**	**-2.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
NJ2				AMB	AMB		
	comp=Z,1µm,4.2s						
NJ2				LR	LR		
	comp=N,180nm,15.0s						
NJ2				LR	LR		
	comp=E,250nm,17.0s						
NJ2				LR	LR		
	comp=Z,2µm,13.1s						
PET	**Petropavlovsk**	**20.69**	**32**	*e*P	**P**	**21 06 42.7**	**-1.1**
	comp=Z,157nm,1.5s						
PET	**Petropavlovsk**	**20.69**	**32**	*e*P	**P**	**21 06 43.1**	**-0.6**
PET				pmax	pmax		
	comp=Z,80nm,1.5s						
PET				MLR	MLR		
	comp=Z,200nm,21.0s						
HHC	**Hu-ho-hao-te**	**23.21**	**290**	*e*P	**P**	**21 07 07.2**	**-1.5**
HHC				AP		21 07 20.7	
HHC				PP	PP	21 07 39.9	-1.3
HHC				S	**S**	**21 11 13.3**	**+0.9**
HHC				XS		21 11 37.3	
HHC				SCP		21 14 22.7	
HHC				PCS		21 14 29.9	
HHC				AMB	AMB		
	comp=Z,100nm,6.0s						
HHC				LR	LR		
	comp=N,190nm,18.0s						
HHC				LR	LR		
	comp=E,260nm,14.4s						
HHC				LR	LR		
	comp=Z,180nm,14.4s						
YAK	**Yakutsk**	**26.48**	**348**	*e*P	**P**	**21 07 37.9**	**-1.7**
	comp=Z,17nm,0.4s,mb4.9						
YAK	**Yakutsk**	**26.48**	**348**	*c* *i*P	**P**	**21 07 38.7**	**-0.9**
YAK				pmax	pmax		
	comp=Z,29nm,0.9s,mb4.8						
YAK				MLR	MLR		
	comp=Z,200nm,20.0s						
ENH	**Enshi**	**26.84**	**266**	*e*P	**P**	**21 07 41.8**	**-1.5**
	comp=Z,5.9nm,0.4s,mb4.5						
SEY	**Seymchan**	**27.39**	**11**	*i* P	**P**	**21 07 48.9**	**+1.0**
SONM	**Songino Array**	**27.70**	**305**	P	**P**	**21 07 50.1**	**-0.9**
	comp=Z,3.7nm,0.7s,mb4.1,baz=102,slow=9.1,SNR=18						
SONM				LR	LR	21 18 46.9	
	comp=Z,132nm,20.0s,baz=221,slow=36						
BOD	**Bodaibo**	**27.73**	**329**	*e*P	**P**	**21 07 49.2**	**-1.9**
BOD				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.5						
LZH	**Lanzhou**	**29.71**	**280**	*e*P	**P**	**21 08 08.2**	**-0.8**
LZH				AP	pP	21 08 23.4	-0.7
LZH				XP	sP	21 08 30.5	-1.0
LZH				PP	PP	21 09 06.0	-1.5
LZH				PPP	PPP	21 09 20.4	-0.9
LZH				PCP	PcP	21 11 11.5	-0.4
LZH				*e*S	**S**	**21 12 58.0**	**-1.3**
LZH				SCP		21 14 48.0	
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,90nm,4.9s						
LZH				LR	LR		
	comp=E,460nm,13.8s						
LZH				LR	LR		
	comp=Z,670nm,15.0s						
LZH	**Lanzhou**	**29.71**	**280**	*e*P	**P**	**21 08 08.2**	**-0.8**
	comp=Z,20nm,1.0s,mb4.8						
LZH				pP	pP	21 08 23.4	-0.7
LZH				sP	sP	21 08 30.5	-1.0
LZH				PP	PP	21 09 06.0	-1.5
LZH				PPP	PPP	21 09 20.4	-0.9
LZH				PcP	PcP	21 11 11.5	-0.4
LZH				*e*S	**S**	**21 12 58.0**	**-1.3**
LZH				ScP		21 14 48.0	
LZH				LR	LR		
	comp=Z,670nm,15.0s						
LZH	**Lanzhou**	**29.71**	**280**	*e*P	**P**	**21 08 08.2**	**-0.8**
LZH				*PP	pP	21 08 23.4	-0.7
LZH						21 09 06.0	
LZH				PPP	PPP	21 09 20.4	-0.9
LZH						21 11 11.5	
LZH				*e*S	**S**	**21 12 58.0**	**-1.3**
LZH				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
LZH				MLR	MLR		
	comp=Z,670nm,15.0s						
GYA	**Guiyang**	**30.69**	**261**	P	**P**	**21 08 16.6**	**-1.2**
GYA				AP	pP	21 08 30.8	-2.2
GYA				XP	sP	21 08 38.5	-1.9
GYA				PPP	PPP	21 09 35.0	0.0
GYA				S	**S**	**21 13 10.5**	**-4.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
GYA				AMB	AMB		
	comp=Z,130nm,5.9s						
GYA				LR	LR		
	comp=N,140nm,10.8s						
GYA				LR	LR		
	comp=E,110nm,9.3s						
GYA				LR	LR		
	comp=Z,180nm,10.5s						
GTA	**Gaotai**	**32.29**	**288**	*e*P	**P**	**21 08 31.3**	**-0.3**
GTA				AP	pP	21 08 45.5	-1.4
GTA				XP	sP	21 08 52.3	-2.2
GTA				PP	PP	21 09 42.1	+1.6
GTA				S	**S**	**21 13 40.3**	**+0.7**
GTA				XS		21 14 06.2	
GTA				SS	SS	21 15 38.4	+0.9
GTA				SCS	ScS	21 18 53.6	+0.2
GTA				AMB	AMB		
	comp=Z,110nm,8.1s						
GTA				LR	LR		
	comp=N,150nm,11.2s						
GTA				LR	LR		
	comp=E,210nm,12.4s						
GTA				LR	LR		
	comp=Z,190nm,17.0s						
KMI	**Kunming**	**34.44**	**262**	P	**P**	**21 08 52.2**	**+1.9**
	comp=Z,3.0nm,1.1s,mb4.1						
KMI	**Kunming**	**34.44**	**262**	P	**P**	**21 08 52.2**	**+1.9**
KMI				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
BILL	**Bilibino**	**34.65**	**16**	*e*P	**P**	**21 08 50.9**	**-0.8**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
TIXI	**Tiksi**	**35.75**	**354**	⇑*e*P	**P**	**21 08 59.9**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,16nm,2.1s,mb4.6						
WMQ	**Urumqi**	**40.67**	**297**	P	**P**	**21 09 43.7**	**+1.4**
WMQ				AP	pP	21 09 59.0	+1.0
WMQ				XP	sP	21 10 06.0	+0.7
WMQ				PPP	PPP	21 11 48.0	-1.2
WMQ				PCS		21 15 32.0	
WMQ				S	**S**	**21 15 49.0**	**+1.3**
WMQ				XS		21 16 15.0	
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,210nm,7.0s						
WMQ				LR	LR		
	comp=N,280nm,20.6s						
WMQ				LR	LR		
	comp=E,210nm,19.8s						
WMQ				LR	LR		
	comp=Z,190nm,19.9s						
LSA	**Lhasa**	**41.81**	**275**	*e*P	**P**	**21 09 53.1**	**+1.3**
	comp=Z,2.3nm,0.4s,mb4.2						
LSA	**Lhasa**	**41.81**	**275**	*e*P	**P**	**21 09 53.1**	**+1.3**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
ZAL	**Zalesovo**	**41.94**	**313**	P	**P**	**21 09 52.8**	**+0.2**
	comp=Z,8.9nm,0.8s,mb4.4,baz=20,slow=7.1,SNR=48						
ZAL				LR	LR	21 28 50.9	
	comp=Z,125nm,18.9s,baz=349,slow=38						
MKAR	**Makanchi Array**	**44.01**	**302**	P	**P**	**21 10 09.9**	**+0.3**
	comp=Z,5.9nm,0.9s,mb4.3,baz=84,slow=9.6,SNR=36						
MKAR	**Makanchi Array**	**44.01**	**302**	*i* P	**P**	**21 10 09.8**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	**Kurchatov**	**45.90**	**308**	*e*P	**P**	**21 10 23.8**	**-0.8**
	comp=Z,8.4nm,0.6s,mb4.8						
KURK	**Kurchatov**	**45.90**	**308**	*c* *i*P	**P**	**21 10 24.2**	**-0.3**
GUN	**Gumba**	**46.76**	**276**	*e*P	**P**	**21 10 32.3**	**+0.6**
	comp=Z,11nm,0.4s,mb5.2						
KKN	**Kakani**	**47.29**	**276**	*e*P	**P**	**21 10 35.8**	**0.0**
	comp=Z,24nm,1.0s,mb5.1						
DMN	**Daman**	**47.51**	**276**	*e*P	**P**	**21 10 37.3**	**-0.2**
GKN	**Gorkha**	**47.71**	**277**	*e*P	**P**	**21 10 38.9**	**-0.3**
	comp=Z,54nm,1.1s,mb5.5						
KDAK	**Kodiak Island**	**47.78**	**42**	P	**P**	**21 10 39.8**	**+0.5**
	comp=Z,8.2nm,0.7s,mb4.9,baz=284,slow=4.2,SNR=8.7						
KOLN	**Koldanda**	**48.64**	**277**	*e*P	**P**	**21 10 46.3**	**-0.1**
	comp=Z,38nm,1.4s,mb5.2						
COLA	**College**	**49.76**	**32**	*e*P	**P**	**21 10 55.0**	**+0.6**
	comp=Z,5.7nm,0.8s,mb4.7						
COLA	**College**	**49.76**	**32**	*i* P	**P**	**21 10 55.9**	**+1.5**
ILAR	**Eielson Array**	**50.17**	**32**	P	**P**	**21 10 57.8**	**+0.2**
	comp=Z,5.5nm,0.7s,mb4.7,baz=268,slow=5.9,SNR=60						
CHKZ	**Chkalovo**	**50.34**	**313**	*e*P	**P**	**21 10 57.8**	**-1.2**
	comp=Z,20nm,1.1s,mb5.1						
CHKZ	**Chkalovo**	**50.34**	**313**	*e*P	**P**	**21 10 57.8**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
AAK	**Ala-Archa**	**50.34**	**299**	*e*P	**P**	**21 10 58.0**	**-1.2**
BVA0	**Borovoye Array**	**50.59**	**313**	*i* P	**P**	**21 11 00.3**	**-0.6**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.4s,mb4.0						
BRVK	**Borovoye**	**50.64**	**313**	*e*P	**P**	**21 10 59.9**	**-1.5**
	comp=Z,4.8nm,0.8s,mb4.5						
BRVK	**Borovoye**	**50.64**	**313**	*e*P	**P**	**21 10 59.9**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
KKAR	**Karatay Array**	**52.99**	**300**	*i* P	**P**	**21 11 19.0**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
DAWY	**Dawson**	**53.48**	**33**	P	**P**	**21 11 22.0**	**-0.5**
INK	**Inuvik**	**55.05**	**27**	P	**P**	**21 11 34.1**	**+0.3**
	comp=Z,8.2nm,0.9s,mb4.8,baz=296,slow=7.4,SNR=28						
INK	**Inuvik**	**55.05**	**27**	*e*P	**P**	**21 11 33.8**	**-0.1**
	comp=Z,4.5nm,0.6s,mb4.7						
INK	**Inuvik**	**55.05**	**27**	P	**P**	**21 11 34.2**	**+0.3**
INK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SVE	**Sverdlovsk**	**55.24**	**319**	*e*P	**P**	**21 11 25.0**	**-10**
SVE				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
SVE				MLR	MLR		
	comp=N,100nm,11.0s						
SVE				MLR	MLR		
	comp=E,100nm,11.0s						
SVE				MLR	MLR		
	comp=Z,300nm,11.0s						
ARU	**Arti**	**56.45**	**319**	*e*P	**P**	**21 11 42.8**	**-1.3**
	comp=Z,21nm,0.6s,mb5.3						
ARU	**Arti**	**56.45**	**319**	⇑*i*P	**P**	**21 11 43.1**	**-1.0**
ARU				*e*PPP	PPP	21 15 03.0	-6.8
ARU				*e*S	**S**	**21 19 30.6**	**+2.0**
ARU				*e*SS	SS	21 23 16.9	-0.1
ARU				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.3						
WRAB	**Tennant Creek**	**56.48**	**187**	*e*P	**P**	**21 11 42.8**	**-2.0**
WB2	**Warramunga Arr**	**56.49**	**187**	*e*P	**P**	**21 11 43.6**	**-1.2**
WRA	**Warramunga Arr**	**56.49**	**187**	P	**P**	**21 11 43.2**	**-1.6**
	comp=Z,1.4nm,0.6s,mb4.2,baz=1.9,slow=7.3,SNR=27						
AB31	**Akbulak array**	**57.93**	**310**	*i* P	**P**	**21 11 53.3**	**-1.3**
AB31				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
AKTO	**Aktyubinsk**	**58.69**	**312**	LR	LR	21 38 29.5	
	comp=Z,142nm,19.8s,baz=222,slow=37						
KEV	**Kevo**	**63.77**	**339**	*e*p	**P**	**21 12 32.1**	**-1.7**
	comp=Z,0.7nm,0.3s,mb4.2						
KEV	**Kevo**	**63.77**	**339**	*e*P	**P**	**21 12 32.1**	**-1.7**
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
ARCES	**ARCESS Array B**	**64.32**	**339**	P	**P**	**21 12 36.8**	**-0.6**
	comp=Z,1.3nm,0.4s,mb4.3,baz=59,slow=8.1,SNR=26						
ARCES				LR	LR	21 45 55.7	
	comp=Z,143nm,19.7s,baz=172,slow=41						
JOF	**Joensuu**	**66.21**	**332**	*e*p	**P**	**21 12 48.5**	**-1.1**
	comp=Z,3.1nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**68.04**	**179**	P	**P**	**21 13 00.9**	**-0.7**
	comp=Z,2.1nm,1.1s,mb4.1,baz=339,slow=14,SNR=2.2						
OBN	**Obninsk**	**68.24**	**323**	⇓*i*P	**P**	**21 13 01.8**	**-0.6**
OBN				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
KAF	**Kangasniemi**	**68.56**	**333**	*e*p	**P**	**21 13 02.9**	**-1.4**
	comp=Z,1.8nm,0.4s,mb4.3,baz=46,slow=5.5						
KAF	**Kangasniemi**	**68.56**	**333**	*e*P	**P**	**21 13 02.9**	**-1.4**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
FINES	**FINESS Array B**	**69.06**	**332**	P	**P**	**21 13 07.0**	**-0.4**
	comp=Z,4.7nm,0.7s,mb4.5,baz=52,slow=7.1,SNR=27						
FINES				LR	LR	21 44 25.3	
	comp=Z,141nm,20.1s,baz=328,slow=37						
FINES	**FINESS Array B**	**69.06**	**332**	*i* P	**P**	**21 13 07.1**	**-0.3**
FINES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GOF	**Gofitskoye**	**70.11**	**312**	*e*P	**P**	**21 13 12.6**	**-1.5**
KIV	**Kislovodsk**	**70.90**	**311**	*e*P	**P**	**21 13 18.6**	**-0.4**
	comp=Z,16nm,1.0s,mb4.9						
KIV	**Kislovodsk**	**70.90**	**311**	⇑*i*P	**P**	**21 13 18.7**	**-0.2**
KIV				*e*		21 13 30.3	
KIV				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
SUMG	**Summit**	**71.20**	**360**	*e*P	**P**	**21 13 21.5**	**+1.2**
	comp=Z,8.8nm,1.1s,mb4.6						
GNI	**Garni**	**71.65**	**307**	LR	LR	21 44 20.6	
	comp=Z,90nm,20.9s,baz=242,slow=35						
GNI	**Garni**	**71.65**	**307**	*i* P	**P**	**21 13 24.8**	**+1.3**
GNI				pmax	pmax		
	comp=Z,27nm,1.6s						
BMO	**Blue Mountains**	**72.61**	**47**	*e*P	**P**	**21 13 29.9**	**+0.9**
	comp=Z,13nm,1.7s,mb4.6						
SOC	**Sochi**	**72.91**	**312**	*e*P	**P**	**21 13 37.0**	**+6.2**
SOC				*e*	pP	21 13 54.4	+6.6
SOC				*e*PPP	PPP	21 18 01.9	+3.1
SOC				*e*S	S	21 23 01.3	+10
SOC				*e*		21 23 32.4	
SOC				*e*SS	SS	21 27 38.2	+3.3
SOC				*e*SSS	SSS	21 30 44.7	-0.5
SOC				pmax	pmax		
	comp=Z,65nm,1.0s,mb5.5						
SOC				MLR	MLR		
	comp=Z,299nm,16.0s						
ANN	**Anapa**	**73.56**	**314**	*e*P	**P**	**21 13 34.9**	**+0.3**
ANN				*i*		21 13 45.8	
ANN				*e*S	S	21 23 02.0	+3.5
ANN				pmax	pmax		
	comp=Z,73nm,1.4s,mb5.4						
AKASG	**Malin Array Be**	**74.43**	**322**	P	**P**	**21 13 39.0**	**-0.5**
	comp=Z,4.7nm,0.5s,mb4.7,baz=47,slow=6.1,SNR=34						
NB2	**NORSAR Subarra**	**74.49**	**337**	P	**P**	**21 13 39.5**	**-0.1**
	comp=Z,2.2nm,0.7s,mb4.2,baz=41,slow=5.8						
NOA	**NORSAR Array B**	**74.49**	**337**	P	**P**	**21 13 39.6**	**0.0**
	comp=Z,4.1nm,0.8s,mb4.4,baz=39,slow=5.8,SNR=9.5						
NOA				pP	pP	21 14 00.0	+3.4
	comp=Z,1.5nm,0.7s,baz=38,slow=6.0,SNR=1.9						
NOA				LR	LR	21 47 07.7	
	comp=Z,104nm,19.9s,baz=20,slow=36						
CMB	**Columbia Colle**	**74.54**	**54**	P	**P**	**21 13 40.1**	**-0.4**
	comp=Z,0.8nm,0.4s,mb4.0						
CMB	**Columbia Colle**	**74.54**	**54**	P	**P**	**21 13 40.1**	**-0.3**
CMB				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
NAO	**NORSAR Subarra**	**74.77**	**337**	P	**P**	**21 13 39.5**	**-1.8**
	comp=Z,2.2nm,0.7s,mb4.2						
NAO	**NORSAR Subarra**	**74.77**	**337**	P	**P**	**21 13 39.5**	**-1.8**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
BOZ	**Bozeman (W)**	**75.40**	**44**	*e*P	**P**	**21 13 46.4**	**+1.3**
	comp=Z,2.6nm,0.4s,mb4.5						
BOZ	**Bozeman (W)**	**75.40**	**44**	*e*P	**P**	**21 13 46.4**	**+1.2**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
KBD	**Kabd**	**75.61**	**296**	*e*P	**P**	**21 13 46.5**	**-0.3**
NVAR	**Mina Array Bea**	**75.66**	**53**	P	**P**	**21 13 48.5**	**+1.7**
	comp=Z,1.4nm,0.6s,mb4.0,baz=300,slow=4.4,SNR=12						
RDF	**Al-Radifah**	**75.85**	**296**	*e*P	**P**	**21 13 48.0**	**-0.1**
RDF				AMb	AMB	21 13 49.1	
	comp=Z,29nm,0.9s,mb5.2						
NAY	**Al-Naaiem**	**75.90**	**296**	*e*P	**P**	**21 13 47.7**	**-0.7**
NAY				AMb	AMB	21 13 49.1	
	comp=Z,13nm,1.0s,mb4.8						
ELK	**Elko**	**76.23**	**49**	P	**P**	**21 13 51.6**	**+1.6**
	comp=Z,0.9nm,0.4s,mb4.0,baz=336,slow=6.1,SNR=4.8						
ELK	**Elko**	**76.23**	**49**	*e*P	**P**	**21 13 50.6**	**+0.6**
	comp=Z,0.9nm,0.5s,mb4.0						
ELK	**Elko**	**76.23**	**49**	P	**P**	**21 13 51.6**	**+1.6**
ELK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
RRI2	**Red Ridge**	**76.98**	**45**	*e*P	**P**	**21 13 55.7**	**+1.5**
	comp=Z,5.5nm,1.2s,mb4.4						
MOOW	**Moose Ponds**	**77.06**	**45**	*e*P	**P**	**21 13 53.6**	**-1.0**
	comp=Z,14nm,1.8s,mb4.6						
TPNV	**Topopah Spring**	**77.85**	**53**	*e*P	**P**	**21 13 58.9**	**-0.2**
	comp=Z,1.7nm,0.5s,mb4.2						
TPNV	**Topopah Spring**	**77.85**	**53**	*e*P	**P**	**21 13 58.9**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
HWUT	**Hardware Ranch**	**77.91**	**47**	*e*P	**P**	**21 13 59.4**	**0.0**
	comp=Z,19nm,1.6s,mb4.8						
KWP	**Kalwaria**	**78.28**	**324**	*e*P	**P**	**21 14 02.6**	**+1.3**
KWP	**Kalwaria**	**78.28**	**324**	*e*P	**P**	**21 14 02.6**	**+1.4**
PDAR	**Pinedale Array**	**78.35**	**45**	P	**P**	**21 14 02.6**	**+0.9**
	comp=Z,1.3nm,0.5s,mb4.1,baz=292,slow=0.2,SNR=13						
PDAR				pP	pP	21 14 24.8	+6.0
	comp=Z,0.9nm,0.8s,baz=270,slow=1.5,SNR=3.2						
BR131	**Keskin Array S**	**78.86**	**311**	*e*P	**P**	**21 14 04.8**	**+0.2**
	comp=Z,0.8nm,0.5s,mb3.9						
BRTR	**Keskin Array B**	**78.86**	**311**	P	**P**	**21 14 05.3**	**+0.7**
	comp=Z,2.1nm,0.8s,mb4.1,baz=117,slow=2.8,SNR=12						
KOLS	**Kolonicke sedl**	**78.97**	**324**	*e*P	**P**	**21 14 05.1**	**+0.1**
OJC	**Ojcow**	**79.22**	**326**	*e*P	**P**	**21 14 06.9**	**+0.6**
CRVS	**Cervenica-Dubn**	**79.38**	**324**	*e*P	**P**	**21 14 07.8**	**+0.5**
KECS	**Kecovo**	**80.13**	**324**	*e*P	**P**	**21 14 10.3**	**-1.0**
ULM	**Lac du Bonnet**	**80.18**	**33**	P	**P**	**21 14 12.1**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=312,slow=5.0,SNR=3.0						
ULM	**Lac du Bonnet**	**80.18**	**33**	P	**P**	**21 14 12.1**	**+0.5**
RAR	**Rarotonga**	**80.22**	**125**	LR	LR	21 41 29.3	
	comp=Z,2µm,21.4s,baz=27,slow=29						
MORC	**Moravsky Berou**	**80.54**	**327**	*e*P	**P**	**21 14 13.5**	**+0.1**
	comp=Z,6.3nm,1.0s,mb4.5						
MORC	**Moravsky Berou**	**80.54**	**327**	*e*P	**P**	**21 14 13.5**	**0.0**
MORC				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
DPC	**Dobruska-Polom**	**80.66**	**328**	*e*P	**P**	**21 14 14.8**	**+0.8**
UPC	**Upice**	**80.67**	**328**	*e*P	**P**	**21 14 15.5**	**+1.4**
PSZ	**Piszkesteto**	**80.81**	**324**	*e*P	**P**	**21 14 15.0**	**+0.1**
	comp=Z,6.6nm,0.8s,mb4.6						
PSZ	**Piszkesteto**	**80.81**	**324**	*e*P	**P**	**21 14 15.0**	**+0.1**
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
VYHS	**Vyhne**	**80.89**	**325**	*e*P	**P**	**21 14 16.0**	**+0.7**
BRG	**Berggiesshubel**	**81.27**	**329**	*e*P	**P**	**21 14 17.6**	**+0.3**
	comp=Z,5.2nm,1.0s,mb4.4						
BRG	**Berggiesshubel**	**81.27**	**329**	*e*P	**P**	**21 14 17.6**	**+0.4**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
PVCC	**Panska Ves**	**81.27**	**329**	*e*P	**P**	**21 14 17.7**	**+0.4**
CLL	**Collm**	**81.32**	**330**	⇓P	**P**	**21 14 17.6**	**+0.1**
	comp=Z,logA/T=1.2,mb4.9						
CLL	**Collm**	**81.32**	**330**	⇓*i*P	**P**	**21 14 17.6**	**+0.1**
	comp=Z,17nm,1.1s,mb4.9						
CLL	**Collm**	**81.32**	**330**	⇓*i*P	**P**	**21 14 17.6**	**+0.1**
CLL				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
PV10	**Paradox Valley**	**81.45**	**48**	*e*P	**P**	**21 14 18.6**	**+0.1**
PRU	**Pruhonice**	**81.69**	**328**	*e*P	**P**	**21 14 20.0**	**+0.6**
TREC	**Trest**	**81.80**	**327**	*e*P	**P**	**21 14 20.8**	**+0.7**
NKC	**Novy Kostel**	**82.37**	**329**	*e*P	**P**	**21 14 24.1**	**+1.1**
KHC	**Kasperske Hory**	**82.75**	**328**	*e*P	**P**	**21 14 25.7**	**+0.8**
KHC	**Kasperske Hory**	**82.75**	**328**	⇓*e*P	**P**	**21 14 25.8**	**+0.9**
GERES	**GERESS Array B**	**82.91**	**328**	P	**P**	**21 14 26.2**	**+0.5**
	comp=Z,1.0nm,0.4s,mb4.2,baz=38,slow=6.4,SNR=17						
GERES				pP	pP	21 14 46.6	+3.6
	comp=Z,0.4nm,0.4s,baz=45,slow=6.1,SNR=3.2						
GERES				LR	LR	21 55 23.7	
	comp=Z,372nm,18.6s,baz=354,slow=38						
GRA1	**Grafenberg Arr**	**83.29**	**330**	*e*P	**P**	**21 14 28.7**	**+1.1**
	comp=Z,10.0nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	**83.29**	**330**	*e*P	**P**	**21 14 28.7**	**+1.1**
	comp=Z,10.0nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	**83.29**	**330**	*e*P	**P**	**21 14 28.7**	**+1.1**
GRF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	**83.29**	**330**	*e*P	**P**	**21 14 28.7**	**+1.1**
GRF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
SDCO	**Great Sand Dun**	**83.97**	**47**	*e*P	**P**	**21 14 32.0**	**+0.7**
	comp=Z,1.1nm,0.6s,mb4.2						
VAY	**Valandovo**	**84.13**	**318**	*e*P	**P**	**21 14 31.3**	**-0.8**
SKO	**Skopje**	**84.28**	**319**	*e*P	**P**	**21 14 34.1**	**+1.4**
TATS	**Tathlith**	**84.29**	**290**	P	**P**	**21 14 34.2**	**+0.9**
PPT	**Papeete**	**84.81**	**116**	LR	LR	21 52 59.7	
	comp=Z,31nm,18.2s,baz=288,slow=36						
BIA	**Bitola**	**85.01**	**319**	*e*P	**P**	**21 14 35.1**	**-1.3**
OHR	**Ohrid**	**85.23**	**319**	*e*P	**P**	**21 14 37.6**	**+0.1**
ANMO	**Albuquerque**	**85.26**	**50**	⇓*e*P	**P**	**21 14 40.1**	**+2.3**
DJNS	**Zahran al Janu**	**85.33**	**288**	P	**P**	**21 14 40.0**	**+1.5**
BLJS	**Baljurashi**	**85.50**	**291**	P	**P**	**21 14 40.9**	**+1.5**
TXAR	**Lajitas Array**	**90.80**	**52**	P	**P**	**21 15 05.4**	**+0.9**
	comp=Z,0.5nm,0.4s,mb4.2,baz=297,slow=2.8,SNR=5.6						
SDV	**Santo Domingo**	**126.01**	**40**	PKP	PKPdf	21 21 03.5	+1.0
	comp=Z,1.3nm,0.3s,baz=341,slow=4.9,SNR=3.8						
SDV				PP	PP	21 22 55.3	-5.7
	comp=Z,1.6nm,0.4s,baz=318,slow=4.4,SNR=3.8						
LPAZ	**La Paz**	**147.34**	**60**	PKPbc	PKPdf	21 21 45.6	+4.4
	comp=Z,1.3nm,0.5s,baz=29,slow=6.2,SNR=6.3						
LPAZ	**La Paz**	**147.34**	**60**	*e*PKPbc	PKPdf	21 21 46.2	+4.9

*ATH **11** 21:18:42.2, 37.27N×20.58E, h12^{km}±9^{km}, MD3.7/4*
*NEIC **11** 21:18:42.2, 37.27N×20.58E, h12^{km}, MD3.7(ATH), After ATH.*
*CSEM **11** 21:18:42.0±0.1, 37.15N×20.64E, h60^{km}, MD3.7, Error ellipse: s-maj=2.4km s-min=1.6km az=69.0*
*THE **11** 21:18:43.5, 37.37N×20.58E, h20^{km}, ML3.7*
*HLW **11** 21:18:46.3, 37.05N×20.60E, h33^{km}, Mb3.5*
*IDC **11** 21:18:46.3±2.0, 37.16N×20.49E, h76^{km}±30^{km}, mb3.4/4, mb1 3.5/7, mb1mx3.3/24, mbtmp3.7/7, Error ellipse: s-maj=42.7km s-min=15.8km az=28.0*
*SKO **11** 21:18:47.6, 37.91N×22.13E*
ISC 11 21:18:38.6±0.4, **37.15N**±0.03×**20.49E**±0.04, **h10**^{km}, **n57**, σ**1**$\overset{s}{.}$**37**/71, **mb3.6**/4, **1C-3D**, **Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	1.03	4	⇑*i*PG	Pg	21 18 58.8	-0.5
VLS				*e*SB	Sb	21 19 12.0	+0.5
ITM	Ithomi	1.15	88	*e*PB	Pb	21 19 02.6	+2.5
RLS	Riolos of Patr	1.19	40	*e*PN	Pn	21 19 02.9	+1.5
VLI	Veliai	2.00	102	*e*PB	Pb	21 19 16.5	+1.7
EVR	Evrytania	2.05	30	*e*PN	Pn	21 19 16.5	+2.9
KYTH	Kithira	2.22	112	*e*PN	Pg	21 19 21.4	-1.6
AGG	Agios Georgios	2.37	37	*e*Pn	Pn	21 19 20.5	+2.3
KEK	Kerkira	2.62	348	*e*PG	Pg	21 19 28.2	-2.7
KEK	Kerkira	2.62	348	Pn	Pn	21 19 22.7	+0.9
KEK				*e*Pg	Pg	21 19 28.2	-2.7
MEV	Metsovon	2.70	12	*e*Pn	Pn	21 19 24.3	+1.5
SRN	Sarande	2.75	352	*i* Sn	Sn	21 19 54.5	-2.9
XOR	Xorichti	3.07	43	*e*Pn	Pn	21 19 29.8	+1.6
XOR				*e*Sn	Sn	21 20 04.9	-0.4
LIT	Litokhoron	3.34	27	*e*Pn	Pn	21 19 32.9	+0.9
LIT				*e*Sn	Sn	21 20 10.8	-1.3
TIP	Timpagrande	3.57	306	*e*Pn	Pn	21 19 37.2	+1.9
TIP	Timpagrande	3.57	306	*e*Pn	Pn	21 19 37.2	+1.9
SOI	Samo	3.64	286	Pn	Pn	21 19 36.3	0.0
LCI	Lecce	3.69	330	Pn	Pn	21 19 37.3	+0.4
FNA	Florina	3.70	10	*e*Pn	Pn	21 19 37.6	+0.6
PAIG	Paliouri	3.73	41	*e*Pn	Pn	21 19 38.1	+0.5
CEL	Celeste	3.81	288	Pn	Pn	21 19 39.2	+0.5
MTTG	Motta San Giov	3.91	284	Pn	Pn	21 19 40.5	+0.4
BIA	Bitola	3.92	9	*i* Pn	Pn	21 19 39.3	-1.0
BIA				*e*Sn	Sn	21 20 18.4	-8.5
OHR	Ohrid	3.96	3	*i* Pn	Pn	21 19 41.6	+0.7
OHR				*i* Sn	Sn	21 20 20.3	-7.7
THE	Thessaloniki	3.98	28	*e*Pn	Pn	21 19 40.9	-0.2
IDI	Anoyia	4.01	116	P	Pn	21 19 47.2	+5.6
	0.5nm,0.3s,baz=357,slow=1.7,SNR=6.1						
IDI				S	Sn	21 20 31.4	+2.2
	2.7nm,0.3s,baz=348,slow=23,SNR=8.9						
GRG	Griva	4.08	21	*e*Pn	Pn	21 19 42.3	-0.3
OUR	Ouranopolis	4.19	40	*e*Pn	Pn	21 19 44.4	+0.3
SOH	Sokhos	4.29	30	*e*Pn	Pn	21 19 45.7	+0.1
SOH				*e*Sn	Sn	21 20 34.6	-1.8
SSY	Sortino	4.33	272	Pn	Pn	21 19 44.5	-1.6
KNT	Kendrikon	4.42	24	*e*Pn	Pn	21 19 47.4	-0.1
KNT	Kendrikon	4.42	24	*e*Pn	Pn	21 19 47.3	-0.1
VAY	Valandovo	4.47	21	*i* Pn	Pn	21 19 42.9	-5.1
VAY				*i* Sn	Sn	21 20 22.4	-18
VAY	Valandovo	4.47	21	*i* Pn	Pn	21 19 42.9	-5.2
VAY				*i* Sn	Sn	21 20 22.4	-18
VAE	Valguarnera	4.86	276	P	Pn	21 19 57.6	+4.1
	4.4nm,0.3s,baz=170,slow=0.8,SNR=11						
VAE	Valguarnera	4.86	276	P	Pn	21 19 57.7	+4.1
SKO	Skopje	4.87	8	*e*Pn	Pn	21 19 49.1	-4.7
WDD	Wield Dalam	4.98	257	Pn	Pn	21 19 56.0	+0.8
SLCN	Sala Consilina	4.99	312	Pn	Pn	21 19 57.8	+2.3
GIB	Gibilmanna	5.21	281	Pn	Pn	21 19 59.7	+1.2
SGO	Sicignano	5.29	312	Pn	Pn	21 20 00.2	+0.5
	5.6nm,0.3s						
STON	Ston	6.11	340	*i* Pn	Pn	21 20 07.8	-3.4
STON				*i* Sn	Sn	21 21 12.6	-9.3
SLUM		6.86	144	P	Pn	21 20 21.7	-0.1
HMAT	Matruh	8.15	136	⇓*e*P	P	21 20 39.1	-0.8
HMAT				S	Sn	21 22 03.3	-10
SWA2		8.91	151	⇓*e*P	P	21 20 49.6	-0.8
SWA1		8.99	149	P	P	21 20 51.2	-0.4
SWA1				S	Sn	21 22 23.1	-11
MLR	Muntele Rosu	9.29	24	P	P	21 20 57.7	+2.0
	0.2nm,0.3s,baz=141,slow=16,SNR=5.9						
VOJS	Vojsko	10.16	333	*i* Pn	P	21 21 04.6	-3.0
VOJS				*e*Sn	S	21 22 49.9	-13
AWBH		11.29	139	P	P	21 21 21.7	-1.4
HFRF	Wahat Farafira	11.96	144	⇓*e*P	P	21 21 30.8	-1.5
CLL	Collm	15.13	342	P	P	21 22 18.0	+4.1
HFS	Hagfors	23.41	351	P	P	21 23 46.9	-1.4
	1.7nm,0.8s,mb3.5,baz=164,slow=10,SNR=4.2						
FINES	FINESS Array B	24.57	6	P	P	21 23 59.0	-0.6
	2.1nm,0.9s,mb3.7,baz=173,slow=11,SNR=3.2						
FINES	FINESS Array B	24.57	6	P	P	21 23 59.0	-0.6
ARCES	ARCESS Array B	32.56	3	P	P	21 25 09.3	-2.4
	1.2nm,0.9s,mb3.8,baz=190,slow=11,SNR=3.5						
ARCES	ARCESS Array B	32.56	3	P	P	21 25 09.3	-2.4
MKAR	Makanchi Array	45.87	58	P	P	21 27 01.3	-1.4
	0.3nm,0.5s,mb3.5,baz=270,slow=7.2,SNR=7.7						
MKAR	Makanchi Array	45.87	58	P	P	21 27 01.3	-1.4

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*GUC **11** 21:35:30.8±0.5, 27.71S×69.93W, h80^{km}±5^{km}, ML4.3*
*NEIC **11** 21:35:30.8, 27.71S×69.93W, h80^{km}, After GUC.*
NEIC Felt [III] at Copiapo and Tierra Amarilla.
ISC 11 21:35:30.9±0.7, **27.72S**±0.05×**70.1W**±0.2, **h92**^{km}±11^{km}, **n11**, σ**0**$\overset{s}{.}$**96**/16, **2C-2D**, **Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPCH	Copiapo	0.41	331	⇓*i*P	P	21 35 44.9	-0.4
CPCH				*i* S	S	21 35 55.7	-0.5
CDCH	Caldera	0.90	316	⇓*i*P	P	21 35 50.3	+0.5
CDCH				*i* S	S	21 36 05.1	+1.1
CRCH	Chaqaral	1.44	342	*e*P	P	21 35 56.4	0.0
CRCH				*i* S	S	21 36 15.6	+0.2
CRCH				AMP		21 36 16.5	
	comp=N,5µm,0.5s						
TLL	Tololo Astrono	2.51	194	*e*P	P	21 36 11.5	+0.8
TLL				AMP		21 36 46.7	
	comp=N,2µm,0.5s						
CPN1	Cerro Paranal	3.09	355	*e*P	P	21 36 16.9	-1.8
CPN1				AMP		21 37 12.3	
	comp=E,590nm,0.3s						
CMCH	Combarbala	3.53	192	*e*P	P	21 36 23.8	-1.0
CMCH				*i* S	S	21 37 04.4	-1.2
ZON	Zonda	4.01	162	*e*P	P	21 36 34.2	+2.7
ZON				*e*S	S	21 37 31.5	+14
CEN1	Los Morros	4.31	359	*e*P	P	21 36 29.5	-6.1
FCH	Farellones	5.59	181	*e*P	P	21 36 53.0	-0.1
VNA3	Neumayer Olymp	54.60	160	⇑*i*	P	21 44 51.9	+0.2
VNA2	Neumayer--Watz	55.21	159	⇑*i*	P	21 44 56.3	+0.2

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*NIED **11** 21:49:00, 33.50N×140.90E, h53^{km}, Mw4.2 Best double couple: M$_0$2.52×10^{15} NP1:φ$_s$327°, δ60°, λ67°. NP2:φ$_s$186°, δ37°, λ123°.*
*MOS **11** 21:49:11.1±1.5, 33.40N×140.98E, h33^{km}, mb5.7/1, Error ellipse: s-maj=26.0km s-min=10.3km az=110.0*
*JMA **11** 21:49:13.9±0.2, 33.49N×140.94E, h63^{km}±4^{km}, M4.2*
JMA Felt I J1.
*IDC **11** 21:49:15.6±0.7, 33.34N×140.92E, h59^{km}±6^{km}, mb3.7/12, mb1 3.9/15, mb1mx3.8/22, mbtmp4.0/15, MS3.1/2, Ms1 3.1/2, ms1mx2.6/31, Error ellipse: s-maj=10.2km s-min=8.7km az=144.0*
*NEIC **11** 21:49:16.2±1.1, 33.43N×140.82E, h61^{km}±10^{km}, mb4.7/4, MW4.2(NIED), Error ellipse: s-maj=12.8km s-min=7.0km az=97.0*
NEIC Recorded [1 JMA] on Hachijo-jima.
ISC 11 21:49:13.4±0.7, **33.42N**±0.03×**140.95E**±0.07, **h56**^{km}±6^{km}, **h57**^{km}±1.4^{km}**:pP-P**, **n52**, σ**0**$\overset{s}{.}$**81**/61, **mb4.4**/21, **1C**, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	1.00	252	P	P	21 49 32.5	+1.0
JHJ2				*e*S	S	21 49 45.8	+0.8
JHJ	Hachijo jima 2	1.03	253	P	P	21 49 32.7	+0.8
	4µm,0.3s,baz=108,slow=5.0,SNR=806						
JHJ				S	S	21 49 46.4	+0.8
	2µm,0.3s,baz=67,slow=23,SNR=22						
BSO1	Boso 1	1.23	1	P	P	21 49 34.3	-0.3
BSO1				*e*S	S	21 49 50.6	+0.2
JMY	Miyakejima3	1.36	299	P	P	21 49 36.7	0.0
BSO3	Boso 3	1.42	345	P	P	21 49 37.2	-0.3
BSO4	Boso 4	1.64	342	P	P	21 49 40.5	0.0
JKO	Kozu shima	1.69	297	P	P	21 49 41.4	+0.2
JKO				*e*S	S	21 50 01.7	-0.1
NJJJ	Nii jima 2	1.70	306	P	P	21 49 41.3	0.0
JIM2	Oshima 3	1.81	316	P	P	21 49 42.3	-0.5
JIZS	Izushimoda	2.15	307	P	P	21 49 47.9	+0.3
JIZS				*e*S	S	21 50 12.2	-0.9
JOD2	Odawara 2	2.40	320	P	P	21 49 50.6	-0.5
JYN	Shimob	2.87	317	P	P	21 49 58.0	+0.1
JRY	Ryogami san	3.09	327	P	P	21 50 00.5	-0.4
MJAR	Matsushiro Arr	3.84	325	P	P	21 50 11.8	+0.3
	18nm,0.3s,baz=148,slow=11,SNR=92						
MJAR				S	S	21 50 56.2	+0.4
	7.7nm,0.3s,baz=152,slow=21,SNR=6.7						
MJAR	Matsushiro Arr	3.84	325	P	P	21 50 11.8	+0.3
MJAR				S	S	21 50 56.2	+0.4
MAJO	Matsushiro	3.84	325	*e*Pn	P	21 50 12.1	+0.6
MAJO				*e*Sn	S	21 50 56.4	+0.5
MAT	Matsushiro	3.84	325	P	P	21 50 11.3	-0.2
MAT				S	S	21 50 53.8	-2.0
MAT	Matsushiro	3.84	325	*e*P	P	21 50 11.0	-0.5
MAT				*e*S	S	21 50 54.0	-1.8
CBIJ	Chichi jima	6.40	170	P	P	21 50 45.7	-1.6
	13nm,0.3s,baz=300,slow=20,SNR=4.3						
CBIJ				S	S	21 51 52.8	-6.9
	6.3nm,0.3s,baz=65,slow=23,SNR=2.9						
JNU	Nakatsue	8.44	271	P	P	21 51 15.2	-0.3
	0.5nm,0.3s,baz=211,slow=26,SNR=4.0						
ASAJ	Asahikawa	10.75	6	P	P	21 51 43.3	-3.9
	0.8nm,0.3s,baz=203,slow=12,SNR=6.1						
ASAJ				S	S	21 53 39.9	-7.1
	0.5nm,0.3s,baz=19,slow=30,SNR=2.6						
ASAJ				LR	LR	21 56 29.9	
	comp=Z,82nm,20.8s,baz=275,slow=40						
ASAJ	Asahikawa	10.75	6	P	P	21 51 43.3	-3.9
ASAJ				S	S	21 53 39.9	-7.0
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,82nm,20.8s						
GUMO	Guam	20.07	169	LR	LR	22 00 51.8	
	comp=Z,58nm,19.8s,baz=63,slow=35						
SONM	Songino Array	29.64	309	P	P	21 55 14.8	-0.8
	comp=Z,0.8nm,0.7s,mb3.5,baz=105,slow=9.2,SNR=4.4						
MKAR	Makanchi Array	45.80	305	P	P	21 57 31.2	+0.1
	comp=Z,0.9nm,0.6s,mb3.9,baz=89,slow=9.2,SNR=14						
KAKA	Kakadu	46.59	191	*e*P	P	21 57 55.8	+18
	comp=Z,5.9nm,0.6s,mb4.7						
ILAR	Eielson Array	52.76	31	P	P	21 58 24.7	+0.2
	comp=Z,0.7nm,0.6s,mb3.8,baz=263,slow=6.0,SNR=13						
FITZ	Fitzroy Crossi	53.28	198	*e*P	P	21 58 29.0	0.0
	comp=Z,8.6nm,1.2s,mb4.6						
WRAB	Tennant Creek	53.43	188	*e*P	P	21 58 29.2	-0.8
	comp=Z,40nm,0.8s,mb5.4						
WRAB	Tennant Creek	53.43	188	*e*P	P	21 58 29.3	-0.8
WRAB				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.4						
WB2	Warramunga Arr	53.44	188	⇑*i*P	P	21 58 29.4	-0.7
WRA	Warramunga Arr	53.44	188	P	P	21 58 29.5	-0.7
	comp=Z,28nm,0.6s,mb5.4,baz=6.1,slow=7.7,SNR=81						
ASPA	Alice Springs	57.17	188	*e*P	P	21 58 56.3	-0.8
STKA	Stephens Creek	64.95	179	*e*P	P	21 59 49.6	+0.1
	comp=Z,3.1nm,1.0s,mb4.3						
STKA	Stephens Creek	64.95	179	P	P	21 59 48.0	-1.6
	comp=Z,2.0nm,0.6s,mb4.3,baz=323,slow=6.5,SNR=6.8						
FORT	Forrest	65.01	192	*e*P	P	21 59 49.9	0.0
	comp=Z,21nm,0.5s,mb5.4						
ARCES	ARCESS Array B	67.24	340	P	P	22 00 03.5	0.0
	comp=Z,3.2nm,1.0s,mb4.3,baz=54,slow=7.8,SNR=2.7						
ARCES				pP	pP	22 00 18.4	-0.6
	comp=Z,1.2nm,0.8s,baz=54,slow=7.8,SNR=1.6						
KLBR	Kellerberrin	68.27	201	*e*P	P	22 00 10.6	+0.1
	comp=Z,10nm,1.0s,mb4.8						
FINES	FINESS Array B	71.83	333	P	P	22 00 31.9	+0.3
	comp=Z,2.2nm,0.9s,mb4.1,baz=117,slow=4.3,SNR=5.7						
FINES				pP	pP	22 00 48.2	+0.9
	comp=Z,1.1nm,0.7s,baz=76,slow=7.9,SNR=2.0						
AKASG	Malin Array Be	76.92	323	P	P	22 01 01.0	-0.1
	comp=Z,0.8nm,0.5s,mb3.9,baz=48,slow=6.2,SNR=5.2						
AKASG	Malin Array Be	76.92	323	P	P	22 01 01.0	-0.2
MIB	Mutribah	76.98	297	*e*P	P	22 01 01.4	-0.5
MIB				AMb	AMB	22 01 02.3	
	comp=Z,8.6nm,0.6s,mb4.8						
RDF	Al-Radifah	77.27	296	*e*P	P	22 01 03.3	-0.3
RDF				AMb	AMB	22 01 04.1	
	comp=Z,17nm,0.7s,mb5.1						
NAY	Al-Naaiem	77.34	297	*e*P	P	22 01 03.6	-0.4
NAY				AMb	AMB	22 01 05.6	
	comp=Z,5.9nm,0.7s,mb4.6						
NOA	NORSAR Array B	77.37	337	P	P	22 01 03.6	+0.2
	comp=Z,1.0nm,0.8s,mb3.8,baz=63,slow=8.8,SNR=3.3						
NVAR	Mina Array Bea	77.47	52	P	P	22 01 06.8	+2.4
	comp=Z,0.8nm,0.7s,mb3.7,baz=322,slow=5.3,SNR=6.2						
NVAR				pP	pP	22 01 23.1	+2.8
	comp=Z,0.3nm,0.5s,baz=293,slow=6.5,SNR=3.8						
ELK	Elko	78.18	49	P	P	22 01 11.0	+2.7
	comp=Z,1.2nm,0.7s,mb3.9,baz=284,slow=8.3,SNR=3.7						
BRTR	Keskin Array B	80.97	312	P	P	22 01 24.6	+1.3
	comp=Z,0.4nm,0.5s,mb3.6,baz=104,slow=5.1,SNR=4.1						
TXAR	Lajitas Array	92.62	52	P	P	22 02 22.6	+2.3
	comp=Z,0.4nm,0.5s,mb4.1,baz=288,slow=4.0,SNR=4.0						
SAML	Samuel	147.01	48	*e*PKPbc	PKPdf	22 08 52.4	+4.0
LPAZ	La Paz	148.73	64	PKPbc	PKPdf	22 08 57.4	+6.4
	comp=Z,2.0nm,0.7s,baz=258,slow=3.8,SNR=11						
LPAZ	La Paz	148.73	64	*e*PKPbc	PKPdf	22 08 57.5	+6.5

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*NEIC **11** 21:57:10.4±1.0, 22.15S×179.67W, h584^{km}±12^{km}, mb4.7/13, Error ellipse: s-maj=15.3km s-min=9.8km az=152.0*
*IDC **11** 21:57:13.8±2.6, 22.18S×179.85W, h617^{km}±31^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.7/14, mbtmp4.6/9, Error ellipse: s-maj=28.5km s-min=16.2km az=167.0*
ISC 11 21:57:10.1±0.9, **22.39S**±0.08×**179.73W**±0.08, **h588**^{km}±11^{km}, **n46**, σ**1**$\overset{s}{.}$**14**/45, **mb4.5**/19, **1C-9D**, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	7.03	167	S	S	22 00 29.0	+0.7
	105nm,0.3s,baz=75,slow=22,SNR=5.6						
AFI	Afiamalu	11.32	43	P	P	21 59 38.9	-3.2
	2.8nm,0.3s,baz=47,slow=8.1,SNR=3.9						
AFI				S	S	22 01 34.4	-10
	4.8nm,0.3s,baz=52,slow=19,SNR=3.8						
DZM	Mont Dzumac	12.81	269	P	P	21 59 58.4	+1.4
	1.9nm,0.3s,baz=88,slow=16,SNR=35						
NOUC	Port Laguerre	12.94	269	*e*P	P	21 59 59.6	+1.4
PUZ	Puketiti	15.73	186	PN	P	22 00 24.9	-0.6
URZ	Urewera	16.05	189	P	P	22 00 25.9	-2.6
	8.5nm,0.3s,baz=357,slow=4.6,SNR=38						
URZ				S	S	22 03 06.7	-1.6
	1.7nm,0.3s,baz=247,slow=20,SNR=12						
URZ	Urewera	16.05	189	PN	P	22 00 25.8	-2.7
TSZ	Takapari Road	17.99	191	PN	P	22 00 45.2	-1.7
THZ	Tophouse	20.29	196	PN	P	22 01 07.9	-0.3
ARMA	Armidale	26.82	247	⇓*i*P	P	22 02 07.9	+1.3
CNB	Canberra Magne	29.85	238	*e*P	P	22 02 34.0	+1.4
	58nm,0.7s,mb5.3						
CTA	Charters Tower	31.75	268	⇓*i*P	P	22 02 49.2	+0.4
	11nm,0.3s,mb5.0						
TOO	Toolangi	33.49	235	⇓*i*P	P	22 03 04.1	+0.8
	17nm,0.8s,mb4.7						
PMG	Port Moresby	34.27	287	P	P	22 03 10.0	0.0
	42nm,0.9s,mb5.1,baz=124,slow=3.4,SNR=14						
PMG	Port Moresby	34.27	287	*e*P	P	22 03 09.8	-0.2
	57nm,1.0s,mb5.2						
STKA	Stephens Creek	35.54	246	⇓*i*P	P	22 03 21.3	+1.0
	15nm,0.7s,mb4.6						
STKA	Stephens Creek	35.54	246	P	P	22 03 21.4	+1.1
	14nm,0.5s,mb4.8,baz=92,slow=9.6,SNR=60						
ASPA	Alice Springs	42.55	259	⇓*i*P	P	22 04 16.9	-0.1
ASPA				*e*S	S	22 09 57.2	-1.3
WB2	Warramunga Arr	42.77	264	⇓*i*P	P	22 04 17.7	-1.0
WB2				*e*S	S	22 09 55.6	-6.0
WRAB	Tennant Creek	42.77	264	*e*P	P	22 04 17.7	-1.1
	20nm,1.4s,mb4.5						
WRA	Warramunga Arr	42.78	264	P	P	22 04 17.9	-0.9
	28nm,0.8s,mb4.8,baz=98,slow=7.8,SNR=79						
WRA				S	S	22 09 59.6	-2.2
	2.7nm,1.2s,baz=99,slow=14,SNR=5.7						
KAKA	Kakadu	46.44	274	*e*P	P	22 05 04.3	+17
	10nm,0.3s,mb4.8						
FORT	Forrest	47.09	248	⇓*i*P	P	22 04 50.8	-1.0
	20nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	51.21	264	⇑*i*P	P	22 05 22.1	-0.4
	12nm,0.3s,mb4.8						
KLBR	Kellerberrin	55.81	246	*e*P	P	22 05 53.7	-1.0
	26nm,1.2s,mb4.3						
SBA	Scott Base	55.89	183	*e*P	P	22 05 56.2	+1.6
	25nm,1.2s,mb4.3						
VNDA	Vanda	55.90	185	*e*P	P	22 05 55.3	+0.6
	4.0nm,0.8s,mb3.7						
QSPA	South Pole Qui	67.69	180	*e*P	P	22 07 11.2	+0.5
	56nm,1.1s,mb4.9						
MAW	Mawson	79.25	200	P	P	22 08 17.3	+1.4
	2.2nm,0.6s,mb3.7,baz=72,slow=10,SNR=5.2						
NVAR	Mina Array Bea	83.50	44	P	P	22 08 38.9	+0.8
	0.4nm,0.6s,baz=203,slow=7.3,SNR=4.0						
SYO	Syowa Base	84.53	193	⇓P	P	22 08 42.0	-0.4
SYO	Syowa Base	84.53	193	⇓*e*P	P	22 08 42.0	-0.4
SNAA	Sanae	86.17	179	*e*P	P	22 08 49.1	-1.2
	1.6nm,0.6s,mb3.8						
VNA3	Neumayer Olymp	86.36	177		P	22 08 51.4	+0.2
VNA2	Neumayer--Watz	86.79	177		P	22 08 53.6	+0.4
VNA1	Neumayer--Stat	87.02	177		P	22 08 56.1	+1.8
PLCA	Paso Flores	89.13	134	P	P	22 09 05.8	+0.9
	2.1nm,0.9s,mb4.0,baz=228,slow=9.7,SNR=4.2						
PLCA	Paso Flores	89.13	134	P	P	22 09 05.8	+0.9
TXAR	Lajitas Array	89.42	58	P	P	22 09 06.9	+0.3
	0.5nm,0.3s,mb3.8,baz=233,slow=6.3,SNR=4.6						
PDAR	Pinedale Array	91.43	44	P	P	22 09 14.8	-0.7
	0.3nm,0.3s,mb3.7,baz=333,slow=2.0,SNR=4.7						
ARCES	ARCESS Array B	130.46	349	PKP	PKPdf	22 15 13.2	-0.8
	2.9nm,0.9s,baz=90,slow=1.2,SNR=4.1						
AKASG	Malin Array Be	143.83	329	PKP	PKPdf	22 15 37.8	-0.8
	0.7nm,0.4s,baz=43,slow=4.1,SNR=10						
BRTR	Keskin Array B	146.84	309	PKPbc	PKPbc	22 15 47.5	+1.2
	0.9nm,0.7s,baz=141,slow=4.9,SNR=6.6						
CLL	Collm	149.48	344	*i* P	PKPdf	22 15 54.0	+6.1
CLL				*i*		22 18 15.3	
BRG	Berggiesshubel	149.63	343	*i* P	PKPdf	22 15 54.4	+6.3
GERES	GERESS Array B	151.52	341	PKPbc	PKPdf	22 15 58.8	+7.8
	0.5nm,0.6s,baz=63,slow=3.0,SNR=5.2						

PGC 11 22:19:53.5, 71.77N×131.64W, h35^{km}**, MLSn3.5**/4, **Beaufort Sea., Beaufort Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	Inuvik	3.53	191	Pn	P	22 20 45.4	-2.0
INK				Sn	S	22 21 23.5	-5.0
INK				Trac		22 21 26.2	
	comp=Z,14nm,0.1s						
DAWY	Dawson	8.26	204	Pn	P	22 21 48.8	-5.0
DAWY				Sn	S	22 23 14.5	-12
DAWY				Trac		22 23 20.6	
	comp=Z,3.0nm,0.1s						
RES	Resolute Bay	10.87	57	Pn	P	22 22 24.7	-4.8
RES				Sn	S	22 24 15.6	-15
RES				Trac		22 24 21.4	
	comp=Z,3.0nm,0.4s						
YKW3	Yellowknife Ar	11.30	136	Pn	P	22 22 28.7	-6.7
YKW3				Sn	S	22 24 26.7	-15
	comp=Z,3.0nm,0.5s						
YKW3				Sn	S	22 24 27.3	-14
YKW3				Trac		22 24 31.7	
	comp=Z,3.0nm,0.5s						

IDC 11 22:32:26.2±2.2, **2.86N**×**128.77E**, **mb3.8**/3, **mb1 4.0**/3, **mb1mx3.7**/15, **mbtmp3.9**/3, **Error ellipse: s-maj=195.1km s-min=24.2km az=66.0**, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.31	167	P	P	22 37 35.0	-1.9
	1.2nm,0.7s,baz=346,slow=10.0,SNR=5.9						
WB2	Warramunga Arr	23.31	167	*e*P	P	22 37 35.1	-1.8
STKA	Stephens Creek	36.63	162	P	P	22 39 34.4	-1.9
	1.7nm,0.6s,baz=346,slow=8.9,SNR=5.9						
MKAR	Makanchi Array	59.44	325	P	P	22 42 31.2	-1.9
	0.8nm,0.6s,baz=118,slow=8.3,SNR=12						

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*CSEM **11** 22:34:05.9±0.2, 40.53N×21.64E, h15^{km}, ML2.7, Error ellipse: s-maj=5.4km s-min=3.4km az=23.0*
*THE **11** 22:34:06.2, 40.51N×21.64E, h13^{km}, ML2.7*
*SKO **11** 22:34:07.9, 40.75N×21.61E, h32^{km}*
ISC 11 22:34:06.2±0.7, **40.54N**±0.05×**21.62E**±0.06, **h25**^{km}±9^{km}, **n12**, σ**0**$\overset{s}{.}$**74**/21, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNA	Florina	0.30	323	*e*Pg	Pb	22 34 13.1	-0.2
FNA				*e*Sg	Sb	22 34 18.6	+0.5
BIA	Bitola	0.53	335	*i* Pg	Pb	22 34 16.1	-0.7
BIA				*i* Sg	Sb	22 34 25.1	+1.1
BIA	Bitola	0.53	335	*i* Pg	Pb	22 34 16.0	-0.7
BIA				*i* Sg	Sb	22 34 25.1	+1.1
GRG	Griva	0.73	55	*e*Pg	Pb	22 34 19.8	-0.3
LIT	Litokhoron	0.80	123	*e*Pg	Pb	22 34 20.5	-0.9
LIT				*e*Sg	Sb	22 34 32.4	+0.7
OHR	Ohrid	0.84	313	*e*Pg	Pb	22 34 22.7	+0.7
OHR				*e*Sg	Sb	22 34 32.4	-0.5
LSK	Leskovik	0.87	244	*e*Pg	Pb	22 34 22.5	0.0
VAY	Valandovo	1.06	43	*e*Pg	Pn	22 34 24.4	-1.1
VAY				*e*Sg	Sb	22 34 38.6	-0.7
VAY	Valandovo	1.06	43	*e*Pg	Pn	22 34 24.4	-1.2
VAY				*e*Sg	Sb	22 34 38.6	-0.6
KNT	Kendrikon	1.15	57	*e*Pg	Pn	22 34 27.0	+0.1
SOH	Sokhos	1.35	78	*e*Pg	Pn	22 34 29.5	-0.2
SOH				*e*Sg	Sn	22 34 48.5	+1.6
SOH	Sokhos	1.35	78	*e*Pg	Pn	22 34 29.5	-0.2
SOH				*e*Sg	Sn	22 34 48.5	+1.6

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*IDC **11** 22:41:38.0±2.3, 29.31N×141.53E, h42^{km}±25^{km}, mb3.6/6, mb1 3.8/8, mb1mx3.6/22, mbtmp3.8/8, ML3.4/1, MS2.7/2, Ms1 2.7/2, ms1mx2.3/23, Error ellipse: s-maj=43.3km s-min=16.1km az=71.0*
*NEIC **11** 22:41:38.2±2.5, 29.33N×141.48E, h45^{km}±20^{km}, mb3.9/1, Error ellipse: s-maj=29.8km s-min=19.3km az=72.0*
ISC 11 22:41:36.1±1.6, **29.3N**±0.1×**141.4E**±0.3, **h40**^{km}±17^{km}, **n11**, σ**0**$\overset{s}{.}$**67**/10, **mb3.8**/7, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.33	162	P	P	22 42 13.4	+0.5
	7.7nm,0.3s,baz=287,slow=22,SNR=1.9						
CBIJ				S	S	22 42 40.2	-0.3
	23nm,0.3s,baz=284,slow=22,SNR=4.6						
MJAR	Matsushiro Arr	7.67	341	P	P	22 43 27.9	-0.2
	0.6nm,0.3s,baz=160,slow=12,SNR=6.5						
JNU	Nakatsue	9.75	295	LR	LR	22 47 34.6	
	comp=Z,29nm,21.8s,baz=258,slow=36						
JOW	Kunigami	11.84	261	LR	LR	22 48 10.7	
	comp=Z,79nm,21.5s,baz=80,slow=33						
MKAR	Makanchi Array	48.53	308	P	P	22 50 16.9	-0.2
	0.2nm,0.6s,mb3.4,baz=83,slow=9.0,SNR=3.4						
WRA	Warramunga Arr	49.45	189	P	P	22 50 24.1	-0.5
	0.4nm,0.3s,mb3.9,baz=8.0,slow=7.9,SNR=5.6						
CHKZ	Chkalovo	55.75	317	*e*P	P	22 51 10.1	-0.9
	0.8nm,0.6s,mb3.9						
BVAR	Borovoye Array	55.94	316	P	P	22 51 12.2	-0.1
	0.6nm,0.5s,mb3.9,baz=96,slow=7.2,SNR=7.4						
FINES	FINESS Array B	75.64	333	P	P	22 53 18.5	+0.1
	5.2nm,1.2s,mb4.3,baz=56,slow=6.9,SNR=8.6						
NVAR	Mina Array Bea	79.70	52	P	P	22 53 41.1	-0.2
	0.4nm,0.6s,mb3.5,baz=298,slow=5.7,SNR=4.0						
BRTR	Keskin Array B	83.98	312	P	P	22 54 05.3	+1.8
	0.6nm,0.6s,mb3.9,baz=45,slow=2.0,SNR=3.7						

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*LDG **11** 22:48:43.1±0.1, 51.57N×6.84E, h1^{km}, Ml2.6/14, Error ellipse: s-maj=2.2km s-min=1.7km az=43.0, Suspected Mining induced.*
*BUG **11** 22:48:43.0, 51.51N×6.94E, h1^{km}, ML1.2*
*BNS **11** 22:48:43.2±1.3, 51.56N×6.88E, h1^{km}, ML1.8*
*CSEM **11** 22:48:43.1±0.1, 51.56N×6.85E, h2^{km}, ML2.7/12, Error ellipse: s-maj=1.9km s-min=1.4km az=91.0*
*BGR **11** 22:48:43.3±0.7, 51.50N×6.90E, h1^{km}, ML2.0/3, Error ellipse: s-maj=7.8km s-min=4.4km az=122.0*

*NEIC **11** 22:48:44.8±3.7,51.40N×6.66E,h10^{km},ML2.6(LDG), Error ellipse: s-maj=42.4km s-min=8.2km az=210.0*

ISC 11 22:48:40.6±0.4,51.50N±0.02×6.74E±0.04,n35,σ1^{s}37/75, 2D,Germany

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BZER	Hlnxe	0.14	33	Pg	Pg	22 48 43.0	-0.5
BZER				Sg	Sg	22 48 44.5	-0.9
LAUG	Laupendahl	0.20	140	ePg	Pg	22 48 47.0	+2.5
BUG	Bochum--Univer	0.33	100	⇓ePg	Pg	22 48 48.2	+0.9
BUG				Sg	Sg	22 48 52.1	+0.4
WTSB	Winterswijk	0.47	4	ePg	Pg	22 48 50.1	+0.2
	46nm,0.3s						
HOBG	Hohbusch	0.64	144	ePg	Pg	22 48 55.4	+2.1
HOBG				eSg	Sg	22 49 04.2	+2.4
HGN	Heimansgroeve	0.90	215	ePg	Pg	22 49 01.7	+3.2
	17nm,0.1s,baz=20						
HGN				eSg	Sg	22 49 15.8	+5.3
KLL	Kalltalsperre	0.90	198	⇓ePg	Pg	22 49 00.9	+2.3
KLL				eSg	Sg	22 49 15.7	+5.2
	25nm,0.2s						
STB	Steinbach	0.91	176	ePg	Pg	22 49 01.8	+3.0
STB				eSg	Sg	22 49 14.8	+4.0
	34nm,0.6s						
IBBN	Ibbenburen	1.02	37	ePg	Pg	22 49 01.1	0.0
	SNR=2.6						
IBBN				eSg	Sg	22 49 14.5	-0.2
HILG	Hillesheim	1.21	182	ePg	Pg	22 49 07.0	+2.2
HILG				eSg	Sg	22 49 23.8	+2.9
BGG	Burgeitz	1.35	164	ePg	Pg	22 49 08.3	+0.7
BGG				eSg	Sg	22 49 27.5	+2.0
TNS	Taunus Mts	1.67	139	ePg	Pg	22 49 13.1	-0.9
	SNR=2.3						
TNS				eSg	Sg	22 49 34.5	-1.8
GIVF	Givet	1.86	222	ePn	Pn	22 49 15.5	+1.6
GIVF				ePg	Pg	22 49 19.3	+1.6
GIVF				eSn	Sn	22 49 38.9	+0.5
GIVF				eSg	Sg	22 49 44.5	+2.1
	17nm,0.3s						
WLF	Walferdange	1.88	192	ePg	Pg	22 49 19.5	+1.5
	SNR=1.5						
WLF				eSg	Sg	22 49 43.2	+0.1
BAIF	Baives	2.16	229	ePn	Pn	22 49 19.9	+1.6
BAIF				eSn	Sn	22 49 46.7	+0.5
BAIF				eSg	Sg	22 49 53.8	+1.2
	6.6nm,0.2s						
CLZ	Clausthal	2.29	80	ePn	Pn	22 49 19.9	-0.1
	SNR=0.9						
CLZ				ePg	Pg	22 49 24.9	-1.3
	SNR=2.0						
CLZ				eSg	Sg	22 49 52.6	-4.1
RFYF	Reffroy	2.99	196	ePg	Pg	22 49 40.1	-0.2
CDF	Champ du Feu	3.11	173	ePn	Pn	22 49 32.7	+0.8
CDF				eSg	Sg	22 50 22.6	-1.6
	2.9nm,0.3s						
MEZF	Maizieres J'vi	3.19	201	ePn	Pn	22 49 33.6	+0.5
	baz=23						
MEZF				ePg	Pg	22 49 43.8	-0.6
	baz=25						
MEZF				eSg	Sg	22 50 25.9	-1.0
	2.0nm,0.2s						
MEZF	Maizieres J'vi	3.19	201	ePg	Pg	22 49 43.8	-0.6
MEZF				eSg	Sg	22 50 25.9	-1.0
	1.0nm,0.2s						
SFTF	Sexfontaines	3.48	199	ePn	Pn	22 49 37.5	+0.4
	baz=16						
SFTF				ePg	Pg	22 49 49.0	-1.0
	baz=18						
SFTF				eSn	Sn	22 50 17.8	-1.8
SFTF				eSg	Sg	22 50 34.7	-1.7
SFTF	Sexfontaines	3.48	199	ePg	Pg	22 49 49.0	-1.0
SFTF				eSn	Sn	22 50 17.8	-1.8
SFTF				eSg	Sg	22 50 34.7	-1.7
HAU	Haudompre	3.51	184	ePn	Pn	22 49 37.5	0.0
HAU				eSn	Sn	22 50 18.1	-2.2
HAU				eSg	Sg	22 50 35.1	-2.3
	3.2nm,0.3s						
HINF	Hinteralfeld	3.69	179	ePn	Pn	22 49 40.2	+0.1
HINF				eSg	Sg	22 50 41.2	-2.2
	1.5nm,0.3s						
LOR	Lormes	4.64	205	ePn	Pn	22 49 53.5	0.0
	baz=28						
LOR				eSn	Sn	22 50 45.2	-3.7
LOR				eSg	Sg	22 51 10.7	-4.2
	1.2nm,0.2s						
CABF	La Chapelle	4.91	185	ePn	Pn	22 49 57.8	+0.3
CABF				eSn	Sn	22 50 52.4	-3.5
SSF	Saint Saulge	4.92	207	ePn	Pn	22 49 57.0	-0.6
SSF				eSn	Sn	22 50 52.3	-3.8
SSF				eSg	Sg	22 51 19.8	-4.7
	0.8nm,0.3s						
AVF	Avril sur Loir	5.21	207	ePn	Pn	22 50 00.8	-0.9
SMF	Signal de Mont	5.22	203	ePn	Pn	22 50 00.6	-1.2
SMF				eSg	Sg	22 51 29.5	-4.9
	1.7nm,0.3s						
LDF	La Druitiere	5.29	239	ePn	Pn	22 50 02.5	-0.3
LDF				eSn	Sn	22 51 01.3	-4.2
	1.2nm,0.3s						
FLN	La Foliniere	5.39	242	ePn	Pn	22 50 03.8	-0.5
	baz=56						
FLN				eSn	Sn	22 51 03.4	-4.6
	1.4nm,0.2s						
BGF	Bois d'Agland	5.57	209	ePn	Pn	22 50 06.1	-0.6
BGF				eSn	Sn	22 51 07.8	-4.6
GRR	Gorron	5.81	241	ePn	Pn	22 50 09.3	-0.9
GRR				eSn	Sn	22 51 13.2	-5.3
	2.2nm,0.2s						
MFF	Saint Martin d	6.67	225	ePn	Pn	22 50 21.1	-1.2
RJF	Les Rejaudoux	7.11	211	ePn	Pn	22 50 26.7	-1.7

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*NIED **11** 23:01:00,43.90N×146.30E,h74^{km},Mw3.6 Best double couple: M$_0$3.28×10^{14} NP1:ϕ_s253°,δ83°,λ-160°. NP2: ϕ_s161°,δ70°,λ-8°.*

JMA 11 23:01:38.9±0.1,43.90N×146.29E,h94^{km}±2^{km},M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.67	217	P	P	23 01 55.5	-0.2
NEM2				S	S	23 02 07.6	-0.6
JRA	Rausu	0.84	273	P	P	23 01 57.2	-0.2
JRA				eS	S	23 02 10.9	-0.3
JNK	Nakash	1.18	255	P	P	23 02 01.1	-0.3
JNK				S	S	23 02 17.7	-0.4
JAK	Akkeshi	1.47	233	P	P	23 02 04.4	-0.5
JAK				eS	S	23 02 23.4	-0.8
JTKR	Abashiri--Toko	1.72	273	P	P	23 02 07.6	-0.5
JTKR				eS	S	23 02 28.6	-1.1
JAR	Ashorobuto	1.93	253	P	P	23 02 11.1	+0.3
JAR				eS	S	23 02 35.1	+0.8
JOB	Onbets	2.05	242	P	P	23 02 12.3	-0.1
JOB				S	S	23 02 37.0	-0.1
JMP	Maruseppu	2.12	274	P	P	23 02 12.9	-0.5
JMP				eS	S	23 02 38.6	-0.3
JCH	Churui	2.50	240	P	P	23 02 17.6	-1.0
JCH				eS	S	23 02 46.4	-1.8
JKK2	Kamakawa 2	2.56	271	P	P	23 02 19.1	-0.4
JKK2				eS	S	23 02 50.0	+0.2

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*IDC **11** 23:17:58.7±1.4,25.39N×92.98E,mb3.7/5,mb1 3.9/5, mb1mx3.6/20,mbtmp3.7/5,MS3.5/1,Ms1 3.5/1, ms1mx2.6/34,Error ellipse: s-maj=51.0km s-min=24.9km az=56.0*

*NEIC **11** 23:18:05.8±2.6,25.46N×93.04E,h52^{km}±21^{km},mb3.7/4, Error ellipse: s-maj=33.8km s-min=17.3km az=48.0*

ISC 11 23:18:05.2±2.1,25.4N±0.1×93.1E±0.2,h67^{km}±17^{km},n13, σ0^{s}87/14,mb3.6/9,Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	1.07	277	eP	P	23 18 25.0	+0.2
SHL				eS	S	23 18 40.0	+0.7
LSA	Lhasa	4.58	339	ePn	P	23 19 12.6	-1.1
BOK	Bokaro	6.73	258	eP	P	23 19 42.7	-0.9
BOK				eS	S	23 20 51.4	-8.1
BOK				AML	AML	23 21 00.6	
	comp=N,35nm,0.5s						
BOK				AML	AML	23 21 00.6	
	comp=E,15nm,0.3s						
AAK	Ala-Archa	22.96	323	eP	P	23 23 06.5	+2.0
	comp=E,1.7nm,0.6s,mb3.5						
MKAR	Makanchi Array	22.98	341	P	P	23 23 04.5	-0.2
	comp=E,1.3nm,0.5s,mb3.5,baz=151,slow=12,SNR=30						
SONM	Songino Array	24.72	22	P	P	23 23 22.8	+1.4
	comp=E,0.4nm,0.6s,mb3.0,baz=190,slow=8.8,SNR=3.1						
KURK	Kurchatov	27.58	340	P	P	23 23 47.6	-0.4
	comp=E,0.7nm,0.4s,mb3.5						
BRVK	Borovoye	32.47	334	eP	P	23 24 30.7	-0.5
	comp=E,1.1nm,0.8s,mb3.6						
CHKZ	Chkalovo	32.81	335	eP	P	23 24 33.1	-1.1
	comp=E,1.0nm,0.4s,mb4.0						
AKTO	Aktyubinsk	36.70	322	LR	LR	23 43 18.9	
	comp=E,69nm,20.8s,slow=41						
FINES	FINESS Array B	57.02	328	P	P	23 27 45.9	-0.3
	comp=E,2.0nm,1.0s,mb4.1,baz=90,slow=7.6,SNR=4.4						
WRA	Warramunga Arr	60.36	134	P	P	23 28 09.9	-0.1
	comp=E,0.6nm,0.6s,mb3.8,baz=325,slow=7.2,SNR=4.4						
GERES	GERESS Array B	64.48	314	P	P	23 28 37.3	+0.5
	comp=E,0.6nm,0.6s,mb3.6,baz=76,slow=4.0,SNR=8.0						

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*NEIC **11** 23:26:01.6,16.37N×99.09W,h16^{km},MD3.6(MEX),After MEX.*

MEX 11 23:26:01.6±0.5,16.37N×99.09W,h16^{km}±7^{km},MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.92	88	i P	Pb	23 26 16.4	-2.3
PNIG				eS	Sb	23 26 27.1	-3.4
ACX	Acapulco	0.94	302	i P	Pb	23 26 16.0	-3.0
ACX				i S	Sb	23 26 27.5	-3.5
CAIG	El Cayaco	1.32	301	i P	Pn	23 26 21.7	-3.7
CAIG				eS	Sb	23 26 37.9	-4.0
PLIG	Platanillo	2.05	349	eP	Pn	23 26 32.3	-3.6
PLIG				eS	Sn	23 26 56.5	-4.8
VHO	Vista Hermosa	2.36	72	i P	Pn	23 26 39.5	-0.8
VHO				i S	Sn	23 27 04.5	-4.7
PPM	Popocatepetl	2.72	9	eP	Pn	23 26 45.0	-0.5

NNC 11 23:27:17.2±2.6,38.84N×69.33E,h11^{km}±9^{km},mpv3.1,7C, Error ellipse: s-maj=20.2km s-min=15.5km az=119.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	4.35	11	⇑Pn	Pn	23 28 24.1	-0.7
	0.7nm,0.4s,baz=202,slow=15,SNR=12						
KK31				⇑Pg	Pg	23 28 35.8	-8.2
	4.8nm,0.9s,baz=189,slow=16,SNR=13						
KK31				⇑Sn	Sn	23 29 20.3	+4.1
	0.9nm,0.3s						
KK31				⇑Lg		23 29 36.3	
	4.1nm,0.5s,baz=189,slow=27,SNR=3.5						
AAK	Ala-Archa	5.45	44	⇑Pn	Pn	23 28 39.6	-0.8
	5.2nm,1.2s						
AB31	Akbulak array	12.40	330	⇑Pn	P	23 30 13.9	-2.5
	0.2nm,0.4s,baz=1.5,slow=27,SNR=6.2						
AB31				⇑Sn	S	23 32 32.3	-3.3
	0.9nm,0.7s,baz=146,slow=23,SNR=4.8						

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*NIED **11** 23:33:00,35.10N×139.90E,h77^{km},Mw3.5 Best double couple: M$_0$2.14×10^{14} NP1:ϕ_s218°,δ70°,λ98°. NP2:ϕ_s16°, δ21°,λ69°.*

*JMA **11** 23:33:01.5±0.2,35.07N×139.92E,h94^{km}±2^{km},M3.3*

JMA Felt I J1.

*NEIC **11** 23:33:02.3±3.5,34.90N×139.72E,h91^{km}±12^{km},mb4.2/3, Error ellipse: s-maj=145.7km s-min=19.3km az=67.0*

*IDC **11** 23:33:05.4±1.3,34.84N×139.23E,h101^{km}±9^{km},mb3.6/3, mb1 3.8/3,mb1mx3.3/21,mbtmp3.9/3,Error ellipse: s-maj=58.5km s-min=5.7km az=69.0*

ISC 11 23:33:01.1±0.5,35.06N±0.04×139.92E±0.05,h98^{km}±3^{km}, n25,σ0^{s}70/39,mb3.9/6,Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TATJ	Tateyama 2	0.04	221	P	P	23 33 14.9	0.0
JYO	Yokosk	0.27	307	P	P	23 33 15.6	+0.1
JYO				S	S	23 33 26.8	+0.5
KTR	Katsuura	0.33	75	P	P	23 33 15.9	+0.1
KTR				eS	S	23 33 26.4	-0.4
BSO4	Boso 4	0.35	102	P	P	23 33 16.2	+0.3
BSO4				eS	S	23 33 27.7	+0.7
JIM2	Oshima 3	0.53	230	P	P	23 33 16.6	-0.6
JIM2				S	S	23 33 27.8	-1.3
BSO3	Boso 3	0.55	118	P	P	23 33 17.2	-0.1
BSO3				S	S	23 33 29.5	+0.1
JOD2	Odawara 2	0.71	286	P	P	23 33 18.2	-0.5
JOD2				S	S	23 33 30.3	-1.6
JIZS	Izushimoda	0.93	248	P	P	23 33 20.9	0.0
JIZS				S	S	23 33 35.3	-0.4
BSO1	Boso 1	0.96	115	P	P	23 33 20.8	-0.4
BSO1				eS	S	23 33 35.8	-0.5
JYN	Shimob	1.21	291	P	P	23 33 24.6	+0.3
JRY	Ryogami san	1.27	319	P	P	23 33 25.2	+0.3
JRY				S	S	23 33 42.2	-0.5
SHZ3	Shizuoka 3	1.41	271	P	P	23 33 27.1	+0.5
JAG	Ashikaga	1.41	344	P	P	23 33 26.5	-0.1
JAG				S	S	23 33 45.0	-0.6
JHJ	Hachijo jima 2	1.94	183	P	P	23 33 34.8	+1.4
	154nm,0.3s,baz=70,slow=22,SNR=15						
JHJ				S	S	23 33 58.5	+1.3
	104nm,0.3s,baz=263,slow=21,SNR=9.5						
MJAR	Matsushiro Arr	2.03	317	P	P	23 33 35.1	+0.6
	32nm,0.3s,baz=157,slow=12,SNR=198						
MJAR				S	S	23 33 60.0	+0.7
	21nm,0.3s,baz=159,slow=17,SNR=10						
MAJO	Matsushiro	2.03	317	ePn	P	23 33 35.5	+0.9
MAT	Matsushiro	2.03	317	P	P	23 33 34.7	+0.2
MAT				S	S	23 33 59.7	+0.4
MAT	Matsushiro	2.03	317	eP	P	23 33 35.0	+0.5
MAT				eS	S	23 34 00.0	+0.7
MKAR	Makanchi Array	44.17	304	P	P	23 41 02.0	+0.5
	0.8nm,0.6s,mb3.6,baz=90,slow=10,SNR=14						
MKAR				pP	pP	23 41 26.0	+1.2
	0.2nm,0.5s,baz=72,slow=12,SNR=5.0						
MKAR	Makanchi Array	44.17	304	P	P	23 41 02.0	+0.5
MKAR				pP	pP	23 41 26.0	+1.2
KURK	Kurchatov	46.22	309	eP	P	23 41 17.6	-0.2
	2.4nm,0.6s,mb4.1						
AAK	Ala-Archa	50.38	299	eP	P	23 41 49.5	-0.6
	1.0nm,0.4s,mb4.1						
CHKZ	Chkalovo	50.79	314	P	P	23 41 52.3	-0.8
	0.7nm,0.6s,mb3.9						
BVAR	Borovoye Array	51.02	313	P	P	23 41 55.6	+0.7
	0.5nm,0.4s,mb3.9,baz=76,slow=5.9,SNR=5.4						
WRA	Warramunga Arr	54.96	186	P	P	23 42 22.7	-1.6
	0.7nm,0.5s,mb3.9,baz=5.0,slow=7.7,SNR=13						

WEL 11 23:35:46.9±0.3,41.41S×175.85E,h12^{km},ML3.5/13, 1C-1D,Error ellipse: s-maj=1.7km s-min=1.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRWZ	Traveller	0.12	275	PG	Pg	23 35 50.8	+0.6
TRWZ				SG	Sg	23 35 52.6	+0.3
TRWZ				SG	Sg	23 35 53.1	+0.8
PAWZ	Paruwai Farm	0.32	275	⇑PG	Pg	23 35 54.0	+0.4
PAWZ				SG	Sg	23 35 59.0	+0.9
PAWZ				SG	Sg	23 35 59.3	+1.2
MTW	Mount Morrison	0.36	314	⇓PG	Pg	23 35 54.5	0.0
MTW				SG	Sg	23 36 00.0	+0.5
MSWZ	Moikau Station	0.45	269	PG	Pg	23 35 56.2	0.0
MSWZ				SG	Sg	23 36 03.1	+0.7
MSWZ				SG	Sg	23 36 03.4	+1.0
CAW	Cannon Point	0.66	297	P*	Pb	23 35 59.8	0.0
CAW				SG	Sg	23 36 09.0	-0.2
CAW				SG	Sg	23 36 09.2	0.0
BHW	Baring Head	0.74	270	P*	Pb	23 36 00.7	-0.4
BHW				SG	Sg	23 36 09.8	-1.8
MRZ	Mangatainoka R	0.78	345	P*	Pb	23 36 02.0	+0.1
MRZ				SG	Sg	23 36 12.5	-0.4
BFZ	Birch Farm	0.79	22	P*	Pb	23 36 02.3	+0.3
WEL	Wellington	0.82	278	P*	Pb	23 36 02.4	-0.2
WEL				SG	Sg	23 36 13.3	-1.3
MRW	Makara Radio	0.89	281	P*	Pb	23 36 03.1	-0.6
MRW				SG	Sg	23 36 14.5	-2.0
KIW	Kapiti Island	0.90	307	P*	Pb	23 36 03.8	-0.1
TCW	Tory Channel	1.20	279	P*	Pb	23 36 07.7	-1.4
TSZ	Takapari Road	1.35	4	P*	Pb	23 36 10.6	-1.0

IDC 11 23:39:57.2±1.5,2.86N×128.98E,mb3.8/4,mb1 4.0/4, mb1mx3.8/15,mbtmp3.8/4,MS2.9/1,Ms1 2.9/1, ms1mx2.3/25,Error ellipse: s-maj=128.7km s-min=21.7km az=69.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.26	167	P	P	23 45 05.9	-1.5
	1.3nm,0.5s,baz=348,slow=10,SNR=4.2						
JOW	Kunigami	23.85	358	LR	LR	23 54 22.6	
	comp=Z,29nm,19.0s,baz=300,slow=36						
STKA	Stephens Creek	36.56	162	P	P	23 47 05.0	-1.7
	1.2nm,0.4s,baz=327,slow=13,SNR=3.8						
SONM	Songino Array	48.86	340	P	P	23 48 45.4	-1.1
	0.5nm,0.6s,baz=142,slow=9.0,SNR=4.1						
MKAR	Makanchi Array	59.56	325	P	P	23 50 02.3	-2.6
	1.1nm,0.6s,baz=117,slow=8.7,SNR=17						

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*NNC **11** 23:45:36.8±14.0,34.94N×72.63E,h38^{km}±361^{km},mpv3.8, Error ellipse: s-maj=704.8km s-min=158.6km az=111.0*

ISC 11 23:45:28.2±1.2,34.82N±0.08×73.0E±0.2,h10^{km},n7, σ1^{s}20/11,3C-1D,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.26	136	eP	Pn	23 46 20.1	-0.4
THN				eS	Sn	23 47 04.2	+4.4
DLH	Dalhousie	3.33	132	eP	Pn	23 46 20.0	-1.5
DLH				eS	Sn	23 47 02.0	+0.4
SDNR	Sundarnagar	4.67	134	eP	Pn	23 46 37.4	-3.1
SDNR				eS	Sn	23 47 27.2	-8.2
NDI	New Delhi	7.07	149	ex	Sb	23 48 58.0	+1.5
AAK	Ala-Archa	7.89	8	⇓Sn	Sn	23 48 56.4	+0.3
	6.0nm,0.9s						
KK31	Karatay Array	8.51	347	⇑Pn	P	23 47 36.1	+1.8
	1.8nm,0.3s,baz=153,slow=11,SNR=95						
KK31				⇑Sn	Sn	23 49 10.9	-0.6
	3.0nm,0.5s,baz=169,slow=22,SNR=13						
AKTO	Aktyubinsk	19.07	330	⇑P	P	23 49 52.8	-0.2
	3.2nm,2.8s						

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*IDC **11** 23:54:53.5±2.1,1.36N×96.83E,mb3.9/7,mb1 4.0/7, mb1mx3.8/18,mbtmp3.9/7,Error ellipse: s-maj=87.2km s-min=26.2km az=53.0*

*NEIC **11** 23:54:58.5±0.9,1.48N×97.00E,h30^{km},mb3.9/1,Error ellipse: s-maj=19.4km s-min=15.0km az=213.0*

ISC 11 23:54:56.7±1.3,1.5N±0.2×97.0E±0.2,h30^{km},n9,σ0^{s}51/9, mb3.9/8,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.23	44	ePn	Pn	23 56 14.8	-0.1
WRA	Warramunga Arr	42.38	122	P	P	00 02 50.3	-0.1
	0.2nm,0.4s,mb3.1,baz=305,slow=8.9,SNR=3.7						
SONM	Songino Array	46.84	9	P	P	00 03 26.5	+0.6
	2.8nm,0.9s,mb4.2,baz=188,slow=9.2,SNR=17						
MKAR	Makanchi Array	46.88	346	P	P	00 03 26.7	+0.5
	2.0nm,0.7s,mb4.2,baz=161,slow=7.8,SNR=25						
ZAL	Zalesovo	53.20	351	P	P	00 04 14.2	-0.2
	0.8nm,0.3s,mb4.1,baz=312,slow=7.9,SNR=4.7						
BVAR	Borovoye Array	55.88	341	P	P	00 04 33.3	-0.7
	0.5nm,0.6s,mb3.7,baz=146,slow=10,SNR=3.5						
CHKZ	Chkalovo	56.36	341	eP	P	00 04 36.5	-0.9
	0.7nm,0.6s,mb3.9						
FINES	FINESS Array B	79.62	333	P	P	00 07 02.8	+0.2
	0.5nm,0.5s,mb3.7,baz=117,slow=3.1,SNR=3.9						
ARCES	ARCESS Array B	82.17	340	P	P	00 07 16.4	+0.6
	1.7nm,0.9s,mb4.0,baz=96,slow=9.1,SNR=5.1						

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*MOS **12** 00:12:06.8±3.3,21.62S×176.79W,h33^{km},mb5.2/15, Error ellipse: s-maj=10.9km s-min=9.2km az=69.4*

*ORF **12** 00:12:16.9,17.16S×176.49W,h30^{km},mb5.7*

*SKO **12** 00:12:16.6,16.25S×178.37W*

*IDC **12** 00:12:17.3±2.2,21.86S×176.61W,h146^{km}±18^{km}, mb4.4/14,mb1 4.6/17,mb1mx4.5/19,mbtmp4.9/17,MS3.1/1, Ms1 3.1/1,ms1mx2.8/27,Error ellipse: s-maj=15.7km s-min=11.8km az=127.0*

*HRVD **12** 00:12:20.8±1.1,22.51S×176.50W,h182^{km}±7^{km}, MW5.0/35,Centroid moment Tensor Solution. LP body waves: s9,c9;Mantle waves: s35,c48; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.36±.35; M$_{\theta\theta}$2.71±.30; M$_{\phi\phi}$-1.35±.29; M$_{r\theta}$-0.66±.29; M$_{\theta\phi}$1.12±.24; M$_{\phi r}$-1.87±.26; Best double couple: M$_0$3.27×10^{16} NP1: ϕ_s292°,δ48°,λ-25°. NP2:ϕ_s39°,δ72°,λ-135°. Principal axes: T 3.295, Plg15°, Azm160°; N -.051, Plg42°, Azm56°; P -3.244, Plg44°, Azm265°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **12** 00:12:20.8±0.2,21.82S×176.60W,mb4.9/26 Error ellipse: s-maj=8.2km s-min=5.8km az=137.0*

*BJI **12** 00:12:24.8,20.88S×177.43W,h179^{km},mB5.0,mb4.9*

ISC 12 00:12:19.7±0.2,21.93S±0.04×176.66W±0.06,h182^{km}, h182^{km}±1.7^{km}:pP-P,n289,σ1^{s}14/121,mb4.7/37,39C-28D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	7.38	189	P	P	00 14 01.6	-4.1
	112nm,0.3s,baz=60,slow=20,SNR=2.7						
RAO				S	S	00 15 28.7	+0.3
	85nm,0.3s,baz=56,slow=23,SNR=7.7						
AFI	Afiamalu	9.22	31	P	P	00 14 22.2	-7.7
	11nm,0.3s,baz=30,slow=3.8,SNR=5.4						
AFI				S	S	00 15 54.8	-17
	18nm,0.3s,baz=113,slow=4.1,SNR=3.2						
AFI	Afiamalu	9.22	31	P	P	00 14 18.5	-11
AFI				P		00 14 22.2	
AFI				S	S	00 15 54.8	-17
AFI	Afiamalu	9.22	31	P	P	00 14 18.5	-11
AFI				S	S	00 15 54.8	-17
DZM	Mont Dzumac	15.68	266	P	P	00 15 57.3	+5.1
	3.8nm,0.3s,baz=84,slow=17,SNR=67						
RAR	Rarotonga	15.72	91	P	P	00 15 50.9	-1.9
	3.3nm,0.3s,baz=241,slow=8.6,SNR=8.2						
RAR				S	S	00 18 36.0	-5.3
	7.0nm,0.3s,baz=84,slow=21,SNR=4.0						
PUZ	Puketiti	16.68	194	ePN	P	00 16 02.1	-2.3
URZ	Urewera	17.14	197	P	P	00 16 07.6	-2.1
	7.6nm,0.3s,baz=328,slow=3.2,SNR=32						
URZ				S	S	00 19 02.4	-10
	2.3nm,0.3s,baz=108,slow=20,SNR=3.7						
URZ	Urewera	17.14	197	PN	P	00 16 06.2	-3.5
QRZ	Quartz Range	20.95	203	ePN	P	00 16 49.1	-0.3
NNZ	Nelson	21.00	201	PN	P	00 16 47.1	-2.7
TUWZ	Tuamarina	21.00	200	ePN	P	00 16 47.4	-2.4
THZ	Tophouse	21.64	202	PN	P	00 16 54.9	-1.2
KHZ	Kahutara	22.02	200	PN	P	00 16 58.4	-1.4
LTZ	Lake Taylor	22.76	201	ePN	P	00 17 07.4	+0.4
RPZ	Rata Peaks	24.00	202	P	P	00 17 17.5	-1.4
	18nm,0.5s,mb4.8,baz=8.5,slow=13,SNR=5.4						
RPZ				S	S	00 21 26.2	+6.5
	12nm,1.0s,baz=2.2,slow=19,SNR=2.2						
HNR	Honiara	25.68	295	P	P	00 17 34.0	-0.8
	81nm,0.6s,mb5.5,baz=301,slow=3.1,SNR=9.4						
HNR				LR	LR	00 26 07.0	
	comp=Z,46nm,20.4s,baz=156,slow=32						
HNR	Honiara	25.68	295	eP	P	00 17 35.9	+1.1
	69nm,0.7s,mb5.4						
HNR	Honiara	25.68	295	eP	P	00 17 35.9	+1.1
HNR				pmax	pmax		
	comp=Z,69nm,0.7s,mb5.4						
CNB	Canberra Magne	32.51	238	⇑iP	P	00 18 37.2	+1.9
	comp=Z,21nm,0.8s,mb4.9						
CTA	Charters Tower	34.62	266	eP	P	00 18 55.0	+1.5
	comp=Z,43nm,0.7s,mb5.2						
CTA	Charters Tower	34.62	266	eP	P	00 18 55.0	+1.5
CTA				pmax	pmax		
	comp=Z,43nm,0.7s						
TOO	Toolangi	36.10	236	eP	P	00 19 08.1	+2.3
	comp=Z,16nm,0.5s,mb4.9						
TOO	Toolangi	36.10	236	eP	P	00 19 08.1	+2.3
TOO				pmax	pmax		
	comp=Z,16nm,0.5s,mb4.9						
PMG	Port Moresby	36.89	284	P	P	00 19 13.4	+0.7
	comp=Z,72nm,0.9s,mb5.3,baz=86,slow=5.2,SNR=26						
PMG	Port Moresby	36.89	284	eP	P	00 19 12.8	+0.1

comp=Z,68nm,0.9s,mb5.3
PMG Port Moresby 36.89 284 eP P 00 19 12.8 +0.2
PMG pmax pmax
comp=Z,68nm,0.9s
STKA Stephens Creek 38.33 246⇓iP P 00 19 25.3 +0.8
comp=Z,22nm,0.7s,mb4.9
STKA Stephens Creek 38.33 246 P P 00 19 25.3 +0.8
comp=Z,21nm,0.6s,mb5.0,baz=93,slow=10.0,SNR=54
STKA PcP PcP 00 21 36.0 +1.0
comp=Z,4.1nm,0.6s,baz=97,slow=7.4,SNR=3.4
STKA ScP 00 25 09.0
comp=Z,3.7nm,1.1s,baz=74,slow=2.9,SNR=3.8
ASPA Alice Springs 45.43 258⇓iP P 00 20 22.3 0.0
WB2 Warramunga Arr 45.65 263⇑iP P 00 20 24.1 +0.1
WRAB Tennant Creek 45.65 263 eP P 00 20 23.6 -0.5
comp=Z,74nm,1.0s,mb5.3
WRAB Tennant Creek 45.65 263⇑eP P 00 20 23.8 -0.2
WRA Warramunga Arr 45.66 263 P P 00 20 23.7 -0.4
comp=Z,17nm,0.5s,mb4.9,baz=97,slow=7.7,SNR=20
KAKA Kakadu 49.27 272⇓iP P 00 21 09.8 +18
comp=Z,51nm,1.5s,mb4.9
FORT Forrest 49.90 248⇓iP P 00 20 55.9 -0.8
comp=Z,90nm,0.5s
FITZ Fitzroy Crossi 54.09 263⇓iP P 00 21 27.7 -0.3
comp=Z,19nm,0.5s,mb5.1
SBA Scott Base 56.54 184 eP P 00 21 46.9 +2.1
comp=Z,18nm,1.2s,mb4.8
SBA Scott Base 56.54 184 eP P 00 21 46.9 +2.1
SBA pmax pmax
comp=Z,18nm,1.2s,mb4.8
VNDA Vanda 56.61 185 eP P 00 21 47.1 +1.8
comp=Z,3.8nm,0.9s,mb4.2
VNDA Vanda 56.61 185 eP P 00 21 47.1 +1.8
VNDA pmax pmax
comp=Z,4.0nm,0.9s
KLBR Kellerberrin 58.60 246 eP P 00 21 58.6 -1.2
comp=Z,12nm,0.6s,mb4.9
MUN Mundaring 59.85 245 eP P 00 22 07.9 -0.5
CASY Casey 63.22 206 eP P 00 22 30.9 +0.5
QSPA South Pole Qui 68.15 180⇑iP P 00 23 03.4 +1.9
comp=Z,11nm,0.8s,mb4.6
MJAR Matsushiro Arr 72.10 323 P P 00 23 24.8 -1.3
comp=Z,8.7nm,0.7s,mb4.6,baz=157,slow=6.2,SNR=18
MAT Matsushiro 72.10 323 P P 00 23 24.7 -1.3
MAT Matsushiro 72.10 323 eP P 00 23 25.0 -1.0
comp=Z,35nm,1.3s,mb4.9
MAT Matsushiro 72.10 323 eP P 00 23 25.0 -1.0
MAT pmax pmax
comp=Z,35nm,1.3s,mb4.9
YSS Yuzh-Sakhalins 77.73 333 eP P 00 23 56.9 -1.0
comp=Z,11nm,0.6s,mb4.7
YSS Yuzh-Sakhalins 77.73 333⇑eP P 00 23 58.1 +0.3
YSS pmax pmax
comp=Z,30nm,0.9s,mb4.9
SSE Sheshan 79.56 310 P P 00 24 07.7 -0.4
SSE AMB AMB
comp=Z,20nm,0.7s,mb4.9
SSE AMB AMB
comp=Z,90nm,6.2s
SSE Sheshan 79.56 310 P P 00 24 07.7 -0.4
comp=Z,23nm,0.7s,mb4.9
CMB Columbia Colle 79.67 42 eP P 00 24 08.4 -0.1
comp=Z,5.8nm,1.2s,mb4.1
CMB epP pP 00 24 52.3 -0.7
CMB Columbia Colle 79.67 42 eP P 00 24 08.4 -0.1
CMB pmax pmax
comp=Z,6.0nm,1.2s,mb4.1
MAW Mawson 80.65 200 P P 00 24 15.4 +2.3
comp=Z,5.3nm,0.5s,mb4.4,baz=146,slow=5.7,SNR=14
MAW Mawson 80.65 200 eP P 00 24 14.9 +1.8
comp=Z,16nm,0.7s,mb4.8
MAW Mawson 80.65 200 eP P 00 24 14.9 +1.8
MAW pmax pmax
comp=Z,16nm,0.7s
NVAR Mina Array Bea 81.21 43 P P 00 24 17.1 +0.5
comp=Z,0.9nm,0.6s,mb3.6,baz=214,slow=8.2,SNR=9.9
TPNV Topopah Spring 81.65 45 eP P 00 24 18.4 -0.6
comp=Z,2.0nm,0.7s,mb3.9
TPNV epP pP 00 25 03.4 -0.4
TPNV Topopah Spring 81.65 45 eP P 00 24 18.4 -0.6
TPNV pmax pmax
comp=Z,2.0nm,0.7s,mb3.9
NJ2 Nanjing 81.75 309 eP P 00 24 18.5 -1.1
NJ2 AP pP 00 25 08.4 +4.0
NJ2 PP PP 00 27 29.5 -1.4
NJ2 S S 00 34 11.0 -4.5
NJ2 AMB AMB
comp=Z,10.0nm,0.5s,mb4.7
NJ2 AMB AMB
comp=Z,30nm,4.6s
NJ2 LR LR
comp=N,3µm,21.9s
NJ2 LR LR
comp=E,930nm,23.7s
NJ2 LR LR
comp=Z,220nm,20.8s
MDJ Mudanjiang 82.40 324 P P 00 24 23.0 +0.3
MDJ AMB AMB
comp=Z,10.0nm,1.2s,mb4.3
MDJ AMB AMB
comp=Z,130nm,5.1s
MDJ LR LR
comp=N,100nm,25.9s
MDJ LR LR
comp=E,100nm,24.8s
MDJ LR LR
comp=Z,150nm,23.7s
ELK Elko 84.48 42 eP P 00 24 33.0 -0.3
comp=Z,7.7nm,1.5s,mb4.2
ELK epP pP 00 25 17.7 -0.6
ELK Elko 84.48 42 eP P 00 24 33.0 -0.3
ELK pmax pmax
comp=Z,8.0nm,1.5s
SYO Syowa Base 85.61 192 ⇓P P 00 24 38.5 +0.3
SYO Syowa Base 85.61 192⇓eP P 00 24 38.5 +0.3
DIV Divide 86.44 14 eP P 00 24 42.0 -0.4
comp=Z,53nm,1.1s,mb5.2
SNAA Sanae 86.55 178 e P 00 24 43.9 +1.2
SNAA Sanae 86.55 178 e P 00 24 56.0 +13
SNAA Sanae 86.55 178 e P 00 25 00.6 +18
SNAA Sanae 86.55 178 e pP 00 25 29.0 +1.1
SNAA Sanae 86.55 178⇑iP P 00 24 42.3 -0.4
SNAA e 00 24 43.9
SNAA e 00 24 56.0
SNAA e 00 25 00.6
SNAA e pP 00 25 29.0 +1.1
SNAA Sanae 86.55 178⇑iP P 00 24 42.3 -0.4
SNAA e 00 24 56.0
HLID Hailey 86.59 40 eP P 00 24 43.8 +0.2
VNA3 Neumayer Olymp 86.64 176 e P 00 24 45.9 +2.8
VNA3 Neumayer Olymp 86.64 176 e P 00 24 57.3 +14
VNA3 Neumayer Olymp 86.64 176 e P 00 25 01.5 +18
VNA3 Neumayer Olymp 86.64 176 e pP 00 25 29.3 +1.0
VNA3 Neumayer Olymp 86.64 176⇑iP P 00 24 44.3 +1.2
VNA3 e 00 24 45.9
VNA3 e 00 24 57.3
VNA3 e 00 25 01.5
VNA3 e pP 00 25 29.3 +1.0
TXAR Lajitas Array 86.78 57 P P 00 24 45.5 +0.8
comp=Z,1.3nm,0.8s,mb3.8,baz=220,slow=7.7,SNR=14
TXAR PKKPbc 00 42 41.1
comp=Z,0.2nm,0.5s,baz=150,slow=2.4,SNR=4.8
VNA2 Neumayer--Watz 87.09 176 e P 00 24 48.4 +3.1
VNA2 Neumayer--Watz 87.09 176 e P 00 24 59.4 +14
VNA2 Neumayer--Watz 87.09 176 e P 00 25 03.5 +18
VNA2 Neumayer--Watz 87.09 176 e pP 00 25 32.1 +1.5
VNA2 Neumayer--Watz 87.09 176⇑iP P 00 24 46.7 +1.4
VNA2 e 00 24 48.4
VNA2 e 00 24 59.4
VNA2 e 00 25 03.5
VNA2 e pP 00 25 32.1 +1.5
VNA1 Neumayer--Stat 87.31 176 e P 00 24 49.5 +3.1
VNA1 Neumayer--Stat 87.31 176 e P 00 25 00.9 +15
VNA1 Neumayer--Stat 87.31 176 e P 00 25 05.4 +19
VNA1 Neumayer--Stat 87.31 176 e pP 00 25 33.0 +1.4
VNA1 Neumayer--Stat 87.31 176⇑iP P 00 24 47.7 +1.3
VNA1 e 00 24 49.5
VNA1 e 00 25 00.9
VNA1 e 00 25 05.4
VNA1 e pP 00 25 33.0 +1.4
ANMO Albuquerque 87.32 51 i P P 00 24 48.2 +1.0
PLCA Paso Flores 87.39 133 P P 00 24 49.5 +2.1
comp=Z,2.3nm,0.7s,mb4.1,baz=87,slow=3.0,SNR=5.6
PLCA Paso Flores 87.39 133 eP P 00 24 48.5 +1.1
GDL2 Guadalupe Moun 87.56 54 eP P 00 24 49.0 +0.6
GDL2 epP pP 00 25 33.0 -0.7
MCMT McKenzie Canyo 88.23 40 eP P 00 24 52.2 +0.9
DLBC Dease Lake 88.87 22 P P 00 24 55.0 +1.0
comp=Z,1.9nm,0.6s,mb4.2,baz=252,slow=13,SNR=4.2
BW06 Boulder Array 89.14 43 P P 00 24 55.8 +0.1
PDAR Pinedale Array 89.14 43 P P 00 24 56.3 +0.7
comp=Z,0.5nm,0.7s,baz=207,slow=3.3,SNR=4.4
COLA College 89.33 12 eP P 00 24 54.7 -1.3
comp=Z,8.7nm,0.7s,mb4.8
COLA College 89.33 12d iP P 00 24 55.2 -0.8
SDCO Great Sand Dun 89.34 49 P P 00 24 56.9 +0.1
ILAR Eielson Array 89.43 12 P P 00 24 55.6 -0.8
comp=Z,3.1nm,0.6s,mb4.4,baz=220,slow=5.5,SNR=51
DAWY Dawson 90.49 15 eP P 00 25 01.0 -0.4
BILL Bilibino 90.58 354 eP P 00 25 01.2 -0.6
comp=Z,6.8nm,0.8s,mb4.7
BILL Bilibino 90.58 354⇑eP P 00 25 01.7 -0.1
BILL eS S 00 35 57.0 +18
BILL pmax pmax
comp=Z,13nm,1.3s,mb4.8
KMI Kunming 91.11 297 P P 00 25 06.2 +1.0
comp=Z,5.0nm,0.8s,mb4.6
KMI LR LR
comp=Z,40nm,18.4s
KMI Kunming 91.11 297 P P 00 25 06.2 +1.0
KMI pmax pmax
comp=Z,5.0nm,0.8s,mb4.6
KMI MLR MLR
comp=Z,40nm,18.4s
HHC Hu-ho-hao-te 91.24 314 eP P 00 25 03.7 -1.8
HHC AP pP 00 25 49.3 -1.7
HHC S S 00 35 39.1 -6.3
HHC AMB AMB
comp=Z,90nm,3.6s
HHC LR LR
comp=N,140nm,16.8s
HHC LR LR
comp=E,200nm,19.2s
HHC LR LR
comp=Z,140nm,14.4s
EDM Edmonton 92.63 33 eP P 00 25 11.2 -0.4
RSSD Black Hills 93.31 44 eP P 00 25 14.5 -0.5
comp=Z,3.9nm,0.9s,mb4.5
RSSD Black Hills 93.31 44 eP P 00 25 14.5 -0.4
RSSD pmax pmax
comp=Z,4.0nm,0.9s,mb4.5
LZH Lanzhou 94.63 307 eP P 00 25 24.1 +3.0
LZH AP pP 00 26 08.7 +2.0
LZH XP sP 00 26 26.9 +0.8
LZH AMB AMB
comp=Z,20nm,1.0s,mb5.3
LZH AMB AMB
comp=Z,70nm,4.0s
LZH Lanzhou 94.63 307 eP P 00 25 24.1 +3.0
comp=Z,20nm,1.0s,mb5.3
LZH pP pP 00 26 08.7 +2.0
LZH sP sP 00 26 26.9 +0.8
LZH Lanzhou 94.63 307 eP P 00 25 24.1 +3.0
LZH pmax pmax
comp=Z,20nm,1.0s,mb5.3
DGMT Dagmar 95.21 40 P P 00 25 22.4 -1.1
YKA Yellowknife Ar 97.28 24 P P 00 25 32.7 +0.2
comp=Z,2.7nm,0.8s,mb4.7,baz=287,slow=2.6,SNR=4.1
YKA Yellowknife Ar 97.28 24 P P 00 25 32.7 +0.2
TIXI Tiksi 100.44 345 eP P 00 25 50.3 +3.6
TIXI pmax pmax
comp=Z,3.0nm,1.5s
ZAL Zalesovo 112.40 321 PKiKP 00 30 34.1
MKAR Makanchi Array 113.08 313 PKiKP 00 30 35.8
comp=Z,2.1nm,0.6s,baz=82,slow=0.8,SNR=32
KURK Kurchatov 115.89 317 ePKP PKPdf 00 30 40.7 +0.2
KURK Kurchatov 115.89 317⇑iPKIKP PKPdf 00 30 41.3 +0.8
CHKZ Chkalovo 120.79 320 ePKP PKPdf 00 30 50.1 +0.2
CHKZ Chkalovo 120.79 320 PKIKP PKPdf 00 30 50.3 +0.4
CHKZ pmax pmax
comp=Z,3.0nm,0.7s
BVA0 Borovoye Array 120.97 320 i PKIKP PKPdf 00 30 51.0 +0.7
BVA0 pmax pmax
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 120.97 320 PKP PKPdf 00 30 51.1 +0.8
comp=Z,6.2nm,0.5s,baz=107,slow=1.3,SNR=57
BRVK Borovoye 121.03 320 ePKP PKPdf 00 30 50.6 +0.2
KKAR Karatay Array 121.11 308 i PKIKP PKPdf 00 30 51.3 +0.5
KKAR pmax pmax
comp=Z,2.0nm,0.6s
ARU Arti 127.08 325 i PKIKP PKPdf 00 31 01.7 -0.2
ARU e 00 33 01.4
AB31 Akbulak array 127.98 316 i PKIKP PKPdf 00 31 05.1 +1.2
AKTO Aktyubinsk 128.96 318 PKP PKPdf 00 31 07.5 +1.8
comp=Z,5.0nm,0.6s,baz=90,slow=3.8,SNR=27
ARCES ARCESS Array B 130.54 350 PKP PKPdf 00 31 09.2 +1.0
comp=Z,3.1nm,0.5s,baz=20,slow=1.8,SNR=22
ARE0 ARCESS Array S 130.54 350 ePKP PKPdf 00 31 08.9 +0.7
ORR Orenburg 130.65 320⇑iPKIKP PKPdf 00 31 10.9 +2.0
ORR pmax pmax
comp=Z,10.0nm,0.6s
MELSS Ber_school_2 134.59 354 e PKPdf 00 31 28.2 +12
STOK Stokkvaagen 135.17 354 e PKPdf 00 31 43.1 +26
MOR8 Moi Rana 135.19 354 e PKPdf 00 31 26.1 +9.1
FINES FINESS Array B 137.49 344 PKhKP 00 31 08.9
comp=Z,0.5nm,0.5s,baz=72,slow=3.5,SNR=7.8
FINES SKPbc 00 34 41.2
comp=Z,3.4nm,0.8s,baz=18,slow=6.0,SNR=6.5
FINES FINESS Array B 137.49 344 PKP 00 31 08.9
FINES SKPbc 00 34 41.2
OBN Obninsk 138.60 332 i PKIKP PKPdf 00 31 26.9 +3.3
OBN e 00 34 18.4
OBN eSS SS 00 52 27.8 +12
OBN pmax pmax
comp=Z,10.0nm,0.7s
OBN MLR MLR
comp=Z,200nm,19.0s
KMBO Kilima Mbogo 139.75 240 PKhKP 00 31 21.2
comp=Z,0.9nm,0.7s,baz=48,slow=23,SNR=5.0
KMBO Kilima Mbogo 139.75 240 PKP 00 31 21.2
NB2 NORSAR Subarra140.53 354 PKPabc PKPdf 00 31 19.9 -6.9
comp=Z,1.9nm,0.6s,baz=9.0,slow=3.0
NOA NORSAR Array B 140.53 354 PKhKP 00 31 20.4
comp=Z,2.1nm,0.6s,baz=16,slow=4.5,SNR=8.0
NOA NORSAR Array B 140.53 354 PKP 00 31 20.4
KAMS Al Khamasin 141.58 275 P PKPdf 00 31 34.6 +4.8
SUW Suwalki 144.61 340 ePKP PKPdf 00 31 34.7 +0.7
SUW Suwalki 144.61 340 ePKP PKPdf 00 31 34.7 +0.6
AKASG Malin Array Be 144.86 331 PKP PKPdf 00 31 34.5 -0.1
comp=Z,8.0nm,0.4s,baz=44,slow=4.2,SNR=58
MUD Monsted U'grnd 145.25 354 i P PKPdf 00 31 37.1 +2.0
comp=Z,64nm,0.8s
MUD Monsted U'grnd 145.25 354 i PKHKP 00 31 37.1
MUD pmax pmax
comp=Z,64nm,0.8s
ELZG Elazig 145.31 307 i P PKPdf 00 31 37.4 +1.6
COP Copenhagen 145.61 351 i P PKPdf 00 31 37.8 +2.1
comp=Z,36nm,0.6s
COP Copenhagen 145.61 351 i PKHKP 00 31 37.8
COP pmax pmax
comp=Z,36nm,0.6s
BSD Bornholm Skovb 145.74 348⇑iP PKPdf 00 31 38.1 +2.1
comp=Z,121nm,0.7s
BSD Bornholm Skovb 145.74 348⇑iPKHKP 00 31 38.1
BSD pmax pmax
comp=Z,120nm,0.7s
SIM Simferopol' 145.89 320 i PKIKP PKPdf 00 31 39.9 +3.4
SIM pmax pmax
comp=Z,22nm,0.8s
GZT Gaziantep 146.73 305 i P PKPdf 00 31 38.9 +0.7
KBRS Khaybar 146.99 284 P PKPdf 00 31 44.1 +5.2
BOYT Boyabat 147.11 314 i P PKPdf 00 31 41.9 +3.3
KAHT Ahir Dag 147.17 306 i P PKPdf 00 31 43.4 +4.6
CTKT Corum 147.54 312 i P PKPdf 00 31 40.8 +1.4
KIS Kishinev 147.61 327⇑iPKIKP PKPdf 00 31 44.0 +4.7
COBT Iskenderun 147.99 304 i P PKPdf 00 31 43.5 +3.2
BALT Daday 148.07 315 i P PKPdf 00 31 41.0 +0.7
YNBS Yanbu' al Bahr 148.10 281 P PKPdf 00 31 47.2 +6.4
AVNT Avonos 148.25 309 i P PKPdf 00 31 45.7 +5.0
QURS Qurayyt al Mil 148.31 295 P PKPdf 00 31 47.4 +6.4
KWP Kalwaria 148.40 336 ePKP PKPdf 00 31 46.2 +5.7
KWP e 00 31 49.8
KWP Kalwaria 148.40 336 ePKP PKPdf 00 31 46.2 +5.7
KWP e 00 31 49.8
ELDT Eldivan 148.53 313 i P PKPdf 00 31 45.2 +4.2
BR131 Keskin Array S 148.72 311 ePKPdf PKPdf 00 31 43.5 +2.1
BR131 ePKPbc PKPdf 00 31 46.8 +5.4
BRTR Keskin Array B 148.72 311 PKP PKPdf 00 31 43.0 +1.7
comp=Z,8.7nm,0.7s,baz=135,slow=3.5,SNR=52
BRTR PKPbc PKPdf 00 31 47.4 +6.0
comp=Z,9.0nm,0.7s,baz=137,slow=4.7,SNR=50
UMJS Umm Lajj 148.74 283 P PKPdf 00 31 48.7 +6.8
OJC Ojcow 148.94 339 ePKP PKPdf 00 31 47.3 +5.9
KOLS Kolonicke sedl 149.13 335 ePKP PKPdf 00 31 48.3 +6.6
KOLS e 00 31 50.5
CFR Carcaliu 149.17 325 ⇑P PKPdf 00 31 47.0 +5.1
ANTO Ankara 149.24 312 ePKPbc PKPdf 00 31 48.3 +6.1
TBKS Tabuk 149.34 289 P PKPdf 00 31 50.0 +7.3
KSP Ksiaz 149.41 344 ePKP PKPdf 00 31 49.6 +7.5
KSP e 00 31 54.0
KSP Ksiaz 149.41 344 ePKPdf PKPdf 00 31 49.0 +6.9
KSP e 00 31 53.6
KSP Ksiaz 149.41 344 i PKIKP PKPdf 00 31 49.0 +6.9
KSP e 00 31 53.6
SGKT Sivrigoynuk 149.41 314 i P PKPdf 00 31 46.3 +3.9
VRI Vrincioaia 149.44 327 ⇑P PKPdf 00 31 48.7 +6.4
VRI Vrincioaia 149.44 327 ⇑P PKPdf 00 31 48.6 +6.4
NIE Niedzica 149.45 338⇓ePKP PKPdf 00 31 49.4 +7.2
CRVS Cervenica-Dubn 149.46 336 ePKP PKPdf 00 31 49.4 +7.2
TIRR Tirgusor 149.48 323 ⇓P PKPdf 00 31 48.8 +6.4
TIRR Tirgusor 149.48 323 ⇓P PKPdf 00 31 48.8 +6.4
HARR Harsova 149.60 324 ⇓P PKPdf 00 31 48.5 +5.9
HARR Harsova 149.60 324 ⇓P PKPdf 00 31 48.5 +5.9
CLL Collm 149.72 348⇓iPKP1 PKPdf 00 31 49.4 +6.8
CLL i 00 31 51.3
CLL i PKP2 PKPab 00 31 54.1 -1.6
CLL e*PPKP 00 32 37.0
CLL Collm 149.72 348⇓iPKP PKPdf 00 31 49.4 +6.8
CLL i PKP PKPdf 00 31 51.3 +8.7
CLL epPKP 00 32 37.0
CLL Collm 149.72 348⇓iPKHKP 00 31 49.4
CLL i 00 31 51.3
CLL pmax pmax
comp=Z,37nm,0.9s
CLL pmax pmax
comp=Z,18nm,0.9s
UPC Upice 149.79 344 ePKPbc PKPdf 00 31 49.7 +7.0
OKC Ostrava-Krasne 149.79 341 ePKPbc PKPdf 00 31 50.0 +7.3
DPC Dobruska-Polom 149.85 343 ePKPbc PKPdf 00 31 49.8 +7.0
DPC ePKPab PKPab 00 31 55.7 -0.5
BRG Berggiesshubel 149.94 347 i PKHKP 00 31 50.3
BRG i 00 31 55.7
BRG pmax pmax
comp=Z,22nm,0.9s
BRG pmax pmax
comp=Z,11nm,0.8s
MORC Moravsky Berou 150.03 341 ePKPdf PKPdf 00 31 44.6 +1.6
MORC ePKPbc PKPdf 00 31 49.8 +6.7
HENT Hendek 150.06 315 i P PKPdf 00 31 48.0 +4.6
PVCC Panska Ves 150.12 346 ePKPbc PKPdf 00 31 50.6 +7.4
KECS Kecovo 150.17 337 i PKP PKPdf 00 31 50.8 +7.5
SNX Sinaia 150.41 327 ⇓P PKPdf 00 31 51.0 +7.2
SNX Sinaia 150.41 327 ⇓P PKPdf 00 31 51.0 +7.2
ERMK Ermenek 150.48 306 i P PKPdf 00 31 49.8 +5.6
ALWS Ilw as Safayha 150.53 291 P PKPdf 00 31 52.5 +8.0
VOIR 150.58 328 ⇓P PKPdf 00 31 52.0 +7.9
BDAS Al Bad' 150.60 289 P PKPdf 00 31 52.7 +8.0
MOX Moxa 150.61 349 ePKIKP PKPdf 00 31 51.5 +7.6
MOX pmax pmax
comp=Z,18nm,1.4s
PRU Pruhonice 150.63 345 ePKPbc PKPdf 00 31 51.5 +7.5
PRU ePKPab PKPab 00 31 58.6 -0.9
DRGR 150.65 332 ⇓P PKPdf 00 31 50.5 +6.4
DRGR 150.65 332 ⇓P PKPdf 00 31 50.5 +6.4
HAQS Haql 150.68 291 P PKPdf 00 31 52.9 +8.2
CSS Prodhromos 150.73 303 ePKPdf PKPdf 00 31 46.4 +1.8
CSS ePKPbc PKPdf 00 31 51.6 +7.0
VYHS Vyhne 150.74 339 i PKP PKPdf 00 31 52.2 +8.0
BORA Eskisehir 150.82 314 i P PKPdf 00 31 52.2 +7.6
PRD Provadia 150.84 322 i P PKPdf 00 31 52.5 +8.0
NKC Novy Kostel 150.85 348 ePKPbc PKPdf 00 31 51.8 +7.5
NKC ePKPab PKPab 00 31 58.2 -2.2
PSZ Piszkesteto 150.86 337 ePKPbc PKPdf 00 31 52.0 +7.6
TREC Trest 151.04 343 ePKPbc PKPdf 00 31 52.3 +7.7
SMOL Smolenice 151.18 340 ePKP PKPdf 00 31 54.3 +9.5
SRO Srobarova 151.51 339 ePKP PKPdf 00 31 53.8 +8.4
SRO2 Moca 151.52 338 ePKP PKPdf 00 31 54.0 +8.6
SRO2 e 00 31 59.6
ULDT Uludag 151.56 316 i P PKPdf 00 31 52.9 +7.2
ZST Bratislava 151.56 340 ePKP PKPdf 00 31 54.3 +8.9
GRA1 Grafenberg Arr 151.60 349 ePKPbc PKPdf 00 31 54.4 +9.0
GRA1 ePKPab PKPab 00 32 02.7 -0.9
GRF Grafenberg Arr 151.60 349 ePKP PKPdf 00 31 54.4 +9.0
GRF ePKP PKPab 00 32 02.7 -0.9
SZH Strazhica 151.62 324 i P PKPdf 00 31 53.7 +8.0
KHC Kasperske Hory 151.66 346 ePKPbc PKPdf 00 31 54.1 +8.6
KHC ePKPab PKPab 00 32 02.5 -1.3
TKTP Tekketepe 151.79 311 i P PKPdf 00 31 52.6 +6.5
GIVF Givet 151.86 358 ePKP1 PKPdf 00 31 54.0 +8.2
GERES GERESS Array B 151.90 345 PKPbc PKPdf 00 31 54.4 +8.5
comp=Z,2.5nm,0.6s,baz=18,slow=1.7,SNR=32
BAIF Baives 151.92 359 ePKP1 PKPdf 00 31 53.8 +7.9
comp=Z,15nm,0.7s
MOA Molln 152.69 344⇑iP PKPdf 00 31 56.2 +9.1
comp=Z,5.5nm,1.1s
MOA Molln 152.69 344⇑iP PKPdf 00 32 07.6 +21
comp=Z,11nm,1.4s
DNZL Cakiroluk 152.84 311 i P PKPdf 00 31 58.3 +11
ARSA Arzberg 152.89 342⇑iP PKPdf 00 31 56.7 +9.3
comp=Z,3.8nm,1.0s
ARSA Arzberg 152.89 342⇓iP PKPdf 00 32 02.1 +15
comp=Z,2.7nm,0.7s
ARSA Arzberg 152.89 342⇑iP PKPdf 00 32 08.2 +21
comp=Z,5.1nm,1.1s
ARSA Arzberg 152.89 342 ⇑P PKPdf 00 31 56.7 +9.3
ARSA e 00 32 02.1
ARSA e 00 32 08.2
KDZ Kurdzhali 152.96 322 i P PKPdf 00 31 56.5 +8.9
FLN La Foliniere 153.05 6 ePKP1 PKPdf 00 31 56.3 +8.8
comp=Z,25nm,0.6s
AKAS Kas 153.09 308 i P PKPdf 00 31 53.5 +5.5
LDF La Druitiere 153.25 5 ePKP1 PKPdf 00 31 56.6 +8.8
comp=Z,11nm,0.5s
SGMF Saint Gilles 153.31 9 ePKP1 PKPdf 00 31 57.0 +9.1
comp=Z,12nm,0.6s
RZN Rozhen 153.33 323 i P PKPdf 00 31 57.5 +9.3
GRR Gorron 153.38 6 ePKP1 PKPdf 00 31 57.2 +9.2
comp=Z,19nm,0.5s
CDF Champ du Feu 153.39 354 ePKP1 PKPdf 00 31 57.5 +10
comp=Z,5.7nm,0.5s
MEZF Maizieres J'vi 153.45 357 ePKP1 PKPdf 00 31 57.6 +10
VTS Vitosha 153.54 326 i P PKPdf 00 31 58.3 +10
PERS Pernice 153.56 342 ePKPbc PKPdf 00 31 58.1 +10
KBA Koelnbreinsper 153.64 344⇑iP PKPdf 00 31 58.1 +10
comp=Z,2.7nm,0.5s
KBA Koelnbreinsper 153.64 344⇑iP PKPdf 00 32 11.7 +23
comp=Z,5.8nm,0.8s
KBA Koelnbreinsper 153.64 344 ⇑P PKPdf 00 31 58.1 +10
KBA e 00 32 11.7
WATA Walderalm 153.79 347⇑iP PKPdf 00 31 58.6 +10
comp=Z,2.5nm,0.4s
WATA Walderalm 153.79 347⇑iP PKPdf 00 32 11.7 +23
comp=Z,1.7nm,0.4s
WATA Walderalm 153.79 347 ⇑P PKPdf 00 31 58.6 +10
WATA e 00 32 11.7
OBKA Obir 153.84 342⇑iP PKPdf 00 31 57.9 +9.2
comp=Z,4.3nm,1.1s
OBKA Obir 153.84 342⇑iP PKPdf 00 32 11.8 +23
comp=Z,4.6nm,0.9s
OBKA Obir 153.84 342 ⇑P PKPdf 00 31 57.9 +9.2
OBKA e 00 32 11.8
WTTA Wattenberg 153.85 347⇑iP PKPdf 00 31 58.5 +10
comp=Z,3.5nm,0.4s
WTTA Wattenberg 153.85 347⇑iP PKPdf 00 32 12.5 +24
comp=Z,12nm,0.7s
WTTA Wattenberg 153.85 347 ⇑P PKPdf 00 31 58.5 +10
WTTA e 00 32 12.5
HAU Haudompre 153.87 355 ePKP1 PKPdf 00 31 58.3 +10
comp=Z,4.5nm,0.4s
MOTA Moosalm 153.88 348⇓iP PKPdf 00 31 58.1 +9.4
comp=Z,4.0nm,1.0s
MOTA Moosalm 153.88 348⇑iP PKPdf 00 32 11.2 +23
comp=Z,6.2nm,0.6s
MOTA Moosalm 153.88 348 ⇓P PKPdf 00 31 58.1 +9.4
MOTA e 00 32 11.2
MMB Musomiste 153.95 323 i P PKPdf 00 31 58.5 +10
SQTA Sankt Quirin 153.98 348⇓iP PKPdf 00 31 51.1 +2.2
comp=Z,1.8nm,0.8s
SQTA Sankt Quirin 153.98 348⇓iP PKPdf 00 31 58.8 +10
comp=Z,1.7nm,0.6s
SQTA Sankt Quirin 153.98 348⇓iP PKPdf 00 32 13.0 +24
comp=Z,4.5nm,0.6s

SQTA	**Sankt Quirin**	**153.98**	**348**	⇓P	PKPdf	00 31 51.1	+2.2
SQTA				*e*		00 31 58.8	
SQTA				*e*		00 32 13.0	
HINF	**Hinteralfeld**	**154.02**	**355**	*e*PKP1	PKPdf	00 31 58.6	+10
KKB	**Krupnik**	**154.11**	**325**	*i* P	PKPdf	00 31 59.0	+10
DAVA	**Damuels**	**154.16**	**350**	⇑*i*P	PKPdf	00 32 00.0	+11
	comp=Z,9.7nm,1.4s						
DAVA	**Damuels**	**154.16**	**350**	⇑*i*P	PKPdf	00 32 13.4	+24
	comp=Z,6.6nm,0.6s						
BOJS	**Bojanci**	**154.54**	**340**	*e*PKPbc	PKPdf	00 32 01.0	+11
HYF	**Humbligny**	**154.71**	**1**	*e*PKP1	PKPdf	00 32 00.0	+10
LOR	**Lormes**	**154.72**	**359**	*e*PKP1	PKPdf	00 32 00.1	+10
	comp=Z,5.2nm,0.6s						
VAY	**Valandovo**	**154.77**	**324**	*e*PKP	PKPdf	00 31 57.8	+7.8
SKO	**Skopje**	**154.90**	**327**	*e*PKP	PKPdf	00 31 58.3	+8.1
AVF	**Avril sur Loir**	**155.20**	**360**	*e*PKP1	PKPdf	00 32 02.4	+12
CABF	**La Chapelle**	**155.28**	**355**	*e*PKP1	PKPdf	00 32 02.6	+12
BGF	**Bois d'Agland**	**155.43**	**1**	*e*PKP1	PKPdf	00 32 01.0	+10
BIA	**Bitola**	**155.65**	**326**	*e*PKP	PKPdf	00 31 58.3	+7.1
OHR	**Ohrid**	**155.85**	**326**	*e*PKP	PKPdf	00 31 58.6	+7.1
EVO	**Evora**	**160.79**	**28**	*e*PKIKP	PKPdf	00 32 00.4	+2.8
	comp=Z,25nm,1.1s						
ESDC	**Sonseca Array**	**161.24**	**18**	PKPab	PKPab	00 32 44.5	-0.5
	comp=Z,2.0nm,0.7s,baz=332,slow=4.3,SNR=9.6						

NEIC 12 00:35:21.8, 53.80N×165.23W, h52^{km}, ML3.5(AEIC), **After AEIC., Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKUT	**Akutan**	**0.46**	**316**	P	P	00 35 32.3	-0.6
AKUT				S	S	00 35 40.6	-0.2
AHB	**Akutan Harbor**	**0.47**	**312**	P	P	00 35 32.2	-0.7
AKLV	**Akutan Long Va**	**0.56**	**310**	P	P	00 35 33.2	-0.8
AKLV				S	S	00 35 42.4	-0.4
LVA	**Lava Point**	**0.59**	**307**	P	P	00 35 33.4	-1.0
UNV	**Unalaska Valle**	**0.76**	**274**	P	P	00 35 35.7	-0.8
UNV				S	S	00 35 46.5	-0.8
WFAR	**Faris Peak**	**0.78**	**20**	P	P	00 35 36.0	-0.9
WFAR				S	S	00 35 47.9	0.0
WPOG	**Pogromni**	**0.84**	**19**	P	P	00 35 36.7	-1.0
WESN	**West Dahl Nort**	**0.86**	**26**	P	P	00 35 37.4	-0.4
MNAT	**Makushin Natee**	**0.87**	**276**	P	P	00 35 37.1	-0.9
MNAT				S	S	00 35 49.3	-0.6
MTBL	**Makushin Table**	**0.87**	**282**	P	P	00 35 37.2	-0.8
MCIR	**Makushin Cirqu**	**1.00**	**279**	P	P	00 35 39.1	-0.7
MCIR				S	S	00 35 52.8	-0.3
WTUG	**Tugumak**	**1.16**	**25**	P	P	00 35 40.4	-1.6
WTUG				S	S	00 35 55.7	-1.3
OKCD	**Okmok Cone D**	**1.76**	**259**	P	P	00 35 49.5	-1.0
DTNA	**Dutton South F**	**2.20**	**51**	P	P	00 35 55.5	-1.2
DOL	**Dolgoi Island**	**2.38**	**54**	P	P	00 35 58.0	-1.4
HAG	**Hague Volcano**	**2.46**	**51**	P	P	00 35 59.7	-0.8
SDPT	**Sand Point**	**3.17**	**59**	P	P	00 36 08.8	-1.7

BJI ***12*** *00:38:05.3, 25.25N×103.26E, h12^{km}, mb4.5, ML3.9, Ms3.8, Msz3.4*
IDC ***12*** *00:38:08.5±57.0, 25.65N×102.51E, mb3.4/4, mb1 3.5/4, mb1mx3.4/20, mbtmp3.4/4, Error ellipse: s-maj=951.1km s-min=71.8km az=152.0*
PLV ***12*** *00:38:10.0±1.2, 25.22N×103.90E, h3^{km}±7^{km}, MD3.6, ML3.9*
ISC 12 00:38:02.9±0.5**, 25.07N**±0.03×**103.27E**±0.04**, h10^{km}, n16, σ1^{s}53**/35**, mb3.4**/4**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	**0.49**	**277**	PG	**Pg**	**00 38 13.4**	**+0.6**
KMI				SG	**Sg**	**00 38 19.9**	**+0.5**
KMI				Smax			
	comp=N,7μm,0.6s						
KMI				Smax			
	comp=E,9μm,0.6s						
GYA	**Guiyang**	**3.36**	**65**	P	**Pn**	**00 38 58.5**	**+1.9**
GYA				PG	**Pg**	**00 39 09.5**	**-0.5**
GYA				S	**Sn**	**00 39 36.5**	**-0.4**
GYA				SG	**Sg**	**00 39 48.8**	**-6.0**
GYA				Smax			
	comp=N,380nm,0.8s						
GYA				Smax			
	comp=E,350nm,0.9s						
GYA				LR	LR		
	comp=N,1μm,7.2s						
GYA				LR	LR		
	comp=E,530nm,7.2s						
GYA				LR	LR		
	comp=Z,670nm,6.9s						
TDV	**Tam Dao**	**4.20**	**148**	*e*PN	**Pn**	**00 39 13.3**	**+4.8**
TDV				*e*Pg	**Pg**	**00 39 28.1**	**+1.3**
TDV				*e*SG	**Sg**	**00 40 21.2**	**-1.6**
BVV	**Ba Vi**	**4.39**	**154**	*e*PN	**Pn**	**00 39 17.2**	**+5.9**
BVV				*e*Pg	**Pg**	**00 39 33.6**	**+2.9**
BVV				*e*SG	**Sg**	**00 40 30.6**	**+1.3**
MTZV	**Met**	**4.50**	**141**	*e*PN	**Pn**	**00 39 16.7**	**+3.9**
MTZV				*e*Pg	**Pg**	**00 39 32.2**	**-0.6**
MTZV				*e*SG	**Sg**	**00 40 29.0**	**-3.7**
HNV	**Hanoi**	**4.63**	**149**	*e*PN	**Pn**	**00 39 19.2**	**+4.5**
HNV				*e*Pg	**Pg**	**00 39 37.5**	**+2.2**
HNV				*e*SG	**Sg**	**00 40 36.9**	**-0.1**
HNV				*e*		00 40 42.4	
	comp=Z,486nm,0.5s						
BGV	**Bac-Giang**	**4.64**	**143**	*e*PN	**Pn**	**00 39 18.6**	**+3.8**
BGV				*e*Pg	**Pg**	**00 39 35.0**	**-0.5**
BGV				*e*SG	**Sg**	**00 40 32.6**	**-4.7**
YTV	**Yen Tu**	**5.02**	**140**	*e*PN	**Pn**	**00 39 24.2**	**+4.0**
YTV				*e*Pg	**Pg**	**00 39 42.4**	**-0.8**
YTV				*e*SG	**Sg**	**00 40 44.3**	**-5.8**
DSV	**Doi Son**	**5.11**	**150**	*e*PN	**Pn**	**00 39 25.6**	**+4.2**
DSV				*e*SG	**Sg**	**00 40 51.0**	**-2.0**
CD2	**Chengdu**	**5.84**	**4**	*e*P	**Pn**	**00 39 32.4**	**+0.7**
CD2				S	**Sn**	**00 40 34.0**	**-5.5**
CD2				SG	**Sg**	**00 41 05.0**	**-12**
CD2				Smax			
	comp=N,110nm,1.4s						
CD2				Smax			
	comp=E,60nm,1.4s						
CD2				LR	LR		
	comp=E,530nm,9.0s						
CD2				LR	LR		
	comp=Z,160nm,4.8s						
XAN	**Xi'an**	**10.20**	**27**	P	**P**	**00 40 34.5**	**+1.9**
XAN				AP		00 40 40.0	
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s						
WMQ	**Urumqi**	**22.62**	**330**	*e*P	**P**	**00 43 03.0**	**-2.2**
SONM	**Songino Array**	**22.86**	**5**	P	**P**	**00 43 08.5**	**+1.1**
	comp=Z,2.7nm,0.9s,mb3.7,baz=192,slow=12,SNR=14						
MKAR	**Makanchi Array**	**27.39**	**328**	P	**P**	**00 43 48.4**	**-2.0**
	comp=Z,0.4nm,0.6s,mb3.1,baz=141,slow=9.2,SNR=5.8						
ZAL	**Zalesovo**	**31.96**	**339**	P	**P**	**00 44 27.8**	**-3.3**
	comp=Z,0.6nm,0.6s,mb3.6,baz=238,slow=5.7,SNR=3.4						
BVAR	**Borovoye Array**	**37.27**	**327**	P	**P**	**00 45 14.8**	**-1.7**
	comp=Z,0.2nm,0.4s,mb3.3,baz=130,slow=11,SNR=4.3						

NIED ***12*** *00:51:00, 42.20N×144.40E, h32^{km}, Mw4.3 Best double couple: M$_0$3.64×10^{15} NP1:ϕ_s243°, δ60°, λ-138°. NP2: ϕ_s129°, δ54°, λ-38°.*
MOS ***12*** *00:51:27.7±1.0, 42.22N×144.26E, h33^{km}, mb4.5/7, Error ellipse: s-maj=13.0km s-min=7.8km az=84.2*
BJI ***12*** *00:51:29.8, 42.65N×144.10E, h23^{km}, mB5.1, mb4.5, Ms4.2, Msz3.9*
SKHL ***12*** *00:51:29.1±2.8, 42.22N×144.38E, h33^{km}, mb4.9/3, Ms3.7/1*
JMA ***12*** *00:51:29.0, 42.25N×144.38E, h59^{km}±1^{km}, M4.4*
JMA Felt I J1.
NEIC ***12*** *00:51:31.3±0.3, 42.31N×144.18E, mb4.3/8, Error ellipse: s-maj=8.7km s-min=5.9km az=133.0*
NEIC Recorded [1 JMA] in the Kushiro and Obihiro areas.
IDC ***12*** *00:51:31.1±0.6, 42.23N×144.24E, h47^{km}±4^{km}, mb3.8/18, mb1 4.1/20, mb1mx4.0/26, mbtmp4.1/20, MS3.7/6, Ms1 3.7/6, ms1mx3.3/26, Error ellipse: s-maj=18.4km s-min=12.4km az=5.0*
ISC 12 00:51:28.8±0.6**, 42.21N**±0.03×**144.37E**±0.04**, h44^{km}**±4^{km}**, h48^{km}**±.6^{km}**:pP-P, n99, σ0^{s}95**/99**, mb4.1**/28**, MS4.0**/3**, 12C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOB	**Onbets**	**0.79**	**331**	⇑P	**P**	**00 51 44.2**	**+0.5**
JOB				*e*S	**S**	**00 51 55.5**	**+0.9**
JAK	**Akkeshi**	**0.82**	**17**	⇑P	**P**	**00 51 44.2**	**+0.2**
JAK				*e*S	**S**	**00 51 56.1**	**+0.9**
JCH	**Churui**	**0.84**	**299**	P	**P**	**00 51 45.1**	**+0.7**
JCH				*e*S	**S**	**00 51 56.4**	**+0.6**
JEM	**Erimo**	**0.92**	**258**	P	**P**	**00 51 46.6**	**+1.1**
JEM				*e*S	**S**	**00 52 00.2**	**+2.4**
JAR	**Ashorobuto**	**1.17**	**338**	⇑P	**P**	**00 51 49.0**	**+0.1**
JAR				*e*S	**S**	**00 52 04.1**	**+0.1**
JNBK	**Urakawa-nobuka**	**1.20**	**274**	P	**P**	**00 51 50.1**	**+0.7**
JNK	**Nakash**	**1.40**	**11**	⇑P	**P**	**00 51 51.7**	**-0.6**
JNK				*e*S	**S**	**00 52 08.6**	**-1.2**
NEM2	**Nemuro 2**	**1.53**	**41**	⇓P	**P**	**00 51 54.0**	**-0.2**
NEM2				*e*S	**S**	**00 52 12.3**	**-0.8**
JBT2	**Biratori 2**	**1.58**	**292**	P	**P**	**00 51 54.8**	**-0.2**
JFR	**Furan**	**1.62**	**307**	P	**P**	**00 51 55.6**	**+0.2**
JFR				*e*S	**S**	**00 52 15.0**	**-0.2**
JTKR	**Abashiri--Toko**	**1.79**	**349**	⇑P	**P**	**00 51 58.3**	**+0.5**
JTKR				*e*S	**S**	**00 52 20.0**	**+0.6**
JRA	**Rausu**	**1.81**	**18**	P	**P**	**00 51 58.3**	**+0.2**
JRA				*e*S	**S**	**00 52 19.4**	**-0.6**
YUK	**Yuzh-Kuril'sk**	**2.12**	**31**	*i* P	**P**	**00 52 03.0**	**+0.4**
YUK				AMB	AMB	00 52 03.7	
	1μm,1.0s						
YUK				AMB	AMB	00 52 03.7	
	800nm,1.0s						
YUK				AMB	AMB	00 52 03.7	
	2μm,1.0s						
YUK				AMB	AMB	00 52 07.7	
	770nm,0.4s						
YUK				AMB	AMB	00 52 07.7	
	510nm,0.4s						
YUK				AMB	AMB	00 52 07.7	
	880nm,0.4s						
YUK				*i* S	**S**	**00 52 26.9**	**-1.0**
YUK				A		00 52 32.0	
	11μm,0.8s						
YUK				A		00 52 32.0	
	10μm,0.8s						
YUK				A		00 52 37.6	
	8μm,0.6s						
YUK				A		00 52 37.6	
	4μm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.12**	**31**	⇑*i*PN	**P**	**00 52 03.0**	**+0.4**
YUK				*i* S	**S**	**00 52 26.9**	**-1.0**
YUK				pmax	pmax		
	comp=Z,2μm,1.0s						
YUK				pmax	pmax		
	comp=N,1μm,0.7s						
YUK				pmax	pmax		
	comp=E,750nm,0.7s						
YUK				pmax	pmax		
	comp=Z,880nm,0.4s						
YUK				pmax	pmax		
	comp=N,770nm,0.5s						
YUK				pmax	pmax		
	comp=E,510nm,0.2s						
YUK				smax			
	comp=N,11μm,0.8s						
YUK				smax			
	comp=E,10μm,0.8s						
YUK				smax			
	comp=N,8μm,0.6s						
YUK				smax			
	comp=E,4μm,0.7s						
ASAJ	**Asahikawa**	**2.30**	**326**	P	**P**	**00 52 05.8**	**+0.7**
	comp=E,23nm,0.3s,baz=189,slow=13,SNR=51						
ASAJ				S	**S**	**00 52 28.4**	**-4.0**
	comp=E,89nm,0.3s,baz=171,slow=12,SNR=12						
ASAJ				LR	LR	00 53 23.9	
	comp=E,1μm,21.7s,baz=120,slow=50						
ASAJ	**Asahikawa**	**2.30**	**326**	PN	**P**	**00 52 05.8**	**+0.7**
ASAJ				S	**S**	**00 52 28.4**	**-4.0**
ASAJ				pmax	pmax		
	comp=Z,23nm,0.3s						
ASAJ				smax			
	comp=N,89nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1μm,21.7s						
KUR	**Kuril'sk**	**3.94**	**39**	*i* P	**P**	**00 52 27.5**	**-0.9**
KUR				AMB	AMB	00 52 28.0	
	comp=Z,140nm,0.9s						
KUR				AMB	AMB	00 52 28.0	
	comp=Z,330nm,0.9s						
KUR				*e*S	**S**	**00 53 13.7**	**-0.3**
KUR				A		00 53 20.0	
	comp=Z,940nm,1.0s						
KUR				A		00 53 20.0	
	comp=Z,380nm,1.0s						
KUR	**Kuril'sk**	**3.94**	**39**	⇓*i*PN	**P**	**00 52 27.5**	**-0.9**
KUR				*e*S	**S**	**00 53 13.7**	**-0.3**
KUR				pmax	pmax		
	comp=E,140nm,0.9s						
KUR				pmax	pmax		
	comp=Z,330nm,0.9s						
KUR				smax			
	comp=N,940nm,1.0s						
KUR				smax			
	comp=E,380nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.88**	**347**	⇑*e*P	**P**	**00 52 41.5**	**-0.1**
YSS				AMB	AMB	00 52 41.8	
	comp=E,20nm,0.3s						
YSS				*e*S	**S**	**00 53 35.0**	**-2.5**
YSS				A		00 53 37.2	
	comp=E,80nm,0.8s						
YSS				AMS	AMS	00 55 07.0	
	comp=E,500nm,13.0s						
YSS				AMS	AMS	00 55 07.0	
	comp=E,600nm,13.0s						
YSS	**Yuzh-Sakhalins**	**4.88**	**347**	*e*P	**P**	**00 52 40.0**	**-1.6**
YSS	**Yuzh-Sakhalins**	**4.88**	**347**	⇑*e*PN	**P**	**00 52 41.5**	**-0.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.3s						
YSS				MLR	MLR		
	comp=N,500nm,13.0s						
YSS				MLR	MLR		
	comp=Z,600nm,13.0s						
MAJO	**Matsushiro**	**7.40**	**222**	*e*P	**P**	**00 53 15.8**	**-1.1**
	comp=Z,28nm,0.4s						
MAJO	**Matsushiro**	**7.40**	**222**	*e*PN	**P**	**00 53 15.8**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,28nm,0.4s						
MAT	**Matsushiro**	**7.40**	**222**	P	**P**	**00 53 16.0**	**-0.9**
MAT				*e*S	**S**	**00 54 38.5**	**-2.0**
MAT	**Matsushiro**	**7.40**	**222**	*e*P	**P**	**00 53 16.0**	**-0.9**
	comp=Z,64nm,1.2s						
MAT				S	**S**	**00 54 39.0**	**-1.5**
MAT	**Matsushiro**	**7.40**	**222**	*e*PN	**P**	**00 53 16.0**	**-0.9**
MAT				pmax	pmax		
	comp=Z,64nm,1.2s						
MJAR	**Matsushiro Arr**	**7.40**	**222**	P	**P**	**00 53 15.6**	**-1.3**
	comp=Z,6.7nm,0.3s,baz=37,slow=11,SNR=51						
MJAR				LR	LR	00 56 54.1	
	comp=Z,294nm,19.4s,baz=55,slow=44						
JHJ	**Hachijo jima 2**	**9.78**	**203**	S	**S**	**00 55 28.8**	**-10**
	comp=Z,23nm,0.3s,baz=66,slow=23,SNR=3.0						
JNU	**Nakatsue**	**14.00**	**234**	LR	LR	01 00 31.8	
	comp=Z,147nm,19.7s,baz=168,slow=39						
CBIJ	**Chichi jima**	**15.19**	**187**	S	**S**	**00 57 34.4**	**-15**
	comp=Z,6.8nm,0.3s,baz=244,slow=20,SNR=2.1						
SONM	**Songino Array**	**27.22**	**295**	P	**P**	**00 57 12.2**	**+1.8**
	comp=Z,1.9nm,0.6s,mb3.8,baz=83,slow=10,SNR=6.3						
SONM				LR	LR	01 07 51.2	
	comp=Z,107nm,18.1s,MS3.5,baz=294,slow=36						
ZAK	**Zakamensk**	**29.22**	**300**	*e*P	**P**	**00 57 28.1**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ENH	**Enshi**	**30.35**	**258**	P	**P**	**00 57 38.5**	**0.0**
GTA	**Gaotai**	**33.55**	**280**	*e*P	**P**	**00 58 06.5**	**+0.1**
GTA				AP	pP	00 58 11.7	-6.6
GTA				XP	sP	00 58 15.8	-8.1
ZAL	**Zalesovo**	**40.33**	**308**	P	**P**	**00 59 02.2**	**-1.1**
	comp=Z,1.6nm,0.8s,mb3.8,baz=30,slow=9.5,SNR=8.1						
ZAL				pP	pP	00 59 14.9	-0.4
	comp=Z,1.3nm,0.4s,baz=41,slow=11,SNR=9.8						
ZAL				PcP	PcP	01 01 06.2	-0.6
	comp=Z,2.2nm,0.7s,baz=13,slow=5.2,SNR=6.6						
ZAL				pPcP		01 01 20.3	
	comp=Z,1.0nm,0.7s,baz=34,slow=7.8,SNR=3.8						
ZAL	**Zalesovo**	**40.33**	**308**	P	**P**	**00 59 02.2**	**-1.1**
ZAL				pP	pP	00 59 14.9	-0.4
ZAL				PcP	PcP	01 01 06.2	-0.6
ZAL				pPcP		01 01 20.3	
WMQ	**Urumqi**	**40.77**	**292**	*e*P	**P**	**00 59 07.0**	**-0.1**
KDAK	**Kodiak Island**	**41.79**	**46**	P	**P**	**00 59 14.0**	**-1.1**
	comp=Z,8.8nm,0.6s,mb4.5,baz=305,slow=5.4,SNR=5.5						
KDAK	**Kodiak Island**	**41.79**	**46**	P	**P**	**00 59 14.0**	**-1.1**
MKAR	**Makanchi Array**	**43.50**	**298**	P	**P**	**00 59 28.8**	**-0.5**
	comp=Z,0.7nm,0.5s,mb3.7,baz=81,slow=9.4,SNR=12						
MKAR				pP	pP	00 59 41.6	+0.2
	comp=Z,4.0nm,1.0s,baz=75,slow=7.1,SNR=17						
MKAR				PcP	PcP	01 01 16.5	-0.8
	comp=Z,0.7nm,0.5s,baz=52,slow=2.2,SNR=4.2						
ILAR	**Eielson Array**	**43.93**	**35**	P	**P**	**00 59 33.0**	**+0.5**
	comp=Z,1.3nm,0.4s,mb4.0,baz=257,slow=5.7,SNR=25						
KURK	**Kurchatov**	**44.71**	**305**	*e*P	**P**	**00 59 37.5**	**-1.4**
	comp=Z,9.2nm,0.9s,mb4.6						
KURK				*e*	pP	00 59 50.3	-0.9
KURK	**Kurchatov**	**44.71**	**305**	*e*P	**P**	**00 59 37.5**	**-1.5**
KURK				*e*	pP	00 59 50.3	-0.8
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.6						
DAWY	**Dawson**	**47.24**	**36**	P	**P**	**00 59 59.4**	**+0.5**
CHKZ	**Chkalovo**	**48.57**	**310**	*e*P	**P**	**01 00 07.7**	**-1.6**
	comp=Z,5.2nm,0.9s,mb4.6						
CHKZ	**Chkalovo**	**48.57**	**310**	*e*P	**P**	**01 00 07.7**	**-1.6**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
INK	**Inuvik**	**48.75**	**29**	*e*P	**P**	**01 00 11.4**	**+0.9**
	comp=Z,3.9nm,0.9s,mb4.4						
INK	**Inuvik**	**48.75**	**29**	*e*P	**P**	**01 00 11.4**	**+0.8**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	**Borovoye Array**	**48.90**	**310**	P	**P**	**01 00 11.4**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.1,baz=78,slow=8.8,SNR=9.5						
BVAR				PcP	PcP	01 01 35.8	-0.3
	comp=Z,1.9nm,0.9s,baz=72,slow=4.6,SNR=2.9						
AKTO	**Aktyubinsk**	**56.98**	**310**	P	**P**	**01 01 11.7**	**-0.3**
	comp=Z,1.0nm,0.6s,mb4.0,baz=45,slow=11,SNR=4.4						
AKTO	**Aktyubinsk**	**56.98**	**310**	P	**P**	**01 01 11.7**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
ARCES	**ARCESS Array B**	**59.97**	**339**	P	**P**	**01 01 33.0**	**+0.5**
	comp=Z,2.1nm,0.9s,mb4.2,baz=51,slow=5.8,SNR=4.9						
JOF	**Joensuu**	**62.48**	**332**	*e*p	**P**	**01 01 47.7**	**-1.8**
	comp=Z,1.2nm,0.6s,mb4.2						
WRAB	**Tennant Creek**	**62.52**	**191**	P	**P**	**01 01 51.7**	**+1.3**
WRA	**Warramunga Arr**	**62.53**	**191**	P	**P**	**01 01 49.1**	**-1.3**
	comp=Z,0.7nm,0.4s,mb4.2,baz=11,slow=7.3,SNR=6.9						
NEW	**Newport**	**64.88**	**47**	P	**P**	**01 02 05.4**	**+0.1**
	comp=Z,0.7nm,0.4s,mb4.0,baz=309,slow=5.9,SNR=4.7						
FINES	**FINESS Array B**	**65.30**	**332**	P	**P**	**01 02 06.7**	**-1.1**
	comp=Z,1.8nm,0.5s,mb4.3,baz=47,slow=8.5,SNR=20						
FINES				LR	LR	01 33 39.5	
	comp=Z,185nm,21.4s,MS4.2,baz=46,slow=39						
HLID	**Hailey**	**69.23**	**50**	*e*P	**P**	**01 02 33.7**	**+0.9**
NVAR	**Mina Array Bea**	**70.13**	**56**	P	**P**	**01 02 39.3**	**+0.9**
	comp=Z,2.2nm,0.8s,mb4.2,baz=296,slow=4.7,SNR=18						
NVAR				pP	pP	01 02 53.0	+1.7
	comp=Z,2.0nm,0.6s,baz=302,slow=5.1,SNR=7.6						
NVAR	**Mina Array Bea**	**70.13**	**56**	P	**P**	**01 02 39.3**	**+0.9**
NVAR				pP	pP	01 02 53.0	+1.7
MNV	**Mina**	**70.22**	**56**	*e*P	**P**	**01 02 39.5**	**+0.5**
	comp=Z,1.8nm,0.7s,mb4.1						
MNV	**Mina**	**70.22**	**56**	*e*P	**P**	**01 02 39.5**	**+0.6**
MNV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
NB2	**NORSAR Subarra**	**70.28**	**338**	P	**P**	**01 02 38.4**	**-0.5**
	comp=Z,2.4nm,0.6s,mb4.3,baz=33,slow=6.5						
NOA	**NORSAR Array B**	**70.28**	**338**	P	**P**	**01 02 38.4**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.0,baz=34,slow=6.5,SNR=3.9						
AKASG	**Malin Array Be**	**71.58**	**323**	P	**P**	**01 02 46.2**	**-0.7**
	comp=Z,0.6nm,0.5s,mb3.8,baz=49,slow=6.1,SNR=4.4						
TPNV	**Topopah Spring**	**72.33**	**56**	*e*P	**P**	**01 02 52.3**	**+0.7**
	comp=Z,3.0nm,0.8s,mb4.3						
TPNV	**Topopah Spring**	**72.33**	**56**	*e*P	**P**	**01 02 52.3**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
BW06	**Boulder Array**	**72.46**	**48**	*e*P	**P**	**01 02 52.7**	**+0.4**
	comp=Z,4.4nm,1.3s,mb4.2						
PDAR	**Pinedale Array**	**72.46**	**48**	P	**P**	**01 02 53.0**	**+0.8**
	comp=Z,1.2nm,0.7s,mb3.9,baz=282,slow=2.2,SNR=12						
PDAR				pP	pP	01 03 06.8	+1.7
	comp=Z,1.2nm,0.6s,baz=275,slow=1.4,SNR=6.7						
PV10	**Paradox Valley**	**75.69**	**51**	P	**P**	**01 03 13.0**	**+1.9**
BR131	**Keskin Array S**	**77.09**	**312**	*e*P	**P**	**01 03 17.7**	**-1.3**
	comp=Z,1.3nm,0.7s,mb4.0						
BR131				*e*	pP	01 03 32.0	0.0
BRTR	**Keskin Array B**	**77.10**	**312**	P	**P**	**01 03 19.3**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.3,baz=356,slow=8.8,SNR=2.6						
BRTR				pP	pP	01 03 32.6	+0.7
	comp=Z,0.8nm,0.7s,baz=57,slow=3.7,SNR=4.8						
DPC	**Dobruska-Polom**	**77.25**	**329**	*e*P	**P**	**01 03 26.4**	**+6.8**
SDCO	**Great Sand Dun**	**78.15**	**50**	*e*P	**P**	**01 03 26.4**	**+1.5**
	comp=Z,0.9nm,0.6s,mb3.9						
PRU	**Pruhonice**	**78.22**	**330**	*e*pP	pP	01 03 37.8	-0.1
KHC	**Kasperske Hory**	**79.28**	**330**	*e*P	**P**	**01 03 30.3**	**-0.5**
KHC				pP	pP	01 03 44.5	+0.7
KHC	**Kasperske Hory**	**79.28**	**330**	*e*P	**P**	**01 03 30.3**	**-0.5**
KHC				*e*	pP	01 03 44.5	+0.7
GERES	**GERESS Array B**	**79.47**	**329**	P	**P**	**01 03 32.2**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.5,baz=45,slow=5.6,SNR=4.1						
GERES				LR	LR	01 40 54.1	
	comp=Z,163nm,18.1s,MS4.4,baz=15,slow=37						
ANMO	**Albuquerque**	**79.55**	**52**	P	**P**	**01 03 33.7**	**+1.1**
	comp=Z,1.8nm,0.9s,mb4.0,baz=322,slow=6.8,SNR=4.9						
ANMO	**Albuquerque**	**79.55**	**52**	P	**P**	**01 03 33.7**	**+1.1**
TXAR	**Lajitas Array**	**85.20**	**54**	P	**P**	**01 04 03.4**	**+1.7**
	comp=Z,2.9nm,0.7s,mb4.5,baz=297,slow=3.4,SNR=39						
TXAR	**Lajitas Array**	**85.20**	**54**	P	**P**	**01 04 03.4**	**+1.7**
SIV	**San Ignacio**	**145.95**	**48**	PKPbc	PKPbc	01 11 06.1	+2.1
	comp=Z,6.2nm,0.5s,baz=302,slow=4.1,SNR=80						
SIV				pPKPbc		01 11 20.2	
	comp=Z,7.1nm,1.2s,baz=318,slow=7.0,SNR=4.5						
SNAA	**Sanae**	**146.37**	**198**	*e*	PKPdf	01 11 06.9	+4.7
SNAA	**Sanae**	**146.37**	**198**	*e*	PKPdf	01 11 20.8	+19
SNAA	**Sanae**	**146.37**	**198**	⇑*i*P	PKPdf	01 11 05.4	+3.2
SNAA				*e*		01 11 06.9	
SNAA				*e*		01 11 20.8	
VNA2	**Neumayer--Watz**	**147.93**	**197**	*e*	PKPdf	01 11 11.8	+7.0
VNA2	**Neumayer--Watz**	**147.93**	**197**	*e*	PKPdf	01 11 27.4	+23
VNA2	**Neumayer--Watz**	**147.93**	**197**	⇑*i*P	PKPdf	01 11 10.4	+5.6
VNA2				*e*		01 11 11.8	
VNA2				*e*		01 11 27.4	
VNA3	**Neumayer Olymp**	**148.16**	**196**	*e*	PKPdf	01 11 11.8	+6.7
VNA3	**Neumayer Olymp**	**148.16**	**196**	*e*	PKPdf	01 11 25.9	+21
VNA3	**Neumayer Olymp**	**148.16**	**196**	⇑*i*P	PKPdf	01 11 10.2	+5.1
VNA3				*e*		01 11 11.8	
VNA3				*e*		01 11 25.9	
VNA1	**Neumayer--Stat**	**148.32**	**197**	*e*	PKPdf	01 11 12.9	+7.5
VNA1	**Neumayer--Stat**	**148.32**	**197**	*e*	PKPdf	01 11 28.5	+23
VNA1	**Neumayer--Stat**	**148.32**	**197**	⇑*i*P	PKPdf	01 11 11.6	+6.2
VNA1				*e*		01 11 12.9	
VNA1				*e*		01 11 28.5	
BDFB	**Brasilia**	**151.46**	**26**	PKPbc	PKPdf	01 11 20.5	+8.7
	comp=Z,7.0nm,0.9s,baz=33,slow=6.7,SNR=5.3						
CFAA	**Coronel Fontan**	**152.02**	**78**	PKPbc	PKPdf	01 11 20.9	+8.6
	comp=Z,0.4nm,0.5s,baz=269,slow=3.2,SNR=8.0						
PLCA	**Paso Flores**	**153.90**	**99**	PKPbc	PKPdf	01 11 25.5	+11
	comp=Z,0.8nm,0.6s,baz=341,slow=14,SNR=2.9						
PLCA				pPKPbc		01 11 39.5	
	comp=Z,1.0nm,0.6s,baz=250,slow=4.6,SNR=3.3						
PLCA	**Paso Flores**	**153.90**	**99**	PKPbc	PKPdf	01 11 25.5	+11
PLCA				pPKPbc		01 11 39.5	

MOS ***12*** *01:27:31.9±0.9, 36.22N×70.75E, h186^{km}, mb3.9/1, Error ellipse: s-maj=29.4km s-min=12.5km az=89.5*
NEIC ***12*** *01:27:33.1±3.1, 36.24N×70.90E, h182^{km}±24^{km}, mb3.9/2, Error ellipse: s-maj=30.0km s-min=13.9km az=221.0*
IDC ***12*** *01:27:33.0±7.3, 36.26N×70.92E, h178^{km}±59^{km}, mb3.5/7, mb1 3.6/9, mb1mx3.3/22, mbtmp4.0/9, Error ellipse: s-maj=50.5km s-min=24.7km az=30.0*
NNC ***12*** *01:27:43.2±2.2, 37.00N×70.75E, h208^{km}±19^{km}, mpv3.8, Error ellipse: s-maj=22.9km s-min=12.0km az=28.0*
ISC 12 01:27:36.6±0.5**, 36.54N**±0.04×**71.00E**±0.10**, h217^{km}**±7^{km}**, n31, σ1^{s}13**/36**, mb3.6**/7**, 4C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.81**	**164**	⇓P	**P**	**01 28 26.9**	**+1.5**
CEP				S	**S**	**01 29 01.0**	**-2.2**
CHCP	**Chirah Chowk**	**3.42**	**146**	P	**P**	**01 28 34.1**	**+1.5**
SBDP	**Sheikh Budin**	**4.23**	**182**	⇑P	**P**	**01 28 42.3**	**-0.1**
SARP	**Sargodha**	**4.81**	**163**	⇑P	**P**	**01 28 50.1**	**+0.5**
THN	**Thein Dam**	**5.65**	**135**	*e*P	**P**	**01 29 01.0**	**+0.7**

THN				ex	x	01 29 46.3	
DLH	Dalhousie	5.72	133	eP	P	01 29 02.0	+0.8
DLH				eS	S	01 30 07.0	0.0
KK31	Karatay Array	6.57	357	P	P	01 29 11.9	-0.3
	5.3nm,0.5s,baz=179,slow=13,SNR=113						
KK31				S	S	01 30 22.5	-4.2
	8.0nm,0.3s,baz=184,slow=24,SNR=12						
AAK	Ala-Archa	6.66	23	⇓P	P	01 29 14.1	+0.8
	2.1nm,0.3s						
AAK				⇑S	S	01 30 27.6	-1.2
	21nm,0.8s						
AAK	Ala-Archa	6.66	23	eP	P	01 29 13.1	-0.3
	3.5nm,0.4s						
AAK	Ala-Archa	6.66	23	ePN	P	01 29 13.1	-0.2
AAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SDNR	Sundarnagar	7.06	134	eP	P	01 29 18.0	-0.4
SDNR				eS	S	01 30 33.6	-4.3
SMLA	Simla	7.44	135	eP	P	01 29 22.9	-0.5
SMLA				eS	S	01 30 42.6	-4.3
KLP	Kalpa	7.82	128	ex	x	01 29 29.3	
KLP				ex	x	01 30 45.2	
KLP				AML	AML	01 30 58.1	
	comp=N,219nm,0.6s						
KLP				AML	AML	01 30 59.2	
	comp=E,166nm,0.8s						
NDI	New Delhi	9.42	144	ex	x	01 30 47.5	
MK31	Makanchi Array	13.26	36	P	P	01 30 40.8	+3.2
	comp=E,0.6nm,0.6s,baz=213,slow=12,SNR=13						
MKAR	Makanchi Array	13.26	36	P	P	01 30 38.2	+0.6
	comp=E,0.2nm,0.3s,baz=216,slow=11,SNR=11						
AB31	Akbulak array	15.05	331	P	P	01 30 58.1	-1.6
	comp=E,1.7nm,0.5s,baz=145,slow=12,SNR=40						
AB31				⇑S	S	01 33 41.7	+1.0
	comp=E,0.4nm,0.4s,baz=155,slow=23,SNR=2.6						
BVA0	Borovoye Array	16.49	359	P	P	01 31 19.3	+2.2
	comp=E,0.1nm,0.4s,baz=154,slow=11,SNR=7.4						
BVAR	Borovoye Array	16.49	359	P	P	01 31 16.5	-0.6
	comp=E,0.4nm,0.3s,baz=166,slow=8.8,SNR=7.4						
AKTO	Aktyubinsk	16.75	330	P	P	01 31 19.4	-0.6
	comp=E,0.4nm,0.3s,baz=122,slow=8.8,SNR=5.4						
CHKZ	Chkalovo	17.14	359	P	P	01 31 21.9	-2.5
ZAL	Zalesovo	19.87	25	P	P	01 31 52.7	+0.2
	comp=E,2.2nm,0.3s,baz=272,slow=8.3,SNR=5.3						
FINES	FINESS Array B	37.45	326	P	P	01 34 30.3	0.0
	comp=E,2.2nm,1.0s,mb3.7,baz=117,slow=8.5,SNR=5.7						
ARCES	ARCESS Array B	41.11	338	P	P	01 35 00.9	+0.5
	comp=E,1.5nm,0.4s,mb3.8,baz=115,slow=8.0,SNR=29						
NOA	NORSAR Array B	44.35	323	P	P	01 35 26.1	-0.3
	comp=E,1.2nm,0.8s,mb3.3,baz=97,slow=8.0,SNR=3.2						
INK	Inuvik	73.87	9	P	P	01 38 49.5	+0.9
	comp=E,1.1nm,0.5s,mb3.8,baz=340,slow=20,SNR=12						
YKA	Yellowknife Ar	81.21	3	P	P	01 39 30.1	+1.2
	comp=E,1.0nm,0.5s,mb3.7,baz=350,slow=5.4,SNR=4.8						
YKA	Yellowknife Ar	81.21	3	P	P	01 39 30.1	+1.2
WRA	Warramunga Arr	82.01	122	P	P	01 39 32.9	-0.9
	comp=E,0.2nm,0.3s,mb3.2,baz=319,slow=4.5,SNR=4.5						
WRAB	Tennant Creek	82.01	122	P	P	01 39 32.0	-1.8
	comp=E,1.1nm,0.6s,mb3.7						
WRAB	Tennant Creek	82.01	122	P	P	01 39 32.0	-1.8
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						

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*NDI **12** 01:43:20.0±2.7,34.70N×72.80E,h10^{km},MD3.7,ML3.4*
*NNC **12** 01:43:27.1±3.6,35.42N×72.08E,mpv3.6,Error ellipse: s-maj=45.8km s-min=26.3km az=113.0*
ISC 12 01:43:16.8±1.1**,34.87N**±0.07×**73.0E**±0.2**,h10**^{km}**,n7, σ1**^{s}**38**/13**,1C-1D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.33	136	eP	Pn	01 44 13.1	+3.1
THN				eSB	Sb	01 44 59.7	+3.3
SDNR	Sundarnagar	4.74	134	eP	Pn	01 44 31.4	+1.4
SDNR				eS	Sn	01 45 25.2	-0.5
KLP	Kalpa	5.53	125	eP	Pn	01 44 41.6	+0.4
KLP				eS	Sn	01 45 44.2	-1.4
KLP				AML	AML	01 46 14.5	
	comp=E,82nm,0.5s						
KLP				AML	AML	01 46 26.8	
	comp=N,44nm,0.6s						
KUDL	Kundal	7.34	155	eP	Pn	01 45 04.9	-1.8
KUDL				eS	Sn	01 46 23.2	-7.7
AAK	Ala-Archa	7.84	8	Pn	Pn	01 45 18.2	+4.5
AAK				Sn	Sn	01 46 44.0	+0.5
KK31	Karatay Array	8.45	348	Pn	P	01 45 23.3	+1.2
	comp=N,1.4nm,0.4s,baz=162,slow=12,SNR=47						
KK31				⇓Sn	Sn	01 46 56.6	-1.9
	comp=N,2.8nm,0.6s,baz=172,slow=23,SNR=8.6						
AB31	Akbulak array	17.29	330	⇑P	P	01 47 19.8	+0.1
	comp=N,0.2nm,0.5s,baz=144,slow=12,SNR=6.2						

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*IDC **12** 01:57:27.1±3.0,51.42N×177.21W,mb3.8/7,mb1 3.9/8, mb1mx3.7/25,mbtmp3.9/8,ML3.7/1,Error ellipse: s-maj=85.4km s-min=24.2km az=2.0*
*NEIC **12** 01:57:28.3,50.89N×177.15W,h6^{km},ML3.2(AEIC),After AEIC.*
ISC 12 01:57:28.9±2.0**,50.9N**±0.1×**177.2W**±0.1**,h45**^{km}±13^{km}**,n14, σ0**^{s}**98**/17**,mb3.9**/7**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	0.89	357	P	P	01 57 44.5	-0.6
KIKV	Kanaga Island	1.00	359	P	P	01 57 46.4	-0.3
KINC	Kanaga Island	1.06	1	P	P	01 57 47.2	-0.2
KINC				S	S	01 58 02.2	+0.9
GSTD	Great Sitkin T	1.34	28	P	P	01 57 51.5	-0.1
GSTD				S	S	01 58 08.8	+0.4
GSSP	Great Sitkin S	1.36	26	P	P	01 57 52.0	+0.1
ATKA	Atka Island	2.27	53	P	P	01 58 04.7	-0.1
KDAK	Kodiak Island	15.85	55	Pn	P	02 01 06.1	-3.9
	0.3nm,0.3s,baz=330,slow=20,SNR=4.3						
KDAK				Sn	S	02 04 03.4	-0.9
	0.1nm,0.3s,baz=37,slow=18,SNR=2.2						
PDAR	Pinedale Array	45.47	73	P	P	02 05 47.1	+2.1
	0.7nm,0.7s,mb3.6,baz=301,slow=3.8,SNR=7.5						
SONM	Songino Array	47.80	298	P	P	02 06 04.2	+0.9
	0.5nm,0.6s,mb3.7,baz=61,slow=9.2,SNR=4.3						
ARCES	ARCESS Array B	58.76	351	P	P	02 07 22.9	-1.1
	1.9nm,0.9s,mb4.1,baz=18,slow=8.6,SNR=3.5						
MKAR	Makanchi Array	61.16	310	P	P	02 07 39.0	-1.7
	0.2nm,0.5s,mb3.5,baz=34,slow=6.5,SNR=4.6						
BVAR	Borovoye Array	61.94	321	P	P	02 07 45.3	-0.6
	0.8nm,0.6s,mb4.0,baz=59,slow=8.4,SNR=4.8						
AKTO	Aktyubinsk	68.69	326	P	P	02 08 29.2	+0.1
	2.9nm,0.8s,mb4.3,baz=48,slow=4.8,SNR=11						
BRTR	Keskin Array B	85.83	337	P	P	02 10 06.2	+1.9
	0.4nm,0.7s,mb3.8,baz=8.7,slow=1.6,SNR=4.2						

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*BJI **12** 02:22:46.3,24.00S×66.60W,h188^{km},mB4.9*
*MOS **12** 02:22:46.2±1.3,23.92S×66.65W,h197^{km},mb4.9/27, Error ellipse: s-maj=11.7km s-min=6.6km az=100.6*
*HRVD **12** 02:22:46.3±0.6,24.08S×66.77W,h216^{km}±6^{km},MW5.0/37, Centroid moment Tensor Solution. LP body waves: s9,c10;Mantle waves: s37,c50; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.66±.24; $M_{\theta\theta}$-0.27±.27; $M_{\phi\phi}$2.93±.38; $M_{r\theta}$0.60±.15; $M_{\theta\phi}$0.29±.24; $M_{\phi r}$-1.59±.23; Best double couple: $M_0$3.291×10^{16} NP1:ϕ_s200°,δ32°, λ-66°. NP2:ϕ_s352°,δ61°,λ-105°. Principal axes: T 3.355, Plg15°, Azm92°; N -.13, Plg13°, Azm359°; P -3.226, Plg70°, Azm229°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **12** 02:22:46.3±0.4,24.03S×66.62W,h188^{km}±4^{km},mb4.9/62 Error ellipse: s-maj=5.6km s-min=4.1km az=73.0*
*IDC **12** 02:22:46.6±1.1,24.04S×66.66W,h188^{km}±9^{km},mb4.4/19, mb1 4.6/23,mb1mx4.6/24,mbtmp5.0/23,MS3.4/1, Ms1 3.4/1,ms1mx2.7/14,Error ellipse: s-maj=10.5km s-min=8.4km az=79.0*
*GUC **12** 02:22:47.7±0.8,24.26S×67.05W,h206^{km}±13^{km},ML5.7*
*LDG **12** 02:22:51.6±0.6,23.41S×66.27W,h224^{km}±3^{km},Mb4.8/13, Ms3.1/1,Error ellipse: s-maj=18.7km s-min=14.7km az=54.0*
ISC 12 02:22:45.3±0.5**,24.03S**±0.03×**66.66W**±0.04**,h192**^{km}±4^{km}**, n252,σ1**^{s}**02**/212**,mb4.7**/80**,10C-15D,Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	San Pedro de A	1.80	308	⇑iP	P	02 23 25.4	+3.8
SPCH				iS	S	02 23 54.2	+4.7
SPCH				AMP		02 23 55.8	
	comp=E,12µm,0.4s						
CEN1	Los Morros	3.31	280	⇓iP	P	02 23 40.8	+2.0
CEN1				iS	S	02 24 19.9	-0.3
CEN1				AMP		02 24 22.9	
	comp=N,11µm,0.9s						
ANCH	Antofagasta	3.45	275	⇑iP	P	02 23 42.4	+1.7
ANCH				iS	S	02 24 22.8	-0.5
ANCH				AMP		02 24 25.1	
	comp=N,11µm,0.3s						
CPN1	Cerro Paranal	3.47	259	⇑iP	P	02 23 41.2	+0.4
CPN1				AMP		02 24 24.1	
	comp=E,17µm,0.7s						
CRCH	Chaqaral	4.27	236	⇑iP	P	02 23 49.9	-1.0
CRCH				iS	S	02 24 37.6	-3.9
CPCH	Copiapo	4.70	224	⇓iP	P	02 23 55.8	-0.6
CPCH				iS	S	02 24 47.4	-4.0
CDCH	Caldera	4.83	230	⇑iP	P	02 23 56.0	-2.1
CDCH				iS	S	02 24 49.4	-5.2
CFAA	Coronel Fontan	7.67	190	P	P	02 24 33.9	-1.2
	comp=E,1.8nm,0.3s,baz=1.7,slow=12,SNR=166						
CFAA				S	S	02 25 54.5	-6.5
	comp=E,5.7nm,0.3s,baz=280,slow=23,SNR=18						
CFAA	Coronel Fontan	7.67	190	P	P	02 24 33.9	-1.2
CFAA				S	S	02 25 54.5	-6.5
ZON	Zonda	7.70	193	eP	P	02 24 39.1	+3.6
ZON				eS	S	02 26 02.9	+1.4
LPAZ	La Paz	7.83	350	P	P	02 24 39.3	+2.1
	comp=E,7.6nm,0.3s,baz=169,slow=9.1,SNR=168						
LPAZ				S	S	02 26 05.4	+0.9
	comp=E,7.4nm,0.3s,baz=254,slow=25,SNR=6.0						
LPAZ	La Paz	7.83	350	eP	P	02 24 38.8	+1.7
	comp=E,56nm,0.6s						
LPAZ	La Paz	7.83	350	eP	P	02 24 38.8	+1.7
LPAZ				pmax	pmax		
	comp=Z,56nm,0.6s						
CPUP	Villa Florida	8.75	107	eP	P	02 24 50.3	+1.0
	comp=Z,205nm,0.6s						
CPUP	Villa Florida	8.75	107	eP	P	02 24 50.3	+1.0
CPUP				pmax	pmax		
	comp=Z,205nm,0.6s						
ARE	Arequipa	8.79	328	P	P	02 24 48.0	-1.8
ARE				iS	S	02 26 22.9	-4.1
MDZ	Mendoza	9.03	192	eP	P	02 24 52.7	-0.2
MDZ				e		02 26 47.0	
SIV	San Ignacio	9.56	34	P	P	02 25 00.7	+0.8
	comp=Z,5.8nm,0.3s,baz=228,slow=12,SNR=151						
SIV				S	S	02 26 35.2	-10
	comp=Z,1.0nm,0.3s,baz=238,slow=14,SNR=4.3						
TRQA	Tornquist	14.54	165	eP	P	02 26 01.2	-2.1
	comp=Z,29nm,0.6s						
SAML	Samuel	15.36	13	eP	P	02 26 13.6	0.0
	comp=Z,18nm,0.8s						
NNA	Nana	15.39	319	eP	P	02 26 14.2	+0.2
	comp=Z,22nm,0.7s						
PLCA	Paso Flores	16.97	190	P	P	02 26 31.9	-1.0
	comp=Z,2.6nm,0.3s,baz=9.3,slow=13,SNR=86						
PLCA				S	S	02 29 39.8	+5.8
	comp=Z,0.1nm,0.3s,baz=352,slow=12,SNR=1.8						
PLCA				PcP	PcP	02 31 07.8	-0.3
	comp=Z,0.3nm,0.3s,baz=18,slow=2.8,SNR=7.0						
PLCA	Paso Flores	16.97	190	eP	P	02 26 31.6	-1.3
	comp=Z,55nm,0.7s						
PLCA	Paso Flores	16.97	190	eP	P	02 26 31.6	-1.3
PLCA				pmax	pmax		
	comp=Z,55nm,0.7s						
BDFB	Brasilia	19.41	68	P	P	02 26 59.5	+0.7
	comp=Z,11nm,0.3s,baz=247,slow=11,SNR=236						
BDFB				S	S	02 30 28.6	+5.6
	comp=Z,0.4nm,0.3s,baz=120,slow=22,SNR=1.9						
BAO	Brasilia Array	19.43	68	P	P	02 26 59.0	0.0
ROSC	El Rosal	29.67	344	P	P	02 28 36.8	+1.3
	comp=Z,4.7nm,0.5s,mb4.4,baz=262,slow=23,SNR=4.0						
ROSC				LR	LR	02 40 42.0	
	comp=Z,74nm,18.7s,baz=175,slow=36						
USHA	Ushuaia	30.79	182	P	P	02 28 44.1	-0.8
	comp=Z,17nm,0.7s,mb4.8,baz=354,slow=6.8,SNR=9.7						
SDV	Santo Domingo	32.94	353	eP	P	02 29 01.8	-2.2
	comp=Z,8.6nm,0.7s,mb4.4						
RPN	Rapa Nui	38.49	256	P	P	02 29 50.3	-0.2
	comp=Z,28nm,0.8s,mb4.8,baz=194,slow=2.3,SNR=4.6						
JTS	JuntasAbangare	38.51	330	iP	P	02 29 52.4	+1.6
SJG	San Juan	41.89	1	eP	P	02 30 15.6	-3.0
	comp=Z,37nm,1.1s,mb4.7						
SJG	San Juan	41.89	1	eP	P	02 30 15.6	-3.0
SJG				pmax	pmax		
	comp=Z,37nm,1.1s						
VNA3	Neumayer Olymp	57.02	161	e	P	02 32 18.9	+6.1
VNA3	Neumayer Olymp	57.02	161	⇓iP	P	02 32 13.1	+0.3
VNA3				e		02 32 18.9	
VNA3				e		02 33 04.9	
VNA1	Neumayer--Stat	57.21	160	e	P	02 32 20.6	+6.4
VNA1	Neumayer--Stat	57.21	160	⇓iP	P	02 32 14.9	+0.7
VNA1				e		02 32 20.6	
VNA1				e		02 33 07.1	
VNA2	Neumayer--Watz	57.58	160	e	P	02 32 22.8	+6.0
VNA2	Neumayer--Watz	57.58	160	⇓iP	P	02 32 17.1	+0.3
VNA2				e		02 32 22.8	
VNA2				e		02 33 07.1	
SNAA	Sanae	59.22	161	e	P	02 32 33.9	+5.8
SNAA	Sanae	59.22	161	e	pP	02 33 13.5	+1.2
SNAA	Sanae	59.22	161	P	P	02 32 28.0	-0.2
	comp=Z,9.1nm,0.9s,mb4.4,baz=285,slow=6.8,SNR=141						
SNAA				PcP	PcP	02 33 14.0	-0.2
	comp=Z,3.2nm,0.6s,baz=271,slow=4.7,SNR=8.0						
SNAA	Sanae	59.22	161	⇓iP	P	02 32 27.9	-0.2
SNAA				e		02 32 33.9	
SNAA				e	pP	02 33 13.5	+1.2
SNAA	Sanae	59.22	161	⇓iP	P	02 32 27.9	-0.2
SNAA				e	pP	02 33 13.5	+1.2
GOGA	Godfrey	59.32	344	eP	P	02 32 27.4	-1.9
LRAL	Lakeview Retre	59.97	340	eP	P	02 32 31.7	-2.1
	comp=Z,25nm,0.9s,mb4.8						
CPCT	Cooper Cave	61.53	343	eP	P	02 32 42.5	-1.7
SWET	Sewanee	61.69	342	eP	P	02 32 42.4	-2.9
OXF	Oxford	62.10	339	eP	P	02 32 45.3	-2.7
	comp=Z,57nm,0.9s,mb5.2						
OXF	Oxford	62.10	339	eP	P	02 32 45.3	-2.7
OXF				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.2						
PLAL	Pickwick Lake	62.11	340	eP	P	02 32 45.6	-2.5
	comp=Z,24nm,0.9s,mb4.8						
ELN	Prospectdale	62.36	347	P	P	02 32 48.6	-1.1
JCT	Junction City	62.84	328	eP	P	02 32 51.8	-1.1
	comp=Z,34nm,0.7s,mb5.1						
JCT	Junction City	62.84	328	eP	P	02 32 51.8	-1.2
JCT				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.1						
WVT	Waverly	63.09	341	eP	P	02 32 52.0	-2.6
	comp=Z,50nm,0.7s,mb5.3						
WVT	Waverly	63.09	341	eP	P	02 32 52.0	-2.6
WVT				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.2						
GLAT	Glass	63.67	340	eP	P	02 32 57.2	-1.2
MAIT	Maitri	63.70	159	⇓iP	P	02 32 58.6	+0.6
NVL	N'lazarevskaya	63.74	159	⇓iP	P	02 32 57.9	-0.3
NVL				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
TXAR	Lajitas Array	63.88	324	P	P	02 32 59.3	-0.6
	comp=Z,5.9nm,0.7s,mb4.3,baz=152,slow=8.4,SNR=86						
PARMO	Parma	64.18	339	eP	P	02 33 00.5	-1.1
WCI	Wyandotte Cave	64.61	343	eP	P	02 33 02.0	-2.4
	comp=Z,16nm,0.6s,mb4.8						
WCI	Wyandotte Cave	64.61	343	eP	P	02 33 02.0	-2.4
WCI				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.8						
FVM	French Village	65.60	340	eP	P	02 33 08.8	-2.0
	comp=Z,46nm,1.0s,mb5.1						
FVM	French Village	65.60	340	eP	P	02 33 08.8	-2.0
FVM				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.1						
CCM	Cathedral Cave	65.93	339	eP	P	02 33 11.1	-1.8
	comp=Z,52nm,0.7s,mb5.3						
CCM	Cathedral Cave	65.93	339	eP	P	02 33 11.1	-1.8
CCM				pmax	pmax		
	comp=Z,52nm,0.7s,mb5.3						
QSPA	South Pole Qui	66.17	180	⇓iP	P	02 33 14.4	+0.6
	comp=Z,76nm,0.6s,mb5.5						
CLNB	Carlsbad	66.31	326	P	P	02 33 14.7	-0.7
GDL2	Guadalupe Moun	66.51	326	eP	P	02 33 16.1	-0.5
MNTX	Cornudas Mount	66.65	324	eP	P	02 33 15.7	-1.8
	comp=Z,15nm,0.8s,mb4.7						
LIC	Lamto	67.15	72	eP	P	02 33 20.0	-0.9
	comp=Z,4.6nm,0.4s,mb4.2						
DBIC	Dimbokro	67.51	71	P	P	02 33 22.3	-0.9
	comp=Z,4.7nm,0.4s,mb4.5,baz=210,slow=6.8,SNR=26						
DBIC	Dimbokro	67.51	71	eP	P	02 33 22.0	-1.2
BNM	Barren Site	69.22	325	eP	P	02 33 33.6	+0.3
LPM	Los Pinos Moun	69.34	325	eP	P	02 33 34.1	+0.1
SADO	Sadowa	69.41	351	P	P	02 33 33.3	-1.0
	comp=Z,4.0nm,0.5s,mb4.3,baz=185,slow=7.5,SNR=9.1						
ANMO	Albuquerque	69.75	326	P	P	02 33 37.2	+0.7
	comp=Z,12nm,0.8s,mb4.6,baz=139,slow=6.6,SNR=56						
ANMO	Albuquerque	69.75	326	eP	P	02 33 36.6	+0.1
	comp=Z,16nm,0.8s,mb4.7						
ANMO	Albuquerque	69.75	326	⇑eP	P	02 33 37.1	+0.6
TUC	Tucson	70.10	321	eP	P	02 33 39.1	+0.3
	comp=Z,16nm,1.2s,mb4.5						
TUC	Tucson	70.10	321	eP	P	02 33 39.1	+0.4
TUC				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.5						
SDCO	Great Sand Dun	71.48	328	eP	P	02 33 47.2	+0.4
	comp=Z,11nm,0.6s,mb4.7						
WUAZ	Wupatki	72.79	323	eP	P	02 33 55.3	+0.5
	comp=Z,25nm,0.9s,mb4.8						
ISCO	Idaho Springs	73.17	330	eP	P	02 33 56.9	0.0
	comp=Z,19nm,1.3s,mb4.6						
ISCO	Idaho Springs	73.17	330	eP	P	02 33 56.9	+0.1
ISCO				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.6						
PV01	Paradox Valley	73.29	327	eP	P	02 33 58.2	+0.6
SMCO	Snowmass	73.31	328	eP	P	02 33 58.4	+0.7
	comp=Z,17nm,0.7s,mb4.8						
SYO	Syowa Base	73.41	159	⇓P	P	02 33 57.8	+0.1
SYO	Syowa Base	73.41	159	⇑PcP	PcP	02 34 11.5	-1.5
SYO	Syowa Base	73.41	159	SH		02 43 10.0	
SYO	Syowa Base	73.41	159	⇓eP	P	02 33 57.8	+0.1
SYO				ePcP	PcP	02 34 11.5	-1.5
PV10	Paradox Valley	73.71	326	eP	P	02 33 59.8	-0.2
SBA	Scott Base	73.72	190	eP	P	02 34 00.5	+1.1
	comp=Z,26nm,1.3s,mb4.7						
SBA	Scott Base	73.72	190	eP	P	02 34 00.5	+1.1
SBA				pmax	pmax		
	comp=Z,26nm,1.3s,mb4.7						
BAR	Barrett	73.86	318	eP	P	02 34 01.2	+0.2
PHWY	Pilot Hill	74.30	331	eP	P	02 34 03.9	+0.5
LDFC	Landfair	74.59	320	eP	P	02 34 06.1	+1.0
VNDA	Vanda	74.72	190	eP	P	02 34 06.0	+0.8
	comp=Z,14nm,1.0s,mb4.5						
VNDA	Vanda	74.72	190	eP	P	02 34 06.0	+0.9
VNDA				pmax	pmax		
	comp=Z,14nm,1.0s						
NEN	Nelson	74.84	321	eP	P	02 34 06.7	+0.2
SRU	San Rafael	75.02	326	eP	P	02 34 07.5	-0.1
	comp=Z,20nm,0.8s,mb4.8						
SRU	San Rafael	75.02	326	eP	P	02 34 07.5	0.0
SRU				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.8						
EYMN	Ely	75.04	343	eP	P	02 34 05.8	-1.6
RWWY	Rawlins	75.40	330	eP	P	02 34 09.7	+0.1
	comp=Z,32nm,1.1s,mb4.9						
MSU	Marysvale	75.43	325	eP	P	02 34 10.7	+0.9
MVU	Marysvale	75.45	325	eP	P	02 34 10.8	+0.9
	comp=Z,16nm,0.9s,mb4.7						
ARUT	Antelope Range	75.58	323	eP	P	02 34 11.6	+0.9
RSSD	Black Hills	75.97	333	eP	P	02 34 12.6	-0.1
	comp=Z,14nm,0.8s,mb4.7						
RSSD	Black Hills	75.97	333	eP	P	02 34 12.6	-0.1
RSSD				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.6						
MPU	Maple Canyon	76.27	326	eP	P	02 34 14.7	+0.2
	comp=Z,16nm,1.2s,mb4.5						
DAU	Daniels Canyon	76.37	327	eP	P	02 34 15.7	+0.7
TPNV	Topopah Spring	76.56	321	eP	P	02 34 17.1	+0.9
	comp=Z,22nm,1.1s,mb4.7						
TPNV	Topopah Spring	76.56	321	eP	P	02 34 17.1	+1.0
TPNV				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.7						
DAC	Darwin (Calif)	76.88	320	eP	P	02 34 18.2	+0.3
	comp=Z,16nm,1.0s,mb4.6						
DAC	Darwin (Calif)	76.88	320	eP	P	02 34 18.2	+0.3
DAC				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.6						
TCUT	Toone Canyon	76.98	327	eP	P	02 34 18.9	+0.6
ISA	Isabella	76.98	319	eP	P	02 34 19.1	+0.6
	comp=Z,30nm,1.6s,mb4.7						
ISA	Isabella	76.98	319	eP	P	02 34 19.1	+0.6
ISA				pmax	pmax		
	comp=Z,30nm,1.6s,mb4.7						
DUG	Dugway	77.01	325	eP	P	02 34 18.9	+0.4
	comp=Z,14nm,1.2s,mb4.5						
DUG	Dugway	77.01	325	eP	P	02 34 18.9	+0.4
DUG				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.5						
PDAR	Pinedale Array	77.33	329	P	P	02 34 20.6	+0.4
	comp=Z,4.0nm,0.6s,mb4.2,baz=130,slow=7.7,SNR=40						
BW06	Boulder Array	77.33	329	eP	P	02 34 20.1	-0.2
	comp=Z,5.0nm,0.7s,mb4.2						
HWUT	Hardware Ranch	77.42	327	eP	P	02 34 20.7	-0.1
	comp=Z,9.3nm,0.6s,mb4.6						
SPUT	South Promonto	77.64	326	eP	P	02 34 22.3	+0.3
HVU	Hansel Valley	78.16	327	eP	P	02 34 24.8	0.0
	comp=Z,12nm,0.9s,mb4.5						
HVU	Hansel Valley	78.16	327	eP	P	02 34 24.8	0.0
HVU				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.5						
MTUM	Tungsten Hills	78.18	320	eP	P	02 34 25.6	+0.6
ULM	Lac du Bonnet	78.36	341	P	P	02 34 25.4	-0.3
	comp=Z,17nm,0.6s,mb4.9,baz=154,slow=6.5,SNR=61						
SNOW	Snow King Moun	78.43	329	eP	P	02 34 26.7	+0.4
	comp=Z,18nm,0.8s,mb4.8						
LOHW	Long Hollow	78.47	329	eP	P	02 34 26.9	+0.4
	comp=Z,16nm,0.7s,mb4.8						
SCHQ	Schefferville	78.54	360	P	P	02 34 26.3	-0.3
	comp=Z,6.4nm,0.6s,mb4.4,baz=78,slow=16,SNR=18						
TPAW	Teton Pass	78.54	329	eP	P	02 34 27.4	+0.6
	comp=Z,38nm,1.3s,mb4.9						
ELK	Elko	78.68	324	P	P	02 34 28.5	+0.8
	comp=Z,8.5nm,0.9s,mb4.4,baz=134,slow=1.9,SNR=19						
NVAR	Mina Array Bea	78.76	321	P	P	02 34 29.1	+0.9
	comp=Z,2.8nm,0.6s,mb4.1,baz=137,slow=7.2,SNR=32						
IMW	Indian Meadow	78.85	329	eP	P	02 34 29.2	+0.7
	comp=Z,26nm,0.9s,mb4.9						
LAO	LASA Array	78.96	333	eP	P	02 34 28.9	-0.1
	comp=Z,38nm,1.0s,mb5.0						
LRV	Little Rabbit	79.03	318	eP	P	02 34 30.5	+0.9
YMR	Madison River	79.44	330	eP	P	02 34 32.7	+1.0
	comp=Z,88nm,1.4s,mb5.2						
DGMT	Dagmar	79.61	336	eP	P	02 34 32.9	+0.4
	comp=Z,64nm,0.8s,mb5.3						
GCMT	Greycliff	79.72	331	eP	P	02 34 33.3	+0.2
QLMT	Earthquake Lak	79.78	329	eP	P	02 34 34.9	+1.4
HLID	Hailey	80.28	327	eP	P	02 34 36.9	+0.7
	comp=Z,30nm,0.8s,mb5.0						
BOSA	Boshof	80.44	117	P	P	02 34 38.0	+0.7
	comp=Z,5.4nm,0.7s,mb4.3,baz=214,slow=5.2,SNR=12						
MCMT	McKenzie Canyo	80.45	329	eP	P	02 34 38.2	+1.2
DLMT	Dillon	80.73	329	eP	P	02 34 39.0	+0.5
	comp=Z,50nm,1.4s,mb5.0						
MAW	Mawson	81.31	163	P	P	02 34 42.3	+1.2
	comp=Z,41nm,0.8s,mb5.1,baz=219,slow=6.1,SNR=49						
MAW	Mawson	81.31	163	eP	P	02 34 41.8	+0.6
	comp=Z,45nm,0.9s,mb5.1						
MAW	Mawson	81.31	163	eP	P	02 34 41.8	+0.7
MAW				pmax	pmax		
	comp=Z,45nm,0.9s						
HRY	Holter Researc	81.39	330	eP	P	02 34 42.4	+0.4
LBTB	Lobatse	82.09	114	eP	P	02 34 46.5	+0.6
	comp=Z,5.0nm,0.6s,mb4.3						
LBTB	Lobatse	82.09	114	eP	P	02 34 46.5	+0.6
LBTB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
BMO	Blue Mountains	82.66	326	eP	P	02 34 48.5	+0.1
	comp=Z,15nm,1.2s,mb4.6						
BMO	Blue Mountains	82.66	326	eP	P	02 34 48.6	+0.1
BMO				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.6						
EVO	Evora	83.00	42	eP	P	02 34 49.2	-1.2
	comp=Z,11nm,0.9s,mb4.3						
PTOM	Tomar	83.42	41	eP	P	02 34 53.8	+1.3
	comp=Z,28nm,1.2s,mb4.9						
PVIS	Viseu	84.42	41	eP	P	02 34 58.1	+0.7
	comp=Z,22nm,2.2s,mb4.5						
MTE	Manteigas	84.43	41	eP	P	02 34 58.4	+0.9
	comp=Z,24nm,1.3s,mb4.8						
PVRL	Vila Real	84.87	40	eP	P	02 35 00.0	+0.3
	comp=Z,20nm,1.3s,mb4.7						
PCAB	Cabril	84.95	40	eP	P	02 35 01.3	+1.2
	comp=Z,54nm,1.9s,mb5.0						
NEW	Newport	84.97	329	P	P	02 34 59.4	-0.6
	comp=Z,4.5nm,0.7s,mb4.3,baz=246,slow=1.5,SNR=7.8						

OD2	Odessa Site #2	85.13	327	P	P	02 35 01.6	+0.8
EBG	Ellensburg	85.73	326	P	P	02 35 05.1	+1.3
PBRG	Braganca	85.77	40	*e*P	P	02 35 07.2	+3.1
TBM	Table Mountain	85.92	326	P	P	02 35 05.9	+1.2
WTV	Waterville	85.95	327	P	P	02 35 05.7	+0.8
ESDC	Sonseca Array	86.20	43	P	P	02 35 08.0	+1.7
	comp=Z,3.4nm,0.8s,mb4.2,baz=242,slow=4.8,SNR=12						
NLW	Nelson Butte	86.40	327	P	P	02 35 07.5	+0.5
EDM	Edmonton	86.93	334	*e*P	P	02 35 08.2	-1.1
VDB	Vedder Mountai	87.91	327	P	P	02 35 14.2	+0.1
SJPF	Ste Jean	89.85	42	*e*P	P	02 35 23.0	-0.4
	comp=Z,16nm,0.9s,mb4.6						
SJPF	Ste Jean	89.85	42	*e*P	P	02 35 23.0	-0.4
SJPF				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
CASY	Casey	89.95	179	*e*P	P	02 35 24.8	+1.4
	comp=Z,49nm,1.0s,mb5.3						
EPF	Esparros	90.76	42	*e*P	P	02 35 27.1	-0.6
	comp=Z,9.3nm,0.8s,mb4.4						
EPF	Esparros	90.76	42	*e*P	P	02 35 27.1	-0.6
EPF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
LFF	La Frestale	92.03	41	*e*P	P	02 35 33.0	-0.5
	comp=Z,239nm,1.9s,mb5.5						
LFF	La Frestale	92.03	41	*e*P	P	02 35 33.0	-0.5
LFF				pmax	pmax		
	comp=Z,120nm,1.9s,mb5.5						
MTLF	Montolieu	92.09	43	*e*P	P	02 35 33.0	-0.9
	comp=Z,14nm,1.1s,mb4.5						
MTLF	Montolieu	92.09	43	*e*P	P	02 35 33.0	-0.9
MTLF				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
CAF	Calviac	92.82	42	*e*P	P	02 35 36.8	-0.4
TCF	Toulx Ste Croi	93.62	40	*e*P	P	02 35 40.4	-0.4
	comp=Z,30nm,1.2s,mb4.9						
TCF	Toulx Ste Croi	93.62	40	*e*P	P	02 35 40.4	-0.4
TCF				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
YKA	Yellowknife Ar	94.26	340	P	P	02 35 43.2	0.0
	comp=Z,8.8nm,0.6s,mb5.0,baz=136,slow=4.6,SNR=34						
YKA	Yellowknife Ar	94.26	340	P	P	02 35 43.2	-0.1
AVF	Avril sur Loir	94.56	40	*e*P	P	02 35 44.7	-0.3
SMF	Signal de Mont	94.77	41	*e*P	P	02 35 45.3	-0.7
	comp=Z,22nm,1.1s,mb4.9						
SMF	Signal de Mont	94.77	41	*e*P	P	02 35 45.3	-0.7
SMF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
SSF	Saint Saulge	94.78	40	*e*P	P	02 35 45.1	-0.9
LOR	Lormes	95.09	40	*e*P	P	02 35 46.0	-1.5
ORIF	Oris-en-Rattie	95.16	43	*e*P	P	02 35 47.5	-0.3
	comp=Z,11nm,0.9s,mb4.7						
ORIF	Oris-en-Rattie	95.16	43	*e*P	P	02 35 47.5	-0.3
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
MBDF	Montbardon	95.63	43	*e*P	P	02 35 49.7	-0.2
SBF	Sospel	95.64	44	*e*P	P	02 35 49.5	-0.5
	comp=Z,8.6nm,0.7s,mb4.8						
SBF	Sospel	95.64	44	*e*P	P	02 35 49.5	-0.5
SBF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
LPL	La Plagne	95.98	43	*e*P	P	02 35 50.6	-0.9
	comp=Z,15nm,1.2s,mb4.8						
LPL	La Plagne	95.98	43	*e*P	P	02 35 50.6	-0.9
LPL				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.8						
LPG	La Plagne	95.98	43	*e*P	P	02 35 50.8	-0.7
	comp=Z,18nm,1.1s,mb4.9						
LPG	La Plagne	95.98	43	*e*P	P	02 35 50.8	-0.7
LPG				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.9						
CABF	La Chapelle	96.11	41	*e*P	P	02 35 51.8	-0.2
DLBC	Dease Lake	97.40	332	P	P	02 35 58.8	+1.2
	comp=Z,4.8nm,0.8s,mb4.8,baz=110,slow=5.7,SNR=8.9						
SUMG	Summit	98.24	8	P	P	02 36 01.5	+0.4
GERES	GERESS Array B	101.70	42	PKiKP		02 40 39.8	
	comp=Z,0.4nm,0.7s,baz=198,slow=4.2,SNR=3.8						
INK	Inuvik	104.02	339	PKKPbc		02 52 16.5	
	comp=Z,2.2nm,1.1s,baz=236,slow=4.5,SNR=3.5						
AKASG	Malin Array Be	111.84	43	PKiKP		02 40 57.8	
	comp=Z,1.3nm,0.6s,baz=266,slow=3.2,SNR=14						
AKASG				PKKPbc		02 51 51.8	
	comp=Z,0.2nm,0.3s,baz=64,slow=4.2,SNR=4.9						
AKASG				PKKPab		02 52 00.8	
	comp=Z,1.2nm,0.6s,baz=64,slow=4.6,SNR=6.8						
AKASG	Malin Array Be	111.84	43	PKIKP	PKPdf	02 40 57.8	+0.9
AKASG						02 52 00.8	
FINES	FINESS Array B	112.09	31	PKKPbc		02 51 50.4	
	comp=Z,2.1nm,1.0s,baz=135,slow=2.7,SNR=4.0						
BRTR	Keskin Array B	112.57	55	PKiKP		02 41 00.6	
	comp=Z,0.9nm,0.8s,baz=243,slow=2.8,SNR=4.6						
BRTR				PKKPab		02 51 57.4	
	comp=Z,0.9nm,0.9s,baz=84,slow=4.2,SNR=5.7						
ARCES	ARCESS Array B	113.03	22	PKKPbc		02 51 47.5	
	comp=Z,3.5nm,1.1s,baz=72,slow=3.8,SNR=6.5						
ARCES				PKKPab		02 51 55.1	
	comp=Z,2.8nm,0.8s,baz=90,slow=1.2,SNR=5.8						
OBN	Obninsk	116.85	39⇓	*i*PKIKP	PKPdf	02 41 07.9	+1.3
OBN				*e*		02 47 33.6	
OBN				*e*SS	SS	02 58 25.1	+14
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
STKA	Stephens Creek	118.19	207	PKP	PKPdf	02 41 11.1	+1.2
	comp=Z,1.7nm,0.9s,baz=94,slow=18,SNR=3.3						
STKA				PKKPbc		02 51 30.3	
	comp=Z,1.1nm,0.6s,baz=276,slow=7.2,SNR=3.8						
BILL	Bilibino	125.63	338⇑	*i*PKIKP	PKPdf	02 41 25.0	+1.7
BILL				*e**PP		02 42 16.6	
BILL				*e*PS	PS	02 53 19.3	-2.3
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CTA	Charters Tower	125.68	219	PKP	PKPdf	02 41 26.1	+1.5
	comp=Z,4.4nm,0.6s,baz=5.2,slow=0.7,SNR=11						
ORR	Orenburg	127.86	42⇑	*i*PKIKP	PKPdf	02 41 29.8	+1.8
ORR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
ASPA	Alice Springs	128.56	204	*e*P	PKPdf	02 41 31.1	+1.0
ARU	Arti	129.02	36	*i* PKIKP	PKPdf	02 41 32.4	+2.3
ARU				*e*		02 43 43.1	
TIXI	Tiksi	131.54	353	*e*PKIKP	PKPdf	02 41 30.8	-3.7
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WB2	Warramunga Arr	131.74	207	*e*P	PKPdf	02 41 37.4	+1.2
WRA	Warramunga Arr	131.74	207	PKP	PKPdf	02 41 36.9	+0.6
	comp=Z,5.8nm,0.5s,baz=165,slow=1.6,SNR=23						
WRA				SKPbc		02 44 43.8	
	comp=Z,3.1nm,1.1s,baz=165,slow=3.6,SNR=5.0						
WRAB	Tennant Creek	131.75	207*d*	*i*PKIKP	PKPdf	02 41 37.8	+1.5
FITZ	Fitzroy Crossi	136.44	197	*e*P	PKPdf	02 41 46.5	+1.5
	comp=Z,10nm,0.8s						
CHKZ	Chkalovo	136.47	36	*e*PKP	PKPdf	02 41 45.5	+1.4
BRVK	Borovoye	136.56	37	*e*PKP	PKPdf	02 41 46.6	+2.3
BVA0	Borovoye Array	136.63	37	*i* PKIKP	PKPdf	02 41 46.2	+1.8
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.2s						
KKAR	Karatay Array	140.07	51	*i* PKIKP	PKPdf	02 41 53.2	+2.2
YAK	Yakutsk	140.42	348	*i* PKHKP		02 41 46.0	
NVS	Novosibirsk	141.99	28	*i* PKHKP		02 41 50.1	
KURK	Kurchatov	142.22	36	*e*PKP	PKPdf	02 41 52.1	-2.2
KURK	Kurchatov	142.22	36⇓	*i*PKIKP	PKPdf	02 41 56.3	+1.9
AAK	Ala-Archa	143.01	50	*e*PKP	PKPdf	02 41 54.6	-1.4
ZAL	Zalesovo	143.27	28	PKP	PKPdf	02 41 55.4	-0.7
	comp=Z,12nm,0.7s,baz=176,slow=4.0,SNR=62						
ZAL				SKP		02 45 14.6	
	comp=Z,1.9nm,0.7s,baz=213,slow=4.5,SNR=2.2						
ZAL				SKPbc		02 45 17.9	
	comp=Z,1.9nm,0.7s,baz=232,slow=3.6,SNR=4.6						
ZAL	Zalesovo	143.27	28	PKP	PKPdf	02 41 55.4	-0.7
ZAL				SKP		02 45 14.6	
ZAL				SKPbc		02 45 17.9	
BOD	Bodaibo	146.24	359	*e*PKIKP	PKPdf	02 42 01.9	+0.8
BOD				pmax	pmax		
	comp=Z,25nm,0.7s						
MKAR	Makanchi Array	146.35	40	PKPbc	PKPbc	02 42 03.9	+0.8
	comp=Z,32nm,0.7s,baz=316,slow=1.3,SNR=151						
MKAR	Makanchi Array	146.35	40	PKPbc	PKPbc	02 42 03.9	+0.8
MKAR	Makanchi Array	146.35	40	*i* PKP2	PKPab	02 42 03.9	-2.9
MKAR				pmax	pmax		
	comp=Z,14nm,0.6s						
HYB	Hyderabad	146.86	95	*i* PKP	PKPdf	02 42 07.0	+3.7
	comp=Z,50nm,1.0s						
HYB	Hyderabad	146.86	95	*e*P	PKPdf	02 42 07.0	+3.7
YSS	Yuzh-Sakhalins	147.21	322	*e*PKP	PKPdf	02 42 05.1	+2.1
YSS	Yuzh-Sakhalins	147.21	322⇑	*i*PKIKP	PKPdf	02 42 05.4	+2.4
GUMO	Guam	148.47	256	PKPbc	PKPdf	02 42 11.2	+5.2
	comp=Z,129nm,0.8s,baz=178,slow=8.2,SNR=5.2						
MOY	Mondy	150.82	16	*e*PKIKP	PKPdf	02 42 17.6	+9.0
MOY				pmax	pmax		
	comp=Z,47nm,1.4s						
KLR	Kul’dur	150.99	335	*e*PKIKP	PKPdf	02 42 13.0	+4.1
ZAK	Zakamensk	152.55	14	*e*PKIKP	PKPdf	02 42 13.3	+2.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MJAR	Matsushiro Arr	155.25	306	PKPab	PKPab	02 42 43.4	-0.4
	comp=Z,8.3nm,0.9s,baz=67,slow=2.7,SNR=9.8						
MAT	Matsushiro	155.25	306	PKP	PKPdf	02 42 24.9	+10
MAT	Matsushiro	155.25	306	*e*P	PKPab	02 42 44.0	+0.2
SONM	Songino Array	155.61	11	PKP	PKPdf	02 42 18.6	+3.2
	comp=Z,3.1nm,0.9s,baz=294,slow=1.0,SNR=18						
SONM				PKPab	PKPab	02 42 45.4	+0.4
	comp=Z,4.7nm,0.7s,baz=323,slow=4.4,SNR=16						
GTA	Gaotai	160.86	34	*e*PKP	PKPdf	02 42 24.8	+2.8
GTA				APKP		02 43 08.5	
GTA				XPKP		02 43 27.8	
LZH	Lanzhou	165.45	32	*e*PKP	PKPdf	02 42 32.0	+5.4
LZH				APKP		02 43 20.8	
LZH				XPKP		02 43 37.5	
LZH				SS	SS	03 07 40.0	+6.2
LZH				PP	PP		
	comp=Z,100nm,6.9s						
LZH				LR	LR		
	comp=N,170nm,19.3s						
LZH				LR	LR		
	comp=Z,210nm,20.5s						
SSE	Sheshan	170.11	317	PKP	PKPdf	02 42 30.8	+1.0
KMI	Kunming	170.29	81	PKP	PKPdf	02 42 32.8	+2.8
NJ2	Nanjing	170.65	330	*e*PKP	PKPdf	02 42 31.2	+1.1
NJ2				PKP2	PKPab	02 43 51.1	+0.2
NJ2				PKS	PKS	02 46 02.0	+0.5
NJ2				PP	PP	02 47 41.0	-1.0
NJ2				PP	PP		
	comp=Z,130nm,10.0s						
NJ2				LR	LR		
	comp=N,1µm,27.7s						
NJ2				LR	LR		
	comp=E,600nm,27.2s						
NJ2				LR	LR		
	comp=Z,580nm,31.6s						

IDC ***12*** *02:27:08.6±6.1, 20.42S×169.44E, h98^{km}±47^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.5/13, mbtmp3.9/4, Error ellipse: s-maj=49.3km s-min=39.5km az=70.0*

ISC 12 02:27:08.9±5.1**, 20.3S**±0.2×**169.3E**±0.3**, h110**^{km}±37^{km}**, n13, σ0^{s}23**/9**, mb3.7**/3**, 4C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.19	236	P	P	02 27 58.5	+0.2
	24nm,0.3s,baz=69,slow=18,SNR=168						
DZM				S	S	02 28 35.6	-0.2
	108nm,0.3s,baz=132,slow=22,SNR=62						
WRA	Warramunga Arr	32.78	264	P	P	02 33 34.1	+0.3
	0.3nm,0.3s,mb3.6,baz=96,slow=7.6,SNR=3.8						
WRA				PcP	PcP	02 36 16.3	-0.3
	0.3nm,0.5s,baz=92,slow=3.3,SNR=4.1						
SONM	Songino Array	88.08	323	P	P	02 39 47.8	-0.3
	0.4nm,0.5s,mb3.7,baz=117,slow=6.4,SNR=4.6						
SNAA	Sanae	88.12	182⇑	*i*	P	02 39 47.5	-0.2
SNAA	Sanae	88.12	182	P	P	02 39 47.4	-0.4
	0.5nm,0.5s,mb3.8,baz=205,slow=15,SNR=20						
VNA3	Neumayer Olymp	88.71	180⇑	*i*	P	02 39 50.4	-0.1
VNA2	Neumayer--Watz	89.00	181⇑	*i*	P	02 39 52.1	+0.2
VNA1	Neumayer--Stat	89.29	181⇑	*i*	P	02 39 53.4	+0.2
ARCES	ARCESS Array B	126.09	345	PKP	PKPdf	02 45 58.1	+0.4
	2.1nm,0.9s,baz=45,slow=1.3,SNR=6.3						
PRU	Pruhonice	144.22	332	*e*P	PKPbc	02 46 31.7	+0.6
NKC	Novy Kostel	144.93	334	*e*P	PKPdf	02 46 34.0	+1.2
KHC	Kasperske Hory	145.28	332	*e*P	PKPdf	02 46 35.0	+1.6
GERES	GERESS Array B	145.43	331	PKPbc	PKPbc	02 46 35.8	+1.4
	2.1nm,0.7s,baz=27,slow=3.0,SNR=18						
GERES				pPKPbc		02 47 00.1	
	1.0nm,0.7s,baz=63,slow=3.0,SNR=4.7						

STR ***12*** *02:27:52.6±0.9, 42.93N×1.87W, h5^{km}±1^{km}, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

LDG ***12*** *02:27:54.3±0.5, 43.01N×1.83W, h7^{km}, Md2.4/1, Ml2.3/5, Error ellipse: s-maj=10.3km s-min=6.8km az=14.0*

MDD 12 02:27:52.0±0.5**, 42.94N**×**1.95W, mbLg1.9**/13**, Error ellipse: s-maj=3.3km s-min=2.0km az=80.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUSE	Utxeti	0.29	89	Pg	Pg	02 27 56.6	-1.2
	4.0nm,0.1s,SNR=7.9						
IUSE				Lg		02 28 01.5	
	53nm,0.2s,SNR=7.9						
EARA	Aranguren	0.32	122	Pg	Pg	02 27 57.5	-0.8
	17nm,0.1s,SNR=30						
EARA				Lg		02 28 02.2	
	930nm,0.4s,SNR=26						
IUNC	Unciti	0.38	119	Pg	Pg	02 27 59.1	-0.4
	1.4nm,0.1s,SNR=7.9						
IUNC				Lg		02 28 05.3	
	36nm,0.2s,SNR=7.9						
EALK	Alkurruntz	0.42	49	Pg	Pg	02 28 00.3	-0.1
	1.4nm,0.1s,SNR=14						
EALK				Lg		02 28 05.8	
	52nm,0.3s,SNR=10						
IPRE	Itoiz	0.45	107	Pg	Pg	02 28 01.5	+0.5
	0.5nm,0.1s,SNR=9.3						
IPRE				Lg		02 28 06.4	
	16nm,0.3s,SNR=13						
SJPF	Ste Jean	0.56	72	*e*Pg	Pg	02 28 01.8	-1.3
SJPF				*e*Sg	Sg	02 28 08.2	-2.3
	31nm,0.3s						
OSSF	Osses	0.59	58	Pg	Pg	02 28 02.6	-1.2
OSSF				Sg	Sg	02 28 10.5	-1.1
LARF	Larrau	0.71	82	Pg	Pg	02 28 05.1	-1.0
LARF				Sg	Sg	02 28 13.7	-1.9
ORDF	Ordiarp	0.79	70	Pg	Pg	02 28 06.9	-0.8
ORDF				Sg	Sg	02 28 17.5	-0.7
EBIE	Bielsa	1.56	99	Pg	Pg	02 28 21.4	-1.6
	1.3nm,0.1s,SNR=32						
EBIE				Lg		02 28 42.9	
	6.3nm,0.3s,SNR=9.8						
ESAC	San Caprasio	1.64	138	Pg	Pg	02 28 21.0	-3.7
	20nm,0.3s,SNR=7.9						
ESAC				Lg		02 28 45.2	
	87nm,0.4s,SNR=7.9						
EPF	Esparros	1.68	86	*e*Pn	Pn	02 28 22.4	-0.4
EPF				*e*Pg	Pg	02 28 24.3	-1.2
EPF				*e*Sg	Sg	02 28 44.7	-3.2
	14nm,0.4s						
EGRA	Graus	1.83	113	Pg	Pg	02 28 24.8	-3.7
	1.1nm,0.3s,SNR=4.0						
EGRA				Lg		02 28 51.3	
	1.9nm,0.2s,SNR=5.0						
EARI	Arriondas	2.42	280	Lg		02 29 09.0	
	0.9nm,0.4s,SNR=7.9						
EPOB	Poblet	2.75	124	Pg	Pg	02 28 42.2	-4.8
	0.8nm,0.3s,SNR=7.9						
EPOB				Sn	Sn	02 29 09.7	-2.9
	0.7nm,0.2s,SNR=4.0						
EPOB				Lg		02 29 19.6	
	1.5nm,0.3s,SNR=7.9						
EMIR	Miracle	2.77	111	Pg	Pg	02 28 43.7	-3.5
	0.8nm,0.2s,SNR=7.9						
EMIR				Lg		02 29 20.6	
	3.6nm,0.3s,SNR=7.9						
LFF	La Frestale	2.78	43	*e*Pn	Pn	02 28 35.9	-2.7
EMOS	Mosqueruela	2.80	156	Pg	Pg	02 28 43.0	-4.9
	0.4nm,0.3s,SNR=4.0						
EMOS				Lg		02 29 20.9	
	1.2nm,0.4s,SNR=7.9						
GUD	Guadarrama	2.83	216	Lg		02 29 22.3	
	0.6nm,0.4s,SNR=4.0						
MTLF	Montolieu	3.07	81	*e*P	Pn	02 28 43.1	+0.4
MTLF				*e*Pg	Pg	02 28 49.1	-4.2
MTLF				*e*Sn	Sn	02 29 15.2	-5.5
	3.3nm,0.5s						
RJF	Les Rejaudoux	3.43	45	*e*Pn	Pn	02 28 44.8	-3.0
RJF				*e*Sn	Sn	02 29 23.1	-6.7
	1.8nm,0.3s						
CAF	Calviac	3.51	54	*e*Pn	Pn	02 28 46.1	-2.8
CAF				*e*Sn	Sn	02 29 24.4	-7.4
	1.0nm,0.2s						
LASF	Ste Croix	4.37	73	*e*Pn	Pn	02 28 58.4	-2.7
LASF				*e*Sn	Sn	02 29 45.6	-8.0
	1.0nm,0.3s						

ISK ***12*** *02:34:47.9, 38.24N×26.52E, h29^{km}, MD3.1*

CSEM ***12*** *02:34:49.6±0.3, 38.18N×26.67E, h30^{km}, MD3.1, Error ellipse: s-maj=7.4km s-min=1.8km az=110.0*

ATH ***12*** *02:34:50.7, 38.16N×26.78E, h52^{km}, MD3.1/3*

ISC 12 02:34:48.9±0.8**, 38.30N**±0.04×**26.48E**±0.07**, h27**^{km}±5^{km}**, n20, σ1^{s}48**/29**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.11	56	*i* P	Pb	02 34 53.9	0.0
URLA				*i* S	Sb	02 34 56.5	-0.7
BLCB	Balcova	0.45	79	*i* PG	Pb	02 34 58.6	+0.3
BLCB				*i* SG	Sb	02 35 04.5	-0.3
IZM	Izmir	0.62	81	*i* PG	Pb	02 35 01.4	+0.3
IZM				*i* SG	Sb	02 35 10.1	+0.6
KDAG	Bornova	0.63	80	*i* P	Pb	02 35 01.2	0.0
KDAG				*i* S	Sb	02 35 09.1	-0.6
SMG	Samos	0.65	154	*e*P	Pb	02 35 02.2	+0.6
SMG				*e*S	Sb	02 35 10.5	+0.1
PRK	Paraskevi	0.96	350	*e*P	Pb	02 35 11.5	+4.7
AYVA	Ayvalik	1.02	9	*i* P	Pn	02 35 12.4	+4.8
AYVA				*i* S	Sb	02 35 27.6	+6.7
AKS	Akhisar	1.20	61	*e*PN	Pn	02 35 10.0	-0.1
AYDN	Tasoluk	1.28	119	*i* P	Pn	02 35 13.0	+1.8
AYDN				*i* S	Sn	02 35 28.4	+0.9
BODT	Bodrum	1.40	152	*e*PN	Pn	02 35 11.1	-1.9
MLSB	Milas	1.44	134	*e*PN	Pn	02 35 11.4	-2.1
APE	Apeiranthos	1.44	212	*i* PN	Pn	02 35 11.6	-2.0
APE	Apeiranthos	1.44	212	*e*P	Pn	02 35 16.2	+2.6
BDRM	Kayabasi	1.45	148	*i* P	Pn	02 35 17.1	+3.4
BDRM				*i* S	Sn	02 35 34.0	+2.1
MANT	Manisa	1.65	83	*i* P	Pn	02 35 20.6	+4.1
MANT				*i* S	Sn	02 35 40.9	+3.9
BALB	Balikesir	1.73	39	*e*PN	Pn	02 35 16.7	-1.0
DAT	Datca	1.79	151	*e*PN	Pn	02 35 17.0	-1.6
YER	Yerkesik	1.84	129	*e*PN	Pn	02 35 17.5	-1.8
DST	Dursunbey	2.12	51	*e*PN	Pn	02 35 22.6	-0.8
FETY	Fethiye	2.66	128	*e*PN	Pn	02 35 29.6	-1.3

THR ***12*** *02:36:58.5±0.5, 31.33N×56.52E, h18^{km}±10^{km}, ML3.1*

CSEM ***12*** *02:36:58.9±0.1, 31.32N×56.53E, h18^{km}, ML3.4, Error ellipse: s-maj=5.8km s-min=2.0km az=48.0*

TEH ***12*** *02:37:00.4, 31.11N×56.40E, h20^{km}, Mn3.4*

ISC 12 02:36:58.2±0.7**, 31.27N**±0.07×**56.42E**±0.07**, h10**^{km}**, n21, σ0^{s}98**/24**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	0.80	294	Pg	Pg	02 37 12.7	-1.5
KRBR	Kerman	1.32	167	*e*Pg	Pg	02 37 23.8	-0.8
KRBR				AML	AML	02 37 46.8	
	comp=N,237nm,0.5s						
IMEH	Mehriz	1.55	275	Pn	Pn	02 37 27.0	+1.0
ICHK	Chekchek	1.97	300	Pn	Pn	02 37 33.4	+1.4
NASN	Na’in	3.42	297	*e*Pn	Pn	02 37 53.8	+1.0
NASN				*e*Sg	Sg	02 38 46.9	-5.3
NASN				AML	AML	02 38 48.5	
	comp=N,45nm,0.5s						
ZHSF	Zahedan	4.11	113	*e*Pn	Pn	02 38 02.0	-0.4
IFIR	Firoozkooh	5.33	326	Pn	Pn	02 38 19.3	-0.4
IFIR	Firoozkooh	5.33	326	Pn	Pn	02 38 19.7	0.0
IMOG	Moghan	5.40	26	Pn	Pn	02 38 21.2	+0.4
IVRN	Varamin	5.41	315	Pn	Pn	02 38 20.9	0.0
IVRN	Varamin	5.41	315	Sn	Sn	02 39 20.2	-3.8
IVRN	Varamin	5.41	315	Pn	Pn	02 38 21.0	+0.1
IVRN				Sn	Sn	02 39 22.5	-1.5
IPAY	Payeh	5.59	22	Pn	Pn	02 38 23.7	+0.3
IDMV	Damavand	5.65	321	Pn	Pn	02 38 24.0	-0.2
IDMV	Damavand	5.65	321	Sn	Sn	02 39 26.1	-3.8
IDMV	Damavand	5.65	321	Pn	Pn	02 38 24.5	+0.3
IDMV				Sn	Sn	02 39 27.2	-2.7
IQOM	Qom	5.73	310	Pn	Pn	02 38 25.6	+0.2
IQOM	Qom	5.73	310	Pn	Pn	02 38 25.4	0.0
IAFJ	Afjeh	6.03	321	Pn	Pn	02 38 29.5	-0.1
IAFJ	Afjeh	6.03	321	Pn	Pn	02 38 28.8	-0.8
IRAZ	Razeghan	6.82	309	Pn	Pn	02 38 42.1	+1.3

IDC ***12*** *03:08:36.4±1.2, 5.84N×126.27E, mb3.8/6, mb1 3.9/6, mb1mx3.8/17, mbtmp3.8/6, Error ellipse: s-maj=109.0km s-min=19.0km az=72.0*

ISC 12 03:08:39.1±1.0**, 6.1N**±0.1×**127.3E**±0.1**, h33**^{km}**, n7, σ1^{s}25**/8**, mb3.7**/6**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	2.34	293⇓	*e*P	P	03 09 20.1	+4.1
KCP				*e*S	S	03 09 44.1	+0.3
FITZ	Fitzroy Crossi	24.09	184	P	P	03 13 51.7	-1.1
	3.5nm,0.8s,mb3.8,baz=14,slow=11,SNR=4.5						
WRA	Warramunga Arr	26.79	165	P	P	03 14 18.6	+0.3
	0.6nm,0.4s,mb3.5,baz=341,slow=10,SNR=12						
STKA	Stephens Creek	40.15	161	P	P	03 16 15.1	+1.3
	0.6nm,0.3s,mb3.8,baz=341,slow=11,SNR=3.4						
SONM	Songino Array	45.26	340	P	P	03 16 56.6	+1.4
	0.4nm,0.8s,mb3.3,baz=149,slow=8.4,SNR=2.9						
MKAR	Makanchi Array	55.95	324	P	P	03 18 13.6	-2.8
	0.2nm,0.4s,mb3.5,baz=112,slow=7.2,SNR=6.1						
ARCES	ARCESS Array B	88.43	340	P	P	03 21 27.9	-0.8
	3.4nm,1.0s,mb4.5,baz=80,slow=5.5,SNR=6.4						

SOF ***12*** *03:28:50.9, 39.40N×24.65E, h10^{km}, MD2.9*

ATH ***12*** *03:28:51.2, 39.36N×24.81E, h32^{km}±2^{km}, MD3.1/4, ML3.3*

THE ***12*** *03:28:51.6, 39.21N×24.90E, h21^{km}, ML3.1*

CSEM ***12*** *03:28:51.8±0.1, 39.32N×24.78E, h25^{km}, ML3.3, Error ellipse: s-maj=2.1km s-min=1.4km az=143.0*

NEIC ***12*** *03:28:51.2, 39.36N×24.81E, h32^{km}, ML3.3(ATH), After ATH.*

SKO ***12*** *03:28:58.2, 38.82N×23.45E, h33^{km}*

ISC 12 03:28:50.2±0.8**, 39.29N**±0.04×**24.81E**±0.04**, h8**^{km}±5^{km}**, n29, σ1^{s}17**/38**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	Limnos Island	0.67	26	*e*PN	Pb	03 29 04.1	+0.5
LIA				*e*SN	Sb	03 29 13.2	+0.4
LOS	Limnos	0.67	18	*e*Pg	Pg	03 29 04.7	+1.0
LOS				*e*Sg	Sg	03 29 14.9	+2.2
AOS	Alonnisos	0.73	261	*e*Pg	Pg	03 29 05.1	+0.2
AOS				*e*Sg	Sg	03 29 16.1	+1.4
PAIG	Paliouri	1.08	306	*e*Pg	Pg	03 29 10.8	-0.9
PAIG				*e*Sg	Sg	03 29 26.8	+0.7
PRK	Paraskevi	1.14	92	*e*PN	Pn	03 29 12.4	+0.1
PRK				*e*SN	Sn	03 29 28.0	-0.1
OUR	Ouranopolis	1.22	329	*e*Pg	Pg	03 29 13.1	-1.5
NEO	Neokhori	1.23	271	*e*PB	Pb	03 29 13.2	0.0
NEO				*e*SN	Sn	03 29 31.1	+0.6
XOR	Xorichti	1.26	274	*e*Pg	Pg	03 29 13.7	-1.6
PTL	Penteli	1.45	211	*e*PB	Pb	03 29 17.4	+0.5
PLG	Polygyros	1.50	316	*e*PB	Pb	03 29 16.2	-1.7
LKR	Lokris	1.55	246	*e*PB	Pb	03 29 18.4	-0.3
ATH	Athens Observa	1.57	213	*e*PN	Pn	03 29 19.8	+1.3
ALN	Alexandroupoli	1.86	30	*e*Pb	Pb	03 29 21.7	-2.3
SOH	Sokhos	1.89	324	*e*Pn	Pn	03 29 22.9	-0.1
THE	Thessaloniki	1.95	314	*e*Pn	Pn	03 29 23.6	-0.3
LIT	Litokhoron	1.96	295	*e*Pn	Pn	03 29 24.1	0.0
NVR	Nevrokopi	2.18	341	*e*PB	Pb	03 29 27.0	-2.4
KNT	Kendrikon	2.37	323	*e*Pn	Pn	03 29 30.0	0.0
RZN	Rozhen	2.39	358	*i* P	Pn	03 29 30.0	-0.3
KDZ	Kurdzhali	2.40	11	P	Pn	03 29 32.0	+1.6
MMB	Musomiste	2.44	341	*i* P	Pn	03 29 29.7	-1.2
GRG	Griva	2.48	313	*e*Pn	Pn	03 29 31.8	+0.3
VAY	Valandovo	2.65	321	*e*Pn	Pn	03 29 36.6	+2.6
VAY				*e*Sn	Sn	03 30 08.6	+2.0
KKB	Krupnik	2.89	333	*i* P	Pn	03 29 36.3	-1.0
FNA	Florina	3.03	301	*e*Pn	Pn	03 29 39.3	0.0
BIA	Bitola	3.18	304	*e*Pn	Pn	03 29 41.0	-0.5
BIA				*e*Sn	Sn	03 30 12.8	-7.2
VTS	Vitosha	3.51	340	P	Pn	03 29 46.0	-0.2
OHR	Ohrid	3.57	302	*e*Pn	Pn	03 29 44.9	-2.1
OHR				*e*Sn	Sn	03 30 18.0	-12
SKO	Skopje	3.71	317	*e*Pn	Pn	03 29 51.0	+2.0

*MOS **12** 04:14:00.8±1.1,37.36N×141.94E,h33^{km},mb4.4/5,Error ellipse: s-maj=13.6km s-min=11.5km az=103.2*
*NIED **12** 04:14:00,37.30N×141.80E,h38^{km},Mw4.0 Best double couple: M$_0$1.3×10^{15} NP1:ϕ_s77°,δ75°,λ105°. NP2:ϕ_s210°,δ21°,λ46°.*
*NEIC **12** 04:14:01.5,37.33N×141.83E,h41^{km},mb4.5/2,MW4.0(NIED),After JMA.*
NEIC Reorded [1 JMA] in Fukushima and Miyagi Prefectures.
*JMA **12** 04:14:01.5±0.2,37.33N×141.83E,h41^{km}±4^{km},M4.4 Broadband fault plane solution: P waves. NP1:ϕ_s210°,δ30°,λ46°. NP2:ϕ_s78°,δ69°,λ112°. Principal axes: T Plg60°, Azm20°; N Plg20°, Azm250°; P Plg21°, Azm152°;*
JMA Felt I J1.
*IDC **12** 04:14:04.5±1.9,37.29N×142.00E,h54^{km}±18^{km},mb3.8/12,mb1 4.0/15,mb1mx3.9/24,mbtmp4.1/15,ML4.0/3 Error ellipse: s-maj=16.6km s-min=11.2km az=109.0*
ISC 12 04:14:01.6±0.9**,37.33N**±0.03×**141.84E**±0.07**,h41**^{km}±7^{km}**,n39,**σ**0^{s}95**/53**,mb4.1**/16**,3C-6D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	0.77	273	⇓P	P	04 14 16.0	-0.1
JFK				S	S	04 14 25.7	-0.9
ONAJ	**Iwakimizuishiy**	0.86	255	⇑P	P	04 14 17.2	-0.2
ONAJ				S	S	04 14 28.0	-0.9
JMM	**Marumori**	0.99	303	⇓P	P	04 14 19.1	-0.1
JMM				S	S	04 14 31.2	-1.0
JIO	**Ouri**	1.19	341	⇓P	P	04 14 21.7	-0.3
JIO				S	S	04 14 35.7	-1.5
JFT	**Otama**	1.21	279	⇓P	P	04 14 23.2	+0.9
JFT				S	S	04 14 37.6	-0.2
JHO	**Hitachi**	1.24	235	⇑P	P	04 14 22.0	-0.8
JHO				*e*S	S	04 14 36.6	-2.1
JOU	**Okura**	1.39	318	⇓P	P	04 14 25.3	+0.3
JOU				S	S	04 14 42.5	+0.1
JYS	**Shirataka**	1.66	303	⇑P	P	04 14 30.0	+1.2
JMK	**Ichinoseki**	1.69	343	⇓P	P	04 14 29.3	+0.1
JFY	**Yanaizu**	1.70	273	P	P	04 14 30.1	+0.7
JFY				S	S	04 14 51.6	+1.5
MJAR	**Matsushiro Arr**	3.01	256	P	P	04 14 49.2	+1.1
	3.8nm,0.3s,baz=64,slow=8.7,SNR=19						
MJAR				S	S	04 15 29.2	+5.9
	18nm,0.3s,baz=5.4,slow=39,SNR=8.8						
MAJO	**Matsushiro**	3.01	256	*e*P	P	04 14 49.9	+1.8
MAT	**Matsushiro**	3.01	256	P	P	04 14 49.5	+1.4
MAT				S	S	04 15 26.7	+3.4
MAT	**Matsushiro**	3.01	256	P	P	04 14 50.0	+1.9
MAT				*e*S	S	04 15 31.0	+7.7
JHJ	**Hachijo jima 2**	4.53	202	P	P	04 15 10.0	+0.5
	70nm,0.3s,baz=265,slow=20,SNR=3.6						
JHJ				S	S	04 16 01.3	-0.3
	95nm,0.3s,baz=244,slow=22,SNR=5.7						
ASAJ	**Asahikawa**	6.80	5	P	P	04 15 40.6	-0.9
	2.8nm,0.3s,baz=217,slow=7.8,SNR=12						
ASAJ				S	S	04 16 58.4	-0.2
	1.2nm,0.3s,baz=118,slow=32,SNR=2.9						
ASAJ	**Asahikawa**	6.80	5	P	P	04 15 40.6	-0.9
ASAJ				S	S	04 16 58.4	-0.2
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
BOD	**Bodaibo**	27.46	327	*e*P	P	04 19 45.0	-0.6
SONM	**Songino Array**	27.90	303	P	P	04 19 50.2	+0.4
	comp=N,1.5nm,0.4s,mb3.9,baz=100,slow=9.1,SNR=15						
ZAK	**Zakamensk**	30.35	308	*e*P	P	04 20 10.3	-1.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
TIXI	**Tiksi**	35.04	353	*e*P	P	04 20 54.4	+2.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ZAL	**Zalesovo**	41.98	312	P	P	04 21 50.3	+0.3
	comp=Z,1.4nm,0.3s,mb4.0,baz=11,slow=6.2,SNR=7.0						
MKAR	**Makanchi Array**	44.25	302	P	P	04 22 08.8	+0.1
	comp=Z,2.8nm,0.7s,mb4.1,baz=87,slow=9.8,SNR=34						
KURK	**Kurchatov**	46.02	308	*e*P	P	04 22 22.0	-0.7
	comp=Z,6.5nm,0.8s,mb4.6						
KURK	**Kurchatov**	46.02	308	*e*P	P	04 22 22.0	-0.7
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ILAR	**Eielson Array**	49.06	33	P	P	04 22 46.6	+0.4
	comp=Z,1.9nm,0.7s,mb4.2,baz=270,slow=6.8,SNR=23						
INK	**Inuvik**	53.97	27	P	P	04 23 23.7	+0.5
	comp=Z,1.2nm,0.7s,mb3.9,baz=212,slow=23,SNR=11						
INK	**Inuvik**	53.97	27	*e*P	P	04 23 23.4	+0.2
WRAB	**Tennant Creek**	57.39	188	*e*P	P	04 23 43.0	-5.5
	comp=Z,1.8nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	57.39	188	*e*P	P	04 23 43.0	-5.5
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WB2	**Warramunga Arr**	57.40	188	*e*P	P	04 23 47.0	-1.5
WRA	**Warramunga Arr**	57.40	188	P	P	04 23 47.1	-1.4
	comp=Z,2.1nm,0.5s,mb4.5,baz=6.7,slow=7.2,SNR=58						
ARCES	**ARCESS Array B**	63.84	339	P	P	04 24 31.1	-0.4
	comp=Z,2.5nm,0.9s,mb4.3,baz=56,slow=8.7,SNR=3.8						
FINES	**FINESS Array B**	68.71	332	P	P	04 25 02.3	-0.3
	comp=Z,2.0nm,0.8s,mb4.1,baz=27,slow=8.5,SNR=4.6						
NOA	**NORSAR Array B**	74.05	337	P	P	04 25 35.3	+0.9
	comp=Z,1.1nm,0.8s,mb3.9,baz=229,slow=11,SNR=3.1						
AKASG	**Malin Array Be**	74.27	322	P	P	04 25 35.5	-0.4
	comp=Z,0.4nm,0.4s,mb3.8,baz=46,slow=5.7,SNR=6.4						
GERES	**GERESS Array B**	82.64	328	P	P	04 26 22.0	+0.2
	comp=Z,0.6nm,0.8s,mb3.7,baz=56,slow=4.8,SNR=4.9						
GERES	**GERESS Array B**	82.64	328	P	P	04 26 22.0	+0.3
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	89.67	53	P	P	04 26 57.5	+0.9
	comp=Z,0.3nm,0.7s,mb3.8,baz=314,slow=2.5,SNR=4.4						

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*IDC **12** 04:31:43.2±4.7,35.58N×23.48E,h53^{km}±36^{km},mb3.7/4,mb1 3.6/5,mb1mx3.3/22,mbtmp3.8/5,ML3.0/1,Error ellipse: s-maj=82.0km s-min=28.9km az=29.0*
*ATH **12** 04:31:44.4,36.04N×23.94E,h18^{km}±5^{km},MD3.5/10,ML3.5*
*NEIC **12** 04:31:44.4,36.04N×23.94E,h18^{km},ML3.5(ATH),After ATH.*
*CSEM **12** 04:31:44.3±0.1,35.86N×23.87E,h70^{km}±1^{km},ML3.5,Error ellipse: s-maj=4.4km s-min=1.5km az=71.0*
*HLW **12** 04:31:45.2,36.02N×24.20E,h33^{km},Mb3.5*
ISC 12 04:31:44.6±0.4**,35.82N**±0.04×**23.78E**±0.06**,h67**^{km}±6^{km}**,n37,**σ**1^{s}22**/44**,mb3.7**/4**,4D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAM	**Vamos**	0.54	140	*e*PN	P	04 31 58.2	+0.6
VAM				*e*SN	S	04 32 06.7	-0.4
KYTH	**Kithira**	0.76	307	*e*PN	P	04 31 59.5	-0.5
GVD	**Gavdhos**	1.01	166	*e*P	P	04 32 07.0	+3.7
GVD	**Gavdhos**	1.01	166	*e*P	P	04 32 07.0	+3.7
IDI	**Anoyia**	1.05	120	P	P	04 32 04.0	+0.2
	39nm,0.3s,baz=314,slow=15,SNR=401						
IDI				S	S	04 32 18.7	+0.6
	185nm,0.3s,baz=93,slow=16,SNR=36						
IDI	**Anoyia**	1.05	120	P	P	04 32 04.0	+0.2
IDI				S	S	04 32 18.6	+0.5
VLI	**Veliai**	1.12	323	*e*PN	P	04 32 04.7	-0.1
VLI				*e*SN	S	04 32 17.6	-2.2
SANT	**Santorini**	1.47	68	*e*P	P	04 32 08.9	-0.7
SANT	**Santorini**	1.47	68	*e*P	P	04 32 08.9	-0.6
NPS	**Neapolis**	1.60	110	*e*PB	P	04 32 12.1	+0.8
XRY	**Khrisi**	1.83	121	*e*PN	P	04 32 17.0	+2.6
APE	**Apeiranthos**	1.88	48	*e*PN	P	04 32 14.4	-0.7
ITM	**Ithomi**	2.02	313	*e*PN	P	04 32 19.9	+2.9
ATH	**Athens Observa**	2.15	359	*e*PN	P	04 32 18.5	-0.3
PTL	**Penteli**	2.22	2	*e*PN	P	04 32 19.3	-0.6
KARP	**Karpathos**	2.77	95	*e*PN	P	04 32 27.2	-0.4
LKR	**Lokris**	2.89	348	*e*PN	P	04 32 29.0	-0.4
RLS	**Riolos of Patr**	2.90	321	*e*PB	P	04 32 33.4	+3.9
EVR	**Evrytania**	3.46	334	*e*PN	P	04 32 38.6	+1.2
ARG	**Arkhangelos**	3.55	82	*e*PN	P	04 32 39.5	+1.0
ARG				*e*SN	S	04 33 19.5	0.0
SLUM		4.48	164	P	P	04 32 52.5	+0.9
HMAT	**Matruh**	5.47	149	P	P	04 33 05.0	-0.3
HMAT				S	S	04 34 02.9	-4.8
SWA2		6.71	167	⇓*e*P	P	04 33 23.5	+0.9
SWA1		6.74	165	⇓*e*P	P	04 33 24.1	+1.0
SWA1				S	S	04 34 36.1	-3.0
AWBH		8.65	148	P	P	04 33 48.8	-0.5
BRTR	**Keskin Array B**	8.72	61	P	P	04 33 53.1	+2.9
	0.1nm,0.3s,baz=241,slow=16,SNR=4.4						
GLL	**Jalalah**	9.13	131	⇓*e*P	P	04 33 54.6	-1.3
HFRF	**Wahat Farafira**	9.47	155	⇓*e*P	P	04 34 00.2	-0.3
SUZ		9.67	126	P	P	04 34 00.8	-2.5
HNKL	**Nakhl**	10.39	122	P	P	04 34 10.3	-2.7
HHRG	**Al Ghardaqah**	11.96	133	P	P	04 34 33.2	-1.0
GERES	**GERESS Array B**	14.98	333	P	P	04 35 19.7	+6.1
	0.4nm,0.3s,baz=146,slow=12,SNR=19						
HFS	**Hagfors**	25.19	348	P	P	04 37 06.1	+1.1
	2.2nm,0.7s,mb3.7,baz=156,slow=11,SNR=5.7						
FINES	**FINESS Array B**	25.68	3	P	P	04 37 09.2	-0.5
	2.3nm,0.9s,mb3.6,baz=186,slow=13,SNR=3.3						
FINES	**FINESS Array B**	25.68	3	P	P	04 37 09.2	-0.5
ARCES	**ARCESS Array B**	33.78	1	P	P	04 38 20.6	-1.1
	1.3nm,0.8s,mb3.8,baz=188,slow=13,SNR=3.5						
MKAR	**Makanchi Array**	44.35	57	P	P	04 39 51.4	+1.7
	0.6nm,0.4s,mb3.7,baz=270,slow=8.1,SNR=19						

CASC 12 04:35:26.8±2.4**,13.33N**×**90.43W,h20**^{km}±20^{km}**,MD3.9,5C-7D,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	**Ixpaco**	0.84	359	⇓*e*P	Pb	04 35 43.3	+0.6
IXG				*e*S	Sb	04 35 54.9	+1.3
SBLS	**San Blas**	0.94	57	⇓*e*P	Pb	04 35 55.3	+11
SBLS				*e*S	Sb	04 36 08.0	+12
RTR	**El Retiro**	0.95	53	⇓*e*P	Pb	04 35 55.7	+11
RTR				*e*S	Sb	04 36 08.6	+12
RBDL	**Robledal**	1.07	43	⇑*e*P	Pb	04 36 01.5	+15
RBDL				*e*S	Sb	04 36 17.5	+17
PCG	**Pacaya**	1.08	351	*e*P	Pb	04 35 45.8	-0.8
PCG				*e*S	Sb	04 36 00.9	+0.7
BOQS	**Boqueron**	1.19	70	⇓*e*P	Pn	04 35 58.9	+10
BOQS				*e*S	Sb	04 36 14.3	+11
LFU	**La Fuente**	1.35	72	⇑*e*P	Pn	04 36 01.4	+11
LFU				*e*S	Sb	04 36 19.4	+11
LBRS	**Las Brisas**	1.41	73	⇑*e*P	Pn	04 36 02.3	+11
LBRS				*e*S	Sn	04 36 23.0	+13
LCBS	**La Ceiba**	1.45	77	⇓*e*P	Pn	04 36 02.5	+10
LCBS				*e*S	Sn	04 36 23.0	+12
MTO2	**Montecristo 2**	1.49	44	⇓*e*P	Pn	04 36 13.5	+21
MTO2				*e*S	Sn	04 36 33.6	+22
SNVI	**San Vicente**	1.58	79	⇑*e*P	Pn	04 36 04.3	+10
SNVI				*e*S	Sn	04 36 26.0	+12
BLLM	**Bellamira**	2.14	87	*e*P	Pn	04 36 12.7	+11
BLLM				*e*S	Sn	04 36 38.7	+10
LEON	**Leon**	3.57	104	*e*P	Pn	04 36 20.4	-2.0
TEL3	**Telica 3**	3.58	102	*e*P	Pn	04 36 21.4	-1.2
MIRN	**Miramar**	3.73	103	⇑*e*P	Pn	04 36 23.5	-1.3
COPN	**Copaltepe**	3.92	106	⇓*e*P	Pn	04 36 25.8	-1.6

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*IDC **12** 04:51:55.1±0.6,9.68N×126.36E,mb4.3/13,mb1 4.3/13,mb1mx4.2/21,mbtmp4.3/13,MS3.4/2,Ms1 3.4/2,ms1mx3.0/22,Error ellipse: s-maj=36.4km s-min=13.2km az=70.0*
*MOS **12** 04:51:58.1±0.9,9.68N×126.45E,h33^{km},mb4.6/4,Error ellipse: s-maj=34.2km s-min=12.7km az=105.7*
*NEIC **12** 04:51:58.0±6.1,9.70N×126.40E,h19^{km}±37^{km},mb4.5/5,Error ellipse: s-maj=18.4km s-min=7.2km az=70.0*
*MAN **12** 04:52:00.7,9.60N×126.35E,h12^{km},mb5.2,ML4.2,MS4.4*
ISC 12 04:52:00.8±0.8**,9.62N**±0.04×**126.50E**±0.07**,h56**^{km}±7^{km}**,n51,**σ**0^{s}95**/55**,mb4.3**/22**,MS3.3**/2**,2C-4D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	1.01	279	*e*P	P	04 52 16.9	-2.1
SCPH				*e*S	S	04 52 28.6	-3.8
BUTP	**Butuan**	1.08	233	*e*P	P	04 52 18.6	-1.4
MSLP	**Maasin**	1.69	288	*e*P	P	04 52 28.9	+0.3
CGP	**Cagayan de Oro**	2.12	237	⇓*i*P	P	04 52 33.5	-1.1
CGP				*e*S	S	04 52 59.5	-0.3
PLP	**Palo**	2.14	316	*e*P	P	04 52 34.9	0.0
PLP				*e*S	S	04 53 02.0	+1.8
BESP	**Borongan**	2.23	332	*e*P	P	04 52 37.1	+1.0
BUKP	**Musuan**	2.24	219	*e*P	P	04 52 36.1	-0.2
BUKP				*e*S	S	04 53 08.2	+5.5
LLP	**Lapu-Lapu**	2.59	286	⇓*e*P	P	04 52 42.0	+0.8
LLP				*e*S	S	04 53 11.3	-0.3
TBP	**Tagbilaran**	2.60	272	*e*P	P	04 52 40.7	-0.7
TBP				*i* S	S	04 53 07.2	-4.7
MATI	**Mati**	2.67	185	*e*P	P	04 52 43.2	+0.8
DAV	**Davao City (W)**	2.69	200	P	P	04 52 40.7	-2.0
KCP	**Kidapawan**	2.94	208	⇓*e*P	P	04 52 48.0	+1.6
SNPH	**Sibulan**	3.23	265	⇑*e*P	P	04 52 50.5	+0.2
DCPH	**Dipolog City**	3.27	252	⇑*e*P	P	04 52 50.5	-0.4
DCPH				*i* S	S	04 53 30.5	+1.6
CNP	**Catarman**	3.39	328	*e*P	P	04 52 52.3	-0.2
PAGZ	**Pagadian**	3.55	240	*e*P	P	04 52 55.2	+0.4
GUIM	**Jordan**	3.98	285	*e*P	P	04 53 00.6	-0.2
RCP	**Roxas**	4.16	298	⇓*i*P	P	04 53 04.5	+1.1
IPIL	**Ipil**	4.29	245	*e*P	P	04 53 05.4	+0.2
PVCP	**Virac**	4.57	330	*e*P	P	04 53 10.1	+0.9
FITZ	**Fitzroy Crossi**	27.56	182	P	P	04 57 45.0	+0.1
	28nm,0.6s,mb5.1,baz=15,slow=7.5,SNR=43						
WRAB	**Tennant Creek**	30.37	165	P	P	04 58 10.1	+0.2
WRA	**Warramunga Arr**	30.38	165	P	P	04 58 08.5	-1.4
	1.4nm,0.8s,mb3.8,baz=347,slow=9.0,SNR=16						
CTA	**Charters Tower**	35.35	147	LR	LR	05 12 51.3	
	comp=Z,65nm,21.7s,MS3.4,baz=50,slow=35						
HNR	**Honiara**	38.30	119	LR	LR	05 12 28.1	
	comp=Z,52nm,21.9s,MS3.3,baz=262,slow=32						
FORT	**Forrest**	40.20	178	*e*P	P	04 59 34.6	+1.1
	23nm,0.5s,mb5.2						
SONM	**Songino Array**	41.70	340	P	P	04 59 45.7	0.0
	0.4nm,0.7s,mb3.1,baz=150,slow=12,SNR=2.7						
KLBR	**Kellerberrin**	41.82	191	*e*P	P	04 59 47.7	+0.7
	7.3nm,0.8s,mb4.4						
MUN	**Mundaring**	42.52	193	*e*P	P	04 59 53.6	+0.9
NWAO	**Narrogin (SRO)**	43.22	191	P	P	04 59 58.4	0.0
	19nm,0.7s,mb4.9,baz=10,slow=6.7,SNR=15						
STKA	**Stephens Creek**	43.72	161	P	P	05 00 02.7	+0.2
	1.8nm,0.4s,mb4.2,baz=6.3,slow=5.7,SNR=14						
DZM	**Mont Dzumac**	50.27	129	P	P	05 00 54.8	+0.9
	4.5nm,0.6s,mb4.7,baz=152,slow=17,SNR=10.0						
MKAR	**Makanchi Array**	52.68	323	P	P	05 01 10.6	-1.2
	1.2nm,0.6s,mb4.0,baz=123,slow=8.1,SNR=17						
KURK	**Kurchatov**	56.73	326	*e*P	P	05 01 39.4	-1.8
	2.2nm,0.8s,mb4.2						
KURK	**Kurchatov**	56.73	326	*e*P	P	05 01 39.4	-1.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
TIXI	**Tiksi**	61.99	1	*e*P	P	05 02 15.9	-1.3
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
BVAR	**Borovoye Array**	62.32	326	P	P	05 02 18.5	-1.1
	comp=Z,1.4nm,0.9s,mb4.1,baz=101,slow=7.6,SNR=5.6						
AKTO	**Aktyubinsk**	68.96	320	P	P	05 03 00.8	-1.3
	comp=Z,1.3nm,0.6s,mb4.0,baz=97,slow=5.9,SNR=3.8						
ILAR	**Eielson Array**	79.92	26	P	P	05 04 05.3	+0.2
	comp=Z,0.6nm,0.8s,mb3.6,baz=238,slow=5.9,SNR=4.2						
JOF	**Joensuu**	83.87	333	*e*p	P	05 04 25.4	-0.1
	comp=Z,1.9nm,0.6s,mb4.4						
ARCES	**ARCESS Array B**	84.88	340	P	P	05 04 31.3	+0.9
	comp=Z,1.4nm,0.6s,mb4.3,baz=82,slow=6.9,SNR=13						
BRTR	**Keskin Array B**	86.11	309	P	P	05 04 36.4	-0.8
	comp=Z,0.3nm,0.5s,mb3.8,baz=117,slow=3.2,SNR=3.9						
KAF	**Kangasniemi**	86.30	332	*e*p	P	05 04 37.6	0.0
	comp=Z,3.0nm,0.6s,mb4.7						
KAF	**Kangasniemi**	86.30	332	*e*P	P	05 04 37.6	0.0
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.7						
FINES	**FINESS Array B**	86.56	332	P	P	05 04 39.3	+0.4
	comp=Z,1.5nm,0.4s,mb4.5,baz=68,slow=4.6,SNR=29						
VNDA	**Vanda**	89.26	173	*e*P	P	05 04 52.2	+0.7
	comp=Z,0.9nm,0.7s,mb4.2						
VNDA	**Vanda**	89.26	173	*e*P	P	05 04 52.2	+0.7
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KMBO	**Kilima Mbogo**	89.44	269	P	P	05 04 54.7	+0.9
	comp=Z,3.3nm,1.2s,mb4.5,baz=74,slow=8.7,SNR=4.4						
KMBO	**Kilima Mbogo**	89.44	269	P	P	05 04 54.7	+0.9
HFS	**Hagfors**	92.72	332	P	P	05 05 07.6	-0.3
	comp=Z,1.9nm,0.6s,mb4.7,baz=90,slow=1.4,SNR=8.1						
PLCA	**Paso Flores**	145.53	157	PKPbc	PKPbc	05 11 36.6	+2.9
	comp=Z,3.6nm,0.8s,baz=215,slow=6.0,SNR=11						

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*ATH **12** 05:02:33.4,36.19N×21.58E,h5^{km},MD3.6/4*
*HLW **12** 05:02:33.5,36.01N×21.69E,h33^{km},Mb3.5*
*NEIC **12** 05:02:33.4,36.19N×21.58E,h5^{km},MD3.6(ATH),After ATH.*
*CSEM **12** 05:02:38.8±1.0,36.42N×21.99E,h2^{km},MD3.6,Error ellipse: s-maj=35.6km s-min=5.5km az=50.0*
*SKO **12** 05:02:48.1,36.58N×20.12E,h111^{km}*
ISC 12 05:02:26.4±1.1**,35.95N**±0.05×**21.2E**±0.1**,h10**^{km}**,n18,**σ**1^{s}19**/26**,2D,Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	**Ithomi**	1.36	25	*e*PG	Pg	05 02 52.7	-0.9
KYTH	**Kithira**	1.52	77	*e*PN	Pn	05 02 54.9	+1.0
VLI	**Veliai**	1.60	61	*e*PN	Pn	05 02 55.8	+0.8
VLI				*e*SB	Sb	05 03 15.0	-0.8
RLS	**Riolos of Patr**	2.12	6	*e*PN	Pg	05 03 10.9	+2.2
VAM	**Vamos**	2.50	102	*e*PG	Pg	05 03 16.8	+0.4
LKR	**Lokris**	3.06	28	*e*PN	Pn	05 03 17.0	+1.3
BIA	**Bitola**	5.06	1	*e*Pn	Pb	05 03 52.0	-2.8
BIA				*e*Sn	Sn	05 04 33.4	-10
BIA	**Bitola**	5.06	1	*e*Pn	Pb	05 03 52.0	-2.9
OHR	**Ohrid**	5.16	357	*e*Pn	Pn	05 03 51.9	+6.2
OHR				*e*Sn	Sn	05 04 33.4	-13
OHR	**Ohrid**	5.16	357	*e*Pn	Pn	05 03 51.9	+6.2
OHR				*e*Sn	Sn	05 04 33.4	-13
VAY	**Valandovo**	5.47	11	*e*Pn	Pn	05 04 00.7	+11
VAY				*e*Sn	Sn	05 04 45.8	-7.9
SLUM		5.56	142	P	Pn	05 03 51.9	+0.6
HMAT	**Matruh**	6.91	133	⇓*e*P	Pn	05 04 09.8	-0.4
HMAT				S	Sn	05 05 19.9	-10
SWA2		7.59	151	P	Pn	05 04 20.6	+0.8
SWA1		7.68	149	P	Pn	05 04 21.4	+0.4
SWA1				S	Sn	05 05 40.9	-8.1
SWA1		7.68	149	P	Pn	05 04 21.4	+0.4
SWA1				S	Sn	05 05 40.8	-8.1
AWBH		10.02	137	P	P	05 04 52.0	-1.6
HFRF	**Wahat Farafira**	10.66	143	⇓*e*P	P	05 05 01.2	-1.1

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*IDC **12** 05:19:41.7±1.3,38.35N×21.93E,mb3.7/9,mb1 3.9/12,mb1mx3.8/25,mbtmp3.7/12,ML3.5/3,Error ellipse: s-maj=26.0km s-min=19.1km az=37.0*
*ATH **12** 05:19:42.8,38.34N×21.97E,h6^{km}±3^{km},MD3.6/8,ML3.5*
*NEIC **12** 05:19:42.8,38.34N×21.97E,h6^{km},ML3.5(ATH),After ATH.*
*CSEM **12** 05:19:42.5±0.1,38.34N×21.94E,h2^{km},ML3.5,Error ellipse: s-maj=1.8km s-min=1.6km az=97.0*
*THE **12** 05:19:43.9,38.37N×22.14E,h2^{km}*
*SKO **12** 05:19:53.0,39.08N×22.42E*
ISC 12 05:19:41.6±0.6**,38.33N**±0.02×**21.98E**±0.03**,h3**^{km}±4^{km}**,n70,**σ**1^{s}33**/83**,mb3.7**/8**,2C,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	0.48	236	⇑*i*PB	Pg	05 19 51.8	+0.5
EVR	**Evrytania**	0.60	347	⇑*i*PB	Pg	05 19 53.2	-0.4
EVR				*e*SB	Sg	05 20 03.2	+1.5
AGG	**Agios Georgios**	0.75	22	*e*Pg	Pg	05 19 55.6	-0.9
AGG				*e*Sg	Sg	05 20 06.8	+0.3
LKR	**Lokris**	0.86	68	*e*PB	Pb	05 19 58.6	-0.3
LKR				*e*SB	Sb	05 20 12.4	+1.8
MGER	**Gerania Oros**	1.07	108	*e*PN	Pn	05 20 04.9	+1.6
VLS	**Valsamata**	1.10	263	*e*PB	Pb	05 20 02.3	-0.7
VLS				*e*SB	Sb	05 20 20.4	+2.8
ITM	**Ithomi**	1.15	182	*e*PG	Pg	05 20 04.0	-0.5
NAIG	**Nisos Aigina**	1.32	115	*e*PB	Pb	05 20 09.0	+2.3
NEO	**Neokhori**	1.38	45	*e*PG	Pg	05 20 08.1	-1.1
MPAR	**Parnis Oros**	1.40	97	*e*PB	Pb	05 20 09.1	+1.1
XOR	**Xorichti**	1.41	42	*e*Pg	Pg	05 20 08.6	-1.1
ATH	**Athens Observa**	1.42	104	*e*PG	Pg	05 20 09.1	-0.8
ATH				*e*SB	Sb	05 20 27.7	+1.0
PTL	**Penteli**	1.51	100	*e*PB	Pb	05 20 10.6	+0.6
JAN	**Janina**	1.59	327	*e*PB	Pb	05 20 13.0	+1.7
AOS	**Alonnisos**	1.71	60	*e*Pg	Pg	05 20 12.3	-3.5
IGT	**Igoumenitsa**	1.76	314	*e*Pb	Pb	05 20 15.8	+1.6
VLI	**Veliai**	1.78	154	*e*PG	Pg	05 20 15.8	-1.3
VLI				*e*SN	Sn	05 20 42.1	+5.2
LIT	**Litokhoron**	1.81	13	*e*Pb	Pb	05 20 14.7	-0.5
LIT	**Litokhoron**	1.81	13	*e*Pb	Pb	05 20 14.6	-0.5
KZN	**Kozani**	1.98	355	*e*PN	Pn	05 20 18.0	+1.6
KZN				*e*SN	Sn	05 20 44.9	+2.8
PAIG	**Paliouri**	2.08	39	*e*Pb	Pb	05 20 17.0	-2.6
LSK	**Leskovik**	2.11	330	*e*Pn	Pn	05 20 23.9	+5.7
PLG	**Polygyros**	2.34	29	*e*PN	Pn	05 20 24.0	+2.5
FNA	**Florina**	2.50	349	*e*Pn	Pn	05 20 24.6	+0.9
FNA	**Florina**	2.50	349	*e*Pn	Pn	05 20 24.6	+0.8
OUR	**Ouranopolis**	2.54	37	*e*Pn	Pn	05 20 23.9	-0.5
GRG	**Griva**	2.65	7	*e*Pn	Pn	05 20 25.9	0.0
SOH	**Sokhos**	2.71	23	*e*Pn	Pn	05 20 27.1	+0.3
SOH				*e*Sn	Sn	05 20 59.8	-0.7
BIA	**Bitola**	2.73	350	*e*Pn	Pn	05 20 28.5	+1.4
BIA				*e*Sn	Sn	05 20 56.5	-4.6
KNT	**Kendrikon**	2.92	14	*e*Pn	Pn	05 20 29.8	+0.1
OHR	**Ohrid**	2.92	342	*e*Pn	Pn	05 20 33.4	+3.5
OHR				*e*Sn	Sn	05 21 02.9	-3.1
VAY	**Valandovo**	3.02	8	*e*Pn	Pn	05 20 31.0	-0.3
VAY				*e*Sn	Sn	05 20 59.4	-9.1
SKO	**Skopje**	3.66	354	*e*Pn	Pn	05 20 42.2	+1.9
SKO	**Skopje**	3.66	354	*e*Pn	Pn	05 20 42.2	+1.8
IDI	**Anoyia**	3.83	142	Pn	Pn	05 20 44.0	+1.3
	2.1nm,0.3s,baz=342,slow=11,SNR=13						
IDI				Sn	Sn	05 21 29.0	+0.1
	3.3nm,0.3s,baz=275,slow=23,SNR=6.2						
KDAG	**Bornova**	4.16	87	*i* P	Pn	05 20 46.8	-0.6
TIP	**Timpagrande**	4.17	283	*e*P	Pn	05 20 46.1	-1.5
TIP	**Timpagrande**	4.17	283	*e*P	Pn	05 20 46.1	-1.4
SLCN	**Sala Consilina**	5.33	295	Pn	Pn	05 21 05.2	+1.2
NVSS	**Nova Varos 2**	5.45	342	*i* Pn	Pg	05 21 21.9	-8.6
DNZL	**Cakiroluk**	5.62	94	*i* P	Pn	05 21 08.7	+0.6
GRUS	**Gruza**	5.64	351	*e*Pn	Pn	05 21 08.9	+0.6
DIVS	**Divcibare**	5.96	346	*i* Pn	Pn	05 21 13.5	+0.7
DIVS				Sg	Sn	05 22 20.0	-2.5
TKTP	**Tekketepe**	6.58	90	*i* P	Pn	05 21 21.5	-0.1
SGG	**Gregorio Mates**	6.59	300	Pn	Pn	05 21 23.4	+1.5
CII	**Carovilli**	6.79	302	P	Pn	05 21 22.6	-2.1
	20nm,0.8s						
USI	**Ustica**	6.91	276	Pn	Pn	05 21 25.1	-1.2
	19nm,0.3s						
ESKT	**Eskisehir**	7.02	77	*i* P	Pn	05 21 22.9	-5.0
PTQR	**Pietraquaria**	7.53	302	Pn	Pn	05 21 36.6	+1.6
MLR	**Muntele Rosu**	7.74	21	Pn	Pn	05 21 38.1	+0.2
	0.3nm,0.3s,baz=198,slow=6.1,SNR=7.0						
NRCA	**Norcia**	8.11	307	Pn	P	05 21 42.4	-0.6
SGKT	**Sivrigoynuk**	8.11	71	*i* P	P	05 21 38.5	-4.6
BR131	**Keskin Array S**	9.18	78	P	P	05 21 56.1	-1.9
	1.0nm,0.5s						
BR131	**Keskin Array S**	9.18	78	P	P	05 21 56.1	-1.9
	1.0nm,0.5s						
BRTR	**Keskin Array B**	9.18	78	Pn	P	05 21 57.9	-0.1
	0.3nm,0.3s,baz=263,slow=12,SNR=10						
BRTR	**Keskin Array B**	9.18	78	Pn	P	05 21 57.8	-0.2
KECS	**Kecovo**	10.21	354	*e*	P	05 22 18.9	+6.9
ESDC	**Sonseca Array**	20.19	282	P	P	05 24 18.9	-1.2
	0.3nm,0.5s,baz=80,slow=11,SNR=5.4						
HFS	**Hagfors**	22.45	349	P	P	05 24 41.4	-1.5
	2.7nm,0.7s,mb3.8,baz=164,slow=11,SNR=7.3						
NB2	**NORSAR Subarra**	23.71	347	P	P	05 24 54.0	-1.2
	1.5nm,0.8s,mb3.5,baz=159,slow=9.3						
NOA	**NORSAR Array B**	23.71	347	P	P	05 24 53.8	-1.3
	1.6nm,0.8s,mb3.5,baz=172,slow=12,SNR=3.6						
EKA	**Eskdalemuir Ar**	23.98	323	P	P	05 24 57.0	-0.8
	2.5nm,0.8s,mb3.7,baz=131,slow=7.7,SNR=4.2						
EKA	**Eskdalemuir Ar**	23.98	323	P	P	05 24 57.0	-0.8
ARCES	**ARCESS Array B**	31.33	2	P	P	05 26 02.9	-2.1
	1.7nm,0.9s,mb3.9,baz=198,slow=8.6,SNR=3.8						
ARCES	**ARCESS Array B**	31.33	2	P	P	05 26 02.8	-2.1
MKAR	**Makanchi Array**	44.24	59	P	P	05 27 52.1	-1.6
	1.5nm,0.5s,mb4.0,baz=277,slow=6.8,SNR=17						
SONM	**Songino Array**	59.48	51	P	P	05 29 45.0	-2.9
	0.7nm,0.7s,mb3.8,baz=283,slow=7.7,SNR=5.4						
ILAR	**Eielson Array**	76.86	355	P	P	05 31 36.6	+0.7
	0.4nm,0.5s,mb3.6,baz=284,slow=6.9,SNR=7.2						
PDAR	**Pinedale Array**	88.06	327	P	P	05 32 32.5	-1.8
	0.3nm,0.7s,mb3.7,baz=63,slow=6.6,SNR=3.7						
PDAR	**Pinedale Array**	88.06	327	P	P	05 32 32.5	-1.8

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*IDC **12** 05:30:06.5±4.2,37.31N×139.86E,h124^{km}±30^{km},mb3.3/4,mb1 3.4/4,mb1mx3.2/20,mbtmp3.6/4,Error ellipse: s-maj=54.8km s-min=24.4km az=71.0*
*JMA **12** 05:30:07.4±0.1,37.26N×139.73E,h122^{km}±1^{km},M2.8*

ISC 12 05:30:06.2±0.6**, 37.28N**±0.05×**139.73E**±0.07**, h130**^{km}±4^{km}**,**
n19, σ**0**^{s}**57**/31**, mb3.4**/4**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFY	**Yanaizu**	0.13	351	P	P	05 30 24.3	+0.3
JFY				S	S	05 30 36.8	-0.7
JSB	**Shiboa**	0.34	154	P	P	05 30 25.1	+0.5
JSB				*e*S	S	05 30 38.3	-0.3
JFT	**Otama**	0.54	63	P	P	05 30 26.1	+0.5
JFT				S	S	05 30 40.2	-0.2
JHK	**Hiroka**	0.57	267	P	P	05 30 26.0	+0.2
JHK				S	S	05 30 40.3	-0.5
JNS	**Sasagawa**	0.63	329	P	P	05 30 26.5	+0.3
JNS				*e*S	S	05 30 40.9	-0.6
JKT	**Katashina**	0.64	217	P	P	05 30 26.6	+0.3
JKT				*e*S	S	05 30 40.8	-0.8
JIZZ	**Izumozaki**	0.85	288	P	P	05 30 29.0	+1.1
JAG	**Ashikaga**	0.88	195	P	P	05 30 28.5	+0.4
JMM	**Marumori**	1.03	55	P	P	05 30 30.0	+0.4
JMM				*e*S	S	05 30 47.3	-0.1
JAW	**Awa shima**	1.24	342	P	P	05 30 32.4	+0.6
JSD	**Sado**	1.39	304	P	P	05 30 33.6	+0.1
JSD				S	S	05 30 53.8	-0.6
JRY	**Ryogami san**	1.42	208	P	P	05 30 34.1	+0.3
JRY				*e*S	S	05 30 54.2	-0.7
MJAR	**Matsushiro Arr**	1.42	239	P	P	05 30 34.2	+0.4
	21nm,0.3s,baz=48,slow=9.8,SNR=164						
MJAR				S	S	05 30 55.6	+0.7
	3.3nm,0.3s,baz=39,slow=18,SNR=15						
MAT	**Matsushiro**	1.42	240	P	P	05 30 34.2	+0.4
MAT				S	S	05 30 55.6	+0.6
MAT	**Matsushiro**	1.42	240	P	P	05 30 34.3	+0.5
MAT				*e*S	S	05 30 54.2	-0.8
SONM	**Songino Array**	26.54	304	P	P	05 35 33.6	+0.3
	1.4nm,0.8s,mb3.6,baz=111,slow=9.2,SNR=9.0						
MKAR	**Makanchi Array**	42.85	302	P	P	05 37 52.6	0.0
	0.1nm,0.4s,mb2.8,baz=88,slow=12,SNR=4.1						
WRA	**Warramunga Arr**	57.13	186	P	P	05 39 40.6	-1.0
	0.3nm,0.4s,mb3.5,baz=3.0,slow=7.4,SNR=5.8						
ARCES	**ARCESS Array B**	63.29	339	P	P	05 40 21.5	-1.3
	1.0nm,0.7s,mb3.7,baz=60,slow=7.3,SNR=3.6						

LDG ***12*** *06:02:37.8±0.2, 20.58S×175.56E, h10*^{km}*, Mb4.8/2, Ms5.0/10, Error ellipse: s-maj=22.0km s-min=7.1km az=158.0*

BJI ***12*** *06:02:38.8, 21.25S×176.56E, h41*^{km}*, mB5.3, mb4.9, Ms5.2, Msz4.9*

HRVD ***12*** *06:02:38.3±0.2, 21.34S×175.81E, h12*^{km}*, MW5.4/72, Centroid moment Tensor Solution. LP body waves: s59,c123;Mantle waves: s72,c160; Half duration: 1*^{s}*3 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*-0.27±.02;* $M_{\theta\theta}$*-1.09±.02;* $M_{\phi\phi}$*1.35±.03;* $M_{r\theta}$*-0.03±.06;* $M_{\theta\phi}$*-1.12±.02;* $M_{\phi r}$*0.28±.06; Best double couple:* M_0*1.676×10*^{17} *NP1:* ϕ_s*293°, δ82°, λ177°. NP2:*ϕ_s*24°, δ87°, λ8°. Principal axes: T 1.821, Plg7°, Azm249°; N -.295, Plg82°, Azm43°; P -1.531, Plg4°, Azm158°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***12*** *06:02:38.3±0.2, 21.35S×175.87E, mb5.2/34, MS5.0/112 Error ellipse: s-maj=9.0km s-min=5.9km az=148.0*

MOS ***12*** *06:02:39.4±1.6, 21.41S×175.81E, h33*^{km}*, mb5.5/17, MS5.0/19, Error ellipse: s-maj=13.5km s-min=10.8km az=68.1*

IDC ***12*** *06:02:43.0±4.5, 21.28S×175.71E, h54*^{km}*±40*^{km}*, mb4.3/12, mb1 4.6/14, mb1mx4.6/16, mbtmp4.6/14, ML4.3/2, MS4.8/16, Ms1 4.8/16, ms1mx4.7/21, Error ellipse: s-maj=22.8km s-min=20.1km az=59.0*

CSEM ***12*** *06:02:45.8, 20.93S×174.66E, h33*^{km}*, mb5.6*

ISC 12 06:02:36.9±0.2**, 21.36S**±0.06×**175.81E**±0.05**, h20**^{km}**,**
h20^{km}±1.4^{km}**:pP-P, n311,** σ**1**^{s}**00**/148**, mb5.0**/53**, MS5.0**/128**,**
14C-14D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	8.74	264	P	P	06 04 45.8	+0.5
	2.2nm,0.3s,baz=94,slow=14,SNR=77						
RAO	**Raoul Island**	9.69	145	LR	LR	06 07 52.1	
	comp=Z,13µm,21.9s,baz=142,slow=32						
AFI	**Afiamalu**	13.95	60	P	P	06 05 48.7	-7.4
	40nm,0.8s						
AFI	**Afiamalu**	13.95	60	P	P	06 05 48.7	-7.3
AFI				pmax	pmax		
	comp=Z,40nm,0.8s						
URZ	**Urewera**	16.88	176	P	P	06 06 37.9	+4.2
	comp=Z,1.4nm,0.3s,baz=38,slow=5.7,SNR=13						
URZ				LR	LR	06 11 28.7	
	comp=Z,6µm,18.1s,baz=257,slow=31						
RPZ	**Rata Peaks**	22.64	189	P	P	06 07 39.1	+1.1
	comp=Z,6.6nm,0.4s,mb4.4,baz=33,slow=5.4,SNR=5.1						
RPZ				LR	LR	06 15 42.0	
	comp=Z,4µm,19.0s,MS4.9,baz=130,slow=34						
RAR	**Rarotonga**	22.75	94	LR	LR	06 14 47.5	
	comp=Z,744nm,18.4s,MS4.2,baz=267,slow=32						
CTA	**Charters Tower**	27.66	267	*e*P	P	06 08 25.1	-0.5
	comp=Z,17nm,1.8s,mb4.4						
CTA				*e*S	S	06 13 07.5	+2.7
CTA	**Charters Tower**	27.66	267	P	P	06 08 25.4	-0.2
	comp=Z,15nm,0.9s,mb4.6,baz=96,slow=10,SNR=20						
CTA				LR	LR	06 18 04.8	
	comp=Z,5µm,21.7s,MS5.1,baz=90,slow=33						
CTA	**Charters Tower**	27.66	267	*e*P	P	06 08 25.1	-0.5
CTA				*e*S	S	06 13 07.5	+2.7
CTA				pmax	pmax		
	comp=Z,17nm,1.8s						
KWAJ	**Kwajalein Atol**	31.04	344	PFAKE		06 09 10.0	+14
KWAJ				LR	LR		
	comp=Z,512nm,20.0s,MS4.2						
TAU	**Tasmania Unive**	32.05	221	PFAKE		06 09 20.0	+15
TAU				LR	LR		
	comp=Z,508nm,21.0s,MS4.2						
TBI	**Tubuai**	32.13	100	*e*S	S	06 14 10.6	-5.1
TBI				*e*LQ		06 16 01.8	
TBI				*e*LR	LR	06 17 13.3	
	comp=Z,2µm,30.2s,baz=270						
STKA	**Stephens Creek**	32.21	244	*e*P	P	06 09 06.3	+0.2
	comp=Z,7.4nm,0.6s,mb4.7						
STKA				*e*S	S	06 14 27.1	+10
STKA	**Stephens Creek**	32.21	244	P	P	06 09 06.3	+0.3
	comp=Z,8.9nm,0.6s,mb4.8,baz=94,slow=11,SNR=34						
STKA				LR	LR	06 21 14.1	
	comp=Z,4µm,18.2s,MS5.1,baz=76,slow=34						
PPT	**Papeete**	32.81	90	*e*S	S	06 14 21.7	-4.6
PPT				*e*LQ		06 16 16.2	
PPT				*e*LR	LR	06 17 33.0	
	comp=Z,5µm,28.5s,baz=255						
PPT	**Papeete**	32.81	90	LR	LR	06 19 04.7	
	comp=Z,1µm,19.4s,MS4.5,baz=258,slow=30						
WB2	**Warramunga Arr**	38.74	264	⇑*i*P	P	06 10 00.3	-1.5
WB2				*e*PP	PP	06 11 37.6	+3.2
WB2				*e*S	S	06 15 58.0	+0.5
WRAB	**Tennant Creek**	38.75	264	*e*P	P	06 10 00.1	-1.7
	comp=Z,74nm,1.1s,mb5.3						
WRAB				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
WRAB	**Tennant Creek**	38.75	264	⇑*i*P	P	06 10 00.3	-1.6
WRA	**Warramunga Arr**	38.76	264	P	P	06 10 00.2	-1.7
	comp=Z,19nm,0.9s,mb4.8,baz=107,slow=7.3,SNR=64						
KAKA	**Kakadu**	42.24	275	*e*P	P	06 10 48.0	+17
	comp=Z,22nm,1.1s,mb4.7						
FORT	**Forrest**	43.63	247	*e*P	P	06 10 41.9	-0.1
	comp=Z,21nm,0.8s,mb4.9						
TAOE	**Nuku Hiva Isla**	44.15	81	*e*S	S	06 17 13.2	-4.5
TAOE				*e*LQ		06 20 44.7	
TAOE				*e*LR	LR	06 22 45.6	
	comp=Z,10µm,28.7s,baz=249						
RKT	**Rikitea**	45.42	102	*e*S	S	06 17 31.4	-4.4
RKT				*e*LQ		06 21 19.4	
RKT				*e*LR	LR	06 23 18.0	
	comp=Z,1µm,32.8s,baz=264						
GUMO	**Guam**	46.15	316	PFAKE		06 11 10.0	+7.8
GUMO				LR	LR		
	comp=Z,1µm,22.0s,MS4.7						
FITZ	**Fitzroy Crossi**	47.18	265	*e*P	P	06 11 10.6	+0.2
	comp=Z,57nm,1.2s,mb5.4						
FITZ				*e*S	S	06 18 05.1	+4.0
FITZ				*e*SS	SS	06 21 44.8	+23
KLBR	**Kellerberrin**	52.44	246	*e*P	P	06 11 49.3	-1.3
	comp=Z,56nm,1.0s,mb5.5						
NWAO	**Narrogin (SRO)**	52.80	244	*e*P	P	06 11 51.8	-1.4
	comp=Z,42nm,1.1s,mb5.3						
NWAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
NWAO	**Narrogin (SRO)**	52.80	244	*e*P	P	06 11 51.8	-1.4
NWAO				pmax	pmax		
	comp=Z,42nm,1.1s						
NWAO				MLR	MLR		
	comp=Z,2µm,20.0s						
MUN	**Mundaring**	53.73	245	*e*P	P	06 11 59.4	-0.6
VNDA	**Vanda**	56.62	184	*e*P	P	06 12 19.0	-1.5
	comp=Z,15nm,1.4s,mb4.8						
VNDA				LR	LR		
	comp=Z,812nm,20.0s,MS4.8						
VNDA	**Vanda**	56.62	184	*e*P	P	06 12 19.0	-1.5
VNDA				pmax	pmax		
	comp=Z,15nm,1.4s						
VNDA				MLR	MLR		
	comp=Z,812nm,20.0s						
SBA	**Scott Base**	56.71	182	*e*P	P	06 12 21.0	-0.2
	comp=Z,70nm,1.2s,mb5.6						
SBA				LR	LR		
	comp=Z,954nm,20.0s,MS4.9						
SBA	**Scott Base**	56.71	182	*e*P	P	06 12 21.0	-0.1
SBA				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.6						
SBA				MLR	MLR		
	comp=Z,954nm,20.0s,MS4.9						
DAV	**Davao City (W)**	56.80	294	PFAKE		06 12 30.0	+7.4
DAV				LR	LR		
	comp=Z,134nm,21.0s,MS4.0						
CASY	**Casey**	60.73	205	PFAKE		06 13 00.0	+11
CASY				LR	LR		
	comp=Z,603nm,21.0s,MS4.7						
KKM	**Kota Kinabalu**	64.45	288	*e*P	P	06 13 13.5	-1.3
MJAR	**Matsushiro Arr**	67.66	328	P	P	06 13 35.2	+0.3
	comp=Z,19nm,1.0s,mb5.1,baz=162,slow=5.6,SNR=21						
MJAR				LR	LR	06 38 27.3	
	comp=Z,518nm,21.4s,MS4.7,baz=125,slow=32						
MAJO	**Matsushiro**	67.67	328	*e*P	P	06 13 34.6	-0.3
	comp=Z,96nm,1.4s,mb5.6						
MAJO				LR	LR		
	comp=Z,715nm,20.0s,MS4.9						
MAJO	**Matsushiro**	67.67	328	*e*P	P	06 13 34.6	-0.3
MAJO				pmax	pmax		
	comp=Z,96nm,1.4s,mb5.6						
MAJO				MLR	MLR		
	comp=Z,715nm,20.0s,MS4.9						
MAT	**Matsushiro**	67.67	328	P	P	06 13 36.8	+1.9
MAT				*e*S	S	06 22 34.0	+4.4
MAT	**Matsushiro**	67.67	328	*e*P	P	06 13 37.0	+2.1
	comp=Z,48nm,1.3s,mb5.4						
MAT				S	S	06 22 35.0	+5.4
MAT				LR	LR		
	comp=Z,740nm,22.0s,MS4.9						
MAT	**Matsushiro**	67.67	328	*e*P	P	06 13 37.0	+2.1
MAT				S	S	06 22 35.0	+5.4
MAT				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.4						
MAT				MLR	MLR		
	comp=Z,740nm,22.0s,MS4.9						
KSM	**Kuching**	67.84	281	*e*P	P	06 13 35.9	-0.6
QSPA	**South Pole Qui**	68.71	180	*e*P	P	06 13 40.4	-0.3
	comp=Z,32nm,1.1s,mb5.2						
QSPA				LR	LR		
	comp=Z,725nm,21.0s,MS4.9						
SSE	**Sheshan**	73.93	313	P	P	06 14 13.5	+0.6
SSE				AP	pP	06 14 22.7	+3.5
SSE				XP	sP	06 14 26.1	+4.7
SSE				PCP	PcP	06 14 28.2	-0.3
SSE				S	S	06 23 44.6	+2.2
SSE				XS		06 24 00.0	
SSE				SCS	ScS	06 24 20.8	+2.6
SSE				SS	SS	06 28 32.6	+3.3
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,90nm,4.2s						
SSE				LR	LR		
	comp=N,230nm,24.2s,MS4.6						
SSE				LR	LR		
	comp=E,330nm,24.1s,MS4.6						
SSE				LR	LR		
	comp=Z,490nm,19.0s						
SSE	**Sheshan**	73.93	313	P	P	06 14 13.5	+0.6
	comp=Z,19nm,0.7s,mb5.1						
SSE				pP	pP	06 14 22.7	+3.5
SSE				sP	sP	06 14 26.1	+4.7
SSE				PcP	PcP	06 14 28.2	-0.3
SSE				S	S	06 23 44.6	+2.2
SSE				sS		06 24 00.0	
SSE				ScS	ScS	06 24 20.8	+2.6
SSE				SS	SS	06 28 32.6	+3.3
SSE				LR	LR		
	comp=Z,500nm,19.0s,MS4.8						
FX1	**Attu Island--F**	73.96	358	P	P	06 14 11.7	-0.9
YSS	**Yuzh-Sakhalins**	74.25	337	*e*P	P	06 14 14.9	+0.5
	comp=Z,86nm,1.1s,mb5.6						
YSS				LR	LR		
	comp=Z,688nm,21.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	74.25	337	⇑*i*P	P	06 14 17.4	+3.0
YSS				*e*	pP	06 14 25.0	+4.2
YSS				S	S	06 23 50.0	+4.3
YSS				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
YSS				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.9						
INCN	**Inchon**	74.62	321	P	P	06 14 16.3	-0.4
INCN				LR	LR		
	comp=Z,462nm,22.0s,MS4.7						
COCO	**West Island**	75.51	262	PFAKE		06 14 30.0	+7.7
COCO				LR	LR		
	comp=Z,428nm,20.0s,MS4.8						
PET	**Petropavlovsk**	75.56	349	PFAKE		06 14 30.0	+8.2
PET				LR	LR		
	comp=Z,504nm,19.0s,MS4.8						
PET	**Petropavlovsk**	75.56	349	*e*P	P	06 14 23.0	+1.2
PET				*e*S	S	06 24 01.6	+1.6
PET				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
PET				smax			
	comp=N,300nm,17.1s						
PET				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.7						
QIZ	**Qiongzhong**	76.01	297	P	P	06 14 25.0	0.0
QIZ				*e*S	S	06 24 06.2	+0.5
QIZ				LR	LR		
	comp=N,180nm,19.0s						
QIZ				LR	LR		
	comp=Z,260nm,29.0s						
QIZ	**Qiongzhong**	76.01	297	PFAKE		06 14 40.0	+15
QIZ				LR	LR		
	comp=Z,287nm,21.0s,MS4.6						
NJ2	**Nanjing**	76.09	313	*e*P	P	06 14 26.8	+1.5
NJ2				AP	pP	06 14 37.1	+5.5
NJ2				XP	sP	06 14 41.1	+7.3
NJ2				PP	PP	06 17 20.0	+2.1
NJ2				S	S	06 24 06.0	-0.3
NJ2				XS		06 24 24.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,30nm,4.8s						
NJ2				LR	LR		
	comp=N,1µm,21.6s,MS5.2						
NJ2				LR	LR		
	comp=E,890nm,23.7s,MS5.2						
NJ2				LR	LR		
	comp=Z,3µm,24.6s,MS5.5						
MDJ	**Mudanjiang**	78.05	328	P	P	06 14 39.2	+3.4
MDJ				PCP	PcP	06 14 48.0	+2.1
MDJ				PP	PP	06 17 36.1	+1.8
MDJ				S	S	06 24 35.1	+7.9
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,90nm,5.4s						
MDJ				LR	LR		
	comp=N,180nm,40.3s,MS4.4						
MDJ				LR	LR		
	comp=E,320nm,38.0s,MS4.4						
MDJ				LR	LR		
	comp=Z,380nm,38.0s,MS4.4						
MDJ	**Mudanjiang**	78.05	328	PFAKE		06 14 50.0	+14
MDJ				LR	LR		
	comp=Z,412nm,19.0s,MS4.8						
MAW	**Mawson**	78.74	201	P	P	06 14 39.1	0.0
	comp=Z,12nm,1.0s,mb4.8,baz=87,slow=17,SNR=4.1						
MAW	**Mawson**	78.74	201	*e*P	P	06 14 38.8	-0.3
	comp=Z,31nm,1.2s,mb5.1						
MAW	**Mawson**	78.74	201	*e*P	P	06 14 38.8	-0.4
MAW				pmax	pmax		
	comp=Z,31nm,1.2s						
CN2	**Changchun**	79.59	325	*e*P	P	06 14 44.2	0.0
CN2				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.0						
KLR	**Kul'dur**	80.47	332	*e*P	P	06 14 45.9	-2.9
ENH	**Enshi**	81.83	307	*e*P	P	06 14 58.2	+1.9
	comp=Z,18nm,1.0s,mb5.0						
ENH				LR	LR		
	comp=Z,320nm,22.0s,MS4.6						
PMSA	**Palmer Station**	82.72	158	P	P	06 15 01.1	+0.8
	comp=Z,30nm,0.9s,mb5.3						
PTRM	**Twissleman Ran**	82.94	48	*e*P	P	06 15 02.4	+0.4
MWC	**Mount Wilson**	83.69	50	*e*P	P	06 15 05.6	-0.4
OHCM	**Honcut**	84.09	44	*e*P	P	06 15 06.0	-1.9
CMB	**Columbia Colle**	84.10	45	*e*P	P	06 15 07.1	-0.9
	comp=Z,16nm,1.1s,mb5.1						
CMB				LR	LR		
	comp=Z,875nm,20.0s,MS5.1						
CMB	**Columbia Colle**	84.10	45	*e*P	P	06 15 07.1	-0.8
CMB				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.1						
CMB				MLR	MLR		
	comp=Z,875nm,20.0s,MS5.1						
WDC	**Whiskeytown Da**	84.12	42	PFAKE		06 15 20.0	+12
WDC				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
XAN	**Xi'an**	84.14	310	P	P	06 15 08.0	-0.2
ISA	**Isabella**	84.14	48	PFAKE		06 15 20.0	+12
ISA				LR	LR		
	comp=Z,206nm,21.0s,MS4.5						
SYO	**Syowa Base**	84.53	195	⇓P	P	06 15 11.8	+2.5
SYO	**Syowa Base**	84.53	195	⇓*e*P	P	06 15 11.8	+2.5
PFO	**Pinyon Flat Ob**	84.53	51	PFAKE		06 15 20.0	+10
PFO				LR	LR		
	comp=Z,209nm,19.0s,MS4.5						
KMI	**Kunming**	84.66	299	P	P	06 15 12.9	+1.9
KMI				S	S	06 25 40.5	+4.7
KMI				LR	LR		
	comp=Z,200nm,24.9s,MS4.4						
MTUM	**Tungsten Hills**	84.96	47	*e*P	P	06 15 12.5	+0.3
MTUM				*e*pP	pP	06 15 18.7	-0.1
DAC	**Darwin (Calif)**	85.07	48	*e*P	P	06 15 11.9	-1.0
	comp=Z,11nm,1.1s,mb4.9						
DAC				LR	LR		
	comp=Z,811nm,20.0s,MS5.1						
DAC	**Darwin (Calif)**	85.07	48	*e*P	P	06 15 11.9	-0.9
DAC				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
DAC				MLR	MLR		
	comp=Z,811nm,20.0s,MS5.1						
GSC	**Goldstone**	85.13	49	*e*P	P	06 15 12.9	-0.2
GSC				*e*pP	pP	06 15 18.9	-0.7
NVAR	**Mina Array Bea**	85.70	46	P	P	06 15 16.6	+0.8
	comp=Z,4.7nm,0.9s,mb4.7,baz=232,slow=12,SNR=36						
MNV	**Mina**	85.80	46	PFAKE		06 15 30.0	+14
MNV				LR	LR		
	comp=Z,727nm,21.0s,MS5.0						
HHC	**Hu-ho-hao-te**	85.91	317	*e*P	P	06 15 17.1	+0.2
HHC				PP	PP	06 18 40.7	+2.4
HHC				SKS	SKS	06 25 40.3	-4.9
HHC				S	S	06 25 51.1	+3.5
HHC				SS	SS	06 31 34.0	+5.1
HHC				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.2						
HHC				AMB	AMB		
	comp=Z,240nm,7.2s						
HHC				LR	LR		
	comp=N,240nm,16.8s,MS5.0						
HHC				LR	LR		
	comp=E,430nm,18.0s,MS5.0						
HHC				LR	LR		
	comp=Z,450nm,21.6s,MS4.8						
SEY	**Seymchan**	86.03	349	⇓*i*P	P	06 15 15.0	-1.9
SEY	**Seymchan**	86.03	349	⇓*i*P	P	06 15 15.9	-1.0
HIA	**Hailar**	86.15	327	PFAKE		06 15 30.0	+12
HIA				LR	LR		
	comp=Z,456nm,20.0s,MS4.9						
LDFC	**Landfair**	86.23	50	*e*P	P	06 15 18.8	+0.2
LDFC				*e*pP	pP	06 15 24.9	-0.2
TPH	**Tonopah**	86.25	47	*e*P	P	06 15 18.8	+0.2
	comp=Z,4.8nm,0.9s,mb4.7						
TPH				*e*pP	pP	06 15 24.1	-1.0
TPH				LR	LR		
	comp=Z,634nm,20.0s,MS5.0						
TPH	**Tonopah**	86.25	47	*e*P	P	06 15 18.8	+0.2
TPH				*e**PP	pP	06 15 24.2	-0.9
TPH				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.7						
TPH				MLR	MLR		
	comp=Z,634nm,20.0s,MS5.0						
MOD	**Modoc**	86.25	42	*e*P	P	06 15 18.6	+0.1
	comp=Z,23nm,1.2s,mb5.3						
MOD				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
TPNV	**Topopah Spring**	86.35	48	*e*P	P	06 15 19.2	+0.1
	comp=Z,15nm,0.9s,mb5.2						
TPNV				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
TPNV	**Topopah Spring**	86.35	48	*e*P	P	06 15 19.2	+0.1
TPNV				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.2						
TPNV				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
FIB	**Fire Island**	86.69	16	PFAKE		06 15 30.0	+10
FIB				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
NEN	**Nelson**	86.69	50	*e*P	P	06 15 20.7	-0.2
NEN				*e*pP	pP	06 15 27.0	-0.3
BTO	**Baotou**	86.78	316	*e*P	P	06 15 24.6	+3.5
SNAA	**Sanae**	87.21	180	*e*	P	06 15 24.1	+1.6
SNAA	**Sanae**	87.21	180	*e*	P	06 15 26.5	+4.0
SNAA	**Sanae**	87.21	180	*e*	P	06 15 28.7	+6.2
SNAA	**Sanae**	87.21	180	*e*	P	06 15 34.0	+11
SNAA	**Sanae**	87.21	180	⇑*i*P	P	06 15 21.9	-0.6
SNAA				*e*		06 15 24.1	
SNAA				*e*	pP	06 15 26.5	-2.5
SNAA				*e*	pP	06 15 28.7	-0.3
SNAA				*e*		06 15 34.0	
SNAA	**Sanae**	87.21	180	⇑*i*P	P	06 15 21.9	-0.6
SNAA				*e*	pP	06 15 28.7	-0.3
SNAA				*e*		06 15 34.0	
OCWA	**Octopus Mounta**	87.30	36	PFAKE		06 15 30.0	+6.5
OCWA				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
NVL	**N'lazarevskaya**	87.44	185	⇓*i*P	P	06 15 28.0	+4.4
NVL				*e**SP	sP	06 15 38.6	+6.4
NVL				*e*		06 18 47.1	
NVL				*e*S	S	06 25 48.3	-13
NVL				*e*SS	SS	06 31 52.4	+2.4
NVL				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.3						
NVL				MLR	MLR		
	comp=Z,36nm,16.7s,MS3.9						
TNA	**Tin City**	87.54	7	PFAKE		06 15 40.0	+16
TNA				LR	LR		
	comp=Z,382nm,19.0s,MS4.8						
VNA3	**Neumayer Olymp**	87.56	178	*e*	P	06 15 25.8	+1.6
VNA3	**Neumayer Olymp**	87.56	178	*e*	P	06 15 28.8	+4.6
VNA3	**Neumayer Olymp**	87.56	178	*e*	P	06 15 31.3	+7.1
VNA3	**Neumayer Olymp**	87.56	178	*e*	P	06 15 37.1	+13
VNA3	**Neumayer Olymp**	87.56	178	⇑*i*P	P	06 15 23.5	-0.7
VNA3				*e*		06 15 25.8	
VNA3				*e*	pP	06 15 28.8	-1.9
VNA3				*e*	pP	06 15 31.3	+0.6
VNA3				*e*		06 15 37.1	
WVOR	**Wild Horse Val**	87.58	42	PFAKE		06 15 40.0	+15
WVOR				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
DIV	**Divide**	87.83	18	PFAKE		06 15 40.0	+14
DIV				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
VNA2	**Neumayer--Watz**	87.94	179	*e*	P	06 15 27.5	+1.5
VNA2	**Neumayer--Watz**	87.94	179	*e*	P	06 15 30.7	+4.7
VNA2	**Neumayer--Watz**	87.94	179	*e*	P	06 15 33.6	+7.6
VNA2	**Neumayer--Watz**	87.94	179	*e*	P	06 15 40.0	+14
VNA2	**Neumayer--Watz**	87.94	179	⇑*i*P	P	06 15 25.7	-0.3
VNA2				*e*		06 15 27.5	
VNA2				*e*	pP	06 15 30.7	-1.8
VNA2				*e*	pP	06 15 33.6	+1.1
VNA2				*e*		06 15 40.0	

TUC	**Tucson**	**88.12**	**54**	PFAKE		06 15 40.0	+12
TUC				LR	LR		
	comp=Z,482nm,19.0s,MS4.9						
VNA1	**Neumayer--Stat**	**88.19**	**179**	e	**P**	**06 15 30.3**	**+3.0**
VNA1	**Neumayer--Stat**	**88.19**	**179**	e	**P**	**06 15 32.7**	**+5.4**
VNA1	**Neumayer--Stat**	**88.19**	**179**	e	**P**	**06 15 35.8**	**+8.5**
VNA1	**Neumayer--Stat**	**88.19**	**179**	e	**P**	**06 15 42.4**	**+15**
VNA1	**Neumayer--Stat**	**88.19**	**179**	⇑iP	**P**	**06 15 28.2**	**+0.9**
VNA1				e		06 15 30.3	
VNA1				e	pP	06 15 32.7	-1.1
VNA1				e	pP	06 15 35.8	+2.0
VNA1				e		06 15 42.4	
ARUT	**Antelope Range**	**88.71**	**48**	eP	**P**	**06 15 30.9**	**+0.4**
ARUT				epP	pP	06 15 36.6	-0.4
LZH	**Lanzhou**	**88.78**	**310**	eP	**P**	**06 15 32.0**	**+1.1**
LZH				PP	PP	06 19 04.0	+1.6
LZH				eSKS	SKS	06 25 58.2	-5.6
LZH				eS	S	06 26 16.0	+1.2
LZH				eSS	SS	06 32 12.0	+1.8
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.4						
LZH				AMB	AMB		
	comp=Z,190nm,6.0s						
LZH				LR	LR		
	comp=E,760nm,18.8s						
LZH				LR	LR		
	comp=Z,900nm,20.0s,MS5.2						
LZH	**Lanzhou**	**88.78**	**310**	eP	**P**	**06 15 32.0**	**+1.1**
	comp=Z,25nm,1.0s,mb5.5						
LZH				pP	pP	06 15 38.5	+1.1
LZH				sP	sP	06 15 40.9	+1.4
LZH				PP	PP	06 19 04.0	+1.6
LZH				eSKS	SKS	06 25 58.2	-5.6
LZH				eS	S	06 26 16.0	+1.2
LZH				sS		06 26 24.0	
LZH				eSS	SS	06 32 12.0	+1.8
LZH				LR	LR		
	comp=Z,910nm,20.0s,MS5.2						
LZH	**Lanzhou**	**88.78**	**310**	eP	**P**	**06 15 32.0**	**+1.1**
LZH				*SP	sP	06 15 40.9	+1.4
LZH						06 19 04.0	
LZH				e		06 25 58.2	
LZH				eS	S	06 26 16.0	+1.2
LZH				eSS	SS	06 32 12.0	+1.8
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.5						
LZH				MLR	MLR		
	comp=Z,910nm,20.0s,MS5.2						
ELK	**Elko**	**88.91**	**45**	LR	LR	06 47 09.6	
	comp=Z,460nm,20.1s,MS4.9,baz=247,slow=30						
ELK	**Elko**	**88.91**	**45**	eP	**P**	**06 15 31.3**	**-0.1**
	comp=Z,11nm,1.0s,mb5.2						
ELK				epP	pP	06 15 37.1	-0.9
ELK				LR	LR		
	comp=Z,875nm,19.0s,MS5.2						
ELK	**Elko**	**88.91**	**45**	eP	**P**	**06 15 31.3**	**-0.1**
ELK				e*PP	pP	06 15 37.1	-0.8
ELK				pmax	pmax		
	comp=Z,11nm,1.0s						
ELK				MLR	MLR		
	comp=Z,875nm,19.0s						
WUAZ	**Wupatki**	**89.13**	**51**	eP	**P**	**06 15 32.8**	**+0.2**
	comp=Z,12nm,1.0s,mb5.2						
WUAZ				LR	LR		
	comp=Z,597nm,20.0s,MS5.0						
BILL	**Bilibino**	**89.41**	**356**	PFAKE		06 15 40.0	+6.9
BILL				LR	LR		
	comp=Z,512nm,22.0s,MS4.9						
BILL	**Bilibino**	**89.41**	**356**	eP	**P**	**06 15 32.1**	**-1.0**
BILL				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.1						
BMO	**Blue Mountains**	**89.67**	**41**	PFAKE		06 15 50.0	+15
BMO				LR	LR		
	comp=Z,983nm,19.0s,MS5.3						
MVU	**Marysvale**	**89.90**	**48**	PFAKE		06 15 50.0	+14
MVU				LR	LR		
	comp=Z,564nm,21.0s,MS5.0						
MSU	**Marysvale**	**89.93**	**48**	eP	**P**	**06 15 37.0**	**+0.8**
DUG	**Dugway**	**90.27**	**47**	PFAKE		06 15 50.0	+12
DUG				LR	LR		
	comp=Z,596nm,22.0s,MS5.0						
COLA	**College**	**90.39**	**15**	eP	**P**	**06 15 36.0**	**-1.7**
	comp=Z,9.9nm,1.0s,mb5.1						
COLA				LR	LR		
	comp=Z,518nm,21.0s,MS4.9						
COLA	**College**	**90.39**	**15**	eP	**P**	**06 15 36.8**	**-0.9**
ILAR	**Eielson Array**	**90.54**	**15**	P	**P**	**06 15 36.6**	**-1.8**
	comp=Z,4.2nm,1.0s,mb4.7,baz=236,slow=4.7,SNR=16						
HLID	**Hailey**	**90.83**	**43**	eP	**P**	**06 15 39.9**	**-0.4**
	comp=Z,4.9nm,0.9s,mb4.8						
HLID				LR	LR		
	comp=Z,1μm,21.0s,MS5.2						
YAK	**Yakutsk**	**90.85**	**340**	i P	**P**	**06 15 42.6**	**+2.7**
YAK				LR	LR		
	comp=Z,395nm,21.0s,MS4.8						
MPU	**Maple Canyon**	**90.99**	**47**	eP	**P**	**06 15 41.1**	**0.0**
	comp=Z,12nm,1.0s,mb5.2						
MPU				epP	pP	06 15 47.2	-0.4
MPU				LR	LR		
	comp=Z,1μm,20.0s,MS5.4						
SPUT	**South Promonto**	**91.04**	**46**	eP	**P**	**06 15 40.7**	**-0.6**
HVU	**Hansel Valley**	**91.04**	**45**	eP	**P**	**06 15 41.4**	**+0.1**
	comp=Z,17nm,1.1s,mb5.3						
HVU	**Hansel Valley**	**91.04**	**45**	eP	**P**	**06 15 41.4**	**+0.1**
HVU				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.3						
CTU	**Camp Tracy**	**91.22**	**46**	eP	**P**	**06 15 42.3**	**+0.2**
	comp=Z,16nm,1.0s,mb5.3						
SRU	**San Rafael**	**91.35**	**48**	eP	**P**	**06 15 43.1**	**+0.4**
	comp=Z,20nm,0.9s,mb5.5						
SRU	**San Rafael**	**91.35**	**48**	eP	**P**	**06 15 43.1**	**+0.3**
SRU				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
DAU	**Daniels Canyon**	**91.43**	**47**	eP	**P**	**06 15 44.0**	**+0.9**
NEW	**Newport**	**91.53**	**38**	LR	LR	06 52 03.1	
	comp=Z,509nm,19.2s,MS5.0,baz=244,slow=32						
TCUT	**Toone Canyon**	**91.65**	**46**	eP	**P**	**06 15 43.9**	**-0.2**
HWUT	**Hardware Ranch**	**91.76**	**46**	eP	**P**	**06 15 43.9**	**-0.7**
	comp=Z,5.5nm,0.9s,mb4.9						
HWUT				LR	LR		
	comp=Z,877nm,20.0s,MS5.2						
MNTX	**Cornudas Mount**	**92.01**	**57**	eP	**P**	**06 15 44.9**	**-1.1**
	comp=Z,14nm,1.4s,mb5.1						
MNTX				LR	LR		
	comp=Z,1μm,19.0s,MS5.3						
PV10	**Paradox Valley**	**92.07**	**49**	eP	**P**	**06 15 46.5**	**+0.4**
PV10				epP	pP	06 15 52.2	-0.4
LPM	**Los Pinos Moun**	**92.12**	**54**	eP	**P**	**06 15 46.1**	**-0.3**
PV01	**Paradox Valley**	**92.30**	**50**	eP	**P**	**06 15 47.1**	**-0.1**
MCMT	**McKenzie Canyo**	**92.42**	**42**	eP	**P**	**06 15 47.7**	**+0.2**
LTX	**Lajitas**	**92.43**	**60**	PFAKE		06 16 00.0	+12
LTX				LR	LR		
	comp=Z,1μm,21.0s,MS5.3						
TXAR	**Lajitas Array**	**92.43**	**60**	P	**P**	**06 15 49.1**	**+1.2**
	comp=Z,1.2nm,0.8s,mb4.3,baz=219,slow=5.9,SNR=14						
TXAR				LR	LR	06 49 01.5	
	comp=Z,785nm,19.5s,MS5.2,baz=275,slow=30						
ANMO	**Albuquerque**	**92.51**	**53**	LR	LR	06 50 13.7	
	comp=Z,466nm,18.6s,MS5.0,slow=31						
ANMO	**Albuquerque**	**92.51**	**53**	PFAKE		06 16 00.0	+12
ANMO				LR	LR		
	comp=Z,571nm,20.0s,MS5.0						
ANMO	**Albuquerque**	**92.51**	**53**	⇑eP	**P**	**06 15 47.6**	**-0.6**
AHID	**Auburn Hatcher**	**92.60**	**45**	PFAKE		06 16 00.0	+12
AHID				LR	LR		
	comp=Z,531nm,21.0s,MS5.0						
SONM	**Songino Array**	**92.68**	**321**	P	**P**	**06 15 48.4**	**-0.3**
	comp=Z,2.5nm,1.0s,mb4.6,baz=153,slow=3.3,SNR=6.3						
SONM				LR	LR	06 53 07.0	
	comp=Z,268nm,20.4s,MS4.7,baz=135,slow=33						
MSO	**Missoula**	**92.69**	**40**	PFAKE		06 16 00.0	+11
MSO				LR	LR		
	comp=Z,593nm,19.0s,MS5.1						
PLCA	**Paso Flores**	**92.79**	**136**	P	**P**	**06 15 50.3**	**+1.0**
	comp=Z,0.6nm,0.7s,mb4.1,baz=291,slow=18,SNR=1.8						
PLCA				LR	LR	06 47 54.1	
	comp=Z,207nm,20.4s,MS4.6,baz=245,slow=29						
GDL2	**Guadalupe Moun**	**93.00**	**57**	eP	**P**	**06 15 50.3**	**-0.3**
GTA	**Gaotai**	**93.11**	**311**	eP	**P**	**06 15 50.6**	**-0.3**
GTA				PPP	PPP	06 20 59.7	-39
GTA				AMB	AMB		
	comp=Z,140nm,5.7s						
GTA				LR	LR		
	comp=N,230nm,16.0s,MS5.0						
GTA				LR	LR		
	comp=E,340nm,17.5s,MS5.0						
GTA				LR	LR		
	comp=Z,470nm,23.6s						
CHMT	**Chamberlain Mo**	**93.15**	**40**	P	**P**	**06 15 51.6**	**+0.7**
EFI	**East Falkland**	**93.37**	**150**	PFAKE		06 16 00.0	+8.3
EFI				LR	LR		
	comp=Z,224nm,19.0s,MS4.6						
PAYG	**Puerto Ayora**	**93.39**	**92**	PFAKE		06 16 00.0	+7.2
PAYG				LR	LR		
	comp=Z,585nm,19.0s,MS5.1						
BOZ	**Bozeman (W)**	**93.56**	**42**	PFAKE		06 16 00.0	+7.2
BOZ				LR	LR		
	comp=Z,965nm,21.0s,MS5.2						
BW06	**Boulder Array**	**93.61**	**45**	eP	**P**	**06 15 52.1**	**-1.0**
	comp=Z,7.2nm,1.4s,mb4.9						
BW06				LR	LR		
	comp=Z,588nm,20.0s,MS5.0						
PDAR	**Pinedale Array**	**93.62**	**45**	P	**P**	**06 15 53.1**	**+0.1**
	comp=Z,0.5nm,0.8s,mb4.0,baz=180,slow=1.5,SNR=4.0						
PDAR				LR	LR	06 50 53.9	
	comp=Z,333nm,19.4s,MS4.8,baz=246,slow=31						
LKWY	**Lake**	**93.85**	**43**	PFAKE		06 16 10.0	+16
LKWY				LR	LR		
	comp=Z,612nm,21.0s,MS5.0						
SDCO	**Great Sand Dun**	**94.35**	**51**	eP	**P**	**06 15 56.9**	**+0.3**
SDCO				LR	LR		
	comp=Z,895nm,22.0s,MS5.2						
ISCO	**Idaho Springs**	**95.08**	**49**	PFAKE		06 16 10.0	+10
ISCO				LR	LR		
	comp=Z,557nm,22.0s,MS5.0						
ZAK	**Zakamensk**	**95.69**	**322**	eP	**P**	**06 15 57.0**	**-5.4**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.5						
LSA	**Lhasa**	**95.92**	**299**	PFAKE		06 16 20.0	+16
LSA				LR	LR		
	comp=Z,292nm,20.0s,MS4.8						
JCT	**Junction City**	**95.97**	**60**	PFAKE		06 16 20.0	+16
JCT				LR	LR		
	comp=Z,880nm,19.0s,MS5.3						
AMTX	**Amarillo**	**96.10**	**55**	PFAKE		06 16 20.0	+15
AMTX				LR	LR		
	comp=Z,1μm,21.0s,MS5.3						
PALK	**Pallekele**	**97.35**	**275**	PFAKE		06 16 20.0	+9.2
PALK				LR	LR		
	comp=Z,202nm,21.0s,MS4.6						
LAO	**LASA Array**	**97.40**	**43**	PFAKE		06 16 20.0	+10
LAO				LR	LR		
	comp=Z,570nm,20.0s,MS5.1						
TIXI	**Tiksi**	**98.16**	**346**	PFAKE		06 16 20.0	+6.9
TIXI				LR	LR		
	comp=Z,509nm,21.0s,MS5.0						
TIXI	**Tiksi**	**98.16**	**346**	eP	**P**	**06 16 13.8**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb4.6						
CBKS	**Cedar Bluff**	**98.95**	**52**	PFAKE		06 16 30.0	+13
CBKS				LR	LR		
	comp=Z,584nm,22.0s,MS5.0						
DGMT	**Dagmar**	**99.35**	**42**	PFAKE		06 16 30.0	+11
DGMT				LR	LR		
	comp=Z,698nm,19.0s,MS5.2						
DGAR	**Diego Garcia**	**99.62**	**258**	PFAKE		06 16 30.0	+8.9
DGAR				LR	LR		
	comp=Z,444nm,20.0s,MS5.0						
YKA	**Yellowknife Ar**	**99.77**	**26**	LR	LR	07 00 34.7	
	comp=Z,385nm,18.8s,MS4.9,baz=255,slow=35						
TRQA	**Tornquist**	**99.78**	**137**	PFAKE		06 16 30.0	+8.7
TRQA				LR	LR		
	comp=Z,626nm,21.0s,MS5.1						
NATX	**Nacogdoches**	**100.55**	**60**	PFAKE		06 16 40.0	+15
NATX				LR	LR		
	comp=Z,757nm,21.0s,MS5.2						
NNA	**Nana**	**101.37**	**108**	PFAKE		06 16 40.0	+11
NNA				LR	LR		
	comp=Z,79nm,21.0s,MS4.2						
JTS	**JuntasAbangare**	**102.21**	**84**	PFAKE		06 16 40.0	+7.2
JTS				LR	LR		
	comp=Z,108nm,19.0s,MS4.4						
MIAR	**Mount Ida**	**102.28**	**58**	PFAKE		06 16 40.0	+7.4
MIAR				LR	LR		
	comp=Z,274nm,19.0s,MS4.8						
CCM	**Cathedral Cave**	**105.08**	**55**	PFAKE		06 21 10.0	
CCM				LR	LR		
	comp=Z,1μm,22.0s,MS5.4						
OXF	**Oxford**	**105.57**	**59**	PFAKE		06 21 10.0	
OXF				LR	LR		
	comp=Z,869nm,21.0s,MS5.3						
LPAZ	**La Paz**	**107.00**	**116**	PFAKE		06 21 20.0	
LPAZ				LR	LR		
	comp=Z,318nm,22.0s,MS4.8						
WVT	**Waverly**	**107.23**	**57**	PFAKE		06 21 20.0	
WVT				LR	LR		
	comp=Z,919nm,21.0s,MS5.3						
EYMN	**Ely**	**107.31**	**45**	PFAKE		06 21 10.0	
EYMN				LR	LR		
	comp=Z,789nm,20.0s,MS5.3						
MKAR	**Makanchi Array**	**107.61**	**314**	Pdiff	Pdif	06 16 53.4	-2.4
	comp=Z,0.2nm,0.8s,baz=90,slow=4.3,SNR=2.7						
WCI	**Wyandotte Cave**	**108.90**	**56**	PFAKE		06 21 20.0	
WCI				LR	LR		
	comp=Z,812nm,22.0s,MS5.2						
GOGA	**Godfrey**	**110.09**	**61**	PFAKE		06 21 20.0	+8.6
GOGA				LR	LR		
	comp=Z,592nm,20.0s,MS5.2						
DWPF	**Disney**	**110.58**	**67**	PFAKE		06 21 20.0	+7.5
DWPF				LR	LR		
	comp=Z,372nm,20.0s,MS5.0						
KURK	**Kurchatov**	**110.72**	**318**	PFAKE		06 21 20.0	+7.8
KURK				LR	LR		
	comp=Z,112nm,19.0s,MS4.5						
AAM	**Ann Arbor**	**111.67**	**52**	PFAKE		06 21 20.0	+5.8
AAM				LR	LR		
	comp=Z,400nm,19.0s,MS5.0						
ACSO	**Alum Creek Sta**	**111.82**	**54**	PFAKE		06 21 20.0	+5.4
ACSO				LR	LR		
	comp=Z,540nm,21.0s,MS5.1						
AAK	**Ala-Archa**	**112.30**	**309**	PFAKE		06 21 20.0	+4.5
AAK				LR	LR		
	comp=Z,83nm,22.0s,MS4.3						
NHSC	**New Hope**	**112.72**	**62**	PFAKE		06 21 30.0	+13
NHSC				LR	LR		
	comp=Z,392nm,19.0s,MS5.0						
BLA	**Blacksburg**	**113.28**	**58**	PFAKE		06 21 30.0	+12
BLA				LR	LR		
	comp=Z,1μm,21.0s,MS5.5						
MCWV	**Mont Chateau**	**114.11**	**55**	PFAKE		06 21 30.0	+11
MCWV				LR	LR		
	comp=Z,1μm,21.0s,MS5.4						
ERPA	**Erie**	**114.33**	**52**	PFAKE		06 21 30.0	+10
ERPA				LR	LR		
	comp=Z,788nm,19.0s,MS5.3						
SAML	**Samuel**	**114.73**	**111**	PFAKE		06 21 30.0	+9.1
SAML				LR	LR		
	comp=Z,295nm,22.0s,MS4.8						
SDV	**Santo Domingo**	**115.07**	**90**	PFAKE		06 21 30.0	+8.4
SDV				LR	LR		
	comp=Z,215nm,21.0s,MS4.7						
CBN	**Corbin**	**115.81**	**57**	PFAKE		06 21 30.0	+7.4
CBN				LR	LR		
	comp=Z,1μm,20.0s,MS5.6						
BRVK	**Borovoye**	**116.06**	**320**	PFAKE		06 21 30.0	+7.3
BRVK				LR	LR		
	comp=Z,70nm,20.0s,MS4.3						
MSEY	**Mahe Island**	**116.10**	**253**	PFAKE		06 21 30.0	+6.3
MSEY				LR	LR		
	comp=Z,254nm,21.0s,MS4.8						
NCB	**Newcomb**	**118.71**	**51**	PFAKE		06 21 40.0	+12
NCB				LR	LR		
	comp=Z,705nm,19.0s,MS5.3						
HRV	**Harvard--Oak R**	**120.60**	**52**	PFAKE		06 21 40.0	+8.3
HRV				LR	LR		
	comp=Z,733nm,21.0s,MS5.3						
WES	**Weston**	**120.77**	**53**	PFAKE		06 21 40.0	+7.9
WES				LR	LR		
	comp=Z,1μm,22.0s,MS5.6						
SJG	**San Juan**	**121.91**	**81**	PFAKE		06 21 40.0	+5.2
SJG				LR	LR		
	comp=Z,195nm,20.0s,MS4.8						
ARU	**Arti**	**122.56**	**324**	PFAKE		06 21 40.0	+4.9
ARU				LR	LR		
	comp=Z,151nm,20.0s,MS4.6						
BOSA	**Boshof**	**122.76**	**211**	PFAKE		06 21 50.0	+14
BOSA				LR	LR		
	comp=Z,504nm,19.0s,MS5.2						
LBTB	**Lobatse**	**125.57**	**214**	PFAKE		06 21 50.0	+8.2
LBTB				LR	LR		
	comp=Z,474nm,20.0s,MS5.2						
KEV	**Kevo**	**128.10**	**347**	PFAKE		06 21 50.0	+4.5
KEV				LR	LR		
	comp=Z,509nm,22.0s,MS5.2						
ARCES	**ARCESS Array B**	**128.59**	**347**	PKP	PKPdf	06 21 41.4	-5.0
	comp=Z,2.2nm,1.0s,baz=333,slow=2.0,SNR=3.0						
ARCES	**ARCESS Array B**	**128.59**	**347**	PKP	PKPdf	06 21 41.4	-5.0
LSZ	**Lusaka**	**131.68**	**224**	PFAKE		06 22 00.0	+6.3
LSZ				LR	LR		
	comp=Z,404nm,20.0s,MS5.1						
KMBO	**Kilima Mbogo**	**133.75**	**246**	PKP	PKPdf	06 21 55.6	-2.0
	comp=Z,0.9nm,0.7s,baz=57,slow=17,SNR=3.6						
KMBO	**Kilima Mbogo**	**133.75**	**246**	PKP	PKPdf	06 21 55.6	-2.0
KMBO				LR	LR		
	comp=Z,301nm,19.0s,MS5.0						
TSUM	**Tsumeb**	**134.40**	**209**	PFAKE		06 22 10.0	+11
TSUM				LR	LR		
	comp=Z,530nm,20.0s,MS5.3						
GNI	**Garni**	**134.59**	**306**	PFAKE		06 22 10.0	+11
GNI				LR	LR		
	comp=Z,228nm,21.0s,MS4.9						
OBN	**Obninsk**	**134.59**	**328**	c iPKIKP	PKPdf	06 21 49.9	-8.2
OBN				e		06 24 26.7	
OBN				e		06 29 06.7	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,300nm,23.0s,MS5.0						
KIV	**Kislovodsk**	**135.29**	**311**	PFAKE		06 22 10.0	+10
KIV				LR	LR		
	comp=Z,89nm,20.0s,MS4.5						
AKASG	**Malin Array Be**	**140.74**	**326**	PKP	PKPdf	06 22 06.3	-3.1
	comp=Z,0.3nm,0.5s,baz=41,slow=4.2,SNR=3.5						
ANTO	**Ankara**	**143.54**	**309**	PFAKE		06 22 20.0	+11
ANTO				LR	LR		
	comp=Z,282nm,20.0s,MS5.0						
CSS	**Prodhromos**	**144.47**	**301**	PKP	PKPdf	06 22 13.1	-3.2
KOLS	**Kolonicke sedl**	**145.34**	**329**	ePKP	PKPdf	06 22 12.9	-4.5
OJC	**Ojcow**	**145.55**	**333**	ePKP	PKPdf	06 22 15.9	-1.8
CRVS	**Cervenica-Dubn**	**145.75**	**330**	ePKP	PKPdf	06 22 15.7	-2.4
CRVS				e		06 22 24.5	
KSP	**Ksiaz**	**146.48**	**336**	ePKP	PKPdf	06 22 18.0	-1.3
KECS	**Kecovo**	**146.50**	**330**	ePKP	PKPdf	06 22 18.1	-1.3
KECS				e		06 22 36.6	
OKC	**Ostrava-Krasne**	**146.54**	**333**	ePKP	PKPdf	06 22 17.7	-1.7
MORC	**Moravsky Berou**	**146.83**	**334**	PKP	PKPdf	06 22 16.8	-3.1
UPC	**Upice**	**146.85**	**336**	ePKP	PKPdf	06 22 18.6	-1.3
UPC				epPKP		06 22 25.1	
DPC	**Dobruska-Polom**	**146.86**	**336**	ePKP	PKPdf	06 22 18.9	-1.1
DPC				epPKP		06 22 24.9	
PSZ	**Piszkesteto**	**147.18**	**330**	ePKP	PKPdf	06 22 18.9	-1.7
CLL	**Collm**	**147.23**	**340**	ePKP1	PKPdf	06 22 22.0	+1.5
CLL				i *PPKP		06 22 26.3	
CLL				i		06 22 29.2	
CLL				e		06 22 40.0	
CLL	**Collm**	**147.23**	**340**	i PKP		06 22 26.3	
CLL				i		06 22 29.2	
CLL	**Collm**	**147.23**	**340**	i PKP2		06 22 26.3	
CLL				pmax	pmax		
	comp=Z,14nm,0.9s						
VYHS	**Vyhne**	**147.25**	**331**	ePKP	PKPdf	06 22 20.3	-0.3
VYHS				e		06 22 28.3	
BRG	**Berggiesshubel**	**147.29**	**339**	ePKP	PKPdf	06 22 19.2	-1.4
BRG				i		06 22 27.0	
BRG	**Berggiesshubel**	**147.29**	**339**	ePKP2	PKPdf	06 22 19.2	-1.4
BRG				pmax	pmax		
	comp=Z,27nm,1.7s						
BRG				pmax	pmax		
	comp=Z,13nm,0.9s						
PVCC	**Panska Ves**	**147.36**	**338**	ePKP	PKPdf	06 22 17.1	-3.7
PVCC				epPKP		06 22 27.6	
PRU	**Pruhonice**	**147.82**	**337**	ePKP	PKPdf	06 22 21.2	-0.3
PRU				epPKP		06 22 27.8	
ZST	**Bratislava**	**148.24**	**333**	ePKP	PKPdf	06 22 29.3	+7.1
KHC	**Kasperske Hory**	**148.88**	**337**	ePKP	PKPdf	06 22 24.4	+1.2
KHC				epPKP		06 22 30.8	
KHC				sPKP		06 22 36.5	
KHC	**Kasperske Hory**	**148.88**	**337**	ePKP	PKPdf	06 22 24.4	+1.2
KHC				e		06 22 30.8	
KHC				e		06 22 36.5	
GERES	**GERESS Array B**	**149.08**	**337**	PKPbc	PKPdf	06 22 24.5	+0.9
	comp=Z,2.4nm,0.9s,baz=63,slow=3.0,SNR=12						
GRA1	**Grafenberg Arr**	**149.20**	**340**	ePKP	PKPdf	06 22 24.6	+0.9
GRA1				LR	LR		
	comp=Z,300nm,21.1s,MS5.1						
GRF	**Grafenberg Arr**	**149.20**	**340**	ePKP	PKPdf	06 22 24.6	+0.9
GRF				LR	LR		
	comp=Z,300nm,21.1s,MS5.1						
GRUS	**Gruza**	**149.48**	**323**	i PKP	PKPdf	06 22 25.8	+1.4
MOA	**Molln**	**149.68**	**335**	⇓iP	PKPdf	06 22 30.2	+5.7
	comp=Z,9.5nm,1.5s						
MOA	**Molln**	**149.68**	**335**	⇓iP		06 22 39.0	
	comp=Z,23nm,1.5s						
DIVS	**Divcibare**	**149.75**	**324**	⇓iPKP	PKPdf	06 22 25.8	+1.0
VAY	**Valandovo**	**149.90**	**317**	ePKP	PKPdf	06 22 21.4	-3.7
VAY	**Valandovo**	**149.90**	**317**	ePKP	PKPdf	06 22 21.4	-3.7
TOD	**Tromm**	**149.99**	**343**	eP	PKPdf	06 22 33.4	+8.4
ABH	**Alteburg**	**150.06**	**345**	eP	PKPdf	06 22 28.2	+3.1
BBLS	**Bajina Basta -**	**150.21**	**324**	i PKP	PKPdf	06 22 27.4	+1.8
SKO	**Skopje**	**150.23**	**319**	ePKP	PKPdf	06 22 24.9	-0.7
GIVF	**Givet**	**150.45**	**348**	ePKP1	PKPdf	06 22 27.6	+1.9
	comp=Z,274nm,1.9s						
WLF	**Walferdange**	**150.59**	**346**	ePKPbc	PKPdf	06 22 27.8	+1.9
BAIF	**Baives**	**150.60**	**349**	ePKP1	PKPdf	06 22 28.1	+2.2
	comp=Z,55nm,1.2s						
KBA	**Koelnbreinsper**	**150.67**	**335**	⇓iP	PKPdf	06 22 27.9	+1.8
	comp=Z,8.6nm,1.2s						
BIA	**Bitola**	**150.84**	**318**	ePKP	PKPdf	06 22 26.5	-0.1
BIA	**Bitola**	**150.84**	**318**	ePKP	PKPdf	06 22 26.5	-0.1
LJU	**Ljubljana**	**151.02**	**333**	ePKPdf	PKPdf	06 22 30.0	+3.3
OHR	**Ohrid**	**151.12**	**319**	ePKP	PKPdf	06 22 30.0	+3.0
WATA	**Walderalm**	**151.12**	**338**	⇑iP	PKPab	06 22 36.6	-2.0
	comp=Z,8.2nm,0.6s						
WTTA	**Wattenberg**	**151.16**	**337**	⇓iP	PKPdf	06 22 24.0	-2.8
	comp=Z,2.7nm,0.5s						
WTTA	**Wattenberg**	**151.16**	**337**	⇓iP	PKPab	06 22 36.5	-2.3
	comp=Z,6.5nm,0.5s						
WTTA	**Wattenberg**	**151.16**	**337**	⇓iP	PKPab	06 22 48.7	+10
	comp=Z,32nm,1.1s						
MOTA	**Moosalm**	**151.28**	**338**	⇑iP	PKPdf	06 22 30.3	+3.3
	comp=Z,10nm,0.9s						
VOY	**Vojsko**	**151.30**	**333**	ePKPdf	PKPdf	06 22 30.8	+3.7
VOY				ePKPbc	PKPdf	06 22 35.8	+8.7
VOY				ePKPab	PKPab	06 22 48.5	+9.1
SQTA	**Sankt Quirin**	**151.35**	**338**	⇑iP	PKPdf	06 22 29.5	+2.4
	comp=Z,7.4nm,0.9s						
SQTA	**Sankt Quirin**	**151.35**	**338**	⇓iP	PKPab	06 22 36.9	-2.6
	comp=Z,7.9nm,0.6s						
SQTA	**Sankt Quirin**	**151.35**	**338**	⇑P	PKPdf	06 22 29.5	+2.4
SQTA				e		06 22 36.9	
WLS	**Welschbruch**	**151.47**	**344**	PKP	PKPdf	06 22 30.1	+2.9
WLS	**Welschbruch**	**151.47**	**344**	eP	PKPdf	06 22 30.1	+2.9
CDF	**Champ du Feu**	**151.49**	**344**	ePKP1	PKPdf	06 22 29.9	+2.6
	comp=Z,28nm,0.8s						
ECH	**Echery**	**151.70**	**344**	PKP	PKPdf	06 22 32.3	+4.7
ECH	**Echery**	**151.70**	**344**	eP	PKPdf	06 22 32.3	+4.7
DAVA	**Damuels**	**151.74**	**340**	⇓iP	PKPab	06 22 39.0	-2.2
	comp=Z,28nm,1.4s						
MEZF	**Maizieres J'vi**	**151.93**	**347**	ePKP1	PKPdf	06 22 31.2	+3.3
	comp=Z,84nm,1.2s						
MOF	**Molkenrain**	**152.04**	**344**	PKP	PKPdf	06 22 31.2	+3.1
MOF	**Molkenrain**	**152.04**	**344**	eP	PKPdf	06 22 31.2	+3.1
HAU	**Haudompre**	**152.10**	**345**	ePKP1	PKPdf	06 22 31.3	+3.1
	comp=Z,46nm,1.3s						
HAU				eR			
	comp=Z,620nm,21.2s						
HINF	**Hinteralfeld**	**152.15**	**344**	ePKP1	PKPdf	06 22 31.3	+3.0
	comp=Z,17nm,0.9s						
FLN	**La Foliniere**	**152.50**	**355**	ePKP1	PKPdf	06 22 31.9	+3.1
	comp=Z,66nm,1.2s						
FLN				eR			
	comp=Z,668nm,17.7s						
LDF	**La Druitiere**	**152.63**	**354**	ePKP1	PKPdf	06 22 32.0	+3.1
GRR	**Gorron**	**152.90**	**355**	ePKP1	PKPdf	06 22 32.9	+3.6
	comp=Z,23nm,0.8s						
LOR	**Lormes**	**153.35**	**348**	ePKP1	PKPdf	06 22 34.0	+4.0
	comp=Z,12nm,0.8s						
LOR				eR			
	comp=Z,658nm,18.9s						
SSF	**Saint Saulge**	**153.61**	**348**	ePKP1	PKPdf	06 22 34.7	+4.4
	comp=Z,17nm,0.8s						
ESDC	**Sonseca Array**	**161.75**	**359**	PKPab	PKPab	06 23 22.7	-1.5
	comp=Z,0.3nm,0.4s,baz=333,slow=5.7,SNR=3.0						
ESLA	**Sonseca Array**	**161.75**	**359**	PFAKE		06 22 50.0	+10
ESLA				LR	LR		

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
	comp=Z,2µm,20.0s						
LIC	**Lamto**	**164.93**	**177**	*e*PKP2	PKPab	06 23 42.4	+3.6
	comp=Z,54nm,1.3s						
LIC				*e*R			
	comp=Z,416nm,19.2s						
DBIC	**Dimbokro**	**165.38**	**177**	PKPab	PKPab	06 23 42.5	+1.7
	comp=Z,7.4nm,1.0s,baz=166,slow=5.8,SNR=5.5						
DBIC	**Dimbokro**	**165.38**	**177**	PFAKE		06 22 50.0	+5.2
DBIC				LR	LR		
	comp=Z,492nm,21.0s						

LDG ***12*** *06:12:52.4±0.1,49.35N×6.82E,h1^{km},Md2.7/1,Ml2.3/11, Error ellipse: s-maj=2.1km s-min=1.6km az=20.0, Suspected Mining induced.*

BGR ***12*** *06:12:52.8±0.6,49.31N×6.85E,h1^{km},ML2.0/2,Error ellipse: s-maj=8.9km s-min=6.7km az=62.0*

ISC 12 06:12:50.5±0.5**,49.31N**±0.02×**6.76E**±0.04**,n14,**σ1^{s}**08**/28**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WLF	**Walferdange**	**0.53**	**312**	*e*Pg	**Pg**	**06 13 03.8**	**+2.6**
	SNR=2.5						
CDF	**Champ du Feu**	**0.96**	**159**	*e*Pg	**Pg**	**06 13 10.3**	**+0.6**
CDF				*e*Pn	**Pn**	**06 13 11.3**	**+0.3**
CDF				*e*Sg	**Sg**	**06 13 23.1**	**+0.6**
	14nm,0.2s						
HAU	**Haudompre**	**1.33**	**192**	*e*Pn	**Pn**	**06 13 17.5**	**+1.1**
HAU				*e*Sg	**Sg**	**06 13 35.7**	**+0.8**
	7.2nm,0.2s						
MEZF	**Maizieres J'vi**	**1.39**	**235**	*e*Pg	**Pg**	**06 13 18.8**	**+0.6**
	baz=51						
MEZF				*e*Sg	**Sg**	**06 13 37.6**	**+0.9**
	2.1nm,0.2s						
BFO	**Black Forest**	**1.43**	**133**	*e*Pg	**Pg**	**06 13 19.5**	**+0.5**
	SNR=1.0						
BFO				*e*Sg	**Sg**	**06 13 36.6**	**-1.4**
TNS	**Taunus Mts**	**1.43**	**49**	*e*Pg	**Pg**	**06 13 17.9**	**-1.2**
	SNR=1.6						
TNS				*e*Sg	**Sg**	**06 13 37.2**	**-0.8**
GIVF	**Givet**	**1.49**	**303**	*e*Pn	**Pn**	**06 13 19.9**	**+1.3**
GIVF				*e*Sg	**Sg**	**06 13 39.9**	**-0.2**
	3.8nm,0.2s						
HINF	**Hinteralfeld**	**1.49**	**178**	*e*Pn	**Pn**	**06 13 20.3**	**+1.6**
HINF				*e*Sg	**Sg**	**06 13 40.8**	**+0.5**
	15nm,0.3s						
SFTF	**Sexfontaines**	**1.59**	**227**	*e*Pg	**Pg**	**06 13 23.0**	**+0.8**
	baz=40						
SFTF				*e*Sg	**Sg**	**06 13 44.2**	**+0.9**
	3.4nm,0.2s,baz=49						
BAIF	**Baives**	**1.82**	**295**	*e*Pg	**Pg**	**06 13 26.7**	**-0.2**
BAIF				*e*Sg	**Sg**	**06 13 50.4**	**-0.7**
	2.9nm,0.3s						
CABF	**La Chapelle**	**2.74**	**190**	*e*Pn	**Pn**	**06 13 36.5**	**0.0**
CABF				*e*Sg	**Sg**	**06 14 20.4**	**-1.2**
	0.8nm,0.3s						
LOR	**Lormes**	**2.81**	**225**	*e*Pn	**Pn**	**06 13 37.2**	**-0.4**
	baz=49						
LOR				*e*Sn	**Sn**	**06 14 10.0**	**-2.7**
	baz=40						
LOR				*e*Sg	**Sg**	**06 14 22.3**	**-1.9**
	2.4nm,0.3s						
SSF	**Saint Saulge**	**3.13**	**225**	*e*Pn	**Pn**	**06 13 41.5**	**-0.6**
SSF				*e*Sg	**Sg**	**06 14 32.8**	**-1.9**
	1.1nm,0.3s						
AVF	**Avril sur Loir**	**3.40**	**224**	*e*Pn	**Pn**	**06 13 45.2**	**-0.7**

BJI ***12*** *06:16:54.4,32.20S×178.80W,h10^{km},mB5.6,mb5.3, Ms5.3,Msz4.9*

HRVD ***12*** *06:16:54.4±0.4,32.32S×178.54W,h54^{km}±1^{km},MW5.2/53, Centroid moment Tensor Solution. LP body waves: s22,c34;Mantle waves: s53,c80; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.79±.57; M$_{\theta\theta}$-0.21±.35; M$_{\phi\phi}$-6.58±.31; M$_{r\theta}$-0.28±.22; M$_{\theta\phi}$-2.22±.20; M$_{\phi r}$2.29±.22; Best double couple: M$_0$7.408×10^{16} NP1:φ$_s$206°,δ37°, λ103°. NP2:φ$_s$10°,δ54°,λ80°. Principal axes: T 7.228, Plg79°, Azm243°; N .354, Plg8°, Azm15°; P -7.588, Plg8°, Azm106°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***12*** *06:16:54.4±0.2,32.16S×178.82W,h10^{km},mb5.1/21, MS5.1/1 Error ellipse: s-maj=10.2km s-min=5.2km az=116.0*

CSEM ***12*** *06:16:57.0,32.43S×178.93W,h33^{km},mb5.6*

MOS ***12*** *06:16:57.3±1.1,32.11S×178.84W,h33^{km},mb5.3/11, Error ellipse: s-maj=17.5km s-min=11.8km az=76.7*

IDC ***12*** *06:17:00.9±2.4,32.07S×178.79W,h56^{km}±20^{km},mb4.5/9, mb1 4.7/9,mb1mx4.7/10,mbtmp4.7/9,MS4.5/11, Ms1 4.5/11,ms1mx4.5/16,Error ellipse: s-maj=17.2km s-min=15.0km az=157.0*

ISC 12 06:16:57.8±1.1**,32.66S**±0.05×**178.82W**±0.07**,h43**^{km}±9^{km}**, h20**^{km}±8.1^{km}**:pP-P,n211,**σ1^{s}**43**/146**,mb5.0**/30**,MS4.6**/14**, 13C-9D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.48**	**13**	P	**P**	**06 17 44.5**	**-6.4**
	360nm,0.3s,baz=354,slow=18,SNR=11						
RAO				S	**S**	**06 18 18.7**	**-13**
	892nm,0.3s,baz=82,slow=21,SNR=5.4						
RAO	**Raoul Island**	**3.48**	**13**	P	**P**	**06 17 40.4**	**-10**
RAO				P		06 17 44.5	
RAO				S	**S**	**06 18 18.7**	**-13**
RAO	**Raoul Island**	**3.48**	**13**	P	**P**	**06 17 40.4**	**-10**
RAO				S	**S**	**06 18 18.7**	**-13**
MXZ	**Matakaoa Point**	**5.43**	**205**	*e*PN	**P**	**06 18 20.6**	**+2.3**
MXZ				SN	**S**	**06 19 29.0**	**+8.6**
MXZ	**Matakaoa Point**	**5.43**	**205**	*e*P	**P**	**06 18 22.3**	**+4.0**
PUZ	**Puketiti**	**5.91**	**203**	PN	**P**	**06 18 27.7**	**+2.8**
PUZ				SN	**S**	**06 19 39.8**	**+7.5**
PUZ	**Puketiti**	**5.91**	**203**	P	**P**	**06 18 27.8**	**+2.9**
KUZ	**Kuaotunu**	**6.07**	**226**	*e*PN	**P**	**06 18 35.8**	**+8.5**
KUZ	**Kuaotunu**	**6.07**	**226**	*e*P	**P**	**06 18 35.4**	**+8.2**
MWZ	**Matawai**	**6.40**	**207**	*e*PN	**P**	**06 18 34.0**	**+2.1**
MWZ				*e*SN	**S**	**06 19 52.6**	**+8.1**
MWZ	**Matawai**	**6.40**	**207**	*e*P	**P**	**06 18 35.2**	**+3.3**
URZ	**Urewera**	**6.50**	**210**	P	**P**	**06 18 35.9**	**+2.5**
	12nm,0.3s,baz=242,slow=0.6,SNR=37						
URZ				S	**S**	**06 19 55.6**	**+8.5**
	57nm,0.3s,baz=187,slow=18,SNR=8.8						
URZ				LR	LR	06 21 19.9	
	comp=Z,2µm,20.5s,baz=9.7,slow=37						
URZ	**Urewera**	**6.50**	**210**	PN	**P**	**06 18 35.2**	**+1.9**
URZ				SN	**S**	**06 19 54.0**	**+6.9**
URZ	**Urewera**	**6.50**	**210**	*e*P	**P**	**06 18 35.9**	**+2.6**
WCZ	**Waipu Caves**	**6.53**	**238**	PN	**P**	**06 18 41.5**	**+7.7**
WCZ	**Waipu Caves**	**6.53**	**238**	*e*P	**P**	**06 18 42.0**	**+8.2**
OUZ	**Omahuta**	**6.80**	**246**	PN	**P**	**06 18 44.6**	**+7.0**
OUZ	**Omahuta**	**6.80**	**246**	*e*P	**P**	**06 18 44.9**	**+7.4**
KNZ	**Kokohu**	**6.96**	**203**	*e*PN	**P**	**06 18 40.6**	**+0.9**
KNZ				SN	**S**	**06 20 00.4**	**+2.0**
KNZ	**Kokohu**	**6.96**	**203**	*e*P	**P**	**06 18 40.6**	**+0.9**
BKZ	**Black Stump Fm**	**7.52**	**209**	*e*PN	**P**	**06 18 48.0**	**+0.4**
BKZ				*e*SN	**S**	**06 20 18.1**	**+5.6**
BKZ	**Black Stump Fm**	**7.52**	**209**	*e*P	**P**	**06 18 49.3**	**+1.7**
CNZ	**Chateau**	**7.96**	**213**	P	**P**	**06 18 58.3**	**+4.6**
FWVZ	**Far West T-bar**	**8.01**	**213**	*e*PN	**P**	**06 18 57.6**	**+3.3**
FWVZ	**Far West T-bar**	**8.01**	**213**	*e*P	**P**	**06 18 57.8**	**+3.5**
MOVZ	**Moawhango**	**8.04**	**212**	*e*PN	**P**	**06 18 56.3**	**+1.5**
MOVZ	**Moawhango**	**8.04**	**212**	P	**P**	**06 18 57.3**	**+2.6**
BFZ	**Birch Farm**	**8.93**	**205**	*e*PN	**P**	**06 19 06.1**	**-0.9**
BFZ				*e*SN	**S**	**06 20 45.5**	**-2.0**
BFZ	**Birch Farm**	**8.93**	**205**	P	**P**	**06 19 06.2**	**-0.9**
MRZ	**Mangatainoka R**	**9.16**	**208**	*e*PN	**P**	**06 19 07.3**	**-3.0**
MRZ				SN	**S**	**06 20 53.0**	**-0.2**
MRZ	**Mangatainoka R**	**9.16**	**208**	P	**P**	**06 19 10.2**	**-0.1**
KIW	**Kapiti Island**	**9.61**	**210**	*e*PN	**P**	**06 19 14.1**	**-2.3**
KIW	**Kapiti Island**	**9.61**	**210**	P	**P**	**06 19 15.8**	**-0.6**
MTW	**Mount Morrison**	**9.62**	**207**	P	**P**	**06 19 15.0**	**-1.6**
CAW	**Cannon Point**	**9.75**	**208**	P	**P**	**06 19 16.6**	**-1.7**
PAWZ	**Paruwai Farm**	**9.84**	**206**	*e*SN	**S**	**06 21 10.2**	**+0.2**
MSWZ	**Moikau Station**	**9.94**	**207**	P	**P**	**06 19 20.4**	**-0.5**
MRW	**Makara Radio**	**10.00**	**209**	*e*SN	**S**	**06 21 12.5**	**-1.2**
TCW	**Tory Channel**	**10.16**	**211**	*e*PN	**P**	**06 19 21.3**	**-2.7**
TCW				*e*SN	**S**	**06 21 15.1**	**-2.7**
TCW	**Tory Channel**	**10.16**	**211**	P	**P**	**06 19 21.3**	**-2.7**
NNZ	**Nelson**	**10.57**	**214**	*e*PN	**P**	**06 19 28.1**	**-1.5**
NNZ				*e*SN	**S**	**06 21 26.7**	**-1.1**
NNZ	**Nelson**	**10.57**	**214**	*e*P	**P**	**06 19 27.8**	**-1.8**
QRZ	**Quartz Range**	**10.70**	**218**	*e*SN	**S**	**06 21 31.7**	**+0.9**
BSWZ	**Blackbirch Sta**	**10.75**	**211**	P	**P**	**06 19 31.5**	**-0.5**
THZ	**Tophouse**	**11.22**	**214**	*e*PN	**P**	**06 19 36.7**	**-1.7**
THZ	**Tophouse**	**11.22**	**214**	*e*P	**P**	**06 19 37.2**	**-1.2**
KHZ	**Kahutara**	**11.47**	**210**	*e*PN	**P**	**06 19 40.8**	**-0.9**
KHZ	**Kahutara**	**11.47**	**210**	*e*P	**P**	**06 19 40.9**	**-0.8**
DSZ	**Denniston Nort**	**11.75**	**217**	*e*SN	**S**	**06 21 54.0**	**-2.2**
LTZ	**Lake Taylor**	**12.31**	**212**	*e*P	**P**	**06 19 51.7**	**-1.4**
MQZ	**McQueen's Vall**	**12.90**	**209**	*e*PN	**P**	**06 19 57.7**	**-3.3**
MQZ				*e*SN	**S**	**06 22 16.2**	**-7.8**
RPZ	**Rata Peaks**	**13.60**	**213**	P	**P**	**06 20 09.2**	**-0.9**
	2.2nm,0.3s,baz=173,slow=8.1,SNR=8.5						
RPZ				S	**S**	**06 22 35.7**	**-4.9**
	7.0nm,0.3s,baz=322,slow=22,SNR=9.2						
ODZ	**Otahua Downs**	**14.82**	**210**	*e*PN	**P**	**06 20 23.4**	**-2.7**
ODZ	**Otahua Downs**	**14.82**	**210**	*e*P	**P**	**06 20 23.5**	**-2.6**
JCZ	**Jackson Bay**	**14.97**	**217**	*e*PN	**P**	**06 20 25.9**	**-2.2**
DZM	**Mont Dzumac**	**16.79**	**305**	P	**P**	**06 20 53.2**	**+1.9**
	0.2nm,0.3s,baz=111,slow=14,SNR=12						
DZM				LR	LR	06 25 59.6	
	comp=Z,3µm,19.3s,baz=197,slow=33						
DZM	**Mont Dzumac**	**16.79**	**305**	P	**P**	**06 20 53.2**	**+1.9**
DZM				LR	LR	06 25 59.6	
NOUC	**Port Laguerre**	**16.87**	**305**	*e*P	**P**	**06 20 52.7**	**+0.5**
RAR	**Rarotonga**	**20.42**	**61**	LR	LR	06 27 13.2	
	comp=Z,833nm,21.9s,MS4.0,baz=261,slow=30						
CNB	**Canberra Magne**	**26.45**	**255**	*e*P	**P**	**06 22 37.4**	**+4.8**
	5.8nm,0.4s,mb4.5						
TBI	**Tubuai**	**27.46**	**78**	*e*LR	LR	06 29 10.5	
	2µm,27.2s,baz=242						
PPT	**Papeete**	**30.32**	**67**	*e*S	**S**	**06 27 59.6**	**-3.8**
PPT				*e*LR	LR	06 30 23.3	
	2µm,26.2s,baz=233						
PPT	**Papeete**	**30.32**	**67**	LR	LR	06 31 37.6	
	comp=Z,857nm,20.0s,MS4.4,baz=243,slow=29						
STKA	**Stephens Creek**	**33.35**	**260**	*e*P	**P**	**06 23 36.1**	**+2.2**
	7.1nm,0.7s,mb4.7						
STKA	**Stephens Creek**	**33.35**	**260**	P	**P**	**06 23 35.2**	**+1.3**
	9.4nm,0.7s,mb4.8,baz=98,slow=9.5,SNR=18						
STKA				LR	LR	06 35 18.6	
	comp=Z,1µm,18.3s,MS4.7,baz=74,slow=33						
CTA	**Charters Tower**	**33.55**	**283**	P	**P**	**06 23 36.1**	**+0.4**
	33nm,0.5s,mb5.5,baz=85,slow=12,SNR=22						
RKT	**Rikitea**	**39.67**	**88**	*e*S	**S**	**06 30 27.3**	**-0.3**
RKT				*e*LR	LR	06 34 53.2	
	2µm,27.5s,baz=249						
TAOE	**Nuku Hiva Isla**	**42.87**	**65**	*e*LR	LR	06 36 14.4	
	2µm,26.7s						
WB2	**Warramunga Arr**	**43.53**	**275**	⇑*i*P	**P**	**06 24 59.2**	**+0.1**
WRAB	**Tennant Creek**	**43.53**	**275**	*e*P	**P**	**06 24 59.0**	**-0.2**
	143nm,0.6s,mb5.9						
WRAB	**Tennant Creek**	**43.53**	**275**	*e*P	**P**	**06 24 59.0**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,143nm,0.6s,mb5.9						
WRA	**Warramunga Arr**	**43.54**	**275**	P	**P**	**06 24 59.3**	**+0.1**
	comp=Z,104nm,0.7s,mb5.7,baz=115,slow=7.6,SNR=335						
WRA				S	**S**	**06 31 24.9**	**+0.2**
	comp=Z,2.4nm,1.1s,baz=103,slow=14,SNR=3.2						
FORT	**Forrest**	**44.83**	**258**	*e*P	**P**	**06 25 10.0**	**+0.5**
	comp=Z,62nm,0.7s,mb5.5						
SBA	**Scott Base**	**45.74**	**184**	*e*P	**P**	**06 25 22.1**	**+6.0**
	comp=Z,20nm,1.1s,mb5.0						
SBA	**Scott Base**	**45.74**	**184**	*e*P	**P**	**06 25 22.1**	**+5.9**
SBA				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
VNDA	**Vanda**	**45.78**	**186**	*e*P	**P**	**06 25 21.6**	**+5.1**
	comp=Z,6.9nm,1.0s,mb4.5						
VNDA	**Vanda**	**45.78**	**186**	*e*P	**P**	**06 25 21.6**	**+5.1**
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KAKA	**Kakadu**	**48.68**	**282**	⇑*i*P	**P**	**06 25 56.6**	**+17**
	comp=Z,60nm,0.6s,mb5.8						
FITZ	**Fitzroy Crossi**	**51.70**	**272**	*e*P	**P**	**06 26 02.6**	**-0.3**
	comp=Z,22nm,0.8s,mb5.2						
CASY	**Casey**	**52.82**	**209**	*e*P	**P**	**06 26 12.6**	**+1.9**
KLBR	**Kellerberrin**	**52.98**	**253**	*e*P	**P**	**06 26 11.5**	**-0.9**
	comp=Z,13nm,0.7s,mb5.0						
MUN	**Mundaring**	**54.10**	**252**	*e*P	**P**	**06 26 20.6**	**0.0**
QSPA	**South Pole Qui**	**57.46**	**180**	*e*P	**P**	**06 26 48.5**	**+4.3**
	comp=Z,50nm,0.6s,mb5.7						
MAW	**Mawson**	**69.95**	**201**	*e*P	**P**	**06 28 08.4**	**+2.3**
	comp=Z,9.5nm,0.8s,mb4.8						
MAW	**Mawson**	**69.95**	**201**	P	**P**	**06 28 08.6**	**+2.5**
	comp=Z,10nm,0.8s,mb4.8,baz=129,slow=7.0,SNR=15						
MAW	**Mawson**	**69.95**	**201**	*e*P	**P**	**06 28 08.4**	**+2.3**
MAW				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SYO	**Syowa Base**	**74.76**	**193**	⇑P	**P**	**06 28 35.8**	**+1.4**
SYO	**Syowa Base**	**74.76**	**193**	⇓pP	pP	06 28 40.1	-6.9
SYO	**Syowa Base**	**74.76**	**193**	⇑PcP	PcP	06 28 49.4	+0.7
SYO	**Syowa Base**	**74.76**	**193**	⇑*e*P	**P**	**06 28 35.8**	**+1.4**
SYO				⇓*e*pP	pP	06 28 40.1	-6.9
SYO				*e*PcP	PcP	06 28 49.4	+0.7
SYO	**Syowa Base**	**74.76**	**193**	⇑*e*P	**P**	**06 28 35.8**	**+1.4**
SYO				*e*	pP	06 28 49.4	+2.4
SNAA	**Sanae**	**75.92**	**179**	*e*	**P**	**06 28 48.4**	**+7.4**
SNAA	**Sanae**	**75.92**	**179**	*e*	pP	06 28 52.9	-0.7
SNAA	**Sanae**	**75.92**	**179**	⇓*i*P	**P**	**06 28 43.8**	**+2.8**
SNAA				*e*		06 28 48.4	
SNAA				*e*		06 28 52.9	
SNAA	**Sanae**	**75.92**	**179**	⇓*i*P	**P**	**06 28 43.8**	**+2.8**
SNAA				*e*		06 28 52.9	
VNA3	**Neumayer Olymp**	**76.10**	**176**	*e*	**P**	**06 28 50.3**	**+8.2**
VNA3	**Neumayer Olymp**	**76.10**	**176**	*e*	pP	06 28 54.7	0.0
VNA3	**Neumayer Olymp**	**76.10**	**176**	⇓*i*P	**P**	**06 28 44.9**	**+2.8**
VNA3				*e*		06 28 50.3	
VNA3				*e*	pP	06 28 54.7	0.0
VNA2	**Neumayer--Watz**	**76.53**	**177**	*e*	**P**	**06 28 52.9**	**+8.4**
VNA2	**Neumayer--Watz**	**76.53**	**177**	*e*	pP	06 28 57.4	+0.3
VNA2	**Neumayer--Watz**	**76.53**	**177**	⇓*i*P	**P**	**06 28 47.7**	**+3.2**
VNA2				*e*		06 28 52.9	
VNA2				*e*	pP	06 28 57.4	+0.3
NVL	**N'lazarevskaya**	**76.59**	**184**	*e*P	**P**	**06 28 46.9**	**+2.1**
NVL				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
VNA1	**Neumayer--Stat**	**76.76**	**177**	*e*	**P**	**06 28 54.4**	**+8.6**
VNA1	**Neumayer--Stat**	**76.76**	**177**	*e*	pP	06 28 58.4	-0.1
VNA1	**Neumayer--Stat**	**76.76**	**177**	⇓*i*P	**P**	**06 28 49.4**	**+3.6**
VNA1				*e*		06 28 54.4	
VNA1				*e*		06 28 58.4	
MJAR	**Matsushiro Arr**	**79.70**	**326**	P	**P**	**06 28 59.4**	**-3.3**
	comp=Z,3.1nm,0.8s,mb4.3,baz=155,slow=5.2,SNR=6.0						
MJAR				LR	LR	07 00 03.6	
	comp=Z,158nm,18.1s,MS4.4,baz=115,slow=33						
PLCA	**Paso Flores**	**81.48**	**133**	P	**P**	**06 29 14.8**	**+2.9**
	comp=Z,4.5nm,0.8s,mb4.4,baz=219,slow=5.0,SNR=12						
PLCA	**Paso Flores**	**81.48**	**133**	*e*P	**P**	**06 29 14.3**	**+2.3**
	comp=Z,16nm,1.1s,mb4.9						
PLCA	**Paso Flores**	**81.48**	**133**	*e*P	**P**	**06 29 14.3**	**+2.3**
PLCA				pmax	pmax		
	comp=Z,16nm,1.1s						
SSE	**Sheshan**	**85.07**	**312**	P	**P**	**06 29 30.7**	**+0.3**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb5.0						
SSE				AMB	AMB		
	comp=Z,110nm,8.1s						
SSE	**Sheshan**	**85.07**	**312**	P	**P**	**06 29 30.7**	**+0.3**
	comp=Z,19nm,0.8s,mb5.3						
YSS	**Yuzh-Sakhalins**	**86.47**	**335**	*e*P	**P**	**06 29 35.4**	**-1.5**
	comp=Z,13nm,0.7s,mb5.3						
YSS	**Yuzh-Sakhalins**	**86.47**	**335**	⇑*e*P	**P**	**06 29 39.7**	**+2.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.4						
NJ2	**Nanjing**	**87.19**	**311**	*e*P	**P**	**06 29 39.2**	**-1.6**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.3						
ISA	**Isabella**	**88.39**	**45**	*e*P	**P**	**06 29 45.5**	**-0.9**
	comp=Z,32nm,1.8s,mb5.3						
ISA	**Isabella**	**88.39**	**45**	*e*P	**P**	**06 29 45.5**	**-0.9**
ISA				pmax	pmax		
	comp=Z,32nm,1.8s,mb5.2						
CMB	**Columbia Colle**	**88.90**	**42**	*e*P	**P**	**06 29 47.8**	**-1.0**
	comp=Z,8.7nm,0.8s,mb5.1						
CMB	**Columbia Colle**	**88.90**	**42**	*e*P	**P**	**06 29 47.8**	**-1.0**
CMB				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
MTUM	**Tungsten Hills**	**89.48**	**44**	*e*P	**P**	**06 29 50.6**	**-0.9**
LDFC	**Landfair**	**90.05**	**47**	*e*P	**P**	**06 29 54.6**	**+0.3**
MDJ	**Mudanjiang**	**90.09**	**326**	P	**P**	**06 29 54.1**	**-0.1**
MDJ				AMB	AMB		
	comp=Z,130nm,9.5s						
MDJ				LR	LR		
	comp=N,100nm,25.9s,MS4.2						
MDJ				LR	LR		
	comp=E,30nm,26.5s,MS4.2						
MDJ				LR	LR		
	comp=Z,170nm,25.2s,MS4.4						
NVAR	**Mina Array Bea**	**90.36**	**43**	P	**P**	**06 29 55.5**	**-0.2**
	comp=Z,6.7nm,0.8s,mb5.0,baz=206,slow=6.2,SNR=53						
NVAR				LR	LR	07 01 09.5	
	comp=Z,307nm,18.7s,MS4.8,baz=230,slow=30						
NVAR	**Mina Array Bea**	**90.36**	**43**	P	**P**	**06 29 55.5**	**-0.2**
NVAR				LR	LR	07 01 09.6	
TPNV	**Topopah Spring**	**90.58**	**45**	*e*P	**P**	**06 29 56.3**	**-0.4**
	comp=Z,9.0nm,0.8s,mb5.2						
TPNV	**Topopah Spring**	**90.58**	**45**	*e*P	**P**	**06 29 56.3**	**-0.5**
TPNV				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
NEN	**Nelson**	**90.58**	**47**	*e*P	**P**	**06 29 56.2**	**-0.6**
TUC	**Tucson**	**91.06**	**52**	*e*P	**P**	**06 29 59.1**	**0.0**
	comp=Z,6.2nm,0.8s,mb5.0						
TUC	**Tucson**	**91.06**	**52**	*e*P	**P**	**06 29 59.2**	**+0.1**
TUC				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.0						
ARUT	**Antelope Range**	**92.83**	**46**	*e*P	**P**	**06 30 06.7**	**-0.4**
ELK	**Elko**	**93.67**	**43**	*e*P	**P**	**06 30 09.8**	**-1.1**
	comp=Z,3.7nm,0.8s,mb4.9						
ELK	**Elko**	**93.67**	**43**	*e*P	**P**	**06 30 09.8**	**-1.0**
ELK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TXAR	**Lajitas Array**	**94.19**	**58**	P	**P**	**06 30 12.1**	**-1.3**
	comp=Z,0.7nm,1.0s,mb4.1,baz=202,slow=6.7,SNR=6.1						
TXAR				LR	LR	07 07 09.5	
	comp=Z,319nm,18.2s,MS4.8,baz=285,slow=32						
KMI	**Kunming**	**94.22**	**297**	P	**P**	**06 30 14.3**	**+0.6**
	comp=Z,9.0nm,0.7s,mb5.3						
KMI				pP	pP	06 30 18.2	-8.5
KMI				LR	LR		
	comp=Z,260nm,26.9s,MS4.6						
KMI	**Kunming**	**94.22**	**297**	P	**P**	**06 30 14.3**	**+0.6**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.3						
KMI				MLR	MLR		
	comp=Z,260nm,26.9s,MS4.6						
BBB	**Bella Bella**	**95.41**	**29**	LR	LR	07 06 58.0	
	comp=Z,221nm,20.8s,MS4.6,baz=223,slow=32						
HLID	**Hailey**	**95.97**	**41**	*e*P	**P**	**06 30 20.5**	**-0.7**
	comp=Z,4.3nm,0.8s,mb4.9						
NEW	**Newport**	**97.61**	**36**	LR	LR	07 04 21.2	
	comp=Z,274nm,21.0s,MS4.7,baz=216,slow=29						
MCMT	**McKenzie Canyo**	**97.64**	**41**	*e*P	**P**	**06 30 28.5**	**-0.3**
PDAR	**Pinedale Array**	**98.25**	**44**	P	**P**	**06 30 31.2**	**-0.3**
	comp=Z,1.0nm,0.8s,mb4.4,baz=180,slow=3.0,SNR=9.3						
PDAR				LR	LR	07 05 55.0	
	comp=Z,276nm,21.6s,MS4.7,baz=244,slow=30						
LZH	**Lanzhou**	**99.50**	**307**	*e*P	**P**	**06 30 38.3**	**+0.8**
	comp=Z,10.0nm,1.2s,mb5.1						
LZH				pP	pP	06 30 41.5	-9.0
LZH				sP	sP	06 30 43.1	-12
LZH				PP	PP	06 34 43.5	-0.3
LZH				*e*SKS	SKS	06 41 15.0	+3.9
LZH				*e*S	S	06 42 05.6	+2.6
LZH				sS		06 42 11.0	
LZH				*e*SS	SS	06 48 58.5	+0.5
LZH				LR	LR		
	comp=Z,630nm,20.3s,MS5.1						
LZH	**Lanzhou**	**99.50**	**307**	*e*P	**P**	**06 30 38.3**	**+0.8**
LZH						06 34 43.5	
LZH				*e*		06 41 15.0	
LZH				*e*S	S	06 42 05.6	+2.6
LZH				*SS		06 42 11.0	
LZH				*e*SS	SS	06 48 58.5	+0.5
LZH				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.1						
LZH				MLR	MLR		
	comp=Z,630nm,20.3s,MS5.1						
ILAR	**Eielson Array**	**100.28**	**13**	P	P	06 30 37.2	-3.1
	comp=Z,1.1nm,1.0s,baz=222,slow=4.6,SNR=5.5						
ILAR				PKiKP		06 35 06.8	
	comp=Z,0.6nm,0.7s,baz=259,slow=2.9,SNR=3.8						
WMQ	**Urumqi**	**114.06**	**308**	*e*PKP	PKPdf	06 35 31.5	-0.7
WMQ				PP	PP	06 36 29.0	-2.9
WMQ				PPP	PPP	06 38 52.0	-4.2
WMQ				PKS	PKS	06 39 07.0	-1.0
WMQ				SKS	SKS	06 42 41.0	+26
WMQ				SKKS		06 43 20.0	
WMQ				PP	PP		
	comp=Z,330nm,6.6s						
WMQ				LR	LR		
	comp=N,180nm,19.5s,MS4.9						
WMQ				LR	LR		
	comp=E,240nm,19.4s,MS4.9						
WMQ				LR	LR		
	comp=Z,340nm,22.8s,MS4.9						
BOSA	**Boshof**	**114.92**	**203**	PKiKP		06 35 37.1	
	comp=Z,5.6nm,1.1s,baz=173,slow=4.2,SNR=3.9						
LBTB	**Lobatse**	**118.10**	**205**	PKiKP		06 35 41.9	
	comp=Z,1.1nm,0.6s,baz=180,slow=7.1,SNR=3.3						
MKAR	**Makanchi Array**	**118.67**	**309**	PKP	PKPdf	06 35 40.1	-0.9
	comp=Z,0.8nm,0.5s,baz=63,slow=2.7,SNR=7.5						
ZAL	**Zalesovo**	**119.25**	**318**	PKP	PKPdf	06 35 40.2	-1.8
	comp=Z,1.3nm,0.4s,baz=356,slow=6.2,SNR=5.0						
ZAL	**Zalesovo**	**119.25**	**318**	⇑*i*PKIKP	PKPdf	06 35 41.4	-0.6
MATP	**Matopo**	**121.10**	**210**	PKP	PKPdf	06 35 48.1	+1.7
	comp=Z,6.7nm,0.7s,baz=164,slow=2.0,SNR=18						
KURK	**Kurchatov**	**122.08**	**313**	*e*PKP	PKPdf	06 35 46.2	-1.4
LSZ	**Lusaka**	**125.78**	**213**	*e*PKP	PKPdf	06 35 57.3	+1.7
BVAR	**Borovoye Array**	**127.51**	**315**	PKP	PKPdf	06 35 57.8	-0.1
	comp=Z,4.7nm,0.7s,baz=90,slow=1.5,SNR=21						
BRVK	**Borovoye**	**127.57**	**315**	*e*PKP	PKPdf	06 35 57.4	-0.7
KMBO	**Kilima Mbogo**	**132.16**	**233**	PKP	PKPdf	06 36 10.1	+2.2
	comp=Z,0.6nm,0.3s,baz=214,slow=22,SNR=5.0						
ARU	**Arti**	**134.36**	**319**	⇑*e*PKP	PKPdf	06 36 10.5	-0.3
ARU	**Arti**	**134.36**	**319**	*i* PKIKP	PKPdf	06 36 10.5	-0.3
ARU				*e*		06 38 39.5	
ARU				*e*SS	SS	06 56 27.9	-3.3
AKTO	**Aktyubinsk**	**135.07**	**311**	PKP	PKPdf	06 36 12.0	-0.3
	comp=Z,2.3nm,0.8s,baz=78,slow=2.4,SNR=9.0						
ARCES	**ARCESS Array B**	**140.63**	**347**	PKhKP		06 36 16.0	
	comp=Z,4.5nm,0.7s,baz=46,slow=1.8,SNR=32						
ARCES				PKP	PKPdf	06 36 22.7	+0.9
	comp=Z,9.7nm,0.7s,baz=41,slow=1.4,SNR=19						
KTK1	**Kautokeino**	**141.50**	**347**	*e*	PKPdf	06 36 20.0	-3.3
TRO	**Tromso**	**141.66**	**350**	*e*	PKPdf	06 36 17.7	-5.9
TRO				AMb	AMB	06 36 22.1	
	comp=Z,40nm,1.8s						
BHD	**Baghdad**	**143.94**	**283**	*e*x	x	06 36 27.0	
JOF	**Joensuu**	**144.23**	**337**	*e*p	PKPbc	06 36 25.0	-2.6
	comp=Z,2.5nm,0.4s						
ZEI	**Tsey**	**145.06**	**299**	*i* PKIKP	PKPdf	06 36 29.7	-0.6
MSL	**Mosul**	**145.45**	**288**	*e*x	x	06 36 38.5	
GOF	**Gofitskoye**	**145.50**	**303**	*e*PKP2	PKPab	06 36 30.1	-3.3
MOR8	**Moi Rana**	**145.52**	**351**	*e*P	PKPdf	06 36 28.9	-1.5
MOS	**Moscow**	**145.76**	**323**	*e*PKP2	PKPab	06 36 29.3	-4.7
KAF	**Kangasniemi**	**146.42**	**339**	*e*p	PKPdf	06 36 31.5	-0.5
	comp=Z,13nm,0.6s						
OBN	**Obninsk**	**146.58**	**323**	*e*PKP	PKPdf	06 36 33.6	+1.2
OBN	**Obninsk**	**146.58**	**323**	⇓*i*PKP2	PKPab	06 36 33.4	-3.8
OBN				pmax	pmax		
	comp=Z,49nm,0.8s						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS5.0						
PUL	**Pulkovo**	**146.73**	**333**	⇑*e*PKP2	PKPab	06 36 34.7	-2.9
FINES	**FINESS Array B**	**147.00**	**338**	PKPbc	PKPbc	06 36 33.9	-0.7
	comp=Z,44nm,0.8s,baz=53,slow=3.8,SNR=111						
FINES	**FINESS Array B**	**147.00**	**338**	PKPbc	PKPbc	06 36 33.9	-0.7
NSS	**Namsos**	**147.41**	**351**	*e*P	PKPdf	06 36 34.5	+1.0
VSU	**Vasula**	**148.97**	**334**	⇑*i*PKP2	PKPab	06 36 39.8	-6.8
ANN	**Anapa**	**149.48**	**304**	*e*PKP2	PKPab	06 37 00.4	+11
ANN				pmax	pmax		
	comp=Z,85nm,1.7s						
MOL	**Molde**	**149.80**	**354**	*e*P	PKPdf	06 36 42.8	+5.3
MOL				AMb	AMB	06 36 50.1	
	comp=Z,131nm,1.5s						
DOMB	**Dombas**	**150.16**	**353**	*e*P	PKPdf	06 36 43.0	+5.0
DOMB	**Dombas**	**150.16**	**353**	*e*P	PKPdf	06 36 42.2	+4.2
NB2	**NORSAR Subarra**	**150.86**	**350**	PKPabc	PKPdf	06 36 44.3	+5.2
	comp=Z,21nm,0.6s,baz=17,slow=2.6						
NB2	**NORSAR Subarra**	**150.86**	**350**	PKPa		06 36 44.3	
	baz=17,slow=2.6						
NOA	**NORSAR Array B**	**150.86**	**350**	PKP	PKPdf	06 36 38.4	-0.7
	comp=Z,3.6nm,0.7s,baz=160,slow=17,SNR=7.3						
NOA				PKPbc	PKPdf	06 36 44.6	+5.5
	comp=Z,21nm,0.7s,baz=15,slow=4.2,SNR=50						
NAO01	**NORSAR Array S**	**151.09**	**350**	*e*PKPdf	PKPdf	06 36 40.7	+1.2
NAO01				*e*PKPbc	PKPdf	06 36 45.5	+6.0
NAO	**NORSAR Subarra**	**151.12**	**350**	PKPab	PKPdf	06 36 44.3	+4.8
AKASG	**Malin Array Be**	**152.61**	**319**	PKPbc	PKPdf	06 36 48.3	+6.3
	comp=Z,8.0nm,0.8s,baz=72,slow=2.4,SNR=8.6						
BR131	**Keskin Array S**	**152.97**	**294**	PKPbc	PKPdf	06 36 51.0	+8.2

BRTR	**Keskin Array B**	**152.97**	**294**	PKPbc	PKPdf	06 36 50.0	+7.2
	comp=Z,3.1nm,0.7s,baz=131,slow=3.3,SNR=11						
LIC	**Lamto**	**153.07**	**166**	*e*PKIKP	PKPdf	06 36 46.6	+2.9
	comp=Z,28nm,1.1s						
SUW	**Suwalki**	**153.53**	**330**	*e*PKPbc	PKPdf	06 36 51.1	+8.0
DBIC	**Dimbokro**	**153.54**	**166**	PKP	PKPdf	06 36 46.8	+2.4
	comp=Z,4.9nm,0.8s,baz=138,slow=5.5,SNR=5.4						
DBIC	**Dimbokro**	**153.54**	**166**	*e*PKP	PKPdf	06 36 46.7	+2.3
MLR	**Muntele Rosu**	**157.00**	**311**	PKP	PKPdf	06 36 51.3	+3.2
	comp=Z,1.0nm,0.4s,baz=324,slow=17,SNR=2.1						
KHC	**Kasperske Hory**	**161.10**	**334**	*e*P	PKPdf	06 37 22.0	+29
GERES	**GERESS Array B**	**161.29**	**333**	PKP	PKPdf	06 36 53.8	+0.9
	comp=Z,0.3nm,0.4s,baz=225,slow=1.4,SNR=5.6						
GERES				PKPab	PKPab	06 37 36.3	-2.9
	comp=Z,1.6nm,0.9s,baz=45,slow=3.8,SNR=5.5						
MOA	**Molln**	**161.87**	**331**	⇓*i*P	PKPdf	06 36 47.7	-5.7
BAIF	**Baives**	**162.47**	**354**	*e*PKIKP	PKPdf	06 36 54.0	0.0
	comp=Z,36nm,1.3s						
MOTA	**Moosalm**	**163.50**	**336**	⇑*i*P	PKPdf	06 36 56.7	+1.6
MOTA	**Moosalm**	**163.50**	**336**	⇑P	PKPdf	06 36 56.6	+1.6
MEZF	**Maizieres J'vi**	**163.91**	**351**	*e*PKIKP	PKPdf	06 36 57.3	+1.8
ROSF	**Rostrenen**	**163.98**	**11**	*e*PKIKP	PKPdf	06 36 57.0	+1.5
SSF	**Saint Saulge**	**165.50**	**354**	*e*PKIKP	PKPdf	06 36 58.5	+1.4
	comp=Z,24nm,1.2s						
AVF	**Avril sur Loir**	**165.79**	**354**	*e*PKIKP	PKPdf	06 36 59.0	+1.7
	comp=Z,43nm,1.5s						
TCF	**Toulx Ste Croi**	**166.37**	**357**	*e*PKIKP	PKPdf	06 36 59.2	+1.4
MBDF	**Montbardon**	**167.19**	**342**	*e*PKIKP	PKPdf	06 37 00.0	+1.6
	comp=Z,11nm,0.9s						
ORIF	**Oris-en-Rattie**	**167.22**	**345**	*e*PKIKP	PKPdf	06 37 00.2	+1.8
	comp=Z,8.4nm,0.9s						
PGF	**Pioggiola**	**168.35**	**330**	*e*PKIKP	PKPdf	06 37 00.6	+1.4
	comp=Z,21nm,1.2s						
LASF	**Ste Croix**	**168.41**	**350**	*e*PKIKP	PKPdf	06 37 00.7	+1.6
MTLF	**Montolieu**	**169.30**	**356**	*e*PKIKP	PKPdf	06 37 01.1	+1.4
	comp=Z,13nm,1.1s						
EPF	**Esparros**	**169.62**	**3**	*e*PKIKP	PKPdf	06 37 01.4	+1.5
	comp=Z,17nm,1.0s						
ESDC	**Sonseca Array**	**171.86**	**29**	PKP	PKPdf	06 37 03.6	+2.2
	comp=Z,0.9nm,0.6s,baz=353,slow=2.4,SNR=6.6						
ESDC				PKPab	PKPab	06 38 23.0	-2.8
	comp=Z,0.7nm,0.6s,baz=332,slow=4.1,SNR=5.0						
MDT	**Midelt**	**175.12**	**87**	PKP	PKPdf	06 37 06.2	+3.4
	comp=Z,2.9nm,0.8s,baz=86,slow=5.4,SNR=5.8						

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*NNC **12** 06:49:51.9±5.9, 42.66N×74.97E, mpv3.1, Error ellipse: s-maj=130.8km s-min=23.3km az=167.0*

*KNET **12** 06:49:52.0±0.3, 42.65N×74.82E, h13^{km}±3^{km}, ml2.4, Error ellipse: s-maj=2.0km s-min=1.7km az=131.0*

ISC 12 06:49:52.6±0.5**, 42.66N**±0.03×**74.84E**±0.04**, h11**^{km}±3^{km}**, n15, σ0^{s}48**/25**, 12C-11D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	**Karagaybulak**	**0.08**	**92**	⇓P	**Pg**	**06 49 55.3**	**+0.2**
	1μm,0.1s,SNR=3264						
KBK				⇓S	**Sg**	**06 49 57.5**	**+0.6**
	10μm,0.2s						
AAK	**Ala-Archa**	**0.26**	**264**	⇑P	**Pg**	**06 49 57.7**	**-0.4**
	169nm,0.2s,SNR=353						
AAK				⇓S	**Sg**	**06 50 01.3**	**-0.4**
	353nm,0.2s						
AAK	**Ala-Archa**	**0.26**	**264**	⇑P	**Pg**	**06 49 57.7**	**-0.4**
	28nm,0.2s						
AAK				⇓S	**Sg**	**06 50 01.4**	**-0.4**
	299nm,0.4s						
CHMS	**Chumysh**	**0.35**	**349**	P	**Pg**	**06 49 59.7**	**-0.1**
	441nm,0.1s,SNR=400						
CHMS				⇑S	**Sg**	**06 50 04.7**	**+0.1**
	188nm,0.1s						
UCH	**Uchtor**	**0.49**	**209**	P	**Pg**	**06 50 02.2**	**-0.5**
	140nm,0.1s,SNR=678						
UCH				⇓S	**Sg**	**06 50 08.9**	**-0.5**
	268nm,0.1s						
TKM2	**Tokmak 2**	**0.62**	**65**	⇑P	**Pb**	**06 50 04.7**	**-0.2**
	43nm,0.1s,SNR=24						
TKM2				⇓S	**Sb**	**06 50 13.4**	**+0.1**
	261nm,0.1s						
KZA	**Kyzart**	**0.66**	**152**	⇓P	**Pb**	**06 50 05.6**	**+0.1**
	88nm,0.2s,SNR=219						
USP	**Ospenovka**	**0.66**	**338**	⇓P	**Pb**	**06 50 05.3**	**-0.4**
	66nm,0.1s,SNR=58						
USP				⇑S	**Sb**	**06 50 14.3**	**-0.1**
	116nm,0.1s						
EKS2	**Erkin-Say**	**0.78**	**271**	⇑P	**Pb**	**06 50 07.9**	**+0.1**
	31nm,0.2s,SNR=80						
EKS2				⇑S	**Sb**	**06 50 18.8**	**+0.6**
	53nm,0.1s						
AML	**Almayashu**	**1.00**	**239**	P	**Pb**	**06 50 11.4**	**0.0**
	24nm,0.2s,SNR=13						
AML				⇓S	**Sb**	**06 50 24.7**	**+0.3**
	78nm,0.2s						
ULHL	**Ulahol**	**1.12**	**111**	⇓P	**Pb**	**06 50 13.8**	**+0.3**
	16nm,0.1s,SNR=68						
KK31	**Karatay Array**	**3.21**	**279**	⇑Pn	**Pn**	**06 50 49.7**	**+5.7**
	1.0nm,0.3s,baz=101,slow=16,SNR=58						
KK31				⇑Sn	**Sn**	**06 51 31.2**	**+8.5**
	6.4nm,0.3s,baz=97,slow=31,SNR=14						
MK31	**Makanchi Array**	**6.73**	**50**	⇑Pn	**Pn**	**06 51 34.3**	**+0.5**
	1.5nm,0.7s,baz=228,slow=14,SNR=17						
MK31				⇑Sn	**Sn**	**06 52 49.9**	**-1.3**
	2.7nm,0.8s,baz=224,slow=25,SNR=4.8						
MK31				⇑Lg		06 53 20.0	
	2.9nm,0.8s,baz=232,slow=26,SNR=4.4						
KURK	**Kurchatov**	**8.47**	**17**	⇓Lg		06 54 18.7	
	6.7nm,0.9s						
AB31	**Akbulak array**	**12.28**	**308**	P	**P**	**06 52 51.1**	**+0.9**
	0.5nm,0.5s,baz=115,slow=12,SNR=4.8						

KRSC 12 07:52:39.6±0.3**, 52.60N**×**159.26E, h49**^{km}±5^{km}**, ML3.8, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.49**	**250**	*i* P	P	07 52 51.0	+0.3
RUS				*e*S	S	07 52 59.5	+0.9
PET	**Petropavlovsk**	**0.56**	**319**	*i* P	P	07 52 52.0	+0.4
PET				*i* S	S	07 53 00.8	+0.5
NLC	**Nalytchevo**	**0.57**	**5**	*e*P	P	07 52 51.8	+0.1
NLC				*e*S	S	07 53 01.1	+0.6
UGLR	**Uglovaya**	**0.67**	**337**	*i* P	P	07 52 53.6	+0.7
UGLR				*e*S	S	07 53 04.0	+1.4
SPN	**Mys Shipunski**	**0.68**	**43**	*i* P	P	07 52 53.8	+0.7
SPN				*e*S	S	07 53 04.3	+1.3
SMAR	**Somma**	**0.72**	**337**	*e*P	P	07 52 53.8	+0.2
SMAR				*e*S	S	07 53 04.5	+0.6
KRMR	**Karymshinskiy**	**0.72**	**289**	*i* P	P	07 52 53.9	+0.2
KRMR				*i* S	S	07 53 04.4	+0.3
GRL	**Gorelyy**	**0.73**	**267**	*i* P	P	07 52 54.9	+1.2
GRL				*e*S	S	07 53 05.9	+1.8
AVH	**Avacha**	**0.74**	**335**	*i* P	P	07 52 54.7	+0.9
AVH				*e*S	S	07 53 05.6	+1.3
KOK	**Koryaka**	**0.79**	**332**	*i* P	P	07 52 55.4	+0.8
KOK				*e*S	S	07 53 06.6	+1.0
APC	**Apacha**	**1.32**	**285**	*i* P	P	07 53 02.3	+0.2
APC				*e*S	S	07 53 18.6	-0.2
APC				Smax			
	90nm,0.8s						
GNL	**Ganaly**	**1.35**	**325**	*i* P	P	07 53 02.9	+0.3
GNL				*e*S	S	07 53 20.0	+0.3
KII	**Karymskiy**	**1.44**	**4**	*e*P	P	07 53 04.2	+0.4
KII				*e*S	S	07 53 22.6	+0.8
PAU	**Pauzhetka**	**1.89**	**234**	P	P	07 53 11.5	+1.4
PAU				Smax			
	100nm,0.9s						
ESO	**Esso**	**3.35**	**355**	*e*P	P	07 53 30.9	+0.1
KPT	**Kopyto**	**3.42**	**9**	*e*P	P	07 53 32.2	+0.4
ZLN	**Zelenaya**	**3.54**	**14**	*e*P	P	07 53 34.6	+1.1
ZLN				*e*S	S	07 54 14.7	+0.1
LGNR	**Loginova**	**3.59**	**13**	P	P	07 53 35.1	+0.9
CIRR	**Tsirk**	**3.63**	**13**	P	P	07 53 36.6	+1.9
SRDR	**Sredinnyy**	**3.73**	**4**	P	P	07 53 37.7	+1.5
KBTR	**Krutoberegovo**	**4.17**	**28**	*e*P	P	07 53 42.5	+0.1
KBTR				*e*S	S	07 54 28.8	-1.6
SMKR	**Semkarok**	**4.19**	**17**	*e*P	P	07 53 43.1	+0.4
SRKR	**Sorokina**	**4.21**	**15**	*e*P	P	07 53 43.6	+0.6

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*NEIC **12** 07:56:13.4, 34.74S×71.85W, h34^{km}, MD3.5(GUC), After GUC.*

GUC 12 07:56:13.4±0.7**, 34.74S**×**71.85W, h34**^{km}±11^{km}**, MD3.5, ML2.6, 5C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	**San Fernando**	**0.70**	**80**	⇑*i*P	P	07 56 26.8	0.0
SFDO				*i* S	S	07 56 37.2	+0.7
LNV	**Longovilo**	**0.86**	**25**	*e*P	P	07 56 29.4	+0.4
LNV				*e*S	S	07 56 40.9	+0.4
CACH	**El Canelo**	**1.20**	**59**	⇑*i*P	P	07 56 35.5	+1.5
CACH				*i* S	S	07 56 50.9	+1.6
CICH	**Cipreses**	**1.25**	**71**	*e*P	P	07 56 35.0	+0.5
CICH				*i* S	S	07 56 52.4	+1.9
CHCH	**Chadas Angostu**	**1.27**	**51**	⇑*i*P	P	07 56 36.0	+1.1
CHCH				*i* S	S	07 56 53.2	+2.1
TACH	**Talagante**	**1.32**	**35**	*e*P	P	07 56 36.3	+0.7
TACH				*i* S	S	07 56 53.7	+1.5
RCDM	**Rinconada Maip**	**1.51**	**35**	⇑*i*P	P	07 56 39.0	+0.6
RCDM				*i* S	S	07 56 58.8	+1.7
RCDM				AMP		07 57 05.7	
	comp=E,130nm,0.1s						
ANTU	**Antumapu**	**1.54**	**41**	⇑*i*P	P	07 56 39.8	+1.0
ANTU				*i* S	S	07 57 00.3	+2.6
ANTU				AMP		07 57 05.1	
	comp=E,115nm,0.2s						
FCH	**Farellones**	**1.91**	**43**	*e*P	P	07 56 44.7	+0.7
FCH				*i* S	S	07 57 08.9	+1.8
FCH				AMP		07 57 15.4	
	comp=N,76nm,0.2s						

WEL 12 08:11:15.2±0.3**, 41.24S**×**172.85E, h151**^{km}±2^{km}**, ML3.5**/7**, 9C-1D, Error ellipse: s-maj=1.9km s-min=1.9km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QRZ	**Quartz Range**	**0.48**	**329**	⇑PN	P	08 11 36.4	-0.7
QRZ				SN	S	08 11 51.5	-2.2
THZ	**Tophouse**	**0.53**	**176**	⇑PN	P	08 11 37.1	-0.1
THZ				SN	S	08 11 53.0	-1.1
TUWZ	**Tuamarina**	**0.84**	**103**	⇑PN	P	08 11 39.1	0.0
TUWZ				SN	S	08 11 56.7	-0.7
BSWZ	**Blackbirch Sta**	**0.90**	**122**	PN	P	08 11 39.5	0.0
DUWZ	**D'Urville Isla**	**0.92**	**62**	PN	P	08 11 39.5	-0.1
DUWZ				SN	S	08 11 57.5	-0.8
DSZ	**Denniston Nort**	**0.94**	**237**	⇑PN	P	08 11 39.2	-0.6
DSZ				SN	S	08 11 56.1	-2.5
TCW	**Tory Channel**	**1.07**	**89**	⇑PN	P	08 11 40.9	0.0
TCW				SN	S	08 11 60.0	-0.7
KHZ	**Kahutara**	**1.28**	**157**	PN	P	08 11 42.9	-0.1
KHZ				SN	S	08 12 02.5	-1.9
MRW	**Makara Radio**	**1.39**	**90**	⇑PN	P	08 11 43.4	-0.6
MRW				SN	S	08 12 04.3	-2.0
WEL	**Wellington**	**1.44**	**92**	PN	P	08 11 43.9	-0.7
BHW	**Baring Head**	**1.53**	**97**	PN	P	08 11 44.7	-0.8
KIW	**Kapiti Island**	**1.60**	**77**	⇑PN	P	08 11 45.5	-0.7
KIW				SN	S	08 12 08.5	-1.6
LTZ	**Lake Taylor**	**1.60**	**196**	PN	P	08 11 45.9	-0.4
LTZ				SN	S	08 12 07.9	-2.3
CAW	**Cannon Point**	**1.68**	**86**	PN	P	08 11 46.1	-0.9
CAW				SN	S	08 12 09.6	-2.0
MSWZ	**Moikau Station**	**1.81**	**96**	PN	P	08 11 47.7	-0.9
PAWZ	**Paruwai Farm**	**1.94**	**95**	PN	P	08 11 49.1	-1.0
MTW	**Mount Morrison**	**2.00**	**89**	⇑PN	P	08 11 49.6	-1.1
MRZ	**Mangatainoka R**	**2.14**	**75**	⇑PN	P	08 11 51.1	-1.4
MRZ				SN	S	08 12 19.1	-2.0
WAZ	**Wanganui**	**2.20**	**48**	PN	P	08 11 53.1	-0.1
CRLZ	**Canterbury Las**	**2.34**	**184**	⇓PN	P	08 11 53.6	-1.4
WVZ	**Waitaha Valley**	**2.42**	**220**	PN	P	08 11 54.2	-1.8
MQZ	**McQueen's Vall**	**2.47**	**183**	PN	P	08 11 54.6	-1.9
MQZ				SN	S	08 12 24.1	-4.2
VRZ	**Vera Road**	**2.57**	**35**	*e*SN	S	08 12 28.6	-1.8
TSZ	**Takapari Road**	**2.64**	**65**	*e*PN	P	08 11 56.8	-1.9
PKVZ	**Pokaka**	**2.73**	**45**	PN	P	08 11 58.3	-1.5
RPZ	**Rata Peaks**	**2.81**	**208**	PN	P	08 11 58.9	-2.0
FOZ	**Fox Glacier**	**3.30**	**224**	PN	P	08 12 03.5	-3.7
LBZ	**Lake Benmore**	**3.71**	**211**	PN	P	08 12 09.8	-2.7
ODZ	**Otahua Downs**	**4.13**	**202**	PN	P	08 12 15.9	-2.1
JCZ	**Jackson Bay**	**4.14**	**225**	PN	P	08 12 15.2	-3.0
WKZ	**Wanaka**	**4.56**	**217**	PN	P	08 12 19.7	-3.9
EAZ	**Earnscleugh**	**4.76**	**212**	SN	S	08 13 14.7	-6.5
TUZ	**Tuapeka**	**5.26**	**205**	PN	P	08 12 30.6	-2.4

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*IDC **12** 08:11:37.9±1.0, 4.86N×95.45E, mb4.0/11, mb1 4.2/11, mb1mx4.0/20, mbtmp4.0/11, Error ellipse: s-maj=50.9km s-min=17.6km az=50.0*

*MOS **12** 08:11:40.8±0.9, 4.90N×95.57E, h33^{km}, mb4.4/1, Error ellipse: s-maj=37.5km s-min=15.6km az=117.5*

*NEIC **12** 08:11:42.0±0.7, 4.69N×95.17E, h30^{km}, mb4.2/1, Error ellipse: s-maj=24.7km s-min=10.7km az=218.0*

ISC 12 08:11:40.7±0.8**, 4.6N**±0.1×**95.2E**±0.1**, h33**^{km}**, n24, σ1^{s}14**/21**, mb4.1**/16**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.48**	**83**	*e*Pn	**Pn**	**08 13 03.4**	**+1.2**
JIRN	**Jiri**	**24.46**	**340**	*e*P	**P**	**08 17 00.5**	**+2.6**
	5.6nm,0.4s,mb4.3						
GUN	**Gumba**	**24.79**	**340**	*e*P	**P**	**08 17 02.9**	**+1.7**
KKN	**Kakani**	**24.89**	**339**	*e*P	**P**	**08 17 02.0**	**-0.1**
GKN	**Gorkha**	**25.32**	**338**	*e*P	**P**	**08 17 06.2**	**0.0**
	6.8nm,0.3s,mb4.7						
KOLN	**Koldanda**	**25.52**	**336**	*e*P	**P**	**08 17 09.1**	**+1.0**
	4.1nm,0.4s,mb4.4						
FITZ	**Fitzroy Crossi**	**37.58**	**128**	P	**P**	**08 18 53.9**	**-0.2**
	1.8nm,0.5s,mb4.0,baz=344,slow=9.9,SNR=3.9						
MKAR	**Makanchi Array**	**43.46**	**347**	P	**P**	**08 19 41.8**	**-0.7**
	0.7nm,0.4s,mb3.8,baz=162,slow=8.2,SNR=16						
MKAR				PcP	PcP	08 21 30.3	-0.4
	0.4nm,0.6s,baz=166,slow=4.0,SNR=4.1						
SONM	**Songino Array**	**44.11**	**11**	P	**P**	**08 19 46.1**	**-1.5**
	0.4nm,0.3s,mb3.6,baz=189,slow=9.4,SNR=5.1						
SONM				PcP	PcP	08 21 32.1	-0.8
	1.8nm,0.4s,baz=196,slow=4.1,SNR=18						
WRA	**Warramunga Arr**	**45.57**	**124**	P	**P**	**08 19 59.4**	**-0.3**
	1.8nm,0.5s,mb4.2,baz=302,slow=9.5,SNR=15						
WB2	**Warramunga Arr**	**45.58**	**124**	*e*P	**P**	**08 20 00.0**	**+0.2**
ZAL	**Zalesovo**	**49.88**	**352**	P	**P**	**08 20 31.2**	**-1.7**
	1.8nm,0.3s,mb4.6,baz=253,slow=2.9,SNR=4.2						
BVAR	**Borovoye Array**	**52.38**	**341**	P	**P**	**08 20 50.7**	**-1.0**
	0.8nm,0.8s,mb3.7,baz=124,slow=5.2,SNR=3.8						
BRTR	**Keskin Array B**	**65.34**	**312**	P	**P**	**08 22 23.5**	**+1.5**
	1.3nm,0.6s,mb4.2,baz=140,slow=8.0,SNR=6.7						
AKASG	**Malin Array Be**	**71.33**	**322**	P	**P**	**08 22 58.6**	**-0.4**
	0.9nm,0.4s,mb4.1,baz=87,slow=6.4,SNR=3.9						
JOF	**Joensuu**	**74.21**	**335**	*e*p	**P**	**08 23 14.5**	**-1.2**
	4.9nm,0.9s,mb4.4						
FINES	**FINESS Array B**	**76.05**	**332**	P	**P**	**08 23 26.3**	**0.0**
	1.4nm,0.4s,mb4.2,baz=102,slow=7.0,SNR=17						
KAF	**Kangasniemi**	**76.14**	**333**	*e*p	**P**	**08 23 25.0**	**-1.8**
	1.5nm,0.6s,mb4.1						
KAF	**Kangasniemi**	**76.14**	**333**	*e*P	**P**	**08 23 25.0**	**-1.8**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ARCES	**ARCESS Array B**	**78.65**	**340**	P	**P**	**08 23 40.8**	**+0.1**
	comp=Z,1.4nm,0.6s,mb4.1,baz=100,slow=7.0,SNR=29						
GERES	**GERESS Array B**	**80.93**	**319**	P	**P**	**08 23 54.9**	**+1.6**
	comp=Z,1.0nm,0.7s,mb3.8,baz=90,slow=5.3,SNR=6.0						
NVAR	**Mina Array Bea**	**127.10**	**33**	PKP	PKPdf	08 30 43.8	+1.6
	comp=Z,0.2nm,0.4s,baz=272,slow=4.5,SNR=4.1						
PDAR	**Pinedale Array**	**127.76**	**23**	PKP	PKPdf	08 30 45.0	+1.6
	comp=Z,0.3nm,0.4s,baz=122,slow=4.1,SNR=5.2						
TXAR	**Lajitas Array**	**141.68**	**27**	PKhKP		08 31 04.5	
	comp=Z,0.2nm,0.4s,baz=267,slow=1.7,SNR=5.6						

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*MOS **12** 08:19:52.3±0.8, 5.18S×145.57E, h80^{km}, mb4.9/18, Error ellipse: s-maj=12.7km s-min=6.9km az=96.0*

*BJI **12** 08:19:53.8, 5.05S×145.98E, h97^{km}, mB5.2, mb5.2*

*HRVD **12** 08:19:55.2±0.2, 5.25S×145.63E, h99^{km}±1^{km}, MW5.3/73, Centroid moment Tensor Solution. LP body waves: s60,c106;Mantle waves: s73,c151; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.91±.02; $M_{\theta\theta}$1.06±.02; $M_{\phi\phi}$-0.15±.02; $M_{r\theta}$-0.55±.02; $M_{\theta\phi}$-0.01±.02; $M_{\phi r}$0.15±.02; Best double couple: $M_0$1.138×10^{17} NP1: ϕ_s261°, δ31°, λ-105°. NP2: ϕ_s99°, δ60°, λ-81°. Principal axes: T 1.204, Plg15°, Azm182°; N -.133, Plg8°, Azm274°; P -1.071, Plg73°, Azm31°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **12** 08:19:55.1±0.5, 5.36S×145.49E, h96^{km}±4^{km}, mb4.7/13, mb1 4.8/17, mb1mx4.8/18, mbtmp5.1/17, MS4.3/11, Ms1 4.3/11, ms1mx4.1/15 Error ellipse: s-maj=13.8km s-min=8.1km az=83.0*

*NEIC **12** 08:19:55.2±0.2, 5.23S×145.64E, mb5.1/31, Error ellipse: s-maj=7.4km s-min=4.5km az=85.0*

*CSEM **12** 08:19:56.1, 5.47S×145.82E, h130^{km}, mb5.5*

ISC 12 08:19:54.0±0.2**, 5.28S**±0.03×**145.66E**±0.05**, h95**^{km}**, h95**^{km}±1.6^{km}**:pP-P, n153, σ0^{s}98**/151**, mb5.0**/58**, 11C-16D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.37**	**160**	P	**P**	**08 20 58.9**	**-0.4**
	518nm,0.3s,baz=16,slow=5.6,SNR=520						
PMG				S	**S**	**08 21 48.2**	**-1.1**
	725nm,0.3s,baz=155,slow=19,SNR=15						
PMG				LR	LR	08 22 26.4	
	comp=Z,6μm,18.3s,baz=15,slow=35						
PMG	**Port Moresby**	**4.37**	**160**	*e*P	**P**	**08 20 58.7**	**-0.7**
PMG				*e*Sn	**S**	**08 21 49.2**	**-0.2**
CTA	**Charters Tower**	**14.73**	**178**	⇓*i*P	**P**	**08 23 20.6**	**+1.8**
	22nm,0.4s						
CTA	**Charters Tower**	**14.73**	**178**	P	**P**	**08 23 19.1**	**+0.3**
	0.3nm,0.3s,baz=355,slow=15,SNR=12						
CTA	**Charters Tower**	**14.73**	**178**	⇓*i*P	**P**	**08 23 20.6**	**+1.8**
CTA				pmax	pmax		
	comp=Z,22nm,0.4s						
HNR	**Honiara**	**14.76**	**107**	P	**P**	**08 23 20.5**	**+1.4**
	comp=Z,19nm,0.3s,baz=156,slow=5.5,SNR=8.1						
HNR	**Honiara**	**14.76**	**107**	*e*P	**P**	**08 23 19.7**	**+0.6**
	comp=Z,396nm,1.1s						
HNR	**Honiara**	**14.76**	**107**	*e*P	**P**	**08 23 19.7**	**+0.6**
HNR				pmax	pmax		
	comp=Z,396nm,1.1s						
KAKA	**Kakadu**	**14.99**	**240**	⇓*i*P	**P**	**08 23 40.3**	**+18**
	comp=Z,547nm,0.6s						
WRAB	**Tennant Creek**	**18.26**	**216**	*e*P	**P**	**08 24 00.4**	**-2.1**
	comp=Z,105nm,0.8s						
WRAB	**Tennant Creek**	**18.26**	**216**	⇓*i*P	**P**	**08 24 01.0**	**-1.4**
WB2	**Warramunga Arr**	**18.26**	**216**	*e*P	**P**	**08 24 00.8**	**-1.7**
WB2				*e*S	**S**	**08 27 20.0**	**+0.3**
WRA	**Warramunga Arr**	**18.27**	**216**	P	**P**	**08 24 01.3**	**-1.3**
	comp=Z,8.0nm,0.3s,baz=42,slow=12,SNR=108						
WRA				S	**S**	**08 27 19.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=39,slow=22,SNR=2.6						
WRA				PcP	PcP	08 28 30.1	-0.8
	comp=Z,0.6nm,0.3s,baz=25,slow=1.8,SNR=4.6						
GUMO	**Guam**	**18.76**	**358**	P	**P**	**08 24 10.0**	**+1.9**
	comp=Z,3.0nm,0.3s,baz=176,slow=5.6,SNR=5.4						
FITZ	**Fitzroy Crossi**	**23.35**	**235**	⇓*i*P	**P**	**08 24 54.4**	**-0.2**
	comp=Z,119nm,0.6s,mb5.4						
FITZ				*i* S	**S**	**08 28 59.7**	**+2.9**
FITZ	**Fitzroy Crossi**	**23.35**	**235**	P	**P**	**08 24 54.3**	**-0.3**
	comp=Z,137nm,0.6s,mb5.5,baz=69,slow=7.8,SNR=111						
FITZ				LR	LR	08 35 41.9	
	comp=Z,2μm,19.1s,baz=52,slow=41						
DZM	**Mont Dzumac**	**26.14**	**132**	P	**P**	**08 25 20.4**	**-0.8**
	comp=Z,9.6nm,0.5s,mb4.5,baz=296,slow=7.2,SNR=25						
STKA	**Stephens Creek**	**26.74**	**188**	⇑*i*P	**P**	**08 25 26.2**	**-0.4**
	comp=Z,39nm,0.7s,mb5.0						
STKA				*e*S	**S**	**08 29 59.8**	**+6.5**
STKA	**Stephens Creek**	**26.74**	**188**	P	**P**	**08 25 26.0**	**-0.6**
	comp=Z,51nm,0.6s,mb5.2,baz=357,slow=8.4,SNR=80						
STKA				LR	LR	08 37 16.9	
	comp=Z,489nm,18.5s,baz=356,slow=39						
CNB	**Canberra Magne**	**30.09**	**174**	*e*P	**P**	**08 25 57.5**	**+0.8**
	comp=Z,158nm,1.9s,mb5.3						
ADE	**Adelaide**	**30.24**	**191**	*e*P	**P**	**08 25 58.2**	**+0.2**
FORT	**Forrest**	**30.29**	**211**	⇓*i*P	**P**	**08 25 58.6**	**+0.1**
	comp=Z,66nm,0.6s,mb5.4						
TOO	**Toolangi**	**32.15**	**180**	*e*P	**P**	**08 26 15.7**	**+1.1**
	comp=Z,31nm,1.0s,mb5.0						
TOO	**Toolangi**	**32.15**	**180**	*e*P	**P**	**08 26 15.7**	**+1.1**
TOO				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.0						
KSM	**Kuching**	**35.94**	**280**	*e*P	**P**	**08 26 47.4**	**0.0**
KLBR	**Kellerberrin**	**37.00**	**222**	⇓*i*P	**P**	**08 26 56.1**	**0.0**
	comp=Z,35nm,0.8s,mb5.3						
KLBR				*e*PCP	PcP	08 29 14.5	-1.1
YHNB	**Yeheng**	**38.01**	**323**	*e*P	**P**	**08 27 05.8**	**+1.3**
TATO	**Taipei**	**38.17**	**323**	*e*P	**P**	**08 27 05.8**	**-0.1**
	comp=Z,150nm,0.9s,mb5.8						
NWAO	**Narrogin (SRO)**	**38.19**	**220**	P	**P**	**08 27 05.8**	**-0.2**
	comp=Z,17nm,0.8s,mb5.0,baz=50,slow=9.1,SNR=8.4						
NWAO				PcP	PcP	08 29 18.4	-1.0
	comp=Z,9.2nm,0.6s,baz=123,slow=2.5,SNR=3.3						
NWAO	**Narrogin (SRO)**	**38.19**	**220**	*e*P	**P**	**08 27 06.4**	**+0.4**
MUN	**Mundaring**	**38.27**	**222**	⇓*i*P	**P**	**08 27 07.5**	**+0.8**
MUN				*e*PCP	PP	08 28 32.5	-6.1
MJAR	**Matsushiro Arr**	**42.18**	**351**	P	**P**	**08 27 38.0**	**-1.0**
	comp=Z,12nm,0.6s,mb4.8,baz=157,slow=8.2,SNR=29						
MJAR				pP	pP	08 28 00.4	-1.0
	comp=Z,13nm,1.0s,baz=173,slow=9.5,SNR=4.1						
MJAR				LR	LR	08 44 33.4	
	comp=Z,127nm,19.7s,baz=110,slow=35						
MAJO	**Matsushiro**	**42.18**	**351**	*e*P	**P**	**08 27 37.7**	**-1.2**
	comp=Z,12nm,0.4s,mb5.0						
MAJO				*e*	pP	08 28 00.5	-0.9
MAJO	**Matsushiro**	**42.18**	**351**	*e*P	**P**	**08 27 37.7**	**-1.2**
MAJO				*e*	pP	08 28 00.5	-0.9
MAJO				pmax	pmax		
	comp=Z,12nm,0.4s,mb5.0						
MAT	**Matsushiro**	**42.18**	**351**	P	**P**	**08 27 36.5**	**-2.4**
MAT				*e*S	**S**	**08 33 47.2**	**-4.3**
MAT	**Matsushiro**	**42.18**	**351**	P	**P**	**08 27 37.0**	**-1.9**
	comp=Z,23nm,1.0s,mb4.9						
MAT				S	**S**	**08 33 47.0**	**-4.5**
MAT	**Matsushiro**	**42.18**	**351**	P	**P**	**08 27 37.0**	**-1.9**
MAT				S	**S**	**08 33 47.0**	**-4.5**
MAT				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.9						
QIZ	**Qiongzhong**	**42.75**	**305**	P	**P**	**08 27 43.2**	**-0.6**
QIZ				S	**S**	**08 33 59.4**	**-0.6**
QIZ				AMB	AMB		
	comp=Z,140nm,12.9s						
QIZ				LR	LR		
	comp=N,300nm,14.5s						
QIZ				LR	LR		
	comp=E,280nm,15.6s						
QIZ				LR	LR		
	comp=Z,390nm,24.0s						
SSE	**Sheshan**	**43.06**	**329**	P	**P**	**08 27 46.2**	**0.0**
SSE				AP	pP	08 28 07.5	-1.3
SSE				PCP	PcP	08 29 35.1	-0.1
SSE				S	**S**	**08 34 05.3**	**+0.8**
SSE				SCS	ScS	08 37 37.6	+3.1
SSE				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.4						
SSE				AMB	AMB		
	comp=Z,80nm,6.2s						
SSE				LR	LR		
	comp=N,350nm,21.9s						
SSE				LR	LR		
	comp=E,240nm,22.0s						
SSE				LR	LR		
	comp=Z,470nm,19.8s						
SSE	**Sheshan**	**43.06**	**329**	P	**P**	**08 27 46.2**	**0.0**
	comp=Z,64nm,0.8s,mb5.4						
SSE				pP	pP	08 28 07.5	-1.3
SSE				sP	sP	08 28 18.7	-1.2
SSE				PcP	PcP	08 29 35.1	-0.1
SSE				S	**S**	**08 34 05.3**	**+0.8**
SSE				sS		08 34 42.1	
SSE				SS	SS	08 37 22.7	+10
SSE				ScS	ScS	08 37 37.6	+3.1
URZ	**Urewera**	**43.52**	**143**	P	**P**	**08 27 50.7**	**+0.9**
	comp=Z,12nm,0.4s,mb5.0,baz=267,slow=4.9,SNR=21						
NJ2	**Nanjing**	**45.05**	**327**	*e*P	**P**	**08 28 03.1**	**+0.9**
NJ2				PP	PP	08 29 50.2	+0.4
NJ2				S	**S**	**08 34 33.0**	**-0.1**
NJ2				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,230nm,4.2s						
NJ2				LR	LR		
	comp=N,1μm,23.8s						
NJ2				LR	LR		
	comp=E,590nm,16.3s						
NJ2				LR	LR		
	comp=Z,560nm,23.0s						
KS15	**Wonju Array Si**	**45.61**	**340**	P	**P**	**08 28 05.6**	**-0.9**
INCN	**Inchon**	**46.09**	**339**	*e*P	**P**	**08 28 09.8**	**-0.6**
	comp=Z,18nm,0.6s,mb5.0						
WHN	**Wuhan**	**46.54**	**322**	P	**P**	**08 28 14.5**	**+0.5**
ENH	**Enshi**	**49.48**	**318**	*e*P	**P**	**08 28 36.8**	**-0.1**
	comp=Z,26nm,1.0s,mb5.1						

ENH				*e*	pP	08 29 01.9	+2.0
SNY	**Shenyang**	**51.02**	**339**	⇓P	**P**	**08 28 47.8**	**-0.6**
SNY				AP	pP	08 29 11.5	-0.1
SNY				S	**S**	**08 36 02.7**	**+5.9**
SNY				XS		08 36 40.4	
SNY				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.3						
SNY				AMB	AMB		
	comp=Z,120nm,10.4s						
SNY				LR	LR		
	comp=N,260nm,15.7s						
SNY				LR	LR		
	comp=Z,310nm,15.9s						
KMI	**Kunming**	**51.50**	**308**	P	**P**	**08 28 55.1**	**+2.9**
KMI				AP	pP	08 29 16.4	+1.0
KMI				PP	PP	08 30 55.5	+4.5
KMI				S	**S**	**08 36 08.7**	**+5.2**
KMI				LR	LR		
	comp=N,260nm,19.6s						
KMI				LR	LR		
	comp=E,210nm,19.6s						
KMI				LR	LR		
	comp=Z,370nm,23.8s						
KMI	**Kunming**	**51.50**	**308**	P	**P**	**08 28 55.1**	**+2.9**
	comp=Z,8.0nm,1.0s,mb4.7						
KMI				pP	pP	08 29 16.4	+1.0
KMI				sP	sP	08 29 27.0	+1.0
KMI				PP	PP	08 30 55.5	+4.5
KMI				S	**S**	**08 36 08.7**	**+5.2**
KMI				sS		08 36 44.6	
KMI				LR	LR		
	comp=Z,370nm,23.8s						
KMI	**Kunming**	**51.50**	**308**	P	**P**	**08 28 55.1**	**+2.9**
KMI				*PP	pP	08 29 16.4	+1.0
KMI				*SP	sP	08 29 27.0	+1.0
KMI						08 30 55.5	
KMI				S	**S**	**08 36 08.7**	**+5.2**
KMI				*SS		08 36 44.6	
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.7						
KMI				MLR	MLR		
	comp=Z,370nm,23.8s						
MDJ	**Mudanjiang**	**51.72**	**345**	P	**P**	**08 28 52.5**	**-1.1**
MDJ				AP	pP	08 29 12.2	-4.6
MDJ				S	**S**	**08 36 09.0**	**+2.7**
MDJ				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,130nm,6.3s						
MDJ				LR	LR		
	comp=N,320nm,36.6s						
MDJ				LR	LR		
	comp=E,120nm,34.4s						
MDJ				LR	LR		
	comp=Z,410nm,32.3s						
MDJ	**Mudanjiang**	**51.72**	**345**	*e*P	**P**	**08 28 53.0**	**-0.6**
	comp=Z,19nm,0.8s,mb5.2						
YSS	**Yuzh-Sakhalins**	**52.06**	**357**	P	**P**	**08 28 54.4**	**-1.8**
	comp=Z,34nm,0.8s,mb5.4						
YSS	**Yuzh-Sakhalins**	**52.06**	**357**	⇑*e*P	**P**	**08 28 56.7**	**+0.5**
YSS				*e*		08 29 13.4	
YSS				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
CN2	**Changchun**	**52.15**	**342**	⇑P	**P**	**08 28 58.0**	**+1.2**
CN2				*e*AP	pP	08 29 20.3	+0.3
CN2				*e*S	**S**	**08 36 14.7**	**+2.6**
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
XAN	**Xi’an**	**52.28**	**321**	P	**P**	**08 28 57.0**	**-1.0**
XAN				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.2						
CD2	**Chengdu**	**53.82**	**315**	P	**P**	**08 29 09.0**	**-0.4**
CD2				PP	PP	08 31 12.8	+0.1
CD2				PPP	PPP	08 32 23.8	-0.2
CD2				S	**S**	**08 36 37.0**	**+2.1**
CD2				SS	SS	08 40 18.5	+1.9
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.3						
CD2				LR	LR		
	comp=E,200nm,13.2s						
CD2				LR	LR		
	comp=Z,140nm,15.6s						
HHC	**Hu-ho-hao-te**	**55.52**	**329**	*e*P	**P**	**08 29 21.6**	**-0.1**
HHC				AP	pP	08 29 44.5	-0.6
HHC				XP	sP	08 29 55.3	-0.5
HHC				PCP	PcP	08 30 19.3	-0.9
HHC				PP	PP	08 31 28.8	+0.8
HHC				SCP		08 34 08.2	
HHC				PCS		08 34 17.8	
HHC				S	**S**	**08 36 58.5**	**+0.9**
HHC				PS	PS	08 37 24.8	+0.4
HHC				SCS	ScS	08 38 58.4	+0.7
HHC				SS	SS	08 40 42.7	-1.0
HHC				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
HHC				AMB	AMB		
	comp=Z,130nm,9.6s						
HHC				LR	LR		
	comp=N,290nm,15.6s						
HHC				LR	LR		
	comp=E,290nm,18.0s						
HHC				LR	LR		
	comp=Z,260nm,16.8s						
KLR	**Kul’dur**	**55.62**	**349**	*e*P	**P**	**08 29 18.0**	**-4.2**
BTO	**Baotou**	**56.15**	**328**	*e*P	**P**	**08 29 25.7**	**-0.5**
BTO				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
LZH	**Lanzhou**	**56.80**	**320**	*e*P	**P**	**08 29 31.7**	**+0.9**
LZH				AP	pP	08 29 54.5	+0.1
LZH				XP	sP	08 30 03.2	-1.9
LZH				PCP	PcP	08 30 27.5	+2.2
LZH				PP	PP	08 31 40.2	+0.7
LZH				SCP		08 34 16.3	
LZH				PCS		08 34 26.0	
LZH				*e*S	**S**	**08 37 19.0**	**+4.4**
LZH				*e*SS	SS	08 41 07.0	+2.1
LZH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4						
LZH				AMB	AMB		
	comp=Z,240nm,4.6s						
LZH				LR	LR		
	comp=E,470nm,14.5s						
LZH				LR	LR		
	comp=Z,830nm,15.1s						
LZH	**Lanzhou**	**56.80**	**320**	*e*P	**P**	**08 29 31.7**	**+0.9**
	comp=Z,48nm,1.0s,mb5.5						
LZH				pP	pP	08 29 54.5	+0.1
LZH				sP	sP	08 30 03.2	-1.9
LZH				PcP	PcP	08 30 27.5	+2.2
LZH				PP	PP	08 31 40.2	+0.7
LZH				ScP		08 34 16.3	
LZH				PcS		08 34 26.0	
LZH				*e*S	**S**	**08 37 19.0**	**+4.4**
LZH				sS		08 37 52.0	
LZH				*e*SS	SS	08 41 07.0	+2.1
LZH				LR	LR		
	comp=Z,840nm,15.1s						
LZH	**Lanzhou**	**56.80**	**320**	*e*P	**P**	**08 29 31.7**	**+0.9**
LZH				*PP	pP	08 29 54.5	+0.1
LZH				*SP	sP	08 30 03.2	-1.9
LZH						08 30 27.5	
LZH						08 31 40.2	
LZH				*e*S	**S**	**08 37 19.0**	**+4.4**
LZH				*e*SS	SS	08 41 07.0	+2.1
LZH				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.5						
LZH				MLR	MLR		
	comp=Z,840nm,15.1s						
HIA	**Hailar**	**58.82**	**340**	*e*P	**P**	**08 29 43.3**	**-1.4**
	comp=Z,25nm,1.0s,mb5.2						
HIA				*e*	pP	08 30 08.2	-0.3
HIA	**Hailar**	**58.82**	**340**	*e*P	**P**	**08 29 43.3**	**-1.4**
HIA				*e*	pP	08 30 08.2	-0.3
HIA				pmax	pmax		
	comp=Z,25nm,1.0s						
GTA	**Gaotai**	**61.34**	**321**	*e*P	**P**	**08 30 02.1**	**0.0**
GTA				AP	pP	08 30 27.2	+1.2
GTA				PCP	PcP	08 30 40.1	-3.1
GTA				XP	sP	08 30 41.5	+4.8
GTA				PP	PP	08 32 22.0	+1.7
GTA				PPP	PPP	08 33 51.8	+2.3
GTA				SCP		08 34 32.5	
GTA				PCS		08 34 44.9	
GTA				S	**S**	**08 38 15.5**	**+2.2**
GTA				PS	PS	08 38 46.8	+3.2
GTA				XS		08 38 58.2	
GTA				SCS	ScS	08 39 39.3	-1.1
GTA				SS	SS	08 42 21.3	+4.5
GTA				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.3						
GTA				AMB	AMB		
	comp=Z,180nm,6.5s						
GTA				LR	LR		
	comp=N,120nm,14.8s						
GTA				LR	LR		
	comp=E,200nm,15.6s						
GTA				LR	LR		
	comp=Z,150nm,16.0s						
FX1	**Attu Island--F**	**62.44**	**18**	*e*P	**P**	**08 30 10.1**	**+0.8**
FX1				*e*	pP	08 30 35.0	+1.7
LSA	**Lhasa**	**62.74**	**307**	*e*P	**P**	**08 30 13.4**	**+1.8**
SONM	**Songino Array**	**63.13**	**331**	P	**P**	**08 30 13.3**	**-0.6**
	comp=Z,5.4nm,0.6s,mb4.7,baz=156,slow=6.3,SNR=38						
SONM				pP	pP	08 30 38.1	+0.1
	comp=Z,3.5nm,0.8s,baz=152,slow=4.8,SNR=4.1						
SONM				LR	LR	08 57 15.3	
	comp=Z,277nm,19.2s,baz=139,slow=36						
CIT	**Chita**	**63.29**	**338**	*e*P	**P**	**08 30 15.0**	**+0.1**
CIT				*e*	pP	08 30 39.9	+0.9
CIT				pmax	pmax		
	comp=Z,68nm,1.9s,mb5.2						
PPT	**Papeete**	**64.38**	**107**	*e*LR	LR	08 49 47.6	
	comp=Z,236nm,23.5s						
PPT	**Papeete**	**64.38**	**107**	LR	LR	08 54 06.0	
	comp=Z,191nm,20.7s,baz=283,slow=32						
TBI	**Tubuai**	**64.88**	**113**	*e*LR	LR	08 50 02.2	
	comp=Z,379nm,39.5s						
JIRN	**Jiri**	**66.01**	**303**	*e*P	**P**	**08 30 33.6**	**+0.7**
	comp=Z,14nm,0.7s,mb4.9						
GUN	**Gumba**	**66.36**	**303**	*e*P	**P**	**08 30 34.9**	**-0.2**
	comp=Z,29nm,0.5s,mb5.4						
ZAK	**Zakamensk**	**66.37**	**332**	⇑*i*P	**P**	**08 30 34.1**	**-0.7**
ZAK				*e*	pP	08 30 59.3	+0.3
ZAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.8						
ZAK				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
PKI	**Pulchoki**	**66.63**	**303**	*e*P	**P**	**08 30 36.3**	**-0.6**
KKN	**Kakani**	**66.81**	**303**	*e*P	**P**	**08 30 37.8**	**-0.2**
	comp=Z,22nm,0.8s,mb5.1						
DMN	**Daman**	**66.90**	**303**	*e*P	**P**	**08 30 38.2**	**-0.3**
	comp=Z,51nm,0.9s,mb5.3						
GKN	**Gorkha**	**67.42**	**303**	*e*P	**P**	**08 30 41.3**	**-0.5**
	comp=Z,24nm,0.6s,mb5.2						
BOD	**Bodaibo**	**67.88**	**342**	*e*P	**P**	**08 30 42.6**	**-1.5**
BOD				*e*	pP	08 31 04.7	-3.8
BOD				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
BOD				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.6						
SEY	**Seymchan**	**68.21**	**3**	⇑*i*P	**P**	**08 30 45.4**	**-0.6**
YAK	**Yakutsk**	**68.23**	**352**	⇑*e*P	**P**	**08 30 45.6**	**-0.6**
YAK				pmax	pmax		
	comp=Z,44nm,1.4s,mb5.1						
YAK				MLR	MLR		
	comp=Z,100nm,17.0s						
MOY	**Mondy**	**68.31**	**332**	*e*P	**P**	**08 30 47.8**	**+1.0**
WMQ	**Urumqi**	**71.38**	**320**	P	**P**	**08 31 06.0**	**+0.4**
WMQ				AP	pP	08 31 28.0	-2.3
WMQ				PP	PP	08 33 47.5	+0.4
WMQ				PPP	PPP	08 35 30.0	+1.4
WMQ				S	S	08 40 15.0	+0.4
WMQ				XS		08 40 58.0	
WMQ				SS	SS	08 44 54.0	+1.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,320nm,5.7s						
WMQ				LR	LR		
	comp=N,420nm,22.8s						
WMQ				LR	LR		
	comp=E,220nm,24.4s						
WMQ				LR	LR		
	comp=Z,280nm,27.2s						
VNDA	**Vanda**	**72.71**	**176**	*e*P	**P**	**08 31 13.1**	**+0.1**
	comp=Z,13nm,0.9s,mb4.8						
VNDA	**Vanda**	**72.71**	**176**	*e*P	**P**	**08 31 13.1**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,13nm,0.9s						
SBA	**Scott Base**	**73.38**	**175**	*e*P	**P**	**08 31 18.3**	**+1.5**
	comp=Z,11nm,1.2s,mb4.6						
SBA	**Scott Base**	**73.38**	**175**	*e*P	**P**	**08 31 18.3**	**+1.5**
SBA				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.6						
BILL	**Bilibino**	**74.58**	**8**	*e*P	**P**	**08 31 24.5**	**+0.6**
	comp=Z,15nm,1.0s,mb4.7						
BILL	**Bilibino**	**74.58**	**8**	⇓*e*P	**P**	**08 31 24.9**	**+1.0**
BILL				*e*S	S	08 40 52.8	+2.7
BILL				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7						
MKAR	**Makanchi Array**	**76.09**	**321**	P	**P**	**08 31 32.2**	**-0.8**
	comp=Z,6.2nm,0.8s,mb4.4,baz=98,slow=6.6,SNR=40						
MKAR				pP	pP	08 31 56.9	-1.0
	comp=Z,4.9nm,0.8s,baz=107,slow=6.8,SNR=6.7						
MKAR				LR	LR	09 07 22.3	
	comp=Z,134nm,19.0s,baz=106,slow=37						
TIXI	**Tiksi**	**77.56**	**355**	⇓*i*P	**P**	**08 31 39.9**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.5						
ZAL	**Zalesovo**	**77.70**	**328**	P	**P**	**08 31 40.4**	**-1.4**
	comp=Z,3.8nm,0.7s,mb4.2,baz=2.9,slow=6.5,SNR=22						
ZAL				pP	pP	08 32 05.3	-1.4
	comp=Z,6.1nm,1.1s,baz=359,slow=6.9,SNR=4.5						
ZAL				LR	LR	09 04 26.4	
	comp=Z,227nm,19.0s,baz=343,slow=34						
ZAL	**Zalesovo**	**77.70**	**328**	P	**P**	**08 31 40.4**	**-1.4**
ZAL				pP	pP	08 32 05.3	-1.4
ZAL				LR	LR	09 04 26.4	
RKT	**Rikitea**	**78.18**	**112**	*e*LR	LR	08 56 11.8	
	comp=Z,498nm,36.2s						
NVS	**Novosibirsk**	**78.92**	**329**	*i* P	**P**	**08 31 46.7**	**-1.7**
KZA	**Kyzart**	**79.19**	**314**	P	**P**	**08 31 51.8**	**+1.6**
	SNR=18						
TKM2	**Tokmak 2**	**79.19**	**315**	P	**P**	**08 31 50.5**	**+0.3**
	SNR=7.8						
UCH	**Uchtor**	**79.75**	**314**	P	**P**	**08 31 54.6**	**+1.3**
	SNR=12						
KURK	**Kurchatov**	**79.83**	**324**	*e*P	**P**	**08 31 53.0**	**-0.5**
	comp=Z,11nm,0.9s,mb4.7						
KURK	**Kurchatov**	**79.83**	**324**	⇑*e*P	**P**	**08 31 53.4**	**-0.1**
AAK	**Ala-Archa**	**79.88**	**315**	*e*P	**P**	**08 31 52.6**	**-1.3**
USP	**Ospenovka**	**80.06**	**315**	P	**P**	**08 31 54.8**	**0.0**
	SNR=8.4						
AML	**Almayashu**	**80.31**	**314**	P	**P**	**08 31 57.4**	**+1.2**
	SNR=15						
EKS2	**Erkin-Say**	**80.40**	**315**	P	**P**	**08 31 57.7**	**+1.0**
	SNR=7.1						
SLKM	**Skilak Lake**	**82.20**	**27**	*e*P	**P**	**08 32 05.5**	**-0.2**
MAW	**Mawson**	**82.40**	**203**	*e*P	**P**	**08 32 07.4**	**+0.8**
	comp=Z,8.2nm,0.7s,mb4.7						
MAW	**Mawson**	**82.40**	**203**	P	**P**	**08 32 06.2**	**-0.3**
	comp=Z,15nm,0.9s,mb4.8,baz=82,slow=6.5,SNR=17						
MAW				LR	LR	09 08 48.6	
	comp=Z,165nm,18.9s,baz=70,slow=36						
MAW	**Mawson**	**82.40**	**203**	*e*P	**P**	**08 32 07.4**	**+0.8**
MAW				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PMR	**Palmer**	**83.14**	**26**	*e*P	**P**	**08 32 09.8**	**-0.6**
	comp=Z,15nm,0.9s,mb4.8						
PMR	**Palmer**	**83.14**	**26**	*e*P	**P**	**08 32 09.9**	**-0.5**
PMR				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.8						
DIV	**Divide**	**84.45**	**27**	*e*P	**P**	**08 32 17.5**	**+0.5**
	comp=Z,73nm,0.7s,mb5.6						
QSPA	**South Pole Qui**	**84.69**	**180**	⇓*i*P	**P**	**08 32 18.7**	**+0.9**
	comp=Z,13nm,0.8s,mb4.9						
COLA	**College**	**85.01**	**23**	*e*P	**P**	**08 32 18.7**	**-1.0**
	comp=Z,28nm,0.8s,mb5.2						
COLA	**College**	**85.01**	**23**	⇓*i*P	**P**	**08 32 17.9**	**-1.8**
THY	**Trims Highway**	**85.30**	**25**	*e*P	**P**	**08 32 21.9**	**+0.7**
ILAR	**Eielson Array**	**85.35**	**23**	P	**P**	**08 32 20.1**	**-1.2**
	comp=Z,30nm,0.7s,mb5.3,baz=252,slow=4.7,SNR=201						
ILAR				pP	pP	08 32 47.8	+1.1
	comp=Z,7.9nm,0.8s,baz=262,slow=5.1,SNR=2.9						
ILAR				PKKPbc		08 50 25.3	
	comp=Z,0.5nm,0.8s,baz=10,slow=0.9,SNR=6.7						
BVAR	**Borovoye Array**	**85.40**	**324**	P	**P**	**08 32 21.2**	**-0.7**
	comp=Z,6.3nm,0.8s,mb4.6,baz=112,slow=6.5,SNR=23						
BVAR				pP	pP	08 32 47.0	-0.2
	comp=Z,3.7nm,0.6s,baz=100,slow=9.0,SNR=4.7						
CHKZ	**Chkalovo**	**85.44**	**325**	*e*P	**P**	**08 32 21.1**	**-0.9**
	comp=Z,4.8nm,0.6s,mb4.6						
CHKZ	**Chkalovo**	**85.44**	**325**	*e*P	**P**	**08 32 21.1**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
BRVK	**Borovoye**	**85.47**	**324**	P	**P**	**08 32 21.8**	**-0.5**
	comp=Z,5.8nm,1.1s,mb4.4						
BRVK	**Borovoye**	**85.47**	**324**	P	**P**	**08 32 21.8**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
DAWY	**Dawson**	**88.19**	**25**	*e*P	**P**	**08 32 35.9**	**+0.7**
DAWY				*e*	pP	08 33 02.4	+1.8
SYO	**Syowa Base**	**90.81**	**200**	⇓P	**P**	**08 32 47.9**	**+0.5**
SYO	**Syowa Base**	**90.81**	**200**	⇓*i*P	**P**	**08 32 47.9**	**+0.5**
INK	**Inuvik**	**91.47**	**22**	*e*P	**P**	**08 32 50.0**	**-0.5**
	comp=Z,16nm,1.1s,mb5.1						
INK	**Inuvik**	**91.47**	**22**	*e*P	**P**	**08 32 50.0**	**-0.5**
INK				pmax	pmax		
	comp=Z,16nm,1.1s						
OPO	**Ambohidratompo**	**96.33**	**251**	P	**P**	**08 33 14.9**	**+1.2**
	baz=65,slow=6.6						
NVAR	**Mina Array Bea**	**97.98**	**52**	P	**P**	**08 33 22.1**	**+1.3**
	comp=Z,0.4nm,0.6s,mb4.1,baz=256,slow=4.4,SNR=4.7						
NVAR				PP	PP	08 37 19.8	-3.5
	comp=Z,0.8nm,1.0s,baz=237,slow=8.4,SNR=4.1						
NVAR				LR	LR	09 10 25.4	
	comp=Z,144nm,21.0s,baz=310,slow=31						
YKA	**Yellowknife Ar**	**99.15**	**28**	PKKPbc		08 49 50.2	
	comp=Z,2.9nm,0.8s,baz=91,slow=2.2,SNR=6.3						
YKA				LR	LR	09 17 29.4	
	comp=Z,191nm,18.6s,baz=255,slow=35						
SNAA	**Sanae**	**100.48**	**190**	⇑*i*P	PP	08 37 37.8	-3.8
SNAA	**Sanae**	**100.48**	**190**	*e*		08 37 52.4	
VNA2	**Neumayer--Watz**	**101.86**	**189**	⇑*i*P	PP	08 37 48.2	-3.6
VNA2	**Neumayer--Watz**	**101.86**	**189**	*e*		08 38 00.4	
VNA3	**Neumayer Olymp**	**101.91**	**188**	⇑*i*P	PP	08 37 49.2	-2.9
VNA3	**Neumayer Olymp**	**101.91**	**188**	*e*		08 38 02.0	
VNA1	**Neumayer--Stat**	**102.24**	**189**	⇑*i*P	PP	08 37 52.2	-2.5
VNA1	**Neumayer--Stat**	**102.24**	**189**	*e*		08 38 06.5	
PDAR	**Pinedale Array**	**104.41**	**47**	PKKPbc		08 49 36.2	
	comp=Z,0.5nm,0.7s,baz=45,slow=2.1,SNR=3.9						
ARCES	**ARCESS Array B**	**105.15**	**342**	PKKPbc		08 49 32.4	
	comp=Z,1.8nm,0.4s,baz=250,slow=2.7,SNR=37						
OBN	**Obninsk**	**105.18**	**326**	⇓*e*P	Pdif	08 33 42.4	-10
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,200nm,15.0s						
FINES	**FINESS Array B**	**108.44**	**334**	PKKPbc		08 49 22.7	
	comp=Z,1.2nm,0.8s,baz=270,slow=7.6,SNR=4.4						
TXAR	**Lajitas Array**	**110.58**	**61**	PKKPbc		08 49 18.7	
	comp=Z,0.4nm,0.6s,baz=110,slow=4.5,SNR=8.2						
TXAR				PKKPab		08 49 28.3	
	comp=Z,1.1nm,0.8s,baz=114,slow=6.4,SNR=11						
BOSA	**Boshof**	**113.55**	**236**	PKiKP		08 38 22.2	
	comp=Z,2.7nm,1.0s,baz=80,slow=5.0,SNR=4.0						
GERES	**GERESS Array B**	**120.56**	**325**	PKP	PKPdf	08 38 34.3	-0.4
	comp=Z,0.4nm,0.5s,baz=288,slow=4.2,SNR=3.7						
GERES				PKKPbc		08 48 42.0	
	comp=Z,0.5nm,0.5s,baz=225,slow=4.2,SNR=5.1						
PLCA	**Paso Flores**	**123.45**	**147**	PKP	PKPdf	08 38 40.9	+0.5
	comp=Z,1.9nm,0.5s,baz=235,slow=1.4,SNR=17						
CPUP	**Villa Florida**	**141.48**	**146**	*e*PKPdf	PKPdf	08 39 10.0	-4.8
SDV	**Santo Domingo**	**143.82**	**82**	*e*PKPdf	PKPdf	08 39 17.4	-1.6
SAML	**Samuel**	**147.96**	**116**	*e*PKPdf	PKPdf	08 39 28.9	+2.8
DBIC	**Dimbokro**	**150.64**	**274**	PKPbc	PKPdf	08 39 37.0	+6.7
	comp=Z,10nm,0.6s,baz=74,slow=2.9,SNR=19						
DBIC	**Dimbokro**	**150.64**	**274**	*e*PKIKP	PKPdf	08 39 37.0	+6.7
BDFB	**Brasilia**	**155.20**	**147**	PKPbc	PKPdf	08 39 47.3	+11
	comp=Z,5.6nm,0.6s,baz=221,slow=4.9,SNR=7.2						

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*NNC **12** 08:24:39.5±2.5, 37.20N×71.05E, h155^{km}±28^{km}, mpv3.8,*
Error ellipse: s-maj=26.7km s-min=22.1km az=22.0

ISC 12 08:24:31.2±0.7**, 36.64N**±0.06×**71.5E**±0.1**, h200^{km}, n11,**
σ**1^{s}44**/18**, 7C-1D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.44**	**139**	*e*P	**P**	**08 25 54.3**	**+2.3**
THN				*e*S	**S**	**08 26 59.4**	**+4.7**
DLH	**Dalhousie**	**5.50**	**137**	*e*P	**P**	**08 25 54.0**	**+1.4**
DLH				*e*S	**S**	**08 26 55.0**	**-0.9**
AAK	**Ala-Archa**	**6.41**	**20**	⇓Pn	**P**	**08 26 05.8**	**+1.3**
	2.5nm,0.3s						
AAK				⇑Sn	**S**	**08 27 16.2**	**-1.0**
	8.7nm,0.6s						
KK31	**Karatay Array**	**6.50**	**353**	⇑Pn	**P**	**08 26 06.1**	**+0.4**
	2.7nm,0.2s,baz=172,slow=12,SNR=266						
KK31				⇑Sn	**S**	**08 27 15.0**	**-4.3**
	2.0nm,0.3s,baz=183,slow=22,SNR=7.4						
KLP	**Kalpa**	**7.56**	**130**	*e*P	**P**	**08 26 22.3**	**+2.8**
KLP				*e*S	**S**	**08 27 43.1**	**-0.9**
KLP				AML	AML	08 27 53.2	
	comp=N,89nm,0.7s						
KLP				AML	AML	08 27 55.9	
	comp=E,82nm,0.4s						
JOSI	**Joshimath**	**9.04**	**130**	*e*x	x	08 27 32.7	
KHET	**Khetri**	**9.28**	**156**	*e*P	**P**	**08 26 40.8**	**-1.0**
KHET				*e*S	**S**	**08 28 18.8**	**-5.3**
KHET				AML	AML	08 28 22.1	
	comp=E,4.1nm,0.1s						
KHET				AML	AML	08 28 22.2	
	comp=N,6.2nm,0.2s						
KUDL	**Kundal**	**9.46**	**152**	*e*P	**P**	**08 26 42.2**	**-1.9**
KUDL				*e*S	**S**	**08 28 21.7**	**-6.5**
MK31	**Makanchi Array**	**12.93**	**35**	⇑P	**P**	**08 27 34.1**	**+5.5**
	comp=N,0.2nm,0.4s,baz=219,slow=13,SNR=8.9						
AB31	**Akbulak array**	**15.17**	**330**	⇑P	**P**	**08 27 56.4**	**+0.1**
	comp=N,0.4nm,0.3s,baz=147,slow=13,SNR=25						
AB31				⇑S	**S**	**08 30 36.7**	**-2.1**
	comp=N,0.7nm,0.6s,baz=151,slow=24,SNR=2.5						
AKTO	**Aktyubinsk**	**16.87**	**329**	⇑P	**P**	**08 28 18.4**	**+1.5**
	comp=N,1.5nm,1.4s						

MAN 12 08:59:28.2, 12.43N×123.61E, h12^{km}, mb4.8, ML3.7,
MS3.7, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	**Masbate**	**0.08**	**170**	*e*P	Pg	08 59 31.7	+0.8
MMPH				*e*S	Sg	08 59 34.0	+1.4
CNP	**Catarman**	**1.03**	**86**	*e*P	Pb	08 59 46.7	-0.8
AUQP	**San Andres**	**1.27**	**314**	*e*P	Pb	08 59 51.5	-0.1
AUQP				*e*S	Sb	09 00 15.5	+7.7
PVCP	**Virac**	**1.27**	**25**	*e*P	Pb	08 59 50.3	-1.3
KALP	**Kalibo**	**1.45**	**239**	*i* P	Pn	09 00 04.8	+10
OTRP	**Odiongan**	**1.56**	**268**	*e*P	Pn	08 59 54.3	-1.6
OTRP				*e*S	Sb	09 00 16.6	+0.6
PLP	**Palo**	**1.84**	**133**	*e*P	Pn	08 59 59.2	-0.7
PLP				*e*S	Sn	09 00 22.2	-1.1
GQP	**Guinayangan**	**1.85**	**322**	*e*P	Pn	09 00 00.2	+0.1
GQP				*e*S	Sn	09 00 24.2	+0.6
BESP	**Borongan**	**1.97**	**115**	*e*P	Pn	09 00 03.3	+1.5
BOAC	**Boac**	**2.00**	**301**	*e*P	Pn	09 00 01.4	-0.8
GUIM	**Jordan**	**2.06**	**209**	*e*P	Pn	09 00 03.6	+0.6
GUIM				*e*S	Sn	09 00 33.9	+5.0
LLP	**Lapu-Lapu**	**2.13**	**171**	⇓*e*P	Pn	09 00 04.7	+0.6
LLP				*i* S	Sn	09 00 35.9	+5.2
SJMP	**San Jose**	**2.43**	**271**	*e*P	Pn	09 00 08.5	0.0
MSLP	**Maasin**	**2.59**	**152**	*e*P	Pn	09 00 10.0	-0.7
TBP	**Tagbilaran**	**2.74**	**175**	*e*P	Pn	09 00 12.8	0.0
TBP				*e*S	Sn	09 00 47.5	+1.4
POLP	**Polilio Island**	**2.80**	**325**	*e*P	Pn	09 00 17.4	+3.7
CUYO	**Cuyo Island**	**2.99**	**238**	*e*P	Pn	09 00 16.1	-0.3
SNPH	**Sibulan**	**3.09**	**187**	*e*P	Pn	09 00 21.0	+3.1
SCPH	**Surigao**	**3.21**	**145**	*e*P	Pn	09 00 27.1	+7.5
BUSP	**Coron**	**3.36**	**263**	*e*P	Pn	09 00 21.1	-0.6
LUBP	**Lubang**	**3.52**	**292**	*e*P	Pn	09 00 23.5	-0.5
BALP	**Baler**	**3.84**	**329**	*e*P	Pn	09 00 35.3	+6.9
PCPH	**Palayan**	**3.95**	**322**	⇑*i*P	Pn	09 00 38.7	+8.6
ENPP	**El Nido**	**4.28**	**254**	*e*P	Pn	09 00 33.8	-0.9
BUKP	**Musuan**	**4.75**	**162**	*e*P	Pn	09 00 42.6	+1.2
CAUP	**Cauayan**	**4.81**	**339**	*e*P	Pn	09 00 42.6	+0.4

GUC 12 09:08:08.3±0.9**, 29.25S×71.43W, h36^{km}**±6^{km}**, ML3.8,**
3C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**1.06**	**150**	⇑*i*P	P	09 08 28.4	+1.5

TLL				*i* S	S	09 08 42.4	+1.7
TLL				AMP		09 08 44.8	
	comp=N,10µm,0.5s						
CMCH	**Combarbala**	**1.95**	**169**	⇑*i*P	P	09 08 40.1	+0.5
CMCH				*i* S	S	09 09 03.8	+0.6
CMCH				AMP		09 09 23.2	
	comp=E,5µm,1.0s						
CPCH	**Copiapo**	**2.11**	**27**	⇓*i*P	P	09 08 42.4	+0.5
CPCH				*i* S	S	09 09 08.4	+1.3
CPCH				AMP		09 09 18.1	
	comp=E,5µm,0.1s						
CDCH	**Caldera**	**2.23**	**14**	AMP		09 09 18.5	
	comp=N,22nm,0.6s						
CHNG	**Los Chungos**	**2.63**	**181**	⇑*i*P	P	09 08 49.4	+0.1
CHNG				AMP		09 09 35.9	
	comp=E,388nm,0.5s						
PEL	**Peldehue**	**3.94**	**171**	*e*S	S	09 09 52.8	-0.7
FCH	**Farellones**	**4.18**	**167**	*e*P	P	09 09 12.6	+1.3
FCH				*e*S	S	09 10 01.1	+1.4
LCCH	**Las Cruces**	**4.22**	**182**	*e*P	P	09 09 10.5	-1.3
RCDM	**Rinconada Maip**	**4.26**	**173**	*e*P	P	09 09 12.5	0.0
RCDM				*i* S	S	09 10 00.8	-0.9
TACH	**Talagante**	**4.41**	**175**	*e*P	P	09 09 14.3	-0.3
TACH				*e*S	S	09 10 04.0	-1.5
CHCH	**Chadas Angostu**	**4.72**	**172**	*e*P	P	09 09 18.7	-0.3

PRE 12 09:19:38.5±3.2**, 28.10S×26.77E, h2^{km}, ML3.8, 1D, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEK	**Senekal**	**0.79**	**106**	*e*P	Pg	09 19 55.4	+1.2
SEK				*e*S	Sg	09 20 03.8	-0.9
SEK				AML	AML	09 20 07.7	
	comp=Z,1µm,0.2s						
PRYS	**Parys**	**1.28**	**24**	*e*P	Pb	09 20 04.8	+1.8
PRYS				*e*S	Sb	09 20 20.1	+0.2
PRYS				AML	AML	09 20 23.1	
	comp=Z,3µm,0.3s						
BOSA	**Boshof**	**1.43**	**249**	*e*P	Pn	09 20 06.2	+0.7
BOSA				*e*S	Sb	09 20 25.0	+0.9
BOSA				AML	AML	09 20 30.8	
	comp=Z,1µm,0.5s						
SWZ	**Schweizer**	**1.57**	**305**	⇓*i*P	Pn	09 19 56.4	-11
SWZ				*e*S	Sb	09 20 06.8	-21
SWZ				AML	AML	09 20 09.7	
	comp=Z,354nm,0.2s						
KSR	**Koster**	**2.25**	**3**	*e*P	Pn	09 20 17.1	-0.1
KSR				*e*S	Sn	09 20 45.0	-0.9
KSR				AML	AML	09 20 49.2	
	comp=Z,5µm,0.1s						
SLR	**Silverton**	**2.72**	**30**	*e*P	Pn	09 20 23.1	-0.9
SLR				*e*S	Sn	09 20 57.1	-0.7
SLR				AML	AML	09 21 10.6	
	comp=Z,310nm,0.3s						
LBTB	**Lobatse**	**3.25**	**341**	*e*P	Pn	09 20 32.3	+0.8
LBTB				*e*S	Sn	09 21 09.1	-2.2
PKA	**Prieska**	**3.85**	**245**	*e*P	Pn	09 20 12.2	-28
PKA				*e*S	Sn	09 20 59.0	-28
PKA				AML	AML	09 21 09.5	
	comp=Z,107nm,0.4s						
POGA	**Pongola**	**4.35**	**81**	*e*P	Pn	09 20 48.0	+0.8
POGA				*e*S	Sn	09 21 36.5	-2.8
POGA				AML	AML	09 21 57.6	
	comp=Z,52nm,0.4s						
UPI	**Upington**	**4.88**	**266**	*e*P	Pn	09 20 54.3	-0.3
UPI				*e*S	Sn	09 21 49.1	-3.4
UPI				AML	AML	09 22 15.3	
	comp=Z,75nm,0.2s						
MSNA	**Messina**	**6.45**	**28**	*e*S	Sn	09 21 25.9	-66
MSNA				AML	AML	09 21 51.8	
	comp=Z,29nm,0.3s						
SUR	**Sutherland**	**6.69**	**229**	*e*P	Pn	09 21 10.1	-10
SUR				*e*S	Sn	09 22 25.0	-13
CVNA	**Calvinia**	**6.96**	**239**	*e*P	Pn	09 21 21.9	-2.1
CVNA				*e*S	Sn	09 22 37.3	-7.4
CVNA				AML	AML	09 22 41.8	
	comp=Z,17nm,0.4s						
CER	**Ceres**	**8.30**	**229**	*e*S	Sn	09 23 40.2	+22
CER				AML	AML	09 24 00.1	
	comp=Z,21nm,0.5s						

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*OMAN **12** 09:45:47.8, 28.87N×52.79E, h157^{km}±2^{km}, Error ellipse: s-maj=30.2km s-min=4.9km az=341.0*
*THR **12** 09:45:49.8±0.4, 28.20N×52.82E, h14^{km}±5^{km}, ML3.6*
*CSEM **12** 09:45:50.4±0.1, 28.26N×52.95E, h14^{km}, ML3.8, Error ellipse: s-maj=2.0km s-min=1.4km az=70.0*
*KISR **12** 09:45:51.4±1.1, 28.40N×52.98E, h33^{km}, ML3.6*
*IDC **12** 09:45:55.1±4.3, 28.96N×52.94E, mb3.9/11, mb1 4.1/12, mb1mx3.9/23, mbtmp3.9/12, ML3.6/1, Error ellipse: s-maj=85.8km s-min=22.0km az=1.0*
*TEH **12** 09:45:58.7, 28.70N×52.98E, h8^{km}, Mn3.8*
*NEIC **12** 09:45:59.2±3.6, 29.37N×52.94E, h10^{km}, mb3.6/2, MN3.8(TEH), Error ellipse: s-maj=74.0km s-min=13.1km az=181.0*
*MOS **12** 09:46:01.9±1.1, 29.52N×52.88E, h33^{km}, mb4.2/1, Error ellipse: s-maj=22.7km s-min=12.2km az=108.4*

ISC 12 09:45:50.3±0.9**, 28.28N**±0.02×**52.94E**±0.03**, h10**^{km}±7^{km}**, n68, σ1^{s}29**/79**, mb3.9**/13**, 3C-1D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMOK	**Mook**	**0.79**	**345**	Pg	**Pg**	**09 46 06.3**	**+0.2**
ISRV	**Sarvestan**	**1.10**	**8**	Pg	**Pg**	**09 46 11.1**	**-1.3**
IPAR	**Pars**	**1.56**	**3**	Pn	**Pn**	**09 46 20.4**	**+2.1**
BNDS	**Bandar-Abbas**	**2.99**	**106**	*e*Pn	**Pn**	**09 46 40.1**	**+1.3**
BNDS				AML	AML	09 47 42.7	
	comp=N,179nm,0.9s						
IMEH	**Mehriz**	**3.42**	**25**	Pn	**Pn**	**09 46 47.3**	**+2.4**
ISAD	**Sadrabad**	**3.67**	**10**	Pn	**Pn**	**09 46 50.9**	**+2.4**
KRBR	**Kerman**	**3.75**	**62**	*e*Pn	**Pn**	**09 46 51.5**	**+2.0**
KRBR				*e*Sg	**Sg**	**09 47 50.5**	**-4.6**
KRBR				AML	AML	09 48 12.0	
	comp=N,87nm,0.8s						
BANOM	**Banah**	**3.81**	**127**	P	**Pn**	**09 46 52.1**	**+1.7**
	SNR=54						
IGAR	**Garneh**	**4.00**	**351**	Pn	**Pn**	**09 47 00.7**	**+7.6**
IBAF	**Bafgh**	**4.01**	**34**	Pn	**Pn**	**09 46 54.7**	**+1.5**
ICHK	**Chekchek**	**4.15**	**17**	Pn	**Pn**	**09 46 57.0**	**+1.8**
HASS	**Wahat al Ahsa’**	**4.23**	**224**	P	**Pn**	**09 47 00.8**	**+4.4**
HASS				S	**Sn**	**09 47 49.1**	**+2.6**
QRN	**Al-Qurain**	**4.44**	**277**	*e*P	**Pn**	**09 47 00.7**	**+1.3**
QRN				AML	AML	09 47 52.8	
	comp=Z,39nm,0.2s						
QRN				*e*S	**Sn**	**09 47 53.0**	**+1.2**
NASN	**Na’in**	**4.50**	**359**	*e*Pn	**Pn**	**09 47 01.0**	**+0.8**
NASN				Sn	**Sn**	**09 47 53.2**	**-0.1**
NASN	**Na’in**	**4.50**	**359**	*e*Pn	**Pn**	**09 47 01.0**	**+0.8**
	SNR=52						
NASN				Sn	**Sn**	**09 47 53.2**	**-0.1**
	SNR=52						
ASHO	**Ashiyiah**	**4.54**	**141**	P	**Pn**	**09 47 02.0**	**+1.2**
	SNR=32						
IZEF	**Zefreh**	**4.63**	**354**	Pn	**Pn**	**09 47 00.8**	**-1.2**
KBD	**Kabd**	**4.69**	**282**	*e*P	**Pn**	**09 47 04.7**	**+1.7**
KBD				*e*S	**Sn**	**09 47 57.9**	**-0.3**
KBD				AML	AML	09 47 59.8	
	comp=Z,85nm,0.3s						
IPIR	**Pirpir**	**4.73**	**339**	Pn	**Pn**	**09 47 00.1**	**-3.4**
RDF	**Al-Radifah**	**4.78**	**279**	*e*P	**Pn**	**09 47 04.7**	**+0.5**
RDF				*e*S	**Sn**	**09 48 00.7**	**+0.3**
NAY	**Al-Naaiem**	**5.09**	**282**	*e*P	**Pn**	**09 47 09.8**	**+1.2**
NAY				AML	AML	09 48 06.4	
	comp=Z,15nm,0.5s						
MIB	**Mutribah**	**5.13**	**288**	*e*P	**Pn**	**09 47 09.9**	**+0.7**
MIB				AML	AML	09 48 04.5	
	comp=Z,44nm,0.5s						
MIB				*e*S	**Sn**	**09 48 09.3**	**+0.1**
MIB	**Mutribah**	**5.13**	**288**	*e*P	**Pn**	**09 47 09.9**	**+0.7**
MIB				*e*S	**Sn**	**09 48 09.3**	**+0.1**
ARQ	**Araqi**	**5.89**	**146**	⇑P	**Pn**	**09 47 20.2**	**+0.4**
ISFB	**Sefidab**	**6.08**	**354**	Sn	**Sn**	**09 48 24.6**	**-8.4**
ISFB	**Sefidab**	**6.08**	**354**	Pn	**Pn**	**09 47 21.6**	**-0.9**
HOQ	**Hoqain**	**6.11**	**139**	⇑P	**Pn**	**09 47 23.1**	**+0.1**
BIDO	**Bidbid**	**6.66**	**134**	⇓P	**Pn**	**09 47 29.8**	**-0.8**
BSY	**Bisya**	**6.72**	**144**	P	**Pn**	**09 47 32.0**	**+0.4**
	SNR=6.4						
ASAO	**Ashtian**	**6.72**	**339**	*e*Pn	**Pn**	**09 47 31.0**	**-0.6**
IQOM	**Qom**	**6.73**	**347**	Pn	**Pn**	**09 47 30.9**	**-0.8**
BSYO	**Bisya**	**6.76**	**144**	P	**Pn**	**09 47 32.0**	**0.0**
	SNR=6.4						
IVRN	**Varamin**	**6.77**	**352**	Pn	**Pn**	**09 47 34.5**	**+2.2**
SMDO	**Samad**	**6.95**	**137**	P	**Pn**	**09 47 34.4**	**-0.4**
	SNR=33						
RYDS	**Riyadh**	**6.97**	**236**	P	**Pn**	**09 47 35.9**	**+0.8**
IDMV	**Damavand**	**7.31**	**354**	Sn	**Sn**	**09 48 53.7**	**-10**
IDMV	**Damavand**	**7.31**	**354**	Pn	**Pn**	**09 47 39.3**	**-0.6**
JMDO	**Jabal Madar**	**7.51**	**140**	⇑P	**Pn**	**09 47 42.1**	**-0.6**
IAFJ	**Afjeh**	**7.62**	**352**	Pn	**Pn**	**09 47 43.3**	**-0.9**
WBK	**Wadi Bani Khal**	**7.85**	**135**	P	**Pn**	**09 47 46.1**	**-1.3**
	SNR=7.7						
MZLS	**Mizel**	**8.14**	**240**	P	**P**	**09 47 51.3**	**-0.1**
MZLS				S	**Sn**	**09 49 18.7**	**-5.7**
SNGE	**Sanandaj**	**8.29**	**326**	*e*Pn	**P**	**09 47 52.0**	**-1.5**
HILS	**Ha’il**	**9.91**	**267**	P	**P**	**09 48 13.2**	**-2.8**
AFFS	**‘Afif**	**9.93**	**246**	P	**P**	**09 48 15.3**	**-1.0**
AFFS				S	**Sn**	**09 49 59.3**	**-10**
WHFO	**Wadi Hawf**	**10.34**	**176**	P	**P**	**09 48 21.1**	**-0.8**
	SNR=19						
RBK	**Rabkut**	**10.79**	**174**	P	**P**	**09 48 26.7**	**-1.4**
	SNR=6.5						
ABTO	**Aybut**	**10.88**	**178**	P	**P**	**09 48 27.5**	**-1.8**
	SNR=8.2						
DJNS	**Zahran al Janu**	**13.62**	**221**	P	**P**	**09 49 05.8**	**-0.3**
ZEI	**Tsey**	**16.20**	**335**	*e*P	**P**	**09 49 41.1**	**+1.4**
BR131	**Keskin Array S**	**19.61**	**311**	*e*P	**P**	**09 50 20.5**	**-1.1**
	comp=Z,1.0nm,0.4s						
BR131	**Keskin Array S**	**19.61**	**311**	*e*P	**P**	**09 50 20.5**	**-1.1**
	comp=Z,1.0nm,0.4s						
BRTR	**Keskin Array B**	**19.61**	**311**	P	**P**	**09 50 20.1**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=126,slow=13,SNR=9.2						
AKTO	**Aktyubinsk**	**22.46**	**9**	P	**P**	**09 50 49.8**	**-1.0**
	comp=Z,1.7nm,0.6s,mb3.7,baz=162,slow=13,SNR=9.5						
MLR	**Muntele Rosu**	**27.40**	**316**	P	**P**	**09 51 39.6**	**+1.8**
	comp=Z,2.5nm,0.5s,mb4.0,baz=314,slow=11,SNR=5.1						
BVAR	**Borovoye Array**	**27.89**	**23**	P	**P**	**09 51 41.2**	**-0.9**
	comp=Z,0.9nm,0.6s,mb3.6,baz=211,slow=8.6,SNR=5.2						
AKASG	**Malin Array Be**	**28.69**	**328**	P	**P**	**09 51 47.7**	**-1.7**
	comp=Z,2.0nm,0.6s,mb4.0,baz=132,slow=7.9,SNR=10						
MKAR	**Makanchi Array**	**29.46**	**43**	P	**P**	**09 51 56.8**	**+0.3**
	comp=Z,0.2nm,0.5s,mb3.1,baz=228,slow=7.4,SNR=5.1						
ZAL	**Zalesovo**	**34.61**	**33**	P	**P**	**09 52 39.5**	**-1.9**
	comp=Z,1.9nm,0.4s,mb4.4,baz=215,slow=6.1,SNR=4.9						
GERES	**GERESS Array B**	**36.38**	**315**	P	**P**	**09 52 57.8**	**+1.2**
	comp=Z,0.6nm,0.6s,mb3.7,baz=108,slow=8.4,SNR=5.4						
JOF	**Joensuu**	**37.41**	**344**	*e*p	**P**	**09 53 04.0**	**-1.0**
	comp=Z,4.1nm,0.7s,mb4.4						
FINES	**FINESS Array B**	**37.68**	**339**	P	**P**	**09 53 06.5**	**-0.8**
	comp=Z,2.3nm,0.5s,mb4.2,baz=142,slow=11,SNR=27						
KAF	**Kangasniemi**	**38.12**	**340**	*e*p	**P**	**09 53 08.5**	**-2.5**
NB2	**NORSAR Subarra**	**42.94**	**332**	P	**P**	**09 53 49.4**	**-1.3**
	comp=Z,1.0nm,0.5s,mb3.8,baz=122,slow=7.9						
NOA	**NORSAR Array B**	**42.94**	**332**	P	**P**	**09 53 48.9**	**-1.8**
	comp=Z,1.3nm,0.6s,mb3.8,baz=122,slow=8.3,SNR=5.5						
NAO	**NORSAR Subarra**	**42.99**	**331**	P	**P**	**09 53 49.4**	**-1.7**
	comp=Z,1.0nm,0.5s,mb3.8						
NAO	**NORSAR Subarra**	**42.99**	**331**	P	**P**	**09 53 49.4**	**-1.7**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ARCES	**ARCESS Array B**	**44.23**	**347**	P	**P**	**09 54 00.2**	**-0.9**
	comp=Z,3.0nm,0.9s,mb4.0,baz=312,slow=18,SNR=8.0						
SONM	**Songino Array**	**45.40**	**49**	P	**P**	**09 54 12.3**	**+1.5**
	comp=Z,0.2nm,0.3s,mb3.4,baz=275,slow=8.3,SNR=2.9						

CASC 12 09:59:13.2±3.0**, 13.12N×88.87W, h84**^{km}±50^{km}**, MD3.9, ML3.2, 6C-11D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNVI	**San Vicente**	**0.49**	**4**	⇑*e*P	P	09 59 38.2	+11
SNVI				*e*S	S	09 59 51.8	+14
LCBS	**La Ceiba**	**0.55**	**349**	⇓*e*P	P	09 59 38.3	+10
LCBS				*e*S	S	09 59 49.2	+10
LBRS	**Las Brisas**	**0.64**	**345**	⇓*e*P	P	09 59 39.6	+11
LBRS				*e*S	S	09 59 52.0	+12
VSM	**San Miguel**	**0.66**	**62**	⇓*e*P	P	09 59 40.7	+12
VSM				*e*S	S	09 59 52.1	+11
LFU	**La Fuente**	**0.67**	**339**	⇓*e*P	P	09 59 39.8	+11
LFU				*e*S	S	09 59 51.8	+11
BLLM	**Bellamira**	**0.70**	**62**	⇓*e*P	P	09 59 40.7	+11
BLLM				*e*S	S	09 59 53.0	+12
BOQS	**Boqueron**	**0.73**	**327**	⇓*e*P	P	09 59 40.5	+11
BOQS				*e*S	S	09 59 52.7	+11
CAHU	**Cacacuatique**	**0.91**	**45**	⇑*e*P	P	09 59 43.4	+12
CAHU				*e*S	S	09 59 58.3	+13
CNCH	**Conchagua**	**1.02**	**81**	⇓*e*P	P	09 59 44.8	+12
CNCH				*e*S	S	10 00 00.4	+13
SBLS	**San Blas**	**1.03**	**315**	⇑*e*P	P	09 59 44.5	+11
SBLS				*e*S	S	09 59 58.5	+10
RTR	**El Retiro**	**1.08**	**316**	⇓*e*P	P	09 59 44.9	+11
RTR				*e*S	S	10 00 01.9	+13
RBDL	**Robledal**	**1.27**	**321**	⇑*e*P	P	09 59 39.7	+3.6
RBDL				*e*S	S	09 59 56.9	+3.6
MTO2	**Montecristo 2**	**1.36**	**340**	⇓*e*P	P	09 59 48.5	+11
MTO2				*e*S	S	10 00 07.8	+12
CRIN	**San Cristobal**	**1.82**	**103**	⇑*e*P	P	09 59 43.7	+0.3
CRIN				*e*S	S	10 00 07.6	+2.0
TEL3	**Telica 3**	**2.05**	**105**	⇓*e*P	P	09 59 45.9	-0.5
TEL3				*e*S	S	10 00 10.4	-0.6
LEON	**Leon**	**2.05**	**110**	*e*P	P	09 59 45.1	-1.4
LEON				*e*S	S	10 00 10.4	-0.6
TELN	**Telica**	**2.05**	**104**	*e*P	P	09 59 45.4	-1.1
TELN				*e*S	S	10 00 13.1	+2.0
MIRN	**Miramar**	**2.21**	**107**	⇑*e*P	P	09 59 48.5	-0.2
MOMJ	**Momotombo**	**2.38**	**107**	*e*S	S	10 00 20.0	+0.7
COPN	**Copaltepe**	**2.41**	**112**	⇓*e*P	P	09 59 51.6	+0.1
MGAN	**Managua**	**2.74**	**110**	*e*S	S	10 00 27.5	-0.6
	comp=N,112nm,0.3s						
MGAN				*e*		10 00 32.7	
	comp=E,154nm,0.5s						
APON	**Apoyo**	**2.99**	**113**	*e*S	S	10 00 36.0	+1.7

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*MOS **12** 10:06:40.5±2.1, 57.37N×120.64E, h3^{km}, mb4.4/1, Error ellipse: s-maj=25.5km s-min=17.9km az=140.1*

BYKL 12 10:06:40.2±0.5**, 57.42N×120.68E, h4**^{km}±33^{km}**, 1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.41**	**249**	⇓*i*Pg	Pg	10 07 06.6	-1.8
CRS				*e*Sg	Sg	10 07 24.5	-2.8
CRS				Pmax			
	253nm,0.5s						
CRS				Smax			
	387nm,0.9s						
CRS	**Chara**	**1.41**	**249**	*e*P	Pn	10 07 06.3	-0.5
CRS				*e*		10 07 24.6	
CRS				pmax	pmax		
	comp=Z,217nm,0.3s						
CRS				smax			
	comp=N,359nm,0.5s						
NRGR	**Nerungri**	**2.34**	**107**	*e*P	Pn	10 07 23.5	+3.5
NRGR				S	Sn	10 07 52.0	+2.5
CLNS	**Chul’man**	**2.37**	**103**	*e*P	Pn	10 07 24.3	+3.8
CLNS				*e*		10 07 55.0	
CLNS				pmax	pmax		
	comp=N,11nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,18nm,0.3s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.2s						
CLNS				smax			
	comp=N,167nm,0.3s						
CLNS				smax			
	comp=Z,131nm,0.4s						
CLNS				smax			
	comp=E,170nm,0.3s						
ALDR	**Aldan**	**2.79**	**63**	*e*Pg	Pg	10 07 30.7	-5.1
ALDR				*e*Sg	Sg	10 08 06.3	-6.6
ALDR				Pmax			
	comp=E,264nm,0.4s						
ALDR				Smax			
	comp=E,991nm,0.3s						
NLYR	**Nelyaty**	**2.88**	**253**	*e*Pn	Pn	10 07 28.3	+0.6
NLYR				*e*Pg	Pg	10 07 32.4	-5.3
NLYR				*e*Sg	Sg	10 08 07.6	-8.5
NLYR				Pmax			
	comp=E,242nm,0.3s						
NLYR				Smax			
	comp=E,465nm,0.9s						
NLYR	**Nelyaty**	**2.88**	**253**	*e*P	Pn	10 07 32.1	+4.4
NLYR				*e*		10 08 07.4	
NLYR				pmax	pmax		
	comp=Z,258nm,0.3s						
NLYR				smax			
	comp=N,459nm,0.8s						
TUP	**Tupik**	**3.03**	**188**	*e*Pn	Pn	10 07 27.8	-2.1
TUP				*e*Pg	Pg	10 07 33.5	-7.2
TUP				*e*Sg	Sg	10 08 12.4	-8.7
TUP				Pmax			
	comp=N,117nm,0.7s						
TUP				Smax			
	comp=N,779nm,0.7s						
TUP	**Tupik**	**3.03**	**188**	*e*P	Pn	10 07 29.5	-0.4
TUP				*e*		10 08 12.1	
TUP				pmax	pmax		
	comp=Z,78nm,0.6s						
TUP				smax			
	comp=E,782nm,0.8s						
BOD	**Bodaibo**	**3.61**	**279**	*e*Pn	Pn	10 07 38.1	-0.1
BOD				*e*Pg	Pg	10 07 45.5	-6.8
BOD				*e*Sn	Sn	10 08 16.4	-5.4
BOD				*e*Sg	Sg	10 08 31.6	-8.9
BOD				Pmax			
	comp=E,24nm,0.6s						
BOD				Smax			
	comp=E,195nm,0.9s						
BOD	**Bodaibo**	**3.61**	**279**	*e*P	Pn	10 07 37.3	-0.9
BOD				*e*		10 08 29.3	
BOD				pmax	pmax		
	comp=Z,18nm,0.4s						
BOD				smax			
	comp=E,164nm,0.4s						
SVKR	**Severomuysk**	**4.13**	**255**	*e*Pg	Pg	10 07 55.7	-7.0
SVKR				*e*Sg	Sg	10 08 49.2	-8.5
SVKR				Pmax			
	comp=E,30nm,0.3s						
SVKR				Smax			
	comp=E,302nm,0.8s						
UKT	**Uakit**	**4.37**	**247**	*e*Pg	Pg	10 07 58.8	-8.6
UKT				*e*Sg	Sg	10 08 54.2	-11
UKT				Pmax			
	comp=E,18nm,0.6s						
UKT				Smax			
	comp=E,93nm,1.6s						
KROS	**Kirovskiy**	**4.63**	**128**	*e*Pg	Pg	10 08 01.9	-11
KROS				*e*Sg	Sg	10 09 03.8	-11
YOA	**Uoyan**	**5.09**	**259**	*e*Sg	Sg	10 09 17.5	-12
YOA				Smax			
	comp=E,704nm,2.2s						
YOA	**Uoyan**	**5.09**	**259**	*e*P	Pn	10 08 12.9	+14
YOA				pmax	pmax		
	comp=Z,99nm,1.3s						
ZEA	**Zeya**	**5.24**	**132**	*e*Pg	Pg	10 08 12.4	-12
ZEA				*e*Sg	Sg	10 09 21.9	-13
KMO	**Kumora**	**5.45**	**258**	*e*Pg	Pg	10 08 17.6	-11
KMO				*e*Sg	Sg	10 09 28.0	-14
KMO				Pmax			
	comp=Z,13nm,1.3s						
KMO				Smax			
	comp=Z,150nm,1.8s						
KMO	**Kumora**	**5.45**	**258**	*e*P	Pn	10 08 02.0	-2.2
KMO				*e*S	Sn	10 09 02.3	-6.0
KMO				pmax	pmax		
	comp=Z,23nm,0.7s						
KMO				smax			
	comp=E,142nm,1.5s						
YLYR	**Ulyunkhan**	**5.90**	**248**	*e*Pn	Pn	10 08 08.4	-2.1
YLYR				*e*Pg	Pg	10 08 27.5	-10
YLYR				*e*Sg	Sg	10 09 43.2	-13
YLYR				Pmax			
	comp=E,15nm,2.1s						
YLYR				Smax			
	comp=E,107nm,1.3s						
YLYR	**Ulyunkhan**	**5.90**	**248**	*e*P	Pn	10 08 23.8	+13
NIZ	**Nizh Angarsk**	**6.37**	**260**	*e*Sg	Sg	10 09 55.3	-17
NIZ				Smax			
	comp=E,59nm,0.9s						
YAK	**Yakutsk**	**6.49**	**41**	*e*Sg	Sg	10 09 58.7	-17
YAK				Smax			
	comp=E,637nm,0.9s						
YAK	**Yakutsk**	**6.49**	**41**	*e*P	Pn	10 08 37.3	+19
YAK				*e*S	Sn	10 09 43.2	+9.1
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				smax			
	comp=N,10.0nm,0.7s						
YAK				smax			
	comp=Z,5.0nm,0.9s						
YAK				smax			
	comp=E,8.0nm,1.0s						
YAK				smax			
	comp=E,36nm,1.1s						
YAK				smax			
	comp=Z,39nm,1.0s						
YAK				smax			
	comp=N,47nm,0.8s						
YAK				MLR	MLR		
	comp=Z,28nm,16.0s						
CIT	**Chita**	**6.80**	**220**	*e*Sg	Sg	10 10 09.8	-17
CIT				Smax			
	comp=Z,186nm,1.5s						
SYVR	**Suvo**	**7.13**	**243**	*e*Sg	Sg	10 10 20.3	-17
SYVR				Smax			
	comp=Z,94nm,1.6s						
OGRR	**Ongureny**	**8.33**	**249**	*e*Sg	Sg	10 10 59.7	-18
OGRR				Smax			
	comp=Z,34nm,2.0s						
KPC	**Khapcheranga**	**9.17**	**216**	*e*Sg	Sg	10 11 23.9	-21
KPC				Smax			
	comp=Z,53nm,1.3s						
TRG	**Tyrgan**	**9.44**	**246**	*e*Sg	Sg	10 11 32.5	-22
TRG				Smax			
	comp=Z,35nm,2.6s						

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*KRSC **12** 10:28:34.0±0.4, 48.85N×155.85E, h43^{km}±15^{km}, ML4.9*
*SKHL **12** 10:28:34.6±3.5, 49.05N×155.51E, h33^{km}, mb4.8/4*
*MOS **12** 10:28:36.4±1.1, 49.21N×155.34E, h56^{km}, mb4.5/9, Error ellipse: s-maj=13.2km s-min=6.3km az=75.9*
*BJI **12** 10:28:38.2, 49.20N×155.40E, h59^{km}, mB4.7, mb4.8*
*NEIC **12** 10:28:38.2±1.2, 49.19N×155.39E, h60^{km}±10^{km}, mb4.6/13, Error ellipse: s-maj=11.9km s-min=6.2km az=137.0*
*IDC **12** 10:28:40.5±3.7, 49.17N×155.24E, h84^{km}±34^{km}, mb3.8/16, mb1 4.1/18, mb1mx4.0/24, mbtmp4.2/18, MS3.4/5, Ms1 3.5/5, ms1mx3.1/27, Error ellipse: s-maj=18.5km s-min=14.2km az=158.0*

ISC 12 10:28:35.9±0.7**, 49.07N**±0.06×**155.49E**±0.09**, h54**^{km}±4^{km}**, n135, σ1^{s}05**/148**, mb4.4**/39**, MS3.5**/4**, 2C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril’s**	**1.67**	**14**	*e*P	**P**	**10 28 59.8**	**-3.5**
SKR				AMB	AMB	10 29 01.5	
	160nm,0.5s						
SKR				AMB	AMB	10 29 01.5	
	80nm,0.5s						
SKR				AMB	AMB	10 29 01.5	
	390nm,0.5s						
SKR				⇓*i*S	**S**	**10 29 21.1**	**-2.5**
SKR				A		10 29 25.0	
	4µm,0.5s						
SKR				A		10 29 25.0	
	5µm,0.5s						
SKR				A		10 29 25.0	
	1µm,0.5s						
ALID	**Alaid**	**1.80**	**1**	*e*P	**P**	**10 29 06.3**	**+1.1**
PAU	**Pauzhetka**	**2.54**	**19**	*i* P	**P**	**10 29 15.8**	**+0.1**
PAU				*e*S	**S**	**10 29 46.1**	**+0.5**
PAU				Smax			
	3µm,0.2s						
PAU	**Pauzhetka**	**2.54**	**19**	*i* P	**P**	**10 29 15.7**	**0.0**
PAU				*i* S	**S**	**10 29 46.8**	**+1.2**
MIPR	**Malaya Ipel’ka**	**3.31**	**14**	*e*P	**P**	**10 29 27.6**	**+1.0**
GRL	**Gorelyy**	**3.85**	**24**	*e*P	**P**	**10 29 34.3**	**+0.1**
RUS	**Russkaya**	**3.88**	**29**	P	**P**	**10 29 33.6**	**-0.9**
RUS				S	**S**	**10 30 12.5**	**-6.7**
RUS	**Russkaya**	**3.88**	**29**	*i* P	**P**	**10 29 33.7**	**-0.8**
RUS				*e*S	**S**	**10 30 17.4**	**-1.8**
APC	**Apacha**	**4.00**	**15**	*i* P	**P**	**10 29 38.3**	**+2.0**
APC				Smax			
	110nm,1.0s						

KRMR	Karymshinskiy	4.12	23	eP	P	10 29 40.0	+2.1
PET	Petropavlovsk	4.43	26	P	P	10 29 42.2	-0.2
PET				S	S	10 30 28.2	-5.1
PET	Petropavlovsk	4.43	26	eP	P	10 29 42.2	-0.2
PET				eS	S	10 30 31.9	-1.4
PET	Petropavlovsk	4.43	26	⇑iP	P	10 29 42.2	-0.2
PET				AMB	AMB	10 29 44.0	
	90nm,0.4s						
PET				pP		10 30 01.5	
PET				eS	S	10 30 33.3	0.0
PET				A		10 30 41.7	
	510nm,0.5s						
PET				A		10 30 41.7	
	280nm,0.5s						
PET	Petropavlovsk	4.43	26	ePn	P	10 29 42.2	-0.1
PET				eSn	S	10 30 30.8	-2.4
UGLR	Uglovaya	4.65	26	eP	P	10 29 45.8	+0.5
KOK	Koryaka	4.67	24	i P	P	10 29 47.1	+1.4
AVH	Avacha	4.67	25	eP	P	10 29 46.8	+1.1
SMAR	Somma	4.69	25	eP	P	10 29 46.5	+0.6
NLC	Nalytchevo	4.77	29	eP	P	10 29 45.0	-2.1
NLC				eS	S	10 30 37.4	-4.3
GNL	Ganaly	4.88	17	i P	P	10 29 49.9	+1.3
SPN	Mys Shipunski	4.94	34	P	P	10 29 47.9	-1.6
SPN				S	S	10 30 39.1	-6.9
SPN	Mys Shipunski	4.94	34	eP	P	10 29 47.9	-1.6
SPN				eS	S	10 30 41.9	-4.1
KUR	Kuril'sk	6.46	236	eP	P	10 30 10.0	-0.7
KUR				AMB	AMB	10 30 13.0	
	190nm,1.0s						
KUR				eS	S	10 31 22.5	-1.3
KUR				A		10 31 34.5	
	260nm,1.0s						
TUMR	Tumrok	6.85	23	eP	P	10 30 17.1	+1.0
ESO	Esso	7.14	15	i P	P	10 30 21.2	+1.0
KMNR	Kamenistaya	7.30	22	eP	P	10 30 22.6	+0.3
KOZ	Kozyrevsk	7.49	19	P	P	10 30 26.2	+1.2
KOZ	Kozyrevsk	7.49	19	eP	P	10 30 24.6	-0.4
KOZR	Kozyr	7.50	19	PN	P	10 30 26.2	+1.0
ZLN	Zelenaya	7.67	23	eP	P	10 30 27.7	+0.2
SRDR	Sredinnyy	7.70	18	eP	P	10 30 28.1	+0.2
LGNR	Loginova	7.70	22	eP	P	10 30 28.3	+0.4
CIRR	Tsirk	7.75	22	eP	P	10 30 29.1	+0.6
KRSR	Krestovskiy	7.79	21	eP	P	10 30 28.8	-0.4
KLY	Klyuchi	7.90	21	P	P	10 30 31.2	+0.5
KLY	Klyuchi	7.90	21	eP	P	10 30 31.1	+0.4
YUK	Yuzh-Kuril'sk	8.33	236	erx	rx	10 31 17.5	
YUK				eS	S	10 32 08.6	-1.5
YUK				A		10 32 10.0	
	190nm,0.5s						
YUK				A		10 32 10.0	
	180nm,0.4s						
YUK				A		10 32 45.2	
	150nm,0.5s						
SRKR	Sorokina	8.34	22	i P	P	10 30 36.1	-0.5
SMKR	Semkarok	8.35	23	eP	P	10 30 35.8	-1.0
KBTR	Krutoberegovo	8.42	29	P	P	10 30 36.7	-1.1
KBTR	Krutoberegovo	8.42	29	i P	P	10 30 35.1	-2.7
TYV	Tymovskoe	8.47	287	eP	P	10 30 36.0	-2.5
TYV				AMB	AMB	10 30 40.0	
	10.0nm,1.0s						
TYV				AMB	AMB	10 30 40.0	
	20nm,1.0s						
YSS	Yuzh-Sakhalins	8.80	261	eP	P	10 30 43.0	0.0
YSS				eS	S	10 32 15.5	-6.2
YSS				AMS	AMS	10 34 10.0	
	200nm,17.0s						
YSS	Yuzh-Sakhalins	8.80	261	ePN	P	10 30 43.0	0.0
YSS				pmax	pmax		
	comp=E,50nm,0.5s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
BKI	Bering	8.90	42	eP	P	10 30 40.2	-4.2
BKI				eS	S	10 32 11.2	-13
ASAJ	Asahikawa	10.16	246	P	P	10 31 02.4	+0.8
	comp=Z,2.5nm,0.3s,baz=50,slow=8.9,SNR=22						
ASAJ				LR	LR	10 34 31.8	
	comp=Z,130nm,18.7s,baz=180,slow=35						
ASAJ	Asahikawa	10.16	246	PN	P	10 31 02.4	+0.8
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,130nm,18.7s						
FX1	Attu Island--F	11.77	64	P	P	10 31 20.3	-3.1
	comp=Z,6.0nm,0.3s,baz=251,slow=15,SNR=30						
FX1				S	S	10 33 19.7	-14
	comp=Z,12nm,0.3s,baz=76,slow=19,SNR=11						
YASR	Yasnyy	17.70	294	eP	P	10 32 40.1	+0.2
YASR				AMB	AMB	10 32 42.0	
	comp=Z,5.0nm,0.5s						
MAJO	Matsushiro	17.77	232	eP	P	10 32 42.1	+1.4
	comp=Z,9.6nm,0.7s						
MAJO	Matsushiro	17.77	232	eP	P	10 32 42.2	+1.4
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MJAR	Matsushiro Arr	17.77	232	P	P	10 32 41.2	+0.5
	comp=Z,0.5nm,0.3s,baz=24,slow=12,SNR=9.8						
YAK	Yakutsk	19.36	322	P	P	10 32 52.4	-6.9
	comp=Z,18nm,0.6s						
YAK	Yakutsk	19.36	322	i P	P	10 32 52.3	-7.0
YAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BILL	Bilibino	19.78	12	eP	P	10 33 01.0	-2.9
	comp=Z,7.5nm,0.4s						
BILL	Bilibino	19.78	12	eP	P	10 33 01.0	-2.9
BILL				pmax	pmax		
	comp=Z,8.0nm,0.4s						
CN2	Changchun	21.28	267	⇑P	P	10 33 20.4	+0.9
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.3						
KS15	Wonju Array Si	23.09	250	eP	P	10 33 38.3	+1.0
CBIJ	Chichi jima	24.24	210	LR	LR	10 41 24.9	
	comp=Z,45nm,20.8s,MS2.9,baz=207,slow=32						
TIXI	Tiksi	25.74	341	⇓iP	P	10 33 59.7	-2.8
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.0						
SSE	Sheshan	31.44	248	P	P	10 34 54.3	+0.2
SSE				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
SSE				AMB	AMB		
	comp=Z,70nm,9.5s						
SSE	Sheshan	31.44	248	P	P	10 34 54.3	+0.2
	comp=Z,25nm,0.9s,mb5.0						
SONM	Songino Array	32.13	287	P	P	10 34 58.6	-1.4
	comp=Z,0.2nm,0.5s,mb3.2,baz=79,slow=7.3,SNR=2.7						
SONM				PcP	PcP	10 37 46.7	-1.5
	comp=Z,0.4nm,0.6s,baz=93,slow=0.3,SNR=3.9						
NJ2	Nanjing	32.22	252	eP	P	10 35 01.5	+0.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
ZAK	Zakamensk	33.20	293	eP	P	10 35 09.4	+0.1
ZAK				e	pP	10 35 20.6	-2.7
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.8						
COLA	College	33.33	40	eP	P	10 35 09.9	-0.3
	comp=Z,12nm,1.0s,mb4.8						
COLA	College	33.33	40	eP	P	10 35 09.9	-0.3
COLA				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
ILAR	Eielson Array	33.74	41	P	P	10 35 13.2	-0.5
	comp=Z,2.0nm,0.8s,mb4.1,baz=256,slow=7.5,SNR=19						
ILAR				LR	LR	10 49 38.0	
	comp=Z,121nm,18.1s,MS3.7,baz=179,slow=37						
KRAR	Krasnoyarsk	37.52	305	eP	P	10 35 40.8	-5.1
INK	Inuvik	38.84	34	P	P	10 35 56.7	0.0
	comp=Z,3.6nm,0.7s,mb4.2,baz=311,slow=4.7,SNR=30						
INK	Inuvik	38.84	34	P	P	10 35 55.9	-0.8
	comp=Z,2.7nm,0.7s,mb4.1						
INK	Inuvik	38.84	34	P	P	10 35 56.7	0.0
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	47.31	297	P	P	10 37 03.7	-1.9
	comp=Z,0.9nm,0.5s,mb4.0,baz=68,slow=8.7,SNR=14						
MKAR				LR	LR	10 58 36.8	
	comp=Z,84nm,20.1s,MS3.7,baz=87,slow=38						
MKAR	Makanchi Array	47.31	297	P	P	10 37 03.7	-1.9
MKAR				LR	LR	10 58 36.8	
MKAR	Makanchi Array	47.31	297	i P	P	10 37 04.5	-1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CHKZ	Chkalovo	50.17	310	eP	P	10 37 23.9	-3.6
	comp=Z,0.8nm,0.4s,mb4.1						
CHKZ	Chkalovo	50.17	310	eP	P	10 37 24.0	-3.6
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
BVAR	Borovoye Array	50.63	309	P	P	10 37 30.2	-0.9
	comp=Z,0.7nm,0.3s,mb4.0,baz=63,slow=9.7,SNR=3.9						
ARCES	ARCESS Array B	56.18	341	P	P	10 38 08.7	-3.1
	comp=Z,3.2nm,0.8s,mb4.4,baz=44,slow=8.1,SNR=13						
JIRN	Jiri	56.35	275	eP	P	10 38 14.4	+0.8
	comp=Z,15nm,0.7s,mb5.1						
GUN	Gumba	56.39	275	eP	P	10 38 14.6	+0.7
	comp=Z,11nm,0.6s,mb5.1						
KKN	Kakani	56.86	275	eP	P	10 38 17.7	+0.4
	comp=Z,15nm,0.5s,mb5.2						
DMN	Daman	57.10	275	eP	P	10 38 20.0	+1.0
	comp=Z,6.2nm,0.3s,mb5.2						
GKN	Gorkha	57.14	276	eP	P	10 38 20.6	+1.4
	comp=Z,10nm,0.5s,mb5.1						
KOLN	Koldanda	57.97	277	eP	P	10 38 26.8	+1.7
	comp=Z,6.4nm,0.6s,mb4.8						
HNR	Honiara	58.38	175	LR	LR	10 58 46.1	
	comp=Z,40nm,21.6s,MS3.5,baz=7.8,slow=31						
NVAR	Mina Array Bea	59.97	65	P	P	10 38 38.7	-0.1
	comp=Z,0.5nm,0.5s,mb3.8,baz=295,slow=5.6,SNR=6.2						
NVAR	Mina Array Bea	59.97	65	P	P	10 38 38.7	-0.1
PDAR	Pinedale Array	62.11	56	P	P	10 38 53.2	+0.1
	comp=Z,1.9nm,0.9s,mb4.2,baz=294,slow=2.1,SNR=11						
SFJD	Kangerlussuaq	62.58	11	P	P	10 38 54.6	-1.3
	comp=Z,2.7nm,0.3s,mb4.8,baz=305,slow=8.1,SNR=5.8						
FINES	FINESS Array B	62.61	335	P	P	10 38 53.8	-2.5
	comp=Z,1.2nm,0.4s,mb4.4,baz=37,slow=7.7,SNR=18						
FINES	FINESS Array B	62.61	335	i P	P	10 38 53.9	-2.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	NORSAR Array B	66.53	342	P	P	10 39 19.3	-2.2
	comp=Z,0.9nm,0.8s,mb3.9,baz=25,slow=6.4,SNR=2.3						
AKASG	Malin Array Be	70.49	327	P	P	10 39 43.2	-2.9
	comp=Z,0.7nm,0.4s,mb3.9,baz=32,slow=6.2,SNR=4.5						
AKASG	Malin Array Be	70.49	327	i P	P	10 39 44.2	-1.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SCHQ	Schefferville	70.54	24	P	P	10 39 46.7	+0.3
	comp=Z,3.4nm,0.7s,mb4.4,baz=270,slow=5.1,SNR=4.0						
SCHQ	Schefferville	70.54	24	P	P	10 39 46.7	+0.3
WRAB	Tennant Creek	71.23	201	eP	P	10 39 50.3	-0.8
WRA	Warramunga Arr	71.24	201	P	P	10 39 50.0	-1.1
	comp=Z,0.9nm,0.5s,mb4.0,baz=17,slow=6.4,SNR=19						
TXAR	Lajitas Array	74.98	63	P	P	10 40 13.7	+0.7
	comp=Z,2.1nm,0.6s,mb4.2,baz=299,slow=4.2,SNR=43						
KHC	Kasperske Hory	76.82	335	eP	P	10 40 23.2	+0.2
GERES	GERESS Array B	77.05	335	P	P	10 40 23.9	-0.3
	comp=Z,1.4nm,0.5s,mb4.1,baz=37,slow=5.5,SNR=15						
BRTR	Keskin Array B	77.77	318	P	P	10 40 28.9	+0.4
	comp=Z,1.0nm,0.8s,mb3.8,baz=45,slow=5.2,SNR=3.5						
GIVF	Givet	78.05	341	eP	P	10 40 29.8	+0.1
BAIF	Baives	78.22	342	eP	P	10 40 30.8	+0.2
CDF	Champ du Feu	79.09	339	eP	P	10 40 35.4	-0.1
	comp=Z,6.4nm,0.7s,mb4.4						
CDF	Champ du Feu	79.09	339	eP	P	10 40 35.4	-0.1
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MEZF	Maizieres J'vi	79.51	341	eP	P	10 40 38.1	+0.3
FLN	La Foliniere	80.36	344	eP	P	10 40 42.2	-0.1
LDF	La Druitiere	80.46	344	eP	P	10 40 43.0	+0.1
	comp=Z,17nm,0.8s,mb4.7						
LDF	La Druitiere	80.46	344	eP	P	10 40 43.0	+0.1
LDF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
GRR	Gorron	80.79	344	eP	P	10 40 44.8	+0.2
	comp=Z,25nm,0.8s,mb4.9						
GRR	Gorron	80.79	344	eP	P	10 40 44.8	+0.2
GRR				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
LOR	Lormes	80.94	341	eP	P	10 40 45.5	+0.1
CABF	La Chapelle	81.06	339	eP	P	10 40 46.3	+0.3
SSF	Saint Saulge	81.21	341	eP	P	10 40 47.2	+0.4
	comp=Z,1.6nm,0.4s,mb4.0						
SGMF	Saint Gilles	81.22	345	eP	P	10 40 46.8	0.0
	comp=Z,21nm,0.6s,mb4.9						
SGMF	Saint Gilles	81.22	345	eP	P	10 40 46.8	0.0
SGMF				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
ROSF	Rostrenen	81.25	346	eP	P	10 40 47.4	+0.4
AVF	Avril sur Loir	81.50	341	eP	P	10 40 48.4	+0.1
SMF	Signal de Mont	81.53	341	eP	P	10 40 48.7	+0.2
LPL	La Plagne	81.93	338	eP	P	10 40 51.3	+0.7
	comp=Z,11nm,0.7s,mb4.6						
LPG	La Plagne	81.94	338	eP	P	10 40 51.3	+0.6
	comp=Z,9.1nm,0.6s,mb4.6						
TCF	Toulx Ste Croi	82.22	342	eP	P	10 40 52.2	+0.1
MFF	Saint Martin d	82.38	343	eP	P	10 40 53.3	+0.4
MBDF	Montbardon	82.66	338	eP	P	10 40 54.7	+0.3
	comp=Z,4.8nm,0.7s,mb4.3						
ORIF	Oris-en-Rattie	82.70	339	eP	P	10 40 54.8	+0.2
RJF	Les Rejaudoux	83.30	342	eP	P	10 40 58.2	+0.6
CAF	Calviac	83.55	341	eP	P	10 40 59.3	+0.5
SMRF	Simiane la Rot	83.66	339	eP	P	10 40 59.9	+0.5
FRF	La Foret Royal	83.79	338	eP	P	10 41 00.4	+0.4
LFF	La Frestale	83.81	342	eP	P	10 41 00.8	+0.7
PGF	Pioggiola	84.13	336	eP	P	10 41 01.8	0.0
	comp=Z,12nm,0.8s,mb4.8						
PGF	Pioggiola	84.13	336	eP	P	10 41 01.8	0.0
PGF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.8						
PLCA	Paso Flores	146.78	93	PKPbc	PKPbc	10 48 11.9	+1.0
	comp=Z,2.2nm,0.7s,baz=275,slow=4.3,SNR=7.6						

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*IDC **12** 10:51:06.3±18.0, 15.57S×179.69E, h523^{km}±217^{km}, mb3.0/6, mb1 3.4/6, mb1mx3.1/15, mbtmp3.9/6, Error ellipse: s-maj=305.7km s-min=54.5km az=155.0*

ISC 12 10:51:01.5±0.7**, 16.8S**±0.2×**179.8W**±0.2**, h500^{km}, n11, σ1^{s}06**/11**, mb3.5**/7**, 4C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	32.34	259	P	P	10 56 50.9	+0.6
	4.6nm,0.9s,mb3.9,baz=95,slow=12,SNR=6.0						
WRA	Warramunga Arr	43.54	259	P	P	10 58 21.4	-0.5
	0.4nm,0.4s,mb3.2,baz=89,slow=7.0,SNR=13						
KAKA	Kakadu	46.27	268	eP	P	10 59 01.5	+18
	4.8nm,0.4s,mb4.3						
FITZ	Fitzroy Crossi	51.90	260	P	P	10 59 25.2	0.0
	3.3nm,0.7s,mb3.8,baz=115,slow=12,SNR=5.8						
NVAR	Mina Array Bea	79.54	45	P	P	11 02 16.7	-0.3
	0.5nm,0.6s,mb3.2,baz=233,slow=9.4,SNR=5.1						
TXAR	Lajitas Array	86.52	58	P	P	11 02 53.3	+1.1
	0.1nm,0.6s,mb2.7,baz=217,slow=6.3,SNR=3.5						
PDAR	Pinedale Array	87.45	44	P	P	11 02 55.5	-0.7
	0.5nm,0.6s,mb3.4,baz=225,slow=4.2,SNR=5.2						
SNAA	Sanae	91.76	179	⇑i	P	11 03 13.8	-1.7
VNA3	Neumayer Olymp	91.95	177	⇑i	P	11 03 17.8	+1.4
VNA2	Neumayer--Watz	92.38	178	⇑i	P	11 03 19.8	+1.4
VNA1	Neumayer--Stat	92.61	177	⇑i	P	11 03 18.0	-1.5

WEL 12 10:59:55.7±0.4**, 36.19S×178.97E, h182^{km}**±14^{km}**, ML3.6**/4**, 1C, Error ellipse: s-maj=12.6km s-min=7.6km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	1.96	197	PN	P	11 00 32.4	-0.5
PUZ				SN	S	11 00 59.8	-1.7
MWZ	Matawai	2.43	208	⇑PN	P	11 00 38.2	+0.1
MWZ				eSN	S	11 01 10.3	-0.6
URZ	Urewera	2.54	215	PN	P	11 00 39.1	-0.4
URZ				eSN	S	11 01 12.5	-0.8
KNZ	Kokohu	3.00	200	PN	P	11 00 44.3	-0.8
BKZ	Black Stump Fm	3.56	213	ePN	P	11 00 52.0	0.0

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*IDC **12** 11:33:06.1±6.4, 5.65S×151.81E, h55^{km}±58^{km}, mb3.7/4, mb1 4.1/5, mb1mx3.7/12, mbtmp4.1/5, ML3.0/1, Error ellipse: s-maj=73.6km s-min=34.4km az=131.0*

ISC 12 11:33:04.4±5.0**, 5.4S**±0.4×**151.6E**±0.4**, h43^{km}**±42^{km}**, n7, σ1^{s}28**/7**, mb3.9**/4**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.91	227	P	P	11 34 31.7	+0.1
	2.4nm,0.3s,baz=42,slow=9.3,SNR=8.7						
PMG				S	S	11 35 38.9	-0.2
	3.4nm,0.3s,baz=31,slow=18,SNR=7.6						
KAKA	Kakadu	20.23	248	eP	Px	11 37 57.4	
	4.8nm,0.6s						
WB2	Warramunga Arr	22.12	228	eP	P	11 38 00.0	+2.1
WRA	Warramunga Arr	22.13	228	P	P	11 37 56.6	-1.3
	2.8nm,0.7s,mb3.8,baz=54,slow=10.0,SNR=30						
FITZ	Fitzroy Crossi	28.30	241	P	P	11 38 56.1	-0.2
	7.5nm,0.6s,mb4.5,baz=51,slow=12,SNR=12						
SONM	Songino Array	66.19	329	P	P	11 43 50.1	+0.2
	0.2nm,0.4s,mb3.5,baz=131,slow=5.9,SNR=3.7						
ILAR	Eielson Array	83.18	22	P	P	11 45 26.9	-0.3
	1.0nm,0.8s,mb3.9,baz=246,slow=4.5,SNR=9.2						

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*JMA **12** 12:04:26.0±0.3, 31.46N×142.87E, h74^{km}, M3.6*

*IDC **12** 12:04:27.3±1.4, 31.06N×141.23E, mb3.8/4, mb1 4.0/6, mb1mx3.7/21, mbtmp3.8/6, ML4.1/2, Error ellipse: s-maj=50.1km s-min=21.5km az=69.0*

*NEIC **12** 12:04:30.4±4.2, 31.04N×141.22E, h21^{km}±30^{km}, mb4.0/3, Error ellipse: s-maj=27.1km s-min=13.8km az=73.0*

*MOS **12** 12:04:33.3±0.3, 31.13N×140.59E, h33^{km}, mb4.3/3, Error ellipse: s-maj=75.1km s-min=15.9km az=113.9*

ISC 12 12:04:28.0±1.1**, 31.39N**±0.08×**142.2E**±0.3**, h46^{km}**±11^{km}**, n27, σ1^{s}04**/32**, mb3.9**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	3.41	343	P	P	12 05 20.0	-0.1
CBIJ	Chichi jima	4.28	180	Pn	P	12 05 31.7	-0.6
	32nm,0.3s,baz=305,slow=22,SNR=14						
JOD2	Odawara 2	4.66	327	P	P	12 05 39.4	+1.7
JHHJ	Haha-jima-NKT	4.74	180	P	P	12 05 37.8	-1.1
JHU	Hanno	5.07	332	P	P	12 05 44.0	+0.5
JYT	Yasato	5.11	342	eS	S	12 06 43.5	+1.1
JYN	Shimob	5.11	324	P	P	12 05 46.2	+2.2
JRY	Ryogami san	5.37	330	P	P	12 05 48.7	+1.1
JHO	Hitachi	5.38	346	P	P	12 05 47.1	-0.7
JHO				S	S	12 06 46.6	-2.8
JAG	Ashikaga	5.52	336	P	P	12 05 50.3	+0.6
JAG				eS	S	12 06 51.6	-1.1
MJAR	Matsushiro Arr	6.11	328	Pn	P	12 05 58.2	+0.1
	1.4nm,0.3s,baz=155,slow=11,SNR=20						
MAJO	Matsushiro	6.11	328	ePn	P	12 05 58.2	+0.1
	6.9nm,0.6s						
MAJO				eSn	S	12 07 06.4	-1.3
MAJO	Matsushiro	6.11	328	eP	P	12 05 58.2	+0.1
MAJO				e		12 07 06.4	
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MAT	Matsushiro	6.11	328	P	P	12 05 58.5	+0.4
MAT				eS	S	12 07 05.8	-1.8
MAT	Matsushiro	6.11	328	P	P	12 05 58.6	+0.5
MAT	Matsushiro	6.11	328	eP	P	12 05 59.0	+0.9
MAT				S	S	12 07 06.0	-1.6
JMK	Ichinoseki	7.59	354	eS	S	12 07 38.4	-5.9
SONM	Songino Array	31.75	312	P	P	12 10 49.0	-0.8
	comp=Z,0.5nm,0.7s,mb3.5,baz=111,slow=7.2,SNR=5.2						
MKAR	Makanchi Array	47.84	307	P	P	12 13 03.5	+0.6
	comp=Z,0.4nm,0.4s,mb3.8,baz=91,slow=8.6,SNR=8.6						
KURK	Kurchatov	50.05	312	eP	P	12 13 20.6	+0.6
	comp=Z,1.3nm,0.6s,mb4.1						
KURK	Kurchatov	50.05	312	eP	P	12 13 20.6	+0.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
WRAB	Tennant Creek	51.58	189	eP	P	12 13 31.6	-0.3
	comp=Z,2.5nm,0.8s,mb4.2						
WRAB	Tennant Creek	51.58	189	eP	P	12 13 31.6	-0.3
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
WRA	Warramunga Arr	51.59	189	P	P	12 13 31.7	-0.3
	comp=Z,1.7nm,0.5s,mb4.2,baz=6.4,slow=7.7,SNR=39						
CHKZ	Chkalovo	54.73	316	eP	P	12 13 55.7	+0.8
	comp=Z,0.5nm,0.7s,mb3.6						
CHKZ	Chkalovo	54.73	316	eP	P	12 13 55.7	+0.8
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
TXAR	Lajitas Array	93.03	53	P	P	12 17 46.8	+8.7
	comp=Z,0.3nm,0.8s,mb3.8,baz=273,slow=2.6,SNR=5.0						

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*CSEM **12** 12:11:31.7±0.3, 34.94N×54.88E, h14^{km}, ML3.3, Error ellipse: s-maj=6.1km s-min=2.6km az=109.0*

*TEH **12** 12:11:32.8, 34.95N×54.90E, h6^{km}, Mn3.3*

*THR **12** 12:11:36.5±0.4, 34.93N×54.73E, h14^{km}±7^{km}, ML2.5*

ISC 12 12:11:31.2±1.2**, 34.85N**±0.07×**54.91E**±0.06**, h1^{km}**±10^{km}**, n17, σ1^{s}14**/22**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IANJ	Anjiloo	1.02	308	Pg	Pg	12 11 50.2	-1.4
ISHM	Shahmirzad	1.63	306	Pn	Pn	12 12 01.1	0.0
ILAS	Lasjerd	1.68	289	Pn	Pn	12 12 03.1	+1.2
IGLO	Galoogah	1.86	322	Pn	Pn	12 12 04.1	-0.3
IFIR	Firoozkooh	1.93	295	Pn	Pn	12 12 05.2	-0.3
IFIR				Sn	Sn	12 12 29.7	-1.0
ISFB	Sefidab	2.26	258	Pn	Pn	12 12 10.8	+0.7
ISFB				Sn	Sn	12 12 38.8	-0.1
IDMV	Damavand	2.46	288	Pn	Pn	12 12 12.8	-0.3
IPRN	Paran-Amol	2.58	303	Pn	Pn	12 12 16.5	+1.8
IVRN	Varamin	2.62	274	Pn	Pn	12 12 15.2	0.0
IVRN				Sn	Sn	12 12 46.6	-1.5
NASN	Na'in	2.69	221	ePN	Pn	12 12 21.4	+5.1
NASN				eSG	Sg	12 12 59.9	-0.7
NASN				AML	AML	12 13 02.9	
	comp=N,20nm,0.2s						
IAFJ	Afjeh	2.80	292	Pn	Pn	12 12 17.2	-0.6
IQOM	Qom	3.15	271	Pn	Pn	12 12 22.6	-0.3
CHTH	Charan	3.27	290	ePN	Pn	12 12 27.1	+2.6
THKV	Tehran--Karaj	3.46	289	ePN	Pn	12 12 30.0	+2.7
THKV				Sn	Sn	12 13 09.1	-0.4
IPAY	Payeh	3.69	63	Pn	Pn	12 12 29.4	-1.2
ASAO	Ashtian	4.03	267	ePN	Pn	12 12 38.2	+2.8
ASAO				AML	AML	12 13 51.9	
	comp=N,7.7nm,0.4s						
IMYA	Miamay	4.49	69	Pn	Pn	12 12 41.6	-0.3

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*MOS **12** 12:52:40.8±1.2, 56.48N×121.99E, h29^{km}, mb4.4/2, Error ellipse: s-maj=41.5km s-min=22.5km az=48.3*

BYKL 12 12:52:25.2±0.6**, 57.44N×120.79E, h6^{km}**±18^{km}**, 1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	Chara	1.48	250	⇓iPg	Pg	12 52 52.2	-2.5
CRS				eSg	Sg	12 53 10.6	-3.8
CRS				Pmax			
	104nm,0.5s						
CRS				Smax			
	167nm,0.5s						
NRGR	Nerungri	2.29	108	eP	Pn	12 53 06.5	+2.4
CLNS	Chul'man	2.32	103	eP	Pn	12 53 07.0	+2.5
CLNS				e		12 53 36.6	
CLNS				pmax	pmax		
	comp=Z,21nm,0.3s						
CLNS				pmax	pmax		
	comp=N,17nm,0.4s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.3s						
CLNS				smax			
	comp=N,137nm,0.3s						
CLNS				smax			
	comp=Z,85nm,0.4s						
CLNS				smax			
	comp=E,76nm,0.2s						
ALDR	Aldan	2.72	63	ePn	Pn	12 53 08.6	-1.7
ALDR				ePg	Pg	12 53 13.2	-6.4
ALDR				eSg	Sg	12 53 49.1	-6.8
ALDR				Pmax			
	comp=E,86nm,0.3s						
ALDR				Smax			
	comp=E,673nm,0.2s						
NLYR	Nelyaty	2.94	253	ePn	Pn	12 53 12.9	-0.5
NLYR				ePg	Pg	12 53 18.4	-5.6
NLYR				eSg	Sg	12 53 54.9	-8.3
NLYR				Pmax			
	comp=E,34nm,0.4s						
NLYR				Smax			
	comp=E,162nm,0.9s						
TUP	Tupik	3.06	189	ePn	Pn	12 53 14.4	-0.7
TUP				ePg	Pg	12 53 20.8	-5.5
TUP				eSn	Sn	12 53 50.6	-1.8
TUP				eSg	Sg	12 53 58.0	-9.1
TUP				Pmax			
	comp=E,94nm,0.3s						
TUP				Smax			
	comp=E,383nm,0.5s						

TUP	**Tupik**	**3.06**	**189**	*e*P	Pn	12 53 19.5	+4.4
TUP				pmax	pmax		
	comp=Z,95nm,0.3s						
TNDR	**Tynda**	**3.17**	**135**	*e*Pn	Pn	12 53 16.5	-0.2
TNDR				*e*Pg	Pg	12 53 22.7	-5.9
TNDR				*e*Sg	Sg	12 54 03.4	-7.5
TNDR				Pmax			
	comp=Z,140nm,0.2s						
TNDR				Smax			
	comp=Z,1µm,0.3s						
BOD	**Bodaibo**	**3.67**	**279**	*e*Pg	Pg	12 53 31.0	-7.5
BOD				*e*Sn	Sn	12 54 06.1	-1.8
BOD				*e*Sg	Sg	12 54 17.5	-10
BOD				Pmax			
	comp=Z,14nm,0.3s						
BOD				Smax			
	comp=Z,116nm,0.7s						
SVKR	**Severomuysk**	**4.19**	**255**	*e*Pg	Pg	12 53 41.6	-7.3
SVKR				*e*Sg	Sg	12 54 35.5	-9.3
SVKR				Pmax			
	comp=Z,35nm,0.2s						
SVKR				Smax			
	comp=Z,167nm,0.9s						
UKT	**Uakit**	**4.43**	**247**	*e*Pg	Pg	12 53 45.5	-8.1
UKT				*e*Sg	Sg	12 54 41.8	-11
UKT				Pmax			
	comp=Z,10.0nm,0.5s						
UKT				Smax			
	comp=Z,31nm,1.0s						
KROS	**Kirovskiy**	**4.60**	**128**	*e*Pg	Pg	12 53 46.5	-11
KROS				*e*Sg	Sg	12 54 48.5	-10
YOA	**Uoyan**	**5.15**	**259**	*e*Sg	Sg	12 55 03.7	-13
YOA				Smax			
	comp=Z,318nm,1.5s						
ZEA	**Zeya**	**5.21**	**133**	*e*Pg	Pg	12 53 56.6	-13
ZEA				*e*Sg	Sg	12 55 04.5	-14
KMO	**Kumora**	**5.51**	**258**	*e*Sg	Sg	12 55 15.2	-14
KMO				Smax			
	comp=Z,63nm,1.2s						
YLYR	**Ulyunkhan**	**5.96**	**249**	*e*Pn	Pn	12 53 55.4	-0.8
YLYR				*e*Pg	Pg	12 54 14.7	-10
YLYR				*e*Sg	Sg	12 55 29.5	-14
YLYR				Smax			
	comp=Z,34nm,1.5s						
YLYR	**Ulyunkhan**	**5.96**	**249**	*e*P	Pn	12 54 14.6	+18
YAK	**Yakutsk**	**6.43**	**41**	*e*Sg	Sg	12 55 42.8	-17
YAK				Smax			
	comp=Z,336nm,0.4s						
YAK	**Yakutsk**	**6.43**	**41**	*e*P	Pn	12 54 22.6	+20
YAK				*e*S	Sn	12 55 39.7	+22
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				smax			
	comp=E,16nm,0.8s						
YAK				smax			
	comp=Z,21nm,1.1s						
YAK				smax			
	comp=N,17nm,0.7s						
YAK				MLR	MLR		
	comp=Z,59nm,19.0s						
NIZ	**Nizh Angarsk**	**6.43**	**260**	*e*Sg	Sg	12 55 43.8	-16
NIZ				Smax			
	comp=Z,34nm,0.8s						
NIZ	**Nizh Angarsk**	**6.43**	**260**	*e*P	Pn	12 54 23.0	+20
NIZ				*e*		12 55 44.7	
NIZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NIZ				smax			
	comp=N,22nm,1.0s						
CIT	**Chita**	**6.86**	**221**	*e*Sg	Sg	12 55 56.9	-17
CIT				Smax			
	comp=N,82nm,1.5s						
SYVR	**Suvo**	**7.20**	**243**	*e*Sg	Sg	12 56 09.5	-15
SYVR				Smax			
	comp=N,49nm,1.2s						
KPC	**Khapcheranga**	**9.22**	**216**	*e*Sg	Sg	12 57 08.0	-24
KPC				Smax			
	comp=N,31nm,1.0s						

ISC 12 13:09:06.4±0.9**,39.66N**±0.05×**29.47E**±0.05**,h0**^{km}±8^{km}**,n6,** σ**0**$\overset{s}{.}$**99**/12**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULDT	**Uludag**	**0.54**	**332**	*i* P	**Pg**	**13 09 16.1**	**-1.1**
ULDT				*i* S	**Sg**	**13 09 24.4**	**0.0**
ALT	**Altintas**	**0.79**	**141**	*e*PG	**Pg**	**13 09 21.9**	**-0.1**
ALT				*e*SG	**Sg**	**13 09 32.7**	**+0.2**
BORA	**Eskisehir**	**0.79**	**74**	*i* P	**Pg**	**13 09 21.9**	**-0.2**
BORA				*i* S	**Sg**	**13 09 34.7**	**+2.1**
ESKT	**Eskisehir**	**1.08**	**97**	*e*PN	**Pn**	**13 09 27.5**	**-1.1**
ESKT				*e*SN	**Sn**	**13 09 43.6**	**-0.8**
ESKT	**Eskisehir**	**1.08**	**97**	*i* P	**Pb**	**13 09 26.3**	**-1.2**
ESKT				*i* S	**Sb**	**13 09 43.1**	**+1.2**
BTOK	**Tokmak**	**1.11**	**275**	*i* P	**Pb**	**13 09 28.2**	**+0.1**
BTOK				*i* S	**Sb**	**13 09 44.5**	**+1.5**

IDC ***12*** *13:14:14.5±0.5, 1.06N×97.36E, mb4.6/24, mb1 4.6/24, mb1mx4.6/26, mbtmp4.6/24, MS4.3/13, Ms1 4.3/13, ms1mx4.0/19, Error ellipse: s-maj=16.7km s-min=12.2km az=51.0*

BJI ***12*** *13:14:16.5, 0.87N×97.61E, h32*^{km}*, mB5.1, mb5.0, Ms4.8, Msz4.7*

MOS ***12*** *13:14:18.1±1.2, 1.18N×97.49E, h33*^{km}*, mb5.0/27, MS4.4/8, Error ellipse: s-maj=12.7km s-min=6.5km az=109.2*

NEIC ***12*** *13:14:18.8±0.3, 1.03N×97.38E, mb4.8/26, Error ellipse: s-maj=7.7km s-min=5.7km az=222.0*

ISC 12 13:14:17.0±0.3**,1.07N**±0.04×**97.43E**±0.04**,h27**^{km}**,** **h27**^{km}±1.3^{km}**:pP-P,n144,** σ**1**$\overset{s}{.}$**17**/147**,mb4.8**/74**,MS4.4**/29**,** **13C-1D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.29**	**37**	⇑*i*P	**Pn**	**13 15 37.8**	**+1.3**
SNG	**Songkhla**	**6.85**	**28**	P	**Pn**	**13 16 04.0**	**+5.5**
	516nm,1.0s						
KSM	**Kuching**	**12.88**	**88**	*e*Pn	**P**	**13 17 23.5**	**+2.2**
NST	**Nakhon Sawan**	**14.76**	**10**	P	**P**	**13 17 39.5**	**-6.6**
CHG	**Chiang Mai**	**17.70**	**5**	⇑P	**P**	**13 18 22.9**	**-0.7**
	15nm,0.8s						
CHRT	**Chiangrai**	**18.83**	**7**	⇑P	**P**	**13 18 37.5**	**0.0**
	150nm,1.3s						
KKM	**Kota Kinabalu**	**19.39**	**75**	*e*P	**P**	**13 18 43.6**	**-0.4**
VIS	**Vishakhapatnam**	**21.59**	**321**	*e*P	**P**	**13 19 09.1**	**+2.1**
VIS				AMb	AMB	13 19 13.0	
	comp=Z,57nm,1.8s,mb4.7						
VIS				*e*S	**S**	**13 22 57.1**	**-2.7**
QIZ	**Qiongzhong**	**21.61**	**34**	P	**P**	**13 19 07.3**	**+0.1**
QIZ				*e*S	**S**	**13 23 02.2**	**+2.1**
QIZ				XS		13 23 16.0	
QIZ				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.3						
QIZ				LR	LR		
	comp=N,820nm,14.4s						
QIZ				LR	LR		
	comp=Z,620nm,13.4s,MS4.2						
QIZ	**Qiongzhong**	**21.61**	**34**	*e*P	**P**	**13 19 06.3**	**-0.9**
	comp=Z,20nm,1.1s,mb4.5						
TRD	**Trivandrum**	**21.68**	**291**	*e*P	**P**	**13 19 07.7**	**-0.3**
TRD				*e*S	**S**	**13 23 09.7**	**+8.1**
KMI	**Kunming**	**24.46**	**12**	P	**P**	**13 19 37.5**	**+2.2**
KMI				AP		13 19 44.7	
KMI				XP		13 19 49.6	
KMI				PP	PP	13 20 15.7	+4.6
KMI				S	**S**	**13 23 57.7**	**+6.9**
KMI				XS		13 24 08.9	
KMI				SS	SS	13 24 52.4	+6.4
KMI				AMB	AMB		
	comp=Z,50nm,1.5s,mb4.7						
KMI				AMB	AMB		
	comp=Z,340nm,4.0s						
KMI				LR	LR		
	comp=N,1µm,13.2s,MS4.7						
KMI				LR	LR		
	comp=E,1µm,13.2s,MS4.7						
KMI				LR	LR		
	comp=Z,2µm,13.2s,MS4.7						
KMI	**Kunming**	**24.46**	**12**	P	**P**	**13 19 37.5**	**+2.2**
	comp=Z,56nm,1.5s,mb4.8						
KMI				pP		13 19 44.7	
KMI				sP		13 19 49.6	
KMI				PP	PP	13 20 15.7	+4.6
KMI				S	**S**	**13 23 57.7**	**+6.9**
KMI				sS		13 24 08.9	
KMI				SS	SS	13 24 52.4	+6.4
KMI				LR	LR		
	comp=Z,2µm,13.2s,MS4.7						
HYB	**Hyderabad**	**24.67**	**312**	*i* P	**P**	**13 19 38.5**	**+1.2**
	comp=Z,30nm,1.0s,mb4.8						
HYB				*e*pP		13 19 47.0	
HYB	**Hyderabad**	**24.67**	**312**	*e*P	**P**	**13 19 38.5**	**+1.2**
	comp=Z,30nm,1.0s,mb4.8						
HYB				*e*		13 19 47.0	
HYB	**Hyderabad**	**24.67**	**312**	*e*P	**P**	**13 19 38.5**	**+1.2**
HYB				*e*		13 19 47.0	
HYB				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
SHL	**Shillong**	**24.94**	**348**	*e*P	**P**	**13 19 41.0**	**+1.2**
SHL				*e*x	x	13 23 30.0	
BOK	**Bokaro**	**25.21**	**335**	*e*P	**P**	**13 19 44.3**	**+1.8**
BOK				AMb	AMB	13 19 46.8	
	comp=Z,56nm,1.0s,mb5.1						
BLSP	**Bilaspur**	**25.69**	**326**	*e*P	**P**	**13 19 47.9**	**+0.9**
BLSP				AMb	AMB	13 19 49.7	
	comp=Z,20nm,0.8s,mb4.7						
GYA	**Guiyang**	**26.77**	**19**	⇑*i*P	**P**	**13 19 56.7**	**-0.1**
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
GYA				AMB	AMB		
	comp=Z,450nm,8.9s						
GYA				LR	LR		
	comp=N,940nm,12.3s,MS4.6						
GYA				LR	LR		
	comp=E,800nm,16.8s,MS4.6						
GYA				LR	LR		
	comp=Z,1µm,14.4s,MS4.6						
PKI	**Pulchoki**	**28.77**	**337**	*e*P	**P**	**13 20 16.9**	**+2.0**
GUN	**Gumba**	**28.89**	**338**	*e*P	**P**	**13 20 17.2**	**+1.1**
	comp=Z,41nm,0.5s,mb5.4						
DMN	**Daman**	**28.92**	**337**	*e*P	**P**	**13 20 18.1**	**+1.8**
KKN	**Kakani**	**29.01**	**337**	*e*P	**P**	**13 20 18.0**	**+0.9**
	comp=Z,37nm,0.7s,mb5.2						
LSA	**Lhasa**	**29.10**	**349**	P	**P**	**13 20 19.2**	**+1.3**
LSA	**Lhasa**	**29.10**	**349**	P	**P**	**13 20 18.5**	**+0.6**
	comp=Z,14nm,0.7s,mb4.8						
LSA				*e*	pP	13 20 25.4	-0.4
LSA	**Lhasa**	**29.10**	**349**	P	**P**	**13 20 18.5**	**+0.6**
LSA				*e*	pP	13 20 25.4	-0.3
LSA				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.8						
GKN	**Gorkha**	**29.45**	**337**	*e*P	**P**	**13 20 21.8**	**+0.7**
	comp=Z,39nm,0.9s,mb5.2						
KOLN	**Koldanda**	**29.68**	**335**	*e*P	**P**	**13 20 24.1**	**+1.0**
	comp=Z,37nm,0.8s,mb5.2						
CD2	**Chengdu**	**30.28**	**11**	*e*P	**P**	**13 20 26.5**	**-1.9**
ENH	**Enshi**	**31.22**	**20**	*e*P	**P**	**13 20 35.6**	**-1.1**
	comp=Z,37nm,0.8s,mb5.3						
FITZ	**Fitzroy Crossi**	**33.66**	**126**	*e*P	**P**	**13 20 57.0**	**-1.1**
	comp=Z,5.2nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**33.66**	**126**	P	**P**	**13 20 56.5**	**-1.7**
	comp=Z,7.6nm,0.6s,mb4.8,baz=316,slow=6.7,SNR=17						
FITZ				LR	LR	13 36 42.0	
	comp=Z,518nm,20.6s,MS4.2,baz=307,slow=40						
XAN	**Xi’an**	**34.52**	**17**	P	**P**	**13 21 04.2**	**-1.2**
XAN				AP	pP	13 21 11.7	-1.6
XAN				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
XAN				LR	LR		
	comp=N,510nm,14.2s,MS4.5						
XAN				LR	LR		
	comp=E,410nm,12.7s,MS4.5						
XAN				LR	LR		
	comp=Z,920nm,13.6s,MS4.7						
LZH	**Lanzhou**	**35.35**	**9**	*e*P	**P**	**13 21 12.9**	**+0.4**
LZH				AP	pP	13 21 19.3	-1.1
LZH				XP	sP	13 21 22.1	-1.7
LZH				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,170nm,6.0s						
LZH				LR	LR		
	comp=E,2µm,14.7s						
LZH				LR	LR		
	comp=Z,2µm,16.2s,MS5.0						
LZH	**Lanzhou**	**35.35**	**9**	*e*P	**P**	**13 21 12.9**	**+0.4**
	comp=Z,41nm,1.4s,mb5.2						
LZH				pP	pP	13 21 19.3	-1.1
LZH				sP	sP	13 21 22.1	-1.7
LZH				LR	LR		
	comp=Z,2µm,16.2s,MS5.0						
LZH	**Lanzhou**	**35.35**	**9**	*e*P	**P**	**13 21 12.9**	**+0.4**
LZH				*SP	sP	13 21 22.1	-1.7
LZH				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.2						
LZH				MLR	MLR		
	comp=Z,2µm,16.2s,MS5.0						
SSE	**Sheshan**	**37.39**	**35**	P	**P**	**13 21 29.1**	**-0.6**
SSE				AP	pP	13 21 38.3	+0.6
SSE				XP	sP	13 21 41.9	+0.9
SSE				PCP	PcP	13 23 48.4	-0.3
SSE				S	**S**	**13 27 14.6**	**-1.1**
SSE				XS		13 27 29.5	
SSE				SCS	ScS	13 31 41.4	+1.9
SSE				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
SSE				AMB	AMB		
	comp=Z,90nm,4.0s						
SSE				LR	LR		
	comp=N,300nm,20.0s,MS4.1						
SSE				LR	LR		
	comp=E,100nm,20.0s,MS4.1						
SSE				LR	LR		
	comp=Z,360nm,14.3s						
SSE	**Sheshan**	**37.39**	**35**	P	**P**	**13 21 29.1**	**-0.6**
	comp=Z,31nm,0.9s,mb5.1						
SSE				pP	pP	13 21 38.3	+0.6
SSE				sP	sP	13 21 41.9	+0.9
SSE				PcP	PcP	13 23 48.4	-0.3
SSE				S	**S**	**13 27 14.6**	**-1.1**
SSE				sS		13 27 29.5	
SSE				ScS	ScS	13 31 41.4	+1.9
SSE				LR	LR		
	comp=Z,360nm,14.3s,MS4.3						
GTA	**Gaotai**	**38.23**	**3**	*e*P	**P**	**13 21 37.0**	**+0.4**
GTA				AP	pP	13 21 44.0	-0.6
GTA				XP	sP	13 21 48.4	+0.4
GTA				PP	PP	13 23 07.7	+0.1
GTA				PPP	PPP	13 23 29.0	-0.9
GTA				PCP	PcP	13 23 52.2	+1.0
GTA				S	**S**	**13 27 25.8**	**-2.5**
GTA				SCP		13 27 37.6	
GTA				XS		13 27 41.1	
GTA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
GTA				AMB	AMB		
	comp=Z,240nm,6.1s						
GTA				LR	LR		
	comp=N,260nm,11.8s,MS4.4						
GTA				LR	LR		
	comp=E,300nm,14.1s,MS4.4						
GTA				LR	LR		
	comp=Z,500nm,15.2s,MS4.4						
NWAO	**Narrogin (SRO)**	**38.63**	**153**	P	**P**	**13 21 43.3**	**+3.2**
	comp=Z,3.3nm,0.7s,mb4.2,baz=325,slow=12,SNR=2.2						
NWAO				LR	LR	13 36 54.4	
	comp=Z,388nm,21.4s,MS4.2,baz=95,slow=35						
JOW	**Kunigami**	**39.17**	**47**	P	**P**	**13 21 45.2**	**+0.6**
	comp=Z,28nm,0.6s,mb5.1,baz=221,slow=9.0,SNR=7.0						
WRA	**Warramunga Arr**	**41.77**	**122**	P	**P**	**13 22 05.9**	**-0.3**
	comp=Z,4.4nm,0.6s,mb4.3,baz=301,slow=9.0,SNR=92						
WRAB	**Tennant Creek**	**41.77**	**122**	*e*P	**P**	**13 22 05.7**	**-0.5**
	comp=Z,9.0nm,0.6s,mb4.6						
WRAB				*e*	pP	13 22 14.2	-0.1
WRAB	**Tennant Creek**	**41.77**	**122**	*e*P	**P**	**13 22 05.7**	**-0.5**
WRAB				*e*	pP	13 22 14.2	-0.1
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
WB2	**Warramunga Arr**	**41.78**	**122**	*e*P	**P**	**13 22 06.1**	**-0.2**
FORT	**Forrest**	**43.02**	**140**	*e*P	**P**	**13 22 18.6**	**+2.2**
	comp=Z,21nm,0.6s,mb5.0						
DL2	**Dalian**	**43.69**	**28**	P	**P**	**13 22 23.1**	**+1.5**
DL2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.3						
JNU	**Nakatsue**	**44.76**	**41**	P	**P**	**13 22 30.9**	**+0.6**
	comp=Z,4.7nm,0.8s,mb4.3,baz=266,slow=28,SNR=4.5						
KS15	**Wonju Array Si**	**45.80**	**34**	*e*P	**P**	**13 22 38.7**	**+0.2**
KS15				*e*		13 22 49.9	
UCH	**Uchtor**	**45.87**	**336**	P	**P**	**13 22 33.0**	**-6.0**
	SNR=11						
TKM2	**Tokmak 2**	**46.03**	**338**	P	**P**	**13 22 41.5**	**+1.2**
	SNR=9.5						
KBK	**Karagaybulak**	**46.05**	**337**	P	**P**	**13 22 42.4**	**+1.9**
	SNR=12						
AML	**Almayashu**	**46.12**	**335**	P	**P**	**13 22 42.7**	**+1.7**
	SNR=8.3						
AAK	**Ala-Archa**	**46.21**	**337**	*e*P	**P**	**13 22 42.0**	**+0.2**
	comp=Z,23nm,1.5s,mb4.9						
AAK				*e*PcP	PcP	13 24 18.1	+0.4
AAK	**Ala-Archa**	**46.21**	**337**	*e*P	**P**	**13 22 42.0**	**+0.2**
AAK				*e*		13 24 18.1	
AAK				pmax	pmax		
	comp=Z,23nm,1.5s,mb4.9						
EKS2	**Erkin-Say**	**46.53**	**336**	P	**P**	**13 22 45.8**	**+1.6**
	SNR=13						
USP	**Ospenovka**	**46.74**	**337**	P	**P**	**13 22 46.8**	**+0.8**
	SNR=27						
SNY	**Shenyang**	**46.92**	**27**	⇑P	**P**	**13 22 47.4**	**+0.1**
SNY				AP	pP	13 22 56.9	+1.5
SNY				S	**S**	**13 29 43.8**	**+8.0**
SNY				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
SNY				AMB	AMB		
	comp=Z,150nm,4.9s						
SNY				LR	LR		
	comp=N,320nm,12.6s,MS4.8						
SNY				LR	LR		
	comp=E,600nm,15.9s,MS4.8						
SNY				LR	LR		
	comp=Z,720nm,14.9s,MS4.8						
SONM	**Songino Array**	**47.23**	**8**	P	**P**	**13 22 50.5**	**+0.8**
	comp=Z,7.3nm,0.6s,mb4.8,baz=192,slow=9.1,SNR=71						
SONM				PcP	PcP	13 24 21.6	+0.4
	comp=Z,5.0nm,0.6s,baz=190,slow=6.6,SNR=7.6						
SONM				LR	LR	13 45 17.8	
	comp=Z,813nm,19.1s,MS4.7,baz=192,slow=39						
MKAR	**Makanchi Array**	**47.43**	**346**	P	**P**	**13 22 51.7**	**+0.4**
	comp=Z,24nm,0.7s,mb5.2,baz=157,slow=7.6,SNR=249						
MKAR				PcP	PcP	13 24 23.0	+1.1
	comp=Z,5.0nm,0.7s,baz=158,slow=7.6,SNR=3.1						
MKAR				LR	LR	13 47 08.0	
	comp=Z,193nm,20.7s,MS4.0,baz=162,slow=42						
KKAR	**Karatay Array**	**48.28**	**334**	P	**P**	**13 22 58.0**	**0.0**
KKAR				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.8						
CN2	**Changchun**	**49.32**	**27**	⇑P	**P**	**13 23 05.9**	**-0.1**
CN2				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4						
PMG	**Port Moresby**	**50.60**	**103**	P	**P**	**13 23 14.7**	**-1.5**
	comp=Z,6.2nm,0.6s,mb4.7,baz=309,slow=10,SNR=4.0						
MJAR	**Matsushiro Arr**	**51.64**	**42**	P	**P**	**13 23 23.2**	**-0.5**
	comp=Z,2.0nm,0.6s,mb4.2,baz=214,slow=6.9,SNR=9.6						
MJAR				LR	LR	13 48 11.8	
	comp=Z,170nm,18.1s,MS4.1,baz=235,slow=39						
HIA	**Hailar**	**51.69**	**18**	P	**P**	**13 23 23.7**	**-0.3**
	comp=Z,13nm,0.6s,mb5.0						
HIA	**Hailar**	**51.69**	**18**	P	**P**	**13 23 23.7**	**-0.3**
HIA				pmax	pmax		
	comp=Z,13nm,0.6s						
MDJ	**Mudanjiang**	**51.87**	**29**	P	**P**	**13 23 24.5**	**-0.9**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,100nm,4.9s						
MDJ	**Mudanjiang**	**51.87**	**29**	P	**P**	**13 23 25.1**	**-0.3**
	comp=Z,10nm,0.9s,mb4.8						
MDJ				*e*	pP	13 23 34.5	+0.9
KURK	**Kurchatov**	**51.98**	**345**	⇑*i*P	**P**	**13 23 26.1**	**0.0**
	comp=Z,19nm,0.9s,mb5.0						
KURK	**Kurchatov**	**51.98**	**345**	⇑*i*P	**P**	**13 23 24.9**	**-1.3**
CTA	**Charters Tower**	**52.24**	**117**	*e*P	**P**	**13 23 28.8**	**+0.3**
	comp=Z,2.5nm,0.9s,mb4.1						
CTA	**Charters Tower**	**52.24**	**117**	LR	LR	13 47 30.9	
	comp=Z,319nm,21.8s,MS4.3,baz=283,slow=38						
CTA	**Charters Tower**	**52.24**	**117**	*e*P	**P**	**13 23 28.8**	**+0.3**
CTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CIT	**Chita**	**52.55**	**12**	*e*P	**P**	**13 23 31.5**	**+1.1**
CIT				pmax	pmax		
	comp=Z,62nm,2.5s,mb5.1						
OPO	**Ambohidratompo**	**53.08**	**246**	P	**P**	**13 23 33.3**	**-1.5**
	comp=Z,1.5nm,0.3s,mb4.4,baz=85,slow=15,SNR=6.4						
STKA	**Stephens Creek**	**53.10**	**132**	*e*P	**P**	**13 23 35.2**	**+0.4**
	comp=Z,5.0nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**53.10**	**132**	P	**P**	**13 23 34.5**	**-0.2**
	comp=Z,9.4nm,1.0s,mb4.7,baz=299,slow=8.8,SNR=10						
STKA				LR	LR	13 49 08.9	
	comp=Z,238nm,20.2s,MS4.2,baz=120,slow=39						
ZAL	**Zalesovo**	**53.72**	**351**	P	**P**	**13 23 38.7**	**-0.3**
	comp=Z,16nm,0.6s,mb5.1,baz=313,slow=5.8,SNR=100						
ZAL	**Zalesovo**	**53.72**	**351**	P	**P**	**13 23 38.7**	**-0.3**
NVS	**Novosibirsk**	**54.85**	**350**	⇑*i*P	**P**	**13 23 45.0**	**-2.3**
NVS				*e*S	**S**	**13 31 19.1**	**-5.8**
NVS				pmax	pmax		
	comp=N,7.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
NVS				smax			
	comp=N,23nm,2.1s						
VOSK	**Vostochnaya**	**56.00**	**341**	P	**P**	**13 23 54.7**	**-1.0**
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
KLR	**Kul’dur**	**56.27**	**26**	*e*P	**P**	**13 23 54.7**	**-2.9**
KLR				MLR	MLR		
	comp=E,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,2µm,13.0s,MS5.4						
BVA0	**Borovoye Array**	**56.45**	**341**	*i* P	**P**	**13 23 57.8**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**56.45**	**341**	P	**P**	**13 23 57.9**	**-1.0**
	comp=Z,11nm,0.7s,mb5.0,baz=142,slow=8.8,SNR=84						
BRVK	**Borovoye**	**56.52**	**341**	*e*P	**P**	**13 23 58.2**	**-1.1**
	comp=Z,5.4nm,0.7s,mb4.7						
BRVK	**Borovoye**	**56.52**	**341**	*e*P	**P**	**13 23 58.2**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
CHKZ	**Chkalovo**	**56.93**	**341**	*e*P	**P**	**13 24 01.6**	**-0.7**
	comp=Z,18nm,0.7s,mb5.2						
CHKZ	**Chkalovo**	**56.93**	**341**	*e*P	**P**	**13 24 01.6**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.2						
AB31	**Akbulak array**	**57.74**	**332**	*i* P	**P**	**13 24 07.1**	**-1.0**
AB31				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
BOD	**Bodaibo**	**58.10**	**10**	*e*P	**P**	**13 24 08.9**	**-1.5**
BOD				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
AKTO	**Aktyubinsk**	**59.46**	**332**	P	**P**	**13 24 18.1**	**-1.9**
	comp=Z,4.4nm,0.8s,mb4.5,baz=130,slow=5.3,SNR=11						
KMBO	**Kilima Mbogo**	**60.21**	**268**	P	**P**	**13 24 25.3**	**-0.4**
	comp=Z,1.2nm,0.7s,mb4.1,baz=54,slow=16,SNR=5.1						
KMBO				LR	LR	13 48 58.2	
	comp=Z,157nm,18.0s,MS4.2,baz=93,slow=35						
KMBO	**Kilima Mbogo**	**60.21**	**268**	*i* P	**P**	**13 24 26.2**	**+0.5**
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YSS	**Yuzh-Sakhalins**	**60.33**	**34**	*e*P	**P**	**13 24 25.8**	**-0.2**
	comp=Z,25nm,1.0s,mb5.2						
YSS	**Yuzh-Sakhalins**	**60.33**	**34**	*i* P	**P**	**13 24 24.9**	**-1.1**
YSS				pmax	pmax		
	comp=Z,43nm,1.5s,mb5.3						
YSS				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
SVE	**Sverdlovsk**	**62.90**	**338**	*e*P	**P**	**13 24 49.6**	**+6.5**
SVE				*e*S	SKS	13 34 33.0	-5.1
SVE				MLR	MLR		
	comp=N,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.2						
SVE				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.7						
ZEI	**Tsey**	**63.25**	**318**	*e*P	**P**	**13 24 42.9**	**-2.8**
ZEI				*i* *PP	pP	13 24 52.9	-1.1
ZEI				*i*		13 25 19.8	
ZEI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						

ARU	Arti	63.40	337	⇑iP	P	13 24 45.2	-1.2
ARU				e		13 27 04.7	
ARU				eS	S	13 33 15.7	0.0
ARU				eSS	SS	13 37 24.0	-0.5
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
ARU				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.3						
ARU				MLR	MLR		
	comp=N,100nm,18.0s,MS4.1						
ARU				MLR	MLR		
	comp=E,60nm,17.0s,MS4.1						
KIV	Kislovodsk	64.56	319	eP	P	13 24 53.5	-0.8
KIV				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.8						
KIV				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						
YAK	Yakutsk	65.48	16	⇑iP	P	13 24 59.0	-0.9
	comp=Z,30nm,1.0s,mb5.3						
YAK				e	pP	13 25 06.4	-1.9
YAK	Yakutsk	65.48	16	⇑iP	P	13 24 59.0	-0.9
YAK				e	pP	13 25 06.4	-1.9
YAK				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
BRTR	Keskin Array B	69.37	312	P	P	13 25 23.0	-1.8
	comp=Z,1.4nm,0.8s,mb4.0,baz=135,slow=8.7,SNR=5.7						
DZM	Mont Dzumac	71.02	114	P	P	13 25 35.9	+0.8
	comp=Z,3.4nm,0.7s,mb4.4,baz=285,slow=12,SNR=3.8						
MA2	Magadan	71.35	26	eP	P	13 25 36.7	+0.2
MA2				e	pP	13 25 45.5	+0.7
PET	Petropavlovsk	72.22	34	eP	P	13 25 41.9	+0.2
PET				e		13 42 45.9	
PET				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
PET				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.1						
PET				smax			
	comp=N,38nm,0.6s						
MOS	Moscow	72.56	329	eP	P	13 25 41.7	-2.0
MAW	Mawson	72.63	193	P	P	13 25 45.1	+1.2
	comp=N,1.7nm,0.6s,mb4.2,baz=21,slow=9.3,SNR=8.4						
MAW				LR	LR	13 53 48.1	
	comp=N,133nm,18.7s,MS4.2,baz=245,slow=33						
TIXI	Tiksi	73.28	10	⇑iP	P	13 25 45.9	-1.7
TIXI				pmax	pmax		
	comp=Z,15nm,1.4s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,400nm,19.0s,MS4.7						
SEY	Seymchan	73.80	23	i P	P	13 25 50.0	-0.7
BOSA	Boshof	74.91	240	P	P	13 25 58.1	+0.2
	comp=Z,2.9nm,1.1s,mb4.1,baz=210,slow=19,SNR=4.0						
BOSA				LR	LR	13 57 02.3	
	comp=Z,175nm,18.4s,MS4.4,baz=145,slow=34						
AKASG	Malin Array Be	75.50	322	P	P	13 25 59.8	-1.1
	comp=Z,2.0nm,0.6s,mb4.3,baz=90,slow=5.2,SNR=18						
JOF	Joensuu	78.36	335	ep	P	13 26 15.6	-0.9
	comp=Z,2.9nm,0.8s,mb4.3						
RPZ	Rata Peaks	78.95	135	P	P	13 26 21.1	+1.0
	comp=Z,8.4nm,0.8s,mb4.7,baz=274,slow=5.6,SNR=4.7						
FINES	FINESS Array B	80.22	332	P	P	13 26 25.9	-0.7
	comp=Z,2.6nm,0.7s,mb4.3,baz=117,slow=8.5,SNR=8.3						
FINES				LR	LR	14 08 52.8	
	comp=Z,175nm,19.8s,MS4.4,baz=40,slow=41						
KAF	Kangasniemi	80.31	333	ep	P	13 26 24.0	-3.0
	comp=Z,4.0nm,0.6s,mb4.5						
KAF	Kangasniemi	80.31	333	eP	P	13 26 24.0	-3.0
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BILL	Bilibino	81.21	21	eP	P	13 26 30.8	-0.9
BILL	Bilibino	81.21	21	⇓eP	P	13 26 26.8	-4.9
BILL				pmax	pmax		
	comp=Z,15nm,2.2s,mb4.5						
BILL				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.6						
ARCES	ARCESS Array B	82.74	340	P	P	13 26 39.1	-0.5
	comp=Z,4.6nm,0.8s,mb4.5,baz=63,slow=5.4,SNR=8.3						
ARCES				LR	LR	14 10 34.2	
	comp=Z,201nm,18.7s,MS4.5,baz=321,slow=41						
DPC	Dobruska-Polom	83.50	320	eP	P	13 26 44.8	+0.9
PRU	Pruhonice	84.61	320	eP	P	13 26 48.4	-1.1
GERES	GERESS Array B	85.07	319	P	P	13 26 52.0	+0.2
	comp=Z,3.2nm,0.9s,mb4.5,baz=104,slow=5.5,SNR=22						
KHC	Kasperske Hory	85.17	319	eP	P	13 26 52.9	+0.6
KHC				epP	pP	13 27 00.0	-0.9
CLL	Collm	85.68	321	P	P	13 26 57.0	+2.2
CLL				e		13 27 13.0	
CLL	Collm	85.68	321	eP	P	13 26 57.0	+2.2
CLL				e		13 27 13.0	
GRA1	Grafenberg Arr	86.73	320	eP	P	13 27 00.9	+0.9
	comp=Z,4.0nm,0.9s,mb4.7						
GRF	Grafenberg Arr	86.73	320	eP	P	13 27 00.9	+0.9
	comp=Z,4.0nm,0.9s,mb4.7						
GRF	Grafenberg Arr	86.73	320	eP	P	13 27 00.9	+0.9
GRF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7						
GRF	Grafenberg Arr	86.73	320	eP	P	13 27 00.9	+0.9
GRF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7						
NB2	NORSAR Subarra	87.23	331	P	P	13 27 02.5	+0.3
	comp=Z,2.7nm,0.8s,mb4.5,baz=97,slow=4.6						
NOA	NORSAR Array B	87.23	331	P	P	13 27 02.5	+0.3
	comp=Z,3.8nm,0.8s,mb4.7,baz=94,slow=4.9,SNR=9.4						
NOA				LR	LR	14 13 14.0	
	comp=Z,170nm,18.3s,MS4.5,baz=75,slow=41						
NOA	NORSAR Array B	87.23	331	P	P	13 27 02.5	+0.3
NOA				LR	LR	14 13 14.0	
NAO	NORSAR Subarra	87.41	331	P	P	13 27 02.5	-0.5
	comp=Z,2.7nm,0.8s,mb4.5						
NAO	NORSAR Subarra	87.41	331	P	P	13 27 02.5	-0.5
NAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
LPG	La Plagne	89.72	315	eP	P	13 27 15.6	+1.1
	comp=Z,7.8nm,0.8s,mb4.8						
LPG	La Plagne	89.72	315	eP	P	13 27 15.6	+1.1
LPG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
INK	Inuvik	102.54	17	P	Pdif	13 28 11.3	-0.9
	comp=Z,1.4nm,1.1s,baz=170,slow=27,SNR=5.5						
INK	Inuvik	102.54	17	P	Pdif	13 28 11.3	-0.9
NVAR	Mina Array Bea	128.76	36	PKP	PKPdf	13 33 23.1	-4.4
	comp=Z,0.4nm,0.6s,baz=238,slow=3.8,SNR=4.0						
TXAR	Lajitas Array	143.66	32	PKhKP		13 33 48.8	
	comp=Z,0.6nm,0.5s,baz=282,slow=1.9,SNR=7.1						
JCT	Junction City	144.60	26	ePKPdf	PKPdf	13 33 52.8	-3.9
GOGA	Godfrey	145.70	1	ePKPdf	PKPdf	13 33 55.4	-3.1
LRAL	Lakeview Retre	145.83	7	ePKPdf	PKPdf	13 33 55.7	-3.0

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*IDC **12** 13:19:51.7±3.2, 1.12N×97.56E, mb4.0/5, mb1 4.1/5, mb1mx3.8/18, mbtmp4.0/5, Error ellipse: s-maj=127.7km s-min=28.2km az=54.0*

*NEIC **12** 13:19:55.5±1.0, 1.01N×97.43E, h30^{km}, mb4.3/1, Error ellipse: s-maj=22.9km s-min=17.0km az=51.0*

ISC 12 13:19:53.5±1.4**, 1.0N**±0.2×**97.4E**±0.2**, h30^{km}, n8, σ0^{s}41**/8**, mb4.0**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	5.33	38	ePn	Pn	13 21 13.1	-0.1
WRA	Warramunga Arr	41.79	122	P	P	13 27 42.4	0.0
	0.6nm,0.7s,mb3.3,baz=302,slow=9.0,SNR=4.7						
SONM	Songino Array	47.27	8	P	P	13 28 26.3	+0.3
	0.7nm,0.5s,mb3.9,baz=190,slow=10,SNR=7.0						
MKAR	Makanchi Array	47.45	346	P	P	13 28 28.3	+0.8
	1.7nm,0.6s,mb4.1,baz=158,slow=7.7,SNR=11						
MKAR	Makanchi Array	47.45	346	P	P	13 28 28.3	+0.8
ZAL	Zalesovo	53.74	351	P	P	13 29 15.1	-0.1
	2.7nm,0.5s,mb4.5,baz=336,slow=6.9,SNR=8.6						
BVAR	Borovoye Array	56.47	341	P	P	13 29 34.4	-0.5
	1.1nm,0.6s,mb4.1,baz=135,slow=10,SNR=5.6						
CHKZ	Chkalovo	56.94	341	eP	P	13 29 38.1	-0.3
	1.7nm,0.5s,mb4.3						

IDC 12 13:26:09.0±10.0**, 25.33S**×**177.93W, h387^{km}**±99^{km}**, mb3.2**/2**, mb1 3.3**/4**, mb1mx3.1**/14**, mbtmp4.1**/4**, Error ellipse: s-maj=84.3km s-min=43.6km az=35.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	13.56	197	P	P	13 29 05.7	-3.3
	0.6nm,0.3s,baz=188,slow=12,SNR=12						
DZM	Mont Dzumac	14.67	280	P	P	13 29 19.1	-1.9
	0.3nm,0.3s,baz=38,slow=21,SNR=3.9						
CTA	Charters Tower	33.38	272	P	P	13 32 13.1	-1.3
	3.8nm,0.7s,baz=86,slow=9.5,SNR=11						
WRA	Warramunga Arr	44.20	267	P	P	13 33 41.4	-1.7
	0.6nm,0.6s,baz=102,slow=8.7,SNR=12						
NOA	NORSAR Array B	143.75	352	PKP	PKPdf	13 44 56.0	-1.7
	1.4nm,0.9s,baz=12,slow=5.2,SNR=3.6						
AKASG	Malin Array Be	147.18	328	PKPbc	PKPdf	13 45 07.0	+3.2
	0.5nm,0.4s,baz=44,slow=4.2,SNR=6.2						

WEL 12 13:44:43.8±0.3**, 38.34S**×**176.10E, h161^{km}**±3^{km}**, ML3.7**/13**, 3C-2D, Error ellipse: s-maj=3.2km s-min=3.0km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.80	85	⇓PN	P	13 45 08.0	-0.4
URZ				SN	S	13 45 26.4	-0.8
BKZ	Black Stump Fm	0.89	160	⇑PN	P	13 45 09.0	+0.1
BKZ				SN	S	13 45 27.7	-0.6
TWVZ	Taurewa	0.90	215	PN	P	13 45 09.0	0.0
CNZ	Chateau	0.96	206	PN	P	13 45 09.2	-0.2
TUVZ	Tukino	0.99	200	PN	P	13 45 09.9	+0.2
TRVZ	Turoa	1.05	204	PN	P	13 45 10.5	+0.3
MOVZ	Moawhango	1.10	194	PN	P	13 45 10.2	-0.4
MOVZ				eSN	S	13 45 30.9	-0.5
PKVZ	Pokaka	1.12	211	PN	P	13 45 10.5	-0.3
PKVZ				SN	S	13 45 31.8	+0.2
MWZ	Matawai	1.12	90	⇓PN	P	13 45 10.8	-0.1
MWZ				SN	S	13 45 30.7	-1.0
MTVZ	Mangateitei	1.16	205	ePN	P	13 45 10.9	-0.2
KNZ	Kokohu	1.41	119	PN	P	13 45 13.8	+0.2
KNZ				eSN	S	13 45 35.6	-1.1
WAZ	Wanganui	1.66	211	PN	P	13 45 15.3	-0.8
PUZ	Puketiti	1.72	82	PN	P	13 45 16.1	-0.7
TSZ	Takapari Road	1.72	184	⇑PN	P	13 45 16.1	-0.8
TSZ				SN	S	13 45 40.0	-2.4
BFZ	Birch Farm	2.34	177	PN	P	13 45 22.2	-1.8
MRZ	Mangatainoka R	2.36	190	⇑PN	P	13 45 22.1	-2.1
MRZ				SN	S	13 45 50.7	-4.6

MEX 12 13:46:28.9±1.0**, 16.74N**×**99.63W, h5^{km}, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.30	294	i P	Pg	13 46 33.5	-1.4
ACX				i S	Sg	13 46 39.0	0.0
CAIG	El Cayaco	0.68	297	i P	Pg	13 46 41.7	-0.8
CAIG				i S	Sg	13 46 51.3	-0.3
PLIG	Platanillo	1.65	4	i P	Pn	13 46 54.4	-4.2
PLIG				i S	Sb	13 47 15.5	-4.8

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*NEIC **12** 14:04:31.9±3.0, 8.05S×121.45E, h146^{km}±35^{km}, mb4.2/2, Error ellipse: s-maj=41.5km s-min=14.7km az=57.0*

*IDC **12** 14:04:33.7±6.2, 8.20S×121.35E, h169^{km}±68^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.5/16, mbtmp4.1/5, Error ellipse: s-maj=121.8km s-min=25.1km az=57.0*

ISC 12 14:04:35.0±2.8**, 8.2S**±0.2×**121.7E**±0.3**, h201^{km}**±35^{km}**, n12, σ0^{s}69**/16**, mb3.6**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.62	159	eP	P	14 07 02.5	-0.6
	5.6nm,1.0s						
FITZ				eS	S	14 08 53.7	-5.5
FITZ	Fitzroy Crossi	10.62	159	P	P	14 07 02.4	-0.8
	1.2nm,0.3s,baz=340,slow=5.2,SNR=21						
FITZ				S	S	14 08 52.4	-6.8
	3.3nm,0.3s,baz=101,slow=9.9,SNR=11						
WRA	Warramunga Arr	16.98	135	P	P	14 08 22.7	+0.5
	1.8nm,0.3s,baz=310,slow=13,SNR=43						
WRA				S	S	14 11 23.2	+0.1
	0.5nm,0.3s,baz=306,slow=21,SNR=7.3						
WRAB	Tennant Creek	16.98	135	eP	P	14 08 22.8	+0.6
	8.4nm,0.6s						
WB2	Warramunga Arr	16.98	135	eP	P	14 08 22.8	+0.5
WB2				eS	S	14 11 22.1	-1.2
STKA	Stephens Creek	30.02	145	eP	P	14 10 28.5	+1.2
	1.4nm,0.5s,mb3.9						
STKA	Stephens Creek	30.02	145	P	P	14 10 27.9	+0.6
	1.1nm,0.4s,mb3.9,baz=341,slow=7.9,SNR=9.8						
STKA	Stephens Creek	30.02	145	eP	P	14 10 28.6	+1.3
KS15	Wonju Array Si	45.73	7	eP	P	14 12 37.2	-0.8
SONM	Songino Array	57.36	348	P	P	14 14 04.1	-0.2
	0.4nm,0.6s,mb3.3,baz=164,slow=8.7,SNR=4.5						
YSS	Yuzh-Sakhalins	57.99	17	eP	P	14 14 09.3	+0.6
MKAR	Makanchi Array	64.94	331	P	P	14 14 54.6	-0.5
	0.7nm,0.5s,mb3.6,baz=138,slow=8.7,SNR=12						

NNC 12 14:27:53.6±7.7**, 36.99N**×**70.95E, h72^{km}**±130^{km}**, mpv3.5, 1C-1D, Error ellipse: s-maj=112.8km s-min=69.6km az=105.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.12	357	⇑P	P	14 29 21.5	-1.8
	2.0nm,0.5s,baz=170,slow=12						
KK31				⇓S	S	14 30 30.5	-2.1
	0.5nm,0.2s,baz=189,slow=25						
AAK	Ala-Archa	6.27	25	P	P	14 29 21.4	-4.0
AAK				S	S	14 30 34.5	-1.8
AB31	Akbulak array	14.64	330	P	P	14 31 16.8	-1.2
	0.2nm,0.3s,baz=165,slow=11,SNR=7.4						

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*MOS **12** 14:31:16.6±2.0, 51.60N×175.17W, h64^{km}, mb4.4/1, Error ellipse: s-maj=29.4km s-min=19.8km az=87.5*

*NEIC **12** 14:31:19.8±3.3, 52.00N×175.42W, h64^{km}±25^{km}, mb4.2/2, Error ellipse: s-maj=33.1km s-min=19.8km az=184.0*

*IDC **12** 14:31:24.6±3.1, 52.28N×175.41W, h100^{km}±28^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.4/25, mbtmp3.9/7, Error ellipse: s-maj=28.4km s-min=14.2km az=151.0*

ISC 12 14:31:20.4±1.5**, 52.0N**±0.1×**175.19W**±0.09**, h80^{km}**±15^{km}**, n21, σ1^{s}37**/24**, mb3.9**/7**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UNV	Unalaska Valle	5.58	67	eP	P	14 32 43.3	+0.8
FX1	Attu Island--F	7.18	282	P	P	14 33 03.1	-1.6
	6.1nm,0.3s,baz=43,slow=3.2,SNR=33						
FX1				S	S	14 34 27.1	+1.7
	1.4nm,0.3s,baz=99,slow=23,SNR=3.4						
FX1	Attu Island--F	7.18	282	P	P	14 33 03.1	-1.6
FX1				S	S	14 34 27.1	+1.7
FX1				pmax	pmax		
	comp=Z,6.0nm,0.3s						
FX1				smax			
	comp=N,1.0nm,0.3s						
KDAK	Kodiak Island	14.21	57	P	P	14 34 36.1	-2.6
	comp=N,0.4nm,0.3s,baz=303,slow=22,SNR=18						
KDAK				S	S	14 37 13.5	-1.2
	comp=N,0.1nm,0.3s,baz=302,slow=10,SNR=1.9						
KDAK	Kodiak Island	14.21	57	P	P	14 34 36.1	-2.6
KDAK				S	S	14 37 13.5	-1.2
SLKM	Skilak Lake	16.20	48	P	P	14 35 04.9	+0.9
BILL	Bilibino	18.45	338	eP	P	14 35 34.3	+2.8
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ILAR	Eielson Array	19.38	38	P	P	14 35 40.7	-1.2
	comp=Z,0.4nm,0.3s,baz=222,slow=9.2,SNR=15						
ILAR				S	S	14 39 12.2	+0.8
	comp=Z,0.1nm,0.3s,baz=212,slow=26,SNR=3.6						
ILAR	Eielson Array	19.38	38	P	P	14 35 40.7	-1.2
ILAR				S	S	14 39 12.2	+0.8
INK	Inuvik	25.68	35	P	P	14 36 44.4	+0.5
	comp=Z,1.8nm,1.0s,mb3.5,baz=215,slow=14,SNR=11						
NEW	Newport	36.56	72	P	P	14 38 20.8	+1.0
	comp=Z,1.6nm,0.5s,mb4.2,baz=304,slow=15,SNR=4.2						
BW06	Boulder Array	43.98	75	eP	P	14 39 21.7	+0.8
	comp=Z,1.5nm,0.5s,mb4.0						
PDAR	Pinedale Array	43.98	75	P	P	14 39 22.3	+1.3
	comp=Z,2.0nm,0.6s,mb4.1,baz=313,slow=4.8,SNR=18						
ULM	Lac du Bonnet	47.46	59	P	P	14 39 48.4	0.0
	comp=Z,1.0nm,0.5s,mb3.8,baz=297,slow=6.8,SNR=3.3						
ULM	Lac du Bonnet	47.46	59	P	P	14 39 48.4	0.0
KURK	Kurchatov	60.21	315	eP	P	14 41 20.4	-1.4
	comp=Z,1.2nm,0.4s,mb4.3						
KURK	Kurchatov	60.21	315	eP	P	14 41 20.4	-1.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
MKAR	Makanchi Array	61.40	310	P	P	14 41 27.7	-2.2
	comp=Z,0.1nm,0.3s,mb3.3,baz=48,slow=5.8,SNR=5.4						
MAW	Mawson	148.34	218	PKPbc	PKPdf	14 50 56.0	+3.8
	comp=Z,1.2nm,0.5s,baz=109,slow=4.2,SNR=10						
LBTB	Lobatse	148.77	322	PKPbc	PKPdf	14 51 00.6	+6.4
	comp=Z,2.3nm,0.5s,baz=346,slow=1.5,SNR=6.7						
BOSA	Boshof	152.12	319	PKPbc	PKPdf	14 51 07.5	+8.3
	comp=Z,1.5nm,0.5s,baz=3.3,slow=3.2,SNR=9.3						

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*IDC **12** 14:56:24.4±4.1, 1.21N×97.75E, mb3.8/4, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, Error ellipse: s-maj=162.8km s-min=28.5km az=56.0*

*NEIC **12** 14:56:27.7±0.7, 1.06N×97.54E, h30^{km}, mb4.1/3, Error ellipse: s-maj=17.7km s-min=15.1km az=102.0*

ISC 12 14:56:25.8±1.0**, 1.1N**±0.1×**97.5E**±0.2**, h30^{km}, n8, σ0^{s}48**/8**, mb4.0**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	5.21	37	ePn	Pn	14 57 43.4	-0.4
WRA	Warramunga Arr	41.71	122	P	P	15 04 14.2	+0.2
	0.3nm,0.3s,mb3.4,baz=302,slow=9.0,SNR=5.4						
SONM	Songino Array	47.19	8	P	P	15 04 58.1	+0.5
	0.4nm,0.4s,mb3.7,baz=190,slow=10,SNR=6.2						
MKAR	Makanchi Array	47.42	346	P	P	15 05 00.4	+0.9
	1.7nm,0.8s,mb4.0,baz=155,slow=7.6,SNR=18						
KURK	Kurchatov	51.97	345	eP	P	15 05 34.6	+0.2
	1.4nm,0.8s,mb3.9						
ZAL	Zalesovo	53.70	351	P	P	15 05 46.6	-0.5
	1.6nm,0.4s,mb4.3,baz=307,slow=7.2,SNR=6.1						
CHKZ	Chkalovo	56.93	341	eP	P	15 06 10.0	-0.6
	0.8nm,0.5s,mb4.0						
LBTB	Lobatse	74.13	244	eP	P	15 08 01.4	-0.3
	2.4nm,0.4s,mb4.5						

IDC 12 15:45:40.0±4.0**, 6.54S**×**154.82E, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.8**/12**, mbtmp4.0**/3**, Error ellipse: s-maj=110.1km s-min=35.2km az=117.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.94	234	P	P	15 50 56.5	-0.3
	2.0nm,0.7s,baz=60,slow=9.8,SNR=14						
SONM	Songino Array	68.86	327	P	P	15 56 47.1	-1.5
	1.3nm,0.7s,baz=144,slow=6.1,SNR=6.1						
MKAR	Makanchi Array	82.95	319	P	P	15 58 06.2	-2.1
	0.9nm,0.6s,baz=96,slow=6.1,SNR=7.2						

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*IDC **12** 15:48:22.4±4.0, 1.23N×97.80E, mb4.0/4, mb1 4.1/4, mb1mx3.7/17, mbtmp4.0/4, Error ellipse: s-maj=158.5km s-min=26.9km az=56.0*

*NEIC **12** 15:48:25.4±0.7, 1.00N×97.47E, h30^{km}, mb4.2/1, Error ellipse: s-maj=15.5km s-min=13.2km az=223.0*

ISC 12 15:48:23.6±0.9**, 1.0N**±0.1×**97.5E**±0.1**, h30^{km}, n10, σ0^{s}79**/10**, mb4.2**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	Kulim	5.28	37	ePn	Pn	15 49 43.3	+0.7
KSM	Kuching	12.82	88	ePn	P	15 51 25.3	-1.5
WRA	Warramunga Arr	41.70	122	P	P	15 56 11.8	+0.1
	0.6nm,0.5s,mb3.5,baz=302,slow=9.0,SNR=8.8						
WRAB	Tennant Creek	41.70	122	eP	P	15 56 13.2	+1.4
	5.2nm,1.1s,mb4.1						
SONM	Songino Array	47.26	8	P	P	15 56 56.2	+0.1
	0.7nm,0.5s,mb3.9,baz=191,slow=9.2,SNR=5.1						
SONM	Songino Array	47.26	8	P	P	15 56 56.2	+0.1
MKAR	Makanchi Array	47.48	346	P	P	15 56 57.9	+0.1
	1.8nm,0.6s,mb4.2,baz=159,slow=8.2,SNR=25						
MKAR	Makanchi Array	47.48	346	P	P	15 56 57.9	+0.1
ZAL	Zalesovo	53.77	351	P	P	15 57 45.0	-0.5
	2.6nm,0.4s,mb4.5,baz=324,slow=1.9,SNR=7.0						
BOSA	Boshof	74.94	240	eP	P	16 00 03.7	-0.5
	45nm,1.8s,mb5.1						
BOSA				epP	pP	16 00 11.0	-2.6

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*MOS **12** 15:53:34.1±0.9, 57.33N×120.77E, h7^{km}, mb4.4/1, Error ellipse: s-maj=38.2km s-min=24.5km az=50.0*

BYKL 12 15:53:32.3±0.4**, 57.40N**×**120.83E, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	Chara	1.48	251	ePg	Pg	15 54 00.0	-1.9
CRS				eSg	Sg	15 54 18.6	-3.1
CRS				Pmax			
	154nm,0.8s						
CRS				Smax			
	380nm,0.8s						
CRS	Chara	1.48	251	eP	Pn	15 54 00.2	-0.1
CRS				e		15 54 18.7	
CRS				pmax	pmax		
	comp=Z,156nm,0.8s						
CRS				smax			
	comp=E,383nm,0.8s						
NRGR	Nerungri	2.25	108	eP	Pn	15 54 12.8	+1.4
NRGR				S	Sn	15 54 42.1	+1.8
CLNS	Chul’man	2.29	103	eP	Pn	15 54 13.5	+1.7
CLNS				e		15 54 43.4	
CLNS				pmax	pmax		
	comp=N,7.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,9.0nm,0.3s						
CLNS				smax			
	comp=N,84nm,0.3s						
CLNS				smax			
	comp=E,132nm,0.3s						
CLNS				smax			
	comp=Z,16nm,0.3s						
ALDR	Aldan	2.72	62	ePn	Pn	15 54 17.9	-0.1
ALDR				ePg	Pg	15 54 21.2	-5.5
ALDR				eSg	Sg	15 54 56.4	-6.5
ALDR				Pmax			
	comp=Z,142nm,0.5s						
ALDR				Smax			
	comp=Z,741nm,0.3s						
NLYR	Nelyaty	2.95	254	ePn	Pn	15 54 21.2	-0.1
NLYR				ePg	Pg	15 54 25.8	-5.5
NLYR				eSg	Sg	15 55 02.2	-8.4
NLYR				Pmax			
	comp=Z,77nm,0.9s						
NLYR				Smax			
	comp=Z,304nm,0.9s						
NLYR	Nelyaty	2.95	254	eP	Pn	15 54 21.1	-0.2
TUP	Tupik	3.02	190	ePn	Pn	15 54 21.7	-0.6
TUP				ePg	Pg	15 54 26.8	-5.8
TUP				e		15 54 58.6	
TUP				eSg	Sg	15 55 05.1	-7.8
TUP				Pmax			
	comp=Z,68nm,0.6s						
TUP				Smax			
	comp=Z,494nm,0.8s						
TUP	Tupik	3.02	190	eP	Pn	15 54 21.6	-0.7
TUP				eS	Sn	15 54 56.9	-2.9
TUP				pmax	pmax		
	comp=Z,72nm,0.6s						
TUP				smax			
	comp=E,495nm,0.8s						
BOD	Bodaibo	3.70	279	ePg	Pg	15 54 38.8	-7.3
BOD				eSg	Sg	15 55 25.8	-10
BOD				Pmax			
	comp=E,11nm,0.6s						
BOD				Smax			
	comp=E,112nm,0.9s						
UKT	Uakit	4.43	247	ePn	Pn	15 54 40.6	-1.8
UKT				ePg	Pg	15 54 52.3	-8.5
UKT				eSg	Sg	15 55 48.7	-11
UKT				Pmax			
	comp=E,13nm,1.2s						
UKT				Smax			
	comp=E,60nm,0.9s						
UKT	Uakit	4.43	247	eP	Pn	15 54 52.1	+10
UKT				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KROS	Kirovskiy	4.56	128	eSg	Sg	15 55 50.0	-14
ZEA	Zeya	5.17	133	ePg	Pg	15 55 06.1	-9.4
ZEA				eSg	Sg	15 56 11.8	-13
KMO	Kumora	5.53	258	eSg	Sg	15 56 23.4	-13
KMO				Smax			

	comp=Z,88nm,1.4s						
YLYR	**Ulyunkhan**	**5.97**	**249**	*e*Sg	Sg	15 56 37.1	-14
YLYR				Smax			
	comp=Z,78nm,1.0s						
YLYR	**Ulyunkhan**	**5.97**	**249**	*e*P	Pn	15 55 20.1	+16
NIZ	**Nizh Angarsk**	**6.45**	**260**	*e*Sg	Sg	15 56 52.4	-15
NIZ				Smax			
	comp=Z,49nm,0.8s						
YAK	**Yakutsk**	**6.45**	**40**	*e*Sg	Sg	15 56 49.6	-17
YAK				Smax			
	comp=Z,293nm,0.7s						
YAK	**Yakutsk**	**6.45**	**40**	*e*P	Pn	15 55 26.6	+16
YAK				*e*S	Sn	15 56 32.9	+6.8
YAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
YAK				smax			
	comp=N,11nm,1.0s						
YAK				smax			
	comp=Z,7.0nm,0.8s						
YAK				smax			
	comp=E,8.0nm,0.9s						
YAK				smax			
	comp=N,21nm,0.8s						
YAK				smax			
	comp=E,26nm,0.8s						
YAK				smax			
	comp=Z,18nm,0.8s						
CIT	**Chita**	**6.84**	**221**	*e*Sg	Sg	15 57 01.9	-18
CIT				Smax			
	comp=Z,147nm,1.6s						
SYVR	**Suvo**	**7.20**	**243**	*e*Sg	Sg	15 57 16.1	-16
SYVR				Smax			
	comp=Z,107nm,1.9s						
KPC	**Khapcheranga**	**9.20**	**217**	*e*Sg	Sg	15 58 17.6	-21
KPC				Smax			
	comp=Z,53nm,1.3s						

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*NEIC **12** 16:03:17.9, 42.32N×7.90W, h23^{km}, MN2.5(MDD), After MDD.*
*CSEM **12** 16:03:17.7±0.1, 42.33N×7.89W, h24^{km}, ML2.5/3, Error ellipse: s-maj=3.4km s-min=2.8km az=85.0*
*INMG **12** 16:03:18.0±1.1, 42.33N×7.90W, h21^{km}±3^{km}, ML2.4, Error ellipse: s-maj=1.9km s-min=1.5km az=71.0*
MDD 12 16:03:17.9±0.2**, 42.33N×7.90W, h22**^{km}±1^{km}**, mbLg2.5**/14**, 4C-1D, Error ellipse: s-maj=2.6km s-min=2.0km az=158.0, PRXIMO, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELOB	**Lobios**	**0.47**	**195**	⇓Pg	Pb	16 03 27.2	-0.4
	SNR=18						
ELOB				Lg		16 03 33.5	
	97nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**0.47**	**195**	Pg	Pb	16 03 27.2	-0.3
	28nm,0.3s,SNR=18						
ERUA	**La Rua**	**0.56**	**83**	⇑Pg	Pb	16 03 28.9	-0.2
	35nm,0.3s,SNR=18						
ERUA				Lg		16 03 36.2	
	87nm,0.2s,SNR=28						
EZAM	**Zamans**	**0.62**	**254**	⇑Pg	Pb	16 03 29.8	-0.2
	184nm,0.4s,SNR=18						
EZAM				Lg		16 03 37.9	
	151nm,0.3s,SNR=40						
PCAB	**Cabril**	**0.62**	**189**	*e*Pg	Pb	16 03 29.7	-0.3
PCAB				*e*Sg	Sb	16 03 38.1	-0.2
	224nm,0.1s						
PCAB	**Cabril**	**0.62**	**189**	*e*Pg	Pb	16 03 29.7	-0.3
PCAB				*e*Sg	Sb	16 03 38.1	-0.2
	224nm,0.1s						
STS	**Santiago**	**0.74**	**319**	⇑Pg	Pb	16 03 31.7	-0.3
	15nm,0.4s,SNR=18						
STS				Lg		16 03 41.4	
	114nm,0.2s,SNR=7.4						
ECAL	**Calabor**	**0.94**	**114**	⇑Pg	Pb	16 03 35.0	-0.5
	31nm,0.4s,SNR=18						
ECAL				Lg		16 03 47.8	
	97nm,0.4s,SNR=28						
ECAL	**Calabor**	**0.94**	**114**	Pg	Pb	16 03 35.0	-0.4
	31nm,0.4s,SNR=18						
PBRG	**Braganca**	**1.00**	**121**	*e*P	Pb	16 03 35.7	-0.8
PBRG				*e*S	Sb	16 03 48.8	-0.5
	96nm,0.2s						
PBRG	**Braganca**	**1.00**	**121**	*e*P	Pb	16 03 35.7	-0.8
PBRG				*e*S	Sb	16 03 48.8	-0.5
	96nm,0.2s						
EMAZ	**Mazaricos**	**1.01**	**308**	Pg	Pb	16 03 35.4	-1.2
	16nm,0.3s,SNR=61						
EMAZ				Lg		16 03 49.8	
	78nm,0.2s,SNR=55						
EMAZ	**Mazaricos**	**1.01**	**308**	Pg	Pb	16 03 35.4	-1.2
	16nm,0.3s,SNR=61						
PVRL	**Vila Real**	**1.06**	**173**	*e*P	Pb	16 03 36.8	-0.6
PVRL				*e*S	Sb	16 03 50.3	-0.5
	121nm,0.1s						
PVRL	**Vila Real**	**1.06**	**173**	*e*P	Pb	16 03 36.8	-0.6
PVRL				*e*S	Sb	16 03 50.3	-0.5
	121nm,0.1s						
EPON	**Pontenova**	**1.14**	**28**	Pg	Pn	16 03 37.4	-1.4
	15nm,0.9s,SNR=22						
EPON				Lg		16 03 52.8	
	31nm,0.3s,SNR=23						
EPON	**Pontenova**	**1.14**	**28**	Pg	Pn	16 03 37.4	-1.4
	15nm,0.9s,SNR=22						
PVIS	**Viseu**	**1.61**	**180**	*e*P	Pn	16 03 44.4	-1.0
PVIS				S	Sn	16 04 04.2	-1.5
	38nm,0.1s						
PVIS	**Viseu**	**1.61**	**180**	*e*P	Pn	16 03 44.4	-1.0
PVIS				S	Sn	16 04 04.2	-1.5
	38nm,0.1s						
MTE	**Manteigas**	**1.94**	**172**	*e*Pg	Pn	16 03 52.4	+2.2
MTE				*e*Sg	Sn	16 04 18.5	+4.4
	19nm,0.6s						
MTE	**Manteigas**	**1.94**	**172**	Pg	Pn	16 03 52.4	+2.2
MTE				Lg		16 04 18.5	
	9.6nm,0.6s						
EARI	**Arriondas**	**2.20**	**63**	Pn	Pn	16 03 52.8	-1.2
	12nm,1.0s,SNR=4.7						
EARI				Pg	Pn	16 03 57.9	+4.0
	20nm,1.0s,SNR=10.0						
EARI				Sn	Sn	16 04 18.3	-2.5
	1.8nm,0.1s,SNR=7.9						
EARI				Lg		16 04 25.1	
	44nm,1.2s,SNR=4.8						
EARI	**Arriondas**	**2.20**	**63**	Pn	Pn	16 03 52.8	-1.2
EARI				Sn	Sn	16 04 18.3	-2.5
EARI				Lg		16 04 25.1	
EARI	**Arriondas**	**2.20**	**63**	Pn	Pn	16 03 52.8	-1.2
	12nm,1.0s,SNR=4.7						
EARI	**Arriondas**	**2.20**	**63**	Pg	Pn	16 03 57.9	+3.9
	20nm,1.0s,SNR=10.0						
EARI				Sn	Sn	16 04 18.3	-2.5
	1.8nm,0.1s,SNR=7.9						
PCBR	**Castelo Branco**	**2.50**	**173**	*e*Pn	Pn	16 03 57.0	-1.2
PCBR				*e*Sg	Sn	16 04 35.4	+7.0
	7.8nm,0.3s						
PCBR	**Castelo Branco**	**2.50**	**173**	Pn	Pn	16 03 57.0	-1.2
PCBR				Lg		16 04 35.4	
	3.9nm,0.3s						
PTOM	**Tomar**	**2.73**	**188**	*e*Sg	Sn	16 04 44.6	+10
	7.8nm,0.4s						
PTOM	**Tomar**	**2.73**	**188**	Lg		16 04 44.6	
	3.9nm,0.4s						
GUD	**Guadarrama**	**3.27**	**120**	Pn	Pn	16 04 07.5	-1.7
	2.9nm,0.3s,SNR=7.9						
GUD				Pg	Pn	16 04 13.9	+4.7
	1.2nm,0.2s,SNR=4.0						
GUD				Sn	Sn	16 04 42.6	-5.3
	1.4nm,0.2s,SNR=7.9						
GUD				Lg		16 04 56.2	
	8.5nm,0.8s,SNR=7.9						
GUD	**Guadarrama**	**3.27**	**120**	Pn	Pn	16 04 07.5	-1.7
GUD				Sn	Sn	16 04 42.6	-5.3
GUD				Lg		16 04 56.2	
GUD	**Guadarrama**	**3.27**	**120**	Pg	Pn	16 04 13.9	+4.7
	1.2nm,0.2s,SNR=4.0						
GUD				Sn	Sn	16 04 42.6	-5.3
	1.4nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**3.63**	**169**	Pn	Pn	16 04 11.9	-2.3
	7.6nm,1.2s,SNR=5.7						
EBAD				Lg		16 05 08.5	
	4.2nm,0.5s,SNR=4.0						
EBAD	**Badajoz**	**3.63**	**169**	Pn	Pn	16 04 11.9	-2.3
	7.6nm,1.2s,SNR=5.7						
ESDC	**Sonseca Array**	**3.98**	**130**	Pn	Pn	16 04 17.1	-2.2
	0.8nm,0.3s,baz=311,slow=13,SNR=3.7						
ESDC				Pg	Pn	16 04 25.0	+5.7
	0.5nm,0.2s,baz=314,slow=14,SNR=4.2						
ESDC				Sn	Sn	16 04 59.8	-6.1
	0.9nm,0.5s,baz=311,slow=23,SNR=40						
ESDC				Lg		16 05 15.9	
	2.3nm,0.7s,baz=160,slow=29,SNR=4.6						
ESDC	**Sonseca Array**	**3.98**	**130**	Pn	Pn	16 04 17.1	-2.2
ESDC				Sn	Sn	16 04 59.8	-6.1
ESDC				Lg		16 05 15.9	
ESDC	**Sonseca Array**	**3.98**	**130**	Pn	Pn	16 04 17.1	-2.2
	0.8nm,0.3s,baz=311,slow=13,SNR=3.7						
ESDC	**Sonseca Array**	**3.98**	**130**	Pg	Pn	16 04 25.0	+5.7
	0.5nm,0.2s,baz=314,SNR=4.2						
ESDC				Sn	Sn	16 04 59.8	-6.1
	0.9nm,0.5s,baz=311,slow=23,SNR=40						
EMIN	**Mina Concepcio**	**4.65**	**168**	Pn	Pn	16 04 26.1	-2.6
	2.4nm,0.7s,SNR=6.5						
EMIN				Lg		16 05 42.4	
	5.0nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**4.65**	**168**	Pn	Pn	16 04 26.1	-2.6
	2.4nm,0.7s,SNR=6.5						
ECAB	**El Cabril**	**4.65**	**155**	Pn	Pn	16 04 26.3	-2.5
	11nm,1.3s,SNR=6.0						
ECAB				Sn	Sn	16 05 16.0	-6.7
	1.5nm,0.7s,SNR=7.9						
ECAB				Lg		16 05 35.9	
	5.3nm,0.6s,SNR=6.7						
ECAB	**El Cabril**	**4.65**	**155**	Pn	Pn	16 04 26.3	-2.4
	11nm,1.3s,SNR=6.0						
ECAB				Sn	Sn	16 05 16.0	-6.7
EADA	**Adamuz**	**4.87**	**147**	Pn	Pn	16 04 29.2	-2.7
	4.9nm,0.4s,SNR=14						
EADA	**Adamuz**	**4.87**	**147**	Pn	Pn	16 04 29.2	-2.6

KRSC 12 16:10:45.4±0.6**, 55.78N×164.49E, h8**^{km}±3^{km}**, ML3.9, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**1.02**	**124**	*i* P	Pb	16 11 04.5	-0.4
BKI				*i* S	Sb	16 11 18.0	-0.3
BKI				Smax			
	690nm,0.8s						
KBTR	**Krutoberegovo**	**1.03**	**295**	*i* P	Pb	16 11 04.2	-0.9
KBTR				*e*S	Sb	16 11 18.7	+0.1
KBG	**Krutoberegovo**	**1.11**	**296**	*i* P	Pb	16 11 05.7	-0.7
KBG				*e*S	Sb	16 11 21.4	+0.6
KBG				Smax			
	2μm,0.4s						
SMKR	**Semkarok**	**1.87**	**297**	*e*P	Pn	16 11 18.5	+0.4
SMKR				*e*S	Sn	16 11 43.1	+1.0
SRKR	**Sorokina**	**2.05**	**297**	*e*P	Pn	16 11 21.1	+0.5
ZLN	**Zelenaya**	**2.09**	**278**	*i* P	Pn	16 11 22.3	+1.1
ZLN				*e*S	Sn	16 11 49.2	+1.6
CIRR	**Tsirk**	**2.13**	**281**	*i* P	Pn	16 11 22.8	+1.0
CIRR				*e*S	Sn	16 11 50.2	+1.5
LGNR	**Loginova**	**2.16**	**280**	*i* P	Pn	16 11 23.4	+1.2
LGNR				*e*S	Sn	16 11 51.1	+1.7
KLY	**Klyuchi**	**2.22**	**286**	*e*P	Pn	16 11 22.1	-0.9
KLY				*e*S	Sn	16 11 49.0	-1.9
KRSR	**Krestovskiy**	**2.25**	**283**	*e*P	Pn	16 11 23.9	+0.4
KRSR				*e*S	Sn	16 11 52.0	+0.3
KMNR	**Kamenistaya**	**2.40**	**271**	*e*P	Pn	16 11 26.7	+1.0
KMNR				*e*S	Sn	16 11 57.0	+1.4
KPT	**Kopyto**	**2.41**	**276**	*e*P	Pn	16 11 26.9	+1.1
KPT				*e*S	Sn	16 11 57.5	+1.7
TUMR	**Tumrok**	**2.52**	**260**	*i* P	Pn	16 11 29.1	+1.8
TUMR				*e*S	Sn	16 12 00.9	+2.4
KOZ	**Kozyrevsk**	**2.61**	**278**	*e*P	Pn	16 11 30.3	+1.6
KOZ				*e*S	Sn	16 12 03.4	+2.5
SRDR	**Sredinnyy**	**2.73**	**283**	*e*P	Pn	16 11 32.0	+1.6
SRDR				*e*S	Sn	16 12 05.4	+1.5
ESO	**Esso**	**3.27**	**275**	*e*P	Pn	16 11 37.4	-0.6
ESO				Smax			
	10.0nm,0.5s						
SPN	**Mys Shipunski**	**3.75**	**226**	*i* P	Pn	16 11 43.7	-1.1
SPN				*e*S	Sn	16 12 26.4	-3.2
NLC	**Nalytchevo**	**3.98**	**231**	*e*P	Pn	16 11 48.1	0.0
SMAR	**Somma**	**4.17**	**235**	*i* P	Pn	16 11 51.6	+0.9
UGLR	**Uglovaya**	**4.19**	**234**	*i* P	Pn	16 11 52.0	+0.9
AVH	**Avacha**	**4.19**	**235**	*i* P	Pn	16 11 52.3	+1.2
GNL	**Ganaly**	**4.33**	**244**	*e*P	Pn	16 11 54.1	+1.0
PET	**Petropavlovsk**	**4.39**	**233**	*e*P	Pn	16 11 54.2	+0.3
PET				*e*S	Sn	16 12 44.2	-1.7
KRMR	**Karymshinskiy**	**4.75**	**234**	*e*P	Pn	16 12 00.5	+1.4
RUS	**Russkaya**	**4.86**	**229**	*i* P	Pn	16 11 58.8	-1.8
GRL	**Gorelyy**	**4.97**	**232**	*e*P	Pn	16 12 03.1	+1.0

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*IDC **12** 16:12:35.0±2.0, 6.21S×130.11E, mb3.9/2, mb1 4.1/4, mb1mx3.8/13, mbtmp3.9/4, ML4.1/2, Error ellipse: s-maj=77.7km s-min=30.8km az=85.0*
*NEIC **12** 16:12:50.2±0.8, 6.83S×129.83E, h150^{km}, mb4.3/2, Error ellipse: s-maj=33.8km s-min=10.2km az=76.0*
ISC 12 16:12:54.8±3.1**, 7.1S**±0.1×**129.8E**±0.1**, h224**^{km}±34^{km}**, n9, σ0^{s}.40**/13**, mb3.6**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.17**	**155**	*e*P	Px	16 14 43.8	
	8.3nm,0.2s						
KAKA				*e*S	Sx	16 15 52.9	
FITZ	**Fitzroy Crossi**	**11.64**	**200**	*e*P	**P**	**16 15 35.6**	**0.0**
	2.5nm,0.3s						
FITZ				*e*S	**S**	**16 17 41.5**	**-0.5**
FITZ	**Fitzroy Crossi**	**11.64**	**200**	Pn	**P**	**16 15 35.4**	**-0.2**
	1.3nm,0.3s,baz=28,slow=12,SNR=18						
FITZ				Sn	**S**	**16 17 42.4**	**+0.4**
	2.8nm,0.3s,baz=121,slow=18,SNR=7.0						
WRAB	**Tennant Creek**	**13.51**	**161**	*e*P	**P**	**16 15 59.2**	**+0.2**
	7.3nm,0.4s						
WRAB				*e*S	**S**	**16 18 24.5**	**+0.1**
WRA	**Warramunga Arr**	**13.52**	**161**	Pn	**P**	**16 15 58.9**	**-0.1**
	0.7nm,0.3s,baz=344,slow=11,SNR=18						
WRA				Sn	**S**	**16 18 24.1**	**-0.3**
	1.1nm,0.3s,baz=333,slow=22,SNR=8.5						
WB2	**Warramunga Arr**	**13.52**	**161**	*e*P	**P**	**16 16 03.2**	**+4.1**
WB2				*e*S	**S**	**16 18 24.7**	**+0.1**
SONM	**Songino Array**	**58.46**	**342**	P	**P**	**16 22 28.8**	**-0.6**
	0.3nm,0.4s,mb3.3,baz=152,slow=7.2,SNR=3.8						
MKAR	**Makanchi Array**	**68.18**	**327**	P	**P**	**16 23 33.2**	**+0.3**
	1.3nm,0.4s,mb3.9,baz=117,slow=7.8,SNR=43						
KURK	**Kurchatov**	**72.48**	**329**	*e*P	**P**	**16 23 59.0**	**+0.3**

NIED 12 16:46:00, 45.30N×149.30E, h53^{km}**, Mw3.8 Best double couple:** M$_0$4.79×10^{14} **NP1:**φ$_s$324°**,**δ67°**,**λ51°. **NP2:** φ$_s$209°**,**δ44°**,**λ147°.**, Kuril Islands**

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*ISK **12** 16:52:42.6, 38.71N×26.48E, h15^{km}, MD3.1*
*NEIC **12** 16:52:42.0, 38.71N×26.48E, h15^{km}, MD3.4(ATH), MD3.1(ISK), After ISK.*
*ATH **12** 16:52:43.3, 38.76N×26.52E, h25^{km}±3^{km}, MD3.4/3*
*CSEM **12** 16:52:43.6±0.1, 38.72N×26.58E, h17^{km}±1^{km}, MD3.4, Error ellipse: s-maj=2.7km s-min=1.2km az=62.0*
ISC 12 16:52:42.4±0.7**, 38.71N**±0.03×**26.43E**±0.05**, h6**^{km}±5^{km}**, n27, σ0^{s}.98**/39**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.37**	**159**	*i* P	**Pg**	**16 52 49.7**	**-0.1**
URLA				*i* S	**Sg**	**16 52 56.2**	**+1.5**
PRK	**Paraskevi**	**0.55**	**347**	⇑*i*PN	**Pg**	**16 52 54.1**	**+0.6**
PRK				*e*SN	**Sg**	**16 53 02.0**	**+1.1**
BLCB	**Balcova**	**0.58**	**123**	*e*PG	**Pg**	**16 52 53.1**	**-0.8**
BLCB				*e*SG	**Sg**	**16 53 01.6**	**-0.1**
AYVA	**Ayvalik**	**0.64**	**19**	*i* P	**Pg**	**16 52 54.8**	**-0.3**
AYVA				*i* S	**Sg**	**16 53 04.2**	**+0.6**
IZM	**Izmir**	**0.72**	**115**	PG	**Pg**	**16 52 56.7**	**-0.1**
KDAG	**Bornova**	**0.72**	**114**	*i* P	**Pg**	**16 52 55.8**	**-1.1**
KDAG				*i* S	**Sg**	**16 53 07.0**	**+0.5**
SMG	**Samos**	**1.05**	**162**	*e*PN	**Pn**	**16 53 03.3**	**-0.2**
SMG				*e*SN	**Sn**	**16 53 19.5**	**+1.0**
AKS	**Akhisar**	**1.10**	**80**	*e*PG	**Pg**	**16 53 03.7**	**-0.6**
EZN	**Ezine**	**1.12**	**356**	*e*PN	**Pn**	**16 53 04.2**	**-0.4**
BALB	**Balikesir**	**1.46**	**50**	*e*PN	**Pn**	**16 53 08.3**	**-1.2**
LIA	**Limnos Island**	**1.53**	**321**	*e*PN	**Pn**	**16 53 11.4**	**+0.9**
BTOK	**Tokmak**	**1.63**	**49**	*i* P	**Pn**	**16 53 13.1**	**+1.2**
BTOK				*i* S	**Sb**	**16 53 35.7**	**+2.3**
MANT	**Manisa**	**1.68**	**97**	*i* P	**Pn**	**16 53 12.3**	**-0.3**
MANT				*i* S	**Sn**	**16 53 34.8**	**+0.1**
LPK	**Lapseki**	**1.69**	**9**	*e*PN	**Pn**	**16 53 11.6**	**-1.0**
MLSB	**Milas**	**1.77**	**142**	*e*PN	**Pn**	**16 53 13.6**	**-0.2**
BODT	**Bodrum**	**1.78**	**157**	*e*PN	**Pn**	**16 53 13.0**	**-1.0**
BDRM	**Kayabasi**	**1.82**	**154**	*i* P	**Pn**	**16 53 17.4**	**+2.8**
BDRM				*i* S	**Sn**	**16 53 42.8**	**+4.5**
BNT	**Bandirma**	**2.01**	**35**	*e*PN	**Pn**	**16 53 16.5**	**-0.8**
MRMT	**Marmara Adasi**	**2.10**	**25**	*e*PN	**Pn**	**16 53 16.9**	**-1.7**
YER	**Yerkesik**	**2.15**	**136**	*e*PN	**Pn**	**16 53 18.8**	**-0.4**
MFT	**Murefte**	**2.18**	**17**	*e*PN	**Pn**	**16 53 19.4**	**-0.3**
DNZL	**Cakiroluk**	**2.30**	**115**	*i* P	**Pn**	**16 53 21.6**	**+0.2**
DNZL				*i* S	**Sn**	**16 53 56.3**	**+5.9**
RDO	**Rodhopi**	**2.53**	**345**	*e*PN	**Pn**	**16 53 24.6**	**-0.2**
ULDT	**Uludag**	**2.54**	**55**	*i* P	**Pn**	**16 53 28.4**	**+3.5**
ULDT				*i* S	**Sn**	**16 54 01.1**	**+4.6**
YLV	**Yalova**	**2.94**	**50**	*e*PN	**Pn**	**16 53 29.9**	**-0.6**
TKTP	**Tekketepe**	**3.13**	**101**	*i* P	**Pn**	**16 53 32.3**	**-1.0**
TKTP				*i* S	**Sn**	**16 54 27.2**	**+16**
EDRB	**Edirne**	**3.15**	**4**	*e*PN	**Pn**	**16 53 33.4**	**-0.1**

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*NAO **12** 17:01:33.9±2.9, 68.96N×17.91W*
*CSEM **12** 17:01:34.7, 68.83N×17.89W, h10^{km}, mb5.0*
*MOS **12** 17:01:35.9±1.0, 68.97N×17.08W, h10^{km}, mb4.9/24, MS4.3/28, Error ellipse: s-maj=15.2km s-min=6.9km az=108.4*
*BJI **12** 17:01:36.4, 69.15N×16.37W, h5^{km}, mB5.4, mb4.6, Ms5.2, Msz4.7*
*IDC **12** 17:01:36.2±0.5, 68.92N×17.15W, mb4.1/16, mb1 4.3/23, mb1mx4.2/30, mbtmp4.1/23, ML4.0/6, MS4.3/31, Ms1 4.3/31, ms1mx4.3/33, Error ellipse: s-maj=17.5km s-min=10.7km az=23.0*
*HRVD **12** 17:01:37.3±0.2, 68.97N×17.05W, h17^{km}±1^{km}, MW5.1/68, Centroid moment Tensor Solution. LP body waves: s34,c54;Mantle waves: s68,c135; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.94±.17; M$_{\theta\theta}$2.12±.16; M$_{\phi\phi}$-0.17±.13; M$_{r\theta}$-1.45±.37; M$_{\theta\phi}$5.29±.14; M$_{\phi r}$-0.46±.34; Best double couple: M$_0$5.593×10^{16} NP1: φ$_s$186°, δ74°, λ-178°. NP2:φ$_s$95°, δ88°, λ-16°. Principal axes: T 6.62, Plg9°, Azm142°; N -2.048, Plg74°, Azm267°; P -4.567, Plg13°, Azm49°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **12** 17:01:37.3±0.2, 68.89N×17.18W, h10^{km}, mb4.9/59, MS4.4/7 Error ellipse: s-maj=5.9km s-min=3.9km az=47.0*
*REY **12** 17:01:38.9, 68.60N×16.74W, h10^{km}, ML4.7, ML4.4*
*SKO **12** 17:01:47.9, 66.79N×18.40W*
ISC 12 17:01:35.4±0.2**, 68.78N**±0.02×**17.40W**±0.08**, h10**^{km}**, (h20**^{km}±3.3^{km}**:pP-P), n296, σ1^{s}.25**/301**, mb4.7**/86**, MS4.3**/39**, 20C-5D, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGRI	**Grimsey**	**2.26**	**186**	P	**Pn**	**17 02 13.3**	**-0.1**
IGRI				S	**Sn**	**17 02 38.8**	**-2.8**
SCO	**Scoresbysund**	**2.34**	**319**	*i* P	**Pn**	**17 02 12.8**	**-1.8**
	196nm,0.7s						
SCO	**Scoresbysund**	**2.34**	**319**	*e*P	**Pn**	**17 02 12.8**	**-1.8**
SCO				pmax	pmax		
	comp=Z,200nm,0.7s						
SCO	**Scoresbysund**	**2.34**	**319**	*e*P	**Pn**	**17 02 12.8**	**-1.8**
	comp=Z,196nm,0.7s						
ILEI	**Leirhofn**	**2.41**	**171**	P	**Pn**	**17 02 14.9**	**-0.7**
ILEI				S	**Sn**	**17 02 43.6**	**-1.8**
IBRE	**Brettingsstaoi**	**2.67**	**184**	P	**Pn**	**17 02 19.2**	**-0.2**
IBRE				S	**Sn**	**17 02 49.8**	**-2.4**
IHED	**Heoinshofoi**	**2.71**	**179**	P	**Pn**	**17 02 19.4**	**-0.5**
ISIG	**Siglufjorour**	**2.72**	**193**	P	**Pn**	**17 02 20.4**	**+0.3**
ISIG				S	**Sn**	**17 02 50.6**	**-2.8**
IGIL	**Gilhagi**	**2.74**	**171**	P	**Pn**	**17 02 19.4**	**-1.0**
IGIL				S	**Sn**	**17 02 52.2**	**-1.7**
IHLA	**Hella**	**2.87**	**188**	P	**Pn**	**17 02 22.3**	**+0.1**
IHLA				S	**Sn**	**17 02 54.5**	**-2.7**
IGRA	**Granastaoir**	**2.88**	**181**	P	**Pn**	**17 02 21.6**	**-0.6**
IGRA				S	**Sn**	**17 02 54.2**	**-3.0**
IHRN	**Hraun**	**2.88**	**203**	P	**Pn**	**17 02 23.8**	**+1.5**
IKVO	**Krokottuvotn**	**3.09**	**176**	P	**Pn**	**17 02 24.7**	**-0.5**
IREN	**Reynihlio**	**3.15**	**176**	P	**Pn**	**17 02 26.1**	**-0.1**
IREN				S	**Sn**	**17 03 02.7**	**-1.5**
IGRS	**Grimsstaoir**	**3.19**	**170**	P	**Pn**	**17 02 26.0**	**-0.8**
IGRS				S	**Sn**	**17 03 03.6**	**-1.7**
ISVA	**Svartarkot**	**3.46**	**179**	P	**Pn**	**17 02 30.4**	**-0.1**
ISVA				S	**Sn**	**17 03 10.1**	**-1.9**
JMIC	**Jan Mayen**	**3.79**	**50**	Pn	**Pn**	**17 02 30.9**	**-4.3**
	comp=Z,19nm,0.3s,baz=123,slow=10.0,SNR=3.1						
JMIC				LR	LR	17 03 34.0	
	comp=Z,4μm,18.2s,baz=270,slow=32						
IADA	**Aoalbol**	**3.84**	**168**	P	**Pn**	**17 02 34.9**	**-1.1**
IADA				S	**Sn**	**17 03 21.7**	**-0.1**
IHVA	**Hvannstoosfjol**	**3.89**	**170**	P	**Pn**	**17 02 35.4**	**-1.2**
IHVA				S	**Sn**	**17 03 21.9**	**-1.0**
IGLU	**Glumsstadir**	**3.92**	**165**	P	**Pn**	**17 02 35.6**	**-1.5**
IGLU				S	**Sn**	**17 03 22.1**	**-1.6**
IBRU	**Bruarjokull**	**4.00**	**172**	P	**Pn**	**17 02 37.2**	**-1.0**
IHVE	**Hveravellir**	**4.02**	**193**	P	**Pn**	**17 02 39.9**	**+1.4**
IVSH	**V-Sauoahnukur**	**4.04**	**170**	P	**Pn**	**17 02 37.6**	**-1.2**
IVSH				S	**Sn**	**17 03 25.7**	**-1.1**
ISKR	**Skrokkalda**	**4.26**	**186**	P	**Pn**	**17 02 43.1**	**+1.2**
ISKR				S	**Sn**	**17 03 32.9**	**+0.7**
BORG	**Borgarnes**	**4.34**	**203**	Pn	**Pn**	**17 02 44.2**	**+1.2**
	comp=Z,34nm,0.3s,baz=13,slow=6.8,SNR=68						
BORG				Sn	**Sn**	**17 03 39.0**	**+4.7**
	baz=139,slow=19,SNR=2.3						
BORG				LR	LR	17 04 00.2	
	comp=Z,429nm,21.8s,baz=205,slow=32						
BORG	**Borgarnes**	**4.34**	**203**	*e*Pn	**Pn**	**17 02 44.6**	**+1.6**
BORG				*e*Pb	**Pb**	**17 02 54.9**	**+3.4**
BORG				*e*Sb	**Sb**	**17 03 49.5**	**+5.2**
IGRF	**Grimsfjall**	**4.39**	**179**	P	**Pn**	**17 02 45.4**	**+1.6**
SUMG	**Summit**	**7.92**	**308**	*e*Pn	**Pn**	**17 03 31.6**	**-1.9**
	comp=Z,44nm,0.8s						
SUMG				*e*Sn	**Sn**	**17 04 59.9**	**-4.2**
DAG	**Danmarks Havn**	**8.04**	**358**	⇑*i*P	**P**	**17 03 35.3**	**+0.1**
	comp=Z,7.6nm,0.9s						
DAG	**Danmarks Havn**	**8.04**	**358**	⇑*i*P	**P**	**17 03 35.3**	**+0.1**
DAG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SFJD	**Kangerlussuaq**	**12.55**	**278**	Pn	**P**	**17 04 36.8**	**+0.2**
	comp=Z,0.9nm,0.3s,baz=32,slow=12,SNR=4.0						
SFJD	**Kangerlussuaq**	**12.55**	**278**	P	**P**	**17 04 36.8**	**+0.2**
SFJD				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBS	**Kingsbay**	**12.80**	**25**	Pn	**P**	**17 04 36.7**	**-3.3**
KBS				Sn	**S**	**17 06 50.3**	**-13**
KBS	**Kingsbay**	**12.80**	**25**	*e*Pn	**P**	**17 04 36.4**	**-3.6**
	comp=Z,17nm,0.6s						
KBS	**Kingsbay**	**12.80**	**25**	*e*Pn	**P**	**17 04 36.4**	**-3.6**
	comp=Z,17nm,0.6s						
KBS				Sn	**S**	**17 06 50.3**	**-13**
SPA0	**Spitsbergen Ar**	**13.16**	**30**	P	**P**	**17 04 42.0**	**-2.7**
	baz=244,slow=11						
NB2	**NORSAR Subarra**	**14.26**	**109**	P	**P**	**17 05 00.3**	**+1.1**
	baz=310,slow=16						
NOA	**NORSAR Array B**	**14.26**	**109**	Pn	**P**	**17 04 57.9**	**-1.3**
	comp=Z,0.4nm,0.3s,baz=304,slow=13,SNR=3.7						
NOA				LR	LR	17 10 17.0	
	comp=Z,806nm,18.5s,baz=310,slow=37						
EKA	**Eskdalemuir Ar**	**14.98**	**147**	Pn	**P**	**17 05 08.6**	**0.0**
	comp=Z,0.5nm,0.3s,baz=336,slow=14,SNR=11						
EKA	**Eskdalemuir Ar**	**14.98**	**147**	P	**P**	**17 05 08.6**	**0.0**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARA0	**ARCESS Array S**	**15.06**	**67**	P	**P**	**17 05 08.6**	**-1.0**
	baz=295,slow=12						
ARCES	**ARCESS Array B**	**15.06**	**67**	Pn	**P**	**17 05 08.2**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=311,slow=13,SNR=8.5						
ARCES				LR	LR	17 09 39.6	
	comp=Z,1μm,19.4s,baz=284,slow=32						
ARCES	**ARCESS Array B**	**15.06**	**67**	Pn	**P**	**17 05 08.2**	**-1.3**
KEV	**Kevo**	**15.49**	**66**	*e*Pn	**P**	**17 05 12.7**	**-2.5**
	comp=Z,690nm,2.4s						
HFS	**Hagfors**	**15.77**	**108**	P	**P**	**17 05 19.2**	**+0.4**
	baz=331,slow=18						
HFS	**Hagfors**	**15.77**	**108**	Pn	**P**	**17 05 17.5**	**-1.4**
	comp=Z,0.0nm,0.3s,baz=315,slow=10,SNR=4.0						
HFS				LR	LR	17 11 22.5	
	comp=Z,1μm,18.2s,baz=170,slow=37						
HFS	**Hagfors**	**15.77**	**108**	P	**P**	**17 05 19.2**	**+0.4**
APA0	**Apatity Array**	**18.34**	**70**	P	**P**	**17 05 51.0**	**-0.1**
	baz=302,slow=14						
APA	**Apatity**	**18.50**	**70**	⇓*i*P	**P**	**17 05 49.3**	**-3.8**

APA				pmax	pmax		
	comp=Z,150nm,1.5s						
APA				MLR	MLR		
	comp=Z,2µm,14.0s						
LVZ	Lovozero	18.77	68	iP	P	17 05 48.0	-8.4
LVZ				pmax	pmax		
	comp=N,33nm,1.4s						
LVZ				pmax	pmax		
	comp=Z,66nm,1.4s						
LVZ				pmax	pmax		
	comp=E,43nm,1.5s						
LVZ				MLR	MLR		
	comp=Z,956nm,15.0s						
LVZ				MLR	MLR		
	comp=N,359nm,13.0s						
LVZ				MLR	MLR		
	comp=E,571nm,15.0s						
KAF	Kangasniemi	18.96	89	ep	P	17 05 57.4	-1.3
	comp=E,13nm,0.9s						
KAF	Kangasniemi	18.96	89	eP	P	17 05 57.4	-1.3
KAF				pmax	pmax		
	comp=Z,13nm,0.9s						
FIA0	FINESS Array S	19.31	91	P	P	17 06 01.9	-1.0
	baz=319,slow=10						
FINES	FINESS Array B	19.31	91	P	P	17 06 02.1	-0.7
	comp=Z,0.9nm,0.3s,baz=321,slow=9.3,SNR=32						
FINES				LR	LR	17 12 33.7	
	comp=Z,562nm,18.6s,baz=311,slow=34						
FINES	FINESS Array B	19.31	91	P	P	17 06 02.2	-0.7
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FINES				MLR	MLR		
	comp=Z,562nm,18.6s						
JOF	Joensuu	20.27	83	ep	P	17 06 11.4	-2.1
	comp=Z,12nm,0.8s						
JOF	Joensuu	20.27	83	eP	P	17 06 11.4	-2.1
JOF				pmax	pmax		
	comp=Z,12nm,0.8s						
WTSB	Winterswijk	20.42	133	eP	P	17 06 12.6	-2.4
	comp=Z,53nm,2.2s						
FRB	Frobisher Bay	20.65	281	P	P	17 06 17.6	+0.3
	comp=Z,27nm,0.9s,baz=79,slow=9.4,SNR=5.2						
FRB				LR	LR	17 13 04.5	
	comp=Z,686nm,20.1s,MS4.0,baz=55,slow=33						
FRB	Frobisher Bay	20.65	281	P	P	17 06 17.6	+0.2
FRB				pmax	pmax		
	comp=Z,27nm,0.9s						
FRB				MLR	MLR		
	comp=Z,686nm,20.1s						
HGN	Heimansgroeve	21.29	136	⇑eP	P	17 06 24.2	+0.2
	comp=Z,162nm,1.2s,mb5.2						
HGN				eS	S	17 10 25.1	+10
CLZ	Clausthal	21.52	128	eP	P	17 06 26.2	-0.1
CLZ				pmax	pmax		
	comp=Z,37nm,1.2s,mb4.7						
CLZ	Clausthal	21.52	128	eP	P	17 06 26.2	-0.1
	comp=Z,37nm,1.2s,mb4.7						
BAIF	Baives	21.52	140	eP	P	17 06 25.8	-0.6
	comp=Z,110nm,1.4s,mb4.8						
VSU	Vasula	21.62	96	⇑eP	P	17 06 26.2	-1.0
VSU	Vasula	21.62	96	eP	P	17 06 26.2	-1.0
GIVF	Givet	21.63	139	eP	P	17 06 27.0	-0.4
ROSF	Rostrenen	21.67	154	eP	P	17 06 28.0	+0.1
	comp=Z,68nm,1.0s,mb4.7						
FLN	La Foliniere	21.75	149	eP	P	17 06 27.9	-0.8
	comp=Z,50nm,0.9s,mb4.7						
FLN				eR			
	comp=Z,2µm,18.0s						
SGMF	Saint Gilles	21.87	153	eP	P	17 06 29.6	-0.3
	comp=Z,263nm,1.5s,mb5.2						
RUE	Ruedersdorf	21.97	122	eP	P	17 06 30.9	0.0
	comp=Z,40nm,1.0s,mb4.8						
RUE	Ruedersdorf	21.97	122	eP	P	17 06 30.9	0.0
	comp=Z,40nm,1.0s,mb4.8						
LDF	La Druitiere	21.98	148	eP	P	17 06 30.7	-0.3
	comp=Z,104nm,1.3s,mb4.8						
GRR	Gorron	22.04	150	eP	P	17 06 31.2	-0.4
	comp=Z,38nm,0.9s,mb4.5						
QUIF	Quistinic	22.10	154	eP	P	17 06 32.2	0.0
	comp=Z,70nm,1.0s,mb4.7						
WLF	Walferdange	22.36	137	eP	P	17 06 35.8	+1.1
	comp=Z,183nm,1.8s,mb5.2						
TNS	Taunus Mts	22.44	133	eP	P	17 06 36.1	+0.6
TNS				pmax	pmax		
	comp=Z,68nm,1.6s,mb4.8						
TNS	Taunus Mts	22.44	133	eP	P	17 06 36.1	+0.6
	comp=Z,68nm,1.6s,mb4.8						
ABH	Alteburg	22.51	135	eP	P	17 06 37.9	+1.8
CLL	Collm	22.76	125	⇑P	P	17 06 38.8	+0.3
	comp=Z,logA/T=1.8,mb5.0						
CLL				ePP	PP	17 06 55.0	-12
CLL				eS	S	17 10 48.0	+5.5
CLL	Collm	22.76	125	⇑iP	P	17 06 38.8	+0.3
	comp=Z,106nm,1.6s,mb5.0						
CLL				e		17 06 55.0	
CLL	Collm	22.76	125	⇑iP	P	17 06 38.8	+0.3
CLL				pmax	pmax		
	comp=Z,106nm,1.6s,mb5.0						
MOX	Moxa	22.94	128	iP	P	17 06 41.5	+1.2
	comp=Z,logA/T=1.7,mb4.9						
MOX				L		17 17 32.0	
MOX	Moxa	22.94	128	eP	P	17 06 41.5	+1.2
	comp=Z,88nm,1.9s,mb4.9						
MOX				LR	LR		
	comp=Z,1µm,17.0s,MS4.3						
MOX	Moxa	22.94	128	eP	P	17 06 41.5	+1.2
MOX				pmax	pmax		
	comp=Z,88nm,1.9s,mb4.9						
MOX				MLR	MLR		
	comp=Z,1µm,17.0s,MS4.3						
TOD	Tromm	23.10	133	eP	P	17 06 45.2	+3.4
MEZF	Maizieres J'vi	23.18	140	eP	P	17 06 42.4	-0.2
	comp=Z,126nm,1.3s,mb4.9						
LANF	Langenberg	23.41	135	eP	P	17 06 44.7	-0.1
BRG	Berggiesshubel	23.42	124	eP	P	17 06 46.7	+1.8
	comp=Z,64nm,1.6s,mb4.8						
BRG	Berggiesshubel	23.42	124	eP	P	17 06 46.7	+1.7
BRG				pmax	pmax		
	comp=Z,65nm,1.7s,mb4.8						
BRG	Berggiesshubel	23.42	124	eP	P	17 06 46.7	+1.7
	comp=Z,64nm,1.6s,mb4.8						
NKC	Novy Kostel	23.55	127	eP	P	17 06 46.8	+0.6
THEF	They Montfort	23.66	139	eP	P	17 06 49.0	+1.8
GRA1	Grafenberg Arr	23.68	129	eP	P	17 06 49.3	+1.8
	comp=Z,185nm,1.8s,mb5.2						
GRA1				LR	LR		
	comp=Z,900nm,21.9s,MS4.2						
GRF	Grafenberg Arr	23.68	129	eP	P	17 06 49.3	+1.8
	comp=Z,185nm,1.8s,mb5.2						
GRF				LR	LR		
	comp=Z,900nm,21.9s,MS4.2						
GRF	Grafenberg Arr	23.68	129	eP	P	17 06 49.3	+1.8
GRF				pmax	pmax		
	comp=Z,185nm,1.8s,mb5.2						
GRF				MLR	MLR		
	comp=Z,900nm,21.9s,MS4.2						
GRF	Grafenberg Arr	23.68	129	eP	P	17 06 49.3	+1.8
	comp=Z,185nm,1.8s,mb5.2						
SUW	Suwalki	23.79	108	eP	P	17 06 49.8	+1.3
CDF	Champ du Feu	23.80	136	eP	P	17 06 48.3	-0.3
	comp=Z,207nm,1.8s,mb5.0						
HYF	Humbligny	23.80	145	eP	P	17 06 48.9	+0.2
WLS	Welschbruch	23.82	136	eP	P	17 06 50.4	+1.6
MFF	Saint Martin d	23.89	150	eP	P	17 06 49.4	-0.1
	comp=Z,86nm,1.1s,mb4.8						
PVCC	Panska Ves	23.92	124	eP	P	17 06 51.3	+1.5
HAU	Haudompre	23.95	138	eP	P	17 06 49.9	-0.2
	comp=Z,171nm,1.9s,mb4.9						
HAU				eR			
	comp=Z,1µm,21.5s						
ECH	Echery	23.95	137	eP	P	17 06 52.3	+2.2
LOR	Lormes	24.07	143	eP	P	17 06 51.1	-0.1
	comp=Z,132nm,1.6s,mb4.8						
LOR				eR			
	comp=Z,1µm,22.5s						
BFO	Black Forest	24.14	135	eP	P	17 06 53.6	+1.6
BFO				pmax	pmax		
	comp=Z,45nm,1.7s,mb4.6						
BFO	Black Forest	24.14	135	eP	P	17 06 53.6	+1.6
	comp=Z,45nm,1.7s,mb4.6						
KSP	Ksiaz	24.17	121	eP	P	17 06 54.0	+1.8
KSP	Ksiaz	24.17	121	eP	P	17 06 53.7	+1.4
SSF	Saint Saulge	24.18	143	eP	P	17 06 52.2	-0.2
HINF	Hinteralfeld	24.25	138	eP	P	17 06 52.8	-0.2
	comp=Z,163nm,1.9s,mb4.8						
UPC	Upice	24.38	122	eP	P	17 06 55.2	+0.9
PRU	Pruhonice	24.39	124	eP	P	17 06 55.5	+1.1
PRU				AMS	AMS	17 19 00.0	
	comp=Z,1µm,9.3s						
AVF	Avril sur Loir	24.41	144	eP	P	17 06 54.1	-0.5
	comp=Z,20nm,0.8s,mb4.3						
BGF	Bois d'Agland	24.52	145	eP	P	17 06 55.3	-0.4
	comp=Z,57nm,0.9s,mb4.8						
KLMR	Klimovskoe	24.57	81	eP	P	17 06 54.6	-1.5
KLMR				eS	S	17 11 11.5	-2.5
KLMR				pmax	pmax		
	comp=Z,60nm,1.4s,mb4.9						
KLMR				smax			
	comp=E,1µm,5.4s						
KLMR				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.6						
DPC	Dobruska-Polom	24.61	121	eP	P	17 06 57.6	+1.1
TCF	Toulx Ste Croi	24.65	146	eP	P	17 06 57.7	+0.8
	comp=Z,29nm,0.7s,mb4.6						
WET	Wettzell	24.65	127	eP	P	17 06 58.7	+1.8
WET				pmax	pmax		
	comp=Z,37nm,1.4s,mb4.7						
WET	Wettzell	24.65	127	eP	P	17 06 58.7	+1.8
	comp=Z,37nm,1.4s,mb4.7						
SMF	Signal de Mont	24.65	143	eP	P	17 06 56.8	-0.2
	comp=Z,109nm,1.5s,mb4.9						
LOMF	Lomont	24.68	138	eP	P	17 07 01.0	+3.8
BBS	Basel-Blauen	24.74	137	eP	P	17 07 01.1	+3.3
KHC	Kasperske Hory	24.86	126	eP	P	17 07 00.4	+1.4
KHC				pP		17 07 08.5	
KHC				AMS	AMS	17 19 20.0	
	comp=Z,1µm,9.1s						
KHC	Kasperske Hory	24.86	126	eP	P	17 07 00.4	+1.4
KHC				e		17 07 08.5	
KHC				MLR	MLR		
	comp=Z,1µm,9.1s						
AGO	Saint Agoulin	25.06	145	eP	P	17 07 02.0	+1.1
FUR	Furstenfeldbru	25.08	131	eP	P	17 07 02.9	+1.8
FUR				pmax	pmax		
	comp=Z,68nm,1.4s,mb5.0						
FUR	Furstenfeldbru	25.08	131	eP	P	17 07 02.9	+1.8
	comp=Z,68nm,1.4s,mb5.0						
GEC2	GERESS Array S	25.16	127	eP	P	17 07 03.4	+1.6
GEC2				pmax	pmax		
	comp=Z,38nm,1.1s,mb4.8						
GEC2	GERESS Array S	25.16	127	eP	P	17 07 03.4	+1.6
	comp=Z,38nm,1.1s,mb4.8						
GERES	GERESS Array B	25.16	127	P	P	17 07 02.8	+1.0
	comp=Z,11nm,0.8s,mb4.5,baz=329,slow=7.8,SNR=47						
GERES				LR	LR	17 15 27.6	
	comp=Z,570nm,21.5s,MS4.0,baz=322,slow=33						
GERES	GERESS Array B	25.16	127	P	P	17 07 02.8	+1.0
GERES				pmax	pmax		
	comp=Z,11nm,0.8s						
GERES				MLR	MLR		
	comp=Z,570nm,21.5s						
PLDF	La Plantade	25.25	144	eP	P	17 07 03.2	+0.6
TREC	Trest	25.29	124	eP	P	17 07 04.5	+1.5
PYM	Petit Puy Mans	25.33	145	eP	P	17 07 04.6	+1.2
RJF	Les Rejaudoux	25.45	148	eP	P	17 07 04.5	-0.1
RJF				eR			
	comp=Z,2µm,20.8s						
MORC	Moravsky Berou	25.50	120	eP	P	17 07 04.8	-0.2
	comp=Z,60nm,1.4s,mb4.9						
MORC	Moravsky Berou	25.50	120	eP	P	17 07 04.8	-0.1
	comp=Z,60nm,1.4s,mb4.9						
DAVA	Damuels	25.51	134	⇑iP	P	17 07 07.5	+2.4
	comp=Z,36nm,1.4s,mb4.7						
VRAC	Vranov	25.61	122	P	P	17 07 06.5	+0.5
	comp=Z,13nm,1.0s,mb4.4,baz=331,slow=10.0,SNR=13						
VRAC				LR	LR	17 16 57.5	
	comp=Z,631nm,19.3s,MS4.2,baz=326,slow=36						
VRAC	Vranov	25.61	122	P	P	17 07 06.5	+0.5
VRAC				pmax	pmax		
	comp=Z,13nm,1.0s						
VRAC				MLR	MLR		
	comp=Z,631nm,19.3s						
OKC	Ostrava-Krasne	25.63	120	eP	P	17 07 06.2	0.0
LFF	La Frestale	25.66	149	eP	P	17 07 06.5	0.0
MOTA	Moosalm	25.79	132	⇑iP	P	17 07 09.7	+2.0
	comp=Z,39nm,1.4s,mb4.8,SNR=9.1						
OJC	Ojcow	25.83	117	eP	P	17 07 08.5	+0.4
WATA	Walderalm	25.92	131	⇑iP	P	17 07 11.1	+2.1
	comp=Z,22nm,1.1s,mb4.6						
WATA	Walderalm	25.92	131	⇑P	P	17 07 11.1	+2.1
	comp=Z,22nm,1.1s,mb4.6						
CAF	Calviac	25.93	147	eP	P	17 07 08.8	-0.2
SQTA	Sankt Quirin	25.93	132	⇓iP	P	17 07 11.8	+2.8
	comp=Z,19nm,0.8s,mb4.7,SNR=14						
SQTA	Sankt Quirin	25.93	132	⇓iP	P	17 07 11.8	+2.8
	comp=Z,19nm,0.8s,mb4.7						
DAVOX	Davos	25.98	134	P	P	17 07 10.6	+1.1
	comp=Z,6.7nm,0.9s,mb4.2,baz=329,slow=13,SNR=8.5						
DAVOX				LR	LR	17 17 01.3	
	comp=Z,1µm,20.9s,MS4.3,baz=322,slow=36						
WTTA	Wattenberg	26.00	131	iP	P	17 07 11.8	+2.1
	comp=Z,50nm,1.6s,mb4.8,SNR=11						
MOA	Molln	26.22	127	⇑iP	P	17 07 13.4	+1.7
	comp=Z,14nm,1.3s,mb4.3						
MOA	Molln	26.22	127	⇑P	P	17 07 13.4	+1.7
	comp=Z,14nm,1.3s,mb4.3						
SCHQ	Schefferville	26.28	263	LR	LR	17 16 46.9	
	comp=Z,546nm,19.1s,MS4.1,baz=185,slow=34						
LPL	La Plagne	26.38	140	eP	P	17 07 13.0	-0.2
	comp=Z,58nm,1.6s,mb4.6						
LPG	La Plagne	26.40	140	eP	P	17 07 13.3	-0.1
VIVF	Saint-Julien-l	26.53	143	eP	P	17 07 14.4	-0.2
	comp=Z,85nm,1.5s,mb4.7						
ORX	Oropa	26.57	138	P	P	17 07 18.7	+3.8
SMOL	Smolenice	26.57	122	esP	sP	17 07 23.2	+4.0
TRAV		26.62	138	P	P	17 07 19.1	+3.7
KBA	Koelnbreinsper	26.65	129	iP	P	17 07 17.9	+2.2
	comp=Z,26nm,1.6s,mb4.5,SNR=8.0						
KBA	Koelnbreinsper	26.65	129	iP	P	17 07 17.9	+2.2
	comp=Z,26nm,1.6s,mb4.5						
NIE	Niedzica	26.69	117	eP	P	17 07 16.9	+0.9
ORIF	Oris-en-Rattie	26.74	141	eP	P	17 07 16.3	-0.2
	comp=Z,68nm,1.5s,mb4.7						
ORIF				eR			
	comp=Z,1µm,20.0s						
RSP	Reno Superiore	26.84	139	P	P	17 07 18.5	+1.0
RSP	Reno Superiore	26.84	139	P	P	17 07 18.5	+1.0
FENE	Fenestrelle	26.91	140	P	P	17 07 20.2	+2.1
FVI	Forni Avoltri	26.93	130	P	P	17 07 20.4	+2.1
	comp=Z,55nm,1.6s,mb4.8						
RRL	Cesana Torines	26.95	140	P	P	17 07 19.3	+0.8
RRL	Cesana Torines	26.95	140	P	P	17 07 19.3	+0.9
VYHS	Vyhne	27.03	120	eP	P	17 07 19.9	+0.8
ARSA	Arzberg	27.13	126	⇑iP	P	17 07 22.0	+2.0
	comp=Z,18nm,1.6s,mb4.4						
MBDF	Montbardon	27.13	140	eP	P	17 07 20.2	+0.1
	comp=Z,133nm,1.5s,mb4.9						
GMNA	Gemona	27.35	130	P	P	17 07 23.1	+1.0
EPF	Esparros	27.43	151	eP	P	17 07 23.0	+0.1
	comp=Z,24nm,1.0s,mb4.4						
CRVS	Cervenica-Dubn	27.52	116	eP	P	17 07 24.9	+1.4
CRVS				epP	pP	17 07 31.8	+5.3
KECS	Kecovo	27.57	118	eP	P	17 07 24.0	0.0
SMRF	Simiane la Rot	27.57	142	eP	P	17 07 23.8	-0.3
OBN	Obninsk	27.71	92	ceP	P	17 07 24.6	-0.6
OBN				eS	S	17 11 58.7	-7.0
OBN				pmax	pmax		
	comp=Z,31nm,1.2s,mb4.8						
OBN				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.1						
OBN	Obninsk	27.71	92	eP	P	17 07 24.6	-0.6
	comp=Z,31nm,1.2s,mb4.8						
ENR	Entracque	27.75	140	P	P	17 07 21.7	-4.1
KOLS	Kolonicke sedl	27.75	115	e	P	17 07 30.5	+4.8
PSZ	Piszkesteto	27.87	119	eP	P	17 07 27.7	+0.9
	comp=Z,36nm,1.4s,mb4.8						
PSZ	Piszkesteto	27.87	119	eP	P	17 07 27.7	+0.9
	comp=Z,36nm,1.4s,mb4.8						
MONE	Monesi	27.97	139	P	P	17 07 24.7	-3.0
RORO		28.02	139	P	P	17 07 25.1	-3.0
IMI	Imperia	28.16	139	P	P	17 07 26.2	-3.3
NEGI	Negi	28.18	139	P	P	17 07 26.1	-3.6
VALM		28.33	135	P	P	17 07 31.1	+0.1
VALM		28.33	135	P	P	17 07 31.1	+0.1
BACM		28.36	136	P	P	17 07 31.0	-0.2
BACM		28.36	136	P	P	17 07 31.0	-0.2
SARO	Sassorosso	28.53	135	P	P	17 07 32.3	-0.4
SARO	Sassorosso	28.53	135	P	P	17 07 32.3	-0.4
SARO	Sassorosso	28.53	135	P	P	17 07 32.3	-0.4
VLC	Villacollemand	28.55	135	eP	P	17 07 34.0	+1.1
	comp=Z,46nm,1.1s,mb5.1						
AKASG	Malin Array Be	28.62	105	P	P	17 07 32.4	-1.2
	comp=Z,5.0nm,0.8s,mb4.3,baz=329,slow=9.1,SNR=18						
AKASG				PcP	PcP	17 10 47.4	+2.6
	comp=Z,0.3nm,0.4s,baz=304,slow=2.9,SNR=5.2						
AKASG	Malin Array Be	28.62	105	P	P	17 07 32.4	-1.1
AKASG				PcP	PcP	17 10 47.4	+2.6
AKASG	Malin Array Be	28.62	105	P	P	17 07 32.4	-1.1
AKASG						17 10 47.4	
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MAIM		28.80	135	P	P	17 07 34.0	-1.2
MAIM		28.80	135	P	P	17 07 34.0	-1.2
PGF	Pioggiola	29.72	138	eP	P	17 07 42.9	-0.6
	comp=Z,62nm,1.4s,mb4.8						
ESDC	Sonseca Array	30.05	159	P	P	17 07 48.0	+1.4
	comp=Z,2.1nm,0.7s,mb4.0,baz=351,slow=9.1,SNR=8.9						
EVO	Evora	30.74	166	eP	P	17 07 50.5	-2.0
	comp=Z,44nm,1.3s,mb4.8						
EVO				eR			
	comp=Z,900nm,20.0s						
DIVS	Divcibare	31.32	123	iP	P	17 07 58.0	+0.4
GRUS	Gruza	31.73	122	iP	P	17 08 01.2	0.0
MLR	Muntele Rosu	31.98	114	LR	LR	17 21 12.3	
	comp=Z,654nm,19.0s,MS4.3,baz=330,slow=37						
VRHR	Novokhopersk	32.75	92	eP	P	17 08 08.5	-1.6
VRHR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
VRHR				pmax	pmax		
	comp=N,30nm,1.1s						
VRHR				pmax	pmax		
	comp=E,40nm,1.6s						
SKO	Skopje	33.69	123	eP	P	17 08 19.4	+1.0
OHR	Ohrid	34.28	124	eP	P	17 08 24.2	+0.7
BIA	Bitola	34.53	123	eP	P	17 08 24.4	-1.2
BIA	Bitola	34.53	123	eP	P	17 08 24.3	-1.3
ARU	Arti	34.57	72	⇓iP	P	17 08 24.2	-1.5
ARU				e		17 09 35.1	
ARU				ePPP	PPP	17 09 52.1	-7.9
ARU				e		17 11 01.7	
ARU				eS	S	17 13 49.3	-4.4
ARU				eSS	SS	17 15 59.7	-5.4
ARU				e		17 18 45.7	
ARU				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
ARU				MLR	MLR		
	comp=N,500nm,18.0s,MS4.5						
ARU				MLR	MLR		
	comp=E,500nm,18.0s,MS4.5						
ARU				MLR	MLR		
	comp=Z,1µm,18.0s,MS4.6						
ARU	Arti	34.57	72	iP	P	17 08 24.2	-1.5
	comp=Z,16nm,1.0s,mb4.9						
ARU	Arti	34.57	72	eScS	ScS	17 18 45.7	-0.5
VAY	Valandovo	34.63	122	eP	P	17 08 26.2	-0.3
SVE	Sverdlovsk	34.97	70	eP	P	17 08 28.7	-0.5
SVE				ePPP	PPP	17 10 01.0	-4.2
SVE				MLR	MLR		
	comp=N,500nm,16.0s,MS4.7						
SVE				MLR	MLR		
	comp=E,1µm,16.0s,MS4.7						
SVE				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.7						
VAE	Valguarnera	35.86	134	LR	LR	17 22 42.5	
	comp=Z,589nm,18.9s,MS4.4,baz=99,slow=35						
YKA	Yellowknife Ar	36.52	309	P	P	17 08 41.0	-1.2
	comp=Z,1.3nm,0.7s,mb3.9,baz=39,slow=7.9,SNR=3.5						
YKA				LR	LR	17 23 18.6	
	comp=Z,771nm,20.3s,MS4.5,baz=30,slow=36						
YKA	Yellowknife Ar	36.52	309	P	P	17 08 41.0	-1.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA				MLR	MLR		
	comp=Z,771nm,20.3s						
ORR	Orenburg	37.08	80	⇓iP	P	17 08 45.3	-1.8
ORR				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.8						
TIXI	Tiksi	38.05	17	⇑eP	P	17 08 52.7	-2.3
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.7						
SOC	Sochi	38.42	101	eP	P	17 09 06.1	+7.7
SOC				e		17 09 13.2	
SOC				eS	S	17 14 54.6	+1.6
SOC				pmax	pmax		
	comp=Z,55nm,1.0s,mb5.2						
SOC				pmax	pmax		
	comp=Z,84nm,1.5s,mb5.2						
SOC				MLR	MLR		
	comp=Z,613nm,14.0s,MS4.6						
KIV	Kislovodsk	39.16	98	ceP	P	17 09 05.7	+1.1
KIV				eS	S	17 15 13.1	+8.9
KIV				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.2						
KIV	Kislovodsk	39.16	98	eP	P	17 09 05.7	+1.1
	comp=Z,14nm,1.0s,mb4.7						
AKTO	Aktyubinsk	39.23	78	LR	LR	17 23 51.2	
	comp=Z,264nm,19.2s,MS4.1,slow=34						
BR131	Keskin Array S	39.70	110	eP	P	17 09 10.8	+1.7
BR131	Keskin Array S	39.70	110	eP	P	17 09 10.8	+1.7
BRTR	Keskin Array B	39.70	110	P	P	17 09 10.7	+1.5
	comp=Z,1.5nm,0.7s,mb3.8,baz=331,slow=6.6,SNR=7.0						
BRTR	Keskin Array B	39.70	110	P	P	17 09 10.7	+1.6
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULM	Lac du Bonnet	40.47	284	P	P	17 09 16.5	+1.2
	comp=Z,2.1nm,0.6s,mb4.0,baz=44,slow=9.7,SNR=3.2						
ULM				LR	LR	17 25 31.6	
	comp=Z,431nm,18.3s,MS4.3,baz=39,slow=35						
CHKZ	Chkalovo	40.88	65	eP	P	17 09 17.9	-0.7
	comp=Z,40nm,1.6s,mb4.8						
CHKZ	Chkalovo	40.88	65	eP	P	17 09 17.9	-0.8
	comp=Z,40nm,1.6s,mb4.8						
IDI	Anoyia	40.89	123	LR	LR	17 25 04.4	
	comp=Z,207nm,21.0s,MS4.0,baz=191,slow=34						
DAWY	Dawson	41.27	326	eP	P	17 09 21.2	-0.5
DAWY	Dawson	41.27	326	eP	P	17 09 21.2	-0.5
ILAR	Eielson Array	42.08	330	P	P	17 09 29.1	+0.9
	comp=Z,1.6nm,0.9s,mb3.6,baz=17,slow=8.1,SNR=11						
ILAR				PcP	PcP	17 11 22.7	-0.9
	comp=Z,0.4nm,0.9s,slow=3.6,SNR=3.6						
ILAR				LR	LR	17 28 39.3	
	comp=Z,411nm,18.8s,MS4.3,baz=40,slow=39						
ILAR	Eielson Array	42.08	330	P	P	17 09 29.1	+0.9
ILAR						17 11 22.7	
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,411nm,18.8s						
ILAR	Eielson Array	42.08	330	PcP	PcP	17 11 22.7	-0.9
COLA	College	42.15	331	⇑eP	P	17 09 30.0	+1.2
COLA	College	42.15	331	eP	P	17 09 30.0	+1.2
GNI	Garni	43.23	98	LR	LR	17 28 13.7	
	comp=Z,176nm,18.9s,MS4.0,baz=338,slow=37						
NVS	Novosibirsk	43.88	55	eP	P	17 09 41.6	-1.3
NVS				e		17 11 24.5	
NVS				pmax	pmax		
	comp=Z,28nm,1.6s,mb4.7						
NVS				pmax	pmax		
	comp=N,15nm,1.5s						
NVS	Novosibirsk	43.88	55	eP	P	17 09 41.6	-1.3
	comp=N,15nm,1.5s,mb4.5						
ZAL	Zalesovo	45.12	55	P	P	17 09 51.9	-1.1
	comp=N,1.0nm,0.4s,mb4.0,baz=204,slow=8.4,SNR=9.6						
ZAL				LR	LR	17 31 23.8	
	comp=N,353nm,20.8s,MS4.3,baz=136,slow=40						
ZAL	Zalesovo	45.12	55	P	P	17 09 51.9	-1.1
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZAL				MLR	MLR		
	comp=Z,353nm,20.8s						
KURK	Kurchatov	46.00	62	eP	P	17 09 59.0	-1.0
	comp=Z,47nm,1.7s,mb5.1						
KURK	Kurchatov	46.00	62	⇑eP	P	17 09 58.2	-1.8
KURK	Kurchatov	46.00	62	eP	P	17 09 59.0	-1.0
	comp=Z,47nm,1.7s,mb5.1						
YAK	Yakutsk	47.37	20	⇑eP	P	17 10 09.6	-1.1
YAK				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
YAK				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.9						
YAK	Yakutsk	47.37	20	eP	P	17 10 09.6	-1.1
	comp=Z,100nm,16.0s						
KDAK	Kodiak Island	49.60	330	LR	LR	17 32 45.8	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,702nm,18.8s,MS4.7,baz=35,slow=38						
MKAR	Makanchi Array	50.61	61	P	P	17 10 34.8	-1.1
	comp=Z,3.8nm,0.9s,mb4.3,baz=338,slow=6.5,SNR=33						
MKAR				PP	PP	17 12 30.9	-1.9
	comp=Z,2.0nm,1.1s,baz=333,slow=8.1,SNR=3.9						
MKAR				LR	LR	17 34 31.5	
	comp=Z,355nm,19.3s,MS4.4,baz=327,slow=39						
MKAR	Makanchi Array	50.61	61	P	P	17 10 34.8	-1.1
MKAR						17 12 30.9	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MKAR				MLR	MLR		
	comp=Z,355nm,19.3s						
PDAR	Pinedale Array	51.68	290	P	P	17 10 45.4	+1.2
	comp=Z,3.1nm,1.1s,mb4.1,baz=14,slow=6.1,SNR=9.6						
PDAR				PP	PP	17 12 43.0	+0.4
	comp=Z,0.8nm,0.8s,baz=45,slow=6.3,SNR=3.5						
PDAR				LR	LR	17 32 51.4	
	comp=Z,698nm,19.0s,MS4.7,baz=31,slow=36						
PDAR	Pinedale Array	51.68	290	P	P	17 10 45.3	+1.2
PDAR	Pinedale Array	51.68	290	PP	PP	17 12 43.0	+0.5
BMO	Blue Mountains	52.40	298	eP	P	17 10 50.5	+1.0
	comp=Z,9.0nm,1.3s,mb4.5						
BMO	Blue Mountains	52.40	298	eP	P	17 10 50.5	+1.0
	comp=Z,9.0nm,1.3s,mb4.5						
WMQ	Urumqi	54.97	59	P	P	17 11 08.5	0.0
WMQ				AP	pP	17 11 13.0	+1.5
WMQ				PCP	PcP	17 12 11.0	+0.9
WMQ				PP	PP	17 13 13.0	-0.1
WMQ				S	S	17 18 47.0	-1.5
WMQ				XS		17 18 58.0	
WMQ				SCS	ScS	17 20 54.0	-0.4
WMQ				AMB	AMB		
	comp=Z,140nm,6.2s						
WMQ				LR	LR		
	comp=N,500nm,12.0s,MS5.1						
WMQ				LR	LR		
	comp=E,660nm,10.2s,MS5.1						
WMQ				LR	LR		
	comp=Z,470nm,15.4s						
PV01	Paradox Valley	55.47	287	eP	P	17 11 13.9	+1.8
PV01	Paradox Valley	55.47	287	eP	P	17 11 13.9	+1.7
SONM	Songino Array	56.51	42	P	P	17 11 18.1	-1.4
	comp=Z,1.0nm,1.1s,mb3.8,baz=321,slow=9.5,SNR=4.2						
SONM				LR	LR	17 37 04.8	
	comp=Z,163nm,19.7s,MS4.1,baz=190,slow=38						
SONM	Songino Array	56.51	42	P	P	17 11 18.1	-1.4
SONM				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM				MLR	MLR		
	comp=Z,163nm,19.7s						
PET	Petropavlovsk	58.48	3	eP	P	17 11 33.7	+0.4
PET				e		17 19 27.6	
PET				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.3						
PET	Petropavlovsk	58.48	3	eP	P	17 11 33.7	+0.4
	comp=Z,200nm,17.0s						
NVAR	Mina Array Bea	58.51	295	P	P	17 11 32.9	-0.8
	comp=Z,0.4nm,0.8s,mb3.5,baz=291,slow=2.9,SNR=3.6						
NVAR				PcP	PcP	17 12 28.7	+4.7
	comp=Z,1.2nm,1.0s,baz=48,slow=4.5,SNR=4.3						
NVAR	Mina Array Bea	58.51	295	P	P	17 11 32.9	-0.8
NVAR				PcP	PcP	17 12 28.7	+4.7
JCT	Junction City	59.23	275	eP	P	17 11 38.9	0.0
	comp=Z,6.4nm,0.6s,mb4.8						
JCT	Junction City	59.23	275	eP	P	17 11 38.9	+0.1
	comp=Z,6.4nm,0.6s,mb4.8						
TXAR	Lajitas Array	61.66	278	P	P	17 11 57.7	+2.2
	comp=Z,0.2nm,0.3s,mb3.8,baz=68,slow=4.9,SNR=3.9						
TXAR				LR	LR	17 36 54.6	
	comp=Z,408nm,21.1s,MS4.6,baz=175,slow=34						
DBIC	Dimbokro	62.58	166	LR	LR	17 39 44.7	
	comp=Z,259nm,18.9s,MS4.4,baz=342,slow=36						
GTA	Gaotai	62.62	51	eP	P	17 12 00.6	-1.1
GTA				AP	pP	17 12 05.3	+0.5
GTA				XP	sP	17 12 07.9	+1.9
LIC	Lamto	63.01	166	eP	P	17 12 04.8	+0.2
	comp=Z,54nm,1.4s,mb5.2						
LIC				eR			
	comp=Z,347nm,20.8s						
KOLN	Koldanda	68.28	69	eP	P	17 12 37.1	-1.1
	comp=Z,31nm,1.3s,mb5.2						
GKN	Gorkha	68.42	68	eP	P	17 12 37.8	-1.3
	comp=Z,36nm,1.4s,mb5.2						
KKN	Kakani	68.83	68	eP	P	17 12 40.6	-1.0
	comp=Z,31nm,1.4s,mb5.0						
GUN	Gumba	68.92	67	eP	P	17 12 42.4	+0.2
	comp=Z,28nm,1.0s,mb5.2						
DMN	Daman	68.94	68	eP	P	17 12 41.6	-0.7
	comp=Z,21nm,1.0s,mb5.0						
MJAR	Matsushiro Arr	73.44	20	LR	LR	17 44 02.2	
	comp=Z,128nm,19.9s,MS4.2,baz=15,slow=35						
ROSC	El Rosal	73.96	240	LR	LR	17 42 23.3	
	comp=Z,114nm,20.3s,MS4.2,baz=30,slow=33						
SSE	Sheshan	75.85	36	P	P	17 13 19.3	-3.8
	comp=Z,24nm,0.8s,mb5.2						
SSE				pP	pP	17 13 28.6	+2.4
SSE				sP	sP	17 13 32.7	+5.4
SSE				PP	PP	17 16 05.8	-9.4
SSE				S	S	17 22 54.0	-10
SSE				sS		17 23 11.2	
SSE				SS	SS	17 27 43.1	-16
SSE				LR	LR		
	comp=Z,120nm,17.5s,MS4.3						
KMI	Kunming	76.85	54	P	P	17 13 25.7	-3.1
	comp=Z,5.0nm,1.0s,mb4.4						
KMI				S	S	17 23 10.6	-4.4
KMI				SS	SS	17 28 10.6	-3.7
KMI				SSS	SSS	17 31 22.3	-7.8
KMI				LR	LR		
	comp=Z,220nm,19.3s,MS4.5						
KMBO	Kilima Mbogo	78.91	124	LR	LR	17 52 57.6	
	comp=Z,76nm,18.4s,MS4.1,baz=64,slow=39						
SAML	Samuel	83.86	225	eP	P	17 14 07.7	+1.5
	comp=Z,4.3nm,1.0s,mb4.5						
BDFB	Brasilia	87.00	209	LR	LR	17 48 57.3	
	comp=Z,170nm,19.5s,MS4.5,baz=11,slow=33						
LPAZ	La Paz	92.19	228	LR	LR	17 49 57.0	
	comp=Z,76nm,20.5s,MS4.1,baz=195,slow=31						
PPT	Papeete	120.84	305	eLR	LR	17 57 35.7	
	comp=Z,255nm,27.5s						
RKT	Rikitea	121.25	287	eLR	LR	17 57 49.4	
	comp=Z,266nm,36.0s						
TBI	Tubuai	126.24	302	eLR	LR	18 00 06.3	
	comp=Z,191nm,32.0s						
WRA	Warramunga Arr	128.13	34	PKP	PKPdf	17 20 43.2	-1.5
	comp=Z,1.4nm,1.0s,baz=355,slow=2.1,SNR=3.4						
WRA	Warramunga Arr	128.13	34	PKIKP	PKPdf	17 20 43.2	-1.5
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MAW	Mawson	146.79	136	PKPbc	PKPbc	17 21 17.9	+2.4
	comp=Z,1.1nm,0.7s,baz=308,slow=7.6,SNR=2.3						
MAW	Mawson	146.79	136	PKP2	PKPab	17 21 17.9	-1.2
MAW				pmax	pmax		
	comp=Z,1.0nm,0.7s						

*NEIC **12** 17:03:17.4±0.9, 18.76S×177.63W, h613^{km}±14^{km}, mb4.3/4, Error ellipse: s-maj=17.0km s-min=12.4km az=142.0*
*IDC **12** 17:03:18.5±1.8, 18.84S×177.65W, h632^{km}±21^{km}, mb3.4/10, mb1 3.6/12, mb1mx3.5/17, mbtmp4.4/12, Error ellipse: s-maj=21.6km s-min=13.9km az=156.0*
ISC 12 17:03:17.7±1.1**, 18.6S**±0.1×**177.77W**±0.10**, h628**^{km}±15^{km}**, n44,** σ**0^{s}77**/30**, mb4.1**/15**, 6C-3D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.39	52	eP	P	17 05 12.1	-0.6
	46nm,0.8s						
DZM	Mont Dzumac	15.21	254	P	P	17 06 27.7	+0.2
	0.7nm,0.3s,baz=80,slow=18,SNR=6.3						
URZ	Urewera	20.11	192	P	P	17 07 08.3	-4.4
	0.4nm,0.3s,baz=200,slow=16,SNR=7.0						
CNB	Canberra Magne	33.51	234	eP	P	17 09 09.7	+0.8
	14nm,0.4s,mb5.0						
CTA	Charters Tower	33.94	261	⇓iP	P	17 09 13.4	+0.7
	7.5nm,0.3s,mb4.8						
CTA	Charters Tower	33.94	261	P	P	17 09 13.6	+0.9
	18nm,0.7s,mb4.8,baz=86,slow=9.9,SNR=29						
PMG	Port Moresby	35.17	280	P	P	17 09 24.6	+1.8
	13nm,0.9s,mb4.5,baz=121,slow=12,SNR=3.5						
STKA	Stephens Creek	38.85	242	eP	P	17 09 53.3	+0.6
	2.9nm,0.4s,mb4.2						
STKA	Stephens Creek	38.85	242	P	P	17 09 52.8	+0.1
	6.9nm,0.7s,mb4.3,baz=67,slow=8.2,SNR=20						
WB2	Warramunga Arr	45.10	260	eP	P	17 10 41.4	-0.6
WRAB	Tennant Creek	45.10	260	⇑eP	P	17 10 41.6	-0.4
	11nm,0.7s,mb4.5						
WRA	Warramunga Arr	45.11	260	P	P	17 10 41.4	-0.7
	5.5nm,0.3s,mb4.5,baz=97,slow=7.2,SNR=254						
WRA				S	S	17 16 34.8	-2.9
	0.7nm,0.8s,baz=91,slow=14,SNR=4.0						
KAKA	Kakadu	48.18	269	eP	P	17 11 23.4	+18
	3.8nm,0.3s,mb4.4						
FITZ	Fitzroy Crossi	53.52	261	eP	P	17 11 43.6	-0.2
	2.6nm,0.3s,mb4.0						
KLBR	Kellerberrin	59.08	244	eP	P	17 12 20.7	-0.8
	11nm,1.1s,mb3.9						
VNDA	Vanda	59.83	185	eP	P	17 12 25.2	-0.7
MUN	Mundaring	60.37	243	eP	P	17 12 29.7	-0.3
MJAR	Matsushiro Arr	68.81	323	P	P	17 13 22.6	0.0
	3.4nm,0.7s,mb3.9,baz=157,slow=5.7,SNR=12						
NVAR	Mina Array Bea	79.49	43	P	P	17 14 22.7	+0.6
	1.2nm,0.7s,mb3.3,baz=214,slow=7.0,SNR=8.1						
SLKM	Skilak Lake	81.90	13	eP	P	17 14 33.8	-0.1
MAW	Mawson	83.43	200	P	P	17 14 40.9	-0.6
	1.0nm,0.5s,mb3.6,baz=180,slow=1.0,SNR=4.4						
MAW	Mawson	83.43	200	eP	P	17 14 41.1	-0.3
TXAR	Lajitas Array	85.84	57	P	P	17 14 54.7	+0.7
	0.4nm,0.6s,mb3.3,baz=217,slow=4.5,SNR=3.4						
ILAR	Eielson Array	86.41	13	P	P	17 14 54.7	-1.1
	1.4nm,0.4s,mb3.9,baz=231,slow=4.9,SNR=45						
PDAR	Pinedale Array	87.42	43	P	P	17 15 01.2	+0.2
	0.8nm,0.7s,mb3.6,baz=180,slow=1.5,SNR=5.6						
SNAA	Sanae	89.91	178	⇑i	P	17 15 11.0	-1.0
VNA3	Neumayer Olymp	90.03	176	⇑i	P	17 15 12.9	+0.4
VNA2	Neumayer--Watz	90.48	177	⇑i	P	17 15 15.1	+0.5
VNA1	Neumayer--Stat	90.70	177	⇑i	P	17 15 17.0	+1.4
MKAR	Makanchi Array	110.04	314	PKiKP		17 20 39.5	
	0.2nm,0.4s,baz=121,slow=1.2,SNR=7.9						
BVAR	Borovoye Array	117.75	321	PKP	PKPdf	17 20 54.1	+0.3
	0.5nm,0.4s,baz=154,slow=2.2,SNR=6.6						
ARCES	ARCESS Array B	127.08	350	PKP	PKPdf	17 21 12.2	+0.7
	2.9nm,0.9s,baz=352,slow=2.2,SNR=12						
FINES	FINESS Array B	134.00	344	PKP	PKPdf	17 21 25.5	+0.8
	4.4nm,1.1s,baz=90,slow=1.9,SNR=4.5						
FINES				SKPbc		17 23 58.1	
	2.3nm,0.9s,baz=45,slow=5.4,SNR=6.4						
AKASG	Malin Array Be	141.44	332	PKhKP		17 21 34.8	
	1.2nm,0.4s,baz=42,slow=4.1,SNR=11						
EKA	Eskdalemuir Ar	143.09	5	PKP	PKPdf	17 21 40.0	-1.0
	3.4nm,0.6s,baz=320,slow=2.9,SNR=23						
BRTR	Keskin Array B	145.69	315	PKPbc	PKPbc	17 21 49.5	+2.1
	1.0nm,0.6s,baz=130,slow=4.6,SNR=4.3						
CLL	Collm	146.25	348	i PKP1	PKPbc	17 21 50.6	+2.2
CLL				i PKP2	PKPab	17 21 53.2	-1.3
MLR	Muntele Rosu	146.72	329	PKPbc	PKPbc	17 21 49.7	0.0
	1.3nm,0.5s,baz=163,slow=23,SNR=3.6						
KHC	Kasperske Hory	148.18	346	ePKPbc	PKPdf	17 21 56.0	+6.3
GERES	GERESS Array B	148.42	345	PKPbc	PKPdf	17 21 56.1	+6.0
	1.5nm,0.8s,baz=27,slow=3.0,SNR=10						
KBA	Koelnbreinsper	150.15	345	⇑iP	PKPdf	17 22 00.0	+7.1
	comp=Z,2.9nm,0.5s						
WATA	Walderalm	150.32	347	⇓iP	PKPdf	17 22 00.9	+7.8
WTTA	Wattenberg	150.37	347	⇓iP	PKPdf	17 22 01.2	+8.0
DAVOX	Davos	151.18	349	PKPbc	PKPdf	17 22 02.9	+8.5
	5.2nm,0.4s,baz=260,slow=3.3,SNR=18						

*CSEM **12** 17:06:16.1, 68.55N×16.82W, h6^{km}, ML3.8, After REY*
REY 12 17:06:16.1, 68.55N×16.82W, h6^{km}**, ML3.8, ML3.0, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGRI	Grimsey	2.07	193	P	Pn	17 06 50.0	-1.9
IGRI				S	Sn	17 07 16.0	-2.3
ILEI	Leirhofn	2.16	177	P	Pn	17 06 51.6	-1.5
IHED	Heoinshofoi	2.49	185	P	Pn	17 06 56.0	-1.9
IHED				S	Sn	17 07 28.8	-0.1
IGIL	Gilhagi	2.49	176	P	Pn	17 06 56.2	-1.7
IGIL				S	Sn	17 07 29.2	+0.2
ISIG	Siglufjorour	2.56	199	P	Pn	17 06 57.2	-1.7
IGRA	Granastaoir	2.66	187	P	Pn	17 06 58.5	-1.8
IGRA				S	Sn	17 07 31.6	-1.7
IHLA	Hella	2.69	194	P	Pn	17 06 59.0	-1.7
IHLA				S	Sn	17 07 31.5	-2.5
IHRN	Hraun	2.77	209	P	Pn	17 07 00.9	-0.9
IKVO	Krokottuvotn	2.85	181	P	Pn	17 07 01.6	-1.4
IKVO				S	Sn	17 07 37.7	-0.4
IREN	Reynihlio	2.92	181	P	Pn	17 07 02.9	-1.1
IGRS	Grimsstaoir	2.94	174	P	Pn	17 07 02.9	-1.4
ISVA	Svartarkot	3.23	183	P	Pn	17 07 07.1	-1.4
ISVA				S	Sn	17 07 46.5	-1.3
IADA	Aoalbol	3.58	172	P	Pn	17 07 11.6	-1.8
IHVA	Hvannstoosfjol	3.63	174	P	Pn	17 07 12.4	-1.7
IGLU	Glumsstadir	3.65	168	P	Pn	17 07 12.6	-1.8
IBRU	Bruarjokull	3.75	175	P	Pn	17 07 14.2	-1.6
IVSH	V-Sauoahnukur	3.79	173	P	Pn	17 07 14.3	-2.0
ISKR	Skrokkalda	4.06	190	P	Pn	17 07 19.6	-0.6

*ISK **12** 17:14:51.2, 37.12N×36.35E, h18^{km}, MD3.8*
*NEIC **12** 17:14:51.0, 37.11N×36.34E, h21^{km}, ML3.9(ISK), After ISK.*
*CSEM **12** 17:14:51.0±0.1, 37.23N×36.34E, h5^{km}, MD3.8, Error ellipse: s-maj=1.4km s-min=1.2km az=73.0*
ISC 12 17:14:50.6±0.5**, 37.24N**±0.02×**36.30E**±0.02**, h2**^{km}±4^{km}**, n58,** σ**1^{s}15**/76**, 7D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.50	243	i PG	Pg	17 15 01.6	+1.0
KAHT	Ahir Dag	0.60	49	i P	Pg	17 15 02.5	-0.2
KAHT				i S	Sg	17 15 11.2	+0.5
DRWC	Darouich	0.68	154	⇓iP	Pg	17 15 05.0	+0.7
DRWC				⇓iS	Sg	17 15 14.2	+0.9
COBT	Iskenderun	0.72	183	i P	Pg	17 15 04.5	-0.5
COBT				i S	Sg	17 15 14.4	-0.1
GAZ	Gaziantep	0.73	95	i PG	Pg	17 15 05.1	-0.1
GAZ				i SG	Sg	17 15 15.3	+0.3
KARA	Karaisali	0.99	272	PG	Pg	17 15 09.6	-0.9
GZT	Gaziantep	1.01	83	i P	Pb	17 15 08.9	-1.7
HTY	Hatay	1.12	187	PG	Pg	17 15 11.4	-1.6
BTCH	Batrach	1.20	174	⇑iP	Pb	17 15 14.9	+1.0
BTCH				⇑iS	Sb	17 15 28.9	-0.8
MERS	Mersin	1.47	256	PN	Pn	17 15 17.4	-0.9
NIG	Nigde	1.60	304	PN	Pn	17 15 20.4	+0.3
ATAB	Bozova	1.61	81	i P	Pn	17 15 21.3	+1.1
ATAB				i S	Sb	17 15 41.0	-0.4
SLNF	Slenfeh	1.64	182	⇑iP	Pn	17 15 21.0	+0.3
SLNF				⇓iS	Sb	17 15 41.9	-0.5
BNN	Bunyan	1.65	348	PN	Pn	17 15 21.7	+0.8
WRDH	Warideh	1.73	177	⇓iP	Pn	17 15 22.0	0.0
WRDH				⇓iS	Sn	17 15 43.0	-1.9
MEST	Erdemli	1.84	250	i P	Pn	17 15 21.1	-2.5
MEST				i S	Sn	17 15 48.5	+0.6
BSTP	Nigde	1.88	293	i P	Pn	17 15 29.9	+5.7
AVNT	Avonos	1.92	324	i P	Pn	17 15 24.6	0.0
AVNT				i S	Sn	17 16 00.8	+11
MYA	Malataya	2.00	57	PN	Pn	17 15 25.4	-0.5
URFA	Urfa	2.02	83	PN	Pn	17 15 24.9	-1.2
KFRA	Kufra	2.06	169	⇑iP	Pn	17 15 28.4	+1.7
KFRA				⇓iS	Sn	17 15 52.9	-0.4
BIDA	Albida	2.22	180	⇑iP	Pn	17 15 29.1	+0.1
BIDA				⇑iS	Sn	17 15 54.4	-3.0
IKL	Isikli	2.33	245	PN	Pn	17 15 29.4	-1.1
JHLN	Al Jahlan	2.33	131	⇑iP	Pn	17 15 32.6	+2.1
ELZG	Elazig	2.47	59	i P	Pn	17 15 34.7	+2.1
ELZG				i S	Sn	17 16 05.1	+1.4
SVST	Sivas	2.58	11	i P	Pn	17 15 34.6	+0.5
SVST				i S	Sg	17 16 15.2	-1.4
ERMK	Ermenek	2.78	259	i P	Pb	17 15 41.1	+0.3
ERMK				i S	Sg	17 16 26.1	+3.0
CDAG	Cicekdag	2.82	328	i P	Pn	17 15 36.9	-0.7
CDAG				i S	Sg	17 16 22.5	-2.2
KAMT	Kaman	2.94	317	PN	Pn	17 15 40.6	+1.2
PTK	Pertek	2.95	55	PN	Pn	17 15 39.8	+0.4
HWQ	Hawqa	2.97	186	ePn	Pn	17 15 39.7	0.0
FKH	Fakeheh	3.00	178	ePn	Pn	17 15 40.1	+0.1
TOKT	Tokat	3.08	3	ePN	Pn	17 15 42.3	+1.0
SFNV	Sufian	3.17	104	⇑iS	Sn	17 16 24.9	+3.5
CORM	Corum	3.21	337	ePN	Pn	17 15 43.6	+0.4
BR131	Keskin Array S	3.25	321	ePn	Pn	17 15 44.5	+0.9
BR131	Keskin Array S	3.25	321	ePn	Pn	17 15 44.5	+0.9
CSS	Prodhromos	3.31	228	ePn	Pn	17 15 44.0	-0.5
BHL	Bhannes	3.37	189	ePn	Pn	17 15 47.4	+2.0
KDHN	Kadinhani	3.55	292	i P	Pb	17 15 53.7	-0.3
KDHN				i S	Sg	17 16 51.2	+2.4
MARD	Mardin	3.57	87	i P	Pn	17 15 44.6	-3.7
MARD				i S	Sb	17 16 42.5	+3.9
CTKT	Corum	3.58	341	i P	Pn	17 15 48.5	+0.1
CTKT				i S	Sg	17 16 48.1	-1.8
KELT	Kelkit	3.71	38	i P	Pn	17 15 55.7	+5.4
KELT				i S	Sn	17 16 43.8	+8.5
EZC	Erzincan	3.73	47	ePN	Pn	17 15 47.3	-3.2
ANTO	Ankara	3.80	315	ePN	Pn	17 15 52.5	+1.0
ANTO	Ankara	3.80	315	ePn	Pn	17 15 49.2	-2.3
BRBR	Barbar	3.83	184	⇓iP	Pn	17 15 51.4	-0.5
KIZT	Kizilcal	3.85	297	ePN	Pn	17 15 53.3	+1.0
ELDT	Eldivan	3.95	326	i P	Pn	17 15 53.2	-0.3
GRSN	GIRESUNGRSN	3.99	22	i P	Pn	17 15 54.4	+0.3
BEST	Besiri	4.00	79	i P	Pn	17 15 52.5	-1.8
BEST				i S	rx	17 15 56.5	
BOYT	Boyabat	4.32	346	i P	Pn	17 16 08.3	+9.5
BOYT				i S	rx	17 16 11.0	
SGKT	Sivrigoynuk	4.70	316	i P	Pn	17 16 13.0	+8.8
ELL	Elmali	5.14	266	ePN	Pn	17 16 09.8	-0.7
MSL	Mosul	5.53	98	ex	x	17 16 33.5	
MSL				i x	x	17 17 52.5	
MSL				i x	x	17 18 05.0	
FETY	Fethiye	5.81	266	ePN	Pn	17 16 20.2	+0.2
HAKT	HAKKARI	5.91	85	i P	Pg	17 16 42.4	-6.1
HAKT				i S	rx	17 16 57.2	
BHD	Baghdad	7.70	119	ex	x	17 17 13.0	
BHD				ex	x	17 18 58.0	
BHD				ex	x	17 19 52.0	
BHD				ex	x	17 21 09.0	

CASC 12 17:42:55.3±1.8**, 12.94N**×**89.77W, h8**^{km}±18^{km}**, MD3.6, 2C-6D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.90	9	⇓eP	Pb	17 43 28.5	+16
SBLS				eS	Sb	17 43 41.3	+17
BOQS	Boqueron	0.92	31	⇓eP	Pb	17 43 28.0	+15
BOQS				eS	Sb	17 43 41.1	+16
RTR	El Retiro	0.95	7	⇑eP	Pb	17 43 29.1	+15
RTR				eS	Sb	17 43 42.5	+16
LCBS	La Ceiba	1.04	47	⇑eP	Pb	17 43 29.2	+14
LCBS				eS	Sb	17 43 43.0	+14
LBRS	Las Brisas	1.06	42	⇓eP	Pb	17 43 29.9	+14
LBRS				eS	Sb	17 43 44.4	+15
IXG	Ixpaco	1.40	331	⇓eP	Pn	17 43 19.6	-1.6
IXG				eS	Sb	17 43 40.4	+1.4
MRL	Marmol	2.11	2	⇓eP	Pn	17 43 31.0	-0.4
MRL				eS	Sn	17 43 59.4	+1.2
TP2	Tecpan 2	2.20	326	⇓eP	Pn	17 43 32.6	-0.1
TP2				eS	Sn	17 44 01.5	+1.1

*NDI **12** 18:10:14.8±4.1, 33.80N×75.51E, h10^{km}, MD3.0, ML3.0*
*NNC **12** 18:10:29.6±6.6, 34.34N×74.84E, Error ellipse: s-maj=414.1km s-min=76.7km az=70.0*
ISC 12 18:10:17.7±1.2**, 33.59N**±0.06×**75.3E**±0.1**, h45**^{km}±32^{km}**, n10,** σ**1^{s}03**/17**, 1C-1D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	Dalhousie	1.19	151	eP	P	18 10 35.0	-3.1
DLH				eS	S	18 10 54.0	+0.7
THN	Thein Dam	1.21	163	eP	P	18 10 38.5	+0.2
THN				eSG	S	18 11 01.8	+8.0
BHK	Bhakra	2.37	156	eSB	S	18 11 30.5	+7.7
SDNR	Sundarnagar	2.52	145	eP	P	18 10 57.4	+0.3
SDNR				eS	S	18 11 28.0	+1.2
SMLA	Simla	2.92	147	eP	P	18 11 01.5	-1.3
SMLA				eS	S	18 11 35.2	-1.8
KLP	Kalpa	3.23	129	eP	P	18 11 07.7	+0.5
KLP				eS	S	18 11 45.0	+0.2
KLP				AML	AML	18 11 48.0	
	comp=E,159nm,0.6s						
KLP				AML	AML	18 11 48.5	
	comp=N,280nm,0.5s						
KHET	Khetri	5.51	175	eS	S	18 12 42.3	0.0
KUDL	Kundal	5.52	169	eP	P	18 11 40.6	+1.2
KUDL				eS	S	18 12 42.4	-0.2
SONA	Sohna	5.54	163	eS	S	18 12 39.0	-4.0
SONA				AML	AML	18 13 03.6	
	comp=E,8.7nm,0.2s						
SONA				AML	AML	18 13 03.9	
	comp=N,4.0nm,0.3s						
KK31	Karatay Array	10.21	340	⇓Pn	P	18 12 48.6	+4.1
	comp=N,0.4nm,0.6s,baz=160,slow=12						
KK31				⇑Sn	S	18 14 38.6	-0.1
	comp=N,0.5nm,0.5s,baz=157,slow=22						

*NEIC **12** 18:23:14.0±5.3, 18.20S×177.56W, h340^{km}±50^{km}, mb4.6/7, Error ellipse: s-maj=27.1km s-min=21.1km az=149.0*
*IDC **12** 18:23:41.6±2.8, 18.64S×177.95W, h669^{km}±34^{km}, mb3.4/7, mb1 3.6/8, mb1mx3.5/14, mbtmp4.4/8, Error ellipse: s-maj=31.0km s-min=14.7km az=152.0*
ISC 12 18:23:34.7±0.5**, 18.6S**±0.1×**177.7W**±0.1**, h600**^{km}**, n70,** σ**0^{s}92**/31**, mb4.3**/13**, 3C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	15.23	254	P	P	18 26 47.9	+2.9
	1.4nm,0.3s,baz=84,slow=17,SNR=19						
URZ	Urewera	20.08	192	P	P	18 27 27.4	-3.0
	7.5nm,0.5s,baz=322,slow=7.9,SNR=6.8						
CNB	Canberra Magne	33.51	234	⇓iP	P	18 29 28.6	+1.3
	28nm,0.9s,mb4.9						
TOO	Toolangi	37.23	232	eP	P	18 29 59.1	+1.1
	10nm,0.9s,mb4.4						
STKA	Stephens Creek	38.86	242	eP	P	18 30 12.3	+1.0
	10nm,0.9s,mb4.4						
STKA	Stephens Creek	38.86	242	P	P	18 30 11.8	+0.5
	13nm,0.8s,mb4.5,baz=80,slow=8.7,SNR=21						
STKA	Stephens Creek	38.86	242	eP	P	18 30 12.2	+0.9
WB2	Warramunga Arr	45.13	260	⇓iP	P	18 31 00.4	-0.4
WB2				eS	S	18 36 52.5	-5.4
WRAB	Tennant Creek	45.13	260	eP	P	18 31 00.5	-0.3
	15nm,0.4s,mb4.9						
WRA	Warramunga Arr	45.14	260	P	P	18 31 00.4	-0.5
	8.3nm,0.3s,mb4.7,baz=97,slow=6.7,SNR=430						
WRA				PcP	PcP	18 32 27.5	-1.0
	1.8nm,0.6s,baz=94,slow=3.0,SNR=6.6						
WRA				S	S	18 36 52.2	-5.8
	0.5nm,0.8s,baz=93,slow=14,SNR=4.5						
KAKA	Kakadu	48.21	269	⇑iP	Px	18 31 42.3	
	3.2nm,0.2s						
FORT	Forrest	50.29	245	eP	P	18 31 38.7	-0.6
	12nm,0.5s,mb4.6						
FITZ	Fitzroy Crossi	53.55	261	eP	P	18 32 02.4	-0.3
	5.2nm,0.3s,mb4.3						
KLBR	Kellerberrin	59.09	244	eP	P	18 32 39.8	-0.8
	47nm,1.7s,mb4.3						
SBA	Scott Base	59.76	184	eP	P	18 32 45.1	+0.7
VNDA	Vanda	59.80	185	eP	P	18 32 44.1	-0.6
MUN	Mundaring	60.38	243	eP	P	18 32 48.9	-0.1
MJAR	Matsushiro Arr	68.85	323	P	P	18 33 41.7	-0.3
	3.2nm,0.6s,mb3.9,baz=159,slow=6.3,SNR=17						
MJAR	Matsushiro Arr	68.85	323	P	P	18 33 41.7	-0.3
ISA	Isabella	77.85	46	eP	P	18 34 33.9	+1.1
	21nm,1.1s,mb4.5						
NVAR	Mina Array Bea	79.49	43	P	P	18 34 42.0	+0.7
	0.3nm,0.6s,baz=230,slow=7.0,SNR=2.9						
MAW	Mawson	83.41	200	P	P	18 35 00.0	-0.6
	1.9nm,0.8s,mb3.7,baz=295,slow=2.1,SNR=3.9						
TXAR	Lajitas Array	85.83	57	P	P	18 35 13.9	+0.6
	1.1nm,0.8s,mb3.5,baz=225,slow=5.3,SNR=8.3						
COLA	College	86.32	12	P	P	18 35 13.8	-0.9
ILAR	Eielson Array	86.43	13	P	P	18 35 14.3	-0.9
	0.9nm,0.4s,mb3.8,baz=229,slow=5.0,SNR=22						
SNAA	Sanae	89.88	178		P	18 35 29.8	-1.4
SNAA	Sanae	89.88	178		P	18 35 35.6	+4.4
VNA3	Neumayer Olymp	90.00	176	⇑i	P	18 35 31.9	+0.2
VNA2	Neumayer--Watz	90.44	177	⇑i	P	18 35 34.3	+0.5
VNA2	Neumayer--Watz	90.44	177		P	18 35 42.6	+8.8
ARCES	ARCESS Array B	127.12	350	PKP	PKPdf	18 41 31.2	+0.2
	1.2nm,0.5s,baz=343,slow=1.6,SNR=11						
JOF	Joensuu	131.42	343	ep	PKPdf	18 41 40.0	+0.6
	1.4nm,0.5s						
KAF	Kangasniemi	133.41	345	ep	PKPdf	18 41 42.4	-0.7
	2.5nm,0.7s						

FINES	**FINESS Array B**	**134.04**	**344**	PKP	PKPdf	18 41 45.1	+0.8
	1.9nm,0.9s,baz=45,slow=2.0,SNR=7.5						
KMBO	**Kilima Mbogo**	**140.41**	**244**	PKhKP		18 41 53.2	
	0.5nm,0.5s,baz=238,slow=23,SNR=3.5						
AKASG	**Malin Array Be**	**141.48**	**332**	PKhKP		18 41 53.8	
	1.3nm,0.4s,baz=42,slow=4.1,SNR=16						
BRTR	**Keskin Array B**	**145.73**	**315**	PKPbc	PKPbc	18 42 08.0	+0.8
	2.0nm,0.7s,baz=136,slow=4.5,SNR=13						
CLL	**Collm**	**146.29**	**348**	*i* P	PKPdf	18 42 09.8	+3.6
DPC	**Dobruska-Polom**	**146.41**	**344**	*e*P	PKPdf	18 42 10.3	+3.9
BRG	**Berggiesshubel**	**146.50**	**347**	*e*P	PKPdf	18 42 10.6	+4.0
PVCC	**Panska Ves**	**146.68**	**346**	*e*PKP	PKPdf	18 42 11.5	+4.6
PRU	**Pruhonice**	**147.19**	**345**	*e*PKP	PKPdf	18 42 12.2	+4.4
KHC	**Kasperske Hory**	**148.22**	**346**	*e*PKP	PKPdf	18 42 15.3	+5.9
KHC				x	x	18 42 20.5	
KHC	**Kasperske Hory**	**148.22**	**346**	*e*P	PKPdf	18 42 15.3	+5.9
KHC				*e*		18 42 20.5	
GERES	**GERESS Array B**	**148.46**	**346**	PKPbc	PKPdf	18 42 15.0	+5.2
	2.0nm,0.8s,baz=27,slow=3.0,SNR=17						
GIVF	**Givet**	**148.52**	**357**	*e*PKP1	PKPdf	18 42 15.2	+5.4
BAIF	**Baives**	**148.59**	**358**	*e*PKP1	PKPdf	18 42 15.5	+5.6
FLN	**La Foliniere**	**149.85**	**4**	*e*PKP1	PKPdf	18 42 18.1	+6.1
CDF	**Champ du Feu**	**150.00**	**353**	*e*PKP1	PKPdf	18 42 19.0	+6.8
	7.2nm,0.7s						
LDF	**La Druitiere**	**150.04**	**3**	*e*PKP1	PKPdf	18 42 18.3	+6.0
	4.6nm,0.5s						
MEZF	**Maizieres J'vi**	**150.10**	**356**	*e*PKP1	PKPdf	18 42 19.2	+6.8
	20nm,1.0s						
KBA	**Koelnbreinsper**	**150.19**	**345**	⇓*i*P	PKPdf	18 42 19.1	+6.6
	comp=Z,6.1nm,0.6s						
GRR	**Gorron**	**150.19**	**4**	*e*PKP1	PKPdf	18 42 18.9	+6.4
	10nm,0.7s						
MOTA	**Moosalm**	**150.45**	**348**	⇓*i*P	PKPdf	18 42 19.5	+6.6
	comp=Z,3.6nm,0.6s						
MOTA	**Moosalm**	**150.45**	**348**	⇓P	PKPdf	18 42 19.5	+6.6
HAU	**Haudompre**	**150.50**	**354**	*e*PKP1	PKPdf	18 42 19.7	+6.7
	7.2nm,0.5s						
SQTA	**Sankt Quirin**	**150.54**	**348**	*i* P	PKPdf	18 42 20.5	+7.4
	comp=Z,5.3nm,0.6s						
SQTA	**Sankt Quirin**	**150.54**	**348**	P	PKPdf	18 42 20.5	+7.4
HINF	**Hinteralfeld**	**150.64**	**354**	*e*PKP1	PKPdf	18 42 19.9	+6.7
	8.6nm,0.8s						
LOR	**Lormes**	**151.40**	**358**	*e*PKP1	PKPdf	18 42 22.1	+7.8
	6.3nm,0.6s						
SSF	**Saint Saulge**	**151.61**	**358**	*e*PKP1	PKPdf	18 42 22.4	+7.8
	6.4nm,0.8s						
CABF	**La Chapelle**	**151.91**	**354**	*e*PKP1	PKPdf	18 42 23.7	+8.7
MFF	**Saint Martin d**	**152.02**	**4**	*e*PKP1	PKPdf	18 42 23.5	+8.3
BGF	**Bois d'Agland**	**152.13**	**359**	*e*PKP1	PKPdf	18 42 23.4	+8.1
	9.2nm,0.7s						
TCF	**Toulx Ste Croi**	**152.41**	**0**	*e*PKP1	PKPdf	18 42 24.0	+8.3
LPL	**La Plagne**	**152.92**	**353**	*e*PKP1	PKPdf	18 42 26.0	+10
LPG	**La Plagne**	**152.94**	**353**	*e*PKP1	PKPdf	18 42 26.2	+10
RJF	**Les Rejaudoux**	**153.38**	**1**	*e*PKP1	PKPdf	18 42 26.0	+8.9
ORIF	**Oris-en-Rattie**	**153.60**	**354**	*e*PKP1	PKPdf	18 42 27.3	+10
MBDF	**Montbardon**	**153.69**	**353**	*e*PKP1	PKPdf	18 42 27.3	+10
	5.9nm,0.8s						

SKO ***12*** *18:53:57.0, 3.41S×96.27E*

BJI ***12*** *18:54:12.1, 1.81N×97.16E, h33^{km}, mB5.2, mb5.3, Ms5.1, Msz4.9*

MOS ***12*** *18:54:13.4±0.9, 1.95N×97.10E, h37^{km}, mb5.4/59, MS4.7/11, Error ellipse: s-maj=9.0km s-min=4.7km az=117.4*

NEIC ***12*** *18:54:13.8±0.1, 1.86N×97.04E, h30^{km}, mb5.2/67, MS4.7/1, Error ellipse: s-maj=4.6km s-min=3.4km az=204.0*

IDC ***12*** *18:54:15.4±2.2, 1.83N×97.08E, h44^{km}±19^{km}, mb4.7/29, mb1 4.7/29, mb1mx4.7/30, mbtmp4.9/29, MS4.6/21, Ms1 4.5/21, ms1mx4.3/33, Error ellipse: s-maj=14.0km s-min=9.7km az=41.0*

ISC 12 18:54:11.7±1.0, **1.90N**±0.03×**97.11E**±0.03, **h25**^{km}±7^{km}, **h27**^{km}±.7^{km}**:pP-P, n386,** σ0^{s}**93**/378, **mb5.2**/141, **MS4.7**/48, **32C-35D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**4.88**	**46**	*e*P	**Pn**	**18 55 27.4**	**+1.9**
SNG	**Songkhla**	**6.30**	**34**	P	**Pn**	**18 55 46.0**	**+0.5**
	1µm,1.0s						
NNT	**Nongplab**	**10.94**	**14**	P	**P**	**18 56 49.0**	**-0.9**
KSM	**Kuching**	**13.20**	**92**	*e*P	**P**	**18 57 20.0**	**-0.3**
UBT	**Ubonrachathani**	**15.39**	**30**	⇓P	**P**	**18 57 53.5**	**+4.4**
KKTK	**Khon Kaen**	**15.41**	**21**	P	**P**	**18 57 48.6**	**-0.8**
	1µm,0.9s						
CHG	**Chiang Mai**	**16.91**	**6**	⇑P	**P**	**18 58 07.7**	**-0.8**
	18nm,1.1s						
PALK	**Pallekele**	**17.20**	**289**	*e*P	**P**	**18 58 11.1**	**-1.1**
	68nm,1.1s						
CHRT	**Chiangrai**	**18.05**	**8**	⇑P	**P**	**18 58 23.0**	**+0.2**
	295nm,1.2s						
KKM	**Kota Kinabalu**	**19.50**	**77**	*e*P	**P**	**18 58 40.3**	**+0.2**
VIS	**Vishakhapatnam**	**20.75**	**320**	*e*P	**P**	**18 58 53.0**	**-0.3**
VIS				AMb	AMB	18 58 57.3	
	comp=Z,142nm,1.1s						
QIZ	**Qiongzhong**	**21.10**	**35**	P	**P**	**18 58 56.2**	**-0.7**
QIZ				XP		18 59 08.4	
QIZ				PPP	PPP	18 59 28.9	-0.4
QIZ				S	**S**	**19 02 44.4**	**-1.2**
QIZ				XS		19 02 56.6	
QIZ				AMB	AMB		
	comp=Z,50nm,1.2s,mb4.7						
QIZ				LR	LR		
	comp=N,2µm,16.4s,MS4.7						
QIZ				LR	LR		
	comp=E,1µm,16.9s,MS4.7						
QIZ				LR	LR		
	comp=Z,3µm,13.5s,MS4.9						
TRD	**Trivandrum**	**21.11**	**289**	*e*x	x	19 02 44.7	
KMI	**Kunming**	**23.72**	**13**	⇓P	**P**	**18 59 25.3**	**+2.4**
KMI				AP		18 59 32.8	
KMI				XP		18 59 36.5	
KMI				PP	PP	19 00 01.6	+5.6
KMI				PPP	PPP	19 00 09.2	+3.2
KMI				S	**S**	**19 03 36.4**	**+3.4**
KMI				XS		19 03 49.3	
KMI				SS	SS	19 04 27.2	+4.5
KMI				SSS	SSS	19 04 45.2	+6.3
KMI				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.2						
KMI				LR	LR		
	comp=N,3µm,17.7s,MS4.9						
KMI				LR	LR		
	comp=E,2µm,19.5s,MS4.9						
KMI				LR	LR		
	comp=Z,3µm,17.7s,MS4.8						
KMI	**Kunming**	**23.72**	**13**	⇓P	**P**	**18 59 25.3**	**+2.4**
	comp=Z,98nm,1.0s,mb5.2						
KMI				pP		18 59 32.8	
KMI				sP		18 59 36.5	
KMI				PP	PP	19 00 01.6	+5.6
KMI				PPP	PPP	19 00 09.2	+3.2
KMI				S	**S**	**19 03 36.4**	**+3.4**
KMI				sS		19 03 49.3	
KMI				SS	SS	19 04 27.2	+4.5
KMI				SSS	SSS	19 04 45.2	+6.3
KMI				LR	LR		
	comp=Z,3µm,17.7s,MS4.8						
KMI	**Kunming**	**23.72**	**13**	⇓P	**P**	**18 59 25.3**	**+2.4**
KMI				*SP		18 59 36.5	
KMI						19 00 01.6	
KMI				PPP	PPP	19 00 09.2	+3.2
KMI				S	**S**	**19 03 36.4**	**+3.4**
KMI				*SS		19 03 49.3	
KMI				SS	SS	19 04 27.2	+4.5
KMI				pmax	pmax		
	comp=Z,98nm,1.0s,mb5.2						
KMI				MLR	MLR		
	comp=Z,3µm,17.7s,MS4.8						
HYB	**Hyderabad**	**23.88**	**311**	*i* P	**P**	**18 59 26.0**	**+1.5**
	comp=Z,70nm,1.0s,mb5.0						
HYB				*e*		18 59 31.0	
HYB				*e*S	**S**	**19 03 36.0**	**+0.1**
HYB	**Hyderabad**	**23.88**	**311**	*e*P	**P**	**18 59 26.0**	**+1.5**
	comp=Z,70nm,1.0s,mb5.0						
HYB				*e*		18 59 31.0	
HYB				*e*S	**S**	**19 03 44.0**	**+8.1**
HYB	**Hyderabad**	**23.88**	**311**	*e*P	**P**	**18 59 26.0**	**+1.5**
HYB				*e*		18 59 31.0	
HYB				*e*S	**S**	**19 03 44.0**	**+8.1**
HYB				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.0						
SHL	**Shillong**	**24.06**	**348**	*e*P	**P**	**18 59 25.0**	**-1.2**
SHL				*e*S	**S**	**19 03 43.0**	**+4.0**
BOK	**Bokaro**	**24.33**	**334**	*e*P	**P**	**18 59 28.2**	**-0.6**
BOK				AMb	AMB	18 59 32.4	
	comp=Z,209nm,0.9s,mb5.6						
BLSP	**Bilaspur**	**24.83**	**325**	*e*P	**P**	**18 59 34.2**	**+0.5**
GYA	**Guiyang**	**26.09**	**20**	⇑*i*P	**P**	**18 59 46.7**	**+1.3**
GYA				AP	pP	18 59 55.6	+2.8
GYA				XP	sP	18 59 59.8	+3.7
GYA				S	**S**	**19 04 13.6**	**+0.6**
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
GYA				AMB	AMB		
	comp=Z,260nm,6.6s						
GYA				LR	LR		
	comp=N,4µm,14.1s,MS5.1						
GYA				LR	LR		
	comp=E,1µm,14.9s,MS5.1						
GYA				LR	LR		
	comp=Z,5µm,15.8s,MS5.1						
TGY	**Tagaytay City**	**26.49**	**62**	P	**P**	**18 59 49.1**	**0.0**
	comp=Z,125nm,0.6s,mb5.7,baz=290,slow=3.6,SNR=7.9						
KAD	**Karad**	**27.24**	**306**	*e*x	x	18 59 53.5	
KAD				*e*P		18 59 54.6	
KAD				AMb	AMB	19 00 04.6	
	comp=Z,25nm,1.4s,mb4.5						
ALBI	**Allahabad**	**27.56**	**329**	*e*P	**P**	**18 59 58.5**	**-0.4**
PKI	**Pulchoki**	**27.88**	**337**	*e*P	**P**	**19 00 01.7**	**-0.1**
	comp=Z,226nm,1.2s,mb5.7						
PKI	**Pulchoki**	**27.88**	**337**	*e*P	**P**	**19 00 01.7**	**-0.1**
PKI				pmax	pmax		
	comp=Z,113nm,1.2s,mb5.4						
GUN	**Gumba**	**28.01**	**338**	*e*P	**P**	**19 00 03.3**	**+0.4**
	comp=Z,180nm,0.7s,mb5.8						
DMN	**Daman**	**28.03**	**337**	*e*P	**P**	**19 00 03.2**	**+0.1**
	comp=Z,154nm,0.9s,mb5.6						
KKN	**Kakani**	**28.12**	**337**	*e*P	**P**	**19 00 03.8**	**-0.2**
	comp=Z,258nm,1.1s,mb5.8						
POO	**Poona**	**28.16**	**307**	*e*x	x	19 00 09.0	
LSA	**Lhasa**	**28.22**	**349**	P	**P**	**19 00 05.1**	**+0.2**
LSA				AP	pP	19 00 15.5	+3.2
LSA				S	**S**	**19 04 42.8**	**-4.8**
LSA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.2						
LSA				AMB	AMB		
	comp=Z,170nm,3.0s						
LSA				LR	LR		
	comp=N,430nm,25.0s,MS4.2						
LSA				LR	LR		
	comp=E,650nm,21.0s,MS4.2						
LSA				LR	LR		
	comp=Z,800nm,21.0s,MS4.3						
BHPL	**Bhopal**	**28.54**	**320**	*e*P	**P**	**19 00 08.0**	**+0.2**
BHPL				AMb	AMB	19 00 12.8	
	comp=Z,26nm,1.3s,mb4.8						
BHPL				AMP		19 00 19.7	
	comp=N,20nm,1.7s						
GKN	**Gorkha**	**28.57**	**336**	*e*P	**P**	**19 00 07.7**	**-0.3**
	comp=N,151nm,0.9s,mb5.7						
KOLN	**Koldanda**	**28.79**	**335**	*e*P	**P**	**19 00 10.0**	**0.0**
	comp=N,125nm,0.7s,mb5.7						
DAV	**Davao City (W)**	**28.83**	**79**	P	**P**	**19 00 11.5**	**+1.0**
CD2	**Chengdu**	**29.53**	**12**	P	**P**	**19 00 15.2**	**-1.5**
CD2				PP	PP	19 01 13.2	+0.4
CD2				S	**S**	**19 05 09.1**	**+0.6**
CD2				SS	SS	19 06 46.7	+4.6
CD2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
CD2				LR	LR		
	comp=E,1µm,14.4s						
CD2				LR	LR		
	comp=Z,1µm,15.6s,MS4.6						
PTH	**Pithoragarh**	**31.85**	**331**	*e*P	**P**	**19 00 36.4**	**-0.7**
PTH				*e*x	x	19 02 20.0	
NACB	**Ninganchiao**	**32.42**	**45**	*e*P	**P**	**19 00 42.9**	**+0.8**
YHNB	**Yeheng**	**32.58**	**44**	*e*P	**P**	**19 00 43.8**	**+0.3**
AJM	**Ajmer**	**32.60**	**321**	*e*x	x	19 00 44.0	
AJM				*e*x	x	19 00 44.1	
NDI	**New Delhi**	**32.70**	**326**	*e*P	**P**	**19 00 42.0**	**-2.5**
WHN	**Wuhan**	**32.84**	**28**	⇓P	**P**	**19 00 46.0**	**+0.3**
WHN				S	**S**	**19 06 01.7**	**+1.3**
WHN				AMB	AMB		
	comp=Z,170nm,0.8s,mb6.0						
WHN				LR	LR		
	comp=Z,4µm,16.0s,MS5.3						
XAN	**Xi'an**	**33.83**	**18**	P	**P**	**19 00 53.0**	**-1.3**
XAN				AP	pP	19 01 05.0	+3.2
XAN				S	**S**	**19 06 21.9**	**+6.2**
XAN				AMB	AMB		
	comp=Z,120nm,0.8s,mb5.9						
XAN				LR	LR		
	comp=N,1µm,15.0s,MS4.9						
XAN				LR	LR		
	comp=E,900nm,15.0s,MS4.9						
XAN				LR	LR		
	comp=Z,3µm,15.0s,MS5.1						
FITZ	**Fitzroy Crossi**	**34.41**	**127**	⇓*i*P	**P**	**19 00 58.4**	**-1.0**
	comp=Z,21nm,0.9s,mb5.1						
FITZ	**Fitzroy Crossi**	**34.41**	**127**	P	**P**	**19 00 57.7**	**-1.7**
	comp=Z,10nm,0.8s,mb4.8,baz=184,slow=6.5,SNR=9.9						
LZH	**Lanzhou**	**34.59**	**10**	*e*P	**P**	**19 01 00.5**	**-0.3**
LZH				AP	pP	19 01 07.8	-0.5
LZH				XP	sP	19 01 10.4	-1.1
LZH				PP	PP	19 02 17.5	+0.1
LZH				*e*S	**S**	**19 06 27.0**	**-0.4**
LZH				XS		19 06 39.5	
LZH				SS	SS	19 08 40.0	+0.2
LZH				AMB	AMB		
	comp=Z,70nm,1.5s,mb5.4						
LZH				AMB	AMB		
	comp=Z,280nm,4.5s						
LZH				LR	LR		
	comp=N,2µm,14.8s						
LZH				LR	LR		
	comp=Z,3µm,16.2s,MS5.1						
LZH	**Lanzhou**	**34.59**	**10**	*e*P	**P**	**19 01 00.5**	**-0.3**
	comp=Z,78nm,1.5s,mb5.4						
LZH				pP	pP	19 01 07.8	-0.5
LZH				sP	sP	19 01 10.4	-1.1
LZH				PP	PP	19 02 17.5	+0.1
LZH				*e*S	**S**	**19 06 27.0**	**-0.4**
LZH				sS		19 06 39.5	
LZH				SS	SS	19 08 40.0	+0.2
LZH				LR	LR		
	comp=Z,3µm,16.2s,MS5.1						
LZH	**Lanzhou**	**34.59**	**10**	*e*P	**P**	**19 01 00.5**	**-0.3**
LZH				*SP	sP	19 01 10.4	-1.1
LZH						19 02 17.5	
LZH				*e*S	**S**	**19 06 27.0**	**-0.4**
LZH				*SS		19 06 39.5	
LZH				SS	SS	19 08 40.0	+0.2
LZH				pmax	pmax		
	comp=Z,78nm,1.5s,mb5.4						
LZH				MLR	MLR		
	comp=Z,3µm,16.2s,MS5.1						
SMLA	**Simla**	**34.65**	**329**	*e*x	x	19 01 02.0	
SDNR	**Sundarnagar**	**35.05**	**329**	*e*x	x	19 01 04.2	
NJ2	**Nanjing**	**36.32**	**32**	*e*P	**P**	**19 01 16.1**	**+0.6**
NJ2				AP	pP	19 01 25.8	+2.7
NJ2				XP	sP	19 01 29.8	+3.5
NJ2				S	**S**	**19 06 51.0**	**-3.3**
NJ2				XS		19 07 06.0	
NJ2				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,30nm,4.6s						
NJ2				LR	LR		
	comp=N,2µm,17.0s,MS5.2						
NJ2				LR	LR		
	comp=E,3µm,16.0s,MS5.2						
NJ2				LR	LR		
	comp=Z,2µm,15.1s,MS5.0						
DLH	**Dalhousie**	**36.39**	**329**	*e*P	**P**	**19 01 14.0**	**-2.1**
THN	**Thein Dam**	**36.44**	**329**	*e*P	**P**	**19 01 15.3**	**-1.2**
SSE	**Sheshan**	**36.90**	**36**	P	**P**	**19 01 21.2**	**+0.8**
SSE				AP	pP	19 01 29.6	+1.7
SSE				XP	sP	19 01 33.5	+2.4
SSE				PP	PP	19 02 47.8	+1.2
SSE				S	**S**	**19 07 04.8**	**+1.7**
SSE				XS		19 07 19.9	
SSE				SCS	ScS	19 11 34.9	+3.1
SSE				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.3						
SSE				AMB	AMB		
	comp=Z,140nm,4.9s						
SSE				LR	LR		
	comp=N,1µm,16.9s,MS4.7						
SSE				LR	LR		
	comp=E,270nm,16.9s,MS4.7						
SSE				LR	LR		
	comp=Z,1µm,16.9s,MS4.8						
SSE	**Sheshan**	**36.90**	**36**	P	**P**	**19 01 21.2**	**+0.8**
	comp=Z,58nm,1.1s,mb5.3						
SSE				pP	pP	19 01 29.6	+1.7
SSE				sP	sP	19 01 33.5	+2.4
SSE				PP	PP	19 02 47.8	+1.2
SSE				S	**S**	**19 07 04.8**	**+1.7**
SSE				sS		19 07 19.9	
SSE				ScS	ScS	19 11 34.9	+3.1
SSE				LR	LR		
	comp=Z,1µm,16.9s,MS4.8						
GTA	**Gaotai**	**37.42**	**3**	⇑*i*P	**P**	**19 01 24.4**	**-0.3**
GTA				AP	pP	19 01 33.2	+1.0
GTA				XP	sP	19 01 37.3	+1.9
GTA				PP	PP	19 02 54.1	+1.3
GTA				PCP	PcP	19 03 44.2	+0.6
GTA				S	**S**	**19 07 10.4**	**-0.6**
GTA				SCP		19 07 26.7	
GTA				PCS		19 07 29.4	
GTA				SS	SS	19 09 43.3	-0.6
GTA				SCS	ScS	19 11 34.1	-0.5
GTA				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.4						
GTA				AMB	AMB		
	comp=Z,310nm,7.6s						
GTA				LR	LR		
	comp=N,410nm,17.9s,MS4.7						
GTA				LR	LR		
	comp=E,930nm,18.2s,MS4.7						
GTA				LR	LR		
	comp=Z,580nm,20.9s,MS4.3						
KAKA	**Kakadu**	**37.96**	**113**	*e*P	**P**	**19 01 46.5**	**+17**
	comp=Z,33nm,0.6s,mb5.2						
JOW	**Kunigami**	**38.83**	**48**	P	**P**	**19 01 37.5**	**+0.8**
	comp=Z,36nm,0.5s,mb5.4,baz=254,slow=8.2,SNR=15						
TIA	**Tai'an**	**38.85**	**26**	⇑P	**P**	**19 01 36.2**	**-0.5**
TIA				AMB	AMB		
	comp=Z,120nm,1.3s,mb5.5						
TIA				LR	LR		
	comp=N,1µm,14.0s						
NWAO	**Narrogin (SRO)**	**39.52**	**153**	P	**P**	**19 01 42.4**	**+0.1**
	comp=N,17nm,1.1s,mb4.7,baz=282,slow=9.3,SNR=2.8						
BTO	**Baotou**	**40.27**	**15**	*e*P	**P**	**19 01 49.3**	**+0.9**
BTO				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
HHC	**Hu-ho-hao-te**	**40.92**	**17**	⇑*i*P	**P**	**19 01 55.3**	**+1.5**
HHC				AP	pP	19 02 04.9	+3.6
HHC				XP	sP	19 02 08.9	+4.4
HHC				PP	PP	19 03 36.0	+4.8
HHC				PCS		19 07 44.2	
HHC				S	**S**	**19 08 09.3**	**+5.6**
HHC				XS		19 08 24.9	
HHC				SCS	ScS	19 11 53.5	-1.4
HHC				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.2						
HHC				AMB	AMB		
	comp=Z,210nm,6.0s						
HHC				LR	LR		
	comp=N,2µm,14.4s,MS5.2						
HHC				LR	LR		
	comp=E,1µm,14.4s,MS5.2						
HHC				LR	LR		
	comp=Z,2µm,14.4s,MS5.0						
KSH	**Kashi**	**42.10**	**335**	*e*P	**P**	**19 02 05.1**	**+1.6**
KSH				*e*AP	pP	19 02 14.2	+3.1
KSH				*e*XP	sP	19 02 18.2	+3.9
KSH				*e*PP	PP	19 03 46.3	+2.2
KSH				*e*PCP	PcP	19 03 59.2	+0.6
KSH				*e*PPP	PPP	19 04 18.1	+1.9
KSH				*e*SCP		19 07 46.3	
KSH				*e*PCS		19 07 50.2	
KSH				*e*S	**S**	**19 08 21.6**	**+0.3**
KSH				*e*XS		19 08 39.3	
KSH				*e*SS	SS	19 11 25.4	+1.8
KSH				*e*SCS	ScS	19 12 02.4	+0.3
KSH				AMB	AMB		
	comp=Z,460nm,5.1s						
KSH				LR	LR		
	comp=N,1µm,6.0s						
KSH				LR	LR		
	comp=E,1µm,7.0s						
WBK	**Wadi Bani Khal**	**42.36**	**302**	P	**P**	**19 02 08.1**	**+2.3**
	SNR=6.4						
WRA	**Warramunga Arr**	**42.48**	**123**	P	**P**	**19 02 06.2**	**-0.7**
	comp=E,8.9nm,0.6s,mb4.5,baz=301,slow=9.1,SNR=123						
WRA				ScP		19 07 48.0	
	comp=E,1.5nm,1.0s,baz=303,slow=4.6,SNR=4.6						
WRA				S	**S**	**19 08 23.6**	**-3.5**
	comp=E,3.4nm,1.1s,baz=294,slow=16,SNR=7.0						
WRA	**Warramunga Arr**	**42.48**	**123**	P	**P**	**19 02 06.2**	**-0.7**
WRA				S	**S**	**19 08 23.6**	**-3.5**
WRAB	**Tennant Creek**	**42.49**	**123**	*e*P	**P**	**19 02 06.5**	**-0.4**
	comp=E,41nm,0.6s,mb5.2						
WRAB	**Tennant Creek**	**42.49**	**123**	⇓*i*P	**P**	**19 02 06.4**	**-0.6**
WB2	**Warramunga Arr**	**42.49**	**123**	⇓*i*P	**P**	**19 02 07.0**	**0.0**
WMQ	**Urumqi**	**42.57**	**350**	P	**P**	**19 02 07.7**	**+0.3**
WMQ				AP	pP	19 02 17.5	+2.6
WMQ				XP	sP	19 02 21.5	+3.4
WMQ				PP	PP	19 03 49.5	+0.7
WMQ				PPP	PPP	19 04 22.0	-0.3
WMQ				PCS		19 07 53.0	
WMQ				S	**S**	**19 08 27.0**	**-1.2**
WMQ				XS		19 08 43.0	
WMQ				SS	SS	19 11 31.0	-1.4
WMQ				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,190nm,4.4s						
WMQ				LR	LR		
	comp=N,850nm,23.6s,MS4.8						
WMQ				LR	LR		
	comp=E,1µm,24.8s,MS4.8						
WMQ				LR	LR		
	comp=Z,630nm,22.6s,MS4.5						
DL2	**Dalian**	**43.11**	**28**	P	**P**	**19 02 12.7**	**+0.9**
DL2				AP	pP	19 02 20.2	+0.9
DL2				XP	sP	19 02 24.5	+2.0
DL2				*e*S	**S**	**19 08 36.8**	**+0.8**
DL2				AMB	AMB		
	comp=Z,140nm,0.8s,mb5.7						
DL2				AMB	AMB		
	comp=Z,240nm,4.8s						
DL2				LR	LR		
	comp=N,520nm,14.4s,MS4.7						
DL2				LR	LR		
	comp=E,560nm,14.2s,MS4.7						
DL2				LR	LR		
	comp=Z,690nm,16.8s,MS4.6						
SMDO	**Samad**	**43.31**	**302**	⇑P	**P**	**19 02 15.9**	**+2.2**
BIDO	**Bidbid**	**43.43**	**303**	P	**P**	**19 02 16.9**	**+2.3**
	SNR=6.5						
FORT	**Forrest**	**43.87**	**140**	*e*P	**P**	**19 02 19.7**	**+1.7**
	comp=Z,50nm,0.7s,mb5.4						
BSY	**Bisya**	**43.91**	**301**	P	**P**	**19 02 20.8**	**+2.3**
	SNR=6.0						
ULHL	**Ulahol**	**44.32**	**338**	P	**P**	**19 02 22.3**	**+0.8**
	SNR=18						
KZA	**Kyzart**	**44.56**	**337**	P	**P**	**19 02 24.6**	**+1.1**
	SNR=10						
INCN	**Inchon**	**44.62**	**34**	*e*P	**P**	**19 02 23.8**	**-0.2**
	comp=Z,56nm,1.3s,mb5.2						
UCH	**Uchtor**	**44.98**	**336**	P	**P**	**19 02 28.0**	**+1.2**
	SNR=42						
TKM2	**Tokmak 2**	**45.14**	**338**	P	**P**	**19 02 29.0**	**+0.8**
	SNR=39						
KBK	**Karagaybulak**	**45.17**	**337**	P	**P**	**19 02 29.7**	**+1.3**
	SNR=66						
AML	**Almayashu**	**45.23**	**335**	P	**P**	**19 02 30.1**	**+1.2**
	SNR=26						
KS15	**Wonju Array Si**	**45.30**	**35**	*e*P	**P**	**19 02 29.4**	**-0.1**
KS15				*e*PP	pP	19 02 37.8	+0.8
AAK	**Ala-Archa**	**45.33**	**336**	P	**P**	**19 02 30.7**	**+1.1**
	SNR=19						
AAK	**Ala-Archa**	**45.33**	**336**	*e*P	**P**	**19 02 29.5**	**-0.1**
	comp=Z,116nm,1.5s,mb5.5						
AAK				*e*pP	pP	19 02 37.7	+0.5
AAK	**Ala-Archa**	**45.33**	**336**	*e*P	**P**	**19 02 29.5**	**-0.1**
AAK				*e**PP	pP	19 02 37.7	+0.5

AAK				pmax	pmax		
	comp=Z,116nm,1.5s,mb5.5						
WHFO	Wadi Hawf	45.40	293	⇑P	P	19 02 31.2	+0.7
	SNR=7.6						
FRU	Bishkek	45.45	337	eP	P	19 02 32.0	+1.5
FRU				e		19 02 49.0	
FRU				pmax	pmax		
	comp=Z,100nm,1.8s,mb5.3						
CHMS	Chumysh	45.53	337	P	P	19 02 31.7	+0.5
	SNR=14						
ASHO	Ashiyiah	45.63	303	⇑P	P	19 02 34.3	+2.0
	SNR=5.5						
EKS2	Erkin-Say	45.64	336	P	P	19 02 33.2	+1.1
	SNR=36						
USP	Ospenovka	45.86	337	P	P	19 02 34.3	+0.5
	SNR=56						
SNY	Shenyang	46.33	27	⇑P	P	19 02 37.2	-0.3
SNY				AP	pP	19 02 45.0	-0.1
SNY				XP	sP	19 02 47.3	-0.9
SNY				S	S	19 09 25.9	+3.5
SNY				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.5						
SNY				AMB	AMB		
	comp=Z,300nm,5.3s						
SNY				LR	LR		
	comp=N,1µm,14.4s						
SNY				LR	LR		
	comp=Z,1µm,18.1s,MS4.9						
SONM	Songino Array	46.46	9	P	P	19 02 38.7	+0.3
	comp=Z,34nm,0.9s,mb5.3,baz=190,slow=8.7,SNR=254						
SONM				PcP	PcP	19 04 13.0	-0.3
	comp=Z,12nm,0.9s,baz=190,slow=3.2,SNR=7.3						
SONM				ScP		19 08 03.1	
	comp=Z,1.9nm,0.9s,baz=178,slow=1.8,SNR=4.9						
SONM				LR	LR	19 25 00.1	
	comp=Z,2µm,18.7s,MS5.0,baz=188,slow=40						
MKAR	Makanchi Array	46.55	346	P	P	19 02 39.1	-0.1
	comp=Z,41nm,0.8s,mb5.4,baz=160,slow=8.0,SNR=210						
MKAR				PcP	PcP	19 04 13.4	-0.2
	comp=Z,6.1nm,0.8s,baz=146,slow=5.2,SNR=2.0						
MKAR				LR	LR	19 26 04.0	
	comp=Z,652nm,20.6s,MS4.6,baz=162,slow=41						
KKAR	Karatay Array	47.39	334	i P	P	19 02 45.6	-0.4
KKAR				pmax	pmax		
	comp=Z,107nm,1.3s,mb5.6						
ZAK	Zakamensk	48.59	5	⇑iP	P	19 02 55.5	+0.4
ZAK				e		19 04 19.5	
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
CN2	Changchun	48.73	27	⇑P	P	19 02 55.9	-0.4
CN2				eXP	sP	19 03 09.2	+2.2
CN2				eS	S	19 09 56.2	-0.1
CN2				AMB	AMB		
	comp=Z,60nm,1.3s,mb5.5						
CN2				AMB	AMB		
	comp=Z,400nm,6.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s,MS5.2						
CN2				LR	LR		
	comp=E,1µm,15.0s,MS5.2						
CN2				LR	LR		
	comp=Z,1µm,16.0s,MS5.0						
MOY	Mondy	49.70	3	eP	P	19 03 03.8	+0.1
MOY				pmax	pmax		
	comp=Z,57nm,1.8s,mb5.3						
IRK	Irkutsk	50.53	6	eP	P	19 03 10.1	+0.1
IRK				pmax	pmax		
	comp=Z,89nm,1.7s,mb5.4						
KURK	Kurchatov	51.10	345	eP	P	19 03 14.2	-0.1
	comp=Z,79nm,1.1s,mb5.6						
KURK	Kurchatov	51.10	345	⇓iP	P	19 03 13.8	-0.5
PMG	Port Moresby	51.10	104	eP	P	19 03 14.7	-0.1
	comp=Z,41nm,0.8s,mb5.4						
PMG	Port Moresby	51.10	104	c iP	P	19 03 14.6	-0.2
MAJO	Matsushiro	51.24	43	eP	P	19 03 15.2	-0.4
	comp=Z,29nm,0.8s,mb5.3						
MAJO	Matsushiro	51.24	43	eP	P	19 03 15.2	-0.4
MAJO				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
MAT	Matsushiro	51.24	43	P	P	19 03 15.1	-0.5
MAT				S	S	19 10 40.0	+8.8
MAT	Matsushiro	51.24	43	eP	P	19 03 15.0	-0.6
	comp=Z,90nm,1.6s,mb5.5						
MAT				eS	S	19 10 40.0	+8.8
MAT				LR	LR		
	comp=Z,720nm,21.0s,MS4.7						
MAT	Matsushiro	51.24	43	eP	P	19 03 15.0	-0.6
MAT				eS	S	19 10 40.0	+8.8
MAT				pmax	pmax		
	comp=Z,90nm,1.6s,mb5.5						
MAT				MLR	MLR		
	comp=Z,720nm,21.0s,MS4.7						
MJAR	Matsushiro Arr	51.24	43	P	P	19 03 15.3	-0.3
	comp=Z,41nm,1.0s,mb5.3,baz=215,slow=6.7,SNR=80						
MJAR	Matsushiro Arr	51.24	43	P	P	19 03 15.3	-0.3
MDJ	Mudanjiang	51.30	29	P	P	19 03 16.3	+0.3
MDJ				AP	pP	19 03 24.3	+0.6
MDJ				XP	sP	19 03 28.6	+1.9
MDJ				PP	PP	19 05 17.2	+3.4
MDJ				PCS		19 08 22.9	
MDJ				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,240nm,5.6s						
MDJ				LR	LR		
	comp=N,490nm,17.6s,MS4.9						
MDJ				LR	LR		
	comp=E,830nm,17.6s,MS4.9						
MDJ				LR	LR		
	comp=Z,1µm,14.5s,MS5.1						
CIT	Chita	51.81	13	eP	P	19 03 20.2	+0.5
CIT				e	pP	19 03 28.5	+1.0
CIT				pmax	pmax		
	comp=Z,160nm,1.7s,mb5.7						
ZAL	Zalesovo	52.85	351	P	P	19 03 26.6	-0.9
	comp=Z,92nm,0.8s,mb5.8,baz=303,slow=6.2,SNR=411						
ZAL				LR	LR	19 31 02.3	
	comp=Z,286nm,19.7s,MS4.3,baz=298,slow=42						
CTA	Charters Tower	52.90	117	eP	P	19 03 28.5	+0.2
	comp=Z,20nm,0.8s,mb5.1						
CTA	Charters Tower	52.90	117	eP	P	19 03 28.5	+0.2
CTA				pmax	pmax		
	comp=Z,20nm,0.8s						
STKA	Stephens Creek	53.89	132	eP	P	19 03 35.8	+0.4
	comp=Z,16nm,0.9s,mb5.0						
STKA	Stephens Creek	53.89	132	P	P	19 03 35.1	-0.3
	comp=Z,8.5nm,0.9s,mb4.7,baz=308,slow=9.4,SNR=9.4						
STKA				LR	LR	19 29 42.1	
	comp=Z,571nm,20.8s,MS4.6,baz=122,slow=40						
NVS	Novosibirsk	53.98	350	⇑iP	P	19 03 31.1	-4.6
NVS				i S	S	19 11 00.8	-7.5
NVS				pmax	pmax		
	comp=Z,103nm,1.0s,mb5.7						
NVS				pmax	pmax		
	comp=N,55nm,0.9s						
NVS				pmax	pmax		
	comp=E,32nm,0.8s						
NVS				smax			
	comp=N,19nm,1.4s						
NVS				smax			
	comp=E,56nm,1.5s						
UMR	Umm Al-Rimmam	54.34	305	eP	P	19 03 38.4	-0.4
UMR				AMb	AMB	19 03 54.3	
	comp=Z,80nm,1.1s,mb5.6						
KAMS	Al Khamasin	54.41	294	P	P	19 03 39.5	+0.2
NAY	Al-Naaiem	54.62	305	eP	P	19 03 40.2	-0.6
NAY				AMb	AMB	19 03 55.2	
	comp=Z,32nm,0.8s,mb5.4						
ATD	Arta Tunnel	54.64	283	P	P	19 03 40.4	-0.8
	comp=Z,12nm,1.0s,mb4.9,baz=100,slow=17,SNR=3.5						
ATD				LR	LR	19 24 36.5	
	comp=Z,271nm,18.0s,MS4.4,baz=358,slow=33						
ATD	Arta Tunnel	54.64	283	P	P	19 03 40.4	-0.8
ATD				LR	LR	19 24 36.5	
MIB	Mutribah	54.74	306	eP	P	19 03 41.0	-0.7
MIB				AMb	AMB	19 03 51.2	
	comp=Z,151nm,0.9s,mb6.0						
MZLS	Mizel	54.75	298	P	P	19 03 42.5	+0.7
DJNS	Zahran al Janu	54.85	290	P	P	19 03 43.2	+0.6
VOSK	Vostochnaya	55.12	341	P	P	19 03 43.0	-1.2
VOSK				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.3						
TATS	Tathlith	55.26	292	P	P	19 03 45.8	+0.2
BVA0	Borovoye Array	55.56	341	i P	P	19 03 46.2	-1.2
BVA0				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BVAR	Borovoye Array	55.56	341	P	P	19 03 46.2	-1.2
	comp=Z,41nm,0.7s,mb5.6,baz=142,slow=8.5,SNR=305						
BRVK	Borovoye	55.63	341	⇑eP	P	19 03 46.6	-1.2
	comp=Z,24nm,0.8s,mb5.3						
BRVK				epP	pP	19 03 54.1	-1.5
BRVK	Borovoye	55.63	341	⇑eP	P	19 03 46.6	-1.2
BRVK				e*PP	pP	19 03 54.1	-1.5
BRVK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
KLR	Kul'dur	55.67	27	κ iP	P	19 03 45.2	-3.0
KLR				e	pP	19 03 52.8	-3.2
KLR				pmax	pmax		
	comp=E,78nm,1.8s						
KLR				pmax	pmax		
	comp=Z,110nm,1.8s,mb5.6						
CHKZ	Chkalovo	56.04	341	eP	P	19 03 49.9	-0.9
	comp=Z,78nm,0.8s,mb5.8						
CHKZ				epP	pP	19 03 58.1	-0.4
CHKZ	Chkalovo	56.04	341	P	P	19 03 49.9	-0.9
CHKZ				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.6						
AFFS	'Afif	56.67	297	P	P	19 03 56.5	+0.8
AB31	Akbulak array	56.86	332	i P	P	19 03 55.5	-1.2
AB31				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.5						
BLJS	Baljurashi	57.06	292	P	P	19 04 00.1	+1.5
BOD	Bodaibo	57.34	11	eP	P	19 03 59.3	-0.7
BOD				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.5						
LTHS	Al Lith	58.23	293	P	P	19 04 07.5	+0.8
AKTO	Aktyubinsk	58.58	332	P	P	19 04 07.2	-1.6
	comp=Z,20nm,0.9s,mb5.2,baz=137,slow=6.4,SNR=68						
HILS	Ha'il	58.62	301	P	P	19 04 10.3	+0.9
CLNS	Chul'man	59.10	17	eP	P	19 04 12.5	+0.2
CLNS				pmax	pmax		
	comp=N,28nm,0.7s						
CLNS				pmax	pmax		
	comp=E,23nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,63nm,0.7s,mb5.8						
YSS	Yuzh-Sakhalins	59.83	35	eP	P	19 04 17.8	+0.3
	comp=Z,160nm,1.1s,mb6.0						
YSS	Yuzh-Sakhalins	59.83	35	⇑iP	P	19 04 17.0	-0.5
YSS				pmax	pmax		
	comp=Z,216nm,1.4s,mb6.0						
YSS				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.8						
KMBO	Kilima Mbogo	59.92	268	P	P	19 04 18.1	-0.5
	comp=Z,5.9nm,0.8s,mb4.7,baz=62,slow=11,SNR=29						
KMBO				LR	LR	19 26 47.7	
	comp=Z,416nm,19.6s,MS4.6,baz=95,slow=33						
KMBO	Kilima Mbogo	59.92	268	P	P	19 04 18.1	-0.5
KMBO				LR	LR	19 26 47.7	
GNI	Garni	60.73	316	P	P	19 04 23.3	-0.4
	comp=Z,14nm,0.9s,mb5.1,baz=221,slow=14,SNR=4.5						
GNI	Garni	60.73	316	eP	P	19 04 23.6	-0.1
	comp=Z,24nm,0.9s,mb5.3						
GNI				epP	pP	19 04 31.0	-0.6
GNI	Garni	60.73	316	eP	P	19 04 23.6	-0.1
GNI				e*PP	pP	19 04 31.0	-0.6
GNI				pmax	pmax		
	comp=Z,24nm,0.9s						
ORR	Orenburg	60.91	331	⇓iP	P	19 04 23.8	-1.0
ORR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.4						
ORR				MLR	MLR		
	comp=Z,230nm,20.0s,MS4.3						
YNBS	Yanbu' al Bahr	61.22	297	P	P	19 04 28.2	+0.9
SVE	Sverdlovsk	62.01	338	eP	P	19 04 30.8	-1.4
SVE				e		19 06 50.0	
SVE				ePPP	PPP	19 08 24.0	+4.1
SVE				eS	S	19 13 12.0	+19
SVE				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.8						
SVE				MLR	MLR		
	comp=N,200nm,14.0s,MS4.7						
SVE				MLR	MLR		
	comp=E,300nm,14.0s,MS4.7						
SVE				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.8						
UMJS	Umm Lajj	62.01	298	P	P	19 04 33.9	+1.3
ZEI	Tsey	62.42	318	i P	P	19 04 31.2	-3.9
ZEI				i *PP	pP	19 04 43.4	+0.4
ZEI				i		19 06 52.9	
ZEI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
ARU	Arti	62.51	337	eP	P	19 04 33.8	-1.6
	comp=Z,47nm,1.0s,mb5.6						
ARU				epP	pP	19 04 42.1	-1.3
ARU	Arti	62.51	337	⇑iP	P	19 04 33.4	-2.1
ARU				e		19 05 12.3	
ARU				e		19 06 48.4	
ARU				eS	S	19 12 58.7	-0.9
ARU				eSS	SS	19 17 03.0	-2.7
ARU				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.4						
ARU				MLR	MLR		
	comp=N,200nm,20.0s,MS4.5						
ARU				MLR	MLR		
	comp=E,300nm,20.0s,MS4.5						
ARU				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.5						
TBKS	Tabuk	63.32	301	P	P	19 04 42.3	+1.1
QURS	Qurayyt al Mil	63.44	304	P	P	19 04 42.5	+0.6
KIV	Kislovodsk	63.72	319	eP	P	19 04 42.2	-1.5
	comp=Z,71nm,1.1s,mb5.6						
KIV				epP	pP	19 04 51.0	-0.6
KIV	Kislovodsk	63.72	319	⇓eP	P	19 04 42.0	-1.7
KIV				eSS	SS	19 17 27.8	+3.2
KIV				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
KIV				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.2						
GOF	Gofitskoye	63.97	320	eP	P	19 04 53.7	+8.4
AYUS	'Aynunah	64.42	300	P	P	19 04 49.3	+0.8
BDAS	Al Bad'	64.61	301	P	P	19 04 50.1	+0.3
JMOS	Jabal al Moall	64.77	301	P	P	19 04 51.4	+0.6
YAK	Yakutsk	64.78	16	⇑eP	P	19 04 49.1	-1.1
	comp=Z,312nm,0.9s						
YAK	Yakutsk	64.78	16	c iP	P	19 04 49.4	-0.9
YAK				e*PP	pP	19 04 59.4	+1.3
YAK				e		19 05 20.3	
YAK				pmax	pmax		
	comp=Z,156nm,1.0s,mb6.0						
YAK				pmax	pmax		
	comp=N,58nm,1.1s						
YAK				pmax	pmax		
	comp=E,40nm,1.2s						
YAK				MLR	MLR		
	comp=Z,809nm,17.0s,MS5.0						
YAK				MLR	MLR		
	comp=N,518nm,16.0s,MS4.9						
YAK				MLR	MLR		
	comp=E,326nm,18.0s,MS4.9						
HAQS	Haql	64.89	301	P	P	19 04 52.0	+0.4
VRHR	Novokhopersk	67.50	326	eP	P	19 05 06.1	-1.7
VRHR				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,20nm,0.7s						
CSS	Prodhromos	67.58	307	eP	P	19 05 07.2	-1.4
	comp=E,24nm,1.1s,mb5.1						
BR131	Keskin Array S	68.58	312	eP	P	19 05 13.2	-1.6
	comp=E,11nm,0.9s,mb4.8						
BRTR	Keskin Array B	68.58	312	P	P	19 05 13.4	-1.4
	comp=E,3.3nm,0.8s,mb4.3,baz=131,slow=7.2,SNR=23						
ANTO	Ankara	69.24	312	eP	P	19 05 17.7	-1.1
	comp=E,14nm,0.8s,mb4.9						
ANTO	Ankara	69.24	312	eP	P	19 05 17.7	-1.1
ANTO				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
SIM	Simferopol'	69.79	318	⇓eP	P	19 05 21.5	-0.6
SIM				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
LSZ	Lusaka	70.23	253	P	P	19 05 23.5	-1.7
	comp=Z,1.3nm,0.4s,mb4.2,baz=85,slow=6.2,SNR=6.0						
LSZ				LR	LR	19 32 09.0	
	comp=Z,564nm,19.0s,MS4.8,baz=161,slow=32						
LSZ	Lusaka	70.23	253	eP	P	19 05 24.8	-0.4
	comp=Z,8.2nm,1.1s,mb4.6						
LSZ	Lusaka	70.23	253	eP	P	19 05 24.8	-0.4
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
MATP	Matopo	70.70	248	LR	LR	19 33 46.1	
	comp=Z,471nm,18.1s,MS4.8,baz=72,slow=34						
MA2	Magadan	70.75	26	eP	P	19 05 27.6	-0.1
	comp=Z,44nm,0.7s,mb5.5						
MA2				epP	pP	19 05 36.4	+0.9
MA2	Magadan	70.75	26	eP	P	19 05 27.6	0.0
MA2				e*PP	pP	19 05 36.4	+0.9
MA2				pmax	pmax		
	comp=Z,44nm,0.7s,mb5.5						
MOS	Moscow	71.69	329	eP	P	19 05 37.0	+3.6
MOS				e		19 05 56.3	
MOS				pmax	pmax		
	comp=Z,79nm,0.7s,mb5.8						
PET	Petropavlovsk	71.70	34	eP	P	19 05 33.7	+0.2
PET				eS	S	19 14 49.9	-0.5
PET				ePS	PS	19 15 21.2	-2.3
PET				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.5						
PET				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.6						
OBN	Obninsk	71.98	328	eP	P	19 05 34.1	-1.0
	comp=Z,19nm,0.9s,mb5.0						
OBN				epP	pP	19 05 40.6	-2.5
OBN	Obninsk	71.98	328	c eP	P	19 05 33.5	-1.6
OBN				e		19 08 12.8	
OBN				pmax	pmax		
	comp=Z,44nm,1.7s,mb5.1						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.4						
TIXI	Tiksi	72.52	10	⇓iP	P	19 05 36.0	-2.0
KLMR	Klimovskoe	73.09	334	eP	P	19 05 38.0	-3.5
KLMR				e		19 08 22.5	
KLMR				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.3						
KLMR				pmax	pmax		
	comp=Z,260nm,6.0s						
SEY	Seymchan	73.16	23	⇑eP	P	19 05 41.8	-0.1
MAW	Mawson	73.37	193	eP	P	19 05 43.5	+0.4
	comp=Z,6.5nm,1.0s,mb4.5						
MAW	Mawson	73.37	193	P	P	19 05 42.7	-0.3
	comp=Z,4.7nm,0.8s,mb4.5,baz=34,slow=8.8,SNR=12						
MAW				LR	LR	19 31 31.5	
	comp=Z,342nm,21.8s,MS4.6,baz=188,slow=30						
MAW	Mawson	73.37	193	eP	P	19 05 43.5	+0.4
MAW				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TIRR	Tirgusor	73.56	316	⇓P	P	19 05 43.9	-0.7
TIRR	Tirgusor	73.56	316	eP	P	19 05 43.5	-1.2
HARR	Harsova	73.95	316	⇓P	P	19 05 45.2	-1.7
HARR	Harsova	73.95	316	⇓P	P	19 05 45.2	-1.7
LBTB	Lobatse	74.12	243	LR	LR	19 33 30.2	
	comp=Z,515nm,20.3s,MS4.8,baz=86,slow=32						
LBTB	Lobatse	74.12	243	eP	pP	19 06 00.7	+4.5
IDI	Anoyia	74.42	306	P	P	19 05 49.0	-0.8
	comp=Z,14nm,0.9s,mb4.9,baz=92,slow=3.1,SNR=3.9						
IDI				LR	LR	19 41 45.6	
	comp=Z,146nm,18.9s,MS4.3,baz=207,slow=38						
AKASG	Malin Array Be	74.65	322	P	P	19 05 49.0	-1.8
	comp=Z,6.1nm,0.6s,mb4.7,baz=90,slow=5.3,SNR=36						
AKASG	Malin Array Be	74.65	322	i P	P	19 05 49.7	-1.1
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VRI	Vrincioaia	75.05	317	⇓P	P	19 05 53.0	-0.2
BOSA	Boshof	75.05	240	P	P	19 05 51.2	-2.4
	comp=Z,5.8nm,0.9s,mb4.5,baz=70,slow=3.9,SNR=5.5						
BOSA				LR	LR	19 37 14.6	
	comp=Z,448nm,18.3s,MS4.8,baz=130,slow=34						
MLR	Muntele Rosu	75.50	317	P	P	19 05 54.9	-0.9
	comp=Z,12nm,0.9s,mb4.8,baz=142,slow=1.2,SNR=14						
VAY	Valandovo	77.16	312	eP	P	19 06 03.8	-1.4
VAY	Valandovo	77.16	312	eP	P	19 06 03.8	-1.4
DRGR		77.96	317	⇑P	P	19 06 08.5	-1.0
DRGR		77.96	317	⇑P	P	19 06 08.5	-1.0
BOLS	Boljevac	77.99	314	⇑iP	P	19 06 08.4	-1.3
BIA	Bitola	78.04	311	eP	P	19 06 07.8	-2.3
BIA	Bitola	78.04	311	eP	P	19 06 07.8	-2.3
SKO	Skopje	78.09	312	eP	P	19 06 09.4	-0.9
SKO	Skopje	78.09	312	eP	P	19 06 09.4	-0.9
APA	Apatity	78.44	339	⇑iP	P	19 06 12.6	+0.9
APA				i	pP	19 06 20.0	+0.2
APA				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
OHR	Ohrid	78.45	311	eP	P	19 06 09.8	-2.5
OHR	Ohrid	78.45	311	eP	P	19 06 09.8	-2.5
KWP	Kalwaria	78.48	320	eP	P	19 06 12.2	0.0
KWP	Kalwaria	78.48	320	eP	P	19 06 12.3	0.0
KOLS	Kolonicke sedl	78.63	320	eP	P	19 06 14.0	+0.9
KOLS				epP	pP	19 06 23.5	+2.4
GRUS	Gruza	78.89	314	i P	P	19 06 13.8	-0.8
SUW	Suwalki	79.06	325	eP	P	19 06 14.8	-0.5
CRVS	Cervenica-Dubn	79.15	319	eP	P	19 06 16.0	0.0
FINES	FINESS Array B	79.34	332	P	P	19 06 15.8	-0.9
	comp=Z,10nm,0.7s,mb4.9,baz=94,slow=6.2,SNR=29						
FINES				LR	LR	19 42 19.5	
	comp=Z,264nm,19.6s,MS4.6,baz=118,slow=36						
FINES	FINESS Array B	79.34	332	i P	P	19 06 16.7	0.0
FINES				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KAF	Kangasniemi	79.42	333	ep	P	19 06 16.3	-0.9
	comp=Z,16nm,0.8s,mb5.0,baz=106,slow=4.6						
KAF	Kangasniemi	79.42	333	eP	P	19 06 16.3	-0.9
KAF				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
DIVS	Divcibare	79.44	314	i P	P	19 06 16.4	-1.2
SUR	Sutherland	79.47	237	LR	LR	19 39 15.9	
	comp=Z,568nm,18.4s,MS4.9,baz=30,slow=34						
KECS	Kecovo	79.72	319	eP	P	19 06 19.4	+0.3
KECS				e	pP	19 06 26.2	-0.9
KECS				e		19 33 14.0	
KECS	Kecovo	79.72	319	eP	P	19 06 19.4	+0.3
KECS				e	pP	19 06 26.2	-0.9
KECS				e		19 33 14.1	
PSZ	Piszkesteto	80.03	318	eP	P	19 06 20.7	0.0
	comp=Z,20nm,1.1s,mb5.0						
PSZ	Piszkesteto	80.03	318	eP	P	19 06 20.7	0.0
PSZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
FX1	Attu Island--F	80.09	37	eP	P	19 06 21.4	+0.5
OJC	Ojcow	80.43	321	eP	P	19 06 22.6	-0.2
BILL	Bilibino	80.55	21	eP	P	19 06 22.6	-0.4
	comp=Z,22nm,1.2s,mb5.0						
BILL				epP	pP	19 06 31.9	+0.7
BILL	Bilibino	80.55	21	⇑eP	P	19 06 22.5	-0.6
BILL				e		19 09 33.3	
BILL				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
BILL				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
SYO	Syowa Base	80.64	198	⇓P	P	19 06 23.4	-0.1
SYO	Syowa Base	80.64	198	⇓PcP	PcP	19 06 32.6	+1.9
SYO	Syowa Base	80.64	198	⇓eP	P	19 06 23.4	-0.1
SYO				ePcP	PcP	19 06 32.6	+1.9
PKSM	Moragy	80.65	316	⇓iP	P	19 06 23.9	-0.2
TSUM	Tsumeb	80.74	250	LR	LR	19 40 36.2	
	comp=Z,211nm,18.4s,MS4.5,baz=321,slow=34						
TSUM	Tsumeb	80.74	250	eP	P	19 06 25.3	+0.2
	comp=Z,14nm,1.1s,mb4.8						
TSUM				epP	pP	19 06 34.3	+1.2
VYHS	Vyhne	80.81	319	eP	P	19 06 24.8	-0.1
VYHS				e		19 06 30.8	
VYHS				e		19 32 59.2	
VYHS				e		19 33 35.8	
VYHS				e		19 35 04.8	
SRO	Srobarova	81.07	318	eP	P	19 06 26.8	+0.6
SRO				e	pP	19 06 34.0	-0.3
SRO				e		19 32 54.5	
SRO				e		19 33 25.2	
TIP	Timpagrande	81.32	309	eP	P	19 06 28.0	+0.2
TIP				epP	pP	19 06 36.4	+0.6
OKC	Ostrava-Krasne	81.43	320	eP	P	19 06 27.3	-0.8
OKC				epP	pP	19 06 35.5	-0.6
TDS	Terranova Siba	81.68	310	P	P	19 06 31.1	+1.5
	comp=Z,69nm,0.8s,mb5.6						
TDS	Terranova Siba	81.68	310	P	P	19 06 31.1	+1.5
TDS				pmax	pmax		
	comp=Z,69nm,0.8s,mb5.6						
MORC	Moravsky Berou	81.81	320	eP	P	19 06 29.8	-0.2
	comp=Z,23nm,1.3s,mb5.0						
MORC				epP	pP	19 06 38.6	+0.4
MORC	Moravsky Berou	81.81	320	eP	P	19 06 29.8	-0.3
MORC				e*PP	pP	19 06 38.6	+0.5
MORC				pmax	pmax		

	comp=Z,23nm,1.3s,mb5.0						
ARCES	ARCESS Array B	81.85	340	P	P	19 06 30.3	+0.5
	comp=Z,18nm,1.0s,mb5.0,baz=100,slow=5.0,SNR=15						
ARCES				LR	LR	19 45 12.1	
	comp=Z,285nm,19.3s,MS4.7,baz=113,slow=37						
ARE0	ARCESS Array S	81.85	340	*e*P	P	19 06 30.1	+0.2
ZST	Bratislava	81.92	318	*e*P	P	19 06 31.0	+0.3
ZST				*e*pP	pP	19 06 38.8	+0.1
VRAC	Vranov	82.38	319	P	P	19 06 34.1	+1.1
	comp=Z,4.5nm,0.4s,mb4.8,baz=149,slow=5.9,SNR=2.2						
SGO	Sicignano	82.54	310	P	P	19 06 34.4	+0.4
	comp=Z,6.0nm,0.8s,mb4.7						
SGO	Sicignano	82.54	310	P	P	19 06 34.4	+0.4
SGO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
DPC	Dobruska-Polom	82.66	320	*e*P	P	19 06 34.5	+0.1
UPC	Upice	82.87	321	*e*P	P	19 06 35.7	+0.2
ARSA	Arzberg	82.89	317	⇓*i*P	P	19 06 36.5	+0.8
	comp=Z,19nm,1.1s,mb5.0						
ARSA	Arzberg	82.89	317	⇓P	P	19 06 36.5	+0.8
	comp=Z,19nm,1.1s,mb5.0						
BOJS	Bojanci	82.94	315	*e*P	P	19 06 36.1	+0.1
VAE	Valguarnera	83.05	307	P	P	19 06 37.9	+1.2
	comp=Z,6.7nm,0.7s,mb4.8,baz=117,slow=11,SNR=3.1						
TREC	Trest	83.10	319	*e*P	P	19 06 35.2	-1.5
PERS	Pernice	83.12	317	*e*P	P	19 06 37.5	+0.6
URZ	Urewera	83.32	129	LR	LR	19 43 17.2	
	comp=Z,352nm,20.8s,MS4.7,baz=340,slow=35						
LJU	Ljubljana	83.48	316	*e*P	P	19 06 39.0	+0.2
OBKA	Obir	83.50	316	⇓*i*P	P	19 06 39.7	+0.8
	comp=Z,17nm,1.1s,mb5.1						
MSC	Monte Massico	83.59	311	P	P	19 06 39.6	+0.1
PRU	Pruhonice	83.77	320	*e*P	P	19 06 39.8	-0.3
PRU				*e*pP	pP	19 06 47.5	-0.7
MOA	Molln	83.79	318	⇓P	P	19 06 40.4	+0.1
	comp=Z,8.5nm,1.0s,mb4.8						
MOA	Molln	83.79	318	⇓P	P	19 06 40.4	+0.1
	comp=Z,8.5nm,1.0s,mb4.8						
PVCC	Panska Ves	83.79	320	*e*P	P	19 06 40.9	+0.6
PVCC				*e*pP	pP	19 06 48.8	+0.5
VOY	Vojsko	83.92	316	*e*P	P	19 06 40.7	-0.3
PTQR	Pietraquaria	84.06	312	P	P	19 06 42.1	+0.3
AQU	L'Aquila	84.07	312	P	P	19 06 42.7	+0.8
	comp=Z,77nm,1.2s,mb5.7						
AQU	L'Aquila	84.07	312	P	P	19 06 42.7	+0.8
AQU				pmax	pmax		
	comp=Z,77nm,1.2s,mb5.7						
ROBS	Robic	84.20	316	*e*P	P	19 06 42.3	-0.1
BRG	Berggiesshubel	84.22	321	*e*P	P	19 06 42.6	+0.2
	comp=Z,8.1nm,1.0s,mb4.8						
BRG				*e*	pP	19 06 50.4	-0.1
BRG	Berggiesshubel	84.22	321	*e*P	P	19 06 42.6	+0.2
BRG				*e*	pP	19 06 50.4	-0.1
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
BRG				pmax	pmax		
	comp=Z,61nm,1.9s,mb5.4						
GEC2	GERESS Array S	84.23	319	*e*P	P	19 06 42.8	+0.3
	comp=Z,18nm,1.0s,mb5.2						
GEC2	GERESS Array S	84.23	319	*e*P	P	19 06 42.8	+0.3
GEC2				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
GERES	GERESS Array B	84.23	319	P	P	19 06 42.6	+0.1
	comp=Z,11nm,0.9s,mb5.0,baz=104,slow=5.5,SNR=79						
GERES				PP	PP	19 09 56.8	-2.1
	comp=Z,1.6nm,1.0s,baz=90,slow=5.3,SNR=3.6						
NRCA	Norcia	84.31	313	P	P	19 06 43.5	+0.5
PTCC	Patocco-Chiusa	84.32	316	P	P	19 06 43.0	0.0
KHC	Kasperske Hory	84.33	319	*e*P	P	19 06 42.3	-0.7
KHC				*e*pP	pP	19 06 50.5	-0.6
KHC				*e*x	x	19 07 00.0	
KBA	Koelnbreinsper	84.36	317	⇓*i*P	P	19 06 43.2	0.0
	comp=Z,11nm,1.0s,mb5.0,SNR=8.9						
KBA	Koelnbreinsper	84.36	317	⇓*i*P	P	19 06 43.2	0.0
	comp=Z,11nm,1.0s,mb5.0						
KBA	Koelnbreinsper	84.36	317	⇓*i*P	P	19 06 43.2	0.0
KBA				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.9						
GMNA	Gemona	84.39	316	P	P	19 06 43.8	+0.4
SNTG	Esanatoglia	84.45	313	P	P	19 06 44.4	+0.6
ARV	Arcevia	84.47	313	P	P	19 06 44.4	+0.6
	comp=Z,16nm,0.8s,mb5.2						
ARV	Arcevia	84.47	313	P	P	19 06 44.4	+0.6
ARV				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.2						
FSSB	Fossombrone	84.59	314	P	P	19 06 45.5	+1.1
MNS	Montasola	84.61	312	P	P	19 06 43.6	-1.0
FVI	Forni Avoltri	84.73	316	P	P	19 06 45.5	+0.5
	comp=Z,78nm,1.8s,mb5.5						
FVI	Forni Avoltri	84.73	316	P	P	19 06 45.5	+0.5
FVI				pmax	pmax		
	comp=Z,78nm,1.8s,mb5.5						
WET	Wettzell	84.79	319	*e*P	P	19 06 45.7	+0.4
	comp=Z,11nm,0.9s,mb5.0						
WET	Wettzell	84.79	319	*e*P	P	19 06 45.7	+0.4
WET				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0						
CLL	Collm	84.83	321	P	P	19 06 45.2	-0.3
	comp=Z,logA/T=0.9,mb4.8						
CLL				*e**PP	pP	19 06 55.0	+1.4
CLL	Collm	84.83	321	*i* P	P	19 06 45.2	-0.3
	comp=Z,7.0nm,0.9s,mb4.8						
CLL				*e*	pP	19 06 55.0	+1.4
CLL	Collm	84.83	321	*i* P	P	19 06 45.2	-0.3
CLL				*e*	pP	19 06 55.0	+1.4
CLL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
HFS	Hagfors	85.08	330	P	P	19 06 47.0	+0.6
	comp=Z,13nm,1.1s,mb5.0,baz=108,slow=4.7,SNR=6.9						
NKC	Novy Kostel	85.13	320	*e*P	P	19 06 45.4	-1.5
CRE	Caprese Michel	85.19	313	P	P	19 06 47.9	+0.5
	comp=Z,24nm,1.2s,mb5.2						
CRE	Caprese Michel	85.19	313	P	P	19 06 47.9	+0.5
CRE				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.2						
SFI	Santa Sofia	85.27	314	P	P	19 06 49.3	+1.5
	comp=Z,33nm,1.0s,mb5.4						
SFI	Santa Sofia	85.27	314	P	P	19 06 49.3	+1.5
SFI				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.4						
PGD	Poggio Sodo	85.36	314	P	P	19 06 49.9	+1.6
	comp=Z,33nm,1.3s,mb5.3						
PGD	Poggio Sodo	85.36	314	P	P	19 06 49.9	+1.6
PGD				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.3						
CTI	Castel Tesino	85.49	316	P	P	19 06 49.7	+0.9
	comp=Z,30nm,1.0s,mb5.4						
CTI	Castel Tesino	85.49	316	P	P	19 06 49.7	+0.9
CTI				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.4						
VMG	Vicchio	85.49	314	P	P	19 06 50.3	+1.4
WTTA	Wattenberg	85.54	317	*i* P	P	19 06 49.0	0.0
	comp=Z,16nm,0.9s,mb5.2,SNR=6.7						
WTTA	Wattenberg	85.54	317	*i* P	P	19 06 49.0	-0.1
WTTA				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
WATA	Walderalm	85.58	317	⇑*i*P	P	19 06 49.3	0.0
	comp=Z,9.6nm,0.7s,mb5.2						
WATA	Walderalm	85.58	317	⇑P	P	19 06 49.3	0.0
WATA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.2						
MOX	Moxa	85.68	320	*i* P	P	19 06 49.7	0.0
MOX	Moxa	85.68	320	*e*P	P	19 06 49.7	0.0
SQTA	Sankt Quirin	85.83	317	⇓*i*P	P	19 06 50.6	+0.1
	comp=Z,9.1nm,0.7s,mb5.1						
SQTA	Sankt Quirin	85.83	317	⇓P	P	19 06 50.6	+0.1
	comp=Z,9.1nm,0.7s,mb5.1						
SQTA	Sankt Quirin	85.83	317	⇓P	P	19 06 50.6	+0.1
SQTA				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.1						
GRA1	Grafenberg Arr	85.90	320	*e*P	P	19 06 51.3	+0.5
	comp=Z,23nm,1.0s,mb5.4						
GRF	Grafenberg Arr	85.90	320	*e*P	P	19 06 51.3	+0.5
	comp=Z,23nm,1.0s,mb5.4						
GRF	Grafenberg Arr	85.90	320	*e*P	P	19 06 51.3	+0.5
GRF				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.4						
GRF	Grafenberg Arr	85.90	320	*e*P	P	19 06 51.3	+0.5
GRF				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.4						
MOTA	Moosalm	85.90	317	*i* P	P	19 06 50.8	-0.1
	comp=Z,11nm,0.8s,mb5.1,SNR=8.1						
MOTA	Moosalm	85.90	317	*i* P	P	19 06 50.8	-0.1
	comp=Z,11nm,0.8s,mb5.2						
MOTA	Moosalm	85.90	317	*i* P	P	19 06 50.8	-0.1
MOTA				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.1						
NB2	NORSAR Subarra	86.36	331	P	P	19 06 52.7	-0.1
	comp=Z,15nm,0.9s,mb5.2,baz=93,slow=4.8						
NB2	NORSAR Subarra	86.36	331	P	P	19 06 52.7	-0.1
	baz=93,slow=4.8						
NOA	NORSAR Array B	86.36	331	P	P	19 06 53.0	+0.2
	comp=Z,9.1nm,0.8s,mb5.0,baz=94,slow=4.9,SNR=17						
NOA				PP	PP	19 10 15.6	-0.4
	comp=Z,3.1nm,0.9s,baz=91,slow=8.7,SNR=3.3						
NOA				LR	LR	19 47 57.1	
	comp=Z,219nm,18.7s,MS4.6,baz=100,slow=37						
BRMO	Bormio	86.38	316	P	P	19 06 54.1	+0.8
CLZ	Clausthal	86.50	322	*e*P	P	19 06 54.4	+0.7
	comp=Z,10.0nm,1.0s,mb5.0						
CLZ	Clausthal	86.50	322	*e*P	P	19 06 54.4	+0.7
CLZ				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.0						
VNDA	Vanda	86.52	169	*e*P	P	19 06 53.3	0.0
	comp=Z,13nm,1.3s,mb5.0						
VNDA				*e*pP	pP	19 07 02.0	+0.5
VNDA	Vanda	86.52	169	*e*P	P	19 06 53.3	0.0
VNDA				*e**PP	pP	19 07 02.0	+0.6
VNDA				pmax	pmax		
	comp=Z,13nm,1.3s						
NAO	NORSAR Subarra	86.53	331	P	P	19 06 52.7	-1.0
	comp=Z,15nm,0.9s,mb5.2						
NAO	NORSAR Subarra	86.53	331	P	P	19 06 52.7	-1.0
NAO				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.2						
DAVOX	Davos	86.73	317	P	P	19 06 55.5	+0.5
	comp=Z,17nm,0.8s,mb5.3,baz=118,slow=5.9,SNR=24						
DAVOX				LR	LR	19 49 16.3	
	comp=Z,174nm,20.4s,MS4.5,baz=83,slow=38						
DAVA	Damuels	86.73	317	⇓*e*P	P	19 06 55.8	+0.8
	comp=Z,24nm,1.0s,mb5.4						
SBA	Scott Base	87.62	169	*e*P	P	19 06 59.7	+1.1
	comp=Z,13nm,1.1s,mb5.1						
SBA				*e*pP	pP	19 07 08.3	+1.5
SBA	Scott Base	87.62	169	*e*P	P	19 06 59.7	+1.1
SBA				*e**PP	pP	19 07 08.3	+1.5
SBA				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.1						
TNS	Taunus Mts	87.70	320	*e*P	P	19 07 00.2	+0.7
	comp=Z,14nm,1.2s,mb5.1						
TNS	Taunus Mts	87.70	320	*e*P	P	19 07 00.2	+0.7
TNS				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.1						
BFO	Black Forest	87.78	318	*e*P	P	19 06 59.4	-0.6
	comp=Z,6.0nm,1.0s,mb4.8						
BFO	Black Forest	87.78	318	*e*P	P	19 06 59.4	-0.6
BFO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.8						
LPG	La Plagne	88.91	315	*e*P	P	19 07 06.1	+0.6
	comp=Z,16nm,0.9s,mb5.0						
LPG	La Plagne	88.91	315	*e*P	P	19 07 06.1	+0.6
LPG				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
NVL	N'lazarevskaya	90.22	199	*e*P	P	19 07 19.0	+8.0
NVL				pmax	pmax		
	comp=Z,2.0nm,1.3s,mb4.3						
JMIC	Jan Mayen	93.28	342	LR	LR	19 54 54.0	
	comp=Z,185nm,18.5s,MS4.6,baz=49,slow=39						
DAG	Danmarks Havn	93.90	348	⇑*i*P	P	19 07 28.1	+0.2
	comp=Z,4.1nm,0.7s,mb5.0						
DAG	Danmarks Havn	93.90	348	⇑*i*P	P	19 07 28.1	+0.2
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb5.0						
SNAA	Sanae	94.92	198	P	P	19 07 32.7	0.0
SNAA	Sanae	94.92	198		pP	19 07 43.9	+3.1
IMA2	Indian Mountai	95.97	23	*e*P	P	19 07 38.3	+0.7
VNA2	Neumayer--Watz	96.51	199	P	P	19 07 38.2	-1.7
VNA2	Neumayer--Watz	96.51	199	⇑*i*	pP	19 07 51.8	+3.7
MDT	Midelt	98.82	303	LR	LR	19 54 33.7	
	comp=Z,201nm,18.4s,MS4.7,baz=143,slow=37						
ILAR	Eielson Array	99.09	23	P	P	19 07 51.1	-0.6
	comp=Z,0.6nm,0.8s,mb4.2,baz=270,slow=4.5,SNR=4.4						
ILAR				PP	PP	19 11 52.5	-3.9
	comp=Z,2.8nm,1.0s,baz=286,slow=8.6,SNR=7.7						
ILAR				PKKPbc		19 24 16.9	
	comp=Z,0.7nm,0.9s,baz=128,slow=2.6,SNR=6.1						
TBI	Tubuai	112.22	114	*e*LR	LR	19 46 16.6	
	comp=Z,259nm,32.8s						
PPT	Papeete	112.78	108	*e*LR	LR	19 46 32.0	
	comp=Z,171nm,22.8s						
NEW	Newport	121.85	26	PKP	PKPdf	19 13 05.0	-3.6
	comp=Z,3.4nm,0.9s,baz=325,slow=3.0,SNR=5.7						
SCHQ	Schefferville	121.93	349	PKP	PKPdf	19 13 04.6	-4.1
	comp=Z,8.9nm,1.1s						
SCHQ	Schefferville	121.93	349	PKP	PKPdf	19 13 04.6	-4.1
RKT	Rikitea	125.33	117	*e*LR	LR	19 52 21.2	
	comp=Z,198nm,28.0s						
ULM	Lac du Bonnet	126.87	10	PKP	PKPdf	19 13 13.5	-4.8
	comp=Z,5.7nm,0.8s,baz=56,slow=3.4,SNR=7.6						
NVAR	Mina Array Bea	128.27	35	PKP	PKPdf	19 13 18.3	-3.1
	comp=Z,2.2nm,0.8s,baz=320,slow=0.7,SNR=16						
ELK	Elko	128.33	31	PKP	PKPdf	19 13 18.8	-2.6
	comp=Z,1.4nm,0.6s,baz=296,slow=5.6,SNR=6.1						
PDAR	Pinedale Array	129.45	25	PKP	PKPdf	19 13 20.2	-3.3
	comp=Z,1.6nm,0.6s,baz=250,slow=1.0,SNR=15						
PDAR				PP	PP	19 15 30.1	-2.9
	comp=Z,1.2nm,0.9s,baz=333,slow=3.3,SNR=4.1						
MSU	Marysvale	131.56	31	*e*PKPdf	PKPdf	19 13 25.3	-2.3
NEN	Nelson	132.19	36	*e*PKPdf	PKPdf	19 13 26.9	-2.0
NEN				*e*pPKPdf		19 13 34.6	
ANMO	Albuquerque	137.20	29	PKP	PKPdf	19 13 34.4	-3.7
	comp=Z,2.2nm,0.7s,baz=46,slow=3.8,SNR=5.3						
PLCA	Paso Flores	139.76	195	PKhKP		19 13 33.4	
	comp=Z,1.6nm,0.9s,baz=356,slow=5.1,SNR=4.0						
CPRX	Cap Rock	140.00	28	*e*pPKPdf		19 13 49.7	
MNTX	Cornudas Mount	140.35	31	*e*PKPdf	PKPdf	19 13 38.7	-5.3
GDL2	Guadalupe Moun	140.45	29	*e*PKPdf	PKPdf	19 13 41.6	-2.6
GDL2				*e*pPKPdf		19 13 49.8	
BDFB	Brasilia	143.01	246	PKP	PKPdf	19 13 46.3	-2.7
	comp=Z,1.0nm,0.4s,baz=135,slow=4.3,SNR=2.3						
TXAR	Lajitas Array	143.12	31	PKP	PKPdf	19 13 44.3	-4.6
	comp=Z,1.2nm,0.7s,baz=315,slow=3.8,SNR=1.2						
NATX	Nacogdoches	144.71	18	*e*PKPdf	PKPdf	19 13 47.3	-4.3
NATX				*e*pPKPdf		19 13 56.0	
GOGA	Godfrey	144.88	1	*e*PKPdf	PKPdf	19 13 47.5	-4.3
GOGA				*e*pPKPdf		19 13 55.9	
LRAL	Lakeview Retre	145.04	6	*e*PKPab	PKPab	19 13 47.8	-1.1
LRAL				*e*pPKPdf		19 13 56.1	
CPUP	Villa Florida	145.46	223	*e*PKP	PKPdf	19 13 49.4	-3.7
LPAZ	La Paz	159.61	225	*e*PKPdf	PKPdf	19 14 12.2	-1.5
ROSC	El Rosal	169.13	308	PKP	PKPdf	19 14 19.1	-3.0
	comp=Z,2.0nm,0.3s,baz=254,slow=21,SNR=3.6						

CSEM **12** *19:17:30.9, 15.21S×174.77W, h33^{km}, mb5.7*
MOS **12** *19:17:46.0±1.4, 15.10S×174.88W, h163^{km}, mb5.0/11,*
Error ellipse: s-maj=13.4km s-min=11.3km az=71.6
BJI **12** *19:17:49.6, 14.78S×175.09W, h185^{km}, mB5.3, mb4.8*
HRVD **12** *19:17:51.0±0.3, 15.05S×174.57W, h250^{km}±1^{km},*
MW5.3/59, Centroid moment Tensor Solution. LP body waves: s53,c79; Mantle waves: s59,c102; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.74±.02; M$_{\theta\theta}$0.70±.03; M$_{\phi\phi}$0.04±.03; M$_{r\theta}$0.29±.03; M$_{\theta\phi}$-0.04±.03; M$_{\phi r}$-0.60±.02; Best double couple: M$_0$.951×10^{17} NP1: ϕ_s77°, δ35°, λ-132°. NP2: ϕ_s305°, δ65°, λ-65°. Principal axes: T .802, Plg16°, Azm17°; N .298, Plg23°, Azm114°; P -1.1, Plg62°, Azm254°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
IDC **12** *19:17:55.0±0.6, 15.27S×174.85W, h245^{km}±5^{km}, mb4.2/13, mb1 4.3/14, mb1mx4.2/18, mbtmp4.7/14 Error ellipse: s-maj=16.7km s-min=9.1km az=128.0*
NEIC **12** *19:17:56.4±0.2, 15.16S×174.93W, mb4.9/30, Error ellipse: s-maj=10.9km s-min=7.3km az=131.0*
ISC 12 19:17:53.5±0.3**, 15.18S**±0.06×**174.84W**±0.06**, h241^{km}, h241^{km}**±4.6^{km}**:pP-P, n246,** σ1^{s}10/96**, mb4.6**/42**, 30C-32D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.23	67	⇓*e*P	P	19 18 46.7	-1.7
DZM	Mont Dzumac	19.00	246	P	P	19 21 58.7	-0.5
	1.2nm,0.3s,baz=80,slow=18,SNR=13						
URZ	Urewera	24.06	196	P	P	19 22 45.5	-2.9
	61nm,0.6s,mb5.4,baz=358,slow=3.6,SNR=32						
URZ				S	S	19 26 47.2	+1.4
	7.8nm,0.7s,baz=309,slow=21,SNR=4.1						
RPZ	Rata Peaks	30.88	200	P	P	19 23 47.2	-2.5
	16nm,0.5s,mb4.9,baz=45,slow=22,SNR=9.4						
CTA	Charters Tower	37.34	257	⇓*i*P	P	19 24 44.5	-0.3
	28nm,0.8s,mb4.8						
CTA				*e*PCP	PcP	19 26 59.0	0.0
CTA	Charters Tower	37.34	257	⇓*i*P	P	19 24 44.5	-0.3
CTA				*e*		19 26 59.0	
CTA				pmax	pmax		
	comp=Z,28nm,0.8s						
PMG	Port Moresby	37.53	274	*e*P	P	19 24 45.0	-1.5
	comp=Z,54nm,0.9s,mb5.1						
PMG	Port Moresby	37.53	274	⇑*e*P	P	19 24 47.8	+1.4
CNB	Canberra Magne	37.79	231	⇓*i*P	P	19 24 48.0	-0.4
	comp=Z,66nm,0.6s,mb5.3						
TOO	Toolangi	41.53	230	⇓*i*P	P	19 25 18.9	-0.3
	comp=Z,24nm,0.6s,mb4.8						
TOO	Toolangi	41.53	230	⇓*i*P	P	19 25 18.9	-0.3
TOO				pmax	pmax		
	comp=Z,24nm,0.6s,mb4.8						
STKA	Stephens Creek	42.95	239	⇓*i*P	P	19 25 30.5	-0.1
	comp=Z,26nm,0.9s,mb4.7						
STKA				*e*PCP	PcP	19 27 18.1	+1.0
STKA	Stephens Creek	42.95	239	P	P	19 25 29.9	-0.7
	comp=Z,43nm,1.0s,mb4.8,baz=90,slow=8.9,SNR=44						
STKA				PcP	PcP	19 27 17.5	+0.4
	comp=Z,4.8nm,0.6s,baz=86,slow=4.2,SNR=3.9						
ADE	Adelaide	45.99	236	*e*P	P	19 25 54.6	-0.1
WB2	Warramunga Arr	48.53	257	⇓*i*P	P	19 26 13.4	-1.1
WB2				*e*S	S	19 32 56.9	+0.7
WRAB	Tennant Creek	48.53	257	*e*P	P	19 26 12.6	-1.9
	comp=Z,41nm,0.7s,mb4.9						
WRAB	Tennant Creek	48.53	257	⇓*i*P	P	19 26 13.3	-1.2
WRA	Warramunga Arr	48.54	257	P	P	19 26 13.5	-1.1
	comp=Z,37nm,0.6s,mb4.9,baz=92,slow=7.0,SNR=237						
WRA				PcP	PcP	19 27 36.4	-0.5
	comp=Z,5.6nm,0.9s,baz=97,slow=3.4,SNR=6.2						
WRA				S	S	19 32 56.2	-0.2
	comp=Z,1.8nm,1.1s,baz=93,slow=14,SNR=5.4						
KAKA	Kakadu	51.13	266	⇓*i*P	P	19 26 52.2	+18
	comp=Z,43nm,0.7s,mb5.0						
FORT	Forrest	54.28	243	⇑*i*P	P	19 26 56.0	-1.0
	comp=Z,57nm,0.5s,mb5.4						
FITZ	Fitzroy Crossi	56.90	258	*e*P	P	19 27 15.3	-0.5
	comp=Z,19nm,1.1s,mb4.6						
KLBR	Kellerberrin	63.11	242	⇓*i*P	P	19 27 56.5	-1.3
	comp=Z,29nm,0.8s,mb5.0						
SBA	Scott Base	63.36	184	*e*P	P	19 27 59.7	+0.9
	comp=Z,32nm,0.7s,mb5.1						
SBA	Scott Base	63.36	184	*e*P	P	19 27 59.7	+0.9
SBA				pmax	pmax		
	comp=Z,32nm,0.7s,mb5.1						
VNDA	Vanda	63.45	186	*e*P	P	19 27 59.5	+0.1
	comp=Z,30nm,1.0s,mb4.9						
VNDA	Vanda	63.45	186	*e*P	P	19 27 59.5	+0.1
VNDA				pmax	pmax		
	comp=Z,30nm,1.0s						
MUN	Mundaring	64.41	242	*e*P	P	19 28 06.7	+0.4
MJAR	Matsushiro Arr	67.88	321	P	P	19 28 26.9	-1.1
	comp=Z,1.4nm,0.4s,mb3.9,baz=62,slow=1.6,SNR=11						
CASY	Casey	70.03	205	*e*P	P	19 28 39.9	-0.7
KKM	Kota Kinabalu	71.47	282	*e*P	P	19 28 49.9	-0.3
YSS	Yuzh-Sakhalins	72.61	331	⇑*e*P	P	19 28 57.5	+1.0
	comp=Z,32nm,1.0s,mb4.9						
YSS	Yuzh-Sakhalins	72.61	331	⇑*e*P	P	19 28 57.5	+1.0
YSS				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.9						
QSPA	South Pole Qui	74.86	180	*e*P	P	19 29 09.6	+0.8
	comp=Z,53nm,0.7s,mb5.3						
NVAR	Mina Array Bea	75.10	43	P	P	19 29 10.4	-0.6
	comp=Z,2.8nm,0.8s,mb3.9,baz=219,slow=6.7,SNR=16						
NVAR				pP	pP	19 30 10.0	+2.2
	comp=Z,1.8nm,0.9s,baz=211,slow=7.8,SNR=3.5						
LDFC	Landfair	75.50	47	*e*P	P	19 29 12.4	-0.9
KSM	Kuching	75.78	275	*e*P	P	19 29 14.7	-0.6
NEN	Nelson	75.98	47	*e*P	P	19 29 12.2	-3.8
SSE	Sheshan	76.72	308	P	P	19 29 20.6	+0.5
SSE				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.9						
SSE				AMB	AMB		
	comp=Z,100nm,5.4s						
SSE	Sheshan	76.72	308	P	P	19 29 20.6	+0.5
	comp=Z,30nm,0.9s,mb4.9						
TUC	Tucson	77.33	51	*e*P	P	19 29 23.2	-0.3
	comp=Z,3.5nm,0.8s,mb4.0						
TUC	Tucson	77.33	51	*e*P	P	19 29 23.2	-0.3
TUC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
MDJ	Mudanjiang	78.01	323	P	P	19 29 28.8	+1.9
MDJ				AMB	AMB		
	comp=Z,1µm,10.8s						
MDJ	Mudanjiang	78.01	323	P	P	19 29 28.8	+1.9
	comp=Z,9.0nm,2.3s,mb4.0						
ELK	Elko	78.34	42	P	P	19 29 28.6	-0.3
	comp=Z,1.0nm,0.5s,mb3.7,baz=191,slow=2.4,SNR=4.2						
NJ2	Nanjing	78.93	308	*e*P	P	19 29 32.3	+0.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NJ2	Nanjing	78.93	308	*e*P	P	19 29 32.3	+0.2
	comp=Z,10.0nm,0.5s,mb4.7						
DIV	Divide	79.51	14	*e*P	P	19 29 33.6	-1.0
	comp=Z,17nm,0.9s,mb4.7						
CN2	Changchun	80.03	321	*e*P	P	19 29 39.1	+1.4
CN2				*e*S	S	19 39 23.8	+3.6
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
CN2				AMB	AMB		
	comp=Z,300nm,4.0s						
CN2	Changchun	80.03	321	*e*P	P	19 29 39.1	+1.4
	comp=Z,20nm,0.8s,mb4.8						
CN2				*e*S	S	19 39 23.8	+3.6
TMUT	Trail Mountain	80.29	45	*e*P	P	19 29 39.5	+0.3
TXAR	Lajitas Array	81.65	57	P	P	19 29 47.2	+0.7
	comp=Z,1.8nm,0.9s,mb3.7,baz=243,slow=5.6,SNR=10						
TXAR				pP	pP	19 30 46.6	+2.3
	comp=Z,0.5nm,0.9s,baz=225,slow=6.4,SNR=1.8						
ANMO	Albuquerque	81.73	51	⇑*i*P	P	19 29 46.1	-0.7
SEY	Seymchan	81.95	346	⇑*e*P	P	19 29 47.2	-0.1
GDL2	Guadalupe Moun	82.21	54	*e*P	P	19 29 49.7	+0.4
COLA	College	82.41	11	*e*P	P	19 29 49.6	0.0
	comp=Z,8.2nm,0.8s,mb4.4						
COLA	College	82.41	11	*e*P	P	19 29 49.7	0.0
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
ILAR	Eielson Array	82.51	12	P	P	19 29 49.5	-0.7
	comp=Z,1.8nm,0.6s,mb4.0,baz=223,slow=6.2,SNR=28						
ILAR				pP	pP	19 30 45.1	-2.9
	comp=Z,2.8nm,1.1s,baz=230,slow=5.5,SNR=3.5						
ILAR				PKKPbc		19 48 13.1	
	comp=Z,0.3nm,0.6s,baz=304,slow=3.3,SNR=4.6						
CPRX	Cap Rock	82.92	53	*e*P	P	19 29 52.0	-0.9
PDAR	Pinedale Array	83.03	42	P	P	19 29 52.8	-0.5
	comp=Z,2.9nm,0.8s,mb4.0,baz=210,slow=3.2,SNR=15						
PDAR				PKKPbc		19 48 13.9	
	comp=Z,0.8nm,0.9s,baz=108,slow=4.7,SNR=3.8						
SMCO	Snowmass	83.16	46	*e*P	P	19 29 54.3	+0.3
	comp=Z,5.7nm,0.9s,mb4.3						
DAWY	Dawson	83.56	15	*e*P	P	19 29 55.5	0.0
BILL	Bilibino	84.11	353	⇑*e*P	P	19 29 58.1	-0.1
	comp=Z,14nm,1.4s,mb4.5						
BILL				*e*pP	pP	19 30 54.6	-1.7
BILL				*e*S	S	19 40 08.3	+7.5
BILL	Bilibino	84.11	353	⇑*e*P	P	19 29 58.1	-0.1
BILL				*e**PP	pP	19 30 54.6	-1.7
BILL				*e*S	S	19 40 08.3	+7.5
BILL				pmax	pmax		
	comp=Z,14nm,1.4s,mb4.5						
GYA	Guiyang	86.71	298	⇓*i*P	P	19 30 13.4	+1.5
GYA				PP	PP	19 33 39.8	+0.5
GYA				SKS	SKS	19 40 15.8	+2.9
GYA				S	S	19 40 30.0	+3.3
GYA				SS	SS	19 46 17.2	-0.3
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.7						
GYA				AMB	AMB		
	comp=Z,200nm,6.6s						
GYA				LR	LR		
	comp=N,460nm,18.4s						
GYA				LR	LR		
	comp=E,310nm,19.7s						
GYA				LR	LR		
	comp=Z,380nm,20.8s						
GYA	Guiyang	86.71	298	⇓*i*P	P	19 30 13.4	+1.5
	comp=Z,20nm,1.2s,mb4.7						
GYA				PP	PP	19 33 39.8	+0.5
GYA				SKS	SKS	19 40 15.8	+2.9
GYA				S	S	19 40 30.0	+3.3
GYA				SS	SS	19 46 17.2	-0.3
GYA				LR	LR		

	comp=Z,380nm,20.8s						
XAN	**Xi'an**	**87.38**	**306**	P	**P**	**19 30 15.6**	**+0.7**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
XAN	**Xi'an**	**87.38**	**306**	P	**P**	**19 30 15.6**	**+0.7**
	comp=Z,17nm,1.2s,mb4.7						
MAW	**Mawson**	**87.55**	**199**	*e*P	**P**	**19 30 15.7**	**+0.8**
	comp=Z,26nm,0.8s,mb5.1						
MAW	**Mawson**	**87.55**	**199**	P	**P**	**19 30 15.7**	**+0.8**
	comp=Z,29nm,0.7s,mb5.2,baz=135,slow=6.3,SNR=67						
MAW	**Mawson**	**87.55**	**199**	*e*P	**P**	**19 30 15.7**	**+0.8**
MAW				pmax	pmax		
	comp=Z,26nm,0.8s						
HHC	**Hu-ho-hao-te**	**87.86**	**313**	⇑P	**P**	**19 30 19.1**	**+2.1**
HHC				PP	PP	19 33 49.1	+0.8
HHC				SKS	SKS	19 40 22.3	+2.5
HHC				S	S	19 40 40.3	+3.3
HHC				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
HHC				AMB	AMB		
	comp=Z,140nm,7.2s						
HHC				LR	LR		
	comp=N,190nm,18.0s						
HHC				LR	LR		
	comp=E,300nm,16.8s						
HHC				LR	LR		
	comp=Z,120nm,16.8s						
HHC	**Hu-ho-hao-te**	**87.86**	**313**	⇑P	**P**	**19 30 19.1**	**+2.1**
	comp=Z,26nm,1.2s,mb4.9						
HHC				PP	PP	19 33 49.1	+0.8
HHC				SKS	SKS	19 40 22.3	+2.5
HHC				S	S	19 40 40.3	+3.3
HHC				LR	LR		
	comp=Z,120nm,16.8s						
YAK	**Yakutsk**	**88.37**	**337**	*e*P	**P**	**19 30 17.5**	**-1.3**
	comp=Z,16nm,0.8s,mb4.9						
YAK	**Yakutsk**	**88.37**	**337**	*e*P	**P**	**19 30 17.5**	**-1.3**
YAK				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
INK	**Inuvik**	**88.39**	**14**	P	**P**	**19 30 18.7**	**-0.1**
	comp=Z,2.8nm,0.8s,mb4.1,baz=247,slow=2.5,SNR=6.9						
KMI	**Kunming**	**89.68**	**296**	⇓P	**P**	**19 30 28.0**	**+2.1**
KMI				SKS	SKS	19 40 34.8	+3.5
KMI				S	S	19 40 56.4	+2.4
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
KMI				AMB	AMB		
	comp=Z,220nm,6.1s						
KMI				LR	LR		
	comp=Z,30nm,27.3s						
KMI	**Kunming**	**89.68**	**296**	⇓P	**P**	**19 30 28.0**	**+2.1**
	comp=Z,13nm,1.0s,mb4.7						
KMI				SKS	SKS	19 40 34.8	+3.5
KMI				S	S	19 40 56.4	+2.4
KMI				LR	LR		
	comp=Z,40nm,27.3s						
KMI	**Kunming**	**89.68**	**296**	⇓P	**P**	**19 30 28.0**	**+2.1**
KMI				*PP	pP	19 31 24.2	-0.4
KMI						19 40 34.8	
KMI				S	S	19 40 56.4	+2.4
KMI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.7						
KMI				MLR	MLR		
	comp=Z,40nm,27.3s						
CD2	**Chengdu**	**90.51**	**302**	*e*P	**P**	**19 30 31.5**	**+1.8**
CD2				AP	pP	19 31 22.2	-6.2
CD2				PP	PP	19 34 11.9	+2.4
CD2				PPP	PPP	19 36 12.6	+1.6
CD2				SKS	SKS	19 40 41.5	+5.4
CD2				S	S	19 41 06.7	+5.4
CD2				LR	LR		
	comp=E,150nm,7.2s						
CD2				LR	LR		
	comp=Z,150nm,15.6s						
CD2	**Chengdu**	**90.51**	**302**	*e*P	**P**	**19 30 31.5**	**+1.8**
CD2				pP	pP	19 31 22.2	-6.2
CD2				PP	PP	19 34 11.9	+2.4
CD2				SKS	SKS	19 40 41.5	+5.4
CD2				S	S	19 41 06.7	+5.4
CD2				LR	LR		
	comp=Z,150nm,15.6s						
PLCA	**Paso Flores**	**90.69**	**133**	P	**P**	**19 30 31.3**	**+1.1**
LZH	**Lanzhou**	**91.98**	**307**	*e*P	**P**	**19 30 38.4**	**+2.0**
LZH				PP	PP	19 34 23.1	+2.1
LZH				*e*SKS	SKS	19 40 47.0	+2.6
LZH				*e*S	S	19 41 18.0	+3.9
LZH				SS	SS	19 47 33.3	+0.9
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,110nm,4.5s						
LZH	**Lanzhou**	**91.98**	**307**	*e*P	**P**	**19 30 38.4**	**+2.0**
	comp=Z,25nm,1.0s,mb5.1						
LZH				PP	PP	19 34 23.1	+2.1
LZH				*e*SKS	SKS	19 40 47.0	+2.6
LZH				*e*S	S	19 41 18.0	+3.9
LZH				SS	SS	19 47 33.3	+0.9
LZH	**Lanzhou**	**91.98**	**307**	*e*P	**P**	**19 30 38.4**	**+2.0**
LZH						19 34 23.1	
LZH				PPP	PPP	19 36 26.0	+2.1
LZH				*e*		19 40 47.0	
LZH				*e*S	S	19 41 18.0	+3.9
LZH				*SS		19 42 52.0	
LZH				SS	SS	19 47 33.3	+0.9
LZH				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
SYO	**Syowa Base**	**92.53**	**192**	⇑P	**P**	**19 30 35.5**	**-2.7**
SYO	**Syowa Base**	**92.53**	**192**	⇓pP	pP	19 31 36.5	-0.5
SYO	**Syowa Base**	**92.53**	**192**	⇑*e*P	**P**	**19 30 35.5**	**-2.7**
SYO				⇓*e*pP	pP	19 31 36.5	-0.5
SNAA	**Sanae**	**93.19**	**177**	⇑*i*P	**P**	**19 30 41.8**	**+0.7**
VNA3	**Neumayer Olymp**	**93.19**	**175**	⇑*i*P	**P**	**19 30 42.9**	**+1.8**
VNA2	**Neumayer--Watz**	**93.68**	**176**	⇑*i*P	**P**	**19 30 45.4**	**+2.1**
SONM	**Songino Array**	**93.76**	**319**	P	**P**	**19 30 44.0**	**-0.2**
	comp=Z,0.7nm,0.7s,mb3.8,baz=132,slow=4.1,SNR=7.3						
VNA1	**Neumayer--Stat**	**93.88**	**176**	⇑*i*P	**P**	**19 30 46.9**	**+2.7**
TIXI	**Tiksi**	**94.42**	**345**	⇑*e*P	**P**	**19 30 45.8**	**-0.9**
	comp=Z,5.0nm,1.2s,mb4.4						
TIXI	**Tiksi**	**94.42**	**345**	⇑*e*P	**P**	**19 30 45.8**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.4						
ZAL	**Zalesovo**	**108.21**	**322**	PKiKP		19 35 53.1	
	comp=Z,1.1nm,0.5s,baz=135,slow=2.0,SNR=4.7						
MKAR	**Makanchi Array**	**109.68**	**315**	PKiKP		19 35 56.0	
	comp=Z,3.1nm,0.6s,baz=65,slow=0.7,SNR=36						
KURK	**Kurchatov**	**112.06**	**319**	⇑*i*PKPdf	PKPdf	19 36 00.1	+0.2
BVAR	**Borovoye Array**	**116.86**	**322**	PKP	PKPdf	19 36 09.8	+0.5
	comp=Z,5.6nm,0.7s,baz=99,slow=1.3,SNR=46						
BVAR	**Borovoye Array**	**116.86**	**322**	PKPdf	PKPdf	19 36 09.8	+0.5
BRVK	**Borovoye**	**116.91**	**322**	*e*PKPdf	PKPdf	19 36 08.8	-0.6
ARU	**Arti**	**122.42**	**328**	*i* PKIKP	PKPdf	19 36 20.4	+0.5
ARU				*e*		19 37 59.9	
ARCES	**ARCESS Array B**	**124.19**	**351**	PKP	PKPdf	19 36 23.3	+0.1
	comp=Z,8.5nm,0.7s,slow=1.2,SNR=20						
AKTO	**Aktyubinsk**	**124.95**	**322**	PKP	PKPdf	19 36 25.8	+0.7
	comp=Z,3.8nm,0.7s,baz=52,slow=2.1,SNR=14						
OPO	**Ambohidratompo**	**126.72**	**232**	PKP	PKPdf	19 36 31.0	+1.8
	comp=Z,3.9nm,0.6s,baz=172,slow=1.8,SNR=15						
SUR	**Sutherland**	**130.39**	**197**	PKP	PKPdf	19 36 38.2	+2.3
	comp=Z,7.6nm,0.8s,baz=228,slow=9.5,SNR=3.5						
BOSA	**Boshof**	**132.32**	**204**	PKP	PKPdf	19 36 41.9	+2.1
	comp=Z,2.6nm,0.6s,baz=177,slow=3.3,SNR=7.4						
OBN	**Obninsk**	**133.35**	**336**	⇓*i*PKIKP	PKPdf	19 36 40.7	-0.2
OBN				*e*		19 37 42.9	
OBN				*e*		19 39 17.8	
OBN				pmax	pmax		
	comp=Z,13nm,0.7s						
NOA	**NORSAR Array B**	**134.00**	**356**	PKP	PKPdf	19 36 42.6	+0.7
	comp=Z,2.2nm,0.9s,baz=14,slow=3.7,SNR=3.6						
LBTB	**Lobatse**	**135.35**	**207**	PKP	PKPdf	19 36 47.0	+1.6
	comp=Z,2.5nm,0.6s,baz=180,slow=5.7,SNR=7.9						
KIV	**Kislovodsk**	**137.14**	**320**	*e*PKIKP	PKPdf	19 36 50.2	+2.1
KIV				*e*		19 39 36.1	
KIV				*e*PS	PS	19 50 08.1	+4.7
KIV				pmax	pmax		
	comp=Z,19nm,1.5s						
MATP	**Matopo**	**137.83**	**214**	PKhKP		19 36 39.0	
	comp=Z,1.3nm,0.7s,baz=67,slow=1.1,SNR=5.1						
MATP				PKP	PKPdf	19 36 51.5	+1.4
	comp=Z,6.1nm,0.7s,baz=122,slow=1.8,SNR=17						
MATP	**Matopo**	**137.83**	**214**	PKP		19 36 39.0	
MATP				PKP	PKPdf	19 36 51.5	+1.4
AKASG	**Malin Array Be**	**139.59**	**336**	PKhKP		19 36 47.5	
	comp=Z,1.1nm,0.6s,baz=39,slow=3.9,SNR=4.3						
LSZ	**Lusaka**	**142.14**	**218**	PKhKP		19 36 54.2	
	comp=Z,2.7nm,0.5s,baz=122,slow=2.4,SNR=7.2						
DJNS	**Zahran al Janu**	**143.14**	**279**	P	PKPbc	19 36 59.9	+2.0
CLZ	**Clausthal**	**143.19**	**355**	*e*PKHKP		19 36 55.2	
TATS	**Tathlith**	**143.22**	**282**	P	PKPbc	19 36 58.7	+0.6
CLL	**Collm**	**143.42**	**352**	*e*PKIKP	PKPdf	19 36 58.0	-1.0
TSUM	**Tsumeb**	**143.71**	**200**	PKP	PKPdf	19 37 00.3	-0.2
	comp=Z,6.6nm,0.8s,baz=105,slow=1.8,SNR=14						
TSUM	**Tsumeb**	**143.71**	**200**	*e*PKPdf	PKPdf	19 37 00.4	-0.1
DPC	**Dobruska-Polom**	**143.77**	**348**	*e*PKP	PKPdf	19 37 00.5	+0.8
CRVS	**Cervenica-Dubn**	**143.81**	**342**	*e*PKP	PKPdf	19 36 54.3	-5.5
MOX	**Moxa**	**144.24**	**353**	*i* P	PKPbc	19 37 01.3	+1.1
MOX	**Moxa**	**144.24**	**353**	*e*PKP	PKPdf	19 37 01.3	+0.8
CFR	**Carcaliu**	**144.36**	**332**	⇓P	PKPbc	19 37 01.6	+0.9
CFR	**Carcaliu**	**144.36**	**332**	⇓P	PKPbc	19 37 01.6	+0.9
KMBO	**Kilima Mbogo**	**144.37**	**246**	PKP	PKPdf	19 37 02.1	+0.3
	comp=Z,16nm,0.9s,baz=67,slow=6.5,SNR=53						
KMBO	**Kilima Mbogo**	**144.37**	**246**	⇑*i*PKIKP	PKPdf	19 37 03.5	+1.6
VRI	**Vrincioaia**	**144.45**	**334**	⇑P	PKPbc	19 37 02.2	+1.3
VRI	**Vrincioaia**	**144.45**	**334**	⇑P	PKPbc	19 37 02.1	+1.2
PRU	**Pruhonice**	**144.46**	**350**	*e*PKP	PKPdf	19 37 01.1	+0.2
KECS	**Kecovo**	**144.47**	**342**	*e*PKP	PKPdf	19 37 01.3	+0.3
VRAC	**Vranov**	**144.70**	**347**	PKP	PKPdf	19 37 02.3	+1.0
	comp=Z,22nm,0.8s,baz=306,slow=3.7,SNR=5.8						
TIRR	**Tirgusor**	**144.78**	**331**	⇑P	PKPdf	19 37 02.7	+1.1
TIRR	**Tirgusor**	**144.78**	**331**	*e*PKPbc	PKPbc	19 37 02.7	+0.8
HARR	**Harsova**	**144.83**	**331**	⇓P	PKPdf	19 37 02.0	+0.3
HARR	**Harsova**	**144.83**	**331**	⇓P	PKPdf	19 37 02.0	+0.3
VYHS	**Vyhne**	**144.92**	**344**	*e*PKP	PKPdf	19 37 03.1	+1.4
TNS	**Taunus Mts**	**144.95**	**356**	*e*PKIKP	PKPdf	19 37 02.6	+0.9
BLJS	**Baljurashi**	**144.99**	**283**	P	PKPdf	19 37 05.6	+2.9
MLR	**Muntele Rosu**	**145.08**	**334**	PKPbc	PKPbc	19 37 03.7	+1.0
	comp=Z,41nm,0.8s,baz=186,slow=4.9,SNR=57						
BR131	**Keskin Array S**	**145.10**	**320**	*e*PKPbc	PKPbc	19 37 03.7	+0.8
BRTR	**Keskin Array B**	**145.10**	**320**	PKPbc	PKPbc	19 37 03.9	+0.9
	comp=Z,14nm,0.8s,baz=112,slow=1.6,SNR=54						
BRTR				pPKPbc		19 38 06.0	
	comp=Z,4.2nm,0.9s,baz=117,slow=2.8,SNR=3.7						
GIVF	**Givet**	**145.17**	**0**	*e*PKP1	PKPbc	19 37 03.2	+0.4
	comp=Z,92nm,1.2s						
BAIF	**Baives**	**145.21**	**1**	*e*PKP1	PKPbc	19 37 03.6	+0.7
	comp=Z,76nm,1.0s						
GRF	**Grafenberg Arr**	**145.23**	**353**	*e*PKP	PKPdf	19 37 04.5	+2.3
GRF				pPKPbc		19 38 10.2	
DRGR		**145.25**	**339**	⇑P	PKPdf	19 37 03.7	+1.4
DRGR		**145.25**	**339**	⇑P	PKPdf	19 37 03.7	+1.3
SMOL	**Smolenice**	**145.26**	**346**	*e*PKIKP	PKPdf	19 37 04.4	+2.1
SMOL				*e*		19 37 47.1	
KHC	**Kasperske Hory**	**145.45**	**350**	*e*PKP	PKPdf	19 37 04.3	+1.7
KHC	**Kasperske Hory**	**145.45**	**350**	⇑*i*PKP2	PKPab	19 37 06.1	+0.1
VOIR		**145.49**	**335**	⇑P	PKPdf	19 37 05.6	+2.8
VOIR		**145.49**	**335**	⇑P	PKPdf	19 37 05.6	+2.8
ANTO	**Ankara**	**145.54**	**321**	*e*PKPdf	PKPdf	19 37 05.0	+1.9
WET	**Wettzell**	**145.54**	**351**	*e*PKP2	PKPab	19 37 05.5	-0.9
WLF	**Walferdange**	**145.60**	**359**	*e*PKPdf	PKPdf	19 37 05.4	+2.6
ZST	**Bratislava**	**145.63**	**346**	*e*PKP	PKPdf	19 37 05.6	+2.7
SRO	**Srobarova**	**145.69**	**344**	*e*PKP	PKPdf	19 37 05.8	+2.8
GEC2	**GERESS Array S**	**145.70**	**350**	*e*PKP2	PKPab	19 37 06.1	-0.9
GEC2	**GERESS Array S**	**145.70**	**350**	*e*PKPbc	PKPbc	19 37 06.1	+2.0
GEC2				*e*pPKPbc		19 38 12.3	
GERES	**GERESS Array B**	**145.70**	**350**	PKPbc	PKPbc	19 37 05.0	+0.8
	comp=Z,7.2nm,0.8s,baz=27,slow=3.0,SNR=9.3						
GERES				pPKPbc		19 38 09.6	
	comp=Z,3.1nm,1.0s,baz=27,slow=3.0,SNR=3.4						
LTHS	**Al Lith**	**146.09**	**284**	P	PKPdf	19 37 08.1	+3.5
FLN	**La Foliniere**	**146.19**	**7**	*e*PKP1	PKPbc	19 37 06.3	+1.0
	comp=Z,48nm,0.8s						
ROSF	**Rostrenen**	**146.21**	**10**	*e*PKP1	PKPbc	19 37 06.3	+0.9
	comp=Z,63nm,1.1s						
LDF	**La Druitiere**	**146.40**	**6**	*e*PKP1	PKPbc	19 37 06.9	+1.1
	comp=Z,29nm,0.7s						
SGMF	**Saint Gilles**	**146.41**	**9**	*e*PKP1	PKPbc	19 37 06.8	+1.0
	comp=Z,59nm,0.8s						
GRR	**Gorron**	**146.52**	**7**	*e*PKP1	PKPbc	19 37 07.1	+1.0
	comp=Z,45nm,0.7s						
MOA	**Molln**	**146.56**	**349**	⇓*i*P	PKPdf	19 37 08.4	+3.8
	comp=Z,31nm,1.1s						
QUIF	**Quistinic**	**146.64**	**10**	*e*PKP1	PKPbc	19 37 07.5	+1.1
	comp=Z,32nm,0.8s						
FUR	**Furstenfeldbru**	**146.72**	**353**	*e*PKP2	PKPab	19 37 08.7	-2.3
MEZF	**Maizieres J'vi**	**146.77**	**0**	*e*PKP1	PKPbc	19 37 08.4	+1.7
CDF	**Champ du Feu**	**146.82**	**357**	*e*PKP1	PKPbc	19 37 08.4	+1.6
	comp=Z,70nm,1.0s						
BFO	**Black Forest**	**146.84**	**356**	*e*PKPbc	PKPbc	19 37 09.0	+2.2
ARSA	**Arzberg**	**146.88**	**347**	⇓P	PKPdf	19 37 07.2	+1.9
ARSA	**Arzberg**	**146.88**	**347**	⇓*i*P	PKPdf	19 37 07.2	+1.9
	comp=Z,19nm,1.2s						
HAU	**Haudompre**	**147.25**	**359**	*e*PKP1	PKPdf	19 37 09.6	+3.8
	comp=Z,83nm,1.2s						
HINF	**Hinteralfeld**	**147.43**	**358**	*e*PKP1	PKPdf	19 37 09.7	+3.7
	comp=Z,31nm,1.2s						
KBA	**Koelnbreinsper**	**147.47**	**350**	⇑*i*P	PKPdf	19 37 10.9	+4.8
	comp=Z,16nm,0.7s						
WATA	**Walderalm**	**147.50**	**352**	⇓*i*P	PKPdf	19 37 10.5	+4.4
	comp=Z,13nm,0.9s						
MOTA	**Moosalm**	**147.55**	**352**	⇓*e*P	PKPdf	19 37 11.0	+4.7
	comp=Z,20nm,1.0s						
WTTA	**Wattenberg**	**147.56**	**352**	⇑*i*P	PKPdf	19 37 11.0	+4.7
	comp=Z,26nm,0.6s						
SQTA	**Sankt Quirin**	**147.66**	**352**	⇓*e*P	PKPdf	19 37 09.6	+3.2
	comp=Z,10nm,0.8s						
SQTA	**Sankt Quirin**	**147.66**	**352**	⇓*e*P	PKPdf	19 37 09.6	+3.2
DAVA	**Damuels**	**147.75**	**354**	⇓*i*P	PKPdf	19 37 11.9	+5.4
	comp=Z,34nm,1.0s						
OBKA	**Obir**	**147.79**	**348**	⇓*e*P	PKPdf	19 37 11.1	+4.4
	comp=Z,9.6nm,0.8s						
YNBS	**Yanbu' al Bahr**	**147.85**	**292**	P	PKPdf	19 37 12.3	+4.9
HYF	**Humbligny**	**147.94**	**3**	*e*PKP1	PKPdf	19 37 12.2	+5.4
CSS	**Prodhromos**	**147.94**	**313**	*e*PKPbc	PKPdf	19 37 11.6	+4.4
LOR	**Lormes**	**147.99**	**2**	*e*PKP1	PKPdf	19 37 10.2	+3.3
	comp=Z,25nm,0.8s						
SSF	**Saint Saulge**	**148.19**	**2**	*e*PKP1	PKPdf	19 37 10.9	+3.7
	comp=Z,62nm,1.2s						
LJU	**Ljubljana**	**148.24**	**348**	*e*PKPdf	PKPdf	19 37 10.0	+2.6
LJU				*e*		19 37 12.9	
DAVOX	**Davos**	**148.25**	**354**	PKPbc	PKPdf	19 37 12.5	+5.1
	comp=Z,25nm,0.8s,baz=352,slow=4.1,SNR=7.9						
UMJS	**Umm Lajj**	**148.29**	**294**	P	PKPdf	19 37 14.2	+6.1
MFF	**Saint Martin d**	**148.36**	**7**	*e*PKP1	PKPdf	19 37 12.2	+4.7
	comp=Z,80nm,1.3s						
AVF	**Avril sur Loir**	**148.45**	**2**	*e*PKP1	PKPdf	19 37 11.9	+4.2
	comp=Z,22nm,0.8s						
GRUS	**Gruza**	**148.46**	**338**	*i* PKP	PKPdf	19 37 12.2	+4.5
DIVS	**Divcibare**	**148.53**	**339**	*i* PKP	PKPdf	19 37 12.9	+5.0
SMF	**Signal de Mont**	**148.61**	**2**	*e*PKP1	PKPdf	19 37 12.2	+4.3
CABF	**La Chapelle**	**148.66**	**359**	*e*PKP1	PKPdf	19 37 13.4	+5.4
	comp=Z,85nm,1.0s						
BGF	**Bois d'Agland**	**148.66**	**3**	*e*PKP1	PKPdf	19 37 12.0	+4.0
TCF	**Toulx Ste Croi**	**148.89**	**4**	*e*PKP1	PKPdf	19 37 13.4	+5.0
	comp=Z,23nm,1.0s						
ALWS	**Ilw as Safayha**	**149.06**	**302**	P	PKPdf	19 37 15.2	+6.0
JMOS	**Jabal al Moall**	**149.08**	**302**	P	PKPdf	19 37 15.3	+6.1
HAQS	**Haql**	**149.26**	**302**	P	PKPdf	19 37 15.7	+6.2
AYUS	**'Aynunah**	**149.27**	**300**	P	PKPdf	19 37 17.0	+7.5
BDAS	**Al Bad'**	**149.33**	**300**	P	PKPdf	19 37 15.7	+6.1
ORX	**Oropa**	**149.55**	**356**	P	PKPdf	19 37 15.1	+5.7
LPL	**La Plagne**	**149.73**	**358**	*e*PKP1	PKPdf	19 37 16.6	+6.9
	comp=Z,46nm,0.9s						
LPG	**La Plagne**	**149.75**	**358**	*e*PKP1	PKPdf	19 37 16.5	+6.8
	comp=Z,45nm,0.8s						
RJF	**Les Rejaudoux**	**149.81**	**5**	*e*PKP1	PKPdf	19 37 16.1	+6.2
SKO	**Skopje**	**149.83**	**335**	*e*PKP	PKPdf	19 37 11.1	+1.1
SKO	**Skopje**	**149.83**	**335**	*e*PKP	PKPdf	19 37 11.1	+1.1
VAY	**Valandovo**	**149.90**	**333**	*e*PKP	PKPdf	19 37 15.6	+5.5
VAY	**Valandovo**	**149.90**	**333**	*e*PKP	PKPdf	19 37 15.6	+5.5
LFF	**La Frestale**	**150.10**	**6**	*e*PKP1	PKPdf	19 37 16.9	+6.6
	comp=Z,52nm,1.0s						
BNI	**Bardonecchia**	**150.20**	**358**	*e*PKPbc	PKPdf	19 37 18.6	+8.2
FENE	**Fenestrelle**	**150.20**	**357**	P	PKPdf	19 37 16.3	+5.8
CAF	**Calviac**	**150.24**	**4**	*e*PKP1	PKPdf	19 37 17.4	+6.9
ORIF	**Oris-en-Rattie**	**150.35**	**359**	*e*PKP1	PKPdf	19 37 17.8	+7.1
	comp=Z,15nm,0.7s						
BHB	**Bricherasio**	**150.38**	**357**	P	PKPdf	19 37 16.8	+6.1
VIVF	**Saint-Julien-l**	**150.42**	**1**	*e*PKP1	PKPdf	19 37 17.9	+7.1
	comp=Z,40nm,1.0s						
GRAM		**150.49**	**353**	P	PKPdf	19 37 16.8	+5.9
MBDF	**Montbardon**	**150.52**	**358**	*e*PKP1	PKPdf	19 37 18.5	+7.6
	comp=Z,29nm,0.8s						
VALM		**150.61**	**353**	P	PKPdf	19 37 16.9	+5.9
CODM		**150.61**	**353**	P	PKPdf	19 37 16.9	+5.9
BIA	**Bitola**	**150.68**	**335**	*e*PKP	PKPdf	19 37 15.9	+4.6
BIA	**Bitola**	**150.68**	**335**	*e*PKP	PKPdf	19 37 15.9	+4.6
BACM		**150.70**	**353**	P	PKPdf	19 37 16.7	+5.5
SARO	**Sassorosso**	**150.75**	**352**	P	PKPdf	19 37 16.4	+5.1
OHR	**Ohrid**	**150.81**	**335**	*e*PKP	PKPdf	19 37 17.8	+6.3
OHR	**Ohrid**	**150.81**	**335**	*e*PKP	PKPdf	19 37 17.8	+6.3
VINC	**Vinca**	**150.82**	**353**	P	PKPdf	19 37 16.6	+5.1
ROB	**Roburent**	**150.89**	**356**	P	PKPdf	19 37 17.9	+6.4
FIN	**Finale Ligure**	**150.95**	**355**	P	PKPdf	19 37 17.7	+6.1
ENR	**Entracque**	**150.99**	**357**	P	PKPdf	19 37 17.9	+6.2
MAIM		**151.00**	**352**	P	PKPdf	19 37 16.9	+5.3
RORO		**151.06**	**356**	P	PKPdf	19 37 17.3	+5.6
MONE	**Monesi**	**151.11**	**356**	P	PKPdf	19 37 18.3	+6.4
LASF	**Ste Croix**	**151.18**	**2**	*e*PKP1	PKPdf	19 37 19.7	+7.8
	comp=Z,16nm,0.8s						
SMRF	**Simiane la Rot**	**151.30**	**359**	*e*PKP1	PKPdf	19 37 20.3	+8.2
	comp=Z,45nm,1.0s						
SBF	**Sospel**	**151.35**	**357**	*e*PKP1	PKPdf	19 37 20.1	+7.9
	comp=Z,36nm,0.8s						
FRF	**La Foret Royal**	**151.69**	**358**	*e*PKP1	PKPdf	19 37 20.8	+8.1
LMR	**La Mourre**	**151.92**	**358**	*e*PKP1	PKPdf	19 37 21.7	+8.6
EPF	**Esparros**	**151.94**	**8**	*e*PKP1	PKPdf	19 37 21.5	+8.4
PGF	**Pioggiola**	**152.53**	**354**	*e*PKP1	PKPdf	19 37 23.1	+9.1
	comp=Z,21nm,0.8s						
ESDC	**Sonseca Array**	**154.32**	**16**	PKPbc	PKPdf	19 37 26.3	+10
	comp=Z,1.9nm,0.7s,baz=324,slow=1.6,SNR=7.6						
ESDC				PKPab	PKPab	19 37 41.4	-1.2
	comp=Z,0.7nm,0.6s,baz=335,slow=3.5,SNR=4.6						

PRU ***12*** *19:31:11.6, 47.27N×8.33E*

ROM ***12*** *19:31:13.9±0.3, 47.43N×8.14E, h6^{km}±3^{km}, Ml3.8/15, Error ellipse: s-maj=3.7km s-min=2.0km az=4.0*

CSEM ***12*** *19:31:15.9±0.0, 47.55N×8.18E, h25^{km}, ML4.4/41, Error ellipse: s-maj=0.7km s-min=0.5km az=168.0*

LDG ***12*** *19:31:16.0±0.1, 47.51N×8.18E, h20^{km}, Md3.9/2, Ml4.3/43, Error ellipse: s-maj=1.0km s-min=1.0km az=36.0*

BGR ***12*** *19:31:16.4±0.2, 47.55N×8.17E, h20^{km}, ML4.3/21, Error ellipse: s-maj=2.2km s-min=1.1km az=7.0*

IDC ***12*** *19:31:16.7±1.9, 47.69N×8.48E, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, ML3.7/4, Error ellipse: s-maj=19.0km s-min=14.1km az=101.0*

ZUR_RM ***12*** *19:31:16, 47.52N×8.16E, h18^{km}, Mw3.6/20, Moment Tensor Solution. s20 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-2.06; M$_{\theta\theta}$-0.27; M$_{\phi\phi}$2.32; M$_{r\theta}$1.71; M$_{\theta\phi}$-0.86; M$_{\phi r}$0.25; Best double couple: M$_0$2.89×10^{14} NP1:ϕ_s314°,δ57°, λ-130°. NP2:ϕ_s191°,δ50°,λ-45°. Principal axes: T 2.6, Plg4°, Azm71°; N .576, Plg33°, Azm339°; P -3.176, Plg57°, Azm167°;*

LEDBW ***12*** *19:31:16.6±0.1, 47.53N×8.17E, h19^{km}±1^{km}, ML4.4 Error ellipse: s-maj=1.6km s-min=1.2km az=177.0*

LEDBW Felt V EMS.

NEIC ***12*** *19:31:16.1, 47.50N×8.20E, h22^{km}, ML4.4(LEDBW), ML4.3(LDG), ML4.3(SZGRF), ML4.2(STR), ML4.1(ZUR), ML3.8(ROM), After ZUR.*

NEIC Felt [III] at Brugg and Zurich. Felt at Baden, Balsthal, Birsfelden, Kloten, Kuttigen, Rheinfelden and Winterthur. Also felt [III] at Lorrach, Germany. Felt at Freiburg and Rheinfelden, Germany.

ZUR ***12*** *19:31:16.4, 47.52N×8.17E, h20^{km}, ML4.1/13*

STR ***12*** *19:31:16.0±0.1, 47.51N×8.15E, h10^{km}±1^{km}, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 12 19:31:15.8±0.2**, 47.51N**±0.01×**8.13E**±0.01**, h32**^{km}±1^{km}**,**
n455,σ**1**§**28**/716**, 62C-69D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SULZ	**Sulz-Cheisache**	**0.02**	**327**	⇓*i*P	**Pn**	**19 31 20.0**	**+0.2**
SULZ				S	**Sn**	**19 31 22.4**	**+0.5**
SULZ	**Sulz-Cheisache**	**0.02**	**327**	⇓*i*Pg	**Pn**	**19 31 19.9**	**+0.2**
SULZ				*i* Sg	**Sn**	**19 31 22.4**	**+0.5**
SULZ	**Sulz-Cheisache**	**0.02**	**327**	*e*Pg	**Pn**	**19 31 20.0**	**+0.3**
	SNR=6280						
SULZ				*e*Sg	**Sn**	**19 31 22.4**	**+0.5**
SULZ	**Sulz-Cheisache**	**0.02**	**327**	⇓*i*P	**Pn**	**19 31 19.9**	**+0.2**
SULZ	**Sulz-Cheisache**	**0.02**	**327**	⇓*i*Pg	**Pn**	**19 31 20.0**	**+0.3**
SULZ				*i* Sg	**Sn**	**19 31 22.4**	**+0.5**
FLACH	**Flaach**	**0.30**	**78**	⇓*i*P	**Pb**	**19 31 22.8**	**-0.6**
ZUR	**Zurich**	**0.34**	**115**	⇑*i*P	**Pb**	**19 31 23.4**	**-0.5**
ZUR	**Zurich**	**0.34**	**115**	⇑*i*Pg	**Pb**	**19 31 23.4**	**-0.5**
ZUR				*i* Sg	**Sb**	**19 31 28.4**	**-1.1**
ZUR	**Zurich**	**0.34**	**115**	*e*Pg	**Pb**	**19 31 23.4**	**-0.5**
	SNR=2212						
ZUR				*e*Sg	**Sb**	**19 31 28.4**	**-1.1**
ZUR	**Zurich**	**0.34**	**115**	⇑*i*Pg	**Pb**	**19 31 23.4**	**-0.5**
ZUR				*i* Sg	**Sb**	**19 31 28.4**	**-1.1**
BALST	**Balsthal**	**0.34**	**239**	⇑*i*Pg	**Pb**	**19 31 24.3**	**+0.3**
BALST				*i* Sg	**Sb**	**19 31 29.7**	**+0.1**
BALST	**Balsthal**	**0.34**	**239**	⇑*i*Pg	**Pb**	**19 31 24.3**	**+0.3**
BALST				*i* Sg	**Sb**	**19 31 29.7**	**+0.1**
SLE	**Schleitheim**	**0.35**	**44**	⇓*i*P	**Pb**	**19 31 23.5**	**-0.6**
SLE	**Schleitheim**	**0.35**	**44**	⇓*i*Pg	**Pb**	**19 31 23.5**	**-0.6**
SLE				*i* Sg	**Sb**	**19 31 28.3**	**-1.5**
SLE	**Schleitheim**	**0.35**	**44**	*e*Pg	**Pb**	**19 31 23.5**	**-0.7**
	SNR=5292						
SLE				*e*Sg	**Sb**	**19 31 28.3**	**-1.5**
SLE	**Schleitheim**	**0.35**	**44**	⇓*i*Pg	**Pb**	**19 31 23.5**	**-0.6**
SLE				*i* Sg	**Sb**	**19 31 28.3**	**-1.5**
FELD	**Feldberg**	**0.37**	**347**	⇓*e*P	**Pb**	**19 31 24.3**	**-0.1**
FELD				⇓*i*P		19 31 24.3	
FELD				*e*S	**Sb**	**19 31 29.7**	**-0.6**
FELD	**Feldberg**	**0.37**	**347**	⇓*i*P	**Pb**	**19 31 24.3**	**-0.1**
FELD	**Feldberg**	**0.37**	**347**	*e*Pg	**Pb**	**19 31 24.3**	**-0.1**
	SNR=184						
FELD	**Feldberg**	**0.37**	**347**	Pg	**Pb**	**19 31 24.2**	**-0.2**
FELD				Sg	**Sb**	**19 31 29.8**	**-0.5**
TRULL	**Truellikon**	**0.40**	**70**	*e*Sg	**Sb**	**19 31 29.6**	**-1.3**
TRULL	**Truellikon**	**0.40**	**70**	⇑*i*Pg	**Pb**	**19 31 24.3**	**-0.5**
TRULL	**Truellikon**	**0.40**	**70**	⇓*i*Pg	**Pb**	**19 31 24.3**	**-0.5**
TRULL				*e*Sg	**Sb**	**19 31 29.6**	**-1.3**
BBS	**Basel-Blauen**	**0.42**	**264**	⇑*i*P	**Pb**	**19 31 25.7**	**+0.5**
BBS	**Basel-Blauen**	**0.42**	**264**	*e*Pg	**Pb**	**19 31 25.6**	**+0.5**
	SNR=700						
KIZ	**Kirchzarten**	**0.47**	**342**	⇓*i*P	**Pb**	**19 31 25.8**	**0.0**
KIZ				⇓*e*P		19 31 25.8	
KIZ				*i* S	**Sb**	**19 31 32.4**	**-0.3**
KIZ				*e*S	**Sb**	**19 31 32.4**	**-0.2**
KIZ	**Kirchzarten**	**0.47**	**342**	⇓*i*P*	**Pb**	**19 31 25.8**	**0.0**
KIZ				*i* S*	**Sb**	**19 31 32.4**	**-0.3**
FBB	**Freiburg**	**0.52**	**339**	⇓*i*P	**Pb**	**19 31 27.0**	**+0.3**
STEIN	**Stein am Rhein**	**0.52**	**72**	⇑*i*Pg	**Pb**	**19 31 26.6**	**-0.1**
STEIN				*e*Sg	**Sb**	**19 31 33.4**	**-0.8**
STEIN	**Stein am Rhein**	**0.52**	**72**	⇑*i*Pg	**Pb**	**19 31 26.6**	**-0.1**
STEIN				*e*Sg	**Sb**	**19 31 33.4**	**-0.8**
WILA	**Wila**	**0.54**	**100**	⇑*i*Pg	**Pb**	**19 31 26.8**	**-0.1**
WILA				*i* Sg	**Sb**	**19 31 34.1**	**-0.4**
WILA	**Wila**	**0.54**	**100**	*e*Pg	**Pb**	**19 31 26.8**	**0.0**
	SNR=1547						
WILA				*e*Sg	**Sb**	**19 31 34.2**	**-0.3**
WILA	**Wila**	**0.54**	**100**	⇑*i*Pg	**Pb**	**19 31 26.8**	**-0.1**
WILA				*i* Sg	**Sb**	**19 31 34.1**	**-0.4**
WEIN	**Weingarten**	**0.58**	**88**	⇑*i*Pg	**Pb**	**19 31 27.6**	**0.0**
WEIN	**Weingarten**	**0.58**	**88**	⇑*i*Pg	**Pb**	**19 31 27.6**	**0.0**
SISB	**Singen-Sch Ber**	**0.59**	**73**	⇑*i*P	**Pb**	**19 31 27.7**	**-0.1**
SISB				*i* S	**Sb**	**19 31 35.8**	**-0.1**
SISB				S	**Sb**	**19 31 36.8**	**+0.8**
SISB	**Singen-Sch Ber**	**0.59**	**73**	⇑*i*P*	**Pb**	**19 31 27.7**	**-0.1**
SISB				*i* S*	**Sb**	**19 31 35.8**	**-0.1**
SISB				SmS		19 31 36.8	
BOURR	**Bourrignon**	**0.62**	**259**	⇑*i*Pg	**Pb**	**19 31 29.2**	**+1.0**
BOURR				*e*Sg	**Sb**	**19 31 38.1**	**+1.3**
BOURR	**Bourrignon**	**0.62**	**259**	*e*Pg	**Pb**	**19 31 29.2**	**+1.0**
	SNR=2341						
BOURR				*e*Sg	**Sb**	**19 31 38.1**	**+1.4**
BOURR	**Bourrignon**	**0.62**	**259**	⇑*i*Pg	**Pb**	**19 31 29.2**	**+1.0**
BOURR				*e*Sg	**Sb**	**19 31 38.1**	**+1.3**
MUO	**Muotathal**	**0.65**	**147**	⇓*i*Pg	**Pb**	**19 31 29.1**	**+0.5**
MUO				*e*Sg	**Sb**	**19 31 38.0**	**+0.6**
MUO	**Muotathal**	**0.65**	**147**	⇓*i*Pg	**Pb**	**19 31 29.1**	**+0.5**
MUO				*e*Sg	**Sb**	**19 31 37.9**	**+0.5**
BNALP	**Bannalp**	**0.67**	**162**	⇓*i*Pg	**Pb**	**19 31 29.7**	**+0.7**
BNALP				*e*Sg	**Sb**	**19 31 39.3**	**+1.1**
BNALP	**Bannalp**	**0.67**	**162**	⇓*i*Pg	**Pb**	**19 31 29.7**	**+0.7**
BNALP				*e*Sg	**Sb**	**19 31 39.3**	**+1.1**
LIBD	**Limburg**	**0.73**	**331**	⇓*e*P	**Pn**	**19 31 30.9**	**+1.0**
LIBD	**Limburg**	**0.73**	**331**	*e*Pg	**Pn**	**19 31 30.9**	**+1.0**
	SNR=77						
LIBD	**Limburg**	**0.73**	**331**	Pg	**Pn**	**19 31 30.7**	**+0.8**
LIBD				Sg	**Sb**	**19 31 41.1**	**+1.3**
SPAK	**Spaichingen**	**0.74**	**37**	⇑*i*P	**Pn**	**19 31 30.0**	**0.0**
SPAK				⇑*i*P		19 31 30.4	
SPAK	**Spaichingen**	**0.74**	**37**	⇑*i*PN	**Pn**	**19 31 30.0**	**0.0**

SPAK	Spaichingen	0.74	37	⇑iPG	Pn	19 31 30.4	+0.4
SPAK	Spaichingen	0.74	37	ePg	Pn	19 31 30.0	0.0
	SNR=254						
SPAK	Spaichingen	0.74	37	⇑iPg	Pn	19 31 30.4	+0.4
SPAK	Spaichingen	0.74	37	Pg	Pn	19 31 29.9	-0.1
SPAK				Sg	Sb	19 31 40.0	0.0
MOF	Molkenrain	0.75	297	Pg	Pn	19 31 30.8	+0.6
MOF				Sg	Sb	19 31 41.6	+1.2
MOF	Molkenrain	0.75	297	⇑P	Pn	19 31 30.9	+0.7
MOF				⇑iP		19 31 31.3	
MOF	Molkenrain	0.75	297	ePg	Pn	19 31 30.8	+0.6
	SNR=980						
HASLI	Hasliberg	0.76	179	⇓iPn	Pn	19 31 31.1	+0.8
HASLI				i Sg	Sb	19 31 41.8	+1.3
HASLI	Hasliberg	0.76	179	⇓iPg	Pn	19 31 31.1	+0.8
HASLI				i Sg	Sb	19 31 41.8	+1.3
BFO	Black Forest	0.83	9	⇑iP	Pn	19 31 31.2	-0.1
BFO				P		19 31 31.9	
BFO	Black Forest	0.83	9	ePg	Pn	19 31 31.2	-0.1
	SNR=980						
BFO				eSg	Sb	19 31 42.1	-0.4
BFO	Black Forest	0.83	9	ePg	Pn	19 31 30.7	-0.6
BFO				eSg	Sb	19 31 42.7	+0.2
GUT	Gutenstein	0.87	50	P	Pn	19 31 31.6	-0.2
GUT				S	Sn	19 31 43.9	+0.4
LLS	Linth-Limmern	0.90	138	i Sg	Sn	19 31 44.9	+0.8
LLS	Linth-Limmern	0.90	138	⇓iPn	Pn	19 31 33.2	+1.0
LLS	Linth-Limmern	0.90	138	⇓iP	Pn	19 31 33.2	+1.0
LOMF	Lomont	0.90	260	Pg	Pn	19 31 34.0	+1.7
LOMF				Sg	Sn	19 31 46.2	+1.9
LOMF	Lomont	0.90	260	⇑iP	Pn	19 31 33.1	+0.8
LOMF				⇑iP		19 31 34.0	
LOMF	Lomont	0.90	260	ePn	Pn	19 31 33.0	+0.7
	SNR=20						
LOMF				ePg	Pn	19 31 34.1	+1.8
	SNR=1732						
HINF	Hinteralfeld	0.92	290	ePn	Pn	19 31 32.9	+0.4
HINF				ePg	Pn	19 31 34.0	+1.5
HINF				eSg	Sn	19 31 45.8	+1.1
	3µm,0.2s						
HINF	Hinteralfeld	0.92	290	ePg	Pn	19 31 34.0	+1.5
HINF				eSg	Sn	19 31 45.8	+1.1
WIMIS	Wimmis	0.92	202	⇓iPn	Pn	19 31 33.3	+0.8
WIMIS	Wimmis	0.92	202	⇓iPn	Pn	19 31 33.3	+0.8
LIENZ	Alp Oberkamor	0.95	103	⇑iPn	Pn	19 31 33.9	+0.8
LIENZ	Alp Oberkamor	0.95	103	⇑iPg	Pn	19 31 34.4	+1.3
LIENZ	Alp Oberkamor	0.95	103	ePn	Pn	19 31 34.0	+0.9
	SNR=157						
LIENZ				eSg	Sn	19 31 46.6	+1.0
LIENZ	Alp Oberkamor	0.95	103	⇑iPn	Pn	19 31 34.0	+0.9
ECH	Echery	0.96	317	⇓eP	Pn	19 31 33.7	+0.5
ECH	Echery	0.96	317	ePn	Pn	19 31 33.5	+0.3
	SNR=16						
ECH	Echery	0.96	317	Pg	Pn	19 31 34.2	+1.0
ECH				Sg	Sn	19 31 47.2	+1.4
PLONS	Plons	0.97	118	⇑iPn	Pn	19 31 34.2	+0.9
PLONS	Plons	0.97	118	⇑iPn	Pn	19 31 34.2	+0.9
WLS	Welschbruch	1.04	330	ePn	Pn	19 31 34.8	+0.4
	SNR=9.1						
WLS	Welschbruch	1.04	330	Pg	Pn	19 31 35.4	+1.1
CDF	Champ du Feu	1.07	328	ePn	Pn	19 31 35.0	+0.3
CDF				ePg	Pn	19 31 36.4	+1.7
CDF				eSn	Sn	19 31 47.3	-1.2
CDF				eSg	Sn	19 31 50.2	+1.7
	2µm,0.3s						
CDF	Champ du Feu	1.07	328	ePg	Pn	19 31 36.4	+1.7
CDF				eSn	Sn	19 31 47.3	-1.2
CDF				eSg	Sn	19 31 50.2	+1.7
TORNY	Torny	1.09	228	⇓iPn	Pn	19 31 35.6	+0.6
TORNY	Torny	1.09	228	⇓iPn	Pn	19 31 35.6	+0.6
STR	Strasbourg	1.10	347	Pg	Pn	19 31 37.0	+1.8
STR				Sg	Sn	19 31 51.7	+2.3
FUSIO	Fusio	1.12	161	⇓iPn	Pn	19 31 36.9	+1.5
FUSIO	Fusio	1.12	161	⇓iPn	Pn	19 31 36.9	+1.5
LKBD	Leukerbad	1.18	197	⇓iPn	Pn	19 31 37.2	+0.9
LKBD	Leukerbad	1.18	197	i Pn	Pn	19 31 37.2	+0.9
TUBL	Tuebingen Lnz	1.20	32	P	Pn	19 31 36.0	-0.5
TUBL				S	Sn	19 31 53.4	+1.6
DAVA	Damuels	1.21	100	⇑ePn	Pn	19 31 37.6	+0.9
	comp=Z,57nm,0.1s,SNR=136						
DAVA				⇓iPg	Pn	19 31 39.0	+2.3
	comp=Z,120nm,0.1s						
DAVA	Damuels	1.21	100	⇑iSg	Sn	19 31 54.9	+2.7
	comp=E,6µm,0.2s						
DAVA	Damuels	1.21	100	ePg	Pn	19 31 37.0	+0.2
DAVA				eSg	Sn	19 31 52.4	+0.3
DAVA	Damuels	1.21	100	⇑ePn	Pn	19 31 37.6	+0.9
DAVA				Sg	Sn	19 31 54.9	+2.7
DAVA	Damuels	1.21	100	Pg	Pn	19 31 39.0	+2.2
DAVA				Sg	Sn	19 31 54.9	+2.7
LBG	Lerchenberg	1.24	21	P	Pn	19 31 36.4	-0.8
LBG				S	Sn	19 31 54.5	+1.7
BUCH	Bad Urach	1.25	41	P	Pn	19 31 36.6	-0.7
BUCH				P		19 31 38.9	
BUCH				S	Sn	19 31 55.5	+2.4
BUCH	Bad Urach	1.25	41	Pg	Pn	19 31 38.9	+1.6
BUCH				Sg	Sn	19 31 55.5	+2.4
BRANT	Les Verrieres	1.27	244	⇑iPn	Pn	19 31 38.2	+0.6
BRANT	Les Verrieres	1.27	244	⇑iPn	Pn	19 31 38.2	+0.6
SENIN	Lac Senin	1.28	207	⇓iPn	Pn	19 31 38.5	+0.7
SENIN	Lac Senin	1.28	207	⇑iPg	Pn	19 31 40.8	+3.0
SENIN	Lac Senin	1.28	207	⇓iPn	Pn	19 31 38.5	+0.7
HAU	Haudompre	1.30	293	ePn	Pn	19 31 38.4	+0.4
HAU				ePg	Pn	19 31 40.3	+2.3
HAU				eSn	Sn	19 31 53.3	-1.1
HAU				eSg	Sn	19 31 57.6	+3.2
	2µm,0.2s						
HAU	Haudompre	1.30	293	ePg	Pn	19 31 40.3	+2.3
HAU				eSn	Sn	19 31 53.3	-1.1
HAU				eSg	Sn	19 31 57.6	+3.2
UBR	Uberruh	1.35	82	⇑iP	Pn	19 31 39.1	+0.4
UBR				P		19 31 41.5	
UBR				S	Sn	19 31 55.1	-0.5
UBR				i S	Sn	19 31 59.0	+3.3
UBR	Uberruh	1.35	82	Pn	Pn	19 31 39.2	+0.4
UBR	Uberruh	1.35	82	⇑iPn	Pn	19 31 39.2	+0.5
UBR				Sn	Sn	19 31 55.2	-0.5
VDL	Val di Lei	1.38	138	⇓iPn	Pn	19 31 40.9	+1.8
VDL	Val di Lei	1.38	138	⇓iPn	Pn	19 31 40.9	+1.8
DAVOX	Davos	1.40	121	Pn	Pn	19 31 41.0	+1.5
	117nm,0.3s,baz=313,slow=18,SNR=477						
DAVOX				Pg	Pn	19 31 42.6	+3.1
	117nm,0.3s,baz=308,slow=17,SNR=493						
DAVOX				Lg		19 32 00.3	
	1µm,0.3s,baz=6.1,slow=19,SNR=114						
DAVOX	Davos	1.40	121	⇓iPn	Pn	19 31 41.0	+1.5
DAVOX	Davos	1.40	121	Pn	Pn	19 31 41.0	+1.5
DAVOX				Sn	Sn	19 32 00.5	+3.5
AIGLE	Aigle	1.42	215	⇓iPn	Pn	19 31 39.9	+0.1
AIGLE	Aigle	1.42	215	⇓iP	Pn	19 31 39.9	+0.1
GRYON	Gryon	1.44	209	⇓iPn	Pn	19 31 40.5	+0.4
GRYON	Gryon	1.44	209	⇓iPn	Pn	19 31 40.5	+0.4
STU	Stuttgart	1.45	29	ePn	Pn	19 31 39.1	-1.1
	SNR=13						
STU				ePg	Pn	19 31 42.5	+2.4
	SNR=106						
STU				eSg	Sn	19 32 00.6	+2.4
STU	Stuttgart	1.45	29	ePn	Pn	19 31 38.8	-1.4
STU				eSg	Sn	19 32 00.6	+2.4
MMK	Mattmark	1.47	184	Pn	Pn	19 31 41.8	+1.4
MMK				Sn	Sn	19 32 02.7	+4.1
MMK	Mattmark	1.47	184	⇓iPn	Pn	19 31 41.8	+1.4
OBER	Oberstdorf	1.47	93	⇑iPn	Pn	19 31 41.2	+0.7
LANF	Langenberg	1.49	352	P	Pn	19 31 40.7	0.0
LANF	Langenberg	1.49	352	ePn	Pn	19 31 40.7	0.0
	SNR=160						
DIX	Grande Dixence	1.52	199	Pn	Pn	19 31 42.1	+1.0
DIX				Sn	Sn	19 32 04.5	+4.6
DIX	Grande Dixence	1.52	199	⇓iPn	Pn	19 31 42.2	+1.1
DIX	Grande Dixence	1.52	199	⇓iPn	Pn	19 31 42.2	+1.1
DIX				Sn	Sn	19 32 04.5	+4.6
OG01	Vacheresse	1.54	221	Pg	Pn	19 31 45.9	+4.4
OG01				Sg	Sn	19 32 06.2	+5.6
OG01	Vacheresse	1.54	221	Pn	Pn	19 31 41.8	+0.3
OG01				Sg	Sn	19 32 06.2	+5.6
OG01	Vacheresse	1.54	221	Pg	Pn	19 31 45.9	+4.4
OG01				Sg	Sn	19 32 06.2	+5.6
MCGN	Macugnaga	1.56	184	Pn	Pn	19 31 43.2	+1.5
MCGN				Sn	Sn	19 32 05.3	+4.3
	867nm,0.3s						
SALAN	Lac Salanfe	1.58	211	⇓iPn	Pn	19 31 42.4	+0.3
SALAN	Lac Salanfe	1.58	211	⇓iPn	Pn	19 31 42.4	+0.3
GIMEL	Gimel	1.61	233	⇓iPn	Pn	19 31 42.5	+0.1
GIMEL	Gimel	1.61	233	⇓iP	Pn	19 31 42.5	+0.1
THEF	They Montfort	1.61	297	⇑eP	Pn	19 31 43.0	+0.5
THEF	They Montfort	1.61	297	ePn	Pn	19 31 42.9	+0.4
	SNR=13						
THEF	They Montfort	1.61	297	Pn	Pn	19 31 43.6	+1.1
CABF	La Chapelle	1.66	238	ePn	Pn	19 31 43.2	0.0
CABF				ePg	Pn	19 31 47.8	+4.6
CABF				eSn	Sn	19 32 01.3	-2.3
CABF				eSg	Sn	19 32 08.4	+4.8
	827nm,0.3s						
CABF	La Chapelle	1.66	238	ePn	Pn	19 31 43.2	0.0
CABF				eSn	Sn	19 32 01.3	-2.3
CABF				eSg	Sn	19 32 08.4	+4.8
EMV	Vieux Emosson	1.68	211	Pn	Pn	19 31 44.0	+0.6
EMV				Sn	Sn	19 32 09.7	+5.7
EMV	Vieux Emosson	1.68	211	⇓iPn	Pn	19 31 43.8	+0.4
BERNI	Berninapass	1.70	130	⇓iPn	Pn	19 31 45.8	+2.0
BERNI	Berninapass	1.70	130	⇓iPn	Pn	19 31 45.8	+2.0
VAI	Varese	1.70	165	Pn	Pn	19 31 44.8	+1.0
FUORN	Ofenpass	1.71	121	Pn	Pn	19 31 45.8	+1.9
FUORN				Sn	Sn	19 32 10.0	+5.2
FUORN	Ofenpass	1.71	121	⇓iPn	Pn	19 31 45.6	+1.7
FUORN	Ofenpass	1.71	121	⇓iP	Pn	19 31 45.6	+1.7
FUORN	Ofenpass	1.71	121	Pn	Pn	19 31 45.8	+1.9
FUORN				Sn	Sn	19 32 10.0	+5.2
MUGIO	Muggio	1.71	158	Pn	Pn	19 31 44.8	+0.9
MUGIO				Sn	Sn	19 32 10.1	+5.2
MUGIO	Muggio	1.71	158	ePn	Pn	19 31 44.7	+0.8
HDH	Heidenheim	1.76	52	P	Pn	19 31 43.2	-1.4
KTD	Kalmit	1.81	359	Sg	Sn	19 32 16.8	+9.4
BRMO	Bormio	1.85	123	Pn	Pn	19 31 47.7	+1.8
BRMO				Sn	Sn	19 32 14.0	+5.5
	467nm,0.3s						
ORX	Oropa	1.88	183	P	Pn	19 31 46.5	+0.1
ORX				S	Sn	19 32 07.2	-2.0
ORX	Oropa	1.88	183	P	Pn	19 31 46.5	+0.1
ORX				S	Sn	19 32 07.2	-2.0
ORO	Oropa	1.89	183	Pn	Pn	19 31 47.3	+0.9
ORO				Sn	Sn	19 32 15.1	+5.7
MRGE	Morge	1.89	203	Pn	Pn	19 31 47.4	+0.9
MRGE				Sn	Sn	19 32 15.8	+6.3
	1µm,0.6s						
HEI	Heidelberg	1.93	12	⇑eP	Pn	19 31 46.0	-1.0
HEI				eS	Sn	19 32 16.1	+5.6
SWS	Schriesheim	2.01	11	P	Pn	19 31 46.9	-1.3
TRAV		2.02	188	P	Pn	19 31 48.0	-0.4
TRAV				S	Sn	19 32 10.6	-2.1
TRAV		2.02	188	P	Pn	19 31 48.0	-0.3
TRAV				S	Sn	19 32 10.6	-2.1
MOTA	Moosalm	2.03	94	⇓ePn	Pn	19 31 47.8	-0.6
	comp=Z,3.4nm,0.1s,SNR=163						
MOTA	Moosalm	2.03	94	⇑iPg	Pn	19 31 53.3	+4.8
	comp=Z,141nm,0.2s						
MOTA	Moosalm	2.03	94	⇑iSn	Sn	19 32 12.2	-0.7
	comp=Z,96nm,0.2s						
MOTA	Moosalm	2.03	94	⇓iSg	Sn	19 32 20.6	+7.7
	comp=Z,10nm,0.1s						
MOTA	Moosalm	2.03	94	⇓Pn	Pn	19 31 47.8	-0.6
MOTA				Sn	Sn	19 32 12.2	-0.7
MOTA				Sg	Sn	19 32 20.6	+7.7
MOTA	Moosalm	2.03	94	Pg	Pn	19 31 53.3	+4.9
MOTA				Sn	Sn	19 32 12.2	-0.7
MOTA				Sg	Sn	19 32 20.6	+7.7
MDI	Monti di Nese	2.05	147	Pn	Pn	19 31 50.4	+1.6
	654nm,0.7s						
NORI	Noerdlinger Ri	2.06	53	⇑iPn	Pn	19 31 47.3	-1.7
SIND	Sindeldorf	2.08	28	P	Pn	19 31 47.1	-2.2
RFYF	Reffroy	2.10	303	ePn	Pn	19 31 49.9	+0.4
	baz=121						
RFYF				ePg	Pn	19 31 56.2	+6.7
	baz=118						
RFYF				eSg	Sn	19 32 23.1	+8.2
	779nm,0.2s						
RFYF	Reffroy	2.10	303	ePn	Pn	19 31 49.9	+0.4
RFYF				eSg	Sn	19 32 23.1	+8.2
RFYF	Reffroy	2.10	303	ePg	Pn	19 31 56.2	+6.7
RFYF				eSg	Sn	19 32 23.1	+8.2
	390nm,0.2s						
SQTA	Sankt Quirin	2.11	97	⇑ePn	Pn	19 31 50.5	+0.8
	comp=Z,12nm,0.1s,SNR=110						
SQTA	Sankt Quirin	2.11	97	⇑iPg	Pn	19 31 56.8	+7.1
	comp=Z,301nm,0.2s						
SQTA	Sankt Quirin	2.11	97	⇓iSn	Sn	19 32 15.4	+0.3
	comp=Z,124nm,0.2s						
SQTA	Sankt Quirin	2.11	97	⇑iSg	Sn	19 32 22.5	+7.4
	comp=Z,388nm,0.2s						
SQTA	Sankt Quirin	2.11	97	Pg	Pn	19 31 56.8	+7.1
SQTA				Sn	Sn	19 32 15.4	+0.3
SQTA				Sg	Sn	19 32 22.5	+7.4
TOD	Tromm	2.14	12	ePn	Pn	19 31 48.8	-1.4
	SNR=5.8						
TOD	Tromm	2.14	12	P	Pn	19 31 48.9	-1.2
LSD	Ceresole Reale	2.16	198	P	Pn	19 31 52.1	+1.7
MABI	Malga Bissina	2.19	131	Pn	Pn	19 31 53.2	+2.4
	311nm,0.4s						
SFTF	Sexfontaines	2.19	290	ePn	Pn	19 31 50.6	-0.2
	baz=110						
SFTF				ePg	Pn	19 31 57.5	+6.7
	baz=111						
SFTF				eSg	Sn	19 32 25.0	+7.8
	978nm,0.3s,baz=110						
SFTF	Sexfontaines	2.19	290	ePn	Pn	19 31 50.6	-0.2
SFTF				eSg	Sn	19 32 25.0	+7.8
SFTF	Sexfontaines	2.19	290	ePg	Pn	19 31 57.5	+6.7
SFTF				eSg	Sn	19 32 25.0	+7.8
	489nm,0.3s						
LPL	La Plagne	2.22	206	ePn	Pn	19 31 51.7	+0.5
LPL				ePg	Pn	19 31 57.8	+6.6
LPL				eSn	Sn	19 32 15.2	-2.6
LPL				eSg	Sn	19 32 25.8	+8.0
	232nm,0.3s						
LPL	La Plagne	2.22	206	ePn	Pn	19 31 51.7	+0.5
LPL				eSn	Sn	19 32 15.2	-2.6
LPL				eSg	Sn	19 32 25.8	+8.0
FUR	Furstenfeldbru	2.22	72	ePn	Pn	19 31 50.7	-0.5
	SNR=1.9						
FUR				ePg	Pn	19 31 57.3	+6.1
FUR				eSg	Sn	19 32 25.6	+7.8
FUR	Furstenfeldbru	2.22	72	ePn	Pn	19 31 51.3	+0.1
FUR				eSg	Sn	19 32 26.0	+8.2
LPG	La Plagne	2.23	206	ePn	Pn	19 31 52.2	+0.9
LPG				ePg	Pn	19 31 57.7	+6.4
LPG				eSn	Sn	19 32 15.6	-2.4
LPG				eSg	Sn	19 32 26.9	+8.9
	242nm,0.2s						
LPG	La Plagne	2.23	206	ePn	Pn	19 31 52.2	+0.9
LPG				eSn	Sn	19 32 15.6	-2.4
LPG				eSg	Sn	19 32 26.9	+8.9
MEZF	Maizieres J'vi	2.29	297	ePn	Pn	19 31 52.1	-0.1
	baz=117						
MEZF				ePg	Pn	19 31 58.7	+6.5
	baz=114						
MEZF				eSn	Sn	19 32 16.8	-2.9
MEZF				eSg	Sn	19 32 29.5	+10
	726nm,0.4s						
MEZF	Maizieres J'vi	2.29	297	ePn	Pn	19 31 52.1	-0.1
MEZF				eSn	Sn	19 32 16.8	-2.9
MEZF				eSg	Sn	19 32 29.5	+10
MEZF	Maizieres J'vi	2.29	297	ePg	Pn	19 31 58.7	+6.5
MEZF				eSn	Sn	19 32 16.8	-2.9
MEZF				eSg	Sn	19 32 29.5	+10
	363nm,0.4s						
WATA	Walderalm	2.35	93	⇑ePn	Pn	19 31 54.2	+1.2
	comp=Z,8.9nm,0.1s,SNR=54						
WATA	Walderalm	2.35	93	⇑iPg	Pn	19 31 59.3	+6.3
	comp=Z,87nm,0.2s						
WATA	Walderalm	2.35	93	⇑iSg	Sn	19 32 33.5	+12
	comp=Z,180nm,0.3s						
WATA	Walderalm	2.35	93	⇑Pn	Pn	19 31 54.2	+1.2
WATA				Sg	Sn	19 32 33.5	+12
WATA	Walderalm	2.35	93	Pg	Pn	19 31 59.3	+6.3
WATA				Sg	Sn	19 32 33.5	+12
OG05	Jujurieux	2.35	232	Pn	Pn	19 31 52.5	-0.6
OG05	Jujurieux	2.35	232	Pg	Pn	19 32 01.0	+7.9
OG05	Jujurieux	2.35	232	Pg	Pn	19 32 01.0	+7.9
APPI	Appiano	2.36	115	Pn	Pn	19 31 55.3	+2.1
	604nm,0.6s						
WTTA	Wattenberg	2.40	95	⇑ePn	Pn	19 31 55.3	+1.6
	comp=Z,15nm,0.1s,SNR=56						
WTTA	Wattenberg	2.40	95	⇑iPg	Pn	19 32 02.5	+8.8
	comp=Z,129nm,0.3s						
WTTA	Wattenberg	2.40	95	⇑iSn	Sn	19 32 23.7	+1.4
	comp=E,73nm,0.2s						
WTTA	Wattenberg	2.40	95	⇑iSg	Sn	19 32 35.7	+13
	comp=E,596nm,0.4s						
WTTA				⇑iSg	Sn	19 32 35.9	+14
WTTA	Wattenberg	2.40	95	Pg	Pn	19 32 02.5	+8.8
WTTA				Sn	Sn	19 32 23.7	+1.4
ABH	Alteburg	2.40	351	ePn	Pn	19 31 54.7	+0.9
	SNR=23						
RSP	Reno Superiore	2.44	195	P	Pn	19 31 54.1	-0.2
MONC	Moncucco Torin	2.44	183	Pn	Pn	19 31 56.6	+2.2
	522nm,0.5s						
SCE	Schlegeis	2.48	100	ePn	Pn	19 31 56.2	+1.2
SALO	Salr	2.51	138	Pn	Pn	19 31 56.6	+1.2
	741nm,0.8s						
SAL	Salo	2.52	138	Pn	Pn	19 31 56.9	+1.4
	618nm,0.5s						
WLF	Walferdange	2.52	329	ePn	Pn	19 31 57.4	+1.9
	SNR=6.8						
WLF				eSg	Sn	19 32 35.7	+10
WLF	Walferdange	2.52	329	ePn	Pn	19 31 57.5	+1.9
WLF				eSn	Sn	19 32 29.8	+4.3
WLF	Walferdange	2.52	329	ePn	Pn	19 31 57.5	+2.0
BRES	Bressanone	2.59	107	Pn	Pn	19 31 58.6	+2.1
	604nm,0.5s						
BNI	Bardonecchia	2.66	203	Pn	Pn	19 31 58.9	+1.4
GDM	Grand'Maison	2.70	212	Pg	Pn	19 32 06.7	+8.7
GDM	Grand'Maison	2.70	212	Pn	Pn	19 31 57.9	-0.1
GDM				Pg	Pn	19 32 06.7	+8.7
GDM	Grand'Maison	2.70	212	Pg	Pn	19 32 06.7	+8.7
TNS	Taunus Mts	2.72	4	ePn	Pn	19 31 57.5	-0.8
	SNR=13						
TNS				eSg	Sn	19 32 42.5	+12
TNS	Taunus Mts	2.72	4	ePn	Pn	19 31 57.3	-1.1
RRL	Cesana Torines	2.76	200	P	Pn	19 32 00.1	+1.2
RRL				S	Sn	19 32 31.3	-0.1
GRN	Grenoble	2.81	217	Pn	Pn	19 31 59.1	-0.5
CTI	Castel Tesino	2.83	120	Pn	Pn	19 32 01.0	+1.1
	301nm,0.3s						
SEST	Monte Rota	2.89	104	Pn	Pn	19 32 02.7	+1.9
	1µm,0.8s						
BOB	Bobbio (Coli)	2.90	161	Pn	Pn	19 32 02.1	+1.3
	69nm,0.7s						
LOR	Lormes	2.91	267	ePn	Pn	19 32 00.0	-1.1
	baz=89						
LOR				ePg	Pn	19 32 10.9	+10
	baz=89						
LOR				eSg	Sn	19 32 48.0	+13
	473nm,0.3s						
LOR	Lormes	2.91	267	ePg	Pn	19 32 10.9	+10
LOR				eSg	Sn	19 32 48.0	+13
	236nm,0.3s						
MBDF	Montbardon	2.94	199	ePn	Pn	19 32 02.1	+0.6
MBDF				ePg	Pn	19 32 10.5	+9.0
MBDF				eSn	Sn	19 32 32.6	-3.5
MBDF				eSg	Sn	19 32 49.7	+14
	247nm,0.4s						
PCP	Pian Castagno	2.98	174	P	Pn	19 32 01.6	-0.5
PCP				S	Sn	19 32 32.5	-4.7
PCP	Pian Castagno	2.98	174	P	Pn	19 32 01.6	-0.5
GRA1	Grafenberg Arr	3.00	42	ePn	Pn	19 31 59.4	-2.9
GRA1				eSg	Sn	19 32 49.9	+12
GRA1				epPKPbc		19 38 10.2	
GRF	Grafenberg Arr	3.00	42	ePn	Pn	19 31 59.5	-2.7
	SNR=5.0						
GRF				ePg	Pn	19 32 12.2	+10
GRF				eSg	Sn	19 32 49.8	+12
GRF	Grafenberg Arr	3.00	42	ePn	Pn	19 31 59.4	-2.9
GRF				eSg	Sn	19 32 49.9	+12
ORIF	Oris-en-Rattie	3.03	212	ePn	Pn	19 32 02.2	-0.5
ORIF				ePg	Pn	19 32 12.2	+9.5
ORIF				eSg	Sn	19 32 50.7	+12
	219nm,0.3s						
SMF	Signal de Mont	3.06	255	ePn	Pn	19 32 01.8	-1.3
SMF				ePg	Pn	19 32 13.6	+10
SMF				eSn	Sn	19 32 35.1	-3.9
SMF				eSg	Sn	19 32 52.8	+14
	434nm,0.3s						
DOI	San Damiano	3.07	192	Pn	Pn	19 32 04.0	+0.7
	186nm,0.6s						
RJOB	Jochberg	3.16	84	⇑iPn	Pn	19 32 05.0	+0.4
SSF	Saint Saulge	3.18	264	ePn	Pn	19 32 03.8	-1.1
SSF				ePg	Pn	19 32 16.1	+11
SSF				eSg	Sn	19 32 55.4	+13
	180nm,0.3s						
ROB	Roburent	3.22	183	P	Pn	19 32 04.9	-0.6
SC2M	Scurtabr	3.26	162	P	Pn	19 32 05.7	-0.3
FIN	Finale Ligure	3.30	179	Pn	Pn	19 32 07.1	+0.5
	104nm,0.5s						
FIN	Finale Ligure	3.30	179	P	Pn	19 32 05.2	-1.4
FIN	Finale Ligure	3.30	179	Pn	Pn	19 32 07.1	+0.5
	104nm,0.5s						
BGLD	Berchtesgaden	3.31	86	⇑iPn	Pn	19 32 06.7	0.0
FVI	Forni Avoltri	3.31	104	Pn	Pn	19 32 08.3	+1.6
HROE	Hohe Rhon--Fla	3.31	23	⇑iPn	Pn	19 32 03.5	-3.2
GRAM		3.31	155	P	Pn	19 32 06.2	-0.5
GRAM				S	Sn	19 32 40.5	-4.8
GRAM		3.31	155	P	Pn	19 32 06.2	-0.5
STV2	Anna di Valdie	3.31	190	P	Pn	19 32 05.3	-1.5
STV	Sta Anna Valdi	3.32	190	P	Pn	19 32 05.7	-1.1
ENR	Entracque	3.32	189	P	Pn	19 32 06.1	-0.8
AVF	Avril sur Loir	3.34	259	ePn	Pn	19 32 06.0	-1.1
AVF				ePg	Pn	19 32 18.7	+12
AVF				eSn	Sn	19 32 42.0	-4.2
AVF				eSg	Sn	19 33 00.9	+15
	115nm,0.3s						
CODM		3.34	158	P	Pn	19 32 06.7	-0.5
CODM		3.34	158	P	Pn	19 32 06.7	-0.5
GIVF	Givet	3.39	321	eP	Pn	19 32 08.7	+0.8
GIVF				eSn	Sn	19 32 43.0	-4.5
GIVF				eSg	Sn	19 33 02.2	+15
	194nm,0.4s						
RORO		3.40	181	P	Pn	19 32 06.2	-1.8
MONE	Monesi	3.44	185	P	Pn	19 32 08.0	-0.6
OG25	Le Caire	3.46	205	Pn	Pn	19 32 08.7	-0.1
ERBM	Eremo	3.48	152	Pn	Pn	19 32 10.6	+1.5
	214nm,1.3s						
VALM		3.49	154	P	Pn	19 32 08.4	-0.9
VALM				S	Sn	19 32 44.8	-5.2
VALM		3.49	154	P	Pn	19 32 08.4	-0.9
NOTT	Nottersdorf	3.51	48	ePn	Pn	19 32 06.2	-3.3
	SNR=18						
BACM		3.51	157	P	Pn	19 32 09.0	-0.5
BACM				S	Sn	19 32 45.1	-5.3
BACM		3.51	157	P	Pn	19 32 09.0	-0.5
MZEK	Zeckenberg-Ebn	3.52	44	⇓iPn	Pn	19 32 06.3	-3.4
ROTZ	Rotzenmuhle	3.52	49	ePn	Pn	19 32 06.7	-3.0
UBBA	Unterbreizbach	3.53	20	ePn	Pn	19 32 06.6	-3.3
OCF	Saint Nazaire	3.53	215	Pn	Pn	19 32 09.0	-0.9
OG26	St.-Nazaire-De	3.53	215	Pn	Pn	19 32 09.0	-0.9
SAOF	Saorge	3.55	187	Pn	Pn	19 32 09.6	-0.5
AUTN	L'Aution	3.55	188	Pn	Pn	19 32 09.7	-0.4
TOUF	Mont Tournerai	3.55	190	Pn	Pn	19 32 09.4	-0.8
HGN	Heimansgroeve	3.56	337	ePn	Pn	19 32 10.7	+0.5
	15nm,0.1s						
HGN				eSn	Sn	19 32 49.5	-2.2
WET	Wettzell	3.56	61	ePn	Pn	19 32 08.4	-1.9
	SNR=34						
WET				ePg	Pn	19 32 22.4	+12
WET				eSn	Sn	19 32 47.0	-4.8
WET				eSg	Sn	19 33 08.1	+16
WET	Wettzell	3.56	61	ePn	Pn	19 32 08.4	-1.9
WET				eSg	Sn	19 33 08.0	+16
KBA	Koelnbreinsper	3.58	95	⇑iPn	Pn	19 32 11.5	+1.0
	comp=Z,5.4nm,0.1s,SNR=61						
KBA	Koelnbreinsper	3.58	95	⇓iPg	Pn	19 32 23.3	+13
	comp=Z,118nm,0.4s						
KBA	Koelnbreinsper	3.58	95	⇑iSn	Sn	19 32 51.3	-0.9
	comp=E,16nm,0.1s						
KBA	Koelnbreinsper	3.58	95	⇓iSg	Sn	19 33 09.6	+17
	comp=E,91nm,0.3s						
KBA	Koelnbreinsper	3.58	95	⇑iPn	Pn	19 32 11.5	+1.0
KBA				Sg	Pn	19 32 23.3	+13
KBA				Sn	Sn	19 32 51.3	-0.9
KBA				Sg	Sn	19 33 09.6	+17
KBA	Koelnbreinsper	3.58	95	Pg	Pn	19 32 23.3	+13
KBA				Sg	Sn	19 33 09.6	+17
VIVF	Saint-Julien-l	3.58	223	ePn	Pn	19 32 08.6	-2.0
VIVF				ePg	Pn	19 32 23.3	+13
VIVF				eSn	Sn	19 32 47.7	-4.6
VIVF				eSg	Sn	19 33 08.6	+16
	207nm,0.3s						
GSCL	Gusciola	3.60	151	Pn	Pn	19 32 12.0	+1.2

	49nm,0.8s						
IMI	**Imperia**	3.61	183	Pn	Pn	19 32 11.4	+0.5
	58nm,0.4s						
IMI	**Imperia**	3.61	183	P	Pn	19 32 09.5	-1.4
IMI	**Imperia**	3.61	183	Pn	Pn	19 32 11.4	+0.5
	58nm,0.4s						
BAIF	**Baives**	3.64	316	eP	Pn	19 32 11.9	+0.6
BAIF				eSn	Sn	19 32 48.8	-4.9
BAIF				eSg	Sn	19 33 09.3	+16
	134nm,0.5s						
VINC	**Vinca**	3.66	157	P	Pn	19 32 10.9	-0.7
VINC				S	Sn	19 32 48.2	-5.9
VINC	**Vinca**	3.66	157	P	Pn	19 32 10.9	-0.7
VINC	**Vinca**	3.66	157	P	Pn	19 32 10.9	-0.7
NEGI	**Negi**	3.68	185	P	Pn	19 32 10.3	-1.6
MVIF	**Mont Vial**	3.68	191	Pn	Pn	19 32 11.7	-0.3
SBF	**Sospel**	3.68	188	ePn	Pn	19 32 11.3	-0.7
SBF				eSn	Sn	19 32 49.8	-5.0
SBF				eSg	Sn	19 33 11.5	+17
	175nm,0.4s						
SARO	**Sassorosso**	3.69	154	P	Pn	19 32 11.4	-0.7
SARO	**Sassorosso**	3.69	154	P	Pn	19 32 11.4	-0.7
SARO	**Sassorosso**	3.69	154	P	Pn	19 32 11.4	-0.7
VLC	**Villacollemand**	3.71	154	ePn	Pn	19 32 12.8	+0.4
VLC	**Villacollemand**	3.71	154	ePn	Pn	19 32 12.8	+0.5
GMNA	**Gemona**	3.71	108	Pn	Pn	19 32 12.5	+0.1
	380nm,0.8s						
AGO	**Saint Agoulin**	3.73	249	Pn	Pn	19 32 10.9	-1.8
AGO				Pg	Pn	19 32 26.7	+14
ZCCA	**Zocca**	3.73	147	Pn	Pn	19 32 14.3	+1.6
	39nm,0.4s						
BGF	**Bois d'Agland**	3.74	257	ePn	Pn	19 32 11.3	-1.5
BGF				ePg	Pn	19 32 24.7	+12
BGF				eSg	Sn	19 33 13.0	+17
	434nm,0.3s						
HYF	**Humbligny**	3.74	268	ePn	Pn	19 32 12.0	-0.8
HYF				ePg	Pn	19 32 26.1	+13
HYF				eSg	Sn	19 33 14.7	+18
PTCC	**Patocco-Chiusa**	3.74	105	Pn	Pn	19 32 13.8	+0.9
	43nm,0.2s						
BDI	**Bagni Di Lucca**	3.86	153	Pn	Pn	19 32 15.2	+0.7
	93nm,0.6s						
MOX	**Moxa**	3.88	35	i P	Pn	19 32 11.0	-3.8
MOX				Pg	Pn	19 32 28.0	+13
MOX				Sg	Sn	19 33 18.0	+18
MOX	**Moxa**	3.88	35	ePn	Pn	19 32 11.2	-3.7
	SNR=5.1						
MOX				ePg	Pn	19 32 28.1	+13
MOX				eSg	Sn	19 33 17.5	+18
MOX	**Moxa**	3.88	35	ePn	Pn	19 32 11.0	-3.8
MOX				ePg	Pn	19 32 28.1	+13
MOX				eSg	Sn	19 33 18.2	+18
PZZT	**Monte Pizzetto**	3.88	150	Pn	Pn	19 32 15.7	+0.9
	120nm,0.7s						
ROBS	**Robic**	3.90	107	ePn	Pn	19 32 15.4	+0.3
ROBS				eSn	Sn	19 32 57.8	-2.6
NKC	**Novy Kostel**	3.94	45	ePN	Pn	19 32 12.1	-3.6
NKC				eSG	Sn	19 33 18.0	+17
	160nm,0.3s						
GEC2	**GERESS Array S**	3.96	68	ePn	Pn	19 32 14.2	-1.7
	SNR=34						
GEC2				ePg	Pn	19 32 29.9	+14
GEC2				eSn	Sn	19 32 55.9	-6.0
GEC2				eSg	Sn	19 33 20.7	+19
GEC2	**GERESS Array S**	3.96	68	eSn	Sn	19 32 55.9	-5.9
GERES	**GERESS Array B**	3.96	68	Pn	Pn	19 32 14.4	-1.6
	8.1nm,0.3s,baz=254,slow=13,SNR=250						
GERES				Pg	Pn	19 32 29.7	+14
	19nm,0.3s,baz=259,slow=17,SNR=29						
GERES				Sn	Sn	19 32 56.4	-5.4
	35nm,0.3s,baz=254,slow=21,SNR=12						
GERES				Lg		19 33 20.4	
	38nm,0.3s,baz=249,slow=30,SNR=11						
GERES	**GERESS Array B**	3.96	68	Pg	Pn	19 32 29.7	+14
MAIM		3.96	154	P	Pn	19 32 15.5	-0.5
MAIM		3.96	154	P	Pn	19 32 15.5	-0.4
SMRF	**Simiane la Rot**	3.96	208	ePn	Pn	19 32 14.8	-1.2
SMRF				ePg	Pn	19 32 29.9	+14
SMRF				eSn	Sn	19 32 57.8	-4.1
	115nm,0.3s						
BUG	**Bochum--Univer**	3.97	352	ePn	Pn	19 32 15.6	-0.6
	SNR=3.2						
GUNZ	**Gunzen**	3.98	43	ePn	Pn	19 32 12.2	-4.0
	SNR=3.3						
GUNZ				eSg	Sn	19 33 19.5	+17
KHC	**Kasperske Hory**	3.98	64	ePN	Pn	19 32 14.3	-1.9
KHC				ex	x	19 32 18.5	
KHC				eSN	Sn	19 32 56.7	-5.7
KHC				eSG	Sn	19 33 20.5	+18
	159nm,0.3s						
KHC	**Kasperske Hory**	3.98	64	ePn	Pn	19 32 14.3	-1.9
KHC				eSn	Sn	19 32 56.7	-5.7
KHC				eSg	Sn	19 33 20.5	+18
	159nm,0.3s						
WERD	**Werda**	4.02	42	ePn	Pn	19 32 13.5	-3.4
	SNR=3.6						
WERD				ePg	Pn	19 32 31.0	+14
WERD				eSg	Sn	19 33 21.3	+18
TANN	**Tannenbergstha**	4.07	43	ePn	Pn	19 32 13.7	-3.9
	SNR=3.3						
TANN				ePg	Pn	19 32 31.5	+14
TANN				eSg	Sn	19 33 23.3	+19
FRF	**La Foret Royal**	4.09	195	ePn	Pn	19 32 16.3	-1.5
FRF				ePg	Pn	19 32 29.4	+12
FRF				eSn	Sn	19 32 59.8	-5.3
	105nm,0.5s						
SEI	**Scarperia**	4.13	146	Pn	Pn	19 32 19.0	+0.6
	77nm,0.3s						
PII	**Pisa**	4.15	155	Pn	Pn	19 32 18.1	-0.5
	38nm,0.2s						
MOA	**Molln**	4.16	83	i Pn	Pn	19 32 17.9	-0.9
	comp=Z,4.6nm,0.1s,SNR=37						
MOA	**Molln**	4.16	83	⇓iPg	Pn	19 32 33.5	+15
	comp=Z,59nm,0.4s						
MOA	**Molln**	4.16	83	⇑iSn	Sn	19 33 03.0	-4.0
	comp=E,25nm,0.1s						
MOA	**Molln**	4.16	83	⇑iSg	Sx	19 33 29.1	
	comp=E,80nm,0.4s						
MOA	**Molln**	4.16	83	ePn	Pn	19 32 17.8	-1.0
MOA	**Molln**	4.16	83	i Pn	Pn	19 32 17.9	-0.9
MOA				⇓Pg	Pn	19 32 33.5	+15
MOA				Sn	Sn	19 33 03.0	-4.0
MOA				Sg	Sn	19 33 29.1	+22
MOA	**Molln**	4.16	83	Pg	Pn	19 32 33.5	+15
MOA				Sn	Sn	19 33 03.0	-3.9
MOA				Sg	Sn	19 33 29.1	+22
VOY	**Vojsko**	4.23	108	ePn	Pn	19 32 19.5	-0.3
VOY				e		19 32 24.5	
VOY				eSn	Sn	19 33 05.2	-3.5
VOY	**Vojsko**	4.23	108	ePn	Pn	19 32 19.5	-0.3
VOY				eSn	Sn	19 33 05.2	-3.5
TCF	**Toulx Ste Croi**	4.24	255	ePn	Pn	19 32 18.2	-1.7
TCF				ePg	Pn	19 32 34.9	+15
TCF				eSn	Sn	19 33 03.4	-5.6
TCF				eSg	Sn	19 33 28.1	+19
	68nm,0.3s						
VMG	**Vicchio**	4.28	145	Pn	Pn	19 32 21.0	+0.5
	42nm,0.2s						
TRI	**Trieste**	4.28	113	Pn	Pn	19 32 20.1	-0.4
	14nm,0.3s						
LMR	**La Mourre**	4.33	196	ePn	Pn	19 32 19.3	-1.9
LMR				ePg	Pn	19 32 36.5	+15
LMR				eSn	Sn	19 33 06.2	-5.1
	24nm,0.2s						
NEUB	**Neuenburg**	4.40	31	ePg	Pn	19 32 38.7	+17
NEUB				eSg	Sn	19 33 34.1	+21
PGD	**Poggio Sodo**	4.42	144	Pn	Pn	19 32 22.9	+0.4
	11nm,0.3s						
SFI	**Santa Sofia**	4.45	143	Pn	Pn	19 32 23.2	+0.3
	17nm,0.3s						
OBKA	**Obir**	4.50	101	⇓iPn	Pn	19 32 23.8	+0.1
	comp=Z,1.8nm,0.2s,SNR=12						
OBKA	**Obir**	4.50	101	⇓iPg	Pn	19 32 40.6	+17
	comp=Z,42nm,0.5s						
OBKA	**Obir**	4.50	101	⇑iSn	Sn	19 33 14.6	-1.1
	comp=E,88nm,0.7s						
OBKA	**Obir**	4.50	101	⇑iSg	Sx	19 33 40.9	
	comp=E,72nm,0.6s						
OBKA	**Obir**	4.50	101	⇓iPn	Pn	19 32 23.8	+0.1
OBKA				⇓Pg	Pn	19 32 40.6	+17
OBKA				Sn	Sn	19 33 14.6	-1.1
OBKA				Sg	Sn	19 33 40.9	+25
OBKA	**Obir**	4.50	101	Pg	Pn	19 32 40.6	+17
OBKA				Sg	Sn	19 33 40.9	+25
WTSB	**Winterswijk**	4.54	350	ePn	Pn	19 32 27.1	+2.9
	11nm,0.6s						
LASF	**Ste Croix**	4.55	223	ePn	Pn	19 32 22.1	-2.3
LASF				eSn	Sn	19 33 11.5	-5.4
LASF				eSg	Sn	19 33 39.5	+23
	132nm,0.4s						
CLZ	**Clausthal**	4.57	18	ePn	Pn	19 32 21.1	-3.5
	SNR=2.3						
CLZ				eSg	Sn	19 33 39.7	+22
CLZ	**Clausthal**	4.57	18	ePn	Pn	19 32 21.0	-3.6
CSNT	**Castellina Chi**	4.61	150	Pn	Pn	19 32 24.8	-0.4
	17nm,0.3s						
LJU	**Ljubljana**	4.63	106	ePn	Pn	19 32 41.5	+16
LJU				eSn	Sn	19 33 18.0	-0.9
CRE	**Caprese Michel**	4.73	144	Pn	Pn	19 32 26.7	-0.1
	14nm,0.2s						
GRFL	**Gerfalco**	4.80	154	Pn	Pn	19 32 27.9	0.0
	6.0nm,0.4s						
PERS	**Pernice**	4.85	98	ePn	Pn	19 32 27.7	-0.9
PERS				eSn	Sn	19 33 23.1	-1.3
PESA	**Pesaro**	4.86	136	Pn	Pn	19 32 28.4	-0.3
	55nm,0.4s						
PRU	**Pruhonice**	4.91	57	ePN	Pn	19 32 24.8	-4.6
PRU				ePG	Pn	19 32 42.8	+13
PRU				eSN	Sn	19 33 19.3	-6.6
PRU				eSG	Sn	19 33 48.4	+22
	86nm,0.4s						
VISS	**Visnje**	4.92	108	i Pn	Pn	19 32 28.9	-0.8
VISS				i Sn	Sn	19 33 21.4	-4.9
CAF	**Calviac**	4.94	241	ePn	Pn	19 32 27.8	-2.0
CAF				ePg	Pn	19 32 48.0	+18
CAF				eSn	Sn	19 33 22.1	-4.5
CAF				eSg	Sn	19 33 51.4	+25
	67nm,0.4s						
CLL	**Collm**	4.95	38	ePN	Pn	19 32 32.0	+2.0
CLL				e		19 32 46.0	
CLL				e		19 32 51.0	
CLL				i PG	Pn	19 32 54.3	+24
CLL				e		19 33 04.0	
CLL				e		19 33 52.0	
CLL				eSG	Sn	19 33 58.0	+31
CLL	**Collm**	4.95	38	ePn	Pn	19 32 26.0	-4.1
	SNR=2.6						
CLL				i Pg	Pn	19 32 54.3	+24
CLL				eSg	Sn	19 33 50.3	+23
CLL	**Collm**	4.95	38	ePn	Pn	19 32 32.0	+2.0
CLL				i Pg	Pn	19 32 54.3	+24
CLL				e		19 33 52.0	
CLL				eSg	Sn	19 33 58.0	+31
PGF	**Pioggiola**	5.00	173	ePn	Pn	19 32 29.1	-1.6
PGF				eSn	Sn	19 33 23.1	-5.1
	10nm,0.4s						
FSSB	**Fossombrone**	5.02	138	Pn	Pn	19 32 30.2	-0.8
	13nm,0.3s						
ARSA	**Arzberg**	5.03	90	⇑iPn	Pn	19 32 30.1	-1.0
	comp=Z,0.7nm,0.1s,SNR=6.5						
ARSA	**Arzberg**	5.03	90	⇑iPg	Pn	19 32 49.3	+18
	comp=Z,14nm,0.3s						
ARSA	**Arzberg**	5.03	90	⇓iSn	Sn	19 33 23.4	-5.5
	comp=E,16nm,0.3s						
ARSA	**Arzberg**	5.03	90	⇑iSg	Sx	19 33 58.5	
	comp=E,19nm,0.4s						
ARSA	**Arzberg**	5.03	90	⇑iPn	Pn	19 32 30.1	-1.0
ARSA				⇑Pg	Pn	19 32 49.3	+18
ARSA				Sn	Sn	19 33 23.4	-5.5
ARSA				Sg	Sn	19 33 58.5	+30
ARSA	**Arzberg**	5.03	90	⇑iPn	Pn	19 32 30.0	-1.1
ARSA	**Arzberg**	5.03	90	Pg	Pn	19 32 49.3	+18
ARSA				Sn	Sn	19 33 23.4	-5.4
ARSA				Sg	Sn	19 33 58.5	+30
RJF	**Les Rejaudoux**	5.08	247	ePn	Pn	19 32 28.9	-2.9
RJF				ePg	Pn	19 32 49.9	+18
RJF				eSg	Sn	19 33 55.4	+25
	72nm,0.3s						
BRG	**Berggiesshubel**	5.08	46	ePn	Pn	19 32 45.5	+14
BRG				eSg	Sn	19 33 55.0	+25
BRG	**Berggiesshubel**	5.08	46	Pn	Pn	19 32 45.5	+14
BRG				i		19 32 51.4	
BRG				Pg	Pn	19 32 56.7	+25
BRG				Sg	Sn	19 33 53.9	+24
PVCC	**Panska Ves**	5.20	52	ePG	Pn	19 32 48.9	+15
PVCC				eSG	Sn	19 33 57.2	+24
	194nm,0.4s						
ARV	**Arcevia**	5.25	138	Pn	Pn	19 32 33.3	-0.9
	7.0nm,0.2s						
BOJS	**Bojanci**	5.31	110	ePn	Pn	19 32 34.5	-0.6
BOJS				eSn	Sn	19 33 30.7	-5.2
SNTG	**Esanatoglia**	5.44	140	Pn	Pn	19 32 36.1	-0.8
	9.0nm,0.2s						
NVLJ	**Novalja**	5.54	120	i Pn	Pn	19 32 37.4	-1.0
NVLJ				i Sn	Sn	19 33 35.6	-6.1
NVLJ	**Novalja**	5.54	120	i Pn	Pn	19 32 37.3	-1.0
LDF	**La Druitiere**	5.64	284	ePn	Pn	19 32 38.1	-1.6
LDF				ePg	Pn	19 33 01.5	+22
LDF				eSn	Sn	19 33 36.3	-7.8
LDF				eSg	Sn	19 34 12.7	+29
	154nm,0.5s						
SOP	**Sopron**	5.70	85	ePn	Pn	19 32 46.1	+5.5
MFF	**Saint Martin d**	5.73	264	ePn	Pn	19 32 39.1	-1.8
MFF				ePg	Pn	19 33 03.0	+22
MFF				eSn	Sn	19 33 38.8	-7.6
MFF				eSg	Sn	19 34 15.4	+29
	128nm,0.6s						
LFF	**La Frestale**	5.74	246	ePn	Pn	19 32 38.7	-2.4
LFF				ePg	Pn	19 33 03.5	+22
LFF				eSg	Sn	19 34 14.7	+28
	104nm,0.5s						
NRCA	**Norcia**	5.86	141	Pn	Pn	19 32 41.6	-1.1
	1.0nm,0.3s						
MTLF	**Montolieu**	5.89	227	ePn	Pn	19 32 39.9	-3.3
MTLF				ePg	Pn	19 33 04.0	+21
MTLF				eSn	Sn	19 33 43.6	-6.8
MTLF				eSg	Sn	19 34 20.7	+30
	54nm,0.4s						
FLN	**La Foliniere**	5.90	285	ePn	Pn	19 32 41.8	-1.6
	baz=102						
FLN				eSn	Sn	19 33 43.8	-6.9
FLN				eSg	Sn	19 34 20.8	+30
	115nm,0.4s						
VRAC	**Vranov**	5.92	69	Pn	Pn	19 32 40.9	-2.6
	1.0nm,0.3s,baz=270,slow=14,SNR=4.1						
VRAC				Sn	Sn	19 33 42.7	-8.4
	7.0nm,0.3s,baz=351,slow=16,SNR=5.5						
VRAC				Lg		19 34 21.2	
	14nm,0.3s,baz=351,slow=22,SNR=6.8						
VRAC	**Vranov**	5.92	69	Pn	Pn	19 32 40.9	-2.7
VRAC				eSn	Sn	19 33 42.5	-8.5
UPC	**Upice**	5.99	57	ePN	Pn	19 32 42.8	-1.8
UPC				ePG	Pn	19 33 01.1	+16
UPC				ex	x	19 33 08.0	
UPC				eSG	Sn	19 34 24.0	+31
MNS	**Montasola**	6.06	146	Pn	Pn	19 32 44.2	-1.4
	3.0nm,0.3s						
ZST	**Bratislava**	6.08	80	ePg	Px	19 33 08.2	
ZST	**Bratislava**	6.08	80	e	Pn	19 32 43.4	-2.5
ZST				e		19 33 08.2	
ZST				e		19 33 47.8	
ZST				e		19 34 27.9	
DPC	**Dobruska-Polom**	6.10	59	eSG	Sx	19 34 25.3	
GRR	**Gorron**	6.10	282	ePn	Pn	19 32 44.3	-1.9
GRR				eSn	Sn	19 33 48.1	-7.6
GRR				eSg	Sn	19 34 27.6	+32
	99nm,0.5s						
EJON	**La Jonquera**	6.28	218	Pn	Pn	19 32 46.2	-2.5
EJON				Pg	Pn	19 33 13.3	+25
EJON				Sn	Sn	19 33 54.2	-5.9
EJON				Lg		19 34 46.9	
EJON	**La Jonquera**	6.28	218	Pn	Pn	19 32 46.2	-2.5
	4.7nm,0.8s,SNR=5.6						
EJON				Sn	Sn	19 33 54.2	-5.9
	2.6nm,0.9s,SNR=7.9						
KSP	**Ksiaz**	6.30	55	ePg	Px	19 33 15.3	
KSP				eSg	Sx	19 34 40.6	
KSP	**Ksiaz**	6.30	55	ePg	Px	19 33 15.2	
KSP				eSg	Sx	19 34 35.0	
SMOL	**Smolenice**	6.32	77	e	Pn	19 32 47.1	-2.2
SMOL				e		19 33 18.1	
SMOL				e		19 34 42.0	
AQU	**L'Aquila**	6.37	142	Pn	Pn	19 32 49.9	-0.1
	5.4nm,0.6s						
AQU	**L'Aquila**	6.37	142	Pn	Pn	19 32 49.9	-0.1
	5.3nm,0.6s						
MORC	**Moravsky Berou**	6.64	67	ePn	Pn	19 32 50.4	-3.3
	14nm,0.6s						
MORC				eS	Sn	19 34 47.8	+39
MORC	**Moravsky Berou**	6.64	67	ePn	Pn	19 32 50.4	-3.3
	14nm,0.6s						
OKC	**Ostrava-Krasne**	7.03	67	ePG	Pn	19 33 19.2	+20
OKC				ex	x	19 33 29.1	
OKC				eSG	Sn	19 34 57.9	+39
EPF	**Esparros**	7.09	234	ePn	Pn	19 32 56.0	-4.1
EPF				eSn	Sn	19 34 12.2	-8.2
EPF				eSg	Sn	19 34 59.8	+39
	78nm,0.8s						
SGMF	**Saint Gilles**	7.23	280	ePn	Pn	19 33 00.0	-2.0
SGMF				eSn	Sn	19 34 15.2	-8.6
	22nm,0.4s						
SGMF				eSg	Sn	19 35 02.8	+39
	68nm,0.5s						
EMIR	**Miracle**	7.31	222	Pn	Pn	19 33 03.0	-0.1
EMIR				Pg	Pn	19 33 33.0	+30
EMIR				Sn	Sn	19 34 22.8	-3.1
EMIR				Lg		19 35 18.3	
EMIR	**Miracle**	7.31	222	Pn	Pn	19 33 03.0	-0.2
	4.0nm,0.4s,SNR=7.0						
EMIR				Sn	Sn	19 34 22.8	-3.1
	15nm,0.4s,SNR=5.1						
EBIE	**Bielsa**	7.43	232	Pn	Pn	19 33 05.7	+0.9
EBIE				Pg	Pn	19 33 38.2	+33
EBIE				Sn	Sn	19 34 27.9	-1.0
EBIE				Lg		19 35 25.3	
EBIE	**Bielsa**	7.43	232	Pn	Pn	19 33 05.7	+0.8
	1.2nm,0.3s,SNR=11						
QUIF	**Quistinic**	7.63	277	ePn	Pn	19 33 05.0	-2.7
QUIF				eSn	Sn	19 34 24.4	-10
QUIF				eSg	Sn	19 35 13.6	+40
	88nm,0.8s						
EGRA	**Graus**	7.68	229	Pn	Pn	19 33 09.5	+1.1
EGRA				Pg	Pn	19 33 41.5	+33
EGRA				Sn	Sn	19 34 33.9	-1.4
EGRA				Lg		19 35 37.7	
ROSF	**Rostrenen**	7.71	280	ePn	Pn	19 33 06.1	-2.6
ROSF				eSn	Sn	19 34 24.7	-11
ROSF				eSg	Sn	19 35 18.5	+43
	84nm,0.7s						
SJPF	**Ste Jean**	7.92	240	eSg	Sx	19 35 24.7	
	29nm,0.8s						
EPOB	**Poblet**	7.96	222	Pn	Pn	19 33 11.0	-1.3
EPOB				Pg	Pn	19 33 45.1	+33
EPOB				Sn	Sn	19 34 41.9	-0.2
EPOB				Lg		19 35 42.0	
EPOB	**Poblet**	7.96	222	Pn	Pn	19 33 11.0	-1.2
	35nm,2.6s,SNR=7.9						
EALK	**Alkurruntz**	8.03	241	Pn	P	19 33 15.7	+2.5
EALK				Pg	P	19 33 51.0	+38
EALK				Sn	Sn	19 34 50.1	+6.3
EALK				Lg		19 35 54.6	
EALK	**Alkurruntz**	8.03	241	Pn	P	19 33 15.7	+2.5
	1.0nm,0.3s,SNR=7.9						
OJC	**Ojcow**	8.16	66	eP	Px	19 33 47.6	
OJC				eS	Sx	19 35 32.4	
IPRE	**Itoiz**	8.19	238	Pn	P	19 33 17.0	+1.6
	0.7nm,1.2s,SNR=7.9						
IUSE	**Utxeti**	8.21	240	Pn	P	19 33 17.7	+1.9
	0.3nm,1.4s,SNR=7.9						
IUNC	**Unciti**	8.30	239	Pn	P	19 33 19.4	+2.4
	0.6nm,0.4s,SNR=7.9						
IUNC				Sn	Sn	19 34 52.3	+1.6
	1.4nm,0.8s,SNR=7.9						
ESAC	**San Caprasio**	8.43	230	Pn	P	19 33 19.1	+0.3
ESAC				Pg	P	19 33 55.5	+37
ESAC				Sn	Sn	19 34 56.5	+2.7
ESAC				Lg		19 36 02.7	
ESAC	**San Caprasio**	8.43	230	Pn	P	19 33 19.1	+0.3
	2.0nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	8.62	223	Pn	P	19 33 19.7	-1.6
ERTA				Sn	Sn	19 34 57.7	-0.8
ERTA	**Horta de San J**	8.62	223	Pn	P	19 33 19.7	-1.6
ETOS	**Mallorca**	8.64	208	Pn	P	19 33 16.9	-4.8
ETOS				Sn	Sn	19 34 50.8	-8.4
ETOS	**Mallorca**	8.64	208	Sn	Sn	19 34 50.8	-8.4
	16nm,1.0s,SNR=7.9						
EMOS	**Mosqueruela**	9.46	224	Pn	P	19 33 31.7	-1.3
	0.3nm,0.4s						
EMOS				Lg		19 36 30.4	
EMOS	**Mosqueruela**	9.46	224	Pn	P	19 33 31.7	-1.3
	0.3nm,0.4s						
EIBI	**Ibiza**	9.81	213	Pn	P	19 33 34.8	-3.0
	0.9nm,0.4s						
EIBI				Sn	Sn	19 35 20.2	-7.8
EIBI	**Ibiza**	9.81	213	Pn	P	19 33 34.8	-3.0
	0.9nm,0.4s						
EIBI				Sn	Sn	19 35 20.2	-7.8
EARI	**Arriondas**	10.28	251	Pn	P	19 33 48.6	+4.3
	1.7nm,0.4s						
ECHE	**Chera**	10.30	223	Pn	P	19 33 43.7	-0.9
	0.7nm,0.3s						
ECHE	**Chera**	10.30	223	Pn	P	19 33 43.7	-0.8
	0.7nm,0.3s						
EKA	**Eskdalemuir Ar**	10.53	322	Pn	P	19 33 45.5	-2.0
	1.3nm,0.3s,baz=141,slow=14,SNR=27						
EKA	**Eskdalemuir Ar**	10.53	322	Pn	P	19 33 45.5	-2.0
EBEN	**Beniarda**	10.71	218	Pn	P	19 33 48.2	-1.9
	1.4nm,0.4s						
ETOB	**Tobarra**	11.33	222	Pn	P	19 33 56.6	-2.0
	56nm,2.0s						
ETOB	**Tobarra**	11.33	222	Pn	P	19 33 56.6	-2.0
	56nm,2.0s						
ESDC	**Sonseca Array**	11.75	233	Pn	P	19 34 07.9	+3.7
	0.3nm,0.3s,baz=47,slow=14,SNR=3.2						
FINES	**FINESS Array B**	17.33	30	Pn	P	19 35 13.6	-3.1
	0.1nm,0.3s,baz=225,slow=7.9,SNR=2.2						
MCWV	**Mont Chateau**	60.94	298	P	P	19 41 24.6	-3.2

IDC 12 19:57:38.1±2.3**, 25.89N×142.45E, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/19**, mbtmp3.6**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/22**, Error ellipse: s-maj=88.9km s-min=20.4km az=84.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	1.23	349	Pn	Pn	19 58 02.5	0.0
	41nm,0.3s,baz=98,slow=23,SNR=18						
CBIJ				Sn	Sn	19 58 21.2	+1.2
	114nm,0.3s,baz=277,slow=23,SNR=17						
PMG	**Port Moresby**	35.38	172	LR	LR	20 18 01.0	
	comp=Z,45nm,19.1s,baz=191,slow=35						
SONM	**Songino Array**	35.75	317	P	P	20 04 39.0	-1.5
	0.2nm,0.7s,baz=118,slow=8.4,SNR=2.0						
WRA	**Warramunga Arr**	46.23	191	P	P	20 06 05.1	-1.9
	0.6nm,0.5s,baz=11,slow=8.5,SNR=5.7						
MKAR	**Makanchi Array**	51.43	310	P	P	20 06 44.8	-2.2
	0.2nm,0.5s,baz=88,slow=9.0,SNR=6.0						
FINES	**FINESS Array B**	79.13	334	P	P	20 09 44.3	-1.5
	2.5nm,0.9s,baz=72,slow=6.0,SNR=8.1						

IDC 12 20:08:36.9±1.6**, 3.60N×126.64E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.7**/17**, mbtmp3.7**/4**, Error ellipse: s-maj=108.8km s-min=21.5km az=73.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	21.59	183	P	P	20 13 29.4	-1.1
	1.4nm,0.5s,baz=24,slow=10.0,SNR=5.3						
WRA	**Warramunga Arr**	24.59	162	P	P	20 13 58.5	-1.6
	1.5nm,0.6s,baz=340,slow=10,SNR=16						
SONM	**Songino Array**	47.39	342	P	P	20 17 12.9	-1.9
	0.5nm,0.6s,baz=155,slow=8.2,SNR=6.2						
MKAR	**Makanchi Array**	57.61	325	P	P	20 18 28.6	-2.5
	0.6nm,0.4s,baz=119,slow=7.7,SNR=15						

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*IDC **12** 20:22:16.4±1.0, 0.91N×97.16E, mb4.3/12, mb1 4.4/12, mb1mx4.1/20, mbtmp4.3/12, Error ellipse: s-maj=36.9km s-min=16.9km az=51.0*

*MOS **12** 20:22:17.3±0.9, 0.70N×97.62E, h33^{km}, mb4.6/5, Error ellipse: s-maj=47.9km s-min=13.5km az=99.7*

*NEIC **12** 20:22:20.1±0.6, 0.74N×97.23E, h30^{km}, mb4.4/4, Error ellipse: s-maj=16.2km s-min=11.8km az=66.0*

*BJI **12** 20:22:23.0, 1.36N×97.95E, h30^{km}, mB5.0, mb4.6, Ms4.1, Msz3.8*

ISC 12 20:22:19.5±0.7**, 0.98N**±0.09**×97.31E**±0.07**, h30^{km}, n35, σ1^{s}07**/37**, mb4.4**/22**, MS3.9**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	5.15	46	P	Pn	20 23 37.0	+0.2
KULM	Kulim	5.43	38	ePn	Pn	20 23 40.3	-0.3
KGM	Kluang	6.10	80	P	Pn	20 23 51.1	+1.0
COCO	West Island	13.10	182	ePn	P	20 25 18.7	-7.7
	79nm,0.5s						
KKM	Kota Kinabalu	19.53	75	eP	P	20 26 48.4	+0.7
KMI	Kunming	24.57	12	P	P	20 27 37.3	-1.1
KMI				AP		20 27 44.7	
KMI				XP		20 27 48.0	
KMI				S	S	20 31 53.3	-1.0
KMI				XS		20 32 06.9	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.1						
KMI				LR	LR		
	comp=N,150nm,11.8s,MS3.9						
KMI				LR	LR		
	comp=E,200nm,12.3s,MS3.9						
KMI				LR	LR		
	comp=Z,210nm,13.2s,MS3.8						
KMI	Kunming	24.57	12	P	P	20 27 37.3	-1.1
	comp=Z,11nm,1.5s,mb4.2						
KMI				pP		20 27 44.7	
KMI				sP		20 27 48.0	
KMI				S	S	20 31 53.3	-1.0
KMI				sS		20 32 06.9	
KMI				LR	LR		
	comp=Z,220nm,13.2s,MS3.8						
GUN	Gumba	28.93	339	eP	P	20 28 20.2	+1.8
	comp=Z,16nm,0.7s,mb4.8						
DMN	Daman	28.94	337	eP	P	20 28 22.0	+3.4
KKN	Kakani	29.04	338	eP	P	20 28 21.2	+1.7
	comp=Z,15nm,1.0s,mb4.7						
LSA	Lhasa	29.15	349	P	P	20 28 21.8	+1.3
GKN	Gorkha	29.48	337	eP	P	20 28 24.3	+0.9
	comp=Z,7.0nm,0.6s,mb4.6						
KOLN	Koldanda	29.70	335	eP	P	20 28 26.5	+1.1
	comp=Z,12nm,0.9s,mb4.6						
FITZ	Fitzroy Crossi	33.72	126	P	P	20 28 59.5	-1.2
	comp=Z,2.1nm,0.6s,mb4.2,baz=350,slow=6.1,SNR=4.8						
XAN	Xi'an	34.64	17	P	P	20 29 06.8	-1.7
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
GTA	Gaotai	38.31	3	eP	P	20 29 39.6	+0.2
GTA				AP	pP	20 29 53.6	+5.2
JOW	Kunigami	39.31	47	P	P	20 29 48.3	+0.4
	comp=Z,11nm,0.5s,mb4.8,baz=304,slow=22,SNR=4.2						
WRA	Warramunga Arr	41.83	122	P	P	20 30 09.1	+0.3
	comp=Z,0.7nm,0.4s,mb3.6,baz=302,slow=9.0,SNR=17						
JNU	Nakatsue	44.90	41	P	P	20 30 33.9	+0.3
	comp=Z,5.9nm,1.1s,mb4.3,baz=212,slow=13,SNR=2.4						
SONM	Songino Array	47.33	8	P	P	20 30 53.0	+0.5
	comp=Z,2.1nm,0.5s,mb4.4,baz=189,slow=9.8,SNR=24						
SONM				PcP	PcP	20 32 24.0	+0.5
	comp=Z,1.5nm,0.7s,baz=188,slow=4.3,SNR=7.4						
MKAR	Makanchi Array	47.48	346	P	P	20 30 54.3	+0.6
	comp=Z,5.5nm,0.7s,mb4.6,baz=159,slow=7.8,SNR=54						
STKA	Stephens Creek	53.13	132	P	P	20 31 38.0	+0.8
	comp=Z,1.0nm,0.6s,mb4.0,baz=293,slow=8.8,SNR=5.2						
ZAL	Zalesovo	53.78	351	P	P	20 31 41.0	-0.4
	comp=Z,7.4nm,0.5s,mb4.9,baz=311,slow=4.6,SNR=27						
NVS	Novosibirsk	54.91	350	eP	P	20 31 47.9	-1.9
BRVK	Borovoye	56.55	341	eP	P	20 32 00.8	-0.8
	comp=Z,1.0nm,0.4s,mb4.2						
BRVK	Borovoye	56.55	341	eP	P	20 32 00.9	-0.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
CHKZ	Chkalovo	56.96	341	eP	P	20 32 04.3	-0.3
	comp=Z,5.4nm,0.8s,mb4.6						
CHKZ	Chkalovo	56.96	341	eP	P	20 32 04.3	-0.3
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BOD	Bodaibo	58.20	10	eP	P	20 32 12.6	-0.6
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
TIXI	Tiksi	73.38	10	eP	P	20 33 48.2	-2.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
AKASG	Malin Array Be	75.49	322	P	P	20 34 01.7	-1.1
	comp=Z,0.2nm,0.2s,mb3.6,baz=104,slow=3.9,SNR=4.2						
FINES	FINESS Array B	80.24	333	P	P	20 34 27.3	-1.4
	comp=Z,3.8nm,0.9s,mb4.3,baz=162,slow=8.8,SNR=3.7						
FINES	FINESS Array B	80.24	333	P	P	20 34 27.3	-1.4
ARCES	ARCESS Array B	82.77	340	P	P	20 34 41.1	-0.7
	comp=Z,4.8nm,1.0s,mb4.5,baz=338,slow=13,SNR=5.3						
GERES	GERESS Array B	85.04	319	P	P	20 34 54.7	+1.0
	comp=Z,0.6nm,0.6s,mb3.9,baz=90,slow=5.3,SNR=7.5						

*MAN **12** 20:28:33.7, 12.45N×123.65E, h1^{km}, mb4.9, ML3.9, MS3.9*
MAN MASBATE - INTENSITY II.

*IDC **12** 20:28:34.6±1.3, 12.14N×123.54E, mb3.9/5, mb1 4.1/6, mb1mx3.9/19, mbtmp4.0/6, ML3.7/1, MS3.4/3, Ms1 3.4/3, ms1mx3.1/27, Error ellipse: s-maj=82.4km s-min=18.2km az=65.0*

ISC 12 20:28:35.8±0.5**, 12.42N**±0.03×**123.64E**±0.03**, h18**^{km}±5^{km}**, n36, σ1**^{s}**04**/41**, mb3.9**/5**, MS3.3**/2**, 3C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	Masbate	0.06	191	eP	Pb	20 28 28.4	-11
MMPH				i S	Sb	20 28 40.7	-0.9
CNP	Catarman	1.01	85	eP	Pb	20 28 53.5	-1.0
CNP				eS	Sb	20 29 09.0	+1.8
RCP	Roxas	1.22	226⇑	eP	Pb	20 28 58.3	+0.3
RCP				eS	Sb	20 29 15.8	+2.5
PVCP	Virac	1.28	23	eP	Pn	20 28 57.6	-1.3
AUQP	San Andres	1.30	314	eP	Pn	20 28 59.1	-0.2
AUQP				eS	Sb	20 29 19.8	+4.1
KALP	Kalibo	1.47	240	eP	Pn	20 29 02.5	+0.8
OTRP	Odiongan	1.58	268	eP	Pn	20 29 00.8	-2.4
PLP	Palo	1.81	133	eP	Pn	20 29 06.5	-0.1
PLP				eS	Sn	20 29 12.5	-17
GQP	Guinayangan	1.88	322	eP	Pn	20 29 06.6	-0.9
GQP				eS	Sn	20 29 31.6	+0.6
BESP	Borongan	1.94	115	eP	Pn	20 29 08.7	+0.3
BOAC	Boac	2.03	301	eP	Pn	20 29 09.7	-0.1
GUIM	Jordan	2.06	210	eP	Pn	20 29 11.1	+1.0
LLP	Lapu-Lapu	2.11	171⇑	eP	Pn	20 29 11.3	+0.4
LLP				eS	Sn	20 29 37.6	+0.8
SJMP	San Jose	2.46	271	eP	Pn	20 29 15.8	-0.1
MSLP	Maasin	2.57	152	eP	Pn	20 29 17.5	+0.1
TBP	Tagbilaran	2.72	175	eP	Pn	20 29 19.6	0.0
TBP				eS	Sn	20 29 50.6	-1.7
POLP	Polilio Island	2.83	325	eP	Pn	20 29 24.9	+3.8
CUYO	Cuyo Island	3.00	239	eP	Pn	20 29 23.6	0.0
SNPH	Sibulan	3.08	187	eP	Pn	20 29 37.0	+12
TGY	Tagaytay City	3.12	303	Pn	Pn	20 29 26.5	+1.3
	8.2nm,0.3s,baz=146,slow=7.5,SNR=4.7						
SCPH	Surigao	3.19	145	eP	Pn	20 29 27.2	+1.0
BUSP	Coron	3.38	263	eP	Pn	20 29 28.3	-0.7
LUBP	Lubang	3.55	292	eP	Pn	20 29 30.7	-0.7
DCPH	Dipolog City	3.82	184⇑	eP	Pn	20 29 34.5	-0.7
BUTP	Butuan	3.94	150	eP	Pn	20 29 36.7	-0.3
ENPP	El Nido	4.29	254	eP	Pn	20 29 41.2	-0.8
PAGZ	Pagadian	4.55	183	eP	Pn	20 29 45.6	0.0
BUKP	Musuan	4.72	163	eP	Pn	20 29 48.7	+0.7
JOW	Kunigami	14.99	16	LR	LR	20 37 08.8	
	comp=Z,138nm,19.6s,baz=207,slow=34						
MJAR	Matsushiro Arr	27.37	26	LR	LR	20 45 10.1	
	comp=Z,75nm,20.6s,MS3.2,baz=220,slow=36						
FITZ	Fitzroy Crossi	30.39	176	P	P	20 34 44.7	-4.7
	4.8nm,0.9s,mb4.2,baz=9.5,slow=6.1,SNR=3.0						
WRA	Warramunga Arr	33.84	162	P	P	20 35 16.9	-2.6
	1.4nm,0.7s,mb4.0,baz=342,slow=9.3,SNR=15						
SONM	Songino Array	38.14	341	P	P	20 35 56.3	+0.6
	0.6nm,0.8s,mb3.4,baz=180,slow=7.2,SNR=4.1						
HNR	Honiara	42.10	119	LR	LR	20 51 31.5	
	comp=Z,50nm,20.0s,MS3.4,baz=336,slow=33						
STKA	Stephens Creek	47.28	159	P	P	20 37 09.5	-0.8
	2.4nm,0.8s,mb4.2,baz=324,slow=8.7,SNR=5.5						
MKAR	Makanchi Array	48.77	323	P	P	20 37 23.2	+1.6
	0.9nm,0.8s,mb3.8,baz=104,slow=5.9,SNR=4.9						

*BJI **12** 20:34:35.3, 1.05N×98.98E, h30^{km}, mB4.9, mb4.6, Ms4.9, Msz4.6*

*IDC **12** 20:34:36.7±0.5, 1.69N×99.24E, mb4.4/19, mb1 4.5/19, mb1mx4.4/22, mbtmp4.4/19, MS4.2/9, Ms1 4.2/9, ms1mx4.0/18, Error ellipse: s-maj=22.1km s-min=12.1km az=57.0*

*MOS **12** 20:34:39.9±1.2, 1.77N×99.28E, h33^{km}, mb4.9/19, MS4.4/8, Error ellipse: s-maj=16.0km s-min=7.9km az=116.3*

*NEIC **12** 20:34:41.1±0.3, 1.66N×99.18E, h30^{km}, mb4.7/23, Error ellipse: s-maj=10.7km s-min=7.1km az=60.0*

ISC 12 20:34:39.2±1.5**, 1.62N**±0.04×**99.12E**±0.05**, h27**^{km}±10^{km}**, h32**^{km}±3.1^{km}**: pP-P, n121, σ1**^{s}**22**/125**, mb4.6**/50**, MS4.5**/25**, 4C-3D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	3.50	33	P	Pn	20 35 33.4	+0.1
KULM	Kulim	3.95	23	eP	Pn	20 35 39.4	-0.3
KULM				eS	Sn	20 36 38.7	+13
KGM	Kluang	4.22	85	P	Pn	20 35 42.9	-0.6
SNG	Songkhla	5.72	15	P	Pn	20 36 04.0	-0.7
	1μm,1.0s						
NNT	Nongplab	10.92	3	P	P	20 37 17.5	+0.5
NST	Nakhon Sawan	14.00	4	P	P	20 37 49.5	-8.8
KKTK	Khon Kaen	15.07	14	P	P	20 38 15.6	+3.2
	309nm,0.9s						
KKM	Kota Kinabalu	17.61	75	eP	P	20 38 44.8	+0.1
KKM	Kota Kinabalu	17.61	75	P	P	20 38 46.7	+2.0
TSM	Tawau	18.92	82	P	P	20 39 02.2	+1.5
QIZ	Qiongzhong	20.24	31	P	P	20 39 15.7	+0.3
QIZ				AMB	AMB		
	comp=Z,10.0nm,1.5s						
QIZ				LR	LR		
	comp=N,2μm,11.8s,MS4.7						
QIZ				LR	LR		
	comp=E,1μm,12.0s,MS4.7						
QIZ				LR	LR		
	comp=Z,2μm,14.9s,MS4.5						
KMI	Kunming	23.63	8	P	P	20 39 51.7	+2.4
KMI				PP	PP	20 40 25.0	+3.0
KMI				PCP	PcP	20 43 36.7	+1.4
KMI				S	S	20 44 03.0	+4.4
KMI				PCS		20 47 14.8	
KMI				AMB	AMB		
	comp=Z,60nm,3.4s						
KMI				LR	LR		
	comp=N,990nm,13.1s,MS4.7						
KMI				LR	LR		
	comp=E,2μm,13.1s,MS4.7						
KMI				LR	LR		
	comp=Z,920nm,13.1s,MS4.4						
KMI	Kunming	23.63	8	P	P	20 39 51.7	+2.4
	comp=Z,8.0nm,1.8s,mb3.9						
KMI				pP		20 39 59.3	
KMI				sP		20 40 03.7	
KMI				PP	PP	20 40 25.0	+3.0
KMI				PPP	PPP	20 40 34.7	+2.7
KMI				PcP	PcP	20 43 36.7	+1.4
KMI				S	S	20 44 03.0	+4.4
KMI				sS		20 44 16.2	
KMI				SS	SS	20 44 52.2	+4.5
KMI				SSS	SSS	20 45 08.0	+4.2
KMI				ScP		20 47 11.3	
KMI				PcS		20 47 14.8	
KMI				LR	LR		
	comp=Z,920nm,13.1s,MS4.4						
KMI	Kunming	23.63	8	P	P	20 39 51.7	+2.4
KMI				*PP		20 39 59.3	
KMI				*SP		20 40 03.7	
KMI						20 40 25.0	
KMI						20 43 36.7	
KMI				S	S	20 44 03.0	+4.4
KMI				*SS		20 44 16.2	
KMI				SS	SS	20 44 52.2	+4.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.8s,mb3.9						
KMI				MLR	MLR		
	comp=Z,920nm,13.1s,MS4.4						
SHL	Shillong	24.81	344	eP	P	20 40 01.5	+0.7
HYB	Hyderabad	25.59	309	i P	P	20 40 10.0	+1.8
HYB	Hyderabad	25.59	309	eP	P	20 40 10.0	+1.8
GYA	Guiyang	25.74	16	P	P	20 40 14.4	+4.9
GYA				AP	pP	20 40 23.3	+6.0
GYA				XP	sP	20 40 27.5	+6.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
GYA				AMB	AMB		
	comp=Z,60nm,5.1s						
GYA				LR	LR		
	comp=N,1μm,15.0s,MS4.7						
GYA				LR	LR		
	comp=E,1μm,12.9s,MS4.7						
GYA				LR	LR		
	comp=Z,2μm,12.9s,MS4.7						
GUN	Gumba	29.05	335	eP	P	20 40 39.2	-0.5
KKN	Kakani	29.20	334	eP	P	20 40 41.2	+0.2
	comp=Z,32nm,1.4s,mb4.8						
CD2	Chengdu	29.46	8	eP	P	20 40 44.1	+0.8
CD2				PP	PP	20 41 40.8	+1.6
CD2				S	S	20 45 35.8	+1.2
CD2				LR	LR		
	comp=E,840nm,12.0s						
CD2				LR	LR		
	comp=Z,670nm,9.6s						
GKN	Gorkha	29.67	333	eP	P	20 40 45.4	+0.2
	comp=Z,1.7nm,0.5s,mb4.1						
KOLN	Koldanda	29.95	332	eP	P	20 40 46.6	-1.1
	comp=Z,16nm,0.9s,mb4.8						
FITZ	Fitzroy Crossi	32.65	128	P	P	20 41 08.4	-3.1
	comp=Z,3.8nm,0.7s,mb4.4,baz=264,slow=13,SNR=5.9						
NDI	New Delhi	34.07	324	ex	x	20 41 22.5	
LZH	Lanzhou	34.57	7	eP	P	20 41 31.0	+3.0
LZH				PP	PP	20 42 48.0	+3.4
LZH				eS	S	20 46 58.5	+4.1
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
LZH				AMB	AMB		
	comp=Z,90nm,5.7s						
LZH				LR	LR		
	comp=E,1μm,11.0s						
LZH				LR	LR		
	comp=Z,1μm,12.8s,MS4.9						
LZH	Lanzhou	34.57	7	eP	P	20 41 31.0	+3.0
	comp=Z,15nm,1.2s,mb4.8						
LZH				pP	pP	20 41 38.7	+2.8
LZH				sP	sP	20 41 41.7	+2.4
LZH				PP	PP	20 42 48.0	+3.4
LZH				eS	S	20 46 58.5	+4.1
LZH				sS		20 47 11.0	
LZH				SS	SS	20 49 11.0	+4.3
LZH				LR	LR		
	comp=Z,1μm,12.8s,MS4.9						
LZH	Lanzhou	34.57	7	eP	P	20 41 31.0	+3.0
LZH				*SP	sP	20 41 41.7	+2.4
LZH						20 42 48.0	
LZH				eS	S	20 46 58.5	+4.1
LZH				*SS		20 47 11.0	
LZH				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.8						
LZH				MLR	MLR		
	comp=Z,1μm,12.8s,MS4.9						
NJ2	Nanjing	35.53	30	eP	P	20 41 36.8	+0.6
NJ2				PP	PP	20 43 00.8	+4.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,230nm,3.6s						
NJ2				LR	LR		
	comp=N,1μm,16.0s,MS5.0						
NJ2				LR	LR		
	comp=E,2μm,16.5s,MS5.0						
NJ2				LR	LR		
	comp=Z,1μm,22.9s						
SSE	Sheshan	35.99	33	P	P	20 41 40.5	+0.4
SSE				AP	pP	20 41 53.3	+5.2
SSE				PCP	PcP	20 44 06.7	0.0
SSE				S	S	20 47 17.1	+0.7
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,110nm,4.5s						
SSE				LR	LR		
	comp=N,270nm,19.8s,MS4.5						
SSE				LR	LR		
	comp=E,780nm,19.8s,MS4.5						
SSE				LR	LR		
	comp=Z,440nm,15.4s,MS4.3						
SSE	Sheshan	35.99	33	P	P	20 41 40.5	+0.4
	comp=Z,25nm,0.8s,mb5.2						
SSE				pP	pP	20 41 49.4	+1.3
SSE				sP	sP	20 41 53.3	+1.8
SSE				PP	PP	20 43 01.3	-0.8
SSE				PcP	PcP	20 44 06.7	0.0
SSE				S	S	20 47 17.1	+0.7
SSE				sS		20 47 32.1	
SSE				SS	SS	20 49 55.4	+16
SSE				LR	LR		
	comp=Z,450nm,15.4s,MS4.3						
KAKA	Kakadu	36.01	114	eP	P	20 41 58.2	+18
	comp=Z,14nm,0.9s,mb4.9						
MUN	Mundaring	37.14	156	eP	P	20 41 52.1	+2.4
KLBR	Kellerberrin	37.47	153	eP	P	20 41 53.6	+1.1
	comp=Z,16nm,0.7s,mb5.0						
GTA	Gaotai	37.62	1	eP	P	20 41 52.3	-1.4
GTA				PP	PP	20 43 21.1	-1.4
GTA				PCP	PcP	20 44 11.9	+0.4
GTA				S	S	20 47 39.7	-1.5
GTA				AMB	AMB		
	comp=Z,170nm,7.2s						
GTA				LR	LR		
	comp=N,480nm,14.8s,MS4.6						
GTA				LR	LR		
	comp=E,560nm,14.1s,MS4.6						
GTA				LR	LR		
	comp=Z,400nm,13.7s,MS4.4						
NWAO	Narrogin (SRO)	38.39	155	P	P	20 42 01.7	+1.4
	comp=Z,20nm,0.6s,mb5.0,baz=324,slow=8.2,SNR=23						
NWAO	Narrogin (SRO)	38.39	155	eP	P	20 42 01.2	+1.0
	comp=Z,14nm,0.6s,mb4.9						
NWAO	Narrogin (SRO)	38.39	155	eP	P	20 42 01.2	+1.0
NWAO				pmax	pmax		
	comp=Z,14nm,0.6s						
HHC	Hu-ho-hao-te	40.64	15	eP	P	20 42 20.1	+1.3
HHC				AP	pP	20 42 33.5	+6.7
HHC				PP	PP	20 44 00.3	+4.6
HHC				PCP	PcP	20 44 18.9	-2.1
HHC				SCP		20 48 04.0	
HHC				PCS		20 48 07.3	
HHC				S	S	20 48 34.7	+7.9
HHC				XS		20 48 50.1	
HHC				SCS	ScS	20 52 18.7	-1.7
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
HHC				AMB	AMB		
	comp=Z,130nm,7.7s						
HHC				LR	LR		
	comp=N,310nm,13.2s,MS4.9						
HHC				LR	LR		
	comp=E,1μm,15.4s,MS4.9						
HHC				LR	LR		
	comp=Z,420nm,15.4s,MS4.4						
WRA	Warramunga Arr	40.65	124	P	P	20 42 16.6	-2.5
	comp=Z,8.4nm,0.9s,mb4.3,baz=302,slow=9.0,SNR=28						
WRA				PcP	PcP	20 44 20.1	-1.2
	comp=Z,0.7nm,0.7s,baz=305,slow=2.4,SNR=5.0						
WRAB	Tennant Creek	40.65	124	eP	P	20 42 16.5	-2.6
	comp=Z,8.8nm,0.8s,mb4.4						
WRAB				epP	pP	20 42 25.1	-2.0
WRAB	Tennant Creek	40.65	124	eP	P	20 42 16.5	-2.6
WRAB				e*PP	pP	20 42 25.2	-1.9
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
WB2	Warramunga Arr	40.66	124	eP	P	20 42 17.0	-2.2
FORT	Forrest	42.39	142	eP	P	20 42 33.5	+0.1
	comp=Z,54nm,0.6s,mb5.3						
WMQ	Urumqi	43.23	348	eP	P	20 42 39.5	-0.5
WMQ				PP	PP	20 44 22.0	-0.6
WMQ				eS	S	20 49 04.0	-0.9
WMQ				AMB	AMB		
	comp=Z,310nm,6.4s						
WMQ				LR	LR		
	comp=N,410nm,20.6s,MS4.4						
WMQ				LR	LR		
	comp=E,330nm,20.6s,MS4.4						
WMQ				LR	LR		
	comp=Z,240nm,22.3s,MS4.0						
UCH	Uchtor	46.06	335	P	P	20 43 03.8	+1.1
	SNR=10						
TKM2	Tokmak 2	46.18	336	P	P	20 43 04.4	+0.7
	SNR=8.4						
KBK	Karagaybulak	46.23	335	P	P	20 43 05.5	+1.4
	SNR=14						
AML	Almayashu	46.34	334	P	P	20 43 05.7	+0.7
	SNR=8.3						
AAK	Ala-Archa	46.41	335	eP	P	20 43 04.5	-1.0
	comp=Z,13nm,1.3s,mb4.7						
AAK	Ala-Archa	46.41	335	eP	P	20 43 04.5	-0.9
AAK				pmax	pmax		
	comp=Z,13nm,1.3s,mb4.7						
SONM	Songino Array	46.46	7	P	P	20 43 05.5	-0.3
	comp=Z,1.6nm,0.7s,mb4.0,baz=190,slow=8.5,SNR=12						
SONM				PcP	PcP	20 44 40.2	-0.5
	comp=Z,2.3nm,0.6s,baz=184,slow=3.9,SNR=17						
EKS2	Erkin-Say	46.73	334	P	P	20 43 09.0	+1.0
	SNR=8.4						
USP	Ospenovka	46.92	335	P	P	20 43 10.0	+0.5
	SNR=10						
MKAR	Makanchi Array	47.33	344	P	P	20 43 12.2	-0.4
	comp=Z,1.7nm,0.5s,mb4.3,baz=154,slow=8.8,SNR=24						
MKAR				LR	LR	21 08 20.1	
	comp=Z,218nm,18.0s,MS4.2,baz=166,slow=43						
CN2	Changchun	48.08	26	eP	P	20 43 21.0	+2.4
MJAR	Matsushiro Arr	50.10	41	LR	LR	21 06 46.6	
	comp=Z,142nm,18.7s,MS4.0,baz=255,slow=39						
MDJ	Mudanjiang	50.58	28	P	P	20 43 37.6	-0.2
MDJ				PCP	PcP	20 44 54.2	-1.3
MDJ				SCP		20 48 48.2	
MDJ				PCS		20 48 52.0	
MDJ				S	S	20 50 56.4	+7.2
MDJ				AMB	AMB		
	comp=Z,70nm,4.7s						
MDJ				LR	LR		
	comp=N,480nm,19.8s,MS4.7						
MDJ				LR	LR		
	comp=E,640nm,19.0s,MS4.7						
MDJ				LR	LR		
	comp=Z,790nm,17.5s,MS4.8						
CTA	Charters Tower	50.98	118	P	P	20 43 40.9	-0.3
	comp=Z,7.1nm,0.8s,mb4.6,baz=314,slow=5.1,SNR=6.4						
CTA	Charters Tower	50.98	118	P	P	20 43 40.9	-0.3
KURK	Kurchatov	51.91	344	eP	P	20 43 46.0	-1.8
	comp=Z,6.4nm,0.9s,mb4.5						
KURK	Kurchatov	51.91	344⇑	eP	P	20 43 47.3	-0.5
STKA	Stephens Creek	52.23	133	eP	P	20 43 49.5	-1.0
	comp=Z,10nm,0.6s,mb4.9						
STKA	Stephens Creek	52.23	133	P	P	20 43 49.1	-1.4
	comp=Z,13nm,0.7s,mb5.0,baz=309,slow=7.4,SNR=28						
STKA				LR	LR	21 07 44.5	
	comp=Z,266nm,18.9s,MS4.3,baz=125,slow=38						
ZAL	Zalesovo	53.46	350	P	P	20 43 58.2	-1.1
	comp=Z,3.1nm,0.5s,mb4.5,baz=293,slow=4.7,SNR=15						
ZAL				LR	LR	21 09 28.7	
	comp=Z,142nm,18.0s,MS4.1,baz=126,slow=39						
NVS	Novosibirsk	54.62	349	eP	P	20 44 05.6	-2.2
BVAR	Borovoye Array	56.50	340	P	P	20 44 19.8	-1.6
	comp=Z,3.4nm,0.8s,mb4.5,baz=142,slow=9.2,SNR=22						
BRVK	Borovoye	56.57	340	eP	P	20 44 19.7	-2.2
	comp=Z,3.7nm,0.9s,mb4.4						
BRVK	Borovoye	56.57	340	eP	P	20 44 19.7	-2.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
CHKZ	Chkalovo	56.96	340	eP	P	20 44 22.7	-2.0
	comp=Z,30nm,0.7s,mb5.4						
CHKZ	Chkalovo	56.96	340	eP	P	20 44 22.7	-2.0
CHKZ				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.4						
BOD	Bodaibo	57.27	9	eP	P	20 44 25.7	-1.1
BOD				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
KMBO	Kilima Mbogo	61.92	268	P	P	20 44 58.6	-0.8
	comp=Z,1.3nm,1.0s,mb4.0,baz=40,slow=24,SNR=4.2						
KMBO				LR	LR	21 06 58.3	
	comp=Z,224nm,21.9s,MS4.3,baz=93,slow=31						
SVE	Sverdlovsk	63.02	337	eP	P	20 45 05.5	-0.6
SVE				MLR	MLR		
	comp=N,200nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,100nm,16.0s,MS4.4						
SVE				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.7						
ARU	Arti	63.56	336	eP	P	20 45 07.7	-2.0
	comp=Z,6.4nm,0.9s,mb4.7						
ARU				epP	pP	20 45 17.7	-0.3
ARU	Arti	63.56	336⇓	iP	P	20 45 09.0	-0.7
ARU				e		20 47 27.6	

ARU				ePPP	PPP	20 48 58.4	-4.3
ARU				eS	S	20 53 41.8	+1.9
ARU				eSS	SS	20 57 52.2	+3.1
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
ARU				MLR	MLR		
	comp=N,300nm,20.0s,MS4.5						
ARU				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.5						
ARU				MLR	MLR		
	comp=E,100nm,17.0s,MS4.5						
YAK	Yakutsk	64.50	15	eP	P	20 45 14.0	-1.7
	comp=E,10nm,0.7s,mb5.0						
YAK	Yakutsk	64.50	15	⇓eP	P	20 45 15.3	-0.4
YAK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
YAK				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.7						
KIV	Kislovodsk	65.25	318	ceP	P	20 45 15.4	-5.5
KIV				pmax	pmax		
	comp=Z,12nm,1.5s,mb4.7						
KIV				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
VRHR	Novokhopersk	68.87	325	eP	P	20 45 42.3	-1.3
VRHR				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
VRHR				pmax	pmax		
	comp=N,20nm,1.3s						
VRHR				pmax	pmax		
	comp=E,20nm,1.6s						
BR131	Keskin Array S	70.25	312	eP	P	20 45 51.1	-1.2
	comp=E,2.0nm,0.7s,mb4.2						
BRTR	Keskin Array B	70.25	312	P	P	20 45 51.6	-0.7
	comp=E,2.6nm,0.8s,mb4.2,baz=132,slow=7.5,SNR=18						
LSZ	Lusaka	72.07	253	P	P	20 46 04.4	+0.8
	comp=E,5.0nm,1.0s,mb4.4,baz=80,slow=5.8,SNR=6.6						
LSZ	Lusaka	72.07	253	eP	P	20 46 03.5	-0.1
	comp=E,7.0nm,1.1s,mb4.5						
LSZ	Lusaka	72.07	253	eP	P	20 46 03.5	-0.1
LSZ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
TIXI	Tiksi	72.45	9	⇑eP	P	20 46 04.0	-1.0
TIXI				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.5						
SEY	Seymchan	72.63	23	⇑eP	P	20 46 02.0	-4.2
OBN	Obninsk	73.28	328	⇓eP	P	20 46 09.4	-0.7
OBN				e		20 48 49.5	
OBN				eS	S	20 55 26.2	-9.3
OBN				pmax	pmax		
	comp=Z,27nm,1.4s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s,MS4.1						
MAW	Mawson	73.56	194	P	P	20 46 13.3	+1.8
	comp=Z,3.9nm,0.6s,mb4.5,baz=48,slow=10,SNR=12						
MAW				LR	LR	21 14 31.2	
	comp=Z,82nm,18.3s,MS4.0,baz=130,slow=32						
LBTB	Lobatse	75.79	244	P	P	20 46 24.8	-0.4
AKASG	Malin Array Be	76.10	322	P	P	20 46 25.7	-0.7
	comp=Z,0.8nm,0.4s,mb4.0,baz=88,slow=5.2,SNR=12						
BOSA	Boshof	76.65	240	P	P	20 46 30.4	+0.5
	comp=Z,2.3nm,0.8s,mb4.2,baz=55,slow=21,SNR=3.6						
BILL	Bilibino	80.09	21	eP	P	20 46 41.4	-6.6
BILL				pmax	pmax		
	comp=Z,9.0nm,1.9s,mb4.4						
FINES	FINESS Array B	80.52	332	P	P	20 46 52.4	+2.0
	comp=Z,3.2nm,1.0s,mb4.2,baz=108,slow=6.0,SNR=8.0						
FINES				LR	LR	21 26 52.5	
	comp=Z,220nm,18.4s,MS4.5,baz=116,slow=39						
TSUM	Tsumeb	82.54	251	eP	P	20 47 03.2	+1.4
	comp=Z,7.8nm,1.3s,mb4.6						
ARCES	ARCESS Array B	82.79	340	P	P	20 47 02.5	+0.4
	comp=Z,1.0nm,0.6s,mb4.0,baz=108,slow=3.8,SNR=6.4						
ARCES				LR	LR	21 26 52.1	
	comp=Z,334nm,18.5s,MS4.7,baz=113,slow=38						
MORC	Moravsky Berou	83.32	320	P	P	20 47 04.8	-0.3
AQU	L'Aquila	85.74	312	eP	P	20 47 18.0	+0.4
	comp=Z,12nm,0.9s,mb5.1						
AQU	L'Aquila	85.74	312	eP	P	20 47 18.0	+0.5
AQU				pmax	pmax		
	comp=Z,12nm,0.9s,mb5.1						
GERES	GERESS Array B	85.76	319	P	P	20 47 18.5	+1.1
	comp=Z,2.3nm,1.0s,mb4.3,baz=104,slow=5.5,SNR=13						
KHC	Kasperske Hory	85.86	319	eP	P	20 47 19.0	+1.1
VNDA	Vanda	85.86	169	eP	P	20 47 17.1	-0.3
	comp=Z,3.4nm,1.1s,mb4.5						
VNDA	Vanda	85.86	169	eP	P	20 47 17.1	-0.3
VNDA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SBA	Scott Base	86.96	169	eP	P	20 47 23.6	+0.9
	comp=Z,2.7nm,0.8s,mb4.5						
SBA	Scott Base	86.96	169	eP	P	20 47 23.6	+0.9
SBA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
GRA1	Grafenberg Arr	87.41	319	eP	P	20 47 23.5	-2.0
	comp=Z,4.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	87.41	319	eP	P	20 47 23.5	-2.0
	comp=Z,4.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	87.41	319	eP	P	20 47 23.5	-2.0
GRF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	87.41	319	eP	P	20 47 23.5	-2.0
GRF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.6						
NOA	NORSAR Array B	87.57	331	P	P	20 47 26.4	+0.4
	comp=Z,3.9nm,1.2s,mb4.5,baz=121,slow=9.4,SNR=2.4						
NOA				LR	LR	21 30 35.1	
	comp=Z,153nm,18.6s,MS4.4,baz=45,slow=38						
LPG	La Plagne	90.52	315	eP	P	20 47 41.1	+0.8
	comp=Z,23nm,1.2s,mb5.1						
LPG	La Plagne	90.52	315	eP	P	20 47 41.1	+0.8
LPG				pmax	pmax		
	comp=Z,11nm,1.2s,mb5.1						
NVAR	Mina Array Bea	127.31	37	PKP	PKPdf	20 53 44.5	-2.4
	comp=Z,0.3nm,0.5s,baz=319,slow=1.1,SNR=3.6						
PLCA	Paso Flores	139.96	192	PKhKP		20 54 02.6	
	comp=Z,1.1nm,0.9s,baz=57,slow=8.1,SNR=3.7						
TXAR	Lajitas Array	142.28	34	PKP	PKPdf	20 54 11.8	-3.1
	comp=Z,0.7nm,0.7s,baz=219,slow=0.7,SNR=4.5						
SWET	Sewanee	143.05	7	esPKPdf		20 54 25.9	
BAO	Brasilia Array	144.71	245	PKPdf	PKPdf	20 54 17.0	-2.4
BDFB	Brasilia	144.73	245	PKP	PKPdf	20 54 16.0	-3.5
	comp=Z,9.2nm,0.9s,baz=50,slow=4.6,SNR=8.7						
LRAL	Lakeview Retre	145.05	9	ePKPab	PKPab	20 54 14.9	-1.3
LRAL				epPKPdf		20 54 26.3	
GOGA	Godfrey	145.07	4	ePKPbc	PKPbc	20 54 15.7	+0.6
CPUP	Villa Florida	146.59	221	ePKPdf	PKPdf	20 54 17.6	-4.8

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*IDC **12** 21:14:26.6±0.5, 55.11S×129.53W, mb4.4/11, mb1 4.5/11, mb1mx4.5/14, mbtmp4.3/11, MS4.4/12, Ms1 4.4/12, ms1mx4.4/13, Error ellipse: s-maj=27.9km s-min=16.6km az=163.0*

*NEIC **12** 21:14:33.7±0.5, 55.90S×130.77W, h10^{km}, mb4.8/3, Error ellipse: s-maj=21.4km s-min=20.0km az=61.0*

ISC 12 21:14:26.8±0.5**, 55.00S**±0.08×**129.6W**±0.2**, h10**^{km}**, n76, σ1^{s}13**/36**, mb4.4**/14**, MS4.5**/12**, 13C-3D, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	31.54	36	LR	LR	21 30 23.7	
	comp=Z,374nm,21.4s,MS4.0,baz=57,slow=30						
RKT	Rikitea	32.09	351	eLR	LR	21 29 20.0	
	2µm,30.1s,baz=168						
VNDA	Vanda	32.47	202	eP	P	21 20 59.1	+0.3
	8.7nm,1.3s,mb4.4						
USHA	Ushuaia	34.18	116	LR	LR	21 30 57.7	
	comp=Z,702nm,18.8s,MS4.4,baz=225,slow=29						
TBI	Tubuai	34.89	327	eS	S	21 26 50.5	-0.1
TBI				eLR	LR	21 30 29.9	
	2µm,27.0s,baz=164						
QSPA	South Pole Qui	35.17	180	eP	P	21 21 22.2	0.0
	11nm,1.0s,mb4.7						
PPT	Papeete	40.37	330	eS	S	21 28 13.2	-0.9
PPT				eLR	LR	21 33 01.9	
	2µm,26.8s,baz=173						
PPT	Papeete	40.37	330	LR	LR	21 33 54.6	
	comp=Z,1µm,20.7s,MS4.7,baz=150,slow=29						
PLCA	Paso Flores	40.86	95	P	P	21 22 09.6	-0.6
	13nm,1.1s,mb4.5,baz=222,slow=8.4,SNR=13						
PLCA				LR	LR	21 35 08.3	
	comp=Z,594nm,18.6s,MS4.5,baz=228,slow=30						
TAOE	Nuku Hiva Isla	46.78	346	eS	S	21 29 44.7	-2.7
TAOE				eLR	LR	21 35 58.1	
	3µm,25.9s						
VNA3	Neumayer Olymp	47.13	158	⇓i	P	21 22 59.9	-0.3
VNA3	Neumayer Olymp	47.13	158	⇑i	P	21 23 02.3	+2.1
VNA3	Neumayer Olymp	47.13	158	⇑i	P	21 23 05.9	+5.7
VNA3	Neumayer Olymp	47.13	158		P	21 23 09.2	+9.0
VNA3	Neumayer Olymp	47.13	158	⇑i	P	21 23 15.8	+16
TRQA	Tornquist	47.57	98	eP	P	21 23 12.3	+8.2
	17nm,0.9s,mb5.1						
VNA2	Neumayer--Watz	47.87	158	⇓i	P	21 23 06.1	+0.1
VNA2	Neumayer--Watz	47.87	158	⇑i	P	21 23 08.4	+2.4
VNA2	Neumayer--Watz	47.87	158	⇑i	P	21 23 12.1	+6.1
VNA2	Neumayer--Watz	47.87	158	⇑i	P	21 23 15.9	+10
VNA2	Neumayer--Watz	47.87	158	⇑i	P	21 23 25.0	+19
VNA1	Neumayer--Stat	47.88	157	⇓i	P	21 23 06.3	+0.2
VNA1	Neumayer--Stat	47.88	157	⇑i	P	21 23 10.1	+4.0
VNA1	Neumayer--Stat	47.88	157	⇑i	P	21 23 13.4	+7.3
VNA1	Neumayer--Stat	47.88	157	⇑i	P	21 23 17.0	+11
VNA1	Neumayer--Stat	47.88	157	⇑i	P	21 23 25.4	+19
SNAA	Sanae	48.23	160	⇑i	P	21 23 07.1	-1.7
SNAA	Sanae	48.23	160	⇑i	P	21 23 09.7	+0.9
SNAA	Sanae	48.23	160		P	21 23 16.1	+7.3
SNAA	Sanae	48.23	160		P	21 23 25.3	+17
MAW	Mawson	57.36	186	P	P	21 24 15.8	-1.0
	4.2nm,0.8s,mb4.5,baz=165,slow=13,SNR=8.6						
MAW				LR	LR	21 46 17.7	
	comp=Z,310nm,19.1s,MS4.4,baz=345,slow=33						
LPAZ	La Paz	60.54	76	P	P	21 24 39.0	-0.5
	7.0nm,0.9s,mb4.8,baz=208,slow=4.7,SNR=20						
LPAZ				LR	LR	21 44 44.7	
	comp=Z,103nm,20.8s,MS4.0,baz=312,slow=30						
STKA	Stephens Creek	63.90	251	P	P	21 25 01.5	-0.2
	1.3nm,0.6s,mb4.1,baz=207,slow=2.3,SNR=3.3						
STKA				LR	LR	21 47 06.0	
	comp=Z,496nm,20.5s,MS4.7,baz=302,slow=31						
BDFB	Brasilia	72.54	92	P	P	21 25 54.2	-1.6
	1.9nm,0.6s,mb4.2,baz=243,slow=7.7,SNR=4.3						
BDFB				LR	LR	21 53 35.9	
	comp=Z,474nm,21.0s,MS4.7,baz=59,slow=32						
ROSC	El Rosal	75.04	58	P	P	21 26 09.9	-0.4
	7.2nm,0.7s,mb4.7,baz=102,slow=22,SNR=9.2						
ROSC				LR	LR	21 52 51.0	
	comp=Z,130nm,18.6s,MS4.3,baz=212,slow=31						
WRA	Warramunga Arr	77.28	254	P	P	21 26 22.0	-0.8
	0.5nm,0.5s,mb3.7,baz=144,slow=5.0,SNR=12						
FITZ	Fitzroy Crossi	83.51	248	P	P	21 26 56.7	+0.7
	6.2nm,0.8s,mb4.8,baz=132,slow=5.8,SNR=3.8						
TXAR	Lajitas Array	86.91	23	P	P	21 27 14.6	+1.9
	1.1nm,0.8s,mb4.1,baz=180,slow=7.5,SNR=5.9						
ANMO	Albuquerque	91.78	19	P	P	21 27 36.9	+1.4
	2.6nm,1.0s,mb4.5,baz=143,slow=3.2,SNR=3.1						
NVAR	Mina Array Bea	93.57	9	P	P	21 27 44.4	+0.8
	0.1nm,0.3s,mb3.7,baz=270,slow=0.9,SNR=2.4						
NVAR				LR	LR	22 01 06.6	
	comp=Z,196nm,21.1s,MS4.5,baz=125,slow=30						
BOSA	Boshof	93.97	158	LR	LR	22 07 59.1	
	comp=Z,251nm,18.3s,MS4.7,baz=149,slow=34						
PDAR	Pinedale Array	98.88	15	LR	LR	22 04 01.8	
	comp=Z,227nm,20.2s,MS4.7,baz=211,slow=30						
ILAR	Eielson Array	120.18	352	PKP	PKPdf	21 33 19.7	-0.2
	0.9nm,0.8s,baz=205,slow=1.6,SNR=5.1						
ESDC	Sonseca Array	141.17	90	PKP	PKPdf	21 33 58.5	-1.4
	0.9nm,0.8s,baz=248,slow=1.2,SNR=3.0						
SONM	Songino Array	145.18	282	PKPbc	PKPbc	21 34 04.5	+0.6
	3.0nm,0.8s,baz=126,slow=2.8,SNR=9.1						
EPF	Esparros	145.80	89	ePKP1	PKPbc	21 34 08.0	+2.4
	18nm,1.0s						
MTLF	Montolieu	147.08	90	ePKP1	PKPdf	21 34 11.8	+1.9
LFF	La Frestale	147.18	87	ePKP1	PKPdf	21 34 12.0	+2.0
MFF	Saint Martin d	147.63	84	ePKP1	PKPdf	21 34 13.1	+2.4
RJF	Les Rejaudoux	147.84	87	ePKP1	PKPdf	21 34 14.1	+3.0
	15nm,0.9s						
RJF				eR			
	324nm,18.8s						
GRR	Gorron	148.19	80	ePKP1	PKPdf	21 34 15.3	+3.8
FLN	La Foliniere	148.59	80	ePKP1	PKPdf	21 34 16.3	+4.2
FLN				eR			
	306nm,17.0s						
LDF	La Druitiere	148.71	81	ePKP1	PKPdf	21 34 16.5	+4.2
TCF	Toulx Ste Croi	148.80	86	ePKP1	PKPdf	21 34 16.5	+3.9
	44nm,1.4s						
LMR	La Mourre	149.54	94	ePKP1	PKPdf	21 34 18.5	+4.6
AVF	Avril sur Loir	149.74	86	ePKP1	PKPdf	21 34 19.3	+5.2
	22nm,1.3s						
FRF	La Foret Royal	149.76	94	ePKP1	PKPdf	21 34 19.3	+5.1
SMF	Signal de Mont	149.94	87	ePKP1	PKPdf	21 34 19.6	+5.2
	11nm,0.9s						
SSF	Saint Saulge	149.97	86	ePKP1	PKPdf	21 34 18.8	+4.4
LOR	Lormes	150.29	86	ePKP1	PKPdf	21 34 20.3	+5.4
	21nm,1.1s						
LOR				eR			
	283nm,17.2s						
SBF	Sospel	150.40	94	ePKP1	PKPdf	21 34 20.9	+5.7
LPG	La Plagne	150.97	91	ePKP1	PKPdf	21 34 22.6	+6.6
	5.6nm,0.8s						
LPL	La Plagne	150.97	91	ePKP1	PKPdf	21 34 22.6	+6.6
	5.6nm,0.9s						
MEZF	Maizieres J'vi	151.62	84	ePKP1	PKPdf	21 34 23.8	+7.0
BAIF	Baives	151.90	81	ePKP1	PKPdf	21 34 23.9	+6.7
	22nm,1.1s						
HAU	Haudompre	152.11	86	ePKP1	PKPdf	21 34 24.9	+7.3
HAU				eR			
	237nm,17.2s						
HINF	Hinteralfeld	152.30	87	ePKP1	PKPdf	21 34 25.8	+7.9
TIP	Timpagrande	152.52	111	ePKPbc	PKPdf	21 34 25.8	+7.4
TIP				ePKPab	PKPab	21 34 33.3	-1.9
CDF	Champ du Feu	152.85	86	ePKP1	PKPdf	21 34 26.9	+8.3
GERES	GERESS Array B	156.76	90	PKP	PKPdf	21 34 23.8	-0.1
	0.6nm,0.8s,baz=342,slow=3.1,SNR=8.3						
MKAR	Makanchi Array	158.42	261	PKPab	PKPab	21 34 59.1	-0.9
	0.9nm,0.6s,baz=130,slow=5.4,SNR=8.4						
ZAL	Zalesovo	160.08	281	PKPab	PKPab	21 35 05.7	-1.2
	0.6nm,0.6s,baz=293,slow=4.4,SNR=3.2						
BRTR	Keskin Array B	161.05	137	PKPab	PKPab	21 35 10.7	-1.0
	2.1nm,0.8s,baz=185,slow=6.3,SNR=10.0						
ARCES	ARCESS Array B	161.62	28	PKPab	PKPab	21 35 11.7	-1.5
	2.4nm,0.8s,baz=346,slow=5.0,SNR=2.6						
AKASG	Malin Array Be	166.53	100	PKPab	PKPab	21 35 33.4	-1.7
	1.0nm,0.7s,baz=254,slow=4.7,SNR=6.2						
BVAR	Borovoye Array	168.06	269	PKPab	PKPab	21 35 40.9	-0.8
	0.4nm,0.8s,baz=90,slow=2.9,SNR=2.5						

IDC 12 21:18:06.5±1.3**, 0.55N**×**122.29E, mb3.6**/3**, mb1 3.9**/4**, mb1mx3.7**/17**, mbtmp3.7**/4**, ML4.2**/1**, Error ellipse: s-maj=118.0km s-min=21.9km az=67.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	18.83	170	P	P	21 22 29.1	-1.0
	0.6nm,0.3s,baz=19,slow=9.0,SNR=8.4						
WRA	Warramunga Arr	23.55	151	P	P	21 23 18.1	-1.4
	1.2nm,0.5s,baz=326,slow=11,SNR=15						
SONM	Songino Array	49.08	346	P	P	21 26 56.3	-1.2
	0.2nm,0.2s,baz=158,slow=8.0,SNR=3.8						
MKAR	Makanchi Array	57.77	329	P	P	21 27 59.0	-2.8
	0.3nm,0.4s,baz=128,slow=8.5,SNR=14						

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*NEIC **12** 21:30:20.8, 38.38N×21.75E, h28^{km}, MD3.0(ATH), After ATH.*

*CSEM **12** 21:30:20.8±0.2, 38.38N×21.75E, h28^{km}, MD3.0, Error ellipse: s-maj=8.3km s-min=4.5km az=109.0, After ATH*

ATH 12 21:30:20.8, 38.38N×**21.75E, h28**^{km}±2^{km}**, MD3.0**/3**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	Riolos of Patr	0.39	215	ePB	Pb	21 30 29.4	0.0
RLS				eSB	Sb	21 30 36.5	+1.2
EVR	Evrytania	0.54	5	ePN	Pn	21 30 31.4	-1.1
EVR				eSN	Sn	21 30 40.3	-0.3
VLS	Valsamata	0.94	258	ePN	Pn	21 30 39.3	+1.1
LKR	Lokris	1.02	74	ePN	Pn	21 30 40.6	+1.3
ITM	Ithomi	1.21	173	ePN	Pn	21 30 43.3	+1.2

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*MOS **12** 21:36:17.9±1.1, 36.27N×71.47E, h93^{km}, mb4.2/10, Error ellipse: s-maj=11.9km s-min=5.7km az=96.6*

*BJI **12** 21:36:18.2, 36.20N×71.50E, h84^{km}, mB5.0, mb4.5, Ms4.7, Msz4.4*

*NEIC **12** 21:36:18.2±1.2, 36.15N×71.48E, h84^{km}±13^{km}, mb3.9/9, Error ellipse: s-maj=12.1km s-min=6.2km az=58.0*

*IDC **12** 21:36:22.0±5.7, 36.29N×71.43E, h114^{km}±54^{km}, mb3.7/11, mb1 3.8/15, mb1mx3.7/22, mbtmp4.1/15, Error ellipse: s-maj=22.9km s-min=15.4km az=175.0*

*NNC **12** 21:36:26.6±4.1, 36.77N×70.97E, h142^{km}±35^{km}, mpv5.1, Error ellipse: s-maj=44.3km s-min=24.4km az=29.0*

ISC 12 21:36:19.2±0.4**, 36.21N**±0.02×**71.55E**±0.04**, h107**^{km}±5^{km}**, n102, σ1^{s}25**/126**, mb4.0**/20**, 10C-15D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.40	173	⇓P	P	21 36 59.9	+2.0
CHCP	Chirah Chowk	2.91	150	P	P	21 37 07.7	+2.8
SBDP	Sheikh Budin	3.95	189	⇓P	P	21 37 18.8	-0.1
SARP	Sargodha	4.38	167	P	P	21 37 24.5	-0.3
SARP				S	S	21 38 14.0	-1.1
DRP	Derazinda	4.59	194	P	P	21 37 27.7	0.0
THN	Thein Dam	5.11	136	eP	P	21 37 36.2	+1.5
THN				ex	x	21 38 37.2	
DLH	Dalhousie	5.17	134	eP	P	21 37 36.0	+0.4
DLH				eS	S	21 38 34.0	-0.5
AML	Almayashu	6.14	15	P	P	21 37 49.5	+0.7
	SNR=312						
BHK	Bhakra	6.27	138	eP	P	21 37 57.8	+7.3
BHK				eS	S	21 39 05.2	+3.9
UCH	Uchtor	6.44	20	P	P	21 37 54.1	+1.3
	SNR=55						
SDNR	Sundarnagar	6.51	135	eP	P	21 37 55.2	+1.3
SDNR				eS	S	21 39 05.6	-1.7
EKS2	Erkin-Say	6.67	14	P	P	21 37 56.8	+0.7
	SNR=93						
AAK	Ala-Archa	6.81	19	P	P	21 37 59.2	+1.2
	SNR=104						
AAK	Ala-Archa	6.81	19	⇓P	P	21 37 59.1	+1.1
	45nm,0.6s						
AAK				⇓S	S	21 39 12.0	-2.5
	40nm,0.6s						
AAK	Ala-Archa	6.81	19	⇓P	P	21 37 59.1	+1.1
	45nm,0.6s						
AAK				S	S	21 39 12.0	-2.5
AAK	Ala-Archa	6.81	19	PN	P	21 37 59.1	+1.1
AAK				S	S	21 39 14.4	-0.1
AAK				pmax	pmax		
	comp=Z,25nm,0.6s						
SMLA	Simla	6.90	136	eP	P	21 37 58.2	-1.1
SMLA				eS	S	21 39 12.6	-4.1
KK31	Karatay Array	6.93	354	⇓P	P	21 37 58.0	-1.6
	comp=Z,105nm,0.3s,baz=178,slow=12,SNR=4270						
KK31				⇑S	S	21 39 10.5	-7.0
	comp=Z,11nm,0.3s,baz=140,slow=17,SNR=5.7						
KK31	Karatay Array	6.93	354	⇓P	P	21 37 58.0	-1.6
	comp=Z,105nm,0.3s						
KK31				S	S	21 39 10.5	-7.0
KKAR	Karatay Array	6.93	354	ePN	P	21 37 58.2	-1.5
KKAR				pmax	pmax		
	comp=Z,29nm,0.2s						
KBK	Karagaybulak	6.96	21	P	P	21 38 01.3	+1.3
	SNR=20						
ULHL	Ulahol	7.04	30	P	P	21 38 03.6	+2.4
	SNR=8.9						
CHMS	Chumysh	7.22	19	P	P	21 38 04.2	+0.6
	SNR=36						
TKM2	Tokmak 2	7.40	24	P	P	21 38 07.5	+1.5
	SNR=23						
USP	Ospenovka	7.41	17	P	P	21 38 06.0	-0.2
	SNR=41						
PTH	Pithoragarh	9.86	130	eS	S	21 40 23.0	-5.5
AJM	Ajmer	10.05	164	eS	S	21 40 26.4	-6.9
KOLN	Koldanda	13.24	126	ePn	P	21 39 22.5	-1.4
KOLN				eSn	S	21 41 42.9	-5.9
	comp=Z,38nm,0.6s						
MK02	Makanchi Array	13.27	34	⇓P	P	21 39 23.8	-0.4
MK02				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK31	Makanchi Array	13.28	34	⇓P	P	21 39 23.8	-0.5
	comp=Z,1.7nm,0.6s,baz=216,slow=12,SNR=16						
MKAR	Makanchi Array	13.28	34	P	P	21 39 25.8	+1.5
	comp=Z,0.1nm,0.3s,baz=221,slow=15,SNR=7.8						
GKN	Gorkha	13.78	123	ePn	P	21 39 29.8	-1.0
GKN				eSn	S	21 41 54.6	-6.9
	comp=Z,84nm,0.4s						
BHPL	Bhopal	13.89	157	eP	P	21 39 30.0	-2.4
BHPL				ex	x	21 41 57.4	
DMN	Daman	14.35	123	ePn	P	21 39 36.8	-1.4
DMN				eSn	S	21 42 07.0	-7.9
	comp=Z,124nm,0.9s						
KKN	Kakani	14.35	122	ePn	P	21 39 36.8	-1.5
KKN				eSn	S	21 42 07.8	-7.2
	comp=Z,85nm,0.6s						
WMQ	Urumqi	14.51	53	eP	P	21 39 40.5	+0.3
PKI	Pulchoki	14.58	122	ePn	P	21 39 40.9	-0.3
PKI				eSn	S	21 42 13.5	-6.8
	comp=Z,50nm,0.5s						
GUN	Gumba	14.69	120	ePn	P	21 39 41.2	-1.4
GUN				eSn	S	21 42 15.4	-7.5
	comp=Z,43nm,0.6s						
KURK	Kurchatov	15.37	17	eP	P	21 39 53.7	+2.6
	comp=Z,4.3nm,0.9s						
KURK	Kurchatov	15.37	17	eP	P	21 39 53.7	+2.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AB31	Akbulak array	15.55	331	⇑P	P	21 39 49.3	-4.1
	comp=Z,5.9nm,0.3s,baz=140,slow=12,SNR=414						
AB31				⇓S	S	21 42 29.2	-13
	comp=Z,1.7nm,0.3s,baz=157,slow=23,SNR=4.5						
AB31	Akbulak array	15.55	331	⇑P	P	21 39 49.3	-4.1
	comp=Z,5.9nm,0.3s						
AB31				S	S	21 42 29.2	-13
VOSK	Vostochnaya	16.52	359	⇓P	P	21 40 02.8	-2.6
	comp=Z,10nm,1.1s						
VOSK	Vostochnaya	16.52	359	⇓P	P	21 40 02.8	-2.6
	comp=Z,10nm,1.0s						
VOSK	Vostochnaya	16.52	359	⇓P	P	21 40 02.8	-2.6
VOSK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BANOM	Banah	16.59	236	P	P	21 40 06.8	+0.3
	SNR=11						
BLSP	Bilaspur	16.78	144	eP	P	21 40 11.4	+2.5
BLSP				ex	x	21 43 05.2	
BVA0	Borovoye Array	16.83	358	⇑P	P	21 40 07.9	-1.4
	comp=Z,0.9nm,0.6s,baz=164,slow=12,SNR=54						
BVA0				S	S	21 43 22.1	+10
	comp=Z,0.2nm,0.8s,baz=171,slow=26,SNR=4.3						
BVA0	Borovoye Array	16.83	358	⇑P	P	21 40 07.9	-1.4
	comp=Z,0.9nm,0.6s						
BVA0				S	S	21 43 22.1	+10
BVAR	Borovoye Array	16.83	358	P	P	21 40 07.6	-1.7
	comp=Z,2.1nm,0.3s,baz=151,slow=12,SNR=44						
BRVK	Borovoye	16.87	357	eP	P	21 40 09.0	-0.8
	comp=Z,3.9nm,0.7s						
BRVK	Borovoye	16.87	357	eP	P	21 40 09.0	-0.8
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKTO	Aktyubinsk	17.25	330	P	P	21 40 12.7	-1.9
	comp=Z,3.2nm,0.3s,baz=135,slow=12,SNR=37						
AKTO	Aktyubinsk	17.25	330	P	P	21 40 12.7	-1.9
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
CHKZ	Chkalovo	17.48	358	⇑P	P	21 40 15.6	-1.8
	comp=Z,3.4nm,0.6s						
BOK	Bokaro	17.50	131	eP	P	21 40 19.8	+1.9
BOK				AMb	AMB	21 40 21.1	
	comp=Z,5.0nm,0.6s						
BOK				ex	x	21 43 20.8	
ASHO	Ashiyiah	17.59	234	P	P	21 40 18.9	0.0
	SNR=12						
LSA	Lhasa	17.67	106	P	P	21 40 21.0	+1.1
POO	Poona	17.73	173	eS	S	21 43 40.0	+8.2
ARQ	Araqi	18.26	229	⇓P	P	21 40 27.0	+0.2
BSY	Bisya	18.30	227	P	P	21 40 27.8	+0.6
	SNR=6.8						
ORR	Orenburg	19.51	327	i P	P	21 40 39.6	-0.6
ORR				pmax	pmax		
	comp=Z,20nm,0.5s						
HYB	Hyderabad	19.72	160	i P	P	21 40 45.0	+2.4
HYB				eS	S	21 44 13.0	-0.9
HYB	Hyderabad	19.72	160	eP	P	21 40 45.0	+2.4
ZAL	Zalesovo	19.98	23	P	P	21 40 45.4	+0.4
	comp=Z,2.9nm,0.3s,baz=245,slow=7.4,SNR=15						
ZAL	Zalesovo	19.98	23	P	P	21 40 45.4	+0.3
NVS	Novosibirsk	20.30	20	eP	P	21 40 46.1	-2.2
GNI	Garni	21.40	289	P	P	21 41 00.7	+1.2
	comp=Z,4.8nm,0.6s,mb4.0,baz=348,slow=3.9,SNR=6.6						
GNI	Garni	21.40	289	eP	P	21 41 00.4	+0.9
	comp=Z,22nm,1.1s,mb4.4						
GNI	Garni	21.40	289	⇑iP	P	21 41 01.8	+2.3

GNI				pmax	pmax		
	comp=Z,30nm,1.4s						
ARU	Arti	22.05	341	eP	P	21 41 06.3	+0.6
	comp=Z,4.6nm,0.5s,mb4.1						
ARU	Arti	22.05	341	⇓iP	P	21 41 06.8	+1.0
ARU				e		21 41 31.2	
ARU				eS	S	21 44 59.7	+2.7
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.0						
ZEI	Tsey	22.26	296	eP	P	21 41 09.2	+1.3
ZEI				i *PP		21 41 38.5	
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.6						
GTA	Gaotai	22.52	73	eP	P	21 41 16.2	+5.8
KIV	Kislovodsk	23.31	298	P	P	21 41 27.1	+9.1
KIV	Kislovodsk	23.31	298	eP	P	21 41 21.6	+3.6
KIV				e		21 41 43.4	
KIV				eS	S	21 45 03.2	-16
KIV				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb3.9						
ABTO	Aybut	24.78	226	⇑P	P	21 41 32.3	-0.1
SONM	Songino Array	28.14	55	P	P	21 42 03.2	+0.2
	comp=Z,0.5nm,0.8s,mb3.1,baz=260,slow=9.1,SNR=4.8						
BRTR	Keskin Array B	29.94	288	P	P	21 42 18.3	-0.9
	comp=Z,0.4nm,0.6s,mb3.2,baz=90,slow=7.2,SNR=3.2						
OBN	Obninsk	30.45	319	⇑eP	P	21 42 23.2	-0.3
OBN				e		21 43 28.4	
OBN				eS	S	21 47 17.2	+2.0
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
AKASG	Malin Array Be	33.47	309	P	P	21 42 48.4	-1.4
	comp=Z,0.8nm,0.4s,mb3.9,baz=83,slow=7.5,SNR=5.5						
JOF	Joensuu	36.34	330	ep	P	21 43 13.8	-0.3
	comp=Z,2.2nm,0.4s,mb4.4						
FINES	FINESS Array B	37.97	326	P	P	21 43 27.6	0.0
	comp=Z,1.0nm,0.4s,mb4.0,baz=119,slow=9.6,SNR=16						
NJ2	Nanjing	39.08	82	eP	P	21 43 37.6	+0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
SSE	Sheshan	41.28	82	P	P	21 43 55.2	-0.1
SSE				AMB	AMB		
	comp=Z,110nm,4.1s						
SSE	Sheshan	41.28	82	P	P	21 43 55.2	-0.1
	comp=Z,36nm,0.7s						
ARCES	ARCESS Array B	41.58	338	P	P	21 43 57.4	+0.1
	comp=Z,3.1nm,0.8s,mb4.1,baz=122,slow=8.2,SNR=20						
NB2	NORSAR Subarra	44.88	323	P	P	21 44 23.2	-0.9
	comp=Z,1.1nm,0.5s,mb3.8,baz=97,slow=7.9						
NOA	NORSAR Array B	44.88	323	P	P	21 44 23.5	-0.6
	comp=Z,1.9nm,0.7s,mb4.0,baz=97,slow=7.7,SNR=6.0						
NAO	NORSAR Subarra	45.05	323	P	P	21 44 23.2	-2.2
	comp=Z,1.1nm,0.5s,mb3.8						
NAO	NORSAR Subarra	45.05	323	P	P	21 44 23.2	-2.2
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
TIXI	Tiksi	45.88	22	eP	P	21 44 32.1	+0.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.5s,mb3.8						
KMBO	Kilima Mbogo	48.96	228	P	P	21 44 57.7	+1.0
	comp=Z,0.7nm,0.4s,mb3.9,baz=45,slow=14,SNR=4.5						
KMBO	Kilima Mbogo	48.96	228	i P	P	21 44 58.5	+1.8
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR	Matsushiro Arr	52.65	68	P	P	21 45 25.9	+1.5
	comp=Z,1.9nm,0.8s,mb4.2,baz=278,slow=10,SNR=4.9						
BILL	Bilibino	58.67	26	⇑eP	P	21 46 15.1	+8.0
BILL				pmax	pmax		
	comp=Z,8.0nm,1.9s,mb4.4						
LSZ	Lusaka	65.57	227	eP	P	21 46 53.0	-0.8
LBTB	Lobatse	74.76	223	eP	P	21 47 49.8	+0.5
BOSA	Boshof	77.81	221	P	P	21 48 06.7	+0.3
	comp=Z,5.7nm,0.8s,mb4.4,baz=14,slow=5.7,SNR=16						
BOSA	Boshof	77.81	221	P	P	21 48 06.7	+0.4
BOSA				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
WRA	Warramunga Arr	81.46	122	P	P	21 48 27.0	+0.9
	comp=Z,0.7nm,0.5s,mb3.8,baz=325,slow=4.9,SNR=6.7						
WB2	Warramunga Arr	81.47	122	eP	P	21 48 26.9	+0.8

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*IDC **12** 21:52:00.7±5.5, 7.48S×119.62E, h232^{km}±61^{km}, mb3.3/2, mb1 3.6/3, mb1mx3.2/14, mbtmp4.0/3, Error ellipse: s-maj=134.3km s-min=15.1km az=49.0*

ISC 12 21:51:51.9±4.3**, 7.8S**±0.7×**119.0E**±0.8**, h170**^{km}±52^{km}**, n6, σ0^{s}17**/6**, mb3.7**/2**, 1D, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.10	148	eP	P	21 54 39.8	+0.1
	6.0nm,1.0s						
KAKA	Kakadu	14.09	111	eP	Px	21 55 25.9	
	9.4nm,0.4s						
WRA	Warramunga Arr	19.14	131	P	P	21 56 04.4	0.0
	1.5nm,0.3s,baz=303,slow=12,SNR=23						
WRA				S	S	21 59 27.5	+0.1
	0.2nm,0.3s,baz=313,slow=20,SNR=4.4						
WB2	Warramunga Arr	19.14	131	⇓iP	P	21 56 04.3	-0.1
STKA	Stephens Creek	31.87	142	P	P	21 58 03.1	-0.1
	1.1nm,0.6s,mb3.8,baz=323,slow=10,SNR=3.9						
MKAR	Makanchi Array	63.41	333	P	P	22 02 05.7	+0.1
	0.7nm,0.6s,mb3.7,baz=145,slow=7.6,SNR=5.1						

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*ATH **12** 21:52:10.8, 38.28N×22.05E, h14^{km}±3^{km}, MD3.8/15, ML3.5*

*HLW **12** 21:52:10.5, 38.38N×22.13E, h21^{km}, Mb3.5*

*NEIC **12** 21:52:10.8, 38.28N×22.05E, h14^{km}, mb3.9/9, ML4.0(THE), ML3.5(ATH), After ATH.*

*IDC **12** 21:52:10.5±0.8, 38.33N×22.25E, mb3.9/12, mb1 4.0/17, mb1mx3.9/27, mbtmp3.9/17, ML3.4/1, MS3.8/1, Ms1 3.8/1, ms1mx2.8/32, Error ellipse: s-maj=14.8km s-min=13.0km az=80.0*

*CSEM **12** 21:52:13.2±0.1, 38.32N×22.20E, h15^{km}, mb3.7/2, Error ellipse: s-maj=1.8km s-min=1.5km az=14.0*

*THE **12** 21:52:15.8, 38.53N×22.29E, h11^{km}, ML3.9*

*SKO **12** 21:52:16.4, 38.52N×22.45E, h20^{km}*

ISC 12 21:52:10.6±0.5**, 38.35N**±0.02×**22.09E**±0.02**, h11**^{km}±3^{km}**, n166, σ1^{s}39**/191**, mb3.9**/15**, MS3.8**/1**, 10C-6D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.57	240	⇑iPB	Pb	21 52 21.3	-0.8
EVR	Evrytania	0.61	339	⇓iPG	Pg	21 52 23.4	+0.4
AGG	Agios Georgios	0.70	16	ePg	Pg	21 52 24.8	0.0
LKR	Lokris	0.78	67	ePG	Pg	21 52 26.4	+0.1
MGER	Gerania Oros	0.99	111	ePN	Pn	21 52 31.1	+0.7
ITM	Ithomi	1.17	186	⇑iPG	Pg	21 52 31.5	-2.6
VLS	Valsamata	1.19	262	ePG	Pg	21 52 32.2	-2.3
NAIG	Nisos Aigina	1.25	118	ePB	Pb	21 52 35.0	+1.2
NEO	Neokhori	1.31	42	⇓iPG	Pg	21 52 36.2	-0.6
XOR	Xorichti	1.33	40	ePg	Pg	21 52 36.7	-0.6
ATH	Athens Observa	1.34	106	ePB	Pb	21 52 36.5	+1.2
ATH				eSB	Sb	21 52 54.6	+2.4
PTL	Penteli	1.43	101	ePG	Pg	21 52 38.0	-1.3
MEV	Metsovon	1.58	335	ePg	Pg	21 52 41.6	-0.8
AOS	Alonnisos	1.62	59	ePg	Pg	21 52 40.3	-2.9
JAN	Janina	1.62	324	ePG	Pg	21 52 42.6	-0.5
VLI	Veliai	1.76	157	⇑iPN	Pn	21 52 41.8	+0.4
LIT	Litokhoron	1.78	10	ePg	Pg	21 52 42.9	-3.3
KZN	Kozani	1.97	353	ePN	Pn	21 52 46.8	+2.4
PAIG	Paliouri	2.01	38	ePb	Pb	21 52 45.3	-1.4
PAIG				eSb	Sb	21 53 08.2	-3.5
LSK	Leskovik	2.14	328	ePn	Pn	21 52 51.6	+4.8
LSK				i Sn	Sn	21 53 13.9	+0.4
KYTH	Kithira	2.20	160	ePN	Pn	21 52 49.1	+1.5
KEK	Kerkira	2.25	308	ePG	Pg	21 52 51.5	-4.0
KEK	Kerkira	2.25	308	Pn	Pn	21 52 51.1	+2.8
KEK	Kerkira	2.25	308	ePg	Pg	21 52 51.5	-4.0
PLG	Polygyros	2.28	27	ePN	Pn	21 52 49.0	+0.2
THE	Thessaloniki	2.38	16	ePn	Pn	21 52 51.0	+0.8
THE	Thessaloniki	2.38	16	P	Pn	21 52 50.8	+0.5
OUR	Ouranopolis	2.47	36	ePn	Pn	21 52 52.0	+0.5
OUR	Ouranopolis	2.47	36	ePn	Pn	21 52 52.0	+0.5
FNA	Florina	2.50	348	ePn	Pn	21 52 53.9	+2.0
FNA				eSn	Sn	21 53 23.4	+0.8
GRG	Griva	2.62	5	ePn	Pn	21 52 54.7	+1.1
SOH	Sokhos	2.66	21	ePn	Pn	21 52 55.4	+1.2
SOH				eSn	Sn	21 53 25.7	-1.0
BIA	Bitola	2.73	348	ePn	Pn	21 52 57.2	+1.9
BIA				eSn	Sn	21 53 29.3	+0.6
LOS	Limnos	2.82	55	ePn	Pn	21 52 56.9	+0.5
KNT	Kendrikon	2.88	12	ePn	Pn	21 52 58.7	+1.3
OHR	Ohrid	2.94	341	ePn	Pn	21 53 02.6	+4.5
OHR				eSn	Sn	21 53 35.5	+1.7
OHR	Ohrid	2.94	341	ePn	Pn	21 53 02.6	+4.5
OHR				eSn	Sn	21 53 35.5	+1.8
VAY	Valandovo	2.99	7	ePn	Pn	21 52 59.6	+0.6
VAY				eSn	Sn	21 53 33.0	-2.2
SANT	Santorini	3.33	125	ePn	Pn	21 53 04.9	+1.1
SANT	Santorini	3.33	125	ePn	Pn	21 53 04.9	+1.1
VAM	Vamos	3.39	149	ePN	Pn	21 53 04.4	-0.2
SKO	Skopje	3.66	352	ePn	Pn	21 53 11.2	+2.8
SKO				eSn	Sn	21 53 51.9	0.0
LCI	Lecce	3.67	304	Pn	Pn	21 53 10.3	+1.8
IDI	Anoyia	3.79	143	Pn	Pn	21 53 09.4	-0.9
	6.1nm,0.3s,baz=321,slow=16,SNR=34						
IDI				Sn	Sn	21 53 54.2	-1.2
	11nm,0.3s,baz=242,slow=22,SNR=3.6						
GVD	Gavdhos	3.85	155	ePn	Pn	21 53 09.5	-1.7
GVD	Gavdhos	3.85	155	ePn	Pn	21 53 09.5	-1.7
ALN	Alexandroupoli	3.98	49	ePn	Pn	21 53 12.9	-0.1
TIP	Timpagrande	4.25	283	Pn	Pn	21 53 18.5	+1.7
PE1	Pezze di Greco	4.36	306	ePn	Pn	21 53 19.3	+0.9
BRT	Bari-Castellan	4.54	305	Pn	Pn	21 53 22.6	+1.6
TDS	Terranova Siba	4.67	288	Pn	Pn	21 53 24.9	+2.2
BAI	Bari	4.87	306	ePn	Pn	21 53 26.0	+0.4
CEL	Celeste	4.87	271	Pn	Pn	21 53 27.0	+1.3
CUC	Castrocucco	5.14	291	Pn	Pn	21 53 31.8	+2.3
	66nm,0.6s						
CDT	Castel del Mon	5.25	303	ePn	Pn	21 53 31.3	+0.3
MGR	Morigerati	5.38	291	Pn	Pn	21 53 35.6	+2.8
	19nm,0.5s						
SLCN	Sala Consilina	5.40	294	Pn	Pn	21 53 35.1	+2.0
NVSS	Nova Varos 2	5.46	341	⇑iPn	Pn	21 53 34.4	+0.4
DNZL	Cakiroluk	5.53	95	i P	Pn	21 53 36.6	+1.6
GRUS	Gruza	5.63	350	Pn	Pn	21 53 37.4	+1.0
GRUS				Sg	Sn	21 54 46.6	+4.8
MRLC	Muro Lucano	5.64	297	Pn	Pn	21 53 37.3	+0.8
SGO	Sicignano	5.69	295	Pn	Pn	21 53 38.8	+1.6
	15nm,0.3s						
SLNA	Salina	5.70	274	Pn	Pn	21 53 39.6	+2.3
ULDT	Uludag	5.76	70	i P	Pn	21 53 37.2	-0.9
FG4	Candela	5.78	301	Pn	Pn	21 53 41.2	+2.8
	41nm,0.5s						
FGMS	Monte Sant'Ang	5.78	307	Pn	Pn	21 53 38.6	+0.1
MS1	Monte Sant'Ang	5.79	307	ePn	Pn	21 53 38.5	-0.1
DIVS	Divcibare	5.96	345	i Pn	Pn	21 53 42.7	+1.7
DIVS				Sg	Sn	21 54 50.9	+0.9
RGNG	Rignano Grg	6.00	306	Pn	Pn	21 53 41.3	-0.2
VAE	Valguarnera	6.13	264	Pn	Pn	21 53 45.0	+1.6
	0.9nm,0.3s,baz=228,slow=14,SNR=2.8						
VAE				Sn	Sn	21 54 58.1	+3.8
	1.0nm,0.3s,baz=99,slow=12,SNR=3.0						
FG2	Serracapriola	6.33	305	Pn	Pn	21 53 47.3	+1.0
TKTP	Tekketepe	6.49	90	i P	Pn	21 53 49.1	+0.6
SGG	Gregorio Mates	6.66	300	Pn	Pn	21 53 53.3	+2.4
ISP	Isparta	6.66	92	ePn	Pn	21 53 51.8	+0.9
CII	Carovilli	6.86	302	Pn	Pn	21 53 57.1	+3.5
ESKT	Eskisehir	6.93	78	i P	Pn	21 53 54.3	-0.4
RNI2	Rionero Sannit	6.95	301	Pn	Pn	21 53 56.8	+1.8
	82nm,1.0s						
HENT	Hendek	7.24	67	i P	Pn	21 53 57.8	-1.2
INTR	Introdacqua	7.25	303	Pn	Pn	21 54 01.1	+1.9
SLUM		7.30	159	P	Pn	21 53 55.7	-4.2
VVLD	Villa Vallelon	7.38	301	Pn	Pn	21 54 02.9	+1.9
	45nm,0.6s						
VOIR		7.42	16	⇓P	Pn	21 54 02.7	+1.1
VOIR		7.42	16	⇓P	Pn	21 54 02.7	+1.2
PTQR	Pietraquaria	7.59	302	Pn	Pn	21 54 07.7	+3.7
MLR	Muntele Rosu	7.70	21	Pn	Pn	21 54 05.7	+0.3
	0.4nm,0.3s,baz=191,slow=13,SNR=7.5						
TIRR	Tirgusor	7.74	36	⇑P	Pn	21 54 07.1	+1.1
TIRR	Tirgusor	7.74	36	eP	Pn	21 54 01.5	-4.4
AQU	L'Aquila	7.75	304	ePn	Pn	21 54 10.3	+4.2
	15nm,0.7s						
TERO	Teramo	7.75	306	Pn	Pn	21 54 06.4	+0.3
SGKT	Sivrigoynuk	8.03	71	i P	P	21 54 09.5	-0.5
NRCA	Norcia	8.16	306	Pn	P	21 54 12.5	+0.6
MNS	Montasola	8.23	302	Pn	P	21 54 14.5	+1.6
	6.6nm,0.6s						
VRI	Vrincioaia	8.27	23	⇑P	P	21 54 14.9	+1.5
VRI	Vrincioaia	8.27	23	⇑P	P	21 54 14.9	+1.6
HMAT	Matruh	8.32	149	P	P	21 54 10.5	-3.6
HMAT				S	Sn	21 55 37.2	-12
HMAT	Matruh	8.32	149	P	P	21 54 10.5	-3.7
HMAT				S	Sn	21 55 37.2	-12
SNTG	Esanatoglia	8.49	308	Pn	P	21 54 16.4	-0.1
ARV	Arcevia	8.62	310	Pn	P	21 54 17.8	-0.5
BOJS	Bojanci	8.78	327	ePn	P	21 54 19.7	-0.8
BOJS				eSn	Sn	21 55 58.2	-2.2
FSSB	Fossombrone	8.83	310	Pn	P	21 54 19.8	-1.4
ELDT	Eldivan	9.03	73	i P	P	21 54 23.1	-0.9
BR131	Keskin Array S	9.10	78	ePn	P	21 54 25.5	+0.7
	2.7nm,0.5s						
BR131	Keskin Array S	9.10	78	ePn	P	21 54 25.5	+0.7
	2.7nm,0.5s						
BRTR	Keskin Array B	9.10	78	Pn	P	21 54 25.4	+0.5
	0.7nm,0.3s,baz=259,slow=12,SNR=24						
SWA2		9.50	162	P	P	21 54 26.3	-4.2
SWA1		9.55	161	⇓eP	P	21 54 26.8	-4.3
SWA1				S	Sn	21 56 07.1	-12
PSZ	Piszkesteto	9.70	351	eP	P	21 54 34.4	+1.2
PSZ	Piszkesteto	9.70	351	eP	P	21 54 34.4	+1.3
PERS	Pernice	9.75	330	ePn	P	21 54 32.6	-1.2
PERS				eSn	Sn	21 56 19.9	-4.5
VOY	Vojsko	9.79	324	ePn	P	21 54 32.8	-1.6
VOY				eSn	Sn	21 56 22.8	-2.6
CADS	Cadrg	10.01	325	i Pg	P	21 54 42.2	+4.8
CADS				i Sg	Px	21 54 44.3	
	comp=Z,4.0nm,0.1s						
ROBS	Robic	10.13	324	i Pg	P	21 54 41.6	+2.6
ROBS				i Sg	Px	21 54 42.9	
	comp=Z,1.0nm,0.0s						
ROBS	Robic	10.13	324	ePn	P	21 54 37.2	-1.8
ROBS				eSn	S	21 56 30.9	-2.7
ROBS	Robic	10.13	324	ePn	P	21 54 37.2	-1.8
ROBS				i Sg	Px	21 54 42.9	
ROBS				eSn	S	21 56 30.9	-2.7
PTCC	Patocco-Chiusa	10.32	324	Pn	P	21 54 40.2	-1.4
CTI	Castel Tesino	10.91	318	Pn	P	21 54 48.1	-1.6
WATA	Walderalm	11.83	323	⇑iSn	S	21 57 14.2	-1.1
	comp=Z,3.4nm,0.7s						
WATA	Walderalm	11.83	323	i Pn	P	21 55 01.5	-0.8
	comp=Z,5.8nm,0.5s						
WATA				Sn	S	21 57 14.2	-1.1
SQTA	Sankt Quirin	11.93	322	⇑iSn	S	21 57 12.4	-5.2
	comp=Z,4.0nm,0.7s						
SQTA	Sankt Quirin	11.93	322	i Pn	P	21 55 03.1	-0.5
	comp=Z,2.8nm,0.4s						
SQTA				Sn	S	21 57 12.4	-5.2
MOTA	Moosalm	12.06	322	⇑iSn	S	21 57 18.3	-2.7
	comp=Z,4.4nm,0.8s						
MOTA	Moosalm	12.06	322	⇓iPn	P	21 55 04.2	-1.2
	comp=Z,2.1nm,0.5s						
MOTA				Sn	S	21 57 18.3	-2.7
GERES	GERESS Array B	12.12	333	Pn	P	21 55 05.9	-0.2
	comp=Z,0.1nm,0.3s,baz=151,slow=14,SNR=5.6						
GERES				Sn	S	21 57 20.4	-1.9
	comp=Z,0.1nm,0.3s,baz=159,slow=22,SNR=4.7						
DAVOX	Davos	12.32	317	Pn	P	21 55 09.2	+0.4
	comp=Z,0.3nm,0.3s,baz=114,slow=21,SNR=5.3						
KHC	Kasperske Hory	12.40	333	eP	P	21 55 14.0	+4.1
MBDF	Montbardon	13.12	304	eP	P	21 55 17.5	-2.0
LPG	La Plagne	13.46	307	eP	P	21 55 22.6	-1.4
	comp=Z,13nm,1.1s						
LPL	La Plagne	13.48	307	eP	P	21 55 22.8	-1.4
HINF	Hinteralfeld	14.59	315	eP	P	21 55 37.6	-1.2
	comp=Z,3.0nm,0.6s						
CDF	Champ du Feu	14.71	318	eP	P	21 55 39.2	-1.2
LASF	Ste Croix	14.86	298	eP	P	21 55 40.0	-2.3
HAU	Haudompre	14.97	315	eP	P	21 55 42.5	-1.3
	comp=Z,4.2nm,0.5s						
SMF	Signal de Mont	15.78	308	eP	P	21 55 52.6	-1.7
	comp=Z,23nm,1.1s						
MTLF	Montolieu	15.83	295	eP	P	21 55 52.3	-2.7
LOR	Lormes	16.05	310	eP	P	21 55 56.7	-1.0
	comp=Z,31nm,1.5s						
AVF	Avril sur Loir	16.15	307	eP	P	21 55 57.7	-1.3
	comp=Z,15nm,1.1s						
SSF	Saint Saulge	16.17	309	eP	P	21 55 58.4	-0.9
	comp=Z,10nm,0.9s						
BGF	Bois d'Agland	16.37	306	eP	P	21 56 00.6	-1.3
TCF	Toulx Ste Croi	16.68	305	eP	P	21 56 04.4	-1.3
	comp=Z,32nm,1.4s						
RJF	Les Rejaudoux	16.81	301	eP	P	21 56 04.8	-2.6
LFF	La Frestale	17.24	299	eP	P	21 56 10.2	-2.6
BAIF	Baives	17.31	318	eP	P	21 56 13.0	-0.7
ESDC	Sonseca Array	20.27	282	P	P	21 56 49.0	+0.2
	comp=Z,1.5nm,0.6s,baz=76,slow=11,SNR=12						
MDT	Midelt	22.37	264	P	P	21 57 13.1	+2.9
	comp=Z,2.1nm,0.8s,mb3.6,baz=84,slow=10,SNR=3.6						
HFS	Hagfors	22.45	349	P	P	21 57 11.8	+1.0
	comp=Z,1.9nm,0.7s,mb3.6,baz=164,slow=11,SNR=8.8						
FINES	FINESS Array B	23.26	5	P	P	21 57 18.6	+0.1
	comp=Z,3.0nm,0.9s,mb3.7,baz=198,slow=12,SNR=4.0						
FINES	FINESS Array B	23.26	5	P	P	21 57 18.6	0.0
EVO	Evora	23.53	280	eP	P	21 57 18.8	-2.7
	comp=Z,110nm,1.8s,mb4.7						
NAO	NORSAR Subarra	23.59	346	P	P	21 57 23.9	+2.1
	comp=Z,1.0nm,0.6s,mb3.4						
NB2	NORSAR Subarra	23.72	347	P	P	21 57 23.9	+0.9
	comp=Z,1.0nm,0.6s,mb3.4,baz=152,slow=9.3						
NOA	NORSAR Array B	23.72	347	P	P	21 57 24.2	+1.2
	comp=Z,3.0nm,0.9s,mb3.7,baz=154,slow=9.5,SNR=4.3						
EKA	Eskdalemuir Ar	24.02	323	P	P	21 57 26.6	+0.6
	comp=Z,3.9nm,0.8s,mb3.9,baz=127,slow=9.4,SNR=11						
EKA	Eskdalemuir Ar	24.02	323	P	P	21 57 26.6	+0.6
ARCES	ARCESS Array B	31.30	2	P	P	21 58 32.4	-0.2
	comp=Z,1.0nm,0.6s,mb3.8,baz=192,slow=11,SNR=5.0						
ARCES	ARCESS Array B	31.30	2	P	P	21 58 32.3	-0.3
CHKZ	Chkalovo	36.25	49	eP	P	21 59 14.1	-1.3
	comp=Z,1.9nm,0.8s,mb4.1						
CHKZ	Chkalovo	36.25	49	eP	P	21 59 14.1	-1.3
	comp=Z,1.9nm,0.8s,mb4.1						
AAK	Ala-Archa	39.56	67	eP	P	21 59 42.6	-0.7
	comp=Z,1.8nm,0.8s,mb3.9						
AAK	Ala-Archa	39.56	67	eP	P	21 59 42.6	-0.7
	comp=Z,1.8nm,0.8s,mb3.9						
DBIC	Dimbokro	39.87	225	P	P	21 59 46.0	-0.1
	comp=Z,1.4nm,0.6s,mb3.9,baz=26,slow=11,SNR=5.2						
LIC	Lamto	40.33	224	eP	P	21 59 48.8	-1.1
KMBO	Kilima Mbogo	41.69	157	LR	LR	22 20 27.7	
	comp=Z,137nm,20.2s,MS3.8,baz=276,slow=41						
MKAR	Makanchi Array	44.16	59	P	P	22 00 20.1	-0.7
	comp=Z,3.2nm,0.5s,mb4.3,baz=276,slow=7.6,SNR=52						
ZAL	Zalesovo	44.65	48	P	P	22 00 23.4	-1.3
	comp=Z,2.2nm,0.4s,mb4.3,baz=203,slow=7.5,SNR=5.9						
SONM	Songino Array	59.40	51	P	P	22 02 13.4	-1.7
	comp=Z,0.5nm,0.5s,mb3.8,baz=286,slow=7.0,SNR=6.2						
BOSA	Boshof	66.68	177	P	P	22 03 03.1	-0.6
	comp=Z,1.0nm,0.4s,mb4.2,baz=71,slow=17,SNR=8.5						

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*NEIC **12** 22:05:24.1, 36.73S×72.87W, h78^{km}, MD3.6(GUC), After GUC.*

GUC 12 22:05:24.1±0.8**, 36.73S**×**72.87W, h78**^{km}±5^{km}**, MD3.6, ML3.3, 4C-9D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COCH	Cobquecura	0.60	7	⇓iP	P	22 05 39.1	+0.3
COCH				i S	S	22 05 49.3	-0.3
COCH				AMP		22 05 50.0	
	comp=N,174nm,0.3s						
CCHI	Chillan	0.65	79	⇓iP	P	22 05 39.2	-0.1
CCHI				⇓iP		22 05 39.4	
CCHI				i S	S	22 05 50.4	-0.1
CCHI				i S	S	22 05 50.7	+0.1
CCHI				AMP		22 05 51.0	
	comp=N,3µm,0.2s						
CCHI				AMP		22 05 51.3	
	comp=N,6µm,0.3s						
CCHI	Chillan	0.65	79	⇓iP	P	22 05 39.4	+0.2
CCHI				i S	S	22 05 50.7	+0.1
LNCH	Linares	1.35	50	eP	P	22 05 53.6	+5.7
LNCH				i S	S	22 06 11.4	+5.8
LNCH				AMP		22 06 18.1	
	comp=E,390nm,0.4s						
TALC	Talca	1.67	37	⇑iP	P	22 05 52.4	+0.3
TALC				i S	S	22 06 13.4	+0.8
TALC				AMP		22 06 18.0	
	comp=E,1µm,0.1s						
SFDO	San Fernando	2.60	36	⇑iP	P	22 06 04.3	-0.6
LNV	Longovilo	3.02	24	⇑iP	P	22 06 10.0	-0.8
CICH	Cipreses	3.13	40	⇓iP	P	22 06 12.8	+0.4
CICH				i S	S	22 06 49.6	+0.9
CACH	El Canelo	3.20	36	⇓iP	P	22 06 13.1	-0.3
CHCH	Chadas Angostu	3.33	34	⇓iP	P	22 06 14.4	-0.7
TACH	Talagante	3.46	28	eP	P	22 06 16.2	-0.7
TACH				eS	S	22 06 55.8	-1.0
RCDM	Rinconada Maip	3.65	28	⇑iP	P	22 06 18.7	-0.9
RCDM				i S	S	22 07 00.4	-1.3
PCH	Pirque	3.66	33	⇓iP	P	22 06 18.9	-0.7
FCH	Farellones	4.00	33	eP	P	22 06 23.9	-0.5
FCH				i S	S	22 07 10.0	-0.4
PLCA	Paso Flores	4.39	156	ePn	P	22 06 28.2	-1.6
JACH	Jahuel	4.46	26	⇓iP	P	22 06 30.1	-0.7
JACH				i S	S	22 07 19.8	-1.9

WEL 12 22:17:51.0±0.7**, 47.57S**×**165.47E, h33**^{km}**, ML3.5**/8**, Error ellipse: s-maj=6.6km s-min=6.1km az=0.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHZ	Wether Hill Ro	2.39	46	PN	Pn	22 18 26.8	-2.0
WHZ				SN	Sn	22 18 52.8	-4.5
DCZ	Deep Cove	2.40	30	PN	Pn	22 18 27.2	-1.7
MLZ	Mavora Lakes	2.91	41	PN	Pn	22 18 34.2	-2.0
MLZ				SN	Sn	22 19 06.1	-4.2
TUZ	Tuapeka	3.29	62	ePN	Pn	22 18 39.5	-2.0
TUZ				SN	Sn	22 19 16.1	-3.8
EAZ	Earnscleugh	3.54	50	ePN	Pn	22 18 42.9	-2.2
EAZ				eSN	Sn	22 19 21.4	-4.9
WKZ	Wanaka	3.69	43	PN	Pn	22 18 45.9	-1.4
JCZ	Jackson Bay	4.18	35	ePN	Pn	22 18 53.6	-0.7
ODZ	Otahua Downs	4.39	57	ePN	Pn	22 18 52.8	-4.4

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*KNET **12** 22:18:36.9±0.3, 42.64N×74.82E, h14^{km}±3^{km}, ml1.7, Error ellipse: s-maj=2.4km s-min=1.9km az=144.0*

*NNC **12** 22:18:38.2±3.1, 42.67N×74.81E, mpv2.3, Error ellipse: s-maj=94.5km s-min=19.2km az=169.0*

ISC 12 22:18:37.8±0.5**, 42.66N**±0.03×**74.82E**±0.03**, h9**^{km}±4^{km}**, n12, σ0^{s}34**/22**, 11C-9D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBK	Karagaybulak	0.09	92	P	Pg	22 18 40.6	+0.4
	334nm,0.1s,SNR=1483						
KBK				⇑S	Sg	22 18 42.5	+0.6
	2µm,0.2s						
AAK	Ala-Archa	0.24	264	⇑P	Pg	22 18 42.9	0.0
	22nm,0.2s,SNR=59						
AAK				⇓S	Sg	22 18 46.5	+0.1
	132nm,0.3s						
AAK	Ala-Archa	0.24	264	⇑P	Pg	22 18 42.9	0.0
	5.4nm,0.2s						
AAK				⇓S	Sg	22 18 46.5	+0.1
	84nm,0.4s						
CHMS	Chumysh	0.34	351	P	Pg	22 18 44.9	+0.1
	74nm,0.1s,SNR=139						
CHMS				⇑S	Sg	22 18 49.8	+0.3
	183nm,0.1s						
UCH	Uchtor	0.49	208	⇓P	Pg	22 18 47.4	-0.3
	17nm,0.1s,SNR=106						
UCH				⇑S	Sg	22 18 53.6	-0.7
	26nm,0.1s						
TKM2	Tokmak 2	0.63	65	⇑P	Pg	22 18 50.0	-0.4
	5.2nm,0.1s,SNR=35						
TKM2				⇑S	Sg	22 18 58.5	-0.3
	35nm,0.1s						
USP	Ospenovka	0.65	339	⇓P	Pb	22 18 50.4	-0.5
	7.0nm,0.1s,SNR=40						
USP				⇓S	Sg	22 18 59.3	-0.4
	46nm,0.2s						
KZA	Kyzart	0.66	151	⇓P	Pb	22 18 50.8	-0.2
	8.3nm,0.1s,SNR=59						
EKS2	Erkin-Say	0.77	270	⇑P	Pb	22 18 53.1	+0.2
	5.8nm,0.1s,SNR=43						
EKS2				⇑S	Sb	22 19 03.7	+0.5
	8.4nm,0.1s						
AML	Almayashu	0.99	238	⇓P	Pb	22 18 56.7	+0.1
	2.2nm,0.1s,SNR=14						
AML				⇑S	Sb	22 19 09.9	+0.3
	29nm,0.4s						
ULHL	Ulahol	1.13	111	⇓P	Pb	22 18 58.9	-0.1
	2.1nm,0.1s,SNR=11						
ULHL				⇑S	Sb	22 19 13.9	+0.3

	6.7nm,0.1s						
KK31	Karatay Array	3.20	279	⇓Pn	Pn	22 19 35.3	+6.0
	0.5nm,0.5s,baz=100,slow=16,SNR=14						
KK31				Lg		22 20 16.4	
	0.7nm,0.3s,baz=97,slow=30,SNR=13						

IDC ***12*** *22:34:38.4±4.8, 34.93N×73.96E, mb3.8/3, mb1 3.8/6, mb1mx3.6/22, mbtmp3.8/6, ML3.6/3, Error ellipse: s-maj=78.4km s-min=36.0km az=1.0*

NNC ***12*** *22:34:46.6±4.4, 35.20N×72.68E, h22^{km}±80^{km}, mpv3.7, Error ellipse: s-maj=79.9km s-min=26.0km az=173.0*

ISC 12 22:34:41.9±0.6**, 34.85N**±0.05×**74.06E**±0.06**, h71**^{km}±15^{km}**, n26,** σ**1^{s}38**/39**, mb3.6**/2**, 4C-2D, Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.36	209	P	P	22 35 04.1	-1.4
CEP	Cherat	2.05	241	P	P	22 35 14.7	-0.2
CEP				S	S	22 35 39.0	-0.3
THN	Thein Dam	2.78	150	eP	P	22 35 27.3	+2.1
THN				eS	S	22 36 08.8	+11
DLH	Dalhousie	2.80	145	eP	P	22 35 26.0	+0.6
DLH				eS	S	22 36 08.0	+10
SARP	Sargodha	3.14	202	P	P	22 35 30.8	+0.5
SARP				S	rx	22 35 39.0	
BHK	Bhakra	3.95	149	ex	S	22 36 37.9	+11
SDNR	Sundarnagar	4.14	143	eP	P	22 35 45.2	+1.1
SDNR				ex	S	22 36 51.8	+20
DRP	Derazinda	4.47	227	P	P	22 35 48.7	-0.1
SMLA	Simla	4.54	144	eP	P	22 35 49.8	+0.1
SMLA				ex	S	22 36 42.3	+0.7
KLP	Kalpa	4.83	132	eP	P	22 35 55.9	+2.1
KLP				eS	S	22 36 51.4	+2.6
KLP				AML	AML	22 37 03.7	
	comp=E,175nm,0.6s						
KLP				AML	AML	22 37 29.9	
	comp=N,164nm,0.4s						
AAK	Ala-Archa	7.78	2	⇓Pn	P	22 36 34.6	0.0
	comp=N,1.5nm,0.6s						
AAK				⇑Sn	S	22 38 02.2	+0.2
	comp=N,7.2nm,0.9s						
KK31	Karatay Array	8.69	343	Pn	P	22 36 45.6	-1.5
	comp=N,4.4nm,0.6s,baz=157,slow=12,SNR=98						
KK31				⇑Sn	S	22 38 18.7	-5.7
	comp=N,5.3nm,0.5s,baz=142,slow=24,SNR=11						
KOLN	Koldanda	10.78	128	ePn	P	22 37 13.5	-2.1
KOLN				eSn	S	22 39 11.4	-3.9
	comp=N,18nm,0.7s						
GKN	Gorkha	11.32	124	ePn	P	22 37 20.9	-1.8
GKN				eSn	S	22 39 23.7	-4.6
	comp=N,26nm,0.4s						
DMN	Daman	11.89	124	ePn	P	22 37 28.6	-1.8
DMN				eSn	S	22 39 39.1	-2.9
	comp=N,37nm,0.7s						
KKN	Kakani	11.89	123	ePn	P	22 37 28.2	-2.2
KKN				eSn	S	22 39 37.7	-4.4
GUN	Gumba	12.23	121	ePn	P	22 37 32.7	-2.3
MK31	Makanchi Array	13.45	25	P	P	22 37 58.5	+7.5
	comp=N,1.1nm,0.6s,baz=213,slow=8.7,SNR=23						
MKAR	Makanchi Array	13.45	25	Pn	P	22 37 50.6	-0.3
	comp=N,0.1nm,0.3s,baz=212,slow=10,SNR=4.1						
AB31	Akbulak array	17.76	328	⇓P	P	22 38 44.7	-1.1
	comp=N,2.0nm,0.8s,baz=132,slow=12,SNR=12						
AB31				⇑S	S	22 41 48.4	-10
	comp=N,0.8nm,0.6s,baz=156,slow=24,SNR=2.9						
VOSK	Vostochnaya	18.00	354	⇑P	P	22 38 49.1	+0.5
	comp=N,12nm,2.8s						
BVAR	Borovoye Array	18.36	353	P	P	22 38 54.0	+1.1
	comp=N,0.6nm,0.3s,baz=164,slow=9.5,SNR=16						
AKTO	Aktyubinsk	19.48	328	P	P	22 39 06.4	+0.9
	comp=N,0.4nm,0.3s,baz=140,slow=12,SNR=8.7						
ZAL	Zalesovo	20.52	18	P	P	22 39 17.1	+0.6
	comp=N,3.2nm,0.5s,baz=256,slow=6.5,SNR=14						
SONM	Songino Array	27.31	52	P	P	22 40 25.4	+3.7
	comp=N,0.6nm,0.7s,mb3.2,baz=250,slow=9.4,SNR=4.0						
FINES	FINESS Array B	40.24	326	P	P	22 42 14.8	+2.0
	comp=N,2.1nm,0.9s,mb4.0,baz=130,slow=11,SNR=6.8						

BJI ***12*** *22:38:39.0, 1.19N×97.36E, h26^{km}, mB5.0, mb5.0, Ms4.7, Msz4.4*

MOS ***12*** *22:38:40.7±0.9, 1.40N×97.28E, h33^{km}, mb5.1/20, MS4.4/4, Error ellipse: s-maj=15.3km s-min=7.1km az=107.3*

NEIC ***12*** *22:38:40.9±0.3, 1.29N×97.13E, mb4.8/20, Error ellipse: s-maj=9.1km s-min=6.3km az=213.0*

IDC ***12*** *22:38:40.7±0.6, 1.29N×97.08E, h21^{km}±3^{km}, mb4.6/18, mb1 4.7/18, mb1mx4.5/22, mbtmp4.7/18, MS4.1/6, Ms1 4.1/6, ms1mx3.6/24, Error ellipse: s-maj=21.7km s-min=11.1km az=51.0*

ISC 12 22:38:39.4±0.3**, 1.33N**±0.05×**97.18E**±0.04**, h23**^{km}**, h23**^{km}±1.1^{km}**:pP-P, n137,** σ**1^{s}04**/143**, mb4.9**/63**, MS4.3**/15**, 12C-5D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPM	Ipoh	5.01	50	P	Pn	22 39 56.8	+1.5
KULM	Kulim	5.24	41	ePn	Pn	22 39 59.6	+1.1
KGM	Kluang	6.17	84	P	Pn	22 40 13.4	+1.8
KSM	Kuching	13.12	89	ePn	P	22 41 48.6	+1.3
PALK	Pallekele	17.46	290	ePn	P	22 42 44.6	+1.2
	55nm,2.0s						
CHG	Chiang Mai	17.46	6	P	P	22 42 42.3	-1.1
CHRT	Chiangrai	18.60	8	⇓P	P	22 42 58.0	+0.4
KKM	Kota Kinabalu	19.56	76	eP	P	22 43 07.8	-1.0
KKM	Kota Kinabalu	19.56	76	P	P	22 43 09.0	+0.2
TSM	Tawau	20.87	81	P	P	22 43 22.7	+0.1
TRD	Trivandrum	21.36	290	eP	P	22 43 30.7	+3.0
TRD				eS	S	22 47 34.7	+16
QIZ	Qiongzhong	21.53	34	eP	P	22 43 28.0	-1.3
QIZ				XP		22 43 41.6	
QIZ				eS	S	22 47 22.5	+0.7
QIZ				XS		22 47 38.4	
QIZ				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
QIZ				AMB	AMB		
	comp=Z,110nm,12.6s						
QIZ				LR	LR		
	comp=N,360nm,15.9s,MS4.1						
QIZ				LR	LR		
	comp=E,430nm,14.3s,MS4.1						
QIZ				LR	LR		
	comp=Z,390nm,13.3s,MS4.0						
KMI	Kunming	24.26	12	⇑P	P	22 43 58.4	+2.2
KMI				AP		22 44 03.3	
KMI				XP		22 44 05.1	
KMI				PP	PP	22 44 34.3	+3.0
KMI				S	S	22 48 16.6	+6.1
KMI				XS		22 48 25.3	
KMI				AMB	AMB		
	comp=Z,70nm,1.3s,mb4.9						
KMI				AMB	AMB		
	comp=Z,240nm,3.1s						
KMI				LR	LR		
	comp=N,1µm,15.6s,MS4.6						
KMI				LR	LR		
	comp=E,600nm,11.9s,MS4.6						
KMI				LR	LR		
	comp=Z,1µm,12.9s,MS4.6						
KMI	Kunming	24.26	12	⇑P	P	22 43 58.4	+2.2
	comp=Z,75nm,1.3s,mb5.0						
KMI				pP		22 44 03.3	
KMI				sP		22 44 05.1	
KMI				PP	PP	22 44 34.3	+3.0
KMI				S	S	22 48 16.6	+6.1
KMI				sS		22 48 25.3	
KMI				SS	SS	22 49 13.7	+10
KMI				LR	LR		
	comp=Z,1µm,12.9s,MS4.6						
KMI	Kunming	24.26	12	⇑P	P	22 43 58.4	+2.2
KMI				*SP		22 44 05.1	
KMI						22 44 34.3	
KMI				S	S	22 48 16.6	+6.1
KMI				SS	SS	22 49 13.7	+10
KMI				pmax	pmax		
	comp=Z,75nm,1.3s,mb5.0						
KMI				MLR	MLR		
	comp=Z,1µm,12.9s,MS4.6						
HYB	Hyderabad	24.31	312	i P	P	22 43 58.5	+1.7
HYB	Hyderabad	24.31	312	eP	P	22 43 58.5	+1.7
SHL	Shillong	24.63	348	eP	P	22 44 00.5	+0.7
SHL				eS	S	22 48 22.0	+5.1
PKI	Pulchoki	28.43	338	eP	P	22 44 35.1	+0.3
	comp=Z,65nm,1.0s,mb5.2						
GUN	Gumba	28.56	339	eP	P	22 44 37.1	+1.1
	comp=Z,117nm,0.7s,mb5.8						
DMN	Daman	28.58	337	eP	P	22 44 36.7	+0.6
	comp=Z,59nm,0.8s,mb5.3						
KKN	Kakani	28.68	338	eP	P	22 44 37.8	+0.8
	comp=Z,63nm,0.9s,mb5.4						
LSA	Lhasa	28.79	349	eP	P	22 44 39.4	+1.4
GKN	Gorkha	29.11	337	eP	P	22 44 41.6	+0.6
	comp=Z,94nm,0.9s,mb5.5						
KOLN	Koldanda	29.33	335	eP	P	22 44 43.9	+0.9
	comp=Z,66nm,0.8s,mb5.4						
CD2	Chengdu	30.07	11	⇓iP	P	22 44 48.8	-0.7
SONA	Sohna	32.95	326	eP	P	22 45 14.2	-0.6
SONA				AMb	AMB	22 45 15.8	
	comp=Z,11nm,0.4s,mb5.2						
KUDL	Kundal	33.21	325	eP	P	22 45 16.1	-0.9
KUDL				AMb	AMB	22 45 17.8	
	comp=Z,4.4nm,1.1s,mb4.3						
WHN	Wuhan	33.31	28	P	P	22 45 18.5	+0.6
JOSI	Joshimath	33.53	332	ex	x	22 44 33.4	
KHET	Khetri	33.55	324	eP	P	22 45 20.1	+0.1
KHET				AMb	AMB	22 45 22.0	
	comp=Z,9.2nm,1.4s,mb4.5						
FITZ	Fitzroy Crossi	34.02	126	eP	P	22 45 22.1	-2.0
	comp=Z,9.9nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	34.02	126	P	P	22 45 22.7	-1.4
	comp=Z,14nm,0.6s,mb5.0,baz=294,slow=5.4,SNR=23						
XAN	Xi'an	34.34	17	P	P	22 45 25.9	-0.9
XAN				AP	pP	22 45 32.7	-0.8
XAN				AMB	AMB		
	comp=Z,20nm,0.6s,mb5.2						
KLP	Kalpa	34.97	331	eP	P	22 45 32.8	+0.6
KLP				AMb	AMB	22 45 33.4	
	comp=Z,15nm,0.5s,mb5.2						
KLP				AML	AML	22 45 59.0	
	comp=N,15nm,0.6s						
KLP				AML	AML	22 45 59.0	
	comp=E,36nm,0.8s						
LZH	Lanzhou	35.13	9	eP	P	22 45 33.6	+0.1
LZH				AP	pP	22 45 40.9	+0.6
LZH				XP	sP	22 45 44.2	+1.1
LZH				PP	PP	22 46 50.7	-1.7
LZH				eS	S	22 51 01.3	-2.9
LZH				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.2						
LZH				AMB	AMB		
	comp=Z,140nm,4.1s						
LZH				LR	LR		
	comp=N,610nm,12.5s						
LZH				LR	LR		
	comp=Z,970nm,13.2s,MS4.7						
LZH	Lanzhou	35.13	9	eP	P	22 45 33.6	+0.1
	comp=Z,40nm,1.3s,mb5.2						
LZH				pP	pP	22 45 40.9	+0.6
LZH				sP	sP	22 45 44.2	+1.1
LZH				PP	PP	22 46 50.7	-1.7
LZH				eS	S	22 51 01.3	-2.9
LZH				sS		22 51 13.5	
LZH				eSS	SS	22 53 12.8	-7.7
LZH				LR	LR		
	comp=Z,980nm,13.2s,MS4.7						
LZH	Lanzhou	35.13	9	eP	P	22 45 33.6	+0.1
LZH				*SP	sP	22 45 44.2	+1.1
LZH						22 46 50.7	
LZH				eS	S	22 51 01.3	-2.9
LZH				*SS		22 51 13.5	
LZH				eSS	SS	22 53 12.8	-7.7
LZH				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
LZH				MLR	MLR		
	comp=Z,980nm,13.2s,MS4.7						
SDNR	Sundarnagar	35.57	330	eP	P	22 45 38.2	+0.9
SSE	Sheshan	37.32	35	P	P	22 45 51.9	-0.1
SSE				AP	pP	22 46 00.7	+1.9
SSE				XP	sP	22 46 04.0	+2.4
SSE				PP	PP	22 47 15.4	-4.3
SSE				PCP	PcP	22 48 10.0	-1.5
SSE				S	S	22 51 38.2	+0.4
SSE				XS		22 51 51.9	
SSE				SCS	ScS	22 56 03.5	+0.9
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,80nm,3.7s						
SSE				LR	LR		
	comp=N,160nm,17.6s,MS3.9						
SSE				LR	LR		
	comp=E,40nm,17.6s,MS3.9						
SSE				LR	LR		
	comp=Z,160nm,16.4s,MS3.9						
SSE	Sheshan	37.32	35	P	P	22 45 51.9	-0.1
	comp=Z,38nm,0.7s,mb5.3						
SSE				pP	pP	22 46 00.7	+1.9
SSE				sP	sP	22 46 04.0	+2.4
SSE				PP	PP	22 47 15.4	-4.3
SSE				PcP	PcP	22 48 10.0	-1.5
SSE				S	S	22 51 38.2	+0.4
SSE				sS		22 51 51.9	
SSE				SS	SS	22 54 21.7	+12
SSE				ScS	ScS	22 56 03.5	+0.9
SSE				LR	LR		
	comp=Z,170nm,16.4s,MS3.9						
KAKA	Kakadu	37.67	113	eP	P	22 46 11.7	+17
	comp=Z,15nm,1.1s,mb4.6						
GTA	Gaotai	37.98	3	eP	P	22 45 57.9	+0.4
GTA				AP	pP	22 46 06.5	+2.3
GTA				XP	sP	22 46 10.8	+3.7
GTA				PP	PP	22 47 28.7	+1.1
GTA				PCP	PcP	22 48 13.5	0.0
GTA				S	S	22 51 46.8	-1.0
GTA				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.0						
GTA				AMB	AMB		
	comp=Z,150nm,6.1s						
GTA				LR	LR		
	comp=N,90nm,12.2s,MS4.1						
GTA				LR	LR		
	comp=E,170nm,13.7s,MS4.1						
GTA				LR	LR		
	comp=Z,130nm,12.9s,MS3.9						
JOW	Kunigami	39.16	47	P	P	22 46 08.7	+1.1
	comp=Z,67nm,0.6s,mb5.5,baz=244,slow=8.6,SNR=16						
WRA	Warramunga Arr	42.12	122	P	P	22 46 31.3	-0.7
	comp=Z,11nm,0.6s,mb4.6,baz=300,slow=9.0,SNR=32						
WRA				pP	pP	22 46 38.6	-0.2
	comp=Z,5.3nm,0.4s,baz=301,slow=9.0,SNR=9.1						
WRAB	Tennant Creek	42.12	122	eP	P	22 46 31.3	-0.7
	comp=Z,14nm,0.6s,mb4.8						
WRAB	Tennant Creek	42.12	122	⇓iP	P	22 46 30.3	-1.7
WB2	Warramunga Arr	42.13	122	eP	P	22 46 31.8	-0.3
WMQ	Urumqi	43.14	350	⇑iP	P	22 46 41.2	+1.1
WMQ				AP	pP	22 46 53.5	+6.6
WMQ				PP	PP	22 48 24.9	+2.3
WMQ				PPP	PPP	22 49 00.9	+3.2
WMQ				eS	S	22 53 03.9	-0.9
WMQ				XS		22 53 24.9	
WMQ				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,390nm,5.6s						
WMQ				LR	LR		
	comp=N,150nm,22.2s,MS4.2						
WMQ				LR	LR		
	comp=E,310nm,22.8s,MS4.2						
WMQ				LR	LR		
	comp=Z,240nm,23.4s,MS4.0						
FORT	Forrest	43.38	140	eP	P	22 46 43.8	+1.6
	comp=Z,21nm,0.5s,mb5.1						
UCH	Uchtor	45.52	336	P	P	22 47 00.8	+1.6
	SNR=19						
TKM2	Tokmak 2	45.69	338	P	P	22 47 01.8	+1.2
	SNR=9.4						
KBK	Karagaybulak	45.72	337	P	P	22 47 02.5	+1.8
	SNR=17						
KS15	Wonju Array Si	45.72	35	eP	P	22 47 01.2	+0.3
AML	Almayashu	45.78	336	P	P	22 47 02.8	+1.6
	SNR=11						
AAK	Ala-Archa	45.87	337	P	P	22 47 08.2	+6.2
	SNR=6.0						
AAK	Ala-Archa	45.87	337	eP	P	22 47 00.5	-1.5
	comp=Z,8.3nm,0.8s,mb4.7						
AAK	Ala-Archa	45.87	337	eP	P	22 47 00.5	-1.5
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
EKS2	Erkin-Say	46.19	336	P	P	22 47 06.0	+1.5
	SNR=15						
USP	Ospenovka	46.41	337	P	P	22 47 07.2	+0.9
	SNR=21						
SONM	Songino Array	47.01	8	P	P	22 47 11.5	+0.6
	comp=Z,17nm,0.7s,mb5.1,baz=189,slow=8.9,SNR=159						
SONM				pP	pP	22 47 18.2	+0.5
	comp=Z,13nm,0.7s,baz=190,slow=9.3,SNR=15						
SONM				PcP	PcP	22 48 43.1	-0.3
	comp=Z,4.0nm,0.7s,baz=191,slow=3.6,SNR=8.2						
MKAR	Makanchi Array	47.11	346	P	P	22 47 12.1	+0.3
	comp=Z,11nm,0.5s,mb5.0,baz=161,slow=9.0,SNR=215						
MKAR	Makanchi Array	47.11	346	eP	P	22 47 12.1	+0.3
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KKAR	Karatay Array	47.93	334	i P	P	22 47 18.2	-0.1
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
ZAK	Zakamensk	49.15	5	eP	P	22 47 26.9	-0.6
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
CN2	Changchun	49.20	27	⇑P	P	22 47 27.6	-0.4
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
MJAR	Matsushiro Arr	51.61	42	P	P	22 47 45.9	-0.6
	comp=Z,3.1nm,0.8s,mb4.3,baz=223,slow=7.1,SNR=13						
KURK	Kurchatov	51.66	345	eP	P	22 47 46.2	-0.5
	comp=Z,16nm,1.0s,mb4.9						
KURK	Kurchatov	51.66	345	⇑iP	P	22 47 45.8	-0.9
MDJ	Mudanjiang	51.76	29	P	P	22 47 47.5	0.0
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,90nm,5.6s						
CIT	Chita	52.35	13	eP	P	22 47 52.0	+0.1
ZAL	Zalesovo	53.42	351	P	P	22 47 59.0	-0.8
	comp=Z,23nm,0.5s,mb5.4,baz=310,slow=5.3,SNR=100						
STKA	Stephens Creek	53.45	132	⇑iP	P	22 48 00.4	+0.1
	comp=Z,6.5nm,0.6s,mb4.7						
STKA	Stephens Creek	53.45	132	P	P	22 48 00.4	0.0
	comp=Z,6.3nm,0.6s,mb4.7,baz=312,slow=8.1,SNR=16						
STKA				pP	pP	22 48 07.3	0.0
	comp=Z,7.6nm,0.7s,baz=290,slow=7.4,SNR=9.5						
NVS	Novosibirsk	54.55	350	⇑iP	P	22 48 06.4	-1.6
NVS				eS	S	22 55 42.5	-1.8
NVS				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
NVS				pmax	pmax		
	comp=N,9.0nm,0.8s						
NVS				smax			
	comp=N,15nm,2.0s						
VOSK	Vostochnaya	55.67	341	P	P	22 48 15.2	-1.1
VOSK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
BVA0	Borovoye Array	56.12	341	i P	P	22 48 18.4	-1.1
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
BVAR	Borovoye Array	56.12	341	P	P	22 48 18.4	-1.0
	comp=Z,15nm,0.7s,mb5.2,baz=144,slow=8.7,SNR=65						
KLR	Kul'dur	56.15	27	eP	P	22 48 16.7	-3.0
KLR				MLR	MLR		
	comp=N,600nm,12.0s						
KLR				MLR	MLR		
	comp=Z,1µm,12.0s,MS5.2						
CHKZ	Chkalovo	56.60	341	eP	P	22 48 22.1	-0.8
	comp=Z,27nm,0.7s,mb5.4						
CHKZ	Chkalovo	56.60	341	eP	P	22 48 22.1	-0.8
CHKZ				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.4						
AB31	Akbulak array	57.39	332	i P	P	22 48 27.5	-1.1
AB31				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
BOD	Bodaibo	57.89	11	eP	P	22 48 30.6	-1.3
BOD				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
AKTO	Aktyubinsk	59.11	332	P	P	22 48 39.0	-1.5
	comp=Z,6.1nm,0.5s,mb4.9,baz=128,slow=8.0,SNR=29						
YSS	Yuzh-Sakhalins	60.25	34	⇑eP	P	22 48 48.2	-0.3
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
GNI	Garni	61.19	316	P	P	22 48 54.5	-0.4
	comp=Z,4.9nm,0.9s,mb4.6,baz=127,slow=10,SNR=2.4						
ORR	Orenburg	61.44	331	⇑iP	P	22 48 55.1	-1.4
ORR				e	pP	22 49 01.8	-1.8
ORR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.1						
SVE	Sverdlovsk	62.56	338	eP	P	22 49 03.7	-0.2
ZEI	Tsey	62.89	318	i P	P	22 49 15.7	+9.4
ZEI				i		22 51 21.7	
ARU	Arti	63.06	337	eP	P	22 49 05.8	-1.3
	comp=Z,12nm,1.0s,mb5.0						
ARU	Arti	63.06	337	⇑iP	P	22 49 05.5	-1.7
ARU				e		22 51 22.4	
ARU				eS	S	22 57 35.5	+0.7
ARU				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
KIV	Kislovodsk	64.20	319	eP	P	22 49 08.7	-6.2
KIV	Kislovodsk	64.20	319	eP	P	22 49 08.7	-6.2
YAK	Yakutsk	65.30	16	eP	P	22 49 20.6	-1.1
	comp=Z,73nm,0.9s,mb5.7						
YAK	Yakutsk	65.30	16	eP	P	22 49 20.1	-1.6
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.4						
BRTR	Keskin Array B	69.01	312	P	P	22 49 44.0	-1.6
	comp=Z,1.8nm,0.8s,mb4.1,baz=129,slow=7.9,SNR=9.4						
BR131	Keskin Array S	69.01	312	eP	P	22 49 43.6	-2.0
	comp=Z,1.7nm,0.6s,mb4.2						
OBN	Obninsk	72.50	328	⇓eP	P	22 50 05.3	-1.0
OBN				e		22 52 49.4	
OBN				pmax	pmax		
	comp=Z,39nm,2.0s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
MAW	Mawson	72.83	193	P	P	22 50 08.4	+0.3
	comp=Z,1.7nm,0.8s,mb4.0,baz=48,slow=5.6,SNR=2.6						
MAW				LR	LR	23 18 33.2	
	comp=Z,85nm,19.3s,MS4.0,baz=238,slow=33						
TIXI	Tiksi	73.06	10	⇓iP	P	22 50 07.9	-1.4
TIXI				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
KLMR	Klimovskoe	73.63	334	eP	P	22 50 10.5	-2.3
KLMR				pmax	pmax		
	comp=Z,50nm,2.2s,mb5.1						
SEY	Seymchan	73.65	23	⇑iP	P	22 50 12.7	-0.2
BOSA	Boshof	74.83	240	LR	LR	23 17 55.5	
	comp=Z,81nm,18.5s,MS4.1,baz=336,slow=32						
AKASG	Malin Array Be	75.15	322	P	P	22 50 20.6	-1.1
	comp=Z,3.0nm,0.6s,mb4.4,baz=90,slow=5.3,SNR=22						
AKASG				pP	pP	22 50 26.9	-2.0
	comp=Z,2.0nm,0.5s,baz=92,slow=5.3,SNR=4.9						
KOLS	Kolonicke sedl	79.11	320	eP	P	22 50 44.3	+0.4
KOLS				e	pP	22 50 49.8	-1.3
RPZ	Rata Peaks	79.31	135	LR	LR	23 25 33.3	
	comp=Z,179nm,18.7s,MS4.4,baz=104,slow=35						
CRVS	Cervenica-Dubn	79.63	319	eP	P	22 50 48.4	+1.7
CRVS				epP	pP	22 50 54.6	+0.7
FINES	FINESS Array B	79.88	332	P	P	22 50 47.4	-0.4
	comp=Z,2.7nm,0.6s,mb4.3,baz=87,slow=7.7,SNR=20						
FINES				pP	pP	22 50 54.1	-0.9
	comp=Z,4.2nm,0.8s,baz=114,slow=5.7,SNR=3.6						
KAF	Kangasniemi	79.96	333	ep	P	22 50 47.5	-0.7
	comp=Z,4.2nm,0.6s,mb4.5						
KAF	Kangasniemi	79.96	333	eP	P	22 50 47.5	-0.7
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KECS	Kecovo	80.20	319	eP	P	22 50 49.7	0.0
FX1	Attu Island--F	80.50	37	eP	P	22 50 51.5	+0.3
BILL	Bilibino	81.05	21	eP	P	22 50 54.2	+0.4
BILL				pmax	pmax		
	comp=Z,11nm,2.1s,mb4.4						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.3						
ARCES	ARCESS Array B	82.41	340	P	P	22 51 01.2	+0.4
	comp=Z,3.6nm,0.5s,mb4.6,baz=101,slow=4.8,SNR=30						
ARCES				pP	pP	22 51 08.1	0.0
	comp=Z,5.0nm,0.8s,baz=104,slow=6.3,SNR=4.1						
ARCES				LR	LR	23 33 35.5	
	comp=Z,114nm,18.7s,MS4.3,baz=213,slow=40						
URZ	Urewera	82.91	129	LR	LR	23 29 02.2	
	comp=Z,125nm,18.4s,MS4.3,baz=210,slow=36						

GERES	GERESS Array B	84.71	319	P	P	22 51 13.6	+0.6
	comp=Z,3.0nm,0.9s,mb4.4,baz=90,slow=4.0,SNR=23						
GERES				pP	pP	22 51 20.5	+0.2
	comp=Z,1.6nm,0.8s,baz=108,slow=4.2,SNR=6.5						
KHC	Kasperske Hory	84.81	319	eP	P	22 51 13.5	0.0
CLL	Collm	85.32	321	P	P	22 51 17.0	+1.0
VNDA	Vanda	85.95	169	eP	P	22 51 24.2	+5.6
	comp=Z,5.5nm,1.4s,mb4.6						
VNDA	Vanda	85.95	169	eP	P	22 51 24.2	+5.6
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
GRA1	Grafenberg Arr	86.37	320	eP	P	22 51 21.8	+0.5
	comp=Z,4.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	86.37	320	eP	P	22 51 21.8	+0.5
	comp=Z,4.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	86.37	320	eP	P	22 51 21.8	+0.5
GRF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.6						
GRF	Grafenberg Arr	86.37	320	eP	P	22 51 21.8	+0.5
GRF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.6						
NB2	NORSAR Subarra	86.89	331	P	P	22 51 23.4	-0.1
	comp=Z,2.8nm,0.8s,mb4.5,baz=96,slow=4.8						
NOA	NORSAR Array B	86.89	331	P	P	22 51 23.4	-0.1
	comp=Z,2.6nm,0.8s,mb4.5,baz=95,slow=4.8,SNR=7.0						
NOA				pP	pP	22 51 30.3	-0.5
	comp=Z,2.7nm,0.8s,baz=93,slow=4.8,SNR=4.6						
NOA				LR	LR	23 31 30.9	
	comp=Z,104nm,18.4s,MS4.3,baz=215,slow=36						
NAO	NORSAR Subarra	87.06	331	P	P	22 51 23.4	-1.0
	comp=Z,2.8nm,0.8s,mb4.5						
NAO	NORSAR Subarra	87.06	331	P	P	22 51 23.4	-1.0
NAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
LPG	La Plagne	89.36	315	eP	P	22 51 35.1	-0.7
	comp=Z,21nm,1.3s,mb5.0						
LPG	La Plagne	89.36	315	eP	P	22 51 35.1	-0.7
LPG				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb5.0						
QSPA	South Pole Qui	91.27	180	eP	P	22 51 45.2	+1.4
IMA2	Indian Mountai	96.47	23	eP	P	22 52 07.8	-0.2
NVAR	Mina Array Bea	128.69	36	PKP	PKPdf	22 57 47.1	-2.9
	comp=Z,1.1nm,0.8s,baz=224,slow=1.2,SNR=7.5						
PDAR	Pinedale Array	129.93	26	PKP	PKPdf	22 57 49.5	-2.8
	comp=Z,0.8nm,0.7s,baz=170,slow=2.8,SNR=5.8						
TXAR	Lajitas Array	143.57	32	PKP	PKPdf	22 58 12.4	-5.1
	comp=Z,1.7nm,0.7s,baz=59,slow=0.4,SNR=18						
JCT	Junction City	144.47	26	ePKPdf	PKPdf	22 58 13.5	-5.6
CPUP	Villa Florida	145.09	222	ePKPdf	PKPdf	22 58 17.1	-3.2

ATH ***12*** *22:44:05.6,41.18N×24.95E,h29^{km}*

CSEM ***12*** *22:44:06.4±0.1,41.10N×24.91E,h20^{km},ML2.8,Error ellipse: s-maj=5.3km s-min=2.1km az=179.0*

THE ***12*** *22:44:08.0,40.99N×24.98E,h20^{km},ML2.8*

ISC 12 22:44:06.2±0.7,**41.09N**±0.07×**24.93E**±0.04,**h20**^{km},**n9, σ0^{s}61**/15,**Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDO	Rodhopi	0.46	83	ePB	Pb	22 44 15.4	-0.2
NVR	Nevrokopi	0.85	288	ePB	Pb	22 44 21.0	-1.1
NVR				eSN	Sn	22 44 34.7	-0.2
ALN	Alexandroupoli	0.86	103	ePg	Pb	22 44 23.1	+0.7
ALN				eSg	Sb	22 44 33.5	-0.1
OUR	Ouranopolis	1.04	224	ePg	Pb	22 44 25.2	-0.3
OUR				eSg	Sb	22 44 38.8	0.0
SOH	Sokhos	1.23	258	ePg	Pn	22 44 28.2	-0.3
SOH				eSg	Sb	22 44 44.0	+0.1
PLG	Polygyros	1.34	238	ePN	Pn	22 44 30.8	+0.8
PAIG	Paliouri	1.50	220	ePg	Pn	22 44 31.5	-0.9
KNT	Kendrikon	1.54	273	ePg	Pn	22 44 33.2	+0.3
KNT				eSg	Sn	22 44 53.6	+1.2
KNT	Kendrikon	1.54	273	ePg	Pn	22 44 33.2	+0.3
KNT				eSg	Sn	22 44 53.6	+1.2

NNC ***12*** *22:53:18.4±10.0,40.64N×84.33E,mpv4.0,Error ellipse: s-maj=92.8km s-min=49.8km az=176.0*

IDC ***12*** *22:53:35.0±4.5,41.82N×82.63E,mb3.9/2,mb1 3.9/4, mb1mx3.6/21,mbtmp3.8/4,ML3.3/2,Error ellipse: s-maj=84.7km s-min=24.5km az=114.0*

BJI ***12*** *22:53:36.8,41.85N×82.45E,h12^{km},ML3.8*

NEIC ***12*** *22:53:40.2±6.2,41.82N×82.68E,h36^{km}±27^{km},Error ellipse: s-maj=78.7km s-min=15.5km az=140.0*

ISC 12 22:53:31.1±1.3,**41.41N**±0.09×**83.06E**±0.09,**h10**^{km},**n11, σ1^{s}40**/17,**mb3.8**/2,**4C-5D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	4.18	53	eP	Pb	22 54 46.8	+2.3
WMQ				S	Sb	22 55 39.8	+4.3
WMQ				Smax			
	comp=N,70nm,0.8s						
WMQ				Smax			
	comp=E,60nm,0.9s						
MK31	Makanchi Array	5.41	354	Pn	Pn	22 54 52.0	-1.8
	comp=E,5.9nm,0.5s,baz=186,slow=12,SNR=95						
MK31				⇑Sn	Sb	22 56 11.7	+0.7
	comp=E,22nm,0.7s,baz=165,slow=25,SNR=3.7						
MK31				⇓Lg		22 56 39.3	
	comp=E,24nm,0.7s,baz=167,slow=28,SNR=3.7						
MK31	Makanchi Array	5.41	354	Pn	Pn	22 54 52.0	-1.8
MK31				Sn	Sb	22 56 11.7	+0.7
MK31				Lg		22 56 39.3	
MKAR	Makanchi Array	5.41	354	Pn	Pn	22 54 52.1	-1.7
	comp=E,1.0nm,0.3s,baz=180,slow=14,SNR=48						
MKAR				Pg	Pb	22 55 06.5	+1.0
	comp=E,3.2nm,0.3s,baz=170,slow=16,SNR=18						
MKAR				Lg		22 56 13.3	
	comp=E,5.3nm,0.3s,baz=167,slow=25,SNR=5.0						
AAK	Ala-Archa	6.49	284	⇓Pn	Pn	22 55 08.8	-0.3
	comp=E,4.5nm,0.5s						
AAK				⇑Sn	Sb	22 56 44.5	+1.9
	comp=E,16nm,0.8s						
AAK				⇓Lg		22 57 19.0	
	comp=E,18nm,0.8s						
AAK	Ala-Archa	6.49	284	⇓Pn	Pn	22 55 08.8	-0.3
	comp=E,4.5nm,0.5s						
AAK				Sn	Sb	22 56 44.5	+1.9
AAK				Lg		22 57 19.0	
KK31	Karatay Array	9.46	284	⇑Pn	P	22 56 07.7	+17
	comp=E,0.5nm,0.5s,baz=93,slow=15,SNR=5.9						
KK31				⇑Pg	P	22 56 32.2	+42
	comp=E,1.0nm,0.5s,baz=91,slow=16,SNR=5.0						
KK31				⇓Sn	Sn	22 58 13.5	+36
	comp=E,2.8nm,0.6s,baz=99,slow=26,SNR=3.9						
ZAL	Zalesovo	12.58	5	Pn	P	22 56 32.1	-0.9
	comp=E,0.4nm,0.3s,baz=262,slow=8.4,SNR=3.7						
CHKZ	Chkalovo	14.84	330	ePn	P	22 57 00.6	-2.0
BRTR	Keskin Array B	37.17	284	P	P	23 00 44.0	+0.1
	comp=E,0.8nm,0.6s,mb3.7,baz=68,slow=10,SNR=6.0						
ARCES	ARCESS Array B	40.64	333	P	P	23 01 12.8	+0.3
	comp=E,3.3nm,0.9s,mb4.0,baz=97,slow=7.3,SNR=4.9						

WEL 12 22:55:26.0±0.7,**38.68S**×**175.66E,h175**^{km}±7^{km},**ML3.5**/4,**2C,Error ellipse: s-maj=6.1km s-min=5.2km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOVZ	Moawhango	0.73	175	⇑PN	P	22 55 51.1	-0.6
TSZ	Takapari Road	1.40	171	⇑PN	P	22 55 56.9	0.0
TSZ				SN	S	22 56 20.2	-0.5
KNZ	Kokohu	1.61	103	PN	P	22 55 59.0	+0.1
KNZ				eSN	S	22 56 20.4	-3.9
PXZ	Pawanui	1.64	146	PN	P	22 55 59.1	-0.2
PXZ				SN	S	22 56 23.1	-1.8
KIW	Kapiti Island	2.26	195	PN	P	22 56 05.2	-0.8
KIW				SN	S	22 56 35.7	-1.2
CAW	Cannon Point	2.47	191	PN	P	22 56 07.5	-1.1
MTW	Mount Morrison	2.48	183	PN	P	22 56 07.5	-1.1
TCW	Tory Channel	2.75	202	PN	P	22 56 10.7	-1.2
TCW				eSN	S	22 56 45.1	-2.1
TUWZ	Tuamarina	3.05	205	PN	P	22 56 14.2	-1.4
TUWZ				eSN	S	22 56 52.2	-1.6
NNZ	Nelson	3.09	214	SN	S	22 56 52.7	-1.8
THZ	Tophouse	3.74	214	PN	P	22 56 21.3	-2.9
THZ				SN	S	22 57 07.5	-1.7

IDC ***12*** *23:04:20.5±1.6,2.65S×80.88W,mb3.9/5,mb1 4.1/7, mb1mx3.9/19,mbtmp3.9/7,ML3.9/2,MS3.2/4,Ms1 3.2/4, ms1mx2.9/24,Error ellipse: s-maj=67.3km s-min=22.6km az=50.0*

IGQ ***12*** *23:04:22.6,2.47S×80.80W,h12^{km}±13^{km},mb4.6,Error ellipse: s-maj=15.3km s-min=2.2km az=131.0*

NEIC ***12*** *23:04:25.9±1.0,2.69S×80.91W,h38^{km}±11^{km},mb4.3/3, Error ellipse: s-maj=13.1km s-min=7.8km az=50.0*

ISC 12 23:04:22.0±1.8,**2.69S**±0.05×**80.98W**±0.05,**h21**^{km}±14^{km},**n36,σ0^{s}99**/39,**mb4.1**/8,**MS3.1**/3,**3C-4D,Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAMA	Jama	2.53	18	P	Pn	23 05 01.8	-1.0
JAMA				S	Sn	23 05 30.0	-3.3
IGUA	Igualata	2.63	63	P	Pn	23 05 03.9	-0.3
IGUA				S	Sn	23 05 33.6	-2.1
QIL1	Quilotoa	2.75	48	⇓P	Pn	23 05 04.5	-1.4
QIL1				S	Sn	23 05 37.3	-1.5
ARRY	Arrayan	2.79	65	P	Pn	23 05 05.9	-0.6
MAG1	Magdalena	2.87	25	⇓P	Pn	23 05 06.3	-1.3
PISA	Pisayambo	3.06	58	P	Pn	23 05 11.4	+1.1
TAMB	Tambo	3.28	53	P	Pn	23 05 14.8	+1.4
VC1	Cotopaxi 1	3.28	52	⇑P	Pn	23 05 14.6	+1.1
JUA2	San Juan 2	3.42	44	P	Pn	23 05 15.7	+0.3
JUA2				S	Sn	23 05 58.7	+2.9
TERV	Terraza Guagua	3.45	44	P	Pn	23 05 15.5	-0.4
TERV				S	Sn	23 05 57.6	+1.1
GGP	Refugio Guagua	3.46	44	⇑P	Pn	23 05 15.1	-0.8
PINO	Pino	3.46	43	⇓P	Pn	23 05 15.4	-0.5
YANA	Yana	3.51	43	⇓P	Pn	23 05 16.1	-0.6
ANTI	Antisana	3.59	52	⇑P	Pn	23 05 18.5	+0.7
COTA	Cotacachi	4.00	41	P	Pn	23 05 23.9	+0.2
CAYR	Refugio Cayamb	4.01	48	P	Pn	23 05 25.4	+1.6
CAYR				S	Sn	23 06 11.2	+0.5
ANGU	Angureal	4.03	48	P	Pn	23 05 24.6	+0.5
CAYA	Cayambe	4.06	48	P	Pn	23 05 25.3	+0.8
PAYG	Puerto Ayora	9.51	282	ePn	P	23 06 40.9	-0.2
	63nm,1.2s						
NNA	Nana	10.11	156	ePn	P	23 06 48.6	-0.7
	14nm,0.5s						
NNA				eSn	S	23 08 36.0	-7.1
JTS	JuntasAbangare	13.49	343	LR	LR	23 11 46.0	
	comp=Z,200nm,19.1s,baz=266,slow=33						
SDV	Santo Domingo	15.45	42	Pn	P	23 08 00.8	+0.2
	0.7nm,0.3s,baz=261,slow=12,SNR=6.8						
LPAZ	La Paz	18.51	138	P	P	23 08 39.4	+0.2
	0.1nm,0.3s,baz=308,slow=11,SNR=6.6						
SIV	San Ignacio	23.64	125	P	P	23 09 32.8	-0.2
	0.6nm,0.4s,mb3.4,baz=293,slow=8.9,SNR=4.2						
CFAA	Coronel Fontan	31.17	159	LR	LR	23 23 28.2	
	comp=Z,6.1nm,18.6s,MS2.3,baz=152,slow=37						
BDFB	Brasilia	34.93	114	LR	LR	23 27 20.8	
	comp=Z,119nm,20.8s,MS3.6,baz=110,slow=40						
PLCA	Paso Flores	39.03	167	LR	LR	23 26 29.6	
	comp=Z,47nm,18.8s,MS3.3,baz=184,slow=34						
ANMO	Albuquerque	44.42	330	eP	P	23 12 34.4	+1.1
	4.9nm,1.0s,mb4.2						
SDCO	Great Sand Dun	46.21	333	eP	P	23 12 48.3	+0.8
	1.8nm,0.8s,mb4.0						
PDAR	Pinedale Array	52.09	333	P	P	23 13 32.6	-0.1
	1.4nm,1.0s,mb3.9,baz=129,slow=9.5,SNR=7.2						
HWUT	Hardware Ranch	52.11	331	eP	P	23 13 32.5	-0.5
	31nm,2.3s,mb4.8						
NVAR	Mina Array Bea	53.48	324	P	P	23 13 44.1	+0.9
	0.9nm,0.8s,mb3.8,baz=133,slow=8.5,SNR=7.5						
ULM	Lac du Bonnet	54.27	348	P	P	23 13 47.2	-1.6
	4.8nm,0.7s,mb4.5,baz=157,slow=9.0,SNR=6.5						
ULM	Lac du Bonnet	54.27	348	P	P	23 13 47.2	-1.6
INK	Inuvik	79.48	343	P	P	23 16 27.9	-0.4
	1.5nm,1.0s,mb3.9,baz=113,slow=4.6,SNR=3.0						
QSPA	South Pole Qui	87.38	180	eP	P	23 17 08.8	+0.4

IDC 12 23:13:34.1±1.4,**16.32S**×**178.58W,mb3.9**/7,**mb1 4.3**/7,**mb1mx4.1**/14,**mbtmp3.9**/7,**1D,Error ellipse: s-maj=99.9km s-min=20.3km az=149.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	39.27	239	⇓iP	P	23 21 04.6	-1.7
	3.1nm,0.6s						
STKA	Stephens Creek	39.27	239	P	P	23 21 04.7	-1.7
	3.4nm,0.4s,baz=84,slow=9.3,SNR=15						
WB2	Warramunga Arr	44.77	258	eP	P	23 21 50.1	-1.4
WRA	Warramunga Arr	44.78	258	P	P	23 21 50.4	-1.2
	1.4nm,0.5s,baz=91,slow=7.1,SNR=9.7						
KAKA	Kakadu	47.47	268	eP	P	23 22 31.4	+18
	2.6nm,0.3s						
FITZ	Fitzroy Crossi	53.14	259	P	P	23 22 53.4	-2.9
	1.3nm,0.3s,baz=82,slow=15,SNR=8.1						
NVAR	Mina Array Bea	78.40	44	P	P	23 25 38.1	-0.2
	0.3nm,0.5s,baz=217,slow=6.5,SNR=4.0						
ILAR	Eielson Array	84.39	13	P	P	23 26 07.8	-1.3
	0.2nm,0.4s,baz=222,slow=5.8,SNR=6.9						
TXAR	Lajitas Array	85.29	58	P	P	23 26 13.2	-1.3
	0.4nm,0.7s,baz=211,slow=7.3,SNR=5.1						
PDAR	Pinedale Array	86.32	44	P	P	23 26 17.6	-1.7
	0.4nm,0.6s,baz=252,slow=2.9,SNR=3.6						

BJI ***12*** *23:36:17.0,61.50N×149.80W,h45^{km},mB5.1,mb4.7, Ms4.7,Msz4.4*

IDC ***12*** *23:36:20.0±1.4,61.43N×150.31W,h53^{km}±15^{km},mb3.5/6, mb1 3.8/10,mb1mx3.6/22,mbtmp3.7/10,ML3.8/4,MS3.3/1, Ms1 3.3/1,ms1mx2.8/21,Error ellipse: s-maj=18.0km s-min=9.1km az=107.0*

NEIC ***12*** *23:36:21.0,61.50N×149.75W,h46^{km},ML4.3(PMR), ML3.9(AEIC),After AEIC.*

NEIC Felt [III] at Anchorage, Chugiak, Eagle River, Palmer, Wasilla and Willow; [II] at Big Lake and Girdwood.

ISC 12 23:36:19.3±0.2,**61.51N**±0.02×**149.75W**±0.05,**h57**^{km}±4^{km},**n82,σ0^{s}88**/88,**mb3.8**/7,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMR	Palmer	0.31	74	P	P	23 36 28.9	-0.3
PMR				S	S	23 36 35.8	-0.7
FIB	Fire Island	0.40	211	P	P	23 36 30.6	+0.4
RC01	Rabbit Creek A	0.42	179	P	P	23 36 30.4	0.0
RC01				S	S	23 36 38.3	-0.1
GHO	Glory Hole Cre	0.47	56	P	P	23 36 31.0	+0.2
KNK	Knik Glacier	0.63	98	P	P	23 36 33.2	+0.6
SML	Sawmill	0.74	66	P	P	23 36 34.3	+0.3
SML				S	S	23 36 45.4	+0.6
CUT	Chulitna	0.93	345	P	P	23 36 36.5	0.0
STLK	Strandline Lak	1.00	270	P	P	23 36 38.0	+0.5
SLKM	Skilak Lake	1.03	193	P	P	23 36 38.2	+0.3
MPA	Moose Pass	1.04	169	P	P	23 36 38.0	-0.1
NKA	Nikishka	1.06	224	P	P	23 36 40.1	+1.8
SPU	Mount Spurr	1.16	254	P	P	23 36 40.1	+0.5
SCM	Sheep Creek Mo	1.20	73	P	P	23 36 41.0	+0.8
CKL	Chakachamna La	1.29	257	P	P	23 36 41.1	-0.4
SEW	Seward	1.42	174	P	P	23 36 42.9	-0.5
GLI	Glacier Island	1.43	115	P	P	23 36 44.0	+0.4
HUR	Hurricane	1.47	2	P	P	23 36 44.9	+0.7
JPK	Jack Peak	1.59	105	P	P	23 36 46.4	+0.6
RDT	Redoubt	1.60	235	P	P	23 36 46.0	+0.2
VLZ	Valdez	1.69	101	P	P	23 36 47.4	+0.2
FID	Port Fidalgo	1.76	114	P	P	23 36 47.9	-0.2
REF	Redoubt East F	1.77	236	P	P	23 36 48.5	+0.4
RSO	Redoubt South	1.80	236	P	P	23 36 49.1	+0.5
KLU	Klutina	1.84	89	P	P	23 36 49.3	+0.2
DHY	Denali Highway	1.93	34	P	P	23 36 51.3	+1.0
HIN	Hinchinbrook I	1.94	124	P	P	23 36 50.5	-0.1
RND	Reindeer	1.95	12	P	P	23 36 51.5	+0.8
DIV	Divide	1.96	100	P	P	23 36 51.0	+0.2
KTH	Kantishna Hill	2.12	346	P	P	23 36 53.9	+0.8
CNPM	China Poot	2.12	201	P	P	23 36 52.7	-0.4
TZL	Tazlina	2.12	73	P	P	23 36 54.1	+1.0
EYAK	Cordova Ski Ar	2.17	115	P	P	23 36 53.9	0.0
INE	Iliamna NE	2.18	230	P	P	23 36 54.1	+0.2
ILW	Iliamna West	2.21	230	P	P	23 36 54.6	+0.3
SDG	Sourdough	2.23	61	P	P	23 36 55.6	+0.9
PAX	Paxson	2.48	52	P	P	23 36 59.0	+0.7
BMRM	Bremner River	2.55	100	P	P	23 36 58.4	-0.8
THY	Trims Highway	2.67	42	eP	P	23 37 02.0	+1.1
BWN	Browne	2.67	3	P	P	23 37 01.8	+0.8
AUL	Augustine Lava	2.81	222	P	P	23 37 03.4	+0.5
SVW2	Sparrevohn	2.84	264	P	P	23 37 02.9	-0.5
GLB	Gilahina Butte	2.85	89	P	P	23 37 02.8	-0.7
WRH	Wood River Hil	3.07	14	P	P	23 37 06.9	+0.3
NEA	Nenana	3.09	5	P	P	23 37 07.0	+0.1
MENT	Mentasta	3.17	60	P	P	23 37 08.2	+0.3
TT01	Tatalina	3.25	298	P	P	23 37 08.6	-0.6
CCB	Clear Creek Bu	3.27	15	P	P	23 37 08.9	-0.5
CRQM	Cirque	3.29	100	P	P	23 37 09.5	-0.2
COLA	College	3.48	13	P	P	23 37 12.4	0.0
IL1	Eielson Array	3.52	20	P	P	23 37 13.1	+0.1
ILAR	Eielson Array	3.52	20	P	P	23 37 13.0	+0.1
	6.8nm,0.3s,baz=206,slow=14,SNR=92						
ILAR				S	S	23 37 57.9	+4.2
	27nm,0.3s,baz=208,slow=21,SNR=9.7						
MDM	Murphy Dome	3.53	11	P	P	23 37 12.8	-0.3
MLY	Manley	3.56	353	P	P	23 37 12.8	-0.7
BALM	Baldy	3.61	94	P	P	23 37 13.1	-1.1
KDAK	Kodiak Island	4.01	202	P	P	23 37 17.5	-2.3
	5.1nm,0.3s,baz=36,slow=10,SNR=73						
KDAK				S	S	23 38 00.3	-5.6
	15nm,0.3s,baz=341,slow=8.9,SNR=6.5						
KDAK	Kodiak Island	4.01	202	P	P	23 37 18.0	-1.7
KABR	Katmai Barrier	4.29	220	P	P	23 37 22.3	-1.5
GCSA	Galena City Sc	4.58	318	P	P	23 37 26.7	-1.2
IM05	Indian Mountai	4.82	340	P	P	23 37 30.6	-0.6
PCA	Pinnacle	4.86	103	P	P	23 37 30.2	-1.5
IMA2	Indian Mountai	4.90	341	eP	P	23 37 31.4	-0.8
DAWY	Dawson	5.40	57	P	P	23 37 38.4	-0.8
PNL	Peninsula	5.43	105	P	P	23 37 38.1	-1.5
BM3	Burnt Mountain	6.33	18	P	P	23 37 51.2	-1.0
WHY	Whitehorse	7.26	90	P	P	23 38 03.1	-2.0
TNA	Tin City	9.06	304	eP	P	23 38 29.1	-0.8
INK	Inuvik	9.66	38	P	P	23 38 39.4	+1.3
	0.4nm,0.3s,baz=242,slow=15,SNR=13						
INK				S	S	23 40 24.4	-1.7
	1.4nm,0.3s,baz=232,slow=11,SNR=7.8						
INK				LR	LR	23 43 31.0	
	comp=Z,150nm,18.0s,baz=201,slow=44						
INK	Inuvik	9.66	38	eP	P	23 38 37.5	-0.5
DLBC	Dease Lake	10.34	99	P	P	23 38 46.0	-1.3
	0.2nm,0.3s,baz=312,slow=14,SNR=4.0						
YKA	Yellowknife Ar	16.41	71	P	P	23 40 09.2	+2.5
	0.2nm,0.3s,baz=280,slow=10,SNR=4.0						
YKA	Yellowknife Ar	16.41	71	P	P	23 40 09.2	+2.5
NVAR	Mina Array Bea	30.18	125	P	P	23 42 27.6	+1.7
	0.5nm,0.5s,mb3.5,baz=321,slow=7.4,SNR=5.1						
PDAR	Pinedale Array	30.30	110	P	P	23 42 28.1	+1.1
	0.7nm,0.6s,mb3.5,baz=316,slow=3.6,SNR=6.8						
TXAR	Lajitas Array	44.10	115	P	P	23 44 24.4	+1.2
	0.1nm,0.5s,mb2.9,baz=321,slow=7.9,SNR=4.5						
TXAR				PcP	PcP	23 46 07.6	-0.6
	0.2nm,0.4s,baz=333,slow=4.0,SNR=3.6						
TXAR	Lajitas Array	44.10	115	P	P	23 44 24.4	+1.2
TXAR				PcP	PcP	23 46 07.6	-0.6
MDJ	Mudanjiang	47.95	288	P	P	23 44 54.0	+0.5
MDJ				AMB	AMB		
	comp=Z,90nm,5.0s						
CN2	Changchun	50.45	291	eP	P	23 45 13.4	+0.6
SONM	Songino Array	55.17	307	P	P	23 45 47.3	-0.5
	comp=Z,0.7nm,0.5s,mb3.9,baz=60,slow=7.7,SNR=10						
HHC	Hu-ho-hao-te	58.88	299	eP	P	23 46 16.3	+2.2
HHC				AP	pP	23 46 23.8	-5.8
HHC				AMB	AMB		
	comp=Z,30nm,2.2s,mb4.9						
MKAR	Makanchi Array	64.22	323	P	P	23 46 47.3	-2.4
	comp=Z,0.4nm,0.5s,mb3.7,baz=38,slow=6.9,SNR=15						
WMQ	Urumqi	65.25	318	eP	P	23 47 00.5	+4.0
AKASG	Malin Array Be	68.14	1	P	P	23 47 13.6	-0.9
	comp=Z,0.9nm,0.4s,mb4.2,baz=356,slow=6.2,SNR=5.7						

NEIC ***13*** *00:20:51.3±0.5,20.65S×177.93W,h500^{km},mb3.8/2, Error ellipse: s-maj=18.4km s-min=14.2km az=165.0*

IDC ***13*** *00:20:55.5±10.0,20.61S×178.04W,h545^{km}±126^{km}, mb3.0/4,mb1 3.3/4,mb1mx3.2/12,mbtmp3.9/4,Error ellipse: s-maj=101.8km s-min=46.4km az=158.0*

ISC 13 00:20:50.5±0.8,**20.6S**±0.2×**178.0W**±0.1,**h500**^{km},**n14, σ0^{s}47**/12,**mb3.5**/6,**3C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	37.77	244	P	P	00 27 24.7	+0.4
	1.1nm,0.6s,mb3.5,baz=63,slow=9.0,SNR=3.5						
STKA	Stephens Creek	37.77	244	P	P	00 27 24.7	+0.4
ASPA	Alice Springs	44.53	257	eP	P	00 28 19.1	+0.6
WB2	Warramunga Arr	44.61	262	eP	P	00 28 19.3	+0.1
WRAB	Tennant Creek	44.61	262	eP	P	00 28 18.3	-0.9
	1.6nm,0.3s,mb3.9						
WRA	Warramunga Arr	44.62	262	P	P	00 28 19.3	0.0
	1.2nm,0.3s,mb3.8,baz=96,slow=7.3,SNR=8.8						
QSPA	South Pole Qui	69.45	180	eP	P	00 31 08.1	-0.7
	1.0nm,0.4s,mb3.7						
TXAR	Lajitas Array	87.09	57	P	P	00 32 44.2	+0.5
	0.3nm,0.8s,mb3.1,baz=207,slow=6.0,SNR=4.8						
VNA3	Neumayer Olymp	88.02	176	⇑iP	P	00 32 47.0	-0.1
VNA3				e		00 32 58.1	
ILAR	Eielson Array	88.42	13	P	P	00 32 48.8	-0.4
	0.3nm,0.5s,mb3.2,baz=226,slow=4.8,SNR=7.4						
VNA2	Neumayer--Watz	88.46	177	⇑iP	P	00 32 49.4	+0.2
VNA2				e		00 33 00.1	
VNA1	Neumayer--Stat	88.69	177	⇑iP	P	00 32 50.6	+0.3
VNA1				e		00 33 01.3	
AKASG	Malin Array Be	143.14	331	PKP	PKPdf	00 39 25.4	-1.0
	0.4nm,0.3s,baz=45,slow=3.6,SNR=5.6						
GERES	GERESS Array B	150.33	344	PKPbc	PKPdf	00 39 45.9	+7.5
	0.4nm,0.6s,baz=45,slow=1.4,SNR=4.0						

MAN 13 00:23:24.9,5.92N×**123.92E,h32**^{km},**mb4.2,ML3.0,MS2.7, 1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	1.03	81	⇓iP	Pn	00 23 47.3	+3.9
GSPH				i S	Sn	00 24 02.6	+5.8
PAGZ	Pagadian	1.99	344	eP	Pn	00 23 56.6	-0.5
PAGZ				eS	Sn	00 24 18.5	-2.6
BUKP	Musuan	2.25	30	eP	Pn	00 24 01.6	+0.8
IPIL	Ipil	2.29	324	eP	Pn	00 24 01.1	-0.3
IPIL				eS	Sn	00 24 25.6	-3.2
SJMP	San Jose	7.07	337	eP	Pn	00 25 08.2	-0.7

NIED ***13*** *00:25:00,39.60N×142.10E,h62^{km},Mw4.3 Best double couple: M$_0$2.77×10^{15} NP1:φ$_s$322°,δ88°,λ-48°. NP2:φ$_s$54°, δ42°,λ-177°.*

MOS ***13*** *00:25:33.4±0.8,40.02N×141.66E,h33^{km},mb4.4/11,Error ellipse: s-maj=12.3km s-min=8.6km az=93.1*

JMA ***13*** *00:25:35.3,39.61N×142.01E,h56^{km}±1^{km},M4.3 Broadband fault plane solution: P waves. NP1:φ$_s$305°, δ50°,λ-23°. NP2:φ$_s$51°,δ72°,λ-137°. Principal axes: T Plg14°, Azm173°; N Plg45°, Azm69°; P Plg42°, Azm276°;*

JMA Felt III J1.

BJI ***13*** *00:25:36.2,39.63N×141.79E,h78^{km},mB4.9,mb4.7*

NEIC ***13*** *00:25:37.6±0.7,39.65N×141.84E,h75^{km}±6^{km},mb4.5/10, MW4.2(NIED),Error ellipse: s-maj=7.8km s-min=5.2km az=128.0*

NEIC Recorded [3 JMA] in Aomori and Iwate; [1 JMA] in Miyagi Prefectures.

IDC ***13*** *00:25:37.8±2.8,39.56N×141.77E,h79^{km}±27^{km},mb3.9/19, mb1 4.0/21,mb1mx4.0/28,mbtmp4.2/21,MS2.8/3, Ms1 2.8/3,ms1mx2.6/42,Error ellipse: s-maj=16.1km s-min=15.3km az=56.0*

ISC 13 00:25:34.1±0.4,**39.61N**±0.02×**142.04E**±0.05,**h65**^{km}±2^{km},**n89,σ1^{s}07**/100,**mb4.2**/35,**15C-3D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	0.17	258	⇓P	P	00 25 44.2	+0.3
MIYJ				eS	S	00 25 50.5	-0.7
JTH	Tanohata	0.35	338	⇑P	P	00 25 45.4	+0.2
JTH				S	S	00 25 52.8	-0.6
JOM	Ohasama	0.59	257	⇓P	P	00 25 47.8	+0.2
JOM				eS	S	00 25 56.8	-0.6
OFUJ	Ofunato	0.60	208	⇑P	P	00 25 48.0	+0.3
OFUJ				S	S	00 25 57.4	-0.3
JKZ	Kuzumaki	0.66	304	⇑P	P	00 25 48.8	+0.5
JKZ				S	S	00 25 58.7	-0.1
JANG	Nango	0.86	332	⇑P	P	00 25 51.1	+0.4
JANG				eS	S	00 26 02.8	-0.3
JMK	Ichinoseki	0.92	224	⇑P	P	00 25 51.8	+0.4
JMK				eS	S	00 26 04.2	-0.1

JAH	Hinai	1.22	299	⇑P	P	00 25 56.1	+0.5
JAH				eS	S	00 26 11.8	+0.3
JIO	Ouri	1.27	205	⇑P	P	00 25 56.6	+0.3
JIO				S	S	00 26 12.3	-0.5
JTM	Tenmabayashi	1.39	328	⇑P	P	00 25 58.3	+0.4
JTM				eS	S	00 26 15.3	-0.3
JYK	Kaneyama	1.48	243	⇓P	P	00 25 59.5	+0.4
JYK				eS	S	00 26 18.1	+0.5
MAJO	Matsushiro	4.30	226	eP	P	00 26 39.6	+1.0
MAT	Matsushiro	4.30	226	P	P	00 26 39.6	+0.9
MAT				S	S	00 27 28.8	+0.8
MAT	Matsushiro	4.30	226	eP	P	00 26 40.0	+1.3
MAT				eS	S	00 27 30.0	+2.0
MJAR	Matsushiro Arr	4.30	226	P	P	00 26 39.7	+1.0
	8.6nm,0.3s,baz=35,slow=13,SNR=87						
MJAR				S	S	00 27 33.3	+5.2
	baz=25,slow=30,SNR=3.7						
ASAJ	Asahikawa	4.52	5	P	P	00 26 41.9	+0.2
	20nm,0.3s,baz=223,slow=10,SNR=40						
ASAJ				S	S	00 27 33.1	-0.3
	18nm,0.3s,baz=26,slow=31,SNR=2.5						
ASAJ				LR	LR	00 28 54.2	
	comp=Z,168nm,21.7s,baz=165,slow=43						
ASAJ	Asahikawa	4.52	5	P	P	00 26 41.9	+0.2
ASAJ				S	S	00 27 33.2	-0.2
ASAJ				pmax	pmax		
	comp=Z,20nm,0.3s						
ASAJ				smax			
	comp=N,18nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,168nm,21.7s						
YUK	Yuzh-Kuril'sk	5.26	32	eP	P	00 26 50.0	-1.9
YUK				eS	S	00 27 47.6	-4.4
YUK				pmax	pmax		
	comp=Z,220nm,0.4s						
YUK				smax			
	comp=N,2µm,0.5s						
YUK				smax			
	comp=E,2µm,0.7s						
YUK				smax			
	comp=N,2µm,0.4s						
YUK				smax			
	comp=E,690nm,0.5s						
JHJ	Hachijo jima 2	6.73	196	P	P	00 27 12.2	-0.3
	comp=E,35nm,0.3s,baz=164,slow=8.5,SNR=5.7						
JHJ				S	S	00 28 25.5	-2.9
	comp=E,28nm,0.3s,baz=90,slow=20,SNR=3.5						
YSS	Yuzh-Sakhalins	7.36	4	eP	P	00 27 21.2	+0.1
	comp=E,35nm,0.8s						
YSS				e		00 27 29.2	
YSS	Yuzh-Sakhalins	7.36	4	⇑eP	P	00 27 20.2	-0.9
YSS				eS	S	00 28 40.0	-3.9
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				smax			
	comp=N,60nm,1.3s						
MDJ	Mudanjiang	10.51	302	P	P	00 28 06.1	+1.9
MDJ				S	S	00 30 02.5	+1.4
MDJ				PCP	PcP	00 34 03.6	-0.5
MDJ				SCP		00 37 26.0	
MDJ				PCS		00 37 36.8	
MDJ				SCS	ScS	00 41 02.9	-0.3
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,180nm,5.5s						
KS15	Wonju Array Si	11.30	263	eP	P	00 28 18.2	+3.4
CBIJ	Chichi jima	12.48	179	P	P	00 28 28.6	-2.2
	comp=Z,5.7nm,0.3s,baz=332,slow=16,SNR=3.2						
CN2	Changchun	13.08	294	eP	P	00 28 34.9	-3.7
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
TIA	Tai'an	19.93	268	⇑P	P	00 30 03.1	0.0
TIA				AMB	AMB		
	comp=Z,40nm,0.9s						
MA2	Magadan	20.73	13	eP	P	00 30 10.9	-0.3
	comp=Z,15nm,0.6s						
MA2	Magadan	20.73	13	eP	P	00 30 10.9	-0.3
MA2				pmax	pmax		
	comp=Z,15nm,0.6s						
YAK	Yakutsk	23.68	345	eP	P	00 30 44.1	+4.0
YAK				e		00 34 48.5	
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
FX1	Attu Island--F	25.06	48	LR	LR	00 40 59.2	
	comp=N,5.9nm,19.2s,baz=45,slow=36						
BOD	Bodaibo	25.66	324	eP	P	00 30 57.8	-1.4
BOD				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.0						
SONM	Songino Array	26.85	300	P	P	00 31 08.7	-1.5
	comp=Z,1.1nm,0.4s,mb3.7,baz=90,slow=8.3,SNR=17						
SONM				LR	LR	00 41 51.6	
	comp=Z,66nm,18.8s,baz=35,slow=36						
ZAK	Zakamensk	29.13	305	eP	P	00 31 27.2	-3.6
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
LZH	Lanzhou	30.21	276	eP	P	00 31 41.5	+1.0
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
LZH				AMB	AMB		
	comp=Z,100nm,4.3s						
LZH	Lanzhou	30.21	276	eP	P	00 31 41.5	+1.0
	comp=Z,13nm,1.0s,mb4.5						
LZH				pP	pP	00 31 49.6	-6.7
LZH				sP	sP	00 31 53.2	-11
GYA	Guiyang	32.21	257	P	P	00 31 56.6	-1.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GTA	Gaotai	32.36	283	eP	P	00 32 01.2	+1.9
TIXI	Tiksi	32.80	352	⇑iP	P	00 32 00.7	-2.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
ZAL	Zalesovo	40.60	310	P	P	00 33 08.1	-0.6
	comp=Z,3.7nm,0.6s,mb4.4,baz=17,slow=8.6,SNR=27						
NVS	Novosibirsk	41.46	312	eP	P	00 33 14.3	-1.4
MKAR	Makanchi Array	43.21	300	P	P	00 33 29.9	-0.2
	comp=Z,4.1nm,0.7s,mb4.3,baz=85,slow=9.7,SNR=42						
IMA2	Indian Mountai	44.23	32	eP	P	00 33 40.4	+2.3
KURK	Kurchatov	44.77	306	eP	P	00 33 42.1	-0.5
	comp=Z,8.8nm,0.6s,mb4.7						
KURK	Kurchatov	44.77	306	eP	P	00 33 42.1	-0.5
KURK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.7						
KDAK	Kodiak Island	44.88	44	P	P	00 33 44.5	+1.2
	comp=Z,7.5nm,0.8s,mb4.5,baz=259,slow=9.7,SNR=5.3						
ILAR	Eielson Array	47.07	34	P	P	00 34 01.9	+1.3
	comp=Z,3.2nm,0.6s,mb4.2,baz=263,slow=5.9,SNR=44						
GUN	Gumba	47.44	274	eP	P	00 34 04.2	+0.2
	comp=Z,32nm,0.4s						
KKN	Kakani	47.96	274	eP	P	00 34 08.0	-0.1
	comp=Z,49nm,0.8s						
DMN	Daman	48.18	274	eP	P	00 34 09.8	0.0
	comp=Z,11nm,0.4s,mb5.0						
GKN	Gorkha	48.35	274	eP	P	00 34 10.8	-0.3
	comp=Z,27nm,0.8s,mb5.2						
CHKZ	Chkalovo	48.94	312	eP	P	00 34 14.3	-1.0
	comp=Z,3.1nm,0.5s,mb4.5						
CHKZ	Chkalovo	48.94	312	eP	P	00 34 14.3	-1.0
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
BVAR	Borovoye Array	49.23	311	P	P	00 34 17.2	-0.4
	comp=Z,2.2nm,0.5s,mb4.3,baz=70,slow=7.7,SNR=18						
KOLN	Koldanda	49.26	275	eP	P	00 34 18.1	-0.1
	comp=Z,10.0nm,0.6s,mb5.0						
BRVK	Borovoye	49.29	311	eP	P	00 34 17.7	-0.2
	comp=Z,1.9nm,0.7s,mb4.1						
BRVK	Borovoye	49.29	311	eP	P	00 34 17.7	-0.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
AAK	Ala-Archa	49.74	297	eP	P	00 34 20.2	-1.4
	comp=Z,1.4nm,0.4s,mb4.2						
AAK	Ala-Archa	49.74	297	eP	P	00 34 20.3	-1.3
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
INK	Inuvik	51.88	28	P	P	00 34 39.0	+1.5
	comp=Z,3.8nm,0.6s,mb4.6,baz=295,slow=6.2,SNR=19						
INK	Inuvik	51.88	28	eP	P	00 34 38.7	+1.2
ARU	Arti	54.77	317	eP	P	00 34 57.8	-1.2
AKTO	Aktyubinsk	57.34	311	P	P	00 35 15.7	-1.8
	comp=Z,3.6nm,0.8s,mb4.5,baz=54,slow=10,SNR=6.3						
AKTO	Aktyubinsk	57.34	311	P	P	00 35 15.7	-1.8
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
FITZ	Fitzroy Crossi	59.42	198	P	P	00 35 31.7	-0.7
	comp=Z,13nm,1.2s,mb4.8,baz=333,slow=4.5						
WRAB	Tennant Creek	59.67	188	P	P	00 35 33.6	-0.5
	comp=Z,2.8nm,0.8s,mb4.3						
WRAB	Tennant Creek	59.67	188	P	P	00 35 33.6	-0.5
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
WRA	Warramunga Arr	59.68	188	P	P	00 35 33.0	-1.1
	comp=Z,1.8nm,0.6s,mb4.3,baz=6.1,slow=7.1,SNR=6.9						
ARCES	ARCESS Array B	61.76	339	P	P	00 35 47.8	+0.2
	comp=Z,2.0nm,0.8s,mb4.2,baz=41,slow=9.6,SNR=3.8						
FINES	FINESS Array B	66.77	332	P	P	00 36 19.7	-0.4
	comp=Z,2.2nm,0.8s,mb4.0,baz=37,slow=9.5,SNR=7.3						
HFS	Hagfors	71.95	336	P	P	00 36 52.3	+0.4
	comp=Z,1.5nm,0.4s,mb4.2,baz=34,slow=5.2,SNR=13						
NB2	NORSAR Subarra	72.00	337	P	P	00 36 52.6	+0.4
	comp=Z,0.7nm,0.5s,mb3.8,baz=37,slow=6.2						
NOA	NORSAR Array B	72.00	337	P	P	00 36 52.4	+0.2
	comp=Z,1.0nm,0.6s,mb3.9,baz=38,slow=5.9,SNR=3.9						
NAO	NORSAR Subarra	72.29	337	P	P	00 36 52.6	-1.3
	comp=Z,0.7nm,0.5s,mb3.8						
NAO	NORSAR Subarra	72.29	337	P	P	00 36 52.6	-1.3
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
AKASG	Malin Array Be	72.56	322	P	P	00 36 55.5	-0.1
	comp=Z,0.8nm,0.4s,mb3.9,baz=44,slow=6.3,SNR=8.9						
NVAR	Mina Array Bea	73.06	54	P	P	00 37 01.1	+2.3
	comp=Z,0.2nm,0.3s,mb3.4,baz=276,slow=8.7,SNR=4.1						
BW06	Boulder Array	75.52	46	eP	P	00 37 14.5	+1.6
	comp=Z,0.8nm,0.5s,mb3.7						
PDAR	Pinedale Array	75.52	46	P	P	00 37 14.8	+1.9
	comp=Z,0.7nm,0.6s,mb3.6,baz=264,slow=2.4,SNR=7.6						
GERES	GERESS Array B	80.78	328	P	P	00 37 42.4	+0.7
	comp=Z,0.2nm,0.5s,mb3.2,baz=51,slow=6.3,SNR=3.1						
TXAR	Lajitas Array	88.17	53	P	P	00 38 21.2	+2.1
	comp=Z,0.2nm,0.5s,mb3.4,baz=289,slow=3.6,SNR=4.6						
TXAR	Lajitas Array	88.17	53	P	P	00 38 21.2	+2.1
SNAA	Sanae	143.35	198	⇑i	PKPbc	00 45 02.4	+4.3
SNAA	Sanae	143.35	198	e	PKPbc	00 45 14.5	+16
VNA2	Neumayer--Watz	144.93	197	⇑i	PKPdf	00 45 03.8	+1.3
VNA2	Neumayer--Watz	144.93	197	e	PKPdf	00 45 15.7	+13
VNA3	Neumayer Olymp	145.18	196	⇑i	PKPdf	00 45 12.7	+10
VNA3	Neumayer Olymp	145.18	196	e	PKPdf	00 45 26.2	+23
VNA1	Neumayer--Stat	145.32	197	⇑i	PKPdf	00 45 09.4	+6.2
VNA1	Neumayer--Stat	145.32	197	e	PKPdf	00 45 22.4	+19

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*NEIC **13** 00:36:30.6±3.0,5.11S×145.74E,h76^{km}±25^{km},mb3.7/3, Error ellipse: s-maj=30.8km s-min=17.1km az=146.0*

*IDC **13** 00:36:32.7±6.1,5.29S×145.92E,h96^{km}±57^{km},mb3.8/3, mb1 4.0/5,mb1mx3.7/13,mbtmp4.2/5,ML3.9/2,Error ellipse: s-maj=50.0km s-min=31.6km az=133.0*

ISC 13 00:36:31.2±3.7,**5.3S**±0.2×**145.8E**±0.1,**h92**^{km}±32^{km},**n14**, σ**0^{s}62**/16,**mb3.8**/3,**Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.31	162	P	P	00 37 36.8	+0.9
	63nm,0.3s,baz=352,slow=10,SNR=144						
PMG				S	S	00 38 24.4	-0.9
	26nm,0.3s,baz=148,slow=21,SNR=12						
PMG	Port Moresby	4.31	162	eP	P	00 37 36.3	+0.4
PMG				eS	S	00 38 25.5	+0.1
CTA	Charters Tower	14.72	178	eP	P	00 40 01.9	+5.9
	1.5nm,0.3s						
CTA	Charters Tower	14.72	178	P	P	00 40 01.1	+5.2
	0.8nm,0.3s,baz=0.9,slow=14,SNR=8.3						
KAKA	Kakadu	15.10	240	eP	P	00 40 19.7	+19
	10nm,0.6s						
WRAB	Tennant Creek	18.32	216	eP	P	00 40 39.6	-1.0
	3.0nm,0.7s						
WB2	Warramunga Arr	18.33	216	eP	P	00 40 40.8	0.0
WRA	Warramunga Arr	18.34	216	P	P	00 40 40.7	-0.2
	0.3nm,0.3s,baz=38,slow=11,SNR=7.2						
FITZ	Fitzroy Crossi	23.45	235	eP	P	00 41 33.7	+0.6
	3.5nm,0.8s,mb3.7						
FITZ	Fitzroy Crossi	23.45	235	P	P	00 41 34.2	+1.1
	3.1nm,0.5s,mb3.9,baz=61,slow=11,SNR=6.4						
STKA	Stephens Creek	26.74	188	eP	P	00 42 04.4	+0.2
	2.0nm,0.8s,mb3.7						
STKA	Stephens Creek	26.74	188	P	P	00 42 04.2	0.0
	1.8nm,0.6s,mb3.8,baz=14,slow=10,SNR=5.0						
VNDA	Vanda	72.69	176	eP	P	00 47 51.1	+0.6
ILAR	Eielson Array	85.31	23	P	P	00 48 58.2	-0.6
	1.2nm,0.7s,mb3.9,baz=253,slow=5.0,SNR=5.0						

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*IDC **13** 00:55:53.0±7.7,8.12S×128.78E,h278^{km}±97^{km},mb3.3/3, mb1 3.6/5,mb1mx3.4/13,mbtmp4.1/5,Error ellipse: s-maj=58.0km s-min=49.3km az=18.0*

ISC 13 00:55:48.3±3.4,**7.8S**±0.1×**128.4E**±0.1,**h228**^{km}±38^{km},**n9**, σ**0^{s}54**/13,**mb3.6**/3,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	6.24	141	eP	Px	00 57 36.8	
	73nm,0.1s						
KAKA				eS	Sx	00 58 46.8	
FITZ	Fitzroy Crossi	10.56	195	eP	P	00 58 15.6	+0.4
	3.6nm,0.2s						
FITZ				eS	S	01 00 10.2	-0.3
FITZ	Fitzroy Crossi	10.56	195	P	P	00 58 15.7	+0.5
	2.1nm,0.3s,baz=22,slow=11,SNR=32						
FITZ				S	S	01 00 10.3	-0.2
	5.6nm,0.3s,baz=122,slow=20,SNR=6.6						
WRA	Warramunga Arr	13.32	155	P	P	00 58 49.3	-0.5
	2.2nm,0.3s,baz=338,slow=12,SNR=18						
WRA				S	S	01 01 12.8	-0.4
	1.4nm,0.3s,baz=337,slow=22,SNR=36						
WB2	Warramunga Arr	13.32	155	eP	P	00 58 50.0	+0.1
WB2				eS	S	01 01 14.0	+0.7
ASPA	Alice Springs	16.59	162	eP	P	00 59 34.1	+4.6
ASPA				eS	S	01 02 34.0	+8.2
SONM	Songino Array	58.76	343	P	P	01 05 24.8	+0.3
	0.6nm,0.8s,mb3.3,baz=153,slow=6.4,SNR=4.7						
MKAR	Makanchi Array	68.09	328	P	P	01 06 25.9	+0.6
	0.6nm,0.3s,mb3.7,baz=118,slow=7.8,SNR=26						
ZAL	Zalesovo	71.66	335	P	P	01 06 45.9	-0.9
	1.0nm,0.4s,mb3.8,baz=248,slow=0.2,SNR=3.8						

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*IDC **13** 01:11:36.6±8.5,17.39S×178.80W,h570^{km}±107^{km}, mb3.0/6,mb1 3.4/6,mb1mx3.3/13,mbtmp3.9/6,Error ellipse: s-maj=88.7km s-min=31.6km az=158.0*

*NEIC **13** 01:11:41.3±4.8,17.97S×178.68W,h643^{km}±56^{km},mb3.9/4, Error ellipse: s-maj=26.0km s-min=16.6km az=91.0*

ISC 13 01:11:36.6±0.6,**18.0S**±0.1×**178.6W**±0.1,**h600**^{km},**n21**, σ**0^{s}73**/19,**mb3.6**/10,**2C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.42	241	eP	P	01 18 10.8	+1.1
	2.4nm,0.4s,mb4.1						
STKA	Stephens Creek	38.42	241	P	P	01 18 11.0	+1.3
	4.9nm,0.7s,mb4.1,baz=94,slow=10,SNR=14						
WB2	Warramunga Arr	44.42	260	eP	P	01 18 56.8	-0.5
WRAB	Tennant Creek	44.42	260	eP	P	01 18 57.0	-0.3
	3.2nm,0.6s,mb4.0						
WRA	Warramunga Arr	44.43	260	P	P	01 18 57.3	-0.1
	1.7nm,0.5s,mb3.8,baz=95,slow=7.2,SNR=9.9						
ASPA	Alice Springs	44.59	254	eP	P	01 18 58.9	+0.3
KAKA	Kakadu	47.39	269	eP	P	01 19 38.0	+18
	4.4nm,0.4s,mb4.3						
SBA	Scott Base	60.33	184	eP	P	01 20 51.0	+1.0
VNDA	Vanda	60.35	185	eP	P	01 20 49.6	-0.6
	0.6nm,0.6s,mb3.0						
QSPA	South Pole Qui	72.07	180	eP	P	01 22 02.0	+0.1
	2.3nm,0.6s,mb3.9						
NVAR	Mina Array Bea	79.61	44	P	P	01 22 44.0	+0.1
	0.6nm,0.7s,mb3.0,baz=222,slow=7.2,SNR=5.3						
ILAR	Eielson Array	86.01	13	P	P	01 23 14.3	-0.8
	0.2nm,0.5s,mb3.0,baz=226,slow=4.1,SNR=4.2						
TXAR	Lajitas Array	86.20	58	P	P	01 23 18.0	+1.1
	0.9nm,0.8s,mb3.5,baz=218,slow=6.7,SNR=12						
TXAR	Lajitas Array	86.20	58	P	P	01 23 18.0	+1.1
PDAR	Pinedale Array	87.54	44	P	P	01 23 22.9	0.0
	0.5nm,0.6s,mb3.4,baz=225,slow=2.1,SNR=4.9						
SNAA	Sanae	90.52	179	⇑i	P	01 23 34.3	-1.8
VNA3	Neumayer Olymp	90.67	176	⇑i	P	01 23 36.3	-0.5
VNA2	Neumayer--Watz	91.11	177		P	01 23 38.7	-0.1
VNA1	Neumayer--Stat	91.34	177		P	01 23 40.4	+0.6
BRTR	Keskin Array B	144.70	315	PKP	PKPdf	01 30 08.4	+2.6
	0.9nm,1.0s,baz=61,slow=3.1,SNR=4.7						
GERES	GERESS Array B	147.64	345	PKPbc	PKPdf	01 30 14.7	+4.3
	0.4nm,0.7s,baz=27,slow=3.0,SNR=5.1						

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*IDC **13** 01:18:37.7±5.2,37.51N×72.50E,h154^{km}±43^{km},mb3.5/10, mb1 3.7/14,mb1mx3.5/24,mbtmp4.1/14,Error ellipse: s-maj=31.6km s-min=18.2km az=18.0*

*BJI **13** 01:18:39.0,37.74N×72.35E,h162^{km}*

*MOS **13** 01:18:39.9±1.0,37.70N×72.40E,h184^{km},mb3.8/4,Error ellipse: s-maj=15.7km s-min=6.5km az=91.0*

*NEIC **13** 01:18:39.2±1.0,37.60N×72.42E,h167^{km}±10^{km},mb3.8/11, Error ellipse: s-maj=13.3km s-min=5.8km az=57.0*

*NNC **13** 01:18:46.8±3.2,38.21N×72.34E,h203^{km}±28^{km},mpv4.1, Error ellipse: s-maj=30.7km s-min=19.2km az=17.0*

ISC 13 01:18:38.7±0.6,**37.60N**±0.03×**72.43E**±0.08,**h179**^{km}±7^{km}, **n66**,σ**1^{s}12**/86,**mb3.7**/12,**9C-5D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	3.37	54	⇑iP	P	01 19 34.1	+1.6
KSH				S	S	01 20 13.5	-0.4
KSH				Smax			
	comp=N,1µm,0.3s						
KSH				Smax			
	comp=E,2µm,0.6s						
AML	Almayashu	4.63	12	P	P	01 19 49.0	+0.5
	SNR=327						
UCH	Uchtor	4.89	18	P	P	01 19 52.5	+0.6
	SNR=33						
EKS2	Erkin-Say	5.16	11	P	P	01 19 56.0	+0.5
	SNR=12						
AAK	Ala-Archa	5.27	17	P	P	01 19 57.7	+0.8
	SNR=56						
AAK	Ala-Archa	5.27	17	⇓P	P	01 19 57.4	+0.5
	comp=E,16nm,0.3s						
AAK				⇑S	S	01 20 54.0	-3.5
	comp=E,70nm,0.5s						
AAK	Ala-Archa	5.27	17	⇓P	P	01 19 57.4	+0.5
	comp=E,16nm,0.3s						
AAK				S	S	01 20 54.0	-3.5
KBK	Karagaybulak	5.40	20	P	P	01 19 59.1	+0.4
	SNR=11						
ULHL	Ulahol	5.49	31	P	P	01 19 59.0	-0.7
	SNR=7.4						
CHMS	Chumysh	5.67	17	P	P	01 20 02.7	+0.5
	SNR=8.9						
KK31	Karatay Array	5.69	346	P	P	01 20 02.6	+0.2
	comp=E,6.9nm,0.3s,baz=145,slow=11,SNR=313						
KK31				S	S	01 21 02.6	-4.7
	comp=E,178nm,0.7s,baz=170,slow=24,SNR=29						
KK31	Karatay Array	5.69	346	P	P	01 20 02.6	+0.2
	comp=E,6.9nm,0.3s						
KK31				S	S	01 21 02.6	-4.7
THN	Thein Dam	5.82	151	eP	P	01 20 05.8	+1.7
THN				eS	S	01 21 09.2	-1.2
DLH	Dalhousie	5.82	149	eP	P	01 20 04.0	-0.1
DLH				eS	S	01 21 09.0	-1.5
TKM2	Tokmak 2	5.84	24	P	P	01 20 04.6	+0.3
	SNR=13						
USP	Ospenovka	5.87	15	P	P	01 20 05.5	+0.7
	SNR=6.9						
BHK	Bhakra	6.99	151	ex	x	01 21 40.4	
SDNR	Sundarnagar	7.14	147	eP	P	01 20 22.8	+1.2
SDNR				eS	S	01 21 38.2	-3.6
SMLA	Simla	7.55	147	eP	P	01 20 25.7	-1.2
SMLA				eS	S	01 21 47.6	-3.8
KLP	Kalpa	7.72	140	eP	P	01 20 30.7	+1.4
KLP				eS	S	01 21 52.1	-3.4
KLP				AML	AML	01 21 56.0	
	comp=E,248nm,0.6s						
KLP				AML	AML	01 21 57.0	
	comp=N,210nm,0.5s						
NDI	New Delhi	9.76	154	ex	x	01 22 36.0	
MK02	Makanchi Array	11.72	35	⇑P	P	01 21 21.6	+0.4
MK02				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31	Makanchi Array	11.73	35	⇑P	P	01 21 21.6	+0.3
	comp=Z,1.0nm,0.2s,baz=203,slow=11,SNR=24						
MK31	Makanchi Array	11.73	35	⇑P	P	01 21 21.6	+0.3
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	11.73	35	P	P	01 21 21.0	-0.4
	comp=Z,0.2nm,0.3s,baz=207,slow=8.1,SNR=12						
KOLN	Koldanda	13.57	133	ePn	P	01 21 45.9	+0.9
KOLN				eSn	S	01 24 07.4	-4.5
	comp=Z,13nm,0.5s						
KURK	Kurchatov	13.83	17	eP	P	01 21 50.5	+2.4
	comp=Z,6.6nm,0.6s						
KURK	Kurchatov	13.83	17	eP	P	01 21 50.5	+2.4
KURK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GKN	Gorkha	14.02	130	ePn	P	01 21 50.8	+0.2
GKN				eSn	S	01 24 17.5	-4.6
	comp=Z,16nm,0.4s						
DMN	Daman	14.59	129	ePn	P	01 21 55.9	-1.8
DMN				eSn	S	01 24 29.5	-5.5
	comp=Z,12nm,0.5s						
AB31	Akbulak array	14.74	326	P	P	01 21 59.0	-0.4
	comp=Z,0.6nm,0.4s,baz=142,slow=13,SNR=32						
AB31				⇑S	S	01 24 32.6	-5.6
	comp=Z,3.2nm,0.6s,baz=148,slow=22,SNR=10						
AB31	Akbulak array	14.74	326	P	P	01 21 59.0	-0.4
	comp=Z,0.6nm,0.4s						
AB31				S	S	01 24 32.6	-5.6
AB31	Akbulak array	14.74	326	P	P	01 21 59.0	-0.4
AB31				S	S	01 24 32.6	-5.6
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GUN	Gumba	14.87	127	ePn	P	01 22 03.3	+2.2
VOSK	Vostochnaya	15.15	357	⇓P	P	01 22 03.4	-1.2
	comp=Z,2.4nm,0.8s						
VOSK	Vostochnaya	15.15	357	⇓P	P	01 22 03.4	-1.2
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
JIRN	Jiri	15.24	127	ePn	P	01 22 06.3	+0.5
JIRN				eSn	S	01 24 45.4	-4.1
	comp=Z,7.1nm,0.3s						
BVA0	Borovoye Array	15.49	355	⇑P	P	01 22 07.9	-0.8
	comp=Z,0.4nm,0.5s,baz=168,slow=17,SNR=29						
BVA0				⇑S	S	01 24 54.7	-0.4
	comp=Z,0.2nm,0.7s,baz=170,slow=24,SNR=4.8						
BVA0	Borovoye Array	15.49	355	⇑P	P	01 22 07.9	-0.8
	comp=Z,0.4nm,0.5s						
BVA0				S	S	01 24 54.7	-0.4
BVAR	Borovoye Array	15.49	355	P	P	01 22 07.0	-1.7
	comp=Z,1.3nm,0.3s,baz=160,slow=10,SNR=29						
BVAR				S	S	01 24 54.9	-0.2
	comp=Z,0.3nm,0.3s,baz=169,slow=25,SNR=4.1						
BRVK	Borovoye	15.53	355	eP	P	01 22 07.9	-1.3
	comp=Z,1.8nm,0.6s						
BRVK	Borovoye	15.53	355	eP	P	01 22 07.9	-1.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CHKZ	Chkalovo	16.12	356	⇓P	P	01 22 15.9	-0.7
	comp=Z,2.0nm,0.7s						
AKTO	Aktyubinsk	16.45	326	P	P	01 22 20.1	-0.6
	comp=Z,1.0nm,0.3s,baz=124,slow=12,SNR=11						
AKTO				S	S	01 25 14.8	-2.0
	comp=Z,0.3nm,0.3s,baz=340,slow=21,SNR=6.7						
AKTO	Aktyubinsk	16.45	326	P	P	01 22 20.1	-0.5
AKTO				S	S	01 25 14.8	-2.0
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	18.43	24	P	P	01 22 41.4	-1.3
	comp=Z,4.5nm,0.3s,baz=254,slow=7.0,SNR=52						
NVS	Novosibirsk	18.75	20	eP	P	01 22 43.5	-2.6
NVS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NVS				pmax	pmax		
	comp=N,14nm,1.5s						
ARU	Arti	21.00	338	eP	P	01 23 09.4	+0.5
	comp=N,3.8nm,0.8s						
ARU	Arti	21.00	338	eP	P	01 23 09.4	+0.5
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA	Gaotai	21.48	77	eP	P	01 23 17.4	+3.7
KIV	Kislovodsk	23.32	295	eP	P	01 23 32.5	+1.0
	comp=Z,1.5nm,0.5s,mb3.7						
KIV	Kislovodsk	23.32	295	eP	P	01 23 32.5	+1.0
KIV				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
SONM	Songino Array	26.77	57	P	P	01 24 04.2	+0.7
	comp=Z,0.7nm,0.9s,mb3.3,baz=278,slow=8.6,SNR=4.0						
FINES	FINESS Array B	37.23	325	P	P	01 25 35.1	+1.0
	comp=Z,5.3nm,1.1s,mb4.1,baz=127,slow=9.5,SNR=8.0						
ARCES	ARCESS Array B	40.58	337	P	P	01 26 02.9	+1.1
	comp=Z,1.9nm,0.4s,mb4.1,baz=116,slow=9.3,SNR=42						
HFS	Hagfors	42.92	321	P	P	01 26 21.5	+0.7
	comp=Z,1.9nm,0.5s,mb4.0,baz=106,slow=11,SNR=9.1						

NB2	**NORSAR Subarra**	**44.20**	**322**	P	**P**	**01 26 31.4**	**+0.3**
	comp=Z,0.8nm,0.4s,mb3.7,baz=93,slow=7.9						
NOA	**NORSAR Array B**	**44.20**	**322**	P	**P**	**01 26 31.4**	**+0.4**
	comp=Z,1.9nm,0.9s,mb3.7,baz=274,slow=6.9,SNR=3.2						
NAO	**NORSAR Subarra**	**44.38**	**322**	P	**P**	**01 26 31.4**	**-1.1**
	comp=Z,0.8nm,0.4s,mb3.7						
NAO	**NORSAR Subarra**	**44.38**	**322**	P	**P**	**01 26 31.4**	**-1.1**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
INK	**Inuvik**	**72.63**	**10**	P	**P**	**01 29 48.4**	**+0.7**
	comp=Z,1.1nm,0.4s,mb3.9,baz=340,slow=5.0,SNR=10						
ILAR	**Eielson Array**	**73.41**	**16**	P	**P**	**01 29 52.0**	**-0.3**
	comp=Z,0.8nm,1.0s,mb3.4,baz=329,slow=5.1,SNR=4.4						
DBIC	**Dimbokro**	**75.89**	**268**	P	**P**	**01 30 08.0**	**+0.6**
	comp=Z,0.6nm,0.4s,mb3.6,baz=48,slow=7.2,SNR=4.3						
YKA	**Yellowknife Ar**	**80.09**	**3**	P	**P**	**01 30 30.1**	**+0.8**
	comp=Z,0.9nm,0.4s,mb3.7,baz=348,slow=5.4,SNR=6.4						
YKA	**Yellowknife Ar**	**80.09**	**3**	P	**P**	**01 30 30.1**	**+0.8**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WRA	**Warramunga Arr**	**81.61**	**123**	P	**P**	**01 30 38.0**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.4,baz=319,slow=4.3,SNR=3.2						

NNC 13 01:27:58.3±5.2**, 36.87N**×**70.43E, h165**^{km}±107^{km}**, mpv3.4, 2C-1D, Error ellipse: s-maj=61.1km s-min=37.8km az=23.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.22**	**1**	P	P	01 29 28.1	-0.8
	0.6nm,0.2s,baz=173,slow=8.2,SNR=32						
KK31				⇑S	S	01 30 39.0	-0.4
	0.5nm,0.3s,baz=188,slow=27,SNR=4.6						
AAK	**Ala-Archa**	**6.55**	**27**	⇓P	P	01 29 32.4	-0.9
	2.6nm,0.7s						
AAK				⇑S	S	01 30 47.1	-0.1
	5.0nm,1.0s						
AB31	**Akbulak array**	**14.54**	**332**	P	P	01 31 16.1	-1.0
	0.2nm,0.3s,baz=152,slow=12,SNR=7.1						

IDC 13 01:29:16.4±19.0**, 3.54N**×**126.72E, h148**^{km}±191^{km}**, mb3.4**/6**, mb1 3.5**/6**, mb1mx3.3**/17**, mbtmp3.8**/6**, Error ellipse: s-maj=98.3km s-min=25.9km az=61.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.54**	**183**	P	P	01 33 54.1	-0.7
	2.4nm,0.7s,baz=30,slow=9.4,SNR=4.6						
WRA	**Warramunga Arr**	**24.51**	**163**	P	P	01 34 21.9	-1.6
	3.3nm,0.9s,baz=342,slow=10,SNR=8.4						
STKA	**Stephens Creek**	**37.96**	**159**	*e*P	P	01 36 20.4	-1.0
	1.2nm,0.5s						
STKA	**Stephens Creek**	**37.96**	**159**	P	P	01 36 19.9	-1.5
	1.5nm,0.7s,baz=345,slow=12,SNR=5.4						
SONM	**Songino Array**	**47.47**	**341**	P	P	01 37 36.3	-1.7
	0.6nm,0.6s,baz=159,slow=8.9,SNR=4.9						
MKAR	**Makanchi Array**	**57.70**	**325**	P	P	01 38 51.5	-2.3
	0.6nm,0.4s,baz=120,slow=7.7,SNR=13						
ZAL	**Zalesovo**	**60.75**	**333**	P	P	01 39 12.4	-2.3
	0.5nm,0.7s,baz=142,slow=6.0,SNR=3.5						

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*IDC **13** 01:50:12.8±0.6, 55.44S×129.35W, mb4.4/9, mb1 4.5/9, mb1mx4.4/13, mbtmp4.3/9, MS4.6/13, Ms1 4.6/13, ms1mx4.5/16, Error ellipse: s-maj=39.1km s-min=17.6km az=172.0*

*NEIC **13** 01:50:14.4±0.4, 55.17S×129.43W, h10^{km}, mb4.8/8, Error ellipse: s-maj=16.2km s-min=12.7km az=175.0*

ISC 13 01:50:11.7±0.4**, 54.95S**±0.07×**129.6W**±0.1**, h10**^{km}**, n65,** σ**1**^{s}**14**/27**, mb4.5**/16**, MS4.7**/13**, 4C, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKT	**Rikitea**	**32.04**	**351**	*e*S	**S**	**02 01 51.4**	**+0.2**
RKT				*e*LR	LR	02 04 44.5	
	3µm,30.0s,baz=173						
VNDA	**Vanda**	**32.53**	**202**	P	**P**	**01 56 47.2**	**+3.0**
	8.2nm,1.3s,mb4.5						
TBI	**Tubuai**	**34.87**	**327**	*e*S	**S**	**02 02 34.3**	**-0.8**
TBI				*e*LR	LR	02 06 10.8	
	2µm,29.5s,baz=162						
QSPA	**South Pole Qui**	**35.23**	**180**	*e*P	**P**	**01 57 08.5**	**+1.0**
	17nm,1.1s,mb4.9						
PPT	**Papeete**	**40.34**	**330**	*e*S	**S**	**02 03 58.3**	**-0.3**
PPT				*e*LR	LR	02 08 43.1	
	3µm,26.8s,baz=173						
PPT	**Papeete**	**40.34**	**330**	LR	LR	02 09 50.8	
	comp=Z,1µm,21.2s,MS4.6,baz=145,slow=29						
PLCA	**Paso Flores**	**40.84**	**95**	P	**P**	**01 57 55.6**	**+0.8**
	13nm,1.1s,mb4.5,baz=224,slow=9.1,SNR=15						
PLCA				LR	LR	02 10 55.1	
	comp=Z,706nm,18.4s,MS4.6,baz=228,slow=30						
PLCA	**Paso Flores**	**40.84**	**95**	*e*P	**P**	**01 57 55.5**	**+0.7**
	18nm,1.4s,mb4.5						
PLCA				*e*		01 58 05.2	
PLCA				LR	LR	02 10 55.1	
TAOE	**Nuku Hiva Isla**	**46.74**	**346**	*e*S	**S**	**02 05 30.6**	**-1.1**
TAOE				*e*LR	LR	02 11 36.1	
	4µm,26.0s						
VNA3	**Neumayer Olymp**	**47.17**	**158**	⇑*i*P	**P**	**01 58 44.6**	**-0.8**
VNA3				*e*		01 58 56.4	
VNA3				*e*		01 59 03.8	
VNA3				*e*		02 00 19.0	
VNA3				*e*		02 00 28.5	
VNA3				*e*		02 00 42.4	
TRQA	**Tornquist**	**47.55**	**98**	*e*P	**P**	**01 58 48.9**	**+0.1**
	39nm,1.2s,mb5.3						
TRQA				*e*		01 58 59.5	
VNA2	**Neumayer--Watz**	**47.90**	**158**	⇑*i*P	**P**	**01 58 50.7**	**-0.5**
VNA2				*e*		01 59 02.3	
VNA2				*e*		01 59 10.0	
VNA2				*e*		02 00 23.4	
VNA2				*e*		02 00 29.9	
VNA2				*e*		02 00 45.1	
VNA1	**Neumayer--Stat**	**47.92**	**157**	⇑*i*P	**P**	**01 58 51.4**	**+0.1**
VNA1				*e*		01 59 03.6	
VNA1				*e*		01 59 11.2	
SNAA	**Sanae**	**48.27**	**160**	⇑*i*P	**P**	**01 58 52.8**	**-1.2**
SNAA				*e*		01 59 04.8	
SNAA				*e*		01 59 12.3	
SNAA				*e*		02 00 32.0	
SNAA				*e*		02 00 40.5	
MAW	**Mawson**	**57.41**	**186**	LR	LR	02 22 04.1	
	comp=Z,477nm,19.7s,MS4.6,baz=164,slow=34						
CPUP	**Villa Florida**	**58.79**	**92**	*e*P	**P**	**02 00 11.3**	**-0.9**
	37nm,1.2s,mb5.3						
LPAZ	**La Paz**	**60.49**	**76**	P	**P**	**02 00 24.9**	**+0.8**
	18nm,1.3s,mb5.0,baz=214,slow=4.3,SNR=22						
LPAZ				LR	LR	02 20 32.0	
	comp=Z,142nm,21.6s,MS4.1,baz=32,slow=30						
STKA	**Stephens Creek**	**63.94**	**251**	P	**P**	**02 00 47.5**	**+0.6**
	1.9nm,0.3s,mb4.6,baz=335,slow=17,SNR=3.7						
STKA				LR	LR	02 23 01.1	
	comp=Z,630nm,20.6s,MS4.8,baz=94,slow=31						
SAML	**Samuel**	**69.24**	**76**	*e*P	**P**	**02 01 19.7**	**-1.1**
	9.5nm,1.1s,mb4.6						
BDFB	**Brasilia**	**72.52**	**92**	P	**P**	**02 01 38.9**	**-1.6**
	2.2nm,0.7s,mb4.2,baz=274,slow=11,SNR=2.8						
BDFB				LR	LR	02 29 23.0	
	comp=Z,550nm,21.4s,MS4.8,baz=33,slow=32						
ROSC	**El Rosal**	**74.99**	**58**	P	**P**	**02 01 56.8**	**+1.8**
	5.0nm,0.7s,mb4.5,baz=297,slow=22,SNR=6.1						
ROSC				LR	LR	02 28 56.9	
	comp=Z,176nm,19.2s,MS4.4,baz=95,slow=31						
NWAO	**Narrogin (SRO)**	**75.47**	**233**	LR	LR	02 27 08.3	
	comp=Z,511nm,21.3s,MS4.8,baz=156,slow=29						
WB2	**Warramunga Arr**	**77.32**	**254**	*e*P	**P**	**02 02 07.4**	**-0.6**
WRA	**Warramunga Arr**	**77.33**	**254**	P	**P**	**02 02 07.2**	**-0.8**
	1.1nm,0.6s,mb4.0,baz=143,slow=5.2,SNR=7.9						
WRAB	**Tennant Creek**	**77.33**	**254**	P	**P**	**02 02 07.3**	**-0.7**
	4.8nm,0.7s,mb4.5						
PMG	**Port Moresby**	**78.50**	**270**	LR	LR	02 33 41.3	
	comp=Z,292nm,18.1s,MS4.7,baz=41,slow=33						
FITZ	**Fitzroy Crossi**	**83.56**	**248**	*e*P	**P**	**02 02 44.3**	**+3.2**
	6.0nm,0.6s,mb4.9						
FITZ	**Fitzroy Crossi**	**83.56**	**248**	LR	LR	02 34 49.1	
	comp=Z,764nm,21.4s,MS5.0,baz=130,slow=32						
TXAR	**Lajitas Array**	**86.85**	**22**	P	**P**	**02 02 59.4**	**+2.1**
	0.4nm,0.8s,mb3.7,baz=190,slow=7.6,SNR=4.7						
TXAR	**Lajitas Array**	**86.85**	**22**	P	**P**	**02 02 59.4**	**+2.1**
ANMO	**Albuquerque**	**91.72**	**19**	P	**P**	**02 03 24.9**	**+4.8**
	2.6nm,1.1s,mb4.5,baz=205,slow=8.0,SNR=4.5						
NVAR	**Mina Array Bea**	**93.51**	**9**	P	**P**	**02 03 33.2**	**+4.9**
	0.2nm,0.5s,mb3.8,baz=196,slow=6.6,SNR=3.4						
NVAR				LR	LR	02 35 49.0	
	comp=Z,316nm,20.6s,MS4.8,baz=180,slow=29						
BOSA	**Boshof**	**94.01**	**158**	LR	LR	02 43 27.4	
	comp=Z,343nm,18.2s,MS4.8,baz=159,slow=34						
PDAR	**Pinedale Array**	**98.83**	**15**	LR	LR	02 39 56.9	
	comp=Z,270nm,19.0s,MS4.8,baz=212,slow=30						
ILAR	**Eielson Array**	**120.13**	**352**	PKP	PKPdf	02 09 04.7	0.0
	1.1nm,0.7s,baz=210,slow=2.3,SNR=10						
SONM	**Songino Array**	**145.20**	**282**	PKPbc	PKPbc	02 09 50.7	+1.9
	2.2nm,0.7s,baz=128,slow=2.5,SNR=11						
QUIF	**Quistinic**	**146.59**	**79**	*e*PKIKP	PKPdf	02 09 59.4	+5.6
ROSF	**Rostrenen**	**146.75**	**79**	*e*PKIKP	PKPdf	02 09 59.8	+5.7
SGMF	**Saint Gilles**	**147.11**	**79**	*e*PKIKP	PKPdf	02 10 00.0	+5.3
LFF	**La Frestale**	**147.15**	**87**	*e*PKIKP	PKPdf	02 10 01.2	+6.3
MFF	**Saint Martin d**	**147.59**	**84**	*e*PKIKP	PKPdf	02 10 01.4	+5.9
	46nm,1.2s						
RJF	**Les Rejaudoux**	**147.81**	**87**	*e*PKIKP	PKPdf	02 10 01.8	+5.9
RJF				*e*R			
	187nm,17.5s						
GRR	**Gorron**	**148.15**	**80**	*e*PKIKP	PKPdf	02 10 01.5	+5.1
TCF	**Toulx Ste Croi**	**148.77**	**86**	*e*PKIKP	PKPdf	02 10 03.9	+6.5
	44nm,1.4s						
BGF	**Bois d'Agland**	**149.28**	**86**	*e*PKIKP	PKPdf	02 10 04.7	+6.5
	51nm,1.2s						
VIVF	**Saint-Julien-l**	**149.37**	**90**	*e*PKIKP	PKPdf	02 10 05.2	+6.8
	7.2nm,0.8s						
AVF	**Avril sur Loir**	**149.70**	**86**	*e*PKIKP	PKPdf	02 10 05.1	+6.2
	20nm,1.2s						
SMF	**Signal de Mont**	**149.90**	**86**	*e*PKIKP	PKPdf	02 10 05.4	+6.2
SSF	**Saint Saulge**	**149.94**	**85**	*e*PKIKP	PKPdf	02 10 05.9	+6.6
	22nm,1.3s						
ORIF	**Oris-en-Rattie**	**150.10**	**91**	*e*PKIKP	PKPdf	02 10 06.6	+7.0
ORIF				*e*R			
	198nm,17.0s						
LOR	**Lormes**	**150.25**	**85**	*e*PKIKP	PKPdf	02 10 05.8	+6.1
	27nm,1.2s						
LOR				*e*R			
	235nm,20.2s						
LPG	**La Plagne**	**150.94**	**91**	*e*PKIKP	PKPdf	02 10 07.7	+6.9
LPL	**La Plagne**	**150.94**	**91**	*e*PKIKP	PKPdf	02 10 07.8	+7.0
CABF	**La Chapelle**	**151.18**	**88**	*e*PKIKP	PKPdf	02 10 07.1	+6.0
	17nm,1.0s						
MEZF	**Maizieres J'vi**	**151.58**	**84**	*e*PKIKP	PKPdf	02 10 07.4	+5.7
	126nm,1.7s						
BAIF	**Baives**	**151.86**	**81**	*e*PKIKP	PKPdf	02 10 07.1	+5.0
HINF	**Hinteralfeld**	**152.26**	**87**	*e*PKIKP	PKPdf	02 10 08.6	+5.9
DAVOX	**Davos**	**153.46**	**91**	PKPbc	PKPdf	02 10 12.8	+8.3
	1.9nm,0.6s,baz=1.2,slow=3.7,SNR=3.9						
DAVOX				PKPab	PKPab	02 10 23.3	-0.5
	4.3nm,0.8s,baz=231,slow=11,SNR=7.5						
GERES	**GERESS Array B**	**156.73**	**90**	PKP	PKPdf	02 10 08.5	-0.2
	1.0nm,0.8s,SNR=9.5						
MKAR	**Makanchi Array**	**158.46**	**261**	PKPab	PKPab	02 10 46.3	+1.2
	1.9nm,0.7s,baz=121,slow=4.6,SNR=12						
ZAL	**Zalesovo**	**160.10**	**281**	PKPab	PKPab	02 10 55.0	+3.1
	0.8nm,0.3s,baz=169,slow=24,SNR=4.2						
BRTR	**Keskin Array B**	**161.07**	**137**	PKP	PKPdf	02 10 14.4	+0.3
	0.5nm,0.8s,baz=90,slow=1.4,SNR=2.8						
BRTR				PKPab	PKPab	02 10 56.2	-0.4
	1.8nm,0.7s,baz=180,slow=5.8,SNR=11						
AKASG	**Malin Array Be**	**166.51**	**100**	PKPab	PKPab	02 11 19.3	-0.6
	0.2nm,0.2s,baz=246,slow=5.1,SNR=4.8						
BVAR	**Borovoye Array**	**168.10**	**269**	PKPab	PKPab	02 11 28.7	+1.9
	0.5nm,0.7s,baz=121,slow=8.6,SNR=4.7						
BRVK	**Borovoye**	**168.17**	**269**	PKPdf	PKPdf	02 10 18.6	-1.3

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*SKO **13** 02:33:59.2, 36.53S×174.43W*

*ORF **13** 02:34:11.5, 30.53S×178.43W, h30^{km}, mb5.8*

*MOS **13** 02:34:33.6±0.9, 31.37S×179.81W, h218^{km}, mb5.3/18, Error ellipse: s-maj=11.7km s-min=9.9km az=74.1*

*BJI **13** 02:34:34.3, 31.14S×179.23W, h234^{km}, mB5.2, mb5.0*

*HRVD **13** 02:34:35.3±0.3, 31.46S×179.57W, h230^{km}±2^{km}, MW5.3/59, Centroid moment Tensor Solution. LP body waves: s41,c66;Mantle waves: s59,c95; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.94±.03; $M_{\theta\theta}$0.04±.03; $M_{\phi\phi}$0.89±.03; $M_{r\theta}$-0.25±.04; $M_{\theta\phi}$0.27±.03; $M_{\phi r}$-0.24±.04; Best double couple: $M_0$1.02×10^{17} NP1: ϕ_s186°, δ37°, λ-106°. NP2: ϕ_s26°, δ55°, λ-78°. Principal axes: T 1.021, Plg9°, Azm107°; N -.003, Plg10°, Azm199°; P -1.019, Plg77°, Azm336°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 02:34:35.4±0.1, 31.44S×179.72W, mb5.1/32 Error ellipse: s-maj=8.9km s-min=6.3km az=145.0*

*IDC **13** 02:34:36.1±0.4, 31.52S×179.63W, h236^{km}±3^{km}, mb4.7/15, mb1 4.9/16, mb1mx4.9/17, mbtmp5.2/16, Error ellipse: s-maj=13.1km s-min=9.4km az=9.0*

ISC 13 02:34:32.0±0.6**, 31.67S**±0.04×**179.80W**±0.06**, h208**^{km}±6^{km}**, h226**^{km}±2.1^{km}**:pP-P, n526,** σ**1**^{s}**30**/194**, mb5.0**/51**, 26C-39D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.90**	**35**	P	**P**	**02 35 21.1**	**-0.3**
	385nm,0.3s,baz=107,slow=7.5,SNR=16						
RAO				S	**S**	**02 35 57.6**	**-2.1**
	481nm,0.3s,baz=83,slow=22,SNR=12						
RAO	**Raoul Island**	**2.90**	**35**	*e*Pn	**P**	**02 35 20.8**	**-0.6**
RAO				*e*S	S	02 35 42.4	-17
MXZ	**Matakaoa Point**	**6.09**	**194**	PN	**P**	**02 36 01.9**	**+0.7**
MXZ				SN	**S**	**02 37 12.5**	**+1.8**
MXZ				T		02 40 40.8	
WIZ	**White Island**	**6.35**	**202**	PN	**P**	**02 36 09.2**	**+4.5**
WCZ	**Waipu Caves**	**6.48**	**227**	PN	**P**	**02 36 14.5**	**+8.3**
MYRZ	**Mayor Island**	**6.49**	**209**	*e*PN	**P**	**02 36 11.3**	**+4.9**
OUZ	**Omahuta**	**6.56**	**236**	⇑PN	**P**	**02 36 15.1**	**+7.8**
PUZ	**Puketiti**	**6.59**	**193**	PN	**P**	**02 36 08.1**	**+0.4**
PUZ				SN	**S**	**02 37 23.5**	**+1.2**
MARZ	**Manawahe**	**6.94**	**204**	*e*PN	**P**	**02 36 17.2**	**+5.0**
MWZ	**Matawai**	**7.01**	**198**	PN	**P**	**02 36 13.3**	**+0.2**
MWZ				SN	**S**	**02 37 32.9**	**+0.9**
URZ	**Urewera**	**7.05**	**200**	P	**P**	**02 36 14.3**	**+0.7**
	8.0nm,0.3s,baz=340,slow=7.2,SNR=33						
URZ				S	**S**	**02 37 32.9**	**-0.2**
	81nm,0.3s,baz=87,slow=17,SNR=9.3						
URZ	**Urewera**	**7.05**	**200**	PN	**P**	**02 36 13.8**	**+0.2**
URZ				SN	**S**	**02 37 33.6**	**+0.5**
TAZ	**Tarawera**	**7.22**	**204**	*e*PN	**P**	**02 36 23.0**	**+7.1**
KNZ	**Kokohu**	**7.62**	**195**	*e*PN	**P**	**02 36 19.7**	**-1.4**
HATZ	**Hinemaiaia**	**7.95**	**204**	*e*PN	**P**	**02 36 29.7**	**+4.3**
BKZ	**Black Stump Fm**	**8.07**	**201**	*e*PN	**P**	**02 36 26.6**	**-0.3**
HIZ	**Hauiti**	**8.12**	**211**	PN	**P**	**02 36 31.9**	**+4.4**
KRVZ	**Karewarewa**	**8.29**	**205**	*e*PN	**P**	**02 36 33.6**	**+3.8**
WTVZ	**West Tongariro**	**8.33**	**206**	*e*PN	**P**	**02 36 34.6**	**+4.2**
OTVZ	**Oturere**	**8.35**	**205**	*e*PN	**P**	**02 36 34.8**	**+4.3**
OTVZ				SN	**S**	**02 38 08.6**	**+5.4**
TWVZ	**Taurewa**	**8.35**	**206**	*e*PN	**P**	**02 36 34.2**	**+3.6**
NGZ	**Ngauruhoe**	**8.38**	**205**	*e*PN	**P**	**02 36 35.8**	**+4.8**
FWVZ	**Far West T-bar**	**8.47**	**205**	*e*PN	**P**	**02 36 35.8**	**+3.7**
TRVZ	**Turoa**	**8.51**	**205**	*e*PN	**P**	**02 36 36.5**	**+3.9**
MOVZ	**Moawhango**	**8.53**	**204**	*e*PN	**P**	**02 36 33.6**	**+0.6**
MTVZ	**Mangateitei**	**8.61**	**205**	*e*PN	**P**	**02 36 37.9**	**+3.9**
PXZ	**Pawanui**	**8.78**	**197**	*e*PN	**P**	**02 36 36.3**	**+0.2**
TSZ	**Takapari Road**	**9.05**	**201**	*e*PN	**P**	**02 36 40.0**	**+0.3**
PKE	**Pukeiti**	**9.06**	**212**	PN	**P**	**02 36 46.6**	**+6.8**
NEZ	**North Egmont**	**9.07**	**212**	*e*PN	**P**	**02 36 46.2**	**+6.3**
BFZ	**Birch Farm**	**9.55**	**198**	SN	**S**	**02 38 27.3**	**-3.7**
MRZ	**Mangatainoka R**	**9.72**	**201**	*e*PN	**P**	**02 36 45.2**	**-3.1**
KIW	**Kapiti Island**	**10.12**	**203**	*e*PN	**P**	**02 36 50.6**	**-2.8**
PAWZ	**Paruwai Farm**	**10.43**	**200**	*e*PN	**P**	**02 36 56.5**	**-0.9**
DUWZ	**D'Urville Isla**	**10.43**	**207**	*e*PN	**P**	**02 36 58.1**	**+0.7**
MSWZ	**Moikau Station**	**10.51**	**201**	*e*PN	**P**	**02 36 57.5**	**-0.9**
MRW	**Makara Radio**	**10.52**	**203**	*e*PN	**P**	**02 36 57.6**	**-1.0**
WEL	**Wellington**	**10.55**	**203**	*e*PN	**P**	**02 36 58.1**	**-0.8**
TCW	**Tory Channel**	**10.65**	**205**	*e*PN	**P**	**02 36 58.3**	**-2.0**
TUWZ	**Tuamarina**	**10.96**	**206**	*e*PN	**P**	**02 37 01.4**	**-2.9**
NNZ	**Nelson**	**11.00**	**208**	*e*PN	**P**	**02 37 03.6**	**-1.1**
QRZ	**Quartz Range**	**11.04**	**212**	*e*PN	**P**	**02 37 06.0**	**+0.8**
THZ	**Tophouse**	**11.65**	**208**	*e*PN	**P**	**02 37 11.5**	**-1.5**
KHZ	**Kahutara**	**11.97**	**204**	*e*PN	**P**	**02 37 13.6**	**-3.4**
LTZ	**Lake Taylor**	**12.76**	**207**	*e*PN	**P**	**02 37 25.3**	**-1.7**
MQZ	**McQueen's Vall**	**13.42**	**204**	SN	**S**	**02 39 52.5**	**-7.4**
WVZ	**Waitaha Valley**	**13.64**	**211**	PN	**P**	**02 37 37.5**	**-0.4**
WVZ				SN	**S**	**02 40 01.0**	**-4.0**
RPZ	**Rata Peaks**	**14.03**	**208**	P	**P**	**02 37 41.2**	**-1.6**
	7.7nm,0.3s,baz=72,slow=3.2,SNR=12						
RPZ				S	**S**	**02 40 07.1**	**-6.6**
	7.3nm,0.3s,baz=338,slow=22,SNR=13						
RPZ	**Rata Peaks**	**14.03**	**208**	*e*PN	**P**	**02 37 41.4**	**-1.4**
FOZ	**Fox Glacier**	**14.49**	**212**	PN	**P**	**02 37 46.5**	**-2.0**
FOZ				SN	**S**	**02 40 16.3**	**-7.8**
LBZ	**Lake Benmore**	**14.94**	**209**	*e*PN	**P**	**02 37 53.6**	**-0.4**
ODZ	**Otahua Downs**	**15.30**	**206**	*e*PN	**P**	**02 37 57.4**	**-1.2**
ODZ				SN	**S**	**02 40 38.8**	**-3.4**
JCZ	**Jackson Bay**	**15.31**	**213**	*e*PN	**P**	**02 37 57.5**	**-1.2**
DZM	**Mont Dzumac**	**15.54**	**305**	P	**P**	**02 38 05.3**	**+3.7**
	6.0nm,0.3s,baz=118,slow=14,SNR=154						
WKZ	**Wanaka**	**15.79**	**210**	*e*PN	**P**	**02 38 02.0**	**-2.5**
TUZ	**Tuapeka**	**16.45**	**207**	*e*PN	**P**	**02 38 12.7**	**+0.2**
MLZ	**Mavora Lakes**	**16.56**	**211**	*e*PN	**P**	**02 38 13.0**	**-0.8**
AFI	**Afiamalu**	**19.14**	**24**	P	**P**	**02 38 38.9**	**-2.5**
	74nm,1.0s						
AFI				*e*S	**S**	**02 41 57.0**	**-5.5**
AFI	**Afiamalu**	**19.14**	**24**	P	**P**	**02 38 38.9**	**-2.5**
AFI				*e*S	**S**	**02 41 57.0**	**-5.5**
AFI				pmax	pmax		
	comp=Z,74nm,1.0s						
ARMA	**Armidale**	**24.49**	**265**	⇓*i*P	**P**	**02 39 38.1**	**+4.7**
RIV	**Riverview**	**24.49**	**257**	*e*P	**P**	**02 39 37.8**	**+4.4**
CNB	**Canberra Magne**	**25.92**	**254**	⇓*i*P	**P**	**02 39 50.5**	**+3.8**
	comp=Z,41nm,0.7s,mb5.2						
CNB				*e*SCP		02 46 25.9	
TOO	**Toolangi**	**29.06**	**249**	⇓*i*P	**P**	**02 40 17.8**	**+2.9**
	comp=Z,43nm,1.1s,mb5.0						
TOO				*e*SCP		02 46 34.4	
TOO	**Toolangi**	**29.06**	**249**	⇓*i*P	**P**	**02 40 17.8**	**+2.9**
TOO				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.0						
CTA	**Charters Tower**	**32.52**	**282**	⇓*i*P	**P**	**02 40 47.2**	**+1.9**
	comp=Z,86nm,0.8s,mb5.3						
CTA				*e*PCP	PcP	02 43 26.3	-0.7
CTA				*e*S	**S**	**02 45 46.9**	**+3.0**
CTA	**Charters Tower**	**32.52**	**282**	P	**P**	**02 40 47.3**	**+2.0**
	comp=Z,139nm,0.9s,mb5.5,baz=106,slow=10,SNR=42						
CTA				S	**S**	**02 45 45.9**	**+2.1**
	comp=Z,42nm,1.3s,baz=291,slow=18,SNR=22						
CTA	**Charters Tower**	**32.52**	**282**	⇓*i*P	**P**	**02 40 47.2**	**+1.9**
CTA				*e*		02 43 26.3	
CTA				*e*S	**S**	**02 45 46.9**	**+3.0**
CTA				pmax	pmax		
	comp=Z,86nm,0.8s						
STKA	**Stephens Creek**	**32.71**	**259**	⇓*i*P	**P**	**02 40 49.4**	**+2.6**
	comp=Z,121nm,0.9s,mb5.4						
STKA	**Stephens Creek**	**32.71**	**259**	P	**P**	**02 40 49.5**	**+2.7**
	comp=Z,150nm,0.8s,mb5.5,baz=99,slow=9.7,SNR=266						
ADE	**Adelaide**	**34.65**	**253**	*e*P	**P**	**02 41 05.6**	**+2.3**
PMG	**Port Moresby**	**37.80**	**299**	P	**P**	**02 41 30.9**	**+1.0**
	comp=Z,96nm,0.9s,mb5.3,baz=126,slow=4.9,SNR=24						
PMG				PcP	PcP	02 43 42.1	-0.4
	comp=Z,37nm,1.0s,baz=71,slow=4.3,SNR=4.2						
PMG	**Port Moresby**	**37.80**	**299**	*e*P	**P**	**02 41 30.7**	**+0.7**
	comp=Z,103nm,1.0s,mb5.3						
PMG				*e*PcP	PcP	02 43 41.8	-0.7
PMG	**Port Moresby**	**37.80**	**299**	*e*P	**P**	**02 41 30.7**	**+0.8**
PMG				*e*		02 43 41.8	
PMG				pmax	pmax		
	comp=Z,103nm,1.0s						
ASPA	**Alice Springs**	**41.52**	**269**	⇓*i*P	**P**	**02 42 01.8**	**+1.3**
ASPA				*e*S	**S**	**02 47 57.8**	**-2.2**
WB2	**Warramunga Arr**	**42.62**	**275**	⇓*i*P	**P**	**02 42 10.4**	**+1.0**
WB2				*e*S	**S**	**02 48 14.3**	**-1.7**
WRAB	**Tennant Creek**	**42.62**	**275**	*e*P	**P**	**02 42 10.5**	**+1.0**
	comp=Z,510nm,0.7s,mb6.1						
WRAB				*e*S	**S**	**02 48 13.4**	**-2.7**
WRAB	**Tennant Creek**	**42.62**	**275**	⇓*i*P	**P**	**02 42 10.5**	**+1.0**
WRA	**Warramunga Arr**	**42.63**	**274**	P	**P**	**02 42 10.4**	**+0.9**
	comp=Z,359nm,0.7s,mb5.9,baz=114,slow=7.7,SNR=402						
WRA				S	**S**	**02 48 14.4**	**-1.7**
	comp=Z,18nm,1.0s,baz=111,slow=13,SNR=10						
FORT	**Forrest**	**44.24**	**257**	*e*P	**P**	**02 42 22.6**	**+0.3**
	comp=Z,66nm,0.8s,mb5.0						
SBA	**Scott Base**	**46.67**	**184**	*e*P	**P**	**02 42 44.1**	**+3.3**
	comp=Z,50nm,1.2s,mb4.7						
SBA				*e*PcP	PcP	02 44 12.1	+0.8
SBA				*e*ScP		02 47 41.2	
SBA	**Scott Base**	**46.67**	**184**	*e*P	**P**	**02 42 44.1**	**+3.3**
SBA				*e*		02 44 12.1	
SBA				pmax	pmax		
	comp=Z,50nm,1.2s,mb4.7						
VNDA	**Vanda**	**46.69**	**185**	*e*P	**P**	**02 42 42.8**	**+1.9**
	comp=Z,12nm,1.5s,mb4.0						
VNDA				*e*PcP	PcP	02 44 11.3	-0.2
VNDA				*e*ScP		02 47 41.0	
VNDA	**Vanda**	**46.69**	**185**	*e*P	**P**	**02 42 42.8**	**+1.9**
VNDA				*e*		02 44 11.3	
VNDA				pmax	pmax		
	comp=Z,12nm,1.5s						
KAKA	**Kakadu**	**47.66**	**282**	⇓*i*P	**P**	**02 43 07.3**	**+18**
	comp=Z,132nm,0.6s,mb5.4						
FITZ	**Fitzroy Crossi**	**50.83**	**272**	⇓*i*P	**P**	**02 43 13.6**	**+0.2**
	comp=Z,159nm,0.9s,mb5.5						
FITZ	**Fitzroy Crossi**	**50.83**	**272**	P	**P**	**02 43 13.8**	**+0.4**
	comp=Z,225nm,0.8s,mb5.6,baz=132,slow=6.8,SNR=151						
KLBR	**Kellerberrin**	**52.49**	**253**	*e*P	**P**	**02 43 24.9**	**-0.6**
	comp=Z,6.1nm,0.4s,mb4.4						
KLBR				*e*		02 44 19.2	
NWAO	**Narrogin (SRO)**	**52.52**	**251**	P	**P**	**02 43 25.7**	**0.0**
	comp=Z,3.5nm,0.6s,mb4.0,baz=129,slow=10,SNR=3.6						
MUN	**Mundaring**	**53.62**	**252**	*e*P	**P**	**02 43 34.3**	**+0.4**
QSPA	**South Pole Qui**	**58.45**	**180**	⇓*i*P	**P**	**02 44 09.6**	**+2.1**
	comp=Z,319nm,0.9s,mb6.0						
MAW	**Mawson**	**70.58**	**201**	*e*P	**P**	**02 45 25.1**	**-0.6**
	comp=Z,7.5nm,0.9s,mb4.3						
MAW	**Mawson**	**70.58**	**201**	P	**P**	**02 45 25.2**	**-0.5**
	comp=Z,8.8nm,0.8s,mb4.4,baz=114,slow=7.6,SNR=9.9						
MAW	**Mawson**	**70.58**	**201**	*e*P	**P**	**02 45 25.1**	**-0.6**
MAW				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TGY	**Tagaytay City**	**72.76**	**299**	P	**P**	**02 45 39.2**	**-0.4**
	comp=Z,164nm,0.3s,mb6.1,baz=170,slow=9.7,SNR=5.9						
KSM	**Kuching**	**73.76**	**282**	*e*P	**P**	**02 45 44.3**	**-1.2**
SYO	**Syowa Base**	**75.53**	**194**	⇓P	**P**	**02 45 53.4**	**-1.0**
SYO	**Syowa Base**	**75.53**	**194**	⇓PcP	PcP	02 46 06.3	-0.4
SYO	**Syowa Base**	**75.53**	**194**	⇓P	**P**	**02 45 53.4**	**-1.0**
SYO	**Syowa Base**	**75.53**	**194**	⇓PcP	PcP	02 46 06.3	-0.4
SYO	**Syowa Base**	**75.53**	**194**	⇓*e*P	**P**	**02 45 53.4**	**-1.0**
SYO				⇓*e*PcP	PcP	02 46 06.3	-0.4
SYO				*e*S	S	02 55 10.0	-6.2
SNAA	**Sanae**	**76.93**	**179**	*e*	**P**	**02 46 13.3**	**+11**
SNAA	**Sanae**	**76.93**	**179**	*e*S	S	02 55 31.6	+0.3
SNAA	**Sanae**	**76.93**	**179**	P	**P**	**02 46 03.0**	**+0.8**
	comp=Z,52nm,0.9s,mb5.1,baz=204,slow=5.0,SNR=252						
SNAA	**Sanae**	**76.93**	**179**	⇓*i*P	**P**	**02 46 02.9**	**+0.8**
SNAA				*e*		02 46 13.3	
SNAA				*e*	pP	02 46 55.1	+2.9
SNAA				*e*		02 47 17.6	
SNAA				*e*		02 47 25.6	
SNAA				*e*		02 48 59.3	
SNAA				*e*S	S	02 55 31.6	+0.3
SNAA				*e*		02 55 48.0	
SNAA				*e*		02 56 06.9	
SNAA	**Sanae**	**76.93**	**179**	⇓*i*P	**P**	**02 46 02.9**	**+0.8**
SNAA				*e*		02 46 13.3	
SNAA				*e*	pP	02 46 55.1	+2.9
SNAA				*e*		02 47 17.6	
SNAA				*e*		02 48 59.3	
SNAA				*e*S	S	02 55 31.6	+0.3
SNAA				*e*		02 55 48.0	
VNA3	**Neumayer Olymp**	**77.14**	**177**	*e*	**P**	**02 46 13.9**	**+11**
VNA3	**Neumayer Olymp**	**77.14**	**177**	*e*S	S	02 55 32.3	-1.3
VNA3	**Neumayer Olymp**	**77.14**	**177**	⇓*i*P	**P**	**02 46 04.2**	**+0.9**
VNA3				*e*		02 46 13.9	
VNA3				*e*	pP	02 46 56.7	+3.3
VNA3				*e*		02 47 18.5	
VNA3				*e*		02 47 26.7	
VNA3				*e*		02 49 02.9	
VNA3				*e*		02 52 05.7	
VNA3				*e*		02 52 38.6	
VNA3				*e*S	S	02 55 32.3	-1.3
VNA3				*e*		02 56 11.1	
VNA3				*e*		03 12 59.9	
MAIT	**Maitri**	**77.52**	**184**	⇓*i*P	**P**	**02 46 06.3**	**+0.9**
NVL	**N'lazarevskaya**	**77.52**	**184**	*e*P	**P**	**02 46 03.7**	**-1.7**
NVL				*e*		02 46 20.5	
NVL				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.3						
VNA2	**Neumayer--Watz**	**77.56**	**177**	*e*	**P**	**02 46 15.9**	**+10**
VNA2	**Neumayer--Watz**	**77.56**	**177**	*e*S	S	02 55 37.4	-0.6
VNA2	**Neumayer--Watz**	**77.56**	**177**	⇓*i*P	**P**	**02 46 06.9**	**+1.3**
VNA2				*e*		02 46 15.9	
VNA2				*e*	pP	02 46 59.5	+3.7

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VNA2                              e        02 47 22.6
VNA2                              e        02 47 30.5
VNA2                              e        02 49 03.6
VNA2                              e        02 52 01.9
VNA2                              e        02 52 34.3
VNA2                              eS       S       02 55 37.4 -0.6
VNA2                              e        02 55 53.1
VNA2                              e        02 56 14.1
VNA2                              e        03 13 01.8
VNA1  Neumayer--Stat      77.80 177⇓iP     P       02 46 08.6 +1.7
VNA1                              e        02 46 18.5
VNA1                              e        pP      02 47 01.7 +4.6
VNA1                              e        02 47 23.8
VNA1                              e        02 47 33.8
VNA1                              e        02 49 05.6
VNA1                              eS       S       02 55 45.9 +5.4
MJAR  Matsushiro Arr      78.42 327  P     P       02 46 09.2 -1.8
      comp=Z,32nm,1.0s,mb4.9,baz=164,slow=5.1,SNR=37
MAJO  Matsushiro          78.42 327 eP     P       02 46 08.1 -3.0
      comp=Z,40nm,1.0s,mb5.0
MAJO  Matsushiro          78.42 327 eP     P       02 46 08.1 -2.9
MAJO                                 pmax  pmax
      comp=Z,40nm,1.0s,mb5.0
MAT   Matsushiro          78.42 327  P     P       02 46 08.8 -2.2
MAT   Matsushiro          78.42 327 eP     P       02 46 09.0 -2.0
      comp=Z,34nm,1.0s,mb4.9
MAT   Matsushiro          78.42 327 eP     P       02 46 09.0 -2.0
MAT                                  pmax  pmax
      comp=Z,34nm,1.0s,mb4.9
PLCA  Paso Flores         82.77 134  P     P       02 46 35.3 +1.5
      comp=Z,13nm,0.8s,mb4.7,baz=230,slow=4.9,SNR=56
PLCA                                 pP    pP      02 47 30.6 +6.0
      comp=Z,7.2nm,1.0s,baz=205,slow=7.6,SNR=3.8
PLCA  Paso Flores         82.77 134 eP     P       02 46 34.7 +1.0
      comp=Z,27nm,1.1s,mb4.9
PLCA                                epP    pP      02 47 27.8 +3.2
PLCA  Paso Flores         82.77 134 eP     P       02 46 34.7 +1.0
PLCA                                e*PP   pP      02 47 27.8 +3.2
PLCA                                 pmax  pmax
      comp=Z,27nm,1.1s
KULM  Kulim               83.91 280 eP     P       02 46 36.2 -4.0
SMY   Shemya              84.20 356 eP     P       02 46 40.2 -0.5
      comp=Z,408nm,1.2s,mb6.0
SMY   Shemya              84.20 356 eP     P       02 46 40.2 -0.5
SMY                                  pmax  pmax
      comp=Z,408nm,1.2s,mb6.0
KS15  Wonju Array Si      84.34 321 eP     P       02 46 40.6 -1.2
YSS   Yuzh-Sakhalins      85.23 335 eP     P       02 46 46.3 +0.3
      comp=Z,129nm,0.8s,mb5.7
YSS   Yuzh-Sakhalins      85.23 335⇑eP     P       02 46 46.8 +0.9
YSS                                  pmax  pmax
      comp=Z,121nm,0.7s,mb5.7
NJ2   Nanjing             85.91 312 eP     P       02 46 49.5 -0.1
NJ2                                  AP    pP      02 47 42.8 +2.0
NJ2                                  XP    sP      02 48 05.9 +3.3
NJ2                                  PP    PP      02 50 11.8 -1.6
NJ2                                  SKS   SKS     02 56 49.0 -3.2
NJ2                                  S     S       02 56 59.0 -4.4
NJ2                                  AMB   AMB
      comp=Z,30nm,1.0s,mb5.0
NJ2                                  AMB   AMB
      comp=Z,150nm,8.0s
NJ2                                  LR    LR
      comp=N,1µm,23.4s
NJ2                                  LR    LR
      comp=E,960nm,28.6s
NJ2                                  LR    LR
      comp=Z,200nm,23.8s
PET   Petropavlovsk       86.40 347 eP     P       02 46 41.0  -10
PTRM  Twissleman Ran      87.23  45 eP     P       02 46 56.3 +0.4
PFO   Pinyon Flat Ob      88.20  48 eP     P       02 47 00.9 +0.4
      comp=Z,45nm,1.4s,mb5.1
PFO   Pinyon Flat Ob      88.20  48 eP     P       02 47 00.9 +0.4
PFO                                  pmax  pmax
      comp=Z,45nm,1.4s,mb5.1
SDPT  Sand Point          88.23  11 eP     P       02 46 59.6 -0.5
      comp=Z,330nm,1.5s,mb5.9
ISA   Isabella            88.28  46 eP     P       02 47 01.1 +0.3
      comp=Z,48nm,1.2s,mb5.2
ISA                                 epP    pP      02 47 55.9 +3.7
ISA   Isabella            88.28  46 eP     P       02 47 01.2 +0.4
ISA                                 e*PP   pP      02 47 55.9 +3.7
ISA                                  pmax  pmax
      comp=Z,48nm,1.2s,mb5.2
MDJ   Mudanjiang          88.81 326  P     P       02 47 03.1  0.0
MDJ                                  AMB   AMB
      comp=Z,20nm,1.1s,mb4.9
MDJ                                  AMB   AMB
      comp=Z,110nm,6.2s
DAC   Darwin (Calif)      89.22  46 eP     P       02 47 05.2  0.0
      comp=Z,12nm,1.5s,mb4.5
DAC   Darwin (Calif)      89.22  46 eP     P       02 47 05.3 +0.1
DAC                                  pmax  pmax
      comp=Z,12nm,1.5s,mb4.5
MTUM  Tungsten Hills      89.35  44 eP     P       02 47 06.3 +0.5
TIA   Tai'an              89.71 314 ⇓P     P       02 47 07.5  0.0
TIA                                  AMB   AMB
      comp=Z,40nm,1.2s,mb5.1
LDFC  Landfair            89.99  48 eP     P       02 47 09.5 +0.6
NVAR  Mina Array Bea      90.21  44  P     P       02 47 09.8  0.0
      comp=Z,14nm,1.0s,mb4.8,baz=208,slow=6.1,SNR=61
NVAR                                 pP    pP      02 48 06.2 +4.8
      comp=Z,6.9nm,0.9s,baz=206,slow=7.3,SNR=7.6
NVAR                                 PKKP  PKKP    03 04 40.4  +32
      comp=Z,0.9nm,0.9s,baz=103,slow=4.1,SNR=4.7
CN2   Changchun           90.23 324 eP     P       02 47 09.1 -0.7
CN2                                 eAP    pP      02 48 03.0 +1.7
CN2                                 eS     S       02 57 41.5 -1.5
CN2                                 eSS    SS      03 03 53.0 +1.4
CN2                                  AMB   AMB
      comp=Z,30nm,0.9s,mb5.1
CN2                                  AMB   AMB
      comp=Z,240nm,6.0s
TPNV  Topopah Spring      90.48  46 eP     P       02 47 11.4 +0.3
      comp=Z,24nm,1.3s,mb4.9
TPNV  Topopah Spring      90.48  46 eP     P       02 47 11.4 +0.3
TPNV                                 pmax  pmax
      comp=Z,24nm,1.3s,mb4.9
NEN   Nelson              90.52  48 eP     P       02 47 11.6 +0.3
TPH   Tonopah             90.62  44 eP     P       02 47 11.2 -0.5
      comp=Z,36nm,1.2s,mb5.2
TPH                                 epP    pP      02 48 08.8 +5.6
TPH   Tonopah             90.62  44 eP     P       02 47 11.2 -0.5
TPH                                 e*PP   pP      02 48 08.8 +5.5
TPH                                  pmax  pmax
      comp=Z,36nm,1.2s,mb5.2
GYA   Guiyang             90.85 301⇑iP     P       02 47 13.4 +0.3
GYA                                  SKS   SKS     02 57 20.7 -2.3
GYA                                  S     S       02 57 47.1 -1.9
GYA                                  AMB   AMB
      comp=Z,10.0nm,1.3s,mb4.6
GYA                                  AMB   AMB
      comp=Z,110nm,5.7s
GYA                                  LR    LR
      comp=N,370nm,19.7s
GYA                                  LR    LR
      comp=E,480nm,21.4s
GYA                                  LR    LR
      comp=Z,570nm,21.8s
TUC   Tucson              91.10  52 eP     P       02 47 14.9 +0.8
      comp=Z,24nm,1.1s,mb5.0
TUC                                 epP    pP      02 48 10.0 +4.4
TUC   Tucson              91.10  52 eP     P       02 47 14.9 +0.8
TUC                                 e*PP   pP      02 48 10.0 +4.4
TUC                                  pmax  pmax
      comp=Z,25nm,1.1s,mb5.1
KLR   Kul'dur             91.36 331 eP     P       02 47 11.2 -3.6
MOD   Modoc               91.40  40 eP     P       02 47 15.0 -0.3
      comp=Z,23nm,1.1s,mb5.0
WUAZ  Wupatki             92.66  49 eP     P       02 47 21.9 +0.7
      comp=Z,13nm,1.0s,mb4.9
WVOR  Wild Horse Val      92.68  40 eP     P       02 47 20.8 -0.3
      comp=Z,23nm,1.3s,mb5.1
WVOR  Wild Horse Val      92.68  40 eP     P       02 47 20.8 -0.4
WVOR                                 pmax  pmax
      comp=Z,23nm,1.3s,mb5.0
KMI   Kunming             93.02 298  P     P       02 47 24.3 +1.1
KMI                                  AP    pP      02 48 20.8 +6.0
KMI                                  AMB   AMB
      comp=Z,10.0nm,1.0s,mb4.8
KMI   Kunming             93.02 298  P     P       02 47 24.3 +1.1
      comp=Z,15nm,1.0s,mb5.0
KMI                                  pP    pP      02 48 20.8 +6.0
ELK   Elko                93.52  43  P     P       02 47 24.9 -0.1
      comp=Z,4.9nm,0.9s,mb4.5,baz=220,slow=8.0,SNR=11
ELK                                  pP    pP      02 48 21.9 +5.2
      comp=Z,2.1nm,0.8s,baz=248,slow=4.2,SNR=3.2
ELK   Elko                93.52  43  P     P       02 47 24.9 -0.1
ELK                                  pP    pP      02 48 21.9 +5.2
XAN   Xi'an               93.66 308  P     P       02 47 26.1 +0.3
MSU   Marysvale           93.97  47 eP     P       02 47 28.0 +0.9
TXAR  Lajitas Array       94.37  58  P     P       02 47 29.2 +0.1
      comp=Z,3.9nm,1.0s,mb4.4,baz=217,slow=6.3,SNR=29
TXAR                                 pP    pP      02 48 26.4 +5.6
      comp=Z,1.4nm,1.0s,baz=217,slow=6.3,SNR=3.2
SLKM  Skilak Lake         94.99  14 eP     P       02 47 30.9 -0.3
BNM   Barren Site         95.00  53 eP     P       02 47 32.3 +0.3
ANMO  Albuquerque         95.57  52  P     P       02 47 33.8 -0.7
      comp=Z,1.3nm,0.9s,mb4.2,baz=225,slow=7.1,SNR=3.3
ANMO                                 pP    pP      02 48 31.0 +4.9
      comp=Z,1.1nm,0.8s,baz=224,slow=6.3,SNR=2.7
ANMO  Albuquerque         95.57  52  P     P       02 47 33.8 -0.7
ANMO                                 pP    pP      02 48 31.0 +4.9
SEY   Seymchan            96.86 348⇑iP     P       02 47 38.5 -1.2
MCMT  McKenzie Canyo      97.44  41 eP     P       02 47 42.5 -0.2
PDAR  Pinedale Array      98.11  44  P     P       02 47 44.5 -1.4
      comp=Z,1.4nm,1.0s,mb4.3,baz=225,slow=2.1,SNR=8.0
PDAR                                 pP    pP      02 48 42.8 +5.4
      comp=Z,0.8nm,0.9s,baz=216,slow=7.8,SNR=2.6
PDAR                                 PKKPbc        03 04 17.0
      comp=Z,0.6nm,0.6s,baz=45,slow=4.2,SNR=4.5
LZH   Lanzhou             98.25 307 eP     P       02 47 49.5 +2.9
LZH                                  pmax  pmax
      comp=Z,4.0nm,1.0s,mb4.7
LPAZ  La Paz              99.02 115  P     P       02 47 51.6 +1.0
      comp=Z,1.5nm,0.9s,mb4.3,baz=224,slow=1.9,SNR=7.1
LPAZ                                 pP    pP      02 48 47.8 +5.6
      comp=Z,1.0nm,0.8s,baz=256,slow=3.0,SNR=3.3
COLA  College             99.41  13  Pdif  P       02 47 50.2 -1.0
      comp=Z,5.4nm,0.4s,mb5.2
COLA  College             99.41  13  P     P       02 47 50.2 -1.0
COLA                                 pmax  pmax
      comp=Z,5.0nm,0.4s,mb5.2
ILAR  Eielson Array       99.51  14  P     P       02 47 49.8 -1.9
      comp=Z,1.7nm,0.7s,mb4.6,baz=225,slow=5.1,SNR=11
ILAR                                 PKiKP         02 52 20.0
      comp=Z,2.2nm,0.8s,baz=245,slow=3.0,SNR=7.8
ILAR                                 PKKPbc        03 04 12.1
      comp=Z,1.2nm,0.8s,baz=356,slow=2.8,SNR=8.9
BILL  Bilibino            99.94 355 eP     P       02 47 53.6  0.0
      comp=Z,8.6nm,0.9s,mb5.2
BILL  Bilibino            99.94 355 eP     P       02 47 53.6  0.0
BILL                                 pmax  pmax
      comp=Z,9.0nm,0.9s,mb5.2
DAWY  Dawson             100.58  17 ePdif  P       02 47 55.5 -1.1
GTA   Gaotai             102.71 308 eP     Pdif    02 48 09.4 +2.9
GTA                                  AP            02 48 59.8
GTA                                  PP    PP      02 52 26.5 +1.7
GTA                                  S     S       02 59 30.0 +0.7
GTA                                  AMB   AMB
      comp=Z,100nm,9.5s
GTA                                  LR    LR
      comp=N,130nm,19.4s
GTA                                  LR    LR
      comp=E,150nm,20.9s
GTA                                  LR    LR
      comp=Z,70nm,17.9s
SONM  Songino Array      103.05 318  Pdiff Pdif    02 48 05.9 -1.9
      comp=Z,0.8nm,0.9s,baz=158,slow=8.0,SNR=5.2
SONM                                 PKKPbc        03 04 04.8
      comp=Z,1.8nm,0.9s,baz=254,slow=2.1,SNR=8.4
INK   Inuvik             105.42  16  PKiKP         02 52 29.1
      comp=Z,3.1nm,0.9s,baz=194,slow=5.9,SNR=7.1
YKA   Yellowknife Ar     107.25  26  PKiKP         02 52 33.0
      comp=Z,2.0nm,0.7s,baz=256,slow=1.4,SNR=4.9
YKA   Yellowknife Ar     107.25  26  PKPdf         02 52 33.0
OPO   Ambohidratompo     112.73 229  PKiKP         02 52 45.3
      comp=Z,3.0nm,0.8s,baz=168,slow=6.7,SNR=4.3
WMQ   Urumqi             112.79 308  PKP   PKPdf   02 52 44.0 +0.5
WMQ                                  PP    PP      02 53 40.0 +1.2
WMQ                                  XPKP          02 54 05.0
WMQ                                  PPP   PPP     02 56 02.0 -1.5
WMQ                                  PKS   PKS     02 56 20.0 +1.1
WMQ                                  SKS   SKS     02 59 33.0  +25
WMQ                                  PP    PP
      comp=Z,160nm,6.2s
SUR   Sutherland         113.39 199  PKiKP         02 52 46.6
      comp=Z,12nm,0.8s,baz=180,slow=6.3,SNR=9.3
SUR   Sutherland         113.39 199  PKPdf PKPdf   02 52 46.6 +1.6
BDFB  Brasilia           114.05 128  PKKPbc        03 03 30.1
      comp=Z,5.5nm,0.9s,baz=41,slow=3.2,SNR=4.7
BOSA  Boshof             115.49 204  PKP   PKPdf   02 52 50.3 +1.1
      comp=Z,7.9nm,0.9s,baz=142,slow=3.0,SNR=11
BOSA                                 PKKPbc        03 03 28.4
      comp=Z,3.4nm,0.8s,baz=29,slow=5.4,SNR=5.5
BOSA  Boshof             115.49 204  PKP   PKPdf   02 52 50.3 +1.1
BOSA                                 PKKPbc        03 03 28.4
MKAR  Makanchi Array     117.40 310  PKP   PKPdf   02 52 52.1 -0.2
      comp=Z,19nm,0.9s,baz=71,slow=2.8,SNR=68
MKAR                                 pPKP          02 53 53.2
      comp=Z,5.5nm,0.9s,baz=63,slow=2.7,SNR=5.3
MKAR                                 PKKPbc        03 03 17.6
      comp=Z,1.2nm,0.7s,baz=298,slow=3.3,SNR=8.0
ZAL   Zalesovo           117.95 318  PKP   PKPdf   02 52 52.3 -0.9
      comp=Z,2.4nm,0.4s,baz=307,slow=2.2,SNR=21
SADO  Sadowa             118.62  53  PKP   PKPdf   02 52 54.0 -0.8
      comp=Z,14nm,1.0s,baz=276,slow=1.7,SNR=5.0
NVS   Novosibirsk        119.07 319⇓iPKIKP PKPdf   02 52 53.8 -1.6
NVS                                  pmax  pmax
      comp=Z,34nm,1.4s
NVS                                  pmax  pmax
      comp=N,12nm,1.5s
NVS                                  pmax  pmax
      comp=E,20nm,1.4s
KURK  Kurchatov          120.80 314 ePKPdf PKPdf   02 52 58.3 -0.6
KURK                                epPKPdf        02 53 59.8
TKM2  Tokmak 2           120.82 304  P     PKPdf   02 52 59.1 -0.1
      SNR=32
KBK   Karagaybulak       121.21 304  P     PKPdf   02 53 00.7 +0.7
      SNR=21
UCH   Uchtor             121.40 303  P     PKPdf   02 53 01.8 +1.5
      SNR=50
CHMS  Chumysh            121.44 304  P     PKPdf   02 53 00.7 +0.3
      SNR=24
FRU   Bishkek            121.49 304 ePKIKP PKPdf   02 53 00.5  0.0
FRU                                  pmax  pmax
      comp=Z,70nm,1.6s
AAK   Ala-Archa          121.53 304  P     PKPdf   02 53 01.2 +0.7
      SNR=21
AAK   Ala-Archa          121.53 304 ePKPdf PKPdf   02 52 58.8 -1.7
AAK   Ala-Archa          121.53 304  PKIKP PKPdf   02 53 00.7 +0.2
AAK                                  pmax  pmax
      comp=Z,25nm,1.0s
USP   Ospenovka          121.69 304  P     PKPdf   02 53 01.1 +0.3
      SNR=29
AML   Almayashu          121.96 303  P     PKPdf   02 53 02.6 +1.2
      SNR=44
EKS2  Erkin-Say          122.04 303  P     PKPdf   02 53 02.4 +0.9
      SNR=25
KKAR  Karatay Array      124.48 303 i PKIKP PKPdf  02 53 05.9 -0.3
KKAR                                 pmax  pmax
      comp=Z,61nm,1.1s
VOSK  Vostochnaya        125.83 315  PKIKP PKPdf   02 53 07.8 -0.7
VOSK                                 pmax  pmax
      comp=Z,65nm,1.1s
CHKZ  Chkalovo           126.15 316 ePKPdf PKPdf   02 53 08.5 -0.6
CHKZ                                epPKPdf        02 54 10.6
CHKZ  Chkalovo           126.15 316  PKIKP PKPdf   02 53 08.5 -0.6
CHKZ                                 pmax  pmax
      comp=Z,52nm,1.1s
LSZ   Lusaka             126.15 214 ePKPdf PKPdf   02 53 11.5 +1.4
BVA0  Borovoye Array     126.22 315 i PKIKP PKPdf  02 53 09.0 -0.2
BVA0                                 pmax  pmax
      comp=Z,12nm,1.1s
BRVK  Borovoye           126.29 315 ePKPdf PKPdf   02 53 08.9 -0.4
BRVK                                epPKPdf        02 54 10.4
TSUM  Tsumeb             126.75 201 ePKPdf PKPdf   02 53 12.3 +1.2
SCHQ  Schefferville      128.21  43  PKP   PKPdf   02 53 12.3 -0.8
      comp=Z,14nm,1.1s,baz=270,slow=1.9,SNR=6.8
SVE   Sverdlovsk         131.89 320 ePKIKP PKPdf   02 53 20.4 +0.4
SVE                                  pmax  pmax
      comp=Z,100nm,1.8s
SVE                                  MLR   MLR
      comp=N,200nm,16.0s
SVE                                  MLR   MLR
      comp=E,100nm,16.0s
SVE                                  MLR   MLR
      comp=Z,200nm,16.0s
KMBO  Kilima Mbogo       132.08 234  PKP   PKPdf   02 53 23.7 +2.1
      comp=Z,3.5nm,0.8s,baz=53,slow=3.9,SNR=11
KMBO  Kilima Mbogo       132.08 234  PKP   PKPdf   02 53 23.7 +2.1
AB31  Akbulak array      132.54 310 i PKIKP PKPdf  02 53 20.7 -0.8
AB31                                 pmax  pmax
      comp=Z,12nm,0.9s
ARU   Arti               133.07 320 ePKPdf PKPdf   02 53 22.0 -0.2
ARU                                 epPKPdf        02 54 24.2
ARU                                 eSKP           02 56 27.2
ORR   Orenburg           135.79 313⇑iPKIKP PKPdf   02 53 26.6 -0.8
ORR                                  pmax  pmax
      comp=Z,50nm,1.0s
DJNS  Zahran al Janu     138.51 261  P     PKPdf   02 53 35.1 +1.8
KAMS  Al Khamasin        138.79 265  P     PKPdf   02 53 35.0 +1.3
ARCES ARCESS Array B     139.48 347  PKhKP         02 53 26.9
      comp=Z,15nm,1.0s,baz=40,slow=2.2,SNR=28
ARCES                                PKP   PKPdf   02 53 33.5 -0.1
      comp=Z,9.7nm,0.7s,baz=45,slow=1.3,SNR=15
ARCES                                SKPbc         02 56 48.3
      comp=Z,4.3nm,0.7s,baz=45,slow=1.7,SNR=4.2
KTK1  Kautokeino         140.36 347 eP     PKPdf   02 53 37.3 +2.1
KLMR  Klimovskoe         141.12 330 ePKHKP         02 53 30.6
KLMR                                 pmax  pmax
      comp=Z,110nm,4.6s
AFFS  'Afif              141.56 269  P     PKPdf   02 53 42.9 +4.4
DGRG  David-gareji       142.79 298  P     PKPdf   02 53 37.0 -3.1
BHD   Baghdad            142.90 285 ex     x       02 53 24.0
JOF   Joensuu            143.00 337 epkp   PKPdf   02 53 43.5 +3.7
MTA   Mtatsminda         143.22 299  P     PKPbc   02 53 29.9 -9.4
TI2   Plekhanov          143.25 299 i PKHKP        02 53 38.0
TI2                                  pmax  pmax
      comp=Z,30nm,0.6s
GNI   Garni              143.26 296 ePKPpre        02 53 39.9
GNI   Garni              143.26 296⇑iPKIKP PKPdf   02 53 39.6 -1.4
ZEI   Tsey               143.84 300 ePKHKP         02 53 39.9
ZEI                                 i              02 56 58.1
HAKT  HAKKARI            143.96 292 i P    PKPbc   02 53 40.3 -1.3
VRHR  Novokhopersk       143.96 315 ePKIKP PKPdf   02 53 40.6 -1.3
VRHR                                 pmax  pmax
      comp=Z,70nm,1.0s
VRHR                                 pmax  pmax
      comp=N,9.0nm,1.2s
VRHR                                 pmax  pmax
      comp=E,10.0nm,1.2s
ONI   Oni                144.19 300  P     PKPbc   02 53 43.3 +1.2
TVAN  Van                144.25 293 i P    PKPbc   02 53 42.3 -0.1
GOF   Gofitskoye         144.26 304 ePKIKP PKPdf   02 53 41.5 -1.1
GOF                                  pmax  pmax
      comp=Z,360nm,1.0s
DIGO  Kars               144.31 296 i P    PKPbc   02 53 41.7 -0.8
MSL   Mosul              144.35 289 ex     x       02 53 49.5
MOR8  Moi Rana           144.40 350 eP     PKPbc   02 53 39.8 -2.2
MOR8                                 AMb   AMB     02 53 42.9
      comp=Z,196nm,1.4s
MOS   Moscow             144.47 324⇓iPKIKP PKPdf   02 53 42.2 -0.4
MOS                                  pmax  pmax
      comp=Z,600nm,1.7s
MOS                                  pmax  pmax
      comp=Z,327nm,1.3s
MOS                                  pmax  pmax
      comp=N,84nm,0.9s
MOS                                  pmax  pmax
      comp=E,39nm,1.0s
KIV   Kislovodsk         144.63 303 ePKP   PKPdf   02 53 43.0 -0.2
KIV   Kislovodsk         144.63 303d iPKIKP PKPdf  02 53 42.8 -0.4
KIV                                  pmax  pmax
      comp=Z,107nm,1.0s
KAF   Kangasniemi        145.19 339 epkp   PKPdf   02 53 43.1 -0.5
      baz=34,slow=2.6
VOR   Voronezh           145.21 317 ePKIKP PKPdf   02 53 44.5 +0.5
VOR                                  pmax  pmax
      comp=Z,600nm,1.0s
OBN   Obninsk            145.29 323 ePKPdf PKPdf   02 53 44.6 +0.6
OBN   Obninsk            145.29 323⇓iPKP2  PKPab   02 53 43.5 -3.4
OBN                                  pmax  pmax
      comp=Z,371nm,1.0s
FINES FINESS Array B     145.77 338  PKPbc PKPbc   02 53 45.4 -0.4
      comp=Z,140nm,0.9s,baz=44,slow=4.6,SNR=303
FINES                                pPKPbc        02 54 46.5
      comp=Z,40nm,1.0s,baz=63,slow=4.3,SNR=3.6
BEST  Besiri             145.91 292 i P    PKPdf   02 53 46.4 +0.8
YNBS  Yanbu' al Bahr     145.97 267  P     PKPdf   02 53 48.0 +1.9
BNGL  BINGOL             146.02 294 i P    PKPdf   02 53 46.4 +0.6
MARD  Mardin             146.27 291 i P    PKPdf   02 53 45.8 -0.4
NSS   Namsos             146.30 351 eP     PKPdf   02 53 45.7 +0.3
NSS                                  AMb   AMB     02 53 47.3
      comp=Z,231nm,1.3s
SOC   Sochi              146.81 302 i PKIKP PKPdf  02 53 48.7 +1.8
SOC                                 e*PP           02 55 01.8
SOC                                 e              02 57 12.9
SOC                                 ePPP   PPP     03 00 32.7 -4.9
SOC                                 eSS    SS      03 15 59.7 +1.9
SOC                                  pmax  pmax
      comp=Z,88nm,0.7s
MACK  Trabzon            147.03 298 i P    PKPdf   02 53 50.7 +3.3
KELT  Kelkit             147.46 296 i P    PKPdf   02 53 53.2 +5.1
VSU   Vasula             147.72 334 i PKP2 PKPab   02 53 52.2 -4.0
ELZG  Elazig             147.72 293 i P    PKPdf   02 53 52.4 +3.8
GRSN  GIRESUNGRSN        148.17 298 i P    PKPdf   02 53 51.5 +2.3
ANN   Anapa              148.23 305⇓iPKP2  PKPab   02 53 53.8 -4.9
ANN                                  pmax  pmax
      comp=Z,282nm,1.2s
TBKS  Tabuk              148.41 273  P     PKPdf   02 53 55.3 +5.3
MOL   Molde              148.72 353 eP     PKPdf   02 53 53.2 +3.7
MOL                                  AMb   AMB     02 53 55.6
      comp=Z,158nm,1.3s
GZT   Gaziantep          148.83 291 i P    PKPdf   02 53 50.5  0.0
DOMB  Dombas             149.07 352 eP     PKPdf   02 53 54.6 +4.6
DOMB                                 AMb   AMB     02 53 57.6
      comp=Z,119nm,1.7s
GAZ   Gaziantep          149.11 291 eP     PKPdf   02 53 54.7 +3.8
SVST  Sivas              149.25 296 i P    PKPdf   02 53 57.2 +6.2
KAHT  Ahir Dag           149.38 291 i P    PKPdf   02 53 56.3 +5.0
AYUS  'Aynunah           149.49 273  P     PKPdf   02 53 58.7 +7.0
TOKT  Tokat              149.52 297 eP     PKPdf   02 53 56.6 +5.2
FKH   Fakeheh            149.61 285 eP     PKPdf   02 53 58.2 +6.4
BDAS  Al Bad'            149.69 273  P     PKPdf   02 53 58.3 +6.2
NB2   NORSAR Subarra     149.74 349  PKPabc PKPdf  02 53 55.8 +4.7
      comp=Z,92nm,0.9s,baz=24,slow=3.0
NB2   NORSAR Subarra     149.74 349  PKPa          02 53 55.8
      baz=24,slow=3.1
NOA   NORSAR Array B     149.74 349  PKP   PKPdf   02 53 51.1  0.0
      comp=Z,11nm,0.9s,baz=144,slow=23,SNR=9.6
NOA                                  PKPbc PKPdf   02 53 56.4 +5.3
      comp=Z,32nm,0.9s,baz=15,slow=4.1,SNR=41
NOA                                  PKPab PKPab   02 54 02.7 -1.7
      comp=Z,62nm,0.9s,baz=18,slow=3.0,SNR=45
NOA                                  pPKPbc        02 54 56.8
      comp=Z,5.2nm,0.8s,baz=14,slow=4.1,SNR=2.4
NOA   NORSAR Array B     149.74 349  PKP   PKPdf   02 53 51.1  0.0
NOA                                  PKPbc PKPdf   02 53 56.4 +5.3
NOA                                  PKPab PKPab   02 54 02.7 -1.7
NOA                                  pPKPbc        02 54 56.8
NOA   NORSAR Array B     149.74 349  PKIKP PKPdf   02 53 51.1  0.0
NOA                                                02 54 02.7
IZAR  Zarasai            149.77 330 eP     PKPdf   02 53 57.0 +5.7
IZAR                                 AMb   AMB     02 53 59.6
      comp=Z,65nm,1.3s
KVT   Kavak              149.82 298 eP     PKPdf   02 53 56.6 +4.7
IDID  Didziasalis        149.85 329 eP     PKPdf   02 53 57.0 +5.6
IDID                                 AMb   AMB     02 53 59.7
      comp=Z,61nm,1.2s
COBT  Iskenderun         149.87 289 i P    PKPdf   02 53 57.4 +5.3
JMOS  Jabal al Moall     149.87 274  P     PKPdf   02 53 58.5 +6.2
MNK   Minsk              149.88 327 ePKIKP PKPdf   02 53 50.0 -1.5
MKRJ  Makawir            149.90 279  P     PKPdf   02 53 52.8 +0.5
ALWS  Ilw as Safayha     149.94 275  P     PKPdf   02 53 59.9 +7.5
ISAL  Salakas            149.94 330 eP     PKPdf   02 53 57.3 +5.7
ISAL                                 AMb   AMB     02 53 60.0
      comp=Z,48nm,1.2s
HTY   Hatay              149.95 288 eP     PKPdf   02 53 59.0 +6.8
NAO01 NORSAR Array S     149.97 350 ePKPbc PKPdf   02 53 57.0 +5.5
NAO01                               ePKPab PKPab   02 54 03.0 -2.4
HAQS  Haql               149.99 274  P     PKPdf   02 54 00.0 +7.5
NAO   NORSAR Subarra     150.00 350  PKPab PKPab   02 53 55.8  -10
AQBJ  Aqaba              150.04 275  P     PKPdf   02 53 53.3 +0.7
MZDA  Masada             150.09 279  P     PKPdf   02 53 53.8 +1.2
ZFRI  Zfri               150.11 277  P     PKPdf   02 53 53.5 +0.8
EIL   Elat               150.12 275  P     PKPdf   02 53 53.5 +0.8
KSDI  Kefar Szold        150.12 282  P     PKPdf   02 53 54.2 +1.6
BNN   Bunyan             150.16 294 eP     PKPdf   02 53 57.0 +4.5
MBH   Mount Berech       150.17 276  P     PKPdf   02 53 53.8 +1.0
BHL   Bhannes            150.20 284 eP     PKPdf   02 53 59.0 +6.3
PRNI  Paran              150.21 277  P     PKPdf   02 53 53.7 +0.9
KOZT  Kozan              150.22 291 eP     PKPdf   02 53 57.8 +5.2
MMLI  Mount Malkishu     150.22 281  P     PKPdf   02 53 53.9 +1.1
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CEYT	Ceyhan	150.28	290	*e*P	PKPdf	02 53 57.8	+5.1
SIM	Simferopol’	150.49	306	*e*PKIKP	PKPdf	02 54 00.0	+7.2
SIM				pmax	pmax		
	comp=Z,102nm,0.9s						
HNTI	Hanita	150.51	282	P	PKPdf	02 53 54.0	+0.8
SLTI	Sal’it	150.51	280	P	PKPdf	02 53 54.4	+1.2
OFRI	‘Ofer	150.61	281	P	PKPdf	02 53 54.0	+0.7
BOYT	Boyabat	150.64	299	*i* P	PKPdf	02 53 59.2	+6.1
BYBT	Boyabat	150.73	299	*e*P	PKPdf	02 54 00.9	+7.7
CTKT	Corum	150.82	298	*i* P	PKPdf	02 53 59.7	+6.2
KZIT	Kziot	150.83	278	P	PKPdf	02 53 54.7	+1.0
KARA	Karaisali	150.84	291	*e*P	PKPdf	02 53 57.8	+4.3
AVNT	Avonos	150.94	294	*i* P	PKPdf	02 53 53.8	+0.2
CORM	Corum	151.00	297	*e*P	PKPdf	02 53 59.0	+5.3
CDAG	Cicekdag	151.25	296	*i* P	PKPdf	02 53 59.6	+5.5
MERS	Mersin	151.26	290	*e*P	PKPdf	02 54 00.2	+6.0
AKASG	Malin Array Be	151.32	320	PKP	PKPdf	02 53 53.2	-0.6
	comp=Z,2.9nm,0.8s,baz=61,slow=1.1,SNR=24						
AKASG				PKPbc	PKPdf	02 54 00.4	+6.6
	comp=Z,87nm,0.9s,baz=56,slow=3.0,SNR=109						
AKASG				PKPab	PKPab	02 54 08.8	-2.5
	comp=Z,4.1nm,0.5s,baz=51,slow=4.8,SNR=11						
AKASG				pPKPbc		02 55 01.7	
	comp=Z,45nm,0.9s,baz=55,slow=2.6,SNR=9.5						
AKASG	Malin Array Be	151.32	320	PKIKP	PKPdf	02 53 53.3	-0.5
AKASG						02 54 08.8	
TOS	Tosya	151.35	299	*e*P	PKPdf	02 54 00.8	+6.6
MEST	Erdemli	151.57	289	*i* P	PKPdf	02 53 58.4	+3.7
PHNC	Paralimni	151.62	286	P	PKPdf	02 54 02.0	+7.2
	comp=Z,2.2nm,0.8s						
CANT	Cankiri	151.71	298	*e*P	PKPdf	02 54 00.8	+6.1
BALT	Daday	151.75	300	*i* P	PKPdf	02 54 01.3	+6.5
KAMT	Kaman	151.78	295	*e*P	PKPdf	02 54 01.4	+6.5
BR131	Keskin Array S	151.80	296	*e*PKPdf	PKPdf	02 53 55.7	+0.8
BR131				*e*PKPbc	PKPdf	02 54 01.9	+7.0
BR131				*e*PKPab	PKPab	02 54 12.9	-0.8
BRTR	Keskin Array B	151.80	296	PKP	PKPdf	02 53 55.0	0.0
	comp=Z,6.9nm,1.1s,baz=135,slow=3.5,SNR=25						
BRTR				PKPbc	PKPdf	02 54 02.5	+7.5
	comp=Z,50nm,0.9s,baz=131,slow=3.4,SNR=110						
BRTR				PKPab	PKPab	02 54 13.3	-0.4
	comp=Z,24nm,0.9s,baz=120,slow=3.4,SNR=11						
BRTR	Keskin Array B	151.80	296	PKIKP	PKPdf	02 53 55.0	+0.1
BRTR						02 54 13.3	
ELDT	Eldivan	151.87	298	*i* P	PKPdf	02 54 01.2	+6.2
IKL	Isikli	151.94	289	*e*P	PKPdf	02 54 00.8	+5.6
CSS	Prodhromos	152.19	286	P	PKPdf	02 54 03.2	+7.6
SUW	Suwalki	152.25	330	*e*PKP	PKPdf	02 54 02.5	+7.4
SUW				*e*		02 54 13.5	
SUW	Suwalki	152.25	330	*e*PKPdf	PKPdf	02 53 56.0	+0.9
SUW				*e*PKPbc	PKPdf	02 54 02.2	+7.1
SUW				*e*PKP	PKPdf	02 54 02.5	+7.4
SUW				*e*PKPab	PKPab	02 54 13.1	-2.0
SUW				*e*		02 54 13.5	
SUW	Suwalki	152.25	330	*e*PKIKP	PKPdf	02 53 56.0	+0.9
SUW				*e*		02 54 13.1	
MAMC	Mammari	152.29	286	P	PKPdf	02 54 03.9	+8.1
SAFT	Safranbolu	152.31	299	*e*P	PKPdf	02 53 56.6	+1.0
ANTO	Ankara	152.43	296	*e*P	PKPdf	02 54 03.1	+7.3
ANTO	Ankara	152.43	296	*e*PKPdf	PKPdf	02 53 56.2	+0.4
ANTO				*e*PKPbc	PKPdf	02 54 03.8	+8.0
LOD	Lodumlu	152.45	296	*e*P	PKPdf	02 54 02.6	+6.7
SZAC	Souni-Zanaja	152.55	285	P	PKPdf	02 54 03.7	+7.6
ERMK	Ermenek	152.56	289	*i* P	PKPdf	02 54 02.4	+6.3
LEF	Lefka	152.56	286	*e*P	PKPdf	02 54 04.4	+8.2
ALFC	Alevga	152.80	286	P	PKPdf	02 54 03.8	+7.3
	comp=Z,0.8nm,0.9s						
SGKT	Sivrigoynuk	152.89	298	*i* P	PKPdf	02 53 54.9	-1.5
PPCY	Paphos	153.00	286	P	PKPdf	02 54 04.1	+7.3
KIZT	Kizilcal	153.25	294	*e*P	PKPdf	02 54 06.2	+9.2
KIS	Kishinev	153.28	313	*e*PKIKP	PKPdf	02 53 57.0	+0.3
MDU	Mudurnu	153.54	298	*e*P	PKPdf	02 54 05.5	+8.3
HENT	Hendek	153.72	299	*i* P	PKPdf	02 53 55.5	-2.0
ESKT	Eskisehir	153.96	296	*i* P	PKPdf	02 53 56.7	-1.2
LIC	Lamto	154.22	168	*e*PKIKP	PKPdf	02 53 59.0	0.0
	comp=Z,27nm,0.9s						
BSD	Bornholm Skovb	154.34	340	*i* P	PKPdf	02 54 07.2	+9.4
	comp=Z,40nm,0.9s						
BSD				*i*		02 54 21.0	
BSD	Bornholm Skovb	154.34	340	*i* PKIKP	PKPdf	02 54 07.2	+9.4
BSD				*i*		02 54 21.0	
BSD				pmax	pmax		
	comp=Z,40nm,0.9s						
ISP	Isparta	154.42	292	PKPbc	PKPdf	02 54 06.6	+8.1
ISP				*e*PKPab	PKPab	02 54 23.5	-1.3
MUD	Monsted U’grnd	154.44	348	*i* P	PKPdf	02 54 08.6	+11
	comp=Z,42nm,1.2s						
MUD				*i*		02 54 22.7	
MUD	Monsted U’grnd	154.44	348	*i* PKIKP	PKPdf	02 54 08.6	+11
MUD				*i*		02 54 22.7	
MUD				pmax	pmax		
	comp=Z,42nm,1.2s						
CFR	Carcaliu	154.44	310	⇑P	PKPdf	02 53 58.2	-0.1
CFR	Carcaliu	154.44	310	⇑P	PKPdf	02 53 58.2	-0.1
ALT	Altintas	154.60	295	*e*P	PKPdf	02 54 10.9	+12
DBIC	Dimbokro	154.69	168	PKP	PKPdf	02 54 01.1	+1.6
	comp=Z,7.9nm,0.7s,baz=153,slow=1.7,SNR=19						
DBIC				PKPbc	PKPdf	02 54 10.4	+11
	comp=Z,12nm,0.9s,baz=254,slow=1.6,SNR=17						
DBIC				PKPab	PKPab	02 54 25.6	-1.0
	comp=Z,26nm,1.1s,baz=156,slow=5.2,SNR=5.7						
DBIC	Dimbokro	154.69	168	*e*PKPdf	PKPdf	02 54 01.4	+1.8
DBIC				*e*PKPbc	PKPdf	02 54 10.5	+11
DBIC				*e*PKPab	PKPab	02 54 25.9	-0.7
DBIC	Dimbokro	154.69	168	*e*PKIKP	PKPdf	02 54 01.4	+1.8
DBIC				*e*		02 54 25.9	
VRI	Vrincioaia	155.07	312	⇓P	PKPdf	02 54 09.6	+11
ULDT	Uludag	155.16	298	*i* P	PKPdf	02 53 58.6	-0.8
KWP	Kalwaria	155.38	323	PKPdf	PKPdf	02 53 59.7	+0.3
KWP				*e*PKPbc	PKPdf	02 54 09.6	+10
KWP				*e*PKP	PKPdf	02 54 10.5	+11
KWP				*e*PKPab	PKPab	02 54 26.8	-1.6
KWP				*e*		02 54 28.4	
KWP	Kalwaria	155.38	323	PKIKP	PKPdf	02 53 59.7	+0.3
KWP				*e*		02 54 09.6	
KWP				*e*		02 54 26.8	
KOLS	Kolonicke sedl	156.04	322	*e*PKP	PKPdf	02 54 01.0	+0.7
KOLS				*e*		02 54 11.8	
OJC	Ojcow	156.40	327	*e*PKP	PKPdf	02 54 01.7	+0.9
CRVS	Cervenica-Dubn	156.48	323	*e*PKP	PKPdf	02 54 01.4	+0.5
CRVS				*e*		02 54 32.7	
NIE	Niedzica	156.71	325	⇑*e*PKP	PKPdf	02 54 02.7	+1.5
DRGR		157.04	318	⇓P	PKPdf	02 54 01.9	+0.2
DRGR		157.04	318	⇓P	PKPdf	02 54 01.9	+0.2
KECS	Kecovo	157.24	323	*e*PKP	PKPab	02 54 34.9	-1.6
OKC	Ostrava-Krasne	157.42	329	*e*PKPDF	PKPdf	02 54 02.7	+0.6
OKC				*e*PKPAB	PKPab	02 54 35.8	-1.4
KSP	Ksiaz	157.43	333	*e*PKP	PKPdf	02 54 03.6	+1.5
KSP				*e*		02 54 36.8	
KSP	Ksiaz	157.43	333	*e*PKPdf	PKPdf	02 54 03.3	+1.2
KSP				*e*PKPab	PKPab	02 54 35.2	-2.0
KSP	Ksiaz	157.43	333	*e*PKP2	PKPab	02 54 35.2	-2.0
LIKS	Likavka	157.54	326	*e*PKP	PKPdf	02 54 04.1	+1.8
MORC	Moravsky Berou	157.73	329	*e*PKPdf	PKPdf	02 54 03.2	+0.6
MORC				*e*PKPab	PKPab	02 54 36.8	-1.7
DPC	Dobruska-Polom	157.81	332	*e*PKPDF	PKPdf	02 54 03.4	+0.8
DPC				*e*PKPAB	PKPab	02 54 37.6	-1.2
DPC				*e*pPKP		02 55 37.1	
UPC	Upice	157.81	333	*e*PKPDF	PKPdf	02 54 03.2	+0.6
UPC				*e*PKPAB	PKPab	02 54 37.4	-1.4
VYHS	Vyhne	158.05	325	*e*PKP	PKPdf	02 54 03.6	+0.6
VYHS				*e*		02 54 38.8	
CLL	Collm	158.22	338	*e*PKIKP	PKPdf	02 54 04.0	+0.9
CLL				*i*		02 54 15.9	
CLL				*i* PKP2	PKPab	02 54 38.8	-1.8
CLL				*i*		02 54 47.4	
CLL				*e**PPKP2		02 55 39.0	
CLL				*e*PP	PP	02 58 19.0	-3.3
CLL	Collm	158.22	338	P	x	02 54 47.4	
	comp=Z,logA/T=0.3						
CLL	Collm	158.22	338	⇑*e*PKIKP	PKPdf	02 54 04.0	+0.9
CLL				*i*		02 54 38.8	
CLL				pmax	pmax		
	comp=Z,16nm,1.1s						
CLL				pmax	pmax		
	comp=Z,69nm,1.0s						
BRG	Berggiesshubel	158.27	336	*e*PKP	PKPdf	02 54 03.8	+0.7
BRG				*e*		02 54 16.5	
BRG	Berggiesshubel	158.27	336	*e*PKIKP	PKPdf	02 54 03.8	+0.6
BRG				*i*		02 54 39.8	
BRG						02 58 21.0	
BRG				pmax	pmax		
	comp=Z,14nm,1.2s						
BRG				pmax	pmax		
	comp=Z,16nm,1.3s						
BRG				pmax	pmax		
	comp=Z,90nm,1.5s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PVCC	Panska Ves	158.34	335	*e*PKPDF	PKPdf	02 54 03.8	+0.5
PVCC				*e*PKPAB	PKPab	02 54 39.8	-1.3
CLZ	Clausthal	158.50	343	*e*PKP2	PKPab	02 54 40.3	-1.5
SMOL	Smolenice	158.71	327	*e*PKP	PKPdf	02 54 04.5	+0.7
SMOL				*e*		02 54 41.7	
SRO	Srobarova	158.77	325	*e*PKP	PKPdf	02 54 04.5	+0.6
PRU	Pruhonice	158.79	334	*e*PKPDF	PKPdf	02 54 04.0	+0.2
PRU				*e*PKPAB	PKPab	02 54 42.3	-0.8
TREC	Trest	158.97	331	*e*PKPDF	PKPdf	02 54 04.6	+0.5
TREC				*e*PKPAB	PKPab	02 54 42.1	-1.8
BOLS	Boljevac	159.01	311	⇑*i*PKP	PKPab	02 54 42.7	-1.6
ZST	Bratislava	159.09	327	*e*PKP	PKPdf	02 54 04.4	+0.2
ZST				*e*		02 54 43.4	
WTSB	Winterswijk	159.14	348	*e*PKP	PKPab	02 54 42.5	-2.1
	comp=Z,35nm,1.2s						
MOX	Moxa	159.23	339	*e*PKP	PKPdf	02 54 04.8	+0.5
MOX				*e*		02 54 43.6	
NKC	Novy Kostel	159.32	337	*e*PKPDF	PKPdf	02 54 04.2	-0.2
NKC				*e*PKPAB	PKPab	02 54 43.9	-1.5
VAY	Valandovo	159.65	305	*e*PKP	PKPdf	02 54 02.3	-2.8
VAY	Valandovo	159.65	305	*e*PKP	PKPdf	02 54 02.3	-2.8
GRUS	Gruza	159.77	313	*i* PKP	PKPdf	02 54 05.1	0.0
KHC	Kasperske Hory	159.85	334	*e*PKPDF	PKPdf	02 54 05.5	+0.5
KHC				*e*PKPAB	PKPab	02 54 46.0	-1.7
GEC2	GERESS Array S	160.04	333	*e*PKPdf	PKPdf	02 54 04.6	-0.6
GEC2				*e*PKPab	PKPab	02 54 46.9	-1.6
GEC2	GERESS Array S	160.04	333	*e*PKP2	PKPab	02 54 46.9	-1.6
GERES	GERESS Array B	160.04	333	PKP	PKPdf	02 54 05.4	+0.2
	comp=Z,5.4nm,1.0s,SNR=32						
GERES				PKPab	PKPab	02 54 46.6	-1.9
	comp=Z,7.2nm,0.8s,baz=34,slow=4.8,SNR=19						
WET	Wettzell	160.10	335	*e*PKPdf	PKPdf	02 54 05.5	+0.2
WET				*e*PKPab	PKPab	02 54 47.2	-1.5
WET	Wettzell	160.10	335	*e*PKP2	PKPab	02 54 47.2	-1.5
DIVS	Divcibare	160.11	314	*i* PKP	PKPdf	02 54 05.7	+0.2
SKO	Skopje	160.18	307	*e*PKP	PKPdf	02 54 03.1	-2.5
SKO	Skopje	160.18	307	*e*PKP	PKPdf	02 54 03.1	-2.5
GRA1	Grafenberg Arr	160.19	339	*e*PKPdf	PKPdf	02 54 08.5	+3.1
GRA1				*e*PKPab	PKPab	02 54 48.2	-0.9
GRF	Grafenberg Arr	160.19	339	*e*PKP	PKPdf	02 54 08.5	+3.1
HGN	Heimansgroeve	160.45	349	⇑*e*PKP	PKPab	02 54 48.3	-1.9
	comp=Z,93nm,1.1s						
TNS	Taunus Mts	160.47	344	*e*PKP2	PKPab	02 54 48.5	-1.8
ARSA	Arzberg	160.51	327	⇑*i*P	PKPdf	02 54 05.9	+0.1
	comp=Z,12nm,1.2s						
ARSA	Arzberg	160.51	327	⇑*i*P	PKPab	02 54 46.8	-3.7
	comp=Z,19nm,1.3s						
ARSA	Arzberg	160.51	327	⇑P	PKPdf	02 54 05.9	+0.1
ARSA				*e*		02 54 46.8	
NVSS	Nova Varos 2	160.60	313	⇑*i*PKP	PKPab	02 54 50.3	-0.7
MOA	Molln	160.60	330	⇓*i*X	PKPab	02 54 50.0	-0.9
BIA	Bitola	160.63	305	*e*PKP	PKPdf	02 54 03.2	-2.9
BIA	Bitola	160.63	305	*e*PKP	PKPdf	02 54 03.2	-2.9
KOGS	Kog	160.74	325	*e*PKPdf	PKPdf	02 54 06.2	+0.1
OHR	Ohrid	160.96	305	*e*PKP	PKPdf	02 54 06.2	-0.3
OHR	Ohrid	160.96	305	*e*PKP	PKPdf	02 54 06.2	-0.2
PERS	Pernice	161.15	327	*e*PKPdf	PKPdf	02 54 06.5	+0.1
PERS				*e*PKPab	PKPab	02 54 51.9	-1.4
GIVF	Givet	161.26	351	*e*PKIKP	PKPdf	02 54 06.9	+0.5
BAIF	Baives	161.38	352	*e*PKIKP	PKPdf	02 54 07.3	+0.8
	comp=Z,42nm,1.2s						
WLF	Walferdange	161.47	348	*e*PKPdf	PKPdf	02 54 07.8	+1.1
WLF				*e*PKPab	PKPab	02 54 53.0	-1.7
FUR	Furstenfeldbru	161.49	336	*e*PKP2	PKPab	02 54 53.9	-0.9
KBA	Koelnbreinsper	161.60	331	⇑*i*P	PKPdf	02 54 06.9	0.0
	comp=Z,14nm,1.2s						
STU	Stuttgart	161.61	341	PKPdf	PKPdf	02 54 06.8	0.0
STU				*e*PKPab	PKPab	02 54 52.5	-2.8
LANF	Langenberg	161.78	344	*e*P	PKPab	02 54 54.2	-1.8
LJU	Ljubljana	161.86	326	*e*PKPdf	PKPdf	02 54 07.5	+0.4
CADS	Cadrg	162.09	328	*e*PKPdf	PKPdf	02 54 07.8	+0.4
WATA	Walderalm	162.09	334	⇑*i*P	PKPdf	02 54 08.7	+1.3
	comp=Z,9.3nm,1.0s						
WATA	Walderalm	162.09	334	⇑*i*P	PKPab	02 54 56.5	-0.9
	comp=Z,15nm,1.0s						
WATA	Walderalm	162.09	334	⇑P	PKPdf	02 54 08.7	+1.3
WATA				*e*		02 54 56.5	
PTCC	Patocco-Chiusa	162.12	329	P	PKPdf	02 54 07.7	+0.3
WTTA	Wattenberg	162.13	334	⇓*i*P	PKPab	02 54 57.2	-0.4
WTTA	Wattenberg	162.13	334	⇓*e*PKIKP	PKPdf	02 54 08.0	+0.6
WTTA				*e*		02 54 57.2	
CEY	Cerknica	162.13	326	*e*PKPdf	PKPdf	02 54 07.5	+0.1
CEY				*e*PKPab	PKPab	02 54 56.2	-1.5
BFO	Black Forest	162.25	342	*e*PKP2	PKPab	02 54 56.4	-1.7
MOTA	Moosalm	162.25	335	⇑*i*P	PKPdf	02 54 08.7	+1.2
	comp=Z,13nm,0.9s						
MOTA	Moosalm	162.25	335	⇑*i*P	PKPab	02 54 57.4	-0.8
	SNR=8.4						
MOTA	Moosalm	162.25	335	⇑P	PKPdf	02 54 08.7	+1.2
MOTA				*e*		02 54 57.4	
GMNA	Gemona	162.27	329	P	PKPdf	02 54 08.0	+0.4
SQTA	Sankt Quirin	162.32	335	⇑*i*P	PKPdf	02 54 09.2	+1.6
	comp=Z,11nm,0.9s						
SQTA	Sankt Quirin	162.32	335	⇑*i*P	PKPab	02 54 57.8	-0.6
SQTA	Sankt Quirin	162.32	335	⇑P	PKPdf	02 54 09.2	+1.6
SQTA				*e*		02 54 57.8	
SPAK	Spaichingen	162.33	341	*e*P	PKPab	02 54 57.6	-0.9
WLS	Welschbruch	162.41	344	*e*P	PKPab	02 54 57.2	-1.6
CDF	Champ du Feu	162.43	344	*e*PKIKP	PKPdf	02 54 08.0	+0.3
LIBD	Limburg	162.60	343	*e*P	PKPab	02 54 58.4	-1.2
ECH	Echery	162.64	344	*e*P	PKPab	02 54 57.7	-2.1
DAVA	Damuels	162.72	337	⇓*i*P	PKPdf	02 54 09.3	+1.4
	comp=Z,16nm,1.2s						
DAVA	Damuels	162.72	337	⇓P	PKPdf	02 54 09.3	+1.4
DAVA				*e*		02 54 59.8	
MEZF	Maizieres J’vi	162.78	349	*e*PKIKP	PKPdf	02 54 08.2	+0.2
	comp=Z,232nm,1.7s						
THEF	They Montfort	162.88	347	*e*P	PKPab	02 54 59.1	-1.8
FLN	La Foliniere	162.91	2	*e*PKIKP	PKPdf	02 54 08.6	+0.5
	comp=Z,96nm,1.3s						
MOF	Molkenrain	162.99	344	*e*P	PKPab	02 54 59.3	-2.0
HAU	Haudompre	163.02	346	*e*PKIKP	PKPdf	02 54 08.9	+0.6
HINF	Hinteralfeld	163.09	344	*e*PKIKP	PKPdf	02 54 08.3	0.0
LDF	La Druitiere	163.09	1	*e*PKIKP	PKPdf	02 54 08.9	+0.6
	comp=Z,72nm,1.3s						
LOMF	Lomont	163.53	344	*e*P	PKPab	02 55 02.4	-1.3
LOR	Lormes	164.17	351	*e*PKIKP	PKPdf	02 54 09.4	0.0
	comp=Z,74nm,1.5s						
HYF	Humbligny	164.31	354	*e*PKIKP	PKPdf	02 54 10.1	+0.5
CABF	La Chapelle	164.40	345	*e*PKIKP	PKPdf	02 54 10.8	+1.1
	comp=Z,36nm,1.1s						
SSF	Saint Saulge	164.41	352	*e*PKIKP	PKPdf	02 54 10.9	+1.2
	comp=Z,46nm,1.4s						
FSSB	Fossombrone	164.43	324	P	PKPdf	02 54 10.1	+0.3
ARV	Arcevia	164.48	323	P	PKPdf	02 54 10.8	+0.9
TIP	Timpagrande	164.57	304	*e*PKPdf	PKPdf	02 54 10.7	+0.6
TIP				*e*PKPab	PKPab	02 55 07.5	-1.0
SNTG	Esanatoglia	164.65	322	P	PKPdf	02 54 10.5	+0.4
AVF	Avril sur Loir	164.70	352	*e*PKIKP	PKPdf	02 54 10.3	+0.3
SMF	Signal de Mont	164.78	350	*e*PKIKP	PKPdf	02 54 10.0	-0.1
	comp=Z,79nm,1.7s						
BGF	Bois d’Agland	164.99	353	*e*PKIKP	PKPdf	02 54 10.7	+0.4
	comp=Z,13nm,0.8s						
MFF	Saint Martin d	165.08	1	*e*PKIKP	PKPdf	02 54 10.6	+0.2
	comp=Z,44nm,1.1s						
LPL	La Plagne	165.26	342	*e*PKIKP	PKPdf	02 54 11.1	+0.5
LPG	La Plagne	165.28	342	*e*PKIKP	PKPdf	02 54 11.3	+0.7
TCF	Toulx Ste Croi	165.31	354	*e*PKIKP	PKPdf	02 54 11.5	+0.9
	comp=Z,30nm,1.1s						
MNS	Montasola	165.40	321	P	PKPdf	02 54 10.7	-0.1
AGO	Saint Agoulin	165.46	352	*e*P	PKPab	02 55 10.7	-1.4
PLDF	La Plantade	165.47	350	*e*P	PKPab	02 55 10.7	-1.5
PYM	Petit Puy Mans	165.77	352	*e*P	PKPab	02 55 12.3	-1.2
MBDF	Montbardon	165.98	340	*e*PKIKP	PKPdf	02 54 12.0	+0.9
	comp=Z,15nm,0.9s						
ORIF	Oris-en-Rattie	166.04	343	*e*PKIKP	PKPdf	02 54 11.5	+0.3
	comp=Z,19nm,1.1s						
LBL	Lubilhac	166.25	351	*e*P	PKPab	02 55 14.9	-0.7
RJF	Les Rejaudoux	166.34	356	*e*PKIKP	PKPdf	02 54 12.0	+0.6
VIVF	Saint-Julien-l	166.37	346	*e*PKIKP	PKPdf	02 54 11.8	+0.4
	comp=Z,65nm,1.6s						
TOUF	Mont Tournerai	166.48	338	*e*P	PKPab	02 55 15.1	-1.6
CAF	Calviac	166.68	354	*e*PKIKP	PKPdf	02 54 12.2	+0.6
LFF	La Frestale	166.74	358	*e*PKIKP	PKPdf	02 54 12.2	+0.5
	comp=Z,26nm,0.9s						
PGF	Pioggiola	167.07	330	*e*PKIKP	PKPdf	02 54 12.3	+0.3
	comp=Z,193nm,1.7s						
ERUA	La Rua	167.80	27	PKP	PKPdf	02 54 14.4	+2.0
MTLF	Montolieu	168.24	353	*e*PKIKP	PKPdf	02 54 12.7	+0.1
PBRG	Braganca	168.45	27	*e*PKPab	PKPab	02 55 24.1	-1.3
PVRL	Vila Real	168.49	31	*e*PKPdf	PKPdf	02 54 14.6	+1.7
PVRL	Vila Real	168.49	31	*e*PKPab	PKPab	02 55 25.7	+0.2
SJPF	Ste Jean	168.52	5	*e*PKIKP	PKPdf	02 54 13.2	+0.4
EPF	Esparros	168.65	359	*e*PKIKP	PKPdf	02 54 13.4	+0.5
	comp=Z,89nm,1.4s						
PVIS	Viseu	168.85	34	*e*PKPdf	PKPdf	02 54 15.0	+1.9
PVIS	Viseu	168.85	34	*e*PKPab	PKPab	02 55 24.1	-3.1
MTE	Manteigas	169.27	34	*e*PKPdf	PKPdf	02 54 16.5	+3.1
PTOM	Tomar	169.42	39	*e*PKPdf	PKPdf	02 54 15.5	+2.0
PCBR	Castelo Branco	169.74	35	*e*PKPdf	PKPdf	02 54 15.7	+2.0
GUD	Guadarrama	170.38	20	PKP	PKPdf	02 54 16.2	+2.1
EVO	Evora	170.40	42	*e*PKIKP	PKPdf	02 54 14.1	0.0
	comp=Z,89nm,1.1s						
PTEO	Sao Teotonio	170.59	49	*e*PKPdf	PKPdf	02 54 17.2	+3.0
PTEO	Sao Teotonio	170.59	49	*e*PKPab	PKPab	02 55 35.2	+0.2
PBEJ	Beja	170.82	44	*e*PKPdf	PKPdf	02 54 17.2	+2.8
ESDC	Sonseca Array	171.32	22	PKP	PKPdf	02 54 16.5	+1.9
	comp=Z,5.8nm,0.7s,baz=358,slow=2.7,SNR=27						
ESDC				PKPab	PKPab	02 55 37.0	-1.1
	comp=Z,5.3nm,0.9s,baz=322,slow=4.4,SNR=9.5						
ESDC				PP	PP	02 59 30.6	+1.2
	comp=Z,0.1nm,0.2s,baz=333,slow=3.3,SNR=4.4						
ESDC	Sonseca Array	171.32	22	PKP	PKPdf	02 54 16.1	+1.5
EMIN	Mina Concepcio	171.69	41	PKP	PKPdf	02 54 18.2	+3.3
ECHE	Chera	172.03	7	PKP	PKPdf	02 54 17.8	+2.8
EADA	Adamuz	172.42	30	PKP	PKPdf	02 54 18.6	+3.3
EVIA	Vianos	172.70	17	PKP	PKPdf	02 54 17.6	+2.2
EBAN	Banos Encina	172.74	26	PKP	PKPdf	02 54 18.2	+2.7
ESPR	Espera	172.78	42	PKP	PKPdf	02 54 19.1	+3.6
ETOB	Tobarra	172.89	11	PKP	PKPdf	02 54 17.0	+1.5
ELUQ	Luque	173.06	31	PKP	PKPdf	02 54 18.0	+2.4
EQES	Quesada	173.31	23	PKP	PKPdf	02 54 18.3	+2.6
EHUE	Huescar	173.45	20	PKP	PKPdf	02 54 16.1	+0.3
ECOG	Cogollos-Vega	173.60	28	PKP	PKPdf	02 54 16.7	+0.9
ERON	Agron	173.72	31	PKP	PKPdf	02 54 17.9	+2.0
EMUR	La Murta	173.72	10	PKP	PKPdf	02 54 17.2	+1.4

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*MOS **13** 02:53:03.5±1.1, 27.49N×140.02E, h448^{km}, mb3.9/4, Error ellipse: s-maj=30.3km s-min=10.4km az=113.6*

*NEIC **13** 02:53:06.3±1.1, 27.60N×140.22E, h464^{km}±10^{km}, mb4.1/4, Error ellipse: s-maj=17.5km s-min=12.0km az=98.0*

*IDC **13** 02:53:06.5±0.5, 27.59N×140.17E, h464^{km}±7^{km}, mb3.2/11, mb1 3.3/15, mb1mx3.2/27, mbtmp4.2/15, Error ellipse: s-maj=18.8km s-min=10.8km az=71.0*

*JMA **13** 02:53:06.7±0.1, 27.79N×140.64E, h484^{km}, M3.8*

ISC 13 02:53:05.9±0.5**, 27.62N**±0.05×**140.3E**±0.1**, h477**^{km}±5^{km}**, n50, σ1^{s}14**/56**, mb3.6**/16**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.80	106	P	P	02 54 08.8	+0.4
	46nm,0.3s,baz=292,slow=2.8,SNR=78						
CBIJ				S	S	02 54 57.4	-0.4
	60nm,0.3s,baz=312,slow=20,SNR=9.4						
CBIJ	Chichi jima	1.80	106	P	P	02 54 08.7	+0.3
CBIJ				*e*S	S	02 54 57.8	0.0
JHHJ	Haha-jima-NKT	1.98	119	P	P	02 54 10.4	+1.1
JHHJ				S	S	02 54 59.9	+0.5
JHJ	Hachijo jima 2	5.49	356	P	P	02 54 37.8	+0.5
	31nm,0.3s,slow=8.1,SNR=5.6						
JHJ				S	S	02 55 48.0	-1.3
	18nm,0.3s,baz=232,slow=22,SNR=2.7						
BSO3	Boso 3	7.16	2	P	P	02 54 53.9	-0.2
BSO3				*e*S	S	02 56 19.5	-0.4
JIE	Ise	7.40	337	P	P	02 54 57.8	+1.1
HMMJ	Hamamatsu 2	7.53	344	P	P	02 54 58.2	+0.2
JOD2	Odawara 2	7.68	353	P	P	02 55 00.0	+0.3
JNY	Yasuok	7.98	346	P	P	02 55 03.0	+0.2
JRY	Ryogami san	8.45	353	P	P	02 55 07.1	-0.8
JWT	Wachi	8.68	333	P	P	02 55 11.5	+1.1
JAG	Ashikaga	8.80	356	P	P	02 55 10.1	-1.6
JAG				*e*S	S	02 56 48.8	-2.7
JAD	Aida	8.96	326	P	P	02 55 14.6	+1.2
MJAR	Matsushiro Arr	9.06	350	P	P	02 55 13.3	-1.1
	1.5nm,0.3s,baz=222,slow=15,SNR=16						
MJAR				S	S	02 56 59.1	+2.6
	0.5nm,0.3s,baz=166,slow=21,SNR=3.8						
MAJO	Matsushiro	9.06	350	*e*P	P	02 55 13.1	-1.4
	7.9nm,0.3s						
MAJO	Matsushiro	9.06	350	*e*P	P	02 55 13.1	-1.4
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.3s						
MAT	Matsushiro	9.06	350	P	P	02 55 13.1	-1.4
MAT				*e*S	S	02 56 57.8	+1.3
JHS	Saijyo	9.55	322	P	P	02 55 21.0	+1.2
JHK	Hiroka	9.65	354	P	P	02 55 20.2	-0.7
JFK	Kawauchi	9.73	3	P	P	02 55 22.0	+0.3
JNU	Nakatsue	9.77	306	P	P	02 55 22.2	+0.1
	comp=Z,0.8nm,0.3s,baz=200,slow=7.7,SNR=6.3						
JOW	Kunigami	10.69	269	P	P	02 55 31.5	-0.4
	comp=Z,8.5nm,0.3s,baz=102,slow=12,SNR=14						
SONM	Songino Array	33.15	317	P	P	02 59 02.4	-0.2
	comp=Z,0.4nm,0.4s,mb3.2,baz=121,slow=9.9,SNR=4.4						
FITZ	Fitzroy Crossi	47.60	199	P	P	03 00 58.4	-0.9
	comp=Z,0.9nm,0.3s,mb3.5,baz=68,slow=11,SNR=4.5						
WRA	Warramunga Arr	47.63	188	P	P	03 00 58.0	-1.5
	comp=Z,0.5nm,0.3s,mb3.3,baz=2.8,slow=7.6,SNR=3.5						
MKAR	Makanchi Array	48.81	309	P	P	03 01 07.0	-1.1
	comp=Z,1.3nm,0.4s,mb3.6,baz=104,slow=5.9,SNR=18						
MKAR	Makanchi Array	48.81	309	P	P	03 01 07.0	-1.1
MKAR	Makanchi Array	48.81	309	*e*P	P	03 01 06.9	-1.2
KURK	Kurchatov	51.39	314	*e*P	P	03 01 25.5	-1.6
	comp=Z,5.1nm,0.6s,mb4.0						
KURK	Kurchatov	51.39	314	*e*P	P	03 01 25.5	-1.7
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
VOSK	Vostochnaya	56.14	317	P	P	03 02 02.1	+1.1
CHKZ	Chkalovo	56.33	318	P	P	03 02 03.4	+1.2
BVA0	Borovoye Array	56.49	317	*i* P	P	03 02 02.2	-1.1
BVAR	Borovoye Array	56.49	317	P	P	03 02 02.4	-0.9
	comp=Z,6.9nm,0.4s,mb4.3,baz=91,slow=7.1						
BRVK	Borovoye	56.55	317	*e*P	P	03 02 02.6	-1.1
	comp=Z,2.2nm,0.5s,mb3.7						
BRVK	Borovoye	56.55	317	*e*P	P	03 02 02.6	-1.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
KKAR	Karatay Array	57.38	305	*e*P	P	03 02 08.5	-1.0
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
ILAR	Eielson Array	58.08	29	P	P	03 02 13.9	0.0
	comp=Z,0.3nm,0.5s,mb2.9,baz=243,slow=6.4,SNR=6.3						
AB31	Akbulak array	63.49	314	P	P	03 02 48.7	-1.2
AKTO	Aktyubinsk	64.45	315	P	P	03 02 57.5	+1.5
	comp=Z,0.3nm,0.3s,mb3.2,baz=61,slow=11,SNR=5.2						
JOF	Joensuu	73.84	333	*e*p	P	03 03 52.5	+0.6
	comp=Z,5.3nm,1.0s,mb4.0						
KAF	Kangasniemi	76.25	334	*e*p	P	03 04 07.1	+1.8
	comp=Z,7.8nm,1.0s,mb4.2						
KAF	Kangasniemi	76.25	334	*e*P	P	03 04 07.1	+1.8
KAF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.2						
FINES	FINESS Array B	76.71	333	P	P	03 04 07.6	-0.3
	comp=Z,1.7nm,0.5s,mb3.8,baz=60,slow=4.0,SNR=18						
FINES	FINESS Array B	76.71	333	P	P	03 04 07.6	-0.3
HFS	Hagfors	82.25	336	P	P	03 04 38.3	+1.4
	comp=Z,4.0nm,1.0s,mb3.9,baz=90,slow=4.3,SNR=6.0						
NOA	NORSAR Array B	82.48	338	P	P	03 04 40.1	+2.1
	comp=Z,0.8nm,0.6s,mb3.4,baz=45,slow=5.0,SNR=2.5						
BRTR	Keskin Array B	84.38	312	P	P	03 04 50.2	+2.3
	comp=Z,0.4nm,0.7s,mb3.1,baz=108,slow=4.6,SNR=3.2						
LPAZ	La Paz	151.44	73	PKPbc	PKPdf	03 12 09.2	+11
	comp=Z,0.6nm,0.8s,baz=307,slow=5.1,SNR=3.7						
PLCA	Paso Flores	151.52	125	PKPbc	PKPdf	03 12 08.0	+10
	comp=Z,0.6nm,0.5s,baz=224,slow=2.1,SNR=4.9						

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*IDC **13** 03:13:15.3±1.0, 7.88S×67.95E, mb4.0/9, mb1 4.1/9, mb1mx3.9/20, mbtmp4.0/9, MS3.8/3, Ms1 3.8/3, ms1mx3.4/29, Error ellipse: s-maj=31.4km s-min=22.7km az=135.0*

*NEIC **13** 03:13:16.8±0.4, 7.85S×67.93E, h10^{km}, mb4.4/1, Error ellipse: s-maj=17.1km s-min=10.8km az=121.0*

ISC 13 03:13:14.9±0.7**, 7.8S**±0.1×**68.0E**±0.2**, h10**^{km}**, n20, σ0^{s}58**/14**, mb4.1**/11**, MS3.8**/3**, 2C, Mid-Indian Ridge**

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

KMBO	Kilima Mbogo	31.30	281	LR	LR	03 28 56.1	
	comp=Z,86nm,20.9s,MS3.4,baz=95,slow=30						
LSZ	Lusaka	39.62	256	P	P	03 20 49.0	+0.3
	2.3nm,0.8s,mb4.0,baz=60,slow=8.3,SNR=8.1						
BOSA	Boshof	45.22	237	P	P	03 21 33.5	-0.8
	1.7nm,0.8s,mb4.0,baz=147,slow=7.7,SNR=3.0						
BOSA				LR	LR	03 40 22.2	
	comp=Z,64nm,18.2s,MS3.6,baz=140,slow=36						
BOSA	Boshof	45.22	237	P	P	03 21 33.5	-0.8
BOSA				LR	LR	03 40 22.2	
MKAR	Makanchi Array	55.81	12	P	P	03 22 54.2	-0.5
	0.9nm,0.6s,mb4.0,baz=199,slow=8.1,SNR=8.8						
MKAR				PcP	PcP	03 23 53.1	-0.4
	0.7nm,0.7s,baz=225,slow=1.7,SNR=4.2						
BRTR	Keskin Array B	56.94	329	P	P	03 23 03.1	+0.3
	1.1nm,0.9s,mb3.9,baz=144,slow=11,SNR=5.2						
AKTO	Aktyubinsk	58.62	353	P	P	03 23 14.7	+0.2
	2.0nm,0.7s,mb4.3,baz=168,slow=8.7,SNR=5.6						
KURK	Kurchatov	58.99	8	*e*P	P	03 23 16.2	-0.8
	3.1nm,0.3s,mb4.8						
BVAR	Borovoye Array	60.61	2	P	P	03 23 28.1	0.0
	1.0nm,0.7s,mb4.1,baz=180,slow=7.4,SNR=5.7						
CHKZ	Chkalovo	61.27	2	*e*P	P	03 23 32.7	+0.1
	2.6nm,0.8s,mb4.4						
ZAL	Zalesovo	63.11	11	P	P	03 23 44.5	-0.4
	0.8nm,0.7s,mb4.0,baz=284,slow=8.7,SNR=5.6						
SONM	Songino Array	64.94	28	P	P	03 23 58.3	+1.3
	1.5nm,0.8s,mb4.1,baz=230,slow=6.2,SNR=6.0						
WRA	Warramunga Arr	65.22	108	P	P	03 23 58.9	-0.4
	0.5nm,0.4s,mb3.9,baz=281,slow=6.0,SNR=4.7						
VNA2	Neumayer--Watz	77.91	199	⇑*i*P	P	03 25 21.3	+7.1
VNA2				*e*		03 25 33.8	
VNA3	Neumayer Olymp	78.69	199	⇑*i*P	P	03 25 19.2	+0.7
VNA3				*e*		03 25 31.3	
HFS	Hagfors	80.03	336	LR	LR	04 01 05.4	
	comp=Z,177nm,19.3s,MS4.4,baz=29,slow=36						
BW06	Boulder Array	145.09	357	P	PKPbc	03 32 54.6	+1.5
PDAR	Pinedale Array	145.09	357	PKPbc	PKPbc	03 32 55.0	+1.8
	1.1nm,0.6s,baz=59,slow=2.2,SNR=10						
NVAR	Mina Array Bea	148.97	10	PKPbc	PKPdf	03 33 06.1	+3.7
	1.3nm,1.0s,baz=19,slow=2.1,SNR=6.7						
TXAR	Lajitas Array	157.16	341	PKPab	PKPab	03 33 45.0	+0.5
	0.6nm,1.0s,SNR=3.9						

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*NNC **13** 03:16:09.5±24.0, 34.98N×72.91E, h87^{km}±460^{km}, mpv3.6, Error ellipse: s-maj=372.8km s-min=218.9km az=95.0*
*NDI **13** 03:16:12.4±2.9, 33.69N×72.73E, h5^{km}, MD3.4, ML3.2*
ISC 13 03:16:00.5±1.4**, 34.90N**±0.09×**73.1E**±0.2**, h10**^{km}**, n6, σ1^{s}19**/11**, 3C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.28	138	*e*x	Pn	03 16 48.2	-4.9
THN				*e*S	Sn	03 17 31.3	-1.3
DLH	Dalhousie	3.34	134	*e*PG	Pg	03 17 09.0	+1.7
DLH				*e*S	Sn	03 17 33.0	-1.2
KLP	Kalpa	5.46	126	*e*P	Pn	03 17 29.9	+5.9
KLP				*e*S	Sn	03 18 28.3	+0.7
KLP				AML	AML	03 18 52.1	
	comp=E,45nm,0.4s						
KLP				AML	AML	03 18 52.7	
	comp=N,32nm,0.6s						
AAK	Ala-Archa	7.80	8	⇓P	Pn	03 18 00.3	+3.4
	comp=N,6.2nm,1.6s						
AAK				⇑S	Sn	03 19 26.0	-0.2
	comp=N,3.4nm,1.1s						
KK31	Karatay Array	8.44	347	⇑P	P	03 18 06.7	+0.9
	comp=N,0.7nm,0.3s,baz=154,slow=11,SNR=41						
KK31				⇑S	Sn	03 19 40.9	-1.3
	comp=N,0.5nm,0.5s,baz=171,slow=23,SNR=5.4						
AB31	Akbulak array	17.32	330	⇓P	P	03 20 03.6	-0.3
	comp=N,0.1nm,0.5s,baz=150,slow=14,SNR=4.9						

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*BJI **13** 03:39:30.5, 20.55S×178.49W, h527^{km}, mB4.7, mb4.6*
*MOS **13** 03:39:31.4±3.1, 20.60S×178.76W, h507^{km}, mb4.5/1, Error ellipse: s-maj=18.2km s-min=14.5km az=80.1*
*NEIC **13** 03:39:31.1±1.0, 20.55S×178.60W, h527^{km}±12^{km}, mb4.5/10, Error ellipse: s-maj=14.7km s-min=9.8km az=134.0*
*IDC **13** 03:39:39.6±2.1, 20.87S×178.74W, h629^{km}±26^{km}, mb3.7/9, mb1 3.9/11, mb1mx3.7/16, mbtmp4.7/11, Error ellipse: s-maj=22.9km s-min=13.4km az=161.0*
ISC 13 03:39:29.6±1.1**, 20.61S**±0.08×**178.62W**±0.08**, h512**^{km}±14^{km}**, n118, σ0^{s}86**/49**, mb4.3**/21**, 8C-10D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	8.63	176	P	P	03 41 33.6	-0.2
AFI	Afiamalu	9.34	46	P	P	03 41 40.6	-0.6
DZM	Mont Dzumac	13.99	261	P	P	03 42 35.6	+6.1
	1.0nm,0.3s,baz=72,slow=16,SNR=13						
URZ	Urewera	17.97	191	P	P	03 43 09.6	+0.7
	2.3nm,0.3s,baz=356,slow=3.4,SNR=9.0						
URZ				S	S	03 45 57.6	-8.2
	0.5nm,0.3s,baz=169,slow=20,SNR=3.6						
PMG	Port Moresby	34.80	284	P	P	03 45 40.0	+1.7
	25nm,0.8s,mb4.8,baz=57,slow=2.8,SNR=10						
PMG	Port Moresby	34.80	284	*e*P	P	03 45 40.1	+1.8
	23nm,0.9s,mb4.7						
PMG	Port Moresby	34.80	284	*d* *i*P	P	03 45 39.8	+1.6
STKA	Stephens Creek	37.21	244	⇓*i*P	P	03 45 59.6	+1.6
	3.3nm,0.6s,mb4.0						
STKA	Stephens Creek	37.21	244	P	P	03 45 59.6	+1.6
	3.4nm,0.5s,mb4.1,baz=92,slow=9.7,SNR=14						
ASPA	Alice Springs	43.93	257	*e*P	P	03 46 52.4	+0.4
ASPA				*e*S	S	03 52 39.1	-7.3
WB2	Warramunga Arr	43.99	262	⇓*i*P	P	03 46 52.3	-0.3
WB2				*e*S	S	03 52 39.4	-8.0
WRAB	Tennant Creek	44.00	262	*e*P	P	03 46 52.1	-0.5
	22nm,1.0s,mb4.7						
WRAB	Tennant Creek	44.00	262	⇓*i*P	P	03 46 51.3	-1.3
WRA	Warramunga Arr	44.01	262	P	P	03 46 52.5	-0.2
	8.8nm,0.5s,mb4.5,baz=96,slow=8.5,SNR=48						
WRA				S	S	03 52 40.3	-7.3
	2.1nm,0.9s,baz=95,slow=14,SNR=9.4						
KAKA	Kakadu	47.39	272	⇓*i*P	P	03 47 36.7	+18
	11nm,0.7s,mb4.5						
FORT	Forrest	48.71	247	*e*P	P	03 47 28.0	-0.6
	17nm,0.6s,mb4.8						
FITZ	Fitzroy Crossi	52.43	263	*e*P	P	03 47 55.5	-0.6
	8.4nm,0.5s,mb4.3						
KLBR	Kellerberrin	57.48	245	*e*P	P	03 48 29.9	-1.3
	111nm,2.0s,mb4.7						
SBA	Scott Base	57.72	184	*e*P	P	03 48 33.2	+0.9
VNDA	Vanda	57.75	185	*e*P	P	03 48 32.6	+0.1
	0.7nm,0.6s						
QSPA	South Pole Qui	69.46	180	*e*P	P	03 49 46.7	-0.1
MJAR	Matsushiro Arr	69.95	324	P	P	03 49 49.8	-0.7
	4.4nm,0.6s,mb4.2,baz=159,slow=6.5,SNR=21						
MJAR	Matsushiro Arr	69.95	324	*e*P	P	03 49 49.8	-0.7
KSM	Kuching	72.85	278	*e*P	P	03 50 07.1	-0.8
ASAJ	Asahikawa	73.55	332	P	P	03 50 12.2	+1.0
	6.0nm,0.5s,mb4.3,baz=211,slow=5.9						
NJ2	Nanjing	79.50	310	*e*P	P	03 50 44.3	+0.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
CMB	Columbia Colle	79.94	43	*e*P	P	03 50 46.6	+0.6
	comp=Z,1.8nm,0.6s,mb3.6						
MDJ	Mudanjiang	80.28	325	P	P	03 50 47.8	+0.2
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,120nm,5.5s						
MTUM	Tungsten Hills	80.73	44	*e*P	P	03 50 51.5	+1.3
NVAR	Mina Array Bea	81.51	44	P	P	03 50 55.0	+0.9
	comp=Z,3.1nm,0.7s,mb3.9,baz=230,slow=9.4,SNR=26						
NVAR	Mina Array Bea	81.51	44	P	P	03 50 55.0	+0.9
SLKM	Skilak Lake	84.05	14	*e*P	P	03 51 05.9	-0.4
HLID	Hailey	86.79	41	*e*P	P	03 51 20.6	+0.7
	comp=Z,13nm,1.6s,mb4.3						
TXAR	Lajitas Array	87.61	58	P	P	03 51 25.3	+1.2
	comp=Z,1.7nm,0.8s,mb3.9,baz=220,slow=6.5,SNR=24						
TXAR	Lajitas Array	87.61	58	P	P	03 51 25.3	+1.2
ANMO	Albuquerque	87.93	51	*i* P	P	03 51 24.0	-1.5
VNA3	Neumayer Olymp	88.07	176	⇑*i*	P	03 51 24.2	-1.1
COLA	College	88.44	13	*e*P	P	03 51 26.1	-1.1
	comp=Z,17nm,1.4s,mb4.6						
COLA	College	88.44	13	*i* P	P	03 51 26.3	-0.8
IMA2	Indian Mountai	88.45	10	*e*P	P	03 51 26.5	-0.6
VNA2	Neumayer--Watz	88.50	177	⇑*i*	P	03 51 26.7	-0.6
ILAR	Eielson Array	88.55	13	P	P	03 51 26.3	-1.4
	comp=Z,4.3nm,0.8s,mb4.3,baz=222,slow=5.6,SNR=28						
HHC	Hu-ho-hao-te	89.01	315	*e*P	P	03 51 31.5	+1.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
BW06	Boulder Array	89.44	43	*e*P	P	03 51 32.2	-0.2
	comp=Z,2.3nm,0.6s,mb4.2						
PDAR	Pinedale Array	89.44	43	P	P	03 51 32.6	+0.2
	comp=Z,2.8nm,0.6s,mb4.3,baz=216,slow=4.0,SNR=33						
MKAR	Makanchi Array	110.85	313	PKiKP		03 57 01.9	
	comp=Z,0.7nm,0.4s,baz=121,slow=1.1,SNR=22						
KURK	Kurchatov	113.68	317	PKIKP	PKPdf	03 57 06.9	-2.1
KURK				pmax	pmax		
	comp=Z,11nm,2.2s						
VOSK	Vostochnaya	118.45	320	PKIKP	PKPdf	03 57 16.0	-2.2
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CHKZ	Chkalovo	118.61	321	PKIKP	PKPdf	03 57 16.1	-2.4
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVA0	Borovoye Array	118.79	320	*i* PKIKP	PKPdf	03 57 17.2	-1.7
BVAR	Borovoye Array	118.79	320	PKP	PKPdf	03 57 17.3	-1.6
	comp=Z,4.0nm,0.4s,baz=128,slow=1.8,SNR=39						
KKAR	Karatay Array	118.86	309	*i* PKIKP	PKPdf	03 57 17.5	-1.8
ARU	Arti	124.96	325	⇑*i*PKIKP	PKPdf	03 57 28.6	-2.0
AKTO	Aktyubinsk	126.76	318	PKP	PKPdf	03 57 33.5	-0.8
	comp=Z,2.5nm,0.7s,baz=95,slow=3.7,SNR=8.8						
ARCES	ARCESS Array B	128.92	349	PKP	PKPdf	03 57 36.5	-1.5
	comp=Z,2.5nm,0.5s,baz=29,slow=1.3,SNR=12						
ARCES	ARCESS Array B	128.92	349	PKP	PKPdf	03 57 36.5	-1.5
FINES	FINESS Array B	135.71	343	PKP	PKPdf	03 57 51.0	+0.1
	comp=Z,1.2nm,0.7s,baz=108,slow=3.4,SNR=3.8						
FINES	FINESS Array B	135.71	343	⇑*i*PKIKP	PKPdf	03 57 54.5	+3.6
NB2	NORSAR Subarra	139.02	353	PKPabc	PKPdf	03 57 48.4	-8.5
	comp=Z,0.5nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	139.02	353	PKhKP		03 57 48.0	
	comp=Z,1.1nm,0.8s,baz=14,slow=2.3,SNR=2.8						
NOA				PKP	PKPdf	03 57 55.4	-1.5
	comp=Z,0.8nm,0.7s,baz=29,slow=2.0,SNR=3.3						
NOA	NORSAR Array B	139.02	353	PKP	PKPdf	03 57 48.0	-8.9
NOA				PKP	PKPdf	03 57 55.4	-1.5
NAO	NORSAR Subarra	139.28	353	PKPab	PKPdf	03 57 48.4	-9.0
HFS	Hagfors	139.56	351	PKhKP		03 57 48.5	
	comp=Z,3.1nm,0.4s,baz=90,slow=1.5,SNR=34						
SUW	Suwalki	142.73	339	*e*PKP	PKPdf	03 58 00.8	-2.7
SUW	Suwalki	142.73	339	*e*P	PKPdf	03 58 00.8	-2.7
AKASG	Malin Array Be	142.83	331	PKP	PKPdf	03 58 00.0	-3.7
	comp=Z,14nm,0.4s,baz=43,slow=4.3,SNR=4.2						
SIM	Simferopol’	143.70	320	*e*PKHKP		03 58 04.8	
SIM				pmax	pmax		
	comp=Z,32nm,0.8s						
EKA	Eskdalemuir Ar	145.16	5	PKPbc	PKPbc	03 58 07.5	-1.2
	comp=Z,4.3nm,0.8s,baz=357,slow=2.8,SNR=8.9						
KWP	Kalwaria	146.44	335	*e*PKP	PKPdf	03 58 12.2	+2.2
KWP	Kalwaria	146.44	335	*e*P	PKPdf	03 58 12.2	+2.2
BR131	Keskin Array S	146.48	312	*e*PKPdf	PKPdf	03 58 12.0	+1.6
BRTR	Keskin Array B	146.48	312	PKPbc	PKPbc	03 58 12.1	-0.2
	comp=Z,4.2nm,0.6s,baz=137,slow=4.6,SNR=26						
ANTO	Ankara	147.00	313	*e*PKPdf	PKPdf	03 58 13.6	+2.4
OJC	Ojcow	147.05	338	*e*PKP	PKPdf	03 58 13.7	+2.8
KOLS	Kolonicke sedl	147.16	334	*e*PKP	PKPdf	03 58 14.5	+3.3
KOLS				*e*		03 58 17.9	
CRVS	Cervenica-Dubn	147.51	335	*e*PKP	PKPdf	03 58 15.0	+3.3
CRVS				*e*		03 58 19.7	
NIE	Niedzica	147.53	337	*e*PKP	PKPdf	03 58 15.9	+4.2
KSP	Ksiaz	147.62	342	*e*PKP	PKPdf	03 58 15.9	+4.0
MLR	Muntele Rosu	148.00	327	PKPbc	PKPdf	03 58 16.2	+3.6
	comp=Z,4.7nm,0.4s,baz=333,slow=7.5,SNR=30						
UPC	Upice	148.00	342	*e*PKPbc	PKPdf	03 58 16.2	+3.7
UPC				*e*PKPab	PKPab	03 58 21.6	-1.7
CLL	Collm	148.03	346	⇓*i*PKHKP		03 58 16.2	
CLL				*i*		03 58 21.3	
CLL				pmax	pmax		
	comp=Z,14nm,0.8s						
CLZ	Clausthal	148.05	349	*e*PKPbc	PKPdf	03 58 16.7	+4.2
DPC	Dobruska-Polom	148.05	342	*e*PKPbc	PKPdf	03 58 16.6	+4.1
DPC				*e*PKPab	PKPab	03 58 21.7	-1.8
BRG	Berggiesshubel	148.22	345	*i* P	PKPdf	03 58 17.0	+4.2
BRG				*i*		03 58 22.0	
BRG	Berggiesshubel	148.22	345	*i* PKHKP		03 58 17.0	
BRG				*i*		03 58 22.0	
BRG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KECS	Kecovo	148.23	336	*e*PKP	PKPdf	03 58 17.2	+4.3
KECS				*e*		03 58 21.8	
PVCC	Panska Ves	148.38	344	*e*PKPbc	PKPdf	03 58 17.4	+4.3
VYHS	Vyhne	148.84	337	*e*PKP	PKPdf	03 58 18.3	+4.4
VYHS				*e*		03 58 25.4	
PRU	Pruhonice	148.88	343	*e*PKPbc	PKPdf	03 58 18.4	+4.5
VRAC	Vranov	148.89	341	PKPbc	PKPdf	03 58 18.8	+4.9
	comp=Z,5.9nm,1.1s,baz=232,slow=3.6,SNR=3.4						
MOX	Moxa	148.96	347	*e*PKP	PKPdf	03 58 18.6	+4.6
MOX				*e*PKPab	PKPab	03 58 25.4	-1.8
NKC	Novy Kostel	149.17	346	*e*PKPbc	PKPdf	03 58 18.9	+4.6
NKC				*e*PKPab	PKPab	03 58 25.0	-3.1
TREC	Trest	149.24	342	*e*PKPbc	PKPdf	03 58 19.3	+4.8
TREC				*e*PKPab	PKPab	03 58 26.6	-1.8
KHC	Kasperske Hory	149.92	344	*e*PKPbc	PKPdf	03 58 20.9	+5.3
KHC				*e*PKPab	PKPab	03 58 29.7	-1.5
TNS	Taunus Mts	149.93	351	*e*PKPbc	PKPdf	03 58 21.1	+5.5
TNS				*e*PKPab	PKPab	03 58 29.3	-1.9
GRA1	Grafenberg Arr	149.94	347	*e*PKPbc	PKPdf	03 58 21.1	+5.5
GRA1				*e*PKPab	PKPab	03 58 30.1	-1.2
GRF	Grafenberg Arr	149.94	347	*e*PKP	PKPdf	03 58 21.1	+5.5
GRF				*e*PKP	PKPab	03 58 30.1	-1.2
WET	Wettzell	150.08	345	*e*PKPbc	PKPdf	03 58 21.4	+5.6
WET				*e*PKPab	PKPab	03 58 30.6	-1.3
GEC2	GERESS Array S	150.15	344	*e*PKPbc	PKPdf	03 58 21.5	+5.6
GERES	GERESS Array B	150.15	344	PKPbc	PKPdf	03 58 21.3	+5.4
	comp=Z,3.8nm,0.7s,baz=25,slow=2.2,SNR=32						
MOA	Molln	150.90	342	⇓*i*P	PKPdf	03 58 22.6	+5.5
	comp=Z,2.2nm,0.5s						
FUR	Furstenfeldbru	151.37	346	*e*PKPbc	PKPdf	03 58 24.3	+6.5
FUR				*e*PKPab	PKPab	03 58 35.9	-1.4
FUR	Furstenfeldbru	151.37	346	*e*PKIKP	PKPab	03 58 35.9	-1.4
PERS	Pernice	151.72	340	*i* PKPbc	PKPdf	03 58 24.2	+5.9
BFO	Black Forest	151.78	350	*e*PKPbc	PKPdf	03 58 24.9	+6.6
BFO				*e*PKPab	PKPab	03 58 37.1	-2.0
BFO	Black Forest	151.78	350	*e*PKIKP	PKPab	03 58 37.1	-2.0
KBA	Koelnbreinsper	151.86	343	⇑*e*P	PKPdf	03 58 24.6	+6.1
	comp=Z,5.3nm,0.9s						
WATA	Walderalm	152.08	345	⇑*i*P	PKPdf	03 58 25.6	+6.8
	comp=Z,2.2nm,0.4s						
WTTA	Wattenberg	152.14	345	⇓*i*P	PKPdf	03 58 25.9	+7.1
	comp=Z,5.6nm,0.4s						
WTTA	Wattenberg	152.14	345	⇓P	PKPdf	03 58 25.9	+7.0
MOTA	Moosalm	152.19	346	⇑*i*P	PKPdf	03 58 25.7	+6.8
	comp=Z,3.9nm,0.8s						
MOTA	Moosalm	152.19	346	⇑P	PKPdf	03 58 25.7	+6.8
SQTA	Sankt Quirin	152.28	346	⇓*i*P	PKPdf	03 58 25.8	+6.8
	comp=Z,2.5nm,0.5s						
LJU	Ljubljana	152.43	340	*i* PKPbc	PKPdf	03 58 26.2	+6.9
BOJS	Bojanci	152.67	338	*i* PKPbc	PKPdf	03 58 27.1	+7.4
CEY	Cerknica	152.74	340	*i* PKPbc	PKPdf	03 58 26.9	+7.1
DAVOS	Davos	152.95	347	PKIKP	PKPdf	03 58 27.8	+7.8
DAVOX	Davos	152.99	347	PKPbc	PKPdf	03 58 27.8	+7.8
	comp=Z,5.5nm,0.5s,baz=242,slow=3.1,SNR=21						
DAVOX				PKPab	PKPab	03 58 42.8	-1.4
	comp=Z,2.5nm,0.5s,baz=1.5,slow=22,SNR=3.8						

GUC 13 03:46:55.9±0.7**, 29.30S**×**69.04W, h135**^{km}±22^{km}**, MD4.1, ML4.3, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.77	240	⇑*i*P	P	03 47 29.8	+2.0
TLL				*i* S	S	03 47 54.6	+2.5
TLL				AMP		03 47 59.2	
	comp=E,1µm,0.3s						
CPCH	Copiapo	2.25	329	⇑*i*P	P	03 47 33.3	-0.4
CPCH				*i* S	S	03 48 01.6	-1.1
CPCH				AMP		03 48 05.4	
	comp=E,2µm,0.2s						
CMCH	Combarbala	2.53	222	⇓*i*P	P	03 47 37.4	0.0
CMCH				*i* S	S	03 48 08.7	-0.2
CMCH				AMP		03 48 11.2	
	comp=E,2µm,0.4s						
CDCH	Caldera	2.72	324	*e*P	P	03 47 39.6	-0.3
CDCH				*i* S	S	03 48 12.8	-0.5
CHNG	Los Chungos	3.34	219	*e*P	P	03 47 47.6	-0.4
CHNG				*i* S	S	03 48 26.6	-1.1
CHNG				AMP		03 48 39.9	
	comp=E,317nm,0.2s						
JACH	Jahuel	3.63	201	*i* P	P	03 47 52.1	+0.3
PEL	Peldehue	4.09	200	*i* P	P	03 47 53.4	-4.5
FCH	Farellones	4.16	195	⇑*i*P	P	03 47 59.3	+0.5
FCH				*i* S	S	03 48 47.7	+0.5
RCDM	Rinconada Maip	4.45	199	*e*P	P	03 48 01.6	-1.0
TACH	Talagante	4.64	200	*e*P	P	03 48 04.2	-1.1
CPN1	Cerro Paranal	4.81	345	*e*P	P	03 48 08.0	+0.5
CPN1				*i* S	S	03 49 01.7	-1.0
CHCH	Chadas Angostu	4.83	196	*e*P	P	03 48 07.7	0.0
LNV	Longovilo	5.07	203	*e*P	P	03 48 08.5	-2.5
CEN1	Los Morros	5.97	350	*e*P	P	03 48 19.8	-3.2
CEN1				*i* S	S	03 49 24.6	-6.2

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*IDC **13** 03:56:06.7±1.7, 17.11N×73.78E, mb3.7/7, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, MS3.7/2, Ms1 3.7/2, ms1mx2.9/24, Error ellipse: s-maj=46.1km s-min=27.0km az=53.0*
*NDI **13** 03:56:08.1±5.2, 17.17N×73.79E, h10^{km}±16^{km}, MD3.8, ML3.6*
*NEIC **13** 03:56:08.9±0.7, 17.29N×74.04E, h10^{km}, ML3.7(MERI), Error ellipse: s-maj=12.1km s-min=10.0km az=86.0*
NEIC Felt at Warnawati.
ISC 13 03:56:10.4±0.7**, 17.26N**±0.06×**74.14E**±0.06**, h37**^{km}±5^{km}**, n35, σ1^{s}13**/38**, mb3.6**/7**, MS3.7**/2**, 1C-1D, Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAD	Karad	0.07	37	⇑*i*P	P	03 56 15.7	-0.8
KAD				*e*S	S	03 56 21.3	+0.5
KAD				AML	AML	03 56 26.2	
	comp=E,2µm,0.4s						
KAD				AML	AML	03 56 26.5	
	comp=N,3µm,0.4s						
POO	Poona	1.30	348	*e*P	P	03 56 33.7	+1.4
POO				*e*S	S	03 56 50.7	+1.9
POO				AML	AML	03 56 53.6	
	comp=N,2µm,0.4s						
POO				AML	AML	03 56 53.9	
	comp=E,1µm,0.2s						
BOM	Bombay	2.06	322	*i* P	P	03 56 42.8	-0.5
BOM				*e*S	S	03 57 06.4	-1.6
LATR	Latur	2.58	63	*e*P	P	03 56 57.2	+6.6
LATR				*e*SB	S	03 57 39.1	+18
HYB	Hyderabad	4.22	87	*i* Pn	P	03 57 16.0	+2.1
HYB				*e*Pg	P	03 57 28.0	+14
HYB				*e*Sn	S	03 58 06.5	+3.9
HYB				*e*Sg	S	03 58 27.5	+25
HYB	Hyderabad	4.22	87	*e*Pn	P	03 57 16.0	+2.1
HYB				*e*Pg	P	03 57 28.0	+14
HYB				*e*Sn	S	03 58 06.5	+3.9
HYB				*e*Sg	S	03 58 27.5	+25
MNGI	Mangalore	4.34	171	*e*x	x	03 57 27.7	
MNGI				*e*SB	S	03 58 17.5	+12
AKL	Akola	4.38	38	⇓*i*x	x	03 56 40.6	
AKL				*i* x	x	03 57 20.6	
BHPL	Bhopal	6.71	27	*e*x	x	03 59 06.6	
BHPL				AML	AML	03 59 45.5	
	comp=N,67nm,0.4s						
BHPL				AML	AML	03 59 45.7	
	comp=E,130nm,0.8s						
VIS	Vishakhapatnam	8.78	86	*e*S	S	03 59 55.5	-1.1
BLSP	Bilaspur	8.95	56	*e*S	S	03 59 57.9	-3.0
ALBI	Allahabad	10.73	40	*e*x	x	04 01 13.0	
ALBI				*e*x	x	04 01 45.0	
NDI	New Delhi	11.72	13	*e*x	x	04 00 44.5	
NDI				*e*x	x	04 02 09.5	
PALK	Pallekele	11.81	146	P	P	03 58 58.1	-1.2
PALK				S	S	04 00 52.7	-18
BOK	Bokaro	12.78	57	*e*S	S	04 01 28.9	-5.3
PTH	Pithoragarh	13.44	23	*e*x	x	04 03 10.0	
KOLN	Koldanda	13.62	38	*e*Pn	P	03 59 23.3	-0.2
KOLN				*e*Sn	S	04 01 48.1	-6.5
	comp=E,32nm,0.7s						
GKN	Gorkha	14.42	40	*e*Pn	P	03 59 33.6	-0.4
GKN				*e*Sn	S	04 02 06.2	-7.3
	comp=E,38nm,0.7s						
DMN	Daman	14.44	43	*e*Pn	P	03 59 33.6	-0.6
PKI	Pulchoki	14.62	43	*e*Pn	P	03 59 35.2	-1.3
KKN	Kakani	14.68	42	*e*Pn	P	03 59 37.3	0.0
GUN	Gumba	15.15	44	*e*Pn	P	03 59 43.6	+0.1
THN	Thein Dam	15.18	5	*e*x	x	03 59 52.2	
JIRN	Jiri	15.19	45	*e*Pn	P	03 59 44.4	+0.4
SHL	Shillong	18.46	60	*e*S	S	04 03 57.0	+11
SHL				*e*x	x	04 05 54.0	
MKAR	Makanchi Array	30.22	11	P	P	04 02 20.1	+0.4
	comp=E,0.3nm,0.6s,mb3.2,baz=209,slow=11,SNR=2.4						
ATD	Arta Tunnel	30.82	264	LR	LR	04 12 04.3	
	comp=E,40nm,18.8s,MS3.1,baz=103,slow=31						
BVAR	Borovoye Array	35.81	356	P	P	04 03 08.6	+0.5
	comp=E,0.5nm,0.6s,mb3.6,baz=169,slow=7.3,SNR=3.3						
ZAL	Zalesovo	37.53	10	P	P	04 03 23.4	+0.8
	comp=E,0.9nm,0.5s,mb3.8,baz=343,slow=6.7,SNR=3.6						
SONM	Songino Array	40.33	34	P	P	04 03 49.5	+3.6
	comp=E,0.6nm,0.7s,mb3.4,baz=240,slow=6.2,SNR=6.8						
BRTR	Keskin Array B	41.58	311	P	P	04 03 55.4	-0.9
	comp=E,0.6nm,0.8s,mb3.3,baz=96,slow=13,SNR=3.8						
ARCES	ARCESS Array B	60.13	342	P	P	04 06 15.7	-0.6
	comp=E,2.4nm,0.8s,mb4.3,baz=112,slow=4.9,SNR=5.6						
WRA	Warramunga Arr	69.70	119	P	P	04 07 20.1	+1.3
	comp=E,1.0nm,0.6s,mb4.0,baz=307,slow=5.6,SNR=8.6						
WRAB	Tennant Creek	69.71	119	*e*P	P	04 07 19.6	+0.8
SFJD	Kangerlussuaq	86.74	341	LR	LR	04 48 02.4	
	comp=E,111nm,19.1s,MS4.3,baz=328,slow=36						

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*IDC **13** 04:42:33.0±1.8, 23.97S×66.95W, h169^{km}±16^{km}, mb4.0/11, mb1 4.2/15, mb1mx4.1/18, mbtmp4.5/15, Error ellipse: s-maj=17.4km s-min=10.4km az=70.0*
*BJI **13** 04:42:33.3, 24.00S×66.90W, h172^{km}, mB4.5*
*NEIC **13** 04:42:33.3±0.5, 24.01S×66.90W, h173^{km}±5^{km}, mb4.4/15, Error ellipse: s-maj=7.7km s-min=5.3km az=70.0*
*GUC **13** 04:42:35.7±1.3, 24.08S×67.49W, h200^{km}±31^{km}, ML4.9*
ISC 13 04:42:31.1±0.5**, 24.07S**±0.03×**66.99W**±0.05**, h166**^{km}±5^{km}**, n72, σ1^{s}20**/71**, mb4.2**/19**, 5C-5D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.60	316	⇑*i*P	P	04 43 07.9	+4.7
SPCH				*i* S	S	04 43 34.2	+6.0
SPCH				AMP		04 43 36.0	
	comp=N,4µm,0.6s						
CEN1	Los Morros	3.02	282	⇓*i*P	P	04 43 23.1	+3.2
CEN1				*i* S	S	04 43 58.2	+0.7
CEN1				AMP		04 44 02.3	
	comp=N,3µm,0.7s						
ANCH	Antofagasta	3.15	276	⇑*i*P	P	04 43 23.8	+2.1
ANCH				*i* S	S	04 43 59.5	-1.1
ANCH				AMP		04 44 03.5	
	comp=N,5µm,0.5s						
CPN1	Cerro Paranal	3.16	259	⇑*i*P	P	04 43 23.8	+2.0
CPN1				*i* S	S	04 44 00.9	+0.2
CPN1				AMP		04 44 04.4	
	comp=E,3µm,0.4s						
CPCH	Copiapo	4.47	222	*e*P	P	04 43 37.5	-1.0
CPCH				*i* S	S	04 44 28.7	-2.0
CDCH	Caldera	4.58	228	⇑*i*P	P	04 43 39.7	-0.4
CDCH				*i* S	S	04 44 30.7	-2.7
CFAA	Coronel Fontan	7.59	188	P	P	04 44 21.2	+1.4
	comp=E,0.3nm,0.3s,baz=359,slow=13,SNR=45						
CFAA				S	S	04 45 43.0	-1.8
	comp=E,0.8nm,0.3s,baz=271,slow=22,SNR=12						
LPAZ	La Paz	7.81	352	P	P	04 44 24.8	+2.0
	comp=E,1.8nm,0.3s,baz=160,slow=9.6,SNR=56						
LPAZ				S	S	04 45 49.2	-0.8
	comp=E,0.7nm,0.3s,baz=337,slow=18,SNR=3.6						
LPAZ	La Paz	7.81	352	*e*P	P	04 44 24.4	+1.5
	comp=E,14nm,0.9s						
ARE	Arequipa	8.66	330	*e*P	P	04 44 32.0	-2.1
ARE				*e*S	S	04 46 06.0	-4.2
CPUP	Villa Florida	9.03	106	*e*P	P	04 44 39.5	+0.6
	comp=E,72nm,0.5s						
CPUP				*e*		04 44 50.4	
SIV	San Ignacio	9.77	36	P	P	04 44 48.4	-0.2
	comp=E,2.0nm,0.3s,baz=217,slow=14,SNR=105						
SIV				S	S	04 46 29.7	-6.6
	comp=E,0.4nm,0.3s,baz=238,slow=16,SNR=4.3						
TRQA	Tornquist	14.59	164	*e*P	P	04 45 50.9	+0.3
	comp=E,16nm,0.5s						
SAML	Samuel	15.47	14	*e*P	P	04 46 00.6	-1.1
	comp=E,3.7nm,0.7s						

PLCA	**Paso Flores**	**16.89**	**189**	P	**P**	**04 46 19.4**	**+0.5**
	comp=E,0.7nm,0.3s,baz=7.6,slow=13,SNR=18						
PLCA				PcP	PcP	04 50 55.9	-0.9
	comp=E,0.2nm,0.3s,baz=295,slow=8.6,SNR=6.2						
PLCA	**Paso Flores**	**16.89**	**189**	*e*P	**P**	**04 46 19.1**	**+0.2**
	comp=E,17nm,0.8s						
BDFB	**Brasilia**	**19.70**	**68**	P	**P**	**04 46 49.7**	**+0.2**
	comp=E,12nm,0.3s,baz=249,slow=10,SNR=215						
BAO	**Brasilia Array**	**19.72**	**68**	P	**P**	**04 46 49.0**	**-0.8**
EFI	**East Falkland**	**28.41**	**168**	P	**P**	**04 48 11.1**	**-0.8**
VNA3	**Neumayer Olymp**	**57.09**	**161**	*e*	**P**	**04 52 03.8**	**+2.1**
VNA3	**Neumayer Olymp**	**57.09**	**161**	*e*	**P**	**04 52 08.5**	**+6.8**
VNA3	**Neumayer Olymp**	**57.09**	**161**	⇓*i*P	**P**	**04 52 02.0**	**+0.3**
VNA3				*e*		04 52 03.8	
VNA3				*e*		04 52 08.5	
VNA3				*e*		04 52 53.7	
VNA1	**Neumayer--Stat**	**57.28**	**160**	*e*	**P**	**04 52 05.8**	**+2.7**
VNA1	**Neumayer--Stat**	**57.28**	**160**	*e*	**P**	**04 52 10.1**	**+7.0**
VNA1	**Neumayer--Stat**	**57.28**	**160**	⇓*i*P	**P**	**04 52 03.9**	**+0.8**
VNA1				*e*		04 52 05.8	
VNA1				*e*		04 52 10.1	
VNA1				*e*		04 52 55.7	
VNA2	**Neumayer--Watz**	**57.65**	**160**	*e*	**P**	**04 52 07.5**	**+1.8**
VNA2	**Neumayer--Watz**	**57.65**	**160**	*e*	**P**	**04 52 12.4**	**+6.7**
VNA2	**Neumayer--Watz**	**57.65**	**160**	⇓*i*P	**P**	**04 52 06.0**	**+0.3**
VNA2				*e*		04 52 07.5	
VNA2				*e*		04 52 12.4	
VNA2				*e*		04 52 56.6	
SNAA	**Sanae**	**59.28**	**161**	P	**P**	**04 52 17.0**	**0.0**
	comp=E,1.8nm,0.6s,mb4.0,baz=286,slow=7.0,SNR=51						
SNAA				PcP	PcP	04 53 03.0	-0.1
	comp=E,1.4nm,0.6s,baz=256,slow=4.4,SNR=6.9						
SNAA	**Sanae**	**59.28**	**161**	*e*P	**P**	**04 52 16.3**	**-0.8**
	comp=E,2.1nm,0.6s,mb4.1						
SNAA				*e*PcP	PcP	04 53 02.8	-0.3
SWET	**Sewanee**	**61.63**	**342**	*e*P	**P**	**04 52 30.4**	**-3.1**
ELN	**Prospectdale**	**62.33**	**348**	*e*P	**P**	**04 52 37.1**	**-1.0**
TXAR	**Lajitas Array**	**63.74**	**324**	P	**P**	**04 52 46.4**	**-1.1**
	comp=E,1.5nm,0.8s,mb3.9,baz=154,slow=8.7,SNR=17						
TXAR				PcP	PcP	04 53 21.5	-0.3
	comp=E,0.4nm,0.7s,baz=157,slow=9.5,SNR=3.6						
GDL2	**Guadalupe Moun**	**66.37**	**326**	*e*P	**P**	**04 53 03.7**	**-0.6**
MNTX	**Cornudas Mount**	**66.51**	**325**	*e*P	**P**	**04 53 03.3**	**-1.9**
	comp=E,8.0nm,1.2s,mb4.4						
DBIC	**Dimbokro**	**67.81**	**72**	P	**P**	**04 53 12.7**	**-0.9**
	comp=E,4.3nm,0.5s,mb4.4,baz=209,slow=7.6,SNR=18						
DBIC	**Dimbokro**	**67.81**	**72**	*e*P	**P**	**04 53 12.6**	**-1.0**
	comp=E,4.0nm,0.5s,mb4.4						
BNM	**Barren Site**	**69.07**	**325**	P	**P**	**04 53 19.3**	**-1.7**
LPM	**Los Pinos Moun**	**69.20**	**326**	*e*P	**P**	**04 53 21.6**	**-0.2**
ANMO	**Albuquerque**	**69.61**	**326**	P	**P**	**04 53 24.4**	**+0.2**
	comp=E,5.9nm,0.8s,mb4.4,baz=139,slow=6.7,SNR=25						
ANMO	**Albuquerque**	**69.61**	**326**	*e*P	**P**	**04 53 23.8**	**-0.5**
	comp=E,6.4nm,0.9s,mb4.3						
WUAZ	**Wupatki**	**72.64**	**323**	*e*P	**P**	**04 53 42.9**	**+0.6**
	comp=E,9.6nm,0.9s,mb4.5						
PV01	**Paradox Valley**	**73.15**	**327**	*e*P	**P**	**04 53 45.7**	**+0.4**
SMCO	**Snowmass**	**73.19**	**329**	*e*P	**P**	**04 53 46.3**	**+0.8**
	comp=E,6.6nm,0.9s,mb4.4						
SYO	**Syowa Base**	**73.48**	**159**	⇓P	**P**	**04 53 45.0**	**-1.6**
SYO	**Syowa Base**	**73.48**	**159**	⇑PcP	PcP	04 53 59.4	-2.5
VNDA	**Vanda**	**74.64**	**190**	*e*P	**P**	**04 53 54.8**	**+1.7**
	comp=E,3.6nm,1.0s,mb4.0						
MSU	**Marysvale**	**75.29**	**325**	*e*P	**P**	**04 53 58.3**	**+0.8**
MVU	**Marysvale**	**75.30**	**325**	*e*P	**P**	**04 53 58.4**	**+0.8**
	comp=E,6.5nm,0.8s,mb4.3						
ARUT	**Antelope Range**	**75.43**	**324**	*e*P	**P**	**04 53 59.6**	**+1.3**
PDAR	**Pinedale Array**	**77.21**	**329**	P	**P**	**04 54 08.2**	**0.0**
	comp=E,1.5nm,0.7s,mb3.8,baz=136,slow=7.5,SNR=12						
TSUM	**Tsumeb**	**77.63**	**106**	*e*P	**P**	**04 54 10.5**	**-0.4**
	comp=E,2.2nm,0.7s,mb3.9						
ULM	**Lac du Bonnet**	**78.29**	**342**	P	**P**	**04 54 13.1**	**-0.9**
	comp=E,6.5nm,0.5s,mb4.5,baz=151,slow=5.8,SNR=17						
SCHQ	**Schefferville**	**78.57**	**0**	P	**P**	**04 54 14.3**	**-1.0**
	comp=E,3.6nm,0.8s,mb4.0,baz=236,slow=10,SNR=6.8						
NVAR	**Mina Array Bea**	**78.59**	**321**	P	**P**	**04 54 16.5**	**+0.7**
	comp=E,1.2nm,0.6s,mb3.7,baz=138,slow=7.3,SNR=11						
HLID	**Hailey**	**80.15**	**327**	*e*P	**P**	**04 54 24.9**	**+0.9**
	comp=E,10.0nm,1.0s,mb4.4						
MCMT	**McKenzie Canyo**	**80.32**	**329**	*e*P	**P**	**04 54 26.1**	**+1.1**
BOSA	**Boshof**	**80.69**	**117**	P	**P**	**04 54 28.0**	**+0.7**
	comp=E,2.6nm,0.7s,mb4.0,baz=56,slow=3.5,SNR=5.5						
HRY	**Holter Researc**	**81.27**	**331**	*e*P	**P**	**04 54 30.4**	**+0.5**
MAW	**Mawson**	**81.37**	**163**	P	**P**	**04 54 31.2**	**+1.2**
	comp=E,8.3nm,0.8s,mb4.4,baz=208,slow=6.4,SNR=21						
NEW	**Newport**	**84.85**	**329**	P	**P**	**04 54 50.5**	**+2.6**
	comp=E,1.2nm,0.5s,mb3.9,baz=122,slow=3.9,SNR=4.2						
YKA	**Yellowknife Ar**	**94.19**	**340**	P	**P**	**04 55 31.1**	**-0.5**
	comp=E,2.7nm,0.5s,mb4.6,baz=129,slow=4.7,SNR=20						
ASPA	**Alice Springs**	**128.40**	**205**	*e*P	PKPdf	05 01 19.6	+1.0
WB2	**Warramunga Arr**	**131.57**	**207**	*e*P	PKPdf	05 01 26.0	+1.3
WRA	**Warramunga Arr**	**131.57**	**207**	PKhKP		05 01 14.1	
	comp=E,0.1nm,0.3s,baz=193,slow=1.0,SNR=5.4						
WRA				PKP	PKPdf	05 01 26.1	+1.3
	comp=E,3.5nm,0.5s,baz=159,slow=1.8,SNR=69						
BVAR	**Borovoye Array**	**136.84**	**37**	PKP	PKPdf	05 01 35.1	+1.5
	comp=E,0.7nm,0.5s,baz=273,slow=4.1,SNR=5.0						
ZAL	**Zalesovo**	**143.45**	**28**	PKhKP		05 01 43.8	
	comp=E,3.8nm,0.6s,baz=172,slow=4.5,SNR=19						
MKAR	**Makanchi Array**	**146.57**	**40**	PKPbc	PKPbc	05 01 52.6	+0.2
	comp=E,8.1nm,0.7s,baz=328,slow=2.2,SNR=58						
WMQ	**Urumqi**	**151.39**	**40**	*e*PKP	PKPdf	05 02 00.0	+1.5
MJAR	**Matsushiro Arr**	**155.03**	**306**	PKPbc	PKPdf	05 02 14.2	+10
	comp=E,1.2nm,0.4s,baz=74,slow=1.6,SNR=6.6						
MJAR				PKPab	PKPab	05 02 31.1	-0.4
	comp=E,2.2nm,0.8s,baz=108,slow=1.9,SNR=5.5						
SONM	**Songino Array**	**155.70**	**11**	PKP	PKPdf	05 02 07.1	+2.8
	comp=E,0.8nm,0.8s,baz=226,slow=0.4,SNR=6.2						
SONM				PKPbc	PKPdf	05 02 15.9	+12
	comp=E,0.6nm,0.5s,baz=319,slow=1.4,SNR=6.2						
SONM				PKPab	PKPab	05 02 33.6	-0.5
	comp=E,1.0nm,0.7s,baz=329,slow=4.7,SNR=6.2						
LZH	**Lanzhou**	**165.64**	**31**	*e*PKP	PKPdf	05 02 16.3	+0.7
LZH				APKP		05 03 00.3	
LZH				XPKP		05 03 18.0	

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*NEIC **13** 04:44:58.5, 15.54N×93.22W, h120^{km}, MD4.1(MEX), After MEX.*

MEX 13 04:44:59.1±1.4**, 15.37N×93.30W, h75^{km}**±82^{km}**, MD4.1, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	**1.44**	**51**	*i* P	P	04 45 21.9	-2.1
CCIG				*i* S	S	04 45 40.7	-1.7
CCIG	**Comitan**	**1.44**	**51**	*i* P	P	04 45 21.9	-2.1
CCIG				*e*S	S	04 45 40.8	-1.6
SCX	**San Cristobal**	**1.50**	**25**	*i* P	P	04 45 23.0	-1.8
SCX				*i* S	S	04 45 43.0	-0.7
CMIG	**Matias Romero**	**2.29**	**319**	*i* P	P	04 45 35.1	-0.4
CMIG				*e*S	S	04 45 59.0	-3.5
TUIG	**Tuzandepetl**	**2.86**	**338**	*i* P	P	04 45 42.1	-1.4
TUIG				*i* S	S	04 46 15.5	-1.3
TUIG	**Tuzandepetl**	**2.86**	**338**	*i* P	P	04 45 39.3	-4.2
TUIG				*e*S	S	04 46 10.7	-6.2
OXX	**Oaxaca**	**3.70**	**298**	*e*P	P	04 45 55.0	-0.3
VHO	**Vista Hermosa**	**3.71**	**298**	*e*P	P	04 45 53.3	-2.0
VHO				*e*S	S	04 46 35.0	-3.0
SCIG		**4.11**	**29**	*i* P	P	04 45 57.4	-3.6
SCIG				*i* S	S	04 46 44.7	-3.4

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*IDC **13** 05:01:24.7±4.5, 52.20N×179.66W, h171^{km}±67^{km}, mb2.9/4, mb1 3.3/6, mb1mx3.0/25, mbtmp3.6/6, Error ellipse: s-maj=56.8km s-min=39.3km az=135.0*

*NEIC **13** 05:01:25.9, 51.99N×179.43W, h164^{km}, MG2.8(AEIC), After AEIC.*

ISC 13 05:01:23.2±0.9**, 52.2N**±0.3×**179.6W**±0.1**, h167^{km}**±11^{km}**, n11, σ0^{s}55**/12**, mb3.3**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**1.50**	**107**	P	**P**	**05 01 54.5**	**+0.1**
KIKV	**Kanaga Island**	**1.51**	**102**	P	**P**	**05 01 54.8**	**+0.3**
GSCK	**Great Sitkin C**	**2.10**	**94**	P	**P**	**05 02 00.9**	**0.0**
ATKA	**Atka Island**	**3.30**	**88**	P	**P**	**05 02 15.1**	**-0.5**
FX1	**Attu Island--F**	**4.50**	**281**	P	**P**	**05 02 31.8**	**+0.7**
	1.9nm,0.3s,baz=141,slow=19,SNR=38						
FX1				S	**S**	**05 03 22.9**	**-0.6**
	8.9nm,0.3s,baz=314,slow=22,SNR=38						
KDAK	**Kodiak Island**	**16.38**	**59**	P	**P**	**05 05 04.0**	**-0.6**
	0.5nm,0.3s,baz=260,slow=6.1,SNR=16						
KDAK	**Kodiak Island**	**16.38**	**59**	P	**P**	**05 05 04.0**	**-0.6**
ILAR	**Eielson Array**	**20.90**	**40**	P	**P**	**05 05 54.1**	**+0.9**
	0.3nm,0.4s,baz=256,slow=12,SNR=4.5						
INK	**Inuvik**	**27.05**	**36**	P	**P**	**05 06 51.2**	**-0.1**
	2.9nm,1.2s,mb3.8,baz=233,slow=9.1,SNR=4.8						
NVAR	**Mina Array Bea**	**43.91**	**83**	P	**P**	**05 09 15.1**	**+0.5**
	0.4nm,0.7s,mb3.2,baz=302,slow=8.5,SNR=2.4						
TXAR	**Lajitas Array**	**58.99**	**81**	P	**P**	**05 11 06.5**	**-0.8**
	0.1nm,0.5s,mb2.9,baz=317,slow=6.4,SNR=4.3						

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*BYKL **13** 05:15:43.2±0.4, 57.43N×120.91E, h3^{km}±23^{km}*

*MOS **13** 05:15:46.5±1.4, 57.63N×120.59E, h29^{km}, mb4.1/2, Error ellipse: s-maj=13.6km s-min=9.9km az=77.8*

*IDC **13** 05:15:46.7±2.2, 57.77N×120.41E, mb3.7/8, mb1 3.8/9, mb1mx3.7/22, mbtmp3.7/9, ML2.9/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/23, Error ellipse: s-maj=50.2km s-min=23.5km az=149.0*

*NEIC **13** 05:15:47.5±1.1, 57.79N×120.42E, h5^{km}, Error ellipse: s-maj=22.6km s-min=11.2km az=131.0*

ISC 13 05:15:46.6±0.4**, 57.62N**±0.05×**120.60E**±0.06**, h29^{km}, n56, σ1^{s}40**/59**, mb3.7**/7**, 2D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.46**	**241**	⇓*i*Pg	**Pn**	**05 16 10.3**	**-1.1**
CRS				Pmax		05 16 11.1	
	1µm,0.9s						
CRS				*i* Sg	**Sn**	**05 16 30.5**	**+0.8**
CRS				Smax		05 16 33.4	
	867nm,1.1s						
CRS	**Chara**	**1.46**	**241**	*e*P	**Pn**	**05 16 10.4**	**-1.0**
CRS				*e*		05 16 30.4	
CRS				pmax	pmax		
	comp=Z,1µm,0.8s						
CRS				smax			
	comp=E,872nm,0.7s						
NRGR	**Nerungri**	**2.45**	**112**	*e*P	**Pn**	**05 16 24.4**	**-1.2**
NRGR				S	**Sn**	**05 16 52.2**	**-2.6**
CLNS	**Chul’man**	**2.46**	**107**	*e*Pn	**Pn**	**05 16 23.7**	**-2.1**
CLNS				*e*Pg	**Pn**	**05 16 25.0**	**-0.8**
CLNS				Pmax		05 16 28.8	
	comp=E,546nm,0.3s						
CLNS				*e*Sn	**Sn**	**05 16 50.1**	**-5.2**
CLNS				*e*Sg	**Sn**	**05 16 55.0**	**-0.3**
CLNS				Smax		05 16 58.8	
	comp=E,6µm,0.3s						
CLNS	**Chul’man**	**2.46**	**107**	*e*P	**Pn**	**05 16 24.3**	**-1.5**
CLNS				*e*		05 16 55.1	
CLNS				pmax	pmax		
	comp=Z,126nm,0.4s						
CLNS				pmax	pmax		
	comp=N,35nm,0.3s						
CLNS				pmax	pmax		
	comp=E,61nm,0.3s						
CLNS				smax			
	comp=N,2µm,0.4s						
CLNS				smax			
	comp=Z,193nm,0.3s						
CLNS				smax			
	comp=E,1µm,0.4s						
ALDR	**Aldan**	**2.74**	**67**	*e*Pg	**Pn**	**05 16 30.8**	**+1.1**
ALDR				Pmax		05 16 37.3	
	comp=E,852nm,0.3s						
ALDR				*e*Sg	**Sn**	**05 17 06.6**	**+4.4**
ALDR				Smax		05 17 10.6	
	comp=E,1µm,0.2s						
NLYR	**Nelyaty**	**2.90**	**249**	*e*Pn	**Pn**	**05 16 31.9**	**-0.2**
NLYR				⇓*i*Pg	**Pn**	**05 16 36.2**	**+4.1**
NLYR				Pmax		05 16 36.8	
	comp=E,395nm,0.8s						
NLYR				*e*Sg	**Sn**	**05 17 15.5**	**+9.1**
NLYR				Smax		05 17 20.2	
	comp=E,911nm,1.1s						
NLYR	**Nelyaty**	**2.90**	**249**	*e*P	**Pn**	**05 16 36.1**	**+4.0**
NLYR				*e*		05 17 14.4	
NLYR				pmax	pmax		
	comp=Z,402nm,0.3s						
NLYR				smax			
	comp=N,1µm,1.2s						
TUP	**Tupik**	**3.23**	**187**	*e*Pn	**Pn**	**05 16 32.0**	**-4.6**
TUP				*e*Pg	**Pn**	**05 16 36.8**	**+0.2**
TUP				Pmax		05 16 39.6	
	comp=N,144nm,0.5s						
TUP				*e*Sn	**Sn**	**05 17 08.8**	**-5.7**
TUP				*e*Sg	**Sn**	**05 17 16.1**	**+1.6**
TUP				Smax		05 17 17.4	
	comp=N,1µm,1.2s						
TUP	**Tupik**	**3.23**	**187**	*e*P	**Pn**	**05 16 37.6**	**+1.0**
TUP				*e*		05 17 16.0	
TUP				pmax	pmax		
	comp=Z,147nm,0.6s						
TUP				smax			
	comp=E,1µm,1.2s						
TNDR	**Tynda**	**3.38**	**136**	*e*Pn	**Pn**	**05 16 34.2**	**-4.6**
TNDR				*e*Pg	**Pn**	**05 16 40.2**	**+1.4**
TNDR				Pmax		05 16 43.2	
	comp=E,545nm,0.3s						
TNDR				*e*Sn	**Sn**	**05 17 11.6**	**-6.8**
TNDR				*e*Sg	**Sn**	**05 17 20.0**	**+1.6**
TNDR				Smax		05 17 22.0	
	comp=E,7µm,0.5s						
BOD	**Bodaibo**	**3.54**	**276**	*e*Pn	**Pn**	**05 16 41.5**	**+0.4**
BOD				*e*Pg	**Pn**	**05 16 48.8**	**+7.7**
BOD				Pmax		05 16 51.2	
	comp=E,78nm,0.8s						
BOD				*e*Sg	**Sn**	**05 17 37.8**	**+15**
BOD				Smax		05 17 43.0	
	comp=E,601nm,1.0s						
BOD	**Bodaibo**	**3.54**	**276**	*e*P	**Pn**	**05 16 49.7**	**+8.6**
BOD				pmax	pmax		
	comp=Z,85nm,0.8s						
SVKR	**Severomuysk**	**4.15**	**252**	*e*Pg	Px	05 16 58.5	
SVKR				Pmax		05 17 04.9	
	comp=Z,131nm,0.4s						
SVKR				*e*Sg	Sx	05 17 54.7	
SVKR				Smax		05 18 01.7	
	comp=Z,628nm,0.9s						
UKT	**Uakit**	**4.41**	**244**	*e*Pg	Px	05 17 02.1	
UKT				Pmax		05 17 05.0	
	comp=Z,67nm,1.4s						
UKT				*e*Sg	Sx	05 18 00.9	
UKT				Smax		05 18 13.5	
	comp=Z,164nm,1.1s						
UKT	**Uakit**	**4.41**	**244**	*e*P	Px	05 17 02.4	
UKT				pmax	pmax		
	comp=Z,45nm,0.6s						
KROS	**Kirovskiy**	**4.79**	**129**	*e*Pg	**Pn**	**05 17 03.0**	**+4.1**
KROS				*e*Sg	**Sn**	**05 18 02.0**	**+7.8**
YOA	**Uoyan**	**5.09**	**257**	*e*Pg	Px	05 17 16.1	
YOA				Pmax		05 17 25.6	
	comp=Z,259nm,0.9s						
YOA				*e*Sg	Sx	05 18 23.0	
YOA				Smax		05 18 33.5	
	comp=Z,2µm,1.1s						
YOA	**Uoyan**	**5.09**	**257**	*e*P	Px	05 17 15.5	
YOA				pmax	pmax		
	comp=Z,276nm,1.3s						
ZEA	**Zeya**	**5.41**	**133**	*e*Pg	Px	05 17 15.1	
ZEA				*e*Sg	Sx	05 18 21.5	
KMO	**Kumora**	**5.46**	**255**	*e*Pn	**Pn**	**05 17 07.2**	**-1.0**
KMO				*e*Pg	Px	05 17 23.4	
KMO				Pmax		05 17 31.0	
	comp=Z,46nm,2.4s						
KMO				*e*Sn	**Sn**	**05 18 08.8**	**-2.0**
KMO				*e*Sg	Sx	05 18 34.9	
KMO				Smax		05 18 44.6	
	comp=Z,405nm,1.5s						
KMO	**Kumora**	**5.46**	**255**	*e*P	**Pn**	**05 17 06.0**	**-2.2**
YLYR	**Ulyunkhan**	**5.94**	**246**	*e*Pn	**Pn**	**05 17 13.0**	**-2.0**
YLYR				*e*Pg	Px	05 17 31.6	
YLYR				Pmax		05 17 37.7	
	comp=Z,27nm,1.0s						
YLYR				*e*Sg	Sx	05 18 50.8	
YLYR				Smax		05 19 09.2	
	comp=Z,219nm,1.4s						
YLYR	**Ulyunkhan**	**5.94**	**246**	*e*P	**Pn**	**05 17 13.6**	**-1.4**
YAK	**Yakutsk**	**6.36**	**42**	*e*Pg	Px	05 17 37.0	
YAK				Pmax		05 17 43.1	
	comp=Z,88nm,0.4s						
YAK				*e*Sn	**Sn**	**05 18 27.7**	**-5.8**
YAK				*e*Sg	Sx	05 19 00.1	
YAK				Smax		05 19 07.8	
	comp=Z,1µm,0.5s						
YAK	**Yakutsk**	**6.36**	**42**	P	**Pn**	**05 17 18.9**	**-2.2**
	comp=Z,23nm,0.6s						
YAK				*e*		05 17 36.6	
YAK	**Yakutsk**	**6.36**	**42**	P	**Pn**	**05 17 18.9**	**-2.1**
YAK				pmax	pmax		
	comp=Z,23nm,0.6s						
NIZ	**Nizh Angarsk**	**6.37**	**258**	*e*Pn	**Pn**	**05 17 19.6**	**-1.5**
NIZ				*e*Pg	Px	05 17 41.0	
NIZ				Pmax		05 18 14.2	
	comp=Z,29nm,2.1s						
NIZ				*e*Sg	Sx	05 19 04.5	
NIZ				Smax		05 19 14.7	
	comp=Z,150nm,1.4s						
CIT	**Chita**	**6.93**	**219**	*e*Pg	Px	05 17 46.3	
CIT				Pmax		05 17 47.2	
	comp=Z,18nm,0.8s						
CIT				*e*Sg	Sx	05 19 15.2	
CIT				Smax		05 19 25.9	
	comp=Z,451nm,1.1s						
CIT	**Chita**	**6.93**	**219**	*e*P	Px	05 17 47.0	
CIT				pmax	pmax		
	comp=Z,9.0nm,0.4s						
SYVR	**Suvo**	**7.19**	**241**	*e*Pn	**Pn**	**05 17 28.8**	**-3.9**
SYVR				*e*Pg	Px	05 17 53.2	
SYVR				Pmax		05 17 58.0	
	comp=Z,28nm,1.8s						
SYVR				*e*Sg	Sx	05 19 26.7	
SYVR				Smax		05 19 33.9	
	comp=Z,360nm,1.5s						
OGRR	**Ongureny**	**8.36**	**247**	*e*Pg	Px	05 18 15.3	
OGRR				Pmax		05 18 34.0	
	comp=Z,21nm,1.5s						
OGRR				*e*Sg	Sx	05 20 05.8	
OGRR				Smax		05 20 15.3	
	comp=Z,67nm,1.5s						
KPC	**Khapcheranga**	**9.31**	**215**	*e*Sg	Sx	05 20 28.2	
KPC				Smax		05 20 38.0	
	comp=Z,211nm,1.2s						
TRG	**Tyrgan**	**9.49**	**245**	*e*Sg	Sx	05 20 41.2	
TRG				Smax		05 20 58.8	
	comp=Z,68nm,1.8s						
KLR	**Kul’dur**	**10.71**	**137**	*e*P	**P**	**05 18 21.8**	**+0.7**
KLR				*e*		05 20 18.2	
TLY	**Talaya**	**11.46**	**246**	*e*Sg	Sx	05 21 41.2	
TLY				Smax		05 22 00.4	
	comp=Z,31nm,1.5s						
ARS	**Arshan**	**11.93**	**249**	*e*Sg	Sx	05 21 58.2	
ARS				Smax		05 22 24.6	
	comp=Z,102nm,1.8s						
ZAK	**Zakamensk**	**12.48**	**242**	*e*Sg	Sx	05 22 12.7	
ZAK				Smax		05 22 24.2	
	comp=Z,36nm,1.1s						
SONM	**Songino Array**	**13.02**	**227**	Pn	**P**	**05 18 53.8**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=23,slow=13,SNR=2.8						
TIXI	**Tiksi**	**14.50**	**10**	*i* P	**P**	**05 19 10.6**	**-0.8**
KRAR	**Krasnoyarsk**	**15.22**	**276**	*e*P	**P**	**05 19 19.2**	**-1.8**
KRAR				*e*		05 22 09.3	
SEY	**Seymchan**	**16.51**	**58**	*i* P	**P**	**05 19 37.4**	**0.0**
ASAJ	**Asahikawa**	**19.26**	**125**	LR	LR	05 26 52.5	
	comp=Z,21nm,20.3s,baz=21,slow=34						
ZAL	**Zalesovo**	**20.31**	**275**	P	**P**	**05 20 23.2**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=63,slow=11,SNR=6.6						
ZAL	**Zalesovo**	**20.31**	**275**	P	**P**	**05 20 23.2**	**+0.4**
NVS	**Novosibirsk**	**20.78**	**278**	*e*P	**P**	**05 20 23.1**	**-4.5**
NVS				pmax	pmax		
	comp=Z,12nm,2.0s						
NVS				pmax	pmax		
	comp=N,18nm,2.3s						
MKAR	**Makanchi Array**	**25.51**	**262**	P	**P**	**05 21 15.6**	**+1.7**
	comp=N,0.6nm,0.8s,mb3.2,baz=34,slow=4.4,SNR=5.2						
MKAR	**Makanchi Array**	**25.51**	**262**	*i* P	**P**	**05 21 16.0**	**+2.2**
BVAR	**Borovoye Array**	**28.39**	**283**	P	**P**	**05 21 40.9**	**+0.8**
	comp=N,0.2nm,0.4s,mb3.1,baz=78,slow=13,SNR=2.3						
ARCES	**ARCESS Array B**	**39.44**	**327**	P	**P**	**05 23 16.6**	**+1.2**
	comp=N,3.9nm,0.9s,mb4.1,baz=70,slow=11,SNR=2.8						
ILAR	**Eielson Array**	**41.28**	**40**	P	**P**	**05 23 32.6**	**+2.1**
	comp=N,0.7nm,0.6s,mb3.5,baz=288,slow=4.4,SNR=11						
FINES	**FINESS Array B**	**44.04**	**316**	P	**P**	**05 23 53.8**	**+0.9**
	comp=N,1.3nm,0.7s,mb3.7,baz=45,slow=5.4,SNR=6.7						
FINES	**FINESS Array B**	**44.04**	**316**	*i* P	**P**	**05 23 54.5**	**+1.6**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	**NORSAR Subarra**	**49.50**	**323**	P	**P**	**05 24 36.3**	**+0.4**
	comp=Z,1.5nm,0.6s,mb4.2,baz=40,slow=7.0						
NOA	**NORSAR Array B**	**49.50**	**323**	P	**P**	**05 24 37.1**	**+1.2**
	comp=Z,1.4nm,0.5s,mb4.2,baz=44,slow=8.0,SNR=4.2						
AKASG	**Malin Array Be**	**50.04**	**304**	P	**P**	**05 24 41.1**	**+1.0**
	comp=Z,1.1nm,0.5s,mb4.2,baz=40,slow=8.6,SNR=7.7						

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*JMA **13** 05:37:37.2±0.4, 33.87N×141.81E, h66^{km}, M3.5*

ISC 13 05:37:37.3±1.8**, 33.87N**±0.07×**141.8E**±0.1**, h78^{km}**±18^{km}**, n9, σ0^{s}60**/17**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.03**	**320**	P	**P**	**05 37 56.0**	**-0.8**
BSO1				S	**S**	**05 38 10.8**	**-0.6**
BSO3	**Boso 3**	**1.40**	**312**	P	**P**	**05 38 01.7**	**-0.1**
BSO3				S	**S**	**05 38 20.6**	**+0.7**
BSO4	**Boso 4**	**1.63**	**314**	P	**P**	**05 38 05.5**	**+0.7**
BSO4				S	**S**	**05 38 26.2**	**+1.1**
JHJ2	**Mitsune**	**1.80**	**246**	P	**P**	**05 38 07.4**	**+0.4**
JHJ2				S	**S**	**05 38 28.9**	**0.0**
JIM2	**Oshima 3**	**2.12**	**294**	P	**P**	**05 38 10.6**	**-0.8**
JIM2				S	**S**	**05 38 35.8**	**-0.8**
JIZS	**Izushimoda**	**2.54**	**290**	P	**P**	**05 38 17.2**	**-0.1**
JOD2	**Odawara 2**	**2.62**	**303**	P	**P**	**05 38 17.9**	**-0.5**
JOD2				*e*S	**S**	**05 38 49.4**	**+0.3**
JYN	**Shimob**	**3.12**	**302**	P	**P**	**05 38 25.9**	**+0.5**
JYN				S	**S**	**05 39 02.0**	**+0.4**
MAT	**Matsushiro**	**3.96**	**313**	P	**P**	**05 38 37.3**	**+0.3**
MAT				S	**S**	**05 39 21.6**	**-0.9**

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*IDC **13** 05:42:52.9±0.9, 15.71S×167.32E, mb4.1/7, mb1 4.2/8, mb1mx4.1/16, mbtmp4.1/8, ML4.6/1, MS3.5/6, Ms1 3.5/6, ms1mx3.4/19, Error ellipse: s-maj=31.0km s-min=22.1km az=107.0*

*LDG **13** 05:42:55.4±0.1, 15.69S×167.35E, h10^{km}, Error ellipse: s-maj=39.8km s-min=2.5km az=94.0*

*NEIC **13** 05:42:56.8±3.6, 15.82S×167.19E, h22^{km}±23^{km}, mb4.8/3, Error ellipse: s-maj=18.4km s-min=8.8km az=68.0*

ISC 13 05:42:56.6±0.7**, 15.88S**±0.05×**167.1E**±0.1**, h33^{km}, (h28^{km}**±1.2^{km}**:pP-P), n45, σ1^{s}12**/21**, mb4.2**/9**, MS3.6**/4**, 3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.19**	**186**	Pn	**Pn**	**05 44 27.7**	**-0.5**
	15nm,0.3s,baz=38,slow=17,SNR=71						
DZM				Sn	**Sn**	**05 45 38.8**	**+0.3**
	5.5nm,0.3s,baz=292,slow=23,SNR=2.6						
DZM				LR	LR	05 46 39.6	
	comp=Z,470nm,21.2s,baz=215,slow=36						
NOUC	**Port Laguerre**	**6.23**	**187**	*e*P	**P**	**05 44 28.7**	**+0.1**
NOUC				*e*S	**S**	**05 45 38.1**	**-1.4**
HNR	**Honiara**	**9.48**	**312**	Pn	**P**	**05 45 16.3**	**+2.5**
	43nm,0.3s,baz=234,slow=6.4,SNR=4.9						
HNR				LR	LR	05 47 47.4	
	comp=Z,62nm,20.3s,baz=305,slow=31						
HNR	**Honiara**	**9.48**	**312**	*e*P	**P**	**05 45 11.9**	**-1.9**
HNR				LR	LR	05 47 47.5	
CTA	**Charters Tower**	**20.27**	**255**	P	**P**	**05 47 33.9**	**+1.8**
	2.4nm,0.7s,baz=88,slow=12,SNR=5.4						
CTA				LR	LR	05 54 27.3	
	comp=Z,119nm,20.0s,MS3.2,baz=52,slow=34						
URZ	**Urewera**	**23.97**	**160**	P	**P**	**05 48 11.3**	**+2.3**
	8.5nm,0.7s,mb4.3,baz=358,slow=6.4,SNR=4.0						
URZ				LR	LR	05 56 25.9	
	comp=Z,135nm,18.5s,MS3.5,baz=41,slow=34						
STKA	**Stephens Creek**	**28.14**	**231**	P	**P**	**05 48 49.0**	**+1.1**
	1.7nm,0.5s,mb4.0,baz=57,slow=8.6,SNR=8.3						
STKA				LR	LR	05 59 35.2	
	comp=Z,148nm,19.5s,MS3.6,baz=24,slow=35						
WRAB	**Tennant Creek**	**31.41**	**258**	P	**P**	**05 49 15.3**	**-1.8**
WRA	**Warramunga Arr**	**31.42**	**258**	P	**P**	**05 49 16.7**	**-0.5**
	0.3nm,0.4s,mb3.5,baz=85,slow=9.1,SNR=7.1						
MJAR	**Matsushiro Arr**	**58.85**	**333**	P	**P**	**05 52 54.4**	**-0.2**
	0.7nm,0.5s,mb3.9,baz=167,slow=8.3,SNR=3.2						
VNDA	**Vanda**	**61.71**	**181**	*e*P	**P**	**05 53 13.3**	**-0.3**
	2.1nm,0.8s,mb4.3						
SBA	**Scott Base**	**61.99**	**180**	*e*P	**P**	**05 53 16.3**	**+0.9**
	7.3nm,0.8s,mb4.9						
QSPA	**South Pole Qui**	**74.15**	**180**	*e*P	**P**	**05 54 31.7**	**+0.7**

	22nm,1.6s,mb4.8						
MAW	Mawson	80.77	202	LR	LR	06 26 19.0	
	comp=Z,94nm,20.7s,MS4.1,baz=244,slow=32						
ILAR	Eielson Array	87.66	18	P	P	05 55 40.7	-1.8
	0.7nm,0.5s,mb4.2,baz=264,slow=5.7,SNR=12						
VNA3	Neumayer Olymp	93.07	181	*e*	pP	05 56 16.6	-1.7
VNA3	Neumayer Olymp	93.07	181	⇑*i*P	P	05 56 07.4	-0.3
VNA3				*e*	pP	05 56 16.6	-1.7
VNA2	Neumayer--Watz	93.33	182	*e*	pP	05 56 18.2	-1.3
VNA2	Neumayer--Watz	93.33	182	⇑*i*P	P	05 56 09.0	+0.1
VNA2				*e*	pP	05 56 18.2	-1.3
VNA1	Neumayer--Stat	93.63	182	⇑*i*P	P	05 56 09.4	-0.9
VNA1				*e*	pP	05 56 19.3	-1.6
MKAR	Makanchi Array	97.93	316	P	P	05 56 31.0	+0.7
	0.5nm,0.7s,mb4.2,baz=107,slow=5.5,SNR=3.7						
MKAR	Makanchi Array	97.93	316	P	P	05 56 31.0	+0.7
ARCES	ARCESS Array B	121.32	345	PKP	PKPdf	06 01 45.8	-0.2
	1.9nm,0.7s,baz=64,slow=2.3,SNR=16						
FINES	FINESS Array B	126.73	338	PKP	PKPdf	06 01 57.2	+0.6
	2.1nm,0.8s,slow=1.9,SNR=4.3						
AKASG	Malin Array Be	131.59	325	PKP	PKPdf	06 02 08.2	+2.0
	0.7nm,0.5s,baz=53,slow=2.0,SNR=4.8						
BRTR	Keskin Array B	133.14	310	PKP	PKPdf	06 02 11.2	+1.8
	0.5nm,0.5s,baz=27,slow=2.8,SNR=3.9						
GERES	GERESS Array B	140.59	332	PKP	PKPdf	06 02 25.1	+2.3
	0.7nm,0.8s,baz=90,slow=1.3,SNR=7.7						
HAU	Haudompre	144.26	338	*e*PKIKP	PKPdf	06 02 30.5	+1.4
	19nm,1.1s						
CABF	La Chapelle	145.52	337	*e*PKIKP	PKPdf	06 02 35.0	+3.6
	50nm,1.2s						
FLN	La Foliniere	145.67	345	*e*PKIKP	PKPdf	06 02 33.6	+2.0
	30nm,1.0s						
LDF	La Druitiere	145.74	345	*e*PKIKP	PKPdf	06 02 34.1	+2.4
LOR	Lormes	145.76	340	*e*PKIKP	PKPdf	06 02 34.4	+2.6
	15nm,0.9s						
SSF	Saint Saulge	146.06	340	*e*PKIKP	PKPdf	06 02 34.6	+2.3
	6.2nm,0.7s						
GRR	Gorron	146.11	346	*e*PKIKP	PKPdf	06 02 35.1	+2.8
LPL	La Plagne	146.17	335	*e*PKIKP	PKPdf	06 02 35.1	+2.6
LPG	La Plagne	146.18	335	*e*PKIKP	PKPdf	06 02 35.2	+2.7
	4.5nm,0.8s						
SMF	Signal de Mont	146.31	339	*e*PKIKP	PKPdf	06 02 34.9	+2.2
	44nm,1.5s						
AVF	Avril sur Loir	146.35	340	*e*PKIKP	PKPdf	06 02 34.7	+1.9
SGMF	Saint Gilles	146.62	347	*e*PKIKP	PKPdf	06 02 36.0	+2.8
	29nm,0.9s						
MBDF	Montbardon	146.80	334	*e*PKIKP	PKPdf	06 02 35.7	+2.1
	19nm,1.2s						
ORIF	Oris-en-Rattie	147.01	335	*e*PKIKP	PKPdf	06 02 36.7	+2.7
TCF	Toulx Ste Croi	147.17	341	*e*PKIKP	PKPdf	06 02 36.2	+2.0
	23nm,1.2s						
VIVF	Saint-Julien-l	147.54	336	*e*PKIKP	PKPdf	06 02 37.2	+2.4
MFF	Saint Martin d	147.58	344	*e*PKIKP	PKPdf	06 02 37.3	+2.5
	33nm,1.2s						
EPF	Esparros	150.67	340	*e*PKIKP	PKPdf	06 02 42.0	+2.2

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*ATH **13** 06:03:04.5, 38.83N×21.31E, h12^{km}±5^{km}, MD3.3/5*
*NEIC **13** 06:03:04.5, 38.83N×21.31E, h12^{km}, MD3.3(ATH), After ATH.*
*CSEM **13** 06:03:04.6±0.1, 38.82N×21.31E, h2^{km}, MD3.3, Error ellipse: s-maj=2.0km s-min=1.8km az=32.0*
*THE **13** 06:03:05.1, 38.75N×21.33E, h10^{km}, ML2.8*
*SKO **13** 06:03:07.6, 38.54N×21.48E, h51^{km}*
ISC 13 06:03:05.3±0.5, **38.73N**±0.03×**21.43E**±0.05, **h12**^{km}, **n17**, σ**1^{s}19**/24, **2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EVR	Evrytania	0.35	57	⇓*i*PB	Pb	06 03 12.3	-0.7
EVR				*e*SB	Sb	06 03 18.8	+0.7
RLS	Riolos of Patr	0.67	177	⇓*i*PB	Pb	06 03 19.4	+1.0
AGG	Agios Georgios	0.76	67	*e*Pg	Pg	06 03 20.2	-0.4
AGG				*e*Sg	Sg	06 03 32.9	+1.9
VLS	Valsamata	0.86	230	*e*PB	Pb	06 03 20.1	-1.5
VLS				*e*SB	Sb	06 03 34.1	+1.3
JAN	Janina	1.03	334	*e*PB	Pb	06 03 21.8	-2.8
LKR	Lokris	1.23	93	*e*PN	Pn	06 03 28.9	+0.6
NEO	Neokhori	1.51	67	*e*PG	Pg	06 03 33.5	-2.1
XOR	Xorichti	1.51	65	*e*Pg	Pg	06 03 33.8	-1.8
ITM	Ithomi	1.59	166	*e*PG	Pg	06 03 36.6	-0.6
LIT	Litokhoron	1.60	31	*e*Pb	Pb	06 03 34.1	-0.2
KEK	Kerkira	1.60	308	*e*PG	Pg	06 03 32.0	-5.4
FNA	Florina	2.05	359	*e*Pn	Pn	06 03 40.1	0.0
BIA	Bitola	2.29	358	*e*Pn	Pn	06 03 44.9	+1.4
BIA				*e*Sn	Sn	06 04 12.4	+0.6
GRG	Griva	2.35	18	*e*Pn	Pn	06 03 44.2	-0.1
OHR	Ohrid	2.43	349	*e*Pn	Pn	06 03 47.9	+2.4
OHR				*e*Sn	Sn	06 04 15.2	-0.2
OHR	Ohrid	2.43	349	*e*Pn	Pn	06 03 47.9	+2.4
OHR				*e*Sn	Sn	06 04 15.1	-0.3
VAY	Valandovo	2.73	18	*e*Pn	Pn	06 03 50.4	+0.6
VAY				*e*Sn	Sn	06 04 22.6	-0.5

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*MOS **13** 06:21:38.8±0.6, 42.74N×138.72E, h237^{km}, mb3.9/1, Error ellipse: s-maj=24.2km s-min=12.3km az=82.4*
*NEIC **13** 06:21:39.6±0.9, 42.74N×138.79E, h232^{km}±15^{km}, mb3.9/2, Error ellipse: s-maj=20.5km s-min=11.4km az=121.0*
*IDC **13** 06:21:39.3±1.3, 42.79N×138.75E, h220^{km}±17^{km}, mb3.1/5, mb1 3.3/7, mb1mx3.1/23, mbtmp3.6/7, Error ellipse: s-maj=31.1km s-min=16.2km az=148.0*
*JMA **13** 06:21:39.7±0.2, 42.70N×138.89E, h235^{km}±2^{km}, M3.2*
ISC 13 06:21:38.9±0.5, **42.66N**±0.05×**138.96E**±0.09, **h241**^{km}±6^{km}, **n36**, σ**0^{s}92**/45, **mb3.4**/6, **Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	Okushiri--Mats	0.69	147	*e*S	S	06 22 36.3	-1.0
JSH	Shimam	0.80	91	P	P	06 22 12.3	+0.1
JYM2	Yakumo 2	1.18	117	P	P	06 22 14.9	+0.5
JYM2				*e*S	S	06 22 41.9	0.0
JSK	Shakotan	1.31	58	P	P	06 22 15.2	-0.1
JNB	Noboribetsu	1.55	97	P	P	06 22 17.3	+0.2
JKB	Kayabe	1.72	116	P	P	06 22 18.9	+0.4
JEW	Eniwo	1.84	84	P	P	06 22 20.3	+0.8
JOT	Ohata	2.01	129	P	P	06 22 21.2	+0.1
JHR	Hokuryu	2.29	61	P	P	06 22 24.8	+1.0
JFR	Furan	2.71	78	P	P	06 22 28.6	+0.4
JNBK	Urakawa-nobuka	2.83	97	P	P	06 22 29.7	+0.3
JNBK				*e*S	S	06 23 10.7	+2.0
JANG	Nango	2.98	139	P	P	06 22 30.6	-0.5
JANG				*e*S	S	06 23 09.4	-2.2
JKK2	Kamakawa 2	3.02	65	P	P	06 22 32.3	+0.8
JKK2				*e*S	S	06 23 12.1	-0.2
ASAJ	Asahikawa	3.02	60	P	P	06 22 32.2	+0.7
	7.1nm,0.3s,baz=252,slow=9.5,SNR=39						
ASAJ				S	S	06 23 11.7	-0.7
	0.5nm,0.3s,baz=34,slow=28,SNR=3.7						
ASAJ	Asahikawa	3.02	60	P	P	06 22 32.3	+0.8
ASAJ				S	S	06 23 11.7	-0.7
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
JCH	Churui	3.25	89	P	P	06 22 33.5	-0.6
JCH				*e*S	S	06 23 14.9	-2.0
JAR	Ashorobuto	3.58	78	P	P	06 22 37.9	-0.1
JAR				*e*S	S	06 23 22.8	-1.0
JOM	Ohasama	3.64	150	P	P	06 22 39.5	+0.8
JOM				*e*S	S	06 23 23.6	-1.4
JTKR	Abashiri--Toko	3.84	68	P	P	06 22 41.2	+0.2
JYK	Kaneyama	3.89	164	P	P	06 22 42.8	+1.2
YSS	Yuzh-Sakhalins	5.07	31	*e*P	P	06 22 56.0	+0.2
	comp=N,8.2nm,0.5s						
YSS	Yuzh-Sakhalins	5.07	31	*e*P	P	06 22 56.1	+0.3
YSS				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MAJO	Matsushiro	6.14	186	*e*P	P	06 23 09.8	+0.6
MAT	Matsushiro	6.14	186	P	P	06 23 09.6	+0.3
MAT	Matsushiro	6.14	186	*e*P	P	06 23 10.0	+0.7
MJAR	Matsushiro Arr	6.14	186	P	P	06 23 10.1	+0.8
	comp=Z,1.1nm,0.3s,baz=357,slow=14,SNR=15						
SONM	Songino Array	23.40	294	P	P	06 26 27.0	-0.2
	comp=Z,0.3nm,0.3s,mb3.2,baz=92,slow=9.2,SNR=2.8						
BILL	Bilibino	29.29	21	*e*P	P	06 27 17.1	-3.4
BILL	Bilibino	29.29	21	*e*P	P	06 27 17.1	-3.4
ZAL	Zalesovo	36.88	307	P	P	06 28 24.2	-1.4
	comp=Z,1.2nm,0.5s,mb3.7,baz=30,slow=9.9,SNR=5.6						
MKAR	Makanchi Array	39.73	296	P	P	06 28 48.5	-0.9
	comp=Z,0.7nm,0.6s,mb3.3,baz=76,slow=12,SNR=5.3						
BRVK	Borovoye	45.55	308	P	P	06 29 34.5	-1.5
ILAR	Eielson Array	45.86	35	P	P	06 29 38.6	+0.4
	comp=Z,0.8nm,0.8s,mb3.1,baz=271,slow=6.1,SNR=6.3						
INK	Inuvik	50.30	29	*e*P	P	06 30 13.1	+0.8
	comp=Z,2.0nm,0.4s,mb3.8						
INK				*e*		06 30 15.3	
INK	Inuvik	50.30	29	*e*P	P	06 30 13.1	+0.9
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
YKA	Yellowknife Ar	59.92	31	P	P	06 31 21.9	+0.8
	comp=Z,0.4nm,0.4s,mb3.4,baz=303,slow=6.5,SNR=4.3						

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*IDC **13** 06:36:54.6±0.6, 11.22S×117.36E, mb4.4/10, mb1 4.5/11, mb1mx4.4/13, mbtmp4.4/11, ML5.1/2, MS3.6/3, Ms1 3.6/3, ms1mx3.2/19, Error ellipse: s-maj=26.6km s-min=15.9km az=71.0*
*MOS **13** 06:36:57.3±1.1, 11.19S×117.47E, h33^{km}, mb4.9/10, Error ellipse: s-maj=18.4km s-min=10.0km az=115.0*
*BJI **13** 06:36:59.2, 11.30S×117.40E, h40^{km}, mB4.6, mb4.7, Ms4.4, Msz3.8*
*NEIC **13** 06:37:00.3±0.2, 11.27S×117.38E, h40^{km}, mb4.9/9, Error ellipse: s-maj=11.3km s-min=5.9km az=63.0*
ISC 13 06:36:59.6±2.2, **11.23S**±0.06×**117.60E**±0.10, **h56**^{km}±21^{km}, **h47**^{km}±2.2^{km}**:pP-P**, **n72**, σ**1^{s}22**/71, **mb4.7**/26, **MS3.7**/3, **1C-4D, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.35	132	*e*P	P	06 39 24.5	-3.5
	76nm,0.4s						
FITZ				*e*S	S	06 41 13.2	-10
FITZ	Fitzroy Crossi	10.35	132	Pn	P	06 39 25.0	-3.0
	26nm,0.3s,baz=310,slow=9.4,SNR=194						
FITZ				Sn	S	06 41 15.0	-8.4
	17nm,0.3s,baz=190,slow=23,SNR=6.2						
FITZ				LR	LR	06 43 55.0	
	comp=Z,568nm,18.1s,baz=305,slow=40						
WRA	Warramunga Arr	18.29	120	P	P	06 41 10.8	-0.3
	4.2nm,0.3s,baz=287,slow=14,SNR=145						
WRA				S	S	06 44 23.1	-6.8
	1.7nm,0.3s,baz=294,slow=25,SNR=7.5						
WRAB	Tennant Creek	18.30	120	*e*P	P	06 41 12.5	+1.3
	38nm,0.4s						
WRAB				*e*S	S	06 44 23.4	-6.6
WRAB	Tennant Creek	18.30	120	*e*P	P	06 41 12.5	+1.3
WRAB				*e*S	S	06 44 23.4	-6.6
WRAB				pmax	pmax		
	comp=Z,38nm,0.4s						
WB2	Warramunga Arr	18.30	120	⇑*i*P	P	06 41 11.6	+0.4
WB2				*e*S	S	06 44 20.9	-9.3
ASPA	Alice Springs	19.84	131	*e*P	P	06 41 30.5	+1.9
ASPA				*e*S	S	06 44 59.7	-4.2
KLBR	Kellerberrin	20.26	180	⇓*i*P	P	06 41 30.0	-3.0
	comp=Z,38nm,0.6s						
KLBR				*e*S	S	06 44 54.3	-18
MUN	Mundaring	20.69	183	*e*P	P	06 41 35.3	-2.1
NWAO	Narrogin (SRO)	21.60	181	P	P	06 41 46.8	+0.3
	comp=Z,29nm,0.5s,mb5.0,baz=1.7,slow=12,SNR=28						
NWAO				S	S	06 45 26.4	-11
	comp=Z,16nm,0.4s,baz=314,slow=15,SNR=7.2						
NWAO	Narrogin (SRO)	21.60	181	*e*P	P	06 41 46.9	+0.4
NWAO				S	S	06 45 26.4	-11
FORT	Forrest	21.74	155	*e*P	P	06 41 48.8	+0.8
	comp=Z,38nm,0.5s,mb5.1						
FORT				*e*S	S	06 45 37.2	-2.8
KULM	Kulim	23.54	313	*e*P	P	06 42 05.1	-0.7
CTA	Charters Tower	28.92	111	LR	LR	06 54 27.0	
	comp=Z,67nm,18.6s,MS3.3,baz=252,slow=36						
STKA	Stephens Creek	30.20	137	*e*P	P	06 43 09.4	+2.3
	comp=Z,1.7nm,0.5s,mb4.0						
STKA	Stephens Creek	30.20	137	P	P	06 43 09.4	+2.4
	comp=Z,1.8nm,0.6s,mb4.0,baz=307,slow=8.0,SNR=6.0						
SHL	Shillong	44.33	326	*e*P	P	06 45 06.5	+0.3
JIRN	Jiri	49.20	322	*e*P	P	06 45 44.6	+0.1
	comp=Z,45nm,0.6s,mb5.7						
GUN	Gumba	49.57	322	*e*P	P	06 45 47.2	-0.1
	comp=Z,36nm,0.6s,mb5.6						
PKI	Pulchoki	49.61	322	*e*P	P	06 45 46.9	-0.7
	comp=Z,15nm,0.6s,mb5.2						
KKN	Kakani	49.85	322	*e*P	P	06 45 48.5	-0.9
	comp=Z,12nm,0.5s,mb5.2						
GKN	Gorkha	50.39	321	*e*P	P	06 45 52.9	-0.7
	comp=Z,21nm,0.4s,mb5.5						
KOLN	Koldanda	50.87	320	*e*P	P	06 45 56.4	-0.8
	comp=Z,27nm,0.7s,mb5.3						
MJAR	Matsushiro Arr	51.33	21	P	P	06 46 00.9	+0.4
	comp=Z,2.3nm,1.0s,mb4.0,baz=201,slow=7.5,SNR=4.1						
POO	Poona	52.32	304	*e*P	P	06 46 04.0	-4.2
GTA	Gaotai	53.03	343	*e*P	P	06 46 14.1	+0.8
GTA				AP	pP	06 46 25.9	-2.3
GTA				XP	sP	06 46 32.3	-2.3
GTA				AMB	AMB		
	comp=Z,40nm,6.1s						
GTA				LR	LR		
	comp=N,120nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=E,110nm,16.3s,MS4.2						
GTA				LR	LR		
	comp=Z,60nm,14.1s,MS3.8						
SONM	Songino Array	59.64	351	P	P	06 47 00.5	+0.2
	comp=Z,2.1nm,0.5s,mb4.4,baz=170,slow=8.1,SNR=17						
MKAR	Makanchi Array	65.83	334	P	P	06 47 41.5	+0.1
	comp=Z,3.5nm,0.6s,mb4.6,baz=150,slow=7.3,SNR=50						
MKAR	Makanchi Array	65.83	334	*e*P	P	06 47 41.3	0.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AAK	Ala-Archa	66.54	327	*e*P	P	06 47 44.0	-1.9
	comp=Z,3.6nm,0.6s,mb4.6						
AAK	Ala-Archa	66.54	327	*e*P	P	06 47 44.0	-2.0
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
MAW	Mawson	66.68	200	P	P	06 47 45.6	-0.8
	comp=Z,3.3nm,0.8s,mb4.4,baz=60,slow=10.0,SNR=5.9						
VNDA	Vanda	70.02	171	*e*P	P	06 48 07.2	+0.3
KURK	Kurchatov	70.40	335	*e*P	P	06 48 09.8	+0.2
	comp=Z,14nm,1.1s,mb4.8						
KURK	Kurchatov	70.40	335	*e*P	P	06 48 09.8	+0.2
KURK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
ZAL	Zalesovo	70.64	340	P	P	06 48 10.5	-0.6
	comp=Z,2.8nm,0.7s,mb4.3,baz=339,slow=6.0,SNR=16						
SBA	Scott Base	71.03	170	*e*P	P	06 48 14.8	+1.7
NVS	Novosibirsk	71.90	340	*e*P	P	06 48 16.1	-2.5
NVS				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
NVS				pmax	pmax		
	comp=N,4.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.2s						
BVA0	Borovoye Array	75.62	333	P	P	06 48 40.4	+0.2
BVA0				pmax	pmax		
	comp=Z,8.0nm,2.6s,mb4.2						
CHKZ	Chkalovo	75.96	333	*e*P	P	06 48 42.5	+0.4
	comp=Z,5.8nm,0.7s,mb4.6						
CHKZ				*e*	pP	06 48 57.1	-0.8
CHKZ	Chkalovo	75.96	333	*e*P	P	06 48 42.5	+0.4
CHKZ				*e*	pP	06 48 57.2	-0.7
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
AB31	Akbulak array	78.59	326	*i* P	P	06 48 57.1	+0.2
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
QSPA	South Pole Qui	78.78	180	*e*P	P	06 48 58.3	+0.9
KMBO	Kilima Mbogo	80.31	271	P	P	06 49 07.7	+0.7
	comp=Z,2.6nm,0.8s,mb4.2,baz=54,slow=7.6,SNR=11						
TIXI	Tiksi	83.04	4	*e*P	P	06 49 20.2	+0.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
LSZ	Lusaka	86.54	255	*e*P	P	06 49 38.9	+0.4
	comp=Z,15nm,1.4s,mb5.0						
LSZ	Lusaka	86.54	255	*e*P	P	06 49 38.9	+0.4
LSZ				pmax	pmax		
	comp=Z,15nm,1.4s,mb5.0						
BOSA	Boshof	86.74	242	P	P	06 49 39.7	+0.4
	comp=Z,1.5nm,0.8s,mb4.3,baz=47,slow=7.9,SNR=5.4						
BOSA	Boshof	86.74	242	P	P	06 49 39.7	+0.4
SNAA	Sanae	88.49	196	LR	LR	07 24 08.2	
	comp=Z,34nm,19.8s,MS3.8,baz=204,slow=32						
SNAA	Sanae	88.49	196	*e*P	P	06 49 48.5	+1.8
	comp=Z,7.0nm,0.8s,mb4.9						
SNAA	Sanae	88.49	196	*e*P	P	06 49 48.5	+1.8
SNAA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VNA2	Neumayer--Watz	90.13	196	*e*	P	06 49 59.6	+5.2
VNA2	Neumayer--Watz	90.13	196	*e*	P	06 50 10.8	+16
VNA2	Neumayer--Watz	90.13	196	⇓*i*P	P	06 49 56.4	+2.0
VNA2				*e*		06 49 59.6	
VNA2				*e*	pP	06 50 10.8	+0.1
VNA3	Neumayer Olymp	90.52	195	*e*	P	06 50 01.5	+5.2
VNA3	Neumayer Olymp	90.52	195	*e*	P	06 50 13.3	+17
VNA3	Neumayer Olymp	90.52	195	⇓*i*P	P	06 49 58.0	+1.7
VNA3				*e*		06 50 01.5	
VNA3				*e*	pP	06 50 13.3	+0.8
VNA1	Neumayer--Stat	90.53	196	*e*	P	06 50 00.2	+3.9
VNA1	Neumayer--Stat	90.53	196	*e*	P	06 50 10.5	+14
VNA1	Neumayer--Stat	90.53	196	⇓*i*P	P	06 49 57.4	+1.1
VNA1				*e*		06 50 00.2	
VNA1				*e*	pP	06 50 10.5	-2.0
BRTR	Keskin Array B	92.50	310	P	P	06 50 06.7	+0.6
	comp=Z,1.3nm,0.7s,mb4.4,baz=124,slow=4.5,SNR=6.9						
YKA	Yellowknife Ar	116.78	24	PKP	PKPdf	06 55 40.4	+2.9
	comp=Z,0.8nm,0.5s,baz=133,slow=7.1,SNR=6.9						
NVAR	Mina Array Bea	123.49	51	PKP	PKPdf	06 55 55.9	+4.7
	comp=Z,0.7nm,0.7s,baz=215,slow=0.8,SNR=5.4						
TXAR	Lajitas Array	137.58	59	PKhKP		06 56 13.4	
	comp=Z,0.2nm,0.5s,baz=237,slow=1.1,SNR=4.4						
JCT	Junction City	140.40	55	*e*PKPdf	PKPdf	06 56 28.0	+4.9
WVT	Waverly	146.19	39	*e*PKPab	PKPab	06 56 38.8	+1.8
SWET	Sewanee	147.95	38	*e*PKPbc	PKPdf	06 56 42.0	+6.1
LRAL	Lakeview Retre	148.69	42	*e*PKPbc	PKPdf	06 56 45.4	+8.2
ELN	Prospectdale	149.30	29	*e*PKPbc	PKPdf	06 56 46.7	+8.6
BDFB	Brasilia	149.74	208	PKPbc	PKPdf	06 56 46.3	+7.0
	comp=Z,12nm,1.3s,baz=186,slow=16,SNR=4.6						
LPAZ	La Paz	152.08	168	PKPbc	PKPdf	06 56 54.8	+12
	comp=Z,3.6nm,0.9s,baz=142,slow=2.5,SNR=15						

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*ISK **13** 06:44:37.2, 38.12N×26.65E, h12^{km}, MD3.1*
*CSEM **13** 06:44:37.2±0.3, 38.17N×26.61E, h14^{km}±2^{km}, MD3.1, Error ellipse: s-maj=6.3km s-min=4.6km az=100.0*
*ATH **13** 06:44:38.0, 38.20N×26.56E, h34^{km}, MD3.1/3*
ISC 13 06:44:37.6±0.8, **38.22N**±0.03×**26.54E**±0.05, **h7**^{km}±5^{km}, **n17**, σ**1^{s}11**/27, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.15	18	*i* P	Pg	06 44 40.9	+0.1
URLA				*i* S	Sg	06 44 43.1	+0.1
BLCB	Balcova	0.43	67	PG	Pg	06 44 46.0	-0.2
BLCB				SG	Sg	06 44 51.2	-0.8
SMG	Samos	0.56	155	*e*PN	Pg	06 44 49.5	+0.6
SMG				*e*SN	Sg	06 44 58.1	+1.7
IZM	Izmir	0.60	72	PG	Pg	06 44 48.9	-0.7
IZM				SG	Sg	06 44 57.3	-0.3
KDAG	Bornova	0.60	72	*i* P	Pg	06 44 48.5	-1.2
PRK	Paraskevi	1.05	349	*e*PN	Pn	06 44 58.3	-0.2
PRK				*e*SN	Sn	06 45 12.8	-0.7
AYVA	Ayvalik	1.09	6	*i* P	Pb	06 45 02.1	+3.7
AYVA				*i* S	Sb	06 45 15.9	+3.2
AKS	Akhisar	1.20	56	PN	Pn	06 45 00.3	-0.4
AYDN	Tasoluk	1.20	117	*i* P	Pb	06 45 01.0	+0.8
AYDN				*i* S	Sb	06 45 15.3	-0.4
BODT	Bodrum	1.31	152	*e*PN	Pn	06 44 59.7	-2.6
BDRM	Kayabasi	1.36	148	*i* P	Pb	06 45 04.2	+1.3
BDRM				*i* S	Sb	06 45 19.8	-0.5
APE	Apeiranthos	1.40	215	*e*PN	Pn	06 45 02.3	-1.3
APE	Apeiranthos	1.40	215	*e*PN	Pn	06 45 03.1	-0.5
MANT	Manisa	1.61	80	*i* P	Pn	06 45 08.0	+1.4
MANT				*i* S	Sb	06 45 28.6	+0.9
YER	Yerkesik	1.76	127	*e*PN	Pn	06 45 06.9	-1.8
BALB	Balikesir	1.76	36	*e*PN	Pn	06 45 09.6	+0.8
DNZL	Cakiroluk	2.05	104	*i* P	Pn	06 45 16.9	+4.0
DNZL				*i* S	Sn	06 45 46.6	+7.5

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*NEIC **13** 07:00:41.9±1.7, 7.48N×94.02E, h30^{km}, mb4.1/1, Error ellipse: s-maj=73.1km s-min=12.9km az=58.0*
*IDC **13** 07:00:41.0±2.1, 7.90N×94.86E, mb3.8/5, mb1 3.9/5, mb1mx3.7/18, mbtmp3.8/5, Error ellipse: s-maj=84.9km s-min=27.3km az=58.0*
ISC 13 07:00:39.5±2.3, **7.4N**±0.4×**93.9E**±0.6, **h30**^{km}, **n9**, σ**0^{s}18**/9, **mb3.8**/6, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	40.50	348	P	P	07 08 17.3	-0.1
	1.2nm,0.7s,mb3.7,baz=172,slow=8.6,SNR=8.1						
SONM	Songino Array	41.67	13	P	P	07 08 26.9	-0.1
	0.5nm,0.7s,mb3.3,baz=190,slow=8.8,SNR=3.3						
KURK	Kurchatov	45.01	346	P	P	07 08 54.1	-0.1
ZAL	Zalesovo	46.98	353	P	P	07 09 10.1	+0.4
	1.1nm,0.6s,mb4.0,baz=306,slow=6.4,SNR=4.2						
ZAL	Zalesovo	46.98	353	P	P	07 09 10.1	+0.4
WRA	Warramunga Arr	48.17	125	P	P	07 09 19.4	-0.1
	0.5nm,0.7s,mb3.7,baz=305,slow=8.4,SNR=7.1						
WRAB	Tennant Creek	48.18	125	*e*P	P	07 09 19.7	+0.1
CHKZ	Chkalovo	49.85	342	P	P	07 09 31.8	-0.1
	1.1nm,0.5s,mb4.1						
FINES	FINESS Array B	73.02	332	P	P	07 12 14.1	+5.8
	2.1nm,0.9s,mb4.1,baz=108,slow=8.8,SNR=5.8						

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*IDC **13** 07:02:05.1±1.6, 24.26S×67.02W, h154^{km}±16^{km}, mb3.2/3, mb1 3.3/6, mb1mx3.2/16, mbtmp3.7/6, MS3.1/1, Ms1 3.1/1, ms1mx2.4/11, Error ellipse: s-maj=24.3km s-min=12.3km az=93.0*
*NEIC **13** 07:02:07.6±0.6, 24.19S×66.93W, h179^{km}±7^{km}, mb3.9/4, Error ellipse: s-maj=10.9km s-min=8.4km az=80.0*
*GUC **13** 07:02:08.9±0.7, 24.42S×67.32W, h177^{km}±10^{km}, ML4.0*
ISC 13 07:02:05.4±0.6, **24.30S**±0.04×**67.01W**±0.06, **h172**^{km}±9^{km}, **n28**, σ**1^{s}16**/35, **mb3.6**/4, **1C-5D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.77	322	⇓*i*P	P	07 02 43.8	+4.1
SPCH				*i* S	S	07 03 11.0	+4.8
SPCH				AMP		07 03 11.9	
	comp=N,372nm,0.6s						
CEN1	Los Morros	3.06	287	⇓*i*P	P	07 02 57.6	+2.6
CEN1				*i* S	S	07 03 34.0	+0.8
CEN1				AMP		07 03 36.8	
	comp=N,570nm,0.5s						
CPN1	Cerro Paranal	3.11	263	*e*P	P	07 02 57.4	+1.8
CPN1				*i* S	S	07 03 33.9	-0.4
CPN1				AMP		07 03 40.9	
	comp=E,336nm,0.7s						
ANCH	Antofagasta	3.17	281	*e*P	P	07 02 57.9	+1.5
ANCH				*i* S	S	07 03 34.8	-0.9
CPCH	Copiapo	4.28	224	⇑*i*P	P	07 03 10.9	+0.3
CPCH				*i* S	S	07 03 59.6	-1.4
CDCH	Caldera	4.42	231	*i* S	S	07 04 02.6	-1.5
CFAA	Coronel Fontan	7.36	188	P	P	07 03 51.2	+0.1
	comp=E,0.0nm,0.3s,baz=49,slow=7.5,SNR=8.8						
CFAA				S	S	07 05 12.2	-1.3
	comp=E,0.1nm,0.3s,baz=110,slow=24,SNR=8.7						
CFAA	Coronel Fontan	7.36	188	P	P	07 03 51.2	+0.1
CFAA				S	S	07 05 12.2	-1.3
LPAZ	La Paz	8.04	352	P	P	07 04 00.7	+0.6
	comp=E,0.2nm,0.3s,baz=147,slow=10,SNR=6.4						
LPAZ				S	S	07 05 28.2	-1.5
	comp=E,0.1nm,0.3s,baz=342,slow=19,SNR=3.7						
LPAZ	La Paz	8.04	352	*e*P	P	07 04 00.5	+0.4
LPAZ				*e*S	S	07 05 27.3	-2.4
LPAZ				S	S	07 05 28.2	-1.5
CPUP	Villa Florida	8.99	105	*e*P	P	07 04 12.2	-0.3
	comp=E,10nm,0.4s						
SIV	San Ignacio	9.97	35	P	P	07 04 23.0	-2.5
	comp=E,0.2nm,0.3s,baz=230,slow=11,SNR=12						
SIV				S	S	07 06 16.0	+0.9
	comp=E,0.1nm,0.3s,baz=280,slow=20,SNR=2.8						
TRQA	Tornquist	14.37	164	P	P	07 05 24.5	+2.6
SAML	Samuel	15.70	14	*e*P	P	07 05 37.2	-1.4
	comp=E,0.6nm,0.7s						
PLCA	Paso Flores	16.65	189	LR	LR	07 13 33.6	
	comp=E,71nm,21.1s,baz=42,slow=41						
PLCA	Paso Flores	16.65	189	P	P	07 05 50.0	-0.1
BDFB	Brasilia	19.80	68	P	P	07 06 24.0	-0.5
	comp=E,0.4nm,0.3s,baz=239,slow=12,SNR=5.9						
VNA3	Neumayer Olymp	56.87	161	⇓*i*P	P	07 11 34.2	+0.3
VNA1	Neumayer--Stat	57.07	160	⇓*i*	P	07 11 35.9	+0.6
VNA2	Neumayer--Watz	57.44	160	⇓*i*P	P	07 11 38.2	+0.3
SNAA	Sanae	59.07	161	P	P	07 11 49.3	+0.1
	comp=E,0.1nm,0.5s,mb3.0,baz=261,slow=11,SNR=11						
SNAA	Sanae	59.07	161	*e*P	P	07 11 49.3	0.0
	comp=E,0.8nm,0.6s,mb3.7						

TXAR	Lajitas Array	63.92	325	P	P	07 12 21.3	-1.0
	comp=E,0.2nm,0.7s,mb3.0,baz=135,slow=5.1,SNR=3.0						
QSPA	South Pole Qui	65.91	180	eP	P	07 12 34.9	+0.6
	comp=E,1.7nm,0.5s,mb4.1						
BOSA	Boshof	80.60	117	P	P	07 14 00.6	+0.2
	comp=E,2.2nm,0.8s,mb3.8,baz=188,slow=7.1,SNR=3.6						
FORT	Forrest	123.36	196	eP	Pdif	07 17 17.4	+2.1
	comp=E,14nm,0.5s						
WRA	Warramunga Arr	131.36	207	PKP	PKPdf	07 20 59.1	+1.1
	comp=E,0.2nm,0.4s,baz=158,slow=1.9,SNR=6.0						
MKAR	Makanchi Array	146.76	40	PKPbc	PKPbc	07 21 28.1	+1.7
	comp=E,1.5nm,0.7s,baz=304,slow=3.2,SNR=12						

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*NEIC **13** 07:09:38.5±1.2, 23.71S×179.99E, h515^{km}±15^{km}, mb4.3/6, Error ellipse: s-maj=14.1km s-min=13.7km az=73.0*

*IDC **13** 07:09:39.7±3.9, 23.87S×179.96E, h525^{km}±40^{km}, mb3.4/7, mb1 3.6/9, mb1mx3.4/16, mbtmp4.4/9, Error ellipse: s-maj=29.3km s-min=20.6km az=44.0*

ISC 13 07:09:38.0±1.4**, 23.75S**±0.08×**180.0E**±0.1**, h521**^{km}±18^{km}**, n29, σ0^{s}77**/28**, mb3.9**/12**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	12.52	40	P	P	07 12 21.9	-0.7
DZM	Mont Dzumac	12.57	275	P	P	07 12 25.4	+2.3
	0.6nm,0.3s,baz=79,slow=18,SNR=8.2						
URZ	Urewera	14.67	189	P	P	07 12 43.9	-0.5
	3.4nm,0.3s,baz=339,slow=3.3,SNR=7.4						
URZ				S	S	07 15 14.3	-0.6
	0.4nm,0.3s,baz=246,slow=23,SNR=5.4						
SNZO	South Karori	18.06	193	eP	P	07 13 18.4	+0.7
THZ	Tophouse	18.91	196	PN	P	07 13 26.1	+0.3
KHZ	Kahutara	19.37	194	ePN	P	07 13 29.8	-0.4
RPZ	Rata Peaks	21.23	198	P	P	07 13 47.4	0.0
	13nm,0.6s,mb4.7,baz=4.1,slow=5.0,SNR=7.6						
FOZ	Fox Glacier	21.50	201	ePN	P	07 13 49.2	-0.8
CTA	Charters Tower	31.44	270	eP	P	07 15 18.5	+0.7
	6.4nm,0.4s,mb4.5						
PMG	Port Moresby	34.41	289	eP	P	07 15 42.4	-0.5
STKA	Stephens Creek	34.75	248	P	P	07 15 46.1	+0.6
	2.6nm,0.5s,mb4.0,baz=93,slow=11,SNR=10						
STKA	Stephens Creek	34.75	248	eP	P	07 15 46.1	+0.6
ASPA	Alice Springs	42.03	260	eP	P	07 16 44.6	-0.2
WB2	Warramunga Arr	42.37	266	⇓iP	P	07 16 46.8	-0.8
WRAB	Tennant Creek	42.37	266	eP	P	07 16 46.7	-0.9
	8.6nm,0.6s,mb4.5						
WRA	Warramunga Arr	42.38	266	P	P	07 16 46.8	-0.9
	7.6nm,0.7s,mb4.3,baz=103,slow=8.1,SNR=64						
FITZ	Fitzroy Crossi	50.80	265	eP	P	07 17 51.9	-0.1
	5.0nm,0.6s,mb4.0						
FITZ	Fitzroy Crossi	50.80	265	P	P	07 17 51.4	-0.6
	5.8nm,0.6s,mb4.1,baz=125,slow=5.3,SNR=11						
SBA	Scott Base	54.53	183	eP	P	07 18 19.8	+1.9
	4.3nm,1.0s,mb3.6						
VNDA	Vanda	54.53	185	eP	P	07 18 18.4	+0.5
	0.8nm,0.7s,mb3.1						
QSPA	South Pole Qui	66.34	180	eP	P	07 19 36.0	+0.5
	5.4nm,0.8s,mb4.1						
MAW	Mawson	77.88	200	P	P	07 20 42.3	+0.2
	0.7nm,0.4s,mb3.4,baz=136,slow=7.3,SNR=6.2						
SNAA	Sanae	84.82	179	P	P	07 21 16.9	-0.4
	0.2nm,0.4s,mb3.0,baz=209,slow=10.0,SNR=12						
VNA3	Neumayer Olymp	85.03	177	e	P	07 21 18.0	-0.4
VNA2	Neumayer--Watz	85.45	178	e	P	07 21 20.4	0.0
TXAR	Lajitas Array	90.38	58	P	P	07 21 45.2	+0.7
	0.7nm,0.7s,mb3.6,baz=212,slow=6.7,SNR=10						
TXAR	Lajitas Array	90.38	58	P	P	07 21 45.2	+0.7
AKASG	Malin Array Be	144.82	327	PKP	PKPdf	07 28 14.9	+0.3
	0.2nm,0.3s,baz=43,slow=3.9,SNR=5.6						
BRTR	Keskin Array B	147.46	307	PKPbc	PKPdf	07 28 26.4	+7.1
	0.9nm,0.6s,baz=117,slow=2.8,SNR=4.1						

ISC 13 07:17:15.9±1.5**, 38.25N**±0.09×**26.60E**±0.10**, h13**^{km}±7^{km}**, n7, σ0^{s}82**/12**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.11	358	i P	Pg	07 17 18.5	-0.6
URLA				i S	Sg	07 17 21.8	+0.5
BLCB	Balcova	0.37	68	PG	Pg	07 17 24.8	+1.0
IZM	Izmir	0.54	74	PG	Pg	07 17 26.3	-0.7
IZM				SG	Sg	07 17 34.1	-0.3
KDAG	Bornova	0.55	73	i P	Pb	07 17 25.9	-0.9
KDAG				i S	Sb	07 17 33.4	-1.0
AKS	Akhisar	1.14	56	ePN	Pn	07 17 37.3	-0.3
AYDN	Tasoluk	1.17	120	i P	Pb	07 17 36.9	-0.6
AYDN				i S	Sb	07 17 52.6	+0.2
MANT	Manisa	1.56	80	i P	Pn	07 17 45.1	+1.6
MANT				i S	Sb	07 18 04.8	+1.1

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*IDC **13** 07:17:41.3±1.7, 23.63S×115.59W, mb4.0/4, mb1 4.4/4, mb1mx4.1/15, mbtmp4.0/4, MS4.0/4, Ms1 4.0/4, ms1mx3.5/19, Error ellipse: s-maj=59.5km s-min=26.9km az=46.0*

*NEIC **13** 07:17:44.0±0.5, 23.45S×115.20W, h10^{km}, mb4.6/8, Error ellipse: s-maj=21.1km s-min=10.7km az=76.0*

ISC 13 07:17:43.0±0.7**, 23.3S**±0.1×**115.2W**±0.2**, h10**^{km}**, (h6**^{km}±.5^{km}**:pP-P), n35, σ0^{s}85**/25**, mb4.2**/13**, MS4.0**/4**, 3C, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	41.12	126	LR	LR	07 37 45.5	
	comp=Z,221nm,20.2s,MS4.0,baz=189,slow=29						
CFAA	Coronel Fontan	42.18	112	P	P	07 25 38.4	+0.8
	0.2nm,0.7s,mb2.8,baz=244,slow=12,SNR=4.3						
LPAZ	La Paz	44.64	90	P	P	07 25 59.5	+1.6
	3.1nm,1.0s,mb4.1,baz=288,slow=4.3,SNR=11						
LPAZ				LR	LR	07 40 02.5	
	comp=Z,138nm,22.0s,MS3.8,baz=86,slow=30						
LPAZ	La Paz	44.64	90	eP	P	07 25 58.4	+0.6
LPAZ				LR	LR	07 40 02.5	
SAML	Samuel	51.66	83	P	P	07 26 50.4	-2.0
	0.9nm,0.8s,mb3.8						
TXAR	Lajitas Array	53.52	12	P	P	07 27 06.5	+0.4
	1.2nm,0.9s,mb3.8,baz=190,slow=7.6,SNR=8.8						
TXAR	Lajitas Array	53.52	12	P	P	07 27 06.5	+0.4
JCT	Junction City	55.50	16	eP	P	07 27 20.5	-0.1
	21nm,1.3s,mb5.0						
MNTX	Cornudas Mount	55.51	10	eP	P	07 27 20.0	-0.7
	6.3nm,1.3s,mb4.5						
SDCO	Great Sand Dun	61.43	9	eP	P	07 28 02.0	+0.1
	6.1nm,1.3s,mb4.6						
MNV	Mina	61.50	357	eP	P	07 28 02.9	+0.5
	6.8nm,1.3s,mb4.6						
NVAR	Mina Array Bea	61.50	357	P	P	07 28 03.0	+0.5
	3.3nm,0.8s,mb4.5,baz=172,slow=9.0,SNR=15						
BDFB	Brasilia	63.29	96	LR	LR	07 52 46.0	
	comp=Z,106nm,19.8s,MS4.0,baz=265,slow=33						
WVOR	Wild Horse Val	65.51	357	eP	P	07 28 29.0	+0.3
	4.4nm,1.0s,mb4.4						
PDAR	Pinedale Array	65.97	5	P	P	07 28 30.6	-1.0
	0.5nm,0.7s,mb3.7,baz=169,slow=5.9,SNR=6.8						
HLID	Hailey	66.56	1	eP	P	07 28 35.6	+0.2
	4.3nm,0.9s,mb4.5						
QSPA	South Pole Qui	66.82	180	eP	P	07 28 36.4	-0.1
	6.6nm,1.1s,mb4.6						
MCMT	McKenzie Canyo	67.86	2	eP	P	07 28 43.6	0.0
VNA3	Neumayer Olymp	72.95	161	e	P	07 29 13.8	-0.1
VNA3	Neumayer Olymp	72.95	161	e	P	07 29 17.4	+3.5
VNA3	Neumayer Olymp	72.95	161	⇑iP	P	07 29 12.1	-1.8
VNA3				e	pP	07 29 13.8	-3.3
VNA3				e		07 29 17.4	
VNA1	Neumayer--Stat	73.61	161	e	P	07 29 19.7	+1.9
VNA1	Neumayer--Stat	73.61	161	e	P	07 29 25.3	+7.5
VNA1	Neumayer--Stat	73.61	161	⇑iP	P	07 29 17.4	-0.4
VNA1				e	pP	07 29 19.7	-1.2
VNA1				e		07 29 25.3	
VNA2	Neumayer--Watz	73.76	161	e	P	07 29 19.0	+0.4
VNA2	Neumayer--Watz	73.76	161	e	P	07 29 25.0	+6.4
VNA2	Neumayer--Watz	73.76	161	⇑iP	P	07 29 17.2	-1.4
VNA2				e	pP	07 29 19.0	-2.8
VNA2				e		07 29 25.0	
YKA	Yellowknife Ar	85.53	0	LR	LR	08 06 09.8	
	comp=Z,86nm,18.1s,MS4.2,baz=110,slow=34						
SONM	Songino Array	138.98	317	PKP	PKPdf	07 37 11.7	-1.2
	0.8nm,1.1s,baz=45,slow=2.1,SNR=3.5						
AKASG	Malin Array Be	141.18	36	PKP	PKPdf	07 37 14.9	-1.8
	0.3nm,0.3s,baz=283,slow=2.9,SNR=3.6						
ZAL	Zalesovo	145.94	339	PKPbc	PKPbc	07 37 22.6	-0.2
	0.8nm,0.3s,baz=40,slow=8.0,SNR=5.5						
ARU	Arti	146.62	6	eP	PKPbc	07 37 24.6	+0.3
BR131	Keskin Array S	148.98	51	ePKPbc	PKPdf	07 37 31.9	+1.7
BR131				ePKPab	PKPab	07 37 37.5	-0.1
BRTR	Keskin Array B	148.98	51	PKPbc	PKPdf	07 37 32.2	+2.0
	2.4nm,0.8s,baz=270,slow=1.2,SNR=11						
MKAR	Makanchi Array	152.70	333	PKPbc	PKPdf	07 37 38.8	+3.2
	0.6nm,0.7s,baz=45,slow=1.7,SNR=5.6						

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*IDC **13** 07:27:59.6±1.2, 14.49N×144.31E, mb3.9/6, mb1 4.1/6, mb1mx3.9/18, mbtmp3.9/6, Error ellipse: s-maj=42.4km s-min=15.0km az=67.0*

*NEIC **13** 07:28:03.6±5.0, 14.54N×144.52E, h33^{km}±38^{km}, mb4.5/3, Error ellipse: s-maj=26.7km s-min=8.8km az=88.0*

ISC 13 07:28:04.0±2.0**, 14.53N**±0.09×**144.5E**±0.3**, h54**^{km}±23^{km}**, n12, σ0^{s}38**/14**, mb4.1**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.00	159	Pn	P	07 28 21.6	-0.5
	51nm,0.3s,baz=25,slow=22,SNR=8.0						
GUMO				Sn	S	07 28 35.9	+0.5
	45nm,0.3s,baz=158,slow=23,SNR=7.5						
GUMO	Guam	1.00	159	eP	P	07 28 21.4	-0.7
GUMO				Sn	S	07 28 35.9	+0.4
MJAR	Matsushiro Arr	22.63	347	P	P	07 33 02.0	+0.6
	0.5nm,0.4s,mb3.3,baz=179,slow=4.5,SNR=4.4						
WRAB	Tennant Creek	35.67	197	eP	P	07 34 59.1	-0.1
	4.7nm,0.7s,mb4.5						
WB2	Warramunga Arr	35.68	197	eP	P	07 34 59.4	+0.1
WRA	Warramunga Arr	35.68	197	P	P	07 34 59.1	-0.3
	3.3nm,0.8s,mb4.3,baz=16,slow=9.5,SNR=24						
FITZ	Fitzroy Crossi	37.37	210	eP	P	07 35 13.4	-0.2
	8.3nm,1.4s,mb4.4						
FITZ	Fitzroy Crossi	37.37	210	P	P	07 35 13.3	-0.3
	3.3nm,0.6s,mb4.3,baz=24,slow=14,SNR=5.9						
SONM	Songino Array	45.76	325	P	P	07 36 22.1	+0.2
	0.7nm,0.7s,mb3.7,baz=121,slow=7.6,SNR=5.8						
STKA	Stephens Creek	46.22	183	P	P	07 36 26.3	+0.5
	1.9nm,0.7s,mb4.1,baz=347,slow=6.5,SNR=6.8						
MKAR	Makanchi Array	60.57	316	P	P	07 38 11.1	-0.2
	0.7nm,0.7s,mb3.9,baz=97,slow=9.8,SNR=4.7						
COLA	College	67.50	25	eP	P	07 38 55.8	-0.4
	1.9nm,0.4s,mb4.5						

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*NEIC **13** 07:40:21.1, 40.43S×173.43E, h185^{km}, MG3.8(WEL), After WEL.*

WEL 13 07:40:21.7±0.3**, 40.47S×173.44E, h178**^{km}±2^{km}**, ML3.6**/12**, 1C-1D, Error ellipse: s-maj=2.2km s-min=1.8km az=0.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D’Urville Isla	0.50	133	PN	P	07 40 46.4	-0.3
DUWZ				SN	S	07 41 05.1	-0.8
NNZ	Nelson	0.75	184	PN	P	07 40 47.6	-0.3
NNZ				SN	S	07 41 07.1	-1.1
QRZ	Quartz Range	0.78	242	P	P	07 40 47.4	-0.7
QRZ				S	S	07 41 06.5	-1.9
QRZ	Quartz Range	0.78	242	⇓PN	P	07 40 47.4	-0.7
QRZ				SN	S	07 41 06.5	-1.9
TCW	Tory Channel	0.98	140	P	P	07 40 49.6	+0.3
TCW	Tory Channel	0.98	140	PN	P	07 40 49.5	+0.2
TCW				SN	S	07 41 09.5	-1.1
TUWZ	Tuamarina	1.04	159	PN	P	07 40 49.8	+0.1
TUWZ				SN	S	07 41 10.0	-1.4
KIW	Kapiti Island	1.18	110	P	P	07 40 50.7	-0.3
KIW				S	S	07 41 12.7	-0.9
KIW	Kapiti Island	1.18	110	PN	P	07 40 50.7	-0.4
KIW				SN	S	07 41 11.6	-2.0
MRW	Makara Radio	1.22	129	P	P	07 40 51.2	-0.2
MRW	Makara Radio	1.22	129	⇑PN	P	07 40 51.2	-0.1
BSWZ	Blackbirch Sta	1.29	165	PN	P	07 40 51.9	-0.1
WEL	Wellington	1.30	130	SN	S	07 41 13.8	-1.6
THZ	Tophouse	1.36	197	PN	P	07 40 52.2	-0.4
THZ				SN	S	07 41 15.0	-1.5
WAZ	Wanganui	1.38	60	P	P	07 40 52.3	-0.5
WAZ	Wanganui	1.38	60	PN	P	07 40 52.3	-0.5
CAW	Cannon Point	1.39	118	P	P	07 40 52.6	-0.3
CAW	Cannon Point	1.39	118	PN	P	07 40 52.5	-0.4
BHW	Baring Head	1.44	132	SN	S	07 41 15.5	-2.2
MRZ	Mangatainoka R	1.64	98	P	P	07 40 54.6	-0.7
MRZ	Mangatainoka R	1.64	98	PN	P	07 40 54.6	-0.7
MSWZ	Moikau Station	1.67	125	P	P	07 40 55.0	-0.6
MSWZ	Moikau Station	1.67	125	PN	P	07 40 54.9	-0.6
MTW	Mount Morrison	1.71	115	P	P	07 40 55.4	-0.6
MTW	Mount Morrison	1.71	115	PN	P	07 40 55.4	-0.7
PAWZ	Paruwai Farm	1.76	122	P	P	07 40 55.9	-0.6
PAWZ	Paruwai Farm	1.76	122	PN	P	07 40 55.6	-0.9
PAWZ				SN	S	07 41 21.4	-2.0
DSZ	Denniston Nort	1.78	224	P	P	07 40 55.8	-0.9
DSZ	Denniston Nort	1.78	224	PN	P	07 40 55.7	-1.0
DSZ				SN	S	07 41 21.3	-2.5
TRWZ	Traveller	1.94	119	PN	P	07 40 57.8	-0.6
KHZ	Kahutara	1.95	178	P	P	07 40 57.8	-0.7
KHZ	Kahutara	1.95	178	PN	P	07 40 57.7	-0.8
KHZ				SN	S	07 41 24.7	-2.2
TSZ	Takapari Road	1.97	79	P	P	07 40 57.6	-1.1
TSZ	Takapari Road	1.97	79	PN	P	07 40 57.5	-1.2
FWVZ	Far West T-bar	2.02	54	eP	P	07 40 57.7	-1.6
FWVZ	Far West T-bar	2.02	54	PN	P	07 40 57.5	-1.8
CNZ	Chateau	2.06	53	P	P	07 40 57.8	-1.9
CNZ	Chateau	2.06	53	PN	P	07 40 57.8	-1.9
MOVZ	Moawhango	2.07	60	P	P	07 40 58.0	-1.8
MOVZ	Moawhango	2.07	60	PN	P	07 40 57.7	-2.1
WTVZ	West Tongariro	2.13	52	P	P	07 40 58.7	-1.9
WTVZ	West Tongariro	2.13	52	ePN	P	07 40 58.5	-2.1
BFZ	Birch Farm	2.15	97	P	P	07 40 59.9	-0.8
BFZ	Birch Farm	2.15	97	PN	P	07 40 59.9	-0.9
LTZ	Lake Taylor	2.48	200	P	P	07 41 03.4	-1.2
LTZ	Lake Taylor	2.48	200	PN	P	07 41 03.3	-1.3
MQZ	McQueen’s Vall	3.29	190	P	P	07 41 11.7	-2.9
MQZ	McQueen’s Vall	3.29	190	PN	P	07 41 11.5	-3.1
URZ	Urewera	3.60	53	SN	S	07 41 55.0	-7.0
FOZ	Fox Glacier	4.17	221	PN	P	07 41 21.1	-4.6
ODZ	Otahua Downs	5.02	203	eP	P	07 41 34.1	-2.6
ODZ	Otahua Downs	5.02	203	PN	P	07 41 33.9	-2.7

MAN 13 07:41:19.5, 9.67N×125.53E, h1^{km}**, mb4.2, ML3.0, MS2.8, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.70	173	eP	Pg	07 41 32.5	-1.0
MSLP	Maasin	0.81	305	eP	Pg	07 41 34.7	-0.9
MSLP				eS	Sg	07 41 39.7	-6.6
PLP	Palo	1.58	340	eP	Pn	07 41 49.0	+0.2
PLP				eS	Sb	07 42 06.8	-3.0
TBP	Tagbilaran	1.65	271	eP	Pn	07 41 52.7	+3.0
TBP				eS	Sb	07 42 09.0	-2.6
LLP	Lapu-Lapu	1.67	293	eP	Pn	07 41 50.2	+0.1

IDC 13 07:55:01.3±10.0**, 52.93N×174.51W, h210**^{km}±91^{km}**, mb3.1**/5**, mb1 3.4**/7**, mb1mx3.1**/25**, mbtmp3.7**/7**, MS3.8**/1**, Ms1 3.8**/1**, ms1mx2.5**/12**, Error ellipse: s-maj=66.4km s-min=21.1km az=20.0, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	13.36	60	P	P	07 58 03.8	+0.2
	1.7nm,0.3s,baz=270,slow=8.4,SNR=20						
KDAK				S	S	08 00 29.9	+2.2
	0.2nm,0.3s,baz=254,slow=5.3,SNR=4.0						
ILAR	Eielson Array	18.38	39	P	P	07 58 59.2	-3.0
	0.2nm,0.3s,baz=240,slow=10,SNR=11						
INK	Inuvik	24.66	36	P	P	08 00 03.0	-0.6
	0.4nm,0.4s,baz=235,slow=4.3,SNR=7.9						
MJAR	Matsushiro Arr	36.62	263	LR	LR	08 14 53.2	
	comp=Z,151nm,19.5s,baz=215,slow=33						
PDAR	Pinedale Array	43.35	76	P	P	08 02 42.5	-1.4
	1.1nm,0.5s,baz=314,slow=3.4,SNR=12						
TXAR	Lajitas Array	55.85	85	P	P	08 04 16.9	-1.8
	0.2nm,0.7s,baz=307,slow=4.8,SNR=4.6						
MKAR	Makanchi Array	61.10	310	P	P	08 04 52.2	-2.4
	0.4nm,0.8s,baz=32,slow=10.0,SNR=3.0						
BVAR	Borovoye Array	61.37	321	P	P	08 04 54.6	-1.8
	0.9nm,0.5s,baz=53,slow=5.4,SNR=7.3						

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*NEIC **13** 08:18:46.0±1.2, 10.61S×161.90E, h94^{km}±10^{km}, mb3.9/2, Error ellipse: s-maj=20.8km s-min=9.8km az=53.0*

*IDC **13** 08:18:46.4±3.1, 10.62S×161.80E, h92^{km}±21^{km}, mb3.6/4, mb1 3.8/7, mb1mx3.7/16, mbtmp4.1/7, MS3.1/2, Ms1 3.1/2, ms1mx2.7/19, Error ellipse: s-maj=36.8km s-min=19.1km az=67.0*

ISC 13 08:18:45.4±1.5**, 10.7S**±0.1×**161.8E**±0.1**, h101**^{km}±11^{km}**, n15, σ0^{s}55**/19**, mb3.6**/6**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.22	303	P	P	08 19 21.8	+0.2
	192nm,0.3s,baz=173,slow=2.3,SNR=57						
HNR				S	S	08 19 47.7	-0.8
	308nm,0.3s,baz=236,slow=7.7,SNR=5.9						
HNR	Honiara	2.22	303	eP	P	08 19 21.7	+0.2
HNR				eS	S	08 19 48.9	+0.4
NOUC	Port Laguerre	12.15	160	eP	P	08 21 36.4	+0.1
NOUC				eS	S	08 23 39.5	-11
NOUC	Port Laguerre	12.15	160	eP	P	08 21 36.4	+0.1
NOUC				eS	S	08 23 39.5	-11
DZM	Mont Dzumac	12.18	159	P	P	08 21 36.3	-0.3
	5.5nm,0.3s,baz=205,slow=19,SNR=92						
DZM				S	S	08 23 44.8	-5.7
	1.3nm,0.3s,baz=275,slow=21,SNR=6.1						
PMG	Port Moresby	14.50	274	LR	LR	08 26 54.3	
	comp=Z,70nm,20.4s,baz=65,slow=34						
CTA	Charters Tower	17.69	236	P	P	08 22 47.5	+0.6
	0.2nm,0.3s,baz=68,slow=15,SNR=2.7						
CTA				LR	LR	08 28 59.3	
	comp=Z,66nm,18.1s,baz=229,slow=35						
CTA	Charters Tower	17.69	236	P	P	08 22 47.5	+0.6
CTA				LR	LR	08 28 59.3	
WRAB	Tennant Creek	28.02	248	eP	P	08 24 28.9	-0.4
	3.7nm,1.0s,mb3.9						
WRA	Warramunga Arr	28.04	248	P	P	08 24 28.4	-1.1
	0.7nm,0.5s,mb3.4,baz=77,slow=9.2,SNR=9.8						
STKA	Stephens Creek	28.20	219	P	P	08 24 31.7	+0.9
	0.7nm,0.6s,mb3.4,baz=47,slow=16,SNR=2.9						
STKA	Stephens Creek	28.20	219	P	P	08 24 31.7	+0.9
VNDA	Vanda	66.84	180	eP	P	08 29 27.9	-0.3
	1.6nm,1.0s,mb3.8						
SONM	Songino Array	76.12	325	P	P	08 30 24.4	+0.6
	1.6nm,0.7s,mb3.9,baz=143,slow=5.6,SNR=14						
MKAR	Makanchi Array	90.63	317	P	P	08 31 37.6	-0.2
	0.2nm,0.6s,mb3.4,baz=85,slow=6.9,SNR=3.5						

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*NSSP **13** 08:31:57.4, 41.35N×44.32E, h8^{km}, ML3.2*

*IDC **13** 08:32:05.6±1.0, 41.36N×44.47E, mb3.4/4, mb1 3.6/5, mb1mx3.5/20, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=23.9km s-min=10.3km az=90.0*

*TIF **13** 08:32:05.7, 41.40N×44.32E, h10^{km}*

*CSEM **13** 08:32:05.5±0.1, 41.44N×44.41E, h12^{km}, mb3.7/2, Error ellipse: s-maj=2.9km s-min=1.6km az=92.0*

*MOS **13** 08:32:06.1±1.3, 41.35N×44.44E, h10^{km}, mb3.7/4, Error ellipse: s-maj=13.3km s-min=4.8km az=94.4*

*NEIC **13** 08:32:07.5±0.7, 41.44N×44.51E, h10^{km}, mb3.7/4, Error ellipse: s-maj=12.5km s-min=10.6km az=222.0*

*ISK **13** 08:32:10.8, 41.23N×44.33E, h29^{km}, ML3.8*

ISC 13 08:32:06.8±0.4**, 41.41N**±0.02×**44.33E**±0.03**, h6**^{km}±3^{km}**, n65, σ1^{s}20**/80**, mb3.5**/8**, 2C-4D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZR	Kazreti	0.07	110	P	Pg	08 32 08.5	0.0
KZR				S	Sg	08 32 10.6	+0.9
STE	Stepanavan	0.41	172	⇓P	Pg	08 32 15.4	+0.4
TBLG	Delisi	0.45	44	P	Pg	08 32 15.8	0.0
TBLG				S	Sg	08 32 22.2	+0.4
MTA	Mtatsminda	0.45	51	P	Pg	08 32 15.8	-0.1
MTA				S	Sg	08 32 22.1	+0.2
TI2	Plekhanov	0.46	44	ePG	Pg	08 32 15.6	-0.3
TI2	Plekhanov	0.46	44	⇑iP	Pg	08 32 15.6	-0.3
	390nm,0.4s						
TI2				i S	Sg	08 32 21.0	-1.0
	1µm,0.8s						
TSOZ	Tsokhamarg	0.57	217	P	Pg	08 32 18.6	+0.4
GOR	Gori	0.60	344	P	Pg	08 32 18.6	-0.2
GOR				S	Sg	08 32 27.1	+0.3
AKH	Akhalkalaki	0.63	271	P	Pg	08 32 18.9	-0.4
AKH				S	Sg	08 32 27.5	-0.2
KAMZ	Kamo	0.65	206	⇓P	Pg	08 32 19.4	-0.3
DGRG	David-gareji	0.79	86	P	Pb	08 32 21.8	-0.7
DGRG				S	Sg	08 32 33.5	+0.5
KARS	Kars	1.23	230	PN	Pn	08 32 30.3	-0.1
KARS				SN	Sn	08 32 45.6	-1.8
GNI	Garni	1.30	166	PN	Pn	08 32 30.9	-0.5
GNI	Garni	1.30	166	Pn	Pn	08 32 32.1	+0.7
	214nm,0.3s,baz=302,slow=4.4,SNR=413						
GNI				Sn	Sn	08 32 49.4	+0.2
	195nm,0.3s,baz=74,slow=6.1,SNR=9.6						
GNI	Garni	1.30	166	⇓iP	Pb	08 32 32.0	+0.9
GNI				Sn	Sn	08 32 49.4	+0.2
GNI	Garni	1.30	166	PG	Pg	08 32 32.1	-0.5
GNI						08 32 49.4	
GNI				pmax	pmax		
	comp=Z,214nm,0.3s						
GNI				smax			
	comp=N,195nm,0.3s						
GNI	Garni	1.30	166	ePn	Pn	08 32 30.9	-0.5
GNI				Sn	Sn	08 32 49.4	+0.2
ONI	Oni	1.34	331	P	Pb	08 32 31.1	-0.8
ONI				S	Sb	08 32 49.0	-0.2
ZEI	Tsey	1.40	347	i PG	Pg	08 32 31.8	-2.9
ZEI				e		08 32 52.1	
ZEI				pmax	pmax		
	comp=Z,346nm,0.1s						
ZEI				smax			
	comp=E,920nm,0.3s						
ZEI	Tsey	1.40	347	i Pg	Pg	08 32 31.8	-2.9
	comp=E,346nm,0.1s						
ZEI				eSg	Sg	08 32 52.1	-1.3
LACR	Lac	1.42	359	i PG	Pg	08 32 33.1	-2.0
DIGR	Digorskoe uzhe	1.59	340	i PN	Pn	08 32 35.9	+0.2
VLKR	Vladikavkaz	1.66	9	i PN	Pn	08 32 38.2	+1.6
KORR	Kora	1.69	354	i PN	Pn	08 32 38.7	+1.6
ARNR	Ardon	1.78	359	i PN	Pn	08 32 40.2	+1.8
LSNR	Lesken	1.90	349	i PN	Pn	08 32 41.5	+1.4
KMSR	Komsomolskaya	1.96	359	ePN	Pn	08 32 42.8	+1.8
CLDR	Caldiran	2.28	188	ePN	Pn	08 32 45.3	-0.2
TRKR	Terskaya	2.33	7	ePN	Pn	08 32 47.9	+1.6
PRTR	Priterechnaya	2.34	359	ePN	Pn	08 32 47.5	+1.1
KUBR	Kubataba	2.49	345	i PN	Pn	08 32 49.2	+0.7
SHAR	Shatzhatmas	2.64	333	i PN	Pn	08 32 51.6	+1.0
KIV0	Kislovodsk Arr	2.82	335	i PN	Pn	08 32 53.5	+0.3
KIV	Kislovodsk	2.82	335	eP	Pn	08 32 53.4	+0.1
KIV				eS	Sn	08 33 35.4	+7.5
KIV	Kislovodsk	2.82	335	ePN	Pn	08 32 53.4	+0.2
KIV				eS	Sn	08 33 35.4	+7.5
MAK	Makhachkala	2.83	56	ePN	Pn	08 32 55.8	+2.5
BEYR	Belyy Ugol+	2.83	337	i PN	Pn	08 32 53.9	+0.5
VANB	Van	2.90	195	ePN	Pn	08 32 53.7	-0.7
NAGR	Nagutskaya	3.25	340	ePn	Pn	08 32 59.0	-0.3
GOF	Gofitskoye	3.77	346	ePN	Pn	08 33 16.8	+10
GUMT	Gumushane	3.79	257	ePN	Pn	08 33 09.2	+2.2
SOC	Sochi	4.04	304	ePN	Pn	08 33 19.7	+9.1
PTK	Pertek	4.54	238	ePN	Pn	08 33 19.0	+1.3
AKTO	Aktyubinsk	13.11	42	Pn	P	08 35 09.5	-6.6
	comp=E,0.4nm,0.3s,baz=220,slow=13,SNR=6.5						
OBN	Obninsk	14.64	342	⇓eP	P	08 35 33.3	-2.9
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
OBN	Obninsk	14.64	342	eP	P	08 35 33.3	-2.9
	comp=Z,100nm,17.0s						
BRVK	Borovoye	21.00	47	eP	P	08 36 50.5	-2.7
	comp=Z,2.5nm,0.6s,mb3.7						
BRVK	Borovoye	21.00	47	eP	P	08 36 50.5	-2.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
BRVK	Borovoye	21.00	47	eP	P	08 36 50.5	-2.7
	comp=Z,2.5nm,0.6s,mb3.7						
BVAR	Borovoye Array	21.05	48	P	P	08 36 50.3	-3.3
	comp=Z,1.7nm,0.5s,mb3.7,baz=250,slow=10,SNR=11						
CHKZ	Chkalovo	21.43	46	eP	P	08 36 54.3	-3.2
	comp=Z,1.8nm,0.5s,mb3.7						
CHKZ	Chkalovo	21.43	46	eP	P	08 36 54.3	-3.2
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						

CHKZ	**Chkalovo**	**21.43**	**46**	eP	**P**	**08 36 54.3**	**-3.2**
	comp=Z,1.8nm,0.5s,mb3.7						
AAK	**Ala-Archa**	**22.39**	**77**	P	**P**	**08 37 03.2**	**-4.1**
	comp=Z,2.7nm,0.9s,mb3.7						
AAK	**Ala-Archa**	**22.39**	**77**	P	**P**	**08 37 03.2**	**-4.0**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
AAK	**Ala-Archa**	**22.39**	**77**	P	**P**	**08 37 03.2**	**-4.0**
	comp=Z,2.7nm,0.9s,mb3.7						
GERES	**GERESS Array B**	**22.74**	**299**	P	**P**	**08 37 11.2**	**+0.7**
	comp=Z,0.6nm,0.8s,mb3.1,baz=80,slow=12,SNR=3.2						
FINES	**FINESS Array B**	**22.91**	**337**	P	**P**	**08 37 10.3**	**-1.8**
	comp=Z,1.3nm,0.8s,mb3.4,baz=146,slow=14,SNR=5.6						
FINES	**FINESS Array B**	**22.91**	**337**	P	**P**	**08 37 10.3**	**-1.8**
KURK	**Kurchatov**	**25.35**	**57**	eP	**P**	**08 37 33.4**	**-2.4**
	comp=Z,2.2nm,0.8s,mb3.7						
KURK	**Kurchatov**	**25.35**	**57**	⇑eP	**P**	**08 37 33.1**	**-2.7**
KURK	**Kurchatov**	**25.35**	**57**	eP	**P**	**08 37 33.1**	**-2.7**
MKAR	**Makanchi Array**	**27.60**	**66**	P	**P**	**08 37 54.4**	**-2.1**
	comp=Z,0.3nm,0.5s,mb3.2,baz=262,slow=10,SNR=5.3						
MKAR	**Makanchi Array**	**27.60**	**66**	P	**P**	**08 37 54.4**	**-2.1**
MKAR	**Makanchi Array**	**27.60**	**66**	i P	**P**	**08 37 54.4**	**-2.1**

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*NDI **13** 08:52:23.3±2.7, 35.00N×72.66E, h10^{km}, MD3.6, ML3.4*
*IDC **13** 08:52:25.2±1.0, 34.80N×73.12E, mb4.1/8, mb1 4.2/11, mb1mx4.0/22, mbtmp4.1/11, ML4.0/3, Error ellipse: s-maj=27.7km s-min=20.6km az=82.0*
*MOS **13** 08:52:26.2±1.1, 34.76N×73.13E, h22^{km}, mb4.4/4, Error ellipse: s-maj=17.0km s-min=7.1km az=101.4*
*NEIC **13** 08:52:26.3±0.4, 34.75N×73.11E, h10^{km}, mb4.2/2, Error ellipse: s-maj=11.3km s-min=5.1km az=52.0*
*NNC **13** 08:52:34.8±9.9, 35.05N×72.48E, h67^{km}±88^{km}, mpv4.0, Error ellipse: s-maj=78.8km s-min=61.5km az=46.0*
ISC 13 08:52:25.0±0.3, **34.78N**±0.03×**73.20E**±0.06, **h10^{km}, n66, σ1^{s}36**/77, **mb4.0**/10, **5C-6D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.12**	**177**	⇓P	**Pb**	**08 52 49.1**	**+3.1**
CEP	**Cherat**	**1.44**	**229**	P	**Pn**	**08 52 51.2**	**0.0**
SARP	**Sargodha**	**2.89**	**189**	P	**Pn**	**08 53 16.0**	**+4.1**
SARP				S	**Sn**	**08 53 55.0**	**+7.9**
THN	**Thein Dam**	**3.14**	**137**	eP	**Pn**	**08 53 20.8**	**+5.2**
THN				ex	x	08 54 09.1	
SBDP	**Sheikh Budin**	**3.18**	**220**	P	**Pn**	**08 53 18.8**	**+2.7**
DLH	**Dalhousie**	**3.21**	**133**	eP	**Pn**	**08 53 21.0**	**+4.5**
DLH				eS	**Sn**	**08 54 02.0**	**+6.8**
BHK	**Bhakra**	**4.30**	**140**	ex	x	08 54 32.0	
BHK				ex	x	08 54 51.0	
SDNR	**Sundarnagar**	**4.55**	**135**	eP	**Pn**	**08 53 38.8**	**+3.3**
SDNR				eS	**Sn**	**08 54 32.8**	**+3.7**
SMLA	**Simla**	**4.94**	**136**	eP	**Pn**	**08 53 43.2**	**+2.2**
SMLA				eS	**Sn**	**08 54 41.4**	**+2.5**
NDI	**New Delhi**	**6.97**	**150**	eP	**Pn**	**08 54 07.5**	**-2.2**
NDI				eS	**Sn**	**08 55 27.8**	**-2.1**
KHET	**Khetri**	**7.05**	**161**	eP	**Pn**	**08 54 11.3**	**+0.5**
KHET				eS	**Sn**	**08 55 28.3**	**-3.4**
KHET				AML	AML	08 55 33.8	
	comp=N,27nm,0.3s						
KHET				AML	AML	08 56 24.5	
	comp=E,28nm,0.7s						
KUDL	**Kundal**	**7.19**	**156**	eP	**Pn**	**08 54 12.8**	**+0.1**
KUDL				eS	**Sn**	**08 55 34.2**	**-1.0**
AML	**Almayashu**	**7.35**	**3**	P	**Pn**	**08 54 17.7**	**+2.8**
	SNR=16						
KZA	**Kyzart**	**7.46**	**12**	P	**Pn**	**08 54 18.0**	**+1.5**
	SNR=9.0						
UCH	**Uchtor**	**7.50**	**7**	P	**Pn**	**08 54 19.6**	**+2.4**
	SNR=19						
EKS2	**Erkin-Say**	**7.88**	**3**	P	**Pn**	**08 54 25.3**	**+2.9**
	SNR=8.8						
AAK	**Ala-Archa**	**7.90**	**7**	P	**Pn**	**08 54 27.3**	**+4.5**
	SNR=5.3						
AAK	**Ala-Archa**	**7.90**	**7**	⇓P	**Pn**	**08 54 24.0**	**+1.3**
	comp=E,2.1nm,0.5s						
AAK				⇓S	**Sn**	**08 55 51.9**	**-1.3**
	comp=E,4.9nm,0.6s						
AAK	**Ala-Archa**	**7.90**	**7**	eP	**Pn**	**08 54 22.5**	**-0.2**
	comp=E,3.6nm,0.5s						
AAK	**Ala-Archa**	**7.90**	**7**	P	**Pn**	**08 54 24.0**	**+1.3**
AAK						08 55 51.8	
AAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TKM2	**Tokmak 2**	**8.34**	**12**	P	**P**	**08 54 31.5**	**+2.7**
	SNR=7.3						
KK31	**Karatay Array**	**8.57**	**347**	P	**P**	**08 54 32.2**	**+0.3**
	comp=Z,4.6nm,0.3s,baz=150,slow=12,SNR=105						
KK31				⇓S	**Sn**	**08 56 04.9**	**-4.8**
	comp=Z,2.6nm,0.3s,baz=171,slow=24,SNR=8.8						
KKAR	**Karatay Array**	**8.57**	**347**	P	**P**	**08 54 32.2**	**+0.2**
KKAR						08 56 05.2	
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KOLN	**Koldanda**	**11.31**	**125**	ePn	**P**	**08 55 09.5**	**-0.2**
GKN	**Gorkha**	**11.87**	**122**	ePn	**P**	**08 55 16.7**	**-0.6**
GKN				eSn	**S**	**08 57 23.9**	**-7.0**
	comp=Z,35nm,0.6s						
DMN	**Daman**	**12.44**	**122**	ePn	**P**	**08 55 23.7**	**-1.3**
DMN				eSn	**S**	**08 57 38.1**	**-6.6**
	comp=Z,27nm,0.7s						
KKN	**Kakani**	**12.45**	**121**	ePn	**P**	**08 55 24.0**	**-1.2**
KKN				eSn	**S**	**08 57 38.7**	**-6.3**
	comp=Z,24nm,0.6s						
PKI	**Pulchoki**	**12.68**	**121**	ePn	**P**	**08 55 28.0**	**-0.2**
GUN	**Gumba**	**12.81**	**119**	ePn	**P**	**08 55 28.9**	**-1.0**
JIRN	**Jiri**	**13.18**	**119**	ePn	**P**	**08 55 33.6**	**-1.2**
MK31	**Makanchi Array**	**13.82**	**27**	⇓P	**P**	**08 55 43.4**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=206,slow=15,SNR=6.4						
MKAR	**Makanchi Array**	**13.82**	**27**	Pn	**P**	**08 55 43.0**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=206,slow=16,SNR=8.8						
MKAR	**Makanchi Array**	**13.82**	**27**	i P	**P**	**08 55 43.3**	**+0.1**
POO	**Poona**	**16.20**	**178**	ex	x	09 00 37.0	
AB31	**Akbulak array**	**17.46**	**330**	⇑P	**P**	**08 56 28.6**	**-1.5**
	comp=Z,1.1nm,0.5s,baz=124,slow=10.0,SNR=28						
AB31				⇓S	**S**	**08 59 30.0**	**-13**
	comp=Z,1.0nm,0.7s,baz=143,slow=23,SNR=3.8						
AB31	**Akbulak array**	**17.46**	**330**	P	**P**	**08 56 28.5**	**-1.5**
VOSK	**Vostochnaya**	**18.00**	**356**	⇑P	**P**	**08 56 36.4**	**-0.4**
BVA0	**Borovoye Array**	**18.35**	**355**	⇑P	**P**	**08 56 41.2**	**+0.1**
	comp=Z,0.7nm,0.8s,baz=164,slow=9.9,SNR=22						
BVA0	**Borovoye Array**	**18.35**	**355**	i P	**P**	**08 56 42.1**	**+1.0**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**18.35**	**355**	P	**P**	**08 56 40.9**	**-0.2**
	comp=Z,1.0nm,0.3s,baz=172,slow=10,SNR=19						
BRVK	**Borovoye**	**18.39**	**354**	eP	**P**	**08 56 42.1**	**+0.5**
	comp=Z,3.3nm,0.8s						
BRVK	**Borovoye**	**18.39**	**354**	eP	**P**	**08 56 42.1**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CHKZ	**Chkalovo**	**18.98**	**355**	⇑P	**P**	**08 56 48.1**	**-0.6**
	comp=Z,3.4nm,0.9s						
CHKZ	**Chkalovo**	**18.98**	**355**	eP	**P**	**08 56 48.0**	**-0.8**
	comp=Z,1.8nm,0.6s						
CHKZ	**Chkalovo**	**18.98**	**355**	eP	**P**	**08 56 48.0**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTO	**Aktyubinsk**	**19.16**	**329**	P	**P**	**08 56 50.2**	**-0.8**
	comp=Z,1.6nm,0.3s,baz=129,slow=8.6,SNR=18						
AKTO	**Aktyubinsk**	**19.16**	**329**	P	**P**	**08 56 50.2**	**-0.8**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	**Zalesovo**	**20.82**	**20**	P	**P**	**08 57 07.5**	**-1.3**
	comp=Z,5.3nm,0.5s,baz=245,slow=6.3,SNR=19						
NVS	**Novosibirsk**	**21.24**	**16**	eP	**P**	**08 57 12.1**	**-1.1**
ORR	**Orenburg**	**21.44**	**327**	⇑iP	**P**	**08 57 14.8**	**-0.5**
ORR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
AKASG	**Malin Array Be**	**35.42**	**310**	P	**P**	**08 59 20.9**	**-2.1**
	comp=Z,0.6nm,0.4s,mb3.9,baz=83,slow=8.0,SNR=4.6						
FINES	**FINESS Array B**	**39.90**	**327**	P	**P**	**08 59 60.0**	**-0.5**
	comp=Z,1.5nm,0.6s,mb3.9,baz=124,slow=11,SNR=8.3						
ARCES	**ARCESS Array B**	**43.41**	**338**	P	**P**	**09 00 29.2**	**+0.3**
	comp=Z,4.1nm,0.7s,mb4.3,baz=118,slow=8.3,SNR=20						
NB2	**NORSAR Subarra**	**46.83**	**324**	P	**P**	**09 00 55.0**	**-1.4**
	comp=Z,0.9nm,0.6s,mb3.9,baz=99,slow=7.4						
NAO	**NORSAR Subarra**	**46.99**	**324**	P	**P**	**09 00 55.0**	**-2.7**
	comp=Z,0.9nm,0.6s,mb3.9						
NAO	**NORSAR Subarra**	**46.99**	**324**	P	**P**	**09 00 55.0**	**-2.7**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
INK	**Inuvik**	**75.30**	**10**	eP	**P**	**09 04 10.6**	**+1.2**
DBIC	**Dimbokro**	**76.43**	**269**	P	**P**	**09 04 16.7**	**-0.2**
	comp=Z,3.3nm,0.8s,mb4.3,baz=84,slow=4.3,SNR=3.9						
DBIC	**Dimbokro**	**76.43**	**269**	P	**P**	**09 04 16.3**	**-0.6**
DBIC	**Dimbokro**	**76.43**	**269**	P	**P**	**09 04 16.7**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOSA	**Boshof**	**77.63**	**222**	P	**P**	**09 04 23.5**	**+0.3**
	comp=Z,1.1nm,0.4s,mb4.2,baz=17,slow=4.3,SNR=6.2						
BOSA	**Boshof**	**77.63**	**222**	eP	**P**	**09 04 23.1**	**-0.1**
	comp=Z,1.3nm,0.5s,mb4.1						
BOSA	**Boshof**	**77.63**	**222**	eP	**P**	**09 04 23.1**	**-0.1**
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
WRA	**Warramunga Arr**	**79.56**	**123**	P	**P**	**09 04 34.6**	**+0.7**
	comp=Z,0.3nm,0.4s,mb3.6,baz=324,slow=4.9,SNR=11						
WRAB	**Tennant Creek**	**79.56**	**123**	eP	**P**	**09 04 35.0**	**+1.1**
YKA	**Yellowknife Ar**	**82.86**	**4**	P	**P**	**09 04 51.5**	**+1.1**
	comp=Z,1.6nm,0.8s,mb4.1,baz=347,slow=5.5,SNR=4.4						

DHMR 13 09:25:11.4±0.3, **12.61N**×**40.53E, h11^{km}**±19^{km}**, ML3.8, 3D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**3.55**	**80**	⇓eP	Pn	09 26 09.4	+1.7
TRBA				i S	Sn	09 26 54.4	+4.3
TRBA				AML	AML	09 27 02.1	
	comp=N,452nm,0.8s						
UDYN	**Al ‘Udayn**	**3.61**	**68**	eP	Pn	09 26 10.2	+1.7
UDYN				i S	Sn	09 26 56.1	+4.6
UDYN				AML	AML	09 27 10.7	
	comp=Z,293nm,0.8s						
DHBB	**Dhamar BB**	**4.23**	**62**	⇓eP	Pn	09 26 18.5	+1.2
DHBB				i S	Sn	09 27 10.8	+3.5
LBOS		**4.76**	**74**	⇓eP	Pn	09 26 23.2	-1.7
LBOS				i S	Sn	09 27 19.8	-1.0
BDHA	**Al Bayda’**	**5.09**	**74**	i S	Sn	09 27 27.7	-1.3

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*MOS **13** 09:27:16.0±1.0, 51.03N×178.80E, h33^{km}, mb4.7/25, Error ellipse: s-maj=10.6km s-min=8.4km az=107.2*
*BJI **13** 09:27:18.4, 51.00N×178.80E, h37^{km}, mB4.9, mb4.6, Ms4.5, Msz4.0*
*NEIC **13** 09:27:18.5±0.3, 51.03N×178.85E, mb4.6/24, ML4.6(AEIC), Error ellipse: s-maj=9.1km s-min=3.6km az=179.0*
*IDC **13** 09:27:18.0±2.6, 50.99N×178.98E, h37^{km}±20^{km}, mb4.0/18, mb1 4.2/20, mb1mx4.1/29, mbtmp4.3/20, ML4.5/1, MS3.9/10, Ms1 3.8/10, ms1mx3.4/38, Error ellipse: s-maj=22.3km s-min=11.7km az=173.0*
ISC 13 09:27:16.4±0.3, **51.08N**±0.07×**178.81E**±0.04, **h35^{km}, h35^{km}**±2.0^{km}**:pP-P, n128, σ1^{s}01**/130, **mb4.6**/55, **MS4.0**/16, **3C-2D, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIMD	**Kanaga Island**	**2.57**	**73**	P	**P**	**09 27 58.2**	**+1.6**
KIKV	**Kanaga Island**	**2.64**	**71**	P	**P**	**09 27 59.5**	**+1.9**
ADAG	**Mount Adagdak**	**3.00**	**71**	P	**P**	**09 28 05.0**	**+2.2**
GSMY	**Great Sitkin M**	**3.34**	**71**	P	**P**	**09 28 08.8**	**+1.1**
SMY	**Shemya**	**3.36**	**301**	P	**P**	**09 28 10.3**	**+2.6**
SMY				S	**S**	**09 28 54.2**	**+7.2**
FX1	**Attu Island--F**	**3.93**	**300**	Pn	**P**	**09 28 16.0**	**+0.1**
	39nm,0.3s,baz=185,slow=2.7,SNR=76						
FX1				Sn	**S**	**09 29 10.3**	**+8.8**
	37nm,0.3s,baz=54,slow=21,SNR=10.0						
FX1	**Attu Island--F**	**3.93**	**300**	P	**P**	**09 28 18.0**	**+2.1**
FX1	**Attu Island--F**	**3.93**	**300**	P	**P**	**09 28 16.0**	**0.0**
FX1						09 29 10.3	
FX1				pmax	pmax		
	comp=Z,39nm,0.3s						
FX1				smax			
	comp=N,37nm,0.3s						
ATKA	**Atka Island**	**4.50**	**73**	P	**P**	**09 28 24.5**	**+0.4**
ATKA				S	**S**	**09 29 15.3**	**-0.5**
NIKO	**Nikolski**	**7.84**	**71**	P	**P**	**09 29 10.8**	**-0.2**
MSOM	**Makushin Julie**	**9.12**	**67**	P	**P**	**09 29 28.6**	**-0.1**
UNV	**Unalaska Valle**	**9.38**	**67**	P	**P**	**09 29 32.3**	**0.0**
KDAK	**Kodiak Island**	**17.85**	**57**	P	**P**	**09 31 20.9**	**-2.4**
	comp=N,1.6nm,0.3s,baz=286,slow=8.5,SNR=23						
KDAK				S	**S**	**09 34 34.6**	**-3.9**
	comp=N,0.2nm,0.3s,baz=162,slow=18,SNR=3.2						
BILL	**Bilibino**	**18.09**	**345**	eP	**P**	**09 31 27.3**	**+0.9**
	comp=N,14nm,0.9s						
BILL	**Bilibino**	**18.09**	**345**	c iP	**P**	**09 31 27.8**	**+1.4**
BILL				pmax	pmax		
	comp=Z,14nm,1.0s						
SLKM	**Skilak Lake**	**19.62**	**49**	P	**P**	**09 31 44.3**	**-0.1**
IMA2	**Indian Mountai**	**20.50**	**33**	eP	**P**	**09 31 52.9**	**-0.8**
COLA	**College**	**22.08**	**39**	eP	**P**	**09 32 09.6**	**-0.1**
	comp=Z,12nm,0.8s,mb4.4						
COLA	**College**	**22.08**	**39**	d iP	**P**	**09 32 10.0**	**+0.4**
ILAR	**Eielson Array**	**22.42**	**39**	P	**P**	**09 32 11.4**	**-1.7**
	comp=Z,1.7nm,0.7s,mb3.6,baz=232,slow=7.7,SNR=20						
THY	**Trims Highway**	**22.45**	**43**	eP	**P**	**09 32 13.1**	**-0.2**
ASAJ	**Asahikawa**	**25.20**	**268**	P	**P**	**09 32 40.8**	**+0.7**
	comp=Z,18nm,0.9s,mb4.6,baz=112,slow=4.8,SNR=5.6						
ASAJ				LR	LR	09 41 48.0	
	comp=Z,63nm,18.8s,MS3.1,baz=262,slow=34						
ASAJ	**Asahikawa**	**25.20**	**268**	P	**P**	**09 32 40.8**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,19nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,63nm,18.8s						
DAWY	**Dawson**	**25.35**	**43**	eP	**P**	**09 32 40.5**	**-0.9**
YAK	**Yakutsk**	**28.49**	**312**	⇓iP	**P**	**09 33 08.3**	**-1.8**
YAK				pmax	pmax		
	comp=Z,25nm,1.3s,mb4.7						
INK	**Inuvik**	**28.57**	**35**	P	**P**	**09 33 09.6**	**-1.1**
	comp=Z,7.8nm,0.9s,mb4.4,baz=258,slow=9.3,SNR=12						
INK	**Inuvik**	**28.57**	**35**	eP	**P**	**09 33 10.2**	**-0.5**
	comp=Z,5.7nm,0.8s,mb4.3						
INK	**Inuvik**	**28.57**	**35**	eP	**P**	**09 33 10.2**	**-0.5**
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TIXI	**Tiksi**	**30.17**	**331**	eP	**P**	**09 33 23.9**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.5						
TIXI				MLR	MLR		
	comp=Z,189nm,15.0s,MS3.9						
MJAR	**Matsushiro Arr**	**32.25**	**259**	LR	LR	09 45 37.1	
	comp=Z,80nm,21.8s,MS3.4,baz=70,slow=34						
MDJ	**Mudanjiang**	**33.14**	**278**	P	**P**	**09 33 48.8**	**-2.5**
MDJ				AMB	AMB		
	comp=Z,130nm,7.5s						
CN2	**Changchun**	**36.12**	**280**	eP	**P**	**09 34 16.3**	**-0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
YKA	**Yellowknife Ar**	**36.52**	**46**	P	**P**	**09 34 18.3**	**-1.6**
	comp=Z,2.6nm,0.8s,mb4.1,baz=283,slow=7.6,SNR=7.5						
YKA				LR	LR	09 50 43.2	
	comp=Z,205nm,19.2s,MS3.9,baz=275,slow=38						
YKA	**Yellowknife Ar**	**36.52**	**46**	P	**P**	**09 34 18.3**	**-1.6**
YKA				LR	LR	09 50 43.2	
YKA	**Yellowknife Ar**	**36.52**	**46**	i P	**P**	**09 34 21.7**	**+1.7**
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BOD	**Bodaibo**	**36.95**	**306**	eP	**P**	**09 34 21.4**	**-2.2**
BOD				e	pP	09 34 32.7	-1.0
BOD				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
BOD				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.9						
EDM	**Edmonton**	**40.26**	**59**	P	**P**	**09 34 45.5**	**-5.8**
NEW	**Newport**	**40.39**	**68**	eP	**P**	**09 34 51.8**	**-0.7**
	comp=Z,3.3nm,0.6s,mb4.2						
NEW	**Newport**	**40.39**	**68**	eP	**P**	**09 34 51.8**	**-0.6**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMB	**Columbia Colle**	**44.02**	**83**	P	**P**	**09 35 22.4**	**+0.2**
	comp=Z,1.4nm,0.5s,mb4.0						
CMB	**Columbia Colle**	**44.02**	**83**	P	**P**	**09 35 22.4**	**+0.2**
CMB				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
HRY	**Holter Researc**	**44.27**	**67**	eP	**P**	**09 35 24.2**	**+0.1**
MCMT	**McKenzie Canyo**	**44.70**	**70**	eP	**P**	**09 35 27.1**	**-0.3**
BOZ	**Bozeman (W)**	**44.96**	**68**	eP	**P**	**09 35 29.4**	**-0.2**
	comp=Z,6.3nm,0.7s,mb4.5						
BOZ	**Bozeman (W)**	**44.96**	**68**	eP	**P**	**09 35 29.4**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
NVAR	**Mina Array Bea**	**45.08**	**81**	P	**P**	**09 35 31.0**	**+0.3**
	comp=Z,1.2nm,0.7s,mb3.8,baz=299,slow=6.4,SNR=11						
MNV	**Mina**	**45.17**	**81**	eP	**P**	**09 35 32.0**	**+0.7**
SONM	**Songino Array**	**45.43**	**296**	P	**P**	**09 35 34.2**	**+0.9**
	comp=Z,3.0nm,0.9s,mb4.1,baz=61,slow=6.5,SNR=17						
SONM				PcP	PcP	09 37 12.4	-0.1
	comp=Z,1.4nm,0.8s,baz=104,slow=3.4,SNR=4.3						
SONM				LR	LR	09 55 19.4	
	comp=Z,97nm,18.5s,MS3.8,baz=67,slow=37						
MTUM	**Tungsten Hills**	**45.58**	**82**	eP	**P**	**09 35 35.1**	**+0.4**
ELK	**Elko**	**45.59**	**76**	eP	**P**	**09 35 35.1**	**+0.5**
	comp=Z,4.9nm,0.8s,mb4.5						
ELK	**Elko**	**45.59**	**76**	eP	**P**	**09 35 35.1**	**+0.4**
ELK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZAK	**Zakamensk**	**45.82**	**300**	eP	**P**	**09 35 34.4**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
HHC	**Hu-ho-hao-te**	**46.32**	**285**	eP	**P**	**09 35 41.4**	**+1.0**
HHC				AP	pP	09 35 50.6	-0.1
HHC				PCP	PcP	09 37 17.4	+1.7
HHC				PP	PP	09 37 30.6	+1.4
HHC				SCP		09 41 07.6	
HHC				PCS		09 41 12.4	
HHC				S	**S**	**09 42 24.3**	**-0.1**
HHC				SCS	ScS	09 45 32.5	+2.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
HHC				AMB	AMB		
	comp=Z,120nm,7.2s						
HHC				LR	LR		
	comp=N,200nm,13.2s,MS4.4						
HHC				LR	LR		
	comp=E,220nm,13.2s,MS4.4						
HHC				LR	LR		
	comp=Z,130nm,14.4s,MS4.0						
RRI2	**Red Ridge**	**46.44**	**71**	eP	**P**	**09 35 41.1**	**-0.2**
	comp=Z,4.4nm,0.6s,mb4.6						
HVU	**Hansel Valley**	**46.48**	**74**	eP	**P**	**09 35 41.5**	**-0.2**
	comp=Z,6.5nm,0.9s,mb4.6						
HVU	**Hansel Valley**	**46.48**	**74**	eP	**P**	**09 35 41.5**	**-0.1**
HVU				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
TPNV	**Topopah Spring**	**47.28**	**81**	eP	**P**	**09 35 48.3**	**+0.3**
	comp=Z,6.9nm,0.6s,mb4.8						
TPNV	**Topopah Spring**	**47.28**	**81**	eP	**P**	**09 35 48.3**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
NJ2	**Nanjing**	**47.32**	**270**	eP	**P**	**09 35 46.9**	**-1.5**
NJ2				AP	pP	09 35 56.8	-1.8
NJ2				XP	sP	09 36 00.6	-2.3
NJ2				S	**S**	**09 42 39.0**	**+0.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,180nm,5.0s						
NJ2				LR	LR		
	comp=N,760nm,21.3s,MS4.8						
NJ2				LR	LR		
	comp=E,690nm,20.9s,MS4.8						
NJ2				LR	LR		
	comp=Z,170nm,18.6s,MS4.0						
DUG	**Dugway**	**47.40**	**75**	eP	**P**	**09 35 49.2**	**+0.3**
	comp=Z,8.2nm,1.1s,mb4.6						
DUG	**Dugway**	**47.40**	**75**	eP	**P**	**09 35 49.2**	**+0.3**
DUG				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
BW06	**Boulder Array**	**47.83**	**71**	eP	**P**	**09 35 52.2**	**-0.1**
	comp=Z,8.4nm,0.9s,mb4.8						
PDAR	**Pinedale Array**	**47.83**	**71**	P	**P**	**09 35 51.9**	**-0.4**
	comp=Z,7.1nm,0.8s,mb4.8,baz=302,slow=4.0,SNR=56						
DAU	**Daniels Canyon**	**48.22**	**74**	eP	**P**	**09 35 56.4**	**+1.1**
MSU	**Marysvale**	**48.82**	**77**	eP	**P**	**09 36 00.7**	**+0.7**
TMUT	**Trail Mountain**	**48.93**	**75**	eP	**P**	**09 36 00.8**	**0.0**
NEN	**Nelson**	**48.98**	**81**	P	**P**	**09 36 01.4**	**+0.2**
SRU	**San Rafael**	**49.46**	**75**	eP	**P**	**09 36 05.7**	**+0.8**
	comp=Z,3.3nm,0.6s,mb4.5						
SRU	**San Rafael**	**49.46**	**75**	eP	**P**	**09 36 05.7**	**+0.8**
SRU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ULM	**Lac du Bonnet**	**51.10**	**55**	LR	LR	09 58 01.5	
	comp=Z,112nm,18.4s,MS3.9,baz=356,slow=36						
PV01	**Paradox Valley**	**51.26**	**75**	eP	**P**	**09 36 18.8**	**+0.1**
ZAL	**Zalesovo**	**53.16**	**313**	P	**P**	**09 36 33.9**	**+1.3**
	comp=Z,1.3nm,0.4s,mb4.2,baz=136,slow=8.2,SNR=5.0						
ZAL				LR	LR	10 03 04.1	
	comp=Z,106nm,19.9s,MS3.9,baz=325,slow=40						
ZAL	**Zalesovo**	**53.16**	**313**	⇑eP	**P**	**09 36 39.5**	**+6.9**
NVS	**Novosibirsk**	**53.31**	**314**	eP	**P**	**09 36 32.5**	**-1.3**
SDCO	**Great Sand Dun**	**53.37**	**73**	eP	**P**	**09 36 34.6**	**+0.1**
	comp=Z,5.9nm,1.1s,mb4.4						
LZH	**Lanzhou**	**54.02**	**285**	eP	**P**	**09 36 39.1**	**-0.1**
LZH				AP	pP	09 36 50.5	+0.8
LZH				PP	PP	09 38 41.5	-0.7
LZH				PCS		09 41 42.6	
LZH				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
LZH				AMB	AMB		
	comp=Z,60nm,5.3s						
LZH	**Lanzhou**	**54.02**	**285**	eP	**P**	**09 36 39.1**	**-0.1**
	comp=Z,10.0nm,1.1s,mb4.7						
LZH				pP	pP	09 36 50.5	+0.8
LZH				sP	sP	09 36 54.9	+1.1
LZH				PP	PP	09 38 41.5	-0.7
LZH				ScP		09 41 39.8	
LZH				PcS		09 41 42.6	
LZH	**Lanzhou**	**54.02**	**285**	eP	**P**	**09 36 39.1**	**-0.1**
LZH				*PP	pP	09 36 50.5	+0.8
LZH				*SP	sP	09 36 54.9	+1.1
LZH						09 38 41.5	
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
GTA	**Gaotai**	**54.28**	**290**	eP	**P**	**09 36 41.8**	**+0.7**
GTA				PP	PP	09 38 45.6	+1.1
GTA				S	**S**	**09 44 17.9**	**+3.3**
GTA				AMB	AMB		
	comp=Z,110nm,5.3s						
GTA				LR	LR		
	comp=N,220nm,13.3s,MS4.5						
GTA				LR	LR		
	comp=E,120nm,13.7s,MS4.5						
GTA				LR	LR		
	comp=Z,100nm,14.1s,MS4.0						
ANMO	**Albuquerque**	**54.62**	**76**	eP	**P**	**09 36 40.5**	**-3.2**
MNTX	**Cornudas Mount**	**57.48**	**79**	eP	**P**	**09 37 03.7**	**-0.5**
	comp=Z,2.2nm,0.8s,mb4.2						
KURK	**Kurchatov**	**58.13**	**313**	eP	**P**	**09 37 07.9**	**-0.6**
	comp=Z,12nm,1.0s,mb4.9						
KURK				epP	pP	09 37 18.5	-0.6
KURK	**Kurchatov**	**58.13**	**313**	eP	**P**	**09 37 07.9**	**-0.6**
KURK				e*PP	pP	09 37 18.5	-0.5
KURK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
WMQ	**Urumqi**	**58.23**	**302**	P	**P**	**09 37 10.3**	**+1.0**
WMQ				AP	pP	09 37 20.0	+0.2
WMQ				PCP	PcP	09 38 02.0	+1.8
WMQ				PP	PP	09 39 20.0	0.0
WMQ				S	**S**	**09 45 08.0**	**+1.0**
WMQ				SCS	ScS	09 46 53.0	+0.5
WMQ				AMB	AMB		
	comp=Z,230nm,6.0s						
WMQ				LR	LR		
	comp=N,260nm,23.0s,MS4.3						
WMQ				LR	LR		
	comp=E,210nm,27.5s,MS4.3						
WMQ				LR	LR		
	comp=Z,240nm,18.3s						
MKAR	**Makanchi Array**	**59.03**	**307**	P	**P**	**09 37 14.1**	**-0.8**
	comp=Z,1.8nm,0.8s,mb4.2,baz=55,slow=6.9,SNR=15						
MKAR	**Makanchi Array**	**59.03**	**307**	i P	**P**	**09 37 14.1**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHKZ	**Chkalovo**	**59.57**	**319**	eP	**P**	**09 37 17.7**	**-0.8**
	comp=Z,8.3nm,1.1s,mb4.7						
CHKZ	**Chkalovo**	**59.57**	**319**	eP	**P**	**09 37 17.7**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.7						
BVAR	**Borovoye Array**	**60.14**	**319**	P	**P**	**09 37 22.5**	**+0.1**
	comp=Z,4.7nm,0.6s,mb4.7,baz=50,slow=7.2,SNR=30						
BRVK	**Borovoye**	**60.16**	**319**	eP	**P**	**09 37 22.1**	**-0.5**
	comp=Z,4.0nm,0.8s,mb4.5						
BRVK	**Borovoye**	**60.16**	**319**	eP	**P**	**09 37 22.1**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
TXAR	**Lajitas Array**	**60.18**	**79**	P	**P**	**09 37 22.3**	**-0.7**
	comp=Z,0.5nm,0.5s,mb3.9,baz=299,slow=5.1,SNR=14						
SVE	**Sverdlovsk**	**61.03**	**326**	eP	**P**	**09 37 28.9**	**+0.5**
ARU	**Arti**	**62.06**	**327**	eP	**P**	**09 37 35.3**	**0.0**

	comp=Z,30nm,1.2s,mb5.3						
ARU	Arti	62.06	327	⇑eP	P	09 37 35.9	+0.6
ARU				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.2						
KMI	Kunming	62.27	276	P	P	09 37 37.8	+0.6
KMI				LR	LR		
	comp=Z,50nm,22.6s,MS3.6						
KMI	Kunming	62.27	276	P	P	09 37 37.7	+0.5
	comp=Z,6.0nm,0.6s,mb4.9						
KMI				LR	LR		
	comp=Z,50nm,22.6s,MS3.6						
KMI	Kunming	62.27	276	P	P	09 37 37.7	+0.5
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
KMI				MLR	MLR		
	comp=Z,50nm,22.6s,MS3.6						
HNR	Honiara	62.44	201	LR	LR	10 02 11.9	
	comp=Z,84nm,19.7s,MS3.9,baz=48,slow=34						
FINES	FINESS Array B	65.73	346	P	P	09 37 58.9	-0.1
	comp=Z,1.0nm,0.8s,mb3.9,baz=27,slow=8.5,SNR=4.1						
FINES				LR	LR	10 12 38.4	
	comp=Z,70nm,18.0s,MS3.9,baz=354,slow=41						
FINES	FINESS Array B	65.73	346	P	P	09 37 58.9	-0.2
FINES				LR	LR	10 12 38.4	
AAK	Ala-Archa	65.89	308	eP	P	09 37 59.9	-0.6
	comp=Z,4.3nm,1.0s,mb4.4						
AAK	Ala-Archa	65.89	308	eP	P	09 37 59.9	-0.5
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
AKTO	Aktyubinsk	67.05	323	P	P	09 38 07.8	+0.2
	comp=Z,10nm,0.9s,mb4.9,baz=29,slow=5.4,SNR=24						
AKTO				LR	LR	10 10 15.6	
	comp=Z,125nm,19.2s,MS4.1,slow=38						
AKTO	Aktyubinsk	67.05	323	P	P	09 38 07.8	+0.2
AKTO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
AKTO				MLR	MLR		
	comp=Z,125nm,19.2s,MS4.2						
ORR	Orenburg	67.27	326	eP	P	09 38 09.7	+0.7
ORR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
NOA	NORSAR Array B	67.79	354	P	P	09 38 13.2	+1.1
	comp=Z,2.9nm,1.1s,mb4.2,baz=302,slow=15,SNR=3.0						
OBN	Obninsk	69.60	338	eP	P	09 38 22.3	-1.1
OBN				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
GUN	Gumba	70.57	290	eP	P	09 38 30.9	+1.2
	comp=Z,60nm,1.0s,mb5.5						
JIRN	Jiri	70.57	290	eP	P	09 38 31.1	+1.4
	comp=Z,58nm,1.1s,mb5.4						
KKN	Kakani	71.01	291	eP	P	09 38 33.3	+0.9
	comp=Z,28nm,0.9s,mb5.2						
PKI	Pulchoki	71.10	291	eP	P	09 38 33.8	+0.8
	comp=Z,22nm,0.9s,mb5.1						
GKN	Gorkha	71.23	291	eP	P	09 38 34.3	+0.6
	comp=Z,34nm,0.8s,mb5.3						
DMN	Daman	71.25	291	eP	P	09 38 34.8	+0.9
	comp=Z,29nm,0.9s,mb5.2						
KOLN	Koldanda	72.01	292	eP	P	09 38 39.1	+0.7
	comp=Z,20nm,1.0s,mb5.0						
PPT	Papeete	73.76	149	LR	LR	10 05 28.9	
	comp=Z,279nm,19.8s,MS4.5,baz=341,slow=31						
AKASG	Malin Array Be	75.35	341	P	P	09 38 56.5	-0.9
	comp=Z,1.0nm,0.5s,mb4.0,baz=24,slow=6.2,SNR=6.9						
AKASG	Malin Array Be	75.35	341	i P	P	09 38 58.0	+0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIV	Kislovodsk	77.98	329	eP	P	09 39 10.6	-1.7
KIV				pmax	pmax		
	comp=Z,11nm,1.3s,mb4.6						
WRAB	Tennant Creek	80.76	222	eP	P	09 39 26.4	-1.4
WRA	Warramunga Arr	80.77	222	P	P	09 39 26.3	-1.6
	comp=Z,2.3nm,0.7s,mb4.2,baz=32,slow=6.1,SNR=24						
WRA	Warramunga Arr	80.77	222	i P	P	09 39 27.2	-0.7
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FITZ	Fitzroy Crossi	83.11	230	P	P	09 39 39.6	-0.3
	comp=Z,10nm,0.9s,mb4.9,baz=103,slow=2.9,SNR=8.0						
BR131	Keskin Array S	84.58	334	eP	P	09 39 48.3	+1.4
	comp=Z,0.8nm,0.6s,mb4.0						
BRTR	Keskin Array B	84.58	334	P	P	09 39 48.7	+1.8
	comp=Z,2.8nm,0.8s,mb4.5,baz=52,slow=3.0,SNR=13						
JTS	JuntasAbangare	85.97	79	eP	P	09 39 52.5	-1.8
BOSA	Boshof	150.03	308	PKPbc	PKPdf	09 47 04.2	+6.3
	comp=Z,4.1nm,0.9s,baz=80,slow=3.3,SNR=6.5						
BOSA	Boshof	150.03	308	PKPbc	PKPdf	09 47 04.2	+6.3

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*HLW **13** 09:33:44.9, 31.52N×35.52E, h15^{km}, Mb3.3*

*CSEM **13** 09:33:46.5±0.4, 31.36N×35.27E, h10^{km}, ML3.3, Error ellipse: s-maj=9.0km s-min=5.3km az=30.0*

*SNSN **13** 09:33:48.0, 31.43N×34.94E, h90^{km}, Ml2.6*

ISC 13 09:33:46.1±1.9**, 31.4N**±0.1×**35.3E**±0.1**, h10^{km}, n16, σ0^{s}67**/18**, 2C-2D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNKL	Nakhl	1.83	218	⇑P	Pn	09 34 18.2	+0.2
AMAG	Maghara	1.93	248	⇓P	Pn	09 34 20.3	+0.9
ALWS	Ilw as Safayha	2.07	185	P	Pn	09 34 22.2	+0.8
ALWS				S	Sn	09 34 48.1	+0.6
HBST	Basata	2.21	193	P	Pn	09 34 23.4	0.0
HBST				S	Sn	09 34 50.9	-0.1
JMOS	Jabal al Moall	2.21	184	P	Pn	09 34 24.5	+1.1
HAQS	Haql	2.33	188	P	Pn	09 34 24.6	-0.6
JMQS	Jabal Moqyreh	2.54	168	P	Pn	09 34 28.6	+0.5
SUZ		2.61	235	⇑iP	Pn	09 34 29.5	+0.3
HDHB	Dhahab	2.71	193	P	Pn	09 34 30.6	+0.1
TAYS	Tayyib Ism	2.84	187	P	Pn	09 34 31.7	-0.7
BDAS	Al Bad‘	2.94	183	P	Pn	09 34 33.1	-0.8
HKAT	Jabal Katrina	3.06	202	⇓P	Pn	09 34 34.7	-0.9
ZAF		3.16	229	P	Pn	09 34 36.5	-0.4
AYUS	‘Aynunah	3.18	180	P	Pn	09 34 37.7	+0.4
DBAS	Duba	4.19	172	P	Pn	09 34 51.6	-0.1
HHRG	Al Ghardaqah	4.41	200	P	Pn	09 34 53.3	-1.4

ISC 13 09:41:39.9±1.7**, 38.24N**±0.09×**26.6E**±0.1**, h19^{km}**±12^{km}**, n6, σ0^{s}34**/10**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.13	346	i P	Pb	09 41 43.7	-0.3
URLA				i S	Sb	09 41 47.1	+0.4
BLCB	Balcova	0.35	65	PG	Pb	09 41 47.2	-0.2
BLCB				SG	Sb	09 41 52.1	-0.3
IZM	Izmir	0.52	72	PG	Pb	09 41 50.4	+0.3
KDAG	Bornova	0.53	71	i P	Pb	09 41 49.6	-0.7
KDAG				i S	Sb	09 41 57.8	+0.4
AKS	Akhisar	1.13	55	ePN	Pn	09 42 01.1	+0.3
AYDN	Tasoluk	1.14	120	i P	Pb	09 42 00.6	-0.1
AYDN				i S	Sb	09 42 15.3	+0.2

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*BJI **13** 09:47:29.8, 34.97S×77.86E, h6^{km}, mB5.2, mb4.7, Ms4.7, Msz4.4*

*IDC **13** 09:47:30.6±0.7, 35.11S×78.65E, mb4.3/13, mb1 4.4/13, mb1mx4.3/18, mbtmp4.3/13, MS4.6/7, Ms1 4.6/7, ms1mx4.1/25, Error ellipse: s-maj=24.0km s-min=15.6km az=174.0*

*HRVD **13** 09:47:32.3±0.3, 35.22S×78.73E, h13^{km}±2^{km}, MW5.1/52, Centroid moment Tensor Solution. LP body waves: s37,c53;Mantle waves: s52,c83; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.70±.17; M$_{\theta\theta}$-5.02±.17; M$_{\phi\phi}$5.72±.21; M$_{r\theta}$1.28±.44; M$_{\theta\phi}$-0.41±.18; M$_{\phi r}$-0.32±.41; Best double couple: M$_0$5.568×10^{16} NP1:φ$_s$222°,δ77°,λ-8°. NP2:φ$_s$314°,δ82°,λ-167°. Principal axes: T 5.757, Plg3°, Azm87°; N -.375, Plg74°, Azm345°; P -5.379, Plg15°, Azm178°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 09:47:32.3±0.3, 35.10S×78.67E, h10^{km}, mb4.9/10 Error ellipse: s-maj=10.7km s-min=9.0km az=174.0*

ISC 13 09:47:30.6±0.4**, 35.17S**±0.08×**78.67E**±0.09**, h10^{km}, n39, σ0^{s}84**/38**, mb4.5**/22**, MS4.6**/9**, 4C, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COCO	West Island	28.19	40	eP	P	09 53 14.0	-11
NWAO	Narrogin (SRO)	31.90	97	LR	LR	10 03 32.9	
	comp=Z,2μm,21.8s,MS4.6,baz=265,slow=30						
MAW	Mawson	33.72	191	P	P	09 54 13.1	-0.7
	1.7nm,0.6s,mb4.2,baz=357,slow=6.5,SNR=5.4						
MAW				LR	LR	10 05 06.5	
	comp=Z,709nm,20.1s,MS4.4,baz=16,slow=31						
SYO	Syowa Base	40.18	201	⇑P	P	09 55 08.9	+0.6
SYO	Syowa Base	40.18	201	⇑pP	pP	09 55 11.3	0.0
SYO	Syowa Base	40.18	201	⇑eP	P	09 55 08.9	+0.6
SYO				⇑epP	pP	09 55 11.3	0.0
FITZ	Fitzroy Crossi	44.86	80	P	P	09 55 47.0	-0.1
	8.5nm,0.8s,mb4.6,baz=209,slow=8.0,SNR=6.7						
FITZ				LR	LR	10 11 16.8	
	comp=Z,1μm,21.1s,MS4.9,baz=288,slow=32						
BOSA	Boshof	45.37	263	P	P	09 55 50.7	-0.3
	7.7nm,0.9s,mb4.5,baz=111,slow=7.8,SNR=11						
BOSA				LR	LR	10 10 40.5	
	comp=Z,833nm,21.0s,MS4.7,baz=122,slow=31						
BOSA	Boshof	45.37	263	eP	P	09 55 51.2	+0.3
	28nm,1.4s,mb4.9						
MATP	Matopo	46.28	275	P	P	09 55 57.4	-0.8
	5.3nm,0.9s,mb4.5,baz=128,slow=8.7,SNR=12						
MATP	Matopo	46.28	275	P	P	09 55 57.4	-0.9
LBTB	Lobatse	46.55	267	P	P	09 55 59.6	-0.7
	11nm,0.8s,mb4.8,baz=146,slow=7.5,SNR=14						
LBTB	Lobatse	46.55	267	eP	P	09 55 59.9	-0.4
	13nm,1.0s,mb4.8						
SUR	Sutherland	47.59	256	P	P	09 56 09.2	+0.7
	22nm,0.9s,mb5.2,baz=107,slow=8.2,SNR=17						
SUR	Sutherland	47.59	256	eP	P	09 56 09.7	+1.2
LSZ	Lusaka	49.21	280	eP	P	09 56 21.2	0.0
	9.8nm,0.8s,mb4.9						
WRA	Warramunga Arr	51.02	88	P	P	09 56 34.6	-0.4
	5.3nm,0.7s,mb4.6,baz=241,slow=7.4,SNR=22						
WRAB	Tennant Creek	51.03	88	eP	P	09 56 34.9	-0.1
	55nm,1.6s,mb5.2						
KMBO	Kilima Mbogo	51.28	302	P	P	09 56 37.2	+0.1
	2.2nm,1.0s,mb4.0,baz=92,slow=7.9,SNR=6.6						
KMBO				LR	LR	10 15 16.4	
	comp=Z,189nm,18.6s,MS4.1,baz=95,slow=32						
KMBO	Kilima Mbogo	51.28	302	P	P	09 56 37.2	+0.1
KMBO				LR	LR	10 15 16.4	
STKA	Stephens Creek	51.79	105	P	P	09 56 40.2	-0.5
	4.9nm,1.1s,mb4.3,baz=211,slow=8.9,SNR=4.5						
STKA				LR	LR	10 15 02.2	
	comp=Z,684nm,20.5s,MS4.7,baz=128,slow=32						
STKA	Stephens Creek	51.79	105	P	P	09 56 40.2	-0.5
STKA				LR	LR	10 15 02.2	
POO	Poona	53.60	354	eP	P	09 56 52.0	-2.3
SNAA	Sanae	54.39	203	P	P	09 57 00.2	+0.8
	0.5nm,1.0s,mb3.4,baz=82,slow=7.1,SNR=3.2						
SNAA	Sanae	54.39	203	eP	P	09 57 01.9	+2.5
VNDA	Vanda	54.49	165	eP	P	09 56 59.9	-0.3
	8.1nm,1.2s,mb4.5						
QSPA	South Pole Qui	54.98	180	eP	P	09 57 03.3	-0.5
	18nm,1.2s,mb5.0						
TSUM	Tsumeb	55.82	270	eP	P	09 57 10.2	-0.3
	11nm,1.1s,mb4.8						
KMI	Kunming	64.15	24	P	P	09 58 07.9	+0.2
KMI				AP	pP	09 58 12.4	+1.6
KMI				PP	PP	10 00 33.9	+3.3
KMI				S	S	10 06 47.0	+3.9
KMI				SS	SS	10 11 00.1	+6.3
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
KMI				LR	LR		
	comp=N,140nm,27.9s						
KMI				LR	LR		
	comp=E,150nm,21.1s						
KMI				LR	LR		
	comp=Z,150nm,36.8s						
KMI	Kunming	64.15	24	P	P	09 58 07.9	+0.2
	comp=Z,14nm,0.5s,mb5.2						
KMI				pP	pP	09 58 12.4	+1.6
KMI				PP	PP	10 00 33.9	+3.3
KMI				S	S	10 06 47.0	+3.9
KMI				SS	SS	10 11 00.1	+6.3
KMI				LR	LR		
	comp=Z,160nm,36.8s,MS3.9						
WMQ	Urumqi	79.05	7	eP	P	09 59 36.5	+0.2
WMQ				XP	sP	09 59 43.0	+2.4
WMQ				PP	PP	10 02 37.0	-0.3
WMQ				eS	S	10 09 33.0	-1.1
WMQ				XS		10 09 48.0	
WMQ				AMB	AMB		
	comp=Z,160nm,6.2s						
WMQ				LR	LR		
	comp=N,580nm,26.0s,MS4.9						
WMQ				LR	LR		
	comp=E,350nm,22.4s,MS4.9						
WMQ				LR	LR		
	comp=Z,570nm,24.6s,MS4.8						
HHC	Hu-ho-hao-te	81.47	25	eP	P	09 59 51.1	+1.8
HHC				AP	pP	10 00 02.0	+9.5
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
HHC				AMB	AMB		
	comp=Z,130nm,3.4s						
MKAR	Makanchi Array	81.66	3	P	P	09 59 49.2	-0.9
	comp=Z,0.3nm,0.7s,mb3.4,baz=180,slow=5.8,SNR=2.9						
BR131	Keskin Array S	85.32	327	eP	P	10 00 08.0	-1.0
	comp=Z,1.4nm,0.6s,mb4.3						
BRTR	Keskin Array B	85.32	327	P	P	10 00 08.7	-0.3
	comp=Z,1.7nm,0.7s,mb4.3,baz=148,slow=7.2,SNR=9.4						
SONM	Songino Array	86.28	18	P	P	10 00 13.9	+0.4
	comp=Z,1.1nm,0.8s,mb4.1,baz=208,slow=4.2,SNR=7.2						
AKTO	Aktyubinsk	87.17	347	P	P	10 00 18.9	+1.1
	comp=Z,0.5nm,0.5s,mb4.0,baz=135,slow=7.1,SNR=2.6						
DBIC	Dimbokro	88.53	279	LR	LR	10 35 10.2	
	comp=Z,465nm,21.9s,MS4.9,baz=162,slow=32						
CHKZ	Chkalovo	88.76	355	P	P	10 00 26.3	+1.0
	comp=Z,2.1nm,0.8s,mb4.5						

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*IDC **13** 09:47:44.0±1.0, 2.61N×128.25E, mb4.1/6, mb1 4.3/6, mb1mx4.0/16, mbtmp4.1/6, Error ellipse: s-maj=56.9km s-min=18.3km az=73.0*

*NEIC **13** 09:47:46.9±0.7, 2.70N×128.73E, h20^{km}, mb4.6/2, Error ellipse: s-maj=27.0km s-min=13.2km az=71.0*

ISC 13 09:47:46.8±0.7**, 2.8N**±0.1×**128.7E**±0.2**, h33^{km}, n11, σ1^{s}10**/11**, mb4.2**/8**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSM	Kuching	18.41	266	eP	P	09 52 02.6	+1.0
WRAB	Tennant Creek	23.21	166	eP	P	09 52 52.8	+0.7
	4.9nm,0.5s,mb4.2						
WRA	Warramunga Arr	23.22	166	P	P	09 52 53.1	+1.0
	1.2nm,0.5s,mb3.5,baz=344,slow=11,SNR=21						
MJAR	Matsushiro Arr	34.76	14	P	P	09 54 37.8	+1.6
	3.3nm,0.8s,mb4.3,baz=180,slow=9.6,SNR=9.7						
STKA	Stephens Creek	36.55	161	P	P	09 54 51.0	-0.6
	1.4nm,0.4s,mb4.2,baz=346,slow=7.1,SNR=9.3						
STKA	Stephens Creek	36.55	161	eP	P	09 54 51.1	-0.5
SONM	Songino Array	48.86	340	P	P	09 56 32.2	+0.9
	2.0nm,0.6s,mb4.3,baz=152,slow=7.8,SNR=12						
MKAR	Makanchi Array	59.48	325	P	P	09 57 48.0	-1.1
	2.8nm,0.5s,mb4.6,baz=118,slow=8.5,SNR=50						
KURK	Kurchatov	63.62	327	eP	P	09 58 15.8	-1.1
	4.5nm,0.4s,mb4.8						
AKTO	Aktyubinsk	75.64	321	P	P	09 59 29.6	-0.7
	0.6nm,0.3s,mb4.0,baz=81,slow=10,SNR=3.6						
VNDA	Vanda	82.22	173	eP	P	10 00 03.8	-1.9

CASC 13 09:58:45.8±2.1**, 13.65N**×**91.05W, h19^{km}**±10^{km}**, MD3.9, 6C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.78	48	⇓eP	Pb	09 59 00.6	+0.1
IXG				eS	Sb	09 59 12.5	+2.0
PCG	Pacaya	0.85	30	eS	Sb	09 59 14.7	+1.9
RTR	El Retiro	1.38	80	⇓eP	Pn	09 59 31.0	+21
RTR				eS	Sb	09 59 49.3	+21
SBLS	San Blas	1.40	82	eP	Pn	09 59 31.1	+21
SBLS				eS	Sb	09 59 50.2	+22
RBDL	Robledal	1.40	71	⇑eP	Pn	09 59 38.1	+28
RBDL				eS	Sb	09 59 54.9	+26
BOQS	Boqueron	1.72	87	⇑eP	Pn	09 59 35.6	+20
BOQS				eS	Sn	09 59 57.9	+21
MTO2	Montecristo 2	1.80	65	⇑eP	Pn	09 59 38.0	+22
MTO2				eS	Sn	10 00 01.9	+23
LFU	La Fuente	1.88	87	eP	Pn	09 59 38.3	+21
LFU				eS	Sn	10 00 02.1	+21
MRL	Marmol	1.93	43	⇑eP	Pn	09 59 18.7	+0.6
MRL				eS	Sn	09 59 42.8	+0.9
LBRS	Las Brisas	1.95	87	⇑eP	Pn	09 59 39.1	+21
LBRS				eS	Sn	10 00 04.4	+22
LCBS	La Ceiba	2.01	90	eP	Pn	09 59 40.0	+21
LCBS				eS	Sn	10 00 05.2	+21
SNVI	San Vicente	2.15	91	⇑eP	Pn	09 59 41.9	+21
SNVI				eS	Sn	10 00 09.1	+22
BLLM	Bellamira	2.74	94	eP	Pn	09 59 49.8	+20
BLLM				eS	Sn	10 00 23.7	+21

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*LDG **13** 10:19:20.4±0.2, 49.40N×6.95E, h1^{km}, Md2.6/1, Ml2.4/8, Error ellipse: s-maj=4.5km s-min=2.6km az=41.0, Suspected Mining induced.*

*BGR **13** 10:19:20.5±0.3, 49.37N×6.88E, h1^{km}, ML1.7/2, Error ellipse: s-maj=4.4km s-min=3.3km az=41.0*

ISC 13 10:19:19.0±0.4**, 49.37N**±0.02×**6.90E**±0.03**, n19, σ0^{s}65**/29**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	Walferdange	0.57	301	ePg	Pg	10 19 31.5	+1.2
	SNR=2.7						
WLF				eSg	Sg	10 19 37.6	-0.3
LANF	Langenberg	0.71	123	ePg	Pg	10 19 33.8	+0.6
	SNR=3.8						
CDF	Champ du Feu	0.99	165	ePg	Pg	10 19 39.5	+0.7
CDF				eSg	Sg	10 19 52.2	+0.2
	5.7nm,0.2s						
WLS	Welschbruch	1.01	162	ePg	Pg	10 19 40.2	+1.2
	SNR=3.8						
ECH	Echery	1.17	171	ePg	Pg	10 19 42.8	+0.4
	SNR=2.9						
RFYF	Reffroy	1.20	232	ePg	Pg	10 19 43.8	+0.9
	baz=41						
RFYF				eSg	Sg	10 19 59.9	+1.1
	13nm,0.2s						
TOD	Tromm	1.27	79	ePg	Pg	10 19 44.0	-0.2
	SNR=3.4						
THEF	They Montfort	1.30	208	ePg	Pg	10 19 44.7	-0.1
	SNR=4.2						
TNS	Taunus Mts	1.32	49	ePg	Pg	10 19 45.3	+0.1
	SNR=2.1						
TNS				eSg	Sg	10 20 03.0	+0.3
BFO	Black Forest	1.41	137	ePg	Pg	10 19 47.4	+0.3
	SNR=3.3						
BFO				eSg	Sg	10 20 04.8	-1.0
HAU	Haudompre	1.42	195	ePg	Pg	10 19 46.8	-0.4
HAU				eSg	Sg	10 20 06.3	+0.2
	8.7nm,0.3s						
MEZF	Maizieres J’vi	1.50	235	ePg	Pg	10 19 49.2	+0.3
	baz=64						
MEZF				eSg	Sg	10 20 09.0	+0.2
	6.9nm,0.4s						
GIVF	Givet	1.53	299	ePg	Pg	10 19 49.1	-0.4
GIVF				eSg	Sg	10 20 09.7	-0.2
	5.0nm,0.3s						
HINF	Hinteralfeld	1.56	181	ePg	Pg	10 19 49.5	-0.6
HINF				eSg	Sg	10 20 10.0	-0.8
	14nm,0.2s						
SFTF	Sexfontaines	1.70	227	ePg	Pg	10 19 52.9	+0.1
	baz=54						
SFTF				eSg	Sg	10 20 15.1	-0.3
	3.6nm,0.3s						
BAIF	Baives	1.88	292	ePg	Pg	10 19 55.7	-0.7
LOR	Lormes	2.92	225	ePn	Pn	10 20 06.7	-0.9
	baz=54						
SSF	Saint Saulge	3.24	226	ePn	Pn	10 20 10.6	-1.5
GEC2	GERESS Array S	4.50	94	ePn	Pn	10 20 29.7	-0.3
	SNR=2.8						

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*IDC **13** 10:24:56.8±2.1, 3.10S×128.96E, h12^{km}±12^{km}, mb5.4/25, mb1 5.3/29, mb1mx5.3/30, mbtmp5.4/29, ML5.0/4, MS5.6/18, Ms1 5.6/18, ms1mx5.4/30, Error ellipse: s-maj=16.2km s-min=9.5km az=71.0*

*DHMR **13** 10:24:56.3±3.0, 3.18S×128.94E, h10^{km}, mb5.9*

*BJI **13** 10:24:58.3, 3.10S×128.90E, h20^{km}, mB5.7, mb5.4, Ms5.6, Msz5.4*

*HRVD **13** 10:24:58.4±0.1, 2.93S×129.04E, h23^{km}, MW5.9/75, Centroid moment Tensor Solution. LP body waves: s75,c164;Mantle waves: s75,c260; Half duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.46±.01; M$_{\theta\theta}$-0.88±.01; M$_{\phi\phi}$0.42±.01; M$_{r\theta}$-0.11±.02; M$_{\theta\phi}$0.19±.01; M$_{\phi r}$0.57±.02; Best double couple: M$_0$.975×10^{18} NP1:φ$_s$63°, δ52°,λ30°. NP2:φ$_s$314°,δ67°,λ138°. Principal axes: T 1.015, Plg46°, Azm272°; N -.08, Plg43°, Azm110°; P -.935, Plg9°, Azm12°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **13** 10:24:58.4±0.1, 3.10S×128.94E, h20^{km}, mb5.8/54, MS5.7/9, MW5.9 Error ellipse: s-maj=5.3km s-min=3.5km az=71.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.36; M$_{\theta\theta}$-9.03; M$_{\phi\phi}$5.66; M$_{r\theta}$-0.99; M$_{\theta\phi}$0.55; M$_{\phi r}$4.45; Best double couple: M$_0$9.1×10^{17} NP1: φ$_s$54°,δ60°,λ25°. NP2:φ$_s$311°,δ69°,λ147°. Principal axes: T 9.11, Plg38°, Azm269°; N .05, Plg52°, Azm101°; P -9.17, Plg6°, Azm4°;*

NEIC Felt strongly on Seram.

*MOS **13** 10:24:59.8±1.4, 2.94S×128.93E, h33^{km}, mb6.0/53, MS5.5/23 Error ellipse: s-maj=9.6km s-min=5.5km az=114.0*

ISC 13 10:24:59.0±0.1**, 3.11S**±0.02×**129.05E**±0.03**, h37^{km}, h37^{km}**±1.6^{km}**:pP-P, n600, σ1^{s}19**/415**, mb5.7**/129**, MS5.5**/60**, 31C-19D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	10.11	161	eP	Px	10 27 42.3	
	356nm,0.5s						
KAKA				eS	Sx	10 29 35.7	
MATI	Mati	10.37	344	eP	P	10 27 25.6	-2.8
DAV	Davao City (W)	10.69	341	eP	P	10 27 36.0	+3.2
DAV	Davao City (W)	10.69	341	Pn	P	10 27 30.1	-2.6
	718nm,1.0s						
BIPH	Bislig	11.53	347	eP	P	10 27 40.7	-3.5
BUKP	Musuan	11.62	340	eP	P	10 27 41.7	-3.7
PAGZ	Pagadian	12.26	333	eP	P	10 27 49.9	-4.1
CGP	Cagayan de Oro	12.28	339	⇓eP	P	10 27 59.1	+4.8
BUTP	Butuan	12.47	344	eP	P	10 27 56.8	-0.1
IPIL	Ipil	12.61	329	eP	P	10 27 56.5	-2.1
TSM	Tawau	13.37	303	P	P	10 28 06.1	-2.7
SNPH	Sibulan	13.66	335	eP	P	10 28 26.0	+13
TBP	Tagbilaran	13.72	338	eP	P	10 28 18.9	+5.4
MSLP	Maasin	13.80	342	eP	P	10 28 13.5	-1.0
LLP	Lapu-Lapu	14.26	339	eP	P	10 28 13.8	-6.8
GUIM	Jordan	15.08	335	eP	P	10 28 26.6	-4.6
FITZ	Fitzroy Crossi	15.27	192	eP	P	10 28 33.2	-0.5
	674nm,0.8s						
FITZ	Fitzroy Crossi	15.27	192	Pn	P	10 28 33.0	-0.7
	4.2nm,0.3s,baz=23,slow=13,SNR=67						
FITZ				LR	LR	10 35 26.9	
	comp=Z,76μm,18.7s,baz=25,slow=41						
KKM	Kota Kinabalu	15.71	305	eP	P	10 28 37.9	-1.6
KKM				eSn	S	10 31 32.8	+0.3
KKM	Kota Kinabalu	15.71	305	P	P	10 28 38.9	-0.5
RCP	Roxas	15.86	337	⇑eP	P	10 28 44.0	+2.7
CUYO	Cuyo Island	16.00	330	eP	P	10 28 43.3	+0.2
CNP	Catarman	16.12	344	eP	P	10 28 46.7	+2.1
BATP	Bataraza	16.30	317	eP	P	10 28 39.9	-6.9
OTRP	Odiongan	16.88	336	eP	P	10 28 56.4	+2.3
ENPP	El Nido	17.14	326	eP	P	10 28 57.1	-0.4
PVCP	Virac	17.29	344	eP	P	10 28 59.3	0.0
SJMP	San Jose	17.36	333	eP	P	10 28 58.9	-1.3
BUSP	Coron	17.40	330	eP	P	10 28 58.0	-2.7
WRAB	Tennant Creek	17.50	163	eP	P	10 29 01.4	-0.6
	1μm,1.0s						
WRAB	Tennant Creek	17.50	163	eP	P	10 29 00.4	-1.6
WRAB				pmax	pmax		
	comp=Z,1μm,1.0s						
AUQP	San Andres	17.51	339	eP	P	10 29 05.5	+3.4
WRA	Warramunga Arr	17.51	163	P	P	10 29 00.7	-1.4
	comp=Z,8.8nm,0.3s,baz=338,slow=12,SNR=128						
WRA				S	S	10 32 16.2	+2.5
	comp=Z,4.8nm,0.3s,baz=328,slow=28,SNR=5.0						
WRA	Warramunga Arr	17.51	163	i P	P	10 29 00.7	-1.4
WRA				pmax	pmax		
	comp=Z,307nm,0.9s						
WB2	Warramunga Arr	17.51	163	eP	P	10 28 59.8	-2.3
WB2				eS	S	10 32 14.0	+0.2
BOAC	Boac	17.95	337	eP	P	10 29 08.5	+1.0
GQP	Guinayangan	18.13	339	eP	P	10 29 10.4	+0.6
LUBP	Lubang	18.87	333	eP	P	10 29 18.4	-0.5
TGY	Tagaytay City	18.90	335	P	P	10 29 17.5	-1.7
	comp=Z,15nm,0.3s,baz=91,slow=19,SNR=4.5						

TGY				LR	LR	10 37 41.2	
	comp=Z,48nm,19.8s,baz=146,slow=40						
TGY	**Tagaytay City**	**18.90**	**335**	*e*P	**P**	**10 29 11.6**	**-7.6**
PMG	**Port Moresby**	**19.05**	**110**	P	**P**	**10 29 21.2**	**+0.2**
	comp=Z,3.5nm,0.3s,baz=313,slow=5.7,SNR=22						
PMG	**Port Moresby**	**19.05**	**110**	*e*P	**P**	**10 29 21.1**	**+0.2**
	comp=Z,290nm,0.9s						
PMG	**Port Moresby**	**19.05**	**110**	*e*P	**P**	**10 29 21.1**	**+0.1**
PMG				pmax	pmax		
	comp=Z,289nm,0.9s						
POLP	**Polilio Island**	**19.07**	**338**	*e*P	**P**	**10 29 21.9**	**+0.8**
KSM	**Kuching**	**19.28**	**283**	*e*P	**P**	**10 29 22.9**	**-0.6**
KSM				*e*S	**S**	**10 32 58.4**	**+4.7**
BALP	**Baler**	**20.13**	**339**	*e*P	**P**	**10 29 29.9**	**-2.8**
PCPH	**Palayan**	**20.15**	**337**	⇑*e*P	**P**	**10 29 35.0**	**+2.0**
SCZP	**Santa Cruz**	**20.83**	**335**	*e*P	**P**	**10 29 38.4**	**-1.6**
ASPA	**Alice Springs**	**20.97**	**167**	*e*P	**P**	**10 29 40.2**	**-1.2**
ASPA				*e*S	**S**	**10 33 33.4**	**+5.4**
ASPA				*e*SCS	ScS	10 41 02.8	+0.1
BCPH	**Baguio City Da**	**21.09**	**337**	*e*P	**P**	**10 29 46.0**	**+3.3**
	comp=Z,1552µm,1.0s						
BCPH				*e*S	**S**	**10 33 32.4**	**+2.0**
CAUP	**Cauayan**	**21.16**	**341**	*e*P	**P**	**10 29 43.4**	**0.0**
BOLP	**Bolinao**	**21.37**	**335**	*e*P	**P**	**10 29 43.1**	**-2.3**
CVP	**Callao Caves**	**21.87**	**341**	*e*P	**P**	**10 29 51.0**	**+0.5**
ABRA	**Dolores**	**22.20**	**339**	*e*P	**P**	**10 29 52.4**	**-1.4**
APYP	**Conner**	**22.21**	**340**	*e*P	**P**	**10 29 50.2**	**-3.7**
SGCP	**Mt. Cagua**	**22.31**	**342**	*e*P	**P**	**10 29 54.9**	**+0.1**
GUMO	**Guam**	**22.84**	**43**	P	**P**	**10 29 59.5**	**-0.6**
	comp=Z,586nm,1.2s,mb5.9,baz=342,slow=20,SNR=4.1						
GUMO	**Guam**	**22.84**	**43**	*e*P	**P**	**10 29 59.6**	**-0.5**
	comp=Z,702nm,1.2s,mb6.0						
GUMO	**Guam**	**22.84**	**43**	*e*P	**P**	**10 29 59.6**	**-0.6**
GUMO				pmax	pmax		
	comp=Z,702nm,1.2s,mb6.0						
PIP	**Pasuquin**	**22.86**	**339**	⇓*e*P	**P**	**10 30 11.3**	**+11**
CTA	**Charters Tower**	**23.80**	**136**	*e*P	**P**	**10 30 10.8**	**+1.3**
	comp=Z,282nm,0.9s,mb5.7						
CTA	**Charters Tower**	**23.80**	**136**	P	**P**	**10 30 10.6**	**+1.1**
	comp=Z,84nm,1.0s,mb5.1,baz=321,slow=11,SNR=40						
CTA	**Charters Tower**	**23.80**	**136**	*e*P	**P**	**10 30 10.8**	**+1.3**
CTA				pmax	pmax		
	comp=Z,282nm,0.9s						
KGM	**Kluang**	**26.22**	**281**	P	**P**	**10 30 33.2**	**+0.6**
FORT	**Forrest**	**27.54**	**182**	*e*P	**P**	**10 30 42.1**	**-2.5**
	comp=Z,327nm,0.7s,mb6.1						
NACB	**Ninganchiao**	**28.07**	**345**	*e*P	**P**	**10 30 47.5**	**-1.9**
YHNB	**Yeheng**	**28.60**	**345**	*e*P	**P**	**10 30 54.0**	**-0.1**
QIZ	**Qiongzhong**	**29.00**	**320**	P	**P**	**10 30 58.9**	**+1.2**
QIZ				AP	pP	10 31 06.1	-2.0
QIZ				XP	sP	10 31 09.8	-3.0
QIZ				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.0						
QIZ				AMB	AMB		
	comp=Z,690nm,9.5s						
QIZ				LR	LR		
	comp=N,6µm,18.2s						
QIZ				LR	LR		
	comp=Z,5µm,22.3s,MS5.1						
IPM	**Ipoh**	**29.02**	**285**	P	**P**	**10 30 58.3**	**+0.3**
HKC	**Hong Kong**	**29.14**	**331**	P	**P**	**10 31 06.0**	**+7.0**
HKC				S	**S**	**10 35 52.0**	**+4.8**
KULM	**Kulim**	**29.57**	**286**	*e*P	**P**	**10 31 02.0**	**-0.8**
QZH	**Quanzhou**	**29.68**	**341**	P	**P**	**10 31 09.0**	**+5.3**
QZH				AMB	AMB		
	comp=Z,150nm,1.0s,mb5.7						
QZH				LR	LR		
	comp=N,4µm,13.2s,MS5.4						
QZH				LR	LR		
	comp=E,5µm,15.8s,MS5.4						
QZH				LR	LR		
	comp=Z,16µm,23.4s						
JOW	**Kunigami**	**29.77**	**359**	P	**P**	**10 31 04.2**	**-0.3**
	comp=Z,35nm,0.8s,mb5.2,baz=184,slow=10,SNR=5.2						
JOW				LR	LR	10 41 01.2	
	comp=Z,24µm,21.5s,MS5.8,baz=137,slow=32						
UBT	**Ubonrachathani**	**29.98**	**308**	⇓P	**P**	**10 31 06.0**	**-0.4**
SNG	**Songkhla**	**30.16**	**290**	P	**P**	**10 31 08.0**	**-0.1**
	comp=Z,566nm,1.0s,mb6.2						
GZH	**Guangzhou**	**30.21**	**330**	P	**P**	**10 31 11.6**	**+3.1**
GZH				S	**S**	**10 36 11.3**	**+7.2**
GZH				LR	LR		
	comp=N,4µm,21.8s,MS5.4						
GZH				LR	LR		
	comp=E,10µm,23.0s,MS5.4						
GZH				LR	LR		
	comp=Z,16µm,23.9s,MS5.6						
KLBR	**Kellerberrin**	**30.26**	**199**	*e*P	**P**	**10 31 06.3**	**-2.6**
	comp=Z,59nm,0.6s,mb5.5						
STKA	**Stephens Creek**	**30.96**	**159**	*e*P	**P**	**10 31 13.3**	**-1.7**
	comp=Z,154nm,0.9s,mb5.8						
STKA	**Stephens Creek**	**30.96**	**159**	P	**P**	**10 31 13.3**	**-1.7**
	comp=Z,193nm,0.9s,mb5.9,baz=336,slow=10.0,SNR=171						
STKA				LR	LR	10 45 10.5	
	comp=Z,25µm,19.0s,MS5.9,baz=95,slow=39						
MUN	**Mundaring**	**31.16**	**201**	*e*P	**P**	**10 31 15.1**	**-1.7**
HNR	**Honiara**	**31.33**	**103**	P	**P**	**10 31 17.8**	**-0.7**
	comp=Z,88nm,0.8s,mb5.7,baz=191,slow=4.4,SNR=5.2						
HNR	**Honiara**	**31.33**	**103**	*e*P	**P**	**10 31 18.4**	**0.0**
	comp=Z,338nm,1.0s,mb6.1						
HNR	**Honiara**	**31.33**	**103**	*e*P	**P**	**10 31 18.5**	**0.0**
HNR				pmax	pmax		
	comp=Z,338nm,1.0s,mb6.1						
NWAO	**Narrogin (SRO)**	**31.66**	**199**	P	**P**	**10 31 18.4**	**-2.8**
	comp=Z,35nm,0.7s,mb5.3,baz=24,slow=8.5,SNR=25						
NWAO				LR	LR	10 46 20.3	
	comp=Z,18µm,18.2s,MS5.8,baz=5.5,slow=41						
NWAO	**Narrogin (SRO)**	**31.66**	**199**	*e*P	**P**	**10 31 18.6**	**-2.7**
	comp=Z,44nm,0.8s,mb5.3						
NWAO	**Narrogin (SRO)**	**31.66**	**199**	*e*P	**P**	**10 31 18.6**	**-2.6**
NWAO				pmax	pmax		
	comp=Z,44nm,0.8s						
KKTK	**Khon Kaen**	**32.33**	**307**	P	**P**	**10 31 26.0**	**-1.2**
	comp=Z,5µm,0.5s						
CBIJ	**Chichi jima**	**32.59**	**22**	P	**P**	**10 31 28.4**	**-1.1**
	comp=Z,102nm,0.8s,mb5.8,baz=203,slow=13,SNR=3.5						
NNT	**Nongplab**	**33.03**	**299**	P	**P**	**10 31 33.0**	**-0.3**
NST	**Nakhon Sawan**	**34.16**	**304**	⇑P	**P**	**10 31 43.2**	**+0.2**
	comp=Z,142nm,0.9s,mb5.9						
SSE	**Sheshan**	**34.83**	**348**	P	**P**	**10 31 51.4**	**+2.8**
SSE				AP	pP	10 32 02.0	+2.9
SSE				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.2						
SSE				AMB	AMB		
	comp=Z,170nm,4.8s						
SSE				LR	LR		
	comp=N,2µm,21.0s,MS5.2						
SSE				LR	LR		
	comp=E,5µm,20.9s,MS5.2						
SSE				LR	LR		
	comp=Z,4µm,21.6s,MS5.1						
SSE	**Sheshan**	**34.83**	**348**	P	**P**	**10 31 51.4**	**+2.8**
	comp=Z,35nm,0.9s,mb5.3						
SSE				pP	pP	10 32 02.0	+2.9
SSE				sP	sP	10 32 07.7	+3.8
SSE				PP	PP	10 33 01.9	-4.8
SSE				S	S	10 36 54.2	-22
SSE				sS		10 37 13.3	
SSE				SS	SS	10 39 05.9	-25
SSE				LR	LR		
	comp=Z,4µm,21.6s,MS5.1						
JNU	**Nakatsue**	**36.07**	**3**	P	**P**	**10 31 57.4**	**-1.8**
	comp=Z,11nm,0.9s,mb4.8,baz=202,slow=4.3,SNR=2.6						
JNU				LR	LR	10 46 26.2	
	comp=Z,15µm,19.6s,MS5.8,baz=184,slow=36						
NJ2	**Nanjing**	**36.28**	**345**	*e*P	**P**	**10 32 03.0**	**+2.0**
NJ2				AP	pP	10 32 12.8	+1.3
NJ2				XP	sP	10 32 16.5	+0.3
NJ2				AMB	AMB		
	comp=Z,80nm,1.2s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,530nm,8.3s						
NJ2				LR	LR		
	comp=N,9µm,18.6s,MS5.6						
NJ2				LR	LR		
	comp=E,7µm,23.2s,MS5.6						
NJ2				LR	LR		
	comp=Z,4µm,19.3s,MS5.2						
WHN	**Wuhan**	**36.29**	**338**	*e*P	**P**	**10 32 02.5**	**+1.5**
WHN				LR	LR		
	comp=N,6µm,16.6s,MS5.6						
WHN				LR	LR		
	comp=E,8µm,20.6s,MS5.6						
WHN				LR	LR		
	comp=Z,12µm,20.9s,MS5.6						
GYA	**Guiyang**	**36.50**	**325**	⇑*i*P	**P**	**10 32 04.0**	**+1.1**
GYA				AP	pP	10 32 13.0	-0.4
GYA				XP	sP	10 32 17.3	-0.8
GYA				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.5						
GYA				AMB	AMB		
	comp=Z,910nm,5.1s						
GYA				LR	LR		
	comp=N,6µm,22.4s,MS5.4						
GYA				LR	LR		
	comp=E,4µm,20.6s,MS5.4						
GYA				LR	LR		
	comp=Z,5µm,21.2s,MS5.2						
CHRT	**Chiangrai**	**36.71**	**310**	⇑P	**P**	**10 32 05.0**	**+0.3**
	comp=Z,908nm,1.3s,mb6.4						
CHG	**Chiang Mai**	**36.77**	**307**	⇑P	**P**	**10 32 05.4**	**+0.2**
	comp=Z,150nm,1.2s,mb5.7						
RIV	**Riverview**	**36.88**	**149**	*e*P	**P**	**10 32 07.2**	**+1.3**
CNB	**Canberra Magne**	**37.17**	**152**	*e*P	**P**	**10 32 08.9**	**+0.5**
	comp=Z,165nm,1.2s,mb5.7						
JHJ	**Hachijo jima 2**	**37.43**	**15**	LR	LR	10 46 26.5	
	comp=Z,9µm,19.2s,MS5.6,baz=191,slow=34						
TOO	**Toolangi**	**37.47**	**158**	*e*P	**P**	**10 32 12.0**	**+1.1**
	comp=Z,37nm,0.8s,mb5.3						
TOO	**Toolangi**	**37.47**	**158**	*e*P	**P**	**10 32 12.0**	**+1.1**
TOO				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.3						
KMI	**Kunming**	**37.94**	**319**	⇑P	**P**	**10 32 17.3**	**+2.4**
KMI				AP	pP	10 32 27.1	+1.6
KMI				XP	sP	10 32 31.5	+1.3
KMI				PP	PP	10 33 47.3	+2.1
KMI				AMB	AMB		
	comp=Z,240nm,1.2s,mb5.8						
KMI				AMB	AMB		
	comp=Z,620nm,3.5s						
KMI				LR	LR		
	comp=N,2µm,18.7s,MS5.3						
KMI				LR	LR		
	comp=E,4µm,20.1s,MS5.3						
KMI				LR	LR		
	comp=Z,4µm,19.1s,MS5.3						
KMI	**Kunming**	**37.94**	**319**	⇑P	**P**	**10 32 17.3**	**+2.4**
	comp=Z,241nm,1.2s,mb5.8						
KMI				pP	pP	10 32 27.1	+1.6
KMI				sP	sP	10 32 31.5	+1.3
KMI				PP	PP	10 33 47.3	+2.1
KMI				PPP	PPP	10 34 09.5	+2.3
KMI				S	**S**	**10 38 06.6**	**+2.8**
KMI				sS		10 38 23.7	
KMI				SS	SS	10 40 43.9	+2.5
KMI				SSS	SSS	10 41 16.3	+2.7
KMI				LR	LR		
	comp=Z,4µm,19.1s,MS5.3						
KMI	**Kunming**	**37.94**	**319**	⇑P	**P**	**10 32 17.3**	**+2.4**
KMI				*PP	pP	10 32 27.1	+1.6
KMI				*SP	sP	10 32 31.5	+1.3
KMI						10 33 47.3	
KMI				PPP	PPP	10 34 09.5	+2.3
KMI				S	**S**	**10 38 06.6**	**+2.8**
KMI				*SS		10 38 23.7	
KMI				SS	SS	10 40 43.9	+2.5
KMI				SSS	SSS	10 41 16.3	+2.7
KMI				pmax	pmax		
	comp=Z,241nm,1.2s,mb5.8						
KMI				MLR	MLR		
	comp=Z,4µm,19.1s,MS5.3						
KS15	**Wonju Array Si**	**40.36**	**359**	*e*P	**P**	**10 32 33.8**	**-1.1**
MJAR	**Matsushiro Arr**	**40.36**	**11**	P	**P**	**10 32 32.9**	**-2.0**
	comp=Z,18nm,0.8s,mb4.9,baz=184,slow=10,SNR=42						
MJAR				LR	LR	10 46 50.8	
	comp=Z,7µm,21.8s,MS5.5,baz=215,slow=33						
MAJO	**Matsushiro**	**40.36**	**11**	*e*P	**P**	**10 32 33.2**	**-1.8**
	comp=Z,110nm,0.9s,mb5.6						
MAJO	**Matsushiro**	**40.36**	**11**	*e*P	**P**	**10 32 33.2**	**-1.7**
MAJO				pmax	pmax		
	comp=Z,110nm,0.9s,mb5.6						
MAT	**Matsushiro**	**40.36**	**11**	P	**P**	**10 32 33.1**	**-1.8**
MAT				S	**S**	**10 38 39.0**	**-1.2**
MAT	**Matsushiro**	**40.36**	**11**	*e*P	**P**	**10 32 33.0**	**-1.9**
	comp=Z,38nm,0.8s,mb5.2						
MAT				*e*S	**S**	**10 38 41.0**	**+0.8**
MAT				LR	LR		
	comp=Z,10µm,21.0s,MS5.7						
MAT	**Matsushiro**	**40.36**	**11**	*e*P	**P**	**10 32 33.0**	**-1.9**
MAT				*e*S	**S**	**10 38 41.0**	**+0.8**
MAT				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.2						
MAT				MLR	MLR		
	comp=Z,10µm,21.0s,MS5.7						
INCN	**Inchon**	**40.45**	**357**	P	**P**	**10 32 33.7**	**-2.0**
	comp=Z,128nm,1.3s,mb5.5						
TIA	**Tai'an**	**40.67**	**345**	*e*P	**P**	**10 32 36.8**	**-0.7**
TIA				AP	pP	10 32 46.0	-2.2
TIA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
TIA				LR	LR		
	comp=N,2µm,15.0s,MS5.2						
TIA				LR	LR		
	comp=E,1µm,13.0s,MS5.2						
DZM	**Mont Dzumac**	**40.89**	**121**	P	**P**	**10 32 40.0**	**+0.6**
	comp=E,18nm,0.7s,mb4.8,baz=308,slow=9.5,SNR=10						
XAN	**Xi'an**	**41.53**	**334**	P	**P**	**10 32 44.0**	**-0.7**
XAN				AP	pP	10 32 53.1	-2.3
XAN				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.0						
XAN				LR	LR		
	comp=N,2µm,22.7s,MS5.2						
XAN				LR	LR		
	comp=E,3µm,25.5s,MS5.2						
XAN				LR	LR		
	comp=Z,4µm,24.6s,MS5.2						
CD2	**Chengdu**	**41.54**	**326**	⇑*i*P	**P**	**10 32 45.3**	**+0.5**
CD2				AP	pP	10 32 56.8	+1.3
CD2				XP	sP	10 32 59.0	-1.1
CD2				PP	PP	10 34 23.6	-0.4
CD2				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.1						
CD2				LR	LR		
	comp=N,3µm,20.4s						
CD2				LR	LR		
	comp=Z,3µm,23.9s,MS5.1						
DL2	**Dalian**	**42.36**	**351**	P	**P**	**10 32 51.5**	**+0.1**
DL2				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.0						
DL2				AMB	AMB		
	comp=Z,260nm,6.2s						
DL2				LR	LR		
	comp=N,2µm,17.4s,MS5.2						
DL2				LR	LR		
	comp=E,1µm,19.5s,MS5.2						
DL2				LR	LR		
	comp=Z,3µm,17.0s,MS5.2						
TAU	**Tasmania Unive**	**42.84**	**160**	*e*P	**P**	**10 32 56.9**	**+1.6**
	comp=Z,120nm,1.1s,mb5.5						
TAU	**Tasmania Unive**	**42.84**	**160**	*e*P	**P**	**10 32 56.9**	**+1.6**
TAU				pmax	pmax		
	comp=Z,121nm,1.1s,mb5.5						
SNY	**Shenyang**	**45.00**	**354**	⇑P	**P**	**10 33 11.3**	**-1.4**
SNY				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.2						
SNY				LR	LR		
	comp=N,8µm,20.5s						
SNY				LR	LR		
	comp=Z,10µm,20.5s,MS5.7						
LZH	**Lanzhou**	**45.55**	**331**	*e*P	**P**	**10 33 18.3**	**+1.0**
LZH				AP	pP	10 33 31.0	+3.0
LZH				XP	sP	10 33 33.5	+1.0
LZH				PP	PP	10 35 05.0	+0.6
LZH				AMB	AMB		
	comp=Z,190nm,1.2s,mb5.9						
LZH				AMB	AMB		
	comp=Z,680nm,5.0s						
LZH				LR	LR		
	comp=E,11µm,18.2s						
LZH				LR	LR		
	comp=Z,13µm,20.0s,MS5.9						
LZH	**Lanzhou**	**45.55**	**331**	*e*P	**P**	**10 33 18.2**	**+0.9**
	comp=Z,195nm,1.2s,mb5.9						
LZH				pP	pP	10 33 31.0	+3.0
LZH				sP	sP	10 33 33.5	+1.0
LZH				PcP	PcP	10 34 56.1	+0.2
LZH				PP	PP	10 35 05.0	+0.6
LZH				ScP		10 38 49.6	
LZH				PcS		10 38 51.4	
LZH				S	**S**	**10 39 57.5**	**+1.4**
LZH				sS		10 40 02.0	
LZH				SS	SS	10 43 13.3	+1.7
LZH				LR	LR		
	comp=Z,13µm,20.0s,MS5.9						
LZH	**Lanzhou**	**45.55**	**331**	*e*P	**P**	**10 33 18.2**	**+0.9**
LZH				*PP	pP	10 33 31.0	+3.0
LZH						10 34 56.1	
LZH						10 35 05.0	
LZH				S	**S**	**10 39 57.5**	**+1.4**
LZH				*SS		10 40 02.0	
LZH				SS	SS	10 43 13.3	+1.7
LZH				pmax	pmax		
	comp=Z,195nm,1.2s,mb5.9						
LZH				MLR	MLR		
	comp=Z,13µm,20.0s,MS5.9						
SHL	**Shillong**	**45.92**	**311**	*e*P	**P**	**10 33 20.0**	**-0.3**
SHL				*e*S	**S**	**10 40 04.0**	**+2.5**
VLA	**Vladivostok**	**46.09**	**3**	⇓*i*P	**P**	**10 33 21.9**	**+0.5**
VLA	**Vladivostok**	**46.09**	**3**	⇓*i*P	**P**	**10 33 21.8**	**+0.4**
VLA				pmax	pmax		
	comp=Z,147nm,2.5s,mb5.5						
VLA				MLR	MLR		
	comp=Z,8µm,18.0s,MS5.7						
HHC	**Hu-ho-hao-te**	**46.57**	**342**	⇓P	**P**	**10 33 25.9**	**+0.7**
HHC				AP	pP	10 33 35.9	0.0
HHC				XP	sP	10 33 39.8	-0.7
HHC				PP	PP	10 35 14.3	-0.3
HHC				SCS	ScS	10 43 18.5	+4.1
HHC				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.8						
HHC				AMB	AMB		
	comp=Z,960nm,9.6s						
HHC				LR	LR		
	comp=N,2µm,18.0s						
HHC				LR	LR		
	comp=E,4µm,24.0s						
CN2	**Changchun**	**46.81**	**356**	*e*P	**P**	**10 33 27.3**	**+0.3**
CN2				*e*XP	sP	10 33 40.8	-1.4
CN2				*e*PP	PP	10 35 16.8	-0.1
CN2				*e*S	**S**	**10 40 17.6**	**+3.8**
CN2				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
CN2				AMB	AMB		
	comp=Z,300nm,6.0s						
CN2				LR	LR		
	comp=N,6µm,19.0s,MS5.7						
CN2				LR	LR		
	comp=E,4µm,19.0s,MS5.7						
CN2				LR	LR		
	comp=Z,8µm,21.0s,MS5.7						
BTO	**Baotou**	**46.86**	**340**	*e*P	**P**	**10 33 27.4**	**0.0**
BTO				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CAL	**Calcutta**	**47.22**	**305**	*e*P	**P**	**10 33 34.2**	**+3.6**
CAL				*e*S	**S**	**10 40 27.2**	**+7.2**
MDJ	**Mudanjiang**	**47.51**	**1**	P	**P**	**10 33 33.6**	**+1.0**
MDJ				S	**S**	**10 40 26.8**	**+2.9**
MDJ				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.3						
MDJ				AMB	AMB		
	comp=Z,620nm,9.5s						
MDJ				LR	LR		
	comp=N,5µm,26.3s						
MDJ				LR	LR		
	comp=E,2µm,19.7s						
MDJ				LR	LR		
	comp=Z,7µm,23.0s,MS5.6						
ASAJ	**Asahikawa**	**48.56**	**13**	P	**P**	**10 33 40.7**	**0.0**
	comp=Z,24nm,0.7s,mb5.3,baz=221,slow=11,SNR=13						
LSA	**Lhasa**	**48.77**	**315**	P	**P**	**10 33 43.3**	**+0.7**
LSA				AMB	AMB		
	comp=Z,130nm,0.9s,mb6.0						
LSA				AMB	AMB		
	comp=Z,690nm,5.0s						
LSA				LR	LR		
	comp=N,1µm,22.0s,MS5.2						
LSA				LR	LR		
	comp=E,3µm,25.0s,MS5.2						
LSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
PALK	**Pallekele**	**49.34**	**282**	*e*P	**P**	**10 33 45.8**	**-1.3**
	comp=Z,152nm,1.1s,mb5.9						
VIS	**Vishakhapatnam**	**49.59**	**296**	*e*P	**P**	**10 33 49.3**	**+0.3**
VIS				AMb	AMB	10 33 52.3	
	comp=Z,204nm,0.9s,mb6.2						
BOK	**Bokaro**	**49.79**	**305**	*e*P	**P**	**10 33 49.1**	**-1.4**
BOK				AMb	AMB	10 33 52.5	
	comp=Z,60nm,0.8s,mb5.7						
GTA	**Gaotai**	**50.13**	**330**	*e*P	**P**	**10 33 52.1**	**-0.8**
GTA				PP	PP	10 35 49.0	0.0
GTA				SCS	ScS	10 43 40.4	+2.5
GTA				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.7						
GTA				AMB	AMB		
	comp=Z,490nm,7.6s						
GTA				LR	LR		
	comp=N,4µm,22.1s,MS5.4						
GTA				LR	LR		
	comp=E,2µm,21.7s,MS5.4						
GTA				LR	LR		
	comp=Z,6µm,21.7s,MS5.6						
YSS	**Yuzh-Sakhalins**	**51.29**	**12**	*e*P	**P**	**10 34 00.8**	**-0.7**
	comp=Z,49nm,0.8s,mb5.5						
YSS	**Yuzh-Sakhalins**	**51.29**	**12**	⇑*i*P	**P**	**10 34 02.0**	**+0.4**
YSS				*e*	pP	10 34 14.0	+1.7
YSS				*e*		10 36 00.0	
YSS				*e*S	**S**	**10 41 15.0**	**-1.5**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
YSS				pmax	pmax		
	comp=Z,500nm,6.0s						
YSS				smax			
	comp=N,1µm,14.0s						
YSS				MLR	MLR		
	comp=N,2µm,19.0s,MS5.4						
YSS				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.3						
YSS				MLR	MLR		
	comp=E,2µm,18.0s,MS5.4						
JIRN	**Jiri**	**51.36**	**309**	*e*P	**P**	**10 34 01.7**	**-0.7**
	comp=E,252nm,0.9s,mb6.1						
GUN	**Gumba**	**51.73**	**310**	*e*P	**P**	**10 34 04.4**	**-0.7**
	comp=E,450nm,0.8s,mb6.4						
PKI	**Pulchoki**	**51.92**	**309**	*e*P	**P**	**10 34 05.4**	**-1.2**
	comp=E,564nm,1.5s,mb6.3						
KKN	**Kakani**	**52.13**	**309**	*e*P	**P**	**10 34 07.1**	**-1.0**
	comp=E,209nm,0.8s,mb6.1						
OUZ	**Omahuta**	**52.15**	**133**	PN	**P**	**10 34 10.4**	**+2.2**
DMN	**Daman**	**52.18**	**309**	*e*P	**P**	**10 34 07.6**	**-0.9**
	comp=E,456nm,1.1s,mb6.3						
KLR	**Kul'dur**	**52.18**	**2**	*e*P	**P**	**10 34 05.5**	**-2.7**
KLR				*e*		10 35 13.5	
KLR				*e*S	**S**	**10 41 25.5**	**-3.1**
KLR				smax			
	comp=N,3µm,13.0s						
KLR				smax			
	comp=E,2µm,13.0s						
KLR				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.6						
BLSP	**Bilaspur**	**52.25**	**301**	*e*P	**P**	**10 34 09.0**	**-0.1**
BLSP				AMb	AMB	10 34 11.5	
	comp=Z,321nm,1.1s,mb6.2						
GKN	**Gorkha**	**52.73**	**309**	*e*P	**P**	**10 34 11.3**	**-1.3**
	comp=Z,388nm,0.9s,mb6.3						
KOLN	**Koldanda**	**53.43**	**308**	*e*P	**P**	**10 34 17.0**	**-0.8**
	comp=Z,752nm,1.0s,mb6.6						
JCZ	**Jackson Bay**	**53.77**	**145**	PN	**P**	**10 34 20.8**	**+0.7**
ALBI	**Allahabad**	**53.79**	**305**	*e*P	**P**	**10 34 18.0**	**-2.5**
HYB	**Hyderabad**	**53.81**	**294**	*i* P	**P**	**10 34 19.0**	**-1.7**
	comp=Z,240nm,1.0s,mb6.1						
HYB				*e*sP	sP	10 34 30.0	-6.0
HYB				*e*PcP	PcP	10 35 27.0	+0.8
HYB				*e*PP	PP	10 36 20.0	-3.4
HYB				*e*S	**S**	**10 41 52.0**	**+0.8**
HYB				LR	LR	10 57 32.0	
	comp=Z,4.6nm,24.0s						
HYB	**Hyderabad**	**53.81**	**294**	*e*P	**P**	**10 34 19.0**	**-1.7**
	comp=Z,240nm,1.0s,mb6.1						
HYB				*e*S	**S**	**10 41 50.0**	**-1.2**
HYB	**Hyderabad**	**53.81**	**294**	*e*P	**P**	**10 34 19.0**	**-1.7**
HYB				*e*S	**S**	**10 41 50.0**	**-1.2**
HYB				pmax	pmax		
	comp=Z,240nm,1.0s,mb6.1						
QRZ	**Quartz Range**	**54.20**	**140**	PN	**P**	**10 34 23.1**	**-0.2**
SONM	**Songino Array**	**54.47**	**341**	P	**P**	**10 34 24.6**	**-0.6**

	comp=Z,32nm,0.7s,mb5.3,baz=151,slow=7.3,SNR=145						
SONM				ScP		10 39 25.2	
	comp=Z,6.6nm,1.1s,baz=180,slow=3.0,SNR=4.1						
SONM				LR	LR	10 58 59.3	
	comp=Z,3µm,20.9s,MS5.3,baz=161,slow=38						
LBZ	**Lake Benmore**	**54.78**	**145**	PN	**P**	**10 34 26.8**	**-0.7**
RPZ	**Rata Peaks**	**54.89**	**144**	PN	**P**	**10 34 28.0**	**-0.3**
THZ	**Tophouse**	**54.94**	**141**	PN	**P**	**10 34 27.9**	**-0.8**
LTZ	**Lake Taylor**	**55.10**	**142**	PN	**P**	**10 34 30.0**	**+0.2**
TUWZ	**Tuamarina**	**55.43**	**140**	PN	**P**	**10 34 31.1**	**-1.1**
KHZ	**Kahutara**	**55.69**	**141**	PN	**P**	**10 34 33.0**	**-1.1**
LATR	**Latur**	**55.92**	**295**	*e*x	x	10 39 36.1	
TSZ	**Takapari Road**	**56.08**	**138**	PN	**P**	**10 34 36.7**	**-0.2**
MNGI	**Mangalore**	**56.14**	**288**	*e*P	**P**	**10 34 37.3**	**-0.4**
MNGI				*e*S	**S**	**10 42 22.1**	**-0.5**
AKL	**Akola**	**56.21**	**297**⇑	*i*x	x	10 33 48.1	
AKL				*i* x	x	10 35 44.9	
MWZ	**Matawai**	**56.37**	**135**	PN	**P**	**10 34 38.4**	**-0.6**
CIT	**Chita**	**56.48**	**349**	*e*P	**P**	**10 34 40.4**	**+0.8**
CIT				*e*		10 34 55.5	
CIT				*e*		10 42 19.4	
CIT				pmax	pmax		
	comp=Z,332nm,1.9s,mb6.0						
DGAR	**Diego Garcia**	**56.49**	**263**	*e*P	**P**	**10 34 39.1**	**-1.1**
	comp=Z,249nm,0.9s,mb6.2						
DGAR	**Diego Garcia**	**56.49**	**263**	P	**P**	**10 34 39.5**	**-0.7**
DGAR				*e*		10 34 46.6	
DGAR				pmax	pmax		
	comp=Z,330nm,1.1s,mb6.3						
BHPL	**Bhopal**	**56.70**	**300**	*e*P	**P**	**10 34 40.8**	**-0.7**
BHPL				AMb	AMB	10 34 43.4	
	comp=Z,255nm,0.9s,mb6.2						
PTH	**Pithoragarh**	**56.88**	**308**	*e*P	**P**	**10 34 43.0**	**+0.1**
PTH				*e*x	x	10 35 39.4	
ZAK	**Zakamensk**	**57.70**	**341**	*e*P	**P**	**10 34 47.8**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KAD	**Karad**	**57.79**	**293**	*e*P	**P**	**10 34 46.6**	**-2.8**
KAD				AMb	AMB	10 34 50.5	
	comp=Z,131nm,0.8s,mb6.0						
POO	**Poona**	**58.42**	**294**	*e*P	**P**	**10 34 53.6**	**-0.1**
POO				AMb	AMB	10 34 56.4	
	comp=Z,103nm,1.1s,mb5.8						
NDI	**New Delhi**	**58.90**	**306**	*e*P	**P**	**10 34 53.0**	**-4.0**
NDI				*e*x	x	10 42 52.0	
AFI	**Afiamalu**	**59.35**	**104**	P	**P**	**10 35 01.2**	**+0.9**
	comp=Z,121nm,1.1s,mb5.8						
AFI	**Afiamalu**	**59.35**	**104**	P	**P**	**10 35 05.3**	**+5.0**
AFI				pmax	pmax		
	comp=Z,120nm,1.1s,mb5.8						
MOY	**Mondy**	**59.56**	**340**	*e*P	**P**	**10 35 01.7**	**+0.5**
MOY				pmax	pmax		
	comp=Z,289nm,3.2s						
WMQ	**Urumqi**	**59.64**	**326**⇑	*i*P	**P**	**10 35 02.3**	**+0.4**
WMQ				AP	pP	10 35 12.0	-0.9
WMQ				XP	sP	10 35 16.0	-1.3
WMQ				PP	PP	10 37 16.0	+0.5
WMQ				S	**S**	**10 43 09.0**	**+1.1**
WMQ				SCS	ScS	10 44 46.0	+0.6
WMQ				AMB	AMB		
	comp=Z,120nm,0.9s,mb5.9						
WMQ				AMB	AMB		
	comp=Z,960nm,3.8s						
WMQ				LR	LR		
	comp=N,5µm,24.4s,MS5.7						
WMQ				LR	LR		
	comp=E,4µm,22.8s,MS5.7						
WMQ				LR	LR		
	comp=Z,6µm,23.0s,MS5.7						
CLNS	**Chul'man**	**59.84**	**357**	*e*P	**P**	**10 35 03.4**	**+0.3**
CLNS				*e*		10 35 50.3	
CLNS				*e*		10 37 10.2	
CLNS				*e*S	**S**	**10 43 09.4**	**-0.9**
CLNS				*e*SS	SS	10 47 07.8	-0.1
CLNS				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.6						
CLNS				pmax	pmax		
	comp=N,40nm,1.0s						
CLNS				pmax	pmax		
	comp=E,42nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
CLNS				pmax	pmax		
	comp=N,30nm,1.2s						
CLNS				pmax	pmax		
	comp=E,21nm,1.2s						
CLNS				smax			
	comp=N,481nm,12.6s						
CLNS				smax			
	comp=Z,827nm,12.3s						
CLNS				smax			
	comp=E,534nm,12.4s						
CLNS				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.3						
CLNS				MLR	MLR		
	comp=N,600nm,18.0s,MS5.1						
CLNS				MLR	MLR		
	comp=E,900nm,14.0s,MS5.1						
SMLA	**Simla**	**59.94**	**309**	*e*P	**P**	**10 35 01.4**	**-2.8**
SMLA				*e*S	**S**	**10 43 11.8**	**-0.2**
AJM	**Ajmer**	**60.20**	**303**	*e*P	**P**	**10 35 04.5**	**-1.4**
AJM				AMb	AMB	10 35 06.2	
	comp=Z,105nm,1.0s,mb5.8						
BHK	**Bhakra**	**60.65**	**309**	*e*x	x	10 35 12.9	
PET	**Petropavlovsk**	**61.21**	**20**	*e*P	**P**	**10 35 12.5**	**0.0**
	comp=Z,127nm,1.0s,mb6.0						
PET	**Petropavlovsk**	**61.21**	**20**	*e*P	**P**	**10 35 12.3**	**-0.2**
PET				*e*S	**S**	**10 43 31.4**	**+3.5**
PET				*e*		10 44 54.8	
PET				*e*SS	SS	10 47 35.9	+6.2
PET				pmax	pmax		
	comp=Z,125nm,0.8s,mb6.1						
PET				smax			
	comp=N,1µm,14.3s						
PET				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.3						
THN	**Thein Dam**	**61.61**	**310**	*e*P	**P**	**10 35 13.4**	**-2.0**
BOD	**Bodaibo**	**61.93**	**351**	*e*P	**P**	**10 35 16.4**	**-0.8**
BOD				pmax	pmax		
	comp=Z,99nm,1.9s,mb5.6						
DRV	**Dumont d'Urvil**	**63.90**	**175**	P	**P**	**10 35 30.0**	**-0.1**
DRV				SP	SP	10 44 38.0	+17
DRV				L		10 51 00.0	
CASY	**Casey**	**64.39**	**188**	*e*P	**P**	**10 35 32.1**	**-1.1**
	comp=Z,94nm,1.2s,mb5.7						
MKAR	**Makanchi Array**	**64.48**	**326**	P	**P**	**10 35 32.6**	**-1.5**
	comp=Z,42nm,0.8s,mb5.5,baz=122,slow=7.3,SNR=233						
MKAR				LR	LR	11 06 17.2	
	comp=Z,2µm,20.8s,MS5.3,baz=119,slow=38						
MKAR	**Makanchi Array**	**64.48**	**326**	*e*P	**P**	**10 35 32.7**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,44nm,0.8s						
KSH	**Kashi**	**64.54**	**317**	P	**P**	**10 35 35.8**	**+1.1**
KSH				*e*XP	sP	10 35 47.3	-2.7
KSH				*e*PP	PP	10 38 01.3	+2.6
KSH				XS		10 44 29.3	
KSH				*e*SCS	ScS	10 45 25.0	+2.7
KSH				AMB	AMB		
	comp=Z,350nm,1.1s,mb6.3						
KSH				LR	LR		
	comp=N,5µm,17.2s						
KSH				LR	LR		
	comp=E,2µm,10.8s						
MA2	**Magadan**	**64.80**	**12**	*e*P	**P**	**10 35 36.2**	**+0.1**
	comp=E,49nm,0.8s,mb5.6						
MA2	**Magadan**	**64.80**	**12**	*e*P	**P**	**10 35 37.0**	**+1.0**
MA2				*e*		10 36 02.6	
MA2				*e*		10 38 05.3	
MA2				*e*S	**S**	**10 44 16.6**	**+4.0**
MA2				*e*PS	PS	10 44 28.6	-9.0
MA2				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.3						
MA2				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.5						
YAK	**Yakutsk**	**64.96**	**0**	*e*P	**P**	**10 35 35.8**	**-1.2**
	comp=Z,284nm,0.8s,mb6.3						
YAK	**Yakutsk**	**64.96**	**0**	*e*P	**P**	**10 35 36.1**	**-0.9**
YAK				*e**PP	pP	10 35 46.9	-1.3
YAK				*e*		10 36 11.2	
YAK				*e*		10 37 59.0	
YAK				*e*S	**S**	**10 44 13.6**	**-1.0**
YAK				*e**SS		10 44 30.6	
YAK				*e*		10 45 28.2	
YAK				*e*SS	SS	10 48 25.8	-2.7
YAK				pmax	pmax		
	comp=Z,159nm,0.9s,mb6.0						
YAK				pmax	pmax		
	comp=N,64nm,1.1s						
YAK				pmax	pmax		
	comp=E,21nm,0.9s						
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,14nm,1.2s						
YAK				pmax	pmax		
	comp=E,14nm,1.2s						
YAK				smax			
	comp=N,710nm,9.7s						
YAK				smax			
	comp=Z,198nm,8.1s						
YAK				smax			
	comp=E,522nm,11.0s						
KZA	**Kyzart**	**66.23**	**319**	P	**P**	**10 35 45.7**	**+0.2**
	SNR=5.4						
TKM2	**Tokmak 2**	**66.41**	**320**	P	**P**	**10 35 47.0**	**+0.4**
	SNR=75						
KBK	**Karagaybulak**	**66.70**	**319**	P	**P**	**10 35 49.1**	**+0.6**
	SNR=28						
UCH	**Uchtor**	**66.78**	**319**	P	**P**	**10 35 49.0**	**+0.1**
	SNR=85						
FX1	**Attu Island--F**	**66.94**	**27**	*e*P	**P**	**10 35 50.5**	**+0.7**
AAK	**Ala-Archa**	**66.98**	**319**	P	**P**	**10 35 50.9**	**+0.6**
	SNR=38						
AAK	**Ala-Archa**	**66.98**	**319**	*e*P	**P**	**10 35 48.2**	**-2.0**
	comp=E,141nm,1.2s,mb5.9						
AAK	**Ala-Archa**	**66.98**	**319**	*e*P	**P**	**10 35 48.2**	**-2.0**
AAK				pmax	pmax		
	comp=Z,141nm,1.2s,mb5.9						
CHMS	**Chumysh**	**66.99**	**320**	P	**P**	**10 35 50.1**	**-0.2**
	SNR=14						
FRU	**Bishkek**	**67.00**	**319**	*e*P	**P**	**10 35 50.3**	**0.0**
FRU				*e*		10 36 19.5	
FRU				*e*S	S	10 44 41.6	+1.9
FRU				*e*S	S	10 44 43.0	+3.3
FRU				pmax	pmax		
	comp=Z,180nm,2.3s,mb5.7						
FRU				MLR	MLR		
	comp=E,5µm,22.0s						
FRU				MLR	MLR		
	comp=Z,5µm,22.0s,MS5.7						
AML	**Almayashu**	**67.28**	**318**	P	**P**	**10 35 51.9**	**-0.2**
	SNR=80						
USP	**Ospenovka**	**67.28**	**320**	P	**P**	**10 35 51.5**	**-0.6**
	SNR=90						
EKS2	**Erkin-Say**	**67.47**	**319**	P	**P**	**10 35 52.9**	**-0.3**
	SNR=59						
ZAL	**Zalesovo**	**67.70**	**334**	P	**P**	**10 35 53.1**	**-1.4**
	comp=Z,41nm,1.1s,mb5.4,baz=353,slow=6.1,SNR=109						
ZAL				LR	LR	11 08 34.9	
	comp=Z,3µm,20.5s,MS5.5,baz=339,slow=39						
ZAL	**Zalesovo**	**67.70**	**334**	*i* P	**P**	**10 35 53.0**	**-1.5**
ZAL				pmax	pmax		
	comp=Z,41nm,1.1s						
SEY	**Seymchan**	**68.19**	**11**⇑	*e*P	**P**	**10 35 57.0**	**-0.4**
KURK	**Kurchatov**	**68.73**	**328**	*e*P	**P**	**10 35 59.4**	**-1.6**
	comp=Z,348nm,1.1s,mb6.2						
KURK				*e*	pP	10 36 12.0	-0.2
KURK	**Kurchatov**	**68.73**	**328**	*e*P	**P**	**10 35 59.4**	**-1.6**
KURK				*e*	pP	10 36 12.0	-0.2
KURK				pmax	pmax		
	comp=Z,348nm,1.1s,mb6.2						
NVS	**Novosibirsk**	**68.98**	**334**	*e*P	**P**	**10 35 59.8**	**-2.7**
NVS				*e*S	S	10 44 59.8	-3.4
NVS				pmax	pmax		
	comp=Z,170nm,1.5s,mb5.8						
NVS				pmax	pmax		
	comp=N,115nm,1.7s						
NVS				pmax	pmax		
	comp=E,115nm,1.5s						
NVS				smax			
	comp=N,136nm,2.8s						
KKAR	**Karatay Array**	**69.81**	**318**	*i* P	**P**	**10 36 06.5**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.3						
WBK	**Wadi Bani Khal**	**72.91**	**295**	⇓P	**P**	**10 36 26.8**	**-0.1**
	SNR=39						
MSEY	**Mahe Island**	**73.39**	**266**	*e*P	**P**	**10 36 28.9**	**-0.9**
	comp=Z,197nm,1.3s,mb5.9						
JMDO	**Jabal Madar**	**73.66**	**294**	P	**P**	**10 36 31.1**	**-0.1**
	SNR=84						
VOSK	**Vostochnaya**	**73.83**	**327**	P	**P**	**10 36 30.5**	**-1.1**
VOSK				pmax	pmax		
	comp=Z,209nm,1.4s,mb5.9						
SMDO	**Samad**	**73.83**	**295**	P	**P**	**10 36 31.5**	**-0.7**
	SNR=80						
BIDO	**Bidbid**	**73.85**	**295**	P	**P**	**10 36 33.1**	**+0.8**
	SNR=77						
BVA0	**Borovoye Array**	**74.29**	**328**	P	**P**	**10 36 33.6**	**-0.6**
BVA0				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.2						
BVAR	**Borovoye Array**	**74.29**	**328**	P	**P**	**10 36 33.2**	**-1.0**
	comp=Z,51nm,0.9s,mb5.5,baz=127,slow=7.4,SNR=142						
BRVK	**Borovoye**	**74.36**	**328**	*e*P	**P**	**10 36 34.0**	**-0.7**
	comp=Z,136nm,1.1s,mb5.8						
BRVK				*e*	pP	10 36 46.3	+0.5
BRVK	**Borovoye**	**74.36**	**328**	*e*P	**P**	**10 36 34.0**	**-0.6**
BRVK				*e*	pP	10 36 46.3	+0.4
BRVK				pmax	pmax		
	comp=Z,135nm,1.1s,mb5.8						
CHKZ	**Chkalovo**	**74.47**	**328**	*e*P	**P**	**10 36 34.2**	**-1.1**
	comp=Z,145nm,1.1s,mb5.8						
CHKZ	**Chkalovo**	**74.47**	**328**	*e*P	**P**	**10 36 34.2**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,145nm,1.1s,mb5.8						
BSY	**Bisya**	**74.55**	**294**	P	**P**	**10 36 36.6**	**+0.3**
	SNR=57						
HOQ	**Hoqain**	**74.59**	**295**	P	**P**	**10 36 37.3**	**+0.7**
	SNR=35						
TIXI	**Tiksi**	**74.62**	**360**⇑	*e*P	**P**	**10 36 35.2**	**-0.6**
TIXI	**Tiksi**	**74.62**	**360**	*e*P	**P**	**10 36 31.1**	**-4.7**
TIXI				*e*		10 39 24.3	
TIXI				*e*PPP	PPP	10 41 09.5	-0.4
TIXI				*e*S	S	10 46 02.2	-5.4
TIXI				*e*		10 46 35.8	
TIXI				*e*SS	SS	10 50 54.8	-2.4
TIXI				*e*SSS	SSS	10 54 12.0	+1.5
TIXI				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.6						
TIXI				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.8						
SHAO	**Shalim**	**75.26**	**289**	P	**P**	**10 36 40.9**	**+0.4**
	SNR=17						
ARQ	**Araqi**	**75.26**	**295**	P	**P**	**10 36 40.8**	**+0.3**
	SNR=23						
HON	**Honolulu**	**75.31**	**67**	*e*P	**P**	**10 36 43.0**	**+2.3**
BILL	**Bilibino**	**75.57**	**14**	*e*P	**P**	**10 36 40.0**	**-1.3**
	comp=Z,21nm,0.8s,mb5.1						
BILL	**Bilibino**	**75.57**	**14**⇑	*i*P	**P**	**10 36 42.6**	**+1.3**
BILL				pmax	pmax		
	comp=Z,32nm,2.5s,mb4.8						
ASHO	**Ashiyiah**	**75.92**	**296**	P	**P**	**10 36 44.5**	**+0.3**
	SNR=58						
BANOM	**Banah**	**75.92**	**298**	P	**P**	**10 36 45.0**	**+0.8**
	SNR=26						
NIKO	**Nikolski**	**76.13**	**33**	*e*P	**P**	**10 36 44.7**	**-0.1**
VNDA	**Vanda**	**76.40**	**173**	*e*P	**P**	**10 36 44.4**	**-1.6**
	comp=Z,59nm,1.0s,mb5.5						
VNDA	**Vanda**	**76.40**	**173**	*e*P	**P**	**10 36 44.4**	**-1.5**
VNDA				pmax	pmax		
	comp=Z,59nm,1.0s						
RBK	**Rabkut**	**76.53**	**289**	P	**P**	**10 36 47.5**	**-0.2**
	SNR=14						
WHFO	**Wadi Hawf**	**76.99**	**289**	P	**P**	**10 36 48.5**	**-1.9**
	SNR=59						
VAN	**Vannovskaya**	**77.01**	**310**⇑	*i*P	**P**	**10 36 50.4**	**+0.3**
VAN				*e*S	S	10 47 07.1	+33
SBA	**Scott Base**	**77.29**	**172**	*e*P	**P**	**10 36 50.5**	**-0.4**
	comp=Z,90nm,1.2s,mb5.6						
SBA	**Scott Base**	**77.29**	**172**	*e*P	**P**	**10 36 50.5**	**-0.4**
SBA				pmax	pmax		
	comp=Z,90nm,1.2s,mb5.6						
ABTO	**Aybut**	**77.36**	**288**	P	**P**	**10 36 52.8**	**+0.3**
	SNR=28						
UNV	**Unalaska Valle**	**77.77**	**33**	*e*P	**P**	**10 36 55.0**	**+1.0**
	comp=Z,262nm,1.1s,mb6.1						
MAW	**Mawson**	**78.21**	**201**	P	**P**	**10 36 55.1**	**-1.0**
	comp=Z,124nm,1.0s,mb5.8,baz=69,slow=6.1,SNR=84						
MAW				LR	LR	11 09 35.7	
	comp=Z,4µm,20.7s,MS5.8,baz=64,slow=34						
AB31	**Akbulak array**	**78.89**	**321**	P	**P**	**10 36 58.2**	**-2.0**
AB31				pmax	pmax		
	comp=Z,104nm,1.0s,mb5.7						
AKTO	**Aktyubinsk**	**80.44**	**322**	P	**P**	**10 37 07.8**	**-0.7**
	comp=Z,38nm,0.8s,mb5.4,baz=104,slow=6.8,SNR=79						
AKTO				LR	LR	11 16 29.5	
	comp=Z,2µm,21.6s,MS5.5,slow=38						
PPT	**Papeete**	**80.85**	**107**	*e*P	**P**	**10 37 10.2**	**-1.1**
PPT	**Papeete**	**80.85**	**107**	*e*S	S	10 47 17.5	+2.0
PPT				*e*SS	SS	10 52 41.4	+8.7
PPT				*e*LR	LR	11 03 34.2	
	comp=Z,9µm,33.8s						
TBI	**Tubuai**	**80.97**	**113**	*e*S	S	10 47 16.7	+0.1
TBI				*e*LR	LR	11 02 38.9	
	comp=Z,6µm,30.0s						
SVE	**Sverdlovsk**	**80.97**	**329**⇓	*e*P	**P**	**10 37 11.7**	**+0.5**
SVE				*e*		10 37 18.8	
SVE				*e*PPP	PPP	10 42 12.0	+2.8
SVE				*e*S	S	10 47 12.0	-4.0
SVE				*e*		10 48 24.0	
SVE				pmax	pmax		
	comp=Z,80nm,1.2s,mb5.5						
SVE				MLR	MLR		
	comp=N,1µm,20.0s,MS5.3						
SVE				MLR	MLR		
	comp=E,1µm,20.0s,MS5.3						
SVE				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
MUKL	**Al Mukalla**	**81.12**	**285**⇑	*e*P	**P**	**10 37 13.1**	**+0.3**
MUKL				AMb	AMB	10 37 14.7	
	comp=Z,142nm,1.2s,mb5.8						
HASS	**Wahat al Ahsa'**	**81.70**	**296**	P	**P**	**10 37 16.3**	**+0.6**
ARU	**Arti**	**81.92**	**328**	*e*P	**P**	**10 37 14.8**	**-1.4**
	comp=Z,176nm,1.3s,mb5.8						
ARU	**Arti**	**81.92**	**328**	*e*P	**P**	**10 37 14.8**	**-1.4**
ARU				pmax	pmax		
	comp=Z,176nm,1.3s,mb5.8						
ORR	**Orenburg**	**82.74**	**323**⇓	*i*P	**P**	**10 37 20.3**	**-0.1**
ORR				pmax	pmax		
	comp=Z,180nm,1.2s,mb6.0						
QRN	**Al-Qurain**	**83.72**	**299**	*e*P	**P**	**10 37 26.3**	**+0.3**
QRN				AMb	AMB	10 37 27.8	
	comp=Z,332nm,0.8s,mb6.5						
KBD	**Kabd**	**83.97**	**300**	*e*P	**P**	**10 37 27.4**	**+0.2**
KBD				AMb	AMB	10 37 29.2	
	comp=Z,490nm,1.3s,mb6.5						
UMR	**Umm Al-Rimmam**	**83.99**	**300**	*e*P	**P**	**10 37 27.1**	**-0.3**
UMR				AMb	AMB	10 37 29.3	
	comp=Z,246nm,0.8s,mb6.4						
RDF	**Al-Radifah**	**84.06**	**299**	AMb	AMB	10 37 31.0	
	comp=Z,238nm,1.0s,mb6.3						
RYDS	**Riyadh**	**84.35**	**295**	P	**P**	**10 37 30.1**	**+0.9**
MIB	**Mutribah**	**84.35**	**300**	*e*P	**P**	**10 37 28.8**	**-0.3**
MIB				AMb	AMB	10 37 31.1	
	comp=Z,305nm,1.1s,mb6.3						
NAY	**Al-Naaiem**	**84.37**	**300**	*e*P	**P**	**10 37 28.8**	**-0.4**
NAY				AMb	AMB	10 37 31.0	
	comp=Z,182nm,0.8s,mb6.3						
LBOS		**84.73**	**284**⇑	*e*P	**P**	**10 37 32.2**	**+0.8**
DHBB	**Dhamar BB**	**85.61**	**285**⇓	*e*P	**P**	**10 37 36.6**	**+0.9**
MZLS	**Mizel**	**85.63**	**294**	P	**P**	**10 37 36.0**	**+0.4**
SVW2	**Sparrevohn**	**85.67**	**28**	*e*P	**P**	**10 37 37.4**	**+2.5**
KAMS	**Al Khamasin**	**85.89**	**291**	P	**P**	**10 37 38.0**	**+1.1**
MAK	**Makhachkala**	**85.92**	**313**	*e*P	**P**	**10 37 44.0**	**+7.4**
MAK				*i*		10 48 10.0	
MAK				pmax	pmax		
	comp=N,2µm,7.0s						
DJNS	**Zahran al Janu**	**86.66**	**288**	P	**P**	**10 37 42.4**	**+1.6**
QSPA	**South Pole Qui**	**86.84**	**180**	*e*P	**P**	**10 37 40.4**	**+0.1**
	comp=N,129nm,1.0s,mb6.1						
TATS	**Tathlith**	**86.86**	**290**	P	**P**	**10 37 42.8**	**+1.1**
ATD	**Arta Tunnel**	**86.90**	**282**	P	**P**	**10 37 43.2**	**+1.2**
	comp=N,131nm,1.0s,mb6.1,baz=85,slow=2.9,SNR=10.0						
ATD	**Arta Tunnel**	**86.90**	**282**	P	**P**	**10 37 43.2**	**+1.2**
SYO	**Syowa Base**	**86.92**	**201**	⇓P	**P**	**10 37 40.4**	**-0.5**
SYO	**Syowa Base**	**86.92**	**201**	⇓PcP	PcP	10 37 42.0	-1.5
SYO	**Syowa Base**	**86.92**	**201**⇓	*e*P	**P**	**10 37 40.4**	**-0.5**
SYO				⇓*i*PcP	PcP	10 37 42.0	-1.5
SYO				*e*S	S	10 48 20.2	+5.3
SYO	**Syowa Base**	**86.92**	**201**⇓	*e*P	**P**	**10 37 40.4**	**-0.5**
SYO				*e*S	S	10 48 20.2	+5.3
BHD	**Baghdad**	**87.23**	**303**	*e*x	x	10 37 39.0	
BHD	**Baghdad**	**87.23**	**303**	*e*x	x	10 48 03.0	
BHD				*e*x	x	10 48 16.0	
DGRG	**David-gareji**	**87.30**	**312**	P	**P**	**10 37 45.1**	**+1.7**
DGRG				S	S	10 48 24.0	+5.0
GNI	**Garni**	**87.63**	**310**	P	**P**	**10 37 47.2**	**+2.2**
GNI	**Garni**	**87.63**	**310**	P	**P**	**10 37 46.2**	**+1.2**
	comp=N,51nm,1.2s,mb5.6,baz=149,slow=7.3,SNR=17						
GNI				LR	LR	11 23 10.2	
	comp=N,502nm,19.4s,MS4.9,baz=84,slow=40						
GNI	**Garni**	**87.63**	**310**	*e*P	**P**	**10 37 46.7**	**+1.7**
	comp=N,152nm,1.2s,mb6.1						
GNI	**Garni**	**87.63**	**310**⇑	*e*P	**P**	**10 37 47.1**	**+2.1**
GNI				pmax	pmax		
	comp=Z,81nm,1.4s						
AFFS	**'Afif**	**87.64**	**294**	P	**P**	**10 37 46.7**	**+1.3**
IMA2	**Indian Mountai**	**87.67**	**23**	*e*P	**P**	**10 37 46.3**	**+1.7**
MTA	**Mtatsminda**	**87.76**	**312**	P	**P**	**10 37 47.4**	**+1.8**
MTA				S	S	10 48 26.7	+3.3
TI2	**Plekhanov**	**87.79**	**312**	*i* P	**P**	**10 37 48.8**	**+3.1**
TI2				pmax	pmax		
	comp=Z,110nm,0.8s,mb6.1						
TBLG	**Delisi**	**87.80**	**312**	P	**P**	**10 37 47.4**	**+1.7**
SLKM	**Skilak Lake**	**88.12**	**29**	*e*P	**P**	**10 37 48.2**	**+1.4**
HKR	**Hakkari**	**88.16**	**308**	P	**P**	**10 37 48.7**	**+1.1**
CLDR	**Caldiran**	**88.16**	**309**	P	**P**	**10 37 47.9**	**+0.3**
HAKT	**HAKKARI**	**88.18**	**308**	*i* P	**P**	**10 37 48.6**	**+0.9**
TVAN	**Van**	**88.50**	**309**	*i* P	**P**	**10 37 41.1**	**-8.1**
VANB	**Van**	**88.52**	**309**	P	**P**	**10 37 51.4**	**+2.0**
ZEI	**Tsey**	**88.53**	**313**	*e*P	**P**	**10 37 47.5**	**-1.7**
ZEI				*i* *PP	pP	10 37 57.7	-3.1
ZEI				*i*		10 41 16.9	
ZEI				pmax	pmax		
	comp=Z,93nm,1.3s,mb6.0						
MSL	**Mosul**	**88.56**	**306**	*e*x	x	10 37 57.0	
MSL				*e*x	x	10 38 05.5	
MSL	**Mosul**	**88.56**	**306**	*e*x	x	10 48 22.5	
MSL				*e*x	x	10 48 41.5	
BLJS	**Baljurashi**	**88.65**	**290**	P	**P**	**10 37 52.5**	**+2.2**
DIGO	**Kars**	**88.70**	**310**	*i* P	**P**	**10 37 50.8**	**+0.7**
AKH	**Akhalkalaki**	**88.70**	**311**	P	**P**	**10 37 51.8**	**+1.8**
PMR	**Palmer**	**88.82**	**28**	*e*P	**P**	**10 37 49.9**	**-0.2**
	comp=Z,47nm,1.1s,mb5.7						
PMR				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
PMR	**Palmer**	**88.82**	**28**	*e*P	**P**	**10 37 49.9**	**-0.2**
PMR				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.7						
PMR				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.6						
ONI	**Oni**	**88.84**	**313**	P	**P**	**10 37 52.9**	**+2.1**
ONI				S	S	10 48 37.0	+3.6
HILS	**Ha'il**	**88.98**	**297**	P	**P**	**10 37 53.3**	**+1.6**
SIRT	**Sirnak**	**89.18**	**307**	P	**P**	**10 37 52.4**	**0.0**
SML	**Sawmill**	**89.22**	**28**	*e*P	**P**	**10 37 53.2**	**+1.1**
GOF	**Gofitskoye**	**89.36**	**315**	*e*P	**P**	**10 37 52.9**	**-0.2**
KIV	**Kislovodsk**	**89.51**	**314**	*e*P	**P**	**10 37 54.1**	**+0.2**
	comp=Z,57nm,1.0s,mb5.8						
KIV	**Kislovodsk**	**89.51**	**314**	*e*P	**P**	**10 37 54.2**	**+0.3**
KIV				*e*		10 41 26.7	
KIV				*e*S		10 48 22.0	
KIV				*e*SS	SS	10 54 41.6	+2.4
KIV				*e*SSS	SSS	10 58 13.1	-0.7
KIV				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.5						
PECR	**Pechory**	**89.77**	**326**	*e*P	**P**	**10 37 55.6**	**+0.9**
PECR				*e*S	S	10 48 45.0	+3.4
PECR				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.6						
PECR				MLR	MLR		
	comp=E,1µm,20.0s						
LTHS	**Al Lith**	**89.79**	**290**	P	**P**	**10 37 57.3**	**+1.6**
COLA	**College**	**89.86**	**25**	*e*P	**P**	**10 37 54.7**	**-0.3**
	comp=E,8.7nm,0.8s,mb5.1						
BTMT	**Batman**	**89.98**	**308**	P	**P**	**10 37 57.6**	**+1.4**
BEST	**Besiri**	**90.13**	**308**	*i* P	**P**	**10 37 58.5**	**+1.6**
ILAR	**Eielson Array**	**90.25**	**25**	P	**P**	**10 37 56.2**	**-0.6**
	comp=E,3.4nm,0.8s,mb4.7,baz=285,slow=5.1,SNR=17						
ILAR				PKKPbc		10 55 27.4	
	comp=E,1.8nm,1.0s,baz=55,slow=1.5,SNR=8.1						
ILAR				LR	LR	11 17 53.0	

	comp=E,2µm,19.0s,MS5.5,baz=97,slow=35						
BNGL	**BINGOL**	**90.30**	**309**	*i* P	**P**	**10 38 02.0**	**+4.3**
TAOE	**Nuku Hiva Isla**	**90.32**	**99**	*e*S	S	10 48 47.7	+0.1
TAOE				*e*SS	SS	10 54 54.6	+2.9
TAOE				*e*LR	LR	11 07 19.8	
	comp=E,12µm,22.0s						
DIV	**Divide**	**90.36**	**29**	*e*P	**P**	**10 37 59.0**	**+1.6**
	comp=E,104nm,0.9s,mb6.2						
MARD	**Mardin**	**90.49**	**307**	*i* P	**P**	**10 37 59.0**	**+0.4**
THY	**Trims Highway**	**90.60**	**27**	P	**P**	**10 37 59.2**	**+0.7**
KBRS	**Khaybar**	**91.14**	**296**	P	**P**	**10 38 03.9**	**+2.0**
SOC	**Sochi**	**91.64**	**313**	*e*P	**P**	**10 38 02.0**	**-1.8**
SOC				*e**PP	pP	10 38 15.3	-0.1
SOC				*e*		10 41 38.0	
SOC				*e*PPP	PPP	10 43 40.5	-5.1
SOC				*e*S		10 48 32.5	
SOC				*e**SS		10 48 53.8	
SOC				*e*SS	SS	10 55 10.0	+0.6
SOC				*e*SSS	SSS	10 58 42.4	-4.7
SOC				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.5						
SOC				MLR	MLR		
	comp=Z,2µm,25.0s,MS5.4						
PTK	**Pertek**	**91.66**	**309**	*e*P	**P**	**10 38 05.1**	**+1.0**
GUMT	**Gumushane**	**91.67**	**310**	*e*P	**P**	**10 38 05.2**	**+1.2**
KMBO	**Kilima Mbogo**	**91.73**	**269**	P	**P**	**10 38 06.3**	**+1.4**
	comp=Z,50nm,1.1s,mb5.8,baz=58,slow=5.9,SNR=94						
KMBO				LR	LR	11 15 43.0	
	comp=Z,4µm,22.0s,MS5.8,baz=92,slow=33						
KMBO	**Kilima Mbogo**	**91.73**	**269**	P	**P**	**10 38 06.3**	**+1.4**
KMBO				LR	LR	11 15 43.0	
KMBO	**Kilima Mbogo**	**91.73**	**269**	*i* P	**P**	**10 38 06.3**	**+1.3**
KMBO				pmax	pmax		
	comp=Z,50nm,1.1s						
KELT	**Kelkit**	**91.82**	**310**	*i* P	**P**	**10 38 05.7**	**+1.0**
ELZG	**Elazig**	**91.96**	**308**	*i* P	**P**	**10 38 06.4**	**+0.9**
URFA	**Urfa**	**92.05**	**307**	*e*P	**P**	**10 38 05.8**	**0.0**
YNBS	**Yanbu‘ al Bahr**	**92.23**	**294**	P	**P**	**10 38 08.3**	**+1.4**
KLMR	**Klimovskoe**	**92.46**	**331**	*e*P	**P**	**10 38 06.0**	**-1.2**
KLMR				*e*		10 41 55.3	
KLMR				pmax	pmax		
	comp=Z,70nm,1.4s,mb5.8						
KLMR				pmax	pmax		
	comp=Z,240nm,5.1s						
KLMR				MLR	MLR		
	comp=Z,3µm,24.0s,MS5.6						
GRSN	**GIRESUNGRSN**	**92.61**	**311**	*i* P	**P**	**10 38 06.7**	**-1.7**
UMJS	**Umm Lajj**	**92.88**	**295**	P	**P**	**10 38 11.4**	**+1.5**
GZT	**Gaziantep**	**93.05**	**307**	*i* P	**P**	**10 38 10.5**	**0.0**
QURS	**Qurayyt al Mil**	**93.07**	**301**	P	**P**	**10 38 11.6**	**+0.9**
ANN	**Anapa**	**93.32**	**315**	*e*P	**P**	**10 38 08.8**	**-2.7**
ANN				*e*SS	SS	10 55 35.3	+1.4
ANN				pmax	pmax		
	comp=Z,140nm,1.3s,mb6.2						
MOS	**Moscow**	**93.35**	**326**	*e*P	**P**	**10 38 10.3**	**-1.0**
MOS				*e*	pP	10 38 19.9	-3.0
MOS				*e*		10 41 58.7	
MOS				*e*		10 48 44.4	
MOS				*e*S	S	10 49 12.8	-0.5
MOS				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.7						
MOS				MLR	MLR		
	comp=E,1µm,22.5s						
DAWY	**Dawson**	**93.46**	**26**	*e*P	**P**	**10 38 12.5**	**+0.8**
KAHT	**Ahir Dag**	**93.60**	**307**	*i* P	**P**	**10 38 14.0**	**+1.1**
TBKS	**Tabuk**	**93.66**	**298**	P	**P**	**10 38 14.8**	**+1.4**
OBN	**Obninsk**	**93.95**	**325**	*e*P	**P**	**10 38 12.6**	**-1.5**
	comp=E,74nm,1.3s,mb6.0						
OBN	**Obninsk**	**93.95**	**325**	*e*P	**P**	**10 38 12.8**	**-1.2**
OBN				*i*	pP	10 38 24.7	-0.9
OBN				*i*		10 42 05.0	
OBN				*i* S	S	10 49 18.9	+0.4
OBN				*i* SS	SS	10 55 48.1	+5.6
OBN				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.8						
OBN				MLR	MLR		
	comp=Z,4µm,23.0s,MS5.8						
DBAS	**Duba**	**94.14**	**297**	P	**P**	**10 38 16.9**	**+1.4**
JMQS	**Jabal Moqyreh**	**94.26**	**299**	P	**P**	**10 38 17.4**	**+1.3**
RKT	**Rikitea**	**94.28**	**113**	*e*SKSac		10 48 45.8	
RKT				*e*SS	SS	10 56 04.0	+16
RKT				*e*LR	LR	11 08 48.2	
	comp=Z,3µm,32.8s						
KVT	**Kavak**	**94.29**	**311**	*e*P	**P**	**10 38 15.9**	**-0.1**
MKRJ	**Makawir**	**94.52**	**301**	P	**P**	**10 38 18.7**	**+1.5**
MMLI	**Mount Malkishu**	**94.71**	**302**	P	**P**	**10 38 19.4**	**+1.3**
AYUS	**‘Aynunah**	**94.78**	**298**	P	**P**	**10 38 19.9**	**+1.3**
BDAS	**Al Bad‘**	**94.94**	**298**	P	**P**	**10 38 19.8**	**+0.6**
JMOS	**Jabal al Moall**	**94.94**	**299**	P	**P**	**10 38 20.4**	**+1.1**
ALWS	**Ilw as Safayha**	**94.98**	**299**	P	**P**	**10 38 21.0**	**+1.6**
APA	**Apatity**	**95.02**	**337**	⇑*i*P	**P**	**10 38 19.2**	**+0.5**
APA				*i*	pP	10 38 32.4	+2.2
APA				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.8						
APA				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.6						
PRNI	**Paran**	**95.05**	**300**	P	**P**	**10 38 21.1**	**+1.4**
EIL	**Elat**	**95.08**	**299**	P	**P**	**10 38 20.8**	**+0.9**
HAQS	**Haql**	**95.10**	**299**	P	**P**	**10 38 21.0**	**+1.1**
MBH	**Mount Berech**	**95.12**	**299**	P	**P**	**10 38 21.3**	**+1.3**
TAYS	**Tayyib Ism**	**95.14**	**298**	P	**P**	**10 38 21.1**	**+0.9**
BOYT	**Boyabat**	**95.15**	**311**	*i* P	**P**	**10 38 19.8**	**-0.1**
AVNT	**Avonos**	**95.20**	**308**	*i* P	**P**	**10 38 20.1**	**-0.1**
CTKT	**Corum**	**95.24**	**310**	*i* P	**P**	**10 38 20.6**	**+0.3**
CORM	**Corum**	**95.37**	**310**	*e*P	**P**	**10 38 17.8**	**-3.2**
MERS	**Mersin**	**95.47**	**307**	*e*P	**P**	**10 38 21.5**	**0.0**
CDAG	**Cicekdag**	**95.57**	**309**	*i* P	**P**	**10 38 20.8**	**-1.1**
INK	**Inuvik**	**95.62**	**22**	LR	LR	11 21 02.8	
	comp=Z,1µm,21.1s,MS5.4,baz=271,slow=35						
INK	**Inuvik**	**95.62**	**22**	*e*P	**P**	**10 38 21.4**	**0.0**
	comp=Z,36nm,1.2s,mb5.7						
INK				*e*PP	PP	10 42 12.8	-2.4
INK	**Inuvik**	**95.62**	**22**	*e*P	**P**	**10 38 21.4**	**0.0**
INK				*e*		10 42 12.8	
INK				pmax	pmax		
	comp=Z,36nm,1.2s						
SIM	**Simferopol’**	**95.68**	**315**	*e*P	**P**	**10 38 22.9**	**+0.7**
SIM						10 42 20.1	
SIM				S	S	10 49 38.1	+4.7
SIM				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.8						
NVL	**N’lazarevskaya**	**95.77**	**197**	*e*P	**P**	**10 38 21.4**	**-0.6**
NVL				*e**PP	pP	10 38 34.4	+0.8
NVL				*e*		10 42 23.7	
NVL				*e*PPP	PPP	10 44 30.3	+8.9
NVL				*e*S		10 48 57.0	
NVL				*e*PS	PS	10 50 58.1	-4.5
NVL				*e*SS	SS	10 56 09.6	+2.0
NVL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
NVL				MLR	MLR		
	comp=Z,270nm,17.7s,MS4.8						
BR131	**Keskin Array S**	**96.14**	**309**	*e*P	**P**	**10 38 24.0**	**-0.4**
	comp=Z,8.6nm,0.9s,mb5.2						
BRTR	**Keskin Array B**	**96.14**	**309**	P	**P**	**10 38 24.4**	**+0.1**
	comp=Z,6.0nm,1.0s,mb5.0,baz=117,slow=5.5,SNR=27						
JOF	**Joensuu**	**96.28**	**333**	*e*p	**P**	**10 38 23.7**	**-0.8**
	comp=Z,10nm,0.8s,mb5.3						
ELDT	**Eldivan**	**96.28**	**310**	*i* P	**P**	**10 38 24.3**	**-0.8**
CSS	**Prodhromos**	**96.46**	**305**	*e*P	**P**	**10 38 26.5**	**+0.6**
	comp=Z,22nm,0.9s,mb5.6						
KEV	**Kevo**	**97.07**	**340**	*e*p	pP	10 38 40.3	+0.8
	comp=Z,23nm,0.9s						
KIZT	**Kizilcal**	**97.52**	**309**	*e*P	**P**	**10 38 30.8**	**+0.1**
ARCES	**ARCESS Array B**	**97.62**	**340**	P	**P**	**10 38 29.6**	**-0.9**
	comp=Z,26nm,1.0s,mb5.7,baz=56,slow=4.4,SNR=16						
ARCES				PKKPbc		10 55 07.9	
	comp=Z,4.2nm,1.0s,slow=5.4,SNR=3.8						
ARCES				LR	LR	11 29 14.3	
	comp=Z,2µm,19.9s,MS5.7,baz=89,slow=40						
ARCES	**ARCESS Array B**	**97.62**	**340**	P	**P**	**10 38 29.6**	**-0.9**
ARCES				PKKPbc		10 55 07.9	
ARCES				LR	LR	11 29 14.3	
ARE0	**ARCESS Array S**	**97.62**	**340**	*e*P	**P**	**10 38 30.3**	**-0.2**
ARE0				*e*	pP	10 38 43.6	+1.6
KBS	**Kingsbay**	**98.09**	**350**	*e*PP	PP	10 42 31.8	-2.9
KBS				*e*SS	SS	10 56 42.1	+2.1
KBS				AMS	AMS	11 22 57.4	
	comp=Z,2µm,20.3s,MS5.7						
BJO	**Bjornoya**	**98.22**	**345**	AMS	AMS	11 28 18.0	
	comp=Z,3µm,19.5s,MS5.7						
DLBC	**Dease Lake**	**98.36**	**31**	LR	LR	11 19 37.9	
	comp=Z,2µm,20.9s,MS5.5,baz=285,slow=33						
AKASG	**Malin Array Be**	**98.62**	**321**	P	P	10 38 33.6	-1.7
	comp=Z,1.6nm,0.7s,mb4.7,baz=73,slow=4.8,SNR=6.3						
AKASG	**Malin Array Be**	**98.62**	**321**	*i* P	P	10 38 36.7	+1.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KAF	**Kangasniemi**	**98.69**	**332**	*e*p	P	10 38 27.6	-7.8
FINES	**FINESS Array B**	**98.91**	**332**	P	P	10 38 35.1	-1.3
	comp=Z,6.0nm,0.8s,mb5.2,baz=27,slow=4.3,SNR=9.0						
FINES	**FINESS Array B**	**98.91**	**332**	*i* P	P	10 38 36.0	-0.4
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SNAA	**Sanae**	**99.20**	**194**	*e*P	P	10 38 38.1	+0.6
	comp=Z,42nm,1.2s,mb5.8						
SNAA	**Sanae**	**99.20**	**194**	*e*P	P	10 38 38.1	+0.6
SNAA				pmax	pmax		
	comp=Z,42nm,1.2s						
KIS	**Kishinev**	**99.25**	**317**	*e*P	P	10 38 41.0	+2.7
KIS				*e*		10 42 50.0	
KIS				*e*		10 50 06.0	
KIS				MLR	MLR		
	comp=E,2µm,20.0s						
KIS				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.7						
KIS				MLR	MLR		
	comp=Z,2µm,20.0s						
ULDT	**Uludag**	**99.58**	**310**	*i* P	P	10 38 39.4	-0.6
LSZ	**Lusaka**	**99.64**	**254**	PP	PP	10 42 41.5	-6.0
	comp=Z,44nm,1.4s,baz=114,slow=7.6,SNR=8.8						
LSZ	**Lusaka**	**99.64**	**254**	*e*P	P	10 38 40.8	-0.1
	comp=Z,67nm,1.3s,mb5.9						
LSZ				*e*PP	PP	10 42 39.5	-8.1
LSZ	**Lusaka**	**99.64**	**254**	*e*P	P	10 38 40.8	0.0
LSZ				pmax	pmax		
	comp=Z,67nm,1.3s,mb5.9						
BOSA	**Boshof**	**100.58**	**240**	P	P	10 38 43.5	-1.3
	comp=Z,18nm,1.1s,baz=137,slow=2.4,SNR=10						
BOSA				PP	PP	10 42 49.6	-5.3
	comp=Z,13nm,1.1s,baz=83,slow=7.9,SNR=5.0						
BOSA	**Boshof**	**100.58**	**240**	*e*Pdif	P	10 38 44.3	-0.5
	comp=Z,55nm,1.5s						
BOSA	**Boshof**	**100.58**	**240**	*e*P	P	10 38 44.3	-0.6
BOSA				pmax	pmax		
	comp=Z,55nm,1.5s						
VNA2	**Neumayer--Watz**	**100.78**	**193**	*e*	P	10 38 54.9	+10
VNA2	**Neumayer--Watz**	**100.78**	**193**	*e*	P	10 39 00.0	+15
VNA2	**Neumayer--Watz**	**100.78**	**193**	*e*		10 43 08.3	
VNA2	**Neumayer--Watz**	**100.78**	**193**	⇑*i*Pdif	P	10 38 45.8	+1.0
VNA2				*e*		10 38 54.9	
VNA2				*e*		10 39 00.0	
VNA3	**Neumayer Olymp**	**101.06**	**193**	*e*	PP	10 43 03.2	+5.6
VNA3	**Neumayer Olymp**	**101.06**	**193**	⇑*i*Pdif	P	10 38 46.9	+0.9
VNA3				*e*		10 38 56.6	
VNA3				*e*		10 39 01.4	
VNA1	**Neumayer--Stat**	**101.18**	**193**	*e*	PP	10 42 59.1	+0.7
VNA1	**Neumayer--Stat**	**101.18**	**193**	⇑*i*Pdif	P	10 38 47.8	+1.3
VNA1				*e*		10 38 57.5	
VNA1				*e*		10 39 02.0	
MLR	**Muntele Rosu**	**101.39**	**316**	P	P	10 38 47.9	-0.2
	comp=Z,8.7nm,0.9s,baz=61,slow=2.8,SNR=8.3						
MLR				PP	PP	10 42 53.5	-7.0
	comp=Z,12nm,1.1s,baz=53,slow=7.0,SNR=3.1						
SUW	**Suwalki**	**101.81**	**325**	*e*P	P	10 38 49.5	-0.2
SUW	**Suwalki**	**101.81**	**325**	*e*P	P	10 38 49.5	-0.2
NSS	**Namsos**	**104.19**	**337**	AMS	AMS	11 34 45.7	
	comp=Z,3µm,21.0s,MS5.7						
YKA	**Yellowknife Ar**	**104.68**	**25**	PKiKP		10 43 18.3	
	comp=Z,2.6nm,0.7s,baz=305,slow=1.9,SNR=8.3						
YKA				PKKPbc		10 54 46.6	
	comp=Z,0.7nm,0.5s,baz=116,slow=3.5,SNR=6.5						
GRUS	**Gruza**	**105.33**	**315**	*i* P	Pdif	10 39 04.4	-1.1
OKC	**Ostrava-Krasne**	**105.77**	**321**	AMS	AMS	11 38 50.0	
	comp=Z,2µm,19.5s						
NB2	**NORSAR Subarra**	**105.90**	**333**	P	Pdif	10 39 06.8	-0.8
	comp=Z,14nm,1.0s,baz=69,slow=4.5						
NB2	**NORSAR Subarra**	**105.90**	**333**	P	Pdif	10 39 06.8	-0.8
	baz=69,slow=4.6						
NOA	**NORSAR Array B**	**105.90**	**333**	Pdiff	Pdif	10 39 06.0	-1.6
	comp=Z,6.0nm,1.0s,baz=69,slow=4.5,SNR=6.9						
NAO	**NORSAR Subarra**	**106.16**	**333**	P	Pdif	10 39 06.8	-1.9
	comp=Z,14nm,1.0s						
NAO	**NORSAR Subarra**	**106.16**	**333**	P	Pdif	10 39 06.8	-1.9
NAO				pmax	pmax		
	comp=Z,14nm,1.0s						
BBLS	**Bajina Basta -**	**106.26**	**315**	*i* P	Pdif	10 39 11.2	+1.6
DPC	**Dobruska-Polom**	**106.77**	**322**	*e*PKP		10 43 21.6	
DPC				AMS	AMS	11 40 00.0	
	comp=Z,2µm,19.1s						
VRAC	**Vranov**	**106.88**	**321**	PKiKP		10 43 23.0	
	comp=Z,4.3nm,0.9s,baz=58,slow=9.5,SNR=3.6						
UPC	**Upice**	**106.92**	**322**	*e*PKP		10 43 28.1	
JMIC	**Jan Mayen**	**107.00**	**347**	AMS	AMS	11 27 24.2	
	comp=Z,1µm,22.0s,MS5.5						
PVCC	**Panska Ves**	**107.79**	**322**	AMS	AMS	11 31 30.0	
	comp=Z,2µm,25.2s						
PRU	**Pruhonice**	**107.97**	**322**	AMS	AMS	11 39 30.0	
	comp=Z,2µm,17.8s						
BRG	**Berggiesshubel**	**108.07**	**323**	*e*PKP	Pdif	10 39 18.7	+1.3
	comp=Z,11nm,1.6s						
BRG				*e*		10 43 09.8	
BRG				*e*		10 43 41.9	
BRG				*e*		10 43 48.0	
BRG				*e*		10 51 31.0	
BRG				*e*		10 53 22.0	
BRG				LR	LR		
	comp=Z,2µm,19.1s,MS5.8						
BRG	**Berggiesshubel**	**108.07**	**323**	*e*P	Pdif	10 39 18.7	+1.3
BRG				*e*		10 43 48.0	
BRG				pmax	pmax		
	comp=Z,11nm,1.6s						
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,23nm,1.8s						
BRG				MLR	MLR		
	comp=N,2µm,23.5s,MS5.8						
BRG				MLR	MLR		
	comp=E,2µm,24.8s,MS5.8						
BRG				MLR	MLR		
	comp=Z,2µm,19.1s						
ARSA	**Arzberg**	**108.12**	**319**	⇑*i*P		10 43 26.0	
	comp=Z,6.7nm,1.1s						
CLL	**Collm**	**108.49**	**324**	*i* PP	PP	10 43 39.2	-14
CLL				*e*		10 43 51.0	
CLL				*e*		10 44 03.0	
CLL				*e*		10 51 23.0	
CLL				*e*		10 53 24.0	
CLL				*e*SSS	SSS	11 03 18.0	+9.3
BOJS	**Bojanci**	**108.76**	**317**	*e*PKiKP		10 43 27.2	
MOA	**Molln**	**108.77**	**320**	⇓*e*P		10 43 26.8	
	comp=Z,6.0nm,0.9s						
MOA	**Molln**	**108.77**	**320**	⇓*e*P		10 43 26.8	
KHC	**Kasperske Hory**	**108.83**	**321**	*e*x		10 43 24.0	
KHC				*e*PKP	x	10 43 33.5	
KHC				AMS	AMS	11 40 50.0	
	comp=Z,2µm,19.9s						
GERES	**GERESS Array B**	**108.83**	**321**	Pdiff	Pdif	10 39 20.5	-0.3
	comp=Z,1.4nm,1.1s,SNR=5.3						
GERES				PKiKP		10 43 25.6	
	comp=Z,4.6nm,0.8s,baz=45,slow=1.9,SNR=17						
GERES				PKKPbc		10 54 32.8	
	comp=Z,0.4nm,0.5s,baz=270,slow=4.9,SNR=3.3						
LJU	**Ljubljana**	**109.11**	**318**	*e*PKiKP		10 43 28.0	
NKC	**Novy Kostel**	**109.17**	**323**	AMS	AMS	11 30 50.0	
	comp=Z,3µm,23.1s						
VOY	**Vojsko**	**109.53**	**318**	*e*PKiKP		10 43 28.2	
VOY				*e*		10 44 05.7	
KBA	**Koelnbreinsper**	**109.59**	**319**	⇑*i*P		10 43 28.3	
	comp=Z,7.0nm,0.7s						
NVAR	**Mina Array Bea**	**109.59**	**50**	Pdiff	Pdif	10 39 25.2	+0.8
	comp=Z,0.2nm,0.7s,baz=69,slow=37,SNR=3.4						
NVAR				PKiKP		10 43 28.1	
	comp=Z,1.1nm,0.8s,baz=216,slow=1.7,SNR=6.2						
NVAR				PKKPbc		10 54 33.4	
	comp=Z,1.9nm,1.0s,baz=121,slow=4.9,SNR=6.0						
NVAR	**Mina Array Bea**	**109.59**	**50**	Pdif	Pdif	10 39 25.2	+0.8
NVAR				PKPdf		10 43 28.1	
NVAR				PKKPbc		10 54 33.4	
ROBS	**Robic**	**109.73**	**318**	*e*PKiKP		10 43 28.3	
WTTA	**Wattenberg**	**110.64**	**320**	⇓*i*P	PKPdf	10 43 30.9	+3.1
	comp=Z,25nm,0.7s						
WTTA	**Wattenberg**	**110.64**	**320**	⇓P	PKPdf	10 43 30.9	+3.1
WATA	**Walderalm**	**110.66**	**320**	⇑*i*P	PKPdf	10 43 30.9	+3.1
	comp=Z,7.8nm,0.6s						
WATA	**Walderalm**	**110.66**	**320**	⇑P	PKPdf	10 43 30.9	+3.1
SQTA	**Sankt Quirin**	**110.93**	**320**	⇑*e*P	PKPdf	10 43 31.4	+3.1
	comp=Z,6.3nm,0.7s						
CHMT	**Chamberlain Mo**	**110.94**	**41**	*e*PKiKP		10 43 30.9	
MOTA	**Moosalm**	**110.96**	**320**	⇑P	PKPdf	10 43 31.3	+2.9
	comp=Z,7.8nm,0.7s						
MCMT	**McKenzie Canyo**	**111.87**	**43**	*e*PKiKP		10 43 33.2	
NEN	**Nelson**	**112.90**	**53**	*e*PKiKP		10 43 36.0	
YMR	**Madison River**	**113.19**	**42**	*e*PKiKP		10 43 36.3	
DUG	**Dugway**	**113.29**	**47**	*e*PKiKP		10 43 35.9	
IMW	**Indian Meadow**	**113.47**	**43**	*e*PKiKP		10 43 36.6	
HINF	**Hinteralfeld**	**113.48**	**322**	*e*PKIKP	PKPdf	10 43 35.1	+1.8
	comp=Z,48nm,1.1s						
TPAW	**Teton Pass**	**113.60**	**43**	*e*PKiKP		10 43 37.1	
GCMT	**Greycliff**	**113.66**	**41**	*e*PKiKP		10 43 36.9	
REDW	**Red Top Meadow**	**113.71**	**44**	*e*PKiKP		10 43 36.6	
REDW				*e*PKKPab		10 54 23.1	
SNOW	**Snow King Moun**	**113.74**	**43**	*e*PKiKP		10 43 36.8	
GIVF	**Givet**	**113.76**	**324**	*e*PKIKP	PKPdf	10 43 36.3	+2.5
HWUT	**Hardware Ranch**	**113.77**	**46**	*e*PKiKP		10 43 36.6	
LOHW	**Long Hollow**	**113.79**	**43**	*e*PKiKP		10 43 36.8	
PGF	**Pioggiola**	**113.94**	**316**	*e*PKIKP	PKPdf	10 43 36.6	+2.3
BAIF	**Baives**	**114.13**	**325**	*e*PKIKP	PKPdf	10 43 37.2	+2.7
	comp=Z,18nm,0.9s						
MSU	**Marysvale**	**114.23**	**49**	*e*PKiKP		10 43 38.5	
CABF	**La Chapelle**	**114.43**	**321**	*e*PKIKP	PKPdf	10 43 37.3	+2.1
	comp=Z,42nm,0.8s						
LPG	**La Plagne**	**114.43**	**319**	*e*PKIKP	PKPdf	10 43 37.8	+2.5
	comp=Z,44nm,0.9s						
LPL	**La Plagne**	**114.43**	**319**	*e*PKIKP	PKPdf	10 43 37.4	+2.1
	comp=Z,28nm,0.7s						
SBF	**Sospel**	**114.57**	**317**	*e*PKIKP	PKPdf	10 43 37.5	+1.9
	comp=Z,58nm,1.0s						
BNI	**Bardonecchia**	**114.64**	**319**	*e*PKiKP		10 43 38.0	
MBDF	**Montbardon**	**114.70**	**318**	*e*PKIKP	PKPdf	10 43 37.9	+2.1
	comp=Z,22nm,0.7s						
TMUT	**Trail Mountain**	**114.73**	**48**	*e*PKiKP		10 43 38.9	
PDAR	**Pinedale Array**	**114.80**	**44**	PKP	PKPdf	10 43 38.3	+2.2
	comp=Z,2.2nm,0.7s,baz=246,slow=1.2,SNR=16						
PDAR				PKKPbc		10 54 15.4	
	comp=Z,2.9nm,0.9s,baz=118,slow=4.9,SNR=15						
ORIF	**Oris-en-Rattie**	**115.22**	**319**	*e*PKIKP	PKPdf	10 43 38.7	+1.9
	comp=Z,19nm,0.7s						
ORIF				*e*R			
	comp=Z,2µm,21.2s						
SRU	**San Rafael**	**115.30**	**48**	*e*PKPdf	PKPdf	10 43 39.7	+2.6
SRU	**San Rafael**	**115.30**	**48**	*e*PKIKP	PKPdf	10 43 37.1	0.0
LAO	**LASA Array**	**115.51**	**39**	*e*PKPdf	PKPdf	10 43 39.9	+2.6
LOR	**Lormes**	**115.55**	**322**	*e*PKIKP	PKPdf	10 43 39.5	+2.1
LOR				*e*R			
	comp=Z,2µm,20.5s						
WUAZ	**Wupatki**	**115.67**	**52**	*e*PKPdf	PKPdf	10 43 40.2	+2.3
SMRF	**Simiane la Rot**	**115.78**	**318**	*e*PKIKP	PKPdf	10 43 39.8	+1.9
SMF	**Signal de Mont**	**115.83**	**321**	*e*PKIKP	PKPdf	10 43 40.1	+2.2
	comp=Z,38nm,1.1s						
SSF	**Saint Saulge**	**115.86**	**322**	*e*PKIKP	PKPdf	10 43 40.4	+2.4
	comp=Z,31nm,0.8s						
VIVF	**Saint-Julien-l**	**116.03**	**319**	*e*PKIKP	PKPdf	10 43 39.5	+1.1
	comp=Z,20nm,0.8s						
AVF	**Avril sur Loir**	**116.07**	**322**	*e*PKIKP	PKPdf	10 43 40.5	+2.1
	comp=Z,32nm,1.1s						
BGF	**Bois d’Agland**	**116.48**	**322**	*e*PKIKP	PKPdf	10 43 41.5	+2.3
	comp=Z,58nm,0.9s						
PV10	**Paradox Valley**	**116.63**	**48**	*e*PKPdf	PKPdf	10 43 42.2	+2.6
RWWY	**Rawlins**	**116.81**	**44**	*e*PKPdf	PKPdf	10 43 42.6	+2.7
LASF	**Ste Croix**	**116.88**	**319**	*e*PKIKP	PKPdf	10 43 42.0	+2.0
	comp=Z,94nm,1.3s						
TCF	**Toulx Ste Croi**	**117.00**	**321**	*e*PKIKP	PKPdf	10 43 42.6	+2.4
	comp=Z,52nm,1.0s						
PV01	**Paradox Valley**	**117.05**	**48**	*e*PKPdf	PKPdf	10 43 42.7	+2.3
CAF	**Calviac**	**117.69**	**320**	*e*PKIKP	PKPdf	10 43 44.3	+2.8
	comp=Z,40nm,0.9s						
RJF	**Les Rejaudoux**	**117.87**	**321**	*e*PKIKP	PKPdf	10 43 43.7	+1.9
	comp=Z,16nm,0.8s						
RJF				*e*R			
	comp=Z,2µm,21.2s						
RSSD	**Black Hills**	**117.99**	**41**	*e*PKPdf	PKPdf	10 43 43.9	+1.8
MTLF	**Montolieu**	**118.27**	**318**	*e*PKIKP	PKPdf	10 43 44.2	+1.5
	comp=Z,34nm,1.0s						
MFF	**Saint Martin d**	**118.30**	**323**	*e*PKIKP	PKPdf	10 43 44.8	+2.1
	comp=Z,42nm,0.8s						
LFF	**La Frestale**	**118.53**	**321**	*e*PKIKP	PKPdf	10 43 45.7	+2.5
	comp=Z,138nm,1.3s						
ISCO	**Idaho Springs**	**118.64**	**46**	*e*PKPdf	PKPdf	10 43 46.5	+3.0
SGMF	**Saint Gilles**	**118.89**	**325**	*e*PKIKP	PKPdf	10 43 45.6	+1.8
SDCO	**Great Sand Dun**	**119.47**	**48**	*e*PKPdf	PKPdf	10 43 48.1	+2.9
LENM	**Lemitar**	**119.53**	**52**	*e*PKPdf	PKPdf	10 43 48.4	+3.0
EPF	**Esparros**	**119.64**	**319**	*e*PKIKP	PKPdf	10 43 47.2	+1.8
	comp=Z,32nm,1.1s						
ULM	**Lac du Bonnet**	**119.68**	**31**	PKP	PKPdf	10 43 46.0	+0.7
	comp=Z,11nm,1.1s,baz=307,slow=4.6,SNR=4.2						
ULM				PKKPbc		10 53 58.4	
	comp=Z,5.1nm,0.8s,baz=40,slow=1.5,SNR=4.7						
ANMO	**Albuquerque**	**119.68**	**51**	*e*PKPdf	PKPdf	10 43 48.8	+3.1
LPM	**Los Pinos Moun**	**119.75**	**52**	*e*PKPdf	PKPdf	10 43 47.8	+1.9
EPOB	**Poblet**	**119.87**	**317**	P	PKPdf	10 43 48.2	+2.3
SJPF	**Ste Jean**	**120.62**	**320**	*e*PKIKP	PKPdf	10 43 49.5	+2.2
	comp=Z,85nm,1.4s						
EMOS	**Mosqueruela**	**121.35**	**316**	P	PKPdf	10 43 51.9	+3.1
MNTX	**Cornudas Mount**	**121.55**	**54**	*e*PKPdf	PKPdf	10 43 51.5	+2.1
ECRI	**Cripan**	**121.69**	**320**	P	PKPdf	10 43 50.3	+0.9
GDL2	**Guadalupe Moun**	**122.22**	**54**	*e*PKPdf	PKPdf	10 43 53.2	+2.5
ETOB	**Tobarra**	**122.84**	**315**	P	PKPdf	10 43 53.6	+1.9
CBKS	**Cedar Bluff**	**123.20**	**45**	*e*PKPdf	PKPdf	10 43 54.6	+2.2
AMTX	**Amarillo**	**123.39**	**50**	*e*PKPdf	PKPdf	10 43 53.6	+0.7
EVIA	**Vianos**	**123.52**	**315**	P	PKPdf	10 43 56.1	+3.1
LTX	**Lajitas**	**123.67**	**57**	PKPdf	PKPdf	10 43 54.8	+1.2
TXAR	**Lajitas Array**	**123.67**	**57**	PKP	PKPdf	10 43 55.8	+2.2
	comp=Z,6.4nm,0.8s,baz=244,slow=1.2,SNR=49						
TXAR				PKKPbc		10 53 42.4	
	comp=Z,2.4nm,0.9s,baz=116,slow=5.5,SNR=13						
TXAR	**Lajitas Array**	**123.67**	**57**	PKP	PKPdf	10 43 55.8	+2.2
TXAR				PKKPbc		10 53 42.4	
GUD	**Guadarrama**	**123.72**	**318**	P	PKPdf	10 43 55.9	+2.5
ESDC	**Sonseca Array**	**124.05**	**317**	PKP	PKPdf	10 43 55.7	+1.6
	comp=Z,5.0nm,0.8s,baz=15,slow=3.6,SNR=13						
ESDC	**Sonseca Array**	**124.05**	**317**	P	PKPdf	10 43 56.9	+2.9
EQES	**Quesada**	**124.29**	**315**	P	PKPdf	10 43 55.0	+0.4
EBAN	**Banos Encina**	**124.63**	**315**	P	PKPdf	10 43 57.0	+1.8
ERUA	**La Rua**	**124.75**	**321**	P	PKPdf	10 43 58.0	+2.6
ECOG	**Cogollos-Vega**	**124.88**	**314**	P	PKPdf	10 43 57.1	+1.4
EGUA	**Guajares**	**125.07**	**314**	P	PKPdf	10 43 58.3	+2.2
ERON	**Agron**	**125.16**	**314**	P	PKPdf	10 43 57.8	+1.5
EADA	**Adamuz**	**125.18**	**316**	P	PKPdf	10 43 57.5	+1.2
KSU1	**Kansas State U**	**125.23**	**43**	*e*PKPdf	PKPdf	10 43 58.5	+2.2
ELUQ	**Luque**	**125.25**	**315**	P	PKPdf	10 43 59.0	+2.5
ELOJ	**Sierra Loja**	**125.35**	**314**	P	PKPdf	10 43 58.0	+1.3
PVRL	**Vila Real**	**125.71**	**321**	*e*PKPdf	PKPdf	10 44 00.5	+3.3
ECAB	**El Cabril**	**125.81**	**316**	P	PKPdf	10 44 00.6	+3.1
MTE	**Manteigas**	**126.07**	**320**	*e*PKPdf	PKPdf	10 44 01.1	+3.2
PVIS	**Viseu**	**126.13**	**320**	*e*PKPdf	PKPdf	10 44 01.4	+3.4
PCBR	**Castelo Branco**	**126.32**	**319**	*e*PKPdf	PKPdf	10 44 01.4	+3.0
JCT	**Junction City**	**126.47**	**54**	*e*PKPdf	PKPdf	10 44 01.4	+2.4
EJIF	**Jimena Fronter**	**126.61**	**314**	P	PKPdf	10 44 02.3	+3.2
EMIN	**Mina Concepcio**	**126.83**	**316**	P	PKPdf	10 44 02.3	+2.8
SCHQ	**Schefferville**	**126.84**	**11**	PKP	PKPdf	10 44 01.2	+2.2
	comp=Z,5.9nm,0.7s,baz=331,slow=5.0,SNR=7.9						
PTOM	**Tomar**	**127.05**	**319**	*e*PKPdf	PKPdf	10 44 02.0	+2.1
EVO	**Evora**	**127.36**	**318**	*e*PKIKP	PKPdf	10 44 03.6	+3.1
	comp=Z,101nm,1.3s						
EVO				*e*R			
	comp=Z,2µm,22.2s						
PBEJ	**Beja**	**127.52**	**317**	*e*PKPdf	PKPdf	10 44 01.8	+1.0
CCM	**Cathedral Cave**	**129.37**	**41**	*e*PKPdf	PKPdf	10 44 06.0	+1.7
CCM				*e*SKP		10 47 26.1	
SLM	**Saint Louis**	**129.70**	**40**	*e*SKP		10 47 27.4	
FVM	**French Village**	**129.95**	**41**	*e*PKPdf	PKPdf	10 44 07.7	+2.3
FVM				*e*SKP		10 47 26.8	
UALR	**University of**	**130.33**	**46**	PKPdf	PKPdf	10 44 07.7	+1.5
UALR				*e*SKP		10 47 30.0	
HBAR	**Harrisburg**	**131.12**	**44**	*e*SKP		10 47 33.7	
PARMO	**Parma**	**131.13**	**42**	*e*PKPdf	PKPdf	10 44 10.4	+2.7
PARMO				*e*SKP		10 47 33.2	
GLAT	**Glass**	**131.66**	**42**	*e*SKP		10 47 35.1	
WCI	**Wyandotte Cave**	**132.43**	**38**	*e*PKPdf	PKPdf	10 44 12.7	+2.5
WCI				*e*SKP		10 47 37.5	
OXF	**Oxford**	**132.54**	**44**	PKPdf	PKPdf	10 44 12.4	+2.0
OXF				*e*SKP		10 47 38.3	
WVT	**Waverly**	**132.71**	**41**	*e*PKPdf	PKPdf	10 44 13.5	+2.7
WVT				*e*SKP		10 47 38.4	
PLCA	**Paso Flores**	**132.83**	**160**	PKP	PKPdf	10 44 13.6	+2.7
	comp=Z,9.6nm,0.9s,baz=231,slow=3.3,SNR=20						
PLCA				SKPbc		10 47 39.2	
	comp=Z,24nm,1.2s,baz=202,slow=2.7,SNR=6.6						
PLCA	**Paso Flores**	**132.83**	**160**	*e*PKPdf	PKPdf	10 44 13.5	+2.7

PLCA				eSKP		10 47 40.1	
PLCA	Paso Flores	132.83	160	PKIKP	PKPdf	10 44 10.7	-0.1
ACSO	Alum Creek Sta	133.06	34	ePKPdf	PKPdf	10 44 13.4	+2.1
ACSO				eSKP		10 47 39.6	
LOZ	Lake Ozonia	133.71	23	ePKPdf	PKPdf	10 44 14.5	+2.1
LOZ				eSKP		10 47 40.8	
GENY	Geneseo	133.82	27	eSKP		10 47 46.1	
DBIC	Dimbokro	133.95	276	PKhKP		10 43 58.6	
	comp=Z,2.9nm,0.6s,baz=73,slow=1.1,SNR=4.8						
DBIC				PKP	PKPdf	10 44 15.7	+2.0
	comp=Z,31nm,0.9s,baz=87,slow=2.4,SNR=16						
DBIC				SKPbc		10 47 42.6	
	comp=Z,19nm,0.9s,baz=74,slow=5.2,SNR=13						
DBIC	Dimbokro	133.95	276	PKPpre		10 44 00.2	
DBIC				ePKPdf	PKPdf	10 44 15.7	+2.0
DBIC				SKPbc		10 47 42.6	
DBIC				eSKP		10 47 43.0	
LIC	Lamto	134.14	276	ePKIKP	PKPdf	10 44 15.9	+1.9
	comp=Z,81nm,0.9s						
LIC				eR			
	comp=Z,2µm,21.8s						
NCB	Newcomb	134.39	24	ePKPdf	PKPdf	10 44 14.7	+1.1
NCB				eSKP		10 47 42.9	
SWET	Sewanee	134.49	41	PKPdf	PKPdf	10 44 15.7	+1.6
MIV	Mineville/With	134.58	23	PKPdf	PKPdf	10 44 15.2	+1.2
LRAL	Lakeview Retre	135.03	44	ePKPdf	PKPdf	10 44 17.2	+2.1
LRAL				eSKP		10 47 46.0	
ACCN	Adirondack Com	135.10	24	ePKPdf	PKPdf	10 44 16.5	+1.6
ACCN				eSKP		10 47 45.7	
CPCT	Cooper Cave	135.27	40	ePKPdf	PKPdf	10 44 19.0	+3.5
HNH	Hanover	135.37	22	ePKPdf	PKPdf	10 44 16.7	+1.3
FWV	Forest Hill	136.11	35	ePKPdf	PKPdf	10 44 19.1	+2.1
BLA	Blacksburg	136.59	35	ePKPdf	PKPdf	10 44 17.9	0.0
MVL	Millersville	136.67	29	ePKPdf	PKPdf	10 44 20.1	+2.1
WES	Weston	136.86	22	PKPdf	PKPdf	10 44 20.0	+1.7
WES				eSKP		10 47 49.8	
PAL	Palisades	136.98	26	ePKPdf	PKPdf	10 44 18.7	+0.2
GOGA	Godfrey	137.21	41	ePKPdf	PKPdf	10 44 23.0	+3.9
CBN	Corbin	137.53	31	ePKPdf	PKPdf	10 44 21.5	+1.9
TRQA	Tornquist	137.79	167	ePKPpre		10 44 12.4	
TRQA				ePKPdf	PKPdf	10 44 22.5	+2.5
JSC	Jenkinsville	138.07	39	ePKPdf	PKPdf	10 44 25.1	+4.4
TLL	Tololo Astrono	141.85	152	eP	PKPdf	10 44 24.1	-3.5
JTS	JuntasAbangare	145.51	76	ePKPdf	PKPdf	10 44 36.8	+2.4
CEN1	Los Morros	147.66	146	eP	PKPdf	10 44 41.5	+3.8
CPUP	Villa Florida	150.09	168	ePKPdf	PKPdf	10 44 44.2	+2.7
CPUP				ePKPbc	PKPdf	10 44 48.6	+7.1
NNA	Nana	150.21	121	ePKPdf	PKPdf	10 44 45.0	+3.0
NNA				ePKPbc	PKPdf	10 44 50.0	+8.0
ARE	Arequipa	151.89	134	eP	PKPdf	10 44 55.0	+11
LPAZ	La Paz	154.31	139	PKP	PKPdf	10 44 50.7	+2.9
	comp=Z,6.9nm,1.1s,baz=8.9,slow=3.1,SNR=17						
LPAZ	La Paz	154.31	139	ePKPdf	PKPdf	10 44 51.7	+3.9
LPAZ				ePKPbc	PKPdf	10 45 00.5	+13
ROSC	El Rosal	156.61	85	PKP	PKPdf	10 44 54.1	+3.2
	comp=Z,4.8nm,0.5s,baz=97,slow=22,SNR=5.1						
ROSC				PKPab	PKPab	10 45 23.9	+1.3
	comp=Z,18nm,0.8s,baz=270,slow=1.0,SNR=7.1						
SDV	Santo Domingo	159.61	73	ePKPdf	PKPdf	10 44 56.7	+2.0
BDFB	Brasilia	161.15	189	PKP	PKPdf	10 44 58.2	+2.0
	comp=Z,14nm,1.0s,baz=176,slow=1.5,SNR=11						
BDFB				PKPab	PKPab	10 45 42.0	0.0
	comp=Z,22nm,1.1s,baz=136,slow=2.0,SNR=5.6						
BAO	Brasilia Array	161.15	189	PKPdf	PKPdf	10 44 59.0	+2.9
RCBR	Riachuelo	162.54	239	ePKPdf	PKPdf	10 45 00.2	+2.5
RCBR				ePKPab	PKPab	10 45 48.4	+0.2
SAML	Samuel	162.91	135	ePKPdf	PKPdf	10 44 59.6	+1.6
SAML				ePKPab	PKPab	10 45 50.1	+0.4

CSEM ***13*** *10:42:19.9±0.0, 48.30N×7.45E, h10^{km}, ML3.0/10, Error ellipse: s-maj=1.0km s-min=0.7km az=161.0*

LDG ***13*** *10:42:20.2±0.1, 48.29N×7.43E, h9^{km}, Md3.1/1, Ml3.0/12, Error ellipse: s-maj=1.3km s-min=0.9km az=157.0*

STR ***13*** *10:42:20.1±0.1, 48.29N×7.44E, h5^{km}±1^{km}, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

BGR ***13*** *10:42:20.0±0.3, 48.29N×7.47E, h5^{km}, ML2.2/4, Error ellipse: s-maj=3.3km s-min=2.2km az=158.0*

NEIC ***13*** *10:42:20.2, 48.29N×7.43E, h9^{km}, ML3.0(LDG), ML2.4(STR), ML2.3(LEDBW), After LDG.*

LEDBW ***13*** *10:42:20.1±0.2, 48.27N×7.46E, h5^{km}±5^{km}, ML2.3, Error ellipse: s-maj=5.2km s-min=4.0km az=44.0*

ISC 13 10:42:18.7±0.2**, 48.31N**±0.02×**7.40E**±0.02**, h12**^{km}±2^{km}**,**
n90, σ1^{s}21/173**, 2C-5D, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLS	Welschbruch	0.11	344	⇓iP	Pb	10 42 23.2	+1.0
WLS	Welschbruch	0.11	344	ePg	Pg	10 42 23.1	+1.3
	SNR=191						
WLS				⇓iP*	Pb	10 42 23.2	+1.0
WLS	Welschbruch	0.11	344	Pg	Pg	10 42 23.1	+1.2
	SNR=191						
WLS				Sg	Sg	10 42 25.3	+1.3
CDF	Champ du Feu	0.14	322	ePg	Pg	10 42 23.7	+1.5
CDF				eSg	Sg	10 42 26.3	+1.7
	185nm,0.2s						
ECH	Echery	0.18	241	Pg	Pg	10 42 24.1	+1.1
ECH				Sg	Sg	10 42 27.2	+1.3
ECH	Echery	0.18	241	⇑P	Pb	10 42 24.3	+0.8
ECH				S	Sb	10 42 27.4	+0.7
ECH	Echery	0.18	241	ePg	Pg	10 42 24.2	+1.2
	SNR=85						
ECH				⇑P*	Pb	10 42 24.3	+0.8
ECH				S*	Sb	10 42 27.4	+0.7
ECH	Echery	0.18	241	Pg	Pg	10 42 24.2	+1.2
	SNR=85						
ECH				Sg	Sg	10 42 27.2	+1.3
LIBD	Limburg	0.20	139	⇓P	Pg	10 42 23.7	+0.3
LIBD	Limburg	0.20	139	ePg	Pg	10 42 23.7	+0.3
	SNR=18						
LIBD				⇓P*	Pb	10 42 23.7	-0.1
LIBD	Limburg	0.20	139	Pg	Pg	10 42 23.6	+0.2
MOF	Molkenrain	0.49	202	Pg	Pg	10 42 29.3	+0.6
MOF				Sg	Sg	10 42 36.1	+0.7
MOF	Molkenrain	0.49	202	⇑P	Pb	10 42 29.5	+0.8
MOF	Molkenrain	0.49	202	ePg	Pg	10 42 29.4	+0.7
	SNR=12						
MOF				⇑P*	Pb	10 42 29.5	+0.8
MOF	Molkenrain	0.49	202	Pg	Pg	10 42 29.4	+0.7
	SNR=12						
MOF				Sg	Sg	10 42 36.1	+0.7
KIZ	Kirchzarten	0.49	135	P	Pb	10 42 28.5	-0.3
KIZ				P		10 42 29.8	
KIZ				S	Sg	10 42 34.3	-1.2
KIZ	Kirchzarten	0.49	135	P	Pb	10 42 29.8	+1.1
KIZ				S	Sg	10 42 34.3	-1.2
KIZ	Kirchzarten	0.49	135	P*	Pb	10 42 29.8	+1.1
KIZ				S*	Sg	10 42 34.3	-1.2
KIZ	Kirchzarten	0.49	135	P	Pb	10 42 29.8	+1.1
KIZ				S	Sg	10 42 34.3	-1.2
HINF	Hinteralfeld	0.61	217	ePg	Pg	10 42 31.7	+0.6
HINF				ePn	Pn	10 42 33.3	+0.5
HINF				eSg	Sg	10 42 39.9	+0.5
HINF				eSn	Sn	10 42 42.8	+0.3
	83nm,0.2s						
BFO	Black Forest	0.62	87	⇑eP	Pb	10 42 31.0	0.0
BFO				P		10 42 32.0	
BFO				S	Sb	10 42 38.8	-0.5
BFO				S	Sb	10 42 42.1	+2.8
BFO	Black Forest	0.62	87	ePg	Pg	10 42 31.0	-0.3
	SNR=9.2						
BFO				eSg	Sg	10 42 38.6	-1.1
BFO	Black Forest	0.62	87	ePg	Pg	10 42 30.7	-0.6
LANF	Langenberg	0.73	21	P	Pb	10 42 34.8	+2.0
LANF	Langenberg	0.73	21	ePg	Pg	10 42 34.5	+1.1
	SNR=12						
LANF	Langenberg	0.73	21	Pg	Pg	10 42 34.4	+1.0
HAU	Haudompre	0.77	247	ePg	Pg	10 42 35.0	+0.8
HAU				ePn	Pn	10 42 35.9	+0.8
HAU				eSg	Sg	10 42 44.9	+0.4
HAU				eSn	Sn	10 42 46.9	+0.4
	115nm,0.4s						
HAU	Haudompre	0.77	247	ePn	Pn	10 42 35.9	+0.8
HAU				eSg	Sg	10 42 44.9	+0.4
HAU				eSn	Sn	10 42 46.9	+0.4
	57nm,0.4s						
BBS	Basel-Blauen	0.84	175	ePg	Pg	10 42 35.9	+0.1
	SNR=10						
BBS	Basel-Blauen	0.84	175	Pg	Pg	10 42 35.8	+0.1
BBS				Sg	Sg	10 42 48.1	+1.0
THEF	They Montfort	0.95	266	Pg	Pg	10 42 38.8	+1.0
THEF				Sg	Sg	10 42 52.4	+1.9
THEF	They Montfort	0.95	266	P	Pb	10 42 38.9	+2.3
THEF	They Montfort	0.95	266	ePg	Pg	10 42 38.8	+1.0
	SNR=7.8						
LBG	Lerchenberg	0.99	68	P	Pb	10 42 38.3	+1.0
LBG				P		10 42 38.6	
LBG				S	Sb	10 42 51.5	+1.3
LBG				S	Sb	10 42 52.1	+2.0
LBG	Lerchenberg	0.99	68	PG	Pg	10 42 38.6	-0.1
LBG	Lerchenberg	0.99	68	SG	Sg	10 42 52.1	+0.1
LBG	Lerchenberg	0.99	68	P	Pb	10 42 38.3	+0.9
LBG				Pg	Pg	10 42 38.6	-0.1
LBG				S	Sb	10 42 51.5	+1.3
LBG				Sg	Sg	10 42 52.1	+0.1
LBG	Lerchenberg	0.99	68	Pg	Pg	10 42 38.6	-0.1
LOMF	Lomont	1.03	202	Pg	Pg	10 42 39.6	+0.2
LOMF				Sg	Sg	10 42 53.5	+0.3
LOMF	Lomont	1.03	202	P	Pb	10 42 39.7	+1.8
LOMF	Lomont	1.03	202	ePg	Pg	10 42 39.5	+0.1
	SNR=18						
LOMF	Lomont	1.03	202	Pg	Pg	10 42 39.5	+0.1
	SNR=18						
LOMF				Sg	Sg	10 42 53.5	+0.3
TUBL	Tuebingen Lnz	1.14	78	S	Sb	10 42 56.0	+1.6
GUT	Gutenstein	1.17	101	P	Pb	10 42 40.9	+0.6
GUT				P		10 42 41.7	
GUT				S	Sb	10 42 55.2	0.0
GUT				S	Sb	10 42 56.8	+1.6
GUT	Gutenstein	1.17	101	PG	Pg	10 42 41.7	-0.5
GUT	Gutenstein	1.17	101	SG	Sg	10 42 56.8	-1.1
GUT	Gutenstein	1.17	101	P	Pb	10 42 40.9	+0.5
GUT				Pg	Pg	10 42 41.7	-0.5
GUT				S	Sb	10 42 55.2	-0.1
GUT				Sg	Sg	10 42 56.8	-1.1
GUT	Gutenstein	1.17	101	Pg	Pg	10 42 41.7	-0.5
SISB	Singen-Sch Ber	1.22	120	P	Pb	10 42 42.7	+1.5
SISB				S	Sb	10 42 57.0	+0.3
SISB				S	Sb	10 42 58.5	+1.8
STU	Stuttgart	1.28	68	ePg	Pg	10 42 45.2	+0.8
STU				eSg	Sg	10 43 00.1	-1.4
STU	Stuttgart	1.28	68	ePg	Pg	10 42 45.2	+0.8
STU				eSg	Sg	10 42 59.9	-1.6
STU	Stuttgart	1.28	68	Pg	Pg	10 42 45.2	+0.8
STU				eSg	Sg	10 42 59.9	-1.6
BUCH	Bad Urach	1.31	83	P	Pb	10 42 42.6	-0.1
BUCH				P		10 42 44.3	
BUCH				S	Sb	10 42 59.3	+0.1
BUCH				S	Sb	10 43 01.2	+1.9
BUCH	Bad Urach	1.31	83	PG	Pg	10 42 44.3	-0.6
BUCH	Bad Urach	1.31	83	SG	Sg	10 43 01.2	-1.3
BUCH	Bad Urach	1.31	83	P	Pb	10 42 42.6	-0.1
BUCH				Pg	Pg	10 42 44.3	-0.6
BUCH				S	Sb	10 42 59.3	0.0
BUCH				Sg	Sg	10 43 01.2	-1.3
BUCH	Bad Urach	1.31	83	Pg	Pg	10 42 44.3	-0.6
RFYF	Reffroy	1.32	285	ePn	Pn	10 42 43.6	+0.6
	baz=103						
RFYF				ePg	Pg	10 42 45.2	0.0
	baz=106						
RFYF				eSg	Sg	10 43 02.7	-0.2
	91nm,0.2s						
RFYF	Reffroy	1.32	285	ePg	Pg	10 42 45.2	0.0
RFYF				eSg	Sg	10 43 02.7	-0.2
	45nm,0.2s						
MEZF	Maizieres J'vi	1.58	278	ePn	Pn	10 42 46.9	+0.2
	baz=103						
MEZF				ePg	Pg	10 42 49.8	-0.5
	baz=100						
MEZF				eSn	Sn	10 43 06.5	-0.6
MEZF				eSg	Sg	10 43 10.5	-0.9
	16nm,0.2s						
MEZF	Maizieres J'vi	1.58	278	ePg	Pg	10 42 49.8	-0.5
MEZF				eSn	Sn	10 43 06.5	-0.6
MEZF				eSg	Sg	10 43 10.5	-0.9
	7.9nm,0.2s						
SFTF	Sexfontaines	1.58	267	ePn	Pn	10 42 47.4	+0.7
	baz=94						
SFTF				ePg	Pg	10 42 50.1	-0.3
	baz=95						
SFTF				eSg	Sg	10 43 10.7	-0.8
	49nm,0.2s						
SFTF	Sexfontaines	1.58	267	ePg	Pg	10 42 50.1	-0.3
SFTF				eSg	Sg	10 43 10.7	-0.8
	24nm,0.2s						
WLF	Walferdange	1.59	329	ePg	Pg	10 42 50.6	0.0
	SNR=2.8						
WLF				eSg	Sg	10 43 11.7	-0.1
SIND	Sindeldorf	1.79	54	P	Pn	10 42 53.2	+3.5
SIND				S	Sn	10 43 16.5	+4.0
CABF	La Chapelle	1.92	208	ePn	Pn	10 42 51.2	-0.3
CABF				ePg	Pg	10 42 55.8	-1.2
CABF				eSg	Sg	10 43 20.4	-2.2
	22nm,0.5s						
UBR	Uberruh	1.92	108	S	Sn	10 43 19.6	+3.8
DAVA	Damuels	1.96	120	⇓iP	Pn	10 42 59.2	+7.1
	comp=Z,5.9nm,0.7s						
TNS	Taunus Mts	2.04	19	eSg	Sg	10 43 25.0	-1.7
GIVF	Givet	2.47	318	ePg	Pg	10 43 06.2	-1.8
LOR	Lormes	2.60	248	ePn	Pn	10 43 00.7	-0.7
	baz=72						
LOR				ePg	Pg	10 43 08.6	-2.1
	baz=73						
LOR				eSg	Sg	10 43 42.1	-3.4
	12nm,0.2s						
LOR	Lormes	2.60	248	ePg	Pg	10 43 08.6	-2.1
LOR				eSg	Sg	10 43 42.1	-3.4
	6.0nm,0.2s						
BAIF	Baives	2.73	311	ePg	Pg	10 43 10.9	-2.4
GRF	Grafenberg Arr	2.87	60	ePg	Pg	10 43 14.2	-1.9
	SNR=3.4						
GRF				eSg	Sg	10 43 49.7	-4.7
SSF	Saint Saulge	2.91	246	ePn	Pn	10 43 05.4	-0.3
SSF				ePg	Pg	10 43 13.0	-3.9
SSF				eSg	Sg	10 43 52.2	-3.5
	16nm,0.6s						
SSF	Saint Saulge	2.91	246	ePg	Pg	10 43 13.0	-3.9
SSF				eSg	Sg	10 43 52.2	-3.5
	8.1nm,0.6s						
SMF	Signal de Mont	2.93	237	ePn	Pn	10 43 04.3	-1.7
SMF				ePg	Pg	10 43 15.0	-2.3
SMF				eSg	Sg	10 43 52.5	-3.8
	7.8nm,0.3s						
AVF	Avril sur Loir	3.13	243	ePn	Pn	10 43 07.9	-1.0
AVF				ePg	Pg	10 43 18.9	-2.4
AVF				eSg	Sg	10 43 58.8	-4.3
	8.1nm,0.8s						
HYF	Humbligny	3.37	254	ePn	Pn	10 43 11.4	-0.9
HYF				eSg	Sg	10 44 05.9	-5.2
BGF	Bois d'Agland	3.55	242	ePn	Pn	10 43 13.8	-1.0
BGF				ePg	Pg	10 43 26.6	-3.0
BGF				eSg	Sg	10 44 12.7	-4.3
	6.2nm,0.3s						
MOX	Moxa	3.61	48	eSg	Sg	10 44 14.6	-4.3
WET	Wettzell	3.72	75	eSn	Sn	10 43 58.6	-2.8
WET				eSg	Sg	10 44 16.1	-6.5
NKC	Novy Kostel	3.83	58	eSG	Sg	10 44 18.4	-7.8
WERD	Werda	3.86	54	eSg	Sg	10 44 19.5	-7.6
TANN	Tannenbergstha	3.92	56	eSg	Sg	10 44 22.2	-7.2
TCF	Toulx Ste Croi	4.07	242	ePn	Pn	10 43 20.9	-1.3
TCF				ePg	Pg	10 43 35.4	-4.5
TCF	Toulx Ste Croi	4.07	242	ePg	Pg	10 43 35.4	-4.5
KHC	Kasperske Hory	4.17	76	eSN	Sn	10 44 10.9	-2.0
KHC				eSG	Sg	10 44 30.4	-7.3
GEC2	GERESS Array S	4.22	80	eSg	Sg	10 44 32.0	-7.1
CAF	Calviac	4.99	229	eSn	Sn	10 44 29.9	-3.7
	2.8nm,0.3s						

JMA 13 10:43:55.9±0.2**, 32.92N×138.38E, h409**^{km}**, M3.5,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.22	81	P	P	10 44 49.3	+0.2
JOD2	Odawara 2	2.41	14	P	P	10 44 56.0	+0.2
BSO3	Boso 3	2.58	43	P	P	10 44 57.2	+0.2
BSO3				S	S	10 45 48.8	+3.7
JHU	Hanno	3.02	14	P	P	10 45 00.0	-0.3
JHU				S	S	10 45 50.0	-1.0
JRY	Ryogami san	3.12	8	P	P	10 45 01.6	+0.4
JAG	Ashikaga	3.61	14	P	P	10 45 04.7	-0.7
JAG				S	S	10 45 59.3	-0.8
JYT	Yasato	3.62	24	S	S	10 46 00.1	-0.3
JHO	Hitachi	4.10	25	P	P	10 45 10.0	0.0
JHO				S	S	10 46 08.4	+0.2
JFK	Kawauchi	4.88	24	P	P	10 45 18.4	+0.6
JFK				S	S	10 46 23.9	+1.9

IDC ***13*** *10:49:05.8±0.8, 3.02S×128.95E, mb4.1/7, mb1 4.3/9, mb1mx4.2/17, mbtmp4.2/9, ML4.6/2, Error ellipse: s-maj=50.2km s-min=17.2km az=67.0*

MOS ***13*** *10:49:08.1±1.7, 3.14S×128.52E, h33^{km}, mb4.5/1, Error ellipse: s-maj=60.4km s-min=15.8km az=111.0*

NEIC ***13*** *10:49:09.0±0.5, 3.02S×129.03E, h20^{km}, mb4.2/2, Error ellipse: s-maj=24.7km s-min=7.8km az=77.0*

ISC 13 10:49:09.1±0.6**, 3.08S**±0.08×**128.9E**±0.2**, h33**^{km}**, n20,**
σ0^{s}89/19**, mb4.0**/7**, 1C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.26	192	eP	P	10 52 45.2	+1.2
	14nm,0.7s						
FITZ	Fitzroy Crossi	15.26	192	Pn	P	10 52 44.5	+0.5
	2.1nm,0.3s,baz=28,slow=10.0,SNR=17						
WRAB	Tennant Creek	17.57	163	eP	P	10 53 12.3	-0.8
	40µm,3.4s						
WRAB	Tennant Creek	17.57	163	eP	P	10 53 12.3	-0.9
WRAB				pmax	pmax		
	comp=Z,10µm,3.4s						
WRA	Warramunga Arr	17.57	163	P	P	10 53 12.8	-0.4
	comp=Z,2.2nm,0.3s,baz=337,slow=12,SNR=83						
WB2	Warramunga Arr	17.58	163	eP	P	10 53 13.3	0.0
ASPA	Alice Springs	21.02	167	eP	P	10 53 52.5	+0.1
CTA	Charters Tower	23.92	136	P	P	10 54 22.2	+1.1
	comp=Z,3.1nm,0.5s,mb4.0,baz=325,slow=11,SNR=7.7						
STKA	Stephens Creek	31.03	159	eP	P	10 55 25.9	-0.3
	comp=Z,2.6nm,0.8s,mb4.1						
STKA	Stephens Creek	31.03	159	P	P	10 55 25.0	-1.2
	comp=Z,1.1nm,0.4s,mb4.0,baz=336,slow=6.3,SNR=6.2						
MJAR	Matsushiro Arr	40.37	12	P	P	10 56 44.2	-1.3
	comp=Z,2.5nm,0.8s,mb4.0,baz=183,slow=10.0,SNR=6.3						
MJAR	Matsushiro Arr	40.37	12	P	P	10 56 44.2	-1.3
SONM	Songino Array	54.41	342	P	P	10 58 35.1	-0.1
	comp=Z,1.8nm,1.0s,mb4.0,baz=159,slow=7.5,SNR=8.4						
MKAR	Makanchi Array	64.38	326	P	P	10 59 43.2	-0.8
	comp=Z,1.5nm,0.7s,mb4.2,baz=115,slow=8.5,SNR=18						
YAK	Yakutsk	64.94	0	⇑eP	P	10 59 49.5	+2.0
ZAL	Zalesovo	67.61	334	P	P	11 00 04.0	-0.6
	comp=Z,0.7nm,0.4s,mb4.0,baz=279,slow=4.9,SNR=5.3						
NVS	Novosibirsk	68.90	334	eP	P	11 00 08.0	-4.6
TIXI	Tiksi	74.60	360	eP	P	11 00 47.1	+0.9
AKTO	Aktyubinsk	80.33	322	P	P	11 01 18.9	+0.3
	comp=Z,0.8nm,0.6s,mb3.8,baz=106,slow=7.4,SNR=4.5						
TXAR	Lajitas Array	123.78	57	PKP	PKPdf	11 08 07.0	+2.6
	comp=Z,0.4nm,0.9s,baz=270,slow=1.3,SNR=3.6						

IDC ***13*** *10:51:34.1±0.8, 3.08S×128.92E, mb4.3/8, mb1 4.4/9, mb1mx4.2/17, mbtmp4.3/9, ML4.5/1, MS3.9/2, Ms1 3.9/2, ms1mx3.4/20, Error ellipse: s-maj=56.9km s-min=17.6km az=65.0*

BJI ***13*** *10:51:36.1, 3.00S×129.10E, h20^{km}, mb4.7, Ms4.7, Msz4.5*

MOS ***13*** *10:51:37.2±1.0, 3.09S×128.90E, h33^{km}, mb4.6/6, Error ellipse: s-maj=38.2km s-min=11.8km az=116.7*

NEIC ***13*** *10:51:37.2±0.4, 3.02S×129.13E, h20^{km}, mb4.5/5, Error ellipse: s-maj=19.8km s-min=7.2km az=69.0*

ISC 13 10:51:40.6±3.2**, 3.07S**±0.09×**129.2E**±0.2**, h69**^{km}±31^{km}**,**
n39, σ0^{s}74/36**, mb4.4**/22**, 2C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.34	193	eP	P	10 55 15.4	+0.9
	21nm,0.9s						
FITZ	Fitzroy Crossi	15.34	193	Pn	P	10 55 15.3	+0.8
	2.4nm,0.3s,baz=22,slow=9.1,SNR=7.5						
WRA	Warramunga Arr	17.51	164	P	P	10 55 40.9	-0.9
	1.7nm,0.3s,baz=351,slow=12,SNR=8.9						
WB2	Warramunga Arr	17.51	164	eP	P	10 55 41.3	-0.5
ASPA	Alice Springs	20.98	168	eP	P	10 56 20.4	+0.1
CTA	Charters Tower	23.73	137	P	P	10 56 49.6	+2.2
	5.1nm,0.9s,mb3.8,baz=312,slow=14,SNR=2.6						
KLBR	Kellerberrin	30.35	200	eP	P	10 57 46.7	-1.5
	107nm,1.9s,mb5.2						
STKA	Stephens Creek	30.94	159	eP	P	10 57 53.4	0.0
	2.8nm,0.6s,mb4.2						
STKA	Stephens Creek	30.94	159	P	P	10 57 53.3	-0.1
	3.7nm,0.7s,mb4.2,baz=354,slow=5.8,SNR=5.2						
CBIJ	Chichi jima	32.50	22	LR	LR	11 09 07.6	
	comp=Z,567nm,21.3s,baz=218,slow=32						
CHG	Chiang Mai	36.87	307	P	P	10 58 45.6	+1.2
	20nm,0.8s,mb5.1						
GTA	Gaotai	50.17	330	eP	P	11 00 32.1	+0.7
GTA				AP	pP	11 00 39.8	-9.1
GTA				XP	sP	11 00 43.8	-13
GTA				LR	LR		
	comp=N,310nm,16.7s						
GTA				LR	LR		
	comp=E,410nm,18.6s						
GTA				LR	LR		
	comp=Z,470nm,18.6s						
GUN	Gumba	51.81	309	eP	P	11 00 44.4	+0.4
	comp=Z,12nm,0.5s,mb5.2						
PKI	Pulchoki	52.01	309	eP	P	11 00 45.1	-0.4
KKN	Kakani	52.22	309	eP	P	11 00 46.9	-0.1
	comp=Z,3.5nm,0.2s,mb5.0						
DMN	Daman	52.27	309	eP	P	11 00 47.6	+0.2
GKN	Gorkha	52.82	309	eP	P	11 00 51.3	-0.2
	comp=Z,5.5nm,0.3s,mb5.0						
KOLN	Koldanda	53.52	308	eP	P	11 00 57.0	+0.3
	comp=Z,17nm,0.7s,mb5.2						
SONM	Songino Array	54.48	341	P	P	11 01 03.5	0.0
	comp=Z,2.0nm,0.7s,mb4.3,baz=150,slow=7.5,SNR=14						
ZAK	Zakamensk	57.71	341	eP	P	11 01 26.8	+0.3
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
BOD	Bodaibo	61.91	351	eP	P	11 01 53.8	-1.4
BOD				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.3						
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
MKAR	Makanchi Array	64.52	326	P	P	11 02 12.2	-0.4
	comp=Z,1.4nm,0.7s,mb3.9,baz=123,slow=7.9,SNR=7.3						
YAK	Yakutsk	64.92	0	eP	P	11 02 15.1	+0.2
	comp=Z,30nm,0.8s,mb5.2						
YAK	Yakutsk	64.92	0	eP	P	11 02 13.9	-1.0
YAK				e		11 02 43.4	
YAK				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
YAK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
FX1	Attu Island--F	66.84	27	LR	LR	11 27 42.7	
	comp=N,32nm,21.3s,baz=288,slow=32						
ZAL	Zalesovo	67.73	333	P	P	11 02 31.8	-1.0
	comp=N,1.1nm,0.3s,mb4.1,baz=201,slow=6.9,SNR=6.1						
KURK	Kurchatov	68.77	328	eP	P	11 02 39.3	0.0
	comp=N,5.3nm,0.8s,mb4.4						
KURK	Kurchatov	68.77	328	eP	P	11 02 39.3	0.0
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
VOSK	Vostochnaya	73.87	327	P	P	11 03 09.8	0.0
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
BVA0	Borovoye Array	74.33	328	P	P	11 03 12.5	0.0
BVA0				pmax	pmax		
	comp=Z,7.0nm,1.7s,mb4.1						
BVAR	Borovoye Array	74.33	328	P	P	11 03 12.7	+0.2
	comp=Z,2.0nm,0.7s,mb3.9,baz=106,slow=11,SNR=6.0						
CHKZ	Chkalovo	74.51	328	P	P	11 03 13.6	+0.1
CHKZ				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.6						
VNDA	Vanda	76.42	173	eP	P	11 03 24.4	+0.4
	comp=Z,1.8nm,0.9s,mb3.8						
VNDA	Vanda	76.42	173	eP	P	11 03 24.4	+0.4
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MAW	Mawson	78.30	201	P	P	11 03 35.6	+1.1
	comp=Z,0.9nm,0.3s,mb4.0,baz=74,slow=11,SNR=4.5						
AKTO	Aktyubinsk	80.49	322	P	P	11 03 47.0	+0.3
	comp=Z,1.8nm,0.6s,mb4.1,baz=106,slow=9.9,SNR=6.8						
SYO	Syowa Base	87.02	201	⇑P	P	11 04 18.1	-1.1
SYO	Syowa Base	87.02	201	⇑eP	P	11 04 18.1	-1.1
JTS	JuntasAbangare	145.36	76	PKPbc	PKPbc	11 11 15.5	+3.3
	comp=Z,10nm,0.7s,baz=77,slow=2.6,SNR=8.9						

BJI ***13*** *10:52:00.9, 3.11S×129.49E, h20^{km}, mB5.2, mb4.6, Ms4.8, Msz4.5*

IDC ***13*** *10:52:01.9±0.5, 3.05S×128.86E, mb4.6/16, mb1 4.6/17, mb1mx4.6/21, mbtmp4.6/17, ML4.9/1, Error ellipse: s-maj=27.0km s-min=13.4km az=67.0*

MOS ***13*** *10:52:05.4±1.2, 3.04S×128.89E, h33^{km}, mb5.1/9, Error ellipse: s-maj=19.1km s-min=8.4km az=117.3*

NEIC ***13*** *10:52:05.2±0.2, 3.01S×128.99E, h20^{km}, mb4.8/14, Error ellipse: s-maj=8.8km s-min=4.2km az=60.0*

ISC 13 10:52:05.8±1.7, **3.06S**±0.06×**128.99E**±0.08, **h40**^{km}±16^{km}, **n88**, σ**0^{s}85**/81, **mb4.8**/39, **MS4.5**/1, **6C-2D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.30**	**192**	*e*P	**P**	**10 55 42.5**	**+1.7**
	40nm,0.9s						
FITZ	**Fitzroy Crossi**	**15.30**	**192**	Pn	**P**	**10 55 42.5**	**+1.8**
	1.6nm,0.3s,baz=21,slow=15,SNR=4.7						
KKM	**Kota Kinabalu**	**15.64**	**305**	P	**P**	**10 55 44.6**	**-0.5**
WRAB	**Tennant Creek**	**17.57**	**163**	*e*P	**P**	**10 56 09.7**	**+0.3**
WRA	**Warramunga Arr**	**17.57**	**163**	P	**P**	**10 56 09.6**	**+0.2**
	4.0nm,0.3s,baz=344,slow=11,SNR=14						
WRA				S	**S**	**10 59 13.5**	**-8.1**
	0.1nm,0.3s,baz=332,slow=22,SNR=2.5						
WB2	**Warramunga Arr**	**17.57**	**163**	*e*P	**P**	**10 56 09.8**	**+0.3**
PMG	**Port Moresby**	**19.12**	**110**	P	**P**	**10 56 28.1**	**-0.3**
	35nm,0.9s						
PMG	**Port Moresby**	**19.12**	**110**	P	**P**	**10 56 28.1**	**-0.3**
PMG				pmax	pmax		
	comp=Z,35nm,0.9s						
KSM	**Kuching**	**19.21**	**283**	*e*P	**P**	**10 56 28.7**	**-0.6**
ASPA	**Alice Springs**	**21.03**	**167**	*e*P	**P**	**10 56 46.7**	**-1.8**
ABRA	**Dolores**	**22.14**	**339**	*e*P	**P**	**10 57 08.8**	**+9.1**
CTA	**Charters Tower**	**23.88**	**136**	P	**P**	**10 57 19.4**	**+2.7**
	comp=Z,7.1nm,0.7s,mb4.2,baz=315,slow=12,SNR=5.5						
KULM	**Kulim**	**29.50**	**286**	*e*P	**P**	**10 58 10.0**	**+1.3**
KLBR	**Kellerberrin**	**30.29**	**199**	*e*P	**P**	**10 58 14.7**	**-0.9**
	comp=Z,65nm,1.7s,mb5.1						
STKA	**Stephens Creek**	**31.02**	**159**	*e*P	**P**	**10 58 21.1**	**-1.0**
	comp=Z,6.9nm,0.7s,mb4.6						
STKA	**Stephens Creek**	**31.02**	**159**	P	**P**	**10 58 20.4**	**-1.7**
	comp=Z,6.9nm,0.6s,mb4.6,baz=326,slow=9.8,SNR=7.5						
NWAO	**Narrogin (SRO)**	**31.68**	**199**	P	**P**	**10 58 26.2**	**-1.8**
	comp=Z,4.1nm,0.5s,mb4.5,baz=59,slow=1.4,SNR=6.4						
NWAO	**Narrogin (SRO)**	**31.68**	**199**	*e*P	**P**	**10 58 26.8**	**-1.1**
KKTK	**Khon Kaen**	**32.25**	**308**	P	**P**	**10 58 32.0**	**-1.1**
	comp=Z,340nm,0.5s						
GYA	**Guiyang**	**36.43**	**325**	P	**P**	**10 59 09.8**	**+1.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
KMI	**Kunming**	**37.86**	**319**	P	**P**	**10 59 20.8**	**0.0**
KMI				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.7						
KMI	**Kunming**	**37.86**	**319**	P	**P**	**10 59 20.8**	**0.0**
	comp=Z,20nm,1.4s,mb4.7						
MJAR	**Matsushiro Arr**	**40.33**	**12**	P	**P**	**10 59 40.0**	**-1.1**
	comp=Z,2.3nm,0.8s,mb4.0,baz=188,slow=9.0,SNR=4.9						
XAN	**Xi'an**	**41.47**	**335**	P	**P**	**10 59 50.6**	**0.0**
LZH	**Lanzhou**	**45.48**	**331**	*e*P	**P**	**11 00 24.1**	**+0.9**
LZH				AP	pP	11 00 35.9	+1.3
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.9						
LZH				AMB	AMB		
	comp=Z,120nm,5.0s						
LZH	**Lanzhou**	**45.48**	**331**	*e*P	**P**	**11 00 24.1**	**+0.9**
	comp=Z,30nm,1.4s,mb4.9						
LZH				pP	pP	11 00 35.9	+1.3
LZH				sP	sP	11 00 40.4	+0.9
SHL	**Shillong**	**45.85**	**311**	*e*P	**P**	**11 00 27.0**	**+0.8**
LSA	**Lhasa**	**48.70**	**315**	*e*P	**P**	**11 00 50.1**	**+1.6**
GTA	**Gaotai**	**50.06**	**330**	*e*P	**P**	**11 00 58.8**	**0.0**
GTA				AP	pP	11 01 08.9	-1.4
GTA				XP	sP	11 01 14.3	-0.9
GTA				PCP	PcP	11 02 19.0	+0.6
GTA				PP	PP	11 02 55.8	+0.9
GTA				PPP	PPP	11 03 50.4	-1.0
GTA				SCP		11 06 08.5	
GTA				PCS		11 06 11.3	
GTA				S	**S**	**11 08 05.9**	**+0.1**
GTA				AMB	AMB		
	comp=Z,870nm,7.2s						
GTA				LR	LR		
	comp=N,310nm,16.7s,MS4.6						
GTA				LR	LR		
	comp=E,410nm,18.6s,MS4.6						
GTA				LR	LR		
	comp=Z,470nm,18.6s,MS4.5						
JIRN	**Jiri**	**51.29**	**309**	*e*P	**P**	**11 01 08.5**	**+0.2**
	comp=Z,16nm,0.6s,mb5.1						
GUN	**Gumba**	**51.65**	**310**	*e*P	**P**	**11 01 11.2**	**+0.2**
	comp=Z,32nm,0.6s,mb5.5						
PKI	**Pulchoki**	**51.85**	**309**	*e*P	**P**	**11 01 12.9**	**+0.4**
	comp=Z,28nm,1.0s,mb5.2						
KKN	**Kakani**	**52.05**	**309**	*e*P	**P**	**11 01 13.8**	**-0.2**
	comp=Z,19nm,0.7s,mb5.2						
DMN	**Daman**	**52.10**	**309**	*e*P	**P**	**11 01 14.4**	**0.0**
	comp=Z,50nm,1.1s,mb5.4						
KLR	**Kul'dur**	**52.14**	**2**	*e*P	**P**	**11 01 04.7**	**-10**
GKN	**Gorkha**	**52.66**	**309**	*e*P	**P**	**11 01 18.2**	**-0.3**
	comp=Z,20nm,0.5s,mb5.3						
KOLN	**Koldanda**	**53.36**	**308**	*e*P	**P**	**11 01 23.5**	**-0.3**
	comp=Z,38nm,0.8s,mb5.4						
HYB	**Hyderabad**	**53.74**	**294**	*i* P	**P**	**11 01 26.0**	**-0.7**
HYB	**Hyderabad**	**53.74**	**294**	*e*P	**P**	**11 01 26.0**	**-0.7**
SONM	**Songino Array**	**54.41**	**341**	P	**P**	**11 01 30.6**	**-0.7**
	comp=Z,3.1nm,0.9s,mb4.3,baz=156,slow=7.9,SNR=10						
RPZ	**Rata Peaks**	**54.96**	**144**	P	**P**	**11 01 35.0**	**-0.3**
	comp=Z,22nm,0.9s,mb5.2,baz=332,slow=6.7,SNR=5.2						
URZ	**Urewera**	**56.12**	**135**	P	**P**	**11 01 44.1**	**+0.4**
	comp=Z,11nm,0.6s,mb5.0,baz=44,slow=10,SNR=8.9						
ZAK	**Zakamensk**	**57.64**	**341**	*e*P	**P**	**11 01 54.9**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.2						
WMQ	**Urumqi**	**59.57**	**326**	P	**P**	**11 02 08.0**	**+0.1**
WMQ				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
MKAR	**Makanchi Array**	**64.41**	**326**	P	**P**	**11 02 39.4**	**-0.8**
	comp=Z,2.5nm,0.5s,mb4.5,baz=111,slow=7.4,SNR=16						
YAK	**Yakutsk**	**64.92**	**0**	*e*P	**P**	**11 02 43.0**	**-0.2**
	comp=Z,46nm,0.7s,mb5.6						
YAK	**Yakutsk**	**64.92**	**0**	*e*P	**P**	**11 02 43.0**	**-0.2**
YAK				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.6						
AAK	**Ala-Archa**	**66.91**	**319**	*e*P	**P**	**11 02 56.1**	**-0.1**
	comp=Z,11nm,1.2s,mb4.8						
AAK	**Ala-Archa**	**66.91**	**319**	*e*P	**P**	**11 02 56.1**	**-0.1**
AAK				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.8						
ZAL	**Zalesovo**	**67.63**	**334**	P	**P**	**11 02 59.8**	**-0.8**
	comp=Z,1.4nm,0.3s,mb4.4,baz=20,slow=3.6,SNR=4.6						
KURK	**Kurchatov**	**68.66**	**328**	*e*P	**P**	**11 03 06.6**	**-0.4**
	comp=Z,33nm,1.0s,mb5.2						
KURK	**Kurchatov**	**68.66**	**328**	*e*P	**P**	**11 03 06.6**	**-0.4**
KURK				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
NVS	**Novosibirsk**	**68.92**	**334**	*i* P	**P**	**11 03 07.2**	**-1.4**
NVS				pmax	pmax		
	comp=Z,23nm,1.5s,mb4.9						
NVS				pmax	pmax		
	comp=N,26nm,1.7s						
NVS				pmax	pmax		
	comp=E,14nm,1.4s						
JMDO	**Jabal Madar**	**73.58**	**294**	⇑P	**P**	**11 03 37.0**	**-0.2**
	SNR=6.6						
SMDO	**Samad**	**73.76**	**295**	⇑P	**P**	**11 03 38.2**	**0.0**
	SNR=6.1						
BIDO	**Bidbid**	**73.77**	**295**	⇓P	**P**	**11 03 38.6**	**+0.3**
	SNR=6.0						
BVAR	**Borovoye Array**	**74.22**	**328**	P	**P**	**11 03 40.0**	**-0.3**
	comp=E,3.6nm,0.7s,mb4.4,baz=130,slow=12,SNR=7.5						
CHKZ	**Chkalovo**	**74.40**	**328**	*e*P	**P**	**11 03 40.6**	**-0.7**
	comp=E,13nm,1.1s,mb4.8						
CHKZ	**Chkalovo**	**74.40**	**328**	*e*P	**P**	**11 03 40.6**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
BSY	**Bisya**	**74.47**	**294**	⇑P	**P**	**11 03 41.7**	**-0.7**
TIXI	**Tiksi**	**74.58**	**360**	*e*P	**P**	**11 03 37.0**	**-5.0**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
BANOM	**Banah**	**75.85**	**298**	⇑P	**P**	**11 03 50.8**	**+0.6**
VNDA	**Vanda**	**76.45**	**173**	*e*P	**P**	**11 03 52.7**	**0.0**
	comp=Z,3.1nm,0.6s,mb4.4						
VNDA	**Vanda**	**76.45**	**173**	*e*P	**P**	**11 03 52.7**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
RBK	**Rabkut**	**76.45**	**289**	⇓P	**P**	**11 03 53.3**	**-0.5**
WHFO	**Wadi Hawf**	**76.92**	**289**	⇑P	**P**	**11 03 55.9**	**-0.5**
	SNR=6.8						
SBA	**Scott Base**	**77.34**	**172**	*e*P	**P**	**11 03 57.1**	**-0.6**
	comp=Z,2.2nm,0.8s,mb4.1						
SBA	**Scott Base**	**77.34**	**172**	*e*P	**P**	**11 03 57.1**	**-0.6**
SBA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
MAW	**Mawson**	**78.23**	**201**	P	**P**	**11 04 02.6**	**-0.1**
	comp=Z,2.8nm,0.7s,mb4.3,baz=77,slow=9.9,SNR=3.6						
AB31	**Akbulak array**	**78.82**	**321**	*e*P	**P**	**11 04 06.3**	**0.0**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
AKTO	**Aktyubinsk**	**80.36**	**322**	P	**P**	**11 04 14.6**	**0.0**
	comp=Z,5.5nm,0.4s,mb4.8,baz=103,slow=9.4,SNR=8.7						
SVE	**Sverdlovsk**	**80.90**	**329**	*e*P	**P**	**11 04 19.6**	**+2.3**
OPO	**Ambohidratompo**	**81.26**	**252**	P	**P**	**11 04 20.9**	**+0.9**
	comp=Z,2.7nm,0.8s,mb4.3,baz=238,slow=2.5,SNR=4.3						
ARU	**Arti**	**81.85**	**328**	⇑*e*P	**P**	**11 04 31.7**	**+9.5**
QSPA	**South Pole Qui**	**86.89**	**180**	*e*P	**P**	**11 04 47.3**	**+0.4**
	comp=Z,7.8nm,0.9s,mb4.9						
ILAR	**Eielson Array**	**90.24**	**25**	P	**P**	**11 05 05.0**	**+1.8**
	comp=Z,0.8nm,0.7s,mb4.1,baz=237,slow=4.8,SNR=6.8						
KMBO	**Kilima Mbogo**	**91.67**	**269**	P	**P**	**11 05 13.2**	**+2.1**
	comp=Z,2.2nm,0.9s,mb4.5,baz=75,slow=5.5,SNR=6.5						
ARCES	**ARCESS Array B**	**97.56**	**340**	P	**P**	**11 05 36.5**	**-0.2**
	comp=Z,3.8nm,0.9s,mb4.9,baz=76,slow=5.0,SNR=4.2						
ARCES	**ARCESS Array B**	**97.56**	**340**	P	**P**	**11 05 36.5**	**-0.2**
TXAR	**Lajitas Array**	**123.70**	**57**	PKP	PKPdf	11 11 02.1	+2.1
	comp=Z,0.6nm,0.8s,baz=208,slow=1.9,SNR=6.0						
PLCA	**Paso Flores**	**132.90**	**160**	PKP	PKPdf	11 11 20.3	+2.9
	comp=Z,0.7nm,0.7s,baz=305,slow=2.3,SNR=3.6						
PLCA	**Paso Flores**	**132.90**	**160**	PKP	PKPdf	11 11 20.3	+2.9
DBIC	**Dimbokro**	**133.89**	**276**	PKP	PKPdf	11 11 22.0	+2.1
	comp=Z,1.5nm,0.6s,baz=108,slow=3.2,SNR=3.6						
DBIC	**Dimbokro**	**133.89**	**276**	PKP	PKPdf	11 11 22.0	+2.1
CFAA	**Coronel Fontan**	**141.83**	**156**	PKhKP		11 11 31.5	
	comp=Z,0.2nm,0.4s,baz=75,slow=5.2,SNR=3.6						
JTS	**JuntasAbangare**	**145.56**	**76**	PKPbc	PKPbc	11 11 44.0	+2.4
	comp=Z,16nm,0.8s,baz=333,slow=4.7,SNR=7.9						
CPUP	**Villa Florida**	**150.15**	**169**	*e*PKPbc	PKPdf	11 11 55.6	+7.6
LPAZ	**La Paz**	**154.39**	**139**	PKPab	PKPab	11 12 21.1	+1.7
	comp=Z,2.5nm,0.9s,baz=144,slow=2.9,SNR=5.1						

MAN 13 10:57:36.5, 9.16N×122.77E, h25^{km}, mb4.6, ML3.4, MS3.3, 3C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.50**	**68**	*i* P	Pb	10 57 48.0	+1.4
SNPH				*e*S	Sb	10 57 56.0	+2.5
DCPH	**Dipolog City**	**0.81**	**135**	⇑*i*P	Pb	10 57 50.8	-1.1
DCPH				*i* S	Sb	10 58 01.3	-1.1
TBP	**Tagbilaran**	**1.20**	**64**	*e*P	Pn	10 57 58.0	0.0
TBP				*e*S	Sn	10 58 13.0	-0.5
IPIL	**Ipil**	**1.37**	**188**	*e*P	Pn	10 58 00.4	-0.1
IPIL				*e*S	Sn	10 58 16.8	-1.2
PAGZ	**Pagadian**	**1.44**	**155**	*e*P	Pn	10 58 01.0	-0.3
PAGZ				*e*S	Sn	10 58 20.2	+0.8
LLP	**Lapu-Lapu**	**1.65**	**46**	⇑*i*P	Pn	10 58 04.5	+0.2
LLP				*i* S	Sn	10 58 24.6	-0.3
MSLP	**Maasin**	**2.28**	**65**	*e*P	Pn	10 58 13.8	+0.4
MSLP				*e*S	Sn	10 58 42.4	+1.5
RCP	**Roxas**	**2.39**	**359**	⇑*e*P	Pn	10 58 15.9	+1.0
RCP				*e*S	Sn	10 58 44.9	+1.2
CUYO	**Cuyo Island**	**2.41**	**314**	*e*P	Pn	10 58 15.1	-0.1
CUYO				*e*S	Sn	10 58 42.8	-1.5
BUKP	**Musuan**	**2.60**	**119**	*e*P	Pn	10 58 22.7	+4.8
BUTP	**Butuan**	**2.82**	**94**	*e*P	Pn	10 58 14.3	-6.8
SJMP	**San Jose**	**3.66**	**334**	*e*P	Pn	10 58 33.3	+0.2
BUSP	**Coron**	**3.79**	**318**	*e*P	Pn	10 58 34.1	-0.8
BUSP				*e*S	Sn	10 59 16.3	-3.0
ENPP	**El Nido**	**3.87**	**302**	*e*P	Pn	10 58 34.5	-1.5

IDC ***13*** *11:06:52.6±0.6, 6.33S×146.83E, mb4.2/10, mb1 4.4/13, mb1mx4.4/17, mbtmp4.3/13, ML4.0/3, MS4.2/2, Ms1 4.2/2, ms1mx3.9/18, Error ellipse: s-maj=24.5km s-min=12.4km az=90.0*

MOS ***13*** *11:06:56.6±0.9, 6.32S×146.79E, h33^{km}, mb4.8/4, Error ellipse: s-maj=15.1km s-min=10.3km az=92.2*

BJI ***13*** *11:07:00.4, 6.40S×146.90E, h53^{km}, mB5.3, mb4.9*

NEIC ***13*** *11:07:00.5±1.4, 6.44S×146.88E, h54^{km}±13^{km}, mb4.6/7, Error ellipse: s-maj=11.6km s-min=9.9km az=122.0*

ISC 13 11:06:55.8±3.0, **6.35S**±0.07×**146.86E**±0.08, **h27**^{km}±22^{km}, **n52**, σ**1^{s}00**/47, **mb4.5**/19, **MS4.3**/1, **1D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.05**	**174**	Pn	**Pn**	**11 07 44.0**	**+0.6**
	37nm,0.3s,baz=348,slow=6.7,SNR=109						
PMG				Lg		11 08 29.6	
	99nm,0.3s,baz=183,slow=22,SNR=2.9						
PMG	**Port Moresby**	**3.05**	**174**	*e*P	**Pn**	**11 07 44.2**	**+0.8**
PMG				*e*S	**Sn**	**11 08 25.1**	**+5.6**
PMG				Lg		11 08 29.6	
HNR	**Honiara**	**13.32**	**104**	Pn	**P**	**11 10 07.4**	**+1.7**
	2.5nm,0.3s,baz=151,slow=6.8,SNR=7.9						
CTA	**Charters Tower**	**13.67**	**182**	*e*P	**P**	**11 10 11.5**	**+1.0**
	15nm,1.6s						
CTA	**Charters Tower**	**13.67**	**182**	Pn	**P**	**11 10 10.0**	**-0.4**
	1.1nm,0.3s,baz=354,slow=14,SNR=8.1						
CTA	**Charters Tower**	**13.67**	**182**	*e*P	**P**	**11 10 11.5**	**+1.0**
CTA				pmax	pmax		
	comp=Z,15nm,1.6s						
KAKA	**Kakadu**	**15.56**	**245**	*e*P	**P**	**11 10 54.5**	**+19**
	comp=Z,55nm,0.6s						
WRAB	**Tennant Creek**	**18.17**	**221**	*e*P	**P**	**11 11 07.6**	**-0.5**
	comp=Z,45nm,0.9s						
WRAB	**Tennant Creek**	**18.17**	**221**	*e*P	**P**	**11 11 07.6**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,45nm,0.9s						
WB2	**Warramunga Arr**	**18.17**	**221**	⇓*i*P	**P**	**11 11 07.5**	**-0.6**
WRA	**Warramunga Arr**	**18.18**	**221**	P	**P**	**11 11 07.0**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=45,slow=12,SNR=92						
WRA				ScP		11 19 17.5	
	baz=38,slow=2.3,SNR=4.9						
GUMO	**Guam**	**19.91**	**354**	LR	LR	11 17 31.7	
	comp=Z,477nm,21.1s,baz=150,slow=32						
ASPA	**Alice Springs**	**21.26**	**215**	*e*P	**P**	**11 11 42.8**	**+0.5**
FITZ	**Fitzroy Crossi**	**23.77**	**239**	*e*P	**P**	**11 12 07.8**	**+0.6**
	comp=Z,39nm,1.1s,mb4.8						
FITZ	**Fitzroy Crossi**	**23.77**	**239**	P	**P**	**11 12 05.7**	**-1.4**
	comp=Z,34nm,1.0s,mb4.7,baz=65,slow=11,SNR=17						
FITZ				S	**S**	**11 16 18.9**	**+1.4**
	comp=Z,11nm,0.9s,baz=83,slow=18,SNR=1.8						
DZM	**Mont Dzumac**	**24.54**	**132**	P	**P**	**11 12 14.7**	**+0.1**
	comp=Z,6.9nm,0.6s,mb4.3,baz=252,slow=22,SNR=10						
STKA	**Stephens Creek**	**25.87**	**190**	*e*P	**P**	**11 12 26.3**	**-0.8**
	comp=Z,6.7nm,0.6s,mb4.3						
STKA	**Stephens Creek**	**25.87**	**190**	P	**P**	**11 12 26.3**	**-0.9**
	comp=Z,5.4nm,0.7s,mb4.2,baz=5.3,slow=11,SNR=12						
STKA				LR	LR	11 23 00.4	
	comp=Z,791nm,19.2s,MS4.3,baz=346,slow=37						
NWAO	**Narrogin (SRO)**	**38.18**	**222**	P	**P**	**11 14 13.9**	**-1.0**
	comp=Z,2.4nm,0.4s,mb4.3,baz=48,slow=14,SNR=3.3						
MJAR	**Matsushiro Arr**	**43.43**	**350**	P	**P**	**11 14 58.0**	**-0.1**
	comp=Z,0.9nm,0.9s,mb3.5,baz=165,slow=6.5,SNR=2.7						
NST	**Nakhon Sawan**	**51.19**	**296**	P	**P**	**11 16 06.0**	**+6.8**
CHG	**Chiang Mai**	**53.43**	**299**	P	**P**	**11 16 24.6**	**+8.6**
XAN	**Xi'an**	**53.86**	**321**	P	**P**	**11 16 19.5**	**+0.6**
LZH	**Lanzhou**	**58.38**	**320**	*e*P	**P**	**11 16 51.6**	**+0.2**
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
LZH				AMB	AMB		
	comp=Z,110nm,4.6s						
LZH	**Lanzhou**	**58.38**	**320**	*e*P	**P**	**11 16 51.6**	**+0.2**
	comp=Z,26nm,1.2s,mb5.1						
LZH				pP	pP	11 16 59.8	-0.1
LZH				sP	sP	11 17 02.8	-0.2
FX1	**Attu Island--F**	**63.09**	**18**	P	**P**	**11 17 22.1**	**-1.0**
	comp=Z,33nm,0.6s,baz=208,slow=1.7,SNR=13						
FX1	**Attu Island--F**	**63.09**	**18**	*e*P	**P**	**11 17 21.8**	**-1.2**
SONM	**Songino Array**	**64.64**	**331**	P	**P**	**11 17 32.8**	**-0.5**
	comp=Z,0.8nm,0.6s,mb4.0,baz=136,slow=4.3,SNR=7.5						
ZAK	**Zakamensk**	**67.88**	**332**	*e*P	**P**	**11 17 53.3**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
GUN	**Gumba**	**67.94**	**303**	*e*P	**P**	**11 17 57.4**	**+2.7**
	comp=Z,12nm,0.6s,mb5.2						
PKI	**Pulchoki**	**68.22**	**303**	*e*P	**P**	**11 17 57.9**	**+1.4**
	comp=Z,7.3nm,0.6s,mb4.9						
KKN	**Kakani**	**68.40**	**303**	*e*P	**P**	**11 17 59.0**	**+1.4**
DMN	**Daman**	**68.48**	**303**	*e*P	**P**	**11 17 59.8**	**+1.7**
	comp=Z,27nm,1.0s,mb5.2						
GKN	**Gorkha**	**69.01**	**303**	*e*P	**P**	**11 18 02.7**	**+1.4**
	comp=Z,3.1nm,0.3s,mb4.7						
BOD	**Bodaibo**	**69.27**	**342**	*e*P	**P**	**11 18 01.5**	**-0.9**
KOLN	**Koldanda**	**69.80**	**303**	*e*P	**P**	**11 18 06.7**	**+0.5**
	comp=Z,14nm,0.7s,mb5.0						
VNDA	**Vanda**	**71.57**	**177**	*e*P	**P**	**11 18 15.3**	**-0.8**
	comp=Z,4.1nm,1.0s,mb4.3						
VNDA	**Vanda**	**71.57**	**177**	*e*P	**P**	**11 18 15.4**	**-0.7**
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SBA	**Scott Base**	**72.22**	**176**	*e*P	**P**	**11 18 20.0**	**0.0**
	comp=Z,5.8nm,1.2s,mb4.4						
SBA	**Scott Base**	**72.22**	**176**	*e*P	**P**	**11 18 20.0**	**0.0**
SBA				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
MKAR	**Makanchi Array**	**77.68**	**321**	P	**P**	**11 18 51.1**	**-0.6**
	comp=Z,1.1nm,0.7s,mb3.9,baz=102,slow=6.7,SNR=8.9						
ZAL	**Zalesovo**	**79.24**	**328**	P	**P**	**11 18 59.0**	**-1.1**
	comp=Z,1.3nm,0.7s,mb4.0,baz=4.2,slow=5.0,SNR=6.8						
QSPA	**South Pole Qui**	**83.62**	**180**	*e*P	**P**	**11 19 22.8**	**+0.3**
	comp=Z,69nm,0.6s						
ILAR	**Eielson Array**	**85.85**	**23**	P	**P**	**11 19 32.5**	**-1.5**
	comp=Z,2.9nm,0.7s,mb4.6,baz=251,slow=4.9,SNR=31						
CHKZ	**Chkalovo**	**87.00**	**325**	*e*P	**P**	**11 19 38.8**	**-1.0**
INK	**Inuvik**	**92.03**	**21**	P	**P**	**11 20 02.7**	**-0.4**
	comp=Z,1.0nm,0.8s,mb4.2,baz=222,slow=4.9,SNR=4.6						
PLCA	**Paso Flores**	**121.91**	**147**	PKP	PKPdf	11 25 48.8	-4.1
	comp=Z,0.7nm,0.8s,baz=219,slow=0.6,SNR=3.3						
GERES	**GERESS Array B**	**122.11**	**325**	PKP	PKPdf	11 25 49.6	-3.4
	comp=Z,0.5nm,0.7s,baz=256,slow=5.5,SNR=3.5						
SDV	**Santo Domingo**	**142.76**	**84**	*e*PKPpre		11 26 25.9	
SAML	**Samuel**	**146.42**	**117**	*e*PKPbc	PKPbc	11 26 36.8	+1.5
DBIC	**Dimbokro**	**151.90**	**272**	PKPbc	PKPdf	11 26 51.1	+3.6
	comp=Z,3.9nm,0.8s,baz=51,slow=1.2,SNR=5.3						
DBIC	**Dimbokro**	**151.90**	**272**	*e*PKPbc	PKPdf	11 26 51.5	+3.9

IDC ***13*** *11:45:03.6±2.0, 3.15S×128.55E, mb3.4/2, mb1 3.6/3, mb1mx3.5/14, mbtmp3.5/3, ML3.7/1, Error ellipse: s-maj=128.2km s-min=35.3km az=70.0*

NEIC ***13*** *11:45:05.5±1.0, 2.88S×129.57E, h20^{km}, mb3.7/2, Error ellipse: s-maj=46.6km s-min=12.0km az=75.0*

ISC 13 11:45:05.4±1.1, **2.9S**±0.1×**129.4E**±0.4, **h33**^{km}, **n8**, σ**0^{s}64**/8, **mb3.4**/2, **1C, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.52**	**193**	*e*P	**P**	**11 48 44.8**	**+1.3**
	3.6nm,0.6s						
FITZ	**Fitzroy Crossi**	**15.52**	**193**	Pn	**P**	**11 48 42.8**	**-0.7**
	0.3nm,0.3s,baz=36,slow=12,SNR=3.8						
WRAB	**Tennant Creek**	**17.57**	**164**	*e*P	**P**	**11 49 09.7**	**+0.2**
	3.3nm,0.7s						
WRA	**Warramunga Arr**	**17.58**	**164**	P	**P**	**11 49 09.6**	**0.0**
	0.3nm,0.3s,baz=341,slow=12,SNR=12						
WB2	**Warramunga Arr**	**17.58**	**164**	*e*P	**P**	**11 49 09.3**	**-0.3**
ASPA	**Alice Springs**	**21.07**	**168**	⇑*i*P	**P**	**11 49 49.1**	**-0.1**
SONM	**Songino Array**	**54.42**	**341**	P	**P**	**11 54 32.6**	**+0.9**
	0.4nm,0.8s,mb3.4,baz=153,slow=6.4,SNR=2.6						
MKAR	**Makanchi Array**	**64.53**	**326**	P	**P**	**11 55 40.4**	**-1.0**
	0.2nm,0.5s,mb3.4,baz=143,slow=6.1,SNR=4.1						

NNC ***13*** *12:03:49.1±1.4, 49.18N×73.41E, mpv3.3, Error ellipse: s-maj=16.5km s-min=11.5km az=66.0*

MOS ***13*** *12:03:54.7±1.4, 49.30N×73.25E, h33^{km}, mb3.5/1, Error ellipse: s-maj=19.9km s-min=11.9km az=106.0*

NEIC ***13*** *12:03:54.1±0.7, 49.30N×73.33E, h10^{km}, Error ellipse: s-maj=12.6km s-min=7.5km az=223.0*

IDC ***13*** *12:03:56.0±1.9, 49.41N×73.46E, h18^{km}±12^{km}, mb2.6/1, mb1 3.5/5, mb1mx3.3/23, mbtmp3.5/5, ML3.4/4, Error ellipse: s-maj=13.6km s-min=7.3km az=20.0*

ISC 13 12:03:53.6±0.4, **49.25N**±0.03×**73.27E**±0.05, **h33**^{km}, **n21**, σ**1^{s}22**/37, **mb2.6**/1, **17C-5D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KURK	**Kurchatov**	**3.75**	**65**	⇓Pn	**Pn**	**12 04 51.2**	**+0.5**
	6.3nm,0.5s						
KURK				⇑Lg		12 05 45.2	
	20nm,0.5s						
KURK	**Kurchatov**	**3.75**	**65**	*e*P	**P**	**12 04 51.1**	**+0.6**
KURK				*e*S	**S**	**12 05 41.6**	**+7.5**
VOSK	**Vostochnaya**	**3.76**	**338**	⇑Pn	**Pn**	**12 04 51.8**	**+0.9**
	1.8nm,0.5s						
VOSK				⇑Pg	**P**	**12 05 00.0**	**+9.3**
	14nm,0.7s						
VOSK				⇓Sn	**Sn**	**12 05 35.0**	**+0.5**
	6.4nm,0.3s						
VOSK				⇓Lg		12 05 46.3	
	61nm,0.6s						
BVA0	**Borovoye Array**	**4.19**	**335**	⇑Pn	**Pn**	**12 04 57.6**	**+0.7**
	0.2nm,0.4s,baz=136,slow=13,SNR=57						
BVA0				⇓Pg	**P**	**12 05 08.2**	**+11**
	2.5nm,0.7s,baz=147,slow=16,SNR=21						
BVA0				⇑Lg		12 06 04.4	
	3.7nm,0.3s,baz=140,slow=36,SNR=12						
BVAR	**Borovoye Array**	**4.19**	**335**	Pn	**Pn**	**12 04 57.9**	**+1.0**
	1.8nm,0.3s,baz=148,slow=13,SNR=35						
BVAR				Pg	**P**	**12 05 08.1**	**+11**
	6.4nm,0.3s,baz=146,slow=15,SNR=25						
BVAR				Sn	**Sn**	**12 05 44.5**	**-0.8**
	15nm,0.3s,baz=140,slow=25,SNR=13						
BVAR				Lg		12 06 04.1	
	18nm,0.3s,baz=151,slow=26,SNR=7.6						
BVAR	**Borovoye Array**	**4.19**	**335**	P	**P**	**12 04 57.9**	**+1.2**
BVAR						12 05 44.5	
BRVK	**Borovoye**	**4.25**	**335**	*e*P	**P**	**12 04 58.6**	**+1.0**
BRVK				*e*S	**S**	**12 05 46.1**	**-0.6**
CHKZ	**Chkalovo**	**4.73**	**340**	⇑Pn	**Pn**	**12 05 04.9**	**+0.4**
	1.9nm,0.5s						
CHKZ				⇑Pg	**P**	**12 05 17.0**	**+13**
	9.2nm,0.7s						
CHKZ				⇑Sn	**Sn**	**12 05 57.1**	**-1.9**
	10.0nm,0.3s						
CHKZ				⇑Lg		12 06 16.9	
	47nm,0.7s						
CHKZ	**Chkalovo**	**4.73**	**340**	*e*P	**P**	**12 05 05.0**	**+0.6**
KK31	**Karatay Array**	**6.44**	**198**	Pn	**Pn**	**12 05 30.4**	**+1.7**
	3.4nm,0.3s,baz=15,slow=14,SNR=75						
KK31				⇑Sn	**Sn**	**12 06 41.5**	**-0.3**
	5.2nm,0.5s						
KK31				⇑Lg		12 07 10.4	
	18nm,0.5s,baz=18,slow=28,SNR=7.1						
MK31	**Makanchi Array**	**6.53**	**109**	Pn	**Pn**	**12 05 30.1**	**+0.1**
	0.5nm,0.2s,baz=285,slow=12,SNR=49						
MK31				⇑Sn	**Sn**	**12 06 41.4**	**-2.7**
	7.4nm,0.6s						
MK31				Lg		12 07 10.8	
	12nm,0.5s,baz=296,slow=26,SNR=9.5						
MKAR	**Makanchi Array**	**6.53**	**109**	Pn	**Pn**	**12 05 30.1**	**+0.1**
	0.9nm,0.3s,baz=297,slow=10.0,SNR=40						
MKAR				Sn	**Sn**	**12 06 42.0**	**-2.1**
	2.0nm,0.3s,baz=288,slow=20,SNR=7.1						
MKAR				Lg		12 07 16.2	
	4.5nm,0.3s,baz=300,slow=27,SNR=9.4						
AAK	**Ala-Archa**	**6.68**	**172**	⇑Pn	**Pn**	**12 05 33.1**	**+1.1**
	2.2nm,0.5s						
AAK				⇑Sn	**Sn**	**12 06 46.8**	**-0.9**
	8.4nm,0.6s						
AAK				⇓Lg		12 07 23.8	
	64nm,1.1s						
AAK	**Ala-Archa**	**6.68**	**172**	*e*P	**P**	**12 05 32.4**	**+0.6**
	4.5nm,0.5s						
AAK	**Ala-Archa**	**6.68**	**172**	*e*P	**P**	**12 05 32.4**	**+0.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ZAL	**Zalesovo**	**8.57**	**52**	Pn	**P**	**12 05 56.1**	**-2.1**
	comp=Z,1.4nm,0.3s,baz=232,slow=9.5,SNR=6.1						
ZAL				Sn	**Sn**	**12 07 27.3**	**-7.6**
	comp=Z,3.8nm,0.3s,baz=27,slow=8.1,SNR=7.7						
ZAL				Lg		12 08 21.5	
	comp=Z,1.3nm,0.3s,baz=316,slow=22,SNR=6.8						
AB31	**Akbulak array**	**8.72**	**275**	⇑Pn	**P**	**12 06 00.6**	**+0.3**
	comp=Z,0.4nm,0.2s						
AB31				⇑Sn	**Sn**	**12 07 36.5**	**-2.2**
	comp=Z,1.2nm,0.5s						
AB31				⇑Lg		12 08 25.4	
	comp=Z,3.3nm,0.6s						
AKTO	**Aktyubinsk**	**9.93**	**283**	Pn	**P**	**12 06 17.4**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=97,slow=9.9,SNR=11						

AKTO				Sn	Sn	12 08 06.0	-2.3
	comp=Z,0.4nm,0.3s,baz=207,slow=22,SNR=6.3						
AKTO				Lg		12 09 12.3	
	comp=Z,0.3nm,0.3s,baz=132,slow=18,SNR=3.5						
ARU	Arti	11.41	315	P	P	12 06 37.0	-0.2
ARU	Arti	11.41	315	P	P	12 06 37.0	-0.1
SONM	Songino Array	21.89	81	P	P	12 08 48.0	+2.9
	comp=Z,0.2nm,0.8s,mb2.6,baz=270,slow=10,SNR=2.6						

ISK ***13*** *12:24:06.8,34.47N×32.50E,h37^{km},MD3.6*
HLW ***13*** *12:24:07.7,35.00N×32.79E,h16^{km},Mb3.1*
CSEM ***13*** *12:24:09.4±0.1,34.74N×32.43E,h40^{km},Mw3.0,Error ellipse: s-maj=4.6km s-min=3.8km az=94.0*
NEIC ***13*** *12:24:12.1,34.81N×32.79E,h10^{km},ML3.3(NIC),After NIC.*
NIC 13 12:24:12.1±0.3**,34.81N×32.79E,h10^{km},ML3.3,MW3.0, 2C-5D,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SZAC	Souni-Zanaja	0.09	124	⇓P	Pg	12 24 15.1	+0.5
SZAC	Souni-Zanaja	0.09	124	⇓iP	Pg	12 24 15.1	+0.5
LEF	Lefka	0.32	15	PG	Pg	12 24 20.7	+2.0
LEF				SG	Sg	12 24 31.7	+8.5
PPCY	Paphos	0.38	282	P	Pg	12 24 19.5	-0.3
ALFC	Alevga	0.38	336	P	Pg	12 24 20.2	+0.3
	28nm,0.2s						
CSS	Prodhromos	0.47	71	P	Pg	12 24 21.0	-0.6
	14nm,0.3s						
CSS				S	Sg	12 24 28.3	+0.3
MAMC	Mammari	0.50	44	P	Pg	12 24 22.3	0.0
PHNC	Paralimni	1.04	79	P	Pb	12 24 33.6	+1.9
PHNC				S	Sb	12 24 52.0	+6.9
IKL	Isikli	1.60	27	PN	Pn	12 24 39.2	-1.5
IKL				SN	Sn	12 25 02.9	+1.4
MERS	Mersin	2.49	34	ePN	Pn	12 24 52.9	-0.5
KARA	Karaisali	3.06	36	ePN	Pn	12 25 00.6	-0.9
FETY	Fethiye	3.53	302	ePN	Pn	12 25 00.7	-7.4
DALT	Dalyan (Mudla)	3.90	301	ePN	Pn	12 25 06.5	-7.0
AMAG	Maghara	4.17	175	⇓eP	Pn	12 25 12.4	-4.8
YER	Yerkesik	4.33	304	ePN	Pn	12 25 12.6	-7.0
DAT	Datca	4.65	296	ePN	Pn	12 25 16.2	-7.9
SUZ		4.95	180	⇓eP	Pn	12 25 23.3	-5.0
HNKL	Nakhl	4.97	168	⇑P	Pn	12 25 23.4	-5.1
HNKL				S	Sn	12 26 18.9	-7.8
HMAT	Matruh	6.05	234	⇓eP	Pn	12 25 37.7	-6.2
HMAT				S	Sn	12 26 43.0	-11
HMAT	Matruh	6.05	234	S	Sn	12 26 43.0	-11
HKAT	Jabal Katrina	6.35	170	⇑P	Pn	12 25 42.6	-5.4

IDC ***13*** *12:44:09.7±1.2,33.26N×101.29E,mb3.9/7,mb1 4.0/9, mb1mx3.8/22,mbtmp3.8/9,ML3.3/1,Error ellipse: s-maj=48.3km s-min=22.5km az=55.0*
NEIC ***13*** *12:44:12.4±2.4,33.19N×100.95E,h16^{km}±17^{km},mb3.9/3, Error ellipse: s-maj=16.9km s-min=12.3km az=47.0*
BJI ***13*** *12:44:13.0,33.35N×101.00E,h20^{km},mb4.2,ML3.9, Ms4.0,Msz3.6*
MOS ***13*** *12:44:19.0±2.0,33.90N×100.71E,h33^{km},mb4.0/1,Error ellipse: s-maj=23.1km s-min=11.6km az=96.4*
ISC 13 12:44:16.0±4.1**,33.53N**±0.09×**100.59E**±0.10**,h27**^{km}±31^{km}**, n27,**σ1§**18**/32**,mb3.9**/9**,Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	3.70	46	P	Pn	12 45 11.3	-1.6
LZH				PG	Pn	12 45 20.6	+7.7
LZH				S	Sn	12 45 57.3	+1.2
LZH				SG	Sn	12 46 11.0	+15
LZH				Smax			
	comp=N,2µm,1.1s						
LZH				Smax			
	comp=E,970nm,1.0s						
LZH				LR	LR		
	comp=E,5µm,5.2s						
LZH				LR	LR		
	comp=Z,5µm,6.9s						
LZH	Lanzhou	3.70	46	P	Pn	12 45 11.2	-1.7
LZH						12 45 57.3	
CD2	Chengdu	3.75	133	PG	Pn	12 45 16.1	+2.5
CD2				SG	Sn	12 45 57.6	+0.2
CD2				Smax			
	comp=N,490nm,0.7s						
CD2				Smax			
	comp=E,470nm,0.8s						
GTA	Gaotai	5.90	354	P	Pn	12 45 45.5	+1.5
GTA				PG	Pn	12 46 04.8	+21
GTA				SG	Sn	12 47 28.8	+37
GTA				Smax			
	comp=N,20nm,1.3s						
GTA				Smax			
	comp=E,30nm,0.8s						
GTA				LR	LR		
	comp=N,410nm,5.6s						
GTA				LR	LR		
	comp=E,350nm,5.6s						
GTA				LR	LR		
	comp=Z,380nm,9.1s						
XAN	Xi'an	6.96	84	P	Pn	12 45 48.9	-10
XAN				PG	Pn	12 46 15.9	+17
XAN				SG	Sn	12 47 45.4	+27
XAN				Smax			
	comp=N,50nm,1.1s						
XAN				Smax			
	comp=E,50nm,1.2s						
KMI	Kunming	8.59	167	P	P	12 46 29.7	+8.1
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
GYA	Guiyang	8.80	142	P	P	12 46 18.8	-5.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
GYA				LR	LR		
	comp=N,510nm,10.8s						
GYA				LR	LR		
	comp=E,560nm,10.2s						
GYA				LR	LR		
	comp=Z,260nm,7.8s						
GYA	Guiyang	8.80	142	P	P	12 46 18.8	-5.8
	comp=Z,10.0nm,0.6s						
WMQ	Urumqi	14.37	319	eP	P	12 47 39.0	-0.6
SONM	Songino Array	14.95	15	Pn	P	12 47 44.2	-3.0
	comp=Z,0.1nm,0.3s,baz=196,slow=13,SNR=9.8						
ZAK	Zakamensk	16.95	6	eP	P	12 48 13.0	+0.1
	comp=Z,2.0nm,1.0s						
ZAK	Zakamensk	16.95	6	eP	P	12 48 13.0	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MKAR	Makanchi Array	19.20	319	P	P	12 48 40.6	+0.2
	comp=Z,0.1nm,0.3s,baz=129,slow=9.9,SNR=8.6						
MKAR	Makanchi Array	19.20	319	P	P	12 48 40.6	+0.1
CN2	Changchun	21.88	55	eP	P	12 49 05.0	-3.6
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
CN2	Changchun	21.88	55	eP	P	12 49 05.0	-3.6
	comp=Z,10.0nm,0.9s,mb4.2						
AAK	Ala-Archa	22.39	302	eP	P	12 49 17.6	+4.0
	comp=Z,4.0nm,0.9s,mb3.9						
AAK	Ala-Archa	22.39	302	eP	P	12 49 17.6	+4.0
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.9						
ZAL	Zalesovo	23.27	336	P	P	12 49 23.1	+1.1
	comp=Z,0.9nm,0.4s,mb3.5,baz=346,slow=8.3,SNR=2.6						
ZAL	Zalesovo	23.27	336	P	P	12 49 23.2	+1.1
ARCES	ARCESS Array B	53.82	335	P	P	12 53 36.8	-1.4
	comp=Z,4.5nm,0.9s,mb4.4,baz=82,slow=8.6,SNR=6.2						
FINES	FINESS Array B	53.89	325	P	P	12 53 39.4	+0.6
	comp=Z,5.4nm,1.0s,mb4.5,baz=135,slow=11,SNR=6.6						
FINES	FINESS Array B	53.89	325	P	P	12 53 39.4	+0.6
NOA	NORSAR Array B	61.00	326	P	P	12 54 29.2	+0.1
	comp=Z,1.3nm,0.8s,mb4.1,baz=64,slow=6.0,SNR=3.3						
WRA	Warramunga Arr	62.16	144	P	P	12 54 28.9	-8.6
	comp=Z,0.4nm,0.7s,mb3.7,baz=339,slow=7.0,SNR=4.5						
GERES	GERESS Array B	63.72	313	P	P	12 54 47.1	-0.3
	comp=Z,0.3nm,0.5s,mb3.6,baz=76,slow=5.5,SNR=4.1						
ILAR	Eielson Array	68.92	25	P	P	12 55 16.1	-4.0
	comp=Z,0.7nm,1.0s,mb3.5,baz=281,slow=4.0,SNR=2.2						

BJI ***13*** *12:52:46.8,21.71N×143.76E,h228^{km},mB4.7,mb4.7*
JMA ***13*** *12:52:46.5±0.2,22.03N×144.43E,h195^{km},M4.8*
MOS ***13*** *12:52:48.1±0.8,21.82N×143.75E,h235^{km},mb4.4/16, Error ellipse: s-maj=14.7km s-min=7.6km az=116.6*
NEIC ***13*** *12:52:48.2±0.2,21.78N×143.71E,mb4.4/15,Error ellipse: s-maj=7.0km s-min=5.7km az=87.0*
IDC ***13*** *12:52:48.5±0.7,21.81N×143.66E,h216^{km}±6^{km},mb4.1/20, mb1 4.1/25,mb1mx4.0/31,mbtmp4.7/25,Error ellipse: s-maj=12.6km s-min=8.8km az=94.0*
ISC 13 12:52:46.1±0.8**,21.76N**±0.04×**143.78E**±0.06**,h213**^{km}±6^{km}**, h218**^{km}±2.1^{km}**:pP-P,n127,**σ1§**01**/132**,mb4.5**/51**,5C-1D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	5.07	344	P	P	12 54 01.8	-0.5
JHHJ				eS	S	12 54 59.6	-1.9
CBIJ	Chichi jima	5.51	345	P	P	12 54 07.0	-1.0
	60nm,0.3s,baz=288,slow=24,SNR=22						
CBIJ				S	S	12 55 08.8	-2.9
	69nm,0.3s,baz=276,slow=22,SNR=11						
CBIJ	Chichi jima	5.51	345	P	P	12 54 07.0	-1.0
CBIJ				S	S	12 55 10.2	-1.5
JHJ2	Mitsune	11.84	344	P	P	12 55 30.1	+0.6
JHJ	Hachijo jima 2	11.86	343	P	P	12 55 30.2	+0.5
	4.3nm,0.3s,baz=112,slow=19,SNR=2.7						
BSO1	Boso 1	13.08	350	P	P	12 55 44.4	-0.7
BSO3	Boso 3	13.31	348	P	P	12 55 48.1	+0.2
BSO3				eS	S	12 58 17.7	+6.2
BSO4	Boso 4	13.53	348	P	P	12 55 51.0	+0.4
BSO4				eS	S	12 58 23.7	+7.3
JWZ	Kozaga	13.72	330	P	P	12 55 54.5	+1.4
JIE	Ise	14.04	335	P	P	12 55 58.8	+1.7
JOD2	Odawara 2	14.07	344	P	P	12 55 56.8	-0.6
JOD2				eS	S	12 58 31.8	+3.2
JKN2	Miekihoku	14.08	334	P	P	12 55 59.5	+1.9
JNY	Yasuok	14.51	340	P	P	12 56 03.2	+0.4
JHU	Hanno	14.58	345	P	P	12 56 02.3	-1.4
JTO	Tosashimizu	14.73	321	P	P	12 56 09.1	+3.5
JRY	Ryogami san	14.83	344	P	P	12 56 06.5	-0.3
JOW	Kunigami	15.01	293	P	P	12 56 09.8	+0.7
	5.1nm,0.3s,baz=116,slow=12,SNR=14						
JHO	Hitachi	15.06	350	P	P	12 56 08.6	-1.0
JAG	Ashikaga	15.09	346	P	P	12 56 08.7	-1.3
MJAR	Matsushiro Arr	15.51	343	P	P	12 56 15.8	+0.6
	1.6nm,0.3s,baz=156,slow=7.9,SNR=18						
MJAR				S	S	12 59 03.8	+3.1
	0.4nm,0.3s,baz=151,slow=15,SNR=5.3						
MAJO	Matsushiro	15.51	343	eP	P	12 56 15.9	+0.7
	15nm,0.7s						
MAJO	Matsushiro	15.51	343	eP	P	12 56 15.9	+0.8
MAJO				pmax	pmax		
	comp=Z,15nm,0.7s						
MAT	Matsushiro	15.51	343	P	P	12 56 13.6	-1.5
MAT				S	S	12 59 05.1	+4.3
MAT	Matsushiro	15.51	343	eP	P	12 56 14.0	-1.1
	comp=Z,9.1nm,0.5s						
MAT				eS	S	12 59 05.0	+4.2
MAT	Matsushiro	15.51	343	eP	P	12 56 14.0	-1.1
MAT				eS	S	12 59 05.0	+4.2
MAT				pmax	pmax		
	comp=Z,9.0nm,0.5s						
JNU	Nakatsue	16.08	317	P	P	12 56 22.7	+0.6
	comp=Z,3.6nm,0.3s,baz=98,slow=26,SNR=29						
JHS	Saijyo	16.17	327	P	P	12 56 23.8	+0.7
JMK	Ichinoseki	17.28	353	P	P	12 56 35.9	+0.2
KS15	Wonju Array Si	20.82	322	eP	P	12 57 13.0	+1.1
ASAJ	Asahikawa	22.32	358	P	P	12 57 29.2	+2.7
	comp=Z,8.9nm,0.6s,mb4.5,baz=224,slow=19,SNR=8.7						
TGY	Tagaytay City	23.00	254	P	P	12 57 35.3	+1.8
	comp=Z,73nm,0.5s,mb5.5,baz=115,slow=14,SNR=5.9						
CN2	Changchun	26.73	330	eP	P	12 58 10.4	+2.7
TIA	Tai'an	27.29	308	⇓P	P	12 58 12.0	-0.9
TIA				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.0						
KKM	Kota Kinabalu	30.89	244	eP	P	12 58 45.4	+0.4
PMG	Port Moresby	31.15	174	eP	P	12 58 46.9	-0.3
	comp=Z,3.3nm,0.6s,mb4.1						
PMG				e		12 58 55.2	
PMG	Port Moresby	31.15	174	eP	P	12 58 46.9	-0.3
PMG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HHC	Hu-ho-hao-te	33.20	312	eP	P	12 59 03.5	-1.2
HHC				AP	pP	12 59 50.1	+1.4
HHC				XP	sP	13 00 15.3	+1.9
HHC				PP	PP	13 00 24.8	+0.8
HHC				PCP	PcP	13 01 37.9	-4.4
HHC				S	S	13 04 07.8	+0.1
HHC				SCP		13 05 02.9	
HHC				PCS		13 05 25.8	
HHC				XS		13 05 30.5	
HHC				SCS	ScS	13 09 01.5	-3.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.2						
HHC				AMB	AMB		
	comp=Z,170nm,9.6s						
HHC				LR	LR		
	comp=N,210nm,19.2s						
HHC				LR	LR		
	comp=E,400nm,18.0s						
HHC				LR	LR		
	comp=Z,210nm,14.4s						
GYA	Guiyang	34.12	285	P	P	12 59 13.3	+0.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
LZH	Lanzhou	37.48	301	eP	P	12 59 41.8	+0.9
LZH				AP	pP	13 00 27.5	+1.8
LZH				XP	sP	13 00 53.0	+2.4
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,140nm,4.5s						
LZH	Lanzhou	37.48	301	eP	P	12 59 41.7	+0.8
	comp=Z,34nm,1.2s,mb4.8						
LZH				pP	pP	13 00 27.5	+1.8
LZH				sP	sP	13 00 53.0	+2.4
LZH	Lanzhou	37.48	301	eP	P	12 59 41.7	+0.8
LZH				*PP	pP	13 00 27.5	+1.8
LZH				*SP	sP	13 00 53.0	+2.4
LZH				pmax	pmax		
	comp=Z,34nm,1.2s,mb4.8						
KMI	Kunming	37.70	283	P	P	12 59 43.3	+0.6
KMI	Kunming	37.70	283	P	P	12 59 43.2	+0.5
	comp=Z,8.0nm,0.9s,mb4.2						
KMI	Kunming	37.70	283	P	P	12 59 43.2	+0.5
KMI				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
KSM	Kuching	38.31	243	P	P	12 59 47.0	-1.0
SONM	Songino Array	39.65	320	P	P	12 59 58.6	0.0
	comp=Z,4.9nm,0.5s,mb4.2,baz=127,slow=7.4,SNR=82						
SONM				PcP	PcP	13 02 01.7	+0.1
	comp=Z,0.6nm,0.7s,baz=124,slow=5.2,SNR=2.7						
SONM				ScP		13 05 29.1	
	comp=Z,0.6nm,0.7s,baz=132,slow=4.2,SNR=4.4						
GTA	Gaotai	41.29	305	eP	P	13 00 12.3	+0.2
GTA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.7						
GTA				AMB	AMB		
	comp=Z,90nm,8.7s						
GTA				LR	LR		
	comp=N,160nm,17.5s						
GTA				LR	LR		
	comp=E,260nm,19.8s						
GTA				LR	LR		
	comp=Z,200nm,21.7s						
CTA	Charters Tower	41.66	176	P	P	13 00 16.2	+0.8
	comp=Z,1.8nm,0.4s,mb3.8,baz=15,slow=13,SNR=4.3						
WRAB	Tennant Creek	42.45	193	eP	P	13 00 21.1	-0.8
	comp=Z,3.8nm,0.4s,mb4.2						
WRAB	Tennant Creek	42.45	193	eP	P	13 00 21.1	-0.7
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.2						
WB2	Warramunga Arr	42.45	193	eP	P	13 00 21.7	-0.2
WRA	Warramunga Arr	42.46	193	P	P	13 00 22.3	+0.3
	comp=Z,1.2nm,0.4s,mb3.7,baz=11,slow=8.1,SNR=36						
WRA				pP	pP	13 01 09.2	+1.6
	comp=Z,2.4nm,0.6s,baz=14,slow=8.8,SNR=1.4						
WRA				ScP		13 05 42.2	
	comp=Z,1.6nm,0.7s,baz=7.3,slow=4.3,SNR=12						
ZAK	Zakamensk	42.63	322	eP	P	13 00 22.5	-0.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
FITZ	Fitzroy Crossi	43.41	206	eP	P	13 00 29.4	-0.2
	comp=Z,6.5nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	43.41	206	P	P	13 00 29.3	-0.3
	comp=Z,9.2nm,0.6s,mb4.4,baz=29,slow=10,SNR=16						
KULM	Kulim	44.82	255	eP	P	13 00 41.6	+0.8
ASPA	Alice Springs	46.16	193	eP	P	13 00 51.8	+0.5
SHL	Shillong	47.44	285	eP	P	13 01 01.5	+0.3
LSA	Lhasa	47.73	291	P	P	13 01 04.8	+1.4
UNV	Unalaska Valle	49.23	37	eP	P	13 01 14.6	+0.1
WMQ	Urumqi	50.97	309	⇑iP	P	13 01 27.8	0.0
WMQ				AP	pP	13 02 17.0	+1.9
WMQ				XP	sP	13 02 41.5	+2.6
WMQ				PP	PP	13 03 28.0	+1.2
WMQ				eS	S	13 08 26.0	-0.7
WMQ				XS		13 09 51.0	
WMQ				AMB	AMB		
	comp=Z,40nm,0.8s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,170nm,6.2s						
GUN	Gumba	52.50	289	eP	P	13 01 39.3	-0.1
	comp=Z,26nm,0.4s,mb5.0						
PKI	Pulchoki	52.95	289	eP	P	13 01 42.0	-0.7
	comp=Z,40nm,0.8s,mb4.9						
KKN	Kakani	53.04	289	eP	P	13 01 43.1	-0.3
	comp=Z,16nm,0.3s,mb5.0						
DMN	Daman	53.21	289	eP	P	13 01 43.0	-1.7
	comp=Z,28nm,0.6s,mb4.9						
STKA	Stephens Creek	53.37	182	P	P	13 01 45.4	-0.4
	comp=Z,2.0nm,0.4s,mb3.9,baz=347,slow=14,SNR=3.8						
STKA	Stephens Creek	53.37	182	eP	P	13 01 45.2	-0.6
GKN	Gorkha	53.58	289	eP	P	13 01 46.6	-0.7
	comp=Z,36nm,0.4s,mb5.3						
KOLN	Koldanda	54.52	289	eP	P	13 01 53.6	-0.5
	comp=Z,13nm,0.3s,mb4.9						
ZAL	Zalesovo	54.52	322	P	P	13 01 52.4	-1.4
	comp=Z,6.0nm,0.4s,mb4.5,baz=0.1,slow=7.9,SNR=20						
MKAR	Makanchi Array	55.06	313	P	P	13 01 57.5	-0.3
	comp=Z,16nm,0.7s,mb4.7,baz=92,slow=9.2,SNR=140						
MKAR				PcP	PcP	13 02 56.1	-0.4
	comp=Z,1.8nm,0.6s,baz=78,slow=3.6,SNR=6.2						
NVS	Novosibirsk	55.59	322	i P	P	13 02 00.9	-0.5
KURK	Kurchatov	57.81	317	eP	P	13 02 16.0	-1.2
	comp=Z,23nm,0.8s,mb4.9						
KURK	Kurchatov	57.81	317	⇑eP	P	13 02 16.0	-1.1
KDAK	Kodiak Island	57.84	35	P	P	13 02 17.6	+0.3
	comp=Z,7.4nm,0.5s,mb4.6,baz=288,slow=5.4,SNR=35						
TKM2	Tokmak 2	59.74	308	P	P	13 02 31.2	+0.7
	SNR=37						
PMR	Palmer	60.22	31	eP	P	13 02 33.0	-0.5
	comp=Z,3.1nm,0.3s,mb4.4						
PMR	Palmer	60.22	31	eP	P	13 02 33.0	-0.5
PMR				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.4						
KBK	Karagaybulak	60.23	308	P	P	13 02 34.4	+0.5
	SNR=5.8						
CHMS	Chumysh	60.36	308	P	P	13 02 34.8	0.0
	SNR=5.8						
USP	Ospenovka	60.53	308	P	P	13 02 35.8	-0.1
	SNR=20						
AAK	Ala-Archa	60.57	308	P	P	13 02 36.4	+0.3
	SNR=17						
AAK	Ala-Archa	60.57	308	eP	P	13 02 35.1	-1.0
	comp=Z,11nm,0.5s,mb4.8						
AAK	Ala-Archa	60.57	308	eP	P	13 02 35.1	-1.0
AAK				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.7						
UCH	Uchtor	60.58	307	P	P	13 02 37.6	+1.4
	SNR=43						
EKS2	Erkin-Say	61.09	308	P	P	13 02 39.9	+0.3
	SNR=13						
AML	Almayashu	61.19	307	P	P	13 02 41.5	+1.1
	SNR=5.4						
ILAR	Eielson Array	61.74	27	P	P	13 02 42.8	-0.8
	comp=Z,3.0nm,0.8s,mb4.0,baz=280,slow=8.7,SNR=20						
ILAR				pP	pP	13 03 33.1	+0.3
	comp=Z,1.3nm,0.7s,baz=270,slow=5.7,SNR=5.2						
VOSK	Vostochnaya	62.63	319	P	P	13 02 48.6	-1.1
VOSK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
CHKZ	Chkalovo	62.84	320	eP	P	13 02 50.0	-1.1
	comp=Z,4.4nm,0.6s,mb4.3						
CHKZ	Chkalovo	62.84	320	eP	P	13 02 50.0	-1.1
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
BVA0	Borovoye Array	62.98	319	i P	P	13 02 50.8	-1.3
BVA0				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.1						
BVAR	Borovoye Array	62.98	319	P	P	13 02 51.6	-0.5
	comp=Z,18nm,0.7s,mb4.8,baz=94,slow=7.3,SNR=114						
BVAR				pP	pP	13 03 41.0	-0.4
	comp=Z,1.9nm,0.5s,baz=101,slow=7.3,SNR=2.1						
BRVK	Borovoye	63.05	320	eP	P	13 02 51.8	-0.7
	comp=Z,7.5nm,0.9s,mb4.3						
BRVK	Borovoye	63.05	320	eP	P	13 02 51.8	-0.7
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
KKAR	Karatay Array	63.45	308	i P	P	13 02 55.0	-0.3
KKAR				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
DAWY	Dawson	64.91	28	eP	P	13 03 04.8	+0.6
INK	Inuvik	67.30	24	P	P	13 03 19.5	+0.2
	comp=Z,3.1nm,0.6s,mb4.1,baz=291,slow=6.8,SNR=27						
INK				pP	pP	13 04 08.9	-0.5
	comp=Z,2.9nm,0.9s,baz=240,slow=6.4,SNR=3.6						
INK	Inuvik	67.30	24	eP	P	13 03 19.2	-0.2
	comp=Z,1.7nm,0.4s,mb4.0						
INK	Inuvik	67.30	24	eP	P	13 03 19.2	-0.2
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARU	Arti	69.54	324	eP	P	13 03 31.4	-1.9
ARU				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.3						
AB31	Akbulak array	69.89	316	i P	P	13 03 35.0	-0.6
AB31				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
YKA	Yellowknife Ar	76.15	28	P	P	13 04 12.4	+0.7
	comp=Z,2.9nm,0.3s,mb4.3,baz=291,slow=5.9,SNR=39						
YKA	Yellowknife Ar	76.15	28	P	P	13 04 12.4	+0.7
ARCES	ARCESS Array B	79.04	342	P	P	13 04 27.4	0.0
	comp=Z,3.2nm,0.7s,mb4.1,baz=72,slow=8.1,SNR=17						
ARCES	ARCESS Array B	79.04	342	P	P	13 04 27.4	0.0
OBN	Obninsk	81.74	326	⇑eP	P	13 04 45.6	+3.7
OBN				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
NVAR	Mina Array Bea	82.67	52	P	P	13 04 49.3	+2.2
	comp=Z,1.4nm,0.8s,mb3.7,baz=269,slow=7.2,SNR=9.3						
KIV	Kislovodsk	82.78	314	eP	P	13 04 48.5	+1.0
KIV				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
KAF	Kangasniemi	82.90	335	ep	P	13 04 46.7	-1.1
	baz=51,slow=4.4						
FINES	FINESS Array B	83.36	335	P	P	13 04 49.4	-0.8
	comp=Z,5.1nm,0.3s,mb4.7,baz=67,slow=5.0,SNR=99						
HRY	Holter Researc	83.78	42	eP	P	13 04 54.4	+1.9
QRN	Al-Qurain	84.67	299	eP	P	13 04 57.8	+0.4
MIB	Mutribah	84.74	300	eP	P	13 04 57.9	+0.2
MIB				AMb	AMB	13 04 59.2	
	comp=Z,80nm,0.5s,mb5.7						
TPNV	Topopah Spring	84.75	52	eP	P	13 04 58.5	+0.9
	comp=Z,0.7nm,0.4s,mb3.7						
TPNV	Topopah Spring	84.75	52	eP	P	13 04 58.5	+0.9
TPNV				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
NAY	Al-Naaiem	85.03	299	eP	P	13 04 58.8	-0.4
NAY				AMb	AMB	13 04 59.9	
	comp=Z,23nm,0.6s,mb5.1						
AKASG	Malin Array Be	87.78	325	P	P	13 05 10.8	-1.0
	comp=Z,1.4nm,0.5s,mb4.0,baz=50,slow=5.1,SNR=6.3						
HFS	Hagfors	88.89	337	P	P	13 05 15.5	-1.4
	comp=Z,1.8nm,0.4s,mb4.2,baz=90,slow=4.4,SNR=18						
BRTR	Keskin Array B	90.70	314	P	P	13 05 24.9	-1.0
	comp=Z,2.0nm,0.9s,mb4.1,baz=90,slow=3.7,SNR=6.3						
TXAR	Lajitas Array	97.57	54	PKKPbc		13 22 33.2	
	comp=Z,0.5nm,1.0s,baz=127,slow=6.3,SNR=4.1						
VNA2	Neumayer--Watz	128.01	192	⇑i	PKPdf	13 11 28.8	+2.7
VNA2	Neumayer--Watz	128.01	192		PKPdf	13 11 42.7	+17
VNA3	Neumayer Olymp	128.15	191	⇑i	PKPdf	13 11 28.7	+2.4
PLCA	Paso Flores	145.38	131	PKPbc	PKPbc	13 12 01.6	+2.4
	comp=Z,1.3nm,0.6s,baz=225,slow=3.8,SNR=5.4						
LPAZ	La Paz	149.38	85	PKPbc	PKPdf	13 12 14.1	+8.4
	comp=Z,2.7nm,0.8s,baz=286,slow=1.0,SNR=10						
LPAZ	La Paz	149.38	85	ePKPbc	PKPdf	13 12 13.8	+8.1
LPAZ				ePKPab	PKPab	13 12 19.9	+1.9

IDC ***13*** *13:21:37.5±1.5,6.18S×146.87E,mb3.7/3,mb1 3.9/6, mb1mx3.7/14,mbtmp3.8/6,ML3.3/3,MS3.0/1,Ms1 3.0/1, ms1mx2.5/21,Error ellipse: s-maj=41.2km s-min=18.3km az=91.0*
NEIC ***13*** *13:21:39.0±1.1,6.19S×146.81E,h10^{km},mb3.4/1,Error*

ellipse: s-maj=19.7km s-min=14.8km az=104.0

ISC 13 13:21:37.9±1.3,6.2S±0.1×146.8E±0.2,h10^{km},n10, $\sigma0^{s}69$/12,mb3.6/3,Eastern New Guinea region

```
Code  Station Name         Δ°  AZ°  Phase ID           Time      Res
                                    Op    ISC      h  m  s      ISC
PMG   Port Moresby       3.17 174  Pn    Pn    13 22 29.4 +0.4
      9.8nm,0.3s,baz=354,slow=10,SNR=28
PMG                                Pg    Pg    13 22 36.2 -5.1
      59nm,0.3s,baz=359,slow=9.9,SNR=38
PMG                                Lg          13 23 20.2
      25nm,0.3s,baz=144,slow=18,SNR=7.2
PMG                                LR    LR    13 23 58.6
      comp=Z,265nm,20.4s,baz=240,slow=44
PMG   Port Moresby       3.17 174  eP    Pn    13 22 29.1 +0.1
PMG                                Pg    Pg    13 22 36.2 -5.1
PMG                                Lg          13 23 20.2
PMG                                LR    LR    13 23 58.6
CTA   Charters Tower    13.79 182  Pn    P     13 24 56.3 +0.3
      0.2nm,0.3s,baz=356,slow=13,SNR=2.6
WRAB  Tennant Creek     18.23 221  eP    P     13 25 52.5 -0.5
      2.2nm,0.7s
WB2   Warramunga Arr    18.24 220  eP    P     13 25 52.6 -0.5
WRA   Warramunga Arr    18.25 221  P     P     13 25 52.6 -0.6
      0.1nm,0.3s,baz=47,slow=12,SNR=9.2
ASPA  Alice Springs     21.34 214  eP    P     13 26 28.7 +1.2
FITZ  Fitzroy Crossi    23.80 238  P     P     13 26 53.0 +1.0
      1.8nm,0.7s,mb3.6,baz=50,slow=16,SNR=2.4
STKA  Stephens Creek    25.98 190  P     P     13 27 11.8 -0.8
      0.9nm,0.7s,mb3.4,baz=356,slow=14,SNR=2.4
ILAR  Eielson Array     85.76  23  P     P     13 34 18.1 -0.2
      0.5nm,0.6s,mb3.9,baz=255,slow=5.4,SNR=8.6
```

JMA 13 13:23:28.3±0.2,43.10N×146.78E,h47^{km}±3^{km},M3.5, Kuril Islands

```
Code  Station Name         Δ°  AZ°  Phase ID           Time      Res
                                    Op    ISC      h  m  s      ISC
NEM2  Nemuro 2           0.80 290  P     P     13 23 43.3 -0.1
NEM2                               eS    S     13 23 54.5  0.0
JRA   Rausu              1.47 305  P     P     13 23 52.9  0.0
JRA                                eS    S     13 24 10.6 -0.5
JAK   Akkeshi            1.53 267  P     P     13 23 53.7  0.0
JAK                                eS    S     13 24 12.4 -0.2
JNK   Nakash             1.58 289  P     P     13 23 54.0 -0.4
JNK                                eS    S     13 24 13.1 -0.7
JOB   Onbets             2.17 266  P     P     13 24 02.8 +0.1
JOB                                eS    S     13 24 28.3 -0.2
JAR   Ashorobuto         2.21 276  P     P     13 24 03.4 +0.1
JAR                                eS    S     13 24 30.0 +0.5
JTKR  Abashiri--Toko     2.26 294  P     P     13 24 04.7 +0.6
JTKR                               eS    S     13 24 31.7 +0.9
JCH   Churui             2.56 260  P     P     13 24 08.0 -0.3
JCH                                eS    S     13 24 37.6 -0.8
```

*NEIC **13** 13:24:28.7±0.2, 45.24N×3.41W, h10^{km}, ML3.5(STR), ML3.4(LDG), Error ellipse: s-maj=3.6km s-min=2.3km az=127.0*

*CSEM **13** 13:24:29.9±0.1, 45.09N×3.56W, h25^{km}, ML3.4/20, Error ellipse: s-maj=1.8km s-min=1.1km az=115.0*

*LDG **13** 13:24:30.2±0.1, 45.16N×3.49W, h15^{km}, Ml3.4/23, Error ellipse: s-maj=3.0km s-min=2.1km az=115.0*

*STR **13** 13:24:37.2±1.1, 45.00N×2.37W, h10^{km}±1^{km}, Ml3.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

MDD 13 13:24:31.7±0.5,45.23N×3.47W,h77^{km}±33^{km},mb3.5/23, Error ellipse: s-maj=4.8km s-min=3.5km az=123.0, PRXIMO,Bay of Biscay

```
Code  Station Name         Δ°  AZ°  Phase ID           Time      Res
                                    Op    ISC      h  m  s      ISC
EARI  Arriondas          2.29 214  P     P     13 25 06.8 -1.5
      3.4nm,0.2s,SNR=7.9
EARI                               S     S     13 25 31.6 -3.8
      11nm,0.1s,SNR=7.9
EARI  Arriondas          2.29 214  P     P     13 25 06.8 -1.5
      3.4nm,0.2s,SNR=7.9
EARI                               S     S     13 25 31.6 -3.8
      11nm,0.1s,SNR=7.9
LCHF  La Chataignera     2.39  52  Pn    P     13 25 09.4 -0.2
LCHF                               Sg    S     13 25 38.0 +0.2
EALK  Alkurruntz         2.45 144  P     P     13 25 08.7 -1.8
      4.9nm,0.1s,SNR=25
EALK                               S     S     13 25 35.1 -4.3
      8.3nm,0.1s,SNR=7.9
OSSF  Osses              2.53 140  Pg    P     13 25 09.5 -2.1
OSSF                               Sg    S     13 25 35.8 -5.5
SJPF  Ste Jean           2.66 142  ePn   P     13 25 11.3 -2.1
SJPF                               eSn   S     13 25 39.7 -4.9
      11nm,0.2s
IUSE  Utxeti             2.67 148  P     P     13 25 12.7 -0.8
      1.8nm,0.1s,SNR=7.9
IUSE                               S     S     13 25 40.3 -4.5
      6.9nm,0.2s,SNR=7.9
IUSE  Utxeti             2.67 148  P     P     13 25 12.7 -0.8
      1.8nm,0.1s,SNR=7.9
IUSE                               S     S     13 25 40.3 -4.5
      6.9nm,0.2s,SNR=7.9
MFF   Saint Martin d     2.70  58  ePn   P     13 25 12.6 -1.4
MFF                                eSn   S     13 25 42.6 -2.9
      26nm,0.2s
QUIF  Quistinic          2.70   4  ePn   P     13 25 12.9 -1.1
QUIF                               ePg   P     13 25 22.7 +8.7
QUIF                               eSn   S     13 25 42.9 -2.7
QUIF                               eSg   S     13 25 56.3 +11
      28nm,0.2s
QUIF  Quistinic          2.70   4  P     P     13 25 12.9 -1.1
QUIF                               Sn    S     13 25 42.9 -2.7
ECRI  Cripan             2.71 165  P     P     13 25 14.2 +0.1
      4.1nm,0.2s,SNR=7.9
ECRI                               S     S     13 25 42.2 -3.5
      14nm,0.2s,SNR=7.9
ECRI  Cripan             2.71 165  P     P     13 25 12.8 -1.2
ECRI                               S     S     13 25 42.2 -3.5
ECRI  Cripan             2.71 165  P     P     13 25 12.9 -1.2
ECRI                               S     S     13 25 42.2 -3.6
      14nm,0.2s,SNR=7.9
EARA  Aranguren          2.81 150  P     P     13 25 14.5 -1.0
      4.6nm,0.2s,SNR=9.0
EARA                               S     S     13 25 44.9 -3.4
      3.5nm,0.1s,SNR=7.9
LARF  Larrau             2.83 140  Pg    P     13 25 13.3 -2.4
LARF                               Sg    S     13 25 41.5 -7.2
IUNC  Unciti             2.85 149  P     P     13 25 15.5 -0.6
      4.9nm,0.2s,SNR=7.9
IUNC                               S     S     13 25 46.2 -3.2
      3.6nm,0.1s,SNR=7.9
IUNC  Unciti             2.85 149  P     P     13 25 15.5 -0.6
      4.9nm,0.2s,SNR=7.9
IUNC                               S     S     13 25 46.2 -3.2
      3.6nm,0.1s,SNR=7.9
IPRE  Itoiz              2.86 147  P     P     13 25 15.7 -0.6
      1.5nm,0.1s,SNR=7.9
IPRE                               S     S     13 25 46.0 -3.6
      1.7nm,0.1s,SNR=7.9
IPRE  Itoiz              2.86 147  P     P     13 25 15.7 -0.5
      1.5nm,0.1s,SNR=7.9
IPRE                               S     S     13 25 46.0 -3.6
      1.7nm,0.1s,SNR=7.9
LFF   La Frestale        3.00  94  ePn   P     13 25 16.1 -2.0
LFF                                ePg   P     13 25 25.7 +7.6
LFF                                eSn   S     13 25 49.0 -4.0
      33nm,0.3s
LFF   La Frestale        3.00  94  P     P     13 25 16.1 -2.0
LFF                                S     S     13 25 49.0 -4.0
      16nm,0.3s
SGMF  Saint Gilles       3.09  11  ePn   P     13 25 17.1 -2.4
SGMF                               ePg   P     13 25 29.7 +10
SGMF                               eSn   S     13 25 52.5 -2.9
SGMF                               eSg   S     13 26 08.8 +13
      42nm,0.5s
SGMF  Saint Gilles       3.09  11  P     P     13 25 17.1 -2.4
SGMF                               S     S     13 25 52.5 -2.9
ROSF  Rostrenen          3.11   2  ePn   P     13 25 18.1 -1.7
ROSF                               eSn   S     13 25 52.2 -3.7
EPON  Pontenova          3.25 236  P     P     13 25 20.3 -1.4
      5.1nm,0.2s,SNR=14
EPON                               S     S     13 25 54.3 -5.1
      22nm,0.2s,SNR=7.9
EPON  Pontenova          3.25 236  P     P     13 25 20.3 -1.4
      5.1nm,0.2s,SNR=14
EPON                               S     S     13 25 54.3 -5.1
      22nm,0.2s,SNR=7.9
VIEF  Viey               3.44 132  Pn    P     13 25 21.4 -2.9
EPF   Esparros           3.52 127  ePn   P     13 25 22.3 -3.0
EPF                                eSn   S     13 25 59.7 -6.2
      9.9nm,0.3s
RJF   Les Rejaudoux      3.52  87  ePn   P     13 25 23.2 -2.2
RJF                                eSn   S     13 26 02.3 -3.8
      36nm,0.2s
GRR   Gorron             3.64  29  ePn   P     13 25 25.7 -1.3
GRR                                eSn   S     13 26 04.5 -4.4
      13nm,0.2s
EBIE  Bielsa             3.64 133  P     P     13 25 25.3 -1.8
      9.0nm,0.1s,SNR=61
EBIE                               S     S     13 26 04.6 -4.4
      4.1nm,0.1s,SNR=7.9
EBIE  Bielsa             3.64 133  P     P     13 25 25.3 -1.8
EBIE                               S     S     13 26 04.6 -4.4
EBIE                               S     S     13 26 07.4 -1.7
EBIE  Bielsa             3.64 133  P     P     13 25 25.3 -1.8
      9.0nm,0.1s,SNR=61
EBIE                               S     S     13 26 04.6 -4.5
      4.1nm,0.1s,SNR=7.9
RESF  Ens                3.66 130  Pn    P     13 25 25.2 -2.2
ERUA  La Rua             3.88 224  P     P     13 25 29.1 -1.4
      2.6nm,0.2s,SNR=7.9
ERUA                               S     S     13 26 09.6 -5.5
      3.3nm,0.2s,SNR=7.9
ERUA  La Rua             3.88 224  P     P     13 25 29.1 -1.4
ERUA                               S     S     13 26 09.6 -5.5
CAF   Calviac            3.93  92  ePn   P     13 25 28.8 -2.3
CAF                                eSn   S     13 26 10.9 -5.5
      26nm,0.2s
ECAL  Calabor            4.05 217  P     P     13 25 30.8 -2.0
      2.7nm,0.2s,SNR=7.9
ECAL                               S     S     13 26 13.9 -5.3
      5.7nm,0.2s,SNR=7.9
ECAL  Calabor            4.05 217  P     P     13 25 30.8 -2.0
      2.7nm,0.2s,SNR=7.9
ECAL                               S     S     13 26 13.9 -5.4
      5.7nm,0.2s,SNR=7.9
LDF   La Druitiere       4.08  33  ePn   P     13 25 31.2 -1.9
LDF                                eSn   S     13 26 15.0 -4.9
      20nm,0.4s
FLN   La Foliniere       4.09  29  ePn   P     13 25 31.2 -2.1
      baz=209
FLN   La Foliniere       4.09  29  ePn   P     13 25 31.2 -2.1
FLN                                eSn   S     13 26 15.6 -4.6
      7.1nm,0.3s
TCF   Toulx Ste Croi     4.12  73  ePn   P     13 25 31.4 -2.3
TCF                                eSn   S     13 26 15.7 -5.2
      16nm,0.2s
ESAC  San Caprasio       4.13 147  P     P     13 25 32.1 -1.8
      7.2nm,0.2s,SNR=7.9
ESAC                               S     S     13 26 16.1 -5.1
      40nm,0.2s,SNR=7.9
ESAC  San Caprasio       4.13 147  P     P     13 25 32.1 -1.8
ESAC                               S     S     13 26 16.1 -5.1
ESAC  San Caprasio       4.13 147  P     P     13 25 32.1 -1.8
      7.2nm,0.2s,SNR=7.9
ESAC                               S     S     13 26 16.1 -5.1
      40nm,0.2s,SNR=7.9
PBRG  Braganca           4.17 216  ePn   P     13 25 32.5 -1.9
PBRG                               eSn   S     13 26 16.9 -5.3
      3.6nm,0.3s
PBRG  Braganca           4.17 216  P     P     13 25 32.5 -1.9
PBRG                               S     S     13 26 16.9 -5.3
      1.8nm,0.3s
STS   Santiago           4.34 239  P     P     13 25 34.9 -2.0
      3.7nm,0.2s,SNR=7.9
STS                                S     S     13 26 19.8 -6.8
      7.4nm,0.1s,SNR=7.9
STS   Santiago           4.34 239  P     P     13 25 34.9 -2.0
STS                                S     S     13 26 19.8 -6.9
STS                                S     S     13 26 21.7 -4.9
MTLF  Montolieu          4.50 113  ePn   P     13 25 36.2 -2.8
MTLF                               eSn   S     13 26 24.4 -6.1
      12nm,0.2s
EMAZ  Mazaricos          4.57 242  P     P     13 25 37.9 -2.1
      5.5nm,0.2s,SNR=7.9
EMAZ                               S     S     13 26 25.1 -7.2
      14nm,0.1s,SNR=7.9
EMAZ  Mazaricos          4.57 242  P     P     13 25 37.9 -2.1
EMAZ                               S     S     13 26 25.1 -7.2
EMAZ                               S     S     13 26 27.1 -5.2
EMAZ  Mazaricos          4.57 242  P     P     13 25 37.9 -2.1
      5.5nm,0.2s,SNR=7.9
EMAZ                               S     S     13 26 25.1 -7.2
      14nm,0.1s,SNR=7.9
BGF   Bois d’Agland      4.61  71  ePn   P     13 25 37.2 -3.3
BGF                                eSn   S     13 26 26.9 -6.3
      26nm,0.2s
GUD   Guadarrama         4.61 186  P     P     13 25 37.8 -2.7
      0.4nm,0.2s,SNR=4.0
GUD                                S     S     13 26 26.6 -6.6
      2.4nm,0.2s,SNR=7.9
AGO   Saint Agoulin      4.70  78  Pn    P     13 25 39.2 -2.6
HYF   Humbligny          4.71  62  ePn   P     13 25 38.8 -3.1
HYF                                eSn   S     13 26 30.7 -4.9
LBL   Lubilhac           4.75  88  Pn    P     13 25 40.1 -2.3
EZAM  Zamans             4.88 233  P     P     13 25 42.0 -2.2
EZAM                               S     S     13 26 33.5 -6.5
EZAM  Zamans             4.88 233  P     P     13 25 42.0 -2.3
EZAM                               S     S     13 26 33.5 -6.4
      1.3nm,0.2s,SNR=7.9
EMIR  Miracle            4.91 131  P     P     13 25 43.9 -0.9
      4.5nm,0.2s,SNR=9.2
EMIR                               S     S     13 26 36.5 -4.3
      6.2nm,0.2s,SNR=7.9
EMIR  Miracle            4.91 131  P     P     13 25 43.9 -0.8
      4.5nm,0.2s,SNR=9.2
EMIR                               S     S     13 26 36.5 -4.3
      6.2nm,0.2s,SNR=7.9
AVF   Avril sur Loir     5.00  69  ePn   P     13 25 42.3 -3.7
AVF                                eSn   S     13 26 36.9 -6.2
      4.9nm,0.2s
PVRL  Vila Real          5.02 220  eSn   S     13 26 36.4 -7.0
PLDF  La Plantade        5.03  79  Pn    P     13 25 44.1 -2.3
EPOB  Poblet             5.10 138  P     P     13 25 45.2 -2.1
      0.8nm,0.0s,SNR=12
EPOB                               S     S     13 26 39.2 -6.2
      1.4nm,0.1s,SNR=7.9
EPOB  Poblet             5.10 138  P     P     13 25 45.2 -2.1
EPOB                               S     S     13 26 39.2 -6.2
EPOB                               S     S     13 26 40.6 -4.8
EPOB  Poblet             5.10 138  P     P     13 25 45.2 -2.1
      0.8nm,0.0s,SNR=12
SSF   Saint Saulge       5.18  67  ePn   P     13 25 45.6 -2.8
SSF                                eSn   S     13 26 39.6 -8.0
      2.3nm,0.2s
SMF   Signal de Mont     5.29  72  ePn   P     13 25 46.2 -3.8
SMF                                eSn   S     13 26 44.2 -6.1
      5.9nm,0.2s
EMOS  Mosqueruela        5.34 155  P     P     13 25 49.3 -1.2
      0.9nm,0.1s,SNR=7.9
EMOS                               S     S     13 26 45.7 -5.6
      3.8nm,0.3s,SNR=7.9
EMOS  Mosqueruela        5.34 155  P     P     13 25 49.3 -1.2
      0.9nm,0.1s,SNR=7.9
EMOS                               S     S     13 26 45.7 -5.6
      3.8nm,0.3s,SNR=7.9
LASF  Ste Croix          5.35 100  ePn   P     13 25 47.4 -3.4
LASF                               eSn   S     13 26 46.1 -5.7
      6.7nm,0.2s
EJON  La Jonquera        5.37 119  P     P     13 25 49.1 -1.9
      2.9nm,0.3s,SNR=8.0
EJON                               S     S     13 26 44.8 -7.4
      3.6nm,0.3s,SNR=7.9
EJON  La Jonquera        5.37 119  P     P     13 25 49.1 -1.9
      2.9nm,0.3s,SNR=8.0
LOR   Lormes             5.48  66  ePn   P     13 25 49.6 -2.9
      baz=243
LOR                                eSn   S     13 26 46.7 -8.2
      4.0nm,0.2s
ESDC  Sonseca Array      5.56 184  P     P     13 25 58.4 +4.8
      baz=1.0,slow=12,SNR=4.6
ESDC                               S     S     13 26 49.7 -7.2
      baz=6.6,slow=23,SNR=7.9
VIVF  Saint-Julien-l     5.78  91  ePn   P     13 25 54.2 -2.5
VIVF                               eSn   S     13 26 55.7 -6.7
      12nm,0.2s
PCBR  Castelo Branco     6.14 210  eSn   S     13 27 03.8 -7.4
SFTF  Sexfontaines       6.56  60  ePn   P     13 26 04.5 -3.1
SMRF  Simiane la Rot     6.58  98  ePn   P     13 26 04.3 -3.5
ORIF  Oris-en-Rattie     6.63  89  ePn   P     13 26 05.2 -3.3
MEZF  Maizieres J’vi     6.70  58  ePn   P     13 26 06.6 -2.9
      baz=244
MEZF                               eSn   S     13 27 18.8 -6.2
      1.4nm,0.2s
ETOB  Tobarra            6.73 167  P     P     13 26 08.8 -1.1
      2.0nm,0.2s,SNR=7.9
ETOB                               S     S     13 27 16.4 -9.4
      6.2nm,0.4s,SNR=7.9
ETOB  Tobarra            6.73 167  P     P     13 26 08.1 -1.8
ETOB                               S     S     13 27 16.4 -9.4
ETOB  Tobarra            6.73 167  P     P     13 26 08.1 -1.8
CABF  La Chapelle        6.81  75  ePn   P     13 26 08.1 -2.9
EBEN  Beniarda           6.95 159  P     P     13 26 11.8 -1.2
      0.8nm,0.2s,SNR=7.9
EBEN                               S     S     13 27 24.0 -7.2
      2.7nm,0.4s,SNR=7.9
EBEN  Beniarda           6.95 159  P     P     13 26 11.8 -1.2
EBEN                               S     S     13 27 21.2  -10
EBEN                               S     S     13 27 24.0 -7.2
EBEN  Beniarda           6.95 159  P     P     13 26 11.8 -1.2
      0.8nm,0.2s,SNR=7.9
EBAD  Badajoz            6.98 203  P     P     13 26 11.3 -2.1
      0.3nm,0.1s,SNR=4.0
EBAD                               S     S     13 27 22.3  -10
      5.3nm,0.2s,SNR=7.9
EBAD  Badajoz            6.98 203  P     P     13 26 11.3 -2.1
      0.3nm,0.1s,SNR=4.0
BAIF  Baives             7.09  44  ePn   P     13 26 12.2 -2.7
EADA  Adamuz             7.10 187  P     P     13 26 13.1 -1.9
      0.1nm,0.1s,SNR=4.0
EADA                               S     S     13 27 24.7  -10
      1.4nm,0.2s,SNR=7.9
EADA  Adamuz             7.10 187  P     P     13 26 13.1 -1.9
EADA                               S     S     13 27 24.7  -10
EADA                               S     S     13 27 25.2  -10
EADA  Adamuz             7.10 187  P     P     13 26 13.1 -1.9
      0.1nm,0.1s,SNR=4.0
EIBI  Ibiza              7.15 148  P     P     13 26 12.9 -2.9
      1.2nm,0.1s,SNR=7.9
EIBI                               S     S     13 27 26.9 -9.3
      3.9nm,0.3s,SNR=7.9
ETOS  Mallorca           7.16 137  P     P     13 26 13.4 -2.5
      0.8nm,0.2s,SNR=7.9
ETOS  Mallorca           7.16 137  P     P     13 26 13.4 -2.5
      0.8nm,0.2s,SNR=7.9
ECAB  El Cabril          7.29 192  P     P     13 26 15.2 -2.5
      0.1nm,0.2s,SNR=7.9
ECAB                               S     S     13 27 28.6  -11
      1.6nm,0.2s,SNR=7.9
ECAB  El Cabril          7.29 192  P     P     13 26 15.2 -2.5
ECAB                               S     S     13 27 28.6  -11
ECAB                               S     S     13 27 30.2 -9.4
ECAB  El Cabril          7.29 192  P     P     13 26 15.2 -2.5
      0.1nm,0.2s,SNR=7.9
HAU   Haudompre          7.31  64  ePn   P     13 26 13.4 -4.5
GIVF  Givet              7.42  46  ePn   P     13 26 16.5 -3.0
FRF   La Foret Royal     7.44  99  ePn   P     13 26 15.4 -4.3
EMUR  La Murta           7.56 166  P     P     13 26 19.9 -1.5
      2.0nm,0.4s,SNR=7.9
EMUR                               S     S     13 27 37.4 -8.9
      4.3nm,0.6s,SNR=7.9
EMUR  La Murta           7.56 166  P     P     13 26 19.9 -1.5
      2.0nm,0.4s,SNR=7.9
HINF  Hinteralfeld       7.58  66  ePn   P     13 26 16.6 -5.0
HINF                               eSn   S     13 27 37.5 -9.2
      1.1nm,0.2s
EMIN  Mina Concepcio     7.83 199  P     P     13 26 22.7 -2.3
      0.3nm,0.1s,SNR=7.9
EMIN                               S     S     13 27 43.4 -9.4
      1.5nm,0.3s,SNR=7.9
EMIN  Mina Concepcio     7.83 199  P     P     13 26 22.7 -2.3
CDF   Champ du Feu       8.03  63  ePn   P     13 26 24.2 -3.6
PGF   Pioggiola          9.40 102  ePn   P     13 26 43.2 -3.1
```

*IDC **13** 13:42:44.8±5.1, 29.62N×142.40E, mb3.7/3, mb1 3.8/4, mb1mx3.6/20, mbtmp3.6/4, ML3.8/1, MS3.7/1, Ms1 3.7/1, ms1mx2.4/34, Error ellipse: s-maj=188.9km s-min=26.2km az=72.0*

*JMA **13** 13:42:46.1±0.6, 30.09N×142.60E, M4.1*

ISC 13 13:42:49.9±2.1,30.1N±0.1×142.7E±0.3,h46^{km}±20^{km},n12, $\sigma0^{s}91$/16,mb3.8/3,MS3.8/1,Southeast of Honshu

```
Code  Station Name         Δ°  AZ°  Phase ID           Time      Res
                                    Op    ISC      h  m  s      ISC
JHJ2  Mitsune            3.88 321  P     P     13 43 47.7 -1.0
JOD2  Odawara 2          5.98 330  P     P     13 44 19.1 +1.1
JHU   Hanno              6.41 334  P     P     13 44 24.4 +0.3
JHU                                eS    S     13 45 37.3 +0.5
JRY   Ryogami san        6.70 332  P     P     13 44 28.7 +0.5
JRY                                eS    S     13 45 45.7 +1.6
JHO   Hitachi            6.72 345  P     P     13 44 29.1 +0.6
JHO                                eS    S     13 45 45.1 +0.5
JFK   Kawauchi           7.39 348  P     P     13 44 38.0 +0.2
JFK                                eS    S     13 45 59.8 -1.4
MJAR  Matsushiro Arr     7.44 331  Pn    P     13 44 38.3 -0.2
      1.4nm,0.3s,baz=158,slow=12,SNR=13
MAT   Matsushiro         7.44 331  P     P     13 44 37.2 -1.3
MAT                                eS    S     13 46 01.0 -1.5
SONM  Songino Array     32.95 313  P     P     13 49 22.5 +0.3
      0.8nm,0.8s,mb3.7,baz=105,slow=8.5,SNR=5.3
MKAR  Makanchi Array    48.97 308  P     P     13 51 33.5 -0.2
      0.7nm,0.6s,mb3.9,baz=88,slow=9.5,SNR=7.2
WRA   Warramunga Arr    50.42 190  P     P     13 51 40.0 -5.1
      0.4nm,0.5s,mb3.7,baz=8.9,slow=8.0,SNR=12
DZM   Mont Dzumac       56.68 153  LR    LR    14 15 21.2
      comp=Z,67nm,19.2s,MS3.8,baz=264,slow=35
```

*BJI **13** 13:46:00.8, 20.80S×178.60W, h580^{km}, mB4.7, mb4.5*

*NEIC **13** 13:46:01.8±1.0, 20.84S×178.61W, h580^{km}±11^{km}, mb4.6/10, Error ellipse: s-maj=13.3km s-min=9.8km az=135.0*

*IDC **13** 13:46:05.5±2.3, 21.16S×178.72W, h625^{km}±27^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.5/15, mbtmp4.5/9, Error ellipse: s-maj=25.7km s-min=15.4km az=161.0*

ISC 13 13:46:01.5±1.2,20.87S±0.09×178.69W±0.09, h588^{km}±15^{km},n69,$\sigma1^{s}08$/37,mb4.3/21,4C-5D,Fiji Islands region

```
Code  Station Name         Δ°  AZ°  Phase ID           Time      Res
                                    Op    ISC      h  m  s      ISC
RAO   Raoul Island       8.38 175  S     S     13 49 36.6 -6.3
      45nm,0.3s,baz=73,slow=19,SNR=4.4
AFI   Afiamalu           9.56  45  eP    P     13 48 14.7 -1.4
      47nm,0.8s
DZM   Mont Dzumac       13.89 262  P     P     13 49 01.4 +2.4
      0.9nm,0.3s,baz=297,slow=22,SNR=12
URZ   Urewera           17.71 191  P     P     13 49 33.3 -2.3
      3.1nm,0.3s,baz=323,slow=4.0,SNR=23
CTA   Charters Tower    32.81 265 ⇓iP    P     13 51 50.1 +1.0
      15nm,0.4s,mb5.0
PMG   Port Moresby      34.80 284  P     P     13 52 06.8 +1.0
      29nm,0.8s,mb5.0,baz=96,slow=6.4,SNR=6.4
PMG   Port Moresby      34.80 284  eP    P     13 52 06.5 +0.8
STKA  Stephens Creek    37.04 244  eP    P     13 52 25.2 +1.2
      4.2nm,0.9s,mb4.0
STKA  Stephens Creek    37.04 244  P     P     13 52 24.8 +0.8
      5.6nm,0.7s,mb4.2,baz=94,slow=11,SNR=13
ASPA  Alice Springs     43.80 257 ⇓iP    P     13 53 18.4 +0.2
ASPA                               eS    S     13 59 05.5 -2.2
WB2   Warramunga Arr    43.90 263 ⇓iP    P     13 53 18.7 -0.2
WB2                                eS    S     13 59 06.9 -2.1
WRAB  Tennant Creek     43.90 263  eP    P     13 53 18.7 -0.3
      55nm,1.0s,mb5.0
WRA   Warramunga Arr    43.91 263  P     P     13 53 18.8 -0.2
      26nm,0.7s,mb4.9,baz=97,slow=7.5,SNR=167
WRA                                S     S     13 59 05.6 -3.5
      1.7nm,0.8s,baz=99,slow=13,SNR=9.0
KAKA  Kakadu            47.33 272  eP    P     13 54 03.6  +18
      18nm,0.3s,mb5.1
FORT  Forrest           48.55 247  eP    P     13 53 53.8 -0.4
      26nm,0.6s,mb4.8
FITZ  Fitzroy Crossi    52.34 263  eP    P     13 54 22.0 +0.1
      11nm,0.4s,mb4.5
KLBR  Kellerberrin      57.31 245  eP    P     13 54 55.6 -0.7
      16nm,0.8s,mb4.3
SBA   Scott Base        57.46 184  eP    P     13 54 57.7 +1.0
      1.0nm,0.5s,mb3.3
VNDA  Vanda             57.49 185  eP    P     13 54 56.9  0.0
      0.5nm,0.6s,mb2.9
MUN   Mundaring         58.58 245  eP    P     13 55 05.0 +0.1
QSPA  South Pole Qui    69.20 180  eP    P     13 56 11.8 +0.6
      5.3nm,0.4s,mb4.3
MJAR  Matsushiro Arr    70.12 324  P     P     13 56 17.6 +0.3
      3.4nm,0.7s,mb3.9,baz=162,slow=6.2,SNR=9.9
NJ2   Nanjing           79.61 310  eP    P     13 57 08.3 -1.7
NJ2                                AMB   AMB
```

	comp=Z,30nm,1.4s,mb4.4						
NVAR	**Mina Array Bea**	**81.74**	**44**	P	**P**	**13 57 22.2**	**+1.5**
	comp=Z,0.3nm,0.5s,mb3.1,baz=225,slow=6.8,SNR=3.3						
CN2	**Changchun**	**82.20**	**323**	*e*P	**P**	**13 57 28.0**	**+5.1**
VNA3	**Neumayer Olymp**	**87.82**	**176**	⇑*i*	**P**	**13 57 49.4**	**-0.1**
VNA2	**Neumayer--Watz**	**88.25**	**177**	⇑*i*	**P**	**13 57 51.8**	**+0.3**
COLA	**College**	**88.71**	**13**	*e*P	**P**	**13 57 52.9**	**-0.8**
	comp=Z,5.3nm,1.0s,mb4.3						
ILAR	**Eielson Array**	**88.82**	**13**	P	**P**	**13 57 54.0**	**-0.2**
	comp=Z,1.6nm,0.9s,mb3.8,baz=226,slow=5.7,SNR=8.2						
KMI	**Kunming**	**88.94**	**297**	P	**P**	**13 57 57.5**	**+1.7**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
KMI	**Kunming**	**88.94**	**297**	P	**P**	**13 57 57.5**	**+1.7**
	comp=Z,11nm,0.8s,mb4.7						
HHC	**Hu-ho-hao-te**	**89.15**	**315**	*e*P	**P**	**13 57 56.5**	**+0.1**
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
PDAR	**Pinedale Array**	**89.67**	**43**	P	**P**	**13 57 59.7**	**+0.9**
	comp=Z,0.6nm,0.6s,mb3.6,baz=231,slow=3.0,SNR=5.8						
LZH	**Lanzhou**	**92.48**	**308**	*e*P	**P**	**13 58 09.4**	**-2.3**
	comp=Z,5.0nm,1.0s,mb4.5						
LZH				pP	pP	14 00 18.1	-2.0
LZH				sP	sP	14 01 12.8	-5.1
MKAR	**Makanchi Array**	**110.98**	**313**	PKiKP		14 03 28.8	
	comp=Z,0.4nm,0.4s,baz=154,slow=0.5,SNR=13						
BVAR	**Borovoye Array**	**118.94**	**320**	PKP	PKPdf	14 03 44.4	+0.8
	comp=Z,2.7nm,0.4s,baz=125,slow=2.2,SNR=21						
AKTO	**Aktyubinsk**	**126.91**	**318**	PKP	PKPdf	14 04 00.7	+1.6
	comp=Z,1.8nm,0.6s,baz=135,slow=3.6,SNR=4.1						
ARCES	**ARCESS Array B**	**129.16**	**349**	PKP	PKPdf	14 04 03.1	+0.2
	comp=Z,3.5nm,0.8s,baz=45,slow=1.7,SNR=19						
FINES	**FINESS Array B**	**135.94**	**343**	PKhKP		14 04 07.4	
	comp=Z,2.1nm,0.9s,baz=90,slow=1.9,SNR=3.4						
FINES				PKP	PKPdf	14 04 15.3	-0.4
	comp=Z,1.2nm,0.7s,baz=27,slow=4.3,SNR=6.0						
HFS	**Hagfors**	**139.80**	**350**	PKhKP		14 04 17.3	
	comp=Z,2.4nm,0.4s,baz=56,slow=2.7,SNR=25						
AKASG	**Malin Array Be**	**143.02**	**330**	PKP	PKPdf	14 04 27.5	-1.2
	comp=Z,11nm,0.5s,baz=44,slow=4.3,SNR=48						
EKA	**Eskdalemuir Ar**	**145.42**	**4**	PKPbc	PKPbc	14 04 35.3	+1.5
	comp=Z,1.1nm,0.5s,baz=331,slow=0.7,SNR=7.4						
BR131	**Keskin Array S**	**146.60**	**311**	*e*PKPbc	PKPbc	14 04 39.2	+2.0
BRTR	**Keskin Array B**	**146.60**	**311**	PKPbc	PKPbc	14 04 39.5	+2.3
	comp=Z,3.5nm,0.6s,baz=130,slow=4.7,SNR=15						
KWP	**Kalwaria**	**146.64**	**334**	*e*PKPbc	PKPbc	14 04 39.3	+2.4
KOLS	**Kolonicke sedl**	**147.36**	**334**	*e*PKP	PKPdf	14 04 42.0	+5.9
KOLS				*e*		14 04 49.7	
CRVS	**Cervenica-Dubn**	**147.72**	**335**	*e*PKP	PKPdf	14 04 42.8	+6.2
CRVS				*e*		14 04 47.2	
OKC	**Ostrava-Krasne**	**148.15**	**339**	*e*PKPbc	PKPdf	14 04 43.4	+6.1
MLR	**Muntele Rosu**	**148.17**	**326**	PKPbc	PKPdf	14 04 43.2	+5.8
	comp=Z,6.0nm,0.5s,baz=330,slow=4.0,SNR=8.7						
UPC	**Upice**	**148.23**	**342**	*e*PKPbc	PKPdf	14 04 44.0	+6.6
CLL	**Collm**	**148.27**	**346**	⇓*i*PKP1	PKPdf	14 04 43.3	+5.9
CLL				*i* PKP2	PKPab	14 04 48.7	-0.9
DPC	**Dobruska-Polom**	**148.28**	**342**	*e*PKPbc	PKPdf	14 04 43.9	+6.5
KECS	**Kecovo**	**148.44**	**335**	*e*PKP	PKPdf	14 04 43.7	+6.0
KECS				*e*		14 04 50.0	
PVCC	**Panska Ves**	**148.60**	**344**	*e*PKPbc	PKPdf	14 04 45.0	+7.1
VYHS	**Vyhne**	**149.05**	**337**	*e*PKP	PKPdf	14 04 46.0	+7.3
VYHS				*e*		14 04 52.9	
PRU	**Pruhonice**	**149.10**	**343**	*e*PKPbc	PKPdf	14 04 45.8	+7.1
VRAC	**Vranov**	**149.11**	**340**	PKPbc	PKPdf	14 04 44.3	+5.5
	comp=Z,1.5nm,0.4s,baz=348,slow=5.8,SNR=4.2						
MOX	**Moxa**	**149.19**	**347**	*i* P	PKPdf	14 04 45.9	+7.1
TREC	**Trest**	**149.46**	**342**	*e*PKPbc	PKPdf	14 04 46.7	+7.4
KHC	**Kasperske Hory**	**150.14**	**344**	*e*PKPbc	PKPdf	14 04 48.2	+7.8
KHC				*e*PKPab	PKPab	14 04 57.6	+0.3
GRF	**Grafenberg Arr**	**150.18**	**347**	*e*PKP	PKPdf	14 04 48.5	+8.1
GERES	**GERESS Array B**	**150.37**	**343**	PKPbc	PKPdf	14 04 48.2	+7.4
	comp=Z,3.7nm,0.8s,baz=30,slow=2.3,SNR=28						
GERES				PKPab	PKPab	14 04 57.8	-0.5
	comp=Z,0.4nm,0.6s,baz=315,slow=1.9,SNR=3.5						
MOA	**Molln**	**151.12**	**342**	⇑*i*P	PKPdf	14 04 50.1	+8.2
	comp=Z,2.3nm,0.5s						
PERS	**Pernice**	**151.94**	**340**	*i* PKPbc	PKPdf	14 04 51.4	+8.4
MOTA	**Moosalm**	**152.42**	**346**	⇑*e*P	PKPdf	14 04 53.6	+10
	comp=Z,1.7nm,0.6s						
PDKS	**Podkum**	**152.48**	**339**	*i* PKPbc	PKPdf	14 04 52.9	+9.0
SQTA	**Sankt Quirin**	**152.51**	**345**	⇓*i*P	PKPdf	14 04 53.6	+10
	comp=Z,5.4nm,0.9s						
BOJS	**Bojanci**	**152.88**	**338**	*i* PKPbc	PKPdf	14 04 54.1	+10
DAVOX	**Davos**	**153.22**	**347**	PKPbc	PKPdf	14 04 54.9	+10
	comp=Z,2.5nm,0.5s,baz=255,slow=6.0,SNR=6.9						

*IDC **13** 13:49:36.9±1.0, 58.85S×25.35W, mb3.9/3, mb1 4.1/3, mb1mx3.8/12, mbtmp3.9/3, Error ellipse: s-maj=71.9km s-min=34.0km az=26.0*

*NEIC **13** 13:49:38.3±0.4, 58.74S×25.36W, h10^{km}, mb3.9/3, Error ellipse: s-maj=25.6km s-min=7.5km az=57.0*

ISC 13 13:49:35.7±1.8**, 58.6S**±0.3×**25.0W**±0.9**, h10^{km}, n15, σ0^{s}63**/8**, mb4.0**/4**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.99**	**157**		**P**	**13 52 56.2**	**+0.3**
VNA3	**Neumayer Olymp**	**14.20**	**160**		**P**	**13 52 57.9**	**-0.6**
SNAA	**Sanae**	**15.94**	**154**	*e*P	**P**	**13 53 21.2**	**0.0**
	4.8nm,0.6s						
PLCA	**Paso Flores**	**33.64**	**282**	P	**P**	**13 56 18.3**	**0.0**
	1.3nm,0.7s,mb4.0,baz=148,slow=9.5,SNR=4.2						
PLCA	**Paso Flores**	**33.64**	**282**	*e*P	**P**	**13 56 17.9**	**-0.3**
	1.3nm,0.8s,mb3.9						
LPAZ	**La Paz**	**52.80**	**305**	P	**P**	**13 58 54.1**	**+0.9**
	0.3nm,0.4s,mb3.6,baz=135,slow=1.4,SNR=4.1						
SAML	**Samuel**	**57.42**	**314**	P	**P**	**13 59 25.8**	**-1.0**
	1.0nm,0.7s,mb4.0						
STKA	**Stephens Creek**	**89.19**	**169**	P	**P**	**14 02 32.9**	**+0.5**
	1.2nm,0.6s,mb4.4,baz=177,slow=11,SNR=4.0						
FINES	**FINESS Array B**	**126.09**	**28**	PKP	PKPdf	14 08 39.4	-0.6
	3.9nm,1.0s,baz=153,slow=4.3,SNR=5.1						
ARCES	**ARCESS Array B**	**132.87**	**22**	PKP	PKPdf	14 08 52.5	-0.4
	3.7nm,0.9s,baz=207,slow=2.0,SNR=4.6						
YKA	**Yellowknife Ar**	**138.83**	**315**	PKP	PKPdf	14 09 03.6	-0.3
	1.9nm,0.6s,baz=132,slow=1.9,SNR=16						
YKA	**Yellowknife Ar**	**138.83**	**315**	PKP	PKPdf	14 09 03.6	-0.3
INK	**Inuvik**	**148.50**	**318**	*e*PKPbc	PKPdf	14 09 23.5	+3.2
SONM	**Songino Array**	**149.65**	**89**	PKPbc	PKPdf	14 09 27.7	+5.0
	1.0nm,0.7s,baz=230,slow=3.5,SNR=8.1						
ILAR	**Eielson Array**	**152.65**	**308**	PKPbc	PKPdf	14 09 33.6	+7.0
	3.9nm,0.9s,baz=135,slow=2.6,SNR=28						

IDC 13 14:08:07.9±3.5**, 5.46S**×**102.74E, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/15**, mbtmp3.6**/4**, Error ellipse: s-maj=152.6km s-min=25.1km az=57.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.93**	**118**	P	P	14 14 52.9	-2.2
	0.5nm,1.1s,baz=296,slow=8.7,SNR=3.4						
STKA	**Stephens Creek**	**44.83**	**131**	P	P	14 16 23.7	-2.1
	1.5nm,0.6s,baz=313,slow=9.8,SNR=6.0						
SONM	**Songino Array**	**53.16**	**3**	P	P	14 17 27.9	-2.0
	0.6nm,0.6s,baz=180,slow=9.0,SNR=7.2						
MKAR	**Makanchi Array**	**55.09**	**343**	P	P	14 17 41.2	-2.9
	0.3nm,0.5s,baz=148,slow=8.4,SNR=6.3						
TXAR	**Lajitas Array**	**145.55**	**43**	PKPbc	PKPbc	14 27 49.0	-0.4
	0.1nm,0.3s,baz=45,slow=1.3,SNR=2.1						

*NIED **13** 14:14:00, 28.70N×129.60E, h20^{km}, Mw3.8 Best double couple: M$_0$5.17×10^{14} NP1:ϕ$_s$83°, δ86°, λ-167°. NP2: ϕ$_s$352°, δ77°, λ-4°.*

*JMA **13** 14:14:00.5, 28.69N×129.62E, h18^{km}±2^{km}, M3.9*

ISC 13 14:14:00.4±0.9**, 28.70N**±0.03×**129.61E**±0.06**, h14^{km}**±6^{km}**, n10, σ0^{s}66**/19**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**0.29**	**181**	P	**Pg**	**14 14 06.6**	**0.0**
JAM				S	**Sg**	**14 14 10.8**	**0.0**
JZK	**Kikaishima**	**0.50**	**141**	P	**Pb**	**14 14 10.0**	**-0.4**
JZK				S	**Sb**	**14 14 17.1**	**-0.2**
JTK	**Tokunoshima**	**1.08**	**213**	P	**Pb**	**14 14 20.4**	**0.0**
JNN	**Nakanoshima**	**1.16**	**11**	P	**Pb**	**14 14 21.3**	**-0.4**
JNN				S	**Sb**	**14 14 36.9**	**+0.5**
JKC	**Kuchinoerabu**	**1.83**	**16**	P	**Pn**	**14 14 30.8**	**-1.0**
JKC				S	**Sn**	**14 14 53.2**	**-1.6**
JOW	**Kunigami**	**2.21**	**213**	P	**Pn**	**14 14 38.1**	**+0.9**
JOW				*e*S	**Sn**	**14 15 04.7**	**+0.2**
JIH	**Iheya**	**2.21**	**222**	P	**Pn**	**14 14 37.3**	**+0.1**
JIH				*e*S	**Sn**	**14 15 04.4**	**-0.2**
JTN	**Tanegashima 3**	**2.28**	**31**	P	**Pn**	**14 14 38.9**	**+0.6**
JTN				*e*S	**Sn**	**14 15 07.9**	**+1.5**
JAGN	**Aguni-jima**	**2.98**	**226**	P	**Pn**	**14 14 48.5**	**+0.3**
JAGN				*e*S	**Sn**	**14 15 24.3**	**+0.3**
JKE	**Kume jima 2**	**3.45**	**227**	P	**Pn**	**14 14 55.1**	**+0.2**
JKE				*e*S	**Sn**	**14 15 35.2**	**-0.8**

*IDC **13** 14:22:00.4±1.6, 41.95N×83.24E, mb4.1/2, mb1 4.0/5, mb1mx3.6/22, mbtmp3.7/5, ML3.2/3, MS4.0/1, Ms1 4.0/1, ms1mx2.5/39, Error ellipse: s-maj=48.1km s-min=17.1km az=72.0*

*NEIC **13** 14:22:01.5±1.2, 41.87N×82.82E, h10^{km}, Error ellipse: s-maj=18.4km s-min=16.9km az=83.0*

*BJI **13** 14:22:02.1, 41.90N×82.61E, h10^{km}, ML3.8*

*NNC **13** 14:22:03.5±6.9, 42.21N×84.06E, h11^{km}±44^{km}, mpv3.9, Error ellipse: s-maj=77.0km s-min=24.8km az=129.0*

ISC 13 14:21:59.1±1.3**, 41.82N**±0.08×**83.25E**±0.08**, h10^{km}, n12, σ1^{s}43**/17**, mb3.9**/2**, MS4.1**/1**, 3C-3D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**3.83**	**57**	*e*PG	**Pg**	**14 23 14.1**	**-1.6**
WMQ				S	**Sg**	**14 24 07.1**	**+0.3**
WMQ				Smax			
	comp=N,80nm,1.0s						
WMQ				Smax			
	comp=E,60nm,0.8s						
MK31	**Makanchi Array**	**5.02**	**352**	Pn	**Pn**	**14 23 17.6**	**+1.2**
	comp=E,7.2nm,0.5s,baz=188,slow=12,SNR=88						
MK31				⇑Sn	**Sn**	**14 24 16.6**	**+1.3**
	comp=E,11nm,0.6s						
MK31				⇓Lg		14 24 36.1	
	comp=E,16nm,0.6s,baz=179,slow=27,SNR=4.3						
MKAR	**Makanchi Array**	**5.02**	**352**	Pn	**Pn**	**14 23 16.8**	**+0.3**
	comp=E,1.1nm,0.3s,baz=177,slow=12,SNR=37						
MKAR				Pg	**Pg**	**14 23 30.4**	**-9.0**
	comp=E,3.3nm,0.3s,baz=174,slow=15,SNR=19						
MKAR				Sn	**Sn**	**14 24 15.6**	**+0.3**
	comp=E,2.4nm,0.3s,baz=175,slow=17,SNR=3.3						
MKAR				Lg		14 24 38.8	
	comp=E,5.6nm,0.3s,baz=166,slow=30,SNR=6.9						
AAK	**Ala-Archa**	**6.55**	**280**	⇑Pn	**Pn**	**14 23 51.5**	**+13**
	comp=E,4.5nm,0.5s						
AAK				⇓Sn	**Sn**	**14 25 09.7**	**+16**
	comp=E,16nm,0.7s						
AAK	**Ala-Archa**	**6.55**	**280**	*e*P	**Pn**	**14 23 33.2**	**-4.8**
	comp=E,5.6nm,0.5s						
KK31	**Karatay Array**	**9.51**	**282**	⇓Pn	**P**	**14 24 28.8**	**+10**
	comp=E,0.7nm,0.6s,baz=154,slow=5.0,SNR=4.9						
KK31				⇑Sn	**Sn**	**14 26 25.9**	**+19**
	comp=E,2.8nm,0.6s,baz=79,slow=27,SNR=3.7						
ZAL	**Zalesovo**	**12.17**	**4**	Pn	**P**	**14 24 53.3**	**-2.1**
	comp=E,0.4nm,0.3s,baz=313,slow=10,SNR=3.1						
BVAR	**Borovoye Array**	**14.17**	**327**	Pn	**P**	**14 25 19.6**	**-2.2**
	comp=E,0.1nm,0.3s,baz=120,slow=12,SNR=2.4						
ARCES	**ARCESS Array B**	**40.35**	**333**	P	**P**	**14 29 37.2**	**-0.9**
	comp=E,4.9nm,0.9s,mb4.2,baz=100,slow=7.4,SNR=5.9						
ARCES	**ARCESS Array B**	**40.35**	**333**	P	**P**	**14 29 37.2**	**-1.0**
PMG	**Port Moresby**	**77.49**	**115**	LR	LR	15 09 36.1	
	comp=E,87nm,18.9s,MS4.1,baz=249,slow=37						
WRA	**Warramunga Arr**	**77.50**	**131**	P	**P**	**14 33 59.1**	**+2.5**
	comp=E,0.5nm,0.8s,mb3.5,baz=329,slow=5.3,SNR=6.4						

*TIF **13** 14:31:28.3, 41.38N×44.14E, h9^{km}±2^{km}*

*MOS **13** 14:31:30.2±0.8, 41.38N×44.06E, h4^{km}, mb4.0/1, Error ellipse: s-maj=31.9km s-min=8.4km az=86.2*

ISC 13 14:31:29.4±0.9**, 41.36N**±0.06×**44.11E**±0.04**, h9^{km}, n15, σ1^{s}23**/21**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.47**	**277**	P	**Pg**	**14 31 38.5**	**-0.4**
AKH				S	**Sg**	**14 31 45.0**	**-0.3**
TBLG	**Delisi**	**0.60**	**51**	P	**Pg**	**14 31 41.1**	**-0.5**
TBLG				S	**Sg**	**14 31 49.7**	**0.0**
TI2	**Plekhanov**	**0.61**	**52**	*i* PG	**Pg**	**14 31 43.2**	**+1.4**
MTA	**Mtatsminda**	**0.61**	**56**	P	**Pg**	**14 31 41.3**	**-0.5**
MTA				S	**Sg**	**14 31 49.7**	**-0.4**
GOR	**Gori**	**0.63**	**360**	P	**Pb**	**14 31 41.6**	**-0.5**
GOR				S	**Sg**	**14 31 50.7**	**+0.1**
DGRG	**David-gareji**	**0.96**	**84**	P	**Pb**	**14 31 47.3**	**-0.3**
DGRG				S	**Sb**	**14 31 59.7**	**-0.5**
ONI	**Oni**	**1.32**	**338**	P	**Pb**	**14 31 53.6**	**-0.3**
ONI				S	**Sb**	**14 32 11.0**	**+0.3**
ZEI	**Tsey**	**1.42**	**354**	*e*PG	**Pg**	**14 31 55.5**	**-2.4**
ZEI				*e*		14 32 15.1	
ZEI				pmax	pmax		
	comp=Z,21nm,0.1s						
ZEI				smax			
	comp=E,192nm,0.5s						
LACR	**Lac**	**1.48**	**5**	*i* PG	**Pg**	**14 31 57.0**	**-1.9**
DIGR	**Digorskoe uzhe**	**1.59**	**346**	*e*PG	**Pg**	**14 31 59.3**	**-2.0**
KORR	**Kora**	**1.73**	**359**	*e*PN	**Pn**	**14 32 00.0**	**+0.1**
VLKR	**Vladikavkaz**	**1.74**	**14**	*e*PN	**Pn**	**14 32 02.0**	**+1.9**
ARNR	**Ardon**	**1.84**	**4**	*e*PN	**Pn**	**14 32 03.6**	**+2.2**
LSNR	**Lesken**	**1.93**	**354**	*e*PN	**Pn**	**14 32 05.0**	**+2.2**
KMSR	**Komsomolskaya**	**2.02**	**4**	*i* PN	**Pn**	**14 32 06.6**	**+2.6**

*NIED **13** 14:48:00, 23.70N×141.70E, h50^{km}, Mw4.9 Best double couple: M$_0$2.17×10^{16} NP1:ϕ$_s$188°, δ80°, λ-70°. NP2: ϕ$_s$304°, δ22°, λ-152°.*

*MOS **13** 14:48:33.3±1.3, 23.31N×141.94E, h33^{km}, mb4.5/10, Error ellipse: s-maj=18.2km s-min=9.2km az=106.8*

*IDC **13** 14:48:35.2±3.2, 23.27N×141.98E, h40^{km}±28^{km}, mb3.8/16, mb1 3.9/18, mb1mx3.9/25, mbtmp4.0/18, ML4.2/2, MS3.9/17, Ms1 3.9/17, ms1mx3.7/34, Error ellipse: s-maj=22.2km s-min=13.9km az=87.0*

*BJI **13** 14:48:39.8, 23.20N×141.90E, h81^{km}, mB5.0, mb4.3, Ms4.3, Msz4.0*

*NEIC **13** 14:48:39.8±0.3, 23.24N×141.89E, mb4.7/10, MW4.8(NIED), Error ellipse: s-maj=11.6km s-min=7.4km az=92.0*

ISC 13 14:48:32.9±0.4**, 23.29N**±0.04×**142.10E**±0.09**, h33^{km}, (h83^{km}**±3.0^{km}**:pP-P), n81, σ1^{s}22**/78**, mb4.3**/31**, MS4.0**/21**, 5C-1D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.79**	**1**	P	**P**	**14 49 30.1**	**-0.2**
	45nm,0.3s,baz=270,slow=19,SNR=23						
CBIJ				S	**S**	**14 50 12.3**	**-2.0**
	65nm,0.3s,baz=301,slow=23,SNR=5.8						
CBIJ				LR	LR	14 50 51.0	
	comp=Z,831nm,18.1s,baz=2.6,slow=36						
JOW	**Kunigami**	**13.01**	**289**	LR	LR	14 55 39.4	
	comp=Z,533nm,19.8s,baz=102,slow=33						
MJAR	**Matsushiro Arr**	**13.62**	**347**	P	**P**	**14 51 44.8**	**-1.3**
	0.6nm,0.3s,baz=161,slow=11,SNR=5.4						
JNU	**Nakatsue**	**13.90**	**317**	LR	LR	14 55 44.1	
	comp=Z,110nm,18.9s,baz=110,slow=31						
SSE	**Sheshan**	**20.14**	**297**	P	**P**	**14 53 01.9**	**-5.0**
	40nm,0.7s						
SSE				sP		14 53 14.2	
SSE				S	**S**	**14 56 34.7**	**-12**
SSE				sS		14 56 50.0	
ASAJ	**Asahikawa**	**20.77**	**1**	P	**P**	**14 53 13.8**	**+0.3**
	4.3nm,0.7s,baz=211,slow=18,SNR=4.6						
ASAJ				LR	LR	15 00 55.2	
	comp=Z,361nm,19.5s,MS3.8,baz=357,slow=36						
NJ2	**Nanjing**	**22.32**	**298**	*e*P	**P**	**14 53 31.8**	**+2.7**
NJ2				AP		14 53 44.9	
NJ2				PP	PP	14 53 57.1	+0.6
NJ2				S	**S**	**14 57 21.0**	**-6.5**
NJ2				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,120nm,8.5s						
NJ2				LR	LR		
	comp=N,2μm,23.9s						
NJ2				LR	LR		
	comp=E,1μm,17.2s						
NJ2				LR	LR		
	comp=Z,330nm,26.0s,MS3.6						
DAV	**Davao City (W)**	**22.64**	**227**	P	**P**	**14 53 36.4**	**+4.0**
	comp=Z,182nm,0.4s						
MDJ	**Mudanjiang**	**23.61**	**337**	P	**P**	**14 53 42.0**	**+0.4**
MDJ				AP		14 53 59.8	
MDJ				XP		14 54 08.8	
MDJ				SCP		15 00 56.1	
MDJ				PCS		15 01 05.8	
MDJ				AMB	AMB		
	comp=Z,100nm,5.7s						
MDJ				LR	LR		
	comp=N,70nm,18.5s,MS3.4						
MDJ				LR	LR		
	comp=E,110nm,19.4s,MS3.4						
MDJ				LR	LR		
	comp=Z,140nm,22.2s,MS3.4						
YSS	**Yuzh-Sakhalins**	**23.61**	**1**	*e*P	**P**	**14 53 44.2**	**+2.6**
CN2	**Changchun**	**24.62**	**330**	*e*P	**P**	**14 53 53.4**	**+1.9**
WHN	**Wuhan**	**25.73**	**292**	⇑P	**P**	**14 54 06.1**	**+4.0**
HHC	**Hu-ho-hao-te**	**31.02**	**312**	*e*P	**P**	**14 54 51.4**	**+1.7**
HHC				AP	pP	14 55 13.3	+14
HHC				XP	sP	14 55 24.0	+20
HHC				PCP	PcP	14 57 44.3	-0.9
HHC				PCS		15 01 26.3	
HHC				SCS	ScS	15 05 12.9	-6.8
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,100nm,6.3s						
HHC				LR	LR		
	comp=N,210nm,10.8s,MS4.2						
HHC				LR	LR		
	comp=E,190nm,10.8s,MS4.2						
HHC				LR	LR		
	comp=Z,240nm,10.8s,MS4.1						
PET	**Petropavlovsk**	**32.25**	**19**	*e*P	**P**	**14 55 03.7**	**+3.4**
LZH	**Lanzhou**	**35.37**	**300**	*e*P	**P**	**14 55 29.8**	**+2.4**
LZH				AP	pP	14 55 49.3	+12
LZH				XP	sP	14 55 59.1	+18
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
LZH	**Lanzhou**	**35.37**	**300**	*e*P	**P**	**14 55 29.7**	**+2.3**
	comp=Z,25nm,1.5s,mb4.9						
LZH				pP	pP	14 55 49.3	+12
LZH				sP	sP	14 55 59.1	+18
LZH	**Lanzhou**	**35.37**	**300**	*e*P	**P**	**14 55 29.7**	**+2.3**
LZH				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.9						
KMI	**Kunming**	**35.86**	**281**	P	**P**	**14 55 30.8**	**-0.9**
KMI				AP	pP	14 55 50.5	+9.1
KMI				XP	sP	14 56 01.1	+15
KMI				S	**S**	**15 01 01.6**	**-4.9**
KMI				XS		15 01 34.5	
KMI				SS	SS	15 03 24.5	-4.3
KMI				AMB	AMB		
	comp=Z,70nm,4.8s						
KMI				LR	LR		
	comp=N,120nm,15.2s,MS4.0						
KMI				LR	LR		
	comp=E,150nm,14.7s,MS4.0						
KMI				LR	LR		
	comp=Z,160nm,13.3s,MS4.0						
KMI	**Kunming**	**35.86**	**281**	P	**P**	**14 55 30.7**	**-1.0**
	comp=Z,5.0nm,0.9s,mb4.4						
KMI				pP	pP	14 55 50.5	+9.1
KMI				sP	sP	14 56 01.1	+15
KMI				S	**S**	**15 01 01.6**	**-4.9**
KMI				sS		15 01 34.5	
KMI				SS	SS	15 03 24.5	-4.3
KMI				LR	LR		
	comp=Z,170nm,13.3s,MS4.0						
KMI	**Kunming**	**35.86**	**281**	P	**P**	**14 55 30.7**	**-1.0**
KMI				S	**S**	**15 01 01.6**	**-4.9**
KMI				SS	SS	15 03 24.5	-4.3
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
KMI				MLR	MLR		
	comp=Z,170nm,13.3s,MS4.0						
SONM	**Songino Array**	**37.47**	**320**	P	**P**	**14 55 45.6**	**+0.5**
	comp=Z,0.4nm,0.6s,mb3.4,baz=113,slow=7.6,SNR=4.0						
SONM				LR	LR	15 11 43.3	
	comp=Z,111nm,18.9s,MS3.7,baz=62,slow=37						
FX1	**Attu Island--F**	**37.81**	**31**	LR	LR	15 09 57.0	
	comp=Z,12nm,20.9s,baz=228,slow=34						
GTA	**Gaotai**	**39.14**	**304**	*e*P	**P**	**14 56 00.1**	**+1.1**
GTA				AP	pP	14 56 18.5	+10
GTA				XP	sP	14 56 27.5	+15
GTA				PP	PP	14 57 35.4	+2.5
GTA				S	**S**	**15 01 54.3**	**-2.1**
GTA				XS		15 02 25.8	
GTA				SCS	ScS	15 05 59.8	-3.6
GTA				AMB	AMB		
	comp=Z,170nm,7.2s						
GTA				LR	LR		
	comp=N,180nm,14.8s,MS4.2						
GTA				LR	LR		
	comp=E,210nm,14.4s,MS4.2						
GTA				LR	LR		
	comp=Z,160nm,11.0s,MS4.1						
YAK	**Yakutsk**	**39.64**	**351**	⇑*i*P	**P**	**14 56 03.0**	**+0.1**
YAK				pmax	pmax		
	comp=Z,30nm,2.7s,mb4.5						
ZAK	**Zakamensk**	**40.47**	**322**	*e*P	**P**	**14 56 23.0**	**+13**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
CTA	**Charters Tower**	**43.31**	**174**	P	**P**	**14 56 33.4**	**-0.2**
	comp=Z,9.0nm,1.1s,mb4.4,slow=6.1,SNR=2.0						
WRAB	**Tennant Creek**	**43.62**	**191**	*e*P	**P**	**14 56 35.3**	**-0.9**
	comp=Z,101nm,1.4s,mb5.4						
WRAB	**Tennant Creek**	**43.62**	**191***c*	*i*P	**P**	**14 56 35.9**	**-0.3**
WB2	**Warramunga Arr**	**43.63**	**191**	*e*P	**P**	**14 56 35.1**	**-1.1**
WRA	**Warramunga Arr**	**43.63**	**191**	P	**P**	**14 56 36.0**	**-0.3**
	comp=Z,21nm,0.9s,mb4.8,baz=12,slow=8.2,SNR=43						
WRA	**Warramunga Arr**	**43.63**	**191**	*i* P	**P**	**14 56 36.0**	**-0.3**
WRA				pmax	pmax		
	comp=Z,21nm,0.9s						
FITZ	**Fitzroy Crossi**	**44.17**	**203**	*e*P	**P**	**14 56 41.8**	**+1.2**
	comp=Z,9.5nm,0.9s,mb4.5						
BILL	**Bilibino**	**47.17**	**12**	*e*P	**P**	**14 57 04.0**	**+0.3**
	comp=Z,18nm,1.4s,mb4.8						
BILL	**Bilibino**	**47.17**	**12**	*e*P	**P**	**14 57 04.1**	**+0.4**
BILL				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.7						
ASPA	**Alice Springs**	**47.35**	**190**	*e*P	**P**	**14 57 05.9**	**+0.1**
WMQ	**Urumqi**	**48.80**	**309**	*e*P	**P**	**14 57 18.3**	**+1.6**
WMQ				AP	pP	14 57 39.0	+12
WMQ				PP	PP	14 59 11.0	+1.1
WMQ				*e*S	**S**	**15 04 12.0**	**-4.5**
WMQ				AMB	AMB		
	comp=Z,120nm,5.8s						
WMQ				LR	LR		
	comp=N,130nm,17.1s,MS4.1						
WMQ				LR	LR		
	comp=E,100nm,15.8s,MS4.1						
WMQ				LR	LR		
	comp=Z,100nm,16.2s,MS3.9						
TIXI	**Tiksi**	**48.97**	**354**	*e*P	**P**	**14 57 14.1**	**-3.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
ZAL	**Zalesovo**	**52.35**	**321**	P	**P**	**14 57 42.9**	**-0.7**
	comp=Z,0.6nm,0.4s,mb3.9,baz=139,slow=13,SNR=3.0						
ZAL				LR	LR	15 21 40.2	
	comp=Z,116nm,18.2s,MS4.0,baz=185,slow=38						
ZAL	**Zalesovo**	**52.35**	**321**	P	**P**	**14 57 42.9**	**-0.7**
ZAL				LR	LR	15 21 40.2	
ZAL	**Zalesovo**	**52.35**	**321**	⇑*e*P	**P**	**14 57 44.7**	**+1.1**
MKAR	**Makanchi Array**	**52.88**	**312**	P	**P**	**14 57 47.0**	**-0.7**
	comp=Z,0.3nm,0.4s,mb3.6,baz=87,slow=8.8,SNR=12						
MKAR	**Makanchi Array**	**52.88**	**312**	P	**P**	**14 57 47.0**	**-0.7**
MKAR	**Makanchi Array**	**52.88**	**312**	*i* P	**P**	**14 57 47.7**	**0.0**
STKA	**Stephens Creek**	**54.86**	**181**	*e*P	**P**	**14 58 00.6**	**-1.9**
	comp=Z,4.2nm,0.8s,mb4.5						
STKA	**Stephens Creek**	**54.86**	**181**	P	**P**	**14 58 00.6**	**-1.9**
	comp=Z,5.5nm,0.8s,mb4.6,baz=337,slow=7.0,SNR=9.5						
STKA				LR	LR	15 19 51.3	
	comp=Z,97nm,18.6s,MS3.9,baz=26,slow=34						
KURK	**Kurchatov**	**55.63**	**316**	*e*P	**P**	**14 58 05.9**	**-1.8**
KURK	**Kurchatov**	**55.63**	**316**	⇑*i*P	**P**	**14 58 05.5**	**-2.2**
KDAK	**Kodiak Island**	**57.47**	**35**	P	**P**	**14 58 20.4**	**-0.4**
	comp=Z,2.9nm,0.7s,mb4.4,baz=282,slow=9.3,SNR=3.7						
KDAK				LR	LR	15 19 22.1	
	comp=Z,293nm,21.2s,MS4.4,baz=257,slow=32						
PMR	**Palmer**	**59.70**	**31**	*e*P	**P**	**14 58 35.8**	**-0.5**
	comp=Z,6.6nm,1.2s,mb4.5						
PMR	**Palmer**	**59.70**	**31**	*e*P	**P**	**14 58 35.8**	**-0.5**
PMR				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
CHKZ	**Chkalovo**	**60.67**	**320**	*e*P	**P**	**14 58 40.9**	**-2.2**
	comp=Z,1.1nm,0.7s,mb4.1						
CHKZ	**Chkalovo**	**60.67**	**320**	*e*P	**P**	**14 58 40.9**	**-2.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
COLA	**College**	**60.69**	**27**	*e*P	**P**	**14 58 48.3**	**+5.3**
BVAR	**Borovoye Array**	**60.81**	**319**	P	**P**	**14 58 42.4**	**-1.5**
	comp=Z,1.0nm,0.4s,mb4.3,baz=93,slow=6.8,SNR=11						
BRVK	**Borovoye**	**60.87**	**319**	*e*P	**P**	**14 58 43.2**	**-1.2**
	comp=Z,1.0nm,0.7s,mb4.0						
BRVK	**Borovoye**	**60.87**	**319**	*e*P	**P**	**14 58 43.2**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
ILAR	**Eielson Array**	**61.09**	**28**	P	**P**	**14 58 45.0**	**-0.8**
	comp=Z,2.1nm,0.9s,mb4.3,baz=272,slow=5.6,SNR=14						
ILAR				LR	LR	15 23 57.2	
	comp=Z,82nm,21.5s,MS3.9,baz=359,slow=35						
INK	**Inuvik**	**66.52**	**24**	P	**P**	**14 59 21.4**	**+0.4**
	comp=Z,1.1nm,0.5s,mb4.1,baz=314,slow=6.8,SNR=4.8						
INK	**Inuvik**	**66.52**	**24**	*e*P	**P**	**14 59 21.2**	**+0.1**
ARU	**Arti**	**67.39**	**323**	⇓*i*P	**P**	**14 59 27.6**	**+0.9**
ARU				*e*		15 01 56.1	
ARU				*e*PPP	PPP	15 03 28.9	-5.3
ARU				*e*S	S	15 08 20.3	+1.7
ARU				*e*SS	SS	15 12 39.6	-0.9
ARU				pmax	pmax		
	comp=Z,4.0nm,1.6s,mb4.2						
AKTO	**Aktyubinsk**	**68.72**	**317**	LR	LR	15 31 59.7	
	comp=Z,47nm,21.7s,MS3.7,slow=38						
YKA	**Yellowknife Ar**	**75.52**	**28**	P	**P**	**15 00 16.3**	**+1.0**
	comp=Z,1.4nm,0.8s,mb3.9,baz=293,slow=5.9,SNR=3.9						
YKA				LR	LR	15 30 40.6	
	comp=Z,72nm,19.6s,MS4.0,baz=275,slow=33						
YKA	**Yellowknife Ar**	**75.52**	**28**	P	**P**	**15 00 16.3**	**+1.0**
YKA				LR	LR	15 30 40.6	
OBN	**Obninsk**	**79.61**	**326**	*e*P	**P**	**15 00 39.0**	**+0.9**
OBN				pmax	pmax		
	comp=Z,21nm,1.6s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
KIV	**Kislovodsk**	**80.59**	**314**	*i* P	**P**	**15 00 43.3**	**-0.4**
FINES	**FINESS Array B**	**81.31**	**334**	P	**P**	**15 00 46.2**	**-0.9**
	comp=Z,0.9nm,0.3s,mb4.2,baz=54,slow=4.0,SNR=15						
FINES				LR	LR	15 41 51.5	
	comp=Z,87nm,18.1s,MS4.2,baz=35,slow=39						
FINES	**FINESS Array B**	**81.31**	**334**	P	**P**	**15 00 46.2**	**-0.9**
FINES				LR	LR	15 41 51.5	
FINES	**FINESS Array B**	**81.31**	**334**	*i* P	**P**	**15 00 47.5**	**+0.4**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NVAR	**Mina Array Bea**	**82.94**	**51**	P	**P**	**15 00 56.8**	**+0.9**
	comp=Z,1.4nm,0.8s,mb4.0,baz=275,slow=4.1,SNR=5.2						
NVAR				LR	LR	15 30 04.0	
	comp=Z,81nm,21.7s,MS4.1,baz=135,slow=30						
AKASG	**Malin Array Be**	**85.63**	**324**	P	**P**	**15 01 08.9**	**-0.2**
	comp=Z,0.2nm,0.3s,mb3.8,baz=47,slow=4.9,SNR=5.8						
PDAR	**Pinedale Array**	**86.97**	**44**	LR	LR	15 33 17.1	
	comp=Z,151nm,20.3s,MS4.4,baz=270,slow=31						
NOA	**NORSAR Array B**	**87.10**	**338**	P	**P**	**15 01 15.7**	**-0.4**
	comp=Z,2.1nm,0.9s,mb4.4,baz=49,slow=4.8,SNR=3.3						
NOA				LR	LR	15 41 25.4	
	comp=Z,56nm,18.2s,MS4.0,baz=45,slow=36						
BRTR	**Keskin Array B**	**88.52**	**313**	P	**P**	**15 01 23.2**	**-0.2**
	comp=Z,1.2nm,0.9s,mb4.2,baz=63,slow=2.8,SNR=5.4						
RW3	**Ridgway**	**90.44**	**48**	*e*P	**P**	**15 01 34.1**	**+1.5**
ULM	**Lac du Bonnet**	**90.66**	**33**	LR	LR	15 38 16.7	
	comp=Z,61nm,20.1s,MS4.0,baz=347,slow=33						
ANMO	**Albuquerque**	**92.97**	**50**	*e*P	**P**	**15 01 50.5**	**+6.2**
TXAR	**Lajitas Array**	**97.93**	**54**	LR	LR	15 39 20.1	
	comp=Z,109nm,21.9s,MS4.3,baz=250,slow=31						
PLCA	**Paso Flores**	**147.56**	**130**	PKPbc	PKPdf	15 08 14.2	+3.1
	comp=Z,2.8nm,1.1s,baz=227,slow=6.1,SNR=4.0						
LPAZ	**La Paz**	**150.76**	**82**	PKPbc	PKPdf	15 08 24.6	+7.7
	comp=Z,0.9nm,0.3s,baz=275,slow=5.1,SNR=5.5						
LPAZ	**La Paz**	**150.76**	**82**	*e*PKPdf	PKPdf	15 08 20.0	+3.1
LPAZ				*e*PKPbc	PKPdf	15 08 25.1	+8.3
SAML	**Samuel**	**151.91**	**64**	*e*PKPbc	PKPdf	15 08 27.9	+9.2

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*BGR **13** 14:52:01.7±1.9,49.92N×18.51E,h1^{km},ML3.4/4,Error ellipse: s-maj=17.8km s-min=13.3km az=107.0*

*NEIC **13** 14:52:01.5±0.7,50.03N×18.54E,h5^{km},ML3.1(SZGRF), Error ellipse: s-maj=10.1km s-min=5.1km az=202.0*

*IPEC **13** 14:52:01.5±0.2,49.97N×18.59E,h5^{km}±1^{km},ML2.7/3, Error ellipse: s-maj=2.2km s-min=1.1km az=161.0*

*PRU **13** 14:52:02.4,50.06N×18.53E*

*CSEM **13** 14:52:02.3±0.1,50.07N×18.52E,h2^{km},ML3.5/4,Error ellipse: s-maj=3.4km s-min=2.0km az=11.0*

WAR 13 14:52:01.1,49.96N×18.57E,h0^{km},ML2.7,7C-2D,Mining Induced,Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.27**	**297**	*e*PG	Pg	14 52 08.0	+1.5
RAC				*e*SG	Sg	14 52 13.0	+2.8
RAC	**Raciborz**	**0.27**	**297**	*e*Pg	Pg	14 52 08.1	+1.6
RAC				*e*Sg	Sg	14 52 12.7	+2.5
OKC	**Ostrava-Krasne**	**0.30**	**246**	*e*PG	Pg	14 52 08.1	+1.0
OKC				*e*SG	Sg	14 52 13.4	+2.3
	210nm,0.3s						
MORC	**Moravsky Berou**	**0.69**	**255**	*e*P	Pg	14 52 14.7	-0.2
MORC				*e*S	Sg	14 52 24.7	+0.7
MORC	**Moravsky Berou**	**0.69**	**255**	*e*Pg	Pg	14 52 14.9	0.0
MORC				*e*Sg	Sg	14 52 23.8	-0.3
	216nm,0.4s						
OJC	**Ojcow**	**0.83**	**71**	*e*PG	Pg	14 52 18.0	+0.3
OJC				*e*SG	Sg	14 52 29.0	+0.2
OJC	**Ojcow**	**0.83**	**71**	*e*Pg	Pg	14 52 17.5	-0.2
OJC				*e*Sg	Sg	14 52 29.2	+0.4
LIKS	**Likavka**	**0.98**	**159**	*e*P	Pb	14 52 22.1	+1.6
LIKS				*e*Sn	Sn	14 52 37.5	+1.0
NIE	**Niedzica**	**1.25**	**115**	⇑*e*Pg	Pg	14 52 26.3	+0.1
NIE				*e*Sg	Sg	14 52 45.0	+2.1
VRAC	**Vranov**	**1.44**	**244**	⇑P	Pn	14 52 28.8	+0.3
VRAC	**Vranov**	**1.44**	**244**	*e*Pn	Pn	14 52 28.3	-0.2
VRAC				*e*Sg	Sg	14 52 47.4	-1.7
	68nm,0.3s						
VYHS	**Vyhne**	**1.48**	**173**	*e*PN	Pn	14 52 29.6	+0.6
VYHS				*e*SN	Sn	14 52 49.9	+0.7
DPC	**Dobruska-Polom**	**1.50**	**286**	*e*PG	Pg	14 52 29.2	-1.8
DPC				*e*SG	Sg	14 52 49.0	-2.0
	48nm,0.3s						
DPC	**Dobruska-Polom**	**1.50**	**286**	*e*Pg	Pg	14 52 29.2	-1.8
DPC				*e*Sg	Sg	14 52 48.8	-2.2
SMOL	**Smolenice**	**1.63**	**208**	*e*SN	Sn	14 52 54.1	+1.0
KRUC	**Moravsky**	**1.68**	**238**	*e*Pn	Pn	14 52 31.3	-0.5
KRUC				*e*Sg	Sg	14 52 54.9	-2.1
	58nm,0.5s						
KSP	**Ksiaz**	**1.70**	**302**	*e*PG	Pg	14 52 33.0	-2.1
KSP				*e*SG	Sg	14 52 55.0	-2.8
KSP	**Ksiaz**	**1.70**	**302**	*e*Pn	Pn	14 52 33.3	+1.1
KSP				*e*Pg	Pg	14 52 37.3	+2.2
KSP				*e*Sn	Sn	14 52 56.0	+1.0
KSP	**Ksiaz**	**1.70**	**302**	*e*Pg	Pg	14 52 33.0	-2.1
KSP				*e*Sg	Sg	14 52 54.8	-3.0
KECS	**Kecovo**	**1.94**	**139**	*e*PN	Pn	14 52 35.8	+0.2
KECS				*e*PG	Pg	14 52 41.1	+1.3
KECS				*e*SN	Sn	14 53 02.4	+1.4
ZST	**Bratislava**	**2.01**	**209**	*e*SN	Sn	14 53 03.9	+1.1
SRO	**Srobarova**	**2.15**	**185**	*e*PG	Pg	14 52 44.6	+0.5
CRVS	**Cervenica-Dubn**	**2.16**	**118**	*e*PN	Pn	14 52 43.6	+4.8
CRVS				*e*SG	Sg	14 53 12.7	-0.5
PSZ	**Piszkesteto**	**2.22**	**156**	*e*P	Pn	14 52 44.1	+4.5
PSZ	**Piszkesteto**	**2.22**	**156**	*e*P	Pn	14 52 44.1	+4.5
PRU	**Pruhonice**	**2.60**	**272**	*e*PG	Pg	14 52 48.1	-4.9
PRU				*e*SG	Sg	14 53 23.1	-4.6
	10nm,0.2s						
KOLS	**Kolonicke sedl**	**2.63**	**112**	*e*PG	Pg	14 52 52.2	-1.3
KOLS				*e*SG	Sg	14 53 27.7	-0.8
BRG	**Berggiesshubel**	**3.10**	**289**	*e*Pg	Pg	14 52 58.6	-4.3
BRG				*e*Sg	Sg	14 53 39.0	-5.2
BRG	**Berggiesshubel**	**3.10**	**289**	Pg	Pg	14 52 58.8	-4.1
BRG				Sg	Sg	14 53 39.0	-5.2
BRG	**Berggiesshubel**	**3.10**	**289**	Pg	Pg	14 52 58.8	-4.1
BRG				Sg	Sg	14 53 39.0	-5.2
KHC	**Kasperske Hory**	**3.35**	**258**	*e*PN	Pn	14 52 54.5	-1.3
KHC				*e*PG	Pg	14 53 02.6	-5.5
KHC				*e*SG	Sg	14 53 48.3	-4.5
	22nm,0.4s						
GEC2	**GERESS Array S**	**3.37**	**253**	*e*Sg	Sg	14 53 47.0	-6.3
ARSA	**Arzberg**	**3.38**	**218**	⇑*i*Pn	Pg	14 53 07.9	-0.8
ARSA	**Arzberg**	**3.38**	**218**	⇑*i*Sg	Sg	14 53 54.3	+0.6
	comp=Z,2.0nm,0.3s						
ARSA	**Arzberg**	**3.38**	**218**	⇑Pn	Pg	14 53 07.9	-0.8
ARSA				Sg	Sg	14 53 54.3	+0.6
MOA	**Molln**	**3.54**	**235**	⇓*i*Pn	Pn	14 53 06.5	+8.1
MOA	**Molln**	**3.54**	**235**	⇑*i*Sg	Sg	14 53 53.9	-5.0
	comp=Z,9.4nm,0.4s						
MOA	**Molln**	**3.54**	**235**	⇓Pn	Pn	14 53 06.5	+8.1
MOA				Sg	Sg	14 53 53.9	-5.0
CLL	**Collm**	**3.79**	**293**	*e*PG	Pg	14 53 15.0	-1.8
CLL				*i*		14 54 01.5	
CLL				*i* SG	Sg	14 54 08.6	+1.2
CLL	**Collm**	**3.79**	**293**	*e*Sg	Sg	14 54 01.8	-5.6
WET	**Wettzell**	**3.79**	**260**	*e*Sg	Sg	14 54 00.7	-6.7
NKC	**Novy Kostel**	**3.95**	**276**	*e*PG	Pg	14 53 11.7	-8.3
NKC				*e*SG	Sg	14 54 07.3	-5.3
	17nm,0.4s						
NOTT	**Nottersdorf**	**4.17**	**270**	*e*Pg	Pg	14 53 17.4	-6.9
DRGR		**4.20**	**137**	⇑P	Pn	14 53 00.6	-7.2
MOX	**Moxa**	**4.51**	**281**	*e*Pg	Pg	14 53 27.4	-3.7
MOX				*e*Sg	Sg	14 54 26.2	-5.1
GRA1	**Grafenberg Arr**	**4.76**	**270**	Sg	Sg	14 54 32.7	-7.0
GRF	**Grafenberg Arr**	**4.76**	**270**	*e*Sg	Sg	14 54 32.7	-7.0

NEIC 13 14:53:51.8,41.06N×121.51W,h8^{km},ML3.5(NCEDC), After NCEDC.,Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDC	**Whiskeytown Da**	**0.92**	**239**	*e*P	Pb	14 54 08.8	-0.8
YBH	**Yreka Blue Hor**	**1.12**	**307**	*e*P	Pb	14 54 11.4	-1.6
YBH				*e*S	Sb	14 54 29.0	+1.4
MOD	**Modoc**	**1.23**	**47**	*e*P	Pb	14 54 11.9	-3.0
KHMM	**Horse Mountain**	**1.69**	**264**	*e*P	Pn	14 54 21.4	-0.5
HUMO	**Hull Mountain**	**1.88**	**325**	*e*P	Pn	14 54 23.8	-0.8
KIPM	**Iron Peak**	**1.96**	**231**	*e*Pn	Pn	14 54 26.0	+0.3
KCPM	**Cahto Peak**	**2.10**	**230**	*e*Pn	Pn	14 54 27.7	0.0
PAHR	**Pah Rah Range**	**2.11**	**129**	*e*Pn	Pn	14 54 27.5	-0.5
KBO	**Bosley Butte**	**2.34**	**300**	Pn	Pn	14 54 28.5	-2.7
HOPS	**Hopland**	**2.39**	**211**	*e*Pn	Pn	14 54 31.6	-0.3
WVOR	**Wild Horse Val**	**2.55**	**57**	*e*Pn	Pn	14 54 30.3	-3.8
CMB	**Columbia Colle**	**3.15**	**164**	*e*Pn	Pn	14 54 41.2	-1.5
MNV	**Mina**	**3.69**	**134**	*e*Pn	Pn	14 54 48.7	-1.6
MTUM	**Tungsten Hills**	**4.35**	**147**	*e*Pn	Pn	14 54 58.5	-1.3
TPH	**Tonopah**	**4.46**	**131**	*e*Pn	Pn	14 54 59.5	-1.8
ELK	**Elko**	**4.76**	**92**	*e*Pn	Pn	14 55 01.9	-3.7
BMO	**Blue Mountains**	**4.88**	**38**	*e*Pn	Pn	14 55 03.3	-4.1
TPNV	**Topopah Spring**	**5.80**	**133**	*e*Pn	Pn	14 55 17.4	-2.9
HLID	**Hailey**	**5.82**	**62**	*e*Pn	Pn	14 55 15.1	-5.5
BGU	**Big Grassy Mou**	**6.42**	**88**	Pn	Pn	14 55 24.5	-4.5
HVU	**Hansel Valley**	**6.60**	**81**	Pn	Pn	14 55 26.3	-5.3
DUG	**Dugway**	**6.67**	**95**	*e*Pn	Pn	14 55 28.4	-4.1
ARUT	**Antelope Range**	**7.05**	**115**	*e*Pn	Pn	14 55 33.3	-4.5
MCMT	**McKenzie Canyo**	**7.38**	**56**	Pn	Pn	14 55 40.4	-2.1
MVU	**Marysvale**	**7.60**	**107**	*e*Pn	Pn	14 55 42.2	-3.4
MSU	**Marysvale**	**7.62**	**106**	*e*Pn	Pn	14 55 44.3	-1.6
RRI2	**Red Ridge**	**7.90**	**70**	Pn	Pn	14 55 45.3	-4.5
TPAW	**Teton Pass**	**8.19**	**69**	Pn	P	14 55 50.7	-3.2
REDW	**Red Top Meadow**	**8.23**	**70**	Pn	P	14 55 51.7	-2.7
IMW	**Indian Meadow**	**8.31**	**67**	Pn	P	14 55 52.6	-2.9
SNOW	**Snow King Moun**	**8.33**	**70**	Pn	P	14 55 53.8	-1.9
LOHW	**Long Hollow**	**8.47**	**69**	Pn	P	14 55 56.1	-1.6
EDM	**Edmonton**	**13.36**	**22**	*e*P	P	14 56 57.9	-6.3

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*MOS **13** 14:53:54.1±1.3,55.41N×165.35E,h40^{km},mb4.3/1,Error ellipse: s-maj=31.5km s-min=26.7km az=155.7*

KRSC 13 14:53:53.2±1.2,55.54N×165.62E,h54^{km}±5^{km},ML4.1, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.39**	**149**	*i* P	P	14 54 03.4	-0.2
BKI				*i* S	S	14 54 10.1	-1.1
BKI				Smax			
	7µm,0.3s						
KBTR	**Krutoberegovo**	**1.71**	**294**	P	P	14 54 20.1	-1.2
KBTR				S	S	14 54 39.5	-2.6
KBTR	**Krutoberegovo**	**1.71**	**294**	*i* P	P	14 54 20.3	-1.0
KBTR				*e*S	S	14 54 41.3	-0.8
KBG	**Krutoberegovo**	**1.79**	**295**	*e*P	P	14 54 21.4	-0.9
KBG				*e*S	S	14 54 44.3	+0.4
KBG				Smax			
	640nm,0.8s						
ZLN	**Zelenaya**	**2.76**	**282**	*i* P	P	14 54 37.0	+0.9
ZLN				*e*S	S	14 55 08.3	-0.1
CIRR	**Tsirk**	**2.81**	**284**	*e*P	P	14 54 38.1	+1.3
CIRR				*e*S	S	14 55 10.9	+1.3
LGNR	**Loginova**	**2.83**	**283**	*e*P	P	14 54 38.6	+1.4
LGNR				*e*S	S	14 55 11.5	+1.2
KLY	**Klyuchi**	**2.90**	**288**	P	P	14 54 37.1	-1.0
KLY				S	S	14 55 08.9	-3.0
KLY	**Klyuchi**	**2.90**	**288**	*e*P	P	14 54 37.0	-1.1
KLY				*e*S	S	14 55 09.1	-2.8
KRSR	**Krestovskiy**	**2.93**	**285**	*i* P	P	14 54 38.9	+0.4
KRSR				*e*S	S	14 55 11.6	-1.0
KMNR	**Kamenistaya**	**3.06**	**276**	*i* P	P	14 54 41.5	+1.2
KMNR				*e*S	S	14 55 16.7	+0.8
KPT	**Kopyto**	**3.08**	**280**	*i* P	P	14 54 41.6	+1.0
KPT				*e*S	S	14 55 16.4	-0.1
TUMR	**Tumrok**	**3.13**	**268**	*i* P	P	14 54 42.2	+0.9
TUMR				*e*S	S	14 55 17.1	-0.6
KOZR	**Kozyr**	**3.27**	**282**	PN	P	14 54 45.0	+1.7
KOZR				S	S	14 55 22.3	+1.0
KOZ	**Kozyrevsk**	**3.29**	**281**	P	P	14 54 45.0	+1.5
KOZ				S	S	14 55 22.3	+0.7
KOZ	**Kozyrevsk**	**3.29**	**281**	*e*P	P	14 54 44.9	+1.4
KOZ				*e*S	S	14 55 22.2	+0.6
SRDR	**Sredinnyy**	**3.41**	**286**	*e*P	P	14 54 46.6	+1.3
SRDR				*e*S	S	14 55 24.9	+0.1
ESO	**Esso**	**3.93**	**278**	*e*P	P	14 54 53.9	+1.3
ESO				*e*S	S	14 55 37.9	0.0
ESO				Smax			
	50nm,1.4s						
OSSR	**Ossora**	**3.97**	**341**	*i* P	P	14 54 50.8	-2.3
OSSR				*e*S	S	14 55 35.3	-3.6
OSSR				Smax			
	50nm,0.3s						
SPN	**Mys Shipunski**	**4.09**	**236**	P	P	14 54 52.5	-2.3
SPN				S	S	14 55 34.0	-7.9
SPN	**Mys Shipunski**	**4.09**	**236**	*e*P	P	14 54 53.5	-1.3
NLC	**Nalytchevo**	**4.37**	**240**	P	P	14 54 57.5	-1.3
NLC				S	S	14 55 44.2	-4.8
NLC	**Nalytchevo**	**4.37**	**240**	*e*P	P	14 54 57.5	-1.3
NLC				*e*S	S	14 55 45.1	-3.9
SMAR	**Somma**	**4.59**	**243**	*e*P	P	14 55 01.4	-0.5
SMAR				*e*S	S	14 55 51.4	-3.1
UGLR	**Uglovaya**	**4.61**	**242**	*e*P	P	14 55 01.8	-0.3
AVH	**Avacha**	**4.62**	**243**	*i* P	P	14 55 02.4	+0.1
AVH				*e*S	S	14 55 52.4	-2.9
KOK	**Koryaka**	**4.66**	**244**	*e*P	P	14 55 01.5	-1.3
PET	**Petropavlovsk**	**4.80**	**241**	P	P	14 55 04.2	-0.6
PET				S	S	14 55 54.3	-5.4
PET	**Petropavlovsk**	**4.80**	**241**	*i* P	P	14 55 04.2	-0.6
PET				*e*S	S	14 55 55.4	-4.3
GNL	**Ganaly**	**4.83**	**251**	*i* P	P	14 55 05.6	+0.4
KRMR	**Karymshinskiy**	**5.17**	**241**	P	P	14 55 09.5	-0.4
GRL	**Gorelyy**	**5.36**	**239**	*e*P	P	14 55 12.7	+0.1
APC	**Apacha**	**5.61**	**246**	*e*P	P	14 55 16.4	+0.3
PAU	**Pauzhetka**	**6.65**	**236**	P	P	14 55 32.7	+2.0

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*MOS **13** 14:55:44.7±1.6,57.28N×120.71E,h16^{km},mb4.4/1,Error ellipse: s-maj=25.5km s-min=18.2km az=140.3*

BYKL 13 14:55:40.3±0.5,57.49N×120.95E,h2^{km}±21^{km},1C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRGR	**Nerungri**	**2.22**	**110**	*e*P	Pn	14 56 21.5	+2.8
NRGR				S	Sn	14 56 47.8	+0.7
CLNS	**Chul'man**	**2.25**	**105**	⇑*i*Pg	Pg	14 56 21.9	-3.2
CLNS				*e*Sg	Sg	14 56 50.7	-4.4
CLNS				Pmax			
	374nm,0.3s						
CLNS				Smax			
	2µm,0.3s						
CLNS	**Chul'man**	**2.25**	**105**	*e*P	Pn	14 56 20.8	+1.8
CLNS				*e*		14 56 51.1	
CLNS				pmax	pmax		
	comp=N,17nm,0.3s						
CLNS				pmax	pmax		
	comp=E,21nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,46nm,0.3s						
CLNS				smax			
	comp=N,438nm,0.3s						
CLNS				smax			
	comp=E,295nm,0.3s						
CLNS				smax			
	comp=Z,165nm,0.3s						
ALDR	**Aldan**	**2.62**	**63**	*e*Pg	Pg	14 56 27.0	-5.7
ALDR				*e*Sg	Sg	14 57 02.1	-5.5
ALDR				Pmax			
	comp=Z,136nm,0.2s						
ALDR				Smax			
	comp=Z,2µm,0.3s						
NLYR	**Nelyaty**	**3.04**	**253**	*e*Pn	Pn	14 56 30.3	-0.1
NLYR				*e*Pg	Pg	14 56 35.5	-5.5
NLYR				*e*Sn	Sn	14 57 03.8	-4.0
NLYR				*e*Sg	Sg	14 57 13.3	-8.2
NLYR				Pmax			
	comp=Z,102nm,0.4s						
NLYR				Smax			
	comp=Z,327nm,1.0s						
NLYR	**Nelyaty**	**3.04**	**253**	*e*P	Pn	14 56 30.2	-0.2
NLYR				*e*		14 57 12.9	
NLYR				pmax	pmax		
	comp=Z,102nm,0.3s						
NLYR				smax			
	comp=N,325nm,1.0s						
TUP	**Tupik**	**3.12**	**191**	*e*Pn	Pn	14 56 30.1	-1.4
TUP				*e*Pg	Pg	14 56 35.4	-7.3
TUP				*e*Sg	Sg	14 57 15.1	-9.2
TUP				Pmax			
	comp=N,86nm,0.5s						
TUP				Smax			
	comp=N,302nm,0.8s						
TUP	**Tupik**	**3.12**	**191**	*e*P	Pn	14 56 30.0	-1.5
TUP				*e*S	Sn	14 57 05.4	-4.5
TUP				pmax	pmax		
	comp=Z,85nm,0.5s						
TUP				smax			
	comp=E,240nm,0.8s						
TNDR	**Tynda**	**3.15**	**137**	*e*Pn	Pn	14 56 30.0	-1.9
TNDR				*e*Pg	Pg	14 56 36.0	-7.2
TNDR				*e*Sn	Sn	14 57 08.1	-2.5
TNDR				*e*Sg	Sg	14 57 17.5	-7.7
TNDR				Pmax			
	comp=E,215nm,0.3s						
TNDR				Smax			
	comp=E,2µm,0.3s						
BOD	**Bodaibo**	**3.75**	**278**	*e*Pn	Pn	14 56 39.5	-0.9
BOD				*e*Pg	Pg	14 56 47.8	-7.3
BOD				*e*Sn	Sn	14 57 23.2	-2.5
BOD				*e*Sg	Sg	14 57 34.8	-10
BOD				Pmax			
	comp=E,31nm,0.6s						
BOD				Smax			
	comp=E,295nm,0.7s						
BOD	**Bodaibo**	**3.75**	**278**	*e*P	Pn	14 56 41.1	+0.7
BOD				*e*		14 57 35.0	
BOD				pmax	pmax		
	comp=Z,34nm,0.5s						
BOD				smax			
	comp=N,299nm,0.7s						
UKT	**Uakit**	**4.53**	**247**	*e*Pg	Pg	14 57 01.3	-9.4
UKT				*e*Sg	Sg	14 57 59.3	-12
UKT				Pmax			
	comp=N,32nm,2.1s						
UKT				Smax			
	comp=N,82nm,0.9s						
UKT	**Uakit**	**4.53**	**247**	*e*P	Pn	14 57 01.2	+10
UKT				pmax	pmax		
	comp=Z,15nm,0.5s						
KROS	**Kirovskiy**	**4.56**	**130**	*e*Sg	Sg	14 58 00.5	-12
ZEA	**Zeya**	**5.18**	**134**	*e*Sg	Sg	14 58 18.1	-15
YOA	**Uoyan**	**5.25**	**259**	*e*Pg	Pg	14 57 15.6	-9.5
YOA				*e*Sg	Sg	14 58 23.8	-11
YOA				Pmax			
	comp=Z,149nm,1.5s						
YOA				Smax			
	comp=Z,509nm,1.9s						
YOA	**Uoyan**	**5.25**	**259**	*e*P	Pn	14 57 18.9	+17
YOA				pmax	pmax		
	comp=Z,159nm,1.0s						
KMO	**Kumora**	**5.61**	**257**	*e*Pg	Pg	14 57 21.9	-10
KMO				*e*Sg	Sg	14 58 32.4	-15
KMO				Pmax			
	comp=Z,8.0nm,0.6s						
KMO				Smax			
	comp=Z,98nm,1.0s						
KMO	**Kumora**	**5.61**	**257**	*e*P	Pn	14 57 06.8	0.0
KMO				*e*S	Sn	14 58 08.8	-3.9
KMO				pmax	pmax		
	comp=Z,11nm,0.4s						
KMO				smax			
	comp=E,101nm,1.5s						
YLYR	**Ulyunkhan**	**6.06**	**249**	*e*Pg	Pg	14 57 31.1	-10
YLYR				*e*Sg	Sg	14 58 47.7	-14
YLYR				Pmax			
	comp=E,16nm,1.4s						
YLYR				Smax			
	comp=E,79nm,1.0s						
YLYR	**Ulyunkhan**	**6.06**	**249**	*e*P	Pn	14 57 33.0	+20
YLYR				pmax	pmax		
	comp=Z,15nm,1.0s						
YAK	**Yakutsk**	**6.34**	**40**	*e*Pg	Pg	14 57 32.1	-15
YAK				*e*Sg	Sg	14 58 54.3	-17
YAK				Pmax			
	comp=Z,33nm,0.6s						
YAK				Smax			
	comp=Z,718nm,0.7s						
YAK	**Yakutsk**	**6.34**	**40**	*e*P	Pn	14 57 21.6	+4.6
YAK				*e*S	Sn	14 58 39.7	+8.8
YAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YAK				smax			
	comp=N,12nm,0.8s						
YAK				smax			
	comp=Z,7.0nm,0.9s						
YAK				smax			
	comp=E,12nm,1.0s						
YAK				smax			
	comp=N,56nm,0.8s						
YAK				smax			
	comp=E,69nm,0.9s						
YAK				smax			
	comp=Z,44nm,0.9s						
YAK				MLR	MLR		
	comp=Z,43nm,7.0s						
NIZ	**Nizh Angarsk**	**6.53**	**260**	*e*Pg	Pg	14 57 38.0	-13
NIZ				*e*Sg	Sg	14 59 01.2	-16
NIZ				Pmax			
	comp=Z,19nm,1.1s						
NIZ				Smax			
	comp=Z,47nm,2.2s						
CIT	**Chita**	**6.95**	**221**	*e*Sg	Sg	14 59 15.8	-16
CIT				Smax			
	comp=Z,148nm,1.4s						
SYVR	**Suvo**	**7.30**	**243**	*e*Sg	Sg	14 59 26.3	-17
SYVR				Smax			
	comp=Z,103nm,2.2s						
OGRR	**Ongureny**	**8.49**	**249**	*e*Sg	Sg	15 00 03.9	-19
OGRR				Smax			
	comp=Z,24nm,2.0s						
KPC	**Khapcheranga**	**9.31**	**217**	*e*Sg	Sg	15 00 28.1	-22
KPC				Smax			
	comp=Z,49nm,1.5s						

IDC 13 14:57:37.7±1.8,2.36N×127.59E,mb3.9/3,mb1 4.0/3, mb1mx3.7/14,mbtmp3.9/3,Error ellipse: s-maj=151.8km s-min=23.4km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.14**	**164**	P	P	15 02 45.7	-1.1
	1.9nm,0.6s,baz=343,slow=11,SNR=16						
WB2	**Warramunga Arr**	**23.14**	**164**	*e*P	P	15 02 45.7	-1.1
STKA	**Stephens Creek**	**36.56**	**160**	*e*P	P	15 04 45.1	-2.2
	1.0nm,0.5s						
STKA	**Stephens Creek**	**36.56**	**160**	P	P	15 04 45.1	-2.2
	1.1nm,0.6s,baz=330,slow=9.7,SNR=7.3						
MKAR	**Makanchi Array**	**59.16**	**325**	P	P	15 07 40.6	-2.2
	0.7nm,0.4s,baz=121,slow=8.4,SNR=16						

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*IDC **13** 15:32:58.1±2.3,8.17S×113.77E,mb3.7/3,mb1 3.9/3, mb1mx3.5/14,mbtmp3.7/3,Error ellipse: s-maj=139.7km* *s-min=27.5km az=50.0*

ISC 13 15:33:00.4±2.5**, 8.4S**±0.7×**113.4E**±0.8**, h33^{km}, n6, σ0^{s}.18**/6**, mb3.8**/3**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.25**	**122**	P	**P**	**15 38 05.9**	**-0.1**
	1.4nm,0.6s,mb3.6,baz=298,slow=12,SNR=19						
WB2	**Warramunga Arr**	**23.27**	**122**	*e*P	**P**	**15 38 06.1**	**0.0**
ASPA	**Alice Springs**	**24.79**	**130**	*e*P	**P**	**15 38 21.0**	**+0.2**
STKA	**Stephens Creek**	**35.07**	**136**	*e*P	**P**	**15 39 52.5**	**0.0**
	1.3nm,0.6s,mb4.0						
STKA	**Stephens Creek**	**35.07**	**136**	P	**P**	**15 39 52.2**	**-0.2**
	1.8nm,0.7s,mb4.1,baz=310,slow=12,SNR=6.2						
MKAR	**Makanchi Array**	**61.57**	**336**	P	**P**	**15 43 16.8**	**0.0**
	0.5nm,0.9s,mb3.7,baz=162,slow=8.5,SNR=4.1						

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*NEIC **13** 16:04:44.5±0.7, 23.70S×67.96W, h108^{km}±12^{km}, mb3.9/3, MD4.0(GUC), Error ellipse: s-maj=20.8km s-min=9.1km az=116.0*

*IDC **13** 16:04:44.0±2.2, 23.71S×67.80W, h88^{km}±21^{km}, mb3.7/3, mb1 3.6/7, mb1mx3.4/18, mbtmp3.9/7, Error ellipse: s-maj=43.3km s-min=14.6km az=107.0*

*GUC **13** 16:04:46.6±0.7, 23.71S×68.23W, h108^{km}±8^{km}, MD4.0, ML3.9*

ISC 13 16:04:43.6±0.6**, 23.81S**±0.05×**67.98W**±0.09**, h121^{km}**±10^{km}**, n21, σ1^{s}.23**/28**, mb3.8**/2**, 1C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**0.92**	**347**	⇓*i*P	**P**	**16 05 06.5**	**+1.3**
SPCH				*i* S	**S**	**16 05 21.8**	**+0.4**
SPCH				AMP		16 05 22.7	
	comp=N,9µm,0.5s						
CEN1	**Los Morros**	**2.08**	**281**	*e*P	**P**	**16 05 19.5**	**+1.0**
CEN1				*i* S	**S**	**16 05 44.3**	**-0.7**
CEN1				AMP		16 05 48.7	
	comp=N,727nm,0.6s						
ANCH	**Antofagasta**	**2.23**	**273**	⇑*i*P	**P**	**16 05 20.4**	**-0.1**
CPN1	**Cerro Paranal**	**2.35**	**249**	⇓*i*P	**P**	**16 05 23.2**	**+1.0**
CPN1				*i* S	**S**	**16 05 51.5**	**0.0**
CPN1				AMP		16 05 56.4	
	comp=N,672nm,0.4s						
CPCH	**Copiapo**	**4.13**	**211**	*i* P	**P**	**16 05 46.0**	**+0.1**
CPCH				*i* S	**S**	**16 06 33.9**	**+0.2**
CDCH	**Caldera**	**4.14**	**218**	*i* P	**P**	**16 05 45.1**	**-1.0**
CDCH				*i* S	**S**	**16 06 32.0**	**-2.1**
LPAZ	**La Paz**	**7.49**	**359**	P	**P**	**16 06 30.2**	**-1.3**
	comp=N,1.6nm,0.3s,baz=179,slow=6.6,SNR=53						
LPAZ	**La Paz**	**7.49**	**359**	*e*P	**P**	**16 06 29.8**	**-1.7**
CFAA	**Coronel Fontan**	**7.77**	**182**	P	**P**	**16 06 37.2**	**+2.0**
	comp=N,0.1nm,0.3s,baz=352,slow=14,SNR=34						
CFAA				S	**S**	**16 08 00.8**	**-1.2**
	comp=N,0.2nm,0.3s,baz=257,slow=22,SNR=6.9						
CFAA	**Coronel Fontan**	**7.77**	**182**	P	**P**	**16 06 37.2**	**+2.0**
CFAA				S	**S**	**16 08 00.8**	**-1.2**
SIV	**San Ignacio**	**10.13**	**41**	P	**P**	**16 07 04.1**	**-2.8**
	comp=N,2.9nm,0.3s,baz=237,slow=12,SNR=37						
SIV				S	**S**	**16 08 52.2**	**-6.9**
	comp=N,0.2nm,0.3s,baz=318,slow=22,SNR=2.4						
TRQA	**Tornquist**	**15.10**	**162**	*e*P	**P**	**16 08 18.6**	**+7.0**
	comp=N,4.2nm,0.5s						
PLCA	**Paso Flores**	**17.01**	**187**	P	**P**	**16 08 39.0**	**+3.7**
	comp=N,0.1nm,0.3s,baz=358,slow=13,SNR=3.6						
PLCA	**Paso Flores**	**17.01**	**187**	*e*P	**P**	**16 08 38.5**	**+3.2**
	comp=N,1.2nm,0.5s						
BDFB	**Brasilia**	**20.46**	**70**	P	**P**	**16 09 13.6**	**+0.1**
	comp=N,11nm,0.7s,baz=250,slow=12,SNR=15						
BAO	**Brasilia Array**	**20.48**	**70**	P	**P**	**16 09 12.5**	**-1.2**
SNAA	**Sanae**	**59.83**	**161**	P	**P**	**16 14 40.5**	**+2.4**
	comp=N,0.3nm,0.7s,mb3.4,baz=297,slow=4.5,SNR=5.1						
SNAA	**Sanae**	**59.83**	**161**	*e*P	**P**	**16 14 39.2**	**+1.2**
DBIC	**Dimbokro**	**68.60**	**72**	P	**P**	**16 15 36.6**	**+0.7**
	comp=N,1.1nm,0.4s,mb4.0,baz=210,slow=6.4,SNR=4.1						
DBIC	**Dimbokro**	**68.60**	**72**	*e*P	**P**	**16 15 36.5**	**+0.6**
	comp=N,3.4nm,0.9s,mb4.2						
MKAR	**Makanchi Array**	**146.95**	**39**	PKPbc	PKPbc	16 24 14.2	+3.0
	comp=N,0.5nm,0.7s,baz=309,slow=3.2,SNR=4.0						

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*NEIC **13** 16:20:20.6±1.3, 57.31N×121.29E, h5^{km}, Error ellipse: s-maj=36.1km s-min=12.5km az=140.0*

*BYKL **13** 16:20:22.6±0.4, 57.40N×120.84E*

*MOS **13** 16:20:23.6±0.9, 57.67N×120.64E, h15^{km}, mb4.4/1, Error ellipse: s-maj=18.5km s-min=17.0km az=76.5*

*IDC **13** 16:20:23.0±2.5, 57.54N×120.61E, mb3.5/5, mb1 3.6/6, mb1mx3.5/21, mbtmp3.4/6, ML3.0/1, Error ellipse: s-maj=61.4km s-min=28.1km az=148.0*

ISC 13 16:20:20.4±0.4**, 57.40N**±0.04×**121.12E**±0.04**, h10^{km}, n41, σ1^{s}.27**/43**, mb3.4**/5**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRGR	**Nerungri**	**2.11**	**109**	*e*P	**Pg**	**16 21 03.8**	**+1.3**
NRGR				S	**Sg**	**16 21 30.9**	**+0.3**
CLNS	**Chul'man**	**2.13**	**104**	*e*Pg	**Pg**	**16 21 04.0**	**+0.9**
CLNS				*e*Sg	**Sg**	**16 21 33.9**	**+2.3**
CLNS				Pmax			
	202nm,0.4s						
CLNS				Smax			
	4µm,0.4s						
CLNS	**Chul'man**	**2.13**	**104**	*e*P	**Pg**	**16 21 03.9**	**+0.8**
CLNS				*e*		16 21 33.9	
CLNS				pmax	pmax		
	comp=Z,38nm,0.4s						
CLNS				pmax	pmax		
	comp=N,37nm,0.6s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.3s						
CLNS				smax			
	comp=N,534nm,0.4s						
CLNS				smax			
	comp=E,513nm,0.4s						
CLNS				smax			
	comp=Z,247nm,0.4s						
ALDR	**Aldan**	**2.58**	**60**	*e*Pg	**Pg**	**16 21 11.7**	**-0.4**
ALDR				*e*Sg	**Sg**	**16 21 46.3**	**-0.2**
ALDR				Pmax			
	comp=Z,75nm,0.2s						
ALDR				Smax			
	comp=Z,745nm,0.2s						
TNDR	**Tynda**	**3.02**	**137**	*e*Pg	**Pg**	**16 21 18.0**	**-2.8**
TNDR				*e*Sn	**Sn**	**16 21 50.5**	**+4.5**
TNDR				*e*Sg	**Sg**	**16 21 58.8**	**-2.3**
TNDR				Pmax			
	comp=Z,301nm,0.3s						
TNDR				Smax			
	comp=Z,666nm,0.3s						
TUP	**Tupik**	**3.06**	**193**	*e*Pn	**Pn**	**16 21 11.2**	**+1.4**
TUP				*e*Pg	**Pg**	**16 21 16.5**	**-5.0**
TUP				*e*Sg	**Sg**	**16 21 54.6**	**-7.6**
TUP				Pmax			
	comp=Z,184nm,0.6s						
TUP				Smax			
	comp=Z,873nm,0.8s						
TUP	**Tupik**	**3.06**	**193**	*e*P	**Pn**	**16 21 17.3**	**+7.5**
TUP				*e*		16 21 54.7	
TUP				pmax	pmax		
	comp=Z,165nm,0.5s						
TUP				smax			
	comp=E,879nm,0.8s						
NLYR	**Nelyaty**	**3.10**	**255**	*e*Pn	**Pn**	**16 21 10.8**	**+0.3**
NLYR				*e*Pg	**Pg**	**16 21 16.0**	**-6.4**
NLYR				*e*Sg	**Sb**	**16 21 52.7**	**-0.8**
NLYR				Pmax			
	comp=E,263nm,0.5s						
NLYR				Smax			
	comp=E,355nm,1.1s						
NLYR	**Nelyaty**	**3.10**	**255**	*e*P	**Pn**	**16 21 11.1**	**+0.6**
NLYR				*e*		16 21 51.2	
NLYR				pmax	pmax		
	comp=Z,256nm,0.5s						
NLYR				smax			
	comp=E,370nm,0.4s						
BOD	**Bodaibo**	**3.85**	**279**	*e*Pn	**Pn**	**16 21 21.2**	**+0.1**
BOD				*e*Pg	**Pg**	**16 21 30.1**	**-7.2**
BOD				*e*Sg	**Sb**	**16 22 15.2**	**0.0**
BOD				Pmax			
	comp=E,48nm,1.0s						
BOD				Smax			
	comp=E,237nm,1.2s						
BOD	**Bodaibo**	**3.85**	**279**	*e*P	**Pn**	**16 21 20.6**	**-0.5**
BOD				pmax	pmax		
	comp=Z,50nm,0.6s						
SVKR	**Severomuysk**	**4.36**	**256**	*e*Pn	**Pn**	**16 21 29.4**	**+1.1**
SVKR				*e*Pg	Px	16 21 38.8	
SVKR				*e*Sg	Sx	16 22 32.8	
SVKR				Pmax			
	comp=Z,63nm,0.5s						
SVKR				Smax			
	comp=Z,339nm,1.0s						
SVKR	**Severomuysk**	**4.36**	**256**	*e*P	**Pb**	**16 21 41.1**	**+4.3**
UKT	**Uakit**	**4.58**	**248**	*e*Pg	**Pb**	**16 21 42.0**	**+1.4**
UKT				*e*Sg	Sx	16 22 38.2	
UKT				Pmax			
	comp=Z,25nm,0.6s						
UKT				Smax			
	comp=Z,100nm,0.9s						
UKT	**Uakit**	**4.58**	**248**	*e*P	**Pb**	**16 21 42.8**	**+2.2**
UKT				pmax	pmax		
	comp=Z,20nm,0.6s						
ZEA	**Zeya**	**5.06**	**134**	*e*Sg	Sx	16 23 02.6	
YOA	**Uoyan**	**5.32**	**260**	*e*Sg	Sx	16 23 02.5	
YOA				Smax			
	comp=Z,675nm,1.9s						
YOA	**Uoyan**	**5.32**	**260**	*e*P	**Pb**	**16 21 56.9**	**+3.6**
YOA				pmax	pmax		
	comp=Z,79nm,1.1s						
KMO	**Kumora**	**5.68**	**259**	*e*Pg	**Pb**	**16 22 03.0**	**+3.5**
KMO				*e*Sg	Sx	16 23 13.0	
KMO				Pmax			
	comp=Z,35nm,1.8s						
KMO				Smax			
	comp=Z,163nm,0.8s						
KMO	**Kumora**	**5.68**	**259**	*e*P	**Pn**	**16 21 45.7**	**-1.3**
KMO				*e*S	**Sn**	**16 22 46.3**	**-6.7**
KMO				pmax	pmax		
	comp=Z,12nm,0.5s						
KMO				smax			
	comp=N,162nm,1.1s						
YLYR	**Ulyunkhan**	**6.12**	**250**	*e*Pn	**Pn**	**16 21 53.0**	**-0.1**
YLYR				*e*Pg	Px	16 22 11.4	
YLYR				*e*Sg	Sx	16 23 27.7	
YLYR				Pmax			
	comp=N,8.0nm,1.2s						
YLYR				Smax			
	comp=N,85nm,1.1s						
YLYR	**Ulyunkhan**	**6.12**	**250**	*e*P	**Pn**	**16 21 54.3**	**+1.2**
YLYR				pmax	pmax		
	comp=Z,22nm,0.7s						
YAK	**Yakutsk**	**6.35**	**39**	*e*Sg	Sx	16 23 40.0	
YAK				Smax			
	comp=Z,534nm,0.6s						
YAK	**Yakutsk**	**6.35**	**39**	P	**Pn**	**16 21 56.2**	**-0.2**
	comp=Z,12nm,0.8s						
YAK	**Yakutsk**	**6.35**	**39**	*e*P	**Pb**	**16 22 10.0**	**-0.8**
YAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YAK				MLR	MLR		
	comp=Z,40nm,7.0s						
NIZ	**Nizh Angarsk**	**6.60**	**261**	*e*Sg	Sx	16 23 42.2	
NIZ				Smax			
	comp=Z,83nm,0.8s						
CIT	**Chita**	**6.95**	**222**	*e*Pg	Px	16 22 26.7	
CIT				*e*Sg	Sx	16 23 52.7	
CIT				Pmax			
	comp=Z,16nm,1.0s						
CIT				Smax			
	comp=Z,145nm,1.6s						
CIT	**Chita**	**6.95**	**222**	*e*P	Px	16 22 27.6	
SYVR	**Suvo**	**7.34**	**244**	*e*Pn	**Pn**	**16 22 09.9**	**-0.4**
SYVR				*e*Pg	Px	16 22 33.4	
SYVR				*e*Sg	Sx	16 24 06.4	
SYVR				Pmax			
	comp=Z,15nm,1.0s						
SYVR				Smax			
	comp=Z,96nm,2.2s						
OGRR	**Ongureny**	**8.54**	**250**	*e*Sg	Sx	16 24 40.1	
OGRR				Smax			
	comp=Z,30nm,2.3s						
KPC	**Khapcheranga**	**9.29**	**218**	*e*Sg	Sx	16 25 06.8	
KPC				Smax			
	comp=Z,103nm,1.5s						
TRG	**Tyrgan**	**9.66**	**247**	*e*Sg	Sx	16 25 17.2	
TRG				Smax			
	comp=Z,33nm,1.6s						
ZAK	**Zakamensk**	**12.63**	**244**	*e*Sg	Sx	16 26 50.7	
ZAK				Smax			
	comp=Z,14nm,1.4s						
SONM	**Songino Array**	**13.08**	**229**	Pn	**P**	**16 23 27.2**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=37,slow=11,SNR=5.8						
SONM				Lg		16 27 06.3	
	comp=Z,0.7nm,0.3s,baz=47,slow=30,SNR=10						
MKAR	**Makanchi Array**	**25.75**	**262**	P	**P**	**16 25 53.6**	**+1.1**
	comp=Z,0.6nm,0.7s,mb3.3,baz=60,slow=9.8,SNR=4.2						
COLA	**College**	**40.87**	**41**	*e*P	**P**	**16 28 01.5**	**-2.1**
ILAR	**Eielson Array**	**41.27**	**40**	P	**P**	**16 28 10.0**	**+3.1**
	comp=Z,0.3nm,0.5s,mb3.2,baz=301,slow=5.2,SNR=6.1						
FINES	**FINESS Array B**	**44.40**	**317**	P	**P**	**16 28 32.6**	**+0.4**
	comp=Z,0.4nm,0.5s,mb3.4,baz=56,slow=10.0,SNR=4.2						
AKASG	**Malin Array Be**	**50.39**	**304**	P	**P**	**16 29 18.7**	**-0.6**
	comp=Z,0.3nm,0.4s,mb3.7,baz=43,slow=8.7,SNR=4.2						
AKASG	**Malin Array Be**	**50.39**	**304**	P	**P**	**16 29 18.7**	**-0.6**
GERES	**GERESS Array B**	**58.39**	**312**	P	**P**	**16 30 17.2**	**-0.6**
	comp=Z,0.1nm,0.3s,mb3.3,baz=34,slow=7.1,SNR=3.5						

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*NIED **13** 16:25:00, 28.70N×129.60E, h8^{km}, Mw3.5 Best double couple: M$_0$1.85×10^{14} NP1:ϕ_s3°, δ61°, λ-59°. NP2:ϕ_s132°, δ42°, λ-133°.*

*JMA **13** 16:25:11.6, 28.69N×129.62E, h18^{km}±2^{km}, M3.5*

ISC 13 16:25:11.5±0.8**, 28.71N**±0.03×**129.63E**±0.07**, h16**^{km}±9^{km}**, n10, σ0^{s}.52**/18**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	**0.29**	**184**	P	**Pb**	**16 25 17.7**	**-0.2**
JAM				S	**Sb**	**16 25 21.7**	**-0.5**
JZK	**Kikaishima**	**0.49**	**142**	P	**Pb**	**16 25 21.1**	**-0.2**
JZK				S	**Sb**	**16 25 28.2**	**+0.2**
JTK	**Tokunoshima**	**1.09**	**213**	P	**Pb**	**16 25 31.5**	**-0.1**
JNN	**Nakanoshima**	**1.15**	**11**	P	**Pb**	**16 25 32.5**	**-0.1**
JNN				*e*S	**Sb**	**16 25 47.8**	**+0.7**
JKC	**Kuchinoerabu**	**1.82**	**16**	P	**Pn**	**16 25 41.9**	**-0.7**
JKC				S	**Sn**	**16 26 04.1**	**-1.3**
JOW	**Kunigami**	**2.22**	**213**	P	**Pn**	**16 25 49.3**	**+1.0**
JOW				*e*S	**Sn**	**16 26 16.0**	**+0.5**
JIH	**Iheya**	**2.22**	**222**	*e*S	**Sn**	**16 26 15.4**	**-0.2**
JTN	**Tanegashima 3**	**2.27**	**31**	P	**Pn**	**16 25 49.5**	**+0.5**
JTN				*e*S	**Sn**	**16 26 17.4**	**+0.5**
JAGN	**Aguni-jima**	**2.99**	**226**	P	**Pn**	**16 25 59.3**	**+0.1**
JAGN				*e*S	**Sn**	**16 26 34.8**	**-0.2**
JKE	**Kume jima 2**	**3.46**	**227**	P	**Pn**	**16 26 06.2**	**+0.2**
JKE				*e*S	**Sn**	**16 26 46.9**	**-0.2**

NNC 13 16:43:31.6±7.3**, 36.98N**×**71.05E, h235^{km}**±102^{km}**, mpv3.5, 3C-2D, Error ellipse: s-maj=78.7km s-min=52.3km az=39.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.13**	**356**	P	P	16 45 00.4	-1.4
	1.8nm,0.4s,baz=184,slow=13,SNR=50						
KK31				⇑S	S	16 46 13.6	+1.4
	0.9nm,0.3s,baz=184,slow=23,SNR=7.0						
AAK	**Ala-Archa**	**6.24**	**24**	⇑P	P	16 45 02.3	-0.8
	1.7nm,0.4s						
AAK				⇓S	S	16 46 15.5	+0.8
	8.7nm,1.1s						
AB31	**Akbulak array**	**14.69**	**330**	⇓P	P	16 46 51.2	+1.5
	1.1nm,0.9s,baz=144,slow=13,SNR=6.2						
AB31				⇑S	S	16 49 28.9	+2.3
	0.3nm,0.5s						

NNC 13 16:53:43.1±8.5**, 37.29N**×**70.69E, h276^{km}**±140^{km}**, mpv3.5, 3C-1D, Error ellipse: s-maj=105.7km s-min=63.1km az=18.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.81**	**359**	P	P	16 55 09.6	-0.5
	1.8nm,0.3s,baz=178,slow=11,SNR=78						
KK31				⇑S	S	16 56 19.4	+1.2
	0.3nm,0.2s,baz=194,slow=25,SNR=6.4						
AAK	**Ala-Archa**	**6.09**	**28**	⇑P	P	16 55 12.9	-0.5
	2.2nm,0.6s						
AAK				⇓S	S	16 56 25.4	+1.0
	1.4nm,0.6s						
AB31	**Akbulak array**	**14.28**	**330**	⇑P	P	16 56 53.1	-1.7
	2.2nm,1.2s,baz=148,slow=12,SNR=4.4						

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*IDC **13** 17:22:00.2±0.7, 23.28N×142.00E, mb4.1/11, mb1 4.2/13, mb1mx4.1/23, mbtmp4.1/13, ML3.9/2, MS3.7/9, Ms1 3.7/9, ms1mx3.3/34, Error ellipse: s-maj=29.1km s-min=17.7km az=79.0*

*MOS **13** 17:22:03.8±0.8, 23.32N×141.93E, h37^{km}, mb4.6/4, Error ellipse: s-maj=30.8km s-min=13.1km az=104.8*

*NEIC **13** 17:22:06.0±1.9, 23.26N×141.84E, h37^{km}±17^{km}, mb4.5/3, Error ellipse: s-maj=17.2km s-min=9.2km az=89.0*

*BJI **13** 17:22:07.1, 22.57N×141.31E, h20^{km}, mb4.6, Ms4.2, Msz4.2*

ISC 13 17:22:02.7±4.3**, 23.32N**±0.06×**141.9E**±0.2**, h27**^{km}±31^{km}**, n34, σ0^{s}.87**/27**, mb4.2**/15**, MS3.8**/8**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.77**	**4**	Pn	**Pn**	**17 23 00.8**	**+0.2**
	18nm,0.3s,baz=292,slow=20,SNR=7.2						
CBIJ				Sn	**Sn**	**17 23 43.1**	**-1.5**
	59nm,0.3s,baz=319,slow=24,SNR=5.5						
JOW	**Kunigami**	**12.85**	**289**	LR	LR	17 29 09.3	
	comp=Z,238nm,19.6s,baz=259,slow=33						
MJAR	**Matsushiro Arr**	**13.56**	**347**	Pn	**P**	**17 25 15.5**	**-0.5**
	0.3nm,0.3s,baz=162,slow=11,SNR=4.7						
YSS	**Yuzh-Sakhalins**	**23.59**	**1**	*e*P	**P**	**17 27 15.6**	**+3.5**
TIA	**Tai'an**	**24.99**	**307**	*e*P	**P**	**17 27 30.3**	**+4.6**
SONM	**Songino Array**	**37.35**	**320**	P	**P**	**17 29 16.1**	**+1.3**
	0.6nm,0.6s,mb3.6,baz=138,slow=8.0,SNR=5.7						
FX1	**Attu Island--F**	**37.87**	**31**	*e*P	**P**	**17 29 21.5**	**+2.5**
ZAK	**Zakamensk**	**40.36**	**322**	*e*P	**P**	**17 29 30.9**	**-8.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
WRAB	**Tennant Creek**	**43.62**	**190**	*e*P	**P**	**17 30 06.6**	**-0.1**
	comp=Z,45nm,1.1s,mb5.1						
WRAB				*e*		17 30 11.4	
WRAB	**Tennant Creek**	**43.62**	**190**	*e*P	**P**	**17 30 06.6**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.1						
WB2	**Warramunga Arr**	**43.63**	**190**	*e*P	**P**	**17 30 06.7**	**-0.2**
WRA	**Warramunga Arr**	**43.63**	**190**	P	**P**	**17 30 06.7**	**-0.2**
	comp=Z,9.4nm,0.8s,mb4.6,baz=11,slow=8.3,SNR=53						
FITZ	**Fitzroy Crossi**	**44.13**	**203**	LR	LR	17 45 50.0	
	comp=Z,208nm,19.4s,MS4.1,baz=81,slow=32						
BILL	**Bilibino**	**47.18**	**12**	*e*P	**P**	**17 30 35.2**	**+0.7**
	comp=Z,4.0nm,0.8s,mb4.4						
BILL	**Bilibino**	**47.18**	**12**	*e*P	**P**	**17 30 35.2**	**+0.6**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
DZM	**Mont Dzumac**	**51.04**	**150**	LR	LR	17 48 28.8	
	comp=Z,83nm,18.4s,MS3.8,baz=23,slow=31						
ZAL	**Zalesovo**	**52.23**	**321**	LR	LR	17 55 01.9	
	comp=Z,66nm,18.9s,MS3.7,baz=192,slow=38						
MKAR	**Makanchi Array**	**52.75**	**312**	P	**P**	**17 31 18.3**	**+0.8**
	comp=Z,0.6nm,0.6s,mb3.7,baz=86,slow=9.3,SNR=7.3						
STKA	**Stephens Creek**	**54.88**	**180**	P	**P**	**17 31 32.1**	**-1.3**
	comp=Z,4.1nm,0.9s,mb4.4,baz=341,slow=10,SNR=4.1						
STKA				LR	LR	17 51 34.4	
	comp=Z,78nm,21.6s,MS3.8,baz=24,slow=32						
KURK	**Kurchatov**	**55.50**	**316**	*e*P	**P**	**17 31 37.3**	**-0.4**
CHKZ	**Chkalovo**	**60.55**	**320**	P	**P**	**17 32 11.9**	**-1.1**
	comp=Z,1.1nm,0.8s,mb4.0						
CHKZ	**Chkalovo**	**60.55**	**320**	P	**P**	**17 32 11.9**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb4.0						
BVAR	**Borovoye Array**	**60.69**	**319**	P	**P**	**17 32 13.9**	**0.0**
	comp=Z,1.9nm,0.7s,mb4.3,baz=104,slow=6.1,SNR=8.6						
ILAR	**Eielson Array**	**61.14**	**28**	P	**P**	**17 32 16.3**	**-0.5**
	comp=Z,1.5nm,0.8s,mb4.2,baz=255,slow=5.4,SNR=9.6						
ILAR				LR	LR	17 57 04.6	
	comp=Z,45nm,21.1s,MS3.6,baz=179,slow=34						
INK	**Inuvik**	**66.56**	**24**	P	**P**	**17 32 52.1**	**-0.1**
	comp=Z,0.9nm,0.7s,mb3.9,baz=305,slow=5.2,SNR=4.2						
FINES	**FINESS Array B**	**81.22**	**334**	P	**P**	**17 34 17.6**	**+0.3**
	comp=Z,1.7nm,0.7s,mb4.1,baz=56,slow=6.9,SNR=9.4						
NOA	**NORSAR Array B**	**87.02**	**338**	P	**P**	**17 34 46.2**	**-0.3**
	comp=Z,1.9nm,0.9s,mb4.3,baz=26,slow=7.9,SNR=3.7						
NOA				LR	LR	18 17 16.2	
	comp=Z,43nm,18.7s,MS3.9,baz=355,slow=38						
NOA	**NORSAR Array B**	**87.02**	**338**	P	**P**	**17 34 46.2**	**-0.3**
NOA				LR	LR	18 17 16.2	
PDAR	**Pinedale Array**	**87.06**	**44**	LR	LR	18 09 23.5	
	comp=Z,57nm,19.7s,MS4.0,baz=266,slow=33						
BRTR	**Keskin Array B**	**88.39**	**313**	P	**P**	**17 34 54.0**	**+0.3**
	comp=Z,1.3nm,0.9s,mb4.2,baz=108,slow=2.0,SNR=6.0						
ULM	**Lac du Bonnet**	**90.73**	**33**	LR	LR	18 13 52.4	
	comp=Z,36nm,18.6s,MS3.8,baz=335,slow=34						
GERES	**GERESS Array B**	**94.60**	**329**	P	**P**	**17 35 22.3**	**+0.1**
	comp=Z,0.7nm,0.8s,mb4.2,baz=27,slow=3.0,SNR=4.9						
PLCA	**Paso Flores**	**147.69**	**130**	PKPbc	PKPdf	17 41 46.6	-0.3
	comp=Z,1.2nm,0.8s,baz=223,slow=6.6,SNR=3.1						
LPAZ	**La Paz**	**150.91**	**82**	PKPbc	PKPdf	17 41 56.0	+3.3
	comp=Z,0.9nm,0.6s,baz=273,slow=4.3,SNR=5.9						
LPAZ				PKPab	PKPab	17 42 03.0	-0.2
	comp=Z,0.6nm,0.4s,baz=0.7,slow=5.1,SNR=5.9						

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*IDC **13** 17:38:16.2±1.4, 23.27N×142.28E, mb3.7/6, mb1 3.9/7, mb1mx3.8/21, mbtmp3.8/7, ML3.8/1, Error ellipse: s-maj=46.3km s-min=24.7km az=87.0*

ISC 13 17:38:20.6±3.3**, 23.4N**±0.1×**142.2E**±0.3**, h45**^{km}±29^{km}**, n7, σ1^{s}.22**/8**, mb3.7**/6**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.71**	**359**	Pn	**P**	**17 39 17.4**	**+0.6**
	12nm,0.3s,baz=230,slow=17,SNR=8.7						
CBIJ				Sn	**S**	**17 39 59.0**	**-0.7**
	21nm,0.3s,baz=300,slow=22,SNR=3.9						
SONM	**Songino Array**	**37.50**	**320**	P	**P**	**17 45 34.6**	**+2.9**
	0.1nm,0.5s,mb2.9,baz=129,slow=9.4,SNR=2.4						
WRA	**Warramunga Arr**	**43.74**	**191**	P	**P**	**17 46 23.0**	**-0.5**
	2.9nm,0.7s,mb4.1,baz=11,slow=8.3,SNR=8.7						
MKAR	**Makanchi Array**	**52.93**	**312**	P	**P**	**17 47 34.1**	**-0.4**
	0.3nm,0.7s,mb3.4,baz=93,slow=7.8,SNR=2.9						
BVAR	**Borovoye Array**	**60.84**	**319**	P	**P**	**17 48 30.0**	**-0.6**
	0.4nm,0.5s,mb3.9,baz=79,slow=7.6,SNR=4.1						
ILAR	**Eielson Array**	**60.96**	**28**	P	**P**	**17 48 31.6**	**+0.4**
	0.9nm,1.0s,mb3.9,baz=264,slow=5.0,SNR=4.5						
FINES	**FINESS Array B**	**81.30**	**334**	P	**P**	**17 50 33.2**	**-0.1**
	2.6nm,0.9s,mb4.2,baz=72,slow=4.4,SNR=4.1						

WEL 13 17:44:40.5±0.2**, 41.87S**×**174.13E, h15^{km}**±1^{km}**, ML3.5**/20**, 3C-1D, Error ellipse: s-maj=1.4km s-min=1.2km az=0.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMWZ	**Cape Campbell**	**0.14**	**29**	⇑PG	Pg	17 44 44.3	0.0
CMWZ				SG	Sg	17 44 47.5	+0.6
BSWZ	**Blackbirch Sta**	**0.24**	**309**	⇓PG	Pg	17 44 45.4	-0.6
BSWZ				SG	Sg	17 44 49.3	-0.5
TUWZ	**Tuamarina**	**0.46**	**342**	⇑P*	Pb	17 44 49.4	-0.3
TUWZ				SG	Sg	17 44 56.0	-0.4
TUWZ				SG	Sg	17 44 56.1	-0.3
TCW	**Tory Channel**	**0.67**	**10**	⇑P*	Pb	17 44 53.0	-0.3
KHZ	**Kahutara**	**0.70**	**218**	P*	Pb	17 44 54.4	+0.4
SNZO	**South Karori**	**0.71**	**38**	P*	Pb	17 44 54.5	+0.5
BHW	**Baring Head**	**0.72**	**51**	P*	Pb	17 44 54.9	+0.6
WEL	**Wellington**	**0.76**	**40**	P*	Pb	17 44 55.4	+0.5
MRW	**Makara Radio**	**0.77**	**34**	P*	Pb	17 44 55.3	+0.3
NNZ	**Nelson**	**0.86**	**319**	P*	Pb	17 44 56.4	-0.2
THZ	**Tophouse**	**0.92**	**276**	P*	Pb	17 44 57.7	+0.1
MSWZ	**Moikau Station**	**0.96**	**62**	P*	Pb	17 44 58.5	+0.2
CAW	**Cannon Point**	**1.04**	**43**	P*	Pb	17 45 00.0	+0.4
DUWZ	**D'Urville Isla**	**1.08**	**352**	P*	Pb	17 45 00.1	-0.3
PAWZ	**Paruwai Farm**	**1.09**	**64**	P*	Pb	17 44 60.0	-0.5
KIW	**Kapiti Island**	**1.17**	**31**	P*	Pb	17 45 02.1	+0.2
MTW	**Mount Morrison**	**1.25**	**56**	P*	Pb	17 45 02.2	-1.2
TRWZ	**Traveller**	**1.26**	**69**	P*	Pb	17 45 02.2	-1.3
QRZ	**Quartz Range**	**1.59**	**310**	PN	Pn	17 45 09.1	+0.7
MRZ	**Mangatainoka R**	**1.63**	**43**	PN	Pn	17 45 07.8	-1.1
LTZ	**Lake Taylor**	**1.65**	**236**	PN	Pn	17 45 08.5	-0.8
DSZ	**Denniston Nort**	**1.74**	**273**	PN	Pn	17 45 10.8	+0.2
MQZ	**McQueen's Vall**	**2.13**	**210**	PN	Pn	17 45 13.3	-2.9

WAZ	Wanganui	2.21	17	ePN	Pn	17 45 19.6	+2.4
TSZ	Takapari Road	2.28	38	ePN	Pn	17 45 16.4	-1.8
PKVZ	Pokaka	2.74	20	ePN	Pn	17 45 25.7	+1.0
MOVZ	Moawhango	2.75	27	ePN	Pn	17 45 23.6	-1.4
RPZ	Rata Peaks	2.92	230	PN	Pn	17 45 25.0	-2.4
ODZ	Otahua Downs	4.06	217	ePN	Pn	17 45 39.5	-4.1

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*IDC **13** 18:14:18.5±1.2, 13.20N×92.53E, mb3.9/5, mb1 4.1/5, mb1mx3.7/19, mbtmp3.9/5, MS3.5/1, Ms1 3.5/1, ms1mx2.6/24, Error ellipse: s-maj=91.5km s-min=21.0km az=47.0*

*NEIC **13** 18:14:23.1±0.5, 13.50N×92.77E, h30^{km}, mb4.2/3, Error ellipse: s-maj=14.1km s-min=7.1km az=58.0*

ISC 13 18:14:21.0±0.6, 13.44N±0.09×92.7E±0.1, h30^{km}, n17, σ0^{s}68/17, mb3.9/7, MS3.4/1, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIS	Vishakhapatnam	9.99	296	eP	P	18 16 44.4	-1.5
VIS				eS	Sn	18 18 26.9	-11
PALK	Pallekele	13.31	244	eP	P	18 17 31.4	+0.8
PKI	Pulchoki	15.63	335	eP	P	18 18 00.5	-0.5
	8.1nm,0.3s						
DMN	Daman	15.79	334	eP	P	18 18 02.5	-0.5
	5.8nm,0.3s						
KKN	Kakani	15.88	335	eP	P	18 18 04.0	-0.2
	8.3nm,0.4s						
GKN	Gorkha	16.33	334	eP	P	18 18 09.8	-0.1
	19nm,0.3s						
KOLN	Koldanda	16.60	331	eP	P	18 18 13.1	-0.3
	10nm,0.3s						
MKAR	Makanchi Array	34.39	347	P	P	18 21 09.0	+1.4
	0.1nm,0.3s,mb3.2,baz=170,slow=6.0,SNR=4.1						
SONM	Songino Array	36.14	16	LR	LR	18 37 41.6	
	comp=Z,62nm,18.5s,MS3.4,baz=218,slow=38						
KURK	Kurchatov	38.91	346	eP	P	18 21 46.2	+0.5
	1.4nm,0.5s,mb4.0						
CHKZ	Chkalovo	43.78	341	eP	P	18 22 26.5	+0.9
FITZ	Fitzroy Crossi	45.13	133	P	P	18 22 36.7	-0.2
	1.6nm,0.4s,mb4.2,baz=322,slow=9.1,SNR=8.1						
WRA	Warramunga Arr	52.70	128	P	P	18 23 35.2	-0.2
	1.7nm,0.5s,mb4.2,baz=303,slow=10,SNR=69						
WRAB	Tennant Creek	52.71	128	eP	P	18 23 35.0	-0.5
	4.6nm,0.5s,mb4.7						
WB2	Warramunga Arr	52.71	128	eP	P	18 23 35.2	-0.3
BRTR	Keskin Array B	57.82	309	P	P	18 24 12.3	+0.1
	0.5nm,0.7s,mb3.7,baz=129,slow=7.9,SNR=4.2						
GERES	GERESS Array B	72.79	317	P	P	18 25 49.3	+0.7
	0.6nm,0.6s,mb3.7,baz=79,slow=6.8,SNR=5.9						

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*LDG **13** 18:27:53.9±0.1, 49.31N×6.86E, h1^{km}, Md2.7/1, Ml2.6/11, Error ellipse: s-maj=2.6km s-min=1.9km az=41.0, Suspected Mining induced.*

*NEIC **13** 18:27:53.9, 49.31N×6.86E, h1^{km}, ML2.6(LDG), After LDG.*

*BGR **13** 18:27:54.7±0.5, 49.33N×6.83E, h1^{km}, ML1.9/3, Error ellipse: s-maj=7.8km s-min=4.4km az=37.0*

*CSEM **13** 18:27:54.1±0.1, 49.31N×6.83E, h2^{km}, ML2.5/9, Error ellipse: s-maj=1.9km s-min=1.2km az=55.0*

ISC 13 18:27:52.2±0.4, 49.28N±0.02×6.81E±0.04, n17, σ1^{s}15/38, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	Walferdange	0.57	312	ePg	Pg	18 28 05.1	+1.4
	SNR=3.6						
WLF				eSg	Sg	18 28 12.5	+1.1
CDF	Champ du Feu	0.92	160	ePg	Pg	18 28 11.8	+1.2
CDF				ePn	Pn	18 28 12.5	+0.3
CDF				eSg	Sg	18 28 23.8	+0.8
	22nm,0.2s						
RFYF	Reffroy	1.10	234	ePg	Pg	18 28 15.9	+1.8
	baz=50						
RFYF				eSg	Sg	18 28 30.5	+1.8
	19nm,0.2s						
HAU	Haudompre	1.31	194	ePn	Pn	18 28 18.4	+0.6
HAU				ePg	Pg	18 28 19.3	+0.9
HAU				eSg	Sg	18 28 36.8	+0.8
	21nm,0.3s						
BFO	Black Forest	1.39	133	ePg	Pg	18 28 20.8	+1.0
	SNR=3.5						
BFO				eSg	Sg	18 28 39.2	+0.9
MEZF	Maizieres J'vi	1.40	237	ePg	Pg	18 28 20.3	+0.2
	baz=60						
MEZF				eSg	Sg	18 28 40.3	+1.5
	7.4nm,0.4s						
TNS	Taunus Mts	1.42	48	ePg	Pg	18 28 19.8	-0.7
	SNR=4.2						
TNS				eSg	Sg	18 28 38.2	-1.2
HINF	Hinteralfeld	1.47	179	ePn	Pn	18 28 20.9	+0.9
HINF				ePg	Pg	18 28 22.0	+0.5
HINF				eSn	Sn	18 28 39.2	-1.0
HINF				eSg	Sg	18 28 41.4	+0.3
	20nm,0.2s						
GIVF	Givet	1.53	303	ePn	Pn	18 28 20.8	-0.1
GIVF				eSn	Sn	18 28 43.0	+1.3
	10nm,0.4s						
SFTF	Sexfontaines	1.59	228	ePn	Pn	18 28 22.3	+0.5
	baz=42						
SFTF				eSg	Sg	18 28 45.3	0.0
	6.2nm,0.3s						
BAIF	Baives	1.86	296	ePn	Pn	18 28 25.5	-0.1
BAIF				ePg	Pg	18 28 29.0	-0.3
BAIF				eSg	Sg	18 28 52.9	-1.2
	4.7nm,0.3s						
CABF	La Chapelle	2.72	191	ePn	Pn	18 28 37.7	-0.2
CABF				ePg	Pg	18 28 45.3	-1.1
CABF				eSg	Sg	18 29 20.5	-2.2
	2.0nm,0.3s						
LOR	Lormes	2.82	225	ePn	Pn	18 28 38.4	-0.9
	baz=48						
LOR				eSn	Sn	18 29 13.0	-1.5
LOR				eSg	Sg	18 29 23.7	-2.4
	4.9nm,0.3s						
SSF	Saint Saulge	3.14	226	ePn	Pn	18 28 42.8	-1.0
SMF	Signal de Mont	3.31	218	ePn	Pn	18 28 43.8	-2.5
SMF				eSn	Sn	18 29 23.7	-3.2
AVF	Avril sur Loir	3.41	224	ePn	Pn	18 28 45.9	-1.8
GEC2	GERESS Array S	4.55	93	ePn	Pn	18 29 03.7	-0.2
	SNR=1.3						

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*IDC **13** 18:47:06.8±1.7, 60.46S×154.10E, mb4.4/7, mb1 4.5/7, mb1mx4.4/11, mbtmp4.4/7, MS4.7/12, Ms1 4.7/12, ms1mx4.6/15, Error ellipse: s-maj=63.5km s-min=22.4km az=101.0*

*NEIC **13** 18:47:08.1±0.8, 60.41S×154.52E, h10^{km}, mb4.8/7, Error ellipse: s-maj=41.4km s-min=10.7km az=82.0*

ISC 13 18:47:06.6±0.7, 60.41S±0.07×154.2E±0.5, h10^{km}, n36, σ1^{s}03/27, mb4.5/10, MS4.7/11, 7C, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	17.38	174	eP	P	18 51 07.3	-3.0
	75nm,1.3s						
SBA	Scott Base	18.00	171	eP	P	18 51 15.9	-2.1
	121nm,1.3s						
RPZ	Rata Peaks	19.55	39	LR	LR	18 57 53.9	
	comp=Z,4µm,20.2s,baz=197,slow=33						
URZ	Urewera	26.45	43	LR	LR	19 02 11.4	
	comp=Z,2µm,20.5s,MS4.6,baz=39,slow=34						
QSPA	South Pole Qui	29.69	180	eP	P	18 53 14.6	+0.5
	47nm,1.4s,mb5.0						
STKA	Stephens Creek	29.74	338	P	P	18 53 16.7	+1.7
	2.5nm,0.8s,mb4.0,baz=186,slow=9.2,SNR=4.0						
STKA	Stephens Creek	29.74	338	P	P	18 53 16.7	+1.7
NWAO	Narrogin (SRO)	36.57	302	LR	LR	19 05 33.8	
	comp=Z,1µm,18.8s,MS4.8,baz=139,slow=30						
MAW	Mawson	37.12	219	P	P	18 54 18.3	-0.1
	4.5nm,0.9s,mb4.3,baz=128,slow=6.2,SNR=4.9						
MAW				LR	LR	19 09 39.1	
	comp=Z,2µm,18.2s,MS4.9,baz=98,slow=36						
MAW	Mawson	37.12	219	P	P	18 54 20.2	+1.7
	11nm,1.1s,mb4.6						
DZM	Mont Dzumac	39.26	18	P	P	18 54 37.1	+0.2
	3.3nm,0.7s,mb4.2,baz=215,slow=12,SNR=3.6						
DZM				LR	LR	19 07 32.7	
	comp=Z,1µm,19.4s,MS4.8,baz=201,slow=31						
ASPA	Alice Springs	39.35	330	eP	P	18 54 37.3	-0.3
CTA	Charters Tower	40.67	348	P	P	18 54 48.9	+0.4
	5.3nm,0.9s,mb4.2,baz=200,slow=4.3,SNR=4.2						
CTA				LR	LR	19 09 21.9	
	comp=Z,1µm,18.9s,MS4.7,baz=180,slow=33						
CTA	Charters Tower	40.67	348	P	P	18 54 48.9	+0.4
CTA				LR	LR	19 09 21.9	
WB2	Warramunga Arr	42.82	332	eP	P	18 55 05.5	-0.6
WRA	Warramunga Arr	42.82	332	P	P	18 55 05.4	-0.7
	3.9nm,1.0s,mb4.1,baz=167,slow=7.2,SNR=11						
WRAB	Tennant Creek	42.83	332	eP	P	18 55 05.7	-0.5
	11nm,0.9s,mb4.6						
FITZ	Fitzroy Crossi	46.95	321	eP	P	18 55 39.1	-0.1
	6.4nm,0.8s,mb4.6						
FITZ	Fitzroy Crossi	46.95	321	P	P	18 55 38.5	-0.7
	6.5nm,0.8s,mb4.6,baz=172,slow=11,SNR=5.9						
FITZ				LR	LR	19 13 11.0	
	comp=Z,974nm,18.8s,MS4.8,baz=166,slow=33						
SNAA	Sanae	47.24	190	eP	P	18 55 41.6	+0.7
	43nm,1.4s,mb5.2						
VNA3	Neumayer Olymp	48.15	187	⇑i	P	18 55 49.2	+1.2
VNA3	Neumayer Olymp	48.15	187	⇑i	P	18 55 58.2	+10
VNA3	Neumayer Olymp	48.15	187	⇑i	P	18 56 01.2	+13
VNA2	Neumayer--Watz	48.32	188	⇑i	P	18 55 50.4	+1.2
VNA2	Neumayer--Watz	48.32	188	⇑i	P	18 55 59.3	+10
VNA2	Neumayer--Watz	48.32	188		P	18 56 03.7	+14
VNA1	Neumayer--Stat	48.65	188	⇑i	P	18 55 53.5	+1.7
VNA1	Neumayer--Stat	48.65	188		P	18 56 04.0	+12
VNA1	Neumayer--Stat	48.65	188	⇑i	P	18 56 06.1	+14
HNR	Honiara	51.05	7	LR	LR	19 14 50.3	
	comp=Z,1µm,18.5s,MS5.0,baz=150,slow=32						
PMG	Port Moresby	51.17	351	LR	LR	19 15 45.8	
	comp=Z,961nm,18.5s,MS4.8,baz=174,slow=34						
BOSA	Boshof	82.00	224	P	P	18 59 26.6	-1.2
	6.5nm,1.1s,mb4.5,baz=135,slow=2.9,SNR=3.4						
BOSA				LR	LR	19 33 08.1	
	comp=Z,253nm,18.1s,MS4.6,baz=157,slow=34						
LPAZ	La Paz	96.33	139	LR	LR	19 37 27.0	
	comp=Z,179nm,19.1s,MS4.6,baz=163,slow=31						
MJAR	Matsushiro Arr	97.49	347	LR	LR	19 43 25.0	
	comp=Z,95nm,19.4s,MS4.3,baz=135,slow=35						
AKASG	Malin Array Be	148.32	277	PKPbc	PKPdf	19 06 53.0	+1.6
	0.2nm,0.2s,baz=107,slow=2.4,SNR=7.2						
GERES	GERESS Array B	154.80	261	PKPbc	PKPdf	19 07 10.0	+9.1
	0.6nm,0.7s,baz=153,slow=3.0,SNR=5.7						

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*IDC **13** 19:03:31.3±1.5, 0.65S×122.09E, mb4.0/4, mb1 4.2/4, mb1mx3.8/15, mbtmp4.0/4, Error ellipse: s-maj=165.2km s-min=24.8km az=62.0*

ISC 13 19:03:34.5±0.8, 0.5S±0.3×122.5E±0.4, h33^{km}, n10, σ0^{s}71/9, mb4.3/7, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	15.68	141	eP	Px	19 07 35.7	
	7.0nm,0.6s						
WRA	Warramunga Arr	22.58	150	P	P	19 08 33.3	-0.3
	5.2nm,0.8s,mb4.0,baz=331,slow=9.8,SNR=22						
WB2	Warramunga Arr	22.59	150	eP	P	19 08 34.0	+0.4
GUN	Gumba	45.02	312	eP	P	19 11 49.8	+0.7
	12nm,0.5s,mb5.0						
KKN	Kakani	45.41	311	eP	P	19 11 52.5	+0.3
GKN	Gorkha	46.01	311	eP	P	19 11 56.4	-0.5
	4.1nm,0.5s,mb4.7						
KOLN	Koldanda	46.67	310	eP	P	19 12 02.2	+0.1
	6.9nm,0.7s,mb4.7						
SONM	Songino Array	50.09	346	P	P	19 12 29.6	+1.2
	1.3nm,0.6s,mb4.1,baz=167,slow=8.5,SNR=18						
MKAR	Makanchi Array	58.72	329	P	P	19 13 31.1	-0.4
	0.4nm,0.3s,mb3.9,baz=132,slow=8.3,SNR=9.9						
ZAL	Zalesovo	62.51	336	P	P	19 13 55.7	-1.4
	0.5nm,0.4s,mb4.0,baz=2.0,slow=22,SNR=4.3						

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*NIED **13** 19:06:00, 32.10N×138.50E, h29^{km}, Mw3.8 Best double couple: M$_0$6.22×10^{14} NP1:φ$_s$44°, δ90°, λ-1°. NP2:φ$_s$134°, δ89°, λ-180°.*

JMA 13 19:06:43.0±0.2, 32.12N×138.46E, h30^{km}, M3.9, 1C, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.51	49	⇑P	Pn	19 07 09.0	+0.5
JHJ2				S	Sn	19 07 27.4	+0.1
TK01	Tokai 1	1.80	336	P	Pn	19 07 13.0	+0.5
TK01				S	Sn	19 07 35.3	+0.8
TK02	Tokai 2	1.92	342	P	Pn	19 07 14.5	+0.3
TK02				S	Sn	19 07 38.6	+1.1
TK03	Tokai 3	2.08	349	S	Sn	19 07 42.5	+0.7
TK04	Tokai 4	2.31	348	P	Pn	19 07 20.1	+0.2
TK04				S	Sn	19 07 47.8	+0.2
JIE	Ise	2.70	328	P	Pn	19 07 25.7	+0.3
JIE				S	Sn	19 07 56.4	-1.1
JWZ	Kozaga	2.71	302	P	Pn	19 07 26.1	+0.6
JWZ				S	Sn	19 07 56.0	-1.6
JWY	Kouya	3.19	312	P	Pn	19 07 33.5	+1.1
JWY				S	Sn	19 08 08.5	-1.3
JYN	Shimob	3.37	1	P	Pn	19 07 35.3	+0.4
JYN				S	Sn	19 08 14.1	-0.3
JAI	Aioi	3.76	297	P	Pn	19 07 41.7	+1.2
JAI				S	Sn	19 08 22.7	-1.6
JGM	Miyama	3.85	338	P	Pn	19 07 42.6	+0.8
JGM				S	Sn	19 08 24.8	-1.8
JRY	Ryogami san	3.90	5	P	Pn	19 07 43.8	+1.3
JWT	Wachi	4.05	322	P	Pn	19 07 45.0	+0.3
JWT				S	Sn	19 08 30.1	-1.7
JMN	Monobe	4.17	294	P	Pn	19 07 47.9	+1.5
JMN				S	Sn	19 08 33.1	-1.7
JAG	Ashikaga	4.37	11	P	Pn	19 07 53.6	+4.4
MAT	Matsushiro	4.42	357	P	Pn	19 07 50.5	+0.7
MAT				S	Sn	19 08 40.7	-0.2
MAT	Matsushiro	4.42	357	P	Pn	19 07 50.7	+0.9
MAT				S	Sn	19 08 40.8	-0.1

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*NEIC **13** 19:35:19.7±1.9, 5.60S×149.16E, h172^{km}±17^{km}, mb4.1/3, Error ellipse: s-maj=17.5km s-min=16.6km az=143.0*

*IDC **13** 19:35:21.5±1.8, 5.66S×149.15E, h191^{km}±17^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.5/14, mbtmp3.9/7, Error ellipse: s-maj=23.1km s-min=13.2km az=128.0*

ISC 13 19:35:18.3±2.1, 5.5S±0.1×149.2E±0.1, h174^{km}±17^{km}, n14, σ0^{s}84/17, mb3.6/6, 1C-1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.37	207	P	P	19 36 24.2	-0.5
	4.5nm,0.3s,baz=64,slow=4.0,SNR=14						
PMG				S	S	19 37 17.1	+1.1
	8.0nm,0.3s,baz=45,slow=23,SNR=8.7						
PMG	Port Moresby	4.37	207	eP	P	19 36 24.1	-0.7
PMG				S	S	19 37 17.1	+1.1
KAKA	Kakadu	18.01	245	eP	P	19 39 35.7	+17
	3.2nm,0.5s						
WRAB	Tennant Creek	20.35	224	eP	P	19 39 41.9	-0.9
	4.9nm,0.5s						
WB2	Warramunga Arr	20.36	224	⇓iP	P	19 39 42.1	-0.7
WRA	Warramunga Arr	20.36	224	P	P	19 39 42.2	-0.7
	2.7nm,0.6s,baz=49,slow=10,SNR=35						
WRA				S	S	19 43 18.6	+2.5
	0.8nm,0.8s,baz=44,slow=20,SNR=3.0						
ASPA	Alice Springs	23.30	218	⇑iP	P	19 40 12.2	+0.5
DZM	Mont Dzumac	23.46	136	P	P	19 40 13.7	+0.5
	2.7nm,0.6s,mb3.9,baz=249,slow=23,SNR=7.9						
FITZ	Fitzroy Crossi	26.19	239	eP	P	19 40 37.5	-1.3
	3.7nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	26.19	239	P	P	19 40 38.1	-0.6
	5.1nm,0.6s,mb4.3,baz=62,slow=11,SNR=15						
SONM	Songino Array	65.05	330	P	P	19 45 43.1	+1.0
	0.2nm,0.4s,mb3.3,baz=143,slow=5.4,SNR=4.6						
VNDA	Vanda	72.29	177	eP	P	19 46 25.6	-0.6
	0.7nm,0.7s,mb3.5						
MKAR	Makanchi Array	78.51	320	P	P	19 47 02.5	+0.8
	0.2nm,0.4s,mb3.1,baz=99,slow=7.8,SNR=4.1						
ILAR	Eielson Array	84.17	23	P	P	19 47 30.6	-0.2
	1.2nm,0.8s,mb3.7,baz=247,slow=4.7,SNR=13						

PGC 13 19:49:01.6, 71.74N×131.66W, h35^{km}, MLSn3.4/4, Beaufort Sea., Beaufort Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INK	Inuvik	3.51	191	Pn	P	19 49 53.0	-2.1
INK				Sn	S	19 50 31.2	-4.7
INK				Trac		19 50 33.6	
	comp=Z,12nm,0.1s						
DAWY	Dawson	8.23	204	Pn	P	19 50 56.4	-5.0
DAWY				Sn	S	19 52 22.0	-12
DAWY				Trac		19 52 27.9	
	comp=Z,4.0nm,0.2s						
RES	Resolute Bay	10.89	57	Pn	P	19 51 32.2	-5.6
RES				Sn	S	19 53 24.6	-15
RES				Trac		19 53 28.9	
	comp=Z,3.0nm,0.4s						
HYT	Haines Junctio	11.20	195	Pn	P	19 51 38.3	-3.8
HYT				Sn	S	19 53 34.3	-13
	comp=Z,1.0nm,0.7s						
HYT				Trac		19 53 46.6	
	comp=Z,1.0nm,0.7s						
YKW3	Yellowknife Ar	11.29	136	Pn	P	19 51 37.4	-5.9
YKW3				Sn	S	19 53 33.0	-16

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*IDC **13** 19:57:54.5±2.0, 6.95S×77.56W, mb3.6/3, mb1 4.0/5, mb1mx3.8/17, mbtmp3.7/5, ML3.7/2, Error ellipse: s-maj=67.0km s-min=36.0km az=52.0*

*NEIC **13** 19:58:07.6±2.0, 6.79S×76.46W, h136^{km}±25^{km}, mb4.6/2, Error ellipse: s-maj=22.3km s-min=18.3km az=98.0*

ISC 13 19:58:08.5±2.2, 6.9S±0.2×76.6W±0.2, h171^{km}±33^{km}, n11, σ1^{s}16/11, mb3.5/4, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	5.06	183	eP	P	19 59 23.3	-0.5
	106nm,0.8s						
NNA				eS	S	20 00 14.5	-7.6
LPAZ	La Paz	12.45	139	Pn	P	20 01 03.4	+2.6
	0.1nm,0.3s,baz=315,slow=7.1,SNR=3.0						
LPAZ	La Paz	12.45	139	P	P	20 01 01.8	+1.0
SAML	Samuel	13.40	100	eP	P	20 01 10.0	-2.8
SDV	Santo Domingo	16.76	21	P	P	20 01 56.1	+1.3
	1.2nm,0.3s,baz=197,slow=10,SNR=6.7						
SDV	Santo Domingo	16.76	21	eP	P	20 01 54.4	-0.5
TXAR	Lajitas Array	44.48	325	P	P	20 06 05.5	+0.9
	0.5nm,0.4s,mb3.5,baz=147,slow=8.4,SNR=11						
SDCO	Great Sand Dun	51.98	331	eP	P	20 07 02.8	+0.5
	1.6nm,0.6s,mb3.8						
PDAR	Pinedale Array	57.84	332	P	P	20 07 43.8	-0.6
	0.3nm,0.6s,mb3.3,baz=127,slow=9.0,SNR=3.0						
NVAR	Mina Array Bea	59.48	323	P	P	20 07 54.9	-1.0
	0.2nm,0.3s,mb3.4,baz=152,slow=10.0,SNR=3.8						
WRA	Warramunga Arr	139.56	228	PKP	PKPdf	20 17 21.9	+5.3
	0.2nm,0.3s,baz=113,slow=2.3,SNR=4.6						

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*CSEM **13** 20:08:27.7±0.1, 38.22N×26.70E, h2^{km}, MD2.7, Error ellipse: s-maj=3.8km s-min=2.2km az=108.0*

*ISK **13** 20:08:28.8, 38.27N×26.70E, h14^{km}, MD2.7*

*ATH **13** 20:08:28.6, 38.15N×26.51E, h7^{km}±4^{km}, MD2.9/3*

ISC 13 20:08:28.4±0.7, 38.19N±0.03×26.69E±0.04, h3^{km}±6^{km}, n13, σ0^{s}83/20, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.18	335	i P	Pg	20 08 32.0	-0.2
URLA				i S	Sg	20 08 35.4	+0.8
BLCB	Balcova	0.34	55	PG	Pg	20 08 35.2	+0.1
IZM	Izmir	0.49	65	PG	Pg	20 08 38.0	-0.2
IZM				SG	Sg	20 08 45.8	+1.0
SMG	Samos	0.49	167	ePB	Pg	20 08 38.4	+0.1
SMG				eSB	Sg	20 08 45.6	+0.7
KDAG	Bornova	0.50	65	i P	Pg	20 08 37.3	-1.1
KDAG				i S	Sg	20 08 44.7	-0.3
AYDN	Tasoluk	1.08	119	i P	Pb	20 08 49.1	-0.3
AYDN				i S	Sb	20 09 03.4	-0.2
PRK	Paraskevi	1.10	343	ePN	Pn	20 08 49.6	-1.1
PRK				eSB	Sb	20 09 04.9	+0.5
AKS	Akhisar	1.11	52	ePG	Pg	20 08 49.8	-0.8
BODT	Bodrum	1.23	156	ePN	Pn	20 08 52.9	+0.4
APE	Apeiranthos	1.45	220	ePN	Pn	20 08 56.7	+1.1
APE	Apeiranthos	1.45	220	ePb	Pb	20 08 53.7	-2.1
APE	Apeiranthos	1.45	220	ePn	Pn	20 08 56.7	+1.1
MANT	Manisa	1.50	78	i P	Pn	20 08 57.9	+1.6
MANT				i S	Sb	20 09 15.5	-0.3

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*NEIC **13** 20:14:11.2±0.3, 43.77N×105.21W, ML3.4, Error ellipse: s-maj=6.0km s-min=4.1km az=146.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

*IDC **13** 20:14:11.6±0.9, 43.94N×105.66W, mb4.0/4, mb1 3.9/10, mb1mx3.7/24, mbtmp3.7/10, ML3.6/6, Error ellipse: s-maj=24.3km s-min=7.9km az=146.0*

ISC 13 20:14:09.5±0.4, 43.74N±0.03×105.20W±0.05, n64, σ0^{s}96/64, mb4.0/5, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.92	66	eP	Pg	20 14 29.8	+1.8
PHWY	Pilot Hill	2.45	185	eP	Pn	20 14 52.1	+0.7
RWWY	Rawlins	2.53	216	eP	Pn	20 14 54.1	+1.5
LAO	LASA Array	3.03	347	eP	Pn	20 15 00.0	+0.3
BW06	Boulder Array	3.33	254	eP	Pn	20 15 04.2	+0.3
PDAR	Pinedale Array	3.33	254	Pn	Pn	20 15 04.0	+0.1
	5.6nm,0.3s,baz=71,slow=15,SNR=123						
PDAR				Lg		20 15 48.0	
	23nm,0.3s,baz=245,slow=14,SNR=9.3						
GCMT	Greycliff	3.78	304	eP	Pn	20 15 11.0	+0.7
LKWY	Lake	3.83	284	P	Pn	20 15 12.4	+1.4
LOHW	Long Hollow	3.92	270	eP	Pn	20 15 13.0	+0.7
ISCO	Idaho Springs	3.95	185	eP	Pn	20 15 13.7	+0.9
MOOW	Moose Ponds	4.02	272	eP	Pn	20 15 14.3	+0.6
SNOW	Snow King Moun	4.04	268	eP	Pn	20 15 14.6	+0.5
YFT	Old Faithful	4.12	282	P	Pn	20 15 16.6	+1.5
REDW	Red Top Meadow	4.12	267	eP	Pn	20 15 15.5	+0.3
IMW	Indian Meadow	4.15	274	eP	Pn	20 15 16.4	+0.7
TPAW	Teton Pass	4.18	269	eP	Pn	20 15 16.1	+0.1
YMR	Madison River	4.25	285	eP	Pn	20 15 18.1	+1.2
AHID	Auburn Hatcher	4.42	259	eP	Pn	20 15 19.6	+0.2
RRI2	Red Ridge	4.46	267	eP	Pn	20 15 20.0	-0.1
QLMT	Earthquake Lak	4.60	286	P	Pn	20 15 22.1	+0.1
SMCO	Snowmass	4.75	197	eP	Pn	20 15 24.7	+0.5
DGMT	Dagmar	4.78	8	eP	Pn	20 15 25.4	+0.9
BOZ	Bozeman (W)	4.96	295	eP	Pn	20 15 26.4	-0.7
HWUT	Hardware Ranch	5.15	248	eP	Pn	20 15 29.0	-0.8
TCUT	Toone Canyon	5.29	242	eP	Pn	20 15 31.4	-0.3
DLMT	Dillon	5.53	290	eP	Pn	20 15 35.5	+0.5
HRY	Holter Researc	5.54	305	eP	Pn	20 15 34.8	-0.5
MCMT	McKenzie Canyo	5.59	284	eP	Pn	20 15 36.5	+0.4
DAU	Daniels Canyon	5.60	236	eP	Pn	20 15 35.7	-0.4
CTU	Camp Tracy	5.74	240	eP	Pn	20 15 36.7	-1.4
RW3	Ridgway	5.80	200	P	Pn	20 15 41.0	+2.0
SPUT	South Promonto	5.88	248	eP	Pn	20 15 40.0	-0.1
HVU	Hansel Valley	5.91	253	eP	Pn	20 15 39.8	-0.6
NOQ	North Oquirrh	5.99	241	P	Pn	20 15 41.8	+0.2
SDCO	Great Sand Dun	6.00	182	eP	Pn	20 15 41.9	+0.2
MPU	Maple Canyon	6.07	234	eP	Pn	20 15 42.2	-0.6
PV10	Paradox Valley	6.09	210	eP	Pn	20 15 43.2	+0.2
SRU	San Rafael	6.12	223	eP	Pn	20 15 41.7	-1.6
PV01	Paradox Valley	6.16	206	P	Pn	20 15 44.4	+0.4
TMUT	Trail Mountain	6.33	227	eP	Pn	20 15 45.8	-0.5
CBKS	Cedar Bluff	6.42	138	eP	Pn	20 15 47.5	-0.2
BGU	Big Grassy Mou	6.45	247	eP	Pn	20 15 47.6	-0.4
CHMT	Chamberlain Mo	6.50	302	eP	Pn	20 15 47.7	-1.0
HLID	Hailey	6.69	272	eP	Pn	20 15 52.0	+0.6
DUG	Dugway	6.69	241	eP	Pn	20 15 50.0	-1.4
MSO	Missoula	6.89	300	eP	Pn	20 15 53.5	-0.8
MSU	Marysvale	7.42	228	eP	Pn	20 16 01.2	-0.5
MVU	Marysvale	7.44	228	eP	Pn	20 16 01.2	-0.8
KSU1	Kansas State U	7.95	123	P	Pn	20 16 08.2	-0.9
ELK	Elko	8.03	252	Pn	P	20 16 09.0	-1.2
	0.4nm,0.3s,baz=62,slow=7.0,SNR=3.6						
ELK				Lg		20 18 10.3	
	0.1nm,0.3s,baz=108,slow=7.7,SNR=2.9						
ULM	Lac du Bonnet	9.11	41	Pn	P	20 16 23.1	-2.1
	4.5nm,0.3s,baz=234,slow=11,SNR=24						
ULM				Lg		20 18 50.6	
	0.6nm,0.3s,baz=333,slow=18,SNR=2.5						
NEW	Newport	9.44	303	Pn	P	20 16 27.5	-2.4
	0.1nm,0.3s,baz=90,slow=15,SNR=2.1						
NEW				Lg		20 18 53.0	
	0.2nm,0.3s,baz=291,slow=16,SNR=1.9						
NEW	Newport	9.44	303	Pn	P	20 16 27.5	-2.4
NEW				Lg		20 18 53.0	
WUAZ	Wupatki	9.49	212	eP	P	20 16 29.4	-1.1
WVOR	Wild Horse Val	9.92	267	P	P	20 16 38.5	+2.2

NVAR	**Mina Array Bea**	**11.22**	**246**	Pn	**P**	**20 16 53.9**	**-0.3**
	0.1nm,0.3s,baz=53,slow=14,SNR=2.1						
TXAR	**Lajitas Array**	**14.43**	**175**	Pn	**P**	**20 17 41.7**	**+4.6**
	0.1nm,0.3s,baz=349,slow=9.2,SNR=3.8						
TXAR				Lg		20 21 52.3	
	0.0nm,0.3s,baz=316,slow=24,SNR=3.6						
YKA	**Yellowknife Ar**	**19.57**	**347**	P	**P**	**20 18 38.2**	**-3.3**
	0.1nm,0.3s,baz=195,slow=33,SNR=3.3						
YKA	**Yellowknife Ar**	**19.57**	**347**	P	**P**	**20 18 38.2**	**-3.3**
ILAR	**Eielson Array**	**31.30**	**327**	P	**P**	**20 20 33.0**	**-0.1**
	0.2nm,0.5s,mb3.3,baz=105,slow=8.3,SNR=3.8						
ARCES	**ARCESS Array B**	**61.40**	**18**	P	**P**	**20 24 27.6**	**-1.5**
	1.3nm,0.5s,mb4.4,baz=337,slow=6.0,SNR=13						
FINES	**FINESS Array B**	**68.01**	**23**	P	**P**	**20 25 11.6**	**-0.5**
	6.9nm,1.2s,mb4.8,baz=90,slow=5.7,SNR=4.0						
SONM	**Songino Array**	**84.65**	**339**	P	**P**	**20 26 46.8**	**+1.1**
	0.3nm,0.6s,mb3.7,baz=359,slow=3.3,SNR=5.2						
MKAR	**Makanchi Array**	**89.61**	**355**	P	**P**	**20 27 10.4**	**+0.5**
	0.3nm,0.6s,mb3.7,baz=15,slow=3.9,SNR=4.9						

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*NDI **13** 20:27:52.3±3.8, 34.66N×73.03E, h10^{km}, ML2.9*

*NNC **13** 20:27:58.4±49.0, 35.89N×75.41E, mpv3.5, Error ellipse: s-maj=475.5km s-min=445.4km az=63.0*

ISC 13 20:27:50.9±1.2**, 34.47N**±0.08×**72.8E**±0.1**, h33^{km}, n7, σ1^{s}35**/11**, 1C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.19**	**129**	*e*P	**P**	**20 28 43.5**	**+3.7**
DLH	**Dalhousie**	**3.28**	**125**	*e*P	**P**	**20 28 44.0**	**+2.8**
DLH				*e*SB	**Sb**	**20 29 29.0**	**+0.8**
KLP	**Kalpa**	**5.45**	**121**	*e*P	**P**	**20 29 12.2**	**+0.3**
KLP				*e*S	**S**	**20 30 12.1**	**-2.1**
KLP				AML	AML	20 30 18.8	
	comp=E,38nm,0.3s						
KLP				AML	AML	20 30 43.6	
	comp=N,52nm,0.7s						
KHET	**Khetri**	**6.88**	**157**	*e*P	**P**	**20 29 32.7**	**+0.7**
KHET				*e*S	**S**	**20 30 48.0**	**-2.1**
KHET				AML	AML	20 30 52.7	
	comp=E,6.2nm,0.2s						
KHET				AML	AML	20 30 53.1	
	comp=N,3.9nm,0.2s						
JOSI	**Joshimath**	**6.93**	**122**	*e*x	x	20 29 05.5	
JOSI				*e*x	x	20 30 04.3	
KUDL	**Kundal**	**7.06**	**152**	*e*P	**P**	**20 29 35.1**	**+0.6**
KUDL				*e*S	**S**	**20 30 54.5**	**0.0**
KK31	**Karatay Array**	**8.80**	**349**	P	**P**	**20 29 57.8**	**-0.9**
	comp=N,0.7nm,0.2s,baz=154,slow=12,SNR=54						
KK31				⇑S	**S**	**20 31 31.7**	**-6.0**
	comp=N,0.9nm,0.5s,baz=150,slow=25,SNR=8.9						

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*BJI **13** 20:49:06.8, 16.50S×71.20W, h93^{km}, mB5.3*

*NEIC **13** 20:49:06.8±0.5, 16.48S×71.25W, h94^{km}±5^{km}, mb4.6/14, Error ellipse: s-maj=7.7km s-min=4.5km az=66.0*

NEIC Felt [III] at Punta de Bombon and [II] at Arequipa.

*IDC **13** 20:49:07.1±0.5, 16.51S×71.35W, h99^{km}±4^{km}, mb4.2/19, mb1 4.3/21, mb1mx4.2/26, mbtmp4.5/21, MS3.5/7, Ms1 3.5/7, ms1mx3.3/21, Error ellipse: s-maj=15.9km s-min=11.4km az=62.0*

ISC 13 20:49:05.9±0.5**, 16.49S**±0.04×**71.30W**±0.05**, h101^{km}**±4^{km}**, h100^{km}**±1.8^{km}**:pP-P, n90, σ0^{s}91**/76**, mb4.4**/30**, 3C-8D, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.18**	**280**	⇓*i*P	**P**	**20 49 20.8**	**+0.6**
ARE				*e*S	**S**	**20 49 32.0**	**+1.0**
LPAZ	**La Paz**	**3.05**	**87**	P	**P**	**20 49 59.0**	**+5.6**
	153nm,0.3s,baz=269,slow=10,SNR=6235						
LPAZ				S	**S**	**20 50 36.9**	**+7.8**
	11nm,0.3s,baz=269,slow=13,SNR=1.6						
LPAZ				LR	LR	20 51 04.9	
	comp=Z,456nm,20.6s,baz=73,slow=38						
LPAZ	**La Paz**	**3.05**	**87**	⇑*i*P	**P**	**20 49 59.6**	**+6.3**
CEN1	**Los Morros**	**6.94**	**172**	*i* P	**P**	**20 50 45.3**	**-1.2**
CEN1				*i* S	**S**	**20 51 58.5**	**-6.0**
NNA	**Nana**	**6.99**	**309**	P	**P**	**20 50 51.5**	**+4.2**
	49nm,0.7s						
ANCH	**Antofagasta**	**7.20**	**173**	⇑*i*P	**P**	**20 50 47.0**	**-3.2**
ANCH				*i* S	**S**	**20 51 59.6**	**-11**
CPN1	**Cerro Paranal**	**8.13**	**174**	*i* P	**P**	**20 50 59.7**	**-3.1**
CPN1				*i* S	**S**	**20 52 22.9**	**-11**
SIV	**San Ignacio**	**9.84**	**89**	P	**P**	**20 51 25.4**	**-0.4**
	7.6nm,0.3s,baz=281,slow=12,SNR=164						
SIV				S	**S**	**20 53 16.0**	**+0.9**
	baz=215,slow=21,SNR=2.2						
SAML	**Samuel**	**10.90**	**48**	⇑*e*P	**P**	**20 51 39.5**	**-0.6**
	152nm,0.8s						
TLL	**Tololo Astrono**	**13.62**	**178**	*e*P	**P**	**20 52 15.5**	**-0.4**
CFAA	**Coronel Fontan**	**15.30**	**170**	P	**P**	**20 52 35.9**	**-1.6**
	0.1nm,0.3s,baz=345,slow=12,SNR=93						
CFAA				S	**S**	**20 55 24.8**	**+0.6**
	0.1nm,0.3s,baz=342,slow=12,SNR=2.8						
CPUP	**Villa Florida**	**16.27**	**129**	P	**P**	**20 52 49.5**	**-0.1**
	20nm,0.8s						
MDZ	**Mendoza**	**16.47**	**173**	*e*P	**P**	**20 52 53.7**	**+1.6**
MDZ				*e*		20 57 33.9	
ROSC	**El Rosal**	**21.42**	**352**	P	**P**	**20 53 46.1**	**-1.1**
	3.8nm,0.4s,mb4.1,baz=104,slow=19,SNR=3.5						
BDFB	**Brasilia**	**22.39**	**91**	P	**P**	**20 53 57.7**	**+1.0**
	24nm,0.7s,mb4.7,baz=266,slow=13,SNR=33						
BDFB				LR	LR	21 03 45.2	
	comp=Z,75nm,19.7s,baz=295,slow=39						
TRQA	**Tornquist**	**22.99**	**161**	*e*P	**P**	**20 54 02.5**	**+0.1**
	11nm,0.8s,mb4.2						
PLCA	**Paso Flores**	**24.16**	**179**	P	**P**	**20 54 13.6**	**0.0**
	21nm,0.9s,mb4.5,baz=355,slow=11,SNR=39						
PLCA				sP		20 54 47.4	
	29nm,0.9s,baz=359,slow=12,SNR=11						
PLCA	**Paso Flores**	**24.16**	**179**	*e*P	**P**	**20 54 14.1**	**+0.4**
	67nm,1.1s,mb4.9						
SDV	**Santo Domingo**	**25.23**	**2**	P	**P**	**20 54 23.4**	**-0.7**
	18nm,0.9s,mb4.5,baz=263,slow=6.8,SNR=19						
SDV				LR	LR	21 05 55.5	
	comp=Z,106nm,20.0s,baz=18,slow=40						
SJG	**San Juan**	**34.76**	**9**	LR	LR	21 09 15.7	
	comp=Z,50nm,19.2s,baz=128,slow=35						
RCBR	**Riachuelo**	**36.25**	**77**	*e*P	**P**	**20 55 59.6**	**-1.6**
	19nm,1.0s,mb5.0						
USHA	**Ushuaia**	**38.33**	**177**	P	**P**	**20 56 17.7**	**-0.4**
	17nm,0.9s,mb4.9,baz=345,slow=3.2,SNR=7.9						
ELN	**Prospectdale**	**54.17**	**351**	P	**P**	**20 58 22.5**	**-0.6**
TXAR	**Lajitas Array**	**55.25**	**325**	P	**P**	**20 58 30.0**	**-1.1**
	0.5nm,0.5s,mb3.8,baz=319,slow=25,SNR=4.4						
WMOK	**Wichita Mounta**	**57.26**	**333**	*e*P	**P**	**20 58 44.3**	**-1.0**
	2.5nm,0.8s,mb4.3						
GDL2	**Guadalupe Moun**	**57.86**	**327**	*e*P	**P**	**20 58 49.2**	**-0.3**
MNTX	**Cornudas Mount**	**58.01**	**326**	*e*P	**P**	**20 58 49.1**	**-1.4**
	8.1nm,1.0s,mb4.7						
CPRX	**Cap Rock**	**58.26**	**328**	*e*P	**P**	**20 58 51.8**	**-0.5**
LPM	**Los Pinos Moun**	**60.69**	**327**	*e*P	**P**	**20 59 09.0**	**0.0**
LAZ	**Ladron**	**61.03**	**326**	*e*P	**P**	**20 59 11.1**	**-0.2**
ANMO	**Albuquerque**	**61.09**	**327**	P	**P**	**20 59 10.3**	**-1.4**
	1.0nm,0.8s,mb3.9,baz=144,slow=7.6,SNR=4.0						
ANMO	**Albuquerque**	**61.09**	**327**	*e*P	**P**	**20 59 10.4**	**-1.3**
SADO	**Sadowa**	**61.38**	**354**	P	**P**	**20 59 12.1**	**-1.5**
	8.2nm,0.7s,mb4.9,baz=180,slow=8.2,SNR=3.0						
SADO	**Sadowa**	**61.38**	**354**	P	**P**	**20 59 12.1**	**-1.5**
SDCO	**Great Sand Dun**	**62.80**	**330**	*e*P	**P**	**20 59 22.9**	**-0.2**
	8.7nm,0.9s,mb4.7						
WUAZ	**Wupatki**	**64.17**	**324**	*e*P	**P**	**20 59 32.6**	**+0.5**
PV01	**Paradox Valley**	**64.62**	**328**	*e*P	**P**	**20 59 35.4**	**+0.3**
SMCO	**Snowmass**	**64.64**	**330**	*e*P	**P**	**20 59 35.6**	**+0.5**
	5.3nm,0.8s,mb4.4						
VNA3	**Neumayer Olymp**	**65.52**	**162**	⇓*i*	**P**	**20 59 40.5**	**+0.3**
VNA1	**Neumayer--Stat**	**65.73**	**161**	⇓*i*	**P**	**20 59 42.3**	**+0.7**
VNA2	**Neumayer--Watz**	**66.10**	**161**	⇓*i*	**P**	**20 59 44.3**	**+0.4**
NEN	**Nelson**	**66.25**	**322**	*e*P	**P**	**20 59 45.9**	**+0.3**
MSU	**Marysvale**	**66.79**	**326**	*e*P	**P**	**20 59 49.6**	**+0.8**
MVU	**Marysvale**	**66.80**	**326**	*e*P	**P**	**20 59 49.9**	**+0.9**
ARUT	**Antelope Range**	**66.95**	**325**	*e*P	**P**	**20 59 51.0**	**+1.1**
MWC	**Mount Wilson**	**67.25**	**319**	P	**P**	**20 59 52.4**	**+0.6**
SNAA	**Sanae**	**67.72**	**161**	⇓*e*P	**P**	**20 59 53.9**	**-0.2**
	25nm,0.8s,mb5.1						
BW06	**Boulder Array**	**68.66**	**331**	*e*P	**P**	**21 00 00.6**	**+0.2**
	3.7nm,1.1s,mb4.1						
PDAR	**Pinedale Array**	**68.66**	**331**	P	**P**	**20 59 59.2**	**-1.2**
	1.0nm,0.7s,mb3.7,baz=143,slow=7.4,SNR=6.2						
PDAR				pP	pP	21 00 23.9	-2.2
	0.8nm,0.9s,baz=111,slow=7.7,SNR=2.2						
MTUM	**Tungsten Hills**	**69.61**	**321**	*e*P	**P**	**21 00 07.6**	**+1.2**
DBIC	**Dimbokro**	**69.62**	**76**	P	**P**	**21 00 06.0**	**-0.7**
	1.6nm,0.3s,mb4.3,baz=257,slow=9.3,SNR=18						
DBIC				LR	LR	21 29 10.1	
	comp=Z,56nm,18.8s,baz=160,slow=34						
DBIC	**Dimbokro**	**69.62**	**76**	*e*P	**P**	**21 00 05.7**	**-1.0**
	14nm,1.2s,mb4.7						
ULM	**Lac du Bonnet**	**69.89**	**343**	P	**P**	**21 00 06.8**	**-0.9**
	6.5nm,0.9s,mb4.4,baz=161,slow=7.6,SNR=6.2						
ELK	**Elko**	**70.03**	**326**	P	**P**	**21 00 09.0**	**+0.2**
	1.3nm,0.6s,mb3.9,baz=113,slow=4.3,SNR=8.1						
NVAR	**Mina Array Bea**	**70.17**	**322**	P	**P**	**21 00 10.2**	**+0.6**
	2.9nm,0.8s,mb4.2,baz=136,slow=7.9,SNR=18						
GCMT	**Greycliff**	**71.05**	**333**	*e*P	**P**	**21 00 15.2**	**+0.4**
GCMT				*e*sP	sP	21 00 52.1	+0.6
HLID	**Hailey**	**71.62**	**328**	*e*P	**P**	**21 00 19.2**	**+0.9**
	4.3nm,1.1s,mb4.2						
HLID				pP	pP	21 00 44.4	+0.2
HLID				*e*sP	sP	21 00 55.1	+0.1
QSPA	**South Pole Qui**	**73.67**	**180**	⇓*i*P	**P**	**21 00 30.6**	**+1.0**
	18nm,0.9s,mb4.8						
MDT	**Midelt**	**80.36**	**52**	P	**P**	**21 01 09.5**	**+1.7**
	1.4nm,0.4s,mb4.2,baz=315,slow=4.3,SNR=2.6						
VNDA	**Vanda**	**81.36**	**190**	*e*P	**P**	**21 01 13.5**	**+1.2**
	5.1nm,0.9s,mb4.3						
VNDA				*e*sP	sP	21 01 49.2	-0.7
SYO	**Syowa Base**	**81.96**	**160**	⇓P	**P**	**21 01 15.5**	**+0.1**
SYO	**Syowa Base**	**81.96**	**160**	⇓*e*P	**P**	**21 01 15.5**	**+0.1**
TSUM	**Tsumeb**	**83.69**	**108**	*e*P	**P**	**21 01 25.0**	**-0.3**
ESDC	**Sonseca Array**	**83.92**	**46**	P	**P**	**21 01 26.6**	**+0.6**
	3.7nm,0.8s,mb4.3,baz=255,slow=5.0,SNR=11						
ESDC				pP	pP	21 01 54.2	+1.6
	2.5nm,0.7s,baz=254,slow=5.0,SNR=6.1						
YKA	**Yellowknife Ar**	**85.74**	**341**	P	**P**	**21 01 34.2**	**-0.3**
	3.8nm,0.9s,mb4.3,baz=137,slow=4.8,SNR=9.0						
YKA				pP	pP	21 02 00.5	-0.7
	1.5nm,0.7s,baz=313,slow=32,SNR=3.1						
YKA				LR	LR	21 45 54.1	
	comp=Z,40nm,18.6s,baz=165,slow=40						
YKA	**Yellowknife Ar**	**85.74**	**341**	P	**P**	**21 01 34.2**	**-0.3**
YKA				pP	pP	21 02 00.5	-0.7
YKA				LR	LR	21 45 54.1	
BOSA	**Boshof**	**87.82**	**119**	LR	LR	21 38 24.9	
	comp=Z,48nm,19.2s,baz=10,slow=34						
DLBC	**Dease Lake**	**88.74**	**333**	P	**P**	**21 01 49.7**	**+0.7**
	4.0nm,0.8s,mb4.5,baz=98,slow=9.3,SNR=5.3						
DLBC	**Dease Lake**	**88.74**	**333**	P	**P**	**21 01 49.7**	**+0.7**
MAW	**Mawson**	**89.75**	**164**	P	**P**	**21 01 53.7**	**+0.2**
	9.2nm,0.9s,mb4.9,baz=240,slow=8.0,SNR=10						
MAW				sP	sP	21 02 31.1	-0.1
	7.6nm,0.7s,baz=228,slow=4.5,SNR=6.5						
EKA	**Eskdalemuir Ar**	**91.57**	**32**	P	**P**	**21 02 03.6**	**+1.3**
	1.0nm,0.8s,mb4.1,baz=348,slow=7.7,SNR=3.5						
AKTO	**Aktyubinsk**	**127.28**	**38**	PKP	PKPdf	21 08 00.9	+2.3
	1.1nm,0.6s,baz=196,slow=3.3,SNR=4.4						
AKTO				pPKP		21 08 28.5	
	1.1nm,0.7s,baz=53,slow=1.5,SNR=2.5						
BVAR	**Borovoye Array**	**132.81**	**31**	PKP	PKPdf	21 08 10.6	+1.4
	0.8nm,0.7s,baz=282,slow=2.1,SNR=4.3						
WRA	**Warramunga Arr**	**135.89**	**216**	PKP	PKPdf	21 08 16.6	+0.9
	3.4nm,0.8s,baz=138,slow=1.6,SNR=19						
WRA				pPKP		21 08 43.1	
	1.6nm,0.8s,baz=154,slow=1.6,SNR=4.9						
ZAL	**Zalesovo**	**138.26**	**21**	PKP	PKPdf	21 08 19.8	+0.6
	3.0nm,0.6s,baz=209,slow=1.9,SNR=17						
ZAL				pPKP		21 08 47.2	
	2.3nm,0.8s,baz=149,slow=1.7,SNR=4.8						
ZAL	**Zalesovo**	**138.26**	**21**	PKP	PKPdf	21 08 19.8	+0.6
ZAL				pPKP		21 08 47.2	
FITZ	**Fitzroy Crossi**	**141.79**	**207**	PKhKP		21 08 21.2	
	6.7nm,0.8s,baz=148,slow=5.8,SNR=7.0						
MKAR	**Makanchi Array**	**142.69**	**30**	PKhKP		21 08 24.4	
	0.9nm,0.8s,baz=18,slow=3.8,SNR=3.6						
MJAR	**Matsushiro Arr**	**147.10**	**313**	PKPbc	PKPdf	21 08 38.6	+3.5
	19nm,0.8s,baz=100,slow=1.5,SNR=53						
MJAR				pPKPbc		21 09 05.3	
	4.4nm,0.8s,baz=107,slow=1.6,SNR=3.5						
MAJO	**Matsushiro**	**147.10**	**313**	*e*PKPbc	PKPdf	21 08 39.2	+4.1
MAT	**Matsushiro**	**147.10**	**313**	PKP	PKPdf	21 08 39.1	+4.0
MAT	**Matsushiro**	**147.10**	**313**	*e*PKP	PKPdf	21 08 39.0	+3.9
WMQ	**Urumqi**	**147.46**	**29**	*e*PKP	PKPdf	21 08 36.0	+0.6
SONM	**Songino Array**	**148.69**	**3**	PKP	PKPdf	21 08 39.2	+1.9
	4.7nm,0.8s,baz=336,slow=0.3,SNR=13						
SONM				PKPbc	PKPdf	21 08 43.6	+6.4
	4.8nm,0.8s,baz=339,slow=1.7,SNR=17						
SONM				pPKPbc		21 09 10.0	
	2.3nm,0.7s,baz=335,slow=2.3,SNR=3.9						
KOLN	**Koldanda**	**154.24**	**60**	*e*P		21 09 36.8	
DMN	**Daman**	**155.54**	**59**	*e*P		21 09 42.9	
	31nm,1.2s						
HHC	**Hu-ho-hao-te**	**155.60**	**355**	*e*PKP	PKPdf	21 08 52.3	+4.8
HHC				PKS	PKS	21 12 23.9	+3.2
HHC				PP	PP		
	comp=Z,130nm,6.0s						
HHC				LR	LR		
	comp=N,120nm,10.8s						
HHC				LR	LR		
	comp=E,100nm,10.8s						
HHC				LR	LR		
	comp=Z,140nm,13.2s						
KKN	**Kakani**	**155.62**	**59**	*e*P		21 09 43.7	
	comp=Z,18nm,0.9s						
GUN	**Gumba**	**156.06**	**58**	*e*P		21 09 46.1	
	comp=Z,31nm,0.9s						
NJ2	**Nanjing**	**161.97**	**331**	*e*PKP	PKPdf	21 08 52.9	-2.3

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*IDC **13** 20:49:14.0±2.0, 5.46N×94.47E, mb3.8/5, mb1 4.0/5, mb1mx3.7/18, mbtmp3.8/5, Error ellipse: s-maj=75.4km s-min=29.2km az=56.0*

*NEIC **13** 20:49:18.0±1.2, 5.31N×94.19E, h30^{km}, mb4.4/1, Error ellipse: s-maj=34.4km s-min=14.1km az=222.0*

ISC 13 20:49:16.4±1.3**, 5.3N**±0.2×**94.3E**±0.2**, h30^{km}, n10, σ0^{s}84**/10**, mb3.9**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**6.37**	**90**	*e*P	**Pn**	**20 50 51.8**	**+0.9**
MKAR	**Makanchi Array**	**42.57**	**348**	P	**P**	**20 57 11.5**	**+0.2**
	1.1nm,0.5s,mb3.9,baz=162,slow=8.2,SNR=20						
MKAR	**Makanchi Array**	**42.57**	**348**	P	**P**	**20 57 11.5**	**+0.2**
SONM	**Songino Array**	**43.60**	**12**	P	**P**	**20 57 18.3**	**-1.4**
	0.7nm,0.9s,mb3.4,baz=186,slow=9.9,SNR=5.7						
WRA	**Warramunga Arr**	**46.74**	**124**	P	**P**	**20 57 44.5**	**-0.7**
	0.3nm,0.3s,mb3.7,baz=297,slow=7.5,SNR=4.9						
WRAB	**Tennant Creek**	**46.75**	**124**	P	**P**	**20 57 44.9**	**-0.2**
KURK	**Kurchatov**	**47.08**	**346**	*e*P	**P**	**20 57 48.2**	**+0.8**
	1.4nm,0.3s,mb4.4						
ZAL	**Zalesovo**	**49.05**	**353**	P	**P**	**20 58 01.9**	**-0.8**
	1.2nm,0.3s,mb4.4,baz=294,slow=6.1,SNR=3.0						
ZAL	**Zalesovo**	**49.05**	**353**	P	**P**	**20 58 01.9**	**-0.8**
GERES	**GERESS Array B**	**79.78**	**319**	P	**P**	**21 01 24.4**	**+1.0**
	0.3nm,0.5s,mb3.5,baz=90,slow=5.3,SNR=3.9						

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*BJI **13** 21:04:25.6, 0.31N×97.22E, h30^{km}, mb4.5*

*IDC **13** 21:04:29.1±3.0, 1.11N×97.26E, mb3.9/5, mb1 4.1/5, mb1mx3.7/18, mbtmp3.9/5, MS4.4/1, Ms1 4.4/1, ms1mx3.0/20, Error ellipse: s-maj=117.3km s-min=26.5km az=55.0*

*NEIC **13** 21:04:33.4±0.8, 1.05N×97.20E, h30^{km}, mb4.3/3, Error ellipse: s-maj=20.3km s-min=11.8km az=56.0*

ISC 13 21:04:31.4±1.0**, 1.1N**±0.1×**97.2E**±0.1**, h30^{km}, n15, σ0^{s}64**/14**, mb4.0**/8**, MS4.4**/1**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.22**	**48**	P	**Pn**	**21 05 49.4**	**-0.1**
KULM	**Kulim**	**5.47**	**40**	*e*P	**Pn**	**21 05 52.3**	**-0.8**
KGM	**Kluang**	**6.24**	**81**	P	**Pn**	**21 06 04.1**	**+0.2**
KMI	**Kunming**	**24.53**	**12**	P	**P**	**21 09 51.3**	**+1.4**
KMI				AP		21 09 58.5	
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
KMI	**Kunming**	**24.53**	**12**	P	**P**	**21 09 51.3**	**+1.4**
	comp=Z,15nm,1.1s,mb4.4						
KMI				pP		21 09 58.5	
GTA	**Gaotai**	**38.25**	**3**	*e*P	**P**	**21 11 51.5**	**+0.7**
GTA				AP	pP	21 11 59.3	-0.5
GTA				XP	sP	21 12 03.6	+0.1
WRA	**Warramunga Arr**	**42.00**	**122**	P	**P**	**21 12 21.8**	**-0.2**
	comp=Z,0.9nm,0.7s,mb3.5,baz=300,slow=9.1,SNR=7.3						
WRAB	**Tennant Creek**	**42.00**	**122**	*e*P	**P**	**21 12 22.3**	**+0.3**
SONM	**Songino Array**	**47.28**	**8**	P	**P**	**21 13 04.1**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.3,baz=192,slow=9.5,SNR=17						
MKAR	**Makanchi Array**	**47.37**	**346**	P	**P**	**21 13 05.3**	**+0.5**
	comp=Z,1.6nm,0.7s,mb4.1,baz=164,slow=8.3,SNR=11						
KURK	**Kurchatov**	**51.92**	**345**	*e*P	**P**	**21 13 39.7**	**+0.1**
	comp=Z,2.1nm,0.9s,mb4.1						
CTA	**Charters Tower**	**52.48**	**116**	LR	LR	21 39 13.2	
	comp=Z,355nm,19.1s,MS4.4,baz=139,slow=40						
ZAL	**Zalesovo**	**53.69**	**351**	P	**P**	**21 13 51.8**	**-0.8**
	comp=Z,1.3nm,0.7s,mb4.0,baz=276,slow=7.5,SNR=7.7						
BVAR	**Borovoye Array**	**56.37**	**341**	P	**P**	**21 14 11.2**	**-1.1**
	comp=Z,0.8nm,0.7s,mb3.9,baz=149,slow=8.6,SNR=7.0						
CHKZ	**Chkalovo**	**56.85**	**341**	*e*P	**P**	**21 14 15.5**	**-0.1**
	comp=Z,2.5nm,0.9s,mb4.2						

MEX 13 21:10:49.8±0.8**, 17.08N**×**100.47W, h7^{km}**±6^{km}**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.20**	**98**	*i* P	Pg	21 10 53.2	-0.8
CAIG				*e*S	Sg	21 10 56.9	+0.1
ACX	**Acapulco**	**0.57**	**111**	*i* P	Pg	21 11 00.5	-0.8
ACX				*i* S	Sg	21 11 08.0	-1.0

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*BJI **13** 21:22:45.3, 3.65S×129.55E, h11^{km}, mB5.1, mb4.8, Ms4.6, Msz4.2*

*IDC **13** 21:22:50.1±0.8, 2.99S×129.15E, mb4.3/8, mb1 4.5/11, mb1mx4.4/16, mbtmp4.4/11, ML4.3/3, MS4.0/5, Ms1 4.0/5, ms1mx3.5/19, Error ellipse: s-maj=32.4km s-min=16.5km az=71.0*

*NEIC **13** 21:22:52.3±0.4, 3.01S×129.19E, mb4.6/8, Error ellipse: s-maj=14.2km s-min=6.9km az=62.0*

ISC 13 21:22:52.1±2.0**, 3.03S**±0.05×**129.21E**±0.09**, h23^{km}**±14^{km}**, h15^{km}**±3.0^{km}**:pP-P, n46, σ0^{s}98**/49**, mb4.7**/22**, MS4.0**/8**, 3D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**10.14**	**162**	*e*P	**P**	**21 25 37.5**	**+18**
	29nm,0.5s						
FITZ	**Fitzroy Crossi**	**15.38**	**193**	*e*P	**P**	**21 26 31.3**	**+1.7**
	35nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.38**	**193**	Pn	**P**	**21 26 30.0**	**+0.4**
	1.4nm,0.3s,baz=23,slow=11,SNR=34						
FITZ				LR	LR	21 33 01.6	
	comp=Z,1µm,20.4s,baz=8.2,slow=40						
WRAB	**Tennant Creek**	**17.54**	**164**	*e*P	**P**	**21 26 56.0**	**-1.0**
	40nm,0.8s						
WRA	**Warramunga Arr**	**17.54**	**164**	P	**P**	**21 26 56.3**	**-0.8**
	1.7nm,0.3s,baz=340,slow=11,SNR=40						
WRA				S	**S**	**21 30 09.5**	**-0.1**
	0.3nm,0.3s,baz=335,slow=24,SNR=3.8						
WB2	**Warramunga Arr**	**17.54**	**164**	*e*P	**P**	**21 26 56.2**	**-0.9**
WB2				*e*S	**S**	**21 30 16.9**	**+7.2**
PMG	**Port Moresby**	**18.93**	**110**	P	**P**	**21 27 15.4**	**+1.2**
	0.7nm,0.3s,baz=320,slow=9.7,SNR=3.7						
KSM	**Kuching**	**19.41**	**283**	*e*P	**P**	**21 27 19.7**	**-0.1**
ASPA	**Alice Springs**	**21.01**	**168**	*e*P	**P**	**21 27 36.2**	**-0.5**
ASPA				*e*S	**S**	**21 31 25.8**	**+1.1**
GUMO	**Guam**	**22.68**	**43**	LR	LR	21 36 30.1	
	comp=Z,154nm,18.9s,MS3.5,baz=126,slow=36						
CTA	**Charters Tower**	**23.75**	**137**	*e*P	**P**	**21 28 07.0**	**+3.1**
	9.7nm,0.8s,mb4.3						
CTA	**Charters Tower**	**23.75**	**137**	P	**P**	**21 28 05.6**	**+1.7**
	6.5nm,1.0s,mb4.0,baz=312,slow=13,SNR=5.5						
JOW	**Kunigami**	**29.70**	**358**	LR	LR	21 38 52.4	
	comp=Z,316nm,20.0s,MS3.9,baz=111,slow=32						
STKA	**Stephens Creek**	**30.97**	**159**	*e*P	**P**	**21 29 10.2**	**+0.1**
	4.2nm,0.9s,mb4.3						
STKA	**Stephens Creek**	**30.97**	**159**	P	**P**	**21 29 09.5**	**-0.6**
	6.1nm,0.8s,mb4.5,baz=336,slow=8.5,SNR=9.2						
NJ2	**Nanjing**	**36.25**	**345**	*e*P	**P**	**21 29 56.4**	**+0.8**
NJ2				AP	pP	21 30 00.9	-1.6
NJ2				XP	sP	21 30 03.4	-2.0
NJ2				PP	PP	21 31 16.6	-2.2
NJ2				S	**S**	**21 35 33.0**	**-1.0**
NJ2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,260nm,3.6s						
NJ2				LR	LR		
	comp=N,4µm,19.0s						
NJ2				LR	LR		
	comp=E,870nm,25.0s						
NJ2				LR	LR		
	comp=Z,430nm,28.4s						
GYA	**Guiyang**	**36.53**	**325**	P	**P**	**21 30 00.5**	**+2.5**
GYA				PCP	PcP	21 32 22.9	+1.1
GYA				S	**S**	**21 35 42.3**	**+3.9**
GYA				AMB	AMB		
	comp=Z,180nm,6.3s						
KMI	**Kunming**	**37.98**	**319**	P	**P**	**21 30 12.5**	**+2.2**
KMI				AP	pP	21 30 16.1	-1.0
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
KMI				AMB	AMB		
	comp=Z,30nm,3.4s						
KMI	**Kunming**	**37.98**	**319**	P	**P**	**21 30 12.5**	**+2.2**
	comp=Z,14nm,1.1s,mb4.6						
KMI				pP	pP	21 30 16.1	-1.0
KMI				LR	LR		
	comp=Z,60nm,19.1s,MS3.4						
MJAR	**Matsushiro Arr**	**40.25**	**11**	P	**P**	**21 30 27.4**	**-1.7**
	comp=Z,0.6nm,0.4s,mb3.7,baz=184,slow=9.4,SNR=5.5						
MJAR				LR	LR	21 44 53.6	
	comp=Z,228nm,20.9s,MS4.0,baz=15,slow=33						
LZH	**Lanzhou**	**45.56**	**331**	*e*P	**P**	**21 31 14.0**	**+1.7**
LZH				AP	pP	21 31 17.3	-1.9
LZH				XP	sP	21 31 18.6	-3.4
LZH				PP	PP	21 33 01.5	+2.0
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,90nm,4.0s						
LZH				LR	LR		
	comp=E,350nm,13.9s						
LZH				LR	LR		
	comp=Z,470nm,15.2s,MS4.5						
LZH	**Lanzhou**	**45.56**	**331**	*e*P	**P**	**21 31 14.0**	**+1.7**
	comp=Z,20nm,1.2s,mb4.9						
LZH				pP	pP	21 31 17.2	-2.0
LZH				sP	sP	21 31 18.6	-3.4
LZH				PP	PP	21 33 01.5	+2.0
LZH				LR	LR		
	comp=Z,470nm,15.2s,MS4.5						
LSA	**Lhasa**	**48.83**	**315**	P	**P**	**21 31 39.3**	**+1.3**
GTA	**Gaotai**	**50.14**	**330**	*e*P	**P**	**21 31 47.8**	**-0.1**
GTA				AP	pP	21 31 56.3	+1.3
GTA				XP	sP	21 32 00.1	+2.4
GTA				PP	PP	21 33 44.4	+0.3
GTA				PPP	PPP	21 34 39.9	-0.5
GTA				S	**S**	**21 38 55.8**	**-1.2**
GTA				PS	PS	21 39 08.8	+0.6
GTA				XS		21 39 12.5	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
GTA				AMB	AMB		
	comp=Z,170nm,6.1s						
GTA				LR	LR		
	comp=N,70nm,15.2s,MS4.0						
GTA				LR	LR		
	comp=E,110nm,16.3s,MS4.0						
GTA				LR	LR		
	comp=Z,130nm,15.2s,MS4.0						
GUN	**Gumba**	**51.80**	**309**	*e*P	**P**	**21 32 00.8**	**+0.1**
	comp=Z,24nm,0.8s,mb5.2						
PKI	**Pulchoki**	**52.00**	**309**	*e*P	**P**	**21 32 01.8**	**-0.4**
	comp=Z,3.6nm,0.4s,mb4.6						
KKN	**Kakani**	**52.20**	**309**	*e*P	**P**	**21 32 02.9**	**-0.8**
	comp=Z,6.7nm,0.6s,mb4.7						
DMN	**Daman**	**52.25**	**309**	*e*P	**P**	**21 32 03.5**	**-0.6**
	comp=Z,17nm,1.0s,mb4.9						
GKN	**Gorkha**	**52.80**	**309**	*e*P	**P**	**21 32 07.4**	**-0.8**
	comp=Z,15nm,0.8s,mb5.0						
KOLN	**Koldanda**	**53.51**	**308**	*e*P	**P**	**21 32 12.7**	**-0.7**
	comp=Z,25nm,0.9s,mb5.1						
HYB	**Hyderabad**	**53.92**	**294**	*i* P	**P**	**21 32 16.0**	**-0.5**
HYB	**Hyderabad**	**53.92**	**294**	*e*P	**P**	**21 32 16.0**	**-0.5**
SONM	**Songino Array**	**54.45**	**341**	P	**P**	**21 32 19.3**	**-0.7**
	comp=Z,3.3nm,0.7s,mb4.4,baz=153,slow=7.1,SNR=35						
WMQ	**Urumqi**	**59.66**	**326**	⇓*i*P	**P**	**21 32 57.4**	**+0.3**
WMQ				AP	pP	21 33 02.0	-2.3
WMQ				XP	sP	21 33 04.5	-2.4
WMQ				PCP	PcP	21 33 45.0	+1.2
WMQ				PP	PP	21 35 11.0	+0.3

WMQ				*e*S	**S**	**21 41 06.0**	**+1.5**
WMQ				SCS	ScS	21 42 43.5	+1.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,250nm,7.0s						
WMQ				LR	LR		
	comp=N,170nm,19.2s,MS4.4						
WMQ				LR	LR		
	comp=E,200nm,19.7s,MS4.4						
WMQ				LR	LR		
	comp=Z,160nm,23.0s,MS4.1						
MKAR	**Makanchi Array**	**64.50**	**326**	P	**P**	**21 33 29.1**	**-0.3**
	comp=Z,2.7nm,0.6s,mb4.5,baz=112,slow=8.1,SNR=27						
YAK	**Yakutsk**	**64.88**	**0**	*e*P	**P**	**21 33 31.5**	**-0.1**
	comp=Z,53nm,0.7s,mb5.7						
FX1	**Attu Island--F**	**66.80**	**27**	LR	LR	22 02 49.0	
	comp=Z,4.0nm,18.1s,baz=63,slow=36						
KURK	**Kurchatov**	**68.74**	**328**	*e*P	**P**	**21 33 55.6**	**-0.7**
	comp=Z,15nm,0.8s,mb5.0						
CHKZ	**Chkalovo**	**74.49**	**328**	*e*P	**P**	**21 34 30.2**	**-0.3**
	comp=Z,3.0nm,0.8s,mb4.3						
MAW	**Mawson**	**78.34**	**201**	P	**P**	**21 34 51.2**	**-0.7**
	comp=Z,6.8nm,1.0s,mb4.5,baz=83,slow=7.2,SNR=7.0						
MAW				LR	LR	22 07 33.9	
	comp=Z,80nm,19.2s,MS4.1,baz=234,slow=34						
SYO	**Syowa Base**	**87.05**	**201**	⇓P	**P**	**21 35 37.3**	**+0.5**
SYO	**Syowa Base**	**87.05**	**201**	⇓*e*P	**P**	**21 35 37.3**	**+0.5**
ILAR	**Eielson Array**	**90.12**	**25**	P	**P**	**21 35 50.6**	**-0.8**
	comp=Z,0.8nm,0.9s,mb4.0,baz=214,slow=6.9,SNR=5.7						
KMBO	**Kilima Mbogo**	**91.89**	**269**	P	**P**	**21 36 01.5**	**+0.7**
	comp=Z,0.8nm,0.6s,mb4.3,baz=70,slow=11,SNR=5.4						
KMBO	**Kilima Mbogo**	**91.89**	**269**	P	**P**	**21 36 01.5**	**+0.7**
JTS	**JuntasAbangare**	**145.34**	**76**	*e*PKP	PKPdf	21 42 32.1	-1.6

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*CSEM **13** 21:32:18.9±0.1, 38.70N×27.33E, h15^{km}, MD3.2, Error ellipse: s-maj=2.0km s-min=0.9km az=106.0*

*ISK **13** 21:32:19.0, 38.69N×27.30E, h16^{km}, MD3.2*

*ATH **13** 21:32:19.1, 38.69N×27.52E, h45^{km}, MD3.3/4*

*NEIC **13** 21:32:19.1, 38.69N×27.52E, h45^{km}, MD3.3(ATH), MD3.2(ISK), After ATH.*

ISC 13 21:32:19.6±0.5**, 38.69N**±0.03×**27.36E**±0.05**, h12**^{km}±4^{km}**, n27, σ0^{s}67**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IZM	**Izmir**	**0.30**	**195**	*i* PG	**Pg**	**21 32 25.8**	**-0.2**
IZM				*i* SG	**Sg**	**21 32 30.4**	**+0.1**
BLCB	**Balcova**	**0.40**	**220**	*i* PG	**Pg**	**21 32 27.2**	**-0.6**
BLCB				*i* SG	**Sg**	**21 32 32.8**	**-0.4**
AKS	**Akhisar**	**0.40**	**62**	*i* PG	**Pg**	**21 32 28.0**	**+0.2**
AKS				*i* SG	**Sg**	**21 32 35.3**	**+1.9**
PRK	**Paraskevi**	**1.02**	**303**	*e*P	**Pb**	**21 32 39.2**	**+0.6**
PRK				*e*S	**Sb**	**21 32 54.2**	**+2.5**
BALB	**Balikesir**	**1.03**	**23**	PG	**Pg**	**21 32 39.6**	**-0.7**
SMG	**Samos**	**1.06**	**203**	*e*P	**Pb**	**21 32 39.2**	**-0.2**
SMG				*e*S	**Sb**	**21 32 54.3**	**+1.3**
DST	**Dursunbey**	**1.34**	**47**	*e*PN	**Pn**	**21 32 44.1**	**-0.1**
MLSB	**Milas**	**1.43**	**167**	*e*PN	**Pn**	**21 32 45.2**	**-0.2**
DENT	**Denizli**	**1.61**	**125**	*e*PN	**Pn**	**21 32 48.5**	**+0.5**
BODT	**Bodrum**	**1.62**	**182**	*e*PN	**Pn**	**21 32 48.3**	**+0.1**
EDC	**Edincik**	**1.70**	**13**	*e*PN	**Pn**	**21 32 49.0**	**-0.3**
YER	**Yerkesik**	**1.71**	**155**	*e*PN	**Pn**	**21 32 49.3**	**-0.2**
BNT	**Bandirma**	**1.72**	**14**	*e*PN	**Pn**	**21 32 49.0**	**-0.6**
LPK	**Lapseki**	**1.75**	**345**	*e*PN	**Pn**	**21 32 49.3**	**-0.6**
KCT	**Karacabey**	**1.75**	**26**	*e*PN	**Pn**	**21 32 49.6**	**-0.4**
ORLT	**Orhaneli**	**1.80**	**41**	*e*PN	**Pn**	**21 32 50.7**	**0.0**
MRMT	**Marmara Adasi**	**1.92**	**5**	*e*PN	**Pn**	**21 32 51.8**	**-0.6**
DAT	**Datca**	**1.96**	**175**	*e*PN	**Pn**	**21 32 52.9**	**-0.2**
LIA	**Limnos Island**	**2.08**	**306**	*e*P	**Pn**	**21 32 55.1**	**+0.4**
MFT	**Murefte**	**2.10**	**358**	*e*PN	**Pn**	**21 32 54.2**	**-0.8**
DALT	**Dalyan (Mudla)**	**2.17**	**152**	*e*PN	**Pn**	**21 32 55.8**	**-0.2**
APE	**Apeiranthos**	**2.17**	**222**	*e*PN	**Pn**	**21 32 56.0**	**-0.1**
APE	**Apeiranthos**	**2.17**	**222**	*e*Pn	**Pn**	**21 32 56.0**	**-0.1**
YLV	**Yalova**	**2.43**	**39**	*e*PN	**Pn**	**21 32 59.6**	**-0.2**
FETY	**Fethiye**	**2.46**	**146**	*e*PN	**Pn**	**21 32 59.8**	**-0.4**
CTT	**Catalca**	**2.59**	**18**	*e*PN	**Pn**	**21 33 01.7**	**-0.3**
ESKT	**Eskisehir**	**2.84**	**72**	*e*PN	**Pn**	**21 33 06.4**	**+0.9**

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*THR **13** 21:32:45.1±0.6, 32.67N×57.59E, h16^{km}±6^{km}, ML4.3*

*CSEM **13** 21:32:46.0±0.1, 32.66N×57.50E, h16^{km}, ML4.5, Error ellipse: s-maj=2.9km s-min=1.9km az=109.0*

*TEH **13** 21:32:47.8, 32.64N×57.49E, h10^{km}, Mn4.5*

*NEIC **13** 21:32:47.8, 32.64N×57.49E, h10^{km}, ML4.5(TEH), After TEH.*

ISC 13 21:32:46.7±0.6**, 32.69N**±0.05×**57.40E**±0.06**, h16**^{km}**, n28, σ1^{s}08**/33**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	**Bafgh**	**1.90**	**235**	Pn	**Pn**	**21 33 20.3**	**+1.4**
ICHK	**Chekchek**	**2.57**	**261**	Pn	**Pn**	**21 33 29.4**	**+0.9**
IMEH	**Mehriz**	**2.70**	**242**	Pn	**Pn**	**21 33 31.6**	**+1.3**
KRBR	**Kerman**	**2.75**	**192**	*e*PN	**Pn**	**21 33 31.6**	**+0.5**
KRBR				*e*Sg	**Sn**	**21 34 11.9**	**+7.6**
KRBR				AML	AML	21 34 18.1	
	comp=N,2μm,0.5s						
KRBR	**Kerman**	**2.75**	**192**	*e*Pn	**Pn**	**21 33 31.5**	**+0.4**
	SNR=52						
KRBR				*e*Sg	**Sn**	**21 34 11.9**	**+7.6**
	SNR=90						
IMOG	**Moghan**	**3.77**	**25**	Pn	**Pn**	**21 33 45.8**	**+0.3**
NASN	**Na'in**	**3.88**	**273**	*e*PN	**Pn**	**21 33 48.1**	**+1.1**
NASN				*e*SG	**Sn**	**21 34 50.5**	**+18**
NASN				AML	AML	21 34 51.8	
	comp=N,627nm,0.4s						
IPAY	**Payeh**	**3.98**	**19**	Pn	**Pn**	**21 33 48.3**	**-0.2**
MHI	**Mashhad**	**4.00**	**25**	Pn	**Pn**	**21 33 49.0**	**+0.3**
IKRD	**Kardeh**	**4.18**	**12**	Pn	**Pn**	**21 33 54.7**	**+3.4**
ZHSF	**Zahedan**	**4.21**	**136**	*e*PN	**Pn**	**21 33 49.0**	**-2.8**
ZHSF				*e*Pg	**Pn**	**21 33 58.7**	**+6.9**
IMYA	**Miamay**	**4.27**	**31**	Pn	**Pn**	**21 33 51.7**	**-1.0**
IZEF	**Zefreh**	**4.28**	**274**	Pn	**Pn**	**21 33 51.2**	**-1.6**
IGAR	**Garneh**	**4.42**	**266**	Pn	**Pn**	**21 33 53.5**	**-1.3**
ISFB	**Sefidab**	**4.62**	**292**	Pn	**Pn**	**21 33 57.4**	**-0.3**
ISFB				Lg		21 35 14.2	
IFIR	**Firoozkooh**	**4.85**	**309**	Pn	**Pn**	**21 34 01.1**	**+0.2**
IFIR				Lg		21 35 21.5	
IKLH	**Kalahroud**	**4.94**	**279**	Pn	**Pn**	**21 34 00.9**	**-1.2**
IVRN	**Varamin**	**5.25**	**298**	Pn	**Pn**	**21 34 07.3**	**+0.7**
IVRN				Lg		21 35 34.0	
IDMV	**Damavand**	**5.31**	**304**	Pn	**Pn**	**21 34 07.7**	**+0.4**
IDMV				Sn	**Sn**	**21 35 06.3**	**-2.5**
DAMV	**Damavand**	**5.38**	**305**	*e*PN	**Pn**	**21 34 08.9**	**+0.6**
BNDS	**Bandar-Abbas**	**5.38**	**192**	*e*PN	**Pn**	**21 34 07.5**	**-0.9**
BNDS				AML	AML	21 35 46.2	
	comp=N,82nm,0.3s						
BNDS	**Bandar-Abbas**	**5.38**	**192**	*e*Pn	**Pn**	**21 34 07.4**	**-0.9**
	SNR=52						
IPIR	**Pirpir**	**5.49**	**272**	Pn	**Pn**	**21 34 07.2**	**-2.7**
IAFJ	**Afjeh**	**5.67**	**305**	Pn	**Pn**	**21 34 13.2**	**+0.7**
IAFJ				Lg		21 35 47.1	
IQOM	**Qom**	**5.70**	**294**	Pn	**Pn**	**21 34 12.6**	**-0.2**
IQOM				Lg		21 35 48.3	
GHIR	**Ghir-Karzin**	**5.81**	**222**	*e*PN	**Pn**	**21 34 14.1**	**-0.3**
CHTH	**Charan**	**6.11**	**303**	*e*PN	**Pn**	**21 34 19.1**	**+0.5**
ASAO	**Ashtian**	**6.43**	**289**	*e*PN	**Pn**	**21 34 24.1**	**+0.9**

WEL 13 22:20:42.5±0.4**, 46.09S×166.84E, h108**^{km}±2^{km}**, ML4.0**/10**, 2D, Error ellipse: s-maj=3.4km s-min=2.6km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	**Deep Cove**	**0.65**	**20**	PN	P	22 21 00.2	-0.1
WHZ	**Wether Hill Ro**	**0.80**	**76**	PN	P	22 21 01.4	-0.4
WHZ				SN	S	22 21 15.4	-0.8
MLZ	**Mavora Lakes**	**1.19**	**52**	PN	P	22 21 05.2	-0.8
MLZ				SN	S	22 21 21.9	-1.9
MSZ	**Milford Sound**	**1.61**	**29**	PN	P	22 21 10.2	-0.8
MSZ				SN	S	22 21 30.7	-1.7
EAZ	**Earnscleugh**	**1.93**	**64**	⇓PN	P	22 21 14.2	-0.8
TUZ	**Tuapeka**	**1.95**	**87**	⇓PN	P	22 21 14.2	-1.0
WKZ	**Wanaka**	**1.98**	**51**	PN	P	22 21 15.4	-0.3
JCZ	**Jackson Bay**	**2.43**	**35**	PN	P	22 21 20.8	-0.9
JCZ				SN	S	22 21 48.0	-3.1
ODZ	**Otahua Downs**	**2.87**	**70**	PN	P	22 21 24.9	-2.8
ODZ				SN	S	22 21 57.3	-4.4
FOZ	**Fox Glacier**	**3.24**	**40**	PN	P	22 21 30.9	-1.7
RPZ	**Rata Peaks**	**3.82**	**53**	PN	P	22 21 36.6	-4.0
RPZ				SN	S	22 22 19.8	-5.0
LTZ	**Lake Taylor**	**5.10**	**52**	*e*PN	P	22 21 54.0	-3.9
DSZ	**Denniston Nort**	**5.63**	**41**	PN	P	22 22 00.8	-4.2
THZ	**Tophouse**	**6.15**	**47**	PN	P	22 22 07.9	-4.3
QRZ	**Quartz Range**	**6.69**	**40**	*e*PN	P	22 22 15.8	-3.9

JMA 13 23:03:17.4±0.6**, 42.36N×137.77E, h290**^{km}±4^{km}**, M3.5, Eastern Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSM	**Okushiri--Mats**	**1.30**	**102**	P	P	23 03 58.1	-0.5
JSH	**Shimam**	**1.71**	**80**	P	P	23 04 01.2	-0.1
JSK	**Shakotan**	**2.22**	**63**	P	P	23 04 05.3	-0.2
JKB	**Kayabe**	**2.47**	**100**	P	P	23 04 07.7	0.0
JOT	**Ohata**	**2.64**	**111**	P	P	23 04 09.1	-0.2
JHR	**Hokuryu**	**3.21**	**63**	P	P	23 04 15.3	+0.3
JANG	**Nango**	**3.45**	**124**	P	P	23 04 16.5	-1.0
JFR	**Furan**	**3.64**	**76**	P	P	23 04 19.1	-0.5
JFR				*e*S	S	23 05 07.1	-1.1
JNBK	**Urakawa-nobuka**	**3.70**	**90**	P	P	23 04 19.6	-0.6
JNBK				*e*S	S	23 05 09.9	+0.7
JOM	**Ohasama**	**3.93**	**136**	P	P	23 04 23.5	+0.7
JKK2	**Kamakawa 2**	**3.95**	**66**	P	P	23 04 22.9	-0.1
JKK2				S	S	23 05 13.5	-0.6
JCH	**Churui**	**4.14**	**85**	P	P	23 04 24.0	-1.2
JCH				*e*S	S	23 05 16.3	-1.8
JWK2	**Keihoku**	**4.20**	**44**	P	P	23 04 26.5	+0.7
JMK	**Ichinoseki**	**4.30**	**141**	P	P	23 04 26.0	-0.9
JTKR	**Abashiri--Toko**	**4.77**	**68**	P	P	23 04 31.9	-0.4
NEM2	**Nemuro 2**	**5.95**	**78**	*e*S	S	23 05 50.9	-5.2

WEL 13 23:06:55.8±0.3**, 38.45S×175.87E, h171**^{km}±2^{km}**, ML3.5**/14**, Error ellipse: s-maj=2.9km s-min=2.5km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUVZ	**Tukino**	**0.83**	**192**	PN	P	23 07 21.6	0.0
FWVZ	**Far West T-bar**	**0.84**	**197**	PN	P	23 07 21.4	-0.2
BKZ	**Black Stump Fm**	**0.86**	**146**	PN	P	23 07 21.8	+0.1
BKZ				SN	S	23 07 41.4	-0.4
WNVZ	**Wahianoa**	**0.90**	**194**	PN	P	23 07 21.9	0.0
MOVZ	**Moawhango**	**0.96**	**185**	PN	P	23 07 22.0	-0.4
URZ	**Urewera**	**0.99**	**79**	PN	P	23 07 22.3	-0.3
URZ				SN	S	23 07 42.8	-0.6
MWZ	**Matawai**	**1.31**	**85**	PN	P	23 07 25.2	-0.3
MWZ				SN	S	23 07 47.7	-0.7
KNZ	**Kokohu**	**1.52**	**112**	PN	P	23 07 27.5	0.0
TSZ	**Takapari Road**	**1.61**	**178**	PN	P	23 07 27.6	-0.8
TSZ				SN	S	23 07 51.6	-2.0
PUZ	**Puketiti**	**1.92**	**79**	SN	S	23 07 58.2	-1.0
MXZ	**Matakaoa Point**	**2.12**	**66**	PN	P	23 07 33.3	-0.6
MRZ	**Mangatainoka R**	**2.22**	**186**	PN	P	23 07 33.0	-2.1
MRZ				SN	S	23 08 01.9	-3.5
BFZ	**Birch Farm**	**2.24**	**173**	PN	P	23 07 33.8	-1.6
KIW	**Kapiti Island**	**2.52**	**197**	PN	P	23 07 35.8	-2.9
MTW	**Mount Morrison**	**2.72**	**186**	SN	S	23 08 11.0	-5.0
CAW	**Cannon Point**	**2.72**	**193**	PN	P	23 07 38.2	-3.0
DUWZ	**D'Urville Isla**	**2.79**	**212**	PN	P	23 07 38.4	-3.6
MRW	**Makara Radio**	**2.92**	**198**	*e*PN	P	23 07 40.1	-3.5
MSWZ	**Moikau Station**	**3.00**	**189**	SN	S	23 08 16.2	-5.9
TCW	**Tory Channel**	**3.02**	**204**	PN	P	23 07 41.3	-3.6
TUWZ	**Tuamarina**	**3.32**	**206**	PN	P	23 07 44.5	-4.2
NNZ	**Nelson**	**3.36**	**214**	*e*PN	P	23 07 44.9	-4.2
THZ	**Tophouse**	**4.01**	**214**	*e*PN	P	23 07 53.1	-4.4
THZ				SN	S	23 08 39.4	-5.7
LTZ	**Lake Taylor**	**5.12**	**211**	*e*PN	P	23 08 06.2	-5.7
MQZ	**McQueen's Vall**	**5.79**	**204**	SN	S	23 09 15.2	-11

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*LDG **13** 23:16:30.9±0.2, 44.49N×10.78E, h10^{km}, Ml2.4/15, Error ellipse: s-maj=5.1km s-min=2.9km az=98.0*

*ROM **13** 23:16:30.8±0.2, 44.48N×10.47E, h24^{km}±3^{km}, Md2.5/9, Ml1.9/6, Error ellipse: s-maj=5.1km s-min=3.3km az=160.0*

ISC 13 23:16:32.1±0.3**, 44.47N**±0.03×**10.44E**±0.04**, h21**^{km}±4^{km}**, n41, σ1^{s}23**/61**, 8C-4D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERBM	**Eremo**	**0.05**	**200**	⇓*i*Pg	**Pb**	**23 16 35.7**	**-0.2**
ERBM				Sg	**Sb**	**23 16 39.7**	**+1.2**
	253nm,0.2s						
GSCL	**Gusciola**	**0.16**	**137**	⇓*i*Pg	**Pb**	**23 16 35.9**	**-1.0**
	78nm,0.2s						
VLC	**Villacollemand**	**0.31**	**187**	Pg	**Pb**	**23 16 38.2**	**-0.8**
VLC				Sg	**Sb**	**23 16 45.3**	**+1.6**
	99nm,0.3s						
ZCCA	**Zocca**	**0.40**	**107**	Pg	**Pb**	**23 16 40.0**	**-0.6**
	6.0nm,0.4s						
BDI	**Bagni Di Lucca**	**0.42**	**164**	Pg	**Pb**	**23 16 39.7**	**-1.1**
BDI				Sg	**Sb**	**23 16 47.0**	**+0.3**
	101nm,0.3s						
PZZT	**Monte Pizzetto**	**0.45**	**138**	Pg	**Pb**	**23 16 40.1**	**-1.3**
PZZT				Sg	**Sb**	**23 16 48.1**	**+0.4**
	127nm,0.2s						
FNVD	**Fontana Vidola**	**0.58**	**121**	Pg	**Pb**	**23 16 42.3**	**-1.1**
	51nm,0.4s						
PII	**Pisa**	**0.75**	**175**	Pg	**Pb**	**23 16 46.4**	**+0.1**
	52nm,0.3s						
SEI	**Scarperia**	**0.78**	**122**	Pg	**Pb**	**23 16 46.6**	**-0.3**
	55nm,0.3s						
PGD	**Poggio Sodo**	**1.10**	**122**	Pg	**Pb**	**23 16 53.1**	**+0.8**
	5.0nm,0.4s						
SAL	**Salo**	**1.14**	**3**	⇑*i*Pg	**Pn**	**23 16 53.3**	**+0.3**
	54nm,0.4s						
SALO	**Salr**	**1.15**	**3**	⇑*i*Pg	**Pn**	**23 16 53.3**	**+0.1**
SALO				Sg	**Sb**	**23 17 10.6**	**+2.9**
	83nm,0.6s						
SFI	**Santa Sofia**	**1.16**	**118**	Pg	**Pn**	**23 16 54.6**	**+1.3**
	5.0nm,0.4s						
CSNT	**Castellina Chi**	**1.17**	**148**	Pg	**Pn**	**23 16 54.2**	**+0.8**
	9.0nm,0.4s						
CTI	**Castel Tesino**	**1.80**	**28**	Pg	**Pn**	**23 17 01.1**	**-1.3**
PGF	**Pioggiola**	**2.19**	**209**	*e*Pn	**Pn**	**23 17 07.8**	**-0.1**
PGF				*e*Sn	**Sn**	**23 17 34.0**	**-0.6**
	0.9nm,0.2s						
SBF	**Sospel**	**2.24**	**255**	*e*Pn	**Pn**	**23 17 09.9**	**+1.1**
SBF				*e*Sn	**Sn**	**23 17 38.0**	**+1.9**
	6.0nm,0.3s						
MBDF	**Montbardon**	**2.63**	**277**	*e*Pn	**Pn**	**23 17 13.2**	**-1.1**
MBDF				*e*Sn	**Sn**	**23 17 48.4**	**+2.4**
	1.1nm,0.3s						
SQTA	**Sankt Quirin**	**2.81**	**11**	⇓*e*Pn	**Pn**	**23 17 17.0**	**+0.2**
	comp=Z,2.2nm,0.1s						
SQTA	**Sankt Quirin**	**2.81**	**11**	⇑*i*Sn	**Sn**	**23 17 53.9**	**+3.5**
	comp=Z,1.5nm,0.2s						
LPG	**La Plagne**	**2.81**	**293**	*e*Pn	**Pn**	**23 17 17.9**	**+1.0**
LPG				*e*Sn	**Sn**	**23 17 50.7**	**+0.2**
	0.8nm,0.2s						
LPL	**La Plagne**	**2.83**	**293**	*e*Pn	**Pn**	**23 17 17.8**	**+0.6**
LPL				*e*Sn	**Sn**	**23 17 51.5**	**+0.5**
	2.4nm,0.4s						
DAVA	**Damuels**	**2.85**	**352**	⇑*i*Pn	**Pn**	**23 17 17.9**	**+0.5**
	comp=Z,1.4nm,0.1s						
DAVA	**Damuels**	**2.85**	**352**	⇓*i*Sn	**Sn**	**23 17 54.6**	**+3.2**
	comp=Z,0.6nm,0.2s						
FRF	**La Foret Royal**	**2.88**	**253**	*e*Pn	**Pn**	**23 17 17.6**	**-0.3**
FRF				*e*Sn	**Sn**	**23 17 53.4**	**+1.1**
	3.2nm,0.2s						
MOTA	**Moosalm**	**2.92**	**9**	⇑*e*Pn	**Pn**	**23 17 19.1**	**+0.7**
	comp=Z,1.4nm,0.2s						
MOTA	**Moosalm**	**2.92**	**9**	⇑*i*Sn	**Sn**	**23 17 56.0**	**+2.8**
	comp=Z,0.8nm,0.3s						
WTTA	**Wattenberg**	**2.92**	**16**	⇑*e*Pn	**Pn**	**23 17 19.4**	**+0.9**
	comp=Z,4.7nm,0.3s						
WTTA	**Wattenberg**	**2.92**	**16**	⇑*i*Sn	**Sn**	**23 17 57.2**	**+3.9**
	comp=Z,1.7nm,0.3s						
LMR	**La Mourre**	**3.06**	**250**	*e*Pn	**Pn**	**23 17 19.8**	**-0.6**
LMR				*e*Sn	**Sn**	**23 17 56.6**	**-0.1**
	3.4nm,0.3s						
ORIF	**Oris-en-Rattie**	**3.28**	**279**	*e*Pn	**Pn**	**23 17 24.0**	**+0.4**
ORIF				*e*Sn	**Sn**	**23 18 03.8**	**+1.4**
	2.5nm,0.4s						
SMRF	**Simiane la Rot**	**3.53**	**264**	*e*Pn	**Pn**	**23 17 27.9**	**+0.8**
CABF	**La Chapelle**	**3.73**	**307**	*e*Pn	**Pn**	**23 17 29.9**	**-0.1**
CABF				*e*Sn	**Sn**	**23 18 12.9**	**-0.9**
	1.2nm,0.3s						
VIVF	**Saint-Julien-l**	**4.13**	**277**	*e*Pn	**Pn**	**23 17 35.4**	**-0.2**
VIVF				*e*Sn	**Sn**	**23 18 23.7**	**-0.2**
	0.7nm,0.2s						
HINF	**Hinteralfeld**	**4.17**	**325**	*e*Pn	**Pn**	**23 17 34.5**	**-1.8**
HINF				*e*Sn	**Sn**	**23 18 20.4**	**-4.6**
	1.0nm,0.2s						
CDF	**Champ du Feu**	**4.51**	**332**	*e*Pn	**Pn**	**23 17 38.4**	**-2.6**
CDF				*e*Sn	**Sn**	**23 18 28.9**	**-4.6**
	0.9nm,0.2s						
HAU	**Haudompre**	**4.54**	**323**	*e*Pn	**Pn**	**23 17 39.5**	**-1.9**
HAU				*e*Sn	**Sn**	**23 18 30.6**	**-3.6**
	2.4nm,0.2s						
LASF	**Ste Croix**	**4.74**	**268**	*e*Pn	**Pn**	**23 17 44.2**	**-0.1**
SMF	**Signal de Mont**	**5.12**	**298**	*e*Pn	**Pn**	**23 17 48.0**	**-1.6**
SMF				*e*Sn	**Sn**	**23 18 45.9**	**-2.9**
	0.4nm,0.2s						
LOR	**Lormes**	**5.38**	**304**	*e*Pn	**Pn**	**23 17 51.7**	**-1.6**
LOR				*e*Sn	**Sn**	**23 18 52.3**	**-3.1**
	2.5nm,0.3s						
MEZF	**Maizieres J'vi**	**5.49**	**319**	*e*Pn	**Pn**	**23 17 52.2**	**-2.6**

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*MOS **13** 23:18:31.7±1.0, 18.59S×69.32W, h93^{km}, mb5.2/37, Error ellipse: s-maj=10.2km s-min=6.4km az=98.1*

*BJI **13** 23:18:32.2, 18.70S×69.30W, h85^{km}, mB5.5, Ms5.6, Msz5.2*

*HRVD **13** 23:18:32.2±0.5, 18.84S×69.67W, h112^{km}±7^{km}, MW4.9/44, Centroid moment Tensor Solution. LP body waves: s6,c7; Mantle waves: s44,c63; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.86±.30; M$_{\theta\theta}$-0.65±.26; M$_{\phi\phi}$-0.21±.26; M$_{r\theta}$1.88±.12; M$_{\theta\phi}$1.47±.33; M$_{\phi r}$-0.77±.18; Best double couple: M$_{0}$2.54×10^{16} NP1:ϕ_s349°,δ27°,λ148°. NP2: ϕ_s108°,δ76°,λ67°. Principal axes: T 2.153, Plg53°, Azm350°; N .775, Plg23°, Azm113°; P -2.927, Plg28°, Azm216°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **13** 23:18:32.2±0.6, 18.67S×69.34W, h85^{km}±5^{km}, mb5.1/95 Error ellipse: s-maj=5.4km s-min=3.7km az=49.0*

NEIC Felt [II] at Arica and Putre. Also felt [II] at Arequipa, Peru.

*LDG **13** 23:18:33.8±0.1, 18.33S×69.06W, h100^{km}, Mb5.0/22, Ms3.4/2, Error ellipse: s-maj=8.3km s-min=4.0km az=50.0*

*IDC **13** 23:18:34.1±0.6, 18.71S×69.37W, h102^{km}±4^{km}, mb4.6/25, mb1 4.7/26, mb1mx4.7/27, mbtmp4.9/26, MS3.5/10, Ms1 3.5/10, ms1mx3.4/28, Error ellipse: s-maj=16.9km s-min=11.7km az=57.0*

ISC 13 23:18:32.4±0.2**, 18.65S**±0.04×**69.40W**±0.04**, h102**^{km}**, h102**^{km}±1.6^{km}**:pP-P, n291, σ1^{s}02**/259**, mb5.0**/122**, 11C-5D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**2.65**	**27**	P	**P**	**23 19 19.9**	**+5.5**
	120nm,0.3s,baz=227,slow=8.2,SNR=2648						
LPAZ	**La Paz**	**2.65**	**27**	⇓*i*P	**P**	**23 19 19.9**	**+5.5**
ARE	**Arequipa**	**2.95**	**317**	⇑*i*P	**P**	**23 19 19.0**	**+0.4**
ARE				S	**S**	**23 20 00.0**	**+6.7**
SPCH	**San Pedro de A**	**4.38**	**165**	*e*P	**P**	**23 19 38.2**	**+0.1**
CEN1	**Los Morros**	**4.77**	**189**	*e*P	**P**	**23 19 41.6**	**-1.8**
CEN1				*i* S	**S**	**23 20 32.5**	**-5.5**
ANCH	**Antofagasta**	**5.09**	**190**	*e*P	**P**	**23 19 43.2**	**-4.6**
ANCH				*i* S	**S**	**23 20 35.7**	**-10**
ANCH	**Antofagasta**	**5.09**	**190**	*e*P	**P**	**23 19 43.5**	**-4.2**
ANCH				*i* S	**S**	**23 20 56.5**	**+11**
CPN1	**Cerro Paranal**	**6.02**	**189**	*e*P	**P**	**23 19 55.5**	**-4.8**
CPN1				*i* S	**S**	**23 20 59.0**	**-9.5**
SIV	**San Ignacio**	**8.38**	**73**	P	**P**	**23 20 32.6**	**-0.1**
	22nm,0.3s,baz=275,slow=9.3,SNR=248						
NNA	**Nana**	**9.77**	**312**	*e*Pn	**P**	**23 20 49.0**	**-2.5**
	55nm,0.7s						
NNA				*e*Sn	**S**	**23 22 35.5**	**-4.5**
SAML	**Samuel**	**11.38**	**33**	⇑*i*Pn	**P**	**23 21 12.0**	**-1.0**
	0.1nm,1.0s						
SAML				*e*Sn	**S**	**23 23 10.4**	**-8.1**
CFAA	**Coronel Fontan**	**12.94**	**176**	P	**P**	**23 21 27.6**	**-6.0**
	0.5nm,0.3s,baz=349,slow=14,SNR=37						
CPUP	**Villa Florida**	**13.52**	**127**	*e*Pn	**P**	**23 21 39.5**	**-1.6**
	42nm,0.8s						
CPUP	**Villa Florida**	**13.52**	**127**	*e*P	**P**	**23 21 39.5**	**-1.6**
CPUP				pmax	pmax		
	comp=Z,42nm,0.8s						
MDZ	**Mendoza**	**14.18**	**178**	*e*P	**P**	**23 21 50.8**	**+1.2**
TRQA	**Tornquist**	**20.39**	**163**	*e*P	**P**	**23 23 01.5**	**-1.7**
	comp=Z,76nm,0.8s						
BDFB	**Brasilia**	**20.65**	**85**	P	**P**	**23 23 05.1**	**-0.9**
	comp=Z,21nm,0.4s,baz=269,slow=9.9,SNR=52						
BDFB				LR	LR	23 32 49.7	
	comp=Z,52nm,19.8s,baz=265,slow=42						
BAO	**Brasilia Array**	**20.68**	**85**	P	**P**	**23 23 06.0**	**-0.2**
BAO				*i*		23 23 09.0	
PLCA	**Paso Flores**	**22.03**	**182**	P	**P**	**23 23 18.6**	**-0.9**
	comp=Z,40nm,0.8s,mb4.8,baz=357,slow=11,SNR=63						
PLCA				LR	LR	23 32 51.9	
	comp=Z,160nm,20.4s,baz=7.5,slow=39						
PLCA	**Paso Flores**	**22.03**	**182**	*e*P	**P**	**23 23 18.4**	**-1.1**
	comp=Z,59nm,0.9s,mb4.9						
PLCA				*e*		23 23 38.5	
PLCA	**Paso Flores**	**22.03**	**182**	*e*P	**P**	**23 23 18.4**	**-1.1**
PLCA				*e*		23 23 38.5	
PLCA				pmax	pmax		
	comp=Z,59nm,0.9s						
ROSC	**El Rosal**	**23.86**	**348**	P	**P**	**23 23 38.7**	**+1.3**
	comp=Z,28nm,0.5s,mb4.8,baz=262,slow=1.4,SNR=14						
SDV	**Santo Domingo**	**27.39**	**357**	P	**P**	**23 24 08.8**	**-1.7**
	comp=Z,21nm,0.4s,mb5.0,baz=208,slow=8.2,SNR=46						
SDV				LR	LR	23 36 43.1	
	comp=Z,43nm,21.1s,baz=350,slow=40						
JTS	**JuntasAbangare**	**32.60**	**331**	P	**P**	**23 24 57.7**	**+1.2**
	comp=Z,14nm,0.9s,mb4.8,baz=142,slow=5.9,SNR=8.5						
JTS	**JuntasAbangare**	**32.60**	**331**	*e*P	**P**	**23 24 57.6**	**+1.0**
	comp=Z,29nm,1.1s,mb5.0						
JTS	**JuntasAbangare**	**32.60**	**331**	*c i*P	**P**	**23 24 57.0**	**+0.4**
USHA	**Ushuaia**	**36.12**	**179**	P	**P**	**23 25 24.8**	**-1.5**
	comp=Z,7.6nm,0.6s,mb4.8,baz=352,slow=7.0,SNR=7.6						
SJG	**San Juan**	**36.67**	**5**	P	**P**	**23 25 29.1**	**-2.1**
	comp=Z,52nm,0.5s,mb5.7,baz=177,slow=4.8,SNR=20						
SJG				LR	LR	23 42 13.7	
	comp=Z,49nm,21.6s,baz=260,slow=39						
SJG	**San Juan**	**36.67**	**5**	*e*P	**P**	**23 25 29.0**	**-2.3**
	comp=Z,95nm,0.9s,mb5.7						
SJG	**San Juan**	**36.67**	**5**	*e*P	**P**	**23 25 29.0**	**-2.3**
SJG				pmax	pmax		
	comp=Z,95nm,0.9s						
NHSC	**New Hope**	**52.49**	**349**	*e*P	**P**	**23 27 37.0**	**-0.2**
	comp=Z,91nm,1.0s,mb5.8						
GOGA	**Godfrey**	**53.48**	**345**	*e*P	**P**	**23 27 43.4**	**-1.3**
	comp=Z,17nm,0.6s,mb5.2						
GOGA	**Godfrey**	**53.48**	**345**	*e*P	**P**	**23 27 43.4**	**-1.3**
GOGA				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2						
JSC	**Jenkinsville**	**53.84**	**348**	*e*P	**P**	**23 27 46.5**	**-0.7**
LRAL	**Lakeview Retre**	**54.08**	**342**	*e*P	**P**	**23 27 47.0**	**-2.0**
	comp=Z,19nm,0.6s,mb5.3						
NATX	**Nacogdoches**	**55.67**	**334**	*e*P	**P**	**23 28 00.4**	**-0.2**
	comp=Z,26nm,0.6s,mb5.4						
CPCT	**Cooper Cave**	**55.68**	**345**	*e*P	**P**	**23 27 59.4**	**-1.2**
SWET	**Sewanee**	**55.82**	**344**	*e*P	**P**	**23 27 59.3**	**-2.3**
OXF	**Oxford**	**56.19**	**340**	*e*P	**P**	**23 28 02.1**	**-2.2**
	comp=Z,70nm,1.0s,mb5.7						
OXF	**Oxford**	**56.19**	**340**	*e*P	**P**	**23 28 02.1**	**-2.2**
OXF				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.7						
TZTN	**Tazewell**	**56.50**	**346**	*e*P	**P**	**23 28 05.0**	**-1.4**
BLA	**Blacksburg**	**56.52**	**349**	*e*P	**P**	**23 28 06.0**	**-0.5**
	comp=Z,41nm,0.9s,mb5.5						
BLA	**Blacksburg**	**56.52**	**349**	*e*P	**P**	**23 28 06.1**	**-0.5**
BLA				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.5						
ELN	**Prospectdale**	**56.60**	**349**	*e*P	**P**	**23 28 07.0**	**-0.2**
JCT	**Junction City**	**56.94**	**329**	*e*P	**P**	**23 28 08.8**	**-0.8**
	comp=Z,23nm,0.8s,mb5.3						
JCT	**Junction City**	**56.94**	**329**	*e*P	**P**	**23 28 08.8**	**-0.8**
JCT				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.3						
FWV	**Forest Hill**	**56.95**	**349**	*e*P	**P**	**23 28 08.9**	**-0.7**
CBN	**Corbin**	**57.05**	**353**	*e*P	**P**	**23 28 09.1**	**-1.1**
	comp=Z,29nm,0.5s,mb5.6						
WVT	**Waverly**	**57.21**	**342**	*e*P	**P**	**23 28 09.4**	**-2.0**
	comp=Z,45nm,0.6s,mb5.7						
WVT	**Waverly**	**57.21**	**342**	*e*P	**P**	**23 28 09.4**	**-2.0**
WVT				pmax	pmax		
	comp=Z,45nm,0.6s,mb5.7						
UALR	**University of**	**57.44**	**338**	*e*P	**P**	**23 28 11.4**	**-1.6**
	comp=Z,12nm,0.6s,mb5.1						
TXAR	**Lajitas Array**	**58.05**	**325**	P	**P**	**23 28 16.8**	**-0.6**
	comp=Z,4.3nm,0.7s,mb4.6,baz=150,slow=8.3,SNR=52						

PARMO	**Parma**	58.28	341	*e*P	P	23 28 18.1	-0.8
MVL	**Millersville**	58.70	354	*e*P	P	23 28 20.5	-1.3
WCI	**Wyandotte Cave**	58.76	344	*e*P	P	23 28 20.3	-1.9
	comp=Z,34nm,0.5s,mb5.6						
WCI	**Wyandotte Cave**	58.76	344	*e*P	P	23 28 20.3	-1.9
WCI				pmax	pmax		
	comp=Z,34nm,0.5s,mb5.6						
MCWV	**Mont Chateau**	58.82	351	*e*P	P	23 28 22.0	-0.6
	comp=Z,63nm,0.9s,mb5.6						
SIUC	**Southern Illin**	59.09	342	*e*P	P	23 28 23.2	-1.2
	comp=Z,110nm,0.7s,mb6.0						
FVM	**French Village**	59.70	341	*e*P	P	23 28 27.2	-1.5
	comp=Z,52nm,0.5s,mb5.8						
FVM	**French Village**	59.70	341	*e*P	P	23 28 27.2	-1.5
FVM				pmax	pmax		
	comp=Z,53nm,0.5s,mb5.8						
ACSO	**Alum Creek Sta**	59.93	348	*e*P	P	23 28 28.6	-1.6
	comp=Z,61nm,1.1s,mb5.5						
WMOK	**Wichita Mounta**	59.99	332	*e*P	P	23 28 29.1	-1.6
	comp=Z,12nm,0.8s,mb5.0						
WMOK				*e*PcP	PcP	23 29 15.3	-0.2
WMOK	**Wichita Mounta**	59.99	332	*e*P	P	23 28 29.1	-1.6
WMOK				*e*		23 29 15.3	
WMOK				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
CCM	**Cathedral Cave**	60.03	340	*e*P	P	23 28 29.1	-1.8
	comp=Z,12nm,0.6s,mb5.1						
CCM				*e*PcP	PcP	23 29 15.6	0.0
CCM	**Cathedral Cave**	60.03	340	*e*P	P	23 28 29.1	-1.8
CCM				*e*		23 29 15.6	
CCM				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.1						
CLNB	**Carlsbad**	60.44	327	*e*P	P	23 28 32.9	-0.9
GDL2	**Guadalupe Moun**	60.65	326	*e*P	P	23 28 34.8	-0.5
MNTX	**Cornudas Mount**	60.81	325	*e*P	P	23 28 34.1	-2.2
	comp=Z,20nm,1.0s,mb5.1						
HRV	**Harvard--Oak R**	60.88	358	*e*P	P	23 28 35.9	-0.8
	comp=Z,58nm,0.9s,mb5.6						
HRV	**Harvard--Oak R**	60.88	358	*e*P	P	23 28 35.9	-0.8
HRV				pmax	pmax		
	comp=Z,58nm,0.9s,mb5.6						
CPRX	**Cap Rock**	61.04	327	*e*P	P	23 28 37.0	-0.9
AMTX	**Amarillo**	61.44	330	*e*P	P	23 28 39.0	-1.6
	comp=Z,7.1nm,0.5s,mb5.0						
NCB	**Newcomb**	62.47	356	*e*P	P	23 28 46.4	-0.9
	comp=Z,18nm,1.0s,mb5.0						
MIV	**Mineville/With**	62.53	357	*e*P	P	23 28 46.8	-0.9
KSU1	**Kansas State U**	62.84	336	*e*P	P	23 28 48.5	-1.3
VNA3	**Neumayer Olymp**	62.91	162	⇑*i*	Px	23 29 14.7	
VNA3	**Neumayer Olymp**	62.91	162	⇓*i*P	P	23 28 49.5	-0.4
VNA3				⇑*i*P	pP	23 29 14.7	-0.6
VNA1	**Neumayer--Stat**	63.11	161	⇑*i*	Px	23 29 16.6	
VNA1	**Neumayer--Stat**	63.11	161	⇓*i*P	P	23 28 51.1	-0.1
VNA1				⇑*i*P	pP	23 29 16.6	0.0
FRNY	**Flat Rock**	63.29	357	*e*P	P	23 28 52.1	-0.7
BNM	**Barren Site**	63.36	326	*e*P	P	23 28 53.3	0.0
VNA2	**Neumayer--Watz**	63.48	161	⇑*i*	pP	23 29 09.9	-9.2
VNA2	**Neumayer--Watz**	63.48	161	⇑*i*	Px	23 29 18.5	
VNA2	**Neumayer--Watz**	63.48	161	⇓*i*P	P	23 28 53.3	-0.3
VNA2				⇑*i*P		23 29 09.9	
VNA2				⇑*i*P	pP	23 29 18.5	-0.6
LPM	**Los Pinos Moun**	63.48	326	*e*P	P	23 28 54.2	+0.1
LENM	**Lemitar**	63.55	326	*e*P	P	23 28 54.6	0.0
SADO	**Sadowa**	63.74	352	LR	LR	23 57 50.9	
	comp=Z,61nm,19.6s,baz=180,slow=37						
LAZ	**Ladron**	63.82	326	*e*P	P	23 28 56.5	+0.1
CBKS	**Cedar Bluff**	63.84	334	*e*P	P	23 28 55.2	-1.2
	comp=Z,48nm,0.9s,mb5.3						
CBKS	**Cedar Bluff**	63.84	334	*e*P	P	23 28 55.2	-1.2
CBKS				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.3						
ANMO	**Albuquerque**	63.88	327	P	P	23 28 56.8	+0.1
	comp=Z,6.0nm,0.8s,mb4.5,baz=139,slow=7.0,SNR=27						
ANMO	**Albuquerque**	63.88	327	*e*P	P	23 28 56.6	-0.2
	comp=Z,9.8nm,1.0s,mb4.6						
ANMO	**Albuquerque**	63.88	327	*e*P	P	23 28 56.9	+0.1
SNAA	**Sanae**	65.11	161	*e*P	P	23 29 03.5	-0.6
	comp=Z,40nm,1.3s,mb5.1						
SNAA				*e*	pP	23 29 28.1	-1.6
SNAA	**Sanae**	65.11	161	*e*P	P	23 29 03.5	-0.6
SNAA				*e*	pP	23 29 28.1	-1.5
SNAA				pmax	pmax		
	comp=Z,40nm,1.3s						
SDCO	**Great Sand Dun**	65.58	329	*e*P	P	23 29 07.9	+0.3
	comp=Z,46nm,1.2s,mb5.2						
WUAZ	**Wupatki**	66.97	324	*e*P	P	23 29 17.1	+0.5
	comp=Z,26nm,1.1s,mb5.0						
ISCO	**Idaho Springs**	67.25	330	*e*P	P	23 29 18.6	+0.4
	comp=Z,18nm,1.1s,mb4.8						
ISCO	**Idaho Springs**	67.25	330	*e*P	P	23 29 18.6	+0.4
ISCO				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
PV01	**Paradox Valley**	67.41	327	*e*P	P	23 29 19.8	+0.6
SMCO	**Snowmass**	67.41	329	*e*P	P	23 29 19.6	+0.4
	comp=Z,17nm,0.7s,mb5.0						
LIC	**Lamto**	68.07	75	*e*P	P	23 29 21.4	-2.3
	comp=Z,17nm,0.7s,mb4.7						
DBIC	**Dimbokro**	68.40	75	P	P	23 29 24.8	-1.0
	comp=Z,20nm,0.8s,mb5.0,baz=226,slow=6.2,SNR=30						
DBIC				pP	pP	23 29 51.6	+0.1
	comp=Z,7.6nm,0.6s,baz=234,slow=6.7,SNR=3.2						
DBIC				LR	LR	23 58 57.6	
	comp=Z,32nm,18.8s,baz=199,slow=35						
DBIC	**Dimbokro**	68.40	75	*e*P	P	23 29 24.6	-1.1
	comp=Z,51nm,1.3s,mb5.2						
DBIC				*e*	pP	23 29 51.4	-0.1
DBIC	**Dimbokro**	68.40	75	*e*P	P	23 29 24.6	-1.1
DBIC				*e*	pP	23 29 51.4	-0.1
DBIC				pmax	pmax		
	comp=Z,51nm,1.3s						
LDFC	**Landfair**	68.83	321	*e*P	P	23 29 29.2	+1.2
NEN	**Nelson**	69.06	322	*e*P	P	23 29 30.2	+0.7
SRU	**San Rafael**	69.15	327	*e*P	P	23 29 30.2	+0.2
	comp=Z,5.7nm,0.6s,mb4.6						
SRU	**San Rafael**	69.15	327	*e*P	P	23 29 30.2	+0.3
SRU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
MSU	**Marysvale**	69.58	325	*e*P	P	23 29 33.7	+1.1
MVU	**Marysvale**	69.60	325	*e*P	P	23 29 33.8	+1.1
	comp=Z,28nm,1.1s,mb5.0						
ARUT	**Antelope Range**	69.76	324	*e*P	P	23 29 35.1	+1.5
RSSD	**Black Hills**	70.04	334	*e*P	P	23 29 35.7	+0.4
	comp=Z,15nm,0.8s,mb4.9						
RSSD	**Black Hills**	70.04	334	*e*P	P	23 29 35.7	+0.4
RSSD				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
DAU	**Daniels Canyon**	70.49	327	*e*P	P	23 29 39.0	+0.9
TPNV	**Topopah Spring**	70.78	322	*e*P	P	23 29 41.2	+1.4
	comp=Z,16nm,1.1s,mb4.8						
TPNV	**Topopah Spring**	70.78	322	*e*P	P	23 29 41.2	+1.3
TPNV				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.8						
DAC	**Darwin (Calif)**	71.13	320	*e*P	P	23 29 42.7	+0.8
	comp=Z,8.1nm,1.1s,mb4.5						
DAC	**Darwin (Calif)**	71.13	320	*e*P	P	23 29 42.7	+0.7
DAC				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.5						
DUG	**Dugway**	71.14	326	*e*P	P	23 29 42.5	+0.5
	comp=Z,18nm,1.1s,mb4.8						
DUG	**Dugway**	71.14	326	*e*P	P	23 29 42.5	+0.5
DUG				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
ISA	**Isabella**	71.26	319	*e*P	P	23 29 43.4	+0.7
	comp=Z,4.4nm,1.0s,mb4.2						
ISA	**Isabella**	71.26	319	*e*P	P	23 29 43.4	+0.6
ISA				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
PDAR	**Pinedale Array**	71.42	330	P	P	23 29 43.6	0.0
	comp=Z,3.3nm,0.8s,mb4.2,baz=124,slow=6.8,SNR=16						
PDAR				LR	LR	00 01 56.2	
	comp=Z,37nm,19.9s,baz=330,slow=36						
QSPA	**South Pole Qui**	71.52	180	*e*P	P	23 29 44.2	+0.6
	comp=Z,11nm,0.5s,mb5.0						
SPUT	**South Promonto**	71.76	327	*e*P	P	23 29 46.0	+0.4
BGU	**Big Grassy Mou**	71.79	327	*e*P	P	23 29 46.1	+0.3
AHID	**Auburn Hatcher**	72.17	329	P	P	23 29 48.2	+0.1
	comp=Z,6.9nm,0.7s,mb4.6						
MTUM	**Tungsten Hills**	72.42	321	*e*P	P	23 29 51.0	+1.4
ULM	**Lac du Bonnet**	72.47	343	P	P	23 29 49.0	-0.7
	comp=Z,18nm,0.5s,mb5.2,baz=156,slow=6.8,SNR=34						
ULM				LR	LR	00 07 05.4	
	comp=Z,33nm,18.2s,baz=40,slow=40						
REDW	**Red Top Meadow**	72.50	330	*e*P	P	23 29 50.4	+0.5
	comp=Z,19nm,1.3s,mb4.8						
SNOW	**Snow King Moun**	72.52	330	*e*P	P	23 29 50.8	+0.7
	comp=Z,6.0nm,0.8s,mb4.5						
LOHW	**Long Hollow**	72.56	330	*e*P	P	23 29 50.9	+0.5
	comp=Z,3.4nm,0.6s,mb4.3						
TPAW	**Teton Pass**	72.64	330	*e*P	P	23 29 51.3	+0.5
	comp=Z,12nm,0.9s,mb4.7						
RRI2	**Red Ridge**	72.71	329	*e*P	P	23 29 51.9	+0.7
	comp=Z,49nm,1.3s,mb5.2						
MOOW	**Moose Ponds**	72.73	330	*e*P	P	23 29 51.2	-0.1
	comp=Z,12nm,1.3s,mb4.6						
MNV	**Mina**	72.89	322	*e*P	P	23 29 53.1	+0.8
	comp=Z,3.0nm,0.9s,mb4.1						
MNV	**Mina**	72.89	322	*e*P	P	23 29 53.2	+0.8
MNV				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
IMW	**Indian Meadow**	72.94	330	*e*P	P	23 29 53.4	+0.9
	comp=Z,13nm,0.6s,mb5.0						
NVAR	**Mina Array Bea**	72.98	322	P	P	23 29 53.7	+0.8
	comp=Z,3.7nm,0.8s,mb4.2,baz=142,slow=7.3,SNR=24						
NVAR	**Mina Array Bea**	72.98	322	P	P	23 29 53.7	+0.8
SCHQ	**Schefferville**	73.22	2	P	P	23 29 53.7	-0.2
	comp=Z,16nm,0.6s,mb5.0,baz=188,slow=4.4,SNR=36						
SCHQ	**Schefferville**	73.22	2	*e*P	P	23 29 53.3	-0.6
	comp=Z,9.0nm,0.5s,mb4.9						
YMR	**Madison River**	73.53	330	*e*P	P	23 29 57.6	+1.7
	comp=Z,20nm,0.9s,mb4.8						
DGMT	**Dagmar**	73.69	337	*e*P	P	23 29 56.6	-0.2
	comp=Z,36nm,1.1s,mb5.0						
GCMT	**Greycliff**	73.80	332	*e*P	P	23 29 58.2	+0.7
QLMT	**Earthquake Lak**	73.87	330	*e*P	P	23 29 59.6	+1.6
HLID	**Hailey**	74.40	328	*e*P	P	23 30 02.4	+1.4
	comp=Z,17nm,1.0s,mb4.7						
MCMT	**McKenzie Canyo**	74.55	329	*e*P	P	23 30 03.8	+2.0
OHCM	**Honcut**	75.45	321	*e*P	P	23 30 08.0	+0.9
HRY	**Holter Researc**	75.47	331	*e*P	P	23 30 08.1	+1.1
CHMT	**Chamberlain Mo**	76.27	331	*e*P	P	23 30 12.8	+1.2
MOD	**Modoc**	76.42	323	*e*P	P	23 30 13.7	+1.2
	comp=Z,6.4nm,0.7s,mb4.5						
BMO	**Blue Mountains**	76.78	327	*e*P	P	23 30 15.2	+0.7
	comp=Z,20nm,1.2s,mb4.7						
BMO	**Blue Mountains**	76.78	327	*e*P	P	23 30 15.2	+0.7
BMO				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.7						
HAWA	**Hanford**	78.98	327	*e*P	P	23 30 27.6	+1.0
	comp=Z,1.4nm,1.2s						
NEW	**Newport**	79.07	330	P	P	23 30 27.1	+0.1
	comp=Z,3.4nm,0.8s,mb4.2,baz=115,slow=0.6,SNR=4.9						
PTEO	**Sao Teotonio**	79.85	45	*e*P	P	23 30 33.5	+2.0
	comp=Z,129nm,1.2s,mb5.6						
PBEJ	**Beja**	80.68	45	*e*P	P	23 30 37.3	+1.4
	comp=Z,47nm,1.7s,mb5.0						
EVO	**Evora**	80.86	44	*e*P	P	23 30 35.7	-1.1
	comp=Z,21nm,0.7s,mb4.8						
EDM	**Edmonton**	81.00	335	*e*P	P	23 30 36.9	-0.3
PTOM	**Tomar**	81.18	43	*e*P	P	23 30 39.3	+0.8
	comp=Z,57nm,1.5s,mb5.2						
EMIN	**Mina Concepcio**	81.35	45	P	P	23 30 40.7	+1.3
	comp=Z,27nm,0.7s,mb5.2						
ESPR	**Espera**	81.44	47	P	P	23 30 41.9	+2.0
	comp=Z,32nm,1.1s,mb5.1						
EJIF	**Jimena Fronter**	81.50	47	P	P	23 30 41.7	+1.5
	comp=Z,6.6nm,0.6s,mb4.6						
EJIF	**Jimena Fronter**	81.50	47	P	P	23 30 41.7	+1.5
EJIF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
EBAD	**Badajoz**	81.64	44	P	P	23 30 42.2	+1.3
	comp=Z,15nm,0.7s,mb4.9						
PCBR	**Castelo Branco**	81.91	43	*e*P	P	23 30 42.5	+0.2
	comp=Z,34nm,1.6s,mb4.9						
EMIJ	**Mijas**	82.04	47	P	P	23 30 43.8	+0.8
	comp=Z,11nm,0.6s,mb4.9						
PVIS	**Viseu**	82.11	42	*e*P	P	23 30 42.8	-0.5
	comp=Z,49nm,1.4s,mb5.1						
MTE	**Manteigas**	82.17	43	*e*P	P	23 30 42.0	-1.6
	comp=Z,63nm,2.2s,mb5.1						
ECAB	**El Cabril**	82.36	46	P	P	23 30 45.3	+0.7
	comp=Z,5.3nm,0.7s,mb4.5						
PVRL	**Vila Real**	82.53	42	*e*P	P	23 30 46.1	+0.7
	comp=Z,44nm,1.3s,mb5.1						
ELOB	**Lobios**	82.63	41	P	P	23 30 46.5	+0.6
	comp=Z,18nm,0.8s,mb4.9						
ELOJ	**Sierra Loja**	82.76	47	P	P	23 30 48.3	+1.6
	comp=Z,9.1nm,0.5s,mb4.9						
ELOJ	**Sierra Loja**	82.76	47	P	P	23 30 48.3	+1.6
ELOJ				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.9						
ELUQ	**Luque**	82.89	47	P	P	23 30 48.8	+1.6
	comp=Z,27nm,1.0s,mb5.0						
ELUQ	**Luque**	82.89	47	P	P	23 30 48.8	+1.5
ELUQ				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.0						
EADA	**Adamuz**	82.97	46	P	P	23 30 48.5	+0.7
	comp=Z,10nm,0.7s,mb4.8						
ECOG	**Cogollos-Vega**	83.23	47	P	P	23 30 49.3	+0.3
	comp=Z,2.5nm,0.8s,mb4.1						
ECOG	**Cogollos-Vega**	83.23	47	P	P	23 30 49.3	+0.3
ECOG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
PBRG	**Braganca**	83.43	42	*e*P	P	23 30 51.1	+1.2
	comp=Z,35nm,1.7s,mb4.9						
ERUA	**La Rua**	83.49	41	P	P	23 30 50.6	+0.3
	comp=Z,49nm,1.2s,mb5.2						
ERUA	**La Rua**	83.49	41	P	P	23 30 50.6	+0.4
ERUA				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.2						
ECAL	**Calabor**	83.50	42	P	P	23 30 51.7	+1.4
	comp=Z,300nm,3.3s						
EBAN	**Banos Encina**	83.52	46	P	P	23 30 51.7	+1.2
	comp=Z,11nm,0.7s,mb4.8						
EBAN	**Banos Encina**	83.52	46	P	P	23 30 51.7	+1.2
EBAN				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.8						
EBER	**Berja**	83.52	48	P	P	23 30 52.3	+1.8
	comp=Z,20nm,0.9s,mb5.0						
EQES	**Quesada**	83.83	47	P	P	23 30 52.5	+0.4
	comp=Z,19nm,0.9s,mb4.9						
EPON	**Pontenova**	83.98	40	P	P	23 30 53.9	+1.2
	comp=Z,66nm,1.2s,mb5.3						
ESDC	**Sonseca Array**	84.14	45	P	P	23 30 54.7	+1.1
	comp=Z,18nm,0.9s,mb4.9,baz=250,slow=5.5,SNR=41						
ESDC				pP	pP	23 31 22.1	+1.8
	comp=Z,3.3nm,0.8s,baz=254,slow=4.9,SNR=3.2						
ESDC	**Sonseca Array**	84.14	45	P	P	23 30 53.7	+0.1
	comp=Z,16nm,0.9s,mb4.8						
ESLA	**Sonseca Array**	84.14	45	*e*P	P	23 30 54.9	+1.3
	comp=Z,5.0nm,1.0s,mb4.3						
GUD	**Guadarrama**	84.50	44	P	P	23 30 57.3	+1.9
	comp=Z,150nm,2.8s,mb5.4						
GUD	**Guadarrama**	84.50	44	P	P	23 30 57.3	+2.0
GUD				pmax	pmax		
	comp=Z,150nm,2.8s,mb5.4						
BOSA	**Boshof**	85.19	118	P	P	23 30 59.4	+0.3
	comp=Z,8.4nm,1.0s,mb4.6,baz=283,slow=3.1,SNR=10						
BOSA				LR	LR	00 03 36.2	
	comp=Z,50nm,19.2s,baz=100,slow=32						
BOSA	**Boshof**	85.19	118	P	P	23 30 59.4	+0.3
BOSA				LR	LR	00 03 36.2	
ETOB	**Tobarra**	85.28	47	P	P	23 30 58.9	-0.4
	comp=Z,2μm,6.3s						
ECHE	**Chera**	86.13	46	P	P	23 31 04.0	+0.6
	comp=Z,1.4nm,0.5s,mb4.2						
ECHE	**Chera**	86.13	46	P	P	23 31 04.0	+0.6
ECHE				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
SFJD	**Kangerlussuaq**	86.53	7	P	P	23 31 04.6	-0.1
	comp=Z,8.0nm,0.9s,mb4.7,baz=151,slow=8.3,SNR=4.0						
MAW	**Mawson**	87.18	164	P	P	23 31 08.6	+0.8
	comp=Z,4.7nm,0.9s,mb4.4,baz=302,slow=4.2,SNR=6.3						
MAW				LR	LR	00 07 04.4	
	comp=Z,67nm,19.7s,baz=60,slow=33						
SJPF	**Ste Jean**	87.61	43	*e*P	P	23 31 10.5	0.0
	comp=Z,13nm,0.8s,mb4.7						
SJPF	**Ste Jean**	87.61	43	*e*P	P	23 31 10.5	0.0
SJPF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
EBIE	**Bielsa**	88.30	44	P	P	23 31 15.0	+1.2
	comp=Z,5.9nm,0.6s,mb4.8						
YKA	**Yellowknife Ar**	88.36	341	P	P	23 31 14.3	+0.7
	comp=Z,30nm,0.8s,mb5.4,baz=134,slow=4.8,SNR=34						
YKA				pP	pP	23 31 40.8	+0.2
	comp=Z,11nm,0.9s,baz=135,slow=4.8,SNR=4.0						
YKW3	**Yellowknife Ar**	88.41	341	*e*P	P	23 31 14.4	+0.5
EPF	**Esparros**	88.59	43	*e*P	P	23 31 14.7	-0.5
	comp=Z,4.6nm,0.5s,mb4.5						
EPF	**Esparros**	88.59	43	*e*P	P	23 31 14.7	-0.5
EPF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
QUIF	**Quistinic**	88.75	38	*e*P	P	23 31 15.0	-0.8
	comp=Z,50nm,1.0s,mb5.2						
QUIF	**Quistinic**	88.75	38	*e*P	P	23 31 15.0	-0.8
QUIF				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.2						
ROSF	**Rostrenen**	88.90	38	*e*P	P	23 31 16.4	0.0
SGMF	**Saint Gilles**	89.27	38	*e*P	P	23 31 17.8	-0.4
LFF	**La Frestale**	89.72	42	*e*P	P	23 31 20.6	+0.2
	comp=Z,50nm,0.7s,mb5.4						
LFF	**La Frestale**	89.72	42	*e*P	P	23 31 20.6	+0.2
LFF				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.5						
MFF	**Saint Martin d**	89.92	40	*e*P	P	23 31 20.9	-0.4
	comp=Z,12nm,0.7s,mb4.8						
MFF	**Saint Martin d**	89.92	40	*e*P	P	23 31 20.9	-0.4
MFF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
MTLF	**Montolieu**	89.96	44	*e*P	P	23 31 21.3	-0.3
	comp=Z,21nm,1.1s,mb4.9						
MTLF	**Montolieu**	89.96	44	*e*P	P	23 31 21.3	-0.3
MTLF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
GRR	**Gorron**	90.33	38	*e*P	P	23 31 22.6	-0.6
	comp=Z,20nm,0.7s,mb5.0						
GRR	**Gorron**	90.33	38	*e*P	P	23 31 22.6	-0.6
GRR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
RJF	**Les Rejaudoux**	90.37	42	*e*P	P	23 31 22.8	-0.6
	comp=Z,38nm,1.1s,mb5.2						
RJF	**Les Rejaudoux**	90.37	42	*e*P	P	23 31 22.8	-0.6
RJF				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.1						
CAF	**Calviac**	90.55	42	*e*P	P	23 31 24.1	-0.2
	comp=Z,11nm,0.7s,mb4.8						
CAF	**Calviac**	90.55	42	*e*P	P	23 31 24.1	-0.2
CAF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
FLN	**La Foliniere**	90.73	38	*e*P	P	23 31 24.7	-0.3
	comp=Z,103nm,1.4s,mb5.5						
FLN	**La Foliniere**	90.73	38	*e*P	P	23 31 24.7	-0.3
FLN				pmax	pmax		
	comp=Z,52nm,1.4s,mb5.5						
LDF	**La Druitiere**	90.86	38	*e*P	P	23 31 24.8	-0.9
	comp=Z,44nm,1.2s,mb5.2						
LDF	**La Druitiere**	90.86	38	*e*P	P	23 31 24.8	-0.9
LDF				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.2						
BORG	**Borgarnes**	90.88	19	P	P	23 31 27.1	+1.7
	comp=Z,34nm,1.1s,mb5.4,baz=6.1,slow=18,SNR=4.7						
DLBC	**Dease Lake**	91.47	333	P	P	23 31 29.5	+1.2
	comp=Z,9.2nm,0.8s,mb4.9,baz=123,slow=4.0,SNR=18						
DLBC	**Dease Lake**	91.47	333	*e*P	P	23 31 29.4	+1.2
BGF	**Bois d'Agland**	91.75	41	*e*P	P	23 31 29.1	-0.7
AVF	**Avril sur Loir**	92.17	41	*e*P	P	23 31 30.9	-0.8
SMF	**Signal de Mont**	92.41	41	*e*P	P	23 31 32.5	-0.4
	comp=Z,14nm,0.8s,mb4.9						
SMF	**Signal de Mont**	92.41	41	*e*P	P	23 31 32.5	-0.4
SMF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
EKA	**Eskdalemuir Ar**	92.44	32	P	P	23 31 33.0	+0.2
	comp=Z,2.0nm,0.8s,mb4.4,baz=7.8,slow=18,SNR=3.9						
LOR	**Lormes**	92.68	41	*e*P	P	23 31 33.1	-1.0
LOR				*e*R			
	comp=Z,62nm,18.0s						
ORIF	**Oris-en-Rattie**	93.01	43	*e*P	P	23 31 35.3	-0.4
SUMG	**Summit**	93.33	9	*e*P	P	23 31 38.1	+1.6
	comp=Z,7.8nm,0.6s,mb5.2						
SBF	**Sospel**	93.63	45	*e*P	P	23 31 37.9	-0.6
LPL	**La Plagne**	93.80	43	*e*P	P	23 31 39.3	+0.1
LPG	**La Plagne**	93.81	43	*e*P	P	23 31 39.3	+0.1
	comp=Z,57nm,1.5s,mb5.4						
LPG	**La Plagne**	93.81	43	*e*P	P	23 31 39.3	+0.1
LPG				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.4						
CABF	**La Chapelle**	93.81	42	*e*P	P	23 31 38.9	-0.3
	comp=Z,15nm,1.0s,mb5.0						
CABF	**La Chapelle**	93.81	42	*e*P	P	23 31 38.9	-0.3
CABF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0						
MEZF	**Maizieres J'vi**	93.92	40	*e*P	P	23 31 39.4	-0.3
	comp=Z,5.3nm,0.6s,mb4.8						
PGF	**Pioggiola**	94.20	47	*e*P	P	23 31 40.8	-0.3
HAU	**Haudompre**	94.52	41	*e*P	P	23 31 41.7	-0.7
	comp=Z,4.9nm,0.6s,mb4.8						
HAU	**Haudompre**	94.52	41	*e*P	P	23 31 41.7	-0.7
HAU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.7						
HINF	**Hinteralfeld**	94.76	41	*e*P	P	23 31 43.2	-0.3
CDF	**Champ du Feu**	95.25	41	*e*P	P	23 31 45.4	-0.4
	comp=Z,14nm,1.0s,mb5.0						
CDF	**Champ du Feu**	95.25	41	*e*P	P	23 31 45.4	-0.4
CDF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
DAVOX	**Davos**	96.30	43	P	P	23 31 51.9	+1.4
	comp=Z,1.9nm,0.7s,mb4.6,baz=36,slow=6.2,SNR=4.3						
INK	**Inuvik**	98.12	340	P	P	23 31 58.7	+0.4
	comp=Z,1.6nm,0.9s,mb4.5,baz=134,slow=4.8,SNR=3.2						
INK	**Inuvik**	98.12	340	P	P	23 31 58.7	+0.4
GERES	**GERESS Array B**	99.41	42	P	P	23 32 04.5	-0.2
	comp=Z,0.4nm,0.5s,mb4.2,baz=207,slow=3.0,SNR=4.3						
SOC	**Sochi**	116.36	50	*e*PKIKP	PKPdf	23 37 03.6	-0.6
KIV	**Kislovodsk**	118.51	50	*i* PKIKP	PKPdf	23 37 09.9	+1.6
KIV				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TIXI	**Tiksi**	125.92	353	*i* PKIKP	PKPdf	23 37 20.9	-1.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKTO	**Aktyubinsk**	127.79	40	PKP	PKPdf	23 37 28.6	+2.4
	comp=Z,3.7nm,0.8s,baz=316,slow=3.5,SNR=6.9						
BVAR	**Borovoye Array**	133.69	33	PKP	PKPdf	23 37 39.4	+2.3
	comp=Z,1.5nm,0.7s,baz=297,slow=3.3,SNR=7.2						
WRA	**Warramunga Arr**	135.13	212	PKP	PKPdf	23 37 41.8	+1.0
	comp=Z,2.2nm,0.7s,baz=151,slow=1.7,SNR=9.4						
NVS	**Novosibirsk**	138.28	24	*i* PKIKP	PKPdf	23 37 47.1	+1.5
KURK	**Kurchatov**	139.17	31	*i* PKIKP	PKPdf	23 37 49.6	+2.3
AAK	**Ala-Archa**	141.25	44	*e*PKPdf	PKPdf	23 37 53.4	+2.1
AAK	**Ala-Archa**	141.25	44	*i* PKIKP	PKPdf	23 37 53.3	+2.0
MKAR	**Makanchi Array**	143.56	33	PKP	PKPdf	23 37 54.0	-1.1
	comp=Z,2.7nm,0.6s,baz=330,slow=2.6,SNR=38						
MKAR				pPKP		23 38 23.9	
	comp=Z,3.1nm,0.8s,baz=317,slow=3.7,SNR=2.6						
MKAR	**Makanchi Array**	143.56	33	*i* PKIKP	PKPdf	23 37 54.0	-1.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KLR	**Kul'dur**	145.06	336	⇓*i*PKP2	PKPab	23 37 56.6	-2.9
KLR				pmax	pmax		
	comp=Z,22nm,1.0s						
CIT	**Chita**	146.62	357	*e*PKP2	PKPab	23 38 03.8	-1.6
ZAK	**Zakamensk**	147.81	9	*e*PKP2	PKPab	23 38 05.6	-4.5
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NDI	**New Delhi**	147.93	66	*e*P	PKPdf	23 38 06.8	+3.7
WMQ	**Urumqi**	148.38	32	PKP	PKPdf	23 38 08.9	+5.5
WMQ				PKP2	PKPab	23 38 18.0	+5.4
WMQ				PP	PP	23 41 46.0	+6.1
WMQ				SKS	SKS	23 45 02.0	+2.4
WMQ				SKKS		23 48 20.0	
WMQ				PP	PP		
	comp=Z,220nm,6.2s						
WMQ				LR	LR		
	comp=N,70nm,16.5s						
WMQ				LR	LR		
	comp=E,70nm,20.2s						
WMQ				LR	LR		
	comp=Z,80nm,17.1s						
MDJ	**Mudanjiang**	149.63	333	PKP	PKPdf	23 38 11.6	+6.3
MJAR	**Matsushiro Arr**	149.89	312	PKPbc	PKPdf	23 38 13.2	+7.2
	comp=Z,9.9nm,0.8s,baz=82,slow=0.9,SNR=16						
MJAR				pPKPbc		23 38 39.8	
	comp=Z,4.3nm,0.7s,baz=82,slow=1.5,SNR=3.6						
MAJO	**Matsushiro**	149.89	312	*e*PKPbc	PKPdf	23 38 13.4	+7.4
MAT	**Matsushiro**	149.89	312	PKP	PKPdf	23 38 13.2	+7.2
MAT	**Matsushiro**	149.89	312	*e*PKP	PKPdf	23 38 13.0	+7.0
SONM	**Songino Array**	150.69	6	PKP	PKPdf	23 38 09.5	+2.7
	comp=Z,23nm,0.6s,baz=275,slow=0.5,SNR=85						
SONM				PKPbc	PKPdf	23 38 15.1	+8.3
	comp=Z,23nm,0.6s,baz=302,slow=1.4,SNR=258						
SONM				pPKPbc		23 38 42.7	
	comp=Z,5.3nm,0.7s,baz=335,slow=1.9,SNR=2.7						
SONM	**Songino Array**	150.69	6	PKIKP	PKPdf	23 38 09.5	+2.7
SONM						23 38 42.7	
CN2	**Changchun**	151.99	337	*e*PKP	PKPdf	23 38 07.8	-1.1
GTA	**Gaotai**	157.30	22	*e*PKP	PKPdf	23 38 19.0	+2.8
HHC	**Hu-ho-hao-te**	157.86	358	*e*PKP	PKPdf	23 38 19.0	+2.1
HHC				PKS	PKS	23 41 51.8	+2.1
HHC				PP	PP		

	comp=Z,90nm,12.0s						
HHC				LR	LR		
	comp=N,230nm,10.8s						
HHC				LR	LR		
	comp=E,130nm,10.8s						
HHC				LR	LR		
	comp=Z,130nm,10.8s						
LZH	**Lanzhou**	161.64	18	*e*PKP	PKPdf	23 38 22.3	+1.2
LZH				PP	PP	23 42 54.3	+0.8
LZH				SKKS		23 49 32.0	
LZH				PP	PP		
	comp=Z,260nm,6.3s						
LZH				LR	LR		
	comp=E,220nm,19.5s						
LZH				LR	LR		
	comp=Z,330nm,21.0s						
LZH	**Lanzhou**	161.64	18	*e*PKP	PKPdf	23 38 22.2	+1.1
LZH				pPKP		23 38 39.8	
LZH				sPKP		23 38 48.5	
LZH	**Lanzhou**	161.64	18	*e*PKIKP	PKPdf	23 38 22.2	+1.1
LZH						23 38 48.5	
SSE	**Sheshan**	164.34	324	PKP	PKPdf	23 38 22.5	-1.5
NJ2	**Nanjing**	164.72	332	*e*PKP	PKPdf	23 38 28.5	+4.1
NJ2				PP	PP	23 43 17.0	+7.0
NJ2				PP	PP		
	comp=Z,150nm,10.4s						
NJ2				LR	LR		
	comp=N,2µm,24.8s						
NJ2				LR	LR		
	comp=E,2µm,24.0s						
NJ2				LR	LR		
	comp=Z,240nm,22.8s						
KMI	**Kunming**	170.27	47	PKIKP	PKPdf	23 38 26.1	-2.3
KMI				MLR	MLR		
	comp=Z,30nm,40.6s						
GYA	**Guiyang**	171.42	24	*e*PKP	PKPdf	23 38 32.6	+3.6
GYA				SKKS		23 50 22.6	
GYA				LR	LR		
	comp=N,670nm,19.8s						
GYA				LR	LR		
	comp=E,540nm,20.7s						
GYA				LR	LR		
	comp=Z,590nm,21.4s						

MOS ***13*** *23:24:55.9±0.9, 36.53N×70.60E, h198^{km}, mb4.5/12, Error ellipse: s-maj=9.7km s-min=5.2km az=94.2*
BJI ***13*** *23:24:57.3, 36.63N×70.67E, h207^{km}, mB4.9, mb4.4*
NEIC ***13*** *23:24:58.3±0.3, 36.53N×70.74E, mb4.5/17, Error ellipse: s-maj=8.2km s-min=5.5km az=48.0*
IDC ***13*** *23:24:58.7±1.0, 36.44N×70.60E, h214^{km}±8^{km}, mb3.8/19, mb1 3.9/22, mb1mx3.8/27, mbtmp4.4/22, Error ellipse: s-maj=13.6km s-min=11.6km az=168.0*
NNC ***13*** *23:25:00.4±3.8, 36.89N×70.38E, h197^{km}±31^{km}, mpv5.2, Error ellipse: s-maj=32.6km s-min=25.5km az=30.0*
ISC 13 23:24:56.2±0.2**, 36.44N**±0.02×**70.77E**±0.03**, h210^{km}, h210^{km}**±4.5^{km}**:pP-P, n144,** σ1§**17**/169**, mb4.2**/32**, 16C-10D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	2.77	160	⇓P	P	23 25 45.2	+1.0
CHCP	**Chirah Chowk**	3.45	143	⇑P	P	23 25 53.7	+1.5
CHCP				S	S	23 26 31.0	-4.5
SBDP	**Sheikh Budin**	4.13	180	P	P	23 26 00.0	-0.6
DRP	**Derazinda**	4.71	186	P	P	23 26 17.9	+10
SARP	**Sargodha**	4.78	160	P	P	23 26 08.8	+0.1
KSH	**Kashi**	5.13	52	P	P	23 26 15.0	+1.9
KSH				S	S	23 27 14.8	+1.9
KSH				Smax			
	comp=N,710nm,0.5s						
KSH				Smax			
	comp=E,1µm,0.7s						
THN	**Thein Dam**	5.72	133	*e*P	P	23 26 21.5	+0.8
THN				*e*S	S	23 27 26.2	-0.2
DLH	**Dalhousie**	5.79	131	*e*P	P	23 26 20.0	-1.6
DLH				*e*S	S	23 27 28.0	-0.1
AML	**Almayashu**	6.12	21	P	P	23 26 25.4	-0.4
	SNR=302						
UCH	**Uchtor**	6.46	26	P	P	23 26 30.2	-0.1
	SNR=581						
KZA	**Kyzart**	6.61	30	P	P	23 26 32.0	-0.2
	SNR=72						
EKS2	**Erkin-Say**	6.63	20	P	P	23 26 32.1	-0.3
	SNR=216						
KK31	**Karatay Array**	6.66	358	⇑P	P	23 26 31.3	-1.5
	comp=E,91nm,0.3s,baz=181,slow=11,SNR=2554						
KK31				S	S	23 27 42.3	-5.8
	comp=E,31nm,0.5s,baz=191,slow=24,SNR=7.7						
KK31	**Karatay Array**	6.66	358	⇑P	P	23 26 31.2	-1.5
	comp=E,91nm,0.3s						
KK31				S	S	23 27 42.3	-5.8
KKAR	**Karatay Array**	6.66	358	PN	P	23 26 31.2	-1.6
KKAR				pmax	pmax		
	comp=Z,31nm,0.2s						
AAK	**Ala-Archa**	6.82	24	P	P	23 26 35.0	+0.1
	SNR=171						
AAK	**Ala-Archa**	6.82	24	⇓P	P	23 26 34.5	-0.4
	comp=Z,69nm,0.5s						
AAK				⇑S	S	23 27 50.0	-1.8
	comp=Z,146nm,0.8s						
AAK	**Ala-Archa**	6.82	24	⇓P	P	23 26 34.5	-0.4
	comp=Z,69nm,0.4s						
AAK				S	S	23 27 50.0	-1.8
AAK	**Ala-Archa**	6.82	24	⇓PN	P	23 26 34.5	-0.4
AAK				S	S	23 27 50.0	-1.9
AAK				pmax	pmax		
	comp=Z,69nm,0.4s						
BHK	**Bhakra**	6.87	135	*e*x	x	23 27 55.1	
KBK	**Karagaybulak**	6.99	26	P	P	23 26 37.4	+0.3
	SNR=166						
FRU	**Bishkek**	7.04	24	⇓*i*PN	P	23 26 38.0	+0.3
FRU				*i* S	S	23 27 56.0	-1.0
FRU				pmax	pmax		
	comp=Z,140nm,1.2s						
FRU				smax			
	comp=N,200nm,1.8s						
SDNR	**Sundarnagar**	7.13	132	*e*P	P	23 26 39.6	+0.7
SDNR				*e*S	S	23 27 57.2	-1.9
ULHL	**Ulahol**	7.18	35	P	P	23 26 39.5	0.0
	SNR=10						
CHMS	**Chumysh**	7.23	24	P	P	23 26 39.7	-0.5
	SNR=136						
USP	**Ospenovka**	7.39	22	P	P	23 26 41.7	-0.6
	SNR=37						
TKM2	**Tokmak 2**	7.46	28	P	P	23 26 43.2	0.0
	SNR=405						
SMLA	**Simla**	7.51	133	*e*P	P	23 26 43.1	-0.8
SMLA				*e*S	S	23 28 07.4	-0.6
DDI	**Dehra Dun**	8.62	133	*e*x	x	23 28 27.0	
BHGR	**Bahadurgarh**	9.32	144	*e*S	S	23 28 46.4	-3.5
KHET	**Khetri**	9.37	152	*e*S	S	23 28 48.8	-2.2
KHET				AMb	AMB	23 28 50.9	
	comp=Z,159nm,0.6s						
JOSI	**Joshimath**	9.39	126	*e*x	x	23 26 20.7	
JOSI				AMb	AMB	23 26 26.6	
	comp=Z,243nm,0.8s						
JOSI				*e*x	x	23 28 03.2	
NDI	**New Delhi**	9.45	143	*e*P	P	23 27 08.0	-1.0
NDI				*e*x	x	23 28 47.0	
AYAN	**Aya Nagar**	9.58	144	*e*P	P	23 27 10.6	-0.1
AYAN				AMb	AMB	23 27 12.4	
	comp=Z,36nm,0.8s						
KUDL	**Kundal**	9.58	148	*e*P	P	23 27 10.1	-0.6
KUDL				AMb	AMB	23 27 12.0	
	comp=Z,34nm,0.7s						
BISR	**Bishrakh**	9.66	142	*e*S	S	23 28 57.1	-0.6
ASOR	**Ausora**	9.67	140	*e*P	P	23 27 12.2	+0.3
ASOR				AMb	AMB	23 27 16.0	
	comp=Z,312nm,0.3s						
SONA	**Sohna**	9.76	145	*e*P	P	23 27 13.3	+0.3
SONA				AMb	AMB	23 27 14.6	
	comp=Z,17nm,0.6s						
SONA				*e*S	S	23 28 56.5	-3.5
AJM	**Ajmer**	10.47	161	*e*x	x	23 27 19.9	
AJM				AMb	AMB	23 27 23.5	
	comp=Z,43nm,0.9s						
AJM				*e*S	S	23 29 10.5	-6.0
AJM				AML	AML	23 29 16.4	
	comp=E,66nm,0.5s						
MK02	**Makanchi Array**	13.44	36	P	P	23 27 59.9	+0.3
MK02				pmax	pmax		
	comp=Z,17nm,0.6s						
MK31	**Makanchi Array**	13.45	36	P	P	23 27 59.9	+0.1
	comp=Z,17nm,0.6s,baz=204,slow=36,SNR=146						
MKAR	**Makanchi Array**	13.45	36	P	P	23 28 00.3	+0.6
	comp=Z,0.9nm,0.3s,baz=218,slow=14,SNR=57						
MKAR	**Makanchi Array**	13.45	36	P	P	23 28 00.3	+0.6
MKAR	**Makanchi Array**	13.45	36	*i* P	P	23 28 00.3	+0.6
MKAR				pmax	pmax		
	comp=Z,17nm,0.7s						
KOLN	**Koldanda**	13.88	125	*e*Pn	P	23 28 05.8	+0.6
KOLN				*e*Sn	S	23 30 31.1	-3.5
	comp=Z,32nm,0.5s						
BHPL	**Bhopal**	14.36	155	*e*P	P	23 28 15.2	+4.0
BHPL				AMb	AMB	23 28 17.3	
	comp=Z,44nm,0.8s						
BHPL				*e*x	x	23 30 43.9	
BHPL				AML	AML	23 30 47.8	
	comp=E,22nm,0.4s						
GKN	**Gorkha**	14.43	122	*e*Pn	P	23 28 13.0	+1.0
GKN				*e*Sn	S	23 30 44.7	-2.2
	comp=E,54nm,0.3s						
DMN	**Daman**	15.00	122	*e*Pn	P	23 28 20.4	+1.3
DMN				*e*Sn	S	23 30 58.9	-0.8
	comp=E,121nm,1.0s						
KKN	**Kakani**	15.01	121	*e*Pn	P	23 28 20.5	+1.4
KKN				*e*Sn	S	23 30 57.6	-2.2
	comp=E,41nm,0.7s						
AB31	**Akbulak array**	15.05	332	P	P	23 28 16.9	-2.6
	comp=E,6.3nm,0.4s,baz=145,slow=12,SNR=150						
AB31				⇑S	S	23 30 53.6	-7.0
	comp=E,2.8nm,0.5s,baz=160,slow=23,SNR=3.8						
AB31	**Akbulak array**	15.05	332	P	P	23 28 16.9	-2.6
	comp=E,6.3nm,0.4s						
AB31				S	S	23 30 53.6	-7.0
AB31	**Akbulak array**	15.05	332	P	P	23 28 16.9	-2.6
AB31				S	S	23 30 53.6	-7.0
AB31				pmax	pmax		
	comp=Z,6.0nm,0.4s						
PKI	**Pulchoki**	15.23	121	*e*Pn	P	23 28 23.4	+1.5
PKI				*e*Sn	S	23 31 03.6	-1.3
	comp=Z,30nm,0.4s						
KURK	**Kurchatov**	15.34	19	⇑P	P	23 28 21.5	-1.7
	comp=Z,4.7nm,1.1s						
KURK	**Kurchatov**	15.34	19	⇑P	P	23 28 21.5	-1.7
KURK	**Kurchatov**	15.34	19	⇑*i*P	P	23 28 21.8	-1.4
GUN	**Gumba**	15.35	119	*e*Pn	P	23 28 25.6	+2.2
GUN				*e*Sn	S	23 31 06.3	-1.2
	comp=Z,51nm,0.8s						
BANOM	**Banah**	16.21	234	⇑P	P	23 28 32.4	-1.5
	SNR=6.2						
VOSK	**Vostochnaya**	16.28	0	P	P	23 28 33.0	-1.5
	comp=Z,9.7nm,0.8s						
VOSK	**Vostochnaya**	16.28	0	P	P	23 28 33.0	-1.5
VOSK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BVA0	**Borovoye Array**	16.58	359	⇑P	P	23 28 36.5	-1.6
	comp=Z,1.9nm,0.9s,baz=166,slow=12,SNR=6.7						
BVA0				⇓S	S	23 31 37.5	+2.8
	comp=Z,2.0nm,1.5s,baz=167,slow=24,SNR=3.8						
BVA0	**Borovoye Array**	16.58	359	⇑P	P	23 28 36.5	-1.6
	comp=Z,1.9nm,0.9s						
BVA0				S	S	23 31 37.5	+2.8
BVA0	**Borovoye Array**	16.58	359	⇑P	P	23 28 36.5	-1.6
BVA0				S	S	23 31 37.5	+2.7
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	16.58	359	P	P	23 28 36.9	-1.2
	comp=Z,2.6nm,0.3s,baz=162,slow=9.5,SNR=44						
BRVK	**Borovoye**	16.62	359	*e*P	P	23 28 37.5	-1.0
	comp=Z,6.1nm,0.8s						
BRVK	**Borovoye**	16.62	359	*e*P	P	23 28 37.5	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
AKTO	**Aktyubinsk**	16.74	331	P	P	23 28 38.9	-1.1
	comp=Z,1.2nm,0.3s,baz=139,slow=10.0,SNR=46						
AKTO	**Aktyubinsk**	16.74	331	P	P	23 28 38.9	-1.0
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WBK	**Wadi Bani Khal**	17.17	220	P	P	23 28 47.4	+2.5
	SNR=9.3						
CHKZ	**Chkalovo**	17.23	360	P	P	23 28 43.9	-1.5
	comp=Z,4.5nm,0.5s						
ASHO	**Ashiyiah**	17.24	231	P	P	23 28 44.9	-0.7
	SNR=41						
SMDO	**Samad**	17.30	223	⇑P	P	23 28 46.2	0.0
BLSP	**Bilaspur**	17.35	142	*e*P	P	23 28 49.2	+2.4
JMDO	**Jabal Madar**	17.82	222	⇑P	P	23 28 52.2	+0.3
ARQ	**Araqi**	17.95	227	⇓P	P	23 28 52.0	-1.2
BSY	**Bisya**	18.02	224	P	P	23 28 54.4	+0.5
	SNR=13						
POO	**Poona**	18.05	171	*e*P	P	23 28 56.0	+1.7
POO				*e*x	x	23 32 31.0	
BOK	**Bokaro**	18.13	130	*e*P	P	23 28 57.0	+1.9
BOK				AMb	AMB	23 28 58.5	
	comp=Z,17nm,0.9s						
BOK				*e*x	x	23 32 26.1	
BOK				AML	AML	23 32 29.5	
	comp=N,4.3nm,0.4s						
LSA	**Lhasa**	18.34	106	*e*P	P	23 29 01.8	+4.6
ORR	**Orenburg**	18.98	328	⇓*i*P	P	23 29 03.1	-0.5
ORR				pmax	pmax		
	comp=Z,40nm,1.1s						
KAD	**Karad**	19.30	170	*e*P	P	23 29 07.9	+0.8
KAD				AMb	AMB	23 29 14.1	
	comp=Z,19nm,1.5s						
HYB	**Hyderabad**	20.16	158	*i* P	P	23 29 20.0	+4.1
HYB				*e*S	S	23 32 52.0	+6.6
HYB	**Hyderabad**	20.16	158	*e*P	P	23 29 20.0	+4.1
NVS	**Novosibirsk**	20.30	21	*i* P	P	23 29 17.2	+0.2
NVS				*e**PP		23 29 48.5	
NVS				*e*PPP	PPP	23 30 15.6	+12
NVS				*i* S	S	23 32 51.5	+3.9
NVS				pmax	pmax		
	comp=Z,15nm,0.7s						
NVS				pmax	pmax		
	comp=N,17nm,0.8s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.8s						
NVS				smax			
	comp=N,28nm,2.0s						
NVS				smax			
	comp=E,19nm,1.3s						
GNI	**Garni**	20.73	288	P	P	23 29 21.5	+0.1
	comp=E,5.7nm,0.8s,baz=182,slow=19,SNR=3.4						
ZEI	**Tsey**	21.60	295	*e*P	P	23 29 29.7	-0.1
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
ARU	**Arti**	21.63	341	*e*P	P	23 29 30.3	+0.3
	comp=Z,21nm,0.8s,mb4.7						
ARU	**Arti**	21.63	341	⇓*i*P	P	23 29 31.0	+1.0
ARU				*e*PPP	PPP	23 30 00.7	-21
ARU				*e*S	S	23 33 19.9	+8.6
ARU				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.6						
GOF	**Gofitskoye**	22.62	301	*e*P	P	23 29 39.2	-0.5
KIV	**Kislovodsk**	22.65	298	*e*P	P	23 29 40.3	+0.3
	comp=Z,10nm,1.2s,mb4.2						
KIV	**Kislovodsk**	22.65	298	*e*P	P	23 29 38.2	-1.8
KIV				pmax	pmax		
	comp=Z,12nm,1.8s,mb4.1						
ANN	**Anapa**	26.50	299	*e*P	P	23 30 20.5	+4.6
LZH	**Lanzhou**	26.60	81	*e*P	P	23 30 15.7	-1.2
	comp=Z,13nm,1.0s,mb4.5						
LZH				pP	pP	23 30 49.8	-8.6
LZH				sP	sP	23 31 09.4	-14
LZH	**Lanzhou**	26.60	81	*e*P	P	23 30 15.7	-1.2
LZH				*SP	sP	23 31 09.4	-14
LZH				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.5						
SONM	**Songino Array**	28.52	55	P	P	23 30 36.4	+2.4
	comp=Z,2.0nm,0.8s,mb3.8,baz=251,slow=9.1,SNR=12						
SONM				pP	pP	23 31 19.6	+3.4
	comp=Z,1.5nm,0.8s,baz=265,slow=10,SNR=4.7						
SONM				PcP	PcP	23 33 40.3	+0.1
	comp=Z,0.6nm,1.0s,baz=216,slow=3.6,SNR=3.5						
BRTR	**Keskin Array B**	29.28	288	P	P	23 30 40.0	-0.8
	comp=Z,0.7nm,0.7s,mb3.4,baz=63,slow=8.3,SNR=4.0						
OBN	**Obninsk**	29.86	320	⇑*i*P	P	23 30 45.3	-0.6
OBN				*i* *PP	pP	23 31 28.9	+0.5
OBN				pmax	pmax		
	comp=Z,17nm,0.6s,mb4.8						
AKASG	**Malin Array Be**	32.84	309	P	P	23 31 10.8	-1.0
	comp=Z,1.1nm,0.3s,mb3.8,baz=81,slow=7.8,SNR=16						
AKASG				pP	pP	23 31 54.6	-0.4
	comp=Z,1.1nm,0.6s,baz=84,slow=7.7,SNR=3.5						
AKASG	**Malin Array Be**	32.84	309	P	P	23 31 10.8	-1.0
AKASG				pP	pP	23 31 54.6	-0.4
JOF	**Joensuu**	35.83	330	*e*p	P	23 31 37.3	+0.3
	comp=Z,7.9nm,0.4s,mb4.6						
VSU	**Vasula**	36.12	322	*i* P	P	23 31 39.2	-0.3
FINES	**FINESS Array B**	37.43	326	P	P	23 31 50.7	+0.3
	comp=Z,8.4nm,0.6s,mb4.5,baz=115,slow=9.4,SNR=56						
FINES	**FINESS Array B**	37.43	326	*i* P	P	23 31 50.7	+0.3
FINES				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KAF	**Kangasniemi**	37.58	327	*e*p	P	23 31 51.7	+0.1
	comp=Z,6.8nm,0.8s,mb4.2,baz=114,slow=8.1						
KAF	**Kangasniemi**	37.58	327	*e*P	P	23 31 51.7	+0.1
KAF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.2						
ARCES	**ARCESS Array B**	41.13	338	P	P	23 32 21.4	+0.6
	comp=Z,11nm,0.8s,mb4.3,baz=111,slow=7.5,SNR=41						
SSE	**Sheshan**	41.86	82	P	P	23 32 27.9	+0.7
	comp=Z,29nm,0.8s,mb4.8						
YAK	**Yakutsk**	44.12	35	*e*P	P	23 32 46.5	+1.5
	comp=Z,22nm,0.5s,mb4.7						
YAK	**Yakutsk**	44.12	35	*e*P	P	23 32 46.1	+1.2
YAK				*i* *PP	pP	23 33 27.0	-3.1
YAK				pmax	pmax		
	comp=Z,25nm,0.8s,mb4.6						
NB2	**NORSAR Subarra**	44.32	323	P	P	23 32 46.1	-0.4
	comp=Z,11nm,0.5s,mb4.4,baz=97,slow=7.9						
NOA	**NORSAR Array B**	44.32	323	P	P	23 32 45.7	-0.8
	comp=Z,13nm,0.7s,mb4.4,baz=97,slow=7.8,SNR=39						
NOA	**NORSAR Array B**	44.32	323	P	P	23 32 45.7	-0.8
NAO	**NORSAR Subarra**	44.48	323	P	P	23 32 46.1	-1.7
	comp=Z,11nm,0.5s,mb4.4						
NAO	**NORSAR Subarra**	44.48	323	P	P	23 32 46.1	-1.7
NAO				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.4						
DAVOX	**Davos**	45.64	303	P	P	23 32 57.5	+0.3
	comp=Z,0.7nm,0.3s,mb3.5,baz=140,slow=7.9,SNR=4.3						
TIXI	**Tiksi**	45.90	22	*e*P	P	23 32 58.2	-0.7
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.1						
KMBO	**Kilima Mbogo**	48.66	227	P	P	23 33 22.2	+1.3
	comp=Z,0.9nm,0.5s,mb3.4,baz=41,slow=13,SNR=8.7						
KMBO	**Kilima Mbogo**	48.66	227	*i* P	P	23 33 22.7	+1.7
KMBO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
EKA	**Eskdalemuir Ar**	52.20	316	P	P	23 33 46.5	-0.6
	comp=Z,1.3nm,0.8s,mb3.4,baz=104,slow=6.9,SNR=4.8						
MBAR	**Mbarara**	52.32	234*c*	*i*P	P	23 33 42.3	-6.3
YSS	**Yuzh-Sakhalins**	53.01	55	*i* P	P	23 33 54.3	+1.1
SEY	**Seymchan**	54.57	34	*e*P	P	23 34 06.1	+1.8
BILL	**Bilibino**	58.74	26	⇓*i*P	P	23 34 35.4	+1.7
BILL				pmax	pmax		
	comp=Z,11nm,1.7s,mb4.2						
IMA2	**Indian Mountai**	72.23	17	*e*P	P	23 36 00.5	+0.9
INK	**Inuvik**	73.99	9	P	P	23 36 10.9	+1.2
	comp=Z,2.6nm,0.5s,mb4.1,baz=346,slow=4.4,SNR=13						
INK	**Inuvik**	73.99	9	*e*P	P	23 36 11.3	+1.6
	comp=Z,2.5nm,0.5s,mb4.1						
INK	**Inuvik**	73.99	9	*e*P	P	23 36 11.3	+1.6
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DBIC	**Dimbokro**	74.51	267	P	P	23 36 12.6	-1.2
	comp=Z,2.3nm,0.5s,mb4.0,baz=339,slow=5.1,SNR=8.6						
COLA	**College**	74.58	16	*e*P	P	23 36 13.9	+0.8
	comp=Z,8.0nm,0.8s,mb4.4						
COLA	**College**	74.58	16	*e*P	P	23 36 14.5	+1.3
ILAR	**Eielson Array**	74.89	16	P	P	23 36 15.4	+0.6
	comp=Z,1.4nm,0.4s,mb3.9,baz=302,slow=5.6,SNR=38						
ILAR				pP	pP	23 37 05.5	+0.5
	comp=Z,0.8nm,0.9s,baz=315,slow=1.0,SNR=3.4						
THY	**Trims Highway**	76.31	16	*e*P	P	23 36 24.1	+1.2
BOSA	**Boshof**	77.58	220	P	P	23 36 31.1	+0.5
	comp=Z,2.5nm,0.6s,mb4.0,baz=47,slow=10,SNR=8.3						
KDAK	**Kodiak Island**	79.32	22	P	P	23 36 40.7	+1.3
	comp=Z,9.9nm,0.7s,mb4.6,baz=17,slow=5.2,SNR=12						
KDAK	**Kodiak Island**	79.32	22	P	P	23 36 40.7	+1.3
YKA	**Yellowknife Ar**	81.31	3	P	P	23 36 51.0	+1.2
	comp=Z,2.4nm,0.7s,mb3.9,baz=350,slow=5.4,SNR=6.7						
YKA	**Yellowknife Ar**	81.31	3	P	P	23 36 51.0	+1.2
YKA	**Yellowknife Ar**	81.31	3	*i* P	P	23 36 51.2	+1.4
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SCHQ	**Schefferville**	82.08	337	P	P	23 36 54.6	+0.7
	comp=Z,3.2nm,1.0s,mb3.9,baz=199,slow=20,SNR=3.2						
WRA	**Warramunga Arr**	82.12	122	P	P	23 36 54.9	+0.1
	comp=Z,3.5nm,0.6s,mb4.2,baz=323,slow=5.0,SNR=25						
WRA	**Warramunga Arr**	82.12	122	*i* P	P	23 36 55.2	+0.4
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
WRAB	**Tennant Creek**	82.12	122	*e*P	P	23 36 54.9	+0.2
	comp=Z,6.4nm,0.7s,mb4.4						
WRAB	**Tennant Creek**	82.12	122	*e*P	P	23 36 55.2	+0.4
DLBC	**Dease Lake**	83.89	11	P	P	23 37 05.5	+2.5
	comp=Z,1.7nm,0.8s,mb3.8,baz=180,slow=20,SNR=3.8						

NEIC 13 23:30:35.4, 38.04N×118.61W, h9^{km}, ML3.8(REN)**, After REN., California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMB	**Columbia Colle**	1.40	270	*e*P	Pn	23 31 00.4	-0.7
PAHR	**Pah Rah Range**	1.77	340	*e*P	Pn	23 31 08.1	+1.6
DAC	**Darwin (Calif)**	1.94	155	*e*P	Pn	23 31 09.0	+0.2
TPNV	**Topopah Spring**	2.17	119	*e*Pn	Pn	23 31 12.1	-0.1
LRV	**Little Rabbit**	2.51	231	Pn	Pn	23 31 15.2	-1.8
SAO	**San Andreas Ge**	2.59	241	*e*Pn	Pn	23 31 16.4	-1.8
OHCM	**Honcut**	2.59	301	*e*Pn	Pn	23 31 17.9	-0.3
PTRM	**Twissleman Ran**	2.70	209	*e*Pn	Pn	23 31 17.6	-2.3
GSC	**Goldstone**	3.10	151	*e*Pn	Pn	23 31 24.5	-0.9
MWC	**Mount Wilson**	3.83	173	Pn	Pn	23 31 34.6	-1.3
NEN	**Nelson**	3.85	127	Pn	Pn	23 31 35.1	-1.1
WDC	**Whiskeytown Da**	3.96	311	*e*Pn	Pn	23 31 36.2	-1.6
MOD	**Modoc**	4.07	342	*e*Pn	Pn	23 31 38.1	-1.2
LDFC	**Landfair**	4.08	135	Pn	Pn	23 31 37.5	-1.9
ARUT	**Antelope Range**	4.10	92	*e*Pn	Pn	23 31 38.6	-1.0
KIPM	**Iron Peak**	4.19	296	Pn	Pn	23 31 39.5	-1.4
WVOR	**Wild Horse Val**	4.39	360	Pn	Pn	23 31 43.5	-0.2
PFO	**Pinyon Flat Ob**	4.76	158	*e*Pn	Pn	23 31 46.8	-2.2
DUG	**Dugway**	5.00	63	*e*Pn	Pn	23 31 50.4	-2.0
MVU	**Marysvale**	5.06	83	*e*Pn	Pn	23 31 51.6	-1.6
MSU	**Marysvale**	5.09	83	Pn	Pn	23 31 52.7	-0.9
BGU	**Big Grassy Mou**	5.19	55	*e*Pn	Pn	23 31 53.1	-2.1
NLU	**North Lily Min**	5.44	67	Pn	Pn	23 32 01.4	+2.7
HVU	**Hansel Valley**	5.84	48	*e*Pn	Pn	23 32 02.5	-1.8
WUAZ	**Wupatki**	6.33	111	*e*Pn	Pn	23 32 09.8	-1.5
HLID	**Hailey**	6.37	29	Pn	Pn	23 32 09.5	-2.3
SRU	**San Rafael**	6.43	78	*e*Pn	Pn	23 32 07.4	-5.2

CRAAG ***13*** *23:45:33.7, 36.37N×2.10E, Ml3.1*
CSEM ***13*** *23:45:35.8±0.2, 36.28N×2.26E, h29^{km}±4^{km}, ML3.1, Error ellipse: s-maj=10.5km s-min=3.3km az=173.0*
MDD ***13*** *23:45:36.6±0.5, 36.40N×2.21E, mb3.5/9, Error ellipse: s-maj=8.4km s-min=4.8km az=175.0, PRXIMO*
NEIC ***13*** *23:45:36.3±0.7, 36.23N×2.31E, h26^{km}±9^{km}, ML3.1(ALG), Error ellipse: s-maj=10.9km s-min=6.0km az=161.0*
ISC 13 23:45:36.0±0.6**, 36.53N**±0.04×**2.16E**±0.04**, h10^{km}, n27,** σ1§**23**/43**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EBNR	**Beni Rached**	0.56	245	P	Pg	23 45 49.0	+1.6
EMHD	**Djebel Mahouad**	0.72	117	P	Pb	23 45 48.0	-2.2
ECHA	**Ech Chlef**	0.75	239	P	Pb	23 45 50.0	-0.6
ABA	**Alger-Bouzarea**	0.75	69	P	Pb	23 45 51.7	+1.0
ECHF	**Ech Chlef**	0.76	241	P	Pb	23 45 50.0	-0.9
EANR	**'Ain N'Sour**	1.04	236	P	Pb	23 45 55.0	-0.6
ABMS	**Boumerdes**	1.08	78	P	Pb	23 45 55.3	-1.1
ETRT	**Tiaret**	1.34	212	P	Pb	23 45 56.0	-4.7
EIBI	**Ibiza**	2.57	346	P	Pn	23 46 20.1	+1.7
	3.1nm,0.1s,SNR=31						
EIBI				S	Sn	23 46 49.4	-0.7
	8.0nm,0.3s,SNR=6.9						
EIBI	**Ibiza**	2.57	346	P	Pn	23 46 20.1	+1.6
	3.1nm,0.1s,SNR=31						
EIBI				S	Sn	23 46 49.4	-0.7
	8.0nm,0.3s,SNR=6.9						
EBEN	**Beniarda**	2.88	320	P	Pn	23 46 24.1	+1.3
	0.4nm,0.1s,SNR=7.9						
EBEN				S	Sn	23 46 57.0	-0.8
	0.1nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	2.88	320	P	Pn	23 46 24.1	+1.3
	0.4nm,0.1s,SNR=7.9						
EBEN				S	Sn	23 46 57.0	-0.8
	0.1nm,0.3s,SNR=7.9						

EMUR	La Murta	3.01	297	P	Pn	23 46 25.9	+1.2
	0.3nm,0.1s,SNR=7.9						
EMUR				S	Sn	23 47 01.2	0.0
	2.7nm,0.5s,SNR=7.9						
EMUR	La Murta	3.01	297	P	Pn	23 46 25.9	+1.2
	0.3nm,0.1s,SNR=7.9						
EMUR				S	Sn	23 47 01.2	-0.1
	2.7nm,0.5s,SNR=7.9						
ETOS	Mallorca	3.27	9	P	Pn	23 46 28.9	+0.5
	1.4nm,0.2s,SNR=7.9						
ETOS				S	Sn	23 47 07.5	-0.3
	1.2nm,0.3s,SNR=7.9						
ETOS	Mallorca	3.27	9	P	Pn	23 46 28.9	+0.5
ETOS				S	Sn	23 47 05.5	-2.3
ETOS	Mallorca	3.27	9	P	Pn	23 46 28.9	+0.5
	1.4nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.62	307	P	Pn	23 46 35.2	+1.8
	0.7nm,0.2s,SNR=9.9						
ETOB				S	Sn	23 47 16.1	-0.5
	0.7nm,0.2s,SNR=6.0						
ETOB	Tobarra	3.62	307	P	Pn	23 46 35.2	+1.8
	0.7nm,0.2s,SNR=9.9						
ETOB				S	Sn	23 47 16.1	-0.6
	0.7nm,0.2s,SNR=6.0						
EBER	Berja	4.07	277	P	Pn	23 46 40.9	+1.1
	0.9nm,0.1s,SNR=6.5						
EBER				S	Sn	23 47 26.6	-1.5
	1.7nm,0.3s,SNR=7.9						
EBER	Berja	4.07	277	P	Pn	23 46 40.9	+1.1
	0.9nm,0.1s,SNR=6.5						
EBER				S	Sn	23 47 26.6	-1.5
	1.7nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	4.35	332	P	Pn	23 46 45.3	+1.6
	2.1nm,0.1s,SNR=21						
EMOS				S	Sn	23 47 34.1	-1.0
	0.4nm,0.6s,SNR=7.9						
EMOS	Mosqueruela	4.35	332	P	Pn	23 46 45.3	+1.6
EMOS				S	Sn	23 47 32.8	-2.2
EMOS	Mosqueruela	4.35	332	P	Pn	23 46 45.3	+1.6
	2.1nm,0.1s,SNR=21						
EQES	Quesada	4.37	288	P	Pn	23 46 45.2	+1.2
	0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	23 47 33.7	-1.8
	3.6nm,0.4s,SNR=7.9						
EQES	Quesada	4.37	288	P	Pn	23 46 45.2	+1.2
	0.2nm,0.1s,SNR=7.9						
EQES				S	Sn	23 47 33.7	-1.8
	3.6nm,0.4s,SNR=7.9						
EQUE	Quentar	4.54	280	P	Pn	23 46 46.5	0.0
	0.5nm,0.2s,SNR=7.9						

ISC 14 00:12:24.5±1.1**, 38.26N**±0.05×**26.67E**±0.08**, h16**^{km}±8^{km}**,**
n8, σ0^{s}**94**/14**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.11	329	*i* P	Pb	00 12 27.7	-0.5
URLA				*i* S	Sb	00 12 31.2	+0.7
BLCB	Balcova	0.32	67	PG	Pb	00 12 31.2	-0.1
IZM	Izmir	0.48	74	*i* PG	Pb	00 12 34.4	+0.2
IZM				*i* SG	Sb	00 12 42.0	+1.2
KDAG	Bornova	0.49	73	*i* P	Pb	00 12 33.1	-1.2
KDAG				*i* S	Sb	00 12 40.4	-0.5
AKS	Akhisar	1.09	55	*e*PN	Pn	00 12 43.4	-1.7
AYDN	Tasoluk	1.13	122	*i* P	Pb	00 12 44.8	-0.4
AYDN				*i* S	Sb	00 12 58.2	-1.2
BDRM	Kayabasi	1.34	153	*i* P	Pn	00 12 48.8	0.0
BDRM				*i* S	Sb	00 13 06.5	+0.8
MANT	Manisa	1.50	81	*i* P	Pn	00 12 52.5	+1.5
MANT				*i* S	Sn	00 13 11.3	+1.0

WEL 14 00:15:26.6±0.2**, 45.30S**×**167.29E, h68**^{km}±2^{km}**, ML3.5**/7**,**
Error ellipse: s-maj=1.8km s-min=1.0km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.20	208	PN	P	00 15 36.7	-0.3
DCZ				SN	S	00 15 45.0	+0.2
MLZ	Mavora Lakes	0.62	95	PN	P	00 15 40.1	-0.7
MLZ				SN	S	00 15 50.2	-0.9
WHZ	Wether Hill Ro	0.75	142	PN	P	00 15 41.9	-0.3
WHZ				SN	S	00 15 53.2	-0.5
MSZ	Milford Sound	0.77	36	PN	P	00 15 42.0	-0.4
MSZ				SN	S	00 15 53.6	-0.5
WKZ	Wanaka	1.31	70	PN	P	00 15 49.2	-0.4
WKZ				SN	S	00 16 05.1	-1.4
EAZ	Earnscleugh	1.43	88	PN	P	00 15 50.5	-0.6
EAZ				SN	S	00 16 07.3	-1.9
JCZ	Jackson Bay	1.61	41	PN	P	00 15 52.9	-0.7
TUZ	Tuapeka	1.77	113	PN	P	00 15 54.6	-1.2
TUZ				SN	S	00 16 14.8	-2.4
LBZ	Lake Benmore	2.25	67	PN	P	00 16 00.2	-2.3
LBZ				SN	S	00 16 25.1	-4.0
ODZ	Otahua Downs	2.39	85	PN	P	00 16 02.0	-2.3
ODZ				SN	S	00 16 27.1	-5.3
FOZ	Fox Glacier	2.44	46	PN	P	00 16 03.7	-1.4
RPZ	Rata Peaks	3.12	61	PN	P	00 16 11.0	-3.8

CASC 14 00:36:26.0±1.9**, 10.01N**×**86.18W, h20**^{km}±9^{km}**, MD3.5,**
1C-4D, Off coast of Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCR	Vista de Mar	0.55	78⇑	*e*P	Pb	00 36 36.8	0.0
VCR				*e*S	Sb	00 36 46.8	+2.6
LIM1	Limonal	1.14	53	*i* P	Pb	00 36 45.8	-1.0
SSNN	San Juan del S	1.31	14⇓	*e*P	Pn	00 36 49.4	0.0
SSNN				*e*S	Sb	00 37 06.3	+0.2
MADN	Villa Maderas	1.52	24⇓	*e*P	Pn	00 36 53.4	+1.0
CONN	Concepcion	1.63	19	*e*P	Pn	00 36 54.2	+0.1
CGA2	Cerro Gallo 2	1.68	90	*e*P	Pn	00 36 54.1	-0.7
PRS1	Puriscal	1.84	91	*e*P	Pn	00 36 55.2	-1.7
LAJ	Bijagual	2.03	94	*e*P	Pn	00 36 52.6	-7.1
LCR2	La Lucha 2	2.16	97⇓	*e*P	Pn	00 37 01.1	-0.5
COPN	Copaltepe	2.19	349	*e*P	Pn	00 37 02.0	0.0
BUS	Buena Vista	2.42	101⇓	*i*P	Pn	00 37 05.5	+0.1
LEON	Leon	2.49	344	*e*P	Pn	00 37 06.2	-0.2
LEON				*e*S	Sn	00 37 36.2	-0.2

LDG ***14*** *00:47:35.1±0.8, 16.09S×166.69E, h10*^{km}*, Mb4.3/2, Error ellipse: s-maj=130.3km s-min=59.7km az=42.0*

IDC ***14*** *00:47:49.8±4.8, 15.07S×167.54E, h113*^{km}*±41*^{km}*, mb3.9/8, mb1 4.0/9, mb1mx3.9/16, mbtmp4.3/9, Error ellipse: s-maj=30.2km s-min=24.4km az=37.0*

NEIC ***14*** *00:47:53.6±1.8, 15.25S×167.44E, h142*^{km}*±15*^{km}*, mb4.3/6, Error ellipse: s-maj=14.0km s-min=12.9km az=188.0*

ISC 14 00:47:52.7±2.1**, 15.3S**±0.1×**167.4E**±0.1**, h151**^{km}±18^{km}**,**
n55, σ1^{s}**04**/34**, mb4.2**/13**, 4C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.85	187	*e*P	P	00 49 31.2	-0.5
DZM				*e*S	S	00 50 44.7	-4.0
DZM	Mont Dzumac	6.85	187	P	P	00 49 31.1	-0.6
	4.4nm,0.3s,baz=37,slow=20,SNR=26						
DZM				S	S	00 50 48.8	+0.2
	5.5nm,0.3s,baz=146,slow=23,SNR=6.5						
DZM	Mont Dzumac	6.85	187	*e*P	P	00 49 31.2	-0.5
DZM				*e*S	S	00 50 44.7	-4.0
NOUC	Port Laguerre	6.90	189	*e*P	P	00 49 32.4	0.0
NOUC				*e*S	S	00 50 50.0	+0.2
NOUC	Port Laguerre	6.90	189	*e*P	P	00 49 32.4	0.0
NOUC				*e*S	S	00 50 50.0	+0.2
AFI	Afiamalu	20.20	89	P	P	00 52 17.9	+0.4
	8.4nm,0.5s						
CTA	Charters Tower	20.71	253	P	P	00 52 25.1	+2.4
	1.2nm,0.5s,baz=63,slow=12,SNR=3.0						
URZ	Urewera	24.48	161	P	P	00 52 59.7	+0.6
	8.0nm,0.8s,mb4.3,baz=278,slow=7.1,SNR=2.7						
RPZ	Rata Peaks	28.55	174	P	P	00 53 36.1	-0.3
	14nm,0.9s,mb4.7,baz=322,slow=8.5,SNR=4.0						
STKA	Stephens Creek	28.76	230	P	P	00 53 39.2	+0.9
	6.1nm,0.3s,mb4.7,baz=48,slow=7.6,SNR=40						
STKA				PcP	PcP	00 56 44.6	-0.1
	3.0nm,0.6s,baz=14,slow=2.7,SNR=7.6						
STKA	Stephens Creek	28.76	230	*e*P	P	00 53 39.6	+1.2
STKA				PcP	PcP	00 56 44.6	-0.1
WRAB	Tennant Creek	31.82	257	*e*P	P	00 54 04.6	-0.8
	2.7nm,0.8s,mb4.0						
WRA	Warramunga Arr	31.83	257	P	P	00 54 04.2	-1.4
	1.6nm,0.6s,mb4.0,baz=86,slow=8.8,SNR=16						
VNDA	Vanda	62.35	181	*e*P	P	00 58 00.5	-0.6
	1.8nm,0.6s,mb4.1						
SBA	Scott Base	62.62	180	P	P	00 58 03.1	+0.3
	3.5nm,0.6s,mb4.4						
CASY	Casey	63.10	202	*e*P	P	00 58 03.6	-2.5
	65nm,1.4s,mb5.3						
QSPA	South Pole Qui	74.78	180	*e*P	P	00 59 17.9	+0.6
	5.1nm,0.6s,mb4.3						
SONM	Songino Array	82.98	324	P	P	01 00 02.5	+0.3
	0.6nm,0.4s,mb3.6,baz=149,slow=7.0,SNR=7.4						
ILAR	Eielson Array	86.98	18	P	P	01 00 20.3	-1.2
	0.3nm,0.8s,mb3.2,baz=248,slow=6.0,SNR=5.4						
SNAA	Sanae	93.04	183⇑	*i*	P	01 00 49.9	+0.2
SNAA	Sanae	93.04	183	*e*	P	01 00 51.8	+2.1
SNAA	Sanae	93.04	183	*e*P	P	01 00 49.7	0.0
	0.8nm,0.6s,mb4.0						
VNA3	Neumayer Olymp	93.70	181⇑	*i*	P	01 00 52.2	-0.5
VNA3	Neumayer Olymp	93.70	181	*e*	P	01 00 54.1	+1.4
VNA2	Neumayer--Watz	93.97	182⇑	*i*	P	01 00 53.6	-0.3
VNA2	Neumayer--Watz	93.97	182	*e*	P	01 00 55.4	+1.5
VNA1	Neumayer--Stat	94.27	181⇑	*i*	P	01 00 51.3	-4.0
VNA1	Neumayer--Stat	94.27	181	*e*	P	01 00 53.1	-2.2
MKAR	Makanchi Array	97.66	316	P	P	01 01 12.1	+0.7
	0.5nm,0.6s,mb4.2,baz=90,slow=6.6,SNR=5.2						
ARCES	ARCESS Array B	120.78	345	PKP	PKPdf	01 06 26.9	+0.5
	6.9nm,1.1s,baz=315,slow=3.4,SNR=6.7						
FINES	FINESS Array B	126.25	338	PKP	PKPdf	01 06 38.4	+1.3
	1.8nm,0.8s,baz=333,slow=4.3,SNR=3.7						
KMBO	Kilima Mbogo	128.11	256	PKP	PKPdf	01 06 45.3	+3.3
	1.3nm,0.8s,baz=196,slow=7.4,SNR=5.0						
CDF	Champ du Feu	143.10	338	*e*PKP1	PKPbc	01 07 07.1	+0.4
HINF	Hinteralfeld	143.75	338	*e*PKP1	PKPbc	01 07 09.4	+0.8
HAU	Haudompre	143.78	338	*e*PKP1	PKPbc	01 07 09.9	+1.2
MEZF	Maizieres J'vi	143.79	340	*e*PKP1	PKPbc	01 07 09.5	+0.8
CABF	La Chapelle	145.05	337	*e*PKP1	PKPbc	01 07 14.2	+1.9
	17nm,0.6s						
FLN	La Foliniere	145.13	346	*e*PKP1	PKPbc	01 07 13.4	+0.9
	18nm,0.5s						
LDF	La Druitiere	145.20	345	*e*PKP1	PKPbc	01 07 13.5	+0.9
	15nm,0.6s						
LOR	Lormes	145.26	340	*e*PKP1	PKPbc	01 07 14.4	+1.5
	12nm,0.6s						
SSF	Saint Saulge	145.56	340	*e*PKP1	PKPbc	01 07 15.5	+1.9
	25nm,0.8s						
GRR	Gorron	145.56	346	*e*PKP1	PKPbc	01 07 15.3	+1.7
	23nm,0.6s						
LPL	La Plagne	145.71	336	*e*PKP1	PKPbc	01 07 16.3	+2.3
	8.9nm,0.7s						
LPG	La Plagne	145.72	336	*e*PKP1	PKPbc	01 07 16.5	+2.4
	16nm,0.6s						
SMF	Signal de Mont	145.82	340	*e*PKP1	PKPbc	01 07 16.1	+1.8
AVF	Avril sur Loir	145.85	340	*e*PKP1	PKPbc	01 07 15.7	+1.4
	12nm,0.6s						
SGMF	Saint Gilles	146.06	348	*e*PKP1	PKPbc	01 07 16.3	+1.5
	19nm,0.6s						
BGF	Bois d'Agland	146.22	341	*e*PKP1	PKPbc	01 07 17.2	+2.0
	17nm,0.5s						
MBDF	Montbardon	146.35	335	*e*PKP1	PKPbc	01 07 17.6	+2.0
	8.2nm,0.6s						
ORIF	Oris-en-Rattie	146.55	336	*e*PKP1	PKPbc	01 07 18.4	+2.4
	9.4nm,0.7s						
TCF	Toulx Ste Croi	146.66	341	*e*PKP1	PKPbc	01 07 18.4	+2.2
	5.5nm,0.5s						
MFF	Saint Martin d	147.05	344	*e*PKP1	PKPdf	01 07 19.4	+4.1
	13nm,0.5s						
PGF	Pioggiola	147.06	330	*e*PKP1	PKPdf	01 07 20.1	+4.6
	74nm,1.3s						
RJF	Les Rejaudoux	147.76	341	*e*PKP1	PKPdf	01 07 22.1	+5.5
	22nm,0.9s						
LFF	La Frestale	148.32	342	*e*PKP1	PKPdf	01 07 23.1	+5.6
	13nm,0.7s						

BJI ***14*** *01:02:27.2, 0.40N×126.19E, h35*^{km}*, mB5.4, mb4.9, Ms4.3*

CSEM ***14*** *01:02:32.3, 1.13N×126.58E, h33*^{km}*, mb5.5*

MOS ***14*** *01:02:32.1±1.2, 1.11N×126.19E, h33*^{km}*, mb5.1/19, Error ellipse: s-maj=19.5km s-min=8.0km az=115.1*

NEIC ***14*** *01:02:33.9±0.3, 1.04N×126.21E, h35*^{km}*, mb4.8/15, Error ellipse: s-maj=12.0km s-min=6.2km az=69.0*

IDC ***14*** *01:02:35.4±4.0, 1.01N×126.23E, h51*^{km}*±36*^{km}*, mb4.3/14, mb1 4.3/15, mb1mx4.3/18, mbtmp4.5/15, ML4.5/1, MS3.8/3, Ms1 3.8/3, ms1mx3.2/27, Error ellipse: s-maj=29.4km s-min=10.5km az=74.0*

ISC 14 01:02:32.2±2.2**, 1.09N**±0.05×**126.29E**±0.09**, h37**^{km}±20^{km}**,**
n85, σ1^{s}**06**/82**, mb4.7**/43**, MS3.8**/2**, 2C-1D, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	11.19	296	*e*Pn	P	01 05 15.1	+2.3
KSM	Kuching	15.98	272	*e*Pn	P	01 06 17.3	+1.3
FITZ	Fitzroy Crossi	19.08	182	*e*P	P	01 06 52.2	-2.3
	14nm,0.8s						
FITZ	Fitzroy Crossi	19.08	182	P	P	01 06 52.5	-2.0
	1.1nm,0.3s,baz=37,slow=6.7,SNR=16						
FITZ				LR	LR	01 13 56.1	
	comp=Z,219nm,20.9s,baz=356,slow=36						
GUMO	Guam	22.19	55	LR	LR	01 14 55.3	
	comp=Z,208nm,20.9s,MS3.5,baz=241,slow=33						
WRAB	Tennant Creek	22.34	160	*e*P	P	01 07 28.1	-0.1
	88nm,0.8s,mb5.2						
WRAB	Tennant Creek	22.34	160	*e*P	P	01 07 28.1	-0.2
WRAB				pmax	pmax		
	comp=Z,88nm,0.8s,mb5.2						
WRA	Warramunga Arr	22.34	160	P	P	01 07 28.2	-0.1
	comp=Z,39nm,0.8s,mb4.9,baz=337,slow=10,SNR=61						
WRA				S	S	01 11 30.0	+3.3
	comp=Z,2.0nm,0.8s,baz=337,slow=15,SNR=5.3						
WB2	Warramunga Arr	22.35	160⇑	*i*P	P	01 07 27.9	-0.5
WB2				*e*S	S	01 11 30.9	+4.1
QIZ	Qiongzhong	24.04	319	*e*P	P	01 07 45.5	+0.5
	comp=Z,39nm,1.8s,mb4.5						
JOW	Kunigami	25.66	4	P	P	01 08 00.1	-0.5
	comp=Z,41nm,1.0s,mb4.9,baz=114,slow=22,SNR=2.3						
KULM	Kulim	25.93	280	*e*P	P	01 08 01.9	-1.2
CTA	Charters Tower	28.74	138	P	P	01 08 29.4	+0.8
	comp=Z,3.1nm,0.9s,mb4.0,baz=312,slow=14,SNR=2.8						
CTA	Charters Tower	28.74	138	P	P	01 08 29.4	+0.8
SSE	Sheshan	30.23	351	P	P	01 08 42.1	+0.3
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,190nm,4.0s						
SSE	Sheshan	30.23	351	P	P	01 08 42.1	+0.3
	comp=Z,31nm,0.7s,mb5.2						
GYA	Guiyang	31.50	325	P	P	01 08 53.3	+0.2
GYA				PCP	PcP	01 11 46.9	+1.4
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
NJ2	Nanjing	31.59	348	*e*P	P	01 08 58.0	+4.3
NJ2				AP	pP	01 09 07.0	+2.8
NJ2				XP	sP	01 09 11.9	+2.9
NJ2				PP	PP	01 10 03.1	+4.3
NJ2				PPP	PPP	01 10 19.1	+5.3
NJ2				S	S	01 14 04.0	+5.2
NJ2				XS		01 14 22.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,440nm,5.0s						
NJ2				LR	LR		
	comp=N,830nm,13.0s						
NJ2				LR	LR		
	comp=E,580nm,18.3s						
ENH	Enshi	33.12	333	*e*P	P	01 09 06.7	-0.5
	comp=E,5.2nm,0.5s,mb4.7						
NWAO	Narrogin (SRO)	34.90	193	P	P	01 09 21.6	-0.7
	comp=E,8.2nm,0.8s,mb4.7,baz=19,slow=12,SNR=4.6						
NWAO	Narrogin (SRO)	34.90	193	*e*P	P	01 09 22.2	-0.2
	comp=E,76nm,1.7s,mb5.3						
NWAO	Narrogin (SRO)	34.90	193	*e*P	P	01 09 22.2	-0.2
NWAO				pmax	pmax		
	comp=Z,76nm,1.7s						
STKA	Stephens Creek	35.85	157	*e*P	P	01 09 30.3	-0.2
	comp=Z,13nm,0.9s,mb4.9						
STKA	Stephens Creek	35.85	157	P	P	01 09 30.2	-0.3
	comp=Z,15nm,0.8s,mb5.0,baz=329,slow=9.4,SNR=23						
STKA	Stephens Creek	35.85	157	*e*P	P	01 09 30.2	-0.4
XAN	Xi'an	36.59	335	P	P	01 09 35.8	-0.9
MJAR	Matsushiro Arr	36.96	16	P	P	01 09 40.5	+0.7
	comp=Z,5.3nm,0.7s,mb4.5,baz=186,slow=9.5,SNR=13						
MDJ	Mudanjiang	43.44	3	P	P	01 10 35.4	+2.1
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,250nm,4.2s						
MDJ	Mudanjiang	43.44	3	*e*P	P	01 10 35.3	+2.0
	comp=Z,17nm,1.0s,mb4.7						
LSA	Lhasa	43.89	314	*e*P	P	01 10 37.5	+0.4
	comp=Z,7.6nm,0.7s,mb4.5						
LSA	Lhasa	43.89	314	*e*P	P	01 10 37.5	+0.3
LSA				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
GTA	Gaotai	45.15	331	*e*P	P	01 10 46.3	-0.8
GTA				AP	pP	01 10 57.6	-0.3
GTA				PCP	PcP	01 12 29.3	+1.7
TAU	Tasmania Unive	47.72	159	*e*P	P	01 11 06.8	-0.5
	comp=Z,18nm,1.1s,mb5.0						
TAU	Tasmania Unive	47.72	159	*e*P	P	01 11 06.8	-0.6
TAU				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
KLR	Kul'dur	48.19	5	*e*P	P	01 11 09.3	-1.6
HYB	Hyderabad	49.64	292	*i* P	P	01 11 20.0	-2.5
HYB	Hyderabad	49.64	292	*e*P	P	01 11 20.0	-2.5
SONM	Songino Array	49.65	342	P	P	01 11 23.0	+0.7
	comp=Z,2.4nm,0.8s,mb4.3,baz=156,slow=7.4,SNR=17						
SONM				PcP	PcP	01 12 44.1	+0.6
	comp=Z,2.1nm,0.7s,baz=164,slow=4.3,SNR=8.2						
CIT	Chita	51.87	350	*e*P	P	01 11 34.7	-4.3
CIT				*e*		01 13 43.1	
CIT				pmax	pmax		
	comp=Z,48nm,2.8s,mb4.9						
ZAK	Zakamensk	52.86	342	*e*P	P	01 11 47.0	+0.5
ZAK				*e*		01 12 55.4	
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
WMQ	Urumqi	54.64	326	*e*P	P	01 11 59.8	+0.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,200nm,4.5s						
BOD	Bodaibo	57.40	352	*e*P	P	01 12 18.2	-1.1
BOD				pmax	pmax		
	comp=Z,9.0nm,1.5s,mb4.6						
MKAR	Makanchi Array	59.48	326	P	P	01 12 32.8	-1.1
	comp=Z,4.5nm,0.5s,mb4.7,baz=120,slow=8.0,SNR=63						
MKAR	Makanchi Array	59.48	326	P	P	01 12 32.6	-1.3
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YAK	Yakutsk	60.84	2	*e*P	P	01 12 43.5	+0.5
YAK				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.4						
AAK	Ala-Archa	62.02	319	*e*P	P	01 12 50.5	-0.7
	comp=Z,10.0nm,1.4s,mb4.8						
AAK	Ala-Archa	62.02	319	*e*P	P	01 12 53.1	+1.9
KURK	Kurchatov	63.73	328	*e*P	P	01 13 01.5	-0.9
	comp=Z,14nm,0.6s,mb5.2						
KURK	Kurchatov	63.73	328	*e*P	P	01 13 01.5	-0.9
KURK				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
NVS	Novosibirsk	64.02	334	*e*P	P	01 13 00.0	-4.2
NVS				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
NVS				pmax	pmax		
	comp=N,11nm,1.7s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.7s						
KKAR	Karatay Array	64.87	318	P	P	01 13 09.1	-0.8
VOSK	Vostochnaya	68.83	328	P	P	01 13 33.7	-1.1
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
BVA0	Borovoye Array	69.29	328	*i* P	P	01 13 36.9	-0.7
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
BVAR	Borovoye Array	69.29	328	P	P	01 13 37.2	-0.3
	comp=Z,9.0nm,0.9s,mb4.7,baz=135,slow=8.4,SNR=22						
BRVK	Borovoye	69.36	328	*e*P	P	01 13 37.7	-0.3
	comp=Z,8.6nm,0.9s,mb4.7						
BRVK	Borovoye	69.36	328	*e*P	P	01 13 37.7	-0.3
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
TIXI	Tiksi	70.47	1	*e*P	P	01 13 40.6	-3.9
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
AB31	Akbulak array	73.91	321	*i* P	P	01 14 04.9	-0.4
AB31				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
SVE	Sverdlovsk	75.97	329	*e*P	P	01 14 16.9	-0.1
ARU	Arti	76.92	328	*e*P	P	01 14 21.9	-0.5
	comp=Z,13nm,0.7s,mb5.0						
ARU	Arti	76.92	328⇑	*i*P	P	01 14 22.0	-0.4
ARU				*e*		01 17 16.6	
ARU				*e*S	S	01 24 03.3	-3.0
ARU				*e*SS	SS	01 29 00.2	-6.0
ARU				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
ORR	Orenburg	77.75	323⇓	*i*P	P	01 14 27.8	+0.7
ORR				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
VNDA	Vanda	80.88	173	*e*P	P	01 14 43.7	+0.2
	comp=Z,3.7nm,0.9s,mb4.3						
VNDA	Vanda	80.88	173	*e*P	P	01 14 43.7	+0.1
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SBA	Scott Base	81.80	172	*e*P	P	01 14 50.0	+1.7
	comp=Z,2.5nm,0.7s,mb4.2						
SBA	Scott Base	81.80	172	*e*P	P	01 14 50.0	+1.7
SBA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
GNI	Garni	82.83	310	*e*P	P	01 14 59.1	+4.8
ZEI	Tsey	83.67	313	*e*P	P	01 14 57.3	-1.3
ZEI				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.1						
GOF	Gofitskoye	84.46	315	*e*P	P	01 15 02.1	-0.4
KIV	Kislovodsk	84.63	314	*e*P	P	01 15 05.9	+2.5
KIV	Kislovodsk	84.63	314	*e*P	P	01 15 05.8	+2.4
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
IMA2	Indian Mountai	84.96	24	*e*P	P	01 15 07.5	+3.0
ILAR	Eielson Array	87.66	25	P	P	01 15 17.9	+0.2
	comp=Z,0.9nm,0.9s,mb4.0,baz=252,slow=5.0,SNR=9.4						
OBN	Obninsk	88.95	325	P	P	01 15 25.0	+0.9
OBN						01 18 50.0	
OBN				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.2						
KMBO	Kilima Mbogo	89.06	269	P	P	01 15 26.6	+1.0
	comp=Z,1.4nm,0.6s,mb4.5,baz=57,slow=4.5,SNR=7.4						
QSPA	South Pole Qui	91.01	180	*e*P	P	01 15 33.3	0.0
BRTR	Keskin Array B	91.35	310	P	P	01 15 35.1	-0.6
	comp=Z,0.7nm,0.8s,mb4.1,baz=108,slow=3.9,SNR=5.0						
ARCES	ARCESS Array B	92.76	340	P	P	01 15 42.1	+0.6
	comp=Z,4.6nm,1.0s,mb4.9,slow=7.3,SNR=4.0						
AKASG	Malin Array Be	93.65	321	P	P	01 15 46.0	+0.1
	comp=Z,0.7nm,0.6s,mb4.3,baz=72,slow=5.0,SNR=5.4						
LSZ	Lusaka	98.10	255	*e*P	P	01 16 09.3	+2.3
BBB	Bella Bella	98.67	37	LR	LR	01 53 57.5	
	comp=Z,75nm,21.9s,MS4.2,baz=148,slow=31						
SNAA	Sanae	102.56	195	*e*Pdif	Pdif	01 16 26.5	+0.6
TXAR	Lajitas Array	123.54	53	PKP	PKPdf	01 21 29.6	+3.2
	comp=Z,0.7nm,0.7s,baz=239,slow=1.0,SNR=7.9						
JCT	Junction City	126.09	50	*e*PKPdf	PKPdf	01 21 34.6	+3.2
DBIC	Dimbokro	130.64	280	PKP	PKPdf	01 21 43.0	+2.5
	comp=Z,1.7nm,0.7s,baz=90,slow=2.0,SNR=3.1						

IDC ***14*** *01:24:36.3±5.9, 30.56S×178.03W, h51*^{km}*±43*^{km}*, mb4.2/3, mb1 4.3/3, mb1mx3.8/12, mbtmp4.4/3, Error ellipse: s-maj=65.8km s-min=28.7km az=126.0*

NEIC ***14*** *01:24:38.5±0.9, 30.60S×178.63W, h35*^{km}*, mb4.2/1, Error ellipse: s-maj=22.8km s-min=18.5km az=119.0*

ISC 14 01:24:35.9±0.8**, 30.49S**±0.09×**178.6W**±0.2**, h33**^{km}**, n19,**
σ1^{s}**36**/20**, mb4.7**/5**, 4C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.35	24	P	P	01 24 57.9	-0.7
	117nm,0.3s,baz=106,slow=21,SNR=8.0						
RAO				S	S	01 25 14.4	-1.0
	208nm,0.3s,baz=276,slow=23,SNR=9.1						
RAO	Raoul Island	1.35	24	*e*Pn	Pn	01 25 03.3	+4.6
RAO				*e*Sn	Sn	01 25 17.3	+1.7
URZ	Urewera	8.54	204	P	P	01 26 31.5	-8.6
	0.3nm,0.3s,baz=42,slow=24,SNR=2.6						
URZ				S	S	01 28 04.9	-11
	2.0nm,0.3s,baz=211,slow=17,SNR=8.4						
CTA	Charters Tower	33.35	280	P	P	01 31 14.8	+1.6

	3.3nm,0.6s,mb4.5,baz=89,slow=8.2,SNR=6.6						
STKA	Stephens Creek	34.00	257	P	P	01 31 18.9	+0.3
	5.0nm,0.7s,mb4.5,baz=75,slow=7.9,SNR=9.5						
WRAB	Tennant Creek	43.62	273	eP	P	01 32 39.0	0.0
	3.2nm,0.7s,mb4.2						
WRA	Warramunga Arr	43.63	273	P	P	01 32 38.7	-0.4
	1.5nm,0.3s,mb4.2,baz=111,slow=8.1,SNR=28						
GUMO	Guam	56.21	316	P	P	01 34 13.5	-1.8
	269nm,1.4s,mb6.1						
QSPA	South Pole Qui	59.62	180	eP	P	01 34 33.1	-5.3
SNAA	Sanae	78.08	179	⇑i	P	01 36 33.3	+0.9
SNAA	Sanae	78.08	179	eP	P	01 36 29.1	-3.3
SNAA				e		01 37 38.0	
VNA3	Neumayer Olymp	78.25	176	e	P	01 36 38.6	+5.3
VNA3	Neumayer Olymp	78.25	176	⇑iP	P	01 36 34.7	+1.4
VNA3				e		01 36 38.6	
VNA3				e		01 37 39.8	
VNA2	Neumayer--Watz	78.68	177	⇑i	P	01 36 36.8	+1.1
VNA2	Neumayer--Watz	78.68	177	e	P	01 36 40.5	+4.8
VNA1	Neumayer--Stat	78.91	177	⇑i	P	01 36 35.3	-1.7
VNA1	Neumayer--Stat	78.91	177	e	P	01 36 38.9	+1.9
KAF	Kangasniemi	144.47	340	ep	PKPbc	01 44 03.4	-4.3
FINES	FINESS Array B	145.06	340	PKPbc	PKPbc	01 44 06.7	-2.6
	1.5nm,0.5s,baz=63,slow=3.1,SNR=13						

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*ROM **14** 01:29:08.8±0.4, 42.99N×17.94E, h12^{km}, Ml3.5/21, Error ellipse: s-maj=5.6km s-min=3.3km az=105.0*
*LDG **14** 01:29:11.8±0.1, 43.03N×17.82E, h10^{km}, Ml3.7/17, Error ellipse: s-maj=2.9km s-min=1.8km az=25.0*
*CSEM **14** 01:29:11.3±0.0, 43.04N×17.73E, h2^{km}, ML3.7/12, Error ellipse: s-maj=1.2km s-min=0.9km az=21.0*
*PDG **14** 01:29:12.4±0.4, 43.03N×17.74E, h11^{km}±1^{km}*
*NEIC **14** 01:29:12.4, 43.03N×17.74E, h11^{km}, ML3.5(ROM), ML3.3(PDG), After PDG.*
ISC 14 01:29:10.5±0.4, **43.05N**±0.02×**17.61E**±0.02, **h2**^{km}±3^{km}, **n177**, σ**1**^{s}**44**/253, **26C-29D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.19	159	i Pg	Pg	01 29 14.7	+0.3
STON				i Sg	Sg	01 29 17.1	+0.2
STON	Ston	0.19	159	i Pg	Pg	01 29 14.6	+0.3
STON				i Sg	Sg	01 29 17.0	+0.1
BRY	Bratogost	0.70	102	⇓iPg	Pg	01 29 23.4	-1.1
BRY				eSg	Sg	01 29 33.7	-0.3
HCY	Herceg Novi	0.89	132	⇓iPg	Pg	01 29 26.7	-1.6
HCY				eSg	Sg	01 29 39.9	-0.3
UPM	Unac-Piva	0.97	80	⇑iPg	Pg	01 29 28.4	-1.4
UPM				eSg	Sg	01 29 42.8	+0.1
NKY	Niksic	1.05	102	⇑iPg	Pg	01 29 29.7	-1.8
NKY				eSg	Sg	01 29 45.6	+0.1
BUM	Brajici-Budva	1.21	128	⇓iPg	Pg	01 29 32.6	-2.1
BUM				eSg	Sg	01 29 50.7	-0.1
PLE	Pljevlja	1.34	77	⇓iPg	Pg	01 29 36.2	-1.0
PLE				eSg	Sg	01 29 56.0	+0.9
TTG	Podgorica	1.37	116	⇑iPg	Pg	01 29 35.8	-2.0
TTG				eSg	Sg	01 29 56.0	-0.1
BBLS	Bajina Basta -	1.55	57	i Pn	Pn	01 29 41.6	+2.4
BBLS				Sg	Sg	01 30 03.4	+1.3
NVSS	Nova Varos 2	1.60	73	⇓iPn	Pn	01 29 42.4	+2.5
NVSS				Sn	Sn	01 30 02.6	+1.2
ULC	Ulcinj	1.63	131	⇑iPg	Pg	01 29 40.5	-2.6
ULC				eSg	Sg	01 30 03.8	-1.0
IVA	Berane	1.69	95	⇓iPn	Pn	01 29 42.0	+0.7
IVA				eSn	Sn	01 30 05.3	+1.4
PVY	Plav	1.80	104	⇓iPn	Pn	01 29 43.9	+1.0
PVY				eSn	Sn	01 30 08.2	+1.6
PVY	Plav	1.80	104	⇓iPn	Pn	01 29 43.8	+1.0
FGMS	Monte Sant'Ang	1.81	223	Pn	Pn	01 29 44.6	+1.5
FGMS				Sn	Sn	01 30 10.8	+3.9
	280nm,0.4s						
MS1	Monte Sant'Ang	1.82	223	ePn	Pn	01 29 41.8	-1.4
BCI	Bajram Curri	1.94	110	i Pn	Pn	01 29 46.6	+1.8
BCI				i Sn	Sn	01 30 14.3	+4.2
BAI	Bari	2.01	196	ePn	Pn	01 29 43.6	-2.3
DIVS	Divcibare	2.03	58	⇑iPn	Pn	01 29 46.8	+0.7
DIVS				Sn	Sn	01 30 10.6	-1.7
RGNG	Rignano Grg	2.03	228	Pn	Pn	01 29 47.1	+0.9
RGNG				Sn	Sn	01 30 16.7	+4.3
BRT	Bari-Castellan	2.19	188	Pn	Pn	01 29 46.5	-1.9
FG2	Serracapriola	2.19	236	Pn	Pn	01 29 48.1	-0.4
FG2				Sn	Sn	01 30 21.2	+4.6
	151nm,0.4s						
CDT	Castel del Mon	2.20	207	ePn	Pn	01 29 47.4	-1.2
PE1	Pezze di Greco	2.25	184	ePn	Pn	01 29 47.2	-2.0
AMUR	Altamura	2.27	200	Pn	Pn	01 29 47.7	-1.8
	43nm,0.5s						
NOCI	Noci	2.29	190	Pn	Pn	01 29 48.6	-1.3
	131nm,0.5s						
GRUS	Gruza	2.41	69	i Pn	Pn	01 29 51.8	+0.2
GRUS				Sg	Sg	01 30 25.8	-5.1
FRES	Fresagrandinar	2.42	245	Pn	Pn	01 29 53.6	+1.8
	300nm,0.7s						
CIGN	Sant'Elia a Pi	2.44	236	Pn	Pn	01 29 53.5	+1.5
	101nm,0.6s						
FG4	Candela	2.47	220	Pn	Pn	01 29 53.1	+0.7
	356nm,0.6s						
NVLJ	Novalja	2.49	308	i Pn	Pn	01 29 54.4	+1.6
NVLJ				i Sn	Sn	01 30 26.9	+2.7
NVLJ	Novalja	2.49	308	i Pn	Pn	01 29 54.3	+1.5
NVLJ				i Sn	Sn	01 30 26.9	+2.7
BSSO	Busso	2.69	237	Pn	Pn	01 29 56.5	+0.9
	258nm,1.1s						
BEO	Belgrade	2.72	48	⇓iPn	Pn	01 29 55.9	0.0
BEO				Sn	Sn	01 30 30.0	+0.1
IPES	Pescosannita	2.75	230	Pn	Pn	01 29 56.5	+0.1
CII	Carovilli	2.78	243	Pn	Pn	01 29 59.0	+2.1
	89nm,0.7s						
VCEL	Villa Celiera	2.85	258	Pn	Pn	01 29 58.1	+0.2
VCEL				Sn	Sn	01 30 37.9	+4.6
	120nm,0.6s						
MIDA	Miranda	2.85	242	Pn	Pn	01 29 58.9	+1.0
RHK3	Tenkes	2.88	9	⇓iP	Pn	01 29 59.0	+0.7
MCRV	Calabrutti - M	2.90	220	Pn	Pn	01 29 57.8	-0.8
	104nm,0.6s						
SVIS	Svilajnac	2.91	63	⇓iPn	Pn	01 29 58.6	-0.1
SVIS				Sn	Sn	01 30 33.0	-1.6
SGG	Gregorio Mates	2.92	236	Pn	Pn	01 29 59.0	+0.2
	85nm,0.6s						
INTR	Introdacqua	2.92	251	Pn	Pn	01 29 58.7	-0.2
	262nm,0.8s						
TERO	Teramo	2.97	263	Pn	Pn	01 30 00.1	+0.5
	63nm,0.6s						
BOJS	Bojanci	2.98	326	i Pn	Pn	01 30 02.6	+2.8
BOJS				eSn	Sn	01 30 40.3	+3.7
	comp=Z,92nm,0.3s						
BOJS	Bojanci	2.98	326	i Pn	Pn	01 30 02.6	+2.9
BOJS				eSn	Sn	01 30 40.3	+3.7
	comp=Z,92nm,0.3s						
VAGA	Valle Agricola	2.99	238	Pn	Pn	01 30 00.9	+1.1
SGO	Sicignano	3.02	215	Pn	Pn	01 30 00.0	-0.3
	comp=Z,16nm,0.5s						
SKO	Skopje	3.03	109	ePn	Pn	01 29 59.9	-0.6
SLCN	Sala Consilina	3.04	210	Pn	Pn	01 29 59.8	-0.8
	comp=Z,54nm,0.7s						
OHR	Ohrid	3.06	128	ePn	Pn	01 30 01.2	+0.3
RHK1	Bakonya	3.06	6	⇓eP	Pn	01 30 01.5	+0.6
RHK1				eS	Sn	01 30 38.4	-0.3
FAGN	Fagnano	3.07	257	Pn	Pn	01 30 02.3	+1.3
	comp=Z,144nm,0.5s						
BARS	Barje	3.11	93	⇓iPn	Pn	01 30 02.1	+0.6
BARS				Sn	Sn	01 30 41.8	+2.0
VVLD	Villa Vallelon	3.17	250	Pn	Pn	01 30 02.3	-0.2
	comp=Z,158nm,0.8s						
AQU	L'Aquila	3.17	259	Pn	Pn	01 30 03.1	+0.6
	comp=Z,49nm,0.7s						
CRES	Cresnjev	3.17	332	ePn	Pn	01 30 04.4	+1.9
CRES				i Sn	Sn	01 30 43.0	+1.5
	comp=Z,33nm,0.2s						
CING	Cingoli	3.24	277	Pn	Pn	01 30 04.6	+1.2
	comp=Z,64nm,0.6s						
PKSM	Moragy	3.25	13	⇓eP	Pn	01 30 03.9	+0.4
PKSM				eS	Sn	01 30 43.6	+0.3
BOLS	Boljevac	3.27	75	ePn	Pn	01 30 04.0	+0.2
BOLS				Sn	Sn	01 30 43.0	-0.8
PTQR	Pietraquaria	3.27	253	Pn	Pn	01 30 04.9	+1.0
	comp=Z,7.0nm,0.3s						
MSC	Monte Massico	3.28	237	Pn	Pn	01 30 04.4	+0.4
NRCA	Norcia	3.31	268	Pn	Pn	01 30 04.3	0.0
	comp=Z,13nm,0.3s						
LNSS	Leonessa	3.39	264	Pn	Pn	01 30 06.2	+0.7
	comp=Z,74nm,0.7s						
VISS	Visnje	3.39	325	ePn	Pn	01 30 08.9	+3.3
VISS				eSn	Sn	01 30 51.0	+4.0
FIAM	Fiamignano	3.40	258	Pn	Pn	01 30 06.5	+0.8
	comp=Z,61nm,0.7s						
SNTG	Esanatoglia	3.42	275	Pn	Pn	01 30 06.1	+0.1
	comp=Z,18nm,0.3s						
BIA	Bitola	3.43	125	ePn	Pn	01 30 07.1	+0.9
ARV	Arcevia	3.44	279	Pn	Pn	01 30 06.8	+0.6
	comp=Z,14nm,0.2s						
FSSB	Fossombrone	3.58	282	Pn	Pn	01 30 08.9	+0.7
	comp=Z,35nm,0.3s						
CERT	Cerreto	3.59	254	Pn	Pn	01 30 09.0	+0.6
	comp=Z,33nm,0.4s						
MNS	Montasola	3.69	261	Pn	Pn	01 30 09.7	-0.1
	comp=Z,17nm,0.4s						
LJU	Ljubljana	3.72	325	ePn	Pn	01 30 12.4	+2.2
LJU				eSn	Sn	01 30 57.4	+2.2
MURB	Monte Urbino	3.72	275	Pn	Pn	01 30 12.1	+1.8
	comp=Z,184nm,0.3s						
PIEI	Pieia	3.73	279	Pn	Pn	01 30 11.3	+0.9
	comp=Z,23nm,0.2s						
BADI	Badiali	3.94	279	Pn	Pn	01 30 15.1	+1.7
	comp=Z,117nm,0.9s						
VOY	Vojsko	3.99	320	ePn	Pn	01 30 15.5	+1.4
VOY				e		01 30 28.0	
VOY				eSn	Sn	01 31 02.6	+0.4
VOY	Vojsko	3.99	320	ePn	Pn	01 30 15.5	+1.4
VOY				eSn	Sn	01 31 02.6	+0.4
PERS	Pernice	4.00	335	ePn	Pn	01 30 15.5	+1.2
PERS				eSn	Sn	01 31 01.9	-0.5
VAY	Valandovo	4.07	113	ePn	Pn	01 30 15.5	+0.3
VAY				eSn	Sn	01 30 51.2	-13
OBKA	Obir	4.09	329	⇑iPn	Pn	01 30 18.0	+2.5
	comp=Z,4.0nm,0.3s						
OBKA	Obir	4.09	329	⇑iPg	Pg	01 30 28.1	-4.0
	comp=Z,12nm,0.5s						
OBKA	Obir	4.09	329	⇑iSn	Sn	01 31 03.8	-0.8
	comp=Z,13nm,0.5s						
OBKA	Obir	4.09	329	⇑Pn	Pn	01 30 18.0	+2.5
OBKA				⇑Pg	Pg	01 30 28.1	-4.0
OBKA				Sn	Sn	01 31 03.8	-0.8
OBKA	Obir	4.09	329	Pg	Pg	01 30 28.1	-4.0
OBKA				Sn	Sn	01 31 03.8	-0.8
VTS	Vitosha	4.15	94	eP	Pn	01 30 16.0	-0.3
CRE	Caprese Michel	4.17	280	Pn	Pn	01 30 18.3	+1.7
	comp=Z,12nm,0.2s						
KKB	Krupnik	4.22	104	eP	Pn	01 30 20.0	+2.6
SFI	Santa Sofia	4.28	284	Pn	Pn	01 30 19.3	+1.1
	comp=Z,10µm,14.0s						
ROBS	Robic	4.33	319	ePn	Pn	01 30 19.6	+0.7
ROBS				eSn	Sn	01 31 10.7	-0.1
PGD	Poggio Sodo	4.36	283	Pn	Pn	01 30 20.7	+1.3
	comp=Z,13nm,0.4s						
PKSG		4.38	7	⇓iP	Pn	01 30 20.1	+0.5
ARSA	Arzberg	4.45	341	⇑iPn	Pn	01 30 21.4	+0.8
	comp=Z,16nm,0.3s,SNR=62						
ARSA	Arzberg	4.45	341	⇑iSn	Sn	01 31 13.4	-0.4
	comp=Z,34nm,0.6s						
ARSA	Arzberg	4.45	341	⇑iPn	Pn	01 30 21.4	+0.8
ARSA				Sn	Sn	01 31 13.4	-0.4
PTCC	Patocco-Chiusa	4.52	319	Pn	Pn	01 30 22.8	+1.2
	comp=Z,35nm,0.5s						
MMB	Musomiste	4.77	106	eP	Pn	01 30 27.0	+1.9
FVI	Forni Avoltri	4.94	318	Pn	Pn	01 30 29.0	+1.5
	comp=Z,126nm,0.9s						
KBA	Koelnbreinsper	5.03	325	⇓iPn	Pn	01 30 31.4	+2.5
	comp=Z,1.7nm,0.2s						
KBA	Koelnbreinsper	5.03	325	⇑iSn	Sn	01 31 28.6	+0.1
	comp=Z,8.7nm,0.4s						
KBA	Koelnbreinsper	5.03	325	⇓Pn	Pn	01 30 31.4	+2.5
	comp=Z,1.7nm,0.2s						
KBA				Sn	Sn	01 31 28.6	+0.1
PSZ	Piszkesteto	5.13	17	ePn	Pn	01 30 29.7	-0.6
	comp=Z,12nm,0.7s						
PSZ				eSn	Sn	01 31 28.3	-2.6
PSZ	Piszkesteto	5.13	17	ePn	Pn	01 30 29.7	-0.5
	comp=Z,12nm,0.7s						
PSZ				eSn	Sn	01 31 28.3	-2.6
ZST	Bratislava	5.16	356	i PN	Pn	01 30 31.0	+0.3
CTI	Castel Tesino	5.21	307	Pn	Pn	01 30 31.4	+0.1
	comp=Z,64nm,0.3s						
DRGR		5.21	42	⇓P	Pn	01 30 29.9	-1.5
DRGR		5.21	42	⇓P	Pn	01 30 29.9	-1.5
MOA	Molln	5.34	335	i Pn	Pn	01 30 35.3	+2.0
	SNR=41						
MOA	Molln	5.34	335	⇑iSn	Sn	01 31 36.8	+0.4
	comp=Z,17nm,0.3s						
MOA	Molln	5.34	335	Pn	Pn	01 30 35.2	+2.0
	comp=Z,17nm,0.3s						
MOA				Sn	Sn	01 31 36.8	+0.4
MOA	Molln	5.34	335	Pn	Pn	01 30 35.2	+1.9
	comp=Z,17nm,0.3s						
SMOL	Smolenice	5.47	359	i PN	Pn	01 30 35.4	+0.4
VYHS	Vyhne	5.51	9	ePN	Pn	01 30 35.0	-0.7
VYHS				eSN	Sn	01 31 40.8	+0.2
APPI	Appiano	5.69	309	Pn	Pn	01 30 38.4	+0.3
	comp=Z,192nm,2.9s						
KECS	Kecovo	5.80	19	ePN	Pn	01 30 39.5	-0.1
KECS				eSN	Sn	01 31 44.9	-2.8
VOIR		5.86	63	⇓P	Pn	01 30 42.6	+2.1
VOIR		5.86	63	⇓P	Pn	01 30 42.6	+2.2
WTTA	Wattenberg	5.96	317	⇑iPn	Pn	01 30 44.4	+2.4
	comp=Z,4.4nm,0.3s,SNR=12						
WTTA	Wattenberg	5.96	317	⇓iSn	Sn	01 31 49.5	-2.3
	comp=Z,17nm,0.5s						
WTTA	Wattenberg	5.96	317	⇓iSg	Sg	01 32 29.1	0.0
	comp=Z,17nm,0.4s						
WTTA	Wattenberg	5.96	317	⇑iPn	Pn	01 30 44.4	+2.4
	comp=Z,4.4nm,0.3s						
WTTA				Sn	Sn	01 31 49.5	-2.3
WTTA				Sg	Sg	01 32 29.1	0.0
WATA	Walderalm	6.04	317	⇑iPn	Pn	01 30 44.4	+1.3
WATA	Walderalm	6.04	317	⇑iSn	Sn	01 31 57.4	+3.6
	comp=Z,14nm,0.6s						
WATA	Walderalm	6.04	317	⇑Pn	Pn	01 30 44.4	+1.3
	comp=Z,14nm,0.6s						
WATA				Sn	Sn	01 31 57.4	+3.6
SNX	Sinaia	6.13	65	⇓P	Pn	01 30 43.8	-0.6
SNX	Sinaia	6.13	65	⇓P	Pn	01 30 43.8	-0.6
SQTA	Sankt Quirin	6.15	315	⇓iPn	Pn	01 30 46.0	+1.4
	comp=Z,4.3nm,0.3s,SNR=16						
SQTA	Sankt Quirin	6.15	315	⇓iSn	Sn	01 31 56.2	-0.4
	comp=Z,16nm,0.5s						
SQTA	Sankt Quirin	6.15	315	⇑iSg	Sg	01 32 36.2	+0.8
	comp=Z,22nm,0.6s						
SQTA	Sankt Quirin	6.15	315	⇓iPn	Pn	01 30 46.0	+1.3
	comp=Z,4.3nm,0.3s						
SQTA				Sn	Sn	01 31 56.2	-0.4
SQTA				Sg	Sg	01 32 36.2	+0.8
MOTA	Moosalm	6.29	315	⇑iPn	Pn	01 30 47.3	+0.8
	comp=Z,4.0nm,0.4s						
MOTA	Moosalm	6.29	315	⇓iSn	Sn	01 31 59.5	-0.5
	comp=Z,6.1nm,0.4s						
MOTA	Moosalm	6.29	315	⇑Pn	Pn	01 30 47.3	+0.8
	comp=Z,4.0nm,0.4s						
MOTA				Sn	Sn	01 31 59.5	-0.5
PGF	Pioggiola	6.35	268	ePn	Pn	01 30 44.6	-2.9
GEC2	GERESS Array S	6.40	336	ePn	Pn	01 30 49.3	+1.1
GEC2				eSn	Sn	01 32 00.4	-2.4
TREC	Trest	6.42	347	eSN	Sn	01 32 00.4	-2.8
CRVS	Cervenica-Dubn	6.44	23	ePN	Pn	01 30 48.4	-0.3
KHC	Kasperske Hory	6.70	337	eSN	Sn	01 32 06.6	-3.6
KHC				ex	x	01 33 06.5	
KOLS	Kolonicke sedl	6.72	27	ePN	Pn	01 30 53.9	+1.2
MORC	Moravsky Berou	6.73	360	ePn	Pn	01 30 53.0	+0.2
	comp=Z,2.1nm,0.5s						
OKC	Ostrava-Krasne	6.80	3	eSN	Sn	01 32 10.4	-2.4
DAVA	Damuels	6.91	310	⇑iPn	Pn	01 30 57.4	+2.0
	comp=Z,0.6nm,0.2s						
DAVA	Damuels	6.91	310	⇑iSn	Sn	01 32 14.4	-1.2
	comp=Z,2.0nm,0.2s						
DAVA	Damuels	6.91	310	⇑Pn	Pn	01 30 57.4	+2.0
	comp=Z,0.6nm,0.2s						
DAVA				Sn	Sn	01 32 14.3	-1.2
WET	Wettzell	6.92	333	ePn	Pn	01 30 56.4	+0.8
WET				eSn	Sn	01 32 12.9	-3.0
PRU	Pruhonice	7.26	344	eSN	Sn	01 32 18.1	-6.1
PRU				ex	x	01 32 33.5	
DPC	Dobruska-Polom	7.36	354	eSN	Sn	01 32 23.6	-3.1
ORO	Oropa	7.37	294	Pn	Pn	01 30 59.6	-2.1
SBF	Sospel	7.45	280	ePn	Pn	01 31 00.6	-2.3
SBF				eSn	Sn	01 32 21.8	-7.1
	comp=Z,17nm,0.4s						
UPC	Upice	7.54	352	eSN	Sn	01 32 27.8	-3.5
PVCC	Panska Ves	7.77	346	eSN	Sn	01 32 47.6	+11
MBDF	Montbardon	8.01	286	ePn	P	01 31 07.7	-3.0
MBDF				eSn	Sn	01 32 35.3	-7.6
	comp=Z,8.1nm,0.5s						
FRF	La Foret Royal	8.01	277	ePn	P	01 31 08.5	-2.3
FRF				eSn	Sn	01 32 36.4	-6.6
	comp=Z,3.5nm,0.3s						
NKC	Novy Kostel	8.01	336	eSN	Sn	01 32 39.4	-3.7
LMR	La Mourre	8.12	276	ePn	P	01 31 09.3	-2.9
LMR				eSn	Sn	01 32 37.8	-7.8
	comp=Z,2.9nm,0.3s						
LPG	La Plagne	8.17	291	ePn	P	01 31 10.6	-2.3
LPG				eSn	Sn	01 32 38.7	-8.2
	comp=Z,12nm,0.5s						
LPL	La Plagne	8.18	291	ePn	P	01 31 09.7	-3.5
LPL				eSn	Sn	01 32 39.4	-7.9
	comp=Z,7.7nm,0.4s						
BFO	Black Forest	8.37	312	ePn	P	01 31 15.0	-0.7
BFO				eSn	Sn	01 32 44.8	-7.1
MOX	Moxa	8.63	334	i P	P	01 31 19.8	+0.4
MOX				S	Sn	01 32 53.0	-5.6
MOX	Moxa	8.63	334	ePn	P	01 31 19.8	+0.4
MOX				eSn	Sn	01 32 53.0	-5.6
ORIF	Oris-en-Rattie	8.66	286	ePn	P	01 31 17.8	-2.0
ORIF				eSn	Sn	01 32 51.3	-7.9
	comp=Z,14nm,0.6s						
SMRF	Simiane la Rot	8.79	280	ePn	P	01 31 18.8	-2.8
CLL	Collm	8.84	341	eSG	Sx	01 33 28.0	
CLL				e		01 34 10.0	
CABF	La Chapelle	8.93	297	ePn	P	01 31 21.1	-2.4
CABF				eSn	Sn	01 32 56.3	-10
	comp=Z,9.8nm,0.7s						
HINF	Hinteralfeld	8.94	306	ePn	P	01 31 20.4	-3.2
HINF				eSn	Sn	01 32 56.9	-9.2
	comp=Z,6.2nm,0.5s						
CDF	Champ du Feu	8.99	310	ePn	P	01 31 22.0	-2.4
CDF				eP		01 31 27.3	
HAU	Haudompre	9.32	306	ePn	P	01 31 26.3	-2.7
HAU				eSn	Sn	01 33 06.3	-9.4
	comp=Z,7.2nm,0.4s						
VIVF	Saint-Julien-l	9.50	285	ePn	P	01 31 27.5	-3.9
VIVF				eSn	Sn	01 33 10.3	-10
	comp=Z,0.7nm,0.3s						
SMF	Signal de Mont	10.41	295	ePn	P	01 31 40.0	-3.9
SMF				eSn	S	01 33 31.1	-11
	comp=Z,2.7nm,0.2s						
LOR	Lormes	10.58	298	ePn	P	01 31 43.1	-3.1
LOR				eSn	S	01 33 35.9	-11
	comp=Z,6.4nm,0.3s						
SSF	Saint Saulge	10.75	297	ePn	P	01 31 45.6	-2.9
SSF				eSn	S	01 33 40.2	-10
	comp=Z,1.1nm,0.4s						
AVF	Avril sur Loir	10.78	295	ePn	P	01 31 45.4	-3.5
AVF				eSn	S	01 33 40.8	-11
	comp=Z,0.5nm,0.2s						
BGF	Bois d'Agland	11.06	294	ePn	P	01 31 49.7	-3.0
BGF				eSn	S	01 33 48.0	-10
	comp=Z,3.5nm,0.3s						
CAF	Calviac	11.36	285	ePn	P	01 31 53.9	-2.9
TCF	Toulx Ste Croi	11.43	292	eSn	S	01 33 57.4	-10
	comp=Z,0.8nm,0.3s						
RJF	Les Rejaudoux	11.77	287	ePn	P	01 31 59.6	-2.9

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*NIED **14** 01:44:00, 38.00N×141.30E, h107^{km}, Mw3.6 Best double couple: M$_0$3.22×10^{14} NP1:ϕ_s244°, δ89°, λ-124°. NP2: ϕ_s153°, δ34°, λ-1°.*
*JMA **14** 01:44:04.9, 37.99N×141.26E, h66^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1:ϕ_s51°, δ66°, λ-162°. NP2:ϕ_s314°, δ74°, λ-25°. Principal axes: T Plg5°, Azm4°; N Plg60°, Azm103°; P Plg29°, Azm271°;*
ISC 14 01:44:04.8±1.1, **37.98N**±0.04×**141.30E**±0.08, **h63**^{km}±9^{km}, **n13**, σ**0**^{s}**38**/24, **7C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMM	Marumori	0.41	254	⇑P	P	01 44 16.3	0.0
JMM				S	S	01 44 24.5	-0.3
JIO	Ouri	0.47	5	⇑P	P	01 44 17.3	+0.4
JIO				S	S	01 44 26.0	+0.3
JOU	Okura	0.63	308	P	P	01 44 18.5	0.0
JOU				S	S	01 44 28.8	+0.1
JFK	Kawauchi	0.70	209	⇑P	P	01 44 19.4	0.0
JFK				S	S	01 44 30.4	+0.1
JFT	Otama	0.89	239	⇑P	P	01 44 21.8	0.0
JFT				eS	S	01 44 33.9	-0.5
JMK	Ichinoseki	0.97	357	⇑P	P	01 44 22.7	-0.1
JYS	Shirataka	1.00	284	⇓P	P	01 44 23.2	0.0
JYS				S	S	01 44 37.3	+0.4
JYK	Kaneyama	1.19	322	⇑P	P	01 44 25.7	-0.1
JYK				S	S	01 44 41.4	0.0
JYA	Atsumi	1.39	297	P	P	01 44 28.0	-0.6
JYA				eS	S	01 44 46.2	0.0
JFY	Yanaizu	1.39	246	⇓P	P	01 44 28.3	-0.3
JFY				S	S	01 44 45.8	-0.4
JOM	Ohasama	1.49	360	⇑P	P	01 44 29.8	-0.2
JOM				eS	S	01 44 48.6	+0.1
JNS	Sasagawa	1.57	265	P	P	01 44 30.6	-0.6
MAT	Matsushiro	2.85	241	P	P	01 44 49.7	+0.6
MAT				eS	S	01 45 23.5	+1.1

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*MOS **14** 01:45:31.0±1.1, 62.01N×144.56E, h6^{km}, mb4.4/1, Error ellipse: s-maj=44.1km s-min=34.9km az=32.7*
NERS 14 01:45:31.0, 62.01N×144.56E, h6^{km}, 1D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCHR	Omchak	1.61	101	ePg	Pg	01 46 01.1	-2.0
OCHR				Pgmax		01 46 02.9	
	20nm,0.2s						
OCHR				Pgmax		01 46 02.9	
	10.0nm,0.2s						
OCHR				i Sg	Sg	01 46 23.2	-1.3
OCHR				Sgmax		01 46 23.7	
	630nm,0.3s						
OCHR				Sgmax		01 46 23.7	
	910nm,0.3s						
OCHR	Omchak	1.61	101	eP	Pn	01 46 01.1	+1.0
OCHR				i		01 46 23.2	
OCHR				pmax	pmax		
	comp=E,20nm,0.2s						
OCHR				pmax	pmax		
	comp=Z,10.0nm,0.2s						
OCHR				smax			
	comp=N,630nm,0.3s						
OCHR				smax			
	comp=E,910nm,0.3s						
SUUS	Susuman	1.85	64	⇓iPg	Pg	01 46 05.5	-2.4
SUUS				Pgmax		01 46 06.3	
	comp=E,140nm,0.2s						
SUUS				Pgmax		01 46 06.3	
	comp=E,490nm,0.2s						
SUUS				Pgmax		01 46 06.3	
	comp=E,320nm,0.2s						
SUUS				eSg	Sg	01 46 29.2	-3.4
SUUS				Sgmax		01 46 30.7	
	comp=E,630nm,0.3s						
SUUS				Sgmax		01 46 30.7	
	comp=E,480nm,0.3s						
SUUS	Susuman	1.85	64	i P	Pn	01 46 05.5	+1.9
SUUS				e		01 46 29.2	
SUUS				pmax	pmax		
	comp=N,140nm,0.2s						
SUUS				pmax	pmax		
	comp=E,490nm,0.2s						
SUUS				pmax	pmax		
	comp=Z,320nm,0.2s						
SUUS				smax			
	comp=N,630nm,0.3s						
SUUS				smax			
	comp=E,480nm,0.3s						
MGD	Magadan 1	3.59	121	eP	Pn	01 46 28.8	+0.4
MGD				Pmax		01 46 29.4	
	comp=E,40nm,0.2s						
MGD				ePg	Pg	01 46 38.1	-4.6
MGD				Pgmax		01 46 39.0	
	comp=E,140nm,0.4s						
MGD				e		01 47 11.3	
MGD				eSg	Sg	01 47 23.2	-7.4
MGD				Sgmax		01 47 26.9	

	comp=E,1μm,0.4s						
MGD				Sgmax		01 47 26.9	
	comp=E,900nm,0.4s						
MGD	Magadan 1	3.59	121	eP	Pn	01 46 28.8	+0.4
MGD				e		01 47 11.3	
MGD				pmax	pmax		
	comp=Z,40nm,0.2s						
MGD				pmax	pmax		
	comp=Z,140nm,0.4s						
MGD				smax			
	comp=N,1μm,0.4s						
MGD				smax			
	comp=E,900nm,0.4s						
SEY	Seymchan	3.75	72	eP	Pn	01 46 29.1	-1.5
SEY				ePb	Pb	01 46 34.8	-2.5
SEY				ePg	Pg	01 46 39.8	-6.0
SEY				Pgmax		01 46 40.9	
	comp=E,100nm,0.5s						
SEY				Pgmax		01 46 40.9	
	comp=E,70nm,0.5s						
SEY				e		01 47 20.6	
SEY				eSg	Sg	01 47 28.6	-7.2
SEY				Sgmax		01 47 30.3	
	comp=E,260nm,0.3s						
SEY				Sgmax		01 47 30.3	
	comp=E,150nm,0.3s						
SEY	Seymchan	3.75	72	eP	Pn	01 46 29.1	-1.5
SEY				e		01 47 20.6	
SEY				pmax	pmax		
	comp=E,100nm,0.5s						
SEY				pmax	pmax		
	comp=Z,70nm,0.5s						
SEY				smax			
	comp=N,260nm,0.3s						
SEY				smax			
	comp=E,150nm,0.3s						
TLAR	Talaya	3.85	100	ePg	Pg	01 46 45.8	-2.1
TLAR				Pgmax		01 46 51.7	
	comp=E,10.0nm,0.4s						
TLAR				e		01 47 11.6	
TLAR				eSg	Sg	01 47 38.7	-0.5
TLAR				Sgmax		01 47 42.1	
	comp=E,210nm,0.3s						
TLAR				Sgmax		01 47 42.1	
	comp=E,320nm,0.3s						
TLAR	Talaya	3.85	100	eP	Pn	01 46 45.8	+14
TLAR				e		01 47 11.6	
TLAR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
TLAR				smax			
	comp=N,210nm,0.3s						
TLAR				smax			
	comp=E,320nm,0.3s						
MA2	Magadan	3.90	126	eP	Pn	01 46 32.5	-0.3
MA2				ePg	Pg	01 46 42.2	-6.7
MA2				Pgmax		01 46 45.2	
	comp=E,20nm,0.4s						
MA2				Pgmax		01 46 45.2	
	comp=E,30nm,0.4s						
MA2				Pgmax		01 46 45.2	
	comp=E,30nm,0.4s						
MA2				eSg	Sg	01 47 32.2	-8.7
MA2				Sgmax		01 47 35.8	
	comp=E,230nm,0.5s						
MA2				Sgmax		01 47 35.8	
	comp=E,110nm,0.4s						
MA2	Magadan	3.90	126	eP	Pn	01 46 32.7	-0.1
MA2				pmax	pmax		
	comp=Z,40nm,1.1s						

*IDC **14** 02:50:28.6±24.0, 30.64S×178.07E, h674^{km}±245^{km}, mb3.1/2, mb1 3.3/2, mb1mx3.0/10, mbtmp4.3/2, Error ellipse: s-maj=204.7km s-min=95.8km az=78.0*

ISC 14 02:50:04.8±2.7**, 31.4S**±0.2×**179.4E**±0.3**, h451**^{km}±19^{km}**, n19, σ0^{s}95**/18**, mb3.9**/2**, 4C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	6.21	188	PN	P	02 51 43.0	+0.8
PUZ	Puketiti	6.72	188	PN	P	02 51 48.2	+0.7
PUZ				SN	S	02 53 08.7	-0.2
MWZ	Matawai	7.08	192	PN	P	02 51 52.2	+0.8
URZ	Urewera	7.09	195	PN	P	02 51 50.4	-1.1
URZ				SN	S	02 53 17.5	+1.5
WNVZ	Wahianoa	8.49	200	PN	P	02 52 07.3	+0.5
TSZ	Takapari Road	9.07	197	PN	P	02 52 12.2	-1.1
BFZ	Birch Farm	9.60	194	PN	P	02 52 19.3	+0.2
MRZ	Mangatainoka R	9.74	197	PN	P	02 52 18.6	-2.0
KIW	Kapiti Island	10.11	200	PN	P	02 52 23.4	-1.3
THZ	Tophouse	11.57	205	PN	P	02 52 40.0	-0.7
STKA	Stephens Creek	32.06	259	P	P	02 55 56.0	+1.9
	2.4nm,0.5s,mb3.9,baz=108,slow=10,SNR=11						
WRA	Warramunga Arr	41.90	275	P	P	02 57 14.8	-0.8
	1.3nm,0.3s,mb3.9,baz=113,slow=8.0,SNR=13						
SNAA	Sanae	77.21	179	⇑i	P	03 01 11.4	-0.2
VNA3	Neumayer Olymp	77.45	177	⇑i	P	03 01 12.9	0.0
VNA2	Neumayer--Watz	77.85	178	⇑i	P	03 01 15.4	+0.3
VNA1	Neumayer--Stat	78.10	177	⇑i	P	03 01 17.0	+0.6
FINES	FINESS Array B	145.26	338	PKP	PKPdf	03 08 48.1	-0.9
	4.4nm,0.7s,baz=49,slow=4.3,SNR=43						
AKASG	Malin Array Be	150.66	320	PKPbc	PKPdf	03 09 02.7	+4.6
	1.7nm,0.7s,baz=61,slow=2.7,SNR=9.5						
AKASG				PKPab	PKPab	03 09 11.7	-3.5
	0.3nm,0.5s,baz=51,slow=4.3,SNR=5.6						
BRTR	Keskin Array B	151.04	296	PKPbc	PKPdf	03 09 04.7	+5.7
	0.7nm,0.8s,baz=122,slow=3.6,SNR=5.2						

*IDC **14** 02:57:51.5±1.2, 5.37N×93.36E, mb3.9/7, mb1 4.1/7, mb1mx3.9/19, mbtmp3.9/7, Error ellipse: s-maj=56.3km s-min=20.6km az=50.0*

ISC 14 02:57:54.4±1.1**, 5.4N**±0.2×**93.4E**±0.3**, h33**^{km}**, n8, σ0^{s}65**/7**, mb3.9**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	39.45	127	P	P	03 05 22.7	-0.7
	7.5nm,1.0s,mb4.4,baz=318,slow=15,SNR=3.2						
MKAR	Makanchi Array	42.36	349	P	P	03 05 47.5	+0.3
	1.4nm,0.8s,mb3.7,baz=172,slow=8.8,SNR=8.2						
SONM	Songino Array	43.75	13	P	P	03 05 58.7	+0.2
	0.7nm,0.8s,mb3.5,baz=202,slow=8.5,SNR=5.4						
SONM				PcP	PcP	03 07 45.9	+0.5
	0.3nm,0.5s,baz=180,slow=1.4,SNR=3.2						
WRA	Warramunga Arr	47.48	123	P	P	03 06 29.1	+0.7
	3.5nm,0.7s,mb4.4,baz=300,slow=9.5,SNR=22						
BVAR	Borovoye Array	51.11	342	P	P	03 06 55.0	-1.0
	0.9nm,0.7s,mb3.8,baz=135,slow=8.4,SNR=4.6						
BVAR				PcP	PcP	03 08 11.7	+0.1
	0.8nm,0.5s,SNR=4.9						
BRTR	Keskin Array B	63.51	312	P	P	03 08 23.6	-0.3
	0.5nm,0.9s,mb3.5,baz=117,slow=6.4,SNR=3.2						
GERES	GERESS Array B	79.19	319	P	P	03 09 58.6	+0.8
	1.3nm,0.8s,mb3.9,baz=90,slow=6.7,SNR=9.4						
TXAR	Lajitas Array	141.80	24	PKP	PKPdf	03 17 27.3	+3.9
	0.1nm,0.4s,baz=344,slow=1.2,SNR=2.2						

*NEIC **14** 03:05:24.2, 37.19S×176.73E, h222^{km}, MG3.9(WEL), After WEL.*

WEL 14 03:05:24.9±0.3**, 37.19S**×**176.72E, h214**^{km}±3^{km}**, ML3.9**/13**, Error ellipse: s-maj=5.1km s-min=4.4km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	1.11	164	P	P	03 05 56.9	-0.2
URZ	Urewera	1.11	164	PN	P	03 05 56.9	-0.2
URZ				SN	S	03 06 21.6	-0.5
MWZ	Matawai	1.31	151	P	P	03 05 58.4	-0.2
MWZ	Matawai	1.31	151	PN	P	03 05 58.4	-0.3
MWZ				SN	S	03 06 24.8	+0.1
MXZ	Matakaoa Point	1.32	107	eP	P	03 05 58.2	-0.5
MXZ	Matakaoa Point	1.32	107	PN	P	03 05 58.2	-0.5
MXZ				SN	S	03 06 24.4	-0.4
PUZ	Puketiti	1.51	126	P	P	03 06 00.0	-0.3
PUZ				S	S	03 06 27.2	-0.4
PUZ	Puketiti	1.51	126	PN	P	03 05 60.0	-0.3
PUZ				SN	S	03 06 26.6	-1.0
KNZ	Kokohu	1.98	158	P	P	03 06 04.2	-0.4
KNZ				S	S	03 06 34.5	-0.7
KNZ	Kokohu	1.98	158	PN	P	03 06 04.2	-0.3
KNZ				SN	S	03 06 34.0	-1.2
BKZ	Black Stump Fm	1.99	185	P	P	03 06 04.2	-0.4
BKZ	Black Stump Fm	1.99	185	PN	P	03 06 04.2	-0.4
BKZ				SN	S	03 06 34.6	-0.7
FWVZ	Far West T-bar	2.26	204	eP	P	03 06 07.9	+0.4
FWVZ	Far West T-bar	2.26	204	PN	P	03 06 07.9	+0.4
WNVZ	Wahianoa	2.31	202	P	P	03 06 08.2	+0.1
WNVZ	Wahianoa	2.31	202	PN	P	03 06 08.2	+0.1
MOVZ	Moawhango	2.35	199	P	P	03 06 08.0	-0.4
MOVZ	Moawhango	2.35	199	PN	P	03 06 08.0	-0.4
PXZ	Pawanui	2.84	178	PN	P	03 06 13.1	-0.8
TSZ	Takapari Road	2.93	192	P	P	03 06 13.7	-1.2
TSZ	Takapari Road	2.93	192	PN	P	03 06 13.7	-1.2
BFZ	Birch Farm	3.51	186	eP	P	03 06 20.2	-1.6
BFZ	Birch Farm	3.51	186	PN	P	03 06 20.2	-1.6
MRZ	Mangatainoka R	3.58	194	eP	P	03 06 20.4	-2.3
MRZ	Mangatainoka R	3.58	194	PN	P	03 06 20.1	-2.6
MRZ				SN	S	03 07 04.0	-3.4
KIW	Kapiti Island	3.93	200	P	P	03 06 24.2	-2.7
KIW	Kapiti Island	3.93	200	PN	P	03 06 24.2	-2.7
KIW				SN	S	03 07 11.3	-3.6
CAW	Cannon Point	4.12	198	P	P	03 06 26.6	-2.7
MSWZ	Moikau Station	4.38	195	P	P	03 06 29.2	-3.2
TCW	Tory Channel	4.45	205	P	P	03 06 30.7	-2.6
LTZ	Lake Taylor	6.55	210	eP	P	03 06 56.5	-3.6
MQZ	McQueen's Vall	7.21	204	eSN	S	03 08 21.2	-8.6
TAU	Tasmania Unive	23.15	247	eP	P	03 10 10.8	-2.4

NNC 14 03:48:19.4±5.6**, 37.45N**×**70.19E, mpv3.3, 2C-3D, Error ellipse: s-maj=46.3km s-min=38.8km az=150.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.66	2	⇓P	Pn	03 49 43.0	-3.7
	0.6nm,0.2s,baz=190,slow=14,SNR=38						
KK31				⇓S	Sn	03 50 52.1	-1.2
	1.8nm,0.4s,baz=177,slow=30,SNR=5.2						
AAK	Ala-Archa	6.14	31	⇑P	Pn	03 49 52.9	-0.7
	3.3nm,0.8s						
AAK				⇑S	Sn	03 51 03.0	-2.5
	5.4nm,0.9s						
AB31	Akbulak array	13.95	331	⇓P	P	03 51 38.0	-2.4
	0.6nm,0.6s						

*NEIC **14** 03:50:47.5, 41.32S×172.56E, h193^{km}, MG3.9(WEL), After WEL.*

WEL 14 03:50:48.0±0.3**, 41.33S**×**172.56E, h189**^{km}±2^{km}**, ML3.8**/13**, 10C-2D, Error ellipse: s-maj=1.9km s-min=1.9km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRZ	Quartz Range	0.50	357	P	P	03 51 13.8	-0.3
QRZ				S	S	03 51 32.8	-1.5
QRZ	Quartz Range	0.50	357	PN	P	03 51 13.8	-0.4
QRZ				SN	S	03 51 32.8	-1.6
THZ	Tophouse	0.50	149	P	P	03 51 14.0	-0.1
THZ				S	S	03 51 33.2	-1.1
THZ	Tophouse	0.50	149	PN	P	03 51 14.0	-0.1
THZ				SN	S	03 51 33.2	-1.1
NNZ	Nelson	0.63	80	P	P	03 51 14.1	-0.6
NNZ				S	S	03 51 15.2	-20
NNZ	Nelson	0.63	80	⇑PN	P	03 51 14.0	-0.7
NNZ				SN	S	03 51 33.9	-1.3
DSZ	Denniston Nort	0.71	234	P	P	03 51 14.5	-0.5
DSZ	Denniston Nort	0.71	234	PN	P	03 51 14.4	-0.6
DSZ				SN	S	03 51 33.7	-2.3
TUWZ	Tuamarina	1.04	96	PN	P	03 51 16.8	-0.3
TUWZ				SN	S	03 51 38.2	-1.4
BSWZ	Blackbirch Sta	1.06	112	P	P	03 51 17.0	-0.2
BSWZ	Blackbirch Sta	1.06	112	PN	P	03 51 17.0	-0.2
BSWZ				SN	S	03 51 39.2	-0.6
DUWZ	D'Urville Isla	1.16	63	PN	P	03 51 17.6	-0.4
DUWZ				SN	S	03 51 40.7	-0.5
TCW	Tory Channel	1.30	85	P	P	03 51 18.8	-0.4
TCW	Tory Channel	1.30	85	⇑PN	P	03 51 18.8	-0.5
TCW				SN	S	03 51 41.6	-1.8
CMWZ	Cape Campbell	1.31	109	P	P	03 51 19.3	0.0
CMWZ	Cape Campbell	1.31	109	PN	P	03 51 19.3	0.0
CMWZ				SN	S	03 51 42.2	-1.3
KHZ	Kahutara	1.31	146	P	P	03 51 19.0	-0.3
KHZ	Kahutara	1.31	146	⇑PN	P	03 51 19.0	-0.4
LTZ	Lake Taylor	1.47	188	P	P	03 51 20.2	-0.6
LTZ	Lake Taylor	1.47	188	⇓PN	P	03 51 20.2	-0.6
SNZO	South Karori	1.61	90	P	P	03 51 21.2	-1.0
SNZO	South Karori	1.61	90	⇑PN	P	03 51 21.2	-0.9
MRW	Makara Radio	1.61	87	P	P	03 51 21.3	-0.9
MRW	Makara Radio	1.61	87	PN	P	03 51 21.3	-0.9
WEL	Wellington	1.66	89	P	P	03 51 21.7	-0.9
WEL	Wellington	1.66	89	PN	P	03 51 21.7	-0.9
BHW	Baring Head	1.74	93	P	P	03 51 22.4	-1.0
BHW	Baring Head	1.74	93	⇑PN	P	03 51 22.4	-0.9
KIW	Kapiti Island	1.83	76	P	P	03 51 23.5	-0.8
KIW	Kapiti Island	1.83	76	⇑PN	P	03 51 23.5	-0.8
CAW	Cannon Point	1.90	84	P	P	03 51 24.0	-1.0
CAW	Cannon Point	1.90	84	⇑PN	P	03 51 24.0	-1.0
MSWZ	Moikau Station	2.02	93	P	P	03 51 25.4	-0.9
MSWZ	Moikau Station	2.02	93	⇑PN	P	03 51 25.4	-0.9
PAWZ	Paruwai Farm	2.16	92	P	P	03 51 26.7	-1.1
PAWZ	Paruwai Farm	2.16	92	⇑PN	P	03 51 26.7	-1.0
WVZ	Waitaha Valley	2.21	217	P	P	03 51 26.8	-1.6
WVZ	Waitaha Valley	2.21	217	⇓PN	P	03 51 26.8	-1.6
MTW	Mount Morrison	2.22	87	P	P	03 51 27.4	-1.1
MTW	Mount Morrison	2.22	87	⇑PN	P	03 51 27.4	-1.1
NRZ	Ngariki Road	2.25	28	P	P	03 51 27.9	-0.9
NRZ	Ngariki Road	2.25	28	PN	P	03 51 27.9	-0.9
DFE	Dawson Falls	2.32	31	P	P	03 51 28.6	-1.0
NEZ	North Egmont	2.37	30	P	P	03 51 29.0	-1.1
MQZ	McQueen's Vall	2.38	178	P	P	03 51 28.3	-2.0
MRZ	Mangatainoka R	2.38	75	P	P	03 51 28.9	-1.4
PKE	Pukeiti	2.40	28	P	P	03 51 29.4	-1.1
WAZ	Wanganui	2.42	50	P	P	03 51 30.0	-0.8
RAEZ	Rainy Point	2.47	35	P	P	03 51 30.3	-1.1
RPZ	Rata Peaks	2.63	205	P	P	03 51 31.5	-1.7
VRZ	Vera Road	2.77	38	P	P	03 51 32.7	-2.1
BFZ	Birch Farm	2.86	78	P	P	03 51 34.7	-1.2
TSZ	Takapari Road	2.88	65	P	P	03 51 34.4	-1.7
WNVZ	Wahianoa	3.06	50	P	P	03 51 36.4	-2.0
FOZ	Fox Glacier	3.08	223	P	P	03 51 35.1	-3.5
FWVZ	Far West T-bar	3.08	49	eP	P	03 51 36.9	-1.7
MOVZ	Moawhango	3.10	53	P	P	03 51 36.5	-2.3
WPVZ	Whakapapa	3.12	48	P	P	03 51 36.9	-2.1
CNZ	Chateau	3.12	48	P	P	03 51 36.9	-2.2
TUVZ	Tukino	3.13	50	P	P	03 51 37.6	-1.6
TWVZ	Taurewa	3.15	45	P	P	03 51 37.0	-2.4
NGZ	Ngauruhoe	3.17	48	P	P	03 51 37.6	-2.0
WTVZ	West Tongariro	3.20	47	P	P	03 51 37.7	-2.4
KATZ	Kakaramea	3.36	47	P	P	03 51 39.6	-2.4
LBZ	Lake Benmore	3.52	209	eP	P	03 51 41.6	-2.4
BKZ	Black Stump Fm	3.70	56	eP	P	03 51 42.7	-3.6
JCZ	Jackson Bay	3.92	224	P	P	03 51 46.2	-2.9
ODZ	Otahua Downs	3.97	200	eP	P	03 51 47.5	-2.2
WKZ	Wanaka	4.36	215	P	P	03 51 51.3	-3.3
EAZ	Earnscleugh	4.57	210	eP	P	03 51 53.9	-3.4
URZ	Urewera	4.66	50	eP	P	03 51 54.4	-4.0
MWZ	Matawai	4.85	54	eP	P	03 51 59.2	-1.7
TUZ	Tuapeka	5.09	204	eP	P	03 52 01.3	-2.7
MLZ	Mavora Lakes	5.13	217	eP	P	03 52 02.1	-2.5

MAN 14 04:31:23.8, 12.47N×**123.63E, h7**^{km}**, mb4.0, ML2.7, MS2.4, 2C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	Masbate	0.12	183	⇑iP	Pg	04 31 27.1	+0.7
MMPH				i S	Sg	04 31 29.6	+1.4
CNP	Catarman	1.01	88	eP	Pb	04 31 42.7	-0.5
CNP				eS	Sb	04 31 57.1	+0.7
RCP	Roxas	1.25	224	⇑eP	Pb	04 31 47.5	+0.1
RCP				eS	Sb	04 32 04.5	+0.9
OTRP	Odiongan	1.58	266	eP	Pn	04 31 51.5	-0.8
OTRP				eS	Sb	04 32 12.1	-0.9
GUIM	Jordan	2.10	209	eP	Pn	04 31 59.6	-0.2
GUIM				eS	Sn	04 32 26.7	+0.2

*IDC **14** 04:33:02.2±0.7, 13.41N×125.22E, mb4.3/12, mb1 4.4/13, mb1mx4.2/22, mbtmp4.3/13, ML4.1/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/16, Error ellipse: s-maj=39.2km s-min=13.8km az=80.0*

*MAN **14** 04:33:04.6, 13.66N×125.14E, h24^{km}, mb5.4, ML4.4, MS4.7*

*MOS **14** 04:33:05.2±0.9, 13.45N×125.23E, h33^{km}, mb4.7/5, Error ellipse: s-maj=43.3km s-min=13.4km az=107.4*

*NEIC **14** 04:33:07.6±0.4, 13.45N×125.20E, h35^{km}, mb4.6/5, Error ellipse: s-maj=19.4km s-min=6.6km az=77.0*

*BJI **14** 04:33:08.9, 14.18N×125.59E, h21^{km}, mb4.6*

ISC 14 04:33:06.0±0.9**, 13.59N**±0.03×**125.20E**±0.06**, h37**^{km}±9^{km}**, n56, σ1^{s}38**/63**, mb4.3**/20**, 2C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	Virac	1.02	271	eP	P	04 33 22.9	-1.0
PVCP				eS	S	04 33 36.8	-0.4
CNP	Catarman	1.19	206	eP	P	04 33 26.2	-0.2
CNP				eS	S	04 33 42.0	+0.4
BESP	Borongan	1.99	173	eP	P	04 33 34.9	-2.9
PLP	Palo	2.42	185	eP	P	04 33 42.9	-1.1
PLP				eS	S	04 34 12.4	-0.2
AUQP	San Andres	2.47	264	eP	P	04 33 47.4	+2.6
GQP	Guinayangan	2.69	277	eP	P	04 33 48.0	+0.1
RCP	Roxas	3.13	230	⇑eP	P	04 33 56.7	+2.6
BOAC	Boac	3.27	268	eP	P	04 33 51.8	-4.3
OTRP	Odiongan	3.33	249	eP	P	04 33 55.8	-1.2
POLP	Polilio Island	3.36	290	eP	P	04 34 02.4	+5.0
MSLP	Maasin	3.45	186	eP	P	04 33 58.9	+0.3
SCPH	Surigao	3.79	176	⇑eP	P	04 34 09.5	+6.0
GUIM	Jordan	3.90	221	eP	P	04 34 05.9	+0.9
GUIM				eS	S	04 34 51.1	+1.0
TBP	Tagbilaran	4.09	199	eP	P	04 34 09.9	+2.2
TBP				eS	S	04 35 07.9	+13
BALP	Baler	4.11	302	eP	P	04 34 05.9	-2.1
BALP				eS	S	04 34 51.4	-4.2
SJMP	San Jose	4.13	255	eP	P	04 34 07.1	-1.2
BUTP	Butuan	4.61	175	eP	P	04 34 17.7	+2.6
CAUP	Cauayan	4.67	316	eP	P	04 34 16.2	+0.3
LUBP	Lubang	4.82	272	eP	P	04 34 15.8	-2.3
BUSP	Coron	5.13	253	eP	P	04 34 17.9	-4.5
BUKP	Musuan	5.67	181	eP	P	04 34 31.9	+1.9
APYP	Conner	5.71	319	eP	P	04 34 28.8	-1.7
APYP				eS	S	04 35 30.5	-5.3
PAGZ	Pagadian	5.98	198	eP	P	04 34 34.7	+0.4
ENPP	El Nido	6.12	248	eP	P	04 34 37.2	+0.9
YHNB	Yeheng	11.60	342	ePn	P	04 35 50.5	-1.6
JOW	Kunigami	13.49	12	Pn	P	04 36 18.3	+1.0
	2.0nm,0.3s,baz=176,slow=28,SNR=4.2						
JNU	Nakatsue	20.12	14	P	P	04 37 40.6	+1.0
	13nm,0.9s,baz=153,slow=6.8,SNR=3.8						
GYA	Guiyang	21.58	309	P	P	04 37 59.1	+4.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
ENH	Enshi	22.05	321	eP	P	04 38 00.5	+1.3
	comp=Z,6.8nm,0.9s,mb4.1						
XAN	Xi'an	25.16	327	P	P	04 38 30.0	+0.5
XAN				AP	pP	04 38 37.6	-1.9
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
KAKA	Kakadu	27.10	164	eP	P	04 39 04.7	+17
	comp=Z,4.8nm,0.6s,mb4.2						
FITZ	Fitzroy Crossi	31.49	179	eP	P	04 39 24.1	-2.8
	comp=Z,6.5nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	31.49	179	P	P	04 39 24.2	-2.7
	comp=Z,8.3nm,0.6s,mb4.8,baz=3.2,slow=9.0,SNR=20						
WRAB	Tennant Creek	34.51	165	eP	P	04 39 50.7	-2.3
	comp=Z,2.4nm,0.6s,mb4.3						
WRAB				epP	pP	04 40 02.1	-1.3
WRAB	Tennant Creek	34.51	165	eP	P	04 39 50.7	-2.3
WRAB				e*PP	pP	04 40 02.1	-1.3
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
WRA	Warramunga Arr	34.51	165	P	P	04 39 51.2	-1.8
	comp=Z,0.8nm,0.6s,mb3.9,baz=343,slow=9.4,SNR=7.5						
WB2	Warramunga Arr	34.51	165	eP	P	04 39 51.6	-1.5
SONM	Songino Array	37.56	339	P	P	04 40 20.1	+1.5
	comp=Z,6.2nm,0.9s,mb4.3,baz=154,slow=8.7,SNR=36						
SONM				LR	LR	04 57 54.6	
	comp=Z,55nm,18.8s,baz=141,slow=40						
CTA	Charters Tower	39.35	148	P	P	04 40 32.5	-1.3
	comp=Z,2.9nm,0.7s,mb4.2,baz=329,slow=8.8,SNR=4.0						
ZAK	Zakamensk	40.81	339	eP	P	04 40 36.6	-9.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
NWAO	Narrogin (SRO)	46.87	189	P	P	04 41 31.9	-2.8
	comp=Z,5.4nm,0.6s,mb4.7,baz=6.0,slow=8.6,SNR=6.2						
NWAO	Narrogin (SRO)	46.87	189	eP	P	04 41 32.7	-2.0
STKA	Stephens Creek	47.86	161	P	P	04 41 41.7	-0.7
	comp=Z,3.8nm,0.7s,mb4.5,baz=334,slow=15,SNR=6.5						
STKA	Stephens Creek	47.86	161	eP	P	04 41 42.3	-0.2
MKAR	Makanchi Array	48.78	322	P	P	04 41 50.9	+1.5
	comp=Z,5.0nm,0.8s,mb4.6,baz=114,slow=9.1,SNR=26						
KURK	Kurchatov	52.77	325	eP	P	04 42 20.8	+1.3
	comp=Z,26nm,1.0s,mb5.1						
KURK	Kurchatov	52.77	325	eP	P	04 42 20.8	+1.3
KURK				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
TIXI	Tiksi	58.08	1	eP	P	04 42 56.4	-1.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BRVK	Borovoye	58.44	325	eP	P	04 43 00.8	+0.4
	comp=Z,17nm,1.3s,mb4.9						
BRVK	Borovoye	58.44	325	eP	P	04 43 00.8	+0.4
BRVK				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
TAU	Tasmania Unive	59.77	161	P	P	04 43 09.8	0.0
ILAR	Eielson Array	76.93	26	P	P	04 44 55.9	-0.3
	comp=Z,0.7nm,0.8s,mb3.7,baz=253,slow=6.7,SNR=6.0						
ARCES	ARCESS Array B	80.74	339	P	P	04 45 18.3	+1.5
	comp=Z,3.9nm,0.9s,mb4.3,baz=83,slow=7.3,SNR=4.0						
ARCES	ARCESS Array B	80.74	339	P	P	04 45 18.3	+1.5
INK	Inuvik	81.61	22	P	P	04 45 22.6	+1.3
	comp=Z,0.9nm,0.6s,mb3.9,baz=333,slow=6.8,SNR=5.5						
FINES	FINESS Array B	82.49	331	P	P	04 45 26.3	+0.3
	comp=Z,1.7nm,0.8s,mb4.0,baz=72,slow=4.4,SNR=7.2						

*GUC **14** 04:49:51.8±0.8, 27.33S×70.67W, h67^{km}±4^{km}, ML3.6*

*NEIC **14** 04:49:51.8, 27.33S×70.67W, h67^{km}, mb3.5/2, After GUC.*

ISC 14 04:49:51.4±0.6**, 27.34S**±0.05×**70.7W**±0.1**, h69**^{km}±5^{km}**, n21, σ1^{s}12**/24**, 9C-1D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CDCH	Caldera	0.27	343	⇓iP	P	04 50 03.0	+0.6
CDCH				i S	S	04 50 10.6	+0.2
CDCH				AMP		04 50 11.8	
	comp=E,159nm,0.1s						
CPCH	Copiapo	0.34	94	⇑iP	P	04 50 03.1	+0.2
CPCH				i S	S	04 50 10.8	-0.5
CPCH				AMP		04 50 11.7	
	comp=E,119μm,0.1s						
CPN1	Cerro Paranal	2.71	6	eP	P	04 50 34.1	+0.3
CPN1				i S	S	04 51 06.4	+0.9
CPN1				AMP		04 51 24.7	
	comp=N,220nm,0.6s						
TLL	Tololo Astrono	2.82	181	eP	P	04 50 35.7	+0.4
TLL				AMP		04 51 29.8	
	comp=E,394nm,0.6s						
CMCH	Combarbala	3.83	183	eP	P	04 50 47.6	-1.7
CEN1	Los Morros	3.96	7	eP	P	04 50 47.4	-3.7
TRQA	Tornquist	12.98	148	ePn	P	04 52 50.2	-4.2
NNA	Nana	16.31	338	Pn	P	04 53 36.4	-1.1
	comp=E,3.8nm,0.7s						
SAML	Samuel	19.63	23	P	P	04 54 14.5	-2.6
	comp=E,1.6nm,1.0s						
VNA3	Neumayer Olymp	55.15	160	⇑i	P	04 59 19.0	+0.3
VNA3	Neumayer Olymp	55.15	160	⇑i	P	04 59 19.0	+0.3
VNA3	Neumayer Olymp	55.15	160	e	P	04 59 20.8	+2.1
VNA1	Neumayer--Stat	55.41	159	⇑i	P	04 59 20.3	-0.2
VNA1	Neumayer--Stat	55.41	159	⇑i	P	04 59 20.3	-0.2
VNA1	Neumayer--Stat	55.41	159	e	P	04 59 22.3	+1.8
VNA2	Neumayer--Watz	55.77	159	⇑i	P	04 59 23.4	+0.3
VNA2	Neumayer--Watz	55.77	159	⇑i	P	04 59 23.4	+0.3
VNA2	Neumayer--Watz	55.77	159	e	P	04 59 25.4	+2.3
SNAA	Sanae	57.37	160	⇑i	P	04 59 34.6	+0.1
SNAA	Sanae	57.37	160	⇑i	P	04 59 34.6	+0.1
SNAA	Sanae	57.37	160	e	P	04 59 36.3	+1.8

*NEIC **14** 05:45:58.2, 14.92N×93.95W, h40^{km}, MD4.4(MEX), After*

MEX.

MEX 14 05:45:58.2±0.7**,14.92N×93.95W,h40^{km},MD4.1,Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	San Cristobal	2.21	35	i P	P	05 46 33.0	-0.2
CCIG	Comitan	2.21	52	i P	P	05 46 31.3	-1.9
CCIG				i S	S	05 46 56.6	-3.0
CMIG	Matias Romero	2.34	338	eP	P	05 46 30.7	-4.3
CMIG				i S	S	05 47 00.1	-2.6
JCT	Junction City	16.39	342	ePn	P	05 49 45.4	-1.7
NATX	Nacogdoches	16.78	358	P	P	05 49 50.4	-1.4
MNTX	Cornudas Mount	19.70	330	Pn	P	05 50 25.5	-1.5

MAN 14 06:01:26.7,17.63N×122.46E,h26^{km},mb3.8,ML2.6,MS2.2,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	0.72	327	eP	Pb	06 01 40.3	-0.3
SGCP				eS	Sb	06 01 50.4	+0.4
CAUP	Cauayan	0.91	221	eP	Pb	06 01 44.8	+1.0
APYP	Conner	1.18	281	eP	Pn	06 01 47.7	0.0
APYP				eS	Sn	06 02 04.6	+1.6
ABRA	Dolores	1.66	271	eP	Pn	06 01 54.1	-0.6
ABRA				eS	Sn	06 02 16.4	+1.1
BALP	Baler	2.06	204	eP	Pn	06 02 00.5	+0.1
BALP				eS	Sn	06 02 24.9	-0.6

IDC **14** *06:14:46.2±1.2,41.09N×79.02E,mb4.0/8,mb1 4.2/11,mb1mx4.0/23,mbtmp4.0/11,ML3.9/3,MS3.5/2,Ms1 3.5/2,ms1mx2.9/20,Error ellipse: s-maj=20.0km s-min=18.3km az=139.0*
NEIC **14** *06:14:47.3±0.6,41.11N×79.03E,h10^{km},mb4.2/6,Error ellipse: s-maj=12.1km s-min=8.7km az=208.0*
MOS **14** *06:14:49.5±1.5,41.26N×79.01E,h33^{km},mb4.4/5,Error ellipse: s-maj=13.8km s-min=6.8km az=103.8*
BJI **14** *06:14:49.0,41.22N×79.12E,h21^{km},mB4.7,mb4.4,ML4.6,Ms4.7,Msz4.2*
NNC **14** *06:14:54.7±3.0,41.57N×78.92E,h20^{km}±13^{km},mpv4.3,Error ellipse: s-maj=26.8km s-min=9.0km az=154.0*
ISC 14 06:14:49.3±0.3**,41.13N**±0.03×**79.14E**±0.05**,h33^{km},n68,σ1$\overset{s}{.}$31**/78**,mb4.3**/13**,MS3.7**/4**,9C-7D,Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	2.90	237	eP	P	06 15 39.1	+4.9
KSH				S	S	06 16 17.3	+9.0
KSH				Smax			
	comp=N,2µm,0.6s						
KSH				Smax			
	comp=E,3µm,1.1s						
KZA	Kyzart	3.07	289	P	P	06 15 37.3	+0.8
	SNR=89						
TKM2	Tokmak 2	3.19	305	P	P	06 15 39.5	+1.3
	SNR=184						
KBK	Karagaybulak	3.48	297	P	P	06 15 44.1	+1.7
	SNR=7.9						
UCH	Uchtor	3.63	289	P	P	06 15 44.4	-0.2
	SNR=40						
CHMS	Chumysh	3.76	301	P	P	06 15 51.4	+5.0
	SNR=14						
FRU	Bishkek	3.78	298	ePN	Pn	06 15 51.0	+4.2
FRU				i		06 15 54.5	
FRU				eS	S	06 16 41.0	+10
FRU				pmax	pmax		
	comp=Z,80nm,1.5s						
FRU				smax			
	comp=E,1µm,1.5s						
AAK	Ala-Archa	3.78	295	P	P	06 15 47.7	+1.1
	SNR=35						
AAK	Ala-Archa	3.78	295	⇑Pn	Pn	06 15 47.8	+1.0
	comp=E,21nm,0.5s,baz=150,slow=22						
AAK				⇓Pg	P	06 15 58.5	+12
	comp=E,80nm,0.5s,baz=150,slow=22						
AAK				⇓Lg		06 16 44.2	
	comp=E,345nm,0.6s,baz=150,slow=22						
AAK	Ala-Archa	3.78	295	ePn	Pn	06 15 46.9	+0.1
AAK				eS	S	06 16 40.8	+10
USP	Ospenovka	4.05	303	P	P	06 15 55.5	+5.0
	SNR=20						
AML	Almayashu	4.20	286	P	P	06 15 51.5	-1.2
	SNR=13						
EKS2	Erkin-Say	4.29	293	P	P	06 15 54.6	+0.8
	SNR=13						
MK02	Makanchi Array	6.09	21	PN	Pn	06 16 19.4	-0.1
MK02						06 16 40.1	
MK02				pmax	pmax		
	comp=Z,11nm,0.5s						
MK31	Makanchi Array	6.11	21	Pn	Pn	06 16 19.4	-0.4
	comp=Z,11nm,0.5s,baz=150,slow=22,SNR=99						
MK31				⇓Pg	P	06 16 40.1	+21
	comp=Z,28nm,0.7s,baz=150,slow=22						
MK31				⇑Lg		06 17 56.4	
	comp=Z,76nm,0.7s,baz=150,slow=22,SNR=5.4						
MK31	Makanchi Array	6.11	21	Pn	Pn	06 16 19.4	-0.4
	comp=Z,11nm,0.5s						
MK31				Pg	P	06 16 40.1	+21
MK31				Lg		06 17 56.4	
MKAR	Makanchi Array	6.11	21	Pn	Pn	06 16 19.6	-0.1
	comp=Z,4.6nm,0.3s,baz=199,slow=12,SNR=52						
MKAR				Sn	Sn	06 17 33.0	+3.9
	comp=Z,4.8nm,0.3s,baz=191,slow=24,SNR=4.1						
MKAR				Lg		06 17 58.5	
	comp=Z,13nm,0.3s,baz=206,slow=27,SNR=7.6						
KK31	Karatay Array	6.71	290	⇑Pg	Px	06 16 50.6	
	comp=Z,43nm,0.8s,baz=150,slow=22,SNR=51						
KK31				⇑Lg		06 18 16.9	
	comp=Z,39nm,0.6s,baz=150,slow=22,SNR=6.6						
KKAR	Karatay Array	6.71	290	ePN	Px	06 16 47.7	
KKAR				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ	Urumqi	6.88	64	eP	P	06 16 32.4	+2.0
WMQ				S	S	06 17 48.3	0.0
WMQ				Smax			
	comp=N,100nm,0.9s						
WMQ				Smax			
	comp=E,130nm,0.8s						
DLH	Dalhousie	8.93	198	eP	P	06 17 01.0	+2.0
DLH				eS	S	06 18 40.0	+0.5
THN	Thein Dam	9.10	199	ex	x	06 16 53.7	
THN				eS	S	06 18 47.2	+3.6
KLP	Kalpa	9.60	185	eP	P	06 17 09.1	+0.9
KLP				eS	S	06 18 50.1	-5.9
KLP				eS	S	06 18 51.8	-4.2
KLP				AML	AML	06 19 04.8	
	comp=N,87nm,0.9s						
KLP				AML	AML	06 19 05.5	
	comp=E,93nm,0.6s						
KURK	Kurchatov	9.60	358	⇑Pn	P	06 17 05.8	-2.3
	comp=E,7.2nm,0.7s,baz=150,slow=22						
KURK				⇑Lg		06 19 44.0	
	comp=E,131nm,1.4s,baz=150,slow=22						
KURK	Kurchatov	9.60	358	ePn	P	06 17 05.1	-3.0
KURK				eSn	Sn	06 18 58.3	+2.3
BHK	Bhakra	9.93	194	eS	S	06 19 04.5	+0.3
NDI	New Delhi	12.51	188	eP	P	06 17 48.0	+0.2
AYAN	Aya Nagar	12.72	188	eP	P	06 17 49.9	-0.7
VOSK	Vostochnaya	12.86	337	⇓Pn	P	06 17 48.5	-3.8
	comp=E,6.8nm,0.8s,baz=150,slow=22						
VOSK				⇑Lg		06 21 28.4	
	comp=E,43nm,1.8s,baz=150,slow=22						
VOSK	Vostochnaya	12.86	337	⇓Pn	P	06 17 48.5	-3.8
	comp=E,6.8nm,0.8s						
VOSK				Lg		06 21 28.4	
KUDL	Kundal	13.13	190	eP	P	06 17 54.3	-1.7
KUDL				ex	x	06 20 08.1	
BVA0	Borovoye Array	13.30	336	⇓Pn	P	06 17 55.8	-2.3
	comp=E,1.2nm,0.7s,baz=150,slow=22,SNR=27						
BVA0				⇑Lg		06 21 41.8	
	comp=E,7.1nm,1.0s,baz=150,slow=22,SNR=5.0						
BVA0	Borovoye Array	13.30	336	⇓Pn	P	06 17 55.8	-2.4
	comp=E,1.2nm,0.7s						
BVA0				Lg		06 21 41.8	
BVAR	Borovoye Array	13.30	336	Pn	P	06 17 54.5	-3.6
	comp=E,0.6nm,0.3s,baz=166,slow=12,SNR=29						
BVAR				Lg		06 21 43.5	
	comp=E,0.7nm,0.3s,baz=149,slow=25,SNR=4.2						
KHET	Khetri	13.30	193	ex	x	06 17 54.5	
KHET				ex	x	06 20 12.4	
BRVK	Borovoye	13.36	336	ePn	P	06 17 55.3	-3.6
BRVK				eSn	S	06 20 28.9	+1.6
NVS	Novosibirsk	13.99	10	eP	P	06 18 08.4	+1.3
NVS				pmax	pmax		
	comp=Z,21nm,1.2s						
NVS				pmax	pmax		
	comp=N,7.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,11nm,1.0s						
LSA	Lhasa	15.01	136	ePn	P	06 18 14.2	-6.4
AB31	Akbulak array	15.76	308	P	P	06 18 28.0	-2.1
	comp=E,2.7nm,0.5s,baz=150,slow=22,SNR=46						
AB31	Akbulak array	15.76	308	i P	P	06 18 28.0	-2.1
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GTA	Gaotai	15.88	89	P	P	06 18 35.4	+3.7
AKTO	Aktyubinsk	17.38	310	P	P	06 18 49.8	-0.8
	comp=Z,0.3nm,0.3s,baz=103,slow=18,SNR=9.4						
ZAK	Zakamensk	19.15	53	eP	P	06 19 07.1	-5.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LZH	Lanzhou	19.93	97	eP	P	06 19 28.8	+7.8
	comp=Z,14nm,1.4s						
LZH				pP		06 19 35.9	
LZH				sP		06 19 37.9	
LZH				LR	LR		
	comp=Z,740nm,14.7s						
LZH	Lanzhou	19.93	97	eP	P	06 19 28.8	+7.8
LZH				*SP		06 19 37.9	
LZH				pmax	pmax		
	comp=Z,14nm,1.4s						
LZH				MLR	MLR		
	comp=Z,740nm,14.7s						
ARU	Arti	20.33	326	⇑iP	P	06 19 23.7	-1.4
ARU				e		06 19 41.2	
ARU				ePPP	PPP	06 19 51.1	-3.6
ARU				eS	S	06 23 10.2	+4.0
ARU				eSS	SS	06 23 29.4	-6.6
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SONM	Songino Array	20.51	62	P	P	06 19 28.2	+1.2
	comp=Z,6.4nm,0.8s,baz=265,slow=11,SNR=38						
SONM				LR	LR	06 27 57.9	
	comp=Z,117nm,19.3s,MS3.3,baz=179,slow=38						
SOC	Sochi	29.05	288	eP	P	06 20 48.8	+0.4
SOC				e*PP	pP	06 20 58.8	+0.9
SOC				e		06 21 45.7	
SOC				eS	S	06 25 40.1	+3.9
SOC				eSS	SS	06 27 15.4	+9.1
SOC				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.9						
NJ2	Nanjing	32.91	93	eP	P	06 21 23.1	+0.5
NJ2				AP	pP	06 21 34.5	+2.2
NJ2				XP	sP	06 21 39.0	+2.4
NJ2				PP	PP	06 22 33.9	+0.7
NJ2				PPP	PPP	06 22 48.8	-0.3
NJ2				S	S	06 26 34.0	-3.1
NJ2				XS		06 26 53.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
NJ2				LR	LR		
	comp=N,980nm,24.2s,MS4.5						
NJ2				LR	LR		
	comp=E,810nm,25.1s,MS4.5						
NJ2				LR	LR		
	comp=Z,620nm,24.8s,MS4.2						
BR131	Keskin Array S	34.37	283	eP	P	06 21 34.1	-0.9
	comp=Z,1.5nm,0.6s,mb4.1						
BRTR	Keskin Array B	34.37	283	P	P	06 21 34.3	-0.7
	comp=Z,2.5nm,0.8s,mb4.2,baz=97,slow=8.6,SNR=11						
SSE	Sheshan	35.12	93	P	P	06 21 39.6	-2.0
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
SSE	Sheshan	35.12	93	P	P	06 21 39.4	-2.2
	comp=Z,23nm,0.7s,mb5.2						
AKASG	Malin Array Be	35.41	303	P	P	06 21 43.8	-0.1
	comp=Z,1.3nm,0.6s,mb4.0,baz=69,slow=9.2,SNR=3.5						
FINES	FINESS Array B	37.56	321	P	P	06 22 01.1	-0.7
	comp=Z,2.2nm,0.6s,mb4.0,baz=112,slow=10,SNR=6.8						
TIXI	Tiksi	39.09	23	eP	P	06 22 11.0	-3.5
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
TIXI				MLR	MLR		
	comp=Z,101nm,14.0s,MS3.8						
NACB	Ninganchiao	39.12	102	eP	P	06 22 15.6	+0.4
ARCES	ARCESS Array B	39.57	334	P	P	06 22 17.9	-0.6
	comp=Z,8.4nm,0.9s,mb4.5,baz=98,slow=8.6,SNR=9.6						
ATD	Arta Tunnel	43.37	238	LR	LR	06 41 16.9	
	comp=Z,58nm,19.3s,MS3.5,baz=115,slow=37						
NB2	NORSAR Subarra	44.72	320	P	P	06 23 00.0	-0.6
	comp=Z,2.0nm,0.6s,mb4.1,baz=87,slow=7.9						
NOA	NORSAR Array B	44.72	320	P	P	06 23 00.1	-0.5
	comp=Z,1.5nm,0.6s,mb4.0,baz=86,slow=7.9,SNR=3.6						
NAO	NORSAR Subarra	44.93	320	P	P	06 23 00.0	-2.3
	comp=Z,2.0nm,0.6s,mb4.1						
NAO	NORSAR Subarra	44.93	320	P	P	06 23 00.0	-2.3
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
GERES	GERESS Array B	45.63	303	P	P	06 23 07.6	-0.4
	comp=Z,0.3nm,0.3s,mb3.8,baz=53,slow=6.7,SNR=4.6						
WRAB	Tennant Creek	79.43	128	eP	P	06 26 53.2	-0.8
	comp=Z,2.6nm,0.7s,mb4.3						
WRAB	Tennant Creek	79.43	128	eP	P	06 26 53.2	-0.8
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
WRA	Warramunga Arr	79.43	128	P	P	06 26 54.5	+0.5
	comp=Z,0.9nm,0.8s,mb3.8,baz=325,slow=5.4,SNR=6.8						
WRA	Warramunga Arr	79.43	128	eP	P	06 26 55.6	+1.6

NDI **14** *06:31:02.4±5.0,31.84N×71.60E,h10^{km},MD3.8,ML3.8*
IDC **14** *06:31:02.1±1.4,34.52N×73.25E,mb4.1/4,mb1 4.2/7,mb1mx3.8/22,mbtmp4.0/7,ML3.9/3,Error ellipse: s-maj=37.2km s-min=22.9km az=65.0*
NEIC **14** *06:31:03.6±1.0,34.52N×73.22E,h10^{km},mb3.2/5,Error ellipse: s-maj=20.0km s-min=13.8km az=72.0*
MOS **14** *06:31:05.3±0.8,34.61N×73.21E,h32^{km},mb5.2/2,Error ellipse: s-maj=26.8km s-min=8.0km az=95.1*
NNC **14** *06:31:13.1±7.5,34.82N×72.82E,h80^{km}±71^{km},mpv4.1,Error ellipse: s-maj=66.7km s-min=55.2km az=89.0*
ISC 14 06:31:03.0±0.6**,34.69N**±0.06×**73.2E**±0.1**,h10^{km},n37,σ1$\overset{s}{.}$00**/49**,mb4.3**/5**,6C-8D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.09	136	eP	Pb	06 31 57.7	0.0
THN				eS	Sb	06 32 39.2	+3.6
DLH	Dalhousie	3.16	132	eP	Pb	06 32 00.0	+1.1
DLH				eS	Sb	06 32 43.0	+5.4
BHK	Bhakra	4.24	139	eSG	Sg	06 33 20.0	-4.3
SDNR	Sundarnagar	4.49	134	eP	Pn	06 32 12.6	-0.2
SDNR				ex	Sn	06 33 07.8	+2.0
SMLA	Simla	4.88	136	eP	Pn	06 32 17.3	-1.0
SMLA				eS	Sn	06 33 09.5	-6.1
KLP	Kalpa	5.29	125	eP	Pn	06 32 23.9	-0.1
KLP				eS	Sn	06 33 24.9	-0.9
KLP				AML	AML	06 33 56.0	
	comp=E,149nm,0.4s						
KLP				AML	AML	06 33 57.4	
	comp=N,156nm,0.5s						
NDI	New Delhi	6.90	149	ex	Sg	06 34 42.0	-11
AAK	Ala-Archa	7.99	7	⇓P	P	06 33 06.0	+3.9
	comp=N,1.5nm,0.4s						
AAK				⇑S	Sn	06 34 33.8	+0.4
	comp=N,4.4nm,0.9s						
AAK	Ala-Archa	7.99	7	ePn	P	06 33 05.2	+3.2
AAK				Sn	Sn	06 34 32.4	-1.0
AAK				S	Sn	06 34 33.8	+0.4
AAK	Ala-Archa	7.99	7	eP	P	06 33 05.3	+3.2
AAK				S	Sn	06 34 33.8	+0.4
KK31	Karatay Array	8.65	347	⇑P	P	06 33 12.4	+1.1
	comp=N,6.9nm,0.3s,baz=162,slow=12,SNR=238						
KK31				⇓S	Sn	06 34 47.3	-2.6
	comp=N,3.7nm,0.4s,baz=150,slow=22,SNR=11						
KK31	Karatay Array	8.65	347	⇑P	P	06 33 12.4	+1.1
	comp=N,6.9nm,0.3s						
KK31				S	Sn	06 34 47.3	-2.6
KK31	Karatay Array	8.65	347	⇑P	P	06 33 12.4	+1.2
KK31				S	Sn	06 34 47.3	-2.6
KK31				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MK31	Makanchi Array	13.90	27	⇓P	P	06 34 27.1	+4.8
	comp=Z,20nm,1.5s,baz=211,slow=11,SNR=16						
MK31	Makanchi Array	13.90	27	⇓P	P	06 34 27.1	+4.8
MK31				pmax	pmax		
	comp=Z,20nm,1.5s						
MKAR	Makanchi Array	13.90	27	Pn	P	06 34 22.9	+0.6
	comp=Z,0.1nm,0.3s,baz=210,slow=16,SNR=4.5						
MKAR				Lg		06 38 29.9	
	comp=Z,0.1nm,0.3s,baz=215,slow=35,SNR=5.5						
KURK	Kurchatov	16.49	12	ePn	P	06 34 55.3	-0.6
	comp=Z,1.8nm,0.8s						
KURK	Kurchatov	16.49	12	eP	P	06 34 55.3	-0.6
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AB31	Akbulak array	17.53	330	⇑P	P	06 35 08.9	-0.2
	comp=Z,0.4nm,0.3s,baz=151,slow=13,SNR=24						
AB31	Akbulak array	17.53	330	⇑P	P	06 35 08.8	-0.2
	comp=Z,0.4nm,0.3s						
VOSK	Vostochnaya	18.09	356	⇓P	P	06 35 15.8	-0.2
	comp=Z,4.3nm,1.6s						
VOSK	Vostochnaya	18.09	356	⇓P	P	06 35 15.8	-0.2
VOSK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BVA0	Borovoye Array	18.43	355	⇓P	P	06 35 20.8	+0.6
	comp=Z,0.9nm,1.1s,baz=157,slow=11,SNR=9.3						
BVA0	Borovoye Array	18.43	355	⇓P	P	06 35 20.8	+0.6
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BVAR	Borovoye Array	18.43	355	P	P	06 35 21.0	+0.7
	comp=Z,0.7nm,0.3s,baz=163,slow=11,SNR=9.3						
BRVK	Borovoye	18.48	354	eP	P	06 35 21.1	+0.3
	comp=Z,1.3nm,0.4s						
BRVK	Borovoye	18.48	354	eP	P	06 35 21.1	+0.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTO	Aktyubinsk	19.24	329	P	P	06 35 29.8	-0.1
	comp=Z,0.7nm,0.3s,baz=142,slow=9.6,SNR=9.9						
AKTO	Aktyubinsk	19.24	329	P	P	06 35 29.8	-0.1
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	Zalesovo	20.90	19	P	P	06 35 47.0	-0.8
	comp=Z,9.3nm,0.4s,baz=255,slow=7.1,SNR=24						
FINES	FINESS Array B	39.97	327	P	P	06 38 39.3	+0.2
	comp=Z,0.5nm,0.4s,mb3.6,baz=126,slow=12,SNR=3.0						
ARCES	ARCESS Array B	43.49	338	P	P	06 39 08.2	+0.6
	comp=Z,3.7nm,0.9s,mb4.1,baz=110,slow=8.8,SNR=10.0						
STU	Stuttgart	48.40	307	eP	P	06 39 47.5	+0.5
	comp=Z,13nm,0.4s,mb5.3						
STU	Stuttgart	48.40	307	eP	P	06 39 47.5	+0.5
STU				pmax	pmax		
	comp=Z,13nm,0.4s,mb5.3						
WRA	Warramunga Arr	79.52	123	P	P	06 43 10.3	-1.4
	comp=Z,0.8nm,0.5s,mb3.9,baz=323,slow=5.1,SNR=26						
WRAB	Tennant Creek	79.52	123	eP	P	06 43 10.2	-1.6
	comp=Z,2.1nm,0.4s,mb4.4						
WRAB	Tennant Creek	79.52	123	eP	P	06 43 10.2	-1.6
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						

NEIC **14** *06:33:44.3,37.23S×177.45E,h138^{km},MG3.7(WEL),After WEL.*
WEL 14 06:33:44.5±0.3**,37.23S×177.45E,h136^{km}**±3^{km}**,ML3.5**/10**,Error ellipse: s-maj=1.8km s-min=1.7km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.76	116	PN	P	06 34 05.8	-0.6
MXZ				SN	S	06 34 22.5	-0.6
PUZ	Puketiti	1.06	143	P	P	06 34 08.6	-0.2
PUZ				S	S	06 34 26.7	-0.6
PUZ	Puketiti	1.06	143	PN	P	06 34 08.6	-0.2
PUZ				SN	S	06 34 26.5	-0.8
URZ	Urewera	1.07	194	P	P	06 34 08.6	-0.2
URZ	Urewera	1.07	194	PN	P	06 34 08.6	-0.2
URZ				SN	S	06 34 26.7	-0.7
URZ				SN	S	06 34 26.9	-0.6
MWZ	Matawai	1.11	177	P	P	06 34 09.1	-0.1
MWZ	Matawai	1.11	177	PN	P	06 34 09.1	-0.2
MWZ				SN	S	06 34 27.9	-0.2
KUZ	Kuaotunu	1.46	289	PN	P	06 34 12.5	-0.5
KNZ	Kokohu	1.80	174	eP	P	06 34 16.1	-0.7
KNZ	Kokohu	1.80	174	PN	P	06 34 16.1	-0.7
KNZ				SN	S	06 34 37.4	-4.1
BKZ	Black Stump Fm	2.08	201	eP	P	06 34 20.1	-0.1
BKZ	Black Stump Fm	2.08	201	PN	P	06 34 20.1	-0.1
BKZ				SN	S	06 34 45.8	-1.6
CNZ	Chateau	2.47	217	ePN	P	06 34 25.4	+0.1
WNVZ	Wahianoa	2.55	214	PN	P	06 34 25.1	-1.2
PXZ	Pawanui	2.84	189	PN	P	06 34 27.8	-2.2
MRZ	Mangatainoka R	3.73	202	eP	P	06 34 38.2	-3.5
CAW	Cannon Point	4.29	205	P	P	06 34 44.7	-4.6

NEIC **14** *06:42:42.0,15.11N×95.82W,h9^{km},MD4.1(MEX),After MEX.*
MEX 14 06:42:42.0±1.8**,15.11N×95.82W,h9^{km}**±49^{km}**,MD4.1,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.72	337	i P	Pb	06 42 53.6	-2.6
HUIG				i S	Sb	06 43 02.2	-3.6
VHO	Vista Hermosa	2.15	336	i P	Pn	06 43 16.3	-2.2
VHO				i S	Sn	06 43 41.2	-4.2
OXX	Oaxaca	2.15	336	i P	Pn	06 43 17.0	-1.5
OXX				i S	Sn	06 43 42.5	-3.0
CMIG	Matias Romero	2.17	24	i P	Pn	06 43 14.9	-3.9
CMIG				i S	Sn	06 43 41.0	-4.9
CCIG	Comitan	3.73	71	i P	Pn	06 43 37.3	-3.7
CCIG				i S	Sn	06 44 21.3	-4.3

BGR **14** *07:08:01.8±0.8,51.55N×6.73E,h1^{km},ML2.3/4,Error ellipse: s-maj=8.9km s-min=4.4km az=120.0*
BUG **14** *07:08:03.4,51.59N×6.92E,h1^{km},ML1.5*
LDG **14** *07:08:04.1±0.1,51.57N×6.85E,h1^{km},Ml2.8/6,Error ellipse: s-maj=2.3km s-min=1.6km az=28.0,Suspected Mining induced.*
CSEM **14** *07:08:04.5±0.1,51.54N×6.85E,h2^{km},ML2.9/6,Error ellipse: s-maj=2.0km s-min=1.9km az=155.0*
NEIC **14** *07:08:04.1,51.57N×6.85E,h1^{km},ML2.8(LDG),After LDG.*
BNS **14** *07:08:04.3±0.9,51.56N×6.86E,h1^{km},ML2.0*
ISC 14 07:08:01.6±0.5**,51.57N**±0.03×**6.73E**±0.04**,n27,σ1$\overset{s}{.}$36**/49**,1D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	Hlnxe	0.10	58	Pg	Pg	07 08 03.9	+0.3
BZER				Sg	Sg	07 08 05.4	+0.4
LAUG	Laupendahl	0.25	148	ePg	Pg	07 08 08.1	+1.5
BUG	Bochum--Univer	0.36	110	⇓ePg	Pg	07 08 09.5	+0.7
BUG				Sg	Sg	07 08 14.0	+0.4
WTSB	Winterswijk	0.40	6	ePg	Pg	07 08 11.0	+1.4
	62nm,0.5s						
WTSB				eSg	Sg	07 08 21.5	+6.5
BNS	Bensberg	0.67	155	ePg	Pg	07 08 16.2	+1.4
BNS				eSg	Sg	07 08 25.3	+1.6
HOBG	Hohbusch	0.70	147	ePg	Pg	07 08 16.4	+0.9
HGN	Heimansgroeve	0.95	212	ePg	Pg	07 08 22.6	+2.1
	20nm,0.2s,baz=30						
HGN				eSg	Sg	07 08 36.2	+3.2
KLL	Kalltalsperre	0.96	196	ePg	Pg	07 08 22.9	+2.2
KLL				eSg	Sg	07 08 36.3	+2.9
	40nm,0.2s						
STB	Steinbach	0.97	176	ePg	Pg	07 08 22.8	+1.8
STB				eSg	Sg	07 08 35.5	+1.5
	46nm,0.4s						
IBBN	Ibbenburen	0.98	40	ePg	Pg	07 08 20.6	-0.5
	SNR=3.8						
HILG	Hillesheim	1.28	181	eSg	Sg	07 08 44.7	+0.7
BGG	Burgeitz	1.42	164	ePg	Pg	07 08 28.9	-0.9
BGG				eSg	Sg	07 08 48.3	-0.4
	33nm,0.3s						
TNS	Taunus Mts	1.73	140	ePg	Pg	07 08 33.7	-2.4
	SNR=2.2						
TNS				eSg	Sg	07 08 56.6	-2.5
GIVF	Givet	1.90	220	ePn	Pn	07 08 36.8	+1.3
GIVF				ePg	Pg	07 08 40.4	+1.0
GIVF				eSn	Sn	07 08 59.9	-0.6
GIVF				eSg	Sg	07 09 05.1	+0.4
	20nm,0.3s						
WLF	Walferdange	1.94	191	eSg	Sg	07 09 02.5	-3.6
BAIF	Baives	2.20	228	ePn	Pn	07 08 40.6	+0.8

BAIF				*e*Sn	**Sn**	**07 09 07.3**	**-0.8**
BAIF				*e*Sg	**Sg**	**07 09 14.7**	**0.0**
	5.8nm,0.2s						
CLZ	**Clausthal**	**2.29**	**82**	*e*Pg	**Pg**	**07 08 44.9**	**-2.3**
	SNR=1.5						
CLZ				*e*Sg	**Sg**	**07 09 13.6**	**-4.0**
CDF	**Champ du Feu**	**3.18**	**173**	*e*Pn	**Pn**	**07 08 53.1**	**-0.7**
SFTF	**Sexfontaines**	**3.54**	**199**	*e*Sg	**Sg**	**07 09 55.6**	**-3.7**
	8.6nm,0.4s						
HAU	**Haudompre**	**3.57**	**184**	*e*Pn	**Pn**	**07 08 58.8**	**-0.6**
HAU				*e*Sg	**Sg**	**07 09 56.4**	**-4.1**
	5.4nm,0.3s						
LOR	**Lormes**	**4.69**	**205**	*e*Pn	**Pn**	**07 09 14.4**	**-0.9**
LOR				*e*Sn	**Sn**	**07 10 06.6**	**-4.6**
LOR				*e*Sg	**Sg**	**07 10 31.1**	**-6.6**
	3.1nm,0.4s						
SSF	**Saint Saulge**	**4.97**	**206**	*e*Pn	**Pn**	**07 09 18.2**	**-1.1**
SSF				*e*Sn	**Sn**	**07 10 13.1**	**-5.3**
SSF				*e*Sg	**Sg**	**07 10 41.3**	**-5.9**
	1.5nm,0.4s						
AVF	**Avril sur Loir**	**5.27**	**206**	*e*Pn	**Pn**	**07 09 22.1**	**-1.3**
SMF	**Signal de Mont**	**5.28**	**202**	*e*Pn	**Pn**	**07 09 22.3**	**-1.2**
LDF	**La Druitiere**	**5.32**	**239**	*e*Pn	**Pn**	**07 09 23.8**	**-0.3**
LDF				*e*Sn	**Sn**	**07 10 22.4**	**-4.7**
FLN	**La Foliniere**	**5.42**	**242**	*e*Pn	**Pn**	**07 09 25.0**	**-0.5**
GRR	**Gorron**	**5.83**	**240**	*e*Pn	**Pn**	**07 09 30.4**	**-1.0**
GRR				*e*Sn	**Sn**	**07 10 34.4**	**-5.6**

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*NEIC **14** 07:17:36.8±0.8, 6.84N×73.05W, h163^{km}±10^{km}, mb3.9/2, Error ellipse: s-maj=16.7km s-min=10.6km az=129.0*

*IDC **14** 07:17:36.2±0.8, 6.81N×72.96W, h158^{km}±14^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.4/21, mbtmp4.1/6, Error ellipse: s-maj=44.1km s-min=7.6km az=132.0*

*FUNV **14** 07:17:37.2, 6.86N×73.06W, h172^{km}, MW2.9*

ISC 14 07:17:35.9±0.5**,6.89N**±0.07×**72.98W**±0.07**,h165**^{km}±7^{km}**, n28,σ1^{s}00**/33**,mb3.6**/5**,2C-2D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.43**	**214**	P	**P**	**07 18 17.2**	**-0.1**
	105nm,0.3s,baz=274,slow=19,SNR=664						
ROSC				S	**S**	**07 18 48.3**	**-1.0**
	75nm,0.3s,baz=269,slow=23,SNR=12						
VIGV	**El Vigia**	**2.51**	**39**	*e*P	**P**	**07 18 19.6**	**+1.2**
VIGV				*e*S	**S**	**07 18 50.2**	**-0.9**
SOCV	**Socops**	**2.52**	**57**	*i* P	**P**	**07 18 19.9**	**+1.4**
SOCV				*e*S	**S**	**07 18 51.6**	**+0.4**
SDV	**Santo Domingo**	**3.05**	**49**	P	**P**	**07 18 26.6**	**+1.5**
	37nm,0.3s,baz=236,slow=4.2,SNR=154						
SDV				S	**S**	**07 19 03.1**	**+0.1**
	45nm,0.3s,baz=59,slow=19,SNR=31						
VIRV	**Villa del Rosa**	**3.63**	**9**	*e*P	**P**	**07 18 32.0**	**-0.5**
QARV	**Quebrada Arrib**	**4.09**	**36**	⇑*i*P	**P**	**07 18 39.5**	**+1.1**
SANV	**Sanarito**	**4.28**	**52**	*e*P	**P**	**07 18 41.4**	**+0.5**
CURV	**Curarigua**	**4.30**	**44**	*e*P	**P**	**07 18 41.9**	**+0.7**
CURV				*e*S	**S**	**07 19 29.4**	**-2.2**
TEPV	**Terepaima**	**4.83**	**51**	*i* P	**P**	**07 18 49.0**	**+0.8**
SIQV	**Siquisique**	**4.88**	**40**	⇓*i*P	**P**	**07 18 49.2**	**+0.5**
SIQV				*e*S	**S**	**07 19 41.3**	**-3.7**
BAUV	**El Baul**	**5.30**	**67**	⇑*i*P	**P**	**07 18 53.3**	**-0.9**
BAUV				*e*S	**S**	**07 19 51.4**	**-3.6**
TURV	**Turiamo**	**6.19**	**55**	*e*P	**P**	**07 19 05.8**	**-0.2**
CAOV	**Caicara del Or**	**6.62**	**86**	⇓*i*P	**P**	**07 19 10.6**	**-1.2**
MERV	**Las Mercedes**	**7.02**	**70**	*e*P	**P**	**07 19 16.7**	**-0.4**
CUPV	**Cœpira**	**7.78**	**66**	*e*P	**P**	**07 19 26.6**	**-0.6**
JTS	**JuntasAbangare**	**12.31**	**287**	P	**P**	**07 20 33.6**	**+7.0**
	0.5nm,0.3s,baz=44,slow=1.6,SNR=6.4						
JTS	**JuntasAbangare**	**12.31**	**287**	*e*Pn	**P**	**07 20 27.3**	**+0.7**
SJG	**San Juan**	**12.99**	**30**	*e*Pn	**P**	**07 20 35.4**	**+0.2**
PAYG	**Puerto Ayora**	**18.83**	**247**	*e*P	**P**	**07 21 41.8**	**-3.8**
	20nm,0.9s						
LPAZ	**La Paz**	**23.52**	**168**	pP		07 23 04.7	
	0.9nm,0.8s,baz=347,slow=15,SNR=6.3						
LPAZ	**La Paz**	**23.52**	**168**	*e*P	**P**	**07 22 33.7**	**+1.5**
	0.5nm,0.5s,mb3.3						
LPAZ				*e*pP		07 23 05.1	
TXAR	**Lajitas Array**	**36.52**	**312**	P	**P**	**07 24 26.9**	**-0.4**
	0.2nm,0.7s,mb2.9,baz=126,slow=7.8,SNR=3.8						
ULM	**Lac du Bonnet**	**47.27**	**340**	P	**P**	**07 25 53.4**	**-0.8**
	1.5nm,0.4s,mb4.0,baz=150,slow=9.1,SNR=5.2						
SCHQ	**Schefferville**	**48.06**	**5**	P	**P**	**07 26 01.3**	**+1.0**
	3.3nm,0.6s,mb4.2,baz=176,slow=9.9,SNR=6.5						
SCHQ	**Schefferville**	**48.06**	**5**	P	**P**	**07 26 01.3**	**+1.0**
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**07 27 47.9**	**-0.9**
	1.2nm,0.6s,mb3.9,baz=133,slow=6.4,SNR=4.3						
YKA	**Yellowknife Ar**	**63.25**	**340**	P	**P**	**07 27 47.9**	**-0.9**
WRA	**Warramunga Arr**	**150.49**	**241**	PKPbc	PKPdf	07 37 09.1	+5.9
	0.3nm,0.5s,baz=108,slow=2.9,SNR=4.7						

ISC 14 07:33:43.4±0.6**,39.65N**±0.03×**29.42E**±0.05**,h10**^{km}**,n8, σ1^{s}19**/14**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.54**	**336**	*i* P	**Pg**	**07 33 53.3**	**-1.0**
ULDT				*i* S	**Sg**	**07 34 00.9**	**-0.6**
ORLT	**Orhaneli**	**0.56**	**315**	*e*PG	**Pg**	**07 33 53.6**	**-1.1**
GDZ	**Gediz**	**0.56**	**175**	*i* P	**Pg**	**07 33 54.1**	**-0.6**
GDZ				*i* S	**Sg**	**07 34 02.7**	**+0.3**
BORA	**Eskisehir**	**0.83**	**74**	*i* P	**Pb**	**07 33 58.9**	**-0.6**
BORA				*i* S	**Sb**	**07 34 12.1**	**+1.6**
YLV	**Yalova**	**0.92**	**358**	*e*PG	**Pg**	**07 34 00.7**	**-1.0**
YLV				*e*SG	**Sg**	**07 34 15.5**	**+1.5**
BTOK	**Tokmak**	**1.07**	**276**	*i* P	**Pb**	**07 34 04.8**	**+1.1**
BTOK				*i* S	**Sb**	**07 34 20.4**	**+2.9**
ESKT	**Eskisehir**	**1.11**	**96**	*e*PN	**Pn**	**07 34 02.9**	**-2.1**
ESKT	**Eskisehir**	**1.11**	**96**	*i* P	**Pb**	**07 34 04.4**	**+0.1**
ESKT				*i* S	**Sb**	**07 34 19.5**	**+0.8**

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*IDC **14** 07:40:04.2±1.1, 9.76N×138.53E, mb3.7/4, mb1 4.0/4, mb1mx3.8/17, mbtmp3.7/4, MS3.1/1, Ms1 3.1/1, ms1mx2.4/22, Error ellipse: s-maj=54.1km s-min=27.7km az=82.0*

*NEIC **14** 07:40:05.0±0.6, 9.65N×138.31E, h10^{km}, mb4.4/3, Error ellipse: s-maj=24.3km s-min=10.4km az=63.0*

ISC 14 07:40:03.0±0.8**,9.6N**±0.1×**138.3E**±0.2**,h10**^{km}**,n15, σ0^{s}83**/13**,mb4.5**/10**,MS2.9**/1**,Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**20.85**	**155**	*e*P	**P**	**07 44 46.7**	**-1.0**
	5.1nm,0.6s						
JNU	**Nakatsue**	**24.38**	**345**	LR	LR	07 53 15.5	
	comp=Z,45nm,21.9s,MS2.9,baz=111,slow=33						
WRAB	**Tennant Creek**	**29.62**	**188**	*e*P	**P**	**07 46 11.3**	**+0.3**
	5.8nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**29.64**	**188**	P	**P**	**07 46 13.3**	**+2.2**
	1.3nm,0.8s,mb3.7,baz=4.6,slow=10.0,SNR=7.7						
STKA	**Stephens Creek**	**41.38**	**176**	*e*P	**P**	**07 47 50.5**	**-0.6**
SONM	**Songino Array**	**46.64**	**331**	P	**P**	**07 48 34.6**	**+1.2**
	1.1nm,0.7s,mb3.9,baz=131,slow=7.3,SNR=4.7						
JIRN	**Jiri**	**52.15**	**298**	*e*P	**P**	**07 49 16.2**	**+0.1**
	16nm,0.5s,mb5.2						
GUN	**Gumba**	**52.46**	**298**	*e*P	**P**	**07 49 18.5**	**0.0**
	44nm,0.7s,mb5.5						
KKN	**Kakani**	**52.96**	**298**	*e*P	**P**	**07 49 21.6**	**-0.6**
	16nm,0.6s,mb5.1						
DMN	**Daman**	**53.09**	**297**	*e*P	**P**	**07 49 22.8**	**-0.4**
	22nm,0.7s,mb5.2						
GKN	**Gorkha**	**53.56**	**298**	*e*P	**P**	**07 49 25.6**	**-1.0**
KOLN	**Koldanda**	**54.43**	**297**	*e*P	**P**	**07 49 32.6**	**-0.4**
	16nm,0.8s,mb5.0						
MKAR	**Makanchi Array**	**60.05**	**319**	P	**P**	**07 50 13.3**	**+0.7**
	0.8nm,0.9s,mb3.8,baz=90,slow=8.4,SNR=3.1						
ILAR	**Eielson Array**	**74.88**	**25**	P	**P**	**07 51 45.5**	**0.0**
	0.8nm,0.8s,mb3.7,baz=247,slow=6.9,SNR=4.5						
LPAZ	**La Paz**	**153.41**	**107**	PKPbc	PKPdf	08 00 05.5	+7.7
	0.4nm,0.7s,baz=301,slow=5.5,SNR=2.9						

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*MEX **14** 07:43:41.0±1.0, 18.53N×95.76W, h73^{km}±24^{km}, MD4.6*

*NEIC **14** 07:43:41.0, 18.53N×95.76W, h73^{km}, mb4.7/38, MD4.6(MEX), After MEX.*

*IDC **14** 07:43:42.5±0.6, 18.57N×95.61W, h51^{km}±4^{km}, mb4.1/15, mb1 4.3/18, mb1mx4.2/24, mbtmp4.3/18, MS3.6/11, Ms1 3.6/11, ms1mx3.4/25, Error ellipse: s-maj=26.2km s-min=9.5km az=57.0*

*BJI **14** 07:43:43.0, 18.50N×95.80W, h72^{km}, mB5.0, Ms4.7, Msz4.4*

ISC 14 07:43:40.1±0.2**,18.46N**±0.02×**95.76W**±0.02**,h51**^{km}**, h51**^{km}±1.1^{km}**:pP-P,n118,σ1^{s}12**/127**,mb4.4**/35**,MS3.7**/11**, 1C,Veracruz**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**1.34**	**108**	*i* P	**P**	**07 44 03.3**	**+0.4**
TUIG				*i* S	**S**	**07 44 20.2**	**+0.4**
CMIG	**Matias Romero**	**1.60**	**148**	⇑*i*P	**P**	**07 44 06.7**	**+0.2**
CMIG				*i* S	**S**	**07 44 25.4**	**-0.7**
OXX	**Oaxaca**	**1.65**	**214**	*i* P	**P**	**07 44 08.5**	**+1.3**
VHO	**Vista Hermosa**	**1.67**	**214**	*i* P	**P**	**07 44 08.3**	**+0.9**
VHO				*e*S	**S**	**07 44 29.0**	**+1.3**
HUIG	**Huatulco**	**2.70**	**187**	*i* P	**P**	**07 44 21.8**	**-0.3**
HUIG				*e*S	**S**	**07 44 54.5**	**+0.8**
PPM	**Popocatepetl**	**2.78**	**283**	*i* P	**P**	**07 44 24.0**	**+0.7**
PPM				*i* P		07 44 25.0	
PPM				*e*S	**S**	**07 44 54.4**	**-1.4**
PNIG	**Pinotepa**	**3.06**	**228**	*i* P	**P**	**07 44 25.9**	**-1.2**
PNIG				*i* S	**S**	**07 45 03.5**	**+0.7**
YAIG	**Yautepec**	**3.16**	**278**	*i* P	**P**	**07 44 28.3**	**-0.4**
YAIG				*e*S	**S**	**07 45 03.9**	**-1.5**
UNM	**Universidad Na**	**3.35**	**285**	*i* P	**P**	**07 44 28.7**	**-2.5**
UNM				*e*S	**S**	**07 45 09.3**	**-0.9**
UNM	**Universidad Na**	**3.35**	**285**	*i* P	**P**	**07 44 28.7**	**-2.5**
UNM				*e*P		07 44 38.0	
UNM				*e*S	**S**	**07 45 09.3**	**-0.9**
IIZ	**Mezontepec**	**3.38**	**283**	*e*P	**P**	**07 44 28.0**	**-3.6**
SCX	**San Cristobal**	**3.44**	**119**	*i* P	**P**	**07 44 33.0**	**+0.5**
SCX				*i* S	**S**	**07 45 11.0**	**-1.4**
PLIG	**Platanillo**	**3.55**	**269**	*i* P	**P**	**07 44 33.3**	**-0.8**
PLIG				*i* S	**S**	**07 45 14.3**	**-1.0**
CCIG	**Comitan**	**4.08**	**122**	*i* P	**P**	**07 44 41.9**	**+0.3**
CCIG				*e*S	**S**	**07 45 26.9**	**-1.7**
ACX	**Acapulco**	**4.27**	**249**	*i* P	**P**	**07 44 40.5**	**-3.7**
SCIG		**4.36**	**83**	*i* P	**P**	**07 44 44.2**	**-1.4**
SCIG				*e*S	**S**	**07 45 31.0**	**-4.7**
CAIG	**El Cayaco**	**4.52**	**253**	*i* P	**P**	**07 44 44.9**	**-2.9**
CAIG				*e*S	**S**	**07 45 36.6**	**-3.0**
ZAIG	**Zacatecas**	**7.68**	**305**	*i* P	**P**	**07 45 28.2**	**-3.7**
JCT	**Junction City**	**12.52**	**344**	*e*P	**P**	**07 46 34.8**	**-3.1**
	48nm,0.5s						
TXAR	**Lajitas Array**	**13.01**	**328**	P	**P**	**07 46 46.0**	**+1.6**
	0.1nm,0.3s,baz=150,slow=14,SNR=23						
TXAR				LR	LR	07 52 13.3	
	comp=Z,118nm,21.9s,baz=110,slow=39						
JTS	**JuntasAbangare**	**13.24**	**126**	P	**P**	**07 46 47.8**	**+0.3**
	0.8nm,0.3s,baz=234,slow=8.7,SNR=4.4						
NATX	**Nacogdoches**	**13.28**	**4**	*e*P	**P**	**07 46 43.2**	**-4.6**
	210nm,0.5s						
GDL2	**Guadalupe Moun**	**15.72**	**332**	*e*P	**P**	**07 47 21.4**	**+1.7**
MNTX	**Cornudas Mount**	**15.79**	**328**	P	**P**	**07 47 19.9**	**-0.6**
	113nm,0.8s						
LRAL	**Lakeview Retre**	**16.51**	**27**	*e*P	**P**	**07 47 23.4**	**-6.2**
	49nm,0.3s						
UALR	**University of**	**16.53**	**10**	*e*P	**P**	**07 47 26.6**	**-3.3**
	90nm,0.4s						
OXF	**Oxford**	**16.96**	**18**	*e*P	**P**	**07 47 31.1**	**-4.1**
	94nm,0.3s						
AMTX	**Amarillo**	**17.18**	**343**	*e*Pn	**P**	**07 47 37.8**	**-0.2**
	62nm,0.8s						
AMTX				*e*Sn	**S**	**07 50 36.1**	**-10**
HBAR	**Harrisburg**	**17.62**	**14**	*e*Pn	**P**	**07 47 41.7**	**-1.7**
HBAR				Sn	**S**	**07 50 42.9**	**-13**
GNAR	**Gosnell**	**18.16**	**15**	*e*Pn	**P**	**07 47 50.1**	**-0.1**
	224nm,0.5s						
GNAR				*e*		07 47 59.5	
HALT	**Halls**	**18.29**	**17**	*e*Pn	**P**	**07 47 51.5**	**-0.2**
HALT				*e*pPn		07 48 00.7	
GOGA	**Godfrey**	**18.52**	**34**	*e*Pn	**P**	**07 47 54.1**	**-0.5**
	72nm,0.6s						
GOGA				*e*pPn		07 48 04.0	
LPM	**Los Pinos Moun**	**18.53**	**331**	*e*P	**P**	**07 47 56.2**	**+1.5**
LENM	**Lemitar**	**18.57**	**330**	*e*P	**P**	**07 47 56.2**	**+1.0**
UTMT	**University of**	**18.82**	**17**	*e*P	**P**	**07 47 56.1**	**-2.1**
	161nm,0.9s						
UTMT				*e*pP		07 48 08.4	
SWET	**Sewanee**	**18.83**	**26**	*e*P	**P**	**07 47 56.3**	**-2.0**
PARMO	**Parma**	**18.89**	**15**	*e*P	**P**	**07 47 56.8**	**-2.1**
PARMO				*e*pP		07 48 07.2	
PARMO				*e*Sn	**S**	**07 51 24.5**	**+0.4**
WVT	**Waverly**	**18.94**	**20**	*e*P	**P**	**07 47 57.3**	**-2.2**
	28nm,0.4s						
WVT				*e*Sn	**S**	**07 51 12.0**	**-13**
ANMO	**Albuquerque**	**18.98**	**332**	P	**P**	**07 47 59.6**	**-0.4**
	baz=141,slow=12,SNR=16						
ANMO	**Albuquerque**	**18.98**	**332**	*e*P	**P**	**07 48 00.2**	**+0.2**
	7.4nm,0.8s						
TUC	**Tucson**	**19.32**	**318**	*e*P	**P**	**07 48 03.6**	**-0.1**
	6.8nm,0.9s						
TUC				*e*pP		07 48 15.1	
CPCT	**Cooper Cave**	**19.64**	**28**	*e*P	**P**	**07 48 06.8**	**-0.3**
CPCT				*e*pP		07 48 18.0	
CCM	**Cathedral Cave**	**19.92**	**11**	*e*P	**P**	**07 48 09.7**	**-0.5**
	54nm,0.5s						
CCM				*e*S	**S**	**07 51 36.1**	**-10**
FVM	**French Village**	**20.00**	**12**	*e*P	**P**	**07 48 10.1**	**-0.9**
	20nm,0.6s						
FVM				*e*pP		07 48 20.9	
FVM				*e*Sn	**S**	**07 51 39.2**	**-9.0**
NHSC	**New Hope**	**20.20**	**41**	*e*P	**P**	**07 48 13.7**	**+0.5**
	217nm,1.2s						
JSC	**Jenkinsville**	**20.38**	**37**	*e*P	**P**	**07 48 15.6**	**+0.6**
JSC				*e*S	**S**	**07 51 40.1**	**-15**
CBKS	**Cedar Bluff**	**20.57**	**351**	*e*P	**P**	**07 48 17.3**	**+0.3**
	121nm,1.0s						
CBKS				*e*pP		07 48 29.8	
KSU1	**Kansas State U**	**20.58**	**358**	*e*P	**P**	**07 48 16.4**	**-0.7**
SLM	**Saint Louis**	**20.67**	**12**	*e*P	**P**	**07 48 17.9**	**-0.1**
	38nm,0.6s						
TZTN	**Tazewell**	**20.98**	**28**	*e*P	**P**	**07 48 21.6**	**+0.4**
TZTN				*e*S	**S**	**07 52 00.4**	**-6.6**
SDCO	**Great Sand Dun**	**21.02**	**338**	*e*P	**P**	**07 48 22.1**	**+0.5**
	28nm,1.3s,mb4.4						
WCI	**Wyandotte Cave**	**21.36**	**21**	*e*P	**P**	**07 48 24.4**	**-0.6**
	41nm,0.8s,mb4.8						
WCI				*e*S	**S**	**07 52 08.0**	**-6.1**
WUAZ	**Wupatki**	**21.91**	**324**	*e*P	**P**	**07 48 31.4**	**+0.9**
	23nm,0.9s,mb4.6						
WUAZ				*e*pP		07 48 45.8	
PV01	**Paradox Valley**	**22.57**	**333**	*e*P	**P**	**07 48 39.6**	**+2.6**
PV01				*e*pP		07 48 52.4	
SMCO	**Snowmass**	**22.82**	**337**	*e*P	**P**	**07 48 42.4**	**+2.9**
	54nm,1.4s,mb4.8						
ELN	**Prospectdale**	**22.87**	**32**	*e*P	**P**	**07 48 40.8**	**+0.8**
ELN				*e*pP		07 48 54.2	
ISCO	**Idaho Springs**	**22.91**	**340**	*e*P	**P**	**07 48 42.3**	**+2.0**
	17nm,1.2s,mb4.3						
ISCO				*e*pP		07 48 53.7	
PV10	**Paradox Valley**	**22.97**	**332**	*e*P	**P**	**07 48 41.5**	**+0.6**
BLA	**Blacksburg**	**23.02**	**33**	*e*P	**P**	**07 48 42.2**	**+0.8**
	31nm,0.8s,mb4.8						
BLA				*e*S	**S**	**07 52 44.5**	**+0.1**
FWV	**Forest Hill**	**23.11**	**31**	*e*P	**P**	**07 48 43.7**	**+1.3**
FWV				*e*pP		07 48 56.5	
LDFC	**Landfair**	**23.85**	**318**	*e*P	**P**	**07 48 50.3**	**+0.8**
NEN	**Nelson**	**24.05**	**319**	*e*P	**P**	**07 48 52.4**	**+1.0**
NEN				*e*pP		07 49 05.6	
PHWY	**Pilot Hill**	**24.23**	**342**	*e*P	**P**	**07 48 56.7**	**+3.6**
PHWY				*e*pP		07 49 07.8	
SRU	**San Rafael**	**24.24**	**331**	*e*P	**P**	**07 48 53.2**	**-0.1**
	8.5nm,1.0s,mb4.1						
ACSO	**Alum Creek Sta**	**24.33**	**24**	*e*P	**P**	**07 48 54.3**	**+0.2**
	64nm,1.0s,mb5.0						
ACSO				*e*pP		07 49 03.9	
MSU	**Marysvale**	**24.57**	**328**	*e*P	**P**	**07 48 57.7**	**+1.2**
MSU				*e*pP		07 49 12.8	
ARUT	**Antelope Range**	**24.70**	**325**	*e*P	**P**	**07 48 59.4**	**+1.7**
ROSC	**El Rosal**	**24.92**	**120**	LR	LR	08 00 32.4	
	comp=Z,61nm,19.2s,MS3.1,baz=178,slow=41						
MCWV	**Mont Chateau**	**25.21**	**30**	*e*P	**P**	**07 49 02.4**	**-0.2**
	17nm,1.0s,mb4.5						
DAU	**Daniels Canyon**	**25.62**	**332**	*e*P	**P**	**07 49 07.0**	**+0.5**
DAU				*e*pP	pP	07 49 21.3	+2.0
TPNV	**Topopah Spring**	**25.75**	**320**	*e*P	**P**	**07 49 09.0**	**+1.3**
	8.2nm,0.8s,mb4.3						
TPNV				*e*pP	pP	07 49 20.8	+0.2
SDV	**Santo Domingo**	**26.17**	**108**	P	**P**	**07 49 12.8**	**+1.0**
	3.0nm,0.5s,mb4.1,baz=338,slow=8.3,SNR=5.8						
HWUT	**Hardware Ranch**	**26.73**	**333**	*e*P	**P**	**07 49 16.8**	**+0.1**
	6.7nm,1.0s,mb4.1						
HWUT				*e*pP	pP	07 49 30.8	+1.2
PDAR	**Pinedale Array**	**26.91**	**337**	P	**P**	**07 49 18.4**	**+0.1**
	0.7nm,0.5s,mb3.5,baz=146,slow=11,SNR=10.0						
PDAR				pP	pP	07 49 32.1	+0.9
	1.9nm,0.9s,baz=140,slow=8.6,SNR=8.6						
ELK	**Elko**	**27.80**	**327**	P	**P**	**07 49 27.9**	**+1.4**
	2.9nm,0.8s,mb4.0,baz=126,slow=6.7,SNR=12						
ELK				pP	pP	07 49 40.8	+1.2
	2.8nm,0.8s,baz=143,slow=8.3,SNR=5.6						
ELK	**Elko**	**27.80**	**327**	*e*P	**P**	**07 49 27.2**	**+0.7**
	2.6nm,0.8s,mb3.9						
ELK				*e*pP	pP	07 49 39.7	+0.2
MNV	**Mina**	**27.86**	**320**	*e*P	**P**	**07 49 27.6**	**+0.6**
	12nm,1.1s,mb4.4						
MNV				*e*pP	pP	07 49 41.3	+1.2
REDW	**Red Top Meadow**	**27.91**	**336**	*e*P	**P**	**07 49 27.8**	**+0.5**
	13nm,0.9s,mb4.6						
REDW				*e*pP	pP	07 49 40.7	+0.3
NVAR	**Mina Array Bea**	**27.95**	**320**	P	**P**	**07 49 28.8**	**+0.9**
	11nm,0.7s,mb4.6,baz=133,slow=9.9,SNR=111						
NVAR				pP	pP	07 49 42.7	+1.8
	5.9nm,0.7s,baz=137,slow=8.9,SNR=11						
NVAR				LR	LR	08 02 57.1	
	comp=Z,122nm,18.3s,MS3.5,baz=115,slow=41						
SNOW	**Snow King Moun**	**27.95**	**336**	*e*P	**P**	**07 49 27.9**	**+0.1**
	32nm,1.0s,mb4.9						
SNOW				*e*pP	pP	07 49 41.6	+0.7
LOHW	**Long Hollow**	**28.02**	**337**	*e*P	**P**	**07 49 28.6**	**+0.1**
	9.9nm,1.0s,mb4.4						
LOHW				*e*pP	pP	07 49 41.4	-0.1
TPAW	**Teton Pass**	**28.05**	**336**	*e*P	**P**	**07 49 29.5**	**+0.8**
	28nm,1.0s,mb4.8						
TPAW				*e*pP	pP	07 49 40.1	-1.6
SJG	**San Juan**	**28.10**	**86**	LR	LR	07 59 59.8	
	comp=Z,128nm,19.4s,MS3.5,baz=266,slow=35						
ULM	**Lac du Bonnet**	**31.71**	**360**	pP	pP	07 50 14.2	-0.2
	7.7nm,1.1s,baz=174,slow=10,SNR=4.7						
ULM				LR	LR	08 04 32.5	
	comp=Z,53nm,18.5s,MS3.2,baz=195,slow=40						
NEW	**Newport**	**34.43**	**334**	pP	pP	07 50 38.5	+0.5
	1.6nm,0.7s,baz=146,slow=14,SNR=2.9						
NEW				LR	LR	08 07 37.1	
	comp=Z,127nm,18.6s,MS3.7,baz=48,slow=42						
SAML	**Samuel**	**42.13**	**128**	*e*P	**P**	**07 51 27.1**	**-2.2**
	1.8nm,0.7s,mb3.8						
SCHQ	**Schefferville**	**42.49**	**24**	P	**P**	**07 51 31.2**	**-0.6**
	3.3nm,0.6s,mb4.2,baz=227,slow=10,SNR=7.8						
SCHQ				LR	LR	08 10 07.5	
	comp=Z,103nm,20.6s,MS3.7,baz=229,slow=37						
SCHQ	**Schefferville**	**42.49**	**24**	P	**P**	**07 51 31.2**	**-0.6**
SCHQ				LR	LR	08 10 07.5	
LPAZ	**La Paz**	**43.95**	**140**	P	**P**	**07 51 45.2**	**+1.0**
	1.9nm,0.7s,mb4.0,baz=327,slow=6.8,SNR=13						
LPAZ				LR	LR	08 09 25.5	
	comp=Z,74nm,21.3s,MS3.6,baz=88,slow=35						
LPAZ	**La Paz**	**43.95**	**140**	*e*P	**P**	**07 51 44.4**	**+0.2**
	3.9nm,1.0s,mb4.1						
YKA	**Yellowknife Ar**	**45.91**	**348**	P	**P**	**07 51 58.5**	**-0.6**
	1.9nm,0.4s,mb4.4,baz=153,slow=7.4,SNR=12						
YKA				pP	pP	07 52 12.1	-0.8
	7.1nm,0.8s,baz=157,slow=7.4,SNR=8.1						
YKA				LR	LR	08 13 23.2	
	comp=Z,92nm,19.9s,MS3.7,baz=130,slow=39						
YKA	**Yellowknife Ar**	**45.91**	**348**	P	**P**	**07 51 58.5**	**-0.7**
YKA				pP	pP	07 52 12.1	-0.8
YKA				LR	LR	08 13 23.1	
DLBC	**Dease Lake**	**47.13**	**336**	*e*P	**P**	**07 52 09.2**	**+0.4**
SIV	**San Ignacio**	**48.36**	**133**	P	**P**	**07 52 18.7**	**-0.2**
	6.7nm,0.9s,mb4.7,baz=311,slow=7.7,SNR=25						
SIV				pP	pP	07 52 33.4	+0.7
	1.5nm,0.6s,baz=268,slow=10,SNR=3.1						
DAWY	**Dawson**	**54.21**	**338**	*e*P	**P**	**07 53 02.1**	**-0.5**
INK	**Inuvik**	**55.17**	**344**	*e*P	**P**	**07 53 07.6**	**-1.8**
	28nm,1.0s,mb5.2						
INK				*e*pP	pP	07 53 21.7	-1.8
KDAK	**Kodiak Island**	**57.04**	**328**	LR	LR	08 16 32.3	
	comp=Z,86nm,20.2s,MS3.8,baz=121,slow=34						
ILAR	**Eielson Array**	**57.34**	**337**	P	**P**	**07 53 24.1**	**-0.9**
	1.0nm,0.4s,mb4.2,baz=145,slow=5.2,SNR=25						
ILAR				pP	pP	07 53 38.6	-0.5
	3.0nm,1.0s,baz=114,slow=5.9,SNR=11						
COLA	**College**	**57.75**	**337**	*e*P	**P**	**07 53 26.2**	**-1.7**
	6.1nm,1.0s,mb4.6						
COLA				*e*pP	pP	07 53 39.9	-2.2
BDFB	**Brasilia**	**57.95**	**123**	P	**P**	**07 53 30.4**	**+0.5**
	9.8nm,0.8s,mb4.9,baz=300,slow=6.9,SNR=12						
BDFB				LR	LR	08 18 34.6	
	comp=Z,109nm,21.0s,MS3.9,baz=111,slow=36						
PLCA	**Paso Flores**	**63.38**	**159**	P	**P**	**07 54 06.9**	**+0.3**
	5.8nm,0.8s,mb4.7,baz=341,slow=8.3,SNR=13						
PLCA				pP	pP	07 54 21.0	+0.1
	5.6nm,0.9s,baz=338,slow=8.0,SNR=8.1						
NAO	**NORSAR Subarra**	**81.86**	**28**	P	**P**	**07 55 56.4**	**+1.4**
	1.8nm,0.8s,mb4.0						
NB2	**NORSAR Subarra**	**81.95**	**28**	P	**P**	**07 55 56.4**	**+0.9**
	1.8nm,0.8s,mb4.0,baz=295,slow=5.0						
NOA	**NORSAR Array B**	**81.95**	**28**	P	**P**	**07 55 56.3**	**+0.9**
	2.5nm,0.8s,mb4.2,baz=292,slow=5.2,SNR=4.6						
NOA				pP	pP	07 56 09.7	-0.6
	3.1nm,0.8s,baz=294,slow=5.3,SNR=5.2						
ARCES	**ARCESS Array B**	**83.03**	**18**	P	**P**	**07 56 01.7**	**+0.8**
	4.3nm,0.7s,mb4.6,baz=304,slow=5.1,SNR=12						
ARCES	**ARCESS Array B**	**83.03**	**18**	P	**P**	**07 56 01.7**	**+0.8**
FINES	**FINESS Array B**	**87.97**	**24**	P	**P**	**07 56 25.6**	**+0.3**
	3.2nm,1.0s,mb4.5,baz=315,slow=2.7,SNR=6.6						
GERES	**GERESS Array B**	**88.43**	**39**	P	**P**	**07 56 28.3**	**+0.4**
	0.4nm,0.3s,mb4.2,baz=297,slow=6.0,SNR=4.7						
HHC	**Hu-ho-hao-te**	**115.76**	**337**	*e*PKP	PKPdf	08 02 19.6	+2.5
HHC				PP	PP		
	comp=Z,90nm,7.4s						
WMQ	**Urumqi**	**117.94**	**357**	*e*PKP	PKPdf	08 02 23.0	+1.9
WMQ				*e*PP	PP	08 03 43.0	+2.2
WMQ				PKS	PKS	08 05 58.0	+0.9
WMQ				PP	PP		
	comp=Z,210nm,5.2s						
WMQ				LR	LR		
	comp=N,100nm,15.8s,MS4.6						
WMQ				LR	LR		
	comp=E,80nm,16.4s,MS4.6						
WMQ				LR	LR		
	comp=Z,60nm,14.6s,MS4.3						
SSE	**Sheshan**	**119.27**	**324**	PKP	PKPdf	08 02 26.5	+2.4
NJ2	**Nanjing**	**119.81**	**326**	*e*PKP	PKPdf	08 02 29.0	+3.9
LZH	**Lanzhou**	**122.66**	**341**	*e*PKP	PKPdf	08 02 36.0	+5.4
LZH				pPKP		08 02 51.0	
LZH				sPKP		08 02 56.0	
STKA	**Stephens Creek**	**126.94**	**244**	PKP	PKPdf	08 02 40.5	+1.5
	comp=Z,3.0nm,0.9s,baz=155,slow=4.4,SNR=5.0						
STKA	**Stephens Creek**	**126.94**	**244**	PKP	PKPdf	08 02 40.5	+1.5
CD2	**Chengdu**	**127.45**	**339**	*e*PKP	PKPdf	08 02 42.5	+2.5
MAW	**Mawson**	**129.01**	**170**	PKP	PKPdf	08 02 44.1	+2.1
	comp=Z,1.5nm,0.5s,baz=252,slow=3.2,SNR=4.7						
WRA	**Warramunga Arr**	**132.81**	**260**	PKP	PKPdf	08 02 52.9	+2.5
	comp=Z,1.3nm,0.5s,baz=83,slow=2.7,SNR=34						

BJI 14 07:50:28.8,42.85N×112.37E,h24^{km}**,mB4.8,ML3.9, Ms4.0,Msz3.9,Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	**Baotou**	**2.85**	**219**	*e*PG	Pn	07 51 18.3	+4.4
BTO				SG	Sn	07 51 55.9	+8.1
BTO				Smax			
	comp=N,410nm,0.5s						
BTO				Smax			
	comp=E,280nm,0.5s						
LZH	**Lanzhou**	**9.43**	**227**	*e*P	P	07 52 47.8	+1.4
LZH				AP		07 52 50.1	
LZH				*e*S	Sn	07 54 27.5	-5.3
LZH				AMB	AMB		
	comp=Z,120nm,4.5s						
LZH				LR	LR		
	comp=E,300nm,4.0s						
LZH				LR	LR		
	comp=Z,380nm,6.3s						

IDC 14 08:10:06.9±1.3**,23.31N**×**142.13E,mb4.1**/3**,mb1 4.2**/4**, mb1mx3.8**/20**,mbtmp4.1**/4**,ML3.8**/1**,MS3.6**/6**,Ms1 3.6**/6**, ms1mx3.3**/23**,1C,Error ellipse: s-maj=61.2km s-min=23.1km az=87.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.77**	**1**	Pn	Pn	08 11 07.9	+0.3
	13nm,0.3s,baz=297,slow=22,SNR=11						
CBIJ				Sn	Sn	08 11 52.9	-0.5
	19nm,0.3s,baz=294,slow=23,SNR=4.1						
JOW	**Kunigami**	**13.04**	**288**	LR	LR	08 18 04.4	

	comp=Z,123nm,19.1s,baz=102,slow=37						
WB2	**Warramunga Arr**	**43.65**	**191**	⇑*i*P	P	08 18 13.6	-1.7
WRA	**Warramunga Arr**	**43.65**	**191**	P	P	08 18 13.7	-1.5
	6.3nm,0.8s,baz=12,slow=8.3,SNR=38						
MKAR	**Makanchi Array**	**52.90**	**312**	P	P	08 19 24.5	-2.4
	0.2nm,0.4s,baz=101,slow=6.3,SNR=5.3						
YKA	**Yellowknife Ar**	**75.49**	**28**	LR	LR	08 57 59.0	
	comp=Z,39nm,18.2s,baz=275,slow=38						
FINES	**FINESS Array B**	**81.32**	**334**	P	P	08 22 24.7	-1.6
	2.6nm,0.9s,baz=72,slow=6.0,SNR=5.5						
NVAR	**Mina Array Bea**	**82.91**	**51**	LR	LR	08 51 05.6	
	comp=Z,24nm,20.9s,baz=135,slow=30						
PDAR	**Pinedale Array**	**86.94**	**44**	LR	LR	08 54 21.0	
	comp=Z,53nm,20.6s,baz=67,slow=30						
GERES	**GERESS Array B**	**94.71**	**329**	LR	LR	09 12 03.3	
	comp=Z,43nm,18.3s,baz=341,slow=39						
TXAR	**Lajitas Array**	**97.89**	**54**	LR	LR	09 03 39.7	
	comp=Z,41nm,20.4s,baz=220,slow=33						
LPAZ	**La Paz**	**150.72**	**82**	PKPbc	PKPdf	08 30 02.0	+4.0
	0.6nm,0.5s,baz=302,slow=4.3,SNR=3.9						

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*CSEM **14** 09:05:20.2±0.7, 31.21N×35.24E, h2^{km}, ML3.0, Error ellipse: s-maj=15.7km s-min=6.0km az=48.0*
*HLW **14** 09:05:21.2, 31.28N×35.30E, h8^{km}, Mb3.0*
*SNSN **14** 09:05:23.0, 30.77N×33.77E, Ml2.2*
ISC 14 09:05:20.8±2.3**, 31.3N**±0.1×**35.2E**±0.2**, h10**^{km}**, n10, σ0**^{s}**.96**/13**, 1C-2D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNKL	**Nakhl**	**1.71**	**218**	⇑*e*P	**Pn**	**09 05 51.0**	**0.0**
AMAG	**Maghara**	**1.83**	**250**	⇓*e*P	**Pn**	**09 05 53.3**	**+0.7**
ALWS	**Ilw as Safayha**	**1.97**	**184**	P	**Pn**	**09 05 55.8**	**+1.2**
ALWS				S	**Sn**	**09 06 19.4**	**-0.2**
HBST	**Basata**	**2.10**	**191**	P	**Pn**	**09 05 56.4**	**-0.1**
HBST				S	**Sn**	**09 06 21.8**	**-1.0**
JMOS	**Jabal al Moall**	**2.11**	**182**	P	**Pn**	**09 05 58.0**	**+1.4**
JMOS				S	**Sn**	**09 06 24.8**	**+1.7**
HAQS	**Haql**	**2.23**	**186**	P	**Pn**	**09 05 57.5**	**-0.9**
SUZ		**2.50**	**236**	P	**Pn**	**09 06 02.1**	**-0.2**
TAYS	**Tayyib Ism**	**2.73**	**186**	P	**Pn**	**09 06 03.8**	**-1.8**
BDAS	**Al Bad‘**	**2.84**	**182**	P	**Pn**	**09 06 06.4**	**-0.7**
HKAT	**Jabal Katrina**	**2.94**	**201**	⇓*e*P	**Pn**	**09 06 08.2**	**-0.3**

NNC 14 09:29:28.1±2.9**, 36.90N×71.12E, h159**^{km}±60^{km}**, mpv3.5, 5C, Error ellipse: s-maj=29.3km s-min=19.2km az=23.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.22**	**356**	⇑P	P	09 30 57.4	-1.2
	1.3nm,0.4s,baz=175,slow=12,SNR=37						
KK31				⇑S	S	09 32 08.7	-0.3
	1.1nm,0.3s,baz=183,slow=19,SNR=7.4						
AAK	**Ala-Archa**	**6.29**	**23**	⇑P	P	09 30 59.1	-0.5
	2.3nm,0.5s						
AAK				⇑S	S	09 32 10.3	-0.4
	2.5nm,0.5s						
AB31	**Akbulak array**	**14.79**	**330**	⇑P	P	09 32 49.3	-1.0
	0.3nm,0.5s,baz=154,slow=14,SNR=9.4						

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*IDC **14** 10:02:45.2±3.3, 11.95S×166.55E, h166^{km}±29^{km}, mb3.6/6, mb1 3.7/8, mb1mx3.6/16, mbtmp4.2/8, Error ellipse: s-maj=29.5km s-min=22.3km az=86.0*
*NEIC **14** 10:02:46.9±1.8, 11.95S×166.39E, h180^{km}±15^{km}, mb4.5/4, Error ellipse: s-maj=19.8km s-min=11.3km az=69.0*
ISC 14 10:02:46.3±2.1**, 11.99S**±0.09×**166.4E**±0.2**, h188**^{km}±17^{km}**, n14, σ0**^{s}**.86**/14**, mb4.1**/9**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.79**	**291**	P	**P**	**10 04 24.4**	**-0.2**
	5.4nm,0.3s,baz=3.8,slow=3.8,SNR=3.8						
DZM	**Mont Dzumac**	**10.02**	**180**	P	**P**	**10 05 07.5**	**+0.6**
	1.5nm,0.3s,baz=256,slow=20,SNR=17						
DZM				S	**S**	**10 06 56.7**	**-0.3**
	0.3nm,0.3s,baz=333,slow=19,SNR=4.7						
CTA	**Charters Tower**	**20.92**	**245**	P	**P**	**10 07 16.7**	**+1.3**
	3.2nm,0.6s,baz=58,slow=15,SNR=3.5						
STKA	**Stephens Creek**	**30.19**	**225**	P	**P**	**10 08 40.9**	**-0.4**
	2.5nm,0.7s,mb4.0,baz=112,slow=11,SNR=3.3						
WRAB	**Tennant Creek**	**31.73**	**251**	*e*P	**P**	**10 08 52.3**	**-2.6**
	9.0nm,1.3s,mb4.3						
WRA	**Warramunga Arr**	**31.74**	**251**	P	**P**	**10 08 55.2**	**+0.2**
	0.6nm,0.8s,mb3.4,baz=82,slow=9.1,SNR=5.3						
WRA				PcP	PcP	10 11 42.0	+0.2
	0.1nm,0.4s,baz=86,slow=3.4,SNR=6.3						
GUMO	**Guam**	**33.17**	**319**	*e*P	**P**	**10 09 07.0**	**-0.3**
	98nm,1.1s,mb5.5						
VNDA	**Vanda**	**65.56**	**181**	*e*P	**P**	**10 13 11.2**	**-0.3**
	0.8nm,0.6s,mb3.7						
SBA	**Scott Base**	**65.86**	**180**	*e*P	**P**	**10 13 13.4**	**0.0**
QSPA	**South Pole Qui**	**78.02**	**180**	*e*P	**P**	**10 14 25.4**	**+0.5**
	14nm,1.1s,mb4.5						
SONM	**Songino Array**	**79.78**	**324**	P	**P**	**10 14 35.9**	**+0.9**
	0.6nm,0.4s,mb3.6,baz=138,slow=5.6,SNR=9.4						
ILAR	**Eielson Array**	**84.22**	**18**	P	**P**	**10 14 56.4**	**-1.2**
	1.0nm,0.9s,mb3.5,baz=232,slow=5.4,SNR=8.9						
MKAR	**Makanchi Array**	**94.62**	**317**	P	**P**	**10 15 47.9**	**+1.0**
	2.5nm,0.6s,mb4.7,baz=91,slow=6.5,SNR=20						
ARCES	**ARCESS Array B**	**117.40**	**346**	PKP	PKPdf	10 21 10.1	+1.0
	1.2nm,0.8s,baz=90,slow=1.8,SNR=8.7						

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*IDC **14** 10:50:56.5±1.1, 34.56N×73.18E, mb4.1/4, mb1 4.2/7, mb1mx3.8/22, mbtmp4.0/7, ML3.9/3, Error ellipse: s-maj=37.0km s-min=22.6km az=88.0*
*NEIC **14** 10:50:58.0±0.9, 34.55N×73.08E, h10^{km}, mb3.1/1, Error ellipse: s-maj=21.6km s-min=14.1km az=88.0*
*MOS **14** 10:50:59.6±1.0, 34.59N×72.98E, h33^{km}, mb4.4/4, Error ellipse: s-maj=33.1km s-min=9.5km az=94.4*
*NNC **14** 10:51:06.6±9.6, 35.12N×72.62E, mpv4.0, Error ellipse: s-maj=109.0km s-min=72.8km az=107.0*
ISC 14 10:50:59.5±1.7**, 34.71N**±0.06×**73.1E**±0.1**, h29**^{km}±13^{km}**, n30, σ1**^{s}**.12**/41**, mb4.0**/3**, 4C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**3.16**	**135**	*e*P	**Pn**	**10 51 49.8**	**+1.3**
THN				*e*S	**Sn**	**10 52 34.3**	**+8.6**
DLH	**Dalhousie**	**3.24**	**131**	*e*PB	**Pb**	**10 51 55.0**	**-1.1**
DLH				*e*S	**Sn**	**10 52 32.0**	**+4.4**
BHK	**Bhakra**	**4.32**	**139**	*e*S	**Sn**	**10 52 56.3**	**+1.4**
SDNR	**Sundarnagar**	**4.57**	**133**	*e*P	**Pn**	**10 52 08.0**	**-0.5**
SDNR				*e*x	x	10 53 14.8	
SMLA	**Simla**	**4.96**	**135**	*e*P	**Pn**	**10 52 12.2**	**-1.7**
SMLA				*e*S	**Sn**	**10 53 10.5**	**-0.5**
KLP	**Kalpa**	**5.37**	**125**	*e*P	**Pn**	**10 52 12.1**	**-7.8**
KLP				*e*S	**Sn**	**10 53 15.1**	**-6.4**
KLP				AML	AML	10 53 54.8	
	comp=N,132nm,0.5s						
KLP				AML	AML	10 53 55.1	
	comp=E,153nm,0.3s						
AAK	**Ala-Archa**	**7.99**	**8**	⇑P	**Pn**	**10 53 00.2**	**+3.7**
	comp=E,2.9nm,0.8s						
AAK				⇓S	**Sn**	**10 54 27.3**	**+0.5**
	comp=E,10nm,0.9s						
AAK	**Ala-Archa**	**7.99**	**8**	*e*Pn	**Pn**	**10 52 59.5**	**+2.9**
AAK				*e*Sn	**Sn**	**10 54 30.9**	**+4.1**
AAK	**Ala-Archa**	**7.99**	**8**	P	**Pn**	**10 53 00.2**	**+3.7**
AAK				S	**Sn**	**10 54 27.2**	**+0.4**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KK31	**Karatay Array**	**8.62**	**347**	⇑P	**P**	**10 53 06.3**	**+1.0**
	comp=Z,6.7nm,0.3s,baz=150,slow=12,SNR=173						
KK31				⇑S	**Sn**	**10 54 40.2**	**-2.2**
	comp=Z,4.4nm,0.6s,baz=114,slow=57,SNR=4.8						
KK31	**Karatay Array**	**8.62**	**347**	⇑P	**P**	**10 53 06.3**	**+1.0**
	comp=Z,6.7nm,0.3s						
KK31				S	**Sn**	**10 54 40.2**	**-2.2**
KKAR	**Karatay Array**	**8.62**	**347**	P	**P**	**10 53 06.2**	**+0.9**
KKAR				S	**Sn**	**10 54 40.2**	**-2.3**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
MKAR	**Makanchi Array**	**13.93**	**27**	Pn	**P**	**10 54 17.8**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=199,slow=15,SNR=3.4						
AB31	**Akbulak array**	**17.47**	**330**	P	**P**	**10 55 02.4**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=145,slow=13,SNR=25						
AB31	**Akbulak array**	**17.47**	**330**	P	**P**	**10 55 02.4**	**-0.1**
	comp=Z,0.7nm,0.4s						
AB31	**Akbulak array**	**17.47**	**330**	*e*P	**P**	**10 55 02.3**	**-0.2**
AB31				S	**S**	**10 58 09.4**	**-4.6**
BVA0	**Borovoye Array**	**18.41**	**355**	*i* P	**P**	**10 55 14.5**	**+0.3**
BVAR	**Borovoye Array**	**18.41**	**355**	P	**P**	**10 55 15.0**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=155,slow=10.0,SNR=16						
BVAR	**Borovoye Array**	**18.41**	**355**	P	**P**	**10 55 15.0**	**+0.8**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**19.18**	**330**	P	**P**	**10 55 23.8**	**+0.4**
	comp=Z,1.1nm,0.3s,baz=137,slow=11,SNR=22						
AKTO	**Aktyubinsk**	**19.18**	**330**	P	**P**	**10 55 23.8**	**+0.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	**20.92**	**20**	P	**P**	**10 55 41.1**	**-0.9**
	comp=Z,3.9nm,0.4s,baz=249,slow=9.2,SNR=8.0						
ZAL	**Zalesovo**	**20.92**	**20**	P	**P**	**10 55 41.1**	**-0.8**
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ARCES	**ARCESS Array B**	**43.44**	**338**	P	**P**	**10 59 01.7**	**+0.7**
	comp=Z,6.0nm,0.9s,mb4.3,baz=101,slow=6.2,SNR=3.7						
ARCES	**ARCESS Array B**	**43.44**	**338**	P	**P**	**10 59 01.7**	**+0.7**
ARCES	**ARCESS Array B**	**43.44**	**338**	P	**P**	**10 59 01.7**	**+0.7**
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BOSA	**Boshof**	**77.51**	**222**	P	**P**	**11 02 53.8**	**-0.3**
	comp=Z,1.7nm,0.8s,mb4.0,baz=16,slow=7.4,SNR=3.1						
BOSA	**Boshof**	**77.51**	**222**	P	**P**	**11 02 53.8**	**-0.3**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**79.60**	**123**	P	**P**	**11 03 05.2**	**-0.5**
	comp=Z,0.5nm,0.4s,mb3.8,baz=324,slow=5.2,SNR=8.1						
WRA	**Warramunga Arr**	**79.60**	**123**	P	**P**	**11 03 05.2**	**-0.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						

GUC 14 10:56:55.7±0.7**, 23.68S×69.38W, h91**^{km}±13^{km}**, MD3.5, ML3.1, 2C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**0.81**	**291**	⇓*i*P	P	10 57 14.4	+0.7
CEN1				*e*S	S	10 57 28.6	+1.7
CEN1				AMP		10 57 30.6	
	comp=N,307nm,0.2s						
ANCH	**Antofagasta**	**0.95**	**270**	⇑*i*P	P	10 57 15.1	0.0
ANCH				*i* S	S	10 57 29.7	+0.1
ANCH				AMP		10 57 32.1	
	comp=N,1µm,0.1s						
CPN1	**Cerro Paranal**	**1.33**	**225**	⇑*i*P	P	10 57 20.1	+0.3
CPN1				*i* S	S	10 57 39.6	+1.9
CPN1				AMP		10 57 43.1	
	comp=E,405nm,0.2s						
SPCH	**San Pedro de A**	**1.33**	**55**	⇓*i*P	P	10 57 20.7	+0.9
SPCH				*i* S	S	10 57 39.0	+1.3
SPCH				AMP		10 57 39.7	
	comp=N,595nm,0.2s						

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*ISK **14** 12:03:38.8, 38.20N×26.66E, h16^{km}, MD2.8*
*ATH **14** 12:03:38.3, 38.12N×26.56E, h34^{km}, MD3.2/3*
*CSEM **14** 12:03:39.4±0.1, 38.20N×26.71E, h20^{km}, MD2.8, Error ellipse: s-maj=3.1km s-min=1.9km az=111.0*
ISC 14 12:03:37.7±1.1**, 38.15N**±0.03×**26.58E**±0.05**, h0**^{km}±7^{km}**, n16, σ0**^{s}**.82**/25**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.21**	**4**	*i* P	**Pg**	**12 03 42.2**	**+0.3**
URLA				*i* S	**Sg**	**12 03 45.5**	**+0.7**
BLCB	**Balcova**	**0.44**	**57**	PG	**Pg**	**12 03 46.6**	**+0.2**
BLCB				SG	**Sg**	**12 03 52.2**	**0.0**
SMG	**Samos**	**0.48**	**155**	*e*PB	**Pb**	**12 03 48.9**	**+0.2**
SMG				*e*SB	**Sb**	**12 03 56.4**	**+0.3**
IZM	**Izmir**	**0.60**	**65**	PG	**Pg**	**12 03 49.6**	**0.0**
IZM				SG	**Sg**	**12 03 57.5**	**0.0**
KDAG	**Bornova**	**0.60**	**65**	*i* P	**Pg**	**12 03 48.9**	**-0.7**
KDAG				*i* S	**Sg**	**12 03 56.4**	**-1.3**
PRK	**Paraskevi**	**1.12**	**348**	*e*PN	**Pn**	**12 04 00.1**	**-0.4**
PRK				*e*SN	**Sn**	**12 04 14.9**	**-1.9**
AYDN	**Tasoluk**	**1.14**	**115**	*i* P	**Pb**	**12 04 00.7**	**+0.8**
AYDN				*i* S	**Sb**	**12 04 15.1**	**-0.1**
AYVA	**Ayvalik**	**1.16**	**4**	*i* P	**Pb**	**12 04 00.6**	**+0.3**
AYVA				*i* S	**Sb**	**12 04 17.6**	**+1.8**
AKS	**Akhisar**	**1.22**	**53**	PN	**Pn**	**12 04 00.6**	**-1.2**
BODT	**Bodrum**	**1.23**	**151**	*e*PN	**Pn**	**12 04 02.5**	**+0.5**
MLSB	**Milas**	**1.28**	**131**	*e*PN	**Pn**	**12 04 02.9**	**+0.2**
APE	**Apeiranthos**	**1.36**	**218**	*e*PN	**Pn**	**12 04 04.8**	**+0.9**
APE	**Apeiranthos**	**1.36**	**218**	*e*PN	**Pn**	**12 04 02.5**	**-1.4**
MANT	**Manisa**	**1.60**	**77**	*i* P	**Pn**	**12 04 08.2**	**+1.0**
MANT				*i* S	**Sb**	**12 04 29.1**	**+0.7**
DAT	**Datca**	**1.62**	**150**	*e*PN	**Pn**	**12 04 07.6**	**-0.1**
DALT	**Dalyan (Mudla)**	**2.14**	**129**	*e*PN	**Pn**	**12 04 13.9**	**-1.2**

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*ISK **14** 12:10:55.8, 38.19N×26.67E, h26^{km}, MD3.2*
*NEIC **14** 12:10:55.0, 38.19N×26.66E, h26^{km}, MD3.5(ATH), MD3.2(ISK), After ISK.*
*ATH **14** 12:10:56.7, 38.17N×26.55E, h29^{km}±15^{km}, MD3.5/3*
*CSEM **14** 12:10:56.5±0.1, 38.20N×26.74E, h30^{km}, MD3.2, Error ellipse: s-maj=3.8km s-min=2.2km az=108.0*
ISC 14 12:10:54.5±0.8**, 38.15N**±0.03×**26.55E**±0.05**, h7**^{km}±5^{km}**, n24, σ1**^{s}**.21**/34**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.21**	**11**	*i* P	**Pg**	**12 10 59.0**	**+0.2**
URLA				*i* S	**Sg**	**12 11 01.5**	**-0.2**
BLCB	**Balcova**	**0.45**	**59**	*i* PG	**Pg**	**12 11 04.2**	**+0.6**
BLCB				*i* SG	**Sg**	**12 11 09.7**	**0.0**
SMG	**Samos**	**0.50**	**153**	*e*PN	**Pn**	**12 11 07.4**	**-0.3**
SMG				*e*SN	**Sn**	**12 11 15.6**	**-1.0**
IZM	**Izmir**	**0.61**	**66**	*i* PG	**Pg**	**12 11 07.4**	**+0.6**
IZM				*i* SG	**Sg**	**12 11 15.4**	**+0.4**
KDAG	**Bornova**	**0.62**	**66**	*i* P	**Pb**	**12 11 06.4**	**-0.8**
KDAG				*i* S	**Sg**	**12 11 13.9**	**-1.3**
PRK	**Paraskevi**	**1.11**	**349**	*e*PN	**Pn**	**12 11 17.3**	**+0.9**
PRK				*e*SN	**Sn**	**12 11 32.7**	**+0.6**
AYVA	**Ayvalik**	**1.16**	**6**	*i* P	**Pb**	**12 11 17.3**	**+0.9**
AYVA				*i* S	**Sb**	**12 11 34.2**	**+2.7**
AYDN	**Tasoluk**	**1.16**	**115**	*i* P	**Pb**	**12 11 18.4**	**+1.9**
AYDN				*i* S	**Sb**	**12 11 33.6**	**+1.9**
AKS	**Akhisar**	**1.23**	**54**	PN	**Pn**	**12 11 16.8**	**-1.3**
BODT	**Bodrum**	**1.25**	**151**	*e*PN	**Pn**	**12 11 18.0**	**-0.3**
MLSB	**Milas**	**1.30**	**131**	*e*PN	**Pn**	**12 11 18.6**	**-0.5**
BDRM	**Kayabasi**	**1.30**	**146**	*i* P	**Pb**	**12 11 21.8**	**+2.9**
BDRM				*i* S	**Sb**	**12 11 39.5**	**+3.9**
APE	**Apeiranthos**	**1.35**	**217**	*e*PN	**Pn**	**12 11 20.4**	**+0.6**
APE	**Apeiranthos**	**1.35**	**217**	*e*Pn	**Pn**	**12 11 21.7**	**+1.9**
MANT	**Manisa**	**1.62**	**77**	*i* P	**Pn**	**12 11 25.8**	**+2.2**
MANT				*i* S	**Sn**	**12 11 46.5**	**+1.6**
DAT	**Datca**	**1.64**	**150**	*e*PN	**Pn**	**12 11 23.5**	**-0.5**
YER	**Yerkesik**	**1.71**	**126**	*e*PN	**Pn**	**12 11 24.6**	**-0.4**
BALB	**Balikesir**	**1.81**	**35**	*e*PN	**Pn**	**12 11 24.6**	**-1.8**
LIA	**Limnos Island**	**2.04**	**329**	*e*PB	**Pb**	**12 11 31.5**	**0.0**
DALT	**Dalyan (Mudla)**	**2.16**	**129**	*e*PN	**Pn**	**12 11 29.7**	**-1.7**
FETY	**Fethiye**	**2.53**	**126**	*e*PN	**Pn**	**12 11 35.3**	**-1.3**
ORLT	**Orhaneli**	**2.63**	**43**	*e*PN	**Pn**	**12 11 36.4**	**-1.7**
MFT	**Murefte**	**2.69**	**12**	*e*PN	**Pn**	**12 11 37.9**	**-1.1**
YLV	**Yalova**	**3.26**	**41**	*e*PN	**Pn**	**12 11 46.2**	**-0.8**

HLW 14 12:19:14.7, 30.05N×36.49E, h15^{km}**, Mb3.5, 2D, Dead Sea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HBST	**Basata**	**1.74**	**242**	⇓*e*P	Pn	12 19 43.6	-1.1
HDHB	**Dhahab**	**2.10**	**231**	P	Pn	12 19 48.7	-1.2
HNKL	**Nakhl**	**2.18**	**267**	P	Pn	12 19 50.4	-0.6
HNKL				S	Sn	12 20 15.4	-2.4
HNKL	**Nakhl**	**2.18**	**267**	P	Pn	12 19 50.4	-0.6
HNKL				S	Sn	12 20 15.4	-2.5
HKAT	**Jabal Katrina**	**2.66**	**236**	⇓*e*P	Pn	12 19 55.1	-2.8
AMAG	**Maghara**	**2.90**	**283**	P	Pn	12 19 59.5	-1.8

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*BJI **14** 12:39:54.5, 4.69N×123.56E, h572^{km}, mB4.7, mb4.4*
*MOS **14** 12:39:55.9±0.8, 4.85N×123.43E, h570^{km}, mb4.5/5, Error ellipse: s-maj=30.4km s-min=12.1km az=117.6*
*NEIC **14** 12:39:55.4±1.0, 4.86N×123.39E, h541^{km}±13^{km}, mb4.6/10, Error ellipse: s-maj=15.4km s-min=5.6km az=61.0*
*IDC **14** 12:39:56.1±1.3, 4.83N×123.37E, h549^{km}±15^{km}, mb3.5/14, mb1 3.6/14, mb1mx3.5/22, mbtmp4.4/14, Error ellipse: s-maj=23.7km s-min=8.2km az=76.0*
ISC 14 12:39:54.5±1.3**, 4.85N**±0.07×**123.4E**±0.1**, h544**^{km}±19^{km}**, n42, σ0**^{s}**.73**/43**, mb4.4**/27**, 4C, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KKM	**Kota Kinabalu**	**7.25**	**280**	*e*P	**P**	**12 41 44.8**	**-0.7**
KAKA	**Kakadu**	**19.62**	**153**	⇑*i*P	**P**	**12 44 07.1**	**+19**
	34nm,0.5s						
FITZ	**Fitzroy Crossi**	**22.91**	**175**	⇑*i*P	**P**	**12 44 18.0**	**-0.5**
	5.8nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**22.91**	**175**	P	**P**	**12 44 18.4**	**-0.1**
	6.3nm,0.5s,mb4.5,baz=18,slow=7.0,SNR=28						
FITZ				ScP		12 50 35.9	
	4.5nm,0.6s,baz=356,slow=0.9,SNR=7.4						
WRAB	**Tennant Creek**	**26.88**	**157**	*e*P	**P**	**12 44 52.9**	**-0.9**
	28nm,0.6s,mb5.1						
WRAB	**Tennant Creek**	**26.88**	**157**	*e*P	**P**	**12 44 52.9**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.1						
WRA	**Warramunga Arr**	**26.88**	**157**	P	**P**	**12 44 53.2**	**-0.5**
	comp=Z,12nm,0.3s,mb5.0,baz=331,slow=10,SNR=148						
WRA				S	**S**	**12 48 48.9**	**-4.1**
	comp=Z,0.3nm,0.5s,baz=337,slow=15,SNR=3.3						
WRA				ScP		12 50 46.9	
	comp=Z,1.0nm,0.5s,baz=339,slow=3.1,SNR=11						
WB2	**Warramunga Arr**	**26.89**	**157**	⇑*i*P	**P**	**12 44 53.2**	**-0.6**
ENH	**Enshi**	**28.49**	**334**	*e*P	**P**	**12 45 07.8**	**0.0**
	comp=Z,15nm,0.8s,mb4.7						
CTA	**Charters Tower**	**33.45**	**139**	*e*P	**P**	**12 45 51.2**	**+1.2**
	comp=Z,6.3nm,1.3s,mb4.0						
CTA	**Charters Tower**	**33.45**	**139**	*e*P	**P**	**12 45 51.2**	**+1.2**
CTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MJAR	**Matsushiro Arr**	**34.35**	**21**	P	**P**	**12 45 56.7**	**-0.7**
	comp=Z,3.3nm,0.6s,mb4.0,baz=198,slow=8.1,SNR=7.5						
MJAR	**Matsushiro Arr**	**34.35**	**21**	P	**P**	**12 45 56.7**	**-0.7**
FORT	**Forrest**	**35.70**	**173**	*e*P	**P**	**12 46 09.3**	**+0.7**
	comp=Z,22nm,0.5s,mb5.0						
KLBR	**Kellerberrin**	**36.63**	**188**	*e*P	**P**	**12 46 16.0**	**-0.3**
	comp=Z,3.7nm,0.4s,mb4.3						
NWAO	**Narrogin (SRO)**	**38.02**	**188**	P	**P**	**12 46 27.9**	**+0.4**
	comp=Z,3.8nm,0.4s,mb4.2,baz=33,slow=10,SNR=6.3						
LSA	**Lhasa**	**39.23**	**313**	*e*P	**P**	**12 46 39.5**	**+2.2**
	comp=Z,11nm,0.6s,mb4.6						
LSA	**Lhasa**	**39.23**	**313**	*e*P	**P**	**12 46 39.5**	**+2.2**
LSA				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.6						
MDJ	**Mudanjiang**	**39.98**	**7**	P	**P**	**12 46 42.6**	**-0.7**
MDJ				AMB	AMB		
	comp=Z,70nm,3.5s						
STKA	**Stephens Creek**	**40.43**	**156**	⇑*i*P	**P**	**12 46 48.2**	**+1.2**
	comp=Z,11nm,0.8s,mb4.4						
STKA	**Stephens Creek**	**40.43**	**156**	P	**P**	**12 46 48.2**	**+1.2**
	comp=Z,11nm,0.6s,mb4.5,baz=314,slow=7.3,SNR=20						
STKA				PcP	PcP	12 48 37.3	+0.1
	comp=Z,3.7nm,0.8s,baz=323,slow=9.8,SNR=2.9						
GTA	**Gaotai**	**40.48**	**331**	*e*P	**P**	**12 46 48.3**	**+1.0**
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
GUN	**Gumba**	**42.39**	**307**	*e*P	**P**	**12 47 03.4**	**+0.6**
	comp=Z,50nm,0.6s,mb5.2						
ASAJ	**Asahikawa**	**42.61**	**20**	P	**P**	**12 47 05.4**	**+1.1**
	comp=Z,2.6nm,0.3s,mb4.3,baz=268,slow=20,SNR=12						
PKI	**Pulchoki**	**42.62**	**306**	*e*P	**P**	**12 47 04.5**	**-0.1**
KKN	**Kakani**	**42.82**	**306**	*e*P	**P**	**12 47 05.9**	**-0.2**
	comp=Z,16nm,0.6s,mb4.7						
DMN	**Daman**	**42.88**	**306**	*e*P	**P**	**12 47 06.9**	**+0.2**
	comp=Z,20nm,0.8s,mb4.7						
GKN	**Gorkha**	**43.42**	**306**	*e*P	**P**	**12 47 10.7**	**-0.2**
	comp=Z,18nm,0.7s,mb4.7						
KOLN	**Koldanda**	**44.16**	**306**	*e*P	**P**	**12 47 17.2**	**+0.5**
	comp=Z,81nm,0.7s,mb5.3						
SONM	**Songino Array**	**45.24**	**344**	P	**P**	**12 47 25.2**	**+0.5**
	comp=Z,4.7nm,0.7s,mb4.1,baz=158,slow=9.1,SNR=40						
SONM				PcP	PcP	12 48 53.1	-0.4
	comp=Z,0.8nm,0.6s,baz=168,slow=2.6,SNR=3.9						
SONM				ScP		12 51 54.4	
	comp=Z,0.7nm,0.9s,baz=166,slow=3.1,SNR=4.1						
ZAK	**Zakamensk**	**48.43**	**343**	*e*P	**P**	**12 47 43.9**	**-5.1**
BOD	**Bodaibo**	**53.34**	**354**	*e*P	**P**	**12 48 18.1**	**-6.5**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb3.8						
MKAR	**Makanchi Array**	**54.77**	**326**	P	**P**	**12 48 34.6**	**-0.2**
	comp=Z,6.4nm,0.5s,mb4.1,baz=122,slow=7.9,SNR=116						
MKAR				PcP	PcP	12 49 27.6	-1.3
	comp=Z,1.7nm,0.6s,baz=117,slow=4.1,SNR=7.3						
MKAR				ScP		12 52 34.6	
	comp=Z,0.4nm,0.6s,baz=108,slow=4.6,SNR=4.3						
ZAL	**Zalesovo**	**58.12**	**334**	P	**P**	**12 48 57.2**	**-0.5**
	comp=Z,1.2nm,0.5s,mb3.4,baz=358,slow=2.5,SNR=5.9						
KURK	**Kurchatov**	**59.03**	**329**	*e*P	**P**	**12 49 03.4**	**-0.6**
	comp=Z,8.1nm,0.6s,mb4.1						
KURK	**Kurchatov**	**59.03**	**329**	*e*P	**P**	**12 49 03.4**	**-0.5**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.1						
BVAR	**Borovoye Array**	**64.59**	**328**	P	**P**	**12 49 39.2**	**-0.7**
	comp=Z,1.7nm,0.7s,mb3.6,baz=135,slow=8.4,SNR=13						
ILAR	**Eielson Array**	**85.53**	**25**	P	**P**	**12 51 35.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=241,slow=5.4,SNR=6.9						
BRTR	**Keskin Array B**	**86.75**	**309**	P	**P**	**12 51 41.6**	**-0.4**
	comp=Z,1.0nm,0.8s,mb3.5,baz=135,slow=8.7,SNR=4.4						
ARCES	**ARCESS Array B**	**88.25**	**340**	P	**P**	**12 51 47.7**	**-0.6**
	comp=Z,3.1nm,0.9s,mb4.0,baz=112,slow=6.5,SNR=6.0						
ARCES	**ARCESS Array B**	**88.25**	**340**	P	**P**	**12 51 47.7**	**-0.7**
FINES	**FINESS Array B**	**89.28**	**332**	P	**P**	**12 51 52.4**	**-0.9**
	comp=Z,4.4nm,1.1s,mb4.2,baz=67,slow=5.5,SNR=9.7						

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*MOS **14** 12:57:28.6±1.3, 43.81S×41.53E, h10^{km}, mb5.1/13, Error ellipse: s-maj=21.4km s-min=10.2km az=94.5*
*BJI **14** 12:57:28.6, 43.79S×41.59E, h11^{km}, mB5.2, mb5.4, Ms4.7, Msz4.3*
*IDC **14** 12:57:28.7±0.5, 43.77S×41.60E, mb4.6/18, mb1 4.7/19, mb1mx4.6/23, mbtmp4.6/19, ML4.2/1, MS4.2/16, Ms1 4.1/16, ms1mx4.1/18, Error ellipse: s-maj=19.2km s-min=12.8km az=64.0*
*HRVD **14** 12:57:30.2±0.4, 43.86S×41.73E, h16^{km}±1^{km}, MW5.1/57, Centroid moment Tensor Solution. LP body waves: s29,c32;Mantle waves: s57,c84; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.51±.31; $M_{\theta\theta}$3.72±.22; $M_{\phi\phi}$0.78±.20; $M_{r\theta}$-2.69±.62; $M_{\theta\phi}$1.13±.13; $M_{\phi r}$-2.11±.70; Best double couple: $M_0$5.489×10^{16} NP1:ϕ_s260°,δ27°, λ-72°. NP2:ϕ_s60°,δ64°,λ-99°. Principal axes: T 5.205, Plg19°, Azm157°; N .556, Plg8°, Azm64°; P -5.772, Plg69°, Azm312°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **14** 12:57:30.2±0.2, 43.75S×41.60E, h10^{km}, mb5.0/18 Error ellipse: s-maj=8.8km s-min=6.3km az=86.0*
ISC 14 12:57:28.7±0.3**, 43.80S**±0.05×**41.5E**±0.1**, h10**^{km}**, (h16**^{km}±5.9^{km}**:pP-P), n113, σ0**^{s}**.89**/79**, mb4.8**/33**, MS4.2**/17**, 15C-3D, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**19.82**	**298**	P	**P**	**13 02 01.7**	**-0.5**
	0.8nm,0.3s,baz=122,slow=13,SNR=11						
SUR				LR	LR	13 07 41.3	
	comp=Z,748nm,19.5s,baz=100,slow=31						
SUR	**Sutherland**	**19.82**	**298**	*e*P	**P**	**13 02 01.8**	**-0.4**
	28nm,0.8s						
BOSA	**Boshof**	**19.98**	**314**	P	**P**	**13 02 03.1**	**-0.9**
	20nm,0.8s,baz=142,slow=12,SNR=17						
BOSA				LR	LR	13 08 28.5	
	comp=Z,758nm,18.6s,baz=151,slow=33						
BOSA	**Boshof**	**19.98**	**314**	*e*P	**P**	**13 02 03.3**	**-0.8**
	45nm,1.2s						
BOSA	**Boshof**	**19.98**	**314**	*e*P	**P**	**13 02 03.3**	**-0.7**
BOSA				pmax	pmax		
	comp=Z,45nm,1.2s						
LBTB	**Lobatse**	**22.80**	**320**	P	**P**	**13 02 33.1**	**+0.5**
	comp=Z,11nm,0.8s,mb4.3,baz=154,slow=9.6,SNR=15						
LBTB				LR	LR	13 09 43.4	
	comp=Z,1µm,21.3s,MS4.2,baz=138,slow=32						
LBTB	**Lobatse**	**22.80**	**320**	*e*P	**P**	**13 02 32.9**	**+0.2**
	comp=Z,33nm,1.2s,mb4.6						
LBTB	**Lobatse**	**22.80**	**320**	*e*P	**P**	**13 02 32.9**	**+0.2**
LBTB				pmax	pmax		
	comp=Z,33nm,1.2s,mb4.6						
SYO	**Syowa Base**	**25.29**	**182**	⇑P	**P**	**13 02 56.9**	**+0.6**
SYO	**Syowa Base**	**25.29**	**182**	⇑*e*P	**P**	**13 02 56.9**	**+0.6**
OPO	**Ambohidratompo**	**25.60**	**13**	P	**P**	**13 02 59.6**	**-0.1**

	comp=Z,4.3nm,0.8s,mb4.0,baz=194,slow=7.7,SNR=4.8						
MATP	**Matopo**	**25.71**	**331**	P	**P**	**13 02 59.4**	**-1.3**
	comp=Z,11nm,0.9s,mb4.4,baz=158,slow=9.4,SNR=11						
MATP				LR	LR	13 11 42.0	
	comp=Z,740nm,19.0s,MS4.2,baz=165,slow=33						
MAW	**Mawson**	**26.43**	**162**	*e*P	**P**	**13 03 06.6**	**-0.4**
	comp=Z,14nm,1.0s,mb4.4						
MAW	**Mawson**	**26.43**	**162**	P	**P**	**13 03 07.0**	**0.0**
	comp=Z,13nm,0.9s,mb4.5,baz=310,slow=8.7,SNR=15						
MAW				PcP	PcP	13 06 31.7	-1.1
	comp=Z,7.3nm,1.0s,baz=297,slow=4.5,SNR=4.4						
MAW				LR	LR	13 10 54.1	
	comp=Z,571nm,21.5s,MS4.1,baz=60,slow=30						
MAW	**Mawson**	**26.43**	**162**	*e*P	**P**	**13 03 06.6**	**-0.4**
MAW				pmax	pmax		
	comp=Z,14nm,1.0s						
LSZ	**Lusaka**	**30.61**	**334**	P	**P**	**13 03 44.2**	**-0.9**
	comp=Z,8.0nm,0.7s,mb4.7,baz=167,slow=8.3,SNR=22						
LSZ	**Lusaka**	**30.61**	**334**	*e*P	**P**	**13 03 43.8**	**-1.3**
	comp=Z,14nm,1.0s,mb4.8						
LSZ	**Lusaka**	**30.61**	**334**	*e*P	**P**	**13 03 43.8**	**-1.3**
LSZ				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
NVL	**N'lazarevskaya**	**30.77**	**199**	*e*P	**P**	**13 03 44.8**	**-1.2**
NVL				*e**PP	pP	13 03 53.6	+4.7
NVL				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SNAA	**Sanae**	**35.10**	**203**	⇑*i*	**P**	**13 04 24.0**	**+0.3**
SNAA	**Sanae**	**35.10**	**203**	⇑*i*	**P**	**13 04 31.9**	**+8.2**
SNAA	**Sanae**	**35.10**	**203**	⇑*i*	**P**	**13 04 41.4**	**+18**
SNAA	**Sanae**	**35.10**	**203**	P	**P**	**13 04 23.6**	**-0.1**
	comp=Z,1.5nm,0.3s,mb4.4,baz=62,slow=7.4,SNR=23						
SNAA				PcP	PcP	13 06 53.9	-1.6
	comp=Z,1.2nm,0.9s,baz=127,slow=0.9,SNR=3.7						
SNAA				LR	LR	13 15 25.4	
	comp=Z,124nm,20.3s,MS3.6,baz=54,slow=31						
SNAA	**Sanae**	**35.10**	**203**	⇑*i*P	**P**	**13 04 24.0**	**+0.3**
VNA2	**Neumayer--Watz**	**36.11**	**205**	⇓*i*	**P**	**13 04 34.1**	**+1.9**
VNA2	**Neumayer--Watz**	**36.11**	**205**	⇑*i*	**P**	**13 04 38.3**	**+6.1**
VNA2	**Neumayer--Watz**	**36.11**	**205**	⇑*i*	**P**	**13 04 42.2**	**+10**
VNA2	**Neumayer--Watz**	**36.11**	**205**	⇑*i*	**P**	**13 04 49.6**	**+17**
VNA1	**Neumayer--Stat**	**36.28**	**205**	⇑*i*	**P**	**13 04 36.0**	**+2.4**
VNA1	**Neumayer--Stat**	**36.28**	**205**	⇑*i*	**P**	**13 04 43.1**	**+9.5**
VNA1	**Neumayer--Stat**	**36.28**	**205**	⇑*i*	**P**	**13 04 49.1**	**+15**
VNA3	**Neumayer Olymp**	**36.92**	**205**	⇓*i*	**P**	**13 04 40.4**	**+1.4**
VNA3	**Neumayer Olymp**	**36.92**	**205**	⇑*i*	**P**	**13 04 45.8**	**+6.8**
VNA3	**Neumayer Olymp**	**36.92**	**205**	⇑*i*	**P**	**13 04 51.0**	**+12**
VNA3	**Neumayer Olymp**	**36.92**	**205**	⇑*i*	**P**	**13 04 54.8**	**+16**
KMBO	**Kilima Mbogo**	**42.65**	**354**	P	**P**	**13 05 27.4**	**+0.2**
	comp=Z,0.9nm,0.4s,mb3.8,baz=199,slow=13,SNR=4.8						
KMBO				LR	LR	13 20 33.3	
	comp=Z,586nm,21.1s,MS4.5,baz=272,slow=32						
QSPA	**South Pole Qui**	**46.41**	**180**	⇓*i*P	**P**	**13 05 55.7**	**-0.8**
	comp=Z,18nm,1.0s,mb5.0						
VNDA	**Vanda**	**53.59**	**167**	*e*P	**P**	**13 06 49.0**	**-2.5**
	comp=Z,4.0nm,0.8s,mb4.4						
VNDA	**Vanda**	**53.59**	**167**	*e*P	**P**	**13 06 49.0**	**-2.5**
VNDA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SBA	**Scott Base**	**54.16**	**168**	*e*P	**P**	**13 06 55.7**	**+0.1**
	comp=Z,40nm,1.6s,mb5.1						
SBA	**Scott Base**	**54.16**	**168**	*e*P	**P**	**13 06 55.7**	**+0.1**
SBA				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
NWAO	**Narrogin (SRO)**	**58.45**	**107**	PP	PP	13 09 31.3	-6.9
	comp=Z,17nm,0.8s,baz=236,slow=2.8,SNR=3.9						
NWAO				LR	LR	13 25 43.9	
	comp=Z,206nm,21.8s,MS4.2,baz=268,slow=29						
DBIC	**Dimbokro**	**65.36**	**308**	P	**P**	**13 08 13.5**	**-0.1**
	comp=Z,7.6nm,0.6s,mb4.9,baz=126,slow=7.3,SNR=17						
DBIC				LR	LR	13 33 44.0	
	comp=Z,190nm,18.4s,MS4.3,baz=128,slow=33						
POO	**Poona**	**68.74**	**33**	*e*x	x	13 08 31.5	
FITZ	**Fitzroy Crossi**	**73.54**	**99**	*e*P	**P**	**13 09 04.0**	**+0.3**
	comp=Z,39nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**73.54**	**99**	P	**P**	**13 09 03.8**	**0.0**
	comp=Z,62nm,0.9s,mb5.5,baz=239,slow=4.1,SNR=3.9						
STKA	**Stephens Creek**	**75.26**	**120**	*e*P	**P**	**13 09 13.6**	**+0.2**
	comp=Z,17nm,0.8s,mb5.0						
STKA	**Stephens Creek**	**75.26**	**120**	P	**P**	**13 09 13.6**	**+0.2**
	comp=Z,17nm,0.7s,mb5.1,baz=196,slow=3.2,SNR=12						
STKA				LR	LR	13 35 35.1	
	comp=Z,153nm,19.5s,MS4.3,baz=27,slow=30						
PLCA	**Paso Flores**	**76.01**	**227**	P	**P**	**13 09 17.6**	**+0.1**
	comp=Z,3.8nm,0.8s,mb4.4,baz=121,slow=5.7,SNR=7.8						
PLCA				LR	LR	13 36 33.2	
	comp=Z,91nm,20.2s,MS4.1,baz=286,slow=31						
PLCA	**Paso Flores**	**76.01**	**227**	*e*P	**P**	**13 09 17.4**	**-0.1**
	comp=Z,9.8nm,1.3s,mb4.6						
PLCA	**Paso Flores**	**76.01**	**227**	*e*P	**P**	**13 09 17.4**	**-0.1**
PLCA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CPUP	**Villa Florida**	**78.20**	**245**	*e*P	**P**	**13 09 30.4**	**+0.5**
	comp=Z,34nm,0.8s,mb5.3						
CPUP	**Villa Florida**	**78.20**	**245**	*e*P	**P**	**13 09 30.4**	**+0.5**
CPUP				pmax	pmax		
	comp=Z,34nm,0.8s						
WRA	**Warramunga Arr**	**78.46**	**106**	P	**P**	**13 09 31.1**	**-0.3**
	comp=Z,3.9nm,0.7s,mb4.5,baz=231,slow=4.8,SNR=4.7						
WRAB	**Tennant Creek**	**78.47**	**106**	P	**P**	**13 09 31.7**	**+0.2**
	comp=Z,63nm,1.6s,mb5.3						
WRAB	**Tennant Creek**	**78.47**	**106**	P	**P**	**13 09 31.7**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,63nm,1.6s,mb5.3						
BDFB	**Brasilia**	**79.01**	**259**	P	**P**	**13 09 35.9**	**+1.4**
	comp=Z,8.3nm,0.7s,mb4.8,baz=145,slow=3.7,SNR=9.9						
BDFB				LR	LR	13 39 41.7	
	comp=Z,58nm,18.6s,MS4.0,baz=169,slow=32						
KOLN	**Koldanda**	**81.00**	**37**	*e*P	**P**	**13 09 44.4**	**-0.6**
	comp=Z,43nm,1.3s,mb5.2						
DMN	**Daman**	**81.53**	**38**	*e*P	**P**	**13 09 47.3**	**-0.4**
	comp=Z,35nm,0.9s,mb5.3						
PKI	**Pulchoki**	**81.63**	**38**	*e*P	**P**	**13 09 47.5**	**-0.8**
GKN	**Gorkha**	**81.66**	**38**	*e*P	**P**	**13 09 47.8**	**-0.6**
	comp=Z,38nm,1.0s,mb5.3						
KKN	**Kakani**	**81.76**	**38**	*e*P	**P**	**13 09 48.6**	**-0.3**
	comp=Z,44nm,1.2s,mb5.3						
GUN	**Gumba**	**82.13**	**39**	*e*P	**P**	**13 09 50.8**	**-0.1**
	comp=Z,53nm,0.9s,mb5.5						
BRTR	**Keskin Array B**	**83.44**	**354**	P	**P**	**13 09 58.0**	**+0.6**
	comp=Z,1.5nm,0.7s,mb4.1,baz=164,slow=8.5,SNR=8.3						
BR131	**Keskin Array S**	**83.44**	**354**	*e*P	**P**	**13 09 57.9**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.2						
GNI	**Garni**	**83.61**	**3**	P	**P**	**13 09 59.9**	**+1.6**
	comp=Z,2.7nm,0.3s,mb4.9,baz=214,slow=3.6,SNR=3.7						
LSA	**Lhasa**	**86.10**	**42**	P	**P**	**13 10 11.4**	**+0.5**
LSA	**Lhasa**	**86.10**	**42**	*e*P	**P**	**13 10 11.9**	**+1.0**
	comp=Z,19nm,0.8s,mb5.4						
LSA	**Lhasa**	**86.10**	**42**	*e*P	**P**	**13 10 11.9**	**+1.0**
LSA				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.4						
ZEI	**Tsey**	**86.21**	**2**	*e*P	**P**	**13 10 11.0**	**-0.1**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9						
KIV	**Kislovodsk**	**87.37**	**1**	*e*P	**P**	**13 10 18.0**	**+1.3**
KIV	**Kislovodsk**	**87.37**	**1**	*e*P	**P**	**13 10 17.2**	**+0.4**
KIV				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.3						
KIV				MLR	MLR		
	comp=Z,81nm,18.0s,MS4.2						
KMI	**Kunming**	**88.59**	**53**	P	**P**	**13 10 22.9**	**-0.2**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb5.0						
KMI	**Kunming**	**88.59**	**53**	P	**P**	**13 10 22.9**	**-0.2**
	comp=Z,11nm,1.3s,mb5.0						
URZ	**Urewera**	**88.97**	**147**	P	**P**	**13 10 23.3**	**-1.3**
	comp=Z,16nm,0.9s,mb5.3,baz=47,slow=4.5,SNR=5.8						
MLR	**Muntele Rosu**	**89.97**	**349**	P	**P**	**13 10 28.7**	**-0.4**
	comp=Z,2.2nm,0.7s,mb4.6,baz=251,slow=18,SNR=3.1						
LPAZ	**La Paz**	**92.37**	**245**	P	**P**	**13 10 41.8**	**+1.0**
	comp=Z,1.8nm,1.0s,mb4.4,baz=165,slow=4.1,SNR=5.2						
LPAZ				LR	LR	13 46 17.2	
	comp=Z,61nm,20.8s,MS4.0,baz=210,slow=32						
AKTO	**Aktyubinsk**	**94.95**	**11**	LR	LR	13 51 32.5	
	comp=Z,118nm,19.4s,MS4.4,slow=34						
GERES	**GERESS Array B**	**95.43**	**342**	LR	LR	13 52 04.7	
	comp=Z,100nm,19.9s,MS4.3,baz=163,slow=34						
WMQ	**Urumqi**	**96.49**	**32**	*e*P	**P**	**13 11 00.5**	**+1.4**
WMQ				AP	pP	13 11 05.0	+2.7
WMQ				XP	sP	13 11 07.5	+4.2
WMQ				SKS	SKS	13 21 35.0	-4.4
WMQ				*e*S	S	13 22 17.0	+0.8
WMQ				AMB	AMB		
	comp=Z,130nm,7.6s						
WMQ				LR	LR		
	comp=N,90nm,22.1s,MS4.5						
WMQ				LR	LR		
	comp=E,110nm,17.4s,MS4.5						
WMQ				LR	LR		
	comp=Z,90nm,19.3s,MS4.3						
MKAR	**Makanchi Array**	**97.15**	**27**	LR	LR	13 48 57.7	
	comp=Z,69nm,18.0s,MS4.2,baz=70,slow=32						
LZH	**Lanzhou**	**97.60**	**46**	*e*P	**P**	**13 11 06.8**	**+2.5**
LZH				AP	pP	13 11 10.0	+2.5
LZH				XP	sP	13 11 11.8	+3.3
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb5.2						
LZH	**Lanzhou**	**97.60**	**46**	*e*P	**P**	**13 11 06.8**	**+2.5**
	comp=Z,10.0nm,1.2s,mb5.2						
LZH				pP	pP	13 11 10.0	+2.5
LZH				sP	sP	13 11 11.7	+3.2
LZH	**Lanzhou**	**97.60**	**46**	*e*P	**P**	**13 11 06.8**	**+2.5**
LZH				*PP	pP	13 11 10.0	+2.5
LZH				*SP	sP	13 11 11.7	+3.2
LZH				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb5.2						
MDJ	**Mudanjiang**	**117.74**	**54**	PKP	PKPdf	13 16 16.0	-1.8
MDJ				PP	PP	13 17 28.0	-4.9
MDJ				LR	LR		
	comp=N,30nm,16.3s,MS4.1						
MDJ				LR	LR		
	comp=E,30nm,19.1s,MS4.1						
MDJ				LR	LR		
	comp=Z,30nm,18.4s,MS4.0						
TIXI	**Tiksi**	**130.06**	**24**	*e*PKIKP	PKPdf	13 16 37.3	-3.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BILL	**Bilibino**	**142.59**	**31**	*e*PKPdf	PKPdf	13 16 58.1	-5.6
BILL	**Bilibino**	**142.59**	**31**	*e*PKIKP	PKPdf	13 16 58.1	-5.6
CCM	**Cathedral Cave**	**144.23**	**277**	*e*PKPdf	PKPdf	13 17 03.6	-3.8
JCT	**Junction City**	**146.72**	**260**	*e*PKPdf	PKPdf	13 17 11.5	-0.5
WMOK	**Wichita Mounta**	**148.20**	**267**	*e*PKPdf	PKPdf	13 17 12.8	-1.5
KSU1	**Kansas State U**	**148.50**	**276**	*e*PKPdf	PKPdf	13 17 12.9	-1.6
LTX	**Lajitas**	**148.78**	**254**	*e*PKPbc	PKPdf	13 17 18.0	+2.6
TXAR	**Lajitas Array**	**148.78**	**254**	PKP	PKPdf	13 17 15.0	-0.3
	comp=Z,23nm,0.9s,baz=135,slow=5.3,SNR=74						
TXAR				PKPbc	PKPdf	13 17 18.5	+3.2
	comp=Z,23nm,0.9s,baz=135,slow=5.1,SNR=73						
TXAR	**Lajitas Array**	**148.78**	**254**	PKP	PKPdf	13 17 15.0	-0.3
TXAR				PKPbc	PKPdf	13 17 18.5	+3.2
AMTX	**Amarillo**	**150.37**	**265**	*e*PKPdf	PKPdf	13 17 17.3	-0.4
ULM	**Lac du Bonnet**	**150.56**	**298**	PKPbc	PKPdf	13 17 20.8	+3.3
	comp=Z,12nm,0.7s,baz=75,slow=3.8,SNR=18						
GDL2	**Guadalupe Moun**	**150.91**	**258**	*e*PKPdf	PKPdf	13 17 17.6	-1.0
CPRX	**Cap Rock**	**151.00**	**260**	*e*PKPdf	PKPdf	13 17 18.1	-0.6
CPRX				*e*PKPbc	PKPdf	13 17 23.2	+4.5
CPRX				*e*PKPab	PKPab	13 17 31.7	+0.4
MNTX	**Cornudas Mount**	**151.35**	**256**	*e*PKPdf	PKPdf	13 17 18.0	-1.3
LPM	**Los Pinos Moun**	**153.64**	**260**	*e*PKPdf	PKPdf	13 17 21.8	-0.7
LPM				*e*PKPbc	PKPdf	13 17 29.3	+6.9
ANMO	**Albuquerque**	**153.84**	**261**	*e*PKPdf	PKPdf	13 17 21.9	-0.8
ANMO				*e*PKPbc	PKPdf	13 17 29.7	+7.0
SDCO	**Great Sand Dun**	**154.40**	**268**	*e*PKPdf	PKPdf	13 17 23.2	-0.1
SDCO				*e*PKPbc	PKPdf	13 17 30.5	+7.2
SDCO				*e*PKPab	PKPab	13 17 46.0	+0.6
RSSD	**Black Hills**	**155.29**	**283**	*e*PKPdf	PKPdf	13 17 19.7	-4.6
IMA2	**Indian Mountai**	**156.17**	**15**	*e*PKPdf	PKPdf	13 17 23.2	-1.6
PV10	**Paradox Valley**	**157.21**	**266**	*e*PKPdf	PKPdf	13 17 25.9	-1.2
ILAR	**Eielson Array**	**158.46**	**10**	PKP	PKPdf	13 17 24.9	-2.9
	comp=Z,0.9nm,0.9s,baz=296,slow=3.6,SNR=5.9						
ILAR				PKPab	PKPab	13 18 00.4	-1.5
	comp=Z,1.6nm,0.8s,baz=328,slow=3.4,SNR=9.5						
SRU	**San Rafael**	**158.56**	**267**	*e*PKPdf	PKPdf	13 17 27.1	-1.6
SRU				*e*PKPab	PKPab	13 18 03.2	0.0
PDAR	**Pinedale Array**	**158.95**	**277**	PKP	PKPdf	13 17 28.3	-0.8
	comp=Z,0.6nm,0.7s,baz=117,slow=3.3,SNR=4.2						
PDAR				PKPab	PKPab	13 18 05.2	+0.5
	comp=Z,0.6nm,0.8s,baz=127,slow=4.5,SNR=2.8						
MSU	**Marysvale**	**159.53**	**264**	*e*PKPdf	PKPdf	13 17 29.3	-0.6
TPNV	**Topopah Spring**	**161.75**	**256**	*e*PKPab	PKPab	13 18 15.8	-1.2
NVAR	**Mina Array Bea**	**163.87**	**257**	PKP	PKPdf	13 17 33.5	-0.7
	comp=Z,0.5nm,0.7s,baz=89,slow=1.8,SNR=4.0						
NVAR				PKPab	PKPab	13 18 27.0	+0.8
	comp=Z,1.1nm,1.0s,baz=126,slow=5.6,SNR=5.4						
NVAR				PP	PP	13 22 11.5	-1.5
	comp=Z,0.1nm,0.3s,baz=202,slow=2.3,SNR=4.3						
NVAR	**Mina Array Bea**	**163.87**	**257**	PKP	PKPdf	13 17 33.5	-0.7
NVAR				PKPab	PKPab	13 18 27.0	+0.8
NVAR				PP	PP	13 22 11.5	-1.5

BJI ***14*** *12:57:51.0, 7.06S×130.97E, h100*^{km}*, mB5.2, mb4.9*

MOS ***14*** *12:57:56.6±1.2, 6.36S×130.19E, h90*^{km}*, mb4.5/11, Error ellipse: s-maj=14.5km s-min=7.8km az=110.0*

HRVD ***14*** *12:57:59.0±1.0, 6.18S×130.58E, h136*^{km}*±9*^{km}*, MW4.9/32, Centroid moment Tensor Solution. LP body waves: s4,c6; Mantle waves: s32,c39; Half duration: 0 Moment tensor: Scale 10*^{16}*Nm; M*$_{rr}$*-0.17±.26; M*$_{\theta\theta}$*2.05±.24; M*$_{\phi\phi}$*-1.89±.28; M*$_{r\theta}$*-0.03±.15; M*$_{\theta\phi}$*0.53±.25; M*$_{\phi r}$*1.62±.16; Best double couple: M*$_0$*2.523×10*^{16} *NP1:φ*$_s$*123°, δ64°, λ-18°. NP2: φ*$_s$*221°, δ74°, λ-153°. Principal axes: T 2.14, Plg6°, Azm350°; N .762, Plg59°, Azm250°; P -2.906, Plg30°, Azm84°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***14*** *12:57:59.0±1.1, 6.45S×130.31E, h100*^{km}*±10*^{km}*, mb4.9/15 Error ellipse: s-maj=9.0km s-min=5.3km az=58.0*

IDC ***14*** *12:58:04.3±2.2, 6.39S×130.40E, h145*^{km}*±19*^{km}*, mb4.5/20, mb1 4.4/21, mb1mx4.4/25, mbtmp4.9/21, MS3.6/2, Ms1 3.5/2, ms1mx2.8/25, Error ellipse: s-maj=17.9km s-min=9.5km az=67.0*

ISC 14 12:57:57.3±1.6**, 6.42S**±0.05×**130.35E**±0.05**, h101**^{km}±15^{km}**, n99, σ0**^{s}**.94**/86**, mb4.9**/43**, 4C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.59**	**162**	*e*P	P	12 59 54.6	+21
	118nm,0.3s						
KAKA				*e*S	**S**	**13 01 04.1**	**+17**
FITZ	**Fitzroy Crossi**	**12.49**	**201**	*e*P	**P**	**13 00 51.6**	**-1.1**
	76nm,0.6s						
FITZ				*e*S	**S**	**13 02 57.7**	**-12**
FITZ	**Fitzroy Crossi**	**12.49**	**201**	P	**P**	**13 00 51.7**	**-1.0**
	13nm,0.3s,baz=35,slow=13,SNR=130						
FITZ				S	**S**	**13 03 01.7**	**-8.2**
	23nm,0.3s,baz=77,slow=16,SNR=8.8						
FITZ				LR	LR	13 05 47.4	
	comp=Z,390nm,21.0s,baz=154,slow=37						
WRAB	**Tennant Creek**	**13.99**	**164**	*e*P	**P**	**13 01 11.2**	**-1.0**
	38nm,0.6s						
WRAB	**Tennant Creek**	**13.99**	**164**	*e*P	**P**	**13 01 11.8**	**-0.4**
WRA	**Warramunga Arr**	**13.99**	**164**	P	**P**	**13 01 11.1**	**-1.1**
	1.7nm,0.3s,baz=349,slow=13,SNR=49						
WRA				S	**S**	**13 03 38.5**	**-6.9**
	5.4nm,0.3s,baz=340,slow=22,SNR=12						
WB2	**Warramunga Arr**	**14.00**	**164**	*e*P	**P**	**13 01 11.2**	**-1.1**
WB2				*e*S	**S**	**13 03 37.2**	**-8.3**
PMG	**Port Moresby**	**16.91**	**101**	P	**P**	**13 01 51.5**	**+2.4**
	4.0nm,0.3s,baz=288,slow=5.2,SNR=24						
PMG				S	**S**	**13 04 51.7**	**-0.9**
	1.5nm,0.3s,baz=190,slow=22,SNR=5.8						
PMG	**Port Moresby**	**16.91**	**101**	*e*P	**P**	**13 01 51.1**	**+1.9**
	91nm,0.8s						
PMG	**Port Moresby**	**16.91**	**101**	*c i*P	**P**	**13 01 53.1**	**+3.9**
KKM	**Kota Kinabalu**	**18.77**	**311**	*e*P	**P**	**13 02 12.2**	**+1.0**
CTA	**Charters Tower**	**20.57**	**133**	*e*P	**P**	**13 02 32.1**	**+2.0**
	38nm,0.7s						
CTA	**Charters Tower**	**20.57**	**133**	P	**P**	**13 02 32.0**	**+1.9**
	51nm,0.7s,baz=311,slow=12,SNR=30						
CTA	**Charters Tower**	**20.57**	**133**	*e*P	**P**	**13 02 32.1**	**+2.0**
CTA				pmax	pmax		
	comp=Z,38nm,0.7s						
KSM	**Kuching**	**21.48**	**291**	*e*P	**P**	**13 02 40.7**	**+1.3**
TGY	**Tagaytay City**	**22.42**	**335**	P	**P**	**13 02 51.5**	**+3.0**
	comp=Z,47nm,0.4s,mb5.2,baz=186,slow=9.2,SNR=2.3						
STKA	**Stephens Creek**	**27.42**	**159**	⇓*i*P	**P**	**13 03 35.6**	**-0.1**
	comp=Z,14nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**27.42**	**159**	P	**P**	**13 03 35.7**	**0.0**
	comp=Z,20nm,0.6s,mb4.8,baz=333,slow=9.1,SNR=46						
STKA				LR	LR	13 14 38.1	
	comp=Z,94nm,21.9s,baz=20,slow=36						
KLBR	**Kellerberrin**	**27.68**	**204**	*e*P	**P**	**13 03 37.8**	**-0.2**
	comp=Z,8.6nm,0.5s,mb4.5						
NWAO	**Narrogin (SRO)**	**29.06**	**203**	P	**P**	**13 03 50.4**	**0.0**
	comp=Z,6.3nm,0.5s,mb4.5,baz=353,slow=4.3,SNR=9.6						
HNR	**Honiara**	**29.46**	**98**	P	**P**	**13 03 54.2**	**+0.1**
	comp=Z,60nm,0.7s,mb5.3,baz=305,slow=2.7,SNR=8.9						
ARMA	**Armidale**	**31.14**	**143**	*e*P	**P**	**13 04 09.7**	**+0.9**
JOW	**Kunigami**	**33.11**	**357**	P	**P**	**13 04 26.7**	**+0.7**
	comp=Z,19nm,0.6s,mb5.1,baz=90,slow=17,SNR=5.5						
CNB	**Canberra Magne**	**33.66**	**151**	*e*P	**P**	**13 04 31.5**	**+0.9**
	comp=Z,15nm,0.8s,mb4.9						
TOO	**Toolangi**	**33.94**	**158**	*e*P	**P**	**13 04 34.8**	**+1.9**
	comp=Z,15nm,4.7s						
TOO	**Toolangi**	**33.94**	**158**	*e*P	**P**	**13 04 34.8**	**+1.9**
TOO				pmax	pmax		
	comp=Z,15nm,4.7s						
CBIJ	**Chichi jima**	**35.23**	**18**	P	**P**	**13 04 43.3**	**-0.7**
	comp=Z,46nm,0.4s,mb5.7,baz=274,slow=15,SNR=14						
DZM	**Mont Dzumac**	**38.15**	**118**	P	**P**	**13 05 09.7**	**+1.1**
	comp=Z,6.8nm,0.6s,mb4.7,baz=294,slow=12,SNR=10						
SSE	**Sheshan**	**38.31**	**347**	P	**P**	**13 05 09.8**	**-0.1**
SSE				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,150nm,4.8s						
SSE	**Sheshan**	**38.31**	**347**	P	**P**	**13 05 09.7**	**-0.2**
	comp=Z,59nm,0.7s,mb5.5						
NJ2	**Nanjing**	**39.79**	**345**	*e*P	**P**	**13 05 22.6**	**+0.5**
NJ2				AP	pP	13 05 44.1	-1.5
NJ2				XP	sP	13 05 57.3	-0.2
NJ2				PP	PP	13 06 59.1	+0.2
NJ2				S	**S**	**13 11 18.0**	**-0.5**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,360nm,4.8s						
NJ2				LR	LR		
	comp=N,3µm,18.3s						
NJ2				LR	LR		
	comp=E,2µm,20.0s						
NJ2				LR	LR		
	comp=Z,430nm,19.3s						
GYA	**Guiyang**	**39.94**	**326**	P	**P**	**13 05 25.0**	**+1.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
GYA				AMB	AMB		
	comp=Z,210nm,4.8s						
MJAR	**Matsushiro Arr**	**43.36**	**9**	P	**P**	**13 05 51.2**	**-0.2**
	comp=Z,9.5nm,0.8s,mb4.6,baz=189,slow=9.8,SNR=18						
MAJO	**Matsushiro**	**43.36**	**9**	*e*P	**P**	**13 05 51.1**	**-0.3**
	comp=Z,7.6nm,0.7s,mb4.5						
MAJO	**Matsushiro**	**43.36**	**9**	*e*P	**P**	**13 05 51.1**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
MAT	**Matsushiro**	**43.36**	**9**	P	**P**	**13 05 50.8**	**-0.6**
MAT	**Matsushiro**	**43.36**	**9**	*e*P	**P**	**13 05 51.0**	**-0.4**
SHL	**Shillong**	**49.07**	**312**	*e*P	**P**	**13 06 36.0**	**-0.5**
SHL				*e*P		13 09 55.3	
CN2	**Changchun**	**50.18**	**355**	*e*P	**P**	**13 06 44.6**	**-0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
ASAJ	**Asahikawa**	**51.50**	**11**	P	**P**	**13 06 54.8**	**0.0**
	comp=Z,12nm,0.8s,mb5.0,baz=124,slow=24,SNR=11						
LSA	**Lhasa**	**52.02**	**316**	*e*P	**P**	**13 06 59.1**	**+0.2**
	comp=Z,7.4nm,0.6s,mb4.9						
LSA	**Lhasa**	**52.02**	**316**	*e*P	**P**	**13 06 59.1**	**+0.2**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
URZ	**Urewera**	**52.81**	**134**	P	**P**	**13 07 03.8**	**-0.9**
	comp=Z,3.1nm,0.6s,mb4.5,baz=248,slow=6.4,SNR=3.8						
YSS	**Yuzh-Sakhalins**	**54.27**	**10**	⇑*i*P	**P**	**13 07 15.1**	**-0.1**
YSS				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
GUN	**Gumba**	**54.83**	**311**	*e*P	**P**	**13 07 19.5**	**-0.1**
	comp=Z,91nm,0.7s,mb5.9						
PKI	**Pulchoki**	**55.01**	**310**	*e*P	**P**	**13 07 20.4**	**-0.5**
	comp=Z,23nm,0.5s,mb5.5						
KKN	**Kakani**	**55.22**	**310**	*e*P	**P**	**13 07 21.9**	**-0.6**
	comp=Z,33nm,0.6s,mb5.5						
DMN	**Daman**	**55.26**	**310**	*e*P	**P**	**13 07 22.4**	**-0.3**
	comp=Z,25nm,0.5s,mb5.5						
GKN	**Gorkha**	**55.82**	**310**	*e*P	**P**	**13 07 26.3**	**-0.5**
	comp=Z,56nm,0.5s,mb5.8						
HYB	**Hyderabad**	**56.37**	**296**	*i* P	**P**	**13 07 34.0**	**+3.2**
HYB	**Hyderabad**	**56.37**	**296**	*e*P	**P**	**13 07 29.0**	**-1.8**
KOLN	**Koldanda**	**56.50**	**309**	*e*P	**P**	**13 07 31.4**	**-0.2**
	comp=Z,24nm,0.5s,mb5.5						
SONM	**Songino Array**	**58.00**	**341**	P	**P**	**13 07 42.6**	**+0.7**
	comp=Z,4.4nm,0.4s,mb4.8,baz=161,slow=7.0,SNR=51						
ZAK	**Zakamensk**	**61.23**	**341**	*e*P	**P**	**13 08 01.8**	**-2.2**
ZAK				*e*		13 08 44.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
BOD	**Bodaibo**	**65.38**	**350**	*e*P	**P**	**13 08 29.8**	**-1.3**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
MKAR	**Makanchi Array**	**67.93**	**327**	P	**P**	**13 08 47.9**	**+0.5**
	comp=Z,9.4nm,0.5s,mb4.9,baz=114,slow=8.1,SNR=120						
YAK	**Yakutsk**	**68.25**	**360**	*e*P	**P**	**13 08 49.2**	**+0.1**
	comp=Z,57nm,0.7s,mb5.5						
YAK	**Yakutsk**	**68.25**	**360**	*d i*P	**P**	**13 08 48.9**	**-0.1**
YAK				pmax	pmax		
	comp=Z,71nm,0.7s,mb5.6						
AAK	**Ala-Archa**	**70.32**	**320**	*e*P	**P**	**13 09 02.2**	**+0.2**
	comp=Z,2.7nm,0.7s,mb4.2						
AAK	**Ala-Archa**	**70.32**	**320**	*e*P	**P**	**13 09 02.3**	**+0.2**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
SEY	**Seymchan**	**71.17**	**10**	*e*P	**P**	**13 09 07.9**	**+1.1**
SEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
SEY				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
ZAL	**Zalesovo**	**71.22**	**334**	P	**P**	**13 09 07.6**	**+0.4**
	comp=Z,2.4nm,0.6s,mb4.2,baz=344,slow=5.9,SNR=15						
ZAL	**Zalesovo**	**71.22**	**334**	*i* P	**P**	**13 09 07.5**	**+0.3**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**72.20**	**328**	*e*P	**P**	**13 09 13.4**	**+0.2**
	comp=Z,5.6nm,0.8s,mb4.5						
KURK	**Kurchatov**	**72.20**	**328**	*e*P	**P**	**13 09 13.4**	**+0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
NVS	**Novosibirsk**	**72.50**	**334**	*e*P	**P**	**13 09 13.5**	**-1.3**
NVS				*e*		13 18 22.8	
NVS				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
NVS				pmax	pmax		
	comp=N,5.0nm,1.5s						
VNDA	**Vanda**	**72.98**	**173**	*e*P	**P**	**13 09 16.6**	**-0.6**
BVAR	**Borovoye Array**	**77.76**	**328**	P	**P**	**13 09 45.1**	**+0.3**
	comp=N,1.7nm,0.5s,mb4.0,baz=129,slow=8.7,SNR=17						
TIXI	**Tiksi**	**77.91**	**360**	⇑*i*P	**P**	**13 09 42.9**	**-2.4**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
QSPA	**South Pole Qui**	**83.56**	**180**	*e*P	**P**	**13 10 15.0**	**+0.1**
	comp=Z,26nm,0.6s,mb5.2						
AKTO	**Aktyubinsk**	**83.83**	**322**	P	**P**	**13 10 16.9**	**+0.1**
	comp=Z,0.7nm,0.3s,mb3.9,baz=115,slow=6.5,SNR=4.6						
KDAK	**Kodiak Island**	**88.55**	**31**	P	**P**	**13 10 39.8**	**+0.1**
	comp=Z,11nm,0.7s,mb5.0,baz=284,slow=5.4,SNR=8.3						
IMA2	**Indian Mountai**	**90.17**	**23**	*e*P	**P**	**13 10 47.6**	**+0.5**
ILAR	**Eielson Array**	**92.67**	**25**	P	**P**	**13 10 57.5**	**-1.3**
	comp=Z,2.8nm,0.8s,mb4.7,baz=278,slow=4.5,SNR=29						
SNAA	**Sanae**	**96.31**	**193**	⇑*i*P	**P**	**13 11 15.8**	**+0.7**
SNAA	**Sanae**	**96.31**	**193**		**P**	**13 11 24.1**	**+9.0**
SNAA	**Sanae**	**96.31**	**193**		**P**	**13 11 27.4**	**+12**
SNAA	**Sanae**	**96.31**	**193**	P	**P**	**13 11 15.7**	**+0.5**
	comp=Z,0.9nm,0.7s,mb4.3,baz=170,slow=4.1,SNR=24						
VNA2	**Neumayer--Watz**	**97.87**	**193**	P	**P**	**13 11 23.8**	**+1.5**
INK	**Inuvik**	**98.19**	**22**	P	**P**	**13 11 23.3**	**-0.5**
	comp=Z,0.8nm,0.5s,mb4.5,baz=300,slow=6.5,SNR=6.5						
ARCES	**ARCESS Array B**	**101.16**	**340**	P	P	13 11 36.5	-0.7
	comp=Z,3.8nm,1.0s,baz=59,slow=7.1,SNR=6.7						
ARCES				PKiKP		13 16 01.7	
	comp=Z,3.8nm,1.0s,baz=90,slow=1.8,SNR=5.5						
YKA	**Yellowknife Ar**	**107.08**	**26**	PKiKP		13 16 12.0	
	comp=Z,1.1nm,0.5s,baz=297,slow=1.8,SNR=4.4						
GERES	**GERESS Array B**	**112.20**	**320**	PKiKP		13 16 22.3	
	comp=Z,0.3nm,0.3s,slow=1.0,SNR=4.4						
PDAR	**Pinedale Array**	**116.24**	**45**	PKP	PKPdf	13 16 30.8	+1.6
	comp=Z,0.7nm,0.7s,baz=102,slow=0.2,SNR=7.4						
PV10	**Paradox Valley**	**117.80**	**50**	*e*PKPdf	PKPdf	13 16 34.6	+2.4
ANMO	**Albuquerque**	**120.68**	**53**	*e*PKPdf	PKPdf	13 16 40.1	+2.2
ULM	**Lac du Bonnet**	**121.77**	**33**	PKP	PKPdf	13 16 39.9	+0.2
	comp=Z,2.1nm,0.5s,baz=314,slow=5.7,SNR=7.1						
TXAR	**Lajitas Array**	**124.33**	**59**	PKP	PKPdf	13 16 47.1	+2.0
	comp=Z,0.7nm,0.4s,baz=297,slow=2.8,SNR=8.3						
TXAR	**Lajitas Array**	**124.33**	**59**	PKP	PKPdf	13 16 47.1	+2.0
PLCA	**Paso Flores**	**129.30**	**159**	PKP	PKPdf	13 16 56.9	+2.4
	comp=Z,1.0nm,0.6s,baz=58,slow=11,SNR=6.5						
SCHQ	**Schefferville**	**129.78**	**13**	PKP	PKPdf	13 16 56.8	+1.9

	comp=Z,5.0nm,0.7s,baz=304,slow=3.6,SNR=9.6						
SCHQ				SKPbc		13 20 03.9	
	comp=Z,4.1nm,0.9s,baz=349,slow=5.2,SNR=5.3						
SCHQ	Schefferville	129.78	13	PKP	PKPdf	13 16 56.8	+1.9
SCHQ				SKPbc		13 20 03.9	
FVM	French Village	131.51	44	ePKPdf	PKPdf	13 17 01.1	+2.4
DBIC	Dimbokro	135.51	273	PKP	PKPdf	13 17 09.4	+2.7
	comp=Z,2.6nm,1.0s,baz=68,slow=5.4,SNR=3.2						
DBIC				SKPbc		13 20 23.9	
	comp=Z,4.4nm,0.7s,baz=132,slow=5.8,SNR=7.7						
CFAA	Coronel Fontan	138.23	156	PKP	PKPdf	13 17 13.0	+1.6
	comp=Z,0.1nm,0.3s,baz=222,slow=7.3,SNR=3.8						
JTS	JuntasAbangare	144.88	81	ePKP	PKPdf	13 17 24.9	+1.3
CPUP	Villa Florida	146.61	167	ePKPdf	PKPdf	13 17 29.3	+3.1
LPAZ	La Paz	150.96	141	PKP	PKPdf	13 17 36.3	+3.0
	comp=Z,1.2nm,0.8s,baz=349,slow=4.3,SNR=4.4						
LPAZ				PKPbc	PKPdf	13 17 42.1	+8.8
	comp=Z,7.4nm,0.4s,baz=22,slow=1.8,SNR=63						
LPAZ				PKPab	PKPab	13 17 50.8	+1.6
	comp=Z,9.4nm,0.8s,baz=175,slow=8.0,SNR=11						
ROSC	El Rosal	155.39	92	PKPab	PKPab	13 18 09.9	+1.8
	comp=Z,7.6nm,0.6s,baz=275,slow=23,SNR=5.6						

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*ISK **14** 13:11:22.1, 38.24N×26.57E, h16^{km}, MD3.0*

*CSEM **14** 13:11:22.0±0.2, 38.26N×26.57E, h18^{km}±1^{km}, MD3.0, Error ellipse: s-maj=4.5km s-min=2.2km az=117.0*

*ATH **14** 13:11:23.1, 38.12N×26.58E, h35^{km}±6^{km}, MD3.4/3*

ISC 14 13:11:22.0±0.9, 38.19N±0.03×26.57E±0.05, h3^{km}±6^{km}, n17, σ0^{s}97/27, 1C-1D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.18	8	iP	Pg	13 11 25.8	+0.2
URLA				iS	Sg	13 11 28.5	+0.5
SMG	Samos	0.52	156	⇑iPB	Pb	13 11 33.3	-0.2
SMG				eSB	Sb	13 11 41.3	+0.1
IZM	Izmir	0.59	69	iPG	Pg	13 11 34.0	+0.2
IZM				iSG	Sg	13 11 42.1	+0.5
KDAG	Bornova	0.59	68	iP	Pg	13 11 33.0	-0.9
KDAG				iS	Sg	13 11 41.0	-0.8
PRK	Paraskevi	1.08	348	⇓iPN	Pn	13 11 44.2	+0.2
PRK				eSN	Sn	13 12 00.5	+0.7
AYVA	Ayvalik	1.13	5	iP	Pb	13 11 44.5	+0.7
AYVA				iS	Sb	13 12 01.6	+2.9
AYDN	Tasoluk	1.16	116	iP	Pb	13 11 45.4	+0.9
AYDN				iS	Sb	13 11 59.9	+0.1
AKS	Akhisar	1.20	54	PN	Pn	13 11 44.0	-1.7
AKS				SN	Sn	13 12 00.8	-1.9
BODT	Bodrum	1.27	152	ePN	Pn	13 11 46.2	-0.5
MLSB	Milas	1.31	132	ePN	Pn	13 11 47.0	-0.2
BDRM	Kayabasi	1.32	148	iP	Pb	13 11 48.3	+1.2
BDRM				iS	Sb	13 12 05.6	+1.3
APE	Apeiranthos	1.39	217	ePN	Pn	13 11 47.4	-0.9
MANT	Manisa	1.60	78	iP	Pn	13 11 52.5	+1.1
MANT				iS	Sb	13 12 13.8	+1.5
DAT	Datca	1.66	151	ePN	Pn	13 11 52.2	-0.1
YER	Yerkesik	1.72	127	ePN	Pn	13 11 52.5	-0.6
BALB	Balikesir	1.78	35	ePN	Pn	13 11 52.0	-2.0
DALT	Dalyan (Mudla)	2.17	130	ePN	Pn	13 11 58.9	-0.7

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*NDI **14** 13:11:20.5±2.8, 32.11N×71.19E, h10^{km}, MD3.7, ML3.8*

*NNC **14** 13:11:38.2±5.6, 34.99N×72.85E, h99^{km}±98^{km}, mpv3.7, Error ellipse: s-maj=70.9km s-min=44.0km az=90.0*

ISC 14 13:11:29.0±1.2, 34.78N±0.09×73.2E±0.2, h33^{km}, n11, σ1^{s}40/17, 2C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.12	138	eP	P	13 12 19.8	+2.7
THN				eS	S	13 13 03.1	+9.4
DLH	Dalhousie	3.19	134	eP	P	13 12 22.0	+4.0
DLH				eS	S	13 13 08.0	+13
SDNR	Sundarnagar	4.53	135	eP	P	13 12 37.0	0.0
SDNR				eS	S	13 13 28.8	-0.4
KLP	Kalpa	5.31	126	eP	P	13 12 48.1	+0.1
KLP				ex	x	13 13 47.2	
KLP				AML	AML	13 14 14.4	
	comp=N,121nm,0.6s						
KLP				AML	AML	13 14 16.3	
	comp=E,156nm,0.3s						
AAK	Ala-Archa	7.91	7	⇓P	P	13 13 29.0	+4.6
	comp=E,2.8nm,0.9s						
AAK				⇑S	S	13 14 54.5	+0.8
	comp=E,6.0nm,0.9s						
KK31	Karatay Array	8.58	347	P	P	13 13 34.9	+1.2
	comp=E,1.7nm,0.3s,baz=157,slow=12,SNR=17						
KK31				⇓S	S	13 15 08.9	-1.6
	comp=E,2.7nm,0.5s,baz=172,slow=22,SNR=7.7						
KOLN	Koldanda	11.29	125	ePn	P	13 14 07.9	-3.1
GKN	Gorkha	11.85	122	ePn	P	13 14 14.8	-3.8
GKN				eSn	S	13 16 19.3	-11
	comp=E,16nm,0.3s						
DMN	Daman	12.42	122	ePn	P	13 14 21.7	-4.6
GUN	Gumba	12.79	119	ePn	P	13 14 27.5	-3.7
AB31	Akbulak array	17.48	330	⇑P	P	13 15 31.3	-0.3
	comp=E,0.9nm,0.7s,baz=141,slow=12,SNR=6.6						

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*MOS **14** 13:16:19.2±1.1, 56.81N×157.67W, h33^{km}, mb4.5/2, Error ellipse: s-maj=25.8km s-min=7.8km az=70.6*

*NEIC **14** 13:16:22.5±0.5, 56.57N×157.32W, h66^{km}±5^{km}, mb4.5/1, ML3.9(AEIC), Error ellipse: s-maj=10.6km s-min=4.1km az=145.0*

*IDC **14** 13:16:22.8±3.9, 56.81N×157.35W, h57^{km}±30^{km}, mb3.8/13, mb1 4.0/16, mb1mx3.9/24, mbtmp4.1/16, ML4.0/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/36, Error ellipse: s-maj=31.0km s-min=19.5km az=22.0*

ISC 14 13:16:20.6±0.5, 56.44N±0.06×157.16W±0.08, h75^{km}±4^{km}, n66, σ1^{s}17/70, mb4.0/15, 1C, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANPK	Aniakchak Peak	0.67	308	P	P	13 16 35.8	+0.1
ANPK				S	S	13 16 47.5	+0.6
ANPB	Aniakchak Plen	0.72	301	P	P	13 16 36.4	+0.1
KJL	Kejulik	1.83	27	P	P	13 16 51.8	+1.1
CAHL	Cahill	1.91	31	P	P	13 16 52.6	+0.9
ACHA	Angle Creek He	2.04	28	P	P	13 16 54.7	+1.2
ACHA				S	S	13 17 19.8	+2.1
MGLS	Mageik LS	2.04	28	P	P	13 16 54.1	+0.7
KABR	Katmai Barrier	2.07	34	P	P	13 16 55.0	+1.0
SDPT	Sand Point	2.16	241	P	P	13 16 55.0	-0.3
SDPT				S	S	13 17 21.1	+0.1
PVV	Pavlof Volcano	2.82	250	P	P	13 17 04.6	+0.1
KDAK	Kodiak Island	2.84	60	P	P	13 17 03.6	-1.1
	41nm,0.3s,baz=239,slow=6.9,SNR=192						
KDAK				S	S	13 17 37.6	-0.2
	36nm,0.3s,baz=321,slow=21,SNR=7.1						
KDAK				LR	LR	13 18 30.9	
	comp=Z,218nm,20.9s,baz=131,slow=46						
KDAK	Kodiak Island	2.84	60	P	P	13 17 03.9	-0.9
BLHA	Black Hill	2.85	257	P	P	13 17 04.9	-0.1
HAG	Hague Volcano	2.90	249	P	P	13 17 05.9	+0.3
DOL	Dolgoi Island	2.95	246	P	P	13 17 05.9	-0.5
DTNA	Dutton South F	3.15	248	P	P	13 17 08.9	-0.2
BALA	Baldy Mountain	3.41	251	P	P	13 17 13.5	+0.8
AGU	Augustine-Summ	3.54	33	P	P	13 17 15.9	+1.4
AUP	Augustine Pinn	3.55	33	P	P	13 17 15.8	+1.2
ILW	Iliamna West	4.21	29	P	P	13 17 24.7	+0.8
INE	Iliamna NE	4.23	29	P	P	13 17 25.0	+0.8
CNPM	China Poot	4.42	43	P	P	13 17 26.3	-0.5
WESN	West Dahl Nort	4.62	249	P	P	13 17 29.6	0.0
RSO	Redoubt South	4.65	28	P	P	13 17 31.0	+1.0
SVW2	Sparrevohn	4.75	9	P	P	13 17 31.5	+0.2
CKL	Chakachamna La	5.39	26	P	P	13 17 40.9	+0.8
SPU	Mount Spurr	5.45	27	P	P	13 17 41.2	+0.3
SLKM	Skilak Lake	5.47	39	eP	P	13 17 40.4	-0.9
STLK	Strandline Lak	5.77	26	P	P	13 17 46.1	+0.7
UNV	Unalaska Valle	5.95	248	P	P	13 17 45.9	-2.0
FIB	Fire Island	5.97	35	P	P	13 17 46.5	-1.6
RC01	Rabbit Creek A	6.05	37	P	P	13 17 48.8	-0.6
PMR	Palmer	6.62	35	eP	P	13 17 56.1	-1.2
GHO	Glory Hole Cre	6.82	35	P	P	13 17 58.6	-1.5
EYAK	Cordova Ski Ar	7.26	51	P	P	13 18 04.0	-2.1
SCM	Sheep Creek Mo	7.40	39	P	P	13 18 06.4	-1.7
DIV	Divide	7.55	47	P	P	13 18 07.4	-2.7
	26nm,0.5s						
KLU	Klutina	7.70	44	P	P	13 18 11.0	-1.2
KTH	Kantishna Hill	7.79	21	P	P	13 18 13.0	-0.3
PAX	Paxson	8.81	37	P	P	13 18 26.6	-0.7
BALM	Baldy	8.97	53	P	P	13 18 28.0	-1.4
THY	Trims Highway	9.03	35	P	P	13 18 27.4	-2.9
COLA	College	9.60	24	eP	P	13 18 34.6	-3.4
IM3	Indian Mountai	9.72	8	P	P	13 18 39.1	-0.3
ILAR	Eielson Array	9.75	27	P	P	13 18 36.6	-3.3
	1.6nm,0.3s,baz=218,slow=13,SNR=73						
ILAR				S	S	13 20 22.8	-5.9
	1.1nm,0.3s,baz=131,slow=28,SNR=5.7						
IMA2	Indian Mountai	9.81	8	P	P	13 18 36.7	-3.9
TNA	Tin City	10.52	335	P	P	13 18 45.3	-5.0
DLBC	Dease Lake	14.71	71	P	P	13 19 47.2	+1.7
	0.1nm,0.3s,baz=282,slow=19,SNR=3.5						
DLBC	Dease Lake	14.71	71	P	P	13 19 47.2	+1.7
YKA	Yellowknife Ar	22.11	57	P	P	13 21 11.4	+0.9
	0.8nm,0.3s,mb3.5,baz=273,slow=10,SNR=8.2						
YKA				LR	LR	13 30 50.4	
	comp=Z,27nm,18.3s,baz=170,slow=39						
NVAR	Mina Array Bea	31.30	108	pP	pP	13 22 57.2	+3.8
	0.7nm,0.7s,baz=302,slow=7.2,SNR=4.4						
PDAR	Pinedale Array	33.03	94	P	P	13 22 54.2	+3.8
	0.3nm,0.5s,mb3.4,baz=327,slow=5.7,SNR=3.7						
PDAR				pP	pP	13 23 09.9	+1.5
	0.9nm,0.6s,baz=309,slow=6.0,SNR=6.4						
TIXI	Tiksi	33.14	326	⇑iP	P	13 22 48.7	-2.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
SRU	San Rafael	35.00	100	eP	P	13 23 09.1	+1.7
	comp=Z,5.6nm,0.9s,mb4.4						
SRU	San Rafael	35.00	100	eP	P	13 23 09.1	+1.7
SRU				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
TXAR	Lajitas Array	46.07	103	P	P	13 24 42.6	+4.1
	comp=Z,0.3nm,0.6s,mb3.2,baz=315,slow=8.9,SNR=3.4						
SCHQ	Schefferville	47.44	52	P	P	13 24 48.8	-0.1
	comp=Z,5.0nm,0.8s,mb4.3,baz=277,slow=4.6,SNR=3.9						
SCHQ				LR	LR	13 43 52.0	
	comp=Z,32nm,18.4s,baz=248,slow=35						
ARCES	ARCESS Array B	54.32	359	P	P	13 25 39.8	-1.0
	comp=Z,1.3nm,0.4s,mb4.3,baz=24,slow=7.1,SNR=24						
SONM	Songino Array	55.08	305	P	P	13 25 46.9	+0.4
	comp=Z,2.2nm,0.5s,mb4.4,baz=41,slow=6.5,SNR=23						
SONM				PcP	PcP	13 26 47.9	+1.0
	comp=Z,0.5nm,0.4s,baz=61,slow=1.1,SNR=3.9						
FINES	FINESS Array B	62.43	358	P	P	13 26 36.5	-0.9
	comp=Z,4.3nm,0.8s,mb4.5,baz=11,slow=9.7,SNR=6.5						
HFS	Hagfors	63.55	5	P	P	13 26 44.5	-0.1
	comp=Z,3.0nm,0.8s,mb4.2,slow=4.3,SNR=5.7						
MKAR	Makanchi Array	65.78	320	P	P	13 26 59.1	-0.2
	comp=Z,0.6nm,0.5s,mb3.7,baz=50,slow=8.0,SNR=11						
EKA	Eskdalemuir Ar	66.60	16	P	P	13 27 05.2	+0.9
	comp=Z,4.9nm,0.8s,mb4.4,baz=338,slow=5.0,SNR=7.5						
AKASG	Malin Array Be	73.10	356	P	P	13 27 43.5	-0.2
	comp=Z,2.3nm,0.5s,mb4.2,baz=3.1,slow=5.9,SNR=12						
KHC	Kasperske Hory	74.52	6	eP	P	13 27 53.5	+1.4
GERES	GERESS Array B	74.81	6	P	P	13 27 55.1	+1.4
	comp=Z,1.8nm,0.6s,mb4.0,baz=357,slow=4.3,SNR=12						
BRTR	Keskin Array B	83.77	352	P	P	13 28 44.1	+2.0
	comp=Z,1.2nm,0.7s,mb3.8,baz=90,slow=1.2,SNR=4.0						

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*IDC **14** 13:46:55.9±1.0, 34.73N×73.18E, mb4.0/9, mb1 4.2/12, mb1mx4.0/23, mbtmp4.0/12, ML4.1/3, Error ellipse: s-maj=26.1km s-min=21.1km az=68.0*

*NDI **14** 13:46:56.6±3.4, 34.58N×72.70E, h10^{km}, ML3.6, mb3.5(NEIC)*

*NEIC **14** 13:46:56.9±0.6, 34.68N×73.18E, h10^{km}, mb3.5/7, Error ellipse: s-maj=12.7km s-min=5.3km az=58.0*

*MOS **14** 13:46:58.0±1.3, 34.69N×73.24E, h33^{km}, mb4.4/3, Error ellipse: s-maj=14.4km s-min=6.4km az=92.3*

*BJI **14** 13:46:58.5, 34.69N×73.60E, h10^{km}, mb3.6, ML3.8*

*NNC **14** 13:47:02.4±17.0, 34.77N×73.28E, h65^{km}±153^{km}, mpv4.1, Error ellipse: s-maj=132.4km s-min=114.1km az=90.0*

ISC 14 13:46:57.9±0.3, 34.70N±0.03×73.31E±0.06, h33^{km}, n65, σ1^{s}29/86, mb3.9/11, 10C-3D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	Chirah Chowk	1.04	182	⇑P	P	13 47 18.0	+1.8
CEP	Cherat	1.46	234	P	P	13 47 20.9	-1.2
SARP	Sargodha	2.82	191	P	P	13 47 43.2	+1.5
SARP				S	S	13 48 23.0	+8.1
THN	Thein Dam	3.02	138	eP	P	13 47 50.1	+5.6
THN				eSB	Sb	13 48 36.6	+8.9
DLH	Dalhousie	3.09	133	ePB	Pb	13 47 54.0	+2.0
DLH				eSB	Sb	13 48 40.0	+10
SBDP	Sheikh Budin	3.18	222	P	P	13 47 48.1	+1.3
DRP	Derazinda	3.93	222	⇓P	P	13 47 58.3	+0.8
BHK	Bhakra	4.18	141	ex	x	13 48 57.8	
SDNR	Sundarnagar	4.43	135	eP	P	13 48 08.8	+4.3
SDNR				eS	S	13 49 00.8	+5.2
SMLA	Simla	4.81	137	eP	P	13 48 11.8	+1.8
SMLA				eS	S	13 49 11.2	+5.9
KLP	Kalpa	5.21	126	eP	P	13 48 19.8	+4.3
KLP				eS	S	13 49 19.8	+4.6
KLP				AML	AML	13 49 48.9	
	comp=N,260nm,0.7s						
NDI	New Delhi	6.86	150	eP	P	13 48 37.0	-1.7
NDI				ex	x	13 49 47.0	
KHET	Khetri	6.94	161	eP	P	13 48 39.9	0.0
KHET				eS	S	13 49 53.6	-4.9
KHET				eS	S	13 49 55.7	-2.8
KHET				AML	AML	13 49 59.6	
	comp=E,20nm,0.1s						
KHET				AML	AML	13 50 00.8	
	comp=N,28nm,0.2s						
AYAN	Aya Nagar	7.00	151	eP	P	13 48 40.6	0.0
AYAN				eS	S	13 49 56.9	-3.1
AYAN				AML	AML	13 50 04.7	
	comp=Z,30nm,0.5s						
KUDL	Kundal	7.07	157	eP	P	13 48 41.0	-0.8
KUDL				eS	S	13 49 57.3	-4.6
KUDL				AML	AML	13 50 05.6	
	comp=Z,24nm,0.5s						
SONA	Sohna	7.19	152	eS	S	13 50 01.0	-3.7
SONA				eS	S	13 50 02.5	-2.2
SONA				AML	AML	13 50 08.1	
	comp=E,83nm,0.3s						
SONA				AML	AML	13 50 10.3	
	comp=N,42nm,0.5s						
AAK	Ala-Archa	7.98	6	⇑S	S	13 50 24.1	-0.2
	comp=N,12nm,0.8s						
AAK	Ala-Archa	7.98	6	ePn	Pn	13 48 54.3	-0.2
AAK				eSn	Sn	13 50 20.2	-4.3
AJM	Ajmer	8.27	172	eP	P	13 48 56.5	-1.9
AJM				eS	S	13 50 22.5	-9.2
AJM				AML	AML	13 50 29.7	
	comp=E,40nm,0.6s						
AJM				AML	AML	13 50 42.6	
	comp=N,33nm,0.6s						
AJM				AML	AML	13 50 45.8	
	comp=E,57nm,0.2s						
KK31	Karatay Array	8.67	346	⇑P	P	13 49 04.0	0.0
	comp=E,2.7nm,0.3s,baz=126,slow=28,SNR=23						
KK31				⇓S	S	13 50 39.6	-2.0
	comp=E,3.0nm,0.4s,baz=182,slow=24,SNR=6.9						
KK31	Karatay Array	8.67	346	⇑P	P	13 49 04.0	0.0
	comp=E,2.7nm,0.3s						
KK31				S	S	13 50 39.6	-2.1
KK31	Karatay Array	8.67	346	⇑P	P	13 49 04.0	0.0
KK31				S	S	13 50 39.6	-2.1
KK31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KOLN	Koldanda	11.18	125	ePn	P	13 49 38.4	-0.1
KOLN				eSn	S	13 51 38.6	-4.8
	comp=Z,49nm,0.9s						
KOLN	Koldanda	11.18	125	ePn	P	13 49 38.4	-0.1
	comp=Z,24nm,0.9s						
KOLN				eSn	S	13 51 38.6	-4.8
GKN	Gorkha	11.75	122	ePn	P	13 49 45.9	-0.3
GKN				eSn	S	13 51 51.5	-5.7
	comp=Z,34nm,0.4s						
BHPL	Bhopal	11.97	161	eS	S	13 51 51.0	-12
BHPL				AML	AML	13 52 02.7	
	comp=N,13nm,0.5s						
DMN	Daman	12.32	122	ePn	P	13 49 53.0	-0.9
DMN				eSn	S	13 52 02.5	-8.5
	comp=N,28nm,0.8s						
KKN	Kakani	12.33	121	ePn	P	13 49 53.5	-0.5
KKN				eSn	S	13 52 04.0	-7.3
	comp=N,31nm,0.6s						
PKI	Pulchoki	12.56	121	ePn	P	13 49 56.1	-0.9
PKI				eSn	S	13 52 07.4	-9.3
	comp=N,23nm,0.6s						
GUN	Gumba	12.69	119	ePn	P	13 49 58.3	-0.5
MK02	Makanchi Array	13.84	27	P	P	13 50 15.2	+1.4
MK02				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	13.85	27	P	P	13 50 15.2	+1.2
	comp=Z,1.9nm,0.8s,baz=203,slow=15,SNR=6.0						
MKAR	Makanchi Array	13.85	27	Pn	P	13 50 14.7	+0.6
	comp=Z,0.1nm,0.3s,baz=194,slow=14,SNR=5.2						
LSA	Lhasa	15.89	103	Pn	P	13 50 46.3	+5.6
	comp=Z,5.0nm,1.0s						
LSA	Lhasa	15.89	103	P	P	13 50 46.3	+5.6
LSA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	Kurchatov	16.47	12	ePn	P	13 50 46.9	-1.0
	comp=Z,2.1nm,0.5s						
KURK	Kurchatov	16.47	12	eP	P	13 50 46.9	-0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AB31	Akbulak array	17.58	330	⇑P	P	13 51 00.0	-1.7
	comp=Z,1.0nm,0.5s,baz=143,slow=14,SNR=26						
AB31	Akbulak array	17.58	330	⇑P	P	13 51 00.0	-1.8
	comp=Z,1.0nm,0.5s						
AB31	Akbulak array	17.58	330	⇑P	P	13 51 00.0	-1.8
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VOSK	Vostochnaya	18.10	355	⇑P	P	13 51 07.6	-0.6
	comp=Z,8.8nm,1.9s						
VOSK	Vostochnaya	18.10	355	⇑P	P	13 51 07.6	-0.6
VOSK				pmax	pmax		
	comp=Z,9.0nm,1.9s						
BVA0	Borovoye Array	18.44	354	P	P	13 51 12.8	+0.3
	comp=Z,1.9nm,2.3s,baz=159,slow=9.5,SNR=25						
BVA0	Borovoye Array	18.44	354	P	P	13 51 12.8	+0.3
	comp=Z,1.9nm,2.3s						
BVA0	Borovoye Array	18.44	354	P	P	13 51 12.8	+0.2
BVA0				pmax	pmax		
	comp=Z,2.0nm,2.3s						
BVAR	Borovoye Array	18.44	354	P	P	13 51 11.0	-1.6
	comp=Z,1.6nm,0.3s,baz=157,slow=9.7,SNR=36						
BRVK	Borovoye	18.48	354	eP	P	13 51 13.1	0.0
	comp=Z,1.7nm,0.6s						
BRVK	Borovoye	18.48	354	eP	P	13 51 13.1	0.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTO	Aktyubinsk	19.28	329	P	P	13 51 21.6	-0.9
	comp=Z,1.8nm,0.3s,baz=133,slow=10,SNR=21						
AKTO	Aktyubinsk	19.28	329	P	P	13 51 21.6	-0.9
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZAL	Zalesovo	20.86	19	P	P	13 51 39.8	+0.5
	comp=Z,6.8nm,0.3s,baz=248,slow=6.9,SNR=12						
NVS	Novosibirsk	21.30	16	eP	P	13 51 42.1	-1.5
ORR	Orenburg	21.56	327	⇓iP	P	13 51 46.0	-0.3
ORR				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
GTA	Gaotai	21.63	70	eP	P	13 51 48.0	+0.9
GTA				AP		13 51 52.5	
GTA				XP		13 51 55.3	
ZAK	Zakamensk	26.84	45	eP	P	13 52 28.4	-8.7
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.4						
SONM	Songino Array	27.89	52	P	P	13 52 49.1	+2.5
	comp=Z,0.2nm,0.4s,mb3.1,baz=247,slow=7.3,SNR=4.6						
FINES	FINESS Array B	40.02	327	P	P	13 54 31.2	+0.2
	comp=Z,3.4nm,0.9s,mb4.1,baz=135,slow=11,SNR=4.5						
ARCES	ARCESS Array B	43.52	338	P	P	13 55 00.3	+0.7
	comp=Z,0.7nm,0.3s,mb3.8,baz=117,slow=8.1,SNR=14						
MJAR	Matsushiro Arr	51.87	68	P	P	13 56 07.0	+1.9
	comp=Z,2.8nm,0.7s,mb4.3,baz=292,slow=10,SNR=6.1						
INK	Inuvik	75.36	10	P	P	13 58 40.9	+1.7
	comp=Z,1.5nm,0.5s,mb4.2,baz=358,slow=7.3,SNR=9.6						
ILAR	Eielson Array	75.98	17	P	P	13 58 43.5	+0.8
	comp=Z,0.3nm,0.5s,mb3.5,baz=291,slow=4.8,SNR=5.6						
BOSA	Boshof	77.63	222	P	P	13 58 54.6	+1.8
	comp=Z,3.3nm,1.0s,mb4.2,baz=18,slow=3.2,SNR=4.2						
WRA	Warramunga Arr	79.43	123	P	P	13 59 04.5	+1.7
	comp=Z,0.7nm,0.7s,mb3.7,baz=324,slow=5.0,SNR=13						
WRAB	Tennant Creek	79.44	123	eP	P	13 59 00.6	-2.2
	comp=Z,3.8nm,0.9s,mb4.3						
WRAB	Tennant Creek	79.44	123	eP	P	13 59 00.6	-2.2
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						

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*IDC **14** 13:57:10.8±0.9, 2.86S×128.92E, mb4.1/8, mb1 4.2/9, mb1mx4.1/17, mbtmp4.1/9, MS3.8/4, Ms1 3.8/4, ms1mx3.3/23, Error ellipse: s-maj=59.3km s-min=19.0km az=62.0*

*NEIC **14** 13:57:15.0±0.6, 3.21S×128.79E, h35^{km}, mb4.2/4, Error ellipse: s-maj=25.5km s-min=9.5km az=72.0*

ISC 14 13:57:13.5±0.6, 3.04S±0.08×128.8E±0.2, h33^{km}, n18, σ1^{s}11/18, mb4.1/9, MS3.8/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	10.26	160	eP	P	13 59 55.3	+14
	14nm,0.6s						
KAKA				eS	S	14 01 57.2	+21
FITZ	Fitzroy Crossi	15.29	191	eP	P	14 00 50.9	+2.2
	9.0nm,0.6s						
FITZ	Fitzroy Crossi	15.29	191	Pn	P	14 00 51.1	+2.4
	0.9nm,0.3s,baz=34,slow=14,SNR=10.0						
WRAB	Tennant Creek	17.64	163	ePn	P	14 01 16.4	-2.1
	12nm,0.6s						
WRA	Warramunga Arr	17.65	163	P	P	14 01 14.9	-3.6
	0.1nm,0.3s,baz=349,slow=12,SNR=8.8						
WRA				S	S	14 04 31.4	-0.4
	0.2nm,0.3s,baz=357,slow=22,SNR=2.7						
WB2	Warramunga Arr	17.65	163	eP	P	14 01 15.7	-2.9
MBWA	Marble Bar	20.06	205	ePn	P	14 01 46.3	-0.5
	6.4nm,0.6s						
GUMO	Guam	22.96	44	LR	LR	14 10 10.9	
	comp=Z,88nm,19.5s,MS3.2,baz=225,slow=34						
CTA	Charters Tower	24.02	136	P	P	14 02 27.6	+1.0
	5.8nm,0.9s,mb4.0,baz=354,slow=14,SNR=3.3						
STKA	Stephens Creek	31.11	159	P	P	14 03 32.7	+1.4
	4.6nm,0.9s,mb4.3,baz=311,slow=12,SNR=4.9						
SONM	Songino Array	54.33	342	P	P	14 06 38.4	-0.7
	0.5nm,0.6s,mb3.6,baz=152,slow=8.4,SNR=5.9						
RPZ	Rata Peaks	55.09	144	LR	LR	14 29 56.9	
	comp=Z,249nm,18.2s,MS4.3,baz=175,slow=36						
MKAR	Makanchi Array	64.28	326	P	P	14 07 47.6	-0.3
	1.7nm,0.7s,mb4.2,baz=120,slow=8.5,SNR=15						
MKAR				LR	LR	14 38 59.6	
	comp=Z,59nm,18.6s,MS3.8,baz=234,slow=39						
ZAL	Zalesovo	67.53	334	P	P	14 08 08.5	0.0
	1.0nm,0.5s,mb4.1,baz=336,slow=6.8,SNR=7.6						
KURK	Kurchatov	68.54	328	eP	P	14 08 14.5	-0.3
	7.1nm,0.9s,mb4.6						
BVAR	Borovoye Array	74.10	328	P	P	14 08 48.4	+0.3
	0.9nm,0.7s,mb3.8,baz=135,slow=10,SNR=6.0						
AKTO	Aktyubinsk	80.23	322	P	P	14 09 22.2	-0.3
	1.5nm,0.5s,mb4.2,baz=103,slow=12,SNR=6.9						
AKTO				LR	LR	14 49 36.4	
	comp=Z,71nm,19.0s,MS4.0,slow=39						
ILAR	Eielson Array	90.30	25	P	P	14 10 12.7	+0.6
	0.3nm,0.6s,mb3.8,baz=259,slow=4.9,SNR=4.8						

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*NEIC **14** 14:32:19.2, 34.58S×72.46W, h33^{km}, ML3.4(GUC), After GUC.*

GUC 14 14:32:19.2±0.9, 34.58S×72.46W, h33^{km}±3^{km}, MD4.0, ML3.4, 4C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TALC	Talca	1.06	141	eP	P	14 32 38.6	+0.8
TALC				iS	S	14 32 52.0	+0.4
LNV	Longovilo	1.06	55	⇓iP	P	14 32 38.4	+0.6
LNV				iS	S	14 32 52.8	+1.2
NICH	Los Niches	1.10	113	eP	P	14 32 38.6	+0.3
NICH				iS	S	14 32 53.7	+1.2
SFDO	San Fernando	1.19	92	⇑iP	P	14 32 40.2	+0.6
SFDO				iS	S	14 32 56.0	+1.1
LCCH	Las Cruces	1.32	34	⇑iP	P	14 32 42.1	+0.6
LCCH				iS	S	14 32 59.0	+0.9
TACH	Talagante	1.56	54	⇑iP	P	14 32 45.8	+0.8
TACH				iS	S	14 33 06.0	+1.8
CACH	El Canelo	1.60	74	⇑iP	P	14 32 47.7	+2.2
CACH				iS	S	14 33 09.2	+3.9
CHCH	Chadas Angostu	1.63	67	eP	P	14 32 47.0	+1.2
CHCH				iS	S	14 33 07.9	+2.0
CICH	Cipreses	1.70	82	eP	P	14 32 48.6	+1.6
CICH				iS	S	14 33 10.3	+2.5

RCDM	Rinconada Maip	1.75	52	eP	P	14 32 48.2	+0.6
RCDM				eS	S	14 33 10.6	+1.6
RCDM				AMP		14 33 17.4	
	comp=E,428nm,0.2s						
ANTU	Antumapu	1.82	57	AMP		14 33 21.1	
	comp=N,482nm,0.5s						
PCH	Pirque	1.87	60	⇓iP	P	14 32 50.8	+1.4
CCHI	Chillan	2.05	171	i S	S	14 33 18.1	+1.6
CCHI				AMP		14 33 28.5	
	comp=N,502nm,0.5s						
PEL	Peldehue	2.05	46	eP	P	14 32 53.1	+1.1
PEL				i S	S	14 33 19.0	+2.3
PEL				AMP		14 33 27.9	
	comp=E,691nm,0.4s						
FCH	Farellones	2.19	56	eP	P	14 32 54.9	+1.0
FCH				⇓iP		14 32 54.9	
FCH				i S	S	14 33 22.4	+2.3
FCH				AMP		14 33 31.6	
	comp=E,279nm,0.4s						
JACH	Jahuel	2.45	40	eP	P	14 32 57.9	+0.3

ISK ***14*** *14:46:28.8, 38.21N×26.67E, h30^{km}, MD2.7*

CSEM ***14*** *14:46:28.9±0.1, 38.20N×26.76E, h40^{km}, MD2.7, Error ellipse: s-maj=6.2km s-min=2.4km az=127.0*

ATH ***14*** *14:46:29.3, 38.14N×26.44E, h10^{km}, MD3.1/3*

ISC 14 14:46:29.1±0.6**, 38.19N**±0.03×**26.57E**±0.05**, h10^{km}, n13, σ1^{s}24**/21**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.17	7	i P	Pg	14 46 32.4	-0.6
URLA				i S	Sg	14 46 35.5	-0.1
BLCB	Balcova	0.42	62	ePG	Pg	14 46 38.2	+0.5
BLCB				eSG	Sg	14 46 42.7	-0.7
SMG	Samos	0.53	156	ePB	Pg	14 46 39.6	-0.2
IZM	Izmir	0.58	69	PG	Pg	14 46 40.2	-0.7
IZM				SG	Sg	14 46 48.2	-0.6
KDAG	Bornova	0.59	69	i P	Pg	14 46 39.3	-1.7
KDAG				i S	Sg	14 46 47.3	-1.7
PRK	Paraskevi	1.08	348	ePB	Pb	14 46 50.2	+0.8
AYVA	Ayvalik	1.12	5	i P	Pb	14 46 50.3	+0.2
AYVA				i S	Sb	14 47 06.8	+2.3
AYDN	Tasoluk	1.16	117	i P	Pb	14 46 52.1	+1.2
AYDN				i S	Sb	14 47 06.2	+0.3
BODT	Bodrum	1.27	152	ePN	Pn	14 46 50.8	-2.2
BDRM	Kayabasi	1.32	148	i P	Pb	14 46 55.9	+2.3
BDRM				i S	Sb	14 47 11.9	+1.5
APE	Apeiranthos	1.39	217	ePN	Pn	14 46 53.2	-1.5
APE	Apeiranthos	1.39	217	ePb	Pb	14 46 53.7	-1.1
MANT	Manisa	1.59	79	i P	Pn	14 46 59.5	+1.9
MANT				i S	Sb	14 47 19.0	+0.7

ISK ***14*** *14:51:54.2, 38.20N×26.69E, h14^{km}, MD2.6*

ATH ***14*** *14:51:54.1, 38.20N×26.60E, h10^{km}, MD3.0/3*

CSEM ***14*** *14:51:54.9±0.1, 38.20N×26.76E, h16^{km}, MD2.6, Error ellipse: s-maj=2.1km s-min=1.2km az=123.0*

ISC 14 14:51:53.3±0.9**, 38.20N**±0.03×**26.61E**±0.05**, h2^{km}**±7^{km}**, n13, σ0^{s}66**/21**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.16	355	i P	Pg	14 51 55.9	-0.5
URLA				i S	Sg	14 51 58.6	0.0
BLCB	Balcova	0.38	62	ePG	Pg	14 52 01.5	+0.6
BLCB				eSG	Sg	14 52 06.5	+0.4
SMG	Samos	0.53	160	⇑iPB	Pb	14 52 04.2	-0.6
IZM	Izmir	0.55	69	PG	Pg	14 52 04.4	+0.2
IZM				SG	Sg	14 52 12.0	+0.5
KDAG	Bornova	0.55	69	i P	Pg	14 52 03.3	-1.0
KDAG				i S	Sg	14 52 11.3	-0.4
PRK	Paraskevi	1.07	346	ePB	Pb	14 52 14.4	+0.2
AYVA	Ayvalik	1.10	3	i P	Pb	14 52 10.4	-4.3
AYVA				i S	Sb	14 52 29.3	-0.1
AYDN	Tasoluk	1.14	118	i P	Pb	14 52 13.8	-1.5
AYDN				i S	Sb	14 52 30.2	-0.2
AKS	Akhisar	1.16	54	ePN	Pn	14 52 15.9	-0.5
BODT	Bodrum	1.27	154	ePN	Pn	14 52 17.7	-0.2
BDRM	Kayabasi	1.31	150	i P	Pb	14 52 19.9	+1.6
BDRM				i S	Sb	14 52 35.3	-0.2
APE	Apeiranthos	1.42	218	ePB	Pb	14 52 20.7	+0.6
MANT	Manisa	1.56	79	i P	Pn	14 52 22.8	+0.8
MANT				i S	Sb	14 52 42.7	+0.3

MAN 14 15:00:13.3, 17.40N×120.12E, h25^{km}, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	0.62	66	eP	Pb	15 00 25.7	+0.2
ABRA				eS	Sb	15 00 36.1	+2.3
BOLP	Bolinao	1.03	191	eP	Pn	15 00 31.5	-0.8
BOLP				eS	Sb	15 00 45.9	+0.4
BCPH	Baguio City Da	1.11	156	eP	Pn	15 00 32.6	-0.8
BCPH				eS	Sb	15 00 47.2	-0.5
APYP	Conner	1.17	67	eP	Pn	15 00 33.1	-1.2
APYP				eS	Sb	15 00 48.2	-1.3
SCZP	Santa Cruz	1.63	187	eP	Pn	15 00 40.5	-0.3
SCZP				eS	Sn	15 00 59.4	-1.7
CVP	Callao Caves	1.66	79	eP	Pn	15 00 45.0	+3.7
CAUP	Cauayan	1.69	105	eP	Pn	15 00 42.6	+0.8
BALP	Baler	2.16	139	eP	Pn	15 00 48.3	-0.3
BALP				eS	Sn	15 01 17.0	+2.2

PRU ***14*** *15:04:36.4, 50.29N×18.75E*

WAR 14 15:04:36.8, 50.23N×18.82E, h1^{km}, MW2.6, Mw2.4, Location given by Central Institute of Mining, origin time based upon OJC, MW from OJC, Mw from NIE, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.58	228	ePG	Pg	15 04 48.7	+0.2
OJC	Ojcow	0.63	90	ePG	Pg	15 04 49.0	-0.4
OJC				eSG	Sg	15 04 58.0	+0.1
NIE	Niedzica	1.27	129	ePG	Pg	15 05 01.0	-1.1
NIE				eSG	Sg	15 05 19.0	+0.1
DPC	Dobruska-Polom	1.60	275	ePG	Pg	15 05 05.6	-3.2
DPC				eSG	Sg	15 05 26.8	-3.4
KSP	Ksiaz	1.72	292	ePG	Pg	15 05 08.0	-3.2
KSP				eSG	Sg	15 05 31.0	-3.2
STHS	Stebnicka Huta	1.77	116	ePN	Pn	15 05 09.8	+1.0
STHS				eSN	Sn	15 05 34.6	+2.3
UPC	Upice	1.82	280	eSG	Sg	15 05 31.9	-5.4
KECS	Kecovo	2.06	147	ePN	Pn	15 05 16.0	+3.0
KECS				eSN	Sn	15 05 40.2	+0.5
PRU	Pruhonice	2.76	267	eSG	Sg	15 06 02.9	-5.9

NEIC ***14*** *15:47:25.9±1.3, 23.48S×179.99W, h540^{km}±12^{km}, mb4.4/7, Error ellipse: s-maj=19.7km s-min=11.3km az=224.0*

IDC ***14*** *15:47:25.9±1.7, 23.53S×179.96W, h538^{km}±16^{km}, mb3.8/8, mb1 3.9/11, mb1mx3.7/17, mbtmp4.8/11, Error ellipse: s-maj=21.5km s-min=16.5km az=42.0*

ISC 14 15:47:25.1±1.3**, 23.59S**±0.09×**179.9E**±0.1**, h535^{km}**±14^{km}**, n40, σ1^{s}06**/38**, mb4.3**/14**, 4C-5D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.96	161	P	P	15 49 04.6	+1.1
	122nm,0.3s,baz=282,slow=22,SNR=7.1						
RAO	Raoul Island	5.96	161	eP	P	15 49 04.4	+0.9
DZM	Mont Dzumac	12.51	274	P	P	15 50 11.9	+2.5
	0.5nm,0.3s,baz=108,slow=23,SNR=7.6						
URZ	Urewera	14.81	189	P	P	15 50 33.1	+0.4
	3.6nm,0.3s,baz=340,slow=1.4,SNR=22						
URZ				S	S	15 53 05.6	+1.6
	0.7nm,0.3s,baz=194,slow=20,SNR=11						
URZ	Urewera	14.81	189	PN	P	15 50 31.5	-1.1
BKZ	Black Stump Fm	15.79	190	PN	P	15 50 41.1	-1.2
TSZ	Takapari Road	16.75	191	PN	P	15 50 50.7	-0.9
MRZ	Mangatainoka R	17.41	191	PN	P	15 50 56.6	-1.4
SNZO	South Karori	18.20	193	eP	P	15 51 07.1	+1.5
QRZ	Quartz Range	18.27	198	PN	P	15 51 05.5	-0.9
THZ	Tophouse	19.04	196	PN	P	15 51 13.4	-0.3
KHZ	Kahutara	19.51	194	PN	P	15 51 17.9	-0.1
LTZ	Lake Taylor	20.16	196	PN	P	15 51 22.8	-1.3
WVZ	Waitaha Valley	20.86	199	PN	P	15 51 29.9	-0.7
RPZ	Rata Peaks	21.36	198	P	P	15 51 34.4	-0.8
	7.4nm,0.7s,mb4.5,baz=211,slow=19,SNR=9.7						
FOZ	Fox Glacier	21.63	200	PN	P	15 51 36.2	-1.5
CTA	Charters Tower	31.39	270	⇓iP	P	15 53 04.6	+0.9
	26nm,0.4s,mb5.1						
CTA	Charters Tower	31.39	270	P	P	15 53 04.7	+1.0
	38nm,0.5s,mb5.2,baz=96,slow=10,SNR=51						
PMG	Port Moresby	34.31	289	P	P	15 53 28.5	+0.2
	29nm,0.7s,mb4.9,baz=106,slow=5.8,SNR=10						
STKA	Stephens Creek	34.76	248	⇓iP	P	15 53 33.1	+1.2
	2.3nm,0.4s,mb4.1						
STKA	Stephens Creek	34.76	248	P	P	15 53 33.1	+1.2
	3.8nm,0.6s,mb4.1,baz=93,slow=10,SNR=14						
WB2	Warramunga Arr	42.33	266	⇓iP	P	15 54 33.1	-0.4
WRAB	Tennant Creek	42.33	266	eP	P	15 54 33.1	-0.4
	19nm,0.8s,mb4.7						
WRA	Warramunga Arr	42.34	266	P	P	15 54 33.0	-0.6
	7.2nm,0.3s,mb4.7,baz=90,slow=5.9,SNR=762						
WRA				ScP		15 59 16.0	
	2.1nm,1.0s,baz=99,slow=4.3,SNR=7.2						
WRA				S	S	16 00 12.8	-4.0
	0.7nm,0.8s,baz=100,slow=13,SNR=4.9						
KAKA	Kakadu	46.19	275	⇓iP	P	15 55 21.2	+18
	18nm,0.9s,mb4.6						
FITZ	Fitzroy Crossi	50.76	265	⇑iP	P	15 55 37.6	-0.3
	12nm,0.7s,mb4.3						
SBA	Scott Base	54.68	183	eP	P	15 56 06.8	+1.7
	9.1nm,0.9s,mb4.0						
VNDA	Vanda	54.68	185	eP	P	15 56 05.7	+0.6
	1.4nm,0.6s,mb3.4						
QSPA	South Pole Qui	66.49	180	⇓iP	P	15 57 23.7	+1.1
	16nm,0.7s,mb4.7						
MJAR	Matsushiro Arr	71.59	326	P	P	15 57 52.2	-1.6
	1.7nm,0.7s,mb3.6,baz=164,slow=7.9,SNR=4.6						
MJAR	Matsushiro Arr	71.59	326	P	P	15 57 52.2	-1.6
MAW	Mawson	78.01	200	P	P	15 58 29.5	+0.7
	2.8nm,0.5s,mb3.8,baz=128,slow=7.9,SNR=9.7						
SNAA	Sanae	84.97	179	⇑i	P	15 59 03.0	-1.1
VNA3	Neumayer Olymp	85.19	177	⇑i	P	15 59 05.4	+0.3
VNA2	Neumayer--Watz	85.60	178	⇑i	P	15 59 08.5	+1.4
TXAR	Lajitas Array	90.34	58	P	P	15 59 30.4	+0.1
	0.9nm,0.8s,mb3.7,baz=211,slow=7.3,SNR=5.4						
BDFB	Brasilia	119.06	125	PKP	PKPdf	16 05 13.2	-0.4
	2.5nm,0.6s,baz=260,slow=4.1,SNR=3.4						
FINES	FINESS Array B	138.13	341	PKP	PKPdf	16 05 52.1	+3.6
	3.7nm,0.9s,baz=50,slow=2.0,SNR=4.2						
FINES				SKPbc		16 08 31.5	
	5.7nm,1.0s,baz=27,slow=4.3,SNR=5.9						
AKASG	Malin Array Be	144.67	327	PKP	PKPdf	16 06 00.0	-0.2
	2.0nm,0.5s,baz=44,slow=4.2,SNR=20						
AKASG				SKPbc		16 08 48.4	
	0.4nm,0.4s,baz=45,slow=2.4,SNR=4.9						
BRTR	Keskin Array B	147.32	308	PKPbc	PKPdf	16 06 08.8	+3.8
	1.3nm,0.6s,baz=113,slow=3.1,SNR=6.8						
BRTR				PKPab	PKPab	16 06 12.9	-1.4
	1.2nm,0.6s,baz=111,slow=3.0,SNR=7.3						

JMA 14 15:55:53.2±0.2**, 41.62N×142.02E, h64^{km}**±4^{km}**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKB	Kayabe	0.79	290	P	P	15 56 09.0	+0.1
JKB				eS	S	15 56 20.3	-0.2
JNBK	Urakawa-nobuka	0.86	39	P	P	15 56 09.9	+0.2
JNB	Noboribetsu	1.12	320	P	P	15 56 13.2	-0.1
JNB				eS	S	15 56 27.5	-0.6
JANG	Nango	1.30	197	P	P	15 56 15.6	-0.3
JANG				eS	S	15 56 32.3	-0.4
JCH	Churui	1.41	45	P	P	15 56 16.6	-0.7
JCH				eS	S	15 56 34.3	-0.8

NIED ***14*** *15:56:00, 42.00N×142.60E, h44^{km}, Mw3.7 Best double couple: M$_0$3.92×10^{14} NP1:φ$_s$25°, δ64°, λ87°. NP2:φ$_s$213°, δ26°, λ96°.*

NEIC ***14*** *15:56:49.4, 42.03N×142.58E, h63^{km}, MG3.7(JMA), After JMA.*

NEIC Recorded [1 JMA] in the Shizunai area.

JMA ***14*** *15:56:49.3±0.2, 42.03N×142.58E, h63^{km}±2^{km}, M3.7*

JMA Felt I J1.

IDC ***14*** *15:56:50.7±2.1, 42.10N×142.79E, h81^{km}±18^{km}, mb3.5/6, mb1 3.6/8, mb1mx3.4/22, mbtmp3.8/8, Error ellipse: s-maj=42.3km s-min=16.2km az=90.0*

ISC 14 15:56:48.6±0.5**, 42.01N**±0.04×**142.55E**±0.04**, h68^{km}**±4^{km}**, n22, σ0^{s}64**/35**, mb3.6**/6**, 4C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.31	29	⇑P	P	15 56 59.4	-0.3
JNBK				eS	S	15 57 07.3	-0.6
JEM	Erimo	0.45	89	⇑P	P	15 57 01.1	+0.3
JEM				eS	S	15 57 09.5	-0.4
JBT2	Biratori 2	0.78	350	⇓P	P	15 57 04.4	0.0
JBT2				eS	S	15 57 15.7	-0.6
JCH	Churui	0.85	45	⇑P	P	15 57 05.3	0.0
JCH				eS	S	15 57 17.2	-0.6
JKB	Kayabe	1.14	264	⇓P	P	15 57 09.3	+0.2
JKB				eS	S	15 57 24.1	-0.2
JFR	Furan	1.15	2	⇓P	P	15 57 09.0	-0.2
JEW	Eniwo	1.17	316	⇓P	P	15 57 09.7	+0.3
JEW				eS	S	15 57 24.8	-0.1
JNB	Noboribetsu	1.21	293	⇓P	P	15 57 09.6	-0.5
JNB				eS	S	15 57 25.6	-0.5
JOT	Ohata	1.29	241	⇓P	P	15 57 11.4	+0.3
JOT				eS	S	15 57 28.0	+0.2
JOB	Onbets	1.30	46	⇑P	P	15 57 12.1	+0.7
JOB				eS	S	15 57 29.2	+0.9
JAB	Ashibetsu	1.51	351	P	P	15 57 14.5	+0.3
JAB				eS	S	15 57 34.1	+1.0
JAR	Ashorobuto	1.57	34	P	P	15 57 14.8	-0.1
JAR				eS	S	15 57 34.1	-0.3
JYM2	Yakumo 2	1.63	275	⇓P	P	15 57 15.8	+0.1
JYM2				eS	S	15 57 35.6	-0.2
ASAJ	Asahikawa	2.11	1	P	P	15 57 22.9	+0.6
	38nm,0.3s,baz=215,slow=9.8,SNR=368						
ASAJ				S	S	15 57 48.0	+0.7
	16nm,0.3s,baz=78,slow=32,SNR=16						
MJAR	Matsushiro Arr	6.41	213	P	P	15 58 25.0	+2.6
	0.4nm,0.3s,baz=25,slow=13,SNR=4.4						
MJAR	Matsushiro Arr	6.41	213	P	P	15 58 25.0	+2.6
SONM	Songino Array	26.09	295	P	P	16 02 17.5	+0.1
	0.5nm,0.5s,mb3.2,baz=76,slow=8.9,SNR=7.8						
ZAL	Zalesovo	39.39	308	P	P	16 04 13.4	+0.7
	1.2nm,0.7s,mb3.8,baz=19,slow=8.2,SNR=6.4						
MKAR	Makanchi Array	42.40	298	P	P	16 04 37.5	-0.1
	1.2nm,0.9s,mb3.6,baz=83,slow=9.8,SNR=6.7						
WRA	Warramunga Arr	62.10	189	P	P	16 07 03.7	-0.9
	0.8nm,1.1s,mb3.6,baz=6.5,slow=6.7,SNR=4.0						
FINES	FINESS Array B	64.84	332	P	P	16 07 20.6	-1.4
	2.9nm,0.8s,mb4.2,baz=76,slow=7.9,SNR=6.1						
AKASG	Malin Array Be	70.92	322	P	P	16 07 59.0	-0.9
	0.1nm,0.3s,mb3.2,baz=51,slow=6.0,SNR=4.2						

WEL 14 16:08:11.7±0.5**, 34.93S×178.17E, h33^{km}, ML3.9**/9**, Error ellipse: s-maj=9.1km s-min=3.6km az=90.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.63	178	P*	Pb	16 08 51.9	-6.1
MXZ				S*	Sb	16 09 21.5	-8.6
PUZ	Puketiti	3.13	179	PN	Pn	16 08 57.7	-2.3
PUZ				SN	Sn	16 09 32.1	-4.6
URZ	Urewera	3.43	194	P*	Pb	16 09 02.6	-9.0
URZ				S*	Sb	16 09 41.8	-11
MWZ	Matawai	3.43	188	P*	Pb	16 09 02.8	-8.9
MWZ				S*	Sb	16 09 41.3	-12
BKZ	Black Stump Fm	4.43	197	P*	Pb	16 09 15.5	-13
PXZ	Pawanui	5.19	191	PN	Pn	16 09 22.6	-6.6
TSZ	Takapari Road	5.41	198	PN	Pn	16 09 26.7	-5.6
MRZ	Mangatainoka R	6.08	199	PN	Pn	16 09 34.3	-7.4
KIW	Kapiti Island	6.45	203	PN	Pn	16 09 39.9	-7.1
KHZ	Kahutara	8.30	204	PN	P	16 10 04.1	-8.5

IDC ***14*** *16:27:45.1±1.5, 5.18N×94.73E, mb4.3/7, mb1 4.5/7, mb1mx4.1/19, mbtmp4.3/7, Error ellipse: s-maj=61.5km s-min=24.0km az=54.0*

MOS ***14*** *16:27:48.5±0.5, 5.23N×94.78E, h33^{km}, mb4.5/5, Error ellipse: s-maj=79.9km s-min=15.4km az=103.0*

NEIC ***14*** *16:27:49.3±0.6, 5.10N×94.50E, h30^{km}, mb4.5/6, Error ellipse: s-maj=21.4km s-min=7.3km az=50.0*

ISC 14 16:27:47.9±0.7**, 5.16N**±0.10×**94.66E**±0.08**, h30^{km}, n25, σ0^{s}76**/26**, mb4.4**/15**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.96	88	ePn	Pn	16 29 18.9	+2.4
KULM				eSn	Sn	16 30 24.0	-0.6
DMN	Daman	24.11	339	eP	P	16 33 02.5	+0.3
KKN	Kakani	24.21	339	eP	P	16 33 03.0	-0.2
	5.3nm,0.6s,mb4.1						
KKN	Kakani	24.21	339	eP	P	16 33 03.0	-0.2
KKN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb3.9						
LSA	Lhasa	24.63	353	eP	P	16 33 07.6	+0.3
	comp=Z,6.0nm,0.6s,mb4.3						
LSA	Lhasa	24.63	353	eP	P	16 33 07.6	+0.3
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.3						
GKN	Gorkha	24.64	338	eP	P	16 33 07.5	+0.2
	comp=Z,7.1nm,0.3s,mb4.7						
KOLN	Koldanda	24.83	336	eP	P	16 33 09.6	+0.4
	comp=Z,13nm,0.6s,mb4.7						
MBWA	Marble Bar	35.90	138	eP	P	16 34 49.2	+1.5
	comp=Z,45nm,1.8s,mb5.1						
MKAR	Makanchi Array	42.83	347	P	P	16 35 44.7	-0.3
	comp=Z,2.6nm,0.4s,mb4.3,baz=166,slow=7.5,SNR=44						
SONM	Songino Array	43.69	11	P	P	16 35 51.2	-0.7
	comp=Z,1.6nm,0.7s,mb3.8,baz=192,slow=7.7,SNR=15						
SONM				PcP	PcP	16 37 38.6	-0.7
	comp=Z,0.5nm,0.5s,baz=194,slow=4.0,SNR=6.8						
WRA	Warramunga Arr	46.30	124	P	P	16 36 12.6	-0.5
	comp=Z,3.9nm,0.6s,mb4.5,baz=303,slow=9.3,SNR=39						
WRAB	Tennant Creek	46.30	124	eP	P	16 36 13.2	0.0
	comp=Z,5.9nm,0.6s,mb4.7						
WRAB	Tennant Creek	46.30	124	eP	P	16 36 13.2	0.0
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
WB2	Warramunga Arr	46.31	124	eP	P	16 36 12.4	-0.8
KURK	Kurchatov	47.35	346	eP	P	16 36 21.1	0.0
	comp=Z,3.5nm,0.6s,mb4.5						
KURK	Kurchatov	47.35	346	eP	P	16 36 21.1	+0.1
KURK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
ZAL	Zalesovo	49.29	352	P	P	16 36 36.2	+0.2
	comp=Z,4.8nm,0.5s,mb4.8,baz=310,slow=6.5,SNR=15						
ZAL	Zalesovo	49.29	352	P	P	16 36 36.2	+0.2
BVAR	Borovoye Array	51.71	342	P	P	16 36 53.8	-0.6
	comp=Z,1.6nm,0.6s,mb4.2,baz=142,slow=9.6,SNR=17						
BRVK	Borovoye	51.77	342	eP	P	16 36 54.4	-0.5
	comp=Z,1.2nm,0.5s,mb4.1						
BRVK	Borovoye	51.77	342	eP	P	16 36 54.4	-0.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
TAU	Tasmania Unive	67.46	141	P	P	16 38 42.1	-1.2
ARCES	ARCESS Array B	77.98	340	P	P	16 39 44.5	-0.1
	comp=Z,1.7nm,0.5s,mb4.2,baz=101,slow=6.6,SNR=15						
GERES	GERESS Array B	80.19	319	P	P	16 39 57.9	+0.9
	comp=Z,0.9nm,0.5s,mb3.9,baz=111,slow=5.5,SNR=11						

IDC ***14*** *16:40:17.6±1.8, 8.52S×109.43E, mb3.8/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.8/4, Error ellipse: s-maj=101.5km s-min=26.9km az=42.0*

NEIC ***14*** *16:40:22.0±0.6, 8.62S×109.38E, h30^{km}, mb4.3/3, Error ellipse: s-maj=35.2km s-min=10.7km az=52.0*

ISC 14 16:40:21.9±6.9**, 8.7S**±0.2×**109.3E**±0.3**, h48^{km}**±64^{km}**, n9, σ1^{s}06**/9**, mb4.0**/6**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBWA	Marble Bar	15.95	142	ePn	P	16 44 04.7	0.0
	7.0nm,0.9s						
NWAO	Narrogin (SRO)	25.21	164	eP	P	16 45 45.2	+0.3
	32nm,1.3s,mb4.7						
WRA	Warramunga Arr	26.65	118	P	P	16 45 58.3	0.0
	0.9nm,0.5s,mb3.6,baz=290,slow=12,SNR=12						
WRAB	Tennant Creek	26.65	118	eP	P	16 45 58.5	+0.1
	8.2nm,1.1s,mb4.2						
STKA	Stephens Creek	37.81	132	P	P	16 47 35.9	+0.4
MKAR	Makanchi Array	60.26	339	P	P	16 50 26.5	-1.3
	0.5nm,0.5s,mb3.8,baz=149,slow=7.2,SNR=15						
BVAR	Borovoye Array	69.81	336	P	P	16 51 29.4	+0.1
	0.2nm,0.4s,mb3.4,baz=120,slow=7.8,SNR=2.7						
QSPA	South Pole Qui	81.32	180	P	P	16 52 31.2	-3.0
BRTR	Keskin Array B	84.67	311	P	P	16 52 54.1	+2.1
	1.6nm,0.7s,mb4.3,baz=114,slow=6.0,SNR=7.6						

NIED ***14*** *17:35:00, 42.20N×142.90E, h53^{km}, Mw4.1 Best double couple: M$_0$1.66×10^{15} NP1:φ$_s$34°, δ66°, λ90°. NP2:φ$_s$214°, δ24°, λ90°.*

MOS ***14*** *17:35:06.7±1.1, 42.55N×142.76E, h33^{km}, mb4.6/5, Error ellipse: s-maj=16.4km s-min=10.6km az=93.4*

BJI ***14*** *17:35:10.9, 42.10N×142.74E, h83^{km}, mB5.0, mb4.7, Ms4.1, Msz3.9*

JMA ***14*** *17:35:10.3±0.1, 42.23N×142.92E, h54^{km}±1^{km}, M4.0*

JMA Felt I J1.

NEIC ***14*** *17:35:12.8±0.9, 42.24N×142.85E, h88^{km}±8^{km}, mb4.7/2, MW4.1(NIED), Error ellipse: s-maj=14.1km s-min=7.3km az=109.0*

NEIC Recorded [1 JMA] in the Chitose area and in south-central Hokkaido.

IDC ***14*** *17:35:12.3±1.9, 42.26N×142.88E, h82^{km}±14^{km}, mb3.8/13, mb1 4.0/14, mb1mx3.8/25, mbtmp4.1/14, MS3.4/2, Ms1 3.4/2, ms1mx2.6/37, Error ellipse: s-maj=22.9km s-min=14.0km az=97.0*

ISC 14 17:35:08.6±0.4**, 42.16N**±0.04×**142.91E**±0.05**, h68^{km}**±3^{km}**, n49, σ0^{s}93**/62**, mb4.3**/22**, 5C-5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.17	315	⇑P	P	17 35 18.5	-0.3
JNBK				eS	S	17 35 25.5	-0.9
JEM	Erimo	0.23	129	⇑P	P	17 35 19.6	+0.4
JCH	Churui	0.56	36	⇑P	P	17 35 21.9	-0.1
JCH				eS	S	17 35 30.8	-1.1
JBT2	Biratori 2	0.74	327	⇓P	P	17 35 23.9	0.0
JBT2				eS	S	17 35 34.6	-0.8
JOB	Onbets	1.01	42	⇑P	P	17 35 28.4	+1.1
JOB				eS	S	17 35 42.0	+0.7
JFR	Furan	1.03	347	⇓P	P	17 35 27.0	-0.6
JEW	Eniwo	1.28	303	⇓P	P	17 35 31.5	+0.6
JEW				eS	S	17 35 48.2	+0.7
JAR	Ashorobuto	1.30	29	⇑P	P	17 35 31.1	-0.2
JAR				eS	S	17 35 46.6	-1.5
JNB	Noboribetsu	1.42	283	⇓P	P	17 35 32.6	-0.4
JNB				eS	S	17 35 50.4	-0.7
JKB	Kayabe	1.43	260	⇓P	P	17 35 33.4	+0.3
JKB				eS	S	17 35 51.3	+0.2
JAB	Ashibetsu	1.44	340	P	P	17 35 33.5	+0.3
JAB				eS	S	17 35 51.7	+0.4
ASAJ	Asahikawa	1.97	353	P	P	17 35 41.2	+0.8
	89nm,0.3s,baz=203,slow=13,SNR=492						
ASAJ				S	S	17 36 06.0	+2.2
	26nm,0.3s,baz=169,slow=34,SNR=8.0						
YSS	Yuzh-Sakhalins	4.79	359	ePn	P	17 36 21.6	+1.6
YSS				eSn	S	17 37 18.9	+4.2
MAJO	Matsushiro	6.69	215	ePn	P	17 36 50.5	+4.2
	11nm,0.5s						
MAJO				eSn	S	17 38 09.8	+8.0
MAJO	Matsushiro	6.69	215	ePN	P	17 36 50.5	+4.2
MAJO				e		17 38 09.8	
MAJO				pmax	pmax		
	comp=Z,11nm,0.5s						
MAT	Matsushiro	6.69	215	P	P	17 36 47.1	+0.8
MAT				eS	S	17 37 59.7	-2.1
MAT	Matsushiro	6.69	215	P	P	17 36 47.0	+0.7
MAT				S	S	17 38 00.0	-1.8
MJAR	Matsushiro Arr	6.69	215	P	P	17 36 49.2	+2.9
	comp=Z,1.7nm,0.3s,baz=30,slow=12,SNR=11						
MJAR	Matsushiro Arr	6.69	215	P	P	17 36 49.2	+2.9
SONM	Songino Array	26.27	295	P	P	17 40 39.3	+0.3
	comp=Z,4.1nm,0.8s,mb3.9,baz=82,slow=8.8,SNR=27						
SONM				LR	LR	17 51 43.9	
	comp=Z,50nm,21.8s,baz=130,slow=38						
ZAK	Zakamensk	28.32	301	eP	P	17 40 57.1	-0.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
ZAK				pmax	pmax		

	comp=Z,1.0nm,1.0s,mb3.3						
GTA	**Gaotai**	**32.49**	**280**	*e*P	**P**	**17 41 35.3**	**+0.7**
GTA				AP	pP	17 41 51.6	+0.3
GTA				PP	PP	17 42 50.0	+5.4
GTA				XS		17 47 13.5	
GTA				AMB	AMB		
	comp=Z,100nm,6.1s						
GTA				LR	LR		
	comp=N,60nm,9.1s						
GTA				LR	LR		
	comp=E,140nm,9.9s						
GTA				LR	LR		
	comp=Z,110nm,10.3s						
ZAL	**Zalesovo**	**39.51**	**308**	P	**P**	**17 42 35.1**	**+1.3**
	comp=Z,3.6nm,0.7s,mb4.3,baz=22,slow=8.6,SNR=25						
NVS	**Novosibirsk**	**40.30**	**309**	*e*P	**P**	**17 42 38.7**	**-1.6**
MKAR	**Makanchi Array**	**42.57**	**298**	P	**P**	**17 42 59.1**	**+0.2**
	comp=Z,3.4nm,0.7s,mb4.2,baz=81,slow=9.5,SNR=32						
MKAR				PcP	PcP	17 44 51.2	+0.3
	comp=Z,0.6nm,0.7s,baz=71,slow=4.4,SNR=3.8						
KURK	**Kurchatov**	**43.84**	**304**	*e*P	**P**	**17 43 08.8**	**-0.4**
	comp=Z,11nm,0.8s,mb4.6						
KURK	**Kurchatov**	**43.84**	**304**	*e*P	**P**	**17 43 08.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
ILAR	**Eielson Array**	**44.59**	**35**	P	**P**	**17 43 15.8**	**+0.7**
	comp=Z,1.1nm,0.8s,mb3.6,baz=270,slow=5.7,SNR=6.1						
GUN	**Gumba**	**47.98**	**272**	*e*P	**P**	**17 43 43.0**	**+0.7**
	comp=Z,17nm,0.3s,mb5.3						
BVAR	**Borovoye Array**	**48.10**	**309**	P	**P**	**17 43 43.1**	**+0.2**
	comp=Z,2.4nm,0.3s,mb4.5,baz=79,slow=9.8,SNR=37						
BVAR				PcP	PcP	17 45 10.5	+0.5
	comp=Z,0.9nm,0.5s,baz=63,slow=3.3,SNR=4.3						
KKN	**Kakani**	**48.49**	**272**	*e*P	**P**	**17 43 46.7**	**+0.5**
	comp=Z,8.4nm,0.6s,mb4.8						
DMN	**Daman**	**48.72**	**272**	*e*P	**P**	**17 43 48.6**	**+0.6**
	comp=Z,7.8nm,0.6s,mb4.8						
GKN	**Gorkha**	**48.85**	**273**	*e*P	**P**	**17 43 48.9**	**-0.1**
	comp=Z,4.0nm,0.3s,mb4.8						
INK	**Inuvik**	**49.33**	**29**	P	**P**	**17 43 52.2**	**+0.1**
	comp=Z,0.6nm,0.3s,mb3.9,baz=262,slow=5.9,SNR=3.2						
KOLN	**Koldanda**	**49.75**	**273**	*e*P	**P**	**17 43 56.5**	**+0.5**
	comp=Z,4.0nm,0.3s,mb4.9						
AKTO	**Aktyubinsk**	**56.19**	**310**	P	**P**	**17 44 41.6**	**-1.8**
	comp=Z,0.8nm,0.5s,mb4.0,baz=157,slow=7.7,SNR=3.0						
AKTO	**Aktyubinsk**	**56.19**	**310**	P	**P**	**17 44 41.6**	**-1.8**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
KEV	**Kevo**	**59.08**	**339**	*e*p	**P**	**17 45 03.6**	**+0.2**
ARCES	**ARCESS Array B**	**59.63**	**339**	P	**P**	**17 45 06.0**	**-1.1**
	comp=Z,4.6nm,0.9s,mb4.5,baz=39,slow=7.8,SNR=6.3						
JOF	**Joensuu**	**62.01**	**331**	*e*p	**P**	**17 45 21.9**	**-1.5**
	comp=Z,1.9nm,0.4s,mb4.5						
JOF	**Joensuu**	**62.01**	**331**	*e*P	**P**	**17 45 21.9**	**-1.5**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.5						
FITZ	**Fitzroy Crossi**	**62.05**	**199**	P	**P**	**17 45 25.2**	**+0.9**
	comp=Z,2.1nm,0.5s,mb4.4,baz=94,slow=19,SNR=3.7						
WRA	**Warramunga Arr**	**62.30**	**189**	P	**P**	**17 45 25.9**	**0.0**
	comp=Z,0.3nm,0.6s,mb3.5,baz=6.3,slow=6.9,SNR=4.8						
KAF	**Kangasniemi**	**64.30**	**332**	*e*p	**P**	**17 45 36.8**	**-1.6**
	comp=Z,6.7nm,0.8s,mb4.5,baz=42,slow=6.0						
KAF	**Kangasniemi**	**64.30**	**332**	*e*P	**P**	**17 45 36.8**	**-1.6**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
FINES	**FINESS Array B**	**64.84**	**332**	P	**P**	**17 45 41.0**	**-0.9**
	comp=Z,3.6nm,0.5s,mb4.5,baz=53,slow=7.6,SNR=48						
NOA	**NORSAR Array B**	**69.91**	**337**	P	**P**	**17 46 13.1**	**-0.6**
	comp=Z,1.5nm,0.8s,mb3.9,baz=35,slow=6.3,SNR=2.7						
AKASG	**Malin Array Be**	**70.97**	**322**	P	**P**	**17 46 19.9**	**-0.2**
	comp=Z,0.4nm,0.4s,mb3.6,baz=48,slow=6.0,SNR=6.6						
VRAC	**Vranov**	**77.44**	**327**	LR	LR	18 21 35.5	
	comp=Z,36nm,18.9s,baz=68,slow=36						

MOS 14 17:41:42.0±0.9**, 53.65N×97.26E, h10^{km}, mb4.3**/1**, Error ellipse: s-maj=36.9km s-min=21.5km az=31.5, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRAR	**Krasnoyarsk**	**3.47**	**315**	*e*PN	Pn	17 42 36.8	-0.4
KRAR				*e*		17 42 44.8	
KRAR				*e*		17 43 31.0	
SHRR	**Shira**	**4.26**	**284**	*e*PN	Pn	17 42 54.9	+6.4
SHRR				*i*		17 43 02.4	
SHRR				*e*		17 43 35.9	
SHRR				*i*		17 43 53.8	

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*IDC **14** 18:10:03.4±1.4, 31.16N×141.86E, mb3.8/5, mb1 4.0/8, mb1mx3.8/22, mbtmp3.8/8, ML3.6/3, Error ellipse: s-maj=51.1km s-min=18.4km az=68.0*

*JMA **14** 18:10:06.0±0.4, 31.27N×142.01E, h49^{km}, M3.9*

ISC 14 18:10:06.0±0.7**, 31.14N**±0.05×**141.7E**±0.2**, h33^{km}, n18, σ0^{s}86**/26**, mb4.0**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**2.55**	**321**	P	**P**	**18 10 46.0**	**+0.1**
JHJ	**Hachijo jima 2**	**2.58**	**320**	Pn	**Pn**	**18 10 47.0**	**+0.5**
	6.3nm,0.3s,baz=45,slow=17,SNR=11						
JHJ				Sn	**Sn**	**18 11 17.4**	**+0.5**
	23nm,0.3s,baz=57,slow=23,SNR=4.3						
BSO1	**Boso 1**	**3.56**	**350**	P	**P**	**18 10 58.9**	**-1.3**
CBIJ	**Chichi jima**	**4.05**	**174**	Pn	**Pn**	**18 11 07.5**	**+0.2**
	12nm,0.3s,baz=336,slow=21,SNR=12						
CBIJ				Sn	**Sn**	**18 11 52.6**	**-1.6**
	22nm,0.3s,baz=275,slow=21,SNR=5.6						
CBIJ	**Chichi jima**	**4.05**	**174**	P	**P**	**18 11 07.6**	**+0.4**
CBIJ				*e*S	**S**	**18 11 53.5**	**-0.6**
JOD2	**Odawara 2**	**4.67**	**332**	P	**P**	**18 11 16.9**	**+0.8**
JHU	**Hanno**	**5.13**	**337**	P	**P**	**18 11 23.3**	**+0.9**
JHU				*e*S	**S**	**18 12 19.8**	**-1.5**
JRY	**Ryogami san**	**5.41**	**335**	P	**P**	**18 11 26.7**	**+0.3**
JRY				*e*S	**S**	**18 12 25.9**	**-2.5**
JAG	**Ashikaga**	**5.60**	**341**	P	**P**	**18 11 28.7**	**-0.4**
MJAR	**Matsushiro Arr**	**6.13**	**332**	Pn	**Pn**	**18 11 36.9**	**+0.1**
	1.5nm,0.3s,baz=157,slow=12,SNR=12						
MJAR				Sn	**Sn**	**18 12 46.5**	**0.0**
	0.5nm,0.3s,baz=131,slow=46,SNR=2.8						
MAT	**Matsushiro**	**6.14**	**332**	P	**P**	**18 11 36.1**	**-0.5**
MAT				*e*S	**S**	**18 12 45.8**	**-0.8**
MAT	**Matsushiro**	**6.14**	**332**	P	**P**	**18 11 37.4**	**+0.8**
MAT				*e*S	**S**	**18 12 46.9**	**+0.3**
ASAJ	**Asahikawa**	**12.97**	**3**	Pn	**P**	**18 13 04.5**	**-6.1**
	0.3nm,0.3s,baz=228,slow=14,SNR=4.0						
SONM	**Songino Array**	**31.62**	**312**	P	**P**	**18 16 29.0**	**+1.0**
	1.3nm,1.0s,mb3.7,baz=105,slow=8.6,SNR=8.1						
ZAL	**Zalesovo**	**46.24**	**317**	P	**P**	**18 18 30.0**	**+0.3**
	1.0nm,0.2s,mb4.3,baz=251,slow=8.2,SNR=3.1						
MKAR	**Makanchi Array**	**47.67**	**307**	P	**P**	**18 18 41.6**	**+0.6**
	0.3nm,0.4s,mb3.7,baz=87,slow=8.6,SNR=11						
WRA	**Warramunga Arr**	**51.28**	**189**	P	**P**	**18 19 09.2**	**+0.2**
	0.9nm,0.3s,mb4.1,baz=6.5,slow=7.7,SNR=50						
TXAR	**Lajitas Array**	**93.49**	**53**	P	**P**	**18 23 20.8**	**+1.1**
	0.4nm,0.7s,mb4.0,baz=280,slow=1.8,SNR=4.1						

BJI 14 18:11:18.6, 22.77N×118.05E, h15^{km}, mb3.9, ML3.8, Ms4.2, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
QZH	**Quanzhou**	**2.22**	**13**	P	Pn	18 11 53.8	-1.7
QZH				PG	Pg	18 12 00.3	-2.7
QZH				S	Sn	18 12 21.5	-1.3
QZH				Smax			
	comp=N,470nm,0.6s						
QZH				Smax			
	comp=E,780nm,0.5s						
GZH	**Guangzhou**	**4.35**	**275**	P	Pn	18 12 28.5	+2.7
GZH				S	Sn	18 13 15.8	-1.0
GZH				Smax			
	comp=N,270nm,0.7s						
GZH				Smax			
	comp=E,250nm,0.8s						
QIZ	**Qiongzhong**	**8.53**	**246**	*e*P	P	18 13 25.6	+1.1
LZH	**Lanzhou**	**18.11**	**320**	*e*P	P	18 15 31.4	0.0
LZH				AP		18 15 34.5	

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*IDC **14** 18:44:00.1±3.4, 9.84N×91.96E, mb3.8/4, mb1 3.9/4, mb1mx3.6/18, mbtmp3.8/4, Error ellipse: s-maj=129.2km s-min=24.8km az=67.0*

*BJI **14** 18:44:03.9, 9.93N×92.38E, h21^{km}, mb4.1*

*NEIC **14** 18:44:05.1±1.6, 9.90N×92.14E, h30^{km}, mb4.3/2, Error ellipse: s-maj=52.0km s-min=14.9km az=69.0*

ISC 14 18:44:02.9±1.6**, 9.9N**±0.1×**92.1E**±0.3**, h30^{km}, n10, σ0^{s}41**/10**, mb4.1**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	**Lhasa**	**19.75**	**358**	P	**P**	**18 48 34.0**	**+0.6**
LSA	**Lhasa**	**19.75**	**358**	*e*P	**P**	**18 48 33.3**	**-0.1**
	5.7nm,0.6s						
GYA	**Guiyang**	**21.51**	**38**	P	**P**	**18 48 51.8**	**+0.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
ENH	**Enshi**	**25.99**	**36**	*e*P	**P**	**18 49 34.5**	**-0.6**
	comp=Z,11nm,0.7s,mb4.5						
MKAR	**Makanchi Array**	**37.73**	**349**	P	**P**	**18 51 17.3**	**-0.5**
	comp=Z,0.4nm,0.6s,mb3.4,baz=165,slow=8.3,SNR=4.7						
SONM	**Songino Array**	**39.72**	**15**	P	**P**	**18 51 35.0**	**+0.6**
	comp=Z,1.2nm,0.8s,mb3.6,baz=200,slow=8.1,SNR=11						
WRA	**Warramunga Arr**	**51.07**	**126**	P	**P**	**18 53 04.7**	**-0.3**
	comp=Z,0.7nm,0.5s,mb3.9,baz=305,slow=8.5,SNR=16						
WRAB	**Tennant Creek**	**51.07**	**126**	*e*P	**P**	**18 53 05.1**	**0.0**
	comp=Z,11nm,1.4s,mb4.6						
STKA	**Stephens Creek**	**62.95**	**133**	P	**P**	**18 54 29.9**	**+0.6**
	comp=Z,2.7nm,1.0s,mb4.3,baz=315,slow=13,SNR=2.4						
STKA	**Stephens Creek**	**62.95**	**133**	*e*P	**P**	**18 54 29.3**	**+0.1**

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*ATH **14** 19:01:09.4, 38.20N×26.55E, h32^{km}±6^{km}, MD3.3/3*

*ISK **14** 19:01:10.5, 38.11N×26.81E, h3^{km}, MD3.2*

*CSEM **14** 19:01:11.8±0.1, 38.11N×26.86E, h10^{km}, MD3.2, Error ellipse: s-maj=3.9km s-min=2.0km az=96.0*

ISC 14 19:01:09.6±0.8**, 38.20N**±0.03×**26.58E**±0.05**, h5^{km}**±5^{km}**, n26, σ1^{s}31**/36**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.16**	**4**	*i* P	**Pg**	**19 01 12.4**	**-0.5**
URLA				*i* S	**Sg**	**19 01 14.8**	**-0.2**
BLCB	**Balcova**	**0.41**	**63**	*i* PG	**Pg**	**19 01 17.6**	**-0.2**
SMG	**Samos**	**0.53**	**157**	*e*PN	**Pg**	**19 01 21.2**	**+0.9**
SMG				*e*SN	**Sg**	**19 01 29.5**	**+2.1**
IZM	**Izmir**	**0.57**	**70**	*i* PG	**Pg**	**19 01 20.7**	**-0.3**
KDAG	**Bornova**	**0.58**	**69**	*i* P	**Pg**	**19 01 19.9**	**-1.2**
KDAG				*i* S	**Sg**	**19 01 27.9**	**-1.0**
PRK	**Paraskevi**	**1.07**	**347**	*e*PN	**Pn**	**19 01 29.4**	**-1.8**
PRK				*e*SN	**Sn**	**19 01 44.1**	**-2.4**
AYVA	**Ayvalik**	**1.11**	**4**	*i* P	**Pb**	**19 01 31.1**	**+0.2**
AYVA				*i* S	**Sb**	**19 01 45.8**	**+0.3**
AYDN	**Tasoluk**	**1.16**	**117**	*i* P	**Pb**	**19 01 31.7**	**-0.1**
AYDN				*i* S	**Sb**	**19 01 47.1**	**+0.1**
AKS	**Akhisar**	**1.18**	**55**	PN	**Pn**	**19 01 32.1**	**-0.6**
AKS				SN	**Sn**	**19 01 48.4**	**-0.9**
BODT	**Bodrum**	**1.28**	**153**	PN	**Pn**	**19 01 32.4**	**-1.7**
MLSB	**Milas**	**1.31**	**133**	PN	**Pn**	**19 01 33.0**	**-1.6**
BDRM	**Kayabasi**	**1.33**	**149**	*i* P	**Pb**	**19 01 33.7**	**-0.9**
BDRM				*i* S	**Sb**	**19 01 55.2**	**+3.4**
APE	**Apeiranthos**	**1.41**	**217**	PN	**Pn**	**19 01 38.6**	**+2.7**
APE	**Apeiranthos**	**1.41**	**217**	*e*PN	**Pn**	**19 01 34.6**	**-1.3**
MANT	**Manisa**	**1.58**	**79**	*i* P	**Pn**	**19 01 39.3**	**+0.8**
MANT				*i* S	**Sb**	**19 01 59.5**	**+0.3**
DAT	**Datca**	**1.67**	**151**	PN	**Pn**	**19 01 39.0**	**-0.8**
YER	**Yerkesik**	**1.72**	**128**	*e*PN	**Pn**	**19 01 39.5**	**-1.0**
BALB	**Balikesir**	**1.76**	**35**	*e*PN	**Pn**	**19 01 42.8**	**+1.8**
DNZL	**Cakiroluk**	**2.02**	**104**	*i* P	**Pn**	**19 01 48.2**	**+3.5**
DNZL				*i* S	**Sn**	**19 02 14.7**	**+4.1**
DST	**Dursunbey**	**2.12**	**48**	*e*PN	**Pn**	**19 01 47.4**	**+1.1**
DALT	**Dalyan (Mudla)**	**2.17**	**131**	*e*PN	**Pn**	**19 01 46.1**	**-0.8**
EDC	**Edincik**	**2.36**	**25**	*e*PN	**Pn**	**19 01 51.8**	**+2.2**
BNT	**Bandirma**	**2.39**	**25**	*e*PN	**Pn**	**19 01 52.1**	**+2.1**
MRMT	**Marmara Adasi**	**2.52**	**18**	*e*PN	**Pn**	**19 01 54.6**	**+2.6**
FETY	**Fethiye**	**2.53**	**127**	*e*PN	**Pn**	**19 01 51.1**	**-1.0**
ORLT	**Orhaneli**	**2.58**	**44**	*e*PN	**Pn**	**19 01 54.0**	**+1.3**

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*MOS **14** 19:46:41.2±3.0, 57.21N×120.58E, h13^{km}, mb4.4/1, Error ellipse: s-maj=21.2km s-min=13.8km az=138.5*

BYKL 14 19:46:37.3±0.5**, 57.36N×120.88E, h1^{km}**±20^{km}**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRGR	**Nerungri**	**2.22**	**107**	*e*P	Pn	19 47 17.8	+2.1
NRGR				S	Sn	19 47 45.4	+1.3
CLNS	**Chul'man**	**2.25**	**102**	*e*Pg	Pg	19 47 17.3	-5.0
CLNS				*e*Sg	Sg	19 47 48.0	-4.3
CLNS				Pmax			
	151nm,0.3s						
CLNS				Smax			
	6µm,0.6s						
CLNS	**Chul'man**	**2.25**	**102**	*e*P	Pn	19 47 16.1	-0.1
CLNS				*e*		19 47 46.6	
CLNS				pmax	pmax		
	comp=N,7.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,12nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,18nm,0.3s						
CLNS				smax			
	comp=N,559nm,0.4s						
CLNS				smax			
	comp=Z,96nm,0.3s						
CLNS				smax			
	comp=E,480nm,0.5s						
ALDR	**Aldan**	**2.72**	**61**	*e*Pn	Pn	19 47 20.7	-2.2
ALDR				*e*Pg	Pg	19 47 25.4	-6.2
ALDR				*e*Sg	Sg	19 48 00.1	-7.7
ALDR				Pmax			
	comp=E,89nm,0.3s						
ALDR				Smax			
	comp=E,1µm,0.3s						
NLYR	**Nelyaty**	**2.97**	**255**	*e*Pn	Pn	19 47 25.7	-0.7
NLYR				*e*Pg	Pg	19 47 30.7	-5.9
NLYR				*e*Sg	Sg	19 48 07.4	-8.7
NLYR				Pmax			
	comp=E,263nm,0.4s						
NLYR				Smax			
	comp=E,371nm,0.9s						
NLYR	**Nelyaty**	**2.97**	**255**	*e*P	Pn	19 47 25.8	-0.6
NLYR				*e*		19 48 07.3	
NLYR				pmax	pmax		
	comp=Z,262nm,0.3s						
NLYR				smax			
	comp=E,368nm,0.9s						
TUP	**Tupik**	**2.99**	**190**	*e*Pn	Pn	19 47 25.6	-1.1
TUP				*e*Pg	Pg	19 47 31.3	-5.7
TUP				*e*Sn	Sn	19 48 01.9	-1.8
TUP				*i* Sg	Sg	19 48 09.2	-7.6
TUP				Pmax			
	comp=E,102nm,0.5s						
TUP				Smax			
	comp=E,665nm,0.8s						
TUP	**Tupik**	**2.99**	**190**	*e*P	Pn	19 47 25.5	-1.2
TUP				*e*		19 48 09.1	
TUP				pmax	pmax		
	comp=Z,99nm,0.5s						
TUP				smax			
	comp=E,465nm,0.6s						
TNDR	**Tynda**	**3.08**	**134**	*e*Pn	Pn	19 47 27.1	-1.0
TNDR				*e*Pg	Pg	19 47 32.0	-6.9
TNDR				*e*Sn	Sn	19 48 04.1	-2.0
TNDR				*e*Sg	Sg	19 48 13.3	-6.7
TNDR				Pmax			
	comp=E,172nm,0.3s						
TNDR				Smax			
	comp=E,986nm,0.3s						
BOD	**Bodaibo**	**3.73**	**280**	*e*Pn	Pn	19 47 37.0	-0.3
BOD				*e*Pg	Pg	19 47 45.6	-6.2
BOD				*e*Sg	Sg	19 48 30.1	-11
BOD				Pmax			
	comp=E,36nm,0.5s						
BOD				Smax			
	comp=E,145nm,0.8s						
BOD	**Bodaibo**	**3.73**	**280**	*e*P	Pn	19 47 43.5	+6.2
BOD				*e*		19 48 30.0	
BOD				pmax	pmax		
	comp=Z,37nm,0.5s						
BOD				smax			
	comp=N,147nm,0.7s						
SVKR	**Severomuysk**	**4.22**	**256**	*e*Pg	Pg	19 47 54.6	-6.9
SVKR				*e*Sg	Sg	19 48 49.0	-8.8
SVKR				Pmax			
	comp=N,41nm,0.3s						
SVKR				Smax			
	comp=N,232nm,0.8s						
SVKR	**Severomuysk**	**4.22**	**256**	*e*P	Pn	19 47 54.6	+10
SVKR				pmax	pmax		
	comp=Z,40nm,0.5s						
UKT	**Uakit**	**4.44**	**248**	*e*Pg	Pg	19 47 56.9	-9.1
UKT				*e*Sg	Sg	19 48 52.6	-13
UKT				Pmax			
	comp=Z,23nm,0.5s						
UKT				Smax			
	comp=Z,80nm,0.9s						
UKT	**Uakit**	**4.44**	**248**	*e*P	Pn	19 47 57.5	+10
UKT				pmax	pmax		
	comp=Z,20nm,0.6s						
KROS	**Kirovskiy**	**4.51**	**128**	*e*Pg	Pg	19 47 55.4	-12
KROS				*e*Sg	Sg	19 48 55.1	-12
ZEA	**Zeya**	**5.12**	**132**	*e*Sg	Sg	19 49 16.9	-11
YOA	**Uoyan**	**5.19**	**260**	*e*Pg	Pg	19 48 12.2	-8.7
YOA				*e*Sg	Sg	19 49 18.1	-12
YOA				Pmax			
	comp=Z,64nm,1.3s						
YOA				Smax			
	comp=Z,410nm,1.2s						
YOA	**Uoyan**	**5.19**	**260**	*e*P	Pn	19 48 13.2	+15
YOA				pmax	pmax		
	comp=Z,41nm,0.6s						
KMO	**Kumora**	**5.54**	**259**	*e*Pn	Pn	19 48 01.1	-1.9
KMO				*e*Pg	Pg	19 48 17.4	-11
KMO				*e*Sg	Sg	19 49 27.4	-14
KMO				Pmax			
	comp=Z,10.0nm,1.1s						
KMO				Smax			
	comp=Z,124nm,0.9s						
KMO	**Kumora**	**5.54**	**259**	*e*P	Pn	19 48 01.5	-1.5
KMO				*e*S	Sn	19 49 02.9	-5.4
KMO				pmax	pmax		
	comp=Z,12nm,0.5s						
KMO				smax			
	comp=N,128nm,1.0s						
YLYR	**Ulyunkhan**	**5.98**	**249**	*e*Pg	Pg	19 48 27.0	-10
YLYR				*e*Sg	Sg	19 49 41.8	-15
YLYR				Pmax			
	comp=N,13nm,1.3s						
YLYR				Smax			
	comp=N,66nm,1.7s						
YLYR	**Ulyunkhan**	**5.98**	**249**	*e*P	Pn	19 48 07.7	-1.4
YLYR				pmax	pmax		
	comp=Z,12nm,0.7s						
YAK	**Yakutsk**	**6.46**	**40**	*e*Sg	Sg	19 49 55.0	-17
YAK				Smax			
	comp=Z,323nm,0.5s						
YAK	**Yakutsk**	**6.46**	**40**	*e*P	Pn	19 48 35.0	+19
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK				MLR	MLR		
	comp=Z,23nm,6.0s						
NIZ	**Nizh Angarsk**	**6.47**	**261**	*e*Pn	Pn	19 48 15.8	-0.2
NIZ				*e*Pg	Pg	19 48 35.3	-11
NIZ				*e*Sg	Sg	19 49 55.7	-17
NIZ				Pmax			
	comp=Z,6.0nm,0.7s						
NIZ				Smax			
	comp=Z,62nm,1.0s						
NIZ	**Nizh Angarsk**	**6.47**	**261**	*e*P	Pn	19 48 16.5	+0.5
NIZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CIT	**Chita**	**6.83**	**222**	*e*Pg	Pg	19 48 41.6	-12
CIT				*e*Sg	Sg	19 50 06.5	-18
CIT				Pmax			
	comp=Z,8.0nm,0.9s						
CIT				Smax			
	comp=Z,97nm,1.3s						
SYVR	**Suvo**	**7.21**	**244**	*e*Pn	Pn	19 48 25.0	-1.4
SYVR				*e*Pg	Pg	19 48 47.9	-13
SYVR				*e*Sg	Sg	19 50 20.5	-17
SYVR				Pmax			
	comp=Z,19nm,1.9s						
SYVR				Smax			
	comp=Z,68nm,2.2s						
KPC	**Khapcheranga**	**9.18**	**217**	*e*Sg	Sg	19 51 18.5	-25
KPC				Smax			
	comp=Z,74nm,1.1s						
KPC	**Khapcheranga**	**9.18**	**217**	*e*P	P	19 48 50.5	-3.4
KPC				pmax	pmax		
	comp=Z,3.0nm,1.8s						
ZAK	**Zakamensk**	**12.49**	**243**	*e*Sg	S	19 53 04.9	+65
ZAK				Smax			
	comp=Z,9.0nm,1.2s						

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*IDC **14** 20:25:56.6±1.2, 39.53N×111.27W, h14^{km}±12^{km}, mb1 3.5/5, mb1mx3.3/25, mbtmp3.2/5, ML3.0/4, Error ellipse: s-maj=10.4km s-min=8.4km az=153.0*

NEIC 14 20:25:52.0, 39.48N×111.51W, h9^{km}, ML3.0(SLC)**, After SLC., Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMUT	**Trail Mountain**	**0.29**	**128**	*e*P	Pg	20 25 58.5	+0.4
MPU	**Maple Canyon**	**0.55**	**350**	*e*P	Pg	20 26 03.6	+0.5
NLU	**North Lily Min**	**0.65**	**318**	*e*P	Pb	20 26 05.4	+0.4
SRU	**San Rafael**	**0.84**	**115**	*e*P	Pb	20 26 08.3	0.0
DAU	**Daniels Canyon**	**0.95**	**11**	*e*P	Pb	20 26 10.7	+0.4
MSU	**Marysvale**	**1.10**	**209**	*e*P	Pb	20 26 13.5	+0.8
MVU	**Marysvale**	**1.12**	**210**	*e*P	Pb	20 26 14.1	+1.0
DUG	**Dugway**	**1.24**	**306**	*e*P	Pb	20 26 15.5	+0.4
NOQ	**North Oquirrh**	**1.27**	**338**	*e*P	Pb	20 26 16.2	+0.6
TCUT	**Toone Canyon**	**1.64**	**3**	*e*P	Pn	20 26 21.6	+0.4
BGU	**Big Grassy Mou**	**1.86**	**322**	*e*P	Pn	20 26 24.3	-0.1
SPUT	**South Promonto**	**1.97**	**339**	*e*Pn	Pn	20 26 25.7	-0.2
HWUT	**Hardware Ranch**	**2.13**	**359**	*e*Pn	Pn	20 26 27.4	-0.8
ARUT	**Antelope Range**	**2.27**	**223**	Pn	Pn	20 26 30.4	+0.2
HVU	**Hansel Valley**	**2.50**	**338**	*e*Pn	Pn	20 26 32.7	-0.8
ELK	**Elko**	**3.13**	**295**	Pn	Pn	20 26 48.5	+6.0
	0.8nm,0.3s,baz=100,slow=12,SNR=15						
ELK				Pg	Pg	20 26 55.2	+0.7
	2.2nm,0.3s,baz=88,slow=14,SNR=16						
ELK				Lg		20 27 32.6	
	2.4nm,0.3s,baz=16,slow=15,SNR=2.8						
ELK	**Elko**	**3.13**	**295**	*e*Pn	Pn	20 26 40.8	-1.8
ELK				Pn	Pn	20 26 48.5	+6.0
ELK				Pg	Pg	20 26 55.2	+0.7
ELK				Lg		20 27 32.6	
AHID	**Auburn Hatcher**	**3.30**	**5**	Pn	Pn	20 26 44.7	-0.3
SMCO	**Snowmass**	**3.53**	**93**	Pn	Pn	20 26 46.6	-1.5
PDAR	**Pinedale Array**	**3.60**	**23**	Pn	Pn	20 26 51.9	+2.6
	0.2nm,0.3s,baz=211,slow=13,SNR=9.5						
PDAR				Pg	Pg	20 27 00.9	-3.0
	1.4nm,0.3s,baz=201,slow=15,SNR=21						
PDAR				Lg		20 27 44.0	
	2.3nm,0.3s,baz=177,slow=27,SNR=4.5						
REDW	**Red Top Meadow**	**3.91**	**7**	Pn	Pn	20 26 53.5	-0.1
TPAW	**Teton Pass**	**4.03**	**6**	Pn	Pn	20 26 54.8	-0.5
LOHW	**Long Hollow**	**4.19**	**9**	Pn	Pn	20 26 56.6	-0.9
IMW	**Indian Meadow**	**4.44**	**5**	Pn	Pn	20 26 59.9	-1.2
HLID	**Hailey**	**4.63**	**333**	*e*Pn	Pn	20 27 02.1	-1.7
NEN	**Nelson**	**4.65**	**216**	Pn	Pn	20 27 02.6	-1.5
TPH	**Tonopah**	**4.68**	**254**	Pn	Pn	20 27 03.1	-1.5
SDCO	**Great Sand Dun**	**5.01**	**108**	*e*Pn	Pn	20 27 08.5	-0.7
MNV	**Mina**	**5.29**	**261**	Pn	Pn	20 27 13.7	+0.6
NVAR	**Mina Array Bea**	**5.40**	**261**	Pn	Pn	20 27 20.6	+5.9
	0.2nm,0.3s,baz=96,slow=9.1,SNR=3.0						
NVAR				Pg	Pg	20 27 32.6	-7.2
	0.4nm,0.3s,baz=82,slow=16,SNR=8.1						
NVAR				Lg		20 28 42.8	
	0.0nm,0.3s,baz=20,slow=24,SNR=0.9						
ANMO	**Albuquerque**	**6.05**	**137**	Pn	Pn	20 27 24.5	+0.6
	baz=325,slow=11,SNR=7.5						
ANMO				Pg	Pg	20 27 44.1	-8.7
	baz=326,slow=14,SNR=12						
ANMO				Lg		20 28 58.1	
	baz=248,slow=17,SNR=7.9						
ANMO	**Albuquerque**	**6.05**	**137**	Pn	Pn	20 27 22.3	-1.6
LAZ	**Ladron**	**6.15**	**144**	Pn	Pn	20 27 23.6	-1.7
WVOR	**Wild Horse Val**	**6.15**	**301**	Pn	Pn	20 27 25.2	-0.1
LENM	**Lemitar**	**6.42**	**144**	Pn	Pn	20 27 29.2	+0.1
BNM	**Barren Site**	**6.60**	**142**	Pn	Pn	20 27 31.5	-0.1
TXAR	**Lajitas Array**	**12.00**	**145**	Pn	P	20 28 48.9	+2.6
	0.0nm,0.3s,baz=332,slow=13,SNR=2.1						
TXAR				Pg	P	20 29 37.5	+51
	baz=340,slow=18,SNR=1.2						
TXAR				Lg		20 32 12.8	
	0.1nm,0.3s,baz=349,slow=24,SNR=3.0						

MAN 14 21:08:29.1,8.41N×122.64E,h38^{km},mb4.0,ML2.7,MS2.4,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIL	**Ipil**	**0.62**	**186**	*e*P	P	21 08 42.9	+1.4
IPIL				*e*S	S	21 08 52.3	+1.9
DCPH	**Dipolog City**	**0.73**	**76**	⇑*i*P	P	21 08 43.4	+0.5
PAGZ	**Pagadian**	**0.93**	**127**	*e*P	P	21 08 46.6	+0.9
PAGZ				*e*S	S	21 08 60.0	+1.9
GUIM	**Jordan**	**2.20**	**359**	*e*P	P	21 09 03.4	-0.6
GUIM				*e*S	S	21 09 30.8	+0.7

*IDC **14** 21:15:40.1±1.2,6.02N×126.33E,mb3.7/4,mb1 3.9/4,mb1mx3.6/16,mbtmp3.7/4,Error ellipse: s-maj=76.7km s-min=24.9km az=73.0*

*MAN **14** 21:15:54.0,6.54N×126.30E,h154^{km},mb4.4,ML3.3,MS3.1*

ISC 14 21:15:52.9±1.0,**5.80N**±0.09×**126.14E**±0.10,**h122**^{km}±10^{km},**n11,**σ**0^{s}93**/17,**mb3.5**/4,**2D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**1.15**	**6**	*e*P	**P**	**21 16 16.7**	**-0.3**
MATI				*e*S	**S**	**21 16 34.3**	**-0.7**
KCP	**Kidapawan**	**1.59**	**319**	⇓*e*P	**P**	**21 16 22.1**	**+0.1**
KCP				*i* S	**S**	**21 16 43.7**	**-0.3**
BUKP	**Musuan**	**2.33**	**333**	*e*P	**P**	**21 16 31.9**	**+0.7**
BUKP				*e*S	**S**	**21 17 01.1**	**+0.9**
CGP	**Cagayan de Oro**	**3.00**	**332**	⇓*e*P	**P**	**21 16 41.1**	**+0.9**
CGP				*e*S	**S**	**21 17 17.8**	**+1.7**
BUTP	**Butuan**	**3.19**	**351**	*e*P	**P**	**21 16 35.3**	**-7.4**
BUTP				*e*S	**S**	**21 17 19.5**	**-1.1**
PAGZ	**Pagadian**	**3.41**	**307**	*e*P	**P**	**21 16 45.2**	**-0.5**
IPIL	**Ipil**	**4.06**	**299**	*e*P	**P**	**21 16 54.7**	**+0.4**
IPIL				*e*S	**S**	**21 17 38.5**	**-2.9**
WRA	**Warramunga Arr**	**26.82**	**163**	P	**P**	**21 21 23.2**	**-0.7**
	0.5nm,0.5s,mb3.3,baz=342,slow=9.9,SNR=11						
STKA	**Stephens Creek**	**40.26**	**159**	P	**P**	**21 23 20.6**	**+1.2**
	2.9nm,0.9s,mb4.1,baz=325,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**55.53**	**325**	P	**P**	**21 25 16.8**	**-0.9**
	0.1nm,0.3s,mb3.3,baz=118,slow=6.6,SNR=4.7						
ILAR	**Eielson Array**	**83.50**	**26**	P	**P**	**21 28 08.0**	**0.0**
	0.5nm,0.8s,mb3.4,baz=252,slow=5.9,SNR=7.3						

*MOS **14** 21:33:20.3±0.9,36.40N×70.18E,h183^{km},mb3.7/1,Error ellipse: s-maj=20.8km s-min=12.0km az=88.1*

*NEIC **14** 21:33:21.1±1.9,36.41N×70.24E,h172^{km}±19^{km},mb3.9/3,Error ellipse: s-maj=21.3km s-min=6.1km az=66.0*

*NNC **14** 21:33:26.6±5.2,37.07N×70.35E,mpv3.8,Error ellipse: s-maj=47.0km s-min=40.2km az=131.0*

*IDC **14** 21:33:26.6±11.0,36.75N×70.34E,h207^{km}±87^{km},mb3.3/3,mb1 3.3/7,mb1mx3.0/22,mbtmp3.8/7,Error ellipse: s-maj=84.4km s-min=25.4km az=15.0*

ISC 14 21:33:21.9±1.4,**36.45N**±0.07×**70.3E**±0.1,**h195**^{km}±15^{km},**n28,**σ**0^{s}64**/33,**mb3.5**/3,**1C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.99**	**130**	*e*P	**P**	**21 34 49.9**	**+0.2**
THN				*e*S	**S**	**21 35 51.8**	**-6.2**
AML	**Almayashu**	**6.24**	**24**	P	**P**	**21 34 53.4**	**+0.4**
	SNR=30						
UCH	**Uchtor**	**6.62**	**28**	P	**P**	**21 34 58.3**	**+0.4**
	SNR=24						
KK31	**Karatay Array**	**6.65**	**1**	⇓P	**P**	**21 34 58.0**	**-0.2**
	2.3nm,0.3s,baz=197,slow=16,SNR=34						
KK31				⇓S	**S**	**21 36 08.3**	**-5.0**
	13nm,0.5s						
EKS2	**Erkin-Say**	**6.75**	**22**	P	**P**	**21 34 59.8**	**+0.2**
	SNR=6.1						
AAK	**Ala-Archa**	**6.96**	**26**	P	**P**	**21 35 02.6**	**+0.3**
	SNR=8.1						
AAK	**Ala-Archa**	**6.96**	**26**	⇓P	**P**	**21 35 02.5**	**+0.2**
	4.9nm,0.6s						
AAK				⇑S	**S**	**21 36 16.6**	**-4.1**
	19nm,0.9s						
AAK	**Ala-Archa**	**6.96**	**26**	*e*Pn	**P**	**21 35 01.7**	**-0.7**
	5.2nm,0.6s						
AAK				*e*Sn	**S**	**21 36 19.7**	**-1.0**
AAK	**Ala-Archa**	**6.96**	**26**	*e*PN	**P**	**21 35 01.7**	**-0.6**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
USP	**Ospenovka**	**7.53**	**24**	P	**P**	**21 35 09.8**	**+0.1**
	SNR=5.6						
TKM2	**Tokmak 2**	**7.63**	**31**	P	**P**	**21 35 11.3**	**+0.2**
	SNR=13						
MKAR	**Makanchi Array**	**13.65**	**37**	P	**P**	**21 36 28.9**	**+0.6**
	comp=Z,0.2nm,0.3s,baz=217,slow=14,SNR=7.8						
KOLN	**Koldanda**	**14.18**	**124**	*e*P	**P**	**21 36 34.4**	**-0.7**
	comp=Z,3.8nm,0.3s						
GKN	**Gorkha**	**14.74**	**121**	*e*P	**P**	**21 36 42.5**	**+0.4**
	comp=Z,10.0nm,0.3s						
AB31	**Akbulak array**	**14.87**	**333**	P	**P**	**21 36 48.5**	**+5.0**
	comp=Z,1.1nm,0.3s,baz=151,slow=12,SNR=65						
DMN	**Daman**	**15.31**	**121**	*e*P	**P**	**21 36 48.9**	**-0.3**
	comp=Z,13nm,0.6s						
KKN	**Kakani**	**15.32**	**120**	*e*P	**P**	**21 36 49.0**	**-0.3**
	comp=Z,9.3nm,0.3s						
KURK	**Kurchatov**	**15.46**	**20**	*e*P	**P**	**21 36 50.6**	**-0.2**
	comp=Z,0.9nm,0.6s						
KURK	**Kurchatov**	**15.46**	**20**	*e*P	**P**	**21 36 50.7**	**-0.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PKI	**Pulchoki**	**15.54**	**120**	*e*P	**P**	**21 36 52.1**	**+0.1**
	comp=Z,27nm,0.5s						
GUN	**Gumba**	**15.67**	**119**	*e*P	**P**	**21 36 54.5**	**+0.9**
	comp=Z,16nm,0.4s						
AKTO	**Aktyubinsk**	**16.56**	**331**	P	**P**	**21 37 02.8**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=166,slow=12,SNR=4.2						
AKTO				S	**S**	**21 40 02.7**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=110,slow=15,SNR=2.9						
BVAR	**Borovoye Array**	**16.57**	**0**	P	**P**	**21 37 03.3**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=174,slow=9.2,SNR=6.8						
ZAL	**Zalesovo**	**20.17**	**25**	P	**P**	**21 37 42.2**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=248,slow=5.8,SNR=11						
SONM	**Songino Array**	**28.81**	**55**	P	**P**	**21 39 03.8**	**+0.1**
	comp=Z,0.2nm,0.5s,mb3.0,baz=275,slow=9.6,SNR=4.2						
FINES	**FINESS Array B**	**37.22**	**326**	P	**P**	**21 40 15.5**	**-0.3**
	comp=Z,2.1nm,0.8s,mb3.7,baz=162,slow=8.8,SNR=3.2						
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**21 40 46.9**	**+0.2**
	comp=Z,3.0nm,0.8s,mb3.8,baz=108,slow=7.7,SNR=6.3						
ARCES	**ARCESS Array B**	**40.98**	**338**	P	**P**	**21 40 46.9**	**+0.2**

*BGS **14** 21:38:33.8,35.47N×149.71E,h10^{km},mb6.5*

*CRAAG **14** 21:38:49.9,38.15N×144.95E,Mb7.2*

*IDC **14** 21:38:49.0±0.3,38.00N×144.95E,mb5.9/35,mb1 6.1/39,mb1mx6.1/39,mbtmp6.0/39,ML5.6/5,MS6.8/38,Ms1 6.8/38,ms1mx6.8/43,Error ellipse: s-maj=9.1km s-min=8.0km az=131.0*

*DHMR **14** 21:38:50.7±3.4,38.11N×144.93E,h10^{km}±999^{km},mb6.8*

*HRVD **14** 21:38:51.4±0.1,38.22N×144.97E,h18^{km},MW7.0/74,Centroid moment Tensor Solution.Mantle waves: s74,c187; Half duration: 7^{s}3 Moment tensor: Scale 10^{19} Nm; M_{rr}-3.49±.02; $M_{\theta\theta}$-0.17±.02; $M_{\phi\phi}$3.66±.02; $M_{r\theta}$-0.59±.22; $M_{\theta\phi}$0.70±.02; $M_{\phi r}$-0.30±.16; Best double couple: $M_0$3.701×10^{19} NP1:ϕ_s181°,δ43°,λ-104°. NP2: ϕ_s19°,δ49°,λ-78°. Principal axes: T 3.805, Plg3°, Azm100°; N -.209, Plg9°, Azm191°; P -3.598, Plg80°, Azm352°; nsta1 refers to body waves. nsta2 refers to mantle waves, cutoff=125s.*

*NEIC **14** 21:38:51.4±0.1,38.11N×144.90E,h11^{km},mb6.7/216,ME6.9,MS6.8/145,MW6.8,MW7.0(MOS),MW7.0(NIED) Error ellipse: s-maj=3.0km s-min=2.1km az=172.0 Broadband fault plane solution: P waves. NP1:ϕ_s180°,δ70°,λ-90°. NP2:ϕ_s0°,δ20°,λ-90°. Principal axes: T Plg25°, Azm270°; N Plg0°, Azm0°; P Plg65°, Azm90°; Moment Tensor Solution. s58 Moment tensor: Scale 10^{19} Nm; M_{rr}-2.01; $M_{\theta\theta}$0.28; $M_{\phi\phi}$1.72; $M_{r\theta}$0.00; $M_{\theta\phi}$0.75; $M_{\phi r}$-0.85; Best double couple: $M_0$2.2×10^{19} NP1:ϕ_s212°,δ35°,λ-75°. NP2:ϕ_s14°,δ56°,λ-100°. Principal axes: T 2.19, Plg11°, Azm111°; N .01, Plg8°, Azm20°; P -2.2, Plg76°, Azm253°; Complex earthquake observed on broadband displacement seismograms. A small event is followed by a large event about 2 seconds later. Depth from synthetics of broadband displacement seismograms based on large event. Energy computed from MT mechanism.*

NEIC Felt [IV] at Misawa, [III] at Sendai and Utsunomiya and [II] at Tokyo and Yokosuka. Felt widely in northern and eastern Honshu. Also felt on Hokkaido. Felt [III] at Malokuril'skoye and [II] at Yuzhno-Kuril'sk, Kuril Islands. A tsunami with a wave height of 32 cm [peak-to-trough] was recorded at Ofunato. Recorded [3 JMA] in northeastern Honshu and [2 JMA] in northwestern and central Honshu. Recorded [3 JMA] in eastern and south-central Hokkaido; [2 JMA] in much of central and southwestern Hokkaido. Also recorded [2 JMA] on Hachijo-jima, Miyake-jima and O-shima; [1 JMA] on Aoga-shima, Kozu-shima and Nii-jima.

*JMA **14** 21:38:51.3±0.3,38.03N×144.94E,h45^{km},M7.2*

JMA Felt III J1.

*BJI **14** 21:38:52.7,38.33N×144.53E,h11^{km},mB7.3,mb6.3,Ms7.3,Msz7.2*

*MOS **14** 21:38:53.1±0.9,38.11N×144.88E,h33^{km},mb6.8/142,MS6.9/87,Error ellipse: s-maj=6.4km s-min=4.4km az=107.3*

*NIED **14** 21:39:00,38.00N×145.00E,h14^{km},Mw7.0 Best double couple: $M_0$4.06×10^{19} NP1:ϕ_s178°,δ63°,λ-105°. NP2: ϕ_s29°,δ31°,λ-63°.*

*SKO **14** 21:39:02.6,37.95N×142.35E*

ISC 14 21:38:50.6±0.1,**38.05N**±0.02×**144.88E**±0.01,**h14**^{km},**h14**^{km}±.6^{km}**:pP-P,n1674,**σ**0^{s}92**/1600,**mb6.5**/345,**MS6.9**/217,**204C-204D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.72**	**293**	⇑P	**Pn**	**21 39 34.9**	**+0.3**
JIO	**Ouri**	**2.81**	**279**	⇑P	**Pn**	**21 39 36.1**	**+0.2**
JIO				*e*S	**Sn**	**21 40 08.0**	**-1.8**
MIYJ	**Miyakonagasawa**	**2.84**	**304**	⇑P	**Pn**	**21 39 36.1**	**-0.2**
MIYJ				*e*S	**Sn**	**21 40 09.8**	**-0.7**
JMK	**Ichinoseki**	**3.01**	**289**	⇑P	**Pn**	**21 39 38.9**	**+0.1**
JOM	**Ohasama**	**3.14**	**298**	⇑P	**Pn**	**21 39 41.0**	**+0.3**
JOM				*e*S	**Sn**	**21 40 17.8**	**-0.5**
JMM	**Marumori**	**3.23**	**268**	⇑P	**Pn**	**21 39 41.8**	**-0.2**
JMM				*e*S	**Sn**	**21 40 18.9**	**-1.7**
JFK	**Kawauchi**	**3.25**	**259**	⇑P	**Pn**	**21 39 41.5**	**-0.7**
JOU	**Okura**	**3.33**	**277**	⇑P	**Pn**	**21 39 43.9**	**+0.5**
JKZ	**Kuzumaki**	**3.37**	**306**	⇑P	**Pn**	**21 39 44.2**	**+0.3**
ONAJ	**Iwakimizuishiy**	**3.38**	**255**	⇑P	**Pn**	**21 39 43.4**	**-0.6**
JANG	**Nango**	**3.50**	**313**	⇑P	**Pn**	**21 39 44.8**	**-0.9**
JANG				*e*S	**Sn**	**21 40 25.7**	**-1.5**
JRG	**Rokugo**	**3.58**	**293**	⇑P	**Pn**	**21 39 47.4**	**+0.5**
JFT	**Otama**	**3.64**	**263**	⇑P	**Pn**	**21 39 48.2**	**+0.5**
JYK	**Kaneyama**	**3.65**	**285**	⇑P	**Pn**	**21 39 48.3**	**+0.4**
JHO	**Hitachi**	**3.72**	**249**	⇑P	**Pn**	**21 39 47.9**	**-1.0**
JAH	**Hinai**	**3.93**	**304**	⇑P	**Pn**	**21 39 51.9**	**0.0**
JTM	**Tenmabayashi**	**4.02**	**314**	⇑P	**Pn**	**21 39 52.7**	**-0.5**
JNS	**Sasagawa**	**4.40**	**269**	⇑P	**Pn**	**21 39 58.9**	**+0.3**
JAW	**Awa shima**	**4.45**	**277**	⇑P	**Pn**	**21 39 59.6**	**+0.3**
JOT	**Ohata**	**4.45**	**320**	P	**Pn**	**21 39 58.7**	**-0.6**
JOT				*e*S	**Sn**	**21 40 47.9**	**-3.5**
JAG	**Ashikaga**	**4.62**	**251**	⇑P	**Pn**	**21 40 01.1**	**-0.6**
BSO1	**Boso 1**	**4.62**	**224**	P	**Pn**	**21 39 59.7**	**-2.0**
JCH	**Churui**	**4.71**	**346**	P	**Pn**	**21 40 00.6**	**-2.3**
JKB	**Kayabe**	**4.84**	**324**	P	**Pn**	**21 40 03.7**	**-1.1**
JIZZ	**Izumozaki**	**4.91**	**266**	P	**Pn**	**21 40 06.8**	**+1.0**
JRY	**Ryogami san**	**5.19**	**249**	⇑P	**Pn**	**21 40 08.7**	**-1.1**
JSD	**Sado**	**5.22**	**272**	⇑P	**Pn**	**21 40 10.0**	**-0.2**
NEM2	**Nemuro 2**	**5.35**	**7**	P	**Pn**	**21 40 08.0**	**-4.0**
JJN	**Nakama**	**5.42**	**262**	⇑P	**Pn**	**21 40 13.8**	**+0.9**
JOD2	**Odawara 2**	**5.42**	**241**	P	**Pn**	**21 40 11.2**	**-1.8**
JEW	**Eniwo**	**5.46**	**332**	⇑P	**Pn**	**21 40 12.5**	**-0.9**
MJAR	**Matsushiro Arr**	**5.53**	**256**	Pn	**Pn**	**21 40 14.6**	**+0.2**
	558nm,0.3s,baz=77,slow=15,SNR=2276						
MJAR				Sn	**Sn**	**21 41 21.2**	**+2.7**
	636nm,0.3s,baz=123,slow=33,SNR=4.7						
MJAR				P3KPbc		22 18 10.9	
	0.2nm,0.3s,baz=225,slow=1.4,SNR=5.4						
MAJO	**Matsushiro**	**5.53**	**256**	*e*P	**Pn**	**21 40 14.7**	**+0.2**
	25µm,0.6s						
MAJO	**Matsushiro**	**5.53**	**256**	*e*P	**Pn**	**21 40 14.7**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,10µm,0.6s						
MAT	**Matsushiro**	**5.53**	**256**	P	**Pn**	**21 40 14.7**	**+0.2**
MAT				*e*S	**Sn**	**21 41 17.0**	**-1.5**
MAT	**Matsushiro**	**5.53**	**256**	*e*P	**Pn**	**21 40 15.0**	**+0.5**
MAT				S	**Sn**	**21 41 17.0**	**-1.5**
JNG	**Nsakai**	**5.65**	**255**	⇑P	**Pn**	**21 40 16.6**	**+0.4**
JOSM	**Okushiri--Mats**	**5.78**	**316**	P	**Pn**	**21 40 16.8**	**-1.2**
JSZ	**Suzu**	**5.99**	**267**	⇑P	**Pn**	**21 40 20.8**	**-0.1**
YUK	**Yuzh-Kuril'sk**	**6.03**	**7**	⇓*i*P	**Pn**	**21 40 17.5**	**-4.0**
YUK				*i* S	**Sn**	**21 41 21.1**	**-10**
YUK				pmax	pmax		
	comp=E,50µm,1.0s						
YUK				pmax	pmax		
	comp=Z,210µm,1.0s						
YUK				pmax	pmax		
	comp=E,28µm,0.5s						
ASAJ	**Asahikawa**	**6.30**	**345**	Pn	**Pn**	**21 40 23.6**	**-1.8**
	comp=E,345nm,0.3s,baz=198,slow=13,SNR=565						
ASAJ				Sn	**Sn**	**21 41 32.4**	**-5.5**
	comp=E,658nm,0.3s,baz=135,slow=8.6,SNR=5.3						
ASAJ				LR	LR	21 43 04.2	
	comp=E,833µm,19.9s,baz=25,slow=40						
ASAJ	**Asahikawa**	**6.30**	**345**	P	**Pn**	**21 40 23.6**	**-1.8**
ASAJ						21 41 32.4	
ASAJ				pmax	pmax		
	comp=Z,345nm,0.3s						
ASAJ				smax			
	comp=N,658nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,833µm,19.9s						
JGN	**Niukaw**	**6.31**	**256**	⇑P	**Pn**	**21 40 26.0**	**+0.5**
JHJ	**Hachijo jima 2**	**6.43**	**222**	Pn	**Pn**	**21 40 24.1**	**-3.2**
	comp=Z,1µm,0.3s,baz=187,slow=2.3,SNR=114						
JHJ				Sn	**Sn**	**21 41 37.5**	**-3.7**
	comp=Z,4µm,0.3s,baz=207,slow=23,SNR=9.5						
JHJ				LR	LR	21 42 13.8	
	comp=Z,169µm,19.9s,baz=192,slow=32						
TK01	**Tokai 1**	**7.29**	**236**	P	**Pn**	**21 40 38.0**	**-1.4**
KUR	**Kuril'sk**	**7.52**	**16**	⇓*i*P	**Pn**	**21 40 34.5**	**-8.0**
KUR				pmax	pmax		
	comp=N,86µm,6.0s						
KUR				pmax	pmax		
	comp=E,37µm,6.0s						
KUR				pmax	pmax		
	comp=Z,102µm,6.0s						
KUR				pmax	pmax		
	comp=N,2µm,0.7s						
KUR				pmax	pmax		
	comp=E,2µm,0.7s						
KUR				pmax	pmax		
	comp=Z,19µm,0.7s						
JWT	**Wachi**	**8.10**	**253**	⇑P	**P**	**21 40 49.8**	**-0.8**
JHE	**Heguri**	**8.15**	**248**	⇑P	**P**	**21 40 50.6**	**-0.7**
JKY	**Yasaka**	**8.20**	**256**	P	**P**	**21 40 51.8**	**-0.2**
JKSM	**Kasumi**	**8.55**	**256**	P	**P**	**21 40 56.2**	**-0.7**
JWZ	**Kozaga**	**8.70**	**242**	P	**P**	**21 40 56.6**	**-2.4**
JWM	**Minabe**	**8.78**	**244**	P	**P**	**21 40 58.4**	**-1.7**
JAJ2	**Tsuna**	**8.85**	**249**	P	**P**	**21 40 59.5**	**-1.5**
YSS	**Yuzh-Sakhalins**	**9.04**	**351**	*e*Pn	**P**	**21 41 00.5**	**-3.2**
	comp=Z,5µm,0.9s						
YSS	**Yuzh-Sakhalins**	**9.04**	**351**	⇑*e*P	**P**	**21 41 00.5**	**-3.1**
YSS				*i* S	**Sn**	**21 42 38.0**	**-8.1**
YSS				pmax	pmax		
	comp=N,540nm,0.5s						
YSS				pmax	pmax		
	comp=E,300nm,0.5s						
YSS				pmax	pmax		
	comp=Z,740nm,0.5s						
YSS				pmax	pmax		
	comp=N,60µm,12.0s						
YSS				pmax	pmax		
	comp=E,21µm,12.0s						
YSS				pmax	pmax		
	comp=Z,47µm,12.0s						
YSS				smax			
	comp=N,3µm,1.1s						
YSS				MLR	MLR		
	comp=N,611µm,16.0s						
YSS				MLR	MLR		
	comp=Z,821µm,16.0s						
JAD	**Aida**	**9.16**	**253**	P	**P**	**21 41 04.1**	**-1.3**
JKR	**Kurayoshi**	**9.27**	**257**	P	**P**	**21 41 06.5**	**-0.3**
SAI	**Saigo**	**9.40**	**262**	P	**P**	**21 41 09.5**	**+0.9**
JAI	**Aioi**	**9.46**	**246**	P	**P**	**21 41 08.6**	**-0.9**
JNM	**Ikuma**	**9.84**	**259**	P	**P**	**21 41 14.4**	**-0.3**
MRT2	**Murotomisaki 2**	**9.89**	**245**	P	**P**	**21 41 13.3**	**-2.0**
JHS	**Saijyo**	**9.94**	**256**	P	**P**	**21 41 15.2**	**-0.9**
JJG	**Jouge**	**10.05**	**254**	P	**P**	**21 41 16.9**	**-0.6**
JKU	**Kubokawa**	**10.71**	**247**	P	**P**	**21 41 24.8**	**-1.8**
JHM	**Kurahashi**	**10.72**	**252**	P	**P**	**21 41 25.1**	**-1.7**
JNA	**Nagahama**	**11.02**	**250**	P	**P**	**21 41 29.5**	**-1.3**
JHIK	**Hikimi**	**11.02**	**255**	P	**P**	**21 41 30.2**	**-0.7**
UWA2	**Uwa jima 2**	**11.07**	**248**	P	**P**	**21 41 30.5**	**-1.1**
VLA	**Vladivostok**	**11.10**	**301**	*i* P	**P**	**21 41 31.2**	**-0.6**
VLA	**Vladivostok**	**11.10**	**301**	*d i*P	**P**	**21 41 31.1**	**-0.7**
VLA				pmax	pmax		
	comp=Z,25µm,1.9s						
VLA				MLR	MLR		
	comp=Z,673µm,16.0s						
JTO	**Tosashimizu**	**11.12**	**246**	P	**P**	**21 41 30.1**	**-2.1**
CBIJ	**Chichi jima**	**11.15**	**193**	Pn	**P**	**21 41 26.4**	**-6.3**
	comp=Z,91nm,0.3s,baz=352,slow=13,SNR=26						
CBIJ				Sn	**S**	**21 43 25.8**	**-12**
	comp=Z,785nm,0.3s,baz=96,slow=23,SNR=7.4						
CBIJ				LR	LR	21 45 45.5	
	comp=Z,209µm,20.1s,baz=350,slow=38						
UGL	**Uglegorsk**	**11.21**	**350**	*e*P	**P**	**21 41 31.0**	**-2.4**
UGL				*e*S	**S**	**21 43 32.0**	**-7.5**
UGL				pmax	pmax		
	comp=N,1µm,1.0s						
UGL				pmax	pmax		
	comp=E,2µm,1.0s						
UGL				pmax	pmax		
	comp=Z,5µm,1.0s						
UGL				pmax	pmax		
	comp=N,70µm,9.0s						
UGL				pmax	pmax		
	comp=E,12µm,9.0s						
UGL				pmax	pmax		
	comp=Z,68µm,9.0s						
UGL				smax			
	comp=N,1µm,1.0s						
UGL				smax			
	comp=E,2µm,1.0s						
UGL				smax			
	comp=Z,1µm,1.2s						
JKD	**Kudamatsu**	**11.26**	**253**	P	**P**	**21 41 34.5**	**+0.5**
JKI	**Kunimi**	**11.66**	**252**	P	**P**	**21 41 38.4**	**-1.2**
JTY	**Toyota**	**11.79**	**255**	P	**P**	**21 41 41.5**	**+0.2**
JUS	**Usuki**	**11.79**	**249**	P	**P**	**21 41 39.1**	**-2.2**
OIT2	**Oita 2**	**11.91**	**250**	P	**P**	**21 41 42.6**	**-0.3**
JFA	**Akaike**	**12.21**	**254**	P	**P**	**21 41 45.6**	**-1.4**
JKIT	**Kitakata**	**12.22**	**248**	P	**P**	**21 41 44.7**	**-2.4**
JTSN	**Tsuno**	**12.38**	**246**	P	**P**	**21 41 47.3**	**-1.9**
JNU	**Nakatsue**	**12.41**	**251**	Pn	**P**	**21 41 48.3**	**-1.3**
	comp=Z,11nm,0.3s,baz=60,slow=16,SNR=110						
JFI	**Itaya**	**12.64**	**253**	P	**P**	**21 41 51.8**	**-0.9**
JIU2	**Izumi 2**	**12.73**	**249**	P	**P**	**21 41 52.2**	**-1.7**
JTZ	**Takazaki**	**12.86**	**246**	P	**P**	**21 41 53.9**	**-1.7**
JTU	**Tsushima**	**12.97**	**259**	P	**P**	**21 41 57.1**	**-0.1**
JII	**Iki**	**12.99**	**256**	P	**P**	**21 41 56.5**	**-0.8**
JZO	**Okuchi**	**13.09**	**248**	P	**P**	**21 41 58.4**	**-0.3**
JUR	**Ureshino**	**13.12**	**252**	P	**P**	**21 41 58.4**	**-0.7**
MDJ	**Mudanjiang**	**13.22**	**305**	P	**P**	**21 42 00.8**	**+0.4**
MDJ				AP		21 42 04.3	
MDJ				XP		21 42 07.3	
MDJ				PP	PP	21 42 11.6	+0.7
MDJ				S	**S**	**21 44 28.3**	**+0.2**
MDJ				XS		21 44 33.3	
MDJ				SCS	ScS	21 54 35.6	-2.2
MDJ				AMB	AMB		
	comp=Z,4µm,1.1s						
MDJ				AMB	AMB		
	comp=Z,51µm,4.0s						
MDJ				LR	LR		
	comp=N,788µm,14.7s						
MDJ				LR	LR		
	comp=E,628µm,19.5s						
MDJ				LR	LR		
	comp=Z,1105µm,12.0s						
MDJ	**Mudanjiang**	**13.22**	**305**	*e*Pn	**P**	**21 42 00.7**	**+0.3**
	comp=Z,24µm,1.8s						
JHD	**Hondo**	**13.27**	**250**	P	**P**	**21 41 59.6**	**-1.4**
NGSJ	**Nagasakinomoza**	**13.44**	**251**	P	**P**	**21 42 02.1**	**-1.2**
KS15	**Wonju Array Si**	**13.47**	**273**	*e*Pn	**P**	**21 42 04.1**	**+0.5**
JSU	**Suzuyama**	**13.53**	**245**	P	**P**	**21 42 03.9**	**-0.6**
INCN	**Inchon**	**14.45**	**273**	Pn	**P**	**21 42 16.9**	**+0.3**
KLR	**Kul'dur**	**14.65**	**324**	*e*P	**P**	**21 42 13.7**	**-5.4**
OKH	**Okha**	**15.56**	**356**	⇑*i*P	**P**	**21 42 26.4**	**-4.6**
OKH				*e*S	**S**	**21 45 24.0**	**+0.4**
OKH				pmax	pmax		
	comp=Z,44µm,10.0s						
OKH				smax			
	comp=N,93µm,9.0s						
OKH				smax			
	comp=Z,534µm,16.0s						
CN2	**Changchun**	**15.76**	**298**	*e*P	**P**	**21 42 32.0**	**-1.6**
CN2				*e*S	**S**	**21 45 25.5**	**-2.7**
CN2				AMB	AMB		
	comp=Z,760nm,1.1s						
CN2				AMB	AMB		
	comp=Z,61µm,6.0s						
CN2				LR	LR		
	comp=N,560µm,15.0s						
CN2				LR	LR		
	comp=E,441µm,15.0s						
CN2				LR	LR		
	comp=Z,531µm,16.0s						
SNY	**Shenyang**	**16.76**	**290**	⇑P	**P**	**21 42 44.9**	**-1.4**
SNY				AP		21 42 48.0	
SNY				XP		21 42 52.1	
SNY				S	**S**	**21 45 51.9**	**+0.5**
SNY				XS		21 45 58.8	
SNY				LR	LR		
	comp=E,555µm,17.5s						
SNY				LR	LR		
	comp=Z,704µm,16.9s						
JMZ	**Minamidaito 2**	**16.80**	**227**	P	**P**	**21 42 48.3**	**+1.4**
PET	**Petropavlovsk**	**17.77**	**28**	Pn	**P**	**21 42 57.3**	**-1.6**
PET	**Petropavlovsk**	**17.77**	**28**	*d i*P	**P**	**21 42 54.7**	**-4.2**
PET				pmax	pmax		
	comp=Z,106µm,9.9s						
PET				pmax	pmax		
	comp=N,80µm,9.6s						
PET				pmax	pmax		
	comp=E,35µm,9.7s						
PET				pmax	pmax		
	comp=Z,2µm,3.7s						
PET				pmax	pmax		
	comp=E,765nm,2.6s						
PET				pmax	pmax		
	comp=N,1µm,2.5s						
PET				pmax	pmax		
	comp=Z,105µm,10.3s						
PET				pmax	pmax		
	comp=N,71µm,14.8s						
PET				pmax	pmax		
	comp=E,38µm,11.7s						
PET				MLR	MLR		
	comp=E,602µm,16.0s						
PET				MLR	MLR		
	comp=E,673µm,16.0s						
PET				MLR	MLR		
	comp=Z,597µm,18.0s						
PET				MLR	MLR		
	comp=N,518µm,18.0s						
PET				MLR	MLR		
	comp=Z,487µm,16.0s						
PET				MLR	MLR		
	comp=N,418µm,17.0s						
JOW	**Kunigami**	**17.90**	**236**	P	**P**	**21 43 00.5**	**-0.3**
	comp=N,16nm,0.3s,baz=49,slow=11,SNR=36						
JOW				S	**S**	**21 46 25.9**	**+8.4**
	comp=N,2.4nm,0.3s,baz=113,slow=13,SNR=1.8						
JOW				LR	LR	21 50 16.4	
	comp=N,89µm,18.7s,baz=53,slow=38						
JOW	**Kunigami**	**17.90**	**236**	P	**P**	**21 43 02.7**	**+2.0**
JIH	**Iheya**	**17.97**	**237**	P	**P**	**21 43 02.9**	**+1.4**
DL2	**Dalian**	**18.22**	**280**	⇑*i*P	**P**	**21 43 04.0**	**-0.7**
DL2				AP		21 43 06.8	
DL2				XP		21 43 10.9	
DL2				PP	PP	21 43 17.4	-2.5
DL2				S	**S**	**21 46 26.3**	**+1.6**
DL2				XS		21 46 30.9	
DL2				AMB	AMB		
	comp=Z,2µm,1.0s						
DL2				AMB	AMB		

	comp=Z,101µm,6.8s						
DL2				LR	LR		
	comp=N,145µm,14.4s						
DL2				LR	LR		
	comp=E,284µm,15.9s						
DL2				LR	LR		
	comp=Z,392µm,16.1s						
NAH1	**Naha**	**18.71**	**236**	P	**P**	**21 43 12.3**	**+1.6**
JJT2	**Tamagusuku 2**	**18.72**	**236**	P	**P**	**21 43 12.0**	**+1.2**
JKE	**Kume jima 2**	**19.23**	**238**	P	**P**	**21 43 15.2**	**-1.7**
SSE	**Sheshan**	**20.67**	**258**	P	**P**	**21 43 31.1**	**-1.5**
SSE				AP		21 43 36.8	
SSE				XP		21 43 39.5	
SSE				S	**S**	**21 47 22.8**	**+4.7**
SSE				PCP	PcP	21 47 40.5	-2.0
SSE				AMB	AMB		
	comp=Z,900nm,1.5s						
SSE				AMB	AMB		
	comp=Z,105µm,7.4s						
SSE				LR	LR		
	comp=N,853µm,20.3s,MS7.1						
SSE				LR	LR		
	comp=E,326µm,20.3s,MS7.1						
SSE				LR	LR		
	comp=Z,413µm,19.6s,MS6.8						
SSE	**Sheshan**	**20.67**	**258**	P	**P**	**21 43 31.1**	**-1.5**
	comp=Z,909nm,1.5s						
SSE				pP		21 43 36.7	
SSE				sP		21 43 39.5	
SSE				S	**S**	**21 47 22.7**	**+4.6**
SSE				sS		21 47 32.3	
SSE				PcP	PcP	21 47 40.5	-2.0
SSE				LR	LR		
	comp=Z,413µm,19.6s,MS6.8						
JMJ	**Miyako jima 2**	**21.23**	**237**	P	**P**	**21 43 38.4**	**+0.1**
HIA	**Hailar**	**21.26**	**310**	*e*P	**P**	**21 43 38.8**	**+0.3**
	comp=Z,2µm,1.1s,mb6.3						
HIA				*e*S	**S**	**21 47 31.9**	**+2.5**
HIA				LR	LR		
	comp=Z,176µm,20.0s,MS6.5						
HIA	**Hailar**	**21.26**	**310**	*e*P	**P**	**21 43 38.8**	**+0.3**
HIA				*e*S	**S**	**21 47 31.9**	**+2.6**
HIA				pmax	pmax		
	comp=Z,2µm,1.1s						
HIA				MLR	MLR		
	comp=Z,176µm,20.0s						
MA2	**Magadan**	**21.88**	**8**	P	**P**	**21 43 43.7**	**-0.8**
MA2				LR	LR		
	comp=Z,203µm,20.1s,MS6.5						
MA2	**Magadan**	**21.88**	**8**	*d i*P	**P**	**21 43 43.8**	**-0.7**
MA2				*e*		21 44 12.1	
MA2				*i* S	**S**	**21 47 38.9**	**-1.8**
MA2				*e*		21 47 48.9	
MA2				*e*SS	SS	21 48 20.8	+2.1
MA2				*e*SSS	SSS	21 48 32.6	-0.4
MA2				pmax	pmax		
	comp=Z,2µm,1.8s,mb6.3						
MA2				MLR	MLR		
	comp=Z,145µm,18.0s,MS6.4						
NJ2	**Nanjing**	**22.09**	**262**	*e*P	**P**	**21 43 46.9**	**0.0**
NJ2				AP		21 43 55.3	
NJ2				XP		21 44 00.0	
NJ2				S	**S**	**21 47 49.0**	**+4.1**
NJ2				AMB	AMB		
	comp=Z,310nm,0.9s,mb5.7						
NJ2				AMB	AMB		
	comp=Z,96µm,10.8s						
NJ2				LR	LR		
	comp=N,502µm,17.6s,MS7.5						
NJ2				LR	LR		
	comp=E,1287µm,15.6s,MS7.5						
NJ2				LR	LR		
	comp=Z,495µm,16.7s,MS7.0						
TIA	**Tai’an**	**22.18**	**274**	⇑P	**P**	**21 43 46.3**	**-1.4**
TIA				AP		21 43 58.0	
TIA				PP	PP	21 44 17.0	+2.7
TIA				S	**S**	**21 47 51.3**	**+4.9**
TIA				AMB	AMB		
	comp=Z,610nm,1.0s,mb6.0						
TIA				AMB	AMB		
	comp=Z,10µm,4.0s						
TIA				LR	LR		
	comp=N,162µm,13.7s,MS6.6						
TIA				LR	LR		
	comp=E,58µm,17.6s,MS6.6						
JIJ	**Ishigaki jima**	**22.31**	**238**	P	**P**	**21 43 47.9**	**-1.2**
JKRS	**Kuro-shima**	**22.48**	**238**	P	**P**	**21 43 49.0**	**-1.8**
IRIF	**Iriomote-Funau**	**22.61**	**239**	P	**P**	**21 43 50.4**	**-1.7**
NRGR	**Nerungri**	**22.93**	**331**	*e*P	**P**	**21 43 55.3**	**+0.3**
NRGR				S	**S**	**21 47 48.3**	**-12**
CLNS	**Chul’man**	**23.00**	**331**	*e*P	**P**	**21 43 57.5**	**+1.9**
CLNS				*e*PPP	PPP	21 44 28.2	-7.3
CLNS				*e*		21 47 42.5	
CLNS				*e*S	**S**	**21 47 58.2**	**-2.9**
CLNS				*e*SS	SS	21 48 42.6	-3.1
CLNS				*e*SSS	SSS	21 48 59.7	-1.3
CLNS				pmax	pmax		
	comp=Z,4µm,1.1s,mb6.8						
CLNS				pmax	pmax		
	comp=N,4µm,1.4s						
CLNS				pmax	pmax		
	comp=E,2µm,1.2s						
CLNS				smax			
	comp=N,252µm,13.2s						
CLNS				smax			
	comp=Z,96µm,12.0s						
CLNS				smax			
	comp=E,104µm,11.8s						
CLNS				MLR	MLR		
	comp=E,263µm,14.0s,MS6.9						
CLNS				MLR	MLR		
	comp=Z,385µm,14.0s,MS7.0						
CLNS				MLR	MLR		
	comp=N,157µm,12.0s,MS6.9						
TATO	**Taipei**	**23.74**	**243**	P	**P**	**21 44 04.3**	**+1.1**
	comp=N,3µm,1.5s,mb6.5						
TATO				LR	LR		
	comp=Z,178µm,19.0s,MS6.5						
YHNB	**Yeheng**	**24.02**	**243**	*e*P	**P**	**21 44 06.2**	**+0.4**
NACB	**Ninganchiao**	**24.18**	**242**	*e*P	**P**	**21 44 06.4**	**-1.0**
NACB				*e*S	**S**	**21 48 26.3**	**+4.4**
GUMO	**Guam**	**24.36**	**180**	P	**P**	**21 44 10.7**	**+1.5**
	comp=Z,249nm,0.8s,mb5.7,baz=182,slow=6.5,SNR=12						
GUMO				LR	LR	21 51 53.2	
	comp=Z,213µm,20.6s,MS6.6,baz=32,slow=32						
GUMO	**Guam**	**24.36**	**180**	P	**P**	**21 44 13.5**	**+4.3**
GUMO				LR	LR		
	comp=Z,194µm,20.0s,MS6.6						
GUMO	**Guam**	**24.36**	**180**	P	**P**	**21 44 10.7**	**+1.5**
GUMO				pmax	pmax		
	comp=Z,249nm,0.8s,mb5.7						
GUMO				MLR	MLR		
	comp=Z,213µm,20.6s,MS6.6						
FX1	**Attu Island--F**	**24.56**	**44**	LR	LR	21 52 25.9	
	comp=Z,12µm,18.5s,baz=258,slow=33						
FX1	**Attu Island--F**	**24.56**	**44**	P	**P**	**21 44 12.0**	**+1.2**
SMY	**Shemya**	**25.01**	**45**	P	**P**	**21 44 17.5**	**+2.4**
SMY				LR	LR		
	comp=Z,333µm,20.5s,MS6.8						
SEY	**Seymchan**	**25.33**	**8**	*i* P	**P**	**21 44 17.9**	**-0.2**
SEY	**Seymchan**	**25.33**	**8**	*i* P	**P**	**21 44 19.0**	**+0.9**
SEY				*e*		21 45 01.3	
SEY				*e*		21 47 53.8	
SEY				*e*S	**S**	**21 48 41.7**	**+0.7**
SEY				*e*SS	SS	21 49 34.0	-8.7
TIY	**Taiyuan**	**25.55**	**279**	⇑P	**P**	**21 44 22.0**	**+1.7**
TIY				S	**S**	**21 48 45.0**	**+0.2**
TIY				LR	LR		
	comp=N,440µm,15.0s						
YAK	**Yakutsk**	**25.78**	**343**	*e*P	**P**	**21 44 20.9**	**-1.4**
	comp=N,4µm,0.9s,mb7.0						
YAK				LR	LR		
	comp=Z,224µm,18.4s,MS6.7						
YAK	**Yakutsk**	**25.78**	**343**	*d i*P	**P**	**21 44 23.8**	**+1.5**
YAK				*e**PP	pP	21 44 34.6	+8.2
YAK				*i* S	**S**	**21 48 40.2**	**-8.3**
YAK				*e**SS		21 48 54.9	
YAK				pmax	pmax		
	comp=Z,3µm,1.1s,mb6.7						
YAK				pmax	pmax		
	comp=N,1µm,1.2s						
YAK				pmax	pmax		
	comp=E,808nm,1.2s						
YAK				smax			
	comp=N,139nm,1.1s						
YAK				smax			
	comp=Z,74nm,0.9s						
YAK				smax			
	comp=E,87nm,1.0s						
YAK				MLR	MLR		
	comp=Z,129µm,19.0s,MS6.5						
YAK				MLR	MLR		
	comp=N,140µm,18.0s,MS6.8						
YAK				MLR	MLR		
	comp=E,214µm,15.0s,MS6.8						
HHC	**Hu-ho-hao-te**	**25.79**	**287**	⇑*i*P	**P**	**21 44 23.8**	**+1.2**
HHC				AP	pP	21 44 31.8	+5.1
HHC				XP	sP	21 44 33.5	+4.9
HHC				S	**S**	**21 48 54.0**	**+5.1**
HHC				AMB	AMB		
	comp=Z,610nm,1.7s,mb5.8						
HHC				AMB	AMB		
	comp=Z,141µm,5.4s						
HHC				LR	LR		
	comp=N,393µm,15.3s,MS7.4						
HHC				LR	LR		
	comp=E,737µm,15.3s,MS7.4						
HHC				LR	LR		
	comp=Z,914µm,15.3s,MS7.4						
QZH	**Quanzhou**	**25.84**	**247**	⇑*i*P	**P**	**21 44 24.0**	**+0.8**
QZH				S	**S**	**21 48 57.0**	**+7.1**
QZH				AMB	AMB		
	comp=Z,8µm,1.5s,mb7.0						
QZH				AMB	AMB		
	comp=Z,102µm,8.1s						
QZH				LR	LR		
	comp=N,402µm,14.4s,MS7.3						
QZH				LR	LR		
	comp=E,444µm,14.1s,MS7.3						
QZH				LR	LR		
	comp=Z,726µm,15.5s,MS7.3						
CIT	**Chita**	**25.94**	**313**	*e*P	**P**	**21 44 24.5**	**+0.7**
CIT				pmax	pmax		
	comp=Z,15µm,2.4s,mb7.1						
WHN	**Wuhan**	**26.23**	**263**	P	**P**	**21 44 31.8**	**+5.1**
WHN				S	**S**	**21 49 02.0**	**+5.8**
WHN				AMB	AMB		
	comp=Z,179µm,11.0s						
WHN				LR	LR		
	comp=N,629µm,15.6s,MS7.6						
WHN				LR	LR		
	comp=E,1252µm,17.6s,MS7.6						
WHN				LR	LR		
	comp=Z,1469µm,16.6s,MS7.6						
BBP	**Basco**	**26.48**	**235**	*e*P	**P**	**21 44 28.8**	**-0.4**
WAKE	**Wake Island**	**26.62**	**129**	*e*P	**P**	**21 44 29.1**	**-1.3**
	comp=Z,3µm,1.1s,mb6.7						
WAKE				LR	LR		
	comp=Z,245µm,20.0s,MS6.8						
BTO	**Baotou**	**26.98**	**286**	*e*P	**P**	**21 44 35.5**	**+1.9**
BTO				AMB	AMB		
	comp=Z,1µm,1.7s,mb6.1						
BTO				LR	LR		
	comp=E,671µm,14.9s						
SGCP	**Mt. Cagua**	**28.06**	**232**	*e*P	**P**	**21 44 46.3**	**+2.8**
BOD	**Bodaibo**	**28.23**	**325**	*e*P	**P**	**21 44 43.4**	**-1.3**
BOD				*e*		21 44 55.5	
BOD				pmax	pmax		
	comp=Z,573nm,1.3s,mb6.0						
BOD				pmax	pmax		
	comp=Z,2µm,1.5s,mb6.5						
CVP	**Callao Caves**	**28.60**	**231**	*e*P	**P**	**21 44 52.0**	**+3.5**
APYP	**Conner**	**28.84**	**232**	*e*P	**P**	**21 44 49.3**	**-1.3**
PIP	**Pasuquin**	**28.89**	**234**	⇑*e*P	**P**	**21 44 53.8**	**+2.7**
CAUP	**Cauayan**	**29.18**	**230**	*e*P	**P**	**21 44 58.0**	**+4.3**
XAN	**Xi’an**	**29.23**	**273**	P	**P**	**21 44 56.8**	**+2.8**
XAN				S	**S**	**21 49 40.5**	**-4.3**
XAN				AMB	AMB		
	comp=Z,1µm,1.5s,mb6.3						
XAN				LR	LR		
	comp=N,332µm,16.4s,MS7.1						
XAN				LR	LR		
	comp=E,218µm,15.3s,MS7.1						
XAN				LR	LR		
	comp=Z,336µm,14.8s,MS7.1						
ABRA	**Dolores**	**29.33**	**233**	*e*P	**P**	**21 44 55.3**	**+0.2**
SONM	**Songino Array**	**29.55**	**302**	P	**P**	**21 44 57.2**	**+0.5**
	comp=Z,30nm,0.8s,baz=95,slow=8.8,SNR=192						
SONM				S	**S**	**21 49 55.3**	**+5.6**
	comp=Z,23nm,1.1s,baz=94,slow=19,SNR=2.8						
SONM				LR	LR	21 57 37.9	
	comp=Z,350µm,18.7s,MS7.0,baz=258,slow=38						
SONM				P3KPbc		22 17 04.3	
	comp=Z,8.5nm,1.1s,baz=262,slow=3.4,SNR=13						
SONM				PKPPKP		22 18 42.0	
	comp=Z,7.1nm,1.1s,baz=256,slow=1.4,SNR=3.6						
SONM	**Songino Array**	**29.55**	**302**	P	**P**	**21 44 57.2**	**+0.5**
SONM				S	**S**	**21 49 55.3**	**+5.6**
SONM				LR	LR	21 57 37.9	
SONM				*e*		22 17 04.3	
ENH	**Enshi**	**30.16**	**266**	*e*P	**P**	**21 45 02.8**	**+0.4**
	comp=Z,0.6nm,0.3s						
ENH				*e*S	**S**	**21 50 12.0**	**+12**
ENH				LR	LR		
	comp=Z,402µm,20.0s,MS7.1						
BALP	**Baler**	**30.26**	**229**	*e*P	**P**	**21 45 06.7**	**+3.3**
BCPH	**Baguio City Da**	**30.37**	**231**	*e*P	**P**	**21 45 07.9**	**+3.6**
PVCP	**Virac**	**30.53**	**223**	*e*P	**P**	**21 45 05.8**	**+0.1**
HKC	**Hong Kong**	**30.66**	**248**	⇑*i*P	**P**	**21 45 12.0**	**+5.2**
HKC				*i* S	**S**	**21 50 16.0**	**+8.5**
PCPH	**Palayan**	**30.69**	**230**	⇓*e*P	**P**	**21 45 10.8**	**+3.7**
BOLP	**Bolinao**	**30.79**	**232**	*e*P	**P**	**21 45 06.8**	**-1.1**
GZH	**Guangzhou**	**30.80**	**250**	P	**P**	**21 45 08.4**	**+0.4**
GZH				S	**S**	**21 50 09.3**	**-0.4**
GZH				LR	LR		
	comp=N,384µm,21.1s,MS7.2						
GZH				LR	LR		
	comp=E,418µm,21.1s,MS7.2						
GZH				LR	LR		
	comp=Z,524µm,16.8s,MS7.3						
POLP	**Polilio Island**	**30.85**	**227**	*e*P	**P**	**21 45 12.6**	**+4.1**
CNP	**Catarman**	**31.17**	**221**	*e*P	**P**	**21 45 19.6**	**+8.3**
GQP	**Guinayangan**	**31.22**	**226**	*e*P	**P**	**21 45 14.8**	**+3.1**
SCZP	**Santa Cruz**	**31.25**	**232**	*e*P	**P**	**21 45 13.7**	**+1.7**
IRK	**Irkutsk**	**31.51**	**310**	*e*P	**P**	**21 45 14.4**	**+0.4**
IRK				*e*		21 45 27.5	
IRK				pmax	pmax		
	comp=Z,2µm,2.1s,mb6.6						
AUQP	**San Andres**	**31.56**	**225**	*e*P	**P**	**21 45 19.4**	**+4.6**
ZAK	**Zakamensk**	**31.85**	**306**	⇓*i*P	**P**	**21 45 17.7**	**+0.7**
ZAK				*e*		21 48 06.5	
ZAK				pmax	pmax		
	comp=Z,218nm,1.2s,mb5.9						
BOAC	**Boac**	**31.92**	**226**	*e*P	**P**	**21 45 15.0**	**-3.0**
TGY	**Tagaytay City**	**31.93**	**228**	P	**P**	**21 45 17.6**	**-0.5**
	comp=Z,88nm,0.3s,mb6.0,baz=162,slow=8.9,SNR=3.3						
PLP	**Palo**	**32.16**	**219**	*e*P	**P**	**21 45 20.7**	**+0.7**
BILL	**Bilibino**	**32.31**	**15**	*e*P	**P**	**21 45 18.9**	**-2.0**
	comp=Z,1µm,1.0s,mb6.6						
BILL				*e*pP	pP	21 45 22.6	-2.4
BILL				*e*PcP	PcP	21 48 08.5	-0.4
BILL				*e*S	**S**	**21 50 40.0**	**+7.2**
BILL				LR	LR		
	comp=Z,193µm,19.0s,MS6.8						
BILL	**Bilibino**	**32.31**	**15**	κ *i*P	**P**	**21 45 18.7**	**-2.1**
BILL				*i*		21 46 28.1	
BILL				*i* S	**S**	**21 50 33.1**	**+0.2**
BILL				*i* SS	SS	21 52 26.4	-1.3
BILL				pmax	pmax		
	comp=Z,800nm,2.7s,mb6.1						
BILL				pmax	pmax		
	comp=Z,2µm,1.4s,mb6.8						
BILL				MLR	MLR		
	comp=Z,192µm,18.0s,MS6.8						
PGP	**Puerto Galera**	**32.40**	**227**	*e*P	**P**	**21 45 30.9**	**+8.8**
LZH	**Lanzhou**	**32.62**	**279**	*e*P	**P**	**21 45 24.5**	**+0.7**
LZH				AP	pP	21 45 32.3	+4.3
LZH				XP	sP	21 45 35.4	+5.6
LZH				PP	PP	21 46 33.1	+0.3
LZH				S	**S**	**21 50 37.6**	**-0.4**
LZH				XS		21 50 51.0	
LZH				AMB	AMB		
	comp=Z,3µm,1.1s,mb7.1						
LZH				AMB	AMB		
	comp=Z,13µm,4.3s						
LZH				LR	LR		
	comp=N,287µm,13.5s						
LZH				LR	LR		
	comp=Z,537µm,16.2s,MS7.3						
LZH	**Lanzhou**	**32.62**	**279**	*e*P	**P**	**21 45 24.5**	**+0.7**
	comp=Z,3µm,1.1s,mb7.1						
LZH				pP	pP	21 45 32.3	+4.3
LZH				sP	sP	21 45 35.4	+5.6
LZH				PP	PP	21 46 33.1	+0.3
LZH				S	**S**	**21 50 37.6**	**-0.4**
LZH				sS		21 50 51.0	
LZH				*e*SS	SS	21 52 40.1	+5.0
LZH				LR	LR		
	comp=Z,537µm,16.2s,MS7.3						
LZH	**Lanzhou**	**32.62**	**279**	*e*P	**P**	**21 45 24.5**	**+0.7**
LZH				*SP	sP	21 45 35.4	+5.6
LZH						21 46 33.1	
LZH				S	**S**	**21 50 37.6**	**-0.4**
LZH				*SS		21 50 51.0	
LZH				*e*SS	SS	21 52 40.1	+5.0
LZH				pmax	pmax		
	comp=Z,3µm,1.1s,mb7.1						
LZH				MLR	MLR		
	comp=Z,537µm,16.2s,MS7.3						
LUBP	**Lubang**	**32.63**	**229**	*e*P	**P**	**21 45 25.7**	**+1.6**
OTRP	**Odiongan**	**32.71**	**225**	*e*P	**P**	**21 45 27.8**	**+3.0**
MIDW	**Midway**	**32.91**	**96**	P	**P**	**21 45 26.7**	**+0.3**
MIDW				LR	LR		
	comp=Z,92µm,19.0s,MS6.5						
RCP	**Roxas**	**32.98**	**223**	⇑*i*P	**P**	**21 45 31.7**	**+4.5**
KALP	**Kalibo**	**33.10**	**223**	*e*P	**P**	**21 45 35.6**	**+7.3**
MSLP	**Maasin**	**33.10**	**218**	*e*P	**P**	**21 45 28.2**	**-0.1**
SJMP	**San Jose**	**33.14**	**226**	*e*P	**P**	**21 45 28.2**	**-0.3**
LLP	**Lapu-Lapu**	**33.39**	**220**	*e*P	**P**	**21 45 30.6**	**-0.2**
MOY	**Mondy**	**33.43**	**308**	*e*P	**P**	**21 45 30.9**	**+0.2**
MOY				pmax	pmax		
	comp=Z,2µm,3.6s						
BUTP	**Butuan**	**33.76**	**216**	*e*P	**P**	**21 45 34.4**	**+0.4**
GUIM	**Jordan**	**33.84**	**222**	*e*P	**P**	**21 45 35.0**	**+0.3**
TBP	**Tagbilaran**	**33.98**	**219**	*e*P	**P**	**21 45 38.9**	**+3.1**
BUSP	**Coron**	**34.03**	**227**	*e*P	**P**	**21 45 35.7**	**-0.7**
GYA	**Guiyang**	**34.10**	**262**	⇑*i*P	**P**	**21 45 35.8**	**-1.0**
GYA				AP	pP	21 45 39.0	-2.0
GYA				XP	sP	21 45 45.0	+2.2
GYA				S	**S**	**21 51 04.3**	**+3.2**
GYA				AMB	AMB		
	comp=Z,1µm,1.0s,mb6.8						
GYA				LR	LR		
	comp=N,274µm,17.4s,MS7.1						
GYA				LR	LR		
	comp=E,209µm,18.6s,MS7.1						
GYA				LR	LR		
	comp=Z,324µm,20.4s,MS7.0						
BIPH	**Bislig**	**34.12**	**214**	⇑*i*P	**P**	**21 45 35.4**	**-1.7**
CD2	**Chengdu**	**34.42**	**271**	⇑*i*P	**P**	**21 45 39.4**	**-0.1**
CD2				AP	pP	21 45 45.8	+2.0
CD2				XP	sP	21 45 50.1	+4.5
CD2				S	**S**	**21 51 01.3**	**-4.7**
CD2				AMB	AMB		
	comp=Z,31µm,12.6s						
CD2				LR	LR		
	comp=N,218µm,18.6s						
CD2				LR	LR		
	comp=Z,250µm,16.8s,MS7.0						
CUYO	**Cuyo Island**	**34.51**	**225**	*e*P	**P**	**21 45 43.5**	**+3.0**
SNPH	**Sibulan**	**34.59**	**220**	*e*P	**P**	**21 45 45.0**	**+3.9**
CGP	**Cagayan de Oro**	**34.64**	**217**	⇓*e*P	**P**	**21 45 48.0**	**+6.4**
TIXI	**Tiksi**	**34.66**	**351**	PFAKE		21 45 50.0	+8.8
TIXI				LR	LR		
	comp=Z,242µm,20.0s,MS6.9						
TIXI	**Tiksi**	**34.66**	**351**	*e*P	**P**	**21 45 34.8**	**-6.4**
TIXI				*e*		21 46 56.1	
TIXI				*e*S	**S**	**21 50 59.2**	**-10**
TIXI				*e*SS	SS	21 53 23.0	+1.2
TIXI				pmax	pmax		
	comp=Z,32µm,9.8s						
TIXI				pmax	pmax		
	comp=Z,633nm,1.0s,mb6.5						
TIXI				pmax	pmax		
	comp=N,271nm,1.2s						
TIXI				pmax	pmax		
	comp=E,254nm,1.2s						
TIXI				MLR	MLR		
	comp=N,158µm,16.0s,MS6.9						
TIXI				MLR	MLR		
	comp=Z,181µm,16.0s,MS6.9						
TIXI				MLR	MLR		
	comp=E,11µm,13.0s,MS6.9						
GTA	**Gaotai**	**34.91**	**287**	*e*P	**P**	**21 45 44.8**	**+1.2**
GTA				AP	pP	21 45 52.9	+5.1
GTA				XP	sP	21 45 55.8	+6.2
GTA				PP	PP	21 46 58.9	-2.6
GTA				PPP	PPP	21 47 16.8	-2.7
GTA				S	**S**	**21 51 07.1**	**-6.4**
GTA				XS		21 51 22.8	
GTA				SCP		21 52 03.8	
GTA				PCS		21 52 07.8	
GTA				SCS	ScS	21 56 02.9	+0.4
GTA				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.6						
GTA				AMB	AMB		
	comp=Z,37µm,4.6s						
GTA				LR	LR		
	comp=N,289µm,18.2s,MS7.4						
GTA				LR	LR		
	comp=E,579µm,17.5s,MS7.4						
GTA				LR	LR		
	comp=Z,745µm,17.9s,MS7.5						
SPIA	**Saint Paul Isl**	**34.97**	**42**	P	**P**	**21 45 43.4**	**-0.5**
BUKP	**Musuan**	**34.97**	**216**	*e*P	**P**	**21 45 43.8**	**-0.6**
NIKO	**Nikolski**	**35.03**	**50**	P	**P**	**21 45 42.6**	**-2.0**
ENPP	**El Nido**	**35.12**	**227**	*e*P	**P**	**21 45 46.7**	**+1.0**
DCPH	**Dipolog City**	**35.18**	**219**	⇑*e*P	**P**	**21 45 46.2**	**0.0**
MATI	**Mati**	**35.27**	**213**	*e*P	**P**	**21 45 38.5**	**-8.4**
DAV	**Davao City (W)**	**35.45**	**214**	⇑*e*P	**P**	**21 45 52.0**	**+3.5**
DAV	**Davao City (W)**	**35.45**	**214**	P	**P**	**21 45 53.5**	**+5.0**
DAV				LR	LR		
	comp=Z,61µm,20.0s,MS6.3						
KWAJ	**Kwajalein Atol**	**35.61**	**139**	P	**P**	**21 45 50.5**	**+0.7**
KWAJ				LR	LR		
	comp=Z,49µm,19.0s,MS6.3						
PAGZ	**Pagadian**	**35.80**	**218**	*e*P	**P**	**21 45 51.0**	**-0.4**
QIZ	**Qiongzhong**	**35.86**	**248**	P	**P**	**21 45 53.0**	**+1.1**
QIZ				XP	sP	21 46 01.3	+3.4
QIZ				PP	PP	21 47 15.9	+2.6
QIZ				S	**S**	**21 51 27.8**	**-0.6**
QIZ				XS		21 51 39.8	
QIZ				LR	LR		
	comp=N,297µm,23.5s,MS7.1						
QIZ				LR	LR		
	comp=E,227µm,24.3s,MS7.1						
QIZ				LR	LR		
	comp=Z,318µm,14.7s						
QIZ	**Qiongzhong**	**35.86**	**248**	*e*P	**P**	**21 45 54.0**	**+2.1**
	comp=Z,1µm,1.3s,mb6.6						
QIZ				LR	LR		
	comp=Z,156µm,20.0s,MS6.8						
IPIL	**Ipil**	**36.26**	**219**	*e*P	**P**	**21 45 55.3**	**0.0**
GAMB	**Gambell**	**36.43**	**31**	P	**P**	**21 45 56.6**	**+0.4**
UNV	**Unalaska Valle**	**36.52**	**48**	P	**P**	**21 46 03.2**	**+6.1**
UNV				LR	LR		
	comp=Z,451µm,21.0s,MS7.2						
KMI	**Kunming**	**37.83**	**263**	⇑P	**P**	**21 46 09.3**	**+0.9**
KMI				AP	pP	21 46 16.8	+4.1
KMI				XP	sP	21 46 20.5	+6.1
KMI				PP	PP	21 47 39.4	+1.5
KMI				S	**S**	**21 52 00.1**	**+1.5**
KMI				XS		21 52 13.4	
KMI				AMB	AMB		
	comp=Z,710nm,1.2s,mb6.3						
KMI				AMB	AMB		
	comp=Z,27µm,13.1s						
KMI				LR	LR		
	comp=N,254µm,14.7s,MS7.4						
KMI				LR	LR		
	comp=E,397µm,17.2s,MS7.4						
KMI				LR	LR		
	comp=Z,405µm,18.7s,MS7.2						
KMI	**Kunming**	**37.83**	**263**	⇑P	**P**	**21 46 09.2**	**+0.8**
	comp=Z,715nm,1.2s,mb6.3						
KMI				pP	pP	21 46 16.8	+4.1
KMI				sP	sP	21 46 20.5	+6.1
KMI				PP	PP	21 47 39.4	+1.5
KMI				PPP	PPP	21 48 01.7	+2.2
KMI				S	**S**	**21 52 00.1**	**+1.5**
KMI				sS		21 52 13.4	
KMI				SS	SS	21 54 37.7	+3.6
KMI				SSS	SSS	21 55 10.2	+4.2
KMI				LR	LR		

	comp=Z,405µm,18.7s,MS7.2						
KMI	**Kunming**	**37.83**	**263**	⇑P	**P**	**21 46 09.2**	**+0.8**
KMI				*SP	sP	21 46 20.5	+6.1
KMI						21 47 39.4	
KMI				PPP	PPP	21 48 01.7	+2.2
KMI				S	**S**	**21 52 00.1**	**+1.5**
KMI				*SS		21 52 13.4	
KMI				SS	SS	21 54 37.7	+3.6
KMI				SSS	SSS	21 55 10.2	+4.2
KMI				pmax	pmax		
	comp=Z,715nm,1.2s,mb6.3						
KMI				MLR	MLR		
	comp=Z,405µm,18.7s,MS7.2						
BATP	**Bataraza**	**37.99**	**227**	*e*P	**P**	**21 46 11.4**	**+1.5**
TNA	**Tin City**	**38.62**	**29**	*e*P	**P**	**21 46 14.7**	**0.0**
	comp=Z,379nm,0.9s,mb6.1						
TNA				*e*pP	pP	21 46 17.6	-1.3
TNA				LR	LR		
	comp=Z,76µm,20.0s,MS6.5						
SDPT	**Sand Point**	**40.12**	**46**	P	**P**	**21 46 28.8**	**+1.6**
KKM	**Kota Kinabalu**	**41.14**	**226**	*e*P	**P**	**21 46 38.2**	**+2.3**
KKM				*e*pP	pP	21 46 44.5	+4.3
KKM	**Kota Kinabalu**	**41.14**	**226**	P	**P**	**21 46 39.4**	**+3.5**
TSM	**Tawau**	**41.66**	**223**	P	**P**	**21 46 41.8**	**+1.5**
UBT	**Ubonrachathani**	**41.81**	**248**	⇑P	**P**	**21 46 42.5**	**+1.0**
KKTK	**Khon Kaen**	**42.74**	**251**	PN	**P**	**21 46 48.5**	**-0.6**
KKTK				PG	**P**	**21 46 51.0**	**+1.9**
KKTK				SG	pP	21 46 58.5	+5.1
WMQ	**Urumqi**	**42.85**	**297**	⇓*i*P	**P**	**21 46 50.4**	**+0.8**
WMQ				AP	pP	21 46 57.0	+3.1
WMQ				XP	sP	21 47 00.3	+4.6
WMQ				PCP	PcP	21 48 40.0	-1.3
WMQ				S	**S**	**21 53 13.5**	**+0.3**
WMQ				XS		21 53 25.0	
WMQ				SS	SS	21 56 19.0	+0.6
WMQ				AMB	AMB		
	comp=Z,1µm,1.2s,mb6.5						
WMQ				AMB	AMB		
	comp=Z,3µm,6.4s						
WMQ				LR	LR		
	comp=N,201µm,15.8s,MS7.3						
WMQ				LR	LR		
	comp=E,264µm,16.5s,MS7.3						
WMQ				LR	LR		
	comp=Z,170µm,19.8s,MS6.9						
CHRT	**Chiangrai**	**42.95**	**258**	⇓P	**P**	**21 46 52.0**	**+1.2**
	comp=Z,3µm,0.8s,mb7.0						
ZAL	**Zalesovo**	**43.30**	**312**	P	**P**	**21 46 54.1**	**+0.9**
	comp=Z,91nm,1.0s,mb5.5,baz=25,slow=8.4,SNR=227						
NVS	**Novosibirsk**	**44.15**	**313**	*e*P	**P**	**21 47 00.0**	**-0.1**
NVS				*e*		21 48 46.9	
NVS				*e*S	**S**	**21 53 34.0**	**+2.0**
NVS				pmax	pmax		
	comp=E,2µm,1.8s						
NVS				pmax	pmax		
	comp=Z,2µm,1.8s,mb6.5						
NVS				smax			
	comp=E,1µm,2.1s						
CHG	**Chiang Mai**	**44.20**	**257**	P	**P**	**21 47 01.7**	**+0.7**
	comp=E,150nm,0.7s,mb5.8						
IMA2	**Indian Mountai**	**44.41**	**31**	*e*P	**P**	**21 47 01.4**	**-0.7**
IMA2				*e*pP	pP	21 47 04.6	-1.7
KDAK	**Kodiak Island**	**44.50**	**43**	P	**P**	**21 47 01.5**	**-1.4**
	comp=E,1µm,0.8s,mb6.7,baz=284,slow=4.4,SNR=75						
LSA	**Lhasa**	**44.85**	**276**	P	**P**	**21 47 07.3**	**+1.2**
LSA				AP	pP	21 47 17.3	+6.9
LSA				SS	SS	21 56 58.4	+3.0
LSA				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.5						
LSA				LR	LR		
	comp=N,100µm,16.0s,MS7.2						
LSA				LR	LR		
	comp=E,200µm,16.0s,MS7.2						
LSA				LR	LR		
	comp=Z,400µm,16.0s,MS7.4						
LSA	**Lhasa**	**44.85**	**276**	*e*P	**P**	**21 47 08.4**	**+2.3**
	comp=Z,3µm,1.6s,mb6.8						
LSA				*e*S	**S**	**21 53 46.9**	**+4.4**
LSA				LR	LR		
	comp=Z,389µm,19.0s,MS7.3						
LSA	**Lhasa**	**44.85**	**276**	*e*P	**P**	**21 47 08.4**	**+2.3**
LSA				*e*S	**S**	**21 53 46.9**	**+4.4**
LSA				pmax	pmax		
	comp=Z,3µm,1.6s,mb6.8						
LSA				MLR	MLR		
	comp=Z,389µm,19.0s,MS7.3						
NST	**Nakhon Sawan**	**45.18**	**253**	P	**P**	**21 47 06.0**	**-2.8**
	comp=Z,438nm,1.0s,mb6.2						
SLKM	**Skilak Lake**	**45.65**	**39**	P	**P**	**21 47 10.0**	**-1.9**
SLKM				*e*pP	pP	21 47 14.4	-1.8
SLKM				*e*PP	PP	21 48 52.0	-7.4
SLKM	**Skilak Lake**	**45.65**	**39**	P	**P**	**21 47 10.0**	**-2.0**
SLKM				*e*		21 48 52.1	
FIB	**Fire Island**	**45.66**	**38**	P	**P**	**21 47 12.7**	**+0.6**
FIB				LR	LR		
	comp=Z,61µm,20.0s,MS6.5						
MKAR	**Makanchi Array**	**45.92**	**302**	P	**P**	**21 47 14.2**	**-0.1**
	comp=Z,67nm,0.7s,mb5.7,baz=84,slow=8.7,SNR=275						
MKAR				S	**S**	**21 53 57.8**	**+0.3**
	comp=Z,6.2nm,0.8s,baz=90,slow=17,SNR=2.1						
MKAR				LR	LR	22 07 35.6	
	comp=Z,128µm,19.1s,MS6.9,baz=82,slow=38						
MKAR				P3KPbc		22 15 56.8	
	comp=Z,0.7nm,0.8s,baz=270,slow=1.2,SNR=3.9						
MKAR				PKPPKP		22 18 20.0	
	comp=Z,3.0nm,0.9s,baz=225,slow=1.7,SNR=6.6						
MKAR				P4KPbc		22 25 04.3	
	comp=Z,2.4nm,1.0s,baz=72,slow=3.8,SNR=6.0						
MKAR	**Makanchi Array**	**45.92**	**302**	P	**P**	**21 47 14.2**	**-0.1**
MKAR				S	**S**	**21 53 57.8**	**+0.3**
MKAR				LR	LR	22 07 35.6	
MKAR				*e*		22 15 56.8	
MKAR				P'P'		22 18 20.0	
MKAR	**Makanchi Array**	**45.92**	**302**	*i* P	**P**	**21 47 14.1**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,67nm,0.7s						
PMR	**Palmer**	**46.16**	**37**	*e*P	**P**	**21 47 15.3**	**-0.7**
	comp=Z,2µm,1.0s,mb6.9						
PMR	**Palmer**	**46.16**	**37**	*e*P	**P**	**21 47 15.3**	**-0.7**
PMR				pmax	pmax		
	comp=Z,2µm,1.0s,mb6.9						
SHL	**Shillong**	**46.16**	**270**	*e*P	**P**	**21 47 16.0**	**-0.5**
SHL				*e*x	x	21 54 19.5	
SML	**Sawmill**	**46.54**	**37**	*e*P	**P**	**21 47 18.3**	**-0.7**
SML				*e*pP	pP	21 47 22.2	-1.1
SML				*e*PcP	PcP	21 48 53.4	-0.4
SML	**Sawmill**	**46.54**	**37**	*e*P	**P**	**21 47 18.3**	**-0.7**
SML				*e*		21 48 53.4	
COLA	**College**	**46.75**	**33**	*e*P	**P**	**21 47 20.1**	**-0.5**
	comp=Z,465nm,0.8s,mb6.5						
COLA				*e*pP	pP	21 47 22.7	-2.2
COLA				LR	LR		
	comp=Z,58µm,22.0s,MS6.5						
COLA	**College**	**46.75**	**33**	*e*P	**P**	**21 47 20.1**	**-0.5**
COLA				pmax	pmax		
	comp=Z,465nm,0.8s,mb6.5						
COLA				MLR	MLR		
	comp=Z,58µm,22.0s,MS6.5						
ILAR	**Eielson Array**	**47.16**	**33**	P	**P**	**21 47 22.1**	**-1.7**
	comp=Z,433nm,0.8s,mb6.5,baz=257,slow=5.9,SNR=393						
ILAR				PP	PP	21 49 16.5	+2.1
	comp=Z,33nm,1.0s,baz=270,slow=6.3,SNR=2.0						
ILAR				LR	LR	22 07 35.1	
	comp=Z,88µm,19.6s,MS6.7,baz=44,slow=37						
ILAR				P3KPbc		22 15 51.2	
	comp=Z,1.1nm,0.8s,baz=94,slow=3.2,SNR=6.5						
ILAR				P3KP		22 17 30.4	
	comp=Z,0.9nm,0.8s,baz=230,slow=2.2,SNR=4.1						
ILAR				PKPPKP		22 18 07.5	
	comp=Z,2.7nm,1.0s,baz=24,slow=1.6,SNR=4.7						
ILAR				PKP2ab		22 19 39.5	
	comp=Z,3.5nm,1.0s,baz=101,slow=2.7,SNR=4.1						
ILAR	**Eielson Array**	**47.16**	**33**	P	**P**	**21 47 22.1**	**-1.7**
ILAR				PP	PP	21 49 16.5	+2.1
ILAR				LR	LR	22 07 35.1	
ILAR				*e*		22 15 51.2	
ILAR				PKKKP		22 17 30.4	
ILAR				P'P'		22 18 07.5	
ILAR				P'P'ab		22 19 39.5	
PMG	**Port Moresby**	**47.25**	**177**	LR	LR	22 04 32.2	
	comp=Z,56µm,21.8s,MS6.5,baz=19,slow=33						
PMG	**Port Moresby**	**47.25**	**177**	P	**P**	**21 47 24.3**	**-0.9**
	comp=Z,703nm,1.1s,mb6.5						
PMG				LR	LR		
	comp=Z,53µm,22.0s,MS6.5						
PMG	**Port Moresby**	**47.25**	**177**	P	**P**	**21 47 24.3**	**-1.0**
PMG				pmax	pmax		
	comp=Z,703nm,1.1s						
PMG				MLR	MLR		
	comp=Z,53µm,22.0s						
NNT	**Nongplab**	**47.42**	**250**	P	**P**	**21 47 27.4**	**+0.8**
KURK	**Kurchatov**	**47.48**	**308**	P	**P**	**21 47 26.1**	**-0.5**
KURK				LR	LR		
	comp=Z,26µm,19.0s,MS6.2						
KURK	**Kurchatov**	**47.48**	**308**	P	**P**	**21 47 26.3**	**-0.3**
KURK				pmax	pmax		
	comp=Z,1µm,1.1s,mb6.7						
THY	**Trims Highway**	**47.68**	**35**	P	**P**	**21 47 27.0**	**-1.0**
DIV	**Divide**	**47.80**	**38**	P	**P**	**21 47 28.5**	**-0.4**
DIV				LR	LR		
	comp=Z,285µm,19.0s,MS7.3						
KSM	**Kuching**	**48.27**	**229**	*e*P	**P**	**21 47 34.1**	**+0.8**
KSM				*e*pP	pP	21 47 37.2	-0.4
HNR	**Honiara**	**49.29**	**160**	LR	LR	22 04 27.8	
	comp=Z,105µm,20.9s,MS6.8,baz=173,slow=31						
HNR	**Honiara**	**49.29**	**160**	*e*P	**P**	**21 47 40.9**	**-0.2**
	comp=Z,2µm,1.0s,mb7.0						
HNR				*e*pP	pP	21 47 44.7	-0.7
HNR				LR	LR		
	comp=Z,114µm,20.0s,MS6.9						
HNR	**Honiara**	**49.29**	**160**	*e*P	**P**	**21 47 40.9**	**-0.2**
HNR				pmax	pmax		
	comp=Z,2µm,1.0s,mb7.0						
HNR				MLR	MLR		
	comp=Z,114µm,20.0s,MS6.9						
GUN	**Gumba**	**49.79**	**277**	*e*P	**P**	**21 47 45.5**	**+0.7**
	comp=Z,599nm,0.9s,mb6.6						
GUN	**Gumba**	**49.79**	**277**	*e*P	**P**	**21 47 45.5**	**+0.7**
KKN	**Kakani**	**50.31**	**277**	*e*P	**P**	**21 47 49.3**	**+0.5**
	comp=Z,4µm,1.2s,mb7.3						
PKI	**Pulchoki**	**50.31**	**276**	*e*P	**P**	**21 47 48.8**	**0.0**
	comp=Z,4µm,1.6s,mb7.2						
SNG	**Songkhla**	**50.41**	**244**	P	**P**	**21 47 51.0**	**+1.3**
	comp=Z,1µm,1.0s,mb6.8						
DAWY	**Dawson**	**50.45**	**34**	*e*P	**P**	**21 47 48.4**	**-0.9**
DAWY				*e*pP	pP	21 47 52.0	-1.6
DAWY				*e*PcP	PcP	21 49 05.1	-2.7
CAL	**Calcutta**	**50.49**	**269**	*e*P	**P**	**21 47 52.3**	**+2.2**
CAL				*e*x	x	21 55 00.4	
DMN	**Daman**	**50.53**	**277**	*e*P	**P**	**21 47 51.0**	**+0.5**
	comp=Z,6µm,1.7s,mb7.3						
GKN	**Gorkha**	**50.72**	**277**	*e*P	**P**	**21 47 52.1**	**+0.3**
ULHL	**Ulahol**	**51.34**	**298**	P	**P**	**21 47 57.8**	**+1.4**
	SNR=12						
KIP	**Kipapa**	**51.51**	**92**	P	**P**	**21 47 57.7**	**-0.2**
	comp=Z,841nm,0.8s,mb6.7						
KIP				LR	LR		
	comp=Z,43µm,20.0s,MS6.5						
KIP	**Kipapa**	**51.51**	**92**	P	**P**	**21 47 57.7**	**-0.2**
KIP				pmax	pmax		
	comp=Z,841nm,0.8s,mb6.7						
KIP				MLR	MLR		
	comp=Z,43µm,20.0s,MS6.5						
PKT	**Phuket**	**51.54**	**247**	P	**P**	**21 48 03.0**	**+4.7**
TKM2	**Tokmak 2**	**51.57**	**299**	P	**P**	**21 47 58.6**	**+0.5**
	SNR=145						
HON	**Honolulu**	**51.57**	**92**	P	**P**	**21 47 58.2**	**-0.2**
KOLN	**Koldanda**	**51.64**	**278**	*e*P	**P**	**21 47 59.3**	**+0.5**
	comp=Z,2µm,0.9s,mb7.0						
VOSK	**Vostochnaya**	**51.66**	**312**	P	**P**	**21 47 58.6**	**0.0**
VOSK				pmax	pmax		
	comp=Z,850nm,1.3s,mb6.5						
KULM	**Kulim**	**51.72**	**242**	*e*P	**P**	**21 47 60.0**	**+0.4**
KULM				*e*pP	pP	21 48 03.2	-0.8
BOK	**Bokaro**	**51.77**	**272**	*e*P	**P**	**21 48 00.9**	**+1.0**
BOK				AMb	AMB	21 48 10.8	
	comp=Z,1µm,0.9s,mb6.7						
BOK				*e*S	**S**	**21 55 21.2**	**+1.3**
KAKA	**Kakadu**	**51.82**	**196**	⇓*i*P	**P**	**21 48 17.4**	**+17**
	comp=Z,2µm,0.8s,mb7.0						
BVA0	**Borovoye Array**	**51.93**	**312**	*i* P	**P**	**21 48 00.2**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,4µm,2.8s,mb6.8						
BVAR	**Borovoye Array**	**51.93**	**312**	P	**P**	**21 48 00.2**	**-0.5**
	comp=Z,142nm,0.8s,mb5.9,baz=82,slow=7.6,SNR=312						
BVAR				PP	PP	21 50 01.5	+2.1
	comp=Z,78nm,0.9s,baz=68,slow=7.8,SNR=1.7						
BVAR				PKKP	PKKP	22 10 19.8	+13
	comp=Z,0.8nm,0.7s,baz=270,slow=1.5,SNR=3.7						
BVAR				PKPPKP		22 18 11.9	
	comp=Z,5.7nm,1.1s,baz=225,slow=2.1,SNR=6.0						
BVAR				P4KPbc		22 25 28.2	
	comp=Z,3.1nm,1.0s,baz=63,slow=3.3,SNR=5.8						
IPM	**Ipoh**	**51.96**	**241**	P	**P**	**21 48 02.0**	**+0.5**
BRVK	**Borovoye**	**51.98**	**312**	P	**P**	**21 48 00.7**	**-0.4**
BRVK	**Borovoye**	**51.98**	**312**	P	**P**	**21 48 00.8**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,330nm,0.8s,mb6.3						
KZA	**Kyzart**	**52.09**	**298**	P	**P**	**21 48 04.4**	**+2.3**
	SNR=35						
KBK	**Karagaybulak**	**52.11**	**299**	P	**P**	**21 48 03.5**	**+1.4**
	SNR=67						
CHMS	**Chumysh**	**52.12**	**299**	P	**P**	**21 48 03.0**	**+0.7**
	SNR=25						
USP	**Ospenovka**	**52.21**	**299**	P	**P**	**21 48 03.8**	**+0.8**
	SNR=64						
INK	**Inuvik**	**52.22**	**28**	P	**P**	**21 48 00.6**	**-2.1**
	comp=Z,523nm,1.0s,mb6.4,baz=288,slow=6.1,SNR=86						
INK				S	**S**	**21 55 30.7**	**+5.3**
	comp=Z,14nm,1.2s,baz=59,slow=19,SNR=1.9						
INK				LR	LR	22 13 41.4	
	comp=Z,98µm,18.8s,MS6.9,baz=276,slow=40						
INK				PKPPKP		22 18 07.2	
	comp=Z,7.6nm,1.2s,baz=132,slow=5.5,SNR=4.1						
INK	**Inuvik**	**52.22**	**28**	P	**P**	**21 48 01.6**	**-1.1**
INK				*e*pP	pP	21 48 05.2	-1.8
INK				*e*PP	PP	21 50 01.5	-0.6
INK	**Inuvik**	**52.22**	**28**	P	**P**	**21 48 00.6**	**-2.1**
INK				S	**S**	**21 55 30.7**	**+5.3**
INK				pmax	pmax		
	comp=Z,523nm,1.0s						
INK				smax			
	comp=N,14nm,1.2s						
INK				MLR	MLR		
	comp=Z,98µm,18.8s						
FRU	**Bishkek**	**52.27**	**299**	⇓*i*P	**P**	**21 48 03.5**	**+0.1**
FRU				*i*		21 48 11.0	
FRU				*e*PPP	PPP	21 51 10.0	+3.0
FRU				*e*S	**S**	**21 55 33.0**	**+6.5**
FRU				pmax	pmax		
	comp=Z,2µm,2.8s,mb6.6						
FRU				smax			
	comp=E,40µm,12.0s						
KGM	**Kluang**	**52.28**	**237**	P	**P**	**21 48 04.8**	**+0.9**
AAK	**Ala-Archa**	**52.43**	**299**	P	**P**	**21 48 05.5**	**+0.9**
	SNR=40						
AAK	**Ala-Archa**	**52.43**	**299**	*e*P	**P**	**21 48 03.5**	**-1.0**
AAK				*e*pP	pP	21 48 07.6	-1.3
AAK				*e*PP	PP	21 49 55.2	-9.4
AAK				LR	LR		
	comp=Z,42µm,19.0s,MS6.5						
AAK	**Ala-Archa**	**52.43**	**299**	*e*P	**P**	**21 48 03.6**	**-1.0**
AAK				MLR	MLR		
	comp=Z,42µm,19.0s,MS6.5						
KSH	**Kashi**	**52.50**	**295**	*i* PR	**P**	**21 48 06.8**	**+1.6**
KSH				AP	pP	21 48 14.3	+4.8
KSH				XP	sP	21 48 17.3	+6.1
KSH				PCP	PcP	21 49 18.3	+2.6
KSH				PP	PP	21 50 06.4	+1.1
KSH				PPP	PPP	21 51 10.3	+0.6
KSH				SCP		21 53 12.3	
KSH				PCS		21 53 15.1	
KSH				S	**S**	**21 55 28.8**	**-0.8**
KSH				XS		21 55 41.4	
KSH				SCS	ScS	21 57 52.0	+0.5
KSH				SS	SS	21 59 04.0	-2.5
KSH				AMB	AMB		
	comp=Z,4µm,3.5s						
KSH				LR	LR		
	comp=N,208µm,13.4s,MS7.5						
KSH				LR	LR		
	comp=E,260µm,13.6s,MS7.5						
UCH	**Uchtor**	**52.56**	**298**	P	**P**	**21 48 07.1**	**+1.5**
	SNR=30						
EKS2	**Erkin-Say**	**52.91**	**299**	P	**P**	**21 48 08.6**	**+0.4**
	SNR=55						
AML	**Almayashu**	**53.16**	**298**	P	**P**	**21 48 11.9**	**+1.8**
	SNR=74						
HKL	**Haleakala**	**53.28**	**91**	*e*P	**P**	**21 48 12.4**	**+1.2**
HKL				*e*pP	pP	21 48 16.3	+0.8
PTH	**Pithoragarh**	**53.45**	**281**	*e*P	**P**	**21 48 14.0**	**+1.7**
PTH				*e*S	**S**	**21 55 48.4**	**+5.8**
SIT	**Sitka**	**53.81**	**42**	*e*P	**P**	**21 48 15.0**	**+0.4**
	comp=E,6µm,2.7s,mb7.0						
SIT	**Sitka**	**53.81**	**42**	P	**P**	**21 48 14.5**	**-0.1**
SIT				pmax	pmax		
	comp=Z,2µm,1.5s,mb6.9						
KKH	**Kailua Kona**	**54.03**	**92**	*e*P	**P**	**21 48 16.9**	**+0.2**
ALBI	**Allahabad**	**54.23**	**276**	*e*P	**P**	**21 48 15.5**	**-2.6**
POHA	**Pohakuloa**	**54.36**	**92**	PFAKE		21 48 30.0	+11
POHA				LR	LR		
	comp=Z,46µm,20.0s,MS6.5						
HPO	**Honuapo**	**54.71**	**93**	*e*P	**P**	**21 48 22.4**	**+0.7**
HPO				*e*pP	pP	21 48 25.8	-0.3
HPO				*e*PcP	PcP	21 49 24.8	+0.5
DDI	**Dehra Dun**	**54.76**	**283**	*e*x	x	21 48 27.1	
KKAR	**Karatay Array**	**54.99**	**301**	*i* P	**P**	**21 48 22.7**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,1µm,1.3s,mb6.8						
SDNR	**Sundarnagar**	**55.06**	**285**	*e*P	**P**	**21 48 23.6**	**-0.6**
SDNR				*e*x	x	21 56 10.2	
SMLA	**Simla**	**55.08**	**285**	*e*P	**P**	**21 48 23.3**	**-1.0**
SMLA				*e*x	x	21 56 02.8	
BHK	**Bhakra**	**55.52**	**285**	*e*x	x	21 48 38.0	
BHK				*e*S	**S**	**21 56 14.4**	**+4.0**
BLSP	**Bilaspur**	**55.59**	**272**	*e*P	**P**	**21 48 27.8**	**-0.3**
BLSP				AMb	AMB	21 48 38.1	
	comp=Z,1µm,1.1s,mb6.9						
BLSP				*e*x	x	21 55 57.7	
BLSP				AMS	AMS	22 17 00.5	
	comp=Z,68µm,21.9s,MS6.7						
THN	**Thein Dam**	**55.59**	**287**	*e*P	**P**	**21 48 26.2**	**-1.8**
THN				*e*x	x	21 56 27.8	
DLBC	**Dease Lake**	**56.12**	**39**	P	**P**	**21 48 30.5**	**-0.9**
	comp=Z,261nm,0.8s,mb6.3,baz=295,slow=6.7,SNR=64						
DLBC				S	**S**	**21 56 23.7**	**+5.7**
	comp=Z,4.9nm,1.1s,baz=229,slow=20,SNR=1.8						
DLBC				LR	LR	22 13 14.6	
	comp=Z,71µm,18.1s,MS6.8,baz=288,slow=37						
DLBC				PKPPKP		22 18 29.1	
	comp=Z,9.8nm,1.1s,baz=149,slow=4.5,SNR=4.6						
DLBC	**Dease Lake**	**56.12**	**39**	P	**P**	**21 48 31.5**	**+0.1**
DLBC				*e*pP	pP	21 48 35.4	-0.4
NDI	**New Delhi**	**56.17**	**282**	*e*x	x	21 49 57.0	
NDI				*e*x	x	21 55 17.0	
SVE	**Sverdlovsk**	**56.21**	**319**	*d* *i*P	**P**	**21 48 30.0**	**-2.0**
SVE				*e*		21 50 44.0	
SVE				*e*S	**S**	**21 56 23.0**	**+3.8**
SVE				pmax	pmax		
	comp=N,3µm,6.0s						
SVE				pmax	pmax		
	comp=E,10µm,6.0s						
SVE				pmax	pmax		
	comp=Z,23µm,6.0s						
VIS	**Vishakhapatnam**	**57.03**	**267**	*e*P	**P**	**21 48 39.2**	**+0.7**
VIS				AMb	AMB	21 48 49.6	
	comp=Z,1µm,1.3s,mb6.7						
VIS				*e*x	x	21 56 27.1	
VIS				AMS	AMS	22 07 56.9	
	comp=Z,23µm,19.7s,MS6.3						
SOKR	**Solikamsk**	**57.20**	**323**	⇓*i*P	**P**	**21 48 38.1**	**-1.0**
SOKR				*i*		21 50 51.6	
SOKR				*i* S	**S**	**21 56 29.1**	**-3.2**
SOKR				SS	SS	22 00 20.0	-3.0
SOKR				pmax	pmax		
	comp=Z,710nm,1.2s,mb6.6						
SOKR				MLR	MLR		
	comp=Z,183µm,16.0s,MS7.3						
ARU	**Arti**	**57.42**	**319**	P	**P**	**21 48 39.8**	**-0.9**
ARU				LR	LR		
	comp=Z,36µm,21.0s,MS6.5						
ARU	**Arti**	**57.42**	**319**	⇓*i*P	**P**	**21 48 39.8**	**-0.9**
ARU				*e*		21 49 31.9	
ARU				*i*		21 50 48.2	
ARU				*i* PPP	PPP	21 52 06.1	-4.4
ARU				*i* S	**S**	**21 56 35.9**	**+0.7**
ARU				pmax	pmax		
	comp=Z,2µm,1.2s,mb6.9						
ARU				MLR	MLR		
	comp=E,240µm,16.0s,MS7.4						
ARU				MLR	MLR		
	comp=Z,300µm,16.0s,MS7.5						
ARU				MLR	MLR		
	comp=N,95µm,15.0s,MS7.4						
CTA	**Charters Tower**	**57.84**	**178**	*e*P	**P**	**21 48 42.5**	**-1.6**
	comp=N,217nm,1.0s,mb6.1						
CTA				*e*PKPPKP		22 18 31.5	
CTA	**Charters Tower**	**57.84**	**178**	LR	LR	22 10 42.3	
	comp=N,39µm,20.5s,MS6.5,baz=3.0,slow=33						
CTA	**Charters Tower**	**57.84**	**178**	*e*P	**P**	**21 48 42.5**	**-1.6**
CTA				pmax	pmax		
	comp=Z,217nm,1.0s						
WRAB	**Tennant Creek**	**58.51**	**192**	*e*P	**P**	**21 48 47.3**	**-1.6**
	comp=Z,150nm,1.1s,mb5.9						
WRAB				*e*pP	pP	21 48 50.3	-3.0
WRAB				*e*PcP	PcP	21 49 38.3	-0.8
WRAB				LR	LR		
	comp=Z,16µm,22.0s,MS6.1						
WRAB	**Tennant Creek**	**58.51**	**192**	*e*P	**P**	**21 48 47.3**	**-1.5**
WRAB				*e*		21 49 38.3	
WRAB				pmax	pmax		
	comp=Z,150nm,1.1s,mb5.9						
WRAB				MLR	MLR		
	comp=Z,16µm,22.0s,MS6.1						
WB2	**Warramunga Arr**	**58.52**	**192**	*e*P	**P**	**21 48 46.3**	**-2.6**
WB2				*e*SCS	ScS	21 58 38.8	+4.1
WB2				*e*PKPPKP		22 18 24.8	
WRA	**Warramunga Arr**	**58.52**	**192**	P	**P**	**21 48 46.4**	**-2.6**
	comp=Z,270nm,0.8s,mb6.3,baz=12,slow=7.2,SNR=418						
WRA				S	**S**	**21 56 50.6**	**+0.3**
	comp=Z,9.9nm,1.3s,baz=22,slow=9.0,SNR=3.6						
WRA				PKPPKP		22 18 21.0	
	comp=Z,7.0nm,1.1s,baz=168,slow=3.4,SNR=7.4						
WRA				P4KPbc		22 25 55.9	
	comp=Z,8.2nm,1.0s,baz=17,slow=4.0,SNR=15						
FITZ	**Fitzroy Crossi**	**58.70**	**202**	*e*P	**P**	**21 48 49.4**	**-0.8**
	comp=Z,734nm,0.9s,mb6.7						
FITZ				*e*S	**S**	**21 56 52.2**	**-0.4**
FITZ				*e*SCS	ScS	21 58 45.5	+9.4
FITZ				*e*PKPPKP		22 18 20.6	
FITZ	**Fitzroy Crossi**	**58.70**	**202**	P	**P**	**21 48 48.1**	**-2.1**
	comp=Z,259nm,0.9s,mb6.3,baz=18,slow=7.2,SNR=101						
BHPL	**Bhopal**	**58.72**	**276**	*e*P	**P**	**21 48 50.0**	**-0.2**
BHPL				AMb	AMB	21 49 00.1	
	comp=Z,1µm,1.5s,mb6.8						
BHPL				*e*S	**S**	**21 56 53.3**	**+0.6**
BHPL				AMS	AMS	22 16 33.1	
	comp=Z,126µm,19.5s,MS7.0						
AJM	**Ajmer**	**59.24**	**281**	*e*P	**P**	**21 48 53.5**	**-0.3**
AJM				AMb	AMB	21 49 03.8	
	comp=Z,2µm,1.4s,mb6.9						
AJM				*e*x	x	21 56 58.1	
AJM				AMS	AMS	22 13 29.2	
	comp=Z,38µm,19.0s,MS6.5						
AB31	**Akbulak array**	**59.38**	**311**	*i* P	**P**	**21 48 53.7**	**-0.8**
AB31				pmax	pmax		
	comp=Z,46nm,0.4s,mb5.9						
BBB	**Bella Bella**	**59.40**	**46**	P	**P**	**21 48 52.7**	**-1.9**
	comp=Z,314nm,1.0s,mb6.3,baz=266,slow=5.9,SNR=21						
BBB				LR	LR	22 11 40.7	
	comp=Z,78µm,19.1s,MS6.9,baz=292,slow=33						
BBB				PKPPKP		22 18 21.0	
	comp=Z,29nm,1.2s,baz=218,slow=24,SNR=3.3						
BBB	**Bella Bella**	**59.40**	**46**	P	**P**	**21 48 52.7**	**-1.9**
BBB				LR	LR	22 11 40.7	
BBB				P'P'		22 18 21.0	
AKTO	**Aktyubinsk**	**60.04**	**313**	P	**P**	**21 48 57.9**	**-1.1**
	comp=Z,88nm,0.7s,mb5.9,baz=70,slow=7.5,SNR=109						
AKTO				LR	LR	22 14 28.7	
	comp=Z,82µm,21.5s,MS6.8,baz=333,slow=36						
AKTO				P4KPbc		22 26 06.8	
	comp=Z,4.9nm,0.9s,baz=80,slow=4.7,SNR=9.6						
KBS	**Kingsbay**	**60.12**	**351**	⇓*i*P	**P**	**21 48 58.2**	**-1.0**
KBS				AMb	AMB	21 49 09.4	
	comp=Z,1µm,1.8s,mb6.6						
KBS				AMS	AMS	22 18 44.7	
	comp=Z,50µm,17.7s,MS6.7						
KBS	**Kingsbay**	**60.12**	**351**	P	**P**	**21 48 58.7**	**-0.5**
KBS				pmax	pmax		
	comp=Z,2µm,1.5s,mb6.8						
AKL	**Akola**	**60.38**	**274**	⇓*i*x	x	21 48 12.9	
AKL				*i* x	x	21 56 26.1	
HYB	**Hyderabad**	**60.97**	**270**	⇓*i*P	**P**	**21 49 05.0**	**-0.8**
	comp=Z,750nm,1.0s,mb6.8						
HYB				*e*sP	sP	21 49 11.0	-0.8

HYB				*e*PcP	PcP	21 49 55.0	+6.1
HYB				*e*PP	PP	21 51 23.0	+0.7
HYB				*e*S	**S**	**21 57 20.0**	**-1.8**
HYB				*e*SS	SS	22 01 24.0	+1.2
HYB				*e*SSS	SSS	22 04 00.0	-0.1
HYB	**Hyderabad**	**60.97**	**270**⇓	*e*P	**P**	**21 49 05.0**	**-0.8**
	comp=Z,750nm,1.0s,mb6.8						
HYB				*e*S	**S**	**21 57 24.0**	**+2.2**
HYB	**Hyderabad**	**60.97**	**270**⇓	*e*P	**P**	**21 49 05.0**	**-0.8**
HYB				*e*S	**S**	**21 57 24.0**	**+2.2**
HYB				pmax	pmax		
	comp=Z,750nm,1.0s,mb6.8						
HSP	**Hornsund**	**61.01**	**348**	*e*P	**P**	**21 49 04.1**	**-1.2**
ORR	**Orenburg**	**61.40**	**315***d*	*i*P	**P**	**21 49 06.8**	**-1.4**
ORR				S	**S**	**21 57 19.9**	**-6.9**
ORR				SS	SS	22 01 31.8	+2.6
ORR				pmax	pmax		
	comp=Z,380nm,0.8s,mb6.6						
ORR				MLR	MLR		
	comp=Z,138µm,16.0s,MS7.2						
YKW3	**Yellowknife Ar**	**61.50**	**31**	P	**P**	**21 49 07.4**	**-1.3**
YKA	**Yellowknife Ar**	**61.53**	**31**	P	**P**	**21 49 06.6**	**-2.3**
	comp=Z,253nm,0.7s,mb6.4,baz=300,slow=6.4,SNR=79						
YKA				LR	LR	22 15 23.6	
	comp=Z,84µm,19.8s,MS6.9,baz=295,slow=36						
YKA				PKPPKP		22 18 18.6	
	comp=Z,10nm,0.9s,baz=132,slow=2.3,SNR=7.7						
YKA	**Yellowknife Ar**	**61.53**	**31**	P	**P**	**21 49 06.6**	**-2.3**
YKA				LR	LR	22 15 23.6	
YKA				P'P'		22 18 18.6	
YKA	**Yellowknife Ar**	**61.53**	**31**	*i* P	**P**	**21 49 07.1**	**-1.9**
YKA				pmax	pmax		
	comp=Z,253nm,0.7s						
LATR	**Latur**	**61.99**	**272**	*e*P	**P**	**21 49 13.5**	**+0.8**
MDRS	**Chennai**	**62.13**	**265**	*e*P	**P**	**21 49 14.1**	**+0.5**
MDRS				AMb	AMB	21 49 24.5	
	comp=Z,1µm,1.3s,mb6.9						
MDRS				*e*S	**S**	**21 57 36.2**	**-0.3**
MDRS				AMS	AMS	22 08 21.0	
	comp=Z,12µm,18.8s,MS6.1						
ASPA	**Alice Springs**	**62.25**	**191**	*e*P	**P**	**21 49 13.2**	**-1.1**
ASPA				*e*		21 58 35.4	
ASPA				*e*PKPPKP		22 18 24.8	
LVZ	**Lovozero**	**62.30**	**336**	*i* P	**P**	**21 49 13.9**	**-0.2**
LVZ				*i* S	**S**	**21 57 36.1**	**-2.0**
LVZ				*i* SS	SS	22 01 36.1	-7.4
LVZ				pmax	pmax		
	comp=Z,301nm,1.0s,mb6.4						
LVZ				pmax	pmax		
	comp=N,77nm,0.9s						
LVZ				pmax	pmax		
	comp=E,69nm,0.9s						
LVZ				pmax	pmax		
	comp=N,8µm,9.8s						
LVZ				pmax	pmax		
	comp=Z,25µm,9.8s						
LVZ				pmax	pmax		
	comp=E,9µm,8.9s						
LVZ				smax			
	comp=E,15µm,9.8s						
LVZ				smax			
	comp=Z,2µm,4.4s						
LVZ				smax			
	comp=N,5µm,7.9s						
LVZ				MLR	MLR		
	comp=Z,118µm,21.0s,MS7.0						
LVZ				MLR	MLR		
	comp=N,53µm,15.0s						
LVZ				MLR	MLR		
	comp=E,85µm,18.0s						
APA	**Apatity**	**62.88**	**336**α	*i*P	**P**	**21 49 16.4**	**-1.5**
APA				*i*		21 49 29.0	
APA				*i*		21 49 53.0	
APA				*i* PPP	PPP	21 53 13.0	+4.3
APA				*i* S	**S**	**21 57 37.0**	**-8.3**
APA				pmax	pmax		
	comp=Z,270nm,1.2s,mb6.2						
APA				pmax	pmax		
	comp=Z,39µm,10.0s						
DZM	**Mont Dzumac**	**63.14**	**158**	*e*P	**P**	**21 49 20.8**	**+0.6**
DZM	**Mont Dzumac**	**63.14**	**158**	LR	LR	22 12 11.1	
	comp=Z,70µm,19.4s,MS6.8,baz=345,slow=32						
KEV	**Kevo**	**63.46**	**340**	*e*p	**P**	**21 49 19.9**	**-1.8**
	comp=Z,226nm,0.8s,mb6.3						
KEV	**Kevo**	**63.46**	**340**	*e*P	**P**	**21 49 19.9**	**-1.8**
KEV				pmax	pmax		
	comp=Z,226nm,0.8s,mb6.3						
OCWA	**Octopus Mounta**	**63.63**	**49**	P	**P**	**21 49 23.7**	**+0.6**
	comp=Z,1µm,1.3s,mb6.7						
OCWA				LR	LR		
	comp=Z,55µm,20.0s,MS6.7						
PGC	**Sidney**	**63.63**	**48**	P	**P**	**21 49 22.6**	**-0.5**
	comp=Z,952nm,1.2s,mb6.7						
PGC				*e*pP	pP	21 49 25.8	-1.7
ARCES	**ARCESS Array B**	**64.00**	**340**	P	**P**	**21 49 23.8**	**-1.3**
	comp=Z,85nm,0.9s,mb5.8,baz=51,slow=7.8,SNR=25						
ARCES				PP	PP	21 51 47.9	+0.1
	comp=Z,64nm,0.9s,baz=45,slow=7.7,SNR=3.6						
ARCES				PKPPKP		22 18 19.1	
	comp=Z,20nm,1.0s,baz=270,slow=3.6,SNR=6.1						
ARCES				LR	LR	22 21 53.3	
	comp=Z,98µm,18.6s,MS7.0,baz=47,slow=40						
ARE0	**ARCESS Array S**	**64.00**	**340**	P	**P**	**21 49 25.0**	**-0.2**
POO	**Poona**	**64.06**	**274**	*e*P	**P**	**21 49 27.8**	**+1.4**
POO				AMb	AMB	21 49 38.2	
	comp=Z,2µm,1.4s,mb6.9						
POO				*e*x	x	21 57 58.5	
SQM	**Sequim**	**64.15**	**48**	P	**P**	**21 49 27.1**	**+0.6**
WISH	**Wishkah**	**64.18**	**49**	P	**P**	**21 49 27.0**	**+0.4**
KLMR	**Klimovskoe**	**64.36**	**328***c*	*i*P	**P**	**21 49 27.3**	**-0.3**
KLMR				*i*		21 51 55.5	
KLMR				*i* S	**S**	**21 58 03.2**	**-0.5**
KLMR				*i* SS	SS	22 02 08.3	-7.0
KLMR				pmax	pmax		
	comp=Z,1µm,1.5s,mb6.8						
KLMR				pmax	pmax		
	comp=Z,7µm,7.4s						
KLMR				smax			
	comp=E,17µm,6.9s						
KLMR				MLR	MLR		
	comp=Z,156µm,16.0s,MS7.3						
KAD	**Karad**	**64.48**	**273**	*e*P	**P**	**21 49 28.9**	**-0.3**
KAD				AMb	AMB	21 49 39.2	
	comp=Z,2µm,1.3s,mb6.9						
KAD				*e*x	x	21 58 00.0	
GNW	**Green Mountain**	**64.52**	**49**	P	**P**	**21 49 28.6**	**-0.3**
BOM	**Bombay**	**64.68**	**275**	*e*P	**P**	**21 49 30.2**	**-0.1**
BOM				*e*S	**S**	**21 58 12.6**	**+4.2**
PECR	**Pechory**	**64.71**	**323***c*	*i*P	**P**	**21 49 28.6**	**-1.3**
PECR				*e*		21 51 48.0	
PECR				*e*S	**S**	**21 58 10.0**	**+1.9**
PECR				pmax	pmax		
	comp=Z,25µm,10.0s						
PECR				pmax	pmax		
	comp=N,7µm,10.0s						
PECR				pmax	pmax		
	comp=Z,18µm,10.0s						
PECR				pmax	pmax		
	comp=E,11µm,8.0s						
PECR				smax			
	comp=N,15µm,10.4s						
PECR				smax			
	comp=E,30µm,12.0s						
BHJ	**Bhuj**	**64.78**	**281**	*e*P	**P**	**21 49 31.2**	**+0.2**
BHJ				AMb	AMB	21 49 41.6	
	comp=Z,1µm,1.4s,mb6.7						
BHJ				*e*x	x	21 58 04.8	
BHJ				AMS	AMS	22 19 37.9	
	comp=Z,60µm,19.0s,MS6.8						
KTK1	**Kautokeino**	**64.96**	**340**	*e*P	**P**	**21 49 30.8**	**-0.6**
KTK1				*e*pP	pP	21 49 34.0	-1.8
KTK1				AMb	AMB	21 49 41.2	
	comp=Z,693nm,1.5s,mb6.5						
KTK1				*e*PP	PP	21 51 52.5	-3.9
KTK1	**Kautokeino**	**64.96**	**340**	*e*P	**P**	**21 49 30.8**	**-0.6**
	comp=Z,693nm,1.5s,mb6.5						
DAG	**Danmarks Havn**	**64.98**	**356**⇑	*i*P	**P**	**21 49 29.7**	**-1.8**
	comp=Z,538nm,0.9s,mb6.6						
	comp=Z,59µm,18.0s						
DAG	**Danmarks Havn**	**64.98**	**356**⇑	*i*P	**P**	**21 49 29.7**	**-1.8**
DAG				pmax	pmax		
	comp=Z,540nm,0.9s,mb6.6						
DAG				MLR	MLR		
	comp=Z,59µm,18.0s,MS6.8						
DAG				MLR	MLR		
	comp=N,58µm,16.0s						
TTW	**Tolt Reservoir**	**65.13**	**48**	P	**P**	**21 49 32.0**	**-0.8**
PALK	**Pallekele**	**65.27**	**259**	P	**P**	**21 49 33.8**	**-0.5**
PALK				LR	LR		
	comp=Z,16µm,21.0s,MS6.2						
LON	**Longmire**	**65.53**	**49**	P	**P**	**21 49 34.6**	**-0.8**
TRO	**Tromso**	**65.63**	**342**⇓	*i*P	**P**	**21 49 35.7**	**0.0**
TRO				AMb	AMB	21 49 44.5	
	comp=Z,1µm,1.8s,mb6.6						
TRO				AMS	AMS	22 25 20.9	
	comp=Z,81µm,15.5s,MS7.0						
TRO	**Tromso**	**65.63**	**342**⇓	*i*P	**P**	**21 49 35.7**	**0.0**
	comp=Z,1µm,1.8s,mb6.5						
COR	**Corvallis**	**65.70**	**52**	P	**P**	**21 49 37.3**	**+0.7**
COR				*e*pP	pP	21 49 42.2	+1.2
COR				LR	LR		
	comp=Z,57µm,19.0s,MS6.8						
COR	**Corvallis**	**65.70**	**52**	P	**P**	**21 49 37.3**	**+0.7**
COR				MLR	MLR		
	comp=Z,57µm,19.0s,MS6.8						
VAN	**Vannovskaya**	**65.73**	**300**⇓	*i*P	**P**	**21 49 36.4**	**-0.5**
VAN				*e*S	S	21 58 21.4	+0.4
AFI	**Afiamalu**	**65.73**	**133**	LR	LR	22 15 27.5	
	comp=Z,57µm,18.9s,MS6.8,baz=333,slow=34						
AFI	**Afiamalu**	**65.73**	**133**	*e*P	**P**	**21 49 36.2**	**-1.0**
	comp=Z,1µm,1.8s,mb6.6						
AFI				*e*pP	pP	21 49 40.5	-1.2
AFI				LR	LR		
	comp=Z,57µm,19.0s,MS6.8						
AFI	**Afiamalu**	**65.73**	**133**	*e*P	**P**	**21 49 36.2**	**-1.0**
AFI				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.6						
AFI				MLR	MLR		
	comp=Z,57µm,19.0s,MS6.8						
KEBM	**Edson Butte**	**65.92**	**54**	P	**P**	**21 49 38.7**	**+0.7**
KEBM				*e*PcP	PcP	21 50 07.7	-1.0
KBO	**Bosley Butte**	**66.32**	**54**	P	**P**	**21 49 41.0**	**+0.5**
HOOD	**Mount Hood Mea**	**66.34**	**50**	P	**P**	**21 49 40.9**	**+0.3**
JOF	**Joensuu**	**66.35**	**333**	*e*p	**P**	**21 49 37.1**	**-3.2**
	comp=Z,192nm,0.7s,mb6.2						
MNGI	**Mangalore**	**66.48**	**268**	*e*P	**P**	**21 49 41.2**	**-0.8**
MNGI				*e*S	S	21 58 34.0	+3.5
EDM	**Edmonton**	**66.83**	**40**	P	**P**	**21 49 42.2**	**-1.4**
HUMO	**Hull Mountain**	**66.92**	**53**	P	**P**	**21 49 44.5**	**+0.1**
	comp=Z,2µm,2.1s,mb6.8						
HUMO				LR	LR		
	comp=Z,47µm,19.0s,MS6.7						
HAWA	**Hanford**	**67.06**	**48**	P	**P**	**21 49 45.0**	**-0.2**
HAWA				LR	LR		
	comp=Z,3µm,19.0s						
WRD	**Warden**	**67.08**	**48**	P	**P**	**21 49 44.3**	**-1.0**
COCO	**West Island**	**67.21**	**232**	*e*P	**P**	**21 49 47.8**	**+1.1**
	comp=Z,2µm,1.3s,mb7.0						
COCO				*e*pP	pP	21 49 51.0	-0.1
COCO				LR	LR		
	comp=Z,9µm,20.0s,MS6.0						
KHMM	**Horse Mountain**	**67.32**	**55**	P	**P**	**21 49 47.3**	**+0.3**
TRD	**Trivandrum**	**67.43**	**263**	*e*P	**P**	**21 49 48.1**	**0.0**
TRD				AMb	AMB	21 49 58.6	
	comp=Z,1µm,1.2s,mb6.8						
TRD				*e*S	S	21 58 42.9	+1.0
TRD				AMS	AMS	22 12 05.5	
	comp=Z,12µm,21.3s,MS6.1						
NEW	**Newport**	**67.47**	**46**	P	**P**	**21 49 46.3**	**-1.5**
	comp=Z,148nm,0.9s,mb6.0,baz=303,slow=5.6,SNR=79						
NEW				LR	LR	22 13 38.0	
	comp=Z,47µm,21.5s,MS6.7,baz=295,slow=31						
NEW	**Newport**	**67.47**	**46**	P	**P**	**21 49 46.7**	**-1.0**
	comp=Z,1µm,1.2s,mb6.7						
NEW				LR	LR		
	comp=Z,52µm,21.0s,MS6.7						
NEW	**Newport**	**67.47**	**46**	P	**P**	**21 49 46.3**	**-1.4**
NEW				pmax	pmax		
	comp=Z,148nm,0.9s						
NEW				MLR	MLR		
	comp=Z,47µm,21.5s						
YBH	**Yreka Blue Hor**	**67.53**	**54**	P	**P**	**21 49 48.2**	**-0.1**
	comp=Z,757nm,1.4s,mb6.5						
YBH				*e*pP	pP	21 49 53.8	+1.1
YBH				LR	LR		
	comp=Z,49µm,19.0s,MS6.8						
YBH	**Yreka Blue Hor**	**67.53**	**54**	P	**P**	**21 49 48.2**	**-0.1**
YBH				*e**PP	pP	21 49 53.8	+1.1
YBH				pmax	pmax		
	comp=Z,757nm,1.4s						
YBH				MLR	MLR		
	comp=Z,49µm,19.0s						
KCPM	**Cahto Peak**	**68.04**	**56**	*e*P	**P**	**21 49 51.9**	**+0.4**
KCPM				*e*pP	pP	21 49 55.5	-0.5
KIPM	**Iron Peak**	**68.04**	**56**	*e*P	**P**	**21 49 52.1**	**+0.6**
KIPM				*e*pP	pP	21 49 54.6	-1.3
MOS	**Moscow**	**68.06**	**324**κ	*i*P	**P**	**21 49 50.4**	**-0.9**
MOS				*e*		21 50 16.6	
MOS				*e*		21 52 18.9	
MOS				*e*PPP	PPP	21 53 59.6	-0.9
MOS				*i* S	S	21 58 50.4	+1.7
MOS				*i*		21 59 30.2	
MOS				*i* SS	SS	22 03 11.9	-0.7
MOS				*e*SSS	SSS	22 06 12.6	-0.1
MOS				pmax	pmax		
	comp=Z,15µm,5.7s						
MOS				pmax	pmax		
	comp=N,6µm,5.4s						
MOS				pmax	pmax		
	comp=E,3µm,6.0s						
MOS				pmax	pmax		
	comp=Z,2µm,1.7s,mb6.9						
MOS				pmax	pmax		
	comp=N,780nm,1.4s						
MOS				pmax	pmax		
	comp=E,267nm,1.4s						
MOS				smax			
	comp=N,12µm,5.8s						
MOS				smax			
	comp=E,8µm,6.6s						
MOS				MLR	MLR		
	comp=N,126µm,15.0s,MS7.3						
MOS				MLR	MLR		
	comp=Z,198µm,15.0s,MS7.5						
MOS				MLR	MLR		
	comp=E,47µm,15.4s,MS7.3						
LOF	**Lofoten**	**68.06**	**342**	*e*P	**P**	**21 49 51.9**	**+0.8**
LOF				AMb	AMB	21 50 02.6	
	comp=Z,442nm,1.6s,mb6.3						
LOF				*e*PP	PP	21 52 21.9	-1.4
LOF	**Lofoten**	**68.06**	**342**	*e*P	**P**	**21 49 51.9**	**+0.8**
	comp=Z,442nm,1.5s,mb6.3						
WDC	**Whiskeytown Da**	**68.25**	**55**	P	**P**	**21 49 52.2**	**-0.5**
	comp=Z,1µm,1.4s,mb6.7						
WDC				*e*pP	pP	21 49 55.9	-1.3
WDC				LR	LR		
	comp=Z,30µm,20.0s,MS6.5						
WDC	**Whiskeytown Da**	**68.25**	**55**	P	**P**	**21 49 52.2**	**-0.6**
WDC				pmax	pmax		
	comp=Z,1µm,1.4s,mb6.7						
WDC				MLR	MLR		
	comp=Z,30µm,20.0s,MS6.5						
KAF	**Kangasniemi**	**68.65**	**334**	*e*p	**P**	**21 49 52.6**	**-2.3**
	comp=Z,359nm,1.0s,mb6.3,baz=43,slow=5.4						
KAF	**Kangasniemi**	**68.65**	**334**	*e*P	**P**	**21 49 52.6**	**-2.3**
KAF				pmax	pmax		
	comp=Z,359nm,1.0s,mb6.3						
PUL	**Pulkovo**	**68.70**	**330**	*i* P	**P**	**21 49 54.0**	**-1.2**
PUL	**Pulkovo**	**68.70**	**330**	*i* P	**P**	**21 49 54.4**	**-0.8**
PUL				*i*		21 52 23.3	
PUL				*i*		21 54 11.2	
PUL				*i* S	S	21 58 55.7	-0.6
PUL				pmax	pmax		
	comp=N,644nm,0.9s						
PUL				pmax	pmax		
	comp=Z,487nm,0.9s,mb6.4						
PUL				pmax	pmax		
	comp=E,530nm,1.1s						
PUL				MLR	MLR		
	comp=E,83µm,17.0s,MS7.1						
PUL				MLR	MLR		
	comp=Z,138µm,17.0s,MS7.3						
PUL				MLR	MLR		
	comp=N,55µm,19.0s,MS7.1						
HOPS	**Hopland**	**68.74**	**57**	P	**P**	**21 49 55.9**	**0.0**
	comp=N,1µm,1.5s,mb6.5						
HOPS				LR	LR		
	comp=Z,75µm,20.0s,MS6.9						
VRHR	**Novokhopersk**	**68.77**	**319**	*e*P	**P**	**21 49 53.8**	**-2.0**
VRHR				*e*		21 50 24.8	
VRHR				*e*S	S	21 58 53.6	-3.7
VRHR				*e*SS	SS	22 03 17.4	-6.6
VRHR				pmax	pmax		
	comp=Z,890nm,1.0s,mb6.7						
VRHR				pmax	pmax		
	comp=N,410nm,1.1s						
VRHR				pmax	pmax		
	comp=E,720nm,1.1s						
VRHR				smax			
	comp=N,6µm,6.2s						
VRHR				smax			
	comp=E,10µm,6.2s						
VRHR				smax			
	comp=Z,3µm,5.8s						
VRHR				MLR	MLR		
	comp=N,150µm,15.0s,MS7.5						
VRHR				MLR	MLR		
	comp=E,125µm,15.0s,MS7.5						
VRHR				MLR	MLR		
	comp=Z,265µm,15.0s,MS7.6						
OBN	**Obninsk**	**68.91**	**324**	P	**P**	**21 49 56.2**	**-0.4**
OBN				LR	LR		
	comp=Z,16µm,20.0s,MS6.3						
OBN	**Obninsk**	**68.91**	**324**κ	*i*P	**P**	**21 49 55.6**	**-1.0**
OBN				*e*		21 50 24.7	
OBN				*i*		21 52 34.6	
OBN				*e*S	S	21 59 01.3	+2.4
OBN				*e*		21 59 15.5	
OBN				*e*		21 59 56.2	
OBN				*i* SS	SS	22 03 28.9	+2.6
OBN				pmax	pmax		
	comp=Z,12µm,5.9s						
OBN				pmax	pmax		
	comp=Z,2µm,1.6s,mb6.7						
OBN				MLR	MLR		
	comp=Z,284µm,17.0s,MS7.6						
MOD	**Modoc**	**68.97**	**53**	P	**P**	**21 49 56.5**	**-0.7**
MOD				*e*pP	pP	21 50 01.8	+0.2
MOD				*e*PP	PP	21 52 34.0	+2.0
MOD				LR	LR		
	comp=Z,62µm,19.0s,MS6.9						
MELSS	**Ber_school_2**	**69.00**	**341**	*e*P	**P**	**21 49 55.8**	**-1.2**
MELSS				*e*pP	pP	21 49 59.0	-2.4
MELSS				*e*PP	PP	21 52 26.9	-4.9
BSMT	**Bassoo Peak**	**69.01**	**45**	P	**P**	**21 49 56.9**	**-0.4**
FINES	**FINESS Array B**	**69.18**	**333**	P	**P**	**21 49 57.4**	**-0.7**
	comp=Z,454nm,1.0s,mb6.4,baz=46,slow=8.5,SNR=119						
FINES				PKPPKP		22 18 05.9	
	comp=Z,5.4nm,0.8s,baz=135,slow=8.1,SNR=5.8						
FINES				LR	LR	22 23 17.2	
	comp=Z,188µm,19.4s,MS7.3,baz=55,slow=38						
FINES	**FINESS Array B**	**69.18**	**333**	P	**P**	**21 49 57.4**	**-0.7**
FINES				P'P'		22 18 05.9	
FINES				LR	LR	22 23 17.2	
BMO	**Blue Mountains**	**69.20**	**49**	P	**P**	**21 49 58.0**	**-0.6**
	comp=Z,852nm,1.4s,mb6.5						
BMO				LR	LR		
	comp=Z,43µm,19.0s,MS6.7						
NSHM	**Saint Helena R**	**69.30**	**57**	*e*P	**P**	**21 49 57.7**	**-1.6**
MOR8	**Moi Rana**	**69.34**	**341**	*e*P	**P**	**21 49 56.7**	**-2.4**
MOR8				*e*pP	pP	21 50 00.1	-3.4
MOR8				AMb	AMB	21 50 07.7	
	comp=Z,760nm,1.9s,mb6.3						
MOR8	**Moi Rana**	**69.34**	**341**	*e*P	**P**	**21 49 56.7**	**-2.4**
	comp=Z,760nm,1.9s,mb6.3						
STOK	**Stokkvaagen**	**69.59**	**341**	*e*P	**P**	**21 49 59.2**	**-1.3**
OHCM	**Honcut**	**69.60**	**56**	P	**P**	**21 50 00.6**	**-0.5**
OHCM				*e*pP	pP	21 50 05.6	+0.1
OHCM				*e*PcP	PcP	21 50 23.0	-1.3
JMIC	**Jan Mayen**	**69.61**	**351**	LR	LR	22 22 26.5	
	comp=Z,27µm,19.0s,MS6.5,baz=205,slow=38						
JMIC	**Jan Mayen**	**69.61**	**351**	*e*P	**P**	**21 50 00.7**	**+0.1**
JMIC				AMS	AMS	22 22 32.6	
	comp=Z,25µm,23.0s,MS6.4						
STKA	**Stephens Creek**	**69.63**	**183**	*e*P	**P**	**21 50 00.3**	**-1.1**
	comp=Z,178nm,0.9s,mb6.0						
STKA				*e*S	S	21 59 10.1	+2.3
STKA				*e*PKPPKP		22 17 59.4	
STKA	**Stephens Creek**	**69.63**	**183**	P	**P**	**21 50 00.9**	**-0.5**
	comp=Z,83nm,1.1s,mb5.6,baz=357,slow=7.8,SNR=16						
STKA				S	S	21 59 09.8	+2.0
	comp=Z,4.9nm,1.0s,baz=29,slow=19,SNR=1.5						
STKA				PKP2ab		22 18 01.8	
	comp=Z,5.6nm,0.9s,baz=176,slow=10,SNR=3.2						
STKA				PKPPKP		22 18 07.7	
	comp=Z,15nm,1.3s,baz=309,slow=5.6,SNR=4.9						
STKA				LR	LR	22 23 42.7	
	comp=Z,46µm,18.4s,MS6.8,baz=7.0,slow=39						
STKA	**Stephens Creek**	**69.63**	**183**	*e*P	**P**	**21 50 00.4**	**-1.0**
STKA				*e*S	S	21 59 10.1	+2.3
STKA				*e*P'P'		22 17 59.4	
VOR	**Voronezh**	**69.64**	**320**	*e*P	**P**	**21 50 00.0**	**-1.1**
VOR				pmax	pmax		
	comp=Z,500nm,2.0s,mb6.1						
SUMG	**Summit**	**69.65**	**1**	P	**P**	**21 50 00.5**	**-0.4**
	comp=Z,521nm,0.8s,mb6.5						
WVOR	**Wild Horse Val**	**69.72**	**52**	*e*P	**P**	**21 50 01.3**	**-0.5**
	comp=Z,1µm,1.5s,mb6.7						
WVOR				*e*pP	pP	21 50 06.2	0.0
WVOR				LR	LR		
	comp=Z,90µm,19.0s,MS7.0						
WVOR	**Wild Horse Val**	**69.72**	**52**	*e*P	**P**	**21 50 01.3**	**-0.5**
WVOR				pmax	pmax		
	comp=Z,1µm,1.5s,mb6.7						
WVOR				MLR	MLR		
	comp=Z,90µm,19.0s,MS7.0						
SAC	**San Andreas**	**69.93**	**58**	P	**P**	**21 50 00.4**	**-2.7**
SAC	**San Andreas**	**69.93**	**58**	P	**P**	**21 50 08.2**	**+5.1**
MAK	**Makhachkala**	**69.98**	**309**	*e*P	**P**	**21 50 01.0**	**-2.3**
MAK				*i*		21 50 23.0	
MAK				*i* PPP	PPP	21 54 22.0	+2.0
MAK				*i* S	S	21 59 10.0	-1.7
MAK				*i* PS	PS	21 59 37.0	-3.4
MAK				*i*		21 59 54.0	
MAK				*i* SS	SS	22 03 42.0	-0.6
MAK				pmax	pmax		
	comp=Z,36µm,8.0s						
MAK				pmax	pmax		
	comp=N,8µm,10.0s						
MAK				pmax	pmax		
	comp=E,7µm,10.0s						
MAK				pmax	pmax		
	comp=N,1µm,1.8s						
MAK				pmax	pmax		
	comp=Z,850nm,1.8s,mb6.4						
MAK				pmax	pmax		
	comp=E,330nm,1.0s						
MAK				smax			
	comp=N,25µm,14.0s						
MAK				smax			
	comp=E,47µm,14.0s						
MAK				smax			
	comp=Z,8µm,14.0s						
MSO	**Missoula**	**70.06**	**46**	P	**P**	**21 50 02.8**	**-1.0**
MSO				*e*pP	pP	21 50 07.8	-0.4
MSO				*e*PP	PP	21 52 37.6	-3.1
MSO				LR	LR		
	comp=Z,29µm,20.0s,MS6.5						
FORT	**Forrest**	**70.25**	**195**	*e*P	**P**	**21 50 04.8**	**-0.4**
	comp=Z,742nm,0.7s,mb6.7						
FORT				*e*PKPPKP		22 18 04.3	
CHMT	**Chamberlain Mo**	**70.40**	**45**	P	**P**	**21 50 04.5**	**-1.3**
CHMT				*e*pP	pP	21 50 09.5	-0.8
PAHR	**Pah Rah Range**	**70.75**	**54**	P	**P**	**21 50 08.3**	**+0.2**
	comp=Z,751nm,1.5s,mb6.4						
SAO	**San Andreas Ge**	**71.03**	**58**	P	**P**	**21 50 09.8**	**-0.1**
	comp=Z,719nm,1.5s,mb6.4						
SAO				LR	LR		
	comp=Z,49µm,19.0s,MS6.8						
SAO	**San Andreas Ge**	**71.03**	**58**	P	**P**	**21 50 09.8**	**0.0**
SAO				pmax	pmax		
	comp=Z,719nm,1.5s,mb6.4						
SAO				MLR	MLR		
	comp=Z,49µm,19.0s,MS6.8						
CMB	**Columbia Colle**	**71.03**	**56**	P	**P**	**21 50 09.4**	**-0.4**
	comp=Z,1µm,1.4s,mb6.6						
CMB				*e*pP	pP	21 50 14.9	+0.6
CMB				LR	LR		
	comp=Z,69µm,20.0s,MS6.9						
CMB	**Columbia Colle**	**71.03**	**56**	P	**P**	**21 50 09.4**	**-0.4**
CMB				*e**PP	pP	21 50 14.9	+0.6
CMB				pmax	pmax		
	comp=Z,1µm,1.4s,mb6.6						
CMB				MLR	MLR		
	comp=Z,69µm,20.0s,MS6.9						

NSS	**Namsos**	**71.28**	**340**	⇓*i*P	**P**	**21 50 11.0**	**+0.2**
NSS				AMb	AMB	21 50 19.7	
	comp=Z,560nm,1.9s,mb6.2						
NSS				AMS	AMS	22 24 58.8	
	comp=Z,105µm,26.3s,MS7.0						
NSS	**Namsos**	**71.28**	**340**	⇓*i*P	**P**	**21 50 11.0**	**+0.2**
	comp=Z,560nm,1.9s,mb6.2						
HRY	**Holter Researc**	**71.31**	**45**	P	**P**	**21 50 11.3**	**-0.1**
SCO	**Scoresbysund**	**71.36**	**355**	*i* P	**P**	**21 50 12.3**	**+1.0**
	comp=Z,110nm,0.9s,mb5.8						
SCO				*i* S	S	21 59 38.2	+11
SCO	**Scoresbysund**	**71.36**	**355**	*i* P	**P**	**21 50 12.3**	**+1.0**
SCO				pmax	pmax		
	comp=Z,111nm,0.9s,mb5.8						
WAKR	**Walker**	**71.39**	**55**	P	**P**	**21 50 11.8**	**-0.2**
GOF	**Gofitskoye**	**71.45**	**313**	*e*P	**P**	**21 50 12.1**	**-0.1**
GOF				pmax	pmax		
	comp=Z,1µm,1.3s,mb6.7						
LRM	**Limekiln Ridge**	**71.48**	**46**	P	**P**	**21 50 11.7**	**-0.8**
LRV	**Little Rabbit**	**71.50**	**58**	*e*P	**P**	**21 50 12.8**	**+0.1**
LRV				*e*pP	pP	21 50 18.1	+1.0
HLID	**Hailey**	**71.65**	**49**	P	**P**	**21 50 13.0**	**-0.5**
HLID				LR	LR		
	comp=Z,60µm,19.0s,MS6.9						
DLMT	**Dillon**	**71.67**	**46**	*e*P	**P**	**21 50 12.8**	**-0.7**
	comp=Z,2µm,1.4s,mb6.8						
DLMT				*e*pP	pP	21 50 17.9	-0.1
RIV	**Riverview**	**71.75**	**174**	*e*P	**P**	**21 50 14.7**	**+0.5**
MCMT	**McKenzie Canyo**	**71.83**	**47**	*e*P	**P**	**21 50 13.7**	**-0.9**
MCMT				*e*pP	pP	21 50 19.1	+0.1
FCC	**Fort Churchill**	**71.84**	**28**	P	**P**	**21 50 13.2**	**-1.1**
BOZ	**Bozeman (W)**	**72.05**	**46**	P	**P**	**21 50 15.2**	**-0.6**
	comp=Z,768nm,1.2s,mb6.5						
BOZ				LR	LR		
	comp=Z,47µm,19.0s,MS6.8						
BOZ	**Bozeman (W)**	**72.05**	**46**	P	**P**	**21 50 15.3**	**-0.5**
BOZ				pmax	pmax		
	comp=Z,768nm,1.2s,mb6.5						
BOZ				MLR	MLR		
	comp=Z,47µm,19.0s,MS6.8						
DGRG	**David-gareji**	**72.14**	**309**	P	**P**	**21 50 15.8**	**-0.6**
DGRG				S	S	21 59 40.9	+4.1
NVAR	**Mina Array Bea**	**72.17**	**55**	P	**P**	**21 50 16.1**	**-0.5**
	comp=Z,83nm,0.8s,mb5.8,baz=297,slow=3.9,SNR=139						
NVAR				PKKPbc		22 10 13.7	
	comp=Z,0.5nm,0.5s,baz=153,slow=3.2,SNR=3.6						
NVAR				LR	LR	22 15 01.6	
	comp=Z,49µm,20.9s,MS6.8,baz=280,slow=30						
NVAR				PKPPKP		22 17 56.1	
	comp=Z,2.4nm,0.9s,baz=130,slow=5.1,SNR=4.7						
MNV	**Mina**	**72.26**	**55**	P	**P**	**21 50 16.8**	**-0.4**
	comp=Z,1µm,1.5s,mb6.6						
MNV				*e*pP	pP	21 50 22.4	+0.8
MNV				LR	LR		
	comp=Z,53µm,20.0s,MS6.8						
MNV	**Mina**	**72.26**	**55**	P	**P**	**21 50 16.8**	**-0.4**
MNV				e*PP	pP	21 50 22.4	+0.8
MNV				pmax	pmax		
	comp=Z,1µm,1.5s,mb6.6						
MNV				MLR	MLR		
	comp=Z,53µm,20.0s,MS6.8						
ZEI	**Tsey**	**72.27**	**311**	*i* P	**P**	**21 50 14.1**	**-3.1**
ZEI				i *PP	pP	21 50 24.4	+2.8
ZEI				*i*		21 52 54.7	
ZEI				*e*S	S	21 59 34.9	-3.4
ZEI				pmax	pmax		
	comp=Z,363nm,0.8s,mb6.4						
ZEI				smax			
	comp=E,305nm,2.7s						
KIV	**Kislovodsk**	**72.30**	**312**	P	**P**	**21 50 17.2**	**-0.1**
KIV				LR	LR		
	comp=Z,17µm,21.0s,MS6.3						
KIV	**Kislovodsk**	**72.30**	**312**	*e*P	**P**	**21 50 15.3**	**-2.0**
KIV				*e*		21 50 31.1	
KIV				*e*		21 52 57.5	
KIV				*e*PPP	PPP	21 54 42.3	+0.1
KIV				*e*S	S	21 59 35.9	-2.6
KIV				pmax	pmax		
	comp=Z,4µm,1.2s,mb7.2						
KIV				pmax	pmax		
	comp=Z,17µm,11.3s						
MTA	**Mtatsminda**	**72.35**	**309**	P	**P**	**21 50 17.2**	**-0.5**
MTA				S	S	21 59 42.7	+3.4
TBLG	**Delisi**	**72.37**	**309**	P	**P**	**21 50 18.5**	**+0.8**
TBLG				S	S	21 59 42.0	+2.7
PTRM	**Twissleman Ran**	**72.48**	**58**	*e*P	**P**	**21 50 18.7**	**+0.2**
PTRM				*e*pP	pP	21 50 23.4	+0.5
PTRM				*e*PcP	PcP	21 50 39.4	+2.9
MTUM	**Tungsten Hills**	**72.61**	**56**	P	**P**	**21 50 19.1**	**-0.1**
QLMT	**Earthquake Lak**	**72.65**	**46**	P	**P**	**21 50 18.9**	**-0.4**
ONI	**Oni**	**72.65**	**311**	P	**P**	**21 50 20.3**	**+0.9**
ELK	**Elko**	**72.78**	**52**	P	**P**	**21 50 19.2**	**-1.0**
	comp=Z,51nm,1.2s,baz=307,slow=3.4,SNR=85						
ELK	**Elko**	**72.78**	**52**	P	**P**	**21 50 20.1**	**0.0**
	comp=Z,2µm,1.9s,mb6.7						
ELK				*e*pP	pP	21 50 25.2	+0.6
ELK				*e*PP	PP	21 52 56.4	-7.8
ELK				LR	LR		
	comp=Z,53µm,19.0s,MS6.8						
ELK	**Elko**	**72.78**	**52**	P	**P**	**21 50 20.1**	**-0.1**
ELK				e*PP	pP	21 50 25.2	+0.6
ELK				*e*		21 52 56.4	
ELK				pmax	pmax		
	comp=Z,2µm,1.9s						
ELK				MLR	MLR		
	comp=Z,53µm,19.0s						
ADE	**Adelaide**	**72.87**	**185**	*e*P	**P**	**21 50 20.8**	**0.0**
IZAR	**Zarasai**	**73.00**	**329**	*i* P	**P**	**21 50 21.1**	**-0.1**
IZAR				AMb	AMB	21 50 23.3	
	comp=Z,57nm,1.6s						
YMR	**Madison River**	**73.01**	**46**	*e*P	**P**	**21 50 22.1**	**+0.6**
	comp=Z,3.8nm,0.1s						
YMR				LR	LR		
	comp=Z,49µm,19.0s,MS6.8						
GCMT	**Greycliff**	**73.07**	**45**	*e*P	**P**	**21 50 21.6**	**-0.1**
GCMT				*e*pP	pP	21 50 25.7	-0.5
TPH	**Tonopah**	**73.07**	**55**	*e*P	**P**	**21 50 21.7**	**-0.2**
	comp=Z,1µm,1.7s,mb6.5						
TPH				*e*pP	pP	21 50 25.2	-1.2
TPH				LR	LR		
	comp=Z,64µm,21.0s,MS6.9						
TPH	**Tonopah**	**73.07**	**55**	*e*P	**P**	**21 50 21.7**	**-0.2**
TPH				pmax	pmax		
	comp=Z,1µm,1.7s,mb6.5						
TPH				MLR	MLR		
	comp=Z,64µm,21.0s,MS6.9						
IDID	**Didziasalis**	**73.10**	**328**	*i* P	**P**	**21 50 21.8**	**+0.1**
IDID				AMb	AMB	21 50 23.9	
	comp=Z,65nm,1.4s,mb5.4						
CNB	**Canberra Magne**	**73.11**	**176**	*e*P	**P**	**21 50 22.2**	**0.0**
	comp=Z,310nm,1.3s,mb6.1						
ISAL	**Salakas**	**73.18**	**329**	*i* P	**P**	**21 50 22.3**	**+0.1**
ISAL				AMb	AMB	21 50 24.4	
	comp=Z,89nm,1.3s,mb5.5						
MNK	**Minsk**	**73.20**	**327**	*e*P	**P**	**21 50 21.0**	**-1.3**
MNK				*e*S	S	21 59 46.0	-2.5
MNK				pmax	pmax		
	comp=Z,1µm,1.0s,mb6.8						
MNK				MLR	MLR		
	comp=Z,44µm,16.0s,MS6.8						
YFT	**Old Faithful**	**73.21**	**46**	*e*P	**P**	**21 50 22.4**	**-0.3**
YFT				*e*pP	pP	21 50 26.4	-0.7
GNI	**Garni**	**73.28**	**308**	P	**P**	**21 50 24.3**	**+1.2**
GNI	**Garni**	**73.28**	**308**	P	**P**	**21 50 23.2**	**+0.1**
	comp=Z,115nm,1.0s,mb5.8,baz=4.2,slow=3.1,SNR=54						
GNI				S	S	21 59 55.1	+5.4
	comp=Z,2.0nm,0.5s,baz=255,slow=10.0,SNR=2.1						
GNI				PKPPKP		22 18 01.1	
	comp=Z,2.2nm,0.6s,baz=15,slow=20,SNR=3.5						
GNI	**Garni**	**73.28**	**308**	P	**P**	**21 50 24.3**	**+1.2**
GNI				LR	LR		
	comp=Z,49µm,19.0s,MS6.8						
GNI	**Garni**	**73.28**	**308**	P	**P**	**21 50 23.2**	**+0.1**
GNI				S	S	21 59 55.1	+5.3
GNI				pmax	pmax		
	comp=Z,115nm,1.0s						
GNI				smax			
	comp=N,2.0nm,0.5s						
IIGN	**Ignalina**	**73.29**	**328**	*e*P	**P**	**21 50 23.0**	**+0.1**
AKH	**Akhalkalaki**	**73.31**	**310**	P	**P**	**21 50 24.2**	**+1.0**
WBK	**Wadi Bani Khal**	**73.34**	**286**	P	**P**	**21 50 24.7**	**+0.9**
	SNR=126						
LKWY	**Lake**	**73.39**	**46**	P	**P**	**21 50 25.8**	**+2.1**
LKWY				LR	LR		
	comp=Z,82µm,21.0s,MS7.0						
BIDO	**Bidbid**	**73.47**	**287**	P	**P**	**21 50 25.7**	**+1.2**
	SNR=128						
BANOM	**Banah**	**73.47**	**290**	⇓P	**P**	**21 50 24.4**	**-0.2**
	SNR=133						
BANOM				⇑S	S	21 59 56.0	+3.8
IMW	**Indian Meadow**	**73.49**	**47**	P	**P**	**21 50 24.9**	**+0.7**
IMW				*e*pP	pP	21 50 28.7	0.0
ISA	**Isabella**	**73.63**	**57**	P	**P**	**21 50 24.1**	**-1.2**
ISA				LR	LR		
	comp=Z,12µm,19.0s,MS6.2						
HVU	**Hansel Valley**	**73.67**	**50**	P	**P**	**21 50 25.6**	**+0.2**
HVU				*e*pP	pP	21 50 28.8	-1.0
HVU				*e*PcP	PcP	21 50 42.2	+0.7
HVU	**Hansel Valley**	**73.67**	**50**	P	**P**	**21 50 25.6**	**+0.2**
HVU				*e*		21 50 42.2	
MOOW	**Moose Ponds**	**73.69**	**47**	P	**P**	**21 50 25.7**	**+0.3**
TPAW	**Teton Pass**	**73.73**	**47**	*e*P	**P**	**21 50 26.1**	**+0.4**
	comp=Z,21nm,0.6s						
TPAW				*e*pP	pP	21 50 30.2	+0.1
KLBR	**Kellerberrin**	**73.76**	**204**	*e*P	**P**	**21 50 27.5**	**+1.4**
	comp=Z,830nm,1.4s,mb6.5						
SMDO	**Samad**	**73.79**	**287**	P	**P**	**21 50 27.2**	**+0.8**
	SNR=54						
LOHW	**Long Hollow**	**73.85**	**47**	P	**P**	**21 50 26.5**	**+0.2**
SNOW	**Snow King Moun**	**73.86**	**47**	*e*P	**P**	**21 50 26.9**	**+0.5**
	comp=Z,2µm,1.4s,mb6.8						
SNOW				*e*pP	pP	21 50 29.9	-0.9
DAC	**Darwin (Calif)**	**73.86**	**57**	P	**P**	**21 50 25.6**	**-0.9**
DAC				LR	LR		
	comp=Z,50µm,20.0s,MS6.8						
REDW	**Red Top Meadow**	**73.86**	**47**	P	**P**	**21 50 26.6**	**+0.1**
REDW				*e*pP	pP	21 50 30.9	0.0
DIGO	**Kars**	**73.97**	**309**	*i* P	**P**	**21 50 26.4**	**-0.7**
BGU	**Big Grassy Mou**	**74.03**	**50**	*e*P	**P**	**21 50 27.2**	**-0.2**
BGU				*e*pP	pP	21 50 31.4	-0.4
KARS	**Kars**	**74.03**	**309**	P	**P**	**21 50 28.3**	**+0.9**
HOQ	**Hoqain**	**74.05**	**288**	⇑P	**P**	**21 50 28.5**	**+0.7**
	SNR=85						
HOQ				⇑S	S	22 00 05.1	+6.5
DOMB	**Dombas**	**74.07**	**340**	*e*P	**P**	**21 50 27.3**	**+0.1**
DOMB				*e*pP	pP	21 50 30.5	-1.2
DOMB				AMb	AMB	21 50 37.8	
	comp=Z,878nm,1.8s,mb6.4						
DOMB	**Dombas**	**74.07**	**340**	*e*P	**P**	**21 50 27.3**	**+0.1**
	comp=Z,878nm,1.8s,mb6.4						
AHID	**Auburn Hatcher**	**74.08**	**48**	P	**P**	**21 50 27.5**	**-0.1**
	comp=Z,722nm,1.1s,mb6.5						
AHID				LR	LR		
	comp=Z,34µm,20.0s,MS6.6						
JMDO	**Jabal Madar**	**74.14**	**286**	P	**P**	**21 50 29.0**	**+0.6**
	SNR=249						
SPUT	**South Promonto**	**74.15**	**50**	P	**P**	**21 50 27.2**	**-1.0**
SPUT				*e*pP	pP	21 50 31.5	-1.1
SOC	**Sochi**	**74.24**	**313**	*d* *i*P	**P**	**21 50 28.5**	**-0.1**
SOC				e*PP	pP	21 50 39.3	+6.2
SOC				*e*		21 50 42.8	
SOC				*i*		21 53 13.2	
SOC				*i* PPP	PPP	21 55 00.0	-1.4
SOC				*i* S	S	22 00 04.5	+4.1
SOC				e*SS		22 00 27.7	
SOC				*e*		22 00 46.6	
SOC				pmax	pmax		
	comp=Z,10µm,4.9s						
SOC				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.5						
HFS	**Hagfors**	**74.27**	**337**	LR	LR	22 31 46.1	
	comp=Z,51µm,19.0s,MS6.8,baz=39,slow=43						
NB2	**NORSAR Subarra**	**74.29**	**339**	P	**P**	**21 50 27.5**	**-1.0**
	comp=Z,4µm,2.5s,mb6.9,baz=37,slow=5.8						
NB2	**NORSAR Subarra**	**74.29**	**339**	P	**P**	**21 50 27.5**	**-1.0**
	baz=37,slow=5.9						
NOA	**NORSAR Array B**	**74.29**	**339**	P	**P**	**21 50 26.5**	**-2.0**
	comp=Z,56nm,0.9s,mb5.5,baz=147,slow=19,SNR=86						
NOA				PKPPKP		22 18 06.8	
	comp=Z,6.2nm,1.1s,baz=210,slow=2.4,SNR=3.8						
NOA				LR	LR	22 26 18.7	
	comp=Z,90µm,21.6s,MS7.0,baz=45,slow=38						
NOA	**NORSAR Array B**	**74.29**	**339**	P	**P**	**21 50 26.5**	**-2.0**
NOA				P'P'		22 18 06.8	
NOA				LR	LR	22 26 18.7	
DGMT	**Dagmar**	**74.31**	**40**	P	**P**	**21 50 28.4**	**-0.5**
DGMT				LR	LR		
	comp=Z,80µm,20.0s,MS7.0						
SNCC	**San Nicolas Is**	**74.31**	**60**	P	**P**	**21 50 29.4**	**+0.2**
	comp=Z,2µm,1.5s,mb6.7						
SNCC				LR	LR		
	comp=Z,120µm,19.0s,MS7.2						
TPNV	**Topopah Spring**	**74.35**	**55**	*e*P	**P**	**21 50 29.1**	**-0.2**
	comp=Z,1µm,1.3s,mb6.7						
TPNV				*e*pP	pP	21 50 32.3	-1.5
TPNV				LR	LR		
	comp=Z,71µm,20.0s,MS7.0						
TPNV	**Topopah Spring**	**74.35**	**55**	*e*P	**P**	**21 50 29.2**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,1µm,1.3s,mb6.7						
TPNV				MLR	MLR		
	comp=Z,71µm,20.0s,MS7.0						
ASHO	**Ashiyiah**	**74.36**	**289**	⇓P	**P**	**21 50 29.5**	**-0.1**
	SNR=144						
ASHO				⇑S	S	22 00 07.4	+5.3
LAO	**LASA Array**	**74.39**	**43**	P	**P**	**21 50 29.7**	**+0.4**
LAO				LR	LR		
	comp=Z,68µm,21.0s,MS6.9						
CLDR	**Caldiran**	**74.39**	**308**	P	**P**	**21 50 30.1**	**+0.5**
ARTV	**Artvin**	**74.39**	**310**	*i* P	**P**	**21 50 29.6**	**+0.1**
HWUT	**Hardware Ranch**	**74.50**	**49**	P	**P**	**21 50 30.2**	**0.0**
	comp=Z,2µm,1.4s,mb6.8						
HWUT				*e*pP	pP	21 50 34.5	-0.1
HWUT				LR	LR		
	comp=Z,36µm,20.0s,MS6.7						
NAO01	**NORSAR Array S**	**74.54**	**339**	PFAKE		21 50 40.0	+10
NAO01				LR	LR		
	comp=Z,120µm,20.0s,MS7.2						
NAO	**NORSAR Subarra**	**74.57**	**339**	P	**P**	**21 50 27.5**	**-2.6**
	comp=Z,4µm,2.5s,mb6.9						
NAO	**NORSAR Subarra**	**74.57**	**339**	P	**P**	**21 50 27.5**	**-2.6**
NAO				pmax	pmax		
	comp=Z,4µm,2.5s,mb6.9						
DUG	**Dugway**	**74.60**	**51**	*e*P	**P**	**21 50 30.7**	**0.0**
	comp=Z,1µm,1.3s,mb6.6						
DUG				*e*pP	pP	21 50 34.1	-1.1
DUG				LR	LR		
	comp=Z,54µm,19.0s,MS6.9						
DUG	**Dugway**	**74.60**	**51**	*e*P	**P**	**21 50 30.7**	**0.0**
DUG				pmax	pmax		
	comp=Z,1µm,1.3s,mb6.6						
DUG				MLR	MLR		
	comp=Z,54µm,19.0s,MS6.9						
BSY	**Bisya**	**74.61**	**287**	⇓P	**P**	**21 50 31.9**	**+0.8**
	SNR=181						
SFJD	**Kangerlussuaq**	**74.61**	**6**	*i* P	**P**	**21 50 29.8**	**-0.5**
	comp=Z,408nm,1.0s,mb6.3						
SFJD				*i*		21 53 18.8	
SFJD				*i* S	S	22 00 28.1	+24
SFJD				*e*		22 08 13.6	
	comp=Z,85µm,18.0s						
SFJD	**Kangerlussuaq**	**74.61**	**6**	*i* P	**P**	**21 50 29.8**	**-0.5**
SFJD				*i*		21 53 18.8	
SFJD				*i* S	S	22 00 28.1	+24
SFJD				pmax	pmax		
	comp=Z,410nm,1.0s,mb6.3						
SFJD				MLR	MLR		
	comp=Z,85µm,18.0s,MS7.1						
MUN	**Mundaring**	**74.62**	**205**	*e*P	**P**	**21 50 33.0**	**+2.0**
MWC	**Mount Wilson**	**74.74**	**58**	P	**P**	**21 50 31.7**	**0.0**
NOQ	**North Oquirrh**	**74.74**	**50**	P	**P**	**21 50 32.2**	**+0.6**
ARQ	**Araqi**	**74.78**	**288**	P	**P**	**21 50 32.6**	**+0.5**
	SNR=138						
ANN	**Anapa**	**74.78**	**315**	*d* *i*P	**P**	**21 50 31.1**	**-0.6**
ANN				*i*		21 50 44.2	
ANN				*i*		21 53 19.2	
ANN				*i* PPP	PPP	21 55 05.4	-0.8
ANN				*i* S	S	22 00 07.9	+1.5
ANN				*i*		22 00 39.0	
ANN				*i* SS	SS	22 04 59.6	+3.0
ANN				pmax	pmax		
	comp=Z,435nm,1.2s,mb6.3						
ANN				pmax	pmax		
	comp=Z,31µm,14.7s						
TCUT	**Toone Canyon**	**74.89**	**49**	P	**P**	**21 50 32.6**	**+0.2**
TCUT				*e*pP	pP	21 50 36.2	-0.7
GSC	**Goldstone**	**74.95**	**57**	P	**P**	**21 50 32.2**	**-0.7**
BW06	**Boulder Array**	**74.98**	**47**	P	**P**	**21 50 32.0**	**-0.8**
	comp=Z,633nm,1.1s,mb6.5						
BW06				LR	LR		
	comp=Z,40µm,19.0s,MS6.7						
PDAR	**Pinedale Array**	**74.98**	**47**	P	**P**	**21 50 32.0**	**-0.9**
	comp=Z,186nm,0.8s,mb6.1,baz=279,slow=1.3,SNR=272						
PDAR				PKKPbc		22 10 00.6	
	comp=Z,2.2nm,1.0s,baz=90,slow=3.0,SNR=4.0						
PDAR				PKP2bc		22 17 37.2	
	comp=Z,1.5nm,0.9s,baz=131,slow=2.0,SNR=4.6						
PDAR	**Pinedale Array**	**74.98**	**47**	P	**P**	**21 50 32.0**	**-0.9**
PDAR				PKKPbc		22 10 00.6	
PDAR				⇑*e*		22 17 37.2	
VANB	**Van**	**75.05**	**307**	P	**P**	**21 50 34.1**	**+0.8**
TVAN	**Van**	**75.08**	**307**	*i* P	**P**	**21 50 33.2**	**-0.3**
FRB	**Frobisher Bay**	**75.13**	**15**	P	**P**	**21 50 31.7**	**-1.6**
	comp=Z,214nm,0.7s,mb6.2,baz=333,slow=6.2,SNR=23						
FRB				S	S	22 00 11.6	+1.7
	comp=Z,20nm,1.1s,baz=190,slow=18,SNR=1.6						
FRB	**Frobisher Bay**	**75.13**	**15**	P	**P**	**21 50 31.7**	**-1.6**
FRB				S	S	22 00 11.6	+1.7
AKASG	**Malin Array Be**	**75.15**	**324**	P	**P**	**21 50 32.9**	**-0.8**
	comp=Z,125nm,0.7s,mb5.9,baz=44,slow=5.7,SNR=344						
AKASG				PP	PP	21 53 19.6	-4.6
	comp=Z,32nm,0.8s,baz=43,slow=8.5,SNR=2.5						
AKASG				S	S	22 00 13.8	+3.4
	comp=Z,0.2nm,0.2s,baz=24,slow=9.1,SNR=2.4						
AKASG				PKKPbc		22 09 58.1	
	comp=Z,0.2nm,0.3s,baz=250,slow=2.2,SNR=6.3						
AKASG				PKPPKP		22 17 42.5	
	comp=Z,2.5nm,0.9s,baz=215,slow=0.9,SNR=4.6						
AKASG	**Malin Array Be**	**75.15**	**324**	P	**P**	**21 50 32.9**	**-0.8**
AKASG				PP	PP	21 53 19.6	-4.6
AKASG				S	S	22 00 13.8	+3.4
AKASG				PKKPbc		22 09 58.1	
AKASG				P'P'		22 17 42.5	
NWAO	**Narrogin (SRO)**	**75.16**	**204**	P	**P**	**21 50 33.8**	**-0.3**
NWAO				LR	LR		
	comp=Z,17µm,19.0s,MS6.4						
NLU	**North Lily Min**	**75.19**	**51**	P	**P**	**21 50 34.8**	**+0.6**
TOO	**Toolangi**	**75.25**	**179**	*e*P	**P**	**21 50 34.9**	**+0.4**
	comp=Z,160nm,0.8s,mb6.0						
TOO	**Toolangi**	**75.25**	**179**	*e*P	**P**	**21 50 34.9**	**+0.4**
TOO				pmax	pmax		
	comp=Z,160nm,0.8s,mb6.0						
SHPR	**Sheep Range**	**75.32**	**55**	P	**P**	**21 50 34.9**	**-0.1**
OSL	**Oslo**	**75.32**	**338**	*e*P	**P**	**21 50 34.8**	**+0.3**
OSL				AMb	AMB	21 50 44.6	
	comp=Z,985nm,1.6s,mb6.5						
OSL	**Oslo**	**75.32**	**338**	*e*P	**P**	**21 50 34.8**	**+0.3**
	comp=Z,985nm,1.6s,mb6.5						
DAU	**Daniels Canyon**	**75.41**	**50**	P	**P**	**21 50 36.0**	**+0.6**
MPU	**Maple Canyon**	**75.43**	**51**	P	**P**	**21 50 36.1**	**+0.6**
HKR	**Hakkari**	**75.43**	**306**	P	**P**	**21 50 35.6**	**0.0**
RAO	**Raoul Island**	**75.45**	**147**	*e*P	**P**	**21 50 35.4**	**-0.5**
	comp=Z,376nm,0.8s,mb6.4						
RAO				*e*		21 50 44.3	
RAO				LR	LR		
	comp=Z,82µm,19.0s,MS7.0						
RAO	**Raoul Island**	**75.45**	**147**	*e*P	**P**	**21 50 35.4**	**-0.5**
RAO				*e*		21 50 44.3	
RAO				pmax	pmax		
	comp=Z,376nm,0.8s,mb6.4						
RAO				MLR	MLR		
	comp=Z,82µm,19.0s,MS7.0						
HAKT	**HAKKARI**	**75.47**	**306**	*i* P	**P**	**21 50 34.6**	**-1.2**
SUW	**Suwalki**	**75.49**	**329**	*e*P	**P**	**21 50 34.8**	**-0.8**
SUW				*e*pP	pP	21 50 42.5	+2.5
SUW				*e*PP	PP	21 53 24.5	-2.3
SUW				*e*S	S	22 00 16.2	+2.2
SUW				MLR	MLR	22 26 40.5	
	comp=Z,125µm,18.2s,MS7.2						
SUW	**Suwalki**	**75.49**	**329**	*e*P	**P**	**21 50 34.1**	**-1.4**
SUW				*e*pP	pP	21 50 42.5	+2.5
SUW				*e*PP	PP	21 53 24.5	-2.3
SUW				*e*PP	PP	21 53 24.6	-2.2
SUW				*e*S	S	22 00 16.2	+2.2
SUW	**Suwalki**	**75.49**	**329**	*e*P	**P**	**21 50 34.1**	**-1.5**
SUW				e*PP	pP	21 50 42.5	+2.5
SUW				*e*		21 53 24.6	
SUW				*e*S	S	22 00 16.2	+2.2
ARUT	**Antelope Range**	**75.65**	**53**	*e*P	**P**	**21 50 36.7**	**-0.2**
ARUT				*e*pP	pP	21 50 41.6	+0.3
MACK	**Trabzon**	**75.83**	**311**	*i* P	**P**	**21 50 37.2**	**-0.6**
KONO	**Kongsberg**	**75.89**	**338**	⇓*i*P	**P**	**21 50 38.0**	**+0.2**
KONO	**Kongsberg**	**75.89**	**338**	P	**P**	**21 50 37.6**	**-0.1**
KONO				pmax	pmax		
	comp=Z,950nm,1.6s,mb6.5						
MVU	**Marysvale**	**75.99**	**52**	P	**P**	**21 50 39.9**	**+1.1**
	comp=Z,865nm,1.3s,mb6.5						
MSU	**Marysvale**	**76.00**	**52**	P	**P**	**21 50 39.1**	**+0.3**
NEN	**Nelson**	**76.03**	**56**	*e*P	**P**	**21 50 38.7**	**-0.4**
NEN				*e*pP	pP	21 50 44.0	+0.4
TMUT	**Trail Mountain**	**76.12**	**51**	*e*P	**P**	**21 50 40.0**	**+0.5**
TMUT				*e*pP	pP	21 50 43.8	-0.2
PFO	**Pinyon Flat Ob**	**76.18**	**58**	P	**P**	**21 50 39.3**	**-0.7**
PFO				LR	LR		
	comp=Z,31µm,20.0s,MS6.6						
LDFC	**Landfair**	**76.20**	**56**	*e*P	**P**	**21 50 40.0**	**0.0**
LDFC				*e*pP	pP	21 50 45.3	+0.8
BNGL	**BINGOL**	**76.22**	**309**	*i* P	**P**	**21 50 40.8**	**+0.7**
SIRT	**Sirnak**	**76.30**	**307**	P	**P**	**21 50 40.5**	**-0.1**
GUMT	**Gumushane**	**76.31**	**311**	P	**P**	**21 50 41.3**	**+0.8**
ASK	**Askoy**	**76.40**	**341**	*e*P	**P**	**21 50 44.0**	**+3.4**
ASK				AMb	AMB	21 50 50.1	
	comp=Z,2µm,1.8s,mb6.8						
ASK	**Askoy**	**76.40**	**341**	*e*P	**P**	**21 50 44.0**	**+3.4**
	comp=Z,2µm,1.8s,mb6.8						
RUND	**Rundenannen**	**76.42**	**341**	*e*P	**P**	**21 50 41.6**	**+1.0**
RUND				AMb	AMB	21 50 51.6	
	comp=Z,662nm,1.8s,mb6.3						
BER	**Bergen**	**76.45**	**341**	*e*P	**P**	**21 50 41.7**	**+0.8**
BER				⇓*i*P		21 50 42.4	
BER				AMb	AMB	21 50 51.7	
	comp=Z,831nm,1.9s,mb6.3						
BER				AMb	AMB	21 50 52.1	
	comp=Z,711nm,1.8s,mb6.3						
BER				AMS	AMS	22 28 20.6	
	comp=Z,79µm,19.5s,MS7.0						
BER	**Bergen**	**76.45**	**341**	*e*P	**P**	**21 50 41.7**	**+0.8**
	comp=Z,831nm,1.9s,mb6.3						
BER	**Bergen**	**76.45**	**341**	*e*P	**P**	**21 50 41.7**	**+0.8**
BER				pmax	pmax		
	comp=Z,831nm,1.9s,mb6.3						
BTMT	**Batman**	**76.48**	**308**	P	**P**	**21 50 41.6**	**+0.1**
EZC	**Erzincan**	**76.55**	**310**	P	**P**	**21 50 43.5**	**+1.7**
EGD	**Espegrend**	**76.58**	**341**	*e*P	**P**	**21 50 44.8**	**+3.2**
EGD				AMb	AMB	21 50 51.1	
	comp=Z,1µm,1.7s,mb6.5						
EGD	**Espegrend**	**76.58**	**341**	*e*P	**P**	**21 50 44.8**	**+3.2**
	comp=Z,1µm,1.7s,mb6.5						
BAR	**Barrett**	**76.59**	**59**	P	**P**	**21 50 41.5**	**-0.7**
MSL	**Mosul**	**76.62**	**306**	*e*x	x	21 50 42.5	
MSL				*e*x	x	21 53 38.5	
MSL				*e*x	x	21 55 36.5	
MSL				*e*x	x	22 00 28.5	
MSL				*e*x	x	22 01 09.0	
KELT	**Kelkit**	**76.63**	**311**	*i* P	**P**	**21 50 45.9**	**+3.5**
SRU	**San Rafael**	**76.66**	**51**	P	**P**	**21 50 42.0**	**-0.4**
BINT	**Bingol**	**76.67**	**309**	P	**P**	**21 50 42.6**	**+0.1**
GRSN	**GIRESUNGRSN**	**76.73**	**312**	*i* P	**P**	**21 50 40.9**	**-1.9**
BEST	**Besiri**	**76.80**	**308**	*i* P	**P**	**21 50 43.3**	**0.0**
BORG	**Borgarnes**	**76.97**	**354**	LR	LR	22 27 03.2	
	comp=Z,31µm,19.6s,MS6.6,baz=20,slow=38						
BORG	**Borgarnes**	**76.97**	**354**	P	**P**	**21 50 44.6**	**+0.9**
BORG				LR	LR		
	comp=Z,9µm,21.0s,MS6.1						
RWWY	**Rawlins**	**77.01**	**47**	*e*P	**P**	**21 50 43.9**	**-0.4**
	comp=Z,2µm,1.4s,mb6.8						
ULM	**Lac du Bonnet**	**77.12**	**35**	P	**P**	**21 50 43.4**	**-1.5**
	comp=Z,123nm,0.8s,mb5.9,baz=313,slow=6.7,SNR=37						
ULM				PP	PP	21 53 37.5	-2.6
	comp=Z,22nm,0.8s,baz=257,slow=14,SNR=2.6						
ULM				S	S	22 00 33.2	+1.2
	comp=Z,4.3nm,1.0s,baz=105,slow=20,SNR=2.2						
ULM				PKPPKP		22 17 49.6	
	comp=Z,17nm,1.2s,baz=212,slow=5.1,SNR=3.9						
ULM				LR	LR	22 24 48.5	
	comp=Z,52µm,19.8s,MS6.8,baz=320,slow=36						
ULM	**Lac du Bonnet**	**77.12**	**35**	P	**P**	**21 50 43.4**	**-1.5**
ULM				PP	PP	21 53 37.5	-2.6
ULM				S	S	22 00 33.2	+1.2
ULM				P'P'		22 17 49.6	
ULM				LR	LR	22 24 48.5	
RSSD	**Black Hills**	**77.22**	**44**	*e*P	**P**	**21 50 37.1**	**-8.4**
RSSD				LR	LR		
	comp=Z,49µm,20.0s,MS6.8						

PTK	Pertek	77.34	310	P	P	21 50 47.0	+0.7
DIY	Diyarbakir	77.44	308	P	P	21 50 49.7	+2.9
MARD	Mardin	77.46	308	i P	P	21 50 46.3	-0.7
UMR	Umm Al-Rimmam	77.56	298	eP	P	21 50 47.9	+0.2
UMR				AMb	AMB	21 50 57.1	
	comp=Z,2µm,1.3s,mb6.8						
GLA	Glamis	77.61	58	P	P	21 50 47.8	0.0
BHD	Baghdad	77.61	302	i x	x	21 50 46.0	
BHD				i x	x	21 53 35.0	
BHD				i x	x	21 55 40.0	
BHD				i x	x	22 00 37.0	
MIB	Mutribah	77.68	298	eP	P	21 50 48.3	0.0
MIB				AMb	AMB	21 50 57.6	
	comp=Z,2µm,1.0s,mb7.0						
KBD	Kabd	77.80	297	eP	P	21 50 48.5	-0.5
KBD				AMb	AMB	21 50 58.6	
	comp=Z,6µm,1.2s,mb7.4						
BSD	Bornholm Skovb	77.82	333	⇑iP	P	21 50 48.3	-0.3
	comp=Z,440nm,1.0s,mb6.3						
BSD	Bornholm Skovb	77.82	333	⇑iP	P	21 50 48.3	-0.3
BSD				pmax	pmax		
	comp=Z,440nm,1.0s,mb6.3						
ELZG	Elazig	77.83	309	i P	P	21 50 48.8	-0.2
KIS	Kishinev	77.88	321	αiP	P	21 50 48.0	-1.0
KIS				i		21 53 48.0	
KIS				i PPP	PPP	21 55 42.0	+6.1
KIS				i S	S	22 00 44.0	+3.8
KIS				i PS	PS	22 01 28.0	+5.1
KIS				pmax	pmax		
	comp=N,400nm,2.0s						
KIS				pmax	pmax		
	comp=E,300nm,2.0s						
KIS				pmax	pmax		
	comp=Z,500nm,5.0s						
KIS				pmax	pmax		
	comp=Z,30µm,12.0s						
KIS				pmax	pmax		
	comp=N,7µm,10.0s						
KIS				pmax	pmax		
	comp=E,6µm,10.0s						
KIS				pmax	pmax		
	comp=Z,26µm,16.0s						
KIS				pmax	pmax		
	comp=Z,12µm,10.0s						
KIS				pmax	pmax		
	comp=N,6µm,13.0s						
KIS				pmax	pmax		
	comp=E,6µm,14.0s						
KIS				pmax	pmax		
	comp=Z,12µm,20.0s						
KIS				smax			
	comp=N,23µm,15.0s						
KIS				smax			
	comp=E,36µm,17.0s						
KIS				MLR	MLR		
	comp=Z,148µm,15.5s,MS7.4						
KIS				MLR	MLR		
	comp=N,104µm,15.0s,MS7.3						
KIS				MLR	MLR		
	comp=E,56µm,15.0s,MS7.3						
KIS				MLR	MLR		
	comp=Z,78µm,16.0s						
QRN	Al-Qurain	77.90	297	eP	P	21 50 49.9	+0.3
QRN				AMb	AMB	21 50 59.1	
	comp=Z,3µm,0.9s,mb7.2						
KVT	Kavak	77.93	313	P	P	21 50 49.3	-0.1
RDF	Al-Radifah	78.05	297	eP	P	21 50 49.9	-0.5
RDF				AMb	AMB	21 51 00.1	
	comp=Z,4µm,1.2s,mb7.2						
NAY	Al-Naaiem	78.07	298	eP	P	21 50 50.6	+0.1
NAY				AMb	AMB	21 51 00.0	
	comp=Z,2µm,1.1s,mb7.0						
LVV	L'vov	78.15	325	eP	P	21 50 50.0	-0.5
LVV				i S	S	22 00 43.0	-0.1
LVV				MLR	MLR		
	comp=Z,113µm,16.0s,MS7.3						
COP	Copenhagen	78.23	335	⇑iP	P	21 50 51.7	+0.9
	comp=Z,756nm,0.9s,mb6.6						
COP				i		21 53 47.1	
COP				i S	S	22 00 41.1	-2.6
COP				i		22 00 45.4	
COP				i		22 05 44.8	
	comp=Z,103µm,18.0s						
COP	Copenhagen	78.23	335	⇑iP	P	21 50 51.7	+0.9
COP				i		21 53 47.1	
COP				i S	S	22 00 41.1	-2.6
COP				i		22 05 44.8	
COP				pmax	pmax		
	comp=Z,760nm,0.9s,mb6.6						
COP				MLR	MLR		
	comp=Z,100µm,18.0s,MS7.2						
WAL1	Walls	78.25	344	⇑eP	P	21 50 52.4	+1.6
PHWY	Pilot Hill	78.27	46	eP	P	21 50 51.8	+0.5
PHWY				epP	pP	21 50 54.5	-1.3
MYA	Malataya	78.28	310	P	P	21 50 54.9	+3.4
IAS	Iasi	78.36	322	⇑iP	P	21 50 52.2	+0.5
IAS	Iasi	78.36	322	⇑iP	P	21 50 52.2	+0.5
BOYT	Boyabat	78.37	314	i P	P	21 50 51.5	-0.3
BYBT	Boyabat	78.41	314	P	P	21 50 51.6	-0.5
SHAO	Shalim	78.55	284	P	P	21 50 53.7	+0.4
	SNR=7.6						
RAR	Rarotonga	78.57	128	LR	LR	22 19 11.9	
	comp=Z,45µm,21.1s,MS6.8,baz=317,slow=31						
RAR	Rarotonga	78.57	128	PFAKE		21 51 00.0	+6.6
RAR				LR	LR		
	comp=Z,2.0nm,19.0s						
URFA	Urfa	78.60	309	P	P	21 50 53.4	+0.2
MUD	Monsted U'grnd	78.66	337	⇑iP	P	21 50 53.7	+0.6
	comp=Z,317nm,1.0s,mb6.2						
MUD				i		21 53 54.3	
MUD				i		21 55 36.6	
MUD				i S	S	22 00 52.8	+4.5
MUD				i		22 05 53.6	
	comp=Z,78µm,17.0s						
MUD	Monsted U'grnd	78.66	337	⇑iP	P	21 50 53.7	+0.6
MUD				i		21 53 54.3	
MUD				i S	S	22 00 52.8	+4.5
MUD				i		22 05 53.6	
MUD				pmax	pmax		
	comp=Z,320nm,1.0s,mb6.2						
MUD				MLR	MLR		
	comp=Z,78µm,17.0s,MS7.1						
HASS	Wahat al Ahsa'	78.75	293	P	P	21 50 54.2	-0.1
SMCO	Snowmass	78.75	49	eP	P	21 50 54.8	+0.8
	comp=Z,2µm,1.5s,mb6.8						
SMCO				epP	pP	21 50 58.3	-0.2
RGN	Rugen	78.83	334	eP	P	21 50 55.4	+1.3
	comp=Z,1µm,1.1s,mb6.8						
RGN				epP	pP	21 50 58.2	-0.5
KWP	Kalwaria	78.88	326	eP	P	21 50 55.1	+0.6
KWP				epP	pP	21 51 02.2	+3.2
KWP				ePP	PP	21 53 52.7	-2.4
KWP				eS	S	22 00 55.7	+4.9
KWP				MLR	MLR	22 29 55.9	
	comp=Z,265µm,16.5s,MS7.7						
ATAB	Bozova	78.90	309	i P	P	21 50 55.4	+0.5
CTKT	Corum	78.95	313	i P	P	21 50 54.0	-1.1
TOS	Tosya	79.12	314	P	P	21 50 56.7	+0.7
BALT	Daday	79.15	315	i P	P	21 50 55.9	-0.2
BURAR	Bucovina Array	79.19	323	⇑P	P	21 50 56.4	+0.2
BURAR	Bucovina Array	79.19	323	⇓P	P	21 50 56.4	+0.2
CORM	Corum	79.34	313	P	P	21 50 57.8	+0.6
GZT	Gaziantep	79.42	309	i P	P	21 50 58.7	+0.9
CFR	Carcaliu	79.48	320	⇑iP	P	21 50 57.5	-0.4
CFR	Carcaliu	79.48	320	⇑iP	P	21 50 57.5	-0.3
BNN	Bunyan	79.49	311	P	P	21 50 59.0	+1.0
KOLS	Kolonicke sedl	79.58	326	eP	P	21 50 58.2	-0.1
KOLS				e		21 54 02.5	
KOLS				e		22 01 40.2	
CANT	Cankiri	79.63	314	P	P	21 50 59.8	+1.1
KAHT	Ahir Dag	79.67	310	i P	P	21 51 00.5	+1.4
STHS	Stebnicka Huta	79.68	326	eP	P	21 50 59.5	+0.7
STHS				e		22 01 12.3	
OJC	Ojcow	79.70	328	⇓iP	P	21 50 59.1	+0.2
OJC				epP	pP	21 51 03.3	-0.1
OJC				ePP	PP	21 54 02.4	+0.8
OJC				ePPP	PPP	21 55 51.5	-0.8
OJC				i S	S	22 01 02.7	+3.2
OJC				e		22 05 49.5	
OJC				MLR	MLR	22 29 32.3	
	comp=Z,143µm,18.5s,MS7.3						
OJC	Ojcow	79.70	328	⇓iP	P	21 50 59.1	+0.2
OJC				e*PP	pP	21 51 03.3	-0.1
OJC				e		21 54 02.4	
OJC				ePPP	PPP	21 55 51.5	-0.8
OJC				i S	S	22 01 02.7	+3.2
OJC				MLR	MLR		
	comp=Z,143µm,18.5s,MS7.3						
VRI	Vrincioaia	79.70	321	⇑iP	P	21 51 00.1	+1.1
VRI	Vrincioaia	79.70	321	⇑iP	P	21 51 00.1	+1.0
SAFT	Safranbolu	79.74	315	P	P	21 50 59.6	+0.2
GAZ	Gaziantep	79.76	309	P	P	21 51 02.6	+3.1
UZH	Uzhgorod	79.80	325	i P	P	21 51 00.0	+0.5
UZH				eS	S	22 01 04.0	+3.5
ELDT	Eldivan	79.82	314	i P	P	21 50 58.7	-1.1
TIRR	Tirgusor	79.84	319	⇑iP	P	21 51 00.0	+0.2
CDAG	Cicekdag	79.85	313	i P	P	21 50 58.4	-1.6
HARR	Harsova	79.92	320	⇑iP	P	21 51 00.3	0.0
HARR	Harsova	79.92	320	⇑iP	P	21 51 00.2	0.0
RBK	Rabkut	79.95	284	P	P	21 51 00.5	-0.4
	SNR=46						
CRVS	Cervenica-Dubn	79.97	326	eP	P	21 51 00.9	+0.5
CRVS				e		21 51 07.7	
CRVS				eS	S	22 01 03.4	+1.1
WHFO	Wadi Hawf	80.03	285	P	P	21 51 00.8	-0.5
	SNR=85						
NIE	Niedzica	80.08	327	⇓eP	P	21 51 01.6	+0.6
AVNT	Avonos	80.12	312	i P	P	21 51 00.6	-0.8
BR131	Keskin Array S	80.21	313	P	P	21 51 02.6	+0.8
BR131				LR	LR		
	comp=Z,31µm,19.0s,MS6.7						
BRTR	Keskin Array B	80.21	313	P	P	21 51 01.5	-0.4
	comp=Z,230nm,1.3s,mb6.0,baz=62,slow=3.4,SNR=125						
BRTR				PP	PP	21 54 02.0	-4.1
	comp=Z,15nm,0.9s,baz=60,slow=12,SNR=2.8						
BRTR				PKKP	PKKP	22 09 31.0	+2.8
	comp=Z,1.4nm,0.8s,baz=154,slow=2.2,SNR=3.8						
BRTR				PKKPbc		22 09 44.0	
	comp=Z,2.0nm,0.8s,baz=193,slow=3.4,SNR=4.6						
BRTR				PKPPKP		22 17 52.2	
	comp=Z,5.4nm,1.1s,baz=153,slow=2.8,SNR=4.2						
BRTR	Keskin Array B	80.21	313	P	P	21 51 01.5	-0.4
BRTR						21 54 02.1	
BRTR						22 09 44.1	
ISR	Istrita	80.32	321	⇑iP	P	21 51 03.3	+0.9
ISR	Istrita	80.32	321	⇑iP	P	21 51 03.3	+0.9
MLR	Muntele Rosu	80.36	321	P	P	21 51 02.1	-0.4
	comp=Z,128nm,1.2s,mb5.7,baz=6.7,slow=2.9,SNR=52						
MLR				PP	PP	21 54 10.7	+3.4
	comp=Z,44nm,0.9s,baz=48,slow=6.6,SNR=2.6						
MLR				S	S	22 01 11.0	+4.6
	comp=Z,3.0nm,1.0s,baz=68,slow=19,SNR=2.0						
MLR				PKKPbc		22 09 46.8	
	comp=Z,23nm,1.1s,baz=125,slow=7.9,SNR=6.5						
MLR				PKPPKP		22 17 36.3	
	comp=Z,6.6nm,1.1s,baz=142,slow=14,SNR=3.1						
MLR				LR	LR	22 28 54.5	
	comp=Z,127µm,21.5s,MS7.2,baz=45,slow=37						
KOZT	Kozan	80.40	310	P	P	21 51 03.1	+0.1
KAMT	Kaman	80.40	313	P	P	21 51 04.3	+1.4
RAC	Raciborz	80.47	328	eP	P	21 51 03.7	+0.7
RAC				ePP	PP	21 54 08.9	+0.6
RAC				eS	S	22 01 11.9	+4.4
RAC				LMN		22 23 44.9	
RAC				MLR	MLR	22 30 57.6	
RAC				LME		22 31 43.3	
	comp=Z,228µm,16.9s						
RAC	Raciborz	80.47	328	eP	P	21 51 03.7	+0.7
RAC				ePP	PP	21 54 08.9	+0.6
RAC				eS	S	22 01 11.9	+4.4
RAC				LR	LR		
	comp=Z,144µm,18.0s,MS7.4						
PSN	Preselentsi	80.50	319	P	P	21 51 04.5	+1.2
SDCO	Great Sand Dun	80.56	49	P	P	21 51 04.2	+0.4
	comp=Z,2µm,1.7s,mb6.7						
SDCO				LR	LR		
	comp=Z,59µm,20.0s,MS6.9						
ANTO	Ankara	80.60	314	P	P	21 51 04.9	+1.0
ANTO	Ankara	80.60	314	eP	P	21 51 04.8	+0.9
	comp=Z,703nm,1.0s,mb6.5						
ANTO				epP	pP	21 51 09.6	+1.1
ANTO				LR	LR		
	comp=Z,36µm,19.0s,MS6.8						
ANTO	Ankara	80.60	314	eP	P	21 51 04.8	+0.9
ANTO				pmax	pmax		
	comp=Z,703nm,1.0s,mb6.5						
ANTO				MLR	MLR		
	comp=Z,36µm,19.0s,MS6.8						
LOD	Lodumlu	80.60	314	P	P	21 51 04.2	+0.3
TAU	Tasmania Unive	80.61	178	P	P	21 51 04.6	+0.7
TAU				LR	LR		
	comp=Z,12µm,22.0s,MS6.2						
KSP	Ksiaz	80.65	330	eP	P	21 51 04.3	+0.3
KSP				epP	pP	21 51 10.2	+1.7
KSP				ePP	PP	21 54 09.1	-0.7
KSP				eS	S	22 01 13.3	+3.9
KSP				eSS	SS	22 06 15.4	-10
KSP				MLR	MLR	22 30 19.7	
	comp=Z,216µm,17.9s,MS7.5						
KSP	Ksiaz	80.65	330	⇓eP	P	21 51 03.6	-0.4
KSP				epP	pP	21 51 11.3	+2.8
KSP				ePP	PP	21 54 06.0	-3.9
KSP				ePPP	PPP	21 55 53.0	-7.9
KSP				eS	S	22 01 08.5	-0.9
KSP				eSS	SS	22 06 07.5	-18
KSP				LR	LR		
	comp=Z,249µm,17.9s,MS7.6						
KSP	Ksiaz	80.65	330	⇓eP	P	21 51 03.6	-0.4
KSP				e*PP	pP	21 51 11.3	+2.8
KSP				e		21 54 06.0	
KSP				ePPP	PPP	21 55 53.0	-7.9
KSP				eS	S	22 01 08.5	-0.9
KSP				MLR	MLR		
	comp=Z,249µm,17.9s,MS7.6						
SNX	Sinaia	80.66	321	⇑iP	P	21 51 04.3	+0.1
OKC	Ostrava-Krasne	80.68	328	⇓iP	P	21 51 04.3	+0.2
OKC				ePP	PP	21 54 09.6	-0.5
OKC				ePPP	PPP	21 55 53.5	-7.6
OKC				eS	S	22 01 14.3	+4.6
OKC				ePKPPKP		22 17 47.4	
OKC				AMS	AMS	22 31 00.0	
	comp=Z,131µm,15.1s						
OKC	Ostrava-Krasne	80.68	328	⇓iP	P	21 51 04.3	+0.2
OKC				e		21 54 09.6	
OKC				ePPP	PPP	21 55 53.5	-7.6
OKC				e		22 01 14.3	
OKC				MLR	MLR		
	comp=Z,131µm,15.1s,MS7.4						
KECS	Kecovo	80.71	326	eP	P	21 51 04.5	+0.2
KECS				e		21 51 12.4	
KECS				eS	S	22 01 12.3	+2.3
KECS	Kecovo	80.71	326	eP	P	21 51 04.5	+0.2
KECS				e		21 51 12.4	
KECS				eS	S	22 01 12.0	+2.0
NIG	Nigde	80.71	311	P	P	21 51 02.0	-2.6
ABTO	Aybut	80.73	285	⇓P	P	21 51 05.3	+0.2
	SNR=58						
TUC	Tucson	80.74	56	eP	P	21 51 03.9	-1.0
	comp=Z,148nm,1.4s,mb5.7						
TUC				epP	pP	21 51 10.3	+0.9
TUC				LR	LR		
	comp=Z,73µm,19.0s,MS7.0						
TUC	Tucson	80.74	56	eP	P	21 51 03.9	-1.0
TUC				e*PP	pP	21 51 10.3	+0.9
TUC				pmax	pmax		
	comp=Z,148nm,1.4s,mb5.7						
TUC				MLR	MLR		
	comp=Z,73µm,19.0s,MS7.0						
CEYT	Ceyhan	80.75	310	P	P	21 51 06.3	+1.5
COBT	Iskenderun	80.76	309	i P	P	21 51 04.7	-0.2
EYMN	Ely	80.77	35	P	P	21 51 03.6	-1.0
	comp=Z,909nm,1.3s,mb6.5						
EYMN				LR	LR		
	comp=Z,63µm,21.0s,MS6.9						
VOIR		80.83	322	⇑iP	P	21 51 05.9	+0.8
LIKS	Likavka	80.88	327	eP	P	21 51 06.5	+1.3
DGAR	Diego Garcia	80.92	253	P	P	21 51 06.3	+0.2
	comp=Z,924nm,1.0s,mb6.7						
DGAR				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
DGAR	Diego Garcia	80.92	253	P	P	21 51 06.3	+0.1
DGAR				pmax	pmax		
	comp=Z,924nm,1.0s,mb6.7						
DGAR				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.0						
MVH1	Achvaich	80.93	344	⇑eP	P	21 51 06.0	+0.7
RTO	Tolsta	80.94	345	eP	P	21 51 06.0	+0.7
DRGR		80.96	324	⇑iP	P	21 51 05.4	-0.3
DRGR		80.96	324	⇑iP	P	21 51 05.4	-0.3
MORC	Moravsky Berou	80.98	329	⇑iP	P	21 51 06.2	+0.5
MORC	Moravsky Berou	80.98	329	⇓P	P	21 51 06.2	+0.5
MTUR	Matau	80.98	322	⇑iP	P	21 51 05.9	+0.1
MTUR	Matau	80.98	322	⇑iP	P	21 51 05.9	0.0
REB	Eisghbrachaidh	80.98	344	eP	P	21 51 05.9	+0.3
KARA	Karaisali	81.00	311	P	P	21 51 07.4	+1.3
HENT	Hendek	81.02	315	i P	P	21 51 05.1	-1.0
DPC	Dobruska-Polom	81.03	330	⇓iP	P	21 51 06.6	+0.6
DPC				ex	x	21 53 59.3	
DPC				ePPP	PPP	21 56 00.9	-3.3
DPC				eS	S	22 01 16.8	+3.5
DPC				ePKKP	PKKP	22 09 45.3	+19
DPC				ePKPPKP		22 17 27.4	
DPC				AMS	AMS	22 30 20.0	
	comp=Z,143µm,18.4s						
DPC	Dobruska-Polom	81.03	330	⇓iP	P	21 51 06.6	+0.6
DPC				ePP	PP	21 53 59.3	-14
DPC				ePPP	PPP	21 56 00.9	-3.3
DPC				eSKS	SKS	22 01 16.8	-8.7
DPC				ePKKP	PKKP	22 09 45.3	+19
DPC				LR	LR		
	comp=Z,143µm,18.4s,MS7.4						
DPC	Dobruska-Polom	81.03	330	⇓iP	P	21 51 06.6	+0.6
DPC				ePPP	PPP	21 56 00.9	-3.3
DPC				e		22 01 16.8	
DPC				e		22 09 45.3	
DPC				MLR	MLR		
	comp=Z,143µm,18.4s,MS7.4						
UPC	Upice	81.03	330	⇓iP	P	21 51 06.2	+0.2
UPC				ePP	PP	21 54 10.6	-2.6
UPC				ePKKP	PKKP	22 09 34.8	+8.2
MCD	Coleburn Disti	81.03	343	⇑eP	P	21 51 06.5	+0.6
MDU	Mudurnu	81.08	315	P	P	21 51 07.4	+0.9
HTY	Hatay	81.09	309	P	P	21 51 07.2	+0.5
BSTP	Nigde	81.11	312	i P	P	21 51 06.4	-0.3
BUC1	Bucharest	81.13	321	⇑iP	P	21 51 07.2	+0.6
BUC1	Bucharest	81.13	321	⇑iP	P	21 51 07.2	+0.5
PRD	Provadia	81.25	319	eP	P	21 51 09.0	+1.7
RRR	Rubha Reidh	81.34	345	⇑eP	P	21 51 08.0	+0.6
PSZ	Piszkesteto	81.39	326	⇓eP	P	21 51 08.7	+0.8
MDO	Dochfour	81.41	344	⇑eP	P	21 51 08.3	+0.5
VYHS	Vyhne	81.42	327	eP	P	21 51 08.7	+0.7
VYHS				ePP	PP	21 54 08.7	-7.7
VYHS				eS	S	22 01 20.2	+2.8
RRH	Rhenigidale	81.46	345	eP	P	21 51 08.3	+0.3
BRG	Berggiesshubel	81.54	331	⇑iP	P	21 51 09.5	+0.9
	comp=Z,320nm,1.5s,mb6.0						
BRG				PP	PP	21 54 18.0	+0.7
BRG				S	S	22 01 23.0	+4.4
BRG				SS	SS	22 06 29.0	-10
BRG				eP'P'		22 17 38.6	
BRG				LR	LR		
	comp=Z,176µm,15.9s,MS7.5						
BRG	Berggiesshubel	81.54	331	⇑iP	P	21 51 09.5	+0.8
BRG						21 54 18.0	
BRG				S	S	22 01 23.0	+4.4
BRG				SS	SS	22 06 29.0	-10
BRG				pmax	pmax		
	comp=Z,320nm,1.5s,mb6.0						
BRG				MLR	MLR		
	comp=N,115µm,16.4s,MS7.4						
BRG				MLR	MLR		
	comp=E,86µm,15.4s,MS7.4						
BRG				MLR	MLR		
	comp=Z,176µm,15.9s,MS7.5						
CLL	Collm	81.55	332	⇑P	P	21 51 08.9	+0.2
	comp=Z,logA/T=2.5,mb6.2						
CLL				i *PP	pP	21 51 12.6	-0.6
CLL				e*SP	sP	21 51 14.0	-0.7
CLL				i PP	PP	21 54 17.9	+0.5
CLL				ePPP	PPP	21 56 05.0	-3.9
CLL				e		21 57 28.0	
CLL				eS	S	22 01 22.0	+3.3
CLL				eSCS	ScS	22 01 38.0	+3.5
CLL				ePS	PS	22 02 05.0	-4.0
CLL				ePPS	PPS	22 02 24.0	-5.6
CLL				eSS	SS	22 06 26.0	-13
CLL				i PKKP	PKKP	22 09 41.0	+15
CLL				eSSS	SSS	22 10 12.0	+10
CLL				e		22 11 47.0	
CLL				e		22 12 54.0	
CLL				i		22 17 35.5	
CLL				i		22 17 58.1	
CLL	Collm	81.55	332	⇑iP	P	21 51 08.9	+0.2
	comp=Z,345nm,1.0s,mb6.2						
CLL				i pP	pP	21 51 12.6	-0.6
CLL				esP	sP	21 51 14.0	-0.7
CLL				eS	S	22 01 22.0	+3.3
CLL				eScS	ScS	22 01 38.0	+3.5
CLL				i PKKP	PKKP	22 09 41.0	+15
CLL				i P'P'		22 17 35.5	
CLL				LR	LR		
	comp=Z,170µm,18.2s,MS7.4						
CLL	Collm	81.55	332	⇑iP	P	21 51 08.9	+0.2
CLL				e*SP	sP	21 51 14.0	-0.7
CLL				eS	S	22 01 22.0	+3.3
CLL				pmax	pmax		
	comp=Z,345nm,1.0s,mb6.2						
CLL				MLR	MLR		
	comp=Z,170µm,18.2s,MS7.4						
KAC	Achnashellach	81.56	344	⇑eP	P	21 51 09.0	+0.4
PVCC	Panska Ves	81.58	331	⇓iP	P	21 51 09.3	+0.5
PVCC				ePP	PP	21 54 08.4	-9.2
PVCC				ePPP	PPP	21 56 05.7	-3.5
PVCC				eS	S	22 01 21.6	+2.6
PVCC				ePKKP	PKKP	22 09 45.5	+20
PVCC				ePKPPKP		22 17 43.6	
PVCC				AMS	AMS	22 31 40.0	
	comp=Z,139µm,16.9s						
PVCC	Panska Ves	81.58	331	⇓iP	P	21 51 09.3	+0.5
PVCC				ePP	PP	21 54 08.4	-9.2
PVCC				ePPP	PPP	21 56 05.7	-3.5
PVCC				eSKS	SKS	22 01 21.6	-7.7
PVCC				ePKKP	PKKP	22 09 45.5	+20
PVCC				LR	LR		
	comp=Z,139µm,16.9s,MS7.4						
PVCC	Panska Ves	81.58	331	⇓iP	P	21 51 09.3	+0.5
PVCC				ePPP	PPP	21 56 05.7	-3.5
PVCC				e		22 01 21.6	
PVCC				MLR	MLR		
	comp=Z,139µm,16.9s,MS7.4						
MERS	Mersin	81.58	311	P	P	21 51 08.7	-0.5
VRAC	Vranov	81.73	329	S	S	22 01 24.8	+4.3
	comp=Z,4.0nm,0.9s,baz=286,slow=19,SNR=2.5						
VRAC				PKPPKP		22 17 40.6	
	comp=Z,4.5nm,1.0s,baz=238,slow=7.8,SNR=3.1						
VRAC				LR	LR	22 31 12.4	
	comp=Z,142µm,18.6s,MS7.4,baz=198,slow=38						
VRAC	Vranov	81.73	329	⇑iP	P	21 51 10.3	+0.6
VRAC	Vranov	81.73	329	⇑iP	P	21 51 10.3	+0.6
KPL	Plockton	81.78	344	⇑eP	P	21 51 10.1	+0.3
KIZT	Kizilcal	81.78	313	P	P	21 51 10.0	-0.2
ANMO	Albuquerque	81.81	52	P	P	21 51 10.4	0.0
	comp=Z,144nm,0.8s,mb6.0,baz=309,slow=6.5,SNR=120						
ANMO				S	S	22 01 28.4	+6.7
	comp=Z,0.5nm,0.4s,baz=60,slow=17,SNR=3.8						
ANMO	Albuquerque	81.81	52	P	P	21 51 10.8	+0.4
	comp=Z,877nm,1.3s,mb6.5						
ANMO				epP	pP	21 51 15.1	+0.2
ANMO				LR	LR		
	comp=Z,40µm,19.0s,MS6.8						
ANMO	Albuquerque	81.81	52	P	P	21 51 10.8	+0.4
ANMO				pmax	pmax		
	comp=Z,877nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,40µm,19.0s						
KSB	Sheil Bridge	81.85	344	⇑eP	P	21 51 10.5	+0.4
KDHN	Kadinhani	81.89	313	i P	P	21 51 09.5	-1.2
BORA	Eskisehir	81.91	315	i P	P	21 51 10.3	-0.5
EDU	Dundee	81.92	343	⇑eP	P	21 51 11.3	+0.9
ESKT	Eskisehir	81.94	314	P	P	21 51 12.0	+1.1
ESKT	Eskisehir	81.94	314	i P	P	21 51 09.7	-1.2
SZH	Strazhica	81.95	320	P	P	21 51 11.5	+0.6
ZIMR		81.96	320	⇑iP	P	21 51 11.8	+0.8
ZIMR		81.96	320	⇑iP	P	21 51 11.8	+0.9
PRA	Prague	81.99	330	⇓P	P	21 51 12.0	+1.0
PRA				ex	x	21 51 47.0	
PRA				PP	PP	21 54 25.0	+4.0
PRA				PPP	PPP	21 56 12.0	-1.0
PRA				AMS	AMS	22 34 30.0	
LENM	Lemitar	82.00	53	P	P	21 51 11.8	+0.5

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SMOL  Smolenice          82.00 328 eP       P       21 51 11.8 +0.7
SMOL                               esP      sP      21 51 16.5 -0.6
SMOL                               ePP      PP      21 54 22.1 +1.0
SMOL  Smolenice          82.00 328 eP       P       21 51 11.8 +0.7
SMOL                               e                21 54 22.1
PRU   Pruhonice          82.02 330⇓iP       P       21 51 11.0 -0.1
PRU                                ePP      PP      21 54 21.3 +0.1
PRU                                ePPP     PPP     21 56 11.1 -2.1
PRU                                eS       S       22 01 26.3 +2.8
PRU                                ePKKP    PKKP    22 09 39.0  +14
PRU                                ePKPPKP          22 17 37.7
PRU                                AMS      AMS     22 32 20.0
      comp=Z,118µm,16.5s
PRU   Pruhonice          82.02 330⇓iP       P       21 51 11.0 -0.1
PRU                                ePP      PP      21 54 21.3 +0.1
PRU                                ePPP     PPP     21 56 11.1 -2.1
PRU                                eSKS     SKS     22 01 26.3 -6.1
PRU                                ePKKP    PKKP    22 09 39.0  +14
PRU                                LR       LR
      comp=Z,118µm,16.5s,MS7.3
PRU   Pruhonice          82.02 330⇓iP       P       21 51 11.0 -0.1
PRU                                e                21 54 21.3
PRU                                ePPP     PPP     21 56 11.1 -2.1
PRU                                e                22 01 26.3
PRU                                MLR      MLR
      comp=Z,118µm,16.5s,MS7.3
YLV   Yalova             82.03 316  P       P       21 51 10.1 -1.3
CLZ   Clausthal          82.07 333 eP       P       21 51 11.5 +0.1
      comp=Z,1µm,1.3s,mb6.7
CLZ                                ePP      PP      21 54 21.8 +0.3
CLZ                                eS       S       22 01 27.2 +3.2
CLZ   Clausthal          82.07 333 eP       P       21 51 11.5 +0.1
CLZ                                e                21 54 21.8
CLZ                                eS       S       22 01 27.2 +3.2
CLZ                                pmax     pmax
      comp=Z,1µm,1.3s,mb6.7
PMOR  Pomariorio Ree     82.10 116 eP       P       21 51 12.9 +0.7
      comp=Z,928nm,1.3s,mb6.5
BUD   Budapest           82.11 326⇑eP       P       21 51 12.5 +0.8
LPM   Los Pinos Moun     82.12  52  P       P       21 51 13.4 +1.4
KONT  Konya--Tatoy       82.14 313  P       P       21 51 12.5 +0.4
ELBA  Catalca            82.14 317 i P      P       21 51 13.8 +1.8
FKH   Fakeheh            82.16 308 eP       P       21 51 13.8 +1.6
SRO   Srobarova          82.16 327 eP       P       21 51 13.4 +1.5
PKSN  Nyarlorinc         82.18 325⇑eP       P       21 51 13.5 +1.5
JMB   Yambol             82.19 319  P       P       21 51 13.0 +0.8
TREC  Trest              82.19 329⇓iP       P       21 51 12.2 +0.2
TREC                               ePP      PP      21 54 21.1 -1.5
TREC                               ePPP     PPP     21 56 12.7 -2.0
TREC                               eS       S       22 01 28.7 +3.4
TREC                               ePKKP    PKKP    22 09 40.3  +15
KAR1  Arisaig            82.21 344⇑eP       P       21 51 12.6 +0.6
CRAR  CRAIOVA            82.25 322⇓iP       P       21 51 13.6 +1.1
PVL   Pavlikeni          82.29 320 eP       P       21 51 14.0 +1.3
ZST   Bratislava         82.39 328 eP       P       21 51 13.8 +0.7
ZST                                e                21 51 21.5
ZST                                ePP      PP      21 54 24.1  0.0
ZST                                eS       S       22 01 29.6 +2.3
ZST                                eL               22 33 40.3
VAH   Vaihoa             82.45 116 eP       P       21 51 14.4 +0.4
      comp=Z,784nm,1.3s,mb6.5
PKSG                     82.45 327⇑eP       P       21 51 14.6 +1.1
ULDT  Uludag             82.46 316 i P      P       21 51 13.1 -0.6
QRZ   Quartz Range       82.47 159  P*      P       21 51 13.8 +0.1
IKL   Isikli             82.50 311  P       P       21 51 14.1 +0.1
WIT   Witteveen          82.51 336 eP       P       21 51 14.5 +0.9
EDI   Edinburgh          82.52 343⇑eP       P       21 51 13.9 +0.2
EDI                                AMb      AMB     21 51 23.2
      comp=Z,351nm,2.2s,mb6.0
EDRB  Edirne             82.55 318  P       P       21 51 15.1 +1.1
EAB   Aberfoyle          82.55 343⇑eP       P       21 51 14.4 +0.7
EAB                                AMb      AMB     21 51 21.6
      comp=Z,1µm,2.0s,mb6.6
MOX   Moxa               82.60 332 i P      P       21 51 14.2  0.0
      comp=Z,logA/T=2.8,mb6.6
MOX                                PP       PP      21 54 10.0  -16
MOX                                S        S       22 01 33.0 +3.5
MOX                                SS       SS      22 06 37.0  -18
MOX                                PKKP     PKKP    22 09 40.0  +16
MOX                                SSS      SSS     22 10 25.0 +6.0
MOX                                PKPPKP           22 17 44.0
MOX                                L                22 31 33.0
MOX   Moxa               82.60 332 eP       P       21 51 14.2  0.0
      comp=Z,1µm,1.8s,mb6.6
MOX                                ePP      PP      21 54 10.0  -16
MOX                                eS       S       22 01 33.0 +3.5
MOX                                eSS      SS      22 06 37.0  -18
MOX                                ePKKP    PKKP    22 09 40.0  +16
MOX                                eSSS     SSS     22 10 25.0 +6.0
MOX                                eP'P'            22 17 44.0
MOX                                LR       LR
      comp=Z,76µm,20.0s,MS7.1
MOX   Moxa               82.60 332 eP       P       21 51 14.2  0.0
MOX                                eS       S       22 01 33.0 +3.5
MOX                                pmax     pmax
      comp=Z,1µm,1.8s,mb6.6
MOX                                MLR      MLR
      comp=Z,76µm,20.0s,MS7.1
EBL   Broad Law          82.63 342⇑eP       P       21 51 15.2 +1.0
EBL                                AMb      AMB     21 51 22.2
      comp=Z,950nm,1.9s,mb6.5
NKC   Novy Kostel        82.63 331⇓iP       P       21 51 14.1 -0.2
NKC                                ePP      PP      21 54 25.9 -0.1
NKC                                ePPP     PPP     21 56 14.3 -4.4
NKC                                eS       S       22 01 31.2 +1.5
NKC                                ePKKP    PKKP    22 09 43.7  +20
NKC                                AMS      AMS     22 32 40.0
      comp=Z,156µm,17.0s
NKC   Novy Kostel        82.63 331⇓iP       P       21 51 14.1 -0.2
NKC                                e                21 54 25.9
NKC                                ePPP     PPP     21 56 14.3 -4.4
NKC                                e                22 01 31.2
NKC                                MLR      MLR
      comp=Z,156µm,17.0s,MS7.4
DJES  Djerdap            82.64 323 eP       P       21 51 14.9 +0.4
EAU   Auchinoon          82.66 343⇑eP       P       21 51 14.9 +0.6
EAU                                AMb      AMB     21 51 20.3
      comp=Z,808nm,1.9s,mb6.4
ORLT  Orhaneli           82.66 316  P       P       21 51 14.0 -0.7
PPT   Papeete            82.67 119 eP       P       21 51 15.9 +0.8
      comp=Z,470nm,1.2s,mb6.4
PPT   Papeete            82.67 119 eLQ              22 12 47.4
PPT   Papeete            82.67 119 ePP      PP      21 54 28.6 +1.6
PPT   Papeete            82.67 119 eS       S       22 01 28.7 -2.0
PPT                                eLR      LR      22 16 25.4
      comp=Z,123µm,23.5s,baz=315
PPT   Papeete            82.67 119  P       P       21 51 15.4 +0.3
      comp=Z,331nm,1.1s,mb6.3,baz=9.5,slow=6.2,SNR=5.3
PPT                                LR       LR      22 20 36.8
      comp=Z,55µm,21.8s,MS6.9,baz=309,slow=30
ALT   Altintas           82.67 315  P       P       21 51 14.5 -0.3
MZLS  Mizel              82.69 295  P       P       21 51 16.0 +0.8
ERMK  Ermenek            82.69 311 i P      P       21 51 13.4 -1.5
PAE   Paea               82.73 119 eP       P       21 51 16.0 +0.6
      comp=Z,774nm,1.3s,mb6.6
BHL   Bhannes            82.85 308 eP       P       21 51 16.6 +0.8
DUWZ  D'Urville Isla     82.85 158  P*      P       21 51 15.6  0.0
BNT   Bandirma           82.97 317  P       P       21 51 16.6 +0.3
MRMT  Marmara Adasi      82.97 317  P       P       21 51 13.6 -2.7
GDZ   Gediz              83.00 315 i P      P       21 51 15.5 -1.0
HILS  Ha'il              83.00 299  P       P       21 51 17.0 +0.3
EDC   Edincik            83.01 317  P       P       21 51 16.1 -0.4
MFT   Murefte            83.01 317  P       P       21 51 15.3 -1.2
SOP   Sopron             83.01 328⇓eP       P       21 51 17.3 +0.9
DIM   Dimitrovgrad       83.03 319  P       P       21 51 18.0 +1.4
TVO   Taravao            83.04 119 eP       P       21 51 17.9 +0.8
      comp=Z,853nm,1.1s,mb6.7
EKA   Eskdalemuir Ar     83.05 342  PKKPbc          22 09 41.8
      comp=Z,12nm,1.1s,baz=59,slow=4.9,SNR=5.2
NNZ   Nelson             83.08 159  P*      P       21 51 15.6 -1.2
ESK   Eskdalemuir        83.08 342⇑eP       P       21 51 17.4 +0.9
ESK                                AMb      AMB     21 51 27.0
      comp=Z,968nm,1.9s,mb6.5
ESK   Eskdalemuir        83.08 342  P       P       21 51 16.7 +0.2
      comp=Z,954nm,1.5s,mb6.6
ESK                                LR       LR
      comp=Z,14µm,20.0s,MS6.3
ESK   Eskdalemuir        83.08 342  P       P       21 51 16.7 +0.2
ESK                                pmax     pmax
      comp=Z,954nm,1.5s,mb6.6
ESK                                MLR      MLR
      comp=Z,14µm,20.0s,MS6.3
KHC   Kasperske Hory     83.08 330⇓iP       P       21 51 16.7  0.0
KHC                                ePP      PP      21 54 30.5 +0.8
KHC                                ePPP     PPP     21 56 19.1 -3.7
KHC                                eSKS     SKS     22 01 37.9 -1.9
KHC                                ePKKP    PKKP    22 09 40.1  +17
KHC                                ePKPPKP          22 17 37.6
KHC                                AMS      AMS     22 34 30.0
      comp=Z,200µm,15.0s
KHC   Kasperske Hory     83.08 330⇓iP       P       21 51 16.7  0.0
KHC                                ePP      PP      21 54 30.5 +0.8
KHC                                ePPP     PPP     21 56 19.1 -3.7
KHC                                eSKS     SKS     22 01 37.9 -1.9
KHC                                ePKKP    PKKP    22 09 40.1  +17
KHC                                LR       LR
      comp=Z,200µm,15.0s,MS7.6
KHC   Kasperske Hory     83.08 330⇓iP       P       21 51 16.7  0.0
KHC                                e                21 54 30.5
KHC                                ePPP     PPP     21 56 19.1 -3.7
KHC                                e                22 01 37.9
KHC                                MLR      MLR
      comp=Z,200µm,15.0s,MS7.6
DST   Dursunbey          83.11 316  P       P       21 51 16.9 -0.2
PHNC  Paralimni          83.12 309 ⇑P       P       21 51 18.2 +1.0
PHNC  Paralimni          83.12 309⇑eP       P       21 51 18.2 +1.0
SART  Tekirdag           83.14 317 i P      P       21 51 16.9 -0.3
SART  Tekirdag           83.14 317 i P      P       21 51 14.9 -2.2
CBKS  Cedar Bluff        83.18  45  P       P       21 51 16.4 -1.0
      comp=Z,990nm,1.3s,mb6.7
CBKS                               LR       LR
      comp=Z,59µm,19.0s,MS7.0
CBKS  Cedar Bluff        83.18  45  P       P       21 51 16.4 -1.0
CBKS                               pmax     pmax
      comp=Z,990nm,1.3s,mb6.7
CBKS                               MLR      MLR
      comp=Z,59µm,19.0s,MS7.0
WTSB  Winterswijk        83.18 335 eP       P       21 51 16.6 -0.5
      comp=Z,733nm,1.8s,mb6.4
ECK   Cauldkaine Hil     83.19 342⇑eP       P       21 51 17.5 +0.4
ECK                                AMb      AMB     21 51 27.5
      comp=Z,1µm,1.9s,mb6.6
MRZ   Mangatainoka R     83.22 157  P*      P       21 51 16.7 -0.9
PKSM  Moragy             83.25 326⇓eP       P       21 51 17.2 -0.4
TKTP  Tekketepe          83.25 314 i P      P       21 51 16.1 -1.7
GEC2  GERESS Array S     83.26 330 eP       P       21 51 17.5 -0.1
      comp=Z,1µm,2.0s,mb6.6
GEC2                               eS       S       22 01 41.3 +5.1
GEC2                               eSSS     SSS     22 10 34.4 +4.5
GEC2  GERESS Array S     83.26 330 eP       P       21 51 17.5 -0.1
GEC2                               eS       S       22 01 41.3 +5.1
GEC2                               eSSS     SSS     22 10 34.4 +4.5
GEC2                               pmax     pmax
      comp=Z,1µm,2.0s,mb6.6
GERES GERESS Array B     83.26 330  P       P       21 51 17.7 +0.1
      comp=Z,48nm,0.7s,mb5.6,baz=34,slow=5.2,SNR=189
GERES                              PP       PP      21 54 27.1 -4.1
      comp=Z,23nm,1.0s,baz=21,slow=8.4,SNR=3.4
GERES                              S        S       22 01 43.3 +7.1
      comp=Z,1.6nm,1.0s,baz=60,slow=7.9,SNR=2.4
GERES                              PKKPbc           22 09 37.3
      comp=Z,18nm,1.1s,baz=207,slow=3.0,SNR=8.3
GERES                              PKPPKP           22 17 22.6
      comp=Z,0.9nm,0.8s,baz=225,slow=1.9,SNR=4.1
GERES                              LR       LR      22 30 35.6
      comp=Z,140µm,20.9s,MS7.3,baz=261,slow=37
ISP   Isparta            83.28 313  P       P       21 51 16.4 -1.6
ISP   Isparta            83.28 313  P       P       21 51 18.8 +0.8
      comp=Z,437nm,1.1s,mb6.4
ISP   Isparta            83.28 313diP       P       21 51 16.6 -1.3
KSDI  Kefar Szold        83.31 307  P       P       21 51 19.0 +0.8
LWH   Whinny Nab         83.33 341⇑eP       P       21 51 18.9 +1.0
WET   Wettzell           83.34 331 eP       P       21 51 18.3 +0.3
      comp=Z,909nm,1.4s,mb6.6
WET                                eS       S       22 01 41.3 +4.3
WET                                eSSS     SSS     22 10 34.7 +3.5
WET   Wettzell           83.34 331 eP       P       21 51 18.3 +0.3
WET                                eS       S       22 01 41.3 +4.3
WET                                eSSS     SSS     22 10 34.7 +3.5
WET                                pmax     pmax
      comp=Z,909nm,1.4s,mb6.6
PGB   Panagyurishte      83.36 320  P       P       21 51 19.4 +1.1
KDZ   Kurdzhali          83.38 319  P       P       21 51 19.0 +0.6
PLD   Plovdiv            83.42 320  P       P       21 51 20.0 +1.5
QURS  Qurayyt al Mil     83.43 305  P       P       21 51 19.8 +1.0
THZ   Tophouse           83.44 159  P*      P       21 51 17.8 -0.9
THZ                                PP       PP      21 54 38.8 +6.0
BEO   Belgrade           83.48 324 eP       P       21 51 19.6 +0.8
BCK   Bucak              83.50 313  P       P       21 51 17.8 -1.2
BALB  Balikesir          83.50 316  P       P       21 51 17.6 -1.4
MAMC  Mammari            83.50 310 ⇑P       P       21 51 20.1 +1.0
MAMC  Mammari            83.50 310⇑eP       P       21 51 20.1 +1.0
KHL   Karahalli          83.51 314  P       P       21 51 18.7 -0.4
BOLS  Boljevac           83.51 322⇑iP       P       21 51 18.1 -0.9
SVIS  Svilajnac          83.52 323⇑iP       P       21 51 19.4 +0.5
GRA1  Grafenberg Arr     83.53 332 eP       P       21 51 19.4 +0.5
      comp=Z,3µm,1.7s,mb7.2
GRA1                               ePP      PP      21 54 34.3 +1.1
GRA1                               eS       S       22 01 41.9 +3.1
GRA1                               eSSS     SSS     22 10 38.7 +4.6
GRA1                               LR       LR
      comp=Z,105µm,20.6s,MS7.2
GRF   Grafenberg Arr     83.53 332 eP       P       21 51 19.4 +0.5
GRF                                e                21 54 34.3
GRF                                eS       S       22 01 41.9 +3.1
GRF                                eSSS     SSS     22 10 38.7 +4.6
GRF                                pmax     pmax
      comp=Z,3µm,1.7s,mb7.2
GRF                                MLR      MLR
      comp=Z,105µm,20.6s,MS7.2
SNZO  South Karori       83.55 158  P       P       21 51 18.2 -1.0
SNZO                               LR       LR
      comp=Z,51µm,20.0s,MS6.9
SCHQ  Schefferville      83.57  18  P       P       21 51 18.0 -0.9
      comp=Z,170nm,0.9s,mb6.2,baz=350,slow=5.3,SNR=24
SCHQ                               PP       PP      21 54 33.7 +0.3
      comp=Z,27nm,1.0s,baz=348,slow=9.8,SNR=2.2
SCHQ                               PKKPbc           22 09 36.5
      comp=Z,4.3nm,0.9s,baz=249,slow=7.7,SNR=4.5
SCHQ                               PKPPKP           22 17 46.1
      comp=Z,8.0nm,1.0s,baz=102,slow=4.5,SNR=4.4
SCHQ                               LR       LR      22 29 37.9
      comp=Z,63µm,20.4s,MS7.0,baz=342,slow=36
SCHQ  Schefferville      83.57  18  P       P       21 51 18.0 -0.9
SCHQ                               PP       PP      21 54 33.7 +0.3
SCHQ                               PKKPbc           22 09 36.5
SCHQ                               P'P'             22 17 46.1
SCHQ                               LR       LR      22 29 37.9
CSS   Prodhromos         83.57 310 ⇑P       P       21 51 20.9 +1.4
      comp=Z,19nm,1.6s
CSS   Prodhromos         83.57 310⇑eP       P       21 51 20.9 +1.4
MMC2  Mount Meron ar     83.58 307  P       P       21 51 20.3 +0.7
MMC1  Mount Meron ar     83.58 307  P       P       21 51 20.3 +0.7
MMB1  Mount Meron ar     83.58 307  P       P       21 51 20.3 +0.7
MMC4  Mount Meron ar     83.58 307  P       P       21 51 20.3 +0.7
MMA1  Mount Meron ar     83.59 307  P       P       21 51 20.3 +0.7
MMB4  Mount Meron ar     83.59 307  P       P       21 51 20.3 +0.7
MMC5  Mount Meron ar     83.59 307  P       P       21 51 20.3 +0.7
MMA0  Mount Meron ar     83.59 307  P       P       21 51 20.3 +0.7
MMA2  Mount Meron ar     83.59 307  P       P       21 51 20.3 +0.7
ALN   Alexandroupoli     83.59 318 eP       P       21 51 19.7 +0.2
MMC7  Mount Meron ar     83.59 307  P       P       21 51 20.3 +0.7
MMA3  Mount Meron ar     83.59 307  P       P       21 51 20.3 +0.7
MMA4  Mount Meron ar     83.59 307  P       P       21 51 20.3 +0.7
RHK1  Bakonya            83.59 326 eP       P       21 51 19.7 +0.4
MMB2  Mount Meron ar     83.60 307  P       P       21 51 20.3 +0.6
MMC6  Mount Meron ar     83.60 307  P       P       21 51 20.3 +0.6
GMK   Mull of Kintyr     83.61 344⇑eP       P       21 51 19.8 +0.7
RDO   Rodhopi            83.68 319 eP       P       21 51 21.0 +1.1
HNTI  Hanita             83.69 307  P       P       21 51 20.4 +0.3
RZN   Rozhen             83.71 319 i P      P       21 51 21.0 +1.0
LEF   Lefka              83.73 310  P       P       21 51 19.7 -0.6
TAOE  Nuku Hiva Isla     83.78 106 eP       P       21 51 21.8 +0.8
      comp=Z,1µm,1.2s,mb6.9
TAOE  Nuku Hiva Isla     83.78 106 ePP      PP      21 54 37.2 +1.2
TAOE  Nuku Hiva Isla     83.78 106 eS       S       22 01 40.3 -1.7
TAOE                               eLR      LR      22 17 03.2
      comp=Z,506µm,34.4s,baz=317
ARSA  Arzberg            83.79 328⇓iP       P       21 51 20.6 +0.3
      comp=Z,566nm,1.6s,mb6.5,SNR=68
ARSA  Arzberg            83.79 328⇑iP       tx      21 56 27.2
      comp=Z,8µm,8.8s
ARSA  Arzberg            83.79 328⇓iS       S       22 01 53.9  +13
      comp=Z,12µm,9.8s
ARSA  Arzberg            83.79 328⇓iP       P       21 51 20.6 +0.3
      comp=Z,566nm,1.6s,mb6.5
ARSA                               e                21 54 37.9
ARSA                               e                21 56 27.2
ARSA                               e                22 01 53.9
VTS   Vitosha            83.82 321  P       P       21 51 21.0 +0.5
MOA   Molln              83.83 329⇓iP       P       21 51 20.8 +0.3
      comp=Z,519nm,1.4s,mb6.5,SNR=72
MOA   Molln              83.83 329⇓iP       P       21 51 20.8 +0.3
      comp=Z,519nm,1.4s,mb6.5
ANTB  Antalya            83.84 313  P       P       21 51 15.8 -5.1
GAL1  Galloway           83.85 343⇑eP       P       21 51 20.9 +0.6
ALFC  Alevga             83.89 310 ⇑P       P       21 51 21.8 +0.7
      comp=Z,25nm,1.4s
ALFC  Alevga             83.89 310⇑eP       P       21 51 21.8 +0.7
MEH   Mehetia            83.92 118 eP       P       21 51 22.2 +0.6
      comp=Z,394nm,1.3s,mb6.4
MANT  Manisa             83.93 315 i P      P       21 51 21.2  0.0
MMLI  Mount Malkishu     83.96 307  P       P       21 51 22.1 +0.6
GCL   Cushendall         83.98 344⇑eP       P       21 51 21.6 +0.5
SZAC  Souni-Zanaja       83.98 310 ⇑P       P       21 51 22.8 +1.2
      comp=Z,33nm,1.2s
SZAC  Souni-Zanaja       83.98 310⇑eP       P       21 51 22.8 +1.2
HAF   Haifa              83.98 307  P       P       21 51 21.8 +0.2
LDU   Leeds Universi     84.04 341 eP       P       21 51 22.2 +0.9
GRUS  Gruza              84.06 323⇑iP       P       21 51 21.7  0.0
AKS   Akhisar            84.07 316  P       P       21 51 21.0 -0.9
WVZ   Waitaha Valley     84.09 161  P*      P       21 51 20.8 -1.1
TNS   Taunus Mts         84.09 334 eP       P       21 51 21.8 +0.1
      comp=Z,815nm,1.5s,mb6.6
TNS                                eSSS     SSS     22 10 46.4 +3.2
TNS   Taunus Mts         84.09 334 eP       P       21 51 21.8 +0.1
TNS                                eSSS     SSS     22 10 46.4 +3.2
TNS                                pmax     pmax
      comp=Z,815nm,1.5s,mb6.6
OFRI  'Ofer              84.11 307  P       P       21 51 22.4 +0.1
ABA1  Baconsthorpe       84.12 339⇑eP       P       21 51 23.0 +1.2
DENT  Denizli            84.18 314  P       P       21 51 24.2 +1.7
EZN   Ezine              84.21 317  P       P       21 51 23.2 +0.6
LTZ   Lake Taylor        84.22 160  P*      P       21 51 21.8 -0.8
DNZL  Cakiroluk          84.22 314 i P      P       21 51 22.4 -0.3
PPCY  Paphos             84.22 310  P       P       21 51 23.2 +0.4
KHZ   Kahutara           84.23 159  P*      P       21 51 20.7 -1.9
GOLH  Golhisar           84.24 314 i P      P       21 51 22.0 -0.8
DIVS  Divcibare          84.25 324⇑iP       P       21 51 21.7 -1.0
FOZ   Fox Glacier        84.29 162  P*      P       21 51 22.9  0.0
MMB   Musomiste          84.29 320  P       P       21 51 23.3 +0.4
AEU   East Anglia Un     84.33 339⇑eP       P       21 51 24.0 +1.2
AFFS  'Afif              84.33 296  P       P       21 51 24.2 +0.6
BARS  Barje              84.33 322⇑iP       P       21 51 22.7 -0.4
SLTI  Sal'it             84.33 307  P       P       21 51 23.7 +0.3
LHO   Holmfirth          84.35 341⇑eP       P       21 51 23.5 +0.5
ELL   Elmali             84.38 313  P       P       21 51 24.6 +1.1
AWH   Whinburgh          84.40 339⇑eP       P       21 51 24.3 +1.1
MKRJ  Makawir            84.41 306  P       P       21 51 24.6 +0.8
SIND  Sindeldorf         84.41 332 eP       P       21 51 23.2 -0.1
KKB   Krupnik            84.41 320  P       P       21 51 24.0 +0.4
PERS  Pernice            84.44 328 eP       P       21 51 23.5 -0.1
PERS                               ePP      PP      21 54 39.4 -1.2
PERS                               eSKSac           22 02 00.1
TOD   Tromm              84.48 333⇓eP       P       21 51 24.0 +0.3
TOD   Tromm              84.48 333 eP       P       21 51 24.2 +0.5
HGN   Heimansgroeve      84.49 335 eP       P       21 51 23.7  0.0
      comp=Z,812nm,1.5s,mb6.6
HGN                                ePP      PP      21 54 37.9 -2.9
HGN                                ePPP     PPP     21 56 33.9 -2.4
HGN                                eS       S       22 01 49.4 +1.1
HGN                                eSS      SS      22 07 14.2 -7.8
WIM   Isle of Man        84.50 343⇑eP       P       21 51 24.3 +0.6
WIM                                AMb      AMB     21 51 34.0
      comp=Z,1µm,1.9s,mb6.8
KBI1  Birley Grange      84.52 340⇑eP       P       21 51 24.4 +0.6
JCZ   Jackson Bay        84.55 163  P*      P       21 51 24.9 +0.7
MNTX  Cornudas Mount     84.63  54  P       P       21 51 24.6 -0.2
MNTX                               LR       LR
      comp=Z,34µm,20.0s,MS6.7
PRK   Paraskevi          84.65 317 eP       P       21 51 25.0 +0.2
ABH   Alteburg           84.69 334⇓eP       P       21 51 24.8 +0.1
ABH   Alteburg           84.69 334 eP       P       21 51 25.2 +0.5
BBLS  Bajina Basta -     84.69 324 eP       P       21 51 27.4 +2.5
KSU1  Kansas State U     84.71  43  P       P       21 51 24.2 -0.9
SRS   Serrai             84.71 320 eP       P       21 51 32.4 +7.4
GMM   Mts of Mourne      84.71 343⇑eP       P       21 51 25.1 +0.4
KDAG  Bornova            84.71 316 i P      P       21 51 24.0 -1.1
IZM   Izmir              84.72 316  P       P       21 51 26.4 +1.2
MZDA  Masada             84.74 306  P       P       21 51 25.6 +0.1
FUR   Furstenfeldbru     84.76 331 eP       P       21 51 25.4 +0.3
      comp=Z,1µm,1.0s,mb7.0
FUR                                eS       S       22 01 53.9 +2.9
FUR   Furstenfeldbru     84.76 331 eP       P       21 51 25.4 +0.3
FUR                                eS       S       22 01 53.9 +2.9
FUR                                pmax     pmax
      comp=Z,1µm,1.0s,mb7.0
AMTX  Amarillo           84.77  49 ePP      PP      21 54 43.3 -0.1
AMTX                               LR       LR
      comp=Z,44µm,22.0s,MS6.8
RPZ   Rata Peaks         84.77 161  PP      PP      21 54 44.2 +0.9
      comp=Z,7.1nm,0.7s,baz=31,slow=18,SNR=2.4
RPZ                                S        S       22 01 49.5 -1.7
      comp=Z,4.4nm,0.5s,baz=319,slow=18,SNR=1.8
RPZ   Rata Peaks         84.77 161  P*      P       21 51 24.5 -0.8
OBKA  Obir               84.78 328⇑iP       tx      21 56 37.0
      comp=Z,6µm,5.7s
OBKA  Obir               84.78 328⇓iS       S       22 02 07.4  +16
      comp=Z,19µm,13.8s
OBKA  Obir               84.78 328⇓iP       P       21 51 25.2 -0.1
      comp=Z,182nm,0.8s,mb6.3
OBKA                               e                21 54 46.0
OBKA                               e                21 56 37.0
OBKA                               e                22 02 07.4
LOS   Limnos             84.80 318 eP       P       21 51 26.4 +0.9
HDH   Heidenheim         84.82 332 eP       P       21 51 25.1 -0.3
KWE   Weaver Farm        84.82 341⇑eP       P       21 51 26.0 +0.7
KBA   Koelnbreinsper     84.82 329⇑iP       tx      21 56 36.2
      comp=Z,17µm,12.0s
KBA   Koelnbreinsper     84.82 329⇓iP       P       21 51 25.8 +0.3
      comp=Z,648nm,1.0s,mb6.7
KBA                                e                21 56 36.2
KBA                                LR       LR
      comp=Z,17078µm,12.0s
NVSS  Nova Varos 2       84.83 323⇑iP       P       21 51 26.9 +1.3
BLCB  Balcova            84.85 316  P       P       21 51 25.2 -0.6
AYDN  Tasoluk            84.90 315 i P      P       21 51 26.9 +0.8
AKAS  Kas                84.91 313 i P      P       21 51 24.3 -1.9
FETY  Fethiye            84.94 313  P       P       21 51 23.9 -2.4
GDL2  Guadalupe Moun     84.94  53  P       P       21 51 26.2 -0.2
KTD   Kalmit             84.98 333 eP       P       21 51 26.6 +0.4
KSL   Kastellorizon      84.99 313 eP       P       21 51 26.0 -0.5
KNT   Kendrikon          85.03 320 eP       P       21 51 26.8 +0.1
STU   Stuttgart          85.04 332  P       P       21 51 27.2 +0.8
YER   Yerkesik           85.04 314  P       P       21 51 27.1 +0.3
SOH   Sokhos             85.05 320 eP       P       21 51 26.4 -0.3
VAY   Valandovo          85.08 320 i P      P       21 51 26.7 -0.1
VAY                                i PP     PP      21 54 39.4 -6.4
VAY                                i S      S       22 01 49.9 -4.4
VAY                                eSS      SS      22 07 30.9 -0.1
VAY   Valandovo          85.08 320 i P      P       21 51 26.7 -0.2
VAY                                i PP     PP      21 54 39.4 -6.4
VAY                                i S      S       22 01 49.9 -4.4
VAY                                eSS      SS      22 07 30.9 -0.1
OUR   Ouranopolis        85.08 319 eP       P       21 51 27.5 +0.6
DALT  Dalyan (Mudla)     85.10 314  P       P       21 51 26.9 -0.1
WME   Myndd Eilian       85.10 342 eP       P       21 51 27.1 +0.5
WME                                AMb      AMB     21 51 37.0
      comp=Z,2µm,1.8s,mb6.8
PLE   Pljevlja           85.11 323⇑iP       P       21 51 28.9 +1.9
URLA  Izmir              85.11 316 i P      P       21 51 26.5 -0.7
WPM1  Penmaenmawr        85.13 342 eP       P       21 51 27.2 +0.4
SKO   Skopje             85.15 321 i P      P       21 51 28.4 +1.1
SKO                                i PP     PP      21 54 41.9 -4.5
SKO                                i S      S       22 01 52.3 -2.8
SKO   Skopje             85.15 321 i P      P       21 51 28.3 +1.1
      comp=Z,2µm,1.5s,mb7.0
SKO                                i                21 51 36.0
SKO                                i PP     PP      21 54 41.9 -4.5
SKO                                i S      S       22 01 52.3 -2.7
SKO   Skopje             85.15 321 i P      P       21 51 28.3 +1.1
SKO                                i                21 51 36.0
SKO                                i                21 54 41.9
SKO                                i S      S       22 01 52.3 -2.7
SKO                                pmax     pmax
      comp=Z,2µm,1.5s,mb7.0
LJU   Ljubljana          85.16 328 eP       P       21 51 26.5 -0.6
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LJU				ePcP	PcP	21 51 30.0	-1.0
LJU				ePP	PP	21 54 46.3	0.0
LJU				eSKSac		22 02 08.3	
LJU	Ljubljana	85.16	328	eP	P	21 51 26.5	-0.7
LJU				e		21 54 46.3	
WCB1	Church Bay	85.17	342	eP	P	21 51 26.7	-0.3
WCB1				AMb	AMB	21 51 37.3	
	comp=Z,844nm,1.8s,mb6.6						
LBZ	Lake Benmore	85.19	162	P*	P	21 51 27.6	+0.3
CLNB	Carlsbad	85.20	52	eP	P	21 51 27.0	-0.7
CLNB				epP	pP	21 51 31.5	-0.8
MLSB	Milas	85.21	315	P	P	21 51 27.8	+0.1
WLF1	Llynfaes	85.22	342	eP	P	21 51 27.3	0.0
WLF1				AMb	AMB	21 51 38.3	
	comp=Z,429nm,1.9s,mb6.2						
IVA	Berane	85.22	323	⇑iP	P	21 51 28.0	+0.4
BUCH	Bad Urach	85.25	332	eP	P	21 51 28.1	+0.6
LBG	Lerchenberg	85.27	333	eP	P	21 51 27.8	+0.1
BOJS	Bojanci	85.28	327	eP	P	21 51 27.5	-0.3
BOJS				ePP	PP	21 54 42.3	-5.0
BOJS				eSKSac		22 02 09.6	
SBD1	Bryn Du	85.29	341	⇑eP	P	21 51 28.7	+1.1
YRC	Rhoscolyn	85.30	342	⇑eP	P	21 51 28.1	+0.4
YRC				AMb	AMB	21 51 38.0	
	comp=Z,588nm,1.8s,mb6.4						
YLL	Llanberis	85.30	342	eP	P	21 51 28.3	+0.7
WATA	Walderalm	85.32	330	⇓iP	P	21 51 28.0	+0.1
	comp=Z,120nm,0.6s,mb6.2,SNR=52						
WATA	Walderalm	85.32	330	⇓iP	P	21 51 28.0	+0.1
	comp=Z,120nm,0.6s,mb6.2						
WATA	Walderalm	85.32	330	⇓iP	P	21 51 28.0	+0.1
WATA				pmax	pmax		
	comp=Z,120nm,0.6s,mb6.2						
MASH	Mash‘abbe Sade	85.32	306	P	P	21 51 28.2	-0.2
PLG	Polygyros	85.33	319	eP	P	21 51 28.0	-0.2
RTMM	Retamin	85.35	306	P	P	21 51 28.3	-0.2
WTTA	Wattenberg	85.36	330	⇑iP	tx	21 56 39.3	
	comp=Z,7µm,6.8s						
WTTA	Wattenberg	85.36	330	⇓iS	S	22 02 08.2	+11
	comp=Z,6µm,7.3s						
WTTA	Wattenberg	85.36	330	⇓iP	P	21 51 28.6	+0.5
	comp=Z,95nm,0.8s,mb6.0						
WTTA				e		21 54 51.5	
WTTA				e		21 56 39.3	
WTTA				e		22 02 08.2	
WTTA	Wattenberg	85.36	330	⇓iP	P	21 51 28.6	+0.5
WTTA				e		21 54 51.5	
WTTA				e		21 56 39.3	
WTTA				pmax	pmax		
	comp=Z,95nm,0.8s,mb6.0						
WLF	Walferdange	85.36	335	P	P	21 51 28.2	+0.2
PTCC	Patocco-Chiusa	85.36	329	P	P	21 51 28.2	0.0
ZFRI	Zfri	85.36	305	P	P	21 51 28.7	+0.1
LANF	Langenberg	85.36	333	eP	P	21 51 28.1	0.0
THE	Thessaloniki	85.39	320	eP	P	21 51 27.9	-0.5
PVY	Plav	85.40	323	⇑iP	P	21 51 28.6	+0.1
GIVF	Givet	85.43	335	⇓iP	P	21 51 28.0	-0.4
	comp=Z,3µm,1.7s,mb6.9						
GIVF	Givet	85.43	335	⇓iP	P	21 51 28.0	-0.4
GIVF				pmax	pmax		
	comp=Z,2µm,1.7s,mb6.9						
GRG	Griva	85.43	320	eP	P	21 51 27.9	-0.7
UPM	Unac-Piva	85.44	324	⇑iP	P	21 51 28.5	-0.1
VOY	Vojsko	85.44	328	eP	P	21 51 27.4	-1.2
VOY				e	pP	21 51 33.6	+0.5
KAMS	Al Khamasin	85.45	292	P	P	21 51 29.8	+0.6
MOTA	Moosalm	85.50	330	⇓iP	P	21 51 28.9	+0.1
	comp=Z,500nm,0.9s,mb6.7,SNR=153						
MOTA	Moosalm	85.50	330	⇓iP	P	21 51 28.9	+0.1
MOTA				pmax	pmax		
	comp=Z,500nm,0.9s,mb6.6						
YRE	Yr Eifl	85.51	342	⇑eP	P	21 51 29.3	+0.6
YRE				AMb	AMB	21 51 39.2	
	comp=Z,2µm,1.9s,mb7.0						
GMNA	Gemona	85.52	329	P	P	21 51 28.5	-0.4
PAIG	Paliouri	85.54	319	eP	P	21 51 28.5	-0.7
HLM1	Long Mynd	85.54	341	⇑eP	P	21 51 29.6	+0.7
HLM1				AMb	AMB	21 51 34.9	
	comp=Z,521nm,1.4s,mb6.6						
SEST	Monte Rota	85.54	330	P	P	21 51 28.7	-0.4
SQTA	Sankt Quirin	85.56	330	⇓iP	P	21 51 29.4	+0.2
	comp=Z,203nm,0.7s,mb6.5,SNR=76						
SQTA	Sankt Quirin	85.56	330	⇓iP	P	21 51 29.4	+0.3
SQTA				pmax	pmax		
	comp=Z,203nm,0.7s,mb6.5						
BDRM	Kayabasi	85.56	315	i P	P	21 51 30.3	+0.9
UBR	Uberruh	85.60	331	eP	P	21 51 29.3	0.0
PRNI	Paran	85.61	305	P	P	21 51 30.0	+0.2
KZIT	Kziot	85.63	306	P	P	21 51 29.8	-0.1
BODT	Bodrum	85.64	315	P	P	21 51 27.2	-2.6
GUT	Gutenstein	85.65	332	eP	P	21 51 29.7	+0.1
BAIF	Baives	85.66	336	⇓iP	P	21 51 28.8	-0.8
	comp=Z,3µm,1.7s,mb6.9						
BAIF	Baives	85.66	336	⇓iP	P	21 51 28.8	-0.8
BAIF				pmax	pmax		
	comp=Z,1µm,1.7s,mb6.9						
SSP1	Stoney Pound	85.69	341	⇑eP	P	21 51 30.4	+0.8
NKY	Niksic	85.69	323	⇑iP	P	21 51 29.0	-0.9
SKP1	Kophill	85.71	339	⇑eP	P	21 51 29.9	+0.1
STR	Strasbourg	85.71	333	eP	P	21 51 30.6	+0.7
DLF	Lyons Farm	85.72	343	⇑iP	P	21 51 29.6	-0.2
MUKL	Al Mukalla	85.72	285	⇑eP	P	21 51 30.6	0.0
MUKL				AMb	AMB	21 51 32.1	
	comp=Z,1µm,1.4s,mb7.0						
BFO	Black Forest	85.72	333	eP	P	21 51 30.0	+0.1
	comp=Z,2µm,1.8s,mb7.1						
BFO				ePP	PP	21 54 51.8	+1.0
BFO				eS	S	22 02 03.6	+3.2
BFO				eSSS	SSS	22 11 13.3	+4.0
BFO	Black Forest	85.72	333	eP	P	21 51 30.0	+0.1
BFO				e		21 54 51.8	
BFO				eS	S	22 02 03.6	+3.2
BFO				eSSS	SSS	22 11 13.3	+4.0
BFO				pmax	pmax		
	comp=Z,2µm,1.8s,mb7.1						
DAT	Datca	85.73	314	P	P	21 51 29.2	-1.0
DSB	Dublin	85.73	343	eP	P	21 51 30.0	+0.2
	comp=Z,868nm,1.8s,mb6.7						
SPAK	Spaichingen	85.75	332	eP	P	21 51 30.6	+0.6
SPAK	Spaichingen	85.75	332	eP	P	21 51 30.8	+0.8
TRI	Trieste	85.75	328	P	P	21 51 29.2	-0.9
	comp=Z,2µm,0.8s,mb7.5						
TRI	Trieste	85.75	328	P	P	21 51 29.2	-0.9
TRI				pmax	pmax		
	comp=Z,2µm,0.8s,mb7.5						
KBRS	Khaybar	85.76	299	P	P	21 51 31.6	+0.9
SSW	Stow on the Wo	85.77	340	⇑eP	P	21 51 31.1	+1.0
ARG	Arkhangelos	85.78	314	eP	P	21 51 28.0	-2.5
HRFI	Mount Harif	85.80	305	P	P	21 51 30.8	0.0
DCN	Croghan	85.84	344	⇑iP	P	21 51 30.2	-0.2
BRY	Bratogost	85.84	324	eP	P	21 51 29.7	-0.9
TTG	Podgorica	85.86	323	⇑iP	P	21 51 30.3	-0.5
MENF	Mencas	85.87	337	eP	P	21 51 30.7	+0.1
ODZ	Otahua Downs	85.92	162	P*	P	21 51 31.5	+0.6
BIA	Bitola	85.93	321	i P	P	21 51 29.6	-1.6
BIA				i PP	PP	21 54 44.5	-8.1
BIA	Bitola	85.93	321	i P	P	21 51 29.6	-1.5
BIA				i PP	PP	21 54 44.5	-8.1
AOS	Alonnisos	85.99	318	eP	P	21 51 31.2	-0.2
AQBJ	Aqaba	86.00	305	P	P	21 51 31.6	-0.1
WLS	Welschbruch	86.00	333	eP	P	21 51 31.6	+0.3
TBKS	Tabuk	86.01	303	P	P	21 51 32.5	+0.6
DAVA	Damuels	86.02	331	i P	P	21 51 31.6	+0.2
	comp=Z,702nm,0.8s,mb6.9,SNR=132						
DAVA	Damuels	86.02	331	P	P	21 51 31.6	+0.2
	comp=Z,702nm,0.8s,mb6.9						
LIT	Litokhoron	86.02	320	eP	P	21 51 30.6	-1.1
CDF	Champ du Feu	86.03	333	⇓iP	P	21 51 31.4	-0.1
	comp=Z,4µm,1.5s,mb7.1						
CDF	Champ du Feu	86.03	333	⇓iP	P	21 51 31.4	-0.1
CDF				pmax	pmax		
	comp=Z,2µm,1.5s,mb7.1						
MBH	Mount Berech	86.04	305	P	P	21 51 31.9	-0.1
HTR	Trewern Hill	86.04	341	⇑eP	P	21 51 32.1	+0.7
HTR				AMb	AMB	21 51 39.0	
	comp=Z,346nm,2.1s,mb6.2						
MCH1	Michaelchurch	86.05	341	⇑eP	P	21 51 32.2	+0.7
STEIN	Stein am Rhein	86.08	332	⇓iP	P	21 51 31.2	-0.5
EIL	Elat	86.10	305	P	P	21 51 32.0	-0.3
OHR	Ohrid	86.12	321	i P	P	21 51 31.8	-0.3
OHR				i PP	PP	21 54 52.3	-2.0
OHR				i S	S	22 01 59.0	-5.4
OHR				eSS	SS	22 07 38.9	-7.6
OHR	Ohrid	86.12	321	i P	P	21 51 31.8	-0.3
OHR				i PP	PP	21 54 52.3	-1.9
OHR				i S	S	22 01 58.9	-5.5
OHR				eSS	SS	22 07 38.9	-7.6
BUM	Brajici-Budva	86.14	323	⇑iP	P	21 51 32.4	+0.2
SLE	Schleitheim	86.14	332	⇓iP	P	21 51 31.5	-0.5
LIBD	Limburg	86.14	333	eP	P	21 51 32.2	+0.2
LIBD	Limburg	86.14	333	eP	P	21 51 32.6	+0.6
WEIN	Weingarten	86.15	332	⇓iP	P	21 51 31.8	-0.3
LIENZ	Alp Oberkamor	86.16	331	⇓iP	P	21 51 32.0	-0.1
APPI	Appiano	86.16	330	P	P	21 51 31.7	-0.4
TRULL	Truellikon	86.17	332	⇓iP	P	21 51 31.6	-0.5
SWN1	Swindon	86.17	340	⇑eP	P	21 51 33.1	+1.0
KIZ	Kirchzarten	86.19	333	eP	P	21 51 32.1	-0.1
NVLJ	Novalja	86.20	327	⇓iP	P	21 51 30.9	-1.5
HCY	Herceg Novi	86.21	323	⇑iP	P	21 51 31.8	-0.7
FELD	Feldberg	86.22	333	eP	P	21 51 32.5	+0.1
ULC	Ulcinj	86.23	323	⇑iP	P	21 51 32.3	-0.2
NEO	Neokhori	86.23	319	eP	P	21 51 32.5	-0.2
ECH	Echery	86.24	333	eP	P	21 51 32.6	+0.1
STON	Ston	86.26	324	⇓iP	P	21 51 30.3	-2.4
ALWS	Ilw as Safayha	86.26	305	P	P	21 51 34.0	+1.0
FLACH	Flaach	86.27	332	⇓iP	P	21 51 32.1	-0.6
WILA	Wila	86.28	332	⇓iP	P	21 51 32.4	-0.3
LPIG	La Paz	86.29	62	i P	P	21 51 33.8	+0.5
HGH	Gray Hill	86.32	340	⇑eP	P	21 51 33.3	+0.5
HGH				AMb	AMB	21 51 35.3	
	comp=Z,305nm,1.7s,mb6.2						
JMOS	Jabal al Moall	86.33	304	P	P	21 51 33.9	+0.5
CTI	Castel Tesino	86.34	329	P	P	21 51 32.2	-0.9
	comp=Z,940nm,1.6s,mb6.8						
CTI	Castel Tesino	86.34	329	P	P	21 51 32.2	-0.9
CTI				pmax	pmax		
	comp=Z,940nm,1.6s,mb6.8						
PLONS	Plons	86.40	331	⇓iP	P	21 51 33.1	-0.2
FUORN	Ofenpass	86.42	331	⇓iP	P	21 51 33.8	+0.4
DAVOX	Davos	86.44	331	PKKPbc		22 09 31.8	
	comp=Z,22nm,1.0s,baz=74,slow=6.6,SNR=6.9						
DAVOX				PKPPKP		22 17 39.5	
	comp=Z,8.0nm,1.1s,baz=193,slow=3.6,SNR=3.6						
DAVOX				LR	LR	22 32 54.5	
	comp=Z,83µm,19.2s,MS7.2,baz=274,slow=38						
DAVOX	Davos	86.44	331	⇓iP	P	21 51 33.6	+0.1
DAVOX	Davos	86.44	331	P	P	21 51 32.8	-0.7
ZUR	Zurich	86.44	332	⇓iP	P	21 51 33.2	-0.3
SULZ	Sulz-Cheisache	86.47	332	⇓iP	P	21 51 33.3	-0.4
BRMO	Bormio	86.50	330	P	P	21 51 34.1	+0.3
HAQS	Haql	86.52	304	P	P	21 51 35.0	+0.6
MOF	Molkenrain	86.56	333	eP	P	21 51 34.0	-0.1
HSA	Swansea	86.57	341	⇑eP	P	21 51 34.3	+0.3
WMOK	Wichita Mounta	86.58	48	P	P	21 51 33.8	-0.8
	comp=Z,1µm,1.6s,mb6.8						
WMOK				LR	LR		
	comp=Z,50µm,19.0s,MS6.9						
WMOK	Wichita Mounta	86.58	48	P	P	21 51 33.8	-0.7
WMOK				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.8						
WMOK				MLR	MLR		
	comp=Z,50µm,19.0s,MS6.9						
SWK	Warminster	86.62	340	⇑eP	P	21 51 34.9	+0.6
APE	Apeiranthos	86.63	316	P	P	21 51 28.8	-5.8
THEF	They Montfort	86.64	334	eP	P	21 51 34.0	-0.5
BERNI	Berninapass	86.69	331	⇓iP	P	21 51 35.0	+0.3
HINF	Hinteralfeld	86.69	333	⇓iP	P	21 51 34.3	-0.4
	comp=Z,2µm,1.7s,mb6.7						
HINF	Hinteralfeld	86.69	333	⇓iP	P	21 51 34.3	-0.4
HINF				pmax	pmax		
	comp=Z,862nm,1.7s,mb6.7						
HAU	Haudompre	86.71	334	⇓iP	P	21 51 34.3	-0.5
	comp=Z,2µm,1.2s,mb6.8						
HAU				eR			
	comp=Z,113µm,19.8s						
HAU	Haudompre	86.71	334	⇓iP	P	21 51 34.3	-0.5
HAU				pmax	pmax		
	comp=Z,800nm,1.2s,mb6.8						
HAU				MLR	MLR		
	comp=Z,113µm,19.8s,MS7.3						
LLS	Linth-Limmern	86.71	331	⇓iP	P	21 51 34.7	-0.1
TBI	Tubuai	86.72	123	eLQ		22 15 01.3	
TBI	Tubuai	86.72	123	eP	P	21 51 36.6	+1.2
	comp=Z,411nm,1.0s,mb6.6						
TBI	Tubuai	86.72	123	ePP	PP	21 54 53.3	-6.8
TBI	Tubuai	86.72	123	eS	S	22 02 08.8	-1.8
TBI				eLR	LR	22 18 03.0	
	comp=Z,113µm,36.0s,baz=314						
MEZF	Maizieres J’vi	86.73	335	⇓iP	P	21 51 35.0	+0.1
	comp=Z,2µm,1.2s,mb6.9						
TATS	Tathlith	86.74	292	P	P	21 51 36.0	+0.4
BBS	Basel-Blauen	86.75	333	eP	P	21 51 35.1	+0.1
BBS	Basel-Blauen	86.75	333	eP	P	21 51 35.5	+0.5
MUO	Muotathal	86.75	332	⇓iP	P	21 51 34.9	-0.1
MABI	Malga Bissina	86.79	330	P	P	21 51 34.8	-0.4
BALST	Balsthal	86.79	332	⇓iP	P	21 51 34.9	-0.3
KARP	Karpathos	86.80	314	eP	P	21 51 36.5	+0.9
SIW	Isle of Wight	86.81	339	eP	P	21 51 36.1	+0.9
MPAR	Parnis Oros	86.81	317	eP	P	21 51 36.5	+0.9
BDAS	Al Bad‘	86.82	304	P	P	21 51 36.3	+0.5
VDL	Val di Lei	86.84	331	⇓iP	P	21 51 35.6	+0.1
AYUS	‘Aynunah	86.88	304	P	P	21 51 36.6	+0.5
TUE	Stuetta	86.90	331	P	P	21 51 36.4	+0.7
BOURR	Bourrignon	86.91	333	⇓iP	P	21 51 35.7	-0.1
BNALP	Bannalp	86.91	332	⇓iP	P	21 51 35.7	-0.1
LSK	Leskovik	86.94	321	i Pn	P	21 51 36.3	+0.2
LOMF	Lomont	87.09	333	eP	P	21 51 36.8	+0.1
HEX	Exmoor	87.10	341	⇑eP	P	21 51 37.0	+0.3
HASLI	Hasliberg	87.11	332	⇓iP	P	21 51 36.5	-0.3
SAL	Salo	87.15	330	P	P	21 51 36.6	-0.4
	comp=Z,1µm,1.1s,mb7.0						
SAL	Salo	87.15	330	P	P	21 51 36.6	-0.4
SAL				pmax	pmax		
	comp=Z,1µm,1.1s,mb7.0						
FUSIO	Fusio	87.17	331	⇓iP	P	21 51 37.0	-0.1
SANT	Santorini	87.17	315	P	P	21 51 38.1	+0.8
JAN	Janina	87.19	320	eP	P	21 51 37.7	+0.4
EVR	Evrytania	87.26	319	eP	P	21 51 37.0	-0.7
LTX	Lajitas	87.31	54	eP	P	21 51 38.1	-0.1
	comp=Z,1µm,1.4s,mb6.9						
LTX				epP	pP	21 51 41.8	-0.9
LTX				esP	sP	21 51 43.9	-0.3
LTX				ePP	PP	21 55 06.0	+1.0
LTX				LR	LR		
	comp=Z,79µm,19.0s,MS7.1						
LTX	Lajitas	87.31	54	eP	P	21 51 38.1	-0.1
LTX				e*SP	sP	21 51 43.9	-0.3
LTX				e		21 55 06.0	
LTX				pmax	pmax		
	comp=Z,1µm,1.4s,mb6.9						
LTX				MLR	MLR		
	comp=Z,79µm,19.0s,MS7.1						
TXAR	Lajitas Array	87.31	54	P	P	21 51 37.8	-0.4
	comp=Z,43nm,0.6s,mb5.8,baz=297,slow=2.8,SNR=207						
TXAR				PP	PP	21 55 04.8	-0.2
	comp=Z,13nm,0.8s,baz=301,slow=5.3,SNR=2.9						
TXAR				S	S	22 02 16.6	+0.6
	comp=Z,0.4nm,0.4s,baz=135,slow=2.6,SNR=2.2						
TXAR				PKKPbc		22 09 29.6	
	comp=Z,8.8nm,1.0s,baz=135,slow=5.3,SNR=7.6						
TXAR				PKPPKP		22 17 22.2	
	comp=Z,0.3nm,0.3s,baz=135,slow=1.8,SNR=4.7						
TXAR				LR	LR	22 27 16.1	
	comp=Z,69µm,18.6s,MS7.1,baz=20,slow=33						
TXAR	Lajitas Array	87.31	54	P	P	21 51 37.8	-0.4
TXAR				PP	PP	21 55 04.8	-0.2
TXAR				S	S	22 02 16.6	+0.6
TXAR				PKKPbc		22 09 29.6	
TXAR				P’P’		22 17 22.2	
TXAR				LR	LR	22 27 16.1	
WIMIS	Wimmis	87.38	332	⇓iP	P	21 51 37.8	-0.3
SRN	Sarande	87.45	321	i Pn	P	21 51 38.4	-0.2
UMJS	Umm Lajj	87.46	300	P	P	21 51 39.9	+1.0
MUGIO	Muggio	87.47	331	⇓iP	P	21 51 37.4	-1.1
TORNY	Torny	87.53	333	⇓iP	P	21 51 38.7	-0.1
AOI	Ancona	87.56	327	P	P	21 51 38.7	-0.3
PESA	Pesaro	87.57	328	P	P	21 51 40.2	+1.2
BRANT	Les Verrieres	87.57	333	⇓iP	P	21 51 39.0	0.0
YNBS	Yanbu‘ al Bahr	87.57	299	P	P	21 51 40.3	+0.8
LKBD	Leukerbad	87.62	332	⇓iP	P	21 51 38.9	-0.3
VAI	Varese	87.62	331	P	P	21 51 38.7	-0.6
KEK	Kerkira	87.67	321	eP	P	21 51 38.7	-1.0
KEK	Kerkira	87.67	321	P	P	21 51 40.1	+0.4
SENIN	Lac Senin	87.76	332	⇓iP	P	21 51 39.9	0.0
MMK	Mattmark	87.77	332	⇓iP	P	21 51 40.2	+0.2
MMK	Mattmark	87.77	332	P	P	21 51 40.7	+0.7
VAL	Valentia	87.79	345	⇓iP	P	21 51 41.5	+1.6
VAL				i S	S	22 02 28.3	+8.3
FSSB	Fossombrone	87.79	327	P	P	21 51 40.7	+0.6
MCGN	Macugnaga	87.84	332	P	P	21 51 40.5	+0.2
DJNS	Zahran al Janu	87.84	291	P	P	21 51 42.0	+1.0
ARV	Arcevia	87.88	327	P	P	21 51 40.7	+0.1
	comp=Z,387nm,1.2s,mb6.5						
NPS	Neapolis	87.89	314	eP	P	21 51 40.0	-0.8
BLJS	Baljurashi	87.89	294	P	P	21 51 41.6	+0.5
AIGLE	Aigle	87.90	332	⇓iP	P	21 51 40.2	-0.4
GRYON	Gryon	87.92	332	⇓iP	P	21 51 34.9	-5.8
DIX	Grande Dixence	87.96	332	⇓iP	P	21 51 41.1	+0.3
FGMS	Monte Sant’Ang	87.97	324	P	P	21 51 40.3	-0.7
	comp=Z,1µm,1.6s,mb6.8						
CABF	La Chapelle	87.99	333	⇓iP	P	21 51 40.8	-0.2
	comp=Z,3µm,1.9s,mb6.9						
CABF	La Chapelle	87.99	333	⇓iP	P	21 51 40.8	-0.2
CABF				pmax	pmax		
	comp=Z,2µm,1.9s,mb6.9						
GIMEL	Gimel	87.99	333	⇓iP	P	21 51 41.0	0.0
ZCCA	Zocca	88.01	329	P	P	21 51 41.4	+0.3
OG01	Vacheresse	88.01	332	eP	P	21 51 41.4	+0.3
SFI	Santa Sofia	88.01	328	P	P	21 51 41.8	+0.6
	comp=Z,3µm,2.1s,mb7.1						
SFI	Santa Sofia	88.01	328	P	P	21 51 41.8	+0.6
SFI				pmax	pmax		
	comp=Z,3µm,2.1s,mb7.1						
PIEI	Pieia	88.02	327	P	P	21 51 41.8	+0.6
LCI	Lecce	88.03	322	P	P	21 51 41.1	-0.2
	comp=Z,950nm,1.8s,mb6.7						
LCI	Lecce	88.03	322	P	P	21 51 41.1	-0.2
LCI				pmax	pmax		
	comp=Z,950nm,1.8s,mb6.7						
CSA1	St Austell	88.04	341	⇑eP	P	21 51 40.1	-1.0
BRT	Bari-Castellan	88.04	323	P	P	21 51 41.0	-0.4
	comp=Z,783nm,1.6s,mb6.7						
BRT	Bari-Castellan	88.04	323	P	P	21 51 41.0	-0.4
BRT				pmax	pmax		
	comp=Z,783nm,1.6s,mb6.7						
SNTG	Esanatoglia	88.08	327	P	P	21 51 41.5	0.0
PGD	Poggio Sodo	88.09	328	P	P	21 51 42.5	+1.0
	comp=Z,4µm,2.2s,mb7.2						
PGD	Poggio Sodo	88.09	328	P	P	21 51 42.5	+1.0
PGD				pmax	pmax		
	comp=Z,4µm,2.2s,mb7.2						
VMG	Vicchio	88.09	328	P	P	21 51 42.8	+1.2
SEI	Scarperia	88.09	328	P	P	21 51 43.1	+1.5
FNVD	Fontana Vidola	88.10	329	P	P	21 51 42.8	+1.2
ORX	Oropa	88.12	331	P	P	21 51 41.1	-0.5
XRY	Khrisi	88.12	314	eP	P	21 51 41.7	-0.2
EMV	Vieux Emosson	88.16	332	⇓iP	P	21 51 42.0	+0.2
EMV	Vieux Emosson	88.16	332	P	P	21 51 42.4	+0.6
GSCL	Gusciola	88.17	329	P	P	21 51 43.3	+1.4
BADI	Badiali	88.17	328	P	P	21 51 42.8	+0.9
RGNG	Rignano Grg	88.17	325	P	P	21 51 41.5	-0.5
LOR	Lormes	88.20	335	⇓iP	P	21 51 41.8	-0.2
	comp=Z,4µm,1.5s,mb7.1						
LOR				eR			
	comp=Z,133µm,20.0s						
LOR	Lormes	88.20	335	⇓iP	P	21 51 41.8	-0.2
LOR				pmax	pmax		
	comp=Z,2µm,1.5s,mb7.1						
LOR				MLR	MLR		
	comp=Z,133µm,20.0s,MS7.3						
CRE	Caprese Michel	88.20	328	P	P	21 51 42.5	+0.4
MURB	Monte Urbino	88.25	327	P	P	21 51 42.7	+0.4
FG2	Serracapriola	88.26	325	P	P	21 51 42.8	+0.4
	comp=Z,2µm,1.8s,mb7.0						
GRAM		88.26	329	P	P	21 51 42.0	-0.3
FLN	La Foliniere	88.26	338	⇓iP	P	21 51 41.7	-0.5
	comp=Z,431nm,0.9s,mb6.4						
FLN				eR			
	comp=Z,64µm,19.2s						
FLN	La Foliniere	88.26	338	⇓iP	P	21 51 41.7	-0.5
FLN				pmax	pmax		
	comp=Z,216nm,0.9s,mb6.4						
FLN				MLR	MLR		
	comp=Z,64µm,19.3s,MS7.0						
CCA1	Carnmenellis	88.27	341	⇑eP	P	21 51 41.4	-0.9
IDI	Anoyia	88.28	315	S	S	22 02 25.5	+0.6
	comp=Z,8.4nm,1.0s,baz=298,slow=24,SNR=2.4						
IDI				LR	LR	22 36 29.7	
	comp=Z,37µm,19.4s,MS6.8,baz=46,slow=39						
BOB	Bobbio (Coli)	88.28	330	P	P	21 51 43.3	+0.9
	comp=Z,129nm,0.8s,mb6.2						
BOB	Bobbio (Coli)	88.28	330	P	P	21 51 43.3	+0.9
BOB				pmax	pmax		
	comp=Z,129nm,0.8s,mb6.2						
CRQ2	Rosemanowes 2	88.28	341	⇑eP	P	21 51 41.2	-1.1
CRQ2				AMb	AMB	21 51 49.6	
	comp=Z,344nm,1.5s,mb6.3						
VLI	Veliai	88.30	317	eP	P	21 51 40.0	-2.7
TERO	Teramo	88.30	326	P	P	21 51 43.6	+1.0
LDF	La Druitiere	88.31	338	⇓iP	P	21 51 42.1	-0.4
	comp=Z,3µm,1.8s,mb6.8						
LDF	La Druitiere	88.31	338	⇓iP	P	21 51 42.1	-0.4
LDF				pmax	pmax		
	comp=Z,1µm,1.8s,mb6.8						
VALM		88.31	329	P	P	21 51 42.0	-0.6
TRAV		88.31	331	P	P	21 51 41.7	-0.8
CCM	Cathedral Cave	88.32	41	P	P	21 51 41.6	-1.2
CCM				LR	LR		
	comp=Z,50µm,22.0s,MS6.9						
NRCA	Norcia	88.34	327	P	P	21 51 42.9	+0.1
CMA1	Manaccan	88.34	341	⇑eP	P	21 51 41.7	-0.9
CGW	Gweek	88.35	341	⇑eP	P	21 51 41.7	-0.9
SARO	Sassorosso	88.38	329	P	P	21 51 43.0	+0.1
CGH1	Goonhilly	88.38	341	⇑eP	P	21 51 41.9	-0.9
CPZ	Penzance	88.39	342	⇑eP	P	21 51 41.9	-1.0
SLM	Saint Louis	88.40	40	P	P	21 51 43.0	-0.1
	comp=Z,480nm,0.8s,mb6.8						
SLM	Saint Louis	88.40	40	P	P	21 51 43.0	-0.2
SLM				pmax	pmax		
	comp=Z,480nm,0.8s,mb6.8						
VLC	Villacollemand	88.41	329	P	P	21 51 44.6	+1.6
	comp=Z,999nm,2.0s,mb6.7						
CODM		88.43	330	P	P	21 51 42.9	-0.3
BACM		88.43	329	P	P	21 51 43.0	-0.2
VLS	Valsamata	88.44	319	eP	P	21 51 42.5	-0.9
SADO	Sadowa	88.49	30	P	P	21 51 42.3	-1.1
	comp=Z,52nm,0.9s,mb5.7,baz=319,slow=5.9,SNR=23						
SADO				PP	PP	21 55 10.8	-3.3
	comp=Z,20nm,0.9s,baz=293,slow=11,SNR=3.1						
SADO				PKKPbc		22 09 31.1	
	comp=Z,2.9nm,0.7s,baz=213,slow=5.2,SNR=3.3						
ITM	Ithomi	88.49	318	eP	P	21 51 43.0	-0.7
CIGN	Sant’Elia a Pi	88.50	325	P	P	21 51 44.5	+0.9
SSF	Saint Saulge	88.50	335	⇓iP	P	21 51 43.4	0.0
	comp=Z,865nm,1.3s,mb6.8						
SSF	Saint Saulge	88.50	335	⇓iP	P	21 51 43.4	0.0
SSF				pmax	pmax		
	comp=Z,865nm,1.3s,mb6.8						
VINC	Vinca	88.52	329	P	P	21 51 42.4	-1.1
MAIM		88.56	329	P	P	21 51 42.7	-1.1
KYTH	Kithira	88.57	317	eP	P	21 51 40.2	-3.8
VAM	Vamos	88.57	315	eP	P	21 51 43.8	-0.3
LSD	Ceresole Reale	88.58	332	P	P	21 51 44.9	+1.0
RSL	Roselend	88.58	332	eP	P	21 51 43.6	-0.2
CSNT	Castellina Chi	88.60	328	P	P	21 51 43.7	-0.3
AQU	L’Aquila	88.61	326	P	P	21 51 44.0	-0.1
	comp=Z,3µm,2.1s,mb7.3						
AQU	L’Aquila	88.61	326	P	P	21 51 44.0	-0.1
AQU				pmax	pmax		
	comp=Z,3µm,2.1s,mb7.3						
HYF	Humbligny	88.61	335	⇓iP	P	21 51 44.3	+0.4
FG4	Candela	88.63	324	P	P	21 51 44.1	-0.1
	comp=Z,686nm,0.8s,mb7.0						
FG4	Candela	88.63	324	P	P	21 51 44.1	-0.1
FG4				pmax	pmax		
	comp=Z,686nm,0.8s,mb7.0						
AAM	Ann Arbor	88.64	34	P	P	21 51 44.3	+0.1
AAM				LR	LR		
	comp=Z,55µm,20.0s,MS7.0						
LPL	La Plagne	88.69	332	⇓iP	P	21 51 44.7	+0.3
	comp=Z,496nm,1.0s,mb6.5						
LPL	La Plagne	88.69	332	⇓iP	P	21 51 44.7	+0.3
LPL				pmax	pmax		
	comp=Z,248nm,1.0s,mb6.5						
LPG	La Plagne	88.69	332	⇓iP	P	21 51 44.8	+0.4
	comp=Z,428nm,0.8s,mb6.5						
LPG	La Plagne	88.69	332	⇓iP	P	21 51 44.8	+0.4
LPG				pmax	pmax		
	comp=Z,214nm,0.8s,mb6.5						
OG05	Jujurieux	88.70	333	eP	P	21 51 45.4	+1.0

GRR	**Gorron**	**88.71**	**338**	⇓*i*P	**P**	**21 51 44.3**	**-0.1**
	comp=Z,759nm,0.9s,mb6.7						
GRR	**Gorron**	**88.71**	**338**	⇓*i*P	**P**	**21 51 44.3**	**-0.1**
GRR				pmax	pmax		
	comp=Z,379nm,0.9s,mb6.7						
PII	**Pisa**	**88.71**	**329**	P	**P**	**21 51 44.9**	**+0.4**
	comp=Z,749nm,2.1s,mb6.7						
PII	**Pisa**	**88.71**	**329**	P	**P**	**21 51 44.9**	**+0.4**
PII				pmax	pmax		
	comp=Z,749nm,2.1s,mb6.7						
CII	**Carovilli**	**88.71**	**325**	P	**P**	**21 51 45.0**	**+0.4**
SMF	**Signal de Mont**	**88.75**	**334**	⇓*i*P	**P**	**21 51 44.5**	**-0.1**
	comp=Z,4µm,1.5s,mb7.2						
SMF	**Signal de Mont**	**88.75**	**334**	⇓*i*P	**P**	**21 51 44.5**	**-0.1**
SMF				pmax	pmax		
	comp=Z,2µm,1.5s,mb7.2						
AVF	**Avril sur Loir**	**88.79**	**335**	⇓*i*P	**P**	**21 51 44.6**	**-0.2**
	comp=Z,5µm,1.5s,mb7.3						
AVF	**Avril sur Loir**	**88.79**	**335**	⇓*i*P	**P**	**21 51 44.6**	**-0.2**
AVF				pmax	pmax		
	comp=Z,3µm,1.5s,mb7.3						
FVM	**French Village**	**88.80**	**41**	P	**P**	**21 51 44.0**	**-1.1**
	comp=Z,794nm,1.4s,mb6.8						
FVM	**French Village**	**88.80**	**41**	P	**P**	**21 51 44.0**	**-1.1**
FVM				pmax	pmax		
	comp=Z,794nm,1.4s,mb6.8						
RNI2	**Rionero Sannit**	**88.80**	**325**	P	**P**	**21 51 45.2**	**+0.2**
RSP	**Reno Superiore**	**88.80**	**332**	P	**P**	**21 51 43.9**	**-1.0**
PCP	**Pian Castagno**	**88.82**	**330**	P	**P**	**21 51 44.5**	**-0.6**
PTQR	**Pietraquaria**	**88.87**	**326**	P	**P**	**21 51 45.7**	**+0.3**
VVLD	**Villa Vallelon**	**88.90**	**326**	P	**P**	**21 51 44.4**	**-1.1**
SGG	**Gregorio Mates**	**88.95**	**325**	P	**P**	**21 51 44.8**	**-0.9**
JCT	**Junction City**	**88.95**	**51**	P	**P**	**21 51 45.6**	**-0.4**
	comp=Z,502nm,1.3s,mb6.7						
JCT				LR	LR		
	comp=Z,46µm,19.0s,MS6.9						
JCT	**Junction City**	**88.95**	**51**	P	**P**	**21 51 45.6**	**-0.4**
JCT				pmax	pmax		
	comp=Z,502nm,1.3s,mb6.7						
JCT				MLR	MLR		
	comp=Z,46µm,19.0s,MS6.9						
LBOS		**88.97**	**287**	⇓*e*P	**P**	**21 51 46.7**	**+0.3**
LBOS				AMb	AMB	21 51 48.7	
	comp=Z,1µm,1.4s,mb7.1						
FENE	**Fenestrelle**	**88.97**	**332**	P	**P**	**21 51 45.8**	**0.0**
GRFL	**Gerfalco**	**89.00**	**328**	P	**P**	**21 51 45.9**	**0.0**
	comp=Z,1µm,2.5s,mb6.8						
ORI	**Oriolo Calabro**	**89.03**	**323**	P	**P**	**21 51 46.5**	**+0.3**
GVD	**Gavdhos**	**89.05**	**315**	*e*P	**P**	**21 51 46.5**	**+0.1**
	comp=Z,282nm,0.9s,mb6.6						
BHB	**Bricherasio**	**89.06**	**331**	P	**P**	**21 51 44.7**	**-1.4**
BNI	**Bardonecchia**	**89.10**	**332**	P	**P**	**21 51 45.6**	**-0.8**
BNI				pmax	pmax		
	comp=Z,140nm,0.9s,mb6.3						
CERT	**Cerreto**	**89.12**	**326**	P	**P**	**21 51 45.9**	**-0.6**
BGF	**Bois d'Agland**	**89.16**	**335**	⇓*i*P	**P**	**21 51 46.6**	**0.0**
	comp=Z,3µm,1.7s,mb7.1						
BGF	**Bois d'Agland**	**89.16**	**335**	⇓*i*P	**P**	**21 51 46.6**	**0.0**
BGF				pmax	pmax		
	comp=Z,2µm,1.7s,mb7.0						
SGO	**Sicignano**	**89.18**	**324**	P	**P**	**21 51 46.2**	**-0.6**
	comp=Z,146nm,0.9s,mb6.3						
SGO	**Sicignano**	**89.18**	**324**	P	**P**	**21 51 46.2**	**-0.6**
SGO				pmax	pmax		
	comp=Z,146nm,0.9s,mb6.3						
DHBB	**Dhamar BB**	**89.18**	**288**	⇓*e*P	**P**	**21 51 47.7**	**+0.3**
DHBB				AMb	AMB	21 51 50.3	
	comp=Z,1µm,1.6s,mb6.9						
RFI	**Roccamonfina**	**89.19**	**325**	P	**P**	**21 51 47.4**	**+0.5**
	comp=Z,233nm,1.8s,mb6.2						
FIN	**Finale Ligure**	**89.23**	**330**	P	**P**	**21 51 46.5**	**-0.5**
MSC	**Monte Massico**	**89.29**	**325**	P	**P**	**21 51 46.6**	**-0.7**
ROB	**Roburent**	**89.29**	**331**	P	**P**	**21 51 46.3**	**-0.9**
SGMF	**Saint Gilles**	**89.32**	**339**	⇓*i*P	**P**	**21 51 47.0**	**-0.3**
	comp=Z,523nm,1.2s,mb6.4						
SGMF	**Saint Gilles**	**89.32**	**339**	⇓*i*P	**P**	**21 51 47.0**	**-0.3**
SGMF				pmax	pmax		
	comp=Z,261nm,1.2s,mb6.4						
MBDF	**Montbardon**	**89.34**	**332**	⇓*i*P	**P**	**21 51 47.0**	**-0.5**
	comp=Z,288nm,1.0s,mb6.2						
MBDF	**Montbardon**	**89.34**	**332**	⇓*i*P	**P**	**21 51 47.0**	**-0.5**
MBDF				pmax	pmax		
	comp=Z,144nm,1.0s,mb6.3						
DOI	**San Damiano**	**89.35**	**331**	P	**P**	**21 51 49.2**	**+1.6**
RDP	**Rocca di Papa**	**89.39**	**326**	P	**P**	**21 51 47.5**	**-0.3**
CUC	**Castrocucco**	**89.39**	**323**	P	**P**	**21 51 49.2**	**+1.3**
MA9	**Marino**	**89.40**	**326**	P	**P**	**21 51 47.1**	**-0.8**
	comp=Z,379nm,1.4s,mb6.5						
TDS	**Terranova Siba**	**89.41**	**323**	P	**P**	**21 51 48.0**	**+0.1**
	comp=Z,668nm,1.0s,mb6.9						
TDS	**Terranova Siba**	**89.41**	**323**	P	**P**	**21 51 48.0**	**+0.1**
TDS				pmax	pmax		
	comp=Z,668nm,1.0s,mb6.9						
PLDF	**La Plantade**	**89.41**	**334**	*e*P	**P**	**21 51 48.4**	**+0.6**
ROSF	**Rostrenen**	**89.45**	**339**	⇓*i*P	**P**	**21 51 47.4**	**-0.5**
	comp=Z,664nm,1.2s,mb6.6						
ROSF	**Rostrenen**	**89.45**	**339**	⇓*i*P	**P**	**21 51 47.4**	**-0.5**
ROSF				pmax	pmax		
	comp=Z,332nm,1.2s,mb6.5						
AGO	**Saint Agoulin**	**89.50**	**334**	*e*P	**P**	**21 51 49.1**	**+0.9**
FRSS	**Farasan al Kab**	**89.51**	**291**	P	**P**	**21 51 50.5**	**+1.6**
ORIF	**Oris-en-Rattie**	**89.51**	**332**	⇓*i*P	**P**	**21 51 48.5**	**+0.2**
	comp=Z,294nm,0.8s,mb6.4						
ORIF				*e*R			
	comp=Z,106µm,21.0s						
MONE	**Monesi**	**89.52**	**331**	P	**P**	**21 51 46.9**	**-1.4**
ENR	**Entracque**	**89.52**	**331**	P	**P**	**21 51 46.6**	**-1.7**
STV2	**Anna di Valdie**	**89.54**	**331**	P	**P**	**21 51 46.9**	**-1.6**
STV	**Sta Anna Valdi**	**89.54**	**331**	P	**P**	**21 51 47.0**	**-1.4**
MAIG	**Mazatlaan**	**89.58**	**61**	*i* P	**P**	**21 51 49.5**	**+0.4**
TIP	**Timpagrande**	**89.58**	**322**	P	**P**	**21 51 48.3**	**-0.4**
IMI	**Imperia**	**89.61**	**330**	P	**P**	**21 51 49.4**	**+0.6**
TCF	**Toulx Ste Croi**	**89.61**	**335**	⇓*i*P	**P**	**21 51 48.8**	**+0.1**
	comp=Z,2µm,1.4s,mb6.9						
TCF	**Toulx Ste Croi**	**89.61**	**335**	⇓*i*P	**P**	**21 51 48.8**	**+0.1**
TCF				pmax	pmax		
	comp=Z,856nm,1.4s,mb6.9						
SIUC	**Southern Illin**	**89.62**	**40**	P	**P**	**21 51 48.8**	**-0.2**
SIUC				*e*pP	pP	21 51 53.0	-0.6
SAOF	**Saorge**	**89.67**	**331**	*e*P	**P**	**21 51 48.9**	**-0.2**
MIAR	**Mount Ida**	**89.69**	**45**	P	**P**	**21 51 48.6**	**-0.8**
	comp=Z,486nm,1.3s,mb6.7						
MIAR				LR	LR		
	comp=Z,47µm,21.0s,MS6.9						
MIAR	**Mount Ida**	**89.69**	**45**	P	**P**	**21 51 48.6**	**-0.8**
MIAR				pmax	pmax		
	comp=Z,486nm,1.3s,mb6.7						
MIAR				MLR	MLR		
	comp=Z,47µm,21.0s,MS6.9						
AUTN	**L'Aution**	**89.71**	**331**	*e*P	**P**	**21 51 49.3**	**0.0**
NEGI	**Negi**	**89.73**	**331**	P	**P**	**21 51 46.5**	**-2.9**
COLF	**Collangettes**	**89.78**	**334**	*e*P	**P**	**21 51 50.0**	**+0.5**
QUIF	**Quistinic**	**89.80**	**339**	⇓*i*P	**P**	**21 51 48.9**	**-0.7**
PYM	**Petit Puy Mans**	**89.81**	**334**	*e*P	**P**	**21 51 50.0**	**+0.3**
SBF	**Sospel**	**89.82**	**331**	⇓*i*P	**P**	**21 51 48.7**	**-1.1**
	comp=Z,279nm,1.0s,mb6.2						
SBF	**Sospel**	**89.82**	**331**	⇓*i*P	**P**	**21 51 48.7**	**-1.1**
SBF				pmax	pmax		
	comp=Z,139nm,1.0s,mb6.2						
MVIF	**Mont Vial**	**89.90**	**331**	*e*P	**P**	**21 51 50.9**	**+0.7**
OG25	**Le Caire**	**89.91**	**332**	*e*P	**P**	**21 51 49.3**	**-0.9**
VERF	**Verneugheol**	**89.99**	**335**	*e*P	**P**	**21 51 51.3**	**+0.8**
VIVF	**Saint-Julien-l**	**90.00**	**333**	⇓*i*P	**P**	**21 51 50.3**	**-0.3**
	comp=Z,651nm,1.0s,mb6.6						
VIVF	**Saint-Julien-l**	**90.00**	**333**	⇓*i*P	**P**	**21 51 50.3**	**-0.3**
VIVF				pmax	pmax		
	comp=Z,326nm,1.0s,mb6.6						
GRI	**Girifalco**	**90.02**	**322**	P	**P**	**21 51 50.9**	**+0.1**
MFF	**Saint Martin d**	**90.09**	**337**	⇓*i*P	**P**	**21 51 51.0**	**+0.1**
	comp=Z,654nm,1.1s,mb6.6						
MFF	**Saint Martin d**	**90.09**	**337**	⇓*i*P	**P**	**21 51 51.0**	**+0.1**
MFF				pmax	pmax		
	comp=Z,327nm,1.1s,mb6.6						
CALN	**Calern**	**90.12**	**331**	*e*P	**P**	**21 51 50.2**	**-1.0**
LBL	**Lubilhac**	**90.18**	**334**	*e*P	**P**	**21 51 51.4**	**0.0**
UALR	**University of**	**90.19**	**44**	P	**P**	**21 51 51.5**	**-0.2**
USIN	**University of**	**90.20**	**39**	P	**P**	**21 51 51.9**	**+0.2**
LCHF	**La Chataignera**	**90.21**	**337**	*e*P	**P**	**21 51 52.4**	**+0.9**
TRBA	**At Turbah**	**90.23**	**287**	⇑*e*P	**P**	**21 51 52.5**	**+0.1**
TRBA				AMb	AMB	21 51 54.7	
	comp=Z,888nm,1.4s,mb6.9						
FRNF	**Fournols**	**90.28**	**334**	*e*P	**P**	**21 51 52.7**	**+0.8**
STOF	**St-Etienne Org**	**90.29**	**332**	*e*P	**P**	**21 51 52.5**	**+0.6**
PGF	**Pioggiola**	**90.31**	**329**	⇓*i*P	**P**	**21 51 51.0**	**-1.1**
	comp=Z,1µm,1.6s,mb6.7						
PGF	**Pioggiola**	**90.31**	**329**	⇓*i*P	**P**	**21 51 51.0**	**-1.1**
PGF				pmax	pmax		
	comp=Z,569nm,1.6s,mb6.7						
ERPA	**Erie**	**90.36**	**32**	P	**P**	**21 51 52.5**	**+0.1**
	comp=Z,946nm,1.3s,mb7.0						
ERPA				LR	LR		
	comp=Z,47µm,20.0s,MS6.9						
FRF	**La Foret Royal**	**90.38**	**331**	⇓*i*P	**P**	**21 51 51.5**	**-0.9**
SMRF	**Simiane la Rot**	**90.43**	**332**	⇓*i*P	**P**	**21 51 52.3**	**-0.3**
	comp=Z,371nm,1.1s,mb6.3						
FRNY	**Flat Rock**	**90.49**	**26**	*e*P	**P**	**21 51 51.8**	**-1.0**
FRNY				*e*pP	pP	21 51 55.4	-2.0
LRYF	**La Roche-sur-Y**	**90.54**	**338**	*e*P	**P**	**21 51 52.8**	**-0.2**
GNAR	**Gosnell**	**90.54**	**42**	P	**P**	**21 51 54.0**	**+0.6**
TAVF	**Tavernes**	**90.56**	**331**	*e*P	**P**	**21 51 53.5**	**+0.3**
ACSO	**Alum Creek Sta**	**90.61**	**35**	*e*P	**P**	**21 51 53.1**	**-0.4**
	comp=Z,357nm,1.0s,mb6.7						
ACSO				*e*pP	pP	21 51 56.9	-1.2
ACSO				LR	LR		
	comp=Z,34µm,20.0s,MS6.8						
LMR	**La Mourre**	**90.63**	**331**	⇓*i*P	**P**	**21 51 52.6**	**-0.9**
WCI	**Wyandotte Cave**	**90.67**	**38**	P	**P**	**21 51 53.0**	**-0.8**
	comp=Z,623nm,1.3s,mb6.8						
WCI				LR	LR		
	comp=Z,53µm,21.0s,MS7.0						
WCI	**Wyandotte Cave**	**90.67**	**38**	P	**P**	**21 51 53.0**	**-0.8**
WCI				pmax	pmax		
	comp=Z,623nm,1.3s,mb6.8						
WCI				MLR	MLR		
	comp=Z,53µm,21.0s,MS7.0						
ALLY	**Alegheny Colle**	**90.68**	**32**	P	**P**	**21 51 53.9**	**+0.1**
GLAT	**Glass**	**90.69**	**41**	P	**P**	**21 51 54.2**	**+0.2**
RJF	**Les Rejaudoux**	**90.70**	**335**	⇓*i*P	**P**	**21 51 53.9**	**+0.1**
	comp=Z,2µm,1.6s,mb6.9						
RJF				*e*R			
	comp=Z,101µm,20.0s						
RJF	**Les Rejaudoux**	**90.70**	**335**	⇓*i*P	**P**	**21 51 53.9**	**+0.1**
RJF				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.9						
RJF				MLR	MLR		
	comp=Z,101µm,20.0s,MS7.2						
CEL	**Celeste**	**90.72**	**322**	P	**P**	**21 51 54.5**	**+0.4**
PRAF	**Pradon**	**90.73**	**332**	*e*P	**P**	**21 51 54.4**	**+0.4**
PUYF	**Puyloubier**	**90.76**	**332**	*e*P	**P**	**21 51 54.6**	**+0.5**
SOI	**Samo**	**90.79**	**322**	P	**P**	**21 51 54.0**	**-0.4**
SCLL	**Scilla**	**90.81**	**322**	P	**P**	**21 51 53.6**	**-0.9**
MATF	**Mathat**	**90.82**	**336**	*e*P	**P**	**21 51 55.0**	**+0.7**
CAF	**Calviac**	**90.85**	**335**	⇓*i*P	**P**	**21 51 55.0**	**+0.5**
	comp=Z,990nm,1.0s,mb6.8						
CAF	**Calviac**	**90.85**	**335**	⇓*i*P	**P**	**21 51 55.0**	**+0.5**
CAF				pmax	pmax		
	comp=Z,495nm,1.0s,mb6.8						
UTMT	**University of**	**90.85**	**41**	P	**P**	**21 51 55.5**	**+0.8**
LASF	**Ste Croix**	**90.97**	**333**	⇓*i*P	**P**	**21 51 55.1**	**0.0**
	comp=Z,495nm,1.1s,mb6.4						
SLNA	**Salina**	**90.99**	**323**	P	**P**	**21 51 54.9**	**-0.4**
GELF	**Grande-Etoile**	**90.99**	**332**	*e*P	**P**	**21 51 54.4**	**-0.8**
NCB	**Newcomb**	**91.02**	**27**	P	**P**	**21 51 55.1**	**-0.2**
NCB				LR	LR		
	comp=Z,58µm,19.0s,MS7.0						
MTTG	**Motta San Giov**	**91.02**	**322**	P	**P**	**21 51 55.4**	**-0.1**
NATX	**Nacogdoches**	**91.12**	**47**	*e*P	**P**	**21 51 56.5**	**+0.5**
NATX				LR	LR		
	comp=Z,63µm,20.0s,MS7.0						
MIV	**Mineville/With**	**91.17**	**27**	*e*P	**P**	**21 51 54.9**	**-1.1**
MIV				*e*pP	pP	21 51 58.9	-1.6
MET	**Memphis--Engin**	**91.23**	**42**	P	**P**	**21 51 55.3**	**-1.2**
LFF	**La Frestale**	**91.28**	**335**	⇓*i*P	**P**	**21 51 56.8**	**+0.3**
	comp=Z,3µm,1.4s,mb7.0						
LFF	**La Frestale**	**91.28**	**335**	⇓*i*P	**P**	**21 51 56.8**	**+0.3**
LFF				pmax	pmax		
	comp=Z,1µm,1.4s,mb7.1						
WVT	**Waverly**	**91.55**	**40**	*e*P	**P**	**21 51 57.2**	**-0.7**
	comp=Z,287nm,1.1s,mb6.5						
WVT				*e*pP	pP	21 52 01.3	-1.2
WVT				LR	LR		
	comp=Z,53µm,19.0s,MS7.0						
WVT	**Waverly**	**91.55**	**40**	*e*P	**P**	**21 51 57.2**	**-0.7**
WVT				pmax	pmax		
	comp=Z,287nm,1.1s,mb6.5						
WVT				MLR	MLR		
	comp=Z,53µm,19.0s,MS7.0						
ACCN	**Adirondack Com**	**91.73**	**27**	P	**P**	**21 51 58.4**	**-0.2**
HNH	**Hanover**	**91.93**	**26**	P	**P**	**21 52 00.2**	**+0.7**
OXF	**Oxford**	**91.97**	**42**	P	**P**	**21 51 59.6**	**-0.4**
OXF				LR	LR		
	comp=Z,40µm,19.0s,MS6.9						
SSY	**Sortino**	**91.99**	**322**	P	**P**	**21 52 00.1**	**+0.2**
VAE	**Valguarnera**	**92.05**	**323**	P	**P**	**21 52 00.1**	**-0.1**
	comp=Z,6.7nm,0.9s,baz=84,slow=19,SNR=2.0						
VAE				LR	LR	22 36 02.1	
	comp=Z,71µm,18.3s,MS7.2,baz=9.1,slow=37						
MTLF	**Montolieu**	**92.19**	**334**	⇓*i*P	**P**	**21 52 00.9**	**+0.2**
	comp=Z,484nm,1.1s,mb6.5						
MTLF	**Montolieu**	**92.19**	**334**	⇓*i*P	**P**	**21 52 00.9**	**+0.2**
MTLF				pmax	pmax		
	comp=Z,242nm,1.1s,mb6.4						
MSEY	**Mahe Island**	**92.37**	**266**	P	**P**	**21 52 04.1**	**+1.9**
MSEY				LR	LR		
	comp=Z,10µm,20.0s,MS6.3						
ERC	**Erice**	**92.46**	**324**	P	**P**	**21 52 02.9**	**+0.8**
	comp=Z,853nm,1.0s,mb7.0						
MCWV	**Mont Chateau**	**92.46**	**33**	P	**P**	**21 51 59.0**	**-3.0**
MCWV				LR	LR		
	comp=Z,71µm,19.0s,MS7.1						
LPEF	**Le Peyrat**	**92.64**	**334**	*e*P	**P**	**21 52 02.8**	**0.0**
VSL	**Villasalto**	**92.69**	**327**	P	**P**	**21 52 05.1**	**+2.0**
SJAF	**Saint Jean de**	**92.71**	**333**	*e*P	**P**	**21 52 03.5**	**+0.4**
EJON	**La Jonquera**	**92.73**	**333**	P	**P**	**21 52 04.5**	**+1.3**
	comp=Z,455nm,2.4s,mb6.5						
FILF	**Fillols**	**92.75**	**333**	*e*P	**P**	**21 52 04.1**	**+0.8**
MLS	**Moulis**	**92.92**	**334**	*e*P	**P**	**21 52 04.2**	**+0.1**
SALF	**Salau**	**93.06**	**334**	*e*P	**P**	**21 52 05.6**	**+0.9**
VALF	**Valcebollere**	**93.09**	**333**	*e*P	**P**	**21 52 05.4**	**+0.6**
EPF	**Esparros**	**93.11**	**335**	⇓*i*P	**P**	**21 52 04.6**	**-0.3**
	comp=Z,259nm,1.1s,mb6.3						
EPF	**Esparros**	**93.11**	**335**	⇓*i*P	**P**	**21 52 04.6**	**-0.3**
EPF				pmax	pmax		
	comp=Z,129nm,1.1s,mb6.3						
QUA2	**Belchertown**	**93.16**	**27**	*e*P	**P**	**21 52 05.3**	**+0.1**
	comp=Z,206nm,1.5s,mb6.3						
QUA2				*e*pP	pP	21 52 08.5	-1.3
SWET	**Sewanee**	**93.22**	**39**	P	**P**	**21 52 03.2**	**-2.4**
HRV	**Harvard--Oak R**	**93.24**	**26**	P	**P**	**21 52 05.9**	**+0.3**
HRV				LR	LR		
	comp=Z,42µm,19.0s,MS6.9						
RESF	**Ens**	**93.31**	**335**	*e*P	**P**	**21 52 07.1**	**+1.2**
TZTN	**Tazewell**	**93.33**	**37**	*e*P	**P**	**21 52 05.9**	**-0.2**
TZTN				*e*pP	pP	21 52 09.4	-1.2
ORDF	**Ordiarp**	**93.37**	**336**	*e*P	**P**	**21 52 06.1**	**0.0**
WES	**Weston**	**93.43**	**26**	P	**P**	**21 52 04.6**	**-1.9**
	comp=Z,406nm,1.4s,mb6.7						
WES				LR	LR		
	comp=Z,46µm,21.0s,MS6.9						
WES	**Weston**	**93.43**	**26**	P	**P**	**21 52 04.6**	**-1.8**
WES				pmax	pmax		
	comp=Z,406nm,1.4s,mb6.7						
WES				MLR	MLR		
	comp=Z,46µm,21.0s,MS6.9						
EBIE	**Bielsa**	**93.48**	**335**	P	**P**	**21 52 06.6**	**0.0**
	comp=Z,466nm,1.9s,mb6.6						
LARF	**Larrau**	**93.54**	**336**	*e*P	**P**	**21 52 07.8**	**+0.9**
EALK	**Alkurruntz**	**93.55**	**336**	P	**P**	**21 52 05.8**	**-1.2**
	comp=Z,722nm,2.0s,mb6.8						
SJPF	**Ste Jean**	**93.55**	**336**	⇓*i*P	**P**	**21 52 06.3**	**-0.7**
	comp=Z,289nm,1.3s,mb6.2						
SJPF	**Ste Jean**	**93.55**	**336**	⇓*i*P	**P**	**21 52 06.3**	**-0.7**
SJPF				pmax	pmax		
	comp=Z,145nm,1.3s,mb6.2						
FDAF	**Les Forges d'A**	**93.60**	**335**	*e*P	**P**	**21 52 07.9**	**+0.7**
MVL	**Millersville**	**93.62**	**30**	P	**P**	**21 52 06.8**	**-0.5**
EMIR	**Miracle**	**93.69**	**333**	P	**P**	**21 52 07.4**	**-0.2**
	comp=Z,334nm,1.6s,mb6.5						
PAL	**Palisades**	**93.70**	**28**	P	**P**	**21 52 08.2**	**+0.4**
	comp=Z,940nm,2.3s,mb6.8						
PAL	**Palisades**	**93.70**	**28**	P	**P**	**21 52 08.2**	**+0.5**
PAL				pmax	pmax		
	comp=Z,939nm,2.3s,mb6.8						
SFJM	**Santa Fe**	**93.71**	**61**	*i* P	**P**	**21 52 09.0**	**+0.8**
CPCT	**Cooper Cave**	**93.73**	**38**	P	**P**	**21 52 06.5**	**-1.5**
BRNJ	**Basking Ridge**	**93.74**	**29**	*e*P	**P**	**21 52 09.0**	**+1.1**
BRYW	**Bryant College**	**93.77**	**26**	*e*P	**P**	**21 52 07.1**	**-0.9**
	comp=Z,419nm,1.5s,mb6.7						
BRYW				*e*pP	pP	21 52 12.0	-0.6
CPNY	**Central Park**	**93.87**	**29**	P	**P**	**21 52 08.3**	**-0.2**
ELN	**Prospectdale**	**94.07**	**35**	*e*P	**P**	**21 52 08.6**	**-0.9**
ELN				*e*pP	pP	21 52 13.0	-1.0
BLA	**Blacksburg**	**94.23**	**35**	*e*P	**P**	**21 52 09.3**	**-1.0**
	comp=Z,285nm,1.0s,mb6.7						
BLA				*e*pP	pP	21 52 15.0	+0.2
BLA				LR	LR		
	comp=Z,57µm,20.0s,MS7.0						
BLA	**Blacksburg**	**94.23**	**35**	*e*P	**P**	**21 52 09.3**	**-0.9**
BLA				pmax	pmax		
	comp=Z,285nm,1.0s,mb6.7						
BLA				MLR	MLR		
	comp=Z,57µm,20.0s,MS7.0						
EPOB	**Poblet**	**94.34**	**334**	P	**P**	**21 52 12.9**	**+2.2**
	comp=Z,468nm,2.2s,mb6.5						
LRAL	**Lakeview Retre**	**94.38**	**42**	*e*P	**P**	**21 52 10.2**	**-0.9**
	comp=Z,122nm,1.1s,mb6.2						
LRAL				*e*pP	pP	21 52 15.6	0.0
LRAL				LR	LR		
	comp=Z,57µm,22.0s,MS7.0						
ESAC	**San Caprasio**	**94.55**	**335**	P	**P**	**21 52 12.2**	**+0.6**
	comp=Z,1µm,1.9s,mb7.0						
EARI	**Arriondas**	**94.60**	**339**	P	**P**	**21 52 13.5**	**+1.7**
	comp=Z,390nm,1.8s,mb6.5						
CBN	**Corbin**	**94.73**	**32**	P	**P**	**21 52 13.0**	**+0.5**
CBN				LR	LR		
	comp=Z,67µm,20.0s,MS7.1						
ERTA	**Horta de San J**	**94.95**	**334**	P	**P**	**21 52 13.5**	**0.0**
	comp=Z,435nm,2.4s,mb6.5						
ETOS	**Mallorca**	**95.10**	**332**	P	**P**	**21 52 16.5**	**+2.3**
	comp=Z,474nm,2.0s,mb6.6						
EPON	**Pontenova**	**95.12**	**340**	P	**P**	**21 52 12.4**	**-1.8**
	comp=Z,709nm,2.3s,mb6.7						
MOIG	**Morelia**	**95.53**	**60**	*i* P	**P**	**21 52 16.9**	**+0.3**
GOGA	**Godfrey**	**95.89**	**39**	*e*P	**P**	**21 52 17.6**	**-0.4**
GOGA				*e*pP	pP	21 52 22.3	-0.2
GOGA				LR	LR		
	comp=Z,51µm,19.0s,MS7.0						
GOGA	**Godfrey**	**95.89**	**39**	*e*P	**P**	**21 52 17.6**	**-0.4**
GOGA				MLR	MLR		
	comp=Z,51µm,19.0s,MS7.0						
STS	**Santiago**	**95.90**	**341**	P	**P**	**21 52 17.7**	**-0.1**
	comp=Z,229nm,1.7s,mb6.3						
STS	**Santiago**	**95.90**	**341**	P	**P**	**21 52 17.7**	**-0.1**
STS				pmax	pmax		
	comp=Z,229nm,1.7s,mb6.3						
CMAH	**Djebel Manchou**	**95.94**	**327**	P	**P**	**21 52 17.0**	**-1.1**
EMAZ	**Mazaricos**	**95.95**	**341**	P	**P**	**21 52 16.0**	**-2.0**
	comp=Z,375nm,1.7s,mb6.5						
ERUA	**La Rua**	**95.98**	**340**	P	**P**	**21 52 15.7**	**-2.5**
	comp=Z,127nm,1.5s,mb6.1						
ERUA	**La Rua**	**95.98**	**340**	P	**P**	**21 52 15.7**	**-2.5**
ERUA				pmax	pmax		
	comp=Z,127nm,1.5s,mb6.1						
CAEH	**'Ain El Ouahch**	**96.05**	**327**	P	**P**	**21 52 19.0**	**+0.4**
ABSA	**Djebel Ababsia**	**96.21**	**327**	P	**P**	**21 52 19.0**	**-0.3**
ECAL	**Calabor**	**96.29**	**339**	P	**P**	**21 52 19.9**	**+0.3**
	comp=Z,252nm,1.8s,mb6.3						
EIBI	**Ibiza**	**96.30**	**332**	P	**P**	**21 52 20.4**	**+0.8**
	comp=Z,406nm,2.1s,mb6.5						
PBRG	**Braganca**	**96.42**	**339**	*e*P	**P**	**21 52 20.1**	**0.0**
PBRG	**Braganca**	**96.42**	**339**	*e*PP	PP	21 56 17.1	+0.6
CKFL	**Kef-Lekhel**	**96.43**	**327**	P	**P**	**21 52 20.0**	**-0.3**
RKT	**Rikitea**	**96.62**	**114**	*e*LR	LR	22 22 41.5	
	comp=Z,109µm,35.0s,baz=307						
ECHE	**Chera**	**96.62**	**334**	P	**P**	**21 52 21.6**	**+0.5**
	comp=Z,53nm,0.9s,mb6.0						
ECHE	**Chera**	**96.62**	**334**	P	**P**	**21 52 21.6**	**+0.5**
ECHE				pmax	pmax		
	comp=Z,53nm,0.9s,mb6.0						
EZAM	**Zamans**	**96.63**	**341**	P	**P**	**21 52 21.2**	**+0.1**
	comp=Z,139nm,1.5s,mb6.2						
EZAM	**Zamans**	**96.63**	**341**	P	**P**	**21 52 21.2**	**+0.1**
EZAM				pmax	pmax		
	comp=Z,139nm,1.5s,mb6.2						
CASM	**Ain Smara**	**96.64**	**327**	P	**P**	**21 52 20.5**	**-0.8**
DFRA	**Djebel Bou Aff**	**96.66**	**328**	P	**P**	**21 52 23.0**	**+1.6**
GUD	**Guadarrama**	**96.72**	**337**	P	**P**	**21 52 21.2**	**-0.4**
	comp=Z,63nm,1.1s,mb6.0						
GUD	**Guadarrama**	**96.72**	**337**	P	**P**	**21 52 21.2**	**-0.3**
GUD				pmax	pmax		
	comp=Z,63nm,1.1s,mb6.0						
ELOB	**Lobios**	**96.72**	**340**	P	**P**	**21 52 22.6**	**+1.1**
	comp=Z,246nm,1.7s,mb6.4						
CTEI	**Djebel Teioual**	**96.85**	**327**	P	**P**	**21 52 22.0**	**-0.2**
PCAB	**Cabril**	**96.86**	**340**	*e*P	**P**	**21 52 22.4**	**+0.3**
PCAB	**Cabril**	**96.86**	**340**	*e*PP	PP	21 56 19.4	-0.7
UNM	**Universidad Na**	**97.14**	**59**	*e*P	**P**	**21 52 28.5**	**+4.6**
EBEN	**Beniarda**	**97.15**	**333**	P	**P**	**21 52 26.1**	**+2.5**
	comp=Z,282nm,1.9s,mb6.4						
SET	**Setif**	**97.16**	**328**	P	**P**	**21 52 25.0**	**+1.4**
PVRL	**Vila Real**	**97.18**	**340**	*e*P	**P**	**21 52 23.4**	**-0.2**
CKHR	**Kef el Ahmar**	**97.27**	**328**	P	**P**	**21 52 26.0**	**+1.9**
YAIG	**Yautepec**	**97.54**	**59**	*i* P	**P**	**21 52 25.5**	**-0.2**
ESDC	**Sonseca Array**	**97.54**	**336**	P	**P**	**21 52 23.7**	**-1.5**
	comp=Z,8.7nm,0.8s,mb5.4,baz=25,slow=3.7,SNR=17						
ESDC				PP	PP	21 56 22.1	-3.4
	comp=Z,20nm,0.9s,baz=22,slow=7.3,SNR=6.4						
ESDC				PKKPbc		22 09 06.1	
	comp=Z,9.9nm,1.1s,baz=212,slow=1.9,SNR=9.9						
ESDC				PKPPKP		22 17 21.7	
	comp=Z,2.8nm,1.1s,baz=225,slow=2.1,SNR=4.0						
ESDC	**Sonseca Array**	**97.54**	**336**	P	**P**	**21 52 24.0**	**-1.2**
	comp=Z,96nm,1.9s,mb6.0						
ESLA	**Sonseca Array**	**97.54**	**336**	P	**P**	**21 52 25.5**	**+0.3**
ESLA				LR	LR		
	comp=Z,510µm,21.0s,MS8.0						
PLIG	**Platanillo**	**97.57**	**60**	*i* P	**P**	**21 52 25.8**	**0.0**
ABA	**Alger-Bouzarea**	**97.60**	**330**	P	**P**	**21 52 28.0**	**+2.4**
ETOB	**Tobarra**	**97.67**	**334**	P	**P**	**21 52 26.3**	**+0.5**
	comp=Z,258nm,1.9s,mb6.4						
PPM	**Popocatepetl**	**97.69**	**59**	*i* P	**P**	**21 52 26.3**	**-0.1**
NHSC	**New Hope**	**97.73**	**37**	P	**P**	**21 52 27.8**	**+1.5**
	comp=Z,309nm,1.4s,mb6.6						
NHSC				*e*pP	pP	21 52 31.2	+0.4
NHSC				LR	LR		
	comp=Z,83µm,19.0s,MS7.2						
PVIS	**Viseu**	**97.75**	**339**	*e*P	**P**	**21 52 28.5**	**+2.3**
PVIS	**Viseu**	**97.75**	**339**	*e*PP	PP	21 56 26.0	-1.2
AKET	**Djebel Ketaf**	**97.91**	**329**	P	**P**	**21 52 29.5**	**+2.5**
MTE	**Manteigas**	**97.95**	**339**	*e*P	**P**	**21 52 27.5**	**+0.4**
MTE	**Manteigas**	**97.95**	**339**	*e*PP	PP	21 56 29.3	+0.5
MTE				*e*S	S	22 03 55.5	+6.1
MTE				*e*SS	SS	22 10 37.9	+2.7
MTE	**Manteigas**	**97.95**	**339**	*e*LQ		22 21 09.0	
MTE				*e*LR	LR	22 26 02.9	
	comp=Z,62µm,16.8s						
MTE	**Manteigas**	**97.95**	**339**	*e*P	**P**	**21 52 27.3**	**+0.2**
	comp=Z,56nm,0.8s,mb6.2						
MTE				*e*pP	pP	21 52 29.9	-1.7
MTE				*e*PP	PP	21 56 27.4	-1.4
CAIG	**El Cayaco**	**97.97**	**61**	*i* P	**P**	**21 52 26.6**	**-1.0**
ADJB	**Djebel Djouab**	**98.00**	**329**	P	**P**	**21 52 27.8**	**+0.4**
EVIA	**Vianos**	**98.00**	**335**	P	**P**	**21 52 28.6**	**+1.2**
	comp=Z,131nm,0.9s,mb6.5						
EVIA	**Vianos**	**98.00**	**335**	P	**P**	**21 52 28.6**	**+1.3**
EVIA				pmax	pmax		
	comp=Z,131nm,0.9s,mb6.5						
EMHD	**Djebel Mahouad**	**98.15**	**330**	P	**P**	**21 52 30.0**	**+1.9**
EMUR	**La Murta**	**98.28**	**334**	P	**P**	**21 52 27.6**	**-1.0**
	comp=Z,171nm,1.8s,mb6.3						
ACX	**Acapulco**	**98.33**	**61**	*e*P	**P**	**21 52 32.0**	**+2.7**
PCBR	**Castelo Branco**	**98.45**	**339**	*e*P	**P**	**21 52 31.1**	**+1.8**
PCBR	**Castelo Branco**	**98.45**	**339**	*e*PP	PP	21 56 30.3	-2.0
EBNR	**Beni Rached**	**98.63**	**331**	P	**P**	**21 52 34.0**	**+3.8**
EHUE	**Huescar**	**98.77**	**334**	P	**P**	**21 52 31.1**	**+0.3**
	comp=Z,56nm,1.3s,mb5.9						
EHUE	**Huescar**	**98.77**	**334**	P	**P**	**21 52 31.1**	**+0.3**
EHUE				pmax	pmax		
	comp=Z,56nm,1.3s,mb5.9						
ECHA	**Ech Chlef**	**98.82**	**331**	P	**P**	**21 52 32.0**	**+0.9**
ECHF	**Ech Chlef**	**98.82**	**331**	P	**P**	**21 52 32.0**	**+0.9**
EBAN	**Banos Encina**	**98.85**	**335**	P	**P**	**21 52 30.8**	**-0.4**
	comp=Z,70nm,1.1s,mb6.1						
EBAN	**Banos Encina**	**98.85**	**335**	P	**P**	**21 52 30.8**	**-0.4**
EBAN				pmax	pmax		
	comp=Z,70nm,1.1s,mb6.1						
PTOM	**Tomar**	**98.92**	**339**	*e*P	**P**	**21 52 32.9**	**+1.5**
PTOM	**Tomar**	**98.92**	**339**	*e*PP	PP	21 56 33.3	-2.3
EQES	**Quesada**	**98.94**	**335**	P	**P**	**21 52 31.2**	**-0.4**
	comp=Z,177nm,1.7s,mb6.3						
EANR	**'Ain N'Sour**	**99.10**	**331**	P	**P**	**21 52 33.0**	**+0.6**
EADA	**Adamuz**	**99.11**	**336**	P	**P**	**21 52 31.1**	**-1.3**
	comp=Z,162nm,1.7s,mb6.3						
EBAD	**Badajoz**	**99.32**	**338**	P	**P**	**21 52 34.8**	**+1.5**
	comp=Z,112nm,2.1s,mb6.0						

ETRT	**Tiaret**	**99.51**	**331**	P	**P**	**21 52 34.5**	**+0.2**
ELUQ	**Luque**	**99.56**	**336**	P	**P**	**21 52 34.7**	**+0.2**
	comp=Z,61nm,0.9s,mb6.0						
ELUQ	**Luque**	**99.56**	**336**	P	**P**	**21 52 34.7**	**+0.3**
ELUQ				pmax	pmax		
	comp=Z,61nm,0.9s,mb6.0						
ECOG	**Cogollos-Vega**	**99.59**	**335**	P	**P**	**21 52 35.5**	**+1.0**
	comp=Z,233nm,2.4s,mb6.2						
ECOG	**Cogollos-Vega**	**99.59**	**335**	P	**P**	**21 52 35.5**	**+0.9**
ECOG				pmax	pmax		
	comp=Z,233nm,2.4s,mb6.2						
PLOU	**Loures**	**99.80**	**340**	*e*P	**P**	**21 52 35.4**	**-0.1**
EVO	**Evora**	**99.81**	**339**	*e*P	**P**	**21 52 35.1**	**-0.5**
	comp=Z,79nm,1.3s,mb5.7						
EVO				*e*R			
	comp=Z,107µm,20.5s						
ELOJ	**Sierra Loja**	**99.90**	**335**	P	**P**	**21 52 35.1**	**-0.9**
	comp=Z,40nm,1.1s,mb5.8						
ELOJ	**Sierra Loja**	**99.90**	**335**	P	**P**	**21 52 35.1**	**-0.9**
ELOJ				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.8						
ERON	**Agron**	**99.90**	**335**	P	**P**	**21 52 35.3**	**-0.7**
	comp=Z,30nm,1.0s,mb5.7						
LIS	**Lisbon**	**99.96**	**340**	*e*P	**P**	**21 52 33.9**	**-2.3**
LIS				*e*		21 52 57.8	
	baz=203,slow=5.6						
LIS				*e*SS	SS	22 11 02.2	-1.2
LIS				*e*SS	SS	22 11 02.4	-1.0
LIS				AMS	AMS	22 34 51.3	
	comp=E,122µm,19.5s						
EGUA	**Guajares**	**99.99**	**335**	P	**P**	**21 52 36.6**	**+0.2**
	comp=E,13nm,1.3s						
EMIN	**Mina Concepcio**	**100.13**	**337**	P	P	21 52 35.7	-1.3
	comp=E,208nm,2.1s						
PBEJ	**Beja**	**100.24**	**338**	*e*P	P	21 52 37.6	0.0
PBEJ	**Beja**	**100.24**	**338**	*e*PP	PP	21 56 44.5	-1.7
OXX	**Oaxaca**	**100.37**	**59**	*e*P	P	21 52 42.0	+3.4
VHO	**Vista Hermosa**	**100.37**	**59**	⇓*i*P	P	21 52 41.7	+3.1
EMIJ	**Mijas**	**100.63**	**336**	P	P	21 52 37.3	-2.1
	comp=E,84nm,2.5s						
ESPR	**Espera**	**100.70**	**336**	P	P	21 52 40.4	+0.7
	comp=E,174nm,2.3s						
PTEO	**Sao Teotonio**	**100.94**	**339**	*e*P	P	21 52 40.8	+0.1
PTEO	**Sao Teotonio**	**100.94**	**339**	*e*PP	PP	21 56 46.6	-5.2
EJIF	**Jimena Fronter**	**100.96**	**336**	P	P	21 52 40.4	-0.4
	comp=E,112nm,1.8s						
EJIF	**Jimena Fronter**	**100.96**	**336**	P	P	21 52 40.4	-0.4
EJIF				pmax	pmax		
	comp=Z,112nm,1.8s						
MORF	**Marmelete**	**101.14**	**339**	*e*P	P	21 52 40.9	-0.7
MORF				*e*SS	SS	22 11 18.1	-1.8
MORF				*e*SS	SS	22 11 18.4	-1.5
MORF				AMS	AMS	22 36 33.3	
	comp=E,137µm,24.2s						
DWPF	**Disney**	**101.19**	**41**	PFAKE		21 52 50.0	+7.9
DWPF				LR	LR		
	comp=Z,40µm,21.0s,MS6.9						
PTCN	**Pitcairn Islan**	**101.33**	**113**	PFAKE		21 52 50.0	+7.2
PTCN				LR	LR		
	comp=Z,37nm,21.0s						
CMIG	**Matias Romero**	**101.59**	**58**	*i* P	P	21 52 42.3	-1.8
ADH	**Angra Heroismo**	**103.33**	**354**	*e*P	Pdif	21 53 07.5	+16
ADH	**Angra Heroismo**	**103.33**	**354**	*i* PP	PP	21 57 15.0	+5.4
ADH				*i*		22 06 22.5	
ADH				*i* SS	SS	22 11 08.0	-42
ADH	**Angra Heroismo**	**103.33**	**354**	*i* LR	LR	22 28 20.0	
MDT	**Midelt**	**103.99**	**334**	PKKPbc		22 08 50.2	
	comp=Z,2.7nm,0.8s,baz=3.1,slow=3.2,SNR=3.6						
CCIG	**Comitan**	**103.99**	**56**	*e*P	Pdif	21 52 55.4	+0.6
KMBO	**Kilima Mbogo**	**104.54**	**280**	Pdiff	Pdif	21 52 57.7	+0.5
	comp=Z,15nm,1.1s,baz=39,slow=5.9,SNR=17						
KMBO				PP	PP	21 57 11.2	-7.9
	comp=Z,5.1nm,1.0s,baz=359,slow=5.8,SNR=4.5						
KMBO				PKKPbc		22 08 46.1	
	comp=Z,4.7nm,0.8s,baz=253,slow=5.1,SNR=6.8						
KMBO	**Kilima Mbogo**	**104.54**	**280**	Pdif	Pdif	21 52 57.7	+0.4
KMBO				PP	PP	21 57 11.2	-7.9
KMBO				PKKPbc		22 08 46.1	
KMBO				LR	LR		
	comp=Z,47µm,19.0s,MS7.0						
BBSR	**BB Station**	**104.72**	**26**	PFAKE		21 53 10.0	+12
BBSR				LR	LR		
	comp=Z,28µm,19.0s,MS6.8						
OPO	**Ambohidratompo**	**107.13**	**260**	Pdiff	Pdif	21 53 09.4	+0.9
	comp=Z,3.6nm,1.0s,baz=344,slow=11,SNR=2.4						
JTS	**JuntasAbangare**	**113.09**	**55**	Pdiff	Pdif	21 53 35.8	+1.0
	comp=Z,1.5nm,0.4s,baz=328,slow=18,SNR=2.4						
JTS				PP	PP	21 58 16.1	-6.4
	comp=Z,4.7nm,0.9s,baz=294,slow=20,SNR=1.6						
JTS				PKKP	PKKP	22 08 28.9	-2.0
	comp=Z,11nm,0.8s,baz=39,slow=7.9,SNR=6.4						
JTS	**JuntasAbangare**	**113.09**	**55**	Pdif	Pdif	21 53 35.8	+1.0
JTS				PP	PP	21 58 16.1	-6.4
JTS				PKKP	PKKP	22 08 28.9	-2.0
JTS				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
VNDA	**Vanda**	**115.77**	**176**	*e*PKPdf	PKPdf	21 57 31.7	-3.5
VNDA				*e*pPKPdf		21 57 36.9	
VNDA				LR	LR		
	comp=Z,16µm,20.0s,MS6.6						
SBA	**Scott Base**	**116.40**	**175**	*e*PKPdf	PKPdf	21 57 33.7	-2.7
SBA				*e*pPKPdf		21 57 39.2	
SBA				LR	LR		
	comp=Z,14µm,22.0s,MS6.5						
SJG	**San Juan**	**116.99**	**33**	PP	PP	21 58 44.0	-5.6
	comp=Z,22nm,0.8s,baz=72,slow=6.4,SNR=2.5						
SJG				PKKPbc		22 08 08.7	
	comp=Z,45nm,1.0s,baz=325,slow=0.7,SNR=5.3						
SJG	**San Juan**	**116.99**	**33**	PFAKE		21 57 50.0	+11
SJG				LR	LR		
	comp=Z,26µm,21.0s,MS6.8						
CPD	**Cerro la Pandu**	**117.15**	**33**	*e*PKPdf	PKPdf	21 57 37.8	-1.3
PAYG	**Puerto Ayora**	**117.27**	**67**	PFAKE		21 57 50.0	+11
PAYG				LR	LR		
	comp=Z,24µm,21.0s,MS6.8						
RPN	**Rapa Nui**	**118.02**	**104**	PFAKE		21 57 50.0	+9.4
RPN				LR	LR		
	comp=Z,6µm,21.0s,MS6.2						
LSZ	**Lusaka**	**120.19**	**274**	PKP	PKPdf	21 57 42.5	-2.5
	comp=Z,17nm,0.8s,baz=55,slow=1.4,SNR=24						
LSZ				PP	PP	21 59 09.7	-1.4
	comp=Z,26nm,1.0s,baz=70,slow=8.3,SNR=2.0						
LSZ				PKKPbc		22 07 54.9	
	comp=Z,11nm,0.8s,baz=233,slow=2.1,SNR=9.2						
LSZ				SKKPbc		22 11 38.7	
	comp=Z,4.4nm,1.1s,baz=172,slow=6.7,SNR=3.2						
LSZ	**Lusaka**	**120.19**	**274**	*e*PKPdf	PKPdf	21 57 43.0	-2.1
LSZ				*e*pPKPdf		21 57 46.0	
LSZ				LR	LR		
	comp=Z,30µm,22.0s,MS6.9						
MAW	**Mawson**	**121.66**	**206**	*e*P	PKPdf	21 57 44.1	-2.7
	comp=Z,47nm,0.9s						
MAW	**Mawson**	**121.66**	**206**	Pdiff	Pdif	21 54 20.5	+9.2
	comp=Z,4.6nm,1.1s,baz=72,slow=7.2,SNR=4.3						
MAW				PKP	PKPdf	21 57 42.8	-3.9
	comp=Z,41nm,0.9s,baz=47,slow=1.8,SNR=20						
MAW				PP	PP	21 59 18.4	-1.8
	comp=Z,17nm,1.1s,baz=90,slow=7.6,SNR=1.6						
MAW				PKKPbc		22 07 46.9	
	comp=Z,14nm,0.9s,baz=280,slow=6.7,SNR=9.8						
MAW				SKKPbc		22 11 40.3	
	comp=Z,13nm,0.9s,baz=229,slow=5.4,SNR=5.5						
SDV	**Santo Domingo**	**122.74**	**43**	PKP	PKPdf	21 57 46.9	-3.1
	comp=Z,109nm,0.8s,baz=259,slow=0.7,SNR=40						
SDV				PKKPbc		22 07 41.7	
	comp=Z,11nm,0.8s,baz=345,slow=3.9,SNR=3.7						
MATP	**Matopo**	**122.81**	**269**	PKP	PKPdf	21 57 46.8	-3.2
	comp=Z,36nm,0.7s,baz=50,slow=2.0,SNR=34						
MATP				PKKPbc		22 07 44.0	
	comp=Z,17nm,1.2s,baz=256,slow=5.4,SNR=9.7						
MATP				SKKPbc		22 11 30.1	
	comp=Z,16nm,1.1s,baz=237,slow=5.8,SNR=3.8						
ROSC	**El Rosal**	**123.92**	**49**	PKP	PKPdf	21 57 50.2	-2.2
	comp=Z,44nm,0.9s,baz=127,slow=1.1,SNR=17						
TRN	**Trinidad (W)**	**125.68**	**32**	*e*P	PP	21 59 46.9	-1.6
DBIC	**Dimbokro**	**127.34**	**321**	PKP	PKPdf	21 57 56.0	-3.0
	comp=Z,38nm,0.8s,baz=59,slow=1.6,SNR=24						
DBIC				PP	PP	21 59 55.2	-4.0
	comp=Z,29nm,0.9s,baz=356,slow=8.2,SNR=3.7						
DBIC	**Dimbokro**	**127.34**	**321**	*e*PKPdf	PKPdf	21 57 55.9	-3.1
DBIC				*e*pPKPdf		21 58 00.9	
DBIC				LR	LR		
	comp=Z,46µm,21.0s,MS7.1						
LBTB	**Lobatse**	**127.48**	**266**	PKP	PKPdf	21 57 56.1	-2.9
	comp=Z,49nm,0.8s,baz=120,slow=2.8,SNR=16						
LBTB				PP	PP	21 59 58.3	-1.7
	comp=Z,14nm,0.9s,baz=91,slow=8.5,SNR=3.4						
LBTB	**Lobatse**	**127.48**	**266**	PKP	PKPdf	21 57 56.1	-2.9
LBTB				*e*PKPdf	PKPdf	21 57 57.1	-1.9
LBTB				PP	PP	21 59 58.3	-1.6
LBTB				LR	LR		
	comp=Z,33µm,21.0s,MS7.0						
LBTB	**Lobatse**	**127.48**	**266**	PKIKP	PKPdf	21 57 56.1	-2.9
LBTB						21 59 58.3	
LBTB				MLR	MLR		
	comp=Z,33µm,21.0s,MS7.0						
QSPA	**South Pole Qui**	**127.79**	**180**	*e*P	PKPdf	21 57 56.0	-2.2
LIC	**Lamto**	**127.81**	**321**	⇑*i*PKIKP	PKPdf	21 57 56.8	-3.1
	comp=Z,410nm,1.1s						
LIC				*e*R			
	comp=Z,60µm,20.0s						
BOSA	**Boshof**	**129.46**	**262**	PKhKP		21 57 46.0	
	comp=Z,8.1nm,1.2s,baz=156,slow=7.6,SNR=3.2						
BOSA				PKP	PKPdf	21 58 00.3	-2.4
	comp=Z,23nm,1.1s,baz=108,slow=1.6,SNR=10						
BOSA				PP	PP	22 00 12.6	-0.7
	comp=Z,23nm,1.1s,baz=62,slow=9.6,SNR=2.7						
BOSA				SKKPbc		22 11 06.8	
	comp=Z,13nm,1.0s,baz=251,slow=3.5,SNR=4.7						
BOSA	**Boshof**	**129.46**	**262**	*e*PKPdf	PKPdf	21 57 52.3	-10
BOSA				PKP	PKPdf	21 58 00.3	-2.4
BOSA				PP	PP	22 00 12.6	-0.7
BOSA				SKKPbc		22 11 06.8	
BOSA				LR	LR		
	comp=Z,28µm,20.0s,MS7.0						
BOSA	**Boshof**	**129.46**	**262**	PKHKP		21 57 46.1	
BOSA						21 58 00.3	
BOSA						22 00 12.6	
BOSA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BOSA				pmax	pmax		
	comp=Z,23nm,1.1s						
BOSA				pmax	pmax		
	comp=Z,23nm,1.1s						
BOSA				pmax	pmax		
	comp=N,13nm,1.0s						
SYO	**Syowa Base**	**130.35**	**207**	⇑Pdiff	Pdif	21 54 52.5	+3.1
SYO	**Syowa Base**	**130.35**	**207**	⇑*e*Pdif	Pdif	21 54 52.5	+3.1
TSUM	**Tsumeb**	**130.75**	**277**	PKP	PKPdf	21 58 02.7	-2.7
	comp=N,29nm,1.1s,baz=56,slow=2.2,SNR=14						
TSUM				PP	PP	22 00 20.9	-1.0
	comp=N,11nm,1.0s,baz=340,slow=4.4,SNR=3.1						
TSUM	**Tsumeb**	**130.75**	**277**	*e*PKPdf	PKPdf	21 57 59.2	-6.2
TSUM				PKP	PKPdf	21 58 02.7	-2.6
TSUM				PP	PP	22 00 20.9	-1.0
TSUM				*e*PP	PP	22 00 21.2	-0.8
TSUM				LR	LR		
	comp=Z,27µm,22.0s,MS6.9						
SUR	**Sutherland**	**134.53**	**260**	PKhKP		21 58 03.2	
	comp=Z,13nm,0.8s,baz=152,slow=2.3,SNR=6.9						
SUR				PKP	PKPdf	21 58 09.8	-2.4
	comp=Z,19nm,0.8s,baz=100,slow=5.0,SNR=6.9						
SUR				PP	PP	22 00 44.4	-1.2
	comp=Z,8.9nm,0.9s,baz=18,slow=3.2,SNR=1.9						
SUR	**Sutherland**	**134.53**	**260**	*e*PKPdf	PKPdf	21 58 03.3	-8.9
SUR				PKP	PKPdf	21 58 09.8	-2.4
SUR				PP	PP	22 00 44.4	-1.2
SUR				LR	LR		
	comp=Z,8µm,20.0s,MS6.4						
NNA	**Nana**	**134.69**	**66**	PFAKE		21 58 20.0	+7.1
NNA				LR	LR		
	comp=Z,5µm,22.0s,MS6.2						
NVL	**N'lazarevskaya**	**139.26**	**202**	⇓*i*PKHKP		21 58 08.5	
NVL				*e*		21 58 18.3	
NVL				*e**PP		21 58 30.9	
NVL				pmax	pmax		
	comp=Z,13nm,1.0s						
MAIT	**Maitri**	**139.28**	**202**	*e*PP	PP	22 01 15.3	+1.2
MAIT				*e*PKPdf	PKPdf	21 58 20.1	+0.3
ARE	**Arequipa**	**141.52**	**66**	*e*P	PKPdf	21 58 22.0	-3.2
ARE				*e*		22 01 31.0	
SAML	**Samuel**	**141.55**	**48**	*e*PKPdf	PKPdf	21 58 15.8	-10
SAML				LR	LR		
	comp=Z,33µm,22.0s,MS7.0						
SNAA	**Sanae**	**142.50**	**196**	⇑*i*P	PKPdf	21 58 18.1	-7.2
SNAA	**Sanae**	**142.50**	**196**	⇑*i*	PKPdf	21 58 20.8	-4.5
SNAA	**Sanae**	**142.50**	**196**	⇑*i*	PKPdf	21 58 27.6	+2.3
SNAA	**Sanae**	**142.50**	**196**	⇑*i*	PKPdf	21 58 31.1	+5.8
SNAA	**Sanae**	**142.50**	**196**	PKhKP		21 58 15.8	
	comp=Z,88nm,1.1s,baz=120,slow=3.2,SNR=117						
SNAA				PP	PP	22 01 29.6	-3.6
	comp=Z,8.5nm,1.0s,baz=39,slow=19,SNR=2.2						
SNAA	**Sanae**	**142.50**	**196**	PKHKP		21 58 15.8	
SNAA						22 01 29.6	
SNAA				pmax	pmax		
	comp=Z,88nm,1.1s						
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LPAZ	**La Paz**	**143.79**	**62**	PKhKP		21 58 24.2	
	comp=Z,73nm,0.7s,baz=347,slow=4.7,SNR=52						
LPAZ	**La Paz**	**143.79**	**62**	*e*PKPdf	PKPdf	21 58 23.8	-5.3
LPAZ				LR	LR		
	comp=Z,22µm,20.0s,MS6.9						
VNA2	**Neumayer--Watz**	**144.03**	**195**	⇑*i*P	PKPbc	21 58 25.0	+1.3
VNA2	**Neumayer--Watz**	**144.03**	**195**	⇑*i*	PKPbc	21 58 31.2	+7.5
VNA2	**Neumayer--Watz**	**144.03**	**195**	⇑*i*	PKPbc	21 58 35.8	+12
VNA2	**Neumayer--Watz**	**144.03**	**195**	⇑*i*	PKPbc	21 58 40.7	+17
VNA2	**Neumayer--Watz**	**144.03**	**195**	⇑*i*	PKPbc	21 58 41.9	+18
VNA3	**Neumayer Olymp**	**144.23**	**194**	⇑*i*P	PKPbc	21 58 25.2	+1.0
VNA3	**Neumayer Olymp**	**144.23**	**194**	⇑*i*	PKPbc	21 58 30.1	+5.9
VNA3	**Neumayer Olymp**	**144.23**	**194**	⇑*i*	PKPbc	21 58 34.9	+11
VNA3	**Neumayer Olymp**	**144.23**	**194**	⇑*i*	PKPbc	21 58 39.9	+16
VNA3	**Neumayer Olymp**	**144.23**	**194**	⇑*i*	PKPbc	21 58 43.4	+19
VNA1	**Neumayer--Stat**	**144.43**	**195**	⇑*i*P	PKPbc	21 58 26.4	+1.6
VNA1	**Neumayer--Stat**	**144.43**	**195**	⇑*i*	PKPbc	21 58 31.3	+6.5
VNA1	**Neumayer--Stat**	**144.43**	**195**	⇑*i*	PKPbc	21 58 35.8	+11
VNA1	**Neumayer--Stat**	**144.43**	**195**	⇑*i*	PKPbc	21 58 38.7	+14
VNA1	**Neumayer--Stat**	**144.43**	**195**	⇑*i*	PKPbc	21 58 43.4	+19
CEN1	**Los Morros**	**146.71**	**74**	⇓*e*P	PKPbc	21 58 32.8	+0.8
RCBR	**Riachuelo**	**147.92**	**1**	*e*PKPdf	PKPdf	21 58 34.5	-1.8
RCBR				LR	LR		
	comp=Z,24µm,21.0s,MS7.0						
PMSA	**Palmer Station**	**148.28**	**157**	*e*PKPdf	PKPdf	21 58 33.8	-1.5
PMSA				LR	LR		
	comp=Z,23µm,19.0s,MS7.0						
SIV	**San Ignacio**	**148.30**	**53**	PKP	PKPdf	21 58 33.5	-3.2
	comp=Z,88nm,0.9s,baz=299,slow=1.0,SNR=76						
SIV				PKPbc	PKPdf	21 58 37.1	+0.4
	comp=Z,108nm,0.8s,baz=301,slow=3.0,SNR=87						
SIV				PP	PP	22 02 08.8	-0.6
	comp=Z,22nm,1.1s,baz=221,slow=9.3,SNR=1.6						
TLL	**Tololo Astrono**	**149.57**	**86**	⇓*e*P	PKPdf	21 58 35.7	-2.7
CMCH	**Combarbala**	**149.82**	**88**	*e*P	PKPdf	21 58 39.0	+0.2
IHA	**Instituto Hidr**	**149.99**	**92**	*e*P	PKPdf	21 58 41.1	+2.0
CCHI	**Chillan**	**150.70**	**99**	*e*P	PKPdf	21 58 37.4	-2.6
PEL	**Peldehue**	**150.78**	**91**	⇑*e*P	PKPdf	21 58 37.4	-2.8
NICH	**Los Niches**	**150.94**	**95**	*e*P	PKPdf	21 58 38.7	-1.7
FCH	**Farellones**	**151.16**	**91**	⇓*e*P	PKPdf	21 58 37.8	-2.9
USHA	**Ushuaia**	**151.92**	**138**	PKP	PKPdf	21 58 38.2	-3.0
	comp=Z,9.3nm,0.9s,baz=191,slow=3.3,SNR=2.9						
USHA				PKPbc	PKPdf	21 58 44.8	+3.6
	comp=Z,173nm,1.0s,baz=297,slow=1.5,SNR=26						
MDZ	**Mendoza**	**152.15**	**90**	PKP	PKPdf	21 58 41.6	-0.7
MDZ				PKS	PKS	22 02 14.4	+2.3
MDZ				SKKS		22 08 23.6	
MDZ				SP		22 11 00.5	
CFAA	**Coronel Fontan**	**152.16**	**87**	PKP	PKPdf	21 58 39.7	-2.6
	comp=Z,2.7nm,0.8s,baz=280,slow=2.4,SNR=19						
CFAA				PKPbc	PKPdf	21 58 46.6	+4.3
	comp=Z,16nm,0.8s,baz=271,slow=3.1,SNR=56						
CFAA	**Coronel Fontan**	**152.16**	**87**	PKP	PKPdf	21 58 39.7	-2.7
CFAA				PKPbc	PKPdf	21 58 46.6	+4.3
PLCA	**Paso Flores**	**152.60**	**107**	PKP	PKPdf	21 58 39.8	-2.8
	comp=Z,65nm,1.2s,baz=256,slow=3.6,SNR=16						
PLCA				PKPbc	PKPdf	21 58 47.6	+5.0
	comp=Z,31nm,0.8s,baz=235,slow=4.4,SNR=18						
PLCA	**Paso Flores**	**152.60**	**107**	*e*PKPdf	PKPdf	21 58 40.3	-2.3
PLCA				*e*pPKPdf		21 58 45.6	
PLCA				LR	LR		
	comp=Z,27µm,19.0s,MS7.1						
PLCA	**Paso Flores**	**152.60**	**107**	PKIKP	PKPdf	21 58 39.8	-2.8
PLCA						21 58 47.6	
PLCA				pmax	pmax		
	comp=Z,65nm,1.2s						
BDFB	**Brasilia**	**154.95**	**31**	PKP	PKPdf	21 58 44.9	-1.6
	comp=Z,62nm,1.1s,baz=3.6,slow=2.5,SNR=18						
BDFB				PKPbc	PKPdf	21 58 53.3	+6.8
	comp=Z,108nm,1.1s,baz=358,slow=2.8,SNR=22						
BDFB				PKPab	PKPab	21 59 09.0	-0.7
	comp=Z,88nm,0.9s,baz=349,slow=8.3,SNR=7.3						
BDFB				PP	PP	22 02 42.0	-4.5
	comp=Z,24nm,1.0s,baz=352,slow=7.1,SNR=2.3						
BDFB	**Brasilia**	**154.95**	**31**	PKIKP	PKPdf	21 58 44.9	-1.6
BDFB						21 58 53.3	
BDFB						22 02 42.0	
BAO	**Brasilia Array**	**154.95**	**30**	PKPdf	PKPdf	21 58 45.0	-1.5
BAO				*e*		21 58 50.0	
BAO				*i*		21 58 53.0	
BAO				*i*		21 58 58.0	
TRQA	**Tornquist**	**158.87**	**98**	*e*PKPdf	PKPdf	21 58 47.6	-3.4
TRQA				*e*pPKPdf		21 58 52.6	
TRQA				LR	LR		
	comp=Z,32µm,19.0s,MS7.2						
EFI	**East Falkland**	**158.90**	**138**	*e*PKPdf	PKPdf	21 58 48.2	-2.4
EFI				*e*pPKPdf		21 58 52.9	
EFI				LR	LR		
	comp=Z,7µm,19.0s,MS6.5						
LPA	**La Plata**	**161.40**	**87**	*de*PKP	PKPdf	21 58 51.0	-2.8
LPA				*e*sPKP		21 58 58.0	
LPA	**La Plata**	**161.40**	**87**	*e*PKP	PKPab	21 59 37.0	0.0
LPA				*e*PKS	PKS	22 02 26.0	+3.5
LPA				*e*PP	PP	22 03 20.0	-1.3
LPA				*e*SKKS		22 10 07.0	
LPA				*e*SKKS		22 12 54.0	
LPA				*e*SKKS		22 14 11.0	
	comp=Z,36µm,18.0s						
TRIS	**Tristan da Cun**	**161.89**	**266**	PFAKE		21 59 00.0	+5.8
TRIS				LR	LR		
	comp=Z,20µm,19.0s						
CAM4	**Nova Friburgo**	**163.10**	**24**	⇑*i*P	PKPdf	21 58 51.5	-4.3
CAM4				*i*		21 58 54.1	
CAM4				*i*		21 58 58.8	
CAM4				*i*		21 59 02.7	
CAM4				*i*		21 59 45.8	
CAM4				*i*		21 59 48.4	

JMA 14 21:44:19.9±0.1**, 38.17N**×**144.63E, h41^{km}, M4.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.49**	**292**	P	P	21 44 59.4	+0.5
JIO	**Ouri**	**2.60**	**277**	P	P	21 45 00.8	+0.4
JIO				*e*S	S	21 45 31.1	+0.1
MIYJ	**Miyakonagasawa**	**2.60**	**304**	P	P	21 45 00.7	+0.2

JMA 14 21:54:01.1±0.1**, 38.39N**×**144.72E, h39^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.48**	**287**	P	P	21 54 40.5	+0.5
MIYJ	**Miyakonagasawa**	**2.55**	**299**	P	P	21 54 41.3	+0.3
JIO	**Ouri**	**2.65**	**272**	S	S	21 55 13.8	+0.2

JMA 14 21:55:16.2±0.2**, 38.17N**×**144.61E, h48^{km}, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.48**	**292**	P	P	21 55 55.3	+0.3
JIO	**Ouri**	**2.58**	**277**	P	P	21 55 56.8	+0.3
JIO				S	S	21 56 27.0	+0.2
MIYJ	**Miyakonagasawa**	**2.59**	**304**	P	P	21 55 56.6	-0.1
MIYJ				*e*S	S	21 56 26.9	-0.2
JOT	**Ohata**	**4.22**	**321**	*e*S	S	21 57 04.5	-3.8
JRY	**Ryogami san**	**5.04**	**247**	*e*S	S	21 57 26.1	-2.9

JMA 14 21:57:43.1±0.1**, 38.21N**×**144.72E, h39^{km}, M3.9, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.54**	**291**	P	P	21 58 23.5	+0.6
OFUJ				*e*S	S	21 58 53.7	+0.8
MIYJ	**Miyakonagasawa**	**2.64**	**302**	P	P	21 58 24.7	+0.4
MIYJ				*e*S	S	21 58 55.4	0.0
JIO	**Ouri**	**2.66**	**276**	P	P	21 58 25.2	+0.6
JIO				*e*S	S	21 58 55.8	-0.1
JMK	**Ichinoseki**	**2.84**	**286**	P	P	21 58 28.1	+1.0
JMK				*e*S	S	21 59 01.5	+1.0
JOT	**Ohata**	**4.25**	**319**	P	P	21 58 47.8	+0.7
JOT				*e*S	S	21 59 34.1	-2.0
JCH	**Churui**	**4.52**	**347**	P	P	21 58 49.2	-1.7
JRY	**Ryogami san**	**5.14**	**247**	P	P	21 58 58.8	-0.8

JMA 14 22:00:49.0±0.2**, 38.20N**×**144.74E, h57^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.56**	**291**	P	P	22 01 29.3	+0.2
MIYJ	**Miyakonagasawa**	**2.66**	**302**	P	P	22 01 30.5	0.0
MIYJ				*e*S	S	22 02 00.9	-0.7
JIO	**Ouri**	**2.68**	**276**	P	P	22 01 31.1	+0.3
JIO				*e*S	S	22 02 02.2	+0.1
JMK	**Ichinoseki**	**2.86**	**286**	*e*S	S	22 02 08.0	+1.3
JRY	**Ryogami san**	**5.15**	**247**	P	P	22 02 04.9	-0.5

JMA 14 22:03:23.6±0.3**, 38.09N**×**144.73E, h46^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.59**	**293**	P	P	22 04 04.6	+0.5
JIO	**Ouri**	**2.69**	**279**	P	P	22 04 05.9	+0.5
MIYJ	**Miyakonagasawa**	**2.71**	**304**	P	P	22 04 05.9	+0.1
JMK	**Ichinoseki**	**2.88**	**288**	P	P	22 04 09.0	+0.8
JRY	**Ryogami san**	**5.10**	**248**	P	P	22 04 38.6	-0.9

MAN 14 22:10:09.7, 6.84N×**125.69E, h3^{km}, mb3.5, ML2.2, MS1.6, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.58**	**80**	*e*P	Pg	22 10 21.0	-0.2
BUKP	**Musuan**	**1.20**	**329**	*e*P	Pb	22 10 40.5	+7.7
BUKP				*e*S	Sb	22 10 57.4	+8.9
PAGZ	**Pagadian**	**2.49**	**294**	*e*P	Pn	22 10 51.9	+0.1

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*JMA **14** 22:10:26.0±0.1, 38.28N×141.91E, h45^{km}±1^{km}, M3.7*
JMA Felt I J1.

ISC 14 22:10:26.3±1.9**, 38.29N**±0.08×**141.9E**±0.2**, h49^{km}**±17^{km}**, n6, σ0^{s}88**/12**, 5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.43**	**293**	⇓P	**P**	**22 10 36.7**	**0.0**
JIO				S	**S**	**22 10 44.1**	**0.0**
OFUJ	**Ofunato**	**0.81**	**350**	⇓P	**P**	**22 10 41.1**	**-0.4**
OFUJ				S	**S**	**22 10 52.1**	**-0.6**
JMK	**Ichinoseki**	**0.83**	**324**	⇓P	**P**	**22 10 42.1**	**+0.3**
JMK				S	**S**	**22 10 53.0**	**-0.2**
JMM	**Marumori**	**0.94**	**244**	⇓P	**P**	**22 10 42.8**	**-0.4**
JMM				S	**S**	**22 10 55.3**	**-0.5**
JOU	**Okura**	**0.94**	**275**	⇓P	**P**	**22 10 43.9**	**+0.6**
JOU				S	**S**	**22 10 57.1**	**+1.2**
MAT	**Matsushiro**	**3.38**	**240**	P	**P**	**22 11 19.9**	**+1.9**
MAT				*e*S	**S**	**22 11 55.4**	**-1.8**

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*IDC **14** 22:16:24.1±0.6, 5.25S×76.64W, mb4.5/16, mb1 4.6/20, mb1mx4.5/24, mbtmp4.4/20, ML4.0/3, Error ellipse: s-maj=24.9km s-min=13.3km az=62.0*
*MOS **14** 22:16:28.6±0.8, 5.26S×76.64W, h39^{km}, mb4.9/16, Error ellipse: s-maj=11.9km s-min=9.0km az=85.3*
*NEIC **14** 22:16:29.1±1.3, 5.24S×76.62W, h32^{km}±9^{km}, mb4.9/22, Error ellipse: s-maj=6.2km s-min=3.8km az=66.0*
*BJI **14** 22:16:33.0, 5.20S×76.60W, h31^{km}*

ISC 14 22:16:25.0±2.3**, 5.28S**±0.04×**76.68W**±0.07**, h16^{km}**±16^{km}**, n115, σ0^{s}71**/95**, mb4.7**/36**, 4C, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**6.67**	**181**	*e*Pn	**Pn**	**22 18 05.0**	**+0.1**
	122nm,1.0s						

NNA				*e*Sn	Sn	22 19 20.1	-1.1
ROSC	El Rosal	10.34	13	Pn	P	22 18 56.7	+0.9
	3.6nm,0.3s,baz=99,slow=22,SNR=9.7						
ROSC				Lg		22 22 02.6	
	12nm,0.3s,baz=90,slow=20,SNR=3.5						
LPAZ	La Paz	13.78	143	Pn	P	22 19 43.3	+1.0
	0.2nm,0.3s,baz=322,slow=10,SNR=6.5						
LPAZ				Lg		22 23 52.4	
	0.7nm,0.3s,baz=132,slow=6.8,SNR=4.6						
SAML	Samuel	13.88	106	*e*Pn	P	22 19 39.0	-4.5
	0.5nm,0.6s						
SAML				*e*Sn	S	22 22 10.7	-7.5
SDV	Santo Domingo	15.30	23	Pn	P	22 20 00.8	-1.5
	2.4nm,0.3s,baz=225,slow=15,SNR=16						
SDV				Sn	S	22 22 59.1	+7.0
	1.3nm,0.3s,baz=0.9,slow=15,SNR=3.6						
SDV				Lg		22 24 37.6	
	1.8nm,0.3s,baz=267,slow=19,SNR=3.6						
JTS	JuntasAbangare	17.52	332	P	P	22 20 31.3	+0.8
	0.3nm,0.3s,baz=170,slow=12,SNR=4.3						
SIV	San Ignacio	18.65	126	P	P	22 20 44.2	-0.3
	0.8nm,0.3s,baz=304,slow=8.5,SNR=14						
SIV				Lg		22 26 21.8	
	1.4nm,0.3s,baz=222,slow=23,SNR=6.0						
SJG	San Juan	25.45	24	P	P	22 21 54.4	+0.3
	29nm,0.5s,mb5.0,baz=169,slow=9.6,SNR=10						
CFAA	Coronel Fontan	27.36	164	P	P	22 22 11.2	-0.3
	0.4nm,0.5s,baz=347,slow=11,SNR=4.3						
BDFB	Brasilia	29.96	112	P	P	22 22 34.0	-1.2
	2.6nm,0.5s,mb4.2,baz=274,slow=9.9,SNR=3.7						
PLCA	Paso Flores	35.73	172	P	P	22 23 24.5	-0.5
	1.6nm,0.6s,mb4.2,baz=347,slow=9.6,SNR=11						
LTX	Lajitas	43.09	325	*e*P	P	22 24 27.4	+1.1
	6.1nm,1.0s,mb4.3						
LTX	Lajitas	43.09	325	*e*P	P	22 24 27.5	+1.2
LTX				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
TXAR	Lajitas Array	43.09	325	P	P	22 24 27.1	+0.8
	comp=Z,3.0nm,0.6s,mb4.2,baz=148,slow=9.6,SNR=22						
TXAR				PcP	PcP	22 26 16.4	-0.4
	comp=Z,1.4nm,0.8s,baz=135,slow=5.1,SNR=4.9						
WMOK	Wichita Mounta	44.93	334	*e*P	P	22 24 40.8	-0.3
	comp=Z,17nm,1.0s,mb4.8						
WMOK	Wichita Mounta	44.93	334	*e*P	P	22 24 40.8	-0.3
WMOK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
GDL2	Guadalupe Moun	45.64	327	*e*P	P	22 24 47.7	+0.9
CPRX	Cap Rock	46.01	328	*e*P	P	22 24 50.8	+1.1
BNM	Barren Site	48.36	326	*e*P	P	22 25 07.6	-0.5
LPM	Los Pinos Moun	48.48	326	*e*P	P	22 25 09.7	+0.6
SADO	Sadowa	49.87	358	P	P	22 25 18.3	-1.3
	comp=Z,3.2nm,0.4s,mb4.7,baz=183,slow=9.9,SNR=8.0						
NEN	Nelson	54.22	322	*e*P	P	22 25 52.5	+0.1
MSU	Marysvale	54.59	326	*e*P	P	22 25 54.9	-0.2
PDAR	Pinedale Array	56.36	331	P	P	22 26 07.0	-0.9
	comp=Z,1.3nm,0.5s,mb4.2,baz=149,slow=8.6,SNR=11						
PDAR				PcP	PcP	22 27 04.0	-0.9
	comp=Z,1.6nm,0.5s,baz=126,slow=7.2,SNR=8.5						
ULM	Lac du Bonnet	57.74	346	P	P	22 26 15.6	-1.9
	comp=Z,7.9nm,0.6s,mb5.0,baz=157,slow=8.5,SNR=18						
ELK	Elko	57.84	326	*e*P	P	22 26 16.0	-2.4
	comp=Z,5.4nm,1.3s,mb4.4						
ELK	Elko	57.84	326	*e*P	P	22 26 16.0	-2.4
ELK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MNV	Mina	58.03	322	*e*P	P	22 26 18.2	-1.6
	comp=Z,2.7nm,0.6s,mb4.5						
MNV	Mina	58.03	322	*e*P	P	22 26 18.2	-1.5
MNV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
NVAR	Mina Array Bea	58.12	322	P	P	22 26 20.9	+0.5
	comp=Z,1.7nm,0.5s,mb4.3,baz=128,slow=7.4,SNR=12						
GCMT	Greycliff	58.73	334	*e*P	P	22 26 24.1	-0.3
QLMT	Earthquake Lak	58.80	332	*e*P	P	22 26 25.3	+0.3
SCHQ	Schefferville	60.45	7	P	P	22 26 35.5	-0.7
	comp=Z,5.3nm,0.5s,mb4.8,baz=198,slow=5.5,SNR=14						
SCHQ	Schefferville	60.45	7	P	P	22 26 35.5	-0.8
LIC	Lamto	72.43	82	*e*P	P	22 27 52.2	-0.9
	comp=Z,2.4nm,0.4s,mb4.2						
DBIC	Dimbokro	72.66	81	P	P	22 27 54.2	-0.4
	comp=Z,4.2nm,0.4s,mb4.7,baz=258,slow=6.4,SNR=29						
YKA	Yellowknife Ar	73.51	343	P	P	22 27 57.6	-1.0
	comp=Z,1.8nm,0.5s,mb4.3,baz=141,slow=6.2,SNR=11						
VNA3	Neumayer Olymp	77.74	162	⇑*i*	P	22 28 23.7	+1.2
VNA1	Neumayer--Stat	77.98	162	⇑*i*	P	22 28 25.8	+2.0
VNA2	Neumayer--Watz	78.34	162	⇑*i*	P	22 28 26.5	+0.8
SNAA	Sanae	79.96	162	⇑*i*	P	22 28 34.5	0.0
ESDC	Sonseca Array	80.19	48	P	P	22 28 36.6	+0.1
	comp=Z,0.4nm,0.5s,baz=270,slow=5.9,SNR=4.4						
QUIF	Quistinic	82.96	41	*e*P	P	22 28 51.0	+0.3
	comp=Z,42nm,1.2s,mb5.0						
QUIF	Quistinic	82.96	41	*e*P	P	22 28 51.0	+0.3
QUIF				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
ROSF	Rostrenen	83.01	40	*e*P	P	22 28 51.4	+0.5
	comp=Z,30nm,1.1s,mb4.9						
ROSF	Rostrenen	83.01	40	*e*P	P	22 28 51.4	+0.5
ROSF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
SJPF	Ste Jean	83.05	46	*e*P	P	22 28 51.6	+0.3
	comp=Z,13nm,0.8s,mb4.7						
SJPF	Ste Jean	83.05	46	*e*P	P	22 28 51.6	+0.3
SJPF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
INK	Inuvik	83.24	342	P	P	22 28 52.1	+0.4
	comp=Z,5.4nm,0.6s,mb4.7,baz=112,slow=2.9,SNR=7.4						
SGMF	Saint Gilles	83.44	40	*e*P	P	22 28 53.6	+0.4
EPF	Esparros	84.15	46	*e*P	P	22 28 57.0	+0.1
GRR	Gorron	84.58	40	*e*P	P	22 28 59.4	+0.5
	comp=Z,5.4nm,0.6s,mb4.6						
GRR	Gorron	84.58	40	*e*P	P	22 28 59.4	+0.5
GRR				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.6						
MFF	Saint Martin d	84.62	42	*e*P	P	22 28 59.5	+0.3
	comp=Z,9.5nm,0.8s,mb4.7						
MFF	Saint Martin d	84.62	42	*e*P	P	22 28 59.5	+0.3
MFF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
LFF	La Frestale	84.85	44	*e*P	P	22 29 00.5	+0.1
	comp=Z,18nm,0.6s,mb5.1						
LFF	La Frestale	84.85	44	*e*P	P	22 29 00.5	+0.1
LFF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.1						
FLN	La Foliniere	84.91	40	*e*P	P	22 29 01.0	+0.5
	comp=Z,10nm,0.8s,mb4.7						
FLN	La Foliniere	84.91	40	*e*P	P	22 29 01.0	+0.5
FLN				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
LDF	La Druitiere	85.10	40	*e*P	P	22 29 01.8	+0.3
	comp=Z,24nm,1.0s,mb5.0						
LDF	La Druitiere	85.10	40	*e*P	P	22 29 01.8	+0.3
LDF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
RJF	Les Rejaudoux	85.46	44	*e*P	P	22 29 03.3	-0.1
MTLF	Montolieu	85.56	46	*e*P	P	22 29 04.0	+0.1
CAF	Calviac	85.77	44	*e*P	P	22 29 04.9	0.0
	comp=Z,13nm,1.0s,mb4.8						
CAF	Calviac	85.77	44	*e*P	P	22 29 04.9	0.0
CAF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.8						
TCF	Toulx Ste Croi	86.14	43	*e*P	P	22 29 06.6	-0.2
ILAR	Eielson Array	86.45	336	P	P	22 29 07.8	0.0
	comp=Z,1.8nm,0.7s,mb4.4,baz=124,slow=3.7,SNR=8.9						
BGF	Bois d'Agland	86.63	43	*e*P	P	22 29 09.2	+0.1
AVF	Avril sur Loir	87.01	43	*e*P	P	22 29 10.9	-0.1
	comp=Z,5.2nm,0.8s,mb4.5						
AVF	Avril sur Loir	87.01	43	*e*P	P	22 29 10.9	-0.1
AVF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
SSF	Saint Saulge	87.17	42	*e*P	P	22 29 11.8	+0.1
	comp=Z,5.7nm,1.0s,mb4.8						
SSF	Saint Saulge	87.17	42	*e*P	P	22 29 11.8	+0.1
SSF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.8						
SMF	Signal de Mont	87.32	43	*e*P	P	22 29 12.4	-0.1
LOR	Lormes	87.44	42	*e*P	P	22 29 13.3	+0.2
VIVF	Saint-Julien-l	87.57	45	*e*P	P	22 29 14.1	+0.3
SMRF	Simiane la Rot	88.07	46	*e*P	P	22 29 16.3	+0.2
	comp=Z,22nm,1.0s,mb5.0						
BAIF	Baives	88.17	40	*e*P	P	22 29 16.8	+0.3
ORIF	Oris-en-Rattie	88.43	45	*e*P	P	22 29 18.2	+0.3
MEZF	Maizieres J'vi	88.45	41	*e*P	P	22 29 17.8	-0.1
	comp=Z,6.1nm,0.5s,mb4.8						
MBDF	Montbardon	89.03	45	*e*P	P	22 29 20.5	-0.2
	comp=Z,65nm,1.6s,mb5.4						
MBDF	Montbardon	89.03	45	*e*P	P	22 29 20.5	-0.2
MBDF				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.4						
LPL	La Plagne	89.12	44	*e*P	P	22 29 21.4	+0.3
	comp=Z,57nm,1.7s,mb5.3						
LPL	La Plagne	89.12	44	*e*P	P	22 29 21.4	+0.3
LPL				pmax	pmax		
	comp=Z,28nm,1.7s,mb5.3						
LPG	La Plagne	89.13	44	*e*P	P	22 29 21.6	+0.4
	comp=Z,68nm,1.5s,mb5.5						
LPG	La Plagne	89.13	44	*e*P	P	22 29 21.6	+0.4
LPG				pmax	pmax		
	comp=Z,34nm,1.5s,mb5.5						
HAU	Haudompre	89.22	42	*e*P	P	22 29 21.6	0.0
SBF	Sospel	89.38	46	*e*P	P	22 29 22.1	-0.3
HINF	Hinteralfeld	89.53	42	*e*P	P	22 29 22.9	-0.1
CDF	Champ du Feu	89.90	41	*e*P	P	22 29 24.5	-0.2
	comp=Z,5.3nm,0.7s,mb4.7						
CDF	Champ du Feu	89.90	41	*e*P	P	22 29 24.5	-0.2
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
ARCES	ARCESS Array B	99.17	20	P	P	22 30 06.1	-0.5
	comp=Z,5.5nm,1.1s,mb5.0,baz=270,slow=1.2,SNR=4.7						
ARCES	ARCESS Array B	99.17	20	P	P	22 30 06.1	-0.5
AKTO	Aktyubinsk	121.21	32	PKP	PKPdf	22 35 19.2	-2.0
	comp=Z,1.1nm,0.6s,baz=52,slow=21,SNR=4.2						
BVAR	Borovoye Array	125.29	24	PKP	PKPdf	22 35 27.0	-2.0
	comp=Z,1.4nm,0.5s,baz=257,slow=2.2,SNR=15						
YSS	Yuzh-Sakhalins	126.40	327	*e*PKIKP	PKPdf	22 35 33.9	+2.7
BOD	Bodaibo	126.93	353	*e*P	Pdif	22 32 06.6	-2.8
BOD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
STKA	Stephens Creek	128.11	222	PKP	PKPdf	22 35 32.3	-2.8
	comp=Z,4.5nm,1.0s,baz=304,slow=7.2,SNR=3.9						
ZAL	Zalesovo	129.20	14	PKP	PKPdf	22 35 34.8	-1.7
	comp=Z,4.7nm,0.6s,baz=214,slow=2.1,SNR=23						
KURK	Kurchatov	130.22	20	*e*PKPdf	PKPdf	22 35 36.6	-1.9
MKAR	Makanchi Array	134.83	20	PKP	PKPdf	22 35 44.6	-2.7
	comp=Z,0.5nm,0.4s,baz=226,slow=29,SNR=10.0						
MJAR	Matsushiro Arr	135.40	319	PKP	PKPdf	22 35 45.6	-3.1
	comp=Z,1.4nm,0.5s,baz=88,slow=1.4,SNR=3.3						
SONM	Songino Array	137.52	357	PKhKP		22 35 40.6	
	comp=Z,0.5nm,0.6s,baz=335,slow=1.6,SNR=3.6						
SONM				PKP	PKPdf	22 35 50.4	-1.8
	comp=Z,1.7nm,0.7s,baz=312,slow=1.2,SNR=15						
WB2	Warramunga Arr	140.52	230	*e*P	PKPdf	22 35 49.2	-9.3
WRA	Warramunga Arr	140.53	230	PKhKP		22 35 48.0	
	comp=Z,0.7nm,0.4s,baz=131,slow=2.8,SNR=15						
WRA				PKP	PKPdf	22 35 57.4	-1.1
	comp=Z,1.6nm,0.4s,baz=117,slow=2.1,SNR=34						
GTA	Gaotai	145.87	5	*e*PKP	PKPdf	22 36 05.5	-1.7
GTA				APKP		22 36 15.3	
KAKA	Kakadu	145.99	238	*e*P	PKPbc	22 36 24.3	+19
	comp=Z,11nm,0.9s						
LZH	Lanzhou	149.34	359	*e*P	PKPdf	22 36 16.4	+3.4
LZH				pP		22 36 22.5	
LZH				sP		22 36 26.0	
KOLN	Koldanda	150.81	38	*e*P	PKPdf	22 36 14.5	-1.0
	comp=Z,36nm,1.1s						
XAN	Xi'an	150.91	350	PKP	PKPdf	22 36 18.9	+3.4
XAN				APKP		22 36 25.3	
GKN	Gorkha	151.26	36	*e*P	PKPdf	22 36 14.1	-2.0
	comp=Z,54nm,0.8s						
KKN	Kakani	151.79	35	*e*P	PKPdf	22 36 15.3	-1.7
	comp=Z,14nm,0.6s						
DMN	Daman	151.83	36	*e*P	PKPdf	22 36 14.7	-2.3
	comp=Z,17nm,0.8s						
GUN	Gumba	152.04	34	*e*P	PKPdf	22 36 15.5	-1.8
LSA	Lhasa	153.12	24	*e*PKPdf	PKPdf	22 36 17.9	-0.9
ENH	Enshi	154.47	348	*e*PKPdf	PKPdf	22 36 19.3	-1.3

JMA 14 22:18:09.1±0.2**,38.10N**×**144.72E,h34**^{km}**,M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.58	293	P	P	22 18 50.4	+0.9
OFUJ				*e*S	S	22 19 20.9	+0.9
JIO	Ouri	2.68	279	*e*S	S	22 19 23.1	+0.7
MIYJ	Miyakonagasawa	2.70	304	*e*S	S	22 19 22.7	-0.3
JMK	Ichinoseki	2.87	288	*e*S	S	22 19 28.9	+1.5

JMA 14 22:34:41.4±0.1**,38.22N**×**144.68E,h52**^{km}**,M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.51	291	P	P	22 35 20.9	+0.2
OFUJ				*e*S	S	22 35 50.6	+0.4
MIYJ	Miyakonagasawa	2.61	302	P	P	22 35 21.9	-0.3
MIYJ				*e*S	S	22 35 52.2	-0.6
JIO	Ouri	2.63	276	P	P	22 35 22.9	+0.5
JIO				S	S	22 35 53.5	+0.2
JMK	Ichinoseki	2.81	286	S	S	22 35 58.7	+0.9
JOM	Ohasama	2.93	296	P	P	22 35 26.9	+0.3
JOM				S	S	22 36 01.1	+0.3
JMM	Marumori	3.09	265	P	P	22 35 28.9	0.0
JMM				S	S	22 36 04.4	-0.5
JCH	Churui	4.50	348	S	S	22 36 34.4	-6.1
JKB	Kayabe	4.61	324	P	P	22 35 50.6	+0.2
JRY	Ryogami san	5.11	246	P	P	22 35 56.6	-0.8
JRY				S	S	22 36 52.5	-3.4
NEM2	Nemuro 2	5.20	9	P	P	22 35 54.1	-4.5
NEM2				S	S	22 36 48.6	-9.5
JTKR	Abashiri--Toko	5.78	354	P	P	22 36 03.6	-3.0

IDC 14 22:38:43.8±1.9**,2.97S**×**128.92E,mb3.5**/3**,mb1 3.7**/4**, mb1mx3.6**/15**,mbtmp3.6**/4**,ML3.9**/1**,Error ellipse: s-maj=110.3km s-min=35.0km az=70.0,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.68	163	P	P	22 42 50.2	-3.1
	0.4nm,0.3s,baz=343,slow=12,SNR=17						
SONM	Songino Array	54.30	341	P	P	22 48 12.8	-1.3
	0.7nm,1.0s,baz=158,slow=7.8,SNR=3.2						
MKAR	Makanchi Array	64.29	326	P	P	22 49 20.6	-2.8
	0.3nm,0.8s,baz=125,slow=8.3,SNR=2.9						
BVAR	Borovoye Array	74.10	328	P	P	22 50 22.2	-1.5
	0.5nm,0.7s,baz=121,slow=8.4,SNR=4.3						

JMA 14 22:39:35.6±0.2**,38.29N**×**144.71E,h46**^{km}**,M3.6,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.51	289	P	P	22 40 15.4	+0.5
MIYJ	Miyakonagasawa	2.59	301	P	P	22 40 16.2	+0.1
MIYJ				*e*S	S	22 40 46.4	-0.2
JIO	Ouri	2.65	275	P	P	22 40 17.4	+0.5
JIO				S	S	22 40 48.2	+0.3
JMK	Ichinoseki	2.81	285	P	P	22 40 19.7	+0.5
JMK				*e*S	S	22 40 53.1	+1.0
JCH	Churui	4.44	347	P	P	22 40 40.0	-2.2
JCH				*e*S	S	22 41 27.6	-5.7
JKB	Kayabe	4.57	323	P	P	22 40 44.9	+0.9
NEM2	Nemuro 2	5.13	8	P	P	22 40 47.5	-4.4
NEM2				*e*S	S	22 41 42.1	-8.5
JRY	Ryogami san	5.16	246	*e*S	S	22 41 48.2	-3.3
JOD2	Odawara 2	5.43	238	*e*S	S	22 41 53.8	-4.3
JTKR	Abashiri--Toko	5.71	354	P	P	22 40 57.2	-2.7
JTKR				*e*S	S	22 41 59.0	-6.1

NEIC ***14*** *22:40:14.2, 17.06N×100.11W, h10^{km}, MD3.5(MEX), After MEX.*

MEX 14 22:40:14.2±0.9**,17.06N**×**100.11W,h10**^{km}±17^{km}**,MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.15	266	*i* P	Pg	22 40 17.0	-0.7
CAIG				*i* S	Sg	22 40 19.6	-0.5
ACX	Acapulco	0.27	136	*i* P	Pg	22 40 19.0	-0.8
ACX				*i* S	Sg	22 40 23.5	-0.1
ZIIG	Zihuatanejo	1.40	293	*e*P	Pn	22 40 36.1	-3.8
ZIIG				*i* S	Sb	22 40 53.4	-4.5
PLIG	Platanillo	1.45	24	*i* P	Pn	22 40 38.6	-2.0
PLIG				*i* S	Sb	22 40 52.6	-6.5

CASC 14 22:42:19.4±1.9**,12.93N**×**90.41W,h9**^{km}±17^{km}**,MD3.6, 2C-1D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	1.19	40	*e*P	Pb	22 43 18.1	+37
SBLS				*e*S	Sb	22 43 35.1	+38
RTR	El Retiro	1.22	38	⇑*e*P	Pb	22 43 19.1	+37
RTR				*e*S	Sb	22 43 36.6	+39
SNJE	San Jose	1.22	40	*e*P	Pb	22 43 18.7	+37
SNJE				*e*S	Sb	22 43 37.1	+39
IXG	Ixpaco	1.24	358	⇑*e*P	Pb	22 42 42.1	-0.4
IXG				*e*S	Sb	22 42 59.3	+0.9
BOQS	Boqueron	1.36	54	*e*P	Pb	22 43 20.2	+36
BOQS				*e*S	Sb	22 43 39.2	+37
LBRS	Las Brisas	1.56	59	*e*P	Pn	22 43 23.1	+36
LBRS				*e*S	Sb	22 43 45.4	+38
LCBS	La Ceiba	1.57	63	*e*P	Pn	22 43 23.1	+35
LCBS				*e*S	Sb	22 43 44.5	+36
SNVI	San Vicente	1.68	66	*e*P	Pn	22 43 23.4	+34
SNVI				*e*S	Sn	22 43 45.0	+34
MTO2	Montecristo 2	1.78	35	*e*P	Pn	22 43 27.2	+36
MTO2				*e*S	Sn	22 43 51.5	+38
TP2	Tecpan 2	1.94	342	*e*P	Pn	22 42 53.0	+0.2
TP2				*e*S	Sn	22 43 18.6	+1.1
MRL	Marmol	2.24	18	⇓*e*P	Pn	22 42 57.2	0.0

IDC ***14*** *22:45:35.7±1.1, 38.18N×145.08E, mb3.6/5, mb1 3.9/7, mb1mx3.8/22, mbtmp3.7/7, ML3.7/2, Error ellipse: s-maj=27.6km s-min=22.6km az=135.0*

JMA ***14*** *22:45:40.4±0.1, 38.28N×144.73E, h55^{km}, M4.2*

ISC 14 22:45:40.3±0.8**,38.42N**±0.05×**144.79E**±0.06**,h55**^{km}**,n20, σ1§33**/32**,mb3.6**/5**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.53	286	P	P	22 46 20.1	+0.2
OFUJ				*e*S	S	22 46 50.3	+0.7
MIYJ	Miyakonagasawa	2.59	297	P	P	22 46 21.0	+0.2
MIYJ				S	S	22 46 51.1	0.0
JIO	Ouri	2.71	272	P	P	22 46 22.0	-0.4
JIO				S	S	22 46 53.1	-1.0
JMK	Ichinoseki	2.85	282	P	P	22 46 24.6	+0.2
JMK				*e*S	S	22 46 58.2	+0.6
JOT	Ohata	4.13	317	P	P	22 46 44.1	+1.6
JCH	Churui	4.33	346	P	P	22 46 44.6	-0.7
JCH				*e*S	S	22 47 33.4	-1.7
JKB	Kayabe	4.51	321	P	P	22 46 49.3	+1.5
NEM2	Nemuro 2	4.99	8	P	P	22 46 51.8	-2.8
NEM2				S	S	22 47 46.1	-5.6
JRY	Ryogami san	5.28	245	P	P	22 46 56.5	-2.0
JRY				S	S	22 47 52.7	-6.1
JOSM	Okushiri--Mats	5.47	314	P	P	22 47 02.6	+1.4
JOD2	Odawara 2	5.55	237	P	P	22 47 00.0	-2.4
JOD2				*e*S	S	22 47 58.7	-7.0
MJAR	Matsushiro Arr	5.56	252	Pn	P	22 47 01.8	-0.7
	3.2nm,0.3s,baz=76,slow=15,SNR=16						
MJAR				Sn	S	22 48 07.1	+1.2
	0.8nm,0.3s,baz=117,slow=16,SNR=1.9						
MAT	Matsushiro	5.56	252	P	P	22 47 02.5	0.0
MAT				S	S	22 48 05.8	-0.1
JTKR	Abashiri--Toko	5.59	353	P	P	22 47 01.6	-1.2
JTKR				*e*S	S	22 48 03.7	-2.8
ASAJ	Asahikawa	5.93	344	Pn	P	22 47 08.9	+1.3
	1.5nm,0.3s,baz=229,slow=6.8,SNR=6.6						
ASAJ				Sn	S	22 48 12.6	-2.5
	0.6nm,0.3s,baz=7.9,slow=28,SNR=3.2						
SONM	Songino Array	29.30	301	P	P	22 51 43.1	+3.6
	0.3nm,0.6s,mb3.2,baz=88,slow=8.2,SNR=3.0						
MKAR	Makanchi Array	45.67	302	P	P	22 54 00.2	+3.1
	0.4nm,0.7s,mb3.4,baz=76,slow=10.0,SNR=5.3						
ILAR	Eielson Array	46.88	33	P	P	22 54 07.7	+1.2
	0.6nm,0.8s,mb3.6,baz=286,slow=7.9,SNR=5.4						
WRA	Warramunga Arr	58.88	192	P	P	22 55 35.1	-0.8
	1.5nm,0.7s,mb4.2,baz=13,slow=7.3,SNR=16						
PDAR	Pinedale Array	74.77	47	P	P	22 57 17.8	+1.8
	0.4nm,0.6s,mb3.5,baz=281,slow=2.1,SNR=4.7						

JMA 14 22:53:20.7±0.2**,38.18N**×**144.63E,h52**^{km}**,M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.49	292	P	P	22 54 00.1	+0.4
OFUJ				*e*S	S	22 54 29.7	+0.8
JIO	Ouri	2.59	277	S	S	22 54 31.8	+0.1
MIYJ	Miyakonagasawa	2.60	303	P	P	22 54 01.2	-0.1
MIYJ				*e*S	S	22 54 31.5	-0.3
JMK	Ichinoseki	2.78	287	P	P	22 54 04.7	+0.8
JMK				*e*S	S	22 54 37.2	+0.8
JCH	Churui	4.53	348	P	P	22 54 25.4	-3.2
JCH				*e*S	S	22 55 16.3	-4.3
JRY	Ryogami san	5.06	246	P	P	22 54 35.2	-0.8
JRY				*e*S	S	22 55 30.3	-3.6
NEM2	Nemuro 2	5.25	9	*e*S	S	22 55 28.9	-10

JMA 14 22:57:48.7±0.1**,38.13N**×**144.78E,h43**^{km}**,M3.6,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.62	292	P	P	22 58 30.0	+0.5
OFUJ				*e*S	S	22 59 01.0	+0.7
JIO	Ouri	2.72	278	P	P	22 58 31.4	+0.4
JIO				S	S	22 59 03.0	+0.1
MIYJ	Miyakonagasawa	2.73	303	P	P	22 58 31.4	+0.3
MIYJ				*e*S	S	22 59 02.8	-0.3
JMK	Ichinoseki	2.91	287	P	P	22 58 34.7	+1.0
JMK				*e*S	S	22 59 08.5	+0.8
JCH	Churui	4.61	347	P	P	22 58 55.6	-2.1
JCH				*e*S	S	22 59 47.1	-3.6
JRY	Ryogami san	5.15	248	P	P	22 59 04.2	-1.2
JRY				*e*S	S	23 00 00.2	-4.1
NEM2	Nemuro 2	5.28	8	*e*S	S	22 59 59.3	-8.3

WEL 14 23:20:21.0±0.6**,35.46S**×**178.67E,h210**^{km}±11^{km}**,ML3.7**/5**, Error ellipse: s-maj=12.3km s-min=9.6km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.12	188	PN	P	23 21 02.0	+0.1
MXZ				SN	S	23 21 32.4	-1.0
PUZ	Puketiti	2.63	187	PN	P	23 21 06.5	-0.9
PUZ				SN	S	23 21 42.7	-0.6
PUZ				SN	S	23 21 42.8	-0.5
URZ	Urewera	3.06	204	PN	P	23 21 12.1	-0.2
URZ				SN	S	23 21 52.2	+0.1
KNZ	Kokohu	3.64	192	PN	P	23 21 18.8	-0.6
BFZ	Birch Farm	5.55	199	PN	P	23 21 42.2	-1.1
BFZ				SN	S	23 22 45.3	-2.1
KIW	Kapiti Island	6.15	208	PN	P	23 21 49.7	-1.4
THZ	Tophouse	7.74	214	PN	P	23 22 10.5	-1.1

NNC 14 23:20:29.9±8.3**,39.60N**×**72.79E,mpv3.0,2C-1D,Error ellipse: s-maj=79.1km s-min=44.9km az=151.0, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	3.29	22	⇑Pg	Pg	23 21 29.8	-5.8
	4.3nm,0.6s						
AAK				⇓Lg		23 22 16.3	
	18nm,1.1s						
KK31	Karatay Array	3.90	335	Pn	Pn	23 21 31.4	-1.1
	0.8nm,0.3s,baz=146,slow=11,SNR=20						
KK31				⇑Lg		23 22 32.8	
	3.1nm,0.2s,baz=144,slow=22,SNR=14						
AB31	Akbulak array	13.31	321	P	P	23 23 38.8	-3.8
	0.6nm,0.5s,baz=132,slow=14,SNR=9.3						

IDC ***14*** *23:23:27.6±2.8, 38.00N×145.09E, mb3.6/2, mb1 4.0/4, mb1mx3.6/22, mbtmp3.9/4, ML3.9/1, Error ellipse: s-maj=57.6km s-min=35.5km az=68.0*

JMA ***14*** *23:23:33.1±0.2, 38.12N×144.61E, h57^{km}, M4.0*

ISC 14 23:23:32.8±1.9**,37.96N**±0.07×**144.6E**±0.1**,h39**^{km}±20^{km}**, n10,σ1§36**/15**,mb3.7**/2**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.52	297	P	P	23 24 12.4	+0.2
JIO	**Ouri**	2.57	282	S	S	23 24 43.9	+0.7
MIYJ	**Miyakonagasawa**	2.67	308	P	P	23 24 14.1	-0.3
MIYJ				*e*S	S	23 24 44.5	-1.4
JRY	**Ryogami san**	4.92	249	P	P	23 24 47.0	+0.8
JRY				*e*S	S	23 25 41.5	-1.1
MJAR	**Matsushiro Arr**	5.25	256	Pn	P	23 24 52.9	+2.0
	2.0nm,0.3s,baz=81,slow=15,SNR=7.0						
MJAR				Sn	S	23 25 53.7	+2.7
	1.6nm,0.3s,baz=85,slow=30,SNR=4.8						
MAT	**Matsushiro**	5.25	256	P	P	23 24 48.9	-2.0
MAT				*e*S	S	23 25 50.0	-1.0
NEM2	**Nemuro 2**	5.48	9	*e*S	S	23 25 42.8	-14
JHJ	**Hachijo jima 2**	6.19	220	Pn	P	23 25 04.7	+0.6
	8.5nm,0.3s,baz=70,slow=10,SNR=3.0						
JHJ				Sn	S	23 26 11.8	-2.8
	26nm,0.3s,baz=77,slow=20,SNR=5.0						
MKAR	**Makanchi Array**	45.74	302	P	P	23 31 53.2	+1.3
	0.3nm,0.7s,mb3.3,baz=80,slow=8.8,SNR=2.8						
WRA	**Warramunga Arr**	58.38	191	P	P	23 33 25.7	-1.1
	0.9nm,0.6s,mb4.0,baz=13,slow=7.2,SNR=7.9						

*NEIC **14** 23:34:33.9±2.0, 43.10N×128.14W, h10^{km}, mb3.8/2, Error ellipse: s-maj=22.7km s-min=7.1km az=80.0*

*IDC **14** 23:34:40.8±2.8, 43.44N×127.22W, mb3.1/1, mb1 3.8/4, mb1mx3.5/24, mbtmp3.4/4, ML3.6/2, Error ellipse: s-maj=41.8km s-min=23.3km az=46.0*

ISC 14 23:34:32.6±3.1, **43.21N**±0.08×**128.2W**±0.3, **h10^{km}, n40, σ0^{s}74**/39, **mb3.9**/1, **Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	2.83	96	*e*P	Pn	23 35 18.2	-0.5
RNO	**Roman Nose**	3.29	76	P	Pn	23 35 24.5	-0.9
HSO	**Harness Mounta**	3.71	83	P	Pn	23 35 30.9	-0.5
COR	**Corvallis**	3.77	67	*e*P	Pn	23 35 31.4	-0.8
HUMO	**Hull Mountain**	3.88	97	*e*P	Pn	23 35 33.9	+0.3
BBOR	**Butler Butte**	4.04	93	P	Pn	23 35 36.2	+0.3
KMOR	**Kings Mountain**	4.13	53	P	Pn	23 35 36.6	-0.7
BROR	**Big Rock Looko**	4.27	74	P	Pn	23 35 39.0	-0.3
HBO	**Huckleberry Mo**	4.30	80	P	Pn	23 35 40.0	+0.3
IRO	**Indian Ridge**	4.37	78	P	Pn	23 35 40.4	-0.2
NLO	**Nicolai Mounta**	4.43	48	P	Pn	23 35 41.7	+0.3
SSOR	**Sweet Springs**	4.43	66	P	Pn	23 35 41.5	-0.1
FRIS	**Frissel Point**	4.51	75	P	Pn	23 35 42.6	0.0
GT2	**Goat Mountain**	4.67	63	P	Pn	23 35 45.4	+0.5
BMW	**Boistfort Moun**	4.79	45	P	Pn	23 35 46.4	-0.3
BKCOR	**Black Crater**	4.81	75	P	Pn	23 35 46.9	0.0
RVW	**Rose Valley**	4.86	51	P	Pn	23 35 47.5	-0.1
BPO	**Bald Peter**	4.90	71	P	Pn	23 35 48.3	+0.2
VLMM	**Larch Mountain**	4.97	60	P	Pn	23 35 49.3	+0.2
LVP	**Lakeview Peak**	5.00	53	P	Pn	23 35 49.9	+0.3
TDH	**Tom, Dick, Har**	5.03	63	P	Pn	23 35 50.2	+0.2
FL2	**Flat Top 2**	5.11	52	P	Pn	23 35 51.5	+0.4
VLL	**Laurance Lake**	5.17	62	P	Pn	23 35 52.5	+0.5
ERK	**Elk Rock**	5.17	51	P	Pn	23 35 52.4	+0.4
TDL	**Tradedollar La**	5.27	51	P	Pn	23 35 53.6	+0.2
LMW	**Ladd Mountain**	5.42	48	P	Pn	23 35 56.0	+0.6
ASR	**Mount Adams--S**	5.53	56	P	Pn	23 35 57.3	+0.3
REMR	**Mount Rainier-**	5.75	49	P	Pn	23 36 00.6	+0.4
TBM	**Table Mountain**	6.65	51	P	Pn	23 36 13.5	+0.6
ETW	**Entiat**	7.05	49	P	Pn	23 36 18.7	+0.3
BMO	**Blue Mountains**	8.00	74	*e*P	Pn	23 36 29.9	-1.8
NVAR	**Mina Array Bea**	8.87	119	Pn	P	23 36 45.8	+2.0
	baz=300,slow=12,SNR=1.8						
NEW	**Newport**	9.23	53	Pn	P	23 36 47.7	-1.1
	0.4nm,0.3s,baz=239,slow=12,SNR=3.6						
NEW	**Newport**	9.23	53	Pn	P	23 36 47.7	-1.1
CHMT	**Chamberlain Mo**	11.18	66	*e*P	P	23 37 14.3	-1.2
PDAR	**Pinedale Array**	13.63	85	Pn	P	23 37 50.4	+2.0
	0.0nm,0.3s,baz=276,slow=15,SNR=10						
SDCO	**Great Sand Dun**	18.07	100	P	P	23 38 45.6	+0.3
	4.1nm,1.0s						
MNTX	**Cornudas Mount**	21.36	115	P	P	23 39 20.2	-2.0
ILAR	**Eielson Array**	24.05	340	P		23 39 57.5	
	0.5nm,1.1s,baz=143,slow=9.0,SNR=5.1						
WMOK	**Wichita Mounta**	24.27	100	*e*P	P	23 39 50.7	-0.1
	6.2nm,1.2s,mb3.9						

*JMA **14** 23:35:02.1±0.2, 38.26N×144.79E, h53^{km}, M3.9*

ISC 14 23:35:00.4±1.6, **38.41N**±0.08×**145.0E**±0.1, **h53^{km}, n9, σ1^{s}06**/14, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.65	286	P	P	23 35 42.6	+0.8
MIYJ	**Miyakonagasawa**	2.70	297	P	P	23 35 43.5	+1.0
MIYJ				*e*S	S	23 36 14.1	0.0
JIO	**Ouri**	2.83	272	P	P	23 35 44.5	+0.2
JIO				*e*S	S	23 36 16.3	-1.0
JMK	**Ichinoseki**	2.97	282	P	P	23 35 47.1	+0.8
JOT	**Ohata**	4.22	316	P	P	23 36 06.0	+2.1
JCH	**Churui**	4.37	344	P	P	23 36 06.8	+0.8
JCH				*e*S	S	23 36 54.9	-1.3
NEM2	**Nemuro 2**	4.99	7	P	P	23 36 13.1	-1.6
JRY	**Ryogami san**	5.38	246	P	P	23 36 18.7	-1.5
JRY				*e*S	S	23 37 14.9	-6.8
MAT	**Matsushiro**	5.68	253	P	P	23 36 24.4	+0.2
MAT				*e*S	S	23 37 28.5	-0.5

*IDC **14** 23:35:58.6±1.1, 2.98N×97.56E, mb4.1/11, mb1 4.2/11, mb1mx4.0/19, mbtmp4.1/11, Error ellipse: s-maj=57.1km s-min=16.7km az=53.0*

*NEIC **14** 23:36:03.9±0.5, 3.04N×97.40E, h30^{km}, mb4.8/1, Error ellipse: s-maj=17.3km s-min=10.0km az=51.0*

ISC 14 23:36:01.8±0.6, **3.02N**±0.08×**97.43E**±0.08, **h30^{km}, n20, σ0^{s}91**/21, **mb4.3**/13, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	3.92	55	*e*Pn	Pn	23 37 02.9	+1.3
KULM				*e*Sn	Sn	23 37 46.9	-0.4
SHL	**Shillong**	23.05	347	*e*P	P	23 41 06.0	+0.1
HYB	**Hyderabad**	23.41	309	*i* P	P	23 41 14.0	+4.5
HYB	**Hyderabad**	23.41	309	*e*P	P	23 41 14.0	+4.5
FITZ	**Fitzroy Crossi**	34.83	128	P	P	23 42 51.8	-0.7
	3.0nm,0.7s,mb4.3,baz=292,slow=9.0,SNR=5.5						
WRA	**Warramunga Arr**	42.82	124	P	P	23 43 55.7	-3.5
	5.1nm,0.6s,mb4.5,baz=301,slow=9.3,SNR=4.9						
WRAB	**Tennant Creek**	42.82	124	*e*P	P	23 44 00.2	+1.0
	22nm,1.1s,mb4.8						
SONM	**Songino Array**	45.31	8	P	P	23 44 18.8	-0.1
	0.6nm,0.7s,mb3.5,baz=193,slow=8.7,SNR=7.0						
SONM				PcP	PcP	23 45 59.4	+0.6
	0.2nm,0.3s,baz=206,slow=1.7,SNR=3.3						
MKAR	**Makanchi Array**	45.55	345	P	P	23 44 19.8	-1.0
	0.9nm,0.4s,mb4.0,baz=158,slow=8.4,SNR=16						
MKAR	**Makanchi Array**	45.55	345	P	P	23 44 19.8	-1.0
ZAL	**Zalesovo**	51.81	351	P	P	23 45 08.6	-0.6
	1.4nm,0.3s,mb4.3,baz=324,slow=9.4,SNR=6.1						
ZAL	**Zalesovo**	51.81	351	P	P	23 45 08.6	-0.6
STKA	**Stephens Creek**	54.41	133	P	P	23 45 26.8	-1.9
	2.8nm,0.6s,mb4.3,baz=298,slow=15,SNR=7.7						
STKA	**Stephens Creek**	54.41	133	*e*P	P	23 45 27.7	-1.0
BVAR	**Borovoye Array**	54.62	340	P	P	23 45 29.2	-0.8
	2.1nm,0.7s,mb4.3,baz=149,slow=9.2,SNR=8.9						
TAU	**Tasmania Unive**	64.07	141	*e*P	P	23 46 36.6	+1.2
	40nm,1.2s,mb5.3						
BRTR	**Keskin Array B**	68.08	312	P	P	23 47 01.4	+0.3
	0.6nm,0.6s,mb3.8,baz=141,slow=7.9,SNR=4.2						
AKASG	**Malin Array Be**	73.97	322	P	P	23 47 36.5	+0.2
	1.1nm,0.6s,mb4.0,baz=89,slow=5.8,SNR=8.2						
FINES	**FINESS Array B**	78.51	332	P	P	23 48 02.2	+0.5
	4.5nm,0.9s,mb4.4,baz=104,slow=12,SNR=4.4						
ARCES	**ARCESS Array B**	80.92	340	P	P	23 48 15.4	+1.0
	3.8nm,0.9s,mb4.3,baz=90,slow=5.4,SNR=3.9						

*IDC **14** 23:38:07.8±1.2, 38.01N×145.02E, mb3.5/4, mb1 4.0/7, mb1mx3.8/23, mbtmp3.9/7, ML4.1/3, Error ellipse: s-maj=32.4km s-min=20.9km az=133.0*

*NEIC **14** 23:38:10.6±2.6, 38.28N×144.90E, h10^{km}, MG4.4(JMA), Error ellipse: s-maj=78.8km s-min=13.4km az=147.0*

*JMA **14** 23:38:13.0±0.1, 38.17N×144.69E, h39^{km}, M4.4*

ISC 14 23:38:12.1±1.6, **38.13N**±0.07×**144.79E**±0.10, **h43^{km}**±16^{km}, **n15, σ0^{s}92**/24, **mb3.6**/4, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.62	292	P	P	23 38 53.4	+0.4
OFUJ				*e*S	S	23 39 23.4	-0.4
JIO	**Ouri**	2.73	278	P	P	23 38 54.8	+0.4
JIO				*e*S	S	23 39 25.6	-0.8
MIYJ	**Miyakonagasawa**	2.73	303	P	P	23 38 54.6	+0.1
MIYJ				S	S	23 39 26.1	-0.5
JMK	**Ichinoseki**	2.92	288	P	P	23 38 57.7	+0.5
MJAR	**Matsushiro Arr**	5.47	255	Pn	P	23 39 33.7	+0.4
	11nm,0.3s,baz=77,slow=16,SNR=47						
MJAR				Sn	S	23 40 37.3	+1.4
	0.4nm,0.3s,baz=103,slow=22,SNR=4.1						
MJAR	**Matsushiro Arr**	5.47	255	Pn	P	23 39 33.7	+0.4
MJAR				Sn	S	23 40 37.3	+1.4
MAJO	**Matsushiro**	5.48	255	*e*Pn	P	23 39 34.1	+0.9
	70nm,0.6s						
MAT	**Matsushiro**	5.48	255	P	P	23 39 33.9	+0.7
MAT				*e*S	S	23 40 34.5	-1.4
MAT	**Matsushiro**	5.48	255	*e*P	P	23 39 34.0	+0.8
	55nm,0.7s						
MAT				S	S	23 40 35.0	-0.9
ASAJ	**Asahikawa**	6.21	345	Pn	P	23 39 42.9	-0.6
	2.7nm,0.3s,baz=84,slow=30,SNR=7.8						
ASAJ				Sn	S	23 40 50.1	-4.0
	1.2nm,0.3s,baz=278,slow=34,SNR=2.8						
JHJ	**Hachijo jima 2**	6.45	221	Pn	P	23 39 43.9	-3.0
	16nm,0.3s,baz=86,slow=19,SNR=2.9						
JHJ				Sn	S	23 40 53.0	-7.1
	26nm,0.3s,baz=67,slow=23,SNR=6.4						
MKAR	**Makanchi Array**	45.82	302	P	P	23 46 32.5	+1.1
	0.2nm,0.6s,mb3.2,baz=79,slow=7.3,SNR=2.3						
ILAR	**Eielson Array**	47.13	33	P	P	23 46 41.2	-0.2
	0.8nm,0.7s,mb3.7,baz=264,slow=6.1,SNR=7.7						
WRA	**Warramunga Arr**	58.59	192	P	P	23 48 05.8	-1.3
	0.6nm,0.6s,mb3.8,baz=9.2,slow=7.0,SNR=4.9						
PDAR	**Pinedale Array**	74.98	47	P	P	23 49 51.0	+0.6
	0.5nm,0.6s,mb3.6,baz=320,slow=0.8,SNR=4.3						

*NEIC **14** 23:43:46.7±0.7, 5.02S×76.51W, h35^{km}, mb3.8/1, Error ellipse: s-maj=27.5km s-min=13.0km az=57.0*

*IDC **14** 23:43:49.6±5.1, 4.85S×76.35W, h49^{km}±55^{km}, mb3.8/4, mb1 3.8/5, mb1mx3.6/19, mbtmp3.9/5, ML3.6/1, Error ellipse: s-maj=103.1km s-min=25.5km az=37.0*

ISC 14 23:43:44.3±0.8, **5.2S**±0.1×**76.4W**±0.1, **h33^{km}, n13, σ0^{s}67**/11, **mb4.0**/4, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	6.76	183	*e*Pn	Pn	23 45 24.0	0.0
NNA				*e*Sn	Sn	23 46 35.2	-5.4
SAML	**Samuel**	13.67	107	*e*Pn	P	23 46 57.8	-0.5
	3.5nm,0.6s						
SAML				*e*Sn	S	23 49 23.3	-6.7
LPAZ	**La Paz**	13.71	144	P	P	23 47 04.8	+5.9
	0.1nm,0.3s,baz=344,slow=7.4,SNR=3.9						
LPAZ	**La Paz**	13.71	144	*e*Pn	P	23 47 04.0	+5.2
JTS	**JuntasAbangare**	17.57	331	*e*Pn	P	23 47 44.1	-4.3
	7.7nm,0.9s						
TXAR	**Lajitas Array**	43.16	324	P	P	23 51 44.0	+0.2
	0.4nm,0.6s,mb3.4,baz=135,slow=7.7,SNR=2.9						
ANMO	**Albuquerque**	48.92	327	P	P	23 52 29.6	+0.2
	2.8nm,0.8s,mb4.3,baz=137,slow=9.4,SNR=7.0						
DBIC	**Dimbokro**	72.41	81	P	P	23 55 10.8	+1.1
	2.8nm,0.7s,mb4.3,baz=252,slow=4.7,SNR=8.2						
INK	**Inuvik**	83.24	342	P	P	23 56 07.6	-0.8
	1.1nm,0.7s,mb4.0,baz=115,slow=2.9,SNR=5.1						
BVAR	**Borovoye Array**	125.11	24	PKP	PKPdf	00 02 43.5	+2.0
	0.4nm,0.6s,baz=297,slow=3.3,SNR=4.2						
ZAL	**Zalesovo**	129.06	14	PKP	PKPdf	00 02 51.8	+2.7
	0.8nm,0.6s,baz=168,slow=4.8,SNR=5.8						
MKAR	**Makanchi Array**	134.67	21	PKP	PKPdf	00 03 01.8	+1.9
	0.3nm,0.4s,baz=308,slow=2.6,SNR=9.7						
SONM	**Songino Array**	137.45	357	PKP	PKPdf	00 03 06.7	+1.7
	0.2nm,0.5s,slow=1.4,SNR=3.7						

IDC 14 23:45:49.8±28.0, **18.00S**×**178.56W, h634^{km}**±301^{km}, **mb3.1**/3, **mb1 3.3**/3, **mb1mx2.9**/14, **mbtmp4.3**/3, **Error ellipse: s-maj=201.2km s-min=101.9km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	33.29	261	P	P	23 51 37.9	-1.1
	1.7nm,0.4s,baz=102,slow=15,SNR=4.5						
STKA	**Stephens Creek**	38.46	241	P	P	23 52 19.7	-1.6
	2.3nm,0.5s,baz=99,slow=11,SNR=5.6						
WB2	**Warramunga Arr**	44.46	260	*e*P	P	23 53 06.7	-2.1
WRA	**Warramunga Arr**	44.47	260	P	P	23 53 07.2	-1.7
	1.5nm,0.4s,baz=94,slow=7.2,SNR=46						
ASPA	**Alice Springs**	44.63	254	*e*P	P	23 53 08.6	-1.5
GERES	**GERESS Array B**	147.66	345	PKPbc	PKPdf	00 04 24.1	+3.7
	0.3nm,0.5s,baz=350,slow=6.0,SNR=4.0						

JMA 14 23:55:56.3±0.2, **38.14N**×**144.68E, h28^{km}, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.54	293	P	Pn	23 56 37.2	+0.6
JIO	**Ouri**	2.64	278	P	Pn	23 56 38.5	+0.4
JIO				S	Sn	23 57 09.4	-0.1
MIYJ	**Miyakonagasawa**	2.65	304	P	Pn	23 56 38.6	+0.3
MIYJ				*e*S	Sn	23 57 10.0	+0.1
JMK	**Ichinoseki**	2.83	288	P	Pn	23 56 41.6	+0.8
MAT	**Matsushiro**	5.40	255	P	Pn	23 57 16.0	-1.2
MAT				*e*S	Sn	23 58 18.5	-0.6

*IDC **15** 00:08:49.6±0.8, 1.91S×137.34E, mb4.1/6, mb1 4.4/8, mb1mx4.2/14, mbtmp4.3/8, ML3.9/2, Error ellipse: s-maj=38.8km s-min=18.9km az=70.0*

*NEIC **15** 00:08:56.2±0.6, 2.22S×137.14E, mb4.5/8, Error ellipse: s-maj=24.5km s-min=11.6km az=74.0*

ISC 15 00:08:49.6±5.2, **2.11S**±0.07×**137.2E**±0.1, **h12^{km}**±33^{km}, **n22, σ1^{s}14**/27, **mb4.2**/9, **1D, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	11.53	204	*e*P	P	00 11 57.2	+20
	24nm,0.4s						
KAKA				*e*S	S	00 14 03.6	+17
PMG	**Port Moresby**	12.29	127	Pn	P	00 11 47.2	-0.3
	2.7nm,0.3s,baz=270,slow=15,SNR=11						
WRAB	**Tennant Creek**	17.93	189	*e*Pn	P	00 13 00.0	-0.5
	34nm,0.7s						
WRAB				*e*Sn	S	00 16 12.7	-5.1
WB2	**Warramunga Arr**	17.93	189	*e*P	P	00 12 59.5	-1.2
WB2				*e*S	S	00 16 11.4	-6.6
WRA	**Warramunga Arr**	17.94	189	P	P	00 12 58.7	-2.0
	0.8nm,0.3s,baz=13,slow=13,SNR=6.2						
WRA				S	S	00 16 08.6	-9.5
	0.5nm,0.3s,baz=11,slow=22,SNR=6.4						
FITZ	**Fitzroy Crossi**	19.51	215	*e*P	P	00 13 22.1	+2.4
	12nm,0.6s						
FITZ				*e*S	S	00 16 48.9	-4.7
FITZ	**Fitzroy Crossi**	19.51	215	P	P	00 13 21.3	+1.6
	0.4nm,0.3s,baz=57,slow=14,SNR=8.7						
FITZ				S	S	00 16 51.6	-2.0
	2.1nm,0.3s,baz=141,slow=9.4,SNR=8.7						
CTA	**Charters Tower**	19.95	154	*e*P	P	00 13 24.3	-0.3
	6.9nm,0.6s						
CTA	**Charters Tower**	19.95	154	P	P	00 13 25.0	+0.4
	5.4nm,0.6s,baz=324,slow=10,SNR=5.5						
ASPA	**Alice Springs**	21.66	188	⇓*i*P	P	00 13 44.3	+2.1
ASPA				*e*S	S	00 17 41.5	+4.8
STKA	**Stephens Creek**	29.90	172	*e*P	P	00 15 00.4	+0.8
	4.4nm,0.4s,mb4.5						
STKA	**Stephens Creek**	29.90	172	P	P	00 15 00.0	+0.4
	4.9nm,0.4s,mb4.6,baz=338,slow=8.9,SNR=21						
MKAR	**Makanchi Array**	68.38	323	P	P	00 19 53.5	+0.3
	0.4nm,0.4s,mb3.8,baz=107,slow=8.3,SNR=8.0						
ZAL	**Zalesovo**	70.66	330	P	P	00 20 06.7	-0.4
	0.4nm,0.3s,mb3.8,baz=342,slow=9.8,SNR=3.7						
VNDA	**Vanda**	76.51	175	*e*P	P	00 20 41.7	+0.8
	5.2nm,1.3s,mb4.3						
VNDA				*e*PcP	PcP	00 20 48.8	-4.1
BVAR	**Borovoye Array**	77.95	325	P	P	00 20 48.9	-0.3
	1.8nm,0.7s,mb4.1,baz=111,slow=6.2,SNR=8.8						
BRVK	**Borovoye**	78.02	325	*e*P	P	00 20 49.0	-0.6
	5.3nm,1.2s,mb4.3						
BRVK				*e*PcP	PcP	00 20 56.9	-2.9
BRVK				*e*pP	pP	00 21 04.5	+11
CHKZ	**Chkalovo**	78.05	326	*e*P	P	00 20 50.3	+0.6
	12nm,1.6s,mb4.6						
CHKZ				*e*pP	pP	00 21 04.1	+11
ILAR	**Eielson Array**	85.93	25	P	P	00 21 29.1	-1.5
	0.5nm,0.6s,mb3.9,baz=274,slow=4.5,SNR=8.5						
QSPA	**South Pole Qui**	87.83	180	*e*P	P	00 21 41.0	+1.6
	2.5nm,0.7s,mb4.5						
LPAZ	**La Paz**	149.03	127	PKP	PKPdf	00 28 36.2	-1.6
	0.5nm,0.8s,baz=241,slow=13,SNR=2.8						
LPAZ				PKPbc	PKPdf	00 28 41.8	+4.0
	1.3nm,0.7s,baz=187,slow=0.7,SNR=7.8						
LPAZ	**La Paz**	149.03	127	PKP	PKPdf	00 28 36.2	-1.6
LPAZ				PKPbc	PKPdf	00 28 41.8	+4.0

PGC 15 00:23:08.2, 70.52N×**133.15W, h35^{km}, MLSn3.1**/3, **Beaufort Sea., Beaufort Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
INK	**Inuvik**	2.22	184	Pn	P	00 23 41.9	-1.5
INK				Sn	S	00 24 07.3	-2.6
INK				Trac		00 24 08.4	
	comp=Z,10.0nm,0.1s						
DAWY	**Dawson**	6.91	203	Pn	P	00 24 45.0	-4.7
DAWY				Sn	S	00 25 58.0	-10
DAWY				Trac		00 26 01.4	
	comp=Z,5.0nm,0.2s						
YKW3	**Yellowknife Ar**	10.82	128	Pn	P	00 25 38.5	-5.0
YKW3				Sn	S	00 27 29.2	-15
YKW3				Trac		00 27 33.8	
	comp=Z,2.0nm,0.2s						

*IDC **15** 00:23:17.3±1.1, 12.32N×90.76E, mb4.2/9, mb1 4.3/9, mb1mx4.0/20, mbtmp4.2/9, Error ellipse: s-maj=50.1km s-min=16.6km az=58.0*

*MOS **15** 00:23:19.6±1.3, 12.20N×90.47E, h33^{km}, mb4.9/6, Error ellipse: s-maj=17.0km s-min=9.0km az=101.6*

*NEIC **15** 00:23:21.6±0.5, 12.35N×90.64E, h30^{km}, mb4.6/10, Error ellipse: s-maj=13.7km s-min=8.0km az=57.0*

*BJI **15** 00:23:24.1, 12.76N×90.66E, h30^{km}, mB5.1, mb4.2, Ms4.5, Msz4.6*

ISC 15 00:23:16.1±2.7, **12.29N**±0.06×**90.69E**±0.05, **h6^{km}**±18^{km}, **n61, σ1^{s}12**/65, **mb4.3**/17, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	2.11	107	*e*P	Pn	00 23 52.8	+0.3
PBA				*e*S	Sn	00 24 17.8	-1.5
VIS	**Vishakhapatnam**	8.92	308	*e*P	P	00 25 27.7	-0.8
VIS				*e*S	Sn	00 26 57.5	-13
VIS				AML	AML	00 27 05.2	
	comp=N,151nm,0.2s						
VIS				AML	AML	00 27 05.7	
	comp=E,118nm,0.2s						
PALK	**Pallekele**	11.03	244	*e*Pn	P	00 25 58.1	+0.5
	comp=E,21nm,1.0s						
PALK				*e*Sn	S	00 27 55.2	-7.2
BOK	**Bokaro**	12.31	339	*e*P	P	00 26 11.3	-3.7
BOK				*e*S	S	00 28 17.9	-16
BOK				AML	AML	00 28 49.2	
	comp=E,88nm,0.5s						
BOK				AML	AML	00 28 49.4	
	comp=N,70nm,0.4s						
BLSP	**Bilaspur**	12.74	321	*e*P	P	00 26 18.5	-2.3
BLSP				*e*S	S	00 28 29.9	-14
BLSP				AML	AML	00 29 05.8	
	comp=E,52nm,0.4s						
BLSP				AML	AML	00 29 06.7	
	comp=N,69nm,0.2s						
HYB	**Hyderabad**	12.78	295	*i* P	P	00 26 19.0	-2.3
HYB				*e*		00 26 21.5	
HYB				*e*S	S	00 28 45.0	-0.1
HYB	**Hyderabad**	12.78	295	*e*P	P	00 26 19.0	-2.3
HYB				*e*S	S	00 28 33.5	-12
SHL	**Shillong**	13.25	5	*e*x	x	00 26 21.0	
SHL				*e*S	S	00 28 38.0	-18
TRD	**Trivandrum**	14.01	256	*e*x	x	00 26 54.0	
TRD				*e*x	x	00 29 06.8	
LATR	**Latur**	14.92	296	*e*P	P	00 26 52.0	+2.5
LATR				*e*x	x	00 29 20.5	
ALBI	**Allahabad**	15.42	328	*e*x	x	00 29 26.0	
MNGI	**Mangalore**	15.49	274	*e*x	x	00 27 02.5	
MNGI				*e*x	x	00 29 59.9	
PKI	**Pulchoki**	15.98	343	*e*P	P	00 27 02.3	-1.0
	comp=N,52nm,0.5s						
PKI	**Pulchoki**	15.98	343	*e*P	P	00 27 02.3	-1.0
PKI				pmax	pmax		
	comp=Z,26nm,0.5s						
DMN	**Daman**	16.11	342	*e*P	P	00 27 04.3	-0.6
	comp=Z,86nm,0.7s						
GUN	**Gumba**	16.18	345	*e*P	P	00 27 04.0	-1.8
	comp=Z,71nm,0.7s						
KKN	**Kakani**	16.23	343	*e*P	P	00 27 05.6	-0.9
	comp=Z,50nm,0.6s						
GKN	**Gorkha**	16.62	341	*e*P	P	00 27 11.0	-0.5
	comp=Z,91nm,0.5s						
BHPL	**Bhopal**	16.66	313	*e*P	P	00 27 13.3	+1.3
BHPL				*e*x	x	00 30 02.7	
BHPL				AML	AML	00 31 07.8	
	comp=N,30nm,0.3s						
BHPL				AML	AML	00 31 08.3	
	comp=E,30nm,0.6s						
KAD	**Karad**	16.71	289	*e*P	P	00 27 12.5	-0.2
KAD				*e*x	x	00 30 03.8	
KAD				AML	AML	00 30 22.2	
	comp=N,35nm,0.7s						
KAD				AML	AML	00 30 22.2	
	comp=E,18nm,0.8s						
KOLN	**Koldanda**	16.77	338	*e*P	P	00 27 14.8	+1.5
	comp=E,67nm,0.6s						
KOLN				*e*S	S	00 30 03.6	-16
KMI	**Kunming**	17.11	40	P	P	00 27 22.0	+4.4
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s						
KMI	**Kunming**	17.11	40	P	P	00 27 22.0	+4.4
	comp=Z,13nm,1.2s						
LSA	**Lhasa**	17.33	1	*e*P	P	00 27 20.8	+0.5
LSA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
LSA	**Lhasa**	17.33	1	*e*P	P	00 27 21.3	+1.0
	comp=Z,29nm,0.8s						
LSA				*e*S	S	00 30 24.4	-7.5
LSA	**Lhasa**	17.33	1	*e*P	P	00 27 21.3	+1.0
LSA				*e*S	S	00 30 24.4	-7.6
LSA				pmax	pmax		
	comp=Z,29nm,0.8s						
POO	**Poona**	17.37	293	*e*P	P	00 27 21.0	+0.1
POO				*e*x	x	00 30 22.6	
BOM	**Bombay**	18.42	293	*e*x	x	00 27 41.0	
BOM				*e*x	x	00 30 38.5	
PTH	**Pithoragarh**	19.74	332	*e*x	x	00 31 20.0	
NDI	**New Delhi**	20.59	324	*e*x	x	00 31 32.0	
GYA	**Guiyang**	20.60	45	P	P	00 28 00.6	+1.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.0s						
AJM	**Ajmer**	20.66	315	*e*P	P	00 27 59.3	0.0
AJM				*e*x	x	00 31 30.6	
CD2	**Chengdu**	22.12	31	*e*P	P	00 28 13.0	-1.1
KSM	**Kuching**	22.23	117	*e*P	P	00 28 17.0	+1.7
ENH	**Enshi**	24.97	41	*e*P	P	00 28 47.2	+5.2
	comp=Z,19nm,0.9s,mb4.6						
LZH	**Lanzhou**	26.50	24	*e*P	P	00 28 58.5	+2.3
LZH				AP	pP	00 29 03.5	+5.6
LZH				XP	sP	00 29 06.0	+7.4
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,150nm,7.0s						
LZH	**Lanzhou**	26.50	24	*e*P	P	00 28 58.5	+2.3
	comp=Z,23nm,1.0s,mb4.7						
LZH				pP	pP	00 29 03.5	+5.6
LZH				sP	sP	00 29 06.0	+7.4
LZH	**Lanzhou**	26.50	24	*e*P	P	00 28 58.5	+2.3
LZH				*SP	sP	00 29 06.0	+7.4
LZH				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.7						
GTA	**Gaotai**	28.19	15	*e*P	P	00 29 11.6	0.0
GTA				AP	pP	00 29 18.5	+5.2
GTA				XP	sP	00 29 21.8	+7.8
WMQ	**Urumqi**	31.52	356	*e*P	P	00 29 42.0	+0.8

MKAR	Makanchi Array	35.11	350	P	P	00 30 12.8	+0.5
	comp=Z,5.6nm,0.8s,mb4.6,baz=167,slow=6.8,SNR=39						
SONM	Songino Array	37.79	17	P	P	00 30 34.5	-0.5
	comp=Z,2.3nm,0.8s,mb3.9,baz=198,slow=8.8,SNR=9.8						
ZAK	Zakamensk	39.36	13	*e*P	P	00 30 48.5	+0.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
KURK	Kurchatov	39.56	348	*e*P	P	00 30 51.6	+1.8
	comp=Z,9.0nm,1.0s,mb4.5						
KURK	Kurchatov	39.56	348	*e*P	P	00 30 51.6	+1.9
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
ZAL	Zalesovo	41.80	355	P	P	00 31 08.2	+0.1
	comp=Z,1.6nm,0.9s,mb3.6,baz=288,slow=9.5,SNR=9.7						
BVAR	Borovoye Array	43.75	342	P	P	00 31 25.2	+1.2
	comp=Z,0.4nm,0.4s,mb3.5,baz=150,slow=12,SNR=3.9						
CHKZ	Chkalovo	44.26	343	*e*P	P	00 31 28.8	+0.7
	comp=Z,5.2nm,0.9s,mb4.3						
CHKZ	Chkalovo	44.26	343	*e*P	P	00 31 28.8	+0.7
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
FITZ	Fitzroy Crossi	45.85	131	*e*P	P	00 31 41.0	-0.3
	comp=Z,6.9nm,0.9s,mb4.6						
FITZ	Fitzroy Crossi	45.85	131	P	P	00 31 41.1	-0.2
	comp=Z,8.7nm,0.9s,mb4.7,baz=295,slow=9.2,SNR=6.3						
KIV	Kislovodsk	51.78	317	*e*P	P	00 32 27.2	+0.3
	comp=Z,10nm,1.0s,mb4.7						
KIV	Kislovodsk	51.78	317	*e*P	P	00 32 27.2	+0.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
WRA	Warramunga Arr	53.59	126	P	P	00 32 40.3	-0.4
	comp=Z,4.6nm,0.7s,mb4.5,baz=304,slow=8.3,SNR=24						
WRAB	Tennant Creek	53.59	126	*e*P	P	00 32 40.4	-0.4
	comp=Z,9.0nm,0.6s,mb4.9						
WRAB	Tennant Creek	53.59	126	*e*P	P	00 32 40.4	-0.3
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
WB2	Warramunga Arr	53.60	126	*e*P	P	00 32 40.3	-0.5
BRTR	Keskin Array B	57.00	309	P	P	00 33 05.4	+0.2
	comp=Z,0.9nm,0.7s,mb3.9,baz=135,slow=8.7,SNR=5.1						
TIXI	Tiksi	63.64	13	*e*P	P	00 33 48.3	-1.7
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
STKA	Stephens Creek	65.60	134	P	P	00 34 03.1	-0.3
	comp=Z,2.3nm,0.5s,mb4.4,baz=302,slow=19,SNR=4.4						
FINES	FINESS Array B	67.24	332	P	P	00 34 12.2	-1.1
	comp=Z,8.5nm,1.1s,mb4.7,baz=124,slow=6.9,SNR=4.2						

JMA 15 00:41:58.1±0.2, 43.71N×147.26E, h27km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	1.16	253	P	Pn	00 42 18.8	+0.1
NEM2				*e*S	Sn	00 42 34.1	+0.4
JRA	Rausu	1.56	279	P	Pn	00 42 24.8	+0.2
JRA				*e*S	Sn	00 42 44.3	+0.2
JNK	Nakash	1.85	267	P	Pn	00 42 28.8	+0.2
JNK				*e*S	Sn	00 42 51.3	0.0
JAK	Akkeshi	2.00	250	P	Pn	00 42 30.9	+0.1
JAK				*e*S	Sn	00 42 54.4	-0.8
JTKR	Abashiri--Toko	2.44	277	P	Pn	00 42 37.4	+0.3
JAR	Ashorobuto	2.57	262	P	Pn	00 42 40.0	+1.0
JAR				*e*S	Sn	00 43 10.7	+1.0
JOB	Onbets	2.63	253	P	Pn	00 42 40.2	+0.4
JOB				*e*S	Sn	00 43 11.1	0.0
JMP	Maruseppu	2.84	277	P	Pn	00 42 43.0	+0.2
JCH	Churui	3.06	250	P	Pn	00 42 45.6	-0.2
JCH				*e*S	Sn	00 43 21.2	-0.7

JMA 15 00:43:20.9±0.3, 38.20N×144.68E, h41km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.52	291	P	P	00 44 01.0	+0.7
MIYJ	Miyakonagasawa	2.62	303	P	P	00 44 01.9	+0.1
MIYJ				*e*S	S	00 44 31.9	-0.7
JIO	Ouri	2.63	277	*e*S	S	00 44 33.9	+1.0

IDC 15 00:48:05.0±2.8, 12.05N×90.11E, mb3.8/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.7/6, Error ellipse: s-maj=102.1km s-min=27.3km az=60.0

ISC 15 00:48:12.1±1.9, 12.4N±0.2×90.14E±0.06, h33km, n20, σ1ˢ41/23, mb3.8/6, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIS	Vishakhapatnam	8.43	309	*e*P	P	00 50 17.8	+3.1
VIS				*e*S	S	00 51 45.0	-4.6
VIS				AML	AML	00 51 54.4	
	comp=N,93nm,0.4s						
VIS				AML	AML	00 51 55.7	
	comp=E,83nm,0.4s						
BOK	Bokaro	12.01	341	*e*P	P	00 51 05.0	+1.1
BOK				*e*S	S	00 53 08.9	-8.7
BOK				AML	AML	00 53 16.2	
	comp=N,31nm,0.4s						
HYB	Hyderabad	12.25	295	*e*S	S	00 53 23.0	-0.5
BLSP	Bilaspur	12.31	323	*e*P	P	00 51 10.2	+2.3
BLSP				*e*S	S	00 53 15.3	-10
BLSP				AML	AML	00 53 54.8	
	comp=N,20nm,0.2s						
BLSP				AML	AML	00 53 55.0	
	comp=E,22nm,0.5s						
SHL	Shillong	13.17	7	*e*P	P	00 51 18.5	-0.9
LATR	Latur	14.38	296	*e*S	S	00 54 16.0	+1.4
PKI	Pulchoki	15.71	344	*e*P	P	00 51 53.2	+0.6
	comp=E,37nm,0.8s						
DMN	Daman	15.82	343	*e*P	P	00 51 54.4	+0.3
GUN	Gumba	15.91	346	*e*P	P	00 51 59.9	+4.7
	comp=E,22nm,0.6s						
KKN	Kakani	15.95	344	*e*P	P	00 51 57.0	+1.3
BHPL	Bhopal	16.18	313	*e*x	x	00 52 27.3	
BHPL				*e*S	S	00 54 54.2	-2.5
GKN	Gorkha	16.33	342	*e*P	P	00 52 00.3	-0.2
	comp=E,36nm,0.6s						
KOLN	Koldanda	16.45	339	*e*P	P	00 52 03.6	+1.6
	comp=E,35nm,0.6s						
POO	Poona	16.83	293	*e*S	S	00 55 10.9	-0.7
POO				AML	AML	00 56 12.5	
	comp=E,11nm,0.8s						
MKAR	Makanchi Array	34.89	351	P	P	00 55 00.8	-1.7
	comp=E,2.5nm,0.8s,mb4.2,baz=172,slow=8.6,SNR=18						
SONM	Songino Array	37.83	18	P	P	00 55 25.4	-1.8
	comp=E,0.4nm,0.5s,mb3.4,baz=211,slow=8.3,SNR=6.0						
ZAL	Zalesovo	41.62	355	P	P	00 55 59.4	+0.7
	comp=E,0.7nm,0.3s,mb3.7,baz=8.4,slow=3.3,SNR=3.0						
BVAR	Borovoye Array	43.47	343	P	P	00 56 12.0	-1.7
	comp=E,1.7nm,0.8s,mb3.9,baz=219,slow=40,SNR=3.1						
WRA	Warramunga Arr	54.10	126	P	P	00 57 30.3	-6.1
	comp=E,0.4nm,0.5s,mb3.6,baz=300,slow=10.0,SNR=5.4						
ILAR	Eielson Array	91.99	21	P	P	01 01 18.7	+0.3
	comp=E,0.4nm,0.7s,mb3.9,baz=251,slow=5.0,SNR=4.5						

IDC 15 00:48:33.7±2.4, 10.23S×161.16E, h80km±17km, mb3.8/6, mb1 4.1/7, mb1mx4.0/15, mbtmp4.2/7, Error ellipse: s-maj=24.9km s-min=21.9km az=73.0

ISC 15 00:48:32.7±1.5, 10.3S±0.1×161.1E±0.1, h83km±12km, n11, σ0ˢ52/13, mb3.8/6, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.44	305	P	P	00 48 58.0	+0.1
	466nm,0.3s,baz=171,slow=6.8,SNR=86						
HNR				S	S	00 49 16.5	0.0
	1μm,0.3s,baz=45,slow=18,SNR=38						
DZM	Mont Dzumac	12.79	157	*e*P	P	00 51 32.7	0.0
DZM				*e*S	S	00 53 43.6	-10
DZM	Mont Dzumac	12.79	157	P	P	00 51 32.2	-0.5
	3.0nm,0.3s,baz=5.9,slow=20,SNR=137						
WB2	Warramunga Arr	27.55	246	*e*P	P	00 54 14.5	+0.4
WRA	Warramunga Arr	27.56	246	P	P	00 54 14.8	+0.6
	1.1nm,0.6s,mb3.6,baz=74,slow=9.1,SNR=9.1						
FITZ	Fitzroy Crossi	35.23	253	*e*P	P	00 55 21.0	-0.3
	6.4nm,1.3s,mb4.3						
FITZ	Fitzroy Crossi	35.23	253	P	P	00 55 20.1	-1.2
	2.1nm,0.4s,mb4.3,baz=106,slow=20,SNR=12						
SONM	Songino Array	75.42	325	P	P	01 00 09.1	-0.2
	1.5nm,0.5s,mb4.0,baz=136,slow=5.6,SNR=20						
ILAR	Eielson Array	84.28	20	P	P	01 00 55.7	-0.5
	0.8nm,0.7s,mb3.6,baz=244,slow=4.6,SNR=13						
NVAR	Mina Array Bea	89.02	51	P	P	01 01 20.8	+0.9
	0.4nm,0.6s,mb3.6,baz=233,slow=4.5,SNR=3.7						
MKAR	Makanchi Array	89.88	318	P	P	01 01 23.4	-0.3
	0.5nm,0.5s,mb3.9,baz=92,slow=6.4,SNR=12						

JMA 15 00:51:41.6±0.2, 38.16N×144.66E, h54km, M3.8

ISC 15 00:51:41.9±2.4, 38.2N±0.2×144.7E±0.2, h54km, n5, σ0ˢ16/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.51	292	P	P	00 52 21.3	+0.1
OFUJ				*e*S	S	00 52 50.8	+0.1
JIO	Ouri	2.62	277	P	P	00 52 22.6	-0.2
JIO				*e*S	S	00 52 53.2	-0.3
MIYJ	Miyakonagasawa	2.62	303	P	P	00 52 22.6	-0.2
MIYJ				*e*S	S	00 52 53.7	+0.1
JMK	Ichinoseki	2.81	287	P	P	00 52 25.5	+0.1
JMK				*e*S	S	00 52 58.3	+0.1
MAT	Matsushiro	5.39	254	P	P	00 53 01.9	+0.2

JMA 15 01:00:12.4±0.2, 38.28N×144.72E, h46km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.52	289	P	P	01 00 52.2	+0.4
OFUJ				*e*S	S	01 01 21.5	0.0
MIYJ	Miyakonagasawa	2.61	301	P	P	01 00 53.1	0.0
MIYJ				*e*S	S	01 01 23.3	-0.4
JIO	Ouri	2.66	275	P	P	01 00 54.2	+0.4
JIO				*e*S	S	01 01 24.9	0.0
JMK	Ichinoseki	2.82	285	P	P	01 00 57.3	+1.1
JMK				*e*S	S	01 01 29.9	+0.7

JMA 15 01:01:13.0±0.2, 38.29N×144.68E, h39km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.48	289	P	P	01 01 52.3	+0.4
MIYJ	Miyakonagasawa	2.57	301	P	P	01 01 53.4	+0.2
MIYJ				*e*S	S	01 02 23.5	-0.1
JIO	Ouri	2.62	275	*e*S	S	01 02 25.2	+0.4

IDC 15 01:10:24.4±4.4, 24.88S×176.79W, mb4.5/2, mb1 4.7/2, mb1mx4.0/13, mbtmp4.5/2, Error ellipse: s-maj=264.9km s-min=43.7km az=163.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	34.41	270	P	P	01 17 15.2	-0.5
	7.1nm,0.4s,baz=93,slow=10,SNR=16						
WRA	Warramunga Arr	45.26	266	P	P	01 18 42.3	-3.4
	1.5nm,0.5s,baz=103,slow=7.8,SNR=8.8						
BVAR	Borovoye Array	123.11	318	PKP	PKPdf	01 29 22.8	-1.8
	0.5nm,0.5s,baz=134,slow=0.7,SNR=4.5						
AKASG	Malin Array Be	147.35	329	PKPbc	PKPdf	01 30 09.4	+0.2
	2.4nm,0.6s,baz=45,slow=4.4,SNR=12						
BRTR	Keskin Array B	150.50	308	PKPbc	PKPdf	01 30 17.6	+3.0
	0.7nm,0.6s,baz=117,slow=2.8,SNR=4.8						

JMA 15 01:11:00.5±0.2, 38.12N×144.66E, h57km, M3.8

ISC 15 01:10:59.4±1.4, 38.23N±0.07×144.8E±0.1, h57km, n12, σ1ˢ22/17, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.56	290	P	P	01 11 40.5	+0.9
MIYJ	Miyakonagasawa	2.66	301	P	P	01 11 41.7	+0.8
MIYJ				*e*S	S	01 12 12.5	+0.5
JIO	Ouri	2.69	276	P	P	01 11 41.7	+0.3
JIO				S	S	01 12 12.2	-0.7
JMK	Ichinoseki	2.87	286	P	P	01 11 44.6	+0.8
JOT	Ohata	4.25	319	*e*S	S	01 12 51.2	-0.9
JCH	Churui	4.50	347	P	P	01 12 07.1	+0.2
JCH				*e*S	S	01 12 57.0	-1.5
JKB	Kayabe	4.64	323	P	P	01 12 10.6	+1.9
JRY	Ryogami san	5.18	246	P	P	01 12 14.5	-1.8
NEM2	Nemuro 2	5.18	8	P	P	01 12 14.1	-2.2
NEM2				*e*S	S	01 13 10.2	-5.2
MAT	Matsushiro	5.49	254	P	P	01 12 20.6	+0.1
MAT				*e*S	S	01 13 19.6	-3.5
JTKR	Abashiri--Toko	5.77	354	P	P	01 12 24.4	0.0
JHR	Hokuryu	5.96	338	P	P	01 12 29.2	+2.1

NNC 15 01:13:24.7±0.9, 44.47N×83.06E, h33km, mpv3.0, Error ellipse: s-maj=9.0km s-min=4.3km az=121.0

BJI 15 01:13:22.7, 44.42N×83.38E, h16km, ML3.1, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MK31	Makanchi Array	2.49	343	⇓Pn	Pn	01 14 04.2	+0.8
	1.1nm,0.3s,baz=157,slow=13,SNR=100						
MK31				⇓Pg	Pn	01 14 09.1	+5.7
	2.8nm,0.4s,baz=155,slow=16,SNR=9.3						
MK31				⇓Lg		01 14 41.4	
	6.6nm,0.4s,baz=160,slow=26,SNR=5.2						
WMQ	Urumqi	3.16	99	*e*P	Pn	01 14 12.8	-0.1
WMQ				S	Sn	01 14 50.3	-0.4
WMQ				Smax			
	comp=N,10.0nm,0.5s						
WMQ				Smax			
	comp=E,10.0nm,0.4s						
AAK	Ala-Archa	6.70	258	⇑Pg	Pn	01 15 23.4	+20
	comp=E,6.6nm,1.4s						
AAK				⇑Lg		01 16 50.4	
	comp=E,10nm,1.7s						
KK31	Karatay Array	9.41	266	⇑Lg		01 18 16.9	
	comp=E,1.0nm,0.7s,baz=73,slow=28,SNR=3.8						

IDC 15 01:17:08.1±0.9, 39.15N×111.99W, mb1 3.6/4, mb1mx3.4/24, mbtmp3.2/4, ML3.4/3, Error ellipse: s-maj=12.0km s-min=8.7km az=30.0

NEIC 15 01:17:06.0, 39.49N×111.49W, h3km, ML3.1(SLC), After SLC., Utah

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMUT	Trail Mountain	0.29	131	*e*P	Pg	01 17 11.6	-0.3
MPU	Maple Canyon	0.54	348	*e*P	Pg	01 17 16.4	-0.3
NLU	North Lily Min	0.65	316	*e*P	Pg	01 17 18.4	-0.5
SRU	San Rafael	0.84	116	*e*P	Pg	01 17 21.4	-1.4
DAU	Daniels Canyon	0.94	11	*e*P	Pb	01 17 24.1	-0.5
MSU	Marysvale	1.11	209	*e*P	Pb	01 17 27.3	-0.2
MVU	Marysvale	1.13	210	*e*P	Pb	01 17 27.7	-0.2
DUG	Dugway	1.24	305	*e*P	Pb	01 17 29.1	-0.6
NOQ	North Oquirrh	1.26	338	*e*P	Pb	01 17 30.1	+0.1
TCUT	Toone Canyon	1.63	2	*e*P	Pn	01 17 35.7	0.0
BGU	Big Grassy Mou	1.86	321	*e*P	Pn	01 17 38.0	-1.0
SPUT	South Promonto	1.96	338	*e*Pn	Pn	01 17 39.8	-0.7
HWUT	Hardware Ranch	2.12	358	*e*Pn	Pn	01 17 42.0	-0.7
ARUT	Antelope Range	2.29	223	Pn	Pn	01 17 45.3	+0.1
HVU	Hansel Valley	2.49	337	*e*Pn	Pn	01 17 46.9	-1.1
ELK	Elko	3.14	295	Pg	Pg	01 18 01.1	-7.5
	1.5nm,0.3s,baz=108,slow=14,SNR=9.9						
ELK				Lg		01 18 43.8	
	0.4nm,0.3s,baz=208,slow=23,SNR=2.4						
ELK	Elko	3.14	295	Pn	Pn	01 17 56.7	-0.5
ELK				Pg	Pg	01 18 01.1	-7.5
ELK				Lg		01 18 43.8	
AHID	Auburn Hatcher	3.29	5	*e*Pn	Pn	01 17 58.4	-1.0
SMCO	Snowmass	3.52	94	Pn	Pn	01 18 01.9	-0.8
PDAR	Pinedale Array	3.58	23	Pn	Pn	01 18 13.5	+10
	1.6nm,0.3s,baz=200,slow=15,SNR=10						
PDAR				Sn	Sn	01 19 02.3	+15
	1.9nm,0.3s,baz=209,slow=28,SNR=6.8						
REDW	Red Top Meadow	3.90	7	*e*Pn	Pn	01 18 07.0	-1.1
RWWY	Rawlins	3.93	55	*e*Pn	Pn	01 18 07.8	-0.7
SNOW	Snow King Moun	4.01	8	Pn	Pn	01 18 08.0	-1.6
TPAW	Teton Pass	4.02	6	Pn	Pn	01 18 08.8	-1.0
LOHW	Long Hollow	4.17	9	Pn	Pn	01 18 11.1	-0.9
MOOW	Moose Ponds	4.29	7	Pn	Pn	01 18 12.1	-1.6
IMW	Indian Meadow	4.42	5	Pn	Pn	01 18 16.2	+0.6
TPNV	Topopah Spring	4.53	237	Pn	Pn	01 18 16.0	-1.0
HLID	Hailey	4.62	333	Pn	Pn	01 18 18.1	-0.3
NEN	Nelson	4.67	216	Pn	Pn	01 18 17.3	-1.8
PHWY	Pilot Hill	4.95	67	Pn	Pn	01 18 22.4	-0.7
YFT	Old Faithful	4.98	5	Pn	Pn	01 18 21.5	-2.0
SDCO	Great Sand Dun	5.00	108	Pn	Pn	01 18 24.0	+0.2
	2.9nm,0.7s						
MNV	Mina	5.30	261	Pn	Pn	01 18 28.9	+0.9
QLMT	Earthquake Lak	5.34	0	Pn	Pn	01 18 31.4	+2.9
NVAR	Mina Array Bea	5.42	261	Pn	Pn	01 18 24.6	-5.0
	0.4nm,0.3s,baz=76,slow=16,SNR=9.4						
NVAR				Pg	Pg	01 18 46.8	-7.4
	1.2nm,0.3s,baz=77,slow=17,SNR=14						
NVAR				Lg		01 19 55.9	
	0.8nm,0.3s,baz=88,slow=27,SNR=3.3						
NVAR	Mina Array Bea	5.42	261	Pn	Pn	01 18 24.6	-5.0
NVAR				Pg	Pg	01 18 46.8	-7.4
NVAR				Lg		01 19 55.9	
MCMT	McKenzie Canyo	5.43	350	Pn	Pn	01 18 28.8	-1.0
ANMO	Albuquerque	6.05	137	Pn	Pn	01 18 38.0	-0.6
	baz=320,slow=15,SNR=9.5						
ANMO				Pg	Pg	01 18 58.8	-8.1
	baz=320,slow=15,SNR=10						
ANMO	Albuquerque	6.05	137	*e*Pn	Pn	01 18 36.5	-2.1
LENM	Lemitar	6.43	144	Pn	Pn	01 18 43.3	-0.6
BNM	Barren Site	6.60	142	Pn	Pn	01 18 43.9	-2.5
TUC	Tucson	7.19	175	Pn	Pn	01 18 50.6	-4.0
TXAR	Lajitas Array	12.01	145	Pn	P	01 20 03.3	+2.3
	0.0nm,0.3s,baz=331,slow=9.3,SNR=2.5						
TXAR				Lg		01 23 27.7	
	0.1nm,0.3s,baz=344,slow=27,SNR=8.1						

IDC 15 01:20:31.2±1.4, 38.14N×145.15E, mb3.5/3, mb1 3.8/4, mb1mx3.6/21, mbtmp3.5/4, ML3.6/1, Error ellipse: s-maj=41.3km s-min=29.2km az=127.0

JMA 15 01:20:37.7±0.1, 38.16N×144.61E, h40km, M3.9

ISC 15 01:20:37.0±1.5, 38.29N±0.06×144.71E±0.10, h70km±19km, n14, σ0ˢ90/23, mb3.3/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.51	289	P	P	01 21 17.2	+0.7
OFUJ				*e*S	S	01 21 47.0	+1.0
MIYJ	Miyakonagasawa	2.60	301	P	P	01 21 18.6	+0.9
MIYJ				S	S	01 21 49.0	+0.8
JIO	Ouri	2.65	275	P	P	01 21 18.4	-0.1
JIO				S	S	01 21 48.9	-0.6
JMK	Ichinoseki	2.81	285	P	P	01 21 21.5	+0.7
JMK				*e*S	S	01 21 54.0	+0.4
JCH	Churui	4.44	347	P	P	01 21 44.2	+0.7
JCH				*e*S	S	01 22 33.2	-1.2
JKB	Kayabe	4.57	323	*e*S	S	01 22 38.2	+0.6
NEM2	Nemuro 2	5.13	8	P	P	01 21 51.9	-1.1
NEM2				*e*S	S	01 22 47.5	-4.1
JOD2	Odawara 2	5.43	238	*e*S	S	01 22 52.6	-6.4
MJAR	Matsushiro Arr	5.46	253	Pn	P	01 21 57.3	-0.3
	1.6nm,0.3s,baz=78,slow=15,SNR=7.5						
MJAR				Sn	S	01 22 58.2	-1.6
	1.1nm,0.3s,baz=344,slow=18,SNR=3.0						
MAT	Matsushiro	5.46	253	P	P	01 21 57.6	0.0
MAT				*e*S	S	01 22 58.5	-1.4
JTKR	Abashiri--Toko	5.71	354	P	P	01 22 01.4	+0.4
JTKR				*e*S	S	01 23 04.4	-1.5
MKAR	Makanchi Array	45.68	302	P	P	01 28 56.5	+4.2
	0.4nm,0.7s,mb3.3,baz=79,slow=6.2,SNR=3.6						
ILAR	Eielson Array	47.03	33	P	P	01 29 03.3	+0.6
	0.3nm,0.8s,mb3.1,baz=183,slow=13,SNR=3.5						
WRA	Warramunga Arr	58.73	191	P	P	01 30 30.5	+0.5
	0.3nm,0.6s,mb3.5,baz=14,slow=7.4,SNR=5.7						

JMA 15 01:31:29.3±0.2, 38.27N×144.66E, h53km, M3.5

ISC 15 01:31:27.8±1.5, 38.50N±0.07×144.86E±0.09, h53km, n9, σ0ˢ94/16, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.56	284	P	P	01 32 08.5	+0.7
OFUJ				*e*S	S	01 32 37.6	-0.3
MIYJ	Miyakonagasawa	2.60	295	P	P	01 32 09.3	+0.9
MIYJ				*e*S	S	01 32 39.3	+0.4
JIO	Ouri	2.75	270	P	P	01 32 10.3	-0.3
JIO				S	S	01 32 40.9	-1.9
JMK	Ichinoseki	2.88	280	P	P	01 32 12.9	+0.5
JMK				*e*S	S	01 32 46.1	+0.1
JOT	Ohata	4.11	316	*e*S	S	01 33 17.6	+0.6
JCH	Churui	4.27	345	P	P	01 32 33.1	+1.2
JCH				*e*S	S	01 33 20.9	-0.1
NEM2	Nemuro 2	4.91	8	P	P	01 32 39.7	-1.2
NEM2				*e*S	S	01 33 33.9	-3.2
JTKR	Abashiri--Toko	5.52	353	P	P	01 32 50.6	+1.3
JTKR				*e*S	S	01 33 51.8	-0.5
MAT	Matsushiro	5.63	252	P	P	01 32 50.5	-0.5

IDC 15 01:36:36.0±1.5, 28.11N×139.49E, h378km±27km, mb3.0/4, mb1 3.1/5, mb1mx2.9/20, mbtmp3.7/5, Error ellipse: s-maj=61.7km s-min=22.9km az=81.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.60	112	P	P	01 37 36.1	+1.5
	26nm,0.3s,baz=290,slow=21,SNR=8.3						
CBIJ				S	S	01 38 20.9	+0.4
	21nm,0.3s,baz=276,slow=20,SNR=3.8						
MKAR	Makanchi Array	47.98	309	P	P	01 44 38.1	-1.8
	0.2nm,0.6s,baz=94,slow=8.4,SNR=3.3						
WRA	Warramunga Arr	48.03	187	P	P	01 44 38.8	-1.8
	0.2nm,0.3s,baz=4.4,slow=7.7,SNR=5.7						
ARCES	ARCESS Array B	71.79	340	P	P	01 47 18.2	-1.2
	4.4nm,0.9s,baz=76,slow=7.9,SNR=4.9						
FINES	FINESS Array B	75.97	333	P	P	01 47 42.0	-1.4
	4.3nm,1.0s,baz=82,slow=5.9,SNR=13						

JMA 15 01:40:34.5±0.1, 38.13N×144.61E, h41km, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.49	293	P	P	01 41 14.1	+0.6
OFUJ				*e*S	S	01 41 43.8	+0.9
JIO	Ouri	2.59	278	S	S	01 41 45.6	+0.3
MIYJ	Miyakonagasawa	2.61	304	P	P	01 41 15.5	+0.2
MIYJ				S	S	01 41 46.2	+0.2
JMK	Ichinoseki	2.78	288	*e*S	S	01 41 50.9	+0.6
JCH	Churui	4.58	348	*e*S	S	01 42 31.9	-3.9
NEM2	Nemuro 2	5.30	9	P	P	01 41 48.8	-4.4
NEM2				*e*S	S	01 42 45.3	-8.6

JMA 15 01:47:15.0±0.1, 38.21N×144.68E, h57km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.51	291	P	P	01 47 54.7	+0.3
OFUJ				S	S	01 48 24.7	+0.8
MIYJ	Miyakonagasawa	2.62	302	P	P	01 47 55.9	0.0
MIYJ				S	S	01 48 26.0	-0.5
JIO	Ouri	2.63	276	S	S	01 48 27.1	+0.2
JMK	Ichinoseki	2.81	286	P	P	01 47 58.8	+0.2
JMK				*e*S	S	01 48 31.9	+0.5
JOT	Ohata	4.23	320	*e*S	S	01 49 04.1	-3.0
JCH	Churui	4.51	348	*e*S	S	01 49 09.9	-4.4
NEM2	Nemuro 2	5.21	9	P	P	01 48 27.8	-4.5
NEM2				*e*S	S	01 49 22.2	-10
JTKR	Abashiri--Toko	5.79	354	*e*S	S	01 49 39.7	-6.4

NEIC 15 01:48:47.8±2.1, 43.20N×127.71W, h10km, mb3.5/1, Error ellipse: s-maj=23.2km s-min=7.2km az=65.0, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	2.49	96	*e*P	Pn	01 49 27.7	-1.5
RNO	Roman Nose	2.97	75	P	Pn	01 49 33.9	-2.0
HSO	Harness Mounta	3.38	83	P	Pn	01 49 40.5	-1.3
KMOR	Kings Mountain	3.88	50	P	Pn	01 49 46.4	-2.5
BROR	Big Rock Looko	3.95	73	P	Pn	01 49 48.3	-1.6

HBO	**Huckleberry Mo**	3.97	79	P	Pn	01 49 49.6	-0.5
IRO	**Indian Ridge**	4.04	77	P	Pn	01 49 49.7	-1.4
SSOR	**Sweet Springs**	4.13	65	P	Pn	01 49 51.1	-1.3
FRIS	**Frissel Point**	4.19	74	P	Pn	01 49 52.1	-1.1
NLO	**Nicolai Mounta**	4.19	45	P	Pn	01 49 51.5	-1.8
BKCOR	**Black Crater**	4.49	74	P	Pn	01 49 56.2	-1.3
BMW	**Boistfort Moun**	4.56	43	P	Pn	01 49 55.9	-2.7
BPO	**Bald Peter**	4.58	70	P	Pn	01 49 57.6	-1.2
RVW	**Rose Valley**	4.60	49	P	Pn	01 49 57.1	-2.0
VLMM	**Larch Mountain**	4.69	58	P	Pn	01 49 58.9	-1.4
TDH	**Tom, Dick, Har**	4.73	62	P	Pn	01 49 59.6	-1.4
LVP	**Lakeview Peak**	4.74	51	P	Pn	01 49 59.4	-1.8
FL2	**Flat Top 2**	4.85	50	P	Pn	01 50 01.1	-1.5
VLL	**Laurance Lake**	4.88	60	P	Pn	01 50 01.9	-1.1
STD	**Studebaker Rid**	4.95	50	P	Pn	01 50 01.3	-2.7
VFP	**Flag Point**	4.96	63	P	Pn	01 50 03.2	-1.0
SOSW	**Source of Smit**	5.00	51	P	Pn	01 50 03.5	-1.3
TDL	**Tradedollar La**	5.02	49	P	Pn	01 50 03.2	-1.8
KOSW	**Kosmos**	5.10	48	P	Pn	01 50 04.7	-1.5
OOW	**Octopus West**	5.16	27	P	Pn	01 50 05.2	-1.9
ASR	**Mount Adams--S**	5.26	54	P	Pn	01 50 06.9	-1.6
VIPM	**Ingram Point**	5.29	73	P	Pn	01 50 06.9	-1.9
REMR	**Mount Rainier-**	5.51	47	P	Pn	01 50 10.3	-1.6
RVC	**Mount Rainier-**	5.52	45	P	Pn	01 50 10.4	-1.6
RCM	**Mount Rainier-**	5.58	47	P	Pn	01 50 11.4	-1.5
FMW	**Mount Fremont**	5.67	47	P	Pn	01 50 12.4	-1.8
GSM	**Grass Mountain**	5.78	44	P	Pn	01 50 14.0	-1.8
PGC	**Sidney**	6.20	27	eP	Pn	01 50 18.8	-3.0
HTW	**Haystack Looko**	6.21	40	P	Pn	01 50 19.8	-2.1
TBM	**Table Mountain**	6.40	49	P	Pn	01 50 23.1	-1.4
BMO	**Blue Mountains**	7.67	74	eP	Pn	01 50 39.3	-3.1
WMOK	**Wichita Mounta**	23.93	101	P	P	01 54 02.7	0.0
	1.0nm,0.8s						

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*LDG **15** 01:58:32.7±0.1, 49.37N×6.92E, h1^{km}, Md3.6/2, Ml3.7/20, Error ellipse: s-maj=1.6km s-min=1.4km az=53.0, Suspected Mining induced.*
*STR **15** 01:58:32.2±0.3, 49.38N×6.85E, h1^{km}±1^{km}, Ml3.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*BGR **15** 01:58:32.5±0.3, 49.35N×6.91E, h1^{km}, ML3.2/6, Error ellipse: s-maj=3.3km s-min=2.2km az=14.0*
*NEIC **15** 01:58:32.2, 49.38N×6.85E, h1^{km}, ML3.7(LDG), ML3.3(SZGRF), ML3.1(STR), After STR.*
*CSEM **15** 01:58:32.7±0.1, 49.37N×6.93E, h2^{km}, ML3.7/18, Error ellipse: s-maj=1.1km s-min=0.9km az=35.0*
*LEDBW **15** 01:58:32.7±0.3, 49.38N×6.90E, h1^{km}, ML3.1, Error ellipse: s-maj=8.0km s-min=4.0km az=104.0*
*PRU **15** 01:58:33.6, 49.39N×7.05E*
*BNS **15** 01:58:34.1±1.2, 49.43N×6.96E, h1^{km}, ML3.2*
ISC 15 01:58:30.4±0.1**, 49.375N**±0.009×**6.88E**±0.02**, n173, σ1^{s}38**/309**, 35C-15D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	**Walferdange**	0.56	302	ePg	Pg	01 58 43.6	+2.1
	SNR=78						
WLF				eSg	Sg	01 58 51.3	+2.3
	SNR=6.3						
ABH	**Alteburg**	0.67	40	⇓P	Pg	01 58 44.8	+1.2
ABH	**Alteburg**	0.67	40	Pg	Pg	01 58 44.7	+1.0
ABH				Sg	Sg	01 58 53.7	+1.1
LANF	**Langenberg**	0.72	123	Pg	Pg	01 58 45.9	+1.1
LANF	**Langenberg**	0.72	123	⇓P*	Pb	01 58 46.0	+0.5
KTD	**Kalmit**	0.79	94	P*	Pb	01 58 47.6	+0.9
KTD	**Kalmit**	0.79	94	Pg	Pg	01 58 47.4	+1.3
KTD				Sg	Sg	01 58 59.6	+3.0
BGG	**Burgeitz**	0.88	19	ePg	Pg	01 58 49.3	+1.3
BGG				eSg	Sg	01 59 00.9	+1.1
	666nm,0.3s						
HILG	**Hillesheim**	0.93	352	ePg	Pg	01 58 50.6	+1.7
HILG				eSg	Sg	01 59 03.3	+2.0
	980nm,0.4s						
STR	**Strasbourg**	0.98	143	Pg	Pg	01 58 51.8	+1.8
CDF	**Champ du Feu**	1.00	165	ePg	Pg	01 58 50.9	+0.6
CDF				ePn	Pn	01 58 52.0	+0.5
CDF				eSg	Sg	01 59 03.8	+0.2
	140nm,0.2s						
WLS	**Welschbruch**	1.01	162	P*	Pb	01 58 51.4	+0.9
WLS				PmP		01 58 52.3	
WLS	**Welschbruch**	1.01	162	Pg	Pg	01 58 51.2	+0.6
ECH	**Echery**	1.18	171	Pg	Pg	01 58 54.2	+0.4
ECH				Sg	Sg	01 59 09.8	+0.3
ECH	**Echery**	1.18	171	P	Pb	01 58 54.3	+1.1
ECH				P		01 58 55.2	
RFYF	**Reffroy**	1.19	232	ePg	Pg	01 58 55.5	+1.3
	baz=54						
RFYF				eSg	Sg	01 59 11.8	+1.8
	272nm,0.2s						
STB	**Steinbach**	1.22	359	ePg	Pg	01 58 56.1	+1.3
STB				eSg	Sg	01 59 12.2	+1.2
	727nm,0.8s						
TOD	**Tromm**	1.27	79	⇓P	Pb	01 58 55.4	+0.4
TOD				P		01 58 56.4	
TOD	**Tromm**	1.27	79	PG	Pg	01 58 56.4	+0.6
TOD	**Tromm**	1.27	79	Pg	Pg	01 58 56.4	+0.6
TOD	**Tromm**	1.27	79	Pn	Pn	01 58 55.2	-0.2
THEF	**They Montfort**	1.29	208	Pg	Pg	01 58 56.4	+0.2
THEF				Sg	Sg	01 59 13.5	+0.1
THEF	**They Montfort**	1.29	208	P	Pb	01 58 56.3	+1.1
THEF				P		01 58 57.1	
LIBD	**Limburg**	1.31	159	P	Pb	01 58 58.0	+2.3
LIBD	**Limburg**	1.31	159	Pn	Pn	01 58 57.5	+1.5
LIBD	**Limburg**	1.31	159	Pg	Pg	01 58 58.0	+1.4
TNS	**Taunus Mts**	1.32	49	ePg	Pg	01 58 57.5	+0.8
	SNR=61						
TNS				eSg	Sg	01 59 15.0	+0.6
	SNR=4.8						
TNS	**Taunus Mts**	1.32	49	ePg	Pg	01 58 56.1	-0.7
TNS				eSg	Sg	01 59 16.1	+1.7
KLL	**Kalltalsperre**	1.32	344	ePg	Pg	01 58 57.3	+0.4
KLL				eSg	Sg	01 59 14.8	+0.3
	236nm,0.8s						
HAU	**Haudompre**	1.42	195	ePn	Pn	01 58 57.8	+0.4
HAU				ePg	Pg	01 58 59.0	+0.3
HAU				eSn	Sn	01 59 14.8	-2.3
HAU				eSg	Sg	01 59 17.5	0.0
	167nm,0.2s						
BFO	**Black Forest**	1.42	137	P	Pg	01 58 59.3	+0.6
BFO				S	Sg	01 59 17.7	+0.2
BFO	**Black Forest**	1.42	137	ePn	Pn	01 58 57.6	+0.1
	SNR=4.1						
BFO				Pg	Pg	01 58 59.3	+0.6
BFO				Sg	Sg	01 59 17.7	+0.2
BFO	**Black Forest**	1.42	137	ePg	Pg	01 58 57.7	-1.0
BFO				eSg	Sg	01 59 17.5	-0.1
LBG	**Lerchenberg**	1.45	119	P	Pn	01 58 58.0	+0.2
LBG				P		01 58 59.7	
LBG				S	Sb	01 59 17.6	+0.8
LBG	**Lerchenberg**	1.45	119	PG	Pg	01 58 59.7	+0.5
LBG				SG	Sg	01 59 17.6	-0.9
LBG	**Lerchenberg**	1.45	119	P	Pn	01 58 58.0	+0.2
LBG				Pg	Pg	01 58 59.7	+0.5
LBG				Sg	Sg	01 59 17.6	-0.9
MEZF	**Maizieres J'vi**	1.49	235	ePn	Pn	01 58 59.8	+1.3
	baz=50						
MEZF				eSn	Sn	01 59 17.9	-1.1
MEZF				eSg	Sg	01 59 20.9	+0.9
	194nm,0.5s						
HGN	**Heimansgroeve**	1.52	337	⇑ePn	Pn	01 58 59.6	+0.7
	baz=150						
HGN				⇑iPg	Pg	01 59 01.0	+0.3
HGN				i Sg	Sg	01 59 19.7	-1.3
HGN				eRg		01 59 37.0	
HGN	**Heimansgroeve**	1.52	337	⇑iPg	Pg	01 59 01.0	+0.3
HGN				i Sg	Sg	01 59 19.7	-1.3
GIVF	**Givet**	1.52	299	ePn	Pn	01 59 00.1	+1.2
GIVF				ePg	Pg	01 59 01.7	+0.9
GIVF				eSn	Sn	01 59 17.8	-1.9
GIVF				eSg	Sg	01 59 21.6	+0.6
	284nm,0.3s						
MOF	**Molkenrain**	1.53	174	Pn	Pn	01 59 00.4	+1.3
MOF				Sg	Sg	01 59 21.7	+0.2
MOF	**Molkenrain**	1.53	174	P	Pg	01 59 01.4	+0.3
MOF				S	Sg	01 59 21.7	+0.2
MOF	**Molkenrain**	1.53	174	P	Pn	01 58 60.0	+0.8
MOF				Pg	Pg	01 59 01.4	+0.3
MOF				Sg	Sg	01 59 21.7	+0.2
HINF	**Hinteralfeld**	1.56	181	ePn	Pn	01 59 00.4	+0.9
HINF				ePg	Pg	01 59 01.6	+0.1
HINF				eSg	Sg	01 59 21.6	-0.7
	237nm,0.2s						
JUE	**Julich**	1.57	349	eSg	Sg	01 59 20.4	-2.1
KIZ	**Kirchzarten**	1.58	154	P	Pn	01 58 59.7	-0.1
KIZ				P		01 59 02.0	
KIZ				S	Sb	01 59 22.4	+1.8
KIZ	**Kirchzarten**	1.58	154	PG	Pg	01 59 02.0	+0.1
KIZ				SG	Sg	01 59 22.4	-0.5
KIZ	**Kirchzarten**	1.58	154	P	Pn	01 58 59.7	0.0
KIZ				Pg	Pg	01 59 02.0	+0.1
KIZ				Sg	Sg	01 59 22.4	-0.5
KIZ	**Kirchzarten**	1.58	154	Pg	Pg	01 59 02.0	+0.1
BNS	**Bensberg**	1.60	7	ePg	Pg	01 59 02.4	+0.1
BNS				i Sg	Sg	01 59 22.1	-1.6
	926nm,0.9s						
HOBG	**Hohbusch**	1.64	10	ePg	Pg	01 59 02.7	-0.3
HOBG				eSg	Sg	01 59 22.4	-2.4
STU	**Stuttgart**	1.64	111	ePn	Pn	01 59 00.8	+0.2
	SNR=2.3						
STU				eSg	Sg	01 59 23.5	-1.4
	SNR=3.0						
STU	**Stuttgart**	1.64	111	ePn	Pn	01 59 00.7	+0.1
STU				eSg	Sg	01 59 22.5	-2.3
FELD	**Feldberg**	1.68	153	P	Pn	01 59 04.1	+3.0
FELD				S	Sb	01 59 26.5	+3.1
SFTF	**Sexfontaines**	1.69	227	ePg	Pg	01 59 01.9	-2.2
	baz=54						
SFTF				eSg	Sg	01 59 24.1	-2.6
	136nm,0.4s						
SIND	**Sindeldorf**	1.78	90	⇓P	Pn	01 59 02.4	-0.2
SPAK	**Spaichingen**	1.79	135	P	Pn	01 59 06.2	+3.4
BAIF	**Baives**	1.87	293	ePn	Pn	01 59 04.8	+0.9
BAIF				ePg	Pg	01 59 08.2	+0.6
BAIF				eSn	Sn	01 59 27.9	-0.6
BAIF				eSg	Sg	01 59 34.1	+1.6
	163nm,0.5s						
BUCH	**Bad Urach**	1.87	119	P	Pn	01 59 04.5	+0.5
BUCH				P		01 59 07.7	
BUCH	**Bad Urach**	1.87	119	PG	Pg	01 59 07.7	-0.1
BUCH	**Bad Urach**	1.87	119	P	Pn	01 59 04.5	+0.5
BUCH				Pg	Pg	01 59 07.7	-0.1
BUCH	**Bad Urach**	1.87	119	Pg	Pg	01 59 07.7	-0.1
BBS	**Basel-Blauen**	1.96	167	P	Pn	01 59 10.1	+4.9
BBS	**Basel-Blauen**	1.96	167	Pn	Pn	01 59 06.0	+0.8
BBS				Pg	Pg	01 59 10.0	+0.5
BBS	**Basel-Blauen**	1.96	167	Pg	Pg	01 59 10.0	+0.5
GUT	**Gutenstein**	1.97	131	P	Pn	01 59 06.3	+0.9
GUT				P		01 59 09.5	
GUT	**Gutenstein**	1.97	131	PG	Pg	01 59 09.5	-0.3
GUT	**Gutenstein**	1.97	131	P	Pn	01 59 06.3	+0.9
GUT				Pg	Pg	01 59 09.5	-0.3
GUT	**Gutenstein**	1.97	131	Pg	Pg	01 59 09.5	-0.3
LAUG	**Laupendahl**	1.98	1	ePg	Pg	01 59 05.8	-4.1
LOMF	**Lomont**	2.03	181	Pg	Pg	01 59 10.9	+0.1
LOMF	**Lomont**	2.03	181	Pg	Pg	01 59 11.2	+0.4
LOMF				Sg	Sg	01 59 37.3	-0.6
LOMF	**Lomont**	2.03	181	Pn	Pn	01 59 06.5	+0.3
LOMF				Pg	Pg	01 59 10.9	+0.1
LOMF	**Lomont**	2.03	181	Pg	Pg	01 59 10.9	+0.1
BUG	**Bochum--Univer**	2.08	7	ePn	Pn	01 59 08.6	+1.7
	SNR=2.4						
BUG				ePg	Pg	01 59 11.4	-0.6
	SNR=7.1						
BUG				eSg	Sg	01 59 41.3	+1.6
BUG	**Bochum--Univer**	2.08	7	ePn	Pn	01 59 08.6	+1.6
BUG				eSg	Sg	01 59 41.3	+1.6
SISB	**Singen-Sch Ber**	2.18	140	P	Pn	01 59 10.8	+2.3
SISB				P		01 59 13.5	
SISB	**Singen-Sch Ber**	2.18	140	P*	Pb	01 59 13.5	+3.0
HDH	**Heidenheim**	2.33	109	Sg	Sg	01 59 47.7	-0.2
HROE	**Hohe Rhon--Fla**	2.41	60	⇑iPn	Pn	01 59 11.7	0.0
UBBA	**Unterbreizbach**	2.47	53	ePg	Pg	01 59 18.7	-1.0
	SNR=3.8						
UBBA				eSg	Sg	01 59 51.0	-1.8
	SNR=3.3						
NORI	**Noerdlinger Ri**	2.55	103	⇓iPn	Pn	01 59 13.7	+0.1
WTSB	**Winterswijk**	2.59	359	⇑ePg	Pg	01 59 21.1	-1.1
WTSB				i Sg	Sg	01 59 52.7	-4.1
UBR	**Uberruh**	2.73	127	P	Pn	01 59 17.0	+0.8
CABF	**La Chapelle**	2.82	191	ePn	Pn	01 59 17.3	-0.2
CABF				ePg	Pg	01 59 25.9	-0.7
CABF				eSn	Sn	01 59 49.0	-3.7
CABF				eSg	Sg	02 00 02.5	-1.7
	152nm,0.8s						
GRF	**Grafenberg Arr**	2.84	82	eSg	Sg	02 00 02.7	-2.3
DAVA	**Damuels**	2.89	135	⇑iPn	Pn	01 59 19.9	+1.4
	comp=Z,1.1nm,0.2s						
DAVA				⇑iPg	Pg	01 59 27.8	-0.3
	comp=Z,9.4nm,0.4s						
DAVA	**Damuels**	2.89	135	⇓iSn	Sn	01 59 54.1	-0.5
	comp=E,11nm,0.3s						
DAVA	**Damuels**	2.89	135	⇑iSg	Sg	02 00 05.4	-1.2
	comp=E,25nm,0.3s						
DAVA	**Damuels**	2.89	135	⇑Pn	Pn	01 59 19.9	+1.4
DAVA				⇑Pg	Pg	01 59 27.8	-0.3
DAVA				Sn	Sn	01 59 54.1	-0.5
DAVA				Sg	Sg	02 00 05.4	-1.3
LOR	**Lormes**	2.92	225	ePn	Pn	01 59 18.1	-0.8
	baz=51						
LOR				eSn	Sn	01 59 53.2	-2.0
LOR				eSg	Sg	02 00 07.4	-0.2
	75nm,0.4s						
FUR	**Furstenfeldbru**	3.15	111	ePn	Pn	01 59 23.0	+0.8
FUR				eSg	Sg	02 00 08.9	-6.3
SSF	**Saint Saulge**	3.23	226	ePn	Pn	01 59 22.3	-1.1
SSF				eSn	Sn	01 59 59.5	-3.7
	43nm,0.7s						
MOX	**Moxa**	3.31	66	i P	Pn	01 59 24.1	-0.3
MOX				Pg	Pg	01 59 33.0	-3.4
MOX				S	Sn	02 00 02.0	-3.0
MOX				Sg	Sg	02 00 17.0	-3.5
MOX	**Moxa**	3.31	66	ePn	Pn	01 59 23.9	-0.5
	SNR=3.7						
MOX				ePg	Pg	01 59 33.3	-3.1
	SNR=7.2						
MOX				eSn	Sn	02 00 02.1	-2.9
MOX				eSg	Sg	02 00 16.9	-3.6
	SNR=2.2						
MOX	**Moxa**	3.31	66	ePn	Pn	01 59 24.1	-0.3
MOX				ePg	Pg	01 59 33.1	-3.3
MOX				eSn	Sn	02 00 02.1	-2.9
MOX				eSg	Sg	02 00 17.3	-3.2
MOX	**Moxa**	3.31	66	ePg	Pg	01 59 33.1	-3.3
MZEK	**Zeckenberg-Ebn**	3.34	78	⇑iPn	Pn	01 59 25.9	+1.0
TUE	**Stuetta**	3.34	149	Pn	Pn	01 59 27.2	+2.2
SMF	**Signal de Mont**	3.41	218	ePn	Pn	01 59 24.5	-1.4
SMF				eSn	Sn	02 00 03.0	-4.7
SMF				eSg	Sg	02 00 20.6	-3.3
	25nm,0.2s						
NOTT	**Nottersdorf**	3.44	81	eSg	Sg	02 00 21.3	-3.5
	SNR=2.8						
MOTA	**Moosalm**	3.47	124	⇓iPn	Pn	01 59 28.2	+1.4
	SNR=8.7						
MOTA	**Moosalm**	3.47	124	⇑iPg	Pg	01 59 39.0	-0.7
	comp=Z,2.0nm,0.2s						
MOTA	**Moosalm**	3.47	124	⇑iSn	Sn	02 00 06.8	-2.4
	comp=Z,6.0nm,0.4s						
MOTA	**Moosalm**	3.47	124	⇓iSg	Sg	02 00 24.7	-1.2
	comp=Z,4.1nm,0.2s						
MOTA	**Moosalm**	3.47	124	⇓iPn	Pn	01 59 28.1	+1.4
MOTA				⇑Pg	Pg	01 59 39.0	-0.7
MOTA				Sn	Sn	02 00 06.8	-2.4
MOTA				Sg	Sg	02 00 24.7	-1.2
ROTZ	**Rotzenmuhle**	3.49	82	ePn	Pn	01 59 27.3	+0.3
AVF	**Avril sur Loir**	3.51	224	ePn	Pn	01 59 25.6	-1.7
AVF				eSn	Sn	02 00 07.0	-3.1
	20nm,0.3s						
HYF	**Humbligny**	3.53	235	ePn	Pn	01 59 26.6	-1.0
HYF				ePg	Pg	01 59 38.7	-2.2
HYF				eSg	Sg	02 00 29.5	+1.6
SQTA	**Sankt Quirin**	3.60	125	⇓iSn	Sn	02 00 10.5	-2.1
	comp=Z,5.9nm,0.3s						
SQTA	**Sankt Quirin**	3.60	125	⇑iSg	Sg	02 00 28.0	-2.4
	comp=Z,6.8nm,0.3s						
SQTA	**Sankt Quirin**	3.60	125	⇓iPn	Pn	01 59 30.1	+1.4
SQTA				Sn	Sn	02 00 10.4	-2.1
SQTA				Sg	Sg	02 00 28.0	-2.4
NEUB	**Neuenburg**	3.63	58	eSg	Sg	02 00 28.4	-3.0
	SNR=2.6						
GUNZ	**Gunzen**	3.66	72	ePn	Pn	01 59 29.9	+0.4
	SNR=2.8						
GUNZ				ePg	Pg	01 59 41.2	-2.3
	SNR=6.8						
GUNZ				eSg	Sg	02 00 28.7	-3.6
	SNR=2.7						
WERD	**Werda**	3.67	71	ePn	Pn	01 59 29.9	+0.3
WERD				ePg	Pg	01 59 40.9	-2.7
	SNR=6.0						
WERD				eSg	Sg	02 00 28.8	-3.7
	SNR=3.8						
NKC	**Novy Kostel**	3.71	74	ePN	Pn	01 59 30.2	+0.1
NKC				eSG	Sg	02 00 28.6	-5.2
	97nm,0.9s						
BRMO	**Bormio**	3.73	140	Pn	Pn	01 59 32.6	+2.1
VAI	**Varese**	3.73	159	Pn	Pn	01 59 31.6	+1.1
WATA	**Walderalm**	3.74	121	⇑iPn	Pn	01 59 31.9	+1.3
	comp=Z,1.5nm,0.1s						
WATA	**Walderalm**	3.74	121	⇑iSn	Sn	02 00 15.8	-0.1
	comp=Z,3.4nm,0.2s						
WATA	**Walderalm**	3.74	121	⇑Pn	Pn	01 59 31.9	+1.3
WATA				Sn	Sn	02 00 15.8	-0.1
TANN	**Tannenbergstha**	3.75	72	ePg	Pg	01 59 42.7	-2.7
	SNR=3.9						
TANN				eSg	Sg	02 00 31.4	-4.0
	SNR=2.9						
WTTA	**Wattenberg**	3.81	122	⇑iPn	Pn	01 59 33.2	+1.6
	comp=Z,1.4nm,0.1s						
WTTA	**Wattenberg**	3.81	122	⇑iSn	Sn	02 00 36.3	+19
	comp=N,8.4nm,0.4s						
WTTA	**Wattenberg**	3.81	122	⇑Pn	Pn	01 59 33.2	+1.6
WTTA				Sn	Sn	02 00 36.3	+19
ORO	**Oropa**	3.82	168	Pn	Pn	01 59 33.7	+1.9
LPL	**La Plagne**	3.86	182	ePn	Pn	01 59 32.7	+0.4
LPG	**La Plagne**	3.88	181	ePn	Pn	01 59 32.9	+0.3
LPG				eSn	Sn	02 00 13.6	-6.0
LPG				eSg	Sg	02 00 34.1	-5.5
	19nm,0.6s						
BGF	**Bois d'Agland**	3.91	225	ePn	Pn	01 59 31.5	-1.5
BGF				eSg	Sg	02 00 38.1	-2.5
	154nm,0.4s						
WET	**Wettzell**	3.93	91	ePn	Pn	01 59 33.4	+0.1
	SNR=13						
WET				ePg	Pg	01 59 45.3	-3.6
	SNR=1.5						
WET	**Wettzell**	3.93	91	ePn	Pn	01 59 33.6	+0.3
APPI	**Appiano**	4.12	133	Pn	Pn	01 59 38.6	+2.7
RJOB	**Jochberg**	4.25	110	⇓iPn	Pn	01 59 38.8	+0.9
CLL	**Collm**	4.37	61	ePG	Pg	01 59 53.0	-4.6
CLL				e		02 00 10.0	
CLL				eSN	Sn	02 00 28.0	-4.0
CLL				i SG	Sg	02 00 50.5	-5.4
CLL				i		02 00 56.6	
CLL	**Collm**	4.37	61	ePg	Pg	01 59 53.0	-4.6
CLL				eSn	Sn	02 00 28.0	-4.0
CLL				i Sg	Sg	02 00 50.5	-5.4
KHC	**Kasperske Hory**	4.39	91	ePN	Pn	01 59 39.5	-0.4
KHC				ePG	Pg	02 00 00.0	+1.9
KHC				eSN	Sn	02 00 28.1	-4.4
KHC				eSG	Sg	02 00 49.6	-7.0
	36nm,0.9s						
TCF	**Toulx Ste Croi**	4.41	227	ePn	Pn	01 59 38.4	-1.7
TCF				eSn	Sn	02 00 29.1	-3.9
TCF				eSg	Sg	02 00 51.7	-5.5
	24nm,0.5s						
GEC2	**GERESS Array S**	4.51	94	ePn	Pn	01 59 41.4	-0.2
	SNR=36						
LDF	**La Druitiere**	4.68	263	ePn	Pn	01 59 42.4	-1.5
LDF				ePg	Pg	01 59 59.5	-4.3
LDF				eSn	Sn	02 00 34.6	-5.2
	28nm,0.7s						
BRG	**Berggiesshubel**	4.78	69	Pn	Pn	01 59 45.6	+0.2
BRG				Pg	Pg	02 00 00.5	-5.4
BRG				Sg	Sg	02 01 04.3	-5.3
FVI	**Forni Avoltri**	4.84	123	Pn	Pn	01 59 48.6	+2.4
FLN	**La Foliniere**	4.88	266	ePn	Pn	01 59 45.4	-1.4
	baz=87						
FLN				ePg	Pg	02 00 04.0	-3.8
	baz=86						
FLN				eSn	Sn	02 00 39.2	-5.7
FLN				eSg	Sg	02 01 05.8	-7.1
	22nm,0.4s						
FLN	**La Foliniere**	4.88	266	ePg	Pg	02 00 04.0	-3.8
FLN				eSn	Sn	02 00 39.2	-5.7
FLN				eSg	Sg	02 01 05.8	-7.1
	11nm,0.4s						
KBA	**Koelnbreinsper**	4.89	116	⇑iPn	Pn	01 59 47.8	+0.9
	comp=Z,2.1nm,0.2s,SNR=16						
KBA	**Koelnbreinsper**	4.89	116	⇓iPg	Pg	01 59 57.1	-11
	comp=Z,8.5nm,0.5s						
KBA	**Koelnbreinsper**	4.89	116	⇑iSn	Sn	02 00 45.3	+0.1
	comp=N,7.3nm,0.4s						
KBA	**Koelnbreinsper**	4.89	116	⇑iSg	Sg	02 01 13.5	+0.3
	comp=Z,4.8nm,0.4s						
KBA	**Koelnbreinsper**	4.89	116	⇑iPn	Pn	01 59 47.8	+0.9
KBA				⇓Pg	Pg	01 59 57.1	-11
KBA				Sn	Sn	02 00 45.3	+0.1
KBA				Sg	Sg	02 01 13.5	+0.3
KBA	**Koelnbreinsper**	4.89	116	Pg	Pg	01 59 57.1	-11
KBA				Sn	Sn	02 00 45.3	+0.1
PRU	**Pruhonice**	5.01	80	ePN	Pn	01 59 47.7	-0.9
PRU				eSG	Sg	02 01 08.5	-8.7
	66nm,1.2s						
PRU	**Pruhonice**	5.01	80	ePn	Pn	01 59 47.7	-0.9
	66nm,1.2s						
PRU				eSg	Sg	02 01 08.5	-8.7
MOA	**Molln**	5.13	105	⇑iPn	Pn	01 59 50.4	+0.1
	SNR=19						
MOA	**Molln**	5.13	105	⇑iSn	Sn	02 00 47.6	-3.6
	comp=N,4.2nm,0.2s						
MOA	**Molln**	5.13	105	⇑iSg	Sg	02 01 19.7	-1.4
	comp=N,6.3nm,0.6s						
MOA	**Molln**	5.13	105	⇑iPn	Pn	01 59 50.4	+0.1
	4.2nm,0.2s						
MOA				Sn	Sn	02 00 47.5	-3.6
MOA				Sg	Sg	02 01 19.7	-1.4
MOA	**Molln**	5.13	105	Sn	Sn	02 00 47.5	-3.6
GRR	**Gorron**	5.20	262	ePn	Pn	01 59 49.0	-2.3
GRR				ePg	Pg	02 00 10.0	-4.2
GRR				eSn	Sn	02 00 45.2	-7.8
GRR				eSg	Sg	02 01 16.8	-6.8
	22nm,0.5s						
PTCC	**Patocco-Chiusa**	5.27	122	Pn	Pn	01 59 54.7	+2.4
MFF	**Saint Martin d**	5.47	242	ePn	Pn	01 59 53.5	-1.7
CAF	**Calviac**	5.53	218	ePn	Pn	01 59 53.1	-2.9
TREC	**Trest**	5.63	88	ePN	Pn	01 59 56.3	-1.0
OBKA	**Obir**	5.89	116	⇑iPn	Pn	02 00 02.4	+1.3
OBKA	**Obir**	5.89	116	⇑iSn	Sn	02 01 08.5	-1.8
	comp=N,3.1nm,0.3s						
OBKA	**Obir**	5.89	116	⇑Pn	Pn	02 00 02.4	+1.3
	3.1nm,0.3s						
OBKA				Sn	Sn	02 01 08.5	-1.8
ARSA	**Arzberg**	6.14	107	⇑iPn	Pn	02 00 05.2	+0.6
	comp=Z,1.4nm,0.2s						
ARSA	**Arzberg**	6.14	107	⇑iSn	Sn	02 01 13.0	-3.6
	comp=E,2.5nm,0.4s						
ARSA	**Arzberg**	6.14	107	⇓iSg	Sg	02 01 58.0	+3.1
	comp=E,3.3nm,0.7s						
ARSA	**Arzberg**	6.14	107	⇑Pn	Pn	02 00 05.2	+0.6
	1.4nm,0.3s						
ARSA				Sn	Sn	02 01 13.0	-3.6
ARSA				Sg	Sg	02 01 58.0	+3.1
DPC	**Dobruska-Polom**	6.18	77	eSG	Sg	02 01 45.9	-10
SGMF	**Saint Gilles**	6.34	263	ePn	Pn	02 00 05.2	-2.1
QUIF	**Quistinic**	6.82	261	ePn	Pn	02 00 11.5	-2.6
OKC	**Ostrava-Krasne**	7.34	82	eSG	Sg	02 02 22.4	-12
VYHS	**Vyhne**	7.92	92	ePN	Pn	02 00 27.8	-1.8

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*IDC **15** 01:59:02.3±0.9, 38.18N×144.96E, mb3.9/10, mb1 4.2/12, mb1mx4.0/23, mbtmp3.9/12, ML4.1/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/25, Error ellipse: s-maj=23.8km s-min=21.1km az=154.0*
*NEIC **15** 01:59:03.8±0.5, 38.17N×145.03E, h10^{km}, mb4.6/1, Error ellipse: s-maj=15.0km s-min=8.3km az=153.0*
*MOS **15** 01:59:05.2±1.0, 38.19N×144.94E, h36^{km}, mb4.3/3, Error ellipse: s-maj=16.5km s-min=15.3km az=91.6*
*JMA **15** 01:59:07.0±0.1, 38.29N×144.71E, h56^{km}, M4.5*
ISC 15 01:59:06.3±1.4**, 38.26N**±0.07×**144.76E**±0.08**, h38^{km}**±12^{km}**, n37, σ0^{s}79**/38**, mb3.9**/12**, 4C, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.55	290	P	P	01 59 46.4	+0.2
OFUJ				S	S	02 00 16.4	+0.1
MIYJ	**Miyakonagasawa**	2.64	301	P	P	01 59 47.4	-0.1
MIYJ				eS	S	02 00 17.8	-0.8

JIO	**Ouri**	**2.69**	**275**	P	**P**	**01 59 48.5**	**+0.4**
JIO				S	**S**	**02 00 19.3**	**-0.5**
JMK	**Ichinoseki**	**2.86**	**285**	P	**P**	**01 59 50.9**	**+0.4**
JMK				*e*S	**S**	**02 00 23.7**	**-0.4**
JOT	**Ohata**	**4.23**	**319**	P	**P**	**02 00 09.5**	**-0.5**
JKB	**Kayabe**	**4.61**	**323**	P	**P**	**02 00 15.3**	**-0.2**
MJAR	**Matsushiro Arr**	**5.49**	**254**	Pn	**P**	**02 00 27.6**	**-0.1**
	5.4nm,0.3s,baz=80,slow=15,SNR=18						
MJAR				Sn	**S**	**02 01 29.9**	**-0.6**
	1.7nm,0.3s,baz=92,slow=26,SNR=3.6						
MAJO	**Matsushiro**	**5.49**	**254**	*e*Pn	**P**	**02 00 28.8**	**+1.0**
	21nm,0.6s						
MAJO	**Matsushiro**	**5.49**	**254**	*e*P	**P**	**02 00 28.8**	**+1.0**
MAJO				pmax	pmax		
	comp=Z,21nm,0.6s						
MAT	**Matsushiro**	**5.49**	**254**	P	**P**	**02 00 28.7**	**+0.9**
MAT				S	**S**	**02 01 31.3**	**+0.7**
MAT	**Matsushiro**	**5.49**	**254**	*e*P	**P**	**02 00 29.0**	**+1.2**
	comp=Z,18nm,0.7s						
MAT				*e*S	**S**	**02 01 31.0**	**+0.4**
MAT	**Matsushiro**	**5.49**	**254**	*e*P	**P**	**02 00 29.0**	**+1.2**
MAT				*e*S	**S**	**02 01 31.0**	**+0.4**
MAT				pmax	pmax		
	comp=Z,18nm,0.7s						
ASAJ	**Asahikawa**	**6.07**	**345**	Pn	**P**	**02 00 35.5**	**-0.4**
	comp=Z,3.7nm,0.3s,baz=186,slow=13,SNR=8.3						
ASAJ				Sn	**S**	**02 01 40.6**	**-4.5**
	comp=Z,2.5nm,0.3s,baz=340,slow=31,SNR=5.3						
ASAJ				LR	LR	02 03 15.6	
	comp=Z,287nm,20.6s,baz=150,slow=41						
ASAJ	**Asahikawa**	**6.07**	**345**	P	**P**	**02 00 35.5**	**-0.4**
ASAJ						02 01 40.7	
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,287nm,20.6s						
JHJ	**Hachijo jima 2**	**6.54**	**220**	Sn	**S**	**02 01 50.1**	**-6.5**
	comp=Z,26nm,0.3s,baz=240,slow=23,SNR=3.4						
BOD	**Bodaibo**	**28.00**	**324**	*e*P	**P**	**02 04 54.5**	**-0.9**
BOD				pmax	pmax		
	comp=Z,4.0nm,1.8s,mb3.8						
ZAL	**Zalesovo**	**43.09**	**311**	P	**P**	**02 07 06.0**	**+1.9**
	comp=Z,0.6nm,0.3s,mb3.9,baz=23,slow=12,SNR=3.1						
MKAR	**Makanchi Array**	**45.73**	**302**	P	**P**	**02 07 26.3**	**+0.9**
	comp=Z,0.5nm,0.7s,mb3.5,baz=90,slow=7.3,SNR=3.8						
ILAR	**Eielson Array**	**47.03**	**33**	P	**P**	**02 07 34.8**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.8,baz=266,slow=6.2,SNR=13						
WRAB	**Tennant Creek**	**58.70**	**191**	*e*P	**P**	**02 09 00.6**	**-2.1**
	comp=Z,3.8nm,0.6s,mb4.6						
WRAB	**Tennant Creek**	**58.70**	**191**	*e*P	**P**	**02 09 00.6**	**-2.1**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
WRA	**Warramunga Arr**	**58.72**	**191**	P	**P**	**02 09 01.3**	**-1.5**
	comp=Z,3.3nm,0.7s,mb4.5,baz=11,slow=7.2,SNR=22						
AKTO	**Aktyubinsk**	**59.82**	**312**	P	**P**	**02 09 10.2**	**+0.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=41,slow=9.3,SNR=3.1						
AKTO	**Aktyubinsk**	**59.82**	**312**	P	**P**	**02 09 10.2**	**+0.2**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
FINES	**FINESS Array B**	**68.94**	**333**	P	**P**	**02 10 08.9**	**-0.1**
	comp=Z,3.4nm,0.9s,mb4.3,baz=51,slow=12,SNR=5.6						
NVAR	**Mina Array Bea**	**72.12**	**55**	P	**P**	**02 10 28.6**	**0.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=295,slow=4.6,SNR=4.2						
PDAR	**Pinedale Array**	**74.90**	**47**	P	**P**	**02 10 45.3**	**+0.5**
	comp=Z,1.0nm,0.7s,mb3.9,baz=284,slow=2.8,SNR=11						
GERES	**GERESS Array B**	**83.03**	**330**	P	**P**	**02 11 29.8**	**+1.1**
	comp=Z,0.3nm,0.6s,mb3.5,baz=14,slow=5.5,SNR=3.5						
TXAR	**Lajitas Array**	**87.26**	**54**	P	**P**	**02 11 50.5**	**+0.4**
	comp=Z,0.5nm,0.7s,mb3.8,baz=315,slow=3.7,SNR=7.5						
SNAA	**Sanae**	**142.68**	**196**	⇑*i*	PKPdf	02 18 34.0	-0.3
SNAA	**Sanae**	**142.68**	**196**	*e*	PKPdf	02 18 44.0	+10
VNA2	**Neumayer--Watz**	**144.22**	**195**	⇑*i*	PKPbc	02 18 36.5	+0.1
VNA2	**Neumayer--Watz**	**144.22**	**195**	*e*	PKPbc	02 18 46.6	+10
VNA3	**Neumayer Olymp**	**144.41**	**194**	⇑*i*	PKPbc	02 18 37.6	+0.7
VNA3	**Neumayer Olymp**	**144.41**	**194**	*e*	PKPbc	02 18 48.5	+12
VNA1	**Neumayer--Stat**	**144.61**	**195**	⇑*i*	PKPbc	02 18 36.6	-0.9
VNA1	**Neumayer--Stat**	**144.61**	**195**	*e*	PKPbc	02 18 47.5	+10

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*NEIC **15** 02:06:49.5, 16.54N×100.25W, h9^{km}, MD4.0(MEX), After MEX.*

MEX 15 02:06:49.5±0.9**, 16.54N×100.25W, h9**^{km}±12^{km}**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.45**	**44**	*i* P	Pg	02 06 57.5	-1.2
ACX				*i* S	Sg	02 07 05.0	+0.2
CAIG	**El Cayaco**	**0.50**	**358**	*i* P	Pg	02 06 58.5	-1.2
CAIG				*i* S	Sg	02 07 06.7	+0.3
PLIG	**Platanillo**	**1.97**	**21**	*i* P	Pn	02 07 19.9	-3.5
PLIG				*i* S	Sn	02 07 42.4	-6.1
PPM	**Popocatepetl**	**2.95**	**31**	*i* P	Pn	02 07 35.0	-2.4
PPM				*e*P		02 07 35.0	
PPM				*i* S	Sn	02 08 09.9	-3.3
PPM	**Popocatepetl**	**2.95**	**31**	*i* P	Pn	02 07 35.0	-2.4
PPM				*i* S	Sn	02 08 09.9	-3.3
UNM	**Universidad Na**	**2.95**	**20**	*e*P	Pn	02 07 34.0	-3.5
OXX	**Oaxaca**	**3.42**	**80**	*e*P	Pn	02 07 37.0	-7.1

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*IDC **15** 02:10:17.5±3.4, 38.00N×145.04E, mb3.5/2, mb1 3.7/4, mb1mx3.5/22, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=71.5km s-min=33.0km az=153.0*

*JMA **15** 02:10:20.7±0.2, 38.23N×144.63E, h35^{km}, M4.0*

ISC 15 02:10:22.4±1.2**, 38.32N**±0.07×**144.60E**±0.09**, h35**^{km}**, n11, σ0^{s}87**/17**, mb3.5**/2**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.41**	**289**	P	**P**	**02 11 00.1**	**-0.2**
MIYJ	**Miyakonagasawa**	**2.50**	**301**	P	**P**	**02 11 01.4**	**-0.2**
JIO	**Ouri**	**2.56**	**274**	P	**P**	**02 11 01.8**	**-0.5**
JIO				*e*S	**S**	**02 11 33.3**	**+0.8**
JMK	**Ichinoseki**	**2.72**	**285**	P	**P**	**02 11 05.2**	**+0.5**
JMK				*e*S	**S**	**02 11 37.0**	**+0.3**
JOM	**Ohasama**	**2.83**	**295**	P	**P**	**02 11 06.4**	**+0.2**
JOM				*e*S	**S**	**02 11 39.1**	**-0.3**
JMM	**Marumori**	**3.04**	**263**	P	**P**	**02 11 08.3**	**-0.8**
JCH	**Churui**	**4.39**	**348**	P	**P**	**02 11 29.3**	**+0.8**
JCH				*e*S	**S**	**02 12 18.8**	**-0.3**
MJAR	**Matsushiro Arr**	**5.38**	**253**	Pn	**P**	**02 11 41.7**	**-0.6**
	1.7nm,0.3s,baz=76,slow=10,SNR=8.1						
MJAR				Sn	**S**	**02 12 43.6**	**-0.5**
	0.5nm,0.3s,baz=212,slow=8.1,SNR=3.1						
ASAJ	**Asahikawa**	**5.99**	**346**	Pn	**P**	**02 11 52.3**	**+1.5**
	0.8nm,0.3s,baz=100,slow=18,SNR=4.3						
ASAJ				Sn	**S**	**02 12 57.8**	**-1.4**
	0.6nm,0.3s,baz=162,slow=20,SNR=3.1						
MKAR	**Makanchi Array**	**45.59**	**302**	P	**P**	**02 18 43.1**	**+2.5**
	0.6nm,0.8s,mb3.6,baz=76,slow=10.0,SNR=4.4						
ILAR	**Eielson Array**	**47.05**	**33**	P	**P**	**02 18 50.9**	**-1.0**
	0.4nm,0.8s,mb3.4,baz=255,slow=6.9,SNR=5.2						

JMA 15 02:13:18.8±0.1**, 38.16N×144.61E, h55**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.48**	**293**	P	P	02 13 58.1	+0.4
OFUJ				*e*S	S	02 14 27.6	+0.7
JIO	**Ouri**	**2.58**	**278**	P	P	02 13 59.4	+0.2
JIO				*e*S	S	02 14 29.6	+0.2
MIYJ	**Miyakonagasawa**	**2.60**	**304**	P	P	02 13 59.5	+0.1
MIYJ				S	S	02 14 29.7	-0.1
JMK	**Ichinoseki**	**2.77**	**288**	P	P	02 14 02.0	+0.1
JMK				*e*S	S	02 14 34.9	+0.6
MAT	**Matsushiro**	**5.35**	**254**	P	P	02 14 39.2	+1.2
MAT				*e*S	S	02 15 43.4	+4.3

KRSC 15 02:13:37.5±0.8**, 50.02N×155.56E, h22**^{km}±19^{km}**, ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.75**	**28**	*e*P	Pb	02 13 51.7	-0.1
SKR				*e*S	Sb	02 14 02.5	+0.8
PAU	**Pauzhetka**	**1.65**	**28**	*e*P	Pn	02 14 05.9	+0.3
PAU				*e*S	Sn	02 14 26.2	-0.2
RUS	**Russkaya**	**3.05**	**36**	P	Pn	02 14 25.8	+0.2
UGLR	**Uglovaya**	**3.79**	**31**	*e*P	Pn	02 14 36.8	+0.7

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*NEIC **15** 02:13:57.6±4.1, 6.60S×127.89E, h318^{km}±49^{km}, mb4.4/3, Error ellipse: s-maj=49.4km s-min=15.5km az=224.0*

*IDC **15** 02:14:02.2±6.0, 6.80S×127.70E, h371^{km}±73^{km}, mb3.7/5, mb1 3.8/7, mb1mx3.6/14, mbtmp4.5/7, Error ellipse: s-maj=45.6km s-min=19.6km az=50.0*

ISC 15 02:13:52.9±3.2**, 6.3S**±0.1×**128.2E**±0.2**, h283**^{km}±36^{km}**, n15, σ0^{s}86**/16**, mb4.0**/7**, 3C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**7.58**	**147**	*e*P	Px	02 16 05.0	
	15nm,0.5s						
FITZ	**Fitzroy Crossi**	**11.95**	**192**	*e*P	**P**	**02 16 36.1**	**-0.2**
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**11.95**	**192**	P	**P**	**02 16 35.7**	**-0.6**
	2.2nm,0.3s,baz=33,slow=7.9,SNR=35						
FITZ				S	**S**	**02 18 46.2**	**+0.8**
	0.1nm,0.3s,baz=132,slow=19,SNR=2.4						
WRAB	**Tennant Creek**	**14.77**	**157**	*e*Pn	**P**	**02 17 10.4**	**-0.2**
	23nm,0.7s						
WRA	**Warramunga Arr**	**14.77**	**157**	P	**P**	**02 17 10.1**	**-0.6**
	4.3nm,0.3s,baz=332,slow=12,SNR=125						
WRA				S	**S**	**02 19 47.3**	**-0.2**
	0.3nm,0.3s,baz=329,slow=20,SNR=7.2						
WB2	**Warramunga Arr**	**14.78**	**157**	⇑*i*P	**P**	**02 17 10.6**	**-0.2**
ASPA	**Alice Springs**	**18.08**	**163**	*e*P	**P**	**02 17 46.8**	**+0.5**
CTA	**Charters Tower**	**22.22**	**130**	P	**P**	**02 18 29.9**	**+2.7**
	5.3nm,0.9s,mb3.9,baz=304,slow=8.6,SNR=5.3						
STKA	**Stephens Creek**	**28.32**	**155**	P	**P**	**02 19 21.7**	**-1.3**
	5.8nm,0.5s,mb4.3,baz=331,slow=8.7,SNR=24						
SONM	**Songino Array**	**57.27**	**343**	P	**P**	**02 23 14.5**	**+1.4**
	1.8nm,0.6s,mb3.7,baz=168,slow=6.7,SNR=14						
MK31	**Makanchi Array**	**66.71**	**327**	⇑Pn	**P**	**02 24 14.8**	**-0.7**
	2.3nm,0.7s,mb4.0,baz=53,slow=17,SNR=56						
MK31				⇓Sn	pP	02 25 12.6	-7.6
	0.3nm,0.5s,baz=62,slow=21,SNR=4.4						
MK31				⇓Lg		02 25 33.4	
	0.7nm,0.4s,baz=54,slow=29,SNR=4.4						
MKAR	**Makanchi Array**	**66.71**	**327**	P	**P**	**02 24 15.2**	**-0.3**
	2.4nm,0.4s,mb4.2,baz=120,slow=9.0,SNR=56						
ZAL	**Zalesovo**	**70.22**	**334**	P	**P**	**02 24 37.0**	**+0.1**
	1.3nm,0.5s,mb3.9,baz=359,slow=6.6,SNR=4.5						
KURK	**Kurchatov**	**71.04**	**329**	⇑Pn	**P**	**02 24 41.4**	**-0.4**
	3.7nm,1.5s,mb3.8						
KURK	**Kurchatov**	**71.04**	**329**	*e*P	**P**	**02 24 41.3**	**-0.5**
	2.3nm,0.4s,mb4.2						

JMA 15 02:22:31.6±0.2**, 38.27N×144.77E, h46**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.56**	**289**	P	P	02 23 12.0	+0.4
OFUJ				*e*S	S	02 23 42.3	+0.6
MIYJ	**Miyakonagasawa**	**2.65**	**300**	P	P	02 23 12.8	0.0
MIYJ				*e*S	S	02 23 43.4	-0.5
JIO	**Ouri**	**2.70**	**275**	S	S	02 23 45.2	0.0
JMK	**Ichinoseki**	**2.86**	**285**	*e*S	S	02 23 50.2	+0.8
JOM	**Ohasama**	**2.97**	**295**	P	P	02 23 18.1	+0.7
JMM	**Marumori**	**3.17**	**264**	*e*S	S	02 23 57.1	0.0

JMA 15 02:23:30.8±0.1**, 38.20N×144.48E, h22**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.37**	**293**	P	Pn	02 24 09.5	+0.3
JIO	**Ouri**	**2.48**	**277**	S	Sn	02 24 40.9	+0.3
MIYJ	**Miyakonagasawa**	**2.49**	**304**	P	Pn	02 24 11.4	+0.5
MIYJ				*e*S	Sn	02 24 41.0	0.0
JMK	**Ichinoseki**	**2.66**	**287**	*e*S	Sn	02 24 46.5	+1.1

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*JMA **15** 02:36:15.6±0.2, 38.28N×144.67E, h54^{km}, M3.9*

*IDC **15** 02:36:21.2±1.6, 36.75N×144.27E, mb3.6/2, mb1 3.9/3, mb1mx3.5/21, mbtmp3.5/3, ML3.4/1, Error ellipse: s-maj=50.0km s-min=31.9km az=125.0*

ISC 15 02:36:14.7±1.6**, 38.48N**±0.07×**144.8E**±0.1**, h70**^{km}±25^{km}**, n11, σ1^{s}01**/17**, mb3.9**/1**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.48**	**285**	P	**P**	**02 36 54.6**	**+0.8**
MIYJ	**Miyakonagasawa**	**2.53**	**297**	P	**P**	**02 36 55.9**	**+1.4**
MIYJ				S	**S**	**02 37 25.9**	**+1.7**
JIO	**Ouri**	**2.67**	**271**	P	**P**	**02 36 56.4**	**-0.1**
JIO				*e*S	**S**	**02 37 26.9**	**-0.8**
JMK	**Ichinoseki**	**2.80**	**281**	P	**P**	**02 36 59.3**	**+1.0**
JMK				*e*S	**S**	**02 37 30.9**	**-0.1**
JMM	**Marumori**	**3.18**	**260**	P	**P**	**02 37 03.1**	**-0.5**
JMM				*e*S	**S**	**02 37 38.8**	**-1.7**
JCH	**Churui**	**4.26**	**346**	P	**P**	**02 37 19.9**	**+1.1**
JCH				*e*S	**S**	**02 38 07.4**	**-0.3**
NEM2	**Nemuro 2**	**4.94**	**8**	P	**P**	**02 37 26.5**	**-1.6**
NEM2				*e*S	**S**	**02 38 19.9**	**-4.6**
JTKR	**Abashiri--Toko**	**5.52**	**354**	P	**P**	**02 37 36.7**	**+0.5**
JTKR				*e*S	**S**	**02 38 37.8**	**-1.3**
MJAR	**Matsushiro Arr**	**5.55**	**252**	Pn	**P**	**02 37 35.8**	**-0.7**
	1.5nm,0.3s,baz=75,slow=15,SNR=7.2						
ILAR	**Eielson Array**	**46.85**	**33**	P	sP	02 45 05.3	+0.6
	0.4nm,0.8s,baz=277,slow=7.3,SNR=4.2						
WRA	**Warramunga Arr**	**58.93**	**191**	P	**P**	**02 46 09.7**	**+0.6**
	0.8nm,0.6s,mb3.9,baz=11,slow=7.3,SNR=11						

JMA 15 02:36:38.8±0.3**, 38.25N×144.66E, h42**^{km}**, M4.2, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.48**	**290**	P	P	02 37 18.2	+0.5
OFUJ				*e*S	S	02 37 48.0	+1.0
MIYJ	**Miyakonagasawa**	**2.58**	**302**	P	P	02 37 19.3	+0.2
MIYJ				*e*S	S	02 37 48.8	-0.7
JIO	**Ouri**	**2.61**	**276**	*e*S	S	02 37 50.8	+0.5
JMK	**Ichinoseki**	**2.79**	**286**	P	P	02 37 22.7	+0.7
JMK				*e*S	S	02 37 55.6	+0.9
JCH	**Churui**	**4.47**	**348**	*e*S	S	02 38 32.1	-5.2
NEM2	**Nemuro 2**	**5.17**	**9**	P	P	02 37 51.1	-4.7
NEM2				*e*S	S	02 38 43.7	-11

JMA 15 02:41:57.1±0.2**, 38.14N×144.77E, h45**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.60**	**292**	P	P	02 42 38.3	+0.6
OFUJ				S	S	02 43 09.1	+0.7
JIO	**Ouri**	**2.71**	**278**	P	P	02 42 39.7	+0.4
JIO				S	S	02 43 11.0	0.0
MIYJ	**Miyakonagasawa**	**2.71**	**303**	P	P	02 42 39.6	+0.3
MIYJ				S	S	02 43 10.6	-0.5
JMK	**Ichinoseki**	**2.90**	**287**	P	P	02 42 42.7	+0.8
JMK				*e*S	S	02 43 17.4	+1.6

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*NEIC **15** 02:50:59.0, 30.57S×71.40W, h15^{km}, ML3.0(GUC), After GUC.*

GUC 15 02:50:59.0±0.8**, 30.57S×71.40W, h15**^{km}±5^{km}**, MD3.9, ML3.0, 2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OVCH	**Ovalle**	**0.17**	**103**	*e*P	Pb	02 51 03.7	+0.4
OVCH				*i* S	Sb	02 51 06.9	+0.7
OVCH				AMP		02 51 07.2	
	comp=E,11µm,0.2s						
TLL	**Tololo Astrono**	**0.65**	**52**	*e*P	Pb	02 51 11.7	+0.2
TLL				*i* S	Sb	02 51 21.1	+1.1
TLL				AMP		02 51 23.2	
	comp=N,643nm,0.3s						
LSCH	**La Serena**	**0.67**	**11**	⇓*i*P	Pb	02 51 11.4	-0.5
LSCH				*i* S	Sb	02 51 20.5	-0.2
LSCH				AMP		02 51 21.0	
	comp=N,1µm,0.3s						
CMCH	**Combarbala**	**0.69**	**151**	⇓*i*P	Pb	02 51 11.8	-0.4
CMCH				*i* S	Sb	02 51 21.4	+0.1
CMCH				AMP		02 51 21.6	
	comp=N,6µm,0.1s						
ILCH	**Illapel**	**1.08**	**170**	*i* P	Pb	02 51 18.1	-0.8
ILCH				*i* S	Sb	02 51 32.1	-0.5
ILCH				AMP		02 51 32.6	
	comp=E,590nm,0.2s						
CHNG	**Los Chungos**	**1.31**	**184**	*e*P	Pb	02 51 21.7	-1.2
CHNG				*i* S	Sb	02 51 38.5	-0.8
CHNG				AMP		02 51 43.1	
	comp=E,148nm,0.4s						
JACH	**Jahuel**	**2.21**	**162**	*e*P	Pn	02 51 36.4	+0.6
JACH				*i* S	Sn	02 52 04.8	+1.8
PEL	**Peldehue**	**2.64**	**167**	*e*P	Pn	02 51 42.3	+0.5
FCH	**Farellones**	**2.91**	**161**	*e*P	Pn	02 51 46.1	+0.5
FCH				*i* S	Sn	02 52 22.7	+2.1
FCH				AMP		02 52 31.9	
	comp=E,62nm,0.1s						
TACH	**Talagante**	**3.10**	**173**	*e*P	Pn	02 51 49.3	+0.9
TACH				*i* S	Sn	02 52 26.3	+0.8

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*IDC **15** 03:34:41.7±0.6, 20.32S×173.82W, mb4.7/15, mb1 4.9/17, mb1mx4.8/19, mbtmp4.7/17, ML4.6/2, MS4.8/21, Ms1 4.8/21, ms1mx4.6/30, Error ellipse: s-maj=23.3km s-min=15.0km az=144.0*

*MOS **15** 03:34:46.0±1.1, 20.32S×173.84W, h33^{km}, mb5.2/29, MS4.9/16, Error ellipse: s-maj=14.1km s-min=10.2km az=51.4*

*BJI **15** 03:34:46.8, 19.44S×173.06W, h30^{km}, mB5.4, mb5.0, Ms5.2, Msz5.0*

*HRVD **15** 03:34:47.5±0.6, 20.47S×173.07W, h26^{km}±1^{km}, MW5.3/54, Centroid moment Tensor Solution. LP body waves: s23,c28;Mantle waves: s54,c78; Half duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}1.10±.12; $M_{\theta\theta}$-0.32±.07; $M_{\phi\phi}$-0.77±.07; $M_{r\theta}$0.17±.16; $M_{\theta\phi}$-0.34±.04; $M_{\phi r}$0.07±.12; Best double couple: $M_0$1.045×10^{17} NP1: ϕ_s203°, δ41°, λ82°. NP2: ϕ_s33°, δ49°, λ97°. Principal axes: T 1.121, Plg83°, Azm351°; N -.15, Plg5°, Azm209°; P -.969, Plg4°, Azm118°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 03:34:47.5±0.2, 20.37S×173.77W, mb5.0/42, MS4.9/22 Error ellipse: s-maj=8.2km s-min=4.6km az=140.0*

ISC 15 03:34:46.0±0.2**, 20.44S**±0.06×**173.79W**±0.05**, h36**^{km}**, h36**^{km}±1.4^{km}**:pP-P, n245, σ1^{s}06**/152**, mb4.9**/64**, MS4.8**/54**, 10C-6D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.77**	**17**	Pn	**P**	**03 36 16.6**	**-8.9**
	3.9nm,0.3s,baz=13,slow=2.7,SNR=18						
AFI				Sn	**S**	**03 37 28.7**	**-14**
	21nm,0.3s,baz=101,slow=23,SNR=5.7						
AFI	**Afiamalu**	**6.77**	**17**	*e*Pn	**P**	**03 36 16.5**	**-9.1**
	197nm,0.8s						
AFI				*e*Sn	**S**	**03 37 35.0**	**-7.3**
AFI	**Afiamalu**	**6.77**	**17**	*e*P	**P**	**03 36 16.5**	**-9.0**
AFI				*e*		03 37 35.0	
AFI				pmax	pmax		
	comp=Z,197nm,0.8s						
RAO	**Raoul Island**	**9.54**	**202**	Sn	**S**	**03 38 43.1**	**-8.1**
	comp=Z,60nm,0.3s,baz=109,slow=22,SNR=9.3						
RAR	**Rarotonga**	**13.13**	**96**	Pn	**P**	**03 37 40.3**	**-12**
	comp=Z,6.8nm,0.3s,baz=260,slow=6.6,SNR=14						
RAR				LR	LR	03 42 05.9	
	comp=Z,4µm,19.3s,baz=255,slow=34						
DZM	**Mont Dzumac**	**18.50**	**261**	*e*P	**P**	**03 39 02.4**	**+0.9**
DZM	**Mont Dzumac**	**18.50**	**261**	P	**P**	**03 39 00.7**	**-0.8**
	comp=Z,0.9nm,0.3s,baz=90,slow=16,SNR=11						
DZM				LR	LR	03 43 17.7	
	comp=Z,831nm,21.8s,baz=24,slow=28						
NOUC	**Port Laguerre**	**18.63**	**261**	*e*P	**P**	**03 39 04.2**	**+1.2**
NOUC	**Port Laguerre**	**18.63**	**261**	*e*P	**P**	**03 39 04.2**	**+1.2**
URZ	**Urewera**	**19.43**	**202**	P	**P**	**03 39 11.3**	**-0.9**
	comp=Z,3.4nm,0.3s,baz=9.0,slow=6.7,SNR=17						
TBI	**Tubuai**	**22.75**	**102**	*e*S	**S**	**03 43 47.7**	**-0.5**
TBI				*e*LR	LR	03 45 29.4	
	comp=Z,2µm,21.2s,baz=277						
SNZO	**South Karori**	**22.99**	**203**	*e*P	**P**	**03 39 48.4**	**-0.1**
	comp=Z,19nm,0.7s,mb4.6						
SNZO				LR	LR		
	comp=Z,669nm,19.0s,MS4.1						
PPT	**Papeete**	**23.07**	**87**	*e*S	**S**	**03 43 51.5**	**-2.3**
PPT				*e*LR	LR	03 45 34.3	
	comp=Z,2µm,21.2s,baz=258						
PPT	**Papeete**	**23.07**	**87**	P	**P**	**03 39 46.4**	**-3.1**
	comp=Z,50nm,0.8s,mb5.0,baz=149,slow=23,SNR=4.2						
PPT				LR	LR	03 46 38.3	
	comp=Z,2µm,18.7s,MS4.7,baz=259,slow=31						
PPT	**Papeete**	**23.07**	**87**	P	**P**	**03 39 46.4**	**-3.1**
PPT				LR	LR	03 46 38.3	
RPZ	**Rata Peaks**	**26.44**	**205**	P	**P**	**03 40 21.2**	**-0.3**
	comp=Z,17nm,0.8s,mb4.6,baz=26,slow=1.9,SNR=6.6						
TAOE	**Nuku Hiva Isla**	**34.45**	**75**	*e*LR	LR	03 50 49.8	
	comp=Z,4µm,20.7s,baz=249						
RKT	**Rikitea**	**36.08**	**101**	*e*S	**S**	**03 47 21.9**	**-0.7**
RKT				*e*LR	LR	03 51 40.0	
	comp=Z,1µm,20.8s,baz=267						
CTA	**Charters Tower**	**37.42**	**263**	*e*P	**P**	**03 41 56.6**	**-1.2**
	comp=Z,6.6nm,0.8s,mb4.5						
CTA	**Charters Tower**	**37.42**	**263**	*e*P	**P**	**03 41 56.6**	**-1.2**
CTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TOO	**Toolangi**	**39.15**	**235**	*e*P	**P**	**03 42 12.3**	**+0.3**
	comp=Z,15nm,0.9s,mb4.7						
TOO	**Toolangi**	**39.15**	**235**	*e*P	**P**	**03 42 12.3**	**+0.3**
TOO				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
PMG	**Port Moresby**	**39.20**	**280**	P	**P**	**03 42 12.0**	**-0.6**
	comp=Z,38nm,0.9s,mb5.1,baz=89,slow=6.4,SNR=6.8						
PMG				LR	LR	03 56 38.2	
	comp=Z,886nm,18.9s,MS4.6,baz=338,slow=34						
PMG	**Port Moresby**	**39.20**	**280**	*e*P	**P**	**03 42 11.6**	**-1.0**
	comp=Z,47nm,1.0s,mb5.2						
PMG				*e*pP	pP	03 42 23.2	+0.3
PMG	**Port Moresby**	**39.20**	**280**	*e*P	**P**	**03 42 11.6**	**-1.0**
PMG				*e**PP	pP	03 42 23.2	+0.3
PMG				pmax	pmax		
	comp=Z,47nm,1.0s						
STKA	**Stephens Creek**	**41.38**	**245**	P	**P**	**03 42 29.3**	**-1.2**
	comp=Z,10.0nm,0.8s,mb4.5,baz=90,slow=9.9,SNR=12						
STKA				LR	LR	03 58 28.1	
	comp=Z,1µm,18.4s,MS4.8,baz=65,slow=34						
STKA	**Stephens Creek**	**41.38**	**245**	*e*P	**P**	**03 42 29.8**	**-0.7**
STKA				*e*pP	pP	03 42 42.4	+1.6
WB2	**Warramunga Arr**	**48.50**	**261**	*e*P	**P**	**03 43 25.3**	**-2.4**
WRAB	**Tennant Creek**	**48.51**	**261**	*e*P	**P**	**03 43 25.1**	**-2.6**
	comp=Z,30nm,1.1s,mb5.2						
WRAB				LR	LR		
	comp=Z,220nm,16.1s,MS4.2						
WRAB	**Tennant Creek**	**48.51**	**261**	⇑*i*P	**P**	**03 43 24.4**	**-3.3**
WRA	**Warramunga Arr**	**48.51**	**261**	P	**P**	**03 43 25.4**	**-2.3**
	comp=Z,12nm,1.0s,mb4.9,baz=96,slow=6.9,SNR=44						
WRA				PcP	PcP	03 44 53.6	-0.1
	comp=Z,5.5nm,0.9s,baz=92,slow=3.8,SNR=6.4						
KAKA	**Kakadu**	**51.92**	**270**	*e*P	**P**	**03 44 10.9**	**+17**
	comp=Z,40nm,1.3s,mb5.2						
FORT	**Forrest**	**52.94**	**246**	*e*P	**P**	**03 43 59.8**	**-1.4**
	comp=Z,25nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**56.94**	**261**	*e*P	**P**	**03 44 29.4**	**-1.1**
	comp=Z,14nm,1.2s,mb4.9						
FITZ	**Fitzroy Crossi**	**56.94**	**261**	P	**P**	**03 44 29.1**	**-1.4**
	comp=Z,9.4nm,0.8s,mb4.9,baz=107,slow=8.6,SNR=8.6						
FITZ				LR	LR	04 07 59.6	
	comp=Z,876nm,18.2s,MS4.9,baz=100,slow=35						
SBA	**Scott Base**	**58.23**	**185**	*e*P	**P**	**03 44 40.3**	**+1.6**
	comp=Z,25nm,1.2s,mb5.1						
SBA				*e*	pP	03 44 48.5	-0.9
SBA				LR	LR		
	comp=Z,719nm,19.9s,MS4.8						
SBA	**Scott Base**	**58.23**	**185**	*e*P	**P**	**03 44 40.3**	**+1.6**
SBA				*e*	pP	03 44 48.5	-1.0
SBA				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.1						
SBA				MLR	MLR		
	comp=Z,719nm,19.9s,MS4.8						
KLBR	**Kellerberrin**	**61.65**	**244**	*e*P	**P**	**03 45 02.1**	**-0.7**
	comp=Z,41nm,1.0s,mb5.5						
NWAO	**Narrogin (SRO)**	**61.92**	**243**	P	**P**	**03 45 03.9**	**-0.7**
	comp=Z,17nm,0.9s,mb5.2,baz=100,slow=2.9,SNR=5.9						
NWAO	**Narrogin (SRO)**	**61.92**	**243**	*e*P	**P**	**03 45 03.9**	**-0.7**
	comp=Z,114nm,1.8s,mb5.7						
NWAO				LR	LR		
	comp=Z,439nm,17.9s,MS4.7						
NWAO	**Narrogin (SRO)**	**61.92**	**243**	*e*P	**P**	**03 45 03.9**	**-0.7**

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NWAO                                pmax   pmax
      comp=Z,114nm,1.8s
NWAO                                MLR    MLR
      comp=Z,439nm,17.9s
MUN   Mundaring         62.90 244  eP     P      03 45 11.3 +0.1
CBIJ  Chichi jima       63.65 316   LR    LR     04 09 00.1
      comp=Z,547nm,19.6s,MS4.7,baz=122,slow=32
MJAR  Matsushiro Arr    72.57 321   P     P      03 46 10.6  -0.9
      comp=Z,10.0nm,0.8s,mb4.8,baz=160,slow=5.4,SNR=14
MJAR                                LR    LR     04 13 43.3
      comp=Z,216nm,20.1s,MS4.4,baz=140,slow=32
MAJO  Matsushiro        72.57 321  eP     P      03 46 10.5  -1.0
      comp=Z,18nm,0.9s,mb5.0
MAJO                                LR    LR
      comp=Z,282nm,18.6s,MS4.6
MAJO  Matsushiro        72.57 321  eP     P      03 46 10.5  -1.1
MAJO                                pmax   pmax
      comp=Z,17nm,0.9s,mb5.0
MAJO                                MLR    MLR
      comp=Z,282nm,18.6s,MS4.6
MAT   Matsushiro        72.57 321   P     P      03 46 11.1  -0.5
MAT   Matsushiro        72.57 321  eP     P      03 46 11.0  -0.6
      comp=Z,17nm,0.8s,mb5.0
MAT   Matsushiro        72.57 321  eP     P      03 46 11.0  -0.6
MAT                                 pmax   pmax
      comp=Z,17nm,0.8s,mb5.0
MIR   Mirnyy            72.71 205  eP     P      03 46 15.0 +3.2
MIR                                 pmax   pmax
      comp=Z,81nm,2.0s,mb5.3
ASAJ  Asahikawa         75.62 329   LR    LR     04 15 09.0
      comp=Z,353nm,19.4s,MS4.7,baz=175,slow=32
ISA   Isabella          76.52  44  eP     P      03 46 33.3  -1.1
      comp=Z,16nm,1.8s,mb4.7
ISA                                epP    pP     03 46 45.0  -0.4
ISA                                 LR    LR
      comp=Z,144nm,17.2s,MS4.3
ISA   Isabella          76.52  44  eP     P      03 46 33.3  -1.1
ISA                                e*PP   pP     03 46 45.0  -0.4
ISA                                 pmax   pmax
      comp=Z,16nm,1.8s,mb4.7
ISA                                 MLR    MLR
      comp=Z,144nm,17.2s,MS4.3
CMB   Columbia Colle    76.79  41  eP     P      03 46 34.6  -1.3
      comp=Z,4.8nm,0.8s,mb4.5
CMB                                e      pP     03 46 46.1  -0.8
CMB                                 LR    LR
      comp=Z,591nm,18.5s,MS4.9
CMB   Columbia Colle    76.79  41  eP     P      03 46 34.6  -1.3
CMB                                e      pP     03 46 46.1  -0.8
CMB                                 pmax   pmax
      comp=Z,5.0nm,0.8s,mb4.5
CMB                                 MLR    MLR
      comp=Z,591nm,18.5s,MS4.9
KSM   Kuching           77.32 276  eP     P      03 46 39.8 +0.4
DAC   Darwin (Calif)    77.46  43  eP     P      03 46 40.0 +0.3
      comp=Z,92nm,2.5s,mb5.3
DAC                                e      pP     03 46 49.1  -1.6
DAC                                 LR    LR
      comp=Z,606nm,18.1s,MS5.0
DAC   Darwin (Calif)    77.46  43  eP     P      03 46 40.0 +0.3
DAC                                e      pP     03 46 49.1  -1.6
DAC                                 pmax   pmax
      comp=Z,92nm,2.5s,mb5.3
DAC                                 MLR    MLR
      comp=Z,606nm,18.1s,MS5.0
MTUM  Tungsten Hills    77.50  42  eP     P      03 46 39.5  -0.4
MTUM                               e      pP     03 46 47.7  -3.2
YSS   Yuzh-Sakhalins    77.67 331  eP     P      03 46 40.7 +0.1
      comp=Z,14nm,0.6s,mb5.1
YSS                                e      pP     03 46 49.1  -2.6
YSS                                 LR    LR
      comp=Z,426nm,22.0s,MS4.7
YSS   Yuzh-Sakhalins    77.67 331⇑iP     P      03 46 40.8 +0.2
YSS                                e      pP     03 46 49.0  -2.6
YSS                                 pmax   pmax
      comp=Z,30nm,1.0s,mb5.2
YSS                                 MLR    MLR
      comp=Z,500nm,16.0s,MS4.9
YBH   Yreka Blue Hor    77.83  37  eP     P      03 46 40.9  -0.7
YBH                                 LR    LR
      comp=Z,614nm,21.1s,MS4.9
NVAR  Mina Array Bea    78.32  41   P     P      03 46 43.9  -0.5
      comp=Z,11nm,0.9s,mb4.8,baz=214,slow=7.3,SNR=40
NVAR                                LR    LR     04 16 46.4
      comp=Z,721nm,18.1s,MS5.0,baz=250,slow=32
LDFC  Landfair          78.39  46  eP     P      03 46 44.5  -0.3
MNV   Mina              78.41  41  eP     P      03 46 43.9  -1.0
      comp=Z,17nm,1.0s,mb4.9
MNV                                e      pP     03 46 53.7  -2.2
MNV                                 LR    LR
      comp=Z,630nm,18.3s,MS5.0
MNV   Mina              78.41  41  eP     P      03 46 43.9  -1.0
MNV                                e      pP     03 46 53.7  -2.2
MNV                                 pmax   pmax
      comp=Z,17nm,1.0s,mb4.9
MNV                                 MLR    MLR
      comp=Z,630nm,18.3s,MS5.0
TPNV  Topopah Spring    78.73  44  eP     P      03 46 46.2  -0.4
      comp=Z,8.4nm,0.9s,mb4.7
TPNV                                LR    LR
      comp=Z,904nm,20.1s,MS5.1
TPNV  Topopah Spring    78.73  44  eP     P      03 46 46.2  -0.4
TPNV                                pmax   pmax
      comp=Z,8.0nm,0.9s,mb4.7
TPNV                                MLR    MLR
      comp=Z,904nm,20.1s,MS5.1
TPH   Tonopah           78.78  42  eP     P      03 46 46.5  -0.4
      comp=Z,16nm,1.0s,mb4.9
TPH                                e             03 46 54.0
TPH                                 LR    LR
      comp=Z,460nm,19.0s,MS4.8
TPH   Tonopah           78.78  42  eP     P      03 46 46.5  -0.4
TPH                                e             03 46 54.0
TPH                                 pmax   pmax
      comp=Z,16nm,1.0s,mb4.9
TPH                                 MLR    MLR
      comp=Z,460nm,19.0s,MS4.8
NEN   Nelson            78.90  45  eP     P      03 46 46.4  -1.2
NEN                                e             03 46 53.0
KDAK  Kodiak Island     79.91  11   LR    LR     04 17 31.7
      comp=Z,825nm,18.4s,MS5.1,baz=9.5,slow=32
WVOR  Wild Horse Val    80.60  38  eP     P      03 46 56.1  -0.5
      comp=Z,14nm,1.2s,mb4.8
WVOR                               e             03 47 03.4
WVOR                                LR    LR
      comp=Z,813nm,21.5s,MS5.0
WVOR  Wild Horse Val    80.60  38  eP     P      03 46 56.1  -0.5
WVOR                               e             03 47 03.4
WVOR                                pmax   pmax
      comp=Z,14nm,1.2s,mb4.8
WVOR                                MLR    MLR
      comp=Z,813nm,21.5s,MS5.0
SSE   Sheshan           80.72 308  eP     P      03 46 55.6  -1.9
SSE                                 AP    pP     03 47 04.9  -3.6
SSE                                 S     S      03 57 02.4 +1.3
SSE                                 XS           03 57 19.4
SSE                                 AMB   AMB
      comp=Z,30nm,0.8s,mb5.3
SSE                                 AMB   AMB
      comp=Z,200nm,4.4s
SSE                                 LR    LR
      comp=N,80nm,44.3s,MS4.1
SSE                                 LR    LR
      comp=E,180nm,44.3s,MS4.1
SSE                                 LR    LR
      comp=Z,210nm,35.5s
SSE   Sheshan           80.72 308  eP     P      03 46 55.6  -1.9
      comp=Z,34nm,0.8s,mb5.3
SSE                                 pP    pP     03 47 04.9  -3.6
SSE                                 S     S      03 57 02.4 +1.3
SSE                                 sS           03 57 19.4
SSE                                 SS    SS     04 02 28.9  +11
SSE                                 LR    LR
      comp=Z,220nm,35.5s,MS4.3
ELK   Elko              81.60  41  eP     P      03 47 01.3  -0.6
      comp=Z,6.3nm,0.9s,mb4.5
ELK                                 LR    LR
      comp=Z,668nm,19.9s,MS5.0
ELK   Elko              81.60  41  eP     P      03 47 01.3  -0.6
ELK                                 pmax   pmax
      comp=Z,6.0nm,0.9s
ELK                                 MLR    MLR
      comp=Z,668nm,19.9s
USHA  Ushuaia           81.98 146   LR    LR     04 16 39.5
      comp=Z,249nm,18.9s,MS4.6,baz=217,slow=31
MSU   Marysvale         82.27  44  eP     P      03 47 05.2  -0.2
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MSU                                epP    pP     03 47 16.6 +0.1
MDJ   Mudanjiang        82.79 323   P     P      03 47 08.5 +0.6
MDJ                                 AP    pP     03 47 21.5 +2.5
MDJ                                 PP    PP     03 50 19.1  -1.0
MDJ                                 S     S      03 57 24.0 +2.0
MDJ                                 AMB   AMB
      comp=Z,10.0nm,1.2s,mb4.7
MDJ                                 AMB   AMB
      comp=Z,110nm,4.6s
MDJ                                 LR    LR
      comp=N,310nm,18.6s,MS4.8
MDJ                                 LR    LR
      comp=E,270nm,21.2s,MS4.8
MDJ                                 LR    LR
      comp=Z,600nm,21.9s,MS4.9
MDJ   Mudanjiang        82.79 323  eP     P      03 47 08.4 +0.5
MDJ                                e      pP     03 47 21.6 +2.6
MDJ                                 LR    LR
      comp=Z,485nm,22.0s,MS4.8
NJ2   Nanjing           82.92 308  eP     P      03 47 09.5 +0.7
NJ2                                 AP    pP     03 47 19.0  -0.9
NJ2                                 XP    sP     03 47 22.3  -1.5
NJ2                                 PP    PP     03 50 21.0  -0.4
NJ2                                 S     S      03 57 24.0 +0.4
NJ2                                 XS           03 57 40.0
NJ2                                 AMB   AMB
      comp=Z,10.0nm,1.0s,mb4.8
NJ2                                 AMB   AMB
      comp=Z,120nm,10.2s
NJ2                                 LR    LR
      comp=N,920nm,28.0s,MS5.1
NJ2                                 LR    LR
      comp=E,650nm,24.4s,MS5.1
NJ2                                 LR    LR
      comp=Z,290nm,29.7s
MAW   Mawson            82.93 199   P     P      03 47 08.5 +0.4
      comp=Z,7.0nm,1.0s,mb4.7,baz=125,slow=7.4,SNR=5.9
MAW                                 LR    LR     04 23 44.6
      comp=Z,838nm,18.4s,MS5.1,baz=89,slow=35
MAW   Mawson            82.93 199  eP     P      03 47 09.7 +1.5
      comp=Z,21nm,1.3s,mb5.0
MAW                                epP    pP     03 47 19.9 +0.7
MAW                                 LR    LR
      comp=Z,889nm,21.0s,MS5.1
MAW   Mawson            82.93 199  eP     P      03 47 09.7 +1.6
MAW                                e*PP   pP     03 47 19.9 +0.7
MAW                                 pmax   pmax
      comp=Z,21nm,1.3s
MAW                                 MLR    MLR
      comp=Z,889nm,21.0s
MNTX  Cornudas Mount    83.53  53  eP     P      03 47 11.7  -0.3
      comp=Z,9.2nm,1.1s,mb4.8
MNTX                               epP    pP     03 47 22.4  -0.7
MNTX                                LR    LR
      comp=Z,471nm,19.4s,MS4.9
SRU   San Rafael        83.68  44  eP     P      03 47 12.6   0.0
      comp=Z,30nm,1.1s,mb5.3
SRU                                epP    pP     03 47 24.4 +0.7
SRU   San Rafael        83.68  44  eP     P      03 47 12.6   0.0
SRU                                e*PP   pP     03 47 24.4 +0.7
SRU                                 pmax   pmax
      comp=Z,30nm,1.1s,mb5.3
HVU   Hansel Valley     83.71  41  eP     P      03 47 12.8 +0.1
      comp=Z,7.0nm,0.8s,mb4.8
HVU                                epP    pP     03 47 23.5  -0.4
HVU   Hansel Valley     83.71  41  eP     P      03 47 12.8 +0.1
HVU                                e*PP   pP     03 47 23.5  -0.3
HVU                                 pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.8
TXAR  Lajitas Array     83.73  56   P     P      03 47 12.7  -0.4
      comp=Z,3.5nm,0.9s,mb4.5,baz=215,slow=6.2,SNR=30
TXAR                                LR    LR     04 17 41.1
      comp=Z,524nm,19.5s,MS4.9,baz=320,slow=31
HLID  Hailey            83.75  39  eP     P      03 47 12.9 +0.1
      comp=Z,8.7nm,0.8s,mb4.9
HLID                               epP    pP     03 47 23.5  -0.4
LPM   Los Pinos Moun    83.88  50  eP     P      03 47 14.6 +0.8
LPM                                epP    pP     03 47 25.3 +0.4
PMR   Palmer            84.10  12  eP     P      03 47 18.1 +3.9
      comp=Z,7.9nm,0.6s,mb5.0
PMR                                 LR    LR
      comp=Z,373nm,23.1s,MS4.7
PMR   Palmer            84.10  12  eP     P      03 47 18.1 +3.9
PMR                                 pmax   pmax
      comp=Z,8.0nm,0.6s,mb5.0
PMR                                 MLR    MLR
      comp=Z,373nm,23.1s,MS4.7
TCUT  Toone Canyon      84.20  42  eP     P      03 47 15.4 +0.2
ANMO  Albuquerque       84.32  50  eP     P      03 47 16.8 +0.9
      comp=Z,17nm,1.2s,mb5.0
ANMO                               epP    pP     03 47 27.7 +0.7
ANMO                                LR    LR
      comp=Z,436nm,19.7s,MS4.8
ANMO  Albuquerque       84.32  50  eP     P      03 47 16.8 +0.9
ANMO                               e*PP   pP     03 47 27.7 +0.6
ANMO                                pmax   pmax
      comp=Z,17nm,1.2s
ANMO                                MLR    MLR
      comp=Z,436nm,19.7s
HWUT  Hardware Ranch    84.37  42  eP     P      03 47 15.1  -0.9
      comp=Z,4.1nm,0.8s,mb4.6
HWUT                                LR    LR
      comp=Z,884nm,19.9s,MS5.2
GDL2  Guadalupe Moun    84.53  53  eP     P      03 47 17.3 +0.3
GDL2                               epP    pP     03 47 29.3 +1.1
CN2   Changchun         84.71 321  eP     P      03 47 18.1 +0.5
CN2                                eAP    pP     03 47 33.0 +4.2
CN2                                eS     S      03 57 41.0  -0.2
CN2                                 AMB   AMB
      comp=Z,10.0nm,1.1s,mb4.9
CN2                                 AMB   AMB
      comp=Z,300nm,4.0s
CN2                                 LR    LR
      comp=N,240nm,18.0s,MS4.9
CN2                                 LR    LR
      comp=E,350nm,18.0s,MS4.9
CN2                                 LR    LR
      comp=Z,300nm,19.0s,MS4.7
AHID  Auburn Hatcher    85.30  41  eP     P      03 47 20.8 +0.2
      comp=Z,13nm,0.8s,mb5.1
AHID                               epP    pP     03 47 32.2 +0.5
AHID                                LR    LR
      comp=Z,653nm,19.2s,MS5.0
MCMT  McKenzie Canyo    85.40  39  eP     P      03 47 20.7  -0.3
MCMT                               epP    pP     03 47 32.7 +0.6
REDW  Red Top Meadow    85.77  41  eP     P      03 47 22.4  -0.5
      comp=Z,11nm,1.1s,mb5.0
REDW                               epP    pP     03 47 34.5 +0.4
TPAW  Teton Pass        85.78  40  eP     P      03 47 23.3 +0.3
      comp=Z,8.9nm,1.0s,mb5.0
TPAW                               epP    pP     03 47 34.3 +0.2
DLMT  Dillon            85.85  38  eP     P      03 47 23.8 +0.6
      comp=Z,11nm,1.0s,mb5.0
DLMT                               epP    pP     03 47 33.9  -0.4
IMW   Indian Meadow     86.01  40  eP     P      03 47 23.7  -0.3
      comp=Z,25nm,1.5s,mb5.2
IMW                                epP    pP     03 47 35.9 +0.7
LOHW  Long Hollow       86.06  41  eP     P      03 47 25.3 +1.0
      comp=Z,4.9nm,1.0s,mb4.7
QLMT  Earthquake Lak    86.23  39  eP     P      03 47 26.0 +0.9
QLMT                               epP    pP     03 47 36.3   0.0
PDAR  Pinedale Array    86.25  42   P     P      03 47 24.6  -0.7
      comp=Z,2.7nm,0.9s,mb4.5,baz=218,slow=2.3,SNR=17
PDAR                                LR    LR     04 21 51.8
      comp=Z,453nm,18.2s,MS4.9,baz=266,slow=33
CHMT  Chamberlain Mo    86.36  37  eP     P      03 47 25.9 +0.2
CHMT                               epP    pP     03 47 37.3 +0.4
SDCO  Great Sand Dun    86.36  48  eP     P      03 47 27.4 +1.5
      comp=Z,22nm,1.8s,mb5.1
SDCO                               epP    pP     03 47 36.5  -0.6
SDCO                                LR    LR
      comp=Z,325nm,19.0s,MS4.8
PLCA  Paso Flores       86.42 132   P     P      03 47 27.2 +1.0
      comp=Z,2.3nm,0.9s,mb4.4,baz=266,slow=6.1,SNR=3.6
PLCA                                LR    LR     04 20 35.4
      comp=Z,679nm,18.1s,MS5.1,baz=195,slow=32
PLCA  Paso Flores       86.42 132   P     P      03 47 27.2 +1.0
PLCA                                LR    LR     04 20 35.4
DLBC  Dease Lake        86.50  21   LR    LR     04 19 57.0
      comp=Z,373nm,18.0s,MS4.8,baz=282,slow=31
BOZ   Bozeman (W)       86.57  38  eP     P      03 47 26.8 +0.1
      comp=Z,7.3nm,0.9s,mb4.9
BOZ                                epP    pP     03 47 37.9   0.0
BOZ                                 LR    LR
      comp=Z,368nm,18.5s,MS4.8
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BOZ   Bozeman (W)       86.57  38  eP     P      03 47 26.8 +0.1
BOZ                                e*PP   pP     03 47 37.9   0.0
BOZ                                 pmax   pmax
      comp=Z,7.0nm,0.9s,mb4.9
BOZ                                 MLR    MLR
      comp=Z,368nm,18.5s,MS4.8
SEY   Seymchan          87.26 345⇑eP     P      03 47 30.5 +0.8
COLA  College           87.35  11  eP     P      03 47 29.3  -0.8
      comp=Z,14nm,0.8s,mb5.3
COLA                               epP    pP     03 47 41.1  -0.2
COLA                                LR    LR
      comp=Z,677nm,20.4s,MS5.0
COLA  College           87.35  11  eP     P      03 47 29.3  -0.8
COLA                               e*PP   pP     03 47 41.1  -0.2
COLA                                pmax   pmax
      comp=Z,14nm,0.8s,mb5.2
COLA                                MLR    MLR
      comp=Z,677nm,20.4s,MS5.0
ILAR  Eielson Array     87.43  11   P     P      03 47 29.9  -0.6
      comp=Z,2.7nm,0.8s,mb4.5,baz=212,slow=5.7,SNR=14
SYO   Syowa Base        87.61 191 ⇑P     P      03 47 31.2  -0.1
SYO   Syowa Base        87.61 191⇑eP     P      03 47 31.2  -0.1
VNA3  Neumayer Olymp    87.90 175⇓iP     P      03 47 34.4 +1.8
VNA3  Neumayer Olymp    87.90 175  e      P      03 47 38.4 +5.8
VNA3  Neumayer Olymp    87.90 175  e      P      03 47 43.4  +11
VNA3  Neumayer Olymp    87.90 175  e      P      03 47 46.9  +14
SNAA  Sanae             87.92 177⇑iP     P      03 47 32.2  -0.5
SNAA  Sanae             87.92 177  e      P      03 47 35.4 +2.7
SNAA  Sanae             87.92 177  e      P      03 47 44.8  +12
SNAA  Sanae             87.92 177  e      P      03 47 49.2  +17
DAWY  Dawson            88.37  14  eP     P      03 47 35.2 +0.2
DAWY                               epP    pP     03 47 45.3  -0.9
VNA2  Neumayer--Watz    88.39 176⇓iP     P      03 47 35.5 +0.6
VNA2  Neumayer--Watz    88.39 176  e      P      03 47 38.4 +3.5
VNA2  Neumayer--Watz    88.39 176  e      P      03 47 44.5  +10
VNA2  Neumayer--Watz    88.39 176  e      P      03 47 47.6  +13
VNA1  Neumayer--Stat    88.59 175   P     P      03 47 37.0 +1.1
VNA1  Neumayer--Stat    88.59 175  e      P      03 47 50.1  +14
BILL  Bilibino          89.43 353  i P    P      03 47 41.5 +1.6
BILL                                pmax   pmax
      comp=Z,24nm,2.5s,mb5.1
BILL                                MLR    MLR
      comp=Z,400nm,19.0s,MS4.9
EDM   Edmonton          89.95  32  eP     P      03 47 43.8 +1.0
GYA   Guiyang           90.07 298   P     P      03 47 47.3 +3.3
GYA                                 AMB   AMB
      comp=Z,10.0nm,1.2s,mb5.0
RSSD  Black Hills       90.41  43  eP     P      03 47 44.8  -0.3
      comp=Z,2.7nm,0.7s,mb4.7
RSSD                               epP    pP     03 47 56.2  -0.2
RSSD                                LR    LR
      comp=Z,515nm,17.2s,MS5.0
RSSD  Black Hills       90.41  43  eP     P      03 47 44.8  -0.3
RSSD                               e*PP   pP     03 47 56.2  -0.2
RSSD                                pmax   pmax
      comp=Z,3.0nm,0.7s,mb4.7
RSSD                                MLR    MLR
      comp=Z,515nm,17.2s,MS5.0
XAN   Xi’an             91.26 306   P     P      03 47 51.4 +2.0
XAN                                 AP    pP     03 48 02.3 +1.7
XAN                                 AMB   AMB
      comp=Z,10.0nm,1.2s,mb5.0
HHC   Hu-ho-hao-te      92.17 313  eP     P      03 47 55.3 +2.0
HHC                                 AP    pP     03 48 08.4 +3.8
HHC                                 SKS   SKS    03 58 23.9 +2.0
HHC                                 AMB   AMB
      comp=Z,10.0nm,1.2s,mb5.0
HHC                                 AMB   AMB
      comp=Z,110nm,7.2s
HHC                                 LR    LR
      comp=Z,140nm,12.0s,MS4.6
JTS   JuntasAbangare    92.46  80  i P    P      03 47 55.9 +0.6
KMI   Kunming           92.86 296   P     P      03 47 59.0 +2.1
KMI                                 AP    pP     03 48 14.5 +6.3
KMI                                 PP    PP     03 51 39.9  -2.2
KMI                                 S     S      03 58 56.6  -0.3
KMI                                 XS           03 59 21.3
KMI                                 SS    SS     04 05 14.9   0.0
KMI                                 AMB   AMB
      comp=Z,10.0nm,1.3s,mb5.1
KMI                                 AMB   AMB
      comp=Z,130nm,3.1s
KMI                                 LR    LR
      comp=N,280nm,21.1s,MS5.0
KMI                                 LR    LR
      comp=E,470nm,20.1s,MS5.0
KMI                                 LR    LR
      comp=Z,540nm,22.1s,MS5.0
KMI   Kunming           92.86 296   P     P      03 47 59.0 +2.1
      comp=Z,14nm,1.3s,mb5.2
KMI                                 pP    pP     03 48 14.5 +6.3
KMI                                 sP    sP     03 48 20.1 +8.3
KMI                                 PP    PP     03 51 39.9  -2.2
KMI                                 S     S      03 58 56.6  -0.3
KMI                                 sS           03 59 21.3
KMI                                 SS    SS     04 05 14.9   0.0
KMI                                 LR    LR
      comp=Z,540nm,22.1s,MS5.0
KMI   Kunming           92.86 296   P     P      03 47 59.0 +2.1
KMI                                 *PP   pP     03 48 14.5 +6.3
KMI                                              03 51 39.9
KMI                                 S     S      03 58 56.6  -0.3
KMI                                 SS    SS     04 05 14.9   0.0
KMI                                 pmax   pmax
      comp=Z,14nm,1.3s,mb5.2
KMI                                 MLR    MLR
      comp=Z,540nm,22.1s,MS5.0
INK   Inuvik            93.22  14   LR    LR     04 26 00.6
      comp=Z,504nm,19.4s,MS5.0,baz=196,slow=33
LZH   Lanzhou           95.89 306  eP     P      03 48 12.6 +2.2
LZH                                 AP    pP     03 48 27.1 +5.4
LZH                                eSKS   SKS    03 58 44.0 +1.5
LZH                                eS     S      03 59 24.3 +1.7
LZH                                 XS           03 59 48.0
LZH                                eSS    SS     04 05 59.8 +2.5
LZH                                 AMB   AMB
      comp=Z,10.0nm,1.0s,mb5.2
LZH                                 AMB   AMB
      comp=Z,80nm,5.8s
LZH                                 LR    LR
      comp=E,530nm,15.9s
LZH                                 LR    LR
      comp=Z,600nm,17.6s,MS5.1
LZH   Lanzhou           95.89 306  eP     P      03 48 12.6 +2.2
      comp=Z,13nm,1.0s,mb5.3
LZH                                 pP    pP     03 48 27.1 +5.4
LZH                                 sP    sP     03 48 32.8 +7.5
LZH                                eSKS   SKS    03 58 44.0 +1.5
LZH                                eS     S      03 59 24.3 +1.7
LZH                                 sS           03 59 48.0
LZH                                eSS    SS     04 05 59.8 +2.5
LZH                                 LR    LR
      comp=Z,610nm,17.6s,MS5.1
LZH   Lanzhou           95.89 306  eP     P      03 48 12.6 +2.2
LZH                                 *PP   pP     03 48 27.1 +5.4
LZH                                e             03 58 44.0
LZH                                eS     S      03 59 24.3 +1.7
LZH                                eSS    SS     04 05 59.8 +2.5
LZH                                 pmax   pmax
      comp=Z,13nm,1.0s,mb5.3
LZH                                 MLR    MLR
      comp=Z,610nm,17.6s,MS5.1
ULM   Lac du Bonnet     98.05  39   LR    LR     04 31 23.4
      comp=Z,507nm,18.0s,MS5.0,baz=300,slow=35
SONM  Songino Array     98.32 318   P     P      03 48 21.6 +0.4
      comp=Z,0.4nm,0.9s,mb4.0,baz=27,slow=3.2,SNR=3.2
SONM                                LR    LR     04 33 14.0
      comp=Z,206nm,18.3s,MS4.7,baz=359,slow=36
LPAZ  La Paz            98.42 111   P     P      03 48 24.9 +2.6
      comp=Z,0.4nm,0.6s,mb4.1,baz=259,slow=5.2,SNR=3.3
LPAZ                                LR    LR     04 24 02.6
      comp=Z,352nm,19.5s,MS4.9,baz=308,slow=30
TIXI  Tiksi             99.73 344  eP     P      03 48 28.8 +1.8
TIXI                                pmax   pmax
      comp=Z,3.0nm,1.5s,mb4.5
TIXI                                MLR    MLR
      comp=Z,261nm,19.0s,MS4.8
WMQ   Urumqi           109.88 310  ePKP          03 53 15.0
WMQ                                 XPKP         03 53 30.0
WMQ                                ePP    PP     03 53 54.0 +3.0
WMQ                                 PKS   PKS    03 56 50.0 +0.8
WMQ                                 PP    PP
      comp=Z,140nm,4.5s
WMQ                                 LR    LR
```

	comp=N,200nm,17.9s,MS5.0						
WMQ				LR	LR		
	comp=E,310nm,21.6s,MS5.0						
WMQ				LR	LR		
	comp=Z,400nm,20.4s,MS5.0						
MKAR	**Makanchi Array**	**114.03**	**313**	PKiKP		03 53 21.8	
	comp=Z,1.3nm,1.0s,SNR=5.5						
KURK	**Kurchatov**	**116.62**	**317**	⇑*i*PKIKP	PKPdf	03 53 26.3	-0.1
BVAR	**Borovoye Array**	**121.56**	**320**	PKP	PKPdf	03 53 36.6	+0.7
	comp=Z,1.8nm,0.7s,baz=90,slow=3.0,SNR=6.4						
ARU	**Arti**	**127.36**	**326**	*i* PKIKP	PKPdf	03 53 45.6	-1.4
ARU				*e*		03 55 45.7	
ARU				*e*		04 00 48.4	
ARU				*e*SS	SS	04 12 56.4	+0.8
ARU				MLR	MLR		
	comp=N,200nm,18.0s,MS5.1						
ARU				MLR	MLR		
	comp=Z,500nm,18.0s,MS5.2						
ARU				MLR	MLR		
	comp=E,300nm,19.0s,MS5.1						
OBN	**Obninsk**	**138.51**	**334**	*e*PKIKP	PKPdf	03 54 11.5	+3.6
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV	**Kislovodsk**	**141.69**	**316**	*i* PKIKP	PKPdf	03 54 24.9	+11
KIV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KMBO	**Kilima Mbogo**	**142.80**	**239**	PKP	PKPdf	03 54 16.1	-0.6
	comp=Z,2.5nm,0.9s,baz=79,slow=4.6,SNR=6.3						
HAKT	**HAKKARI**	**143.32**	**306**	*i* P	PKPbc	03 54 14.6	-0.6
BHD	**Baghdad**	**143.82**	**299**	*e*x	x	03 54 17.0	
MSL	**Mosul**	**144.16**	**304**	*e*x	x	03 54 20.0	
BNGL	**BINGOL**	**144.76**	**309**	*i* P	PKPbc	03 54 20.2	+0.9
AKASG	**Malin Array Be**	**144.77**	**334**	PKP	PKPdf	03 54 18.8	-0.2
	comp=Z,18nm,0.8s,baz=39,slow=4.3,SNR=37						
MACK	**Trabzon**	**144.95**	**313**	*i* P	PKPdf	03 54 23.0	+3.4
BEST	**Besiri**	**145.05**	**308**	*i* P	PKPdf	03 54 21.9	+2.1
MARD	**Mardin**	**145.61**	**307**	*i* P	PKPdf	03 54 21.9	+1.0
KELT	**Kelkit**	**145.64**	**312**	*i* P	PKPdf	03 54 25.1	+4.2
SIM	**Simferopol’**	**146.40**	**323**	*i* PKP2	PKPab	03 54 25.4	-0.8
SIM				pmax	pmax		
	comp=Z,17nm,0.9s						
ELZG	**Elazig**	**146.50**	**310**	*i* P	PKPdf	03 54 25.8	+3.4
BOYT	**Boyabat**	**147.94**	**317**	*i* P	PKPdf	03 54 28.0	+3.4
GZT	**Gaziantep**	**147.98**	**309**	*i* P	PKPdf	03 54 29.0	+4.2
KWP	**Kalwaria**	**148.04**	**340**	*e*PKP	PKPdf	03 54 33.8	+9.3
KAHT	**Ahir Dag**	**148.38**	**309**	*i* P	PKPdf	03 54 34.7	+9.3
OJC	**Ojcow**	**148.39**	**343**	*e*PKP	PKPdf	03 54 32.1	+7.1
CTKT	**Corum**	**148.43**	**316**	*i* P	PKPdf	03 54 30.6	+5.2
KSP	**Ksiaz**	**148.63**	**348**	*e*PKP	PKPab	03 54 35.9	+1.0
KSP	**Ksiaz**	**148.63**	**348**	*e*PKP	PKPdf	03 54 31.5	+6.1
STHS	**Stebnicka Huta**	**148.69**	**341**	*e*PKP	PKPdf	03 54 31.6	+6.1
STHS				*e*		03 54 38.3	
CLL	**Collm**	**148.73**	**352**	*i* PKP1	PKPdf	03 54 30.9	+5.4
CLL				*i* *PPKP		03 54 42.7	
CLL				*i*		03 54 54.1	
CLL	**Collm**	**148.73**	**352**	*i* PKP2	PKPdf	03 54 30.9	+5.4
CLL				pmax	pmax		
	comp=Z,15nm,1.1s						
KOLS	**Kolonicke sedl**	**148.79**	**339**	*e*PKP	PKPdf	03 54 31.8	+6.1
BURAR	**Bucovina Array**	**148.82**	**335**	⇑P	PKPdf	03 54 33.4	+7.6
UPC	**Upice**	**149.01**	**348**	*e*PKPab	PKPab	03 54 35.1	-1.3
UPC				*e*pPKP		03 54 43.8	
BRG	**Berggiesshubel**	**149.02**	**350**	PKP	PKPdf	03 54 28.9	+2.9
BRG				*i*		03 54 35.2	
BRG				*e*		03 54 43.6	
CRVS	**Cervenica-Dubn**	**149.08**	**340**	*e*PKP	PKPdf	03 54 34.0	+7.8
DPC	**Dobruska-Polom**	**149.09**	**347**	*e*PKPbc	PKPdf	03 54 33.1	+7.0
OKC	**Ostrava-Krasne**	**149.16**	**345**	*e*PKPbc	PKPdf	03 54 33.8	+7.5
PVCC	**Panska Ves**	**149.25**	**350**	*e*PKPbc	PKPdf	03 54 33.0	+6.6
PVCC				*e*pPKP		03 54 44.6	
AVNT	**Avonos**	**149.30**	**313**	*i* P	PKPdf	03 54 31.7	+4.9
MORC	**Moravsky Berou**	**149.37**	**346**	*e*PKPbc	PKPdf	03 54 32.9	+6.3
MORC				*e*PKPab	PKPab	03 54 36.4	-1.6
ELDT	**Eldivan**	**149.38**	**317**	*i* P	PKPdf	03 54 32.2	+5.3
MOX	**Moxa**	**149.56**	**353**	*e*P	PKPdf	03 54 36.0	+9.1
BR131	**Keskin Array S**	**149.65**	**315**	*e*PKPbc	PKPdf	03 54 32.6	+5.3
BRTR	**Keskin Array B**	**149.65**	**315**	PKPbc	PKPdf	03 54 32.8	+5.4
	comp=Z,3.1nm,0.9s,baz=139,slow=3.8,SNR=9.9						
KECS	**Kecovo**	**149.75**	**341**	*e*PKP	PKPdf	03 54 33.6	+6.3
PRU	**Pruhonice**	**149.78**	**349**	*e*PKPbc	PKPdf	03 54 33.5	+6.2
NKC	**Novy Kostel**	**149.86**	**352**	*e*PKPbc	PKPdf	03 54 33.9	+6.5
ANTO	**Ankara**	**150.12**	**316**	*e*PKPdf	PKPdf	03 54 29.0	+0.9
ANTO				*e*PKPbc	PKPdf	03 54 35.2	+7.1
ANTO				*e*PKPab	PKPab	03 54 38.7	-2.7
MLR	**Muntele Rosu**	**150.19**	**331**	PKPbc	PKPdf	03 54 33.5	+5.5
	comp=Z,13nm,1.0s,baz=339,slow=4.6,SNR=10						
MLR	**Muntele Rosu**	**150.19**	**331**	⇓P	PKPdf	03 54 34.7	+6.7
VYHS	**Vyhne**	**150.22**	**343**	*e*PKP	PKPdf	03 54 35.0	+7.0
VYHS				*e*		03 54 47.2	
TREC	**Trest**	**150.27**	**348**	*e*PKPbc	PKPdf	03 54 34.0	+6.0
TREC				*e*pPKP		03 54 46.7	
GIVF	**Givet**	**150.38**	**2**	*e*PKIKP	PKPdf	03 54 34.0	+5.8
BAIF	**Baives**	**150.40**	**3**	*e*PKIKP	PKPdf	03 54 34.3	+6.1
	comp=Z,70nm,1.4s						
PSZ	**Piszkesteto**	**150.43**	**341**	*e*PKPbc	PKPdf	03 54 36.4	+8.1
SNX	**Sinaia**	**150.49**	**332**	⇓P	PKPdf	03 54 35.6	+7.1
VOIR		**150.62**	**332**	⇓P	PKPdf	03 54 37.5	+8.8
KHC	**Kasperske Hory**	**150.77**	**350**	*e*PKPbc	PKPdf	03 54 36.4	+7.6
KHC				*e*PKPab	PKPab	03 54 46.3	+2.5
ZST	**Bratislava**	**150.94**	**345**	*e*PKP	PKPdf	03 54 40.6	+12
GERES	**GERESS Array B**	**151.03**	**350**	PKPbc	PKPdf	03 54 36.8	+7.6
	comp=Z,2.8nm,0.9s,slow=1.3,SNR=9.0						
ROSF	**Rostrenen**	**151.13**	**13**	*e*PKIKP	PKPdf	03 54 35.4	+6.0
FLN	**La Foliniere**	**151.23**	**9**	*e*PKIKP	PKPdf	03 54 35.6	+6.1
	comp=Z,56nm,1.1s						
FLN				*e*R			
	comp=Z,299nm,20.8s						
KDHN	**Kadinhani**	**151.28**	**314**	*i* P	PKPdf	03 54 35.1	+5.2
SGMF	**Saint Gilles**	**151.36**	**12**	*e*PKIKP	PKPdf	03 54 35.5	+5.8
	comp=Z,38nm,1.1s						
LDF	**La Druitiere**	**151.45**	**9**	*e*PKIKP	PKPdf	03 54 36.2	+6.4
	comp=Z,37nm,1.1s						
GRR	**Gorron**	**151.54**	**10**	*e*PKIKP	PKPdf	03 54 36.5	+6.5
	comp=Z,14nm,0.6s						
QUIF	**Quistinic**	**151.56**	**13**	*e*PKIKP	PKPdf	03 54 36.1	+6.1
ESKT	**Eskisehir**	**151.56**	**317**	*i* P	PKPdf	03 54 37.1	+6.8
CDF	**Champ du Feu**	**152.08**	**358**	*e*PKIKP	PKPdf	03 54 37.2	+6.4
	comp=Z,4.1nm,0.8s						
ARSA	**Arzberg**	**152.20**	**346**	⇓*i*P	PKPdf	03 54 42.0	+11
	comp=Z,3.9nm,1.2s						
HAU	**Haudompre**	**152.50**	**360**	*e*PKIKP	PKPdf	03 54 37.6	+6.2
HAU				*e*R			
	comp=Z,298nm,20.5s						
HINF	**Hinteralfeld**	**152.68**	**359**	*e*PKIKP	PKPdf	03 54 37.9	+6.3
KBA	**Koelnbreinsper**	**152.80**	**349**	⇑*i*P	PKPab	03 54 50.2	-2.2
	comp=Z,4.0nm,0.9s						
WTTA	**Wattenberg**	**152.88**	**352**	⇑*i*P	PKPdf	03 54 42.4	+10
	comp=Z,9.8nm,1.1s						
LOR	**Lormes**	**153.17**	**4**	*e*PKIKP	PKPdf	03 54 38.4	+6.1
	comp=Z,54nm,1.7s						
LOR				*e*R			
	comp=Z,495nm,19.5s						
SSF	**Saint Saulge**	**153.35**	**4**	*e*PKIKP	PKPdf	03 54 38.6	+6.0
MFF	**Saint Martin d**	**153.39**	**10**	*e*PKIKP	PKPdf	03 54 38.9	+6.2
AVF	**Avril sur Loir**	**153.61**	**4**	*e*PKIKP	PKPdf	03 54 39.5	+6.5
	comp=Z,57nm,1.6s						
DIVS	**Divcibare**	**153.76**	**337**	*e*PKP	PKPdf	03 54 43.4	+10
CABF	**La Chapelle**	**153.89**	**0**	*e*PKIKP	PKPdf	03 54 39.9	+6.5
TCF	**Toulx Ste Croi**	**154.01**	**6**	*e*PKIKP	PKPdf	03 54 39.7	+6.2
LPL	**La Plagne**	**154.99**	**359**	*e*PKIKP	PKPdf	03 54 40.1	+5.3
	comp=Z,23nm,1.2s						
LPG	**La Plagne**	**155.00**	**359**	*e*PKIKP	PKPdf	03 54 40.1	+5.2
LFF	**La Frestale**	**155.15**	**9**	*e*PKIKP	PKPdf	03 54 41.4	+6.3
CAF	**Calviac**	**155.34**	**7**	*e*PKIKP	PKPdf	03 54 41.1	+5.8
	comp=Z,71nm,1.6s						
LASF	**Ste Croix**	**156.35**	**4**	*e*PKIKP	PKPdf	03 54 42.2	+5.5
	comp=Z,191nm,1.5s						
LIC	**Lamto**	**162.15**	**141**	*e*PKIKP	PKPdf	03 54 46.2	+2.0
	comp=Z,40nm,1.3s						
LIC				*e*R			
	comp=Z,504nm,20.0s						

WEL 15 03:42:13.7±0.6**,37.82S**×**179.83E,h33**^{km}**,ML3.7**/14**,**
Error ellipse: s-maj=5.9km s-min=3.4km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.24**	**282**	PN	Pn	03 42 33.7	-1.2
MXZ				SN	Sn	03 42 49.9	-0.7
PUZ	**Puketiti**	**1.27**	**258**	PN	Pn	03 42 34.2	-1.2
PUZ				SN	Sn	03 42 49.6	-1.8
MWZ	**Matawai**	**1.89**	**254**	PN	Pn	03 42 42.7	-1.5
MWZ				SN	Sn	03 43 04.9	-2.2
KNZ	**Kokohu**	**2.07**	**234**	PN	Pn	03 42 45.4	-1.5
KNZ				SN	Sn	03 43 09.2	-2.6
URZ	**Urewera**	**2.19**	**258**	PN	Pn	03 42 48.0	-0.6
URZ				SN	Sn	03 43 12.5	-2.4
BKZ	**Black Stump Fm**	**2.94**	**242**	PN	Pn	03 42 57.7	-1.6
BKZ				SN	Sn	03 43 30.0	-3.9
PXZ	**Pawanui**	**3.20**	**225**	PN	Pn	03 43 00.0	-2.9
PXZ				SN	Sn	03 43 36.0	-4.3
MOVZ	**Moawhango**	**3.56**	**242**	PN	Pn	03 43 05.7	-2.4
WNVZ	**Wahianoa**	**3.64**	**244**	PN	Pn	03 43 07.4	-1.8
TSZ	**Takapari Road**	**3.75**	**232**	PN	Pn	03 43 06.9	-3.8
BFZ	**Birch Farm**	**3.99**	**223**	PN	Pn	03 43 09.4	-4.7
BFZ				SN	Sn	03 43 52.8	-7.4
MRZ	**Mangatainoka R**	**4.35**	**228**	PN	Pn	03 43 15.3	-4.0
MRZ				SN	Sn	03 44 02.1	-7.5

JMA 15 03:49:15.9±0.1**,38.21N**×**144.62E,h41**^{km}**,M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**2.58**	**303**	P	P	03 49 56.4	+0.3
MIYJ				*e*S	S	03 50 26.7	+0.2
JIO	**Ouri**	**2.58**	**276**	*e*S	S	03 50 27.0	+0.3
JMK	**Ichinoseki**	**2.77**	**287**	*e*S	S	03 50 32.1	+0.8
JCH	**Churui**	**4.50**	**348**	*e*S	S	03 51 10.8	-4.5
JRY	**Ryogami san**	**5.07**	**246**	*e*S	S	03 51 25.7	-3.8

JMA 15 03:51:21.0±0.1**,38.30N**×**144.81E,h55**^{km}**,M3.8,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.58**	**289**	P	P	03 52 01.6	+0.3
OFUJ				*e*S	S	03 52 31.8	+0.3
MIYJ	**Miyakonagasawa**	**2.66**	**300**	P	P	03 52 02.3	-0.1
MIYJ				*e*S	S	03 52 33.2	-0.4
JIO	**Ouri**	**2.73**	**274**	P	P	03 52 03.6	+0.2
JIO				S	S	03 52 35.2	0.0
JMK	**Ichinoseki**	**2.89**	**284**	P	P	03 52 06.1	+0.4
JMK				*e*S	S	03 52 39.9	+0.6
JOT	**Ohata**	**4.23**	**318**	P	P	03 52 24.9	+0.4
JOT				*e*S	S	03 53 11.9	-1.2

JMA ***15*** *03:57:59.2±0.2,38.13N×144.74E,h57^{km},M4.0*
ISC 15 03:57:58.0±1.6**,38.30N**±0.07×**144.88E**±0.10**,h57**^{km}**,n8,**
σ1^{s}03/15**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.63**	**288**	P	**P**	**03 58 39.9**	**+0.8**
OFUJ				*e*S	**S**	**03 59 10.3**	**+0.4**
MIYJ	**Miyakonagasawa**	**2.71**	**299**	P	**P**	**03 58 41.2**	**+1.1**
MIYJ				*e*S	**S**	**03 59 12.2**	**+0.5**
JIO	**Ouri**	**2.78**	**274**	P	**P**	**03 58 41.2**	**0.0**
JIO				*e*S	**S**	**03 59 12.6**	**-1.0**
JMK	**Ichinoseki**	**2.94**	**284**	P	**P**	**03 58 44.1**	**+0.7**
JMK				*e*S	**S**	**03 59 17.8**	**+0.1**
JOT	**Ohata**	**4.26**	**317**	P	**P**	**03 59 04.1**	**+2.1**
JOT				*e*S	**S**	**03 59 51.1**	**+0.1**
JKB	**Kayabe**	**4.64**	**322**	*e*S	**S**	**03 59 59.4**	**-1.1**
NEM2	**Nemuro 2**	**5.10**	**7**	P	**P**	**03 59 12.6**	**-1.1**
NEM2				*e*S	**S**	**04 00 08.5**	**-3.5**
MAT	**Matsushiro**	**5.59**	**254**	P	**P**	**03 59 20.5**	**-0.1**
MAT				S	**S**	**04 00 22.6**	**-1.7**

MOS ***15*** *03:59:29.2±0.9,52.23N×178.15E,h163^{km},mb4.3/9,Error ellipse: s-maj=16.1km s-min=11.8km az=136.6*
BJI ***15*** *03:59:30.3,52.20N×178.20E,h156^{km},mB4.8,mb4.4*
NEIC ***15*** *03:59:30.4±0.4,52.24N×178.18E,h156^{km}±4^{km},mb4.2/17, Error ellipse: s-maj=9.1km s-min=4.6km az=176.0*
IDC ***15*** *03:59:30.2±1.5,52.34N×178.11E,h150^{km}±13^{km}, mb4.0/17,mb1 4.1/19,mb1mx4.0/28,mbtmp4.4/19,Error ellipse: s-maj=18.5km s-min=10.0km az=163.0*
ISC 15 03:59:29.4±0.5**,52.31N**±0.08×**178.19E**±0.05**,h158**^{km}±5^{km}**,**
n74,σ0^{s}97/78**,mb4.2**/33**,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMY	**Shemya**	**2.54**	**281**	P	**P**	**04 00 11.4**	**-0.5**
KIMD	**Kanaga Island**	**2.88**	**99**	P	**P**	**04 00 16.3**	**+0.2**
FX1	**Attu Island--F**	**3.12**	**283**	P	**P**	**04 00 18.6**	**-0.6**
	67nm,0.3s,baz=152,slow=3.1,SNR=397						
FX1				S	**S**	**04 00 55.8**	**-1.7**
	429nm,0.3s,baz=350,slow=21,SNR=70						
FX1	**Attu Island--F**	**3.12**	**283**	P	**P**	**04 00 18.6**	**-0.7**
FX1				S	**S**	**04 00 55.8**	**-1.7**
FX1				pmax	pmax		
	comp=Z,67nm,0.3s						
FX1				smax			
	comp=N,429nm,0.3s						
ADK	**Adak**	**3.19**	**96**	P	**P**	**04 00 20.8**	**+0.7**
GSCK	**Great Sitkin C**	**3.49**	**93**	P	**P**	**04 00 23.8**	**-0.2**
GSMY	**Great Sitkin M**	**3.55**	**92**	P	**P**	**04 00 25.5**	**+0.7**
ATKA	**Atka Island**	**4.68**	**88**	P	**P**	**04 00 40.6**	**+1.1**
NIKO	**Nikolski**	**7.91**	**80**	P	**P**	**04 01 22.8**	**+0.3**
KDAK	**Kodiak Island**	**17.53**	**60**	P	**P**	**04 03 23.6**	**-1.4**
	comp=N,2.3nm,0.3s,baz=335,slow=10,SNR=14						
SLKM	**Skilak Lake**	**19.14**	**52**	*e*P	**P**	**04 03 42.5**	**+0.2**
IMA2	**Indian Mountai**	**19.68**	**35**	*e*P	**P**	**04 03 48.8**	**+1.0**
PMR	**Palmer**	**19.89**	**49**	*e*P	**P**	**04 03 51.8**	**+1.8**
	comp=N,9.5nm,0.8s						
PMR	**Palmer**	**19.89**	**49**	*e*P	**P**	**04 03 51.8**	**+1.9**
PMR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
COLA	**College**	**21.38**	**41**	*e*P	**P**	**04 04 06.2**	**+1.4**
	comp=Z,11nm,0.8s,mb4.2						
COLA	**College**	**21.38**	**41**	*e*P	**P**	**04 04 06.2**	**+1.4**
COLA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.2						
ILAR	**Eielson Array**	**21.73**	**41**	P	**P**	**04 04 08.4**	**+0.2**
	comp=Z,4.1nm,0.5s,mb4.1,baz=242,slow=8.8,SNR=58						
THY	**Trims Highway**	**21.84**	**45**	P	**P**	**04 04 10.9**	**+1.6**
DAWY	**Dawson**	**24.74**	**45**	*e*P	**P**	**04 04 38.2**	**+1.3**
ASAJ	**Asahikawa**	**24.89**	**265**	P	**P**	**04 04 39.5**	**+1.0**
	comp=Z,9.1nm,0.8s,mb4.4,baz=93,slow=15,SNR=3.6						
ASAJ	**Asahikawa**	**24.89**	**265**	P	**P**	**04 04 39.6**	**+1.0**
ASAJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
INK	**Inuvik**	**27.79**	**37**	P	**P**	**04 05 05.6**	**+0.5**
	comp=Z,3.7nm,0.4s,mb4.5,baz=251,slow=10,SNR=38						
INK	**Inuvik**	**27.79**	**37**	*e*P	**P**	**04 05 05.3**	**+0.3**
	comp=Z,3.9nm,0.4s,mb4.5						
INK	**Inuvik**	**27.79**	**37**	*e*P	**P**	**04 05 05.3**	**+0.3**
INK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
DLBC	**Dease Lake**	**29.41**	**57**	P	**P**	**04 05 20.9**	**+1.4**
	comp=Z,1.7nm,0.7s,mb3.9,baz=168,slow=19,SNR=8.4						
MDJ	**Mudanjiang**	**32.60**	**276**	P	**P**	**04 05 47.5**	**-0.1**
MDJ				AP	pP	04 06 28.0	+6.6
MDJ				PP	PP	04 07 02.3	+0.3
MDJ				PCP	PcP	04 08 31.5	+1.4
MDJ				S	**S**	**04 10 51.9**	**+1.5**
MDJ				SCP		04 12 03.1	
MDJ				PCS		04 12 15.0	
MDJ				AMB	AMB		
	comp=Z,80nm,4.9s						
MDJ				LR	LR		
	comp=N,190nm,23.1s						
MDJ				LR	LR		
	comp=E,230nm,18.6s						
MDJ				LR	LR		
	comp=Z,430nm,19.0s						
CN2	**Changchun**	**35.56**	**278**	*e*P	**P**	**04 06 14.3**	**+1.6**
CN2				*e*S	**S**	**04 11 40.3**	**+4.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
YKA	**Yellowknife Ar**	**35.95**	**47**	P	**P**	**04 06 16.8**	**+1.0**
	comp=Z,8.6nm,0.6s,mb4.5,baz=284,slow=7.4,SNR=27						
HAWA	**Hanford**	**39.88**	**73**	*e*P	**P**	**04 06 48.5**	**-0.2**
	comp=Z,0.1nm,0.4s						
NEW	**Newport**	**40.30**	**69**	*e*P	**P**	**04 06 51.6**	**-0.5**
	comp=Z,3.3nm,0.6s,mb4.1						
NEW	**Newport**	**40.30**	**69**	*e*P	**P**	**04 06 51.6**	**-0.6**
NEW				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MOD	**Modoc**	**41.94**	**79**	*e*P	**P**	**04 07 05.8**	**+0.2**
	comp=Z,3.9nm,0.7s,mb4.2						
BMO	**Blue Mountains**	**42.03**	**74**	*e*P	**P**	**04 07 05.6**	**-0.7**
	comp=Z,2.2nm,0.9s,mb3.8						
HLID	**Hailey**	**44.47**	**73**	*e*P	**P**	**04 07 25.4**	**-0.6**
	comp=Z,2.1nm,1.0s,mb3.7						
MCMT	**McKenzie Canyo**	**44.65**	**71**	*e*P	**P**	**04 07 26.7**	**-0.7**
BOZ	**Bozeman (W)**	**44.88**	**69**	*e*P	**P**	**04 07 28.4**	**-0.8**
	comp=Z,4.1nm,0.7s,mb4.2						
BOZ	**Bozeman (W)**	**44.88**	**69**	*e*P	**P**	**04 07 28.4**	**-0.8**
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
NVAR	**Mina Array Bea**	**45.27**	**82**	P	**P**	**04 07 33.1**	**+0.7**
	comp=Z,3.0nm,0.5s,mb4.1,baz=298,slow=6.5,SNR=30						
MNV	**Mina**	**45.36**	**82**	*e*P	**P**	**04 07 32.7**	**-0.4**
HHC	**Hu-ho-hao-te**	**45.65**	**283**	*e*P	**P**	**04 07 37.1**	**+1.7**
HHC				PCP	PcP	04 09 12.1	+0.9
HHC				PP	PP	04 09 22.8	-1.8
HHC				SCP		04 12 52.6	
HHC				PCS		04 13 05.8	
HHC				S	**S**	**04 14 13.0**	**+7.9**
HHC				SCS	ScS	04 17 15.3	+3.3
HHC				SS	SS	04 17 29.6	+4.0
HHC				AMB	AMB		
	comp=Z,130nm,7.2s						
HHC				LR	LR		
	comp=N,170nm,18.0s						
HHC				LR	LR		
	comp=E,290nm,15.6s						
HHC				LR	LR		
	comp=Z,250nm,20.4s						
ELK	**Elko**	**45.68**	**77**	*e*P	**P**	**04 07 35.5**	**-0.1**
	comp=Z,1.9nm,0.8s,mb3.8						
ELK	**Elko**	**45.68**	**77**	*e*P	**P**	**04 07 35.5**	**-0.1**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YMR	**Madison River**	**45.83**	**70**	*e*P	**P**	**04 07 36.1**	**-0.6**
SSE	**Sheshan**	**46.18**	**266**	*e*P	**P**	**04 07 39.5**	**-0.1**
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,340nm,4.2s						
SSE	**Sheshan**	**46.18**	**266**	*e*P	**P**	**04 07 39.5**	**-0.1**
	comp=Z,42nm,0.7s,mb5.2						
NJ2	**Nanjing**	**46.94**	**269**	*e*P	**P**	**04 07 48.4**	**+2.8**
ISA	**Isabella**	**46.96**	**85**	*e*P	**P**	**04 07 44.6**	**-1.0**
	comp=Z,2.1nm,0.7s,mb3.9						
ISA	**Isabella**	**46.96**	**85**	*e*P	**P**	**04 07 44.6**	**-1.1**
ISA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
DUG	**Dugway**	**47.47**	**76**	*e*P	**P**	**04 07 49.4**	**-0.2**
	comp=Z,3.3nm,0.6s,mb4.1						
DUG	**Dugway**	**47.47**	**76**	*e*P	**P**	**04 07 49.4**	**-0.2**
DUG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
BW06	**Boulder Array**	**47.79**	**71**	*e*P	**P**	**04 07 50.8**	**-1.3**
	comp=Z,3.0nm,0.6s,mb4.1						
PDAR	**Pinedale Array**	**47.79**	**71**	P	**P**	**04 07 51.6**	**-0.5**
	comp=Z,3.6nm,0.6s,mb4.2,baz=317,slow=3.9,SNR=34						
ULM	**Lac du Bonnet**	**50.72**	**56**	P	**P**	**04 08 13.8**	**-0.5**
	comp=Z,8.9nm,0.6s,mb4.6,baz=308,slow=6.6,SNR=28						
LZH	**Lanzhou**	**53.34**	**284**	*e*P	**P**	**04 08 34.0**	**-0.1**
LZH				PCP	PcP	04 09 40.9	+1.5
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,100nm,4.0s						
LZH	**Lanzhou**	**53.34**	**284**	*e*P	**P**	**04 08 34.0**	**-0.1**
	comp=Z,22nm,1.0s,mb4.8						
LZH				pP	pP	04 09 05.5	-5.0
LZH				sP	sP	04 09 21.3	-6.5
LZH				PcP	PcP	04 09 40.9	+1.5
SDCO	**Great Sand Dun**	**53.39**	**74**	*e*P	**P**	**04 08 33.8**	**-0.7**
	comp=Z,5.7nm,1.4s,mb4.1						
ARCES	**ARCESS Array B**	**56.84**	**349**	P	**P**	**04 08 57.5**	**-1.3**
	comp=Z,7.8nm,1.1s,mb4.5,baz=33,slow=8.0,SNR=8.2						
KURK	**Kurchatov**	**57.02**	**312**	*e*P	**P**	**04 09 01.2**	**+0.9**
WMQ	**Urumqi**	**57.27**	**301**	*e*P	**P**	**04 09 06.0**	**+3.9**
CPRX	**Cap Rock**	**57.59**	**77**	P	**P**	**04 09 04.4**	**-0.1**
MNTX	**Cornudas Mount**	**57.62**	**79**	*e*P	**P**	**04 09 03.8**	**-1.0**
	comp=Z,5.7nm,1.2s,mb4.3						
MKAR	**Makanchi Array**	**57.99**	**306**	P	**P**	**04 09 06.0**	**-1.2**
	comp=Z,0.9nm,0.4s,mb3.9,baz=46,slow=6.1,SNR=12						
MKAR				pP	pP	04 09 44.6	+0.5
	comp=Z,0.8nm,0.6s,baz=42,slow=6.5,SNR=4.4						
WMOK	**Wichita Mounta**	**59.39**	**72**	*e*P	**P**	**04 09 15.8**	**-1.3**
	comp=Z,2.9nm,0.5s,mb4.4						
WMOK	**Wichita Mounta**	**59.39**	**72**	*e*P	**P**	**04 09 15.9**	**-1.2**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
TXAR	**Lajitas Array**	**60.34**	**80**	P	**P**	**04 09 22.9**	**-0.7**
	comp=Z,2.2nm,0.6s,mb4.2,baz=304,slow=5.1,SNR=56						
SCHQ	**Schefferville**	**60.41**	**37**	P	**P**	**04 09 23.0**	**-0.7**
	comp=Z,3.7nm,0.5s,mb4.5,baz=350,slow=7.7,SNR=7.9						
FINES	**FINESS Array B**	**64.44**	**346**	P	**P**	**04 09 49.5**	**-0.7**
	comp=Z,2.9nm,1.0s,mb4.1,baz=127,slow=19,SNR=5.5						
OXF	**Oxford**	**64.92**	**66**	*e*P	**P**	**04 09 52.4**	**-1.4**
AKASG	**Malin Array Be**	**74.06**	**340**	P	**P**	**04 10 48.4**	**-0.5**
	comp=Z,0.9nm,0.4s,mb3.9,baz=20,slow=5.8,SNR=5.4						
WRAB	**Tennant Creek**	**81.42**	**221**	P	**P**	**04 11 28.7**	**-1.2**
WRA	**Warramunga Arr**	**81.44**	**221**	P	**P**	**04 11 29.4**	**-0.5**
	comp=Z,1.0nm,0.5s,mb3.7,baz=31,slow=5.8,SNR=15						
STKA	**Stephens Creek**	**89.74**	**210**	P	**P**	**04 12 11.8**	**+1.4**
	comp=Z,1.0nm,0.5s,mb4.0,baz=329,slow=4.3,SNR=2.1						
URZ	**Urewera**	**90.20**	**181**	P	**P**	**04 12 13.6**	**+1.2**
	comp=Z,3.4nm,0.6s,mb4.5						
BOSA	**Boshof**	**148.96**	**309**	PKPbc	PKPdf	04 19 00.2	+6.4
	comp=Z,3.2nm,0.4s,baz=8.5,slow=3.3,SNR=14						

IDC ***15*** *04:12:10.1±7.2,11.80S×165.63E,h66^{km}±71^{km},mb3.9/7, mb1 4.2/8,mb1mx4.0/16,mbtmp4.3/8,ML4.4/1,MS4.0/6, Ms1 4.0/6,ms1mx3.7/18,Error ellipse: s-maj=59.1km s-min=27.4km az=154.0*
NEIC ***15*** *04:12:34.5±2.9,13.57S×166.16E,h344^{km}±30^{km},mb4.1/1, Error ellipse: s-maj=30.4km s-min=23.4km az=175.0*
ISC 15 04:12:33.0±3.0**,13.5S**±0.2×**166.0E**±0.1**,h337**^{km}±31^{km}**,**
n21,σ0^{s}99/16**,mb3.8**/8**,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**7.21**	**304**	LR	LR	04 15 46.5	
	comp=Z,1μm,21.3s,baz=341,slow=36						
DZM	**Mont Dzumac**	**8.53**	**177**	*e*P	**P**	**04 14 34.0**	**-0.1**
DZM	**Mont Dzumac**	**8.53**	**177**	P	**P**	**04 14 34.4**	**+0.3**
	3.1nm,0.3s,baz=304,slow=11,SNR=52						
CTA	**Charters Tower**	**20.02**	**248**	P	**P**	**04 16 40.8**	**-1.4**
	5.6nm,0.8s,baz=68,slow=13,SNR=4.8						
CTA				LR	LR	04 23 40.1	
	comp=Z,526nm,19.0s,baz=53,slow=34						
AFI	**Afiamalu**	**21.56**	**94**	LR	LR	04 23 50.7	
	comp=Z,128nm,19.8s,baz=45,slow=32						
STKA	**Stephens Creek**	**28.91**	**227**	P	**P**	**04 18 12.2**	**+8.2**
	4.3nm,0.8s,mb3.7,baz=19,slow=10,SNR=5.3						
STKA				LR	LR	04 29 22.2	
	comp=Z,400nm,18.8s,baz=22,slow=35						
WB2	**Warramunga Arr**	**30.97**	**254**	*e*P	**P**	**04 18 22.8**	**+0.9**
WRAB	**Tennant Creek**	**30.97**	**254**	*e*P	**P**	**04 18 22.1**	**+0.1**
	8.1nm,0.8s,mb4.0						
WRA	**Warramunga Arr**	**30.98**	**254**	P	**P**	**04 18 22.1**	**0.0**
	5.0nm,0.8s,mb3.8,baz=78,slow=9.3,SNR=28						
RAR	**Rarotonga**	**33.47**	**108**	LR	LR	04 30 38.2	
	comp=Z,350nm,18.1s,baz=282,slow=32						
FITZ	**Fitzroy Crossi**	**39.08**	**258**	*e*P	**P**	**04 19 30.8**	**+0.7**
	7.6nm,0.7s,mb4.0						
SONM	**Songino Array**	**80.80**	**324**	P	**P**	**04 24 09.9**	**-1.0**
	0.3nm,0.6s,mb3.2,baz=126,slow=5.4,SNR=4.1						
ILAR	**Eielson Array**	**85.74**	**18**	P	**P**	**04 24 34.4**	**-0.9**
	1.2nm,0.6s,mb3.9,baz=240,slow=4.7,SNR=20						
NVAR	**Mina Array Bea**	**87.39**	**50**	LR	LR	04 59 55.5	
	comp=Z,100nm,18.8s,baz=260,slow=33						
NEW	**Newport**	**91.42**	**41**	P	**P**	**04 25 03.4**	**+1.0**
	1.1nm,0.8s,mb3.9,baz=328,slow=6.0,SNR=3.4						
NEW	**Newport**	**91.42**	**41**	P	**P**	**04 25 03.4**	**+1.0**
VNA3	**Neumayer Olymp**	**95.41**	**181**	P	**P**	**04 25 17.8**	**-2.4**
MKAR	**Makanchi Array**	**95.49**	**317**	P	**P**	**04 25 22.0**	**+0.8**
	1.4nm,0.7s,mb4.1,baz=93,slow=5.6,SNR=14						
VNA2	**Neumayer--Watz**	**95.66**	**182**	P	**P**	**04 25 22.3**	**+0.9**
VNA1	**Neumayer--Stat**	**95.96**	**182**	P	**P**	**04 25 16.8**	**-6.0**
GNI	**Garni**	**122.43**	**309**	PKP	PKPdf	04 30 53.6	+4.8
	5.7nm,0.3s,baz=170,slow=3.5,SNR=5.4						

IDC 15 04:25:40.0±1.5**,11.56S**×**165.49E,mb4.1**/6**,mb1 4.3**/7**,**
mb1mx4.1/15**,mbtmp4.2**/7**,ML4.1**/1**,MS3.1**/2**,Ms1 3.1**/2**,**
ms1mx3.0/12**,Error ellipse: s-maj=46.9km s-min=24.6km az=118.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.49	175	Pn	P	04 28 11.7	-3.1
	1.6nm,0.3s,baz=354,slow=9.2,SNR=11						
CTA	Charters Tower	20.34	243	P	P	04 30 19.0	-1.8
	3.2nm,0.6s,baz=63,slow=11,SNR=3.9						
AFI	Afiamalu	22.29	98	LR	LR	04 36 03.3	
	comp=Z,14nm,21.8s,baz=130,slow=28						
STKA	Stephens Creek	29.90	224	P	P	04 31 49.6	-2.2
	1.6nm,0.6s,baz=56,slow=3.6,SNR=2.5						
STKA				LR	LR	04 42 46.8	
	comp=Z,115nm,18.8s,baz=24,slow=34						
WRA	Warramunga Arr	31.08	251	P	P	04 31 59.2	-3.1
	5.9nm,1.0s,baz=78,slow=9.2,SNR=18						
SONM	Songino Array	78.94	324	P	P	04 37 47.0	-0.1
	0.5nm,0.8s,baz=135,slow=4.5,SNR=3.9						
ILAR	Eielson Array	84.08	19	P	P	04 38 11.7	-2.0
	1.3nm,0.8s,baz=238,slow=5.7,SNR=8.3						
MKAR	Makanchi Array	93.73	317	P	P	04 38 58.9	-1.1
	1.2nm,0.7s,baz=99,slow=6.4,SNR=11						

*ATH **15** 04:50:36.3, 40.32N×25.24E, h24^{km}, MD3.2/3*
*THE **15** 04:50:36.9, 40.30N×25.29E, h7^{km}, ML2.8*
*NEIC **15** 04:50:36.3, 40.32N×25.24E, h24^{km}, MD3.2(ATH), After ATH.*
*CSEM **15** 04:50:37.0±0.1, 40.32N×25.26E, h15^{km}, ML2.8, Error ellipse: s-maj=3.7km s-min=2.7km az=117.0*
ISC 15 04:50:37.1±0.7**, 40.28N**±0.05×**25.31E**±0.06**, h22**^{km}±9^{km}**, n11, σ0^{s}75**/15**, 2C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	Limnos	0.39	207	ePg	Pb	04 50 44.7	-0.5
LOS				eSg	Sb	04 50 50.5	-0.2
LIA	Limnos Island	0.39	194	⇑iPB	Pb	04 50 45.3	0.0
ALN	Alexandroupoli	0.84	42	ePg	Pb	04 50 52.6	-0.2
ALN				eSg	Sb	04 51 04.3	+0.7
RDO	Rodhopi	0.89	11	ePN	Pn	04 50 52.9	-1.4
OUR	Ouranopolis	1.02	274	ePg	Pb	04 50 55.7	-0.2
OUR				eSg	Sb	04 51 09.8	+1.0
PRK	Paraskevi	1.27	144	ePN	Pn	04 51 01.4	+1.6
PAIG	Paliouri	1.30	255	ePg	Pn	04 50 59.6	-0.6
PLG	Polygyros	1.43	274	ePN	Pn	04 51 01.6	-0.4
NVR	Nevrokopi	1.53	315	⇑iPN	Pn	04 51 03.3	-0.3
SOH	Sokhos	1.58	291	ePg	Pn	04 51 03.7	-0.6
KNT	Kendrikon	2.03	297	ePn	Pn	04 51 10.7	0.0
KNT				eSn	Sn	04 51 36.8	+1.1

*SOF **15** 05:00:52.1, 40.28N×25.20E, h2^{km}, MD3.1*
*ATH **15** 05:00:54.0, 40.29N×25.22E, h26^{km}±1^{km}, MD3.6/4*
*THE **15** 05:00:55.0, 40.26N×25.33E, h20^{km}, ML3.3*
*CSEM **15** 05:00:55.0±0.1, 40.31N×25.26E, h20^{km}, ML3.3, Error ellipse: s-maj=1.5km s-min=1.5km az=61.0*
*NEIC **15** 05:00:55.0, 40.26N×25.33E, h20^{km}, MD3.6(ATH), ML3.2(THE), After THE.*
*SKO **15** 05:00:59.4, 40.40N×25.30E*
ISC 15 05:00:55.0±0.3**, 40.29N**±0.02×**25.25E**±0.03**, h20**^{km}**, n33, σ1^{s}02**/51**, 5C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	Limnos	0.38	200	ePg	Pb	05 01 02.6	-0.3
LIA	Limnos Island	0.40	187	⇑iPB	Pb	05 01 03.0	-0.3
LIA				eSB	Sb	05 01 08.9	0.0
ALN	Alexandroupoli	0.86	45	ePg	Pb	05 01 10.4	-0.6
ALN				eSg	Sb	05 01 22.0	-0.1
ALN	Alexandroupoli	0.86	45	ePg	Pb	05 01 10.4	-0.7
ALN				eSg	Sb	05 01 22.0	-0.1
RDO	Rodhopi	0.88	14	⇑iPN	Pn	05 01 10.8	-1.5
RDO				eSN	Sn	05 01 24.1	-0.5
OUR	Ouranopolis	0.97	273	ePg	Pb	05 01 13.6	+0.6
PAIG	Paliouri	1.26	254	ePg	Pn	05 01 17.4	-0.3
PAIG				eSg	Sb	05 01 34.4	+0.7
PRK	Paraskevi	1.31	143	ePN	Pn	05 01 18.7	+0.3
PRK				eSN	Sn	05 01 36.7	+1.3
KDZ	Kurdzhali	1.36	5	i P	Pn	05 01 18.5	-0.7
PLG	Polygyros	1.38	274	⇑iPN	Pn	05 01 19.5	0.0
PLG				eSN	Sn	05 01 36.9	-0.4
RZN	Rozhen	1.45	344	P	Pn	05 01 20.5	0.0
AYVA	Ayvalik	1.48	131	i P	Pn	05 01 21.5	+0.6
AYVA				i S	Sn	05 01 40.3	+0.5
NVR	Nevrokopi	1.49	316	⇑iPN	Pn	05 01 21.2	+0.2
NVR				eSN	Sn	05 01 40.4	+0.3
SOH	Sokhos	1.54	291	ePg	Pn	05 01 21.6	-0.1
SOH				eSg	Sn	05 01 42.7	+1.5
AOS	Alonnisos	1.54	224	ePg	Pn	05 01 21.1	-0.6
MMB	Musomiste	1.73	319	i P	Pn	05 01 24.2	-0.3
DIM	Dimitrovgrad	1.77	7	i P	Pn	05 01 27.0	+2.0
XOR	Xorichti	1.83	240	ePb	Pb	05 01 25.3	-2.4
NEO	Neokhori	1.84	238	⇑iPB	Pb	05 01 25.4	-2.5
KNT	Kendrikon	1.99	297	ePn	Pn	05 01 28.4	+0.3
KNT				eSn	Sn	05 01 53.4	+0.7
LIT	Litokhoron	2.12	266	ePn	Pn	05 01 29.9	-0.2
BTOK	Tokmak	2.20	103	i P	Pn	05 01 33.6	+2.4
BTOK				i S	Sn	05 02 03.7	+5.7
GRG	Griva	2.27	288	ePn	Pn	05 01 31.6	-0.6
GRG				eSn	Sn	05 02 00.2	+0.5
GRG	Griva	2.27	288	ePn	Pn	05 01 31.6	-0.5
GRG				S	Sn	05 02 00.2	+0.4
KKB	Krupnik	2.27	315	i P	Pn	05 01 31.3	-0.9
VAY	Valandovo	2.28	298	ePn	Pn	05 01 38.8	+6.4
VAY				eSn	Sn	05 02 07.7	+7.6
PGB	Panagyurishte	2.40	341	P	Pn	05 01 35.7	+1.7
ELBA	Catalca	2.56	69	i P	Pn	05 01 34.9	-1.5
ELBA				i S	Sn	05 02 15.0	+7.6
VTS	Vitosha	2.76	327	P	Pn	05 01 41.0	+1.8
SMG	Samos	2.86	154	ePN	Pn	05 01 40.1	-0.5
PVL	Pavlikeni	2.92	1	P	Pn	05 01 39.5	-2.0
ULDT	Uludag	2.98	92	i P	Pn	05 01 47.2	+4.9
ULDT				i S	Sn	05 02 26.8	+9.0
MANT	Manisa	3.13	124	i P	Pn	05 01 53.4	+9.0
MANT				i S	Sn	05 02 31.9	+10

*ROM **15** 05:07:04.4±0.1, 42.74N×13.21E, h14^{km}±2^{km}, Md3.0/6, Ml3.1/24, Error ellipse: s-maj=1.5km s-min=0.9km az=116.0*
*NEIC **15** 05:07:04.4, 42.74N×13.21E, h14^{km}, ML3.1(ROM), ML2.9(LDG), After ROM.*
*CSEM **15** 05:07:04.5±0.1, 42.72N×13.20E, h12^{km}, ML2.9/7, Error ellipse: s-maj=1.6km s-min=1.1km az=78.0*
*LDG **15** 05:07:06.7±0.2, 42.70N×13.24E, h10^{km}, Ml2.9/7, Error ellipse: s-maj=8.0km s-min=4.7km az=66.0*
*VIE **15** 05:07:06.7±1.8, 42.71N×13.42E, h8^{km}, mb2.7/5, ML3.0/8, Error ellipse: s-maj=19.1km s-min=12.5km az=54.0*
ISC 15 05:07:04.7±0.2**, 42.73N**±0.02×**13.17E**±0.03**, h14**^{km}±2^{km}**, n75, σ1^{s}06**/109**, 18C-6D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNSS	Leonessa	0.16	218	⇑iPg	Pg	05 07 09.6	+0.9
LNSS				Sg	Sg	05 07 13.2	+1.8
	6µm,0.3s						
TERO	Teramo	0.34	108	⇑ePg	Pg	05 07 11.3	-0.5
TERO				Sg	Sg	05 07 16.2	-0.4
	3µm,0.4s						
AQU	L'Aquila	0.41	155	Pg	Pg	05 07 13.3	0.0
AQU				Sg	Sg	05 07 19.9	+0.9
FIAM	Fiamignano	0.46	185	⇑ePg	Pg	05 07 14.4	+0.2
FIAM				Sg	Sg	05 07 21.8	+1.2
	982nm,0.5s						
MNS	Montasola	0.50	227	⇑iPg	Pg	05 07 15.3	+0.3
MNS				Sg	Sg	05 07 23.6	+1.8
	471nm,0.3s						
FAGN	Fagnano	0.55	146	Pg	Pg	05 07 15.5	-0.5
	2µm,0.5s						
SNTG	Esanatoglia	0.55	342	⇓ePg	Pg	05 07 15.7	-0.3
SNTG				Sg	Sg	05 07 24.1	+0.5
VCEL	Villa Celiera	0.60	124	⇑ePg	Pg	05 07 16.4	-0.5
VCEL				Sg	Sg	05 07 25.9	+0.9
	1µm,0.5s						
CING	Cingoli	0.65	2	Pg	Pg	05 07 17.2	-0.7
CING				Sg	Sg	05 07 27.5	+0.8
	1µm,0.2s						
MURB	Monte Urbino	0.72	319	Pg	Pg	05 07 18.8	-0.4
MURB				Sg	Sg	05 07 30.7	+1.8
	3µm,0.3s						
PTQR	Pietraquaria	0.72	166	Pg	Pg	05 07 19.1	-0.3
	168nm,0.6s						
MTCE	Montecelio	0.77	204	Pg	Pg	05 07 19.7	-0.6
	470nm,0.6s						
ARV	Arcevia	0.79	348	Pg	Pg	05 07 19.8	-0.8
ARVD	Arcevia	0.79	348	Pg	Pg	05 07 19.8	-0.8
ARVD				Sg	Sg	05 07 32.0	+0.7
	307nm,0.2s						
CERT	Cerreto	0.79	190	Pg	Pg	05 07 19.9	-0.8
	821nm,0.6s						
AOI	Ancona	0.88	21	Pg	Pg	05 07 21.3	-1.2
AOI				Sg	Sg	05 07 35.6	+1.3
	603nm,0.3s						
INTR	Introdacqua	0.90	143	Pg	Pg	05 07 21.3	-1.5
	1µm,1.2s						
VVLD	Villa Vallelon	0.92	159	Pg	Pg	05 07 23.1	-0.1
	432nm,0.5s						
PIEI	Pieia	0.93	330	Pg	Pg	05 07 22.7	-0.8
	124nm,0.2s						
SACS	San Casciano d	0.94	278	Pg	Pg	05 07 23.3	-0.3
	348nm,0.6s						
FSSB	Fossombrone	1.01	343	Pg	Pg	05 07 24.1	-0.8
	188nm,0.3s						
RDP	Rocca di Papa	1.03	199	Pg	Pg	05 07 26.0	+0.7
	589nm,0.5s						
BADI	Badiali	1.04	319	Pg	Pg	05 07 25.3	-0.2
	313nm,0.6s						
TOLF	Tolfa	1.09	233	Pg	Pg	05 07 26.0	-0.7
	140nm,0.6s						
GIUL	Giuliano Di Ro	1.17	177	Pg	Pg	05 07 28.8	+0.6
	187nm,0.6s						
PESA	Pesaro	1.24	349	Pg	Pg	05 07 28.9	-0.6
	504nm,0.7s						
CRE	Caprese Michel	1.26	315	Pg	Pg	05 07 29.1	-0.9
	180nm,0.5s						
CII	Carovilli	1.31	140	Pg	Pg	05 07 31.4	+0.4
	51nm,0.4s						
FRES	Fresagrandinar	1.34	124	Pg	Pg	05 07 31.1	-0.5
	410nm,0.7s						
SFI	Santa Sofia	1.52	321	Pg	Pg	05 07 33.4	-1.8
	87nm,0.5s						
PGD	Poggio Sodo	1.56	318	Pg	Pg	05 07 33.6	-2.4
	38nm,0.4s						
CSNT	Castellina Chi	1.57	299	Pg	Pg	05 07 34.1	-2.0
	46nm,0.4s						
NVLJ	Novalja	2.21	33	i Pn	Pn	05 07 41.3	-0.2
NVLJ				i Sn	Sn	05 08 07.9	-1.0
PGF	Pioggiola	3.08	268	ePn	Pn	05 07 55.0	+1.0
PGF				eSn	Sn	05 08 30.1	-0.9
	2.6nm,0.3s						
BOJS	Bojanci	3.15	28	i Pn	Pn	05 07 55.9	+0.9
BOJS				eSn	Sn	05 08 33.5	+0.7
VISS	Visnje	3.30	21	i Pn	Pn	05 07 57.6	+0.5
VISS				i Sn	Sn	05 08 37.9	+1.4
STON	Ston	3.33	86	i Pn	Pn	05 07 57.1	-0.5
STON				i Sn	Sn	05 08 35.8	-1.6
VOY	Vojsko	3.34	9	ePn	Pn	05 07 56.9	-0.8
VOY				eSn	Sn	05 08 37.7	+0.1
BUA	Buia	3.49	359	⇑iPg	Pn	05 07 59.5	-0.3
CTI	Castel Tesino	3.50	342	Pg	Pn	05 08 00.5	+0.6
	31nm,0.2s						
ROBS	Robic	3.52	4	ePn	Pn	05 07 59.6	-0.7
ROBS				eSn	Sn	05 08 40.8	-1.4
BRT	Bari-Castellan	3.54	120	Pg	Pn	05 08 00.6	+0.2
	15nm,0.6s						
PTCC	Patocco-Chiusa	3.68	2	Pg	Pn	05 08 01.6	-0.9
	9.0nm,0.4s						
OBKA	Obir	3.91	14	⇑iPn	Pn	05 08 08.7	+3.0
APPI	Appiano	4.00	340	Pg	Pn	05 08 07.8	+0.8
BRES	Bressanone	4.10	346	Pg	Pn	05 08 09.5	+1.0
KBA	Koelnbreinsper	4.35	2	⇑iPn	Pn	05 08 12.3	+0.3
	comp=Z,1.5nm,0.2s						
KBA	Koelnbreinsper	4.35	2	⇑iSn	Sn	05 09 04.7	+1.6
	comp=Z,7.5nm,0.4s						
KBA	Koelnbreinsper	4.35	2	⇑Pn	Pn	05 08 12.3	+0.3
KBA				Sn	Sn	05 09 04.7	+1.6
WTTA	Wattenberg	4.67	347	⇑iPn	Pn	05 08 18.5	+2.0
	comp=Z,1.2nm,0.2s						
WTTA	Wattenberg	4.67	347	⇓iSn	Sn	05 09 13.9	+2.9
	comp=Z,6.7nm,0.4s						
WTTA	Wattenberg	4.67	347	⇑Pn	Pn	05 08 18.5	+2.0
WTTA				Sn	Sn	05 09 13.9	+2.9
SQTA	Sankt Quirin	4.70	343	⇑iPn	Pn	05 08 18.8	+1.7
	comp=Z,3.3nm,0.1s						
SQTA	Sankt Quirin	4.70	343	⇑Pn	Pn	05 08 18.8	+1.7
SQTA				Sn	Sn	05 09 16.1	+4.1
SQTA	Sankt Quirin	4.70	343	Pn	Pn	05 08 18.8	+1.8
	3.3nm,0.1s						
SQTA				Sn	Sn	05 09 16.1	+4.1
	3.6nm,0.2s						
WATA	Walderalm	4.75	347	⇑iPn	Pn	05 08 19.9	+2.3
	comp=Z,1.9nm,0.2s						
WATA	Walderalm	4.75	347	⇑Pn	Pn	05 08 19.9	+2.3
WATA				Sn	Sn	05 09 18.1	+5.1
WATA	Walderalm	4.75	347	Pn	Pn	05 08 19.9	+2.3
	1.9nm,0.2s						
WATA				Sn	Sn	05 09 18.1	+5.0
	2.3nm,0.2s						
MOTA	Moosalm	4.84	343	⇑iPn	Pn	05 08 20.7	+1.7
	comp=Z,1.3nm,0.2s						
MOTA	Moosalm	4.84	343	⇑Pn	Pn	05 08 20.7	+1.7
MOTA				Sn	Sn	05 09 20.9	+5.3
MOTA	Moosalm	4.84	343	Pn	Pn	05 08 20.7	+1.7
	1.3nm,0.2s						
MOTA				Sn	Sn	05 09 20.9	+5.3
	1.4nm,0.2s						
FRF	La Foret Royal	4.85	282	ePn	Pn	05 08 18.5	-0.6
FRF				eSn	Sn	05 09 11.4	-4.2
	1.5nm,0.3s						
LMR	La Mourre	4.92	279	ePn	Pn	05 08 19.2	-0.9
MBDF	Montbardon	5.05	295	ePn	Pn	05 08 22.0	+0.1
MBDF				eSn	Sn	05 09 16.9	-3.8
	0.9nm,0.3s						
DAVA	Damuels	5.12	334	⇓iPn	Pn	05 08 25.6	+2.6
	comp=Z,1.4nm,0.2s						
DAVA	Damuels	5.12	334	⇓Pn	Pn	05 08 25.6	+2.6
	1.4nm,0.3s						
DAVA				Sn	Sn	05 09 28.8	+6.3
DAVA	Damuels	5.12	334	Pn	Pn	05 08 25.6	+2.7
	1.4nm,0.2s						
DAVA				Sn	Sn	05 09 28.8	+6.3
	2.6nm,0.3s						
MOA	Molln	5.18	8	⇓iPn	Pn	05 08 23.6	-0.1
	comp=Z,1.5nm,0.3s						
MOA	Molln	5.18	8	⇓Pn	Pn	05 08 23.6	-0.1
	1.5nm,0.3s						
LPG	La Plagne	5.39	303	ePn	Pn	05 08 26.1	-0.6
LPL	La Plagne	5.41	303	ePn	Pn	05 08 26.6	-0.4
LPL				eSn	Sn	05 09 25.0	-4.7
	2.5nm,0.3s						
SMRF	Simiane la Rot	5.68	285	ePn	Pn	05 08 30.3	-0.5
HINF	Hinteralfeld	6.76	321	ePn	Pn	05 08 45.1	-1.0
HINF				eSn	Sn	05 09 57.8	-5.8
	3.9nm,0.3s						
CDF	Champ du Feu	7.03	326	ePn	Pn	05 08 48.7	-1.1
CDF				eSn	Sn	05 10 04.2	-6.1
	2.3nm,0.3s						
HAU	Haudompre	7.14	320	ePn	Pn	05 08 50.2	-1.1
HAU				eSn	Sn	05 10 06.1	-6.9
	5.9nm,0.4s						

*SKO **15** 05:30:54.6, 39.88N×25.26E, h30^{km}*
*ISK **15** 05:30:55.5, 40.24N×25.09E, h19^{km}, MD3.5, ML3.7*
*SOF **15** 05:30:55.0, 40.35N×25.26E, h2^{km}, MD3.4*
*NEIC **15** 05:30:55.0, 40.24N×25.08E, h24^{km}, MD3.5(ATH), MD3.4(ISK), After ISK.*
*ATH **15** 05:30:56.5, 40.31N×25.25E, h23^{km}, MD3.5/5*
*THE **15** 05:30:57.5, 40.25N×25.35E, h19^{km}, ML3.6*
*CSEM **15** 05:30:57.5±0.1, 40.30N×25.26E, h20^{km}, ML3.6, Error ellipse: s-maj=1.6km s-min=1.2km az=171.0*
ISC 15 05:30:57.2±0.5**, 40.28N**±0.02×**25.26E**±0.02**, h19**^{km}±5^{km}**, n77, σ1^{s}06**/95**, 6C-4D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	Limnos	0.37	201	ePg	Pb	05 31 05.1	+0.1
LIA	Limnos Island	0.39	188	ePB	Pb	05 31 05.7	+0.4
LIA				eSB	Sb	05 31 11.6	+0.8
ALN	Alexandroupoli	0.86	44	ePg	Pb	05 31 12.9	-0.4
ALN				eSg	Sb	05 31 24.7	+0.3
RDO	Rodhopi	0.89	14	ePN	Pn	05 31 13.2	-1.5
EZN	Ezine	0.94	119	i PG	Pb	05 31 14.6	0.0
OUR	Ouranopolis	0.98	274	ePg	Pb	05 31 15.9	+0.6
OUR				eSg	Sb	05 31 30.4	+2.6
LPK	Lapseki	1.15	85	PN	Pn	05 31 18.3	-0.2
PAIG	Paliouri	1.26	254	ePg	Pn	05 31 19.8	-0.2
PAIG				eSg	Sb	05 31 37.1	+1.1
PRK	Paraskevi	1.30	143	ePN	Pn	05 31 21.7	+1.2
PRK				eSN	Sn	05 31 39.6	+2.1
KDZ	Kurdzhali	1.37	5	i P	Pn	05 31 20.0	-1.6
PLG	Polygyros	1.39	274	ePN	Pn	05 31 22.0	+0.2
PLG				eSN	Sn	05 31 40.4	+0.7
RZN	Rozhen	1.46	344	i P	Pn	05 31 23.0	+0.1
NVR	Nevrokopi	1.50	316	ePN	Pn	05 31 23.7	+0.2
SART	Tekirdag	1.52	74	i P	Pn	05 31 22.1	-1.7
SART				i S	Sn	05 31 40.7	-2.5
AOS	Alonnisos	1.54	224	ePg	Pn	05 31 23.6	-0.3
SOH	Sokhos	1.55	291	ePb	Pb	05 31 24.1	-0.9
MFT	Murefte	1.62	71	PN	Pn	05 31 25.0	-0.2
MFT				SN	Sn	05 31 47.6	+1.8
MMB	Musomiste	1.75	319	i P	Pn	05 31 26.5	-0.5
DIM	Dimitrovgrad	1.78	7	i P	Pn	05 31 29.5	+2.1
THE	Thessaloniki	1.78	282	ePb	Pb	05 31 27.0	-2.0
MRMT	Marmara Adasi	1.81	79	PN	Pn	05 31 28.6	+0.7
XOR	Xorichti	1.83	241	ePb	Pb	05 31 27.6	-2.3
PLD	Plovdiv	1.87	347	i P	Pn	05 31 31.5	+2.8
EDRB	Edirne	1.93	35	PN	Pn	05 31 29.8	+0.3
EDC	Edincik	2.00	87	PN	Pn	05 31 31.6	+1.1
KNT	Kendrikon	2.00	297	ePn	Pn	05 31 30.9	+0.3
BNT	Bandirma	2.04	87	PN	Pn	05 31 31.7	+0.5
BALB	Balikesir	2.12	107	PN	Pn	05 31 32.8	+0.5
LIT	Litokhoron	2.13	266	ePn	Pn	05 31 32.5	+0.1
LIT				eSn	Sn	05 32 00.2	+1.6
URLA	Izmir	2.18	151	i P	Pn	05 31 32.2	-1.0
URLA				i S	Sn	05 31 58.9	-1.1
GRG	Griva	2.27	288	ePn	Pn	05 31 35.1	+0.6
KKB	Krupnik	2.28	315	i P	Pn	05 31 34.5	-0.1
VAY	Valandovo	2.29	298	ePn	Pn	05 31 34.7	0.0
VAY				eSn	Sn	05 32 04.7	+2.1
BLCB	Balcova	2.35	143	ePN	Pn	05 31 35.0	-0.6
KCT	Karacabey	2.37	89	ePN	Pn	05 31 36.6	+0.7
JMB	Yambol	2.40	24	i P	Pn	05 31 36.5	+0.2
PGB	Panagyurishte	2.41	340	P	Pn	05 31 36.0	-0.5
AKS	Akhisar	2.42	125	ePN	Pn	05 31 36.9	+0.2
KDAG	Bornova	2.44	140	i P	Pn	05 31 36.8	-0.1
KDAG				i S	Sn	05 32 05.2	-1.3
IZM	Izmir	2.44	140	ePN	Pn	05 31 36.5	-0.4
CTT	Catalca	2.56	69	ePN	Pn	05 31 39.2	+0.5
ELBA	Catalca	2.56	69	i P	Pn	05 31 37.3	-1.4
ELBA				i S	Sn	05 32 16.4	+6.8
AGG	Agios Georgios	2.58	242	ePn	Pn	05 31 38.9	-0.1
AGG				eSn	Sn	05 32 10.4	+0.2
DST	Dursunbey	2.68	104	ePN	Pn	05 31 40.6	+0.3
VTS	Vitosha	2.77	327	P	Pn	05 31 51.7	+10
ORLT	Orhaneli	2.80	94	ePN	Pn	05 31 42.6	+0.6
PVL	Pavlikeni	2.93	1	i P	Pn	05 31 42.7	-1.2
ULDT	Uludag	2.98	91	i P	Pn	05 31 45.8	+1.3
ULDT				i S	Sn	05 32 20.7	+0.6
BADT	Buyukada	3.00	78	ePN	Pn	05 31 45.5	+0.7
ISK	Istanbul-Kandi	3.00	74	ePN	Pn	05 31 45.2	+0.4
FNA	Florina	3.00	281	ePn	Pn	05 31 45.1	+0.3
BIA	Bitola	3.08	285	ePn	Pn	05 31 44.4	-1.7
BIA				eSn	Sn	05 32 19.1	-3.7
MANT	Manisa	3.12	124	i P	Pn	05 31 55.5	+8.9
MANT				i S	Sn	05 32 35.1	+11
YLV	Yalova	3.16	83	ePN	Pn	05 31 47.8	+0.7
PRD	Provadia	3.33	28	P	Pn	05 31 48.5	-1.0
SKO	Skopje	3.34	302	ePn	Pn	05 31 47.5	-2.2
SKO				eSn	Sn	05 32 27.1	-2.2
SKO	Skopje	3.34	302	ePn	Pn	05 31 47.5	-2.2
SKO				eSn	Sn	05 32 27.1	-2.2
HRT	Hereke	3.41	79	ePN	Pn	05 31 51.2	+0.6
GDZ	Gediz	3.47	109	i P	Pn	05 31 59.5	+7.9
BODT	Bodrum	3.59	153	ePN	Pn	05 31 52.1	-1.2
BDRM	Kayabasi	3.64	151	i P	Pn	05 31 53.8	-0.2
BDRM				i S	Sx	05 31 54.5	
YER	Yerkesik	3.93	142	ePN	Pn	05 31 57.3	-0.8
ALT	Altintas	3.94	107	ePN	Pn	05 31 58.6	+0.4
ESKT	Eskisehir	4.37	98	i P	Pn	05 32 02.1	-2.2
ESKT				i S	Sx	05 32 13.3	
ESKT	Eskisehir	4.37	98	ePn	Pn	05 32 04.0	-0.3
FETY	Fethiye	4.72	139	ePN	Pn	05 32 08.6	-0.7
TIRR	Tirgusor	4.78	28	⇑P	Pn	05 32 09.8	-0.4
TIRR	Tirgusor	4.78	28	⇑P	Pn	05 32 09.8	-0.5
VOIR		5.16	358	⇑P	Pn	05 32 16.1	+0.7
VOIR		5.16	358	⇑P	Pn	05 32 16.1	+0.7
MLR	Muntele Rosu	5.23	5	⇓P	Pn	05 32 15.8	-0.7
MLR	Muntele Rosu	5.23	5	⇓P	Pn	05 32 15.8	-0.7
CFR	Carcaliu	5.33	22	⇓P	Pn	05 32 18.9	+0.9
CFR	Carcaliu	5.33	22	⇓P	Pn	05 32 18.9	+0.9
DIVS	Divcibare	5.46	316	i Sn	Sx	05 33 52.2	
BURAR	Bucovina Array	7.33	360	⇑P	Pn	05 32 47.8	+1.7
BURAR	Bucovina Array	7.33	360	⇑P	Pn	05 32 47.8	+1.7

*ISK **15** 05:51:31.3, 40.33N×25.10E, h28^{km}, ML4.3*
*ATH **15** 05:51:31.9, 40.32N×25.28E, h26^{km}, MD4.0/10, ML4.1*
*SKO **15** 05:51:31.1, 40.02N×25.38E, h20^{km}*
*SOF **15** 05:51:31.6, 40.37N×25.29E, h10^{km}, MD4.0*
*PDG **15** 05:51:32.5±0.5, 40.33N×25.27E, h21^{km}±1^{km}*
*IDC **15** 05:51:32.6±1.7, 40.40N×25.32E, mb3.6/3, mb1 3.8/9, mb1mx3.7/26, mbtmp3.7/9, ML3.8/6, MS3.1/7, Ms1 3.2/7, ms1mx3.0/33, Error ellipse: s-maj=25.0km s-min=19.5km az=53.0*
*THE **15** 05:51:33.0, 40.19N×25.40E, h20^{km}, ML4.2*
*NEIC **15** 05:51:33.3, 40.23N×25.37E, h27^{km}, MD3.8(PDG), ML4.4(THE), ML4.2(ISK), ML4.1(ATH), After THE.*
*CSEM **15** 05:51:33.6±0.0, 40.31N×25.32E, h40^{km}, mb3.6/3, Error ellipse: s-maj=1.4km s-min=0.9km az=18.0*
*MOS **15** 05:51:34.7±1.1, 40.42N×25.34E, h29^{km}, mb3.8/3, Error ellipse: s-maj=14.0km s-min=4.9km az=93.4*
ISC 15 05:51:32.8±0.1**, 40.32N**±0.02×**25.26E**±0.02**, h26**^{km}**, n161, σ0^{s}94**/199**, mb3.5**/3**, MS3.0**/3**, 18C-15D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	Limnos	0.41	200	ePg	Pb	05 51 40.8	-0.8
LIA	Limnos Island	0.43	188	ePB	Pb	05 51 41.3	-0.5
LIA				eSB	Sb	05 51 47.8	-0.2
ALN	Alexandroupoli	0.83	46	ePg	Pb	05 51 48.5	0.0
ALN				eSg	Sb	05 51 60.0	+0.7
RDO	Rodhopi	0.85	14	ePN	Pn	05 51 48.9	-0.2
RDO				eSN	Sn	05 52 00.3	-0.4
EZN	Ezine	0.96	121	i PG	Pb	05 51 50.3	-0.3
OUR	Ouranopolis	0.98	271	ePg	Pn	05 51 51.6	+0.7
LPK	Lapseki	1.15	87	i PN	Pn	05 51 53.6	+0.2
LPK				i SN	Sn	05 52 10.0	+1.7
PAIG	Paliouri	1.27	252	ePg	Pn	05 51 55.5	+0.3
PAIG				eSg	Sn	05 52 12.2	+0.6
PRK	Paraskevi	1.33	144	ePN	Pn	05 51 56.7	+0.8
PRK				eSN	Sn	05 52 14.5	+1.6
KDZ	Kurdzhali	1.33	5	i P	Pn	05 51 56.5	+0.5
PLG	Polygyros	1.39	273	⇓iPN	Pn	05 51 57.5	+0.7
PLG				eSN	Sn	05 52 15.8	+1.4
RZN	Rozhen	1.43	343	i P	Pn	05 51 58.3	+1.0
NVR	Nevrokopi	1.48	314	ePN	Pn	05 51 59.0	+0.9
AYVA	Ayvalik	1.50	132	i P	Pn	05 52 00.0	+1.7
AYVA				i S	Sn	05 52 17.9	+0.8
SART	Tekirdag	1.51	75	i P	Pn	05 51 57.6	-0.9
SART				i S	Sn	05 52 17.2	-0.3
SOH	Sokhos	1.54	290	ePb	Pb	05 51 59.8	-0.6
SOH				eSb	Sb	05 52 21.6	+2.1
AOS	Alonnisos	1.57	223	ePg	Pn	05 51 59.0	-0.4
MFT	Murefte	1.61	73	i PN	Pn	05 51 59.7	-0.2
MMB	Musomiste	1.72	318	i P	Pn	05 52 02.0	+0.5
DIM	Dimitrovgrad	1.74	7	i P	Pn	05 52 02.7	+0.9
THE	Thessaloniki	1.78	281	ePb	Pb	05 52 02.5	-2.0
THE				eSb	Sb	05 52 27.4	+0.9
MRMT	Marmara Adasi	1.80	80	i PN	Pn	05 52 02.9	+0.2
PLD	Plovdiv	1.83	347	i P	Pn	05 52 05.0	+1.9
XOR	Xorichti	1.86	240	ePb	Pb	05 52 03.2	-2.7
XOR				eSb	Sb	05 52 26.1	-2.8
NEO	Neokhori	1.87	238	⇓iPB	Pb	05 52 03.5	-2.6
EDRB	Edirne	1.89	36	PN	Pn	05 52 04.0	0.0
KNT	Kendrikon	1.98	296	ePn	Pn	05 52 06.3	+1.1
KNT				eSn	Sn	05 52 32.4	+2.9
KNT	Kendrikon	1.98	296	ePn	Pn	05 52 06.3	+1.0
EDC	Edincik	1.99	88	PN	Pn	05 52 05.8	+0.4
BNT	Bandirma	2.03	88	PN	Pn	05 52 05.9	-0.1
BALB	Balikesir	2.12	108	PN	Pn	05 52 08.0	+0.6
LIT	Litokhoron	2.13	265	ePn	Pn	05 52 07.8	+0.3
BTOK	Tokmak	2.20	104	i P	Pn	05 52 09.0	+0.6

BTOK				iS	Sn	05 52 41.2	+6.1
URLA	Izmir	2.22	152	iP	Pn	05 52 08.5	-0.1
URLA				iS	Sn	05 52 41.3	+5.8
KKB	Krupnik	2.25	314	iP	Pn	05 52 10.0	+0.8
GRG	Griva	2.27	287	ePn	Pn	05 52 10.0	+0.6
VAY	Valandovo	2.27	297	ePn	Pn	05 52 10.1	+0.6
VAY				eSn	Sn	05 52 42.7	+5.8
VAY	Valandovo	2.27	297	ePn	Pn	05 52 10.1	+0.6
VAY				eSn	Sn	05 52 42.7	+5.8
JMB	Yambol	2.36	24	iP	Pn	05 52 11.5	+0.8
KCT	Karacabey	2.37	90	PN	Pn	05 52 10.8	0.0
PGB	Panagyurishte	2.37	340	iP	Pn	05 52 11.3	+0.4
BLCB	Balcova	2.38	144	PN	Pn	05 52 11.3	+0.3
LKR	Lokris	2.42	227	ePN	Pn	05 52 11.9	+0.3
AKS	Akhisar	2.44	125	PN	Pn	05 52 11.9	0.0
KDAG	Bornova	2.47	140	iP	Pn	05 52 12.0	-0.3
KDAG				iS	Sn	05 52 40.3	-1.6
IZM	Izmir	2.47	140	PN	Pn	05 52 12.4	+0.1
PTL	Penteli	2.52	206	ePN	Pn	05 52 13.0	0.0
CTT	Catalca	2.54	70	PN	Pn	05 52 12.8	-0.6
ELBA	Catalca	2.55	70	iP	Pn	05 52 12.7	-0.6
ELBA				iS	Sn	05 52 51.7	+7.9
AGG	Agios Georgios	2.61	241	ePn	Pn	05 52 14.1	-0.1
AGG				eSn	Sn	05 52 44.7	-0.7
ATH	Athens Observa	2.64	208	ePN	Pn	05 52 14.5	-0.2
KZN	Kozani	2.67	271	ePN	Pn	05 52 16.2	+1.1
DST	Dursunbey	2.69	104	PN	Pn	05 52 16.0	+0.6
VTS	Vitosha	2.74	326	iP	Pn	05 52 17.5	+1.3
VTS	Vitosha	2.74	326	⇓P	Pn	05 52 17.4	+1.3
ARMT	Armutlu	2.76	84	PN	Pn	05 52 16.8	+0.4
ORLT	Orhaneli	2.80	95	PN	Pn	05 52 17.6	+0.6
SMG	Samos	2.88	154	ePN	Pn	05 52 18.2	0.0
PVL	Pavlikeni	2.89	1	iP	Pn	05 52 18.0	-0.3
ULDT	Uludag	2.97	92	iP	Pn	05 52 19.7	+0.2
ISK	Istanbul-Kandi	2.98	74	PN	Pn	05 52 19.9	+0.3
SZH	Strazhica	2.98	9	iP	Pn	05 52 20.0	+0.4
BADT	Buyukada	2.98	79	PN	Pn	05 52 18.3	-1.3
FNA	Florina	3.00	280	ePn	Pn	05 52 20.7	+0.9
EVR	Evrytania	3.01	243	ePN	Pn	05 52 20.3	+0.3
BIA	Bitola	3.07	284	ePn	Pn	05 52 21.6	+0.8
BIA				eSn	Sn	05 52 57.8	+0.6
BIA	Bitola	3.07	284	ePn	Pn	05 52 21.6	+0.7
BIA				eSn	Sn	05 52 57.8	+0.6
MANT	Manisa	3.14	125	iP	Pn	05 52 22.4	+0.6
MANT				iS	Sn	05 53 04.7	+5.8
YLV	Yalova	3.15	84	ePN	Pn	05 52 22.1	+0.2
APE	Apeiranthos	3.26	176	ePN	Pn	05 52 22.0	-1.5
SKO	Skopje	3.32	301	ePn	Pn	05 52 24.8	+0.4
SKO				eSn	Sn	05 53 05.8	+2.3
AYDN	Tasoluk	3.35	142	iP	Pn	05 52 25.1	+0.3
HRT	Hereke	3.39	80	ePN	Pn	05 52 25.6	+0.2
GDZ	Gediz	3.48	109	iP	Pn	05 52 26.6	-0.1
GDZ				iS	Sn	05 53 20.3	+13
OHR	Ohrid	3.48	285	ePn	Pn	05 52 28.0	+1.4
OHR				eSn	Sn	05 53 08.4	+0.9
BARS	Barje	3.59	315	⇑iPn	Pn	05 52 28.8	+0.6
BARS				Sn	Sn	05 53 27.3	+17
MLSB	Milas	3.61	146	ePN	Pn	05 52 28.1	-0.3
BODT	Bodrum	3.63	153	ePN	Pn	05 52 27.7	-1.1
BDRM	Kayabasi	3.67	152	iP	Pn	05 52 30.0	+0.6
BDRM				iS	Px	05 52 30.1	
GPA	Golpazari	3.86	89	ePN	Pn	05 52 31.8	-0.2
KHL	Karahalli	3.86	120	ePN	Pn	05 52 32.6	+0.5
DENT	Denizli	3.90	130	ePN	Pn	05 52 32.6	0.0
ALT	Altintas	3.95	107	ePN	Pn	05 52 33.8	+0.5
DNZL	Cakiroluk	3.95	131	iP	Pn	05 52 33.8	+0.5
DNZL				iS	Px	05 52 37.7	
YER	Yerkesik	3.96	142	ePN	Pn	05 52 33.1	-0.4
BORA	Eskisehir	4.01	95	iP	Pn	05 52 34.1	0.0
BORA				iS	Px	05 52 37.4	
DAT	Datca	4.02	152	ePN	Pn	05 52 33.3	-1.1
BOLS	Boljevac	4.28	326	⇓iPn	Pn	05 52 39.0	+1.0
BOLS				Sn	Sn	05 53 26.6	-1.2
HENT	Hendek	4.32	82	iP	Pn	05 52 37.0	-1.7
HENT				iS	Px	05 52 42.0	
ESKT	Eskisehir	4.37	99	iP	Pn	05 52 38.4	-0.9
ESKT				iS	Px	05 52 46.4	
ESKT	Eskisehir	4.37	99	ePn	Pn	05 52 39.4	+0.1
DALT	Dalyan (Mudla)	4.43	142	ePN	Pn	05 52 39.4	-0.7
TKTP	Tekketepe	4.54	118	iP	Pn	05 52 41.2	-0.6
TKTP				iS	Px	05 53 01.8	
MDU	Mudurnu	4.55	86	ePN	Pn	05 52 41.4	-0.4
GOLH	Golhisar	4.56	131	iP	Pn	05 52 41.8	-0.2
GOLH				iS	Px	05 52 56.2	
PVY	Plav	4.58	301	⇓iPn	Pn	05 52 42.7	+0.5
PVY				eSn	Sn	05 53 34.9	-0.3
TIRR	Tirgusor	4.75	28	⇑P	Pn	05 52 44.5	-0.1
TIRR	Tirgusor	4.75	28	⇑P	Pn	05 52 44.5	-0.1
FETY	Fethiye	4.75	140	ePN	Pn	05 52 44.5	-0.2
IVA	Berane	4.76	304	⇓iPn	Pn	05 52 45.1	+0.3
IVA				eSn	Sn	05 53 39.1	-0.8
ISP	Isparta	4.78	120	ePN	Pn	05 52 45.8	+0.8
HARR	Harsova	4.79	23	⇑P	Pn	05 52 44.3	-0.9
HARR	Harsova	4.79	23	⇑P	Pn	05 52 44.3	-0.9
ULC	Ulcinj	4.83	292	⇓iPn	Pn	05 52 46.3	+0.6
ULC				eSn	Sn	05 53 41.0	-0.5
MTUR	Matau	4.90	358	⇓P	Pn	05 52 46.1	-0.7
MTUR	Matau	4.90	358	⇓P	Pn	05 52 46.1	-0.7
GRUS	Gruza	4.91	318	iPn	Pn	05 52 46.3	-0.6
TTG	Podgorica	4.98	297	⇑iPn	Pn	05 52 48.2	+0.3
TTG				eSn	Sn	05 53 45.0	-0.4
SNX	Sinaia	5.03	2	⇑P	Pn	05 52 47.9	-0.8
SNX	Sinaia	5.03	2	⇑P	Pn	05 52 47.9	-0.7
IDI	Anoyia	5.04	183	Pn	Pn	05 52 50.8	+2.1
	1.1nm,0.3s,baz=353,slow=8.1,SNR=5.4						
IDI				LR	LR	05 54 54.5	
	comp=Z,206nm,18.2s,baz=61,slow=40						
ELL	Elmali	5.10	133	ePN	Pn	05 52 49.5	-0.1
VOIR		5.11	358	⇓P	Pn	05 52 49.7	-0.1
VOIR		5.11	358	⇓P	Pn	05 52 49.7	-0.1
BUM	Brajici-Budva	5.18	294	⇓iPn	Pn	05 52 50.7	-0.1
BUM				eSn	Sn	05 53 49.2	-1.2
MLR	Muntele Rosu	5.19	5	Pn	Pn	05 52 51.7	+0.8
	2.9nm,0.3s,baz=240,slow=20,SNR=57						
MLR				Lg		05 54 21.2	
	12nm,0.3s,baz=258,slow=24,SNR=6.8						
MLR				LR	LR	05 54 33.9	
	comp=Z,109nm,18.9s,baz=177,slow=36						
MLR	Muntele Rosu	5.19	5	P	Pn	05 52 51.7	+0.8
MLR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MLR				MLR	MLR		
	comp=Z,12nm,0.3s						
MLR				MLR	MLR		
	comp=Z,109nm,19.0s						
NVSS	Nova Varos 2	5.23	309	⇑iPn	Pn	05 52 49.9	-1.5
NVSS				Sn	Sn	05 53 50.5	-1.1
CFR	Carcaliu	5.29	23	⇑P	Pn	05 52 50.9	-1.4
CFR	Carcaliu	5.29	23	⇑P	Pn	05 52 50.9	-1.4
KIZT	Kizilcal	5.31	104	ePN	Pn	05 52 53.0	+0.4
NKY	Niksic	5.32	300	ePn	Pn	05 52 53.2	+0.5
NKY				eSn	Sn	05 53 52.5	-1.3
AKAS	Kas	5.32	139	iP	Pn	05 52 57.6	+4.8
AKAS				iS	Px	05 53 24.9	
DIVS	Divcibare	5.43	316	⇓iPn	Pn	05 52 53.4	-0.9
DIVS				Sn	Sn	05 53 51.0	-5.8
HCY	Herceg Novi	5.51	295	ePn	Pn	05 52 54.7	-0.7
HCY				eSn	Sn	05 53 57.3	-1.4
UPM	Unac-Piva	5.55	303	⇓iPn	Pn	05 52 55.7	-0.3
UPM				eSn	Sn	05 53 57.4	-2.4
KDHN	Kadinhani	5.61	107	iP	Pn	05 53 03.6	+6.8
KDHN				iS	Px	05 53 28.8	
BBLS	Bajina Basta -	5.61	311	iPn	Pn	05 53 06.5	+10
VRI	Vrincioaia	5.64	10	⇑P	Pn	05 52 58.2	+0.9
VRI	Vrincioaia	5.64	10	⇑P	Pn	05 52 58.1	+0.9
VRI	Vrincioaia	5.64	10	⇓P	Pn	05 52 58.5	+1.2
BRY	Bratogost	5.65	299	⇑iPn	Pn	05 52 57.7	+0.3
BRY				eSn	Sn	05 54 00.3	-2.0
SAFT	Safranbolu	5.71	78	ePN	Pn	05 52 57.8	-0.4
BEO	Belgrade	5.73	323	ePn	Pn	05 53 21.5	+23
BEO				Sn	Sn	05 54 24.4	+20
ANTO	Ankara	5.79	92	ePN	Pn	05 52 59.9	+0.5
KONT	Konya--Tatoy	6.01	111	ePN	Pn	05 53 02.9	+0.5
ELDT	Eldivan	6.24	86	iP	Pn	05 53 03.6	-2.1
ELDT				iS	rx	05 53 58.6	
BR131	Keskin Array S	6.46	93	ePn	Pn	05 53 07.5	-1.3
	comp=Z,5.1nm,0.5s						
BR131	Keskin Array S	6.46	93	ePn	Pn	05 53 07.5	-1.3
	comp=Z,5.1nm,0.5s						
BRTR	Keskin Array B	6.46	93	Pn	Pn	05 53 08.0	-0.8
	comp=Z,0.9nm,0.3s,baz=263,slow=12,SNR=24						
BRTR				Lg		05 55 03.8	
	comp=Z,0.3nm,0.3s,baz=267,slow=22,SNR=8.1						
BRTR	Keskin Array B	6.46	93	Pn	Pn	05 53 07.9	-0.9
DRGR		6.73	345	⇑P	Pn	05 53 19.6	+7.1
CDAG	Cicekdag	7.03	93	iP	Pn	05 53 15.5	-1.4
CDAG				iS	rx	05 54 12.6	
KIS	Kishinev	7.15	20	eP	Pn	05 53 30.0	+11
KIS				e		05 54 46.0	
BURAR	Bucovina Array	7.29	360	⇑P	Pn	05 53 18.6	-1.8
BURAR	Bucovina Array	7.29	360	⇑P	Pn	05 53 18.6	-1.8
PKSM	Moragy	7.61	323	⇑eP	Pn	05 53 23.2	-1.7
PKSM				S	Sn	05 55 04.6	+13
KECS	Kecovo	8.84	339	ePN	P	05 53 41.3	-0.8
KECS				e		05 56 27.5	
VOY	Vojsko	10.07	308	ePn	P	05 53 59.6	+0.7
VOY				e		05 54 03.8	
AKASG	Malin Array Be	10.74	14	Pn	P	05 54 05.2	-2.9
	comp=Z,0.7nm,0.3s,baz=195,slow=13,SNR=5.1						
AKASG				Lg		05 57 18.4	
	baz=188,slow=28,SNR=4.2						
AKASG	Malin Array Be	10.74	14	P	P	05 54 05.2	-2.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GERES	GERESS Array B	11.84	320	Pn	P	05 54 22.6	-0.5
	comp=Z,0.4nm,0.3s,baz=126,slow=13,SNR=4.6						
GERES				LR	LR	05 59 02.2	
	comp=Z,87nm,18.4s,baz=253,slow=38						
DAVOX	Davos	12.88	305	Pn	P	05 54 37.4	+0.5
	comp=Z,0.4nm,0.3s,baz=130,slow=16,SNR=4.1						
DAVOX				LR	LR	05 59 59.1	
	comp=Z,156nm,20.5s,baz=96,slow=39						
HFS	Hagfors	21.11	344	LR	LR	06 05 00.2	
	comp=Z,20nm,21.0s,MS2.5,baz=226,slow=38						
FINES	FINESS Array B	21.16	1	P	P	05 56 16.9	-1.1
	comp=Z,3.4nm,0.9s,mb3.6,baz=180,slow=12,SNR=3.1						
FINES	FINESS Array B	21.16	1	P	P	05 56 16.9	-1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NOA	NORSAR Array B	22.47	342	P	P	05 56 33.4	+2.2
	comp=Z,1.3nm,0.8s,mb3.4,baz=147,slow=9.1,SNR=3.3						
NOA				LR	LR	06 04 36.5	
	comp=Z,43nm,19.9s,MS2.9,baz=280,slow=35						
NOA	NORSAR Array B	22.47	342	P	P	05 56 33.4	+2.2
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NOA				MLR	MLR		
	comp=Z,43nm,19.9s						
ARCES	ARCESS Array B	29.28	0	LR	LR	06 09 12.5	
	comp=Z,130nm,18.9s,MS3.6,baz=193,slow=36						
MKAR	Makanchi Array	41.05	61	P	P	05 59 16.9	+1.5
	comp=Z,0.8nm,0.7s,mb3.5,baz=277,slow=7.4,SNR=9.3						
MKAR	Makanchi Array	41.05	61	P	P	05 59 16.9	+1.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

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*NEIC **15** 06:14:02.3, 15.84N×94.95W, h16^{km}, MD4.0(MEX), After MEX.*

MEX 15 06:14:02.3±0.6**, 15.84N×94.95W, h16^{km}**±8^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.12	266	iP	Pb	06 14 19.3	-3.5
HUIG				iS	Sb	06 14 32.6	-4.3
CMIG	Matias Romero	1.24	3	iP	Pb	06 14 21.3	-3.5
CMIG				iS	Sb	06 14 35.9	-4.6
OXX	Oaxaca	2.10	306	iP	Pn	06 14 35.0	-2.4
OXX				iS	Sn	06 14 59.0	-4.3
VHO	Vista Hermosa	2.10	306	iP	Pn	06 14 34.9	-2.5
VHO				eS	Sn	06 14 58.4	-5.0
SCX	San Cristobal	2.39	68	eP	Pn	06 14 40.0	-1.6
SCX				iS	Sn	06 15 11.0	+0.2
CCIG	Comitan	2.74	80	iP	Pn	06 14 42.8	-3.7
CCIG				iS	Sn	06 15 14.7	-4.9

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*JMA **15** 06:19:10.6±0.2, 38.23N×144.70E, h52^{km}, M3.5*

ISC 15 06:19:10.3±2.1**, 38.34N**±0.08×**144.8E**±0.1**, h52^{km}, n10,** σ**1$\overset{s}{.}$23**/14**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.54	288	P	P	06 19 50.4	+0.5
MIYJ	Miyakonagasawa	2.61	299	P	P	06 19 51.5	+0.5
MIYJ				eS	S	06 20 21.9	+0.3
JIO	Ouri	2.69	273	P	P	06 19 52.0	-0.1
JIO				eS	S	06 20 23.0	-0.6
JMK	Ichinoseki	2.84	283	P	P	06 19 54.8	+0.5
JMK				eS	S	06 20 28.1	+0.5
JCH	Churui	4.40	346	eS	S	06 21 05.3	-1.5
NEM2	Nemuro 2	5.07	8	eS	S	06 21 18.7	-5.0
JOSM	Okushiri--Mats	5.51	314	P	P	06 20 33.4	+1.6
MAT	Matsushiro	5.52	253	P	P	06 20 32.1	+0.2
MAT				eS	S	06 21 32.4	-2.5
JTKR	Abashiri--Toko	5.66	354	eS	S	06 21 35.9	-2.5
JHR	Hokuryu	5.87	338	eS	S	06 21 45.5	+2.0

IDC 15 06:25:15.3±1.3**, 30.84N×140.35E, mb3.7**/4**, mb1 4.0**/5**, mb1mx3.7**/20**, mbtmp3.6**/5**, ML3.1**/1**, MS2.9**/2**, Ms1 2.9**/2**, ms1mx2.3**/26**, Error ellipse: s-maj=42.6km s-min=29.1km az=74.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	2.32	348	LR	LR	06 26 23.9	
	comp=Z,302nm,19.7s,baz=42,slow=30						
MJAR	Matsushiro Arr	5.96	343	Pn	Pn	06 26 43.0	-3.9
	0.5nm,0.3s,baz=149,slow=14,SNR=6.6						
JNU	Nakatsue	8.36	288	LR	LR	06 29 54.4	
	comp=Z,54nm,18.9s,baz=228,slow=33						
SONM	Songino Array	30.95	313	P	P	06 31 34.6	-1.4
	0.2nm,0.5s,baz=129,slow=9.2,SNR=2.3						
WRA	Warramunga Arr	50.82	187	P	P	06 34 17.3	-2.5
	0.3nm,0.4s,baz=3.9,slow=7.5,SNR=5.0						
NVAR	Mina Array Bea	79.47	52	P	P	06 37 24.3	-0.9
	0.3nm,0.6s,baz=312,slow=2.9,SNR=3.6						
TXAR	Lajitas Array	94.61	52	P	P	06 38 38.5	-1.0
	0.5nm,0.8s,baz=286,slow=1.6,SNR=4.9						

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*IDC **15** 06:39:24.2±1.8, 16.43S×178.48W, mb3.9/4, mb1 4.2/4, mb1mx3.9/13, mbtmp3.9/4, MS3.6/1, Ms1 3.6/1, ms1mx2.7/16, Error ellipse: s-maj=105.2km s-min=27.4km az=146.0*

ISC 15 06:39:27.8±1.6**, 16.5S**±0.6×**178.5W**±0.4**, h33^{km}, n7,** σ**0$\overset{s}{.}$28**/6**, mb3.8**/4**, MS3.4**/1**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	21.98	189	LR	LR	06 51 11.1	
	comp=Z,140nm,18.8s,MS3.4,baz=262,slow=32						
STKA	Stephens Creek	39.20	240	eP	P	06 46 54.6	+0.1
	2.9nm,0.6s,mb4.2						
STKA	Stephens Creek	39.20	240	P	P	06 46 54.8	+0.3
	3.4nm,0.5s,mb4.4,baz=96,slow=10,SNR=10.0						
WRA	Warramunga Arr	44.78	258	P	P	06 47 40.5	+0.1
	1.1nm,0.5s,mb4.0,baz=91,slow=6.9,SNR=21						
ASPA	Alice Springs	45.06	253	eP	P	06 47 42.3	-0.3
ILAR	Eielson Array	84.58	13	P	P	06 51 58.7	+0.1
	0.2nm,0.4s,mb3.6,baz=219,slow=5.6,SNR=5.9						
TXAR	Lajitas Array	85.37	58	P	P	06 52 03.3	-0.1
	0.3nm,0.7s,mb3.6,baz=231,slow=8.0,SNR=4.2						

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*ATH **15** 06:45:56.6, 40.35N×25.26E, h33^{km}±7^{km}, MD3.2/3*
*CSEM **15** 06:45:56.9±0.1, 40.28N×25.26E, h20^{km}, ML3.2, Error ellipse: s-maj=1.7km s-min=1.3km az=178.0*
*THE **15** 06:45:57.1, 40.25N×25.34E, h17^{km}, ML3.2*
*SOF **15** 06:45:57.1, 40.38N×25.13E, h8^{km}, MD2.9*
*NEIC **15** 06:45:57.1, 40.25N×25.34E, h18^{km}, MD3.2(ATH), ML3.3(THE), After THE.*
*ISK **15** 06:45:58.1, 40.27N×25.30E, h32^{km}, MD3.2*

ISC 15 06:45:56.9±0.3**, 40.31N**±0.03×**25.24E**±0.03**, h17^{km}, n32,** σ**0$\overset{s}{.}$91**/41**, 1C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	Limnos	0.39	198	ePg	Pb	06 46 04.8	-0.1
ALN	Alexandroupoli	0.85	46	ePg	Pb	06 46 12.7	-0.1
ALN				eSg	Sb	06 46 24.4	+0.6
RDO	Rodhopi	0.87	15	⇑iPN	Pn	06 46 13.0	-1.2
RDO				eSN	Sn	06 46 24.5	-2.0
OUR	Ouranopolis	0.96	272	ePg	Pb	06 46 15.7	+1.1
EZN	Ezine	0.96	120	iPG	Pb	06 46 14.4	-0.3
EZN				iSG	Sb	06 46 27.0	0.0
LPK	Lapseki	1.17	86	PN	Pn	06 46 17.7	-0.8
PAIG	Paliouri	1.25	253	ePg	Pb	06 46 19.6	0.0
PRK	Paraskevi	1.33	143	ePN	Pn	06 46 20.7	-0.1
PRK				eSN	Sn	06 46 38.9	+0.8
KDZ	Kurdzhali	1.35	6	iP	Pn	06 46 21.3	+0.2
PLG	Polygyros	1.37	273	ePB	Pb	06 46 21.0	-0.6
PLG				eSN	Sn	06 46 38.9	-0.3
RZN	Rozhen	1.44	344	iP	Pn	06 46 22.5	+0.2
NVR	Nevrokopi	1.48	315	⇓iPN	Pn	06 46 23.2	+0.3
AYVA	Ayvalik	1.50	131	iP	Pn	06 46 24.9	+1.7
AYVA				iS	Sn	06 46 42.9	+0.5
AOS	Alonnisos	1.54	223	ePg	Pn	06 46 22.8	-1.0
AOS				eSg	Sn	06 46 43.8	+0.2
MFT	Murefte	1.63	72	PN	Pn	06 46 24.1	-1.0
MMB	Musomiste	1.72	319	iP	Pn	06 46 26.5	+0.2
DIM	Dimitrovgrad	1.76	7	iP	Pn	06 46 30.0	+3.1
MRMT	Marmara Adasi	1.82	80	PN	Pn	06 46 27.8	-0.1
XOR	Xorichti	1.83	240	ePb	Pb	06 46 27.4	-2.2
PLD	Plovdiv	1.84	348	P	Pn	06 46 33.5	+5.4
EDRB	Edirne	1.92	36	ePN	Pn	06 46 30.2	+1.0
KNT	Kendrikon	1.97	296	ePn	Pn	06 46 30.1	+0.2
BNT	Bandirma	2.05	88	PN	Pn	06 46 30.1	-1.0
BTOK	Tokmak	2.21	103	iP	Pn	06 46 39.9	+6.4
BTOK				iS	Sn	06 47 05.0	+4.3
GRG	Griva	2.25	288	ePn	Pn	06 46 34.5	+0.5
KKB	Krupnik	2.25	314	P	Pn	06 46 34.5	+0.5
PGB	Panagyurishte	2.38	341	P	Pn	06 46 35.5	-0.4
AKS	Akhisar	2.45	125	ePN	Pn	06 46 36.8	0.0
DST	Dursunbey	2.70	104	ePN	Pn	06 46 40.2	-0.2
VTS	Vitosha	2.75	327	P	Pn	06 46 43.5	+2.4
ULDT	Uludag	2.99	92	iP	Pn	06 46 48.8	+4.2
ULDT				iS	Sn	06 47 25.9	+5.6
YLV	Yalova	3.17	84	ePN	Pn	06 46 46.8	-0.2

PRE 15 06:46:03.5±3.0**, 26.43S×27.53E, h2^{km}, ML3.6, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.52	197	eP	Pg	06 46 15.4	+1.5
PRYS				eS	Sg	06 46 21.2	+0.3
PRYS				AML	AML	06 46 26.0	
	comp=Z,807nm,0.4s						
KSR	Koster	0.81	315	eP	Pg	06 46 19.3	-0.3
KSR				eS	Sg	06 46 29.6	-0.8
KSR				AML	AML	06 46 38.4	
	comp=Z,1µm,0.2s						
SLR	Silverton	0.96	45	eP	Pb	06 46 21.5	-1.1
SLR				eS	Sb	06 46 35.3	-0.2
SLR				AML	AML	06 46 40.9	
	comp=Z,398nm,0.2s						
SEK	Senekal	1.89	178	eP	Pn	06 46 38.4	+1.3
SEK				eS	Sn	06 47 01.6	-0.2
SEK				AML	AML	06 47 05.2	
	comp=Z,748nm,0.3s						
SWZ	Schweizer	2.11	249	eP	Pn	06 46 27.9	-12
SWZ				eS	Sn	06 46 44.0	-23
SWZ				AML	AML	06 46 45.4	
	comp=Z,357nm,0.3s						
LBTB	Lobatse	2.24	308	eP	Pn	06 46 42.2	0.0
LBTB				eS	Sn	06 47 12.6	+1.8
BOSA	Boshof	2.97	222	eP	Pn	06 46 52.1	-0.4
BOSA				eS	Sn	06 47 27.4	-1.9
BOSA				AML	AML	06 47 47.4	
	comp=Z,546nm,0.5s						
POGA	Pongola	3.76	105	eP	Pn	06 47 04.0	+0.2
POGA				eS	Sn	06 47 39.5	-10
POGA				AML	AML	06 48 07.9	
	comp=Z,131nm,0.5s						
MSNA	Messina	4.65	30	eP	Pn	06 46 09.2	-67
MSNA				eS		06 46 38.6	
MSNA				AML	AML	06 46 56.1	
	comp=Z,46nm,0.4s						
PKA	Prieska	5.32	231	eP	Pn	06 46 20.2	-66
PKA				eS	Sn	06 47 19.4	-69
PKA				AML	AML	06 47 39.9	
	comp=Z,73nm,0.4s						
UPI	Upington	5.91	250	eP	Pn	06 47 32.3	-1.8
UPI				eS	Sn	06 48 37.1	-6.2
CVNA	Calvinia	8.47	232	eP	P	06 48 07.6	-2.5
CVNA				eS	Sn	06 49 29.7	-18
CVNA				AML	AML	06 49 42.0	
	comp=Z,9.4nm,0.4s						

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*IDC **15** 06:46:50.9±1.4, 33.05S×178.61W, mb4.1/3, mb1 4.4/4, mb1mx4.1/12, mbtmp4.2/4, ML4.1/1, Error ellipse: s-maj=47.1km s-min=26.8km az=140.0*

ISC 15 06:46:54.5±1.6**, 33.1S**±0.1×**178.7W**±0.3**, h33^{km}, n11,** σ**1$\overset{s}{.}$08**/9**, mb4.2**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.92	10	Sn	Sn	06 48 30.2	-9.4
	60nm,0.3s,baz=14,slow=23,SNR=3.2						
MXZ	Matakaoa Point	5.06	208	PN	Pn	06 48 09.0	-1.2
URZ	Urewera	6.16	213	Pn	Pn	06 48 25.4	-0.3
	3.9nm,0.3s,baz=87,slow=0.5,SNR=20						
URZ				Sn	Sn	06 49 37.0	+1.4
	6.1nm,0.3s,baz=152,slow=20,SNR=6.9						
URZ	Urewera	6.16	213	PN	Pn	06 48 24.2	-1.5
URZ				SN	Sn	06 49 36.8	+1.2
CTA	Charters Tower	33.77	284	P	P	06 53 35.6	+0.2
	1.5nm,0.3s,mb4.3,baz=102,slow=9.3,SNR=3.5						
WRA	Warramunga Arr	43.70	275	P	P	06 54 58.0	-0.3
	3.5nm,0.5s,mb4.3,baz=116,slow=7.6,SNR=12						
NVAR	Mina Array Bea	90.63	43	P	P	06 59 56.0	+1.1
	0.3nm,0.4s,mb3.9,baz=225,slow=2.6,SNR=2.4						
FINES	FINESS Array B	147.48	338	PKPbc	PKPdf	07 06 33.7	+2.0
	5.2nm,0.8s,baz=45,slow=5.2,SNR=16						
NB2	NORSAR Subarra	151.34	350	PKPbc	PKPdf	07 06 43.7	+5.9
	2.9nm,0.7s,baz=20,slow=4.3						
NOA	NORSAR Array B	151.34	350	PKPab	PKPab	07 06 54.3	-0.1
	1.0nm,0.7s,baz=13,slow=4.1,SNR=4.1						
AKASG	Malin Array Be	153.05	319	PKPbc	PKPdf	07 06 48.7	+8.1
	0.3nm,0.4s,baz=63,slow=2.0,SNR=2.8						

MAN 15 06:49:48.0, 16.65N×119.94E, h21^{km}, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.26	186	eP	Pb	06 49 56.5	+2.4
BOLP				eS	Sb	06 50 04.4	+6.1
BCPH	Baguio City Da	0.67	113	eP	Pb	06 50 01.2	+0.4
BCPH				eS	Sb	06 50 12.0	+2.4
SCZP	Santa Cruz	0.86	182	eP	Pb	06 50 03.2	-1.0
SCZP				eS	Sb	06 50 15.9	+0.6
ABRA	Dolores	1.24	36	eP	Pn	06 50 09.7	-0.6
ABRA				eS	Sb	06 50 24.3	-1.8
APYP	Conner	1.73	46	eP	Pn	06 50 16.6	-0.7
APYP				eS	Sn	06 50 38.1	-0.9
BALP	Baler	1.81	120	eP	Pn	06 50 18.6	+0.1
BALP				eS	Sn	06 50 42.0	+1.0
CAUP	Cauayan	1.83	80	eP	Pn	06 50 19.0	+0.3
LUBP	Lubang	2.91	174	eP	Pn	06 50 33.1	-1.1
BUSP	Coron	4.62	177	eP	Pn	06 50 51.4	-7.1

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*JMA **15** 06:50:58.9±0.1, 38.30N×144.74E, h56^{km}, M4.0*

ISC 15 06:50:58.6±1.6**, 38.45N**±0.08×**144.8E**±0.1**, h81^{km}**±50^{km}**, n9,** σ**0$\overset{s}{.}$89**/16**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.53	285	P	P	06 51 38.7	+0.2
OFUJ				eS	S	06 52 08.4	+0.1
MIYJ	Miyakonagasawa	2.58	297	P	P	06 51 39.7	+0.5
MIYJ				eS	S	06 52 09.9	+0.3
JIO	Ouri	2.71	271	P	P	06 51 40.6	-0.4
JIO				eS	S	06 52 11.4	-1.4
JMK	Ichinoseki	2.85	281	P	P	06 51 43.0	+0.1
JMK				eS	S	06 52 16.5	+0.3
JOT	Ohata	4.12	317	eS	S	06 52 48.4	+0.7
JCH	Churui	4.31	346	P	P	06 52 04.1	+0.9
JCH				eS	S	06 52 50.9	-1.6
JKB	Kayabe	4.49	321	P	P	06 52 07.7	+2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.97	8	P	P	06 52 11.0	-1.3
NEM2				*e*S	S	06 53 03.8	-5.1
MAT	Matsushiro	5.58	252	P	P	06 52 21.0	+0.4
MAT				*e*S	S	06 53 23.5	-0.6

*KNET **15** 07:10:22.5±0.7,41.65N×74.19E,h13^{km}±2^{km},ml2.8,Error ellipse: s-maj=4.1km s-min=2.2km az=16.0*
*NNC **15** 07:10:25.8±3.5,41.79N×74.11E,mpv3.3,Error ellipse: s-maj=29.2km s-min=12.7km az=162.0*
ISC 15 07:10:22.2±1.4**,41.56N**±0.07×**74.11E**±0.06**,h10^{km},n14,** σ**0^{s}71**/24**,12C-11D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	0.65	331	P	Pb	07 10 34.6	-0.5
	463nm,0.2s,SNR=557						
AML				⇑S	Sb	07 10 43.4	-0.5
	1μm,0.2s						
UCH	Uchtor	0.73	24	P	Pb	07 10 35.6	-0.9
	100nm,0.2s,SNR=515						
UCH				⇑S	Sb	07 10 45.2	-1.0
	162nm,0.1s						
KZA	Kyzart	0.99	59	⇑P	Pb	07 10 40.0	-1.0
	60nm,0.2s,SNR=119						
KZA				⇑S	Sb	07 10 53.0	-0.9
	165nm,0.2s						
AAK	Ala-Archa	1.11	15	⇓P	Pb	07 10 42.5	-0.5
	38nm,0.2s,SNR=36						
AAK				⇓S	Sb	07 10 56.8	-0.4
	98nm,0.2s						
AAK	Ala-Archa	1.11	15	⇓P	Pb	07 10 42.5	-0.4
	19nm,0.4s						
AAK				⇑S	Sb	07 10 56.8	-0.4
	38nm,0.3s						
EKS2	Erkin-Say	1.12	347	⇓P	Pb	07 10 43.0	-0.3
	20nm,0.1s,SNR=21						
EKS2				⇑S	Sb	07 10 58.2	+0.4
	89nm,0.2s						
KBK	Karagaybulak	1.26	29	P	Pb	07 10 45.2	-0.3
	86nm,0.1s,SNR=115						
KBK				⇑S	Sb	07 11 01.6	0.0
	331nm,0.2s						
CHMS	Chumysh	1.51	18	⇑P	Pn	07 10 49.7	+0.3
	15nm,0.1s,SNR=27						
CHMS				⇑S	Sb	07 11 09.4	+0.4
	213nm,0.3s						
USP	Ospenovka	1.73	9	⇓P	Pn	07 10 53.6	+1.0
	42nm,0.2s,SNR=66						
USP				⇓S	Sn	07 11 16.0	+1.2
	92nm,0.3s						
ULHL	Ulahol	1.73	66	P	Pn	07 10 53.0	+0.4
	39nm,0.2s,SNR=76						
ULHL				⇓S	Sn	07 11 15.3	+0.4
	51nm,0.2s						
TKM2	Tokmak 2	1.75	39	⇓P	Pn	07 10 53.8	+1.0
	47nm,0.1s,SNR=108						
TKM2				⇓S	Sn	07 11 16.5	+1.1
	128nm,0.2s						
KK31	Karatay Array	3.08	301	⇓Pn	Pn	07 11 17.6	+5.8
	5.8nm,0.5s,baz=120,slow=14,SNR=101						
KK31				⇓Lg		07 11 59.1	
	10nm,0.3s,baz=126,slow=24,SNR=11						
MK31	Makanchi Array	7.87	46	⇑Pn	Pn	07 12 26.2	+6.8
	1.4nm,0.6s,baz=224,slow=14,SNR=12						
MK31				⇑Lg		07 14 25.4	
	3.1nm,0.7s						
KURK	Kurchatov	9.67	17	⇑Lg		07 15 24.6	
	5.2nm,1.2s						

JMA 15 07:11:32.2±0.1**,38.23N×144.64E,h42^{km},M3.7,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.48	291	P	P	07 12 11.4	+0.4
OFUJ				*e*S	S	07 12 41.1	+0.9
MIYJ	Miyakonagasawa	2.58	302	P	P	07 12 12.6	+0.1
MIYJ				*e*S	S	07 12 43.1	+0.3
JIO	Ouri	2.60	276	P	P	07 12 13.1	+0.4
JIO				*e*S	S	07 12 43.3	0.0
JMK	Ichinoseki	2.77	286	P	P	07 12 15.6	+0.3
JMK				*e*S	S	07 12 48.4	+0.6
JCH	Churui	4.49	348	P	P	07 12 36.7	-2.8
JCH				*e*S	S	07 13 26.5	-4.6
JKB	Kayabe	4.58	324	P	P	07 12 40.9	0.0
JKB				*e*S	S	07 13 31.2	-2.4
NEM2	Nemuro 2	5.20	9	P	P	07 12 44.3	-5.2

IDC 15 07:18:21.9±4.0**,11.23S×165.35E,mb4.0**/3**,mb1 4.2**/3**, mb1mx3.9**/13**,mbtmp3.9**/3**,MS3.6**/1**,Ms1 3.5**/1**, ms1mx2.9**/12**,Error ellipse: s-maj=167.5km s-min=36.8km az=141.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	30.05	223	LR	LR	07 36 38.7	
	comp=Z,98nm,18.7s,baz=25,slow=36						
WRA	Warramunga Arr	31.06	250	P	P	07 24 41.8	-2.2
	1.3nm,0.7s,baz=81,slow=9.1,SNR=7.4						
ILAR	Eielson Array	83.81	19	P	P	07 30 52.8	-1.4
	1.2nm,0.8s,baz=252,slow=5.2,SNR=14						
MKAR	Makanchi Array	93.39	317	P	P	07 31 39.4	-0.9
	0.4nm,0.7s,baz=89,slow=6.4,SNR=4.3						

NNC 15 07:29:10.5±2.1**,36.87N×70.78E,h138^{km}**±38^{km}**,mpv3.5, 3C-2D,Error ellipse: s-maj=25.3km s-min=14.8km az=50.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.23	358	⇓P	P	07 30 40.4	-0.8
	1.0nm,0.3s,baz=170,slow=11,SNR=34						
KK31				⇑S	S	07 31 50.4	-1.1
	0.8nm,0.3s,baz=182,slow=22,SNR=5.5						
AAK	Ala-Archa	6.43	25	⇓P	P	07 30 42.7	-1.1
	3.2nm,0.5s						
AAK				⇑S	S	07 31 56.2	-0.1
	7.4nm,0.7s						
AB31	Akbulak array	14.67	331	⇑P	P	07 32 31.2	-1.0
	0.3nm,0.4s,baz=144,slow=11,SNR=6.7						

*JMA **15** 07:47:47.2±0.2,38.17N×144.63E,h55^{km},M4.1*
ISC 15 07:47:46.3±1.5**,38.21N**±0.10×**144.7E**±0.1**,h80^{km}**±58^{km}**, n13,** σ**0^{s}78**/20**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.53	291	P	P	07 48 26.7	+0.5
OFUJ				*e*S	S	07 48 55.8	-0.2
MIYJ	Miyakonagasawa	2.63	302	P	P	07 48 27.9	+0.3
MIYJ				S	S	07 48 58.1	-0.4
JIO	Ouri	2.65	276	P	P	07 48 28.1	+0.2
JIO				S	S	07 48 58.3	-0.7
JMK	Ichinoseki	2.83	286	P	P	07 48 30.9	+0.5
JMK				*e*S	S	07 49 03.6	+0.1
JOM	Ohasama	2.95	296	P	P	07 48 32.8	+0.8
JOM				*e*S	S	07 49 06.7	+0.3
JMM	Marumori	3.11	265	P	P	07 48 34.1	-0.1
JMM				*e*S	S	07 49 09.1	-1.3
JANG	Nango	3.29	312	P	P	07 48 37.0	+0.3
JYK	Kaneyama	3.48	283	*e*S	S	07 49 20.4	+0.8
JCH	Churui	4.52	347	P	P	07 48 52.1	-1.7
JKB	Kayabe	4.63	324	P	P	07 48 56.3	+1.0
JRY	Ryogami san	5.13	247	P	P	07 49 01.5	-0.7
NEM2	Nemuro 2	5.21	8	P	P	07 48 59.8	-3.5
MAT	Matsushiro	5.44	254	P	P	07 49 07.5	+1.1
MAT				*e*S	S	07 50 08.0	-0.3

*NIED **15** 08:00:00,38.20N×144.80E,h5^{km},Mw3.8 Best double couple: $M_0$5.88×10^{14} NP1:ϕ_s231°,δ77°,λ-83°. NP2:ϕ_s21°, δ14°,λ-119°.*
JMA 15 08:00:49.4±0.2**,38.18N×144.78E,h52^{km},M3.6,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.60	291	P	P	08 01 30.4	+0.4
OFUJ				*e*S	S	08 02 00.9	+0.5
MIYJ	Miyakonagasawa	2.70	302	P	P	08 01 31.5	+0.1
MIYJ				*e*S	S	08 02 02.9	-0.1
JIO	Ouri	2.71	277	S	S	08 02 03.3	-0.1
JMK	Ichinoseki	2.90	287	*e*S	S	08 02 08.6	+0.6
JOM	Ohasama	3.01	296	P	P	08 01 36.6	+0.7
JOM				*e*S	S	08 02 11.3	+0.3
JMM	Marumori	3.16	266	P	P	08 01 38.1	+0.1
JMM				S	S	08 02 14.0	-0.8
JANG	Nango	3.35	312	P	P	08 01 40.4	-0.2
JANG				*e*S	S	08 02 18.6	-0.9
JCH	Churui	4.56	347	P	P	08 01 55.8	-1.9
JCH				*e*S	S	08 02 45.5	-4.5

*IDC **15** 08:01:40.6±1.0,24.49N×123.00E,mb3.9/5,mb1 4.1/6, mb1mx3.8/20,mbtmp4.0/6,ML4.7/1,Error ellipse: s-maj=41.0km s-min=19.2km az=62.0*
*NEIC **15** 08:01:50.3,24.67N×123.32E,h80^{km},mb4.3/1,After JMA.*
*JMA **15** 08:01:50.3±0.1,24.67N×123.32E,h80^{km}±1^{km},M3.7*
ISC 15 08:01:49.0±0.4**,24.64N**±0.06×**123.32E**±0.04**,h92^{km}**±4^{km}**, n25,** σ**0^{s}89**/34**,mb3.9**/6**,3D,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.33	239	P	P	08 02 03.0	+0.2
YOJ				S	S	08 02 12.1	-1.3
IRIF	Iriomote-Funau	0.48	129	P	P	08 02 03.9	0.0
IRIF				S	S	08 02 14.4	-0.6
HATJ	Hateruma jima	0.72	143	P	P	08 02 06.6	+0.5
HATJ				S	S	08 02 19.2	+0.4
JKRS	Kuro-shima	0.74	122	P	P	08 02 06.9	+0.6
JKRS				S	S	08 02 19.2	+0.1
JIJ	Ishigaki jima	0.79	110	P	P	08 02 07.1	+0.3
JIJ				S	S	08 02 19.3	-0.7
JTJ	Tarama	1.25	89	P	P	08 02 12.8	+0.6
JTJ				S	S	08 02 29.2	-0.4
NACB	Ninganchiao	1.64	254	⇓*i*Pn	P	08 02 17.0	-0.1
TATO	Taipei	1.70	282	⇓*e*Pn	P	08 02 19.1	+1.2
YHNB	Yeheng	1.77	272	⇓*i*Pn	P	08 02 20.0	+1.3
JMJ	Miyako jima 2	1.80	84	P	P	08 02 20.2	+1.1
JMJ				*e*S	S	08 02 42.3	+1.0
JOGS	Gusukube	1.90	86	P	P	08 02 21.3	+0.9
JOGS				*e*S	S	08 02 44.9	+1.3
JKE	Kume jima 2	3.55	61	P	P	08 02 43.5	+0.3
BBP	Basco	4.36	197	*e*P	P	08 02 52.3	-2.0
BBP				*e*S	S	08 03 36.8	-7.4
JIH	Iheya	4.82	59	P	P	08 02 59.8	-0.8
JOW	Kunigami	4.97	63	Pn	P	08 03 01.5	-1.2
	53nm,0.3s,baz=243,slow=15,SNR=97						
JOW	Kunigami	4.97	63	P	P	08 03 01.4	-1.3
JTK	Tokunoshima	5.95	57	P	P	08 03 14.2	-1.8
JAM	Amami Oshima	6.77	55	P	P	08 03 25.2	-2.2
SONM	Songino Array	26.76	334	P	P	08 07 21.9	0.0
	0.5nm,0.8s,mb3.1,baz=146,slow=10,SNR=2.7						
MKAR	Makanchi Array	39.39	315	P	P	08 09 10.7	-0.4
	0.6nm,0.4s,mb3.8,baz=98,slow=10,SNR=14						
FITZ	Fitzroy Crossi	42.54	177	*e*P	P	08 09 36.9	-0.4
	2.7nm,0.6s,mb4.2						
WRA	Warramunga Arr	45.59	165	P	P	08 10 02.1	+0.3
	3.3nm,0.7s,mb4.2,baz=348,slow=8.7,SNR=23						
WB2	Warramunga Arr	45.59	165	*e*P	P	08 10 02.0	+0.1
BVAR	Borovoye Array	48.57	320	P	P	08 10 25.8	+1.0
	0.5nm,0.5s,mb3.7,baz=90,slow=7.4,SNR=3.8						
STKA	Stephens Creek	58.84	162	P	P	08 11 40.5	+0.1
	1.4nm,0.6s,mb4.2,baz=344,slow=6.2,SNR=3.4						

*IDC **15** 08:06:19.0±1.0,86.02N×25.03E,mb3.6/7,mb1 3.9/8, mb1mx3.7/22,mbtmp3.7/8,ML4.0/1,MS3.3/9,Ms1 3.3/9, ms1mx3.1/23,Error ellipse: s-maj=35.3km s-min=17.9km az=66.0*
*NAO **15** 08:06:21.9±8.8,85.81N×25.93E,h39^{km}±78^{km},ML2.4*
NEIC 15 08:06:19.8±0.8**,85.87N×22.93E,h10^{km},Error ellipse: s-maj=22.6km s-min=13.1km az=80.0,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	7.11	197	Pn	Pn	08 08 03.2	-3.3
KBS				Sn	Sn	08 09 23.8	-4.4
KBS	Kingsbay	7.11	197	*e*Pn	Pn	08 08 03.2	-3.3
	34nm,0.5s						
SPA0	Spitsbergen Ar	7.78	190	Pn	Pn	08 08 11.6	-4.4
	baz=10,slow=14						
SPA0				Sn	Sn	08 09 36.4	-8.7
	baz=54,slow=28						
ARA0	ARCESS Array S	16.44	177	P	P	08 10 08.1	-3.6
	baz=360,slow=12						
ARA0				Sn	S	08 12 57.4	-16
	baz=5.6,slow=22						
ARCES	ARCESS Array B	16.44	177	Pn	P	08 10 08.3	-3.4
	0.8nm,0.3s,baz=1.4,slow=10,SNR=31						
ARCES				LR	LR	08 16 09.6	
	comp=Z,124nm,18.2s,baz=11,slow=36						
ARCES	ARCESS Array B	16.44	177	Pn	P	08 10 08.3	-3.4
ARCES				LR	LR	08 16 09.6	
FINES	FINESS Array B	24.57	176	P	P	08 11 41.5	+1.2
	2.3nm,0.8s,baz=345,slow=16,SNR=2.3						
FINES				LR	LR	08 22 17.1	
	comp=Z,62nm,20.1s,baz=31,slow=39						
INK	Inuvik	25.69	340	P	P	08 11 49.3	-1.6
	2.3nm,1.1s,baz=18,slow=14,SNR=3.2						
INK				LR	LR	08 21 19.7	
	comp=Z,73nm,20.8s,baz=247,slow=35						
FRB	Frobisher Bay	26.82	280	LR	LR	08 22 22.3	
	comp=Z,42nm,18.6s,baz=88,slow=36						
ILAR	Eielson Array	29.48	351	P	P	08 12 22.9	-2.5
	0.8nm,0.9s,baz=356,slow=7.6,SNR=7.1						
YKA	Yellowknife Ar	30.85	322	LR	LR	08 25 19.0	
	comp=Z,59nm,19.0s,baz=10.0,slow=37						
BVAR	Borovoye Array	34.47	128	P	P	08 13 08.1	-1.1
	1.0nm,0.9s,baz=349,slow=7.6,SNR=4.2						
GERES	GERESS Array B	37.25	190	LR	LR	08 30 17.1	
	comp=Z,32nm,18.0s,baz=266,slow=38						
MKAR	Makanchi Array	41.40	117	P	P	08 14 06.6	-0.7
	0.4nm,0.8s,baz=338,slow=7.8,SNR=3.7						
MKAR				LR	LR	08 32 42.0	
	comp=Z,46nm,18.7s,baz=237,slow=38						
SONM	Songino Array	42.05	92	P	P	08 14 09.6	-2.9
	0.2nm,0.4s,baz=342,slow=4.6,SNR=4.0						
PDAR	Pinedale Array	50.31	315	P	P	08 15 16.7	-1.2
	0.5nm,0.9s,baz=9.5,slow=5.5,SNR=3.8						
NVAR	Mina Array Bea	55.05	323	LR	LR	08 41 23.8	
	comp=Z,23nm,20.3s,baz=180,slow=38						
TXAR	Lajitas Array	63.36	308	LR	LR	08 43 25.8	
	comp=Z,34nm,18.5s,baz=165,slow=35						

*IDC **15** 08:19:55.1±4.3,1.25N×97.40E,mb3.8/3,mb1 3.9/3, mb1mx3.7/16,mbtmp3.8/3,Error ellipse: s-maj=165.4km s-min=28.3km az=57.0*
*NEIC **15** 08:19:58.9±1.2,1.15N×97.26E,h30^{km},mb3.9/1,Error ellipse: s-maj=22.2km s-min=14.1km az=57.0*
ISC 15 08:19:57.3±1.6**,1.2N**±0.2×**97.3E**±0.2**,h30^{km},n6,** σ**0^{s}51**/6**, mb3.8**/4**,1C,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.27	39	⇑*i*Pn	Pn	08 21 16.5	+0.4
KSM	Kuching	13.00	89	Pn	P	08 23 02.3	-0.5
WRA	Warramunga Arr	41.94	122	P	P	08 27 47.4	0.0
	0.8nm,0.5s,mb3.6,baz=301,slow=9.0,SNR=11						
WRAB	Tennant Creek	41.94	122	*e*P	P	08 27 47.8	+0.4
	1.6nm,0.6s,mb3.8						
SONM	Songino Array	47.13	8	P	P	08 28 28.9	+0.1
	1.1nm,0.9s,mb3.8,baz=184,slow=8.7,SNR=4.9						
MKAR	Makanchi Array	47.28	346	P	P	08 28 29.6	-0.4
	1.1nm,0.6s,mb3.9,baz=162,slow=8.7,SNR=12						

*NEIC **15** 08:21:37.2,35.04S×70.48W,h19^{km},ML2.8(GUC),After GUC.*
GUC 15 08:21:37.2±0.6**,35.04S×70.48W,h19^{km}**±2^{km}**,MD3.7, ML2.8,3D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.61	314	⇓*i*P	Pb	08 21 48.8	-0.3
SFDO				*i* S	Sb	08 21 57.5	+0.4
NICH	Los Niches	0.62	273	*e*P	Pb	08 21 49.0	-0.2
NICH				*i* S	Sb	08 21 57.6	+0.2
CICH	Cipreses	0.72	4	⇓*i*P	Pb	08 21 50.6	-0.2
CICH				*i* S	Sb	08 22 01.0	+0.8
CACH	El Canelo	0.92	354	*i* P	Pb	08 21 54.2	-0.2
CACH				*i* S	Sb	08 22 07.4	+1.2
CHCH	Chadas Angostu	1.11	352	*e*P	Pb	08 21 57.4	-0.1
CHCH				*i* S	Sb	08 22 13.2	+1.6
LNV	Longovilo	1.32	324	*e*P	Pn	08 22 00.8	-0.1
LNV				*i* S	Sb	08 22 18.8	+1.0
TACH	Talagante	1.43	344	*e*P	Pn	08 22 03.0	+0.6
TACH				*i* S	Sn	08 22 22.7	+1.9
FCH	Farellones	1.71	5	⇓*i*P	Pn	08 22 08.6	+2.2
FCH				*i* S	Sn	08 22 32.0	+4.1
FCH				AMP		08 22 33.4	
	comp=N,155nm,0.2s						
JACH	Jahuel	2.35	358	*e*P	Pn	08 22 18.3	+2.7

WEL 15 09:00:17.2±0.3**,38.49S×175.82E,h153^{km}**±2^{km}**,ML3.5**/14**, Error ellipse: s-maj=2.8km s-min=2.7km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTVZ	West Tongariro	0.65	196	PN	P	09 00 40.0	-0.1
WTVZ				*e*SN	S	09 00 57.2	-0.5
WPVZ	Whakapapa	0.74	197	PN	P	09 00 40.6	0.0
WNVZ	Wahianoa	0.85	192	PN	P	09 00 41.4	0.0
WNVZ				SN	S	09 00 59.6	-0.3
BKZ	Black Stump Fm	0.86	142	PN	P	09 00 41.5	+0.1
BKZ				SN	S	09 00 59.7	-0.3
MOVZ	Moawhango	0.92	183	PN	P	09 00 41.4	-0.4
MOVZ				SN	S	09 00 59.3	-1.4
URZ	Urewera	1.04	78	PN	P	09 00 42.3	-0.5
URZ				SN	S	09 01 01.5	-1.0
MWZ	Matawai	1.35	84	PN	P	09 00 45.7	-0.1
MWZ				SN	S	09 01 07.0	-0.9
WAZ	Wanganui	1.42	207	PN	P	09 00 45.8	-0.7
WAZ				SN	S	09 01 08.4	-0.7
KNZ	Kokohu	1.54	111	PN	P	09 00 48.0	+0.2
TSZ	Takapari Road	1.57	176	PN	P	09 00 47.3	-0.8
TSZ				SN	S	09 01 09.4	-2.5
PXZ	Pawanui	1.74	153	PN	P	09 00 49.5	-0.4
PXZ				SN	S	09 01 13.6	-1.5
PUZ	Puketiti	1.96	78	PN	P	09 00 52.2	-0.2
PUZ				SN	S	09 01 18.0	-1.5
MXZ	Matakaoa Point	2.17	66	PN	P	09 00 54.3	-0.6
MXZ				SN	S	09 01 23.3	-0.7
MRZ	Mangatainoka R	2.18	185	PN	P	09 00 52.8	-2.2
MRZ				SN	S	09 01 19.8	-4.3
BFZ	Birch Farm	2.21	172	PN	P	09 00 53.9	-1.6
KIW	Kapiti Island	2.47	196	PN	P	09 00 55.7	-3.0
MTW	Mount Morrison	2.68	185	PN	P	09 00 58.0	-3.3

*MOS **15** 09:08:35.0±0.9,28.82N×139.89E,h363^{km},mb4.4/7,Error ellipse: s-maj=19.3km s-min=8.6km az=110.7*
*IDC **15** 09:08:35.3±0.7,28.78N×139.90E,h352^{km}±6^{km},mb3.5/15, mb1 3.7/18,mb1mx3.7/22,mbtmp4.2/18,Error ellipse: s-maj=16.8km s-min=9.7km az=66.0*
*BJI **15** 09:08:36.7,28.80N×139.90E,h366^{km},mB4.5,mb4.1*
*JMA **15** 09:08:36.5±0.2,28.95N×140.40E,h365^{km}±3^{km},M4.1*
*NEIC **15** 09:08:36.7±0.8,28.82N×139.88E,h366^{km}±8^{km},mb4.4/11, Error ellipse: s-maj=10.1km s-min=7.9km az=105.0*
ISC 15 09:08:35.0±0.3**,28.84N**±0.03×**139.99E**±0.07**,h362^{km}**±3^{km}**, n85,** σ**1^{s}06**/102**,mb4.0**/31**,1C-1D,Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.61	131	P	P	09 09 32.6	+0.4
	203nm,0.3s,baz=279,slow=23,SNR=97						
CBIJ				S	S	09 10 16.8	-0.4
	616nm,0.3s,baz=104,slow=23,SNR=35						
CBIJ	Chichi jima	2.61	131	P	P	09 09 32.5	+0.2
CBIJ				S	S	09 10 16.8	-0.4
JHHJ	Haha-jima-NKT	2.93	138	P	P	09 09 35.4	+0.4
JHHJ				S	S	09 10 21.9	-0.2
JHJ2	Mitsune	4.26	358	P	P	09 09 49.1	+1.3
JHJ2				S	S	09 10 43.9	-1.1
JHJ	Hachijo jima 2	4.27	358	P	P	09 09 49.4	+1.5
	30nm,0.3s,baz=79,slow=20,SNR=7.0						
JHJ				S	S	09 10 46.4	+1.2
	83nm,0.3s,baz=94,slow=23,SNR=6.3						
JKO	Kozu shima	5.38	352	P	P	09 10 00.8	+0.9
BSO1	Boso 1	5.86	8	P	P	09 10 05.7	+0.5
BSO1				*e*S	S	09 11 15.6	-0.5
BSO3	Boso 3	5.96	4	P	P	09 10 07.0	+0.6
BSO3				*e*S	S	09 11 17.2	-1.0
BSO4	Boso 4	6.14	3	P	P	09 10 08.7	+0.3
BSO4				S	S	09 11 21.9	+0.1
JOD2	Odawara 2	6.45	353	P	P	09 10 12.7	+0.7
JOD2				S	S	09 11 27.0	-1.3
JNY	Yasuok	6.75	345	P	P	09 10 17.1	+1.7
JRY	Ryogami san	7.22	353	P	P	09 10 21.4	+0.5
JRY				*e*S	S	09 11 44.8	+0.5
JYT	Yasato	7.37	1	P	P	09 10 20.8	-1.9
JYT				*e*S	S	09 11 45.7	-1.8
JHO	Hitachi	7.77	3	P	P	09 10 27.2	-0.2
JHO				*e*S	S	09 11 53.2	-2.7
MJAR	Matsushiro Arr	7.83	349	P	P	09 10 27.9	-0.2
	4.3nm,0.3s,baz=167,slow=11,SNR=23						
MAJO	Matsushiro	7.83	349	*e*P	P	09 10 29.1	+1.0
	17nm,0.3s						
MAJO	Matsushiro	7.83	349	*e*P	P	09 10 29.1	+1.0
MAJO				pmax	pmax		
	comp=Z,17nm,0.3s						
MAT	Matsushiro	7.83	349	P	P	09 10 28.0	-0.1
MAT				*e*S	S	09 11 59.1	+1.9
MAT	Matsushiro	7.83	349	P	P	09 10 28.2	+0.1
MAT	Matsushiro	7.83	349	*e*P	P	09 10 28.0	-0.1
	comp=Z,13nm,0.6s						
MAT				S	S	09 11 51.0	-6.2
MAT	Matsushiro	7.83	349	*e*P	P	09 10 28.0	-0.1
MAT				S	S	09 11 51.0	-6.2
MAT				pmax	pmax		
	comp=Z,13nm,0.6s						
JFK	Kawauchi	8.54	5	P	P	09 10 36.2	-0.3
JFK				*e*S	S	09 12 11.0	-1.3
ASAJ	Asahikawa	15.39	7	P	P	09 12 00.2	+4.7
	comp=Z,1.6nm,0.3s,baz=209,slow=10,SNR=13						
GUMO	Guam	15.84	162	*e*P	P	09 11 59.9	-0.4
	comp=Z,154nm,1.1s						
GUMO	Guam	15.84	162	*e*P	P	09 11 59.9	-0.4
GUMO				pmax	pmax		
	comp=Z,154nm,1.1s						
NACB	Ninganchiao	17.10	259	*e*P	P	09 12 13.0	-0.3
YHNB	Yeheng	17.13	260	*e*P	P	09 12 12.5	-1.1
MDJ	Mudanjiang	17.79	335	P	P	09 12 20.3	+0.1
MDJ				XP		09 13 57.0	
MDJ				S	S	09 15 25.9	+3.8
MDJ				AMB	AMB		
	comp=Z,100nm,5.4s						
YSS	Yuzh-Sakhalins	18.22	6	*e*P	P	09 12 28.0	+3.6
	comp=Z,13nm,0.3s						
YSS	Yuzh-Sakhalins	18.22	6	*e*P	P	09 12 28.0	+3.6
YSS				pmax	pmax		
	comp=Z,13nm,0.3s						
SNY	Shenyang	18.59	319	⇑*i*P	P	09 12 31.1	+2.9
SNY				AMB	AMB		
	comp=Z,110nm,0.5s						
CN2	Changchun	18.94	326	*e*P	P	09 12 33.1	+1.5
CN2				*e*S	S	09 15 44.1	+1.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
CN2				AMB	AMB		
	comp=Z,300nm,3.0s						
HHC	Hu-ho-hao-te	26.11	305	*e*P	P	09 13 41.0	+2.2
HHC				AP		09 14 48.1	
HHC				XP	sP	09 15 30.6	+4.2
HHC				S	S	09 17 53.3	+10
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.0						
HHC				AMB	AMB		
	comp=Z,190nm,7.8s						
HHC				LR	LR		
	comp=N,160nm,7.2s						
HHC				LR	LR		
	comp=E,190nm,7.8s						
HHC				LR	LR		
	comp=Z,120nm,8.4s						
ENH	Enshi	26.53	281	*e*P	P	09 13 41.6	-1.1
	comp=Z,6.6nm,0.3s,mb4.3						
LZH	Lanzhou	31.21	293	*e*P	P	09 14 24.4	+0.8
LZH				AP	pP	09 15 34.8	+2.8

LZH				XP	sP	09 16 14.3	+0.8
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb3.9						
LZH	**Lanzhou**	**31.21**	**293**	*e*P	**P**	**09 14 24.4**	**+0.8**
	comp=Z,15nm,1.2s,mb4.1						
LZH				pP	pP	09 15 34.8	+2.8
LZH				sP	sP	09 16 14.2	+0.7
LZH	**Lanzhou**	**31.21**	**293**	*e*P	**P**	**09 14 24.4**	**+0.8**
LZH				*PP	pP	09 15 34.8	+2.8
LZH				*SP	sP	09 16 14.2	+0.7
LZH				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.1						
SONM	**Songino Array**	**32.12**	**315**	P	**P**	**09 14 31.6**	**+0.3**
	comp=Z,1.7nm,0.5s,mb3.5,baz=125,slow=7.9,SNR=15						
SONM				PcP	PcP	09 17 10.4	-0.8
	comp=Z,0.5nm,0.4s,baz=108,slow=4.0,SNR=4.4						
KMI	**Kunming**	**33.31**	**273**	P	**P**	**09 14 42.1**	**+0.4**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.0						
KMI	**Kunming**	**33.31**	**273**	P	**P**	**09 14 42.1**	**+0.4**
	comp=Z,10.0nm,1.0s,mb4.0						
YAK	**Yakutsk**	**33.89**	**351**	*i* P	**P**	**09 14 40.3**	**-5.9**
YAK				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.4						
GTA	**Gaotai**	**34.64**	**298**	*e*P	**P**	**09 14 52.3**	**-0.5**
ZAK	**Zakamensk**	**35.02**	**318**	*e*P	**P**	**09 14 55.9**	**0.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.4						
TIXI	**Tiksi**	**43.30**	**355**	*i* P	**P**	**09 16 01.6**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.3						
WMQ	**Urumqi**	**43.99**	**304**	*e*P	**P**	**09 16 11.5**	**+2.3**
WMQ				AMB	AMB		
	comp=Z,100nm,4.5s						
MKAR	**Makanchi Array**	**47.87**	**308**	P	**P**	**09 16 38.7**	**-0.7**
	comp=Z,1.8nm,0.6s,mb3.5,baz=94,slow=8.8,SNR=15						
MKAR				PcP	PcP	09 18 01.3	-0.7
	comp=Z,1.1nm,0.8s,baz=80,slow=7.4,SNR=6.2						
MKAR	**Makanchi Array**	**47.87**	**308**	P	**P**	**09 16 38.7**	**-0.7**
MKAR				PcP	PcP	09 18 01.3	-0.7
WB2	**Warramunga Arr**	**48.80**	**187**	*e*P	**P**	**09 16 45.7**	**-1.1**
WRA	**Warramunga Arr**	**48.80**	**187**	P	**P**	**09 16 45.7**	**-1.0**
	comp=Z,1.9nm,0.4s,mb3.7,baz=3.7,slow=7.7,SNR=48						
WRA				ScP		09 21 22.5	
	comp=Z,0.4nm,0.6s,baz=359,slow=4.3,SNR=5.4						
KURK	**Kurchatov**	**50.38**	**314**	*e*P	**P**	**09 16 57.1**	**-1.1**
	comp=Z,3.3nm,0.6s,mb3.7						
KURK	**Kurchatov**	**50.38**	**314***d*	*i*P	**P**	**09 16 57.0**	**-1.2**
BVA0	**Borovoye Array**	**55.45**	**317**	*i* P	**P**	**09 17 34.0**	**-1.0**
KKAR	**Karatay Array**	**56.49**	**305**	*i* P	**P**	**09 17 41.6**	**-0.8**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.5						
ILAR	**Eielson Array**	**57.14**	**29**	P	**P**	**09 17 46.0**	**-0.5**
	comp=Z,0.5nm,0.7s,mb3.0,baz=225,slow=8.1,SNR=5.1						
STKA	**Stephens Creek**	**60.40**	**178**	P	**P**	**09 18 09.0**	**-0.2**
DAWY	**Dawson**	**60.41**	**30**	P	**P**	**09 18 09.5**	**+0.8**
ARU	**Arti**	**61.86**	**321**	*i* P	**P**	**09 18 13.6**	**-4.8**
ARU				pmax	pmax		
	comp=Z,26nm,0.7s,mb4.9						
INK	**Inuvik**	**62.27**	**25**	P	**P**	**09 18 20.8**	**-0.2**
	comp=Z,1.4nm,0.4s,mb3.9,baz=292,slow=4.6,SNR=18						
AB31	**Akbulak array**	**62.49**	**313**	*e*P	**P**	**09 18 21.7**	**-0.9**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.7						
KEV	**Kevo**	**70.70**	**340**	*e*p	**P**	**09 19 13.1**	**-0.3**
	comp=Z,17nm,1.0s,mb4.7						
KEV	**Kevo**	**70.70**	**340**	*e*P	**P**	**09 19 13.1**	**-0.3**
KEV				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
ARCES	**ARCESS Array B**	**71.26**	**340**	P	**P**	**09 19 16.9**	**+0.2**
	comp=Z,2.3nm,0.5s,mb4.2,baz=71,slow=8.8,SNR=22						
ARCES	**ARCESS Array B**	**71.26**	**340**	P	**P**	**09 19 16.9**	**+0.2**
YKA	**Yellowknife Ar**	**71.54**	**28**	P	**P**	**09 19 18.6**	**+0.1**
	comp=Z,0.9nm,0.6s,mb3.7,baz=296,slow=6.0,SNR=4.0						
YKA	**Yellowknife Ar**	**71.54**	**28**	P	**P**	**09 19 18.6**	**+0.1**
JOF	**Joensuu**	**72.66**	**333**	*e*p	**P**	**09 19 24.1**	**-0.9**
	comp=Z,5.6nm,0.5s,mb4.5						
JOF	**Joensuu**	**72.66**	**333**	*e*P	**P**	**09 19 24.1**	**-0.9**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
OBN	**Obninsk**	**73.99**	**324**	*i* P	**P**	**09 19 32.8**	**-0.1**
OBN				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.8						
KAF	**Kangasniemi**	**75.06**	**334**	*e*p	**P**	**09 19 37.9**	**-0.9**
	comp=Z,15nm,0.9s,mb4.7,baz=54,slow=5.3						
KAF	**Kangasniemi**	**75.06**	**334**	*e*P	**P**	**09 19 37.9**	**-0.9**
KAF				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.7						
FINES	**FINESS Array B**	**75.53**	**333**	P	**P**	**09 19 41.2**	**-0.3**
	comp=Z,2.3nm,0.3s,mb4.3,baz=68,slow=5.3,SNR=31						
AKASG	**Malin Array Be**	**80.07**	**323**	P	**P**	**09 20 05.7**	**-0.5**
	comp=Z,1.6nm,0.4s,mb4.1,baz=51,slow=5.7,SNR=5.4						
AKASG	**Malin Array Be**	**80.07**	**323**	*i* P	**P**	**09 20 05.6**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVAR	**Mina Array Bea**	**80.96**	**51**	P	**P**	**09 20 12.9**	**+1.8**
	comp=Z,1.5nm,0.5s,mb3.9,baz=283,slow=6.2,SNR=14						
NB2	**NORSAR Subarra**	**81.27**	**337**	P	**P**	**09 20 11.8**	**-0.4**
	comp=Z,2.3nm,0.6s,mb4.1,baz=44,slow=5.0						
NOA	**NORSAR Array B**	**81.27**	**337**	P	**P**	**09 20 11.9**	**-0.3**
	comp=Z,1.7nm,0.5s,mb4.0,baz=46,slow=4.9,SNR=5.0						
NAO	**NORSAR Subarra**	**81.56**	**337**	P	**P**	**09 20 11.8**	**-1.9**
	comp=Z,2.3nm,0.6s,mb4.2						
NAO	**NORSAR Subarra**	**81.56**	**337**	P	**P**	**09 20 11.8**	**-1.9**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.1						
BRTR	**Keskin Array B**	**83.40**	**312**	P	**P**	**09 20 23.9**	**+0.5**
	comp=Z,1.2nm,0.6s,mb3.9,baz=100,slow=4.8,SNR=4.0						
PDAR	**Pinedale Array**	**84.33**	**44**	P	**P**	**09 20 29.8**	**+1.7**
	comp=Z,0.5nm,0.6s,mb3.5,baz=259,slow=2.3,SNR=5.0						
GERES	**GERESS Array B**	**89.01**	**328**	P	**P**	**09 20 49.9**	**-0.4**
	comp=Z,0.6nm,0.5s,mb3.6,baz=18,slow=4.2,SNR=4.4						
ANMO	**Albuquerque**	**90.83**	**49**	*i* P	**P**	**09 21 01.9**	**+2.8**
TXAR	**Lajitas Array**	**96.09**	**52**	P	**P**	**09 21 24.8**	**+1.4**
	comp=Z,0.5nm,0.7s,mb3.8,baz=308,slow=2.8,SNR=10.0						
LPAZ	**La Paz**	**151.27**	**70**	PKPbc	PKPdf	09 27 49.5	+10
	comp=Z,1.3nm,0.7s,baz=359,slow=10,SNR=8.3						
PLCA	**Paso Flores**	**152.39**	**124**	PKPbc	PKPdf	09 27 50.6	+10
	comp=Z,0.9nm,0.7s,baz=189,slow=6.6,SNR=3.7						

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*ROM **15** 09:15:05.7±0.1, 45.79N×10.64E, h10^{km}, Md2.5/10, Ml2.3/7, Error ellipse: s-maj=1.6km s-min=0.6km az=1.0*
*CSEM **15** 09:15:05.0±0.1, 45.77N×10.64E, h20^{km}, ML3.3/3, Error ellipse: s-maj=1.4km s-min=1.0km az=170.0*
*ZUR **15** 09:15:06.2, 45.78N×10.64E, h10^{km}, ML2.3/6*
ISC 15 09:15:05.8±0.3**, 45.80N**±0.02×**10.67E**±0.02**, h10**^{km}**, n39, σ0^{s}84**/59**, 9C-7D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SALO	**Salr**	**0.20**	**211**	Pg	**Pg**	**09 15 10.0**	**-0.2**
SALO				Sg	**Sg**	**09 15 13.8**	**+0.6**
	380nm,0.2s						
SAL	**Salo**	**0.21**	**209**	Pg	**Pg**	**09 15 10.5**	**+0.1**
SAL				Sg	**Sg**	**09 15 14.1**	**+0.6**
	234nm,0.2s						
MABI	**Malga Bissina**	**0.28**	**337**⇑	*i*Pg	**Pg**	**09 15 12.5**	**+0.8**
MABI				Sg	**Sg**	**09 15 16.9**	**+1.2**
	329nm,0.2s						
MDI	**Monti di Nese**	**0.67**	**269**	Pg	**Pg**	**09 15 19.1**	**-0.2**
	141nm,0.2s						
BRMO	**Bormio**	**0.71**	**343**	Pg	**Pg**	**09 15 20.3**	**+0.2**
BRMO				Sg	**Sg**	**09 15 30.2**	**+0.5**
	43nm,0.2s						
CTI	**Castel Tesino**	**0.73**	**69**	Pg	**Pg**	**09 15 20.4**	**0.0**
	138nm,0.3s						
BERNI	**Berninapass**	**0.77**	**324**	*e*Pg	**Pg**	**09 15 21.1**	**-0.1**
BERNI				*e*Sg	**Sg**	**09 15 31.5**	**0.0**
APPI	**Appiano**	**0.79**	**29**	Pg	**Pg**	**09 15 22.4**	**+0.9**
APPI				Sg	**Sg**	**09 15 33.9**	**+1.8**
	139nm,0.4s						
CGRP	**Cima Grappa**	**0.79**	**83**⇓	*i*Pg	**Pg**	**09 15 21.9**	**+0.2**
CGRP				*i* Sg	**Sg**	**09 15 32.4**	**+0.1**
TEOL	**Teolo**	**0.82**	**121**⇓	*e*Pg	**Pg**	**09 15 21.6**	**-0.7**
TEOL				*e*Sg	**Sg**	**09 15 33.3**	**-0.1**
FUORN	**Ofenpass**	**0.87**	**341**	Pg	**Pg**	**09 15 23.2**	**-0.1**
FUORN				Sg	**Sg**	**09 15 35.0**	**0.0**
FUORN	**Ofenpass**	**0.87**	**341**	*e*Pg	**Pg**	**09 15 23.1**	**-0.2**
FUORN				*e*Sg	**Sg**	**09 15 35.0**	**0.0**
MTLO	**Montello**	**1.00**	**88**	*e*Pg	**Pg**	**09 15 25.8**	**+0.1**
MTLO				*e*Sg	**Sg**	**09 15 39.5**	**+0.5**
FAU	**Forcella Aurin**	**1.01**	**64**	*e*Pg	**Pg**	**09 15 26.3**	**+0.3**
FAU				*e*Sg	**Sg**	**09 15 40.3**	**+0.8**
VDL	**Val di Lei**	**1.08**	**310**	*e*Pg	**Pg**	**09 15 26.8**	**-0.7**
DAVOX	**Davos**	**1.13**	**331**	*e*Pg	**Pg**	**09 15 28.0**	**-0.4**
TUE	**Stuetta**	**1.14**	**307**	Pg	**Pg**	**09 15 28.0**	**-0.7**
TUE				Sg	**Sg**	**09 15 43.4**	**-0.6**
MUGIO	**Muggio**	**1.15**	**277**	Pg	**Pg**	**09 15 27.4**	**-1.3**
MUGIO				Sg	**Sg**	**09 15 44.7**	**+0.6**
MUGIO	**Muggio**	**1.15**	**277**	*e*Pg	**Pg**	**09 15 27.5**	**-1.2**
BRES	**Bressanone**	**1.17**	**39**	Pg	**Pg**	**09 15 28.8**	**-0.3**
BRES				Sg	**Sg**	**09 15 45.1**	**+0.4**
	47nm,0.2s						
VAI	**Varese**	**1.33**	**274**	Pg	**Pg**	**09 15 31.1**	**-1.3**
	23nm,0.2s						
IESO	**Jesolo**	**1.34**	**101**	*e*Pg	**Pg**	**09 15 32.5**	**-0.2**
MLNI	**Malnisio**	**1.40**	**75**⇑	*e*Pg	**Pg**	**09 15 33.2**	**-0.5**
MLNI				*e*Sg	**Sg**	**09 15 52.9**	**+0.6**
SCE	**Schlegeis**	**1.44**	**30**⇓	*i*Pg	**Pg**	**09 15 33.7**	**-0.8**
SCE				*i* Sg	**Sg**	**09 15 52.8**	**-0.9**
SQTA	**Sankt Quirin**	**1.47**	**14**⇑	*i*Pg	**Pg**	**09 15 35.0**	**-0.2**
	comp=Z,2.3nm,0.2s						
SQTA	**Sankt Quirin**	**1.47**	**14**⇓	*i*Sg	**Sg**	**09 15 54.5**	**-0.4**
	comp=Z,5.5nm,0.2s						
SQTA	**Sankt Quirin**	**1.47**	**14**	Pg	**Pg**	**09 15 35.0**	**-0.2**
SQTA				Sg	**Sg**	**09 15 54.5**	**-0.4**
FUSIO	**Fusio**	**1.55**	**296**	*e*P*	**Pb**	**09 15 34.7**	**+0.7**
CSMI	**Casera Mimoias**	**1.55**	**62**	*e*Pg	**Pg**	**09 15 36.2**	**-0.6**
CSMI				*e*Sg	**Sg**	**09 15 57.6**	**+0.1**
MOTA	**Moosalm**	**1.58**	**11**⇓	*i*Pn	**Pn**	**09 15 38.7**	**+4.7**
	comp=Z,3.9nm,0.2s						
DAVA	**Damuels**	**1.59**	**340**⇑	*i*Pn	**Pn**	**09 15 38.3**	**+4.2**
	comp=Z,2.3nm,0.1s						
DAVA	**Damuels**	**1.59**	**340**⇑	*i*Sg	**Sg**	**09 15 58.4**	**-0.3**
	comp=N,17nm,0.4s						
WTTA	**Wattenberg**	**1.61**	**24**⇑	*i*Pn	**Pn**	**09 15 37.3**	**+2.8**
	comp=Z,2.0nm,0.2s						
WTTA	**Wattenberg**	**1.61**	**24**⇓	*i*Sg	**Sg**	**09 15 58.9**	**-0.6**
	comp=N,7.6nm,0.2s						
KBA	**Koelnbreinsper**	**2.25**	**54**⇑	*i*Pn	**Pn**	**09 15 48.8**	**+5.3**
	comp=Z,2.1nm,0.2s						
KBA	**Koelnbreinsper**	**2.25**	**54**⇑	*i*Sg	**Sg**	**09 16 19.1**	**-1.6**
	comp=E,5.2nm,0.3s						
VOY	**Vojsko**	**2.26**	**83**	*e*Pn	**Pn**	**09 15 47.8**	**+4.1**
VOY				*e*Sn	**Sn**	**09 16 17.8**	**+5.9**
OBKA	**Obir**	**2.79**	**74**⇓	*i*Pn	**Pn**	**09 15 53.9**	**+2.7**
	comp=Z,1.3nm,0.2s						
OBKA	**Obir**	**2.79**	**74**⇑	*i*Sg	**Sg**	**09 16 36.0**	**-2.6**
	comp=E,6.4nm,0.3s						

IDC 15 09:18:35.8±1.8**, 30.76N×139.04E, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.5**/19**, mbtmp3.5**/3**, ML3.1**/1**, Error ellipse: s-maj=103.3km s-min=32.9km az=95.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**5.81**	**353**	Pn	Pn	09 20 02.6	-2.8
	0.5nm,0.3s,baz=167,slow=13,SNR=5.2						
WRA	**Warramunga Arr**	**50.61**	**186**	P	P	09 27 36.3	-2.4
	0.2nm,0.6s,baz=5.0,slow=7.6,SNR=4.8						
TXAR	**Lajitas Array**	**95.55**	**51**	P	P	09 32 03.5	-0.7
	0.3nm,0.6s,baz=305,slow=2.5,SNR=4.8						

WEL 15 09:20:50.5±1.7**, 35.21S×178.79E, h12**^{km}**, ML3.6**/3**, Error ellipse: s-maj=27.4km s-min=12.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.38**	**189**	P*	Pb	09 21 27.4	-5.5
MXZ				S*	Sb	09 21 53.6	-8.5
MXZ				S*	Sb	09 21 54.1	-8.0
MXZ				T		09 23 38.8	
PUZ	**Puketiti**	**2.89**	**188**	*e*PN	Pn	09 21 35.0	-2.2
PUZ				SN	Sn	09 22 11.1	-1.1
URZ	**Urewera**	**3.33**	**203**	P*	Pb	09 21 42.5	-6.6
URZ				S*	Sb	09 22 19.4	-10
URZ				S*	Sb	09 22 20.4	-9.3

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*NEIC **15** 09:25:35.3±12.0, 10.77S×166.67E, h35^{km}, mb4.5/2, Error ellipse: s-maj=223.0km s-min=15.1km az=52.0*
*IDC **15** 09:25:46.8±5.4, 11.51S×165.57E, h37^{km}±46^{km}, mb4.0/3, mb1 4.2/5, mb1mx3.8/14, mbtmp4.3/5, ML4.3/2, MS3.4/4, Ms1 3.4/4, ms1mx2.9/29, Error ellipse: s-maj=39.3km s-min=38.9km az=72.0*
ISC 15 09:25:43.2±5.5**, 11.7S**±0.2×**165.6E**±0.2**, h25**^{km}±39^{km}**, n12, σ0^{s}56**/9**, mb4.2**/5**, MS3.5**/2**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.94**	**291**	Pn	**Pn**	**09 27 12.1**	**0.0**
	13nm,0.3s,baz=132,slow=12,SNR=3.4						
HNR				LR	LR	09 29 13.9	
	comp=Z,162nm,21.2s,baz=328,slow=35						
DZM	**Mont Dzumac**	**10.40**	**175**	*e*P	**P**	**09 28 13.8**	**-0.4**
DZM	**Mont Dzumac**	**10.40**	**175**	Pn	**P**	**09 28 14.9**	**+0.7**
	1.4nm,0.3s,baz=11,slow=18,SNR=33						
PMG	**Port Moresby**	**18.23**	**275**	LR	LR	09 35 52.4	
	comp=Z,102nm,20.0s,baz=306,slow=33						
CTA	**Charters Tower**	**20.36**	**243**	LR	LR	09 37 38.4	
	comp=Z,81nm,18.3s,MS3.1,baz=228,slow=35						
WRAB	**Tennant Creek**	**31.10**	**251**	*e*P	**P**	**09 32 02.0**	**-0.2**
	8.7nm,1.0s,mb4.5						
WB2	**Warramunga Arr**	**31.10**	**251**	*e*P	**P**	**09 32 02.2**	**0.0**
WRA	**Warramunga Arr**	**31.11**	**251**	P	**P**	**09 32 02.1**	**-0.2**
	3.4nm,0.9s,mb4.2,baz=78,slow=9.3,SNR=18						
FITZ	**Fitzroy Crossi**	**39.05**	**256**	*e*P	**P**	**09 33 10.0**	**-0.2**
	5.7nm,0.8s,mb4.3						
ILAR	**Eielson Array**	**84.14**	**19**	P	**P**	**09 38 12.5**	**-0.8**
	0.5nm,0.7s,mb3.8,baz=228,slow=5.4,SNR=7.3						
MKAR	**Makanchi Array**	**93.83**	**317**	P	**P**	**09 39 01.1**	**+1.2**
	1.0nm,0.7s,mb4.4,baz=96,slow=6.4,SNR=10						
TXAR	**Lajitas Array**	**96.28**	**61**	LR	LR	10 18 42.0	
	comp=Z,42nm,19.5s,MS3.9,baz=355,slow=33						

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*NEIC **15** 09:28:35.8, 31.45S×67.96W, h130^{km}, MD3.5(GUC), After GUC.*
GUC 15 09:28:35.8±0.6**, 31.45S×67.96W, h130**^{km}**, MD3.5, ML3.8, 1D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.62**	**261**⇓	*i*P	P	09 28 57.4	+1.7
ZON				*e*S	S	09 29 10.7	-0.2
JACH	**Jahuel**	**2.55**	**241**	*e*P	P	09 29 19.4	+2.1
JACH				*i* S	S	09 29 50.3	+1.5
CMCH	**Combarbala**	**2.61**	**275**	*e*P	P	09 29 17.9	-0.3
CMCH				*i* S	S	09 29 50.5	+0.1
CMCH				AMP		09 29 51.2	
	comp=N,587nm,0.4s						
FCH	**Farellones**	**2.71**	**226**	*e*P	P	09 29 20.1	+0.6
FCH				*i* S	S	09 29 55.0	+2.3
ROCH	**El Roble**	**3.00**	**239**	*e*P	P	09 29 23.1	-0.1
RCDM	**Rinconada Maip**	**3.15**	**229**	*e*P	P	09 29 25.2	0.0
RCDM				*i* S	S	09 30 02.8	0.0
RCDM				AMP		09 30 04.3	
	comp=E,89nm,0.1s						
TACH	**Talagante**	**3.33**	**228**	*e*P	P	09 29 27.4	-0.3

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*ISK **15** 09:29:09.2, 38.24N×26.59E, h13^{km}, MD3.1*
*ATH **15** 09:29:09.9, 38.13N×26.74E, h49^{km}, MD3.0/3*
*CSEM **15** 09:29:09.7±0.1, 38.20N×26.65E, h10^{km}, MD3.1, Error ellipse: s-maj=2.0km s-min=1.4km az=98.0*
ISC 15 09:29:10.4±0.6**, 38.22N**±0.02×**26.61E**±0.05**, h10**^{km}**, n18, σ1^{s}19**/27**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.14**	**355**	*i* P	**Pg**	**09 29 12.2**	**-1.4**
URLA				*i* S	**Sg**	**09 29 14.8**	**-1.1**
BLCB	**Balcova**	**0.38**	**64**	*i* PG	**Pg**	**09 29 17.4**	**-0.7**
BLCB				*i* SG	**Sg**	**09 29 22.8**	**-0.4**
IZM	**Izmir**	**0.54**	**71**	PG	**Pg**	**09 29 20.6**	**-0.7**
IZM				SG	**Sg**	**09 29 28.9**	**+0.3**
SMG	**Samos**	**0.54**	**161**	*e*P	**Pg**	**09 29 20.9**	**-0.5**
SMG				*e*S	**Sg**	**09 29 28.9**	**+0.2**
KDAG	**Bornova**	**0.55**	**71**	*i* P	**Pg**	**09 29 19.8**	**-1.6**
KDAG				*i* S	**Sg**	**09 29 28.1**	**-0.7**
PRK	**Paraskevi**	**1.06**	**346**	*e*P	**Pb**	**09 29 31.0**	**+0.7**
PRK				*e*S	**Sb**	**09 29 46.4**	**+2.4**
AYVA	**Ayvalik**	**1.09**	**3**	*i* P	**Pb**	**09 29 31.3**	**+0.5**
AYVA				*i* S	**Sb**	**09 29 47.3**	**+2.5**
AKS	**Akhisar**	**1.15**	**55**	*e*PN	**Pn**	**09 29 31.9**	**-0.6**
AYDN	**Tasoluk**	**1.15**	**119**	*i* P	**Pb**	**09 29 32.9**	**+1.0**
AYDN				*i* S	**Sb**	**09 29 47.8**	**+1.1**
BODT	**Bodrum**	**1.28**	**154**	*e*PN	**Pn**	**09 29 33.7**	**-0.7**
MLSB	**Milas**	**1.31**	**135**	*e*PN	**Pn**	**09 29 34.4**	**-0.4**
BDRM	**Kayabasi**	**1.33**	**150**	*i* P	**Pb**	**09 29 37.1**	**+2.1**
BDRM				*i* S	**Sb**	**09 29 54.0**	**+2.0**
APE	**Apeiranthos**	**1.44**	**217**	*e*PN	**Pn**	**09 29 34.7**	**-1.9**
APE	**Apeiranthos**	**1.44**	**217**	*e*P	**Pn**	**09 29 34.8**	**-1.8**
MANT	**Manisa**	**1.55**	**79**	*i* P	**Pn**	**09 29 39.7**	**+1.4**
DAT	**Datca**	**1.68**	**152**	*e*PN	**Pn**	**09 29 40.1**	**+0.1**
YER	**Yerkesik**	**1.71**	**129**	*e*PN	**Pn**	**09 29 40.0**	**-0.6**
DALT	**Dalyan (Mudla)**	**2.17**	**131**	*e*PN	**Pn**	**09 29 45.6**	**-1.4**

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*IDC **15** 09:35:12.6±1.9, 22.70S×66.33W, h235^{km}±16^{km}, mb3.3/6, mb1 3.7/9, mb1mx3.5/16, mbtmp4.0/9, Error ellipse: s-maj=21.6km s-min=16.7km az=35.0*
*GUC **15** 09:35:13.4±0.7, 23.06S×66.68W, h267^{km}±14^{km}, ML5.1*
*NEIC **15** 09:35:13.5±0.7, 22.82S×66.27W, h247^{km}±10^{km}, mb4.2/2, Error ellipse: s-maj=13.9km s-min=13.1km az=146.0*
ISC 15 09:35:12.3±0.5**, 22.79S**±0.05×**66.36W**±0.07**, h251**^{km}±8^{km}**, n20, σ1^{s}19**/26**, mb3.5**/6**, 2C-1D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**1.71**	**266**⇑	*i*P	**P**	**09 35 54.7**	**+2.1**
CEN1	**Los Morros**	**3.59**	**260**⇓	*e*P	**P**	**09 36 14.2**	**+2.3**
CEN1				*i* S	**S**	**09 37 00.1**	**+1.9**
CEN1				AMP		09 37 03.2	
	comp=N,453nm,0.5s						
ANCH	**Antofagasta**	**3.83**	**256**	*e*P	**P**	**09 36 14.8**	**+0.1**
ANCH				*i* S	**S**	**09 37 01.2**	**-2.0**
ANCH				AMP		09 37 03.8	
	comp=N,1µm,0.2s						
CPN1	**Cerro Paranal**	**4.14**	**243**	*e*P	**P**	**09 36 19.2**	**+0.9**
CPN1				*i* S	**S**	**09 37 08.6**	**-1.0**
CPN1				AMP		09 37 11.3	
	comp=N,563nm,0.2s						
CRCH	**Chaqaral**	**5.26**	**227**⇑	*i*P	**P**	**09 36 31.4**	**-0.3**
CRCH				*i* S	**S**	**09 37 31.6**	**-2.3**
CRCH				AMP		09 37 33.1	
	comp=N,308nm,0.3s						
LPAZ	**La Paz**	**6.68**	**345**	P	**P**	**09 36 50.3**	**+0.8**
	comp=N,0.9nm,0.3s,baz=158,slow=11,SNR=23						
LPAZ				S	**S**	**09 38 04.6**	**-1.1**
	comp=N,0.2nm,0.3s,baz=251,slow=24,SNR=3.3						
ARE	**Arequipa**	**7.94**	**322**	P	**P**	**09 37 12.0**	**+6.5**
ARE				*e*S	**S**	**09 38 30.0**	**-4.2**
SIV	**San Ignacio**	**8.40**	**37**	P	**P**	**09 37 10.1**	**-1.3**
	comp=N,3.0nm,0.3s,baz=233,slow=8.4,SNR=98						
CPUP	**Villa Florida**	**8.94**	**115**	*e*Pn	**P**	**09 37 19.0**	**+0.8**
	comp=N,15nm,0.6s						
CFAA	**Coronel Fontan**	**8.94**	**190**	P	**P**	**09 37 18.6**	**+0.4**
	comp=N,0.1nm,0.3s,slow=10,SNR=4.4						
CFAA				S	**S**	**09 38 53.5**	**-3.5**
	comp=N,0.2nm,0.3s,baz=141,slow=19,SNR=11						
SAML	**Samuel**	**14.09**	**13**	*e*Pn	**P**	**09 38 21.5**	**-1.3**
	comp=N,9.5nm,0.8s						
BDFB	**Brasilia**	**18.71**	**71**	P	**P**	**09 39 14.1**	**-0.2**
	comp=N,1.6nm,0.3s,baz=256,slow=11,SNR=45						
BAO	**Brasilia Array**	**18.73**	**71**	P	**P**	**09 39 14.5**	**0.0**
TXAR	**Lajitas Array**	**63.05**	**324**	P	**P**	**09 45 15.2**	**+0.4**
	comp=N,0.3nm,0.6s,mb3.1,baz=148,slow=9.7,SNR=6.3						
DBIC	**Dimbokro**	**66.86**	**72**	P	**P**	**09 45 38.5**	**-1.0**
	comp=N,1.4nm,0.3s,mb4.0,baz=216,slow=6.0,SNR=7.5						
PDAR	**Pinedale Array**	**76.42**	**329**	P	**P**	**09 46 35.8**	**+0.1**
	comp=N,0.4nm,0.6s,mb3.2,baz=135,slow=7.7,SNR=3.5						
ELK	**Elko**	**77.83**	**324**	P	**P**	**09 46 43.2**	**-0.3**
	comp=N,0.8nm,0.4s,mb3.7,baz=158,slow=11,SNR=6.5						
NVAR	**Mina Array Bea**	**77.97**	**321**	P	**P**	**09 46 45.5**	**+1.2**
	comp=N,0.4nm,0.6s,mb3.2,baz=162,slow=5.7,SNR=3.7						
ESDC	**Sonseca Array**	**85.11**	**43**	P	**P**	**09 47 22.0**	**+0.8**
	comp=N,0.3nm,0.3s,mb3.5,baz=225,slow=4.2,SNR=4.8						
MKAR	**Makanchi Array**	**145.21**	**39**	PKPbc	PKPbc	09 54 22.5	+2.2
	comp=N,0.9nm,0.4s,baz=342,slow=3.8,SNR=8.7						

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*THR **15** 09:37:26.9±0.6, 34.91N×49.94E, h14^{km}±7^{km}, ML2.9*
*CSEM **15** 09:37:27.8±0.2, 34.98N×49.99E, h16^{km}, ML2.9, Error ellipse: s-maj=4.3km s-min=2.2km az=105.0*
*TEH **15** 09:37:29.2, 34.97N×50.00E, h10^{km}, Mn3.2*
ISC 15 09:37:28.1±0.8**, 34.95N**±0.04×**50.04E**±0.06**, h10**^{km}**, n19, σ1^{s}22**/23**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAO	**Ashtian**	**0.40**	**181**	*e*Pg	**Pg**	**09 37 34.9**	**-1.5**
ASAO				*e*Sg	**Sg**	**09 37 40.4**	**-1.5**
IQOM	**Qom**	**0.86**	**97**	Pg	**Pg**	**09 37 44.6**	**-0.7**
IQOM				Sg	**Sg**	**09 37 57.7**	**+0.9**
IMHD	**Mahdasht**	**0.90**	**35**	Pg	**Pg**	**09 37 45.1**	**-1.0**
IMHD				Sg	**Sg**	**09 37 57.8**	**-0.3**
THKV	**Tehran--Karaj**	**1.18**	**35**	*e*Pg	**Pg**	**09 37 50.8**	**-1.0**
THKV				AML	AML	09 38 09.6	
	comp=N,248nm,0.2s						
CHTH	**Charan**	**1.31**	**43**	*e*Pg	**Pg**	**09 37 52.5**	**-1.7**
IVRN	**Varamin**	**1.39**	**88**	Pg	**Pg**	**09 37 54.4**	**-1.5**
IVRN				Sg	**Sg**	**09 38 13.8**	**-0.7**
IAFJ	**Afjeh**	**1.64**	**56**	Pn	**Pn**	**09 37 58.2**	**+0.9**
IAFJ				Sn	**Sn**	**09 38 19.7**	**+1.1**
DAMV	**Damavand**	**1.72**	**66**	*e*Pg	**Pg**	**09 37 60.0**	**-2.6**
IDMV	**Damavand**	**1.75**	**68**	Pn	**Pn**	**09 38 00.0**	**+1.2**
IDMV				Sn	**Sn**	**09 38 22.4**	**+1.1**
ISFB	**Sefidab**	**1.91**	**108**	Pn	**Pn**	**09 38 02.2**	**+1.1**
ISFB	**Sefidab**	**1.91**	**108**	Lg		09 38 30.0	
IKLH	**Kalahroud**	**2.07**	**141**	Pn	**Pn**	**09 38 04.3**	**+0.9**
SNGE	**Sanandaj**	**2.21**	**274**	*e*Pg	**Pg**	**09 38 05.8**	**-6.5**
SNGE				AML	AML	09 38 43.5	
	comp=N,77nm,0.4s						
IKOM	**Komasi**	**2.22**	**250**	Pn	**Pn**	**09 38 07.9**	**+2.3**
IFIR	**Firoozkooh**	**2.33**	**72**	Lg		09 38 42.1	
IFIR	**Firoozkooh**	**2.33**	**72**	Pn	**Pn**	**09 38 08.7**	**+1.6**
IPIR	**Pirpir**	**2.37**	**162**	Pn	**Pn**	**09 38 08.5**	**+0.8**
IZEF	**Zefreh**	**2.80**	**136**	Pn	**Pn**	**09 38 14.5**	**+0.7**
NASN	**Na’in**	**3.15**	**132**	*e*Pn	**Pn**	**09 38 19.0**	**+0.2**

JMA 15 09:44:39.6±0.2**, 38.29N×144.73E, h51**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.52**	**289**	P	P	09 45 19.4	+0.3
OFUJ				S	S	09 45 49.7	+1.0
MIYJ	**Miyakonagasawa**	**2.61**	**300**	P	P	09 45 20.3	0.0
MIYJ				*e*S	S	09 45 50.1	-0.8
JIO	**Ouri**	**2.66**	**275**	P	P	09 45 21.3	+0.2
JIO				S	S	09 45 52.3	0.0
JMK	**Ichinoseki**	**2.83**	**285**	P	P	09 45 23.9	+0.5
JOT	**Ohata**	**4.19**	**319**	P	P	09 45 43.2	+0.5
JCH	**Churui**	**4.44**	**347**	P	P	09 45 44.0	-2.2
JCH				*e*S	S	09 46 31.7	-5.6
JKB	**Kayabe**	**4.58**	**323**	P	P	09 45 48.6	+0.5
JKB				*e*S	S	09 46 39.3	-1.3
JTKR	**Abashiri--Toko**	**5.71**	**354**	P	P	09 46 01.3	-2.6
JTKR				*e*S	S	09 47 04.0	-5.0

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*NEIC **15** 09:46:07.5, 24.68S×69.08W, h84^{km}, mb3.6/2, MD4.1(GUC), After GUC.*
GUC 15 09:46:07.5±0.6**, 24.68S×69.08W, h84**^{km}±14^{km}**, MD4.1, ML3.7, 2C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**1.21**	**272**⇑	*i*P	P	09 46 30.5	+0.9
CPN1				*i* S	S	09 46 47.8	+1.7
CPN1				AMP		09 46 53.1	
	comp=N,1µm,0.5s						
ANCH	**Antofagasta**	**1.57**	**309**	*e*P	P	09 46 34.6	+0.2
ANCH				*i* S	S	09 46 54.4	+0.2
CEN1	**Los Morros**	**1.65**	**321**	*e*P	P	09 46 34.7	-0.6
CEN1				*i* S	S	09 46 55.5	-0.4
CEN1				AMP		09 46 59.0	
	comp=N,445nm,0.5s						
SPCH	**San Pedro de A**	**1.94**	**25**⇑	*i*P	P	09 46 39.9	+0.6
SPCH				*i* S	S	09 47 04.9	+2.2
SPCH				AMP		09 47 06.5	
	comp=N,2µm,0.4s						
CRCH	**Chaqaral**	**2.16**	**220**	*e*P	P	09 46 42.5	+0.2
CRCH				*i* S	S	09 47 08.8	+0.6

CRCH				AMP		09 47 15.7	
	comp=N,638nm,0.5s						
LPAZ	**La Paz**	**8.40**	**6**	*e*Pn	P	09 48 06.0	-2.4
	comp=N,1.3nm,0.4s						
TRQA	**Tornquist**	**14.64**	**157**	P	P	09 49 30.1	-1.3
	comp=N,40nm,1.7s						
PLCA	**Paso Flores**	**16.05**	**184**	P	P	09 49 43.9	-5.5
	comp=N,7.5nm,1.4s						
SAML	**Samuel**	**16.63**	**21**	P	P	09 49 50.6	-6.1
	comp=N,4.3nm,1.3s						

NIED ***15*** *10:02:00,44.00N×148.10E,h59^{km},Mw3.8 Best double couple: $M_0$6.63×10^{14} NP1:ϕ_s189°,δ82°,λ-70°. NP2: ϕ_s301°,δ21°,λ-156°.*
MOS ***15*** *10:02:13.3±1.6,44.50N×148.49E,h33^{km},mb4.5/1,Error ellipse: s-maj=17.4km s-min=14.4km az=141.9*
JMA ***15*** *10:02:17.7±0.2,44.05N×148.07E,M4.8*
NEIC ***15*** *10:02:18.1±1.4,44.49N×148.31E,h58^{km}±12^{km},mb4.2/1, Error ellipse: s-maj=13.2km s-min=11.0km az=109.0*
IDC ***15*** *10:02:20.4±4.0,44.60N×148.22E,h76^{km}±36^{km},mb3.5/8, mb1 3.7/9,mb1mx3.6/20,mbtmp3.8/9,Error ellipse: s-maj=24.6km s-min=21.7km az=140.0*
ISC 15 10:02:18.2±1.1**,44.32N**±0.08×**148.2E**±0.1**,h75**^{km}±9^{km}**, n37,**σ**1**^{s}**05**/47**,mb4.3**/15**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.73**	**261**	*e*PN	**P**	**10 02 45.0**	**-1.9**
YUK				*i* S	**S**	**10 03 07.5**	**-0.5**
YUK				pmax	pmax		
	comp=E,1µm,0.4s						
YUK				pmax	pmax		
	comp=N,350nm,0.4s						
YUK				smax			
	comp=N,4µm,0.8s						
YUK				smax			
	comp=E,2µm,1.0s						
YUK				smax			
	comp=N,3µm,0.5s						
YUK				smax			
	comp=E,2µm,0.5s						
NEM2	**Nemuro 2**	**2.04**	**243**	P	**P**	**10 02 50.5**	**-0.6**
NEM2				*e*S	**S**	**10 03 14.6**	**-0.7**
JRA	**Rausu**	**2.27**	**261**	P	**P**	**10 02 55.1**	**+0.7**
JRA				*e*S	**S**	**10 03 22.5**	**+1.3**
JNK	**Nakash**	**2.64**	**255**	P	**P**	**10 02 59.9**	**+0.3**
JNK				*e*S	**S**	**10 03 31.0**	**+0.5**
JAK	**Akkeshi**	**2.88**	**244**	P	**P**	**10 03 02.7**	**-0.3**
JAK				*e*S	**S**	**10 03 35.8**	**-0.8**
JTKR	**Abashiri--Toko**	**3.13**	**265**	P	**P**	**10 03 07.7**	**+1.3**
JAR	**Ashorobuto**	**3.38**	**254**	P	**P**	**10 03 10.9**	**+0.9**
JAR				*e*S	**S**	**10 03 50.7**	**+1.6**
JCH	**Churui**	**3.93**	**246**	P	**P**	**10 03 17.6**	**0.0**
JCH				*e*S	**S**	**10 04 01.9**	**-0.8**
JKK2	**Kamakawa 2**	**3.97**	**265**	P	**P**	**10 03 20.5**	**+2.3**
ASAJ	**Asahikawa**	**4.05**	**269**	P	**P**	**10 03 20.1**	**+0.8**
	comp=E,3.8nm,0.3s,baz=78,slow=18,SNR=29						
ASAJ				S	**S**	**10 04 18.4**	**+13**
	comp=E,4.5nm,0.3s,baz=88,slow=14,SNR=2.8						
JFR	**Furan**	**4.24**	**256**	P	**P**	**10 03 23.4**	**+1.5**
JNBK	**Urakawa-nobuka**	**4.49**	**245**	P	**P**	**10 03 25.4**	**+0.1**
YSS	**Yuzh-Sakhalins**	**4.66**	**306**	*e*Pn	**P**	**10 03 26.2**	**-1.5**
JKB	**Kayabe**	**5.80**	**248**	P	**P**	**10 03 43.7**	**+0.3**
JKB				*e*S	**S**	**10 04 47.8**	**-1.5**
JOT	**Ohata**	**6.04**	**243**	P	**P**	**10 03 46.2**	**-0.5**
JOT				*e*S	**S**	**10 04 52.6**	**-2.6**
JANG	**Nango**	**6.34**	**234**	P	**P**	**10 03 50.3**	**-0.7**
JANG				*e*S	**S**	**10 04 57.4**	**-5.4**
MJAR	**Matsushiro Arr**	**10.88**	**228**	P	**P**	**10 04 51.7**	**-1.3**
	comp=E,0.2nm,0.3s,baz=26,slow=14,SNR=3.9						
MAJO	**Matsushiro**	**10.89**	**228**	*e*Pn	**P**	**10 04 53.8**	**+0.7**
	comp=E,2.9nm,0.4s						
MAJO	**Matsushiro**	**10.89**	**228**	*e*PN	**P**	**10 04 53.8**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SONM	**Songino Array**	**28.97**	**292**	P	**P**	**10 08 12.5**	**+0.1**
	comp=Z,0.5nm,0.4s,mb3.5,baz=80,slow=7.7,SNR=5.0						
ILAR	**Eielson Array**	**40.57**	**37**	P	**P**	**10 09 49.5**	**-1.8**
	comp=Z,0.7nm,0.9s,mb3.5,baz=266,slow=8.4,SNR=6.5						
MKAR	**Makanchi Array**	**45.01**	**297**	P	**P**	**10 10 27.4**	**-0.2**
	comp=Z,0.5nm,0.4s,mb3.6,baz=76,slow=12,SNR=4.8						
MKAR				PcP	PcP	10 12 07.8	-0.1
	comp=Z,0.5nm,0.4s,baz=69,slow=4.8,SNR=8.2						
MKAR	**Makanchi Array**	**45.01**	**297**	P	**P**	**10 10 27.4**	**-0.2**
MKAR				PcP	PcP	10 12 07.8	-0.1
JIRN	**Jiri**	**51.68**	**273**	*e*P	**P**	**10 11 20.3**	**+0.8**
	comp=Z,7.3nm,0.3s,mb5.2						
GUN	**Gumba**	**51.76**	**274**	*e*P	**P**	**10 11 20.1**	**0.0**
	comp=Z,18nm,0.4s,mb5.5						
KKN	**Kakani**	**52.26**	**274**	*e*P	**P**	**10 11 24.5**	**+0.7**
	comp=Z,10nm,0.5s,mb5.1						
DMN	**Daman**	**52.49**	**274**	*e*P	**P**	**10 11 26.0**	**+0.4**
	comp=Z,8.0nm,0.4s,mb5.1						
GKN	**Gorkha**	**52.59**	**274**	*e*P	**P**	**10 11 26.4**	**0.0**
	comp=Z,7.8nm,0.4s,mb5.1						
KOLN	**Koldanda**	**53.47**	**275**	*e*P	**P**	**10 11 33.3**	**+0.4**
	comp=Z,7.0nm,0.5s,mb4.9						
FINES	**FINESS Array B**	**64.72**	**333**	P	**P**	**10 12 47.0**	**-3.0**
	comp=Z,1.9nm,0.9s,mb3.9,baz=56,slow=6.9,SNR=6.7						
WRAB	**Tennant Creek**	**65.19**	**194**	P	**P**	**10 12 55.0**	**+1.2**
	comp=Z,2.5nm,0.9s,mb4.0						
WRAB	**Tennant Creek**	**65.19**	**194**	P	**P**	**10 12 55.0**	**+1.3**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
WRA	**Warramunga Arr**	**65.20**	**194**	P	**P**	**10 12 54.7**	**+0.9**
	comp=Z,0.5nm,0.5s,mb3.6,baz=8.3,slow=6.7,SNR=9.9						
PDAR	**Pinedale Array**	**68.95**	**50**	P	**P**	**10 13 16.9**	**-0.1**
	comp=Z,0.5nm,0.7s,mb3.5,baz=333,slow=2.0,SNR=4.5						
NOA	**NORSAR Array B**	**69.35**	**339**	P	**P**	**10 13 17.5**	**-1.6**
	comp=Z,2.7nm,0.9s,mb4.0,baz=30,slow=6.5,SNR=2.6						
TXAR	**Lajitas Array**	**81.69**	**57**	P	**P**	**10 14 30.4**	**+0.7**
	comp=Z,0.6nm,0.5s,mb3.7,baz=302,slow=4.8,SNR=16						
PLCA	**Paso Flores**	**151.38**	**96**	PKPbc	PKPdf	10 22 04.8	+8.4
	comp=Z,0.7nm,0.5s,baz=207,slow=4.5,SNR=3.0						

TIF ***15*** *10:10:12.3,42.52N×43.35E,h16^{km}±1^{km}*
MOS ***15*** *10:10:15.2±0.8,42.68N×43.50E,h19^{km},mb3.7/1,Error ellipse: s-maj=18.6km s-min=9.9km az=67.7*
ISC 15 10:10:13.4±0.8**,42.55N**±0.04×**43.4E**±0.1**,h16**^{km}**,n12,** σ**0**^{s}**51**/14**,Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONI	**Oni**	**0.07**	**65**	P	**Pb**	**10 10 15.8**	**-0.8**
ONI				S	**Sb**	**10 10 18.8**	**+0.2**
DIGR	**Digorskoe uzhe**	**0.38**	**25**	*i* PG	**Pb**	**10 10 20.9**	**-0.5**
ZEI	**Tsey**	**0.45**	**61**	*e*PG	**Pb**	**10 10 23.0**	**+0.5**
ZEI				*i*		10 10 32.3	
LACR	**Lac**	**0.74**	**68**	*i* PG	**Pb**	**10 10 27.8**	**+0.3**
LSNR	**Lesken**	**0.80**	**25**	*i* PG	**Pb**	**10 10 28.2**	**-0.2**
ARNR	**Ardon**	**0.93**	**46**	*e*PG	**Pb**	**10 10 30.8**	**+0.2**
VLKR	**Vladikavkaz**	**1.09**	**62**	*e*PG	**Pb**	**10 10 33.5**	**+0.1**
AKH	**Akhalkalaki**	**1.14**	**175**	P	**Pb**	**10 10 33.3**	**-1.0**
AKH				S	**Sb**	**10 10 49.4**	**+0.7**
SHAR	**Shatzhatmas**	**1.30**	**337**	*e*PG	**Pb**	**10 10 37.1**	**+0.2**
PRTR	**Priterechnaya**	**1.38**	**29**	*i* PG	**Pn**	**10 10 37.7**	**-0.4**
KIV0	**Kislovodsk Arr**	**1.49**	**341**	*e*PG	**Pn**	**10 10 40.5**	**+0.8**
TRKR	**Terskaya**	**1.54**	**40**	*i* PG	**Pn**	**10 10 40.4**	**-0.1**

ATH ***15*** *10:17:12.9,38.17N×26.80E,h40^{km}±2^{km},MD3.1/3*
NEIC ***15*** *10:17:12.9,38.17N×26.80E,h40^{km},MD3.1(ATH), MD3.0(ISK),After ATH.*
CSEM ***15*** *10:17:13.9±0.3,38.18N×26.58E,h8^{km},MD3.0,Error ellipse: s-maj=8.6km s-min=4.6km az=128.0*
ISK ***15*** *10:17:15.1,38.16N×26.67E,h12^{km},MD3.0*
ISC 15 10:17:14.2±0.7**,38.16N**±0.02×**26.57E**±0.04**,h3**^{km}±5^{km}**, n19,**σ**0**^{s}**76**/30**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.20**	**6**	*i* P	**Pg**	**10 17 18.3**	**+0.1**
URLA				*i* S	**Sg**	**10 17 21.8**	**+0.9**
BLCB	**Balcova**	**0.43**	**59**	*i* PG	**Pg**	**10 17 23.0**	**+0.1**
BLCB				*i* SG	**Sg**	**10 17 28.6**	**-0.1**
SMG	**Samos**	**0.50**	**155**	*e*P	**Pg**	**10 17 23.5**	**-0.7**
SMG				*e*S	**Sg**	**10 17 31.4**	**+0.5**
IZM	**Izmir**	**0.59**	**66**	PG	**Pg**	**10 17 25.9**	**-0.2**
IZM				SG	**Sg**	**10 17 33.8**	**-0.2**
KDAG	**Bornova**	**0.60**	**66**	*i* P	**Pg**	**10 17 25.2**	**-1.0**
KDAG				*i* S	**Sg**	**10 17 33.6**	**-0.6**
PRK	**Paraskevi**	**1.11**	**348**	*e*P	**Pb**	**10 17 34.1**	**-1.5**
PRK				*e*S	**Sb**	**10 17 49.5**	**-0.8**
AYVA	**Ayvalik**	**1.15**	**5**	*i* P	**Pb**	**10 17 38.2**	**+1.8**
AYVA				*i* S	**Sb**	**10 17 51.9**	**+0.4**
AYDN	**Tasoluk**	**1.15**	**115**	*i* P	**Pb**	**10 17 37.3**	**+0.9**
AYDN				*i* S	**Sb**	**10 17 51.2**	**-0.4**
AKS	**Akhisar**	**1.21**	**53**	*e*PN	**Pn**	**10 17 37.6**	**-0.4**
BODT	**Bodrum**	**1.25**	**152**	*e*PN	**Pn**	**10 17 38.2**	**-0.3**
BODT				*e*SN	**Sn**	**10 17 55.1**	**-0.8**
BDRM	**Kayabasi**	**1.30**	**147**	*i* P	**Pb**	**10 17 40.0**	**+1.1**
BDRM				*i* S	**Sb**	**10 17 56.2**	**+0.4**
APE	**Apeiranthos**	**1.37**	**217**	*e*PN	**Pn**	**10 17 40.3**	**+0.1**
APE	**Apeiranthos**	**1.37**	**217**	*e*P	**Pb**	**10 17 38.9**	**-1.2**
APE	**Apeiranthos**	**1.37**	**217**	*e*Pn	**Pn**	**10 17 40.3**	**+0.1**
MANT	**Manisa**	**1.60**	**78**	*i* P	**Pn**	**10 17 44.9**	**+1.4**
MANT				*i* S	**Sb**	**10 18 04.3**	**-0.3**
DAT	**Datca**	**1.64**	**150**	*e*PN	**Pn**	**10 17 44.6**	**+0.4**
BALB	**Balikesir**	**1.80**	**34**	*e*PN	**Pn**	**10 17 46.6**	**+0.2**
SANT	**Santorini**	**2.00**	**207**	Pn	**Pn**	**10 17 49.6**	**+0.4**
SANT	**Santorini**	**2.00**	**207**	Pn	**Pn**	**10 17 49.6**	**+0.4**

NEIC ***15*** *10:27:06.2,51.23N×178.40W,h19^{km},ML3.1(AEIC),After AEIC.*
IDC ***15*** *10:27:15.3±3.7,51.86N×178.44W,h99^{km}±34^{km},mb3.1/7, mb1 3.4/9,mb1mx3.3/24,mbtmp3.6/9,Error ellipse: s-maj=45.2km s-min=16.8km az=173.0*
ISC 15 10:27:03.8±1.9**,51.2N**±0.2×**178.6W**±0.1**,h23**^{km}±11^{km}**,n25,** σ**0**^{s}**90**/30**,mb4.0**/9**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**1.04**	**55**	P	**Pb**	**10 27 22.3**	**-0.7**
KIKV	**Kanaga Island**	**1.14**	**52**	P	**Pn**	**10 27 24.3**	**-0.2**
KIRH	**Kanaga Island**	**1.19**	**52**	P	**Pn**	**10 27 25.2**	**0.0**
KINC	**Kanaga Island**	**1.19**	**50**	P	**Pn**	**10 27 25.8**	**+0.5**
KINC				S	**Sb**	**10 27 41.2**	**+0.5**
ADAG	**Mount Adagdak**	**1.49**	**57**	P	**Pn**	**10 27 29.6**	**+0.1**
GSTD	**Great Sitkin T**	**1.77**	**59**	P	**Pn**	**10 27 34.3**	**+0.8**
GSTD				S	**Sn**	**10 27 55.1**	**-0.5**
GSMY	**Great Sitkin M**	**1.81**	**61**	P	**Pn**	**10 27 34.0**	**-0.2**
GSMY				S	**Sn**	**10 27 57.4**	**+0.7**
GSTR	**Great Sitkin T**	**1.84**	**59**	P	**Pn**	**10 27 34.6**	**+0.2**
GSTR				S	**Sn**	**10 27 58.6**	**+1.4**
ATKA	**Atka Island**	**2.93**	**68**	P	**Pn**	**10 27 50.6**	**+0.4**
ATKA				S	**Sn**	**10 28 24.8**	**-0.3**
FX1	**Attu Island--F**	**5.36**	**292**	P	**Pn**	**10 28 31.8**	**+7.4**
	2.1nm,0.3s,baz=201,slow=22,SNR=5.6						
KDAK	**Kodiak Island**	**16.44**	**56**	P	**P**	**10 30 52.0**	**-2.3**
	0.7nm,0.3s,baz=302,slow=17,SNR=4.7						
ILAR	**Eielson Array**	**21.33**	**38**	P	**P**	**10 31 48.9**	**-2.1**
	0.5nm,0.9s,baz=229,slow=9.6,SNR=6.4						
ASAJ	**Asahikawa**	**26.82**	**270**	P	**P**	**10 32 46.0**	**+1.9**
	2.2nm,0.6s,mb3.9,baz=113,slow=34,SNR=3.2						
INK	**Inuvik**	**27.56**	**35**	P	**P**	**10 32 46.2**	**-4.3**
	0.3nm,0.4s,mb3.2,baz=245,slow=9.7,SNR=4.7						
INK	**Inuvik**	**27.56**	**35**	P	**P**	**10 32 46.2**	**-4.3**
PDAR	**Pinedale Array**	**46.26**	**72**	P	**P**	**10 35 27.3**	**-1.6**
	0.9nm,0.6s,mb3.9,baz=304,slow=3.8,SNR=11						
SONM	**Songino Array**	**46.84**	**297**	P	**P**	**10 35 33.7**	**+0.3**
	0.2nm,0.3s,mb3.6,baz=59,slow=8.4,SNR=3.6						
ARCES	**ARCESS Array B**	**58.31**	**350**	P	**P**	**10 36 53.9**	**-4.6**
	4.4nm,0.9s,mb4.5,baz=17,slow=9.4,SNR=3.4						
TXAR	**Lajitas Array**	**58.57**	**81**	P	**P**	**10 37 01.9**	**+1.0**
	0.2nm,0.6s,mb3.3,baz=297,slow=4.0,SNR=2.7						
MKAR	**Makanchi Array**	**60.25**	**309**	P	**P**	**10 37 11.4**	**-0.8**
	0.4nm,0.9s,mb3.5,baz=45,slow=4.1,SNR=2.9						
GUN	**Gumba**	**72.04**	**292**	*e*P	**P**	**10 38 28.3**	**+0.5**
	33nm,0.4s						
KKN	**Kakani**	**72.48**	**293**	*e*P	**P**	**10 38 30.3**	**-0.1**
	14nm,0.5s,mb5.1						
GKN	**Gorkha**	**72.69**	**293**	*e*P	**P**	**10 38 31.3**	**-0.3**
	8.6nm,0.5s,mb4.9						
DMN	**Daman**	**72.72**	**293**	*e*P	**P**	**10 38 31.7**	**0.0**
KOLN	**Koldanda**	**73.47**	**294**	*e*P	**P**	**10 38 36.3**	**+0.2**

NEIC ***15*** *11:09:23.8,17.10N×100.67W,h20^{km},MD3.7(MEX),After MEX.*
MEX 15 11:09:23.8±1.1**,17.10N**×**100.67W,h20**^{km}±8^{km}**,MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.39**	**97**	*i* P	Pb	11 09 30.4	-1.5
CAIG				*i* S	Sb	11 09 35.0	-2.4
ACX	**Acapulco**	**0.75**	**107**	*i* P	Pb	11 09 36.0	-2.1
ACX				*i* S	Sb	11 09 46.5	-1.4
ZIIG	**Zihuatanejo**	**0.92**	**304**	*e*P	Pb	11 09 37.9	-2.9
ZIIG				*i* S	Sb	11 09 49.0	-3.6
PLIG	**Platanillo**	**1.70**	**41**	*i* P	Pn	11 09 51.1	-1.7
PLIG				*i* S	Sn	11 10 09.0	-5.2
MOIG	**Morelia**	**2.62**	**349**	*e*P	Pn	11 10 02.8	-3.1
MOIG				*i* S	Sn	11 10 32.5	-4.8
PPM	**Popocatepetl**	**2.76**	**44**	*e*P	Pn	11 10 04.9	-3.1
PPM				*i* S	Sn	11 10 36.5	-4.5

NEIC ***15*** *11:16:01.8±0.8,31.20S×179.64W,h403^{km}±9^{km},mb4.5/3, Error ellipse: s-maj=21.2km s-min=9.6km az=105.0*
IDC ***15*** *11:16:01.6±1.4,31.18S×179.76W,h388^{km}±14^{km},mb3.5/3, mb1 3.6/7,mb1mx3.4/16,mbtmp4.4/7,Error ellipse: s-maj=32.1km s-min=12.6km az=135.0*
ISC 15 11:16:01.2±0.5**,31.22S**±0.06×**179.9E**±0.1**,h385**^{km}±8^{km}**, n68,**σ**1**^{s}**22**/74**,mb3.8**/4**,2D,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.72**	**45**	P	**P**	**11 16 59.8**	**-1.6**
	69nm,0.3s,baz=255,slow=22,SNR=8.0						
RAO				S	**S**	**11 17 42.6**	**-6.1**
	238nm,0.3s,baz=75,slow=22,SNR=8.4						
RAO	**Raoul Island**	**2.72**	**45**	*e*Pn	**P**	**11 16 59.0**	**-2.4**
RAO				*e*Sn	**S**	**11 17 47.9**	**-0.7**
MXZ	**Matakaoa Point**	**6.47**	**191**	PN	**P**	**11 17 39.3**	**+0.1**
MXZ				SN	**S**	**11 18 57.0**	**+0.8**
MXZ	**Matakaoa Point**	**6.47**	**191**	P	**P**	**11 17 41.0**	**+1.8**
MXZ				S	**S**	**11 18 57.0**	**+0.7**
PUZ	**Puketiti**	**6.97**	**191**	PN	**P**	**11 17 45.4**	**+0.4**
PUZ				SN	**S**	**11 19 08.2**	**+1.5**
PUZ	**Puketiti**	**6.97**	**191**	*e*P	**P**	**11 17 47.0**	**+2.0**
PUZ				S	**S**	**11 19 06.7**	**0.0**
MWZ	**Matawai**	**7.37**	**195**	PN	**P**	**11 17 49.6**	**+0.1**
MWZ				SN	**S**	**11 19 16.0**	**+1.3**
MWZ	**Matawai**	**7.37**	**195**	*e*P	**P**	**11 17 51.6**	**+2.1**
URZ	**Urewera**	**7.39**	**197**	P	**P**	**11 17 50.7**	**+0.9**
	7.4nm,0.3s,baz=44,slow=2.8,SNR=144						
URZ				S	**S**	**11 19 14.8**	**-0.5**
	12nm,0.3s,baz=105,slow=20,SNR=13						
URZ	**Urewera**	**7.39**	**197**	PN	**P**	**11 17 49.3**	**-0.5**
URZ				SN	**S**	**11 19 15.8**	**+0.5**
URZ	**Urewera**	**7.39**	**197**	*e*P	**P**	**11 17 50.7**	**+0.9**
TAZ	**Tarawera**	**7.54**	**201**	P	**P**	**11 17 56.2**	**+4.8**
UTU	**Utuhina**	**7.58**	**203**	P	**P**	**11 17 57.1**	**+5.1**
PATZ	**Paeroa**	**7.75**	**202**	P	**P**	**11 17 58.1**	**+4.2**
KNZ	**Kokohu**	**8.00**	**193**	PN	**P**	**11 17 58.1**	**+1.3**
KNZ	**Kokohu**	**8.00**	**193**	P	**P**	**11 17 58.1**	**+1.3**
BKZ	**Black Stump Fm**	**8.41**	**198**	PN	**P**	**11 18 00.9**	**-0.6**
BKZ				SN	**S**	**11 19 36.4**	**-0.1**
BKZ	**Black Stump Fm**	**8.41**	**198**	*e*P	**P**	**11 18 02.7**	**+1.1**
CNZ	**Chateau**	**8.72**	**203**	PN	**P**	**11 18 07.9**	**+2.7**
CNZ	**Chateau**	**8.72**	**203**	P	**P**	**11 18 07.9**	**+2.7**
WNVZ	**Wahianoa**	**8.82**	**202**	PN	**P**	**11 18 06.0**	**-0.4**
WNVZ	**Wahianoa**	**8.82**	**202**	P	**P**	**11 18 07.5**	**+1.1**
MOVZ	**Moawhango**	**8.85**	**201**	PN	**P**	**11 18 08.1**	**+1.5**
MOVZ	**Moawhango**	**8.85**	**201**	P	**P**	**11 18 08.1**	**+1.4**
PXZ	**Pawanui**	**9.14**	**195**	PN	**P**	**11 18 11.1**	**+1.0**
TSZ	**Takapari Road**	**9.39**	**199**	PN	**P**	**11 18 10.2**	**-2.8**
TSZ	**Takapari Road**	**9.39**	**199**	*e*P	**P**	**11 18 11.6**	**-1.4**
BFZ	**Birch Farm**	**9.90**	**196**	PN	**P**	**11 18 19.2**	**+0.2**
BFZ	**Birch Farm**	**9.90**	**196**	*e*P	**P**	**11 18 19.2**	**+0.2**
MRZ	**Mangatainoka R**	**10.05**	**199**	PN	**P**	**11 18 19.8**	**-1.1**
MRZ				*e*SN	**S**	**11 20 09.5**	**-1.8**
MRZ	**Mangatainoka R**	**10.05**	**199**	P	**P**	**11 18 20.0**	**-0.9**
KIW	**Kapiti Island**	**10.44**	**201**	PN	**P**	**11 18 25.3**	**-0.1**
KIW	**Kapiti Island**	**10.44**	**201**	P	**P**	**11 18 25.3**	**-0.1**
MTW	**Mount Morrison**	**10.54**	**198**	PN	**P**	**11 18 26.7**	**+0.1**
MTW	**Mount Morrison**	**10.54**	**198**	P	**P**	**11 18 26.7**	**+0.1**
CAW	**Cannon Point**	**10.61**	**200**	PN	**P**	**11 18 26.4**	**-1.1**
CAW	**Cannon Point**	**10.61**	**200**	P	**P**	**11 18 26.4**	**-1.1**
MSWZ	**Moikau Station**	**10.85**	**199**	PN	**P**	**11 18 29.2**	**-1.0**
MSWZ	**Moikau Station**	**10.85**	**199**	P	**P**	**11 18 29.2**	**-1.0**
SNZO	**South Karori**	**10.91**	**201**	*e*P	**P**	**11 18 30.4**	**-0.5**
	27nm,0.7s						
SNZO				*e*Sn	**S**	**11 20 29.7**	**+0.3**
TCW	**Tory Channel**	**10.96**	**203**	PN	**P**	**11 18 30.1**	**-1.5**
TUWZ	**Tuamarina**	**11.26**	**204**	PN	**P**	**11 18 33.2**	**-1.9**
QRZ	**Quartz Range**	**11.29**	**210**	PN	**P**	**11 18 35.0**	**-0.4**
QRZ	**Quartz Range**	**11.29**	**210**	*e*P	**P**	**11 18 34.9**	**-0.5**
THZ	**Tophouse**	**11.93**	**206**	PN	**P**	**11 18 41.8**	**-1.0**
THZ	**Tophouse**	**11.93**	**206**	*e*P	**P**	**11 18 41.8**	**-1.0**
KHZ	**Kahutara**	**12.28**	**203**	PN	**P**	**11 18 45.7**	**-1.1**
KHZ	**Kahutara**	**12.28**	**203**	*e*P	**P**	**11 18 45.7**	**-1.1**
DSZ	**Denniston Nort**	**12.36**	**209**	PN	**P**	**11 18 47.5**	**-0.2**
DSZ	**Denniston Nort**	**12.36**	**209**	*e*P	**P**	**11 18 47.5**	**-0.2**
RPZ	**Rata Peaks**	**14.30**	**207**	S	**S**	**11 21 38.7**	**-1.2**
	0.3nm,0.3s,baz=82,slow=18,SNR=2.6						
DZM	**Mont Dzumac**	**15.07**	**304**	P	**P**	**11 19 17.7**	**+0.3**
	0.2nm,0.3s,baz=240,slow=21,SNR=2.4						
AFI	**Afiamalu**	**18.85**	**26**	P	**P**	**11 19 54.3**	**-1.4**
	2.0nm,0.3s,baz=60,slow=8.5,SNR=6.9						
AFI				S	**S**	**11 23 06.8**	**+1.5**
	0.9nm,0.3s,baz=240,slow=21,SNR=2.6						
AFI	**Afiamalu**	**18.85**	**26**	*e*P	**P**	**11 19 54.2**	**-1.5**
	26nm,1.1s						
CTA	**Charters Tower**	**32.17**	**282**	P	**P**	**11 21 58.9**	**+2.5**
	3.1nm,0.6s,mb3.9,baz=103,slow=11,SNR=6.9						
STKA	**Stephens Creek**	**32.53**	**259**	P	**P**	**11 22 01.4**	**+2.0**
	2.4nm,0.5s,mb3.8,baz=105,slow=11,SNR=7.4						
WRA	**Warramunga Arr**	**42.33**	**274**	P	**P**	**11 23 20.4**	**-0.2**
	1.4nm,0.4s,mb3.6,baz=111,slow=8.1,SNR=74						
WRA				PcP	PcP	11 25 05.2	-1.5
	0.7nm,0.7s,baz=123,slow=3.1,SNR=5.1						
WRA				S	**S**	**11 29 10.4**	**-2.4**
	0.2nm,0.6s,baz=115,slow=13,SNR=3.1						
QSPA	**South Pole Qui**	**58.90**	**180**	P	**P**	**11 25 23.9**	**+1.4**
	4.0nm,0.7s,mb3.9						
SYO	**Syowa Base**	**75.91**	**194**	⇓P	**P**	**11 27 06.6**	**-0.7**
SYO	**Syowa Base**	**75.91**	**194**	⇓*e*P	**P**	**11 27 06.6**	**-0.7**
MIV	**Mineville/With**	**122.25**	**55**	PKPdf	PKPdf	11 34 09.0	-1.8
KEV	**Kevo**	**138.50**	**346**	*e*pkp	PKPdf	11 34 50.6	+10
JOF	**Joensuu**	**142.48**	**337**	*e*pkp	PKPdf	11 34 49.3	+1.5
KAF	**Kangasniemi**	**144.68**	**339**	*e*pkp	PKPdf	11 34 50.3	-1.3
	baz=36,slow=3.2						
FINES	**FINESS Array B**	**145.25**	**338**	PKPbc	PKPbc	11 34 53.1	-0.4
	3.4nm,0.4s,baz=48,slow=4.0,SNR=38						
NB2	**NORSAR Subarra**	**149.25**	**349**	PKPabc	PKPdf	11 35 03.8	+4.6
	1.1nm,0.5s,baz=13,slow=2.5						
NOA	**NORSAR Array B**	**149.25**	**349**	PKPbc	PKPdf	11 35 04.0	+4.9
	1.3nm,0.6s,baz=11,slow=4.0,SNR=3.4						
BRTR	**Keskin Array B**	**151.37**	**297**	PKPab	PKPab	11 35 20.1	-1.7
	1.2nm,0.7s,baz=108,slow=3.9,SNR=4.6						

IDC ***15*** *11:24:47.8±0.9,29.90N×139.45E,h398^{km}±16^{km},mb3.2/6, mb1 3.3/9,mb1mx3.1/21,mbtmp3.9/9,Error ellipse: s-maj=59.0km s-min=10.0km az=74.0*
ISC 15 11:24:47.0±1.0**,29.8N**±0.2×**139.2E**±0.5**,h401**^{km}±19^{km}**,n9,** σ**0**^{s}**52**/11**,mb3.5**/6**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**3.31**	**8**	P	**P**	**11 25 53.4**	**+0.1**
	11nm,0.3s,baz=270,slow=19,SNR=3.0						
JHJ				S	**S**	**11 26 45.2**	**-0.1**
	17nm,0.3s,baz=78,slow=22,SNR=2.3						
CBIJ	**Chichi jima**	**3.77**	**136**	P	**P**	**11 25 57.9**	**+0.5**
	8.1nm,0.3s,baz=126,slow=22,SNR=9.8						
CBIJ				S	**S**	**11 26 52.3**	**-0.4**
	40nm,0.3s,baz=256,slow=22,SNR=12						
MJAR	**Matsushiro Arr**	**6.74**	**353**	P	**P**	**11 26 28.7**	**+0.2**
	0.9nm,0.3s,baz=165,slow=11,SNR=8.8						
MKAR	**Makanchi Array**	**46.74**	**308**	P	**P**	**11 32 39.2**	**-0.2**
	0.3nm,0.3s,mb3.0,baz=85,slow=9.2,SNR=4.6						
WRA	**Warramunga Arr**	**49.71**	**186**	P	**P**	**11 33 02.1**	**-0.2**
	0.5nm,0.5s,mb3.1,baz=1.9,slow=7.6,SNR=18						
STKA	**Stephens Creek**	**61.41**	**178**	P	**P**	**11 34 24.7**	**+0.5**
	2.3nm,0.9s,mb3.6,baz=353,slow=4.7,SNR=2.9						
ARCES	**ARCESS Array B**	**70.10**	**340**	P	**P**	**11 35 19.1**	**+0.9**
	2.7nm,0.8s,mb3.9,baz=56,slow=8.7,SNR=6.4						
FINES	**FINESS Array B**	**74.34**	**333**	P	**P**	**11 35 42.9**	**0.0**
	2.9nm,0.9s,mb3.9,baz=90,slow=4.2,SNR=3.8						
NOA	**NORSAR Array B**	**80.10**	**337**	P	**P**	**11 36 13.1**	**-1.2**
	0.9nm,0.6s,mb3.6,baz=32,slow=1.7,SNR=3.2						

MOS ***15*** *11:59:02.8±1.1,34.30S×179.70W,h33^{km},mb5.0/3,Error ellipse: s-maj=20.8km s-min=16.8km az=75.4*
HRVD ***15*** *11:59:04.6±0.7,34.57S×179.45W,h45^{km}±2^{km},MW4.9/28, Centroid moment Tensor Solution. LP body waves: s23,c25;Mantle waves: s28,c36; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.40±.27; $M_{\theta\theta}$-0.07±.20; $M_{\phi\phi}$-2.33±.17; $M_{r\theta}$0.03±.17; $M_{\theta\phi}$-0.40±.15; $M_{\phi r}$0.94±.16; Best double couple: $M_0$2.576×10^{16} NP1:ϕ_s193°,δ34°,λ95°. NP2:ϕ_s7°,δ56°,λ87°. Principal axes: T 2.579, Plg79°, Azm265°; N -.009, Plg3°, Azm9°; P -2.572, Plg11°, Azm99°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***15*** *11:59:04.6±1.6,34.35S×179.68W,h38^{km}±14^{km},mb5.1/9 Error ellipse: s-maj=15.2km s-min=12.0km az=124.0*
IDC ***15*** *11:59:05.2±1.9,34.21S×179.88W,h46^{km}±17^{km},mb4.5/5, mb1 4.7/7,mb1mx4.5/12,mbtmp4.9/7,ML4.8/2,MS4.0/15, Ms1 4.0/15,ms1mx3.8/20,Error ellipse: s-maj=19.3km s-min=14.9km az=112.0*
ISC 15 11:59:02.2±0.9**,34.59S**±0.05×**179.29W**±0.09**,h58**^{km}±7^{km}**, n115,**σ**1**^{s}**44**/95**,mb4.8**/13**,MS4.0**/14**,3C-2D,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**3.55**	**213**	PN	**P**	**11 59 57.2**	**+0.9**
MXZ				SN	**S**	**12 00 37.8**	**+0.5**
MXZ				T		12 02 57.2	
PUZ	**Puketiti**	**4.00**	**209**	PN	**P**	**12 00 03.4**	**+0.8**
PUZ				SN	**S**	**12 00 51.3**	**+2.6**
WIZ	**White Island**	**4.09**	**223**	PN	**P**	**12 00 04.5**	**+0.6**
MYRZ	**Mayor Island**	**4.51**	**232**	PN	**P**	**12 00 11.6**	**+1.7**
MWZ	**Matawai**	**4.54**	**214**	PN	**P**	**12 00 10.1**	**0.0**
MWZ				SN	**S**	**12 01 00.2**	**-1.9**
KUZ	**Kuaotunu**	**4.60**	**241**	PN	**P**	**12 00 11.8**	**+0.8**
URZ	**Urewera**	**4.67**	**217**	P	**P**	**12 00 12.0**	**-0.1**
	44nm,0.3s,baz=38,slow=4.2,SNR=220						
URZ				S	**S**	**12 01 02.1**	**-3.5**
	89nm,0.3s,baz=290,slow=19,SNR=7.0						
URZ	**Urewera**	**4.67**	**217**	PN	**P**	**12 00 11.9**	**-0.1**
MARZ	**Manawahe**	**4.71**	**223**	PN	**P**	**12 00 13.6**	**+1.1**
EDRZ	**Edgecumbe**	**4.76**	**221**	PN	**P**	**12 00 14.5**	**+1.3**
TGRZ	**Tauranga**	**4.78**	**228**	PN	**P**	**12 00 14.3**	**+0.8**
KNZ	**Kokohu**	**5.05**	**208**	PN	**P**	**12 00 16.5**	**-0.8**
UTU	**Utuhina**	**5.11**	**224**	PN	**P**	**12 00 20.0**	**+1.9**
MTAZ	**Motutapu**	**5.21**	**243**	PN	**P**	**12 00 20.0**	**+0.5**
PATZ	**Paeroa**	**5.21**	**222**	PN	**P**	**12 00 20.6**	**+1.1**
TOZ	**Tahuroa Road**	**5.25**	**232**	PN	**P**	**12 00 21.4**	**+1.3**
OTAZ	**Otara**	**5.26**	**242**	PN	**P**	**12 00 22.0**	**+1.8**
KAAZ	**Kauri Point**	**5.37**	**244**	PN	**P**	**12 00 23.8**	**+2.0**
WCZ	**Waipu Caves**	**5.38**	**254**	PN	**P**	**12 00 22.2**	**+0.3**
RAO	**Raoul Island**	**5.45**	**13**	P	**P**	**12 00 20.2**	**-2.6**
	26nm,0.3s,baz=236,slow=22,SNR=3.2						
RAO				S	**S**	**12 01 19.3**	**-5.6**
	36nm,0.3s,baz=62,slow=23,SNR=2.2						
WTAZ	**Waiatarua**	**5.51**	**243**	PN	**P**	**12 00 25.6**	**+1.9**
BKZ	**Black Stump Fm**	**5.69**	**215**	PN	**P**	**12 00 24.7**	**-1.4**
RATZ	**Rangitukua**	**5.83**	**221**	PN	**P**	**12 00 28.2**	**+0.1**
OUZ	**Omahuta**	**5.88**	**262**	PN	**P**	**12 00 28.1**	**-0.7**
OTVZ	**Oturere**	**6.10**	**220**	PN	**P**	**12 00 30.0**	**-1.9**
WTVZ	**West Tongariro**	**6.11**	**221**	PN	**P**	**12 00 31.0**	**-1.0**
HIZ	**Hauiti**	**6.13**	**229**	PN	**P**	**12 00 32.7**	**+0.5**
NGZ	**Ngauruhoe**	**6.14**	**220**	PN	**P**	**12 00 31.9**	**-0.5**
TWVZ	**Taurewa**	**6.16**	**222**	PN	**P**	**12 00 32.2**	**-0.4**
CNZ	**Chateau**	**6.19**	**220**	PN	**P**	**12 00 32.5**	**-0.6**
WPVZ	**Whakapapa**	**6.19**	**220**	PN	**P**	**12 00 32.8**	**-0.4**
FWVZ	**Far West T-bar**	**6.23**	**220**	PN	**P**	**12 00 32.3**	**-1.3**
MOVZ	**Moawhango**	**6.24**	**218**	PN	**P**	**12 00 32.0**	**-1.8**
PXZ	**Pawanui**	**6.24**	**208**	PN	**P**	**12 00 30.5**	**-3.3**
WNVZ	**Wahianoa**	**6.26**	**219**	PN	**P**	**12 00 33.0**	**-1.1**
PKVZ	**Pokaka**	**6.36**	**221**	PN	**P**	**12 00 35.1**	**-0.5**
TSZ	**Takapari Road**	**6.64**	**213**	PN	**P**	**12 00 35.9**	**-3.7**
WAZ	**Wanganui**	**6.89**	**220**	PN	**P**	**12 00 39.9**	**-3.1**
BFZ	**Birch Farm**	**7.04**	**209**	PN	**P**	**12 00 41.7**	**-3.3**
NEZ	**North Egmont**	**7.06**	**227**	PN	**P**	**12 00 46.6**	**+1.2**
PKE	**Pukeiti**	**7.08**	**228**	PN	**P**	**12 00 49.0**	**+3.3**

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NRZ   Ngariki Road       7.20 227    PN      P        12 00 50.2 +2.9
MRZ   Mangatainoka R     7.30 212    PN      P        12 00 45.0 -3.7
MTW   Mount Morrison     7.74 211    PN      P        12 00 50.8 -4.0
KIW   Kapiti Island      7.77 215    PN      P        12 00 51.1 -4.0
TRWZ  Traveller          7.87 209    PN      P        12 00 52.8 -3.7
CAW   Cannon Point       7.89 213    PN      P        12 00 52.9 -3.9
PAWZ  Paruwai Farm       7.96 210    PN      P        12 00 53.8 -4.0
MSWZ  Moikau Station     8.06 211    PN      P        12 00 55.0 -4.1
MRW   Makara Radio       8.15 214    PN      P        12 00 55.9 -4.5
DUWZ  D'Urville Isla     8.21 219    PN      P        12 00 58.4 -2.8
TCW   Tory Channel       8.34 216    PN      P        12 00 58.1 -4.8
TUWZ  Tuamarina          8.67 216    PN      P        12 01 02.1 -5.4
QRZ   Quartz Range       8.99 224    PN      P        12 01 06.6 -5.2
THZ   Tophouse           9.44 218    PN      P        12 01 11.7 -6.3
RPZ   Rata Peaks        11.79 217    P       P        12 01 42.8 -7.2
      3.3nm,0.3s,baz=353,slow=4.8,SNR=10
RPZ                                  S       S        12 03 44.5  -16
      1.9nm,0.3s,baz=226,slow=23,SNR=8.4
DZM   Mont Dzumac       17.68 311    P       P        12 03 03.5 -2.4
      0.1nm,0.3s,baz=108,slow=21,SNR=2.0
DZM                                  LR      LR       12 08 17.4
      comp=Z,1µm,21.7s,baz=200,slow=32
AFI   Afiamalu          21.68  20    P       P        12 03 51.7 +1.9
      5.0nm,0.5s,mb4.2,baz=278,slow=23,SNR=3.7
AFI                                  LR      LR       12 10 29.4
      comp=Z,283nm,20.5s,MS3.7,baz=184,slow=32
AFI   Afiamalu          21.68  20    P       P        12 03 51.7 +1.9
AFI                                  LR      LR       12 10 29.4
RAR   Rarotonga         21.74  57    LR      LR       12 09 40.1
      comp=Z,405nm,21.4s,MS3.8,baz=232,slow=29
TBI   Tubuai            28.30  75   eLR      LR       12 12 09.4
      552nm,26.0s,baz=246
HNR   Honiara           31.45 318    LR      LR       12 15 23.2
      comp=Z,180nm,21.1s,MS3.7,baz=166,slow=32
PPT   Papeete           31.45  65   eLR      LR       12 13 33.8
      663nm,26.5s,baz=235
STKA  Stephens Creek    32.70 264   eP       P        12 05 33.5 +2.3
      2.6nm,0.5s,mb4.4
STKA  Stephens Creek    32.70 264    P       P        12 05 31.6 +0.3
      2.8nm,0.5s,mb4.5,baz=62,slow=7.3,SNR=16
STKA                                 PcP     PcP      12 08 15.9  0.0
      2.2nm,0.7s,baz=90,slow=2.0,SNR=3.1
STKA                                 LR      LR       12 17 44.8
      comp=Z,481nm,19.4s,MS4.2,baz=284,slow=35
STKA  Stephens Creek    32.70 264   eP       P        12 05 31.3 +0.1
STKA                                eP                12 05 33.5
CTA   Charters Tower    33.66 286   eP       P        12 05 40.9 +1.2
      7.0nm,0.6s,mb4.8
CTA   Charters Tower    33.66 286    LR      LR       12 15 29.2
      comp=Z,143nm,20.2s,MS3.7,baz=309,slow=30
CTA   Charters Tower    33.66 286   eP       P        12 05 40.9 +1.2
CTA                                  pmax    pmax
      comp=Z,7.0nm,0.6s
CTAO  Charters Tower    33.66 286   eP       P        12 05 41.0 +1.3
      comp=Z,6.3nm,0.6s,mb4.7
CTAO  Charters Tower    33.66 286   eP       P        12 05 41.0 +1.3
CTAO                                 pmax    pmax
      comp=Z,6.0nm,0.6s,mb4.7
PMG   Port Moresby      39.63 301    LR      LR       12 20 23.2
      comp=Z,400nm,19.9s,MS4.3,baz=116,slow=33
RKT   Rikitea           40.17  86   eS       S        12 12 39.1 +2.4
RKT                                 eLR      LR       12 17 42.1
      comp=Z,540nm,26.2s,baz=245
ASPA  Alice Springs     41.99 272   eP       P        12 06 50.1 +0.7
ASPA                                eS       S        12 13 01.6 -2.1
WB2   Warramunga Arr    43.35 277⇑ iP       P        12 07 00.3 -0.2
WB2                                 eS       S        12 13 22.7 -0.8
WRAB  Tennant Creek     43.35 277   eP       P        12 07 00.7 +0.1
      comp=Z,44nm,0.7s,mb5.3
WRAB  Tennant Creek     43.35 277d iP       P        12 07 00.5 -0.1
WRA   Warramunga Arr    43.36 277    P       P        12 07 00.2 -0.4
      comp=Z,22nm,0.6s,mb5.0,baz=119,slow=7.5,SNR=154
WRA                                  PcP     PcP      12 08 48.0 -0.9
      comp=Z,2.0nm,0.6s,baz=121,slow=3.2,SNR=5.4
WRA                                  S       S        12 13 20.1 -3.6
      comp=Z,2.6nm,1.0s,baz=122,slow=14,SNR=7.8
TAOE  Nuku Hiva Isla    44.05  64   eLR      LR       12 19 22.0
      comp=Z,863nm,26.4s
FORT  Forrest           44.07 260⇑ iP       P        12 07 06.8 +0.5
      comp=Z,56nm,0.6s,mb5.5
FITZ  Fitzroy Crossi    51.41 274   eP       P        12 08 02.9 -0.7
      comp=Z,24nm,0.8s,mb5.2
FITZ  Fitzroy Crossi    51.41 274    P       P        12 08 03.3 -0.3
      comp=Z,34nm,0.8s,mb5.3,baz=126,slow=7.1,SNR=16
FITZ                                 LR      LR       12 28 45.4
      comp=Z,490nm,18.9s,MS4.5,baz=131,slow=35
NWAO  Narrogin (SRO)    52.01 253    LR      LR       12 26 03.3
      comp=Z,147nm,20.7s,MS4.0,baz=120,slow=31
KLBR  Kellerberrin      52.07 254   eP       P        12 08 07.5 -0.9
      comp=Z,46nm,0.7s,mb5.5
MUN   Mundaring         53.16 253   eP       P        12 08 15.8 -0.7
QSPA  South Pole Qui    55.53 180⇑ iP       P        12 08 39.2 +6.0
      comp=Z,14nm,0.7s,mb5.1
MAW   Mawson            68.02 201   eP       P        12 10 00.3 +3.4
      comp=Z,9.8nm,0.7s,mb5.0
MAW   Mawson            68.02 201    P       P        12 09 60.0 +3.1
      comp=Z,12nm,0.6s,mb5.1,baz=133,slow=8.4,SNR=37
MAW                                  LR      LR       12 37 47.8
      comp=Z,114nm,18.1s,MS4.1,baz=66,slow=34
MAW   Mawson            68.02 201   eP       P        12 10 00.3 +3.4
MAW                                  pmax    pmax
      comp=Z,10.0nm,0.7s
SNAA  Sanae             74.01 179   eP       P        12 10 37.6 +4.9
      comp=Z,9.0nm,1.1s,mb4.6
SNAA  Sanae             74.01 179d iP       P        12 10 38.0 +5.3
PLCA  Paso Flores       80.45 133    P       P        12 11 16.3 +7.1
      comp=Z,1.1nm,0.5s,mb4.0,baz=210,slow=6.2,SNR=5.7
PLCA                                 LR      LR       12 39 12.8
      comp=Z,50nm,18.2s,MS3.9,baz=176,slow=30
PLCA  Paso Flores       80.45 133    P       P        12 11 16.3 +7.0
PLCA                                 LR      LR       12 39 12.8
NVAR  Mina Array Bea    92.03  43    P       P        12 12 12.1 +6.1
      comp=Z,0.6nm,0.7s,mb4.0,baz=229,slow=8.3,SNR=5.4
NVAR                                 LR      LR       12 42 08.5
      comp=Z,38nm,21.1s,MS3.8,baz=130,slow=28
TXAR  Lajitas Array     95.54  58    LR      LR       12 51 29.9
      comp=Z,70nm,18.7s,MS4.2,baz=305,slow=33
LPAZ  La Paz            97.38 115    LR      LR       12 47 14.1
      comp=Z,42nm,21.4s,MS3.9,baz=25,slow=30
PDAR  Pinedale Array    99.89  45    LR      LR       12 49 40.6
      comp=Z,69nm,18.4s,MS4.2,baz=259,slow=30
ILAR  Eielson Array    102.24  14    PKiKP            12 17 17.6
      comp=Z,0.5nm,0.7s,baz=315,slow=2.6,SNR=5.6
MKAR  Makanchi Array   119.58 309    PKP     PKPdf    12 17 47.4 +2.1
      comp=Z,0.7nm,0.6s,baz=83,slow=1.8,SNR=12
MKAR  Makanchi Array   119.58 309    PKP     PKPdf    12 17 47.4 +2.1
KURK  Kurchatov        123.10 312  i PKIKP   PKPdf    12 17 54.3 +2.3
BVAR  Borovoye Array   128.57 314    PKP     PKPdf    12 18 04.8 +2.3
      comp=Z,1.2nm,0.3s,baz=141,slow=1.5,SNR=13
KMBO  Kilima Mbogo     130.67 232    PKP     PKPdf    12 18 12.5 +4.9
      comp=Z,1.4nm,0.9s,baz=60,slow=23,SNR=3.7
AKTO  Aktyubinsk       136.01 309    PKP     PKPdf    12 18 19.4 +3.0
      comp=Z,1.3nm,0.6s,SNR=4.9
KEV   Kevo             141.93 346   epkp     PKPdf    12 18 36.9  +10
ARCES ARCESS Array B   142.41 346    PKhKP            12 18 26.1
      comp=Z,2.6nm,0.7s,baz=63,slow=2.7,SNR=6.1
JOF   Joensuu          145.84 335   epkp     PKPdf    12 18 36.4 +3.0
KAF   Kangasniemi      148.06 337   epkp     PKPdf    12 18 40.3 +3.2
      baz=40,slow=2.2
FINES FINESS Array B   148.63 337    PKPbc   PKPdf    12 18 44.6 +6.5
      comp=Z,8.8nm,0.6s,baz=37,slow=4.7,SNR=45
DBIC  Dimbokro         151.75 168    PKP     PKPdf    12 18 49.9 +5.5
      comp=Z,4.1nm,1.0s,baz=142,slow=12,SNR=4.4
DBIC                                 PKPbc   PKPdf    12 18 57.1  +13
      comp=Z,5.7nm,0.6s,baz=157,slow=1.7,SNR=13
NB2   NORSAR Subarra152.68 349       PKPabc  PKPdf    12 18 55.0  +11
      comp=Z,2.8nm,0.6s,baz=17,slow=2.6
NOA   NORSAR Array B152.68 349       PKPbc   PKPdf    12 18 53.9  +10
      comp=Z,2.2nm,0.9s,baz=305,slow=5.3,SNR=12
NOA                                  PKPab   PKPab    12 19 04.7 +0.1
      comp=Z,3.8nm,0.9s,baz=18,slow=2.5,SNR=3.5
BRTR  Keskin Array B   153.35 291    PKPbc   PKPdf    12 18 55.3 +9.5
      comp=Z,2.7nm,0.6s,baz=125,slow=3.4,SNR=9.9
BRTR                                 PKPab   PKPab    12 19 05.6 -2.5
      comp=Z,1.2nm,0.7s,baz=162,slow=3.9,SNR=4.5
AKASG Malin Array Be   153.78 317    PKP     PKPdf    12 18 48.1 +2.1
      comp=Z,0.3nm,0.2s,baz=50,slow=1.6,SNR=4.0
AKASG                                PKPbc   PKPdf    12 18 57.0  +11
      comp=Z,1.5nm,0.3s,baz=49,slow=3.0,SNR=9.6
AKASG                                PKPab   PKPab    12 19 09.5  0.0
      comp=Z,0.4nm,0.3s,baz=54,slow=4.7,SNR=4.3
AKASG Malin Array Be   153.78 317    PKP     PKPdf    12 18 48.1 +2.1
AKASG                                PKPbc   PKPdf    12 18 57.0  +11
AKASG                                PKPab   PKPab    12 19 09.5 -0.1
```

NNC 15 12:24:40.3±2.8**,37.06N**×**70.28E,h230**^{km}±44^{km}**,mpv3.0, 2C-2D,Error ellipse: s-maj=41.1km s-min=27.7km az=61.0,Afghanistan-Tajikistan border region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
KK31  Karatay Array      6.04    2 ⇑P       P        12 26 08.4 -0.7
      0.7nm,0.5s,baz=181,slow=12,SNR=6.4
KK31                               ⇑S       S        12 27 19.2 +0.7
      0.8nm,0.3s,baz=189,slow=25,SNR=5.4
AAK   Ala-Archa          6.44   29 ⇓S       S        12 27 28.6 +0.9
      14nm,1.6s
AB31  Akbulak array     14.31  332 ⇓P       P        12 27 52.8 -1.1
      0.2nm,0.4s,baz=151,slow=13,SNR=4.2
```

JMA 15 12:30:36.5±0.2**,38.03N**×**144.62E,h48**^{km}**,M3.7,Off east coast of Honshu**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
OFUJ  Ofunato            2.54  295   P       P        12 31 16.6 +0.4
OFUJ                                eS       S        12 31 46.6 +0.5
JIO   Ouri               2.61  280   P       P        12 31 17.6 +0.4
JIO                                  S       S        12 31 48.1 +0.2
MIYJ  Miyakonagasawa     2.68  306   P       P        12 31 18.1 -0.1
MIYJ                                 S       S        12 31 49.2 -0.4
JMK   Ichinoseki         2.82  290   S       S        12 31 54.0 +0.7
JOM   Ohasama            2.97  300   P       P        12 31 23.2 +0.8
JOM                                  S       S        12 31 58.1 +1.0
JMM   Marumori           3.03  268   S       S        12 31 58.2 -0.3
JOT   Ohata              4.33  322  eS       S        12 32 28.9 -2.6
JKB   Kayabe             4.74  326  eS       S        12 32 38.2 -3.4
JRY   Ryogami san        5.00  248   P       P        12 31 50.1 -0.8
JRY                                  S       S        12 32 44.8 -3.3
NEM2  Nemuro 2           5.40    9  eS       S        12 32 48.8 -9.4
JTKR  Abashiri--Toko     5.96  355  eS       S        12 33 04.0 -8.2
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*IDC **15** 12:50:31.8±3.8,6.86S×148.18E,h50^{km}±35^{km},mb4.0/7, mb1 4.1/9,mb1mx4.1/13,mbtmp4.2/9,ML3.4/2,MS3.6/2, Ms1 3.5/2,ms1mx2.7/23,Error ellipse: s-maj=47.6km s-min=22.2km az=107.0*

*NEIC **15** 12:50:33.1±2.1,6.88S×148.08E,h63^{km}±20^{km},mb4.0/1, Error ellipse: s-maj=41.8km s-min=14.4km az=105.0*

ISC 15 12:50:32.1±2.5**,6.9S**±0.1×**148.1E**±0.2**,h71**^{km}±24^{km}**,n16,** σ**0**^{s}**73**/15**,mb3.9**/7**,New Britain region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
PMG   Port Moresby       2.67  200   P       P        12 51 14.0 +0.2
      5.2nm,0.3s,baz=33,slow=5.1,SNR=18
PMG                                  S       S        12 51 45.6 +0.5
      32nm,0.3s,baz=3.1,slow=18,SNR=12
KAKA  Kakadu            16.45  248  eP       P        12 54 38.7  +19
      9.9nm,0.7s
WRAB  Tennant Creek     18.59  224  eP       P        12 54 45.3 -0.9
      8.7nm,0.8s
WB2   Warramunga Arr    18.60  224  eP       P        12 54 45.2 -1.0
WRA   Warramunga Arr    18.61  224   P       P        12 54 45.4 -1.0
      0.6nm,0.3s,baz=52,slow=11,SNR=34
ASPA  Alice Springs     21.54  218  eP       P        12 55 17.3 +0.1
FITZ  Fitzroy Crossi    24.54  241  eP       P        12 55 47.8 +1.2
      17nm,0.3s,mb5.0
FITZ  Fitzroy Crossi    24.54  241   P       P        12 55 47.6 +1.0
      20nm,0.4s,mb4.9,baz=58,slow=8.1,SNR=117
STKA  Stephens Creek    25.60  193   P       P        12 55 56.3 -0.2
      2.3nm,0.6s,mb3.8,baz=47,slow=7.5,SNR=4.8
STKA                                 LR      LR       13 06 49.7
      comp=Z,115nm,21.7s,baz=26,slow=38
NWAO  Narrogin (SRO)    38.61  224   P       P        12 57 50.6 +0.6
      6.1nm,0.8s,mb4.5,baz=81,slow=5.2,SNR=3.3
JNU   Nakatsue          43.00  339   LR      LR       13 14 09.5
      comp=Z,96nm,20.8s,baz=160,slow=33
MJAR  Matsushiro Arr    44.16  349   P       P        12 58 35.1 -0.5
      1.0nm,0.7s,mb3.7,baz=164,slow=8.9,SNR=4.8
SONM  Songino Array     65.68  331   P       P        13 01 11.1 -0.1
      0.3nm,0.8s,mb3.2,baz=138,slow=3.1,SNR=3.6
MKAR  Makanchi Array    78.84  320   P       P        13 02 30.5 +1.4
      0.8nm,0.4s,mb3.9,baz=97,slow=8.4,SNR=29
ILAR  Eielson Array     85.86   23   P       P        13 03 04.6 -0.3
      0.5nm,0.7s,mb3.5,baz=275,slow=4.4,SNR=5.0
GERES GERESS Array B   123.22  326   PKP     PKPdf    13 09 25.1 +4.1
      0.7nm,0.5s,baz=90,slow=1.3,SNR=4.9
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*IDC **15** 12:55:11.3±0.7,3.73N×97.29E,mb4.2/10,mb1 4.2/10, mb1mx4.1/17,mbtmp4.2/10,Error ellipse: s-maj=39.6km s-min=15.9km az=63.0*

*MOS **15** 12:55:13.9±1.4,3.78N×97.27E,h30^{km},mb4.5/4,Error ellipse: s-maj=42.0km s-min=16.8km az=120.4*

*NEIC **15** 12:55:23.2±0.7,3.75N×97.29E,h100^{km},mb4.7/4,Error ellipse: s-maj=20.7km s-min=14.0km az=51.0*

ISC 15 12:55:14.2±0.6**,3.61N**±0.09×**97.11E**±0.07**,h33**^{km}**,n23,** σ**1**^{s}**07**/24**,mb4.3**/13**,1C,Northern Sumatera**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
KULM  Kulim              3.91   65⇑iPn      Pn       12 56 18.8 +5.3
KULM                                eSn      Sn       12 56 59.4 +0.6
SNG   Songkhla           4.98   44   P       P        12 56 33.5 +4.9
NWAO  Narrogin (SRO)    41.04  154   P       P        13 02 57.6 +1.4
      5.1nm,0.7s,mb4.2,baz=329,slow=5.9,SNR=4.5
NWAO  Narrogin (SRO)    41.04  154   P       P        13 02 57.6 +1.4
      8.6nm,0.9s,mb4.4
NWAO  Narrogin (SRO)    41.04  154   P       P        13 02 57.6 +1.4
NWAO                                 pmax    pmax
      comp=Z,9.0nm,0.9s
WRA   Warramunga Arr    43.42  124   P       P        13 03 14.8 -1.1
      comp=Z,2.9nm,0.4s,mb4.3,baz=302,slow=9.2,SNR=63
WRAB  Tennant Creek     43.42  124  eP       P        13 03 15.2 -0.8
      comp=Z,7.2nm,0.5s,mb4.7
WRAB  Tennant Creek     43.42  124  eP       P        13 03 15.2 -0.8
WRAB                                 pmax    pmax
      comp=Z,7.0nm,0.5s,mb4.7
SONM  Songino Array     44.78    9   P       P        13 03 26.5  0.0
      comp=Z,0.7nm,0.4s,mb3.8,baz=191,slow=9.3,SNR=8.8
MKAR  Makanchi Array    44.90  346   P       P        13 03 27.2 -0.3
      comp=Z,0.6nm,0.3s,mb4.0,baz=156,slow=7.9,SNR=17
MKAR  Makanchi Array    44.90  346   P       P        13 03 27.5  0.0
STKA  Stephens Creek    55.05  133   P       P        13 04 43.9 -1.4
      comp=Z,1.9nm,0.6s,mb4.3,baz=282,slow=15,SNR=4.2
STKA  Stephens Creek    55.05  133  eP       P        13 04 44.2 -1.1
AB31  Akbulak array     55.36  331  eP       P        13 04 47.1 -0.2
AB31                                 pmax    pmax
      comp=Z,1.0nm,0.3s,mb4.3
BRTR  Keskin Array B    67.44  312   P       P        13 06 09.8 +1.0
      comp=Z,1.0nm,0.6s,mb4.0,baz=128,slow=7.1,SNR=5.7
AKASG Malin Array Be    73.31  322   P       P        13 06 43.6 -0.7
      comp=Z,1.0nm,0.4s,mb4.1,baz=90,slow=6.1,SNR=4.4
MAW   Mawson            75.02  193   P       P        13 06 55.6 +1.8
      comp=Z,0.7nm,0.5s,mb3.8,baz=63,slow=2.3,SNR=4.8
MAW   Mawson            75.02  193  eP       P        13 06 56.3 +2.4
      comp=Z,1.0nm,0.6s,mb3.9
MAW   Mawson            75.02  193  eP       P        13 06 56.3 +2.4
MAW                                  pmax    pmax
      comp=Z,1.0nm,0.6s
FINES FINESS Array B    77.83  332   P       P        13 07 10.2 +0.4
      comp=Z,7.2nm,1.0s,mb4.5,baz=98,slow=5.5,SNR=16
PSZ   Piszkesteto       78.76  318  eP       P        13 07 12.3 -2.9
      comp=Z,8.8nm,0.5s,mb5.0
PSZ   Piszkesteto       78.76  318  eP       P        13 07 12.3 -2.9
PSZ                                  pmax    pmax
      comp=Z,9.0nm,0.5s,mb5.0
ARCES ARCESS Array B    80.25  340   P       P        13 07 23.3 +0.5
      comp=Z,2.0nm,0.5s,mb4.3,baz=93,slow=5.4,SNR=22
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*MOS **15** 13:02:26.1±1.3,6.78S×148.29E,h33^{km},mb4.8/4,Error ellipse: s-maj=16.9km s-min=11.5km az=69.9*

*BJI **15** 13:02:28.3,6.80S×148.20E,h35^{km},mB5.1,mb4.9*

*NEIC **15** 13:02:28.4±0.6,6.80S×148.25E,h35^{km},mb4.7/7,Error ellipse: s-maj=14.9km s-min=9.6km az=101.0*

*IDC **15** 13:02:29.4±4.0,6.90S×148.25E,h43^{km}±39^{km},mb3.7/5, mb1 4.0/7,mb1mx3.9/11,mbtmp4.0/7,ML3.6/2,MS3.5/2, Ms1 3.5/2,ms1mx2.9/16,Error ellipse: s-maj=46.2km s-min=25.0km az=104.0*

ISC 15 13:02:28.7±1.9**,6.92S**±0.09×**148.33E**±0.10**,h61**^{km}±20^{km}**, n39,** σ**1**^{s}**06**/40**,mb4.4**/14**,New Britain region**

```
Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
PMG   Port Moresby       2.73  205   P       P        13 03 11.7 +0.6
      14nm,0.3s,baz=78,slow=6.0,SNR=11
PMG                                  S       S        13 03 42.8 -0.1
      23nm,0.3s,baz=30,slow=15,SNR=4.0
PMG   Port Moresby       2.73  205  ePn      P        13 03 12.7 +1.6
PMG                                 eSn      S        13 03 46.1 +3.1
HNR   Honiara           11.77  103   P       P        13 05 15.2 -0.9
      42nm,1.1s
HNR   Honiara           11.77  103   P       P        13 05 15.2 -0.9
HNR                                  pmax    pmax
      comp=Z,42nm,1.1s
CTA   Charters Tower    13.24  189   LR      LR       13 10 25.8
      comp=Z,151nm,19.3s,baz=50,slow=36
CTAO  Charters Tower    13.24  189   Pn      P        13 05 36.3 +0.7
      comp=Z,18nm,1.5s
CTAO  Charters Tower    13.24  189   P       P        13 05 36.3 +0.7
CTAO                                 pmax    pmax
      comp=Z,18nm,1.5s
KAKA  Kakadu            16.67  249  eP       P        13 06 38.2  +18
      comp=Z,9.9nm,0.7s
WRAB  Tennant Creek     18.74  225  eP       P        13 06 44.1 -1.1
      comp=Z,9.7nm,0.7s
WRAB  Tennant Creek     18.74  225  eP       P        13 06 44.1 -1.1
WRAB                                 pmax    pmax
      comp=Z,10.0nm,0.7s
WB2   Warramunga Arr    18.75  225  eP       P        13 06 43.6 -1.7
WRA   Warramunga Arr    18.76  225   P       P        13 06 43.8 -1.6
      comp=Z,0.7nm,0.3s,baz=52,slow=11,SNR=20
ASPA  Alice Springs     21.66  218  eP       P        13 07 16.0 +0.1
FITZ  Fitzroy Crossi    24.74  241  eP       P        13 07 46.2 +0.1
      comp=Z,22nm,0.4s,mb5.0
FITZ                                e                 13 07 57.7
FITZ  Fitzroy Crossi    24.74  241   P       P        13 07 46.1  0.0
      comp=Z,23nm,0.4s,mb5.1,baz=61,slow=8.5,SNR=83
FITZ                                 LR      LR       13 18 44.4
      comp=Z,156nm,18.7s,baz=176,slow=40
STKA  Stephens Creek    25.61  193   P       P        13 07 54.7 +0.5
      comp=Z,2.8nm,0.7s,mb3.9,baz=305,slow=5.5,SNR=5.7
STKA  Stephens Creek    25.61  193  eP       P        13 07 55.2 +1.0
KKM   Kota Kinabalu     34.53  291   P       P        13 09 14.2 +0.6
KLBR  Kellerberrin      37.64  225  eP       P        13 09 39.4 -0.2
      comp=Z,5.4nm,0.4s,mb4.6
NWAO  Narrogin (SRO)    38.76  224  eP       P        13 09 49.0 +0.1
      comp=Z,3.8nm,0.7s,mb4.2
NWAO  Narrogin (SRO)    38.76  224  eP       P        13 09 49.0 +0.1
NWAO                                 pmax    pmax
      comp=Z,4.0nm,0.7s
MJAR  Matsushiro Arr    44.26  348   P       P        13 10 33.6 -0.6
      comp=Z,1.5nm,0.7s,mb3.8,baz=178,slow=6.8,SNR=4.6
QIZ   Qiongzhong        45.86  305   P       P        13 10 44.4 -2.7
      comp=Z,55nm,1.3s,mb5.3
KS15  Wonju Array Si    48.09  338   P       P        13 11 05.2 +0.9
YSS   Yuzh-Sakhalins    53.87  355   P       P        13 11 44.9 -3.0
      comp=Z,55nm,1.6s,mb5.2
YSS   Yuzh-Sakhalins    53.87  355   P       P        13 11 44.9 -3.0
YSS                                  pmax    pmax
      comp=Z,55nm,1.6s,mb5.2
MDJ   Mudanjiang        54.01  344   P       P        13 11 48.3 -0.7
MDJ                                  AP      pP       13 11 57.3 -7.7
MDJ                                  XP      sP       13 12 01.3  -11
MDJ                                  PCP     PcP      13 12 53.3  0.0
MDJ                                  PP      PP       13 13 48.8 -3.5
MDJ                                  SCP              13 16 49.1
MDJ                                  PCS              13 16 52.6
MDJ                                  S       S        13 19 22.1 +3.5
MDJ                                  XS               13 19 37.3
MDJ                                  SCS     ScS      13 21 35.1 +6.0
MDJ                                  AMB     AMB
      comp=Z,120nm,5.5s
KMI   Kunming           54.60  307   P       P        13 11 54.9 +1.3
KMI                                  AMB     AMB
      comp=Z,10.0nm,0.6s,mb5.0
KMI   Kunming           54.60  307   P       P        13 11 54.9 +1.3
      comp=Z,11nm,0.6s,mb5.1
SONM  Songino Array     65.85  330   P       P        13 13 10.7 +0.6
      comp=Z,0.2nm,0.3s,mb3.6,baz=135,slow=4.1,SNR=4.6
ZAK   Zakamensk         69.08  331  eP       P        13 13 29.9 -0.3
ZAK                                  pmax    pmax
      comp=Z,1.0nm,1.2s,mb3.6
BILL  Bilibino          75.86    7   P       P        13 14 10.0 +0.1
      comp=Z,6.6nm,1.3s,mb4.4
BILL  Bilibino          75.86    7   P       P        13 14 10.0 +0.1
BILL                                 pmax    pmax
      comp=Z,7.0nm,1.3s,mb4.4
MKAR  Makanchi Array    79.04  320   P       P        13 14 29.2 +1.2
      comp=Z,0.8nm,0.4s,mb4.0,baz=99,slow=8.4,SNR=18
MKAR  Makanchi Array    79.04  320   P       P        13 14 29.2 +1.1
ILAR  Eielson Array     85.81   23   P       P        13 15 03.4 +1.0
      comp=Z,0.9nm,0.7s,mb4.1,baz=248,slow=4.9,SNR=11
CHKZ  Chkalovo          88.31  324   P       P        13 15 15.0 +0.3
      comp=Z,1.6nm,0.7s,mb4.4
CHKZ  Chkalovo          88.31  324   P       P        13 15 15.0 +0.2
CHKZ                                 pmax    pmax
      comp=Z,2.0nm,0.7s,mb4.5
GERES GERESS Array B   123.41  326   PKP     PKPdf    13 21 23.0 +3.8
      comp=Z,0.8nm,0.5s,baz=90,slow=1.3,SNR=5.5
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*IDC **15** 13:23:31.8±2.4,7.02S×155.74E,h77^{km}±23^{km},mb3.9/7, mb1 4.0/10,mb1mx3.9/15,mbtmp4.2/10,MS3.6/6, Ms1 3.6/6,ms1mx3.2/23,Error ellipse: s-maj=22.9km s-min=13.9km az=177.0*

*BJI **15** 13:23:37.5,7.10S×155.50E,h122^{km},mB5.0,mb4.5*

*NEIC **15** 13:23:37.5±1.2,7.09S×155.50E,h122^{km}±12^{km},mb4.4/8, Error ellipse: s-maj=14.2km s-min=10.4km az=147.0*

ISC 15 13:23:31.1±1.6**,7.05S**±0.10×**155.75E**±0.06**,h86**^{km}±16^{km}**, n37,** σ**0**^{s}**85**/37**,mb4.2**/16**,1C,Bougainville - Solomon Islands region**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
HNR   Honiara            4.78  120   P       P        13 24 41.4 -0.8
      8.2nm,0.3s,baz=214,slow=6.9,SNR=6.4
HNR                                  S       S        13 25 36.9 +0.1
      21nm,0.3s,baz=219,slow=11,SNR=3.7
HNR                                  LR      LR       13 26 37.0
      comp=Z,381nm,18.0s,baz=130,slow=39
HNR   Honiara            4.78  120  ePn      P        13 24 50.1 +7.9
HNR                                  S       S        13 25 36.9 +0.1
HNR                                 eSn      S        13 25 47.9  +11
HNR                                  LR      LR       13 26 37.0
PMG   Port Moresby       8.82  254   P       P        13 25 36.4 -1.3
      2.6nm,0.3s,baz=51,slow=8.3,SNR=11
PMG                                  S       S        13 27 16.0 -0.4
      0.1nm,0.3s,baz=76,slow=12,SNR=5.4
PMG                                  LR      LR       13 28 57.9
      comp=Z,151nm,21.2s,baz=242,slow=37
PMG   Port Moresby       8.82  254  ePn      P        13 25 38.7 +0.9
      26nm,0.8s
PMG                                 eSn      S        13 27 17.7 +1.3
CTA   Charters Tower    15.91  214   P       P        13 27 11.9 +0.6
      0.2nm,0.3s,baz=21,slow=15,SNR=3.1
CTA                                  LR      LR       13 32 23.5
      comp=Z,112nm,21.8s,baz=48,slow=33
WRAB  Tennant Creek     24.40  236  eP       P        13 28 43.1 +0.2
      5.9nm,0.8s,mb4.0
WB2   Warramunga Arr    24.40  236  eP       P        13 28 42.9  0.0
WRA   Warramunga Arr    24.41  236   P       P        13 28 43.0  0.0
      2.4nm,0.7s,mb3.6,baz=59,slow=9.8,SNR=17
WRA                                  PcP     PcP      13 32 20.2 -1.1
      0.4nm,0.6s,baz=62,slow=2.3,SNR=4.9
STKA  Stephens Creek    28.02  206   P       P        13 29 16.2 -0.1
      2.3nm,1.0s,mb3.7,baz=58,slow=9.5,SNR=3.0
STKA                                 LR      LR       13 39 22.3
      comp=Z,109nm,20.3s,baz=27,slow=34
STKA  Stephens Creek    28.02  206   P       P        13 29 16.6 +0.3
FITZ  Fitzroy Crossi    31.32  247  eP       P        13 29 44.6 -1.2
      5.1nm,0.7s,mb4.4
FITZ  Fitzroy Crossi    31.32  247   P       P        13 29 44.2 -1.6
      4.8nm,0.5s,mb4.5,baz=122,slow=8.8,SNR=9.1
JOW   Kunigami          42.94  323   LR      LR       13 48 16.8
      comp=Z,242nm,19.6s,baz=284,slow=35
MAJO  Matsushiro        46.38  340   P       P        13 31 53.5 +2.7
      8.3nm,0.9s,mb4.5
QIZ   Qiongzhong        52.13  301   P       P        13 32 34.7 -0.5
      20nm,1.1s,mb5.1
KULM  Kulim             56.34  281   P       P        13 33 03.0 -3.0
MDJ   Mudanjiang        56.57  338   P       P        13 33 07.9 +0.6
MDJ                                  AP      pP       13 33 36.6 +7.8
MDJ                                  XP      sP       13 33 50.0  +12
MDJ                                  PCP     PcP      13 34 03.0 +0.4
MDJ                                  PP      PP       13 35 13.8 -1.6
MDJ                                  SCP              13 37 50.8
MDJ                                  PCS              13 38 03.8
MDJ                                  S       S        13 40 50.8 +0.4
MDJ                                  XS               13 41 40.8
MDJ                                  AMB     AMB
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	comp=Z,130nm,6.1s						
MDJ				LR	LR		
	comp=N,180nm,18.9s						
MDJ				LR	LR		
	comp=E,290nm,18.4s						
MDJ				LR	LR		
	comp=Z,260nm,13.4s						
HHC	**Hu-ho-hao-te**	62.58	323	eP	P	13 33 52.4	+3.8
HHC				AP	pP	13 34 21.8	+11
HHC				XP	sP	13 34 35.3	+15
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
HHC				AMB	AMB		
	comp=Z,90nm,6.3s						
SONM	**Songino Array**	69.79	327	P	P	13 34 34.7	+0.4
	comp=Z,2.1nm,0.6s,mb4.1,baz=141,slow=6.8,SNR=17						
BILL	**Bilibino**	75.28	4	eP	P	13 35 06.3	+0.1
	comp=Z,3.6nm,0.8s,mb4.2						
GUN	**Gumba**	75.79	301	eP	P	13 35 10.2	+0.3
PKI	**Pulchoki**	76.10	301	eP	P	13 35 11.4	-0.3
KKN	**Kakani**	76.27	301	eP	P	13 35 12.2	-0.4
	comp=Z,10.0nm,0.8s,mb4.6						
DMN	**Daman**	76.37	301	eP	P	13 35 12.7	-0.5
GKN	**Gorkha**	76.87	301	eP	P	13 35 15.6	-0.4
	comp=Z,4.2nm,0.4s,mb4.5						
KOLN	**Koldanda**	77.70	300	eP	P	13 35 20.2	-0.4
	comp=Z,9.1nm,0.9s,mb4.5						
WMQ	**Urumqi**	79.38	317	eP	P	13 35 30.0	+0.5
ILAR	**Eielson Array**	83.14	21	P	P	13 35 48.0	-0.7
	comp=Z,0.4nm,0.4s,mb3.6,baz=242,slow=5.3,SNR=13						
MKAR	**Makanchi Array**	83.94	319	P	P	13 35 53.5	+0.4
	comp=Z,1.2nm,0.6s,mb3.9,baz=102,slow=6.3,SNR=11						
MAW	**Mawson**	84.64	203	P	P	13 35 57.1	+1.0
	comp=Z,2.5nm,1.0s,mb4.1,baz=90,slow=8.4,SNR=4.6						
SYO	**Syowa Base**	92.52	199	⇑P	P	13 36 34.1	+0.5
CHKZ	**Chkalovo**	92.75	324	P	P	13 36 33.9	-1.0
	comp=Z,0.6nm,0.4s,mb4.3						
NEW	**Newport**	93.29	42	LR	LR	14 11 05.8	
	comp=Z,57nm,19.9s,baz=105,slow=31						
FINES	**FINESS Array B**	114.29	336	PKP	PKPdf	13 42 01.8	+1.1
	comp=Z,2.3nm,0.7s,baz=90,slow=1.9,SNR=3.3						
LBTB	**Lobatse**	121.97	235	PKPdf	PKPdf	13 42 18.2	+1.8
BDFB	**Brasilia**	147.41	134	PKPbc	PKPdf	13 43 08.1	+4.6
	comp=Z,1.4nm,0.4s,baz=215,slow=6.4,SNR=3.2						
DBIC	**Dimbokro**	160.75	270	PKPab	PKPab	13 44 05.8	-0.9
	comp=Z,1.7nm,0.7s,baz=125,slow=6.0,SNR=3.2						

ISK ***15*** *13:39:49.7,38.11N×26.77E,h10^{km},MD3.3*

ATH ***15*** *13:39:50.0,38.17N×26.74E,h34^{km}±1^{km},MD3.3/3*

CSEM ***15*** *13:39:50.5±0.1,38.20N×26.79E,h20^{km},MD3.3,Error ellipse: s-maj=3.3km s-min=2.5km az=89.0*

ISC 15 13:39:49.5±0.7**,38.16N**±0.02×**26.67E**±0.04**,h4**^{km}±5^{km}**, n27,**σ**1**^{s}**10**/38**,1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.21	343	i P	Pg	13 39 53.9	+0.1
URLA				i S	Sg	13 39 57.3	+0.7
SMG	**Samos**	0.47	164	⇑iPB	Pg	13 40 00.4	+1.5
SMG				eSB	Sg	13 40 07.9	+2.7
IZM	**Izmir**	0.52	63	i PG	Pg	13 39 59.7	-0.3
IZM				i SG	Sg	13 40 06.9	0.0
KDAG	**Bornova**	0.53	62	i P	Pg	13 39 59.3	-0.8
KDAG				i S	Sg	13 40 05.5	-1.6
AYDN	**Tasoluk**	1.08	117	i P	Pb	13 40 11.4	+1.1
AYDN				i S	Sb	13 40 25.0	+0.4
PRK	**Paraskevi**	1.13	344	ePN	Pn	13 40 11.3	-0.8
PRK				eSN	Sn	13 40 26.8	-1.4
AKS	**Akhisar**	1.15	51	PN	Pn	13 40 11.3	-1.0
AYVA	**Ayvalik**	1.15	1	i P	Pb	13 40 12.0	+0.4
AYVA				i S	Sb	13 40 28.1	+1.4
BODT	**Bodrum**	1.21	155	PN	Pn	13 40 11.4	-1.8
MLSB	**Milas**	1.23	134	PN	Pn	13 40 12.7	-0.8
BDRM	**Kayabasi**	1.25	150	i P	Sn	13 40 31.7	+0.4
BDRM	**Kayabasi**	1.25	150	i P	Pb	13 40 13.7	+0.3
APE	**Apeiranthos**	1.42	220	ePN	Pn	13 40 16.3	+0.1
APE	**Apeiranthos**	1.42	220	ePN	Pn	13 40 16.0	-0.2
MANT	**Manisa**	1.52	77	i P	Pn	13 40 18.6	+1.0
MANT				i S	Sb	13 40 36.9	-0.5
DAT	**Datca**	1.60	153	ePN	Pn	13 40 17.0	-1.8
YER	**Yerkesik**	1.64	128	ePN	Pn	13 40 18.5	-0.8
BALB	**Balikesir**	1.75	32	ePN	Pn	13 40 21.1	+0.1
BTOK	**Tokmak**	1.92	33	i P	Pn	13 40 25.7	+2.4
BTOK				i S	Sn	13 40 49.7	+1.5
DNZL	**Cakiroluk**	1.94	103	i P	Pn	13 40 23.4	-0.2
DNZL				i S	Sn	13 40 50.6	+2.0
DALT	**Dalyan (Mudla)**	2.09	131	ePN	Pn	13 40 24.3	-1.5
GDZ	**Gediz**	2.39	66	i P	Pn	13 40 34.3	+4.2
BNT	**Bandirma**	2.40	23	ePN	Pn	13 40 30.6	+0.4
FETY	**Fethiye**	2.45	128	ePN	Pn	13 40 29.9	-1.0
KCT	**Karacabey**	2.48	31	ePN	Pn	13 40 31.7	+0.3
MRMT	**Marmara Adasi**	2.54	16	ePN	Pn	13 40 31.4	-0.9
ULDT	**Uludag**	2.75	43	i P	Pn	13 40 40.1	+4.8
ULDT				i S	Sn	13 41 15.2	+5.8

NIED ***15*** *13:41:00,23.60N×120.90E,h89^{km},Mw4.8 Best double couple: M$_0$1.51×10^{16} NP1:φ$_s$74°,δ82°,λ-69°. NP2:φ$_s$184°, δ23°,λ-159°.*

BJI ***15*** *13:41:33.3,23.16N×120.93E,h11^{km},mB4.5,mb4.5, ML4.4,Ms4.1,Msz3.9*

NEIC ***15*** *13:41:34.0,23.35N×120.92E,h2^{km},mb4.6/1,ML4.7(TAP), After TAP.*

NEIC Recorded [3 TAP] in Chia-i and T'ai-tung; [2 TAP] in Hua-lien, Nan-t'ou, T'ai-chung and Yun-lin; [1 TAP] in Chang-hua and T'ai-nan Counties.

JMA ***15*** *13:41:39.1±0.4,23.59N×120.94E,h128^{km},M3.7*

ISC 15 13:41:33.2±0.7**,23.19N**±0.06×**120.92E**±0.04**,h2**^{km}**,n16,** σ**1**^{s}**35**/27**,mb4.5**/1**,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	**Ninganchiao**	1.16	32	ePn	Pn	13 41 55.0	-1.3
NACB				eSn	Sn	13 42 10.8	-1.9
YHNB	**Yeheng**	1.53	16	ePn	Pn	13 42 01.6	0.0
YHNB				eSn	Sn	13 42 21.9	-0.3
TATO	**Taipei**	1.85	16	ePn	Pn	13 42 07.5	+1.3
TATO				eSn	Sn	13 42 31.9	+1.5
YOJ	**Yonaguni jima**	2.29	56	P	Pn	13 42 14.4	+1.9
YOJ				S	Sn	13 42 41.5	-0.2
QZH	**Quanzhou**	2.75	310	P	Pn	13 42 18.9	-0.2
QZH				S	Sn	13 42 49.0	-4.3
QZH				Smax			
	comp=N,1μm,0.5s						
QZH				Smax			
	comp=E,1μm,0.6s						
HATJ	**Hateruma jima**	2.78	71	P	Pn	13 42 22.2	+2.7
HATJ				eS	Sn	13 42 53.6	-0.5
IRIF	**Iriomote-Funau**	2.81	66	P	Pn	13 42 21.2	+1.3
IRIF				eS	Sn	13 42 54.6	-0.3
JKRS	**Kuro-shima**	3.02	69	P	Pn	13 42 24.5	+1.7
JKRS				eS	Sn	13 43 00.4	+0.4
JIJ	**Ishigaki jima**	3.17	68	P	Pn	13 42 26.6	+1.5
JIJ				eS	Sn	13 43 02.2	-1.8
JTJ	**Tarama**	3.75	67	P	Pn	13 42 34.1	+0.9
JTJ				eS	Sn	13 43 16.2	-2.3
JMJ	**Miyako jima 2**	4.31	67	eS	Sn	13 43 31.6	-1.2
GZH	**Guangzhou**	6.97	271	P	Pn	13 43 17.3	-1.6
GZH				S	Sn	13 44 34.9	-4.8
GZH				Smax			
	comp=N,240nm,0.9s						
GZH				Smax			
	comp=E,130nm,0.9s						
GTA	**Gaotai**	24.13	317	eP	P	13 46 50.0	-1.3
GTA				AP		13 46 59.0	
GTA				XP		13 47 03.3	
KURK	**Kurchatov**	42.70	321	P	P	13 49 33.9	+0.9
WRAB	**Tennant Creek**	44.82	162	eP	P	13 49 48.6	-2.0
	comp=E,3.4nm,0.4s,mb4.5						
BRVK	**Borovoye**	48.36	321	P	P	13 50 19.0	+0.9

STR ***15*** *13:43:55.5±0.3,49.34N×6.80E,h1^{km}±1^{km},Ml2.6,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

BGR ***15*** *13:43:55.9±0.4,49.34N×6.83E,h1^{km},ML2.3/3,Error ellipse: s-maj=5.6km s-min=3.3km az=29.0*

CSEM ***15*** *13:43:55.9±0.1,49.33N×6.84E,h2^{km},ML3.1/16,Error ellipse: s-maj=1.1km s-min=0.8km az=100.0*

LDG ***15*** *13:43:56.1±0.1,49.33N×6.82E,h1^{km},Md3.0/2,Ml3.1/15, Error ellipse: s-maj=1.6km s-min=1.5km az=95.0, Suspected Mining induced.*

BNS ***15*** *13:43:56.6±0.3,49.36N×6.94E,h1^{km},ML2.4*

NEIC ***15*** *13:43:56.1,49.33N×6.82E,h1^{km},ML3.1(LDG),After LDG.*

ISC 15 13:43:54.0±0.3**,49.32N**±0.01×**6.75E**±0.03**,n42,**σ**1**^{s}**09**/83**, 2C,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	**Walferdange**	0.52	312	ePg	Pg	13 44 06.7	+2.3
	SNR=9.5						
WLF				eSg	Sg	13 44 12.7	+1.4
	SNR=3.2						
WLF	**Walferdange**	0.52	312	ePg	Pg	13 44 06.8	+2.4
WLF				eSg	Sg	13 44 15.6	+4.3
WLF	**Walferdange**	0.52	312	ePg	Pg	13 44 06.8	+2.4
WLF				eSg	Sg	13 44 15.6	+4.3
ABH	**Alteburg**	0.77	42	Pg	Pg	13 44 09.5	+0.2
LANF	**Langenberg**	0.77	115	Pg	Pg	13 44 09.5	+0.1
KTD	**Kalmit**	0.88	89	Pg	Pg	13 44 10.7	-0.8
BGG	**Burgeitz**	0.97	23	ePg	Pg	13 44 13.3	0.0
BGG				eSg	Sg	13 44 25.9	-0.4
	78nm,0.3s						
CDF	**Champ du Feu**	0.97	159	ePg	Pg	13 44 13.5	+0.1
CDF				ePn	Pn	13 44 14.7	0.0
CDF				eSg	Sg	13 44 26.7	+0.4
	98nm,0.2s						
HILG	**Hillesheim**	0.98	357	ePg	Pg	13 44 14.6	+1.1
WLS	**Welschbruch**	0.99	156	Pg	Pg	13 44 14.9	+1.2
WLS				Sg	Sg	13 44 28.8	+1.9
RFYF	**Reffroy**	1.08	231	ePg	Pg	13 44 17.7	+2.1
	baz=51						
RFYF				eSg	Sg	13 44 31.7	+1.6
	79nm,0.2s						
ECH	**Echery**	1.14	166	Pg	Pg	13 44 17.7	+1.1
ECH				Sg	Sg	13 44 33.0	+1.2
THEF	**They Montfort**	1.20	205	Pg	Pg	13 44 18.7	+0.7
THEF				Sg	Sg	13 44 35.6	+1.6
STB	**Steinbach**	1.28	3	ePg	Pg	13 44 19.6	0.0
STB				eSg	Sg	13 44 36.1	-0.5
	68nm,0.5s						
STB	**Steinbach**	1.28	3	Pg	Pg	13 44 19.5	0.0
STB				Sg	Sg	13 44 36.1	-0.5
	68nm,0.5s						
HAU	**Haudompre**	1.34	192	ePn	Pn	13 44 20.2	+0.3
HAU				ePg	Pg	13 44 21.4	+0.7
HAU				eSg	Sg	13 44 38.8	+0.3
	63nm,0.3s						
KLL	**Kalltalsperre**	1.36	348	ePg	Pg	13 44 20.9	-0.2
MEZF	**Maizieres J'vi**	1.38	235	ePn	Pn	13 44 21.7	+1.1
	baz=57						
MEZF				eSg	Sg	13 44 41.3	+1.3
	22nm,0.2s						
TNS	**Taunus Mts**	1.43	50	ePn	Pn	13 44 21.4	+0.2
	SNR=11						
TNS				eSg	Sg	13 44 39.9	-1.6
	SNR=3.3						
TNS	**Taunus Mts**	1.43	50	ePn	Pn	13 44 21.4	+0.2
TNS				eSg	Sg	13 44 39.9	-1.6
BFO	**Black Forest**	1.44	133	ePg	Pg	13 44 22.6	-0.1
	SNR=6.1						
BFO				eSg	Sg	13 44 41.1	-0.8
	SNR=7.3						
GIVF	**Givet**	1.48	303	ePn	Pn	13 44 23.2	+1.3
GIVF				eSg	Sg	13 44 44.0	+0.9
	34nm,0.3s						
MOF	**Molkenrain**	1.49	170	Pg	Pg	13 44 23.8	+0.1
MOF				Sg	Sg	13 44 43.9	+0.4
HINF	**Hinteralfeld**	1.50	177	ePn	Pn	13 44 22.4	+0.1
HINF				ePg	Pg	13 44 24.0	0.0
HINF				eSg	Sg	13 44 43.8	-0.2
	86nm,0.2s						
HGN	**Heimansgroeve**	1.54	340	ePn	Pn	13 44 23.6	+0.7
HGN				⇑ePg	Pg	13 44 25.1	+0.4
HGN				eSg	Sg	13 44 43.2	-2.1
HGN	**Heimansgroeve**	1.54	340	ePn	Pn	13 44 23.6	+0.8
	SNR=0.9						
HGN				ePg	Pg	13 44 24.9	+0.1
	SNR=3.8						
HGN	**Heimansgroeve**	1.54	340	⇑ePg	Pg	13 44 25.1	+0.3
HGN				eSg	Sg	13 44 43.2	-2.1
SFTF	**Sexfontaines**	1.59	226	ePn	Pn	13 44 24.3	+0.8
	baz=40						
SFTF				ePg	Pg	13 44 26.3	+0.7
SFTF				eSg	Sg	13 44 47.4	+0.6
	19nm,0.2s						
BAIF	**Baives**	1.81	295	ePn	Pn	13 44 27.5	+0.9
BAIF				ePg	Pg	13 44 30.5	+0.4
BAIF				eSn	Sn	13 44 49.9	-0.7
BAIF				eSg	Sg	13 44 54.5	+0.3
	22nm,0.3s						
LOMF	**Lomont**	1.97	178	Pg	Pg	13 44 32.8	-0.5
CABF	**La Chapelle**	2.74	190	ePn	Pn	13 44 39.8	-0.2
CABF				eSg	Sg	13 45 23.7	-1.6
	13nm,0.4s						
LOR	**Lormes**	2.81	224	ePn	Pn	13 44 40.6	-0.4
	baz=50						
LOR				eSn	Sn	13 45 14.7	-1.5
LOR				eSg	Sg	13 45 25.7	-2.0
	18nm,0.4s						
SSF	**Saint Saulge**	3.13	225	ePn	Pn	13 44 44.6	-0.9
SSF				eSg	Sg	13 45 35.3	-2.9
	4.4nm,0.3s						
SMF	**Signal de Mont**	3.31	217	ePn	Pn	13 44 47.0	-1.1
SMF				eSn	Sn	13 45 26.7	-2.0
SMF				eSg	Sg	13 45 41.3	-2.9
	7.9nm,0.3s						
AVF	**Avril sur Loir**	3.40	223	ePn	Pn	13 44 48.2	-1.2
AVF				eSg	Sg	13 45 43.8	-3.4
	3.3nm,0.4s						
HYF	**Humbligny**	3.42	235	ePn	Pn	13 44 49.7	0.0
HYF				ePg	Pg	13 45 02.6	+0.3
HYF				eSg	Sg	13 45 45.3	-2.6
GUNZ	**Gunzen**	3.76	72	eSg	Sg	13 45 52.7	-6.6
	SNR=2.6						
BGF	**Bois d'Agland**	3.81	225	ePn	Pn	13 44 54.1	-1.0
LDF	**La Druitiere**	4.58	264	ePn	Pn	13 45 06.1	-0.1
LDF				eSn	Sn	13 45 56.4	-4.6
	3.6nm,0.3s						
MBDF	**Montbardon**	4.59	180	ePn	Pn	13 45 03.5	-2.8
FLN	**La Foliniere**	4.79	266	ePn	Pn	13 45 09.0	-0.1
	baz=83						
RJF	**Les Rejaudoux**	5.36	224	ePn	Pn	13 45 15.6	-1.6

ATH ***15*** *13:44:51.1,38.07N×26.55E,h30^{km},MD3.2/3*

ISK ***15*** *13:44:52.3,38.11N×26.77E,h20^{km},MD3.1*

CSEM ***15*** *13:44:52.3±0.1,38.13N×26.80E,h20^{km},MD3.1,Error ellipse: s-maj=3.4km s-min=2.1km az=94.0*

ISC 15 13:44:51.2±0.6**,38.14N**±0.03×**26.61E**±0.05**,h10**^{km}**,n24,** σ**1**^{s}**23**/34**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.22	358	i P	Pg	13 44 54.2	-1.7
SMG	**Samos**	0.47	157	ePB	Pg	13 45 00.6	0.0
IZM	**Izmir**	0.58	63	i PG	Pg	13 45 02.1	-0.8
IZM				i SG	Sg	13 45 10.4	-0.3
KDAG	**Bornova**	0.58	63	i P	Pg	13 45 01.3	-1.7
KDAG				i S	Sg	13 45 09.4	-1.4
AYDN	**Tasoluk**	1.11	115	i P	Pb	13 45 12.6	+0.5
AYDN				i S	Sb	13 45 27.6	+1.2
PRK	**Paraskevi**	1.14	347	ePN	Pn	13 45 13.9	+0.8
PRK				eSN	Sn	13 45 29.6	+0.8
AKS	**Akhisar**	1.20	52	PN	Pn	13 45 13.3	-0.7
BODT	**Bodrum**	1.21	152	PN	Pn	13 45 13.5	-0.6
MLSB	**Milas**	1.25	132	PN	Pn	13 45 13.3	-1.5
BDRM	**Kayabasi**	1.26	148	i P	Pb	13 45 15.0	+0.5
BDRM				i S	Sb	13 45 33.3	+2.6
APE	**Apeiranthos**	1.37	219	ePN	Pn	13 45 18.2	+1.9
APE	**Apeiranthos**	1.37	219	ePN	Pn	13 45 15.0	-1.4
MANT	**Manisa**	1.57	76	i P	Pn	13 45 20.8	+1.4
MANT				i S	Sb	13 45 40.8	+0.9
DAT	**Datca**	1.60	151	ePN	Pn	13 45 19.7	-0.1
YER	**Yerkesik**	1.67	126	ePN	Pn	13 45 19.9	-0.7
BALB	**Balikesir**	1.80	33	ePN	Pn	13 45 22.4	-0.2
BTOK	**Tokmak**	1.97	34	i P	Pn	13 45 27.3	+2.4
BTOK				i S	Sn	13 45 52.9	+3.0
DNZL	**Cakiroluk**	1.98	102	i P	Pn	13 45 29.4	+4.2
DNZL				i S	Sn	13 45 56.8	+6.6
DALT	**Dalyan (Mudla)**	2.12	130	ePN	Pn	13 45 25.9	-1.2
BNT	**Bandirma**	2.44	24	ePN	Pn	13 45 32.4	+0.7
FETY	**Fethiye**	2.48	126	ePN	Pn	13 45 31.2	-1.1
KCT	**Karacabey**	2.52	32	ePN	Pn	13 45 32.0	-1.0
ULDT	**Uludag**	2.81	44	i P	Pn	13 45 43.6	+6.6
ULDT				i S	Sn	13 46 20.2	+8.9
TKTP	**Tekketepe**	2.93	91	i P	Pn	13 45 46.9	+8.1
TKTP				i S	Sn	13 46 32.5	+18

MAN 15 13:53:58.2,8.56N×123.46E,h20^{km},mb3.9,ML2.6,MS2.2, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	0.11	283	⇑iP	Pb	13 54 03.1	+0.8
DCPH				eS	Sb	13 54 05.8	+0.8
PAGZ	**Pagadian**	0.71	186	eP	Pb	13 54 11.6	-0.2
PAGZ				eS	Sb	13 54 22.4	+1.3
IPIL	**Ipil**	1.17	229	eP	Pb	13 54 19.8	+0.2
IPIL				eS	Sb	13 54 35.4	+1.1
GUIM	**Jordan**	2.23	337	eP	Pn	13 54 33.5	-1.3
GUIM				eS	Sn	13 55 04.8	+2.8

THR ***15*** *14:07:12.7±0.8,34.18N×52.07E,h16^{km}±6^{km},ML3.3*

CSEM ***15*** *14:07:12.6±0.1,34.19N×52.08E,h16^{km},ML4.0,Error ellipse: s-maj=1.8km s-min=1.2km az=85.0*

TEH ***15*** *14:07:14.0,34.18N×52.07E,h10^{km},Mn4.0*

ISC 15 14:07:12.9±0.4**,34.14N**±0.02×**52.03E**±0.04**,h10**^{km}**,n33,** σ**1**^{s}**28**/34**,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISFB	**Sefidab**	0.27	39	Pg	Pg	14 07 18.0	-0.6
ISFB				Sg	Sg	14 07 21.2	-1.3
IVRN	**Varamin**	0.89	344	Pg	Pg	14 07 31.4	+0.7
IKLH	**Kalahroud**	0.90	205	Pg	Pg	14 07 30.7	-0.3
IQOM	**Qom**	1.05	312	Pg	Pg	14 07 32.9	-1.1
IQOM				Sg	Sg	14 07 47.3	-0.9
IZEF	**Zefreh**	1.27	168	Pg	Pg	14 07 36.8	-1.5
IDMV	**Damavand**	1.43	0	Pn	Pn	14 07 39.1	+0.1
IDMV				Sn	Sn	14 07 58.3	+0.3
ILAS	**Lasjerd**	1.46	32	Pn	Pn	14 07 39.4	0.0
DAMV	**Damavand**	1.48	358	ePg	Pg	14 07 40.0	-2.6
NASN	**Na'in**	1.49	154	ePg	Pg	14 07 40.8	-1.9
NASN				eSg	Sg	14 08 01.1	-1.5
IFIR	**Firoozkooh**	1.61	22	Lg		14 08 02.9	
IFIR	**Firoozkooh**	1.61	22	Pn	Pn	14 07 41.5	-0.1
ASAO	**Ashtian**	1.71	284	ePg	Pg	14 07 44.5	-2.5
IAFJ	**Afjeh**	1.73	351	Lg		14 08 07.5	
IAFJ	**Afjeh**	1.73	351	Pn	Pn	14 07 44.0	+0.7
IPIR	**Pirpir**	1.74	213	Pn	Pn	14 07 45.1	+1.7
IGAR	**Garneh**	1.90	176	Pn	Pn	14 07 44.8	-0.9
IMHD	**Mahdasht**	1.90	324	Pn	Pn	14 07 47.3	+1.5
IMHD	**Mahdasht**	1.90	324	Lg		14 08 12.4	
CHTH	**Charan**	1.91	337	ePg	Pg	14 07 47.1	-3.9
ISHM	**Shahmirzad**	1.96	32	Pn	Pn	14 07 47.4	+0.8
THKV	**Tehran--Karaj**	2.00	332	ePg	Pg	14 07 48.9	-4.1
THKV	**Tehran--Karaj**	2.00	332	ePg	Pg	14 07 48.8	-4.2
	SNR=90						
IANJ	**Anjiloo**	2.04	49	Pn	Pn	14 07 47.4	-0.3
IPRN	**Paran-Amol**	2.10	5	Pn	Pn	14 07 50.9	+2.3
IRAZ	**Razeghan**	2.14	307	Pn	Pn	14 07 56.0	+6.8
IGLO	**Galoogah**	2.47	29	Pn	Pn	14 07 59.8	+5.9
ISAD	**Sadrabad**	2.62	147	Pn	Pn	14 07 58.3	+2.2
ICHK	**Chekchek**	2.75	133	Pn	Pn	14 07 59.7	+1.8
SHGR	**Shooshtar-Gavs**	3.38	234	ePn	Pn	14 08 07.7	+0.8
IMEH	**Mehriz**	3.50	141	Pn	Pn	14 08 10.0	+1.4
IBAF	**Bafgh**	3.92	130	Pn	Pn	14 08 15.5	+1.0
SNGE	**Sanandaj**	3.98	285	ePn	Pn	14 08 16.2	+0.9
SNGE				AML	AML	14 09 33.4	
	comp=N,30nm,0.6s						
KRBR	**Kerman**	5.77	135	ePn	Pn	14 08 39.8	-1.0
KRBR				AML	AML	14 10 29.5	
	comp=N,18nm,0.8s						

IDC 15 14:12:54.5±4.4**,1.40N×97.31E,mb3.5**/3**,mb1 3.6**/3**, mb1mx3.4**/16**,mbtmp3.5**/3**,Error ellipse: s-maj=167.1km s-min=30.1km az=57.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	42.05	122	P	P	14 20 48.1	-1.8
	0.3nm,0.5s,baz=300,slow=9.3,SNR=5.7						
SONM	**Songino Array**	46.92	8	P	P	14 21 27.2	-1.4
	0.7nm,0.8s,baz=190,slow=8.8,SNR=4.8						
MKAR	**Makanchi Array**	47.07	346	P	P	14 21 27.7	-2.2
	0.4nm,0.4s,baz=162,slow=8.6,SNR=13						

IDC ***15*** *14:14:36.2±3.7,1.44N×97.38E,mb4.0/4,mb1 4.2/4, mb1mx3.8/17,mbtmp4.0/4,MS3.7/1,Ms1 3.7/1, ms1mx3.0/22,Error ellipse: s-maj=143.9km s-min=26.3km az=57.0*

BJI ***15*** *14:14:37.3,1.08N×97.38E,h41^{km},mB4.4,mb4.5,Ms4.2, Msz3.9*

NEIC ***15*** *14:14:39.5±0.9,1.28N×97.15E,h30^{km},mb4.4/4,Error ellipse: s-maj=19.4km s-min=13.0km az=213.0*

ISC 15 14:14:36.1±3.7**,1.3N**±0.2×**97.1E**±0.1**,h21**^{km}±26^{km}**,n15,** σ**0**^{s}**63**/16**,mb4.4**/11**,MS3.8**/2**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	5.35	41	ePn	Pn	14 15 57.2	+0.3
SHL	**Shillong**	24.70	349	eP	P	14 19 58.0	+0.7
GUN	**Gumba**	28.61	339	eP	P	14 20 34.0	+0.7
	18nm,0.8s,mb4.8						
KKN	**Kakani**	28.73	338	eP	P	14 20 34.3	-0.1
	13nm,0.8s,mb4.7						
GKN	**Gorkha**	29.16	337	eP	P	14 20 38.6	+0.3
	11nm,0.6s,mb4.8						
KOLN	**Koldanda**	29.38	335	eP	P	14 20 40.6	+0.3
	11nm,0.7s,mb4.7						
ENH	**Enshi**	31.17	21	eP	P	14 20 54.4	-1.7
	2.6nm,0.6s,mb4.2						
GTA	**Gaotai**	38.06	3	eP	P	14 21 55.4	+0.3
GTA				AP	pP	14 22 02.9	+1.5
GTA				XP	sP	14 22 07.6	+3.5
GTA				PP	PP	14 23 26.3	+0.8
GTA				PPP	PPP	14 23 47.1	-0.4
GTA				S	S	14 27 46.8	+0.7
GTA				XS		14 28 00.8	
GTA				SS	SS	14 30 21.1	-2.7
GTA				AMB	AMB		
	comp=Z,30nm,6.5s						
GTA				LR	LR		
	comp=N,130nm,16.7s,MS4.0						
GTA				LR	LR		
	comp=E,130nm,12.5s,MS4.0						
GTA				LR	LR		
	comp=Z,130nm,15.6s,MS3.8						
WRA	**Warramunga Arr**	42.13	122	P	P	14 22 29.5	+0.5
	comp=Z,1.1nm,0.9s,mb3.5,baz=301,slow=9.1,SNR=10						
SONM	**Songino Array**	47.10	9	P	P	14 23 08.4	-0.1
	comp=Z,2.8nm,0.8s,mb4.2,baz=189,slow=9.6,SNR=20						
SONM				LR	LR	14 45 31.6	
	comp=Z,75nm,18.8s,MS3.7,baz=332,slow=40						
MKAR	**Makanchi Array**	47.18	346	P	P	14 23 09.2	+0.1
	comp=Z,1.1nm,0.4s,mb4.1,baz=160,slow=8.8,SNR=27						
KURK	**Kurchatov**	51.73	345	eP	P	14 23 43.3	-0.7
	comp=Z,3.5nm,1.0s,mb4.2						
ZAL	**Zalesovo**	53.49	351	P	P	14 23 57.2	0.0
	comp=Z,2.9nm,0.7s,mb4.3,baz=292,slow=7.1						
ZAL	**Zalesovo**	53.49	351	P	P	14 23 57.2	0.0
CHKZ	**Chkalovo**	56.66	341	eP	P	14 24 19.2	-1.0
	comp=Z,3.1nm,0.7s,mb4.5						

NEIC ***15*** *14:34:07.4±1.3,17.94S×178.45W,h568^{km}±22^{km},mb4.4/2, Error ellipse: s-maj=66.2km s-min=17.9km az=156.0*

IDC ***15*** *14:34:07.9±2.1,17.77S×178.51W,h567^{km}±26^{km},mb3.2/7, mb1 3.4/8,mb1mx3.3/15,mbtmp4.1/8,Error ellipse: s-maj=58.1km s-min=15.1km az=155.0*

ISC 15 14:34:06.7±1.5**,17.8S**±0.4×**178.6W**±0.2**,h566**^{km}±21^{km}**, n13,**σ**0**^{s}**62**/13**,mb3.7**/8**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	7.60	61	P	P	14 36 01.5	-0.1
	1.2nm,0.3s,baz=241,slow=10,SNR=3.4						
AFI	**Afiamalu**	7.60	61	P	P	14 36 01.5	-0.1

PMG	**Port Moresby**	34.27	279	P	P	14 40 09.0	+1.3
	15nm,0.8s,mb4.6,baz=108,slow=7.8,SNR=5.7						
PMG	**Port Moresby**	34.27	279	*e*P	P	14 40 09.2	+1.5
	16nm,0.8s,mb4.6						
STKA	**Stephens Creek**	38.54	241	P	P	14 40 43.2	+0.6
	4.2nm,0.8s,mb4.0,baz=110,slow=8.0,SNR=7.0						
WB2	**Warramunga Arr**	44.48	259	*e*P	P	14 41 29.5	-0.5
WRAB	**Tennant Creek**	44.48	259	*e*P	P	14 41 29.4	-0.6
	4.1nm,0.7s,mb4.1						
WRA	**Warramunga Arr**	44.49	259	P	P	14 41 29.6	-0.4
	2.6nm,0.7s,mb3.9,baz=96,slow=7.1,SNR=49						
ASPA	**Alice Springs**	44.66	254	*e*P	P	14 41 31.1	-0.3
NVAR	**Mina Array Bea**	79.45	44	P	P	14 45 16.0	0.0
	0.4nm,0.5s,mb3.0,baz=206,slow=8.1,SNR=4.2						
ILAR	**Eielson Array**	85.80	13	P	P	14 45 46.4	-0.8
	0.7nm,1.1s,mb3.2,baz=216,slow=4.6,SNR=6.0						
TXAR	**Lajitas Array**	86.07	58	P	P	14 45 50.1	+0.8
	0.5nm,0.5s,mb3.4,baz=225,slow=5.3,SNR=4.4						
PDAR	**Pinedale Array**	87.38	43	P	P	14 45 55.1	0.0
	0.5nm,0.6s,mb3.3,baz=236,slow=4.6,SNR=5.2						

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*IDC **15** 14:34:22.2±4.7, 29.61S×179.11W, mb4.1/2, mb1 4.3/2, mb1mx3.9/11, mbtmp4.1/2, Error ellipse: s-maj=171.1km s-min=75.9km az=158.0*

ISC 15 14:35:12.6±1.8**, 31.6S**±0.2×**179.7E**±0.5**, h449**^{km}±32^{km}**, n15, σ0^{s}86**/17**, mb3.7**/2**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	6.04	191	PN	P	14 36 47.7	-0.4
MXZ				SN	S	14 38 04.2	+0.7
PUZ	**Puketiti**	6.55	190	PN	P	14 36 52.9	-0.6
PUZ				SN	S	14 38 13.3	+0.1
MWZ	**Matawai**	6.93	194	PN	P	14 36 57.5	-0.1
URZ	**Urewera**	6.96	197	PN	P	14 36 57.4	-0.5
URZ				SN	S	14 38 21.3	+0.2
KNZ	**Kokohu**	7.57	192	PN	P	14 37 05.8	+1.4
BKZ	**Black Stump Fm**	7.97	198	PN	P	14 37 09.7	+0.8
PXZ	**Pawanui**	8.70	195	PN	P	14 37 17.4	+0.4
PXZ				SN	S	14 38 54.5	-1.0
TSZ	**Takapari Road**	8.95	199	PN	P	14 37 17.7	-2.0
TSZ				SN	S	14 39 00.3	-0.2
THZ	**Tophouse**	11.49	206	PN	P	14 37 48.6	+0.9
KHZ	**Kahutara**	11.84	203	PN	P	14 37 51.6	+0.2
STKA	**Stephens Creek**	32.29	259	P	P	14 41 05.3	+1.3
	1.6nm,0.5s,mb3.7,baz=109,slow=12,SNR=4.6						
WRA	**Warramunga Arr**	42.19	275	P	P	14 42 24.5	-1.3
	1.2nm,0.4s,mb3.7,baz=112,slow=7.9,SNR=15						
JOF	**Joensuu**	142.78	337	*e*p	PKPdf	14 53 49.0	-3.6
	0.5nm,0.3s						
KAF	**Kangasniemi**	144.99	338	*e*p	PKPdf	14 53 55.9	-0.6
	1.2nm,0.3s						
FINES	**FINESS Array B**	145.56	338	PKP	PKPdf	14 53 58.4	+1.0
	3.8nm,0.5s,baz=55,slow=3.6,SNR=28						

ISC 15 14:40:35.5±0.9**, 37.52N**±0.05×**29.12E**±0.07**, h8**^{km}±6^{km}**, n6, σ1^{s}16**/11**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNZL	**Cakiroluk**	0.18	340	*i* P	Pg	14 40 39.3	-0.1
DNZL				*i* S	Sg	14 40 43.0	+0.8
DENT	**Denizli**	0.25	343	PG	Pg	14 40 39.8	-0.9
DENT				SG	Sg	14 40 43.8	-0.3
GOLH	**Golhisar**	0.45	129	*i* P	Pg	14 40 43.7	-0.8
GOLH				*i* S	Sg	14 40 52.9	+2.3
YER	**Yerkesik**	0.77	241	*e*PN	Pn	14 40 52.3	-0.1
MANT	**Manisa**	1.07	335	*i* P	Pb	14 40 55.2	-0.6
MANT				*i* S	Sb	14 41 11.6	+1.8
TKTP	**Tekketepe**	1.08	61	*i* P	Pb	14 40 53.5	-2.5
TKTP				*i* S	Sb	14 41 10.4	+0.4

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*THR **15** 14:44:27.7±1.0, 38.84N×49.03E, h40^{km}±10^{km}, ML3.0*

*CSEM **15** 14:44:27.5±0.5, 38.94N×49.00E, h35^{km}, ML3.0, Error ellipse: s-maj=15.4km s-min=5.3km az=19.0*

*TEH **15** 14:44:28.9, 38.82N×48.85E, h10^{km}, Mn3.8*

*NNC **15** 14:44:36.6±5.8, 39.81N×49.93E, Error ellipse: s-maj=181.3km s-min=36.5km az=129.0*

ISC 15 14:44:26.0±0.7**, 39.11N**±0.05×**49.15E**±0.05**, h33**^{km}**, n18, σ1^{s}42**/24**, 4D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRMI	**Germi**	1.02	254	*e*PG	P	14 44 45.3	+1.3
GRMI				*e*SG	S	14 44 57.1	-0.3
GRMI				AML	AML	14 44 59.1	
	comp=N,350nm,0.3s						
IHSH	**Hashtroud**	1.68	242	Pn	Pn	14 45 01.9	+8.3
IBST	**Bostanabad**	2.26	232	Pn	Pn	14 45 01.3	-0.7
ITBZ	**Tabriz**	2.51	251	Pn	Pn	14 45 05.7	+0.3
MAKU	**Maku**	3.48	275	*e*PN	Pn	14 45 20.3	+1.1
CHTH	**Charan**	3.56	153	*e*PN	Pn	14 45 19.2	-1.2
IRAZ	**Razeghan**	3.75	170	Sn	Sn	14 46 03.7	-2.9
IRAZ	**Razeghan**	3.75	170	Pn	Pn	14 45 28.8	+5.8
IPRN	**Paran-Amol**	3.77	138	Pn	Pn	14 45 24.7	+1.4
IAFJ	**Afjeh**	3.83	147	Pn	Pn	14 45 25.7	+1.5
IAFJ				Sn	Sn	14 46 08.3	-0.4
DAMV	**Damavand**	4.13	146	*e*Pn	Pn	14 45 28.1	-0.4
DAMV				AML	AML	14 46 19.5	
	comp=N,32nm,0.4s						
IDMV	**Damavand**	4.21	146	Pn	Pn	14 45 31.8	+2.2
IDMV				Sn	Sn	14 46 17.6	-0.6
SNGE	**Sanandaj**	4.26	200	*e*Pn	Pn	14 45 28.4	-2.0
IGLO	**Galoogah**	4.44	128	Pn	Pn	14 45 35.1	+2.3
IFIR	**Firoozkooh**	4.50	139	Pn	Pn	14 45 35.8	+2.1
IFIR				Sn	Sn	14 46 25.4	-0.1
IVRN	**Varamin**	4.59	153	Pn	Pn	14 45 32.9	-2.1
AB31	**Akbulak array**	12.75	34	⇓Pn	P	14 47 25.0	-2.5
	comp=N,0.7nm,0.7s,baz=214,slow=15,SNR=7.1						
AB31				⇓Sn	S	14 49 40.6	-8.7
	comp=N,2.2nm,0.7s,baz=225,slow=24,SNR=5.3						
AKTO	**Aktyubinsk**	12.95	26	⇓Pn	P	14 47 29.8	-0.4
	comp=N,0.7nm,1.1s						
AKTO				⇓Sn	S	14 49 45.2	-8.9
	comp=N,0.8nm,0.6s						

IDC 15 15:06:17.1±1.6**, 5.33N**×**78.23W, mb3.6**/2**, mb1 3.9**/3**, mb1mx3.7**/19**, mbtmp3.6**/3**, ML2.3**/1**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.8**/19**, Error ellipse: s-maj=64.4km s-min=28.7km az=19.0, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	3.91	97	Pn	Pn	15 07 19.9	+0.2
	4.2nm,0.3s,baz=91,slow=22,SNR=5.6						
ROSC				Sn	Sn	15 08 06.1	-0.9
	1.6nm,0.3s,baz=107,slow=19,SNR=3.4						
ROSC				LR	LR	15 09 05.0	
	comp=Z,164nm,19.7s,baz=99,slow=43						
BDFB	**Brasilia**	36.46	125	LR	LR	15 28 42.3	
	comp=Z,32nm,20.4s,baz=287,slow=37						
NVAR	**Mina Array Bea**	49.04	318	P	P	15 15 07.4	-0.5
	0.5nm,0.7s,baz=121,slow=7.3,SNR=4.0						
ILAR	**Eielson Array**	76.19	336	P	P	15 18 06.2	-2.5
	0.6nm,0.8s,baz=108,slow=5.7,SNR=5.2						
ASPA	**Alice Springs**	144.09	236	*e*P	PKPbc	15 25 52.1	-2.7
WB2	**Warramunga Arr**	145.15	242	*e*P	PKPbc	15 25 56.0	-1.8
WRA	**Warramunga Arr**	145.16	242	PKPbc	PKPbc	15 25 56.2	-1.7
	2.3nm,0.8s,baz=106,slow=3.4,SNR=16						

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*NEIC **15** 15:14:30.3±0.8, 7.92S×147.41E, h100^{km}, mb4.2/7, Error ellipse: s-maj=18.6km s-min=14.4km az=94.0*

*IDC **15** 15:14:32.8±1.9, 8.29S×147.54E, h114^{km}±12^{km}, mb3.9/4, mb1 4.0/6, mb1mx3.7/12, mbtmp4.3/6, Error ellipse: s-maj=41.8km s-min=25.1km az=119.0*

ISC 15 15:14:31.8±1.6**, 8.2S**±0.1×**147.5E**±0.1**, h118**^{km}±11^{km}**, n23, σ1^{s}06**/23**, mb4.3**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	1.24	196	P	P	15 14 56.8	+0.2
	281nm,0.3s,baz=22,slow=4.9,SNR=2673						
PMG				S	S	15 15 13.8	-1.4
	154nm,0.3s,baz=41,slow=22,SNR=8.9						
PMG	**Port Moresby**	1.24	196	*e*Pn	P	15 14 56.5	-0.2
PMG				*e*Sn	S	15 15 15.0	-0.2
CTA	**Charters Tower**	11.88	186	*e*P	P	15 17 20.9	+2.6
	1.3nm,0.3s						
CTA	**Charters Tower**	11.88	186	P	P	15 17 18.9	+0.6
	0.6nm,0.3s,baz=351,slow=13,SNR=7.9						
CTAO	**Charters Tower**	11.88	186	*e*P	P	15 17 20.8	+2.5
	2.5nm,0.4s						
KAKA	**Kakadu**	15.48	252	*e*P	Px	15 18 25.6	
	21nm,0.5s						
WRAB	**Tennant Creek**	17.27	226	*e*P	P	15 18 27.5	+0.3
	7.9nm,0.5s						
WB2	**Warramunga Arr**	17.28	226	*e*P	P	15 18 27.3	+0.1
WRA	**Warramunga Arr**	17.29	226	P	P	15 18 27.6	+0.3
	2.1nm,0.3s,baz=50,slow=11,SNR=137						
ASPA	**Alice Springs**	20.16	219	*e*P	P	15 18 58.7	-0.2
FITZ	**Fitzroy Crossi**	23.43	243	P	P	15 19 32.4	+1.1
	12nm,0.3s,mb4.7,baz=72,slow=9.1,SNR=76						
STKA	**Stephens Creek**	24.19	192	*e*P	P	15 19 37.2	-1.2
	2.4nm,0.4s,mb3.9						
STKA	**Stephens Creek**	24.19	192	P	P	15 19 37.6	-0.8
	2.9nm,0.6s,mb3.8,baz=11,slow=9.6,SNR=15						
KLBR	**Kellerberrin**	36.17	226	*e*P	P	15 21 24.3	-0.4
	4.3nm,0.3s,mb4.9						
KSM	**Kuching**	38.32	283	*e*P	P	15 21 38.6	-4.2
RAO	**Raoul Island**	38.62	127	*e*P	P	15 21 47.2	+1.9
	90nm,0.4s						
RAO				*e*		15 22 03.7	
KULM	**Kulim**	48.62	284	*e*P	P	15 23 07.4	+1.6
VNDA	**Vanda**	69.69	177	*e*P	P	15 25 28.9	-1.3
	1.5nm,0.7s,mb3.9						
MAW	**Mawson**	80.42	203	P	P	15 26 30.9	-0.5
	0.9nm,0.6s,mb3.8,baz=112,slow=13,SNR=3.9						
QSPA	**South Pole Qui**	81.78	180	*e*P	P	15 26 38.0	-0.3
	3.0nm,0.3s,mb4.6						
ILAR	**Eielson Array**	87.30	23	P	P	15 27 06.1	+0.1
	0.8nm,0.8s,mb3.7,baz=258,slow=5.3,SNR=7.6						
ARU	**Arti**	96.19	326	*e*P	P	15 27 45.2	-2.1
	8.1nm,0.6s,mb5.3						
DBIC	**Dimbokro**	152.56	269	PKPbc	PKPdf	15 34 17.4	+9.4
	3.5nm,1.0s,baz=90,slow=1.0,SNR=5.2						

IDC 15 15:18:55.6±1.6**, 50.07N**×**28.99W, mb3.8**/7**, mb1 3.9**/7**, mb1mx3.7**/27**, mbtmp3.8**/7**, MS2.9**/4**, Ms1 2.9**/4**, ms1mx2.7**/33**, Error ellipse: s-maj=40.5km s-min=27.3km az=31.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	20.46	111	P	P	15 23 33.6	-3.8
	0.4nm,0.3s,baz=315,slow=10,SNR=5.6						
SCHQ	**Schefferville**	23.34	296	LR	LR	15 31 15.0	
	comp=Z,12nm,21.4s,baz=69,slow=32						
NOA	**NORSAR Array B**	24.83	48	LR	LR	15 33 13.9	
	comp=Z,40nm,19.3s,baz=200,slow=35						
MDT	**Midelt**	24.95	125	P	P	15 24 21.3	-0.4
	1.8nm,0.6s,baz=307,slow=7.6,SNR=5.6						
DAVOX	**Davos**	25.80	82	LR	LR	15 35 34.3	
	comp=Z,25nm,18.5s,baz=270,slow=39						
GERES	**GERESS Array B**	27.50	76	LR	LR	15 35 28.6	
	comp=Z,47nm,19.5s,baz=21,slow=36						
FINES	**FINESS Array B**	32.01	48	P	P	15 25 22.8	-2.5
	3.7nm,0.9s,baz=284,slow=5.7,SNR=5.8						
PDAR	**Pinedale Array**	53.48	295	P	P	15 28 17.2	-2.3
	0.6nm,0.9s,baz=72,slow=4.7,SNR=4.0						
BVAR	**Borovoye Array**	56.90	45	P	P	15 28 42.2	-2.0
	0.8nm,0.6s,baz=304,slow=6.3,SNR=6.0						
MKAR	**Makanchi Array**	66.73	44	P	P	15 29 47.7	-2.5
	1.2nm,0.9s,baz=324,slow=6.1,SNR=5.3						
SONM	**Songino Array**	75.16	29	P	P	15 30 40.6	-0.3
	0.3nm,0.9s,baz=323,slow=7.2,SNR=3.8						

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*IDC **15** 15:21:35.9±8.6, 38.11N×72.96E, h90^{km}±79^{km}, mb3.0/2, mb1 3.2/6, mb1mx3.1/23, mbtmp3.4/6, ML3.3/4, Error ellipse: s-maj=66.1km s-min=45.6km az=10.0*

*NNC **15** 15:21:41.9±2.9, 38.89N×72.12E, mpv3.4, Error ellipse: s-maj=26.2km s-min=19.8km az=43.0*

ISC 15 15:21:34.7±0.8**, 38.10N**±0.05×**72.6E**±0.1**, h126**^{km}±14^{km}**, n23, σ1^{s}31**/29**, mb3.0**/2**, 5C-3D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	4.11	12	P	P	15 22 37.0	+0.1
	SNR=16						
UCH	**Uchtor**	4.38	19	P	P	15 22 40.6	+0.1
	SNR=16						
KZA	**Kyzart**	4.47	26	P	P	15 22 41.0	-0.7
	SNR=13						
EKS2	**Erkin-Say**	4.64	11	P	P	15 22 44.5	+0.4
	SNR=21						
AAK	**Ala-Archa**	4.76	17	P	P	15 22 46.2	+0.7
	SNR=9.8						
AAK	**Ala-Archa**	4.76	17	⇑Pn	P	15 22 46.1	+0.5
	3.6nm,0.3s						
AAK				⇓Sn	S	15 23 35.6	-4.4
	11nm,0.3s						
KBK	**Karagaybulak**	4.89	21	P	P	15 22 48.0	+0.6
	SNR=11						
ULHL	**Ulahol**	5.00	33	P	P	15 22 47.6	-1.2
	SNR=18						
KK31	**Karatay Array**	5.24	343	⇑Pn	P	15 22 53.4	+1.5
	1.1nm,0.2s,baz=156,slow=14,SNR=37						
KK31				⇑Sn	S	15 23 48.3	-3.3
	8.9nm,0.4s,baz=164,slow=27,SNR=18						
DLH	**Dalhousie**	6.20	152	*e*x	x	15 24 15.0	
THN	**Thein Dam**	6.21	155	*e*P	P	15 23 07.2	+2.0
THN				*e*S	S	15 24 13.2	-2.2
KLP	**Kalpa**	8.04	143	*e*P	P	15 23 31.0	+1.0
KLP				*e*S	S	15 24 50.4	-9.4
KLP				AML	AML	15 24 56.8	
	comp=N,44nm,0.3s						
KLP				AML	AML	15 24 57.2	
	comp=E,98nm,0.4s						
AYAN	**Aya Nagar**	10.32	157	*e*S	S	15 25 47.3	-7.1
KUDL	**Kundal**	10.46	161	*e*P	P	15 24 01.4	-0.8
KUDL				*e*S	S	15 25 50.6	-7.0
SONA	**Sohna**	10.53	158	*e*S	S	15 25 50.8	-8.4
SONA				AML	AML	15 25 57.6	
	comp=E,17nm,0.3s						
SONA				AML	AML	15 25 58.1	
	comp=N,6.9nm,0.2s						
MKAR	**Makanchi Array**	11.26	36	P	P	15 24 11.5	-1.2
	comp=N,0.1nm,0.3s,baz=215,slow=18,SNR=3.5						
AB31	**Akbulak array**	14.39	325	⇑Pn	P	15 24 54.4	+1.1
	comp=N,1.4nm,0.8s,baz=143,slow=12,SNR=12						
AB31				⇑Sn	S	15 27 23.4	-6.5
	comp=N,0.5nm,0.4s,baz=145,slow=23,SNR=5.7						
BVAR	**Borovoye Array**	15.00	355	P	P	15 25 01.5	+0.5
	comp=N,0.1nm,0.3s,baz=153,slow=13,SNR=2.3						
AKTO	**Aktyubinsk**	16.11	325	⇓Pn	P	15 25 18.6	+3.7
	comp=N,1.8nm,1.7s						
AKTO				⇓Sn	S	15 28 06.4	-2.8
	comp=N,5.0nm,3.9s						
AKTO	**Aktyubinsk**	16.11	325	P	P	15 25 20.1	+5.2
	comp=N,0.4nm,0.3s,baz=132,slow=10,SNR=7.0						
ZAL	**Zalesovo**	17.92	24	P	P	15 25 36.0	-1.0
	comp=N,0.4nm,0.3s,baz=274,slow=9.2,SNR=7.8						
SONM	**Songino Array**	26.40	57	P	P	15 27 02.3	+1.3
	comp=N,0.4nm,0.8s,mb2.9,baz=254,slow=11,SNR=4.4						
WRA	**Warramunga Arr**	81.79	123	P	P	15 33 43.5	+2.4
	comp=N,0.2nm,0.6s,mb3.1,baz=321,slow=5.1,SNR=5.5						

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*NIED **15** 15:34:00, 38.20N×144.70E, h8^{km}, Mw3.7 Best double couple: $M_0$4.16×10^{14} NP1:ϕ_s219°, δ52°, λ-93°. NP2:ϕ_s43°, δ38°, λ-87°.*

*IDC **15** 15:34:52.4±1.3, 38.11N×144.97E, mb3.5/3, mb1 3.8/5, mb1mx3.6/22, mbtmp3.5/5, ML3.4/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/27, Error ellipse: s-maj=42.3km s-min=25.6km az=120.0*

*JMA **15** 15:34:56.8±0.2, 38.25N×144.69E, h55^{km}, M3.6*

ISC 15 15:34:55.5±1.4**, 38.42N**±0.06×**144.83E**±0.09**, h50**^{km}±20^{km}**, n16, σ1^{s}25**/22**, mb3.6**/3**, MS3.6**/1**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	2.56	286	P	P	15 35 36.3	+0.9
OFUJ				*e*S	S	15 36 06.2	+0.7
MIYJ	**Miyakonagasawa**	2.61	297	P	P	15 35 37.3	+1.1
MIYJ				*e*S	S	15 36 07.4	+0.5
JIO	**Ouri**	2.73	272	P	P	15 35 38.1	+0.1
JIO				*e*S	S	15 36 08.8	-1.1
JMK	**Ichinoseki**	2.87	282	P	P	15 35 40.7	+0.7
JMK				*e*S	S	15 36 13.5	0.0
JOT	**Ohata**	4.14	317	*e*S	S	15 36 44.6	-1.0
JCH	**Churui**	4.33	346	*e*S	S	15 36 49.2	-1.2
JKB	**Kayabe**	4.52	321	*e*S	S	15 36 55.9	+0.8
NEM2	**Nemuro 2**	4.98	8	P	P	15 36 08.3	-1.4
NEM2				*e*S	S	15 37 02.0	-4.8
JRY	**Ryogami san**	5.30	245	P	P	15 36 12.4	-1.8
JRY				*e*S	S	15 37 08.3	-6.5
JTKR	**Abashiri--Toko**	5.58	353	P	P	15 36 18.6	+0.6
JTKR				*e*S	S	15 37 19.3	-2.5
MJAR	**Matsushiro Arr**	5.59	252	Pn	P	15 36 17.8	-0.4
	0.8nm,0.3s,baz=79,slow=16,SNR=6.9						
ASAJ	**Asahikawa**	5.93	344	Pn	P	15 36 24.9	+2.1
	0.9nm,0.3s,baz=178,slow=18,SNR=13						
ILAR	**Eielson Array**	46.86	33	P	P	15 43 25.4	+3.4
	0.8nm,1.1s,mb3.5,baz=262,slow=6.4,SNR=4.0						
PMG	**Port Moresby**	47.63	177	LR	LR	15 59 33.1	
	comp=Z,67nm,20.3s,MS3.6,baz=223,slow=31						
WRA	**Warramunga Arr**	58.88	192	P	P	15 44 50.7	-1.1
	0.8nm,0.8s,mb3.8,baz=11,slow=7.1,SNR=5.4						
PDAR	**Pinedale Array**	74.75	47	P	P	15 46 35.5	+3.7
	0.4nm,0.9s,mb3.4,baz=315,slow=2.6,SNR=2.9						

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*CASC **15** 15:38:10.6±2.1, 14.99N×92.88W, h0^{km}±35^{km}, MD4.7, mb4.6(NEIC)*

*MEX **15** 15:38:11.6±0.9, 14.69N×93.33W, h25^{km}±999^{km}, MD4.6*

*NEIC **15** 15:38:11.0, 14.66N×93.31W, h23^{km}, mb4.6/11, MD4.6(MEX), After MEX.*

*IDC **15** 15:38:15.7±4.2, 15.05N×92.61W, h92^{km}±37^{km}, mb3.8/8, mb1 4.0/10, mb1mx3.8/22, mbtmp4.1/10, MS3.3/9, Ms1 3.4/9, ms1mx3.2/25, Error ellipse: s-maj=83.2km s-min=12.8km az=52.0*

ISC 15 15:38:08.7±0.5**, 14.65N**±0.04×**93.31W**±0.03**, h42**^{km}±6^{km}**, h55**^{km}±.7^{km}**:pP-P, n65, σ1^{s}27**/77**, mb4.4**/19**, MS3.4**/8**, 1C-5D, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	1.98	35	*i* P	P	15 38 40.4	+0.1
CCIG				*i* S	S	15 39 04.1	+0.1
SCX	**San Cristobal**	2.17	17	*i* P	P	15 38 44.5	+1.3
SCX				*i* S	S	15 39 10.0	+1.0
TP2	**Tecpan 2**	2.22	86	⇓*e*P	P	15 38 43.6	-0.1
TP2				*e*S	S	15 39 09.3	-0.8
FUG	**Fuego 3**	2.40	94	⇓*e*P	P	15 38 45.2	-1.2
PCG	**Pacaya**	2.63	95	*e*P	P	15 38 48.9	-0.8
PCG				*e*S	S	15 39 19.1	-1.5
IXG	**Ixpaco**	2.81	99	⇑*e*P	P	15 38 51.2	-0.9
IXG				*e*S	S	15 39 24.1	-0.9
CMIG	**Matias Romero**	2.86	328	*e*P	P	15 38 53.8	+0.8
CMIG				*i* S	S	15 39 25.3	-1.2
HUIG	**Huatulco**	2.92	293	*i* P	P	15 38 54.7	+0.9
HUIG				*i* S	S	15 39 26.4	-1.6
MRL	**Marmol**	3.52	83	⇓*e*P	P	15 39 01.4	-1.0
TUIG	**Tuzandepetl**	3.53	343	*i* P	P	15 39 02.0	-0.4
TUIG				*i* S	S	15 39 41.0	-2.5
RTR	**El Retiro**	3.63	101	*e*P	P	15 39 05.0	+1.1
RTR				*e*S	S	15 39 46.6	+0.7
SBLS	**San Blas**	3.66	102	*e*P	P	15 39 05.5	+1.1
SBLS				*e*S	S	15 39 47.4	+0.6
BOQS	**Boqueron**	4.01	103	⇓*e*P	P	15 39 10.9	+1.6
BOQS				*e*S	S	15 39 55.5	-0.2
OXX	**Oaxaca**	4.08	307	*e*P	P	15 39 10.0	-0.2
OXX				*i* S	S	15 39 59.0	+1.6
VHO	**Vista Hermosa**	4.08	307	*i* P	P	15 39 09.9	-0.4
VHO				*i* S	S	15 39 57.0	-0.4
LBRS	**Las Brisas**	4.24	102	*e*P	P	15 39 12.9	+0.5
LCBS	**La Ceiba**	4.32	103	*e*P	P	15 39 14.2	+0.6
LCBS				*e*S	S	15 40 02.3	-0.9
SNVI	**San Vicente**	4.46	103	*e*P	P	15 39 16.5	+0.9
SNVI				*e*S	S	15 40 05.9	-1.0
VSM	**San Miguel**	5.03	103	*e*P	P	15 39 25.0	+1.3
BLLM	**Bellamira**	5.07	103	*e*P	P	15 39 25.1	+1.0
PPM	**Popocatepetl**	6.72	312	*e*P	P	15 39 44.9	-2.5
PPM				*e*P		15 39 52.0	
PPM				*i* S	S	15 41 01.2	-2.4
PPM	**Popocatepetl**	6.72	312	*e*P	P	15 39 44.9	-2.5
PPM				*i* S	S	15 41 01.2	-2.4
ACX	**Acapulco**	6.73	290	*e*P	P	15 39 49.0	+1.5
PLIG	**Platanillo**	7.01	303	*i* S	S	15 41 07.4	-3.2
JTS	**JuntasAbangare**	9.24	117	P	P	15 40 21.3	-0.9
	3.6nm,0.3s,baz=341,slow=6.0,SNR=15						
JTS	**JuntasAbangare**	9.24	117	*e*Pn	P	15 40 21.1	-1.1
	46nm,0.9s						
JTS				*e*Sn	S	15 42 02.8	-3.2
LCR2	**La Lucha 2**	10.32	117	*e*P	P	15 40 37.0	-0.3
LCR2				*e*S	S	15 42 35.8	+3.1
URSC	**Urasca**	10.47	116	*e*P	P	15 40 40.5	+1.2
BUS	**Buena Vista**	10.62	117	⇓*e*P	P	15 40 41.4	0.0
BUS				*e*S	S	15 42 43.7	+3.7
ACR	**Cerro Adams**	11.58	120	*e*P	P	15 40 54.7	+0.4
TXAR	**Lajitas Array**	17.47	328	P	P	15 42 13.1	+2.2
	baz=153,slow=14,SNR=9.2						
TXAR				LR	LR	15 50 54.2	
	comp=Z,32nm,19.8s,baz=10.0,slow=43						
GDL2	**Guadalupe Moun**	20.18	332	*e*P	P	15 42 45.7	+3.4
GOGA	**Godfrey**	20.70	24	*e*P	P	15 42 47.3	-0.5
	14nm,0.9s						
WVT	**Waverly**	21.95	12	*e*P	P	15 43 03.4	+3.1
	5.3nm,0.8s,mb4.0						
WVT				*e*		15 43 15.1	
BNM	**Barren Site**	22.85	331	*e*P	P	15 43 14.1	+4.8
BNM				*e*		15 43 24.3	
LPM	**Los Pinos Moun**	22.98	331	P	P	15 43 13.8	+3.2
LPM				*e*		15 43 26.5	
ANMO	**Albuquerque**	23.43	332	P	P	15 43 16.7	+1.8
	1.2nm,0.4s,mb3.6,baz=145,slow=10,SNR=4.1						
ANMO	**Albuquerque**	23.43	332	P	P	15 43 16.7	+1.8
SDCO	**Great Sand Dun**	25.42	337	*e*P	P	15 43 35.1	+1.0
	5.0nm,1.0s,mb4.0						
SDCO				*e*		15 43 49.5	
BRNJ	**Basking Ridge**	30.66	29	*e*P	P	15 44 14.4	-7.0
PAL	**Palisades**	31.22	29	*e*P	P	15 44 34.6	+8.3
	40nm,0.8s,mb5.3						
PDAR	**Pinedale Array**	31.32	337	P	P	15 44 26.4	-0.8
	1.2nm,0.9s,mb3.7,baz=135,slow=10,SNR=8.6						
REDW	**Red Top Meadow**	32.33	336	*e*P	P	15 44 36.2	+0.2
	15nm,0.9s,mb4.8						
REDW				*e*pP	pP	15 44 50.3	+2.7
SADO	**Sadowa**	32.34	19	LR	LR	15 59 01.8	
	comp=Z,86nm,19.0s,MS3.5,baz=88,slow=39						
SNOW	**Snow King Moun**	32.37	336	*e*P	P	15 44 36.7	+0.2
	30nm,0.8s,mb5.2						
SNOW				*e*pP	pP	15 44 51.1	+3.1
NVAR	**Mina Array Bea**	32.38	322	P	P	15 44 38.5	+2.0
	2.6nm,0.7s,mb4.2,baz=129,slow=9.5,SNR=20						
NVAR				pP	pP	15 44 52.1	+4.1
	3.4nm,0.8s,baz=133,slow=10,SNR=12						
NVAR				LR	LR	15 59 23.2	
	comp=Z,72nm,18.9s,MS3.4,baz=180,slow=39						
LOHW	**Long Hollow**	32.44	336	*e*P	P	15 44 36.7	-0.3
	6.9nm,0.8s,mb4.5						
LOHW				*e*	pP	15 44 51.1	+2.6
TPAW	**Teton Pass**	32.47	336	*e*P	P	15 44 37.9	+0.5
	13nm,1.1s,mb4.7						
MOOW	**Moose Ponds**	32.61	336	*e*P	P	15 44 38.3	-0.2
	3.6nm,0.8s,mb4.3						
QUA2	**Belchertown**	32.94	29	P	P	15 44 41.3	-0.1
	194nm,1.9s,mb5.7						
MCMT	**McKenzie Canyo**	34.34	335	*e*P	P	15 44 54.7	+1.2
MCMT				*e*		15 45 09.3	
DLMT	**Dillon**	34.68	336	*e*P	P	15 44 57.0	+0.6
	6.6nm,0.9s,mb4.6						
DLMT				*e*	pP	15 45 11.3	+3.3
SAML	**Samuel**	37.98	126	*e*P	P	15 45 21.3	-3.2
	5.9nm,0.9s,mb4.3						
SAML				*e*		15 45 36.9	
LPAZ	**La Paz**	39.54	140	P	P	15 45 37.1	-0.3
	0.7nm,0.3s,mb3.9,baz=334,slow=8.7,SNR=6.2						
SIV	**San Ignacio**	44.06	132	P	P	15 46 12.6	-2.0
	4.5nm,0.6s,mb4.3,baz=306,slow=8.4,SNR=27						
SCHQ	**Schefferville**	45.07	21	LR	LR	16 05 08.9	
	comp=Z,106nm,19.6s,MS3.8,baz=286,slow=36						
YKA	**Yellowknife Ar**	50.11	347	P	P	15 46 59.3	-2.1
	1.9nm,0.8s,mb4.2,baz=133,slow=9.2,SNR=5.9						
YKA				LR	LR	16 10 53.2	
	comp=Z,38nm,19.1s,MS3.4,baz=95,slow=39						
CFAA	**Coronel Fontan**	51.90	153	LR	LR	16 04 26.8	
	comp=Z,4.9nm,18.1s,MS2.6,baz=350,slow=30						
BDFB	**Brasilia**	53.94	122	P	P	15 47 28.1	-2.6
	1.7nm,0.5s,mb4.2,baz=6.8,slow=2.3,SNR=4.0						
ILAR	**Eielson Array**	61.75	337	P	P	15 48 23.4	-1.6
	2.4nm,0.8s,mb4.4,baz=130,slow=4.0,SNR=20						
NOA	**NORSAR Array B**	84.18	28	LR	LR	16 26 48.8	
	comp=Z,52nm,20.5s,MS3.9,baz=290,slow=35						

ARCES	**ARCESS Array B**	**85.92**	**18**	LR	LR	16 27 09.4	
	comp=Z,45nm,20.5s,MS3.9,baz=3.0,slow=34						
FINES	**FINESS Array B**	**90.45**	**25**	LR	LR	16 30 49.3	
	comp=Z,8.4nm,21.2s,MS3.1,baz=5.8,slow=35						
BOSA	**Boshof**	**121.78**	**115**	PKP	PKPdf	15 56 59.5	+0.7
	1.8nm,0.8s,baz=255,slow=6.1,SNR=3.3						
WRA	**Warramunga Arr**	**134.32**	**256**	PKP	PKPdf	15 57 24.4	+1.3
	0.3nm,0.6s,baz=82,slow=2.1,SNR=5.2						

*IDC **15** 15:50:55.9±0.8,5.43N×77.80W,mb3.9/8,mb1 4.3/8,mb1mx4.1/19,mbtmp3.9/8,MS3.8/2,Ms1 3.8/2,ms1mx3.0/23,Error ellipse: s-maj=30.3km s-min=14.3km az=39.0*

*NEIC **15** 15:51:01.7±0.5,5.96N×77.07W,h35^{km},mb4.4/10,Error ellipse: s-maj=19.1km s-min=8.9km az=51.0*

ISC 15 15:50:59.6±0.6,**6.0N**±0.1×**77.1W**±0.1,**h33**^{km},**n35,**σ**0$\overset{s}{.}$89**/22,**mb4.2**/15,**MS3.9**/1,**Near west coast of Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**2.94**	**111**	Pg	**P**	**15 52 00.2**	**+15**
	8.5nm,0.3s,baz=321,slow=5.9,SNR=9.4						
ROSC				Lg		15 52 48.4	
	0.5nm,0.3s,baz=273,slow=21,SNR=6.1						
JTS	**JuntasAbangare**	**8.91**	**299**	LR	LR	15 56 07.8	
	comp=Z,479nm,19.2s,baz=148,slow=36						
SJG	**San Juan**	**16.12**	**40**	*e*Pn	**P**	**15 54 45.5**	**0.0**
	221nm,2.2s						
SAML	**Samuel**	**20.27**	**137**	*e*P	**P**	**15 55 35.8**	**+0.6**
	11nm,0.8s						
LPAZ	**La Paz**	**23.80**	**158**	P	**P**	**15 56 09.3**	**-1.2**
	1.6nm,0.7s,mb3.6,baz=340,slow=14,SNR=7.1						
LPAZ	**La Paz**	**23.80**	**158**	*e*P	**P**	**15 56 12.0**	**+1.5**
	2.2nm,0.9s,mb3.6						
SIV	**San Ignacio**	**26.95**	**144**	P	**P**	**15 56 39.6**	**-0.6**
	1.4nm,0.9s,mb3.5,baz=314,slow=8.4,SNR=5.5						
OXF	**Oxford**	**30.63**	**340**	P	**P**	**15 57 11.8**	**-1.3**
	36nm,1.3s,mb5.0						
TXAR	**Lajitas Array**	**34.22**	**316**	P	**P**	**15 57 43.2**	**-1.3**
	0.4nm,0.4s,mb3.8,baz=142,slow=10,SNR=1.7						
BDFB	**Brasilia**	**35.90**	**127**	LR	LR	16 13 53.7	
	comp=Z,201nm,18.8s,MS3.9,baz=289,slow=38						
CPRX	**Cap Rock**	**36.70**	**321**	*e*P	**P**	**15 58 08.4**	**+2.8**
TUC	**Tucson**	**40.94**	**314**	*e*P	**P**	**15 58 39.7**	**-1.1**
	2.0nm,0.8s,mb3.8						
RCBR	**Riachuelo**	**42.73**	**105**	*e*P	**P**	**15 58 55.4**	**-0.5**
	25nm,1.3s,mb4.8						
GLA	**Glamis**	**44.24**	**313**	*e*P	**P**	**15 59 08.4**	**+0.5**
RSSD	**Black Hills**	**44.77**	**332**	*e*P	**P**	**15 59 11.7**	**-0.2**
	3.6nm,0.8s,mb4.2						
PDAR	**Pinedale Array**	**46.56**	**327**	P	**P**	**15 59 26.8**	**+0.7**
	0.4nm,0.5s,mb3.6,baz=117,slow=9.9,SNR=4.1						
ULM	**Lac du Bonnet**	**46.89**	**344**	P	**P**	**15 59 29.1**	**+0.5**
	3.1nm,0.7s,mb4.4,baz=164,slow=5.1,SNR=5.2						
LOHW	**Long Hollow**	**47.70**	**327**	*e*P	**P**	**15 59 35.6**	**+0.5**
	3.2nm,0.9s,mb4.3						
IMW	**Indian Meadow**	**48.07**	**327**	*e*P	**P**	**15 59 38.5**	**+0.6**
	2.6nm,0.4s,mb4.6						
NVAR	**Mina Array Bea**	**49.36**	**317**	P	**P**	**15 59 47.3**	**-0.7**
	1.4nm,0.8s,mb4.0,baz=119,slow=7.3,SNR=8.7						
BOZ	**Bozeman (W)**	**49.61**	**329**	*e*P	**P**	**15 59 49.2**	**-0.5**
	2.2nm,0.7s,mb4.3						
YKA	**Yellowknife Ar**	**62.78**	**341**	P	**P**	**16 01 24.1**	**+0.2**
	3.0nm,0.8s,mb4.5,baz=129,slow=7.2,SNR=10						
YKA	**Yellowknife Ar**	**62.78**	**341**	P	**P**	**16 01 24.1**	**+0.2**
ILAR	**Eielson Array**	**76.11**	**336**	P	**P**	**16 02 46.4**	**+0.9**
	1.3nm,0.7s,mb4.0,baz=108,slow=4.1,SNR=16						
MJAR	**Matsushiro Arr**	**126.36**	**325**	PKP	PKPdf	16 10 00.5	+0.8
	1.5nm,0.8s,baz=108,slow=7.9,SNR=4.1						
SONM	**Songino Array**	**126.36**	**357**	PKP	PKPdf	16 10 02.4	+3.0
	0.6nm,0.9s,baz=304,slow=5.3,SNR=3.6						
KOLN	**Koldanda**	**141.63**	**28**	*e*P	PKPdf	16 10 33.8	+5.4
GKN	**Gorkha**	**141.91**	**27**	*e*P	PKPdf	16 10 31.8	+2.9
KKN	**Kakani**	**142.38**	**26**	*e*P	PKPdf	16 10 29.9	+0.2
DMN	**Daman**	**142.46**	**26**	*e*P	PKPdf	16 10 29.8	0.0
	9.3nm,0.7s						
GUN	**Gumba**	**142.53**	**25**	*e*P	PKPdf	16 10 30.7	+0.8
	12nm,0.7s						
PKI	**Pulchoki**	**142.63**	**26**	*e*P	PKPdf	16 10 29.4	-0.7
ASPA	**Alice Springs**	**145.39**	**236**	*e*P	PKPdf	16 10 32.2	-2.8
WB2	**Warramunga Arr**	**146.45**	**243**	*e*P	PKPdf	16 10 36.1	-0.8
WRA	**Warramunga Arr**	**146.46**	**243**	PKPbc	PKPbc	16 10 36.2	-2.0
	6.3nm,0.8s,baz=104,slow=3.9,SNR=30						

*NIED **15** 16:19:00,38.00N×144.60E,h5^{km},Mw3.9 Best double couple: M$_0$7.57×10^{14} NP1:ϕ_s186°,δ71°,λ-95°. NP2:ϕ_s22°,δ20°,λ-76°.*

*IDC **15** 16:19:45.1±1.1,37.99N×145.29E,mb3.8/6,mb1 4.0/8,mb1mx3.8/23,mbtmp3.8/8,ML3.8/2,MS3.0/3,Ms1 3.0/3,ms1mx2.6/38,Error ellipse: s-maj=28.9km s-min=24.6km az=71.0*

*NEIC **15** 16:19:47.6±1.1,37.91N×144.99E,h10^{km},mb4.3/2,Error ellipse: s-maj=19.6km s-min=13.7km az=130.0*

*MOS **15** 16:19:49.2±1.0,37.98N×144.86E,h33^{km},mb4.6/3,Error ellipse: s-maj=18.9km s-min=15.9km az=26.1*

*JMA **15** 16:19:51.0±0.1,38.02N×144.62E,h53^{km},M4.3*

ISC 15 16:19:50.1±0.7,**38.11N**±0.04×**144.71E**±0.06,**h53**^{km},**n37,**σ**1$\overset{s}{.}$23**/52,**mb3.9**/8,**MS3.4**/1,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.57**	**293**	P	**P**	**16 20 31.0**	**+0.7**
JIO	**Ouri**	**2.67**	**278**	P	**P**	**16 20 32.0**	**+0.3**
JIO				S	**S**	**16 21 02.3**	**-0.6**
MIYJ	**Miyakonagasawa**	**2.69**	**304**	P	**P**	**16 20 32.7**	**+0.7**
MIYJ				S	**S**	**16 21 04.3**	**+0.8**
JMK	**Ichinoseki**	**2.86**	**288**	P	**P**	**16 20 35.0**	**+0.5**
JOM	**Ohasama**	**3.00**	**298**	P	**P**	**16 20 37.3**	**+0.9**
JOM				*e*S	**S**	**16 21 12.5**	**+1.2**
JMM	**Marumori**	**3.10**	**267**	P	**P**	**16 20 37.6**	**-0.3**
JMM				S	**S**	**16 21 12.3**	**-1.7**
JANG	**Nango**	**3.35**	**313**	P	**P**	**16 20 42.1**	**+0.7**
JANG				*e*S	**S**	**16 21 20.2**	**-0.1**
JYK	**Kaneyama**	**3.51**	**285**	P	**P**	**16 20 44.6**	**+1.1**
JYK				S	**S**	**16 21 24.8**	**+0.7**
JOT	**Ohata**	**4.32**	**320**	P	**P**	**16 20 56.3**	**+1.4**
JOT				*e*S	**S**	**16 21 43.5**	**-1.0**
BSO1	**Boso 1**	**4.58**	**222**	P	**P**	**16 20 55.3**	**-3.3**
JCH	**Churui**	**4.61**	**348**	P	**P**	**16 20 58.8**	**-0.3**
JCH				*e*S	**S**	**16 21 50.3**	**-1.7**
JKB	**Kayabe**	**4.71**	**324**	*e*S	**S**	**16 21 52.6**	**-1.9**
JRY	**Ryogami san**	**5.09**	**248**	P	**P**	**16 21 04.3**	**-1.5**
JRY				S	**S**	**16 21 58.9**	**-5.2**
NEM2	**Nemuro 2**	**5.31**	**8**	P	**P**	**16 21 06.0**	**-2.8**
NEM2				*e*S	**S**	**16 22 03.6**	**-5.8**
JOD2	**Odawara 2**	**5.34**	**240**	P	**P**	**16 21 07.1**	**-2.1**
JOD2				S	**S**	**16 22 03.6**	**-6.5**
MJAR	**Matsushiro Arr**	**5.41**	**255**	Pn	**P**	**16 21 10.4**	**+0.2**
	4.5nm,0.3s,baz=78,slow=15,SNR=30						
MJAR				Sn	**S**	**16 22 12.0**	**-0.1**
	2.1nm,0.3s,baz=198,slow=24,SNR=6.4						
MJAR				LR	LR	16 23 19.6	
	comp=Z,164nm,19.2s,baz=30,slow=37						
MAJO	**Matsushiro**	**5.41**	**255**	*e*Pn	**P**	**16 21 10.4**	**+0.1**
	24nm,0.4s						
MAJO	**Matsushiro**	**5.41**	**255**	*e*P	**P**	**16 21 10.4**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,23nm,0.4s						
MAT	**Matsushiro**	**5.41**	**255**	P	**P**	**16 21 10.8**	**+0.6**
MAT				S	**S**	**16 22 11.4**	**-0.7**
MAT	**Matsushiro**	**5.41**	**255**	*e*P	**P**	**16 21 11.0**	**+0.8**
	comp=Z,20nm,0.7s						
MAT				*e*S	**S**	**16 22 11.0**	**-1.1**
MAT	**Matsushiro**	**5.41**	**255**	*e*P	**P**	**16 21 11.0**	**+0.8**
MAT				*e*S	**S**	**16 22 11.0**	**-1.1**
MAT				pmax	pmax		
	comp=Z,21nm,0.7s						
JTKR	**Abashiri--Toko**	**5.88**	**354**	P	**P**	**16 21 16.1**	**-0.7**
JTKR				S	**S**	**16 22 19.1**	**-4.7**
JHR	**Hokuryu**	**6.06**	**339**	P	**P**	**16 21 21.0**	**+1.7**
JHR				*e*S	**S**	**16 22 27.9**	**-0.3**
ASAJ	**Asahikawa**	**6.21**	**346**	Pn	**P**	**16 21 20.6**	**-0.8**
	comp=Z,1.7nm,0.3s,baz=196,slow=15,SNR=20						
ASAJ	**Asahikawa**	**6.21**	**346**	P	**P**	**16 21 20.6**	**-0.7**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
JNU	**Nakatsue**	**12.30**	**250**	LR	LR	16 27 40.3	
	comp=Z,28nm,20.1s,baz=242,slow=37						
SONM	**Songino Array**	**29.40**	**302**	P	**P**	**16 25 54.8**	**+4.4**
	comp=Z,0.4nm,0.7s,mb3.3,baz=108,slow=4.6,SNR=4.1						
MKAR	**Makanchi Array**	**45.77**	**302**	P	**P**	**16 28 11.8**	**+3.9**
	comp=Z,0.9nm,0.7s,mb3.8,baz=90,slow=9.1,SNR=8.3						
KURK	**Kurchatov**	**47.34**	**308**	*e*P	**P**	**16 28 23.2**	**+3.0**
	comp=Z,3.1nm,0.5s,mb4.5						
KURK	**Kurchatov**	**47.34**	**308**	*e*P	**P**	**16 28 23.2**	**+3.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
CHKZ	**Chkalovo**	**51.49**	**313**	*e*P	**P**	**16 28 54.5**	**+2.4**
	comp=Z,0.9nm,0.4s,mb4.0						
CHKZ	**Chkalovo**	**51.49**	**313**	*e*P	**P**	**16 28 54.5**	**+2.4**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
BVAR	**Borovoye Array**	**51.79**	**312**	P	**P**	**16 28 57.4**	**+3.1**
	comp=Z,0.6nm,0.4s,mb3.9,baz=68,slow=8.0,SNR=5.4						
WRA	**Warramunga Arr**	**58.56**	**191**	P	**P**	**16 29 43.5**	**-0.3**
	comp=Z,1.7nm,0.6s,mb4.2,baz=12,slow=7.3,SNR=16						
AKTO	**Aktyubinsk**	**59.89**	**312**	LR	LR	16 54 31.7	
	comp=Z,27nm,21.6s,MS3.4,baz=287,slow=35						
AKASG	**Malin Array Be**	**75.02**	**324**	P	**P**	**16 31 30.7**	**+3.4**
	comp=Z,0.5nm,0.5s,mb3.8,baz=43,slow=6.4,SNR=6.1						
PDAR	**Pinedale Array**	**75.03**	**47**	P	**P**	**16 31 26.9**	**-0.6**
	comp=Z,0.2nm,0.5s,mb3.3,baz=333,slow=2.0,SNR=3.3						

*NEIC **15** 16:22:35.8±2.6,34.49N×140.62E,h77^{km}±17^{km},Error ellipse: s-maj=36.4km s-min=17.7km az=89.0*

*JMA **15** 16:22:36.8±0.2,34.44N×140.28E,h75^{km}±2^{km},M2.8*

*IDC **15** 16:22:37.4±3.5,34.42N×140.43E,h85^{km}±21^{km},mb3.3/3,mb1 3.4/5,mb1mx3.3/22,mbtmp3.6/5,Error ellipse: s-maj=54.4km s-min=15.9km az=77.0*

ISC 15 16:22:36.5±0.6,**34.45N**±0.04×**140.27E**±0.06,**h82**^{km}±5^{km},**n23,**σ**0$\overset{s}{.}$69**/35,**mb3.5**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**0.40**	**29**	P	**P**	**16 22 49.4**	**-0.3**
BSO3				S	**S**	**16 22 59.9**	**+0.2**
BSO4	**Boso 4**	**0.54**	**6**	P	**P**	**16 22 51.1**	**+0.2**
BSO1	**Boso 1**	**0.62**	**71**	P	**P**	**16 22 50.9**	**-0.8**
TATJ	**Tateyama 2**	**0.66**	**332**	P	**P**	**16 22 52.4**	**+0.3**
TATJ				S	**S**	**16 23 04.6**	**+0.9**
JIM2	**Oshima 3**	**0.74**	**291**	P	**P**	**16 22 52.6**	**-0.5**
JIM2				S	**S**	**16 23 04.1**	**-1.2**
JKO	**Kozu shima**	**0.98**	**255**	P	**P**	**16 22 56.0**	**+0.4**
KTJJ	**Kamata 2**	**1.10**	**296**	P	**P**	**16 22 56.7**	**-0.4**
KTJJ				S	**S**	**16 23 11.3**	**-1.4**
JIZS	**Izushimoda**	**1.18**	**283**	P	**P**	**16 22 58.2**	**0.0**
JIZS				S	**S**	**16 23 14.0**	**-0.4**
JOD2	**Odawara 2**	**1.27**	**310**	P	**P**	**16 22 58.8**	**-0.5**
JOD2				S	**S**	**16 23 15.3**	**-1.1**
JHJ	**Hachijo jima 2**	**1.39**	**197**	P	**P**	**16 23 01.6**	**+0.5**
	85nm,0.3s,baz=51,slow=7.6,SNR=6.2						
JHJ				S	**S**	**16 23 19.6**	**+0.5**
	107nm,0.3s,baz=235,slow=22,SNR=12						
JHJ2	**Mitsune**	**1.39**	**196**	P	**P**	**16 23 01.3**	**+0.3**
JHJ2				S	**S**	**16 23 19.3**	**+0.2**
JYN	**Shimob**	**1.76**	**307**	P	**P**	**16 23 06.5**	**+0.7**
JYN				S	**S**	**16 23 27.8**	**+0.4**
SHZ3	**Shizuoka 3**	**1.81**	**290**	P	**P**	**16 23 07.2**	**+0.8**
JRY	**Ryogami san**	**1.92**	**325**	P	**P**	**16 23 08.2**	**+0.2**
MJAR	**Matsushiro Arr**	**2.68**	**322**	P	**P**	**16 23 18.8**	**+0.2**
	2.9nm,0.3s,baz=154,slow=12,SNR=11						
MAJO	**Matsushiro**	**2.68**	**322**	*e*Pn	**P**	**16 23 19.1**	**+0.5**
MAJO				*e*Sn	**S**	**16 23 50.9**	**+0.8**
MAT	**Matsushiro**	**2.68**	**322**	P	**P**	**16 23 18.6**	**0.0**
MAT				S	**S**	**16 23 50.3**	**+0.3**
MAT	**Matsushiro**	**2.68**	**322**	*e*P	**P**	**16 23 19.0**	**+0.4**
MAT				*e*S	**S**	**16 23 50.0**	**0.0**
JNU	**Nakatsue**	**7.93**	**263**	P	**P**	**16 24 32.4**	**+1.2**
	0.3nm,0.3s,baz=59,slow=12,SNR=3.9						
SONM	**Songino Array**	**28.55**	**308**	P	**P**	**16 28 26.5**	**0.0**
	0.3nm,0.6s,mb3.1,baz=83,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	**44.75**	**304**	P	**P**	**16 30 42.8**	**-0.5**
	0.9nm,0.7s,mb3.6,baz=92,slow=8.8,SNR=6.5						
MKAR	**Makanchi Array**	**44.75**	**304**	P	**P**	**16 30 42.8**	**-0.5**
WRA	**Warramunga Arr**	**54.39**	**187**	P	**P**	**16 31 55.4**	**-2.0**
	0.7nm,0.7s,mb3.8,baz=5.1,slow=7.6,SNR=6.6						

*IDC **15** 16:27:23.0±1.4,34.62N×73.33E,mb3.9/6,mb1 4.0/9,mb1mx3.7/23,mbtmp3.9/9,ML3.8/3,Error ellipse: s-maj=40.4km s-min=23.1km az=52.0*

*NDI **15** 16:27:24.6±4.2,33.90N×72.60E,h10^{km},MD3.5,ML3.7*

*NEIC **15** 16:27:24.5±1.1,34.62N×73.33E,h10^{km},Error ellipse: s-maj=20.4km s-min=17.7km az=103.0*

*NNC **15** 16:27:33.5±1.8,35.24N×72.25E,mpv3.8,Error ellipse: s-maj=28.2km s-min=17.6km az=84.0*

ISC 15 16:27:22.2±1.4,**34.65N**±0.06×**73.3E**±0.1,**h3**^{km}±9^{km},**n23,**σ**1$\overset{s}{.}$07**/32,**mb3.9**/5,**3C-2D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**3.01**	**137**	*e*PB	**Pb**	**16 28 15.8**	**-0.3**
THN				*e*SB	**Sb**	**16 28 58.5**	**+5.1**
DLH	**Dalhousie**	**3.08**	**132**	*e*PB	**Pb**	**16 28 18.0**	**+0.7**
DLH				*e*SG	**Sg**	**16 29 05.0**	**+0.4**
BHK	**Bhakra**	**4.17**	**140**	*e*SG	**Sg**	**16 29 39.0**	**-1.9**
SDNR	**Sundarnagar**	**4.42**	**134**	*e*P	**Pn**	**16 28 34.0**	**+2.4**
SDNR				*e*S	**Sn**	**16 29 24.0**	**-0.3**
SMLA	**Simla**	**4.80**	**136**	*e*P	**Pn**	**16 28 36.6**	**-0.5**
SMLA				*e*S	**Sn**	**16 29 28.8**	**-5.2**
KLP	**Kalpa**	**5.21**	**125**	*e*P	**Pn**	**16 28 45.0**	**+2.2**
KLP				*e*S	**Sn**	**16 29 44.0**	**-0.2**
KLP				*e*S	**Sn**	**16 29 44.1**	**-0.1**
KLP				AML	AML	16 30 13.9	
	comp=E,157nm,0.3s						
KLP				AML	AML	16 30 27.1	
	comp=N,102nm,0.7s						
AAK	**Ala-Archa**	**8.03**	**6**	⇓Pn	**P**	**16 29 26.1**	**+3.5**
	comp=N,7.2nm,1.6s						
AAK				⇓Sn	**Sn**	**16 30 54.9**	**0.0**
	comp=N,18nm,1.8s						
AAK	**Ala-Archa**	**8.03**	**6**	Pn	**P**	**16 29 22.3**	**-0.2**
KK31	**Karatay Array**	**8.71**	**347**	Pn	**P**	**16 29 33.1**	**+1.1**
	comp=N,1.6nm,0.2s,baz=171,slow=13,SNR=45						
KK31				Sn	**Sn**	**16 31 07.8**	**-4.1**
	comp=N,3.0nm,0.6s,baz=184,slow=24,SNR=7.4						
KKAR	**Karatay Array**	**8.71**	**347**	P	**P**	**16 29 33.1**	**+1.1**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
MKAR	**Makanchi Array**	**13.91**	**27**	Pn	**P**	**16 30 40.5**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=194,slow=15,SNR=7.1						
MKAR	**Makanchi Array**	**13.91**	**27**	Pn	**P**	**16 30 40.5**	**-2.0**
AB31	**Akbulak array**	**17.60**	**330**	⇑P	**P**	**16 31 28.4**	**-1.5**
	comp=Z,0.5nm,0.3s,baz=146,slow=14,SNR=20						
AB31				⇑S	**S**	**16 34 36.0**	**-8.6**
	comp=Z,0.3nm,0.4s						
BVAR	**Borovoye Array**	**18.48**	**354**	P	**P**	**16 31 41.7**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=158,slow=9.0,SNR=14						
AKTO	**Aktyubinsk**	**19.31**	**329**	⇑P	**P**	**16 31 50.8**	**-0.1**
	comp=Z,0.8nm,0.8s						
AKTO	**Aktyubinsk**	**19.31**	**329**	P	**P**	**16 31 51.0**	**+0.2**
	comp=Z,0.5nm,0.3s,baz=134,slow=10,SNR=16						
ZAL	**Zalesovo**	**20.92**	**19**	P	**P**	**16 32 07.6**	**-0.6**
	comp=Z,3.1nm,0.3s,baz=249,slow=5.0,SNR=8.7						
ZAL	**Zalesovo**	**20.92**	**19**	P	**P**	**16 32 07.6**	**-0.6**
FINES	**FINESS Array B**	**40.05**	**327**	P	**P**	**16 34 59.8**	**-0.1**
	comp=Z,0.9nm,0.5s,mb3.7,baz=90,slow=14,SNR=2.4						
ARCES	**ARCESS Array B**	**43.56**	**338**	P	**P**	**16 35 29.2**	**+0.8**
	comp=Z,1.2nm,0.4s,mb4.0,baz=117,slow=7.9,SNR=9.7						
HFS	**Hagfors**	**45.66**	**323**	P	**P**	**16 35 44.8**	**-0.7**
	comp=Z,1.7nm,0.5s,mb4.2,baz=103,slow=9.6,SNR=9.1						
NOA	**NORSAR Array B**	**46.97**	**324**	P	**P**	**16 35 55.0**	**-0.8**
	comp=Z,0.4nm,0.4s,mb3.7,baz=111,slow=5.0,SNR=2.4						
WRA	**Warramunga Arr**	**79.44**	**123**	P	**P**	**16 39 31.3**	**-0.3**
	comp=Z,0.6nm,0.4s,mb3.9,baz=321,slow=4.9,SNR=12						

ISC 15 16:41:03.1±1.2,**38.60N**±0.09×**33.65E**±0.06,**h10**^{km},**n5,**σ**1$\overset{s}{.}$25**/9,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AVNT	**Avonos**	**0.96**	**79**	*i* P	**Pb**	**16 41 21.3**	**0.0**
AVNT				*i* S	**Sb**	**16 41 34.4**	**+0.6**
CDAG	**Cicekdag**	**1.17**	**28**	*i* P	**Pb**	**16 41 23.8**	**-1.2**
CDAG				*i* S	**Sb**	**16 41 38.7**	**-1.2**
KIZT	**Kizilcal**	**1.42**	**282**	PN	**Pn**	**16 41 30.3**	**+1.3**
KIZT				SN	**Sn**	**16 41 46.1**	**-1.8**
CORM	**Corum**	**1.75**	**25**	*e*PN	**Pn**	**16 41 33.0**	**-0.9**
ELDT	**Eldivan**	**1.90**	**355**	*i* P	**Pn**	**16 41 37.2**	**+1.3**
ELDT				*i* S	**Sn**	**16 42 02.2**	**+2.2**

*SOF **15** 16:41:25.2,46.23N×27.18E,h20^{km},MD3.6*

*MOS **15** 16:41:30.2±1.1,45.91N×27.19E,h26^{km},mb4.5/6,Error ellipse: s-maj=5.7km s-min=4.0km az=84.5*

MOS Felt (II) at Kishinev.

*CSEM **15** 16:41:30.6±0.1,45.95N×27.12E,h51^{km}±1^{km},MD4.2/7,Error ellipse: s-maj=2.7km s-min=1.8km az=32.0*

*BJI **15** 16:41:30.0,45.80N×27.20E,h29^{km},mB4.6,mb4.5,Ms4.2,Msz4.0*

*BUC **15** 16:41:32.5±0.4,45.86N×27.14E,h37^{km}±3^{km},MD4.2/7,Error ellipse: s-maj=5.5km s-min=4.2km az=8.0*

*IDC **15** 16:41:32.4±1.3,45.89N×27.11E,h34^{km}±14^{km},mb3.9/7,mb1 3.9/13,mb1mx3.7/26,mbtmp3.9/13,ML3.9/6,MS3.2/5,Ms1 3.2/5,ms1mx2.8/35,Error ellipse: s-maj=15.9km s-min=9.4km az=115.0*

*NEIC **15** 16:41:32.7,45.83N×27.20E,h30^{km},mb4.1/4,ML4.2(BUC),After BUC.*

NEIC Felt [II] at Chisinau, Moldova.

*SKO **15** 16:41:35.5,45.71N×27.01E,h43^{km}*

ISC 15 16:41:31.5±0.2,**45.85N**±0.02×**27.07E**±0.02,**h54**^{km}±2^{km},**n175,**σ**1$\overset{s}{.}$15**/230,**mb4.5**/18,**MS3.4**/3,**39C-11D,Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETR		**0.17**	**138**	⇑*i*P	**P**	**16 41 39.8**	**-0.2**
PETR				*i* S	**S**	**16 41 45.9**	**-0.4**
VRI	**Vrincioaia**	**0.24**	**275**	⇓*i*P	**P**	**16 41 40.2**	**-0.3**
VRI				*i* S	**S**	**16 41 45.4**	**-1.7**
VRI	**Vrincioaia**	**0.24**	**275**	⇓*i*P	**P**	**16 41 40.3**	**-0.3**
VRI				*i* S	**S**	**16 41 47.5**	**+0.4**
VRI	**Vrincioaia**	**0.24**	**275**	⇓*i*P	**P**	**16 41 40.3**	**-0.2**
VRI				*i* S	**S**	**16 41 47.5**	**+0.4**
PLOR	**Plostina**	**0.29**	**271**	⇓*i*P	**P**	**16 41 41.1**	**+0.1**
PLOR				*i* S	**S**	**16 41 47.6**	**-0.3**
BRD	**Bordesti**	**0.30**	**185**	P	**P**	**16 41 39.3**	**-1.7**
BRD	**Bordesti**	**0.30**	**185**	P	**P**	**16 41 39.4**	**-1.6**
GHRR		**0.32**	**48**	⇑*i*P	**P**	**16 41 40.7**	**-0.5**
GHRR				*i* S	**S**	**16 41 46.6**	**-1.6**
TUDR		**0.49**	**121**	⇓*i*P	**P**	**16 41 42.7**	**-0.3**
TUDR				*i* S	**S**	**16 41 50.7**	**-0.6**
VARR		**0.55**	**86**	⇑*i*P	**P**	**16 41 43.6**	**0.0**
VARR				*e*S	**S**	**16 41 52.0**	**-0.5**
ONCR	**Oncesti**	**0.63**	**13**	⇑*i*P	**P**	**16 41 44.9**	**+0.3**
ONCR				*e*S	**S**	**16 41 54.2**	**-0.1**
ISR	**Istrita**	**0.82**	**207**	⇑*i*P	**P**	**16 41 49.9**	**+2.9**
ISR	**Istrita**	**0.82**	**207**	⇑*i*P	**P**	**16 41 49.9**	**+2.9**
MLR	**Muntele Rosu**	**0.86**	**246**	Pg	**P**	**16 41 50.5**	**+2.8**
	baz=197,slow=11						
MLR				Lg		16 42 04.3	
	1μm,0.3s,baz=180,slow=20,SNR=23						
MLR	**Muntele Rosu**	**0.86**	**246**	⇑*i*P	**P**	**16 41 50.6**	**+2.9**
MLR				*i* S	**S**	**16 42 04.8**	**+5.1**
MLR	**Muntele Rosu**	**0.86**	**246**	⇑*i*P	**P**	**16 41 50.6**	**+2.9**
MLR				*i* S	**S**	**16 42 04.8**	**+5.1**
MLR	**Muntele Rosu**	**0.86**	**246**	⇑P	**P**	**16 41 50.6**	**+2.9**
MLR				S	**S**	**16 42 04.1**	**+4.4**
BERR	**Berezeni**	**0.91**	**55**	⇑*i*P	**P**	**16 41 49.3**	**+1.0**
BERR				*i* S	**S**	**16 42 01.7**	**+0.9**
OZUR		**0.93**	**286**	⇑*i*P	**P**	**16 41 49.9**	**+1.4**
OZUR				*e*S	**S**	**16 42 02.5**	**+1.3**
PGOR	**Pogoanele**	**0.94**	**184**	⇑*i*P	**P**	**16 41 50.8**	**+2.1**
PGOR				*i* S	**S**	**16 42 05.5**	**+4.0**
CFR	**Carcaliu**	**1.01**	**131**	⇑*i*P	**P**	**16 41 49.6**	**0.0**
CFR				*i* S	**S**	**16 42 03.2**	**+0.1**
CFR	**Carcaliu**	**1.01**	**131**	⇑*i*P	**P**	**16 41 49.7**	**+0.1**
CFR				*i* S	**S**	**16 42 03.4**	**+0.3**
CFR	**Carcaliu**	**1.01**	**131**	⇑*i*P	**P**	**16 41 49.7**	**+0.1**
CFR				*i* S	**S**	**16 42 03.3**	**+0.2**
DOPR	**Dopca**	**1.18**	**276**	⇑*i*P	**P**	**16 41 53.8**	**+1.8**
DOPR				*i* S	**S**	**16 42 11.3**	**+4.0**
SNX	**Sinaia**	**1.20**	**246**	⇑*i*P	**P**	**16 41 55.1**	**+2.9**
SNX	**Sinaia**	**1.20**	**246**	⇑P	**P**	**16 41 54.1**	**+1.9**
SNX				S	**S**	**16 42 11.9**	**+4.2**
SNX	**Sinaia**	**1.20**	**246**	⇑*i*P	**P**	**16 41 55.1**	**+2.9**
SNX				S	**S**	**16 42 11.9**	**+4.2**
AMRR		**1.25**	**171**	⇑*i*P	**P**	**16 41 54.4**	**+1.3**
AMRR				*i* S	**S**	**16 42 11.3**	**+2.2**
HARR	**Harsova**	**1.31**	**152**	⇑*i*P	**P**	**16 41 54.2**	**+0.2**
HARR				*i* S	**S**	**16 42 12.1**	**+1.5**
HARR	**Harsova**	**1.31**	**152**	⇑*i*P	**P**	**16 41 54.2**	**+0.2**
HARR				*i* S	**S**	**16 42 12.1**	**+1.4**
IAS	**Iasi**	**1.39**	**14**	⇓*e*P	**P**	**16 41 55.7**	**+0.6**
IAS				*e*S	**S**	**16 42 13.0**	**+0.5**
IAS	**Iasi**	**1.39**	**14**	⇑*i*P	**P**	**16 41 56.0**	**+0.9**
IAS				*i* S	**S**	**16 42 12.9**	**+0.4**
IAS	**Iasi**	**1.39**	**14**	⇑P	**P**	**16 41 56.7**	**+1.6**
IAS				S	**S**	**16 42 14.7**	**+2.2**
IAS	**Iasi**	**1.39**	**14**	⇑*i*P	**P**	**16 41 56.0**	**+0.9**
IAS				*i* S	**S**	**16 42 12.9**	**+0.4**
TLCR		**1.40**	**118**	⇑*i*P	**P**	**16 41 56.2**	**+1.0**
TLCR				*i* S	**S**	**16 42 15.2**	**+2.5**
VOIR		**1.48**	**255**	⇑*e*P	**P**	**16 41 57.9**	**+1.6**
VOIR				*i* S	**S**	**16 42 17.4**	**+2.8**
VOIR		**1.48**	**255**	⇑*i*P	**P**	**16 41 57.9**	**+1.6**
VOIR				*i* S	**S**	**16 42 17.4**	**+2.8**
VOIR		**1.48**	**255**	⇑*i*P	**P**	**16 41 57.9**	**+1.6**
VOIR				*i* S	**S**	**16 42 17.4**	**+2.8**
MTUR	**Matau**	**1.54**	**247**	⇓*i*P	**P**	**16 42 00.5**	**+3.3**
MTUR				*i* S	**S**	**16 42 21.7**	**+5.5**
MTUR	**Matau**	**1.54**	**247**	⇓*i*P	**P**	**16 42 00.5**	**+3.3**
MTUR				*i* S	**S**	**16 42 21.7**	**+5.5**
KIS	**Kishinev**	**1.67**	**46**	*e*P	**P**	**16 42 00.0**	**+1.0**
KIS				*i* S	**S**	**16 42 22.0**	**+2.7**
BUC1	**Bucharest**	**1.67**	**207**	⇑*i*P	**P**	**16 42 00.0**	**+1.0**
BUC1				S	**S**	**16 42 17.8**	**-1.5**
BUC1	**Bucharest**	**1.67**	**207**	⇑*i*P	**P**	**16 42 00.8**	**+1.8**
BUC1	**Bucharest**	**1.67**	**207**	⇑*i*P	**P**	**16 42 00.8**	**+1.8**
TIRR	**Tirgusor**	**1.68**	**145**	⇑*i*P	**P**	**16 42 00.0**	**+0.8**
TIRR				*i* S	**S**	**16 42 19.4**	**-0.2**
TIRR	**Tirgusor**	**1.68**	**145**	⇑*i*P	**P**	**16 42 00.0**	**+0.8**
TIRR				*i* S	**S**	**16 42 19.4**	**-0.2**
BURAR	**Bucovina Array**	**2.18**	**325**	⇑*i*P	**P**	**16 42 08.3**	**+2.2**
BURAR	**Bucovina Array**	**2.18**	**325**	P	**P**	**16 42 08.3**	**+2.2**
PSN	**Preselentsi**	**2.31**	**159**	*i* P	**P**	**16 42 09.0**	**+1.1**
ZIMR		**2.50**	**210**	*i* S	**S**	**16 42 41.2**	**+1.0**
PRD	**Provadia**	**2.66**	**175**	*i* P	**P**	**16 42 14.0**	**+1.1**
SZH	**Strazhica**	**2.71**	**198**	*i* P	**P**	**16 42 14.0**	**+0.4**
PVL	**Pavlikeni**	**2.91**	**206**	*i* P	**P**	**16 42 18.5**	**+2.0**
DRGR		**3.16**	**289**	⇓*i*P	**P**	**16 42 19.8**	**-0.3**
DRGR				*i* S	**S**	**16 42 56.3**	**-0.6**
DRGR		**3.16**	**289**	⇓*i*P	**P**	**16 42 19.8**	**-0.3**
DRGR				*i* S	**S**	**16 42 56.3**	**-0.5**
JMB	**Yambol**	**3.40**	**186**	*i* P	**P**	**16 42 23.5**	**+0.1**
DJES	**Djerdap**	**3.43**	**251**	Sn	**S**	**16 43 03.0**	**-0.6**
PGB	**Panagyurishte**	**3.90**	**213**	*i* P	**P**	**16 42 31.5**	**+1.0**
DIM	**Dimitrovgrad**	**3.96**	**197**	*i* P	**P**	**16 42 32.3**	**+1.1**
EDRB	**Edirne**	**4.01**	**183**	P	**P**	**16 42 32.0**	**0.0**
PLD	**Plovdiv**	**4.11**	**205**	*i* P	**P**	**16 42 33.0**	**-0.5**
VTS	**Vitosha**	**4.28**	**222**	*i* P	**P**	**16 42 35.7**	**-0.1**
VTS	**Vitosha**	**4.28**	**222**	P	**P**	**16 42 35.9**	**+0.1**
VTS	**Vitosha**	**4.28**	**222**	P	**P**	**16 42 35.9**	**+0.1**
UZH	**Uzhgorod**	**4.28**	**312**	*e*P	**P**	**16 42 36.0**	**+0.2**
UZH				*e*S	**S**	**16 43 25.0**	**0.0**
KDZ	**Kurdzhali**	**4.36**	**196**	*i* P	**P**	**16 42 37.5**	**+0.5**
LVV	**L'vov**	**4.47**	**334**	*e*P	**P**	**16 42 47.0**	**+8.5**
KOLS	**Kolonicke sedl**	**4.49**	**315**	*e*PN	**P**	**16 42 38.7**	**0.0**
RZN	**Rozhen**	**4.49**	**203**	*i* P	**P**	**16 42 39.0**	**+0.2**
CTT	**Catalca**	**4.80**	**168**	P	**P**	**16 42 41.8**	**-1.3**
CRVS	**Cervenica-Dubn**	**4.88**	**311**	*e*PN	**P**	**16 42 43.8**	**-0.5**
MMB	**Musomiste**	**4.90**	**211**	*i* P	**P**	**16 42 45.5**	**+1.0**
KKB	**Krupnik**	**4.91**	**217**	*i* P	**P**	**16 42 45.3**	**+0.6**
ISK	**Istanbul-Kandi**	**5.00**	**162**	P	**P**	**16 42 44.4**	**-1.4**
ALN	**Alexandroupoli**	**5.00**	**189**	*e*P	**P**	**16 42 45.6**	**-0.4**
ALN				*e*S	**S**	**16 43 39.1**	**-4.0**
SIM	**Simferopol'**	**5.04**	**98**	*ce*P	**P**	**16 42 45.4**	**-1.1**
SIM				*e*S	**S**	**16 43 40.0**	**-4.2**
SIM				pmax	pmax		
	comp=Z,33nm,0.6s						
SIM				MLR	MLR		
	comp=Z,297nm,1.1s						
SIM	**Simferopol'**	**5.04**	**98**	*e*P	**P**	**16 42 45.4**	**-1.1**
	comp=Z,33nm,0.6s						
SIM				*e*S	**S**	**16 43 40.0**	**-4.2**
	comp=Z,297nm,1.1s						
MFT	**Murefte**	**5.06**	**178**	P	**P**	**16 42 45.7**	**-1.0**
AKASG	**Malin Array Be**	**5.07**	**16**	Pn	**P**	**16 42 45.1**	**-1.6**
	comp=Z,8.0nm,0.3s,baz=203,slow=11,SNR=18						
AKASG				Sn	**S**	**16 43 39.2**	**-5.5**
	comp=Z,44nm,0.3s,baz=200,slow=21,SNR=7.4						

AKASG				Lg		16 44 07.5	
	comp=Z,134nm,0.3s,baz=198,slow=29,SNR=19						
AKASG	Malin Array Be	5.07	16	Pn	P	16 42 45.1	-1.6
AKASG				Sn	S	16 43 39.2	-5.5
AKASG				Lg		16 44 07.5	
KECS	Kecovo	5.21	303	*e*PN	P	16 42 48.2	-0.5
KECS				*e*SN	S	16 43 46.3	-1.9
BADT	Buyukada	5.21	163	P	P	16 42 47.8	-1.0
MRMT	Marmara Adasi	5.26	176	P	P	16 42 47.5	-1.9
STHS	Stebnicka Huta	5.32	314	*e*PN	P	16 42 50.3	+0.1
DIVS	Divcibare	5.32	253	⇑*i*Pn	P	16 42 49.4	-0.9
PSZ	Piszkesteto	5.34	295	⇑*e*P	P	16 42 49.7	-0.8
PSZ				*e*S	S	16 43 48.4	-3.1
HRT	Hereke	5.37	158	P	P	16 42 49.5	-1.6
LPK	Lapseki	5.48	182	P	P	16 42 52.3	-0.2
BNT	Bandirma	5.53	173	P	P	16 42 52.2	-0.9
EDC	Edincik	5.53	174	*e*P	P	16 42 52.4	-0.9
YLV	Yalova	5.54	162	*e*P	P	16 42 52.5	-0.8
KNT	Kendrikon	5.58	214	*e*P	P	16 42 54.2	+0.3
KNT				*e*S	S	16 43 54.1	-3.5
VAY	Valandovo	5.58	217	*e*Pn	P	16 42 53.5	-0.4
VAY				*e*Sn	S	16 43 51.5	-6.1
VAY	Valandovo	5.58	217	*e*Pn	P	16 42 53.5	-0.4
VAY				*e*Sn	S	16 43 51.5	-6.1
SOH	Sokhos	5.71	210	*e*P	P	16 42 55.5	-0.2
PKSM	Moragy	5.88	277	⇓*e*P	P	16 42 57.5	-0.6
GRG	Griva	5.95	216	*e*P	P	16 42 59.7	+0.6
OUR	Ouranopolis	5.96	203	*e*P	P	16 42 58.4	-0.8
THE	Thessaloniki	6.01	211	*e*P	P	16 42 59.4	-0.6
GPA	Golpazari	6.04	156	*e*P	P	16 42 59.7	-0.7
EZN	Ezine	6.04	185	*e*P	P	16 42 59.6	-0.8
SAFT	Safranbolu	6.15	136	*e*P	P	16 43 00.8	-1.1
MDU	Mudurnu	6.17	149	*e*P	P	16 43 01.5	-0.7
VYHS	Vyhne	6.21	298	*e*PN	P	16 43 01.6	-1.1
BIA	Bitola	6.38	223	*e*Pn	P	16 43 04.4	-0.8
PAIG	Paliouri	6.42	204	*e*P	P	16 43 04.6	-1.1
FNA	Florina	6.54	221	*e*P	P	16 43 07.3	-0.2
FNA				*e*S	S	16 44 16.3	-5.2
OJC	Ojcow	6.55	315	*e*Pn	P	16 43 18.0	+10
OHR	Ohrid	6.57	226	*e*Pn	P	16 43 08.0	+0.1
LIT	Litokhoron	6.65	212	*e*P	P	16 43 07.5	-1.5
ESKT	Eskisehir	6.91	155	*e*P	P	16 43 11.8	-0.8
XOR	Xorichti	7.08	205	*e*P	P	16 43 14.2	-0.8
ANN	Anapa	7.38	94	*e*P	P	16 43 14.1	-5.0
ANN				*e*S	S	16 44 35.5	-6.8
ANN				pmax	pmax		
	comp=Z,20nm,0.7s						
ANN				MLR	MLR		
	comp=Z,92nm,5.0s						
AGG	Agios Georgios	7.67	209	*e*P	P	16 43 22.7	-0.4
BRTR	Keskin Array B	7.79	139	Pn	P	16 43 23.4	-1.5
	comp=Z,0.4nm,0.3s,baz=325,slow=10,SNR=4.9						
KIZT	Kizilcal	7.82	151	*e*P	P	16 43 23.9	-1.2
DPC	Dobruska-Polom	8.48	306	*e*PN	P	16 43 34.1	-0.2
SOC	Sochi	9.29	100	*e*P	P	16 43 43.4	-1.9
SOC				*e*		16 45 29.1	
SOC				pmax	pmax		
	comp=Z,17nm,1.0s						
SOC				MLR	MLR		
	comp=Z,49nm,7.0s						
SOC	Sochi	9.29	100	*e*P	P	16 43 43.4	-1.9
	comp=Z,17nm,1.0s						
SOC				*e*S	S	16 45 29.1	-0.3
	comp=Z,49nm,7.0s						
GERES	GERESS Array B	9.56	293	Pn	P	16 43 48.5	-0.5
	comp=Z,0.2nm,0.3s,baz=108,slow=13,SNR=5.5						
GERES				LR	LR	16 47 50.3	
	comp=Z,55nm,20.1s,baz=272,slow=40						
KHC	Kasperske Hory	9.71	295	*e*PN	P	16 43 44.7	-6.3
VOR	Voronezh	9.93	49	P	P	16 44 00.0	+5.9
VOR				pmax	pmax		
	comp=N,150nm,1.5s						
VRHR	Novokhopersk	10.99	56	*e*P	P	16 44 15.2	+6.7
VRHR				pmax	pmax		
	comp=Z,30nm,0.5s						
VRHR				pmax	pmax		
	comp=N,20nm,0.7s						
VRHR				pmax	pmax		
	comp=E,20nm,0.4s						
OBN	Obninsk	11.06	30	*e*Pn	P	16 44 04.5	-4.9
	comp=E,42nm,0.6s						
OBN	Obninsk	11.06	30	*e*P	P	16 44 04.5	-5.0
OBN				*i* S	S	16 46 02.0	-11
OBN				pmax	pmax		
	comp=Z,87nm,2.3s						
OBN	Obninsk	11.06	30	*e*Pn	P	16 44 04.5	-5.0
	comp=Z,42nm,0.6s						
KIV	Kislovodsk	11.24	94	*e*P	P	16 44 11.8	-0.1
KIV				*e*S	S	16 46 13.4	-3.5
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,29nm,11.0s						
KIV	Kislovodsk	11.24	94	*e*P	P	16 44 11.8	-0.1
	comp=Z,10.0nm,1.0s						
GOF	Gofitskoye	11.25	88	*e*P	P	16 44 10.1	-1.9
DAVOX	Davos	11.93	281	LR	LR	16 48 24.1	
	comp=Z,52nm,18.0s,baz=69,slow=34						
ZEI	Tsey	12.44	98	*e*P	P	16 44 25.3	-2.7
GNI	Garni	14.12	108	*i* P	P	16 44 51.1	+1.1
GNI				pmax	pmax		
	comp=Z,11nm,1.4s						
GNI	Garni	14.12	108	*i* P	P	16 44 51.1	+1.1
	comp=Z,11nm,1.4s						
FINES	FINESS Array B	15.64	358	Pn	P	16 45 03.0	-6.5
	comp=Z,0.4nm,0.3s,baz=170,slow=8.5,SNR=11						
FINES				Sn	S	16 47 45.8	-15
	comp=Z,1.1nm,0.3s,baz=181,slow=20,SNR=4.4						
FINES	FINESS Array B	15.64	358	*e*P	P	16 45 14.8	+5.3
KAF	Kangasniemi	16.30	359	*e*p	P	16 45 10.6	-7.3
	comp=Z,3.3nm,0.4s						
KAF	Kangasniemi	16.30	359	*e*P	P	16 45 10.6	-7.3
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
HFS	Hagfors	16.37	336	Pn	P	16 45 15.8	-2.9
	comp=Z,0.2nm,0.3s,baz=139,slow=14,SNR=14						
KLMR	Klimovskoe	16.72	22	*e*P	P	16 45 22.0	-1.1
KLMR				*e*		16 48 29.4	
KLMR				pmax	pmax		
	comp=Z,30nm,1.5s						
KLMR				smax			
	comp=E,2µm,6.0s						
JOF	Joensuu	17.28	7	*e*p	P	16 45 24.4	-5.7
	comp=E,8.6nm,0.5s						
JOF	Joensuu	17.28	7	*e*P	P	16 45 24.4	-5.7
JOF				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NAO01	NORSAR Array S	17.78	333	P	P	16 45 35.0	-1.3
NAO01	NORSAR Array S	17.78	333	P	P	16 45 35.0	-1.4
NAO	NORSAR Subarra	17.78	333	P	P	16 45 35.5	-0.9
NAO				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NAO	NORSAR Subarra	17.78	333	P	P	16 45 35.5	-0.9
	comp=Z,1.8nm,0.5s						
NB2	NORSAR Subarra	17.83	334	P	P	16 45 35.5	-1.5
	comp=Z,1.8nm,0.5s,baz=141,slow=11						
NOA	NORSAR Array B	17.83	334	P	P	16 45 36.1	-0.9
	comp=Z,0.9nm,0.3s,baz=143,slow=11,SNR=11						
AKTK	Aktyubinsk	21.07	66	P	P	16 46 12.3	-0.7
AKTO	Aktyubinsk	21.07	66	P	P	16 46 12.3	-0.7
	comp=Z,1.8nm,0.5s,mb3.6,baz=270,slow=13,SNR=7.5						
AKTO	Aktyubinsk	21.07	66	P	P	16 46 12.3	-0.7
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
APA	Apatity	22.03	6	⇑*e*P	P	16 46 29.0	+6.5
APA				pmax	pmax		
	comp=Z,43nm,1.3s,mb4.7						
ARU	Arti	22.22	50	*e*P	P	16 46 24.3	-0.1
ARU				*e*PPP	PPP	16 46 54.5	-8.4
ARU				*e*S	S	16 50 28.1	+7.5
ARU				*e*SS	SS	16 50 56.2	-7.2
SVE	Sverdlovsk	23.43	50	*e*P	P	16 46 38.3	+2.2
SVE				*e*		16 46 50.1	
SVE				*e*		16 47 15.5	
SVE				pmax	pmax		
	comp=Z,20nm,1.5s,mb4.3						
ARCES	ARCESS Array B	23.77	359	P	P	16 46 39.3	0.0
	comp=Z,1.6nm,0.4s,mb3.8,baz=177,slow=11,SNR=35						
KEV	Kevo	23.98	360	*e*p	P	16 46 35.0	-6.2
	comp=Z,22nm,1.3s,mb4.4						
KEV	Kevo	23.98	360	*e*P	P	16 46 35.0	-6.2
KEV				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.4						
BVAR	Borovoye Array	28.70	60	P	P	16 47 25.9	+0.6
	comp=Z,2.0nm,0.7s,mb4.0,baz=270,slow=8.9,SNR=12						
NVS	Novosibirsk	36.05	55	*e*P	P	16 48 29.8	+0.5
NVS				pmax	pmax		
	comp=N,1.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,1.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
ZAL	Zalesovo	37.12	56	P	P	16 48 39.7	+1.5
	comp=Z,3.1nm,0.5s,mb4.4,baz=182,slow=8.0,SNR=9.8						
ZAL				LR	LR	17 05 42.7	
	comp=Z,80nm,20.2s,MS3.5,baz=121,slow=39						
ZAL	Zalesovo	37.12	56	*i* P	P	16 48 39.9	+1.7
ZAL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	37.48	68	P	P	16 48 42.6	+1.3
	comp=Z,1.3nm,0.5s,mb4.0,baz=270,slow=8.6,SNR=20						
MKAR				LR	LR	17 04 26.8	
	comp=Z,42nm,19.9s,MS3.2,baz=290,slow=37						
MKAR	Makanchi Array	37.48	68	*i* P	P	16 48 42.5	+1.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WMQ	Urumqi	42.13	70	*e*P	P	16 49 22.0	+2.2
KOLN	Koldanda	47.70	92	*e*P	P	16 50 05.7	+1.1
	comp=Z,6.2nm,0.8s,mb4.7						
DBIC	Dimbokro	47.79	225	P	P	16 50 05.3	-0.2
	comp=Z,2.1nm,0.4s,mb4.5,baz=8.9,slow=9.9,SNR=8.3						
GKN	Gorkha	48.28	91	*e*P	P	16 50 10.0	+0.9
	comp=Z,10nm,0.7s,mb5.0						
DMN	Daman	48.85	91	*e*P	P	16 50 14.8	+1.3
	comp=Z,15nm,1.0s,mb5.0						
KKN	Kakani	48.86	91	*e*P	P	16 50 14.6	+1.1
	comp=Z,12nm,0.6s,mb5.1						
GUN	Gumba	49.21	90	*e*P	P	16 50 17.3	+1.1
	comp=Z,3.6nm,0.2s,mb5.0						
SONM	Songino Array	52.00	57	P	P	16 50 37.8	+0.7
	comp=Z,1.3nm,0.8s,mb3.9,baz=302,slow=11,SNR=5.2						
CD2	Chengdu	59.74	76	P	P	16 51 33.6	+0.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
MDJ	Mudanjiang	66.90	49	P	P	16 52 21.1	+1.3
MDJ				AP	pP	16 52 30.1	-4.8
MDJ				PCP	PcP	16 52 50.1	+2.0
MDJ				S	S	17 01 06.4	-0.7
MDJ				AMB	AMB		
	comp=Z,40nm,5.0s						
MDJ				LR	LR		
	comp=N,30nm,34.2s						
MDJ				LR	LR		
	comp=E,50nm,25.6s						
MDJ				LR	LR		
	comp=Z,30nm,22.5s						
SSE	Sheshan	71.07	65	*e*P	P	16 52 44.3	-1.4
	comp=Z,30nm,0.7s,mb5.3						
ULM	Lac du Bonnet	72.28	326	LR	LR	17 24 29.3	
	comp=Z,26nm,20.3s,MS3.5,baz=7.3,slow=36						
MAW	Mawson	116.31	166	PKP	PKPdf	17 00 12.2	+4.2
	comp=Z,3.3nm,0.9s,baz=111,slow=8.6,SNR=5.6						

NIED **15** *16:45:00,45.70N×143.30E,h320*^{km}*,Mw4.2 Best double couple: M*$_0$*1.91×10*^{15} *NP1:*ϕ_s*181°,δ88°,λ84°. NP2:*ϕ_s*71°, δ6°,λ160°.*

BJI **15** *16:45:17.8,45.94N×143.24E,h326*^{km}*,mB4.4,mb4.4*

MOS **15** *16:45:18.1±0.9,45.92N×143.07E,h324*^{km}*,mb4.0/17, Error ellipse: s-maj=11.5km s-min=7.8km az=93.4*

IDC **15** *16:45:18.7±0.5,46.00N×143.16E,h312*^{km}*±10*^{km}*, mb3.7/19,mb1 3.8/21,mb1mx3.7/28,mbtmp4.3/21,Error ellipse: s-maj=21.5km s-min=9.5km az=170.0*

JMA **15** *16:45:18.7±0.2,45.72N×143.28E,h329*^{km}*±2*^{km}*,M4.4*

SKHL **15** *16:45:18.3±5.2,46.00N×143.00E,h334*^{km}*±9*^{km}*,mb5.2/1, msh4.9/2*

NEIC **15** *16:45:19.1±0.5,45.91N×143.17E,h320*^{km}*±5*^{km}*,mb4.1/23, Error ellipse: s-maj=7.5km s-min=4.5km az=153.0*

ISC 15 16:45:17.8±0.2**,45.89N**±0.04×**143.19E**±0.05**,h322**^{km}±2^{km}**, n126,**σ**1.04**/147**,mb4.0**/46**,16C-6D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	1.02	205	⇑P	P	16 46 01.8	+1.0
JSE				*e*S	S	16 46 35.1	+0.6
JWK2	Keihoku	1.07	238	⇑P	P	16 46 02.7	+1.6
JWK2				*e*S	S	16 46 36.6	+1.6
YSS	Yuzh-Sakhalins	1.10	344	*i* P	P	16 46 03.0	+1.8
YSS				AMB	AMB	16 46 04.2	
	670nm,0.4s						
YSS				⇑*i*rx	rx	16 46 12.2	
YSS				*e*rx	rx	16 46 31.2	
YSS				*e*S	S	16 46 36.5	+1.2
YSS				A		16 46 37.9	
	320nm,0.9s						
YSS				A		16 46 37.9	
	620nm,0.9s						
YSS	Yuzh-Sakhalins	1.10	344	⇑*i*Pn	P	16 46 03.1	+1.9
YSS				*e*Sn	S	16 46 31.5	-3.7
YSS	Yuzh-Sakhalins	1.10	344	⇑*i*PN	P	16 46 03.0	+1.8
YSS				*e*S	S	16 46 36.0	+0.7
YSS				pmax	pmax		
	comp=Z,670nm,0.4s						
YSS				pmax	pmax		
	comp=E,20nm,0.2s						
YSS				smax			
	comp=N,320nm,0.8s						
YSS				smax			
	comp=E,620nm,1.0s						
JRR	Rishiri	1.52	241	⇑P	P	16 46 04.8	+1.2
JSS	Shosan	1.77	213	⇑P	P	16 46 06.2	+1.1
ASAJ	Asahikawa	1.82	194	P	P	16 46 06.5	+1.0
	comp=E,48nm,0.3s,baz=14,slow=4.9,SNR=601						
ASAJ				S	S	16 46 44.0	+1.1
	comp=E,3.8nm,0.3s,baz=13,slow=33,SNR=20						
ASAJ	Asahikawa	1.82	194	⇑P	P	16 46 06.4	+0.9
ASAJ				*e*S	S	16 46 44.1	+1.2
ASAJ	Asahikawa	1.82	194	PN	P	16 46 06.5	+1.0
ASAJ				S	S	16 46 44.0	+1.1
ASAJ				pmax	pmax		
	comp=Z,48nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
JYG	Yagishiri	1.92	221	⇑P	P	16 46 07.0	+0.8
JTKR	Abashiri--Toko	1.99	165	⇓P	P	16 46 07.2	+0.5
JTKR				*e*S	S	16 46 45.1	+0.1
JKK2	Kamakawa 2	2.04	189	⇑P	P	16 46 07.8	+0.7
JKK2				*e*S	S	16 46 46.6	+0.9
JHR	Hokuryu	2.39	206	⇑P	P	16 46 10.6	+0.6
JRA	Rausu	2.39	144	⇓P	P	16 46 10.2	+0.2
JAR	Ashorobuto	2.63	171	⇓P	P	16 46 12.1	+0.1
JAR				*e*S	S	16 46 53.6	-0.9
JFR	Furan	2.76	189	⇑P	P	16 46 13.3	+0.1
JFR				*e*S	S	16 46 56.4	-0.2
JAK	Akkeshi	3.09	159	P	P	16 46 14.5	-1.8
JAK				*e*S	S	16 46 58.4	-3.7
NEM2	Nemuro 2	3.12	143	⇓P	P	16 46 13.9	-2.7
NEM2				*e*S	S	16 46 57.6	-5.0
JSK	Shakotan	3.19	218	⇑P	P	16 46 18.0	+0.7
JCH	Churui	3.28	178	P	P	16 46 16.6	-1.6
JCH				*e*S	S	16 47 00.2	-5.3
JEW	Eniwo	3.29	203	⇑P	P	16 46 19.0	+0.6
JEW				*e*S	S	16 47 04.5	-1.3
KUR	Kuril'sk	3.35	100	*e*P	P	16 46 16.8	-2.1
JNBK	Urakawa-nobuka	3.62	185	P	P	16 46 20.6	-1.1
JNBK				*e*S	S	16 47 05.6	-6.1
JKB	Kayabe	4.29	202	P	P	16 46 27.6	-1.2
JKB				*e*S	S	16 47 20.0	-4.5
JOSM	Okushiri--Mats	4.66	216	⇑P	P	16 46 32.3	-0.5
JOSM				*e*S	S	16 47 29.8	-1.8
TEY	Ternei	4.71	262	*e*P	P	16 46 33.0	-0.4
JOT	Ohata	4.77	200	⇑P	P	16 46 32.3	-1.7
JOT				*e*S	S	16 47 27.9	-6.0
TYV	Tymovskoe	4.99	356	*e*P	P	16 46 35.0	-1.5
TYV				AMB	AMB	16 46 36.0	
	comp=N,78nm,1.4s						
TYV				AMB	AMB	16 46 36.0	
	comp=N,24nm,0.8s						
MDJ	Mudanjiang	9.68	267	*e*Pn	P	16 47 33.8	+1.2
	comp=N,17nm,0.6s						
MDJ				*e*S	S	16 49 20.1	+1.0
EKMR	Ekimchan	9.79	321	*e*P	P	16 47 33.5	-0.5
SKR	Severo-Kuril's	9.86	56	*e*P	P	16 47 32.7	-2.1
SKR				A		16 47 34.5	
	comp=N,60nm,0.6s						
MAJO	Matsushiro	10.06	204	*e*Pn	P	16 47 36.9	-0.4
MAT	Matsushiro	10.06	204	P	P	16 47 36.7	-0.6
MAT	Matsushiro	10.06	204	*e*P	P	16 47 37.0	-0.3
MJAR	Matsushiro Arr	10.06	204	P	P	16 47 37.2	-0.1
	comp=N,1.7nm,0.3s,baz=5.4,slow=12,SNR=22						
MJAR	Matsushiro Arr	10.06	204	P	P	16 47 37.2	-0.1
PET	Petropavlovsk	12.32	49	*e*Pn	P	16 48 05.1	+0.3
YASR	Yasnyy	12.32	312	*e*P	P	16 48 03.7	-1.1
BMKR	Bomnak	12.71	319	*e*P	P	16 48 07.8	-1.7
CN2	Changchun	12.77	267	*e*P	P	16 48 09.5	-0.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s						
ZEA	Zeya	12.93	313	*e*P	P	16 48 11.0	-1.1
ZEA				AMB	AMB	16 48 11.7	
	comp=Z,29nm,0.6s						
ZEA				AMB	AMB	16 48 11.7	
	comp=Z,39nm,0.6s						
KROS	Kirovskiy	13.43	315	*e*P	P	16 48 15.7	-2.5
KROS				AMB	AMB	16 48 17.2	
	comp=Z,6.0nm,0.6s						
JNU	Nakatsue	15.88	221	P	P	16 48 45.4	-0.2
	comp=Z,0.3nm,0.3s,baz=139,slow=14,SNR=3.7						
HIA	Hailar	16.16	291	*e*P	P	16 48 47.1	-1.4
	comp=Z,33nm,1.3s						
HIA	Hailar	16.16	291	*e*P	P	16 48 47.1	-1.4
HIA				pmax	pmax		
	comp=Z,33nm,1.3s						
SEY	Seymchan	17.86	14	*e*P	P	16 49 06.2	+0.3
SEY				pmax	pmax		
	comp=N,10.0nm,0.9s						
SEY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK	Yakutsk	17.95	339	*e*P	P	16 49 05.0	-1.8
	comp=Z,16nm,0.5s						
YAK	Yakutsk	17.95	339	*i* P	P	16 49 05.3	-1.6
YAK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
FX1	Attu Island--F	20.62	59	P	P	16 49 35.4	+2.1
	comp=Z,24nm,0.5s,baz=8.8,slow=6.1,SNR=8.7						
FX1	Attu Island--F	20.62	59	*e*P	P	16 49 35.5	+2.1
FX1	Attu Island--F	20.62	59	P	P	16 49 35.4	+2.0
FX1				pmax	pmax		
	comp=Z,24nm,0.5s						
BOD	Bodaibo	21.43	314	*e*P	P	16 49 35.4	-5.8
BOD				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb3.8						
SSE	Sheshan	22.59	237	*e*P	P	16 49 53.0	+0.7
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,60nm,3.5s						
SSE	Sheshan	22.59	237	*e*P	P	16 49 53.0	+0.7
	comp=Z,44nm,0.7s,mb4.8						
SONM	Songino Array	25.09	288	P	P	16 50 15.7	+0.6
	comp=Z,3.8nm,0.5s,mb3.9,baz=86,slow=8.8,SNR=29						
SONM				ScP		16 56 47.9	
	comp=Z,1.4nm,0.9s,baz=61,slow=1.6,SNR=7.5						
ZAK	Zakamensk	26.78	294	*e*P	P	16 50 25.1	-5.3
ZAK				*e*		16 51 33.8	
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.1						
ZAK	Zakamensk	26.78	294	*e*P	P	16 50 25.1	-5.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.1						
GTA	Gaotai	32.24	274	⇓*i*P	P	16 51 19.8	+1.5
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.1						
ZAL	Zalesovo	37.48	304	P	P	16 52 01.8	-0.4
	comp=Z,1.4nm,0.4s,mb3.6,baz=18,slow=7.1,SNR=3.1						
IMA2	Indian Mountai	38.54	36	⇓*i*P	P	16 52 10.2	-0.7
KDAK	Kodiak Island	39.92	49	P	P	16 52 22.1	-0.2
	comp=Z,6.9nm,0.5s,mb4.2,baz=276,slow=22,SNR=10						
COLA	College	41.04	37	*e*P	P	16 52 31.1	-0.2
	comp=Z,2.4nm,0.5s,mb3.7						
COLA	College	41.04	37	*e*P	P	16 52 31.1	-0.3
COLA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.6						
MKAR	Makanchi Array	41.12	294	P	P	16 52 32.6	+0.5
	comp=Z,2.1nm,0.6s,mb3.6,baz=80,slow=8.9,SNR=23						
MKAR				ScP		16 57 44.2	
	comp=Z,0.2nm,0.5s,baz=66,slow=4.7,SNR=4.5						
ILAR	Eielson Array	41.47	37	P	P	16 52 34.4	-0.5
	comp=Z,1.2nm,0.3s,mb3.5,baz=256,slow=6.0,SNR=32						
KURK	Kurchatov	42.00	301	*e*P	P	16 52 38.9	-0.3
	comp=Z,4.9nm,0.5s,mb3.9						
KURK	Kurchatov	42.00	301	*e*P	P	16 52 38.9	-0.3
KURK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb3.9						
LSA	Lhasa	43.40	267	*e*P	P	16 52 52.1	+1.4
	comp=Z,3.0nm,0.4s,mb3.8						
LSA	Lhasa	43.40	267	*e*P	P	16 52 52.1	+1.4
LSA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb3.8						
CHKZ	Chkalovo	45.60	307	*e*P	P	16 53 06.8	-1.0
	comp=Z,5.0nm,0.7s,mb3.8						
CHKZ	Chkalovo	45.60	307	*e*P	P	16 53 06.8	-0.9
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb3.8						
BVAR	Borovoye Array	45.97	307	P	P	16 53 10.3	-0.2
	comp=Z,1.5nm,0.5s,mb3.4,baz=85,slow=8.8,SNR=7.2						
INK	Inuvik	46.00	31	P	P	16 53 09.7	-1.0
	comp=Z,2.6nm,0.3s,mb3.8,baz=306,slow=6.6,SNR=14						
INK	Inuvik	46.00	31	*e*P	P	16 53 09.5	-1.1
	comp=Z,3.3nm,0.4s,mb3.8						
INK	Inuvik	46.00	31	*e*P	P	16 53 09.5	-1.1
INK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AAK	Ala-Archa	47.91	292	*e*P	P	16 53 25.4	-0.4
	comp=Z,2.6nm,0.5s,mb3.7						
AAK	Ala-Archa	47.91	292	*e*P	P	16 53 25.4	-0.4
AAK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.8						
GUN	Gumba	48.16	269	*e*P	P	16 53 28.6	+0.7
	comp=Z,16nm,0.6s,mb4.5						
KKN	Kakani	48.65	269	*e*P	P	16 53 32.1	+0.5
	comp=Z,4.8nm,0.4s,mb4.1						
DMN	Daman	48.88	269	*e*P	P	16 53 34.0	+0.6
	comp=Z,8.4nm,0.7s,mb4.1						
GKN	Gorkha	48.97	270	*e*P	P	16 53 33.6	-0.4
	comp=Z,13nm,0.4s,mb4.5						
SVE	Sverdlovsk	49.64	314	*e*P	P	16 53 30.2	-8.5
SVE				*e*		16 54 54.2	
KOLN	Koldanda	49.84	270	*e*P	P	16 53 41.2	+0.7
	comp=Z,11nm,0.5s,mb4.3						
KKAR	Karatay Array	50.24	295	*i* P	P	16 53 43.2	-0.1
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.6						
AB31	Akbulak array	53.52	306	*e*P	P	16 54 07.0	-0.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
AKTO	Aktyubinsk	54.00	308	P	P	16 54 10.4	-0.3
	comp=Z,0.5nm,0.3s,mb3.3,baz=79,slow=18,SNR=4.3						
AKTO	Aktyubinsk	54.00	308	P	P	16 54 10.5	-0.2
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.6						
KULM	Kulim	54.69	236	*e*P	P	16 54 16.1	-0.1
YKW3	Yellowknife Ar	55.54	33	*e*P	P	16 54 20.8	-0.7
YKA	Yellowknife Ar	55.58	33	P	P	16 54 21.2	-0.6
	comp=Z,3.9nm,0.6s,mb4.0,baz=307,slow=7.4,SNR=24						
YKA	Yellowknife Ar	55.58	33	P	P	16 54 21.2	-0.6
KEV	Kevo	55.69	338	*e*p	P	16 54 24.6	+2.0
	comp=Z,16nm,1.0s,mb4.3						
KEV	Kevo	55.69	338	*e*P	P	16 54 24.6	+2.0
KEV				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.3						
JOF	Joensuu	58.86	330	*e*p	P	16 54 42.9	-1.7
	comp=Z,2.6nm,0.4s,mb4.0						
JOF	Joensuu	58.86	330	*e*P	P	16 54 42.9	-1.7
JOF				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.1						
KAF	Kangasniemi	61.11	331	*e*p	P	16 54 58.2	-1.5
	comp=Z,3.7nm,0.5s,mb4.1,baz=44,slow=6.3						
KAF	Kangasniemi	61.11	331	*e*P	P	16 54 58.2	-1.5
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
FINES	FINESS Array B	61.66	331	P	P	16 55 02.5	-0.9
	comp=Z,3.8nm,0.5s,mb4.2,baz=46,slow=7.7,SNR=29						
FINES	FINESS Array B	61.66	331	P	P	16 55 02.5	-0.9
FFC	Flin Flon	65.62	35	*e*P	P	16 55 28.6	-0.2
	comp=Z,6.2nm,0.7s,mb4.5						
FFC	Flin Flon	65.62	35	*e*P	P	16 55 28.6	-0.2
FFC				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
WVOR	Wild Horse Val	65.95	53	*e*P	P	16 55 31.8	+0.7

	comp=Z,3.7nm,1.0s,mb4.1						
WVOR	Wild Horse Val	65.95	53	*e*P	P	16 55 31.8	+0.7
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
KIV	Kislovodsk	66.23	309	*e*P	P	16 55 34.6	+1.7
	comp=Z,10nm,0.8s,mb4.6						
KIV	Kislovodsk	66.23	309	*e*P	P	16 55 34.6	+1.7
KIV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
HFS	Hagfors	66.59	335	P	P	16 55 34.2	-0.7
	comp=Z,1.8nm,0.5s,mb4.0,baz=45,slow=6.3,SNR=7.9						
HRY	Holter Researc	66.73	46	*e*P	P	16 55 36.8	+0.8
MCMT	McKenzie Canyo	67.49	48	*e*P	P	16 55 42.2	+1.5
BOZ	Bozeman (W)	67.56	47	*e*P	P	16 55 42.2	+1.1
	comp=Z,2.6nm,0.6s,mb4.1						
BOZ	Bozeman (W)	67.56	47	*e*P	P	16 55 42.2	+1.1
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
AKASG	Malin Array Be	68.17	321	P	P	16 55 44.4	-0.4
	comp=Z,1.2nm,0.5s,mb3.9,baz=40,slow=6.3,SNR=4.1						
NVAR	Mina Array Bea	68.79	56	P	P	16 55 50.0	+1.2
	comp=Z,2.9nm,0.7s,mb4.1,baz=302,slow=3.9,SNR=23						
HWUT	Hardware Ranch	70.39	50	*e*P	P	16 55 59.2	+0.8
	comp=Z,2.8nm,0.7s,mb4.1						
BW06	Boulder Array	70.63	48	*e*P	P	16 56 00.2	+0.4
	comp=Z,3.8nm,0.7s,mb4.2						
PDAR	Pinedale Array	70.63	48	P	P	16 56 00.6	+0.7
	comp=Z,3.7nm,0.7s,mb4.2,baz=317,slow=1.6,SNR=30						
DUG	Dugway	70.69	52	*e*P	P	16 56 01.4	+1.1
	comp=Z,3.3nm,0.7s,mb4.2						
DUG	Dugway	70.69	52	*e*P	P	16 56 01.4	+1.1
DUG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
TPNV	Topopah Spring	70.99	56	*e*P	P	16 56 03.0	+0.9
	comp=Z,4.2nm,0.8s,mb4.2						
TPNV	Topopah Spring	70.99	56	*e*P	P	16 56 03.0	+0.9
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
ULM	Lac du Bonnet	71.45	36	P	P	16 56 04.2	-0.4
	comp=Z,2.0nm,0.5s,mb4.1,baz=331,slow=6.9,SNR=6.9						
BR131	Keskin Array S	74.02	311	*e*P	P	16 56 20.6	+0.8
	comp=Z,1.9nm,0.7s,mb3.9						
BRTR	Keskin Array B	74.02	311	P	P	16 56 20.7	+0.8
	comp=Z,1.7nm,0.8s,mb3.8,baz=71,slow=3.5,SNR=8.9						
GERES	GERESS Array B	75.89	328	P	P	16 56 30.7	+0.5
	comp=Z,0.3nm,0.5s,mb3.2,baz=34,slow=4.8,SNR=4.3						
SDCO	Great Sand Dun	76.41	49	*e*P	P	16 56 33.6	+0.2
	comp=Z,1.7nm,0.8s,mb3.8						
TXAR	Lajitas Array	83.74	54	P	P	16 57 13.4	+1.4
	comp=Z,1.6nm,0.5s,mb4.1,baz=288,slow=4.0,SNR=8.9						

*LDG **15** 16:47:17.8±0.2, 16.98S×169.25E, h10^{km}, Mb4.5/2, Error ellipse: s-maj=30.9km s-min=7.1km az=108.0*
*MOS **15** 16:47:33.3±2.8, 18.67S×169.18E, h155^{km}, mb5.0/15, Error ellipse: s-maj=11.9km s-min=11.1km az=149.4*
*NEIC **15** 16:47:41.3±0.9, 18.83S×169.19E, h237^{km}±8^{km}, mb4.8/26, Error ellipse: s-maj=7.8km s-min=6.1km az=145.0*
*IDC **15** 16:47:41.6±1.1, 18.87S×169.11E, h236^{km}±10^{km}, mb4.4/19, mb1 4.4/22, mb1mx4.4/24, mbtmp4.9/22, Error ellipse: s-maj=14.0km s-min=10.0km az=141.0*
*BJI **15** 16:47:45.8, 17.93S×168.53E, h237^{km}, mB4.9, mb4.5*
ISC 15 16:47:40.9±0.9**, 18.84S**±0.06×**169.13E**±0.06**, h244**^{km}±9^{km}**, n179, σ0^{s}85**/100**, mb4.6**/44**, 10C-12D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.08	218⇑	*i*P	P	16 48 45.2	-0.7
DZM				*e*S	S	16 49 37.0	+0.5
DZM	Mont Dzumac	4.08	218	P	P	16 48 45.1	-0.8
	22nm,0.3s,baz=56,slow=17,SNR=204						
DZM				S	S	16 49 35.9	-0.6
	6.6nm,0.3s,baz=130,slow=17,SNR=5.8						
DZM	Mont Dzumac	4.08	218⇑	*i*P	P	16 48 45.2	-0.7
DZM				*e*S	S	16 49 37.0	+0.5
HNR	Honiara	12.91	315	P	P	16 50 37.2	+0.3
	5.8nm,0.3s,baz=256,slow=1.3,SNR=8.7						
AFI	Afiamalu	18.96	78	P	P	16 51 46.5	+0.5
	0.7nm,0.3s,baz=70,slow=17,SNR=4.2						
AFI	Afiamalu	18.96	78	*e*P	P	16 51 45.0	-1.0
	17nm,0.8s						
AFI	Afiamalu	18.96	78	*e*P	P	16 51 45.0	-1.0
AFI				pmax	pmax		
	comp=Z,17nm,0.8s						
ARMA	Armidale	19.61	231	*e*P	P	16 51 54.4	+1.9
CTA	Charters Tower	21.60	263	*e*P	P	16 52 13.4	+1.3
	comp=Z,19nm,0.6s,mb4.8						
CTA	Charters Tower	21.60	263	P	P	16 52 13.3	+1.2
	comp=Z,25nm,0.5s,mb5.0,baz=92,slow=12,SNR=56						
CTA	Charters Tower	21.60	263	*e*P	P	16 52 13.4	+1.3
CTA				pmax	pmax		
	comp=Z,19nm,0.6s						
CTAO	Charters Tower	21.60	263	*e*P	P	16 52 13.5	+1.4
	comp=Z,42nm,0.8s,mb5.0						
CTAO	Charters Tower	21.60	263	*e*P	P	16 52 13.5	+1.4
CTAO				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.0						
PMG	Port Moresby	23.25	291	P	P	16 52 29.0	+0.9
	comp=Z,48nm,0.8s,mb5.1,baz=107,slow=6.8,SNR=16						
PMG	Port Moresby	23.25	291	*e*P	P	16 52 29.0	+0.9
	comp=Z,24nm,0.6s,mb4.9						
PMG	Port Moresby	23.25	291*d*	*i*P	P	16 52 29.2	+1.1
STKA	Stephens Creek	27.97	237⇓	*i*P	P	16 53 11.6	+0.4
	comp=Z,18nm,0.6s,mb4.9						
STKA	Stephens Creek	27.97	237	*e*P	PcP	16 56 19.6	-0.2
	comp=Z,2.4nm,0.5s						
STKA	Stephens Creek	27.97	237	P	P	16 53 11.8	+0.6
	comp=Z,20nm,0.6s,mb4.9,baz=66,slow=8.7,SNR=59						
STKA				PcP	PcP	16 56 18.5	-1.4
	comp=Z,3.4nm,0.5s,baz=353,slow=2.0,SNR=4.3						
STKA	Stephens Creek	27.97	237	*e*P	P	16 53 11.6	+0.5
STKA				*e*	pP	16 53 59.3	+0.2
WB2	Warramunga Arr	32.79	262⇓	*i*P	P	16 53 52.4	-1.0
WRAB	Tennant Creek	32.79	262⇓	*i*P	P	16 53 52.4	-1.0
WRA	Warramunga Arr	32.80	262	P	P	16 53 52.3	-1.1
	comp=Z,12nm,0.4s,mb4.8,baz=90,slow=8.5,SNR=283						
WRA				S	S	16 58 50.8	-0.7
	comp=Z,2.3nm,1.0s,baz=91,slow=14,SNR=5.9						
WRA				ScP		16 59 55.3	
	comp=Z,1.9nm,1.0s,baz=90,slow=3.9,SNR=5.8						
WRA				PKiKP		17 03 56.6	
	comp=Z,0.4nm,0.7s,baz=17,slow=0.2,SNR=5.6						
ASPA	Alice Springs	33.12	255⇓	*i*P	P	16 53 56.0	-0.2
KAKA	Kakadu	35.78	274⇓	*i*P	P	16 54 37.2	+18
	comp=Z,12nm,0.5s,mb4.7						
FORT	Forrest	38.92	244	*e*P	P	16 54 44.9	+0.1
	comp=Z,11nm,0.5s,mb4.7						
GUMO	Guam	40.12	322	P	P	16 54 54.3	-0.5
	comp=Z,38nm,0.6s,mb5.0,baz=102,slow=14,SNR=3.1						
FITZ	Fitzroy Crossi	41.18	264⇓	*i*P	P	16 55 04.1	+0.7
	comp=Z,56nm,1.0s,mb5.0						
MBWA	Marble Bar	46.33	258	*e*P	P	16 55 44.9	+0.5
	comp=Z,46nm,0.8s,mb4.9						
KLBR	Kellerberrin	47.79	244⇓	*i*P	P	16 55 55.0	-0.7
	comp=Z,20nm,0.9s,mb4.4						
MUN	Mundaring	49.12	244	*e*P	P	16 56 05.8	0.0
CBIJ	Chichi jima	52.61	329	P	P	16 56 30.9	-1.0
	comp=Z,63nm,0.8s,mb5.1,baz=270,slow=19,SNR=3.0						
VNDA	Vanda	58.82	182	*e*P	P	16 57 14.6	-0.9
	comp=Z,0.4nm,0.4s						
SBA	Scott Base	59.06	181	*e*P	P	16 57 17.2	+0.2
	comp=Z,5.5nm,1.1s,mb4.1						
SBA	Scott Base	59.06	181	*e*P	P	16 57 17.3	+0.3
SBA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
MJAR	Matsushiro Arr	62.35	332	P	P	16 57 38.9	-0.7
	comp=Z,1.9nm,0.4s,mb4.1,baz=157,slow=6.3,SNR=8.1						
MJAR	Matsushiro Arr	62.35	332	P	P	16 57 38.9	-0.7
JNU	Nakatsue	63.28	324	P	P	16 57 45.8	0.0
	comp=Z,4.2nm,0.6s,mb4.2,baz=239,slow=5.9,SNR=4.3						
ASAJ	Asahikawa	67.19	340	P	P	16 58 11.7	+1.1
	comp=Z,17nm,0.8s,mb4.7,baz=271,slow=11,SNR=16						
SSE	Sheshan	67.71	317	*e*P	P	16 58 13.3	-0.7
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,170nm,8.0s						
SSE				LR	LR		
	comp=N,30nm,18.0s						
SSE				LR	LR		
	comp=E,50nm,18.0s						
SSE				LR	LR		
	comp=Z,60nm,18.7s						
SSE	Sheshan	67.71	317	*e*P	P	16 58 13.3	-0.7
	comp=Z,35nm,0.7s,mb5.1						
SSE				LR	LR		
	comp=Z,70nm,18.7s						
YSS	Yuzh-Sakhalins	69.67	341	*e*P	P	16 58 26.2	+0.4
	comp=Z,13nm,0.8s,mb4.6						
YSS	Yuzh-Sakhalins	69.67	341	*e*P	P	16 58 26.2	+0.5
YSS				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
NJ2	Nanjing	69.85	316	*e*P	P	16 58 27.1	0.0
NJ2				PP	PP	17 01 04.3	-2.0
NJ2				AMB	AMB		
	comp=Z,300nm,7.8s						
NJ2				LR	LR		
	comp=N,510nm,11.0s						
NJ2				LR	LR		
	comp=E,520nm,12.9s						
NJ2				LR	LR		
	comp=Z,300nm,12.0s						
QSPA	South Pole Qui	71.21	180	*e*P	P	16 58 34.7	+0.2
	comp=Z,9.6nm,1.1s,mb4.3						
FX1	Attu Island--F	71.51	3	P	P	16 58 36.9	+0.3
	comp=Z,36nm,0.5s,mb5.2,baz=227,slow=3.2,SNR=14						
FX1	Attu Island--F	71.51	3	*e*P	P	16 58 36.2	-0.4
PET	Petropavlovsk	72.14	353	*e*P	P	16 58 39.1	-1.3
	comp=Z,25nm,0.5s,mb5.1						
PET	Petropavlovsk	72.14	353	*e*P	P	16 58 39.1	-1.3
PET				pmax	pmax		
	comp=Z,25nm,0.5s,mb5.1						
CN2	Changchun	74.06	329	*e*P	P	16 58 52.1	+0.2
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
MAW	Mawson	78.76	202	P	P	16 59 18.6	+1.2
	comp=Z,2.7nm,0.9s,mb3.9,baz=125,slow=6.4,SNR=6.9						
KDAK	Kodiak Island	82.70	20	P	P	16 59 39.0	+0.8
	comp=Z,22nm,0.8s,mb5.0,baz=36,slow=0.9,SNR=5.5						
KDAK	Kodiak Island	82.70	20	P	P	16 59 39.0	+0.8
YAK	Yakutsk	86.46	343	*i* P	P	16 59 57.1	+0.3
YAK				pmax	pmax		
	comp=Z,29nm,1.2s,mb4.9						
BILL	Bilibino	86.66	359	*e*P	P	16 59 57.5	-0.1
	comp=Z,12nm,0.7s,mb4.7						
BILL	Bilibino	86.66	359*c*	*i*P	P	16 59 57.9	+0.3
BILL				pmax	pmax		
	comp=Z,12nm,0.5s,mb4.9						
GTA	Gaotai	86.78	313	*e*P	P	17 00 00.4	+1.6
GTA				AMB	AMB		
	comp=Z,30nm,4.9s						
GTA				LR	LR		
	comp=N,130nm,10.6s						
GTA				LR	LR		
	comp=E,80nm,15.6s						
GTA				LR	LR		
	comp=Z,110nm,14.8s						
OHCM	Honcut	86.80	47	*e*P	P	16 59 58.8	-0.2
SONM	Songino Array	86.84	323	P	P	16 59 59.7	+0.8
	comp=Z,4.6nm,0.8s,mb4.2,baz=171,slow=5.2,SNR=17						
SONM				PKKPbc		17 17 50.5	
	comp=Z,0.5nm,0.7s,baz=270,slow=1.5,SNR=3.8						
CMB	Columbia Colle	86.97	48	*e*P	P	16 59 59.5	-0.3
	comp=Z,11nm,0.8s,mb4.6						
CMB	Columbia Colle	86.97	48	*e*P	P	16 59 59.5	-0.3
CMB				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
YBH	Yreka Blue Hor	87.09	44	*e*P	P	16 59 59.6	-0.6
	comp=Z,17nm,1.2s,mb4.7						
YBH	Yreka Blue Hor	87.09	44	*e*P	P	16 59 59.6	-0.7
YBH				pmax	pmax		
	comp=Z,17nm,1.2s						
HUMO	Hull Mountain	87.34	43	*e*P	P	17 00 00.9	-0.6
	comp=Z,14nm,0.9s,mb4.7						
MTUM	Tungsten Hills	87.97	49	P	P	17 00 04.3	-0.2
NVAR	Mina Array Bea	88.62	49	P	P	17 00 08.4	+0.9
	comp=Z,4.8nm,0.9s,mb4.3,baz=213,slow=6.3,SNR=20						
IMA2	Indian Mountai	89.16	14	*e*P	P	17 00 08.7	-0.7
SNAA	Sanae	89.55	183	P	P	17 00 11.1	0.0
SNAA	Sanae	89.55	183	P	P	17 00 11.2	0.0
	comp=Z,1.0nm,0.6s,mb3.8,baz=214,slow=6.1,SNR=14						
SNAA	Sanae	89.55	183	*e*P	P	17 00 10.9	-0.3
	comp=Z,3.0nm,0.6s,mb4.3						
SNAA	Sanae	89.55	183	*e*P	P	17 00 10.9	-0.2
SNAA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
COLA	College	89.69	17	*e*P	P	17 00 10.6	-1.3
	comp=Z,18nm,1.3s,mb4.7						
COLA	College	89.69	17⇓	*e*P	P	17 00 11.0	-0.9
ILAR	Eielson Array	89.89	17	P	P	17 00 11.4	-1.4
	comp=Z,3.8nm,0.5s,mb4.5,baz=240,slow=4.9,SNR=60						
ZAK	Zakamensk	89.91	324	*e*P	P	17 00 05.4	-7.9
ZAK				*e*		17 00 45.3	
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
ZAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
NEN	Nelson	90.00	52	*e*P	P	17 00 14.3	+0.2
WVOR	Wild Horse Val	90.11	45	*e*P	P	17 00 15.2	+0.8
	comp=Z,25nm,1.1s,mb5.0						
WVOR	Wild Horse Val	90.11	45	*e*P	P	17 00 15.3	+0.9
WVOR				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.0						
VNA3	Neumayer Olymp	90.15	180	P	P	17 00 12.4	-1.5
VNA2	Neumayer--Watz	90.44	181	P	P	17 00 12.0	-3.3
HAWA	Hanford	91.26	41	*e*P	P	17 00 20.6	+1.0
	comp=Z,2.2nm,1.2s,mb4.0						
DAWY	Dawson	91.66	20	*e*P	P	17 00 20.9	-0.2
ELK	Elko	91.73	47	*e*P	P	17 00 21.7	-0.3
	comp=Z,15nm,1.7s,mb4.6						
ELK	Elko	91.73	47	*e*P	P	17 00 21.7	-0.3
ELK				pmax	pmax		
	comp=Z,15nm,1.7s						
TUC	Tucson	91.88	57	*e*P	P	17 00 23.8	+0.9
	comp=Z,11nm,1.0s,mb4.8						
TUC	Tucson	91.88	57	*e*P	P	17 00 23.8	+0.9
TUC				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
MSU	Marysvale	93.06	50	*e*P	P	17 00 29.7	+1.5
HLID	Hailey	93.40	45	*e*P	P	17 00 30.5	+0.9
	comp=Z,2.9nm,0.8s,mb4.4						
TIXI	Tiksi	94.33	348	*e*P	P	17 00 32.1	-1.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
MNTX	Cornudas Mount	95.99	59	*e*P	P	17 00 40.4	-1.3
	comp=Z,3.4nm,1.0s,mb4.5						
ANMO	Albuquerque	96.16	55⇑	*e*P	P	17 00 43.5	+1.2
INK	Inuvik	96.20	18	P	P	17 00 40.7	-1.0
	comp=Z,5.5nm,1.0s,mb4.8,baz=237,slow=5.0,SNR=6.9						
INK	Inuvik	96.20	18	*e*P	P	17 00 41.1	-0.6
	comp=Z,15nm,1.4s,mb5.0						
INK	Inuvik	96.20	18	*e*P	P	17 00 41.2	-0.5
INK				pmax	pmax		
	comp=Z,15nm,1.4s						
PDAR	Pinedale Array	96.42	47	P	P	17 00 43.8	+0.5
	comp=Z,1.1nm,1.0s,mb4.0,baz=225,slow=4.2,SNR=5.6						
TXAR	Lajitas Array	96.67	61	P	P	17 00 45.7	+0.9
	comp=Z,1.5nm,0.8s,mb4.2,baz=225,slow=5.3,SNR=7.9						
TXAR	Lajitas Array	96.67	61	P	P	17 00 45.7	+0.9
YKA	Yellowknife Ar	100.37	27	P	P	17 01 01.5	+0.8
	comp=Z,2.2nm,0.6s,baz=255,slow=4.5,SNR=9.8						
YKA	Yellowknife Ar	100.37	27	P	P	17 01 01.5	+0.8
MKAR	Makanchi Array	101.38	316	P	P	17 01 07.1	+1.4
	comp=Z,0.5nm,0.5s,baz=88,slow=5.8,SNR=5.1						
MKAR	Makanchi Array	101.38	316	*i* P	P	17 01 07.6	+1.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTO	Aktyubinsk	117.70	318	PKP	PKPdf	17 05 58.9	+1.1
	comp=Z,0.8nm,0.5s,baz=84,slow=5.4,SNR=6.2						
BOSA	Boshof	121.31	217	PKP	PKPdf	17 06 07.2	+1.8
	comp=Z,4.0nm,1.0s,baz=59,slow=2.2,SNR=5.9						
ARCES	ARCESS Array B	124.66	345	PKP	PKPdf	17 06 11.0	+0.1
	comp=Z,3.6nm,0.5s,baz=84,slow=2.6,SNR=48						
FINES	FINESS Array B	130.18	338	PKP	PKPdf	17 06 21.8	+0.2
	comp=Z,6.3nm,1.0s,baz=34,slow=5.0,SNR=4.3						
FINES				SKPbc		17 09 23.9	
	comp=Z,4.0nm,1.1s,baz=56,slow=6.9,SNR=5.6						
NOA	NORSAR Array B	135.04	345	PKP	PKPdf	17 06 31.4	+0.8
	comp=Z,1.7nm,0.9s,baz=29,slow=2.1,SNR=2.8						
AKASG	Malin Array Be	135.11	325	SKPbc		17 09 41.9	
	comp=Z,1.2nm,0.6s,baz=49,slow=3.9,SNR=8.5						
DPC	Dobruska-Polom	141.83	332	*e*PKP	PKPdf	17 06 40.2	-3.0
PRU	Pruhonice	142.88	333	*e*PKP	PKPdf	17 06 43.8	-1.2
NKC	Novy Kostel	143.57	335	*e*PKP	PKPdf	17 06 45.5	-0.7
MOX	Moxa	143.58	336	*i* P	PKPbc	17 06 45.5	+0.4
	comp=Z,logA/T=1.2						
MOX	Moxa	143.58	336	*e*PKP	PKPdf	17 06 45.5	-0.7
VAY	Valandovo	143.75	315	*e*PKP	PKPdf	17 06 45.4	-1.4
VAY	Valandovo	143.75	315	*e*PKP	PKPdf	17 06 45.4	-1.4
DIVS	Divcibare	143.93	321⇑	*i*PKP	PKPdf	17 06 46.8	-0.2
KHC	Kasperske Hory	143.94	332	*e*PKP	PKPdf	17 06 46.9	+0.1
GEC2	GERESS Array S	144.09	332	*e*PKPbc	PKPbc	17 06 47.3	+0.6
GERES	GERESS Array B	144.09	332	PKP	PKPdf	17 06 47.5	+0.3
	comp=Z,5.5nm,0.7s,baz=35,slow=3.8,SNR=39						
SKO	Skopje	144.17	317	*e*PKP	PKPdf	17 06 48.8	+1.3
SKO	Skopje	144.17	317	*e*PKP	PKPdf	17 06 48.8	+1.3
WET	Wettzell	144.23	333	*e*PKPbc	PKPbc	17 06 48.2	+1.1
ARSA	Arzberg	144.38	329⇑	*i*P	PKPbc	17 06 48.9	+1.3
	comp=Z,16nm,1.4s						
GRA1	Grafenberg Arr	144.49	335	*e*PKPbc	PKPbc	17 06 49.2	+1.4
GRF	Grafenberg Arr	144.49	335	*e*PKIKP	PKPdf	17 06 49.2	+1.4
KOGS	Kog	144.56	327	*i* PKPbc	PKPbc	17 06 49.4	+1.3
MOA	Molln	144.56	330⇑	*i*P	PKPdf	17 06 49.2	+1.3
	comp=Z,28nm,0.7s						
PERS	Pernice	145.01	328	*e*PKPbc	PKPbc	17 06 50.8	+1.5
OHR	Ohrid	145.02	316	*e*PKP	PKPdf	17 06 51.0	+2.0
OHR	Ohrid	145.02	316	*e*PKP	PKPdf	17 06 51.0	+2.0
TNS	Taunus Mts	145.10	338	*e*PKPbc	PKPbc	17 06 51.1	+1.7
GOLS	Golise	145.18	327	*i* PKPbc	PKPbc	17 06 51.9	+2.1
OBKA	Obir	145.38	329⇓	*i*P	PKPdf	17 06 51.5	+2.0
	comp=Z,14nm,0.8s						
KBA	Koelnbreinsper	145.55	330⇑	*i*P	PKPdf	17 06 51.6	+1.9
	comp=Z,5.6nm,0.7s						
FUR	Furstenfeldbru	145.66	333	*e*PKPbc	PKPbc	17 06 51.3	+0.4
LJU	Ljubljana	145.71	328	*e*PKPbc	PKPbc	17 06 52.9	+1.8
VISS	Visnje	145.72	327	*i* PKPbc	PKPbc	17 06 53.0	+1.8
WATA	Walderalm	146.17	332⇑	*i*P	PKPdf	17 06 54.7	+3.9
	comp=Z,3.7nm,0.5s						
WTTA	Wattenberg	146.20	332⇑	*i*P	PKPdf	17 06 53.4	+2.6
	comp=Z,5.6nm,0.6s						
WLF	Walferdange	146.35	340	*e*PKPbc	PKPbc	17 06 54.5	+2.0
MOTA	Moosalm	146.37	333⇓	*i*P	PKPdf	17 06 54.4	+3.3
	comp=Z,7.0nm,0.6s						
GIVF	Givet	146.38	342	*e*PKP1	PKPbc	17 06 54.3	+1.7
SQTA	Sankt Quirin	146.42	332⇑	*i*P	PKPdf	17 06 54.9	+3.6
	comp=Z,9.5nm,0.5s						
BAIF	Baives	146.60	342	*e*PKP1	PKPbc	17 06 55.1	+2.0
	comp=Z,18nm,0.6s						
BFO	Black Forest	146.71	336	*e*PKPbc	PKPbc	17 06 55.1	+1.7
DAVA	Damuels	146.94	334⇓	*i*P	PKPdf	17 06 56.4	+4.3
	comp=Z,10nm,0.8s						
CDF	Champ du Feu	147.03	338	*e*PKP1	PKPdf	17 06 56.3	+4.0
	comp=Z,18nm,0.6s						
HINF	Hinteralfeld	147.69	337	*e*PKP1	PKPdf	17 06 57.7	+4.4
HAU	Haudompre	147.71	338	*e*PKP1	PKPdf	17 06 58.0	+4.7
	comp=Z,19nm,0.7s						
MEZF	Maizieres J'vi	147.72	340	*e*PKP1	PKPdf	17 06 58.5	+5.2
	comp=Z,30nm,0.6s						
TIP	Timpagrande	148.66	316	*e*PKPbc	PKPdf	17 07 01.2	+6.1
AQU	L'Aquila	148.81	324	*e*PKPbc	PKPdf	17 07 01.4	+6.2
CABF	La Chapelle	148.99	337	*e*PKP1	PKPdf	17 07 01.8	+6.4
	comp=Z,29nm,0.6s						
FLN	La Foliniere	148.99	347	*e*PKP1	PKPdf	17 07 00.9	+5.6
	comp=Z,21nm,0.5s						
LDF	La Druitiere	149.07	346	*e*PKP1	PKPdf	17 07 01.0	+5.6
	comp=Z,20nm,0.7s						
LOR	Lormes	149.19	340	*e*PKP1	PKPdf	17 07 01.8	+6.1
	comp=Z,22nm,0.6s						
GRR	Gorron	149.43	347	*e*PKP1	PKPdf	17 07 02.2	+6.2
	comp=Z,15nm,0.6s						
SSF	Saint Saulge	149.48	340	*e*PKP1	PKPdf	17 07 02.6	+6.5
	comp=Z,25nm,0.7s						
LPL	La Plagne	149.65	335	*e*PKP1	PKPdf	17 07 03.6	+7.2
	comp=Z,21nm,0.8s						
LPG	La Plagne	149.66	335	*e*PKP1	PKPdf	17 07 03.7	+7.2
	comp=Z,21nm,0.8s						
SMF	Signal de Mont	149.74	340	*e*PKP1	PKPdf	17 07 03.0	+6.5
AVF	Avril sur Loir	149.77	340	*e*PKP1	PKPdf	17 07 03.0	+6.4
SGMF	Saint Gilles	149.89	349	*e*PKP1	PKPdf	17 07 03.0	+6.3
	comp=Z,13nm,0.6s						
ROSF	Rostrenen	149.94	350	*e*PKP1	PKPdf	17 07 03.1	+6.3
BNI	Bardonecchia	150.06	335	*e*PKPbc	PKPdf	17 07 04.1	+7.1
BGF	Bois d'Agland	150.14	341	*e*PKP1	PKPdf	17 07 04.0	+6.8
	comp=Z,21nm,0.7s						
MBDF	Montbardon	150.28	334	*e*PKP1	PKPdf	17 07 04.4	+7.0
	comp=Z,9.6nm,0.7s						
QUIF	Quistinic	150.33	349	*e*PKP1	PKPdf	17 07 03.9	+6.5
ORIF	Oris-en-Rattie	150.49	335	*e*PKP1	PKPdf	17 07 05.1	+7.4
	comp=Z,22nm,0.6s						
TCF	Toulx Ste Croi	150.57	341	*e*PKP1	PKPdf	17 07 05.0	+7.2
	comp=Z,15nm,0.7s						
MFF	Saint Martin d	150.94	345	*e*PKP1	PKPdf	17 07 05.8	+7.4
	comp=Z,11nm,0.6s						
PGF	Pioggiola	150.98	329	*e*PKP1	PKPdf	17 07 06.2	+7.6
	comp=Z,27nm,0.5s						
VIVF	Saint-Julien-l	151.00	337	*e*PKP1	PKPdf	17 07 06.2	+7.7
	comp=Z,12nm,0.8s						
FRF	La Foret Royal	151.28	333	*e*PKP1	PKPdf	17 07 06.4	+7.4
	comp=Z,7.1nm,0.6s						
SMRF	Simiane la Rot	151.39	335	*e*PKP1	PKPdf	17 07 07.4	+8.3
	comp=Z,27nm,0.9s						
LMR	La Mourre	151.52	333	*e*PKP1	PKPdf	17 07 07.1	+7.8
	comp=Z,21nm,0.7s						
RJF	Les Rejaudoux	151.67	341	*e*PKP1	PKPdf	17 07 07.5	+8.0
	comp=Z,6.7nm,0.6s						
LASF	Ste Croix	151.97	337	*e*PKP1	PKPdf	17 07 09.0	+9.0
LFF	La Frestale	152.23	342	*e*PKP1	PKPdf	17 07 08.9	+8.6
MTLF	Montolieu	153.20	339	*e*PKP1	PKPdf	17 07 10.9	+9.2

*BJI **15** 16:53:35.5, 57.30N×120.90E, h5^{km}, ML4.4*
*BYKL **15** 16:53:35.7±0.3, 57.41N×120.77E*
*NEIC **15** 16:53:35.5±0.6, 57.34N×120.90E, h5^{km}, mb3.9/1, Error ellipse: s-maj=13.2km s-min=10.3km az=103.0*
*IDC **15** 16:53:35.1±1.0, 57.39N×120.84E, mb3.7/10, mb1 3.9/11, mb1mx3.8/22, mbtmp3.7/11, ML3.3/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/31, Error ellipse: s-maj=24.8km s-min=21.2km az=164.0*
*MOS **15** 16:53:36.2±1.5, 57.57N×120.62E, h16^{km}, mb4.5/3, Error ellipse: s-maj=12.8km s-min=8.8km az=65.4*
ISC 15 16:53:36.9±0.3**, 57.57N**±0.05×**120.60E**±0.05**, h16**^{km}**, n67, σ1^{s}12**/73**, mb4.0**/14**, 1C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	Chara	1.43	243⇑	*i*Pg	Pn	16 54 02.3	-0.1
CRS				Pmax		16 54 04.2	
	1μm,0.9s						
CRS				*e*Sg	Sb	16 54 20.7	+0.1
CRS				Smax		16 54 21.5	
	1μm,0.7s						
CRS	Chara	1.43	243	*e*P	Pn	16 54 02.6	+0.2
CRS				*e*		16 54 20.9	
CRS				pmax	pmax		
	comp=Z,1μm,0.9s						
CRS				smax			
	comp=E,1μm,0.7s						
NRGR	Nerungri	2.43	110	*i* P	Pn	16 54 16.2	-0.5
NRGR				S	Sn	16 54 45.8	-0.5
CLNS	Chul'man	2.45	106	*e*Pn	Pn	16 54 16.4	-0.6
CLNS				*e*Pg	Pn	16 54 18.1	+1.1
CLNS				Pmax		16 54 20.4	
	comp=E,682nm,0.3s						
CLNS				*e*Sg	Sn	16 54 48.6	+1.8
CLNS				Smax		16 54 50.4	
	comp=E,7μm,0.3s						
CLNS	Chul'man	2.45	106	*e*P	Pn	16 54 16.7	-0.3
CLNS				*e*S	Sn	16 54 46.8	0.0
CLNS				pmax	pmax		
	comp=N,5.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,15nm,0.3s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.4s						
CLNS				smax			
	comp=N,132nm,0.3s						
CLNS				smax			
	comp=E,226nm,0.3s						
CLNS				smax			
	comp=Z,30nm,0.2s						
CLNS				MLR	MLR		
	comp=Z,70nm,13.0s						
ALDR	Aldan	2.76	66	*e*Pn	Pn	16 54 22.7	+1.3
ALDR				*e*Pg	Pn	16 54 24.8	+3.4
ALDR				Pmax		16 54 31.9	
	comp=Z,456nm,0.2s						
ALDR				*e*Sn	Sn	16 54 54.9	+0.2
ALDR				*e*Sg	Sn	16 55 00.7	+6.0
ALDR				Smax		16 55 01.2	
	comp=Z,8μm,0.3s						
NLYR	Nelyaty	2.88	250	*e*Pn	Pn	16 54 23.9	+0.7
NLYR				*e*Pg	Pn	16 54 28.1	+4.9
NLYR				Pmax		16 54 30.0	
	comp=Z,887nm,0.4s						
NLYR				*e*Sg	Sn	16 55 05.4	+7.6

NLYR				Smax		16 55 08.8	
	comp=Z,2μm,0.9s						
NLYR	**Nelyaty**	**2.88**	**250**	*e*P	**Pn**	**16 54 28.2**	**+5.0**
NLYR				*e*		16 55 04.6	
NLYR				pmax	pmax		
	comp=Z,892nm,0.3s						
NLYR				smax			
	comp=E,2μm,0.9s						
TUP	**Tupik**	**3.17**	**187**	*e*Pn	**Pn**	**16 54 23.9**	**-3.4**
TUP				*e*Pg	**Pn**	**16 54 29.7**	**+2.4**
TUP				Pmax		16 54 30.8	
	comp=E,479nm,0.7s						
TUP				*e*Sg	**Sn**	**16 55 07.6**	**+2.5**
TUP				Smax		16 55 09.4	
	comp=E,1μm,1.1s						
TUP	**Tupik**	**3.17**	**187**	*e*P	**Pn**	**16 54 30.1**	**+2.8**
TUP				*e*		16 55 07.5	
TUP				pmax	pmax		
	comp=Z,377nm,0.4s						
TUP				smax			
	comp=E,1μm,0.9s						
TNDR	**Tynda**	**3.34**	**135**	*e*Pn	**Pn**	**16 54 26.9**	**-2.8**
TNDR				*e*Pg	**Pn**	**16 54 34.1**	**+4.4**
TNDR				Pmax		16 54 37.7	
	comp=E,777nm,0.3s						
TNDR				*e*Sn	**Sn**	**16 55 02.0**	**-7.4**
TNDR				*e*Sg	**Sn**	**16 55 12.9**	**+3.5**
TNDR				Smax		16 55 15.1	
	comp=E,4μm,0.5s						
BOD	**Bodaibo**	**3.55**	**277**	*e*Pn	**Pn**	**16 54 33.8**	**+1.2**
BOD				*e*Pg	**Pn**	**16 54 41.1**	**+8.5**
BOD				Pmax		16 54 44.8	
	comp=E,108nm,0.5s						
BOD				*e*Sg	**Sn**	**16 55 27.8**	**+13**
BOD				Smax		16 55 34.1	
	comp=E,565nm,1.0s						
BOD	**Bodaibo**	**3.55**	**277**	*e*P	**Pn**	**16 54 41.8**	**+9.2**
SVKR	**Severomuysk**	**4.13**	**252**	*e*Pn	**Pn**	**16 54 40.9**	**+0.1**
SVKR				*e*Pg	Px	16 54 52.0	
SVKR				Pmax		16 54 54.2	
	comp=E,154nm,0.5s						
SVKR				*e*Sg	Sx	16 55 46.5	
SVKR				Smax		16 55 51.8	
	comp=E,779nm,1.0s						
SVKR	**Severomuysk**	**4.13**	**252**	*e*P	Px	16 54 52.1	
SVKR				pmax	pmax		
	comp=Z,150nm,0.6s						
UKT	**Uakit**	**4.39**	**245**	*e*Pn	**Pn**	**16 54 45.2**	**+0.7**
UKT				*e*Pg	Px	16 54 54.3	
UKT				Pmax		16 54 58.6	
	comp=Z,68nm,1.0s						
UKT				*e*Sg	Sx	16 55 51.0	
UKT				Smax		16 55 56.8	
	comp=Z,293nm,0.9s						
UKT	**Uakit**	**4.39**	**245**	*e*P	Px	16 54 54.7	
UKT				pmax	pmax		
	comp=Z,46nm,0.5s						
KROS	**Kirovskiy**	**4.76**	**129**	*e*Sg	Sx	16 55 55.5	
YOA	**Uoyan**	**5.08**	**257**	*e*Pg	Px	16 55 08.6	
YOA				Pmax		16 55 18.8	
	comp=Z,281nm,1.3s						
YOA				*e*Sg	Sx	16 56 15.3	
YOA				Smax		16 56 27.9	
	comp=Z,1μm,1.6s						
YOA	**Uoyan**	**5.08**	**257**	*e*P	Px	16 55 09.6	
YOA				pmax	pmax		
	comp=Z,297nm,0.8s						
ZEA	**Zeya**	**5.38**	**133**	*e*Pg	Px	16 55 09.3	
ZEA				*e*Sg	Sx	16 56 16.8	
KMO	**Kumora**	**5.44**	**256**	*e*Pn	**Pn**	**16 55 00.9**	**+1.5**
KMO				*e*Pg	Px	16 55 15.0	
KMO				Pmax		16 55 22.8	
	comp=Z,42nm,0.6s						
KMO				*e*Sg	Sx	16 56 25.1	
KMO				Smax		16 56 30.1	
	comp=Z,484nm,0.8s						
KMO	**Kumora**	**5.44**	**256**	*e*P	Px	16 55 15.3	
KMO				pmax	pmax		
	comp=Z,44nm,0.6s						
YLYR	**Ulyunkhan**	**5.91**	**247**	*e*Pn	**Pn**	**16 55 04.6**	**-1.5**
YLYR				*e*Pg	Px	16 55 22.9	
YLYR				Pmax		16 55 26.5	
	comp=Z,25nm,0.9s						
YLYR				*e*Sn	**Sn**	**16 56 10.6**	**-3.6**
YLYR				*e*Sg	Sx	16 56 39.2	
YLYR				Smax		16 56 42.7	
	comp=Z,265nm,1.9s						
YLYR	**Ulyunkhan**	**5.91**	**247**	*e*P	**Pn**	**16 55 06.1**	**0.0**
NIZ	**Nizh Angarsk**	**6.35**	**258**	*e*Pn	**Pn**	**16 55 13.2**	**+0.9**
NIZ				*e*Pg	Px	16 55 31.6	
NIZ				Pmax		16 55 36.9	
	comp=Z,22nm,1.3s						
NIZ				*e*Sg	Sx	16 56 54.3	
NIZ				Smax		16 57 04.7	
	comp=Z,192nm,2.2s						
NIZ	**Nizh Angarsk**	**6.35**	**258**	*e*P	**Pn**	**16 55 12.8**	**+0.5**
NIZ				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK	**Yakutsk**	**6.40**	**42**	*e*Pn	**Pn**	**16 55 11.4**	**-1.6**
YAK				*e*Pg	Px	16 55 30.7	
YAK				Pmax		16 55 33.8	
	comp=Z,236nm,0.5s						
YAK				*e*Sn	**Sn**	**16 56 20.1**	**-6.3**
YAK				*e*Sg	Sx	16 56 53.7	
YAK				Smax		16 56 57.5	
	comp=Z,1μm,0.5s						
YAK	**Yakutsk**	**6.40**	**42**	*e*Pg	Px	16 55 30.4	
	comp=Z,85nm,0.8s						
YAK				*e*Sg	Sx	16 56 53.7	
YAK	**Yakutsk**	**6.40**	**42**	*e*P	**Pn**	**16 55 12.9**	**-0.1**
YAK				*e*S	**Sn**	**16 56 21.2**	**-5.2**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				smax			
	comp=N,36nm,0.9s						
YAK				smax			
	comp=Z,27nm,1.1s						
YAK				smax			
	comp=E,33nm,0.7s						
YAK				MLR	MLR		
	comp=Z,176nm,2.0s						
CIT	**Chita**	**6.89**	**219**	*e*Pn	**Pn**	**16 55 17.8**	**-2.0**
CIT				*e*Pg	Px	16 55 38.7	
CIT				Pmax		16 55 40.6	
	comp=Z,89nm,1.3s						
CIT				*e*		16 57 03.5	
CIT				*e*Sg	Sx	16 57 06.7	
CIT				Smax		16 57 15.6	
	comp=Z,722nm,1.8s						
CIT	**Chita**	**6.89**	**219**	*e*P	Px	16 55 39.0	
CIT				pmax	pmax		
	comp=Z,91nm,1.3s						
SYVR	**Suvo**	**7.17**	**241**	*e*Pn	**Pn**	**16 55 22.2**	**-1.5**
SYVR				*e*Pg	Px	16 55 45.6	
SYVR				Pmax		16 55 48.5	
	comp=Z,51nm,1.2s						
SYVR				*e*Sg	Sx	16 57 18.4	
SYVR				Smax		17 57 32.5	
	comp=Z,287nm,1.8s						
SYVR	**Suvo**	**7.17**	**241**	*e*P	**Pn**	**16 55 24.0**	**+0.3**
HIA	**Hailar**	**8.34**	**184**	*e*Pn	**P**	**16 55 33.0**	**-7.1**
	comp=Z,11nm,0.5s						
HIA	**Hailar**	**8.34**	**184**	*e*P	**P**	**16 55 33.0**	**-7.0**
HIA				pmax	pmax		
	comp=Z,11nm,0.5s						
OGRR	**Ongureny**	**8.34**	**247**	*e*Pn	**P**	**16 55 39.7**	**-0.4**
OGRR				*e*Pg	Px	16 56 06.7	
OGRR				Pmax		16 56 08.8	
	comp=Z,25nm,1.9s						
OGRR				*e*Sg	Sx	16 57 54.0	
OGRR				Smax		16 58 11.1	
	comp=Z,107nm,2.1s						
OGRR	**Ongureny**	**8.34**	**247**	*e*P	**P**	**16 55 38.5**	**-1.6**
OGRR				pmax	pmax		
	comp=Z,26nm,2.2s						
KPC	**Khapcheranga**	**9.26**	**215**	*e*Pn	**P**	**16 55 49.1**	**-3.8**
KPC				*e*Pg	Px	16 56 20.7	
KPC				Pmax		16 56 24.7	
	comp=Z,18nm,2.8s						
KPC				*e*Sg	Sx	16 58 17.4	
KPC				Smax		16 58 28.3	
	comp=Z,178nm,1.0s						
KPC	**Khapcheranga**	**9.26**	**215**	*e*P	**P**	**16 55 49.2**	**-3.7**
KPC				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TRG	**Tyrgan**	**9.46**	**245**	*e*Sg	Sx	16 58 27.7	
TRG				Smax		16 58 42.1	
	comp=Z,89nm,1.6s						
LSTR	**Listvyanka**	**10.75**	**245**	*e*Sg	Sx	16 59 07.5	
LSTR				Smax		16 59 16.2	
	comp=Z,54nm,2.2s						
ARS	**Arshan**	**11.91**	**249**	*e*Pg	Px	16 57 11.8	
ARS				Pmax		16 57 13.8	
	comp=Z,11nm,0.5s						
ARS				*e*Sg	Sx	16 59 46.3	
ARS				Smax		16 59 54.1	
	comp=Z,93nm,1.0s						
ZAK	**Zakamensk**	**12.45**	**242**	*e*Sg	Sx	17 00 02.2	
ZAK				Smax		17 00 25.3	
	comp=Z,41nm,1.5s						
MOY	**Mondy**	**12.78**	**251**	*e*Sg	Sx	17 00 10.7	
MOY				Smax		17 00 43.9	
	comp=Z,73nm,2.1s						
SONM	**Songino Array**	**12.98**	**227**	Pn	**P**	**16 56 40.9**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=37,slow=12,SNR=9.2						
SONM				LR	LR	17 01 54.8	
	comp=Z,133nm,18.5s,baz=355,slow=39						
TIXI	**Tiksi**	**14.55**	**10**	*i* P	**P**	**16 57 00.0**	**-3.6**
ZAL	**Zalesovo**	**20.32**	**275**	P	**P**	**16 58 15.3**	**+0.7**
	comp=Z,0.9nm,0.7s,baz=46,slow=14,SNR=5.0						
MKAR	**Makanchi Array**	**25.50**	**262**	P	**P**	**16 59 06.2**	**+0.5**
	comp=Z,1.4nm,0.6s,mb3.7,baz=56,slow=8.2,SNR=15						
SSE	**Sheshan**	**26.47**	**179**	*e*P	**P**	**16 59 15.5**	**+0.6**
	comp=Z,27nm,0.7s,mb4.9						
CHKZ	**Chkalovo**	**27.96**	**284**	*e*P	**P**	**16 59 28.0**	**-0.2**
	comp=Z,1.9nm,0.9s,mb3.7						
CHKZ	**Chkalovo**	**27.96**	**284**	*e*P	**P**	**16 59 28.0**	**-0.2**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
KKN	**Kakani**	**38.72**	**235**	*e*P	**P**	**17 01 01.4**	**-0.3**
	comp=Z,5.3nm,0.6s,mb4.4						
GKN	**Gorkha**	**38.82**	**236**	*e*P	**P**	**17 01 03.3**	**+0.7**
	comp=Z,6.2nm,0.5s,mb4.6						
DMN	**Daman**	**38.95**	**235**	*e*P	**P**	**17 01 02.8**	**-0.9**
KOLN	**Koldanda**	**39.49**	**237**	*e*P	**P**	**17 01 08.5**	**+0.4**
	comp=Z,8.1nm,1.0s,mb4.4						
ILAR	**Eielson Array**	**41.33**	**40**	P	**P**	**17 01 23.2**	**+0.4**
	comp=Z,0.7nm,0.7s,mb3.4,baz=296,slow=4.7,SNR=6.6						
FINES	**FINESS Array B**	**44.08**	**316**	P	**P**	**17 01 45.9**	**+0.7**
	comp=Z,2.7nm,0.7s,mb4.1,baz=63,slow=8.5,SNR=6.6						
HFS	**Hagfors**	**49.39**	**321**	P	**P**	**17 02 27.2**	**+0.2**
	comp=Z,2.1nm,0.5s,mb4.4,baz=63,slow=6.6,SNR=14						
NB2	**NORSAR Subarra**	**49.54**	**323**	P	**P**	**17 02 28.2**	**0.0**
	comp=Z,0.6nm,0.5s,mb3.9,baz=48,slow=7.0						
NOA	**NORSAR Array B**	**49.54**	**323**	P	**P**	**17 02 28.3**	**+0.1**
	comp=Z,1.3nm,0.6s,mb4.2,baz=43,slow=7.8,SNR=2.9						
AKASG	**Malin Array Be**	**50.06**	**304**	P	**P**	**17 02 32.8**	**+0.4**
	comp=Z,0.6nm,0.3s,mb4.1,baz=38,slow=8.8,SNR=5.0						
AKASG	**Malin Array Be**	**50.06**	**304**	*i* P	**P**	**17 02 33.2**	**+0.9**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KHC	**Kasperske Hory**	**57.89**	**312**	*e*P	**P**	**17 03 30.5**	**+0.7**
GERES	**GERESS Array B**	**58.06**	**312**	P	**P**	**17 03 30.1**	**-1.0**
	comp=Z,0.6nm,0.7s,mb3.7,baz=27,slow=6.0,SNR=4.9						
PDAR	**Pinedale Array**	**71.60**	**37**	P	**P**	**17 04 58.7**	**-0.2**
	comp=Z,0.3nm,0.6s,mb3.4,baz=315,slow=2.6,SNR=3.0						
WRA	**Warramunga Arr**	**78.07**	**167**	P	**P**	**17 05 33.8**	**-2.4**
	comp=Z,0.7nm,0.8s,mb3.7,baz=351,slow=6.7,SNR=8.2						

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*NIED **15** 17:10:00,38.20N×144.70E,h5^{km},Mw3.8 Best double couple: M$_0$6.39×10^{14} NP1:φ$_s$231°,δ77°,λ-87°. NP2:φ$_s$36°, δ13°,λ-104°.*

*IDC **15** 17:10:26.9±2.4,38.18N×145.29E,mb3.5/2,mb1 3.7/4, mb1mx3.4/22,mbtmp3.5/4,ML3.6/2,Error ellipse: s-maj=59.7km s-min=28.8km az=74.0*

*JMA **15** 17:10:32.4±0.2,38.24N×144.67E,h53^{km},M4.0*

ISC 15 17:10:31.5±1.0**,38.40N**±0.05×**144.79E**±0.07**,h53^{km},n16, σ1^{s}22**/25**,mb3.6**/2**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.54**	**287**	P	**P**	**17 11 11.8**	**+0.6**
OFUJ				*e*S	**S**	**17 11 41.7**	**+0.7**
MIYJ	**Miyakonagasawa**	**2.60**	**298**	P	**P**	**17 11 12.9**	**+0.8**
MIYJ				*e*S	**S**	**17 11 42.9**	**+0.3**
JIO	**Ouri**	**2.71**	**272**	P	**P**	**17 11 13.5**	**-0.1**
JIO				*e*S	**S**	**17 11 44.0**	**-1.3**
JMK	**Ichinoseki**	**2.85**	**282**	P	**P**	**17 11 16.2**	**+0.5**
JMK				*e*S	**S**	**17 11 48.9**	**-0.1**
JOT	**Ohata**	**4.14**	**317**	*e*S	**S**	**17 12 20.8**	**-0.8**
JCH	**Churui**	**4.35**	**346**	P	**P**	**17 11 36.9**	**+0.1**
JCH				*e*S	**S**	**17 12 26.0**	**-0.8**
JKB	**Kayabe**	**4.52**	**322**	*e*S	**S**	**17 12 29.7**	**-1.4**
NEM2	**Nemuro 2**	**5.01**	**8**	P	**P**	**17 11 44.9**	**-1.2**
NEM2				*e*S	**S**	**17 12 39.7**	**-3.8**
JRY	**Ryogami san**	**5.27**	**245**	P	**P**	**17 11 47.6**	**-2.0**
JRY				*e*S	**S**	**17 12 43.0**	**-6.8**
JOD2	**Odawara 2**	**5.54**	**237**	*e*S	**S**	**17 12 48.9**	**-7.8**
MJAR	**Matsushiro Arr**	**5.55**	**253**	Pn	**P**	**17 11 55.1**	**+1.5**
	1.5nm,0.3s,baz=72,slow=15,SNR=13						
JTKR	**Abashiri--Toko**	**5.61**	**353**	P	**P**	**17 11 54.5**	**+0.2**
JTKR				*e*S	**S**	**17 12 56.5**	**-1.8**
JHR	**Hokuryu**	**5.82**	**338**	P	**P**	**17 11 59.5**	**+2.2**
JHR				*e*S	**S**	**17 13 06.1**	**+2.5**
ASAJ	**Asahikawa**	**5.95**	**345**	Pn	**P**	**17 12 00.8**	**+1.7**
	1.5nm,0.3s,baz=193,slow=11,SNR=17						
MKAR	**Makanchi Array**	**45.68**	**302**	P	**P**	**17 18 52.7**	**+4.1**
	0.4nm,0.9s,mb3.4,baz=69,slow=12,SNR=2.8						
WRA	**Warramunga Arr**	**58.85**	**192**	P	**P**	**17 20 26.4**	**-0.8**
	0.5nm,0.5s,mb3.8,baz=8.9,slow=7.2,SNR=10						

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*IDC **15** 17:15:05.8±0.7,24.13S×74.85E,mb4.1/12,mb1 4.1/12, mb1mx4.1/20,mbtmp4.1/12,MS3.7/6,Ms1 3.7/6, ms1mx3.5/19,Error ellipse: s-maj=22.5km s-min=18.5km az=125.0*

*NEIC **15** 17:15:07.5±0.5,24.17S×74.83E,h10^{km},mb4.4/7,Error ellipse: s-maj=17.6km s-min=13.1km az=99.0*

ISC 15 17:15:05.8±0.5**,24.18S**±0.09×**74.9E**±0.1**,h10^{km},n24, σ0^{s}99**/22**,mb4.2**/18**,MS3.8**/6**,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATP	**Matopo**	**42.92**	**266**	P	**P**	**17 23 06.6**	**-0.1**
	1.8nm,0.7s,mb3.9,baz=102,slow=7.5,SNR=5.7						
MATP	**Matopo**	**42.92**	**266**	P	**P**	**17 23 06.6**	**-0.1**
KMBO	**Kilima Mbogo**	**43.01**	**297**	P	**P**	**17 23 08.0**	**+0.5**
	2.0nm,0.8s,mb3.9,baz=66,slow=19,SNR=2.0						
KMBO				LR	LR	17 38 34.6	
	comp=Z,80nm,18.1s,MS3.7,baz=95,slow=33						
MAW	**Mawson**	**44.07**	**187**	P	**P**	**17 23 16.4**	**+1.1**
	1.8nm,0.8s,mb3.9,baz=31,slow=13,SNR=4.2						
MAW				LR	LR	17 38 29.4	
	comp=Z,67nm,19.7s,MS3.6,baz=244,slow=32						
MAW	**Mawson**	**44.07**	**187**	P	**P**	**17 23 16.4**	**+1.1**
	5.7nm,1.2s,mb4.2						
BOSA	**Boshof**	**44.41**	**253**	P	**P**	**17 23 18.4**	**-0.3**
	2.9nm,1.0s,mb4.0,baz=103,slow=7.4,SNR=3.0						
BOSA				LR	LR	17 39 03.4	
	comp=Z,91nm,18.3s,MS3.7,baz=100,slow=32						
BOSA	**Boshof**	**44.41**	**253**	P	**P**	**17 23 18.4**	**-0.3**
BOSA				LR	LR	17 39 03.4	
WRA	**Warramunga Arr**	**54.93**	**98**	P	**P**	**17 24 37.9**	**-1.5**
	1.3nm,1.0s,mb3.9,baz=257,slow=9.6,SNR=12						
KAKA	**Kakadu**	**55.46**	**89**	*e*P	**P**	**17 25 00.9**	**+18**
	5.1nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**58.60**	**114**	LR	LR	17 48 02.4	
	comp=Z,94nm,18.4s,MS3.9,baz=26,slow=34						
SNAA	**Sanae**	**63.40**	**200**	P	**P**	**17 25 37.4**	**0.0**
	0.6nm,0.6s,mb3.9,baz=159,slow=15,SNR=7.4						
SNAA	**Sanae**	**63.40**	**200**	*e*P	**P**	**17 25 37.2**	**-0.2**
	4.5nm,0.9s,mb4.6						
VNDA	**Vanda**	**65.92**	**166**	*e*P	**P**	**17 25 53.1**	**-0.6**
	5.0nm,1.4s,mb4.3						
QSPA	**South Pole Qui**	**65.94**	**180**	*e*P	**P**	**17 25 53.8**	**+0.1**
	33nm,1.8s,mb5.1						
MKAR	**Makanchi Array**	**70.95**	**5**	P	**P**	**17 26 25.1**	**-0.3**
	4.2nm,0.8s,mb4.4,baz=192,slow=6.4,SNR=23						
MKAR				LR	LR	17 58 30.1	
	comp=Z,44nm,18.5s,MS3.8,baz=188,slow=37						
BRTR	**Keskin Array B**	**74.31**	**328**	P	**P**	**17 26 43.5**	**-1.8**
	0.9nm,0.9s,mb3.7,baz=108,slow=4.6,SNR=3.6						
KURK	**Kurchatov**	**74.63**	**2**	*e*P	**P**	**17 26 48.0**	**+1.0**
	3.5nm,1.0s,mb4.2						
BVAR	**Borovoye Array**	**76.97**	**357**	P	**P**	**17 26 58.1**	**-2.0**
	1.7nm,0.9s,mb4.0,baz=169,slow=7.6,SNR=8.1						
BRVK	**Borovoye**	**77.01**	**357**	*e*P	**P**	**17 27 00.3**	**0.0**
	2.5nm,1.2s,mb4.0						
SONM	**Songino Array**	**77.08**	**21**	P	**P**	**17 27 01.6**	**+0.7**
	0.9nm,0.8s,mb3.7,baz=202,slow=7.4,SNR=6.6						
CHKZ	**Chkalovo**	**77.61**	**357**	*e*P	**P**	**17 27 03.6**	**-0.1**
	3.7nm,1.1s,mb4.2						
ZAL	**Zalesovo**	**78.26**	**6**	P	**P**	**17 27 08.2**	**+1.0**
	1.7nm,0.9s,mb4.0,baz=268,slow=6.2,SNR=8.4						
ZAL				LR	LR	18 00 43.9	
	comp=Z,65nm,18.5s,MS4.0,baz=172,slow=35						
MJAR	**Matsushiro Arr**	**84.92**	**46**	P	**P**	**17 27 44.3**	**+1.8**
	3.3nm,1.0s,mb4.4,baz=229,slow=5.6,SNR=4.7						
SIV	**San Ignacio**	**121.32**	**232**	PKP	PKPdf	17 33 59.5	-3.6
	0.3nm,0.4s,baz=113,slow=18,SNR=3.6						

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*ISK **15** 17:15:41.3,37.35N×36.00E,h25^{km},MD3.6*

*CSEM **15** 17:15:41.3,37.35N×36.00E,h25^{km},MD3.6,After ISK*

ISC 15 17:15:41.1±0.5**,37.34N**±0.04×**36.08E**±0.03**,h16^{km}**±6^{km}**, n21,σ1^{s}02**/27**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.25**	**305**	*i* PG	**Pb**	**17 15 46.9**	**+0.1**
KOZT				SG	**Sb**	**17 15 51.8**	**+1.3**
CEYT	**Ceyhan**	**0.42**	**219**	*i* PG	**Pb**	**17 15 50.4**	**+0.6**
KAHT	**Ahir Dag**	**0.70**	**65**	*i* P	**Pb**	**17 15 53.7**	**-0.7**
KAHT				*i* S	**Sb**	**17 16 02.7**	**-0.9**
KARA	**Karaisali**	**0.82**	**265**	PG	**Pb**	**17 15 56.5**	**-0.1**
COBT	**Iskenderun**	**0.83**	**170**	*i* P	**Pb**	**17 15 55.5**	**-1.2**
COBT				*i* S	**Sb**	**17 16 08.6**	**+1.2**
GAZ	**Gaziantep**	**0.92**	**100**	PG	**Pb**	**17 15 59.1**	**+0.9**
GZT	**Gaziantep**	**1.18**	**89**	*i* P	**Pb**	**17 16 01.5**	**-1.2**
GZT				*i* S	**Sb**	**17 16 16.7**	**-1.0**
HTY	**Hatay**	**1.22**	**178**	PN	**Pn**	**17 16 03.3**	**-0.3**
MERS	**Mersin**	**1.33**	**250**	PN	**Pn**	**17 16 04.8**	**-0.5**
NIG	**Nigde**	**1.40**	**304**	PN	**Pn**	**17 16 04.5**	**-1.6**
BNN	**Bunyan**	**1.52**	**353**	PN	**Pn**	**17 16 07.8**	**-0.2**
AVNT	**Avonos**	**1.73**	**327**	*i* P	**Pn**	**17 16 11.8**	**+0.8**
AVNT				*i* S	**Sn**	**17 16 35.6**	**+2.7**
ATAB	**Bozova**	**1.77**	**85**	*i* P	**Pn**	**17 16 13.1**	**+1.6**
ATAB				*i* S	**Sn**	**17 16 35.1**	**+1.3**
MYA	**Malataya**	**2.10**	**61**	*e*PN	**Pn**	**17 16 16.8**	**+0.5**
URFA	**Urfa**	**2.19**	**86**	*e*PN	**Pn**	**17 16 18.5**	**+1.0**
IKL	**Isikli**	**2.21**	**241**	*e*PN	**Pn**	**17 16 16.7**	**-1.1**
KAMT	**Kaman**	**2.75**	**318**	*e*PN	**Pn**	**17 16 24.7**	**-0.8**
PTK	**Pertek**	**3.04**	**58**	*e*PN	**Pn**	**17 16 30.2**	**+0.6**
CORM	**Corum**	**3.05**	**339**	*e*PN	**Pn**	**17 16 29.1**	**-0.8**
DIY	**Diyarbakir**	**3.34**	**79**	*e*PN	**Pn**	**17 16 34.7**	**+0.8**
BTMT	**Batman**	**4.37**	**77**	*e*PN	**Pn**	**17 16 47.1**	**-1.5**

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*NEIC **15** 17:42:46.1,19.70N×65.40W,h58^{km},MD3.8(RSPR), After RSPR.*

*RSPR **15** 17:42:47.8,19.59N×65.43W,h44^{km}±11^{km},MD3.6/11, MD3.6/11*

*IDC **15** 17:42:49.8±3.8,19.28N×65.28W,h45^{km}±37^{km},mb3.6/7, mb1 3.9/8,mb1mx3.6/22,mbtmp3.9/8,ML3.2/1,Error ellipse: s-maj=29.2km s-min=18.2km az=56.0*

ISC 15 17:42:47.6±1.1**,19.50N**±0.07×**65.42W**±0.04**,h45^{km}**±11^{km}**, n53,σ1^{s}08**/67**,mb3.9**/7**,21C,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CULB	**Culebra**	**1.19**	**176**	⇑*e*P	**P**	**17 43 08.9**	**+0.8**
CBYP	**Canovanas**	**1.29**	**199**	*e*S	**S**	**17 43 28.2**	**+2.1**
CBYP	**Canovanas**	**1.29**	**199**	⇑*e*P	**P**	**17 43 09.6**	**0.0**
CBYP	**Canovanas**	**1.29**	**199**	⇑*e*P	**P**	**17 43 09.1**	**-0.5**
CBYP				*e*S	**S**	**17 43 26.7**	**+0.7**
TBVI	**Tortola**	**1.33**	**145**	⇑*e*P	**P**	**17 43 09.8**	**-0.5**
TBVI				*e*S	**S**	**17 43 28.0**	**+0.9**
TBVI	**Tortola**	**1.33**	**145**	⇑*e*P	**P**	**17 43 09.8**	**-0.4**
TBVI				*e*S	**S**	**17 43 26.9**	**-0.1**
MTP	**Monte Pirata**	**1.41**	**185**	⇑*e*P	**P**	**17 43 10.9**	**-0.4**
MTP	**Monte Pirata**	**1.41**	**185**	*e*S	**S**	**17 43 30.8**	**+1.8**
MTP	**Monte Pirata**	**1.41**	**185**	*e*S	**S**	**17 43 29.2**	**+0.3**
MTP	**Monte Pirata**	**1.41**	**185**	⇑*e*P	**P**	**17 43 11.2**	**-0.2**
MTP				*e*S	**S**	**17 43 29.2**	**+0.3**
HUMP	**Col San Antoni**	**1.41**	**197**	⇑*e*P	**P**	**17 43 11.1**	**-0.3**
HUMP	**Col San Antoni**	**1.41**	**197**	*e*S	**S**	**17 43 31.4**	**+2.3**
HUMP	**Col San Antoni**	**1.41**	**197**	*e*S	**S**	**17 43 29.6**	**+0.5**
HUMP	**Col San Antoni**	**1.41**	**197**	⇑*e*P	**P**	**17 43 11.2**	**-0.2**
HUMP				*e*S	**S**	**17 43 29.6**	**+0.5**
SJG	**San Juan**	**1.55**	**207**	*e*S	**S**	**17 43 34.2**	**+1.9**
SJG	**San Juan**	**1.55**	**207**	*e*S	**S**	**17 43 32.0**	**-0.3**
SJG	**San Juan**	**1.55**	**207**	⇑*e*P	**P**	**17 43 13.0**	**-0.3**
SJG				*e*S	**S**	**17 43 33.0**	**+0.7**
SJG	**San Juan**	**1.55**	**207**	P	**P**	**17 43 12.8**	**-0.4**
	96nm,0.3s,baz=37,slow=11,SNR=32						
SJG				S	**S**	**17 43 30.8**	**-1.5**
	172nm,0.3s,baz=315,slow=16,SNR=25						
SJG	**San Juan**	**1.55**	**207**	⇑*e*P	**P**	**17 43 12.8**	**-0.4**
SJG				*e*S	**S**	**17 43 32.0**	**-0.3**
AOPR	**Arecibo Observ**	**1.70**	**228**	⇑*e*P	**P**	**17 43 14.8**	**-0.6**
AOPR	**Arecibo Observ**	**1.70**	**228**	*e*S	**S**	**17 43 36.7**	**+0.5**
AOPR	**Arecibo Observ**	**1.70**	**228**	*e*S	**S**	**17 43 35.9**	**-0.3**
AOPR	**Arecibo Observ**	**1.70**	**228**	⇑*e*P	**P**	**17 43 14.8**	**-0.7**
AOPR				*e*S	**S**	**17 43 35.9**	**-0.3**
CDVI	**St. Croix**	**1.85**	**160**	⇑*e*P	**P**	**17 43 17.4**	**-0.1**
CDVI	**St. Croix**	**1.85**	**160**	*e*S	**S**	**17 43 41.1**	**+1.3**
CDVI	**St. Croix**	**1.85**	**160**	*e*S	**S**	**17 43 40.1**	**+0.3**
CDVI	**St. Croix**	**1.85**	**160**	⇑*e*P	**P**	**17 43 17.5**	**0.0**
CDVI				*e*S	**S**	**17 43 40.1**	**+0.3**
ICM	**Isla Caja Muer**	**1.91**	**213**	⇑*e*P	**P**	**17 43 18.1**	**-0.3**
ICM	**Isla Caja Muer**	**1.91**	**213**	*e*S	**S**	**17 43 42.7**	**+1.4**
ICM	**Isla Caja Muer**	**1.91**	**213**	*e*S	**S**	**17 43 41.5**	**+0.2**
ICM	**Isla Caja Muer**	**1.91**	**213**	⇑*e*P	**P**	**17 43 18.1**	**-0.3**
ICM				*e*S	**S**	**17 43 41.5**	**+0.2**
LSP	**Las Mesas**	**2.05**	**230**	⇑*e*P	**P**	**17 43 19.9**	**-0.5**
LSP				*e*S	**S**	**17 43 44.1**	**-0.8**
MGP	**Maguayo**	**2.17**	**227**	⇑*e*P	**P**	**17 43 21.2**	**-0.8**
MGP				*e*S	**S**	**17 43 47.4**	**-0.4**
CRPR	**Cabo Rojo, PR**	**2.18**	**227**	⇑*e*P	**P**	**17 43 21.7**	**-0.6**
CRPR	**Cabo Rojo, PR**	**2.18**	**227**	*e*S	**S**	**17 43 49.3**	**+1.0**
CRPR	**Cabo Rojo, PR**	**2.18**	**227**	*e*S	**S**	**17 43 47.7**	**-0.5**
CRPR	**Cabo Rojo, PR**	**2.18**	**227**	⇑*e*P	**P**	**17 43 21.7**	**-0.6**
CRPR				*e*S	**S**	**17 43 47.7**	**-0.5**
BCG	**Bois Riant Cap**	**4.97**	**133**	*e*P	**P**	**17 44 02.1**	**+0.4**
DEG	**La Desirade**	**5.23**	**127**	*e*P	**P**	**17 44 02.7**	**-2.6**
DEG				*e*S	**S**	**17 45 02.1**	**-3.0**
MGG	**Marie-Galante**	**5.29**	**132**	*e*P	**P**	**17 44 08.5**	**+2.3**
BBL	**Barber's Block**	**5.46**	**136**	*e*P	**P**	**17 44 09.2**	**+0.6**
ROSC	**El Rosal**	**16.95**	**212**	P	**P**	**17 46 42.4**	**-0.7**
	1.8nm,0.3s,baz=270,slow=20,SNR=2.1						
JTS	**JuntasAbangare**	**20.96**	**247**	P	**P**	**17 47 32.9**	**+3.7**
	9.3nm,0.8s,baz=52,slow=12,SNR=3.7						
SIV	**San Ignacio**	**35.53**	**173**	P	**P**	**17 49 40.1**	**-2.4**
	1.1nm,0.6s,mb4.0,baz=22,slow=10,SNR=6.7						
LPAZ	**La Paz**	**35.67**	**184**	P	**P**	**17 49 42.5**	**-1.2**
	0.7nm,0.7s,mb3.7,baz=348,slow=15,SNR=3.2						
TXAR	**Lajitas Array**	**36.03**	**293**	P	**P**	**17 49 47.9**	**+1.3**
	0.4nm,0.4s,mb3.7,baz=104,slow=10,SNR=3.5						
TXAR	**Lajitas Array**	**36.03**	**293**	P	**P**	**17 49 47.9**	**+1.3**
PDAR	**Pinedale Array**	**43.69**	**312**	P	**P**	**17 50 54.5**	**+4.5**
	0.9nm,0.9s,mb3.5,baz=104,slow=6.1,SNR=7.4						
NVAR	**Mina Array Bea**	**49.27**	**304**	P	**P**	**17 51 35.8**	**+1.9**
	0.7nm,0.6s,mb3.9,baz=98,slow=8.1,SNR=4.9						
DBIC	**Dimbokro**	**60.08**	**94**	P	**P**	**17 52 52.2**	**-0.8**
	3.4nm,0.9s,mb4.4,baz=226,slow=6.9,SNR=3.3						
DBIC	**Dimbokro**	**60.08**	**94**	P	**P**	**17 52 52.2**	**-0.8**
ILAR	**Eielson Array**	**68.91**	**333**	P	**P**	**17 53 50.5**	**+0.9**
	0.7nm,0.6s,mb3.8,baz=100,slow=4.0,SNR=15						
STKA	**Stephens Creek**	**152.79**	**238**	PKPbc	PKPdf	18 02 43.2	+10
	2.1nm,0.8s,baz=14,slow=9.6,SNR=3.2						

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*IDC **15** 17:57:56.9±1.2,38.17N×145.06E,mb3.6/4,mb1 3.8/6, mb1mx3.6/22,mbtmp3.5/6,ML3.4/2,Error ellipse: s-maj=31.9km s-min=24.7km az=120.0*

*NEIC **15** 17:57:58.6±0.8,38.16N×145.10E,h10^{km},MG3.9(JMA), Error ellipse: s-maj=24.6km s-min=10.5km az=154.0*

*JMA **15** 17:58:02.0±0.2,38.29N×144.73E,h50^{km},M3.9*

ISC 15 17:58:01.4±1.5**,38.48N**±0.07×**144.8E**±0.1**,h35^{km}**±16^{km}**, n18,σ1^{s}24**/25**,mb3.6**/4**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.53**	**285**	P	**P**	**17 58 41.6**	**+0.7**
MIYJ	**Miyakonagasawa**	**2.57**	**296**	P	**P**	**17 58 42.6**	**+1.0**

MIYJ				*e*S	S	17 59 12.4	+0.4
JIO	Ouri	2.72	270	P	P	17 58 43.8	+0.2
JIO				*e*S	S	17 59 14.7	-0.9
JMK	Ichinoseki	2.85	281	P	P	17 58 46.2	+0.7
JOT	Ohata	4.09	316	P	P	17 59 05.8	+2.6
JCH	Churui	4.27	346	P	P	17 59 05.7	0.0
JCH				*e*S	S	17 59 53.7	-1.4
JKB	Kayabe	4.46	321	P	P	17 59 10.8	+2.3
NEM2	Nemuro 2	4.93	8	P	P	17 59 12.6	-2.4
NEM2				*e*S	S	18 00 07.5	-4.1
JTKR	Abashiri--Toko	5.53	353	P	P	17 59 23.2	-0.2
JTKR				*e*S	S	18 00 23.8	-2.8
MJAR	Matsushiro Arr	5.59	252	Pn	P	17 59 23.4	-0.9
	1.0nm,0.3s,baz=77,slow=15,SNR=8.8						
MAJO	Matsushiro	5.59	252	*e*Pn	P	17 59 24.1	-0.3
	9.6nm,0.4s						
MAT	Matsushiro	5.59	252	P	P	17 59 23.9	-0.4
MAT				*e*S	S	18 00 26.8	-1.5
MAT	Matsushiro	5.59	252	P	P	17 59 24.0	-0.3
	9.6nm,0.7s						
MAT				S	S	18 00 27.0	-1.3
ASAJ	Asahikawa	5.87	344	Pn	P	17 59 28.9	+0.7
	0.7nm,0.3s,baz=61,slow=30,SNR=11						
MKAR	Makanchi Array	45.65	302	P	P	18 06 21.6	+1.5
	0.3nm,0.8s,mb3.2,baz=74,slow=10,SNR=3.4						
ILAR	Eielson Array	46.82	33	P	P	18 06 29.4	+0.3
	0.6nm,0.9s,mb3.5,baz=253,slow=6.2,SNR=4.7						
WRA	Warramunga Arr	58.94	192	P	P	18 07 55.9	-3.7
	1.0nm,0.8s,mb3.9,baz=13,slow=7.3,SNR=9.3						
PDAR	Pinedale Array	74.72	47	P	P	18 09 39.4	+0.3
	0.5nm,0.6s,mb3.6,slow=1.5,SNR=4.7						

JMA 15 18:02:48.0±0.1, 43.53N×146.17E, h69^{km}±1^{km}, M3.9, 2C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.35	242	⇑P	P	18 02 59.6	+0.1
NEM2				*e*S	S	18 03 08.0	-0.1
JRA	Rausu	0.86	299	⇑P	P	18 03 04.8	-0.1
JRA				*e*S	S	18 03 17.7	+0.2
JNK	Nakash	1.06	274	⇓P	P	18 03 06.9	-0.5
JNK				*e*S	S	18 03 20.6	-1.2
JAK	Akkeshi	1.20	244	⇓P	P	18 03 09.1	-0.2
JAK				*e*S	S	18 03 25.0	-0.3
JTKR	Abashiri--Toko	1.70	286	⇓P	P	18 03 15.9	-0.2
JTKR				*e*S	S	18 03 37.3	+0.4
JAR	Ashorobuto	1.77	263	⇓P	P	18 03 17.2	+0.2
JAR				*e*S	S	18 03 39.4	+1.0
JOB	Onbets	1.82	251	⇓P	P	18 03 17.9	+0.1
JOB				*e*S	S	18 03 40.2	+0.5
JMP	Maruseppu	2.09	284	⇓P	P	18 03 21.6	+0.1
JMP				*e*S	S	18 03 47.3	+1.0

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*IDC **15** 18:15:35.4±4.2, 1.72N×97.61E, mb3.6/3, mb1 3.7/3, mb1mx3.5/16, mbtmp3.6/3, Error ellipse: s-maj=160.4km s-min=28.6km az=58.0*

*NEIC **15** 18:15:37.7±1.3, 1.43N×97.14E, h30^{km}, mb3.8/1, Error ellipse: s-maj=26.7km s-min=20.3km az=55.0*

ISC 15 18:15:35.8±1.7, 1.5N±0.2×97.1E±0.2, h30^{km}, n5, σ0^{s}66/5, mb3.6/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.20	43	*e*Pn	Pn	18 16 53.6	0.0
WRA	Warramunga Arr	42.23	122	P	P	18 23 28.4	0.0
	0.2nm,0.4s,mb3.1,baz=302,slow=9.2,SNR=4.3						
SONM	Songino Array	46.90	9	P	P	18 24 05.2	-0.1
	1.0nm,0.8s,mb3.8,baz=193,slow=8.5,SNR=7.0						
MKAR	Makanchi Array	46.98	346	P	P	18 24 06.8	+0.8
	0.7nm,0.5s,mb3.9,baz=158,slow=8.6,SNR=17						
CHKZ	Chkalovo	56.47	341	P	P	18 25 16.6	-0.7
	0.6nm,0.6s,mb3.8						

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*MOS **15** 18:19:57.4±1.1, 18.23N×145.51E, h212^{km}, mb4.3/7, Error ellipse: s-maj=27.6km s-min=10.9km az=89.5*

*NEIC **15** 18:19:58.3±1.3, 18.24N×145.65E, h205^{km}±13^{km}, mb4.2/10, Error ellipse: s-maj=14.0km s-min=7.5km az=95.0*

*IDC **15** 18:19:58.4±2.0, 18.29N×145.61E, h207^{km}±20^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.9/24, mbtmp4.4/16, Error ellipse: s-maj=18.9km s-min=9.2km az=90.0*

ISC 15 18:19:56.7±1.2, 18.29N±0.05×145.6E±0.1, h203^{km}±12^{km}, n44, σ0^{s}90/44, mb4.0/21, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	4.72	188	P	P	18 21 07.8	-0.4
	5.0nm,0.3s,baz=32,slow=18,SNR=4.5						
GUMO				S	S	18 21 58.5	-5.2
	6.9nm,0.3s,baz=128,slow=19,SNR=2.8						
CBIJ	Chichi jima	9.30	341	P	P	18 22 08.8	+1.1
	2.3nm,0.3s,baz=187,slow=15,SNR=2.4						
CBIJ				S	S	18 23 48.5	-1.6
	4.7nm,0.3s,baz=306,slow=23,SNR=3.2						
MJAR	Matsushiro Arr	19.30	342	P	P	18 24 08.8	+0.6
	1.1nm,0.3s,baz=155,slow=4.5,SNR=9.8						
MAJO	Matsushiro	19.30	342	P	P	18 24 10.8	+2.6
	4.1nm,0.4s						
MAJO	Matsushiro	19.30	342	P	P	18 24 10.8	+2.6
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ASAJ	Asahikawa	25.87	355	P	P	18 25 11.8	+0.4
	comp=Z,4.9nm,0.7s,mb4.3,baz=164,slow=8.4,SNR=8.8						
KKM	Kota Kinabalu	31.09	251	*e*P	P	18 25 59.7	+1.3
CTA	Charters Tower	38.14	179	P	P	18 26 57.5	-0.6
	comp=Z,4.6nm,0.9s,mb4.0,baz=20,slow=7.4,SNR=6.2						
CTAO	Charters Tower	38.14	179	*e*P	P	18 26 58.7	+0.6
	comp=Z,2.7nm,0.6s,mb4.0						
CTAO	Charters Tower	38.14	179	*e*P	P	18 26 58.7	+0.6
CTAO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.0						
WRAB	Tennant Creek	39.54	197	*e*P	P	18 27 08.9	-0.7
	comp=Z,11nm,0.6s,mb4.5						
WRAB	Tennant Creek	39.54	197	*e*P	P	18 27 08.9	-0.8
WRAB				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.5						
WB2	Warramunga Arr	39.55	197	*e*P	P	18 27 09.1	-0.6
WRA	Warramunga Arr	39.55	197	P	P	18 27 08.8	-0.9
	comp=Z,4.5nm,0.5s,mb4.2,baz=18,slow=8.4,SNR=82						
FITZ	Fitzroy Crossi	41.12	210	*e*P	P	18 27 22.5	-0.1
	comp=Z,10nm,0.7s,mb4.4						
FITZ	Fitzroy Crossi	41.12	210	P	P	18 27 22.8	+0.2
	comp=Z,14nm,0.7s,mb4.5,baz=37,slow=9.9,SNR=20						
SONM	Songino Array	43.38	322	P	P	18 27 41.1	+0.5
	comp=Z,0.4nm,0.6s,mb3.0,baz=133,slow=9.3,SNR=3.2						
DZM	Mont Dzumac	45.02	152	P	P	18 27 55.3	+1.3
	comp=Z,5.4nm,0.9s,mb3.9,baz=295,slow=14,SNR=4.5						
MBWA	Marble Bar	46.66	214	P	P	18 28 06.8	-0.1
	comp=Z,2.7nm,0.4s,mb3.9						
BILL	Bilibino	51.45	10	*e*P	P	18 28 42.9	+0.1
	comp=Z,4.8nm,0.9s,mb3.9						
BILL	Bilibino	51.45	10	*e*P	P	18 28 42.9	+0.2
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
MKAR	Makanchi Array	58.65	314	P	P	18 29 34.4	-0.4
	comp=Z,0.3nm,0.7s,mb3.0,baz=106,slow=6.6,SNR=3.1						
MKAR				pP	pP	18 30 21.7	+0.5
	comp=Z,0.5nm,0.7s,baz=98,slow=7.6,SNR=3.4						
MKAR	Makanchi Array	58.65	314	P	P	18 29 34.4	-0.4
MKAR				pP	pP	18 30 21.7	+0.5
KDAK	Kodiak Island	59.78	33	P	P	18 29 41.5	-0.8
	comp=Z,15nm,0.8s,mb4.7,baz=294,slow=12,SNR=3.2						
ILAR	Eielson Array	64.07	26	P	P	18 30 08.8	-1.9
	comp=Z,2.0nm,0.6s,mb4.0,baz=247,slow=6.0,SNR=32						
INK	Inuvik	69.80	23	P	P	18 30 45.7	-0.9
	comp=Z,2.6nm,0.5s,mb4.1,baz=271,slow=6.6,SNR=7.8						
INK	Inuvik	69.80	23	*e*P	P	18 30 45.8	-0.8
	comp=Z,3.3nm,0.7s,mb4.1						
INK	Inuvik	69.80	23	*e*P	P	18 30 45.8	-0.7
INK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
YKW3	Yellowknife Ar	78.39	28	P	P	18 31 35.6	-0.3
YKA	Yellowknife Ar	78.41	28	P	P	18 31 35.2	-0.8
	comp=Z,1.3nm,0.5s,mb3.8,baz=286,slow=5.5,SNR=9.5						
YKA	Yellowknife Ar	78.41	28	P	P	18 31 35.2	-0.8
ARCES	ARCESS Array B	82.84	342	P	P	18 31 59.2	0.0
	comp=Z,4.0nm,1.0s,mb4.1,baz=68,slow=4.9,SNR=3.7						
NVAR	Mina Array Bea	83.50	52	P	P	18 32 04.0	+0.8
	comp=Z,1.7nm,0.6s,mb4.0,baz=259,slow=5.3,SNR=14						
ELK	Elko	84.99	49	*e*P	P	18 32 10.9	+0.3
	comp=Z,4.0nm,0.9s,mb4.2						
ELK	Elko	84.99	49	*e*P	P	18 32 10.9	+0.3
ELK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HRY	Holter Researc	85.21	42	*e*P	P	18 32 12.4	+0.9
DUG	Dugway	86.92	49	*e*P	P	18 32 20.5	+0.6
	comp=Z,2.3nm,0.6s,mb4.1						
DUG	Dugway	86.92	49	*e*P	P	18 32 20.5	+0.6
DUG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
FINES	FINESS Array B	87.20	335	P	P	18 32 19.5	-1.3
	comp=Z,2.3nm,0.9s,mb3.9,baz=63,slow=4.3,SNR=6.7						
PDAR	Pinedale Array	88.21	45	P	P	18 32 25.8	-0.2
	comp=Z,0.3nm,0.4s,mb3.5,baz=223,slow=1.2,SNR=6.9						
SRU	San Rafael	88.96	49	*e*P	P	18 32 30.2	+0.6
	comp=Z,3.3nm,0.6s,mb4.3						
SRU	San Rafael	88.96	49	*e*P	P	18 32 30.3	+0.7
SRU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
LPAZ	La Paz	147.80	92	PKPbc	PKPdf	18 39 20.2	+5.1
	comp=Z,1.2nm,0.4s,baz=35,slow=12,SNR=7.6						
LPAZ	La Paz	147.80	92	*e*PKPdf	PKPdf	18 39 16.8	+1.7
LPAZ				PKPbc	PKPdf	18 39 20.2	+5.1

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*NIED **15** 18:37:00, 38.20N×144.80E, h20^{km}, Mw3.7 Best double couple: $M_0$4.25×10^{14} NP1:φ$_s$227°, δ61°, λ-67°. NP2:φ$_s$6°, δ36°, λ-125°.*

*NEIC **15** 18:37:45.7±0.9, 38.45N×144.89E, h10^{km}, mb4.0/1, Error ellipse: s-maj=22.8km s-min=12.2km az=146.0*

*JMA **15** 18:37:48.0±0.2, 38.17N×144.78E, h57^{km}, M4.2*

*IDC **15** 18:37:50.6±3.6, 38.39N×144.73E, h47^{km}±35^{km}, mb3.3/3, mb1 3.7/5, mb1mx3.4/22, mbtmp3.6/5, ML3.7/2, Error ellipse: s-maj=36.7km s-min=15.4km az=118.0*

ISC 15 18:37:47.2±1.0, 38.31N±0.04×144.86E±0.06, h41^{km}±12^{km}, n25, σ1^{s}11/44, mb3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.61	288	P	P	18 38 28.9	+1.0
MIYJ	Miyakonagasawa	2.69	299	P	P	18 38 30.1	+1.1
MIYJ				*e*S	S	18 39 01.5	+0.9
JIO	Ouri	2.76	274	P	P	18 38 30.4	+0.3
JIO				*e*S	S	18 39 02.0	-0.5
JMK	Ichinoseki	2.92	284	P	P	18 38 33.3	+0.9
JMK				*e*S	S	18 39 07.2	+0.7
JOM	Ohasama	3.02	294	P	P	18 38 35.0	+1.3
JOM				*e*S	S	18 39 09.9	+1.0
JMM	Marumori	3.24	263	P	P	18 38 36.5	-0.3
JMM				*e*S	S	18 39 12.8	-1.8
JANG	Nango	3.31	310	P	P	18 38 38.4	+0.5
JANG				*e*S	S	18 39 16.8	+0.3
JYK	Kaneyama	3.58	281	P	P	18 38 42.6	+1.0
JYK				*e*S	S	18 39 24.1	+0.9
JOT	Ohata	4.24	318	P	P	18 38 52.1	+1.0
JOT				*e*S	S	18 39 39.4	-0.7
JCH	Churui	4.45	346	P	P	18 38 54.0	0.0
JCH				*e*S	S	18 39 43.0	-2.3
JKB	Kayabe	4.62	322	P	P	18 38 58.0	+1.5
JKB				*e*S	S	18 39 49.2	-0.4
NEM2	Nemuro 2	5.10	7	P	P	18 39 00.5	-2.6
NEM2				*e*S	S	18 39 55.4	-6.1
JRY	Ryogami san	5.28	246	P	P	18 39 03.5	-2.1
JRY				*e*S	S	18 39 59.9	-6.2
JOD2	Odawara 2	5.54	238	P	P	18 39 07.8	-1.5
JOD2				*e*S	S	18 40 04.9	-7.7
MJAR	Matsushiro Arr	5.58	254	P	P	18 39 09.4	-0.4
	4.9nm,0.3s,baz=76,slow=15,SNR=35						
MJAR				S	S	18 40 11.5	-2.1
	0.5nm,0.3s,baz=87,slow=27,SNR=2.8						
MAJO	Matsushiro	5.58	254	*e*Pn	P	18 39 09.7	-0.1
	32nm,0.6s						
MAT	Matsushiro	5.58	254	P	P	18 39 09.7	-0.1
MAT				S	S	18 40 12.9	-0.7
MAT	Matsushiro	5.58	254	*e*P	P	18 39 10.0	+0.2
	28nm,0.9s						
MAT				*e*S	S	18 40 13.0	-0.6
JTKR	Abashiri--Toko	5.70	353	P	P	18 39 11.3	-0.3
JTKR				*e*S	S	18 40 13.8	-2.9
JHR	Hokuryu	5.92	337	P	P	18 39 16.7	+2.0
JHR				*e*S	S	18 40 22.0	-0.2
ASAJ	Asahikawa	6.05	344	P	P	18 39 16.6	+0.1
	1.3nm,0.3s,baz=216,slow=9.7,SNR=13						
ASAJ				S	S	18 40 24.0	-1.3
	1.3nm,0.3s,baz=360,slow=33,SNR=7.3						
MKAR	Makanchi Array	45.77	302	P	P	18 46 06.3	0.0
	0.3nm,0.6s,mb3.4,baz=63,slow=9.7,SNR=2.4						
ILAR	Eielson Array	46.95	33	P	P	18 46 15.2	-0.2
	0.9nm,0.8s,mb3.7,baz=262,slow=6.5,SNR=9.0						
KURK	Kurchatov	47.31	308	*e*P	P	18 46 19.4	+1.0
	0.8nm,0.6s,mb3.8						
WRA	Warramunga Arr	58.78	192	P	P	18 47 45.1	+1.3
	0.4nm,0.5s,mb3.7,baz=12,slow=7.2,SNR=5.3						
WRA				pP	pP	18 47 52.3	-3.2
	1.5nm,0.7s,baz=13,slow=7.2,SNR=9.0						

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*NEIC **15** 18:40:36.2, 36.54S×70.89W, h145^{km}, MD3.6(GUC), After GUC.*

GUC 15 18:40:36.2±0.9, 36.54S×70.89W, h145^{km}±31^{km}, MD3.6, ML3.6, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCHI	Chillan	0.96	266	⇑*i*P	P	18 41 00.2	-0.1
CCHI				*i* S	S	18 41 18.4	-0.4
CCHI				AMP		18 41 19.6	
	comp=N,360nm,0.6s						
TALC	Talca	1.28	332	*e*P	P	18 41 03.1	-0.4
TALC				*e*S	S	18 41 24.1	-0.4
TALC				AMP		18 41 25.6	
	comp=N,3μm,0.1s						
SFDO	San Fernando	1.92	357	⇑*i*P	P	18 41 10.6	+0.2
SFDO				*i* S	S	18 41 36.3	-0.4
CICH	Cipreses	2.24	10	*e*P	P	18 41 14.9	+0.5
CACH	El Canelo	2.42	6	⇓*i*P	P	18 41 16.8	+0.1
CACH				*i* S	S	18 41 47.8	+0.1
CHCH	Chadas Angostu	2.60	4	*e*P	P	18 41 18.9	-0.1
CHCH				*i* S	S	18 41 51.1	-0.5
RCDM	Rinconada Maip	3.04	1	*e*P	P	18 41 23.5	-1.1
RCDM				*i* S	S	18 42 00.1	-1.5
FCH	Farellones	3.24	9	⇑*i*P	P	18 41 26.6	-0.6
FCH				*i* S	S	18 42 05.0	-1.2
FCH				AMP		18 42 11.9	
	comp=E,52nm,0.5s						
PEL	Peldehue	3.39	3	*e*P	P	18 41 27.8	-1.4
PEL				*i* S	S	18 42 08.4	-1.3
PEL				AMP		18 42 12.7	
	comp=E,108nm,0.5s						

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*KNET **15** 18:43:07.3±0.5, 42.65N×77.79E, ml2.2, Error ellipse: s-maj=4.6km s-min=2.9km az=161.0*

*NNC **15** 18:43:08.4±4.0, 43.14N×77.82E, mpv2.6, Error ellipse: s-maj=70.4km s-min=10.9km az=153.0*

ISC 15 18:43:03.8±2.1, 42.4N±0.3×78.2E±0.2, h3^{km}±30^{km}, n9, σ1^{s}10/16, 11C-7D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	1.48	265	⇓P	Pn	18 43 30.4	-1.1
	3.5nm,0.1s,SNR=20						
ULHL				⇓S	Sb	18 43 48.8	-2.1
	31nm,0.1s						
TKM2	Tokmak 2	2.02	286	⇓P	Pn	18 43 38.2	-1.0
	4.5nm,0.1s,SNR=16						
TKM2				⇑S	Sn	18 44 02.5	-2.8
	20nm,0.1s						
KBK	Karagaybulak	2.44	278	⇑P	Pn	18 43 46.0	+0.7
	3.1nm,0.1s,SNR=12						
KBK				⇑S	Sn	18 44 16.9	+0.8
	19nm,0.2s						
CHMS	Chumysh	2.64	285	⇑P	Pn	18 43 48.6	+0.5
	6.5nm,0.4s,SNR=7.2						
CHMS				⇑S	Sn	18 44 21.3	+0.2
	11nm,0.3s						
AAK	Ala-Archa	2.78	276	⇑P	Pn	18 43 51.4	+1.4
	3.3nm,0.2s,SNR=7.0						
AAK				⇓S	Sn	18 44 26.2	+1.7
	12nm,0.3s						
AAK	Ala-Archa	2.78	276	⇑P	Pn	18 43 51.1	+1.0
	1.8nm,0.4s						
AAK				⇓S	Sn	18 44 25.8	+1.3
	3.8nm,0.3s						
USP	Ospenovka	2.89	289	⇓P	Pn	18 43 51.9	+0.3
	3.5nm,0.2s,SNR=6.9						
USP				⇑S	Sn	18 44 27.2	-0.1
	12nm,0.3s						
MK31	Makanchi Array	5.28	32	⇑Pn	Pn	18 44 25.0	-0.6
	0.4nm,0.7s,baz=209,slow=14,SNR=5.0						
MK31				⇑Lg		18 45 41.6	
	0.1nm,0.3s,baz=221,slow=27,SNR=4.6						
KK31	Karatay Array	5.73	280	⇓Pg	Pb	18 44 45.1	+0.7
	0.2nm,0.2s,baz=82,slow=14,SNR=11						
KK31				⇑Lg		18 45 57.7	
	2.2nm,0.7s,baz=89,slow=30						

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*NEIC **15** 18:55:50.1, 37.43S×177.12E, h151^{km}, MG3.9(WEL), After WEL.*

WEL 15 18:55:50.4±0.2, 37.41S×177.12E, h148^{km}±1^{km}, ML3.8/11, 1C, Error ellipse: s-maj=2.1km s-min=1.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.85	181	P	P	18 56 13.8	-0.3
URZ	Urewera	0.85	181	PN	P	18 56 13.8	-0.2
URZ				SN	S	18 56 31.7	-0.6
MXZ	Matakaoa Point	0.95	99	P	P	18 56 14.5	-0.3
MXZ				S	S	18 56 33.3	-0.3
MXZ	Matakaoa Point	0.95	99	PN	P	18 56 14.5	-0.3
MXZ				SN	S	18 56 33.3	-0.3
MWZ	Matawai	0.97	161	P	P	18 56 14.9	-0.1
MWZ	Matawai	0.97	161	PN	P	18 56 14.9	-0.1
MWZ				SN	S	18 56 33.8	-0.1
PUZ	Puketiti	1.11	127	⇑PN	P	18 56 16.0	-0.3
PUZ				SN	S	18 56 34.7	-1.5
KNZ	Kokohu	1.66	165	P	P	18 56 21.6	-0.3
KNZ	Kokohu	1.66	165	PN	P	18 56 21.6	-0.4
BKZ	Black Stump Fm	1.82	196	P	P	18 56 23.2	-0.5
BKZ	Black Stump Fm	1.82	196	PN	P	18 56 23.2	-0.5
BKZ				SN	S	18 56 48.2	-1.1
CNZ	Chateau	2.17	214	*e*PN	P	18 56 28.0	+0.1
TUVZ	Tukino	2.19	212	*e*PN	P	18 56 28.0	-0.1
FWVZ	Far West T-bar	2.22	213	P	P	18 56 28.4	-0.1
FWVZ	Far West T-bar	2.22	213	PN	P	18 56 28.4	0.0
WNVZ	Wahianoa	2.26	212	P	P	18 56 28.4	-0.6
WNVZ	Wahianoa	2.26	212	PN	P	18 56 28.4	-0.6
MOVZ	Moawhango	2.27	208	P	P	18 56 27.9	-1.2
MOVZ	Moawhango	2.27	208	PN	P	18 56 27.9	-1.2
PXZ	Pawanui	2.62	184	PN	P	18 56 31.9	-1.7
PXZ				SN	S	18 57 03.9	-2.8
TSZ	Takapari Road	2.80	199	P	P	18 56 33.7	-2.1
TSZ	Takapari Road	2.80	199	PN	P	18 56 33.7	-2.1
BFZ	Birch Farm	3.33	192	*e*P	P	18 56 39.9	-2.9
BFZ	Birch Farm	3.33	192	PN	P	18 56 39.9	-2.9
MRZ	Mangatainoka R	3.46	200	P	P	18 56 41.4	-3.0
MRZ	Mangatainoka R	3.46	200	PN	P	18 56 41.4	-3.0
KIW	Kapiti Island	3.85	206	P	P	18 56 46.0	-3.5
KIW	Kapiti Island	3.85	206	PN	P	18 56 46.0	-3.5
MTW	Mount Morrison	3.95	198	P	P	18 56 46.8	-4.0
TCW	Tory Channel	4.39	209	P	P	18 56 52.2	-4.4
QRZ	Quartz Range	4.94	225	*e*P	P	18 56 59.5	-4.4
THZ	Tophouse	5.43	216	*e*P	P	18 57 05.8	-4.6
MQZ	McQueen's Vall	7.15	207	*e*SN	S	18 58 41.9	-12

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*IDC **15** 19:10:59.9±1.6, 43.11N×105.04W, mb3.4/2, mb1 3.7/6, mb1mx3.5/24, mbtmp3.5/6, ML3.5/4, MS2.8/2, Ms1 2.8/2, ms1mx2.5/18, Error ellipse: s-maj=34.9km s-min=8.2km az=154.0*

*NEIC **15** 19:11:02.0±0.4, 43.57N×105.09W, ML3.4, Error ellipse: s-maj=6.0km s-min=4.4km az=121.0, Suspected Mining explosion.*

NEIC 80 km [50 miles] WSW of Newcastle.

ISC 15 19:11:00.2±0.5, 43.57N±0.04×105.06W±0.06, n42, σ0^{s}99/41, mb3.7/1, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.92	53	*e*P	Pg	19 11 19.1	+0.5
PHWY	Pilot Hill	2.29	187	*e*P	Pn	19 11 42.1	+2.4
RWWY	Rawlins	2.46	221	*e*P	Pn	19 11 44.6	+2.5
LAO	LASA Array	3.22	346	*e*P	Pn	19 11 52.9	-0.1
BW06	Boulder Array	3.38	258	*e*P	Pn	19 11 55.2	-0.1
PDAR	Pinedale Array	3.38	258	Pn	Pn	19 11 55.3	-0.1
	4.4nm,0.3s,baz=76,slow=16,SNR=103						
PDAR				Sn	Sn	19 12 39.0	+2.1
	4.8nm,0.3s,baz=75,slow=21,SNR=3.7						
PDAR				Lg		19 12 44.6	
	19nm,0.3s,baz=71,slow=27,SNR=7.3						
GCMT	Greycliff	3.96	306	P	Pn	19 12 04.0	+0.5
LKWY	Lake	3.97	286	P	Pn	19 12 04.2	+0.6
LOHW	Long Hollow	4.03	272	*e*P	Pn	19 12 05.9	+1.5
MOOW	Moose Ponds	4.13	274	P	Pn	19 12 06.2	+0.4
SNOW	Snow King Moun	4.14	270	P	Pn	19 12 06.6	+0.5
REDW	Red Top Meadow	4.22	269	P	Pn	19 12 07.7	+0.5
YFT	Old Faithful	4.26	284	*e*P	Pn	19 12 07.6	-0.2
IMW	Indian Meadow	4.27	276	P	Pn	19 12 08.4	+0.5
TPAW	Teton Pass	4.28	271	*e*P	Pn	19 12 09.3	+1.3
YMR	Madison River	4.39	287	P	Pn	19 12 10.1	+0.5
SMCO	Snowmass	4.62	199	P	Pn	19 12 12.6	-0.3
QLMT	Earthquake Lak	4.75	288	P	Pn	19 12 14.9	+0.2
DGMT	Dagmar	4.94	7	*e*P	Pn	19 12 17.0	-0.4
BOZ	Bozeman (W)	5.13	296	*e*P	Pn	19 12 19.3	-0.8
HWUT	Hardware Ranch	5.19	250	*e*P	Pn	19 12 19.3	-1.6
TCUT	Toone Canyon	5.30	245	*e*P	Pn	19 12 22.2	-0.3
DAU	Daniels Canyon	5.59	238	P	Pn	19 12 26.9	+0.3
DLMT	Dillon	5.68	291	*e*P	Pn	19 12 27.9	0.0
HRY	Holter Researc	5.72	306	*e*P	Pn	19 12 27.6	-0.9
MCMT	McKenzie Canyo	5.74	285	P	Pn	19 12 27.2	-1.4
SDCO	Great Sand Dun	5.83	183	P	Pn	19 12 28.9	-1.1
HVU	Hansel Valley	5.96	255	*e*P	Pn	19 12 30.3	-1.5
SRU	San Rafael	6.06	225	P	Pn	19 12 33.9	+0.6
TMUT	Trail Mountain	6.29	229	*e*P	Pn	19 12 35.6	-0.9
CHMT	Chamberlain Mo	6.68	303	*e*P	Pn	19 12 41.1	-0.8
DUG	Dugway	6.70	242	*e*P	Pn	19 12 41.5	-0.7
HLID	Hailey	6.79	273	P	Pn	19 12 42.5	-1.1
MSU	Marysvale	7.38	229	P	Pn	19 12 50.4	-1.3
MVU	Marysvale	7.40	229	P	Pn	19 12 51.2	-0.9
ELK	Elko	8.07	253	Pn	P	19 13 01.2	-0.2
	0.5nm,0.3s,baz=77,slow=11,SNR=7.9						
ANMO	Albuquerque	8.68	188	LR	LR	19 15 43.7	
	comp=Z,86nm,18.9s,slow=34						
ULM	Lac du Bonnet	9.17	40	Pn	P	19 13 16.0	-0.7
	1.6nm,0.3s,baz=235,slow=12,SNR=16						
ULM				Lg		19 15 50.1	
	0.7nm,0.3s,baz=300,slow=20,SNR=4.7						
NVAR	Mina Array Bea	11.24	247	Pn	P	19 13 41.0	-4.2
	0.1nm,0.3s,baz=75,slow=10,SNR=3.2						
BBB	Bella Bella	17.64	307	LR	LR	19 23 35.8	
	comp=Z,26nm,19.7s,baz=309,slow=42						
YKA	Yellowknife Ar	19.76	347	P	P	19 15 35.0	+0.7
	0.5nm,0.7s,baz=152,slow=14,SNR=6.0						
MKAR	Makanchi Array	89.79	355	P	P	19 24 03.4	+2.0
	0.3nm,0.6s,mb3.7,baz=352,slow=4.0,SNR=3.9						

WEL 15 19:12:52.9±0.5, 35.41S×178.79E, h33^{km}, ML3.7/5, Error ellipse: s-maj=7.4km s-min=3.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.19	190	P*	Pb	19 13 26.9	-4.7
MXZ				S*	Sb	19 13 51.9	-6.7
MWZ	Matawai	3.09	199	P*	Pb	19 13 39.8	-7.3
MWZ				S*	Sb	19 14 16.1	-8.6
URZ	Urewera	3.15	205	P*	Pb	19 13 41.1	-7.0
URZ				S*	Sb	19 14 17.2	-9.1
KNZ	Kokohu	3.71	194	PN	Pn	19 13 47.3	-2.2
BKZ	Black Stump Fm	4.18	205	P*	Pb	19 13 54.9	-11
MQZ	McQueen's Vall	9.54	208	*e*SN	Sn	19 16 40.4	-18

OTT 15 19:12:53.7±0.6, 60.03N×74.11W, h18^{km}, MN2.6/3, 30km northwest from Tuttusivik, Qc Boothia Ungava Seismic Zone., Northern Quebec

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FRB	Frobisher Bay	4.56	33	SN	Sn	19 14 51.5	-5.4
FRB				SG	Sn	19 15 08.0	+11
FRB				Trac		19 15 10.6	

	comp=Z,5.3nm,0.5s						
LG4Q	**La Grande 4**	**6.42**	**180**	PN	Pn	19 14 25.8	-4.1
LG4Q				SN	Sn	19 15 31.7	-12
LG4Q				LG		19 16 07.8	
LG4Q				Trac		19 16 13.8	
	comp=Z,4.6nm,0.2s						
SCHQ	**Schefferville**	**6.53**	**140**	PN	Pn	19 14 26.6	-4.7
SCHQ				SN	Sn	19 15 37.5	-8.6
SCHQ				LG		19 16 11.1	
SCHQ				Trac		19 16 11.3	
	comp=Z,1.8nm,0.5s						
YOSQ	**Ashton Mining**	**7.26**	**171**	PN	Pn	19 14 39.1	-2.5
YOSQ				SN	Sn	19 15 55.0	-9.4
YOSQ				LG		19 16 34.7	
YOSQ				Trac		19 16 42.6	
	comp=Z,2.5nm,0.3s						
WEMQ	**Wemindji, Queb**	**7.31**	**199**	PN	Pn	19 14 37.6	-4.8
WEMQ				SN	Sn	19 15 58.3	-7.5
WEMQ				LG		19 16 38.4	
WEMQ				Trac		19 16 46.6	
	comp=Z,3.8nm,0.4s						
SILO	**Sutton Inlier**	**8.07**	**231**	PN	P	19 14 51.9	-1.1
SILO				SN	Sn	19 16 16.4	-8.3
SILO				LG		19 17 05.0	
VIMO	**Victor Mine**	**8.98**	**221**	PN	P	19 14 56.2	-9.3
VIMO				SN	Sn	19 16 39.5	-7.7
MALO	**McAlpine Lake**	**10.54**	**200**	PN	P	19 15 24.1	-2.7
MALO				SN	S	19 17 13.1	-12

JMA 15 19:29:24.3±0.2**, 38.18N×144.73E, h53^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.56**	**291**	P	P	19 30 04.5	+0.2
OFUJ				*e*S	S	19 30 34.4	0.0
MIYJ	**Miyakonagasawa**	**2.67**	**302**	P	P	19 30 05.7	-0.1
MIYJ				*e*S	S	19 30 36.9	-0.2
JIO	**Ouri**	**2.67**	**277**	P	P	19 30 06.2	+0.2
JIO				S	S	19 30 37.7	+0.4
JMK	**Ichinoseki**	**2.86**	**287**	P	P	19 30 09.0	+0.4
JMK				S	S	19 30 42.8	+0.9
JCH	**Churui**	**4.55**	**347**	P	P	19 30 29.8	-2.6
JCH				*e*S	S	19 31 21.5	-3.1
JRY	**Ryogami san**	**5.13**	**247**	P	P	19 30 39.6	-1.0
JRY				*e*S	S	19 31 36.2	-3.1
NEM2	**Nemuro 2**	**5.24**	**8**	P	P	19 30 36.5	-5.5
NEM2				*e*S	S	19 31 32.9	-8.9
JTKR	**Abashiri--Toko**	**5.82**	**354**	P	P	19 30 46.8	-3.3
JTKR				*e*S	S	19 31 50.8	-5.5

*NEIC **15** 19:30:20.3±2.4, 20.79S×178.30W, h580^{km}±17^{km}, mb4.0/1, Error ellipse: s-maj=113.9km s-min=16.2km az=148.0*

*IDC **15** 19:30:20.4±3.5, 20.80S×178.30W, h575^{km}±27^{km}, mb3.2/4, mb1 3.4/4, mb1mx3.2/13, mbtmp4.1/4, Error ellipse: s-maj=132.6km s-min=19.5km az=148.0*

ISC 15 19:30:20.6±2.4**, 20.2S**±0.9×**178.8W**±0.7**, h562**^{km}±42^{km}**, n12, σ0ˢ12**/9**, mb3.8**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.21**	**48**	P	**P**	**19 32 31.3**	**0.0**
	baz=208,slow=17						
AFI	**Afiamalu**	**9.21**	**48**	P	**P**	**19 32 31.3**	**0.0**
STKA	**Stephens Creek**	**37.21**	**244**	P	**P**	**19 36 46.0**	**-0.1**
	3.8nm,1.1s,mb3.8,baz=107,slow=14,SNR=2.8						
ASPA	**Alice Springs**	**43.83**	**257**	*e*P	**P**	**19 37 39.2**	**+0.2**
WB2	**Warramunga Arr**	**43.85**	**262**	*e*P	**P**	**19 37 39.1**	**-0.2**
WRAB	**Tennant Creek**	**43.86**	**262**	*e*P	**P**	**19 37 39.3**	**-0.1**
	2.3nm,0.4s,mb4.1						
WRA	**Warramunga Arr**	**43.87**	**262**	P	**P**	**19 37 39.4**	**0.0**
	1.3nm,0.3s,mb3.9,baz=97,slow=7.6,SNR=84						
FITZ	**Fitzroy Crossi**	**52.29**	**262**	P	**P**	**19 38 42.7**	**+0.2**
	1.9nm,0.5s,mb3.7,baz=87,slow=9.5,SNR=8.0						
ILAR	**Eielson Array**	**88.20**	**13**	P	**P**	**19 42 12.7**	**0.0**
	0.8nm,0.9s,mb3.4,baz=219,slow=5.8,SNR=6.5						
AKASG	**Malin Array Be**	**142.38**	**331**	PKP	PKPdf	19 48 46.8	-2.4
	2.0nm,0.4s,baz=43,slow=4.1,SNR=22						
BRTR	**Keskin Array B**	**146.06**	**312**	PKPbc	PKPbc	19 48 59.0	+1.5
	0.7nm,0.6s,baz=133,slow=3.5,SNR=4.7						
GERES	**GERESS Array B**	**149.70**	**343**	PKPbc	PKPdf	19 49 07.4	+6.0
	0.9nm,0.9s,slow=2.7,SNR=5.0						

*IDC **15** 19:37:58.9±0.8, 6.57S×130.36E, mb4.4/5, mb1 4.7/8, mb1mx4.4/15, mbtmp4.7/8, ML3.7/3, MS3.2/2, Ms1 3.2/2, ms1mx2.7/20, Error ellipse: s-maj=45.1km s-min=17.2km az=63.0*

*BJI **15** 19:38:05.9, 6.80S×130.30E, h78^{km}, mb4.4*

*NEIC **15** 19:38:07.9±1.7, 6.85S×130.34E, h79^{km}±18^{km}, mb4.4/12, Error ellipse: s-maj=16.1km s-min=8.3km az=214.0*

ISC 15 19:38:08.7±2.0**, 6.98S**±0.06×**130.31E**±0.08**, h110**^{km}±22^{km}**, n38, σ0ˢ92**/42**, mb4.6**/15**, 2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**6.07**	**160**	⇓*i*P	P	19 39 59.1	+22
	471nm,0.6s						
KAKA				*e*S	**S**	**19 41 05.9**	**+20**
FITZ	**Fitzroy Crossi**	**11.96**	**202**	*e*P	**P**	**19 40 59.0**	**+2.4**
	16nm,0.3s						
FITZ				*e*S	**S**	**19 43 05.9**	**-2.2**
FITZ	**Fitzroy Crossi**	**11.96**	**202**	Pn	**P**	**19 40 58.2**	**+1.6**
	8.6nm,0.3s,baz=38,slow=12,SNR=89						
FITZ				Sn	**S**	**19 43 05.9**	**-2.2**
	22nm,0.3s,baz=236,slow=23,SNR=18						
FITZ				LR	LR	19 46 41.5	
	comp=Z,111nm,18.2s,baz=38,slow=42						
WRAB	**Tennant Creek**	**13.46**	**163**	*e*Pn	**P**	**19 41 15.7**	**-0.6**
	46nm,0.6s						
WRAB				*e*Sn	**S**	**19 43 38.7**	**-4.8**
WRA	**Warramunga Arr**	**13.46**	**164**	Pn	**P**	**19 41 16.0**	**-0.3**
	0.1nm,0.3s,baz=350,slow=12,SNR=45						
WRA				Sn	**S**	**19 43 39.0**	**-4.7**
	10nm,0.3s,baz=332,slow=23,SNR=9.2						
WB2	**Warramunga Arr**	**13.47**	**163**	*e*P	**P**	**19 41 16.2**	**-0.2**
WB2				*e*S	**S**	**19 43 40.3**	**-3.4**
PMG	**Port Moresby**	**16.85**	**99**	Pn	**P**	**19 41 57.5**	**-1.8**
	0.6nm,0.3s,baz=294,slow=6.2,SNR=6.0						
PMG	**Port Moresby**	**16.85**	**99**	*e*P	**P**	**19 42 00.1**	**+0.8**
	35nm,1.3s						
ASPA	**Alice Springs**	**16.95**	**169**	*e*P	**P**	**19 42 03.7**	**+3.3**
ASPA				*e*S	**S**	**19 45 04.1**	**+0.4**
MBWA	**Marble Bar**	**17.42**	**215**	*e*P	**P**	**19 42 12.2**	**+5.8**
	62nm,1.3s						
MBWA				*e*S	**S**	**19 45 14.7**	**+0.4**
KKM	**Kota Kinabalu**	**19.11**	**312**	*e*P	**P**	**19 42 25.1**	**-0.6**
CTA	**Charters Tower**	**20.22**	**132**	*e*P	**P**	**19 42 38.1**	**+1.0**
	11nm,0.8s						
CTA	**Charters Tower**	**20.22**	**132**	P	**P**	**19 42 39.8**	**+2.6**
	18nm,0.9s,baz=314,slow=12,SNR=16						
CTAO	**Charters Tower**	**20.22**	**132**	*e*P	**P**	**19 42 37.5**	**+0.4**
	15nm,0.8s						
GUMO	**Guam**	**25.03**	**35**	LR	LR	19 51 02.4	
	comp=Z,59nm,21.3s,baz=44,slow=32						
STKA	**Stephens Creek**	**26.91**	**158**	⇓*i*P	**P**	**19 43 44.8**	**+3.2**
	4.6nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**26.91**	**158**	P	**P**	**19 43 44.9**	**+3.4**
	6.3nm,0.6s,mb4.3,baz=333,slow=10,SNR=26						
KULM	**Kulim**	**32.02**	**292**	*e*P	**P**	**19 44 27.4**	**+0.4**
LSA	**Lhasa**	**52.40**	**316**	*e*P	**P**	**19 47 12.7**	**+0.6**
	4.8nm,0.7s,mb4.6						
GTA	**Gaotai**	**54.10**	**331**	*e*P	**P**	**19 47 24.1**	**-0.4**
GTA				AP	pP	19 47 39.5	-12
GUN	**Gumba**	**55.17**	**311**	*e*P	**P**	**19 47 32.7**	**+0.2**
	15nm,0.5s,mb5.3						
PKI	**Pulchoki**	**55.35**	**310**	*e*P	**P**	**19 47 33.7**	**0.0**
KKN	**Kakani**	**55.56**	**311**	*e*P	**P**	**19 47 35.2**	**-0.1**
	24nm,1.2s,mb5.1						
DMN	**Daman**	**55.60**	**310**	*e*P	**P**	**19 47 35.7**	**+0.2**
	26nm,1.1s,mb5.2						
GKN	**Gorkha**	**56.16**	**310**	*e*P	**P**	**19 47 39.5**	**0.0**
	12nm,0.4s,mb5.3						
HYB	**Hyderabad**	**56.59**	**296**	*i* P	**P**	**19 47 42.0**	**-0.7**
HYB	**Hyderabad**	**56.59**	**296**	*e*P	**P**	**19 47 42.0**	**-0.7**
KOLN	**Koldanda**	**56.83**	**310**	*e*P	**P**	**19 47 44.3**	**0.0**
	30nm,1.1s,mb5.3						
SONM	**Songino Array**	**58.52**	**341**	P	**P**	**19 47 55.1**	**-0.7**
	1.7nm,0.7s,mb4.2,baz=158,slow=6.4,SNR=16						
MKAR	**Makanchi Array**	**68.38**	**327**	P	**P**	**19 49 00.8**	**+0.4**
	6.1nm,0.6s,mb4.6,baz=116,slow=7.9,SNR=60						
YAK	**Yakutsk**	**68.81**	**360**	*e*P	**P**	**19 49 01.9**	**-1.0**
	6.1nm,0.5s,mb4.7						
AAK	**Ala-Archa**	**70.72**	**320**	*e*P	**P**	**19 49 15.5**	**+0.6**
	3.5nm,1.0s,mb4.1						
ZAL	**Zalesovo**	**71.70**	**334**	P	**P**	**19 49 20.1**	**-0.4**
	1.6nm,0.8s,mb3.9,baz=357,slow=5.2,SNR=9.4						
KURK	**Kurchatov**	**72.66**	**328**	*e*P	**P**	**19 49 26.4**	**+0.3**
	7.5nm,1.0s,mb4.5						
BRVK	**Borovoye**	**78.28**	**328**	*e*P	**P**	**19 49 58.1**	**+0.1**
	1.8nm,0.8s,mb3.9						
CHKZ	**Chkalovo**	**78.41**	**328**	*e*P	**P**	**19 49 58.7**	**0.0**
	2.1nm,0.7s,mb4.0						
LPAZ	**La Paz**	**150.54**	**142**	PKPbc	PKPdf	19 57 53.4	+11
	0.8nm,0.3s,baz=104,slow=4.2,SNR=4.0						
LPAZ	**La Paz**	**150.54**	**142**	PKPbc	PKPdf	19 57 53.4	+11

*JMA **15** 19:52:21.1±0.2, 38.08N×144.63E, h56^{km}, M3.7*

ISC 15 19:52:19.4±1.4**, 38.13N**±0.06×**144.77E**±0.09**, h56**^{km}**, n9, σ0ˢ82**/17**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.61**	**292**	P	**P**	**19 53 01.0**	**+0.8**
OFUJ				S	**S**	**19 53 31.0**	**+0.3**
JIO	**Ouri**	**2.71**	**278**	P	**P**	**19 53 02.1**	**+0.5**
JIO				S	**S**	**19 53 32.6**	**-0.8**
MIYJ	**Miyakonagasawa**	**2.72**	**303**	P	**P**	**19 53 02.6**	**+0.9**
MIYJ				*e*S	**S**	**19 53 33.6**	**+0.1**
JMK	**Ichinoseki**	**2.90**	**287**	P	**P**	**19 53 05.2**	**+0.8**
JMK				*e*S	**S**	**19 53 38.4**	**+0.2**
JOT	**Ohata**	**4.33**	**320**	*e*S	**S**	**19 54 13.6**	**-0.6**
JCH	**Churui**	**4.60**	**347**	P	**P**	**19 53 29.2**	**+0.9**
JCH				*e*S	**S**	**19 54 20.8**	**-0.2**
JRY	**Ryogami san**	**5.15**	**248**	P	**P**	**19 53 34.6**	**-1.2**
JRY				S	**S**	**19 54 29.3**	**-5.3**
NEM2	**Nemuro 2**	**5.28**	**8**	P	**P**	**19 53 36.3**	**-1.4**
NEM2				*e*S	**S**	**19 54 34.0**	**-4.0**
MAT	**Matsushiro**	**5.47**	**255**	P	**P**	**19 53 41.1**	**+0.9**
MAT				*e*S	**S**	**19 54 41.6**	**-1.0**

*NIED **15** 20:20:00, 33.40N×141.50E, h8^{km}, Mw5.7 Best double couple: $M_0 3.48\times10^{17}$ NP1:ϕ_s345°, δ69°, λ67°. NP2:ϕ_s215°, δ31°, λ136°.*

*BJI **15** 20:20:42.8, 33.38N×141.72E, h30^{km}, mB5.6, mb5.1, Ms5.8, Msz5.6*

*IDC **15** 20:20:43.2±0.4, 33.37N×141.54E, mb5.2/23, mb1 5.2/29, mb1mx5.2/30, mbtmp5.2/29, ML4.4/6, MS5.2/27, Ms1 5.2/27, ms1mx5.2/30, Error ellipse: s-maj=12.3km s-min=10.4km az=92.0*

*BGS **15** 20:20:44.9, 33.34N×141.35E, h10^{km}, mb5.5*

*SKO **15** 20:20:44.8, 32.12N×141.02E*

*JMA **15** 20:20:44.1±0.5, 33.44N×141.51E, h4^{km}, M5.5*

*HRVD **15** 20:20:45.8±0.1, 33.35N×141.61E, h16^{km}, MW5.7/70, Centroid moment Tensor Solution. LP body waves: s59,c134;Mantle waves: s70,c160; Half duration: 1ˢ8 Moment tensor: Scale 10^{17}Nm; M_{rr}3.68±.05; $M_{\theta\theta}$0.39±.05; $M_{\phi\phi}$-4.08±.05; $M_{r\theta}$0.64±.16; $M_{\theta\phi}$-0.67±.04; $M_{\phi r}$2.87±.15; Best double couple: $M_0 4.907\times10^{17}$ NP1:ϕ_s185°, δ27°, λ85°. NP2:ϕ_s11°, δ63°, λ93°. Principal axes: T 4.664, Plg71°, Azm287°; N .48, Plg2°, Azm190°; P -5.151, Plg18°, Azm99°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 20:20:45.8±0.1, 33.34N×141.35E, mb5.5/157, MS5.3/144, MW5.7, MW5.6(NIED) Error ellipse: s-maj=3.7km s-min=2.8km az=169.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{17}Nm; M_{rr}3.95; $M_{\theta\theta}$0.52; $M_{\phi\phi}$-4.47; $M_{r\theta}$0.19; $M_{\theta\phi}$1.08; $M_{\phi r}$-1.22; Best double couple: $M_0 4.5\times10^{17}$ NP1:ϕ_s347°, δ37°, λ88°. NP2:ϕ_s169°, δ53°, λ91°. Principal axes: T 4.12, Plg82°, Azm85°; N .74, Plg1°, Azm349°; P -4.87, Plg8°, Azm258°;*

NEIC Felt in the Tokyo area.

*MOS **15** 20:20:46.9±0.9, 33.32N×141.35E, h33^{km}, mb5.7/120, MS5.5/81 Error ellipse: s-maj=7.0km s-min=3.6km az=112.5*

ISC 15 20:20:43.1±0.8**, 33.26N**±0.02×**141.40E**±0.02**, h9**^{km}±4^{km}**, h17**^{km}±1.9^{km}**:pP-P, n856, σ0ˢ93**/796**, mb5.5**/237**, MS5.4**/202**, 90C-26D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.33**	**264**	P	**Pb**	**20 21 11.0**	**+3.2**
JHJ	**Hachijo jima 2**	**1.36**	**264**	Pn	**Pn**	**20 21 11.2**	**+2.9**
	646nm,0.3s,baz=145,slow=5.9,SNR=88						
JHJ				LR	LR	20 21 27.6	
	comp=Z,64μm,18.6s,baz=166,slow=30						
JHJ				Sn	**Sn**	**20 21 33.2**	**+6.7**
	2μm,0.3s,baz=68,slow=23,SNR=9.4						
BSO1	**Boso 1**	**1.43**	**346**	P	**Pn**	**20 21 08.5**	**-0.8**
BSO3	**Boso 3**	**1.70**	**335**	P	**Pn**	**20 21 12.9**	**-0.3**
JMY	**Miyakejima3**	**1.77**	**298**	P	**Pn**	**20 21 17.2**	**+3.1**
BSO4	**Boso 4**	**1.93**	**333**	P	**Pn**	**20 21 17.6**	**+1.1**
KTR	**Katsuura**	**2.08**	**335**	P	**Pn**	**20 21 19.7**	**+1.0**
KTR				*e*S	**Sn**	**20 21 45.7**	**+0.7**
JKO	**Kozu shima**	**2.10**	**297**	⇓P	**Pn**	**20 21 20.7**	**+1.8**
JIM2	**Oshima 3**	**2.19**	**312**	P	**Pn**	**20 21 21.6**	**+1.5**
JIZS	**Izushimoda**	**2.55**	**305**	⇓P	**Pn**	**20 21 26.4**	**+1.1**
JOD2	**Odawara 2**	**2.76**	**317**	P	**Pn**	**20 21 28.1**	**-0.3**
JOD2				S	**Sn**	**20 22 02.3**	**+0.1**
TK04	**Tokai 4**	**3.14**	**292**	P	**Pn**	**20 21 37.2**	**+3.5**
SHZ3	**Shizuoka 3**	**3.20**	**305**	P	**Pn**	**20 21 36.5**	**+1.9**
TK01	**Tokai 1**	**3.22**	**280**	P	**Pn**	**20 21 38.1**	**+3.2**
JYN	**Shimob**	**3.25**	**314**	P	**Pn**	**20 21 35.9**	**+0.6**
JYN				S	**Sn**	**20 22 18.7**	**+4.3**
JRY	**Ryogami san**	**3.43**	**324**	⇑P	**Pn**	**20 21 38.3**	**+0.4**
JRY				S	**Sn**	**20 22 20.9**	**+1.7**
MJAR	**Matsushiro Arr**	**4.19**	**322**	Pn	**Pn**	**20 21 49.5**	**+0.8**
	37nm,0.3s,baz=150,slow=12,SNR=352						
MJAR				Sn	**Sn**	**20 22 39.8**	**+1.4**
	32nm,0.3s,baz=120,slow=9.8,SNR=6.8						
MAJO	**Matsushiro**	**4.19**	**322**	*e*Pn	**Pn**	**20 21 49.9**	**+1.2**
MAT	**Matsushiro**	**4.19**	**322**	P	**Pn**	**20 21 49.5**	**+0.8**
MAT				S	**Sn**	**20 22 38.7**	**+0.3**
MAT	**Matsushiro**	**4.19**	**322**	P	**Pn**	**20 21 49.6**	**+0.9**
MAT	**Matsushiro**	**4.19**	**322**	*e*P	**Pn**	**20 21 50.0**	**+1.3**
MAT				*e*S	**Sn**	**20 22 39.0**	**+0.6**
JGN	**Niukaw**	**4.47**	**312**	⇑P	**Pn**	**20 21 55.5**	**+2.8**
JYS	**Shirataka**	**5.07**	**348**	P	**Pn**	**20 22 00.0**	**-1.1**
JIO	**Ouri**	**5.18**	**360**	⇑P	**Pn**	**20 21 59.2**	**-3.5**
JYA	**Atsumi**	**5.49**	**346**	P	**Pn**	**20 22 06.0**	**-1.1**
JYK	**Kaneyama**	**5.71**	**352**	P	**Pn**	**20 22 08.2**	**-1.9**
OFUJ	**Ofunato**	**5.81**	**2**	P	**Pn**	**20 22 07.6**	**-4.0**
JRG	**Rokugo**	**6.15**	**354**	P	**Pn**	**20 22 14.2**	**-2.2**
CBIJ	**Chichi jima**	**6.18**	**173**	Pn	**Pn**	**20 22 16.6**	**-0.3**
	61nm,0.3s,baz=154,slow=3.9,SNR=27						
CBIJ				Sn	**Sn**	**20 23 23.2**	**-5.2**
	40nm,0.3s,baz=248,slow=22,SNR=2.2						
CBIJ				LR	LR	20 24 35.6	
	comp=Z,23μm,19.0s,baz=352,slow=37						
JNU	**Nakatsue**	**8.82**	**272**	Pn	**P**	**20 22 54.4**	**+0.7**
	0.8nm,0.3s,baz=94,slow=13,SNR=10						
JNU				LR	LR	20 26 20.4	
	comp=Z,29μm,19.8s,baz=83,slow=38						
JIU2	**Izumi 2**	**8.93**	**268**	P	**P**	**20 22 58.9**	**+3.7**
JTN	**Tanegashima 3**	**9.22**	**256**	P	**P**	**20 23 05.1**	**+5.8**
ASAJ	**Asahikawa**	**10.88**	**5**	Pn	**P**	**20 23 16.8**	**-5.3**
	8.8nm,0.3s,baz=232,slow=12,SNR=28						
ASAJ				Sn	**S**	**20 25 10.9**	**-14**
	8.2nm,0.3s,baz=55,slow=29,SNR=5.5						
YUK	**Yuzh-Kuril'sk**	**11.31**	**17**	P	**P**	**20 23 19.2**	**-8.7**
YUK				MLR	MLR		
	comp=Z,18μm,11.0s						
YUK				MLR	MLR		
	comp=N,13μm,10.0s						
YUK				MLR	MLR		
	comp=E,4μm,10.0s						
KS15	**Wonju Array Si**	**11.79**	**295**	*e*Pn	**P**	**20 23 34.6**	**+0.1**
INCN	**Inchon**	**12.76**	**293**	*e*Pn	**P**	**20 23 44.4**	**-3.2**
INCN				*e*pPn		20 23 56.0	
JOW	**Kunigami**	**13.04**	**244**	Pn	**P**	**20 23 51.0**	**-0.3**
	comp=E,1.5nm,0.3s,baz=133,slow=19,SNR=2.6						
JOW				LR	LR	20 28 51.0	
	comp=E,19μm,18.9s,baz=91,slow=37						
YSS	**Yuzh-Sakhalins**	**13.71**	**4**	*e*Pn	**P**	**20 23 54.1**	**-5.9**
	comp=E,188nm,1.1s						
YSS	**Yuzh-Sakhalins**	**13.71**	**4**	⇑*e*P	**P**	**20 23 53.3**	**-6.8**
YSS				MLR	MLR		
	comp=Z,11μm,15.0s						
YSS				MLR	MLR		
	comp=N,5μm,17.0s						
YSS				MLR	MLR		
	comp=E,7μm,14.0s						
JKE	**Kume jima 2**	**14.44**	**245**	P	**P**	**20 24 18.2**	**+8.5**
MDJ	**Mudanjiang**	**14.57**	**325**	P	**P**	**20 24 08.8**	**-2.5**
MDJ				AP		20 24 13.3	
MDJ				S	**S**	**20 26 49.8**	**-4.1**
MDJ				PCP	PcP	20 29 24.1	-1.8
MDJ				SCP		20 32 57.6	
MDJ				PCS		20 32 59.3	
MDJ				AMB	AMB		
	comp=Z,20nm,1.7s						
MDJ				AMB	AMB		
	comp=Z,2μm,10.3s						
MDJ				LR	LR		
	comp=N,16μm,19.6s						
MDJ				LR	LR		
	comp=E,18μm,18.5s						
MDJ				LR	LR		
	comp=Z,18μm,16.6s						
MDJ	**Mudanjiang**	**14.57**	**325**	*e*Pn	**P**	**20 24 09.1**	**-2.3**
	comp=Z,46nm,0.9s						
UGL	**Uglegorsk**	**15.81**	**2**	*e*P	**P**	**20 24 32.0**	**+4.6**
UGL				pmax	pmax		
	comp=Z,190nm,0.8s						
UGL				pmax	pmax		
	comp=Z,700nm,2.0s						
UGL				MLR	MLR		
	comp=N,18μm,17.0s						
UGL				MLR	MLR		
	comp=Z,13μm,17.0s						
UGL				MLR	MLR		
	comp=E,9μm,15.0s						
CN2	**Changchun**	**16.30**	**315**	*e*P	**P**	**20 24 32.8**	**-0.9**
CN2				*e*XP		20 24 39.8	
CN2				AMB	AMB		
	comp=Z,3μm,14.0s						
CN2				LR	LR		
	comp=N,12μm,13.0s						
CN2				LR	LR		
	comp=E,14μm,13.0s						
CN2				LR	LR		
	comp=Z,15μm,15.0s						
SNY	**Shenyang**	**16.49**	**306**	⇑P	**P**	**20 24 34.4**	**-1.8**
SNY				AP		20 24 41.6	
SNY				XP		20 24 47.4	
SNY				S	**S**	**20 27 32.3**	**-6.7**
SNY				XS		20 27 47.8	
SNY				AMB	AMB		
	comp=Z,60nm,2.4s						
SNY				AMB	AMB		
	comp=Z,4μm,12.2s						
SNY				LR	LR		
	comp=N,16μm,14.2s						
SNY				LR	LR		
	comp=E,10μm,19.2s						
SNY				LR	LR		
	comp=Z,17μm,14.7s						
DL2	**Dalian**	**16.93**	**295**	⇑*i*P	**P**	**20 24 42.9**	**+1.1**
DL2				S	**S**	**20 27 54.0**	**+4.9**
DL2				AMB	AMB		
	comp=Z,30nm,0.9s						
DL2				AMB	AMB		
	comp=Z,3μm,9.8s						
DL2				LR	LR		
	comp=N,8μm,18.8s						
DL2				LR	LR		
	comp=E,13μm,16.7s						
DL2				LR	LR		
	comp=Z,16μm,16.7s						
SSE	**Sheshan**	**17.25**	**268**	*e*P	**P**	**20 24 44.6**	**-1.2**
SSE				AP		20 24 49.3	
SSE				PP	PP	20 25 01.8	+1.6
SSE				S	**S**	**20 27 56.3**	**0.0**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s						
SSE				LR	LR		
	comp=N,5μm,14.4s						
SSE				LR	LR		
	comp=E,15μm,14.4s						
SSE				LR	LR		
	comp=Z,19μm,14.4s						
SSE	**Sheshan**	**17.25**	**268**	*e*P	**P**	**20 24 44.6**	**-1.2**
	comp=Z,28nm,0.7s						
SSE				pP		20 24 49.2	
SSE				sP		20 24 50.7	
SSE				PP	PP	20 25 01.7	+1.5
SSE				S	**S**	**20 27 56.3**	**0.0**
SSE				sS		20 28 01.8	
JIJ	**Ishigaki jima**	**17.51**	**244**	P	**P**	**20 24 51.9**	**+2.8**
IRIF	**Iriomote-Funau**	**17.84**	**245**	P	**P**	**20 24 55.2**	**+2.0**
NJ2	**Nanjing**	**19.02**	**273**	*e*P	**P**	**20 25 08.3**	**+0.7**
NJ2				AP		20 25 11.9	
NJ2				XP		20 25 15.5	
NJ2				PP	PP	20 25 24.4	+0.1
NJ2				S	**S**	**20 28 37.0**	**+0.5**
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s						
NJ2				AMB	AMB		
	comp=Z,2μm,10.0s						
NJ2				LR	LR		
	comp=N,17μm,15.7s						
NJ2				LR	LR		
	comp=E,36μm,18.3s						
NJ2				LR	LR		
	comp=Z,16μm,18.7s						
YHNB	**Yeheng**	**19.47**	**249**	*e*P	**P**	**20 25 11.6**	**-1.5**
NACB	**Ninganchiao**	**19.56**	**248**	*e*P	**P**	**20 25 11.8**	**-2.2**
NACB				*e*pP		20 25 24.2	
GUMO	**Guam**	**19.84**	**170**	P	**P**	**20 25 17.1**	**-0.1**
	comp=Z,3.4nm,0.3s,baz=333,slow=9.0,SNR=2.6						
GUMO				LR	LR	20 31 26.8	
	comp=Z,8μm,20.4s,baz=231,slow=32						
GUMO	**Guam**	**19.84**	**170**	*e*P	**P**	**20 25 18.2**	**+1.1**
	comp=Z,1μm,1.3s						
GUMO				Pn	**P**	**20 25 20.8**	**+3.6**
GUMO	**Guam**	**19.84**	**170**	P	**P**	**20 25 17.1**	**-0.1**
GUMO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,8μm,20.4s						
TIA	**Tai'an**	**20.15**	**285**	P	**P**	**20 25 19.3**	**-1.1**
TIA				LR	LR		
	comp=N,17μm,15.0s,MS5.8						
TIA				LR	LR		
	comp=E,24μm,15.0s,MS5.8						
TIA				LR	LR		
	comp=E,12μm,18.3s						
QZH	**Quanzhou**	**21.55**	**253**	⇑*i*P	**P**	**20 25 35.4**	**+0.6**
QZH				S	**S**	**20 29 28.0**	**-0.7**
QZH				AMB	AMB		
	comp=Z,100nm,0.8s,mb5.3						
QZH				LR	LR		
	comp=N,10μm,16.2s,MS5.6						
QZH				LR	LR		
	comp=E,15μm,14.7s,MS5.6						
QZH				LR	LR		
	comp=Z,18μm,15.4s,MS5.6						
HIA	**Hailar**	**22.70**	**321**	*e*P	**P**	**20 25 43.3**	**-2.7**
	comp=Z,154nm,1.1s,mb5.3						
HIA				LR	LR		
	comp=Z,11μm,19.0s,MS5.3						
WHN	**Wuhan**	**23.10**	**271**	*e*P	**P**	**20 25 50.5**	**+0.3**
WHN				LR	LR		
	comp=N,16μm,13.0s,MS5.8						
WHN				LR	LR		
	comp=E,19μm,13.3s,MS5.8						
WHN				LR	LR		
	comp=Z,33μm,15.0s,MS5.9						
PET	**Petropavlovsk**	**23.31**	**27**	*e*P	**P**	**20 25 53.1**	**+1.1**
PET				LR	LR		
	comp=Z,3μm,19.0s,MS4.8						
PET	**Petropavlovsk**	**23.31**	**27**	*e*P	**P**	**20 25 55.7**	**+3.7**
PET				*e*S	**S**	**20 30 01.9**	**+1.4**
PET				*e*SS	SS	20 30 48.9	+2.2
PET				pmax	pmax		
	comp=Z,400nm,10.8s						
PET				pmax	pmax		
	comp=Z,1μm,4.2s						
PET				pmax	pmax		
	comp=Z,37nm,0.8s,mb4.9						
PET				smax			
	comp=N,6μm,13.4s						
PET				smax			
	comp=E,6μm,23.7s						
PET				smax			

	comp=N,5µm,10.0s						
PET				smax			
	comp=E,4µm,12.1s						
PET				MLR	MLR		
	comp=Z,5µm,16.0s,MS5.0						
PET				MLR	MLR		
	comp=Z,5µm,16.0s						
TIY	**Taiyuan**	**23.95**	**289**	PR	**P**	**20 25 57.0**	**-1.4**
TIY				LR	LR		
	comp=N,12µm,15.0s						
TIY				LR	LR		
	comp=Z,5µm,13.0s,MS5.2						
HHC	**Hu-ho-hao-te**	**24.90**	**296⇑**	*i*P	**P**	**20 26 07.3**	**-0.3**
HHC				AP		20 26 11.5	
HHC				XP		20 26 15.1	
HHC				PP	PP	20 26 43.9	-0.7
HHC				PCP	PcP	20 29 43.8	-0.6
HHC				S	**S**	**20 30 26.9**	**-1.0**
HHC				SS	SS	20 31 25.6	-0.3
HHC				SCP		20 33 20.8	
HHC				PCS		20 33 23.1	
HHC				AMB	AMB		
	comp=Z,60nm,1.4s,mb4.9						
HHC				AMB	AMB		
	comp=Z,2µm,9.6s						
HHC				LR	LR		
	comp=N,10µm,15.6s,MS5.6						
HHC				LR	LR		
	comp=E,10µm,15.6s,MS5.6						
HHC				LR	LR		
	comp=Z,13µm,16.8s,MS5.5						
BTO	**Baotou**	**26.03**	**295**	*e*P	**P**	**20 26 18.3**	**+0.1**
BTO				AMB	AMB		
	comp=Z,90nm,0.8s,mb5.3						
NRGR	**Nerungri**	**26.06**	**339**	*e*P	**P**	**20 26 14.8**	**-3.5**
NRGR				S	PcP	20 29 41.8	-5.0
CLNS	**Chul'man**	**26.16**	**339**	*e*P	**P**	**20 26 19.8**	**+0.6**
CLNS				*e**PP	pP	20 26 27.2	+5.4
CLNS				*e*PPP	PPP	20 27 00.5	-13
CLNS				*e*		20 29 49.4	
CLNS				*e*S	**S**	**20 30 41.9**	**-6.9**
CLNS				pmax	pmax		
	comp=Z,299nm,0.9s,mb5.8						
CLNS				pmax	pmax		
	comp=N,547nm,1.8s						
CLNS				pmax	pmax		
	comp=E,57nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,105nm,0.9s,mb5.4						
CLNS				pmax	pmax		
	comp=N,97nm,1.1s						
CLNS				pmax	pmax		
	comp=E,76nm,0.9s						
CLNS				smax			
	comp=N,621nm,12.8s						
CLNS				smax			
	comp=Z,969nm,11.5s						
CLNS				smax			
	comp=E,1µm,12.7s						
CLNS				MLR	MLR		
	comp=Z,12µm,17.0s,MS5.5						
CLNS				MLR	MLR		
	comp=N,3µm,15.0s,MS5.2						
CLNS				MLR	MLR		
	comp=E,4µm,15.0s,MS5.2						
HKC	**Hong Kong**	**26.37**	**253**	P	**P**	**20 26 24.0**	**+2.5**
WAKE	**Wake Island**	**26.50**	**115**	PFAKE		20 26 30.0	+7.3
WAKE				LR	LR		
	comp=Z,8µm,20.0s,MS5.3						
TGY	**Tagaytay City**	**26.64**	**229**	P	**P**	**20 26 24.2**	**+0.1**
	comp=Z,44nm,0.3s,mb5.5,baz=82,slow=7.1,SNR=3.0						
TGY				LR	LR	20 35 58.8	
	comp=Z,18nm,19.6s,baz=296,slow=34						
XAN	**Xi'an**	**26.99**	**281**	P	**P**	**20 26 25.5**	**-1.6**
XAN				S	**S**	**20 31 06.3**	**+3.7**
XAN				SS	SS	20 32 12.5	-3.7
XAN				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
XAN				LR	LR		
	comp=N,7µm,13.9s,MS5.7						
XAN				LR	LR		
	comp=E,13µm,15.4s,MS5.7						
XAN				LR	LR		
	comp=Z,19µm,16.0s,MS5.7						
MA2	**Magadan**	**27.05**	**11**	*e*P	**P**	**20 26 24.9**	**-2.5**
	comp=Z,85nm,0.9s,mb5.3						
MA2				LR	LR		
	comp=Z,3µm,19.0s,MS4.9						
MA2	**Magadan**	**27.05**	**11**	*e*P	**P**	**20 26 26.4**	**-0.9**
MA2				*e*		20 27 24.4	
MA2				*e*S	**S**	**20 31 01.8**	**-1.6**
MA2				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.8						
MA2				MLR	MLR		
	comp=Z,8µm,19.0s,MS5.3						
ENH	**Enshi**	**27.24**	**272**	*e*P	**P**	**20 26 27.6**	**-1.8**
	comp=Z,151nm,1.0s,mb5.5						
ENH				LR	LR		
	comp=Z,19µm,19.0s,MS5.7						
CIT	**Chita**	**27.50**	**321**	*e*P	**P**	**20 26 31.5**	**-0.1**
CIT				*e*		20 26 39.0	
CIT				*e*		20 29 45.9	
CIT				pmax	pmax		
	comp=Z,372nm,2.3s,mb5.6						
YAK	**Yakutsk**	**29.75**	**349**	*e*P	**P**	**20 26 50.3**	**-1.4**
	comp=Z,195nm,1.0s,mb5.8						
YAK				LR	LR		
	comp=Z,5µm,19.0s,MS5.2						
YAK	**Yakutsk**	**29.75**	**349***c*	*i*P	**P**	**20 26 50.4**	**-1.3**
YAK				pmax	pmax		
	comp=Z,172nm,1.1s,mb5.7						
YAK				MLR	MLR		
	comp=Z,8µm,15.0s,MS5.5						
DAV	**Davao City (W)**	**29.91**	**213**	PFAKE		20 27 10.0	+16
DAV				LR	LR		
	comp=Z,2µm,20.0s,MS4.7						
SONM	**Songino Array**	**30.03**	**309**	P	**P**	**20 26 55.2**	**+0.8**
	comp=Z,73nm,1.0s,mb5.4,baz=109,slow=6.8,SNR=244						
SONM				PcP	PcP	20 29 56.1	-0.4
	comp=Z,8.5nm,1.0s,baz=118,slow=2.4,SNR=4.1						
SONM				LR	LR	20 39 26.0	
	comp=Z,7µm,19.2s,MS5.3,baz=112,slow=37						
SMY	**Shemya**	**30.45**	**40**	PFAKE		20 27 10.0	+12
SMY				LR	LR		
	comp=Z,9µm,19.0s,MS5.4						
SEY	**Seymchan**	**30.49**	**10⇓**	*e*P	**P**	**20 26 57.8**	**-0.5**
SEY	**Seymchan**	**30.49**	**10**	*e*P	**P**	**20 26 58.0**	**-0.3**
SEY				*e*		20 28 08.2	
SEY				*e*		20 30 03.3	
SEY				*e*S	**S**	**20 31 54.5**	**-4.0**
SEY				*e*SSS	SSS	20 34 03.9	+3.9
SEY				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.3						
SEY				pmax	pmax		
	comp=N,30nm,1.2s						
SEY				pmax	pmax		
	comp=E,20nm,1.2s						
SEY				smax			
	comp=N,3µm,15.6s						
SEY				smax			
	comp=E,970nm,12.7s						
SEY				MLR	MLR		
	comp=Z,11µm,20.0s,MS5.5						
SEY				MLR	MLR		
	comp=N,5µm,18.0s,MS5.4						
SEY				MLR	MLR		
	comp=E,4µm,14.0s,MS5.4						
BOD	**Bodaibo**	**30.77**	**331⇓**	*i*P	**P**	**20 27 00.0**	**-0.8**
BOD				pmax	pmax		
	comp=Z,84nm,1.4s,mb5.4						
GYA	**Guiyang**	**30.77**	**267⇑**	*i*P	**P**	**20 26 59.5**	**-1.7**
GYA				PPP	PPP	20 28 11.6	-5.4
GYA				S	**S**	**20 32 01.8**	**-1.5**
GYA				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.3						
GYA				AMB	AMB		
	comp=Z,480nm,7.6s						
GYA				LR	LR		
	comp=N,6µm,17.1s,MS5.4						
GYA				LR	LR		
	comp=E,4µm,21.0s,MS5.4						
GYA				LR	LR		
	comp=Z,7µm,19.8s,MS5.3						
LZH	**Lanzhou**	**30.89**	**286**	*e*P	**P**	**20 27 01.6**	**-0.5**
LZH				AP	pP	20 27 05.9	+1.2
LZH				PP	PP	20 28 03.0	-0.6
LZH				PCP	PcP	20 30 00.0	+1.1
LZH				*e*S	**S**	**20 32 02.0**	**-3.0**
LZH				SS	SS	20 33 46.3	-1.6
LZH				AMB	AMB		
	comp=Z,250nm,1.6s,mb5.8						
LZH				AMB	AMB		
	comp=Z,850nm,5.1s						
LZH				LR	LR		
	comp=E,31µm,15.1s						
LZH				LR	LR		
	comp=Z,49µm,16.4s,MS6.2						
LZH	**Lanzhou**	**30.89**	**286**	*e*P	**P**	**20 27 01.6**	**-0.5**
	comp=Z,254nm,1.6s,mb5.8						
LZH				pP	pP	20 27 04.8	+0.1
LZH				sP	sP	20 27 05.9	0.0
LZH				PP	PP	20 28 03.0	-0.6
LZH				PcP	PcP	20 30 00.0	+1.1
LZH				*e*S	**S**	**20 32 02.0**	**-3.0**
LZH				sS		20 32 08.0	
LZH				SS	SS	20 33 46.3	-1.6
LZH				LR	LR		
	comp=Z,49µm,16.4s,MS6.2						
LZH	**Lanzhou**	**30.89**	**286**	*e*P	**P**	**20 27 01.6**	**-0.5**
LZH						20 28 03.0	
LZH						20 30 00.0	
LZH				*e*S	**S**	**20 32 02.0**	**-3.0**
LZH				SS	SS	20 33 46.3	-1.6
LZH				pmax	pmax		
	comp=Z,254nm,1.6s,mb5.8						
LZH				MLR	MLR		
	comp=Z,49µm,16.4s,MS6.2						
QIZ	**Qiongzhong**	**31.53**	**251**	P	**P**	**20 27 07.0**	**-0.9**
QIZ				S	**S**	**20 32 14.0**	**-1.1**
QIZ				LR	LR		
	comp=N,3µm,15.9s,MS5.3						
QIZ				LR	LR		
	comp=E,5µm,18.2s,MS5.3						
QIZ				LR	LR		
	comp=Z,4µm,18.7s,MS5.1						
QIZ	**Qiongzhong**	**31.53**	**251**	PFAKE		20 27 20.0	+12
QIZ				LR	LR		
	comp=Z,4µm,19.0s,MS5.1						
CD2	**Chengdu**	**31.86**	**276**	P	**P**	**20 27 09.5**	**-1.2**
CD2				PP	PP	20 28 11.1	-5.2
CD2				PPP	PPP	20 28 34.3	+3.0
CD2				S	**S**	**20 32 22.5**	**+2.2**
CD2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.3						
CD2				AMB	AMB		
	comp=Z,560nm,11.8s						
CD2				LR	LR		
	comp=N,17µm,15.6s						
CD2				LR	LR		
	comp=Z,22µm,16.2s,MS5.9						
ZAK	**Zakamensk**	**32.71**	**313⇓**	*e*P	**P**	**20 27 17.7**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.1						
IRK	**Irkutsk**	**32.73**	**317**	*e*P	**P**	**20 27 17.7**	**-0.3**
IRK				*e*		20 30 00.8	
IRK				*e*		20 32 23.1	
IRK				pmax	pmax		
	comp=Z,107nm,1.8s,mb5.5						
TLY	**Talaya**	**32.90**	**315**	P	**P**	**20 27 19.5**	**0.0**
GTA	**Gaotai**	**33.83**	**293**	*e*P	**P**	**20 27 27.1**	**-0.6**
GTA				AP	pP	20 27 31.4	+1.0
GTA				XP	sP	20 27 34.4	+2.9
GTA				PP	PP	20 28 42.0	+1.1
GTA				PCP	PcP	20 30 06.8	0.0
GTA				S	**S**	**20 32 51.3**	**+0.6**
GTA				SCP		20 33 49.3	
GTA				PCS		20 33 51.3	
GTA				SS	SS	20 34 58.5	+2.0
GTA				SCS	ScS	20 37 48.8	-2.0
GTA				AMB	AMB		
	comp=Z,20nm,1.7s,mb4.8						
GTA				AMB	AMB		
	comp=Z,980nm,7.2s						
GTA				LR	LR		
	comp=N,5µm,13.7s						
GTA				LR	LR		
	comp=E,7µm,19.4s						
GTA				LR	LR		
	comp=Z,8µm,17.5s,MS5.5						
KWAJ	**Kwajalein Atol**	**34.32**	**129**	PFAKE		20 27 40.0	+7.8
KWAJ				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
KMI	**Kunming**	**34.55**	**267**	P	**P**	**20 27 32.8**	**-1.3**
KMI				AP	pP	20 27 39.1	+2.3
KMI				XP	sP	20 27 41.4	+3.5
KMI				PP	PP	20 28 52.6	+2.3
KMI				S	**S**	**20 32 58.8**	**-3.3**
KMI				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.3						
KMI				AMB	AMB		
	comp=Z,390nm,5.6s						
KMI				LR	LR		
	comp=N,6µm,16.4s,MS5.8						
KMI				LR	LR		
	comp=E,12µm,14.9s,MS5.8						
KMI				LR	LR		
	comp=Z,13µm,14.9s,MS5.8						
KMI	**Kunming**	**34.55**	**267**	P	**P**	**20 27 32.8**	**-1.3**
	comp=Z,40nm,1.0s,mb5.3						
KMI				pP	pP	20 27 39.1	+2.3
KMI				sP	sP	20 27 41.4	+3.5
KMI				PP	PP	20 28 52.6	+2.3
KMI				PPP	PPP	20 29 02.3	-6.0
KMI				S	**S**	**20 32 58.7**	**-3.4**
KMI				sS		20 33 10.5	
KMI				SS	SS	20 35 22.3	+9.0
KMI				LR	LR		
	comp=Z,13µm,14.9s,MS5.8						
KMI	**Kunming**	**34.55**	**267**	P	**P**	**20 27 32.8**	**-1.3**
KMI				*SP	sP	20 27 41.4	+3.5
KMI						20 28 52.6	
KMI				PPP	PPP	20 29 02.3	-6.0
KMI				S	**S**	**20 32 58.7**	**-3.4**
KMI				*SS		20 33 10.5	
KMI				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.3						
KMI				MLR	MLR		
	comp=Z,13µm,14.9s,MS5.8						
MIDW	**Midway**	**35.63**	**87**	PFAKE		20 28 00.0	+17
MIDW				LR	LR		
	comp=Z,7µm,20.0s,MS5.4						
KKM	**Kota Kinabalu**	**35.79**	**226**	P	**P**	**20 27 40.2**	**-4.6**
KKM	**Kota Kinabalu**	**35.79**	**226**	P	**P**	**20 27 45.2**	**+0.4**
TSM	**Tawau**	**36.23**	**222**	P	**P**	**20 27 47.0**	**-1.4**
UBT	**Ubonrachathani**	**37.46**	**250**	⇓P	**P**	**20 27 58.0**	**-0.8**
BILL	**Bilibino**	**37.65**	**15**	*e*P	**P**	**20 27 58.1**	**-1.8**
	comp=Z,47nm,1.1s,mb5.1						
BILL				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
BILL	**Bilibino**	**37.65**	**15***c*	*i*P	**P**	**20 27 58.4**	**-1.5**
BILL				*e*		20 30 17.4	
BILL				*i* S	**S**	**20 33 42.9**	**-6.5**
BILL				*i* SS	SS	20 36 28.2	+5.0
BILL				pmax	pmax		
	comp=Z,19nm,1.2s,mb4.7						
BILL				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.2						
KKTK	**Khon Kaen**	**38.60**	**254**	⇓P	**P**	**20 28 07.1**	**-1.2**
	comp=Z,679nm,0.9s,mb6.4						
TIXI	**Tiksi**	**39.03**	**354⇑**	*i*P	**P**	**20 28 10.2**	**-1.2**
TIXI				LR	LR		
	comp=Z,4µm,20.0s,MS5.2						
TIXI	**Tiksi**	**39.03**	**354**	*e*P	**P**	**20 28 07.3**	**-4.1**
TIXI				*e*		20 30 22.4	
TIXI				*e*S	**S**	**20 34 03.1**	**-7.1**
TIXI				*e*SS	SS	20 36 55.0	+1.3
TIXI				*e*		20 38 14.6	
TIXI				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,7µm,15.0s,MS5.6						
CHRT	**Chiangrai**	**39.28**	**261**	⇑P	**P**	**20 28 12.0**	**-2.0**
	comp=Z,421nm,0.8s,mb6.2						
NIKO	**Nikolski**	**40.35**	**45**	P	**P**	**20 28 21.9**	**-0.6**
CHG	**Chiang Mai**	**40.48**	**260**	⇑P	**P**	**20 28 22.7**	**-1.3**
	comp=Z,117nm,1.0s,mb5.6						
NST	**Nakhon Sawan**	**41.13**	**255**	⇑P	**P**	**20 28 29.5**	**+0.3**
	comp=Z,75nm,1.0s,mb5.3						
UNV	**Unalaska Valle**	**41.87**	**44**	*e*P	**P**	**20 28 33.4**	**-1.5**
	comp=Z,83nm,0.9s,mb5.4						
UNV				LR	LR		
	comp=Z,8µm,20.0s,MS5.6						
WMQ	**Urumqi**	**42.63**	**301⇑**	*i*P	**P**	**20 28 42.1**	**+0.8**
WMQ				AP	pP	20 28 46.5	+2.5
WMQ				XP	sP	20 28 49.0	+3.8
WMQ				PP	PP	20 30 24.0	+1.0
WMQ				S	**S**	**20 35 04.0**	**-0.1**
WMQ				SS	SS	20 38 08.0	-0.1
WMQ				SCS	ScS	20 38 41.0	+0.1
WMQ				AMB	AMB		
	comp=Z,160nm,1.2s,mb5.6						
WMQ				AMB	AMB		
	comp=Z,2µm,3.8s						
WMQ				LR	LR		
	comp=N,13µm,18.8s,MS6.0						
WMQ				LR	LR		
	comp=E,10µm,15.4s,MS6.0						
WMQ				LR	LR		
	comp=Z,8µm,17.0s,MS5.7						
LSA	**Lhasa**	**42.67**	**279**	P	**P**	**20 28 42.4**	**+0.6**
LSA				S	**S**	**20 34 54.9**	**-10**
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
LSA				AMB	AMB		
	comp=Z,770nm,11.0s						
LSA				LR	LR		
	comp=N,2µm,17.0s,MS5.5						
LSA				LR	LR		
	comp=E,4µm,18.0s,MS5.5						
LSA				LR	LR		
	comp=Z,5µm,19.0s,MS5.4						
LSA	**Lhasa**	**42.67**	**279**	*e*P	**P**	**20 28 41.9**	**+0.1**
	comp=Z,25nm,0.9s,mb5.0						
LSA				LR	LR		
	comp=Z,6µm,20.0s,MS5.5						
LSA	**Lhasa**	**42.67**	**279**	*e*P	**P**	**20 28 41.9**	**+0.1**
LSA				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.9						
LSA				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.5						
PMG	**Port Moresby**	**42.78**	**172**	P	**P**	**20 28 42.9**	**0.0**
	comp=Z,6.9nm,0.5s,mb4.6,baz=313,slow=4.5,SNR=2.2						
PMG	**Port Moresby**	**42.78**	**172**	*e*P	**P**	**20 28 42.6**	**-0.3**
	comp=Z,37nm,1.0s,mb5.1						
PMG				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
PMG	**Port Moresby**	**42.78**	**172**	*e*P	**P**	**20 28 42.7**	**-0.2**
PMG				pmax	pmax		
	comp=Z,37nm,1.0s						
PMG				MLR	MLR		
	comp=Z,2µm,19.0s						
KSM	**Kuching**	**43.01**	**229⇑**	*e*P	**P**	**20 28 44.5**	**-0.2**
NNT	**Nongplab**	**43.17**	**252**	P	**P**	**20 28 45.8**	**-0.3**
SHL	**Shillong**	**43.48**	**273**	*e*P	**P**	**20 28 48.5**	**+0.1**
SHL				*e*x	x	20 35 34.0	
TNA	**Tin City**	**44.17**	**28**	PFAKE		20 29 00.0	+6.5
TNA				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
ZAL	**Zalesovo**	**44.52**	**315**	P	**P**	**20 28 56.6**	**+0.1**
	comp=Z,18nm,0.9s,mb4.9,baz=9.0,slow=8.2,SNR=101						
ZAL				PcP	PcP	20 30 39.0	-1.3
	comp=Z,14nm,0.9s,baz=22,slow=3.8,SNR=4.9						
ZAL				LR	LR	20 48 54.3	
	comp=Z,6µm,18.8s,MS5.5,baz=16,slow=38						
NVS	**Novosibirsk**	**45.50**	**316**	*e*P	**P**	**20 29 02.7**	**-1.6**
NVS				*e*		20 30 37.3	
NVS				*e*S	**S**	**20 35 40.6**	**-4.8**
NVS				pmax	pmax		
	comp=N,12nm,1.0s						
NVS				pmax	pmax		
	comp=E,47nm,1.0s						
NVS				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.3						
NVS				pmax	pmax		
	comp=Z,34nm,1.7s,mb4.9						
NVS				pmax	pmax		
	comp=N,13nm,1.2s						
NVS				pmax	pmax		
	comp=E,31nm,1.7s						
NVS				smax			
	comp=N,37nm,2.1s						
NVS				smax			
	comp=E,28nm,2.1s						
SDPT	**Sand Point**	**45.51**	**43**	P	**P**	**20 29 02.9**	**-1.5**
SNG	**Songkhla**	**45.79**	**245**	P	**P**	**20 29 07.5**	**+0.4**
HNR	**Honiara**	**45.98**	**154**	PFAKE		20 29 20.0	+11
HNR				LR	LR		
	comp=Z,4µm,21.0s,MS5.3						
MKAR	**Makanchi Array**	**46.19**	**305**	P	**P**	**20 29 10.1**	**+0.2**
	comp=Z,34nm,0.8s,mb5.3,baz=88,slow=8.5,SNR=190						
MKAR				PcP	PcP	20 30 45.9	-0.3
	comp=Z,23nm,0.9s,baz=90,slow=2.4,SNR=4.7						
MKAR				ScP		20 34 37.4	
	comp=Z,4.3nm,0.9s,baz=79,slow=6.2,SNR=4.2						
MKAR				LR	LR	20 50 31.7	
	comp=Z,3µm,19.9s,MS5.3,baz=91,slow=39						
MKAR	**Makanchi Array**	**46.19**	**305**	P	**P**	**20 29 10.1**	**+0.2**
MKAR				PcP	PcP	20 30 45.9	-0.3
MKAR				ScP		20 34 37.4	
MKAR				LR	LR	20 50 31.7	
MKAR	**Makanchi Array**	**46.19**	**305**	*i* P	**P**	**20 29 09.8**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,68nm,1.0s						
KAKA	**Kakadu**	**46.51**	**192⇑**	*i*P	**P**	**20 29 31.7**	**+19**
	comp=Z,227nm,0.8s,mb6.2						
KULM	**Kulim**	**46.99**	**243**	*e*P	**P**	**20 29 16.9**	**+0.3**
KULM				*e*PcP	PcP	20 30 49.4	0.0
IPM	**Ipoh**	**47.19**	**242**	P	**P**	**20 29 18.3**	**+0.1**
KGM	**Kluang**	**47.30**	**237**	P	**P**	**20 29 19.1**	**+0.1**
GUN	**Gumba**	**47.62**	**279**	*e*P	**P**	**20 29 21.5**	**0.0**
	comp=Z,512nm,1.2s,mb6.4						
CAL	**Calcutta**	**47.66**	**271**	*e*P	**P**	**20 29 22.8**	**+0.9**
CAL				*e*x	x	20 40 18.4	
PKI	**Pulchoki**	**48.13**	**279**	*e*P	**P**	**20 29 25.2**	**-0.3**
	comp=Z,239nm,1.1s,mb6.1						
KKN	**Kakani**	**48.16**	**279**	*e*P	**P**	**20 29 25.3**	**-0.4**
	comp=Z,302nm,1.0s,mb6.3						
KURK	**Kurchatov**	**48.31**	**311⇑**	*e*P	**P**	**20 29 26.1**	**-0.4**
	comp=Z,120nm,0.9s,mb5.9						
KURK				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
KURK	**Kurchatov**	**48.31**	**311⇑**	*e*P	**P**	**20 29 26.1**	**-0.4**
KURK				pmax	pmax		
	comp=Z,120nm,0.9s,mb5.9						
KURK				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.0						
DMN	**Daman**	**48.37**	**279**	*e*P	**P**	**20 29 27.0**	**-0.3**
	comp=Z,200nm,1.1s,mb6.1						
SVW2	**Sparrevohn**	**48.56**	**35**	*e*P	**P**	**20 29 28.6**	**+0.3**
GKN	**Gorkha**	**48.62**	**280**	*e*P	**P**	**20 29 28.6**	**-0.6**
	comp=Z,536nm,1.2s,mb6.5						
BOK	**Bokaro**	**49.19**	**274**	*e*P	**P**	**20 29 32.9**	**-0.7**
BOK				AMb	AMB	20 29 35.0	
	comp=Z,79nm,0.9s,mb5.7						
KOLN	**Koldanda**	**49.56**	**280**	*e*P	**P**	**20 29 36.2**	**-0.2**
	comp=Z,517nm,1.5s,mb6.3						
KDAK	**Kodiak Island**	**49.96**	**40**	P	**P**	**20 29 38.0**	**-1.1**
	comp=Z,44nm,0.7s,mb5.6,baz=240,slow=8.4,SNR=15						
IMA2	**Indian Mountai**	**49.96**	**29**	*e*P	**P**	**20 29 37.1**	**-1.9**
AAA	**Alma-Ata**	**50.45**	**301**	*e*P	**P**	**20 29 44.0**	**+1.0**
AAA				*e*S	**S**	**20 36 54.5**	**-0.8**
AAA				pmax	pmax		
	comp=Z,1µm,6.0s						
AAA				smax			
	comp=N,2µm,3.7s						
AAA				MLR	MLR		
	comp=Z,5µm,9.0s						
SLKM	**Skilak Lake**	**51.16**	**36**	*e*P	**P**	**20 29 47.2**	**-1.0**
FIB	**Fire Island**	**51.19**	**35**	PFAKE		20 30 00.0	+12
FIB				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
TKM2	**Tokmak 2**	**51.49**	**301**	P	**P**	**20 29 51.6**	**+0.7**
	SNR=9.9						
PMR	**Palmer**	**51.69**	**35**	*e*P	**P**	**20 29 50.2**	**-2.0**
	comp=Z,30nm,0.8s,mb5.3						
PMR				LR	LR		
	comp=Z,3µm,19.0s,MS5.3						
PMR	**Palmer**	**51.69**	**35**	*e*P	**P**	**20 29 50.2**	**-2.0**
PMR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
PMR				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.3						
PTH	**Pithoragarh**	**51.70**	**283**	*e*P	**P**	**20 29 54.4**	**+1.7**
KZA	**Kyzart**	**51.92**	**300**	P	**P**	**20 29 55.6**	**+1.4**
	SNR=7.0						
ALBI	**Allahabad**	**51.98**	**278**	*e*P	**P**	**20 29 52.0**	**-2.9**

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KBK   Karagaybulak     52.01 301   P     P      20 29 55.5 +0.6
       SNR=22
KSH   Kashi            52.01 297⇑iP     P      20 29 56.3 +1.4
KSH                                AP    pP     20 30 01.1 +3.4
KSH                                XP    sP     20 30 04.3 +5.5
KSH                                PCP   PcP    20 31 08.3 +0.9
KSH                                PP    PP     20 31 56.1 +2.3
KSH                                PCS          20 35 05.0
KSH                                S     S      20 37 17.5 +0.6
KSH                                XS           20 37 27.3
KSH                                LR    LR
       comp=N,7µm,13.4s,MS6.1
KSH                                LR    LR
       comp=E,10µm,14.9s,MS6.1
SML   Sawmill          52.07  35  eP     P      20 29 52.8 -2.3
CHMS  Chumysh          52.08 301   P     P      20 29 55.3 -0.1
       SNR=11
USP   Ospenovka        52.20 302   P     P      20 29 56.4 +0.1
       SNR=9.4
FRU   Bishkek          52.21 301  eP     P      20 29 56.0 -0.4
FRU                                MLR   MLR
       comp=Z,8µm,16.0s,MS5.8
COLA  College          52.30  31  eP     P      20 29 56.8  0.0
       comp=Z,16nm,0.9s,mb5.0
COLA                               LR    LR
       comp=Z,2µm,20.0s,MS5.0
COLA  College          52.30  31  eP     P      20 29 56.5 -0.2
COLA                               pmax  pmax
       comp=Z,16nm,0.9s,mb5.0
AAK   Ala-Archa        52.34 301   P     P      20 29 57.6 +0.2
       SNR=6.2
AAK   Ala-Archa        52.34 301  eP     P      20 29 56.3 -1.1
       comp=Z,35nm,1.0s,mb5.2
AAK                                LR    LR
       comp=Z,629nm,19.0s,MS4.7
UCH   Uchtor           52.42 300   P     P      20 29 59.2 +1.2
       SNR=12
ILAR  Eielson Array    52.71  31   P     P      20 29 57.8 -2.1
       comp=Z,11nm,0.8s,mb4.9,baz=268,slow=5.9,SNR=85
ILAR                               LR    LR     20 52 54.0
       comp=Z,2µm,18.7s,MS5.1,baz=33,slow=37
EKS2  Erkin-Say        52.85 301   P     P      20 30 01.2  0.0
       SNR=5.6
CHKZ  Chkalovo         52.92 315  eP     P      20 30 00.8 -0.8
       comp=Z,132nm,1.0s,mb5.8
BLSP  Bilaspur         53.02 274  eP     P      20 30 02.2 -0.5
BLSP                               AMb   AMB    20 30 03.5
       comp=Z,149nm,1.3s,mb5.8
AML   Almayashu        53.04 301   P     P      20 30 03.7 +1.1
       SNR=22
BVA0  Borovoye Array   53.15 314  i P    P      20 30 02.7 -0.5
BVA0                               pmax  pmax
       comp=Z,17nm,1.1s,mb4.9
BVAR  Borovoye Array   53.15 314   P     P      20 30 02.8 -0.4
       comp=Z,56nm,0.9s,mb5.5,baz=90,slow=7.4,SNR=173
BVAR                               PcP   PcP    20 31 11.0 -0.4
       comp=Z,13nm,0.6s,baz=92,slow=4.5,SNR=4.6
BRVK  Borovoye         53.21 315⇑eP     P      20 30 03.2 -0.5
       comp=Z,62nm,1.0s,mb5.5
BRVK                               LR    LR
       comp=Z,640nm,22.0s,MS4.6
BRVK  Borovoye         53.21 315⇑eP     P      20 30 03.2 -0.5
BRVK                               pmax  pmax
       comp=Z,62nm,1.0s,mb5.5
BRVK                               MLR   MLR
       comp=Z,640nm,22.0s,MS4.6
FITZ  Fitzroy Crossi   53.25 199⇑iP     P      20 30 05.0 +0.6
       comp=Z,164nm,0.8s,mb6.0
CTA   Charters Tower   53.25 174  eP     P      20 30 04.7 +0.3
       comp=Z,12nm,0.8s,mb4.9
CTA   Charters Tower   53.25 174   P     P      20 30 04.7 +0.3
       comp=Z,18nm,0.9s,mb5.0,baz=345,slow=10,SNR=8.9
CTA   Charters Tower   53.25 174  eP     P      20 30 04.7 +0.3
CTA                                pmax  pmax
       comp=Z,12nm,0.8s
CTAO  Charters Tower   53.25 174  eP     P      20 30 04.5  0.0
       comp=Z,48nm,1.4s,mb5.2
CTAO                               LR    LR
       comp=Z,2µm,21.0s,MS5.0
CTAO  Charters Tower   53.25 174  eP     P      20 30 04.5 +0.1
CTAO                               pmax  pmax
       comp=Z,48nm,1.4s,mb5.2
CTAO                               MLR   MLR
       comp=Z,2µm,21.0s,MS5.0
WRAB  Tennant Creek    53.32 188⇑eP     P      20 30 04.5 -0.5
       comp=Z,126nm,0.9s,mb5.8
WRAB                               LR    LR
       comp=Z,643nm,21.0s,MS4.7
WRAB  Tennant Creek    53.32 188⇑eP     P      20 30 04.5 -0.5
WRAB                               pmax  pmax
       comp=Z,126nm,0.9s,mb5.8
WRAB                               MLR   MLR
       comp=Z,643nm,21.0s,MS4.7
DIV   Divide           53.32  35  eP     P      20 30 04.3 -0.1
       comp=Z,183nm,1.2s,mb5.9
DIV                                LR    LR
       comp=Z,7µm,19.0s,MS5.8
WB2   Warramunga Arr   53.33 188  eP     P      20 30 04.2 -0.8
WRA   Warramunga Arr   53.33 188   P     P      20 30 04.5 -0.5
       comp=Z,93nm,0.8s,mb5.7,baz=5.8,slow=7.6,SNR=341
WRA                                S     S      20 37 29.7 -5.5
       comp=Z,2.7nm,1.1s,baz=3.1,slow=14,SNR=3.2
SMLA  Simla            53.62 286  eP     P      20 30 04.9 -2.1
SMLA                              ex     x      20 30 18.0
VIS   Vishakhapatnam   54.02 268  eP     P      20 30 10.1 +0.1
VIS                                AMb   AMB    20 30 11.8
       comp=Z,96nm,1.2s,mb5.6
DLH   Dalhousie        54.09 288  eP     P      20 30 11.0 +0.6
BHK   Bhakra           54.12 287  ex     x      20 30 15.0
MENT  Mentasta         54.17  33  eP     P      20 30 12.3 +1.7
THN   Thein Dam        54.33 288  eP     P      20 30 10.6 -1.5
KIP   Kipapa           54.44  86⇓eP     P      20 30 13.8 +0.7
NDI   New Delhi        54.46 284  eP     P      20 30 11.5 -1.7
NDI                               ex     x      20 37 46.0
KKAR  Karatay Array    55.07 302  i P    P      20 30 17.2 -0.3
KKAR                               pmax  pmax
       comp=Z,94nm,1.1s,mb5.7
DAWY  Dawson           56.00  31  eP     P      20 30 22.6 -1.2
ASPA  Alice Springs    57.06 188⇓iP     P      20 30 32.1  0.0
POHA  Pohakuloa        57.26  87   PFAKE        20 30 50.0  +16
POHA                               LR    LR
       comp=Z,7µm,19.0s,MS5.8
AJM   Ajmer            57.42 282  eP     P      20 30 33.6 -1.0
AJM                                AMb   AMB    20 30 35.2
       comp=Z,106nm,1.3s,mb5.7
INK   Inuvik           57.76  26  eP     P      20 30 34.9 -1.5
       comp=Z,13nm,1.1s,mb4.9
INK   Inuvik           57.76  26  eP     P      20 30 34.9 -1.5
INK                                pmax  pmax
       comp=Z,13nm,1.1s
AKL   Akola            57.92 275⇓ix     x      20 29 49.4
AKL                               i x    x      20 37 48.0
MBWA  Marble Bar       57.93 204⇑eP     P      20 30 38.2  0.0
       comp=Z,109nm,0.7s,mb6.0
MBWA                               LR    LR
       comp=Z,1µm,19.0s,MS5.0
SVE   Sverdlovsk       58.00 320⇑iP     P      20 30 37.6 -0.6
SVE                               e             20 32 44.0
SVE                               eS     S      20 38 28.0 -8.9
SVE                               ePS    PS     20 38 56.0 +5.0
SVE                               eSS    SS     20 42 24.0 -5.6
SVE                                pmax  pmax
       comp=Z,204nm,1.0s,mb6.1
SVE                                MLR   MLR
       comp=N,3µm,15.0s,MS5.7
SVE                                MLR   MLR
       comp=E,4µm,15.0s,MS5.7
SVE                                MLR   MLR
       comp=Z,6µm,15.0s,MS5.8
HYB   Hyderabad        58.16 271⇑iP     P      20 30 39.0 -0.8
       comp=Z,130nm,1.0s,mb5.9
HYB                               ePcP   PcP    20 31 29.0 -2.2
HYB                               eS     S      20 38 40.0 +0.4
HYB   Hyderabad        58.16 271  eP     P      20 30 39.0 -0.8
       comp=Z,130nm,1.0s,mb5.9
HYB                               eS     S      20 38 48.0 +8.4
HYB   Hyderabad        58.16 271  eP     P      20 30 39.0 -0.8
HYB                               eS     S      20 38 48.0 +8.4
HYB                                pmax  pmax
       comp=Z,130nm,1.0s,mb5.9
ARU   Arti             59.20 320⇑iP     P      20 30 45.8 -0.8
ARU                               e             20 31 33.0
ARU                               eS     S      20 38 54.8 +2.1
ARU                               e             20 40 33.4
ARU                               eSS    SS     20 42 46.7 -2.0
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ARU                                pmax  pmax
       comp=Z,144nm,0.9s,mb6.0
ARU                                MLR   MLR
       comp=N,3µm,17.0s,MS5.6
ARU                                MLR   MLR
       comp=Z,5µm,17.0s,MS5.7
ARU                                MLR   MLR
       comp=E,4µm,18.0s,MS5.6
SIT   Sitka            59.28  39   PFAKE        20 31 00.0  +13
SIT                                LR    LR
       comp=Z,3µm,19.0s,MS5.5
SOKR  Solikamsk        59.34 324⇑iP     P      20 30 47.1 -0.4
SOKR                              i S    S      20 38 55.7 +1.3
SOKR                               pmax  pmax
       comp=Z,60nm,1.4s,mb5.4
SOKR                               MLR   MLR
       comp=Z,7µm,18.0s,MS5.8
LATR  Latur            59.36 273  eP     P      20 30 48.3 +0.1
AB31  Akbulak array    60.40 312  i P    P      20 30 53.6 -1.3
AB31                               pmax  pmax
       comp=Z,24nm,0.7s,mb5.3
AKTO  Aktyubinsk       61.22 314   LR    LR     20 58 06.2
       comp=Z,2µm,20.5s,MS5.2,slow=37
AKTO  Aktyubinsk       61.22 314   P     P      20 30 58.9 -1.6
AKTO                               pmax  pmax
       comp=Z,18nm,1.1s,mb5.1
POO   Poona            61.57 274  eP     P      20 31 03.8 +0.6
POO                                AMb   AMB    20 31 05.6
       comp=Z,281nm,1.0s,mb6.3
PALK  Pallekele        61.61 260  eP     P      20 31 03.2 -0.4
       comp=Z,62nm,1.2s,mb5.6
PALK                               LR    LR
       comp=Z,563nm,21.0s,MS4.7
DLBC  Dease Lake       61.63  37   P     P      20 31 03.5 +0.3
KAD   Karad            61.87 273  eP     P      20 31 04.4 -0.9
KAD                                AMb   AMB    20 31 06.1
       comp=Z,279nm,1.2s,mb6.3
COCO  West Island      62.02 231   PFAKE        20 31 20.0  +14
COCO                               LR    LR
       comp=Z,280nm,19.0s,MS4.4
ORR   Orenburg         62.78 316⇑iP     P      20 31 09.9 -1.0
ORR                                MLR   MLR
       comp=Z,3µm,17.0s,MS5.6
BHJ   Bhuj             62.89 281  eP     P      20 31 11.3 -0.7
BHJ                                AMb   AMB    20 31 13.5
       comp=Z,113nm,1.4s,mb5.8
MNGI  Mangalore        63.50 268  eP     P      20 31 15.6 -0.6
MNGI                              ex     x      20 39 59.9
TRD   Trivandrum       64.03 263  eP     P      20 31 19.0 -0.7
TRD                                AMb   AMB    20 31 21.0
       comp=Z,64nm,1.1s,mb5.6
KBS   Kingsbay         64.36 350  eP     P      20 31 22.4 +1.5
KBS                               eS     S      20 39 58.2 +0.5
KBS                                AMS   AMS    21 02 46.7
       comp=Z,773nm,19.5s,MS4.9
KBS   Kingsbay         64.36 350  eP     P      20 31 22.4 +1.5
KBS                               e             20 39 59.8
AFI   Afiamalu         64.77 128   PFAKE        20 31 40.0  +16
AFI                                LR    LR
       comp=Z,3µm,20.0s,MS5.5
STKA  Stephens Creek   64.79 180⇓iP     P      20 31 24.9 +0.5
       comp=Z,21nm,0.8s,mb5.2
STKA  Stephens Creek   64.79 180   P     P      20 31 24.4  0.0
       comp=Z,18nm,0.7s,mb5.2,baz=348,slow=8.2,SNR=26
STKA                               LR    LR     20 58 48.2
       comp=Z,3µm,20.4s,MS5.4,baz=131,slow=35
FORT  Forrest          64.93 193  eP     P      20 31 25.9 +0.6
       comp=Z,144nm,0.8s,mb6.0
APA   Apatity          66.12 336⇓iP     P      20 31 31.0 -1.3
APA                               i             20 31 42.0
APA                               e             20 32 00.0
APA                               i S    S      20 40 20.0 +0.6
APA                               i             20 41 26.0
APA                               eSS    SS     20 44 29.0 -7.4
APA                                pmax  pmax
       comp=Z,44nm,1.0s,mb5.4
APA                                MLR   MLR
       comp=Z,8µm,19.0s,MS6.0
PECR  Pechory          66.81 323  i P    P      20 31 36.0 -0.8
PECR                               MLR   MLR
       comp=E,4µm,18.0s,MS5.9
PECR                               MLR   MLR
       comp=Z,10µm,18.0s,MS6.0
PECR                               MLR   MLR
       comp=N,4µm,16.0s,MS5.9
KLMR  Klimovskoe       66.95 329c iP    P      20 31 36.8 -0.9
KLMR                              eS     S      20 40 27.6 -1.8
KLMR                               pmax  pmax
       comp=Z,70nm,1.4s,mb5.5
KLMR                               pmax  pmax
       comp=Z,220nm,5.2s
KLMR                               smax
       comp=E,1µm,5.2s
KLMR                               MLR   MLR
       comp=Z,4µm,17.0s,MS5.7
KEV   Kevo             66.96 340  eP     P      20 31 36.9 -0.8
       comp=Z,36nm,1.1s,mb5.3
KEV                                LR    LR
       comp=Z,4µm,19.0s,MS5.6
KEV   Kevo             66.96 340  eP     P      20 31 36.9 -0.8
KEV                                pmax  pmax
       comp=Z,36nm,1.1s,mb5.3
KEV                                MLR   MLR
       comp=Z,4µm,19.0s,MS5.6
YKW3  Yellowknife Ar   67.05  29  eP     P      20 31 36.1 -2.2
YKA   Yellowknife Ar   67.08  29   P     P      20 31 36.7 -1.8
       comp=Z,9.8nm,0.8s,mb4.9,baz=296,slow=6.3,SNR=18
YKA   Yellowknife Ar   67.08  29   P     P      20 31 36.7 -1.8
ARCES ARCESS Array B   67.52 340   P     P      20 31 39.9 -1.3
       comp=Z,19nm,0.9s,mb5.1,baz=40,slow=9.5,SNR=11
ARCES                              PP    PP     20 34 08.0 -3.9
       comp=Z,5.1nm,1.0s,baz=18,slow=3.8,SNR=5.3
ARCES                              LR    LR     21 06 44.7
       comp=Z,4µm,18.7s,MS5.6,baz=62,slow=41
ARE0  ARCESS Array S   67.52 340  eP     P      20 31 40.6 -0.6
ADE   Adelaide         67.92 182   P     P      20 31 45.0 +0.7
KLBR  Kellerberrin     68.26 202  eP     P      20 31 46.4  0.0
       comp=Z,56nm,0.9s,mb5.6
OCWA  Octopus Mounta   68.95  46  eP     P      20 31 49.9 -0.5
       comp=Z,75nm,1.2s,mb5.5
OCWA                               LR    LR
       comp=Z,2µm,20.0s,MS5.3
PGC   Sidney           68.98  45  eP     P      20 31 50.7 +0.1
       comp=Z,60nm,0.9s,mb5.5
MUN   Mundaring        69.11 203  eP     P      20 31 51.3 -0.4
TRO   Tromso           69.28 342  eP     P      20 31 52.1  0.0
TRO                                AMS   AMS    21 08 28.1
       comp=Z,3µm,16.8s,MS5.6
JOF   Joensuu          69.29 333  ep     P      20 31 50.8 -1.4
       comp=Z,14nm,0.6s,mb5.1
JOF   Joensuu          69.29 333  eP     P      20 31 50.8 -1.4
JOF                                pmax  pmax
       comp=Z,14nm,0.6s,mb5.1
DAG   Danmarks Havn    69.52 355⇓iP     P      20 31 52.9 -0.6
       comp=Z,7.7nm,0.5s,mb4.9
DAG   Danmarks Havn    69.52 355⇓eP     P      20 31 52.9 -0.6
       comp=Z,7.8nm,0.5s,mb4.9
DAG   Danmarks Havn    69.52 355⇓eP     P      20 31 52.9 -0.6
DAG                                pmax  pmax
       comp=Z,8.0nm,0.5s,mb4.9
NWAO  Narrogin (SRO)   69.66 202   P     P      20 31 55.4 +0.4
       baz=25,slow=7.2
NWAO  Narrogin (SRO)   69.66 202  eP     P      20 31 55.1 +0.1
       comp=Z,80nm,0.8s,mb5.7
NWAO                               LR    LR
       comp=Z,839nm,21.0s,MS5.0
NWAO  Narrogin (SRO)   69.66 202  eP     P      20 31 55.1 +0.1
NWAO                               pmax  pmax
       comp=Z,80nm,0.8s
NWAO                               MLR   MLR
       comp=Z,839nm,21.0s
GNW   Green Mountain   69.85  46   P     P      20 31 56.8 +0.9
MOS   Moscow           70.28 324κ iP    P      20 31 57.1 -1.3
MOS                               e             20 34 32.5
MOS                                pmax  pmax
       comp=Z,158nm,1.4s,mb5.8
MOS                                MLR   MLR
       comp=Z,5µm,17.0s,MS5.9
TTW   Tolt Reservoir   70.47  45   P     P      20 32 00.2 +0.5
VRHR  Novokhopersk     70.49 319  eP     P      20 31 57.6 -2.2
VRHR                               pmax  pmax
       comp=Z,50nm,0.8s,mb5.5
VRHR                               pmax  pmax
       comp=N,20nm,1.3s
VRHR                               pmax  pmax
       comp=E,10.0nm,0.9s
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TOO   Toolangi         70.57 177  eP     P      20 32 02.0 +1.5
       comp=E,9.2nm,0.7s,mb4.8
TOO   Toolangi         70.57 177  eP     P      20 32 02.0 +1.5
TOO                                pmax  pmax
       comp=Z,9.0nm,0.7s,mb4.8
MAK   Makhachkala      70.80 309  eP     P      20 32 02.0 +0.2
MAK                               e             20 34 42.0
MAK                                S     S      20 41 18.0 +2.6
MAK                               e             20 42 04.0
MAK                                pmax  pmax
       comp=Z,2µm,6.0s
MAK                                MLR   MLR
       comp=Z,10µm,15.0s,MS6.2
MAK                                MLR   MLR
       comp=N,10µm,15.0s,MS6.3
MAK                                MLR   MLR
       comp=E,11µm,16.0s,MS6.3
LON   Longmire         70.84  46   P     P      20 32 04.4 +2.4
COR   Corvallis        70.94  49  eP     P      20 32 03.3 +0.7
       comp=E,68nm,1.0s,mb5.5
COR                                LR    LR
       comp=Z,2µm,19.0s,MS5.3
COR   Corvallis        70.94  49  eP     P      20 32 03.3 +0.7
COR                                pmax  pmax
       comp=Z,68nm,1.0s,mb5.5
COR                                MLR   MLR
       comp=Z,2µm,19.0s,MS5.3
KEBM  Edson Butte      71.08  51  eP     P      20 32 04.0 +0.4
OBN   Obninsk          71.12 324  eP     P      20 32 02.9 -0.6
       comp=Z,115nm,1.3s,mb5.7
OBN                                LR    LR
       comp=Z,1µm,19.0s,MS5.3
OBN   Obninsk          71.12 324c iP    P      20 32 02.8 -0.7
OBN                               i             20 32 20.5
OBN                               i S    S      20 41 18.3 -0.6
OBN                                pmax  pmax
       comp=Z,99nm,1.2s,mb5.6
OBN                                MLR   MLR
       comp=Z,6µm,14.0s,MS6.0
TBM   Table Mountain   71.37  45   P     P      20 32 05.6 +0.4
PUL   Pulkovo          71.44 330  eP     P      20 31 57.0 -8.4
PUL                                pmax  pmax
       comp=Z,979nm,0.6s
PUL                                MLR   MLR
       comp=Z,3µm,17.0s,MS5.7
PUL                                MLR   MLR
       comp=N,2µm,13.0s,MS5.8
PUL                                MLR   MLR
       comp=E,4µm,18.0s,MS5.8
VOR   Voronezh         71.50 320  eP     P      20 32 04.0 -1.8
VOR                                pmax  pmax
       comp=N,30nm,2.0s
VOR                                pmax  pmax
       comp=Z,140nm,2.0s,mb5.5
EBG   Ellensburg       71.51  46   P     P      20 32 06.7 +0.6
HOOD  Mount Hood Mea   71.62  48   P     P      20 32 07.6 +0.9
KAF   Kangasniemi      71.66 333  ep     P      20 32 05.5 -1.1
       comp=Z,28nm,0.8s,mb5.2,baz=44,slow=5.5
KAF   Kangasniemi      71.66 333  eP     P      20 32 05.5 -1.1
KAF                                pmax  pmax
       comp=Z,28nm,0.8s,mb5.2
VFP   Flag Point       71.74  47   P     P      20 32 08.2 +0.8
WBK   Wadi Bani Khal   71.90 285   P     P      20 32 09.5 +0.7
       SNR=36
HBO   Huckleberry Mo   71.91  49   P     P      20 32 09.2 +0.7
HUMO  Hull Mountain    72.10  51  eP     P      20 32 09.2 -0.4
       comp=Z,18nm,1.2s,mb4.9
HUMO                               LR    LR
       comp=Z,1µm,20.0s,MS5.2
BIDO  Bidbid           72.14 287   P     P      20 32 11.3 +1.1
       SNR=26
FINES FINESS Array B   72.15 333   P     P      20 32 08.1 -1.5
       comp=Z,29nm,0.8s,mb5.3,baz=72,slow=6.0,SNR=40
FINES                              PP    PP     20 34 44.6 -7.0
       comp=Z,6.7nm,0.9s,baz=63,slow=6.2,SNR=2.6
FINES                              LR    LR     21 06 50.0
       comp=Z,2µm,18.4s,MS5.4,baz=59,slow=38
FINES FINESS Array B   72.15 333   P     P      20 32 08.1 -1.5
FINES                              PP    PP     20 34 44.6 -7.0
FINES                              LR    LR     21 06 50.0
FINES FINESS Array B   72.15 333  i P    P      20 32 08.8 -0.8
FINES                              pmax  pmax
       comp=Z,29nm,0.8s
EDM   Edmonton         72.33  38  eP     P      20 32 09.6 -1.2
EDM   Edmonton         72.33  38   P     P      20 32 09.9 -0.9
OD2   Odessa Site #2   72.38  45   P     P      20 32 11.1 -0.1
HAWA  Hanford          72.39  46  eP     P      20 32 09.3 -2.0
       comp=Z,1.7nm,1.0s
HAWA                               LR    LR
       comp=Z,83nm,19.0s
SMDO  Samad            72.42 286   P     P      20 32 12.3 +0.4
       SNR=15
KHMM  Horse Mountain   72.43  52  eP     P      20 32 12.5 +0.9
BANOM Banah            72.43 290 ⇑P     P      20 32 12.4 +0.5
       SNR=53
GOF   Gofitskoye       72.62 313⇑iP     P      20 32 12.4 -0.2
GOF                                pmax  pmax
       comp=Z,170nm,1.0s,mb5.9
VIPM  Ingram Point     72.66  48   P     P      20 32 13.5 +0.7
YBH   Yreka Blue Hor   72.69  51  eP     P      20 32 13.6 +0.5
       comp=Z,29nm,1.1s,mb5.1
YBH                                LR    LR
       comp=Z,2µm,20.0s,MS5.3
YBH   Yreka Blue Hor   72.69  51  eP     P      20 32 13.6 +0.5
YBH                                pmax  pmax
       comp=Z,29nm,1.1s
YBH                                MLR   MLR
       comp=Z,2µm,20.0s
JMDO  Jabal Madar      72.71 286   P     P      20 32 13.8 +0.2
       SNR=25
BUOR  Burton Butte     72.72  51   P     P      20 32 14.0 +0.7
HOQ   Hoqain           72.76 287   P     P      20 32 14.6 +0.7
       SNR=21
NEW   Newport          72.86  43  eP     P      20 32 13.0 -1.0
       comp=Z,28nm,0.9s,mb5.2
NEW                                LR    LR
       comp=Z,1µm,19.0s,MS5.2
NEW   Newport          72.86  43  eP     P      20 32 13.0 -1.0
NEW                                pmax  pmax
       comp=Z,28nm,0.9s
NEW                                MLR   MLR
       comp=Z,1µm,19.0s
MOR8  Moi Rana         72.89 340⇑iP     P      20 32 12.4 -1.4
MOR8  Moi Rana         72.89 340  eP     P      20 32 12.5 -1.3
DGRG  David-gareji     72.91 309   P     P      20 32 14.2 -0.2
KCPM  Cahto Peak       73.11  53  eP     P      20 32 15.9 +0.4
KIPM  Iron Peak        73.11  53  eP     P      20 32 14.2 -1.5
RAO   Raoul Island     73.15 143   PFAKE        20 32 30.0  +14
RAO                                LR    LR
       comp=Z,1µm,20.0s,MS5.2
MTA   Mtatsminda       73.17 309   P     P      20 32 16.3 +0.4
MTA                                S     S      20 41 42.4 -0.1
TBLG  Delisi           73.19 309   P     P      20 32 16.4 +0.4
ZEI   Tsey             73.21 310  eP     P      20 32 14.0 -2.1
ZEI                               i             20 32 30.5
ZEI                               i             20 34 54.8
ZEI                                pmax  pmax
       comp=Z,70nm,1.2s,mb5.5
ASHO  Ashiyiah         73.22 289   P     P      20 32 17.0 +0.4
       SNR=42
BSY   Bisya            73.26 286   P     P      20 32 17.3 +0.5
       SNR=72
WDC   Whiskeytown Da   73.36  52  eP     P      20 32 16.7 -0.3
       comp=Z,28nm,1.0s,mb5.2
WDC                                LR    LR
       comp=Z,1µm,19.0s,MS5.3
WDC   Whiskeytown Da   73.36  52  eP     P      20 32 16.7 -0.4
WDC                                pmax  pmax
       comp=Z,29nm,1.0s,mb5.2
WDC                                MLR   MLR
       comp=Z,1µm,19.0s,MS5.3
KIV   Kislovodsk       73.39 312⇑eP     P      20 32 17.6 +0.4
KIV                                LR    LR
       comp=Z,861nm,21.0s,MS5.0
KIV   Kislovodsk       73.39 312c iP    P      20 32 17.7 +0.6
KIV                               e             20 32 34.4
KIV                               e             20 35 00.1
KIV                               ePPP   PPP    20 36 44.8 -1.6
KIV                               eS     S      20 41 45.6 +0.7
KIV                               eSS    SS     20 46 26.8 -2.7
KIV                                pmax  pmax
       comp=Z,193nm,1.1s,mb5.9
KIV                                MLR   MLR
       comp=Z,4µm,17.0s,MS5.8
ARQ   Araqi            73.51 287   P     P      20 32 19.2 +1.0
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       SNR=27
ONI    Oni               73.59 310    P      P      20 32 19.4 +1.0
ONI                                   S      S      20 41 47.9 +0.6
VSU    Vasula            73.70 330⇑  eP      P      20 32 18.5 -0.1
HOPS   Hopland           73.79  54    PFAKE         20 32 30.0  +10
HOPS                                  LR     LR
       comp=Z,4µm,19.0s,MS5.7
JMIC   Jan Mayen         73.85 350    LR     LR     21 07 43.6
       comp=Z,878nm,18.6s,MS5.1,baz=267,slow=38
JMIC   Jan Mayen         73.85 350    AMS    AMS    21 08 36.3
       comp=Z,849nm,16.5s,MS5.1
GNI    Garni             73.97 308    P      P      20 32 21.7 +1.1
GNI    Garni             73.97 308    LR     LR     21 08 46.3
       comp=Z,3µm,18.3s,MS5.6,baz=326,slow=39
GNI    Garni             73.97 308   eP      P      20 32 21.8 +1.2
       comp=Z,67nm,0.9s,mb5.6
GNI                                   LR     LR
       comp=Z,2µm,20.0s,MS5.5
GNI    Garni             73.97 308   eP      P      20 32 21.8 +1.2
GNI                                   pmax   pmax
       comp=Z,67nm,0.9s
GNI                                   MLR    MLR
       comp=Z,2µm,20.0s
AKH    Akhalkalaki       74.16 309    P      P      20 32 22.4 +0.8
MOD    Modoc             74.16  50⇑  eP      P      20 32 21.4 -0.2
       comp=Z,30nm,1.0s,mb5.2
MOD                                   LR     LR
       comp=Z,2µm,19.0s,MS5.3
BSMT   Bassoo Peak       74.41  43    P      P      20 32 24.0 +1.0
SUMG   Summit            74.45 360   eP      P      20 32 23.5 +0.7
       comp=Z,58nm,1.0s,mb5.5
BMO    Blue Mountains    74.52  46   eP      P      20 32 23.7  0.0
       comp=Z,93nm,1.7s,mb5.4
BMO                                   LR     LR
       comp=Z,836nm,21.0s,MS5.0
BMO    Blue Mountains    74.52  46   eP      P      20 32 23.7  0.0
BMO                                   pmax   pmax
       comp=Z,93nm,1.7s,mb5.4
BMO                                   MLR    MLR
       comp=Z,836nm,21.0s,MS5.0
OHCM   Honcut            74.69  53   eP      P      20 32 24.8  0.0
DIGO   Kars              74.74 308   i P     P      20 32 24.9 -0.1
WVOR   Wild Horse Val    74.95  49   eP      P      20 32 26.2  0.0
       comp=Z,34nm,1.0s,mb5.2
WVOR                                  LR     LR
       comp=Z,2µm,19.0s,MS5.5
WVOR   Wild Horse Val    74.95  49   eP      P      20 32 26.3 +0.1
WVOR                                  pmax   pmax
       comp=Z,34nm,1.0s,mb5.2
WVOR                                  MLR    MLR
       comp=Z,2µm,19.0s,MS5.5
CLDR   Caldiran          75.03 307    P      P      20 32 26.9 +0.2
ARTV   Artvin            75.28 310   i P     P      20 32 28.0 -0.2
SOC    Sochi             75.42 313⇑ iP      P      20 32 29.2 +0.3
SOC    Sochi             75.42 313c iP      P      20 32 29.0 +0.1
SOC                                  e              20 32 36.1
SOC                                  e              20 35 18.8
SOC                                  ePPP    PPP    20 37 00.3 -5.5
SOC                                  i S     S      20 42 07.2 -0.4
SOC                                   pmax   pmax
       comp=Z,80nm,0.9s,mb5.7
SOC                                   pmax   pmax
       comp=Z,311nm,2.0s,mb5.9
MSO    Missoula          75.45  43   eP      P      20 32 29.0  0.0
       comp=Z,37nm,1.3s,mb5.2
MSO                                   LR     LR
       comp=Z,535nm,19.0s,MS4.9
MNK    Minsk             75.64 327   eP      P      20 32 28.0 -1.9
VANB   Van               75.66 307    P      P      20 32 31.2 +0.9
TVAN   Van               75.68 307   i P     P      20 32 30.1 -0.4
CHMT   Chamberlain Mo    75.80  43   eP      P      20 32 31.0 +0.1
SCO    Scoresbysund      75.86 354   i P     P      20 32 31.7 +0.9
       comp=Z,17nm,0.8s,mb5.0
SCO    Scoresbysund      75.86 354   i P     P      20 32 31.7 +0.9
SCO                                   pmax   pmax
       comp=Z,17nm,0.8s,mb5.0
HAKT   HAKKARI           75.98 306   i P     P      20 32 31.4 -0.8
TAU    Tasmania Unive    76.00 176    PFAKE         20 32 40.0 +7.8
TAU                                   LR     LR
       comp=Z,479nm,19.0s,MS4.8
TAU    Tasmania Unive    76.00 176    P      P      20 32 33.3 +1.1
SAO    San Andreas Ge    76.03  55   eP      P      20 32 32.9 +0.5
       comp=Z,23nm,1.1s,mb5.0
SAO                                   LR     LR
       comp=Z,2µm,21.0s,MS5.4
SAO    San Andreas Ge    76.03  55   eP      P      20 32 32.9 +0.4
SAO                                   pmax   pmax
       comp=Z,23nm,1.1s,mb5.0
SAO                                   MLR    MLR
       comp=Z,2µm,21.0s,MS5.4
CMB    Columbia Colle    76.09  54   eP      P      20 32 33.0 +0.2
       comp=Z,70nm,1.1s,mb5.5
CMB                                  ePcP    PcP    20 32 45.6 +0.1
CMB                                   LR     LR
       comp=Z,2µm,20.0s,MS5.4
CMB    Columbia Colle    76.09  54    P      P      20 32 33.0 +0.2
CMB                                   pmax   pmax
       comp=Z,70nm,1.0s,mb5.5
ANN    Anapa             76.15 315d iP      P      20 32 31.5 -1.5
ANN                                  e              20 32 42.4
ANN                                  eS      S      20 42 14.8 -0.8
ANN                                   pmax   pmax
       comp=Z,125nm,1.1s,mb5.8
ANN                                   MLR    MLR
       comp=Z,3µm,20.0s,MS5.5
ERZM   Erzurum           76.32 309   i P     P      20 32 34.9 +0.8
WAKR   Walker            76.48  53    P      P      20 32 35.9 +0.8
HRY    Holter Researc    76.72  43   eP      P      20 32 36.9 +0.7
DGAR   Diego Garcia      76.78 252   eP      P      20 32 34.8 -2.4
       comp=Z,142nm,1.0s,mb5.8
DGAR                                  LR     LR
       comp=Z,444nm,20.0s,MS4.8
DGAR   Diego Garcia      76.78 252   eP      P      20 32 34.8 -2.4
DGAR                                  pmax   pmax
       comp=Z,142nm,1.0s,mb5.8
DGAR                                  MLR    MLR
       comp=Z,444nm,20.0s,MS4.8
LRM    Limekiln Ridge    76.87  44    P      P      20 32 37.6 +0.6
SIRT   Sirnak            76.87 306    P      P      20 32 37.3 +0.1
FFC    Flin Flon         76.89  32   eP      P      20 32 36.4 -0.5
       comp=Z,39nm,1.1s,mb5.2
FFC                                   LR     LR
       comp=Z,371nm,20.0s,MS4.7
FFC    Flin Flon         76.89  32   eP      P      20 32 36.4 -0.5
FFC                                   pmax   pmax
       comp=Z,39nm,1.1s,mb5.2
FFC                                   MLR    MLR
       comp=Z,371nm,20.0s,MS4.7
BNGL   BINGOL            76.96 308   i P     P      20 32 38.3 +0.7
HLID   Hailey            76.97  46   eP      P      20 32 38.5 +0.9
       comp=Z,15nm,1.0s,mb4.9
HLID                                  LR     LR
       comp=Z,2µm,21.0s,MS5.3
DLMT   Dillon            77.04  44   eP      P      20 32 38.6 +0.6
       comp=Z,72nm,1.0s,mb5.6
MSL    Mosul             77.06 305   ex      x      20 32 39.5
MSL                                  ex      x      20 42 26.8
BTMT   Batman            77.14 307   eP      P      20 32 39.7 +1.0
MCMT   McKenzie Canyo    77.19  45   eP      P      20 32 39.2 +0.4
UMR    Umm Al-Rimmam     77.23 297   eP      P      20 32 39.1 -0.2
UMR                                   AMb    AMB    20 32 40.5
       comp=Z,150nm,0.9s,mb5.9
GUMT   Gumushane         77.24 310   eP      P      20 32 39.8 +0.6
NVAR   Mina Array Bea    77.28  52    P      P      20 32 39.3 -0.1
       comp=Z,16nm,0.9s,mb5.0,baz=293,slow=4.2,SNR=73
NVAR                                  LR     LR     21 09 31.3
       comp=Z,3µm,18.1s,MS5.6,baz=270,slow=38
AKASG  Malin Array Be    77.28 323    P      P      20 32 38.7 -0.4
       comp=Z,34nm,0.9s,mb5.3,baz=47,slow=5.9,SNR=106
AKASG  Malin Array Be    77.28 323    P      P      20 32 38.7 -0.4
MNV    Mina              77.38  52   eP      P      20 32 40.1 +0.1
       comp=Z,36nm,1.2s,mb5.2
MNV                                   LR     LR
       comp=Z,2µm,20.0s,MS5.5
MNV    Mina              77.38  52   eP      P      20 32 40.1 +0.1
MNV                                   pmax   pmax
       comp=Z,36nm,1.2s,mb5.2
MNV                                   MLR    MLR
       comp=Z,2µm,20.0s,MS5.5
FCC    Fort Churchill    77.38  26    P      P      20 32 40.0 +0.4
MIB    Mutribah          77.38 297   eP      P      20 32 40.1 -0.1
MIB                                   AMb    AMB    20 32 41.4
       comp=Z,231nm,0.8s,mb6.1
EZC    Erzincan          77.41 309   eP      P      20 32 42.3 +2.2
BOZ    Bozeman (W)       77.44  43   eP      P      20 32 40.7 +0.5
       comp=Z,31nm,0.9s,mb5.2
BOZ                                   LR     LR
       comp=Z,898nm,19.0s,MS5.1
BOZ    Bozeman (W)       77.44  43   eP      P      20 32 40.7 +0.5
BOZ                                   pmax   pmax
       comp=Z,31nm,0.9s,mb5.2
BOZ                                   MLR    MLR
       comp=Z,898nm,19.0s,MS5.1
KBD    Kabd              77.44 297   eP      P      20 32 40.7 +0.2
KBD                                   AMb    AMB    20 32 41.9
       comp=Z,650nm,0.8s
QRN    Al-Qurain         77.50 296   eP      P      20 32 41.1 +0.3
QRN                                   AMb    AMB    20 32 42.0
       comp=Z,205nm,0.8s,mb6.1
HFS    Hagfors           77.52 336    LR     LR     21 09 39.5
       comp=Z,3µm,18.9s,MS5.7,baz=4.9,slow=38
KELT   Kelkit            77.55 310   i P     P      20 32 43.9 +3.0
NB2    NORSAR Subarra    77.66 338    P      P      20 32 40.7 -0.3
       comp=Z,42nm,0.8s,mb5.4,baz=41,slow=5.6
NB2    NORSAR Subarra    77.66 338    P      P      20 32 40.7 -0.3
       baz=41,slow=5.9
NOA    NORSAR Array B    77.66 338    P      P      20 32 40.8 -0.2
       comp=Z,39nm,0.9s,mb5.3,baz=40,slow=5.6,SNR=67
NOA                                   LR     LR     21 10 14.6
       comp=Z,3µm,19.7s,MS5.7,baz=45,slow=38
NOA    NORSAR Array B    77.66 338    P      P      20 32 40.8 -0.2
NOA                                   pmax   pmax
       comp=Z,39nm,0.9s
NOA                                   MLR    MLR
       comp=Z,3µm,19.7s
RDF    Al-Radifah        77.68 296   eP      P      20 32 41.9  0.0
RDF                                   AMb    AMB    20 32 43.2
       comp=Z,366nm,1.1s,mb6.2
MTUM   Tungsten Hills    77.68  53   eP      P      20 32 42.2 +0.6
BHD    Baghdad           77.74 302   ex      x      20 32 41.0
BHD                                  ex      x      20 42 36.0
NAY    Al-Naaiem         77.74 297   eP      P      20 32 42.1 -0.1
NAY                                   AMb    AMB    20 32 43.5
       comp=Z,188nm,0.8s,mb6.0
GRSN   GIRESUNGRSN       77.76 311   i P     P      20 32 40.6 -1.5
NAO01  NORSAR Array S    77.91 338   eP      P      20 32 41.9 -0.5
       comp=Z,15nm,0.8s,mb5.0
NAO01                                 LR     LR
       comp=Z,6µm,19.0s,MS5.9
NAO    NORSAR Subarra    77.94 338    P      P      20 32 40.7 -1.9
       comp=Z,42nm,0.8s,mb5.4
NAO    NORSAR Subarra    77.94 338    P      P      20 32 40.7 -1.9
NAO                                   pmax   pmax
       comp=Z,42nm,0.8s,mb5.4
RAR    Rarotonga         77.98 125    PFAKE         20 33 00.0  +16
RAR                                   LR     LR
       comp=Z,1.0nm,20.0s
ELK    Elko              78.01  49   eP      P      20 32 44.2 +0.8
       comp=Z,31nm,1.1s,mb5.2
ELK                                   LR     LR
       comp=Z,2µm,19.0s,MS5.4
ELK    Elko              78.01  49   eP      P      20 32 44.2 +0.8
ELK                                   pmax   pmax
       comp=Z,31nm,1.1s
ELK                                   MLR    MLR
       comp=Z,2µm,19.0s
SIM    Simferopol'       78.02 316c eP      P      20 32 43.6 +0.3
SIM                                  e              20 35 35.0
SIM                                  eS      S      20 42 37.0 +1.1
SIM                                   pmax   pmax
       comp=Z,200nm,9.5s
SIM                                   pmax   pmax
       comp=Z,57nm,0.8s,mb5.5
SIM                                   MLR    MLR
       comp=Z,2µm,16.0s,MS5.6
QLMT   Earthquake Lak    78.02  44   eP      P      20 32 44.7 +1.3
SUW    Suwalki           78.06 328   eP      P      20 32 43.2 -0.2
SUW                                   MLR    MLR    21 09 18.9
       comp=Z,3µm,18.3s,MS5.6
SUW    Suwalki           78.06 328    P      P      20 32 44.1 +0.7
MARD   Mardin            78.09 307   i P     P      20 32 43.8 -0.1
PTK    Pertek            78.15 309   eP      P      20 32 44.8 +0.6
TPH    Tonopah           78.19  52   eP      P      20 32 43.5 -0.9
       comp=Z,52nm,1.1s,mb5.4
TPH                                   LR     LR
       comp=Z,3µm,20.0s,MS5.6
TPH    Tonopah           78.19  52   eP      P      20 32 43.6 -0.8
TPH                                   pmax   pmax
       comp=Z,52nm,1.1s,mb5.4
TPH                                   MLR    MLR
       comp=Z,3µm,20.0s,MS5.6
RBK    Rabkut            78.33 283    P      P      20 32 45.5  0.0
       SNR=18
YMR    Madison River     78.39  44   eP      P      20 32 46.9 +1.5
       comp=Z,71nm,1.1s,mb5.5
YMR                                   LR     LR
       comp=Z,2µm,22.0s,MS5.4
WHFO   Wadi Hawf         78.46 284    P      P      20 32 46.0 -0.3
       SNR=46
GCMT   Greycliff         78.48  42   eP      P      20 32 45.5 -0.4
YFT    Old Faithful      78.59  44   eP      P      20 32 48.9 +2.4
ELZG   Elazig            78.63 309   i P     P      20 32 47.6 +0.7
ISA    Isabella          78.65  55   eP      P      20 32 46.5 -0.5
       comp=Z,9.8nm,0.9s,mb4.7
ISA                                   LR     LR
       comp=Z,562nm,20.0s,MS4.9
ISA    Isabella          78.65  55   eP      P      20 32 46.5 -0.5
ISA                                   pmax   pmax
       comp=Z,10.0nm,0.9s,mb4.8
ISA                                   MLR    MLR
       comp=Z,562nm,20.0s,MS4.9
LKWY   Lake              78.78  44    P      P      20 32 50.8 +3.2
       comp=Z,43nm,0.8s,mb5.4
LKWY                                  LR     LR
       comp=Z,2µm,19.0s,MS5.4
IMW    Indian Meadow     78.85  45   eP      P      20 32 49.4 +1.4
       comp=Z,82nm,1.1s,mb5.6
DAC    Darwin (Calif)    78.92  54   eP      P      20 32 48.6 +0.1
       comp=Z,40nm,1.1s,mb5.3
DAC                                   LR     LR
       comp=Z,2µm,21.0s,MS5.4
DAC    Darwin (Calif)    78.92  54   eP      P      20 32 48.6 +0.1
DAC                                   pmax   pmax
       comp=Z,40nm,1.1s,mb5.3
DAC                                   MLR    MLR
       comp=Z,2µm,21.0s,MS5.4
HVU    Hansel Valley     78.97  47   eP      P      20 32 48.3 -0.3
       comp=Z,39nm,1.1s,mb5.2
HVU    Hansel Valley     78.97  47   eP      P      20 32 48.3 -0.3
HVU                                   pmax   pmax
       comp=Z,39nm,1.1s,mb5.2
MOOW   Moose Ponds       79.05  45   eP      P      20 32 49.9 +0.9
       comp=Z,96nm,1.5s,mb5.5
KVT    Kavak             79.07 312   eP      P      20 32 49.2  0.0
TPAW   Teton Pass        79.08  45   eP      P      20 32 50.8 +1.6
       comp=Z,28nm,1.0s,mb5.2
MYA    Malataya          79.09 309   eP      P      20 32 51.4 +2.0
ABTO   Aybut             79.14 284    P      P      20 32 50.2 +0.1
       SNR=17
SNOW   Snow King Moun    79.21  45   eP      P      20 32 51.3 +1.4
       comp=Z,46nm,1.1s,mb5.3
LOHW   Long Hollow       79.21  45   eP      P      20 32 50.9 +0.9
       comp=Z,42nm,1.2s,mb5.2
REDW   Red Top Meadow    79.21  45   eP      P      20 32 50.7 +0.7
       comp=Z,75nm,1.3s,mb5.5
SNCC   San Nicolas Is    79.22  57    PFAKE         20 33 00.0  +10
SNCC                                  LR     LR
       comp=Z,3µm,20.0s,MS5.6
SVST   Sivas             79.24 311   i P     P      20 32 51.6 +1.5
KONO   Kongsberg         79.24 337   eP      P      20 32 49.7  0.0
KONO                                 eS      S      20 42 49.4 +0.8
KONO   Kongsberg         79.24 337   i P     P      20 32 49.8 +0.1
KONO                                  LR     LR
       comp=Z,5µm,20.0s,MS5.8
URFA   Urfa              79.32 308   eP      P      20 32 51.0 +0.4
AHID   Auburn Hatcher    79.41  46   eP      P      20 32 49.4 -1.7
       comp=Z,17nm,0.5s,mb5.2
AHID                                  LR     LR
       comp=Z,939nm,21.0s,MS5.1
SPUT   South Promonto    79.44  47   eP      P      20 32 51.2 +0.1
TPNV   Topopah Spring    79.45  53   eP      P      20 32 52.1 +0.7
       comp=Z,63nm,1.1s,mb5.5
TPNV                                  LR     LR
       comp=Z,3µm,20.0s,MS5.5
TPNV   Topopah Spring    79.45  53   eP      P      20 32 52.1 +0.7
TPNV                                  pmax   pmax
       comp=Z,63nm,1.1s,mb5.5
TPNV                                  MLR    MLR
       comp=Z,3µm,20.0s,MS5.5
BOYT   Boyabat           79.58 313   i P     P      20 32 51.9 -0.1
BYBT   Boyabat           79.64 313   eP      P      20 32 51.2 -1.1
SFJD   Kangerlussuaq     79.64   5    LR     LR     21 08 53.9
       comp=Z,2µm,21.4s,MS5.3,baz=330,slow=36
MWC    Mount Wilson      79.72  56   eP      P      20 32 53.3 +0.5
MWC    Mount Wilson      79.72  56    P      P      20 32 53.4 +0.5
KIS    Kishinev          79.76 320   eP      P      20 32 51.0 -1.8
KIS                                  e              20 36 00.0
KIS                                  e              20 43 04.0
KIS                                   MLR    MLR
       comp=Z,5µm,16.0s,MS6.0
KIS                                   MLR    MLR
       comp=N,3µm,17.0s,MS5.8
KIS                                   MLR    MLR
       comp=E,3µm,16.0s,MS5.8
KIS                                   MLR    MLR
       comp=Z,5µm,16.0s
DGMT   Dagmar            79.80  38   eP      P      20 32 52.6 -0.4
       comp=Z,90nm,1.3s,mb5.5
DGMT                                  LR     LR
       comp=Z,1µm,22.0s,MS5.3
HWUT   Hardware Ranch    79.81  47   eP      P      20 32 53.8 +0.7
       comp=Z,73nm,1.1s,mb5.5
HWUT                                  LR     LR
       comp=Z,2µm,19.0s,MS5.4
LAO    LASA Array        79.84  40   eP      P      20 32 53.6 +0.4
       comp=Z,111nm,1.4s,mb5.6
LAO                                   LR     LR
       comp=Z,1µm,20.0s,MS5.2
DUG    Dugway            79.85  48   eP      P      20 32 53.9 +0.5
       comp=Z,79nm,1.3s,mb5.5
DUG                                   LR     LR
       comp=Z,1µm,19.0s,MS5.3
DUG    Dugway            79.85  48   eP      P      20 32 53.9 +0.5
DUG                                   pmax   pmax
       comp=Z,79nm,1.3s,mb5.5
DUG                                   MLR    MLR
       comp=Z,1µm,19.0s,MS5.3
BER    Bergen            79.97 340   eS      S      20 42 54.1 -2.2
BER                                   AMS    AMS    21 12 20.4
       comp=Z,3µm,19.8s,MS5.7
GSC    Goldstone         79.98  54   eP      P      20 32 54.7 +0.4
NOQ    North Oquirrh     80.02  48   eP      P      20 32 54.6 +0.3
       comp=Z,131nm,1.3s,mb5.7
CTKT   Corum             80.11 312   i P     P      20 32 54.5 -0.3
TCUT   Toone Canyon      80.19  47   eP      P      20 32 53.7 -1.5
SNZO   South Karori      80.30 155    PFAKE         20 33 10.0  +14
SNZO                                  LR     LR
       comp=Z,1µm,19.0s,MS5.3
IAS    Iasi              80.31 321    P      P      20 32 56.2 +0.5
BW06   Boulder Array     80.33  45   eP      P      20 32 55.9 -0.1
       comp=Z,23nm,1.0s,mb5.1
BW06                                  LR     LR
       comp=Z,1µm,19.0s,MS5.3
PDAR   Pinedale Array    80.33  45    P      P      20 32 56.1 +0.1
       comp=Z,7.3nm,0.8s,mb4.7,baz=282,slow=2.8,SNR=52
PDAR                                  LR     LR     21 11 16.3
       comp=Z,1µm,18.1s,MS5.2,baz=333,slow=38
LVV    L'vov             80.42 324   eP      P      20 32 54.6 -1.7
LVV                                  eS      S      20 42 57.0 -4.1
LVV                                   MLR    MLR
       comp=Z,4µm,18.3s,MS5.8
SHPR   Sheep Range       80.42  53    P      P      20 32 57.4 +0.8
BALT   Daday             80.44 314   i P     P      20 32 56.5  0.0
NLU    North Lily Min    80.45  48   eP      P      20 32 57.0 +0.3
BNN    Bunyan            80.47 310   eP      P      20 32 58.2 +1.4
CORM   Corum             80.47 312   eP      P      20 32 57.0 +0.2
GAZ    Gaziantep         80.54 308   eP      P      20 32 58.7 +1.5
MPU    Maple Canyon      80.69  48   eP      P      20 32 58.4 +0.5
       comp=Z,80nm,1.3s,mb5.5
MPU                                   PcP    PcP    20 33 03.6 -1.6
MPU                                   LR     LR
       comp=Z,2µm,20.0s,MS5.5
DAU    Daniels Canyon    80.69  48   eP      P      20 32 58.8 +0.9
DAU                                   PcP    PcP    20 33 03.7 -1.4
BSD    Bornholm Skovb    80.76 332   i P     P      20 33 00.2 +2.2
       comp=Z,41nm,1.0s,mb5.3
BSD                                  i              20 33 12.6
BSD    Bornholm Skovb    80.76 332   eP      P      20 33 00.2 +2.2
       comp=Z,41nm,1.0s,mb5.3
BSD                                  i              20 33 12.6
BSD    Bornholm Skovb    80.76 332   eP      P      20 33 00.2 +2.2
BSD                                  i              20 33 12.6
BSD                                   pmax   pmax
       comp=Z,41nm,1.0s,mb5.3
ARUT   Antelope Range    80.83  51   eP      P      20 32 59.4 +0.7
ARUT                                 ePcP    PcP    20 33 04.8 -0.9
CDAG   Cicekdag          80.95 312   i P     P      20 32 59.0 -0.3
ELDT   Eldivan           81.03 313   i P     P      20 32 59.8 +0.1
SAFT   Safranbolu        81.04 314   eP      P      20 33 00.4 +0.7
NEN    Nelson            81.12  53   eP      P      20 32 60.0 -0.3
NEN                                  ePcP    PcP    20 33 05.7 -1.4
AVNT   Avonos            81.14 311   i P     P      20 33 01.0 +0.7
PFO    Pinyon Flat Ob    81.17  56   eP      P      20 33 00.5 -0.1
       comp=Z,82nm,1.1s,mb5.6
PFO                                   LR     LR
       comp=Z,795nm,19.0s,MS5.1
PFO    Pinyon Flat Ob    81.17  56   eP      P      20 33 00.5 -0.1
PFO                                   pmax   pmax
       comp=Z,82nm,1.1s,mb5.6
PFO                                   MLR    MLR
       comp=Z,795nm,19.0s,MS5.1
KWP    Kalwaria          81.19 325   eP      P      20 33 01.3 +1.0
KWP                                   MLR    MLR    21 12 04.6
       comp=Z,6µm,19.1s,MS6.0
KWP    Kalwaria          81.19 325   eP      P      20 33 01.3 +1.0
MVU    Marysvale         81.20  50   eP      P      20 33 01.5 +0.9
       comp=Z,46nm,1.1s,mb5.3
MVU                                  ePcP    PcP    20 33 06.7 -0.7
MVU                                   LR     LR
       comp=Z,1µm,19.0s,MS5.2
MSU    Marysvale         81.22  50   eP      P      20 33 01.8 +1.1
BURAR  Bucovina Array    81.27 322   ⇑P      P      20 33 01.5 +0.7
BURAR  Bucovina Array    81.27 322   ⇑P      P      20 33 01.5 +0.7
CFR    Carcaliu          81.27 319   ⇓P      P      20 33 00.2 -0.6
CFR    Carcaliu          81.27 319   ⇓P      P      20 33 00.1 -0.7
KOZT   Kozan             81.27 309   eP      P      20 33 01.7 +0.7
COP    Copenhagen        81.28 334   i P     Px     20 33 23.3
COP                                  i S     S      20 43 10.3 +0.3
       comp=Z,410nm,20.0s
COP    Copenhagen        81.28 334   eP      Px     20 33 23.3
COP                                  i S     S      20 43 10.3 +0.3
COP                                   LR     LR
       comp=Z,420nm,20.0s,MS4.8
BR131  Keskin Array S    81.35 312   eP      P      20 33 01.9 +0.6
       comp=Z,60nm,0.9s,mb5.5
BR131                                 LR     LR
       comp=Z,1µm,19.0s,MS5.3
BRTR   Keskin Array B    81.35 312    P      P      20 33 02.0 +0.7
       comp=Z,57nm,0.9s,mb5.5,baz=90,slow=3.7,SNR=174
BRTR   Keskin Array B    81.35 312    P      P      20 33 02.1 +0.7
BRTR                                  pmax   pmax
       comp=Z,57nm,0.9s
TMUT   Trail Mountain    81.38  48   eP      P      20 33 01.8 +0.3
BORG   Borgarnes         81.38 353    LR     LR     21 08 17.3
       comp=Z,715nm,18.6s,MS5.1,baz=349,slow=35
KAMT   Kaman             81.51 312   eP      P      20 33 02.1 -0.2
BAR    Barrett           81.53  57   eP      P      20 33 02.4 -0.1
COBT   Iskenderun        81.54 308   i P     P      20 33 01.6 -0.9
TIRR   Tirgusor          81.56 318   ⇑P      P      20 33 02.9 +0.5
TIRR   Tirgusor          81.56 318   ⇑P      P      20 33 02.9 +0.5
CEYT   Ceyhan            81.59 309   eP      P      20 33 03.0 +0.3
VRI    Vrincioaia        81.60 320   ⇑P      P      20 33 03.5 +1.0
VRI    Vrincioaia        81.60 320   ⇑P      P      20 33 03.5 +0.9
HARR   Harsova           81.69 319   ⇑P      P      20 33 02.8 -0.2
HARR   Harsova           81.69 319   ⇑P      P      20 33 02.8 -0.2
ANTO   Ankara            81.79 313   eP      P      20 33 04.2 +0.6
ANTO   Ankara            81.79 313   eP      P      20 33 04.5 +0.8
       comp=Z,48nm,0.9s,mb5.4
ANTO                                  LR     LR
       comp=Z,2µm,19.0s,MS5.4
ANTO   Ankara            81.79 313   eP      P      20 33 04.5 +0.8
ANTO                                  pmax   pmax
       comp=Z,48nm,0.9s,mb5.4
ANTO                                  MLR    MLR
       comp=Z,2µm,19.0s,MS5.4
LOD    Lodumlu           81.80 313   eP      P      20 33 05.1 +1.4
KOLS   Kolonicke sedl    81.87 324   eP      P      20 33 04.3 +0.4
KOLS                                 e              20 33 21.3
MUD    Monsted U'grnd    81.87 335   i S     S      20 43 24.1 +8.1
       comp=Z,2µm,17.0s
MUD    Monsted U'grnd    81.87 335   i P     P      20 33 03.6 -0.1
       comp=Z,33nm,1.0s,mb5.2
MUD                                  i S     S      20 43 24.1 +8.1
MUD    Monsted U'grnd    81.87 335   i P     P      20 33 03.6 -0.1
MUD                                  i S     S      20 43 24.1 +8.1
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MUD				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
KARA	**Karaisali**	**81.89**	**309**	*e*P	**P**	**20 33 05.6**	**+1.3**
SRU	**San Rafael**	**81.92**	**48**	*e*P	**P**	**20 33 04.8**	**+0.5**
	comp=Z,50nm,0.8s,mb5.5						
SRU	**San Rafael**	**81.92**	**48**	*e*P	**P**	**20 33 04.9**	**+0.6**
SRU				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5						
STHS	**Stebnicka Huta**	**82.04**	**325**	*e*P	**P**	**20 33 05.4**	**+0.7**
STHS				*e*		20 33 23.1	
UZH	**Uzhgorod**	**82.06**	**324**	*e*P	**P**	**20 33 04.0**	**-0.9**
UZH				*e*S	S	20 43 23.0	+4.9
OJC	**Ojcow**	**82.16**	**326**	*e*P	**P**	**20 33 05.6**	**+0.2**
MLR	**Muntele Rosu**	**82.26**	**320**	LR	LR	21 09 43.2	
	comp=Z,2µm,21.9s,MS5.4,baz=211,slow=36						
MLR	**Muntele Rosu**	**82.26**	**320**	⇓P	**P**	**20 33 06.9**	**+0.9**
MLR	**Muntele Rosu**	**82.26**	**320**	⇓P	**P**	**20 33 06.9**	**+0.9**
CRVS	**Cervenica-Dubn**	**82.28**	**325**	*e*P	**P**	**20 33 06.7**	**+0.7**
RWWY	**Rawlins**	**82.37**	**45**	*e*P	**P**	**20 33 07.0**	**+0.4**
	comp=Z,41nm,1.0s,mb5.3						
MERS	**Mersin**	**82.47**	**309**	*e*P	**P**	**20 33 07.7**	**+0.5**
NIE	**Niedzica**	**82.48**	**326**	⇑*e*P	**P**	**20 33 08.2**	**+1.2**
SNX	**Sinaia**	**82.58**	**320**	⇑P	**P**	**20 33 07.5**	**-0.1**
GLA	**Glamis**	**82.60**	**55**	*e*P	**P**	**20 33 08.2**	**+0.2**
GLA				*e*PcP	PcP	20 33 13.9	+0.3
RSSD	**Black Hills**	**82.66**	**41**	*e*P	**P**	**20 33 08.0**	**-0.1**
	comp=Z,52nm,1.5s,mb5.3						
RSSD				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
RSSD	**Black Hills**	**82.66**	**41**	*e*P	**P**	**20 33 08.0**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,53nm,1.5s,mb5.3						
RSSD				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
ULM	**Lac du Bonnet**	**82.66**	**33**	P	**P**	**20 33 06.7**	**-1.3**
	comp=Z,14nm,1.0s,mb5.0,baz=284,slow=7.4,SNR=6.7						
ULM				LR	LR	21 10 04.3	
	comp=Z,1µm,20.6s,MS5.2,baz=179,slow=36						
VOIR		**82.77**	**321**	⇓P	**P**	**20 33 09.9**	**+1.3**
VOIR		**82.77**	**321**	⇓P	**P**	**20 33 09.8**	**+1.2**
MTUR	**Matau**	**82.90**	**320**	⇑P	**P**	**20 33 09.3**	**0.0**
MTUR	**Matau**	**82.90**	**320**	⇑P	**P**	**20 33 09.3**	**-0.1**
KIZT	**Kizilcal**	**82.95**	**312**	*e*P	**P**	**20 33 09.5**	**-0.2**
PPT	**Papeete**	**82.97**	**116**	*e*S	S	20 43 30.6	+2.6
PPT	**Papeete**	**82.97**	**116**	LR	LR	21 09 07.1	
	comp=Z,2µm,18.3s,MS5.5,baz=287,slow=35						
KECS	**Kecovo**	**83.04**	**325**	*i* P	**P**	**20 33 10.5**	**+0.5**
DRGR		**83.09**	**323**	P	**P**	**20 33 10.3**	**0.0**
HRT	**Hereke**	**83.10**	**315**	*e*P	**P**	**20 33 10.6**	**+0.1**
OKC	**Ostrava-Krasne**	**83.19**	**327**	*e*P	**P**	**20 33 11.4**	**+0.7**
OKC				*e*S	S	20 43 34.4	+4.8
OKC				AMS	AMS	21 13 20.0	
	comp=Z,3µm,16.0s						
ESKT	**Eskisehir**	**83.19**	**313**	*e*P	**P**	**20 33 08.8**	**-2.1**
ESKT	**Eskisehir**	**83.19**	**313**	*i* P	**P**	**20 33 09.8**	**-1.2**
BORA	**Eskisehir**	**83.21**	**314**	*i* P	**P**	**20 33 11.0**	**-0.1**
KSP	**Ksiaz**	**83.30**	**329**	*e*P	**P**	**20 33 11.8**	**+0.6**
KSP				MLR	MLR	21 13 55.1	
	comp=Z,8µm,18.3s,MS6.1						
KSP	**Ksiaz**	**83.30**	**329**	⇑*e*P	**P**	**20 33 11.7**	**+0.5**
KSP				*e*PP	PP	20 36 28.0	+3.2
KSP				*e*S	S	20 43 29.0	-1.6
KSP				*e*SS	SS	20 48 49.0	-10
KSP				LR	LR		
	comp=Z,9µm,18.3s,MS6.2						
IKL	**Isikli**	**83.38**	**309**	*e*P	**P**	**20 33 12.2**	**+0.2**
BSEG	**Bad Segeberg**	**83.41**	**333**	*e*P	**P**	**20 33 12.1**	**+0.3**
YLV	**Yalova**	**83.44**	**315**	*e*P	**P**	**20 33 11.0**	**-1.2**
BHL	**Bhannes**	**83.45**	**306**	*e*P	**P**	**20 33 12.9**	**+0.5**
WUAZ	**Wupatki**	**83.50**	**52**	*e*P	**P**	**20 33 12.2**	**-0.4**
	comp=Z,85nm,1.2s,mb5.7						
WUAZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
MORC	**Moravsky Berou**	**83.51**	**327**	*e*P	**P**	**20 33 11.9**	**-0.4**
	comp=Z,48nm,1.3s,mb5.5						
MORC	**Moravsky Berou**	**83.51**	**327**	*e*P	**P**	**20 33 11.9**	**-0.4**
MORC				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.5						
CTT	**Catalca**	**83.63**	**316**	*e*P	**P**	**20 33 13.3**	**+0.2**
DPC	**Dobruska-Polom**	**83.64**	**328**	*e*P	**P**	**20 33 14.0**	**+1.0**
DPC				*e*x	x	20 36 36.9	
DPC				*e*S	S	20 43 35.4	+1.4
DPC				AMS	AMS	21 16 30.0	
	comp=Z,4µm,15.7s						
DPC	**Dobruska-Polom**	**83.64**	**328**	*e*P	**P**	**20 33 14.0**	**+1.0**
DPC				*e*S	S	20 43 35.4	+1.4
DPC				MLR	MLR		
	comp=Z,4µm,15.7s,MS6.0						
UPC	**Upice**	**83.67**	**328**	*e*P	**P**	**20 33 13.9**	**+0.8**
PSZ	**Piszkesteto**	**83.72**	**325**	⇑*i*P	**P**	**20 33 14.3**	**+0.9**
VYHS	**Vyhne**	**83.82**	**326**	*i* P	**P**	**20 33 14.9**	**+1.0**
VYHS				*e*PP	PP	20 36 22.9	-6.1
VYHS				*e*S	S	20 43 34.0	-1.8
ULDT	**Uludag**	**83.84**	**314**	*i* P	**P**	**20 33 14.0**	**-0.3**
ALT	**Altintas**	**83.93**	**313**	*e*P	**P**	**20 33 15.5**	**+0.8**
SMCO	**Snowmass**	**84.07**	**47**	*e*P	**P**	**20 33 15.9**	**+0.5**
	comp=Z,52nm,1.2s,mb5.5						
SMCO				*e*PcP	PcP	20 33 21.4	+1.6
EDRB	**Edirne**	**84.16**	**317**	*e*P	**P**	**20 33 16.2**	**+0.4**
VRAC	**Vranov**	**84.28**	**327**	P	**P**	**20 33 17.2**	**+1.0**
PVCC	**Panska Ves**	**84.28**	**329**	*e*P	**P**	**20 33 17.2**	**+1.0**
PVCC				*e*S	S	20 43 42.9	+2.6
PVCC				AMS	AMS	21 13 50.0	
	comp=Z,4µm,18.3s						
BRG	**Berggiesshubel**	**84.29**	**330**	⇑*i*P	**P**	**20 33 16.6**	**+0.4**
	comp=Z,32nm,0.9s,mb5.5						
BRG				*e*		20 33 31.8	
BRG				S	S	20 43 43.0	+2.6
BRG				SS	SS	20 49 20.0	+7.1
BRG				LR	LR		
	comp=Z,3µm,16.2s,MS5.8						
BRG	**Berggiesshubel**	**84.29**	**330**	⇑*i*P	**P**	**20 33 16.6**	**+0.4**
BRG				*e*		20 33 31.8	
BRG				S	S	20 43 43.0	+2.6
BRG				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.5						
BRG				MLR	MLR		
	comp=Z,3µm,16.2s,MS5.8						
GDZ	**Gediz**	**84.29**	**313**	*i* P	**P**	**20 33 15.8**	**-0.7**
MAMC	**Mammari**	**84.33**	**309**	P	**P**	**20 33 17.3**	**+0.5**
CLL	**Collm**	**84.36**	**330**	⇑P	**P**	**20 33 16.4**	**-0.1**
	comp=Z,logA/T=1.8,mb5.7						
CLL				*i* *PP	pP	20 33 21.2	+1.8
CLL				*i*		20 33 27.9	
CLL				*e*		20 33 42.0	
CLL				*e*PP	PP	20 36 31.0	-2.2
CLL				*e*S	S	20 43 41.0	-0.1
CLL	**Collm**	**84.36**	**330**	⇑*i*P	**P**	**20 33 16.4**	**-0.1**
	comp=Z,61nm,0.9s,mb5.7						
CLL				*i* pP	pP	20 33 21.2	+1.8
CLL				*e*S	S	20 43 41.0	-0.1
CLL				LR	LR		
	comp=Z,4µm,15.4s,MS5.9						
CLL	**Collm**	**84.36**	**330**	⇑*i*P	**P**	**20 33 16.4**	**-0.1**
CLL				*e*S	S	20 43 41.0	-0.1
CLL				pmax	pmax		
	comp=Z,61nm,0.9s,mb5.7						
CLL				MLR	MLR		
	comp=Z,4µm,15.4s,MS5.9						
CSS	**Prodhromos**	**84.38**	**308**	⇑P	**P**	**20 33 17.7**	**+0.6**
CSS	**Prodhromos**	**84.38**	**308**	⇑*e*P	**P**	**20 33 17.7**	**+0.6**
BNT	**Bandirma**	**84.43**	**315**	*e*P	**P**	**20 33 17.9**	**+0.7**
ISP	**Isparta**	**84.43**	**312**	*e*P	**P**	**20 33 16.1**	**-1.1**
ISP	**Isparta**	**84.43**	**312**	*e*P	**P**	**20 33 17.4**	**+0.1**
	comp=Z,28nm,0.9s,mb5.4						
ISP	**Isparta**	**84.43**	**312**	*c* *i*P	**P**	**20 33 17.2**	**-0.1**
MRMT	**Marmara Adasi**	**84.47**	**316**	*e*P	**P**	**20 33 16.9**	**-0.5**
SMOL	**Smolenice**	**84.47**	**326**	*i* P	**P**	**20 33 18.2**	**+1.0**
SMOL				*e*PP	PP	20 36 30.5	-3.7
MFT	**Murefte**	**84.53**	**316**	*e*P	**P**	**20 33 17.7**	**0.0**
PRU	**Pruhonice**	**84.69**	**329**	*e*P	**P**	**20 33 19.1**	**+0.9**
PRU				*e*S	S	20 43 45.5	+1.1
PRU				AMS	AMS	21 14 40.0	
	comp=Z,4µm,17.6s						
ALFC	**Alevga**	**84.74**	**309**	⇑P	**P**	**20 33 18.7**	**-0.2**
	comp=Z,1.1nm,0.6s						
ALFC	**Alevga**	**84.74**	**309**	⇑*e*P	**P**	**20 33 18.7**	**-0.2**
KHL	**Karahalli**	**84.75**	**313**	*e*P	**P**	**20 33 18.6**	**-0.3**
TREC	**Trest**	**84.78**	**328**	*e*P	**P**	**20 33 19.3**	**+0.6**
TREC				*e*S	S	20 43 47.9	+2.5
TREC				MLR	MLR		
	comp=Z,7µm,16.1s,MS6.1						
PKSG		**84.81**	**325**	⇑*e*P	**P**	**20 33 19.3**	**+0.4**
ZST	**Bratislava**	**84.85**	**326**	*i* P	**P**	**20 33 20.2**	**+1.1**
ZST				*e*S	S	20 43 48.0	+2.0
BALB	**Balikesir**	**84.91**	**315**	*e*P	**P**	**20 33 19.9**	**+0.3**
CLZ	**Clausthal**	**85.01**	**332**	*e*P	**P**	**20 33 20.5**	**+0.7**
	comp=Z,73nm,1.2s,mb5.7						
CLZ				*e*S	S	20 43 49.8	+2.2
CLZ	**Clausthal**	**85.01**	**332**	*e*P	**P**	**20 33 20.5**	**+0.7**
CLZ				*e*S	S	20 43 49.8	+2.2
CLZ				pmax	pmax		
	comp=Z,73nm,1.2s,mb5.7						
TAOE	**Nuku Hiva Isla**	**85.28**	**104**	*e*S	S	20 43 48.3	-2.8
TAOE				*e*SS	SS	20 49 25.3	-3.4
TAOE				*e*LR	LR	20 58 49.6	
	comp=Z,7µm,20.8s						
NKC	**Novy Kostel**	**85.40**	**330**	*e*P	**P**	**20 33 22.2**	**+0.4**
NKC				*e*S	S	20 43 51.1	-0.3
NKC				AMS	AMS	21 15 40.0	
	comp=Z,3µm,15.6s						
MOX	**Moxa**	**85.43**	**331**	*i* P	**P**	**20 33 22.1**	**+0.2**
	comp=Z,logA/T=1.5,mb5.4						
MOX				S	S	20 43 52.0	+0.3
MOX				L		21 14 38.0	
MOX	**Moxa**	**85.43**	**331**	*e*P	**P**	**20 33 22.1**	**+0.2**
	comp=Z,54nm,1.6s,mb5.4						
MOX				*e*S	S	20 43 52.0	+0.3
MOX				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
MOX	**Moxa**	**85.43**	**331**	*e*P	**P**	**20 33 22.1**	**+0.2**
MOX				*e*S	S	20 43 52.0	+0.3
MOX				pmax	pmax		
	comp=Z,54nm,1.6s,mb5.4						
MOX				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.6						
AKS	**Akhisar**	**85.44**	**314**	*e*P	**P**	**20 33 23.0**	**+0.7**
DNZL	**Cakiroluk**	**85.44**	**313**	*i* P	**P**	**20 33 22.6**	**+0.4**
ELL	**Elmali**	**85.49**	**311**	*e*P	**P**	**20 33 23.0**	**+0.5**
PKSM	**Moragy**	**85.53**	**324**	⇑*i*P	**P**	**20 33 22.5**	**0.0**
VTS	**Vitosha**	**85.65**	**319**	*i* P	**P**	**20 33 24.5**	**+1.3**
KHC	**Kasperske Hory**	**85.75**	**329**	*e*P	**P**	**20 33 24.1**	**+0.6**
KHC				x	x	20 33 35.5	
KHC				*e*S	S	20 43 57.1	+2.3
KHC				AMS	AMS	21 18 00.0	
	comp=Z,4µm,17.7s						
KHC	**Kasperske Hory**	**85.75**	**329**	*e*P	**P**	**20 33 24.1**	**+0.6**
KHC				*e*		20 33 35.5	
KHC				*e*S	S	20 43 57.1	+2.3
KHC				LR	LR		
	comp=Z,4µm,17.7s,MS5.9						
KHC	**Kasperske Hory**	**85.75**	**329**	*c* *i*P	**P**	**20 33 23.9**	**+0.4**
TUC	**Tucson**	**85.80**	**54**	*e*P	**P**	**20 33 24.8**	**+0.6**
	comp=Z,31nm,1.4s,mb5.3						
TUC				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
TUC	**Tucson**	**85.80**	**54**	*e*P	**P**	**20 33 24.8**	**+0.6**
TUC				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.3						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
SDCO	**Great Sand Dun**	**85.86**	**47**	*e*P	**P**	**20 33 25.1**	**+0.7**
	comp=Z,55nm,1.4s,mb5.6						
SDCO				LR	LR		
	comp=Z,932nm,20.0s,MS5.2						
GEC2	**GERESS Array S**	**85.91**	**328**	*e*P	**P**	**20 33 24.6**	**+0.3**
	comp=Z,16nm,1.0s,mb5.2						
GEC2				*e*PP	PP	20 36 42.6	-3.1
GEC2				*e*S	S	20 43 58.9	+2.6
GEC2	**GERESS Array S**	**85.91**	**328**	*e*P	**P**	**20 33 24.6**	**+0.3**
GEC2				*e*		20 36 42.6	
GEC2				*e*S	S	20 43 58.9	+2.6
GEC2				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.2						
GERES	**GERESS Array B**	**85.91**	**328**	P	**P**	**20 33 23.9**	**-0.4**
	comp=Z,7.0nm,0.8s,mb4.9,baz=45,slow=3.8,SNR=45						
GERES				PP	PP	20 36 48.6	+3.0
	comp=Z,3.5nm,0.9s,baz=39,slow=8.5,SNR=4.5						
GERES				LR	LR	21 18 31.1	
	comp=Z,3µm,18.6s,MS5.8,baz=198,slow=40						
GERES	**GERESS Array B**	**85.91**	**328**	P	**P**	**20 33 23.9**	**-0.4**
GERES						20 36 48.6	
GERES				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GERES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GERES				MLR	MLR		
	comp=Z,3µm,18.6s						
WET	**Wettzell**	**86.04**	**329**	*e*P	**P**	**20 33 25.7**	**+0.7**
	comp=Z,22nm,1.3s,mb5.2						
WET				*e*S	S	20 43 56.6	-1.0
WET	**Wettzell**	**86.04**	**329**	*e*P	**P**	**20 33 25.7**	**+0.7**
WET				*e*S	S	20 43 56.6	-1.0
WET				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.2						
IZM	**Izmir**	**86.07**	**314**	*e*P	**P**	**20 33 25.5**	**+0.1**
FETY	**Fethiye**	**86.08**	**312**	*e*P	**P**	**20 33 21.5**	**-4.0**
GRUS	**Gruza**	**86.10**	**321**	*i* P	**P**	**20 33 24.9**	**-0.6**
KKB	**Krupnik**	**86.21**	**319**	*i* P	**P**	**20 33 26.3**	**+0.3**
BLCB	**Balcova**	**86.21**	**314**	*e*P	**P**	**20 33 25.7**	**-0.4**
EAB	**Aberfoyle**	**86.25**	**342**	*e*P	**P**	**20 33 26.1**	**+0.2**
EAB				AMb	AMB	20 33 27.3	
	comp=Z,125nm,1.4s,mb6.0						
YER	**Yerkesik**	**86.26**	**313**	*e*P	**P**	**20 33 26.0**	**-0.3**
EBL	**Broad Law**	**86.26**	**341**	⇑*e*P	**P**	**20 33 26.2**	**+0.3**
EBL				AMb	AMB	20 33 29.6	
	comp=Z,112nm,2.0s,mb5.8						
ARSA	**Arzberg**	**86.27**	**326**	*i* P	**P**	**20 33 26.8**	**+0.6**
	comp=Z,19nm,1.2s,mb5.2,SNR=8.2						
WTSB	**Winterswijk**	**86.28**	**334**	⇑*i*P	**P**	**20 33 26.0**	**-0.1**
	comp=Z,55nm,1.3s,mb5.6						
EAU	**Auchinoon**	**86.31**	**341**	⇑*e*P	**P**	**20 33 26.5**	**+0.4**
EAU				AMb	AMB	20 33 35.4	
	comp=Z,130nm,1.6s,mb5.9						
EYMN	**Ely**	**86.32**	**32**	PFAKE		20 33 40.0	+14
EYMN				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
GRA1	**Grafenberg Arr**	**86.33**	**330**	*e*P	**P**	**20 33 27.3**	**+0.9**
	comp=Z,114nm,1.4s,mb5.9						
GRA1				*e*PP	PP	20 36 45.7	-3.6
GRF	**Grafenberg Arr**	**86.33**	**330**	*e*P	**P**	**20 33 27.3**	**+0.9**
	comp=Z,114nm,1.4s,mb5.9						
GRF				*e*PP	PP	20 36 45.7	-3.6
GRF				LR	LR		
	comp=Z,3µm,18.2s,MS5.7						
GRF	**Grafenberg Arr**	**86.33**	**330**	*e*P	**P**	**20 33 27.3**	**+0.9**
GRF				*e*		20 36 45.7	
GRF				pmax	pmax		
	comp=Z,114nm,1.4s,mb5.9						
GRF				MLR	MLR		
	comp=Z,3µm,18.2s,MS5.7						
DIVS	**Divcibare**	**86.33**	**322**	⇑*i*P	**P**	**20 33 25.9**	**-0.6**
MOA	**Molln**	**86.40**	**327**	⇑*i*P	**P**	**20 33 27.4**	**+0.6**
	comp=Z,19nm,1.3s,mb5.2,SNR=5.7						
KOGS	**Kog**	**86.51**	**325**	*e*P	**P**	**20 33 27.8**	**+0.4**
TBI	**Tubuai**	**86.61**	**121**	*e*S	S	20 44 05.5	+1.8
TBI				*e*LQ		20 56 33.9	
TBI				*e*LR	LR	20 59 36.2	
	comp=Z,2µm,25.8s,baz=318						
ESK	**Eskdalemuir**	**86.70**	**341**	*e*P	**P**	**20 33 29.1**	**+1.0**
ESK				AMb	AMB	20 33 34.1	
	comp=Z,42nm,3.1s						
ESK	**Eskdalemuir**	**86.70**	**341**	*e*P	**P**	**20 33 28.5**	**+0.4**
	comp=Z,14nm,0.7s,mb5.3						
ESK				LR	LR		
	comp=Z,815nm,19.0s,MS5.2						
ESK	**Eskdalemuir**	**86.70**	**341**	*e*P	**P**	**20 33 28.5**	**+0.4**
ESK				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.3						
ESK				MLR	MLR		
	comp=Z,815nm,19.0s,MS5.2						
ECK	**Cauldkaine Hil**	**86.80**	**341**	⇑*e*P	**P**	**20 33 28.6**	**+0.1**
ECK				AMb	AMB	20 33 37.7	
	comp=Z,70nm,1.9s,mb5.6						
GROS	**Grobnik**	**86.86**	**326**	*e*P	**P**	**20 33 28.9**	**-0.2**
VAY	**Valandovo**	**86.86**	**319**	*i* P	**P**	**20 33 28.1**	**-1.1**
PERS	**Pernice**	**86.91**	**326**	*e*P	**P**	**20 33 29.3**	**0.0**
LAZ	**Ladron**	**86.93**	**50**	*e*P	**P**	**20 33 30.8**	**+1.1**
ANMO	**Albuquerque**	**87.03**	**50**	LR	LR	21 05 22.9	
	comp=Z,1µm,21.9s,MS5.2,slow=31						
ANMO	**Albuquerque**	**87.03**	**50**	*e*P	**P**	**20 33 30.7**	**+0.5**
	comp=Z,18nm,1.1s,mb5.2						
ANMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
ANMO	**Albuquerque**	**87.03**	**50**	*e*P	**P**	**20 33 30.7**	**+0.5**
ANMO				pmax	pmax		
	comp=Z,18nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,2µm,20.0s						
SKO	**Skopje**	**87.03**	**320**	*e*P	**P**	**20 33 29.3**	**-0.8**
SKO	**Skopje**	**87.03**	**320**	*e*P	**P**	**20 33 29.3**	**-0.8**
TNS	**Taunus Mts**	**87.04**	**332**	*e*P	**P**	**20 33 30.2**	**+0.3**
	comp=Z,25nm,1.1s,mb5.4						
TNS				*e*PP	PP	20 36 51.2	-4.5
TNS				*e*S	S	20 44 06.2	-0.9
TNS	**Taunus Mts**	**87.04**	**332**	*e*P	**P**	**20 33 30.2**	**+0.3**
TNS				*e*		20 36 51.2	
TNS				*e*S	S	20 44 06.2	-0.9
TNS				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.4						
LENM	**Lemitar**	**87.19**	**51**	*e*P	**P**	**20 33 31.1**	**+0.1**
LPM	**Los Pinos Moun**	**87.32**	**50**	*e*P	**P**	**20 33 32.1**	**+0.5**
TOD	**Tromm**	**87.38**	**331**	*e*P	**P**	**20 33 31.8**	**+0.3**
KBA	**Koelnbreinsper**	**87.39**	**327**	⇑*i*P	**P**	**20 33 30.6**	**-1.1**
	comp=Z,16nm,1.4s,mb5.0						
KBA	**Koelnbreinsper**	**87.39**	**327**	⇑P	**P**	**20 33 30.6**	**-1.1**
	comp=Z,16nm,1.4s,mb5.0						
KBA	**Koelnbreinsper**	**87.39**	**327**	⇑P	**P**	**20 33 30.6**	**-1.0**
KBA				pmax	pmax		
	comp=Z,16nm,1.4s,mb5.1						
BNM	**Barren Site**	**87.42**	**50**	*e*P	**P**	**20 33 31.4**	**-0.8**
FUR	**Furstenfeldbru**	**87.48**	**329**	*e*P	**P**	**20 33 32.7**	**+0.7**
	comp=Z,57nm,1.2s,mb5.7						
FUR				*e*PP	PP	20 36 55.2	-4.1
FUR				*e*S	S	20 44 14.8	+3.5
FUR	**Furstenfeldbru**	**87.48**	**329**	*e*P	**P**	**20 33 32.7**	**+0.7**
FUR				*e*		20 36 55.2	
FUR				*e*S	S	20 44 14.8	+3.5
FUR				pmax	pmax		
	comp=Z,57nm,1.2s,mb5.7						
LBOS		**87.54**	**285**	⇑*e*P	**P**	**20 33 33.9**	**+0.8**
HGN	**Heimansgroeve**	**87.57**	**334**	⇑*i*P	**P**	**20 33 32.5**	**0.0**
	comp=Z,46nm,1.3s,mb5.5						
HGN				*e*PP	PP	20 36 38.7	-21
HGN				*e*S	S	20 44 01.1	-11
HGN				*e*SS	SS	20 50 06.8	+5.7
HGN				*e*SSS	SSS	20 54 03.6	+31
LJU	**Ljubljana**	**87.62**	**326**	*e*P	**P**	**20 33 32.4**	**-0.4**
ABH	**Alteburg**	**87.66**	**332**	*e*P	**P**	**20 33 33.0**	**+0.1**
BIA	**Bitola**	**87.75**	**319**	*e*P	**P**	**20 33 31.6**	**-1.9**
BIA	**Bitola**	**87.75**	**319**	*e*P	**P**	**20 33 31.6**	**-1.9**
LHO	**Holmfirth**	**87.86**	**339**	⇑*e*P	**P**	**20 33 33.8**	**+0.1**
STU	**Stuttgart**	**87.88**	**331**	*e*P	**P**	**20 33 32.7**	**-1.2**
OHR	**Ohrid**	**87.98**	**319**	*i* P	**P**	**20 33 33.2**	**-1.4**
OHR	**Ohrid**	**87.98**	**319**	*i* P	**P**	**20 33 33.2**	**-1.4**
WATA	**Walderalm**	**87.98**	**328**	⇑*i*P	**P**	**20 33 37.1**	**+2.6**
	comp=Z,3.2nm,0.5s,mb4.8						
WATA	**Walderalm**	**87.98**	**328**	⇑P	**P**	**20 33 37.1**	**+2.6**
WATA				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.8						
FVI	**Forni Avoltri**	**88.01**	**327**	P	**P**	**20 33 34.1**	**-0.5**
WTTA	**Wattenberg**	**88.01**	**328**	⇑*i*P	**P**	**20 33 36.4**	**+1.8**
	comp=Z,16nm,1.3s,mb5.1						
WTTA	**Wattenberg**	**88.01**	**328**	⇑P	**P**	**20 33 36.4**	**+1.8**
	comp=Z,16nm,1.3s,mb5.1						
WTTA	**Wattenberg**	**88.01**	**328**	⇑P	**P**	**20 33 36.4**	**+1.8**
WTTA				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.1						
KBI1	**Birley Grange**	**88.01**	**339**	*e*P	**P**	**20 33 34.4**	**0.0**
MOTA	**Moosalm**	**88.18**	**329**	⇑P	**P**	**20 33 34.3**	**-1.1**
	comp=Z,5.9nm,0.7s,mb5.0						
MOTA	**Moosalm**	**88.18**	**329**	⇑P	**P**	**20 33 34.3**	**-1.1**
MOTA				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.2						
SQTA	**Sankt Quirin**	**88.23**	**329**	⇑*i*P	**P**	**20 33 36.4**	**+0.7**
	comp=Z,3.3nm,0.7s,mb4.7						
SQTA	**Sankt Quirin**	**88.23**	**329**	⇑P	**P**	**20 33 36.4**	**+0.7**
SQTA				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.6						
LANF	**Langenberg**	**88.28**	**331**	*e*P	**P**	**20 33 35.3**	**-0.5**
KWE	**Weaver Farm**	**88.31**	**339**	*e*P	**P**	**20 33 35.9**	**0.0**
WLF	**Walferdange**	**88.38**	**333**	*e*P	**P**	**20 33 36.3**	**0.0**
	comp=Z,32nm,1.3s,mb5.4						
WLF	**Walferdange**	**88.38**	**333**	*e*P	**P**	**20 33 36.3**	**0.0**
WLF				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.4						
GIVF	**Givet**	**88.52**	**334**	*e*P	**P**	**20 33 36.6**	**-0.4**
BFO	**Black Forest**	**88.58**	**331**	*e*P	**P**	**20 33 37.4**	**+0.1**
	comp=Z,23nm,1.2s,mb5.4						
BFO				*e*PP	PP	20 37 08.7	+0.6
BFO				*e*S	S	20 44 25.3	+3.7
BFO	**Black Forest**	**88.58**	**331**	*e*P	**P**	**20 33 37.4**	**+0.1**
BFO				*e*		20 37 08.7	
BFO				*e*S	S	20 44 25.3	+3.7
BFO				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.4						
CBKS	**Cedar Bluff**	**88.58**	**43**	*e*P	**P**	**20 33 37.3**	**-0.3**
CBKS				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
DAVA	**Damuels**	**88.75**	**329**	⇓*i*P	**P**	**20 33 37.1**	**-1.1**
	comp=Z,19nm,1.3s,mb5.3						
DAVA	**Damuels**	**88.75**	**329**	⇓P	**P**	**20 33 37.1**	**-1.1**
	comp=Z,19nm,1.3s,mb5.3						
BAIF	**Baives**	**88.78**	**334**	*e*P	**P**	**20 33 38.0**	**-0.2**
	comp=Z,30nm,0.9s,mb5.3						
BAIF	**Baives**	**88.78**	**334**	*e*P	**P**	**20 33 38.0**	**-0.2**
BAIF				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
WLS	**Welschbruch**	**88.91**	**331**	*e*P	**P**	**20 33 38.1**	**-0.8**
CDF	**Champ du Feu**	**88.94**	**331**	*e*P	**P**	**20 33 38.7**	**-0.3**
	comp=Z,47nm,1.3s,mb5.3						
CDF	**Champ du Feu**	**88.94**	**331**	*e*P	**P**	**20 33 38.7**	**-0.3**
CDF				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.3						
SCHQ	**Schefferville**	**88.96**	**16**	P	**P**	**20 33 38.5**	**-0.5**
	comp=Z,8.4nm,0.8s,mb5.1,baz=327,slow=3.0,SNR=4.9						
SCHQ				LR	LR	21 20 13.7	
	comp=Z,1µm,18.1s,MS5.3,baz=352,slow=40						
LIBD	**Limburg**	**89.02**	**331**	*e*P	**P**	**20 33 38.6**	**-0.8**
MSEY	**Mahe Island**	**89.12**	**264**	*e*P	**P**	**20 33 38.7**	**-2.0**
	comp=Z,49nm,1.1s,mb5.8						
MSEY				LR	LR		
	comp=Z,281nm,20.0s,MS4.7						
ECH	**Echery**	**89.15**	**331**	*e*P	**P**	**20 33 39.3**	**-0.7**
BRMO	**Bormio**	**89.17**	**329**	P	**P**	**20 33 40.7**	**+0.5**
MOF	**Molkenrain**	**89.45**	**331**	*e*P	**P**	**20 33 41.9**	**+0.4**
HINF	**Hinteralfeld**	**89.59**	**331**	*e*P	**P**	**20 33 41.8**	**-0.3**
BBS	**Basel-Blauen**	**89.61**	**331**	*e*P	**P**	**20 33 40.9**	**-1.3**
HAU	**Haudompre**	**89.64**	**332**	*e*P	**P**	**20 33 42.3**	**0.0**
HAU				*e*R			
	comp=Z,3µm,20.8s						
MEZF	**Maizieres J'vi**	**89.75**	**333**	*e*P	**P**	**20 33 42.0**	**-0.8**
MNTX	**Cornudas Mount**	**89.78**	**52**	*e*P	**P**	**20 33 43.4**	**0.0**
	comp=Z,4.7nm,0.9s,mb4.8						
MNTX				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
CPRX	**Cap Rock**	**89.91**	**50**	*e*P	**P**	**20 33 44.2**	**+0.2**
LOMF	**Lomont**	**89.97**	**331**	*e*P	**P**	**20 33 43.1**	**-0.8**
AMTX	**Amarillo**	**90.06**	**47**	PFAKE		20 34 00.0	+15
AMTX				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
GDL2	**Guadalupe Moun**	**90.12**	**51**	*e*P	**P**	**20 33 45.8**	**+0.7**
VAI	**Varese**	**90.34**	**329**	P	**P**	**20 33 45.0**	**-0.7**
SFI	**Santa Sofia**	**90.48**	**326**	P	**P**	**20 33 45.8**	**-0.6**
PGD	**Poggio Sodo**	**90.56**	**326**	P	**P**	**20 33 48.3**	**+1.6**
	comp=Z,56nm,1.0s,mb5.8						
PGD	**Poggio Sodo**	**90.56**	**326**	P	**P**	**20 33 48.3**	**+1.6**
PGD				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.8						
VMG	**Vicchio**	**90.58**	**326**	P	**P**	**20 33 48.5**	**+1.7**
MCGN	**Macugnaga**	**90.61**	**330**	P	**P**	**20 33 47.6**	**+0.7**
NRCA	**Norcia**	**90.69**	**325**	P	**P**	**20 33 48.0**	**+0.7**
ORO	**Oropa**	**90.87**	**329**	P	**P**	**20 33 47.9**	**-0.2**
	comp=Z,20nm,0.9s,mb5.5						
ORO	**Oropa**	**90.87**	**329**	P	**P**	**20 33 47.9**	**-0.2**
ORO				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.5						
CABF	**La Chapelle**	**90.87**	**331**	*e*P	**P**	**20 33 47.2**	**-0.9**
	comp=Z,147nm,1.8s,mb5.7						
CABF	**La Chapelle**	**90.87**	**331**	*e*P	**P**	**20 33 47.2**	**-0.9**
CABF				pmax	pmax		
	comp=Z,73nm,1.8s,mb5.7						
AQU	**L'Aquila**	**90.91**	**324**	*e*P	**P**	**20 33 46.8**	**-1.6**
	comp=Z,50nm,1.2s,mb5.7						
AQU	**L'Aquila**	**90.91**	**324**	P	**P**	**20 33 46.6**	**-1.8**
LOR	**Lormes**	**91.22**	**333**	*e*P	**P**	**20 33 49.3**	**-0.3**
	comp=Z,64nm,1.4s,mb5.5						
LOR				*e*R			
	comp=Z,3µm,19.8s						
LOR	**Lormes**	**91.22**	**333**	*e*P	**P**	**20 33 49.3**	**-0.3**
LOR				pmax	pmax		
	comp=Z,32nm,1.4s,mb5.5						

LOR				MLR	MLR		
	comp=Z,3µm,19.8s,MS5.7						
LPL	La Plagne	91.49	330	*e*P	P	20 33 50.9	0.0
	comp=Z,62nm,1.1s,mb5.5						
LPL	La Plagne	91.49	330	*e*P	P	20 33 50.9	0.0
LPL				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.5						
LPG	La Plagne	91.49	330	*e*P	P	20 33 51.0	0.0
	comp=Z,60nm,1.1s,mb5.5						
LPG	La Plagne	91.49	330	*e*P	P	20 33 51.0	0.0
LPG				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.5						
SSF	Saint Saulge	91.52	333	*e*P	P	20 33 50.8	-0.3
	comp=Z,24nm,1.3s,mb5.4						
SSF	Saint Saulge	91.52	333	*e*P	P	20 33 50.8	-0.3
SSF				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.4						
FLN	La Foliniere	91.54	336	*e*P	P	20 33 50.6	-0.5
	comp=Z,120nm,1.4s,mb5.7						
FLN				*e*R			
	comp=Z,4µm,17.8s						
FLN	La Foliniere	91.54	336	*e*P	P	20 33 50.6	-0.5
FLN				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.7						
FLN				MLR	MLR		
	comp=Z,4µm,17.8s,MS5.9						
LDF	La Druitiere	91.56	336	*e*P	P	20 33 50.7	-0.5
SMF	Signal de Mont	91.74	332	*e*P	P	20 33 51.7	-0.3
	comp=Z,78nm,1.3s,mb5.6						
SMF	Signal de Mont	91.74	332	*e*P	P	20 33 51.7	-0.3
SMF				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.6						
AVF	Avril sur Loir	91.81	333	*e*P	P	20 33 52.1	-0.3
	comp=Z,62nm,0.9s,mb5.6						
AVF	Avril sur Loir	91.81	333	*e*P	P	20 33 52.1	-0.3
AVF				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.6						
BNI	Bardonecchia	91.88	330	*e*P	P	20 33 49.6	-3.1
	comp=Z,22nm,1.0s,mb5.4						
BNI	Bardonecchia	91.88	330	*e*P	P	20 33 49.6	-3.2
BNI				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.4						
WMOK	Wichita Mounta	91.92	46	*e*P	P	20 33 52.6	-0.6
	comp=Z,15nm,1.0s,mb5.3						
WMOK				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
WMOK	Wichita Mounta	91.92	46	*e*P	P	20 33 52.6	-0.6
WMOK				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.3						
WMOK				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.5						
GRR	Gorron	91.99	336	*e*P	P	20 33 53.0	-0.2
	comp=Z,56nm,1.0s,mb5.6						
GRR	Gorron	91.99	336	*e*P	P	20 33 53.0	-0.2
GRR				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.5						
MBDF	Montbardon	92.10	329	*e*P	P	20 33 53.1	-0.7
	comp=Z,81nm,1.3s,mb5.6						
MBDF	Montbardon	92.10	329	*e*P	P	20 33 53.1	-0.7
MBDF				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.6						
BGF	Bois d’Agland	92.19	333	*e*P	P	20 33 54.0	-0.2
	comp=Z,20nm,0.9s,mb5.2						
BGF	Bois d’Agland	92.19	333	*e*P	P	20 33 54.0	-0.2
BGF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
ORIF	Oris-en-Rattie	92.33	330	*e*P	P	20 33 54.6	-0.2
	comp=Z,25nm,0.9s,mb5.2						
ORIF				*e*R			
	comp=Z,3µm,19.8s						
PLDF	La Plantade	92.38	332	*e*P	P	20 33 54.9	-0.1
LTX	Lajitas	92.43	52	*e*P	P	20 33 56.1	+0.4
	comp=Z,43nm,1.3s,mb5.6						
LTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
LTX	Lajitas	92.43	52	*e*P	P	20 33 56.1	+0.4
LTX				pmax	pmax		
	comp=Z,43nm,1.3s,mb5.6						
LTX				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.6						
TXAR	Lajitas Array	92.43	52	P	P	20 33 56.1	+0.5
	comp=Z,7.9nm,0.9s,mb5.0,baz=297,slow=2.8,SNR=16						
TXAR	Lajitas Array	92.43	52	P	P	20 33 56.1	+0.4
TXAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AGO	Saint Agoulin	92.50	332	*e*P	P	20 33 55.9	+0.3
SBF	Sospel	92.51	329	*e*P	P	20 33 54.6	-1.1
	comp=Z,108nm,1.1s,mb5.9						
SBF	Sospel	92.51	329	*e*P	P	20 33 54.6	-1.1
SBF				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.9						
TCF	Toulx Ste Croi	92.66	333	*e*P	P	20 33 56.3	0.0
	comp=Z,27nm,1.0s,mb5.3						
TCF	Toulx Ste Croi	92.66	333	*e*P	P	20 33 56.3	0.0
TCF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.3						
SGMF	Saint Gilles	92.68	337	*e*P	P	20 33 56.3	0.0
	comp=Z,35nm,0.9s,mb5.5						
SGMF	Saint Gilles	92.68	337	*e*P	P	20 33 56.3	0.0
SGMF				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.5						
PYM	Petit Puy Mans	92.80	332	*e*P	P	20 33 57.1	+0.1
ROSF	Rostrenen	92.84	337	*e*P	P	20 33 56.2	-0.9
PGF	Pioggiola	92.85	327	*e*P	P	20 33 56.4	-0.9
VIVF	Saint-Julien-l	92.88	331	*e*P	P	20 33 57.1	-0.2
	comp=Z,80nm,1.2s,mb5.7						
VIVF	Saint-Julien-l	92.88	331	*e*P	P	20 33 57.1	-0.2
VIVF				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.7						
FRF	La Foret Royal	93.09	329	*e*P	P	20 33 57.3	-1.1
	comp=Z,66nm,1.3s,mb5.6						
FRF	La Foret Royal	93.09	329	*e*P	P	20 33 57.3	-1.1
FRF				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.6						
QUIF	Quistinic	93.17	337	*e*P	P	20 33 58.3	-0.3
	comp=Z,45nm,1.1s,mb5.5						
QUIF	Quistinic	93.17	337	*e*P	P	20 33 58.3	-0.3
QUIF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.5						
SMRF	Simiane la Rot	93.22	330	*e*P	P	20 33 58.7	-0.2
MFF	Saint Martin d	93.27	335	*e*P	P	20 33 59.1	0.0
	comp=Z,50nm,1.1s,mb5.5						
MFF	Saint Martin d	93.27	335	*e*P	P	20 33 59.1	0.0
MFF				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.6						
LMR	La Mourre	93.33	329	*e*P	P	20 33 58.7	-0.8
	comp=Z,70nm,1.1s,mb5.7						
LMR	La Mourre	93.33	329	*e*P	P	20 33 58.7	-0.8
LMR				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.7						
RJF	Les Rejaudoux	93.75	333	*e*P	P	20 34 01.4	+0.1
	comp=Z,42nm,1.1s,mb5.5						
RJF				*e*R			
	comp=Z,2µm,17.8s						
RJF	Les Rejaudoux	93.75	333	*e*P	P	20 34 01.4	+0.1
RJF				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.5						
RJF				MLR	MLR		
	comp=Z,2µm,17.8s,MS5.7						
CCM	Cathedral Cave	93.80	39	*e*P	P	20 34 01.2	-0.6
	comp=Z,26nm,1.1s,mb5.6						
CCM				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
CCM	Cathedral Cave	93.80	39	*e*P	P	20 34 01.2	-0.6
CCM				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.6						
CCM				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.3						
LASF	Ste Croix	93.85	331	*e*P	P	20 34 01.8	0.0
	comp=Z,143nm,1.6s,mb5.9						
CAF	Calviac	93.86	332	*e*P	P	20 34 02.2	+0.4
	comp=Z,40nm,1.1s,mb5.5						
CAF	Calviac	93.86	332	*e*P	P	20 34 02.2	+0.4
CAF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.5						
JCT	Junction City	94.19	49	*e*P	P	20 34 03.7	0.0
	comp=Z,18nm,0.8s,mb5.6						
JCT				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
JCT	Junction City	94.19	49	*e*P	P	20 34 03.7	0.0
JCT				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.5						
JCT				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.4						
AAM	Ann Arbor	94.19	32	PFAKE		20 34 10.0	+6.5
AAM				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
LFF	La Frestale	94.35	333	*e*P	P	20 34 04.4	+0.3
	comp=Z,39nm,1.1s,mb5.5						
LFF	La Frestale	94.35	333	*e*P	P	20 34 04.4	+0.3
LFF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.5						
MIAR	Mount Ida	95.10	43	PFAKE		20 34 20.0	+12
MIAR				LR	LR		
	comp=Z,5µm,21.0s,MS5.9						
MTLF	Montolieu	95.12	331	*e*P	P	20 34 07.7	0.0
	comp=Z,34nm,1.1s,mb5.4						
MTLF	Montolieu	95.12	331	*e*P	P	20 34 07.7	0.0
MTLF				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.4						
UALR	University of	95.62	42	*e*P	P	20 34 14.7	+4.4
	comp=Z,102nm,1.3s,mb6.1						
ERPA	Erie	95.91	30	PFAKE		20 34 20.0	+8.6
ERPA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
EPF	Esparros	96.12	332	*e*P	P	20 34 11.6	-0.7
ACSO	Alum Creek Sta	96.16	33	PFAKE		20 34 20.0	+7.5
ACSO				LR	LR		
	comp=Z,836nm,20.0s,MS5.2						
WCI	Wyandotte Cave	96.19	36	PFAKE		20 34 20.0	+7.3
WCI				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
NATX	Nacogdoches	96.47	45	PFAKE		20 34 30.0	+16
NATX				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
NCB	Newcomb	96.55	25	PFAKE		20 34 30.0	+16
NCB				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
SJPF	Ste Jean	96.65	333	*e*P	P	20 34 13.4	-1.3
WVT	Waverly	97.04	38	PFAKE		20 34 30.0	+13
WVT				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
LBNH	Lisbon	97.11	23	PFAKE		20 34 30.0	+13
LBNH				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
RKT	Rikitea	97.33	113	*e*PS	PS	20 47 05.4	-2.1
RKT	Rikitea	97.33	113	*e*SKSac		20 44 51.1	
RKT				*e*SS	SS	20 52 14.8	-6.0
RKT				*e*LR	LR	21 04 26.0	
	comp=Z,3µm,34.0s,baz=307						
OXF	Oxford	97.43	40	PFAKE		20 34 30.0	+12
OXF				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
PLAL	Pickwick Lake	97.79	39	PFAKE		20 34 30.0	+10
PLAL				LR	LR		
	comp=Z,849nm,21.0s,MS5.2						
MCWV	Mont Chateau	98.01	31	PFAKE		20 34 30.0	+9.1
MCWV				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
HRV	Harvard--Oak R	98.77	24	PFAKE		20 34 40.0	+16
HRV				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
WES	Weston	98.95	24	PFAKE		20 34 40.0	+15
WES				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
DRV	Dumont d’Urvil	99.61	181	PP	PP	20 38 48.0	+14
DRV				SP	SP	20 47 44.0	+15
DRV				SS	SS	20 52 59.0	+7.2
BLA	Blacksburg	99.78	33	PFAKE		20 34 40.0	+11
BLA				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
CBN	Corbin	100.28	30	PFAKE		20 34 40.0	+8.8
CBN				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
ESDC	Sonseca Array	100.66	333	PP	PP	20 38 30.1	-13
	comp=Z,1.5nm,0.8s,baz=38,slow=4.9,SNR=4.4						
ESLA	Sonseca Array	100.66	333	PFAKE		20 34 40.0	+7.1
ESLA				LR	LR		
	comp=Z,13µm,20.0s,MS6.4						
GOGA	Godfrey	101.39	37	PFAKE		20 34 50.0	+14
GOGA				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
CASY	Casey	102.02	192	PFAKE		20 34 50.0	+12
CASY				LR	LR		
	comp=Z,470nm,20.0s,MS5.0						
KMBO	Kilima Mbogo	102.44	277	PP	PP	20 38 53.8	-2.9
	comp=Z,1.0nm,0.5s,baz=34,slow=9.6,SNR=4.5						
KMBO	Kilima Mbogo	102.44	277	PFAKE		20 34 50.0	+8.5
KMBO				LR	LR		
	comp=Z,823nm,22.0s,MS5.2						
EVO	Evora	103.12	336	*e*P	Pdif	20 34 42.1	-1.9
	comp=Z,31nm,1.2s						
EVO				*e*R			
	comp=Z,4µm,19.8s						
NHSC	New Hope	103.26	35	PFAKE		20 35 00.0	+15
NHSC				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
DWPF	Disney	106.68	39	PFAKE		20 39 20.0	
DWPF				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
BBSR	BB Station	110.24	23	PFAKE		20 39 30.0	+12
BBSR				LR	LR		
	comp=Z,644nm,22.0s,MS5.2						
VNDA	Vanda	111.22	175	PFAKE		20 39 30.0	+11
VNDA				LR	LR		
	comp=Z,702nm,20.0s,MS5.2						
SBA	Scott Base	111.91	174	PFAKE		20 39 30.0	+10
SBA				LR	LR		
	comp=Z,550nm,20.0s,MS5.1						
SBA	Scott Base	111.91	174	PKIKP	PKPdf	20 39 20.0	-0.4
MAW	Mawson	116.12	205	PKP	PKPdf	20 39 27.3	-1.7
	comp=Z,2.1nm,0.8s,baz=316,slow=3.5,SNR=4.8						
MAW				PP	PP	20 40 32.1	-3.7
	comp=Z,7.7nm,1.0s,baz=55,slow=14,SNR=6.9						
MAW				PKKPbc		20 49 57.3	
	comp=Z,2.5nm,1.0s,baz=266,slow=3.3,SNR=4.9						
MAW	Mawson	116.12	205	PKIKP	PKPdf	20 39 27.3	-1.7
MAW						20 40 32.1	
MAW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MAW				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MAW				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LSZ	Lusaka	117.49	269	*e*PKPdf	PKPdf	20 39 31.3	-1.4
LSZ				*e*PP	PP	20 40 41.1	-5.5
LSZ				LR	LR		
	comp=Z,988nm,20.0s,MS5.4						
JTS	JuntasAbangare	118.18	54	PFAKE		20 39 40.0	+5.9
JTS				LR	LR		
	comp=Z,170nm,20.0s,MS4.7						
RPN	Rapa Nui	119.61	105	PFAKE		20 39 50.0	+13
RPN				LR	LR		
	comp=Z,573nm,19.0s,MS5.2						
PAYG	Puerto Ayora	121.72	67	PFAKE		20 39 50.0	+8.9
PAYG				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
SJG	San Juan	122.54	31	PFAKE		20 39 50.0	+7.6
SJG				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
CPD	Cerro la Pandu	122.70	31	*e*Pdif	Pdif	20 36 08.7	-1.9
CPD	Cerro la Pandu	122.70	31	P	Pdif	20 36 07.4	-3.2
QSPA	South Pole Qui	123.01	180	*e*PKPdf	PKPdf	20 39 40.3	-1.6
LBTB	Lobatse	124.08	260	*e*PKPdf	PKPdf	20 39 43.2	-2.2
LBTB				LR	LR		
	comp=Z,856nm,21.0s,MS5.4						
BOSA	Boshof	125.78	257	PKP	PKPdf	20 39 47.1	-1.5
	comp=Z,6.2nm,1.0s,baz=297,slow=2.5,SNR=6.5						
BOSA	Boshof	125.78	257	PKP	PKPdf	20 39 47.1	-1.5
BOSA				LR	LR		
	comp=Z,861nm,21.0s,MS5.4						
TSUM	Tsumeb	128.25	271	PFAKE		20 40 00.0	+6.4
TSUM				LR	LR		
	comp=Z,875nm,22.0s,MS5.4						
DBIC	Dimbokro	128.98	315	PKP	PKPdf	20 39 53.5	-1.6
	comp=Z,3.1nm,0.9s,baz=62,slow=5.7,SNR=3.0						
DBIC				PP	PP	20 41 55.3	-8.9
	comp=Z,6.2nm,1.0s,baz=348,slow=10,SNR=3.4						
DBIC	Dimbokro	128.98	315	PKIKP	PKPdf	20 39 53.5	-1.6
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DBIC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ROSC	El Rosal	129.19	49	PKP	PKPdf	20 39 54.6	-0.9
	comp=Z,3.5nm,0.4s,baz=276,slow=19,SNR=5.2						
LIC	Lamto	129.44	315	*e*PKIKP	PKPdf	20 39 51.7	-4.3
	comp=Z,48nm,1.3s						
LIC				*e*R			
	comp=Z,2µm,21.0s						
SUR	Sutherland	130.67	254	PFAKE		20 40 10.0	+12
SUR				LR	LR		
	comp=Z,225nm,19.0s,MS4.9						
PMSA	Palmer Station	144.83	161	*e*PKPdf	PKPdf	20 40 20.3	-2.2
PMSA				LR	LR		
	comp=Z,787nm,19.0s,MS5.5						
ARE	Arequipa	145.98	69	*e*P	PKPbc	20 40 26.0	+2.0
SAML	Samuel	146.84	49	*e*PKPdf	PKPdf	20 40 25.6	-1.9
SAML				LR	LR		
	comp=Z,778nm,20.0s,MS5.5						
LPAZ	La Paz	148.46	65	PKPbc	PKPdf	20 40 33.3	+3.4
	comp=Z,39nm,0.8s,baz=360,slow=4.8,SNR=67						
LPAZ	La Paz	148.46	65	*e*PKPdf	PKPdf	20 40 29.7	-0.3
LPAZ				*e*PKPbc	PKPdf	20 40 33.2	+3.2
LPAZ				LR	LR		
	comp=Z,624nm,22.0s,MS5.4						
TLL	Tololo Astrono	152.49	92	*e*P	PKPdf	20 40 39.8	+4.0
RCBR	Riachuelo	152.59	354	PKPdf	PKPdf	20 40 42.3	+6.0
RCBR				LR	LR		
	comp=Z,820nm,20.0s,MS5.5						
PLCA	Paso Flores	153.52	116	PKPbc	PKPdf	20 40 44.0	+7.2
	comp=Z,7.7nm,1.0s,baz=210,slow=3.7,SNR=6.2						
PLCA	Paso Flores	153.52	116	*e*PKPdf	PKPdf	20 40 35.4	-1.5
PLCA				*e*PKPbc	PKPdf	20 40 42.6	+5.7
PLCA				PKPab	PKPab	20 40 57.5	+0.9
PLCA				LR	LR		
	comp=Z,879nm,19.0s,MS5.6						
PLCA	Paso Flores	153.52	116	*e*PKIKP	PKPdf	20 40 35.4	-1.5
PLCA				*e*		20 40 42.6	
PLCA				MLR	MLR		
	comp=Z,879nm,19.0s						
EFI	East Falkland	156.79	148	PFAKE		20 40 50.0	+9.1
EFI				LR	LR		
	comp=Z,235nm,21.0s,MS5.0						
TRQA	Tornquist	160.43	111	PKPab	PKPab	20 41 27.5	+1.3
TRQA				LR	LR		
	comp=Z,1µm,20.0s						
BDFB	Brasilia	160.50	28	PKP	PKPdf	20 40 45.5	-0.8
	comp=Z,1.2nm,0.4s,baz=45,slow=2.9,SNR=2.5						
BDFB				PKPab	PKPab	20 41 22.4	-4.6
	comp=Z,5.4nm,0.9s,baz=4.9,slow=4.6,SNR=5.0						
BDFB	Brasilia	160.50	28	PKP2	PKPab	20 41 22.4	-4.7
BDFB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BAO	Brasilia Array	160.50	28	PKPdf	PKPdf	20 40 46.0	-0.3
CPUP	Villa Florida	162.35	72	*e*PKPdf	PKPdf	20 40 46.2	-1.7
CPUP				*e*PKPab	PKPab	20 41 34.1	-0.8
CPUP				LR	LR		
	comp=Z,206nm,20.0s						

MOS ***15*** *20:44:00.4±0.8, 35.80N×70.72E, h93^{km}, mb4.4/25, Error ellipse: s-maj=9.7km s-min=5.3km az=101.0*

BJI ***15*** *20:44:02.6, 35.71N×70.95E, h97^{km}, mB5.6, mb4.4*

NEIC ***15*** *20:44:02.3±0.4, 35.74N×70.92E, mb4.5/23, Error ellipse: s-maj=8.8km s-min=6.5km az=210.0*

IDC ***15*** *20:44:03.4±0.8, 35.79N×70.80E, h109^{km}±5^{km}, mb3.8/16, mb1 4.0/19, mb1mx3.9/25, mbtmp4.2/19, Error ellipse: s-maj=18.6km s-min=12.9km az=10.0*

NNC ***15*** *20:44:09.8±3.3, 36.43N×70.41E, h110^{km}±28^{km}, mpv4.5, Error ellipse: s-maj=32.6km s-min=22.5km az=17.0*

ISC 15 20:44:00.3±0.2**, 35.69N**±0.02×**70.87E**±0.04**, h107**^{km}**, h107**^{km}±5.0^{km}**:pP-P, n151,** σ1^{s}**27**/183**, mb4.2**/30**, 21C-10D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.05	155	⇑P	P	20 44 36.5	+2.3
CHCP	Chirah Chowk	2.83	135	P	P	20 44 47.0	+2.2
THW	Thamme Wali	2.97	166	⇑P	P	20 44 48.1	+1.2
SBDP	Sheikh Budin	3.38	181	P	P	20 44 52.4	0.0
DRP	Derazinda	3.97	188	⇓P	P	20 45 01.1	+0.7
SARP	Sargodha	4.04	158	P	P	20 45 01.3	-0.1
SARP				S	S	20 45 48.0	0.0
THN	Thein Dam	5.17	128	*e*P	P	20 45 17.8	+1.1
THN				*e*S	S	20 46 17.1	+1.6
DLH	Dalhousie	5.26	125	*e*P	P	20 45 21.0	+3.1
DLH				*e*S	S	20 46 21.0	+3.1
KSH	Kashi	5.57	45	*e*P	P	20 45 25.9	+3.8
KSH				S	S	20 46 18.4	-7.0
KSH				Smax			
	comp=N,350nm,0.3s						
KSH				Smax			
	comp=E,280nm,0.6s						
BHK	Bhakra	6.29	131	*e*S	S	20 46 45.4	+2.4
BHK				*e*x	x	20 47 27.8	
SDNR	Sundarnagar	6.58	128	*e*P	P	20 45 36.8	+0.8
SDNR				*e*S	S	20 46 48.4	-1.7
AML	Almayashu	6.80	18	P	P	20 45 39.0	0.0
	SNR=42						
SMLA	Simla	6.95	129	*e*P	P	20 45 40.0	-1.1
SMLA				*e*S	S	20 46 57.7	-1.5
UCH	Uchtor	7.12	22	P	P	20 45 43.6	+0.2
	SNR=20						
KZA	Kyzart	7.24	27	P	P	20 45 45.8	+0.8
	SNR=9.8						
EKS2	Erkin-Say	7.32	17	P	P	20 45 46.2	0.0
	SNR=24						
KK31	Karatay Array	7.41	358	⇑P	P	20 45 45.5	-1.9
	comp=E,13nm,0.3s,baz=184,slow=13,SNR=410						
KK31				⇓S	S	20 47 03.3	-7.1
	comp=E,100nm,0.6s,baz=170,slow=13,SNR=9.0						
KK31	Karatay Array	7.41	358	⇑P	P	20 45 45.5	-1.9
	comp=E,13nm,0.3s						
KK31				S	S	20 47 03.3	-7.1
KKAR	Karatay Array	7.41	358	PN	P	20 45 45.5	-1.9
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.2s						
KLP	Kalpa	7.42	122	*e*P	P	20 45 47.5	0.0
KLP				AML	AML	20 48 06.0	
	comp=N,354nm,0.5s						
KLP				AML	AML	20 48 34.8	
	comp=E,307nm,0.3s						
AAK	Ala-Archa	7.49	21	P	P	20 45 48.7	+0.3
	SNR=26						
AAK	Ala-Archa	7.49	21	⇑P	P	20 45 48.4	+0.1
	comp=E,26nm,0.6s						
AAK				⇓S	S	20 47 10.5	-1.7
	comp=E,71nm,0.9s						
AAK	Ala-Archa	7.49	21	*e*Pn	P	20 45 47.5	-0.9
	comp=E,27nm,0.5s						
AAK				*e*Sn	S	20 47 09.3	-2.9
AAK	Ala-Archa	7.49	21	*e*PN	P	20 45 47.5	-0.9
AAK				pmax	pmax		
	comp=Z,27nm,0.5s						
KBK	Karagaybulak	7.64	23	P	P	20 45 51.8	+1.3
	SNR=12						
CHMS	Chumysh	7.90	21	P	P	20 45 54.2	+0.3
	SNR=26						
USP	Ospenovka	8.07	19	P	P	20 45 55.9	-0.4
	SNR=19						
TKM2	Tokmak 2	8.10	25	P	P	20 45 57.3	+0.7
	SNR=14						
KHET	Khetri	8.67	150	*e*P	P	20 46 02.2	-2.2
KHET				*e*S	S	20 47 32.3	-8.7
JASL	Jaisalmer	8.73	180	*e*P	P	20 46 02.4	-2.8
NDI	New Delhi	8.81	141	*e*P	P	20 46 06.0	-0.2
NDI				*e*S	S	20 47 39.0	-5.5
NDI				AML	AML	20 47 44.9	
	comp=N,77nm,0.8s						
NDI				AML	AML	20 47 45.3	
	comp=E,85nm,0.6s						
JOSI	Joshimath	8.90	123	*e*x	x	20 45 23.0	
KUDL	Kundal	8.90	146	*e*P	P	20 46 06.3	-1.2
AYAN	Aya Nagar	8.93	142	*e*P	P	20 46 07.7	-0.1
AYAN				*e*S	S	20 47 41.7	-5.6
KALG	Kalgarh	9.06	131	*e*P	P	20 46 06.8	-2.8
KALG				*e*x	x	20 47 41.1	
SONA	Sohna	9.10	143	*e*P	P	20 46 09.3	-0.8
SONA				*e*S	S	20 47 45.9	-5.5
SONA				AML	AML	20 47 49.7	
	comp=E,72nm,0.4s						
SONA				AML	AML	20 48 10.1	
	comp=N,50nm,0.4s						
AJM	Ajmer	9.73	160	*e*P	P	20 46 16.2	-2.4
AJM				*e*S	S	20 47 58.9	-7.7
AJM				AML	AML	20 48 03.1	
	comp=N,47nm,0.1s						
AJM				AML	AML	20 48 43.1	
	comp=E,56nm,0.5s						
KOLN	Koldanda	13.39	123	*e*Pn	P	20 47 04.3	-2.8
KOLN				*e*Sn	S	20 49 27.6	-6.1
	comp=E,38nm,0.6s						
KOLN	Koldanda	13.39	123	*e*Pn	P	20 47 04.3	-2.8
	comp=E,19nm,0.6s						
KOLN				*e*Sn	S	20 49 27.6	-6.1

GKN	Gorkha	13.98	119	*e*Pn	P	20 47 12.7	-1.9
GKN				*e*Sn	S	20 49 41.8	-5.6
	comp=E,49nm,0.6s						
MK02	Makanchi Array	14.01	34	⇓P	P	20 47 16.1	+1.3
MK02				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MK31	Makanchi Array	14.02	34	⇓P	P	20 47 16.1	+1.2
	comp=Z,1.4nm,0.5s,baz=219,slow=12,SNR=22						
MK31	Makanchi Array	14.02	34	⇓P	P	20 47 16.1	+1.2
	comp=Z,1.4nm,0.4s						
MKAR	Makanchi Array	14.02	34	P	P	20 47 15.2	+0.2
	comp=Z,0.1nm,0.3s,baz=219,slow=9.2,SNR=7.6						
DMN	Daman	14.54	120	*e*Pn	P	20 47 20.4	-1.5
DMN				*e*Sn	S	20 49 55.4	-5.3
	comp=Z,36nm,0.7s						
KKN	Kakani	14.56	119	*e*Pn	P	20 47 20.3	-1.8
KKN				*e*Sn	S	20 49 55.1	-6.0
	comp=Z,53nm,0.9s						
PKI	Pulchoki	14.78	119	*e*Pn	P	20 47 24.2	-0.8
PKI				*e*Sn	S	20 50 00.7	-5.5
	comp=Z,48nm,0.8s						
AB31	Akbulak array	15.75	333	⇑P	P	20 47 34.5	-2.5
	comp=Z,48nm,0.5s,baz=153,slow=12,SNR=855						
AB31				⇑S	S	20 50 16.0	-12
	comp=Z,7.7nm,0.5s,baz=148,slow=23,SNR=10						
AB31	Akbulak array	15.75	333	⇑P	P	20 47 34.5	-2.5
	comp=Z,48nm,0.5s						
AB31				S	S	20 50 16.0	-12
AB31	Akbulak array	15.75	333	*e*P	P	20 47 34.6	-2.5
AB31				*e*S	S	20 50 16.0	-12
AB31				pmax	pmax		
	comp=Z,21nm,0.4s						
KURK	Kurchatov	16.03	18	⇓P	P	20 47 41.4	+0.8
	comp=Z,4.3nm,1.6s						
KURK	Kurchatov	16.03	18	*e*P	P	20 47 40.7	+0.1
	comp=Z,2.8nm,0.8s						
KURK	Kurchatov	16.03	18	*i* P	P	20 47 43.4	+2.8
VOSK	Vostochnaya	17.03	0	⇑P	P	20 47 51.7	-1.3
	comp=Z,6.6nm,0.9s						
VOSK				⇑S	S	20 50 47.9	-9.4
	comp=Z,8.1nm,1.2s						
VOSK	Vostochnaya	17.03	0	⇑P	P	20 47 51.7	-1.3
	comp=Z,6.6nm,0.9s						
VOSK				S	S	20 50 47.9	-9.4
VOSK	Vostochnaya	17.03	0	⇑P	P	20 47 51.7	-1.3
VOSK				S	S	20 50 47.9	-9.4
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
POO	Poona	17.29	170	*e*x	x	20 52 14.0	
BVA0	Borovoye Array	17.34	359	⇑P	P	20 47 55.9	-0.9
	comp=Z,0.7nm,0.6s,baz=160,slow=10,SNR=32						
BVA0	Borovoye Array	17.34	359	⇑P	P	20 47 55.9	-0.9
	comp=Z,0.7nm,0.6s						
BVA0	Borovoye Array	17.34	359	⇑P	P	20 47 55.9	-0.9
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	Borovoye Array	17.34	359	P	P	20 47 55.7	-1.1
	comp=Z,1.3nm,0.3s,baz=168,slow=12,SNR=21						
BVAR				S	S	20 50 58.6	-5.5
	comp=Z,0.6nm,0.3s,baz=178,slow=20,SNR=5.2						
BVAR	Borovoye Array	17.34	359	P	P	20 47 55.7	-1.1
BVAR				S	S	20 50 58.6	-5.5
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax			
	comp=N,1.0nm,0.3s						
BRVK	Borovoye	17.37	359	*e*Pn	P	20 47 56.1	-1.1
	comp=N,4.1nm,0.6s						
BRVK				pP		20 48 08.9	
BRVK	Borovoye	17.37	359	*e*P	P	20 47 56.1	-1.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKTK	Aktyubinsk	17.44	332	⇑P	P	20 47 57.2	-0.9
AKTK				S	S	20 50 59.8	-6.6
AKTO	Aktyubinsk	17.44	332	⇑P	P	20 47 57.2	-0.9
	comp=Z,4.1nm,0.6s						
AKTO				⇓S	S	20 50 59.8	-6.6
	comp=Z,5.8nm,1.0s						
AKTO	Aktyubinsk	17.44	332	P	P	20 47 56.8	-1.3
	comp=Z,4.8nm,0.3s,baz=135,slow=13,SNR=83						
AKTO				S	S	20 50 59.5	-6.8
	comp=Z,1.3nm,0.3s,baz=245,slow=17,SNR=9.5						
AKTO	Aktyubinsk	17.44	332	P	P	20 47 57.1	-1.0
AKTO				S	S	20 50 59.7	-6.6
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CHKZ	Chkalovo	17.99	360	⇓P	P	20 48 04.5	-0.1
	comp=Z,2.8nm,0.4s						
CHKZ				⇑S	S	20 51 12.8	-5.7
	comp=Z,5.3nm,1.1s						
CHKZ	Chkalovo	17.99	360	*e*P	P	20 48 04.3	-0.3
	comp=Z,6.7nm,0.5s						
CHKZ	Chkalovo	17.99	360	*e*P	P	20 48 04.3	-0.3
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
LSA	Lhasa	18.07	104	P	P	20 48 09.3	+3.6
LSA	Lhasa	18.07	104	*e*P	P	20 48 08.3	+2.6
	comp=Z,8.2nm,0.6s						
LSA	Lhasa	18.07	104	*e*P	P	20 48 08.3	+2.6
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
HYB	Hyderabad	19.44	157	*i* P	P	20 48 23.0	+2.2
HYB	Hyderabad	19.44	157	*e*P	P	20 48 23.0	+2.2
ORR	Orenburg	19.67	329	⇑*i*P	P	20 48 22.7	-0.3
SHL	Shillong	20.67	113	*e*P	P	20 48 38.0	+4.6
ZAL	Zalesovo	20.68	24	P	P	20 48 33.6	+0.2
	comp=Z,11nm,0.3s,baz=246,slow=6.4,SNR=21						
ZAL	Zalesovo	20.68	24	P	P	20 48 33.6	+0.2
ZAL				pmax	pmax		
	comp=Z,11nm,0.3s						
NVS	Novosibirsk	20.98	20	*e*P	P	20 48 36.0	-0.4
NVS				*e*S	S	20 52 22.6	+3.8
NVS				pmax	pmax		
	comp=N,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.7s						
NVS				smax			
	comp=N,12nm,1.8s						
NVS				smax			
	comp=E,8.0nm,1.3s						
GNI	Garni	21.06	290	P	P	20 48 38.4	+1.2
	comp=E,25nm,0.6s,mb4.8,baz=349,slow=1.1,SNR=31						
GNI	Garni	21.06	290	*e*P	P	20 48 38.5	+1.3
	comp=E,48nm,0.9s,mb4.8						
GNI	Garni	21.06	290*c*	*i*P	P	20 48 39.5	+2.2
GNI				pmax	pmax		
	comp=Z,26nm,0.5s						
ZEI	Tsey	22.00	297	*e*P	P	20 48 45.7	-0.8
ZEI				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.1						
SVE	Sverdlovsk	22.25	345	*e*P	P	20 48 50.6	+1.7
ARU	Arti	22.37	342	⇑*i*P	P	20 48 46.7	-3.3
ARU				*e*		20 49 14.8	
ARU				*e*S	S	20 52 42.4	-1.4
ARU				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.3						
KIV	Kislovodsk	23.09	300	*e*P	P	20 48 57.0	0.0
	comp=Z,21nm,0.9s,mb4.5						
KIV				*e*pP		20 49 10.9	
KIV	Kislovodsk	23.09	300	*e*P	P	20 48 57.5	+0.5
KIV				*e*S	S	20 53 00.3	+4.0
KIV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.2						
GTA	Gaotai	23.20	72	*e*P	P	20 49 04.0	+5.8
SONM	Songino Array	28.89	54	P	P	20 49 52.7	+1.7
	comp=Z,0.6nm,0.6s,mb3.4,baz=266,slow=9.6,SNR=7.3						
SONM				pP	pP	20 50 15.5	+1.0
	comp=Z,1.4nm,0.9s,baz=254,slow=9.6,SNR=6.8						
SONM				sP	sP	20 50 29.3	+2.4
	comp=Z,0.9nm,0.8s,baz=260,slow=10.0,SNR=4.4						
SONM	Songino Array	28.89	54	P	P	20 49 52.7	+1.8
SONM				*PP	pP	20 50 15.5	+1.0
SONM				*SP	sP	20 50 29.3	+2.4
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BR131	Keskin Array S	29.59	289	*e*P	P	20 49 57.2	0.0
BRTR	Keskin Array B	29.59	289	P	P	20 49 57.7	+0.4
	comp=Z,1.7nm,0.7s,mb3.8,baz=99,slow=9.5,SNR=11						
BRTR	Keskin Array B	29.59	289	P	P	20 49 57.7	+0.4
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
OBN	Obninsk	30.49	320	P	P	20 50 04.4	-0.7
	comp=Z,9.3nm,0.6s,mb4.6						
OBN	Obninsk	30.49	320	*i* P	P	20 50 04.9	-0.2
OBN				*e*		20 53 03.0	
OBN				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
AKASG	Malin Array Be	33.38	310	P	P	20 50 29.2	-1.0
	comp=Z,1.9nm,0.5s,mb4.2,baz=82,slow=7.9,SNR=17						
AKASG	Malin Array Be	33.38	310	P	P	20 50 29.2	-1.1
AKASG	Malin Array Be	33.38	310	*i* P	P	20 50 29.6	-0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	38.10	327	P	P	20 51 10.5	+0.5
	comp=Z,2.6nm,0.6s,mb4.2,baz=112,slow=8.4,SNR=10						
FINES				pP	pP	20 51 36.4	+1.8
	comp=Z,3.5nm,0.9s,baz=135,slow=11,SNR=2.0						
FINES	FINESS Array B	38.10	327	P	P	20 51 10.5	+0.5
FINES				pP	pP	20 51 36.4	+1.8
FINES	FINESS Array B	38.10	327	P	P	20 51 10.5	+0.5
FINES				*PP	pP	20 51 36.4	+1.8
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ARCES	ARCESS Array B	41.86	338	P	P	20 51 41.0	+0.3
	comp=Z,3.4nm,0.6s,mb4.2,baz=127,slow=6.1,SNR=11						
ARCES	ARCESS Array B	41.86	338	P	P	20 51 41.0	+0.2
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SSE	Sheshan	41.89	81	*e*P	P	20 51 42.3	+0.7
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,2µm,12.0s						
SSE	Sheshan	41.89	81	*e*P	P	20 51 42.3	+0.7
	comp=Z,32nm,0.7s,mb5.2						
GERES	GERESS Array B	43.32	306	P	P	20 51 54.7	+1.7
	comp=Z,0.2nm,0.4s,mb3.2,baz=74,slow=7.1,SNR=2.3						
HFS	Hagfors	43.64	322	P	P	20 51 55.6	+0.2
	comp=Z,4.5nm,0.5s,mb4.5,baz=98,slow=10,SNR=21						
HFS				pP	pP	20 52 22.3	+2.0
	comp=Z,2.1nm,0.7s,baz=112,slow=8.0,SNR=1.5						
HFS	Hagfors	43.64	322	P	P	20 51 55.6	+0.2
HFS				*PP	pP	20 52 22.3	+2.0
HFS				pmax	pmax		
	comp=Z,5.0nm,0.5s						
HFS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MDJ	Mudanjiang	44.90	60	*e*P	P	20 52 07.5	+1.8
	comp=Z,5.8nm,0.3s,mb4.8						
NB2	NORSAR Subarra	44.97	324	P	P	20 52 06.0	0.0
	comp=Z,1.7nm,0.5s,mb4.0,baz=99,slow=7.4						
NOA	NORSAR Array B	44.97	324	P	P	20 52 05.9	-0.2
	comp=Z,3.1nm,0.8s,mb4.1,baz=97,slow=7.8,SNR=7.6						
NOA				pP	pP	20 52 32.6	+1.6
	comp=Z,1.7nm,0.7s,baz=98,slow=7.9,SNR=2.9						
NOA	NORSAR Array B	44.97	324	P	P	20 52 05.9	-0.1
NOA				*PP	pP	20 52 32.6	+1.6
NOA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NOA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NAO	NORSAR Subarra	45.13	323	P	P	20 52 06.0	-1.3
	comp=Z,1.7nm,0.5s,mb4.0						
NAO	NORSAR Subarra	45.13	323	P	P	20 52 06.0	-1.3
NAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
TIXI	Tiksi	46.57	22	⇓*e*P	P	20 52 19.8	+1.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
LPG	La Plagne	48.49	302	*e*P	P	20 52 34.5	+0.6
	comp=Z,11nm,1.0s,mb4.4						
LPG	La Plagne	48.49	302	*e*P	P	20 52 34.5	+0.6
LPG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.4						
LPL	La Plagne	48.50	302	*e*P	P	20 52 34.5	+0.6
MBDF	Montbardon	48.64	301	*e*P	P	20 52 36.1	+1.1
	comp=Z,8.8nm,0.8s,mb4.5						
MBDF	Montbardon	48.64	301	*e*P	P	20 52 36.1	+1.1
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
CABF	La Chapelle	48.72	304	*e*P	P	20 52 36.7	+1.1
VIVF	Saint-Julien-l	50.07	302	*e*P	P	20 52 46.5	+0.5
SMF	Signal de Mont	50.22	304	*e*P	P	20 52 46.0	-1.2
	comp=Z,9.2nm,0.7s,mb4.5						
SMF	Signal de Mont	50.22	304	*e*P	P	20 52 46.0	-1.2
SMF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
AVF	Avril sur Loir	50.52	305	*e*P	P	20 52 49.1	-0.3
	comp=Z,4.2nm,0.6s,mb4.3						
AVF	Avril sur Loir	50.52	305	*e*P	P	20 52 49.1	-0.3
AVF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
TCF	Toulx Ste Croi	51.40	304	*e*P	P	20 52 56.2	+0.1
	comp=Z,6.8nm,0.8s,mb4.5						
TCF	Toulx Ste Croi	51.40	304	*e*P	P	20 52 56.2	+0.1
TCF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CAF	Calviac	51.84	303	*e*P	P	20 52 59.6	+0.2
LFF	La Frestale	52.75	303	*e*P	P	20 53 06.4	+0.2
EPF	Esparros	53.57	301	*e*P	P	20 53 12.9	+0.6
ESDC	Sonseca Array	57.75	298	P	P	20 53 41.5	-0.8
	comp=Z,1.8nm,0.7s,mb4.2,baz=56,slow=7.6,SNR=7.4						
MDT	Midelt	60.98	291	P	P	20 54 04.0	-0.7
	comp=Z,0.7nm,0.6s,mb3.9,baz=72,slow=3.2,SNR=2.5						
DBIC	Dimbokro	74.55	267	P	P	20 55 29.1	-0.4
	comp=Z,2.5nm,0.7s,mb4.0,baz=300,slow=3.0,SNR=4.4						
DBIC	Dimbokro	74.55	267	P	P	20 55 29.1	-0.4
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
INK	Inuvik	74.72	9	*e*P	P	20 55 31.0	+1.6
	comp=Z,7.9nm,0.6s,mb4.6						
INK	Inuvik	74.72	9	*e*P	P	20 55 31.0	+1.6
INK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
COLA	College	75.29	16	*e*P	P	20 55 34.7	+2.1
	comp=Z,5.1nm,0.9s,mb4.2						
COLA	College	75.29	16	*e*P	P	20 55 34.7	+2.1
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
ILAR	Eielson Array	75.59	16	P	P	20 55 35.0	+0.6
	comp=Z,2.3nm,0.9s,mb3.9,baz=318,slow=5.1,SNR=17						
ILAR	Eielson Array	75.59	16	P	P	20 55 35.0	+0.6
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WRA	Warramunga Arr	81.65	122	P	P	20 56 10.6	+2.3
	comp=Z,0.7nm,0.4s,mb3.8,baz=326,slow=4.9,SNR=36						
WRA				pP	pP	20 56 36.5	+0.4
	comp=Z,0.3nm,0.4s,baz=324,slow=4.9,SNR=2.6						
WRA	Warramunga Arr	81.65	122	P	P	20 56 10.6	+2.3
WRA				*PP	pP	20 56 36.5	+0.5
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	Yellowknife Ar	82.06	3	P	P	20 56 10.9	+1.3
	comp=Z,1.2nm,0.5s,mb4.0,baz=351,slow=5.2,SNR=6.6						
YKA				pP	pP	20 56 36.9	-0.4
	comp=Z,0.6nm,0.5s,baz=350,slow=5.6,SNR=2.4						
YKA	Yellowknife Ar	82.06	3	P	P	20 56 10.9	+1.3
YKA				pP	pP	20 56 36.9	-0.4
YKA	Yellowknife Ar	82.06	3	P	P	20 56 10.9	+1.3
YKA				*PP	pP	20 56 36.9	-0.4
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CFAA	Coronel Fontan	145.89	265	PKPbc	PKPbc	21 03 30.0	+2.5
	comp=Z,0.3nm,0.4s,baz=87,slow=4.3,SNR=4.1						
PLCA	Paso Flores	149.44	249	PKPbc	PKPdf	21 03 40.8	+8.8
	comp=Z,1.4nm,0.5s,baz=34,slow=3.0,SNR=3.5						
PLCA	Paso Flores	149.44	249	PKP2	PKPdf	21 03 40.8	+8.8
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.5s						

IDC ***15*** *20:47:12.0±0.7, 5.39N×77.91W, mb4.1/13, mb1 4.4/14, mb1mx4.3/21, mbtmp4.1/14, ML2.7/1, MS4.0/3, Ms1 4.0/3, ms1mx3.7/23, Error ellipse: s-maj=32.5km s-min=13.8km az=47.0*

NEIC ***15*** *20:47:18.3±1.3, 5.32N×78.02W, h48^{km}±13^{km}, mb4.6/9, Error ellipse: s-maj=21.2km s-min=7.5km az=222.0*

ISC 15 20:47:16.1±1.4**, 5.3N**±0.1×**78.09W**±0.08**, h45^{km}**±13^{km}**, n37, σ1§12**/35**, mb4.3**/19**, MS4.3**/1**, 1C, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	El Rosal	3.77	96	Pn	P	20 48 14.6	+1.3
	35nm,0.3s,baz=318,slow=5.4,SNR=40						
ROSC				Sn	S	20 48 57.1	+0.1
	4.9nm,0.3s,baz=105,slow=21,SNR=4.4						
ROSC				LR	LR	20 49 50.7	
	comp=Z,864nm,21.7s,baz=348,slow=44						
JTS	JuntasAbangare	8.42	307	Pn	P	20 49 17.6	-0.7
	0.1nm,0.3s,baz=128,slow=19,SNR=3.4						
JTS				Sn	S	20 50 52.4	-0.6
	0.4nm,0.3s,baz=236,slow=22,SNR=2.5						
JTS				LR	LR	20 52 23.5	
	comp=Z,1µm,18.1s,baz=116,slow=37						
JTS	JuntasAbangare	8.42	307	Pn	P	20 49 17.6	-0.7
JTS				Sn	S	20 50 52.4	-0.6
JTS				LR	LR	20 52 23.5	
SAML	Samuel	20.52	134	*e*P	P	20 51 50.7	-2.6
	34nm,1.0s						
LPAZ	La Paz	23.60	155	P	P	20 52 26.2	+2.3
	1.5nm,0.8s,mb3.5,baz=353,slow=13,SNR=5.1						
LPAZ	La Paz	23.60	155	*e*P	P	20 52 26.7	+2.7
	8.1nm,1.2s,mb4.0						
SIV	San Ignacio	27.04	142	P	P	20 52 55.6	-0.9
	2.1nm,0.5s,mb4.0,baz=316,slow=9.5,SNR=14						
TXAR	Lajitas Array	34.01	318	P	P	20 53 58.8	+0.8
	1.0nm,0.6s,mb3.9,baz=151,slow=9.3,SNR=3.1						
BDFB	Brasilia	36.33	125	P	P	20 54 16.8	-1.0
	3.2nm,0.9s,mb4.3,baz=300,slow=5.5,SNR=3.6						
BDFB				LR	LR	21 10 00.6	
	comp=Z,476nm,18.7s,MS4.3,baz=182,slow=38						
ERPA	Erie	36.71	358	*e*P	P	20 54 18.6	-2.2
	32nm,0.7s,mb5.3						
ANMO	Albuquerque	39.47	322	P	P	20 54 44.7	+0.8
	2.2nm,0.6s,mb4.1,baz=168,slow=6.2,SNR=4.7						
ANMO	Albuquerque	39.47	322	*e*P	P	20 54 44.8	+0.9
	1.9nm,0.6s,mb4.0						
WUAZ	Wupatki	42.94	319	*e*P	P	20 55 13.7	+1.2
	4.7nm,1.0s,mb4.2						
RSSD	Black Hills	44.89	333	*e*P	P	20 55 27.8	-0.4
	5.7nm,0.8s,mb4.5						
RSSD				*e*pP	pP	20 55 43.8	+3.2
PDAR	Pinedale Array	46.57	328	P	P	20 55 42.1	+0.7
	1.3nm,0.9s,mb3.9,baz=129,slow=9.5,SNR=5.9						
DUG	Dugway	46.70	323	*e*P	P	20 55 41.9	-0.6
ULM	Lac du Bonnet	47.24	345	P	P	20 55 45.0	-1.7
	6.5nm,0.6s,mb4.7,baz=162,slow=8.5,SNR=7.1						
LOHW	Long Hollow	47.71	328	*e*P	P	20 55 50.5	+0.1
	6.7nm,0.9s,mb4.7						
MOOW	Moose Ponds	47.88	328	*e*P	P	20 55 52.3	+0.6
	4.6nm,0.9s,mb4.5						
QLMT	Earthquake Lak	48.98	329	*e*P	P	20 56 01.1	+0.9
NVAR	Mina Array Bea	49.16	318	P	P	20 56 03.5	+1.8
	1.7nm,0.7s,mb4.2,baz=125,slow=7.9,SNR=12						
NVAR	Mina Array Bea	49.16	318	P	P	20 56 03.5	+1.7
MCMT	McKenzie Canyo	49.72	328	*e*P	P	20 56 07.6	+1.6
WVOR	Wild Horse Val	51.55	322	*e*P	P	20 56 18.7	-1.2
	39nm,1.8s,mb5.0						
EDM	Edmonton	55.80	335	*e*P	P	20 56 50.3	-0.7
YKA	Yellowknife Ar	63.08	342	P	P	20 57 40.5	-0.6
	5.1nm,0.7s,mb4.7,baz=130,slow=6.9,SNR=23						
YKA	Yellowknife Ar	63.08	342	P	P	20 57 40.5	-0.6
DBIC	Dimbokro	72.79	85	P	P	20 58 43.3	+0.8
	2.6nm,0.7s,mb4.3,baz=251,slow=11,SNR=3.6						
INK	Inuvik	72.84	341	*e*P	P	20 58 41.5	-0.2
ESDC	Sonseca Array	74.43	50	P	P	20 58 52.4	+0.8
	2.2nm,0.7s,mb4.2,baz=260,slow=5.4,SNR=8.7						
ILAR	Eielson Array	76.28	336	P	P	20 59 02.4	+0.7
	1.8nm,0.8s,mb4.1,baz=115,slow=4.3,SNR=18						
GERES	GERESS Array B	87.24	41	P	P	20 59 57.9	-1.2
	0.4nm,0.6s,mb3.8,baz=294,slow=9.7,SNR=2.8						
MKAR	Makanchi Array	125.31	16	PKP	PKPdf	21 06 14.5	+2.1
	0.5nm,0.8s,baz=306,slow=3.2,SNR=5.6						
SONM	Songino Array	126.96	356	PKP	PKPdf	21 06 17.6	+2.0
	0.8nm,0.9s,baz=18,slow=2.5,SNR=6.3						
ASPA	Alice Springs	144.18	236	⇑*i*P	PKPbc	21 06 48.6	+1.3
WB2	Warramunga Arr	145.25	242	*e*P	PKPdf	21 06 52.4	+2.5
WRA	Warramunga Arr	145.26	242	PKPbc	PKPbc	21 06 51.7	+1.3
	9.5nm,0.9s,baz=105,slow=3.4,SNR=39						

IPEC ***15*** *20:59:16.8±0.7, 51.50N×16.34E, h0^{km}±3^{km}, ML2.5/3, Error ellipse: s-maj=4.1km s-min=1.6km az=15.0*

NEIC ***15*** *20:59:17.8±0.5, 51.52N×16.30E, h15^{km}, ML2.8(SZGRF), Error ellipse: s-maj=6.1km s-min=5.4km az=88.0*

CSEM ***15*** *20:59:17.6±0.2, 51.51N×16.23E, ML3.2/4, Error ellipse: s-maj=3.3km s-min=3.0km az=25.0*

IDC ***15*** *20:59:18.4±0.6, 51.44N×16.13E, mb1 3.5/9, mb1mx3.4/26, mbtmp3.4/9, ML3.0/9, Error ellipse: s-maj=11.1km s-min=6.0km az=104.0*

PRU ***15*** *20:59:19.3, 51.39N×16.20E*

WAR ***15*** *20:59:19.0, 51.45N×16.19E, h1^{km}, ML2.9, Mining Induced*

ISC 15 20:59:16.3±0.5**, 51.43N**±0.03×**16.20E**±0.03**, n55, σ1§39**/96**, 9C-4D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.59	174	⇓*i*PG	Pg	20 59 30.1	+2.1
KSP				⇓*e*SG	Sg	20 59 37.1	+1.2
KSP	Ksiaz	0.59	174	*e*Pg	Pg	20 59 30.1	+2.1
KSP				*e*Sg	Sg	20 59 37.4	+1.5
KSP	Ksiaz	0.59	174	⇓*i*Pg	Pg	20 59 30.1	+2.1
KSP				*e*Sg	Sg	20 59 37.2	+1.3
KSP				*e*		20 59 42.6	
KSP	Ksiaz	0.59	174	⇓*i*Pg	Pg	20 59 30.1	+2.1
KSP				*e*Sg	Sg	20 59 37.3	+1.4
UPC	Upice	0.93	187	*e*PG	Pg	20 59 36.3	+1.5
DPC	Dobruska-Polom	1.08	176	*e*PG	Pg	20 59 38.9	+1.0
DPC				*e*SG	Sg	20 59 53.1	+0.8
	75nm,0.6s						
PVCC	Panska Ves	1.37	229	*e*Pn	Pn	20 59 44.2	+1.6
PVCC	Panska Ves	1.37	229	*e*Pg	Pg	20 59 44.4	+0.8
PVCC				*e*Sg	Sg	21 00 03.1	+1.3
BRG	Berggiesshubel	1.52	250	Pn	Pn	20 59 45.5	+0.6
BRG				Pg	Pg	20 59 47.5	+0.8
BRG				Sg	Sg	21 00 07.7	+0.7
BRG	Berggiesshubel	1.52	250	Pn	Pn	20 59 45.5	+0.6
BRG	Berggiesshubel	1.52	250	Pg	Pg	20 59 47.5	+0.8
PRU	Pruhonice	1.78	217	*e*PN	Pn	20 59 50.2	+1.6
PRU				*e*PG	Pg	20 59 51.4	-0.5
PRU				*e*SG	Sg	21 00 15.3	-0.4
	75nm,0.7s						
MORC	Moravsky Berou	1.86	152	*e*Pn	Pn	20 59 50.6	+0.9
MORC				*e*Sn	Sn	21 00 17.2	+2.9
MORC	Moravsky Berou	1.86	152	*e*Pn	Pn	20 59 50.6	+0.9
MORC				*e*Sn	Sn	21 00 17.2	+2.9
CLL	Collm	2.00	268	*e*PG	Pg	20 59 56.0	-0.3
CLL				*e*		21 00 10.0	
CLL				*i* SG	Sg	21 00 22.9	-0.1
CLL				*i* L		21 00 37.1	
CLL	Collm	2.00	268	*e*Pg	Pg	20 59 56.0	-0.3
CLL				*i* Sg	Sg	21 00 22.9	-0.1
OKC	Ostrava-Krasne	2.02	141	*e*PG	Pg	20 59 56.5	-0.1
OKC				*e*SG	Sg	21 00 21.6	-1.9
	34nm,0.5s						
VRAC	Vranov	2.14	173	Pn	Pn	20 59 55.2	+1.6
	2.4nm,0.3s,baz=341,slow=12,SNR=8.2						
VRAC				Lg		21 00 26.0	
	4.9nm,0.3s,baz=71,slow=20,SNR=9.2						
VRAC	Vranov	2.14	173	*e*Pn	Pn	20 59 54.9	+1.3
VRAC				*e*Sg	Sg	21 00 25.9	-1.5
	31nm,0.7s						
KRUC	Moravsky	2.37	177	*e*Pn	Pn	20 59 57.7	+0.7
KRUC				*e*Sg	Sg	21 00 33.7	-1.5
	28nm,0.8s						
OJC	Ojcow	2.58	117	*e*PG	Pg	21 00 07.0	-0.9
OJC				*e*SG	Sg	21 00 41.0	-1.3
OJC	Ojcow	2.58	117	*e*Pg	Pg	21 00 06.9	-1.0
OJC				*e*Sg	Sg	21 00 41.4	-0.9
NKC	Novy Kostel	2.66	245	*e*PN	Pn	21 00 01.9	+0.8
NKC				*e*PG	Pg	21 00 08.3	-1.1
NKC				*e*SG	Sg	21 00 45.1	+0.3
	26nm,0.3s						
KHC	Kasperske Hory	2.85	217	*e*PN	Pn	21 00 04.9	+1.1
KHC				*e*PG	Pg	21 00 10.9	-2.2
KHC				*e*SN	Sn	21 00 37.6	-1.7
KHC				*e*SG	Sg	21 00 48.3	-2.8
	11nm,0.4s						
MOX	Moxa	3.00	257	Pg	Pg	21 00 15.0	-1.1
MOX				Sg	Sg	21 00 55.0	-1.0
MOX	Moxa	3.00	257	*e*Pg	Pg	21 00 14.9	-1.2
MOX				*e*Sg	Sg	21 00 54.8	-1.2

SMOL	Smolenice	3.02	164	ePG	Pg	21 00 16.1	-0.5
SMOL				eSG	Sg	21 00 55.5	-1.4
GERES	GERESS Array B	3.04	213	Pn	Pn	21 00 08.3	+1.7
	0.8nm,0.3s,baz=32,slow=13,SNR=27						
GERES				Pg	Pg	21 00 14.0	-3.0
	5.2nm,0.3s,baz=32,slow=17,SNR=52						
GERES				Sn	Sn	21 00 45.1	+0.9
	2.2nm,0.3s,baz=27,slow=27,SNR=4.1						
GERES				Lg		21 00 53.2	
	3.9nm,0.3s,baz=33,slow=27,SNR=8.0						
GERES	GERESS Array B	3.04	213	Pg	Pg	21 00 14.0	-3.0
WET	Wettzell	3.12	224	ePn	Pn	21 00 08.6	+0.9
ZST	Bratislava	3.29	169	eSG	Sg	21 01 02.4	-3.3
ZST	Bratislava	3.29	169	eSg	Sg	21 01 02.4	-3.3
NIE	Niedzica	3.31	126	eP	Pg	21 00 23.0	+0.6
NIE				eS	Sg	21 01 07.0	+0.4
VYHS	Vyhne	3.40	149	ePG	Pg	21 00 23.8	-0.3
VYHS				eSG	Sg	21 01 07.5	-1.8
MOA	Molln	3.79	200	⇑iPn	Pn	21 00 18.3	+1.1
MOA	Molln	3.79	200	⇑iSg	Sg	21 01 20.8	-1.8
	comp=Z,16nm,0.6s						
MOA	Molln	3.79	200	⇑Pn	Pn	21 00 18.3	+1.0
MOA				Sg	Sg	21 01 20.8	-1.8
MOA	Molln	3.79	200	Pn	Pn	21 00 18.3	+1.0
MOA				Sg	Sg	21 01 20.8	-1.8
STHS	Stebnicka Huta	3.80	120	ePN	Pn	21 00 19.7	+2.3
STHS				ePG	Pg	21 00 31.8	-0.4
STHS				eSG	Sg	21 01 24.4	+1.5
ARSA	Arzberg	4.20	186	⇑iPn	Pn	21 00 24.9	+1.8
ARSA	Arzberg	4.20	186	⇑iSg	Sg	21 01 35.5	-0.8
	comp=Z,15nm,0.9s						
ARSA	Arzberg	4.20	186	⇑Pn	Pn	21 00 24.9	+1.8
ARSA				Sg	Sg	21 01 35.5	-0.8
ARSA	Arzberg	4.20	186	Pn	Pn	21 00 24.9	+1.8
ARSA				Sg	Sg	21 01 35.5	-0.7
KBA	Koelnbreinsper	4.74	204	⇑iPn	Pn	21 00 31.3	+0.7
	comp=Z,1.7nm,0.3s						
KBA	Koelnbreinsper	4.74	204	⇑iSg	Sg	21 01 50.6	-3.3
	comp=Z,8.1nm,0.5s						
KBA	Koelnbreinsper	4.74	204	⇑Pn	Pn	21 00 31.3	+0.7
KBA				Sg	Sg	21 01 50.6	-3.3
KBA	Koelnbreinsper	4.74	204	Pn	Pn	21 00 31.3	+0.7
KBA				Sg	Sg	21 01 50.6	-3.4
DAVOX	Davos	6.23	224	Pn	Pn	21 00 51.7	-0.1
	0.2nm,0.3s,baz=45,slow=11,SNR=2.3						
DAVOX				Lg		21 02 33.4	
	0.3nm,0.3s,baz=177,slow=18,SNR=2.5						
AKASG	Malin Array Be	8.24	90	Pn	P	21 01 15.2	-4.7
	0.5nm,0.3s,baz=279,slow=12,SNR=3.5						
HFS	Hagfors	8.84	352	Pn	P	21 01 24.2	-4.0
	0.0nm,0.3s,baz=163,slow=15,SNR=3.9						
HFS				Sn	Sn	21 03 00.9	-8.9
	0.0nm,0.3s,baz=168,slow=27,SNR=2.8						
NOA	NORSAR Array B	10.02	346	Pn	P	21 01 40.1	-4.3
	0.1nm,0.3s,baz=164,slow=11,SNR=2.6						
FINES	FINESS Array B	11.41	25	Pn	P	21 01 58.3	-5.2
	0.1nm,0.3s,baz=207,slow=8.5,SNR=4.5						
FINES				Sn	S	21 04 03.6	-9.4
	0.2nm,0.3s,baz=210,slow=19,SNR=3.1						
EKA	Eskdalemuir Ar	12.19	296	Pn	P	21 02 12.9	-1.1
	0.1nm,0.3s,baz=98,slow=14,SNR=2.7						
ARCES	ARCESS Array B	18.69	10	Pn	P	21 03 32.8	-4.9
	0.2nm,0.3s,baz=198,slow=12,SNR=4.7						
ELN	Prospectdale	65.84	300	eP	P	21 10 02.1	-3.2

*MOS **15** 21:17:56.9±0.9, 36.33N×140.89E, h33^{km}, mb5.1/68, MS4.4/8, Error ellipse: s-maj=10.2km s-min=4.8km az=115.1*

*BJI **15** 21:17:56.2, 36.22N×140.91E, h29^{km}, mB4.9, mb4.8, Ms4.7, Msz4.5*

*IDC **15** 21:17:58.9±0.5, 36.30N×141.14E, h44^{km}±4^{km}, mb4.4/24, mb1 4.5/28, mb1mx4.5/31, mbtmp4.6/28, ML4.2/4, MS4.2/10, Ms1 4.2/10, ms1mx3.9/36, Error ellipse: s-maj=9.1km s-min=7.6km az=147.0*

*JMA **15** 21:17:58.0±0.1, 36.31N×141.07E, h48^{km}±1^{km}, M4.8*

JMA Felt II J1.

*HRVD **15** 21:17:59.2±0.9, 36.22N×141.28E, h43^{km}±2^{km}, MW4.9/34, Centroid moment Tensor Solution. LP body waves: s13,c16;Mantle waves: s34,c57; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.84±.30; $M_{\theta\theta}$-0.06±.20; $M_{\phi\phi}$-1.78±.17; $M_{r\theta}$0.49±.15; $M_{\theta\phi}$-0.79±.10; $M_{\phi r}$1.22±.12; Best double couple: $M_0$2.363×10^{16} NP1:ϕ_s201°,δ28°,λ89°. NP2:ϕ_s22°,δ62°,λ90°. Principal axes: T 2.239, Plg73°, Azm292°; N .252, Plg0°, Azm201°; P -2.486, Plg17°, Azm111°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 21:17:59.2±0.2, 36.34N×141.05E, mb4.9/64, MW4.8(NIED) Error ellipse: s-maj=6.0km s-min=4.1km az=161.0*

NEIC Recorded [2 JMA] in Fukushima, Ibaraki and Tochigi; [1 JMA] in Gumma and Saitama Prefectures.

*NIED **15** 21:18:00, 36.30N×141.10E, h35^{km}, Mw4.8 Best double couple: $M_0$1.67×10^{16} NP1:ϕ_s30°,δ72°,λ89°. NP2:ϕ_s214°,δ18°,λ93°.*

*SKO **15** 21:18:07.5, 37.31N×139.73E*

ISC 15 21:17:58.2±0.4**, 36.30N**±0.03×**141.00E**±0.04**, h47**^{km}±3^{km}**, h42**^{km}±.8^{km}**:pP-P, n321,** σ1.00/332**, mb4.8**/111**, MS4.4**/13**, 23C-24D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.46	311	⇓P	P	21 18 08.9	0.0
JHO				S	S	21 18 16.8	+0.4
CHOJ	Chosi	0.61	191	⇑P	P	21 18 10.7	0.0
CHOJ				S	S	21 18 19.6	-0.2
JYT	Yasato	0.66	264	⇓P	P	21 18 11.8	+0.5
JYT				S	S	21 18 21.7	+0.8
ONAJ	Iwakimizuishiy	0.81	348	⇓P	P	21 18 12.8	-0.6
ONAJ				S	S	21 18 23.4	-1.2
JFK	Kawauchi	1.06	355	⇓P	P	21 18 16.1	-0.9
JAG	Ashikaga	1.25	276	⇓P	P	21 18 20.3	+0.6
JFT	Otama	1.32	336	⇓P	P	21 18 21.5	+0.8
JFT				S	S	21 18 38.1	+0.6
JKT	Katashina	1.48	289	⇓P	P	21 18 24.2	+1.2
JFY	Yanaizu	1.51	317	⇓P	P	21 18 24.2	+0.8
BSO3	Boso 3	1.55	195	P	P	21 18 24.5	+0.6
JMM	Marumori	1.57	354	⇓P	P	21 18 23.7	-0.4
JMM				S	S	21 18 42.5	-0.9
MJAR	Matsushiro Arr	2.27	277	P	P	21 18 34.6	+0.6
	118nm,0.3s,baz=106,slow=8.7,SNR=764						
MJAR				S	S	21 19 04.2	+3.4
	114nm,0.3s,baz=114,slow=15,SNR=8.4						
MJAR				LR	LR	21 19 47.1	
	comp=Z,4μm,18.1s,baz=135,slow=46						
MJAR	Matsushiro Arr	2.27	277	P	P	21 18 34.6	+0.6
MJAR				S	S	21 19 04.2	+3.4
MJAR				LR	LR	21 19 47.1	
MJAR	Matsushiro Arr	2.27	277	P	P	21 18 34.6	+0.6
MJAR				S	S	21 19 04.2	+3.4
MJAR				pmax	pmax		
	comp=Z,118nm,0.3s						
MJAR				smax			
	comp=N,114nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,4μm,18.2s						
MAJO	Matsushiro	2.27	277	⇓ePn	P	21 18 35.7	+1.7
MAT	Matsushiro	2.27	277	P	P	21 18 34.6	+0.6
MAT				S	S	21 18 59.5	-1.3
MAT	Matsushiro	2.27	277	eP	P	21 18 35.0	+1.0
MAT				eS	S	21 19 00.0	-0.8
JHJ	Hachijo jima 2	3.33	198	P	P	21 18 49.6	+0.5
	comp=Z,108nm,0.3s,baz=314,slow=1.8,SNR=8.6						
JHJ				S	S	21 19 27.2	-0.6
	comp=Z,368nm,0.3s,baz=108,slow=20,SNR=8.0						
JHJ				LR	LR	21 19 53.6	
	comp=Z,850nm,19.6s,baz=90,slow=34						
ASAJ	Asahikawa	7.90	8	P	P	21 19 49.1	-4.0
	comp=Z,4.6nm,0.3s,baz=226,slow=9.6,SNR=25						
ASAJ				S	S	21 21 14.8	-7.3
	comp=Z,1.7nm,0.3s,baz=197,slow=20,SNR=2.0						
ASAJ	Asahikawa	7.90	8	P	P	21 19 49.1	-4.0
ASAJ				S	S	21 21 14.8	-7.3
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
JNU	Nakatsue	8.92	252	P	P	21 20 07.3	+0.1
	comp=N,0.9nm,0.3s,baz=92,slow=12,SNR=8.9						
JNU				LR	LR	21 23 49.1	
	comp=N,2μm,18.4s,baz=68,slow=39						
CBIJ	Chichi jima	9.24	173	P	P	21 20 06.3	-5.2
	comp=N,27nm,0.3s,baz=354,slow=8.4,SNR=21						
CBIJ				S	S	21 21 39.0	-16
	comp=N,10nm,0.3s,baz=198,slow=20,SNR=2.2						
KS15	Wonju Array Si	10.57	280	ePn	P	21 20 28.0	-1.8
YSS	Yuzh-Sakhalins	10.72	6	ePn	P	21 20 29.8	-2.0
	comp=N,21nm,0.8s						
YSS	Yuzh-Sakhalins	10.72	6	eP	P	21 20 28.6	-3.3
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
MDJ	Mudanjiang	12.01	317	ePn	P	21 20 51.4	+2.2
	comp=Z,57nm,1.1s						
JOW	Kunigami	14.37	232	P	P	21 21 17.0	-3.5
	comp=Z,3.5nm,0.3s,baz=78,slow=16,SNR=3.7						
JOW				LR	LR	21 25 57.7	
	comp=Z,561nm,19.6s,baz=321,slow=33						
SNY	Shenyang	14.61	297	⇑P	P	21 21 23.9	+0.4
SNY				AMB	AMB		
	comp=Z,20nm,1.2s						
SSE	Sheshan	17.28	258	eP	P	21 22 07.3	+10
	comp=Z,31nm,0.7s						
SSE				sP		21 22 39.5	
SSE				S	S	21 25 12.3	+5.8
SSE				ScS	ScS	21 33 55.2	+7.5
NJ2	Nanjing	18.80	263	eP	P	21 22 15.3	-1.0
NJ2				AP		21 22 23.9	
NJ2				PP	PP	21 22 32.0	-0.8
NJ2				S	S	21 25 39.0	-1.7
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,220nm,5.5s						
NJ2				LR	LR		
	comp=N,1μm,13.2s						
NJ2				LR	LR		
	comp=E,1μm,15.4s						
NJ2				LR	LR		
	comp=Z,700nm,15.0s						
TIA	Tai'an	19.25	277	eP	P	21 22 19.1	-2.2
TIA				AMB	AMB		
	comp=Z,40nm,1.0s						
HIA	Hailar	20.19	317	eP	P	21 22 30.2	-1.2
	comp=Z,24nm,1.0s						
HIA	Hailar	20.19	317	eP	P	21 22 30.2	-1.2
HIA				pmax	pmax		
	comp=Z,24nm,1.0s						
WHN	Wuhan	22.94	263	eP	P	21 22 57.5	-1.6
CLNS	Chul'man	23.22	337	eP	P	21 23 00.7	-0.8
CLNS				pmax	pmax		
	comp=N,35nm,1.3s						
CLNS				pmax	pmax		
	comp=Z,43nm,1.3s,mb4.7						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,900nm,14.0s,MS4.4						
CLNS				MLR	MLR		
	comp=N,200nm,12.0s,MS4.3						
CLNS				MLR	MLR		
	comp=E,700nm,16.0s,MS4.3						
HHC	Hu-ho-hao-te	23.40	290	eP	P	21 23 06.8	+3.4
HHC				S	S	21 27 02.5	-7.1
HHC				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
HHC				AMB	AMB		
	comp=Z,320nm,5.4s						
HHC				LR	LR		
	comp=N,570nm,11.4s,MS4.4						
HHC				LR	LR		
	comp=E,610nm,12.6s,MS4.4						
HHC				LR	LR		
	comp=Z,840nm,13.2s,MS4.4						
MA2	Magadan	24.14	12	eP	P	21 23 09.8	-0.6
	comp=Z,18nm,0.8s,mb4.5						
MA2	Magadan	24.14	12	i P	P	21 23 10.4	0.0
MA2				pmax	pmax		
	comp=Z,94nm,2.2s,mb4.8						
CIT	Chita	24.98	318	eP	P	21 23 17.3	-1.4
XAN	Xi'an	26.26	275	P	P	21 23 30.0	-0.8
XAN				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
YAK	Yakutsk	26.71	348	eP	P	21 23 32.9	-1.8
	comp=Z,58nm,0.9s,mb5.1						
YAK	Yakutsk	26.71	348	eP	P	21 23 33.3	-1.4
YAK				eS	S	21 28 12.6	+7.7
YAK				pmax	pmax		
	comp=N,19nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,37nm,1.1s,mb4.8						
YAK				smax			
	comp=E,8.0nm,1.3s						
YAK				smax			
	comp=N,9.0nm,1.1s						
ENH	Enshi	26.95	266	eP	P	21 23 36.0	-1.2
	comp=N,44nm,0.8s,mb5.0						
SEY	Seymchan	27.57	11	eP	P	21 23 45.1	+2.6
SEY				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.5						
SONM	Songino Array	27.93	305	P	P	21 23 45.2	-0.7
	comp=Z,19nm,1.0s,mb4.7,baz=106,slow=7.7,SNR=72						
SONM				PcP	PcP	21 27 00.1	-0.5
	comp=Z,2.0nm,1.0s,baz=148,slow=1.7,SNR=4.4						
SONM				LR	LR	21 34 37.7	
	comp=Z,375nm,19.4s,MS4.0,baz=275,slow=36						
SONM	Songino Array	27.93	305	P	P	21 23 45.2	-0.7
SONM						21 27 00.1	
SONM				pmax	pmax		
	comp=Z,19nm,1.0s						
SONM				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM				MLR	MLR		
	comp=Z,375nm,19.4s						
BOD	Bodaibo	27.98	329	eP	P	21 23 44.2	-2.0
BOD				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.6						
LZH	Lanzhou	29.87	281	eP	P	21 24 03.5	+0.1
LZH				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
LZH				AMB	AMB		
	comp=Z,90nm,4.5s						
LZH				LR	LR		
	comp=E,2μm,15.7s						
LZH				LR	LR		
	comp=Z,3μm,17.9s,MS4.9						
LZH	Lanzhou	29.87	281	eP	P	21 24 03.5	+0.1
	comp=Z,20nm,1.1s,mb4.8						
LZH				pP	pP	21 24 30.1	+14
LZH				sP	sP	21 24 43.3	+22
LZH				PcP	PcP	21 27 13.9	+8.2
LZH				eS	S	21 28 39.3	-17
LZH				sS		21 29 21.2	
LZH				SS	SS	21 30 11.0	-23
LZH				ScP		21 30 45.6	
LZH				LR	LR		
	comp=Z,3μm,17.9s,MS4.9						
ZAK	Zakamensk	30.47	309	⇓eP	P	21 24 07.6	-0.9
ZAK				e		21 25 19.2	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.8						
GYA	Guiyang	30.78	261	⇑iP	P	21 24 10.4	-1.1
GYA				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.0						
CD2	Chengdu	31.35	271	P	P	21 24 15.8	-0.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
GTA	Gaotai	32.47	288	eP	P	21 24 26.0	-0.2
GTA				PP	PP	21 25 31.9	-3.4
GTA				SCP		21 30 52.0	
GTA				SCS	ScS	21 34 47.4	-1.7
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
GTA				AMB	AMB		
	comp=Z,170nm,8.0s						
GTA				LR	LR		
	comp=N,310nm,13.3s,MS4.4						
GTA				LR	LR		
	comp=E,480nm,15.6s,MS4.4						
GTA				LR	LR		
	comp=Z,680nm,14.1s,MS4.5						
KMI	Kunming	34.53	262	P	P	21 24 43.5	-0.6
KMI				XP	sP	21 24 52.6	-10
KMI				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
KMI				AMB	AMB		
	comp=Z,320nm,6.7s						
KMI				LR	LR		
	comp=N,470nm,15.8s,MS4.5						
KMI				LR	LR		
	comp=E,470nm,17.8s,MS4.5						
KMI				LR	LR		
	comp=Z,440nm,17.8s,MS4.2						
KMI	Kunming	34.53	262	P	P	21 24 43.5	-0.6
	comp=Z,18nm,1.3s,mb4.8						
KMI				sP	sP	21 24 52.6	-10
KMI				LR	LR		
	comp=Z,450nm,17.8s,MS4.3						
BILL	Bilibino	34.82	16	i P	P	21 24 44.9	-1.3
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.5						
TIXI	Tiksi	35.98	353	i P	P	21 24 54.5	-1.5
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,300nm,11.0s,MS4.3						
WMQ	Urumqi	40.88	298	⇑iP	P	21 25 38.3	+1.2
WMQ				PP	PP	21 27 14.0	-0.8
WMQ				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,220nm,5.4s						
LSA	Lhasa	41.95	276	eP	P	21 25 48.0	+2.0
LSA	Lhasa	41.95	276	eP	P	21 25 47.2	+1.1
	comp=Z,18nm,0.9s,mb4.7						
LSA	Lhasa	41.95	276	eP	P	21 25 47.2	+1.2
LSA				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.7						
ZAL	Zalesovo	42.18	313	P	P	21 25 47.8	+0.3
	comp=Z,10nm,0.8s,mb4.5,baz=17,slow=7.9,SNR=71						
ZAL	Zalesovo	42.18	313	P	P	21 25 47.8	+0.2
ZAL				pmax	pmax		
	comp=Z,11nm,0.8s						
SHL	Shillong	43.07	270	eP	P	21 25 56.0	+0.7
NVS	Novosibirsk	43.11	314	eP	P	21 25 54.2	-1.0
NVS				pmax	pmax		
	comp=N,6.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,34nm,1.2s						
NVS				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.0						
MKAR	Makanchi Array	44.23	303	P	P	21 26 04.6	+0.2
	comp=Z,11nm,0.7s,mb4.7,baz=88,slow=8.4,SNR=75						
MKAR				PcP	PcP	21 27 47.4	-1.5
	comp=Z,2.8nm,0.8s,baz=63,slow=5.4,SNR=3.5						
MKAR				LR	LR	21 44 44.3	
	comp=Z,397nm,18.3s,MS4.4,baz=106,slow=36						
MKAR	Makanchi Array	44.23	303	P	P	21 26 04.6	+0.2
MKAR				PcP	PcP	21 27 47.4	-1.5
MKAR				LR	LR	21 44 44.3	
MKAR	Makanchi Array	44.23	303	P	P	21 26 04.6	+0.2
MKAR						21 27 47.4	
MKAR				pmax	pmax		
	comp=Z,11nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR				MLR	MLR		
	comp=Z,397nm,18.3s						
KSM	Kuching	44.81	226	eP	P	21 26 10.6	+1.1
KURK	Kurchatov	46.12	309	⇑eP	P	21 26 19.1	-0.3
	comp=Z,56nm,0.8s,mb5.5						
KURK				epP	pP	21 26 37.0	+4.7
KURK	Kurchatov	46.12	309	⇑eP	P	21 26 19.1	-0.3
KURK				e*PP	pP	21 26 37.0	+4.7
KURK				pmax	pmax		
	comp=Z,56nm,0.8s,mb5.5						
GUN	Gumba	46.90	276	eP	P	21 26 26.6	+0.8
	comp=Z,117nm,0.9s,mb5.8						
PKI	Pulchoki	47.42	276	eP	P	21 26 30.3	+0.4
	comp=Z,86nm,1.0s,mb5.7						
KKN	Kakani	47.43	276	eP	P	21 26 30.5	+0.5
	comp=Z,126nm,1.0s,mb5.8						
DMN	Daman	47.65	276	eP	P	21 26 32.2	+0.5
	comp=Z,64nm,1.0s,mb5.6						
GKN	Gorkha	47.86	277	eP	P	21 26 33.8	+0.4
	comp=Z,322nm,1.0s						
KDAK	Kodiak Island	47.86	41	P	P	21 26 31.3	-1.7
	comp=Z,9.9nm,0.8s,mb4.9,baz=274,slow=13,SNR=3.6						
KDAK	Kodiak Island	47.86	41	P	P	21 26 31.3	-1.7
KOLN	Koldanda	48.79	277	eP	P	21 26 40.9	+0.3
	comp=Z,121nm,1.2s,mb5.8						
KAKA	Kakadu	49.41	191	eP	P	21 27 03.5	+18
	comp=Z,9.2nm,0.7s,mb4.9						
TKM2	Tokmak 2	49.69	299	P	P	21 26 48.0	+0.7
	SNR=10.0						
COLA	College	49.87	32	eP	P	21 26 47.7	-0.7
	comp=Z,3.8nm,0.8s,mb4.5						
COLA	College	49.87	32	⇑eP	P	21 26 50.7	+2.3
KZA	Kyzart	50.17	298	P	P	21 26 53.3	+2.4
	SNR=6.2						
KBK	Karagaybulak	50.22	299	P	P	21 26 52.3	+0.9
	SNR=23						
CHMS	Chumysh	50.27	299	P	P	21 26 52.0	+0.3
	SNR=5.4						
ILAR	Eielson Array	50.29	32	P	P	21 26 51.1	-0.5
	comp=Z,5.1nm,0.8s,mb4.6,baz=280,slow=7.0,SNR=35						
ILAR	Eielson Array	50.29	32	P	P	21 26 51.1	-0.5
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
USP	Ospenovka	50.37	300	P	P	21 26 53.1	+0.6
	SNR=8.5						
KSH	Kashi	50.40	294	eP	P	21 26 54.3	+1.5
KSH				ePP	PP	21 28 49.3	-0.1
KSH				eSCS	ScS	21 36 33.1	-3.4
KSH				AMB	AMB		
	comp=Z,220nm,4.2s						
KSH				LR	LR		
	comp=N,760nm,6.1s						
KSH				LR	LR		
	comp=E,880nm,6.4s						
AAK	Ala-Archa	50.55	299	P	P	21 26 54.4	+0.5
	SNR=7.5						
AAK	Ala-Archa	50.55	299	eP	P	21 26 52.8	-1.1
	comp=E,14nm,1.0s,mb4.9						
AAK	Ala-Archa	50.55	299	P	P	21 26 53.8	-0.1
AAK				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
CHKZ	Chkalovo	50.57	313	eP	P	21 26 53.0	-0.8
	comp=Z,41nm,1.2s,mb5.2						
CHKZ	Chkalovo	50.57	313	eP	P	21 26 53.0	-0.9
CHKZ				pmax	pmax		
	comp=Z,41nm,1.2s,mb5.2						
BVA0	Borovoye Array	50.82	313	i P	P	21 26 55.2	-0.6
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
BVAR	Borovoye Array	50.82	313	P	P	21 26 55.2	-0.6
	comp=Z,7.9nm,0.6s,mb4.8,baz=79,slow=7.6,SNR=43						
BVAR				PcP	PcP	21 28 11.7	-0.6
	comp=Z,2.5nm,0.7s,baz=76,slow=6.1,SNR=3.7						
BVAR	Borovoye Array	50.82	313	P	P	21 26 55.2	-0.6
BVAR						21 28 11.7	
BVAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRVK	Borovoye	50.88	313	eP	P	21 26 55.2	-1.0
	comp=Z,12nm,0.8s,mb4.9						
BRVK	Borovoye	50.88	313	eP	P	21 26 55.2	-1.0
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
AML	Almayashu	51.26	298	P	P	21 27 00.6	+1.4
	SNR=22						
KLP	Kalpa	51.49	284	eP	P	21 27 01.8	+0.7
KLP				AMb	AMB	21 27 04.3	
	comp=Z,89nm,1.1s,mb5.6						
THN	Thein Dam	53.11	286	eP	P	21 27 11.6	-1.7
KKAR	Karatay Array	53.21	300	i P	P	21 27 13.4	-0.4
KKAR				pmax	pmax		
	comp=Z,36nm,1.0s,mb5.3						
NDI	New Delhi	53.49	281	eP	P	21 27 13.3	-2.8
AYAN	Aya Nagar	53.65	281	eP	P	21 27 16.7	-0.6
AYAN				AMb	AMB	21 27 21.4	
	comp=Z,14nm,1.0s,mb4.8						
SONA	Sohna	53.78	281	eP	P	21 27 17.7	-0.5
SONA				AMb	AMB	21 27 19.0	
	comp=Z,20nm,0.8s,mb5.1						
KUDL	Kundal	54.30	281	eP	P	21 27 21.0	-1.1
KUDL				AMb	AMB	21 27 24.0	
	comp=Z,9.5nm,0.8s,mb4.8						

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INK    Inuvik           55.19  27   P      P       21 27 26.7 -1.2
       comp=Z,4.9nm,0.6s,mb4.7,baz=299,slow=7.4,SNR=12
INK    Inuvik           55.19  27  eP      P       21 27 27.3 -0.7
       comp=Z,9.8nm,1.2s,mb4.7
INK    Inuvik           55.19  27  eP      P       21 27 27.3 -0.7
INK                                 pmax   pmax
       comp=Z,10.0nm,1.2s
SVE    Sverdlovsk       55.48 319⇑eP      P       21 27 29.9 -0.3
SVE                                 pmax   pmax
       comp=Z,48nm,1.2s,mb5.4
SVE                                 MLR    MLR
       comp=N,300nm,12.0s,MS4.8
SVE                                 MLR    MLR
       comp=E,400nm,12.0s,MS4.8
SVE                                 MLR    MLR
       comp=Z,500nm,12.0s,MS4.8
FITZ   Fitzroy Crossi   56.03 198  eP      P       21 27 34.4 -0.3
       comp=Z,4.6nm,0.6s,mb4.7
FITZ   Fitzroy Crossi   56.03 198   P      P       21 27 33.8 -0.9
       comp=Z,10.0nm,1.0s,mb4.8,baz=18,slow=7.8,SNR=15
WRAB   Tennant Creek    56.28 188  eP      P       21 27 34.7 -1.8
       comp=Z,17nm,0.9s,mb5.1
WRAB   Tennant Creek    56.28 188d iP      P       21 27 35.3 -1.2
WB2    Warramunga Arr   56.29 188  eP      P       21 27 34.8 -1.7
WRA    Warramunga Arr   56.29 188   P      P       21 27 34.8 -1.7
       comp=Z,5.3nm,0.6s,mb4.8,baz=2.9,slow=7.6,SNR=45
WRA    Warramunga Arr   56.29 188   P      P       21 27 34.8 -1.8
WRA                                 pmax   pmax
       comp=Z,5.0nm,0.6s
ARU    Arti             56.69 319⇑iP      P       21 27 38.1 -0.8
ARU                                e               21 28 29.2
ARU                                e               21 29 46.2
ARU                                eS      S       21 35 29.7 +3.6
ARU                                eSS     SS      21 39 16.1 +1.0
ARU                                 pmax   pmax
       comp=Z,34nm,0.9s,mb5.4
HYB    Hyderabad        57.85 269⇑iP      P       21 27 47.0 -0.6
HYB    Hyderabad        57.85 269⇑eP      P       21 27 47.0 -0.6
       comp=Z,30nm,1.0s,mb5.3
HYB    Hyderabad        57.85 269⇑eP      P       21 27 47.0 -0.6
HYB                                 pmax   pmax
       comp=Z,30nm,1.0s,mb5.3
AB31   Akbulak array    58.16 310  i P     P       21 27 48.4 -0.9
AB31                                pmax   pmax
       comp=Z,46nm,1.2s,mb5.4
AKTO   Aktyubinsk       58.92 312   P      P       21 27 53.2 -1.4
       comp=Z,5.8nm,0.7s,mb4.7,baz=78,slow=5.9,SNR=20
AKTO   Aktyubinsk       58.92 312   P      P       21 27 53.3 -1.3
AKTO                                pmax   pmax
       comp=Z,6.0nm,0.7s,mb4.7
DLBC   Dease Lake       59.41  38   P      P       21 27 55.4 -2.4
       comp=Z,1.5nm,0.3s,mb4.4,baz=256,slow=17,SNR=1.9
DLBC   Dease Lake       59.41  38   P      P       21 27 55.4 -2.4
POO    Poona            61.07 272  eP      P       21 28 08.0 -1.8
KAD    Karad            61.44 271  eP      P       21 28 11.2 -1.1
KEV    Kevo             64.01 339  ep      P       21 28 24.9 -3.6
       comp=Z,19nm,1.1s,mb5.0
KEV    Kevo             64.01 339  eP      P       21 28 24.9 -3.6
KEV                                 pmax   pmax
       comp=Z,19nm,1.1s,mb5.0
ARCES  ARCESS Array B   64.56 339   P      P       21 28 30.9 -1.2
       comp=Z,9.3nm,1.0s,mb4.8,baz=56,slow=8.7,SNR=5.7
ARCES                               LR     LR      21 59 40.6
       comp=Z,197nm,18.2s,MS4.3,baz=290,slow=39
ARCES  ARCESS Array B   64.56 339   P      P       21 28 30.9 -1.2
ARCES                               pmax   pmax
       comp=Z,9.0nm,1.0s
ARCES                               MLR    MLR
       comp=Z,197nm,18.2s
YKA    Yellowknife Ar   64.61  30   P      P       21 28 30.8 -1.7
       comp=Z,2.0nm,0.8s,mb4.2,baz=298,slow=6.6,SNR=5.1
YKA    Yellowknife Ar   64.61  30  i P     P       21 28 32.2 -0.3
YKA                                 pmax   pmax
       comp=Z,2.0nm,0.8s
JOF    Joensuu          66.45 332  ep      P       21 28 42.7 -1.6
       comp=Z,13nm,0.9s,mb5.0
JOF    Joensuu          66.45 332  eP      P       21 28 42.7 -1.6
JOF                                 pmax   pmax
       comp=Z,13nm,0.9s,mb5.0
MOS    Moscow           67.64 323  eP      P       21 28 49.1 -2.7
MOS                                 pmax   pmax
       comp=Z,52nm,1.0s,mb5.5
STKA   Stephens Creek   67.83 179   P      P       21 28 52.0 -1.5
       comp=Z,1.3nm,0.5s,mb4.2,baz=307,slow=9.1,SNR=4.6
STKA   Stephens Creek   67.83 179  eP      P       21 28 52.6 -0.8
OBN    Obninsk          68.48 323  eP      P       21 28 56.8 -0.3
       comp=Z,6.5nm,0.4s,mb5.0
OBN    Obninsk          68.48 323  eP      P       21 28 56.8 -0.3
OBN                                e       pP      21 29 08.2 -2.5
OBN                                 pmax   pmax
       comp=Z,12nm,0.7s,mb5.0
KAF    Kangasniemi      68.80 333  ep      P       21 28 58.0 -1.0
       comp=Z,15nm,1.0s,mb4.9,baz=46,slow=5.4
KAF    Kangasniemi      68.80 333  eP      P       21 28 58.0 -1.0
KAF                                 pmax   pmax
       comp=Z,15nm,1.0s,mb4.9
FINES  FINESS Array B   69.31 332   P      P       21 29 01.4 -0.7
       comp=Z,10nm,0.9s,mb4.8,baz=135,slow=2.7,SNR=9.2
FINES  FINESS Array B   69.31 332  i P     P       21 29 02.2 +0.1
FINES                               pmax   pmax
       comp=Z,10.0nm,0.9s
GOF    Gofitskoye       70.34 312  eP      P       21 29 07.9 -0.8
WBK    Wadi Bani Khal   70.80 284   P      P       21 29 13.0 +1.1
       SNR=8.6
NEW    Newport          70.88  44  eP      P       21 29 13.9 +2.0
       comp=Z,1.9nm,0.4s,mb4.4
NEW    Newport          70.88  44  eP      P       21 29 13.9 +2.0
NEW                                 pmax   pmax
       comp=Z,2.0nm,0.4s
BIDO   Bidbid           70.98 286   P      P       21 29 14.1 +1.2
       SNR=6.3
ZEI    Tsey             71.02 309  i P     P       21 29 10.8 -2.0
ZEI                                i *PP   pP      21 29 25.7 -0.7
ZEI                                i               21 31 47.3
ZEI                                 pmax   pmax
       comp=Z,9.0nm,1.1s,mb4.6
BANOM  Banah            71.13 289   P      P       21 29 14.7 +1.0
       SNR=11
KIV    Kislovodsk       71.13 311  eP      P       21 29 13.6 +0.1
       comp=Z,20nm,0.9s,mb5.0
KIV    Kislovodsk       71.13 311c iP      P       21 29 13.8 +0.3
KIV                                 pmax   pmax
       comp=Z,29nm,0.9s,mb5.2
SMDO   Samad            71.28 285   P      P       21 29 16.1 +1.3
       SNR=7.0
SUMG   Summit           71.41 360  eP      P       21 29 14.6 -0.1
       comp=Z,11nm,0.9s,mb4.8
JMDO   Jabal Madar      71.61 285   P      P       21 29 17.2 +0.5
       SNR=8.5
GNI    Garni            71.88 307   LR     LR      22 03 40.5
       comp=Z,145nm,19.2s,MS4.3,baz=252,slow=38
GNI    Garni            71.88 307  eP      P       21 29 19.1 +1.1
       comp=Z,35nm,1.4s,mb5.1
GNI    Garni            71.88 307c iP      P       21 29 19.0 +1.0
GNI                                 pmax   pmax
       comp=Z,38nm,1.8s
ASHO   Ashiyiah         71.97 288   P      P       21 29 19.2 +0.5
       SNR=9.2
BSY    Bisya            72.11 285   P      P       21 29 20.2 +0.6
       SNR=10
NWAO   Narrogin (SRO)   72.37 201   P      P       21 29 20.4 -0.7
       comp=Z,12nm,1.0s,mb4.8,baz=45,slow=7.1,SNR=3.0
NWAO   Narrogin (SRO)   72.37 201   P      P       21 29 20.4 -0.6
NWAO                                pmax   pmax
       comp=Z,12nm,1.0s
CMB    Columbia Colle   74.56  54  eP      P       21 29 33.2 -0.6
       comp=Z,5.1nm,1.0s,mb4.4
CMB                                epP     pP      21 29 46.1 -1.3
CMB    Columbia Colle   74.56  54  eP      P       21 29 33.2 -0.6
CMB                                e*PP    pP      21 29 46.1 -1.3
CMB                                 pmax   pmax
       comp=Z,5.0nm,1.0s,mb4.4
AKASG  Malin Array Be   74.67 322   P      P       21 29 33.5 -0.6
       comp=Z,4.3nm,0.4s,mb4.7,baz=47,slow=5.8,SNR=25
AKASG  Malin Array Be   74.67 322  i P     P       21 29 33.5 -0.6
AKASG                               pmax   pmax
       comp=Z,4.0nm,0.4s
NB2    NORSAR Subarra   74.73 337   P      P       21 29 33.9 -0.3
       comp=Z,3.9nm,0.7s,mb4.5,baz=41,slow=5.8
NOA    NORSAR Array B   74.73 337   P      P       21 29 34.3 +0.1
       comp=Z,9.0nm,0.9s,mb4.7,baz=39,slow=5.8,SNR=13
NOA                                 pP     pP      21 29 46.3 -1.6
       comp=Z,5.4nm,0.8s,baz=40,slow=5.8,SNR=5.7
NOA                                 LR     LR      22 05 46.0
       comp=Z,199nm,18.1s,MS4.5,baz=35,slow=38
NOA    NORSAR Array B   74.73 337   P      P       21 29 34.3 +0.1
NOA                                 *PP    pP      21 29 46.3 -1.6
NOA                                 pmax   pmax
       comp=Z,9.0nm,0.9s
NOA                                 pmax   pmax
       comp=Z,5.0nm,0.8s
NOA                                 MLR    MLR
       comp=Z,199nm,18.1s
NAO    NORSAR Subarra   75.02 337   P      P       21 29 33.9 -2.0
       comp=Z,3.9nm,0.7s,mb4.5
NAO    NORSAR Subarra   75.02 337   P      P       21 29 33.9 -2.0
NAO                                 pmax   pmax
       comp=Z,4.0nm,0.7s,mb4.5
MSL    Mosul            75.08 304  e       P       21 29 37.0 +0.2
SUW    Suwalki          75.32 327  eP      P       21 29 37.5 -0.2
SUW    Suwalki          75.32 327  eP      P       21 29 37.6 -0.1
       comp=Z,31nm,1.0s,mb5.2
SUW    Suwalki          75.32 327  eP      P       21 29 37.7 -0.1
SUW                                 pmax   pmax
       comp=Z,31nm,1.0s,mb5.2
NVAR   Mina Array Bea   75.69  53   P      P       21 29 40.5 +0.2
       comp=Z,2.4nm,0.8s,mb4.2,baz=299,slow=3.9,SNR=12
NVAR                                pP     pP      21 29 53.4 -0.5
       comp=Z,2.5nm,0.9s,baz=289,slow=3.1,SNR=6.2
ELK    Elko             76.27  49  eP      P       21 29 45.0 +1.5
       comp=Z,1.2nm,0.6s,mb4.0
ELK    Elko             76.27  49  eP      P       21 29 45.0 +1.5
ELK                                 pmax   pmax
       comp=Z,1.0nm,0.6s
TPH    Tonopah          76.59  53   P      P       21 29 44.3 -1.1
       comp=Z,10nm,1.1s,mb4.7
TPH    Tonopah          76.59  53   P      P       21 29 44.3 -1.0
TPH                                 pmax   pmax
       comp=Z,10.0nm,1.1s,mb4.7
MOOW   Moose Ponds      77.12  45  eP      P       21 29 48.8 +0.6
       comp=Z,6.4nm,1.5s,mb4.3
TPNV   Topopah Spring   77.88  53  eP      P       21 29 53.8 +1.2
       comp=Z,5.3nm,1.0s,mb4.4
TPNV   Topopah Spring   77.88  53  eP      P       21 29 53.8 +1.3
TPNV                                pmax   pmax
       comp=Z,5.0nm,1.0s,mb4.4
HWUT   Hardware Ranch   77.97  47  eP      P       21 29 53.4 +0.5
       comp=Z,14nm,1.4s,mb4.7
DUG    Dugway           78.08  49  eP      P       21 29 55.0 +1.4
ABTO   Aybut            78.13 283   P      P       21 29 54.3 +0.1
       SNR=7.1
BW06   Boulder Array    78.42  45  eP      P       21 29 55.4  0.0
PDAR   Pinedale Array   78.42  45   P      P       21 29 55.5 +0.2
       comp=Z,1.5nm,0.5s,mb4.1,baz=284,slow=1.2,SNR=19
PDAR                                pP     pP      21 30 08.3 -0.8
       comp=Z,1.4nm,0.6s,baz=297,slow=3.2,SNR=7.4
KWP    Kalwaria         78.53 324  eP      P       21 29 56.6 +0.8
KWP    Kalwaria         78.53 324  eP      P       21 29 56.6 +0.8
BURAR  Bucovina Array   78.68 322  ⇓P      P       21 29 57.1 +0.4
BURAR  Bucovina Array   78.68 322  ⇓P      P       21 29 57.1 +0.4
CFR    Carcaliu         78.77 318  ⇓P      P       21 29 57.0 -0.2
DAU    Daniels Canyon   78.89  48  eP      P       21 29 59.3 +1.3
DAU                                epP     pP      21 30 11.6 -0.1
VRI    Vrincioaia       79.07 320  ⇓P      P       21 30 01.1 +2.2
VRI    Vrincioaia       79.07 320  ⇓P      P       21 30 01.1 +2.2
BR131  Keskin Array S   79.09 311  eP      P       21 30 00.1 +1.0
       comp=Z,4.6nm,0.9s,mb4.4
BRTR   Keskin Array B   79.09 311   P      P       21 29 59.2 +0.1
       comp=Z,4.9nm,1.0s,mb4.4,baz=104,slow=5.1,SNR=20
BRTR                                pP     pP      21 30 12.3 -0.6
       comp=Z,5.8nm,1.1s,baz=72,slow=3.9,SNR=5.8
BRTR   Keskin Array B   79.09 311   P      P       21 29 59.3 +0.2
BRTR                                *PP    pP      21 30 12.3 -0.6
BRTR                                pmax   pmax
       comp=Z,5.0nm,1.0s
BRTR                                pmax   pmax
       comp=Z,6.0nm,1.1s
KOLS   Kolonicke sedl   79.22 324  eP      P       21 30 00.0 +0.4
KOLS                               epP     pP      21 30 12.0 -1.4
STHS   Stebnicka Huta   79.36 325  eP      P       21 30 00.9 +0.5
STHS                               epP     pP      21 30 12.3 -1.9
OJC    Ojcow            79.46 326  eP      P       21 30 01.4 +0.5
MSU    Marysvale        79.50  50  eP      P       21 30 02.9 +1.5
MSU                                epP     pP      21 30 15.3 +0.2
ANTO   Ankara           79.51 312  eP      P       21 30 01.1 -0.2
       comp=Z,4.7nm,0.8s,mb4.5
ANTO   Ankara           79.51 312  eP      P       21 30 01.1 -0.3
ANTO                                pmax   pmax
       comp=Z,5.0nm,0.8s,mb4.5
TMUT   Trail Mountain   79.61  49  eP      P       21 30 01.9 -0.1
TMUT                               epP     pP      21 30 16.0 +0.3
CRVS   Cervenica-Dubn   79.62 324  eP      P       21 30 02.5 +0.7
CRVS                               e               21 30 09.6
MLR    Muntele Rosu     79.73 320  ⇓P      P       21 30 03.2 +0.8
MLR    Muntele Rosu     79.73 320  ⇓P      P       21 30 03.2 +0.8
SRU    San Rafael       80.14  49  eP      P       21 30 05.0 +0.2
       comp=Z,10nm,1.1s,mb4.7
SRU                                epP     pP      21 30 18.1 -0.5
SRU    San Rafael       80.14  49  eP      P       21 30 05.0 +0.2
SRU                                e*PP    pP      21 30 18.1 -0.5
SRU                                 pmax   pmax
       comp=Z,10.0nm,1.1s,mb4.7
KECS   Kecovo           80.38 324  eP      P       21 30 07.0 +1.2
KECS                               e               21 30 14.7
OKC    Ostrava-Krasne   80.47 327  epP     pP      21 30 19.7 -0.4
DRGR                    80.49 322  ⇑P      P       21 30 06.7 +0.2
DRGR                    80.49 322  ⇑P      P       21 30 06.7 +0.2
KSP    Ksiaz            80.55 328  eP      P       21 30 07.3 +0.6
KSP                                e       pP      21 30 20.0 -0.5
BSEG   Bad Segeberg     80.56 333  eP      P       21 30 07.5 +0.8
MORC   Moravsky Berou   80.79 327  eP      P       21 30 08.2 +0.2
       comp=Z,6.9nm,0.9s,mb4.6
MORC                               ePcP    PcP     21 30 19.8 +5.0
MORC   Moravsky Berou   80.79 327  eP      P       21 30 08.2 +0.2
MORC                               e       pP      21 30 19.8 -2.0
MORC                                pmax   pmax
       comp=Z,7.0nm,0.9s,mb4.6
DPC    Dobruska-Polom   80.90 328  eP      P       21 30 09.9 +1.3
DPC                                epP     pP      21 30 22.2 -0.2
UPC    Upice            80.92 328  eP      P       21 30 09.2 +0.6
UPC                                epP     pP      21 30 22.6 +0.2
PSZ    Piszkesteto      81.06 324  eP      P       21 30 09.8 +0.3
       comp=Z,6.9nm,1.0s,mb4.5
PSZ    Piszkesteto      81.06 324  eP      P       21 30 09.8 +0.4
PSZ                                 pmax   pmax
       comp=Z,7.0nm,1.0s,mb4.5
VYHS   Vyhne            81.14 325  eP      P       21 30 10.3 +0.5
VYHS                               epP     pP      21 30 21.7 -2.0
BRG    Berggiesshubel   81.51 329  i P     P       21 30 12.6 +0.8
       comp=Z,8.0nm,0.8s,mb4.7
BRG                                e       pP      21 30 24.4 -1.2
BRG                                e               21 30 43.5
BRG    Berggiesshubel   81.51 329  i P     P       21 30 12.6 +0.9
BRG                                e       pP      21 30 24.4 -1.2
BRG                                 pmax   pmax
       comp=Z,8.0nm,0.8s,mb4.7
PVCC   Panska Ves       81.51 329  eP      P       21 30 12.7 +0.9
PVCC                               epP     pP      21 30 25.3 -0.3
CLL    Collm            81.56 330  ⇑P      P       21 30 12.1 +0.1
       comp=Z,logA/T=1.3,mb5.0
CLL                                i *PP   pP      21 30 24.9 -0.9
CLL                                e               21 30 37.0
CLL    Collm            81.56 330⇑iP      P       21 30 12.1 +0.1
       comp=Z,18nm,0.9s,mb5.0
CLL                                i pP    pP      21 30 24.9 -0.9
CLL                                esP     sP      21 30 37.0 +6.0
CLL    Collm            81.56 330⇑iP      P       21 30 12.1 +0.1
CLL                                i *PP   pP      21 30 24.9 -0.9
CLL                                 pmax   pmax
       comp=Z,18nm,0.9s,mb5.0
SMOL   Smolenice        81.76 326  eP      P       21 30 13.9 +0.8
PRU    Pruhonice        81.93 328  eP      P       21 30 14.8 +0.9
PRU                                epP     pP      21 30 27.2 -0.6
TREC   Trest            82.05 327  eP      P       21 30 15.6 +1.0
TREC                               epP     pP      21 30 28.0 -0.4
CLZ    Clausthal        82.19 332  eP      P       21 30 15.9 +0.7
       comp=Z,15nm,1.1s,mb4.8
CLZ                                epP     pP      21 30 28.9 -0.1
CLZ    Clausthal        82.19 332  eP      P       21 30 15.9 +0.7
CLZ                                e*PP    pP      21 30 28.9 -0.1
CLZ                                 pmax   pmax
       comp=Z,15nm,1.1s,mb4.8
NKC    Novy Kostel      82.61 330  eP      P       21 30 17.9 +0.5
NKC                                epP     pP      21 30 31.0 -0.3
MOX    Moxa             82.63 330  i P     P       21 30 17.6 +0.1
MOX    Moxa             82.63 330  eP      P       21 30 17.6 +0.1
KHC    Kasperske Hory   82.99 328  eP      P       21 30 20.1 +0.7
KHC                                epP     pP      21 30 32.7 -0.5
GEC2   GERESS Array S   83.16 328  eP      P       21 30 20.6 +0.4
       comp=Z,9.0nm,1.0s,mb4.8
GEC2   GERESS Array S   83.16 328  eP      P       21 30 20.6 +0.4
GEC2                                pmax   pmax
       comp=Z,9.0nm,1.0s,mb4.8
GERES  GERESS Array B   83.16 328   P      P       21 30 20.5 +0.2
       comp=Z,2.9nm,0.7s,mb4.4,baz=34,slow=4.8,SNR=23
GERES                               pP     pP      21 30 32.3 -1.7
       comp=Z,2.9nm,1.0s,baz=45,slow=1.9,SNR=5.8
GERES  GERESS Array B   83.16 328   P      P       21 30 20.5 +0.3
GERES                               *PP    pP      21 30 32.3 -1.8
GERES                               pmax   pmax
       comp=Z,3.0nm,0.7s
GERES                               pmax   pmax
       comp=Z,3.0nm,1.0s
GRA1   Grafenberg Arr   83.53 330  eP      P       21 30 23.3 +1.2
       comp=Z,26nm,1.0s,mb5.3
GRA1                               epP     pP      21 30 36.0 +0.1
GRF    Grafenberg Arr   83.53 330  eP      P       21 30 23.3 +1.2
       comp=Z,26nm,1.0s,mb5.3
GRF                                epP     pP      21 30 36.0 +0.1
GRF    Grafenberg Arr   83.53 330  eP      P       21 30 23.3 +1.2
GRF                                e*PP    pP      21 30 36.0 +0.1
GRF                                 pmax   pmax
       comp=Z,26nm,1.0s,mb5.3
GRF    Grafenberg Arr   83.53 330  eP      P       21 30 23.3 +1.2
GRF                                e*PP    pP      21 30 36.0 +0.1
GRF                                 pmax   pmax
       comp=Z,26nm,1.0s,mb5.3
ARSA   Arzberg          83.56 326⇓iP      P       21 30 23.3 +1.0
       comp=Z,12nm,2.0s,mb4.7
ARSA   Arzberg          83.56 326  ⇓P      P       21 30 23.2 +1.0
       comp=Z,12nm,2.0s,mb4.7
MOA    Molln            83.67 327⇓iP      P       21 30 21.8 -1.0
       comp=Z,12nm,1.2s,mb4.9
SDCO   Great Sand Dun   84.03  47  eP      P       21 30 24.2 -0.6
       comp=Z,5.9nm,1.3s,mb4.6
SDCO                               epP     pP      21 30 38.4 -0.3
VAY    Valandovo        84.37 318  eP      P       21 30 26.3 -0.2
VAY    Valandovo        84.37 318  eP      P       21 30 26.3 -0.2
SKO    Skopje           84.52 319  eP      P       21 30 28.8 +1.6
SKO    Skopje           84.52 319  eP      P       21 30 28.8 +1.6
OBKA   Obir             84.56 326⇑iP      P       21 30 29.2 +1.9
       comp=Z,19nm,1.6s,mb5.0
PPT    Papeete          84.61 116   LR     LR      22 02 24.6
       comp=Z,130nm,20.6s,MS4.3,baz=82,slow=32
BIA    Bitola           85.25 319  eP      P       21 30 32.3 +1.4
BIA    Bitola           85.25 319  eP      P       21 30 32.3 +1.4
ANMO   Albuquerque      85.31  50  i P     P       21 30 33.5 +2.2
MOTA   Moosalm          85.42 328⇑iP      P       21 30 31.2 -0.4
       comp=Z,5.7nm,1.0s,mb4.7
MOTA   Moosalm          85.42 328  ⇑P      P       21 30 31.2 -0.4
       comp=Z,5.7nm,1.0s,mb4.7
MOTA   Moosalm          85.42 328  ⇑P      P       21 30 31.2 -0.4
MOTA                                pmax   pmax
       comp=Z,6.0nm,1.0s,mb4.7
OHR    Ohrid            85.47 319  eP      P       21 30 32.7 +0.8
OHR    Ohrid            85.47 319  eP      P       21 30 32.7 +0.8
BFO    Black Forest     85.78 331  eP      P       21 30 33.5 +0.2
       comp=Z,19nm,1.1s,mb5.2
BFO                                epP     pP      21 30 46.5 -0.7
BFO    Black Forest     85.78 331  eP      P       21 30 33.5 +0.2
BFO                                e*PP    pP      21 30 46.5 -0.7
BFO                                 pmax   pmax
       comp=Z,19nm,1.1s,mb5.2
BAIF   Baives           85.92 334  eP      P       21 30 33.5 -0.4
DAVA   Damuels          85.98 329⇓iP      P       21 30 35.1 +0.8
       comp=Z,9.8nm,0.9s,mb5.0
DAVA   Damuels          85.98 329  ⇓P      P       21 30 35.1 +0.8
       comp=Z,9.8nm,0.9s,mb5.0
CDF    Champ du Feu     86.12 331  eP      P       21 30 35.4 +0.4
       comp=Z,30nm,1.1s,mb5.1
CDF    Champ du Feu     86.12 331  eP      P       21 30 35.4 +0.4
CDF                                 pmax   pmax
       comp=Z,15nm,1.1s,mb5.1
SCHQ   Schefferville    86.13  16   P      P       21 30 34.0 -0.8
       comp=Z,2.9nm,0.9s,mb4.5,baz=274,slow=15,SNR=2.7
SCHQ   Schefferville    86.13  16   P      P       21 30 34.0 -0.8
HINF   Hinteralfeld     86.78 331  eP      P       21 30 37.3 -0.9
HAU    Haudompre        86.82 331  eP      P       21 30 37.9 -0.5
       comp=Z,9.3nm,0.8s,mb4.8
HAU    Haudompre        86.82 331  eP      P       21 30 37.9 -0.5
HAU                                 pmax   pmax
       comp=Z,5.0nm,0.8s,mb4.8
CABF   La Chapelle      88.06 331  eP      P       21 30 43.7 -0.7
       comp=Z,13nm,1.0s,mb4.8
CABF   La Chapelle      88.06 331  eP      P       21 30 43.7 -0.7
CABF                                pmax   pmax
       comp=Z,7.0nm,1.0s,mb4.8
LOR    Lormes           88.37 332  eP      P       21 30 45.8 -0.1
FLN    La Foliniere     88.64 336  eP      P       21 30 46.5 -0.6
SSF    Saint Saulge     88.68 332  eP      P       21 30 47.0 -0.3
LPL    La Plagne        88.70 330  eP      P       21 30 47.7 +0.2
       comp=Z,5.0nm,0.7s,mb4.7
LPL    La Plagne        88.70 330  eP      P       21 30 47.7 +0.2
LPL                                 pmax   pmax
       comp=Z,3.0nm,0.7s,mb4.7
LPG    La Plagne        88.71 330  eP      P       21 30 48.2 +0.7
       comp=Z,4.9nm,0.6s,mb4.7
LPG    La Plagne        88.71 330  eP      P       21 30 48.2 +0.7
LPG                                 pmax   pmax
       comp=Z,2.0nm,0.6s,mb4.6
SMF    Signal de Mont   88.90 332  eP      P       21 30 48.5 +0.1
AVF    Avril sur Loir   88.96 332  eP      P       21 30 48.8 +0.1
       comp=Z,15nm,0.9s,mb5.0
AVF    Avril sur Loir   88.96 332  eP      P       21 30 48.8 +0.1
AVF                                 pmax   pmax
       comp=Z,7.0nm,0.9s,mb5.0
MBDF   Montbardon       89.33 329  eP      P       21 30 50.5  0.0
       comp=Z,11nm,0.8s,mb4.9
MBDF   Montbardon       89.33 329  eP      P       21 30 50.5  0.0
MBDF                                pmax   pmax
       comp=Z,6.0nm,0.8s,mb5.0
BGF    Bois d'Agland    89.35 333  eP      P       21 30 50.9 +0.4
ORIF   Oris-en-Rattie   89.53 330  eP      P       21 30 51.8 +0.4
       comp=Z,19nm,1.1s,mb5.0
ORIF   Oris-en-Rattie   89.53 330  eP      P       21 30 51.8 +0.4
ORIF                                pmax   pmax
       comp=Z,10.0nm,1.1s,mb5.1
TCF    Toulx Ste Croi   89.81 333  eP      P       21 30 52.2 -0.5
VIVF   Saint-Julien-l   90.07 331  eP      P       21 30 53.8 -0.1
PGF    Pioggiola        90.13 327  eP      P       21 30 53.9 -0.4
       comp=Z,145nm,1.3s,mb5.8
PGF    Pioggiola        90.13 327  eP      P       21 30 53.9 -0.4
PGF                                 pmax   pmax
       comp=Z,72nm,1.3s,mb5.8
FRF    La Foret Royal   90.33 329  eP      P       21 30 54.6 -0.6
       comp=Z,60nm,1.4s,mb5.4
FRF    La Foret Royal   90.33 329  eP      P       21 30 54.6 -0.6
FRF                                 pmax   pmax
       comp=Z,30nm,1.4s,mb5.4
MFF    Saint Martin d   90.39 334  eP      P       21 30 55.9 +0.5
TXAR   Lajitas Array    90.83  52   P      P       21 30 58.8 +0.9
       comp=Z,1.0nm,0.3s,mb4.6,baz=349,slow=6.4,SNR=6.5
TXAR                                pP     pP      21 31 10.7 -1.3
       comp=Z,0.5nm,0.2s,baz=260,slow=14,SNR=1.5
TXAR   Lajitas Array    90.83  52   P      P       21 30 58.8 +0.9
TXAR                                *PP    pP      21 31 10.7 -1.3
TXAR                                pmax   pmax
       comp=Z,1.0nm,0.3s
TXAR                                pmax   pmax
       comp=Z,1.0nm,0.3s
RJF    Les Rejaudoux    90.90 333  eP      P       21 30 58.4 +0.5
       comp=Z,38nm,1.2s,mb5.3
RJF    Les Rejaudoux    90.90 333  eP      P       21 30 58.4 +0.5
RJF                                 pmax   pmax
       comp=Z,19nm,1.2s,mb5.3
CAF    Calviac          91.02 332  eP      P       21 30 58.4  0.0
       comp=Z,11nm,0.9s,mb4.9
CAF    Calviac          91.02 332  eP      P       21 30 58.4  0.0
CAF                                 pmax   pmax
       comp=Z,6.0nm,0.9s,mb4.9
LFF    La Frestale      91.50 333  eP      P       21 30 59.8 -0.8
MTLF   Montolieu        92.30 331  eP      P       21 31 04.5 +0.1
       comp=Z,27nm,1.2s,mb5.2
MTLF   Montolieu        92.30 331  eP      P       21 31 04.5 +0.1
MTLF                                pmax   pmax
       comp=Z,14nm,1.2s,mb5.2
BOSA   Boshof          126.11 259   PKP    PKPdf   21 36 56.6 +1.0
       comp=Z,2.5nm,0.9s,baz=27,slow=5.6,SNR=3.4
BOSA   Boshof          126.11 259   PKIKP  PKPdf   21 36 56.7 +1.0
BOSA                                pmax   pmax
       comp=Z,3.0nm,0.9s
DBIC   Dimbokro        126.59 316   PKP    PKPdf   21 36 57.0 +0.1
       comp=Z,3.7nm,1.1s,baz=211,slow=5.4,SNR=3.3
DBIC   Dimbokro        126.59 316   PKIKP  PKPdf   21 36 57.1 +0.1
DBIC                                pmax   pmax
```

	comp=Z,4.0nm,1.1s						
LPAZ	**La Paz**	**147.35**	**60**	PKPbc	PKPdf	21 37 37.8	+3.1
	comp=Z,2.3nm,0.5s,baz=319,slow=3.1,SNR=12						
LPAZ				pPKPbc		21 37 51.5	
	comp=Z,2.0nm,0.7s,baz=354,slow=7.3,SNR=3.8						
LPAZ	**La Paz**	**147.35**	**60**	*e*PKPab	PKPab	21 37 40.2	-1.0
LPAZ				pPKPbc		21 37 51.5	
LPAZ	**La Paz**	**147.35**	**60**	PKP2	PKPdf	21 37 37.8	+3.2
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						

IDC 15 21:54:43.7±4.0,**5.30N**×**94.56E**,**mb3.8**/4,**mb1 4.0**/4,**mb1mx3.7**/18,**mbtmp3.8**/4,**Error ellipse: s-maj=156.9km s-min=28.6km az=59.0**,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**42.68**	**348**	P	P	22 02 41.7	-2.2
	1.9nm,0.7s,baz=169,slow=8.2,SNR=16						
SONM	**Songino Array**	**43.58**	**12**	P	P	22 02 49.5	-1.7
	0.4nm,0.8s,baz=194,slow=5.9,SNR=4.7						
WRA	**Warramunga Arr**	**46.46**	**124**	P	P	22 03 12.7	-1.9
	0.8nm,0.7s,baz=303,slow=8.6,SNR=5.7						
ZAL	**Zalesovo**	**49.14**	**352**	P	P	22 03 33.5	-1.6
	1.0nm,0.2s,baz=297,slow=4.5,SNR=2.7						

*IDC **15** 21:55:47.3±1.6,34.49N×73.55E,mb3.9/5,mb1 3.9/8,mb1mx3.7/22,mbtmp3.8/8,ML3.4/3,Error ellipse: s-maj=43.4km s-min=26.2km az=55.0*

*NEIC **15** 21:55:49.7±3.9,34.61N×73.48E,h10^{km},mb3.8/1,Error ellipse: s-maj=65.7km s-min=21.5km az=148.0*

*NDI **15** 21:55:51.1±2.0,34.62N×73.54E,h10^{km},MD3.7,ML3.8,mb3.8(NEIC)*

*NNC **15** 21:55:59.1±5.8,35.20N×72.50E,mpv4.0,Error ellipse: s-maj=105.6km s-min=49.9km az=99.0*

ISC 15 21:55:49.0±0.7,**34.76N**±0.07×**73.6E**±0.1,**h10^{km}**,**n21**,σ**1^{s}36**/26,**mb3.8**/4,**2C-1D**,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	**2.32**	**151**	*e*SB	**Sb**	**21 57 00.0**	**+0.7**
THN	**Thein Dam**	**2.93**	**142**	*e*P	**Pn**	**21 56 37.1**	**+0.5**
THN				*e*SB	**Sb**	**21 57 18.1**	**+1.0**
DLH	**Dalhousie**	**2.98**	**137**	*e*P	**Pn**	**21 56 39.0**	**+1.7**
DLH				*e*SB	**Sb**	**21 57 21.0**	**+2.5**
BHK	**Bhakra**	**4.10**	**144**	*e*x	x	21 57 57.6	
SDNR	**Sundarnagar**	**4.33**	**138**	*e*P	**Pn**	**21 56 55.4**	**-1.0**
SDNR				*e*S	**Sn**	**21 57 43.8**	**-3.7**
SMLA	**Simla**	**4.72**	**139**	*e*P	**Pn**	**21 57 00.2**	**-1.8**
SMLA				*e*S	**Sn**	**21 57 51.6**	**-5.9**
KLP	**Kalpa**	**5.08**	**128**	*e*P	**Pn**	**21 57 06.6**	**-0.5**
KLP				*e*S	**Sn**	**21 58 01.1**	**-5.4**
KLP				*e*S	**Sn**	**21 58 01.3**	**-5.1**
KLP				AML	AML	21 58 31.6	
	comp=E,307nm,0.5s						
KLP				AML	AML	21 58 50.9	
	comp=N,144nm,0.7s						
NDI	**New Delhi**	**6.81**	**152**	*e*x	x	21 57 50.0	
AAK	**Ala-Archa**	**7.90**	**5**	⇓Sn	**Sn**	**21 59 22.1**	**+5.1**
	comp=N,5.4nm,0.8s						
AAK	**Ala-Archa**	**7.90**	**5**	*e*Pn	**Pn**	**21 57 45.8**	**-0.9**
	comp=N,9.1nm,1.7s						
KK31	**Karatay Array**	**8.66**	**345**	Pn	**P**	**21 57 59.6**	**+2.2**
	comp=N,3.1nm,0.4s,baz=159,slow=12,SNR=47						
KK31				⇑Sn	**Sn**	**21 59 34.8**	**-1.5**
	comp=N,3.6nm,0.5s,baz=177,slow=24,SNR=14						
MKAR	**Makanchi Array**	**13.71**	**26**	Pn	**P**	**21 59 06.7**	**+0.9**
	comp=N,0.1nm,0.3s,baz=201,slow=12,SNR=3.1						
AB31	**Akbulak array**	**17.63**	**329**	⇑P	**P**	**21 59 57.8**	**+1.6**
	comp=N,0.4nm,0.5s,baz=134,slow=12,SNR=8.1						
BVAR	**Borovoye Array**	**18.40**	**354**	P	**P**	**22 00 07.9**	**+2.1**
	comp=N,0.1nm,0.3s,baz=153,slow=10.0,SNR=2.9						
CHKZ	**Chkalovo**	**19.03**	**355**	*e*P	**P**	**22 00 13.1**	**-0.4**
	comp=N,16nm,2.6s						
AKTO	**Aktyubinsk**	**19.34**	**329**	P	**P**	**22 00 17.1**	**0.0**
	comp=N,0.4nm,0.3s,baz=125,slow=11,SNR=6.7						
ZAL	**Zalesovo**	**20.74**	**19**	P	**P**	**22 00 31.8**	**-0.4**
	comp=N,2.1nm,0.3s,baz=243,slow=5.5,SNR=7.3						
FINES	**FINESS Array B**	**40.09**	**327**	P	**P**	**22 03 25.6**	**-0.4**
	comp=N,3.0nm,1.0s,mb4.0,baz=129,slow=12,SNR=3.9						
ARCES	**ARCESS Array B**	**43.55**	**338**	P	**P**	**22 03 54.0**	**-0.1**
	comp=N,1.3nm,0.8s,mb3.7,baz=98,slow=8.6,SNR=3.7						
NOA	**NORSAR Array B**	**47.02**	**324**	P	**P**	**22 04 21.2**	**-0.8**
	comp=N,0.9nm,0.8s,mb3.8,baz=102,slow=6.7,SNR=2.5						
WRA	**Warramunga Arr**	**79.29**	**123**	P	**P**	**22 07 54.3**	**-2.2**
	comp=N,0.8nm,0.8s,mb3.7,baz=325,slow=5.4,SNR=5.8						

*NEIC **15** 22:43:19.8±0.9,5.65S×110.35E,h533^{km}±11^{km},mb4.1/4,Error ellipse: s-maj=18.8km s-min=8.5km az=57.0*

*IDC **15** 22:43:23.8±5.8,5.58S×110.51E,h581^{km}±76^{km},mb3.4/10,mb1 3.5/10,mb1mx3.4/16,mbtmp4.3/10,Error ellipse: s-maj=45.8km s-min=12.7km az=73.0*

ISC 15 22:43:19.6±1.4,**5.6S**±0.1×**110.5E**±0.2,**h546^{km}**±18^{km},**n29**,σ**0^{s}66**/27,**mb4.2**/18,**Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSM	**Kuching**	**7.00**	**359**	*e*P	**P**	**22 45 07.2**	**-0.9**
KKM	**Kota Kinabalu**	**12.88**	**26**	*e*P	**P**	**22 46 01.5**	**-6.1**
KULM	**Kulim**	**14.58**	**318**	*e*P	**P**	**22 46 25.0**	**+0.2**
WRA	**Warramunga Arr**	**27.25**	**124**	P	**P**	**22 48 21.9**	**-0.1**
	0.3nm,0.3s,mb3.4,baz=256,slow=12,SNR=3.6						
STKA	**Stephens Creek**	**39.14**	**136**	P	**P**	**22 50 02.5**	**+0.9**
	2.8nm,0.3s,mb4.2,baz=311,slow=7.8,SNR=17						
STKA	**Stephens Creek**	**39.14**	**136**	*e*P	**P**	**22 50 02.1**	**+0.5**
LSA	**Lhasa**	**39.67**	**333**	*e*P	**P**	**22 50 08.2**	**+2.3**
	3.9nm,0.5s,mb4.2						
GUN	**Gumba**	**40.88**	**326**	*e*P	**P**	**22 50 16.6**	**+0.9**
	28nm,0.4s,mb5.1						
PKI	**Pulchoki**	**40.89**	**325**	*e*P	**P**	**22 50 15.9**	**+0.2**
	6.6nm,0.5s,mb4.4						
DMN	**Daman**	**41.09**	**325**	*e*P	**P**	**22 50 17.6**	**+0.2**
	14nm,0.4s,mb4.8						
KKN	**Kakani**	**41.13**	**325**	*e*P	**P**	**22 50 17.8**	**+0.1**
	7.6nm,0.6s,mb4.4						
GKN	**Gorkha**	**41.66**	**325**	*e*P	**P**	**22 50 22.2**	**+0.2**
	19nm,0.3s,mb5.1						
KOLN	**Koldanda**	**42.10**	**323**	*e*P	**P**	**22 50 25.6**	**+0.2**
	18nm,0.4s,mb4.9						
SONM	**Songino Array**	**53.30**	**357**	P	**P**	**22 51 49.7**	**+0.3**
	1.2nm,0.5s,mb3.5,baz=176,slow=8.4,SNR=18						
MKAR	**Makanchi Array**	**57.81**	**337**	P	**P**	**22 52 20.7**	**0.0**
	4.7nm,0.3s,mb4.1,baz=151,slow=7.3,SNR=101						
AAK	**Ala-Archa**	**58.04**	**329**	*e*P	**P**	**22 52 21.5**	**-0.9**
KURK	**Kurchatov**	**62.42**	**338**	*e*P	**P**	**22 52 50.3**	**-0.7**
ZAL	**Zalesovo**	**63.09**	**343**	P	**P**	**22 52 55.3**	**0.0**
	3.7nm,0.3s,mb4.2,baz=5.0,slow=2.6,SNR=15						
CHKZ	**Chkalovo**	**67.85**	**336**	*e*P	**P**	**22 53 24.3**	**-0.7**
	2.1nm,0.7s,mb3.8						
MAW	**Mawson**	**69.74**	**198**	P	**P**	**22 53 36.4**	**+0.3**
	1.0nm,0.4s,mb3.7,baz=13,slow=7.6,SNR=6.4						
MAW	**Mawson**	**69.74**	**198**	*e*P	**P**	**22 53 36.0**	**-0.1**
	8.4nm,1.5s,mb4.0						
LSZ	**Lusaka**	**81.13**	**255**	*e*P	**P**	**22 54 38.7**	**-1.1**
BOSA	**Boshof**	**83.17**	**242**	P	**P**	**22 54 50.1**	**+0.2**
	3.3nm,1.0s,mb3.8,baz=344,slow=7.3,SNR=5.2						
BRTR	**Keskin Array B**	**83.49**	**311**	P	**P**	**22 54 51.0**	**-0.2**
	1.0nm,0.7s,mb3.5,baz=139,slow=7.6,SNR=5.8						
AKASG	**Malin Array Be**	**88.75**	**321**	P	**P**	**22 55 15.4**	**-0.7**
	1.3nm,0.5s,mb4.0,baz=90,slow=4.9,SNR=9.7						
FINES	**FINESS Array B**	**92.17**	**331**	P	**P**	**22 55 31.7**	**+0.1**
	2.0nm,0.8s,mb4.2,baz=117,slow=8.5,SNR=5.6						
FINES	**FINESS Array B**	**92.17**	**331**	P	**P**	**22 55 31.7**	**+0.1**
CFAA	**Coronel Fontan**	**143.01**	**182**	PKP	PKPdf	23 01 51.8	+0.2
	0.6nm,0.5s,baz=168,slow=4.7,SNR=9.5						
BDFB	**Brasilia**	**150.04**	**225**	PKPbc	PKPdf	23 02 11.6	+8.0
	2.9nm,0.5s,baz=146,slow=3.1,SNR=3.9						

*NIED **15** 23:01:00,22.60N×145.40E,h8^{km},Mw5.8 Best double couple: $M_0$5.73×10^{17} NP1:ϕ_s346°,δ72°,λ97°. NP2:ϕ_s144°,δ19°,λ70°.*

*BJI **15** 23:01:08.3,21.99N×144.92E,h26^{km},mB5.8,mb5.3,Ms5.5,Msz5.3*

*JMA **15** 23:01:09.1±0.2,22.56N×145.39E,M6.0*

*MOS **15** 23:01:10.6±0.9,22.05N×144.73E,h33^{km},mb5.6/66,MS5.6/26,Error ellipse: s-maj=8.0km s-min=4.4km az=108.9*

*HRVD **15** 23:01:10.1±0.2,22.11N×145.06E,h21^{km},MW5.8/65,Centroid moment Tensor Solution. LP body waves: s61,c136;Mantle waves: s65,c179; Half duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}3.13±.07; $M_{\theta\theta}$-0.14±.06; $M_{\phi\phi}$-2.99±.05; $M_{r\theta}$0.11±.12; $M_{\theta\phi}$1.78±.04; $M_{\phi r}$3.89±.11; Best double couple: $M_0$5.26×10^{17} NP1: ϕ_s132°,δ26°,λ50°. NP2:ϕ_s355°,δ70°,λ107°. Principal axes: T 5.172, Plg61°, Azm291°; N .178, Plg16°, Azm169°; P -5.348, Plg23°, Azm72°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **15** 23:01:10.1±0.1,22.04N×144.80E,h20^{km},mb5.4/85,MS5.7/14,MW5.6,MW5.8(NIED) Error ellipse: s-maj=4.2km s-min=3.9km az=154.0,Moment Tensor Solution. s14 Moment tensor: Scale 10^{17}Nm; M_{rr}2.75; $M_{\theta\theta}$-0.15; $M_{\phi\phi}$-2.60; $M_{r\theta}$0.09; $M_{\theta\phi}$0.62; $M_{\phi r}$1.22; Best double couple: $M_0$3×10^{17} NP1:ϕ_s160°,δ34°,λ78°. NP2: ϕ_s354°,δ57°,λ98°. Principal axes: T 3.03, Plg77°, Azm288°; N -.05, Plg6°, Azm169°; P -2.99, Plg12°, Azm78°;*

*IDC **15** 23:01:12.5±1.8,21.97N×144.78E,h36^{km}±13^{km},mb4.9/24,mb1 5.0/27,mb1mx5.0/30,mbtmp5.1/27,ML4.8/3,MS5.3/32,Ms1 5.3/32,ms1mx5.3/37 Error ellipse: s-maj=14.1km s-min=10.9km az=96.0*

ISC 15 23:01:13.5±0.6,**22.12N**±0.02×**144.77E**±0.02,**h55^{km}**±4^{km},**h54^{km}**±2.7^{km}**:pP-P**,**n566**,σ**1^{s}10**/558,**mb5.4**/162,**MS5.5**/90,**41C-8D**,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**5.08**	**333**	P	**P**	**23 02 27.5**	**-1.4**
JHHJ				*e*S	**S**	**23 03 27.2**	**+0.3**
CBIJ	**Chichi jima**	**5.49**	**335**	Pn	**P**	**23 02 32.8**	**-1.8**
	144nm,0.3s,baz=126,slow=17,SNR=70						
CBIJ				Sn	**S**	**23 03 35.3**	**-1.9**
	288nm,0.3s,baz=264,slow=24,SNR=11						
CBIJ	**Chichi jima**	**5.49**	**335**	P	**P**	**23 02 32.7**	**-1.9**
CBIJ				*e*S	**S**	**23 03 35.0**	**-2.2**
GUMO	**Guam**	**8.48**	**179**	Pn	**P**	**23 03 18.1**	**+1.9**
	15nm,0.3s,baz=349,slow=7.6,SNR=8.6						
GUMO				LR	LR	23 06 21.7	
	comp=Z,25µm,19.4s,baz=10,slow=37						
GUMO	**Guam**	**8.48**	**179**	*e*Pn	**P**	**23 03 12.9**	**-3.3**
	2µm,1.3s						
GUMO				LR	LR	23 06 21.7	
GUMO	**Guam**	**8.48**	**179**	*e*P	**P**	**23 03 12.9**	**-3.3**
GUMO				pmax	pmax		
	comp=Z,2µm,1.3s						
JHJ	**Hachijo jima 2**	**11.81**	**339**	LR	LR	23 07 47.7	
	comp=Z,7µm,20.9s,baz=157,slow=33						
JMZ	**Minamidaito 2**	**12.92**	**289**	P	**P**	**23 04 21.7**	**+5.2**
JOD2	**Odawara 2**	**14.01**	**340**	P	**P**	**23 04 28.4**	**-2.3**
JYN	**Shimob**	**14.40**	**339**	P	**P**	**23 04 34.7**	**-1.1**
JHU	**Hanno**	**14.50**	**342**	P	**P**	**23 04 34.0**	**-3.1**
JHU				S	**S**	**23 07 10.5**	**-6.4**
JRY	**Ryogami san**	**14.76**	**341**	P	**P**	**23 04 37.6**	**-2.9**
JRY				S	**S**	**23 07 17.7**	**-5.4**
JHO	**Hitachi**	**14.90**	**347**	P	**P**	**23 04 39.8**	**-2.4**
JHO				S	**S**	**23 07 17.5**	**-8.8**
JAG	**Ashikaga**	**14.99**	**343**	P	**P**	**23 04 40.3**	**-3.1**
JAG				S	**S**	**23 07 20.3**	**-8.1**
JMN	**Monobe**	**15.03**	**323**	P	**P**	**23 04 45.6**	**+1.6**
JTO	**Tosashimizu**	**15.06**	**318**	P	**P**	**23 04 45.0**	**+0.6**
JNG	**Nsakai**	**15.38**	**339**	P	**P**	**23 04 47.5**	**-0.9**
MJAR	**Matsushiro Arr**	**15.46**	**340**	Pn	**P**	**23 04 48.6**	**-0.9**
	comp=Z,2.1nm,0.3s,baz=163,slow=12,SNR=20						
MAJO	**Matsushiro**	**15.46**	**340**	*e*Pn	**P**	**23 04 48.5**	**-1.0**
	comp=Z,110nm,0.8s						
MAJO	**Matsushiro**	**15.46**	**340**	*e*P	**P**	**23 04 48.5**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,110nm,0.8s						
MAT	**Matsushiro**	**15.46**	**340**	P	**P**	**23 04 48.0**	**-1.5**
MAT				S	**S**	**23 07 54.0**	**+15**
MAT	**Matsushiro**	**15.46**	**340**	P	**P**	**23 04 48.4**	**-1.1**
MAT	**Matsushiro**	**15.46**	**340**	*e*P	**P**	**23 04 48.0**	**-1.5**
	comp=Z,16nm,0.8s						
MAT				*e*S	**S**	**23 07 54.0**	**+15**
MAT	**Matsushiro**	**15.46**	**340**	*e*P	**P**	**23 04 48.0**	**-1.5**
MAT				pmax	pmax		
	comp=Z,16nm,0.8s						
JJS	**Sakaide**	**15.49**	**324**	P	**P**	**23 04 49.8**	**-0.1**
JOW	**Kunigami**	**15.73**	**291**	Pn	**P**	**23 04 55.4**	**+2.3**
	comp=Z,10nm,0.3s,baz=125,slow=12,SNR=18						
JOW				LR	LR	23 10 09.6	
	comp=Z,32µm,20.9s,baz=121,slow=34						
JOW	**Kunigami**	**15.73**	**291**	P	**P**	**23 04 57.9**	**+4.9**
JNA	**Nagahama**	**15.73**	**319**	P	**P**	**23 04 59.5**	**+6.5**
JSU	**Suzuyama**	**15.82**	**309**	P	**P**	**23 04 59.2**	**+5.1**
JFY	**Yanaizu**	**15.86**	**345**	P	**P**	**23 04 53.3**	**-1.2**
JHK	**Hiroka**	**15.88**	**343**	P	**P**	**23 04 54.6**	**-0.2**
JJG	**Jouge**	**16.11**	**323**	P	**P**	**23 04 59.5**	**+1.7**
JKI	**Kunimi**	**16.35**	**317**	P	**P**	**23 05 06.3**	**+5.6**
JHS	**Saijyo**	**16.40**	**324**	P	**P**	**23 05 02.5**	**+1.1**
JSJ	**Shimokoshiki**	**16.45**	**309**	P	**P**	**23 05 06.1**	**+4.1**
JNU	**Nakatsue**	**16.46**	**315**	Pn	**P**	**23 05 04.1**	**+1.9**
	comp=Z,1.5nm,0.3s,baz=126,slow=17,SNR=12						
JNU				LR	LR	23 10 58.1	
	comp=Z,6µm,20.6s,baz=145,slow=35						
JFU	**Fukue jima 2**	**17.66**	**310**	P	**P**	**23 05 19.5**	**+2.3**
JTU	**Tsushima**	**18.30**	**316**	P	**P**	**23 05 25.8**	**+0.7**
JTM	**Tenmabayashi**	**18.88**	**351**	P	**P**	**23 05 33.4**	**+1.6**
JIJ	**Ishigaki jima**	**19.09**	**281**	P	**P**	**23 05 35.0**	**+0.7**
JSR	**Shiriuchi**	**19.70**	**350**	P	**P**	**23 05 42.3**	**+1.4**
JEM	**Erimo**	**19.89**	**356**	P	**P**	**23 05 44.2**	**+1.3**
JKB	**Kayabe**	**19.96**	**352**	P	**P**	**23 05 44.7**	**+1.0**
JOSM	**Okushiri--Mats**	**20.40**	**349**	P	**P**	**23 05 48.9**	**+0.6**
JSH	**Shimam**	**20.85**	**350**	P	**P**	**23 05 53.9**	**+1.0**
KS15	**Wonju Array Si**	**21.11**	**320**	*e*P	**P**	**23 05 56.9**	**+1.3**
NEM2	**Nemuro 2**	**21.20**	**2**	P	**P**	**23 05 56.8**	**+0.3**
BBP	**Basco**	**21.32**	**270**	*e*P	**P**	**23 05 55.0**	**-2.7**
PVCP	**Virac**	**21.35**	**250**	*e*P	**P**	**23 06 00.5**	**+2.3**
NACB	**Ninganchiao**	**21.41**	**280**	*e*P	**P**	**23 05 55.8**	**-2.8**
CNP	**Catarman**	**21.42**	**247**	*e*P	**P**	**23 06 00.8**	**+2.0**
YHNB	**Yeheng**	**21.62**	**281**	*e*P	**P**	**23 06 00.3**	**-0.4**
SGCP	**Mt. Cagua**	**21.67**	**264**	*e*P	**P**	**23 06 01.4**	**+0.1**
JTKR	**Abashiri--Toko**	**21.81**	**358**	P	**P**	**23 06 03.4**	**+0.9**
PLP	**Palo**	**21.84**	**243**	*e*P	**P**	**23 06 05.3**	**+2.3**
YUK	**Yuzh-Kuril'sk**	**21.88**	**2**	P	**P**	**23 05 57.0**	**-6.2**
YUK				*e*SP		23 06 13.0	
YUK				*e*		23 06 30.0	
YUK				S	**S**	**23 10 03.0**	**+6.6**
YUK				*e*SS	SS	23 10 32.0	-5.3
YUK				smax			
	comp=E,10µm,11.0s						
YUK				smax			
	comp=N,5µm,8.0s						
YUK				MLR	MLR		
	comp=E,4µm,12.0s						
YUK				MLR	MLR		
	comp=Z,8µm,12.0s,MS5.3						
YUK				MLR	MLR		
	comp=N,6µm,18.0s						
INCN	**Inchon**	**21.90**	**318**	*e*P	**P**	**23 06 03.8**	**+0.3**
	comp=N,270nm,1.1s,mb5.6						
CVP	**Callao Caves**	**22.01**	**263**	*e*P	**P**	**23 06 07.0**	**+2.3**
ASAJ	**Asahikawa**	**22.02**	**356**	P	**P**	**23 06 06.5**	**+2.0**
	comp=N,26nm,0.6s,mb4.8,baz=212,slow=15,SNR=12						
ASAJ				LR	LR	23 12 51.2	
	comp=N,9µm,21.3s,MS5.2,baz=93,slow=32						
ASAJ	**Asahikawa**	**22.02**	**356**	P	**P**	**23 06 07.0**	**+2.5**
SCPH	**Surigao**	**22.19**	**239**	⇓*e*P	**P**	**23 06 08.6**	**+2.1**
CAUP	**Cauayan**	**22.22**	**261**	*e*P	**P**	**23 06 10.1**	**+3.4**
MSLP	**Maasin**	**22.50**	**241**	*e*P	**P**	**23 06 08.9**	**-0.6**
APYP	**Conner**	**22.50**	**263**	*e*P	**P**	**23 06 08.9**	**-0.7**
BUTP	**Butuan**	**22.57**	**238**	*e*P	**P**	**23 06 11.1**	**+0.8**
AUQP	**San Andres**	**22.77**	**251**	*e*P	**P**	**23 06 15.3**	**+3.1**
BALP	**Baler**	**22.82**	**258**	*e*P	**P**	**23 06 11.9**	**-0.9**
POLP	**Polilio Island**	**22.85**	**255**	*e*P	**P**	**23 06 10.1**	**-3.0**
SSE	**Sheshan**	**22.87**	**298**	⇑P	**P**	**23 06 13.0**	**-0.1**
SSE				S	**S**	**23 10 17.3**	**+2.9**
SSE				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.1						
SSE				AMB	AMB		
	comp=Z,2µm,4.9s						
SSE				LR	LR		
	comp=N,3µm,20.4s,MS5.1						
SSE				LR	LR		
	comp=E,6µm,20.4s,MS5.1						
SSE				LR	LR		
	comp=Z,7µm,23.3s,MS5.0						
SSE	**Sheshan**	**22.87**	**298**	⇑P	**P**	**23 06 13.0**	**-0.1**
	comp=Z,97nm,1.1s,mb5.2						
SSE				pP		23 06 34.9	
SSE				sP		23 06 44.7	
SSE				S	**S**	**23 10 17.2**	**+2.8**
SSE				sS		23 10 51.9	
SSE				ScS	ScS	23 17 15.7	-4.3
SSE				LR	LR		
	comp=Z,7µm,23.3s,MS5.0						
ABRA	**Dolores**	**23.05**	**263**	*e*P	**P**	**23 06 06.1**	**-8.8**
LLP	**Lapu-Lapu**	**23.13**	**243**	*e*P	**P**	**23 06 16.3**	**+0.5**
MATI	**Mati**	**23.38**	**233**	*e*P	**P**	**23 06 19.4**	**+1.2**
BOAC	**Boac**	**23.44**	**252**	*e*P	**P**	**23 06 19.2**	**+0.5**
BCPH	**Baguio City Da**	**23.52**	**260**	*e*P	**P**	**23 06 19.3**	**-0.2**
CGP	**Cagayan de Oro**	**23.61**	**238**	⇓*i*P	**P**	**23 06 22.1**	**+1.7**
BUKP	**Musuan**	**23.68**	**236**	*e*P	**P**	**23 06 22.9**	**+1.9**
OTRP	**Odiongan**	**23.76**	**250**	*e*P	**P**	**23 06 23.4**	**+1.6**
DAV	**Davao City (W)**	**23.80**	**234**	⇑*e*P	**P**	**23 06 25.0**	**+2.8**
DAV	**Davao City (W)**	**23.80**	**234**	P	**P**	**23 06 23.6**	**+1.3**
TGY	**Tagaytay City**	**23.99**	**255**	P	**P**	**23 06 24.6**	**+0.5**
	comp=Z,157nm,0.3s,mb5.9,baz=141,slow=1.9,SNR=20						
TGY				LR	LR	23 14 46.7	
	comp=Z,72nm,18.2s,baz=22,slow=34						
GUIM	**Jordan**	**24.12**	**245**	*e*P	**P**	**23 06 26.2**	**+0.9**
BOLP	**Bolinao**	**24.13**	**261**	*e*P	**P**	**23 06 28.2**	**+2.7**
QZH	**Quanzhou**	**24.15**	**282**	⇑*i*P	**P**	**23 06 25.3**	**-0.3**
QZH				S	**S**	**23 10 47.0**	**+10**
QZH				AMB	AMB		
	comp=Z,630nm,1.5s,mb5.8						
QZH				AMB	AMB		
	comp=Z,3µm,3.4s						
QZH				LR	LR		
	comp=N,4µm,14.2s,MS5.5						
QZH				LR	LR		
	comp=E,13µm,17.2s,MS5.5						
QZH				LR	LR		
	comp=Z,20µm,21.2s,MS5.6						
SNPH	**Sibulan**	**24.27**	**242**	*e*P	**P**	**23 06 28.0**	**+1.2**
SCZP	**Santa Cruz**	**24.32**	**259**	*e*P	**P**	**23 06 17.2**	**-10**
SJMP	**San Jose**	**24.51**	**251**	*e*P	**P**	**23 06 30.1**	**+1.0**
DCPH	**Dipolog City**	**24.60**	**240**	⇑*i*P	**P**	**23 06 31.0**	**+0.9**
LUBP	**Lubang**	**24.75**	**254**	*e*P	**P**	**23 06 32.0**	**+0.5**
YSS	**Yuzh-Sakhalins**	**24.83**	**357**	*e*P	**P**	**23 06 33.0**	**+1.1**
	comp=Z,67nm,0.8s,mb5.2						
YSS	**Yuzh-Sakhalins**	**24.83**	**357**	*e*P	**P**	**23 06 32.0**	**0.0**
YSS				*e*		23 06 40.0	
YSS				*e*		23 07 07.0	
YSS				*e*PPP	PPP	23 07 23.0	+1.5
YSS				*e*S	**S**	**23 10 44.0**	**-4.1**
YSS				*e*SSS	SSS	23 12 12.0	+5.7
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.1						
YSS				smax			
	comp=E,2µm,10.0s						
YSS				MLR	MLR		
	comp=N,4µm,18.0s						
YSS				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.0						
PAGZ	**Pagadian**	**25.01**	**239**	*e*P	**P**	**23 06 33.8**	**-0.2**
NJ2	**Nanjing**	**25.05**	**299**	*e*P	**P**	**23 06 34.8**	**+0.6**
NJ2				S	**S**	**23 10 49.0**	**-2.9**
NJ2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,450nm,5.6s						
NJ2				LR	LR		
	comp=N,12µm,25.3s,MS5.5						
NJ2				LR	LR		
	comp=E,14µm,22.0s,MS5.5						
NJ2				LR	LR		
	comp=Z,6µm,30.2s						
CUYO	**Cuyo Island**	**25.34**	**248**	*e*P	**P**	**23 06 37.6**	**+0.6**
BUSP	**Coron**	**25.51**	**251**	*e*P	**P**	**23 06 38.8**	**+0.1**
MDJ	**Mudanjiang**	**25.69**	**334**	P	**P**	**23 06 40.8**	**+0.8**
MDJ				PCP	PcP	23 10 08.6	-1.3
MDJ				S	**S**	**23 11 07.8**	**+5.5**
MDJ				SCP		23 13 43.8	
MDJ				PCS		23 13 49.4	
MDJ				SCS	ScS	23 17 33.3	+2.2
MDJ				AMB	AMB		
	comp=Z,40nm,1.6s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,2µm,7.5s						
MDJ				LR	LR		
	comp=N,4µm,23.9s,MS5.1						
MDJ				LR	LR		
	comp=E,4µm,21.0s,MS5.1						
MDJ				LR	LR		
	comp=Z,9µm,18.6s,MS5.3						
MDJ	**Mudanjiang**	**25.69**	**334**	*e*P	**P**	**23 06 40.8**	**+0.8**
	comp=Z,95nm,1.0s,mb5.3						
IPIL	**Ipil**	**25.69**	**240**	*e*P	**P**	**23 06 40.4**	**0.0**
DL2	**Dalian**	**25.92**	**315**	⇑*i*P	**P**	**23 06 42.6**	**+0.4**
DL2				XP	sP	23 06 58.8	-3.7
DL2				S	**S**	**23 11 10.9**	**+4.8**
DL2				AMB	AMB		
	comp=Z,90nm,0.8s,mb5.3						
DL2				AMB	AMB		
	comp=Z,1µm,5.8s						
DL2				LR	LR		
	comp=N,3µm,16.2s,MS4.9						
DL2				LR	LR		
	comp=E,2µm,19.3s,MS4.9						
DL2				LR	LR		
	comp=Z,3µm,15.9s,MS4.9						
SNY	**Shenyang**	**26.51**	**323**	⇑P	**P**	**23 06 46.8**	**-0.9**
SNY				AP	pP	23 06 50.9	-10
SNY				XP	sP	23 06 54.3	-14
SNY				PP	PP	23 07 30.4	-2.2
SNY				PCP	PcP	23 10 09.9	-1.9
SNY				XS		23 11 37.3	
SNY				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.1						
SNY				AMB	AMB		
	comp=Z,1µm,11.4s						
ENPP	**El Nido**	**26.55**	**250**	*e*P	**P**	**23 06 48.3**	**0.0**
CN2	**Changchun**	**26.90**	**328**	*e*P	**P**	**23 06 52.8**	**+1.5**
CN2				*e*S	**S**	**23 11 21.0**	**-1.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
CN2				AMB	AMB		
	comp=Z,3µm,8.0s						
CN2				LR	LR		
	comp=N,8µm,18.0s,MS5.6						
CN2				LR	LR		
	comp=E,12µm,18.0s,MS5.6						
CN2				LR	LR		
	comp=Z,12µm,21.0s,MS5.4						
TIA	**Tai'an**	**27.81**	**306**	P	**P**	**23 06 59.1**	**-0.5**
TIA				S	**S**	**23 11 48.8**	**+12**
TIA				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.2						
TIA				LR	LR		
	comp=E,2µm,15.3s,MS5.1						
TIA				LR	LR		
	comp=N,4µm,15.0s,MS5.1						
TIA				LR	LR		
	comp=E,2µm,15.0s						
WHN	**Wuhan**	**28.46**	**294**	*e*P	**P**	**23 07 05.0**	**-0.5**
WHN				LR	LR		
	comp=N,9µm,13.2s,MS5.6						
WHN				LR	LR		
	comp=E,6µm,14.5s,MS5.6						
WHN				LR	LR		
	comp=Z,9µm,19.0s,MS5.4						
KLR	**Kul'dur**	**28.96**	**342**	*e*P	**P**	**23 07 07.5**	**-2.3**
KLR				*e*		23 10 15.2	
KLR				*e*S	**S**	**23 12 00.0**	**+4.7**
KLR				*e*SS	SS	23 13 41.0	+14
KLR				pmax	pmax		
	comp=N,1µm,13.0s						
KLR				pmax	pmax		
	comp=E,500nm,13.0s						
KLR				pmax	pmax		
	comp=Z,2µm,13.0s						
KLR				smax			
	comp=N,4µm,17.0s						
KLR				smax			
	comp=E,2µm,17.0s						
GZH	**Guangzhou**	**29.00**	**278**	P	**P**	**23 07 11.4**	**+1.0**
GZH				S	**S**	**23 12 03.3**	**+7.1**
GZH				LR	LR		
	comp=N,3µm,17.1s,MS5.0						
GZH				LR	LR		

	comp=E,2µm,18.6s,MS5.0						
GZH				LR	LR		
	comp=Z,7µm,19.2s,MS5.3						
BATP	**Bataraza**	**29.10**	**247**	*e*P	**P**	**23 07 12.2**	**+0.9**
TSM	**Tawau**	**31.51**	**240**	P	**P**	**23 07 32.5**	**-0.2**
TIY	**Taiyuan**	**31.86**	**307**	PR	**P**	**23 07 34.0**	**-1.5**
TIY				S	**S**	**23 12 50.0**	**+9.0**
TIY				LR	LR		
	comp=N,3µm,14.0s						
TIY				LR	LR		
	comp=Z,810nm,15.0s,MS4.5						
KKM	**Kota Kinabalu**	**31.88**	**244**	*e*P	**P**	**23 07 35.7**	**-0.2**
KKM	**Kota Kinabalu**	**31.88**	**244**	P	**P**	**23 07 36.0**	**+0.1**
ENH	**Enshi**	**32.58**	**292**	*e*P	**P**	**23 07 39.8**	**-2.1**
	comp=Z,61nm,0.9s,mb5.5						
PET	**Petropavlovsk**	**32.64**	**16**	*e*P	**P**	**23 07 42.2**	**0.0**
	comp=Z,68nm,1.0s,mb5.5						
PET	**Petropavlovsk**	**32.64**	**16**	*e*P	**P**	**23 07 42.1**	**0.0**
PET				*e*S	**S**	**23 12 49.2**	**-3.8**
PET				pmax	pmax		
	comp=Z,94nm,1.1s,mb5.6						
PET				pmax	pmax		
	comp=Z,500nm,20.4s						
PET				smax			
	comp=E,1µm,12.0s						
PET				smax			
	comp=N,2µm,16.4s						
PET				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.2						
PET				MLR	MLR		
	comp=Z,4µm,20.0s						
QIZ	**Qiongzhong**	**32.80**	**271**	P	**P**	**23 07 43.6**	**-0.3**
QIZ				PP	PP	23 08 55.8	+1.0
QIZ				S	**S**	**23 12 57.1**	**+1.2**
QIZ				SS	SS	23 14 53.5	-3.6
QIZ				AMB	AMB		
	comp=Z,650nm,5.0s						
QIZ				LR	LR		
	comp=N,2µm,18.1s,MS5.2						
QIZ				LR	LR		
	comp=E,5µm,19.8s,MS5.2						
QIZ				LR	LR		
	comp=Z,6µm,20.4s,MS5.3						
HIA	**Hailar**	**33.57**	**330**	*e*P	**P**	**23 07 50.3**	**+0.1**
	comp=Z,46nm,1.0s,mb5.4						
HIA	**Hailar**	**33.57**	**330**	*e*P	**P**	**23 07 50.3**	**+0.1**
HIA				pmax	pmax		
	comp=Z,46nm,1.0s						
XAN	**Xi'an**	**33.62**	**299**	P	**P**	**23 07 50.0**	**-0.8**
XAN				PP	PP	23 09 03.8	-0.9
XAN				S	**S**	**23 13 07.4**	**-1.1**
XAN				SS	SS	23 15 18.5	+2.7
XAN				AMB	AMB		
	comp=Z,30nm,1.8s,mb4.9						
XAN				LR	LR		
	comp=N,2µm,17.0s						
XAN				LR	LR		
	comp=E,3µm,22.6s						
XAN				LR	LR		
	comp=Z,6µm,20.5s,MS5.3						
HHC	**Hu-ho-hao-te**	**33.65**	**311**	⇑*i*P	**P**	**23 07 50.8**	**-0.2**
HHC				XP	sP	23 08 05.9	-6.1
HHC				PP	PP	23 09 07.0	+2.1
HHC				PCP	PcP	23 10 28.5	-1.7
HHC				S	**S**	**23 13 10.4**	**+1.6**
HHC				SCP		23 14 06.8	
HHC				PCS		23 14 13.9	
HHC				SCS	ScS	23 18 06.5	-2.3
HHC				AMB	AMB		
	comp=Z,50nm,1.4s,mb5.2						
HHC				AMB	AMB		
	comp=Z,1µm,9.6s						
HHC				LR	LR		
	comp=N,3µm,18.0s,MS5.3						
HHC				LR	LR		
	comp=E,4µm,20.4s,MS5.3						
HHC				LR	LR		
	comp=Z,5µm,20.4s,MS5.2						
BTO	**Baotou**	**34.63**	**310**	*e*P	**P**	**23 07 57.8**	**-1.7**
HNR	**Honiara**	**34.71**	**153**	*e*P	**P**	**23 07 57.4**	**-2.9**
	comp=Z,198nm,1.0s,mb6.0						
HNR	**Honiara**	**34.71**	**153**	*e*P	**P**	**23 07 57.4**	**-2.9**
HNR				pmax	pmax		
	comp=Z,200nm,1.0s,mb6.0						
GYA	**Guiyang**	**34.92**	**285**	⇑*i*P	**P**	**23 08 02.0**	**0.0**
GYA				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
GYA				AMB	AMB		
	comp=Z,860nm,11.1s						
GYA				LR	LR		
	comp=N,2µm,16.8s,MS5.0						
GYA				LR	LR		
	comp=E,2µm,18.9s,MS5.0						
GYA				LR	LR		
	comp=Z,1µm,19.5s,MS4.7						
KAKA	**Kakadu**	**36.66**	**200**	*e*P	**P**	**23 08 33.6**	**+17**
	comp=Z,39nm,0.6s,mb5.4						
CD2	**Chengdu**	**37.56**	**292**	P	**P**	**23 08 23.8**	**-0.5**
CD2				PP	PP	23 09 53.1	-0.3
CD2				S	**S**	**23 14 08.8**	**-0.3**
CD2				SS	SS	23 16 46.3	+1.3
CD2				AMB	AMB		
	comp=Z,80nm,1.3s,mb5.3						
CD2				AMB	AMB		
	comp=Z,630nm,5.9s						
CD2				LR	LR		
	comp=N,5µm,20.4s						
CD2				LR	LR		
	comp=Z,5µm,19.8s,MS5.3						
FX1	**Attu Island--F**	**37.62**	**28**	P	**P**	**23 08 25.9**	**+1.4**
	comp=Z,52nm,0.9s,mb5.3,baz=180,slow=6.1,SNR=4.2						
CLNS	**Chul'man**	**37.63**	**342**	*e*P	**P**	**23 08 24.3**	**-0.2**
CLNS				*e**PP	pP	23 08 32.4	-6.5
CLNS				*e*PPP	PPP	23 09 56.5	-19
CLNS				*e*S	**S**	**23 14 09.0**	**-0.8**
CLNS				*e*SS	SS	23 16 49.8	+3.5
CLNS				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
CLNS				pmax	pmax		
	comp=N,13nm,1.1s						
CLNS				pmax	pmax		
	comp=E,10.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.0						
CLNS				pmax	pmax		
	comp=N,38nm,1.4s						
CLNS				pmax	pmax		
	comp=E,30nm,0.9s						
CLNS				smax			
	comp=E,2µm,17.2s						
CLNS				smax			
	comp=Z,736nm,25.0s						
CLNS				smax			
	comp=N,692nm,22.2s						
CLNS				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.3						
CLNS				MLR	MLR		
	comp=N,900nm,16.0s,MS5.3						
CLNS				MLR	MLR		
	comp=E,4µm,15.0s,MS5.3						
MA2	**Magadan**	**37.67**	**5**	*i* P	**P**	**23 08 26.5**	**+1.6**
MA2	**Magadan**	**37.67**	**5**	P	**P**	**23 08 27.0**	**+2.1**
MA2				*e*		23 10 36.2	
MA2				*e*S	**S**	**23 14 14.8**	**+4.4**
MA2				*e*SSS	SSS	23 17 21.6	+1.5
MA2				pmax	pmax		
	comp=Z,2µm,13.0s						
MA2				MLR	MLR		
	comp=Z,3µm,23.0s,MS5.0						
LZH	**Lanzhou**	**38.09**	**301**	*e*P	**P**	**23 08 30.1**	**+1.5**
LZH				PP	PP	23 10 04.0	+4.4
LZH				PCP	PcP	23 10 44.0	+0.6
LZH				S	**S**	**23 14 15.4**	**-1.7**
LZH				SCP		23 14 28.1	
LZH				SS	SS	23 16 59.3	+2.1
LZH				AMB	AMB		
	comp=Z,210nm,1.3s,mb5.7						
LZH				AMB	AMB		
	comp=Z,960nm,4.6s						
LZH				LR	LR		
	comp=E,9µm,17.6s						
LZH				LR	LR		
	comp=Z,15µm,20.7s,MS5.8						
LZH	**Lanzhou**	**38.09**	**301**	*e*P	**P**	**23 08 30.1**	**+1.5**
	comp=Z,210nm,1.3s,mb5.7						
LZH				pP	pP	23 08 50.7	+7.7
LZH				sP	sP	23 09 00.3	+11
LZH				PP	PP	23 10 04.0	+4.4
LZH				PcP	PcP	23 10 44.0	+0.6
LZH				S	**S**	**23 14 15.4**	**-1.7**
LZH				ScP		23 14 28.1	
LZH				sS		23 14 50.0	
LZH				SS	SS	23 16 59.2	+2.0
LZH				LR	LR		
	comp=Z,15µm,20.7s,MS5.8						
LZH	**Lanzhou**	**38.09**	**301**	*e*P	**P**	**23 08 30.1**	**+1.5**
LZH						23 10 04.0	
LZH						23 10 44.0	
LZH				S	**S**	**23 14 15.4**	**-1.7**
LZH						23 14 28.1	
LZH				SS	SS	23 16 59.2	+2.0
LZH				pmax	pmax		
	comp=Z,210nm,1.3s,mb5.7						
LZH				MLR	MLR		
	comp=Z,15µm,20.7s,MS5.8						
CIT	**Chita**	**38.34**	**329**	*e*P	**P**	**23 08 31.4**	**+0.9**
CIT				*e*	pP	23 08 43.6	-1.3
CIT				*e*		23 14 27.5	
CIT				pmax	pmax		
	comp=Z,271nm,2.8s,mb5.5						
KMI	**Kunming**	**38.52**	**283**	P	**P**	**23 08 32.3**	**0.0**
KMI				AP	pP	23 08 40.6	-6.0
KMI				XP	sP	23 08 44.4	-8.9
KMI				PP	PP	23 10 02.8	-1.8
KMI				PPP	PPP	23 10 24.8	-3.3
KMI				S	**S**	**23 14 31.9**	**+8.2**
KMI				XS		23 14 45.8	
KMI				AMB	AMB		
	comp=Z,30nm,1.7s,mb4.8						
KMI				AMB	AMB		
	comp=Z,590nm,5.5s						
KMI				LR	LR		
	comp=N,3µm,15.5s,MS5.3						
KMI				LR	LR		
	comp=E,3µm,18.1s,MS5.3						
KMI				LR	LR		
	comp=Z,3µm,25.9s						
KMI	**Kunming**	**38.52**	**283**	P	**P**	**23 08 32.3**	**0.0**
	comp=Z,30nm,1.7s,mb4.8						
KMI				pP	pP	23 08 40.6	-6.0
KMI				sP	sP	23 08 44.4	-8.9
KMI				PP	PP	23 10 02.7	-1.9
KMI				PPP	PPP	23 10 24.8	-3.3
KMI				S	**S**	**23 14 31.9**	**+8.2**
KMI				sS		23 14 45.8	
KMI				SS	SS	23 17 19.0	+12
KMI				SSS	SSS	23 17 44.7	+3.9
KMI				LR	LR		
	comp=Z,3µm,25.9s,MS5.0						
KMI	**Kunming**	**38.52**	**283**	P	**P**	**23 08 32.3**	**0.0**
KMI				*PP	pP	23 08 40.6	-6.0
KMI				*SP	sP	23 08 44.4	-8.9
KMI						23 10 02.7	
KMI				PPP	PPP	23 10 24.8	-3.3
KMI				S	**S**	**23 14 31.9**	**+8.2**
KMI				*SS		23 14 45.8	
KMI				SSS	SSS	23 17 44.7	+3.9
KMI				pmax	pmax		
	comp=Z,30nm,1.7s,mb4.8						
KMI				MLR	MLR		
	comp=Z,3µm,25.9s,MS5.0						
KSM	**Kuching**	**39.30**	**243**	*e*P	**P**	**23 08 37.7**	**-1.2**
SONM	**Songino Array**	**39.97**	**319**	P	**P**	**23 08 44.5**	**+0.4**
	comp=Z,21nm,0.8s,mb4.9,baz=133,slow=9.5,SNR=66						
SONM				ScP		23 14 35.9	
	comp=Z,1.2nm,0.8s,baz=162,slow=3.2,SNR=2.7						
SONM				LR	LR	23 25 26.6	
	comp=Z,11µm,21.4s,MS5.7,baz=122,slow=36						
SEY	**Seymchan**	**41.12**	**5**	*i* P	**P**	**23 08 54.8**	**+1.3**
SEY	**Seymchan**	**41.12**	**5**	*e*P	**P**	**23 08 54.0**	**+0.5**
SEY				*e*		23 10 28.6	
SEY				*e*PPP	PPP	23 11 01.8	-0.7
SEY				*e*S	**S**	**23 15 03.4**	**+1.1**
SEY				*e*SSS	SSS	23 18 44.4	+1.7
SEY				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.0						
SEY				smax			
	comp=N,2µm,10.0s						
SEY				smax			
	comp=E,1µm,8.9s						
SEY				MLR	MLR		
	comp=Z,4µm,24.0s,MS5.2						
SEY				MLR	MLR		
	comp=N,2µm,20.0s,MS5.1						
SEY				MLR	MLR		
	comp=E,1µm,17.0s,MS5.1						
YAK	**Yakutsk**	**41.22**	**349**	*e*P	**P**	**23 08 53.9**	**-0.4**
	comp=E,211nm,0.9s,mb5.8						
YAK	**Yakutsk**	**41.22**	**349***c*	*i*P	**P**	**23 08 54.7**	**+0.4**
YAK				*i* *PP	pP	23 09 05.9	-2.7
YAK				*e*		23 10 31.1	
YAK				*e*PPP	PPP	23 10 54.8	-8.9
YAK				*e*		23 10 56.4	
YAK				*e*S	**S**	**23 15 02.5**	**-1.2**
YAK				*e*SS	SS	23 18 04.4	+0.6
YAK				*e*		23 18 57.7	
YAK				pmax	pmax		
	comp=Z,67nm,0.9s,mb5.3						
YAK				pmax	pmax		
	comp=N,18nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.6						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				smax			
	comp=N,266nm,15.5s						
YAK				smax			
	comp=Z,34nm,10.7s						
YAK				smax			
	comp=E,695nm,17.5s						
YAK				MLR	MLR		
	comp=Z,16µm,23.0s,MS5.8						
YAK				MLR	MLR		
	comp=N,21µm,28.0s						
YAK				MLR	MLR		
	comp=E,22µm,12.0s						
GTA	**Gaotai**	**41.84**	**305**	⇑*i*P	**P**	**23 09 00.1**	**+0.5**
GTA				PP	PP	23 10 42.3	+2.3
GTA				PCS		23 14 45.3	
GTA				S	**S**	**23 15 11.3**	**-1.8**
GTA				SS	SS	23 18 15.5	+0.1
GTA				AMB	AMB		
	comp=Z,80nm,1.6s,mb5.1						
GTA				AMB	AMB		
	comp=Z,1µm,8.4s						
GTA				LR	LR		
	comp=N,2µm,19.8s,MS5.4						
GTA				LR	LR		
	comp=E,5µm,18.3s,MS5.4						
GTA				LR	LR		
	comp=Z,6µm,17.1s,MS5.5						
CTA	**Charters Tower**	**41.97**	**178**	*e*P	**P**	**23 09 00.2**	**-0.8**
	comp=Z,18nm,0.9s,mb4.7						
CTA	**Charters Tower**	**41.97**	**178**	LR	LR	23 24 50.5	
	comp=Z,3µm,21.8s,MS5.1,baz=357,slow=34						
CTA	**Charters Tower**	**41.97**	**178**	*e*P	**P**	**23 09 00.2**	**-0.8**
CTA				pmax	pmax		
	comp=Z,18nm,0.9s						
CTAO	**Charters Tower**	**41.97**	**178**	*e*P	**P**	**23 08 59.0**	**-1.9**
	comp=Z,29nm,1.0s,mb4.9						
CTAO	**Charters Tower**	**41.97**	**178**	*e*P	**P**	**23 08 59.0**	**-2.0**
CTAO				pmax	pmax		
	comp=Z,29nm,1.0s,mb4.9						
BOD	**Bodaibo**	**42.04**	**336**	*e*P	**P**	**23 09 01.5**	**+0.5**
BOD				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.7						
ZAK	**Zakamensk**	**42.92**	**321**	⇑*i*P	**P**	**23 09 09.3**	**+0.9**
ZAK				*e*		23 15 33.5	
ZAK				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.8						
CHG	**Chiang Mai**	**42.94**	**274**	⇑P	**P**	**23 09 08.9**	**0.0**
	comp=Z,38nm,1.0s,mb5.1						
WRAB	**Tennant Creek**	**43.01**	**194**	*e*P	**P**	**23 09 07.7**	**-1.8**
	comp=Z,202nm,0.9s,mb5.8						
WRAB	**Tennant Creek**	**43.01**	**194***c*	*i*P	**P**	**23 09 08.8**	**-0.7**
WB2	**Warramunga Arr**	**43.02**	**194**	⇑*i*P	**P**	**23 09 07.8**	**-1.8**
WB2				*e*SCP		23 14 49.0	
WB2				*i* S	**S**	**23 15 29.2**	**-1.5**
WRA	**Warramunga Arr**	**43.03**	**194**	P	**P**	**23 09 08.0**	**-1.7**
	comp=Z,45nm,0.8s,mb5.2,baz=16,slow=8.9,SNR=106						
WRA				ScP		23 14 47.8	
	comp=Z,6.9nm,0.9s,baz=13,slow=4.5,SNR=7.4						
WRA				S	**S**	**23 15 28.2**	**-2.6**
	comp=Z,6.0nm,1.1s,baz=20,slow=16,SNR=7.1						
WRA	**Warramunga Arr**	**43.03**	**194**	P	**P**	**23 09 08.0**	**-1.6**
WRA				S	**S**	**23 15 28.2**	**-2.6**
IRK	**Irkutsk**	**43.22**	**324**	*e*P	**P**	**23 09 10.3**	**-0.4**
IRK				*e*	pP	23 09 28.8	+3.6
IRK				pmax	pmax		
	comp=Z,107nm,2.2s,mb5.2						
FITZ	**Fitzroy Crossi**	**44.14**	**207**	⇑*i*P	**P**	**23 09 17.3**	**-1.3**
	comp=Z,160nm,0.8s,mb5.8						
FITZ				*e*SCP		23 14 59.9	
FITZ				*e*S	**S**	**23 15 46.7**	**-0.3**
MOY	**Mondy**	**44.78**	**322**	*e*P	**P**	**23 09 23.6**	**+0.3**
MOY				pmax	pmax		
	comp=Z,114nm,4.0s						
KGM	**Kluang**	**44.95**	**249**	P	**P**	**23 09 25.8**	**+0.6**
SNG	**Songkhla**	**45.04**	**258**	⇑P	**P**	**23 09 26.5**	**+0.6**
	comp=Z,254nm,0.9s,mb6.0						
IPM	**Ipoh**	**45.77**	**254**	P	**P**	**23 09 32.8**	**+1.0**
KULM	**Kulim**	**45.80**	**255**	*e*P	**P**	**23 09 31.4**	**-0.6**
ASPA	**Alice Springs**	**46.72**	**194**	*e*P	**P**	**23 09 37.5**	**-1.6**
ASPA				*e*S	**S**	**23 16 22.3**	**-1.6**
BILL	**Bilibino**	**47.83**	**11**	*e*P	**P**	**23 09 46.4**	**-0.8**
	comp=Z,69nm,1.2s,mb5.6						
BILL	**Bilibino**	**47.83**	**11***c*	*i*P	**P**	**23 09 47.3**	**+0.1**
BILL				*e*	pP	23 10 05.9	+4.1
BILL				*e*		23 11 11.2	
BILL				*e*		23 11 39.3	
BILL				*i* S	**S**	**23 16 38.9**	**0.0**
BILL				pmax	pmax		
	comp=Z,16nm,0.5s,mb5.3						
BILL				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.3						
SHL	**Shillong**	**48.24**	**285**	*e*P	**P**	**23 09 51.5**	**+0.5**
SHL				*e*x	x	23 16 40.0	
LSA	**Lhasa**	**48.47**	**291**	P	**P**	**23 09 53.3**	**+0.7**
LSA				S	**S**	**23 16 50.9**	**+2.5**
LSA				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.5						
LSA				AMB	AMB		
	comp=Z,690nm,7.0s						
LSA				LR	LR		
	comp=N,860nm,21.8s,MS5.3						
LSA				LR	LR		
	comp=E,3µm,21.8s,MS5.3						
LSA				LR	LR		
	comp=Z,5µm,21.8s,MS5.5						
LSA	**Lhasa**	**48.47**	**291**	*e*P	**P**	**23 09 53.4**	**+0.7**
	comp=Z,29nm,0.6s,mb5.5						
LSA	**Lhasa**	**48.47**	**291**	*e*P	**P**	**23 09 53.4**	**+0.8**
LSA				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.5						
NOUC	**Port Laguerre**	**48.70**	**153**	*e*P	**P**	**23 09 52.8**	**-1.8**
DZM	**Mont Dzumac**	**48.74**	**153**	*e*P	**P**	**23 09 52.8**	**-2.1**
TIXI	**Tiksi**	**50.39**	**354**	⇑*e*P	**P**	**23 10 07.0**	**+0.1**
TIXI	**Tiksi**	**50.39**	**354**	*e*P	**P**	**23 10 04.7**	**-2.2**
TIXI				*e*		23 11 19.3	
TIXI				*e*		23 11 58.5	
TIXI				*e*S	**S**	**23 17 13.9**	**-0.8**
TIXI				*e*		23 19 45.7	
TIXI				*e*SS	SS	23 20 50.5	+4.5
TIXI				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.3						
WMQ	**Urumqi**	**51.46**	**309**	⇑*i*P	**P**	**23 10 15.8**	**+0.5**
WMQ				PCP	PcP	23 11 29.5	+0.3
WMQ				PP	PP	23 12 15.0	+1.5
WMQ				PCS		23 15 25.0	
WMQ				S	**S**	**23 17 28.0**	**-1.7**
WMQ				PS	PS	23 17 52.0	+4.7
WMQ				SCS	ScS	23 19 54.5	-2.8
WMQ				SS	SS	23 21 03.0	-1.0
WMQ				AMB	AMB		
	comp=Z,230nm,1.2s,mb6.0						
WMQ				AMB	AMB		
	comp=Z,1µm,4.6s						
WMQ				LR	LR		
	comp=N,3µm,18.8s,MS5.5						
WMQ				LR	LR		
	comp=E,4µm,23.6s,MS5.5						
WMQ				LR	LR		
	comp=Z,5µm,22.7s,MS5.5						
CAL	**Calcutta**	**51.93**	**282**	*e*P	**P**	**23 10 16.3**	**-2.9**
CAL				*e*x	x	23 12 45.5	
GUN	**Gumba**	**53.25**	**289**	*e*P	**P**	**23 10 28.9**	**-0.1**
	comp=Z,267nm,1.0s,mb6.1						
PKI	**Pulchoki**	**53.71**	**289**	*e*P	**P**	**23 10 32.1**	**-0.3**
	comp=Z,73nm,0.6s,mb5.8						
STKA	**Stephens Creek**	**53.77**	**183**	*e*P	**P**	**23 10 29.8**	**-3.0**
	comp=Z,11nm,0.6s,mb5.0						
STKA	**Stephens Creek**	**53.77**	**183**	P	**P**	**23 10 30.4**	**-2.4**
	comp=Z,7.4nm,0.7s,mb4.7,baz=6.0,slow=10,SNR=10						
STKA				LR	LR	23 33 49.3	
	comp=Z,4µm,21.7s,MS5.5,baz=0.6,slow=36						
KKN	**Kakani**	**53.79**	**289**	*e*P	**P**	**23 10 32.8**	**-0.2**
	comp=Z,93nm,0.9s,mb5.7						
BOK	**Bokaro**	**53.91**	**284**	*e*P	**P**	**23 10 34.8**	**+1.0**
BOK				*e*x	x	23 10 35.7	
BOK				AMb	AMB	23 10 38.6	
	comp=Z,101nm,1.8s,mb5.4						
DMN	**Daman**	**53.97**	**289**	*e*P	**P**	**23 10 33.8**	**-0.5**
	comp=Z,174nm,1.1s,mb5.9						
GKN	**Gorkha**	**54.33**	**289**	*e*P	**P**	**23 10 36.3**	**-0.6**
	comp=Z,328nm,1.2s,mb6.1						
ZAL	**Zalesovo**	**54.81**	**321**	P	**P**	**23 10 40.1**	**0.0**
	comp=Z,10.0nm,0.6s,mb5.0,baz=4.6,slow=8.9,SNR=34						
ZAL				LR	LR	23 35 36.7	
	comp=Z,6µm,19.9s,MS5.7,baz=14,slow=38						
FORT	**Forrest**	**54.98**	**198**	*e*P	**P**	**23 10 39.7**	**-1.9**
	comp=Z,130nm,0.8s,mb6.0						
KOLN	**Koldanda**	**55.27**	**289**	*e*P	**P**	**23 10 43.2**	**-0.5**
	comp=Z,333nm,1.5s,mb6.2						
MKAR	**Makanchi Array**	**55.50**	**312**	P	**P**	**23 10 44.5**	**-0.6**
	comp=Z,39nm,0.9s,mb5.5,baz=91,slow=6.4,SNR=220						
MKAR				ScP		23 15 43.7	
	comp=Z,0.7nm,0.8s,baz=180,slow=26,SNR=3.2						
MKAR				S	**S**	**23 18 29.0**	**+4.6**
	comp=Z,1.9nm,0.9s,baz=98,slow=17,SNR=4.1						
MKAR				LR	LR	23 37 36.9	
	comp=Z,2µm,18.3s,MS5.2,baz=92,slow=39						
MKAR				PKP2bc		23 41 01.9	
	comp=Z,0.4nm,0.8s,baz=315,slow=3.4,SNR=3.7						
MKAR	**Makanchi Array**	**55.50**	**312**	P	**P**	**23 10 44.5**	**-0.6**
MKAR				ScP		23 15 43.7	
MKAR				S	**S**	**23 18 29.0**	**+4.6**
MKAR				LR	LR	23 37 36.9	
MKAR				⇑*e*		23 41 01.9	
MKAR	**Makanchi Array**	**55.50**	**312**	P	**P**	**23 10 44.6**	**-0.5**
MKAR				S	**S**	**23 18 29.0**	**+4.6**
AFI	**Afiamalu**	**55.65**	**126**	LR	LR	23 29 18.2	
	comp=Z,4µm,21.7s,MS5.5,baz=306,slow=30						
AFI	**Afiamalu**	**55.65**	**126**	P	**P**	**23 10 45.9**	**-0.7**
NVS	**Novosibirsk**	**55.88**	**322**	*e*P	**P**	**23 10 45.4**	**-2.3**
NVS				*e*S	**S**	**23 18 26.5**	**-2.7**
NVS				pmax	pmax		
	comp=N,21nm,1.8s						
NVS				pmax	pmax		
	comp=E,54nm,1.8s						
NVS				pmax	pmax		
	comp=Z,81nm,1.8s,mb5.5						
NVS				smax			
	comp=N,47nm,2.6s						
NVS				smax			
	comp=E,24nm,1.9s						
SVW2	**Sparrevohn**	**56.30**	**30**	*e*P	**P**	**23 10 50.6**	**-0.1**
KDAK	**Kodiak Island**	**57.02**	**35**	LR	LR	23 31 57.3	
	comp=E,5µm,21.2s,MS5.6,baz=248,slow=32						
ALBI	**Allahabad**	**57.27**	**287**	*e*P	**P**	**23 10 55.0**	**-3.1**
VIS	**Vishakhapatnam**	**57.60**	**277**	*e*P	**P**	**23 10 59.0**	**-1.4**
VIS				AMb	AMB	23 11 16.2	
	comp=Z,48nm,1.2s,mb5.4						
BLSP	**Bilaspur**	**57.63**	**283**	*e*P	**P**	**23 10 59.7**	**-0.9**
BLSP				AMb	AMB	23 11 03.1	
	comp=Z,103nm,1.3s,mb5.7						
KURK	**Kurchatov**	**58.18**	**317**	*e*P	**P**	**23 11 02.5**	**-1.6**
	comp=Z,80nm,1.0s,mb5.7						
KURK	**Kurchatov**	**58.18**	**317***c*	*i*P	**P**	**23 11 03.3**	**-0.7**
IMA2	**Indian Mountai**	**58.53**	**25**	*e*P	**P**	**23 11 04.8**	**-1.5**
SLKM	**Skilak Lake**	**58.73**	**32**	*e*P	**P**	**23 11 06.4**	**-1.3**

KLBR	**Kellerberrin**	**59.34**	**207**	*e*P	**P**	**23 11 10.4**	**-2.0**
	comp=Z,52nm,1.0s,mb5.5						
PMR	**Palmer**	**59.44**	**31**	*e*P	**P**	**23 11 11.3**	**-1.4**
	comp=Z,31nm,0.9s,mb5.3						
PMR	**Palmer**	**59.44**	**31**	*e*P	**P**	**23 11 11.3**	**-1.4**
PMR				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.3						
ULHL	**Ulahol**	**59.82**	**307**	P	**P**	**23 11 16.4**	**+0.8**
	SNR=6.6						
KSH	**Kashi**	**60.22**	**304⇑**	*i*P	**P**	**23 11 20.3**	**+2.0**
KSH				PCP	PcP	23 12 05.3	+2.2
KSH				SCP		23 15 57.1	
KSH				PCS		23 16 06.3	
KSH				S	**S**	**23 19 24.5**	**-1.7**
KSH				SCS	ScS	23 21 00.0	-0.2
KSH				SS	SS	23 23 28.3	+3.0
KSH				AMB	AMB		
	comp=Z,2µm,3.8s						
KSH				LR	LR		
	comp=N,6µm,17.4s,MS6.0						
KSH				LR	LR		
	comp=E,7µm,16.8s,MS6.0						
TKM2	**Tokmak 2**	**60.25**	**308**	P	**P**	**23 11 19.3**	**+0.8**
	SNR=23						
SMLA	**Simla**	**60.29**	**294**	*e*P	**P**	**23 11 16.6**	**-2.3**
MUN	**Mundaring**	**60.34**	**208**	*e*P	**P**	**23 11 17.4**	**-1.8**
KZA	**Kyzart**	**60.56**	**307**	P	**P**	**23 11 22.2**	**+1.5**
	SNR=34						
COLA	**College**	**60.61**	**27**	*e*P	**P**	**23 11 18.8**	**-1.8**
	comp=E,13nm,0.8s,mb5.1						
COLA	**College**	**60.61**	**27**	*i* P	**P**	**23 11 21.8**	**+1.2**
NDI	**New Delhi**	**60.67**	**291**	*e*P	**P**	**23 11 19.0**	**-2.5**
NDI				*e*x	x	23 19 30.5	
NWAO	**Narrogin (SRO)**	**60.72**	**206**	P	**P**	**23 11 20.6**	**-1.2**
	comp=E,22nm,0.8s,mb5.3,baz=50,slow=6.7,SNR=8.7						
NWAO	**Narrogin (SRO)**	**60.72**	**206**	*e*P	**P**	**23 11 19.2**	**-2.6**
	comp=E,72nm,1.3s,mb5.6						
NWAO	**Narrogin (SRO)**	**60.72**	**206**	*e*P	**P**	**23 11 19.2**	**-2.6**
NWAO				pmax	pmax		
	comp=Z,72nm,1.3s						
KBK	**Karagaybulak**	**60.75**	**307**	P	**P**	**23 11 22.4**	**+0.5**
	SNR=47						
CHMS	**Chumysh**	**60.87**	**308**	P	**P**	**23 11 23.6**	**+0.9**
	SNR=32						
BHK	**Bhakra**	**60.88**	**295**	*e*P	**P**	**23 11 26.9**	**+4.0**
DIV	**Divide**	**60.98**	**31**	*e*P	**P**	**23 11 22.1**	**-1.1**
	comp=Z,88nm,1.0s,mb5.8						
FRU	**Bishkek**	**60.98**	**308**	*i* P	**P**	**23 11 24.0**	**+0.6**
FRU				*e*	pP	23 11 40.0	+1.5
FRU				pmax	pmax		
	comp=Z,260nm,1.8s,mb6.1						
FRU				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.6						
ILAR	**Eielson Array**	**61.00**	**27**	P	**P**	**23 11 21.2**	**-2.1**
	comp=Z,12nm,0.8s,mb5.1,baz=266,slow=5.2,SNR=62						
ILAR				LR	LR	23 34 45.5	
	comp=Z,2µm,21.9s,MS5.2,baz=271,slow=33						
ILAR				PKPPKP		23 40 35.1	
	comp=Z,1.0nm,1.0s,baz=145,slow=2.3,SNR=4.5						
USP	**Ospenovka**	**61.03**	**308**	P	**P**	**23 11 23.6**	**-0.1**
	SNR=26						
AAK	**Ala-Archa**	**61.08**	**307**	P	**P**	**23 11 24.4**	**+0.3**
	SNR=25						
AAK	**Ala-Archa**	**61.08**	**307**	*e*P	**P**	**23 11 22.7**	**-1.4**
	comp=Z,62nm,1.1s,mb5.7						
AAK	**Ala-Archa**	**61.08**	**307**	P	**P**	**23 11 24.3**	**+0.2**
AAK				pmax	pmax		
	comp=Z,477nm,2.0s,mb6.3						
UCH	**Uchtor**	**61.10**	**307**	P	**P**	**23 11 25.6**	**+1.4**
	SNR=75						
THY	**Trims Highway**	**61.28**	**29**	*e*P	**P**	**23 11 24.1**	**-1.1**
THN	**Thein Dam**	**61.31**	**296**	*e*P	**P**	**23 11 23.8**	**-2.0**
EKS2	**Erkin-Say**	**61.61**	**308**	P	**P**	**23 11 28.6**	**+1.0**
	SNR=19						
AML	**Almayashu**	**61.71**	**307**	P	**P**	**23 11 29.2**	**+0.9**
	SNR=38						
HYB	**Hyderabad**	**62.07**	**279⇑**	*i*P	**P**	**23 11 30.0**	**-1.1**
	comp=Z,50nm,1.0s,mb5.6						
HYB				*e*	pP	23 11 44.0	-2.2
HYB				*e*S	**S**	**23 19 52.0**	**+2.0**
HYB	**Hyderabad**	**62.07**	**279⇑**	*e*P	**P**	**23 11 30.0**	**-1.1**
	comp=Z,50nm,1.0s,mb5.6						
HYB	**Hyderabad**	**62.07**	**279⇑**	*e*P	**P**	**23 11 30.0**	**-1.1**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.6						
AKL	**Akola**	**62.60**	**283⇓**	*i*x	x	23 10 45.3	
AKL				*i* x	x	23 19 10.0	
VOSK	**Vostochnaya**	**62.96**	**319**	P	**P**	**23 11 35.3**	**-1.3**
VOSK				pmax	pmax		
	comp=Z,133nm,2.0s,mb5.7						
CHKZ	**Chkalovo**	**63.16**	**320**	*e*P	**P**	**23 11 36.4**	**-1.5**
	comp=Z,48nm,0.9s,mb5.6						
CHKZ	**Chkalovo**	**63.16**	**320**	P	**P**	**23 11 37.3**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.6						
BVA0	**Borovoye Array**	**63.31**	**319**	*i* P	**P**	**23 11 38.2**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,19nm,1.4s,mb5.0						
AJM	**Ajmer**	**63.35**	**289**	*e*P	**P**	**23 11 38.3**	**-1.2**
AJM				AMb	AMB	23 11 55.1	
	comp=Z,105nm,1.1s,mb5.9						
BRVK	**Borovoye**	**63.38**	**319**	*e*P	**P**	**23 11 38.3**	**-1.0**
	comp=Z,32nm,0.8s,mb5.5						
BRVK	**Borovoye**	**63.38**	**319**	P	**P**	**23 11 38.5**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.5						
LATR	**Latur**	**63.62**	**280**	*e*P	**P**	**23 11 40.5**	**-0.9**
KKAR	**Karatay Array**	**63.95**	**308**	*i* P	**P**	**23 11 43.4**	**+0.2**
KKAR				pmax	pmax		
	comp=Z,93nm,0.9s,mb5.8						
DAWY	**Dawson**	**64.16**	**28**	*e*P	**P**	**23 11 43.1**	**-1.0**
POO	**Poona**	**66.06**	**281**	*e*P	**P**	**23 11 57.8**	**+0.6**
POO				*e*x	x	23 11 59.6	
POO				AMb	AMB	23 12 14.1	
	comp=Z,64nm,0.9s,mb5.6						
KAD	**Karad**	**66.10**	**280**	*e*P	**P**	**23 11 55.0**	**-2.5**
KAD				AMb	AMB	23 11 59.5	
	comp=Z,76nm,1.2s,mb5.6						
TRD	**Trivandrum**	**66.33**	**270**	*e*x	x	23 11 51.5	
INK	**Inuvik**	**66.60**	**24**	P	**P**	**23 11 59.5**	**-0.2**
	comp=Z,15nm,0.9s,mb5.0,baz=259,slow=4.8,SNR=27						
INK				LR	LR	23 42 50.0	
	comp=Z,1µm,19.8s,MS5.0,baz=103,slow=37						
INK	**Inuvik**	**66.60**	**24**	*e*P	**P**	**23 11 58.8**	**-1.0**
	comp=Z,30nm,0.9s,mb5.3						
INK	**Inuvik**	**66.60**	**24**	*e*P	**P**	**23 11 58.8**	**-0.9**
INK				pmax	pmax		
	comp=Z,30nm,0.9s						
URZ	**Urewera**	**67.30**	**153**	LR	LR	23 38 03.7	
	comp=Z,3µm,21.4s,MS5.4,baz=140,slow=33						
BHJ	**Bhuj**	**68.53**	**287**	*e*P	**P**	**23 12 12.8**	**+0.2**
BHJ				AMb	AMB	23 12 31.0	
	comp=Z,92nm,1.3s,mb5.5						
SVE	**Sverdlovsk**	**68.61**	**324⇑**	*i*P	**P**	**23 12 12.1**	**-0.4**
SVE				*e*	pP	23 12 24.2	-3.7
SVE				*e*		23 12 34.8	
SVE				*e*S	S	23 21 10.0	+0.6
SVE				pmax	pmax		
	comp=Z,164nm,2.1s,mb5.6						
SVE				MLR	MLR		
	comp=N,500nm,18.0s,MS4.9						
SVE				MLR	MLR		
	comp=E,500nm,18.0s,MS4.9						
SVE				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.5						
DLBC	**Dease Lake**	**68.95**	**34**	P	**P**	**23 12 15.9**	**+1.3**
	comp=Z,21nm,0.9s,mb5.0,baz=271,slow=6.2,SNR=19						
DLBC				LR	LR	23 37 48.8	
	comp=Z,1µm,21.9s,MS5.1,baz=286,slow=32						
DLBC	**Dease Lake**	**68.95**	**34**	*e*P	**P**	**23 12 15.2**	**+0.6**
RAR	**Rarotonga**	**69.15**	**125**	LR	LR	23 36 02.4	
	comp=Z,3µm,20.4s,MS5.5,baz=344,slow=30						
ARU	**Arti**	**69.80**	**324⇑**	*i*P	**P**	**23 12 19.5**	**-0.3**
ARU				*e*	pP	23 12 37.6	+2.4
ARU				*e*SP	sP	23 12 45.2	+4.0
ARU				*e*		23 14 51.7	
ARU				*e*PPP	PPP	23 16 36.0	-0.2
ARU				*e*S	S	23 21 25.0	+1.5
ARU				*e*SS	SS	23 25 55.5	+1.1
ARU				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
ARU				MLR	MLR		
	comp=Z,2µm,20.5s,MS5.5						
ARU				MLR	MLR		
	comp=N,2µm,20.0s,MS5.4						
ARU				MLR	MLR		
	comp=E,2µm,19.0s,MS5.4						
SOKR	**Solikamsk**	**70.19**	**327⇓**	*i*P	**P**	**23 12 22.7**	**+0.6**
SOKR				S	S	23 21 29.0	+0.9
SOKR				SS	SS	23 26 08.4	+7.9
SOKR				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.6						
AB31	**Akbulak array**	**70.27**	**316**	*i* P	**P**	**23 12 21.9**	**-0.9**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
BBB	**Bella Bella**	**71.11**	**41**	LR	LR	23 36 34.0	
	comp=Z,1µm,21.7s,MS5.1,baz=283,slow=30						
AKTO	**Aktyubinsk**	**71.25**	**318**	P	**P**	**23 12 27.8**	**-0.9**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ORR	**Orenburg**	**72.99**	**319⇓**	*i*P	**P**	**23 12 39.2**	**+0.3**
ORR				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
YKW3	**Yellowknife Ar**	**75.37**	**28**	*e*P	**P**	**23 12 51.9**	**-0.5**
PPT	**Papeete**	**75.38**	**116**	*e*S	S	23 22 28.9	+1.3
PPT				*e*SS	SS	23 27 19.3	-1.8
PPT				*e*LQ		23 32 22.1	
PPT				*e*LR	LR	23 35 19.2	
	comp=Z,3µm,21.5s,baz=300						
PPT	**Papeete**	**75.38**	**116**	LR	LR	23 40 01.8	
	comp=Z,2µm,18.9s,MS5.5,baz=286,slow=31						
YKA	**Yellowknife Ar**	**75.40**	**28**	P	**P**	**23 12 51.8**	**-0.9**
	comp=Z,9.5nm,0.9s,mb4.7,baz=292,slow=5.7,SNR=24						
YKA				LR	LR	23 45 07.6	
	comp=Z,2µm,20.5s,MS5.3,baz=285,slow=35						
YKA	**Yellowknife Ar**	**75.40**	**28**	P	**P**	**23 12 51.8**	**-0.9**
YKA				LR	LR	23 45 07.5	
YKA	**Yellowknife Ar**	**75.40**	**28**	*i* P	**P**	**23 12 52.7**	**+0.1**
YKA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CMW	**Cultus Mountai**	**75.78**	**43**	P	**P**	**23 12 56.7**	**+1.5**
KBS	**Kingsbay**	**75.80**	**352**	*e*P	**P**	**23 12 52.0**	**-2.7**
KBS				*e*S	S	23 22 38.0	+6.9
KBS				*e*SS	SS	23 27 29.6	+3.0
KBS				AMS	AMS	23 48 43.1	
	comp=Z,1µm,19.4s,MS5.2						
KBS	**Kingsbay**	**75.80**	**352**	*e*P	**P**	**23 12 52.0**	**-2.7**
KBS				*e*		23 22 36.7	
KBS				LR	LR		
	comp=Z,1087µm,19.4s						
MBW	**Mount Baker**	**75.81**	**43**	P	**P**	**23 12 56.5**	**+1.2**
COR	**Corvallis**	**76.14**	**47**	P	**P**	**23 12 58.1**	**+0.8**
	comp=Z,64nm,1.2s,mb5.4						
COR	**Corvallis**	**76.14**	**47**	P	**P**	**23 12 58.1**	**+0.8**
COR				pmax	pmax		
	comp=Z,64nm,1.2s,mb5.4						
KTRM	**Thompson Ridge**	**76.90**	**50**	P	**P**	**23 13 02.9**	**+1.3**
KHMM	**Horse Mountain**	**76.96**	**51**	*e*P	**P**	**23 13 02.0**	**0.0**
HUMO	**Hull Mountain**	**76.98**	**49**	*e*P	**P**	**23 13 02.0**	**0.0**
	comp=Z,31nm,1.2s,mb5.1						
HUMO				LR	LR		
	comp=Z,4µm,20.0s,MS5.7						
HBO	**Huckleberry Mo**	**77.04**	**48**	P	**P**	**23 13 03.3**	**+0.9**
NAC	**Naches**	**77.13**	**45**	P	**P**	**23 13 04.1**	**+1.3**
TBM	**Table Mountain**	**77.14**	**44**	P	**P**	**23 13 04.0**	**+1.1**
VFP	**Flag Point**	**77.16**	**46**	P	**P**	**23 13 04.1**	**+1.2**
EBG	**Ellensburg**	**77.24**	**44**	P	**P**	**23 13 04.7**	**+1.2**
YBH	**Yreka Blue Hor**	**77.43**	**50**	*e*P	**P**	**23 13 04.7**	**+0.2**
	comp=Z,18nm,1.0s,mb5.0						
YBH	**Yreka Blue Hor**	**77.43**	**50**	P	**P**	**23 13 05.4**	**+0.9**
YBH				pmax	pmax		
	comp=Z,18nm,1.0s						
KCPM	**Cahto Peak**	**77.44**	**52**	*e*P	**P**	**23 13 04.8**	**+0.2**
APA	**Apatity**	**77.53**	**339⇑**	*i*P	**P**	**23 13 05.0**	**+0.4**
APA				*i*		23 13 13.5	
APA				*i*	pP	23 13 23.0	+2.8
APA				*i* S	S	23 22 51.0	+1.0
APA				*e*PS	PS	23 23 32.0	-5.6
APA				pmax	pmax		
	comp=Z,140nm,1.6s,mb5.6						
APA				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.7						
PECR	**Pechory**	**77.58**	**326**	*e*P	**P**	**23 13 03.4**	**-1.7**
PECR				pmax	pmax		
	comp=Z,800nm,1.6s,mb6.4						
PECR				MLR	MLR		
	comp=E,2µm,17.0s						
PECR				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.6						
WDC	**Whiskeytown Da**	**77.91**	**51**	*e*P	**P**	**23 13 06.9**	**-0.4**
	comp=Z,16nm,1.0s,mb4.9						
WDC	**Whiskeytown Da**	**77.91**	**51**	*e*P	**P**	**23 13 06.9**	**-0.3**
WDC				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
KLMR	**Klimovskoe**	**78.05**	**331**	*e*P	**P**	**23 13 07.9**	**+0.3**
KLMR				*e*S	S	23 22 55.2	-0.6
KLMR				*e*SS	SS	23 27 59.8	-1.1
KLMR				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.3						
KLMR				smax			
	comp=E,1µm,5.6s						
KLMR				MLR	MLR		
	comp=Z,5µm,25.0s,MS5.7						
HAWA	**Hanford**	**78.09**	**45**	*e*P	**P**	**23 13 07.9**	**-0.2**
	comp=Z,1.7nm,0.9s						
HAWA				LR	LR		
	comp=Z,239nm,20.0s,MS4.5						
WBK	**Wadi Bani Khal**	**78.12**	**290**	P	**P**	**23 13 09.3**	**+0.6**
	SNR=23						
TBI	**Tubuai**	**78.33**	**121**	*e*S	S	23 23 01.4	+1.9
TBI				*e*SS	SS	23 28 07.7	+1.9
TBI				*e*LQ		23 33 34.9	
TBI				*e*LR	LR	23 36 47.9	
	comp=Z,4µm,29.2s,baz=307						
KEV	**Kevo**	**78.43**	**342**	*e*p	**P**	**23 13 08.9**	**-0.6**
	comp=Z,25nm,0.8s,mb5.2						
KEV	**Kevo**	**78.43**	**342**	*e*P	**P**	**23 13 08.9**	**-0.6**
KEV				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
BIDO	**Bidbid**	**78.56**	**291**	P	**P**	**23 13 12.1**	**+1.0**
	SNR=28						
SMDO	**Samad**	**78.78**	**290**	P	**P**	**23 13 12.9**	**+0.6**
	SNR=15						
JMDO	**Jabal Madar**	**78.96**	**290**	P	**P**	**23 13 13.3**	**0.0**
	SNR=11						
ARCES	**ARCESS Array B**	**78.99**	**342**	P	**P**	**23 13 13.3**	**+0.7**
	comp=Z,18nm,0.7s,mb5.1,baz=62,slow=7.5,SNR=29						
ARCES				LR	LR	23 52 59.7	
	comp=Z,4µm,20.2s,MS5.8,baz=66,slow=39						
ARCES	**ARCESS Array B**	**78.99**	**342**	P	**P**	**23 13 13.3**	**+0.7**
ARCES				LR	LR	23 52 59.7	
ARE0	**ARCESS Array S**	**78.99**	**342**	*e*P	**P**	**23 13 12.7**	**+0.1**
MOD	**Modoc**	**79.07**	**49**	*e*P	**P**	**23 13 13.2**	**-0.4**
	comp=Z,19nm,1.0s,mb5.0						
OHCM	**Honcut**	**79.09**	**52**	*e*P	**P**	**23 13 13.1**	**-0.7**
HOQ	**Hoqain**	**79.24**	**291**	P	**P**	**23 13 15.6**	**+0.7**
	SNR=17						
BANOM	**Banah**	**79.34**	**294**	P	**P**	**23 13 16.9**	**+1.5**
	SNR=24						
EDM	**Edmonton**	**79.38**	**37**	*e*P	**P**	**23 13 15.4**	**+0.4**
EDM	**Edmonton**	**79.38**	**37**	*e*P	**P**	**23 13 16.1**	**+1.1**
BSY	**Bisya**	**79.62**	**290**	P	**P**	**23 13 17.1**	**+0.2**
	SNR=40						
TAOE	**Nuku Hiva Isla**	**79.71**	**104**	*e*S	S	23 23 15.5	+1.2
TAOE				*e*S	S	23 23 15.7	+1.4
TAOE				*e*S	S	23 23 16.3	+2.0
TAOE				*e*LR	LR	23 37 26.8	
	comp=Z,5µm,21.4s						
ARQ	**Araqi**	**80.01**	**291**	P	**P**	**23 13 19.6**	**+0.6**
	SNR=11						
WVOR	**Wild Horse Val**	**80.05**	**48**	*e*P	**P**	**23 13 18.7**	**-0.1**
	comp=Z,33nm,1.0s,mb5.2						
WVOR				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
WVOR	**Wild Horse Val**	**80.05**	**48**	*e*P	**P**	**23 13 19.1**	**+0.3**
WVOR				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
BMO	**Blue Mountains**	**80.09**	**46**	*e*P	**P**	**23 13 18.6**	**-0.4**
	comp=Z,34nm,1.0s,mb5.2						
BMO	**Blue Mountains**	**80.09**	**46**	*e*P	**P**	**23 13 19.1**	**+0.1**
BMO				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
MAK	**Makhachkala**	**80.32**	**312**	*e*P	**P**	**23 13 18.0**	**-2.3**
MAK				*i*	pP	23 13 30.0	-6.0
MAK				*e*		23 23 30.0	
MAK				pmax	pmax		
	comp=Z,1µm,5.5s						
CMB	**Columbia Colle**	**80.34**	**53**	*e*P	**P**	**23 13 19.9**	**-0.6**
	comp=Z,53nm,1.2s,mb5.3						
CMB				LR	LR		
	comp=Z,6µm,20.0s,MS5.9						
CMB	**Columbia Colle**	**80.34**	**53**	P	**P**	**23 13 20.5**	**0.0**
CMB				pmax	pmax		
	comp=Z,53nm,1.2s,mb5.3						
JOF	**Joensuu**	**80.57**	**335**	*e*p	**P**	**23 13 20.2**	**-1.0**
	comp=Z,24nm,0.5s,mb5.4						
JOF	**Joensuu**	**80.57**	**335**	*e*P	**P**	**23 13 20.2**	**-1.0**
JOF				pmax	pmax		
	comp=Z,24nm,0.5s,mb5.4						
TRO	**Tromso**	**80.76**	**343**	*e*P	**P**	**23 13 20.9**	**-1.1**
TRO				*e*S	S	23 23 27.9	+3.7
TRO				AMS	AMS	23 56 28.4	
	comp=Z,2µm,21.8s,MS5.4						
TRO	**Tromso**	**80.76**	**343**	*e*P	**P**	**23 13 21.0**	**-1.1**
TRO				*e*		23 23 27.8	
TRO				MLR	MLR		
	comp=Z,1977µm,21.8s						
DAG	**Danmarks Havn**	**80.82**	**356⇓**	*i*P	**P**	**23 13 22.0**	**-0.3**
	comp=Z,6.5nm,0.3s,mb5.0						
DAG	**Danmarks Havn**	**80.82**	**356⇓**	*e*P	**P**	**23 13 22.0**	**-0.3**
	comp=Z,6.5nm,0.3s,mb5.0						
DAG	**Danmarks Havn**	**80.82**	**356⇓**	*e*P	**P**	**23 13 22.0**	**-0.3**
DAG				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb5.0						
VRHR	**Novokhopersk**	**80.94**	**322**	*e*P	**P**	**23 13 22.3**	**-1.1**
VRHR				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
VRHR				pmax	pmax		
	comp=N,20nm,1.4s						
VRHR				pmax	pmax		
	comp=E,30nm,1.5s						
VRHR				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.8						
VRHR				MLR	MLR		
	comp=N,1µm,17.0s,MS5.7						
VRHR				MLR	MLR		
	comp=E,3µm,18.0s,MS5.7						
MOS	**Moscow**	**81.14**	**327**	*e*P	**P**	**23 13 23.0**	**-1.3**
MOS				*e*		23 13 33.7	
MOS				*e*S	S	23 23 22.3	-6.0
MOS				pmax	pmax		
	comp=Z,100nm,1.6s,mb5.5						
NVAR	**Mina Array Bea**	**81.73**	**52**	P	**P**	**23 13 28.4**	**+0.7**
	comp=Z,31nm,0.9s,mb5.2,baz=254,slow=6.6,SNR=46						
NVAR				LR	LR	23 44 18.4	
	comp=Z,3µm,20.5s,MS5.7,baz=215,slow=32						
NVAR	**Mina Array Bea**	**81.73**	**52**	P	**P**	**23 13 28.4**	**+0.6**
NVAR				LR	LR	23 44 18.4	
MNV	**Mina**	**81.84**	**52**	*e*P	**P**	**23 13 28.0**	**-0.3**
	comp=Z,22nm,0.9s,mb5.1						
MNV	**Mina**	**81.84**	**52**	P	**P**	**23 13 28.6**	**+0.3**
MNV				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
MTUM	**Tungsten Hills**	**81.93**	**53**	*e*P	**P**	**23 13 28.9**	**0.0**
OBN	**Obninsk**	**81.95**	**327⇑**	*e*P	**P**	**23 13 28.9**	**+0.3**
OBN				LR	LR		
	comp=Z,3µm,17.0s,MS5.8						
OBN	**Obninsk**	**81.95**	**327**	*e*P	**P**	**23 13 28.8**	**+0.2**
OBN				*i* S	S	23 23 43.5	+6.8
OBN				*i* SS	SS	23 28 56.3	-3.1
OBN				pmax	pmax		
	comp=Z,113nm,1.9s,mb5.5						
OBN				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.8						
VOR	**Voronezh**	**82.05**	**323**	*e*P	**P**	**23 13 29.5**	**+0.4**
VOR				pmax	pmax		
	comp=N,70nm,2.0s						
VOR				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.7						
DGRG	**David-gareji**	**82.36**	**312**	P	**P**	**23 13 22.9**	**-8.1**
HLID	**Hailey**	**82.50**	**46**	*e*P	**P**	**23 13 31.9**	**+0.3**
	comp=Z,17nm,1.0s,mb4.9						
HLID				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
GOF	**Gofitskoye**	**82.51**	**316**	*e*P	**P**	**23 13 31.8**	**+0.2**
GOF				*i*	pP	23 13 45.9	-1.5
GOF				pmax	pmax		
	comp=Z,50nm,1.7s,mb5.3						
ISA	**Isabella**	**82.62**	**55**	*e*P	**P**	**23 13 31.3**	**-1.1**
	comp=Z,3.4nm,0.3s,mb4.8						
ISA	**Isabella**	**82.62**	**55**	*e*P	**P**	**23 13 31.3**	**-1.1**
ISA				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.8						
SHAO	**Shalim**	**82.63**	**286**	P	**P**	**23 13 33.3**	**+0.5**
	SNR=6.7						
TPH	**Tonopah**	**82.65**	**52**	*e*P	**P**	**23 13 32.6**	**+0.1**
	comp=Z,27nm,1.0s,mb5.2						
TPH	**Tonopah**	**82.65**	**52**	*e*P	**P**	**23 13 32.6**	**+0.1**
TPH				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
MTA	**Mtatsminda**	**82.66**	**312**	P	**P**	**23 13 32.6**	**+0.1**
TI2	**Plekhanov**	**82.68**	**312⇑**	*i*P	**P**	**23 13 32.8**	**+0.2**
TI2				*e*S	S	23 23 49.8	+5.5
TI2				*e*S	S	23 23 50.0	+5.7
TI2				MLR	MLR		
	comp=E,2µm,15.0s						
TI2				MLR	MLR		
	comp=Z,5µm,15.0s,MS6.0						
TBLG	**Delisi**	**82.69**	**312**	P	**P**	**23 13 33.6**	**+1.0**
ZEI	**Tsey**	**82.85**	**313**	*i* P	**P**	**23 13 31.1**	**-2.3**
ZEI				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.4						
HRY	**Holter Researc**	**82.89**	**42**	P	**P**	**23 13 34.5**	**+1.0**
KAF	**Kangasniemi**	**82.96**	**335**	*e*p	**P**	**23 13 32.5**	**-1.1**
	comp=Z,18nm,0.7s,mb5.2,baz=49,slow=4.2						
KAF	**Kangasniemi**	**82.96**	**335**	*e*P	**P**	**23 13 32.5**	**-1.1**
KAF				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.2						
DLMT	**Dillon**	**82.97**	**44**	*e*P	**P**	**23 13 34.6**	**+0.7**
	comp=Z,6.9nm,0.5s,mb4.9						
MCMT	**McKenzie Canyo**	**83.02**	**44**	*e*P	**P**	**23 13 35.0**	**+0.8**
ELK	**Elko**	**83.04**	**49**	P	**P**	**23 13 34.5**	**+0.1**
	comp=Z,27nm,0.9s,mb5.3,baz=292,slow=5.5,SNR=74						
ELK				LR	LR	23 47 42.1	
	comp=Z,2µm,18.8s,MS5.6,baz=331,slow=34						
ELK	**Elko**	**83.04**	**49**	*e*P	**P**	**23 13 34.4**	**-0.1**
	comp=Z,30nm,0.9s,mb5.3						
ELK	**Elko**	**83.04**	**49**	*e*P	**P**	**23 13 35.0**	**+0.6**
DAC	**Darwin (Calif)**	**83.05**	**54**	*e*P	**P**	**23 13 34.1**	**-0.5**
	comp=Z,15nm,0.9s,mb5.0						
DAC	**Darwin (Calif)**	**83.05**	**54**	P	**P**	**23 13 34.7**	**+0.1**
DAC				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
KIV	**Kislovodsk**	**83.18**	**315**	*e*P	**P**	**23 13 35.5**	**+0.4**
	comp=Z,69nm,0.9s,mb5.7						
KIV	**Kislovodsk**	**83.18**	**315*c***	*i*P	**P**	**23 13 35.8**	**+0.7**
KIV				*e*		23 16 46.1	
KIV				*e*S	S	23 23 49.2	-0.1
KIV				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.7						
KIV				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.8						
ONI	**Oni**	**83.23**	**313**	S	S	23 24 00.3	+10
ONI	**Oni**	**83.23**	**313**	P	**P**	**23 13 36.8**	**+1.5**
ONI				S	S	23 23 56.9	+7.1
GNI	**Garni**	**83.30**	**311**	*e*P	**P**	**23 13 36.8**	**+1.0**
	comp=Z,120nm,1.3s,mb5.8						
GNI	**Garni**	**83.30**	**311**	*e*P	**P**	**23 13 36.8**	**+1.0**
GNI				pmax	pmax		
	comp=Z,120nm,1.3s						
FINES	**FINESS Array B**	**83.43**	**335**	P	**P**	**23 13 35.5**	**-0.5**
	comp=Z,14nm,0.5s,mb5.2,baz=68,slow=5.3,SNR=120						
FINES				LR	LR	23 53 51.1	
	comp=Z,2µm,19.0s,MS5.4,baz=177,slow=38						
BOZ	**Bozeman (W)**	**83.47**	**43**	*e*P	**P**	**23 13 37.5**	**+1.0**
	comp=Z,10nm,0.7s,mb5.0						
BOZ	**Bozeman (W)**	**83.47**	**43**	*e*P	**P**	**23 13 38.0**	**+1.5**
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
MWC	**Mount Wilson**	**83.48**	**56**	*e*P	**P**	**23 13 36.8**	**0.0**
TPNV	**Topopah Spring**	**83.80**	**53**	*e*P	**P**	**23 13 38.1**	**-0.2**
	comp=Z,33nm,0.9s,mb5.5						
TPNV				LR	LR		
	comp=Z,5µm,21.0s,MS5.8						
TPNV	**Topopah Spring**	**83.80**	**53**	P	**P**	**23 13 38.6**	**+0.2**
TPNV				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.5						
QLMT	**Earthquake Lak**	**83.94**	**44**	*e*P	**P**	**23 13 39.6**	**+0.7**
RBK	**Rabkut**	**84.08**	**286**	P	**P**	**23 13 40.4**	**+0.2**
	SNR=24						
DIGO	**Kars**	**84.16**	**311**	*i* P	**P**	**23 13 41.6**	**+1.5**
YMR	**Madison River**	**84.31**	**44**	*e*P	**P**	**23 13 41.9**	**+1.2**
	comp=Z,57nm,1.0s,mb5.7						
HVU	**Hansel Valley**	**84.33**	**47**	*e*P	**P**	**23 13 41.4**	**+0.5**

	comp=Z,27nm,1.0s,mb5.3						
HVU	Hansel Valley	84.33	47	P	P	23 13 42.3	+1.4
HVU				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.3						
MOR8	Moi Rana	84.36	342	eP	P	23 13 39.0	-1.5
MOR8				AMb	AMB	23 13 50.3	
	comp=Z,71nm,2.1s,mb5.4						
MOR8	Moi Rana	84.36	342	eP	P	23 13 39.0	-1.5
	comp=Z,71nm,2.1s,mb5.4						
YFT	Old Faithful	84.48	44	P	P	23 13 42.6	+1.0
GCMT	Greycliff	84.64	43	P	P	23 13 43.7	+1.3
IMW	Indian Meadow	84.66	45	eP	P	23 13 43.6	+1.1
	comp=Z,32nm,1.0s,mb5.4						
FFC	Flin Flon	84.69	32	eP	P	23 13 43.3	+0.9
	comp=Z,73nm,1.4s,mb5.6						
FFC	Flin Flon	84.69	32	P	P	23 13 43.8	+1.4
FFC				pmax	pmax		
	comp=Z,73nm,1.3s,mb5.7						
SPUT	South Promonto	84.74	48	eP	P	23 13 43.3	+0.3
TPAW	Teton Pass	84.82	45	eP	P	23 13 44.2	+0.8
	comp=Z,28nm,1.1s,mb5.3						
ARTV	Artvin	84.84	312	iP	P	23 13 42.3	-1.1
MOOW	Moose Ponds	84.85	45	eP	P	23 13 44.2	+0.8
	comp=Z,17nm,1.1s,mb5.1						
VSU	Vasula	84.87	332	iP	P	23 13 44.5	+1.3
TVAN	Van	84.90	309	iP	P	23 13 44.2	+0.4
ABTO	Aybut	84.94	287	P	P	23 13 45.0	+0.5
	SNR=18						
PFO	Pinyon Flat Ob	84.94	56	eP	P	23 13 43.2	-1.0
	comp=Z,25nm,0.9s,mb5.3						
PFO	Pinyon Flat Ob	84.94	56	P	P	23 13 43.5	-0.7
PFO				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.3						
REDW	Red Top Meadow	84.94	45	eP	P	23 13 44.4	+0.5
	comp=Z,74nm,1.4s,mb5.6						
DUG	Dugway	84.96	49	eP	P	23 13 44.0	-0.1
	comp=Z,23nm,0.8s,mb5.4						
DUG				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
DUG	Dugway	84.96	49	P	P	23 13 44.5	+0.4
DUG				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.3						
LOHW	Long Hollow	85.00	45	eP	P	23 13 44.3	+0.1
	comp=Z,19nm,1.1s,mb5.1						
HAKT	HAKKARI	85.08	308	iP	P	23 13 44.5	-0.3
BAR	Barrett	85.14	57	eP	P	23 13 44.6	-0.6
UMR	Umm Al-Rimmam	85.16	300	eP	P	23 13 45.5	+0.2
UMR				AMb	AMB	23 13 50.6	
	comp=Z,131nm,1.2s,mb5.9						
HWUT	Hardware Ranch	85.22	47	eP	P	23 13 45.5	+0.1
	comp=Z,37nm,1.0s,mb5.5						
SOC	Sochi	85.29	315c	iP	P	23 13 44.5	-1.1
SOC				e		23 17 04.5	
SOC				eS	S	23 24 01.9	-8.3
SOC				eSS	SS	23 29 52.3	+3.6
SOC				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
SOC				pmax	pmax		
	comp=Z,456nm,5.3s						
SOC				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.9						
KBD	Kabd	85.32	299	eP	P	23 13 46.5	+0.4
NEN	Nelson	85.35	53	eP	P	23 13 46.6	+0.4
MIB	Mutribah	85.36	300	eP	P	23 13 46.4	+0.1
MIB				AMb	AMB	23 13 55.2	
	comp=Z,144nm,0.9s,mb6.1						
LDFC	Landfair	85.38	54	P	P	23 13 46.9	+0.6
ARUT	Antelope Range	85.51	51	eP	P	23 13 47.9	+1.1
SUMG	Summit	85.53	1	eP	P	23 13 47.4	+1.2
	comp=Z,62nm,1.3s,mb5.7						
RDF	Al-Radifah	85.53	299	eP	P	23 13 48.4	+1.2
RDF				AMb	AMB	23 13 55.9	
	comp=Z,124nm,0.7s,mb6.3						
TCUT	Toone Canyon	85.54	47	eP	P	23 13 46.8	-0.1
NLU	North Lily Min	85.57	49	eP	P	23 13 47.5	+0.4
NAY	Al-Naaiem	85.65	300	eP	P	23 13 47.7	-0.1
NAY				AMb	AMB	23 13 56.5	
	comp=Z,59nm,0.7s,mb5.9						
MPU	Maple Canyon	85.85	48	eP	P	23 13 48.9	+0.4
	comp=Z,12nm,0.9s,mb5.1						
DAU	Daniels Canyon	85.94	48	eP	P	23 13 48.6	-0.3
DAU	Daniels Canyon	85.94	48	eP	P	23 13 49.3	+0.4
MSL	Mosul	86.05	308	ex	x	23 13 50.5	
MSL				ex	x	23 14 06.0	
MSL	Mosul	86.05	308	ex	x	23 24 10.0	
BW06	Boulder Array	86.06	45	eP	P	23 13 49.6	+0.2
	comp=Z,8.0nm,0.9s,mb5.0						
BW06				epP	pP	23 14 04.0	-1.3
PDAR	Pinedale Array	86.06	45	P	P	23 13 49.9	+0.4
	comp=Z,5.8nm,0.9s,mb4.8,baz=263,slow=1.6,SNR=25						
PDAR				LR	LR	23 47 16.8	
	comp=Z,2µm,20.3s,MS5.5,baz=316,slow=32						
PDAR	Pinedale Array	86.06	45	P	P	23 13 49.9	+0.4
PDAR				LR	LR	23 47 16.8	
MVU	Marysvale	86.09	50	eP	P	23 13 49.5	-0.2
	comp=Z,14nm,0.8s,mb5.2						
MSU	Marysvale	86.11	50	eP	P	23 13 50.2	+0.4
MSU	Marysvale	86.11	50	eP	P	23 13 50.5	+0.7
ANN	Anapa	86.21	317	eP	P	23 13 49.8	-0.3
ANN				i *PP	pP	23 14 04.9	-1.1
ANN				eS	S	23 24 09.1	-10
ANN				i *SS		23 24 21.7	
ANN				pmax	pmax		
	comp=Z,59nm,1.7s,mb5.5						
ANN				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.7						
NSS	Namsos	86.27	341	AMS	AMS	23 59 54.2	
	comp=Z,2µm,22.0s,MS5.3						
BHD	Baghdad	86.31	304	ex	x	23 13 50.0	
BHD	Baghdad	86.31	304	ex	x	23 24 10.0	
BNGL	BINGOL	86.33	311	iP	P	23 13 53.0	+2.2
LAO	LASA Array	86.35	41	eP	P	23 13 51.1	+0.3
MACK	Trabzon	86.42	313	iP	P	23 13 49.6	-1.6
TMUT	Trail Mountain	86.46	49	eP	P	23 13 52.1	+0.6
MNK	Minsk	86.62	329	eP	P	23 13 51.0	-0.9
BEST	Besiri	86.69	310	iP	P	23 13 53.5	+0.8
SRU	San Rafael	87.02	49	eP	P	23 13 53.9	-0.3
	comp=Z,28nm,0.9s,mb5.5						
SRU	San Rafael	87.02	49	eP	P	23 13 54.6	+0.4
SRU				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.5						
KELT	Kelkit	87.12	312	iP	P	23 13 56.4	+1.7
MARD	Mardin	87.30	309	iP	P	23 13 54.0	-1.7
WUAZ	Wupatki	87.98	52	eP	P	23 13 59.1	+0.2
WUAZ				LR	LR		
	comp=Z,4µm,21.0s,MS5.8						
AKASG	Malin Array Be	88.02	325	P	P	23 13 57.9	-0.9
	comp=Z,7.6nm,0.6s,mb5.1,baz=48,slow=5.0,SNR=39						
ELZG	Elazig	88.05	311	iP	P	23 13 59.3	+0.1
RWWY	Rawlins	88.10	45	P	P	23 13 59.3	-0.1
	comp=Z,36nm,0.9s,mb5.6						
SIM	Simferopol’	88.21	318c	eP	P	23 13 59.5	-0.3
SIM				eS	S	23 24 38.0	+0.1
SIM				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.3						
SIM				pmax	pmax		
	comp=Z,200nm,13.0s						
SIM				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.5						
DRV	Dumont d’Urvil	88.58	182	P	P	23 14 02.0	+1.0
RSSD	Black Hills	88.96	42	eP	P	23 14 03.1	-0.3
	comp=Z,22nm,1.4s,mb5.3						
RSSD				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
RSSD	Black Hills	88.96	42	P	P	23 14 03.3	-0.1
RSSD				pmax	pmax		
	comp=Z,22nm,1.3s,mb5.3						
ATAB	Bozova	89.00	310	iP	P	23 14 03.5	-0.2
NB2	NORSAR Subarra	89.08	339	P	P	23 14 02.6	-0.9
	comp=Z,6.2nm,0.6s,mb5.1,baz=53,slow=4.8						
NB2	NORSAR Subarra	89.08	339	P	P	23 14 02.6	-0.9
	baz=53,slow=5.1						
NOA	NORSAR Array B	89.08	339	P	P	23 14 02.9	-0.6
	comp=Z,6.6nm,0.6s,mb5.1,baz=45,slow=4.4,SNR=23						
NOA				PP	PP	23 17 35.7	-0.7
	comp=Z,3.4nm,0.9s,baz=45,slow=7.5,SNR=3.8						
NOA				LR	LR	23 58 41.7	
	comp=Z,2µm,20.6s,MS5.5,baz=40,slow=39						
NOA	NORSAR Array B	89.08	339	P	P	23 14 02.9	-0.6
NOA				PP	PP	23 17 35.7	-0.7
NOA				LR	LR	23 58 41.6	
SUW	Suwalki	89.11	330	eP	P	23 14 03.5	-0.3
SUW	Suwalki	89.11	330	eP	P	23 14 03.5	-0.4
NAO01	NORSAR Array S	89.34	339	eP	P	23 14 03.5	-1.2
NAO	NORSAR Subarra	89.37	339	P	P	23 14 02.6	-2.3
	comp=Z,6.2nm,0.6s,mb5.1						
NAO	NORSAR Subarra	89.37	339	P	P	23 14 02.6	-2.3
NAO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.1						
PHWY	Pilot Hill	89.44	45	eP	P	23 14 05.1	-0.6
PHWY				epP	pP	23 14 22.3	+0.6
SMCO	Snowmass	89.44	48	eP	P	23 14 06.9	+1.1
	comp=Z,30nm,0.8s,mb5.7						
GZT	Gaziantep	89.57	310	iP	P	23 14 06.4	0.0
TUC	Tucson	89.82	55	eP	P	23 14 07.6	-0.1
TUC	Tucson	89.82	55	eP	P	23 14 08.2	+0.5
CTKT	Corum	89.91	314	iP	P	23 14 07.3	-0.6
KAHT	Ahir Dag	89.92	311	iP	P	23 14 08.6	+0.6
RKT	Rikitea	90.10	115	eSKSac		23 24 36.5	
RKT				eSS	SS	23 30 52.9	-6.3
RKT				eLQ		23 38 14.2	
RKT				eLR	LR	23 42 10.6	
	comp=Z,3µm,35.2s,baz=295						
ULM	Lac du Bonnet	90.28	34	LR	LR	23 54 29.1	
	comp=Z,2µm,20.4s,MS5.4,baz=141,slow=35						
KIS	Kishinev	90.28	322	eP	P	23 14 09.0	-0.5
KIS				e	pP	23 14 26.0	+0.4
KIS				e		23 17 40.0	
KIS				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.9						
KIS				MLR	MLR		
	comp=E,3µm,1.0s						
KIS				MLR	MLR		
	comp=Z,3µm,20.0s						
BALT	Daday	90.38	316	iP	P	23 14 09.4	-0.7
SFJD	Kangerlussuaq	90.41	6	iP	P	23 14 08.8	-0.9
	comp=Z,14nm,0.4s,mb5.7						
SFJD				iS	S	23 25 02.1	+4.4
	comp=Z,1µm,20.0s						
SFJD	Kangerlussuaq	90.41	6	P	P	23 14 09.2	-0.5
KONO	Kongsberg	90.66	339	eSS	SS	23 31 01.2	-5.0
CDAG	Cicekdag	90.68	314	iP	P	23 14 09.8	-1.8
AVNT	Avonos	90.77	313	iP	P	23 14 12.4	+0.3
ELDT	Eldivan	90.88	315	iP	P	23 14 11.7	-0.8
COBT	Iskenderun	90.88	310	iP	P	23 14 12.1	-0.5
MSEY	Mahe Island	91.08	265	eP	P	23 14 13.1	-0.9
	comp=Z,18nm,1.4s,mb5.2						
BR131	Keskin Array S	91.12	314	eP	P	23 14 12.8	-0.9
	comp=Z,6.1nm,0.8s,mb5.0						
BRTR	Keskin Array B	91.12	314	P	P	23 14 13.1	-0.6
	comp=Z,8.5nm,1.1s,mb5.0,baz=108,slow=3.9,SNR=32						
SDCO	Great Sand Dun	91.14	48	eP	P	23 14 13.7	-0.1
	comp=Z,27nm,1.3s,mb5.4						
SDCO				epP	pP	23 14 19.5	-10
SDCO				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
BER	Bergen	91.43	341	AMS	AMS	00 06 29.6	
	comp=Z,2µm,19.0s,MS5.5						
ANMO	Albuquerque	91.81	51	P	P	23 14 17.6	+0.6
	comp=Z,13nm,0.9s,mb5.2,baz=260,slow=2.0,SNR=15						
ANMO				LR	LR	23 51 40.3	
	comp=Z,2µm,19.8s,MS5.7,baz=306,slow=33						
ANMO	Albuquerque	91.81	51	eP	P	23 14 16.9	-0.1
	comp=Z,37nm,0.8s,mb5.8						
ANMO				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
ANMO	Albuquerque	91.81	51c	iP	P	23 14 18.6	+1.6
BURAR	Bucovina Array	91.94	324	⇑P	P	23 14 16.7	-0.5
BURAR	Bucovina Array	91.94	324	⇑P	P	23 14 16.7	-0.5
LPM	Los Pinos Moun	91.99	52	eP	P	23 14 17.7	-0.1
LPM				epP	pP	23 14 33.7	-0.2
KWP	Kalwaria	92.05	327	eP	P	23 14 18.2	+0.6
KWP	Kalwaria	92.05	327	eP	P	23 14 18.2	+0.6
BNM	Barren Site	92.07	52	eP	P	23 14 18.0	-0.2
BNM				epP	pP	23 14 34.7	+0.4
COP	Copenhagen	92.59	335	iP	P	23 14 20.1	+0.1
COP				i		23 17 55.4	
COP				e		23 26 49.3	
	comp=Z,1µm,20.0s						
COP	Copenhagen	92.59	335	eP	P	23 14 20.1	+0.1
COP				i		23 17 55.4	
COP				e		23 26 49.3	
COP				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
COP	Copenhagen	92.59	335	eP	P	23 14 20.1	+0.1
COP				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.3						
KOLS	Kolonicke sedl	92.70	326	eP	P	23 14 20.9	+0.2
KOLS				e		23 14 31.5	
KDHN	Kadinhani	92.75	314	iP	P	23 14 16.0	-5.1
STHS	Stebnicka Huta	92.92	327	eP	P	23 14 22.9	+1.2
CRVS	Cervenica-Dubn	93.14	326	eP	P	23 14 23.4	+0.7
CRVS				e	pP	23 14 36.3	-2.5
BORA	Eskisehir	93.14	315	iP	P	23 14 21.3	-1.7
NIE	Niedzica	93.39	327	eP	P	23 14 24.9	+1.1
DRGR		93.80	324	⇑P	P	23 14 25.9	+0.2
ULDT	Uludag	93.85	316	iP	P	23 14 23.1	-3.0
KECS	Kecovo	93.91	327	e	P	23 14 22.6	-3.5
KECS				e		23 14 26.3	
KECS				ePP	PP	23 18 13.4	-1.8
KECS	Kecovo	93.91	327	eP	P	23 14 26.3	+0.2
KECS				ePP	PP	23 18 13.4	-1.8
OKC	Ostrava-Krasne	94.18	329	eP	P	23 14 27.6	+0.2
KSP	Ksiaz	94.38	330	eP	P	23 14 29.4	+1.2
KSP	Ksiaz	94.38	330	eP	P	23 14 28.4	+0.2
KSP				ePP	PP	23 18 16.0	-2.6
KSP				eSKS	SKS	23 24 58.0	+0.9
KSP				eSP	SP	23 26 48.0	-5.0
KSP				LR	LR		
	comp=Z,5µm,20.1s,MS6.0						
PSZ	Piszkesteto	94.57	326	eP	P	23 14 28.0	-1.1
	comp=Z,27nm,1.7s,mb5.4						
PSZ	Piszkesteto	94.57	326	P	P	23 14 29.9	+0.7
PSZ				pmax	pmax		
	comp=Z,27nm,1.7s,mb5.4						
CPRX	Cap Rock	94.63	52	eP	P	23 14 29.5	-0.3
CPRX				epP	pP	23 14 46.5	+0.6
DPC	Dobruska-Polom	94.70	330	eP	P	23 14 30.1	+0.4
DPC				ePP	PP	23 18 18.9	-2.0
VYHS	Vyhne	94.73	327	eP	P	23 14 30.5	+0.6
UPC	Upice	94.74	330	eP	P	23 14 30.4	+0.5
UPC				ePP	PP	23 18 20.1	-1.0
PVCC	Panska Ves	95.39	331	eP	P	23 14 33.2	+0.3
PVCC				ex	x	23 15 01.1	
PVCC				ePP	PP	23 18 25.3	-0.7
SMOL	Smolenice	95.42	328	eP	P	23 14 34.6	+1.5
BRG	Berggiesshubel	95.42	331	iP	P	23 14 33.0	-0.1
	comp=Z,15nm,1.3s,mb5.3						
BRG				i		23 15 01.6	
BRG				PP	PP	23 18 26.6	+0.3
BRG				i		23 19 05.3	
BRG				S	S	23 25 46.0	+4.5
BRG				SS	SS	23 32 13.0	-1.1
BRG	Berggiesshubel	95.42	331	iP	P	23 14 33.0	0.0
BRG						23 18 26.6	
BRG				S	S	23 25 46.0	+4.5
BRG				SS	SS	23 32 13.0	-1.1
BRG				pmax	pmax		
	comp=Z,15nm,1.3s,mb5.3						
CLL	Collm	95.53	332	⇑P	P	23 14 32.7	-0.8
	comp=Z,logA/T=1.3,mb5.5						
CLL				i *PP	pP	23 14 50.7	+1.1
CLL				i *SP	sP	23 15 00.9	+5.7
CLL				e*SPP		23 18 45.0	
CLL				eSS	SS	23 32 11.0	-4.6
CLL	Collm	95.53	332	⇑iP	P	23 14 32.7	-0.8
	comp=Z,28nm,1.4s,mb5.5						
CLL				i pP	pP	23 14 50.7	+1.1
CLL				i sP	sP	23 15 00.9	+5.7
CLL				eS	SS	23 32 11.0	-4.6
CLL				LR	LR		
	comp=Z,4µm,24.8s,MS5.8						
CLL	Collm	95.53	332	⇑iP	P	23 14 32.7	-0.8
CLL				i *PP	pP	23 14 50.7	+1.1
CLL				eS	SS	23 32 11.0	-4.6
CLL				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.5						
CLL				MLR	MLR		
	comp=Z,4µm,24.8s,MS5.8						
PRU	Pruhonice	95.78	330	eP	P	23 14 34.6	0.0
PRU				ex	x	23 15 01.5	
PRU				ePP	PP	23 18 27.8	-1.4
TREC	Trest	95.82	329	eP	P	23 14 34.7	-0.1
TREC				ex	x	23 15 01.5	
TREC				ePP	PP	23 18 28.2	-1.3
NKC	Novy Kostel	96.55	331	eP	P	23 14 35.9	-2.2
NKC				ex	x	23 15 05.4	
MOX	Moxa	96.61	332	iP	P	23 14 38.5	+0.1
MOX				PP	PP	23 18 36.0	+0.2
MOX				L		00 01 22.0	
MOX	Moxa	96.61	332	eP	P	23 14 38.5	+0.1
MOX				ePP	PP	23 18 36.3	+0.5
MOX				LR	LR		
	comp=Z,3µm,22.0s,MS5.7						
TXAR	Lajitas Array	96.61	55	P	P	23 14 40.8	+1.8
	comp=Z,3.4nm,0.9s,mb4.8,baz=315,slow=3.5,SNR=11						
TXAR				LR	LR	23 55 21.6	
	comp=Z,2µm,19.9s,MS5.5,baz=300,slow=34						
KHC	Kasperske Hory	96.83	330	eP	P	23 14 39.4	0.0
KHC				ex	x	23 15 06.5	
KHC				ex	x	23 18 46.6	
KHC				x	x	23 18 58.0	
GERES	GERESS Array B	96.97	330	P	P	23 14 41.0	+0.9
	comp=Z,1.5nm,0.7s,mb4.5,baz=34,slow=4.8,SNR=10						
GERES				PP	PP	23 18 36.4	-2.4
	comp=Z,0.6nm,0.6s,baz=63,slow=12,SNR=4.9						
GERES				LR	LR	00 01 56.6	
	comp=Z,3µm,20.5s,MS5.8,baz=46,slow=38						
ARSA	Arzberg	97.22	328	⇑iP	P	23 14 42.4	+1.1
	comp=Z,7.4nm,1.9s,mb4.8						
GRA1	Grafenberg Arr	97.48	332	eP	P	23 14 42.6	+0.2
	comp=Z,17nm,1.4s,mb5.3						
GRA1				ePP	PP	23 18 41.0	-1.8
GRF	Grafenberg Arr	97.48	332	eP	P	23 14 42.6	+0.2
	comp=Z,17nm,1.4s,mb5.3						
GRF				ePP	PP	23 18 41.0	-1.8
GRF	Grafenberg Arr	97.48	332	eP	P	23 14 42.6	+0.2
GRF				e		23 18 41.0	
GRF				pmax	pmax		
	comp=Z,17nm,1.4s,mb5.3						
GRF	Grafenberg Arr	97.48	332	eP	P	23 14 42.6	+0.2
GRF				e		23 18 41.0	
GRF				pmax	pmax		
	comp=Z,17nm,1.4s,mb5.3						
SCHQ	Schefferville	98.72	18	LR	LR	23 58 41.0	
	comp=Z,990nm,21.5s,MS5.3,baz=233,slow=35						
LOR	Lormes	102.48	334	ePP	PP	23 19 18.3	-2.6
	comp=Z,35nm,1.4s						
LPL	La Plagne	102.63	331	ePP	PP	23 19 19.4	-2.7
LPG	La Plagne	102.64	331	ePP	PP	23 19 19.6	-2.5
SSF	Saint Saulge	102.79	334	ePP	PP	23 19 19.7	-3.6
FLN	La Foliniere	102.92	337	ePP	PP	23 19 20.2	-4.1
	comp=Z,63nm,1.4s						
LDF	La Druitiere	102.93	337	ePP	PP	23 19 20.6	-3.8
	comp=Z,56nm,1.3s						
SMF	Signal de Mont	102.98	334	ePP	PP	23 19 20.5	-4.4
	comp=Z,68nm,1.6s						
AVF	Avril sur Loir	103.07	334	ePP	PP	23 19 20.7	-4.8
	comp=Z,48nm,1.6s						
MBDF	Montbardon	103.22	331	ePP	PP	23 19 22.0	-4.6
GRR	Gorron	103.36	337	ePP	PP	23 19 22.3	-5.3
BGF	Bois d’Agland	103.46	334	ePP	PP	23 19 22.5	-5.8
	comp=Z,34nm,1.2s						
ORIF	Oris-en-Rattie	103.47	331	ePP	PP	23 19 22.7	-5.7
	comp=Z,11nm,0.8s						
FRF	La Foret Royal	104.17	330	ePP	PP	23 19 26.0	-7.5
	comp=Z,68nm,1.5s						
SMRF	Simiane la Rot	104.34	331	ePP	PP	23 19 26.9	-8.0
LMR	La Mourre	104.41	330	ePP	PP	23 19 27.0	-8.4
	comp=Z,63nm,1.5s						
QUIF	Quistinic	104.58	338	ePP	PP	23 19 27.6	-9.0
	comp=Z,317nm,1.9s						
RJF	Les Rejaudoux	105.02	334	ePP	PP	23 19 29.6	-11
MAW	Mawson	107.20	203	PP	PP	23 19 47.2	-8.7
	comp=Z,2.5nm,0.9s,baz=41,slow=12,SNR=3.5						
ESDC	Sonseca Array	111.94	334	PP	PP	23 20 29.8	-1.1
	comp=Z,3.4nm,1.0s,baz=28,slow=8.1,SNR=4.7						
ESDC				PKKP	PKKP	23 30 56.8	+11
	comp=Z,5.6nm,1.0s,baz=218,slow=5.2,SNR=10						
LSZ	Lusaka	119.90	265	ePKPdf	PKPdf	23 19 59.8	+1.2
LBTB	Lobatse	124.58	254	ePKPdf	PKPdf	23 20 08.2	+0.7
BOSA	Boshof	125.45	250	PKP	PKPdf	23 20 12.7	+3.7
	comp=Z,3.7nm,0.9s,baz=100,slow=8.5,SNR=4.3						
SNAA	Sanae	127.07	192	PKPdf	PKPdf	23 20 11.1	0.0
DBIC	Dimbokro	138.72	310	PKP	PKPdf	23 20 35.9	+1.6
	comp=Z,5.6nm,0.8s,baz=93,slow=3.7,SNR=3.5						
DBIC				SKPbc		23 24 08.3	
	comp=Z,5.2nm,0.9s,baz=0.3,slow=2.0,SNR=3.1						
DBIC	Dimbokro	138.72	310	PKP	PKPdf	23 20 35.9	+1.6
DBIC				SKPbc		23 24 08.3	
LIC	Lamto	139.15	310	ePKIKP	PKPdf	23 20 32.0	-3.1
	comp=Z,22nm,0.9s						
PLCA	Paso Flores	144.91	130	PKP	PKPdf	23 20 44.9	+0.4
	comp=Z,28nm,0.9s,baz=244,slow=3.4,SNR=25						
PLCA	Paso Flores	144.91	130	ePKP	PKPdf	23 20 44.6	+0.1
ARE	Arequipa	145.37	87	eP	PKPdf	23 20 50.0	+4.0
EFI	East Falkland	145.59	155	ePKP	PKPdf	23 20 46.0	+0.7
FCH	Farellones	147.16	118	⇑eP	PKPdf	23 20 52.0	+3.5
LPAZ	La Paz	148.44	85	PKP	PKPdf	23 20 53.6	+2.5
	comp=Z,35nm,0.6s,baz=268,slow=3.4,SNR=92						
LPAZ				PKPbc	PKPdf	23 20 57.1	+6.1
	comp=Z,35nm,0.6s,baz=326,slow=4.4,SNR=94						
LPAZ	La Paz	148.44	85	ePKPdf	PKPdf	23 20 53.1	+2.1
SAML	Samuel	150.13	68	PKPdf	PKPdf	23 20 53.9	+0.1
TRQA	Tornquist	152.06	131	ePKPdf	PKPdf	23 20 56.6	+0.5
BDFB	Brasilia	166.30	64	PKP	PKPdf	23 21 15.8	+2.8
	comp=Z,9.7nm,1.1s,baz=7.6,slow=2.8,SNR=8.1						
BDFB				PKPab	PKPab	23 22 15.0	-1.5
	comp=Z,5.2nm,0.9s,baz=159,slow=6.5,SNR=3.9						
BAO	Brasilia Array	166.31	64	PKPdf	PKPdf	23 21 16.0	+2.9

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*ISK **15** 23:04:14.4, 38.11N×26.64E, h5^{km}, MD3.1*
*ATH **15** 23:04:14.4, 38.18N×26.83E, h32^{km}, MD3.1/3*
*NEIC **15** 23:04:14.0, 38.11N×26.63E, h5^{km}, MD3.1(ISK), MD3.1(ATH), After ISK.*
*CSEM **15** 23:04:14.7±0.1, 38.19N×26.62E, h10^{km}, MD3.1, Error ellipse: s-maj=2.1km s-min=1.6km az=109.0*
ISC 15 23:04:14.6±0.8**, 38.18N**±0.03×**26.58E**±0.05**, h4**^{km}±5^{km}**, n21, σ1^{s}00**/31**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.18	4	iP	Pg	23 04 18.0	-0.3
URLA				iS	Sg	23 04 21.6	+0.8
BLCB	Balcova	0.42	60	PG	Pg	23 04 22.9	-0.1
SMG	Samos	0.51	156	⇑iPB	Pg	23 04 24.8	0.0
SMG				eSB	Sg	23 04 32.4	+0.8
IZM	Izmir	0.58	68	PG	Pg	23 04 26.1	-0.1
IZM				SG	Sg	23 04 34.5	+0.6
KDAG	Bornova	0.59	67	iP	Pg	23 04 25.1	-1.1
KDAG				iS	Sg	23 04 33.3	-0.8
PRK	Paraskevi	1.09	347	ePN	Pn	23 04 36.0	-0.5
PRK				eSN	Sn	23 04 51.7	-0.5
AYVA	Ayvalik	1.13	4	iP	Pb	23 04 33.4	-2.9
AYVA				iS	Sb	23 04 54.4	+3.2
AYDN	Tasoluk	1.15	116	iP	Pb	23 04 36.9	+0.3
AYDN				iS	Sb	23 04 51.5	-0.2
AKS	Akhisar	1.20	54	ePN	Pn	23 04 38.2	+0.3
BODT	Bodrum	1.26	152	ePN	Pn	23 04 36.8	-2.0
MLSB	Milas	1.29	132	ePN	Pn	23 04 38.3	-1.1
BDRM	Kayabasi	1.31	148	iP	Pb	23 04 39.9	+0.6
BDRM				iS	Sb	23 04 57.3	+1.1
APE	Apeiranthos	1.39	217	ePN	Pn	23 04 40.5	-0.1
APE	Apeiranthos	1.39	217	ePN	Pn	23 04 41.4	+0.7
MANT	Manisa	1.59	78	iP	Pn	23 04 45.0	+1.4
MANT				iS	Sb	23 05 03.6	-0.8
YER	Yerkesik	1.71	127	ePN	Pn	23 04 44.8	-0.5
BALB	Balikesir	1.78	34	ePN	Pn	23 04 47.3	+1.0
BTOK	Tokmak	1.94	35	iP	Pn	23 04 52.5	+3.8
BTOK				iS	Sn	23 05 17.9	+4.1
SANT	Santorini	2.01	207	Pn	Pn	23 04 45.6	-4.0
SANT	Santorini	2.01	207	Pn	Pn	23 04 45.6	-4.1
DST	Dursunbey	2.14	48	ePN	Pn	23 04 51.9	+0.4

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*NEIC **15** 23:06:25.6, 41.55S×174.32E, h26^{km}, ML3.9(WEL), After WEL.*
WEL 15 23:06:25.5±0.1**, 41.55S×174.32E, h27**^{km}**, ML3.9**/28**, 5C-1D, Error ellipse: s-maj=0.6km s-min=0.5km az=0.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	Cape Campbell	0.21	201	P	Pb	23 06 31.8	+0.2
CMWZ				S	Sb	23 06 37.7	+2.0
CMWZ	Cape Campbell	0.21	201	P*	Pb	23 06 31.8	+0.3
CMWZ				S*	Sb	23 06 37.7	+2.0
TUWZ	Tuamarina	0.30	293	P*	Pb	23 06 32.3	-0.4
TUWZ				S*	Sb	23 06 38.0	+0.3
TCW	Tory Channel	0.34	355	P	Pb	23 06 33.0	-0.3

TCW				S	Sb	23 06 37.9	-0.6
TCW	**Tory Channel**	**0.34**	**355**	P*	Pb	23 06 33.0	-0.3
TCW				S*	Sb	23 06 37.9	-0.6
BSWZ	**Blackbirch Sta**	**0.37**	**243**	P	Pb	23 06 33.6	-0.1
BSWZ	**Blackbirch Sta**	**0.37**	**243**	P*	Pb	23 06 33.6	-0.1
SNZO	**South Karori**	**0.38**	**51**	P	Pb	23 06 33.9	0.0
SNZO	**South Karori**	**0.38**	**51**	⇑P*	Pb	23 06 33.9	0.0
SNZO				S*	Sb	23 06 40.0	+0.4
MRW	**Makara Radio**	**0.43**	**42**	⇑P*	Pb	23 06 34.6	-0.1
MRW				S*	Sb	23 06 41.2	+0.3
WEL	**Wellington**	**0.43**	**52**	P	Pb	23 06 34.7	0.0
WEL	**Wellington**	**0.43**	**52**	⇑P*	Pb	23 06 34.7	+0.1
WEL				S*	Sb	23 06 41.7	+0.8
BHW	**Baring Head**	**0.44**	**72**	P	Pb	23 06 34.9	+0.1
BHW	**Baring Head**	**0.44**	**72**	⇑P*	Pb	23 06 34.9	+0.1
BHW				S*	Sb	23 06 41.9	+0.7
MSWZ	**Moikau Station**	**0.71**	**80**	P	Pb	23 06 39.6	+0.3
MSWZ	**Moikau Station**	**0.71**	**80**	P*	Pb	23 06 39.6	+0.3
MSWZ				S*	Sb	23 06 50.6	+1.8
CAW	**Cannon Point**	**0.72**	**52**	P*	Pb	23 06 39.4	+0.1
CAW				S*	Sb	23 06 50.1	+1.3
NNZ	**Nelson**	**0.78**	**295**	P	Pb	23 06 40.4	0.0
NNZ				S	Sb	23 06 49.3	-1.3
NNZ	**Nelson**	**0.78**	**295**	P*	Pb	23 06 40.4	0.0
NNZ				S*	Sb	23 06 51.0	+0.4
DUWZ	**D'Urville Isla**	**0.80**	**338**	P*	Pb	23 06 40.9	+0.1
DUWZ				S*	Sb	23 06 51.6	+0.3
KIW	**Kapiti Island**	**0.82**	**33**	P	Pb	23 06 40.8	-0.3
KIW	**Kapiti Island**	**0.82**	**33**	⇑P*	Pb	23 06 40.8	-0.3
KIW				S*	Sb	23 06 52.0	+0.3
PAWZ	**Paruwai Farm**	**0.85**	**79**	P	Pb	23 06 41.3	-0.3
PAWZ	**Paruwai Farm**	**0.85**	**79**	P*	Pb	23 06 41.3	-0.3
MTW	**Mount Morrison**	**0.97**	**67**	P	Pn	23 06 43.1	-0.4
MTW	**Mount Morrison**	**0.97**	**67**	P*	Pb	23 06 43.1	-0.6
TRWZ	**Traveller**	**1.04**	**82**	P*	Pb	23 06 43.7	-1.1
KHZ	**Kahutara**	**1.04**	**213**	P	Pn	23 06 44.2	-0.3
KHZ				S	Sb	23 06 56.9	-1.3
KHZ	**Kahutara**	**1.04**	**213**	P*	Pb	23 06 44.2	-0.7
THZ	**Tophouse**	**1.08**	**258**	P	Pn	23 06 44.9	-0.2
THZ	**Tophouse**	**1.08**	**258**	P*	Pb	23 06 44.7	-0.8
MRZ	**Mangatainoka R**	**1.30**	**48**	P	Pn	23 06 47.9	-0.3
MRZ	**Mangatainoka R**	**1.30**	**48**	⇓P*	Pb	23 06 47.9	-1.3
QRZ	**Quartz Range**	**1.53**	**298**	P	Pn	23 06 52.4	+0.9
QRZ	**Quartz Range**	**1.53**	**298**	PN	Pn	23 06 52.4	+0.9
WAZ	**Wanganui**	**1.86**	**16**	PN	Pn	23 06 57.6	+1.4
DSZ	**Denniston Nort**	**1.89**	**263**	PN	Pn	23 06 56.8	+0.1
TSZ	**Takapari Road**	**1.94**	**41**	PN	Pn	23 06 56.5	-0.9

*MOS **15** 23:13:28.8±1.3, 22.14N×144.83E, h33^{km}, mb5.0/20, Error ellipse: s-maj=13.7km s-min=6.8km az=119.0*

*HRVD **15** 23:13:28.2±1.0, 22.30N×145.16E, h35^{km}±1^{km}, MW5.0/35, Centroid moment Tensor Solution. LP body waves: s1,c1; Mantle waves: s35,c48; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.29±.77; M$_{\theta\theta}$-1.24±.41; M$_{\phi\phi}$-3.05±.40; M$_{r\theta}$-0.33±.34; M$_{\theta\phi}$1.44±.14; M$_{\phi r}$1.10±.21; Best double couple: M$_0$4.226×10^{16} NP1:ϕ_s148°,δ37°,λ86°. NP2: ϕ_s334°,δ53°,λ93°. Principal axes: T 4.454, Plg82°, Azm261°; N -.456, Plg3°, Azm152°; P -3.998, Plg8°, Azm62°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 23:13:28.2±0.3, 22.07N×144.90E, h20^{km}, mb4.9/27 Error ellipse: s-maj=8.6km s-min=7.6km az=87.0*

*BJI **15** 23:13:30.7, 22.28N×144.35E, h20^{km}, mB5.4, mb4.8, Ms5.2, Msz4.7*

*IDC **15** 23:13:32.3±3.4, 22.11N×144.79E, h47^{km}±31^{km}, mb4.2/18, mb1 4.4/20, mb1mx4.4/25, mbtmp4.5/20, ML4.4/2, Error ellipse: s-maj=19.3km s-min=16.4km az=109.0*

ISC 15 23:13:29.4±1.7, **22.09N**±0.05×**144.80E**±0.07, **h37**^{km}±13^{km}, **n139, σ1^{s}12**/139, **mb4.7**/64, **MS5.3**/3, **3C-9D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**5.53**	**335**	P	**P**	**23 14 51.4**	**0.0**
	38nm,0.3s,baz=126,slow=20,SNR=18						
CBIJ				S	**S**	**23 15 53.6**	**-1.0**
	38nm,0.3s,baz=118,slow=23,SNR=9.9						
MJAR	**Matsushiro Arr**	**15.50**	**340**	P	**P**	**23 17 07.0**	**0.0**
	1.0nm,0.3s,baz=168,slow=13,SNR=9.6						
MAJO	**Matsushiro**	**15.50**	**340**	*e*Pn	**P**	**23 17 10.6**	**+3.6**
	31nm,1.3s						
MAJO	**Matsushiro**	**15.50**	**340**	*e*P	**P**	**23 17 10.6**	**+3.6**
MAJO				pmax	pmax		
	comp=Z,31nm,1.3s						
MAT	**Matsushiro**	**15.50**	**340**	P	**P**	**23 17 07.0**	**0.0**
	comp=Z,12nm,0.7s						
MAT	**Matsushiro**	**15.50**	**340**	P	**P**	**23 17 07.0**	**0.0**
MAT				pmax	pmax		
	comp=Z,12nm,0.7s						
JNU	**Nakatsue**	**16.50**	**315**	P	**P**	**23 17 24.6**	**+4.9**
	comp=Z,3.0nm,0.3s,baz=127,slow=7.5,SNR=15						
KS15	**Wonju Array Si**	**21.16**	**320**	*e*P	**P**	**23 18 16.2**	**+2.7**
YHNB	**Yeheng**	**21.65**	**281**	*e*P	**P**	**23 18 19.4**	**+0.8**
INCN	**Inchon**	**21.94**	**318**	*e*P	**P**	**23 18 24.1**	**+2.7**
	comp=Z,35nm,0.9s,mb4.8						
SSE	**Sheshan**	**22.90**	**298**	*e*P	**P**	**23 18 29.8**	**-1.2**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,2μm,12.0s						
SSE	**Sheshan**	**22.90**	**298**	*e*P	**P**	**23 18 29.8**	**-1.2**
	comp=Z,35nm,0.8s,mb4.8						
TGY	**Tagaytay City**	**24.00**	**255**	P	**P**	**23 18 44.5**	**+2.7**
	comp=Z,83nm,0.3s,mb5.6,baz=158,slow=22,SNR=4.4						
YSS	**Yuzh-Sakhalins**	**24.86**	**357**	*e*P	**P**	**23 18 49.5**	**-0.4**
	comp=Z,80nm,2.1s,mb4.9						
YSS	**Yuzh-Sakhalins**	**24.86**	**357**	*i* P	**P**	**23 18 52.6**	**+2.7**
YSS				pmax	pmax		
	comp=Z,57nm,1.8s,mb4.8						
NJ2	**Nanjing**	**25.09**	**299**	*e*P	**P**	**23 18 50.3**	**-1.9**
NJ2				AP	pP	23 18 59.4	-2.9
NJ2				XP	sP	23 19 02.1	-4.5
NJ2				PP	PP	23 19 26.9	-3.6
NJ2				S	**S**	**23 23 07.0**	**-4.5**
NJ2				XS		23 23 22.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,2μm,7.0s						
NJ2				LR	LR		
	comp=N,4μm,15.6s,MS5.2						
NJ2				LR	LR		
	comp=E,4μm,13.4s,MS5.2						
NJ2				LR	LR		
	comp=Z,2μm,20.0s						
SNY	**Shenyang**	**26.55**	**323**	⇑P	**P**	**23 19 04.8**	**-0.9**
CN2	**Changchun**	**26.94**	**328**	*e*P	**P**	**23 19 14.0**	**+4.7**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
TIA	**Tai'an**	**27.85**	**306**	⇓P	**P**	**23 19 17.9**	**+0.3**
KLR	**Kul'dur**	**29.00**	**342**	*e*P	**P**	**23 19 24.8**	**-3.0**
ENH	**Enshi**	**32.62**	**292**	*e*P	**P**	**23 19 58.4**	**-1.5**
	comp=Z,17nm,1.8s,mb4.7						
HIA	**Hailar**	**33.61**	**330**	*e*P	**P**	**23 20 08.3**	**+0.1**
	comp=Z,4.7nm,0.6s,mb4.6						
HIA	**Hailar**	**33.61**	**330**	*e*P	**P**	**23 20 08.3**	**0.0**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GYA	**Guiyang**	**34.95**	**285**	P	**P**	**23 20 19.8**	**-0.2**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
CD2	**Chengdu**	**37.59**	**292**	P	**P**	**23 20 42.5**	**+0.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
LZH	**Lanzhou**	**38.13**	**301**	*e*P	**P**	**23 20 48.3**	**+1.6**
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
LZH	**Lanzhou**	**38.13**	**301**	*e*P	**P**	**23 20 48.3**	**+1.6**
	comp=Z,25nm,1.0s,mb4.9						
LZH				pP	pP	23 21 09.7	+12
LZH				sP	sP	23 21 18.8	+17
KMI	**Kunming**	**38.55**	**283**	P	**P**	**23 20 52.3**	**+2.0**
	comp=Z,9.0nm,0.8s,mb4.5						
KMI	**Kunming**	**38.55**	**283**	P	**P**	**23 20 52.3**	**+2.0**
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
SONM	**Songino Array**	**40.01**	**319**	P	**P**	**23 21 03.2**	**+1.0**
	comp=Z,4.5nm,0.8s,mb4.3,baz=136,slow=10,SNR=26						
YAK	**Yakutsk**	**41.25**	**349**	*e*P	**P**	**23 21 12.5**	**+0.1**
	comp=Z,52nm,0.8s,mb5.2						
YAK	**Yakutsk**	**41.25**	**349**	⇓*e*P	**P**	**23 21 12.8**	**+0.4**
YAK				pmax	pmax		
	comp=Z,56nm,0.9s,mb5.2						
GTA	**Gaotai**	**41.87**	**305**	*e*P	**P**	**23 21 18.0**	**+0.3**
GTA				XP	sP	23 21 32.5	-0.5
GTA				PP	PP	23 23 00.8	+3.0
GTA				S	**S**	**23 27 30.3**	**-2.7**
GTA				SS	SS	23 30 33.1	-1.6
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,520nm,8.0s						
GTA				LR	LR		
	comp=N,1μm,16.0s,MS5.0						
GTA				LR	LR		
	comp=E,1μm,15.2s,MS5.0						
GTA				LR	LR		
	comp=Z,990nm,16.4s,MS4.8						
BOD	**Bodaibo**	**42.08**	**336**	*e*P	**P**	**23 21 19.0**	**-0.2**
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.0						
ZAK	**Zakamensk**	**42.96**	**321**	⇓*e*P	**P**	**23 21 26.6**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.1						
WRAB	**Tennant Creek**	**42.99**	**194**	*e*P	**P**	**23 21 26.5**	**-0.6**
	comp=Z,20nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	**42.99**	**194**	⇓*e*P	**P**	**23 21 27.0**	**-0.1**
WB2	**Warramunga Arr**	**43.00**	**194**	*e*P	**P**	**23 21 26.6**	**-0.6**
WRA	**Warramunga Arr**	**43.00**	**194**	P	**P**	**23 21 26.7**	**-0.5**
	comp=Z,11nm,0.7s,mb4.7,baz=15,slow=8.8,SNR=34						
FITZ	**Fitzroy Crossi**	**44.12**	**207**	⇑*i*P	**P**	**23 21 35.9**	**-0.4**
	comp=Z,32nm,0.6s,mb5.2						
ASPA	**Alice Springs**	**46.70**	**194**	*e*P	**P**	**23 21 55.9**	**-0.8**
BILL	**Bilibino**	**47.85**	**11**	*e*P	**P**	**23 22 03.3**	**-1.9**
	comp=Z,3.4nm,0.3s,mb4.8						
BILL	**Bilibino**	**47.85**	**11**	*i* P	**P**	**23 22 07.0**	**+1.8**
BILL				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
LSA	**Lhasa**	**48.50**	**291**	P	**P**	**23 22 12.0**	**+1.3**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
LSA	**Lhasa**	**48.50**	**291**	*e*P	**P**	**23 22 12.3**	**+1.6**
	comp=Z,12nm,0.8s,mb5.0						
LSA	**Lhasa**	**48.50**	**291**	*e*P	**P**	**23 22 12.3**	**+1.6**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
TIXI	**Tiksi**	**50.43**	**354**	⇓*i*P	**P**	**23 22 23.8**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
WMQ	**Urumqi**	**51.50**	**309**	⇓*i*P	**P**	**23 22 34.5**	**+1.1**
WMQ				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,330nm,9.2s						
GUN	**Gumba**	**53.28**	**289**	*e*P	**P**	**23 22 46.6**	**-0.4**
	comp=Z,42nm,0.8s,mb5.4						
STKA	**Stephens Creek**	**53.74**	**183**	P	**P**	**23 22 49.1**	**-1.2**
	comp=Z,2.9nm,0.8s,mb4.2,baz=351,slow=13,SNR=3.4						
PKI	**Pulchoki**	**53.74**	**289**	*e*P	**P**	**23 22 49.2**	**-1.2**
KKN	**Kakani**	**53.83**	**289**	*e*P	**P**	**23 22 49.9**	**-1.1**
	comp=Z,23nm,0.7s,mb5.2						
DMN	**Daman**	**54.01**	**289**	*e*P	**P**	**23 22 51.6**	**-0.8**
	comp=Z,12nm,0.4s,mb5.2						
GKN	**Gorkha**	**54.36**	**289**	*e*P	**P**	**23 22 54.5**	**-0.5**
	comp=Z,40nm,0.9s,mb5.4						
ZAL	**Zalesovo**	**54.85**	**321**	P	**P**	**23 22 57.9**	**-0.2**
	comp=Z,2.0nm,0.7s,mb4.2,baz=355,slow=7.5,SNR=7.4						
ZAL				PcP	PcP	23 23 58.9	-1.0
	comp=Z,1.3nm,0.7s,baz=1.5,slow=6.1,SNR=4.0						
ZAL	**Zalesovo**	**54.85**	**321**	P	**P**	**23 22 57.9**	**-0.2**
ZAL				PcP	PcP	23 23 58.9	-1.0
KOLN	**Koldanda**	**55.30**	**289**	*e*P	**P**	**23 23 01.5**	**-0.3**
	comp=Z,27nm,0.8s,mb5.3						
MKAR	**Makanchi Array**	**55.54**	**312**	P	**P**	**23 23 03.0**	**-0.2**
	comp=Z,12nm,0.7s,mb5.0,baz=91,slow=8.6,SNR=70						
MKAR				PcP	PcP	23 24 02.2	-0.5
	comp=Z,5.9nm,0.7s,baz=90,slow=3.6,SNR=6.4						
MKAR	**Makanchi Array**	**55.54**	**312**	P	**P**	**23 23 03.0**	**-0.2**
MKAR				PcP	PcP	23 24 02.2	-0.5
MKAR	**Makanchi Array**	**55.54**	**312**	*i* P	**P**	**23 23 02.9**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,16nm,0.9s						
NVS	**Novosibirsk**	**55.91**	**322**	*e*P	**P**	**23 23 05.2**	**-0.6**
NVS				pmax	pmax		
	comp=N,12nm,2.0s						
NVS				pmax	pmax		
	comp=E,17nm,2.0s						
NVS				pmax	pmax		
	comp=Z,17nm,2.0s,mb4.7						
KURK	**Kurchatov**	**58.22**	**317**	*e*P	**P**	**23 23 21.1**	**-1.0**
	comp=Z,8.8nm,0.8s,mb4.8						
KURK	**Kurchatov**	**58.22**	**317**	⇓*e*P	**P**	**23 23 21.8**	**-0.4**
SML	**Sawmill**	**59.87**	**30**	*e*P	**P**	**23 23 26.7**	**-6.8**
KSH	**Kashi**	**60.26**	**304**	*e*P	**P**	**23 23 40.3**	**+3.8**
KSH				*e*XP	sP	23 23 50.3	-1.6
KSH				AMB	AMB		
	comp=Z,150nm,4.4s						
TKM2	**Tokmak 2**	**60.29**	**308**	P	**P**	**23 23 37.9**	**+1.3**
	SNR=13						
KZA	**Kyzart**	**60.60**	**307**	P	**P**	**23 23 36.1**	**-2.7**
	SNR=18						
KBK	**Karagaybulak**	**60.78**	**307**	P	**P**	**23 23 40.9**	**+0.8**
	SNR=18						
CHMS	**Chumysh**	**60.91**	**308**	P	**P**	**23 23 41.5**	**+0.7**
	SNR=7.1						
ILAR	**Eielson Array**	**61.01**	**27**	P	**P**	**23 23 39.4**	**-1.9**
	comp=Z,3.3nm,0.7s,mb4.5,baz=260,slow=5.7,SNR=32						
USP	**Ospenovka**	**61.07**	**308**	P	**P**	**23 23 42.5**	**+0.6**
	SNR=7.3						
AAK	**Ala-Archa**	**61.12**	**307**	P	**P**	**23 23 43.1**	**+0.9**
	SNR=7.6						
AAK	**Ala-Archa**	**61.12**	**307**	*e*P	**P**	**23 23 41.8**	**-0.5**
	comp=Z,11nm,0.8s,mb5.0						
AAK	**Ala-Archa**	**61.12**	**307**	*e*P	**P**	**23 23 41.8**	**-0.5**
AAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb5.0						
UCH	**Uchtor**	**61.14**	**307**	P	**P**	**23 23 43.9**	**+1.4**
	SNR=25						
EKS2	**Erkin-Say**	**61.65**	**308**	P	**P**	**23 23 46.1**	**+0.3**
	SNR=7.7						
AML	**Almayashu**	**61.75**	**307**	P	**P**	**23 23 47.9**	**+1.4**
	SNR=16						
HYB	**Hyderabad**	**62.10**	**279**	*i* P	**P**	**23 23 49.0**	**-0.2**
HYB	**Hyderabad**	**62.10**	**279**	*e*P	**P**	**23 23 49.0**	**-0.2**
VOSK	**Vostochnaya**	**63.00**	**319**	P	**P**	**23 23 53.5**	**-1.3**
VOSK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.7						
CHKZ	**Chkalovo**	**63.20**	**320**	*e*P	**P**	**23 23 54.8**	**-1.3**
	comp=Z,6.2nm,0.7s,mb4.8						
CHKZ	**Chkalovo**	**63.20**	**320**	*e*P	**P**	**23 23 54.8**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.8						
BVA0	**Borovoye Array**	**63.35**	**319**	*i* P	**P**	**23 23 56.5**	**-0.6**
BVA0				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
BRVK	**Borovoye**	**63.41**	**319**	*e*P	**P**	**23 23 56.7**	**-0.8**
	comp=Z,8.5nm,0.8s,mb4.9						
BRVK	**Borovoye**	**63.41**	**319**	*e*P	**P**	**23 23 56.7**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
KKAR	**Karatay Array**	**63.99**	**308**	*i* P	**P**	**23 24 01.3**	**0.0**
KKAR				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
INK	**Inuvik**	**66.62**	**24**	P	**P**	**23 24 17.0**	**-0.8**
	comp=Z,3.5nm,0.8s,mb4.4,baz=253,slow=8.2,SNR=7.6						
SVE	**Sverdlovsk**	**68.64**	**324**	*e*P	**P**	**23 24 35.0**	**+4.4**
SVE				MLR	MLR		
	comp=N,600nm,16.0s,MS5.1						
SVE				MLR	MLR		
	comp=E,600nm,16.0s,MS5.1						
SVE				MLR	MLR		
	comp=Z,22μm,16.0s,MS6.5						
DLBC	**Dease Lake**	**68.97**	**34**	P	**P**	**23 24 33.8**	**+1.2**
	comp=Z,1.0nm,0.3s,mb4.2,baz=289,slow=8.3,SNR=3.8						
ARU	**Arti**	**69.84**	**324**	*e*P	**P**	**23 24 34.8**	**-3.2**
AB31	**Akbulak array**	**70.31**	**316**	*i* P	**P**	**23 24 40.5**	**-0.5**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
AKTO	**Aktyubinsk**	**71.30**	**318**	P	**P**	**23 24 45.7**	**-1.2**
AKTO				pmax	pmax		
	comp=Z,300nm,4.0s						
YKA	**Yellowknife Ar**	**75.41**	**28**	P	**P**	**23 25 10.5**	**-0.2**
	comp=Z,2.8nm,0.8s,mb4.2,baz=294,slow=5.4,SNR=7.7						
YKA	**Yellowknife Ar**	**75.41**	**28**	P	**P**	**23 25 10.5**	**-0.2**
WBK	**Wadi Bani Khal**	**78.16**	**290**	P	**P**	**23 25 27.8**	**+0.9**
	SNR=10						
KEV	**Kevo**	**78.47**	**342**	*e*p	**P**	**23 25 29.5**	**+1.8**
	comp=Z,18nm,0.9s,mb5.0						
KEV	**Kevo**	**78.47**	**342**	*e*P	**P**	**23 25 29.5**	**+1.8**
KEV				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
BIDO	**Bidbid**	**78.59**	**291**	P	**P**	**23 25 30.4**	**+1.0**
	SNR=14						
SMDO	**Samad**	**78.81**	**290**	P	**P**	**23 25 31.1**	**+0.6**
	SNR=8.4						
ARCES	**ARCESS Array B**	**79.03**	**342**	P	**P**	**23 25 31.5**	**+0.7**
	comp=Z,12nm,0.7s,mb4.9,baz=63,slow=5.4,SNR=14						
HOQ	**Hoqain**	**79.28**	**291**	P	**P**	**23 25 33.8**	**+0.7**
	SNR=13						
BANOM	**Banah**	**79.37**	**294**	P	**P**	**23 25 34.8**	**+1.2**
	SNR=8.7						
BSY	**Bisya**	**79.65**	**290**	P	**P**	**23 25 35.8**	**+0.6**
	SNR=21						
ASHO	**Ashiyiah**	**79.99**	**293**	P	**P**	**23 25 37.7**	**+0.8**
	SNR=10.0						
JOF	**Joensuu**	**80.61**	**335**	*e*p	**P**	**23 25 38.6**	**-0.8**
	comp=Z,16nm,0.7s,mb5.1						
JOF	**Joensuu**	**80.61**	**335**	*e*P	**P**	**23 25 38.6**	**-0.8**
JOF				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
NVAR	**Mina Array Bea**	**81.73**	**52**	P	**P**	**23 25 46.8**	**+1.0**
	comp=Z,2.7nm,0.7s,mb4.3,baz=275,slow=4.2,SNR=14						
OBN	**Obninsk**	**81.99**	**327**	*e*P	**P**	**23 25 41.7**	**-5.1**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
ZEI	**Tsey**	**82.89**	**313**	*e*P	**P**	**23 25 48.9**	**-2.7**
ZEI				*i*		23 29 03.1	
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
KAF	**Kangasniemi**	**83.00**	**335**	*e*p	**P**	**23 25 50.9**	**-0.9**
	comp=Z,9.2nm,0.8s,mb4.9,baz=50,slow=4.3						
KAF	**Kangasniemi**	**83.00**	**335**	*e*P	**P**	**23 25 50.9**	**-0.9**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
ELK	**Elko**	**83.05**	**49**	P	**P**	**23 25 53.6**	**+1.2**
	comp=Z,2.8nm,0.9s,mb4.3,baz=282,slow=4.1,SNR=11						
KIV	**Kislovodsk**	**83.22**	**315**	*e*P	**P**	**23 25 54.4**	**+1.1**
	comp=Z,17nm,0.9s,mb5.1						
KIV	**Kislovodsk**	**83.22**	**315**	⇓*e*P	**P**	**23 25 54.5**	**+1.2**
KIV				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
GNI	**Garni**	**83.34**	**311**	*e*P	**P**	**23 25 54.7**	**+0.7**
	comp=Z,19nm,1.1s,mb5.0						
GNI	**Garni**	**83.34**	**311**	*d i*P	**P**	**23 25 55.5**	**+1.5**
GNI				pmax	pmax		
	comp=Z,15nm,1.5s						
FINES	**FINESS Array B**	**83.47**	**335**	P	**P**	**23 25 54.1**	**-0.1**
	comp=Z,6.2nm,0.6s,mb4.8,baz=64,slow=5.7,SNR=27						
FINES	**FINESS Array B**	**83.47**	**335**	*i* P	**P**	**23 25 54.0**	**-0.2**
FINES				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HWUT	**Hardware Ranch**	**85.22**	**47**	*e*P	**P**	**23 26 02.8**	**-0.7**
	comp=Z,3.4nm,0.9s,mb4.5						
SUMG	**Summit**	**85.56**	**1**	*e*P	**P**	**23 26 05.6**	**+1.3**
	comp=Z,12nm,1.1s,mb5.0						
PDAR	**Pinedale Array**	**86.06**	**45**	P	**P**	**23 26 08.3**	**+0.9**
	comp=Z,1.1nm,0.7s,mb4.2,baz=259,slow=2.2,SNR=7.7						
AKASG	**Malin Array Be**	**88.06**	**325**	P	**P**	**23 26 16.4**	**-0.6**
	comp=Z,2.3nm,0.6s,mb4.6,baz=49,slow=4.7,SNR=16						
AKASG	**Malin Array Be**	**88.06**	**325**	*i* P	**P**	**23 26 16.3**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NB2	**NORSAR Subarra**	**89.12**	**339**	P	**P**	**23 26 21.1**	**-0.7**
	comp=Z,3.8nm,0.7s,mb4.8,baz=53,slow=4.8						
NOA	**NORSAR Array B**	**89.12**	**339**	P	**P**	**23 26 21.3**	**-0.5**
	comp=Z,1.3nm,0.8s,mb4.3,baz=50,slow=3.7,SNR=17						
NOA	**NORSAR Array B**	**89.12**	**339**	P	**P**	**23 26 21.3**	**-0.5**
NAO	**NORSAR Subarra**	**89.41**	**339**	P	**P**	**23 26 21.1**	**-2.1**
	comp=Z,3.8nm,0.7s,mb4.8						
NAO	**NORSAR Subarra**	**89.41**	**339**	P	**P**	**23 26 21.1**	**-2.1**
NAO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.9						
BR131	**Keskin Array S**	**91.16**	**314**	*e*P	**P**	**23 26 31.4**	**-0.5**
	comp=Z,3.0nm,1.0s,mb4.6						
BRTR	**Keskin Array B**	**91.16**	**314**	P	**P**	**23 26 31.4**	**-0.5**
	comp=Z,2.7nm,0.9s,mb4.6,baz=89,slow=4.2,SNR=11						
BRTR				PP	PP	23 30 13.7	+2.3
	comp=Z,0.8nm,0.9s,baz=135,slow=5.2,SNR=3.9						
ANMO	**Albuquerque**	**91.81**	**51**	P	**P**	**23 26 36.7**	**+1.6**
	comp=Z,2.2nm,0.7s,mb4.6,baz=282,slow=2.1,SNR=4.1						
ANMO	**Albuquerque**	**91.81**	**51**	⇑*e*P	**P**	**23 26 36.5**	**+1.5**
OKC	**Ostrava-Krasne**	**94.22**	**329**	*e*P	**P**	**23 26 55.6**	**+10**
DPC	**Dobruska-Polom**	**94.74**	**330**	*e*P	**P**	**23 26 43.1**	**-4.9**
PRU	**Pruhonice**	**95.82**	**330**	*e*P	**P**	**23 26 52.7**	**-0.2**
KHC	**Kasperske Hory**	**96.87**	**330**	*e*P	**P**	**23 26 49.8**	**-7.9**
PLCA	**Paso Flores**	**144.87**	**130**	PKP	PKPdf	23 33 04.0	+1.4
	comp=Z,11nm,0.9s,baz=248,slow=2.0,SNR=17						
LPAZ	**La Paz**	**148.41**	**85**	PKPbc	PKPdf	23 33 15.9	+6.7
	comp=Z,11nm,0.6s,baz=275,slow=2.8,SNR=38						
SAML	**Samuel**	**150.12**	**68**	*e*PKPbc	PKPdf	23 33 18.2	+6.2

*IDC **15** 23:21:20.6±4.1, 23.29N×142.04E, h13^{km}±25^{km}, mb4.5/18, mb1 4.6/20, mb1mx4.6/24, mbtmp4.6/20, ML4.4/2, MS4.8/8, Ms1 4.8/8, ms1mx4.3/38, Error ellipse: s-maj=20.9km s-min=13.0km az=86.0*

*MOS **15** 23:21:22.3±1.1, 23.31N×142.00E, h35^{km}, mb5.1/29, Error ellipse: s-maj=12.6km s-min=5.5km az=109.9*

*BJI **15** 23:21:24.3, 23.58N×142.51E, h60^{km}, mB5.2, mb4.9, Ms5.1, Msz4.8*

*NEIC **15** 23:21:26.2±0.2, 23.32N×142.17E, mb4.9/39, Error ellipse: s-maj=6.4km s-min=5.7km az=77.0*

ISC 15 23:21:21.6±2.1, **23.32N**±0.03×**142.17E**±0.05, **h29**^{km}±14^{km}, **h40**^{km}±5.6^{km}**:pP-P, n206, σ1^{s}10**/203, **mb4.8**/77, **MS4.9**/10, **16C-11D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.76**	**0**	Pn	**Pn**	**23 22 19.1**	**0.0**
	60nm,0.3s,baz=358,slow=20,SNR=30						
CBIJ				Sn	**Sn**	**23 23 04.0**	**+1.1**
	153nm,0.3s,baz=289,slow=23,SNR=6.4						
CBIJ				LR	LR	23 23 38.3	
	comp=Z,5μm,18.4s,baz=161,slow=36						
GUMO	**Guam**	**10.01**	**165**	*e*P	**P**	**23 23 47.5**	**+0.8**
	475nm,1.8s						
GUMO	**Guam**	**10.01**	**165**	*e*P	**P**	**23 23 47.5**	**+0.8**
GUMO				pmax	pmax		
	comp=Z,475nm,1.8s						
JOW	**Kunigami**	**13.07**	**288**	LR	LR	23 28 48.6	
	comp=Z,4μm,19.2s,baz=128,slow=35						
MJAR	**Matsushiro Arr**	**13.62**	**346**	Pn	**P**	**23 24 33.1**	**-2.1**
	comp=Z,0.9nm,0.3s,baz=163,slow=11,SNR=7.2						
MJAR				Sn	**S**	**23 27 05.2**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=238,slow=30,SNR=5.5						
MJAR	**Matsushiro Arr**	**13.62**	**346**	Pn	**P**	**23 24 33.1**	**-2.1**
MJAR				Sn	**S**	**23 27 05.2**	**-1.2**
MAJO	**Matsushiro**	**13.62**	**346**	*e*P	**P**	**23 24 36.0**	**+0.8**
	comp=Z,26nm,0.8s						
MAJO	**Matsushiro**	**13.62**	**346**	*e*P	**P**	**23 24 36.0**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,26nm,0.8s						
MAT	**Matsushiro**	**13.62**	**346**	P	**P**	**23 24 34.1**	**-1.2**
MAT				*e*S	**S**	**23 27 01.0**	**-5.5**
MAT	**Matsushiro**	**13.62**	**346**	P	**P**	**23 24 34.0**	**-1.3**
	comp=Z,6.8nm,0.7s						
MAT				S	**S**	**23 27 01.0**	**-5.5**
MAT	**Matsushiro**	**13.62**	**346**	P	**P**	**23 24 34.0**	**-1.3**
MAT				S	**S**	**23 27 01.0**	**-5.5**
MAT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KS15	**Wonju Array Si**	**18.68**	**322**	*e*P	**P**	**23 25 39.3**	**-0.4**
NACB	**Ninganchiao**	**18.86**	**277**	*e*P	**P**	**23 25 41.4**	**-0.6**
SSE	**Sheshan**	**20.18**	**297**	⇑P	**P**	**23 25 58.4**	**+1.6**
SSE				AMB	AMB		
	comp=Z,240nm,1.1s						
SSE				AMB	AMB		
	comp=Z,2μm,11.7s						
SSE	**Sheshan**	**20.18**	**297**	⇑P	**P**	**23 25 58.4**	**+1.6**
	comp=Z,244nm,1.1s						
ASAJ	**Asahikawa**	**20.75**	**1**	P	**P**	**23 26 02.5**	**0.0**
	comp=Z,16nm,0.7s,baz=216,slow=11,SNR=7.4						
ASAJ				LR	LR	23 32 42.3	
	comp=Z,3μm,19.7s,MS4.7,baz=178,slow=33						
NJ2	**Nanjing**	**22.37**	**298**	*e*P	**P**	**23 26 21.1**	**+2.2**
NJ2				AP		23 26 32.1	
NJ2				S	**S**	**23 30 14.0**	**-4.1**
NJ2				AMB	AMB		
	comp=Z,60nm,0.7s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,1μm,9.6s						

NJ2				LR	LR		
	comp=N,3µm,14.7s,MS5.0						
NJ2				LR	LR		
	comp=E,3µm,13.4s,MS5.0						
NJ2				LR	LR		
	comp=Z,2µm,14.1s,MS4.6						
YSS	Yuzh-Sakhalins	23.59	1	eP	P	23 26 32.0	+1.4
	comp=Z,25nm,0.8s,mb4.7						
YSS	Yuzh-Sakhalins	23.59	1	eP	P	23 26 31.8	+1.1
YSS				e		23 26 50.2	
YSS				pmax	pmax		
	comp=Z,40nm,1.1s,mb4.8						
SNY	Shenyang	24.12	324	⇑P	P	23 26 33.8	-2.1
SNY				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
CN2	Changchun	24.64	330	eP	P	23 26 40.5	-0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
WHN	Wuhan	25.78	292	eP	P	23 26 53.0	+1.2
KLR	Kul'dur	27.14	345	eP	P	23 27 00.0	-4.1
ENH	Enshi	29.91	290	eP	P	23 27 29.3	0.0
	comp=Z,46nm,1.4s,mb5.0						
XAN	Xi'an	30.94	298	P	P	23 27 38.6	+0.3
XAN				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
GYA	Guiyang	32.30	283	⇓iP	P	23 27 51.6	+1.3
GYA				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
CD2	Chengdu	34.88	291	⇓iP	P	23 28 13.0	+0.3
CD2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.1						
LZH	Lanzhou	35.41	300	eP	P	23 28 18.1	+1.0
LZH				AP	pP	23 28 34.4	+8.7
LZH				XP	sP	23 28 42.3	+13
LZH				AMB	AMB		
	comp=Z,50nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,200nm,5.0s						
LZH				LR	LR		
	comp=E,1µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,18.0s,MS4.9						
LZH	Lanzhou	35.41	300	eP	P	23 28 18.1	+1.0
	comp=Z,54nm,1.4s,mb5.3						
LZH				pP	pP	23 28 34.4	+8.7
LZH				sP	sP	23 28 42.3	+13
LZH				LR	LR		
	comp=Z,2µm,18.0s,MS4.9						
LZH	Lanzhou	35.41	300	eP	P	23 28 18.1	+1.0
LZH				*PP	pP	23 28 34.4	+8.7
LZH				pmax	pmax		
	comp=Z,54nm,1.4s,mb5.3						
LZH				MLR	MLR		
	comp=Z,2µm,18.0s,MS4.9						
KMI	Kunming	35.92	281	P	P	23 28 23.3	+1.8
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.5						
KMI	Kunming	35.92	281	P	P	23 28 23.3	+1.8
	comp=Z,16nm,1.5s,mb4.7						
KMI				pP	pP	23 28 28.2	-1.9
SONM	Songino Array	37.50	320	P	P	23 28 34.0	-0.5
	comp=Z,2.1nm,0.6s,mb4.1,baz=132,slow=7.1,SNR=16						
SONM				PcP	PcP	23 30 52.1	-0.8
	comp=Z,1.0nm,0.7s,baz=117,slow=3.5,SNR=3.1						
SONM				ScP		23 34 39.5	
	comp=Z,1.3nm,1.0s,baz=135,slow=4.2,SNR=7.2						
KKTK	Khon Kaen	37.57	267	⇑P	P	23 28 36.6	+1.1
	comp=Z,679nm,0.8s						
YAK	Yakutsk	39.62	351	⇓eP	P	23 28 52.0	-0.2
YAK				pmax	pmax		
	comp=Z,21nm,0.7s,mb5.0						
BOD	Bodaibo	39.98	337	eP	P	23 28 52.3	-2.9
SEY	Seymchan	40.19	7	⇑eP	P	23 28 58.4	+1.6
NST	Nakhon Sawan	40.24	267	⇑P	P	23 29 00.0	+2.3
	comp=Z,50nm,1.2s,mb5.1						
CHG	Chiang Mai	40.48	272	⇓P	P	23 29 01.1	+1.5
	comp=Z,47nm,1.1s,mb5.1						
ZAK	Zakamensk	40.49	322	eP	P	23 28 59.9	+0.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
NNT	Nongplab	41.62	263	P	P	23 29 10.6	+1.5
SNG	Songkhla	42.99	255	P	P	23 29 26.5	+6.1
	comp=Z,254nm,0.9s						
CTA	Charters Tower	43.33	174	eP	P	23 29 22.6	-0.4
	comp=Z,11nm,0.9s,mb4.6						
CTA	Charters Tower	43.33	174	P	P	23 29 22.2	-0.8
	comp=Z,17nm,1.0s,mb4.7,baz=359,slow=7.3,SNR=8.5						
CTA	Charters Tower	43.33	174	eP	P	23 29 22.6	-0.4
CTA				pmax	pmax		
	comp=Z,11nm,0.9s						
CTAO	Charters Tower	43.33	174	eP	P	23 29 22.1	-1.0
	comp=Z,16nm,0.9s,mb4.8						
CTAO				epP	pP	23 29 36.0	+4.3
CTAO	Charters Tower	43.33	174	eP	P	23 29 22.1	-0.9
CTAO				e*PP	pP	23 29 36.0	+4.3
CTAO				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
WRAB	Tennant Creek	43.66	191	eP	P	23 29 24.9	-0.8
	comp=Z,444nm,1.5s						
WRAB	Tennant Creek	43.66	191	d iP	P	23 29 24.7	-1.0
WB2	Warramunga Arr	43.67	191	⇓iP	P	23 29 24.9	-0.9
WRA	Warramunga Arr	43.67	191	P	P	23 29 25.0	-0.8
	comp=Z,68nm,0.9s,mb5.4,baz=11,slow=8.5,SNR=154						
KULM	Kulim	43.83	252	eP	P	23 29 28.6	+1.4
FITZ	Fitzroy Crossi	44.22	203	eP	P	23 29 29.1	-1.2
	comp=Z,36nm,0.9s,mb5.1						
LSA	Lhasa	45.80	289	P	P	23 29 45.4	+2.6
LSA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
LSA	Lhasa	45.80	289	eP	P	23 29 45.8	+3.0
	comp=Z,14nm,0.7s,mb5.0						
LSA	Lhasa	45.80	289	eP	P	23 29 45.8	+3.0
LSA				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
BILL	Bilibino	47.13	12	eP	P	23 29 53.2	+0.4
	comp=Z,33nm,1.0s,mb5.2						
BILL	Bilibino	47.13	12	d iP	P	23 29 53.1	+0.3
BILL				pmax	pmax		
	comp=Z,18nm,0.5s,mb5.3						
ASPA	Alice Springs	47.39	190	eP	P	23 29 54.0	-1.4
WMQ	Urumqi	48.84	309	P	P	23 30 06.5	+0.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
TIXI	Tiksi	48.95	354	⇑eP	P	23 30 06.4	-0.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
GUN	Gumba	50.60	288	eP	P	23 30 21.1	+1.0
	comp=Z,277nm,1.6s,mb5.9						
PKI	Pulchoki	51.06	287	eP	P	23 30 23.6	0.0
KKN	Kakani	51.14	288	eP	P	23 30 24.5	+0.3
	comp=Z,50nm,1.2s,mb5.3						
DMN	Daman	51.32	287	eP	P	23 30 26.1	+0.6
	comp=Z,47nm,1.1s,mb5.3						
GKN	Gorkha	51.67	288	eP	P	23 30 28.7	+0.5
	comp=Z,60nm,1.1s,mb5.5						
ZAL	Zalesovo	52.37	321	P	P	23 30 31.1	-2.0
	comp=Z,1.2nm,0.8s,mb3.9,baz=346,slow=8.1,SNR=6.3						
ZAL				PcP	PcP	23 31 43.8	-0.1
	comp=Z,3.2nm,0.9s,baz=5.2,slow=3.5,SNR=6.9						
KOLN	Koldanda	52.61	288	eP	P	23 30 35.9	+0.6
	comp=Z,48nm,1.0s,mb5.4						
MKAR	Makanchi Array	52.92	312	P	P	23 30 36.4	-0.9
	comp=Z,2.7nm,0.6s,mb4.4,baz=87,slow=8.9,SNR=35						
MKAR				PcP	PcP	23 31 45.2	-0.8
	comp=Z,1.4nm,0.6s,baz=85,slow=6.3,SNR=2.9						
MKAR	Makanchi Array	52.92	312	P	P	23 30 36.4	-0.9
MKAR				PcP	PcP	23 31 45.2	-0.8
MKAR	Makanchi Array	52.92	312	eP	P	23 30 36.4	-0.9
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NVS	Novosibirsk	53.45	322	eP	P	23 30 35.5	-5.6
NVS				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.5						
NVS				pmax	pmax		
	comp=E,17nm,2.0s						
STKA	Stephens Creek	54.89	181	eP	P	23 30 49.3	-2.7
	comp=E,9.1nm,1.0s,mb4.8						
STKA	Stephens Creek	54.89	181	P	P	23 30 50.3	-1.7
	comp=E,14nm,1.0s,mb5.0,baz=343,slow=4.8,SNR=12						
FORT	Forrest	55.47	195	eP	P	23 30 54.7	-1.5
	comp=E,21nm,0.6s,mb5.3						
KURK	Kurchatov	55.66	316	eP	P	23 30 55.4	-2.0
	comp=E,8.1nm,0.9s,mb4.8						
KURK	Kurchatov	55.66	316	c iP	P	23 30 55.7	-1.6
KDAK	Kodiak Island	57.41	35	P	P	23 31 09.0	-0.7
	comp=E,6.4nm,0.9s,mb4.7,baz=96,slow=18,SNR=6.3						
KDAK				LR	LR	23 51 49.7	
	comp=E,1µm,20.2s,MS5.1,baz=256,slow=32						
KDAK	Kodiak Island	57.41	35	P	P	23 31 09.0	-0.7
KDAK				LR	LR	23 51 49.7	
NDI	New Delhi	58.00	290	ex	x	23 31 12.5	
IMA2	Indian Mountai	58.47	26	eP	P	23 31 17.7	+0.7
KLBR	Kellerberrin	59.39	204	eP	P	23 31 22.5	-1.4
	comp=E,42nm,1.1s,mb5.4						
HYB	Hyderabad	59.53	277	⇓iP	P	23 31 24.5	-0.5
HYB	Hyderabad	59.53	277	⇓eP	P	23 31 24.5	-0.5
VOSK	Vostochnaya	60.48	319	P	P	23 31 28.9	-2.2
VOSK				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.4						
COLA	College	60.64	27	i P	P	23 31 34.8	+2.8
CHKZ	Chkalovo	60.70	320	eP	P	23 31 30.4	-2.2
	comp=Z,6.0nm,1.0s,mb4.7						
CHKZ	Chkalovo	60.70	320	eP	P	23 31 30.4	-2.1
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
NWAO	Narrogin (SRO)	60.78	204	LR	LR	23 55 44.3	
	comp=Z,284nm,18.1s,MS4.5,baz=175,slow=34						
BVA0	Borovoye Array	60.84	319	i P	P	23 31 31.8	-1.7
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
BRVK	Borovoye	60.90	319	eP	P	23 31 32.0	-1.9
	comp=Z,5.5nm,0.9s,mb4.7						
BRVK	Borovoye	60.90	319	eP	P	23 31 32.0	-1.9
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.7						
ILAR	Eielson Array	61.04	28	P	P	23 31 33.9	-0.8
	comp=Z,12nm,1.1s,mb5.0,baz=261,slow=5.3,SNR=48						
KKAR	Karatay Array	61.32	308	i P	P	23 31 36.8	-0.1
KKAR				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.8						
DAWY	Dawson	64.25	29	eP	P	23 31 54.2	-1.7
INK	Inuvik	66.47	24	P	P	23 32 10.3	+0.2
	comp=Z,5.9nm,0.7s,mb4.8,baz=279,slow=5.5,SNR=14						
INK	Inuvik	66.47	24	eP	P	23 32 09.9	-0.3
	comp=Z,12nm,1.0s,mb4.9						
INK	Inuvik	66.47	24	eP	P	23 32 09.9	-0.3
INK				pmax	pmax		
	comp=Z,12nm,1.0s						
AB31	Akbulak array	67.74	315	i P	P	23 32 17.3	-1.2
AB31				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
WBK	Wadi Bani Khal	75.46	289	P	P	23 33 05.8	+0.6
	SNR=9.2						
YKA	Yellowknife Ar	75.47	28	P	P	23 33 04.6	+0.2
	comp=Z,2.6nm,0.5s,mb4.4,baz=293,slow=5.9,SNR=17						
YKA	Yellowknife Ar	75.47	28	P	P	23 33 04.6	+0.2
YKA	Yellowknife Ar	75.47	28	⇑eP	P	23 33 04.5	+0.1
BIDO	Bidbid	75.89	290	P	P	23 33 08.3	+0.7
	SNR=8.5						
JMDO	Jabal Madar	76.30	289	P	P	23 33 10.1	+0.2
	SNR=6.4						
HOQ	Hoqain	76.58	290	P	P	23 33 12.0	+0.6
	SNR=13						
BANOM	Banah	76.66	293	P	P	23 33 12.8	+0.9
	SNR=7.4						
BSY	Bisya	76.95	289	P	P	23 33 13.7	+0.1
	SNR=25						
ARCES	ARCESS Array B	77.09	341	P	P	23 33 13.6	+0.1
	comp=Z,6.2nm,0.9s,mb4.5,baz=72,slow=7.7,SNR=7.9						
ASHO	Ashiyiah	77.28	291	P	P	23 33 15.7	+0.3
	SNR=8.3						
ARQ	Araqi	77.34	290	P	P	23 33 16.5	+0.8
	SNR=14						
JOF	Joensuu	78.45	334	ep	P	23 33 19.9	-1.1
	comp=Z,7.9nm,0.6s,mb4.8						
JOF	Joensuu	78.45	334	eP	P	23 33 19.9	-1.1
JOF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
OBN	Obninsk	79.62	326	eP	P	23 33 28.7	+1.2
OBN				e		23 33 40.5	
OBN				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
OBN				MLR	MLR		
	comp=Z,1µm,22.0s,MS5.2						
NEW	Newport	79.70	42	LR	LR	00 08 12.3	
	comp=Z,638nm,18.0s,MS5.0,baz=338,slow=35						
GOF	Gofitskoye	79.97	315	eP	P	23 33 29.6	0.0
OHCM	Honcut	80.23	51	eP	P	23 33 28.8	-2.4
ZEI	Tsey	80.28	312	i P	P	23 33 28.5	-2.8
ZEI				i *PP	pP	23 33 38.9	-1.6
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
KIV	Kislovodsk	80.63	314	d iP	P	23 33 33.6	+0.5
KIV				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
GNI	Garni	80.69	310	eP	P	23 33 33.2	-0.4
	comp=Z,16nm,1.1s,mb4.9						
GNI	Garni	80.69	310	d iP	P	23 33 34.8	+1.2
GNI				pmax	pmax		
	comp=Z,24nm,1.5s						
KAF	Kangasniemi	80.86	335	ep	P	23 33 32.9	-1.1
	comp=Z,3.3nm,0.7s,mb4.4,baz=53,slow=4.4						
KAF	Kangasniemi	80.86	335	eP	P	23 33 32.9	-1.1
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
FINES	FINESS Array B	81.32	334	P	P	23 33 35.9	-0.5
	comp=Z,4.8nm,0.5s,mb4.7,baz=70,slow=5.4,SNR=38						
CMB	Columbia Colle	81.52	52	eP	P	23 33 38.9	+1.0
	comp=Z,14nm,1.2s,mb4.8						
CMB	Columbia Colle	81.52	52	eP	P	23 33 38.9	+1.0
CMB				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
SOC	Sochi	82.74	314	eP	P	23 33 43.8	-0.3
SOC				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.1						
NVAR	Mina Array Bea	82.87	51	P	P	23 33 46.1	+1.2
	comp=Z,3.0nm,0.9s,mb4.3,baz=270,slow=3.6,SNR=8.9						
HLID	Hailey	83.38	45	eP	P	23 33 48.4	+1.0
	comp=Z,14nm,2.1s,mb4.6						
MSL	Mosul	83.41	307	ex	x	23 33 51.5	
HRY	Holter Researc	83.61	42	P	P	23 33 47.4	-1.2
BHD	Baghdad	83.66	303	ex	x	23 33 46.0	
ANN	Anapa	83.69	316	eP	P	23 33 48.5	-0.5
ANN				e	pP	23 33 57.5	-0.7
ANN				eS	S	23 44 07.2	-1.0
ANN				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.5						
DLMT	Dillon	83.75	43	eP	P	23 33 51.0	+1.8
	comp=Z,23nm,1.1s,mb5.2						
ELK	Elko	84.05	48	LR	LR	00 05 42.1	
	comp=Z,400nm,20.0s,MS4.8,baz=346,slow=32						
ELK	Elko	84.05	48	eP	P	23 33 52.1	+1.1
	comp=Z,7.6nm,1.1s,mb4.7						
ELK	Elko	84.05	48	eP	P	23 33 52.1	+1.2
ELK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SUMG	Summit	84.35	0	eP	P	23 33 51.9	+0.2
	comp=Z,4.1nm,0.6s,mb4.7						
QLMT	Earthquake Lak	84.73	43	eP	P	23 33 55.5	+1.3
TPNV	Topopah Spring	84.97	52	eP	P	23 33 56.7	+1.2
	comp=Z,21nm,1.5s,mb5.0						
TPNV	Topopah Spring	84.97	52	eP	P	23 33 56.7	+1.1
TPNV				pmax	pmax		
	comp=Z,21nm,1.5s,mb5.0						
YFT	Old Faithful	85.28	43	eP	P	23 34 00.6	+3.6
GCMT	Greycliff	85.37	42	P	P	23 33 56.8	-0.5
IMW	Indian Meadow	85.48	44	eP	P	23 33 59.7	+1.7
	comp=Z,7.0nm,0.9s,mb4.8						
AKASG	Malin Array Be	85.65	324	P	P	23 33 58.0	-0.6
	comp=Z,7.1nm,0.8s,mb5.0,baz=52,slow=5.0,SNR=38						
DUG	Dugway	85.95	48	eP	P	23 34 01.3	+0.9
	comp=Z,6.8nm,0.9s,mb4.9						
DUG	Dugway	85.95	48	eP	P	23 34 01.3	+0.9
DUG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.9						
HWUT	Hardware Ranch	86.14	46	eP	P	23 34 00.6	-0.7
	comp=Z,8.3nm,1.1s,mb4.9						
NEN	Nelson	86.55	53	eP	P	23 34 04.6	+1.1
SUW	Suwalki	86.86	329	eP	P	23 34 04.2	-0.3
SUW	Suwalki	86.86	329	eP	P	23 34 04.2	-0.3
PDAR	Pinedale Array	86.90	44	P	P	23 34 06.0	+1.0
	comp=Z,0.9nm,0.9s,mb4.0,baz=288,slow=4.7,SNR=4.6						
PDAR				LR	LR	00 14 52.5	
	comp=Z,503nm,18.2s,MS5.0,baz=353,slow=37						
DAU	Daniels Canyon	86.91	47	eP	P	23 34 05.5	+0.4
DAU				epP	pP	23 34 21.4	+7.0
NB2	NORSAR Subarra	87.10	338	P	P	23 34 04.5	-1.0
	comp=Z,3.3nm,0.8s,mb4.6,baz=48,slow=4.6						
NOA	NORSAR Array B	87.10	338	P	P	23 34 04.8	-0.7
	comp=Z,6.8nm,0.9s,mb4.9,baz=48,slow=4.6,SNR=9.3						
MSU	Marysvale	87.16	49	eP	P	23 34 07.6	+1.2
MSU				e		23 34 24.2	
NAO	NORSAR Subarra	87.39	338	P	P	23 34 04.5	-2.4
	comp=Z,3.3nm,0.8s,mb4.6						
NAO	NORSAR Subarra	87.39	338	P	P	23 34 04.5	-2.4
NAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
BR131	Keskin Array S	88.55	313	eP	P	23 34 12.2	-0.8
	comp=Z,6.7nm,0.9s,mb5.0						
BRTR	Keskin Array B	88.56	313	P	P	23 34 12.6	-0.5
	comp=Z,5.7nm,0.9s,mb4.9,baz=86,slow=3.8,SNR=25						
WUAZ	Wupatki	89.13	51	eP	P	23 34 16.6	+0.8
	comp=Z,14nm,1.2s,mb5.2						
BURAR	Bucovina Array	89.55	323	⇑P	P	23 34 18.4	+0.9
RSSD	Black Hills	89.66	41	P	P	23 34 16.4	-1.8
VRI	Vrincioaia	89.68	321	⇑P	P	23 34 18.9	+0.7
VRI	Vrincioaia	89.68	321	⇑P	P	23 34 18.9	+0.7
KWP	Kalwaria	89.71	326	eP	P	23 34 18.1	-0.1
KWP	Kalwaria	89.71	326	eP	P	23 34 18.1	-0.1
MLR	Muntele Rosu	90.34	321	⇑P	P	23 34 21.8	+0.5
MLR	Muntele Rosu	90.34	321	⇑P	P	23 34 21.8	+0.5
KOLS	Kolonicke sedl	90.36	325	eP	P	23 34 21.2	-0.1
KOLS				e		23 34 27.4	
STHS	Stebnicka Huta	90.60	326	eP	P	23 34 22.9	+0.5
STHS				epP	pP	23 34 36.2	+4.6
CRVS	Cervenica-Dubn	90.80	325	i P	P	23 34 23.7	+0.4
OJC	Ojcow	90.83	327	eP	P	23 34 21.1	-2.3
NIE	Niedzica	91.08	326	eP	P	23 34 25.1	+0.6
KECS	Kecovo	91.57	326	eP	P	23 34 26.0	-0.8
OKC	Ostrava-Krasne	91.90	328	eP	P	23 34 28.3	0.0
OKC				ex	x	23 34 33.0	
SDCO	Great Sand Dun	92.12	47	eP	P	23 34 30.9	+1.2
	comp=Z,5.6nm,1.1s,mb4.8						
KSP	Ksiaz	92.13	329	eP	P	23 34 29.9	+0.5
KSP	Ksiaz	92.13	329	eP	P	23 34 29.4	0.0
MORC	Moravsky Berou	92.23	328	eP	P	23 34 28.5	-1.4
	comp=Z,12nm,1.4s,mb5.0						
MORC	Moravsky Berou	92.23	328	eP	P	23 34 28.5	-1.4
MORC				pmax	pmax		
	comp=Z,12nm,1.4s,mb5.0						
PSZ	Piszkesteto	92.23	325	eP	P	23 34 27.2	-2.7
	comp=Z,16nm,1.4s,mb5.2						
PSZ	Piszkesteto	92.23	325	eP	P	23 34 27.2	-2.7
PSZ				pmax	pmax		
	comp=Z,16nm,1.4s,mb5.2						
VYHS	Vyhne	92.42	326	i P	P	23 34 31.1	+0.4
DPC	Dobruska-Polom	92.45	329	eP	P	23 34 31.1	+0.3
UPC	Upice	92.49	329	eP	P	23 34 31.1	+0.1
UPC				ex	x	23 34 36.0	
ANMO	Albuquerque	92.91	50	eP	P	23 34 33.9	+0.6
	comp=Z,13nm,1.5s,mb5.1						
ANMO	Albuquerque	92.91	50	⇑eP	P	23 34 34.9	+1.6
SMOL	Smolenice	93.12	327	eP	P	23 34 34.3	+0.3
PVCC	Panska Ves	93.15	330	eP	P	23 34 34.4	+0.3
PVCC				ex	x	23 34 39.2	
BRG	Berggiesshubel	93.20	330	eP	P	23 34 35.0	+0.7
	comp=Z,4.6nm,1.1s,mb4.8						
BRG				LR	LR		
	comp=Z,2µm,23.6s,MS5.6						
BRG	Berggiesshubel	93.20	330	eP	P	23 34 35.0	+0.7
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.9						
BRG				MLR	MLR		
	comp=Z,2µm,23.6s,MS5.6						
CLL	Collm	93.33	331	⇑P	P	23 34 34.4	-0.5
CLL	Collm	93.33	331	i P	P	23 34 34.5	-0.4
ZST	Bratislava	93.49	327	eP	P	23 34 35.5	-0.2
PRU	Pruhonice	93.53	329	eP	P	23 34 35.8	0.0
PRU				ex	x	23 34 40.2	
NKC	Novy Kostel	94.33	330	eP	P	23 34 39.4	-0.1
KHC	Kasperske Hory	94.58	329	eP	P	23 34 40.5	-0.2
KHC				ex	x	23 34 46.0	
GERES	GERESS Array B	94.72	329	P	P	23 34 40.8	-0.6
	comp=Z,4.4nm,1.0s,mb4.8,baz=45,slow=3.8,SNR=14						
GRA1	Grafenberg Arr	95.28	330	eP	P	23 34 43.1	-0.8
	comp=Z,10.0nm,1.3s,mb5.1						
GRF	Grafenberg Arr	95.28	330	eP	P	23 34 43.1	-0.8
	comp=Z,10.0nm,1.3s,mb5.1						
GRF	Grafenberg Arr	95.28	330	eP	P	23 34 43.1	-0.8
GRF				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb5.1						
GRF	Grafenberg Arr	95.28	330	eP	P	23 34 43.1	-0.8
GRF				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb5.1						
PLCA	Paso Flores	147.52	130	PKPbc	PKPdf	23 41 04.1	-1.3
	comp=Z,9.2nm,1.1s,baz=224,slow=3.3,SNR=8.1						
LPAZ	La Paz	150.69	82	PKPbc	PKPdf	23 41 13.6	+2.5
	comp=Z,5.4nm,0.8s,baz=319,slow=3.8,SNR=7.3						
SAML	Samuel	151.83	64	ePKPdf	PKPdf	23 41 09.1	-3.8
SAML				ePKPbc	PKPdf	23 41 14.4	+1.5
SAML				epPKPdf		23 41 23.1	

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*ATH **15** 23:24:02.1, 39.73N×20.68E, h24^{km}±2^{km}, MD3.0/5*
*NEIC **15** 23:24:02.1, 39.73N×20.68E, h24^{km}, MD3.0(ATH), After ATH.*
*CSEM **15** 23:24:02.2±0.1, 39.82N×20.70E, h12^{km}, MD3.0, Error ellipse: s-maj=4.8km s-min=2.7km az=4.0*
ISC 15 23:24:01.9±0.5**, 39.85N**±0.04×**20.74E**±0.04**, h10^{km}, n16, σ0^{s}.96**/20**, 1C, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.21	155	⇑iPB	Pb	23 24 06.3	-1.1
JAN				eSB	Sb	23 24 10.6	-0.4
IGT	Igoumenitsa	0.44	225	eP	Pg	23 24 10.3	-0.7
IGT	Igoumenitsa	0.44	225	P	Pg	23 24 10.3	-0.7
IGT				S	Sg	23 24 18.3	+1.3
IGT	Igoumenitsa	0.44	225	P	Pg	23 24 10.3	-0.7
IGT				S	Sg	23 24 18.3	+1.3
SRN	Sarande	0.57	273	ePg	Pg	23 24 12.6	-0.8
SRN				i Sg	Sg	23 24 22.4	+1.4
KEK	Kerkira	0.73	260	ePN	Pn	23 24 15.6	-2.5
KZN	Kozani	0.92	60	ePN	Pn	23 24 21.8	+1.1
FNA	Florina	1.05	28	eP	Pb	23 24 20.7	-1.1
EVR	Evrytania	1.25	138	ePN	Pn	23 24 25.2	-0.3
LIT	Litokhoron	1.37	79	eP	Pn	23 24 27.9	+0.6
AGG	Agios Georgios	1.49	123	eP	Pn	23 24 29.7	+0.8
GRG	Griva	1.69	48	eP	Pn	23 24 31.2	-0.5
XOR	Xorichti	1.96	104	eP	Pn	23 24 36.6	+1.0
PLG	Polygyros	2.14	75	ePN	Pn	23 24 38.7	+0.4
SOH	Sokhos	2.22	63	eP	Pn	23 24 39.8	+0.3
OUR	Ouranopolis	2.54	78	eP	Pn	23 24 43.8	-0.1

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*NEIC **15** 23:29:57.8±2.9, 21.97S×176.25W, h181^{km}±29^{km}, mb4.4/5, Error ellipse: s-maj=24.5km s-min=14.7km az=171.0*
*IDC **15** 23:30:01.7±4.3, 22.22S×176.20W, h220^{km}±41^{km}, mb4.1/4, mb1 4.0/7, mb1mx3.7/18, mbtmp4.6/7, Error ellipse: s-maj=25.9km s-min=20.0km az=160.0*
ISC 15 23:30:00.3±2.6**, 22.3S**±0.1×**176.1W**±0.1**, h239^{km}**±36^{km}**, n22, σ0^{s}.72**/19**, mb4.2**/8**, 1C, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	15.21	89	P	P	23 33 24.8	0.0
	3.6nm,0.3s,baz=234,slow=9.0,SNR=5.7						
RAR				S	S	23 35 57.5	-9.4
	1.7nm,0.3s,baz=85,slow=16,SNR=3.5						
DZM	Mont Dzumac	16.18	267	P	P	23 33 36.2	0.0
	0.5nm,0.3s,baz=74,slow=16,SNR=12						
URZ	Urewera	16.97	199	P	P	23 33 44.7	-0.3
	1.3nm,0.3s,baz=207,slow=3.0,SNR=4.1						
URZ				S	S	23 36 44.5	-0.2
	0.5nm,0.3s,baz=62,slow=5.2,SNR=3.1						
RPZ	Rata Peaks	23.89	203	P	P	23 34 57.1	+3.5
	9.9nm,0.8s,mb4.5,baz=346,slow=4.2,SNR=3.4						
CTA	Charters Tower	35.12	266	⇑iP	P	23 36 33.4	+0.3
	10nm,0.6s,mb4.5						
CTA	Charters Tower	35.12	266	P	P	23 36 33.5	+0.4
	14nm,0.6s,mb4.7,baz=94,slow=11,SNR=22						
CTAO	Charters Tower	35.12	266	eP	P	23 36 33.3	+0.2
	11nm,0.7s,mb4.5						
STKA	Stephens Creek	38.66	246	eP	P	23 37 04.0	+1.4
	3.7nm,0.7s,mb4.0						
STKA	Stephens Creek	38.66	246	P	P	23 37 04.0	+1.5
	4.8nm,0.7s,mb4.2,baz=98,slow=11,SNR=12						
STKA	Stephens Creek	38.66	246	eP	P	23 37 03.8	+1.2
ASPA	Alice Springs	45.87	258	eP	P	23 38 00.7	-0.1
WB2	Warramunga Arr	46.12	263	eP	P	23 38 01.8	-1.0
WRAB	Tennant Creek	46.13	263	eP	P	23 38 02.1	-0.7
	8.9nm,0.9s,mb4.1						
WRA	Warramunga Arr	46.14	263	P	P	23 38 02.9	0.0

	4.8nm,0.7s,mb3.9,baz=97,slow=7.8,SNR=26						
KAKA	Kakadu	49.80	272	eP	P	23 38 48.9	+18
	6.6nm,0.6s,mb4.1						
FITZ	Fitzroy Crossi	54.56	263	eP	P	23 39 06.4	+0.2
	5.8nm,1.2s,mb4.0						
QSPA	South Pole Qui	67.80	180	P	P	23 40 39.9	+6.1
	2.4nm,0.4s,mb4.2						
ARCES	ARCESS Array B	130.97	350	PKP	PKPdf	23 48 47.8	+4.9
	2.3nm,0.7s,slow=1.2,SNR=7.2						
AKASG	Malin Array Be	145.42	331	PKPbc	PKPbc	23 49 11.6	+1.4
	5.2nm,0.5s,baz=44,slow=4.2,SNR=50						
BR131	Keskin Array S	149.34	311	ePKPdf	PKPdf	23 49 24.7	+8.5
BRTR	Keskin Array B	149.34	311	PKPbc	PKPdf	23 49 24.9	+8.7
	2.3nm,0.5s,baz=136,slow=4.5,SNR=17						
GERES	GERESS Array B	152.37	346	PKPbc	PKPdf	23 49 31.9	+11
	0.7nm,0.7s,baz=18,slow=4.2,SNR=3.6						

MAN 15 23:38:07.6, 9.43N×125.36E, h1^{km}, mb4.7, ML3.6, MS3.5, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.38	20⇑	eP	Pg	23 38 15.2	+0.1
SCPH				eS	Sg	23 38 21.2	+1.1
BUTP	Butuan	0.53	150	eP	Pg	23 38 17.7	-0.4
BUTP				eS	Sg	23 38 30.7	+5.6
MSLP	Maasin	0.86	325	eP	Pg	23 38 24.2	-0.4
MSLP				eS	Sg	23 38 37.2	+1.1
CGP	Cagayan de Oro	1.17	214⇑	iP	Pb	23 38 30.1	-0.2
CGP				i S	Sb	23 38 47.4	+1.6
BUKP	Musuan	1.57	191	eP	Pn	23 38 36.1	-0.5
BUKP				eS	Sb	23 39 00.6	+3.3
LLP	Lapu-Lapu	1.63	303	eP	Pn	23 38 35.7	-1.9
LLP				eS	Sb	23 38 57.8	-1.3
PLP	Palo	1.77	348	eP	Pn	23 38 38.7	-0.9
PLP				eS	Sn	23 39 02.0	-0.9
SNPH	Sibulan	2.09	268	eP	Pn	23 38 44.0	-0.2
DCPH	Dipolog City	2.15	247	i P	Pn	23 38 44.5	-0.5
DCPH				i S	Sn	23 39 13.2	+0.4
BESP	Borongan	2.16	2	eP	Pn	23 38 46.7	+1.5
BESP				eS	Sn	23 39 12.9	-0.1
PAGZ	Pagadian	2.50	231	eP	Pn	23 38 50.4	+0.3
PAGZ				eS	Sn	23 39 22.0	+0.2
MATI	Mati	2.62	160	eP	Pn	23 38 47.0	-4.8
GUIM	Jordan	2.97	294	eP	Pn	23 38 51.5	-5.3
CNP	Catarman	3.14	348	eP	Pn	23 39 00.1	+1.0
CNP				eS	Sn	23 39 43.9	+6.1
IPIL	Ipil	3.20	240	eP	Pn	23 39 00.7	+0.6

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*NEIC **15** 23:44:35.8±2.5, 33.39N×141.54E, h41^{km}±19^{km}, mb4.4/3, Error ellipse: s-maj=33.0km s-min=21.5km az=61.0*
*JMA **15** 23:44:35.4±0.5, 33.61N×141.19E, M3.2*
*IDC **15** 23:44:37.7±5.9, 33.33N×141.40E, h51^{km}±40^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.4/20, mbtmp3.6/5, ML3.2/1, Error ellipse: s-maj=72.9km s-min=18.2km az=77.0*
ISC 15 23:44:34.7±1.4**, 33.45N**±0.07×**141.5E**±0.1**, h46**^{km}±11^{km}**, n19, σ0^{s}84**/23**, mb4.0**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.29	339	P	P	23 44 56.2	-0.4
JHJ2	Mitsune	1.48	257	P	P	23 44 59.6	+0.2
JHJ	Hachijo jima 2	1.50	258	P	P	23 45 00.1	+0.4
	77nm,0.3s,baz=68,slow=16,SNR=6.1						
BSO3	Boso 3	1.60	328	P	P	23 45 00.9	-0.1
TATJ	Tateyama 2	2.09	320	S	S	23 45 32.0	-0.8
JHU	Hanno	3.04	323	eS	S	23 45 56.8	0.0
JYN	Shimob	3.21	310	P	P	23 45 24.5	+0.6
JAG	Ashikaga	3.43	331	P	P	23 45 26.5	-0.5
JAG				S	S	23 46 07.4	+0.6
MJAR	Matsushiro Arr	4.12	319	P	P	23 45 36.7	-0.1
	1.3nm,0.3s,baz=153,slow=13,SNR=6.2						
MJAR				S	S	23 46 25.6	+1.3
	1.4nm,0.3s,baz=141,slow=19,SNR=4.3						
MAT	Matsushiro	4.12	319	P	P	23 45 37.3	+0.5
MAT				eS	S	23 46 23.0	-1.4
MAT	Matsushiro	4.12	319	P	P	23 45 37.0	+0.2
MAT				S	S	23 46 23.0	-1.4
SONM	Songino Array	30.00	309	P	P	23 50 41.9	+0.9
	1.6nm,1.1s,mb3.6,baz=103,slow=12,SNR=5.2						
MKAR	Makanchi Array	46.18	305	P	P	23 52 56.4	-0.1
	0.7nm,0.9s,mb3.6,baz=83,slow=12,SNR=5.5						
MKAR	Makanchi Array	46.18	305	P	P	23 52 56.4	-0.1
KURK	Kurchatov	48.28	311	eP	P	23 53 11.8	-1.2
	1.7nm,0.8s,mb4.1						
CHKZ	Chkalovo	52.88	315	eP	P	23 53 46.8	-1.0
	10nm,2.2s,mb4.4						
WRA	Warramunga Arr	53.53	188	P	P	23 53 51.9	-1.3
	0.6nm,0.4s,mb3.9,baz=5.1,slow=7.6,SNR=3.7						
MVU	Marysvale	81.00	50	eP	P	23 56 46.7	+0.7
	5.0nm,0.6s,mb4.6						
BRTR	Keskin Array B	81.31	312	P	P	23 56 49.5	+1.8
	0.6nm,0.8s,mb3.6,baz=63,slow=3.2,SNR=4.0						

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*IDC **15** 23:49:30.6±0.9, 5.95N×124.93E, mb3.9/7, mb1 4.1/7, mb1mx3.9/19, mbtmp3.9/7, Error ellipse: s-maj=48.0km s-min=19.1km az=78.0*
*MAN **15** 23:49:34.0, 5.75N×124.80E, h63^{km}, mb4.6, ML3.5, MS3.4*
*NEIC **15** 23:49:39.9±1.8, 5.92N×124.97E, h76^{km}±17^{km}, Error ellipse: s-maj=34.0km s-min=12.2km az=82.0*
ISC 15 23:49:36.4±1.2**, 5.86N**±0.08×**124.81E**±0.07**, h61**^{km}±11^{km}**, n13, σ1^{s}15**/18**, mb3.9**/7**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCP	Kidapawan	1.17	14⇓	eP	P	23 49 57.0	0.0
KCP				i S	S	23 50 13.7	+1.3
DAV	Davao City (W)	1.42	32	eP	P	23 50 02.4	+1.9
MATI	Mati	1.80	53	eP	P	23 50 05.1	-0.5
MATI				eS	S	23 50 25.2	-2.1
BUKP	Musuan	2.02	7	eP	P	23 50 08.6	-0.2
BUKP				eS	S	23 50 33.5	+0.7
PAGZ	Pagadian	2.43	324	eP	P	23 50 13.8	-0.8
PAGZ				eS	S	23 50 44.3	+1.1
IPIL	Ipil	2.93	311	eP	P	23 50 19.9	-1.8
IPIL				eS	S	23 50 52.2	-3.7
FITZ	Fitzroy Crossi	23.82	178	P	P	23 54 46.2	+1.3
	3.9nm,0.5s,mb4.1,baz=4.3,slow=12,SNR=9.5						
WRA	Warramunga Arr	27.30	160	P	P	23 55 17.9	+0.3
	0.7nm,0.4s,mb3.5,baz=336,slow=10,SNR=4.0						
MJAR	Matsushiro Arr	32.91	20	P	P	23 56 05.3	-1.8
	4.8nm,0.9s,mb4.4,baz=195,slow=9.5,SNR=5.2						
SONM	Songino Array	44.69	342	P	P	23 57 45.9	+0.8
	1.1nm,0.9s,mb3.7,baz=156,slow=6.7,SNR=6.9						
MKAR	Makanchi Array	54.73	325	P	P	23 59 01.8	-0.1
	0.9nm,0.7s,mb3.9,baz=118,slow=6.9,SNR=11						
BVAR	Borovoye Array	64.50	327	P	P	00 00 08.6	-0.4
	0.9nm,0.9s,mb3.8,baz=124,slow=5.3,SNR=5.1						
ILAR	Eielson Array	84.01	26	P	P	00 02 01.7	+0.5
	0.8nm,0.7s,mb4.0,baz=249,slow=5.0,SNR=9.3						

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*MAN **15** 23:52:26.9, 9.44N×125.31E, mb4.9, ML3.8, MS3.8*
*IDC **15** 23:52:35.3±8.8, 9.54N×125.43E, h86^{km}±83^{km}, mb3.9/11, mb1 4.1/11, mb1mx3.8/21, mbtmp4.3/11, Error ellipse: s-maj=35.8km s-min=15.8km az=70.0*
*NEIC **15** 23:52:42.6±6.3, 9.48N×125.45E, h159^{km}±61^{km}, mb4.3/4, Error ellipse: s-maj=29.7km s-min=13.1km az=72.0*
ISC 15 23:52:28.1±0.4**, 9.52N**±0.03×**125.48E**±0.04**, h33**^{km}**, n39, σ1^{s}22**/49**, mb4.2**/13**, 2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.26	2⇑	eP	P	23 52 34.3	-1.0
SCPH				eS	S	23 52 40.5	0.0
BUTP	Butuan	0.57	166	eP	P	23 52 37.2	-2.3
BUTP				eS	S	23 52 48.4	+0.5
MSLP	Maasin	0.86	315	eP	P	23 52 43.5	-0.3
MSLP				eS	S	23 52 57.0	+1.7
CGP	Cagayan de Oro	1.31	216⇑	iP	P	23 52 49.1	-1.2
CGP				i S	S	23 53 07.1	+0.2
BIPH	Bislig	1.59	147⇓	eP	P	23 52 54.3	+0.1
BIPH				i S	S	23 53 16.4	+2.6
BUKP	Musuan	1.68	194	eP	P	23 52 55.5	-0.1
BUKP				eS	S	23 53 19.8	+3.6
LLP	Lapu-Lapu	1.69	298	eP	P	23 52 55.9	+0.2
LLP				eS	S	23 53 16.7	+0.4
PLP	Palo	1.71	343	eP	P	23 52 58.2	+2.3
PLP				eS	S	23 53 21.6	+4.8
BESP	Borongan	2.07	359	eP	P	23 53 04.5	+3.4
BESP				eS	S	23 53 31.8	+5.8
SNPH	Sibulan	2.22	266	eP	P	23 53 03.0	-0.3
DCPH	Dipolog City	2.30	246	eP	P	23 53 03.8	-0.6
DCPH				i S	S	23 53 32.6	+0.8
PAGZ	Pagadian	2.66	231	eP	P	23 53 09.2	-0.4
PAGZ				eS	S	23 53 41.5	+0.6
MATI	Mati	2.67	163	eP	P	23 53 12.3	+2.6
GUIM	Jordan	3.05	291	eP	P	23 53 14.6	-0.6
GUIM				eS	S	23 53 50.2	-0.7
CNP	Catarman	3.08	345	eP	P	23 53 19.2	+3.7
CNP				eS	S	23 53 58.7	+7.1
RCP	Roxas	3.37	307⇓	eP	P	23 53 21.1	+1.5
PVCP	Virac	4.25	342	eP	P	23 53 38.1	+5.9
OTRP	Odiongan	4.42	310	eP	P	23 53 36.3	+1.8
ENPP	El Nido	6.19	286	eP	P	23 53 58.6	-0.9
FITZ	Fitzroy Crossi	27.45	180	eP	P	23 58 11.4	-2.0
	6.3nm,0.8s,mb4.2						
FITZ	Fitzroy Crossi	27.45	180	P	P	23 58 11.7	-1.7
	8.9nm,0.8s,mb4.3,baz=6.2,slow=4.1,SNR=5.1						
MJAR	Matsushiro Arr	29.27	21	P	P	23 58 29.6	0.0
	2.6nm,0.8s,mb4.0,baz=195,slow=9.0,SNR=4.0						
WRA	Warramunga Arr	30.55	163	P	P	23 58 42.1	+1.0
	0.5nm,0.3s,mb3.8,baz=344,slow=9.4,SNR=2.7						
CTA	Charters Tower	35.83	145	P	P	23 59 27.8	+0.9
	2.5nm,0.6s,mb4.3,baz=315,slow=9.7,SNR=4.9						
CTA	Charters Tower	35.83	145	P	P	23 59 27.8	+0.9
STKA	Stephens Creek	43.96	160	eP	P	00 00 33.9	-0.2
	3.8nm,0.6s,mb4.3						
STKA	Stephens Creek	43.96	160	P	P	00 00 34.0	-0.2
	3.4nm,0.5s,mb4.4,baz=328,slow=10,SNR=9.8						
MKAR	Makanchi Array	52.15	323	P	P	00 01 37.6	0.0
	0.8nm,0.4s,mb4.0,baz=120,slow=7.6,SNR=16						
KURK	Kurchatov	56.24	326	eP	P	00 02 06.0	-1.5
	6.8nm,1.0s,mb4.6						
BVAR	Borovoye Array	61.84	326	P	P	00 02 45.5	-0.8
	2.4nm,1.0s,mb4.3,baz=117,slow=6.6,SNR=9.3						
BRVK	Borovoye	61.91	326	eP	P	00 02 45.0	-1.8
	3.9nm,1.0s,mb4.5						
AKTO	Aktyubinsk	68.40	321	P	P	00 03 26.9	-1.6
	1.3nm,0.8s,mb4.0,baz=96,slow=4.5,SNR=3.2						
ILAR	Eielson Array	80.45	26	P	P	00 04 36.9	-1.1
	0.5nm,0.6s,mb3.6,baz=239,slow=4.8,SNR=9.8						
ARCES	ARCESS Array B	84.62	340	P	P	00 04 58.8	-0.4
	3.0nm,0.9s,mb4.4,baz=63,slow=5.4,SNR=6.3						
FINES	FINESS Array B	86.17	332	P	P	00 05 06.1	-0.9
	1.3nm,0.5s,mb4.4,baz=90,slow=3.8,SNR=8.4						
FINES	FINESS Array B	86.17	332	P	P	00 05 06.1	-0.9
IMW	Indian Meadow	106.31	39	ePKPdf		00 10 47.8	
TCUT	Toone Canyon	107.43	42	PKPdf		00 10 58.0	
PLCA	Paso Flores	145.82	158	PKPbc	PKPbc	00 12 05.7	+1.1
	1.8nm,0.8s,baz=162,slow=5.7,SNR=4.5						

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*NEIC **15** 23:55:02.1, 17.67N×100.91W, h57^{km}, MD4.0(MEX), After MEX.*
MEX 15 23:55:02.1±1.3**, 17.67N×100.91W, h57**^{km}±19^{km}**, MD3.9, 1D, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.53	263⇓	iP	P	23 55 12.2	-2.1
ZIIG				i S	S	23 55 21.2	-1.9
ACX	Acapulco	1.24	130	i P	P	23 55 21.5	-2.1
ACX				i S	S	23 55 38.5	-1.0
PLIG	Platanillo	1.52	62	i P	P	23 55 25.1	-2.4
PLIG				i S	S	23 55 44.3	-2.1
MOIG	Morelia	2.02	352	i P	P	23 55 34.2	-0.2
MOIG				i S	S	23 55 57.4	-1.0
YAIG	Yautepec	2.11	56	i P	P	23 55 33.1	-2.7
YAIG				i S	S	23 55 59.7	-1.1
PPM	Popocatepetl	2.57	57	i P	P	23 55 39.8	-2.6
PPM				i P		23 55 40.0	
PPM				i S	S	23 56 09.7	-2.9
PPM				i S	S	23 56 10.0	-2.5
PPM	Popocatepetl	2.57	57	i P	P	23 55 39.8	-2.6
PPM				i S	S	23 56 09.7	-2.9
PPM				i S	S	23 56 10.0	-2.5
SFJM	Santa Fe	3.45	325	i P	P	23 55 53.0	-1.7
SFJM				i S	S	23 56 35.0	+0.3
OXX	Oaxaca	4.04	98	i P	P	23 56 01.5	-1.5
OXX				i S	S	23 56 46.0	-3.5
CJM	Chamela	4.32	296	i P	P	23 56 05.2	-1.8
CJM				i S	S	23 56 51.7	-4.9
CMIG	Matias Romero	5.78	95	i S	S	23 57 28.6	-4.5
CMIG	Matias Romero	5.78	95	eP	P	23 56 36.9	+10
CMIG				i S	S	23 57 31.7	-1.5

SKHL 15 23:59:07.1±0.1**, 54.64N×124.81E, h5**^{km}±2^{km}**, mb3.8**/5**, 1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KROS	Kirovskiy	1.28	98⇓	iPg	Pg	23 59 29.6	-3.0
KROS				AMB	AMB	23 59 31.7	
	11nm,0.4s						
KROS				AMB	AMB	23 59 31.7	
	24nm,0.4s						
KROS				AMB	AMB	23 59 31.7	
	26nm,0.4s						
KROS				sPg		23 59 33.0	
KROS				eSg	Sg	23 59 46.0	-3.6
KROS				A		23 59 51.9	
	130nm,0.5s						
KROS				A		23 59 51.9	
	81nm,0.5s						
KROS				A		23 59 51.9	
	66nm,0.5s						
ZEA	Zeya	1.69	121	ePg	Pg	23 59 38.2	-2.7
ZEA				AMB	AMB	23 59 38.5	
	32nm,0.2s						
ZEA				pPg		23 59 39.6	
ZEA				eSg	Sg	00 00 01.0	-2.5
ZEA				A		00 00 02.4	
	68nm,0.4s						
ZEA				A		00 00 02.4	
	160nm,0.4s						
ZEA				A		00 00 02.4	
	53nm,0.4s						
YASR	Yasnyy	2.31	125	erx	rx	23 59 47.6	
YASR				ePg	Pg	23 59 48.5	-4.7
YASR				eSg	Sg	00 00 18.7	-5.3
YASR				A		00 00 23.9	
	30nm,0.4s						
YASR				A		00 00 23.9	
	50nm,0.4s						
YASR				A		00 00 23.9	
	20nm,0.4s						
BMKR	Bomnak	2.34	87	ePn	Pn	23 59 46.9	+0.1
BMKR				pPn		23 59 48.5	
BMKR				ePg	Pg	23 59 49.5	-4.4
BMKR				AMB	AMB	23 59 49.9	
	15nm,0.4s						
BMKR				eSg	Sg	00 00 20.5	-4.6
BMKR				A		00 00 21.5	
	40nm,0.3s						
TUP	Tupik	2.84	268	ePn	Pn	23 59 53.4	-0.5
TUP				ePg	Pg	23 59 58.5	-5.3
TUP				AMB	AMB	00 00 02.3	
	24nm,0.2s						
TUP				eSg	Sg	00 00 34.9	-6.7
TUP				A		00 00 36.9	
	55nm,0.5s						
EKMR	Ekimchan	5.07	105	ePn	Pn	00 00 22.7	-2.9
EKMR				ePg	Pg	00 00 37.5	-11
EKMR				AMB	AMB	00 00 37.6	
	3.0nm,0.6s						
EKMR				eSg	Sg	00 01 45.0	-11
EKMR				A		00 02 07.0	
	8.0nm,0.6s						
EKMR				A		00 02 07.0	
	4.0nm,0.6s						

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*JMA **16** 00:00:26.4±0.2, 38.19N×144.63E, h56^{km}, M4.4*
ISC 16 00:00:25.0±1.3**, 38.36N**±0.06×**144.8E**±0.1**, h86**^{km}±40^{km}**, n13, σ1^{s}24**/24**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.54	287	P	P	00 01 05.6	+0.5
MIYJ	Miyakonagasawa	2.61	299	P	P	00 01 06.9	+0.8
MIYJ				S	S	00 01 36.9	+0.1
JIO	Ouri	2.70	273	P	P	00 01 07.1	-0.2
JIO				S	S	00 01 37.5	-1.5
JMK	Ichinoseki	2.85	283	P	P	00 01 09.9	+0.5
JMK				S	S	00 01 42.7	-0.1
JOT	Ohata	4.17	318	P	P	00 01 29.7	+2.1
JOT				eS	S	00 02 14.2	-1.2
JCH	Churui	4.39	346	P	P	00 01 31.3	+0.6
JCH				eS	S	00 02 20.3	-0.6
JKB	Kayabe	4.55	322	P	P	00 01 35.2	+2.3
JKB				eS	S	00 02 25.4	+0.5
NEM2	Nemuro 2	5.05	8	P	P	00 01 38.5	-1.3
NEM2				eS	S	00 02 34.9	-2.5
JRY	Ryogami san	5.25	245	P	P	00 01 40.7	-1.7
JRY				eS	S	00 02 36.1	-6.1
JOD2	Odawara 2	5.51	238	eS	S	00 02 41.0	-7.8
MAT	Matsushiro	5.54	253	P	P	00 01 46.7	+0.3
MAT				S	S	00 02 48.9	-0.5
JTKR	Abashiri--Toko	5.64	354	P	P	00 01 48.5	+0.6
JTKR				eS	S	00 02 50.4	-1.7
JHR	Hokuryu	5.85	338	P	P	00 01 54.0	+3.2
JHR				eS	S	00 02 58.8	+1.6

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*ISK **16** 00:19:11.8, 36.96N×27.77E, h10^{km}, MD3.3*
*NEIC **16** 00:19:11.0, 36.95N×27.77E, h10^{km}, MD3.3(ISK), MD3.0(ATH), After ISK.*
*CSEM **16** 00:19:12.1±0.1, 36.99N×27.80E, h10^{km}, MD3.3, Error ellipse: s-maj=2.6km s-min=1.9km az=48.0*
*ATH **16** 00:19:13.2, 37.00N×27.81E, h40^{km}±2^{km}, MD3.0/4*
ISC 16 00:19:12.7±0.5**, 36.98N**±0.03×**27.81E**±0.04**, h6**^{km}±5^{km}**, n26, σ0^{s}91**/37**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.31	287	i P	Pg	00 19 19.2	+0.3
BDRM				i S	Sg	00 19 24.1	+1.1
DAT	Datca	0.31	217	i PG	Pg	00 19 17.9	-1.1
MLSB	Milas	0.32	355	i PG	Pg	00 19 19.0	-0.1
MLSB				SG	Sg	00 19 24.6	+1.2
BODT	Bodrum	0.41	282	i PG	Pg	00 19 19.6	-1.3
YER	Yerkesik	0.41	67	i PG	Pg	00 19 20.6	-0.3
NISR	Nisiros	0.66	237	eP	Pg	00 19 27.1	+1.3
AYDN	Tasoluk	0.69	5	i P	Pg	00 19 26.0	-0.4
AYDN				i S	Sg	00 19 35.8	+0.3
DALT	Dalyan (Mudla)	0.69	107	i PG	Pg	00 19 25.9	-0.7
ARG	Arkhangelos	0.80	161	eP	Pb	00 19 29.2	+0.6
ARG				eS	Sb	00 19 41.5	+2.1
SMG	Samos	1.07	314	eP	Pb	00 19 33.0	-0.1
SMG				eS	Sb	00 19 47.1	0.0
FETY	Fethiye	1.08	108	PN	Pn	00 19 33.8	-0.4
DNZL	Cakiroluk	1.22	54	i P	Pb	00 19 35.4	-0.3
DNZL				i S	Sb	00 19 51.6	+0.1
DENT	Denizli	1.25	51	PN	Pn	00 19 36.2	-0.4
GOLH	Golhisar	1.42	79	i P	Pn	00 19 38.2	-0.9
GOLH				i S	Sb	00 20 02.6	+5.1
IZM	Izmir	1.48	343	PN	Pn	00 19 39.6	-0.4
KDAG	Bornova	1.49	343	i P	Pn	00 19 39.3	-0.8
KDAG				i S	Sb	00 20 01.8	+2.4
KARP	Karpathos	1.52	200	eP	Pn	00 19 39.9	-0.6
BLCB	Balcova	1.53	337	PN	Pn	00 19 39.7	-1.0
AKAS	Kas	1.62	117	i P	Pn	00 19 44.8	+2.8
AKAS				i S	Sb	00 20 08.4	+5.1
MANT	Manisa	1.62	21	i P	Pn	00 19 42.1	+0.1
MANT				i S	Sb	00 20 03.8	+0.5
ELL	Elmali	1.70	97	ePN	Pn	00 19 43.2	+0.2
APE	Apeiranthos	1.83	274	ePN	Pn	00 19 43.7	-1.2
AKS	Akhisar	1.90	0	ePN	Pn	00 19 45.2	-0.7
KHL	Karahalli	1.91	45	ePN	Pn	00 19 46.1	0.0
TKTP	Tekketepe	2.26	61	i P	Pn	00 19 55.3	+4.1
TKTP				i S	Sn	00 20 27.0	+7.4
BCK	Bucak	2.27	77	ePN	Pn	00 19 51.3	+0.1

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*IDC **16** 00:30:38.1±0.7, 9.59N×125.51E, mb4.2/12, mb1 4.3/12, mb1mx4.2/21, mbtmp4.2/12, MS4.0/2, Ms1 4.0/2, ms1mx3.1/33, Error ellipse: s-maj=47.0km s-min=14.7km az=71.0*
*NEIC **16** 00:30:39.7±0.5, 9.61N×125.66E, h10^{km}, mb4.4/7, Error ellipse: s-maj=31.6km s-min=8.9km az=68.0*
NEIC Felt [II PIVS] at Surigao.
*MAN **16** 00:30:40.9, 9.42N×125.32E, h1^{km}, mb4.8, ML3.7, MS3.7*
MAN MAINIT SURIGAO DEL NORTE - INTENSITY II.
*MOS **16** 00:30:41.4±1.2, 9.57N×125.54E, h33^{km}, mb4.6/7, Error ellipse: s-maj=49.6km s-min=12.7km az=117.4*
ISC 16 00:30:41.8±0.5**, 9.54N**±0.03×**125.47E**±0.04**, h36**^{km}±4^{km}**, n51, σ1^{s}21**/60**, mb4.1**/20**, MS4.5**/1**, 2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.24	5⇑	eP	P	00 30 48.5	-0.6
SCPH				eS	S	00 30 54.4	+0.2
BUTP	Butuan	0.59	165	eP	P	00 30 51.4	-2.3
BUTP				eS	S	00 31 05.5	+3.3
MSLP	Maasin	0.84	314	eP	P	00 30 57.7	+0.5
MSLP				eS	S	00 31 10.9	+2.4
CGP	Cagayan de Oro	1.32	215⇑	iP	P	00 31 02.5	-1.7
CGP				i S	S	00 31 21.1	+0.2
BIPH	Bislig	1.61	147⇓	iP	P	00 31 08.2	-0.1
BIPH				i S	S	00 31 30.4	+2.3
LLP	Lapu-Lapu	1.67	298	eP	P	00 31 09.9	+0.8
LLP				eS	S	00 31 27.8	-1.7
BUKP	Musuan	1.70	194	eP	P	00 31 09.3	-0.2
BUKP				eS	S	00 31 33.8	+3.4
BESP	Borongan	2.05	359	eP	P	00 31 19.2	+4.7
BESP				eS	S	00 31 46.2	+7.1
DCPH	Dipolog City	2.30	246⇓	eP	P	00 31 17.6	-0.5
DCPH				eS	S	00 31 44.6	-0.8
PAGZ	Pagadian	2.66	231	eP	P	00 31 23.1	-0.2
PAGZ				eS	S	00 31 55.7	+1.0
MATI	Mati	2.69	163	eP	P	00 31 27.3	+3.5
GUIM	Jordan	3.03	291	eP	P	00 31 22.1	-6.5
CNP	Catarman	3.05	345	eP	P	00 31 33.8	+4.9
CNP				eS	S	00 32 17.5	+13
IPIL	Ipil	3.35	239	eP	P	00 31 32.0	-1.2
IPIL				eS	S	00 32 13.4	+1.1
PVCP	Virac	4.23	342	eP	P	00 31 51.8	+6.2
PVCP				eS	S	00 32 40.7	+6.3
OTRP	Odiongan	4.39	310	eP	P	00 31 48.6	+0.7
GUMO	Guam	19.42	76	LR	LR	00 41 15.7	
	comp=Z,226nm,20.1s,baz=282,slow=33						
KAKA	Kakadu	23.17	162	eP	P	00 36 04.0	+18
	3.7nm,0.4s,mb4.2						
FITZ	Fitzroy Crossi	27.47	180	P	P	00 36 25.2	-1.8
	9.9nm,1.1s,mb4.3,baz=351,slow=9.3,SNR=4.3						
WRAB	Tennant Creek	30.57	163	P	P	00 36 52.8	-1.8
	5.0nm,1.0s,mb4.3						
WRAB	Tennant Creek	30.57	163	P	P	00 36 52.8	-1.8
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
WRA	Warramunga Arr	30.57	163	P	P	00 36 54.6	-0.1
	comp=Z,0.4nm,0.6s,mb3.5,baz=344,slow=9.6,SNR=3.4						
CTA	Charters Tower	35.85	145	P	P	00 37 40.5	+0.1
	comp=Z,1.8nm,0.6s,mb4.2,baz=302,slow=11,SNR=3.3						
LSA	Lhasa	37.82	307	P	P	00 37 59.4	+2.6
	comp=Z,3.6nm,0.6s,mb4.3						
LSA	Lhasa	37.82	307	P	P	00 37 59.4	+2.5
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
SONM	Songino Array	41.43	341	P	P	00 38 27.5	+0.9
	comp=Z,0.1nm,0.4s,mb2.8,baz=161,slow=13,SNR=2.8						
NWAO	Narrogin (SRO)	42.95	190	P	P	00 38 40.2	+0.9
	comp=Z,8.1nm,1.0s,mb4.4,baz=32,slow=7.9,SNR=4.1						
NWAO	Narrogin (SRO)	42.95	190	eP	P	00 38 41.1	+1.8
	comp=Z,14nm,1.1s,mb4.6						
NWAO	Narrogin (SRO)	42.95	190	eP	P	00 38 41.1	+1.8
NWAO				pmax	pmax		
	comp=Z,14nm,1.1s						
STKA	Stephens Creek	43.98	160	P	P	00 38 47.6	-0.1
	comp=Z,3.7nm,0.7s,mb4.2,baz=341,slow=8.8,SNR=7.2						
STKA	Stephens Creek	43.98	160	eP	P	00 38 48.2	+0.5
MKAR	Makanchi Array	52.13	323	P	P	00 39 50.7	-0.1
	comp=Z,1.1nm,0.7s,mb3.9,baz=120,slow=7.8,SNR=14						
MKAR	Makanchi Array	52.13	323	P	P	00 39 50.7	-0.1
KURK	Kurchatov	56.22	326	eP	P	00 40 19.9	-0.9
	comp=Z,9.4nm,1.4s,mb4.6						
KURK	Kurchatov	56.22	326	eP	P	00 40 19.9	-0.9
KURK				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
BVAR	Borovoye Array	61.82	326	P	P	00 40 57.9	-1.6
	comp=Z,1.7nm,0.8s,mb4.2,baz=120,slow=12,SNR=6.9						

BRVK	**Borovoye**	**61.89**	**326**	*e*P	**P**	**00 40 59.6**	**-0.4**
	comp=Z,1.7nm,0.7s,mb4.3						
BRVK	**Borovoye**	**61.89**	**326**	*e*P	**P**	**00 40 59.6**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
CHKZ	**Chkalovo**	**61.95**	**327**	*e*P	**P**	**00 40 59.2**	**-1.2**
	comp=Z,5.1nm,1.5s,mb4.4						
CHKZ	**Chkalovo**	**61.95**	**327**	*e*P	**P**	**00 40 59.2**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.5s,mb4.4						
AKTO	**Aktyubinsk**	**68.38**	**321**	P	**P**	**00 41 41.1**	**-0.7**
	comp=Z,0.9nm,0.7s,mb3.9,baz=111,slow=8.6,SNR=3.4						
ILAR	**Eielson Array**	**80.44**	**26**	P	**P**	**00 42 50.9**	**-0.3**
	comp=Z,0.6nm,0.7s,mb3.6,baz=247,slow=4.8,SNR=7.8						
ARCES	**ARCESS Array B**	**84.60**	**340**	P	**P**	**00 43 12.5**	**+0.1**
	comp=Z,1.8nm,0.8s,mb4.3,baz=82,slow=6.4,SNR=3.3						
FINES	**FINESS Array B**	**86.15**	**332**	P	**P**	**00 43 20.3**	**+0.1**
	comp=Z,3.5nm,1.0s,mb4.6,baz=135,slow=8.1,SNR=6.2						
VNDA	**Vanda**	**89.31**	**173**	*e*P	**P**	**00 43 36.1**	**+1.0**
	comp=Z,1.6nm,1.0s,mb4.3						
VNDA	**Vanda**	**89.31**	**173**	*e*P	**P**	**00 43 36.1**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NOA	**NORSAR Array B**	**93.06**	**334**	P	**P**	**00 43 55.0**	**+2.2**
	comp=Z,0.9nm,0.8s,mb4.2,baz=46,slow=6.6,SNR=3.3						
NOA	**NORSAR Array B**	**93.06**	**334**	P	**P**	**00 43 55.0**	**+2.2**
DAVOX	**Davos**	**99.97**	**321**	LR	LR	01 30 26.9	
	comp=Z,144nm,18.3s,MS4.5,baz=239,slow=36						
PLCA	**Paso Flores**	**145.84**	**158**	PKPbc	PKPbc	00 50 18.3	+0.3
	comp=Z,1.2nm,0.7s,baz=223,slow=10,SNR=3.6						
PLCA	**Paso Flores**	**145.84**	**158**	PKPbc	PKPbc	00 50 18.3	+0.3

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*IDC **16** 01:06:47.1±9.9,11.89S×165.68E,h75^{km}±104^{km},mb3.5/4, mb1 3.7/5,mb1mx3.6/14,mbtmp3.8/5,ML3.8/1,Error ellipse: s-maj=71.9km s-min=41.4km az=155.0*

ISC 16 01:06:43.1±6.7,**11.8S**±0.2×**165.6E**±0.3,**h51**^{km}±64^{km},**n5**, σ**1^{s}60**/6,**mb3.8**/4,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.22**	**175**	P	**P**	**01 09 10.0**	**0.0**
	0.8nm,0.3s,baz=98,slow=21,SNR=9.9						
DZM				S	**S**	**01 11 04.4**	**+0.2**
	0.1nm,0.3s,baz=117,slow=24,SNR=2.3						
WRA	**Warramunga Arr**	**31.06**	**251**	P	**P**	**01 12 58.1**	**-0.7**
	1.1nm,0.8s,mb3.7,baz=78,slow=9.2,SNR=4.5						
SONM	**Songino Array**	**79.19**	**324**	P	**P**	**01 18 46.4**	**+2.1**
	0.3nm,0.8s,mb3.3,baz=146,slow=10,SNR=2.4						
ILAR	**Eielson Array**	**84.30**	**19**	P	**P**	**01 19 09.6**	**-0.9**
	0.7nm,0.5s,mb4.0,baz=237,slow=4.9,SNR=7.2						
MKAR	**Makanchi Array**	**93.96**	**317**	P	**P**	**01 19 56.4**	**-0.3**
	0.5nm,0.7s,mb4.1,baz=90,slow=5.9,SNR=4.4						

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*BUG **16** 01:18:46.3,51.52N×6.90E,h1^{km},ML1.3*

*LDG **16** 01:18:47.3±0.4,51.58N×6.73E,h1^{km},Ml2.7/7,Error ellipse: s-maj=6.7km s-min=5.6km az=44.0,Suspected Mining induced.*

*BNS **16** 01:18:47.2±0.9,51.56N×6.87E,h1^{km},ML1.9*

*CSEM **16** 01:18:47.0±0.2,51.57N×6.82E,h2^{km},ML2.7/6,Error ellipse: s-maj=4.4km s-min=2.2km az=104.0*

BGR 16 01:18:46.6±0.3,**51.54N×6.94E,h1**^{km}**,ML2.2**/4,**2D,Error ellipse: s-maj=3.3km s-min=2.2km az=88.0,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BZER	**Hlnxe**	**0.10**	**332**	Pg	Pg	01 18 46.9	-1.6
BZER				Sg	Sg	01 18 48.4	-1.4
LAUG	**Laupendahl**	**0.18**	**180**	*e*Pg	Pg	01 18 51.0	+0.8
LAUG				*e*Sg	Sg	01 18 54.6	+1.9
	182nm,0.6s						
BUG	**Bochum--Univer**	**0.23**	**115**	⇓*e*Pg	Pg	01 18 51.9	+0.8
BUG				Sg	Sg	01 18 56.0	+1.9
WTSB	**Winterswijk**	**0.44**	**348**	⇓*i*Pg	Pg	01 18 54.0	-1.3
	30nm,0.3s						
WTSB				*e*Sg	Sg	01 19 01.4	+0.2
WTSB	**Winterswijk**	**0.44**	**348**	*e*Pg	Pg	01 18 54.0	-1.3
	SNR=12						
WTSB				*e*Sg	Sg	01 19 00.9	-0.3
	SNR=2.3						
WTSB	**Winterswijk**	**0.44**	**348**	*e*Sg	Sg	01 19 01.4	+0.2
BNS	**Bensberg**	**0.59**	**166**	*e*Pg	Pg	01 18 59.4	+1.0
BNS				*e*Sg	Sg	01 19 08.2	+2.0
HOBG	**Hohbusch**	**0.60**	**156**	*e*Pg	Pg	01 18 59.7	+1.1
HOBG				*e*Sg	Sg	01 19 08.0	+1.3
RODG	**Roetgen-Dahlhe**	**0.62**	**231**	*e*Pg	Pg	01 18 58.1	-0.8
RODG				*e*Sg	Sg	01 19 07.0	-0.1
IBBN	**Ibbenburen**	**0.92**	**33**	*e*Pg	Pg	01 19 03.5	-1.5
	SNR=3.4						
STB	**Steinbach**	**0.94**	**184**	*e*Pg	Pg	01 19 05.4	0.0
STB				*e*Sg	Sg	01 19 19.0	+1.0
	47nm,0.4s						
KLL	**Kalltalsperre**	**0.97**	**204**	*e*Pg	Pg	01 19 05.5	-0.5
KLL				*e*Sg	Sg	01 19 19.3	+0.3
HGN	**Heimansgroeve**	**1.00**	**220**	*e*Pn	Pn	01 19 05.2	-2.4
	baz=30						
HGN				*e*Pg	Pg	01 19 05.8	-0.8
	22nm,0.2s						
HGN				*e*Sg	Sg	01 19 19.7	-0.2
HGN	**Heimansgroeve**	**1.00**	**220**	*e*Pg	Pg	01 19 05.6	-0.9
	SNR=31						
HGN				*e*Sg	Sg	01 19 19.2	-0.6
	SNR=15						
HGN	**Heimansgroeve**	**1.00**	**220**	*e*Pg	Pg	01 19 05.8	-0.7
	22nm,0.2s						
HGN				*e*Sg	Sg	01 19 19.7	-0.2
HILG	**Hillesheim**	**1.26**	**188**	*e*Pg	Pg	01 19 11.1	-0.5
HILG				*e*Sg	Sg	01 19 28.0	-0.3
WIT	**Witteveen**	**1.29**	**353**	*e*Pg	Pg	01 19 10.7	-1.6
	SNR=2.9						
WIT				*e*Sg	Sg	01 19 28.4	-1.2
	SNR=1.5						
BGG	**Burgeitz**	**1.35**	**169**	*e*Pg	Pg	01 19 12.1	-1.5
BGG				*e*Sg	Sg	01 19 31.5	-0.1
	36nm,0.3s						
TNS	**Taunus Mts**	**1.62**	**143**	*e*Pg	Pg	01 19 17.0	-1.9
	SNR=3.2						
TNS				*e*Sg	Sg	01 19 38.3	-2.4
	SNR=4.3						
WLF	**Walferdange**	**1.94**	**195**	*e*Pg	Pg	01 19 23.4	-1.9
	SNR=2.6						
WLF				*e*Sg	Sg	01 19 47.2	-3.9
	SNR=2.7						
GIVF	**Givet**	**1.97**	**224**	*e*Pn	Pn	01 19 18.9	-2.5
GIVF	**Givet**	**1.97**	**224**	*e*Pg	Pg	01 19 22.2	-3.6
GIVF				*e*Sg	Sg	01 19 47.1	-4.9
	18nm,0.3s						
GIVF	**Givet**	**1.97**	**224**	*e*Pg	Pg	01 19 22.2	-3.6
GIVF				*e*Sg	Sg	01 19 47.1	-4.9
	9.2nm,0.3s						
CLZ	**Clausthal**	**2.16**	**80**	*e*Pg	Pg	01 19 26.2	-3.5
CLZ				*e*Sg	Sg	01 19 55.4	-3.0
	SNR=3.3						
BAIF	**Baives**	**2.28**	**231**	*e*Pn	Pn	01 19 23.7	-2.1
BAIF				*e*Sg	Sg	01 19 55.7	-6.7
	6.4nm,0.2s						
MOX	**Moxa**	**3.08**	**105**	*e*Sg	Sg	01 20 24.8	-4.3
MOX	**Moxa**	**3.08**	**105**	*e*Sg	Sg	01 20 27.5	-1.6
CDF	**Champ du Feu**	**3.13**	**176**	*e*Pn	Pn	01 19 36.5	-1.5
CDF				*e*Sg	Sg	01 20 28.6	-2.3
	4.2nm,0.4s						
MEZF	**Maizieres J'vi**	**3.27**	**203**	*e*Pn	Pn	01 19 38.0	-2.0
	baz=36						
MEZF				*e*Sg	Sg	01 20 29.2	-6.3
	3.6nm,0.3s						
SFTF	**Sexfontaines**	**3.55**	**201**	*e*Pn	Pn	01 19 42.1	-1.9
SFTF	**Sexfontaines**	**3.55**	**201**	*e*Pg	Pg	01 19 52.9	-4.6
	baz=20						
SFTF				*e*Sg	Sg	01 20 38.6	-6.3
	4.2nm,0.3s						
LOR	**Lormes**	**4.72**	**206**	*e*Pn	Pn	01 19 56.8	-3.8
	baz=30						
LOR				*e*Sn	Sn	01 20 50.1	-6.7
LOR				*e*Sg	Sg	01 21 14.5	-9.2
	1.9nm,0.3s						
SSF	**Saint Saulge**	**5.01**	**208**	*e*Pn	Pn	01 20 00.9	-3.8
HYF	**Humbligny**	**5.11**	**215**	*e*Pn	Pn	01 20 02.9	-3.2
AVF	**Avril sur Loir**	**5.30**	**208**	*e*Pn	Pn	01 20 04.3	-4.5
AVF				*e*Sn	Sn	01 21 03.1	-8.3
SMF	**Signal de Mont**	**5.30**	**204**	*e*Pn	Pn	01 20 03.8	-5.0
SMF				*e*Sn	Sn	01 21 03.1	-8.3
LDF	**La Druitiere**	**5.42**	**240**	*e*Pn	Pn	01 20 06.0	-4.4
LDF				*e*Sn	Sn	01 21 05.0	-9.4
FLN	**La Foliniere**	**5.52**	**243**	*e*Pn	Pn	01 20 07.7	-4.2
	baz=53						
FLN				*e*Sn	Sn	01 21 07.0	-10
BGF	**Bois d'Agland**	**5.66**	**210**	*e*Pn	Pn	01 20 08.4	-5.5
GRR	**Gorron**	**5.94**	**241**	*e*Pn	Pn	01 20 13.4	-4.4
GRR				*e*Sn	Sn	01 21 16.6	-11
TCF	**Toulx Ste Croi**	**6.11**	**213**	*e*Pn	Pn	01 20 15.8	-4.4
TCF				*e*Sn	Sn	01 21 21.5	-10
MFF	**Saint Martin d**	**6.78**	**226**	*e*Pn	Pn	01 20 24.9	-4.8
SGMF	**Saint Gilles**	**6.96**	**246**	*e*Pn	Pn	01 20 26.0	-6.2

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*NDI **16** 01:31:23.3±2.6,34.75N×72.78E,h10^{km},MD3.9,ML4.3*

*IDC **16** 01:31:23.1±0.9,34.59N×73.31E,mb4.0/14,mb1 4.2/17, mb1mx4.1/24,mbtmp4.1/17,ML4.1/3,MS3.5/1,Ms1 3.5/1, ms1mx2.9/24,Error ellipse: s-maj=19.7km s-min=18.6km az=14.0*

*BJI **16** 01:31:24.9,34.60N×73.20E,h10^{km},mb3.7,ML3.9*

*NEIC **16** 01:31:24.7±0.3,34.58N×73.24E,h10^{km},mb3.4/5,Error ellipse: s-maj=8.3km s-min=4.7km az=48.0*

*MOS **16** 01:31:25.8±1.1,34.60N×73.25E,h33^{km},mb4.4/2,Error ellipse: s-maj=13.4km s-min=6.1km az=97.6*

*NNC **16** 01:31:34.0±3.6,34.97N×72.55E,h58^{km}±41^{km},mpv4.1, Error ellipse: s-maj=42.0km s-min=25.9km az=71.0*

ISC 16 01:31:26.3±0.3,**34.66N**±0.04×**73.30E**±0.06,**h33**^{km},**n65**, σ**1^{s}29**/85,**mb3.9**/16,**MS3.5**/1,**12C-7D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**3.00**	**137**	*e*P	**P**	**01 32 16.0**	**+3.5**
THN				*e*S	**S**	**01 32 56.4**	**+8.7**
DLH	**Dalhousie**	**3.06**	**133**	*e*P	**P**	**01 32 19.0**	**+5.5**
BHK	**Bhakra**	**4.16**	**140**	*e*PB	**Pb**	**01 32 47.8**	**+9.2**
BHK				*e*SB	**Sb**	**01 33 45.0**	**+16**
SDNR	**Sundarnagar**	**4.40**	**135**	*e*P	**P**	**01 32 34.0**	**+1.5**
SDNR				*e*S	**S**	**01 33 28.4**	**+5.1**
SMLA	**Simla**	**4.79**	**136**	*e*x	x	01 32 29.1	
SMLA				*e*S	**S**	**01 33 36.8**	**+3.7**
KLP	**Kalpa**	**5.19**	**126**	*e*P	**P**	**01 32 45.8**	**+2.2**
KLP				*e*S	**S**	**01 33 47.0**	**+3.9**
KLP				AML	AML	01 34 13.8	
	comp=E,428nm,0.7s						
KLP				AML	AML	01 34 19.5	
	comp=N,699nm,0.4s						
NDI	**New Delhi**	**6.83**	**150**	*e*P	**P**	**01 33 07.5**	**+0.9**
NDI				*e*S	**S**	**01 34 22.5**	**-1.5**
AAK	**Ala-Archa**	**8.02**	**6**	⇓Pn	**P**	**01 33 26.6**	**+3.4**
	comp=N,3.2nm,0.7s						
AAK				⇑Sn	**Sn**	**01 34 53.3**	**-0.6**
	comp=N,19nm,1.1s						
AAK	**Ala-Archa**	**8.02**	**6**	*e*Pn	**P**	**01 33 23.8**	**+0.6**
AAK				Sn	**Sn**	**01 34 53.3**	**-0.6**
KK31	**Karatay Array**	**8.71**	**346**	⇑Pn	**P**	**01 33 32.4**	**-0.4**
	comp=N,7.1nm,0.3s,baz=151,slow=12,SNR=340						
KK31				⇑Sn	**Sn**	**01 35 06.6**	**-4.5**
	comp=N,7.2nm,0.4s						
KK31	**Karatay Array**	**8.71**	**346**	⇑Pn	**P**	**01 33 32.4**	**-0.4**
	comp=N,7.1nm,0.3s						
KK31				Sn	**Sn**	**01 35 06.6**	**-4.5**
KK31	**Karatay Array**	**8.71**	**346**	⇑P	**P**	**01 33 32.4**	**-0.4**
KK31						01 35 06.6	
KK31				pmax	pmax		
	comp=Z,7.0nm,0.3s						
KKAR	**Karatay Array**	**8.71**	**346**	P	**P**	**01 33 32.8**	**0.0**
KKAR				S	**S**	**01 35 08.7**	**-2.2**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KKAR				smax			
	comp=Z,2.0nm,0.3s						
KOLN	**Koldanda**	**11.17**	**125**	*e*Pn	**P**	**01 34 05.7**	**-1.0**
KOLN				*e*Sn	**S**	**01 36 05.6**	**-5.8**
	comp=Z,23nm,0.5s						
KOLN	**Koldanda**	**11.17**	**125**	*e*Pn	**P**	**01 34 05.7**	**-1.0**
	comp=Z,12nm,0.5s						
KOLN				*e*Sn	**S**	**01 36 05.6**	**-5.8**
GKN	**Gorkha**	**11.74**	**121**	*e*Pn	**P**	**01 34 12.7**	**-1.6**
GKN				*e*Sn	**S**	**01 36 16.6**	**-8.6**
	comp=Z,37nm,0.4s						
DMN	**Daman**	**12.31**	**122**	*e*Pn	**P**	**01 34 21.3**	**-0.7**
DMN				*e*Sn	**S**	**01 36 30.8**	**-8.2**
KKN	**Kakani**	**12.32**	**121**	*e*Pn	**P**	**01 34 20.5**	**-1.7**
KKN				*e*Sn	**S**	**01 36 31.3**	**-8.0**
	comp=Z,40nm,0.8s						
PKI	**Pulchoki**	**12.54**	**121**	*e*Pn	**P**	**01 34 22.8**	**-2.4**
GUN	**Gumba**	**12.68**	**119**	*e*Pn	**P**	**01 34 24.7**	**-2.3**
JIRN	**Jiri**	**13.05**	**119**	*e*Pn	**P**	**01 34 30.1**	**-1.8**
MK02	**Makanchi Array**	**13.88**	**27**	⇑P	**P**	**01 34 43.5**	**+0.8**
MK02				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MK31	**Makanchi Array**	**13.89**	**27**	⇑P	**P**	**01 34 43.5**	**+0.6**
	comp=Z,1.3nm,0.7s,baz=211,slow=14,SNR=13						
MKAR	**Makanchi Array**	**13.89**	**27**	Pn	**P**	**01 34 42.9**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=9.6						
MKAR	**Makanchi Array**	**13.89**	**27**	Pn	**P**	**01 34 42.9**	**0.0**
MKAR	**Makanchi Array**	**13.89**	**27**	P	**P**	**01 34 44.0**	**+1.1**
AB31	**Akbulak array**	**17.61**	**330**	⇓P	**P**	**01 35 29.4**	**-1.1**
	comp=Z,0.9nm,0.3s,baz=140,slow=12,SNR=56						
AB31				⇑S	**S**	**01 38 34.9**	**-8.4**
	comp=Z,2.7nm,0.9s,baz=143,slow=23,SNR=3.4						
AB31	**Akbulak array**	**17.61**	**330**	⇓P	**P**	**01 35 29.4**	**-1.1**
	comp=Z,0.9nm,0.3s						
AB31				S	**S**	**01 38 34.9**	**-8.4**
AB31	**Akbulak array**	**17.61**	**330**	⇓P	**P**	**01 35 29.4**	**-1.1**
AB31				S	**S**	**01 38 34.9**	**-8.4**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VOSK	**Vostochnaya**	**18.14**	**355**	⇓P	**P**	**01 35 37.1**	**0.0**
	comp=Z,2.7nm,0.9s						
VOSK	**Vostochnaya**	**18.14**	**355**	⇓P	**P**	**01 35 37.1**	**0.0**
	comp=Z,2.7nm,0.9s						
VOSK	**Vostochnaya**	**18.14**	**355**	⇓P	**P**	**01 35 37.1**	**0.0**
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVA0	**Borovoye Array**	**18.48**	**354**	⇑P	**P**	**01 35 41.6**	**+0.2**
	comp=Z,0.4nm,0.4s,baz=167,slow=11,SNR=18						
BVA0	**Borovoye Array**	**18.48**	**354**	⇑P	**P**	**01 35 41.6**	**+0.2**
	comp=Z,0.4nm,0.4s						
BVAR	**Borovoye Array**	**18.48**	**354**	P	**P**	**01 35 41.6**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=164,slow=10,SNR=24						
BRVK	**Borovoye**	**18.52**	**354**	*e*P	**P**	**01 35 42.2**	**+0.3**
	comp=Z,3.9nm,0.8s						
BRVK	**Borovoye**	**18.52**	**354**	*e*P	**P**	**01 35 42.2**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHKZ	**Chkalovo**	**19.11**	**355**	⇑P	**P**	**01 35 48.3**	**-0.6**
	comp=Z,1.7nm,0.6s						
CHKZ	**Chkalovo**	**19.11**	**355**	⇑P	**P**	**01 35 48.3**	**-0.6**
AKTO	**Aktyubinsk**	**19.31**	**329**	P	**P**	**01 35 49.9**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=136,slow=10,SNR=34						
AKTO				S	**S**	**01 39 24.1**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=2.4,slow=21,SNR=2.2						
AKTO	**Aktyubinsk**	**19.31**	**329**	P	**P**	**01 35 49.9**	**-1.3**
AKTO				S	**S**	**01 39 24.1**	**+2.2**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	**20.91**	**19**	P	**P**	**01 36 07.5**	**-0.5**
	comp=Z,7.9nm,0.4s,baz=267,slow=6.4,SNR=23						
ZAL				S	**S**	**01 39 57.5**	**+3.2**
	comp=Z,0.7nm,0.3s,baz=149,slow=7.1,SNR=3.3						
GTA	**Gaotai**	**21.66**	**70**	*e*P	**P**	**01 36 17.0**	**+1.3**
GTA				AP		01 36 25.0	
GTA				XP		01 36 28.8	
GNI	**Garni**	**23.29**	**292**	P	**P**	**01 36 34.7**	**+2.9**
	comp=Z,1.1nm,0.5s,mb3.6,baz=203,slow=3.3,SNR=3.7						
SONM	**Songino Array**	**27.92**	**52**	P	**P**	**01 37 16.7**	**+1.4**
	comp=Z,0.2nm,0.4s,mb3.1,baz=248,slow=8.0,SNR=3.6						
BRTR	**Keskin Array B**	**31.82**	**291**	P	**P**	**01 37 51.1**	**+1.1**
	comp=Z,0.4nm,0.7s,mb3.3,baz=124,slow=5.2,SNR=3.0						
AKASG	**Malin Array Be**	**35.56**	**310**	P	**P**	**01 38 22.3**	**+0.1**
	comp=Z,0.4nm,0.4s,mb3.7,baz=83,slow=7.8,SNR=3.7						
IDI	**Anoyia**	**39.36**	**285**	P	**P**	**01 38 54.3**	**+0.1**
	comp=Z,9.7nm,1.1s,mb4.5,baz=358,slow=17,SNR=7.0						
FINES	**FINESS Array B**	**40.05**	**327**	P	**P**	**01 38 59.1**	**-0.6**
	comp=Z,3.2nm,0.9s,mb4.0,baz=117,slow=8.2,SNR=6.5						
ARCES	**ARCESS Array B**	**43.56**	**338**	P	**P**	**01 39 29.1**	**+0.8**
	comp=Z,3.7nm,0.7s,mb4.3,baz=111,slow=7.8,SNR=15						
HFS	**Hagfors**	**45.67**	**323**	P	**P**	**01 39 44.9**	**-0.4**
	comp=Z,1.9nm,0.5s,mb4.3,baz=97,slow=12,SNR=11						
NB2	**NORSAR Subarra**	**46.98**	**324**	P	**P**	**01 39 55.3**	**-0.2**
	comp=Z,0.3nm,0.3s,mb3.7,baz=95,slow=7.4						
NOA	**NORSAR Array B**	**46.98**	**324**	P	**P**	**01 39 54.7**	**-0.8**
	comp=Z,1.1nm,0.8s,mb3.8,baz=308,slow=11,SNR=2.4						
NAO	**NORSAR Subarra**	**47.14**	**324**	P	**P**	**01 39 55.3**	**-1.5**
	comp=Z,0.3nm,0.3s,mb3.7						
TGY	**Tagaytay City**	**47.47**	**103**	LR	LR	02 00 16.1	
	comp=Z,48nm,19.9s,MS3.5,baz=120,slow=36						
LBTB	**Lobatse**	**74.62**	**224**	*e*P	**P**	**01 43 05.0**	**+0.9**
ILAR	**Eielson Array**	**76.02**	**17**	P	**P**	**01 43 11.8**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.5,baz=304,slow=4.9,SNR=6.6						
DBIC	**Dimbokro**	**76.51**	**269**	P	**P**	**01 43 12.7**	**-2.4**
	comp=Z,2.8nm,0.9s,mb4.2,baz=33,slow=5.0,SNR=4.4						
BOSA	**Boshof**	**77.59**	**222**	P	**P**	**01 43 20.8**	**-0.1**
	comp=Z,3.2nm,0.5s,mb4.5,baz=10.0,slow=3.4,SNR=15						
BOSA	**Boshof**	**77.59**	**222**	P	**P**	**01 43 20.8**	**-0.1**
WRA	**Warramunga Arr**	**79.42**	**123**	P	**P**	**01 43 31.0**	**0.0**
	comp=Z,1.9nm,0.5s,mb4.3,baz=326,slow=5.4,SNR=11						
WRAB	**Tennant Creek**	**79.42**	**123**	*e*P	**P**	**01 43 32.1**	**+1.0**
	comp=Z,3.3nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	**79.42**	**123**	*e*P	**P**	**01 43 32.1**	**+1.1**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
YKA	**Yellowknife Ar**	**82.98**	**4**	P	**P**	**01 43 50.2**	**+1.5**
	comp=Z,0.9nm,0.6s,mb4.0,baz=346,slow=5.5,SNR=4.1						
YKA	**Yellowknife Ar**	**82.98**	**4**	P	**P**	**01 43 50.2**	**+1.5**

CASC 16 01:39:34.9±1.4,**11.18N×86.68W,h37**^{km}±248^{km},**MD3.6, ML3.4,5C-8D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSNN	**San Juan del S**	**0.82**	**82**	⇓*e*P	P	01 39 49.6	-0.4
SSNN				*e*S	S	01 40 01.6	+0.5
APON	**Apoyo**	**0.95**	**39**	⇓*e*P	P	01 39 51.7	-0.1
TICN	**Ticuantepe**	**0.96**	**27**	⇓*e*P	P	01 39 51.9	-0.1
TICN				*e*S	S	01 40 05.8	+1.2
COPN	**Copaltepe**	**1.00**	**5**	⇓*e*P	P	01 39 52.6	0.0
COPN				*e*S	S	01 40 05.5	-0.2
XAVN	**Gruta Xavier**	**1.03**	**19**	*e*P	P	01 39 53.0	+0.1
XAVN				*e*S	S	01 40 07.0	+0.6
MGAN	**Managua**	**1.05**	**23**	⇓*e*P	P	01 39 53.2	-0.1
MGAN				*e*S	S	01 40 07.1	+0.1
	comp=E,831nm,0.4s						
CONN	**Concepcion**	**1.10**	**69**	⇑*e*P	P	01 39 53.8	-0.2
MADN	**Villa Maderas**	**1.14**	**78**	⇑*e*P	P	01 39 54.4	-0.2
MOMJ	**Momotombo**	**1.23**	**6**	⇑*e*P	P	01 39 55.5	-0.4
LEON	**Leon**	**1.25**	**350**	⇓*e*P	P	01 39 55.9	-0.2
LEON				*e*S	S	01 40 11.3	-0.8
MIRN	**Miramar**	**1.26**	**358**	⇑*e*P	P	01 39 56.0	-0.2
MIRN				*e*S	S	01 40 11.9	-0.3
CNGN	**Cerro Negro**	**1.32**	**359**	⇑*e*P	P	01 39 56.8	-0.3
CNGN				*e*S	S	01 40 14.5	+0.7
TEL3	**Telica 3**	**1.40**	**353**	⇓*e*P	P	01 39 58.6	+0.2
TEL3				*e*S	S	01 40 16.2	+0.5
TELN	**Telica**	**1.43**	**354**	*e*P	P	01 39 58.8	0.0
CRIN	**San Cristobal**	**1.56**	**346**	⇓*e*P	P	01 40 01.0	+0.4

ISC 16 01:43:41.6±1.0,**38.21N**±0.04×**26.64E**±0.07,**h10**^{km},**n8**, σ**0^{s}95**/14,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.16**	**348**	*i* P	**Pg**	**01 43 44.8**	**-0.4**
URLA				*i* S	**Sg**	**01 43 48.3**	**+0.6**
BLCB	**Balcova**	**0.37**	**61**	PG	**Pg**	**01 43 49.0**	**-0.2**
BLCB				SG	**Sg**	**01 43 54.5**	**+0.3**
IZM	**Izmir**	**0.53**	**69**	PG	**Pg**	**01 43 52.3**	**0.0**
KDAG	**Bornova**	**0.53**	**68**	*i* P	**Pg**	**01 43 51.2**	**-1.2**
KDAG				*i* S	**Sg**	**01 43 59.2**	**-0.5**
AYDN	**Tasoluk**	**1.12**	**119**	*i* P	**Pb**	**01 44 02.3**	**-0.4**
AYDN				*i* S	**Sb**	**01 44 16.3**	**-0.9**
AKS	**Akhisar**	**1.14**	**54**	*e*PN	**Pn**	**01 44 02.0**	**-1.6**
BDRM	**Kayabasi**	**1.31**	**150**	*i* P	**Pb**	**01 44 07.0**	**+1.2**
BDRM				*i* S	**Sb**	**01 44 22.6**	**+0.1**
MANT	**Manisa**	**1.54**	**79**	*i* P	**Pn**	**01 44 10.7**	**+1.4**
MANT				*i* S	**Sb**	**01 44 31.2**	**+2.0**

JMA 16 01:47:12.9±0.2,**38.08N×144.70E,h55**^{km}**,M3.7,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.58**	**294**	P	P	01 47 53.5	+0.3
OFUJ				*e*S	S	01 48 24.6	+1.2
JIO	**Ouri**	**2.66**	**279**	P	P	01 47 54.5	+0.1
JIO				S	S	01 48 25.2	-0.4
MIYJ	**Miyakonagasawa**	**2.70**	**304**	P	P	01 47 54.8	-0.1
MIYJ				*e*S	S	01 48 26.7	+0.2
JMK	**Ichinoseki**	**2.87**	**289**	P	P	01 47 57.8	+0.5
JMK				*e*S	S	01 48 32.2	+1.5
JOT	**Ohata**	**4.34**	**321**	P	P	01 48 18.0	0.0
JOT				*e*S	S	01 49 05.0	-2.8
JKB	**Kayabe**	**4.73**	**325**	*e*S	S	01 49 14.7	-3.0
JRY	**Ryogami san**	**5.07**	**248**	P	P	01 48 27.5	-0.8
JRY				*e*S	S	01 49 21.8	-4.5
JOD2	**Odawara 2**	**5.32**	**240**	*e*S	S	01 49 27.4	-4.9
NEM2	**Nemuro 2**	**5.34**	**8**	P	P	01 48 27.3	-4.7
NEM2				*e*S	S	01 49 23.2	-10
JTKR	**Abashiri--Toko**	**5.92**	**354**	P	P	01 48 37.3	-2.7
JTKR				*e*S	S	01 49 40.7	-6.6
JHR	**Hokuryu**	**6.09**	**339**	*e*S	S	01 49 48.5	-3.1

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*IDC **16** 02:10:58.1±1.7,3.29N×96.53E,mb4.2/8,mb1 4.3/8, mb1mx4.0/18,mbtmp4.2/8,Error ellipse: s-maj=83.5km s-min=18.6km az=57.0*

*NEIC **16** 02:11:01.7±1.0,3.07N×96.24E,h30^{km},mb4.4/2,Error ellipse: s-maj=29.8km s-min=14.0km az=47.0*

ISC 16 02:11:00.2±0.9,**3.1N**±0.1×**96.2E**±0.1,**h33**^{km},**n18**, σ**1^{s}29**/18,**mb4.3**/14,**2D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**4.92**	**63**	*e*P	**P**	**02 12 14.4**	**+0.6**
JIRN	**Jiri**	**26.28**	**340**	*e*P	**P**	**02 16 34.8**	**+0.1**
	22nm,0.8s,mb4.7						
GUN	**Gumba**	**26.62**	**339**	*e*P	**P**	**02 16 36.6**	**-1.2**
DMN	**Daman**	**26.63**	**338**	*e*P	**P**	**02 16 42.0**	**+4.0**
KKN	**Kakani**	**26.73**	**338**	*e*P	**P**	**02 16 40.5**	**+1.6**
	25nm,1.0s,mb4.7						
GKN	**Gorkha**	**27.17**	**337**	*e*P	**P**	**02 16 45.0**	**+2.1**
	24nm,0.8s,mb4.8						
KOLN	**Koldanda**	**27.38**	**335**	*e*P	**P**	**02 16 51.4**	**+6.6**
	9.2nm,0.7s,mb4.4						
FITZ	**Fitzroy Crossi**	**35.79**	**127**	P	**P**	**02 17 58.2**	**-0.5**
	2.0nm,0.6s,mb4.2,baz=320,slow=7.9,SNR=3.5						
WRA	**Warramunga Arr**	**43.83**	**123**	P	**P**	**02 19 05.8**	**+0.4**
	0.6nm,0.7s,mb3.5,baz=303,slow=9.0,SNR=3.6						
MKAR	**Makanchi Array**	**45.22**	**347**	P	**P**	**02 19 14.9**	**-1.2**
	1.0nm,0.5s,mb3.9,baz=157,slow=8.3,SNR=18						
SONM	**Songino Array**	**45.46**	**10**	P	**P**	**02 19 17.1**	**-0.9**
	0.7nm,0.5s,mb3.8,baz=191,slow=9.3,SNR=8.4						
SONM				PcP	PcP	02 20 57.3	+0.2
	0.8nm,0.8s,baz=188,slow=3.1,SNR=2.6						
KK31	**Karatay Array**	**45.98**	**334**	⇓Pn	**P**	**02 19 20.8**	**-1.4**
	0.7nm,0.3s,mb4.1,baz=154,slow=11,SNR=27						
KK31				⇓Sn	PcP	02 20 56.4	-2.6
	0.7nm,0.5s,baz=175,slow=21,SNR=5.5						
ZAL	**Zalesovo**	**51.58**	**351**	P	**P**	**02 20 04.3**	**-1.0**
	3.4nm,0.3s,mb4.8,baz=253,slow=1.5,SNR=4.7						
CHKZ	**Chkalovo**	**54.67**	**342**	*e*P	**P**	**02 20 25.2**	**-3.1**
	1.7nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**55.30**	**133**	P	**P**	**02 20 32.9**	**-0.3**
	2.1nm,0.8s,mb4.2,baz=328,slow=13,SNR=3.7						
STKA	**Stephens Creek**	**55.30**	**133**	P	**P**	**02 20 32.9**	**-0.3**
FINES	**FINESS Array B**	**77.92**	**332**	P	**P**	**02 22 57.3**	**+0.9**
	6.5nm,1.1s,mb4.5,baz=80,slow=8.5,SNR=2.9						
ARCES	**ARCESS Array B**	**80.48**	**340**	P	**P**	**02 23 12.4**	**+2.3**
	3.4nm,0.8s,mb4.3,baz=90,slow=5.4,SNR=3.9						

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*NEIC **16** 02:13:20.2,18.47N×68.81W,h161^{km},MD4.2(RSPR), After RSPR.*

RSPR 16 02:13:20.2,18.47N×68.81W,h161^{km}±7^{km},**MD4.2**/7, **MD4.2**/7,**7C-1D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**1.68**	**106**	⇑*e*P	P	02 13 51.3	-1.5
CRPR				*e*S	S	02 14 17.4	-0.6
AOPR	**Arecibo Observ**	**1.96**	**93**	⇑*e*P	P	02 13 55.4	-0.5
AOPR				*e*S	S	02 14 24.1	+0.7
SJG	**San Juan**	**2.56**	**98**	⇑*e*P	P	02 14 03.6	+0.6
SJG				*e*S	S	02 14 36.6	+0.6
CPD	**Cerro la Pandu**	**2.79**	**98**	⇑*e*P	P	02 14 06.8	+0.9
CPD				*e*S	S	02 14 41.1	+0.1

CBYP	**Canovanas**	**2.81**	**94**	⇓*e*P	P	02 14 06.3	0.0
CBYP				*e*S	S	02 14 41.0	-0.7
HUMP	**Col San Antoni**	**2.83**	**96**	⇑*e*P	P	02 14 06.2	-0.3
HUMP				*e*S	S	02 14 41.8	-0.2
MTP	**Monte Pirata**	**3.12**	**96**	⇑*e*P	P	02 14 09.9	-0.2
MTP				*e*S	S	02 14 49.5	+1.1
CULB	**Culebra**	**3.31**	**92**	⇑*e*P	P	02 14 12.0	-0.6
CULB	**Culebra**	**3.31**	**92**	*e*S	S	02 14 53.1	+0.2

MAN 16 02:20:57.1, 9.58N×125.65E, h33^{km}, mb3.9, ML2.6, MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.61**	**183**	*e*P	P	02 21 09.7	+0.6
BUTP				*e*S	S	02 21 19.4	+1.5
MSLP	**Maasin**	**0.95**	**305**	*e*P	P	02 21 05.1	-9.0
MSLP				*e*S	S	02 21 26.7	+0.1
BUKP	**Musuan**	**1.79**	**199**	*e*P	P	02 21 17.2	-8.8
BUKP				*e*S	S	02 21 52.5	+4.6
PAGZ	**Pagadian**	**2.83**	**233**	*e*P	P	02 21 41.5	+0.6
PAGZ				*e*S	S	02 22 13.8	-0.3

NDI ***16*** *02:26:50.5±5.4, 34.97N×75.46E, h10^{km}, mb4.8, ML4.5*
IDC ***16*** *02:26:53.7±0.5, 34.51N×75.60E, mb4.5/23, mb1 4.6/25, mb1mx4.6/27, mbtmp4.5/25, ML4.3/2, MS3.6/10, Ms1 3.6/10, ms1mx3.4/32, Error ellipse: s-maj=14.7km s-min=13.3km az=31.0*
NEIC ***16*** *02:26:55.0±0.2, 34.51N×75.56E, h10^{km}, mb4.7/41, Error ellipse: s-maj=5.2km s-min=2.9km az=35.0*
BJI ***16*** *02:26:55.2, 34.75N×75.35E, h32^{km}, mB4.9, mb4.6, ML4.9, Ms4.5, Msz4.2*
MOS ***16*** *02:26:57.5±1.0, 34.61N×75.48E, h35^{km}, mb4.8/44, Error ellipse: s-maj=7.6km s-min=4.0km az=115.1*
NNC ***16*** *02:27:05.9±4.1, 35.07N×75.17E, h58^{km}±42^{km}, mpv4.6, Error ellipse: s-maj=39.5km s-min=29.1km az=59.0*
ISC 16 02:26:57.3±0.4**, 34.55N**±0.02×**75.67E**±0.03**, h41**^{km}±4^{km}**, h22**^{km}±2.8^{km}**:pP-P, n259,** σ1§**36**/310**, mb4.6**/73**, MS3.7**/22**, 22C-22D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRNI	**Srinagar**	**0.81**	**236**	*e*P	**P**	**02 27 10.0**	**-2.4**
SRNI				*e*S	**S**	**02 27 23.0**	**-0.5**
JMU	**Jammu**	**1.94**	**199**	*e*P	**P**	**02 27 33.0**	**+4.5**
JMU				*e*S	**S**	**02 28 00.0**	**+8.2**
DLH	**Dalhousie**	**2.02**	**173**	*e*P	**P**	**02 27 34.0**	**+4.4**
DLH				*e*S	**S**	**02 28 05.0**	**+11**
THN	**Thein Dam**	**2.12**	**179**	*e*P	**P**	**02 27 33.4**	**+2.4**
THN				*e*x	x	02 28 09.2	
CHCP	**Chirah Chowk**	**2.19**	**247**	⇓P	**P**	**02 27 34.8**	**+2.8**
BHK	**Bhakra**	**3.19**	**168**	*e*P	**P**	**02 27 58.4**	**+12**
BHK				*e*S	**S**	**02 28 38.4**	**+15**
CEP	**Cherat**	**3.20**	**258**	⇓P	**P**	**02 27 47.0**	**+0.6**
CEP				S	**S**	**02 28 32.0**	**+8.3**
SDNR	**Sundarnagar**	**3.24**	**160**	*e*P	**P**	**02 27 49.0**	**+2.0**
SDNR				*e*x	x	02 27 55.8	
SARP	**Sargodha**	**3.63**	**225**	P	**P**	**02 27 53.6**	**+1.0**
SARP				S	**S**	**02 28 37.0**	**+2.3**
SMLA	**Simla**	**3.64**	**159**	*e*P	**P**	**02 27 54.1**	**+1.4**
SMLA				*e*P		02 27 55.5	
SMLA				*e*S	**S**	**02 28 38.0**	**+3.1**
SMLA				*e*S	**S**	**02 28 39.7**	**+4.7**
SMLA				*e*S	**S**	**02 28 40.8**	**+5.8**
SMLA				AML	AML	02 28 54.8	
	comp=N,2µm,0.6s						
SMLA				AML	AML	02 28 54.9	
	comp=E,1µm,0.7s						
KLP	**Kalpa**	**3.71**	**144**	*e*P	**P**	**02 27 57.3**	**+3.6**
KLP				*e*S	**S**	**02 28 41.4**	**+4.6**
KLP				AML	AML	02 29 08.3	
	comp=E,13µm,1.2s						
KLP				AML	AML	02 29 09.9	
	comp=N,11µm,1.0s						
THW	**Thamme Wali**	**3.71**	**243**	⇑P	**P**	**02 27 53.4**	**-0.3**
SBDP	**Sheikh Budin**	**4.64**	**242**	P	**P**	**02 28 07.6**	**+0.7**
DDI	**Dehra Dun**	**4.68**	**154**	*e*P	**P**	**02 28 09.8**	**+2.4**
DDI				*e*S	**S**	**02 29 08.6**	**+7.5**
KKR	**Kurukshetra**	**4.68**	**168**	*e*P	**P**	**02 28 05.9**	**-1.6**
KSH	**Kashi**	**4.96**	**3**	*e*PG	**P**	**02 28 16.5**	**+5.2**
KSH				*e*SG	**S**	**02 29 16.1**	**+7.9**
KSH				LR	LR		
	comp=N,5µm,5.7s						
KSH				LR	LR		
	comp=E,4µm,6.1s						
JOSI	**Joshimath**	**5.17**	**139**	*e*x	x	02 27 30.8	
DRP	**Derazinda**	**5.37**	**240**	⇑P	**P**	**02 28 17.6**	**+0.5**
KALG	**Kalgarh**	**5.67**	**152**	*e*P	**P**	**02 28 19.1**	**-2.2**
KALG				AML	AML	02 29 39.2	
	comp=E,354nm,0.3s						
NDI	**New Delhi**	**6.00**	**167**	*e*P	**P**	**02 28 25.9**	**0.0**
NDI				*e*S	**S**	**02 29 35.2**	**+1.0**
ASOR	**Ausora**	**6.05**	**162**	*e*P	**P**	**02 28 27.1**	**+0.5**
BISR	**Bishrakh**	**6.15**	**165**	*e*P	**P**	**02 28 28.1**	**+0.1**
BISR				AMb	AMB	02 28 39.0	
	comp=Z,43nm,1.2s						
AYAN	**Aya Nagar**	**6.18**	**168**	*e*P	**P**	**02 28 28.3**	**-0.1**
PTH	**Pithoragarh**	**6.31**	**141**	*e*P	**P**	**02 28 34.8**	**+4.6**
PTH				*e*S	**S**	**02 29 45.0**	**+3.1**
KUDL	**Kundal**	**6.43**	**173**	*e*P	**P**	**02 28 31.3**	**-0.6**
KHET	**Khetri**	**6.46**	**179**	*e*P	**P**	**02 28 31.0**	**-1.4**
KHET				*e*S	**S**	**02 29 44.1**	**-1.6**
KHET				AML	AML	02 30 28.3	
	comp=E,152nm,0.5s						
KHET				AML	AML	02 30 29.4	
	comp=N,151nm,0.5s						
KZA	**Kyzart**	**7.52**	**358**	P	**P**	**02 28 49.5**	**+2.3**
	SNR=13						
AGRA	**Agra**	**7.56**	**164**	*e*P	**P**	**02 28 46.2**	**-1.5**
AGRA				*e*S	**S**	**02 30 10.6**	**-2.4**
AGRA				AML	AML	02 31 03.5	
	comp=E,217nm,0.7s						
AGRA				AML	AML	02 31 03.7	
	comp=N,183nm,0.4s						
UCH	**Uchtor**	**7.71**	**354**	P	**P**	**02 28 51.9**	**+2.1**
	SNR=25						
AML	**Almayashu**	**7.72**	**349**	P	**P**	**02 28 50.7**	**+0.7**
	SNR=38						
AJM	**Ajmer**	**8.10**	**187**	*e*P	**P**	**02 28 56.0**	**+0.8**
KBK	**Karagaybulak**	**8.11**	**356**	P	**P**	**02 28 58.2**	**+2.9**
	SNR=16						
AAK	**Ala-Archa**	**8.12**	**354**	P	**P**	**02 28 57.6**	**+2.1**
	SNR=12						
AAK	**Ala-Archa**	**8.12**	**354**	⇑Pn	**P**	**02 28 57.6**	**+2.1**
	comp=N,14nm,0.7s						
AAK				⇑Sn	**S**	**02 30 17.6**	**-9.3**
	comp=N,29nm,0.7s						
AAK	**Ala-Archa**	**8.12**	**354**	*e*Pn	**P**	**02 28 55.4**	**0.0**
AAK				Sn	**S**	**02 30 17.6**	**-9.3**
FRU	**Bishkek**	**8.31**	**355**	*e*P	**P**	**02 29 00.0**	**+1.9**
FRU				*e*S	**S**	**02 30 32.0**	**+0.3**
FRU				smax			
	comp=E,160nm,1.8s						
TKM2	**Tokmak 2**	**8.36**	**360**	P	**P**	**02 29 00.5**	**+1.8**
	SNR=14						
CHMS	**Chumysh**	**8.46**	**355**	P	**P**	**02 29 01.8**	**+1.5**
	SNR=20						
JASL	**Jaisalmer**	**8.64**	**210**	*e*P	**P**	**02 28 58.8**	**-3.9**
JASL				AMb	AMB	02 29 03.4	
USP	**Ospenovka**	**8.75**	**354**	P	**P**	**02 29 05.3**	**+1.1**
	SNR=9.8						
KK31	**Karatay Array**	**9.43**	**336**	⇓Pn	**P**	**02 29 10.9**	**-2.7**
	comp=E,20nm,0.5s,baz=150,slow=12,SNR=376						
KK31				⇓Sn	**S**	**02 30 51.8**	**-7.8**
	comp=E,47nm,0.6s,baz=149,slow=21,SNR=17						
KK31	**Karatay Array**	**9.43**	**336**	⇓P	**P**	**02 29 10.9**	**-2.8**
KK31						02 30 51.8	
KK31				pmax	pmax		
	comp=Z,21nm,0.4s						
KKAR	**Karatay Array**	**9.43**	**336**	*e*P	**P**	**02 29 11.1**	**-2.6**
KKAR				S	**S**	**02 30 52.3**	**-7.3**
KKAR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
KKAR				smax			
	comp=Z,58nm,0.7s						
KOLN	**Koldanda**	**9.58**	**133**	*e*Pn	**P**	**02 29 13.9**	**-1.8**
KOLN				*e*Sn	**S**	**02 31 01.9**	**-1.4**
	comp=Z,144nm,0.7s						
KOLN	**Koldanda**	**9.58**	**133**	*e*Pn	**P**	**02 29 13.9**	**-1.8**
	comp=Z,72nm,0.7s						
KOLN				*e*Sn	**S**	**02 31 01.9**	**-1.4**
GKN	**Gorkha**	**10.07**	**128**	*e*Pn	**P**	**02 29 21.2**	**-1.3**
GKN				*e*Sn	**S**	**02 31 10.4**	**-4.9**
	comp=Z,213nm,0.6s						
KKN	**Kakani**	**10.64**	**127**	*e*Pn	**P**	**02 29 28.1**	**-2.1**
KKN				*e*Sn	**S**	**02 31 25.3**	**-3.7**
	comp=Z,138nm,0.6s						
ALBI	**Allahabad**	**10.64**	**148**	*e*P	**P**	**02 29 26.0**	**-4.2**
DMN	**Daman**	**10.64**	**128**	*e*Pn	**P**	**02 29 28.4**	**-1.9**
DMN				*e*Sn	**S**	**02 31 25.5**	**-3.7**
	comp=Z,442nm,1.0s						
PKI	**Pulchoki**	**10.87**	**127**	*e*Pn	**P**	**02 29 31.3**	**-2.0**
PKI				*e*Sn	**S**	**02 31 29.6**	**-5.1**
	comp=Z,129nm,0.7s						
GUN	**Gumba**	**10.96**	**124**	*e*Pn	**P**	**02 29 32.6**	**-2.0**
GUN				*e*Sn	**S**	**02 31 33.3**	**-3.6**
	comp=Z,201nm,0.9s						
JIRN	**Jiri**	**11.33**	**124**	*e*Pn	**P**	**02 29 37.0**	**-2.6**
JIRN				*e*Sn	**S**	**02 31 41.3**	**-4.7**
	comp=Z,416nm,0.9s						
BHPL	**Bhopal**	**11.38**	**172**	*e*P	**P**	**02 29 37.7**	**-2.5**
BHPL				*e*S	**S**	**02 31 39.8**	**-7.3**
WMQ	**Urumqi**	**13.13**	**42**	⇑*i*P	**P**	**02 30 02.3**	**-1.3**
WMQ				AP		02 30 08.0	
WMQ				XP		02 30 12.0	
WMQ				PP	PP	02 30 13.0	-0.9
WMQ				S	**S**	**02 32 27.0**	**-2.2**
WMQ				XS		02 32 36.0	
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s						
WMQ				AMB	AMB		
	comp=Z,210nm,5.2s						
WMQ				LR	LR		
	comp=N,520nm,4.6s						
WMQ				LR	LR		
	comp=E,630nm,5.2s						
WMQ				LR	LR		
	comp=Z,550nm,14.8s						
MK02	**Makanchi Array**	**13.20**	**20**	⇑P	**P**	**02 30 05.1**	**+0.6**
MK02				S	**S**	**02 32 29.0**	**-1.8**
MK02				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MK31	**Makanchi Array**	**13.21**	**20**	⇑P	**P**	**02 30 05.1**	**+0.4**
	comp=Z,3.9nm,0.3s,baz=202,slow=13,SNR=216						
MK31				⇑S	**S**	**02 32 29.0**	**-2.2**
	comp=Z,6.1nm,0.7s,baz=190,slow=22,SNR=4.9						
MKAR	**Makanchi Array**	**13.21**	**20**	Pn	**P**	**02 30 04.7**	**0.0**
	comp=Z,0.4nm,0.3s,baz=205,slow=12,SNR=17						
MKAR				Sn	**S**	**02 32 31.2**	**+0.1**
	comp=Z,0.5nm,0.3s,baz=189,slow=23,SNR=3.9						
BLSP	**Bilaspur**	**13.62**	**154**	*e*P	**P**	**02 30 04.8**	**-5.4**
BLSP				AMb	AMB	02 30 26.3	
	comp=Z,38nm,2.4s						
NGP	**Nagpur**	**13.68**	**167**	*e*P	**P**	**02 30 06.5**	**-4.5**
NGP				*e*S	**S**	**02 32 34.5**	**-8.1**
NGP				AML	AML	02 34 17.2	
	comp=N,22nm,0.8s						
NGP				AML	AML	02 34 20.0	
	comp=E,22nm,0.6s						
AKL	**Akola**	**13.85**	**175**	*i* x	x	02 29 21.1	
LSA	**Lhasa**	**13.98**	**106**	*e*P	**P**	**02 30 14.0**	**-0.8**
	comp=E,16nm,0.8s						
LSA	**Lhasa**	**13.98**	**106**	*e*P	**P**	**02 30 14.0**	**-0.8**
LSA				pmax	pmax		
	comp=Z,17nm,0.8s						
POO	**Poona**	**16.04**	**186**	*e*P	**P**	**02 30 45.0**	**+3.4**
POO				*e*x	x	02 33 41.0	
KURK	**Kurchatov**	**16.30**	**7**	⇓P	**P**	**02 30 42.3**	**-2.3**
	comp=Z,54nm,1.0s						
KURK				⇑S	**S**	**02 33 51.3**	**+7.7**
	comp=Z,40nm,2.1s						
KURK	**Kurchatov**	**16.30**	**7**	⇓P	**P**	**02 30 42.3**	**-2.3**
KURK				S	**S**	**02 33 51.3**	**+7.7**
SHL	**Shillong**	**16.64**	**118**	*e*P	**P**	**02 30 44.0**	**-5.0**
SHL				*e*S	**S**	**02 33 42.0**	**-10**
KAD	**Karad**	**17.23**	**185**	*e*P	**P**	**02 30 53.2**	**-3.3**
KAD				AMb	AMB	02 31 02.8	
	comp=Z,36nm,1.0s						
HYB	**Hyderabad**	**17.26**	**171**	*i* P	**P**	**02 30 52.0**	**-5.0**
HYB				*e*		02 30 59.0	
HYB				*e*S	**S**	**02 34 06.0**	**+0.1**
HYB	**Hyderabad**	**17.26**	**171**	*e*P	**P**	**02 30 52.0**	**-5.0**
HYB				*e*		02 30 59.0	
HYB				*e*S	**S**	**02 33 54.0**	**-12**
VIS	**Vishakhapatnam**	**18.11**	**156**	*e*P	**P**	**02 31 07.0**	**-0.5**
VIS				*e*S	**S**	**02 34 19.8**	**-5.2**
VOSK	**Vostochnaya**	**18.47**	**351**	⇑P	**P**	**02 31 09.3**	**-2.5**
	comp=Z,15nm,1.1s						
VOSK	**Vostochnaya**	**18.47**	**351**	⇑P	**P**	**02 31 09.3**	**-2.5**
	comp=Z,15nm,1.0s						
VOSK	**Vostochnaya**	**18.47**	**351**	⇑P	**P**	**02 31 09.3**	**-2.5**
VOSK				pmax	pmax		
	comp=Z,15nm,1.0s						
AB31	**Akbulak array**	**18.73**	**326**	⇓P	**P**	**02 31 12.4**	**-2.5**
	comp=Z,12nm,0.7s,baz=131,slow=12,SNR=194						
AB31				⇑S	**S**	**02 34 25.8**	**-13**
	comp=Z,9.4nm,1.1s,baz=159,slow=22,SNR=4.5						
AB31	**Akbulak array**	**18.73**	**326**	⇓P	**P**	**02 31 12.4**	**-2.5**
	comp=Z,12nm,0.6s						
AB31				S	**S**	**02 34 25.8**	**-13**
BANOM	**Banah**	**18.79**	**248**	P	**P**	**02 31 18.2**	**+2.3**
	SNR=5.2						
BVA0	**Borovoye Array**	**18.84**	**350**	⇓P	**P**	**02 31 14.8**	**-1.5**
	comp=Z,2.5nm,0.6s,baz=160,slow=11,SNR=105						
BVA0				⇓S	**S**	**02 35 00.5**	**+19**
	comp=Z,3.4nm,2.5s,baz=154,slow=18,SNR=3.5						
BVA0	**Borovoye Array**	**18.84**	**350**	⇓P	**P**	**02 31 14.8**	**-1.5**
	comp=Z,2.5nm,0.6s						
BVA0				S	**S**	**02 35 00.5**	**+19**
BVAR	**Borovoye Array**	**18.84**	**350**	P	**P**	**02 31 15.0**	**-1.3**
	comp=Z,2.9nm,0.3s,baz=161,slow=12,SNR=42						
WBK	**Wadi Bani Khal**	**18.85**	**235**	P	**P**	**02 31 17.8**	**+1.2**
	SNR=7.4						
BRVK	**Borovoye**	**18.89**	**350**	*e*P	**P**	**02 31 15.4**	**-1.4**
	comp=Z,17nm,0.8s						
BRVK	**Borovoye**	**18.89**	**350**	*e*P	**P**	**02 31 15.4**	**-1.4**
BRVK				pmax	pmax		
	comp=Z,17nm,0.8s						
SMDO	**Samad**	**19.19**	**238**	P	**P**	**02 31 22.1**	**+1.7**
	SNR=11						
CHKZ	**Chkalovo**	**19.45**	**351**	⇑P	**P**	**02 31 22.6**	**-0.5**
	comp=Z,13nm,1.1s						
JMDO	**Jabal Madar**	**19.61**	**236**	P	**P**	**02 31 26.3**	**+1.3**
	SNR=32						
ASHO	**Ashiyiah**	**19.65**	**245**	P	**P**	**02 31 27.9**	**+2.4**
	SNR=10						
GTA	**Gaotai**	**19.87**	**69**	P	**P**	**02 31 29.4**	**+1.6**
GTA				AP		02 31 35.8	
GTA				XP		02 31 39.5	
GTA				PP	PP	02 31 47.8	+0.7
GTA				S	**S**	**02 35 09.3**	**+5.2**
GTA				XS		02 35 18.1	
GTA				SS	SS	02 35 37.4	+4.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s						
GTA				AMB	AMB		
	comp=Z,100nm,6.1s						
GTA				LR	LR		
	comp=N,190nm,14.1s						
GTA				LR	LR		
	comp=E,110nm,13.7s						
GTA				LR	LR		
	comp=Z,120nm,14.8s						
BSY	**Bisya**	**19.99**	**239**	P	**P**	**02 31 31.7**	**+2.6**
	SNR=12						
ZAL	**Zalesovo**	**20.42**	**16**	P	**P**	**02 31 33.2**	**-0.3**
	comp=Z,43nm,0.4s,baz=256,slow=6.6,SNR=90						
ZAL				S	**S**	**02 35 17.4**	**+2.5**
	comp=Z,1.6nm,0.6s,baz=177,slow=24,SNR=5.7						
ZAL				LR	LR	02 40 44.4	
	comp=Z,209nm,19.9s,MS3.5,baz=265,slow=41						
ZAL	**Zalesovo**	**20.42**	**16**	P	**P**	**02 31 33.2**	**-0.3**
ZAL				S	**S**	**02 35 17.4**	**+2.5**
ZAL				LR	LR	02 40 44.4	
AKTO	**Aktyubinsk**	**20.44**	**326**	P	**P**	**02 31 32.7**	**-1.0**
	comp=Z,40nm,0.7s,baz=124,slow=11,SNR=116						
AKTO				S	**S**	**02 35 13.7**	**-1.6**
	comp=Z,1.9nm,0.7s,baz=349,slow=21,SNR=4.1						
AKTO				LR	LR	02 40 02.1	
	comp=Z,137nm,19.5s,MS3.3,slow=39						
AKTO	**Aktyubinsk**	**20.44**	**326**	P	**P**	**02 31 32.7**	**-1.0**
AKTO				S	**S**	**02 35 13.7**	**-1.6**
AKTO				pmax	pmax		
	comp=Z,40nm,0.7s						
AKTO				smax			
	comp=N,2.0nm,0.7s						
AKTO				MLR	MLR		
	comp=Z,137nm,19.5s,MS3.3						
NVS	**Novosibirsk**	**20.96**	**12**	*e*P	**P**	**02 31 36.9**	**-2.1**
ORR	**Orenburg**	**22.76**	**325**	*e*P	**P**	**02 31 56.8**	**-0.1**
ORR				*e*		02 32 39.2	
ORR				pmax	pmax		
	comp=Z,20nm,0.6s,mb4.7						
LZH	**Lanzhou**	**23.01**	**78**	*e*P	**P**	**02 32 00.5**	**+1.0**
LZH				AP		02 32 07.5	
LZH				XP		02 32 12.1	
LZH				PP	PP	02 32 30.6	+0.4
LZH				*e*S	**S**	**02 36 12.5**	**+9.4**
LZH				*e*SS	SS	02 36 47.5	-1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.4						
LZH				AMB	AMB		
	comp=Z,120nm,4.5s						
LZH				LR	LR		
	comp=E,540nm,8.5s						
LZH				LR	LR		
	comp=Z,1µm,12.2s,MS4.6						
LZH	**Lanzhou**	**23.01**	**78**	*e*P	**P**	**02 32 00.5**	**+1.0**
	comp=Z,27nm,1.3s,mb4.5						
LZH				pP		02 32 07.5	
LZH				sP		02 32 12.1	
LZH				PP	PP	02 32 30.6	+0.4
LZH				*e*S	**S**	**02 36 12.5**	**+9.4**
LZH				sS		02 36 16.3	
LZH				*e*SS	SS	02 36 47.5	-1.7
LZH				LR	LR		
	comp=Z,1µm,12.2s,MS4.6						
CD2	**Chengdu**	**23.88**	**91**	*e*P	**P**	**02 32 11.0**	**+3.1**
SVE	**Sverdlovsk**	**24.52**	**340**	*e*P	**P**	**02 32 15.5**	**+1.6**
ARU	**Arti**	**24.81**	**337**	⇓*i*P	**P**	**02 32 18.0**	**+1.2**
ARU				*e*PPP	PPP	02 32 57.6	-7.6
ARU				*e*S	**S**	**02 36 38.7**	**+4.8**
ARU				*e*SS	SS	02 37 27.7	-5.2
ARU				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.7						
GNI	**Garni**	**25.13**	**292**	P	**P**	**02 32 22.1**	**+2.1**
	comp=Z,14nm,0.9s,mb4.5,baz=139,slow=4.2,SNR=17						
GNI				LR	LR	02 44 16.6	
	comp=Z,98nm,19.2s,MS3.3,baz=154,slow=42						
GNI	**Garni**	**25.13**	**292**	*e*P	**P**	**02 32 22.9**	**+2.9**
	comp=Z,59nm,1.3s,mb5.0						
GNI	**Garni**	**25.13**	**292**	*d* *i*P	**P**	**02 32 22.7**	**+2.7**
GNI				pmax	pmax		
	comp=Z,56nm,1.3s						
GNI				MLR	MLR		
	comp=Z,100nm,20.0s						
KMI	**Kunming**	**25.23**	**105**	P	**P**	**02 32 22.8**	**+1.7**
KMI				AP	pP	02 32 29.1	-2.8
KMI				XP	sP	02 32 32.8	-3.9
KMI				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
KMI				LR	LR		
	comp=Z,70nm,21.6s,MS3.1						
KMI	**Kunming**	**25.23**	**105**	P	**P**	**02 32 22.7**	**+1.6**
	comp=Z,21nm,0.9s,mb4.7						
KMI				pP	pP	02 32 29.1	-2.8
KMI				sP	sP	02 32 32.7	-4.0
KMI				LR	LR		
	comp=Z,80nm,21.6s,MS3.2						
KMI	**Kunming**	**25.23**	**105**	P	**P**	**02 32 22.7**	**+1.6**
KMI				*SP	sP	02 32 32.7	-4.0
KMI				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.7						
KMI				MLR	MLR		
	comp=Z,80nm,21.6s,MS3.2						
ZAK	**Zakamensk**	**25.59**	**43**	*e*P	**P**	**02 32 27.1**	**+2.9**
ZAK				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
BHD	**Baghdad**	**25.95**	**276**	*e*x	x	02 32 27.0	
ZEI	**Tsey**	**26.01**	**298**	*e*P	**P**	**02 32 26.4**	**-1.8**
ZEI				*i* *PP	pP	02 32 35.0	-4.0
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
SONM	**Songino Array**	**26.46**	**51**	P	**P**	**02 32 34.8**	**+2.5**
	comp=Z,25nm,1.0s,mb4.7,baz=249,slow=8.3,SNR=42						
SONM				LR	LR	02 44 35.7	
	comp=Z,487nm,18.3s,MS4.1,baz=240,slow=40						
MSL	**Mosul**	**26.54**	**283**	*e*x	x	02 32 33.0	
KIV	**Kislovodsk**	**27.06**	**300**	*e*P	**P**	**02 32 38.5**	**+0.7**
KIV	**Kislovodsk**	**27.06**	**300**	*i* P	**P**	**02 32 38.4**	**+0.6**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.2						
KIV				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.5						
GYA	**Guiyang**	**27.82**	**98**	P	**P**	**02 32 48.9**	**+4.0**
GYA				AP	pP	02 32 55.8	-0.1
GYA				XP	sP	02 32 59.4	-1.6
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
GYA				AMB	AMB		
	comp=Z,230nm,5.4s						
GYA				LR	LR		
	comp=N,230nm,6.9s						
GYA				LR	LR		
	comp=E,220nm,5.7s						
GYA				LR	LR		
	comp=Z,220nm,5.6s						
HHC	**Hu-ho-hao-te**	**28.95**	**67**	*e*P	**P**	**02 32 55.4**	**+0.5**
HHC				AP	pP	02 33 02.8	-3.1
HHC				XP	sP	02 33 05.6	-5.5
HHC				PP	PP	02 33 49.1	-0.1
HHC				PCP	PcP	02 36 06.9	+3.6
HHC				S	**S**	**02 37 44.0**	**+2.6**
HHC				SCP		02 39 45.1	
HHC				SCS	ScS	02 43 36.5	+4.0
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,110nm,12.0s						
HHC				LR	LR		
	comp=N,130nm,13.2s,MS3.9						
HHC				LR	LR		
	comp=E,140nm,14.4s,MS3.9						
HHC				LR	LR		
	comp=Z,100nm,18.0s,MS3.5						
MOS	**Moscow**	**33.57**	**321**	*e*P	**P**	**02 33 34.5**	**-0.8**
MOS				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.3						
BR131	**Keskin Array S**	**33.67**	**291**	*e*P	**P**	**02 33 36.4**	**0.0**
	comp=Z,2.7nm,0.6s,mb4.3						
BRTR	**Keskin Array B**	**33.67**	**291**	P	**P**	**02 33 36.5**	**+0.1**
	comp=Z,3.2nm,0.7s,mb4.4,baz=103,slow=9.2,SNR=25						
OBN	**Obninsk**	**33.89**	**319**	*e*P	**P**	**02 33 38.0**	**-0.1**
	comp=Z,22nm,0.6s,mb5.3						
OBN	**Obninsk**	**33.89**	**319**	⇓*e*P	**P**	**02 33 38.1**	**0.0**
OBN				*e*		02 34 56.2	
OBN				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.6						
BOD	**Bodaibo**	**34.57**	**36**	*e*P	**P**	**02 33 44.2**	**+0.2**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
NJ2	**Nanjing**	**35.98**	**82**	*e*P	**P**	**02 33 58.4**	**+2.2**
NJ2				AP	pP	02 34 06.1	-1.4
NJ2				XP	sP	02 34 09.1	-3.6
NJ2				PP	PP	02 35 20.0	+1.3
NJ2				S	**S**	**02 39 34.0**	**+2.7**
NJ2				XS		02 39 48.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,250nm,4.6s						
NJ2				LR	LR		
	comp=N,550nm,17.3s,MS4.5						
NJ2				LR	LR		
	comp=E,470nm,15.4s,MS4.5						
NJ2				LR	LR		
	comp=Z,260nm,16.0s,MS4.1						
AKASG	**Malin Array Be**	**37.12**	**310**	P	**P**	**02 34 05.1**	**-0.4**
	comp=Z,3.9nm,0.6s,mb4.4,baz=80,slow=8.0,SNR=18						
AKASG	**Malin Array Be**	**37.12**	**310**	*i* P	**P**	**02 34 05.0**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SNY	**Shenyang**	**37.95**	**64**	⇓P	**P**	**02 34 09.1**	**-3.5**
SSE	**Sheshan**	**38.16**	**82**	*e*P	**P**	**02 34 13.4**	**-1.1**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,120nm,4.7s						

SSE	**Sheshan**	38.16	82	*e*P	P	02 34 13.4	-1.1
	comp=Z,34nm,0.7s,mb5.2						
MLR	**Muntele Rosu**	39.05	302	LR	LR	02 54 34.1	
	comp=Z,108nm,18.0s,MS3.7,baz=326,slow=43						
CN2	**Changchun**	39.17	61	*e*P	P	02 34 24.3	+1.6
CN2				*e*S	S	02 40 21.4	+1.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
JOF	**Joensuu**	39.46	330	*e*p	P	02 34 24.6	-0.3
	comp=Z,7.0nm,0.5s,mb4.7						
FINES	**FINESS Array B**	41.22	326	P	P	02 34 39.5	0.0
	comp=Z,2.4nm,0.5s,mb4.1,baz=111,slow=9.4,SNR=25						
FINES				LR	LR	02 53 00.8	
	comp=Z,49nm,19.7s,MS3.4,baz=79,slow=38						
FINES	**FINESS Array B**	41.22	326	*i* P	P	02 34 40.2	+0.7
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	**Kangasniemi**	41.32	327	*e*p	P	02 34 40.8	+0.5
	comp=Z,4.4nm,0.6s,mb4.3						
KAF	**Kangasniemi**	41.32	327	*e*P	P	02 34 40.8	+0.5
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
KOLS	**Kolonicke sedl**	41.50	307	*e*P	P	02 34 43.4	+1.5
MDJ	**Mudanjiang**	42.07	59	P	P	02 34 47.6	+0.9
MDJ				PP	PP	02 36 23.4	-3.9
MDJ				S	S	02 41 07.0	+4.1
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,90nm,3.5s						
MDJ				LR	LR		
	comp=N,80nm,26.0s,MS3.5						
MDJ				LR	LR		
	comp=E,40nm,26.0s,MS3.5						
MDJ				LR	LR		
	comp=Z,40nm,20.0s						
STHS	**Stebnicka Huta**	42.17	308	*e*P	P	02 34 47.8	+0.4
KLR	**Kul'dur**	43.26	53	*e*P	P	02 34 54.8	-1.5
YAK	**Yakutsk**	43.40	34	⇑*e*P	P	02 35 00.2	+2.9
YAK				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.0						
YAK				MLR	MLR		
	comp=Z,100nm,23.0s,MS3.7						
OKC	**Ostrava-Krasne**	44.17	308	*e*P	P	02 35 05.0	+1.3
ARCES	**ARCESS Array B**	44.40	337	P	P	02 35 05.5	+0.2
	comp=Z,4.9nm,0.7s,mb4.3,baz=7.1,slow=9.8,SNR=18						
ARCES				LR	LR	02 55 20.9	
	comp=Z,94nm,18.5s,MS3.7,baz=25,slow=38						
ARCES	**ARCESS Array B**	44.40	337	P	P	02 35 05.5	+0.2
ARCES				LR	LR	02 55 20.9	
MORC	**Moravsky Berou**	44.57	308	*e*P	P	02 35 07.1	+0.2
	comp=Z,4.7nm,0.7s,mb4.4						
MORC	**Moravsky Berou**	44.57	308	*e*P	P	02 35 07.1	+0.2
MORC				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
VRAC	**Vranov**	45.21	308	LR	LR	02 56 16.6	
	comp=Z,63nm,21.7s,MS3.5,baz=212,slow=39						
DPC	**Dobruska-Polom**	45.32	309	*e*P	P	02 35 13.7	+0.8
UPC	**Upice**	45.51	309	*e*P	P	02 35 15.0	+0.6
TREC	**Trest**	45.93	308	*e*P	P	02 35 18.6	+0.8
TIXI	**Tiksi**	46.20	21	⇓*e*P	P	02 35 20.3	+0.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,100nm,23.0s,MS3.7						
PRU	**Pruhonice**	46.49	309	*e*P	P	02 35 23.5	+1.4
BRG	**Berggiesshubel**	46.80	310	*i* P	P	02 35 25.0	+0.5
	comp=Z,5.6nm,0.7s,mb4.6						
BRG	**Berggiesshubel**	46.80	310	*i* P	P	02 35 25.0	+0.5
BRG				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
MOA	**Molln**	46.89	306	⇓P	P	02 35 25.5	+0.2
	comp=Z,8.0nm,1.5s,mb4.4						
MOA	**Molln**	46.89	306	⇓P	P	02 35 25.5	+0.2
	comp=Z,8.0nm,1.5s,mb4.4						
GERES	**GERESS Array B**	47.15	307	P	P	02 35 27.6	+0.3
	comp=Z,0.6nm,0.5s,mb3.8,baz=79,slow=6.8,SNR=6.7						
GERES				LR	LR	02 59 26.5	
	comp=Z,34nm,18.1s,MS3.4,baz=93,slow=41						
KHC	**Kasperske Hory**	47.20	308	*e*P	P	02 35 26.5	-1.2
KHC				x	x	02 38 28.1	
KHC	**Kasperske Hory**	47.20	308	*e*P	P	02 35 28.1	+0.4
CLL	**Collm**	47.36	311	*e*P	P	02 35 35.0	+6.1
CLL				*e*		02 35 52.0	
CLL				*e*		02 36 10.0	
NB2	**NORSAR Subarra**	48.21	324	P	P	02 35 35.2	-0.2
	comp=Z,12nm,0.6s,mb5.1,baz=94,slow=7.4						
NOA	**NORSAR Array B**	48.21	324	P	P	02 35 35.5	+0.1
	comp=Z,11nm,0.6s,mb5.1,baz=95,slow=7.5,SNR=43						
NOA				LR	LR	02 57 18.9	
	comp=Z,65nm,19.2s,MS3.6,baz=320,slow=38						
MOX	**Moxa**	48.29	310	*e*P	P	02 35 36.0	-0.3
NAO	**NORSAR Subarra**	48.38	324	P	P	02 35 35.2	-1.6
	comp=Z,12nm,0.6s,mb5.1						
NAO	**NORSAR Subarra**	48.38	324	P	P	02 35 35.2	-1.6
NAO				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.1						
GRA1	**Grafenberg Arr**	48.66	309	*e*P	P	02 35 40.1	+1.0
	comp=Z,19nm,1.6s,mb4.9						
GRF	**Grafenberg Arr**	48.66	309	*e*P	P	02 35 40.1	+1.0
	comp=Z,19nm,1.6s,mb4.9						
GRF	**Grafenberg Arr**	48.66	309	*e*P	P	02 35 40.1	+1.0
GRF				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.9						
GRF	**Grafenberg Arr**	48.66	309	*e*P	P	02 35 40.1	+1.0
GRF				pmax	pmax		
	comp=Z,19nm,1.6s,mb4.9						
SQTA	**Sankt Quirin**	49.03	305	⇑*i*P	P	02 35 41.1	-0.9
	comp=Z,3.8nm,0.6s,mb4.6						
SQTA	**Sankt Quirin**	49.03	305	⇑*i*P	P	02 35 41.1	-0.9
SQTA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
MOTA	**Moosalm**	49.08	306	⇓*e*P	P	02 35 41.7	-0.7
	comp=Z,3.5nm,0.7s,mb4.5						
MOTA	**Moosalm**	49.08	306	⇓*e*P	P	02 35 41.7	-0.7
MOTA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
DAVA	**Damuels**	49.91	306	⇑*i*P	P	02 35 48.2	-0.5
	comp=Z,19nm,0.8s,mb5.2						
DAVA	**Damuels**	49.91	306	⇑*i*P	P	02 35 48.2	-0.5
	comp=Z,19nm,0.8s,mb5.2						
MJAR	**Matsushiro Arr**	50.12	69	P	P	02 35 52.5	+2.0
	comp=Z,4.8nm,0.9s,mb4.5,baz=292,slow=9.5,SNR=7.6						
KMBO	**Kilima Mbogo**	50.54	234	P	P	02 35 55.2	+1.2
	comp=Z,3.8nm,0.8s,mb4.4,baz=22,slow=12,SNR=8.6						
KMBO	**Kilima Mbogo**	50.54	234	*i* P	P	02 35 56.0	+2.0
KMBO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	50.84	54	⇑*e*P	P	02 35 59.2	+3.3
YSS				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s,MS3.9						
CDF	**Champ du Feu**	51.42	308	*e*P	P	02 35 59.9	-0.3
PGF	**Pioggiola**	51.54	300	*e*P	P	02 36 00.0	-1.2
HINF	**Hinteralfeld**	51.82	307	*e*P	P	02 36 02.6	-0.6
HAU	**Haudompre**	52.11	307	*e*P	P	02 36 04.9	-0.5
HAU				*e*R			
	comp=Z,32nm,20.0s						
SBF	**Sospel**	52.32	302	*e*P	P	02 36 06.1	-0.9
	comp=Z,23nm,0.8s,mb4.9						
SBF	**Sospel**	52.32	302	*e*P	P	02 36 06.1	-0.9
SBF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
LPG	**La Plagne**	52.40	304	*e*P	P	02 36 07.3	-0.3
	comp=Z,9.4nm,0.7s,mb4.6						
LPG	**La Plagne**	52.40	304	*e*P	P	02 36 07.3	-0.3
LPG				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
LPL	**La Plagne**	52.41	304	*e*P	P	02 36 07.2	-0.4
	comp=Z,22nm,0.8s,mb4.9						
LPL	**La Plagne**	52.41	304	*e*P	P	02 36 07.2	-0.4
LPL				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
MBDF	**Montbardon**	52.57	303	*e*P	P	02 36 07.8	-1.1
	comp=Z,10nm,0.7s,mb4.6						
MBDF	**Montbardon**	52.57	303	*e*P	P	02 36 07.8	-1.1
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
CABF	**La Chapelle**	52.59	306	*e*P	P	02 36 08.4	-0.6
	comp=Z,11nm,0.8s,mb4.5						
CABF	**La Chapelle**	52.59	306	*e*P	P	02 36 08.4	-0.6
CABF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
GIVF	**Givet**	52.67	310	*e*P	P	02 36 08.9	-0.7
MEZF	**Maizieres J'vi**	52.86	308	*e*P	P	02 36 10.8	-0.2
FRF	**La Foret Royal**	52.95	302	*e*P	P	02 36 10.7	-1.0
	comp=Z,15nm,0.8s,mb4.7						
FRF	**La Foret Royal**	52.95	302	*e*P	P	02 36 10.7	-1.0
FRF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
BAIF	**Baives**	53.07	310	*e*P	P	02 36 12.2	-0.3
LMR	**La Mourre**	53.10	301	*e*P	P	02 36 12.2	-0.7
ORIF	**Oris-en-Rattie**	53.14	304	*e*P	P	02 36 12.1	-1.0
ORIF				*e*R			
	comp=Z,42nm,18.0s						
SMRF	**Simiane la Rot**	53.59	302	*e*P	P	02 36 15.4	-1.1
LOR	**Lormes**	53.92	307	*e*P	P	02 36 17.8	-1.1
LOR				*e*R			
	comp=Z,60nm,17.5s						
SEY	**Seymchan**	53.93	33	⇓*e*P	P	02 36 21.4	+2.7
VIVF	**Saint-Julien-l**	53.98	304	*e*P	P	02 36 18.8	-0.5
SMF	**Signal de Mont**	54.09	306	*e*P	P	02 36 19.2	-0.9
	comp=Z,17nm,0.7s,mb4.8						
SMF	**Signal de Mont**	54.09	306	*e*P	P	02 36 19.2	-0.9
SMF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
SSF	**Saint Saulge**	54.20	307	*e*P	P	02 36 20.1	-0.8
	comp=Z,20nm,1.4s,mb4.8						
SSF	**Saint Saulge**	54.20	307	*e*P	P	02 36 20.1	-0.8
SSF				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
AVF	**Avril sur Loir**	54.37	306	*e*P	P	02 36 21.3	-0.9
	comp=Z,15nm,0.7s,mb4.7						
AVF	**Avril sur Loir**	54.37	306	*e*P	P	02 36 21.3	-0.9
AVF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
HYF	**Humbligny**	54.72	307	*e*P	P	02 36 23.7	-1.0
LASF	**Ste Croix**	54.76	303	*e*P	P	02 36 24.3	-0.7
	comp=Z,11nm,0.7s,mb4.7						
BGF	**Bois d'Agland**	54.77	306	*e*P	P	02 36 24.1	-1.0
	comp=Z,13nm,0.8s,mb4.7						
BGF	**Bois d'Agland**	54.77	306	*e*P	P	02 36 24.1	-1.0
BGF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
TCF	**Toulx Ste Croi**	55.27	306	*e*P	P	02 36 28.2	-0.5
	comp=Z,11nm,0.7s,mb4.7						
TCF	**Toulx Ste Croi**	55.27	306	*e*P	P	02 36 28.2	-0.5
TCF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
CAF	**Calviac**	55.74	304	*e*P	P	02 36 31.3	-0.8
	comp=Z,8.4nm,0.7s,mb4.6						
CAF	**Calviac**	55.74	304	*e*P	P	02 36 31.3	-0.8
CAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
RJF	**Les Rejaudoux**	56.01	305	*e*P	P	02 36 33.3	-0.7
	comp=Z,6.2nm,0.6s,mb4.5						
RJF				*e*R			
	comp=Z,86nm,17.8s						
RJF	**Les Rejaudoux**	56.01	305	*e*P	P	02 36 33.3	-0.7
RJF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
RJF				MLR	MLR		
	comp=Z,90nm,17.8s,MS3.9						
MTLF	**Montolieu**	56.11	303	*e*P	P	02 36 33.6	-1.2
LDF	**La Druitiere**	56.17	309	*e*P	P	02 36 34.0	-1.1
FLN	**La Foliniere**	56.35	309	*e*P	P	02 36 35.6	-0.9
FLN				*e*R			
	comp=Z,56nm,21.8s						
LFF	**La Frestale**	56.64	305	*e*P	P	02 36 37.6	-1.0
	comp=Z,13nm,0.6s,mb4.8						
LFF	**La Frestale**	56.64	305	*e*P	P	02 36 37.6	-1.0
LFF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
GRR	**Gorron**	56.70	309	*e*P	P	02 36 38.2	-0.7
MFF	**Saint Martin d**	56.74	307	*e*P	P	02 36 38.3	-1.0
EPF	**Esparros**	57.51	303	*e*P	P	02 36 43.7	-1.1
	comp=Z,11nm,0.9s,mb4.6						
EPF	**Esparros**	57.51	303	*e*P	P	02 36 43.7	-1.1
EPF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
SGMF	**Saint Gilles**	57.82	309	*e*P	P	02 36 46.1	-0.8
ROSF	**Rostrenen**	58.25	310	*e*P	P	02 36 49.2	-0.7
QUIF	**Quistinic**	58.31	309	*e*P	P	02 36 49.4	-0.9
SJPF	**Ste Jean**	58.56	303	*e*P	P	02 36 51.5	-0.6
BILL	**Bilibino**	58.68	26	*i* P	P	02 36 53.8	+1.2
BILL				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
BILL				MLR	MLR		
	comp=Z,100nm,27.0s,MS3.8						
ESDC	**Sonseca Array**	61.73	300	P	P	02 37 13.3	-0.5
	comp=Z,2.3nm,0.6s,mb4.5,baz=54,slow=6.8,SNR=18						
SUMG	**Summit**	64.10	342	*e*P	P	02 37 30.4	+1.4
	comp=Z,8.2nm,0.8s,mb4.8						
EVO	**Evora**	65.07	301	*e*P	P	02 37 34.9	-0.9
	comp=Z,25nm,1.2s,mb4.8						
IMA2	**Indian Mountai**	72.77	19	*e*P	P	02 38 23.0	+0.3
INK	**Inuvik**	75.16	11	P	P	02 38 37.3	+0.8
	comp=Z,4.3nm,0.8s,mb4.4,baz=31,slow=4.1,SNR=19						
INK	**Inuvik**	75.16	11	*e*P	P	02 38 36.8	+0.4
	comp=Z,8.5nm,1.1s,mb4.6						
INK	**Inuvik**	75.16	11	*e*P	P	02 38 36.8	+0.3
INK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
COLA	**College**	75.23	18	*e*P	P	02 38 38.2	+1.3
	comp=Z,8.5nm,0.9s,mb4.7						
COLA	**College**	75.23	18	⇑*e*P	P	02 38 39.2	+2.3
ILAR	**Eielson Array**	75.55	17	P	P	02 38 39.5	+0.7
	comp=Z,2.6nm,0.8s,mb4.2,baz=317,slow=5.1,SNR=28						
ILAR				PP	PP	02 41 30.9	+0.6
	comp=Z,1.1nm,0.9s,baz=324,slow=6.9,SNR=6.0						
THY	**Trims Highway**	76.95	18	P	P	02 38 47.6	+0.8
NWAO	**Narrogin (SRO)**	77.65	145	P	P	02 38 51.1	-0.2
	comp=Z,4.9nm,0.7s,mb4.6,slow=9.1,SNR=3.5						
WRA	**Warramunga Arr**	77.74	125	P	P	02 38 52.7	+0.6
	comp=Z,2.7nm,0.5s,mb4.5,baz=324,slow=5.9,SNR=13						
WRA	**Warramunga Arr**	77.74	125	*i* P	P	02 38 53.0	+1.0
WRA				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WRAB	**Tennant Creek**	77.74	125	*e*P	P	02 38 52.7	+0.7
	comp=Z,5.8nm,0.6s,mb4.7						
WRAB	**Tennant Creek**	77.74	125	*e*P	P	02 38 52.7	+0.7
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
DBIC	**Dimbokro**	78.45	270	P	P	02 38 56.1	0.0
	comp=Z,2.8nm,0.6s,mb4.4,baz=75,slow=5.8,SNR=8.1						
BOSA	**Boshof**	78.84	224	P	P	02 38 58.1	+0.2
	comp=Z,3.9nm,0.7s,mb4.5,baz=26,slow=7.6,SNR=12						
LIC	**Lamto**	78.84	270	*e*P	P	02 38 55.7	-2.5
	comp=Z,9.4nm,0.7s,mb4.5						
LIC				*e*R			
	comp=Z,112nm,20.0s						
KDAK	**Kodiak Island**	79.50	24	P	P	02 39 03.1	+2.3
	comp=Z,5.7nm,0.7s,mb4.6,baz=48,slow=4.5,SNR=5.2						
FORT	**Forrest**	81.60	136	*e*P	P	02 39 14.0	+1.4
	comp=Z,14nm,0.6s,mb5.1						
YKA	**Yellowknife Ar**	82.94	5	P	P	02 39 19.2	+0.4
	comp=Z,2.6nm,0.7s,mb4.4,baz=344,slow=5.4,SNR=11						
YKA	**Yellowknife Ar**	82.94	5	P	P	02 39 19.2	+0.4
YKA	**Yellowknife Ar**	82.94	5	⇑*e*P	P	02 39 21.1	+2.3
CTA	**Charters Tower**	86.27	117	P	P	02 39 37.6	+1.4
	comp=Z,2.7nm,0.7s,mb4.6,baz=305,slow=5.8,SNR=4.1						
CTAO	**Charters Tower**	86.27	117	*e*P	P	02 39 37.7	+1.4
	comp=Z,2.4nm,0.7s,mb4.5						
CTAO	**Charters Tower**	86.27	117	*e*P	P	02 39 37.7	+1.4
CTAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.5						
STKA	**Stephens Creek**	90.59	129	P	P	02 39 58.0	+1.3
	comp=Z,1.6nm,0.8s,mb4.4,baz=350,slow=10,SNR=3.6						

MAN 16 02:27:53.4, 6.73N×123.70E, h36^{km}, mb4.4, ML3.3, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	1.16	344	*e*P	P	02 28 12.6	-0.7
PAGZ				*e*S	S	02 28 27.1	-0.9
IPIL	**Ipil**	1.54	313	*e*P	P	02 28 19.5	+0.7
IPIL				*e*S	S	02 28 38.2	+0.5
BUKP	**Musuan**	1.77	50	*e*P	P	02 28 22.2	+0.1
BUKP				*e*S	S	02 28 41.8	-1.8
DCPH	**Dipolog City**	1.87	349	⇑*e*P	P	02 28 23.9	+0.4
DCPH				*e*S	S	02 28 46.5	+0.4

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*ISK **16** 02:28:46.4, 38.23N×26.56E, h15^{km}, MD3.0*
*ATH **16** 02:28:47.3, 38.16N×26.62E, h37^{km}±2^{km}, MD3.0/3*
*CSEM **16** 02:28:47.0±0.1, 38.20N×26.64E, h12^{km}, MD3.0, Error ellipse: s-maj=1.9km s-min=1.3km az=88.0*
ISC 16 02:28:46.9±0.8, **38.22N**±0.03×**26.58E**±0.05, **h5**^{km}±5^{km}, **n17, σ0^{s}71**/26, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.14	6	*i* P	Pg	02 28 49.8	-0.1
URLA				*i* S	Sg	02 28 52.6	+0.7
BLCB	**Balcova**	0.40	65	PG	Pg	02 28 54.9	0.0
SMG	**Samos**	0.55	158	*e*PB	Pg	02 28 58.0	+0.1
SMG				*e*SB	Sg	02 29 06.3	+1.1
IZM	**Izmir**	0.57	71	PG	Pg	02 28 58.2	-0.1
IZM				SG	Sg	02 29 06.3	+0.4
KDAG	**Bornova**	0.57	71	*i* P	Pg	02 28 57.1	-1.3
KDAG				*i* S	Sg	02 29 05.2	-0.9
PRK	**Paraskevi**	1.05	347	*e*PN	Pn	02 29 08.0	-0.1
PRK				*e*SN	Sn	02 29 23.5	+0.2
AYVA	**Ayvalik**	1.09	5	*i* P	Pb	02 29 08.8	+0.9
AYVA				*i* S	Sb	02 29 25.9	+3.7
AYDN	**Tasoluk**	1.17	118	*i* P	Pb	02 29 09.1	-0.1
AYDN				*i* S	Sb	02 29 24.6	+0.2
AKS	**Akhisar**	1.17	55	*e*PN	Pn	02 29 09.4	-0.4
BODT	**Bodrum**	1.29	153	*e*PN	Pn	02 29 11.2	-0.4
MLSB	**Milas**	1.32	134	*e*PN	Pn	02 29 11.3	-0.6
BDRM	**Kayabasi**	1.34	149	*i* P	Pb	02 29 12.4	+0.3
BDRM				*i* S	Sb	02 29 30.9	+1.4
APE	**Apeiranthos**	1.42	216	*e*PN	Pn	02 29 12.2	-1.1
APE	**Apeiranthos**	1.42	216	*e*PN	Pn	02 29 12.1	-1.2
MANT	**Manisa**	1.58	79	*i* P	Pn	02 29 16.1	+0.5
MANT				*i* S	Sb	02 29 36.4	0.0
DAT	**Datca**	1.69	151	*e*PN	Pn	02 29 16.5	-0.7
YER	**Yerkesik**	1.73	128	*e*PN	Pn	02 29 17.4	-0.5

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*IDC **16** 02:30:53.3±0.8, 9.13S×158.75E, mb4.1/6, mb1 4.3/7, mb1mx4.2/13, mbtmp4.1/7, ML3.8/1, MS3.7/2, Ms1 3.7/2, ms1mx3.1/26, Error ellipse: s-maj=25.2km s-min=17.3km az=0.0*
*NEIC **16** 02:30:54.7±0.5, 9.18S×158.74E, h10^{km}, mb4.4/3, Error ellipse: s-maj=16.4km s-min=9.7km az=151.0*
ISC 16 02:30:52.2±5.3, **9.2S**±0.1×**158.67E**±0.06, **h2**^{km}±33^{km}, **n15, σ0^{s}68**/14, **mb4.1**/8, **MS4.1**/1, **Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	1.29	102	Pn	Pn	02 31 17.0	-0.2
	928nm,0.3s,baz=226,slow=4.4,SNR=77						
HNR				Sn	Sn	02 31 35.3	0.0
	1μm,0.3s,baz=275,slow=24,SNR=17						
DZM	**Mont Dzumac**	14.85	151	LR	LR	02 39 13.6	
	comp=Z,153nm,18.8s,baz=24,slow=34						
CTA	**Charters Tower**	16.18	226	Pn	P	02 34 42.5	0.0
	0.2nm,0.3s,baz=55,slow=14,SNR=3.9						
CTAO	**Charters Tower**	16.18	226	*e*P	P	02 34 42.8	+0.3
	20nm,1.4s						
WRAB	**Tennant Creek**	25.82	243	*e*P	P	02 36 26.6	-0.2
	11nm,0.9s,mb4.4						
WB2	**Warramunga Arr**	25.83	243	*e*P	P	02 36 26.9	+0.1
WRA	**Warramunga Arr**	25.84	243	P	P	02 36 26.8	-0.1
	7.3nm,0.9s,mb4.2,baz=69,slow=9.6,SNR=11						
STKA	**Stephens Creek**	27.61	213	P	P	02 36 44.1	+1.0
	2.4nm,0.6s,mb4.0,baz=77,slow=20,SNR=6.8						
STKA	**Stephens Creek**	27.61	213	*e*P	P	02 36 43.5	+0.4
VNDA	**Vanda**	68.36	179	*e*P	P	02 41 56.0	-0.9
	2.4nm,0.8s,mb4.3						
SONM	**Songino Array**	73.13	326	P	P	02 42 26.5	+0.3
	2.0nm,0.7s,mb4.2,baz=139,slow=5.8,SNR=15						
ILAR	**Eielson Array**	84.08	21	P	P	02 43 24.8	-0.7
	0.5nm,0.5s,mb3.9,baz=249,slow=5.0,SNR=12						
MKAR	**Makanchi Array**	87.43	318	P	P	02 43 41.7	-0.8
	0.6nm,0.6s,mb4.0,baz=99,slow=5.7,SNR=7.1						
DLBC	**Dease Lake**	88.17	30	LR	LR	03 17 56.3	
	comp=Z,74nm,19.6s,MS4.1,baz=297,slow=32						
NVAR	**Mina Array Bea**	90.21	51	P	P	02 43 57.6	+1.7
	0.7nm,0.8s,mb4.0,baz=214,slow=4.9,SNR=4.6						

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*ISK **16** 02:35:42.6, 38.15N×26.60E, h3^{km}, MD3.1*
*ATH **16** 02:35:43.1, 38.26N×27.01E, h29^{km}, MD2.9/3*
*CSEM **16** 02:35:44.0±0.1, 38.20N×26.67E, h15^{km}, MD3.1, Error ellipse: s-maj=2.8km s-min=2.5km az=63.0*
ISC 16 02:35:43.9±0.8, **38.23N**±0.03×**26.60E**±0.05, **h3**^{km}±5^{km}, **n19, σ0^{s}92**/28, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	0.13	359	*i* P	Pg	02 35 46.0	-0.5
URLA				*i* S	Sg	02 35 48.4	+0.1
BLCB	**Balcova**	0.38	66	*i* PG	Pg	02 35 51.5	0.0
IZM	**Izmir**	0.55	72	PG	Pg	02 35 54.8	-0.1
IZM				SG	Sg	02 36 03.2	+1.0
KDAG	**Bornova**	0.55	72	*i* P	Pg	02 35 53.7	-1.2
KDAG				*i* S	Sg	02 36 02.0	-0.3
SMG	**Samos**	0.56	160	*e*PN	Pg	02 35 54.8	-0.2
SMG				*e*SN	Sg	02 36 03.4	+1.0
PRK	**Paraskevi**	1.04	346	*e*PN	Pn	02 36 04.8	-0.5
PRK				*e*SN	Sn	02 36 20.5	-0.1
AYVA	**Ayvalik**	1.08	4	*i* P	Pb	02 36 05.5	+0.6
AYVA				*i* S	Sb	02 36 23.1	+4.0
AKS	**Akhisar**	1.15	55	PN	Pn	02 36 05.7	-1.1
AYDN	**Tasoluk**	1.16	119	*i* P	Pb	02 36 05.9	-0.4
AYDN				*i* S	Sb	02 36 21.8	+0.2
BODT	**Bodrum**	1.30	154	*e*PN	Pn	02 36 07.0	-1.9
BDRM	**Kayabasi**	1.34	150	*i* P	Pb	02 36 11.0	+1.6
BDRM				*i* S	Sb	02 36 27.6	+0.7
APE	**Apeiranthos**	1.44	216	PN	Pn	02 36 08.9	-2.0
APE	**Apeiranthos**	1.44	216	*e*PN	Pn	02 36 12.6	+1.7
MANT	**Manisa**	1.56	80	*i* P	Pn	02 36 13.5	+0.8
MANT				*i* S	Sb	02 36 32.4	-0.8
EZN	**Ezine**	1.61	352	*e*PN	Pn	02 36 14.2	+0.8
DAT	**Datca**	1.69	152	*e*PN	Pn	02 36 13.3	-1.2
BALB	**Balikesir**	1.73	35	*e*PN	Pn	02 36 16.1	+1.1
YER	**Yerkesik**	1.73	129	*e*PN	Pn	02 36 14.4	-0.7
DST	**Dursunbey**	2.10	48	*e*PN	Pn	02 36 21.1	+0.8

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*IDC **16** 02:47:38.3±0.9, 9.64S×118.06E, mb4.4/9, mb1 4.5/11, mb1mx4.3/16, mbtmp4.3/11, ML4.3/2, MS3.8/4, Ms1 3.7/4, ms1mx3.3/16, Error ellipse: s-maj=39.8km s-min=19.0km az=53.0*
*NEIC **16** 02:47:40.0±0.3, 9.59S×118.00E, h10^{km}, mb4.7/4, Error ellipse: s-maj=15.8km s-min=7.0km az=54.0*
*MOS **16** 02:47:41.7±0.8, 9.47S×118.18E, h33^{km}, mb4.7/6, Error ellipse: s-maj=26.0km s-min=11.8km az=117.1*
ISC 16 02:47:38.1±0.4, **9.56S**±0.09×**118.1E**±0.1, **h10**^{km}, **n45, σ0^{s}92**/54, **mb4.5**/19, **MS3.7**/3, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	11.21	140	*e*P	P	02 50 18.5	-3.1
	12nm,0.4s						
FITZ				*e*S	S	02 52 13.9	-14
FITZ	**Fitzroy Crossi**	11.21	140	Pn	P	02 50 17.9	-3.7
	5.4nm,0.3s,baz=328,slow=12,SNR=75						
FITZ				Sn	S	02 52 12.5	-16
	6.1nm,0.3s,baz=174,slow=18,SNR=12						
FITZ				LR	LR	02 54 37.6	
	comp=Z,456nm,19.4s,baz=318,slow=38						
KAKA	**Kakadu**	14.42	104	*e*P	P	02 51 23.9	+19
	12nm,0.5s						
KAKA				*e*S	S	02 53 58.0	+13
WRA	**Warramunga Arr**	18.78	125	P	P	02 51 59.6	-0.2
	0.4nm,0.3s,baz=301,slow=12,SNR=10						
WRA				S	S	02 55 14.9	-11
	0.2nm,0.3s,baz=294,slow=24,SNR=4.7						
WRA	**Warramunga Arr**	18.78	125	P	P	02 51 59.6	-0.2
WRA				S	S	02 55 14.8	-11
WRAB	**Tennant Creek**	18.78	125	*e*P	P	02 51 59.8	0.0
WB2	**Warramunga Arr**	18.79	125	*e*P	P	02 52 00.0	+0.1
WB2				*e*S	S	02 55 13.7	-13
KLBR	**Kellerberrin**	21.93	181	*e*P	P	02 52 40.3	+6.8
	154nm,2.5s,mb5.0						
KLBR				*e*S	S	02 56 13.9	-17
MUN	**Mundaring**	22.38	184	*e*P	P	02 52 45.6	+7.6
MUN				*e*S	S	02 56 25.2	-14
NWAO	**Narrogin (SRO)**	23.27	182	P	P	02 52 54.2	+7.3
	15nm,0.7s,mb4.6,baz=2.8,slow=12,SNR=16						
NWAO				S	S	02 56 49.0	-5.9
	9.6nm,0.5s,baz=111,slow=20,SNR=5.1						
NWAO	**Narrogin (SRO)**	23.27	182	*e*P	P	02 52 48.2	+1.3
	11nm,0.6s,mb4.5						
NWAO	**Narrogin (SRO)**	23.27	182	*e*P	P	02 52 48.2	+1.4
NWAO				pmax	pmax		

	comp=Z,11nm,0.6s						
STKA	**Stephens Creek**	**31.11**	**139**	P	**P**	**02 53 58.5**	**-0.6**
	comp=Z,1.3nm,0.5s,mb4.0,baz=314,slow=16,SNR=4.7						
STKA				LR	LR	03 06 56.3	
	comp=Z,159nm,19.2s,MS3.7,baz=218,slow=37						
STKA	**Stephens Creek**	**31.11**	**139**	P	**P**	**02 53 59.0**	**0.0**
ENH	**Enshi**	**40.45**	**348**	*e*P	**P**	**02 55 20.8**	**+2.2**
JIRN	**Jiri**	**48.20**	**321**	*e*P	**P**	**02 56 20.5**	**-0.5**
	comp=Z,18nm,0.6s,mb5.3						
GUN	**Gumba**	**48.57**	**321**	*e*P	**P**	**02 56 23.7**	**-0.2**
	comp=Z,18nm,0.6s,mb5.3						
PKI	**Pulchoki**	**48.63**	**320**	*e*P	**P**	**02 56 23.2**	**-1.1**
DMN	**Daman**	**48.85**	**320**	*e*P	**P**	**02 56 25.3**	**-0.7**
KKN	**Kakani**	**48.86**	**320**	*e*P	**P**	**02 56 25.6**	**-0.5**
GKN	**Gorkha**	**49.42**	**320**	*e*P	**P**	**02 56 29.5**	**-0.9**
MJAR	**Matsushiro Arr**	**49.60**	**21**	P	**P**	**02 56 32.2**	**+0.5**
	comp=Z,4.5nm,0.9s,mb4.5,baz=207,slow=9.3,SNR=6.3						
MJAR				LR	LR	03 16 13.3	
	comp=Z,117nm,18.9s,MS3.9,baz=135,slow=34						
KOLN	**Koldanda**	**49.92**	**319**	*e*P	**P**	**02 56 33.0**	**-1.3**
	comp=Z,12nm,0.6s,mb5.1						
MDJ	**Mudanjiang**	**54.91**	**10**	*e*P	**P**	**02 57 12.8**	**+1.5**
SONM	**Songino Array**	**58.07**	**351**	P	**P**	**02 57 34.4**	**+0.5**
	comp=Z,1.9nm,0.5s,mb4.4,baz=167,slow=8.2,SNR=20						
MKAR	**Makanchi Array**	**64.55**	**334**	P	**P**	**02 58 17.9**	**+0.2**
	comp=Z,4.1nm,0.6s,mb4.6,baz=146,slow=7.4,SNR=42						
MKAR				LR	LR	03 27 05.8	
	comp=Z,37nm,19.4s,MS3.6,baz=176,slow=37						
MKAR	**Makanchi Array**	**64.55**	**334**	*e*P	**P**	**02 58 17.5**	**-0.2**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	**Kurchatov**	**69.11**	**334**	*e*P	**P**	**02 58 46.4**	**-0.1**
ZAL	**Zalesovo**	**69.24**	**340**	P	**P**	**02 58 47.0**	**-0.2**
	comp=Z,2.7nm,0.3s,mb4.7,baz=323,slow=5.1,SNR=7.6						
VNDA	**Vanda**	**71.58**	**171**	*e*P	**P**	**02 59 01.5**	**+0.4**
BVAR	**Borovoye Array**	**74.37**	**332**	P	**P**	**02 59 17.3**	**-0.4**
	comp=Z,2.3nm,0.7s,mb4.2,baz=143,slow=7.5,SNR=15						
BRVK	**Borovoye**	**74.44**	**332**	*e*P	**P**	**02 59 18.3**	**+0.1**
CHKZ	**Chkalovo**	**74.69**	**333**	*e*P	**P**	**02 59 19.8**	**+0.2**
	comp=Z,2.5nm,0.6s,mb4.3						
CHKZ	**Chkalovo**	**74.69**	**333**	*e*P	**P**	**02 59 19.8**	**+0.1**
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
AB31	**Akbulak array**	**77.50**	**325**	P	**P**	**02 59 35.7**	**+0.1**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
AKTO	**Aktyubinsk**	**79.18**	**326**	P	**P**	**02 59 45.6**	**+0.8**
	comp=Z,2.8nm,0.5s,mb4.4,baz=82,slow=5.6,SNR=17						
AKTO	**Aktyubinsk**	**79.18**	**326**	P	**P**	**02 59 45.1**	**+0.4**
KMBO	**Kilima Mbogo**	**80.78**	**270**	P	**P**	**02 59 55.4**	**+1.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=63,slow=9.0,SNR=5.2						
KMBO	**Kilima Mbogo**	**80.78**	**270**	P	**P**	**02 59 55.4**	**+1.3**
TIXI	**Tiksi**	**81.35**	**3**	*e*P	**P**	**02 59 55.8**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
LBTB	**Lobatse**	**88.26**	**245**	*e*P	**P**	**03 00 33.2**	**+1.7**
	comp=Z,3.1nm,0.8s,mb4.6						
LBTB	**Lobatse**	**88.26**	**245**	*e*P	**P**	**03 00 33.3**	**+1.7**
LBTB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.6						
BRTR	**Keskin Array B**	**91.81**	**310**	P	**P**	**03 00 47.8**	**0.0**
	comp=Z,0.6nm,0.8s,mb4.0,baz=135,slow=7.0,SNR=3.7						
FINES	**FINESS Array B**	**99.29**	**331**	P	**P**	**03 01 19.7**	**-1.6**
	comp=Z,3.7nm,0.9s,mb4.9,baz=180,slow=1.9,SNR=3.9						
FINES	**FINESS Array B**	**99.29**	**331**	P	**P**	**03 01 19.7**	**-1.6**

JMA 16 03:19:23.3±0.4**,38.00N**×**144.61E,h40**^{km}**,M3.6,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.55**	**296**	P	P	03 20 03.7	+0.6
OFUJ				*e*S	S	03 20 34.1	+1.0
JIO	**Ouri**	**2.61**	**281**	P	P	03 20 04.9	+0.9
JIO				*e*S	S	03 20 35.3	+0.6
MIYJ	**Miyakonagasawa**	**2.69**	**307**	P	P	03 20 05.1	-0.1
MIYJ				*e*S	S	03 20 36.6	-0.2
JRY	**Ryogami san**	**4.98**	**248**	P	P	03 20 37.3	-0.3
JRY				*e*S	S	03 21 32.1	-2.6

JMA 16 03:22:40.8±0.2**,38.05N**×**144.65E,h50**^{km}**,M3.6,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.55**	**295**	P	P	03 23 21.1	+0.4
OFUJ				*e*S	S	03 23 51.2	+0.5
JIO	**Ouri**	**2.63**	**280**	P	P	03 23 22.1	+0.3
JIO				*e*S	S	03 23 52.6	-0.1
MIYJ	**Miyakonagasawa**	**2.69**	**305**	P	P	03 23 22.5	-0.1
MIYJ				*e*S	S	03 23 53.7	-0.4
JMK	**Ichinoseki**	**2.84**	**290**	P	P	03 23 25.3	+0.5
JMK				*e*S	S	03 23 58.3	+0.4
JOM	**Ohasama**	**2.98**	**299**	P	P	03 23 27.5	+0.6
JOM				*e*S	S	03 24 01.9	+0.2
JMM	**Marumori**	**3.05**	**268**	P	P	03 23 28.1	+0.3
JMM				*e*S	S	03 24 02.8	-0.6

ISK ***16*** *03:28:14.2,38.13N×26.61E,h5*^{km}*,MD3.3*
NEIC ***16*** *03:28:14.0,38.13N×26.62E,h5*^{km}*,MD3.3(ISK), MD3.2(ATH),After ISK.*
CSEM ***16*** *03:28:14.8±0.1,38.13N×26.61E,h2*^{km}*,MD3.3,Error ellipse: s-maj=3.2km s-min=2.3km az=86.0*
ATH ***16*** *03:28:15.6,38.15N×26.45E,h20*^{km}*±1*^{km}*,MD3.2/3*
ISC 16 03:28:15.3±0.8**,38.18N**±0.03×**26.57E**±0.05**,h3**^{km}±5^{km}**,n26,**σ**0**^{s}**87**/34**,1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.18**	**7**	*i* P	**Pg**	**03 28 18.8**	**-0.2**
URLA				*i* S	**Sg**	**03 28 21.8**	**+0.3**
BLCB	**Balcova**	**0.43**	**61**	*i* PG	**Pg**	**03 28 23.7**	**-0.2**
SMG	**Samos**	**0.52**	**155**	⇑*i*PN	**Pg**	**03 28 26.3**	**+0.6**
SMG				*e*SN	**Sg**	**03 28 34.2**	**+1.6**
IZM	**Izmir**	**0.59**	**68**	PG	**Pg**	**03 28 26.6**	**-0.5**
IZM				SG	**Sg**	**03 28 35.8**	**+0.8**
KDAG	**Bornova**	**0.59**	**68**	*i* P	**Pg**	**03 28 25.7**	**-1.5**
KDAG				*i* S	**Sg**	**03 28 33.4**	**-1.7**
PRK	**Paraskevi**	**1.09**	**348**	*e*PN	**Pn**	**03 28 36.9**	**-0.4**
PRK				*e*SN	**Sn**	**03 28 51.8**	**-1.2**
AYDN	**Tasoluk**	**1.16**	**116**	*i* P	**Pb**	**03 28 37.5**	**-0.2**
AYDN				*i* S	**Sb**	**03 28 52.9**	**-0.1**
AKS	**Akhisar**	**1.20**	**54**	PN	**Pn**	**03 28 37.8**	**-1.1**
BODT	**Bodrum**	**1.26**	**152**	PN	**Pn**	**03 28 38.3**	**-1.5**
MLSB	**Milas**	**1.30**	**132**	PN	**Pn**	**03 28 39.4**	**-1.0**
BDRM	**Kayabasi**	**1.31**	**148**	*i* P	**Pb**	**03 28 40.3**	**+0.1**
BDRM				*i* S	**Sb**	**03 28 58.2**	**+0.8**
APE	**Apeiranthos**	**1.38**	**217**	PN	**Pn**	**03 28 40.3**	**-1.2**
APE	**Apeiranthos**	**1.38**	**217**	*e*Pn	**Pn**	**03 28 40.4**	**-1.1**
MANT	**Manisa**	**1.60**	**78**	*i* P	**Pn**	**03 28 45.1**	**+0.6**
MANT				*i* S	**Sb**	**03 29 06.0**	**+0.4**
EZN	**Ezine**	**1.65**	**354**	*e*PN	**Pn**	**03 28 46.8**	**+1.4**
DAT	**Datca**	**1.66**	**151**	*e*PN	**Pn**	**03 28 45.4**	**0.0**
YER	**Yerkesik**	**1.72**	**127**	*e*PN	**Pn**	**03 28 46.2**	**-0.1**
BALB	**Balikesir**	**1.78**	**35**	*e*PN	**Pn**	**03 28 48.3**	**+1.0**
LIA	**Limnos Island**	**2.03**	**328**	*e*PN	**Pn**	**03 28 50.5**	**-0.2**
DST	**Dursunbey**	**2.15**	**48**	*e*PN	**Pn**	**03 28 53.2**	**+0.8**
DALT	**Dalyan (Mudla)**	**2.17**	**130**	*e*PN	**Pn**	**03 28 52.3**	**-0.5**
LPK	**Lapseki**	**2.19**	**4**	*e*PN	**Pn**	**03 28 54.5**	**+1.4**
EDC	**Edincik**	**2.39**	**25**	*e*PN	**Pn**	**03 28 56.6**	**+0.7**
BNT	**Bandirma**	**2.41**	**25**	*e*PN	**Pn**	**03 28 57.3**	**+1.0**
FETY	**Fethiye**	**2.53**	**127**	*e*PN	**Pn**	**03 28 57.4**	**-0.5**
ORLT	**Orhaneli**	**2.60**	**43**	*e*PN	**Pn**	**03 28 59.4**	**+0.4**

IDC ***16*** *04:11:38.0±1.2,39.00N×110.76E,mb3.7/5,mb1 4.0/6, mb1mx3.8/20,mbtmp3.8/6,ML3.1/1,Error ellipse: s-maj=36.7km s-min=20.6km az=59.0*
BJI ***16*** *04:11:39.8,38.97N×110.62E,h16*^{km}*,mB4.4,mb3.8, ML3.6,Ms3.7,Msz3.5*
NEIC ***16*** *04:11:39.4±0.8,39.02N×110.79E,h10*^{km}*,mb4.4/2,Error ellipse: s-maj=14.8km s-min=10.1km az=112.0*
MOS ***16*** *04:11:40.6±1.3,39.05N×110.75E,h33*^{km}*,mb4.3/1,Error ellipse: s-maj=40.9km s-min=30.9km az=156.1*
ISC 16 04:11:40.2±2.7**,39.03N**±0.04×**110.74E**±0.09**,h28**^{km}±21^{km}**,n22,**σ**1**^{s}**20**/28**,mb4.2**/10**,Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTO	**Baotou**	**1.67**	**341**	*e*P	**Pn**	**04 12 08.1**	**0.0**
XAN	**Xi’an**	**5.19**	**197**	P	**Pn**	**04 12 57.8**	**-0.4**
XAN				PG	**Pn**	**04 13 05.0**	**+6.8**
XAN				S	**Sn**	**04 13 57.4**	**-0.5**
XAN				SG	Sn	04 14 19.5	+22
XAN				Smax			
	comp=N,80nm,1.7s						
XAN				Smax			
	comp=E,60nm,1.5s						
TIA	**Tai’an**	**5.80**	**117**	PG	**Pn**	**04 13 22.0**	**+15**
TIA				SG	Sn	04 14 39.9	+27
TIA				Smax			
	comp=N,30nm,0.9s						
TIA				Smax			
	comp=E,30nm,0.7s						
LZH	**Lanzhou**	**6.21**	**244**	*e*P	**Pn**	**04 13 12.9**	**+0.3**
LZH				*e*S	**Sn**	**04 14 20.5**	**-3.0**
LZH				Smax			
	comp=N,130nm,1.2s						
LZH				Smax			
	comp=E,90nm,1.2s						
LZH				LR	LR		
	comp=E,450nm,7.2s						
LZH				LR	LR		
	comp=Z,770nm,10.3s						
LZH	**Lanzhou**	**6.21**	**244**	*e*P	**Pn**	**04 13 12.9**	**+0.3**
	comp=Z,25nm,1.2s						
LZH				pP		04 13 16.0	
LZH				sP		04 13 19.1	
LZH				PP	PP	04 13 21.3	+1.9
LZH				*e*S	**Sn**	**04 14 20.5**	**-3.0**
LZH				sS		04 14 25.3	
LZH				*e*SS	SS	04 14 47.4	+12
GTA	**Gaotai**	**8.49**	**276**	P	**P**	**04 13 45.9**	**+1.5**
GTA				S	**Sn**	**04 15 20.1**	**-0.2**
GTA				AMB	AMB		
	comp=Z,70nm,4.6s						
GTA				LR	LR		
	comp=N,160nm,5.3s						
GTA				LR	LR		
	comp=E,120nm,5.7s						
GTA				LR	LR		
	comp=Z,130nm,7.2s						
SONM	**Songino Array**	**9.35**	**342**	Pn	**P**	**04 13 54.3**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=156,slow=13,SNR=46						
SONM				Sn	**Sn**	**04 15 39.6**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=163,slow=20,SNR=2.5						
SONM				Lg		04 16 34.4	
	comp=Z,0.3nm,0.3s,baz=164,slow=27,SNR=6.9						
CD2	**Chengdu**	**9.92**	**217**	*e*P	**P**	**04 14 02.4**	**-1.8**
GYA	**Guiyang**	**12.99**	**196**	P	**P**	**04 14 45.9**	**+0.1**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
WMQ	**Urumqi**	**17.91**	**293**	*e*P	**P**	**04 15 50.0**	**+1.1**
MKAR	**Makanchi Array**	**22.15**	**300**	P	**P**	**04 16 35.0**	**-0.2**
	comp=Z,2.9nm,1.0s,mb3.7,baz=96,slow=11,SNR=18						
ZAL	**Zalesovo**	**23.08**	**319**	P	**P**	**04 16 46.0**	**+1.7**
	comp=Z,1.4nm,0.4s,mb3.8,baz=96,slow=16,SNR=3.9						
JIRN	**Jiri**	**23.36**	**248**	*e*P	**P**	**04 16 49.3**	**+2.0**
	comp=Z,48nm,1.1s,mb4.8						
GUN	**Gumba**	**23.44**	**249**	*e*P	**P**	**04 16 50.2**	**+2.1**
	comp=Z,23nm,0.8s,mb4.6						
KKN	**Kakani**	**23.95**	**250**	*e*P	**P**	**04 16 53.6**	**+0.6**
	comp=Z,39nm,1.1s,mb4.7						
GKN	**Gorkha**	**24.30**	**251**	*e*P	**P**	**04 16 56.8**	**+0.3**
KOLN	**Koldanda**	**25.20**	**252**	*e*P	**P**	**04 17 04.7**	**-0.3**
	comp=Z,26nm,1.2s,mb4.6						
KURK	**Kurchatov**	**25.38**	**308**	*e*P	**P**	**04 17 06.4**	**-0.1**
	comp=Z,5.5nm,1.1s,mb4.0						
KURK	**Kurchatov**	**25.38**	**308**	*e*P	**P**	**04 17 06.4**	**-0.1**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.0						
BRTR	**Keskin Array B**	**57.77**	**297**	P	**P**	**04 21 31.7**	**+0.6**
	comp=Z,0.7nm,0.6s,mb3.9,baz=76,slow=5.9,SNR=5.0						
ILAR	**Eielson Array**	**60.32**	**29**	P	**P**	**04 21 48.6**	**+0.1**
	comp=Z,0.9nm,1.1s,mb3.7,baz=301,slow=10,SNR=5.0						
WRA	**Warramunga Arr**	**62.69**	**155**	P	**P**	**04 22 03.9**	**-1.1**
	comp=Z,1.0nm,1.0s,mb3.9,baz=344,slow=7.3,SNR=5.6						

NIED ***16*** *04:12:00,41.90N×143.00E,h32*^{km}*,Mw3.8 Best double couple: M*$_0$*4.75×10*^{14} *NP1:φ*$_s$*13°,δ72°,λ82°. NP2:φ*$_s$*218°, δ19°,λ113°.*
JMA ***16*** *04:12:16.1±0.1,41.90N×142.96E,h44*^{km}*±1*^{km}*,M3.7*
JMA Felt I J1.
MOS ***16*** *04:12:17.0±1.1,41.88N×142.90E,h83*^{km}*,mb4.0/8,Error ellipse: s-maj=30.0km s-min=14.8km az=90.1*
IDC ***16*** *04:12:18.3±2.1,41.91N×142.93E,h73*^{km}*±16*^{km}*,mb3.6/9, mb1 3.7/11,mb1mx3.5/24,mbtmp3.9/11,Error ellipse: s-maj=26.7km s-min=14.6km az=96.0*
ISC 16 04:12:14.6±0.7**,41.84N**±0.06×**142.96E**±0.07**,h55**^{km}±4^{km}**,n28,**σ**1**^{s}**02**/36**,mb4.0**/9**,2C-3D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.23**	**39**	⇑P	**P**	**04 12 23.7**	**0.0**
JEM				*e*S	**S**	**04 12 28.8**	**-1.5**
JNBK	**Urakawa-nobuka**	**0.47**	**341**	⇓P	**P**	**04 12 25.7**	**-0.2**
JNBK				*e*S	**S**	**04 12 33.4**	**-0.7**
JCH	**Churui**	**0.83**	**21**	⇑P	**P**	**04 12 30.8**	**+0.4**
JCH				*e*S	**S**	**04 12 41.0**	**-1.1**
JBT2	**Biratori 2**	**1.04**	**335**	⇓P	**P**	**04 12 33.6**	**+0.4**
JOB	**Onbets**	**1.25**	**31**	P	**P**	**04 12 37.4**	**+1.3**
JOB				*e*S	**S**	**04 12 53.5**	**+1.4**
JFR	**Furan**	**1.35**	**349**	P	**P**	**04 12 37.5**	**-0.2**
JFR				*e*S	**S**	**04 12 53.1**	**-1.8**
JKB	**Kayabe**	**1.44**	**273**	⇓P	**P**	**04 12 38.9**	**0.0**
JKB				*e*S	**S**	**04 12 56.8**	**-0.1**
JEW	**Eniwo**	**1.50**	**312**	P	**P**	**04 12 40.7**	**+0.9**
ASAJ	**Asahikawa**	**2.29**	**353**	P	**P**	**04 12 53.0**	**+2.2**
	14nm,0.3s,baz=207,slow=11,SNR=22						
ASAJ				S	**S**	**04 13 19.9**	**+1.9**
	11nm,0.3s,baz=18,slow=31,SNR=9.1						
ASAJ	**Asahikawa**	**2.29**	**353**	P	**P**	**04 12 53.1**	**+2.2**
ASAJ				S	**S**	**04 13 19.9**	**+2.0**
ASAJ				pmax	pmax		
	comp=Z,14nm,0.3s						
ASAJ				smax			
	comp=N,11nm,0.3s						
MJAR	**Matsushiro Arr**	**6.45**	**216**	P	**P**	**04 13 51.1**	**+1.9**
	comp=N,0.2nm,0.3s,baz=38,slow=12,SNR=3.7						
ZAL	**Zalesovo**	**39.74**	**308**	P	**P**	**04 19 43.4**	**+0.3**
	comp=N,1.7nm,0.4s,mb4.1,baz=69,slow=11,SNR=4.9						
ZAL	**Zalesovo**	**39.74**	**308**	P	**P**	**04 19 43.4**	**+0.3**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	**Makanchi Array**	**42.75**	**298**	P	**P**	**04 20 07.8**	**-0.1**
	comp=Z,1.2nm,0.8s,mb3.7,baz=85,slow=9.7,SNR=9.3						
MKAR	**Makanchi Array**	**42.75**	**298**	P	**P**	**04 20 07.8**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**44.84**	**35**	P	**P**	**04 20 24.3**	**-0.2**
	comp=Z,0.3nm,0.9s,mb3.1,baz=272,slow=5.9,SNR=4.6						
BVAR	**Borovoye Array**	**48.34**	**310**	P	**P**	**04 20 51.9**	**-0.3**
	comp=Z,1.1nm,0.4s,mb4.2,baz=74,slow=8.2,SNR=8.7						
BVAR	**Borovoye Array**	**48.34**	**310**	P	**P**	**04 20 51.9**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
INK	**Inuvik**	**49.59**	**29**	P	**P**	**04 21 01.5**	**-0.2**
	comp=Z,2.8nm,1.2s,mb4.2,baz=285,slow=4.8,SNR=4.1						
INK	**Inuvik**	**49.59**	**29**	P	**P**	**04 21 01.5**	**-0.2**
INK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
WRA	**Warramunga Arr**	**61.98**	**189**	P	**P**	**04 22 31.0**	**-0.3**
	comp=Z,0.6nm,0.4s,mb4.0,baz=6.7,slow=6.8,SNR=16						
WRA	**Warramunga Arr**	**61.98**	**189**	P	**P**	**04 22 31.0**	**-0.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	**FINESS Array B**	**65.14**	**332**	P	**P**	**04 22 50.2**	**-1.2**
	comp=Z,2.1nm,0.6s,mb4.3,baz=53,slow=8.1,SNR=13						
FINES	**FINESS Array B**	**65.14**	**332**	P	**P**	**04 22 50.2**	**-1.2**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NOA	**NORSAR Array B**	**70.22**	**337**	P	**P**	**04 23 21.4**	**-1.7**
	comp=Z,0.9nm,0.7s,mb3.8,baz=33,slow=6.2,SNR=3.5						
NOA	**NORSAR Array B**	**70.22**	**337**	P	**P**	**04 23 21.4**	**-1.7**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	**Malin Array Be**	**71.24**	**322**	P	**P**	**04 23 28.8**	**-0.6**
	comp=Z,1.3nm,0.7s,mb4.0,baz=42,slow=5.9,SNR=5.9						
AKASG	**Malin Array Be**	**71.24**	**322**	P	**P**	**04 23 28.8**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						

CASC 16 04:13:03.8±2.7**,15.42N**×**89.16W,h4**^{km}±20^{km}**,MD4.0, 11C-3D,Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTO2	**Montecristo 2**	**1.03**	**191**	⇓*e*P	Pb	04 13 24.3	+0.4
MTO2				*e*S	Sb	04 13 38.5	+0.9
RBDL	**Robledal**	**1.40**	**201**	⇓*e*P	Pb	04 13 24.2	-5.9
RBDL				*e*S	Sb	04 13 43.9	-4.3
RTR	**El Retiro**	**1.58**	**197**	⇑*e*P	Pn	04 13 34.5	+1.7
RTR				*e*S	Sb	04 13 57.9	+4.3
SNJE	**San Jose**	**1.60**	**196**	⇑*e*P	Pn	04 13 34.7	+1.6
SNJE				*e*S	Sb	04 13 58.2	+4.1
SBLS	**San Blas**	**1.63**	**196**	⇑*e*P	Pn	04 13 35.3	+1.8
SBLS				*e*S	Sb	04 13 59.0	+3.9
LFU	**La Fuente**	**1.66**	**178**	⇑*e*P	Pn	04 13 34.1	+0.2
LFU				*e*S	Sb	04 13 58.6	+2.7
LBRS	**Las Brisas**	**1.68**	**176**	⇑*e*P	Pn	04 13 34.5	+0.4
LBRS				*e*S	Sb	04 13 57.7	+1.4
BOQS	**Boqueron**	**1.68**	**184**	⇑*e*P	Pn	04 13 35.2	+1.0
BOQS				*e*S	Sb	04 13 59.0	+2.6
IXG	**Ixpaco**	**1.76**	**226**	*e*P	Pn	04 13 32.4	-2.9
IXG				*e*S	Sn	04 13 58.6	+0.2
LCBS	**La Ceiba**	**1.76**	**174**	⇑*e*P	Pn	04 13 35.7	+0.3
LCBS				*e*S	Sn	04 13 59.3	+0.8
LFRS	**El Faro**	**1.79**	**177**	⇑*e*P	Pn	04 13 36.2	+0.4
LFRS				*e*S	Sn	04 13 59.3	+0.1
SNVI	**San Vicente**	**1.82**	**170**	⇑*e*P	Pn	04 13 36.5	+0.3
SNVI				*e*S	Sn	04 14 00.8	+0.8
TP2	**Tecpan 2**	**1.91**	**251**	⇓*e*P	Pn	04 13 36.4	-1.0
TP2				*e*S	Sn	04 14 04.5	+2.4
VSM	**San Miguel**	**2.16**	**156**	⇑*e*P	Pn	04 13 40.7	-0.3
VSM				*e*S	Sn	04 14 09.0	+0.4
CNCH	**Conchagua**	**2.49**	**149**	⇑*e*P	Pn	04 13 45.9	+0.1
CNCH				*e*S	Sn	04 14 18.0	+1.0
TELN	**Telica**	**3.60**	**141**	*e*P	Pn	04 14 00.4	-1.2
TEL3	**Telica 3**	**3.61**	**141**	*e*P	Pn	04 14 00.3	-1.5
TEL3				*e*S	Sn	04 14 44.8	-0.7
LEON	**Leon**	**3.71**	**143**	*e*P	Pn	04 14 01.1	-2.1
LEON				*e*S	Sn	04 14 45.8	-2.2
CNGN	**Cerro Negro**	**3.76**	**140**	*e*P	Pn	04 14 06.5	+2.6
MIRN	**Miramar**	**3.80**	**141**	*e*P	Pn	04 14 03.6	-0.8
MOMJ	**Momotombo**	**3.93**	**139**	*e*P	Pn	04 14 05.1	-1.2
COPN	**Copaltepe**	**4.07**	**142**	*e*P	Pn	04 14 08.5	+0.2
COPN				*e*S	Sn	04 14 57.4	+0.3
WILN	**Americas 2**	**4.34**	**138**	*e*S	Sn	04 15 01.2	-2.7

ATH ***16*** *04:49:12.2,40.26N×25.38E,h37*^{km}*±1*^{km}*,MD3.2/4*
SOF ***16*** *04:49:12.0,40.31N×25.24E,h2*^{km}*,MD2.9*
THE ***16*** *04:49:13.7,40.24N×25.31E,h19*^{km}*,ML3.1*
CSEM ***16*** *04:49:13.3±0.1,40.32N×25.20E,h10*^{km}*,ML3.1,Error ellipse: s-maj=1.7km s-min=1.0km az=165.0*
ISK ***16*** *04:49:14.4,40.21N×25.07E,h33*^{km}*,MD3.2*
NEIC ***16*** *04:49:14.0,40.27N×25.25E,h13*^{km}*,MD3.2(ISK), MD3.2(ATH),After ISK.*
ISC 16 04:49:12.7±0.6**,40.31N**±0.03×**25.16E**±0.03**,h2**^{km}±4^{km}**,n37,**σ**1**^{s}**07**/49**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	**Limnos**	**0.38**	**190**	*e*Pg	**Pg**	**04 49 21.1**	**+0.9**
LOS				*e*Sg	**Sg**	**04 49 26.7**	**+1.5**
LIA	**Limnos Island**	**0.41**	**178**	*e*PB	**Pb**	**04 49 21.7**	**-0.5**
RDO	**Rodhopi**	**0.89**	**19**	*e*PN	**Pg**	**04 49 29.6**	**-0.8**
ALN	**Alexandroupoli**	**0.90**	**48**	*e*Pg	**Pg**	**04 49 29.3**	**-1.2**
ALN				*e*Sg	**Sg**	**04 49 41.4**	**-1.0**
OUR	**Ouranopolis**	**0.90**	**272**	*e*Pg	**Pg**	**04 49 31.8**	**+1.1**
OUR				*e*Sg	**Sg**	**04 49 46.8**	**+4.0**
EZN	**Ezine**	**1.01**	**118**	*e*PG	**Pg**	**04 49 32.9**	**0.0**
PAIG	**Paliouri**	**1.20**	**252**	*e*Pg	**Pg**	**04 49 35.6**	**-0.9**
PAIG				*e*Sg	**Sg**	**04 49 52.7**	**+0.2**
LPK	**Lapseki**	**1.22**	**86**	*e*PN	**Pn**	**04 49 36.3**	**-0.4**
PLG	**Polygyros**	**1.31**	**274**	*e*PN	**Pn**	**04 49 37.8**	**-0.3**
PLG				*e*SN	**Sn**	**04 49 56.5**	**+0.1**
KDZ	**Kurdzhali**	**1.36**	**8**	*i* P	**Pb**	**04 49 36.8**	**-1.7**
RZN	**Rozhen**	**1.42**	**346**	*i* P	**Pn**	**04 49 41.0**	**+1.4**
NVR	**Nevrokopi**	**1.44**	**317**	*e*PN	**Pn**	**04 49 39.7**	**-0.1**
SOH	**Sokhos**	**1.47**	**291**	*e*Pg	**Pn**	**04 49 40.1**	**-0.2**
AOS	**Alonnisos**	**1.50**	**222**	*e*Pg	**Pn**	**04 49 39.7**	**-1.0**
AOS				*e*Sg	**Sn**	**04 49 59.5**	**-1.8**
MMB	**Musomiste**	**1.68**	**320**	*i* P	**Pn**	**04 49 42.0**	**-1.3**
MFT	**Murefte**	**1.68**	**73**	*e*PN	**Pn**	**04 49 43.3**	**0.0**
MFT				*e*SN	**Sn**	**04 50 05.0**	**-0.8**
DIM	**Dimitrovgrad**	**1.77**	**9**	*i* P	**Pn**	**04 49 46.0**	**+1.5**
XOR	**Xorichti**	**1.79**	**239**	*e*Pb	**Pb**	**04 49 43.4**	**-2.4**
PLD	**Plovdiv**	**1.83**	**349**	*i* P	**Pn**	**04 49 48.0**	**+2.6**
MRMT	**Marmara Adasi**	**1.88**	**80**	*e*PN	**Pn**	**04 49 45.9**	**-0.2**
KNT	**Kendrikon**	**1.92**	**297**	*e*Pn	**Pn**	**04 49 47.0**	**+0.3**
KNT				*e*Sn	**Sn**	**04 50 11.9**	**0.0**
KNT	**Kendrikon**	**1.92**	**297**	*e*Pn	**Pn**	**04 49 47.0**	**+0.2**
KNT				S	**Sn**	**04 50 11.9**	**+0.1**
EDRB	**Edirne**	**1.95**	**37**	*e*PN	**Pn**	**04 49 48.2**	**+1.1**
EDC	**Edincik**	**2.06**	**88**	*e*PN	**Pn**	**04 49 48.8**	**0.0**
BNT	**Bandirma**	**2.11**	**88**	*e*PN	**Pn**	**04 49 49.1**	**-0.3**
BALB	**Balikesir**	**2.19**	**107**	*e*PN	**Pn**	**04 49 50.5**	**-0.1**
GRG	**Griva**	**2.20**	**288**	*e*Pn	**Pn**	**04 49 51.5**	**+0.7**
KKB	**Krupnik**	**2.21**	**315**	*i* P	**Pn**	**04 49 52.0**	**+1.1**
VAY	**Valandovo**	**2.21**	**298**	*e*Pn	**Pn**	**04 49 51.0**	**0.0**
VAY				*e*Sn	**Sn**	**04 50 20.3**	**+1.0**
VAY				*e*Lg		04 50 29.1	
	comp=E,13nm,0.7s						
URLA	**Izmir**	**2.24**	**150**	*i* P	**Pn**	**04 49 48.5**	**-2.8**
BTOK	**Tokmak**	**2.27**	**103**	*i* P	**Pn**	**04 49 53.3**	**+1.6**
BTOK				*i* S	**Sn**	**04 50 21.1**	**+0.4**
AKS	**Akhisar**	**2.49**	**124**	*e*PN	**Pn**	**04 49 54.6**	**-0.3**
AGG	**Agios Georgios**	**2.54**	**241**	*e*Pn	**Pn**	**04 49 54.5**	**-1.0**
CTT	**Catalca**	**2.62**	**70**	*e*PN	**Pn**	**04 49 56.7**	**-0.1**
ORLT	**Orhaneli**	**2.87**	**94**	*e*PN	**Pn**	**04 50 00.1**	**-0.2**
ULDT	**Uludag**	**3.05**	**92**	*i* P	**Pn**	**04 49 55.8**	**-7.0**
MANT	**Manisa**	**3.19**	**123**	*i* P	**Pb**	**04 50 11.2**	**+1.2**
MANT				*i* S	**Sb**	**04 50 51.9**	**+2.3**

JMA 16 04:55:49.8±0.2**,38.19N**×**144.61E,h56**^{km}**,M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.47**	**292**	P	P	04 56 28.6	0.0
OFUJ				*e*S	S	04 56 58.0	+0.4
JIO	**Ouri**	**2.58**	**277**	P	P	04 56 30.3	+0.2
JIO				*e*S	S	04 57 00.5	+0.2
MIYJ	**Miyakonagasawa**	**2.58**	**303**	P	P	04 56 30.1	0.0
MIYJ				*e*S	S	04 57 00.0	-0.4
JMK	**Ichinoseki**	**2.76**	**287**	P	P	04 56 33.1	+0.3
JMK				*e*S	S	04 57 05.7	+0.7
JCH	**Churui**	**4.52**	**348**	*e*S	S	04 57 43.9	-5.4
JRY	**Ryogami san**	**5.05**	**246**	P	P	04 57 04.0	-0.9
JRY				*e*S	S	04 57 59.0	-3.6
NEM2	**Nemuro 2**	**5.24**	**9**	P	P	04 57 02.3	-5.2
NEM2				*e*S	S	04 57 58.3	-9.1
JTKR	**Abashiri--Toko**	**5.80**	**355**	*e*S	S	04 58 14.5	-6.8

NEIC ***16*** *05:04:09.1,39.15S×178.02E,h10*^{km}*,ML3.9(WEL),After WEL.*
NEIC Felt at Mahia.
WEL 16 05:04:08.2±0.2**,39.16S**×**178.01E,h5**^{km}**,ML3.9**/13**,8C-2D, Error ellipse: s-maj=1.6km s-min=1.2km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNZ	**Kokohu**	**0.30**	**298**	⇓P	Pg	05 04 14.9	+0.6
KNZ				S	Sg	05 04 18.3	0.0
KNZ	**Kokohu**	**0.30**	**298**	⇓PG	Pg	05 04 14.9	+0.6
KNZ				SG	Sg	05 04 18.3	0.0
KNZ				SG	Sg	05 04 18.6	+0.3
MWZ	**Matawai**	**0.91**	**335**	⇑P	Pb	05 04 26.1	0.0
MWZ				S	Sb	05 04 38.3	0.0
MWZ	**Matawai**	**0.91**	**335**	⇑P*	Pb	05 04 26.1	0.0
MWZ				S*	Sb	05 04 38.3	0.0
PUZ	**Puketiti**	**1.10**	**10**	⇑P	Pb	05 04 29.2	-0.3
PUZ	**Puketiti**	**1.10**	**10**	⇑P*	Pb	05 04 29.2	-0.2
URZ	**Urewera**	**1.15**	**322**	⇑P	Pb	05 04 29.4	-0.7
URZ	**Urewera**	**1.15**	**322**	⇑P*	Pb	05 04 29.4	-0.7
URZ				S*	Sb	05 04 44.4	-0.7
BKZ	**Black Stump Fm**	**1.18**	**269**	P*	Pb	05 04 30.6	-0.2

BKZ				eS*	Sb	05 04 46.4	+0.2
PXZ	Pawanui	1.24	225	eP*	Pb	05 04 31.1	-0.7
EDRZ	Edgecumbe	1.45	316	P	Pn	05 04 35.1	-0.1
EDRZ	Edgecumbe	1.45	316	ePN	Pn	05 04 33.9	-1.3
TAZ	Tarawera	1.50	308	P	Pn	05 04 34.7	-1.2
TAZ	Tarawera	1.50	308	PN	Pn	05 04 34.7	-1.2
PATZ	Paeroa	1.58	299	P	Pn	05 04 38.0	+1.0
PATZ	Paeroa	1.58	299	ePN	Pn	05 04 36.2	-0.9
MXZ	Matakaoa Point	1.61	8	⇑P	Pn	05 04 36.4	-1.1
MXZ	Matakaoa Point	1.61	8	⇑PN	Pn	05 04 36.4	-1.2
UTU	Utuhina	1.73	304	P	Pn	05 04 41.3	+2.1
WIZ	White Island	1.76	338	P	Pn	05 04 37.9	-1.7
WIZ	White Island	1.76	338	ePN	Pn	05 04 37.8	-1.8
MOVZ	Moawhango	1.77	261	P	Pn	05 04 39.3	-0.5
MOVZ	Moawhango	1.77	261	PN	Pn	05 04 39.3	-0.5
RATZ	Rangitukua	1.77	279	P	Pn	05 04 42.2	+2.4
RATZ	Rangitukua	1.77	279	ePN	Pn	05 04 40.9	+1.2
TSZ	Takapari Road	1.82	240	P	Pn	05 04 39.3	-1.2
TSZ	Takapari Road	1.82	240	PN	Pn	05 04 39.3	-1.2
WNVZ	Wahianoa	1.88	264	P	Pn	05 04 40.9	-0.5
WNVZ	Wahianoa	1.88	264	ePN	Pn	05 04 40.8	-0.6
FWVZ	Far West T-bar	1.91	266	eP	Pn	05 04 41.0	-0.8
FWVZ	Far West T-bar	1.91	266	ePN	Pn	05 04 41.0	-0.8
CNZ	Chateau	1.92	268	PN	Pn	05 04 42.2	+0.3
BFZ	Birch Farm	2.04	221	P	Pn	05 04 42.4	-1.2
BFZ	Birch Farm	2.04	221	PN	Pn	05 04 42.4	-1.2
MRZ	Mangatainoka R	2.40	231	P	Pn	05 04 46.8	-1.9
MRZ	Mangatainoka R	2.40	231	PN	Pn	05 04 46.8	-1.9
MRZ				SN	Sn	05 05 15.5	-3.3
KIW	Kapiti Island	2.92	234	P	Pn	05 04 54.2	-2.1
KIW	Kapiti Island	2.92	234	ePN	Pn	05 04 54.0	-2.3
TCW	Tory Channel	3.52	233	P	Pn	05 05 01.5	-3.2
TCW	Tory Channel	3.52	233	ePN	Pn	05 05 01.3	-3.5
TUWZ	Tuamarina	3.85	233	ePN	Pn	05 05 05.2	-4.2
BSWZ	Blackbirch Sta	4.06	230	P	Pn	05 05 08.3	-4.1
QRZ	Quartz Range	4.53	247	P	Pn	05 05 14.7	-4.4
QRZ	Quartz Range	4.53	247	ePN	Pn	05 05 14.6	-4.5
THZ	Tophouse	4.68	235	eP	Pn	05 05 16.8	-4.5
THZ	Tophouse	4.68	235	ePN	Pn	05 05 16.4	-4.9
KHZ	Kahutara	4.70	225	eP	Pn	05 05 15.7	-5.8
KHZ	Kahutara	4.70	225	ePN	Pn	05 05 16.2	-5.4
MQZ	McQueen's Vall	6.07	220	eSN	Sn	05 06 39.5	-12

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*IDC **16** 05:05:59.5±5.1, 16.89N×92.71E, h25^{km}±6^{km}, mb3.7/10, mb1 3.9/10, mb1mx3.7/21, mbtmp3.9/10, Error ellipse: s-maj=98.9km s-min=42.6km az=150.0*

*NEIC **16** 05:06:01.5±1.1, 17.18N×92.47E, mb4.2/1, Error ellipse: s-maj=36.5km s-min=15.6km az=53.0*

ISC 16 05:06:04.6±2.7**, 17.73N**±0.10×**92.2E**±0.1**, h28**^{km}±19^{km}**, h26**^{km}±.7^{km}**: pP-P, n24, σ0^{s}96**/28**, mb3.9**/11**, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	7.80	358	eP	Pn	05 07 57.0	-2.3
SHL				eS	Sn	05 09 20.5	-7.1
BOK	Bokaro	8.43	317	eP	P	05 08 08.1	+0.1
BOK				AMb	AMB	05 08 14.2	
	comp=Z,6.0nm,0.4s						
VIS	Vishakhapatnam	8.43	271	eP	P	05 08 07.5	-0.5
VIS				AMb	AMB	05 08 20.2	
	comp=Z,12nm,1.0s						
BLSP	Bilaspur	10.41	297	eP	P	05 08 35.0	-0.4
BLSP				AMb	AMB	05 08 54.5	
	comp=Z,5.8nm,0.9s						
JIRN	Jiri	11.32	332	ePn	P	05 08 48.7	+1.0
PKI	Pulchoki	11.61	329	ePn	P	05 08 50.6	-1.1
GUN	Gumba	11.68	331	ePn	P	05 08 54.2	+1.6
GKN	Gorkha	12.36	327	ePn	P	05 09 02.7	+1.0
GKN				eSn	S	05 11 19.1	-0.4
	comp=Z,33nm,0.6s						
GKN	Gorkha	12.36	327	ePn	P	05 09 02.7	+1.0
	comp=Z,16nm,0.6s						
GKN				eSn	S	05 11 19.1	-0.4
KOLN	Koldanda	12.74	323	ePn	P	05 09 06.6	-0.2
KOLN				eSn	S	05 11 28.4	-0.3
	comp=Z,22nm,0.6s						
MKAR	Makanchi Array	30.11	346	P	P	05 12 15.1	+0.9
	comp=Z,1.0nm,0.7s,mb3.7,baz=166,slow=9.9,SNR=9.6						
MKAR				pP	pP	05 12 22.6	+0.3
	comp=Z,0.6nm,0.6s,baz=164,slow=8.8,SNR=6.3						
SONM	Songino Array	32.21	18	P	P	05 12 31.6	-1.0
	comp=Z,0.8nm,0.8s,mb3.6,baz=198,slow=7.6,SNR=6.4						
SONM				pP	pP	05 12 38.6	-2.1
	comp=Z,0.6nm,0.8s,baz=210,slow=12,SNR=3.6						
ZAL	Zalesovo	36.59	353	P	P	05 13 11.2	+1.1
	comp=Z,1.3nm,0.7s,mb3.9,baz=307,slow=9.3,SNR=7.4						
ZAL				pP	pP	05 13 18.9	+0.6
	comp=Z,8.5nm,0.8s,baz=31,slow=16,SNR=47						
ZAL	Zalesovo	36.59	353	P	P	05 13 11.2	+1.1
ZAL				pP	pP	05 13 18.9	+0.6
BVAR	Borovoye Array	39.12	339	P	P	05 13 32.5	+1.1
	comp=Z,0.4nm,0.5s,mb3.4,baz=127,slow=7.2,SNR=3.3						
BRVK	Borovoye	39.19	339	P	P	05 13 31.7	-0.1
CHKZ	Chkalovo	39.59	340	eP	P	05 13 35.8	+0.6
	comp=Z,4.7nm,1.0s,mb4.2						
CHKZ				epP	pP	05 13 44.1	+0.6
AKTO	Aktyubinsk	42.52	328	P	P	05 14 00.6	+1.3
	comp=Z,0.6nm,0.6s,mb3.5,baz=123,slow=10,SNR=3.7						
BRTR	Keskin Array B	54.81	306	P	P	05 15 34.8	+0.3
	comp=Z,0.4nm,0.8s,mb3.5,baz=101,slow=6.3,SNR=4.3						
FINES	FINESS Array B	63.19	331	P	P	05 16 32.4	+0.1
	comp=Z,6.1nm,1.1s,mb4.6,baz=135,slow=11,SNR=3.9						
FINES	FINESS Array B	63.19	331	P	P	05 16 32.4	+0.1
ARCES	ARCESS Array B	65.41	339	P	P	05 16 45.2	-1.5
	comp=Z,5.9nm,1.0s,mb4.6,baz=104,slow=3.7,SNR=3.8						
GERES	GERESS Array B	69.33	316	P	P	05 17 10.2	-1.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=56,slow=4.8,SNR=6.2						
NOA	NORSAR Array B	70.29	329	P	P	05 17 17.0	-0.2
	comp=Z,0.9nm,0.7s,mb3.8,baz=90,slow=5.9,SNR=2.8						

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*IDC **16** 05:07:16.2±1.0, 0.57N×126.19E, mb3.9/5, mb1 4.2/6, mb1mx3.9/16, mbtmp4.0/6, ML3.9/1, Error ellipse: s-maj=69.2km s-min=18.8km az=72.0*

*NEIC **16** 05:07:17.5±0.5, 0.57N×126.24E, h10^{km}, mb4.4/2, Error ellipse: s-maj=36.4km s-min=8.3km az=72.0*

ISC 16 05:07:19.0±0.7**, 0.5N**±0.1×**126.1E**±0.3**, h33**^{km}**, n10, σ0^{s}25**/10**, mb4.1**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.48	181	P	P	05 11 34.7	+0.3
	0.3nm,0.3s,baz=357,slow=8.4,SNR=5.3						
WRAB	Tennant Creek	21.87	159	eP	P	05 12 10.6	-0.1
	15nm,0.6s,mb4.6						
WRA	Warramunga Arr	21.87	159	P	P	05 12 10.9	+0.1
	8.4nm,0.6s,mb4.4,baz=336,slow=12,SNR=32						
WB2	Warramunga Arr	21.88	159	eP	P	05 12 10.5	-0.3
STKA	Stephens Creek	35.40	157	eP	P	05 14 14.0	+0.1
	2.6nm,0.7s,mb4.3						
STKA	Stephens Creek	35.40	157	P	P	05 14 14.1	+0.2
	1.9nm,0.3s,mb4.5,baz=338,slow=7.0,SNR=15						
SONM	Songino Array	50.15	343	P	P	05 16 13.7	+0.3
	0.4nm,0.6s,mb3.6,baz=169,slow=7.3,SNR=3.3						
MKAR	Makanchi Array	59.84	327	P	P	05 17 23.6	-0.1
	0.9nm,0.5s,mb4.0,baz=120,slow=8.4,SNR=9.9						
KURK	Kurchatov	64.11	329	eP	P	05 17 51.7	-0.4
ILAR	Eielson Array	88.31	25	P	P	05 20 08.2	+0.2
	0.3nm,0.7s,mb3.6,baz=257,slow=4.1,SNR=4.8						

IDC 16 05:10:19.8±1.7**, 2.53N×127.03E, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.8**/16**, mbtmp4.0**/4**, Error ellipse: s-maj=103.2km s-min=23.6km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.54	184	P	P	05 15 01.6	-1.2
	3.4nm,0.5s,baz=358,slow=11,SNR=7.7						
WRA	Warramunga Arr	23.45	163	P	P	05 15 30.9	-1.1
	1.6nm,0.4s,baz=339,slow=11,SNR=20						
WB2	Warramunga Arr	23.45	162	eP	P	05 15 31.4	-0.6
STKA	Stephens Creek	36.90	159	P	P	05 17 29.8	-2.4
	2.6nm,0.7s,baz=356,slow=9.4,SNR=6.5						
MKAR	Makanchi Array	58.71	326	P	P	05 20 19.3	-2.4
	0.3nm,0.3s,baz=121,slow=7.3,SNR=7.2						

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*NEIC **16** 05:12:52.0, 17.05N×94.49W, h116^{km}, MD4.1(MEX), After MEX.*

MEX 16 05:12:51.9±1.3**, 17.05N×94.49W, h117**^{km}±27^{km}**, MD4.1, 1C, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	0.98	4	iP	P	05 13 12.0	-1.8
TUIG				iS	S	05 13 27.8	-2.4
SCX	San Cristobal	1.81	100	iP	P	05 13 22.0	-1.2
SCX				iS	S	05 13 45.0	-1.9
HUIG	Huatulco	2.01	231	⇑iP	P	05 13 22.1	-3.6
HUIG				iS	S	05 13 49.3	-2.0
OXX	Oaxaca	2.13	271	iP	P	05 13 26.0	-1.5
OXX				iS	S	05 13 54.0	-0.3
VHO	Vista Hermosa	2.15	271	iP	P	05 13 26.1	-1.5
VHO				iS	S	05 13 53.6	-0.9
CCIG	Comitan	2.38	108	iP	P	05 13 29.6	-1.2
CCIG				eS	S	05 13 59.0	-1.1
PPM	Popocatepetl	4.42	298	iP	P	05 13 56.6	-1.5
PPM				iS	S	05 14 46.3	-2.6

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*IDC **16** 05:14:37.9±2.0, 3.07S×129.14E, mb3.5/3, mb1 4.1/5, mb1mx3.9/15, mbtmp3.9/5, ML4.2/2, Error ellipse: s-maj=110.0km s-min=30.0km az=77.0*

*NEIC **16** 05:14:40.6±0.8, 3.11S×128.93E, h10^{km}, mb4.2/4, Error ellipse: s-maj=37.5km s-min=13.1km az=69.0*

ISC 16 05:14:38.5±0.8**, 3.1S**±0.1×**128.9E**±0.3**, h10**^{km}**, n14, σ1^{s}54**/16**, mb3.8**/5**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	10.14	160	eP	P	05 17 25.0	+18
	9.6nm,0.6s						
KAKA				eS	S	05 19 19.2	+17
FITZ	Fitzroy Crossi	15.23	192	eP	P	05 18 17.2	+1.6
	7.1nm,0.6s						
FITZ	Fitzroy Crossi	15.23	192	Pn	P	05 18 16.6	+1.0
	0.5nm,0.3s,baz=16,slow=12,SNR=11						
WRAB	Tennant Creek	17.53	163	eP	P	05 18 43.9	-0.9
	7.9nm,0.6s						
WRA	Warramunga Arr	17.54	163	P	P	05 18 43.2	-1.7
	1.0nm,0.3s,baz=345,slow=13,SNR=27						
WRA				S	S	05 21 54.3	-4.0
	0.1nm,0.3s,baz=346,slow=21,SNR=3.2						
WB2	Warramunga Arr	17.54	163	eP	P	05 18 44.2	-0.7
CTA	Charters Tower	23.88	136	P	P	05 19 55.9	+2.6
	5.2nm,0.9s,mb3.9,baz=299,slow=13,SNR=4.4						
CTA	Charters Tower	23.88	136	P	P	05 19 55.9	+2.6
CTAO	Charters Tower	23.88	136	eP	P	05 19 55.5	+2.2
	6.0nm,1.0s,mb4.0						
SONM	Songino Array	54.45	341	P	P	05 24 06.5	-1.8
	0.2nm,0.4s,mb3.4,baz=149,slow=8.4,SNR=2.5						
MKAR	Makanchi Array	64.42	326	P	P	05 25 15.8	-1.5
	0.5nm,0.6s,mb3.7,baz=107,slow=8.5,SNR=3.5						
MKAR	Makanchi Array	64.42	326	P	P	05 25 15.8	-1.5
KURK	Kurchatov	68.67	328	eP	P	05 25 45.5	+1.2
	4.3nm,0.9s,mb4.4						
BVAR	Borovoye Array	74.23	328	P	P	05 26 18.8	+1.4
	0.3nm,0.4s,mb3.6,baz=117,slow=9.7,SNR=3.1						

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*NEIC **16** 05:17:46.7, 39.15S×178.05E, h15^{km}, ML3.8(WEL), After WEL.*

WEL 16 05:17:46.4±0.2**, 39.15S×178.01E, h12**^{km}**, ML3.8**/6**, Error ellipse: s-maj=1.7km s-min=1.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNZ	Kokohu	0.29	297	P*	Pb	05 17 52.0	-1.0
KNZ				S*	Sb	05 17 56.1	-1.3
MWZ	Matawai	0.90	335	P	Pb	05 18 03.2	-0.2
MWZ				S	Sb	05 18 15.4	+0.3
MWZ	Matawai	0.90	335	P*	Pb	05 18 03.2	-0.2
MWZ				S*	Sb	05 18 15.4	+0.3
PUZ	Puketiti	1.09	10	P	Pb	05 18 06.3	-0.5
PUZ	Puketiti	1.09	10	P*	Pb	05 18 06.3	-0.5
URZ	Urewera	1.13	322	P	Pb	05 18 06.8	-0.7
URZ	Urewera	1.13	322	P*	Pb	05 18 06.8	-0.7
URZ				S*	Sb	05 18 21.7	-0.2
BKZ	Black Stump Fm	1.18	269	P	Pb	05 18 07.8	-0.4
BKZ				S	Sb	05 18 23.8	+0.6
BKZ	Black Stump Fm	1.18	269	P*	Pb	05 18 07.8	-0.4
BKZ				S*	Sb	05 18 23.8	+0.5
EDRZ	Edgecumbe	1.44	316	P	Pn	05 18 12.0	-0.5
EDRZ	Edgecumbe	1.44	316	ePN	Pn	05 18 11.9	-0.5
TAZ	Tarawera	1.49	308	P	Pn	05 18 14.1	+0.9
TAZ	Tarawera	1.49	308	ePN	Pn	05 18 13.4	+0.3
MARZ	Manawahe	1.56	318	P	Pn	05 18 14.7	+0.5
MARZ	Manawahe	1.56	318	ePN	Pn	05 18 14.7	+0.4
PATZ	Paeroa	1.57	299	P	Pn	05 18 15.1	+0.8
PATZ	Paeroa	1.57	299	ePN	Pn	05 18 14.2	-0.1
MXZ	Matakaoa Point	1.60	9	P	Pn	05 18 13.5	-1.3
MXZ	Matakaoa Point	1.60	9	PN	Pn	05 18 13.5	-1.3
WIZ	White Island	1.74	338	P	Pn	05 18 15.1	-1.7
WIZ	White Island	1.74	338	ePN	Pn	05 18 15.0	-1.9
MOVZ	Moawhango	1.77	261	P	Pn	05 18 16.7	-0.4
MOVZ	Moawhango	1.77	261	ePN	Pn	05 18 16.5	-0.7
TSZ	Takapari Road	1.82	239	PN	Pn	05 18 16.5	-1.4
KRVZ	Karewarewa	1.84	271	PN	Pn	05 18 17.7	-0.5
MRZ	Mangatainoka R	2.40	230	P	Pn	05 18 24.3	-1.9
MRZ				S	Sn	05 18 53.6	-2.2
MRZ	Mangatainoka R	2.40	230	PN	Pn	05 18 24.3	-1.9
MRZ				SN	Sn	05 18 53.6	-2.2

GUC 16 05:34:50.2±0.7**, 22.01S×69.33W, h90**^{km}**, MD4.0, ML3.5, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.38	131	⇑iP	P	05 35 15.6	+0.8
SPCH				iS	S	05 35 34.6	+1.5
SPCH				AMP		05 35 47.9	
	comp=N,732nm,0.5s						
CEN1	Los Morros	1.59	210	eP	P	05 35 20.4	+2.8
CEN1				iS	S	05 35 43.5	+5.8
CEN1				AMP		05 35 48.7	
	comp=E,849nm,0.6s						
ANCH	Antofagasta	1.94	211	eP	P	05 35 22.5	+0.4
ANCH				iS	S	05 35 46.9	+1.4
CPN1	Cerro Paranal	2.78	201	⇓iP	P	05 35 36.2	+2.4
CPN1				iS	S	05 36 10.0	+3.6

KRSC 16 05:35:13.0±0.0**, 49.25N×154.01E, h180**^{km}±22^{km}**, ML4.1, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.85	38	iP	P	05 36 00.3	-0.1
MIPR	Malaya Ipel'ka	3.50	29	eP	P	05 36 09.5	+1.1
GRL	Gorelyy	4.19	36	eP	P	05 36 18.8	+1.6
KOK	Koryaka	4.98	34	eP	P	05 36 27.7	+0.2
UGLR	Uglovaya	4.99	36	eP	P	05 36 27.9	+0.4
AVH	Avacha	5.00	35	eP	P	05 36 28.4	+0.7
SMAR	Somma	5.02	35	eP	P	05 36 29.4	+1.4
GNL	Ganaly	5.08	27	eP	P	05 36 28.8	0.0
NLC	Nalytchevo	5.16	38	eS	S	05 37 27.7	-1.7
SPN	Mys Shipunski	5.40	42	eP	P	05 36 32.5	-0.4
SPN				eS	S	05 37 30.5	-4.4
KMNR	Kamenistaya	7.54	28	eP	P	05 37 00.7	-0.4
KBTR	Krutoberegovo	8.78	34	eP	P	05 37 16.2	-1.2

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*ISK **16** 05:41:14.8, 38.12N×26.56E, h13^{km}, ML4.1*

*NEIC **16** 05:41:14.0, 38.12N×26.56E, h14^{km}, MD4.0(ATH), ML4.1(ISK), ML3.8(THE), After ISK.*

*IDC **16** 05:41:15.5±1.2, 38.22N×26.56E, mb3.7/2, mb1 3.6/6, mb1mx3.5/25, mbtmp3.4/6, ML3.4/4, MS3.0/3, Ms1 3.0/3, ms1mx2.6/27, Error ellipse: s-maj=21.4km s-min=13.6km az=119.0*

*ATH **16** 05:41:16.0, 38.14N×26.48E, h14^{km}±1^{km}, MD4.0/10*

*CSEM **16** 05:41:17.1±0.1, 38.15N×26.68E, h26^{km}±1^{km}, MD4.0, Error ellipse: s-maj=1.8km s-min=1.5km az=34.0*

*THE **16** 05:41:18.6, 38.13N×26.70E, h20^{km}, ML3.9*

*SKO **16** 05:41:19.0, 38.13N×26.23E, M2.8, ML3.6*

ISC 16 05:41:14.6±0.6**, 38.15N**±0.02×**26.59E**±0.02**, h1**^{km}±4^{km}**, n111, σ1^{s}00**/136**, mb3.5**/2**, 1C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.21	1	iP	Pg	05 41 20.0	+1.2
URLA				iS	Sg	05 41 23.8	+2.1
BLCB	Balcova	0.43	56	iPG	Pg	05 41 24.3	+1.2
SMG	Samos	0.48	156	ePB	Pb	05 41 25.9	+0.4
SMG				eSB	Sb	05 41 33.2	+0.5
IZM	Izmir	0.58	65	iPG	Pg	05 41 27.4	+1.1
KDAG	Bornova	0.59	64	iP	Pg	05 41 26.0	-0.4
KDAG				iS	Sg	05 41 34.2	0.0
PRK	Paraskevi	1.12	347	ePB	Pb	05 41 37.5	+1.0
PRK				eSB	Sb	05 41 52.7	+1.3
AYDN	Tasoluk	1.13	115	iP	Pb	05 41 36.9	+0.4
AYDN				iS	Sb	05 41 51.8	+0.2
AYVA	Ayvalik	1.16	4	iP	Pb	05 41 36.9	-0.2
AYVA				iS	Sb	05 41 55.2	+2.8
AKS	Akhisar	1.21	52	iPN	Pn	05 41 38.1	-0.4
AKS				SN	Sn	05 41 56.1	+0.5
BODT	Bodrum	1.23	152	iPN	Pn	05 41 37.3	-1.5
MLSB	Milas	1.27	132	iPN	Pn	05 41 38.4	-1.0
BDRM	Kayabasi	1.28	148	iP	Pb	05 41 40.4	+1.4
BDRM				iS	Sb	05 41 57.0	+1.2
APE	Apeiranthos	1.37	218	ePG	Pg	05 41 40.3	-1.6
APE				eSB	Sb	05 41 58.9	+0.4
APE	Apeiranthos	1.37	218	iPn	Pn	05 41 40.0	-0.8
APE	Apeiranthos	1.37	218	ePg	Pg	05 41 40.3	-1.6
APE				eSb	Sb	05 41 58.9	+0.4
MANT	Manisa	1.58	77	iP	Pn	05 41 45.2	+1.3
MANT				iS	Sb	05 42 03.8	-1.0
NISR	Nisiros	1.59	164	ePG	Pg	05 41 45.5	-0.9
DAT	Datca	1.62	151	iPN	Pn	05 41 43.4	-1.0
YER	Yerkesik	1.68	126	iPN	Pn	05 41 45.0	-0.3
EZN	Ezine	1.69	353	iPN	Pn	05 41 45.2	-0.1
BALB	Balikesir	1.80	34	PN	Pn	05 41 46.6	-0.3
DENT	Denizli	1.97	101	PN	Pn	05 41 49.1	-0.3
SANT	Santorini	1.99	207	eP	Pn	05 41 49.5	-0.2
DNZL	Cakiroluk	2.00	103	iP	Pn	05 41 52.2	+2.5
DNZL				iS	Sn	05 42 18.7	+3.0
LIA	Limnos Island	2.06	328	ePN	Pn	05 41 51.3	+0.6
DALT	Dalyan (Mudla)	2.13	130	PN	Pn	05 41 51.5	-0.2
LOS	Limnos	2.13	327	ePn	Pn	05 41 52.7	+1.0
PTL	Penteli	2.15	268	ePN	Pn	05 41 53.0	+1.0
DST	Dursunbey	2.15	47	PN	Pn	05 41 52.1	0.0
LPK	Lapseki	2.23	3	PN	Pn	05 41 53.2	+0.1
MPAR	Parnis Oros	2.25	271	ePN	Pn	05 41 54.0	+0.6
ARG	Arkhangelos	2.29	147	ePN	Pn	05 41 56.7	+2.8
ARG				eSN	Sn	05 42 25.9	+2.8
KHL	Karahalli	2.32	85	ePN	Pn	05 41 54.2	-0.1
AOS	Alonnisos	2.35	297	ePn	Pn	05 41 55.5	+0.6
EDC	Edincik	2.41	24	ePN	Pn	05 41 55.0	-0.6
BNT	Bandirma	2.43	25	ePN	Pn	05 41 55.2	-0.8
GDZ	Gediz	2.45	67	iP	Pn	05 42 01.0	+4.7
GDZ				iS	Sn	05 42 32.2	+4.9
FETY	Fethiye	2.50	127	ePN	Pn	05 41 56.8	-0.2
KCT	Karacabey	2.52	32	PN	Pn	05 41 56.8	-0.5
GOLH	Golhisar	2.53	110	iP	Pn	05 41 57.7	+0.3
GOLH				iS	Sn	05 42 35.4	+6.2
MRMT	Marmara Adasi	2.57	17	ePN	Pn	05 41 57.8	-0.2
SART	Tekirdag	2.58	10	iP	Pn	05 42 02.0	+3.9
SART				iS	Sn	05 42 35.2	+4.8
ORLT	Orhaneli	2.61	43	ePN	Pn	05 41 58.7	+0.1
MGER	Gerania Oros	2.63	267	ePB	Pb	05 41 59.0	-3.3
KARP	Karpathos	2.64	170	ePN	Pn	05 42 01.2	+2.2
MFT	Murefte	2.69	11	ePN	Pn	05 41 59.3	-0.4
ALN	Alexandroupoli	2.78	351	ePn	Pn	05 42 00.8	-0.2
ALN				eSn	Sn	05 42 33.8	-1.7
ULDT	Uludag	2.81	44	iP	Pn	05 42 06.0	+4.6
LKR	Lokris	2.87	281	ePN	Pn	05 42 02.6	+0.4
NEO	Neokhori	2.88	295	ePN	Pn	05 42 02.6	+0.2
PAIG	Paliouri	2.88	309	ePn	Pn	05 42 02.7	+0.2
ALT	Altintas	2.90	71	ePN	Pn	05 42 02.7	0.0
XOR	Xorichti	2.92	296	ePn	Pn	05 42 03.2	+0.2
XOR	Xorichti	2.92	296	ePn	Pn	05 42 03.2	+0.2
TKTP	Tekketepe	2.94	91	iP	Pn	05 42 02.5	-0.9
TKTP				iS	Sn	05 42 52.3	+12
OUR	Ouranopolis	2.98	318	ePn	Pn	05 42 04.0	+0.2
ELL	Elmali	2.99	117	ePN	Pn	05 42 03.2	-0.8
RDO	Rodhopi	3.10	345	ePN	Pn	05 42 06.2	+0.6
RDO				eSN	Sn	05 42 43.6	-0.2
ISP	Isparta	3.11	94	ePN	Pn	05 42 05.9	+0.2
KSL	Kastellorizon	3.11	129	ePB	Pb	05 42 09.0	-1.5
IDI	Anoyia	3.17	206	Pn	Pn	05 42 05.8	-0.7
	2.0nm,0.3s,baz=9.7,slow=16,SNR=17						
IDI				Pg	Pg	05 42 15.6	-2.2
	1.8nm,0.3s,baz=28,slow=6.3,SNR=7.8						
IDI				Lg		05 42 58.4	
	17nm,0.3s,baz=287,slow=20,SNR=6.7						
IDI				LR	LR	05 43 29.7	
	comp=Z,200nm,21.5s,baz=98,slow=42						
IDI	Anoyia	3.17	206	Pg	Pg	05 42 15.6	-2.2
YLV	Yalova	3.24	41	ePN	Pn	05 42 06.7	-0.8
VLI	Veliai	3.24	245	ePB	Pb	05 42 08.8	-3.9
BCK	Bucak	3.24	101	ePN	Pn	05 42 07.4	-0.1
PLG	Polygyros	3.30	313	ePN	Pn	05 42 08.8	+0.4
ELBA	Catalca	3.31	25	iP	Pn	05 42 15.8	+7.2
ELBA				iS	Sn	05 42 59.5	+10
BADT	Buyukada	3.33	35	ePN	Pn	05 42 08.2	-0.7
XRY	Khrisi	3.35	193	ePN	Pn	05 42 10.0	+0.9
KYTH	Kithira	3.40	238	ePB	Pb	05 42 11.0	-4.3
AGG	Agios Georgios	3.45	286	ePn	Pn	05 42 11.5	+1.0
BORA	Eskisehir	3.47	59	iP	Pn	05 42 20.1	+9.3
BORA				iS	Sn	05 43 04.1	+11
ISK	Istanbul-Kandi	3.48	32	ePN	Pn	05 42 10.8	-0.1
HRT	Hereke	3.58	41	ePN	Pn	05 42 12.2	-0.2
GPA	Golpazari	3.59	52	ePN	Pn	05 42 12.2	-0.4
ESKT	Eskisehir	3.60	66	ePN	Pn	05 42 12.0	-0.6
ESKT	Eskisehir	3.60	66	iP	Pn	05 42 21.7	+9.1
ESKT				iS	Sn	05 43 08.1	+12
KDZ	Kurdzhali	3.61	346	iP	Pn	05 42 12.0	-0.8
SOH	Sokhos	3.66	318	ePn	Pn	05 42 13.9	+0.4
EDRB	Edirne	3.69	2	ePN	Pn	05 42 13.5	-0.5
RZN	Rozhen	3.82	338	iP	Pn	05 42 16.0	+0.3
ITM	Ithomi	3.83	257	ePN	Pn	05 42 17.0	+1.2
NVR	Nevrokopi	3.83	328	ePN	Pn	05 42 15.9	0.0
DIM	Dimitrovgrad	3.98	349	iP	Pn	05 42 17.0	-1.0
MMB	Musomiste	4.08	328	iP	Pn	05 42 19.0	-0.5
KNT	Kendrikon	4.14	318	ePn	Pn	05 42 20.9	+0.5
KIZT	Kizilcal	4.21	78	ePN	Pn	05 42 21.6	+0.2
MDU	Mudurnu	4.27	56	ePN	Pn	05 42 22.1	0.0
HENT	Hendek	4.27	50	iP	Pn	05 42 34.1	+12
GRG	Griva	4.28	312	ePn	Pn	05 42 23.2	+0.8
KDHN	Kadinhani	4.36	83	iP	Pn	05 42 36.9	+13
KDHN				iS	Sn	05 43 34.6	+19
VAY	Valandovo	4.43	317	iPn	Pn	05 42 24.0	-0.5
VAY				eSn	Sn	05 43 14.6	-2.8
VAY				eLg		05 43 42.9	
	comp=N,144nm,1.8s						
KONT	Konya--Tatoy	4.56	91	ePN	Pn	05 42 25.8	-0.5
KKB	Krupnik	4.59	325	iP	Pn	05 42 26.5	-0.2
PGB	Panagyurishte	4.77	338	iP	Pn	05 42 28.0	-1.3
FNA	Florina	4.82	305	ePn	Pn	05 42 30.9	+1.0
ANTO	Ankara	5.13	69	ePN	Pn	05 42 34.5	+0.2
VTS	Vitosha	5.13	331	iP	Pn	05 42 34.5	+0.1
BR131	Keskin Array S	5.72	72	eP	Pn	05 42 40.5	-2.1
	comp=N,18nm,0.8s						
BR131	Keskin Array S	5.72	72	eP	Pn	05 42 40.5	-2.1
	comp=N,18nm,0.8s						
BRTR	Keskin Array B	5.72	72	Pn	Pn	05 42 42.4	-0.3
	comp=N,0.5nm,0.3s,baz=253,slow=15,SNR=11						
BRTR				Pg	Pg	05 43 04.1	-4.6
	comp=N,0.5nm,0.3s,baz=262,slow=18,SNR=14						
BRTR				Lg		05 44 20.6	
	baz=263,slow=33,SNR=2.7						
BRTR	Keskin Array B	5.72	72	Pn	Pn	05 42 42.3	-0.3
BRTR	Keskin Array B	5.72	72	Pg	Pg	05 43 04.1	-4.6
ELDT	Eldivan	5.79	64	iP	Pn	05 43 03.2	+19
TIRR	Tirgusor	6.45	12	⇓iP	Pn	05 42 50.5	-2.5
MLR	Muntele Rosu	7.35	356	Pn	Pn	05 43 04.6	-1.0
	comp=N,0.4nm,0.3s,baz=282,slow=2.2,SNR=5.4						
MLR				LR	LR	05 46 19.0	
	comp=N,120nm,18.4s,baz=4.3,slow=42						
MLR	Muntele Rosu	7.35	356	⇑iP	Pn	05 43 05.1	-0.6
GERES	GERESS Array B	14.18	323	Pn	P	05 44 38.6	0.0
	comp=N,0.1nm,0.3s,baz=139,slow=10,SNR=2.3						
DAVOX	Davos	15.03	310	LR	LR	05 50 33.3	
	comp=N,77nm,20.8s,baz=203,slow=37						
AKTO	Aktyubinsk	25.43	51	P	P	05 46 43.0	-2.0
	comp=N,1.1nm,0.8s,mb3.4,baz=294,slow=10.0,SNR=3.7						
MKAR	Makanchi Array	41.22	59	P	P	05 49 01.2	-1.1
	comp=N,0.8nm,0.6s,mb3.5,baz=272,slow=8.2,SNR=9.5						

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*ATH **16** 06:09:24.4, 38.13N×26.76E, h39^{km}±7^{km}, MD3.2/3*

ISK ***16*** *06:09:25.5,38.13N×26.74E,h9^{km},MD3.0*
CSEM ***16*** *06:09:25.5±0.2,38.20N×26.74E,h15^{km},MD3.0,Error ellipse: s-maj=4.8km s-min=2.7km az=116.0*
ISC 16 06:09:24.8±0.8,38.17N±0.03×26.64E±0.05,h6^{km}±6^{km}, n17,σ0^{s}78/25,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.20	349	*i* P	Pg	06 09 28.8	0.0
URLA				*i* S	Sg	06 09 32.5	+0.9
BLCB	Balcova	0.38	55	PG	Pg	06 09 32.5	+0.1
SMG	Samos	0.48	162	*e*PB	Pb	06 09 34.9	-0.4
SMG				*e*SB	Sb	06 09 41.7	-0.7
IZM	Izmir	0.54	65	PG	Pg	06 09 35.3	-0.3
IZM				SG	Sg	06 09 43.1	+0.4
KDAG	Bornova	0.54	64	*i* P	Pg	06 09 34.7	-1.0
KDAG				*i* S	Sg	06 09 41.9	-1.0
AYDN	Tasoluk	1.10	117	*i* P	Pb	06 09 45.9	+0.1
AYDN				*i* S	Sb	06 10 00.1	-0.1
PRK	Paraskevi	1.11	345	*e*PN	Pn	06 09 46.1	-0.8
PRK				*e*SN	Sn	06 10 01.3	-1.4
AKS	Akhisar	1.16	52	PN	Pn	06 09 47.8	+0.3
BODT	Bodrum	1.22	154	*e*PN	Pn	06 09 48.1	-0.4
MLSB	Milas	1.25	134	*e*PN	Pn	06 09 49.0	+0.1
BDRM	Kayabasi	1.27	150	*i* P	Pb	06 09 49.0	+0.2
BDRM				*i* S	Sb	06 10 06.6	+1.3
APE	Apeiranthos	1.41	219	*e*PN	Pn	06 09 52.0	+0.9
APE	Apeiranthos	1.41	219	*e*PN	Pn	06 09 49.9	-1.2
MANT	Manisa	1.54	77	*i* P	Pn	06 09 54.0	+1.1
MANT				*i* S	Sb	06 10 13.5	+0.5
DAT	Datca	1.62	152	*e*PN	Pn	06 09 54.1	0.0
YER	Yerkesik	1.66	128	*e*PN	Pn	06 09 54.1	-0.6
EZN	Ezine	1.67	352	*e*PN	Pn	06 09 56.9	+2.0

NEIC ***16*** *06:30:40.5±0.7,20.80S×178.54W,h586^{km}±8^{km},mb4.4/6, Error ellipse: s-maj=12.1km s-min=8.4km az=150.0*
IDC ***16*** *06:30:42.7±1.8,20.98S×178.62W,h614^{km}±23^{km}, mb3.4/10,mb1 3.6/12,mb1mx3.6/16,mbtmp4.4/12,Error ellipse: s-maj=22.6km s-min=13.4km az=169.0*
ISC 16 06:30:39.5±0.7,20.76S±0.08×178.57W±0.09, h583^{km}±12^{km},n35,σ0^{s}90/28,mb4.1/14,3D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	8.48	176	P	P	06 32 43.8	+0.3
	36nm,0.3s,baz=73,slow=19,SNR=2.9						
RAO				S	S	06 34 22.7	+0.2
	24nm,0.3s,baz=73,slow=19,SNR=3.1						
AFI	Afiamalu	9.40	45	P	P	06 32 52.8	+0.4
	2.3nm,0.3s,baz=270,slow=19,SNR=4.2						
AFI				S	S	06 34 38.0	-0.9
	2.6nm,0.3s,baz=209,slow=22,SNR=6.5						
DZM	Mont Dzumac	14.02	262	P	P	06 33 40.6	+2.2
	0.5nm,0.3s,baz=87,slow=20,SNR=12						
URZ	Urewera	17.84	191	P	P	06 34 13.2	-1.8
	2.2nm,0.3s,baz=16,slow=5.3,SNR=12						
CTA	Charters Tower	32.94	265	⇓*i*P	P	06 36 28.8	+0.4
	4.5nm,0.3s,mb4.6						
CTA	Charters Tower	32.94	265	P	P	06 36 28.9	+0.5
	5.0nm,0.3s,mb4.5,baz=92,slow=11,SNR=20						
CTAO	Charters Tower	32.94	265	*e*P	P	06 36 28.8	+0.3
	6.2nm,0.4s,mb4.6						
PMG	Port Moresby	34.88	284	P	P	06 36 45.7	+1.0
	13nm,0.8s,mb4.6,baz=130,slow=2.0,SNR=4.2						
STKA	Stephens Creek	37.20	244	*e*P	P	06 37 04.0	+0.4
	4.3nm,0.9s,mb4.0						
STKA	Stephens Creek	37.20	244	P	P	06 37 03.9	+0.3
	5.4nm,0.8s,mb4.1,baz=88,slow=10,SNR=8.1						
WB2	Warramunga Arr	44.03	262	⇓*i*P	P	06 37 57.3	-0.9
WRAB	Tennant Creek	44.03	262	*e*P	P	06 37 56.9	-1.3
	37nm,1.0s,mb4.9						
WRA	Warramunga Arr	44.04	262	P	P	06 37 57.3	-1.0
	10nm,0.3s,mb4.9,baz=97,slow=7.5,SNR=454						
WRA				S	S	06 43 44.6	-4.9
	1.3nm,0.8s,baz=96,slow=13,SNR=5.9						
KAKA	Kakadu	47.45	272	⇓*i*P	P	06 38 42.0	+18
	17nm,1.1s,mb4.5						
FITZ	Fitzroy Crossi	52.47	263	*e*P	P	06 39 00.5	-0.6
	5.1nm,1.0s,mb3.8						
QSPA	South Pole Qui	69.31	180	*e*P	P	06 40 50.4	+0.2
	8.0nm,0.7s,mb4.3						
MJAR	Matsushiro Arr	70.10	324	P	P	06 40 54.6	-0.9
	2.6nm,0.5s,mb3.9,baz=161,slow=6.8,SNR=4.4						
MAW	Mawson	81.14	200	P	P	06 41 55.7	+0.3
	1.4nm,0.8s,mb3.4,baz=134,slow=6.3,SNR=3.6						
NVAR	Mina Array Bea	81.57	44	P	P	06 41 58.9	+0.7
	0.9nm,0.8s,mb3.4,baz=233,slow=12,SNR=7.0						
NVAR	Mina Array Bea	81.57	44	P	P	06 41 58.9	+0.7
ENH	Enshi	85.74	304	P	P	06 42 19.7	+0.7
TXAR	Lajitas Array	87.64	58	P	P	06 42 29.3	+1.3
	1.0nm,0.9s,mb3.5,baz=202,slow=6.7,SNR=5.5						
COLA	College	88.57	13	*e*P	P	06 42 31.1	-0.4
ILAR	Eielson Array	88.68	13	P	P	06 42 31.5	-0.5
	1.2nm,0.7s,mb3.9,baz=226,slow=5.5,SNR=11						
PDAR	Pinedale Array	89.51	43	P	P	06 42 36.9	+0.5
	0.9nm,0.8s,mb3.7,baz=207,slow=1.5,SNR=8.9						
BVAR	Borovoye Array	118.93	320	PKP	PKPdf	06 48 22.1	+0.1
	1.0nm,0.5s,baz=113,slow=3.6,SNR=5.3						
ARCES	ARCESS Array B	129.07	349	PKP	PKPdf	06 48 41.4	+0.1
	2.1nm,0.6s,baz=326,slow=4.4,SNR=4.6						
HFS	Hagfors	139.71	351	PKhKP		06 48 54.2	
	1.4nm,0.5s,baz=117,slow=3.3,SNR=7.5						
AKASG	Malin Array Be	142.98	331	PKP	PKPdf	06 49 05.3	-1.7
	5.9nm,0.5s,baz=44,slow=4.2,SNR=47						
AKASG	Malin Array Be	142.98	331	PKP	PKPdf	06 49 05.3	-1.7
BRTR	Keskin Array B	146.61	312	PKPbc	PKPbc	06 49 17.4	+1.8
	1.4nm,0.6s,baz=135,slow=5.4,SNR=6.5						
CLL	Collm	148.19	346	P	PKPdf	06 49 19.0	+3.3
CLL				*e*		06 50 39.0	
CLL	Collm	148.19	346	*e*P	PKPdf	06 49 19.0	+3.3
CLL				*e*		06 50 39.0	
BRG	Berggiesshubel	148.37	345	*i* P	PKPdf	06 49 22.0	+6.0
GERES	GERESS Array B	150.30	344	PKPbc	PKPdf	06 49 26.4	+7.4
	1.4nm,0.8s,baz=45,slow=1.9,SNR=8.1						

IDC ***16*** *06:38:03.9±1.9,3.69N×95.39E,mb4.0/6,mb1 4.1/6, mb1mx3.8/18,mbtmp4.0/6,Error ellipse: s-maj=81.8km s-min=26.6km az=53.0*
NEIC ***16*** *06:38:08.5±0.8,3.61N×95.41E,h30^{km},mb4.3/5,Error ellipse: s-maj=23.2km s-min=9.7km az=40.0*
ISC 16 06:38:06.7±1.1,3.6N±0.2×95.4E±0.1,h30^{km},n17, σ0^{s}88/17,mb4.3/14,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.48	72	*e*P	Pn	06 39 28.6	+0.2
JIRN	Jiri	25.50	341	*e*P	P	06 43 35.6	+1.3
	25nm,0.6s,mb4.9						
DMN	Daman	25.83	339	*e*P	P	06 43 39.5	+2.1
GUN	Gumba	25.83	340	*e*P	P	06 43 37.8	+0.4
	16nm,0.6s,mb4.7						
KKN	Kakani	25.93	339	*e*P	P	06 43 38.8	+0.5
LSA	Lhasa	26.27	352	*e*P	P	06 43 41.3	-0.1
	9.3nm,0.6s,mb4.5						
GKN	Gorkha	26.36	338	*e*P	P	06 43 42.5	+0.3
	25nm,0.7s,mb4.9						
KOLN	Koldanda	26.55	336	*e*P	P	06 43 44.8	+0.8
	20nm,0.8s,mb4.7						
MKAR	Makanchi Array	44.51	347	P	P	06 46 16.3	-1.0
	1.3nm,0.4s,mb4.1,baz=157,slow=8.3,SNR=28						
WRA	Warramunga Arr	44.81	123	P	P	06 46 20.5	+0.3
	0.3nm,0.5s,mb3.4,baz=300,slow=9.2,SNR=3.9						
WRAB	Tennant Creek	44.82	123	*e*P	P	06 46 20.5	+0.3
	1.3nm,0.6s,mb3.9						
SONM	Songino Array	45.07	10	P	P	06 46 21.0	-0.8
	0.7nm,0.5s,mb3.7,baz=190,slow=7.7,SNR=6.9						
BVAR	Borovoye Array	53.42	341	P	P	06 47 24.8	-1.2
	0.9nm,0.6s,mb3.9,baz=151,slow=8.0,SNR=5.3						
BRVK	Borovoye	53.48	341	*e*P	P	06 47 26.0	-0.4
	1.1nm,0.6s,mb4.0						
CHKZ	Chkalovo	53.91	342	*e*P	P	06 47 27.8	-1.7
	2.3nm,0.6s,mb4.3						
FINES	FINESS Array B	77.06	333	P	P	06 49 58.2	-0.3
	1.4nm,0.5s,mb4.2,baz=93,slow=6.7,SNR=11						
ARCES	ARCESS Array B	79.69	340	P	P	06 50 12.5	-0.3
	7.3nm,1.1s,mb4.5,baz=90,slow=7.3,SNR=6.4						

GUC 16 06:38:34.7±0.5,24.27S×67.25W,h235^{km}±13^{km},ML4.0, 1C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.61	327	⇑*i*P	P	06 39 11.5	-1.3
SPCH				*i* S	S	06 39 41.7	-0.7
CEN1	Los Morros	2.84	287	*e*P	P	06 39 27.4	+2.5
CEN1				*i* S	S	06 40 07.1	+3.1
CEN1				AMP		06 40 10.4	
	comp=N,115nm,0.5s						
CPN1	Cerro Paranal	2.90	262	⇓*i*P	P	06 39 27.8	+2.2
CPN1				*i* S	S	06 40 08.2	+3.1
CPN1				AMP		06 40 11.1	
	comp=E,130nm,0.3s						
ANCH	Antofagasta	2.95	281	*e*P	P	06 39 28.9	+2.7
ANCH				*i* S	S	06 40 09.3	+3.2
ANCH				AMP		06 40 12.2	
	comp=N,320nm,0.0s						

MOS ***16*** *07:21:27.3±0.8,9.38S×78.66W,h33^{km},mb5.4/20,Error ellipse: s-maj=22.7km s-min=7.0km az=120.0*
IDC ***16*** *07:21:31.9±0.6,9.49S×78.75W,h60^{km}±5^{km},mb4.4/12, mb1 4.6/14,mb1mx4.5/19,mbtmp4.6/14,MS4.2/19, Ms1 4.1/19,ms1mx4.1/25,Error ellipse: s-maj=18.5km s-min=7.7km az=63.0*
BJI ***16*** *07:21:32.0,9.40S×78.60W,h60^{km},mB5.2,Ms5.6,Msz5.1*
HRVD ***16*** *07:21:32.1±0.3,9.62S×78.94W,h90^{km}±3^{km},MW5.0/67, Centroid moment Tensor Solution. LP body waves: s48,c63;Mantle waves: s67,c106; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.54±.20; $M_{\theta\theta}$-0.25±.17; $M_{\phi\phi}$3.79±.20; $M_{r\theta}$-1.74±.12; $M_{\theta\phi}$-1.72±.17; $M_{\phi r}$1.68±.15; Best double couple: $M_0$4.692×10^{16} NP1: ϕ_s357°,δ33°,λ-62°. NP2:ϕ_s145°,δ61°,λ-107°. Principal axes: T 4.991, Plg15°, Azm247°; N -.599, Plg15°, Azm153°; P -4.394, Plg69°, Azm19°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***16*** *07:21:32.1±0.2,9.39S×78.55W,mb5.3/51 Error ellipse: s-maj=9.9km s-min=3.8km az=55.0*
NEIC Felt [IV] at Casma.
ISC 16 07:21:30.2±0.2,9.36S±0.05×78.57W±0.08,h59^{km}, h59^{km}±2.1^{km}:pP-P,n187,σ0^{s}80/148,mb5.1/60,MS4.3/21, 7C-9D,Near coast of northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.12	147	*e*P	P	07 22 18.3	+0.1
LPAZ	La Paz	12.29	125	P	P	07 24 24.0	-0.6
	0.2nm,0.3s,baz=301,slow=6.9,SNR=6.3						
LPAZ	La Paz	12.29	125	*e*P	P	07 24 24.7	+0.1
	1.8nm,1.0s						
LPAZ	La Paz	12.29	125	*e*P	P	07 24 24.7	+0.1
LPAZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ROSC	El Rosal	14.74	17	P	P	07 25 02.3	+5.4
	comp=Z,0.2nm,0.3s,baz=254,slow=22,SNR=2.2						
ROSC				S	S	07 27 45.7	+6.5
	comp=Z,0.8nm,0.3s,baz=50,slow=18,SNR=2.0						
ROSC				LR	LR	07 31 36.2	
	comp=Z,2µm,21.5s,baz=196,slow=40						
SAML	Samuel	15.20	90	*e*P	P	07 25 00.6	-2.3
	comp=Z,5.0nm,2.0s						
SIV	San Ignacio	18.29	113	P	P	07 25 42.3	+0.7
	comp=Z,0.6nm,0.3s,baz=291,slow=11,SNR=79						
JTS	JuntasAbangare	20.53	342	P	P	07 26 07.7	+1.5
	comp=Z,17nm,1.0s,baz=132,slow=3.2,SNR=8.1						
JTS				S	S	07 29 55.8	+8.3
	comp=Z,2.5nm,0.5s,baz=201,slow=14,SNR=1.9						
JTS				LR	LR	07 33 36.0	
	comp=Z,256nm,19.1s,MS3.6,baz=172,slow=35						
JTS	JuntasAbangare	20.53	342	*e*P	P	07 26 09.2	+2.9
	comp=Z,39nm,1.1s						
JTS	JuntasAbangare	20.53	342	*d* *i*P	P	07 26 08.6	+2.4
CFAA	Coronel Fontan	24.13	158	P	P	07 26 41.9	+0.2
	comp=Z,1.6nm,0.9s						
CFAA				S	S	07 30 56.6	+4.2
	comp=Z,0.1nm,0.9s,baz=357,slow=14,SNR=1.7						
CFAA				LR	LR	07 34 38.1	
	comp=Z,32nm,21.1s,baz=354,slow=33						
FCH	Farellones	25.04	163	*e*P	P	07 26 50.3	-0.3
CPUP	Villa Florida	26.27	133	*e*P	P	07 27 02.2	+0.2
	comp=Z,24nm,0.8s,mb4.8						
CPUP	Villa Florida	26.27	133	*e*P	P	07 27 02.2	+0.2
CPUP				pmax	pmax		
	comp=Z,24nm,0.8s						
BDFB	Brasilia	30.45	105	P	P	07 27 40.0	+0.2
	comp=Z,12nm,0.7s,mb4.7,baz=276,slow=11,SNR=16						
BDFB				S	S	07 32 39.9	+4.6
	comp=Z,1.6nm,0.6s,baz=254,slow=21,SNR=1.5						
BDFB				LR	LR	07 40 37.6	
	comp=Z,1µm,20.8s,MS4.5,baz=282,slow=38						
BAO	Brasilia Array	30.48	105	P	P	07 27 41.0	+1.0
PLCA	Paso Flores	32.04	168	P	P	07 27 52.3	-1.2
	comp=Z,5.6nm,1.0s,mb4.4,baz=338,slow=9.7,SNR=9.2						
PLCA				pP	pP	07 28 07.5	-0.8
	comp=Z,13nm,1.1s,baz=344,slow=8.9,SNR=10						
PLCA				PcP	PcP	07 30 40.2	-1.9
	comp=Z,2.6nm,0.6s,baz=9.1,slow=4.7,SNR=5.9						
PLCA				pPcP		07 31 00.1	
	comp=Z,4.7nm,1.1s,baz=344,slow=5.5,SNR=3.7						
PLCA				S	S	07 33 01.1	+1.0
	comp=Z,0.6nm,0.4s,baz=196,slow=8.6,SNR=1.7						
PLCA				LR	LR	07 38 00.1	
	comp=Z,184nm,20.9s,MS3.7,baz=6.2,slow=31						
PLCA	Paso Flores	32.04	168	*e*P	P	07 27 52.3	-1.2
	comp=Z,5.5nm,1.1s,mb4.3						
PLCA				*e*pP	pP	07 28 07.4	-0.9
PLCA	Paso Flores	32.04	168	*e*P	P	07 27 52.3	-1.2
PLCA				*e**PP	pP	07 28 07.4	-0.9
PLCA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TRQA	Tornquist	32.24	155	*e*P	P	07 27 53.5	-1.8
	comp=Z,25nm,1.5s,mb4.8						
NATX	Nacogdoches	43.69	340	*e*P	P	07 29 33.0	+1.8
	comp=Z,230nm,1.5s,mb5.7						
JCT	Junction City	44.55	334	*e*P	P	07 29 38.8	+0.6
	comp=Z,2.7nm,0.6s,mb4.2						
JCT	Junction City	44.55	334	*e*P	P	07 29 38.8	+0.5
JCT				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
SWET	Sewanee	44.88	351	*e*P	P	07 29 39.6	-1.2
PLAL	Pickwick Lake	45.01	349	*e*P	P	07 29 40.9	-0.9
	comp=Z,46nm,1.4s,mb5.1						
LTX	Lajitas	45.44	329	*e*P	P	07 29 45.2	-0.2
TXAR	Lajitas Array	45.44	329	P	P	07 29 45.5	+0.1
	comp=Z,4.5nm,0.9s,mb4.3,baz=151,slow=9.4,SNR=22						
TXAR				pP	pP	07 30 01.8	+1.2
	comp=Z,1.4nm,0.9s,baz=164,slow=9.1,SNR=3.6						
TXAR				pPcP		07 31 41.2	
	comp=Z,2.1nm,1.0s,baz=158,slow=6.7,SNR=4.1						
TXAR				LR	LR	07 46 54.1	
	comp=Z,102nm,21.0s,MS3.7,baz=200,slow=34						
UALR	University of	45.79	344	*e*P	P	07 29 49.1	+1.1
	comp=Z,103nm,1.4s,mb5.6						
TZTN	Tazewell	45.90	354	*e*P	P	07 29 48.8	-0.1
WVT	Waverly	46.08	350	*e*P	P	07 29 49.2	-1.1
	comp=Z,63nm,1.5s,mb5.3						
WVT	Waverly	46.08	350	*e*P	P	07 29 49.2	-1.1
WVT				pmax	pmax		
	comp=Z,63nm,1.5s,mb5.3						
ELN	Prospectdale	46.39	358	*e*P	P	07 29 52.8	+0.1
PARMO	Parma	46.97	348	P	P	07 29 55.4	-1.9
WMOK	Wichita Mounta	47.85	337	*e*P	P	07 30 03.9	-0.3
	comp=Z,41nm,1.5s,mb5.2						
WMOK	Wichita Mounta	47.85	337	*e*P	P	07 30 03.9	-0.4
WMOK				pmax	pmax		
	comp=Z,41nm,1.5s,mb5.2						
GDL2	Guadalupe Moun	48.12	330	*e*P	P	07 30 07.1	+0.7
MNTX	Cornudas Mount	48.22	329	*e*P	P	07 30 06.6	-0.5
	comp=Z,50nm,1.7s,mb5.3						
FVM	French Village	48.38	347	*e*P	P	07 30 07.7	-0.6
	comp=Z,67nm,1.4s,mb5.5						
FVM	French Village	48.38	347	*e*P	P	07 30 07.7	-0.6
FVM				pmax	pmax		
	comp=Z,67nm,1.4s,mb5.5						
CPRX	Cap Rock	48.56	331	*e*P	P	07 30 10.6	+0.9
CPRX				*e*pP	pP	07 30 26.3	+1.2
CCM	Cathedral Cave	48.63	347	*e*P	P	07 30 09.7	-0.6
	comp=Z,62nm,1.6s,mb5.4						
CCM	Cathedral Cave	48.63	347	*e*P	P	07 30 09.7	-0.5
CCM				pmax	pmax		
	comp=Z,62nm,1.6s,mb5.4						
AMTX	Amarillo	49.14	335	*e*P	P	07 30 14.4	+0.2
	comp=Z,51nm,1.6s,mb5.3						
ACSO	Alum Creek Sta	49.51	356	*e*P	P	07 30 16.7	-0.2
	comp=Z,69nm,1.4s,mb5.5						
LPM	Los Pinos Moun	50.94	330	*e*P	P	07 30 27.6	-0.4
ANMO	Albuquerque	51.36	331	*e*P	P	07 30 31.7	+0.5
	comp=Z,32nm,1.3s,mb5.1						
ANMO	Albuquerque	51.36	331	*d* *i*P	P	07 30 31.8	+0.6
TUC	Tucson	51.60	325	*e*P	P	07 30 32.9	-0.1
	comp=Z,7.8nm,1.2s,mb4.5						
TUC	Tucson	51.60	325	*e*P	P	07 30 32.9	-0.1
TUC				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
SDCO	Great Sand Dun	53.20	333	*e*P	P	07 30 45.2	+0.3
	comp=Z,38nm,1.1s,mb5.2						
WUAZ	Wupatki	54.32	327	*e*P	P	07 30 53.6	+0.5
	comp=Z,124nm,1.8s,mb5.5						
PV01	Paradox Valley	54.93	331	*e*P	P	07 30 57.8	+0.3
SMCO	Snowmass	55.04	333	*e*P	P	07 30 58.6	+0.3
	comp=Z,46nm,1.5s,mb5.3						
PV10	Paradox Valley	55.34	331	*e*P	P	07 30 58.0	-2.5
RKT	Rikitea	55.54	248	*e*LR	LR	07 46 51.8	
	comp=Z,548nm,31.2s						
LDFC	Landfair	56.09	324	*e*P	P	07 31 07.3	+1.4
NEN	Nelson	56.34	325	*e*P	P	07 31 07.5	-0.2
SRU	San Rafael	56.64	330	*e*P	P	07 31 09.7	-0.1
	comp=Z,74nm,1.6s,mb5.5						
SRU	San Rafael	56.64	330	*e*P	P	07 31 09.7	-0.1
SRU				pmax	pmax		
	comp=Z,74nm,1.6s,mb5.5						
MSU	Marysvale	57.00	329	*e*P	P	07 31 12.6	+0.2
MVU	Marysvale	57.01	329	*e*P	P	07 31 12.9	+0.4
	comp=Z,30nm,1.3s,mb5.2						
ARUT	Antelope Range	57.12	327	*e*P	P	07 31 13.8	+0.6
DAU	Daniels Canyon	58.00	331	*e*P	P	07 31 19.9	+0.5
RSSD	Black Hills	58.02	339	*e*P	P	07 31 19.1	-0.4
	comp=Z,44nm,1.5s,mb5.3						
RSSD	Black Hills	58.02	339	*e*P	P	07 31 19.1	-0.4
RSSD				pmax	pmax		
	comp=Z,44nm,1.5s,mb5.3						
TPNV	Topopah Spring	58.06	325	*e*P	P	07 31 20.7	+0.9
	comp=Z,67nm,2.0s,mb5.3						
TPNV	Topopah Spring	58.06	325	*e*P	P	07 31 20.7	+0.9
TPNV				pmax	pmax		
	comp=Z,67nm,2.0s,mb5.3						
DUG	Dugway	58.60	330	⇓*i*P	P	07 31 23.9	+0.3
	comp=Z,44nm,1.3s,mb5.3						
DUG	Dugway	58.60	330	⇓*i*P	P	07 31 23.9	+0.4
DUG				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.3						
NOQ	North Oquirrh	58.61	330	*e*P	P	07 31 23.6	0.0
	comp=Z,16nm,0.9s,mb5.1						
TCUT	Toone Canyon	58.62	331	*e*P	P	07 31 24.1	+0.4
TCUT				*e*		07 32 27.3	
HWUT	Hardware Ranch	59.08	332	*e*P	P	07 31 26.4	-0.4
	comp=Z,54nm,1.1s,mb5.5						
PDAR	Pinedale Array	59.09	334	P	P	07 31 26.1	-0.7
	comp=Z,5.9nm,0.9s,mb4.6,baz=143,slow=7.4,SNR=40						
PDAR				LR	LR	07 58 41.2	
	comp=Z,115nm,18.5s,MS4.0,baz=164,slow=38						
SPUT	South Promonto	59.27	331	*e*P	P	07 31 27.9	-0.3
SPUT				*e*pP	pP	07 31 43.3	-0.8
TPH	Tonopah	59.40	325	*e*P	P	07 31 29.5	+0.4
	comp=Z,29nm,1.3s,mb5.2						
TPH	Tonopah	59.40	325	*e*P	P	07 31 29.5	+0.4
TPH				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
MTUM	Tungsten Hills	59.68	324	*e*P	P	07 31 31.1	+0.1
AHID	Auburn Hatcher	59.77	333	*e*P	P	07 31 31.5	-0.1
	comp=Z,14nm,0.9s,mb5.0						
HVU	Hansel Valley	59.79	331	*e*P	P	07 31 31.5	-0.2
	comp=Z,41nm,1.4s,mb5.3						
HVU	Hansel Valley	59.79	331	*e*P	P	07 31 31.5	-0.2
HVU				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.3						
REDW	Red Top Meadow	60.13	333	*e*P	P	07 31 33.7	-0.4
	comp=Z,106nm,1.8s,mb5.6						
SNOW	Snow King Moun	60.17	333	*e*P	P	07 31 34.3	0.0
	comp=Z,20nm,1.3s,mb5.0						
MNV	Mina	60.18	325	*e*P	P	07 31 34.7	+0.2
	comp=Z,107nm,2.0s,mb5.5						
MNV	Mina	60.18	325	*e*P	P	07 31 34.7	+0.2
MNV				pmax	pmax		
	comp=Z,107nm,2.0s,mb5.5						
LOHW	Long Hollow	60.23	334	*e*P	P	07 31 34.2	-0.5
	comp=Z,15nm,1.3s,mb4.8						
ELK	Elko	60.24	328	*e*P	P	07 31 35.0	+0.2
	comp=Z,35nm,1.3s,mb5.2						
ELK	Elko	60.24	328	*e*P	P	07 31 35.0	+0.2
ELK				pmax	pmax		
	comp=Z,35nm,1.3s						
NVAR	Mina Array Bea	60.26	325	P	P	07 31 35.4	+0.4
	comp=Z,10nm,0.8s,mb4.9,baz=144,slow=6.9,SNR=64						
NVAR				LR	LR	07 53 53.8	
	comp=Z,115nm,20.1s,MS4.0,baz=130,slow=32						
NVAR	Mina Array Bea	60.26	325	P	P	07 31 35.4	+0.4
NVAR				LR	LR	07 53 53.8	
LRV	Little Rabbit	60.54	321	*e*P	P	07 31 37.5	+0.6
IMW	Indian Meadow	60.60	334	*e*P	P	07 31 35.0	-2.2
	comp=Z,70nm,1.7s,mb5.5						
TAOE	Nuku Hiva Isla	60.73	265	*e*LR	LR	07 49 14.5	
	comp=Z,976nm,28.1s						
YFT	Old Faithful	60.99	334	*e*P	P	07 31 39.6	-0.3
CMB	Columbia Colle	61.21	323	*e*P	P	07 31 41.6	+0.2
	comp=Z,11nm,1.2s,mb4.9						
CMB	Columbia Colle	61.21	323	*e*P	P	07 31 41.6	+0.2
CMB				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.9						
YMR	Madison River	61.22	334	*e*P	P	07 31 42.4	+1.0
	comp=Z,108nm,1.9s,mb5.7						
ULM	Lac du Bonnet	61.25	347	P	P	07 31 40.4	-1.2
	comp=Z,8.9nm,0.8s,mb5.0,baz=138,slow=5.5,SNR=13						
QLMT	Earthquake Lak	61.55	334	*e*P	P	07 31 44.4	+0.8
GCMT	Greycliff	61.59	336	*e*P	P	07 31 43.4	-0.5
HLID	Hailey	61.93	331	*e*P	P	07 31 46.2	0.0
	comp=Z,31nm,1.4s,mb5.2						
MCMT	McKenzie Canyo	62.18	333	*e*P	P	07 31 48.3	+0.5
BOZ	Bozeman (W)	62.29	334	*e*P	P	07 31 47.6	-0.9
	comp=Z,40nm,1.5s,mb5.3						
BOZ	Bozeman (W)	62.29	334	*e*P	P	07 31 47.7	-0.9
BOZ				pmax	pmax		
	comp=Z,40nm,1.5s,mb5.3						
DLMT	Dillon	62.48	334	*e*P	P	07 31 49.5	-0.3
	comp=Z,37nm,1.4s,mb5.3						
NSHM	Saint Helena R	62.85	322	*e*P	P	07 31 51.2	-1.3
WVOR	Wild Horse Val	63.22	328	*e*P	P	07 31 54.3	-0.6
	comp=Z,42nm,1.4s,mb5.4						
WVOR	Wild Horse Val	63.22	328	*e*P	P	07 31 54.3	-0.6
WVOR				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.4						
MOD	Modoc	63.75	326	*e*P	P	07 31 57.6	-0.7
	comp=Z,51nm,1.2s,mb5.4						
CHMT	Chamberlain Mo	63.98	334	*e*P	P	07 31 59.9	+0.2
MSO	Missoula	64.21	334	*e*P	P	07 32 01.2	0.0
	comp=Z,42nm,1.4s,mb5.3						
SCHQ	Schefferville	64.71	7	P	P	07 32 04.0	-0.3
	comp=Z,4.9nm,0.8s,mb4.6,baz=217,slow=7.5,SNR=6.5						
SCHQ	Schefferville	64.71	7	P	P	07 32 04.0	-0.3
HOG	Hogback Mounta	64.75	326	P	P	07 32 05.2	+0.4
VSP	Spence Mountai	64.95	326	P	P	07 32 06.7	+0.5
YBH	Yreka Blue Hor	64.98	325	*e*P	P	07 32 04.5	-1.9
	comp=Z,23nm,1.4s,mb5.0						
YBH	Yreka Blue Hor	64.98	325	*e*P	P	07 32 04.5	-1.8
YBH				pmax	pmax		
	comp=Z,23nm,1.4s						
KHMM	Horse Mountain	65.02	324	*e*P	P	07 32 07.0	+0.5
BSMT	Bassoo Peak	65.36	334	P	P	07 32 09.2	+0.5
HBO	Huckleberry Mo	66.15	327	P	P	07 32 13.7	-0.1
BROR	Big Rock Looko	66.51	327	P	P	07 32 15.6	-0.4
MDW	Midway	66.74	330	P	P	07 32 18.1	+0.7
OD2	Odessa Site #2	66.79	332	P	P	07 32 18.4	+0.6
TBI	Tubuai	68.86	249	*e*LR	LR	07 53 02.1	
	comp=Z,471nm,29.8s						
EDM	Edmonton	69.00	338	*e*P	P	07 32 30.4	-1.0
PPT	Papeete	69.21	255	*e*LR	LR	07 53 11.4	
	comp=Z,820nm,28.0s						
PPT	Papeete	69.21	255	LR	LR	07 54 36.4	
	comp=Z,340nm,21.2s,MS4.6,baz=80,slow=29						
FRB	Frobisher Bay	73.29	5	LR	LR	08 06 33.6	
	comp=Z,139nm,19.9s,MS4.2,baz=126,slow=37						
VNA3	Neumayer Olymp	74.47	162	⇑*i*P	P	07 33 03.4	-0.2
VNA3				*e*	pP	07 33 16.6	-3.5
VNA3				*e*	pP	07 33 21.3	+1.2
VNA3				*e*		07 33 26.8	
VNA2	Neumayer--Watz	75.09	161	⇑*i*P	P	07 33 07.0	-0.2
VNA2				*e*	pP	07 33 21.8	-1.9
VNA2				*e*	pP	07 33 24.9	+1.2

VNA2				*e*		07 33 31.3	
DBIC	**Dimbokro**	**75.15**	**81**	P	**P**	**07 33 10.2**	**+1.6**
	comp=Z,23nm,0.7s,mb5.2,baz=239,slow=5.7,SNR=55						
DBIC				LR	LR	08 04 23.5	
	comp=Z,179nm,19.3s,MS4.4,baz=220,slow=34						
DBIC	**Dimbokro**	**75.15**	**81**	*e*P	**P**	**07 33 10.3**	**+1.6**
	comp=Z,22nm,0.7s,mb5.2						
DBIC	**Dimbokro**	**75.15**	**81**	*e*P	**P**	**07 33 10.3**	**+1.6**
DBIC				pmax	pmax		
	comp=Z,22nm,0.7s						
SNAA	**Sanae**	**76.69**	**162**	⇑*i*P	**P**	**07 33 15.7**	**-0.6**
SNAA				*e*		07 33 26.1	
SNAA				*e*	pP	07 33 32.8	0.0
SNAA				*e*		07 33 40.8	
YKA	**Yellowknife Ar**	**76.85**	**344**	P	**P**	**07 33 17.0**	**-0.4**
	comp=Z,6.5nm,0.5s,mb4.8,baz=143,slow=6.0,SNR=36						
SFJD	**Kangerlussuaq**	**78.81**	**11**	LR	LR	08 07 30.8	
	comp=Z,171nm,18.1s,MS4.4,baz=175,slow=35						
QSPA	**South Pole Qui**	**80.75**	**180**	⇑*i*P	**P**	**07 33 38.9**	**+0.6**
	comp=Z,29nm,1.2s,mb5.1						
ESDC	**Sonseca Array**	**84.29**	**48**	P	**P**	**07 33 59.1**	**+1.9**
	comp=Z,2.1nm,0.5s,mb4.5,baz=264,slow=4.5,SNR=13						
BORG	**Borgarnes**	**85.23**	**21**	LR	LR	08 08 29.1	
	comp=Z,66nm,19.9s,MS4.0,baz=16,slow=33						
SUMG	**Summit**	**85.80**	**11**	*e*P	**P**	**07 34 05.6**	**+1.7**
	comp=Z,75nm,1.3s,mb5.8						
SBA	**Scott Base**	**85.95**	**191**	*e*P	**P**	**07 34 05.5**	**+0.9**
	comp=Z,26nm,1.9s,mb5.1						
SBA	**Scott Base**	**85.95**	**191**	*e*P	**P**	**07 34 05.5**	**+0.9**
SBA				pmax	pmax		
	comp=Z,26nm,1.9s,mb5.1						
DAWY	**Dawson**	**86.19**	**337**	*e*P	**P**	**07 34 06.2**	**+0.2**
INK	**Inuvik**	**86.52**	**342**	*e*P	**P**	**07 34 07.2**	**-0.3**
	comp=Z,37nm,1.3s,mb5.5						
INK	**Inuvik**	**86.52**	**342**	*e*P	**P**	**07 34 07.2**	**-0.3**
INK				pmax	pmax		
	comp=Z,37nm,1.3s						
VNDA	**Vanda**	**87.03**	**191**	*e*P	**P**	**07 34 10.8**	**+0.9**
	comp=Z,32nm,2.5s,mb5.1						
VNDA				*e*pP	pP	07 34 27.4	+0.7
VNDA	**Vanda**	**87.03**	**191**	*e*P	**P**	**07 34 10.8**	**+0.9**
VNDA				*e**PP	pP	07 34 27.4	+0.6
VNDA				pmax	pmax		
	comp=Z,32nm,2.5s						
ILAR	**Eielson Array**	**89.41**	**337**	P	**P**	**07 34 21.0**	**-0.5**
	comp=Z,2.8nm,0.9s,mb4.6,baz=144,slow=3.4,SNR=24						
ILAR				pP	pP	07 34 37.8	-0.5
	comp=Z,6.9nm,1.0s,baz=145,slow=3.5,SNR=13						
COLA	**College**	**89.83**	**336**	*e*P	**P**	**07 34 23.2**	**-0.2**
	comp=Z,25nm,1.4s,mb5.3						
COLA				*e*pP	pP	07 34 42.1	+1.7
COLA	**College**	**89.83**	**336***c*	*i*P	**P**	**07 34 23.7**	**+0.3**
COLA				*e**PP	pP	07 34 40.8	+0.4
SYO	**Syowa Base**	**90.98**	**161**	⇓P	**P**	**07 34 27.7**	**-1.0**
SYO	**Syowa Base**	**90.98**	**161**	⇑pP	pP	07 34 43.0	-2.7
SYO	**Syowa Base**	**90.98**	**161**	⇓*e*P	**P**	**07 34 27.7**	**-1.0**
SYO				⇑*e*pP	pP	07 34 43.0	-2.7
SYO				⇓*e*PP	PP	07 38 01.3	-6.5
JMIC	**Jan Mayen**	**92.43**	**18**	LR	LR	08 13 07.0	
	comp=Z,128nm,18.0s,MS4.4,baz=52,slow=33						
DAVOX	**Davos**	**95.68**	**44**	LR	LR	08 17 48.2	
	comp=Z,94nm,18.8s,MS4.3,baz=287,slow=35						
BOSA	**Boshof**	**97.49**	**121**	LR	LR	08 17 05.1	
	comp=Z,121nm,18.3s,MS4.4,baz=319,slow=34						
VAE	**Valguarnera**	**97.97**	**53**	LR	LR	08 18 19.8	
	comp=Z,155nm,21.4s,MS4.5,baz=164,slow=35						
NOA	**NORSAR Array B**	**98.01**	**29**	LR	LR	08 15 33.0	
	comp=Z,74nm,18.9s,MS4.2,baz=265,slow=33						
MAW	**Mawson**	**98.42**	**166**	LR	LR	08 19 08.7	
	comp=Z,79nm,18.7s,MS4.2,baz=51,slow=35						
GERES	**GERESS Array B**	**98.46**	**42**	LR	LR	08 19 43.1	
	comp=Z,79nm,18.3s,MS4.2,baz=263,slow=35						
OBN	**Obninsk**	**111.91**	**34**	⇓*i*PKIKP	PKPdf	07 39 57.3	-1.1
OBN				*e*		07 47 09.5	
OBN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KIV	**Kislovodsk**	**118.79**	**45**	*i* PKIKP	PKPdf	07 40 09.1	-3.0
GNI	**Garni**	**121.28**	**49**	*i* PKIKP	PKPdf	07 40 15.3	-1.8
ARU	**Arti**	**122.42**	**27**	*i* PKIKP	PKPdf	07 40 18.9	0.0
ARU				*e*		07 41 55.8	
ARU				*e*		07 47 11.7	
STKA	**Stephens Creek**	**123.83**	**221**	PKP	PKPdf	07 40 22.3	+0.1
	comp=Z,1.7nm,0.6s,baz=89,slow=4.4,SNR=8.5						
STKA				pPKP		07 40 41.4	
	comp=Z,2.1nm,0.7s,baz=169,slow=5.7,SNR=3.9						
AKTO	**Aktyubinsk**	**125.64**	**33**	PKP	PKPdf	07 40 26.8	+1.6
	comp=Z,3.4nm,0.7s,baz=314,slow=3.2,SNR=11						
BVAR	**Borovoye Array**	**129.76**	**24**	PKP	PKPdf	07 40 33.6	+0.5
	comp=Z,1.9nm,0.7s,baz=253,slow=1.9,SNR=9.9						
BVAR				pPKP		07 40 52.3	
	comp=Z,1.4nm,0.9s,baz=315,slow=2.1,SNR=3.5						
KURK	**Kurchatov**	**134.67**	**20**	*e*P	PKPdf	07 40 44.4	+2.0
KURK	**Kurchatov**	**134.67**	**20**	⇓*i*PKIKP	PKPdf	07 40 44.2	+1.8
WRA	**Warramunga Arr**	**136.44**	**228**	PKP	PKPdf	07 40 46.9	+0.4
	comp=Z,3.8nm,0.4s,baz=123,slow=1.9,SNR=32						
WRA				pPKP		07 41 04.6	
	comp=Z,5.1nm,0.8s,baz=127,slow=1.7,SNR=6.0						
MDJ	**Mudanjiang**	**137.26**	**330**	PKP	PKPdf	07 40 51.3	+4.0
MKAR	**Makanchi Array**	**139.29**	**20**	PKhKP		07 40 43.0	
	comp=Z,0.5nm,0.6s,baz=323,slow=2.1,SNR=5.2						
MKAR				PKP	PKPdf	07 40 52.2	+1.3
	comp=Z,0.9nm,0.4s,baz=286,slow=2.8,SNR=10.0						
MKAR				pPKP		07 41 10.2	
	comp=Z,1.8nm,0.9s,baz=315,slow=1.7,SNR=3.8						
MKAR	**Makanchi Array**	**139.29**	**20**	PKP	PKPdf	07 40 43.0	-7.9
MKAR				PKP	PKPdf	07 40 52.2	+1.3
MKAR				pPKP		07 41 10.2	
AAK	**Ala-Archa**	**139.32**	**31**	*i* PKIKP	PKPdf	07 40 48.5	-2.6
AAK				*i*		07 40 54.2	
CN2	**Changchun**	**139.83**	**333**	*e*PKP	PKPdf	07 40 48.8	-3.2
ULN	**Ulaanbaatar**	**141.33**	**354**	*i* PKIKP	PKPdf	07 40 56.5	+1.9
SONM	**Songino Array**	**141.43**	**355**	PKhKP		07 40 49.1	
	comp=Z,0.8nm,0.6s,baz=328,slow=2.8,SNR=5.6						
SONM				PP	PP	07 43 56.8	-4.9
	comp=Z,0.3nm,0.5s,slow=8.9,SNR=5.5						
WMQ	**Urumqi**	**143.65**	**17**	*e*PKP	PKPdf	07 41 02.5	+3.9
WMQ				APKP		07 41 16.0	
WMQ				XPKP		07 41 20.0	
WMQ				*e*PP	PP	07 44 19.0	+3.9
WMQ				PKS	PKS	07 44 37.0	+3.7
WMQ				SKS	SKS	07 48 04.0	+3.7
WMQ				PP	PP		
	comp=Z,220nm,4.8s						
WMQ				LR	LR		
	comp=N,170nm,30.8s,MS4.8						
WMQ				LR	LR		
	comp=E,190nm,26.7s,MS4.8						
WMQ				LR	LR		
	comp=Z,150nm,32.0s						
THN	**Thein Dam**	**146.94**	**42**	*e*P	PKPdf	07 41 07.9	+3.2
HHC	**Hu-ho-hao-te**	**147.38**	**346**	*e*PKP	PKPdf	07 41 07.4	+2.3
HHC				PKP2	PKPab	07 41 11.6	-0.2
HHC				PP	PP	07 44 35.3	-2.3
HHC				PKS	PKS	07 44 41.6	+2.3
HHC				SKS	SKS	07 48 11.5	+5.7
HHC				SKKS		07 51 20.1	
HHC				SS	SS	08 03 34.1	+1.2
HHC				PP	PP		
	comp=Z,50nm,5.4s						
HHC				LR	LR		
	comp=N,160nm,7.4s						
HHC				LR	LR		
	comp=E,170nm,5.4s						
HHC				LR	LR		
	comp=Z,150nm,8.8s						
BTO	**Baotou**	**147.96**	**348**	*e*PKP	PKPdf	07 41 09.8	+3.7
GTA	**Gaotai**	**150.04**	**3**	PKP	PKPdf	07 41 11.9	+2.5
GTA				APKP		07 41 30.8	
GTA				XPKP		07 41 39.6	
GTA				PKS	PKS	07 44 45.3	+2.0
GTA				PP	PP	07 44 51.3	-1.4
GTA				SKS	SKS	07 48 08.6	-0.8
GTA				SKKS		07 51 30.1	
GTA				PP	PP		
	comp=Z,70nm,6.5s						
GTA				LR	LR		
	comp=N,120nm,19.8s,MS4.8						
GTA				LR	LR		
	comp=E,110nm,17.5s,MS4.8						
GTA				LR	LR		
	comp=Z,130nm,23.9s						
NDI	**New Delhi**	**150.22**	**47**	*e*P	PKPdf	07 41 11.0	+0.9
SSE	**Sheshan**	**151.62**	**322**	*e*PKP	PKPdf	07 41 16.4	+4.3
NJ2	**Nanjing**	**152.24**	**327**	*e*PKP	PKPdf	07 41 17.4	+4.4
NJ2				APKP		07 41 28.1	
NJ2				PKP2	PKPab	07 41 35.6	+3.5
NJ2				PP	PP	07 45 09.0	+3.9
NJ2				PP	PP		
	comp=Z,260nm,7.9s						
NJ2				LR	LR		
	comp=N,340nm,23.4s,MS5.4						
NJ2				LR	LR		
	comp=E,470nm,19.1s,MS5.4						
NJ2				LR	LR		
	comp=Z,90nm,19.6s,MS4.6						
LZH	**Lanzhou**	**153.31**	**356**	*e*PKP	PKPdf	07 41 17.5	+3.2
LZH				PKP2	PKPab	07 41 33.4	-3.0
LZH				XPKP		07 41 42.1	
LZH				*e*PP	PP	07 45 14.3	+3.0
LZH				SKS	SKS	07 48 16.3	+2.8
LZH				SKKS		07 51 54.5	
LZH				*e*SS	SS	08 04 40.3	+2.2
LZH				PP	PP		
	comp=Z,190nm,8.1s						
LZH				LR	LR		
	comp=E,290nm,18.2s						
LZH				LR	LR		
	comp=Z,740nm,20.0s						
LZH	**Lanzhou**	**153.31**	**356**	*e*PKP	PKPdf	07 41 17.5	+3.2
LZH				pPKP		07 41 39.6	
KMI	**Kunming**	**164.27**	**356**	PKP	PKPdf	07 41 25.3	-2.1
KMI				LR	LR		
	comp=Z,70nm,31.7s						

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*NIED **16** 07:32:00, 38.20N×144.70E, h5^{km}, Mw3.6 Best double couple: M$_0$3.27×10^{14} NP1:φ$_s$179°, δ75°, λ-92°. NP2:φ$_s$7°, δ15°, λ-82°.*

*JMA **16** 07:32:59.1±0.2, 38.22N×144.66E, h51^{km}, M3.6*

ISC 16 07:32:59.5±1.8**, 38.15N**±0.07×**144.6E**±0.1**, h51**^{km}**, n9, σ0**$\overset{s}{.}$**72**/16**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.49**	**293**	P	**P**	**07 33 38.5**	**0.0**
JIO	**Ouri**	**2.59**	**278**	P	**P**	**07 33 40.4**	**+0.5**
JIO				*e*S	**S**	**07 34 10.7**	**+0.4**
MIYJ	**Miyakonagasawa**	**2.61**	**304**	P	**P**	**07 33 39.6**	**-0.5**
MIYJ				*e*S	**S**	**07 34 09.8**	**-0.9**
JMK	**Ichinoseki**	**2.78**	**288**	P	**P**	**07 33 43.0**	**+0.4**
JMK				*e*S	**S**	**07 34 15.8**	**+0.7**
JOM	**Ohasama**	**2.91**	**298**	P	**P**	**07 33 44.5**	**0.0**
JOM				*e*S	**S**	**07 34 19.5**	**+1.0**
JMM	**Marumori**	**3.03**	**266**	P	**P**	**07 33 46.7**	**+0.5**
JMM				*e*S	**S**	**07 34 22.2**	**+0.7**
JANG	**Nango**	**3.27**	**314**	*e*S	**S**	**07 34 26.5**	**-1.1**
JRY	**Ryogami san**	**5.04**	**247**	P	**P**	**07 34 14.5**	**0.0**
JRY				*e*S	**S**	**07 35 10.3**	**-1.8**
MAT	**Matsushiro**	**5.35**	**254**	P	**P**	**07 34 19.0**	**+0.2**
MAT				*e*S	**S**	**07 35 19.7**	**-0.2**

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*IDC **16** 07:52:17.2±3.7, 53.46N×35.46W, mb4.0/4, mb1 4.1/6, mb1mx3.7/25, mbtmp4.0/6, ML2.9/1, Error ellipse: s-maj=128.0km s-min=23.5km az=171.0*

ISC 16 07:52:17.1±3.1**, 53.6N**±0.7×**35.5W**±0.2**, h10**^{km}**, n7, σ0**$\overset{s}{.}$**63**/6**, mb4.0**/4**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	**Schefferville**	**18.32**	**287**	P	**P**	**07 56 32.1**	**-0.6**
	0.4nm,0.3s,baz=70,slow=11,SNR=6.2						
EKA	**Eskdalemuir Ar**	**18.80**	**71**	P	**P**	**07 56 38.5**	**-0.1**
	baz=265,slow=10.0,SNR=4.7						
ARCES	**ARCESS Array B**	**31.47**	**36**	P	**P**	**07 58 40.9**	**+0.5**
	7.6nm,1.1s,mb4.4,baz=276,slow=8.2,SNR=3.6						
FINES	**FINESS Array B**	**32.83**	**51**	P	**P**	**07 58 52.1**	**-0.3**
	1.8nm,0.8s,mb4.1,baz=288,slow=8.8,SNR=4.0						
PDAR	**Pinedale Array**	**48.44**	**289**	P	**P**	**08 01 01.8**	**+0.7**
	0.9nm,0.6s,mb4.0,baz=57,slow=7.8,SNR=9.1						
MKAR	**Makanchi Array**	**66.92**	**41**	P	**P**	**08 03 11.0**	**-0.2**
	0.4nm,0.7s,mb3.6,baz=323,slow=6.1,SNR=4.1						
WRA	**Warramunga Arr**	**145.55**	**17**	PKPbc	PKPbc	08 11 56.5	+0.6
	1.3nm,0.9s,baz=347,slow=3.2,SNR=11						

IDC 16 07:56:48.0±2.3**, 1.93N**×**96.61E, h26**^{km}±6^{km}**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.7**/17**, mbtmp4.0**/5**, Error ellipse: s-maj=89.2km s-min=19.9km az=56.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.93**	**122**	P	P	08 04 44.9	-1.9
	1.2nm,0.5s,baz=301,slow=9.1,SNR=8.4						
WRA				pP	pP	08 04 52.6	-1.9
	0.9nm,0.7s,baz=301,slow=9.2,SNR=5.6						
MKAR	**Makanchi Array**	**46.39**	**346**	P	P	08 05 12.2	-2.0
	1.7nm,0.7s,baz=162,slow=7.7,SNR=21						
MKAR				pP	pP	08 05 20.0	-1.9
	0.7nm,0.5s,baz=162,slow=8.7,SNR=6.4						
SONM	**Songino Array**	**46.50**	**9**	P	P	08 05 13.3	-1.7
	0.6nm,0.4s,baz=187,slow=8.9,SNR=5.9						
SONM				pP	pP	08 05 21.2	-1.6
	0.7nm,0.5s,baz=190,slow=9.7,SNR=6.5						
BVAR	**Borovoye Array**	**55.37**	**341**	P	P	08 06 19.0	-3.2
	0.7nm,0.7s,baz=135,slow=8.4,SNR=4.1						
ARCES	**ARCESS Array B**	**81.65**	**340**	P	P	08 09 03.7	-1.3
	6.0nm,1.0s,baz=108,slow=5.7,SNR=4.3						

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*IGIL **16** 08:18:28.9±29.0, 35.48N×5.11W, h2^{km}, ML2.9*

*CSEM **16** 08:18:29.9±0.2, 35.46N×5.10W, h30^{km}, MD3.1, Error ellipse: s-maj=5.3km s-min=3.1km az=40.0*

*MDD **16** 08:18:30.8±0.7, 35.37N×5.11W, h65^{km}±18^{km}, mb3.3/12, Error ellipse: s-maj=6.8km s-min=4.9km az=52.0, PRXIMO*

*INMG **16** 08:18:31.9±1.1, 35.47N×5.17W, h31^{km}, ML2.8, Error ellipse: s-maj=5.2km s-min=3.4km az=174.0*

*CNRM **16** 08:18:31.4, 35.28N×5.20W, h30^{km}, MD3.1*

*SFS **16** 08:18:31.0, 35.43N×5.11W, h29^{km}, ML2.4*

ISC 16 08:18:29.0±0.6**, 35.44N**±0.03×**5.17W**±0.04**, h81**^{km}±9^{km}**, n55, σ1**$\overset{s}{.}$**28**/98**, 1D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	**Palemas**	**1.03**	**102**	*e*P	**P**	**08 18 48.0**	**-0.7**
MPAL				*i* S	**S**	**08 19 02.0**	**-1.5**
EJIF	**Jimena Fronter**	**1.03**	**347**	P	**P**	**08 18 51.2**	**+2.5**
	0.8nm,0.2s,SNR=9.3						
EJIF				S	**S**	**08 19 04.8**	**+1.2**
	7.7nm,0.4s,SNR=8.3						
EMIJ	**Mijas**	**1.16**	**16**	P	**P**	**08 18 50.5**	**+0.1**
	16nm,0.2s,SNR=17						
EMIJ				S	**S**	**08 19 05.2**	**-1.2**
	18nm,0.3s,SNR=7.6						
TOU	**Touzarine**	**1.26**	**112**	*e*P	**P**	**08 18 51.0**	**-0.6**
TOU				*i* S	**S**	**08 19 06.0**	**-2.5**
LIJA	**Lijar**	**1.47**	**353**	P	**P**	**08 18 56.8**	**+2.3**
LIJA				S	**S**	**08 19 14.0**	**+0.7**
LIJA	**Lijar**	**1.47**	**353**	*i* P	**P**	**08 18 56.8**	**+2.3**
LIJA				*e*S	**S**	**08 19 14.0**	**+0.7**
ESPR	**Espera**	**1.53**	**339**	P	**P**	**08 18 56.9**	**+1.8**
	1.1nm,0.1s,SNR=5.5						
ESPR				S	**S**	**08 19 15.1**	**+0.6**
	51nm,0.2s,SNR=11						
ESPR	**Espera**	**1.53**	**339**	P	**P**	**08 18 56.9**	**+1.7**
	1.1nm,0.1s,SNR=5.5						
ESPR				S	**S**	**08 19 15.1**	**+0.6**
	46nm,0.3s,SNR=11						
GIBL	**Gibalbin**	**1.53**	**335**	*e*S	**S**	**08 19 16.0**	**+1.5**
EGUA	**Guajares**	**1.90**	**43**	P	**P**	**08 18 59.7**	**-0.5**
	1.3nm,0.1s,SNR=7.9						
EGUA				S	**S**	**08 19 21.4**	**-1.7**
	1.3nm,0.1s,SNR=7.9						
ERON	**Agron**	**1.92**	**35**	P	**P**	**08 19 00.1**	**-0.3**
	2.1nm,0.1s,SNR=7.9						
ERON				S	**S**	**08 19 23.7**	**+0.2**
	3.7nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**2.25**	**38**	P	**P**	**08 19 05.8**	**+0.9**
	0.7nm,0.1s,SNR=5.5						
EQUE				S	**S**	**08 19 32.1**	**+0.5**
	1.4nm,0.2s,SNR=7.9						
EBER	**Berja**	**2.35**	**51**	P	**P**	**08 19 06.3**	**0.0**
	15nm,0.4s,SNR=10						
EBER				S	**S**	**08 19 33.5**	**-0.6**
	7.3nm,0.2s,SNR=6.2						
EBER	**Berja**	**2.35**	**51**	P	**P**	**08 19 06.3**	**0.0**
	15nm,0.4s,SNR=10						
EBER				S	**S**	**08 19 33.5**	**-0.6**
	7.3nm,0.2s,SNR=6.2						
CZD	**Col de Zad**	**2.41**	**177**	*i* P	**P**	**08 19 06.5**	**-0.7**
CZD				*i* S	**S**	**08 19 30.0**	**-5.6**
EMIN	**Mina Concepcio**	**2.61**	**333**	P	**P**	**08 19 11.0**	**+0.9**
	0.8nm,0.1s,SNR=24						
EMIN				S	**S**	**08 19 39.6**	**-1.2**
	11nm,0.1s,SNR=6.6						
EMIN	**Mina Concepcio**	**2.61**	**333**	P	**P**	**08 19 11.0**	**+0.9**
	0.8nm,0.1s,SNR=24						
ECAB	**El Cabril**	**2.63**	**356**	P	**P**	**08 19 11.3**	**+0.9**
	1.0nm,0.3s,SNR=13						
ECAB				S	**S**	**08 19 40.2**	**-1.1**
	3.2nm,0.2s,SNR=5.3						
ECAB	**El Cabril**	**2.63**	**356**	P	**P**	**08 19 11.3**	**+1.0**
	1.0nm,0.3s,SNR=13						
ECAB				S	**S**	**08 19 40.2**	**-1.0**
	3.2nm,0.2s,SNR=5.3						
EADA	**Adamuz**	**2.76**	**10**	P	**P**	**08 19 13.2**	**+1.1**
	1.8nm,0.1s,SNR=10						
EADA				S	**S**	**08 19 44.1**	**-0.3**
	5.5nm,0.1s						
EADA	**Adamuz**	**2.76**	**10**	P	**P**	**08 19 13.2**	**+1.1**
	1.8nm,0.1s,SNR=10						
EADA				S	**S**	**08 19 44.1**	**-0.3**
	5.5nm,0.1s						
EGRO	**El Granado**	**2.80**	**319**	⇓P	**P**	**08 19 13.7**	**+1.1**
	1.7nm,0.1s,SNR=18						
EGRO				S	**S**	**08 19 45.0**	**-0.3**
	16nm,0.1s,SNR=9.0						
EGRO	**El Granado**	**2.80**	**319**	P	**P**	**08 19 13.7**	**+1.1**
	1.7nm,0.1s,SNR=18						
EGRO				S	**S**	**08 19 45.0**	**-0.3**
	16nm,0.1s,SNR=9.0						
EQES	**Quesada**	**2.90**	**35**	P	**P**	**08 19 16.3**	**+2.3**
	1.5nm,0.1s,SNR=7.9						
EQES				S	**S**	**08 19 48.4**	**+0.6**
	2.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.90**	**35**	P	**P**	**08 19 16.3**	**+2.3**
	1.5nm,0.1s,SNR=7.9						
EQES				S	**S**	**08 19 48.4**	**+0.6**
	2.1nm,0.2s,SNR=7.9						
EBAN	**Banos Encina**	**2.93**	**22**	P	**P**	**08 19 15.5**	**+1.0**
	2.4nm,0.1s,SNR=7.9						
PBEJ	**Beja**	**3.37**	**321**	*e*Sn	**S**	**08 19 58.2**	**-1.3**
	19nm,0.3s						
PBEJ	**Beja**	**3.37**	**321**	S	**S**	**08 19 58.2**	**-1.3**
	9.4nm,0.3s						
MORF	**Marmelete**	**3.37**	**305**	*e*P	**P**	**08 19 21.2**	**+0.7**
MORF				*e*		08 19 21.5	
	baz=3.1,slow=14						
MORF				*e*S	**S**	**08 19 58.8**	**-0.7**
MORF				*e*S	**S**	**08 19 58.8**	**-0.7**
MORF				AML	AML	08 20 00.0	
	comp=N,37nm,0.3s						
MORF	**Marmelete**	**3.37**	**305**	*e*P	**P**	**08 19 21.2**	**+0.7**
MORF				*e*S	**S**	**08 19 58.8**	**-0.7**
PTEO	**Sao Teotonio**	**3.55**	**307**	*e*Pn	**P**	**08 19 24.0**	**+1.0**
PTEO				*e*Sn	**S**	**08 20 03.0**	**-1.0**
	comp=N,15nm,0.2s						
PTEO	**Sao Teotonio**	**3.55**	**307**	*e*Pn	**P**	**08 19 24.0**	**+1.0**
PTEO				*e*Sn	**S**	**08 20 03.0**	**-1.0**
	comp=N,15nm,0.2s						
EBAD	**Badajoz**	**3.62**	**337**	P	**P**	**08 19 25.3**	**+1.3**
	comp=N,6.4nm,0.1s,SNR=29						
EBAD				S	**S**	**08 20 04.7**	**-1.0**
	comp=N,15nm,0.1s,SNR=14						
EBAD	**Badajoz**	**3.62**	**337**	P	**P**	**08 19 25.3**	**+1.3**
	comp=N,6.4nm,0.1s,SNR=29						
ESDC	**Sonseca Array**	**4.33**	**12**	P	**P**	**08 19 34.5**	**+0.6**
	comp=N,0.8nm,0.2s,baz=196,slow=13,SNR=6.0						
ESDC				S	**S**	**08 20 19.5**	**-4.0**
	comp=N,0.7nm,0.1s,baz=196,slow=23,SNR=7.9						
ESDC	**Sonseca Array**	**4.33**	**12**	P	**P**	**08 19 34.5**	**+0.6**
	comp=N,0.8nm,0.2s,SNR=6.0						
PLOU	**Loures**	**4.68**	**318**	*e*Sn	**S**	**08 20 30.1**	**-2.1**
	comp=N,16nm,0.2s						
PLOU	**Loures**	**4.68**	**318**	*e*Sn	**S**	**08 20 30.1**	**-2.1**
	comp=N,16nm,0.2s						
PCBR	**Castelo Branco**	**4.75**	**338**	*e*Pn	**P**	**08 19 40.7**	**+1.0**
PCBR				*e*Sn	**S**	**08 20 31.1**	**-2.9**
	comp=N,6.6nm,0.1s						
PCBR	**Castelo Branco**	**4.75**	**338**	*e*Pn	**P**	**08 19 40.7**	**+1.0**
PCBR				*e*Sn	**S**	**08 20 31.1**	**-2.9**
	comp=N,6.6nm,0.1s						
CIA	**Chichaoua**	**4.89**	**219**	P	**P**	**08 19 40.0**	**-1.6**
CIA				S	**S**	**08 20 31.0**	**-6.5**
CIA	**Chichaoua**	**4.89**	**219**	*i* P	**P**	**08 19 40.0**	**-1.6**
PTOM	**Tomar**	**4.90**	**329**	*e*Sn	**S**	**08 20 34.9**	**-2.7**
	comp=N,12nm,0.2s						
PTOM	**Tomar**	**4.90**	**329**	*e*Sn	**S**	**08 20 34.9**	**-2.7**
	comp=N,12nm,0.2s						
MTE	**Manteigas**	**5.29**	**340**	*e*Pn	**P**	**08 19 48.2**	**+1.1**
MTE				*e*Sn	**S**	**08 20 45.5**	**-1.8**
	comp=N,3.6nm,0.2s						
MTE	**Manteigas**	**5.29**	**340**	*e*Pn	**P**	**08 19 48.2**	**+1.1**
MTE				*e*Sn	**S**	**08 20 45.5**	**-1.8**
	comp=N,3.6nm,0.2s						
PVIS	**Viseu**	**5.68**	**339**	*e*Pn	**P**	**08 19 53.7**	**+1.2**
PVIS				*e*Sn	**S**	**08 20 54.5**	**-2.6**
	comp=N,7.8nm,0.1s						
PVIS	**Viseu**	**5.68**	**339**	P	**P**	**08 19 53.7**	**+1.2**
PVIS				S	**S**	**08 20 54.5**	**-2.6**
	comp=N,3.9nm,0.1s						
PVRL	**Vila Real**	**6.16**	**342**	*e*Pn	**P**	**08 20 00.1**	**+1.1**
PVRL				*e*Sn	**S**	**08 21 05.4**	**-3.3**
	comp=N,34nm,0.1s						
PVRL	**Vila Real**	**6.16**	**342**	P	**P**	**08 20 00.1**	**+1.1**
PVRL				S	**S**	**08 21 05.4**	**-3.3**
	comp=N,17nm,0.1s						
PBRG	**Braganca**	**6.47**	**350**	*e*Pn	**P**	**08 20 04.0**	**+0.6**
PBRG				*e*Sn	**S**	**08 21 13.8**	**-2.6**
PCAB	**Cabril**	**6.64**	**341**	*e*Pn	**P**	**08 20 06.6**	**+0.8**
PCAB				*e*Sn	**S**	**08 21 16.7**	**-4.0**
	comp=N,4.0nm,0.2s						
PCAB	**Cabril**	**6.64**	**341**	P	**P**	**08 20 06.6**	**+0.8**
PCAB				S	**S**	**08 21 16.7**	**-4.0**
	comp=N,2.0nm,0.2s						
ELOB	**Lobios**	**6.80**	**341**	P	**P**	**08 20 09.0**	**+1.0**
	comp=N,0.6nm,0.2s,SNR=7.9						
ELOB				S	**S**	**08 21 19.4**	**-5.2**
	comp=N,0.6nm,0.1s,SNR=5.9						
ELOB	**Lobios**	**6.80**	**341**	P	**P**	**08 20 09.0**	**+1.0**
	SNR=7.9						

MAN 16 08:32:20.9, 9.89N×**125.58E, h4**^{km}**, mb4.0, ML2.8, MS2.5, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.75**	**289**	*e*P	Pg	08 32 35.3	-0.4
MSLP				*e*S	Sg	08 33 06.0	+20
BUTP	**Butuan**	**0.92**	**177**	*e*P	Pb	08 32 38.2	-0.7
BUTP				*e*S	Sb	08 33 04.8	+13
PLP	**Palo**	**1.39**	**335**	*e*P	Pb	08 32 51.7	+4.6
PLP				*e*S	Sb	08 33 12.8	+7.6
BESP	**Borongan**	**1.70**	**355**	*e*P	Pn	08 32 51.1	-0.5
BESP				*e*S	Sn	08 33 18.2	+4.2
CNP	**Catarman**	**2.75**	**341**	*e*P	Pn	08 33 07.4	+0.8
CNP				*e*S	Sn	08 33 39.8	-0.9
PAGZ	**Pagadian**	**2.97**	**227**	*e*P	Pn	08 33 09.4	-0.3

JMA 16 08:33:52.6±0.1**, 38.09N**×**144.66E, h38**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.54**	**294**	P	P	08 34 33.0	+0.6
OFUJ				*e*S	S	08 35 03.6	+1.2
JIO	**Ouri**	**2.63**	**279**	P	P	08 34 34.1	+0.5
JIO				S	S	08 35 04.7	+0.1
MIYJ	**Miyakonagasawa**	**2.67**	**305**	P	P	08 34 34.3	+0.1
MIYJ				*e*S	S	08 35 05.8	+0.2
JMK	**Ichinoseki**	**2.83**	**289**	P	P	08 34 37.2	+0.7
JMK				S	S	08 35 10.8	+1.1

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*IDC **16** 08:45:40.5±2.2, 24.21S×68.31W, h75^{km}±22^{km}, mb1 3.6/3, mb1mx3.3/16, mbtmp3.7/3, Error ellipse: s-maj=52.4km s-min=14.7km az=97.0*

*GUC **16** 08:45:41.6±0.9, 24.13S×68.85W, h93^{km}±22^{km}, MD4.1, ML3.7*

*NEIC **16** 08:45:41.6, 24.13S×68.85W, h93^{km}, MD4.1(GUC), After GUC.*

ISC 16 08:45:40.1±0.8**, 24.16S**±0.06×**68.80W**±0.09**, h116**^{km}±12^{km}**, n11, σ1^{s}00**/16**, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	1.36	24	⇑iP	P	08 46 06.9	+0.9
SPCH				i S	S	08 46 25.7	0.0
SPCH				AMP		08 46 26.9	
	comp=N,6µm,0.7s						
CEN1	Los Morros	1.49	300	⇓iP	P	08 46 07.8	+0.2
CEN1				i S	S	08 46 27.1	-1.2
CEN1				AMP		08 46 30.0	
	comp=N,680nm,0.4s						
CPN1	Cerro Paranal	1.53	252	⇑iP	P	08 46 08.8	+0.8
CPN1				i S	S	08 46 29.4	+0.2
CPN1				AMP		08 46 29.9	
	comp=N,912nm,0.5s						
ANCH	Antofagasta	1.54	287	eP	P	08 46 09.3	+1.1
ANCH				i S	S	08 46 28.4	-1.1
CRCH	Chaqaral	2.73	217	eP	P	08 46 24.3	+0.8
CDCH	Caldera	3.43	212	eP	P	08 46 32.6	-0.4
CFAA	Coronel Fontan	7.44	176	P	P	08 47 27.1	-0.2
	comp=N,0.1nm,0.3s,baz=355,slow=14,SNR=19						
CFAA				S	S	08 48 46.1	-4.5
	comp=N,0.1nm,0.3s,baz=171,slow=22,SNR=1.9						
LPAZ	La Paz	7.85	5	P	P	08 47 33.3	+0.4
	comp=N,0.5nm,0.3s,baz=197,slow=11,SNR=18						
LPAZ				S	S	08 49 01.1	+0.4
	comp=N,0.1nm,0.3s,baz=221,slow=18,SNR=1.7						
SIV	San Ignacio	10.89	43	P	P	08 48 10.5	-3.2
	comp=N,3.8nm,0.3s,baz=231,slow=12,SNR=60						
SIV				S	S	08 50 06.8	-7.0
	comp=N,0.2nm,0.3s,baz=152,slow=21,SNR=3.0						
WRA	Warramunga Arr	130.71	209	PKP	PKPdf	09 04 43.2	+5.0
	comp=N,0.2nm,0.4s,baz=156,slow=1.8,SNR=8.5						
MKAR	Makanchi Array	147.68	38	PKPbc	PKPdf	09 05 15.7	+7.8
	comp=N,0.4nm,0.6s,baz=314,slow=2.7,SNR=4.9						

IDC 16 08:50:20.8±1.7**, 1.59N**×**126.40E, mb4.3**/3**, mb1 4.4**/4**, mb1mx3.9**/14**, mbtmp4.2**/4**, ML4.1**/1**, 1C, Error ellipse: s-maj=106.0km s-min=23.6km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	15.42	157	⇑iP	Px	08 54 25.6	
	19nm,0.8s						
FITZ	Fitzroy Crossi	19.58	182	P	P	08 54 51.4	-2.0
	0.5nm,0.3s,baz=18,slow=9.9,SNR=5.7						
WRA	Warramunga Arr	22.77	160	P	P	08 55 24.6	-1.7
	16nm,0.7s,baz=338,slow=11,SNR=93						
WB2	Warramunga Arr	22.78	160	eP	P	08 55 24.9	-1.4
STKA	Stephens Creek	36.27	158	P	P	08 57 25.9	-2.0
	2.3nm,0.7s,baz=345,slow=11,SNR=5.5						
MKAR	Makanchi Array	59.12	326	P	P	09 00 23.1	-2.4
	1.2nm,0.5s,baz=119,slow=8.2,SNR=8.0						

GUC 16 08:55:35.9±1.0**, 23.42S**×**69.20W, h85**^{km}±13^{km}**, MD3.6, ML2.6, 1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEN1	Los Morros	0.92	272	⇓iP	P	08 55 56.3	+1.8
CEN1				i S	S	08 56 11.5	+2.9
SPCH	San Pedro de A	1.05	61	eP	P	08 55 56.9	+0.7
SPCH				i S	S	08 56 12.9	+1.5
SPCH				AMP		08 56 14.0	
	comp=E,425nm,0.4s						
ANCH	Antofagasta	1.14	257	eP	P	08 55 58.4	+1.2
ANCH				i S	S	08 56 15.3	+2.1
CPN1	Cerro Paranal	1.63	222	eP	P	08 56 04.1	+0.6
CPN1				i S	S	08 56 26.1	+2.1
CPN1				AMP		08 56 29.7	
	comp=E,53nm,0.5s						

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*IDC **16** 08:59:54.6±0.9, 16.58N×146.25E, mb3.8/6, mb1 4.1/7, mb1mx3.9/20, mbtmp3.9/7, Error ellipse: s-maj=37.8km s-min=19.9km az=97.0*

ISC 16 08:59:57.8±0.8**, 16.54N**±0.05×**146.1E**±0.2**, h33**^{km}**, n8, σ0^{s}76**/9**, mb3.7**/6**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.17	203	Pn	Pn	09 00 46.8	+0.2
	36nm,0.3s,baz=62,slow=2.5,SNR=16						
GUMO				Sn	Sn	09 01 23.3	-0.4
	15nm,0.3s,baz=148,slow=23,SNR=4.1						
CBIJ	Chichi jima	11.12	342	Sn	S	09 04 41.9	0.0
	2.2nm,0.3s,baz=290,slow=17,SNR=2.6						
PMG	Port Moresby	25.79	178	P	P	09 05 27.8	0.0
	14nm,0.9s,mb4.5,baz=4.4,slow=13,SNR=3.1						
WRA	Warramunga Arr	38.05	198	P	P	09 07 15.6	+0.5
	0.5nm,0.6s,mb3.5,baz=20,slow=9.9,SNR=6.6						
MKAR	Makanchi Array	60.25	315	P	P	09 10 04.4	-0.9
	0.2nm,0.6s,mb3.3,baz=98,slow=10,SNR=2.9						
ILAR	Eielson Array	65.41	26	P	P	09 10 37.8	-1.3
	0.9nm,0.9s,mb3.8,baz=251,slow=6.1,SNR=4.9						
BVAR	Borovoye Array	68.39	321	P	P	09 10 59.5	+1.4
	0.6nm,0.8s,mb3.7,baz=90,slow=2.9,SNR=3.9						
NVAR	Mina Array Bea	84.16	52	P	P	09 12 27.9	+0.7
	0.4nm,0.8s,mb3.6,baz=260,slow=5.5,SNR=2.4						

JMA 16 09:13:52.8±0.1**, 38.11N**×**144.62E, h32**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.51	294	P	Pn	09 14 33.2	+0.9
OFUJ				eS	Sn	09 15 03.1	+1.0
JIO	Ouri	2.60	279	eS	Sn	09 15 04.7	+0.3
MIYJ	Miyakonagasawa	2.63	305	P	Pn	09 14 34.6	+0.5
MIYJ				eS	Sn	09 15 05.8	+0.5
JMK	Ichinoseki	2.80	289	P	Pn	09 14 37.6	+1.2
JMK				eS	Sn	09 15 10.5	+1.1

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*NIED **16** 09:14:00, 21.70N×121.80E, h119^{km}, Mw4.9 Best double couple: M$_0$2.69×10^{16} NP1:φ$_s$237°, δ68°, λ49°. NP2:φ$_s$123°, δ45°, λ148°.*

*MOS **16** 09:14:42.2±1.3, 21.72N×121.71E, h126^{km}, mb4.5/24, Error ellipse: s-maj=12.2km s-min=6.5km az=120.5*

*CRAAG **16** 09:14:43.1, 21.83N×122.01E, Mb4.8*

*BJI **16** 09:14:43.1, 21.89N×121.79E, h119^{km}, mB4.6, mb4.5*

*JMA **16** 09:14:43.4±0.5, 21.66N×121.78E, h136^{km}, M4.5*

*NEIC **16** 09:14:44.8±0.6, 21.78N×121.78E, h135^{km}±5^{km}, mb4.6/27, Error ellipse: s-maj=6.8km s-min=5.4km az=88.0*

NEIC Recorded [3 TAP] in T'ai-nan and T'ai-tung; [2 TAP] in Kao-hsiung, P'eng-hu, P'ing-tung and Yun-lin; [1 TAP] in Chang-hua and Nan-t'ou Counties.

*MAN **16** 09:14:46.1, 21.60N×121.84E, h137^{km}, mb5.3, ML4.3, MS4.5*

*IDC **16** 09:14:47.6±0.9, 21.73N×121.78E, h165^{km}±8^{km}, mb4.1/17, mb1 4.3/19, mb1mx4.3/21, mbtmp4.7/19, MS3.9/5, Ms1 3.9/5, ms1mx3.3/24, Error ellipse: s-maj=15.7km s-min=9.6km az=77.0*

ISC 16 09:14:43.8±0.2**, 21.75N**±0.02×**121.77E**±0.03**, h139**^{km}±2^{km}**, h164**^{km}±6.0^{km}**:pP-P, n169, σ1^{s}24**/198**, mb4.5**/52**, 2C-3D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.32	172	eP	P	09 15 11.4	+0.4
BBP				eS	S	09 15 31.4	-0.5
NACB	Ninganchiao	2.42	356	eP	P	09 15 22.5	-1.5
NACB				eS	S	09 15 50.7	-4.0
YHNB	Yeheng	2.93	353	eP	P	09 15 29.7	-0.9
YHNB				eS	S	09 16 03.8	-2.4
YOJ	Yonaguni jima	2.93	23	P	P	09 15 31.1	+0.5
YOJ				eS	S	09 16 06.8	+0.5
HATJ	Hateruma jima	2.96	39	P	P	09 15 31.1	0.0
HATJ				S	S	09 16 08.5	+1.4
IRIF	Iriomote-Funau	3.14	35	P	P	09 15 33.8	+0.4
TATO	Taipei	3.22	355	eP	P	09 15 33.6	-0.9
JKRS	Kuro-shima	3.22	39	P	P	09 15 34.6	+0.1
JKRS				S	S	09 16 14.6	+1.5
JIJ	Ishigaki jima	3.40	40	P	P	09 15 36.1	-0.7
JIJ				eS	S	09 16 17.2	0.0
SGCP	Mt. Cagua	3.50	176	eP	P	09 15 38.2	0.0
SGCP				eS	S	09 16 18.5	-1.2
PIP	Pasuquin	3.58	198	eP	P	09 15 39.6	+0.5
PIP				eS	S	09 16 20.1	-1.4
APYP	Conner	3.90	187	eP	P	09 15 43.9	+0.5
APYP				eS	S	09 16 28.8	-0.4
JTJ	Tarama	3.94	43	P	P	09 15 44.4	+0.4
JTJ				S	S	09 16 31.9	+1.8
CVP	Callao Caves	4.03	179	eP	P	09 15 46.0	+0.9
ABRA	Dolores	4.20	194	eP	P	09 15 48.1	+0.7
ABRA				eS	S	09 16 33.5	-2.8
QZH	Quanzhou	4.32	318	P	P	09 15 46.6	-2.3
QZH				S	S	09 16 25.8	-13
QZH				Smax			
	comp=N,4µm,0.3s						
QZH				Smax			
	comp=E,3µm,0.3s						
JMJ	Miyako jima 2	4.45	46	P	P	09 15 51.0	+0.3
CAUP	Cauayan	4.78	179	eP	P	09 15 56.5	+1.4
BCPH	Baguio City Da	5.46	192	eP	P	09 16 03.1	-1.1
BCPH				eS	S	09 17 03.9	-2.4
BOLP	Bolinao	5.62	199	eP	P	09 16 07.6	+1.3
BOLP				eS	S	09 17 11.8	+1.5
BALP	Baler	5.98	182	eP	P	09 16 11.4	+0.3
PCPH	Palayan	6.19	186	i P	P	09 16 15.2	+1.2
SCZP	Santa Cruz	6.20	197	eP	P	09 16 15.4	+1.4
POLP	Polilio Island	6.99	179	eP	P	09 16 24.5	-0.2
TGY	Tagaytay City	7.65	186	P	P	09 16 36.2	+2.6
	comp=E,60nm,0.3s,baz=194,slow=8.5,SNR=13						
JOW	Kunigami	7.79	48	P	P	09 16 34.1	-1.5
	comp=E,3.2nm,0.3s,baz=232,slow=20,SNR=3.9						
JOW				LR	LR	09 19 40.6	
	comp=E,335nm,18.2s,baz=301,slow=38						
GZH	Guangzhou	7.91	281	P	P	09 16 34.3	-2.8
GZH				S	S	09 17 56.9	-8.5
GZH				Smax			
	comp=N,300nm,1.0s						
GZH				Smax			
	comp=E,330nm,0.7s						
LUBP	Lubang	8.11	191	eP	P	09 16 40.2	+0.5
SJMP	San Jose	9.26	184	eP	P	09 16 57.0	+1.9
SSE	Sheshan	9.32	357	eP	P	09 16 49.8	-6.1
SSE				S	S	09 18 33.6	-5.6
SSE				AMB	AMB		
	comp=Z,20nm,0.7s						
SSE				AMB	AMB		
	comp=Z,160nm,4.4s						
SSE				LR	LR		
	comp=N,300nm,10.1s						
SSE				LR	LR		
	comp=E,380nm,10.2s						
SSE				LR	LR		
	comp=Z,380nm,12.8s						
SSE	Sheshan	9.32	357	eP	P	09 16 49.7	-6.2
	comp=Z,28nm,0.7s						
SSE				S	S	09 18 33.6	-5.6
BUSP	Coron	9.81	189	eP	P	09 17 02.3	-0.2
NJ2	Nanjing	10.58	346	eP	P	09 17 10.3	-2.3
NJ2				S	S	09 19 08.8	-0.4
NJ2				AMB	AMB		
	comp=Z,30nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,240nm,6.2s						
NJ2				LR	LR		
	comp=N,1µm,10.8s						
NJ2				LR	LR		
	comp=E,740nm,13.0s						
NJ2				LR	LR		
	comp=Z,370nm,12.0s						
ENPP	El Nido	10.72	192	eP	P	09 17 03.4	-11
WHN	Wuhan	11.00	324	P	P	09 17 19.0	+0.9
WHN				S	S	09 19 19.0	0.0
WHN				LR	LR		
	comp=N,2µm,13.0s						
WHN				LR	LR		
	comp=E,1µm,12.6s						
QIZ	Qiongzhong	11.51	259	eP	P	09 17 26.3	+1.5
QIZ				S	S	09 19 32.3	+1.3
QIZ				LR	LR		
	comp=N,680nm,19.7s						
QIZ				LR	LR		
	comp=Z,550nm,17.7s						
QIZ	Qiongzhong	11.51	259	P	P	09 17 25.0	+0.2
JNU	Nakatsue	13.91	34	P	P	09 17 56.0	+0.2
	comp=Z,1.0nm,0.3s,baz=209,slow=15,SNR=15						
ENH	Enshi	13.92	310	P	P	09 17 53.0	-3.0
	comp=Z,9.8nm,0.7s						
KS15	Wonju Array Si	16.51	17	eP	P	09 18 26.4	-2.1
KKM	Kota Kinabalu	16.51	200	eP	P	09 18 29.8	+1.1
KMI	Kunming	17.78	285	P	P	09 18 41.1	-2.9
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s						
KMI	Kunming	17.78	285	P	P	09 18 41.1	-2.9
	comp=Z,11nm,0.5s						
CD2	Chengdu	18.52	303	P	P	09 18 53.8	+1.7
CD2				PP	PP	09 19 09.0	-1.7
CD2				S	S	09 22 12.9	+2.2
CD2				XS		09 22 28.9	
CD2				SS	SS	09 22 41.4	-2.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
CD2				LR	LR		
	comp=N,510nm,5.1s						
CD2				LR	LR		
	comp=Z,210nm,12.6s						
MAJO	Matsushiro	20.53	41	eP	P	09 19 14.6	+1.8
	comp=Z,8.2nm,0.6s						
MAJO	Matsushiro	20.53	41	eP	P	09 19 14.6	+1.8
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAT	Matsushiro	20.53	41	P	P	09 19 13.2	+0.4
MAT				S	S	09 22 56.0	+6.6
MAT	Matsushiro	20.53	41	eP	P	09 19 14.0	+1.2
	comp=Z,11nm,0.8s						
MAT				eS	S	09 23 00.0	+11
MAT	Matsushiro	20.53	41	eP	P	09 19 14.0	+1.2
MAT				eS	S	09 23 00.0	+11
MAT				pmax	pmax		
	comp=Z,11nm,0.8s						
MJAR	Matsushiro Arr	20.53	41	P	P	09 19 14.4	+1.6
	comp=Z,9.7nm,0.7s,baz=242,slow=9.4,SNR=15						
HHC	Hu-ho-hao-te	20.91	338	eP	P	09 19 16.8	+0.2
HHC				AP		09 19 41.4	
HHC				PP	PP	09 19 46.9	+3.3
HHC				XP		09 19 57.3	
HHC				S	S	09 22 59.3	+2.8
HHC				PCP	PcP	09 23 18.3	-1.6
HHC				SCP		09 26 42.1	
HHC				PCS		09 26 55.3	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.6s						
HHC				AMB	AMB		
	comp=Z,120nm,4.3s						
HHC				LR	LR		
	comp=N,310nm,15.5s						
HHC				LR	LR		
	comp=E,290nm,8.2s						
HHC				LR	LR		
	comp=Z,250nm,19.2s						
LZH	Lanzhou	21.17	316	eP	P	09 19 21.0	+1.8
LZH				AP		09 19 44.8	
LZH				eS	S	09 23 03.3	+2.1
LZH				XS		09 23 44.8	
LZH				eSS	SS	09 23 48.5	+1.5
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.3						
LZH				AMB	AMB		
	comp=Z,130nm,4.4s						
LZH				LR	LR		
	comp=E,420nm,8.5s						
LZH				LR	LR		
	comp=Z,760nm,12.3s						
LZH	Lanzhou	21.17	316	eP	P	09 19 21.0	+1.8
	comp=Z,24nm,1.3s,mb4.4						
LZH				pP		09 19 44.7	
LZH				sP		09 19 51.5	
LZH				PP	PP	09 20 02.6	+16
LZH				eS	S	09 23 03.2	+2.0
LZH				sS		09 23 44.7	
LZH				eSS	SS	09 23 48.5	+1.5
LZH				LR	LR		
	comp=Z,760nm,12.3s						
LZH	Lanzhou	21.17	316	eP	P	09 19 21.0	+1.8
LZH				*SP		09 19 51.5	
LZH						09 20 02.6	
LZH				eS	S	09 23 03.2	+2.0
LZH				*SS		09 23 44.7	
LZH				pmax	pmax		
	comp=Z,24nm,1.3s,mb4.4						
LZH				MLR	MLR		
	comp=Z,760nm,12.3s						
CN2	Changchun	22.20	7	eP	P	09 19 30.8	+1.6
MDJ	Mudanjiang	23.70	14	P	P	09 19 45.1	+1.4
MDJ				AP		09 20 10.0	
MDJ				XP		09 20 26.3	
MDJ				S	S	09 23 49.8	+4.6
MDJ				SS	SS	09 24 47.9	+0.4
MDJ				PCS		09 27 04.8	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,110nm,3.8s						
MDJ				LR	LR		
	comp=N,50nm,20.4s						
MDJ				LR	LR		
	comp=E,120nm,18.3s						
MDJ				LR	LR		
	comp=Z,140nm,16.2s						
MDJ	Mudanjiang	23.70	14	eP	P	09 19 46.2	+2.5
ASAJ	Asahikawa	28.18	33	P	P	09 20 26.0	+0.7
	comp=Z,9.5nm,0.5s,mb4.8,baz=223,slow=8.6,SNR=16						
ULN	Ulaanbaatar	28.62	339	eP	P	09 20 27.8	-1.3
	comp=Z,2.9nm,0.5s,mb4.3						
ULN	Ulaanbaatar	28.62	339	⇑eP	P	09 20 28.6	-0.5
LSA	Lhasa	28.64	292	eP	P	09 20 31.3	+1.9
	comp=Z,7.8nm,0.6s,mb4.6						
LSA	Lhasa	28.64	292	eP	P	09 20 31.3	+1.9
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
SONM	Songino Array	28.81	338	P	P	09 20 29.9	-0.9
	comp=Z,4.1nm,0.6s,mb4.3,baz=158,slow=9.4,SNR=37						
SONM				pP	pP	09 21 05.2	+4.8
	comp=Z,3.0nm,0.8s,baz=160,slow=10,SNR=3.8						
SONM				LR	LR	09 33 30.3	
	comp=Z,287nm,18.4s,baz=17,slow=39						
JIRN	Jiri	32.78	288	eP	P	09 21 06.2	+0.4
	comp=Z,20nm,0.7s,mb5.0						
GUN	Gumba	33.06	288	eP	P	09 21 08.8	+0.5
	comp=Z,31nm,0.7s,mb5.1						
KKN	Kakani	33.59	288	eP	P	09 21 13.1	+0.3
DMN	Daman	33.74	287	eP	P	09 21 14.2	+0.2
	comp=Z,23nm,0.9s,mb4.9						
GKN	Gorkha	34.16	288	eP	P	09 21 17.3	-0.4
	comp=Z,20nm,0.7s,mb5.0						
KOLN	Koldanda	35.08	288	eP	P	09 21 25.4	0.0
	comp=Z,18nm,0.7s,mb4.8						
WMQ	Urumqi	35.75	316	eP	P	09 21 32.6	+1.7
WMQ				AMB	AMB		
	comp=Z,60nm,5.9s						
FITZ	Fitzroy Crossi	39.79	174	eP	P	09 22 03.8	-1.0
	comp=Z,5.1nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	39.79	174	P	P	09 22 03.9	-0.9
	comp=Z,6.7nm,0.5s,mb4.5,baz=13,slow=6.6,SNR=11						
MKAR	Makanchi Array	40.47	318	P	P	09 22 10.6	+0.4
	comp=Z,8.7nm,0.5s,mb4.6,baz=112,slow=9.4,SNR=63						
MKAR				pP	pP	09 22 46.4	+5.0
	comp=Z,5.7nm,0.8s,baz=111,slow=10,SNR=3.2						
MKAR				PcP	PcP	09 24 09.3	-1.5
	comp=Z,1.7nm,0.6s,baz=212,slow=3.0,SNR=7.0						
MKAR				ScP		09 27 44.4	
	comp=Z,1.0nm,0.6s,baz=110,slow=5.7,SNR=7.0						
MKAR	Makanchi Array	40.47	318	P	P	09 22 10.6	+0.4
MKAR				pP	pP	09 22 46.4	+5.0
MKAR				PcP	PcP	09 24 09.3	-1.5
MKAR				ScP		09 27 44.4	
MKAR	Makanchi Array	40.47	318	P	P	09 22 10.6	+0.4
MKAR						09 24 09.3	
WRAB	Tennant Creek	43.22	163	eP	P	09 22 32.0	-1.0
WRA	Warramunga Arr	43.22	163	P	P	09 22 31.7	-1.3
	comp=Z,3.5nm,0.8s,mb4.0,baz=342,slow=8.2,SNR=42						
WRA				pP	pP	09 23 08.5	+4.1
	comp=Z,1.6nm,0.6s,baz=343,slow=8.9,SNR=2.1						
WRA				PcP	PcP	09 24 19.2	-1.1
	comp=Z,1.7nm,0.7s,baz=348,slow=3.3,SNR=7.2						
WRA	Warramunga Arr	43.22	163	P	P	09 22 31.7	-1.3
WRA						09 24 19.2	
WB2	Warramunga Arr	43.23	163	eP	P	09 22 31.9	-1.1
TKM2	Tokmak 2	43.71	310	P	P	09 22 37.9	+1.3
	SNR=8.6						
KZA	Kyzart	43.76	309	P	P	09 22 39.2	+2.2
	SNR=6.0						
NVS	Novosibirsk	43.85	329	eP	P	09 22 35.1	-2.4
NVS				eS	S	09 28 55.2	-2.1
NVS				pmax	pmax		
	comp=N,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.2						
NVS				smax			
	comp=N,27nm,2.1s						
NVS				smax			
	comp=E,19nm,2.1s						
KBK	Karagaybulak	44.11	309	P	P	09 22 41.1	+1.3
	SNR=6.5						
KURK	Kurchatov	44.31	322	eP	P	09 22 39.6	-1.6
	comp=E,9.8nm,0.7s,mb4.5						
KURK	Kurchatov	44.31	322	⇑eP	P	09 22 41.3	0.0
UCH	Uchtor	44.33	309	P	P	09 22 43.8	+2.2
	SNR=5.8						
AAK	Ala-Archa	44.43	309	eP	P	09 22 43.0	+0.6
	comp=E,3.6nm,0.9s,mb4.0						
AAK	Ala-Archa	44.43	309	⇓iP	P	09 22 42.5	+0.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
AAK				MLR	MLR		
	comp=Z,200nm,24.0s						
AML	Almayashu	44.91	308	P	P	09 22 47.8	+1.6
	SNR=6.5						
KKAR	Karatay Array	47.39	309	eP	P	09 23 06.2	+0.5
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
CTA	Charters Tower	47.98	148	eP	P	09 23 11.2	+0.6
	comp=Z,4.8nm,0.7s,mb4.2						
CTA	Charters Tower	47.98	148	eP	P	09 23 11.2	+0.6
CTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CTAO	Charters Tower	47.98	148	eP	P	09 23 11.3	+0.8
BVA0	Borovoye Array	49.90	322	i P	P	09 23 24.6	-0.3
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5						
BRVK	Borovoye	49.97	322	eP	P	09 23 24.3	-1.1
	comp=Z,8.4nm,0.8s,mb4.4						
BRVK	Borovoye	49.97	322	eP	P	09 23 24.3	-1.1
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
CHKZ	Chkalovo	49.98	323	eP	P	09 23 24.8	-0.7
	comp=Z,13nm,0.7s,mb4.7						
CHKZ	Chkalovo	49.98	323	eP	P	09 23 24.8	-0.7
CHKZ				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.7						
TIXI	Tiksi	50.08	3	i P	P	09 23 24.0	-2.0
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.0						
FORT	Forrest	52.58	173	eP	P	09 23 44.6	-0.8
	comp=Z,30nm,0.7s,mb5.1						
KLBR	Kellerberrin	53.18	184	eP	P	09 23 48.1	-1.7
	comp=Z,6.6nm,0.5s,mb4.6						
NWAO	Narrogin (SRO)	54.54	185	P	P	09 23 58.1	-1.6
AB31	Akbulak array	55.53	316	i P	P	09 24 05.9	-0.8
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
STKA	Stephens Creek	56.60	160	eP	P	09 24 13.8	-0.8
	comp=Z,3.3nm,0.6s,mb4.3						
STKA	Stephens Creek	56.60	160	P	P	09 24 13.0	-1.6
	comp=Z,3.6nm,0.6s,mb4.4,baz=340,slow=7.8,SNR=11						
ARU	Arti	57.38	324	eP	P	09 24 20.3	+0.7
	comp=Z,31nm,0.8s,mb5.2						
ARU				e		09 24 29.2	
ARU	Arti	57.38	324	⇓iP	P	09 24 20.2	+0.6
ARU				e		09 26 27.4	
ARU				ePPP	PPP	09 27 45.2	-6.9
ARU				eS	S	09 32 11.4	+8.1
ARU				eSS	SS	09 36 01.2	+4.8
ARU				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.8						
ZEI	Tsey	66.85	308	i P	P	09 25 20.0	-2.9
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
KIV	Kislovodsk	67.54	310	eP	P	09 25 27.8	+0.6
KIV	Kislovodsk	67.54	310	i P	P	09 25 27.2	0.0

KIV				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
SOC	**Sochi**	**69.73**	**310**	*e*P	**P**	**09 25 37.9**	**-2.7**
SOC				e*PP	pP	09 26 10.8	-3.9
SOC				*e*		09 28 11.9	
SOC				*e*S	S	09 34 41.2	+4.6
SOC				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.1						
OBN	**Obninsk**	**69.74**	**322**	⇓*e*P	**P**	**09 25 39.2**	**-1.3**
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
PMR	**Palmer**	**70.70**	**30**	*e*P	**P**	**09 25 44.4**	**-1.7**
	comp=Z,16nm,0.9s,mb4.8						
PMR	**Palmer**	**70.70**	**30**	*e*P	**P**	**09 25 44.4**	**-1.7**
PMR				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
JOF	**Joensuu**	**71.08**	**331**	*e*p	**P**	**09 25 46.7**	**-1.7**
	comp=Z,5.6nm,0.4s,mb4.7						
ILAR	**Eielson Array**	**71.12**	**27**	P	**P**	**09 25 46.7**	**-1.9**
	comp=Z,3.3nm,0.7s,mb4.2,baz=271,slow=5.0,SNR=34						
KEV	**Kevo**	**71.43**	**339**	*e*p	**P**	**09 25 48.8**	**-1.5**
	comp=Z,9.9nm,0.8s,mb4.6						
KEV	**Kevo**	**71.43**	**339**	*e*P	**P**	**09 25 48.8**	**-1.5**
KEV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
AFFS	**‘Afif**	**71.68**	**289**	P	**P**	**09 25 52.8**	**+0.2**
HILS	**Ha’il**	**71.80**	**293**	P	**P**	**09 25 53.8**	**+0.6**
ARCES	**ARCESS Array B**	**71.99**	**338**	P	**P**	**09 25 52.3**	**-1.3**
	comp=Z,3.2nm,0.6s,mb4.2,baz=72,slow=7.7,SNR=11						
KAF	**Kangasniemi**	**73.53**	**331**	*e*p	**P**	**09 26 01.2**	**-1.5**
	comp=Z,2.5nm,0.5s,mb4.2,baz=74,slow=5.8						
KAF	**Kangasniemi**	**73.53**	**331**	*e*P	**P**	**09 26 01.2**	**-1.5**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
FINES	**FINESS Array B**	**73.81**	**330**	P	**P**	**09 26 03.5**	**-0.9**
	comp=Z,6.8nm,0.8s,mb4.5,baz=72,slow=5.3,SNR=15						
FINES				LR	LR	10 04 42.2	
	comp=Z,61nm,18.5s,baz=53,slow=41						
DAWY	**Dawson**	**74.45**	**27**	*e*P	**P**	**09 26 07.6**	**-0.4**
AKASG	**Malin Array Be**	**75.04**	**319**	P	**P**	**09 26 10.1**	**-1.6**
	comp=Z,4.4nm,0.5s,mb4.3,baz=63,slow=6.2,SNR=9.9						
AKASG	**Malin Array Be**	**75.04**	**319**	P	**P**	**09 26 10.1**	**-1.6**
AKASG	**Malin Array Be**	**75.04**	**319**	*i* P	**P**	**09 26 11.3**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BR131	**Keskin Array S**	**75.05**	**307**	P	**P**	**09 26 10.8**	**-1.1**
BRTR	**Keskin Array B**	**75.05**	**307**	P	**P**	**09 26 12.0**	**0.0**
	comp=Z,2.0nm,0.7s,mb3.9,baz=112,slow=6.7,SNR=11						
INK	**Inuvik**	**75.27**	**22**	*e*P	**P**	**09 26 11.4**	**-1.2**
	comp=Z,9.3nm,0.9s,mb4.4						
INK	**Inuvik**	**75.27**	**22**	*e*P	**P**	**09 26 11.4**	**-1.2**
INK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AYUS	**‘Aynunah**	**77.10**	**295**	P	**P**	**09 26 23.2**	**-0.5**
HAQS	**Haql**	**77.12**	**296**	P	**P**	**09 26 24.0**	**+0.3**
KWP	**Kalwaria**	**79.36**	**319**	*e*P	**P**	**09 26 35.5**	**0.0**
KWP	**Kalwaria**	**79.36**	**319**	*e*P	**P**	**09 26 35.5**	**0.0**
STHS	**Stebnicka Huta**	**80.32**	**319**	*e*P	**P**	**09 26 41.3**	**+0.6**
CRVS	**Cervenica-Dubn**	**80.38**	**319**	*e*P	**P**	**09 26 42.1**	**+1.1**
NB2	**NORSAR Subarra**	**80.62**	**332**	P	**P**	**09 26 40.4**	**-1.6**
	comp=Z,5.9nm,1.1s,mb4.1,baz=63,slow=5.3						
NOA	**NORSAR Array B**	**80.62**	**332**	P	**P**	**09 26 42.8**	**+0.7**
	comp=Z,1.6nm,0.6s,mb3.8,baz=61,slow=5.2,SNR=3.6						
NOA				LR	LR	10 06 06.2	
	comp=Z,81nm,18.5s,baz=65,slow=38						
OJC	**Ojcow**	**80.88**	**320**	*e*P	**P**	**09 26 43.4**	**-0.3**
NAO	**NORSAR Subarra**	**80.89**	**332**	P	**P**	**09 26 40.4**	**-3.1**
	comp=Z,5.9nm,1.1s,mb4.1						
NAO	**NORSAR Subarra**	**80.89**	**332**	P	**P**	**09 26 40.4**	**-3.1**
NAO				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
KECS	**Kecovo**	**81.14**	**319**	*e*P	**P**	**09 26 44.7**	**-0.4**
VYHS	**Vyhne**	**82.14**	**319**	*e*P	**P**	**09 26 50.6**	**+0.3**
CLL	**Collm**	**84.31**	**323**	P	**P**	**09 27 00.0**	**-1.1**
CLL	**Collm**	**84.31**	**323**	*e*P	**P**	**09 27 00.0**	**-1.1**
SUMG	**Summit**	**84.97**	**354**	*e*P	**P**	**09 27 04.1**	**+0.2**
	comp=Z,19nm,0.8s,mb4.9						
YKA	**Yellowknife Ar**	**84.99**	**23**	P	**P**	**09 27 04.2**	**0.0**
	comp=Z,4.9nm,0.6s,mb4.4,baz=309,slow=4.5,SNR=13						
YKA	**Yellowknife Ar**	**84.99**	**23**	*i* P	**P**	**09 27 03.7**	**-0.5**
YKA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
GERES	**GERESS Array B**	**85.06**	**321**	P	**P**	**09 27 05.0**	**+0.1**
	comp=Z,4.0nm,0.8s,mb4.2,baz=72,slow=4.2,SNR=19						
KMBO	**Kilima Mbogo**	**85.32**	**267**	P	**P**	**09 27 08.4**	**+1.4**
	comp=Z,7.6nm,0.8s,mb4.5,baz=48,slow=8.7,SNR=27						
KMBO				LR	LR	10 07 56.0	
	comp=Z,61nm,18.1s,baz=89,slow=37						
KMBO	**Kilima Mbogo**	**85.32**	**267**	*i* P	**P**	**09 27 08.3**	**+1.3**
KMBO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CDF	**Champ du Feu**	**88.97**	**323**	*e*P	**P**	**09 27 25.4**	**+1.7**
HAU	**Haudompre**	**89.71**	**323**	*e*P	**P**	**09 27 27.6**	**+0.4**
	comp=Z,5.9nm,0.4s,mb4.5						
LPG	**La Plagne**	**90.84**	**320**	*e*P	**P**	**09 27 33.8**	**+1.2**
LPL	**La Plagne**	**90.84**	**320**	*e*P	**P**	**09 27 33.7**	**+1.1**
	comp=Z,5.2nm,0.6s,mb4.5						
LPL	**La Plagne**	**90.84**	**320**	*e*P	**P**	**09 27 33.7**	**+1.1**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
PGF	**Pioggiola**	**91.01**	**317**	*e*P	**P**	**09 27 34.7**	**+1.2**
SBF	**Sospel**	**91.30**	**319**	*e*P	**P**	**09 27 35.1**	**+0.3**
ORIF	**Oris-en-Rattie**	**91.67**	**320**	*e*P	**P**	**09 27 37.5**	**+1.1**
SMF	**Signal de Mont**	**91.89**	**322**	*e*P	**P**	**09 27 37.9**	**+0.5**
	comp=Z,10nm,0.8s,mb4.6						
SMF	**Signal de Mont**	**91.89**	**322**	*e*P	**P**	**09 27 37.9**	**+0.5**
SMF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
AVF	**Avril sur Loir**	**92.08**	**323**	*e*P	**P**	**09 27 38.7**	**+0.4**
RJF	**Les Rejaudoux**	**93.99**	**322**	*e*P	**P**	**09 27 47.3**	**+0.3**
NVAR	**Mina Array Bea**	**97.83**	**43**	P	**P**	**09 28 05.3**	**+0.6**
	comp=Z,1.0nm,0.7s,mb4.3,baz=314,slow=3.9,SNR=8.4						
TXAR	**Lajitas Array**	**112.96**	**43**	PKiKP		09 33 05.6	
	comp=Z,0.4nm,0.6s,baz=266,slow=0.4,SNR=6.6						
DBIC	**Dimbokro**	**120.56**	**292**	PKP	PKPdf	09 33 19.8	+0.1
	comp=Z,2.2nm,0.7s,baz=34,slow=3.0,SNR=5.0						
LPAZ	**La Paz**	**169.18**	**62**	PKP	PKPdf	09 34 38.4	+3.8
	comp=Z,0.8nm,0.9s,baz=229,slow=9.0,SNR=3.7						
LPAZ				PKPab	PKPab	09 35 49.9	+0.5
	comp=Z,1.5nm,0.9s,baz=329,slow=5.9,SNR=4.4						

IDC 16 09:25:05.4±6.8**,8.04S**×**129.30E,h294**^{km}±75^{km}**,mb3.1**/2**,**
mb1 3.2/4**,mb1mx3.0**/12**,mbtmp3.8**/4**,Error ellipse:**
s-maj=60.9km s-min=30.3km az=49.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**5.58**	**147**	*e*P	P	09 26 41.7	+12
	14nm,0.2s						
KAKA				*e*S	S	09 27 47.8	+11
FITZ	**Fitzroy Crossi**	**10.62**	**199**	*e*P	P	09 27 31.8	-0.2
	1.9nm,0.3s						
FITZ				*e*S	S	09 29 32.1	+4.3
FITZ	**Fitzroy Crossi**	**10.62**	**199**	P	P	09 27 31.5	-0.5
	0.7nm,0.3s,baz=40,slow=13,SNR=16						
FITZ				S	S	09 29 30.2	+2.4
	1.3nm,0.3s,baz=73,slow=14,SNR=4.6						
WRA	**Warramunga Arr**	**12.80**	**158**	P	P	09 27 57.3	-1.6
	0.9nm,0.3s,baz=342,slow=13,SNR=25						
WRA				S	S	09 30 18.7	+2.4
	1.0nm,0.3s,baz=333,slow=22,SNR=8.8						
WB2	**Warramunga Arr**	**12.80**	**158**	*e*P	P	09 27 58.0	-1.0
WB2				*e*S	S	09 30 20.7	+4.3
STKA	**Stephens Creek**	**26.34**	**156**	P	P	09 30 15.7	-1.2
	0.4nm,0.3s,baz=339,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**68.72**	**327**	P	P	09 35 37.5	-1.8
	0.5nm,0.5s,baz=118,slow=7.0,SNR=4.4						

NIED ***16*** *09:35:00,37.80N×142.00E,h35*^{km}*,Mw4.4 Best double couple:* M_0*4.05×*10^{15} *NP1:*ϕ_s*19°,δ69°,λ91°. NP2:*ϕ_s*196°, δ21°,λ87°.*

BJI ***16*** *09:35:17.5,37.87N×142.06E,h55*^{km}*,mB4.9,mb4.6, Ms4.4,Msz4.3*

JMA ***16*** *09:35:17.9±0.1,37.81N×142.02E,h36*^{km}*±2*^{km}*,M4.4*

JMA Felt I J1.

MOS ***16*** *09:35:18.2±0.9,38.10N×141.86E,h33*^{km}*,mb4.7/22,Error ellipse: s-maj=9.6km s-min=6.9km az=105.9*

IDC ***16*** *09:35:19.3±0.8,37.89N×142.15E,h40*^{km}*±6*^{km}*,mb4.1/15, mb1 4.3/18,mb1mx4.2/25,mbtmp4.3/18,ML3.8/3,MS3.4/7, Ms1 3.4/7,ms1mx3.2/25,Error ellipse: s-maj=16.8km s-min=9.9km az=144.0*

NEIC ***16*** *09:35:20.0±1.0,37.78N×142.03E,h52*^{km}*±8*^{km}*,mb4.6/13, MW4.3(NIED),Error ellipse: s-maj=8.3km s-min=7.5km az=104.0*

NEIC Recorded [1 JMA] in Fukushima, Iwate and Miyagi Prefectures.

ISC 16 09:35:17.8±0.7**,37.82N**±0.04×**142.04E**±0.05**,h46**^{km}±4^{km}**,**
h39^{km}±2.3^{km}**:pP-P,n111,**σ**0.92**/123**,mb4.6**/52**,MS3.8**/6**,**
5C-14D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.84**	**320**	⇓P	**P**	**09 35 33.5**	**+0.2**
JIO				S	**S**	**09 35 44.4**	**-0.4**
JMM	**Marumori**	**0.99**	**273**	⇓P	**P**	**09 35 35.5**	**+0.1**
JMM				*e*S	**S**	**09 35 46.7**	**-1.8**
JFK	**Kawauchi**	**1.03**	**244**	⇓P	**P**	**09 35 35.7**	**-0.3**
JFK				S	**S**	**09 35 48.7**	**-0.8**
JOU	**Okura**	**1.22**	**297**	⇓P	**P**	**09 35 39.3**	**+0.7**
JMK	**Ichinoseki**	**1.30**	**331**	⇓P	**P**	**09 35 40.1**	**+0.1**
JMK				*e*S	**S**	**09 35 56.1**	**-0.4**
JFT	**Otama**	**1.38**	**258**	⇓P	**P**	**09 35 41.9**	**+0.8**
JFT				*e*S	**S**	**09 35 59.4**	**+0.9**
JYS	**Shirataka**	**1.61**	**285**	⇓P	**P**	**09 35 44.9**	**+0.6**
JYK	**Kaneyama**	**1.72**	**310**	⇓P	**P**	**09 35 46.3**	**+0.5**
JOM	**Ohasama**	**1.75**	**341**	⇓P	**P**	**09 35 46.6**	**+0.3**
JFY	**Yanaizu**	**1.90**	**258**	⇓P	**P**	**09 35 49.0**	**+0.7**
JYA	**Atsumi**	**1.99**	**294**	⇓P	**P**	**09 35 50.2**	**+0.6**
MJAR	**Matsushiro Arr**	**3.31**	**249**	P	**P**	**09 36 09.4**	**+0.9**
	9.4nm,0.3s,baz=56,slow=11,SNR=48						
MJAR				S	**S**	**09 36 51.0**	**+4.1**
	9.3nm,0.3s,baz=82,slow=15,SNR=6.9						
MJAR				LR	LR	09 37 49.1	
	comp=Z,742nm,18.1s,baz=65,slow=44						
MAJO	**Matsushiro**	**3.31**	**249**	*e*P	**P**	**09 36 09.2**	**+0.7**
MAT	**Matsushiro**	**3.31**	**249**	P	**P**	**09 36 08.4**	**-0.1**
MAT				*e*S	**S**	**09 36 48.1**	**+1.1**
MAT	**Matsushiro**	**3.31**	**249**	*e*P	**P**	**09 36 09.0**	**+0.5**
MAT				*e*S	**S**	**09 37 02.0**	**+15**
JHJ	**Hachijo jima 2**	**5.04**	**202**	LR	LR	09 38 29.0	
	comp=Z,193nm,19.3s,baz=249,slow=37						
ASAJ	**Asahikawa**	**6.31**	**4**	P	**P**	**09 36 48.6**	**-1.9**
	2.9nm,0.3s,baz=229,slow=15,SNR=19						
ASAJ				S	**S**	**09 37 58.5**	**-3.7**
	2.2nm,0.3s,baz=7.1,slow=29,SNR=2.6						
ASAJ	**Asahikawa**	**6.31**	**4**	P	**P**	**09 36 48.7**	**-1.8**
ASAJ				S	**S**	**09 37 58.5**	**-3.7**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				smax			
	comp=N,2.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**9.15**	**3**	*e*P	**P**	**09 37 24.9**	**-5.0**
JNU	**Nakatsue**	**10.23**	**246**	P	**P**	**09 37 44.0**	**-0.8**
	comp=N,0.4nm,0.3s,baz=55,slow=16,SNR=6.5						
JNU				LR	LR	09 41 12.1	
	comp=N,86nm,19.8s,baz=327,slow=34						
JNU	**Nakatsue**	**10.23**	**246**	P	**P**	**09 37 44.0**	**-0.8**
JNU				LR	LR	09 41 12.1	
CBIJ	**Chichi jima**	**10.69**	**179**	P	**P**	**09 37 47.6**	**-3.5**
	comp=N,4.1nm,0.3s,baz=269,slow=19,SNR=3.1						
CBIJ				S	**S**	**09 39 36.5**	**-14**
	comp=N,7.8nm,0.3s,baz=118,slow=24,SNR=3.0						
MDJ	**Mudanjiang**	**11.57**	**310**	P	**P**	**09 38 03.0**	**+0.1**
MDJ				S	**S**	**09 40 10.8**	**-0.9**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s						
MDJ				AMB	AMB		
	comp=Z,130nm,3.7s						
MDJ				LR	LR		
	comp=N,160nm,17.8s						
MDJ				LR	LR		
	comp=E,220nm,14.1s						
MDJ				LR	LR		
	comp=Z,280nm,14.1s						
CN2	**Changchun**	**13.91**	**301**	*e*P	**P**	**09 38 34.3**	**+0.4**
SSE	**Sheshan**	**18.44**	**255**	*e*P	**P**	**09 39 29.8**	**-1.8**
SSE				AP		09 39 38.0	
SSE				S	**S**	**09 42 53.1**	**+0.8**
SSE				XS		09 43 04.9	
SSE				AMB	AMB		
	comp=Z,30nm,1.6s						
SSE				AMB	AMB		
	comp=Z,140nm,4.0s						
SSE	**Sheshan**	**18.44**	**255**	*e*P	**P**	**09 39 29.8**	**-1.8**
	comp=Z,31nm,1.6s						
SSE				pP		09 39 38.0	
SSE				sP		09 39 41.8	
SSE				S	**S**	**09 42 53.1**	**+0.8**
SSE				sS		09 43 04.9	
PET	**Petropavlovsk**	**19.09**	**32**	*i* P	**P**	**09 39 39.9**	**+0.8**
PET				pmax	pmax		
	comp=Z,92nm,1.5s						
NJ2	**Nanjing**	**19.84**	**260**	*e*P	**P**	**09 39 47.4**	**0.0**
NJ2				AP		09 39 54.8	
NJ2				PP	PP	09 40 05.3	-1.6
NJ2				S	**S**	**09 43 21.0**	**-2.1**
NJ2				XS		09 43 36.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,300nm,4.3s						
NJ2				LR	LR		
	comp=N,480nm,16.0s						
NJ2				LR	LR		
	comp=E,500nm,12.6s						
NJ2				LR	LR		
	comp=Z,260nm,10.3s						
MA2	**Magadan**	**22.49**	**12**	*i* P	**P**	**09 40 13.1**	**-1.0**
MA2				pmax	pmax		
	comp=Z,53nm,1.5s,mb4.8						
GUMO	**Guam**	**24.26**	**173**	LR	LR	09 50 30.7	
	comp=Z,86nm,18.3s,MS3.3,baz=326,slow=38						
CIT	**Chita**	**24.47**	**315**	*e*P	**P**	**09 40 34.4**	**+1.0**
CIT				pmax	pmax		
	comp=Z,85nm,1.4s,mb5.0						
YAK	**Yakutsk**	**25.42**	**346**	*i* P	**P**	**09 40 41.8**	**-0.5**
YAK				pmax	pmax		
	comp=Z,42nm,1.1s,mb4.9						
SEY	**Seymchan**	**25.93**	**11**	⇓*i*P	**P**	**09 40 48.3**	**+1.2**
BOD	**Bodaibo**	**27.14**	**327**	*e*P	**P**	**09 40 57.6**	**-0.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
ULN	**Ulaanbaatar**	**27.34**	**303**	*e*P	**P**	**09 41 00.4**	**+0.2**
	comp=Z,4.6nm,0.8s,mb4.1						
ULN	**Ulaanbaatar**	**27.34**	**303**	*i* P	**P**	**09 41 00.5**	**+0.3**
SONM	**Songino Array**	**27.77**	**303**	P	**P**	**09 41 04.5**	**+0.3**
	comp=Z,11nm,0.8s,mb4.5,baz=100,slow=8.5,SNR=74						
SONM				LR	LR	09 52 30.0	
	comp=Z,75nm,20.5s,MS3.3,baz=34,slow=37						
ENH	**Enshi**	**27.90**	**264**	*e*P	**P**	**09 41 04.8**	**-0.7**
	comp=Z,110nm,1.0s,mb5.4						
ZAK	**Zakamensk**	**30.18**	**307**	*e*P	**P**	**09 41 24.7**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
LZH	**Lanzhou**	**30.43**	**279**	*e*P	**P**	**09 41 28.0**	**0.0**
LZH				PP	PP	09 42 26.9	-1.8
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.7						
LZH				AMB	AMB		
	comp=Z,50nm,5.2s						
LZH				LR	LR		
	comp=N,380nm,13.2s						
LZH				LR	LR		
	comp=Z,590nm,17.5s,MS4.3						
LZH	**Lanzhou**	**30.43**	**279**	*e*P	**P**	**09 41 28.0**	**0.0**
	comp=Z,25nm,1.4s,mb4.8						
LZH				pP	pP	09 41 31.2	-9.0
LZH				sP	sP	09 41 32.7	-13
LZH				PP	PP	09 42 26.9	-1.8
LZH				LR	LR		
	comp=Z,590nm,17.5s,MS4.3						
GYA	**Guiyang**	**31.85**	**260**	⇑*i*P	**P**	**09 41 39.6**	**-0.9**
GYA				S	**S**	**09 46 47.3**	**+0.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
GYA				AMB	AMB		
	comp=Z,180nm,6.0s						
GYA				LR	LR		
	comp=N,240nm,8.4s						
GYA				LR	LR		
	comp=E,330nm,6.0s						
GYA				LR	LR		
	comp=Z,420nm,6.3s						
CD2	**Chengdu**	**32.18**	**269**	P	**P**	**09 41 42.8**	**-0.6**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
GTA	**Gaotai**	**32.82**	**286**	*e*P	**P**	**09 41 48.5**	**-0.4**
TIXI	**Tiksi**	**34.58**	**353**	*i* P	**P**	**09 42 02.1**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
KMI	**Kunming**	**35.58**	**261**	P	**P**	**09 42 13.1**	**+0.4**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
KMI	**Kunming**	**35.58**	**261**	P	**P**	**09 42 13.1**	**+0.4**
	comp=Z,13nm,0.9s,mb4.9						
WMQ	**Urumqi**	**40.94**	**296**	*e*P	**P**	**09 42 57.6**	**+0.4**
WMQ				PP	PP	09 44 36.0	+1.0
WMQ				*e*S	**S**	**09 49 09.0**	**+3.5**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,180nm,5.6s						
WMQ				LR	LR		
	comp=N,60nm,16.4s						
WMQ				LR	LR		
	comp=E,80nm,25.0s						
WMQ				LR	LR		
	comp=Z,100nm,28.0s						
NVS	**Novosibirsk**	**42.66**	**313**	*e*P	**P**	**09 43 10.4**	**-0.8**
NVS				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
NVS				pmax	pmax		
	comp=N,1.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.9s						
MKAR	**Makanchi Array**	**44.13**	**302**	P	**P**	**09 43 23.4**	**+0.2**
	comp=E,3.5nm,0.7s,mb4.2,baz=83,slow=9.8,SNR=23						
MKAR				LR	LR	10 01 18.6	
	comp=E,38nm,19.3s,MS3.3,baz=257,slow=35						
MKAR	**Makanchi Array**	**44.13**	**302**	P	**P**	**09 43 23.4**	**+0.2**
MKAR				LR	LR	10 01 18.6	
MKAR	**Makanchi Array**	**44.13**	**302**	⇑*e*P	**P**	**09 43 23.3**	**+0.1**
KURK	**Kurchatov**	**45.85**	**308**	*e*P	**P**	**09 43 36.7**	**-0.2**
	comp=E,24nm,0.9s,mb5.1						
KURK	**Kurchatov**	**45.85**	**308**	*c i*P	**P**	**09 43 36.8**	**-0.1**
JIRN	**Jiri**	**47.45**	**275**	*e*P	**P**	**09 43 50.7**	**+0.9**
	comp=E,10.0nm,0.5s,mb5.0						
GUN	**Gumba**	**47.58**	**275**	*e*P	**P**	**09 43 51.5**	**+0.7**
	comp=E,40nm,0.7s,mb5.5						
PKI	**Pulchoki**	**48.10**	**275**	*e*P	**P**	**09 43 55.2**	**+0.3**
	comp=E,11nm,0.7s,mb5.0						
KKN	**Kakani**	**48.10**	**275**	*e*P	**P**	**09 43 55.3**	**+0.4**
	comp=E,30nm,0.7s,mb5.5						
GKN	**Gorkha**	**48.51**	**276**	*e*P	**P**	**09 43 58.2**	**+0.1**
	comp=E,51nm,1.0s,mb5.5						
ILAR	**Eielson Array**	**48.57**	**33**	P	**P**	**09 43 58.0**	**+0.1**
	comp=E,1.8nm,0.8s,mb4.1,baz=270,slow=6.4,SNR=14						
KOLN	**Koldanda**	**49.44**	**276**	*e*P	**P**	**09 44 05.4**	**+0.2**
	comp=E,15nm,0.9s,mb5.0						
TKM2	**Tokmak 2**	**49.70**	**298**	P	**P**	**09 44 08.1**	**+1.1**
	SNR=12						
VOSK	**Vostochnaya**	**50.13**	**311**	P	**P**	**09 44 09.5**	**-0.7**
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
CHKZ	**Chkalovo**	**50.15**	**313**	*e*P	**P**	**09 44 09.7**	**-0.6**
	comp=Z,5.0nm,0.9s,mb4.5						
CHKZ	**Chkalovo**	**50.15**	**313**	*e*P	**P**	**09 44 09.7**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
KZA	**Kyzart**	**50.21**	**297**	P	**P**	**09 44 12.5**	**+1.6**
	SNR=6.2						
KBK	**Karagaybulak**	**50.24**	**298**	P	**P**	**09 44 12.0**	**+0.9**
	SNR=11						
USP	**Ospenovka**	**50.36**	**299**	P	**P**	**09 44 12.3**	**+0.3**
	SNR=5.4						
BVA0	**Borovoye Array**	**50.42**	**312**	*i* P	**P**	**09 44 12.2**	**-0.1**
BVA0				pmax	pmax		
	comp=Z,5.0nm,2.4s,mb4.1						
BVAR	**Borovoye Array**	**50.42**	**312**	P	**P**	**09 44 12.1**	**-0.2**
	comp=Z,2.2nm,0.5s,mb4.4,baz=73,slow=7.9,SNR=14						
BVAR				PcP	PcP	09 45 30.5	+0.1
	comp=Z,0.7nm,0.6s,baz=63,slow=3.2,SNR=2.7						
BVAR				pPcP		09 45 43.7	
	comp=Z,2.1nm,0.8s,slow=1.5,SNR=5.0						
BRVK	**Borovoye**	**50.47**	**312**	*e*P	**P**	**09 44 12.7**	**0.0**
	comp=Z,2.3nm,0.8s,mb4.3						
BRVK	**Borovoye**	**50.47**	**312**	*e*P	**P**	**09 44 12.7**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
AAK	**Ala-Archa**	**50.56**	**298**	*e*P	**P**	**09 44 12.8**	**-0.8**
	comp=Z,5.8nm,1.0s,mb4.5						
AAK	**Ala-Archa**	**50.56**	**298**	*e*P	**P**	**09 44 12.8**	**-0.8**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
AML	**Almayashu**	**51.28**	**298**	P	**P**	**09 44 20.2**	**+1.1**
	SNR=14						
KKAR	**Karatay Array**	**53.17**	**300**	*i* P	**P**	**09 44 32.8**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
INK	**Inuvik**	**53.47**	**27**	P	**P**	**09 44 35.0**	**-0.1**
	comp=Z,0.7nm,0.5s,mb3.9,baz=356,slow=7.1,SNR=9.9						
SVE	**Sverdlovsk**	**54.89**	**318**	⇑*e*P	**P**	**09 44 40.2**	**-5.4**
SVE				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
SVE				MLR	MLR		
	comp=N,300nm,14.0s,MS4.6						
SVE				MLR	MLR		
	comp=E,200nm,14.0s,MS4.6						
SVE				MLR	MLR		
	comp=Z,300nm,14.0s,MS4.5						
ARU	**Arti**	**56.11**	**318**	⇓*i*P	**P**	**09 44 53.8**	**-0.5**
ARU				*e*S	**S**	**09 52 38.4**	**+0.3**
ARU				*e*SS	SS	09 56 24.6	-0.3
ARU				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
AB31	**Akbulak array**	**57.82**	**310**	P	**P**	**09 45 05.9**	**-0.7**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	**57.89**	**189**	*e*P	**P**	**09 45 06.2**	**-1.3**
	comp=Z,6.8nm,0.9s,mb4.7						
WRAB	**Tennant Creek**	**57.89**	**189**	*e*P	**P**	**09 45 06.2**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
WB2	**Warramunga Arr**	**57.90**	**189**	*e*P	**P**	**09 45 05.8**	**-1.8**
WRA	**Warramunga Arr**	**57.90**	**189**	P	**P**	**09 45 06.3**	**-1.3**
	comp=Z,4.1nm,0.6s,mb4.6,baz=6.1,slow=7.2,SNR=67						
ARCES	**ARCESS Array B**	**63.44**	**339**	LR	LR	10 16 16.9	
	comp=Z,88nm,19.2s,MS4.0,baz=10,slow=39						
JOF	**Joensuu**	**65.51**	**332**	*e*p	**P**	**09 45 57.5**	**-0.4**
	comp=Z,5.9nm,0.9s,mb4.6						
OBN	**Obninsk**	**67.77**	**323**	⇑*e*P	**P**	**09 46 06.1**	**-6.2**
OBN				*e*S	S	09 55 02.2	-3.0
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
KAF	**Kangasniemi**	**67.84**	**333**	*e*p	**P**	**09 46 11.6**	**-1.0**
	comp=Z,2.6nm,0.6s,mb4.4						
FINES	**FINESS Array B**	**68.36**	**332**	P	**P**	**09 46 15.8**	**0.0**
	comp=Z,3.8nm,0.7s,mb4.5,baz=45,slow=8.1,SNR=7.2						
KIV	**Kislovodsk**	**70.77**	**311**	*i* P	**P**	**09 46 32.1**	**+1.2**
KIV				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
SOC	**Sochi**	**72.75**	**312**	*e*P	**P**	**09 46 40.8**	**-1.9**
SOC				*e*		09 47 03.3	
SOC				*e*		09 49 23.9	
SOC				*e*PPP	PPP	09 51 06.2	-3.5
SOC				*e*S	S	09 56 01.0	-2.5
SOC				*e*		09 56 44.9	
SOC				*e*SS	SS	10 00 38.6	-7.5
SOC				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.2						
HFS	**Hagfors**	**73.58**	**336**	P	**P**	**09 46 47.4**	**+0.1**
	comp=Z,6.6nm,0.8s,mb4.6,baz=72,slow=4.7,SNR=6.8						
NB2	**NORSAR Subarra**	**73.66**	**337**	P	**P**	**09 46 47.9**	**+0.3**
	comp=Z,1.9nm,0.7s,mb4.1,baz=39,slow=5.8						
NOA	**NORSAR Array B**	**73.66**	**337**	P	**P**	**09 46 47.8**	**+0.1**
	comp=Z,3.5nm,0.8s,mb4.3,baz=38,slow=5.8,SNR=6.8						
NAO	**NORSAR Subarra**	**73.94**	**337**	P	**P**	**09 46 47.9**	**-1.4**
	comp=Z,1.9nm,0.7s,mb4.1						
NAO	**NORSAR Subarra**	**73.94**	**337**	P	**P**	**09 46 47.9**	**-1.4**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
AKASG	**Malin Array Be**	**73.98**	**322**	P	**P**	**09 46 49.7**	**0.0**
	comp=Z,2.5nm,0.5s,mb4.4,baz=45,slow=6.0,SNR=13						
AKASG				pP	pP	09 47 02.4	-0.9
	comp=Z,1.2nm,0.5s,baz=45,slow=6.2,SNR=4.2						
AKASG	**Malin Array Be**	**73.98**	**322**	P	**P**	**09 46 49.7**	**0.0**
AKASG				pP	pP	09 47 02.4	-0.9
NVAR	**Mina Array Bea**	**74.12**	**54**	pP	pP	09 47 03.2	-1.1
	comp=Z,0.9nm,0.8s,baz=278,slow=6.4,SNR=4.6						
PDAR	**Pinedale Array**	**76.77**	**46**	P	**P**	**09 47 06.9**	**+1.1**

	comp=Z,0.8nm,0.6s,mb3.8,baz=321,slow=1.3,SNR=7.9						
PDAR				pP	pP	09 47 18.1	-1.3
	comp=Z,1.1nm,0.6s,baz=271,slow=2.2,SNR=6.7						
BRTR	**Keskin Array B**	**78.71**	**312**	P	**P**	**09 47 17.9**	**+1.2**
	comp=Z,0.8nm,0.7s,mb3.8,baz=117,slow=5.5,SNR=6.1						
VRAC	**Vranov**	**80.73**	**327**	P	**P**	**09 47 28.8**	**+1.5**
	comp=Z,2.7nm,0.4s,mb4.5,baz=45,slow=5.7,SNR=3.8						
VRAC	**Vranov**	**80.73**	**327**	P	**P**	**09 47 28.8**	**+1.5**
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KHC	**Kasperske Hory**	**82.14**	**329**	*i* P	**P**	**09 47 36.1**	**+1.5**
GERES	**GERESS Array B**	**82.31**	**328**	P	**P**	**09 47 36.1**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.1,baz=27,slow=3.0,SNR=8.6						
GERES	**GERESS Array B**	**82.31**	**328**	P	**P**	**09 47 36.1**	**+0.6**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ANMO	**Albuquerque**	**83.70**	**50**	⇓*e*P	**P**	**09 47 45.5**	**+2.6**
TXAR	**Lajitas Array**	**89.25**	**53**	P	**P**	**09 48 11.3**	**+1.2**
	comp=Z,0.5nm,0.5s,mb4.1,baz=318,slow=3.5,SNR=8.2						
TXAR				pP	pP	09 48 23.4	-0.6
	comp=Z,0.7nm,0.7s,baz=312,slow=3.3,SNR=5.7						
TXAR	**Lajitas Array**	**89.25**	**53**	P	**P**	**09 48 11.3**	**+1.2**
TXAR				*PP	pP	09 48 23.4	-0.6
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LPAZ	**La Paz**	**145.87**	**59**	PKPbc	PKPbc	09 54 55.1	+2.4
	comp=Z,3.0nm,0.9s,baz=1.9,slow=4.4,SNR=10						
LPAZ	**La Paz**	**145.87**	**59**	*e*PKP2	PKPab	09 54 55.0	0.0

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*IDC **16** 09:37:27.1±1.2, 35.73N×11.68E, mb4.0/6, mb1 4.0/12, mb1mx3.9/26, mbtmp3.9/12, ML3.8/5, MS3.3/4, Ms1 3.3/4, ms1mx3.0/24, Error ellipse: s-maj=25.9km s-min=17.2km az=141.0*

*NEIC **16** 09:37:28.3±0.5, 35.87N×11.49E, h10^{km}, mb3.7/1, Error ellipse: s-maj=8.1km s-min=4.4km az=172.0*

*CSEM **16** 09:37:29.7±0.1, 35.80N×11.46E, h40^{km}, ML3.5/2, Error ellipse: s-maj=4.9km s-min=2.0km az=175.0*

*LDG **16** 09:37:32.5±0.8, 36.09N×11.73E, h10^{km}, Ml3.6/3, ms2.9/6, Error ellipse: s-maj=22.2km s-min=7.5km az=23.0*

ISC 16 09:37:27.3±0.6**, 35.96N**±0.06×**11.46E**±0.04**, h10^{km}, n41, σ1§09**/46**, mb3.9**/6**, MS3.7**/1**, Tunisia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTS	**Pantelleria**	**0.95**	**27**	Pn	**Pn**	**09 37 47.1**	**+0.6**
MMGO	**Monte Magaggia**	**2.09**	**35**	Pn	**Pn**	**09 38 03.2**	**+0.4**
ERC	**Erice**	**2.26**	**23**	Pn	**Pn**	**09 38 05.7**	**+0.5**
VAE	**Valguarnera**	**2.81**	**57**	Pn	**Pn**	**09 38 13.9**	**+0.8**
	9.9nm,0.3s,baz=10,slow=3.1,SNR=8.6						
VAE				Sn	**Sn**	**09 38 46.3**	**-1.1**
	17nm,0.3s,baz=308,slow=16,SNR=6.7						
VAE				Lg		09 38 53.9	
	16nm,0.3s,baz=171,slow=23,SNR=5.6						
PZI	**Palazzolo**	**3.01**	**68**	Pn	**Pn**	**09 38 15.9**	**-0.1**
SSY	**Sortino**	**3.14**	**67**	Pn	**Pn**	**09 38 17.8**	**0.0**
SSY				Sn	**Sn**	**09 38 54.9**	**-0.8**
ABSA	**Djebel Ababsia**	**3.24**	**277**	P	**Pn**	**09 38 20.0**	**+0.8**
AGST	**Augusta-Monte**	**3.29**	**66**	Pn	**Pn**	**09 38 19.8**	**-0.2**
CGMA	**Guelma**	**3.31**	**280**	P	**Pn**	**09 38 21.0**	**+0.7**
CMAH	**Djebel Manchou**	**3.33**	**283**	P	**Pn**	**09 38 20.0**	**-0.5**
CAEH	**’Ain El Ouahch**	**3.81**	**284**	P	**Pn**	**09 38 27.0**	**-0.3**
CKFL	**Kef-Lekhel**	**3.86**	**278**	P	**Pn**	**09 38 29.0**	**+0.9**
VSL	**Villasalto**	**3.90**	**336**	Pn	**Pn**	**09 38 29.5**	**+1.0**
VSL				Sn	**Sn**	**09 39 13.8**	**-1.1**
CASM	**Ain Smara**	**4.04**	**276**	P	**Pn**	**09 38 30.0**	**-0.6**
DFRA	**Djebel Bou Aff**	**4.55**	**279**	P	**Pn**	**09 38 38.0**	**+0.1**
SET	**Setif**	**4.92**	**275**	P	**Pn**	**09 38 38.0**	**-5.0**
PGF	**Pioggiola**	**6.85**	**345**	*e*Pn	**Pn**	**09 39 11.3**	**+1.0**
PGF				*e*Sn	**Sn**	**09 40 22.9**	**-6.2**
	10nm,0.4s						
LMR	**La Mourre**	**8.29**	**334**	*e*Pn	**P**	**09 39 28.5**	**-2.0**
LMR				*e*Sn	**Sn**	**09 41 00.1**	**-5.1**
	2.7nm,0.3s						
FRF	**La Foret Royal**	**8.44**	**335**	*e*Pn	**P**	**09 39 31.8**	**-0.8**
SBF	**Sospel**	**8.47**	**340**	*e*Pn	**P**	**09 39 32.5**	**-0.5**
SMRF	**Simiane la Rot**	**9.19**	**332**	*e*Pn	**P**	**09 39 43.0**	**+0.1**
SMRF				*e*Sn	**Sn**	**09 41 19.9**	**-7.5**
	2.3nm,0.3s						
MBDF	**Montbardon**	**9.46**	**339**	*e*Pn	**P**	**09 39 46.1**	**-0.5**
ORIF	**Oris-en-Rattie**	**9.90**	**336**	*e*Pn	**P**	**09 39 51.7**	**-1.0**
ORIF				*e*R			
	260nm,23.0s						
LASF	**Ste Croix**	**9.98**	**327**	*e*Pn	**P**	**09 39 51.8**	**-2.0**
LPG	**La Plagne**	**10.17**	**341**	*e*P	**P**	**09 40 01.7**	**+5.3**
LPL	**La Plagne**	**10.19**	**341**	*e*P	**P**	**09 40 00.9**	**+4.2**
VIVF	**Saint-Julien-l**	**10.28**	**332**	*e*Pn	**P**	**09 39 57.3**	**-0.5**
DAVOX	**Davos**	**10.87**	**354**	Pn	**P**	**09 40 07.9**	**+2.0**
	0.1nm,0.3s,baz=164,slow=17,SNR=2.7						
DAVOX				LR	LR	09 44 30.0	
	comp=Z,114nm,19.3s,baz=262,slow=38						
IDI	**Anoyia**	**10.95**	**90**	Sn	**S**	**09 42 02.5**	**-8.2**
	0.7nm,0.3s,baz=270,slow=12,SNR=3.0						
ESDC	**Sonseca Array**	**12.75**	**292**	Pn	**P**	**09 40 34.3**	**+3.0**
	0.5nm,0.3s,baz=104,slow=14,SNR=3.9						
MDT	**Midelt**	**13.64**	**261**	Pn	**P**	**09 40 42.3**	**-0.9**
	0.5nm,0.3s,baz=76,slow=20,SNR=14						
MDT				LR	LR	09 46 48.6	
	comp=Z,155nm,19.8s,baz=27,slow=41						
VRAC	**Vranov**	**13.86**	**14**	LR	LR	09 46 13.0	
	comp=Z,70nm,18.6s,baz=54,slow=37						
BR131	**Keskin Array S**	**17.91**	**71**	*e*P	**P**	**09 41 41.1**	**+3.1**
	6.2nm,0.9s						
BRTR	**Keskin Array B**	**17.91**	**71**	P	**P**	**09 41 38.4**	**+0.5**
	0.1nm,0.3s,baz=253,slow=12,SNR=14						
AKASG	**Malin Array Be**	**19.52**	**35**	P	**P**	**09 41 57.5**	**+0.1**
	0.3nm,0.3s,baz=230,slow=10,SNR=5.4						
HFS	**Hagfors**	**24.23**	**3**	P	**P**	**09 42 47.2**	**+2.3**
	4.3nm,0.8s,mb3.9,baz=180,slow=15,SNR=6.8						
NOA	**NORSAR Array B**	**25.10**	**360**	P	**P**	**09 42 55.9**	**+2.7**
	5.4nm,0.9s,mb4.1,baz=183,slow=12,SNR=7.1						
FINES	**FINESS Array B**	**27.13**	**15**	P	**P**	**09 43 12.6**	**+0.5**
	2.9nm,0.9s,mb3.8,baz=198,slow=8.8,SNR=3.0						
MKAR	**Makanchi Array**	**52.56**	**55**	P	**P**	**09 46 42.9**	**0.0**
	0.8nm,0.8s,mb3.7,baz=292,slow=6.5,SNR=4.9						
BOSA	**Boshof**	**65.53**	**167**	P	**P**	**09 48 10.6**	**-2.6**
	2.6nm,0.8s,mb4.3,baz=341,slow=5.1,SNR=3.9						
BOSA				LR	LR	10 18 44.6	
	comp=Z,48nm,19.6s,MS3.7,baz=151,slow=38						
SONM	**Songino Array**	**67.35**	**47**	P	**P**	**09 48 23.4**	**-1.1**
	0.3nm,0.3s,mb3.8,baz=284,slow=6.1,SNR=4.0						

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*NEIC **16** 09:50:06.7, 18.48N×95.04W, h84^{km}, MD3.9(MEX), After MEX.*

MEX 16 09:50:06.7±1.1**, 18.48N×95.04W, h84^{km}**±37^{km}**, MD3.9, Veracruz**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.74**	**127**	*i* P	P	09 50 21.9	-1.4
TUIG				*i* S	S	09 50 33.5	-2.2
CMIG	**Matias Romero**	**1.39**	**174**	*i* P	P	09 50 29.3	-2.0
CMIG				*i* S	S	09 50 49.4	-0.1
OXX	**Oaxaca**	**2.12**	**229**	*i* P	P	09 50 40.0	-1.0
OXX				*i* S	S	09 51 04.0	-2.3
VHO	**Vista Hermosa**	**2.14**	**229**	*i* P	P	09 50 41.5	+0.3
VHO				*i* S	S	09 51 04.0	-2.7
PPM	**Popocatepetl**	**3.44**	**280**	*e*P	P	09 51 04.0	+4.6

IDC 16 09:55:07.9±3.7**, 3.21N×126.23E, h174^{km}**±34^{km}**, mb3.3**/5**, mb1 3.4**/5**, mb1mx3.3**/15**, mbtmp3.8**/5**, Error ellipse: s-maj=79.9km s-min=13.3km az=71.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.18**	**182**	*e*P	P	09 59 42.7	+2.0
	5.8nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.18**	**182**	P	P	09 59 39.0	-1.6
	1.3nm,0.3s,baz=345,slow=12,SNR=4.4						
WRA	**Warramunga Arr**	**24.34**	**161**	P	P	10 00 09.7	-1.6
	1.1nm,0.4s,baz=344,slow=10,SNR=23						
WRA				S	S	10 04 17.2	+2.1
	0.8nm,0.8s,baz=335,slow=20,SNR=4.6						
WB2	**Warramunga Arr**	**24.35**	**161**	*e*P	P	10 00 09.7	-1.6
STKA	**Stephens Creek**	**37.83**	**158**	P	P	10 02 09.2	-0.2
	1.3nm,0.5s,baz=339,slow=10,SNR=2.8						
SONM	**Songino Array**	**47.63**	**342**	P	P	10 03 26.0	-2.2
	0.2nm,0.4s,baz=172,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**57.70**	**326**	P	P	10 04 40.6	-1.9
	0.5nm,0.4s,baz=119,slow=7.4,SNR=6.6						

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*SKO **16** 09:55:50.1, 37.80N×23.74E, ML3.2*

*ATH **16** 09:55:51.8, 37.93N×22.17E, h9^{km}±1^{km}, MD3.7/17, ML3.6*

*NEIC **16** 09:55:51.7, 37.93N×22.17E, h9^{km}, MD3.7(ATH), After ATH.*

*CSEM **16** 09:55:52.1±0.2, 38.00N×22.15E, h2^{km}±1^{km}, ML3.6, Error ellipse: s-maj=2.5km s-min=1.8km az=37.0*

*IDC **16** 09:55:57.7±3.4, 37.95N×22.22E, h47^{km}±35^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.5/22, mbtmp3.8/7, ML3.8/2, Error ellipse: s-maj=30.2km s-min=23.2km az=147.0*

ISC 16 09:55:51.8±0.3**, 37.94N**±0.02×**22.17E**±0.03**, h9^{km}, n54, σ1§21**/69**, mb3.7**/5**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.57**	**283**	*e*PB	**Pb**	**09 56 02.4**	**-1.0**
RLS				*e*SB	**Sb**	**09 56 11.2**	**-0.1**
ITM	**Ithomi**	**0.78**	**194**	*e*PG	**Pg**	**09 56 06.0**	**-1.4**
ITM				*e*SB	**Sb**	**09 56 17.7**	**+0.2**
MGER	**Gerania Oros**	**0.86**	**86**	*e*PB	**Pb**	**09 56 08.5**	**0.0**
LKR	**Lokris**	**0.97**	**42**	*e*PB	**Pb**	**09 56 10.2**	**-0.1**
EVR	**Evrytania**	**1.02**	**344**	*e*PB	**Pb**	**09 56 11.3**	**+0.1**
EVR				*e*SB	**Sb**	**09 56 25.6**	**+1.1**
NAIG	**Nisos Aigina**	**1.06**	**99**	*e*PN	**Pn**	**09 56 12.5**	**-0.3**
AGG	**Agios Georgios**	**1.09**	**7**	*e*P	**Pb**	**09 56 12.1**	**-0.3**
AGG	**Agios Georgios**	**1.09**	**7**	P	**Pb**	**09 56 12.1**	**-0.3**
AGG				S	**Sb**	**09 56 26.0**	**-0.5**
AGG	**Agios Georgios**	**1.09**	**7**	P	**Pb**	**09 56 12.1**	**-0.3**
AGG				S	**Sb**	**09 56 26.0**	**-0.6**
ATH	**Athens Observa**	**1.23**	**88**	*e*PB	**Pb**	**09 56 15.3**	**+0.6**
ATH				*e*SB	**Sb**	**09 56 31.6**	**+1.2**
MPAR	**Parnis Oros**	**1.26**	**80**	*e*PB	**Pb**	**09 56 15.5**	**+0.3**
VLS	**Valsamata**	**1.27**	**281**	*e*PG	**Pg**	**09 56 15.3**	**-1.9**
VLS				*e*SB	**Sb**	**09 56 33.6**	**+1.9**
PTL	**Penteli**	**1.34**	**85**	*e*PB	**Pb**	**09 56 16.5**	**-0.3**
VLI	**Veliai**	**1.36**	**153**	*e*PG	**Pg**	**09 56 17.1**	**-1.9**
VLI				*e*SB	**Sb**	**09 56 35.5**	**+1.1**
NEO	**Neokhori**	**1.60**	**31**	*e*PG	**Pg**	**09 56 21.1**	**-2.7**
XOR	**Xorichti**	**1.64**	**29**	*e*P	**Pn**	**09 56 21.3**	**+0.3**
KYTH	**Kithira**	**1.79**	**157**	*e*PG	**Pg**	**09 56 25.0**	**-2.6**
AOS	**Alonnisos**	**1.82**	**47**	*e*P	**Pn**	**09 56 23.1**	**-0.5**
JAN	**Janina**	**2.00**	**329**	*e*PN	**Pn**	**09 56 28.0**	**+1.8**
IGT	**Igoumenitsa**	**2.15**	**319**	*e*P	**Pn**	**09 56 34.5**	**+6.2**
IGT	**Igoumenitsa**	**2.15**	**319**	P	**Pn**	**09 56 34.5**	**+6.2**
IGT				S	**Sn**	**09 57 03.4**	**+8.2**
LIT	**Litokhoron**	**2.18**	**7**	*e*P	**Pn**	**09 56 29.1**	**+0.4**
LIT	**Litokhoron**	**2.18**	**7**	P	**Pn**	**09 56 29.1**	**+0.4**
LIT				S	**Sn**	**09 56 54.2**	**-1.8**
LIT	**Litokhoron**	**2.18**	**7**	P	**Pn**	**09 56 29.1**	**+0.4**
LIT				S	**Sn**	**09 56 54.2**	**-1.8**
PAIG	**Paliouri**	**2.31**	**30**	*e*P	**Pn**	**09 56 29.8**	**-0.8**
KZN	**Kozani**	**2.39**	**353**	*e*PB	**Pb**	**09 56 32.8**	**-1.8**
KEK	**Kerkira**	**2.56**	**315**	*e*PN	**Pn**	**09 56 36.3**	**+2.0**
PLG	**Polygyros**	**2.63**	**22**	*e*PB	**Pb**	**09 56 36.0**	**-2.7**
APE	**Apeiranthos**	**2.81**	**107**	*e*PN	**Pn**	**09 56 39.5**	**+1.7**
FNA	**Florina**	**2.91**	**348**	*e*P	**Pn**	**09 56 40.2**	**+1.1**
FNA	**Florina**	**2.91**	**348**	P	**Pn**	**09 56 40.2**	**+1.1**
FNA				S	**Sn**	**09 57 15.0**	**+0.4**
FNA	**Florina**	**2.91**	**348**	P	**Pn**	**09 56 40.2**	**+1.0**
FNA				S	**Sn**	**09 57 15.0**	**+0.4**
VAM	**Vamos**	**3.01**	**146**	*e*PN	**Pn**	**09 56 42.0**	**+1.4**
GRG	**Griva**	**3.02**	**3**	*e*P	**Pn**	**09 56 41.0**	**+0.3**
SOH	**Sokhos**	**3.02**	**17**	*e*P	**Pn**	**09 56 41.2**	**+0.4**
LIA	**Limnos Island**	**3.06**	**49**	*e*PN	**Pn**	**09 56 42.8**	**+1.5**
KNT	**Kendrikon**	**3.27**	**10**	*e*P	**Pn**	**09 56 44.7**	**+0.4**
OHR	**Ohrid**	**3.34**	**342**	*e*Pn	**Pn**	**09 56 52.7**	**+7.3**
OHR				*e*Sn	**Sn**	**09 57 39.6**	**+14**
VAY	**Valandovo**	**3.40**	**5**	*e*Pn	**Pn**	**09 56 46.4**	**+0.3**
VAY				*e*Sn	**Sn**	**09 57 29.7**	**+2.8**
VAY				*e*Lg		09 57 34.3	
NVR	**Nevrokopi**	**3.65**	**20**	*e*PN	**Pn**	**09 56 51.7**	**+2.0**
SMG	**Samos**	**3.70**	**92**	*e*PN	**Pn**	**09 56 51.2**	**+0.7**
MMB	**Musomiste**	**3.84**	**18**	*e*P	**Pn**	**09 56 51.5**	**-0.9**
KKB	**Krupnik**	**3.99**	**10**	*e*P	**Pn**	**09 56 54.0**	**-0.5**
XRY	**Khrisi**	**4.17**	**136**	*e*PN	**Pn**	**09 56 59.0**	**+1.8**
RZN	**Rozhen**	**4.23**	**27**	*e*P	**Pn**	**09 56 57.0**	**-0.9**
KDZ	**Kurdzhali**	**4.47**	**33**	*e*P	**Pn**	**09 56 59.0**	**-2.4**
MLR	**Muntele Rosu**	**8.06**	**19**	P	**P**	**09 57 52.4**	**+0.5**
	0.7nm,0.3s,baz=2.0,slow=21,SNR=6.0						
BRTR	**Keskin Array B**	**9.13**	**75**	P	**P**	**09 58 06.2**	**-0.5**
	0.3nm,0.3s,baz=252,slow=13,SNR=6.1						
NB2	**NORSAR Subarra**	**24.13**	**347**	P	**P**	**10 01 08.4**	**-0.1**
	1.5nm,0.6s,mb3.6,baz=155,slow=9.3						
NOA	**NORSAR Array B**	**24.13**	**347**	P	**P**	**10 01 08.5**	**-0.1**
	1.3nm,0.8s,mb3.4,baz=146,slow=9.6,SNR=2.7						
EKA	**Eskdalemuir Ar**	**24.38**	**324**	P	**P**	**10 01 11.3**	**+0.3**
	2.3nm,0.7s,mb3.7,baz=135,slow=9.4,SNR=4.6						
DBIC	**Dimbokro**	**39.62**	**225**	P	**P**	**10 03 25.1**	**-0.4**
	2.5nm,0.8s,mb4.0,baz=8.2,slow=7.3,SNR=3.5						
MKAR	**Makanchi Array**	**44.32**	**59**	P	**P**	**10 04 01.6**	**-2.0**
	1.2nm,0.5s,mb3.9,baz=275,slow=7.3,SNR=16						
SONM	**Songino Array**	**59.60**	**51**	P	**P**	**10 05 58.0**	**-0.1**
	0.4nm,0.7s,mb3.5,baz=297,slow=9.7,SNR=3.8						

JMA 16 09:59:32.3±0.2**, 38.27N×144.69E, h56^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.50**	**290**	P	P	10 00 11.7	+0.2
OFUJ				*e*S	S	10 00 41.2	+0.4
MIYJ	**Miyakonagasawa**	**2.59**	**301**	P	P	10 00 12.7	-0.1
MIYJ				*e*S	S	10 00 42.6	-0.6
JIO	**Ouri**	**2.63**	**275**	P	P	10 00 13.6	+0.2
JIO				S	S	10 00 44.3	+0.1
JMK	**Ichinoseki**	**2.80**	**285**	P	P	10 00 16.2	+0.4
JMK				*e*S	S	10 00 49.0	+0.5
JRY	**Ryogami san**	**5.14**	**246**	P	P	10 00 47.9	-0.7
JRY				*e*S	S	10 01 45.8	-1.6

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*NNC **16** 10:08:39.6±6.5, 34.10N×69.16E, h65^{km}±139^{km}, Error ellipse: s-maj=74.8km s-min=44.0km az=116.0*

ISC 16 10:08:35.5±1.7**, 33.94N**±0.08×**69.6E**±0.1**, h33^{km}, n8, σ1§52**/12**, 2C-3D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**5.32**	**105**	*e*P	**P**	**10 09 53.7**	**-0.9**
THN				*e*S	**S**	**10 10 58.1**	**+2.6**
DLH	**Dalhousie**	**5.49**	**103**	*e*P	**P**	**10 09 58.0**	**+1.0**
DLH				*e*S	**S**	**10 11 04.0**	**+4.2**
SDNR	**Sundarnagar**	**6.64**	**109**	*e*P	**P**	**10 10 11.8**	**-1.5**
SDNR				*e*S	**S**	**10 11 26.8**	**-1.9**
KLP	**Kalpa**	**7.64**	**106**	*e*x	x	10 10 05.0	
KLP				AML	AML	10 12 37.6	
	comp=N,81nm,0.6s						
KLP				AML	AML	10 13 05.2	
	comp=E,94nm,0.4s						
KK31	**Karatay Array**	**9.17**	**4**	⇓Pn	**P**	**10 10 47.8**	**-0.7**
	comp=E,1.3nm,0.4s,baz=197,slow=20,SNR=26						
KK31				⇓Sn	**Sn**	**10 12 29.7**	**-2.2**
	comp=E,1.6nm,0.5s,baz=196,slow=23,SNR=3.9						
AAK	**Ala-Archa**	**9.48**	**22**	⇑Pn	**P**	**10 10 54.1**	**+1.4**
	comp=E,3.1nm,0.6s						
AAK				⇑Sn	**Sn**	**10 12 40.3**	**+0.9**
	comp=E,15nm,1.7s						
MK31	**Makanchi Array**	**16.03**	**33**	⇓P	**P**	**10 12 19.1**	**-0.8**
	comp=E,2.3nm,0.8s,baz=208,slow=11,SNR=15						
AB31	**Akbulak array**	**16.91**	**338**	P	**P**	**10 12 32.9**	**+1.9**
	comp=E,0.9nm,0.6s,baz=160,slow=13,SNR=9.7						

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*NEIC **16** 10:32:31.0, 36.18S×179.21E, h12^{km}, ML4.5(WEL), After WEL.*

WEL 16 10:32:31.1±1.0**, 36.11S×179.25E, h33^{km}, ML4.4**/11**, 1D, Error ellipse: s-maj=7.6km s-min=6.2km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.64**	**207**	P	P	10 32 56.7	-1.2
MXZ	**Matakaoa Point**	**1.64**	**207**	P*	Pb	10 32 56.7	-3.9
MXZ				*e*S*	Sb	10 33 18.0	-2.9
PUZ	**Puketiti**	**2.12**	**202**	P	P	10 33 04.4	-0.4
PUZ				S	S	10 33 30.1	0.0
PUZ	**Puketiti**	**2.12**	**202**	PN	Pn	10 33 04.3	-0.7
PUZ				*e*SN	Sn	10 33 28.9	-1.5
WIZ	**White Island**	**2.17**	**229**	P*	Pb	10 33 04.3	-5.4
MWZ	**Matawai**	**2.61**	**211**	P	P	10 33 11.1	-0.8
MWZ				S	S	10 33 41.8	-1.0
MWZ	**Matawai**	**2.61**	**211**	P*	Pb	10 33 11.1	-6.0
MWZ				*e*S*	Sb	10 33 41.0	-8.0
MYRZ	**Mayor Island**	**2.68**	**243**	P*	Pb	10 33 11.9	-6.4
URZ	**Urewera**	**2.74**	**218**	P	P	10 33 12.7	-1.1
URZ	**Urewera**	**2.74**	**218**	P*	Pb	10 33 12.5	-6.8
MARZ	**Manawahe**	**2.78**	**227**	P	P	10 33 13.9	-0.4
MARZ	**Manawahe**	**2.78**	**227**	P*	Pb	10 33 13.9	-6.2
EDRZ	**Edgecumbe**	**2.83**	**224**	P	P	10 33 14.5	-0.5
EDRZ	**Edgecumbe**	**2.83**	**224**	P*	Pb	10 33 14.4	-6.4
TGRZ	**Tauranga**	**2.89**	**235**	P	P	10 33 15.1	-0.7
TGRZ	**Tauranga**	**2.89**	**235**	P*	Pb	10 33 15.0	-6.8
KUZ	**Kuaotunu**	**2.91**	**256**	⇓PN	Pn	10 33 15.5	-0.9
KUZ				*e*SN	Sn	10 33 47.0	-3.6
LIRZ	**Lichensteins R**	**2.97**	**230**	P	P	10 33 16.8	-0.2
LIRZ	**Lichensteins R**	**2.97**	**230**	P*	Pb	10 33 16.7	-6.6
TAZ	**Tarawera**	**3.05**	**225**	P	P	10 33 18.2	+0.1
KNZ	**Kokohu**	**3.17**	**203**	*e*P	P	10 33 16.7	-3.1
KNZ	**Kokohu**	**3.17**	**203**	PN	Pn	10 33 16.7	-3.2
KNZ				SN	Sn	10 33 51.7	-5.2
UTU	**Utuhina**	**3.20**	**229**	P	P	10 33 20.6	+0.4
PATZ	**Paeroa**	**3.29**	**226**	P	P	10 33 21.0	-0.6
PATZ	**Paeroa**	**3.29**	**226**	P*	Pb	10 33 20.9	-7.8
TOZ	**Tahuroa Road**	**3.41**	**241**	P	P	10 33 22.6	-0.6
TOZ	**Tahuroa Road**	**3.41**	**241**	P*	Pb	10 33 22.6	-8.1
TOZ				*e*S*	Sb	10 33 58.8	-13
MKAZ	**Moumakai**	**3.43**	**252**	P	P	10 33 23.4	-0.2
MKAZ	**Moumakai**	**3.43**	**252**	PN	Pn	10 33 23.4	-0.3
MTAZ	**Motutapu**	**3.56**	**258**	P	P	10 33 25.5	+0.1
OTAZ	**Otara**	**3.58**	**255**	P	P	10 33 25.9	+0.2
OTAZ	**Otara**	**3.58**	**255**	PN	Pn	10 33 25.9	+0.1
KAAZ	**Kauri Point**	**3.73**	**258**	P	P	10 33 28.5	+0.7
BKZ	**Black Stump Fm**	**3.75**	**215**	P	P	10 33 25.2	-3.0
BKZ	**Black Stump Fm**	**3.75**	**215**	P*	Pb	10 33 25.1	-12
BKZ				*e*S*	Sb	10 34 06.6	-15
WTAZ	**Waiatarua**	**3.85**	**256**	P	P	10 33 30.0	+0.5
HIZ	**Hauiti**	**4.25**	**234**	PN	Pn	10 33 34.6	-0.7
CNZ	**Chateau**	**4.26**	**222**	P	P	10 33 32.9	-2.4
CNZ	**Chateau**	**4.26**	**222**	*e*P*	Pb	10 33 32.8	-12
FWVZ	**Far West T-bar**	**4.30**	**222**	P	P	10 33 33.9	-2.0
FWVZ	**Far West T-bar**	**4.30**	**222**	*e*P*	Pb	10 33 33.9	-12
MOVZ	**Moawhango**	**4.30**	**219**	P	P	10 33 32.2	-3.7
MOVZ	**Moawhango**	**4.30**	**219**	P*	Pb	10 33 32.1	-14
PXZ	**Pawanui**	**4.35**	**205**	PN	Pn	10 33 31.2	-5.5
PXZ				SN	Sn	10 34 19.3	-7.6
OUZ	**Omahuta**	**4.68**	**279**	*e*P	P	10 33 40.8	-0.6
OUZ	**Omahuta**	**4.68**	**279**	PN	Pn	10 33 40.8	-0.7
TSZ	**Takapari Road**	**4.72**	**212**	*e*P	P	10 33 36.6	-5.3
TSZ	**Takapari Road**	**4.72**	**212**	PN	Pn	10 33 36.1	-5.9
TSZ				*e*SN	Sn	10 34 28.3	-8.0
WAZ	**Wanganui**	**4.96**	**221**	*e*P	P	10 33 42.9	-2.4
WAZ	**Wanganui**	**4.96**	**221**	*e*PN	Pn	10 33 41.6	-3.8
NEZ	**North Egmont**	**5.16**	**231**	P	P	10 33 49.9	+1.8
NEZ	**North Egmont**	**5.16**	**231**	*e*PN	Pn	10 33 49.7	+1.4
MRZ	**Mangatainoka R**	**5.38**	**211**	P	P	10 33 46.8	-4.4
MRZ	**Mangatainoka R**	**5.38**	**211**	PN	Pn	10 33 46.5	-4.9
MRZ				SN	Sn	10 34 41.4	-11
KIW	**Kapiti Island**	**5.84**	**214**	P	P	10 33 51.8	-5.8
KIW	**Kapiti Island**	**5.84**	**214**	PN	Pn	10 33 51.7	-6.0
CAW	**Cannon Point**	**5.97**	**212**	P	P	10 33 53.0	-6.4
CAW	**Cannon Point**	**5.97**	**212**	*e*PN	Pn	10 33 53.0	-6.6
TCW	**Tory Channel**	**6.41**	**216**	P	P	10 33 58.5	-7.1
TCW	**Tory Channel**	**6.41**	**216**	*e*PN	Pn	10 33 58.5	-7.4
TCW				*e*SN	Sn	10 35 06.2	-12
THZ	**Tophouse**	**7.50**	**219**	*e*P	P	10 34 13.1	-7.8
THZ	**Tophouse**	**7.50**	**219**	*e*PN	Pn	10 34 12.2	-9.0
THZ				*e*SN	Sn	10 35 34.3	-12
LTZ	**Lake Taylor**	**8.57**	**217**	*e*PN	P	10 34 26.7	-9.1
LTZ				*e*SN	Sn	10 35 56.3	-16
MQZ	**McQueen’s Vall**	**9.12**	**212**	*e*PN	P	10 34 35.5	-7.9
MQZ				*e*SN	Sn	10 36 06.9	-19
ODZ	**Otahua Downs**	**11.06**	**214**	*e*PN	P	10 35 00.6	-9.4
WB2	**Warramunga Arr**	**42.39**	**280**	*e*P	P	10 40 19.2	-5.0

MAN 16 10:50:55.0, 8.48N×123.55E, h26^{km}, mb3.7, ML2.5, MS2.0, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**0.22**	**298**	⇓*i*P	Pb	10 51 01.9	+0.9
DCPH				*i* S	Sb	10 51 05.5	+0.4
PAGZ	**Pagadian**	**0.65**	**195**	*e*P	Pb	10 51 08.4	+0.9
PAGZ				*e*S	Sb	10 51 18.3	+2.1
SNPH	**Sibulan**	**0.91**	**340**	⇑*i*P	Pb	10 51 11.5	-0.6
SNPH				*i* S	Sb	10 51 25.0	+1.2
IPIL	**Ipil**	**1.19**	**235**	*e*P	Pn	10 51 16.4	+0.3
IPIL				*e*S	Sn	10 51 33.0	+1.5

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*IDC **16** 10:58:39.1±0.9, 5.24N×94.72E, mb4.2/9, mb1 4.4/9, mb1mx4.1/18, mbtmp4.2/9, Error ellipse: s-maj=52.0km s-min=16.9km az=53.0*

*MOS **16** 10:58:42.5±0.8, 5.26N×94.76E, h33^{km}, mb4.6/7, Error ellipse: s-maj=39.0km s-min=13.1km az=112.8*

*NEIC **16** 10:58:43.5±0.6, 5.15N×94.60E, h30^{km}, mb4.4/6, Error ellipse: s-maj=21.9km s-min=7.6km az=47.0*

ISC 16 10:58:42.7±0.7**, 5.2N**±0.1×**94.8E**±0.1**, h33^{km}, n39, σ1§01**/36**, mb4.3**/19**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.87**	**89**	*e*P	**P**	**11 00 11.9**	**+2.3**
DMN	**Daman**	**24.12**	**339**	*e*P	**P**	**11 03 59.1**	**+2.4**
	8.1nm,0.6s,mb4.3						
GUN	**Gumba**	**24.13**	**340**	*e*P	**P**	**11 03 55.8**	**-0.9**
LSA	**Lhasa**	**24.62**	**352**	*e*P	**P**	**11 04 00.4**	**-1.1**
	7.5nm,0.6s,mb4.4						
LSA	**Lhasa**	**24.62**	**352**	*e*P	**P**	**11 04 00.4**	**-1.1**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.4						
GKN	**Gorkha**	**24.65**	**338**	*e*P	**P**	**11 04 01.6**	**-0.2**
	comp=Z,5.8nm,0.3s,mb4.6						
KOLN	**Koldanda**	**24.84**	**336**	*e*P	**P**	**11 04 03.8**	**+0.1**
	comp=Z,17nm,0.8s,mb4.6						
ENH	**Enshi**	**28.56**	**27**	P	**P**	**11 04 36.5**	**-1.3**
FITZ	**Fitzroy Crossi**	**38.26**	**128**	P	**P**	**11 06 01.5**	**-0.3**
	comp=Z,4.1nm,0.7s,mb4.2,baz=282,slow=9.3,SNR=5.3						
FITZ				PcP	PcP	11 08 15.9	-0.3
	comp=Z,1.7nm,0.5s,baz=306,slow=5.6,SNR=3.6						
UCH	**Uchtor**	**41.05**	**337**	P	**P**	**11 06 25.9**	**+1.1**
	SNR=8.4						
TKM2	**Tokmak 2**	**41.24**	**339**	P	**P**	**11 06 27.1**	**+0.8**
	SNR=7.0						
KBK	**Karagaybulak**	**41.25**	**338**	P	**P**	**11 06 28.0**	**+1.6**
	SNR=9.0						
AML	**Almayashu**	**41.29**	**336**	P	**P**	**11 06 27.8**	**+1.1**
	SNR=13						
AAK	**Ala-Archa**	**41.40**	**337**	P	**P**	**11 06 29.6**	**+2.0**
	SNR=5.8						
AAK	**Ala-Archa**	**41.40**	**337**	*e*P	**P**	**11 06 28.4**	**+0.8**
	comp=Z,2.7nm,0.5s,mb4.1						
AAK	**Ala-Archa**	**41.40**	**337**	*e*P	**P**	**11 06 28.4**	**+0.8**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.2						
EKS2	**Erkin-Say**	**41.70**	**337**	P	**P**	**11 06 31.5**	**+1.3**
	SNR=5.7						
USP	**Ospenovka**	**41.94**	**338**	P	**P**	**11 06 32.5**	**+0.4**
	SNR=6.1						
MKAR	**Makanchi Array**	**42.83**	**347**	P	**P**	**11 06 39.0**	**-0.3**
	comp=Z,3.0nm,0.6s,mb4.2,baz=164,slow=7.8,SNR=44						
MKAR				PcP	PcP	11 08 29.7	-1.0
	comp=Z,0.4nm,0.4s,baz=188,slow=4.0,SNR=5.1						
KKAR	**Karatay Array**	**43.43**	**334**	*i* P	**P**	**11 06 44.2**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
SONM	**Songino Array**	**43.65**	**11**	P	**P**	**11 06 45.1**	**-0.9**
	comp=Z,2.8nm,0.8s,mb4.0,baz=194,slow=8.0,SNR=22						
SONM				PcP	PcP	11 08 32.5	-0.9
	comp=Z,0.7nm,0.4s,baz=189,slow=4.2,SNR=12						
WRA	**Warramunga Arr**	**46.24**	**124**	P	**P**	**11 07 07.0**	**0.0**
	comp=Z,5.1nm,0.6s,mb4.6,baz=303,slow=9.3,SNR=62						
WRAB	**Tennant Creek**	**46.24**	**124**	*e*P	**P**	**11 07 06.8**	**-0.3**
	comp=Z,6.9nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**46.24**	**124**	*e*P	**P**	**11 07 06.8**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
WB2	**Warramunga Arr**	**46.25**	**124**	⇑*i*P	**P**	**11 07 07.1**	**0.0**
KURK	**Kurchatov**	**47.35**	**346**	*e*P	**P**	**11 07 14.3**	**-1.0**
	comp=Z,4.9nm,0.5s,mb4.7						
KURK				*e*		11 07 29.2	
KURK	**Kurchatov**	**47.35**	**346**	*e*P	**P**	**11 07 14.3**	**-1.1**
KURK				*e*		11 07 29.2	

KURK				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
BRVK	Borovoye	51.78	341	eP	P	11 07 47.6	-1.7
	comp=Z,3.6nm,0.9s,mb4.3						
BRVK	Borovoye	51.78	341	eP	P	11 07 47.6	-1.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
AB31	Akbulak array	52.87	332	eP	P	11 07 56.8	-0.7
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
STKA	Stephens Creek	57.83	133	P	P	11 08 33.7	0.0
	comp=Z,1.8nm,0.8s,mb4.2,baz=322,slow=8.7,SNR=3.4						
STKA	Stephens Creek	57.83	133	P	P	11 08 33.7	0.0
BRTR	Keskin Array B	64.65	312	P	P	11 09 18.2	-1.4
	comp=Z,0.8nm,0.7s,mb3.9,baz=135,slow=8.2,SNR=3.0						
FINES	FINESS Array B	75.36	332	P	P	11 10 23.7	-0.8
	comp=Z,2.7nm,0.9s,mb4.2,baz=90,slow=3.8,SNR=6.5						
ARCES	ARCESS Array B	77.99	340	P	P	11 10 38.6	-0.4
	comp=Z,2.0nm,0.7s,mb4.2,baz=104,slow=5.0,SNR=12						
GERES	GERESS Array B	80.23	319	P	P	11 10 52.3	+0.7
	comp=Z,0.9nm,0.5s,mb4.0,baz=101,slow=6.8,SNR=9.2						
NVAR	Mina Array Bea	126.87	32	PKP	PKPdf	11 17 45.5	+1.6
	comp=Z,0.2nm,0.4s,baz=285,slow=3.1,SNR=4.0						
PDAR	Pinedale Array	127.42	22	PKP	PKPdf	11 17 45.5	+0.7
	comp=Z,0.3nm,0.5s,slow=0.9,SNR=5.4						
TXAR	Lajitas Array	141.38	26	PKP	PKPdf	11 18 12.7	+1.6
	comp=Z,0.3nm,0.5s,baz=15,slow=1.9,SNR=5.6						

*GUC **16** 11:05:43.8±0.6, 31.74S×69.75W, h137^{km}±5^{km}, MD4.2, ML4.4*
*NEIC **16** 11:05:44.6±0.3, 31.80S×69.56W, h116^{km}±4^{km}, mb4.5/1, MD4.2(GUC), Error ellipse: s-maj=8.3km s-min=5.8km az=105.0*
*IDC **16** 11:05:44.8±0.7, 31.82S×69.43W, h116^{km}±5^{km}, mb3.7/8, mb1 3.8/11, mb1mx3.7/17, mbtmp4.0/11, Error ellipse: s-maj=13.7km s-min=12.6km az=170.0*
ISC 16 11:05:43.6±0.4**, 31.74S**±0.03×**69.54W**±0.05**, h121**^{km}±3^{km}**, n38,** σ1^{s}**00**/53**, mb4.0**/9**, 5C-3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.76	75	⇓iP	P	11 06 07.1	+3.5
ZON				eS	S	11 06 23.1	+4.3
CFAA	Coronel Fontan	1.11	83	P	P	11 06 06.8	-0.3
	21nm,0.3s,baz=261,slow=8.6,SNR=1064						
CFAA				S	S	11 06 24.0	-0.8
	109nm,0.3s,baz=55,slow=18,SNR=126						
MDZ	Mendoza	1.28	153	⇓iP	P	11 06 09.2	+0.2
MDZ				i		11 06 12.4	
MDZ				i		11 06 27.4	
MDZ				i S	S	11 06 28.5	+0.5
JACH	Jahuel	1.30	223	⇑iP	P	11 06 09.6	+0.5
JACH				i S	S	11 06 29.2	+0.8
CHNG	Los Chungos	1.68	265	eP	P	11 06 12.9	-0.7
CHNG				i S	S	11 06 34.1	-2.2
CHNG				AMP		11 06 42.4	
	comp=N,2μm,0.6s						
PEL	Peldehue	1.70	215	⇑iP	P	11 06 14.0	+0.1
PEL				i S	S	11 06 36.9	+0.1
PEL				AMP		11 06 37.8	
	comp=E,5μm,0.4s						
FCH	Farellones	1.71	202	⇑iP	P	11 06 15.0	+1.1
FCH				i S	S	11 06 38.8	+1.9
FCH				AMP		11 06 39.7	
	comp=N,3μm,0.3s						
ROCH	El Roble	1.75	225	eP	P	11 06 14.5	0.0
ROCH				i S	S	11 06 38.1	+0.3
CLCH	Cerro Calan	1.85	207	eP	P	11 06 15.8	+0.1
CLCH				i S	S	11 06 40.9	+0.9
TLL	Tololo Astrono	1.91	325	⇑iP	P	11 06 17.2	+0.9
TLL				i S	S	11 06 41.7	+0.5
TLL				AMP		11 06 44.5	
	comp=E,6μm,0.3s						
SAN	Santiago	1.95	209	eP	P	11 06 17.3	+0.4
SAN				i S	S	11 06 42.4	+0.3
ANTU	Antumapu	2.04	207	eP	P	11 06 18.2	+0.1
ANTU				i S	S	11 06 44.5	+0.3
ANTU				AMP		11 06 46.0	
	comp=E,2μm,0.5s						
RCDM	Rinconada Maip	2.05	211	eP	P	11 06 18.2	+0.1
RCDM				i S	S	11 06 44.6	+0.4
RCDM				AMP		11 06 45.5	
	comp=E,5μm,0.2s						
IHA	Instituto Hidr	2.19	234	eP	P	11 06 19.1	-1.0
TACH	Talagante	2.24	211	eP	P	11 06 20.1	-0.6
TACH				i S	S	11 06 48.3	-0.5
LSCH	La Serena	2.35	321	eP	P	11 06 21.7	-0.4
LSCH				i S	S	11 06 49.7	-1.5
LSCH				AMP		11 06 51.1	
	comp=N,5μm,0.6s						
CHCH	Chadas Angostu	2.38	203	⇑iP	P	11 06 22.5	0.0
LCCH	Las Cruces	2.44	224	eP	P	11 06 22.4	-0.9
CACH	El Canelo	2.53	200	⇓iP	P	11 06 25.0	+0.5
CACH				i S	S	11 06 56.5	+1.0
CICH	Cipreses	2.68	196	eP	P	11 06 26.7	+0.3
LNV	Longovilo	2.71	215	eP	P	11 06 25.2	-1.7
SFDO	San Fernando	3.12	203	eP	P	11 06 30.9	-1.5
TRQA	Tornquist	8.84	138	eP	P	11 07 47.4	-2.2
	comp=N,48nm,0.9s						
PLCA	Paso Flores	9.01	185	P	P	11 07 49.5	-2.4
	comp=N,0.1nm,0.3s,baz=347,slow=10.0,SNR=3.8						
PLCA				S	S	11 09 30.1	-2.0
	comp=N,0.1nm,0.3s,baz=12,slow=19,SNR=1.7						
LPAZ	La Paz	15.44	5	P	P	11 09 18.8	+2.9
	comp=N,0.2nm,0.3s,baz=171,slow=5.0,SNR=5.0						
LPAZ	La Paz	15.44	5	eP	P	11 09 17.0	+1.1
SIV	San Ignacio	17.47	28	P	P	11 09 41.0	-0.1
	comp=N,0.2nm,0.3s,baz=221,slow=11,SNR=10						
USHA	Ushuaia	23.09	178	P	P	11 10 40.6	+1.6
	comp=N,9.3nm,1.0s,mb4.1,baz=340,slow=4.5,SNR=3.6						
SNAA	Sanae	52.90	159	P	P	11 14 47.9	-0.8
	comp=N,1.2nm,0.8s,mb4.0,baz=233,slow=6.2,SNR=6.2						
QSPA	South Pole Qui	58.49	180	eP	P	11 15 29.3	+0.5
	comp=N,4.5nm,0.9s,mb4.5						
TXAR	Lajitas Array	68.86	328	P	P	11 16 38.0	+0.8
	comp=N,0.6nm,0.6s,mb3.6,baz=150,slow=8.8,SNR=9.1						
TXAR				pP	pP	11 17 07.4	+0.2
	comp=N,0.3nm,0.6s,baz=161,slow=7.9,SNR=3.7						
DBIC	Dimbokro	72.45	70	P	P	11 16 58.1	-0.8
	comp=N,2.2nm,0.6s,mb4.2,baz=148,slow=6.0,SNR=3.7						
MAW	Mawson	74.73	163	P	P	11 17 11.3	+0.1
	comp=N,2.1nm,0.8s,mb3.9,baz=26,slow=16,SNR=3.8						
PDAR	Pinedale Array	82.75	331	P	P	11 17 56.9	+1.7
	comp=N,0.5nm,0.6s,mb3.5,baz=135,slow=4.2,SNR=4.0						
PDAR				pP	pP	11 18 26.4	+0.3
	comp=N,0.3nm,0.7s,baz=127,slow=4.5,SNR=1.6						
NVAR	Mina Array Bea	83.28	324	P	P	11 17 59.0	+1.0
	comp=N,0.7nm,0.8s,mb3.5,baz=149,slow=6.0,SNR=4.3						
SCHQ	Schefferville	86.25	2	P	P	11 18 11.9	-0.3
	comp=N,6.0nm,1.1s,mb4.5,baz=184,slow=15,SNR=3.3						
WRA	Warramunga Arr	123.74	207	PKP	PKPdf	11 24 27.9	+0.4
	comp=N,0.5nm,0.8s,baz=159,slow=1.7,SNR=5.5						
WRA				pPKP		11 25 00.5	
	comp=N,0.3nm,0.5s,baz=162,slow=1.7,SNR=6.4						
MKAR	Makanchi Array	153.69	47	PKPbc	PKPdf	11 25 30.1	+11
	comp=N,0.3nm,0.5s,baz=297,slow=3.2,SNR=2.5						
MKAR				PKPab	PKPab	11 25 42.9	-0.3
	comp=N,0.8nm,0.6s,baz=288,slow=3.8,SNR=6.1						
MKAR				pPKPbc		11 25 59.8	
	comp=N,0.8nm,0.9s,baz=297,slow=3.2,SNR=2.2						
MKAR				pPKPab		11 26 13.4	
	comp=N,0.9nm,0.8s,baz=304,slow=4.4,SNR=5.1						

IDC 16 12:04:38.2±3.2**, 2.58N**×**95.81E, mb3.6**/4**, mb1 3.6**/4**, mb1mx3.5**/17**, mbtmp3.6**/4**, Error ellipse: s-maj=127.5km s-min=28.0km az=56.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.94	122	P	P	12 12 47.3	-1.7
	0.3nm,0.5s,baz=299,slow=9.5,SNR=6.6						
MKAR	Makanchi Array	45.58	347	P	P	12 13 00.2	-1.6
	0.7nm,0.4s,baz=155,slow=9.1,SNR=21						
SONM	Songino Array	46.00	10	P	P	12 13 03.5	-1.7
	0.4nm,0.6s,baz=183,slow=11,SNR=5.4						
BVAR	Borovoye Array	54.50	341	P	P	12 14 07.1	-2.8
	0.6nm,0.7s,baz=141,slow=9.2,SNR=4.4						

*ROM **16** 12:10:06.2±0.1, 46.41N×12.48E, h9^{km}, Md2.6/6, Ml2.3/7, Error ellipse: s-maj=2.2km s-min=1.3km az=11.0*
*CSEM **16** 12:10:06.0±0.1, 46.36N×12.45E, h20^{km}, ML3.0/5, Error ellipse: s-maj=2.4km s-min=1.7km az=8.0*
*VIE **16** 12:10:07.1±0.3, 46.41N×12.47E, h6^{km}±7^{km}, mb2.1/3, ML2.6/7, Error ellipse: s-maj=2.9km s-min=1.2km az=23.0*
ISC 16 12:10:06.6±0.2**, 46.39N**±0.02×**12.45E**±0.02**, h9**^{km}**, n47,** σ**0**^{s}**81**/77**, 9C-15D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CSO	Casso	0.15	215	⇓iPg	Pg	12 10 09.8	0.0
CSO				i Sg	Sg	12 10 12.2	+0.1
CSMI	Casera Mimoias	0.19	50	ePg	Pg	12 10 10.7	+0.1
CSMI				eSg	Sg	12 10 13.6	+0.3
AFL	Alpe Faloria	0.23	307	⇓ePg	Pg	12 10 11.8	+0.4
AFL				eSg	Sg	12 10 16.3	+1.6
MLNI	Malnisio	0.27	155	⇓iPg	Pg	12 10 11.7	-0.4
MLNI				i Sg	Sg	12 10 15.7	-0.2
FVI	Forni Avoltri	0.31	48	Pg	Pg	12 10 12.8	-0.1
FVI				Sg	Sg	12 10 17.6	+0.5
	151nm,0.3s						
FAU	Forcella Aurin	0.36	243	⇓ePg	Pg	12 10 14.3	+0.4
FAU				eSg	Sg	12 10 20.0	+1.1
CAE	Caneva	0.39	181	⇓ePg	Pg	12 10 13.5	-0.9
CAE				eSg	Sg	12 10 19.8	+0.2
SEST	Monte Rota	0.39	336	Pg	Pg	12 10 15.1	+0.6
SEST				Sg	Sg	12 10 20.9	+1.1
	457nm,0.2s						
ZOU	Zoufplan	0.40	66	⇑iPg	Pg	12 10 14.7	0.0
ZOU				i Sg	Sg	12 10 20.6	+0.5
MPRI	Monte Prat	0.41	112	⇓ePg	Pg	12 10 13.9	-0.9
MPRI				eSg	Sg	12 10 21.1	+0.8
BOO	Bordano	0.46	99	⇓ePg	Pg	12 10 15.5	-0.3
BOO				eSg	Sg	12 10 22.5	+0.5
BUA	Buia	0.50	110	⇓ePg	Pg	12 10 16.4	-0.3
BUA				eSg	Sg	12 10 24.2	+0.8
BUA	Buia	0.50	110	ePg	Pg	12 10 16.4	-0.3
BUA				eSg	Sg	12 10 24.2	+0.8
PLRO	Paularo	0.51	72	⇑ePg	Pg	12 10 16.6	-0.3
PLRO				eSg	Sg	12 10 24.1	+0.4
PLRO	Paularo	0.51	72	ePg	Pg	12 10 16.5	-0.4
PLRO				eSg	Sg	12 10 24.1	+0.4
GMNA	Gemona	0.56	102	Pg	Pg	12 10 15.9	-1.9
	202nm,0.6s						
BAD	Bernadia	0.57	105	⇑ePg	Pg	12 10 17.1	-1.0
BAD				eSg	Sg	12 10 26.4	+0.5
BRES	Bressanone	0.58	302	Pg	Pg	12 10 18.2	0.0
	109nm,0.2s						
PTCC	Patocco-Chiusa	0.63	89	Pg	Pg	12 10 18.9	-0.3
PTCC				Sg	Sg	12 10 28.3	+0.7
	49nm,0.5s						
MTLO	Montello	0.63	203	⇓ePg	Pg	12 10 19.0	-0.2
MTLO				eSg	Sg	12 10 29.0	+1.4
CTI	Castel Tesino	0.65	238	Pg	Pg	12 10 19.7	0.0
	146nm,0.3s						
COLI	Coloredo	0.70	112	⇓iPg	Pg	12 10 19.9	-0.7
COLI				i Sg	Sg	12 10 30.9	+1.0
LSR	Lussari	0.75	83	⇓ePg	Pg	12 10 20.7	-0.9
LSR				eSg	Sg	12 10 32.6	+0.8
SCE	Schlegeis	0.82	322	⇓iPg	Pg	12 10 23.0	0.0
APPI	Appiano	0.85	276	Pg	Pg	12 10 23.5	0.0
	61nm,0.3s						
DRE	Drenchia	0.86	104	⇑iPg	Pg	12 10 22.2	-1.6
KBA	Koelnbreinsper	0.92	42	⇑ePg	Pg	12 10 25.0	0.0
KBA	Koelnbreinsper	0.92	42	Pg	Pg	12 10 25.0	-0.1
KBA				Sg	Sg	12 10 36.8	-0.6
	7.8nm,0.2s						
WTTA	Wattenberg	1.03	328	⇓ePg	Pg	12 10 27.1	-0.2
	comp=Z,19nm,0.1s,SNR=29						
WTTA	Wattenberg	1.03	328	Pg	Pg	12 10 27.1	-0.2
	19nm,0.1s,SNR=29						
WTTA				Sg	Sg	12 10 41.7	+0.6
	26nm,0.2s						
VOY	Vojsko	1.07	109	ePg	Pg	12 10 26.0	-1.9
VOY				e		12 10 28.5	
VOY				eSg	Sg	12 10 42.4	+0.2
VOY				e		12 10 43.7	
VOY	Vojsko	1.07	109	ePg	Pg	12 10 26.0	-1.9
VOY				eSg	Sg	12 10 42.4	+0.2
WATA	Walderalm	1.12	328	⇑iPg	Pg	12 10 28.7	-0.2
	comp=Z,15nm,0.1s,SNR=8.7						
WATA	Walderalm	1.12	328	Pg	Pg	12 10 28.7	-0.2
	15nm,0.1s,SNR=8.7						
WATA				Sg	Sg	12 10 44.4	+0.6
	16nm,0.2s						
TRI	Trieste	1.15	126	Pg	Pg	12 10 29.4	-0.1
TRI				Sg	Sg	12 10 45.7	+1.0
	94nm,0.6s						
TEOL	Teolo	1.17	208	ePg	Pg	12 10 29.7	-0.2
TEOL				eSg	Sg	12 10 46.6	+1.1
MOTA	Moosalm	1.32	316	⇓iPg	Pg	12 10 32.6	-0.4
	comp=Z,5.9nm,0.3s						
MABI	Malga Bissina	1.38	257	Pg	Pg	12 10 33.3	-0.9
	20nm,0.3s						
OBKA	Obir	1.46	85	⇑Pg	Pg	12 10 35.7	0.0
	comp=Z,2.4nm,0.1s						
OBKA	Obir	1.46	85	Pg	Pg	12 10 35.7	0.0
	2.4nm,0.1s						
OBKA				Sg	Sg	12 10 55.6	+0.4
	19nm,0.4s						
FUORN	Ofenpass	1.52	279	Pg	Pg	12 10 35.6	-1.4
DAVOX	Davos	1.81	283	Pg	Pg	12 10 40.9	-1.9
MOA	Molln	1.92	40	⇑Pn	Pn	12 10 41.9	+2.1
	comp=Z,0.9nm,0.1s						
MOA	Molln	1.92	40	Pn	Pn	12 10 41.9	+2.1
MOA				Sg	Sg	12 11 09.0	-1.4
	11nm,0.3s						
DAVA	Damuels	1.98	298	⇑iPg	Pg	12 10 45.2	-0.8
	comp=Z,9.3nm,0.2s						
DAVA	Damuels	1.98	298	⇓iSg	Sg	12 11 12.3	0.0
	comp=E,16nm,0.3s						
DAVA	Damuels	1.98	298	Pg	Pg	12 10 45.2	-0.8
	9.3nm,0.2s						
DAVA				Sg	Sg	12 11 12.3	-0.1

JMA 16 12:14:03.7±0.5**, 46.24N**×**147.88E, h340**^{km}**, M3.6, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	3.25	209	P	P	12 15 04.8	-0.3
NEM2				eS	S	12 15 52.4	-0.8
JAK	Akkeshi	3.96	216	P	P	12 15 11.8	-0.3
JAK				eS	S	12 16 05.4	-0.4
JAR	Ashorobuto	4.15	226	P	P	12 15 14.7	+0.6
ASAJ	Asahikawa	4.30	242	P	P	12 15 15.6	-0.1
JCH	Churui	4.86	223	P	P	12 15 21.0	-0.8
JCH				eS	S	12 16 21.0	-2.1
JNBK	Urakawa-nobuka	5.41	225	P	P	12 15 26.7	-1.2
JKB	Kayabe	6.58	231	P	P	12 15 39.9	-1.7
JKB				eS	S	12 16 54.9	-3.5
JOT	Ohata	6.93	228	P	P	12 15 44.3	-1.4
JOT				eS	S	12 17 02.3	-3.5
JANG	Nango	7.48	221	P	P	12 15 52.5	+0.3
JANG				eS	S	12 17 14.3	-3.3

*SKO **16** 12:20:55.4, 39.93N×25.84E, h22^{km}*
*ISK **16** 12:20:57.2, 40.20N×25.27E, h5^{km}, MD3.1*
*ATH **16** 12:20:58.6, 40.30N×25.31E, h24^{km}±1^{km}, MD3.3/5*
*NEIC **16** 12:20:58.6, 40.30N×25.31E, h24^{km}, MD3.3(ATH), After ATH.*
*THE **16** 12:20:59.4, 40.30N×25.28E, h10^{km}, ML3.0*
*SOF **16** 12:20:59.7, 40.42N×25.32E, h15^{km}, MD2.7*
*CSEM **16** 12:20:59.6±0.1, 40.30N×25.31E, h20^{km}, ML3.0, Error ellipse: s-maj=2.3km s-min=1.7km az=177.0*
ISC 16 12:20:58.2±0.7**, 40.31N**±0.03×**25.25E**±0.04**, h5**^{km}±6^{km}**, n28,** σ**1**^{s}**07**/39**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOS	Limnos	0.40	200	ePg	Pg	12 21 07.4	+1.3
LOS				eSg	Sg	12 21 12.9	+1.5
LIA	Limnos Island	0.41	188	ePB	Pb	12 21 07.9	+0.4
LIA				eSB	Sb	12 21 13.6	-0.2
ALN	Alexandroupoli	0.84	45	ePg	Pg	12 21 15.0	-0.1
RDO	Rodhopi	0.86	14	ePN	Pn	12 21 15.3	-1.4
OUR	Ouranopolis	0.97	272	ePg	Pg	12 21 18.4	+0.8
OUR				eSg	Sg	12 21 32.1	+1.5
LPK	Lapseki	1.15	86	PN	Pn	12 21 20.3	-0.6
PAIG	Paliouri	1.27	253	ePg	Pg	12 21 22.2	-1.3
PAIG				eSg	Sg	12 21 40.5	+0.1
PRK	Paraskevi	1.32	143	ePN	Pn	12 21 23.1	-0.1
PRK				eSN	Sn	12 21 40.5	-0.8
KDZ	Kurdzhali	1.35	5	i P	Pb	12 21 23.0	-0.5
PLG	Polygyros	1.38	273	ePN	Pn	12 21 24.5	+0.3
RZN	Rozhen	1.44	344	i P	Pn	12 21 25.0	+0.1
NVR	Nevrokopi	1.48	315	ePN	Pn	12 21 26.2	+0.6
AYVA	Ayvalik	1.49	132	i P	Pn	12 21 25.5	-0.2
AYVA				i S	Sb	12 21 45.2	+0.2
SOH	Sokhos	1.54	290	ePg	Pg	12 21 26.6	-2.2
AOS	Alonnisos	1.55	223	ePg	Pg	12 21 26.4	-2.9
MFT	Murefte	1.62	72	ePN	Pn	12 21 27.6	+0.1
MFT				eSN	Sn	12 21 51.0	+2.1
MRMT	Marmara Adasi	1.81	80	ePN	Pn	12 21 29.8	-0.5
XOR	Xorichti	1.85	240	ePb	Pb	12 21 30.1	-1.9
EDRB	Edirne	1.91	36	ePN	Pn	12 21 33.6	+2.0
KNT	Kendrikon	1.98	296	ePn	Pn	12 21 32.1	-0.6
KNT				eSn	Sn	12 21 58.7	+0.4
EDC	Edincik	2.00	88	ePN	Pn	12 21 32.3	-0.6
BALB	Balikesir	2.12	107	ePN	Pn	12 21 34.9	+0.2
BTOK	Tokmak	2.20	103	i P	Pn	12 21 39.5	+3.7
BTOK				i S	Sn	12 22 08.2	+4.5
KKB	Krupnik	2.26	314	i P	Pn	12 21 41.0	+4.3
VAY	Valandovo	2.27	297	ePn	Pn	12 21 40.5	+3.6
VAY				eSn	Sn	12 22 12.9	+7.3
VAY	Valandovo	2.27	297	ePn	Pn	12 21 40.5	+3.6
VAY				eSn	Sn	12 22 12.9	+7.3
AKS	Akhisar	2.44	125	ePN	Pn	12 21 38.8	-0.5
ORLT	Orhaneli	2.80	94	ePN	Pn	12 21 44.4	-0.1

*NAO **16** 12:27:22.3±3.3, 60.59N×28.81E, ML2.3*
*HEL **16** 12:27:22.9±0.1, 60.95N×29.25E, ML2.3(NAO), Explosion*
*BER **16** 12:27:24.8±2.5, 60.80N×28.89E, ML2.3(NAO), Suspected explosion*
*IDC **16** 12:27:26.1±1.9, 60.83N×28.80E, mb1 3.4/3, mb1mx3.1/20, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=17.5km s-min=11.8km az=171.0*
ISC 16 12:27:21.0±1.6**, 60.96N**±0.09×**29.2E**±0.2**, n12,** σ**0**^{s}**86**/16**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	Virojoki	0.92	244	eP	Pg	12 27 39.4	+0.1
VJF				eS	Sg	12 27 51.5	-0.1
FIA0	FINESS Array S	1.60	289	eP	Pn	12 27 51.5	+0.9
FIA0				eS	Sb	12 28 12.3	+0.5
FIA0	FINESS Array S	1.60	289	Pn	Pn	12 27 51.5	+0.9
	baz=113,slow=18						
FIA0				Lg		12 28 12.3	
	baz=121,slow=37						
FIA0				Rg		12 28 19.8	
	baz=118,slow=37						
FINES	FINESS Array B	1.60	289	Pg	Pg	12 27 51.4	-1.5
	1.5nm,0.3s,baz=113,slow=16,SNR=27						
FINES				Lg		12 28 12.0	
	3.6nm,0.3s,baz=115,slow=29,SNR=20						
FINES				Rg		12 28 19.8	
	14nm,0.7s,baz=117,slow=37,SNR=17						
PVF	Pernaja	1.70	257	eP	Pn	12 27 53.1	+1.0
PVF				eS	Sb	12 28 15.2	+0.4
HFS	Hagfors	7.70	271	e	Sn	12 30 35.5	-11
HFS				eSG		12 31 17.3	
HFS	Hagfors	7.70	271	Pn	Pn	12 29 16.6	-0.4
	0.0nm,0.3s,baz=69,slow=12,SNR=2.9						
HFS				Sn	Sn	12 30 35.5	-11
	0.0nm,0.3s,baz=58,slow=19,SNR=2.5						
HFS				Lg		12 31 21.1	
	0.1nm,0.3s,baz=78,slow=29,SNR=6.1						
HFS	Hagfors	7.70	271	Sn	Sn	12 30 35.5	-11
	baz=81,slow=28						
HFS				Lg		12 31 17.3	
	baz=65,slow=28						
NOA	NORSAR Array B	8.75	278	Pn	P	12 29 29.8	-1.9
	0.2nm,0.3s,baz=92,slow=15,SNR=2.8						
NOA				Lg		12 31 54.4	
	0.2nm,0.3s,baz=286,slow=2.6,SNR=2.9						
ARA0	ARCESS Array S	8.75	351	Pn	P	12 29 32.0	+0.3
	baz=175,slow=14						
ARA0	ARCESS Array S	8.75	351	eP	P	12 29 32.0	+0.3
ARCES	ARCESS Array B	8.75	351	Pn	P	12 29 32.1	+0.4
	0.2nm,0.3s,baz=174,slow=12,SNR=9.4						

IDC 16 12:33:29.1±2.8**, 2.06N**×**96.91E, mb3.9**/4**, mb1 3.9**/4**, mb1mx3.7**/17**, mbtmp3.9**/4**, Error ellipse: s-maj=112.9km s-min=26.1km az=56.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.74	123	P	P	12 41 28.3	-1.8
	0.6nm,0.6s,baz=303,slow=9.0,SNR=11						
SONM	Songino Array	46.33	9	P	P	12 41 57.1	-1.5
	0.8nm,0.3s,baz=191,slow=9.2,SNR=19						
SONM				PcP	PcP	12 43 32.2	-2.2
	0.4nm,0.6s,baz=175,slow=3.0,SNR=4.3						
MKAR	Makanchi Array	46.34	346	P	P	12 41 57.3	-1.5
	0.9nm,0.4s,baz=152,slow=8.1,SNR=13						
BVAR	Borovoye Array	55.35	341	P	P	12 43 03.9	-3.2
	1.0nm,0.7s,baz=143,slow=7.4,SNR=7.3						

*JMA **16** 12:39:50.4±0.2, 38.18N×144.77E, h51^{km}, M3.8*
ISC 16 12:39:50.4±1.7**, 38.13N**±0.09×**144.8E**±0.1**, h51**^{km}**, n9,** σ**0**^{s}**49**/17**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.61	292	P	P	12 40 31.2	+0.1
OFUJ				eS	S	12 41 01.7	0.0
JIO	Ouri	2.71	278	P	P	12 40 32.9	+0.3
JIO				S	S	12 41 04.4	+0.1
MIYJ	Miyakonagasawa	2.72	303	P	P	12 40 32.4	-0.3
MIYJ				S	S	12 41 03.6	-0.9
JMK	Ichinoseki	2.90	288	P	P	12 40 35.6	+0.3
JMK				eS	S	12 41 09.3	+0.1
JOM	Ohasama	3.03	297	P	P	12 40 37.3	+0.2
JOM				S	S	12 41 12.7	+0.3
JMM	Marumori	3.15	266	P	P	12 40 39.0	+0.2
JMM				S	S	12 41 15.0	-0.5
JANG	Nango	3.38	313	P	P	12 40 41.4	-0.6
JYK	Kaneyama	3.55	284	P	P	12 40 45.4	+1.0
JYK				eS	S	12 41 26.3	+0.8
MAT	Matsushiro	5.47	255	P	P	12 41 10.5	-0.8
MAT				eS	S	12 42 13.5	-0.2

*NEIC **16** 13:20:43.6, 35.44S×178.95E, h230^{km}, MG4.2(WEL), After WEL.*
WEL 16 13:20:41.8±0.4**, 35.11S**×**178.65E, h207**^{km}±9^{km}**, ML4.1**/9**, Error ellipse: s-maj=10.2km s-min=8.8km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.46	186	P	P	13 21 26.1	-0.1
MXZ				S	S	13 21 59.5	-1.0
MXZ	Matakaoa Point	2.46	186	PN	P	13 21 26.0	-0.3
MXZ				SN	S	13 21 59.5	-1.0
PUZ	Puketiti	2.97	186	eP	P	13 21 31.6	-0.4
PUZ	Puketiti	2.97	186	PN	P	13 21 31.4	-0.6
PUZ				SN	S	13 22 10.2	-0.6
MWZ	Matawai	3.34	195	P	P	13 21 36.7	+0.3
MWZ	Matawai	3.34	195	PN	P	13 21 36.5	+0.1
MWZ				SN	S	13 22 18.3	-0.4
URZ	Urewera	3.38	201	P	P	13 21 37.1	+0.2
URZ	Urewera	3.38	201	PN	P	13 21 36.8	0.0
URZ				SN	S	13 22 18.8	-0.6
KNZ	Kokohu	3.98	191	P	P	13 21 43.8	-0.4
KNZ	Kokohu	3.98	191	PN	P	13 21 43.6	-0.6
BKZ	Black Stump Fm	4.40	202	P	P	13 21 49.6	+0.1
BKZ	Black Stump Fm	4.40	202	PN	P	13 21 49.5	0.0
PXZ	Pawanui	5.11	196	PN	P	13 21 56.0	-2.5
TSZ	Takapari Road	5.38	203	eP	P	13 22 00.6	-1.4
TSZ	Takapari Road	5.38	203	ePN	P	13 21 59.9	-2.1
MRZ	Mangatainoka R	6.05	203	P	P	13 22 07.9	-2.7
MRZ	Mangatainoka R	6.05	203	ePN	P	13 22 07.8	-2.7
KIW	Kapiti Island	6.46	206	P	P	13 22 13.4	-2.4
KIW	Kapiti Island	6.46	206	ePN	P	13 22 13.3	-2.5
MTW	Mount Morrison	6.53	201	P	P	13 22 13.8	-2.9
MTW	Mount Morrison	6.53	201	ePN	P	13 22 13.8	-2.9
CAW	Cannon Point	6.62	204	P	P	13 22 14.7	-3.2

CAW	**Cannon Point**	**6.62**	**204**	*e*PN	P	13 22 14.6	-3.3
WEL	**Wellington**	**6.88**	**205**	P	P	13 22 18.6	-2.7
WEL	**Wellington**	**6.88**	**205**	*e*PN	P	13 22 18.6	-2.7
TCW	**Tory Channel**	**7.00**	**208**	P	P	13 22 20.4	-2.4
TCW	**Tory Channel**	**7.00**	**208**	*e*PN	P	13 22 20.1	-2.7
TUWZ	**Tuamarina**	**7.31**	**209**	*e*PN	P	13 22 23.9	-3.0
THZ	**Tophouse**	**8.03**	**212**	*e*P	P	13 22 34.3	-1.9
THZ	**Tophouse**	**8.03**	**212**	*e*PN	P	13 22 33.8	-2.4
THZ				SN	S	13 24 01.9	-3.7
KHZ	**Kahutara**	**8.31**	**207**	*e*P	P	13 22 36.5	-3.4
KHZ	**Kahutara**	**8.31**	**207**	*e*PN	P	13 22 36.2	-3.8
LTZ	**Lake Taylor**	**9.13**	**211**	*e*PN	P	13 22 46.8	-3.7

MAN 16 13:21:34.1, 16.25N×119.99E, h15$^{\text{km}}$, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.15**	**331**	*e*P	Pb	13 21 39.8	+1.7
BOLP				*e*S	Sb	13 21 45.4	+4.7
SCZP	**Santa Cruz**	**0.48**	**189**	*e*P	Pb	13 21 44.1	+0.4
SCZP				*e*S	Sb	13 21 51.7	+1.6
BCPH	**Baguio City Da**	**0.58**	**77**	*i* P	Pb	13 21 46.0	+0.5
BCPH				*e*S	Sb	13 21 55.5	+2.2
PCPH	**Palayan**	**1.27**	**123**	*e*P	Pb	13 21 56.2	-1.0
PCPH				*e*S	Sb	13 22 14.6	+1.6
ABRA	**Dolores**	**1.55**	**26**	*e*P	Pn	13 21 58.4	-3.1
ABRA				*e*S	Sn	13 22 18.4	-3.0
BALP	**Baler**	**1.61**	**108**	*e*P	Pn	13 22 01.8	-0.4
BALP				*e*S	Sn	13 22 25.4	+2.7
CAUP	**Cauayan**	**1.89**	**68**	*e*P	Pn	13 22 05.9	-0.3
CAUP				*e*S	Sn	13 22 33.2	+3.3
APYP	**Conner**	**2.00**	**37**	*e*P	Pn	13 22 04.9	-2.9
APYP				*e*S	Sn	13 22 28.3	-4.5
CVP	**Callao Caves**	**2.27**	**50**	*e*P	Pn	13 22 11.0	-0.8
POLP	**Polilio Island**	**2.41**	**129**	*e*P	Pn	13 22 13.7	-0.1
POLP				*e*S	Sn	13 22 45.2	+2.0
LUBP	**Lubang**	**2.51**	**174**	*e*P	Pn	13 22 15.4	+0.2
LUBP				*e*S	Sn	13 22 44.9	-0.9
SJMP	**San Jose**	**3.92**	**164**	*e*P	Pn	13 22 34.3	-0.9
SJMP				*e*S	Sn	13 23 19.2	-2.2
BUSP	**Coron**	**4.23**	**177**	*e*P	Pn	13 22 34.8	-4.8
BUSP				*e*S	Sn	13 23 25.9	-3.3
ENPP	**El Nido**	**5.04**	**186**	*e*P	Pn	13 22 47.1	-4.0
ENPP				*e*S	Sn	13 23 40.7	-9.1

ISC 16 13:21:59.3±0.7**, 39.84N**±0.04×**33.66E**±0.07**, h10$^{\text{km}}$, n7, σ1$^{\text{s}}$08**/13**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAMT	**Kaman**	**0.47**	**175**	PG	**Pg**	**13 22 08.0**	**-0.9**
KAMT				SG	**Sg**	**13 22 13.9**	**-1.3**
CDAG	**Cicekdag**	**0.59**	**111**	*i* P	**Pg**	**13 22 10.3**	**-0.8**
CDAG				*i* S	**Sg**	**13 22 18.9**	**-0.1**
ELDT	**Eldivan**	**0.68**	**344**	*i* P	**Pb**	**13 22 12.7**	**0.0**
ELDT				*i* S	**Sb**	**13 22 21.4**	**-0.5**
CORM	**Corum**	**0.82**	**65**	PG	**Pg**	**13 22 15.9**	**+0.2**
CTKT	**Corum**	**1.17**	**47**	*i* P	**Pb**	**13 22 20.1**	**-1.0**
CTKT				*i* S	**Sb**	**13 22 30.3**	**-5.8**
AVNT	**Avonos**	**1.41**	**138**	*i* P	**Pn**	**13 22 26.4**	**+1.4**
AVNT				*i* S	**Sb**	**13 22 45.5**	**+2.5**
SGKT	**Sivrigoynuk**	**1.43**	**301**	*i* P	**Pn**	**13 22 26.9**	**+1.4**
SGKT				*i* S	**Sb**	**13 22 48.5**	**+4.7**

CSEM ***16*** *13:37:46.8±0.2, 28.16N×16.18W, h18$^{\text{km}}$±5$^{\text{km}}$, mb3.7/5, Error ellipse: s-maj=1.7km s-min=1.1km az=29.0, After MDD*

MDD 16 13:37:45.6±0.4**, 28.15N×16.18W, h29$^{\text{km}}$**±7$^{\text{km}}$**, mbLg2.3**/9**, 2C-1D, Error ellipse: s-maj=6.5km s-min=3.3km az=3.0, PRXIMO TT-MODEL: CANARY, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCAN	**Las Canadas**	**0.38**	**281**	⇑P	Pb	13 37 54.1	0.0
	11nm,0.1s,SNR=18						
CCAN				S	Sb	13 37 59.2	-0.7
	29nm,0.1s						
CRAJ	**Montana Rajada**	**0.38**	**288**	P	Pb	13 37 54.3	+0.1
	11nm,0.1s,SNR=7.9						
CRAJ				S	Sb	13 37 59.2	-0.8
	145nm,0.1s,SNR=7.7						
CRAJ	**Montana Rajada**	**0.38**	**288**	P	Pb	13 37 54.3	+0.2
	11nm,0.1s,SNR=7.9						
CRAJ				S	Sb	13 37 59.2	-0.8
	145nm,0.1s,SNR=7.7						
EBAJ	**Bajamar**	**0.42**	**340**	⇓P	Pb	13 37 54.8	+0.1
	36nm,0.1s,SNR=18						
EBAJ				S	Sb	13 37 60.0	-0.9
	42nm,0.1s,SNR=20						
EBAJ	**Bajamar**	**0.42**	**340**	P	Pb	13 37 54.8	+0.2
	36nm,0.1s,SNR=18						
EBAJ				S	Sb	13 38 00.0	-0.8
	42nm,0.1s,SNR=20						
CICO	**Icod de los Vi**	**0.52**	**293**	P	Pb	13 37 56.5	+0.3
	1.3nm,0.2s,SNR=12						
CICO				S	Sb	13 38 03.0	-0.5
	9.2nm,0.1s,SNR=7.9						
EOSO	**Osorio**	**0.56**	**98**	⇑P	Pb	13 37 56.8	-0.1
	15nm,0.1s,SNR=18						
EOSO				S	Sb	13 38 03.7	-1.0
	76nm,0.1s,SNR=18						
EOSO	**Osorio**	**0.56**	**98**	P	Pb	13 37 56.8	-0.1
	15nm,0.1s,SNR=18						
EOSO				S	Sb	13 38 03.7	-1.0
	76nm,0.1s,SNR=18						
CHIO	**Chio**	**0.57**	**280**	P	Pb	13 37 55.8	-1.2
	12nm,0.2s,SNR=7.9						
CHIO				S	Sb	13 38 04.7	-0.2
	53nm,0.1s,SNR=7.9						
EGOM	**La Gomera**	**0.91**	**271**	P	Pn	13 38 01.1	-1.4
	4.8nm,0.1s,SNR=6.3						
EGOM				S	Sb	13 38 12.9	-1.5
	22nm,0.1s,SNR=7.9						
EGOM	**La Gomera**	**0.91**	**271**	P	Pn	13 38 01.1	-1.4
	4.8nm,0.1s,SNR=6.3						
EGOM				S	Sb	13 38 12.9	-1.5
	22nm,0.1s,SNR=7.9						
CFTV	**Fuerteventura**	**1.87**	**81**	P	Pn	13 38 14.4	-1.9
	1.0nm,0.1s,SNR=7.9						
CFTV				S	Sn	13 38 35.5	-3.6
	1.0nm,0.2s,SNR=7.9						
CFUE	**Fuerteventura**	**2.04**	**75**	P	Pn	13 38 16.7	-2.0
	2.8nm,0.1s,SNR=7.9						
CFUE				S	Sn	13 38 39.4	-4.1
	2.6nm,0.0s,SNR=7.9						

NIED ***16*** *13:39:00, 24.00N×122.40E, h29$^{\text{km}}$, Mw4.6 Best double couple: M$_0$9.73×10^{15} NP1:φ$_s$68°, δ88°, λ72°. NP2:φ$_s$333°, δ18°, λ174°.*

MOS ***16*** *13:39:01.7±1.0, 24.13N×122.54E, h38$^{\text{km}}$, mb5.1/28, MS4.2/7, Error ellipse: s-maj=11.3km s-min=5.9km az=120.7*

BJI ***16*** *13:39:01.8, 24.19N×122.56E, h38$^{\text{km}}$, mB4.8, mb4.7, ML4.6, Ms4.3, Msz4.2*

IDC ***16*** *13:39:01.9±2.5, 24.14N×122.56E, h27$^{\text{km}}$±16$^{\text{km}}$, mb4.5/27, mb1 4.5/30, mb1mx4.5/34, mbtmp4.6/30, ML4.3/3, MS4.0/10, Ms1 4.0/10, ms1mx3.7/27, Error ellipse: s-maj=15.7km s-min=11.5km az=59.0*

JMA ***16*** *13:39:02.2±0.2, 24.04N×122.42E, h36$^{\text{km}}$, M4.8*

HRVD ***16*** *13:39:03.9±1.2, 23.70N×122.44E, h40$^{\text{km}}$±1$^{\text{km}}$, MW4.7/21, Centroid moment Tensor Solution. LP body waves: s13,c13; Mantle waves: s21,c30; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.48±.24; M$_{\theta\theta}$-1.23±.13; M$_{\phi\phi}$-0.24±.14; M$_{r\theta}$0.44±.07; M$_{\theta\phi}$-0.02±.10; M$_{\phi r}$0.27±.14; Best double couple: M$_0$1.446×10^{16} NP1:φ$_s$276°, δ36°, λ103°. NP2:φ$_s$80°, δ55°, λ81°. Principal axes: T 1.588, Plg78°, Azm317°; N -.277, Plg8°, Azm85°; P -1.304, Plg9°, Azm177°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***16*** *13:39:03.9±0.6, 24.06N×122.49E, h43$^{\text{km}}$±5$^{\text{km}}$, mb4.9/27, MS4.2/1 Error ellipse: s-maj=5.9km s-min=5.3km az=52.0*

ISC 16 13:39:02.4±0.3**, 24.04N**±0.02×**122.46E**±0.02**, h44$^{\text{km}}$**±3$^{\text{km}}$**, n202, σ1$^{\text{s}}$21**/239**, mb4.8**/69**, MS4.1**/19**, 10C-7D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.66**	**50**	P	**P**	**13 39 15.4**	**0.0**
YOJ				S	**S**	**13 39 24.5**	**-0.4**
NACB	**Ninganchiao**	**0.80**	**280**	⇑*i*P	**P**	**13 39 16.8**	**-0.6**
YHNB	**Yeheng**	**1.17**	**303**	*e*P	**P**	**13 39 23.6**	**+1.0**
YHNB				*e*S	**S**	**13 39 39.8**	**+2.2**
IRIF	**Iriomote-Funau**	**1.20**	**76**	P	**P**	**13 39 23.6**	**+0.6**
IRIF				S	**S**	**13 39 39.7**	**+1.3**
HATJ	**Hateruma jima**	**1.23**	**89**	P	**P**	**13 39 23.8**	**+0.3**
HATJ				S	**S**	**13 39 40.3**	**+1.0**
TATO	**Taipei**	**1.28**	**317**	*e*P	**P**	**13 39 25.7**	**+1.4**
TATO				*e*S	**S**	**13 39 41.9**	**+1.3**
JKRS	**Kuro-shima**	**1.43**	**82**	P	**P**	**13 39 27.0**	**+0.6**
JKRS				S	**S**	**13 39 46.3**	**+2.0**
JIJ	**Ishigaki jima**	**1.57**	**78**	P	**P**	**13 39 28.6**	**+0.2**
JIJ				S	**S**	**13 39 48.2**	**+0.5**
JTJ	**Tarama**	**2.13**	**73**	P	**P**	**13 39 36.6**	**+0.2**
JTJ				*e*S	**S**	**13 40 03.2**	**+1.5**
JMJ	**Miyako jima 2**	**2.70**	**73**	P	**P**	**13 39 44.8**	**+0.4**
JMJ				S	**S**	**13 40 17.9**	**+1.8**
JOGS	**Gusukube**	**2.78**	**74**	P	**P**	**13 39 47.2**	**+1.6**
JOGS				S	**S**	**13 40 19.7**	**+1.5**
QZH	**Quanzhou**	**3.63**	**285**	⇑*i*P	**P**	**13 39 56.8**	**-0.9**
QZH				S	**S**	**13 40 36.9**	**-2.9**
QZH				Smax			
	comp=N,2μm,0.8s						
QZH				Smax			
	comp=E,1μm,0.4s						
QZH				LR	LR		
	comp=N,2μm,9.3s						
QZH				LR	LR		
	comp=E,6μm,14.9s						
QZH				LR	LR		
	comp=Z,4μm,13.6s						
JKE	**Kume jima 2**	**4.54**	**59**	P	**P**	**13 40 09.5**	**-0.9**
JKE				S	**S**	**13 41 01.9**	**-0.6**
JAGN	**Aguni-jima**	**5.02**	**59**	S	**S**	**13 41 15.5**	**+0.8**
NAH1	**Naha**	**5.21**	**64**	*e*S	**S**	**13 41 19.4**	**-0.1**
JJT2	**Tamagusuku 2**	**5.23**	**65**	P	**P**	**13 40 19.7**	**-0.5**
JJT2				*e*S	**S**	**13 41 20.2**	**+0.1**
SGCP	**Mt. Cagua**	**5.78**	**184**	*e*P	**P**	**13 40 20.3**	**-7.5**
SGCP				*e*S	**S**	**13 41 25.2**	**-8.6**
JIH	**Iheya**	**5.80**	**58**	P	**P**	**13 40 26.2**	**-1.9**
JIH				S	**S**	**13 41 33.2**	**-1.1**
JOW	**Kunigami**	**5.95**	**61**	Pn	**P**	**13 40 27.8**	**-2.4**
	comp=Z,17nm,0.3s,baz=212,slow=12,SNR=20						
JOW				Sn	**S**	**13 41 33.2**	**-4.8**
	comp=Z,7.0nm,0.3s,baz=130,slow=27,SNR=2.6						
JOW	**Kunigami**	**5.95**	**61**	P	**P**	**13 40 27.6**	**-2.6**
JOW				S	**S**	**13 41 35.9**	**-2.1**
APYP	**Conner**	**6.25**	**191**	*e*P	**P**	**13 40 30.4**	**-4.1**
APYP				*e*S	**S**	**13 41 37.6**	**-7.9**
CVP	**Callao Caves**	**6.33**	**185**	*e*P	**P**	**13 40 32.5**	**-3.1**
ABRA	**Dolores**	**6.56**	**195**	*e*P	**P**	**13 40 36.5**	**-2.4**
ABRA				*e*S	**S**	**13 41 47.3**	**-6.0**
JTK	**Tokunoshima**	**6.94**	**56**	P	**P**	**13 40 40.5**	**-3.6**
JTK				S	**S**	**13 41 58.4**	**-4.1**
SSE	**Sheshan**	**7.12**	**351**	*e*P	**P**	**13 40 45.8**	**-0.8**
SSE				S	**S**	**13 42 05.5**	**-1.6**
SSE				AMB	AMB		
	comp=Z,120nm,4.0s						
SSE				Smax			
	comp=N,80nm,0.9s						
SSE				Smax			
	comp=E,120nm,0.9s						
SSE				LR	LR		
	comp=N,1μm,13.4s						
SSE				LR	LR		
	comp=E,180nm,13.4s						
SSE				LR	LR		
	comp=Z,2μm,15.7s						
SSE	**Sheshan**	**7.12**	**351**	*e*Pn	**P**	**13 40 45.8**	**-0.8**
	comp=Z,276nm,0.6s						
SSE				Sn	**S**	**13 42 05.5**	**-1.6**
JAM	**Amami Oshima**	**7.75**	**54**	P	**P**	**13 40 51.1**	**-4.4**
JAM				S	**S**	**13 42 16.8**	**-6.1**
JMZ	**Minamidaito 2**	**8.15**	**76**	P	**P**	**13 40 55.0**	**-5.9**
JMZ				*e*S	**S**	**13 42 21.6**	**-11**
SCZP	**Santa Cruz**	**8.56**	**197**	*e*P	**P**	**13 41 04.3**	**-2.3**
NJ2	**Nanjing**	**8.59**	**339**	*e*P	**P**	**13 41 04.9**	**-2.1**
NJ2				AP		13 41 11.8	
NJ2				XP		13 41 15.8	
NJ2				S	**S**	**13 42 42.5**	**-1.2**
NJ2				XS		13 42 53.1	
NJ2				AMB	AMB		
	comp=Z,40nm,0.5s						
NJ2				AMB	AMB		
	comp=Z,210nm,3.6s						
NJ2				Smax			
	comp=N,330nm,0.9s						
NJ2				Smax			
	comp=E,530nm,0.8s						
NJ2				LR	LR		
	comp=N,3μm,10.6s						
NJ2				LR	LR		
	comp=E,3μm,13.5s						
NJ2				LR	LR		
	comp=Z,2μm,14.0s						
TGY	**Tagaytay City**	**9.99**	**189**	Pn	**P**	**13 41 27.0**	**+0.6**
	comp=Z,8.3nm,0.3s,baz=176,slow=12,SNR=3.8						
SJMP	**San Jose**	**11.59**	**187**	*e*P	**P**	**13 41 50.1**	**+2.0**
JNU	**Nakatsue**	**11.68**	**37**	Pn	**P**	**13 41 48.0**	**-1.4**
	comp=Z,0.6nm,0.3s,baz=143,slow=18,SNR=4.6						
JNU				LR	LR	13 46 46.8	
	comp=Z,401nm,19.2s,baz=216,slow=40						
QIZ	**Qiongzhong**	**12.75**	**249**	*e*P	**P**	**13 42 03.8**	**+0.1**
QIZ				S	**S**	**13 44 21.9**	**-3.2**
QIZ				LR	LR		
	comp=N,600nm,17.0s						
QIZ				LR	LR		
	comp=Z,330nm,19.2s						
ENH	**Enshi**	**13.11**	**301**	*e*P	**P**	**13 42 09.0**	**+0.6**
	comp=Z,9.2nm,0.8s						
ENH				S	**S**	**13 44 40.3**	**+6.8**
INCN	**Inchon**	**13.87**	**14**	P	**P**	**13 42 24.4**	**+6.1**
	comp=Z,31nm,0.7s						
KS15	**Wonju Array Si**	**14.15**	**18**	*e*P	**P**	**13 42 25.0**	**+3.0**
GYA	**Guiyang**	**14.49**	**283**	P	**P**	**13 42 26.8**	**+0.2**
GYA				AP		13 42 35.4	
GYA				XP		13 42 41.9	
GYA				S	**S**	**13 45 02.8**	**-3.9**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GYA				AMB	AMB		
	comp=Z,60nm,3.9s						
GYA				LR	LR		
	comp=N,2μm,13.2s						
GYA				LR	LR		
	comp=E,850nm,13.8s						
GYA				LR	LR		
	comp=Z,1μm,13.7s						
PAGZ	**Pagadian**	**16.12**	**177**	*e*P	**P**	**13 42 47.9**	**+0.3**
BUKP	**Musuan**	**16.26**	**171**	*e*P	**P**	**13 42 46.0**	**-3.4**
SNY	**Shenyang**	**17.76**	**3**	⇓P	**P**	**13 43 05.4**	**-2.7**
SNY				S	**S**	**13 46 21.6**	**-0.4**
SNY				LR	LR		
	comp=N,540nm,13.8s						
SNY				LR	LR		
	comp=E,410nm,11.7s						
SNY				LR	LR		
	comp=Z,620nm,14.5s						
CD2	**Chengdu**	**17.94**	**297**	⇓*i*P	**P**	**13 43 10.5**	**+0.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.7s						
CD2				LR	LR		
	comp=N,470nm,15.6s						
CD2				LR	LR		
	comp=Z,540nm,13.8s						
KMI	**Kunming**	**17.97**	**278**	P	**P**	**13 43 11.6**	**+0.9**
KMI				AP		13 43 20.3	
KMI				XP		13 43 26.3	
KMI				PP	PP	13 43 27.3	+1.6
KMI				S	**S**	**13 46 27.3**	**+0.6**
KMI				XS		13 46 41.3	
KMI				SS	SS	13 46 50.8	+0.3
KMI				LR	LR		
	comp=N,300nm,10.6s						
KMI				LR	LR		
	comp=E,660nm,14.5s						
KMI				LR	LR		
	comp=Z,780nm,13.7s						
KMI	**Kunming**	**17.97**	**278**	P	**P**	**13 43 11.6**	**+0.9**
KMI				pP		13 43 20.3	
KMI				sP		13 43 26.3	
KMI				PP	PP	13 43 27.3	+1.6
KMI				PPP	PPP	13 43 35.4	+0.4
KMI				S	**S**	**13 46 27.2**	**+0.5**
KMI				sS		13 46 41.2	
KMI				SS	SS	13 46 50.7	+0.2
KMI				SSS	SSS	13 47 03.8	-1.0
KMI	**Kunming**	**17.97**	**278**	P	**P**	**13 43 11.6**	**+0.9**
KMI				S	**S**	**13 46 27.2**	**+0.5**
MJAR	**Matsushiro Arr**	**18.41**	**44**	P	**P**	**13 43 13.8**	**-2.4**
	comp=Z,0.5nm,0.3s,baz=247,slow=11,SNR=5.1						
KKM	**Kota Kinabalu**	**18.87**	**200**	*e*P	**P**	**13 43 21.9**	**+0.1**
HHC	**Hu-ho-hao-te**	**19.09**	**334**	*e*P	**P**	**13 43 24.8**	**+0.7**
HHC				AP		13 43 35.9	
HHC				XP		13 43 41.8	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s						
HHC				AMB	AMB		
	comp=Z,160nm,3.9s						
HHC				LR	LR		
	comp=N,860nm,14.6s						
HHC				LR	LR		
	comp=E,530nm,13.8s						
HHC				LR	LR		
	comp=Z,970nm,16.0s						
BTO	**Baotou**	**19.54**	**331**	*e*P	**P**	**13 43 29.0**	**-0.1**
CN2	**Changchun**	**19.86**	**6**	*e*P	**P**	**13 43 31.1**	**-1.5**
CN2				*e*S	**S**	**13 47 08.1**	**-0.6**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s						
CN2				AMB	AMB		
	comp=Z,70nm,5.0s						
CN2				LR	LR		
	comp=N,1μm,13.0s						
CN2				LR	LR		
	comp=E,400nm,13.0s						
CN2				LR	LR		
	comp=Z,1μm,14.0s						
LZH	**Lanzhou**	**20.05**	**311**	⇑P	**P**	**13 43 35.8**	**+1.2**
LZH				AP		13 43 46.8	
LZH				XP		13 43 52.6	
LZH				PP	PP	13 43 55.9	+1.2
LZH				*e*S	**S**	**13 47 12.6**	**0.0**
LZH				XS		13 47 29.8	
LZH				*e*SS	SS	13 47 43.0	+0.8
LZH				AMB	AMB		
	comp=Z,140nm,1.3s						
LZH				AMB	AMB		
	comp=Z,320nm,4.5s						
LZH				LR	LR		
	comp=E,1μm,10.3s						
LZH				LR	LR		
	comp=Z,2μm,12.9s,MS4.7						
LZH	**Lanzhou**	**20.05**	**311**	⇑P	**P**	**13 43 35.7**	**+1.1**
	comp=Z,146nm,1.3s						
LZH				pP		13 43 46.8	
LZH				sP		13 43 52.6	
LZH				PP	PP	13 43 55.9	+1.2
LZH				*e*S	**S**	**13 47 12.6**	**0.0**
LZH				sS		13 47 29.7	
LZH				*e*SS	SS	13 47 43.0	+0.8
LZH				LR	LR		
	comp=Z,2μm,12.9s,MS4.7						
LZH	**Lanzhou**	**20.05**	**311**	⇑P	**P**	**13 43 35.7**	**+1.1**
LZH				pmax	pmax		
	comp=Z,146nm,1.3s						
MDJ	**Mudanjiang**	**21.34**	**14**	P	**P**	**13 43 45.3**	**-2.5**
MDJ				AP		13 43 57.8	
MDJ				XP		13 44 03.4	
MDJ				SS	SS	13 48 10.3	-3.0
MDJ				SCS	ScS	13 55 07.0	+1.3
MDJ				AMB	AMB		
	comp=Z,40nm,3.1s						
MDJ				LR	LR		
	comp=N,240nm,19.4s,MS3.7						
MDJ				LR	LR		
	comp=E,190nm,20.2s,MS3.7						
MDJ				LR	LR		
	comp=Z,290nm,19.4s,MS3.7						
MDJ	**Mudanjiang**	**21.34**	**14**	P	**P**	**13 43 49.7**	**+1.9**
GUMO	**Guam**	**23.59**	**112**	P	**P**	**13 44 10.0**	**-0.1**
	comp=Z,26nm,0.6s,mb4.9,baz=17,slow=20,SNR=2.5						
GUMO				LR	LR	13 51 07.4	
	comp=Z,201nm,20.3s,MS3.6,baz=86,slow=31						
GTA	**Gaotai**	**24.52**	**314**	*e*P	**P**	**13 44 19.4**	**+0.4**
GTA				AP		13 44 29.3	
GTA				XP		13 44 33.3	
GTA				PP	PP	13 44 56.3	+0.6
GTA				PCP	PcP	13 47 58.3	+0.5
GTA				S	**S**	**13 48 36.8**	**+3.1**
GTA				XS		13 48 51.3	
GTA				SCP		13 51 33.3	
GTA				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.8						
GTA				AMB	AMB		
	comp=Z,120nm,4.9s						
GTA				LR	LR		
	comp=N,210nm,13.3s,MS4.1						
GTA				LR	LR		
	comp=E,420nm,15.6s,MS4.1						
GTA				LR	LR		
	comp=Z,500nm,16.7s,MS4.1						
HIA	**Hailar**	**25.27**	**356**	*e*P	**P**	**13 44 25.9**	**-0.2**
	comp=Z,11nm,1.1s,mb4.3						
HIA	**Hailar**	**25.27**	**356**	*e*P	**P**	**13 44 26.0**	**-0.1**
HIA				pmax	pmax		
	comp=Z,11nm,1.1s						
KSM	**Kuching**	**25.33**	**209**	*e*P	**P**	**13 44 26.7**	**-0.4**
ASAJ	**Asahikawa**	**25.94**	**35**	P	**P**	**13 44 29.6**	**-2.9**
	comp=Z,4.7nm,0.3s,mb4.5,baz=18,slow=29,SNR=27						
ASAJ				LR	LR	13 54 12.4	
	comp=Z,210nm,19.3s,MS3.7,baz=358,slow=35						
ULN	**Ulaanbaatar**	**26.75**	**337**	*c i*P	**P**	**13 44 39.1**	**-0.7**
SONM	**Songino Array**	**26.96**	**336**	P	**P**	**13 44 40.9**	**-0.9**
	comp=Z,12nm,0.6s,mb4.6,baz=151,slow=8.5,SNR=75						
SONM				PcP	PcP	13 48 02.7	-0.5
	comp=Z,1.0nm,0.5s,baz=176,slow=3.2,SNR=11						
SONM				ScP		13 51 40.5	
	comp=Z,1.5nm,1.1s,baz=153,slow=3.3,SNR=5.5						
SONM				LR	LR	13 56 35.5	
	comp=Z,641nm,18.7s,MS4.2,baz=274,slow=39						
SHL	**Shillong**	**27.77**	**280**	*e*P	**P**	**13 44 49.5**	**+0.1**
LSA	**Lhasa**	**28.44**	**288**	*e*P	**P**	**13 44 56.8**	**+1.5**
	comp=Z,9.3nm,0.6s,mb4.6						
LSA	**Lhasa**	**28.44**	**288**	*e*P	**P**	**13 44 56.8**	**+1.5**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
MOY	**Mondy**	**32.13**	**335**	*e*P	**P**	**13 45 27.1**	**-0.7**
GUN	**Gumba**	**33.03**	**285**	*e*P	**P**	**13 45 36.3**	**+0.4**
	comp=Z,12nm,0.4s,mb5.2						
PKI	**Pulchoki**	**33.46**	**284**	*e*P	**P**	**13 45 39.5**	**-0.1**
KKN	**Kakani**	**33.56**	**284**	*e*P	**P**	**13 45 40.3**	**-0.2**
	comp=Z,13nm,0.6s,mb5.0						
DMN	**Daman**	**33.73**	**284**	*e*P	**P**	**13 45 42.0**	**+0.1**
	comp=Z,17nm,0.8s,mb5.0						
GKN	**Gorkha**	**34.13**	**285**	*e*P	**P**	**13 45 45.0**	**-0.3**
	comp=Z,24nm,0.8s,mb5.2						
WMQ	**Urumqi**	**34.60**	**313**	⇓*i*P	**P**	**13 45 49.9**	**+0.7**
WMQ				AP	pP	13 46 02.5	+1.4
WMQ				XP	sP	13 46 08.0	+1.3
WMQ				PP	PP	13 47 08.0	+1.5
WMQ				*e*S	**S**	**13 51 15.0**	**+0.5**
WMQ				XS		13 51 35.5	
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,120nm,4.0s						
WMQ				LR	LR		
	comp=N,540nm,10.3s,MS4.7						
WMQ				LR	LR		
	comp=E,560nm,12.4s,MS4.7						
WMQ				LR	LR		
	comp=Z,200nm,14.4s,MS4.0						
KOLN	**Koldanda**	**35.05**	**285**	*e*P	**P**	**13 45 53.3**	**0.0**
	comp=Z,23nm,1.0s,mb5.0						
YAK	**Yakutsk**	**38.29**	**5**	⇓*i*P	**P**	**13 46 17.8**	**-2.3**
YAK				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
YAK				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.0						
MKAR	**Makanchi Array**	**39.25**	**316**	P	**P**	**13 46 28.5**	**+0.2**
	comp=Z,13nm,0.4s,mb5.0,baz=100,slow=9.8,SNR=150						
MKAR				ScP		13 52 22.8	
	comp=Z,1.3nm,1.1s,baz=90,slow=2.4,SNR=3.5						
MKAR				LR	LR	14 04 05.1	

	comp=Z,212nm,18.4s,MS4.0,baz=260,slow=38						
MKAR	**Makanchi Array**	**39.25**	**316**	P	**P**	**13 46 28.5**	**+0.2**
MKAR				ScP		13 52 22.8	
MKAR				LR	LR	14 04 05.1	
ZAL	**Zalesovo**	**41.01**	**327**	P	**P**	**13 46 42.4**	**-0.3**
	comp=Z,12nm,0.8s,mb4.6,baz=5.0,slow=7.8,SNR=55						
ZAL				PcP	PcP	13 48 41.8	-1.0
	comp=Z,1.4nm,0.5s,baz=360,slow=5.3,SNR=3.6						
ZAL				LR	LR	14 05 55.5	
	comp=Z,271nm,21.6s,MS4.1,baz=327,slow=39						
FITZ	**Fitzroy Crossi**	**42.00**	**175**	*e*P	**P**	**13 46 50.4**	**-0.9**
	comp=Z,7.9nm,1.2s,mb4.2						
FITZ	**Fitzroy Crossi**	**42.00**	**175**	P	**P**	**13 46 50.3**	**-1.0**
	comp=Z,5.7nm,0.9s,mb4.2,baz=354,slow=10,SNR=3.7						
ULHL	**Ulahol**	**42.18**	**307**	P	**P**	**13 46 54.5**	**+2.0**
	SNR=10						
NVS	**Novosibirsk**	**42.26**	**327**	*e*P	**P**	**13 46 49.9**	**-3.1**
NVS				*e*		13 48 45.1	
NVS				pmax	pmax		
	comp=N,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
NVS				pmax	pmax		
	comp=E,9.0nm,0.9s						
TKM2	**Tokmak 2**	**42.77**	**308**	P	**P**	**13 46 59.1**	**+1.7**
	SNR=52						
KZA	**Kyzart**	**42.87**	**307**	P	**P**	**13 47 00.6**	**+2.4**
	SNR=14						
KURK	**Kurchatov**	**42.95**	**320**	*e*P	**P**	**13 46 58.0**	**-0.7**
	comp=E,12nm,0.4s,mb5.0						
KURK	**Kurchatov**	**42.95**	**320**	*c i*P	**P**	**13 46 58.2**	**-0.5**
KBK	**Karagaybulak**	**43.19**	**307**	P	**P**	**13 47 02.6**	**+1.8**
	SNR=33						
CHMS	**Chumysh**	**43.39**	**308**	P	**P**	**13 47 03.6**	**+1.2**
	SNR=20						
UCH	**Uchtor**	**43.44**	**307**	P	**P**	**13 47 05.1**	**+2.3**
	SNR=61						
FRU	**Bishkek**	**43.46**	**308**	*i* P	**P**	**13 47 04.0**	**+1.0**
AAK	**Ala-Archa**	**43.52**	**307**	P	**P**	**13 47 05.0**	**+1.5**
	SNR=15						
AAK	**Ala-Archa**	**43.52**	**307**	*e*P	**P**	**13 47 03.8**	**+0.4**
	comp=E,13nm,0.8s,mb4.7						
AAK	**Ala-Archa**	**43.52**	**307**	*e*P	**P**	**13 47 03.8**	**+0.4**
AAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
USP	**Ospenovka**	**43.62**	**308**	P	**P**	**13 47 05.2**	**+0.9**
	SNR=15						
AML	**Almayashu**	**44.02**	**306**	P	**P**	**13 47 09.5**	**+1.9**
	SNR=47						
EKS2	**Erkin-Say**	**44.05**	**307**	P	**P**	**13 47 09.1**	**+1.4**
	SNR=19						
WRAB	**Tennant Creek**	**45.22**	**164**	*e*P	**P**	**13 47 16.2**	**-1.1**
	comp=Z,19nm,0.9s,mb4.9						
WRAB	**Tennant Creek**	**45.22**	**164**	*i* P	**P**	**13 47 16.3**	**-1.1**
WRA	**Warramunga Arr**	**45.22**	**164**	P	**P**	**13 47 16.4**	**-1.0**
	comp=Z,8.8nm,0.8s,mb4.6,baz=346,slow=8.6,SNR=49						
WB2	**Warramunga Arr**	**45.23**	**164**	⇓*i*P	**P**	**13 47 16.3**	**-1.1**
KKAR	**Karatay Array**	**46.48**	**307**	*e*P	**P**	**13 47 27.9**	**+0.8**
KKAR				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
TIXI	**Tiksi**	**47.78**	**3**	⇓*i*P	**P**	**13 47 34.3**	**-2.6**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.6						
BVA0	**Borovoye Array**	**48.52**	**321**	*i* P	**P**	**13 47 42.2**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**48.52**	**321**	P	**P**	**13 47 42.3**	**-0.6**
	comp=Z,7.1nm,0.5s,mb5.0,baz=107,slow=8.1,SNR=66						
BVAR				PcP	PcP	13 49 07.2	-1.5
	comp=Z,5.4nm,0.8s,baz=108,slow=4.7,SNR=8.9						
BVAR				ScP		13 53 00.6	
	comp=Z,1.6nm,1.0s,baz=117,slow=6.6,SNR=6.6						
BRVK	**Borovoye**	**48.59**	**321**	*e*P	**P**	**13 47 42.6**	**-0.8**
	comp=Z,5.2nm,0.3s,mb5.0						
BRVK				*e*PcP	PcP	13 49 07.6	-1.3
BRVK	**Borovoye**	**48.59**	**321**	*e*P	**P**	**13 47 42.6**	**-0.8**
BRVK				*e*		13 49 07.6	
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb5.0						
CTA	**Charters Tower**	**49.61**	**150**	*e*P	**P**	**13 47 51.6**	**-0.1**
	comp=Z,4.2nm,0.8s,mb4.5						
CTA	**Charters Tower**	**49.61**	**150**	P	**P**	**13 47 51.1**	**-0.6**
	comp=Z,1.6nm,0.7s,mb4.1,baz=338,slow=12,SNR=3.6						
CTA				LR	LR	14 05 33.4	
	comp=Z,159nm,22.0s,MS4.0,baz=159,slow=32						
CTAO	**Charters Tower**	**49.61**	**150**	*e*P	**P**	**13 47 51.9**	**+0.2**
	comp=Z,13nm,1.2s,mb4.8						
CTAO	**Charters Tower**	**49.61**	**150**	*e*P	**P**	**13 47 51.9**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
BILL	**Bilibino**	**51.43**	**19**	⇑*e*P	**P**	**13 47 57.9**	**-7.0**
BILL				*e*S	**S**	**13 55 13.7**	**-6.4**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s,MS3.9						
AB31	**Akbulak array**	**54.37**	**314**	*i* P	**P**	**13 48 26.7**	**-0.3**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
AKTO	**Aktyubinsk**	**55.69**	**316**	P	**P**	**13 48 35.0**	**-1.6**
	comp=Z,2.1nm,0.4s,mb4.5,baz=87,slow=10,SNR=8.5						
AKTO				LR	LR	14 14 18.3	
	comp=Z,95nm,18.9s,MS3.9,slow=38						
ARU	**Arti**	**55.92**	**323**	*e*P	**P**	**13 48 36.3**	**-1.8**
	comp=Z,13nm,0.8s,mb5.0						
ARU	**Arti**	**55.92**	**323**	⇓*i*P	**P**	**13 48 36.8**	**-1.4**
ARU				*e*		13 49 33.8	
ARU				*e*		13 50 39.0	
ARU				*e*PPP	PPP	13 51 54.8	-5.7
ARU				*e*S	**S**	**13 56 24.1**	**+3.1**
ARU				*e*SS	SS	14 00 08.3	+1.1
ARU				pmax	pmax		
	comp=Z,22nm,1.5s,mb5.0						
STKA	**Stephens Creek**	**58.53**	**161**	*e*P	**P**	**13 48 56.9**	**-0.1**
	comp=Z,7.7nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**58.53**	**161**	P	**P**	**13 48 57.1**	**+0.1**
	comp=Z,7.6nm,0.9s,mb4.7,baz=339,slow=6.8,SNR=14						
STKA				LR	LR	14 15 03.2	
	comp=Z,144nm,20.0s,MS4.1,baz=25,slow=37						
GNI	**Garni**	**65.84**	**305**	P	**P**	**13 49 46.4**	**+0.8**
	comp=Z,3.8nm,0.5s,mb4.7,baz=163,slow=14,SNR=4.4						
GNI	**Garni**	**65.84**	**305**	*e*P	**P**	**13 49 47.0**	**+1.4**
	comp=Z,15nm,0.9s,mb5.0						
GNI	**Garni**	**65.84**	**305**	*c i*P	**P**	**13 49 46.7**	**+1.1**
GNI				pmax	pmax		
	comp=Z,11nm,0.8s						
ZEI	**Tsey**	**65.94**	**308**	*e*P	**P**	**13 49 44.4**	**-1.8**
ZEI				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.1						
VRHR	**Novokhopersk**	**66.03**	**317**	*e*P	**P**	**13 49 45.5**	**-1.1**
VRHR				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb5.1						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,8.0nm,0.4s						
KIV	**Kislovodsk**	**66.58**	**309**	*e*P	**P**	**13 49 50.3**	**0.0**
	comp=E,20nm,0.8s,mb5.2						
KIV	**Kislovodsk**	**66.58**	**309**	*i* P	**P**	**13 49 50.7**	**+0.5**
KIV				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
KIV				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						
KDAK	**Kodiak Island**	**67.35**	**35**	P	**P**	**13 49 53.7**	**-1.1**
	comp=Z,11nm,0.8s,mb4.9,baz=315,slow=12,SNR=16						
OBN	**Obninsk**	**68.33**	**322**	⇑*e*P	**P**	**13 50 00.7**	**-0.3**
OBN				*e*S	S	13 58 56.4	-1.0
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.1						
PMR	**Palmer**	**68.42**	**31**	*e*P	**P**	**13 50 00.5**	**-1.0**
ILAR	**Eielson Array**	**68.81**	**27**	P	**P**	**13 50 02.0**	**-1.7**
	comp=Z,0.7nm,0.4s,mb4.0,baz=270,slow=4.8,SNR=16						
JOF	**Joensuu**	**69.40**	**331**	*e*p	**P**	**13 50 05.8**	**-1.7**
	comp=Z,4.2nm,0.4s,mb4.7						
KEV	**Kevo**	**69.54**	**338**	*e*p	**P**	**13 50 07.0**	**-1.2**
	comp=Z,4.5nm,0.4s,mb4.8						
KEV	**Kevo**	**69.54**	**338**	*e*P	**P**	**13 50 07.0**	**-1.2**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.8						
ARCES	**ARCESS Array B**	**70.11**	**338**	P	**P**	**13 50 10.0**	**-1.7**
	comp=Z,4.8nm,0.8s,mb4.5,baz=60,slow=8.0,SNR=16						
KAMS	**Al Khamasin**	**71.34**	**284**	P	**P**	**13 50 19.5**	**-0.4**
AFFS	**‘Afif**	**71.55**	**288**	P	**P**	**13 50 21.8**	**+0.7**
KAF	**Kangasniemi**	**71.85**	**331**	*e*p	**P**	**13 50 21.5**	**-0.8**
	comp=Z,2.8nm,0.5s,mb4.5						
KAF	**Kangasniemi**	**71.85**	**331**	*e*P	**P**	**13 50 21.5**	**-0.8**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
DAWY	**Dawson**	**72.13**	**27**	*e*P	**P**	**13 50 23.7**	**-0.2**
FINES	**FINESS Array B**	**72.16**	**330**	P	**P**	**13 50 23.0**	**-1.1**
	comp=Z,3.2nm,0.4s,mb4.6,baz=59,slow=6.1,SNR=33						
FINES	**FINESS Array B**	**72.16**	**330**	*i* P	**P**	**13 50 23.3**	**-0.8**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.4s						
TATS	**Tathlith**	**72.57**	**284**	P	**P**	**13 50 27.8**	**+0.4**
INK	**Inuvik**	**72.92**	**22**	*e*P	**P**	**13 50 27.0**	**-1.5**
	comp=Z,32nm,0.8s,mb5.3						
INK	**Inuvik**	**72.92**	**22**	*e*P	**P**	**13 50 27.0**	**-1.4**
INK				pmax	pmax		
	comp=Z,32nm,0.8s						
AKASG	**Malin Array Be**	**73.75**	**319**	P	**P**	**13 50 32.9**	**-0.8**
	comp=Z,3.4nm,0.6s,mb4.5,baz=60,slow=6.2,SNR=8.5						
BLJS	**Baljurashi**	**74.12**	**285**	P	**P**	**13 50 37.6**	**+1.2**
BR131	**Keskin Array S**	**74.19**	**307**	*e*P	**P**	**13 50 36.4**	**0.0**
	comp=Z,4.4nm,0.5s,mb4.6						
BRTR	**Keskin Array B**	**74.19**	**307**	P	**P**	**13 50 36.5**	**+0.1**
	comp=Z,13nm,0.8s,mb4.9,baz=101,slow=6.3,SNR=51						
KWP	**Kalwaria**	**78.05**	**319**	*e*P	**P**	**13 50 58.8**	**+0.8**
KWP	**Kalwaria**	**78.05**	**319**	*e*P	**P**	**13 50 58.8**	**+0.8**
HFS	**Hagfors**	**78.26**	**331**	P	**P**	**13 50 58.1**	**-0.8**
	comp=Z,3.0nm,0.5s,mb4.5,baz=90,slow=7.4,SNR=13						
KOLS	**Kolonicke sedl**	**78.58**	**319**	*e*	**P**	**13 51 06.1**	**+5.1**
NB2	**NORSAR Subarra**	**78.89**	**332**	P	**P**	**13 51 01.2**	**-1.2**
	comp=Z,2.4nm,0.5s,mb4.4,baz=59,slow=5.3						
NOA	**NORSAR Array B**	**78.89**	**332**	P	**P**	**13 51 02.0**	**-0.5**
	comp=Z,3.9nm,0.7s,mb4.4,baz=55,slow=5.7,SNR=13						
NOA				LR	LR	14 29 57.3	
	comp=Z,164nm,18.4s,MS4.4,baz=220,slow=39						
STHS	**Stebnicka Huta**	**79.01**	**319**	*e*P	**P**	**13 51 00.2**	**-3.1**
CRVS	**Cervenica-Dubn**	**79.09**	**319**	*e*P	**P**	**13 51 03.3**	**-0.5**
NAO	**NORSAR Subarra**	**79.16**	**332**	P	**P**	**13 51 01.2**	**-2.7**
	comp=Z,2.4nm,0.5s,mb4.4						
NAO	**NORSAR Subarra**	**79.16**	**332**	P	**P**	**13 51 01.2**	**-2.7**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
JMIC	**Jan Mayen**	**79.27**	**345**	P	**P**	**13 51 07.2**	**+2.8**
	comp=Z,79nm,0.4s,mb6.0,baz=141,slow=6.5,SNR=3.2						
KECS	**Kecovo**	**79.85**	**319**	*e*P	**P**	**13 51 09.0**	**+1.1**
VYHS	**Vyhne**	**80.84**	**319**	*e*P	**P**	**13 51 13.3**	**+0.2**
KSP	**Ksiaz**	**81.26**	**322**	*e*P	**P**	**13 51 16.4**	**+1.0**
VRAC	**Vranov**	**81.80**	**320**	P	**P**	**13 51 20.1**	**+2.0**
	comp=Z,3.1nm,0.6s,mb4.4,baz=23,slow=7.7,SNR=3.5						
YKA	**Yellowknife Ar**	**82.65**	**23**	P	**P**	**13 51 22.0**	**-0.2**
	comp=Z,3.5nm,0.7s,mb4.5,baz=307,slow=4.6,SNR=7.2						
KHC	**Kasperske Hory**	**83.62**	**321**	*i* P	**P**	**13 51 28.6**	**+1.2**
GERES	**GERESS Array B**	**83.69**	**321**	P	**P**	**13 51 28.7**	**+0.9**
	comp=Z,3.8nm,0.8s,mb4.6,baz=56,slow=4.8,SNR=21						
BOJS	**Bojanci**	**84.39**	**318**	*e*P	**P**	**13 51 32.0**	**+0.6**
VISS	**Visnje**	**84.50**	**318**	*e*P	**P**	**13 51 32.8**	**+0.8**
GRA1	**Grafenberg Arr**	**84.67**	**323**	*e*P	**P**	**13 51 33.9**	**+1.2**
	comp=Z,9.0nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	**84.67**	**323**	*e*P	**P**	**13 51 33.9**	**+1.2**
	comp=Z,9.0nm,1.1s,mb4.8						
GRF				LR	LR		
	comp=Z,100nm,18.1s,MS4.2						
GRF	**Grafenberg Arr**	**84.67**	**323**	*e*P	**P**	**13 51 33.9**	**+1.2**
GRF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.8						
GRF				MLR	MLR		
	comp=Z,100nm,18.1s,MS4.2						
ROBS	**Robic**	**85.09**	**319**	*e*P	**P**	**13 51 34.6**	**-0.3**
KMBO	**Kilima Mbogo**	**86.07**	**267**	P	**P**	**13 51 41.2**	**+0.7**
	comp=Z,0.7nm,0.5s,mb4.2,baz=41,slow=16,SNR=4.5						
KMBO	**Kilima Mbogo**	**86.07**	**267**	P	**P**	**13 51 41.2**	**+0.7**
DAVOX	**Davos**	**86.96**	**321**	P	**P**	**13 51 45.0**	**+1.0**
	comp=Z,2.0nm,0.5s,mb4.6,baz=8.0,slow=15,SNR=3.7						
CDF	**Champ du Feu**	**87.54**	**323**	*e*P	**P**	**13 51 46.9**	**+0.1**
JCW	**Jim Creek**	**87.90**	**37**	P	**P**	**13 51 50.2**	**+1.6**
HAU	**Haudompre**	**88.28**	**323**	*e*P	**P**	**13 51 49.9**	**-0.4**
	comp=Z,9.2nm,0.7s,mb4.8						
HAU	**Haudompre**	**88.28**	**323**	*e*P	**P**	**13 51 49.9**	**-0.4**
HAU				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.8						
EKA	**Eskdalemuir Ar**	**88.38**	**332**	P	**P**	**13 51 51.1**	**+0.5**
	comp=Z,1.6nm,0.5s,mb4.5,baz=34,slow=3.0,SNR=6.6						
GSM	**Grass Mountain**	**88.54**	**38**	P	**P**	**13 51 53.3**	**+1.7**
EDM	**Edmonton**	**89.16**	**30**	*e*P	**P**	**13 51 55.1**	**+0.7**
TBM	**Table Mountain**	**89.23**	**37**	P	**P**	**13 51 56.2**	**+1.4**
WTV	**Waterville**	**89.28**	**37**	P	**P**	**13 51 56.2**	**+1.2**
LPG	**La Plagne**	**89.48**	**321**	*e*P	**P**	**13 51 56.4**	**+0.3**
	comp=Z,33nm,1.2s,mb5.3						
LPG	**La Plagne**	**89.48**	**321**	*e*P	**P**	**13 51 56.4**	**+0.3**
LPG				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.2						
LPL	**La Plagne**	**89.48**	**321**	*e*P	**P**	**13 51 56.4**	**+0.3**
	comp=Z,19nm,0.9s,mb5.1						
LPL	**La Plagne**	**89.48**	**321**	*e*P	**P**	**13 51 56.4**	**+0.3**
LPL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
PGF	**Pioggiola**	**89.77**	**317**	*e*P	**P**	**13 51 57.4**	**-0.1**
SBF	**Sospel**	**90.00**	**319**	*e*P	**P**	**13 51 58.1**	**-0.5**
	comp=Z,28nm,0.7s,mb5.4						
GBL	**Gable Mountain**	**90.19**	**37**	P	**P**	**13 52 01.1**	**+1.7**
ORIF	**Oris-en-Rattie**	**90.32**	**321**	*e*P	**P**	**13 52 00.0**	**0.0**
SSF	**Saint Saulge**	**90.40**	**323**	*e*P	**P**	**13 51 59.9**	**-0.5**
	comp=Z,17nm,1.1s,mb5.0						
NEW	**Newport**	**90.46**	**35**	*e*P	**P**	**13 52 01.7**	**+1.1**
	comp=Z,14nm,0.9s,mb5.3						
NEW	**Newport**	**90.46**	**35**	*e*P	**P**	**13 52 01.7**	**+1.1**
NEW				pmax	pmax		
	comp=Z,14nm,0.9s						
SMF	**Signal de Mont**	**90.46**	**323**	*e*P	**P**	**13 52 00.3**	**-0.4**
	comp=Z,45nm,1.1s,mb5.4						
AVF	**Avril sur Loir**	**90.64**	**323**	*e*P	**P**	**13 52 01.2**	**-0.3**
	comp=Z,27nm,1.2s,mb5.2						
TCF	**Toulx Ste Croi**	**91.58**	**323**	*e*P	**P**	**13 52 05.7**	**-0.2**
	comp=Z,26nm,1.2s,mb5.2						
TCF	**Toulx Ste Croi**	**91.58**	**323**	*e*P	**P**	**13 52 05.7**	**-0.2**
TCF				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.1						
RJF	**Les Rejaudoux**	**92.56**	**323**	*e*P	**P**	**13 52 09.9**	**-0.5**
	comp=Z,24nm,1.0s,mb5.3						
RJF	**Les Rejaudoux**	**92.56**	**323**	*e*P	**P**	**13 52 09.9**	**-0.5**
RJF				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.3						
NVAR	**Mina Array Bea**	**95.74**	**44**	P	**P**	**13 52 26.4**	**+1.3**
	comp=Z,0.8nm,0.7s,mb4.2,baz=308,slow=4.1,SNR=7.2						
TXAR	**Lajitas Array**	**110.85**	**42**	PKiKP		13 57 32.7	
	comp=Z,0.6nm,0.4s,baz=304,slow=4.5,SNR=4.3						
SIV	**San Ignacio**	**171.33**	**23**	PKP	PKPdf	13 59 09.1	+2.7
	comp=Z,1.7nm,0.8s,baz=314,slow=1.7,SNR=8.9						
SIV				PKPab	PKPab	14 00 28.0	-1.0
	baz=305,slow=5.0						

IDC ***16*** *13:42:42.3±0.8, 1.24N×28.59W, mb4.1/9, mb1 4.1/9, mb1mx4.0/23, mbtmp4.1/9, MS4.1/12, Ms1 4.1/12, ms1mx4.0/18, Error ellipse: s-maj=33.9km s-min=17.3km az=148.0*

HRVD ***16*** *13:42:43.5±0.5, 1.13N×28.49W, h12^{km}, MW4.8/52, Centroid moment Tensor Solution. LP body waves: s13,c13;Mantle waves: s52,c71; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.19±.09; M$_{\theta\theta}$0.47±.11; M$_{\phi\phi}$-0.28±.10; M$_{r\theta}$0.36±.29; M$_{\theta\phi}$-1.47±.06; M$_{\phi r}$-0.59±.29; Best double couple: M$_0$1.648×10^{16} NP1:φ$_s$81°,δ69°,λ176°. NP2:φ$_s$173°,δ86°,λ21°. Principal axes: T 1.819, Plg18°, Azm39°; N -.344, Plg68°, Azm183°; P -1.476, Plg12°, Azm305°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***16*** *13:42:43.5±0.5, 1.33N×28.64W, h10^{km}, mb4.9/5 Error ellipse: s-maj=22.1km s-min=11.1km az=147.0*

ISC 16 13:42:42.0±0.6**, 1.3N**±0.2×**28.6W**±0.1**, h10^{km}, n17, σ0^{s}98**/10**, mb4.2**/10**, MS4.1**/12**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**24.30**	**77**	P	**P**	**13 48 00.5**	**-0.5**
	8.0nm,0.7s,mb4.2,baz=236,slow=13,SNR=10						
DBIC				LR	LR	13 55 37.6	
	comp=Z,252nm,19.1s,MS3.7,baz=234,slow=32						
BDFB	**Brasilia**	**25.50**	**228**	P	**P**	**13 48 12.3**	**0.0**
	2.0nm,0.6s,mb3.8,baz=69,slow=9.6,SNR=3.7						
BDFB				LR	LR	13 57 09.6	
	comp=Z,1μm,19.0s,MS4.4,baz=75,slow=34						
SAML	**Samuel**	**35.90**	**253**	*e*P	**P**	**13 49 43.9**	**-0.8**
	29nm,1.8s,mb4.9						
SIV	**San Ignacio**	**36.35**	**241**	P	**P**	**13 49 47.7**	**-0.7**
	2.8nm,1.2s,mb4.1,baz=92,slow=12,SNR=5.1						
LPAZ	**La Paz**	**42.73**	**244**	P	**P**	**13 50 43.0**	**+1.6**
	2.5nm,0.8s,mb4.0,baz=61,slow=7.0,SNR=9.7						
LPAZ				LR	LR	14 07 51.5	
	comp=Z,345nm,20.5s,MS4.2,baz=89,slow=35						
ROSC	**El Rosal**	**45.77**	**275**	LR	LR	14 09 02.2	
	comp=Z,190nm,18.1s,MS4.1,baz=32,slow=34						
TSUM	**Tsumeb**	**49.72**	**117**	P	**P**	**13 51 38.3**	**+1.6**
	2.3nm,0.8s,mb4.3,baz=300,slow=8.8,SNR=3.6						
VAE	**Valguarnera**	**53.50**	**42**	LR	LR	14 13 16.7	
	comp=Z,212nm,18.8s,MS4.2,baz=123,slow=34						
PLCA	**Paso Flores**	**56.58**	**217**	LR	LR	14 16 26.6	
	comp=Z,246nm,18.4s,MS4.3,baz=33,slow=36						
BOSA	**Boshof**	**59.50**	**124**	P	**P**	**13 52 46.5**	**-1.6**
	2.3nm,0.6s,mb4.4,baz=330,slow=7.8,SNR=4.4						
BOSA				LR	LR	14 12 57.2	
	comp=Z,191nm,20.3s,MS4.2,baz=352,slow=30						
GERES	**GERESS Array B**	**59.67**	**31**	P	**P**	**13 52 48.2**	**-0.7**
	0.4nm,0.3s,mb3.9,baz=191,slow=5.0,SNR=3.2						
GERES				LR	LR	14 15 12.3	
	comp=Z,111nm,20.9s,MS4.0,baz=212,slow=33						
IDI	**Anoyia**	**60.06**	**49**	LR	LR	14 19 16.1	
	comp=Z,131nm,21.9s,MS4.0,baz=264,slow=36						
KMBO	**Kilima Mbogo**	**65.92**	**92**	LR	LR	14 18 28.5	
	comp=Z,108nm,20.0s,MS4.0,baz=258,slow=33						
NOA	**NORSAR Array B**	**66.86**	**20**	LR	LR	14 18 09.2	
	comp=Z,89nm,19.3s,MS4.0,baz=220,slow=32						
BRTR	**Keskin Array B**	**68.10**	**47**	P	**P**	**13 53 45.0**	**+0.7**
	0.8nm,0.5s,mb4.0,baz=236,slow=4.5,SNR=3.7						
AKASG	**Malin Array Be**	**69.18**	**35**	P	**P**	**13 53 51.2**	**+0.4**
	2.1nm,0.6s,mb4.2,baz=243,slow=7.2,SNR=9.8						
MAW	**Mawson**	**91.75**	**157**	LR	LR	14 27 00.8	
	comp=Z,63nm,19.9s,MS4.1,baz=59,slow=29						

MOS ***16*** *13:55:43.2±1.2, 37.24N×71.42E, h81^{km}, mb4.3/1, Error ellipse: s-maj=13.3km s-min=6.4km az=94.9*

NEIC ***16*** *13:55:45.0±1.2, 37.23N×71.60E, h83^{km}±13^{km}, mb3.7/4, Error ellipse: s-maj=14.0km s-min=6.7km az=54.0*

IDC ***16*** *13:55:45.5±5.2, 37.27N×71.55E, h81^{km}±42^{km}, mb3.7/13, mb1 4.0/17, mb1mx3.9/25, mbtmp4.1/17, ML4.1/4, MS4.1/2, Ms1 4.1/2, ms1mx2.9/27, Error ellipse: s-maj=35.5km s-min=17.9km az=5.0*

NNC ***16*** *13:55:54.9±7.5, 37.96N×71.06E, h153^{km}±84^{km}, mpv4.5, Error ellipse: s-maj=68.1km s-min=37.2km az=17.0*

ISC 16 13:55:45.1±0.7**, 37.26N**±0.03×**71.52E**±0.08**, h101^{km}**±9^{km}**, n71, σ1^{s}21**/92**, mb3.9**/15**, 9C-9D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.15**	**18**	P	**P**	**13 57 02.0**	**+0.8**
	SNR=1265						
UCH	**Uchtor**	**5.47**	**24**	P	**P**	**13 57 06.6**	**+1.1**
	SNR=62						
KZA	**Kyzart**	**5.61**	**30**	P	**P**	**13 57 08.4**	**+1.0**
	SNR=58						
EKS2	**Erkin-Say**	**5.67**	**17**	P	**P**	**13 57 09.1**	**+0.8**
	SNR=81						
AAK	**Ala-Archa**	**5.83**	**22**	P	**P**	**13 57 11.7**	**+1.2**
	SNR=173						
AAK	**Ala-Archa**	**5.83**	**22**	⇓P	**P**	**13 57 11.5**	**+1.0**
	46nm,0.3s						
AAK				⇑S	**S**	**13 58 15.1**	**-1.6**
	61nm,0.5s						
KK31	**Karatay Array**	**5.89**	**353**	⇓P	**P**	**13 57 10.8**	**-0.5**
	8.5nm,0.2s,baz=177,slow=14,SNR=232						
KK31				⇑S	**S**	**13 58 12.7**	**-5.4**
	14nm,0.3s,baz=182,slow=20,SNR=6.6						
KK31	**Karatay Array**	**5.89**	**353**	⇓P	**P**	**13 57 10.8**	**-0.5**
	8.5nm,0.3s						
KK31				S	**S**	**13 58 12.7**	**-5.4**
KKAR	**Karatay Array**	**5.89**	**353**	*i* PN	**P**	**13 57 10.7**	**-0.5**
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.2s						
THN	**Thein Dam**	**5.92**	**143**	*e*P	**P**	**13 57 14.1**	**+2.4**
THN				*e*S	**S**	**13 58 18.7**	**-0.2**
DLH	**Dalhousie**	**5.96**	**141**	*e*P	**P**	**13 57 17.0**	**+4.8**
DLH				*e*S	**S**	**13 58 21.0**	**+1.2**
KBK	**Karagaybulak**	**6.00**	**25**	P	**P**	**13 57 14.0**	**+1.3**
	SNR=35						
ULHL	**Ulahol**	**6.17**	**35**	P	**P**	**13 57 16.1**	**+1.0**
	SNR=47						
CHMS	**Chumysh**	**6.24**	**22**	P	**P**	**13 57 16.9**	**+0.7**
	SNR=64						
USP	**Ospenovka**	**6.42**	**20**	P	**P**	**13 57 18.8**	**+0.2**
	SNR=40						
TKM2	**Tokmak 2**	**6.46**	**28**	P	**P**	**13 57 19.9**	**+0.8**
	SNR=60						
BHK	**Bhakra**	**7.10**	**144**	*e*x	x	13 58 48.2	
SDNR	**Sundarnagar**	**7.30**	**140**	*e*P	**P**	**13 57 31.8**	**+1.1**
SDNR				*e*S	**S**	**13 58 49.4**	**-3.2**
SMLA	**Simla**	**7.70**	**141**	*e*P	**P**	**13 57 37.1**	**+1.0**
SMLA				*e*S	**S**	**13 58 57.4**	**-5.0**
KLP	**Kalpa**	**7.97**	**134**	*e*P	**P**	**13 57 42.4**	**+2.5**
KLP				*e*S	**S**	**13 59 03.9**	**-5.1**
NDI	**New Delhi**	**9.80**	**149**	*e*P	**P**	**13 58 05.0**	**+0.5**
NDI				*e*S	**S**	**13 59 45.0**	**-8.3**
KHET	**Khetri**	**9.85**	**157**	*e*P	**P**	**13 58 04.3**	**-0.8**
KHET				*e*S	**S**	**13 59 48.6**	**-5.8**
KHET				AML	AML	13 59 50.9	
	comp=N,59nm,0.4s						
KHET				AML	AML	13 59 51.1	
	comp=E,66nm,0.4s						
KUDL	**Kundal**	**10.01**	**154**	*e*P	**P**	**13 58 06.6**	**-0.7**
KUDL				*e*S	**S**	**13 59 50.4**	**-7.9**
SONA	**Sohna**	**10.13**	**151**	*e*P	**P**	**13 58 08.0**	**-0.9**
SONA				*e*S	**S**	**13 59 55.1**	**-6.2**
SONA				AML	AML	13 59 57.9	
	comp=E,62nm,0.2s						
SONA				AML	AML	13 59 58.3	
	comp=N,35nm,0.4s						
MK02	**Makanchi Array**	**12.42**	**37**	⇓P	**P**	**13 58 39.4**	**0.0**
MK02				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MK31	**Makanchi Array**	**12.43**	**37**	⇓P	**P**	**13 58 39.4**	**-0.1**
	comp=Z,3.5nm,0.5s,baz=225,slow=15,SNR=31						
MK31	**Makanchi Array**	**12.43**	**37**	⇓P	**P**	**13 58 39.4**	**-0.1**
	comp=Z,3.5nm,0.5s						
MKAR	**Makanchi Array**	**12.43**	**37**	P	**P**	**13 58 39.0**	**-0.5**
	comp=Z,1.3nm,0.3s,baz=225,slow=15,SNR=46						
MKAR	**Makanchi Array**	**12.43**	**37**	*e*P	**P**	**13 58 39.4**	**-0.1**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KOLN	**Koldanda**	**13.90**	**129**	*e*Pn	**P**	**13 58 57.8**	**-0.8**
KOLN				*e*Sn	**S**	**14 01 22.6**	**-8.1**
	comp=Z,26nm,0.7s						
KOLN	**Koldanda**	**13.90**	**129**	*e*Pn	**P**	**13 58 57.8**	**-0.8**
	comp=Z,13nm,0.7s						
KOLN				*e*Sn	**S**	**14 01 22.6**	**-8.1**
GKN	**Gorkha**	**14.39**	**126**	*e*Pn	**P**	**13 59 02.5**	**-2.5**
GKN				*e*Sn	**S**	**14 01 33.3**	**-9.0**
	comp=Z,22nm,0.3s						
AB31	**Akbulak array**	**14.64**	**329**	⇑P	**P**	**13 59 05.0**	**-3.0**
	comp=Z,1.5nm,0.3s,baz=134,slow=14,SNR=140						
AB31				⇓S	**S**	**14 01 32.9**	**-15**
	comp=Z,2.8nm,0.4s,baz=147,slow=23,SNR=8.2						
AB31	**Akbulak array**	**14.64**	**329**	⇑P	**P**	**13 59 05.0**	**-3.0**
	comp=Z,1.5nm,0.3s						
AB31				S	**S**	**14 01 32.9**	**-15**
KKN	**Kakani**	**14.95**	**125**	*e*Pn	**P**	**13 59 10.3**	**-1.9**
DMN	**Daman**	**14.96**	**126**	*e*Pn	**P**	**13 59 11.0**	**-1.3**
DMN				*e*Sn	**S**	**14 01 46.1**	**-9.5**
PKI	**Pulchoki**	**15.18**	**126**	*e*Pn	**P**	**13 59 15.2**	**+0.1**
GUN	**Gumba**	**15.26**	**124**	*e*Pn	**P**	**13 59 14.7**	**-1.4**
VOSK	**Vostochnaya**	**15.47**	**359**	⇑P	**P**	**13 59 16.0**	**-2.5**
	comp=Z,5.1nm,0.9s						
VOSK	**Vostochnaya**	**15.47**	**359**	⇑P	**P**	**13 59 16.0**	**-2.6**
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BVA0	**Borovoye Array**	**15.79**	**357**	⇑P	**P**	**13 59 21.1**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=160,slow=13,SNR=30						
BVA0	**Borovoye Array**	**15.79**	**357**	⇑P	**P**	**13 59 21.1**	**-1.4**
	comp=Z,0.5nm,0.6s						
BVA0	**Borovoye Array**	**15.79**	**357**	⇑P	**P**	**13 59 21.1**	**-1.4**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**15.79**	**357**	P	**P**	**13 59 20.7**	**-1.8**
	comp=Z,1.1nm,0.3s,baz=161,slow=12,SNR=26						
BVAR				S	**S**	**14 02 08.8**	**-5.5**
	comp=Z,0.4nm,0.3s,baz=167,slow=23,SNR=5.5						
BRVK	**Borovoye**	**15.82**	**357**	*e*P	**P**	**13 59 21.1**	**-1.9**

	comp=Z,2.5nm,0.6s						
BRVK	**Borovoye**	**15.82**	**357**	*e*P	**P**	**13 59 21.1**	**-1.9**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTK	**Aktyubinsk**	**16.34**	**328**	⇓P	**P**	**13 59 28.7**	**-0.8**
AKTK				S	**S**	**14 02 17.3**	**-10**
AKTO	**Aktyubinsk**	**16.34**	**328**	⇓P	**P**	**13 59 28.7**	**-0.8**
	comp=Z,1.8nm,1.1s						
AKTO				S	**S**	**14 02 17.3**	**-10**
	comp=Z,1.0nm,0.8s						
AKTO	**Aktyubinsk**	**16.34**	**328**	P	**P**	**13 59 28.8**	**-0.8**
	comp=Z,1.2nm,0.3s,baz=137,slow=13,SNR=12						
AKTO				S	**S**	**14 02 18.2**	**-8.8**
	comp=Z,0.4nm,0.3s,baz=103,slow=22,SNR=5.6						
AKTO	**Aktyubinsk**	**16.34**	**328**	P	**P**	**13 59 28.8**	**-0.7**
AKTO				S	**S**	**14 02 18.3**	**-8.7**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAL	**Zalesovo**	**19.04**	**25**	P	**P**	**14 00 00.9**	**-0.6**
	comp=Z,0.8nm,0.3s,baz=260,slow=10,SNR=8.0						
GNI	**Garni**	**21.07**	**286**	P	**P**	**14 00 25.8**	**+3.2**
	comp=Z,8.9nm,0.5s,mb4.3,baz=245,slow=2.1,SNR=6.3						
SONM	**Songino Array**	**27.57**	**56**	P	**P**	**14 01 25.7**	**+1.3**
	comp=Z,0.4nm,0.7s,mb3.1,baz=264,slow=14,SNR=3.5						
BRTR	**Keskin Array B**	**29.61**	**287**	P	**P**	**14 01 44.4**	**+1.6**
	comp=Z,0.8nm,0.6s,mb3.5,baz=108,slow=8.8,SNR=4.2						
AKASG	**Malin Array Be**	**32.80**	**308**	P	**P**	**14 02 10.9**	**+0.4**
	comp=Z,0.4nm,0.4s,mb3.6,baz=82,slow=6.7,SNR=4.5						
FINES	**FINESS Array B**	**37.09**	**325**	P	**P**	**14 02 47.5**	**+0.6**
	comp=Z,0.7nm,0.3s,mb4.1,baz=120,slow=8.1,SNR=14						
ARCES	**ARCESS Array B**	**40.60**	**337**	P	**P**	**14 03 17.1**	**+1.1**
	comp=Z,4.6nm,0.9s,mb4.3,baz=115,slow=8.4,SNR=14						
ARCES				LR	LR	14 23 09.6	
	comp=Z,182nm,18.5s,baz=183,slow=40						
HFS	**Hagfors**	**42.73**	**321**	P	**P**	**14 03 34.1**	**+0.8**
	comp=Z,6.7nm,0.4s,mb4.8,baz=106,slow=11,SNR=39						
NB2	**NORSAR Subarra**	**44.03**	**323**	P	**P**	**14 03 43.6**	**-0.3**
	comp=Z,2.0nm,0.5s,mb4.1,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.03**	**323**	P	**P**	**14 03 44.4**	**+0.6**
	comp=Z,3.1nm,0.7s,mb4.2,baz=94,slow=7.8,SNR=9.9						
NOA	**NORSAR Array B**	**44.03**	**323**	P	**P**	**14 03 44.4**	**+0.6**
NAO	**NORSAR Subarra**	**44.20**	**322**	P	**P**	**14 03 43.6**	**-1.6**
	comp=Z,2.0nm,0.5s,mb4.1						
NAO	**NORSAR Subarra**	**44.20**	**322**	P	**P**	**14 03 43.6**	**-1.6**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.1						
EKA	**Eskdalemuir Ar**	**52.03**	**316**	P	**P**	**14 04 46.0**	**0.0**
	comp=Z,2.2nm,0.7s,mb4.3,baz=80,slow=7.1,SNR=4.5						
ESDC	**Sonseca Array**	**57.47**	**298**	P	**P**	**14 05 26.0**	**+0.3**
	comp=Z,1.2nm,0.4s,mb4.2,baz=56,slow=7.6,SNR=6.5						
CBIJ	**Chichi jima**	**59.43**	**78**	LR	LR	14 31 24.0	
	comp=Z,170nm,18.2s,baz=337,slow=36						
INK	**Inuvik**	**73.09**	**9**	P	**P**	**14 07 06.8**	**+1.5**
	comp=Z,2.9nm,0.6s,mb4.3,baz=0.6,slow=6.0,SNR=29						
ILAR	**Eielson Array**	**73.94**	**16**	P	**P**	**14 07 10.6**	**+0.2**
	comp=Z,0.3nm,0.6s,mb3.2,baz=303,slow=4.8,SNR=4.8						
YKA	**Yellowknife Ar**	**80.47**	**3**	P	**P**	**14 07 47.8**	**+1.1**
	comp=Z,1.4nm,0.5s,mb4.0,baz=348,slow=5.5,SNR=6.4						
YKA	**Yellowknife Ar**	**80.47**	**3**	P	**P**	**14 07 47.8**	**+1.1**
WRA	**Warramunga Arr**	**82.04**	**122**	P	**P**	**14 07 56.3**	**+0.6**
	comp=Z,0.3nm,0.7s,mb3.2,baz=326,slow=4.8,SNR=4.4						

*NEIC **16** 14:02:35.1±0.6,36.08N×71.25E,h10^{km},mb3.8/6,Error ellipse: s-maj=12.7km s-min=5.9km az=53.0*
*MOS **16** 14:02:36.3±1.1,36.09N×71.32E,h33^{km},mb4.4/2,Error ellipse: s-maj=15.6km s-min=6.9km az=94.5*
*IDC **16** 14:02:40.8±5.6,36.16N×71.48E,h55^{km}±48^{km},mb3.8/10, mb1 4.0/13,mb1mx3.8/23,mbtmp4.1/13,ML3.8/3,Error ellipse: s-maj=30.3km s-min=20.5km az=24.0*
*NNC **16** 14:02:50.2±4.2,36.84N×70.87E,h102^{km}±46^{km},mpv4.2, Error ellipse: s-maj=32.4km s-min=28.2km az=41.0*
ISC 16 14:02:41.0±0.9,**36.14N**±0.04×**71.44E**±0.10,**h83**^{km}±10^{km}, **n67**,σ**1^{s}34**/80,**mb3.9**/10,**6C-6D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.12**	**135**	*e*P	**P**	**14 04 00.0**	**+3.3**
THN				*e*S	**S**	**14 05 00.0**	**+4.9**
DLH	**Dalhousie**	**5.19**	**132**	*e*P	**P**	**14 04 02.0**	**+4.3**
DLH				*e*x	x	14 05 03.0	
AML	**Almayashu**	**6.24**	**16**	P	**P**	**14 04 13.3**	**+1.2**
	SNR=92						
BHK	**Bhakra**	**6.27**	**137**	*e*x	x	14 05 29.2	
SDNR	**Sundarnagar**	**6.53**	**134**	*e*P	**P**	**14 04 17.4**	**+1.2**
SDNR				*e*x	x	14 05 28.6	
UCH	**Uchtor**	**6.53**	**21**	P	**P**	**14 04 17.6**	**+1.3**
	SNR=23						
KZA	**Kyzart**	**6.63**	**25**	P	**P**	**14 04 18.4**	**+0.7**
	SNR=7.6						
EKS2	**Erkin-Say**	**6.76**	**15**	P	**P**	**14 04 20.1**	**+0.7**
	SNR=19						
AAK	**Ala-Archa**	**6.90**	**19**	P	**P**	**14 04 22.2**	**+0.8**
	SNR=40						
AAK	**Ala-Archa**	**6.90**	**19**	⇑Pn	**P**	**14 04 21.9**	**+0.4**
	17nm,0.5s						
AAK				⇓Sn	**S**	**14 05 34.9**	**-4.1**
	15nm,0.8s						
AAK	**Ala-Archa**	**6.90**	**19**	*e*Pn	**P**	**14 04 19.6**	**-1.8**
AAK				Sn	**S**	**14 05 34.9**	**-4.2**
KK31	**Karatay Array**	**6.99**	**354**	Pn	**P**	**14 04 21.6**	**-1.1**
	3.1nm,0.3s,baz=200,slow=13,SNR=64						
KK31				⇓Sn	**S**	**14 05 33.7**	**-7.5**
	13nm,0.6s,baz=178,slow=22,SNR=6.3						
KK31				⇑Lg		14 06 14.4	
	7.4nm,0.5s,baz=177,slow=29,SNR=4.1						
KBK	**Karagaybulak**	**7.05**	**22**	P	**P**	**14 04 24.6**	**+1.2**
	SNR=13						
ULHL	**Ulahol**	**7.15**	**30**	P	**P**	**14 04 26.3**	**+1.5**
	SNR=8.6						
KLP	**Kalpa**	**7.29**	**127**	*e*P	**P**	**14 04 29.0**	**+2.2**
KLP				*e*S	**S**	**14 05 48.1**	**-0.6**
KLP				AML	AML	14 05 56.9	
	comp=E,184nm,0.6s						
KLP				AML	AML	14 05 57.3	
	comp=N,194nm,0.7s						
CHMS	**Chumysh**	**7.31**	**19**	P	**P**	**14 04 27.2**	**+0.2**
	SNR=16						
TKM2	**Tokmak 2**	**7.50**	**24**	P	**P**	**14 04 31.4**	**+1.8**
	SNR=11						
USP	**Ospenovka**	**7.50**	**17**	P	**P**	**14 04 29.3**	**-0.3**
	SNR=9.7						
KHET	**Khetri**	**8.85**	**154**	*e*P	**P**	**14 04 46.7**	**-1.3**
KHET				*e*S	**S**	**14 06 19.6**	**-7.4**
KHET				AML	AML	14 06 29.1	
	comp=N,21nm,0.1s						
KHET				AML	AML	14 06 29.3	
	comp=E,14nm,0.1s						
NDI	**New Delhi**	**8.89**	**145**	*e*S	**S**	**14 06 27.0**	**-1.0**
KUDL	**Kundal**	**9.05**	**150**	*e*P	**P**	**14 04 51.6**	**+1.0**
KUDL				*e*S	**S**	**14 06 24.4**	**-7.3**
SONA	**Sohna**	**9.20**	**147**	*e*P	**P**	**14 04 53.7**	**+0.9**
SONA				*e*S	**S**	**14 06 30.1**	**-5.4**
SONA				AML	AML	14 06 35.9	
	comp=N,11nm,0.3s						
SONA				AML	AML	14 06 37.2	
	comp=E,22nm,0.2s						
KOLN	**Koldanda**	**13.27**	**126**	*e*Pn	**P**	**14 05 46.8**	**-0.3**
KOLN				*e*Sn	**S**	**14 08 05.8**	**-7.2**
	comp=E,14nm,0.6s						
KOLN	**Koldanda**	**13.27**	**126**	*e*Pn	**P**	**14 05 46.8**	**-0.3**
	comp=E,7.1nm,0.6s						
KOLN				*e*Sn	**S**	**14 08 05.8**	**-7.2**
MK02	**Makanchi Array**	**13.38**	**34**	P	**P**	**14 05 54.1**	**+5.7**
MK02				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK31	**Makanchi Array**	**13.38**	**34**	P	**P**	**14 05 54.1**	**+5.6**
	comp=Z,0.7nm,0.5s,baz=207,slow=10,SNR=9.7						
MK31	**Makanchi Array**	**13.38**	**34**	P	**P**	**14 05 54.1**	**+5.6**
	comp=Z,0.7nm,0.5s						
MKAR	**Makanchi Array**	**13.38**	**34**	P	**P**	**14 05 46.7**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=221,slow=17,SNR=3.8						
GKN	**Gorkha**	**13.81**	**122**	*e*Pn	**P**	**14 05 53.3**	**-0.9**
GKN				*e*Sn	**S**	**14 08 16.4**	**-9.5**
	comp=Z,23nm,0.4s						
DMN	**Daman**	**14.38**	**122**	*e*Pn	**P**	**14 06 00.2**	**-1.4**
DMN				*e*Sn	**S**	**14 08 29.5**	**-10**
	comp=Z,23nm,0.6s						
KKN	**Kakani**	**14.39**	**121**	*e*Pn	**P**	**14 06 00.2**	**-1.5**
PKI	**Pulchoki**	**14.61**	**122**	*e*Pn	**P**	**14 06 03.5**	**-1.1**
GUN	**Gumba**	**14.73**	**120**	*e*Pn	**P**	**14 06 04.4**	**-1.7**
KURK	**Kurchatov**	**15.46**	**17**	P	**P**	**14 06 17.8**	**+2.5**
KURK	**Kurchatov**	**15.46**	**17**	*e*P	**P**	**14 06 16.7**	**+1.4**
	comp=Z,8.8nm,0.9s						
KURK	**Kurchatov**	**15.46**	**17**	*e*P	**P**	**14 06 16.7**	**+1.4**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AB31	**Akbulak array**	**15.57**	**331**	⇓P	**P**	**14 06 14.3**	**-2.3**
	comp=Z,0.5nm,0.3s,baz=123,slow=9.0,SNR=29						
AB31				⇑S	**S**	**14 08 53.0**	**-14**
	comp=Z,0.6nm,0.3s,baz=152,slow=23,SNR=4.9						
AB31	**Akbulak array**	**15.57**	**331**	⇓P	**P**	**14 06 14.3**	**-2.3**
	comp=Z,0.5nm,0.3s						
AB31				S	**S**	**14 08 53.0**	**-14**
VOSK	**Vostochnaya**	**16.59**	**359**	⇑P	**P**	**14 06 26.7**	**-2.7**
	comp=Z,5.8nm,1.6s						
VOSK	**Vostochnaya**	**16.59**	**359**	⇑P	**P**	**14 06 26.7**	**-2.7**
	comp=Z,5.8nm,1.6s						
VOSK	**Vostochnaya**	**16.59**	**359**	⇑P	**P**	**14 06 26.7**	**-2.6**
VOSK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
BVA0	**Borovoye Array**	**16.90**	**358**	P	**P**	**14 06 31.4**	**-1.8**
	comp=Z,0.4nm,0.8s,baz=201,slow=18,SNR=15						
BVAR	**Borovoye Array**	**16.90**	**358**	P	**P**	**14 06 32.2**	**-1.0**
	comp=Z,0.6nm,0.3s,baz=158,slow=9.0,SNR=12						
BRVK	**Borovoye**	**16.94**	**358**	*e*P	**P**	**14 06 32.2**	**-1.5**
	comp=Z,4.9nm,0.9s						
BRVK	**Borovoye**	**16.94**	**358**	*e*P	**P**	**14 06 32.2**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AKTK	**Aktyubinsk**	**17.27**	**330**	⇓P	**P**	**14 06 37.0**	**-1.0**
AKTO	**Aktyubinsk**	**17.27**	**330**	⇓P	**P**	**14 06 37.0**	**-1.0**
	comp=Z,0.5nm,0.5s						
AKTO	**Aktyubinsk**	**17.27**	**330**	P	**P**	**14 06 37.4**	**-0.5**
	comp=Z,1.0nm,0.3s,baz=150,slow=7.8,SNR=10						
ZAL	**Zalesovo**	**20.09**	**23**	P	**P**	**14 07 09.5**	**-0.4**
	comp=Z,13nm,0.3s,baz=259,slow=5.4,SNR=36						
NVS	**Novosibirsk**	**20.40**	**20**	*e*P	**P**	**14 07 11.1**	**-2.0**
SONM	**Songino Array**	**28.25**	**55**	P	**P**	**14 08 29.3**	**+1.2**
	comp=Z,0.5nm,0.5s,mb3.3,baz=257,slow=10,SNR=7.1						
AKASG	**Malin Array Be**	**33.45**	**309**	P	**P**	**14 09 14.2**	**+0.4**
	comp=Z,0.8nm,0.4s,mb3.9,baz=80,slow=7.9,SNR=5.8						
FINES	**FINESS Array B**	**37.98**	**326**	P	**P**	**14 09 53.4**	**+1.5**
	comp=Z,2.1nm,0.6s,mb4.1,baz=101,slow=9.7,SNR=12						
FINES	**FINESS Array B**	**37.98**	**326**	P	**P**	**14 09 53.4**	**+1.5**
ARCES	**ARCESS Array B**	**41.61**	**338**	P	**P**	**14 10 23.3**	**+1.5**
	comp=Z,2.9nm,0.6s,mb4.2,baz=106,slow=8.8,SNR=7.8						
ARCES	**ARCESS Array B**	**41.61**	**338**	P	**P**	**14 10 23.3**	**+1.5**
NB2	**NORSAR Subarra**	**44.88**	**323**	P	**P**	**14 10 48.7**	**+0.3**
	comp=Z,2.7nm,0.6s,mb4.2,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.88**	**323**	P	**P**	**14 10 49.1**	**+0.7**
	comp=Z,2.2nm,0.5s,mb4.2,baz=96,slow=7.7,SNR=10						
NAO	**NORSAR Subarra**	**45.05**	**323**	P	**P**	**14 10 48.7**	**-1.0**
	comp=Z,2.7nm,0.6s,mb4.2						
NAO	**NORSAR Subarra**	**45.05**	**323**	P	**P**	**14 10 48.7**	**-1.0**
NAO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
INK	**Inuvik**	**74.20**	**9**	P	**P**	**14 14 10.7**	**+0.9**
	comp=Z,0.7nm,0.4s,mb3.7,baz=322,slow=4.9,SNR=10						
INK	**Inuvik**	**74.20**	**9**	*e*P	**P**	**14 14 10.5**	**+0.8**
	comp=Z,0.7nm,0.5s,mb3.6						
INK	**Inuvik**	**74.20**	**9**	*e*P	**P**	**14 14 10.5**	**+0.8**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BOSA	**Boshof**	**77.70**	**220**	P	**P**	**14 14 32.3**	**+2.0**
	comp=Z,2.2nm,0.7s,mb4.0,baz=204,slow=8.9,SNR=3.6						
WRA	**Warramunga Arr**	**81.50**	**122**	P	**P**	**14 14 52.0**	**+1.2**
	comp=Z,0.3nm,0.3s,mb3.6,baz=324,slow=4.9,SNR=16						
YKA	**Yellowknife Ar**	**81.59**	**3**	P	**P**	**14 14 51.5**	**+1.1**
	comp=Z,2.1nm,0.8s,mb4.0,baz=347,slow=5.8,SNR=4.1						
YKA	**Yellowknife Ar**	**81.59**	**3**	P	**P**	**14 14 51.5**	**+1.1**

*PGC **16** 14:07:38.6,49.87N×130.14W,h10^{km},MLSn3.8/2, Mw4.9/6,Mw4.4,mb4.4/12(NEIC),West of Vancouver Island, British Columbia*
*IDC **16** 14:07:39.8±1.2,49.92N×129.90W,mb3.9/6,mb1 4.2/14, mb1mx4.1/27,mbtmp4.0/14,ML3.6/7,MS4.0/19,Ms1 4.0/19, ms1mx3.9/28,Error ellipse: s-maj=21.5km s-min=11.5km az=66.0*
*BJI **16** 14:07:40.5,50.14N×130.51W,h10^{km},mB4.9,mb4.7, Ms4.5,Msz4.3*
*NEIC **16** 14:07:41.9±0.4,49.99N×129.77W,h10^{km},mb4.4/12, MW4.9(PGC),Error ellipse: s-maj=7.5km s-min=3.6km az=64.0*
ISC 16 14:07:39.9±0.3,**49.98N**±0.02×**129.79W**±0.03,**h10**^{km}, **n123**,σ**1^{s}00**/144,**mb4.3**/14,**MS4.1**/14,**3D,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.25**	**58**	Pn	**Pn**	**14 08 03.4**	**0.0**
HOLB				Sn	**Sn**	**14 08 23.5**	**+3.2**
	comp=Z,334nm,0.6s						
HOLB				Trac		14 08 33.0	
	comp=Z,334nm,0.6s						
BPBC	**Brooks Peninsu**	**1.31**	**82**	Pn	**Pn**	**14 08 03.4**	**-0.9**
BPBC				Sn	**Sn**	**14 08 23.2**	**+1.3**
	comp=Z,504nm,0.3s						
BPBC				Trac		14 08 23.6	
	comp=Z,504nm,0.3s						
PHC	**Port Hardy**	**1.68**	**63**	⇓Pn	**Pn**	**14 08 09.4**	**-0.1**
PHC				Sn	**Sn**	**14 08 32.8**	**+1.6**
PHC				Trac		14 08 33.5	
	comp=Z,123nm,0.3s						
EDB	**Eliza Dome**	**1.73**	**93**	Pn	**Pn**	**14 08 08.9**	**-1.3**
EDB				Sn	**Sn**	**14 08 32.1**	**-0.4**
EDB				Trac		14 08 50.1	
	comp=Z,155nm,0.7s						
MAYB	**Maynard**	**1.73**	**75**	Pn	**Pn**	**14 08 09.9**	**-0.4**
MAYB				Sn	**Sn**	**14 08 33.5**	**+0.9**
	comp=Z,163nm,0.6s						
MAYB				Trac		14 08 36.6	
	comp=Z,163nm,0.6s						
WOSB	**Woss**	**2.08**	**84**	Pn	**Pn**	**14 08 15.0**	**-0.3**
WOSB				Sn	**Sn**	**14 08 42.3**	**+0.8**
	comp=Z,53nm,0.4s						
WOSB				Trac		14 08 46.6	
	comp=Z,53nm,0.4s						
ETB	**Estevan Point**	**2.20**	**105**	Pn	**Pn**	**14 08 17.1**	**+0.2**
NCRB	**Newcastle Ridg**	**2.44**	**79**	Pn	**Pn**	**14 08 20.8**	**+0.4**
NCRB				Sn	**Sn**	**14 08 51.5**	**+1.0**
	comp=Z,99nm,0.5s						
NCRB				Trac		14 08 54.4	
	comp=Z,99nm,0.5s						
GDR	**Gold River**	**2.44**	**93**	Pn	**Pn**	**14 08 20.1**	**-0.4**
GDR				Sn	**Sn**	**14 08 48.4**	**-2.1**
	comp=Z,148nm,0.9s						
GDR				Trac		14 09 10.8	
	comp=Z,148nm,0.9s						
BBB	**Bella Bella**	**2.45**	**25**	Pn	**Pn**	**14 08 20.6**	**+0.1**
	212nm,0.3s,baz=128,slow=18,SNR=2993						
BBB				Sn	**Sn**	**14 08 50.2**	**-0.6**
	36nm,0.3s,baz=293,slow=22,SNR=12						
BBB				LR	LR	14 09 25.1	
	comp=Z,2µm,20.5s,baz=6.4,slow=42						
BBB	**Bella Bella**	**2.45**	**25**	⇓Pn	**Pn**	**14 08 20.4**	**-0.1**
BBB				Pn	**Pn**	**14 08 20.6**	**+0.1**
BBB				Sn	**Sn**	**14 08 49.2**	**-1.5**
BBB				Sn	**Sn**	**14 08 50.2**	**-0.6**
BBB				Trac		14 08 56.0	
	comp=Z,211nm,0.6s						
BTB	**Buttle Lake**	**2.82**	**99**	Pn	**Pn**	**14 08 25.9**	**+0.1**
BTB				Sn	**Sn**	**14 08 58.9**	**-1.3**
	comp=Z,55nm,0.5s						
BTB				Trac		14 09 02.4	
	comp=Z,55nm,0.5s						
CBB	**Campbell River**	**2.85**	**87**	Pn	**Pn**	**14 08 26.2**	**-0.1**
CBB				Sn	**Sn**	**14 09 01.9**	**+0.7**
CBB				Trac		14 09 04.6	
	comp=Z,32nm,0.5s						
BNB	**Barry Inlet**	**2.88**	**335**	Pn	**Pn**	**14 08 23.4**	**-3.3**
BNB				Sn	**Sn**	**14 08 56.2**	**-5.5**
	comp=Z,504nm,0.3s						
BNB				Trac		14 08 57.8	
	comp=Z,504nm,0.3s						
OZB	**Mount Ozzard**	**2.98**	**108**	Pn	**Pn**	**14 08 28.3**	**+0.1**
OZB				Sn	**Sn**	**14 09 02.9**	**-1.5**
OZB				Trac		14 09 11.8	
	comp=Z,41nm,0.7s						
ALB	**Alberni**	**3.30**	**101**	Pn	**Pn**	**14 08 32.6**	**-0.1**
ALB				Sn	**Sn**	**14 09 11.7**	**-0.7**
	comp=Z,9.9nm,0.4s						
ALB				Trac		14 09 29.5	
	comp=Z,9.9nm,0.4s						
MGB	**Mount Grey**	**3.46**	**105**	Pn	**Pn**	**14 08 35.0**	**0.0**
MGB				Sn	**Sn**	**14 09 15.8**	**-0.7**
MGB				Trac		14 09 19.8	
	comp=Z,66nm,0.9s						
TXB	**Texada**	**3.48**	**93**	Pn	**Pn**	**14 08 35.8**	**+0.6**
TXB				Sn	**Sn**	**14 09 17.9**	**+1.1**
	comp=Z,90nm,0.8s						
TXB				Trac		14 09 33.8	
	comp=Z,90nm,0.8s						
MOBC	**Moresby Island**	**3.48**	**339**	Pn	**Pn**	**14 08 31.7**	**-3.5**
MOBC				Sn	**Sn**	**14 09 12.7**	**-4.2**
MOBC				Trac		14 09 13.9	
	comp=Z,10.0nm,0.5s						
BNAB	**Bonilla**	**3.56**	**352**	Pn	**Pn**	**14 08 34.8**	**-1.5**
BNAB				Sn	**Sn**	**14 09 12.9**	**-6.0**
	comp=Z,12nm,0.5s						
BNAB				Trac		14 09 19.7	
	comp=Z,12nm,0.5s						
VIB	**Van Inlet**	**3.70**	**333**	Pn	**Pn**	**14 08 34.0**	**-4.3**
PFB	**Port Renfrew**	**3.78**	**110**	Pn	**Pn**	**14 08 39.2**	**-0.3**
PFB				Sn	**Sn**	**14 09 21.0**	**-3.5**
PFB				Trac		14 09 33.3	
	comp=Z,11nm,0.7s						
NLLB	**Nanaimo Lost L**	**3.85**	**99**	Pn	**Pn**	**14 08 41.8**	**+1.3**
NLLB				Sn	**Sn**	**14 09 25.4**	**-0.8**
NLLB				Trac		14 09 32.8	
	comp=Z,48nm,0.9s						
SHB	**Sechelt**	**3.85**	**93**	Pn	**Pn**	**14 08 40.7**	**+0.2**
SHB				Sn	**Sn**	**14 09 27.0**	**+0.7**
SHB				Trac		14 09 46.7	
	comp=Z,60nm,0.7s						
LZB	**Mount Lazard**	**4.14**	**107**	Pn	**Pn**	**14 08 44.5**	**-0.1**
LZB				Sn	**Sn**	**14 09 31.5**	**-2.1**
LZB				Trac		14 09 37.4	
	comp=Z,9.9nm,0.7s						
GOBB	**Galiano Island**	**4.22**	**102**	Pn	**Pn**	**14 08 46.8**	**+1.0**
GOBB				Sn	**Sn**	**14 09 33.6**	**-2.2**
	comp=Z,9.0nm,0.5s						
GOBB				Trac		14 09 41.2	
	comp=Z,9.0nm,0.5s						
BIB	**Bowen Island**	**4.25**	**95**	Pn	**Pn**	**14 08 46.4**	**+0.2**
WPB	**Watts Point**	**4.27**	**92**	Pn	**Pn**	**14 08 47.2**	**+0.7**
WPB				Sn	**Sn**	**14 09 35.7**	**-1.3**
	comp=Z,111nm,1.2s						
WPB				Trac		14 10 20.9	
	comp=Z,111nm,1.2s						
PGC	**Sidney**	**4.36**	**105**	P	**Pn**	**14 08 46.4**	**-1.2**
PGC				Pn	**Pn**	**14 08 47.5**	**-0.2**
PGC				Sn	**Sn**	**14 09 39.1**	**0.0**
PGC	**Sidney**	**4.36**	**105**	*e*P	**Pn**	**14 08 46.4**	**-1.2**
RUBB	**Prince Rupert**	**4.36**	**356**	Pn	**Pn**	**14 08 47.3**	**-0.4**
RUBB				Sn	**Sn**	**14 09 38.6**	**-0.6**
RUBB				Trac		14 09 42.2	
	comp=Z,29nm,0.5s						
WSLR	**Whistler**	**4.43**	**86**	Pn	**Pn**	**14 08 49.7**	**+1.0**
WSLR				Trac		14 10 07.2	
	comp=Z,26nm,0.8s						
SNB	**Saturna Island**	**4.49**	**103**	Pn	**Pn**	**14 08 50.2**	**+0.6**
SNB				Sn	**Sn**	**14 09 41.2**	**-1.3**
SNB				Trac		14 09 49.1	
	comp=Z,36nm,1.1s						
VGZ	**Gonzales**	**4.52**	**108**	Pn	**Pn**	**14 08 49.8**	**-0.3**
VGZ				Trac		14 09 55.1	
	comp=Z,9.1nm,0.7s						
HNB	**Haney**	**4.74**	**96**	Pn	**Pn**	**14 08 53.9**	**+0.8**
HNB				Sn	**Sn**	**14 09 48.0**	**-0.8**
VDB	**Vedder Mountai**	**5.10**	**98**	Pn	**Pn**	**14 08 58.9**	**+0.7**
LLLB	**Lillooet**	**5.11**	**80**	Pn	**Pn**	**14 08 58.0**	**-0.3**
HOPB	**Hope**	**5.46**	**93**	Pn	**Pn**	**14 09 04.0**	**+0.6**
HOPB				Trac		14 10 12.2	
	comp=Z,7.0nm,0.3s						
PNT	**Penticton**	**6.64**	**92**	Pn	**Pn**	**14 09 20.4**	**+0.4**
PNT				Trac		14 11 07.8	
	comp=Z,7.0nm,0.6s						
TBM	**Table Mountain**	**6.72**	**111**	P	**Pn**	**14 09 21.6**	**+0.6**
BMBC	**Bull Mountain**	**7.63**	**34**	Pn	**Pn**	**14 09 35.1**	**+1.3**
HAWA	**Hanford**	**7.74**	**114**	*e*P	**Pn**	**14 09 33.8**	**-1.5**
	1.8nm,1.3s						
OD2	**Odessa Site #2**	**7.78**	**105**	P	**Pn**	**14 09 34.8**	**-1.1**
DLBC	**Dease Lake**	**8.47**	**359**	Pn	**P**	**14 09 45.3**	**-0.3**
	0.3nm,0.3s,baz=198,slow=16,SNR=7.9						
DLBC				LR	LR	14 12 54.8	
	comp=Z,963nm,18.2s,baz=356,slow=37						
NEW	**Newport**	**8.49**	**97**	Pn	**P**	**14 09 45.2**	**-0.5**
	0.3nm,0.3s,baz=275,slow=13,SNR=5.5						
NEW	**Newport**	**8.49**	**97**	Pn	**P**	**14 09 45.2**	**-0.5**
BBOR	**Butler Butte**	**8.62**	**143**	P	**P**	**14 09 48.6**	**+0.9**
HUMO	**Hull Mountain**	**8.76**	**145**	*e*P	**P**	**14 09 48.8**	**-0.8**
	11nm,1.0s						
YBH	**Yreka Blue Hor**	**9.61**	**146**	*e*P	**P**	**14 10 00.2**	**-1.0**
	26nm,1.2s						
MOD	**Modoc**	**10.43**	**137**	*e*P	**P**	**14 10 12.4**	**0.0**
	12nm,1.0s						
WDC	**Whiskeytown Da**	**10.69**	**149**	*e*P	**P**	**14 10 16.0**	**-0.1**
	29nm,1.2s						
WVOR	**Wild Horse Val**	**10.79**	**130**	*e*P	**P**	**14 10 17.6**	**+0.1**
	11nm,0.7s						
MSO	**Missoula**	**11.00**	**101**	*e*P	**P**	**14 10 19.2**	**-1.1**
	5.3nm,1.0s						
CHMT	**Chamberlain Mo**	**11.40**	**99**	*e*P	**P**	**14 10 24.7**	**-1.1**
HLID	**Hailey**	**12.33**	**116**	*e*P	**P**	**14 10 37.9**	**-0.4**
	7.1nm,1.1s						
DLMT	**Dillon**	**12.47**	**105**	*e*P	**P**	**14 10 38.6**	**-1.6**
MCMT	**McKenzie Canyo**	**12.57**	**108**	*e*P	**P**	**14 10 40.4**	**-1.2**
PAHR	**Pah Rah Range**	**12.64**	**140**	*e*P	**P**	**14 10 42.8**	**+0.4**
	22nm,1.0s						
QLMT	**Earthquake Lak**	**13.45**	**106**	*e*P	**P**	**14 10 52.8**	**-0.4**
ELK	**Elko**	**13.76**	**127**	LR	LR	14 16 09.8	
	comp=Z,644nm,21.2s,baz=319,slow=37						
ELK	**Elko**	**13.76**	**127**	*e*P	**P**	**14 10 56.6**	**-0.6**
	12nm,1.3s						
YMR	**Madison River**	**13.82**	**105**	*e*P	**P**	**14 10 57.9**	**-0.1**
	19nm,1.1s						
NVAR	**Mina Array Bea**	**14.16**	**140**	Pn	**P**	**14 11 02.5**	**0.0**
	0.1nm,0.3s,baz=323,slow=10,SNR=27						
MNV	**Mina**	**14.22**	**140**	*e*P	**P**	**14 11 03.3**	**-0.1**
	19nm,1.3s						
IMW	**Indian Meadow**	**14.23**	**108**	*e*P	**P**	**14 11 04.4**	**+1.1**
	54nm,1.2s						
MOOW	**Moose Ponds**	**14.42**	**108**	*e*P	**P**	**14 11 07.8**	**+1.9**
	8.4nm,1.4s						
TPAW	**Teton Pass**	**14.44**	**110**	P	**P**	**14 11 08.6**	**+2.5**
	62nm,1.2s						
REDW	**Red Top Meadow**	**14.57**	**110**	P	**P**	**14 11 09.1**	**+1.2**
	68nm,1.4s						
SNOW	**Snow King Moun**	**14.57**	**109**	P	**P**	**14 11 10.1**	**+2.2**
	49nm,1.2s						
LOHW	**Long Hollow**	**14.58**	**109**	*e*P	**P**	**14 11 10.2**	**+2.2**
	45nm,1.4s						
TPH	**Tonopah**	**14.92**	**138**	*e*P	**P**	**14 11 12.8**	**+0.3**
	25nm,1.1s						
LRV	**Little Rabbit**	**14.97**	**152**	*e*P	**P**	**14 11 12.5**	**-0.5**
MTUM	**Tungsten Hills**	**14.99**	**143**	*e*P	**P**	**14 11 13.4**	**+0.1**
YKA	**Yellowknife Ar**	**15.06**	**28**	Pn	**P**	**14 11 12.6**	**-1.5**
	0.3nm,0.3s,baz=213,slow=13,SNR=5.6						
YKA				LR	LR	14 17 08.6	
	comp=Z,448nm,19.5s,baz=215,slow=38						
DUG	**Dugway**	**15.44**	**123**	*e*P	**P**	**14 11 19.1**	**-0.2**
	30nm,1.3s						
KDAK	**Kodiak Island**	**15.49**	**309**	LR	LR	14 15 43.4	
	comp=Z,1µm,20.4s,baz=149,slow=31						
PDAR	**Pinedale Array**	**15.69**	**110**	Pn	**P**	**14 11 25.2**	**+2.8**
	0.1nm,0.3s,baz=304,slow=11,SNR=43						
PDAR				LR	LR	14 17 14.6	
	comp=Z,433nm,19.8s,baz=62,slow=36						
DAU	**Daniels Canyon**	**16.15**	**119**	*e*P	**P**	**14 11 29.1**	**+0.7**
TPNV	**Topopah Spring**	**16.28**	**138**	*e*P	**P**	**14 11 29.8**	**-0.3**
	54nm,1.4s						
DAC	**Darwin (Calif)**	**16.30**	**143**	*e*P	**P**	**14 11 30.5**	**+0.1**
	37nm,1.3s						
ISA	**Isabella**	**16.51**	**146**	*e*P	**P**	**14 11 33.6**	**+0.6**
	46nm,2.3s						
ARUT	**Antelope Range**	**16.91**	**130**	*e*P	**P**	**14 11 38.1**	**+0.1**
MSU	**Marysvale**	**17.00**	**126**	*e*P	**P**	**14 11 39.8**	**+0.7**
ILAR	**Eielson Array**	**17.36**	**335**	P	**P**	**14 11 43.9**	**+0.4**
	0.0nm,0.3s,baz=144,slow=12,SNR=8.1						
FFC	**Flin Flon**	**17.58**	**64**	*e*P	**P**	**14 11 46.6**	**+0.3**
	28nm,0.7s						
RSSD	**Black Hills**	**18.45**	**99**	*e*P	**P**	**14 11 56.6**	**-0.7**
	5.6nm,0.9s						
INK	**Inuvik**	**18.48**	**356**	P	**P**	**14 11 59.0**	**+1.7**
	0.1nm,0.3s,baz=182,slow=9.1,SNR=12						
INK				LR	LR	14 19 15.2	
	comp=Z,623nm,18.8s,baz=350,slow=38						
PV10	**Paradox Valley**	**18.80**	**120**	*e*P	**P**	**14 12 01.8**	**+0.3**
PFO	**Pinyon Flat Ob**	**19.09**	**144**	*e*P	**P**	**14 12 04.0**	**-1.1**
	15nm,1.3s						
PV01	**Paradox Valley**	**19.23**	**120**	*e*P	**P**	**14 12 06.6**	**-0.1**
SMCO	**Snowmass**	**19.43**	**115**	*e*P	**P**	**14 12 08.5**	**-0.5**

WUAZ	Wupatki	19.72	130	eP	P	14 12 11.2	-1.1
	13nm,1.1s						
IMA2	Indian Mountai	20.28	332	eP	P	14 12 17.7	-0.3
SDCO	Great Sand Dun	21.25	116	eP	P	14 12 28.2	0.0
	21nm,1.2s,mb4.3						
ULM	Lac du Bonnet	21.65	76	P	P	14 12 33.9	+1.8
	11nm,0.8s,mb4.3,baz=283,slow=11,SNR=10						
ULM				LR	LR	14 21 41.2	
	comp=Z,198nm,18.2s,MS3.5,baz=3.2,slow=39						
TUC	Tucson	22.62	134	eP	P	14 12 42.9	+1.0
	13nm,1.1s,mb4.3						
ANMO	Albuquerque	22.71	123	P	P	14 12 43.5	+0.7
	2.9nm,0.9s,mb3.7,baz=310,slow=9.1,SNR=6.4						
LAZ	Ladron	22.76	125	eP	P	14 12 44.6	+1.3
LENM	Lemitar	23.03	125	eP	P	14 12 47.4	+1.5
LPM	Los Pinos Moun	23.10	124	eP	P	14 12 48.0	+1.4
BNM	Barren Site	23.22	124	eP	P	14 12 48.4	+0.6
AMTX	Amarillo	25.45	116	eP	P	14 13 09.5	+0.2
	25nm,0.9s,mb4.7						
MNTX	Cornudas Mount	25.78	126	eP	P	14 13 12.1	-0.4
	14nm,1.4s,mb4.3						
TXAR	Lajitas Array	28.56	126	P	P	14 13 37.4	-0.4
	0.4nm,0.4s,mb3.5,slow=3.8,SNR=4.7						
SCHQ	Schefferville	37.56	58	LR	LR	14 30 19.8	
	comp=Z,273nm,21.0s,MS4.0,baz=301,slow=36						
ARCES	ARCESS Array B	59.43	10	LR	LR	14 43 16.2	
	comp=Z,130nm,18.3s,MS4.1,baz=2.7,slow=36						
MDJ	Mudanjiang	63.28	308	P	P	14 18 07.9	-2.8
MDJ				AMB	AMB		
	comp=Z,60nm,4.4s						
ROSC	El Rosal	64.60	115	LR	LR	14 47 04.2	
	comp=Z,40nm,18.1s,MS3.6,baz=22,slow=37						
NOA	NORSAR Array B	64.98	20	LR	LR	14 47 50.4	
	comp=Z,81nm,18.5s,MS4.0,baz=340,slow=37						
CN2	Changchun	65.94	310	eP	P	14 18 28.8	+0.9
CN2				eS	S	14 27 13.4	-0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
FINES	FINESS Array B	67.25	12	P	P	14 18 35.5	-0.4
	comp=Z,2.5nm,0.9s,mb4.2,baz=330,slow=11,SNR=3.2						
FINES				LR	LR	14 47 08.4	
	comp=Z,87nm,19.9s,MS4.0,baz=330,slow=35						
PPT	Papeete	69.49	200	LR	LR	14 44 27.1	
	comp=Z,252nm,19.5s,MS4.5,baz=315,slow=32						
SONM	Songino Array	71.20	324	LR	LR	14 51 20.8	
	comp=Z,198nm,18.2s,MS4.4,baz=171,slow=37						
HHC	Hu-ho-hao-te	74.76	316	eP	P	14 19 20.3	-1.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb4.4						
BVAR	Borovoye Array	75.96	348	P	P	14 19 29.1	+1.1
	comp=Z,0.4nm,0.7s,mb3.5,baz=346,slow=5.9,SNR=3.2						
GERES	GERESS Array B	76.67	24	LR	LR	14 52 43.3	
	comp=Z,76nm,18.9s,MS4.0,baz=1.4,slow=35						
GUMO	Guam	76.75	275	LR	LR	14 46 13.7	
	comp=Z,53nm,20.9s,MS3.8,baz=132,slow=30						
SSE	Sheshan	77.76	304	eP	P	14 19 37.0	-1.5
SSE				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.5						
SSE				AMB	AMB		
	comp=Z,160nm,3.9s						
SSE				LR	LR		
	comp=N,40nm,37.3s,MS3.5						
SSE				LR	LR		
	comp=E,10.0nm,37.2s,MS3.5						
SSE				LR	LR		
	comp=Z,60nm,29.3s						
MKAR	Makanchi Array	79.69	338	P	P	14 19 48.5	-0.2
	comp=Z,0.8nm,1.0s,mb3.6,slow=6.1,SNR=4.6						
MKAR				LR	LR	14 58 04.7	
	comp=Z,126nm,18.7s,MS4.3,baz=1.7,slow=38						
MKAR	Makanchi Array	79.69	338	P	P	14 19 48.5	-0.2
MKAR				LR	LR	14 58 04.7	
WMQ	Urumqi	81.02	334	⇓iP	P	14 19 57.0	+1.2
LZH	Lanzhou	82.08	319	eP	P	14 20 01.9	+0.4
LZH				AP	pP	14 20 05.3	+0.6
LZH				XP	sP	14 20 06.8	+1.1
LZH				PP	PP	14 23 11.3	-0.4
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,50nm,7.2s						
LZH				LR	LR		
	comp=N,430nm,15.2s						
LZH				LR	LR		
	comp=Z,670nm,17.8s,MS5.0						
LPAZ	La Paz	85.33	122	LR	LR	15 00 36.1	
	comp=Z,63nm,19.2s,MS4.0,baz=170,slow=37						

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*CSEM **16** 14:17:39.0±0.1, 34.87N×4.28W, h5^{km}, MD3.8, Error ellipse: s-maj=2.2km s-min=1.7km az=168.0*
*SFS **16** 14:17:39.0, 34.80N×4.20W, ML2.8*
*IGIL **16** 14:17:40.9±36.0, 34.84N×4.32W, h2^{km}, ML2.5*
*NEIC **16** 14:17:40.1, 34.84N×4.32W, MG4.0(MDD), After MDD.*
*MDD **16** 14:17:41.4±0.4, 34.92N×4.27W, mb4.0/12, Error ellipse: s-maj=4.2km s-min=3.7km az=98.0, PRXIMO*
*INMG **16** 14:17:41.6±1.2, 34.78N×4.35W, h18^{km}±12^{km}, ML2.8, Error ellipse: s-maj=9.1km s-min=3.9km az=1.0*
*CNRM **16** 14:17:42.4, 34.88N×4.11W, h4^{km}, MD3.8*
ISC 16 14:17:40.7±0.7**, 34.97N**±0.02×**4.38W**±0.03**, h13**^{km}±4^{km}**, n77,** σ1^{s}**25**/138**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	Palemas	0.44	54	P	Pg	14 17 50.0	+0.2
MPAL				S	Sg	14 17 54.0	-1.9
MPAL	Palemas	0.44	54	iP	Pg	14 17 50.0	+0.2
TOU	Touzarine	0.52	90	iP	Pb	14 17 48.0	-3.1
TZK	Tazeka	0.89	169	iP	Pb	14 17 57.0	-0.5
TZK				iS	Sb	14 18 08.0	-1.1
EMEL	Melilla	1.21	74	P	Pb	14 18 01.8	-1.3
	349nm,0.2s,SNR=18						
EMEL				S	Sb	14 18 19.0	+0.5
	275nm,0.1s,SNR=4.6						
EMLI	Melilla	1.22	74	P	Pb	14 18 01.8	-1.4
	349nm,0.2s,SNR=18						
EMLI				S	Sb	14 18 19.0	+0.4
	275nm,0.1s,SNR=4.6						
MELI	Melilla	1.23	74	P	Pb	14 18 01.7	-1.6
MELI				S	Sb	14 18 18.7	-0.2
MELI	Melilla	1.23	74	iP	Pb	14 18 01.7	-1.6
MELI				eS	Sb	14 18 18.7	-0.2
ZAI	Zaio	1.34	89	P	Pn	14 18 03.5	-1.8
ZAI				S	Sb	14 18 17.0	-5.2
ZAI	Zaio	1.34	89	iP	Pn	14 18 03.5	-1.8
EMIJ	Mijas	1.63	349	P	Pn	14 18 09.1	-0.2
	7.1nm,0.1s,SNR=9.6						
EMIJ				S	Sn	14 18 28.5	-1.7
	47nm,0.1s,SNR=9.4						
REAL	Reales	1.66	336	S	Sn	14 18 29.0	-2.0
EJIF	Jimena Fronter	1.73	329	P	Pn	14 18 12.2	+1.5
	6.8nm,0.2s,SNR=10						
EJIF				S	Sn	14 18 36.3	+3.5
	15nm,0.3s,SNR=4.0						
EGUA	Guajares	1.98	19	P	Pn	14 18 13.2	-1.2
	4.2nm,0.3s,SNR=7.9						
EGUA				S	Sn	14 18 40.8	+1.6
	6.7nm,0.2s,SNR=7.9						
EGUA	Guajares	1.98	19	P	Pn	14 18 13.2	-1.2
EGUA				S	Sn	14 18 40.8	+1.6
CZD	Col de Zad	2.01	196	iP	Pn	14 18 15.0	+0.2
CZD				iS	Sn	14 18 41.0	+1.1
ERON	Agron	2.10	13	P	Pn	14 18 16.6	+0.5
	12nm,0.2s,SNR=9.9						
ERON				S	Sn	14 18 42.4	+0.1
	14nm,0.2s,SNR=7.9						
LIJA	Lijar	2.10	337	iP	Pn	14 18 19.0	+2.8
LIJA				eS	Sn	14 18 49.5	+7.1
ELOJ	Sierra Loja	2.18	5	P	Pn	14 18 18.5	+1.2
	9.3nm,0.2s,SNR=11						
ELOJ				S	Sn	14 18 46.4	+1.9
	18nm,0.3s,SNR=4.0						
ELOJ	Sierra Loja	2.18	5	P	Pn	14 18 18.5	+1.2
	9.3nm,0.2s,SNR=11						
ELOJ				S	Sn	14 18 46.3	+1.9
	18nm,0.3s,SNR=4.0						
EBER	Berja	2.27	32	P	Pn	14 18 18.5	-0.1
	7.8nm,0.2s,SNR=12						
EBER				S	Sn	14 18 48.0	+1.2
	77nm,0.4s,SNR=7.4						
EBER	Berja	2.27	32	P	Pn	14 18 18.5	-0.1
	7.8nm,0.2s,SNR=12						
EBER				S	Sn	14 18 48.0	+1.2
	77nm,0.4s,SNR=7.4						
EQUE	Quentar	2.36	19	P	Pn	14 18 20.3	+0.4
	13nm,0.3s,SNR=17						
EQUE				S	Sn	14 18 51.1	+2.2
	34nm,0.4s,SNR=5.0						
ECOG	Cogollos-Vega	2.40	16	P	Pn	14 18 21.3	+0.9
	9.4nm,0.3s,SNR=4.0						
ECOG				S	Sn	14 18 51.3	+1.4
	11nm,0.2s,SNR=8.7						
ELUQ	Luque	2.59	2	P	Pn	14 18 26.4	+3.3
	12nm,0.2s,SNR=6.9						
ELUQ				S	Sn	14 18 56.7	+2.0
	23nm,0.2s,SNR=7.9						
ELUQ	Luque	2.59	2	P	Pn	14 18 26.4	+3.3
ELUQ				S	Sn	14 18 56.7	+2.0
EQES	Quesada	3.02	20	P	Pn	14 18 30.2	+0.9
	5.8nm,0.2s,SNR=22						
EQES				S	Sn	14 19 08.0	+2.3
	81nm,0.6s,SNR=8.0						
EQES	Quesada	3.02	20	P	Pn	14 18 30.2	+0.9
EQES				S	Sn	14 19 07.7	+2.0
EQES	Quesada	3.02	20	P	Pn	14 18 30.2	+0.9
	5.8nm,0.2s,SNR=22						
EQES				S	Sn	14 19 07.7	+2.0
	81nm,0.6s,SNR=8.0						
EHUE	Huescar	3.19	26	P	Pn	14 18 32.0	+0.3
	3.4nm,0.2s,SNR=10						
EHUE				S	Sn	14 19 10.4	+0.5
	6.3nm,0.3s,SNR=5.8						
EHUE	Huescar	3.19	26	P	Pn	14 18 32.0	+0.3
EHUE				S	Sn	14 19 11.3	+1.5
EHUE	Huescar	3.19	26	P	Pn	14 18 32.0	+0.4
	3.4nm,0.2s,SNR=10						
EHUE				S	Sn	14 19 11.4	+1.5
	6.3nm,0.3s,SNR=5.8						
EADA	Adamuz	3.20	357	P	Pn	14 18 32.7	+0.9
	2.7nm,0.1s,SNR=17						
EADA				S	Sn	14 19 10.7	+0.6
	4.5nm,0.2s,SNR=6.0						
EADA	Adamuz	3.20	357	P	Pn	14 18 32.7	+0.9
EADA				S	Sn	14 19 11.2	+1.1
EADA	Adamuz	3.20	357	P	Pn	14 18 32.7	+0.9
	2.7nm,0.1s,SNR=17						
EADA				S	Sn	14 19 11.2	+1.1
	4.5nm,0.2s,SNR=6.0						
ECAB	El Cabril	3.21	345	P	Pn	14 18 32.6	+0.6
	3.5nm,0.3s,SNR=9.0						
ECAB				S	Sn	14 19 10.1	-0.4
	42nm,0.5s,SNR=8.3						
ECAB	El Cabril	3.21	345	P	Pn	14 18 32.6	+0.6
	3.5nm,0.3s,SNR=9.0						
ECAB				S	Sn	14 19 10.1	-0.4
	42nm,0.5s,SNR=8.3						
EBAN	Banos Encina	3.23	8	P	Pn	14 18 32.7	+0.5
	2.5nm,0.2s,SNR=6.5						
EBAN				S	Sn	14 19 09.6	-1.3
	5.2nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.35	327	P	Pn	14 18 34.7	+0.7
	2.0nm,0.1s,SNR=17						
EMIN				S	Sn	14 19 14.0	0.0
	5.6nm,0.2s,SNR=9.3						
EMIN	Mina Concepcio	3.35	327	P	Pn	14 18 34.7	+0.8
	2.0nm,0.1s,SNR=17						
EMIN				S	Sn	14 19 14.0	0.0
	5.6nm,0.2s,SNR=9.3						
EGRO	El Granado	3.58	317	P	Pn	14 18 37.9	+0.6
	4.6nm,0.1s,SNR=19						
EGRO				S	Sn	14 19 19.3	-0.6
	7.9nm,0.1s,SNR=15						
EGRO	El Granado	3.58	317	P	Pn	14 18 37.9	+0.6
	4.6nm,0.1s,SNR=19						
EGRO				S	Sn	14 19 19.3	-0.6
	7.9nm,0.1s,SNR=15						
EMUR	La Murta	3.83	41	S	Sn	14 19 22.1	-4.0
	22nm,0.5s,SNR=6.6						
EMUR	La Murta	3.83	41	S	Sn	14 19 22.1	-4.0
	22nm,0.5s,SNR=6.6						
EVIA	Vianos	3.96	22	P	Pn	14 18 46.9	+4.3
PBEJ	Beja	4.15	318	ePn	Pn	14 18 46.5	+1.2
PBEJ				eSn	Sn	14 19 33.7	-0.5
	7.7nm,0.1s						
PBEJ	Beja	4.15	318	ePn	Pn	14 18 46.5	+1.2
PBEJ				eSn	Sn	14 19 33.7	-0.5
	7.7nm,0.1s						
MORF	Marmelete	4.17	305	eP	Pn	14 18 46.6	+1.1
MORF				e		14 18 47.1	
	baz=329,slow=16						
MORF				eS	Sn	14 19 31.1	-3.7
MORF				eS	Sn	14 19 31.1	-3.7
MORF				AML	AML	14 19 34.4	
	comp=E,9.2nm,0.1s						
MORF	Marmelete	4.17	305	eP	Pn	14 18 46.6	+1.0
MORF				eS	Sn	14 19 31.1	-3.7
ETOB	Tobarra	4.32	31	P	Pn	14 18 48.2	+0.5
	comp=E,9.9nm,0.3s,SNR=17						
ETOB				S	Sn	14 19 36.3	-2.2
	comp=E,16nm,0.4s,SNR=8.8						
ETOB	Tobarra	4.32	31	P	Pn	14 18 48.2	+0.5
	comp=E,9.9nm,0.3s,SNR=17						
ETOB				S	Sn	14 19 36.3	-2.2
	comp=E,16nm,0.4s,SNR=8.8						
EBAD	Badajoz	4.33	332	P	Pn	14 18 48.5	+0.6
	comp=E,2.1nm,0.1s,SNR=14						
EBAD				S	Sn	14 19 37.7	-1.1
	comp=E,13nm,0.2s						
EBAD	Badajoz	4.33	332	P	Pn	14 18 48.5	+0.6
	comp=E,2.1nm,0.1s,SNR=14						
EBAD				S	Sn	14 19 37.7	-1.1
	comp=E,13nm,0.2s						
PTEO	Sao Teotonio	4.35	308	ePn	Pn	14 18 49.1	+0.9
PTEO				eSn	Sn	14 19 38.2	-1.2
	comp=E,16nm,0.4s						
PTEO	Sao Teotonio	4.35	308	ePn	Pn	14 18 49.1	+0.9
PTEO				eSn	Sn	14 19 38.2	-1.2
	comp=E,16nm,0.4s						
ESDC	Sonseca Array	4.71	4	P	Pn	14 18 54.1	+0.9
	comp=E,3.1nm,0.2s,baz=176,slow=12,SNR=12						
ESDC				S	Sn	14 19 45.5	-2.9
	comp=E,1.2nm,0.3s,baz=185,slow=23,SNR=5.4						
ESDC	Sonseca Array	4.71	4	P	Pn	14 18 54.1	+0.8
	comp=E,3.1nm,0.2s,SNR=12						
OUK	Oukaimeden	4.75	219	P	Pn	14 18 43.0	-11
OUK				S	Sn	14 19 50.0	+0.5
CIA	Chichaoua	5.00	228	P	Pn	14 18 47.0	-10
CIA				S	Sn	14 19 56.0	+0.4
ECHE	Chera	5.36	30	P	Pn	14 19 02.1	-0.3
	comp=E,1.9nm,0.4s,SNR=7.9						
PCBR	Castelo Branco	5.45	334	ePn	Pn	14 19 04.2	+0.5
PCBR				eSn	Sn	14 20 05.3	-1.8
	comp=E,6.8nm,0.3s						
PCBR	Castelo Branco	5.45	334	P	Pn	14 19 04.2	+0.5
PCBR				S	Sn	14 20 05.3	-1.8
	comp=E,3.4nm,0.3s						
PTOM	Tomar	5.64	327	ePn	Pn	14 19 07.5	+1.1
PTOM				eSn	Sn	14 20 09.8	-2.1
	comp=E,12nm,0.4s						
PTOM	Tomar	5.64	327	P	Pn	14 19 07.5	+1.1
PTOM				S	Sn	14 20 09.8	-2.1
	comp=E,6.1nm,0.4s						
GUD	Guadarrama	5.67	2	P	Pn	14 19 06.3	-0.5
	comp=E,1.6nm,0.5s,SNR=7.9						
MTE	Manteigas	5.97	336	eSn	Sn	14 20 18.2	-2.0
	comp=E,8.0nm,0.7s						
MTE	Manteigas	5.97	336	S	Sn	14 20 18.2	-2.0
	comp=E,4.0nm,0.7s						
PVIS	Viseu	6.38	335	eSn	Sn	14 20 28.3	-1.9
	comp=E,4.3nm,0.3s						
PVIS	Viseu	6.38	335	S	Sn	14 20 28.3	-1.9
	comp=E,2.2nm,0.3s						
PVRL	Vila Real	6.82	338	eSn	Sn	14 20 37.7	-3.7
	comp=E,9.4nm,0.1s						
PVRL	Vila Real	6.82	338	S	Sn	14 20 37.7	-3.7
	comp=E,4.7nm,0.1s						
PBRG	Braganca	7.07	346	ePn	Pn	14 19 26.0	-0.6
PBRG				eSn	Sn	14 20 43.3	-4.4
	comp=E,4.0nm,0.4s						
PBRG	Braganca	7.07	346	P	Pn	14 19 26.0	-0.6
PBRG				S	Sn	14 20 43.3	-4.4
	comp=E,2.0nm,0.4s						
ECAL	Calabor	7.20	346	P	Pn	14 19 27.5	-0.9
	comp=E,0.2nm,0.2s,SNR=7.9						
ECAL				S	Sn	14 20 44.9	-6.0
	comp=E,6.1nm,0.3s,SNR=4.0						
ECAL	Calabor	7.20	346	P	Pn	14 19 27.5	-0.9
ELOB	Lobios	7.47	338	P	Pn	14 19 31.1	-1.0
	comp=E,0.6nm,0.2s,SNR=4.0						
ELOB				S	Sn	14 20 51.0	-6.6
	comp=E,1.1nm,0.3s,SNR=4.0						
ELOB	Lobios	7.47	338	P	Pn	14 19 31.1	-1.0
ELOB				S	Sn	14 20 51.0	-6.6

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*BJI **16** 14:21:58.8, 6.59S×127.40E, h439^{km}, mB4.5, mb4.3*
*NEIC **16** 14:22:00.0±0.9, 6.14S×127.69E, h410^{km}±12^{km}, mb4.5/14, Error ellipse: s-maj=13.0km s-min=6.1km az=54.0*
*IDC **16** 14:22:00.2±3.5, 6.16S×127.65E, h410^{km}±42^{km}, mb3.9/6, mb1 4.0/9, mb1mx3.8/15, mbtmp4.8/9, Error ellipse: s-maj=30.6km s-min=16.4km az=68.0*
ISC 16 14:21:59.0±1.6**, 6.23S**±0.07×**127.6E**±0.1**, h414**^{km}±19^{km}**, h417**^{km}±2.7^{km}**:pP-P, n51,** σ**0^{s}97**/54**, mb4.4**/25**, 7C-1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	8.01	144	eP	P	14 24 13.4	+18
	72nm,0.4s						
KAKA				eS	S	14 25 41.4	+15
FITZ	Fitzroy Crossi	11.96	189	⇑iP	P	14 24 39.8	-0.6
	15nm,0.4s						
FITZ	Fitzroy Crossi	11.96	189	P	P	14 24 39.9	-0.5
	6.6nm,0.3s,baz=19,slow=10,SNR=120						
WRAB	Tennant Creek	15.11	155	⇑iP	P	14 25 13.6	-0.7
	37nm,0.6s						
WRAB				eS	S	14 27 51.4	+0.1
WRA	Warramunga Arr	15.12	155	P	P	14 25 13.7	-0.6
	8.4nm,0.3s,baz=332,slow=11,SNR=863						
WRA				S	S	14 27 51.6	+0.2
	1.9nm,0.3s,baz=326,slow=20,SNR=19						
WB2	Warramunga Arr	15.12	155	⇑iP	P	14 25 13.7	-0.7
KKM	Kota Kinabalu	16.68	317	eP	P	14 25 31.4	+1.3
KSM	Kuching	18.90	293	eP	P	14 25 53.3	+1.1
PMG	Port Moresby	19.62	101	P	P	14 26 01.0	+1.8
	1.0nm,0.3s,baz=190,slow=5.8,SNR=5.4						
PMG	Port Moresby	19.62	101	eP	P	14 26 00.3	+1.0
	14nm,0.8s						
STKA	Stephens Creek	28.67	155	eP	P	14 27 22.1	+0.4
	3.4nm,0.3s,mb4.2						
STKA	Stephens Creek	28.67	155	P	P	14 27 22.2	+0.5
	3.5nm,0.3s,mb4.2,baz=328,slow=8.6,SNR=31						
KULM	Kulim	29.25	292	⇑eP	P	14 27 27.9	+0.9
SSE	Sheshan	37.62	351	eP	P	14 28 38.1	+0.4
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,50nm,3.5s						
SSE	Sheshan	37.62	351	eP	P	14 28 38.1	+0.4
	comp=Z,45nm,0.7s,mb4.9						
SSE				LR	LR		
	comp=Z,60nm,33.0s						
GYA	Guiyang	38.32	329	⇑iP	P	14 28 43.5	0.0
GYA				AP	pP	14 30 02.4	-0.2
GYA				PP	PP	14 30 24.3	+2.6
GYA				S	S	14 34 07.0	-0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.0						
KMI	Kunming	39.46	323	P	P	14 28 53.9	+1.1
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
KMI	Kunming	39.46	323	P	P	14 28 53.9	+1.1
	comp=Z,10.0nm,0.9s,mb4.2						
ENH	Enshi	40.24	335	eP	P	14 28 57.9	-1.3
	comp=Z,3.2nm,0.4s,mb4.0						
MJAR	Matsushiro Arr	43.69	12	P	P	14 29 24.8	-1.9
	comp=Z,0.4nm,0.3s,mb3.2,baz=180,slow=9.7,SNR=4.5						
XAN	Xi'an	43.78	337	P	P	14 29 26.0	-1.6
XAN				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
LZH	Lanzhou	47.64	334	P	P	14 29 58.0	+0.5
LZH				AP	pP	14 31 21.5	+1.7
LZH				PP	PP	14 31 56.8	+3.9
LZH				XP	sP	14 32 07.3	+2.2
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.2						
LZH				AMB	AMB		
	comp=Z,50nm,7.2s						
LZH	Lanzhou	47.64	334	P	P	14 29 58.0	+0.5
	comp=Z,25nm,1.5s,mb4.3						
LZH				pP	pP	14 31 21.5	+1.7
LZH				PP	PP	14 31 56.7	+3.8
LZH				sP	sP	14 32 07.2	+2.1
CN2	Changchun	49.83	358	eP	P	14 30 17.3	+3.3
CN2				eS	S	14 36 55.3	+4.3
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.3						
LSA	Lhasa	50.02	318	eP	P	14 30 16.2	+0.6
	comp=Z,11nm,0.6s,mb4.3						
MDJ	Mudanjiang	50.64	2	P	P	14 30 21.8	+1.8
MDJ				AMB	AMB		
	comp=Z,90nm,3.7s						
GTA	Gaotai	52.18	333	P	P	14 30 30.9	-0.5
GTA				AP	pP	14 31 55.3	-0.3
GTA				PP	PP	14 32 36.3	+1.6
GTA				S	S	14 37 23.8	+0.9
GTA				SS	SS	14 41 09.6	+2.1
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.2						
GTA				AMB	AMB		
	comp=Z,110nm,5.7s						
GUN	Gumba	52.67	312	eP	P	14 30 34.4	-0.8
	comp=Z,49nm,0.4s,mb5.0						
PKI	Pulchoki	52.84	312	eP	P	14 30 35.3	-1.0
	comp=Z,23nm,0.5s,mb4.6						
KKN	Kakani	53.05	312	eP	P	14 30 36.9	-1.0
	comp=Z,20nm,0.6s,mb4.6						
DMN	Daman	53.08	311	eP	P	14 30 36.9	-1.2
	comp=Z,19nm,0.5s,mb4.6						
GKN	Gorkha	53.64	312	eP	P	14 30 41.2	-1.0
	comp=Z,44nm,0.3s,mb5.2						
KOLN	Koldanda	54.30	311	eP	P	14 30 46.1	-0.8
	comp=Z,37nm,0.6s,mb4.8						
SONM	Songino Array	56.99	343	P	P	14 31 05.1	-0.3
	comp=Z,3.2nm,0.5s,mb3.9,baz=168,slow=7.2,SNR=35						
WMQ	Urumqi	61.48	328	⇓iP	P	14 31 35.4	0.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
WMQ				AMB	AMB		
	comp=Z,160nm,4.2s						
MKAR	Makanchi Array	66.30	328	P	P	14 32 06.0	-0.4
	comp=Z,10.0nm,0.4s,mb4.8,baz=118,slow=8.1,SNR=164						
MKAR				PcP	PcP	14 32 32.1	-0.7
	comp=Z,2.8nm,0.6s,baz=116,slow=4.8,SNR=8.5						
TKM2	Tokmak 2	67.89	321	P	P	14 32 16.6	+0.4
	SNR=5.2						
YAK	Yakutsk	68.08	1	eP	P	14 32 16.1	-0.9
	comp=Z,18nm,0.6s,mb4.9						
UCH	Uchtor	68.21	320	P	P	14 32 19.6	+1.4
	SNR=5.2						
AAK	Ala-Archa	68.43	321	P	P	14 32 20.3	+0.8
	SNR=5.0						
AAK	Ala-Archa	68.43	321	eP	P	14 32 19.1	-0.4
	comp=Z,2.0nm,0.6s,mb3.9						
AML	Almayashu	68.69	320	P	P	14 32 22.1	+1.0
	SNR=8.9						
USP	Ospenovka	68.76	321	P	P	14 32 21.7	+0.2
	SNR=6.0						
KURK	Kurchatov	70.64	329	eP	P	14 32 32.2	-0.4
	comp=Z,14nm,0.7s,mb4.6						
BVAR	Borovoye Array	76.16	328	P	P	14 33 04.1	-0.1
	comp=Z,2.4nm,0.6s,mb4.0,baz=123,slow=9.7,SNR=17						
BRVK	Borovoye	76.23	328	eP	P	14 33 04.4	-0.2
	comp=Z,3.7nm,0.9s,mb4.0						
SYO	Syowa Base	83.52	201	⇑P	P	14 33 45.0	+2.6
SYO	Syowa Base	83.52	201	⇑eP	P	14 33 45.0	+2.6
ARCES	ARCESS Array B	100.03	340	P	P	14 34 58.2	-0.9
	comp=Z,4.2nm,1.0s,baz=63,slow=5.4,SNR=3.6						
DBIC	Dimbokro	132.78	273	PKP	PKPdf	14 40 28.5	+1.8
	comp=Z,1.3nm,0.6s,baz=169,slow=15,SNR=3.8						
LPAZ	La Paz	152.74	145	PKPbc	PKPdf	14 41 10.9	+10
	comp=Z,0.9nm,0.4s,baz=208,slow=13,SNR=4.8						

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*NEIC **16** 14:57:08.4, 39.55S×174.37E, h226^{km}, MG3.8(WEL), After WEL.*
WEL 16 14:57:09.7±0.3**, 39.58S×174.38E, h214**^{km}±2^{km}**, ML3.8**/9**, 5C-1D, Error ellipse: s-maj=2.5km s-min=1.4km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFE	Dawson Falls	0.33	319	P	P	14 57 37.8	-0.4
DFE	Dawson Falls	0.33	319	PN	P	14 57 37.8	-0.5
NEZ	North Egmont	0.38	324	P	P	14 57 38.0	-0.4
NEZ	North Egmont	0.38	324	PN	P	14 57 38.0	-0.4
NRZ	Ngariki Road	0.43	305	PN	P	14 57 37.9	-0.6

PKE	**Pukeiti**	0.49	321	PN	P	14 57 37.9	-0.8
WAZ	**Wanganui**	0.50	111	P	P	14 57 39.0	+0.3
WAZ				S	S	14 58 01.7	+0.5
WAZ	**Wanganui**	0.50	111	PN	P	14 57 39.0	+0.3
WAZ				SN	S	14 58 01.7	+0.5
NWEZ	**Newall Road**	0.50	307	PN	P	14 57 38.1	-0.6
VRZ	**Vera Road**	0.54	33	P	P	14 57 37.7	-1.1
VRZ	**Vera Road**	0.54	33	PN	P	14 57 37.6	-1.2
VRZ				SN	S	14 58 00.5	-0.9
PKVZ	**Pokaka**	0.80	69	PN	P	14 57 39.4	-0.5
TRVZ	**Turoa**	0.94	73	PN	P	14 57 40.6	-0.1
FWVZ	**Far West T-bar**	0.96	71	P	P	14 57 40.7	-0.1
FWVZ	**Far West T-bar**	0.96	71	PN	P	14 57 40.7	-0.1
FWVZ				SN	S	14 58 03.7	-1.3
TWVZ	**Taurewa**	0.96	58	P	P	14 57 40.1	-0.7
TWVZ	**Taurewa**	0.96	58	PN	P	14 57 40.1	-0.7
WNVZ	**Wahianoa**	0.97	75	P	P	14 57 40.8	-0.1
WNVZ	**Wahianoa**	0.97	75	PN	P	14 57 40.8	0.0
WPVZ	**Whakapapa**	0.97	68	P	P	14 57 40.6	-0.3
WPVZ	**Whakapapa**	0.97	68	PN	P	14 57 40.6	-0.3
CNZ	**Chateau**	0.98	68	P	P	14 57 40.6	-0.3
CNZ	**Chateau**	0.98	68	⇓PN	P	14 57 40.6	-0.3
WTVZ	**West Tongariro**	1.04	64	P	P	14 57 41.0	-0.4
WTVZ	**West Tongariro**	1.04	64	PN	P	14 57 41.0	-0.4
MOVZ	**Moawhango**	1.07	81	P	P	14 57 41.0	-0.6
MOVZ	**Moawhango**	1.07	81	PN	P	14 57 41.0	-0.6
MOVZ				SN	S	14 58 04.1	-2.3
OTVZ	**Oturere**	1.08	68	PN	P	14 57 41.5	-0.1
KRVZ	**Karewarewa**	1.09	64	⇑PN	P	14 57 41.3	-0.4
KATZ	**Kakaramea**	1.18	60	P	P	14 57 41.9	-0.5
KATZ				S	S	14 57 43.5	-24
KATZ	**Kakaramea**	1.18	60	PN	P	14 57 41.9	-0.5
DUWZ	**D'Urville Isla**	1.27	196	PN	P	14 57 42.8	-0.4
DUWZ				SN	S	14 58 07.6	-1.4
TSZ	**Takapari Road**	1.30	112	P	P	14 57 43.3	-0.1
TSZ				S	S	14 58 02.4	-7.1
TSZ	**Takapari Road**	1.30	112	⇑PN	P	14 57 43.3	-0.1
TSZ				SN	S	14 58 08.8	-0.7
KIW	**Kapiti Island**	1.34	163	P	P	14 57 43.4	-0.3
KIW	**Kapiti Island**	1.34	163	PN	P	14 57 43.4	-0.3
KIW				SN	S	14 58 08.4	-1.6
MRZ	**Mangatainoka R**	1.42	140	⇑PN	P	14 57 44.0	-0.3
MRZ				SN	S	14 58 10.0	-1.1
CAW	**Cannon Point**	1.61	161	P	P	14 57 45.6	-0.4
CAW	**Cannon Point**	1.61	161	PN	P	14 57 45.6	-0.4
CAW				SN	S	14 58 13.4	-0.6
TCW	**Tory Channel**	1.63	183	P	P	14 57 45.8	-0.4
TCW				S	S	14 58 12.7	-1.6
TCW	**Tory Channel**	1.63	183	PN	P	14 57 45.8	-0.4
TCW				SN	S	14 58 12.7	-1.6
TCW				SN	S	14 58 12.7	-1.6
MRW	**Makara Radio**	1.67	172	P	P	14 57 46.0	-0.5
MRW	**Makara Radio**	1.67	172	PN	P	14 57 46.0	-0.4
MRW				SN	S	14 58 13.5	-1.3
BKZ	**Black Stump Fm**	1.69	76	P	P	14 57 45.8	-0.8
BKZ				S	S	14 58 12.3	-2.8
BKZ	**Black Stump Fm**	1.69	76	⇑PN	P	14 57 45.8	-0.9
BKZ				SN	S	14 58 12.3	-2.9
SNZO	**South Karori**	1.75	172	PN	P	14 57 46.5	-0.7
SNZO				SN	S	14 58 14.8	-1.3
MTW	**Mount Morrison**	1.79	152	PN	P	14 57 47.1	-0.5
BFZ	**Birch Farm**	1.80	128	PN	P	14 57 47.4	-0.3
BFZ				SN	S	14 58 15.4	-1.6
TUWZ	**Tuamarina**	1.88	190	PN	P	14 57 47.7	-0.8
QRZ	**Quartz Range**	1.89	228	eP	P	14 57 46.6	-1.9
QRZ	**Quartz Range**	1.89	228	PN	P	14 57 46.6	-1.9
MSWZ	**Moikau Station**	1.95	160	P	P	14 57 48.4	-0.7
MSWZ	**Moikau Station**	1.95	160	PN	P	14 57 48.4	-0.7
PXZ	**Pawanui**	1.96	104	⇑PN	P	14 57 49.2	0.0
PAWZ	**Paruwai Farm**	1.97	157	P	P	14 57 48.7	-0.6
PAWZ	**Paruwai Farm**	1.97	157	PN	P	14 57 48.7	-0.6
TRWZ	**Traveller**	2.07	152	PN	P	14 57 49.8	-0.5
BSWZ	**Blackbirch Sta**	2.17	190	P	P	14 57 50.7	-0.6
BSWZ	**Blackbirch Sta**	2.17	190	PN	P	14 57 50.6	-0.8
THZ	**Tophouse**	2.45	207	P	P	14 57 53.1	-1.3
THZ	**Tophouse**	2.45	207	PN	P	14 57 53.0	-1.4
URZ	**Urewera**	2.50	59	P	P	14 57 52.5	-2.4
URZ	**Urewera**	2.50	59	PN	P	14 57 52.4	-2.5
URZ				SN	S	14 58 24.3	-5.6
KNZ	**Kokohu**	2.61	79	P	P	14 57 55.0	-1.1
KNZ	**Kokohu**	2.61	79	PN	P	14 57 55.2	-0.9
MWZ	**Matawai**	2.75	64	eP	P	14 57 55.6	-2.0
MWZ	**Matawai**	2.75	64	PN	P	14 57 55.6	-2.0
KHZ	**Kahutara**	2.91	192	eP	P	14 57 57.9	-1.5
KHZ	**Kahutara**	2.91	192	PN	P	14 57 57.8	-1.6
DSZ	**Denniston Nort**	2.92	221	P	P	14 57 57.4	-2.2
DSZ	**Denniston Nort**	2.92	221	PN	P	14 57 57.4	-2.2
LTZ	**Lake Taylor**	3.58	206	P	P	14 58 05.2	-2.2
LTZ	**Lake Taylor**	3.58	206	PN	P	14 58 05.2	-2.2
MQZ	**McQueen's Vall**	4.32	197	eP	P	14 58 13.0	-3.5
WVZ	**Waitaha Valley**	4.44	217	eP	P	14 58 15.3	-2.7
FOZ	**Fox Glacier**	5.31	220	P	P	14 58 23.8	-5.3
JCZ	**Jackson Bay**	6.15	221	eP	P	14 58 35.0	-4.7

MAN 16 15:48:39.2,7.12N×123.61E,h53^{km},mb4.2,ML3.0,MS2.8,
2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	0.76	342	eP	P	15 48 53.8	-0.1
PAGZ				eS	S	15 49 03.9	-0.9
IPIL	**Ipil**	1.23	303	eP	P	15 49 02.0	+1.6
IPIL				eS	S	15 49 17.8	+1.6
DCPH	**Dipolog City**	1.48	350	⇑eP	P	15 49 05.0	+1.0
BUKP	**Musuan**	1.62	62	eP	P	15 49 06.5	+0.5
BUKP				eS	S	15 49 27.6	+1.8
CGP	**Cagayan de Oro**	1.71	39	⇑eP	P	15 49 07.3	+0.1
CGP				i S	S	15 49 28.7	+0.8
ENPP	**El Nido**	5.80	315	eP	P	15 50 03.9	-0.8

MAN 16 16:37:52.5,12.51N×123.72E,h1^{km},mb3.6,ML2.3,MS1.8,
Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	**Masbate**	0.18	212	i P	Pg	16 37 56.0	-0.1
MMPH				i S	Sg	16 37 58.5	0.0
CNP	**Catarman**	0.92	90	eP	Pg	16 38 10.5	-0.5
CNP				eS	Sg	16 38 26.6	+3.3
PVCP	**Virac**	1.16	21	eP	Pb	16 38 15.1	-0.1
PVCP				eS	Sb	16 38 31.2	+0.7
AUQP	**San Andres**	1.30	309	eP	Pb	16 38 17.2	-0.3
AUQP				eS	Sb	16 38 38.7	+4.2

NEIC ***16*** *16:40:35.5±0.7,32.86N×23.50E,h10^{km},mb4.5/2, MD4.1(ATH),Error ellipse: s-maj=8.8km s-min=5.4km az=175.0*
MOS ***16*** *16:40:37.0±1.0,32.96N×23.43E,h39^{km},mb3.7/1,Error ellipse: s-maj=14.7km s-min=9.1km az=89.8*
CSEM ***16*** *16:40:37.4±0.1,33.01N×23.66E,h30^{km},MD4.1,Error ellipse: s-maj=3.4km s-min=1.4km az=37.0*
HLW ***16*** *16:40:40.3,33.04N×23.53E,h33^{km},Mb4.1*
ATH ***16*** *16:40:41.8,33.32N×23.53E,h41^{km}±13^{km},MD4.1/12*
IDC ***16*** *16:40:49.7±2.9,34.71N×23.23E,mb3.8/4,mb1 3.8/8, mb1mx3.7/25,mbtmp3.7/8,ML3.6/4,MS3.0/2,Ms1 3.0/2, ms1mx2.4/39,Error ellipse: s-maj=51.3km s-min=21.2km az=12.0*
ISC 16 16:40:33.6±0.3**,33.07N**±0.02×**23.58E**±0.03**,h10^{km},n103,**
σ1^{s}23/116**,mb4.3**/4**,MS3.0**/2**,5C-8D,Central**
Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	**Gavdhos**	1.82	13	eP	Pg	16 41 09.5	-0.5
SLUM		2.10	138	⇓eP	Pg	16 41 13.5	-2.0
SLUM				S	Sn	16 41 37.4	+1.7
VAM	**Vamos**	2.39	12	eP	Pb	16 41 17.0	+0.6
IDI	**Anoyia**	2.47	26	Pn	Pb	16 41 18.0	+0.3
	20nm,0.3s,baz=208,slow=13,SNR=126						
IDI				Lg		16 41 46.5	
	34nm,0.3s,baz=7.2,slow=20,SNR=11						
XRY	**Khrisi**	2.52	44	eP	Pb	16 41 19.2	+0.6
NPS	**Neapolis**	2.77	37	eP	Pb	16 41 23.2	+0.4
NPS				eS	Sn	16 41 53.0	+0.4
KYTH	**Kithira**	3.24	352	eP	Pb	16 41 29.0	-1.8
HMAT	**Matruh**	3.58	122	⇓eP	Pn	16 41 33.5	+3.1
HMAT				S	Sn	16 42 13.0	-0.2
HMAT	**Matruh**	3.58	122	S	Sn	16 42 13.0	-0.2
VLI	**Veliai**	3.68	352	eP	Pn	16 41 34.6	+2.8
VLI				eS	Sn	16 42 13.7	-2.1
KARP	**Karpathos**	3.86	49	eP	Pn	16 41 39.3	+4.8
KARP				eS	Sn	16 42 21.2	+0.8
SWA2		4.14	157	⇓eP	Pn	16 41 40.5	+2.1
SWA1		4.21	154	⇓eP	Pn	16 41 41.6	+2.2
SWA1				S	Sn	16 42 26.4	-2.8
APE	**Apeiranthos**	4.30	21	eP	Pn	16 41 44.0	+3.3
APE				eS	Sn	16 42 29.4	-2.1
ITM	**Ithomi**	4.32	342	eP	Pn	16 41 44.2	+3.3
ITM				eS	Sn	16 42 28.4	-3.6
ARG	**Arkhangelos**	4.89	49	eP	Pn	16 41 53.0	+3.9
ARG				eS	Sn	16 42 46.1	-0.4
DAT	**Datca**	4.92	41	PN	Pn	16 41 50.3	+0.9
BODT	**Bodrum**	5.03	37	PN	Pn	16 41 51.7	+0.7
MPAR	**Parnis Oros**	5.07	1	eP	Pn	16 41 54.0	+2.4
RLS	**Riolos of Patr**	5.27	342	eP	Pn	16 41 57.7	+3.4
RLS				eS	Sn	16 42 52.5	-3.4
MLSB	**Milas**	5.44	38	ePN	Pn	16 41 56.6	-0.3
DALT	**Dalyan (Mudla)**	5.56	47	PN	Pn	16 41 58.8	+0.3
LKR	**Lokris**	5.59	355	eP	Pn	16 42 00.9	+2.0
YER	**Yerkesik**	5.60	42	ePN	Pn	16 42 00.5	+1.5
VLS	**Valsamata**	5.65	335	eP	Pn	16 42 02.0	+2.3
FETY	**Fethiye**	5.76	50	ePN	Pn	16 42 00.6	-0.7
EVR	**Evrytania**	6.01	347	eP	Pn	16 42 08.4	+3.6
ELL	**Elmali**	6.37	53	ePN	Pn	16 42 09.6	-0.3
AWBH		6.59	134	⇑P	Pn	16 42 13.3	+0.3
HNAT	**Natroun**	6.93	118	P	Pn	16 42 18.6	+0.9
HNAT	**Natroun**	6.93	118	P	Pn	16 42 18.6	+0.8
HMYD	**Mayadein**	6.98	116	⇓eP	Pn	16 42 19.5	+1.0
HFRF	**Wahat Farafira**	7.18	144	⇓eP	Pn	16 42 21.4	0.0
FYM	**Al Fayyum**	7.22	116	P	Pn	16 42 23.1	+1.3
AANS		7.22	110	P	Pn	16 42 23.1	+1.2
SQR		7.24	114	P	Pn	16 42 23.1	+1.0
AYT	**Al 'Ayyat**	7.29	115	P	Pn	16 42 23.7	+0.8
HSAF	**As Saff**	7.64	115	P	Pn	16 42 28.5	+0.7
KOT	**Kottamia**	7.71	112	⇑eP	Pn	16 42 29.5	+0.8
GLL	**Jalalah**	7.78	114	P	Pn	16 42 30.2	+0.6
GLL	**Jalalah**	7.78	114	P	Pn	16 42 30.2	+0.5
SOI	**Samo**	7.90	311	P	Pn	16 42 31.3	-0.1
SOI				pmax	pmax		
	comp=Z,143nm,1.4s						
SOI	**Samo**	7.90	311	Pn	Pn	16 42 31.3	-0.1
	comp=Z,143nm,1.4s						
HHAG	**Hagoal**	7.91	111	P	Pn	16 42 32.1	+0.6
AGST	**Augusta-Monte**	8.01	304	Pn	P	16 42 31.7	-1.2
SSY	**Sortino**	8.07	303	Pn	P	16 42 32.9	-0.9
	comp=Z,650nm,0.9s						
MTTG	**Motta San Giov**	8.09	310	Pn	P	16 42 33.7	-0.3
PZI	**Palazzolo**	8.12	302	Pn	P	16 42 33.7	-0.7
	comp=Z,108nm,0.1s						
PZI	**Palazzolo**	8.12	302	P	P	16 42 33.7	-0.7
PZI				pmax	pmax		
	comp=Z,108nm,0.1s						
TIP	**Timpagrande**	8.22	320	Pn	P	16 42 35.4	-0.4
	comp=Z,246nm,1.9s						
CSS	**Prodhromos**	8.32	74	eP	P	16 42 36.1	-1.1
	comp=Z,11nm,0.3s						
CSS				eS	Sn	16 44 01.2	-11
CSS	**Prodhromos**	8.32	74	eP	P	16 42 36.1	-1.1
	comp=Z,11nm,0.3s						
SUZ		8.54	110	⇓eP	P	16 42 39.8	-0.4
ZAF		8.56	114	⇑P	P	16 42 40.2	-0.4
VAE	**Valguarnera**	8.69	303	Pn	P	16 42 43.1	+0.8
	comp=Z,15nm,0.3s,baz=288,slow=2.5,SNR=21						
VAE				Sn	Sn	16 44 11.3	-10
	comp=Z,9.3nm,0.3s,baz=354,slow=2.9,SNR=5.9						
TDS	**Terranova Siba**	8.79	320	P	P	16 42 44.5	+0.7
TDS				pmax	pmax		
	comp=Z,109nm,0.7s						
TDS	**Terranova Siba**	8.79	320	Pn	P	16 42 44.5	+0.7
	comp=Z,109nm,0.7s						
HDK1	**Dakhla**	9.06	144	⇑P	P	16 42 46.9	-0.6
FAVR	**Favara**	9.13	300	Pn	P	16 42 49.8	+1.4
CUC	**Castrocucco**	9.31	320	Pn	P	16 42 50.6	-0.4
	comp=Z,990nm,3.2s						
HNKL	**Nakhl**	9.42	107	P	P	16 42 51.8	-0.6
RTMM	**Retamin**	9.64	99	Pn	P	16 42 54.8	-0.7
AKRG	**Al Kharijah**	9.66	140	P	P	16 42 55.2	-0.6
GTR	**Jabal at Tayr**	9.69	139	P	P	16 42 55.6	-0.5
SLCN	**Sala Consilina**	9.69	321	Pn	P	16 42 57.7	+1.5
SLTI	**Sal'it**	9.70	92	Pn	P	16 42 55.2	-1.2
SLTI				Sn	Sn	16 44 33.6	-13
MASH	**Mash'abbe Sade**	9.74	99	Pn	P	16 42 56.3	-0.6
TR2		9.90	115	P	P	16 42 58.2	-0.9
TR2		9.90	115	P	P	16 42 58.2	-0.9
HDK2	**Wahat Dakhilah**	9.91	150	⇑P	P	16 42 58.0	-1.2
MMA0	**Mount Meron ar**	9.93	87	Pn	P	16 42 58.1	-1.4
KMTI	**Karmit**	9.96	104	Pn	P	16 43 00.5	+0.6
KMTI				Sn	Sn	16 44 43.5	-9.3
MMLI	**Mount Malkishu**	10.00	90	Pn	P	16 42 59.2	-1.2
HKAT	**Jabal Katrina**	10.04	114	P	P	16 43 00.5	-0.5
PRNI	**Paran**	10.10	102	Pn	P	16 43 01.7	-0.2
MZDA	**Masada**	10.14	97	Pn	P	16 43 00.8	-1.6
MBH	**Mount Berech**	10.22	106	Pn	P	16 43 03.4	-0.1
HRFI	**Mount Harif**	10.23	104	Pn	P	16 43 03.9	+0.2
TR1		10.27	117	P	P	16 43 02.9	-1.2
EIL	**Elat**	10.30	106	Pn	P	16 43 04.7	+0.1
MKRJ	**Makawir**	10.32	95	Pn	P	16 43 03.7	-1.2
AQBJ	**Aqaba**	10.36	106	Pn	P	16 43 05.5	+0.1
HDHB	**Dhahab**	10.43	112	P	P	16 43 06.5	+0.2
HHRG	**Al Ghardaqah**	10.43	121	⇓eP	P	16 43 05.6	-0.7
BRTR	**Keskin Array B**	10.48	48	Pn	P	16 43 08.3	+1.3
	comp=Z,0.1nm,0.3s,baz=239,slow=12,SNR=7.6						
BRTR				Sn	S	16 44 57.6	-7.9
	comp=Z,0.3nm,0.3s,baz=217,slow=29,SNR=6.3						
HSFG		11.08	123	P	P	16 43 14.5	-0.7
DIVS	**Divcibare**	11.36	347	ePn	P	16 43 17.8	-1.2
DIVS				Sg	S	16 45 10.3	-17
MLR	**Muntele Rosu**	12.54	8	Pn	P	16 43 29.1	-5.9
	comp=Z,0.1nm,0.3s,baz=207,slow=10,SNR=3.7						
DAVOX	**Davos**	17.22	327	Pn	P	16 44 38.6	+2.8
	comp=Z,0.5nm,0.3s,baz=142,slow=15,SNR=6.2						
DAVOS	**Davos**	17.31	327	P	P	16 44 38.6	+1.8
GERES	**GERESS Array B**	17.41	338	Pn	P	16 44 35.0	-3.1
	comp=Z,0.1nm,0.3s,baz=157,slow=13,SNR=4.4						
GERES				Sn	S	16 47 33.1	-17
	comp=Z,0.3nm,0.3s,baz=162,slow=27,SNR=6.1						
AKASG	**Malin Array Be**	18.11	12	Pn	P	16 44 43.0	-3.8
	comp=Z,0.4nm,0.3s,baz=201,slow=11,SNR=5.5						
AKASG	**Malin Array Be**	18.11	12	Pn	P	16 44 43.0	-3.8
MDT	**Midelt**	23.63	277	LR	LR	16 57 46.3	
	comp=Z,25nm,18.4s,MS2.7,baz=132,slow=44						
HFS	**Hagfors**	27.85	349	P	P	16 46 24.9	-0.1
	comp=Z,1.1nm,0.6s,mb3.7,baz=144,slow=12,SNR=3.7						
ARCES	**ARCESS Array B**	36.53	1	P	P	16 47 43.3	+2.4
	comp=Z,4.7nm,1.0s,mb4.3,baz=166,slow=7.4,SNR=2.6						
ARCES	**ARCESS Array B**	36.53	1	P	P	16 47 43.3	+2.4
DBIC	**Dimbokro**	37.24	231	P	P	16 47 45.2	-2.1
	comp=Z,7.4nm,1.3s,mb4.4						
MKAR	**Makanchi Array**	46.04	55	P	Px	16 49 09.4	
	comp=Z,0.5nm,0.5s,baz=267,slow=8.2,SNR=4.4						
LBTB	**Lobatse**	57.79	178	eP	P	16 50 26.4	-1.1
	comp=Z,7.7nm,0.9s,mb4.7						
LBTB	**Lobatse**	57.79	178	eP	P	16 50 26.4	-1.2
BOSA	**Boshof**	61.36	178	LR	LR	17 22 32.7	
	comp=Z,19nm,19.5s,MS3.3,baz=322,slow=40						
SONM	**Songino Array**	61.84	49	P	Px	16 51 05.0	
	comp=Z,0.3nm,0.4s,baz=278,slow=10,SNR=3.2						

IDC ***16*** *16:41:20.2±1.3,7.79S×128.07E,mb3.6/3,mb1 3.7/4, mb1mx3.7/12,mbtmp3.6/4,ML3.8/1,Error ellipse: s-maj=204.9km s-min=24.1km az=65.0*
ISC 16 16:41:23.3±3.5**,7.69S**±0.09×**128.8E**±0.1**,h43^{km}**±36^{km}**,n7,**
σ0^{s}87/9**,mb3.5**/3**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	6.17	144	eP	Px	16 43 17.0	
	8.4nm,0.4s						
KAKA				eS	Sx	16 44 33.6	
FITZ	**Fitzroy Crossi**	10.78	196	eP	P	16 43 58.4	+0.3
	5.5nm,0.4s						
FITZ				eS	S	16 45 58.4	-0.1
WRA	**Warramunga Arr**	13.33	157	Pn	P	16 44 31.8	-0.5
	0.5nm,0.3s,baz=333,slow=14,SNR=22						
WRA				Sn	S	16 46 58.8	-1.1
	0.5nm,0.3s,baz=326,slow=23,SNR=9.1						
WB2	**Warramunga Arr**	13.34	157	eP	P	16 44 32.5	+0.2
WB2				eS	S	16 47 00.6	+0.6
STKA	**Stephens Creek**	26.88	155	P	P	16 47 05.2	+3.0
	0.4nm,0.3s,mb3.4,baz=328,slow=9.5,SNR=2.5						
SONM	**Songino Array**	58.71	343	P	P	16 51 19.2	+0.1
	0.8nm,0.8s,mb3.8,baz=159,slow=6.8,SNR=5.6						
MKAR	**Makanchi Array**	68.13	328	P	P	16 52 20.2	-0.8
	0.2nm,0.5s,mb3.4,baz=111,slow=7.0,SNR=5.2						

SKO ***16*** *16:43:05.7,41.78N×22.68E,M1.2,ML1.5*
THE ***16*** *16:43:06.3,41.61N×22.62E,h14^{km},ML2.7*
CSEM ***16*** *16:43:07.1±0.8,41.60N×22.60E,h20^{km},ML2.7,Error ellipse: s-maj=16.6km s-min=6.6km az=8.0*
ISC 16 16:43:07.0±2.1**,41.6N**±0.1×**22.80E**±0.08**,h32^{km}**±7^{km}**,n10,**
σ0^{s}78/17**,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	**Valandovo**	0.31	215	i Pg	Pb	16 43 14.5	-0.2
VAY				i Sg	Sb	16 43 20.2	+0.2
VAY				eLg		16 43 20.4	
	comp=N,42nm,0.4s						
KNT	**Kendrikon**	0.42	170	ePg	Pb	16 43 15.8	-0.5
KNT				eSg	Sb	16 43 23.2	+0.7
GRG	**Griva**	0.69	206	ePg	Pb	16 43 19.4	-1.1
SOH	**Sokhos**	0.86	151	ePg	Pn	16 43 23.2	+0.2
SOH				eSg	Sb	16 43 38.4	+3.9
SOH	**Sokhos**	0.86	151	ePg	Pn	16 43 23.2	+0.2
SOH				eSg	Sb	16 43 38.4	+3.8
BIA	**Bitola**	1.24	244	ePg	Pn	16 43 29.4	+0.8
BIA				eSg	Sn	16 43 45.5	+1.2
FNA	**Florina**	1.33	234	ePg	Pn	16 43 28.9	-0.9
FNA				eSg	Sn	16 43 45.6	-1.0
LIT	**Litokhoron**	1.49	189	ePg	Pn	16 43 31.5	-0.5
OUR	**Ouranopolis**	1.53	144	ePb	Pb	16 43 34.6	0.0
OHR	**Ohrid**	1.58	254	ePn	Pn	16 43 33.9	+0.6
OHR				eSn	Sn	16 43 59.5	+6.7

MOS ***16*** *16:51:01.7±0.9,52.22N×172.54W,h24^{km},mb5.1/56, MS4.2/12,Error ellipse: s-maj=7.7km s-min=5.4km az=76.9*
BJI ***16*** *16:51:02.3,51.70N×172.98W,h24^{km},mB5.0,mb4.6, Ms4.8,Msz4.3*
HRVD ***16*** *16:51:03.8±0.3,52.07N×172.42W,h26^{km}±1^{km},MW4.9/72, Centroid moment Tensor Solution. LP body waves: s31,c41;Mantle waves: s72,c117; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.88±.16; $M_{\theta\theta}$-0.10±.12; $M_{\phi\phi}$1.98±.10; $M_{r\theta}$1.24±.26; $M_{\theta\phi}$-1.52±.07; $M_{\phi r}$1.04±.19; Best double couple: $M_0$2.935×10^{16} NP1: ϕ_s302°,δ51°,λ-139°. NP2:ϕ_s183°,δ59°,λ-47°. Principal axes: T 2.81, Plg5°, Azm244°; N .247, Plg36°, Azm338°; P -3.06, Plg54°, Azm148°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***16*** *16:51:03.8±0.1,52.23N×172.57W,mb4.9/94,MS4.2/6, ML4.7(AEIC) Error ellipse: s-maj=4.6km s-min=2.0km az=176.0*
NEIC Felt [IV] on Atka.
IDC ***16*** *16:51:03.9±0.5,52.28N×172.59W,h25^{km}±2^{km},mb4.5/28, mb1 4.6/30,mb1mx4.6/34,mbtmp4.7/30,ML4.4/2,MS4.0/21, Ms1 4.0/21,ms1mx3.9/34,Error ellipse: s-maj=14.6km s-min=8.0km az=1.0*
ISC 16 16:51:02.2±0.2**,52.20N**±0.04×**172.52W**±0.03**,h26^{km},**
h26^{km}±.6^{km}**:pP-P,n359,σ1^{s}01**/350**,mb4.8**/124**,MS4.1**/35**,**
3C-2D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	**Atka Island**	1.03	271	P	Pn	16 51 22.4	+1.3
ATKA				S	Sb	16 51 36.8	+2.3
GSTR	**Great Sitkin T**	2.18	269	P	Pn	16 51 39.1	+1.5
GSMY	**Great Sitkin M**	2.19	267	P	Pn	16 51 38.4	+0.8
GSTD	**Great Sitkin T**	2.24	268	P	Pn	16 51 39.2	+0.8
GSSP	**Great Sitkin S**	2.26	269	P	Pn	16 51 40.4	+1.7
NIKO	**Nikolski**	2.37	69	P	Pn	16 51 40.5	+0.3
NIKO				S	Sn	16 52 07.8	-0.9
ADAG	**Mount Adagdak**	2.53	267	P	Pn	16 51 43.5	+0.9
ADK	**Adak**	2.59	265	P	Pn	16 51 43.8	+0.4
KIKV	**Kanaga Island**	2.89	265	P	Pn	16 51 48.6	+0.9
OKCE	**Okmok Cone E**	2.92	63	P	Pn	16 51 49.7	+1.7
OKCD	**Okmok Cone D**	2.94	63	P	Pn	16 51 49.9	+1.4
KIMD	**Kanaga Island**	2.95	263	P	Pn	16 51 48.7	+0.2
MSW	**Makushin Switc**	3.86	61	P	Pn	16 52 02.9	+1.4
UNV	**Unalaska Valle**	3.99	63	P	Pn	16 52 04.4	+1.1
LVA	**Lava Point**	4.37	61	P	Pn	16 52 08.6	-0.1
AKLV	**Akutan Long Va**	4.41	61	P	Pn	16 52 09.6	+0.3
AKUT	**Akutan**	4.50	62	eP	Pn	16 52 13.2	+2.7
SPIA	**Saint Paul Isl**	5.16	14	P	Pn	16 52 22.0	+2.1
WFAR	**Faris Peak**	5.19	60	P	Pn	16 52 20.1	-0.2
BLHA	**Black Hill**	7.10	56	P	Pn	16 52 45.0	-2.1
SDPT	**Sand Point**	7.80	61	eP	Pn	16 53 04.9	+7.9
FX1	**Attu Island--F**	8.76	280	Pn	P	16 53 08.9	-1.4
	12nm,0.3s,baz=147,slow=7.8,SNR=12						
FX1				Sn	Sn	16 54 48.4	-0.8
	0.3nm,0.3s,baz=112,slow=19,SNR=2.0						
FX1	**Attu Island--F**	8.76	280	P	P	16 53 09.7	-0.6
FX1	**Attu Island--F**	8.76	280	P	P	16 53 08.9	-1.4
FX1						16 54 48.4	
FX1				pmax	pmax		
	comp=Z,12nm,0.3s						
KDAK	**Kodiak Island**	12.72	56	Pn	P	16 54 01.5	-2.6
	comp=Z,2.2nm,0.3s,baz=231,slow=6.0,SNR=12						
SVW2	**Sparrevohn**	12.86	39	eP	P	16 54 08.9	+3.0
SLKM	**Skilak Lake**	14.83	47	eP	P	16 54 30.6	-1.2
PMR	**Palmer**	15.78	44	P	P	16 54 44.4	+0.4
	comp=Z,34nm,1.0s						
PMR				eP		16 54 50.2	
PMR	**Palmer**	15.78	44	P	P	16 54 44.4	+0.4
PMR				pmax	pmax		
	comp=Z,34nm,1.0s						
IMA2	**Indian Mountai**	16.82	27	eP	P	16 55 00.8	+3.6
DIV	**Divide**	17.09	48	eP	P	16 55 02.5	+1.9
	comp=Z,62nm,0.9s						
COLA	**College**	17.92	35	eP	P	16 55 12.2	+1.3
	comp=Z,51nm,1.0s						
COLA	**College**	17.92	35	eP	P	16 55 12.2	+1.3
COLA				pmax	pmax		
	comp=Z,51nm,1.0s						
THY	**Trims Highway**	17.99	41	eP	P	16 55 15.0	+3.2
ILAR	**Eielson Array**	18.21	36	P	P	16 55 13.8	-0.8
	comp=Z,0.9nm,0.3s,baz=228,slow=11,SNR=29						
ILAR				PcP	PcP	16 59 45.5	-2.0
	comp=Z,0.3nm,0.3s,baz=279,slow=2.9,SNR=7.8						
ILAR				pPcP		16 59 53.0	
	comp=Z,0.2nm,0.3s,baz=268,slow=3.5,SNR=5.2						
ILAR				LR	LR	17 02 34.3	
	comp=Z,544nm,18.7s,baz=256,slow=38						
ILAR				ScP		17 03 19.1	
	comp=Z,0.1nm,0.3s,baz=301,slow=3.5,SNR=14						
MENT	**Mentasta**	18.64	44	eP	P	16 55 21.7	+1.9
BILL	**Bilibino**	18.90	335	eP	P	16 55 25.1	+2.2
	comp=Z,27nm,0.6s						
BILL	**Bilibino**	18.90	335	d iP	P	16 55 26.0	+3.0
BILL				pmax	pmax		
	comp=Z,42nm,0.9s						
BILL				MLR	MLR		
	comp=Z,300nm,15.0s						
DAWY	**Dawson**	20.85	42	eP	P	16 55 44.6	+0.3
SEY	**Seymchan**	21.38	314	eP	P	16 55 52.4	+2.8
SEY				*SP		16 56 09.6	
SEY				e		16 56 22.1	
SEY				eS	S	16 59 43.0	+2.4
SEY						16 59 52.0	
SEY				eSS	SS	17 00 12.9	-2.7
SEY				pmax	pmax		
	comp=E,110nm,1.1s						
SEY				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.2						
SEY				pmax	pmax		
	comp=N,40nm,1.4s						
MA2	**Magadan**	21.64	304	eP	P	16 56 01.8	+10
INK	**Inuvik**	24.57	34	P	P	16 56 21.4	+0.7
	comp=N,12nm,0.6s,mb4.6,baz=246,slow=7.0,SNR=33						
INK				PcP	PcP	16 59 58.3	-1.2
	comp=N,8.4nm,0.8s,baz=280,slow=2.8,SNR=6.1						
INK				pPcP		17 00 05.8	
	comp=N,5.2nm,0.6s,baz=272,slow=1.5,SNR=5.6						
INK				LR	LR	17 06 44.8	
	comp=N,441nm,18.5s,MS4.0,baz=51,slow=38						
INK	**Inuvik**	24.57	34	eP	P	16 56 20.7	0.0
	comp=N,18nm,0.7s,mb4.7						

INK	**Inuvik**	**24.57**	**34**	P	**P**	**16 56 21.4**	**+0.7**
INK						16 59 58.3	
INK				pmax	pmax		
	comp=Z,12nm,0.6s						
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
INK				MLR	MLR		
	comp=Z,441nm,18.5s						
DLBC	**Dease Lake**	**24.63**	**58**	P	**P**	**16 56 23.8**	**+2.4**
	comp=Z,20nm,0.8s,mb4.7,baz=254,slow=8.2,SNR=59						
DLBC				LR	LR	17 05 49.9	
	comp=Z,410nm,18.8s,MS4.0,baz=137,slow=36						
DLBC	**Dease Lake**	**24.63**	**58**	*e*P	**P**	**16 56 23.9**	**+2.6**
BBB	**Bella Bella**	**26.90**	**72**	P	**P**	**16 56 43.9**	**+1.2**
	comp=Z,29nm,1.0s,mb4.8,baz=315,slow=11,SNR=3.0						
ASAJ	**Asahikawa**	**30.59**	**273**	P	**P**	**16 57 16.4**	**+0.5**
	comp=Z,7.2nm,0.8s,mb4.5,baz=18,slow=13,SNR=4.7						
ASAJ	**Asahikawa**	**30.59**	**273**	P	**P**	**16 57 16.4**	**+0.5**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
YKA	**Yellowknife Ar**	**31.81**	**48**	P	**P**	**16 57 25.7**	**-0.6**
	comp=Z,1.1nm,0.3s,mb4.2,baz=274,slow=9.2,SNR=22						
YKA				PcP	PcP	17 00 16.6	-0.6
	comp=Z,3.2nm,0.7s,baz=280,slow=3.6,SNR=4.7						
YKA				pPcP		17 00 24.2	
	comp=Z,1.9nm,0.7s,baz=287,slow=3.3,SNR=4.6						
YKA				LR	LR	17 11 48.4	
	comp=Z,618nm,18.4s,MS4.3,baz=280,slow=39						
YAK	**Yakutsk**	**31.82**	**311**	P	**P**	**16 57 26.2**	**-0.3**
	comp=Z,12nm,0.9s,mb4.7						
YAK	**Yakutsk**	**31.82**	**311**	*i* P	**P**	**16 57 27.7**	**+1.1**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
YAK				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.0						
MBW	**Mount Baker**	**31.85**	**76**	P	**P**	**16 57 28.0**	**+1.1**
TIXI	**Tiksi**	**31.89**	**329**	*i* P	**P**	**16 57 28.5**	**+1.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.0s,mb4.0						
COR	**Corvallis**	**33.00**	**83**	*e*P	**P**	**16 57 37.0**	**0.0**
	comp=Z,9.5nm,0.6s,mb4.9						
COR	**Corvallis**	**33.00**	**83**	*e*P	**P**	**16 57 37.0**	**0.0**
COR				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
TBM	**Table Mountain**	**33.36**	**78**	P	**P**	**16 57 41.1**	**+1.0**
EBG	**Ellensburg**	**33.51**	**78**	P	**P**	**16 57 42.7**	**+1.3**
VFP	**Flag Point**	**33.75**	**81**	P	**P**	**16 57 44.5**	**+1.0**
EPH	**Ephrata**	**33.88**	**77**	P	**P**	**16 57 45.0**	**+0.4**
HUMO	**Hull Mountain**	**34.28**	**86**	*e*P	**P**	**16 57 48.0**	**-0.1**
	comp=Z,3.9nm,0.8s,mb4.4						
HAWA	**Hanford**	**34.38**	**78**	*e*P	**P**	**16 57 49.1**	**+0.2**
	comp=Z,2.6nm,0.8s,mb4.2						
OD2	**Odessa Site #2**	**34.39**	**76**	P	**P**	**16 57 49.4**	**+0.4**
KTRM	**Thompson Ridge**	**34.41**	**87**	P	**P**	**16 57 50.6**	**+1.4**
VIPM	**Ingram Point**	**34.68**	**82**	P	**P**	**16 57 52.5**	**+1.0**
YBH	**Yreka Blue Hor**	**34.92**	**87**	*e*P	**P**	**16 57 54.3**	**+0.7**
	comp=Z,14nm,0.9s,mb4.9						
YBH	**Yreka Blue Hor**	**34.92**	**87**	*e*P	**P**	**16 57 54.3**	**+0.7**
YBH				pmax	pmax		
	comp=Z,14nm,0.9s						
NEW	**Newport**	**34.92**	**74**	P	**P**	**16 57 54.1**	**+0.5**
	comp=Z,40nm,0.8s,mb5.4,baz=302,slow=7.1,SNR=38						
NEW				pP	pP	16 58 01.7	+0.5
	comp=Z,54nm,0.9s,baz=299,slow=3.9,SNR=16						
NEW	**Newport**	**34.92**	**74**	*e*P	**P**	**16 57 53.3**	**-0.2**
	comp=Z,60nm,0.9s,mb5.5						
NEW	**Newport**	**34.92**	**74**	P	**P**	**16 57 54.1**	**+0.6**
NEW				*PP	pP	16 58 01.7	+0.5
NEW				pmax	pmax		
	comp=Z,40nm,0.8s						
NEW				pmax	pmax		
	comp=Z,54nm,0.9s						
EDM	**Edmonton**	**34.97**	**64**	*e*P	**P**	**16 57 54.3**	**+0.4**
KIPM	**Iron Peak**	**35.57**	**91**	*e*P	**P**	**16 57 59.8**	**+0.6**
WDC	**Whiskeytown Da**	**35.69**	**89**	*e*P	**P**	**16 58 00.9**	**+0.7**
	comp=Z,28nm,1.3s,mb5.0						
WDC	**Whiskeytown Da**	**35.69**	**89**	*e*P	**P**	**16 58 00.9**	**+0.7**
WDC				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.0						
MOD	**Modoc**	**36.30**	**85**	*e*P	**P**	**16 58 06.1**	**+0.9**
	comp=Z,38nm,1.1s,mb5.2						
BMO	**Blue Mountains**	**36.51**	**79**	*e*P	**P**	**16 58 07.1**	**+0.1**
	comp=Z,18nm,1.4s,mb4.7						
NSHM	**Saint Helena R**	**36.90**	**92**	P	**P**	**16 58 11.0**	**+0.7**
WVOR	**Wild Horse Val**	**37.02**	**83**	*e*P	**P**	**16 58 12.0**	**+0.7**
	comp=Z,27nm,0.9s,mb5.1						
WVOR	**Wild Horse Val**	**37.02**	**83**	*e*P	**P**	**16 58 12.0**	**+0.7**
WVOR				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.1						
OHCM	**Honcut**	**37.09**	**90**	*e*P	**P**	**16 58 11.8**	**-0.1**
MSO	**Missoula**	**37.50**	**74**	*e*P	**P**	**16 58 15.1**	**-0.3**
	comp=Z,23nm,1.1s,mb4.8						
MJAR	**Matsushiro Arr**	**37.76**	**265**	P	**P**	**16 58 18.4**	**+0.8**
	comp=Z,4.6nm,0.6s,mb4.4,baz=43,slow=6.7,SNR=15						
MJAR				LR	LR	17 12 12.9	
	comp=Z,159nm,21.1s,MS3.8,baz=70,slow=34						
MAJO	**Matsushiro**	**37.76**	**265**	*e*P	**P**	**16 58 17.8**	**+0.2**
	comp=Z,40nm,1.0s,mb5.1						
MAJO	**Matsushiro**	**37.76**	**265**	*e*P	**P**	**16 58 17.8**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
MAT	**Matsushiro**	**37.76**	**265**	P	**P**	**16 58 18.0**	**+0.4**
MAT	**Matsushiro**	**37.76**	**265**	*e*P	**P**	**16 58 18.0**	**+0.4**
	comp=Z,20nm,1.0s,mb4.8						
MAT	**Matsushiro**	**37.76**	**265**	*e*P	**P**	**16 58 18.0**	**+0.4**
MAT				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.8						
CHMT	**Chamberlain Mo**	**37.87**	**74**	*e*P	**P**	**16 58 18.2**	**-0.2**
MDJ	**Mudanjiang**	**38.25**	**282**	P	**P**	**16 58 18.9**	**-2.7**
MDJ				AP	pP	16 58 26.9	-2.5
MDJ				XP	sP	16 58 29.9	-2.7
MDJ				S	**S**	**17 04 13.3**	**-0.2**
MDJ				XS		17 04 26.9	
MDJ				SS	SS	17 06 45.8	-6.9
MDJ				AMB	AMB		
	comp=Z,110nm,3.9s						
MDJ				LR	LR		
	comp=N,310nm,29.0s,MS4.0						
MDJ				LR	LR		
	comp=E,130nm,29.0s,MS4.0						
MDJ				LR	LR		
	comp=Z,160nm,19.8s						
CMB	**Columbia Colle**	**38.56**	**90**	*e*P	**P**	**16 58 25.2**	**+0.9**
	comp=Z,7.8nm,0.8s,mb4.5						
CMB	**Columbia Colle**	**38.56**	**90**	*e*P	**P**	**16 58 25.2**	**+0.8**
CMB				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
HRY	**Holter Researc**	**38.81**	**73**	*e*P	**P**	**16 58 26.3**	**0.0**
HLID	**Hailey**	**38.96**	**79**	*e*P	**P**	**16 58 27.9**	**+0.3**
	comp=Z,23nm,1.3s,mb4.8						
DLMT	**Dillon**	**39.07**	**75**	*e*P	**P**	**16 58 28.1**	**-0.4**
	comp=Z,32nm,1.3s,mb4.9						
MCMT	**McKenzie Canyo**	**39.20**	**76**	*e*P	**P**	**16 58 30.0**	**+0.4**
BOZ	**Bozeman (W)**	**39.49**	**75**	*e*P	**P**	**16 58 32.3**	**+0.3**
	comp=Z,26nm,0.7s,mb5.1						
BOZ				*e*pP	pP	16 58 39.4	-0.3
BOZ	**Bozeman (W)**	**39.49**	**75**	*e*P	**P**	**16 58 32.3**	**+0.3**
BOZ				*e**PP	pP	16 58 39.4	-0.3
BOZ				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.1						
NVAR	**Mina Array Bea**	**39.60**	**88**	P	**P**	**16 58 34.0**	**+1.1**
	comp=Z,3.8nm,0.4s,mb4.4,baz=304,slow=6.4,SNR=37						
NVAR				pP	pP	16 58 41.1	+0.5
	comp=Z,11nm,0.8s,baz=299,slow=6.3,SNR=17						
NVAR				PcP	PcP	17 00 40.4	0.0
	comp=Z,2.9nm,0.6s,baz=314,slow=1.5,SNR=7.3						
NVAR				ScP		17 04 26.6	
	comp=Z,1.0nm,0.9s,baz=312,slow=2.2,SNR=4.6						
NVAR				LR	LR	17 11 34.7	
	comp=Z,67nm,21.6s,MS3.4,baz=40,slow=31						
NVAR	**Mina Array Bea**	**39.60**	**88**	P	**P**	**16 58 34.0**	**+1.1**
NVAR				pP	pP	16 58 41.1	+0.5
NVAR				PcP	PcP	17 00 40.4	0.0
NVAR				ScP		17 04 26.6	
NVAR				LR	LR	17 11 34.7	
MNV	**Mina**	**39.69**	**88**	*e*P	**P**	**16 58 33.8**	**+0.1**
	comp=Z,13nm,1.1s,mb4.6						
MNV	**Mina**	**39.69**	**88**	*e*P	**P**	**16 58 33.8**	**+0.1**
MNV				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.6						
QLMT	**Earthquake Lak**	**40.05**	**75**	*e*P	**P**	**16 58 36.9**	**+0.3**
ELK	**Elko**	**40.08**	**83**	P	**P**	**16 58 37.9**	**+1.1**
	comp=Z,8.0nm,0.8s,mb4.5,baz=295,slow=8.3,SNR=46						
ELK				pP	pP	16 58 45.7	+1.1
	comp=Z,8.3nm,0.8s,baz=298,slow=10,SNR=12						
ELK				PcP	PcP	17 00 42.2	+0.3
	comp=Z,1.2nm,0.7s,baz=312,slow=4.7,SNR=3.2						
ELK	**Elko**	**40.08**	**83**	*e*P	**P**	**16 58 37.3**	**+0.4**
	comp=Z,11nm,0.8s,mb4.7						
ELK	**Elko**	**40.08**	**83**	P	**P**	**16 58 37.9**	**+1.0**
ELK				*PP	pP	16 58 45.7	+1.1
ELK						17 00 42.2	
ELK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ELK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ELK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MTUM	**Tungsten Hills**	**40.11**	**90**	*e*P	**P**	**16 58 38.1**	**+0.8**
PTRM	**Twissleman Ran**	**40.20**	**93**	*e*P	**P**	**16 58 38.5**	**+0.6**
YMR	**Madison River**	**40.41**	**75**	*e*P	**P**	**16 58 40.3**	**+0.7**
	comp=Z,43nm,0.9s,mb5.2						
FFC	**Flin Flon**	**40.45**	**57**	*e*P	**P**	**16 58 39.5**	**-0.4**
	comp=Z,33nm,1.0s,mb5.0						
FFC	**Flin Flon**	**40.45**	**57**	*e*P	**P**	**16 58 39.5**	**-0.3**
FFC				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.0						
TPH	**Tonopah**	**40.48**	**88**	*e*P	**P**	**16 58 40.6**	**+0.3**
	comp=Z,31nm,1.4s,mb4.8						
TPH				*e*pP	pP	16 58 47.8	-0.2
TPH	**Tonopah**	**40.48**	**88**	*e*P	**P**	**16 58 40.6**	**+0.3**
TPH				*e**PP	pP	16 58 47.8	-0.2
TPH				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.8						
GCMT	**Greycliff**	**40.57**	**73**	*e*P	**P**	**16 58 41.5**	**+0.6**
BOD	**Bodaibo**	**40.59**	**308**	*e*P	**P**	**16 58 40.2**	**-0.7**
BOD				*e*		16 58 53.3	
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.2						
YFT	**Old Faithful**	**40.61**	**76**	*e*P	**P**	**16 58 42.0**	**+0.8**
LKWY	**Lake**	**40.81**	**75**	*e*P	**P**	**16 58 44.3**	**+1.5**
IMW	**Indian Meadow**	**40.86**	**76**	*e*P	**P**	**16 58 44.0**	**+0.7**
	comp=Z,32nm,0.9s,mb5.0						
HVU	**Hansel Valley**	**40.97**	**80**	*e*P	**P**	**16 58 44.5**	**+0.4**
	comp=Z,15nm,0.8s,mb4.7						
HVU	**Hansel Valley**	**40.97**	**80**	*e*P	**P**	**16 58 44.5**	**+0.3**
HVU				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
MOOW	**Moose Ponds**	**41.06**	**76**	*e*P	**P**	**16 58 45.3**	**+0.4**
	comp=Z,14nm,1.2s,mb4.5						
TPAW	**Teton Pass**	**41.08**	**77**	*e*P	**P**	**16 58 46.1**	**+1.0**
	comp=Z,34nm,1.3s,mb4.8						
CN2	**Changchun**	**41.19**	**284**	*e*P	**P**	**16 58 46.5**	**+0.6**
CN2				*e*S	**S**	**17 04 56.4**	**-1.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,300nm,19.0s,MS4.3						
CN2				LR	LR		
	comp=E,300nm,19.0s,MS4.3						
CN2				LR	LR		
	comp=Z,340nm,19.0s,MS4.2						
REDW	**Red Top Meadow**	**41.21**	**77**	*e*P	**P**	**16 58 46.5**	**+0.3**
	comp=Z,29nm,1.2s,mb4.8						
LOHW	**Long Hollow**	**41.22**	**77**	*e*P	**P**	**16 58 46.5**	**+0.3**
	comp=Z,14nm,1.0s,mb4.5						
ISA	**Isabella**	**41.26**	**92**	*e*P	**P**	**16 58 46.4**	**-0.2**
	comp=Z,4.0nm,0.8s,mb4.1						
ISA	**Isabella**	**41.26**	**92**	*e*P	**P**	**16 58 46.4**	**-0.2**
ISA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.1						
DAC	**Darwin (Calif)**	**41.40**	**90**	*e*P	**P**	**16 58 47.8**	**+0.1**
	comp=Z,8.0nm,0.8s,mb4.4						
DAC	**Darwin (Calif)**	**41.40**	**90**	*e*P	**P**	**16 58 47.8**	**0.0**
DAC				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.4						
TPNV	**Topopah Spring**	**41.80**	**88**	*e*P	**P**	**16 58 51.4**	**+0.4**
	comp=Z,23nm,0.9s,mb4.8						
TPNV	**Topopah Spring**	**41.80**	**88**	*e*P	**P**	**16 58 51.4**	**+0.4**
TPNV				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.8						
HWUT	**Hardware Ranch**	**41.80**	**80**	*e*P	**P**	**16 58 51.5**	**+0.5**
	comp=Z,6.2nm,0.3s,mb4.7						
DUG	**Dugway**	**41.88**	**82**	*e*P	**P**	**16 58 51.8**	**+0.2**
	comp=Z,28nm,1.0s,mb4.8						
DUG	**Dugway**	**41.88**	**82**	*e*P	**P**	**16 58 51.8**	**+0.2**
DUG				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.8						
LAO	**LASA Array**	**42.10**	**70**	*e*P	**P**	**16 58 53.7**	**+0.4**
	comp=Z,25nm,0.9s,mb4.8						
TCUT	**Toone Canyon**	**42.19**	**80**	*e*P	**P**	**16 58 54.7**	**+0.6**
DGMT	**Dagmar**	**42.31**	**67**	*e*P	**P**	**16 58 55.1**	**+0.1**
	comp=Z,80nm,1.4s,mb5.2						
BW06	**Boulder Array**	**42.33**	**77**	*e*P	**P**	**16 58 55.7**	**+0.4**
	comp=Z,40nm,0.7s,mb5.2						
BW06				*e*pP	pP	16 59 03.3	+0.3
PDAR	**Pinedale Array**	**42.33**	**77**	P	**P**	**16 58 56.0**	**+0.7**
	comp=Z,43nm,0.7s,mb5.2,baz=304,slow=4.2,SNR=341						
NLU	**North Lily Min**	**42.48**	**82**	*e*P	**P**	**16 58 56.8**	**+0.3**
FCC	**Fort Churchill**	**42.53**	**49**	P	**P**	**16 58 56.1**	**-0.6**
DAU	**Daniels Canyon**	**42.70**	**81**	*e*P	**P**	**16 58 59.2**	**+0.9**
ARUT	**Antelope Range**	**42.99**	**85**	*e*P	**P**	**16 59 01.1**	**+0.4**
MSU	**Marysvale**	**43.31**	**84**	*e*P	**P**	**16 59 03.9**	**+0.6**
TMUT	**Trail Mountain**	**43.41**	**82**	*e*P	**P**	**16 59 04.5**	**+0.4**
SRU	**San Rafael**	**43.95**	**82**	*e*P	**P**	**16 59 08.9**	**+0.5**
	comp=Z,32nm,0.9s,mb5.0						
SRU	**San Rafael**	**43.95**	**82**	*e*P	**P**	**16 59 08.9**	**+0.5**
SRU				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.0						
BAR	**Barrett**	**44.36**	**93**	*e*P	**P**	**16 59 11.8**	**-0.1**
RSSD	**Black Hills**	**44.82**	**72**	*e*P	**P**	**16 59 14.8**	**-0.7**
	comp=Z,37nm,1.4s,mb5.0						
RSSD	**Black Hills**	**44.82**	**72**	*e*P	**P**	**16 59 14.8**	**-0.6**
RSSD				pmax	pmax		
	comp=Z,37nm,1.4s,mb5.0						
PV10	**Paradox Valley**	**45.31**	**82**	*e*P	**P**	**16 59 19.9**	**+0.5**
WUAZ	**Wupatki**	**45.72**	**86**	*e*P	**P**	**16 59 23.1**	**+0.3**
	comp=Z,59nm,1.4s,mb5.3						
PV01	**Paradox Valley**	**45.75**	**82**	*e*P	**P**	**16 59 22.8**	**-0.1**
ULM	**Lac du Bonnet**	**45.93**	**60**	P	**P**	**16 59 23.6**	**-0.6**
	comp=Z,8.2nm,0.8s,mb4.7,baz=315,slow=10,SNR=9.1						
ULM				pP	pP	16 59 32.4	+0.5
	comp=Z,21nm,0.8s,baz=297,slow=8.8,SNR=11						
SMCO	**Snowmass**	**46.06**	**79**	*e*P	**P**	**16 59 25.3**	**0.0**
	comp=Z,10nm,0.7s,mb4.9						
RW3	**Ridgway**	**46.21**	**81**	*e*P	**P**	**16 59 26.6**	**+0.1**
SDCO	**Great Sand Dun**	**47.86**	**80**	*e*P	**P**	**16 59 39.6**	**+0.1**
	comp=Z,23nm,0.9s,mb5.2						
TUC	**Tucson**	**48.24**	**89**	*e*P	**P**	**16 59 42.4**	**-0.1**
	comp=Z,9.6nm,0.8s,mb4.9						
TUC	**Tucson**	**48.24**	**89**	*e*P	**P**	**16 59 42.4**	**-0.2**
TUC				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
LAZ	**Ladron**	**49.06**	**84**	*e*P	**P**	**16 59 48.8**	**0.0**
ANMO	**Albuquerque**	**49.11**	**83**	P	**P**	**16 59 49.0**	**-0.2**
	comp=Z,6.6nm,1.0s,mb4.6,baz=328,slow=7.7,SNR=8.3						
ANMO	**Albuquerque**	**49.11**	**83**	*e*P	**P**	**16 59 49.6**	**+0.3**
	comp=Z,12nm,1.2s,mb4.8						
ANMO	**Albuquerque**	**49.11**	**83**	⇑*i*P	**P**	**16 59 49.9**	**+0.7**
ULN	**Ulaanbaatar**	**49.34**	**299**	*i* P	**P**	**16 59 50.5**	**-0.3**
LPM	**Los Pinos Moun**	**49.43**	**84**	*e*P	**P**	**16 59 51.5**	**-0.2**
BNM	**Barren Site**	**49.54**	**84**	*e*P	**P**	**16 59 52.7**	**+0.1**
EYMN	**Ely**	**49.61**	**61**	*e*P	**P**	**16 59 51.9**	**-1.0**
EYMN				*e*pP	pP	17 00 00.8	0.0
SONM	**Songino Array**	**49.71**	**299**	P	**P**	**16 59 53.4**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=40,slow=7.6,SNR=5.4						
SONM				ScP		17 05 07.6	
	comp=Z,2.3nm,0.8s,baz=37,slow=4.3,SNR=11						
SONM				pScP		17 05 18.5	
	comp=Z,2.3nm,0.9s,baz=58,slow=3.5,SNR=6.7						
SONM				LR	LR	17 20 50.9	
	comp=Z,342nm,20.7s,MS4.3,baz=279,slow=36						
FRB	**Frobisher Bay**	**50.22**	**34**	P	**P**	**16 59 56.5**	**-0.9**
	comp=Z,7.7nm,0.5s,mb5.0,baz=297,slow=12,SNR=10						
CBKS	**Cedar Bluff**	**50.63**	**75**	*e*P	**P**	**17 00 00.1**	**-0.7**
	comp=Z,64nm,0.9s,mb5.5						
CBKS	**Cedar Bluff**	**50.63**	**75**	*e*P	**P**	**17 00 00.1**	**-0.7**
CBKS				pmax	pmax		
	comp=Z,64nm,0.9s,mb5.5						
SSE	**Sheshan**	**51.88**	**273**	*e*P	**P**	**17 00 09.4**	**-1.0**
SSE				AP	pP	17 00 18.8	+0.5
SSE				XP	sP	17 00 22.1	+0.7
SSE				PCP	PcP	17 01 21.1	-2.0
SSE				PP	PP	17 02 07.3	-1.7
SSE				S	**S**	**17 07 29.5**	**-0.5**
SSE				XS		17 07 45.5	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,280nm,4.7s						
SSE				LR	LR		
	comp=Z,90nm,25.3s,MS3.7						
SSE	**Sheshan**	**51.88**	**273**	*e*P	**P**	**17 00 09.4**	**-1.0**
	comp=Z,30nm,0.7s,mb5.3						
SSE				pP	pP	17 00 18.7	+0.4
SSE				sP	sP	17 00 22.1	+0.7
SSE				PcP	PcP	17 01 21.1	-2.0
SSE				PP	PP	17 02 07.2	-1.8
SSE				S	**S**	**17 07 29.5**	**-0.5**
SSE				sS		17 07 45.5	
SSE				ScS	ScS	17 09 59.8	+4.2
SSE				SS	SS	17 11 07.2	+2.4
SSE				LR	LR		
	comp=Z,90nm,25.3s,MS3.7						
MNTX	**Cornudas Mount**	**51.98**	**86**	*e*P	**P**	**17 00 10.3**	**-0.8**
	comp=Z,7.0nm,0.7s,mb4.7						
AMTX	**Amarillo**	**52.06**	**80**	*e*P	**P**	**17 00 11.0**	**-0.8**
	comp=Z,9.3nm,0.6s,mb4.9						
KSU1	**Kansas State U**	**52.29**	**73**	*e*P	**P**	**17 00 11.7**	**-1.8**
NJ2	**Nanjing**	**52.65**	**276**	*e*P	**P**	**17 00 18.3**	**+2.1**
NJ2				AP	pP	17 00 28.1	+4.0
NJ2				PCP	PcP	17 01 28.0	+2.1
NJ2				S	**S**	**17 07 41.0**	**+0.6**
NJ2				XS		17 07 58.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,290nm,4.9s						
NJ2				LR	LR		
	comp=N,840nm,25.2s						
NJ2				LR	LR		
	comp=E,570nm,17.0s						
NJ2				LR	LR		
	comp=Z,310nm,25.6s,MS4.2						
WMOK	**Wichita Mounta**	**53.91**	**78**	*e*P	**P**	**17 00 24.3**	**-1.1**
	comp=Z,25nm,0.9s,mb5.2						
WMOK	**Wichita Mounta**	**53.91**	**78**	*e*P	**P**	**17 00 24.3**	**-1.1**
WMOK				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
LTX	**Lajitas**	**54.69**	**86**	*e*P	**P**	**17 00 30.2**	**-1.1**
	comp=Z,16nm,0.8s,mb5.1						
LTX	**Lajitas**	**54.69**	**86**	*e*P	**P**	**17 00 30.2**	**-1.0**
LTX				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
TXAR	**Lajitas Array**	**54.69**	**86**	P	**P**	**17 00 30.6**	**-0.6**
	comp=Z,18nm,0.8s,mb5.2,baz=296,slow=5.2,SNR=53						
TXAR				pP	pP	17 00 38.6	-0.5
	comp=Z,2.7nm,0.4s,baz=315,slow=5.3,SNR=8.7						
TXAR				LR	LR	17 21 04.9	
	comp=Z,78nm,20.2s,MS3.8,baz=355,slow=33						
ZAL	**Zalesovo**	**56.24**	**316**	LR	LR	17 26 29.6	
	comp=Z,181nm,18.8s,MS4.2,baz=172,slow=38						
JCT	**Junction City**	**56.24**	**83**	*e*P	**P**	**17 00 40.9**	**-1.5**
	comp=Z,11nm,0.5s,mb5.2						
JCT	**Junction City**	**56.24**	**83**	*e*P	**P**	**17 00 40.9**	**-1.6**
JCT				pmax	pmax		
	comp=Z,11nm,0.5s,mb5.1						
JMIC	**Jan Mayen**	**56.59**	**6**	LR	LR	17 25 41.8	
	comp=Z,120nm,18.4s,MS4.0,baz=99,slow=37						
FVM	**French Village**	**56.64**	**70**	*e*P	**P**	**17 00 43.2**	**-2.0**
	comp=Z,21nm,1.0s,mb5.1						
FVM	**French Village**	**56.64**	**70**	*e*P	**P**	**17 00 43.2**	**-2.0**
FVM				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
SCHQ	**Schefferville**	**56.87**	**42**	P	**P**	**17 00 45.6**	**-1.0**
	comp=Z,5.2nm,0.6s,mb4.8,baz=324,slow=7.8,SNR=12						
MIAR	**Mount Ida**	**57.16**	**75**	*e*P	**P**	**17 00 47.6**	**-1.4**
	comp=Z,13nm,0.7s,mb5.1						
MIAR	**Mount Ida**	**57.16**	**75**	*e*P	**P**	**17 00 47.6**	**-1.4**
MIAR				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1						
KEV	**Kevo**	**57.53**	**352**	*e*p	**P**	**17 00 50.6**	**-0.5**
	comp=Z,20nm,0.9s,mb5.2						
KEV	**Kevo**	**57.53**	**352**	*e*P	**P**	**17 00 50.6**	**-0.5**
KEV				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
ARCES	**ARCESS Array B**	**57.87**	**353**	P	**P**	**17 00 52.4**	**-1.0**
	comp=Z,5.2nm,1.0s,mb4.5,baz=8.1,slow=8.6,SNR=5.3						
ARCES				pP	pP	17 01 01.1	-0.3
	comp=Z,2.5nm,0.7s,baz=21,slow=7.0,SNR=1.4						
ARCES				LR	LR	17 26 23.9	
	comp=Z,170nm,18.4s,MS4.2,baz=9.5,slow=37						
PARMO	**Parma**	**57.94**	**70**	*e*P	**P**	**17 00 52.7**	**-1.6**
SADO	**Sadowa**	**58.17**	**57**	P	**P**	**17 00 54.0**	**-1.9**
	comp=Z,10.0nm,0.7s,mb5.0,baz=347,slow=8.0,SNR=4.8						
SADO				pP	pP	17 01 03.4	-0.5
	comp=Z,26nm,1.0s,baz=343,slow=6.9,SNR=3.0						
GTA	**Gaotai**	**58.82**	**295**	*e*P	**P**	**17 01 05.6**	**+5.1**
GTA				AP	pP	17 01 15.4	+6.9
GTA				PP	PP	17 03 17.3	+5.0
GTA				S	**S**	**17 09 05.1**	**+2.6**
GTA				XS		17 09 21.8	
GTA				SS	SS	17 13 00.4	+2.7
GTA				AMB	AMB		
	comp=Z,150nm,5.3s						
GTA				LR	LR		
	comp=N,210nm,15.6s,MS4.6						
GTA				LR	LR		
	comp=E,310nm,16.4s,MS4.6						
GTA				LR	LR		
	comp=Z,340nm,16.0s,MS4.6						
WCI	**Wyandotte Cave**	**58.83**	**67**	*e*P	**P**	**17 00 58.6**	**-2.0**
	comp=Z,20nm,0.9s,mb5.2						
WCI	**Wyandotte Cave**	**58.83**	**67**	*e*P	**P**	**17 00 58.7**	**-1.9**
WCI				*e*	pP	17 01 08.0	-0.6
WCI				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
LZH	**Lanzhou**	**58.84**	**290**	*e*P	**P**	**17 01 00.0**	**-0.7**
LZH				AP	pP	17 01 07.9	-0.8
LZH				XP	sP	17 01 11.3	-0.3
LZH				PP	PP	17 03 11.6	-1.0
LZH				*e*S	**S**	**17 09 01.3**	**-1.6**
LZH				XS		17 09 14.3	
LZH				*e*SS	SS	17 12 55.5	-2.6
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,80nm,7.4s						
LZH				LR	LR		
	comp=E,570nm,15.0s						
LZH				LR	LR		
	comp=Z,930nm,18.3s,MS4.9						
LZH	**Lanzhou**	**58.84**	**290**	*e*P	**P**	**17 01 00.0**	**-0.7**
	comp=Z,26nm,1.4s,mb5.1						
LZH				pP	pP	17 01 07.9	-0.8
LZH				sP	sP	17 01 11.3	-0.3
LZH				PP	PP	17 03 11.6	-1.0
LZH				*e*S	**S**	**17 09 01.2**	**-1.7**
LZH				sS		17 09 14.3	
LZH				PS	PS	17 09 18.4	-2.0
LZH				*e*SS	SS	17 12 55.5	-2.6
LZH				LR	LR		
	comp=Z,940nm,18.3s,MS5.0						
LZH	**Lanzhou**	**58.84**	**290**	*e*P	**P**	**17 01 00.0**	**-0.7**
LZH				*PP	pP	17 01 07.9	-0.8
LZH				*SP	sP	17 01 11.3	-0.3
LZH						17 03 11.6	
LZH				*e*S	**S**	**17 09 01.2**	**-1.7**
LZH				*SS		17 09 14.3	
LZH				PS	PS	17 09 18.4	-2.0
LZH				*e*SS	SS	17 12 55.5	-2.6
LZH				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.1						
LZH				MLR	MLR		
	comp=Z,940nm,18.3s,MS5.0						
WVT	**Waverly**	**59.42**	**69**	*e*P	**P**	**17 01 03.4**	**-1.3**
	comp=Z,35nm,1.4s,mb5.2						
WVT	**Waverly**	**59.42**	**69**	*e*P	**P**	**17 01 03.4**	**-1.3**
WVT				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.2						
OXF	**Oxford**	**59.64**	**72**	*e*P	**P**	**17 01 04.5**	**-1.7**
	comp=Z,103nm,1.0s,mb5.8						
OXF	**Oxford**	**59.64**	**72**	*e*P	**P**	**17 01 04.5**	**-1.7**
OXF				pmax	pmax		
	comp=Z,103nm,1.0s,mb5.8						
ALLY	**Alegheny Colle**	**59.82**	**60**	P	**P**	**17 01 04.6**	**-2.8**
PLAL	**Pickwick Lake**	**60.08**	**71**	*e*P	**P**	**17 01 07.0**	**-2.2**
	comp=Z,38nm,0.8s,mb5.5						
KURK	**Kurchatov**	**61.19**	**317**	*e*P	**P**	**17 01 15.1**	**-1.5**
	comp=Z,4.2nm,0.6s,mb4.8						
KURK	**Kurchatov**	**61.19**	**317**	*i* P	**P**	**17 01 16.2**	**-0.4**
NCB	**Newcomb**	**61.24**	**55**	*e*P	**P**	**17 01 15.4**	**-1.6**
	comp=Z,32nm,1.1s,mb5.4						

BORG	**Borgarnes**	**61.28**	**14**	LR	LR	17 27 05.4	
	comp=Z,160nm,19.8s,MS4.2,baz=248,slow=35						
MCWV	**Mont Chateau**	**61.39**	**61**	*e*P	**P**	**17 01 17.2**	**-0.9**
	comp=Z,29nm,0.8s,mb5.5						
ACCN	**Adirondack Com**	**61.94**	**55**	*e*P	**P**	**17 01 20.0**	**-1.8**
WMQ	**Urumqi**	**62.09**	**306**	*e*P	**P**	**17 01 23.8**	**+1.0**
WMQ				AP	pP	17 01 32.0	+1.2
WMQ				XP	sP	17 01 36.0	+2.3
WMQ				PCP	PcP	17 02 04.0	+1.4
WMQ				*e*S	**S**	**17 09 46.0**	**+1.6**
WMQ				SCS	ScS	17 11 10.0	+0.8
WMQ				AMB	AMB		
	comp=Z,100nm,5.4s						
WMQ				LR	LR		
	comp=N,390nm,19.7s						
WMQ				LR	LR		
	comp=E,350nm,28.5s						
WMQ				LR	LR		
	comp=Z,270nm,25.2s						
LRAL	**Lakeview Retre**	**62.10**	**71**	*e*P	**P**	**17 01 20.6**	**-2.4**
	comp=Z,8.7nm,0.8s,mb4.9						
FWV	**Forest Hill**	**62.35**	**64**	*e*P	**P**	**17 01 23.6**	**-1.0**
MKAR	**Makanchi Array**	**62.50**	**312**	P	**P**	**17 01 23.8**	**-1.6**
	comp=Z,0.3nm,0.4s,mb3.8,baz=47,slow=6.1,SNR=12						
MKAR				pP	pP	17 01 31.8	-1.7
	comp=Z,0.8nm,0.6s,baz=39,slow=6.8,SNR=6.4						
MKAR				LR	LR	17 29 28.3	
	comp=Z,117nm,19.1s,MS4.1,slow=37						
CD2	**Chengdu**	**62.57**	**286**	*e*P	**P**	**17 01 25.6**	**-0.5**
ELN	**Prospectdale**	**62.64**	**64**	*e*P	**P**	**17 01 24.0**	**-2.4**
ELN				*e*pP	pP	17 01 33.7	-0.8
BRVK	**Borovoye**	**62.71**	**323**	*e*P	**P**	**17 01 25.4**	**-1.3**
	comp=Z,2.3nm,0.7s,mb4.4						
BRVK	**Borovoye**	**62.71**	**323**	*e*P	**P**	**17 01 25.5**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
JOF	**Joensuu**	**63.70**	**348**	*e*p	**P**	**17 01 30.9**	**-2.1**
	comp=Z,1.9nm,0.6s,mb4.3						
ARU	**Arti**	**63.87**	**331**	⇓*i*P	**P**	**17 01 34.0**	**-0.1**
ARU				*e*		17 03 53.6	
ARU				*e*PPP	PPP	17 05 22.9	-5.3
ARU				*e*S	**S**	**17 10 07.1**	**+0.8**
ARU				*e*SS	SS	17 14 16.0	-0.2
ARU				MLR	MLR		
	comp=Z,200nm,18.0s,MS4.3						
ARU				MLR	MLR		
	comp=N,100nm,16.0s,MS4.2						
ARU				MLR	MLR		
	comp=E,100nm,18.0s,MS4.2						
GOGA	**Godfrey**	**63.87**	**69**	*e*P	**P**	**17 01 32.4**	**-2.2**
	comp=E,37nm,1.0s,mb5.4						
GOGA	**Godfrey**	**63.87**	**69**	*e*P	**P**	**17 01 32.4**	**-2.2**
GOGA				pmax	pmax		
	comp=Z,37nm,1.0s,mb5.4						
GYA	**Guiyang**	**64.07**	**280**	P	**P**	**17 01 35.6**	**-0.4**
GYA				AP	pP	17 01 42.8	-1.3
GYA				XP	sP	17 01 45.6	-1.3
GYA				PP	PP	17 03 57.8	-0.9
GYA				SCP		17 06 10.6	
GYA				S	**S**	**17 10 07.5**	**-1.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,370nm,5.7s						
GYA				LR	LR		
	comp=N,390nm,18.7s,MS4.8						
GYA				LR	LR		
	comp=E,470nm,19.0s,MS4.8						
GYA				LR	LR		
	comp=Z,510nm,19.4s,MS4.7						
JSC	**Jenkinsville**	**64.49**	**67**	*e*P	**P**	**17 01 37.5**	**-1.1**
KAF	**Kangasniemi**	**65.06**	**350**	*e*p	**P**	**17 01 39.4**	**-2.4**
	comp=Z,7.1nm,0.9s,mb4.7						
KAF	**Kangasniemi**	**65.06**	**350**	*e*P	**P**	**17 01 39.4**	**-2.4**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
FINES	**FINESS Array B**	**65.74**	**350**	P	**P**	**17 01 44.9**	**-1.3**
	comp=Z,3.6nm,0.8s,mb4.5,baz=13,slow=8.3,SNR=8.7						
FINES				LR	LR	17 31 24.2	
	comp=Z,112nm,18.2s,MS4.1,baz=337,slow=37						
NB2	**NORSAR Subarra**	**67.07**	**358**	P	**P**	**17 01 53.5**	**-1.2**
	comp=Z,3.5nm,0.5s,mb4.7,baz=2.0,slow=6.5						
NOA	**NORSAR Array B**	**67.07**	**358**	P	**P**	**17 01 53.6**	**-1.1**
	comp=Z,4.6nm,0.7s,mb4.6,baz=1.9,slow=6.4,SNR=14						
NOA				pP	pP	17 02 02.0	-0.7
	comp=Z,1.7nm,0.6s,baz=2.9,slow=6.5,SNR=4.1						
NOA				LR	LR	17 33 08.5	
	comp=Z,67nm,20.5s,MS3.8,baz=40,slow=38						
NAO	**NORSAR Subarra**	**67.30**	**358**	P	**P**	**17 01 53.5**	**-2.6**
	comp=Z,3.5nm,0.5s,mb4.7						
NAO	**NORSAR Subarra**	**67.30**	**358**	P	**P**	**17 01 53.5**	**-2.6**
NAO				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
KMI	**Kunming**	**67.42**	**282**	P	**P**	**17 01 57.4**	**-0.1**
KMI				AP	pP	17 02 04.4	-1.2
KMI				XP	sP	17 02 08.3	-0.2
KMI				PP	PP	17 04 24.0	-4.0
KMI				S	S	17 10 54.3	+4.0
KMI				XS		17 11 07.9	
KMI				AMB	AMB		
	comp=Z,80nm,3.8s						
KMI				LR	LR		
	comp=N,230nm,17.0s,MS4.6						
KMI				LR	LR		
	comp=E,140nm,12.0s,MS4.6						
KMI				LR	LR		
	comp=Z,130nm,17.0s,MS4.2						
KMI	**Kunming**	**67.42**	**282**	P	**P**	**17 01 57.4**	**-0.1**
	comp=Z,9.0nm,1.1s,mb4.7						
KMI				pP	pP	17 02 04.4	-1.2
KMI				sP	sP	17 02 08.3	-0.2
KMI				PP	PP	17 04 24.0	-4.0
KMI				PPP	PPP	17 05 57.9	-7.1
KMI				S	S	17 10 54.3	+4.0
KMI				sS		17 11 07.9	
KMI				SS	SS	17 15 24.0	+12
KMI				LR	LR		
	comp=Z,140nm,17.0s,MS4.2						
KMI	**Kunming**	**67.42**	**282**	P	**P**	**17 01 57.4**	**-0.1**
KMI				*PP	pP	17 02 04.4	-1.2
KMI				*SP	sP	17 02 08.3	-0.2
KMI						17 04 24.0	
KMI				PPP	PPP	17 05 57.9	-7.1
KMI				S	S	17 10 54.3	+4.0
KMI				*SS		17 11 07.9	
KMI				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
KMI				MLR	MLR		
	comp=Z,140nm,17.0s,MS4.2						
HFS	**Hagfors**	**67.91**	**357**	P	**P**	**17 01 58.3**	**-1.7**
	comp=Z,6.4nm,0.4s,mb5.0,baz=45,slow=2.1,SNR=45						
HFS				pP	pP	17 02 06.9	-1.1
	comp=Z,3.8nm,0.3s,baz=6.8,slow=3.3,SNR=6.1						
HFS				LR	LR	17 31 09.2	
	comp=Z,94nm,18.2s,MS4.0,baz=344,slow=36						
AKTO	**Aktyubinsk**	**69.16**	**328**	P	**P**	**17 02 06.9**	**-1.0**
	comp=Z,3.9nm,0.6s,mb4.5,baz=53,slow=7.4,SNR=12						
AKTO				LR	LR	17 32 43.5	
	comp=Z,94nm,18.0s,MS4.1,baz=106,slow=36						
AKTO	**Aktyubinsk**	**69.16**	**328**	P	**P**	**17 02 06.9**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
AKTO				MLR	MLR		
	comp=Z,94nm,18.0s,MS4.1						
AAK	**Ala-Archa**	**69.24**	**313**	*e*P	**P**	**17 02 07.6**	**-0.9**
	comp=Z,3.1nm,0.7s,mb4.3						
AAK	**Ala-Archa**	**69.24**	**313**	⇑*i*P	**P**	**17 02 07.8**	**-0.7**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
AAK				MLR	MLR		
	comp=Z,200nm,16.0s,MS4.5						
OBN	**Obninsk**	**70.37**	**343**	⇑*e*P	**P**	**17 02 13.7**	**-1.4**
OBN				*e*		17 04 49.2	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.6						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
LSA	**Lhasa**	**70.77**	**294**	P	**P**	**17 02 19.4**	**+1.4**
PPT	**Papeete**	**72.28**	**157**	*e*LR	LR	17 23 38.2	
	comp=Z,100nm,22.8s						
PPT	**Papeete**	**72.28**	**157**	LR	LR	17 29 42.3	
	comp=Z,88nm,19.9s,MS4.0,baz=86,slow=32						
EKA	**Eskdalemuir Ar**	**72.47**	**6**	P	**P**	**17 02 27.2**	**-0.6**
	comp=Z,1.6nm,0.8s,mb4.6,baz=349,slow=4.3,SNR=3.7						
SHL	**Shillong**	**73.50**	**290**	*e*P	**P**	**17 02 37.5**	**+3.2**
KKTK	**Khon Kaen**	**74.02**	**276**	P	**P**	**17 02 36.0**	**-1.4**
AKASG	**Malin Array Be**	**75.84**	**346**	P	**P**	**17 02 45.8**	**-1.4**
	comp=Z,1.5nm,0.5s,mb4.2,baz=14,slow=5.8,SNR=11						
AKASG				pP	pP	17 02 53.7	-1.6
	comp=Z,2.9nm,0.6s,baz=13,slow=5.6,SNR=7.9						
AKASG	**Malin Array Be**	**75.84**	**346**	P	**P**	**17 02 45.8**	**-1.4**
AKASG				pP	pP	17 02 53.7	-1.6
CLL	**Collm**	**76.77**	**356**	P	**P**	**17 02 52.0**	**-0.4**
CLL				*e*	pP	17 03 00.0	-0.6
CLL	**Collm**	**76.77**	**356**	*e*P	**P**	**17 02 52.0**	**-0.4**
CLL				*e*	pP	17 03 00.0	-0.6
BRG	**Berggiesshubel**	**77.16**	**356**	*i* P	**P**	**17 02 54.8**	**+0.2**
	comp=Z,7.1nm,0.9s,mb4.6						
BRG				*i*		17 03 00.7	
BRG	**Berggiesshubel**	**77.16**	**356**	*i* P	**P**	**17 02 54.8**	**+0.2**
BRG				*i*		17 03 00.7	
BRG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
UPC	**Upice**	**77.42**	**354**	*e*P	**P**	**17 02 56.2**	**+0.2**
MOX	**Moxa**	**77.47**	**357**	*i* P	**P**	**17 02 56.9**	**+0.5**
MOX	**Moxa**	**77.47**	**357**	*e*P	**P**	**17 02 56.9**	**+0.5**
PVCC	**Panska Ves**	**77.47**	**355**	*e*P	**P**	**17 02 55.9**	**-0.5**
PVCC				*e*pP	pP	17 03 05.0	+0.5
DPC	**Dobruska-Polom**	**77.56**	**354**	*e*P	**P**	**17 02 57.4**	**+0.6**
DPC				*e*pP	pP	17 03 05.2	+0.2
NKC	**Novy Kostel**	**77.86**	**357**	*e*P	**P**	**17 02 59.1**	**+0.6**
NKC				*e*pP	pP	17 03 06.2	-0.4
TBI	**Tubuai**	**77.88**	**158**	*e*LR	LR	17 26 13.5	
	comp=Z,158nm,27.5s						
OKC	**Ostrava-Krasne**	**77.94**	**353**	*e*pP	pP	17 03 05.9	-1.2
PRU	**Pruhonice**	**78.02**	**355**	*e*P	**P**	**17 02 58.2**	**-1.1**
PRU				*e*	pP	17 03 07.6	+0.1
BAIF	**Baives**	**78.08**	**2**	*e*P	**P**	**17 02 59.9**	**+0.2**
STHS	**Stebnicka Huta**	**78.09**	**351**	*e*P	**P**	**17 02 59.8**	**+0.1**
STHS				*e*		17 03 05.7	
GRA1	**Grafenberg Arr**	**78.44**	**358**	*e*P	**P**	**17 03 02.4**	**+0.7**
	comp=Z,10.0nm,1.2s,mb4.6						
GRA1				*e*	pP	17 03 08.9	-0.9
GRF	**Grafenberg Arr**	**78.44**	**358**	*e*P	**P**	**17 03 02.4**	**+0.7**
	comp=Z,10.0nm,1.2s,mb4.6						
GRF				*e*	pP	17 03 08.9	-0.9
GRF				LR	LR		
	comp=Z,100nm,19.0s,MS4.2						
GRF	**Grafenberg Arr**	**78.44**	**358**	*e*P	**P**	**17 03 02.4**	**+0.7**
GRF				*e*	pP	17 03 08.9	-0.9
GRF				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
GRF				MLR	MLR		
	comp=Z,100nm,19.0s,MS4.2						
KOLS	**Kolonicke sedl**	**78.46**	**350**	*e*P	**P**	**17 03 01.3**	**-0.5**
KOLS				*e*	pP	17 03 08.0	-2.0
KOLS				*e*		17 21 35.2	
CRVS	**Cervenica-Dubn**	**78.58**	**351**	*e*	sP	17 03 17.7	+4.3
KHC	**Kasperske Hory**	**78.92**	**356**	*e*P	**P**	**17 03 04.6**	**+0.3**
KHC				*e*	pP	17 03 11.3	-1.2
KECS	**Kecovo**	**79.09**	**351**	*e*P	**P**	**17 03 03.4**	**-1.8**
FLN	**La Foliniere**	**79.19**	**5**	*e*P	**P**	**17 03 05.8**	**0.0**
FLN				*e*R			
	comp=Z,114nm,18.0s						
GERES	**GERESS Array B**	**79.20**	**356**	P	**P**	**17 03 05.8**	**0.0**
	comp=Z,2.5nm,0.7s,mb4.2,baz=18,slow=4.2,SNR=17						
GERES				LR	LR	17 41 14.9	
	comp=Z,67nm,18.9s,MS4.0,baz=25,slow=38						
VYHS	**Vyhne**	**79.22**	**352**	*e*	**P**	**17 03 09.1**	**+3.1**
SMOL	**Smolenice**	**79.31**	**353**	*e*P	**P**	**17 03 01.3**	**-5.2**
SMOL				*e*	pP	17 03 08.0	-6.6
SMOL				*e*		17 21 35.2	
LDF	**La Druitiere**	**79.38**	**5**	*e*P	**P**	**17 03 06.9**	**+0.1**
	comp=Z,121nm,1.6s,mb5.3						
LDF	**La Druitiere**	**79.38**	**5**	*e*P	**P**	**17 03 06.9**	**+0.1**
LDF				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.3						
ROSF	**Rostrenen**	**79.42**	**7**	*e*P	**P**	**17 03 07.3**	**+0.2**
KIV	**Kislovodsk**	**79.52**	**335**	*e*P	**P**	**17 03 03.9**	**-3.8**
KIV				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
GRR	**Gorron**	**79.54**	**6**	*e*P	**P**	**17 03 07.9**	**+0.2**
	comp=Z,58nm,1.2s,mb5.1						
GRR	**Gorron**	**79.54**	**6**	*e*P	**P**	**17 03 07.9**	**+0.2**
GRR				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.1						
CDF	**Champ du Feu**	**79.77**	**0**	*e*P	**P**	**17 03 09.3**	**+0.4**
QUIF	**Quistinic**	**79.85**	**7**	*e*P	**P**	**17 03 09.1**	**-0.3**
KAKA	**Kakadu**	**80.11**	**234**	*e*P	**P**	**17 03 29.0**	**+18**
	comp=Z,8.1nm,0.6s,mb4.8						
HINF	**Hinteralfeld**	**80.36**	**0**	*e*P	**P**	**17 03 12.3**	**+0.2**
CTA	**Charters Tower**	**80.44**	**219**	*e*P	**P**	**17 03 12.6**	**-0.5**
	comp=Z,7.7nm,1.1s,mb4.5						
CTA	**Charters Tower**	**80.44**	**219**	*e*P	**P**	**17 03 12.6**	**-0.5**
CTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CTAO	**Charters Tower**	**80.44**	**219**	*e*P	**P**	**17 03 10.8**	**-2.3**
	comp=Z,17nm,1.1s,mb4.9						
CTAO	**Charters Tower**	**80.44**	**219**	*e*P	**P**	**17 03 10.8**	**-2.3**
CTAO				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
SOC	**Sochi**	**80.61**	**337**	*e*P	**P**	**17 03 13.1**	**-0.4**
SOC				*e*		17 06 20.0	
SOC				*e*S	S	17 13 16.9	-0.7
SOC				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.0						
SOC				MLR	MLR		
	comp=Z,196nm,18.0s,MS4.5						
LOR	**Lormes**	**80.86**	**2**	*e*P	**P**	**17 03 14.7**	**-0.1**
	comp=Z,3.6nm,0.4s,mb4.3						
LOR				*e*R			
	comp=Z,64nm,19.3s						
LOR	**Lormes**	**80.86**	**2**	*e*P	**P**	**17 03 14.7**	**-0.1**
LOR				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
LOR				MLR	MLR		
	comp=Z,60nm,19.3s,MS4.0						
SSF	**Saint Saulge**	**81.06**	**3**	*e*P	**P**	**17 03 16.2**	**+0.4**
	comp=Z,3.6nm,0.4s,mb4.7						
SSF	**Saint Saulge**	**81.06**	**3**	*e*P	**P**	**17 03 16.2**	**+0.4**
SSF				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
AVF	**Avril sur Loir**	**81.33**	**3**	*e*P	**P**	**17 03 17.0**	**-0.2**
	comp=Z,6.4nm,0.6s,mb4.5						
AVF	**Avril sur Loir**	**81.33**	**3**	*e*P	**P**	**17 03 17.0**	**-0.2**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MFF	**Saint Martin d**	**81.36**	**5**	*e*P	**P**	**17 03 17.5**	**+0.1**
MLR	**Muntele Rosu**	**81.40**	**347**	P	**P**	**17 03 18.5**	**+0.9**
	comp=Z,1.9nm,0.5s,mb4.2,baz=237,slow=5.7,SNR=4.4						
SMF	**Signal de Mont**	**81.49**	**3**	*e*P	**P**	**17 03 18.4**	**+0.4**
BGF	**Bois d'Agland**	**81.54**	**3**	*e*P	**P**	**17 03 18.5**	**+0.2**
CABF	**La Chapelle**	**81.56**	**1**	*e*P	**P**	**17 03 18.5**	**+0.1**
	comp=Z,42nm,1.3s,mb4.9						
CABF	**La Chapelle**	**81.56**	**1**	*e*P	**P**	**17 03 18.5**	**+0.1**
CABF				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.9						
TCF	**Toulx Ste Croi**	**81.79**	**4**	*e*P	**P**	**17 03 19.7**	**+0.1**
	comp=Z,7.5nm,0.7s,mb4.4						
TCF	**Toulx Ste Croi**	**81.79**	**4**	*e*P	**P**	**17 03 19.7**	**+0.1**
TCF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
RKT	**Rikitea**	**81.86**	**145**	*e*LR	LR	17 28 06.3	
	comp=Z,187nm,29.2s						
SNG	**Songkhla**	**82.46**	**272**	P	**P**	**17 03 25.0**	**+1.3**
LPL	**La Plagne**	**82.66**	**1**	*e*P	**P**	**17 03 24.6**	**+0.4**
LPG	**La Plagne**	**82.68**	**1**	*e*P	**P**	**17 03 24.6**	**+0.3**
RJF	**Les Rejaudoux**	**82.74**	**4**	*e*P	**P**	**17 03 24.9**	**+0.3**
RJF				*e*R			
	comp=Z,179nm,20.2s						
LFF	**La Frestale**	**83.07**	**5**	*e*P	**P**	**17 03 25.9**	**-0.4**
CAF	**Calviac**	**83.14**	**4**	*e*P	**P**	**17 03 26.8**	**+0.1**
ORIF	**Oris-en-Rattie**	**83.25**	**1**	*e*P	**P**	**17 03 27.3**	**+0.1**
ORIF				*e*R			
	comp=Z,117nm,19.2s						
VIVF	**Saint-Julien-l**	**83.30**	**2**	*e*P	**P**	**17 03 27.4**	**-0.1**
	comp=Z,2.9nm,0.5s,mb4.3						
VIVF	**Saint-Julien-l**	**83.30**	**2**	*e*P	**P**	**17 03 27.4**	**-0.1**
VIVF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.1						
MBDF	**Montbardon**	**83.45**	**1**	*e*P	**P**	**17 03 28.5**	**+0.2**
	comp=Z,8.1nm,0.8s,mb4.5						
MBDF	**Montbardon**	**83.45**	**1**	*e*P	**P**	**17 03 28.5**	**+0.2**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
LASF	**Ste Croix**	**84.06**	**3**	*e*P	**P**	**17 03 31.4**	**+0.2**
SMRF	**Simiane la Rot**	**84.19**	**1**	*e*P	**P**	**17 03 31.7**	**-0.2**
SBF	**Sospel**	**84.32**	**0**	*e*P	**P**	**17 03 32.8**	**+0.2**
	comp=Z,34nm,0.8s,mb5.2						
SBF	**Sospel**	**84.32**	**0**	*e*P	**P**	**17 03 32.8**	**+0.2**
SBF				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.2						
FRF	**La Foret Royal**	**84.62**	**1**	*e*P	**P**	**17 03 34.0**	**-0.1**
	comp=Z,26nm,1.1s,mb5.0						
FRF	**La Foret Royal**	**84.62**	**1**	*e*P	**P**	**17 03 34.0**	**-0.1**
FRF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.0						
MTLF	**Montolieu**	**84.73**	**4**	*e*P	**P**	**17 03 34.6**	**0.0**
	comp=Z,2.7nm,0.5s,mb4.3						
MTLF	**Montolieu**	**84.73**	**4**	*e*P	**P**	**17 03 34.6**	**0.0**
MTLF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2						
SJPF	**Ste Jean**	**84.77**	**6**	*e*P	**P**	**17 03 34.7**	**-0.1**
	comp=Z,138nm,1.6s,mb5.5						
SJPF	**Ste Jean**	**84.77**	**6**	*e*P	**P**	**17 03 34.7**	**-0.1**
SJPF				pmax	pmax		
	comp=Z,69nm,1.6s,mb5.5						
EPF	**Esparros**	**84.95**	**5**	*e*P	**P**	**17 03 36.1**	**+0.4**
WRAB	**Tennant Creek**	**85.39**	**229**	*e*P	**P**	**17 03 36.9**	**-1.5**
	comp=Z,10nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**85.39**	**229**	*e*P	**P**	**17 03 36.9**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
WB2	**Warramunga Arr**	**85.40**	**229**	*e*P	**P**	**17 03 37.5**	**-1.0**
WRA	**Warramunga Arr**	**85.41**	**229**	P	**P**	**17 03 37.7**	**-0.8**
	comp=Z,3.6nm,0.7s,mb4.6,baz=35,slow=5.9,SNR=25						
SJG	**San Juan**	**85.50**	**66**	P	**P**	**17 03 39.2**	**+0.2**
	comp=Z,8.8nm,0.3s,mb5.4,baz=332,slow=21,SNR=3.6						
PGF	**Pioggiola**	**85.62**	**359**	*e*P	**P**	**17 03 39.0**	**-0.1**
BR131	**Keskin Array S**	**85.67**	**340**	*e*P	**P**	**17 03 39.9**	**+0.6**
	comp=Z,1.1nm,0.5s,mb4.3						
BRTR	**Keskin Array B**	**85.67**	**340**	P	**P**	**17 03 40.1**	**+0.8**
	comp=Z,1.6nm,0.5s,mb4.5,baz=49,slow=1.9,SNR=10						
BRTR				pP	pP	17 03 47.3	-0.3
	comp=Z,1.3nm,0.5s,baz=33,slow=1.4,SNR=5.7						
HYB	**Hyderabad**	**87.49**	**295**	*i* P	**P**	**17 03 48.0**	**-0.8**
HYB	**Hyderabad**	**87.49**	**295**	*e*P	**P**	**17 03 48.0**	**-0.8**
FITZ	**Fitzroy Crossi**	**88.12**	**237**	*e*P	**P**	**17 03 51.8**	**0.0**
	comp=Z,6.8nm,0.5s,mb5.1						
EVO	**Evora**	**88.64**	**12**	*e*P	**P**	**17 03 53.1**	**-0.8**
EVO				*e*R			
	comp=Z,61nm,18.8s						
STKA	**Stephens Creek**	**92.85**	**218**	*e*P	**P**	**17 04 13.6**	**+0.1**
	comp=Z,8.1nm,1.0s,mb5.1						
STKA	**Stephens Creek**	**92.85**	**218**	P	**P**	**17 04 13.6**	**+0.1**
	comp=Z,11nm,0.9s,mb5.2,baz=343,slow=7.0,SNR=15						
STKA				pP	pP	17 04 21.0	-0.8
	comp=Z,3.8nm,0.8s,baz=358,slow=6.6,SNR=5.2						
STKA				LR	LR	17 41 51.1	
	comp=Z,110nm,18.6s,MS4.3,baz=25,slow=33						
MDT	**Midelt**	**94.69**	**10**	LR	LR	17 46 36.4	
	comp=Z,49nm,18.2s,MS4.0,baz=159,slow=35						
SIV	**San Ignacio**	**115.61**	**83**	PKP	PKPdf	17 09 42.4	-4.4
	comp=Z,0.7nm,0.7s,baz=260,slow=22,SNR=4.0						
DBIC	**Dimbokro**	**120.42**	**14**	PKP	PKPdf	17 09 51.7	-4.5
	comp=Z,1.1nm,0.3s,baz=103,slow=23,SNR=8.7						
DBIC	**Dimbokro**	**120.42**	**14**	PKP	PKPdf	17 09 51.7	-4.5
LIC	**Lamto**	**120.83**	**15**	*e*PKIKP	PKPdf	17 09 51.8	-5.2
	comp=Z,7.3nm,0.7s						
LIC				*e*R			
	comp=Z,92nm,21.8s						
KMBO	**Kilima Mbogo**	**123.34**	**324**	PKP	PKPdf	17 09 59.2	-2.6
	comp=Z,2.4nm,0.3s,baz=58,slow=11,SNR=11						
KMBO				pPKP		17 10 06.7	
	comp=Z,5.9nm,0.9s,baz=57,slow=2.5,SNR=3.9						
KMBO	**Kilima Mbogo**	**123.34**	**324**	PKP	PKPdf	17 09 59.2	-2.6
KMBO				pPKP		17 10 06.7	
PLCA	**Paso Flores**	**127.54**	**110**	PKP	PKPdf	17 10 05.8	-3.4
	comp=Z,6.3nm,0.8s,baz=304,slow=2.2,SNR=17						
QSPA	**South Pole Qui**	**141.96**	**180**	P	PKPdf	17 10 25.5	-9.2
MATP	**Matopo**	**144.32**	**325**	PKP	PKPdf	17 10 35.4	-5.0
	comp=Z,5.6nm,0.7s,baz=18,slow=2.2,SNR=16						
MATP	**Matopo**	**144.32**	**325**	PKP	PKPdf	17 10 35.4	-5.1
TSUM	**Tsumeb**	**146.13**	**343**	*e*PKP	PKPdf	17 10 40.9	-2.8
MAW	**Mawson**	**149.53**	**218**	PKPbc	PKPdf	17 10 48.6	+0.9
	comp=Z,11nm,0.9s,baz=118,slow=0.1,SNR=15						
LBTB	**Lobatse**	**149.56**	**326**	*e*PKPdf	PKPdf	17 10 45.9	-3.2
LBTB				*e*PKPbc	PKPdf	17 10 50.8	+1.7
BOSA	**Boshof**	**152.98**	**324**	PKPbc	PKPdf	17 10 58.4	+4.3
	comp=Z,8.4nm,0.6s,baz=65,slow=1.5,SNR=22						
BOSA	**Boshof**	**152.98**	**324**	*e*PKIKP	PKPdf	17 10 58.0	+4.0

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*IDC **16** 16:56:47.6±1.1,5.11N×78.40W,mb3.7/4,mb1 3.9/5,mb1mx3.8/20,mbtmp3.7/5,ML2.6/1,MS3.3/4,Ms1 3.3/4,ms1mx3.1/32,Error ellipse: s-maj=44.8km s-min=20.7km az=44.0*

ISC 16 16:56:52.7±4.7,**5.1N**±0.2×**78.4W**±0.2,**h49**^{km}±45^{km},**n8**,σ**1**^{s}**58**/6,**mb3.5**/4,**MS3.2**/2,**South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**4.02**	**94**	Pn	**P**	**16 57 53.0**	**-0.3**
	7.8nm,0.3s,baz=87,slow=11,SNR=11						
ROSC				Sn	**S**	**16 58 40.0**	**+0.4**
	1.5nm,0.3s,baz=86,slow=22,SNR=4.6						
ROSC				LR	LR	16 59 35.9	
	comp=Z,231nm,20.5s,baz=206,slow=41						
JTS	**JuntasAbangare**	**8.30**	**308**	LR	LR	17 01 59.2	
	comp=Z,269nm,19.1s,baz=206,slow=38						
LPAZ	**La Paz**	**23.57**	**155**	P	**P**	**17 02 01.3**	**+1.4**
	0.9nm,0.7s,mb3.3,baz=346,slow=18,SNR=5.0						
LPAZ				LR	LR	17 12 27.8	
	comp=Z,33nm,18.5s,MS2.8,baz=86,slow=40						
SIV	**San Ignacio**	**27.08**	**141**	P	**P**	**17 02 31.4**	**-1.7**
	0.9nm,0.7s,mb3.4,baz=314,slow=10,SNR=6.2						
BDFB	**Brasilia**	**36.45**	**125**	LR	LR	17 19 34.7	
	comp=Z,87nm,19.2s,MS3.5,baz=209,slow=38						
NVAR	**Mina Array Bea**	**49.09**	**318**	P	**P**	**17 05 37.6**	**+0.3**
	0.5nm,0.6s,mb3.7,baz=120,slow=7.3,SNR=4.5						
ILAR	**Eielson Array**	**76.31**	**336**	P	**P**	**17 08 37.8**	**-0.1**
	0.6nm,0.6s,mb3.7,baz=116,slow=4.4,SNR=9.8						
WRA	**Warramunga Arr**	**144.96**	**242**	PKP	PKPdf	17 16 27.5	+2.1
	3.3nm,0.7s,baz=105,slow=3.3,SNR=30						

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*NEIC **16** 16:58:12.7,17.23N×93.04W,h82^{km},MD4.1(MEX),After MEX.*

MEX 16 16:58:12.7±1.2,**17.24N**×**93.03W**,**h82**^{km}±19^{km},**MD4.1**,**Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCX	**San Cristobal**	**0.63**	**142**	*i* P	P	16 58 27.5	-0.5
SCX				*i* S	S	16 58 37.5	-1.8
CCIG	**Comitan**	**1.28**	**138**	*i* P	P	16 58 34.9	-0.7
CCIG				*i* S	S	16 58 50.6	-2.3
TUIG	**Tuzandepetl**	**1.54**	**301**	*i* P	P	16 58 36.5	-2.7
TUIG				*i* S	S	16 58 58.4	-0.3
CMIG	**Matias Romero**	**1.77**	**266**	*e*P	P	16 58 39.7	-2.5
CMIG				*i* S	S	16 59 01.8	-2.1
SCIG		**2.46**	**45**	*i* P	P	16 58 49.9	-1.8
SCIG				*i* S	S	16 59 18.6	-2.1
HUIG	**Huatulco**	**3.29**	**244**	*i* S	S	16 59 39.5	-1.9
OXX	**Oaxaca**	**3.53**	**268**	*i* P	P	16 59 05.0	-1.6
OXX				*i* S	S	16 59 44.0	-3.3
VHO	**Vista Hermosa**	**3.54**	**268**	*i* P	P	16 59 05.6	-1.1
VHO				*i* S	S	16 59 45.6	-1.9

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*NEIC **16** 17:20:53.7±0.8,50.27N×18.85E,h5^{km},MG2.6(WAR),Error ellipse: s-maj=14.1km s-min=6.2km az=190.0*

*PRU **16** 17:20:54.4,50.23N×18.89E*

WAR 16 17:20:53.9,50.24N×18.98E,h0^{km}**,ML2.6,Mining Induced,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.53**	**92**	*e*PG	Pg	17 21 04.0	-0.4
OJC				*e*SG	Sg	17 21 12.0	+0.6
RAC	**Raciborz**	**0.53**	**253**	*e*PG	Pg	17 21 05.0	+0.5
RAC				*e*SG	Sg	17 21 13.0	+1.5
OKC	**Ostrava-Krasne**	**0.67**	**234**	*e*PG	Pg	17 21 06.7	-0.6
NIE	**Niedzica**	**1.19**	**133**	*e*PG	Pg	17 21 17.0	-0.7
NIE				*e*SG	Sg	17 21 34.0	+0.4
NIE	**Niedzica**	**1.19**	**133**	*e*Pg	Pg	17 21 17.0	-0.7
NIE				*e*		17 21 32.3	
NIE				*e*Sg	Sg	17 21 33.6	0.0
STHS	**Stebnicka Huta**	**1.68**	**118**	*e*PN	Pn	17 21 25.9	+1.2
STHS				*e*SN	Sn	17 21 50.2	+3.0
DPC	**Dobruska-Polom**	**1.71**	**275**	*e*PG	Pg	17 21 23.8	-4.2
DPC				*e*SG	Sg	17 21 47.5	-3.3
	12nm,0.2s						
VYHS	**Vyhne**	**1.75**	**183**	*e*PN	Pn	17 21 24.5	-1.2

VYHS				*e*SN	Sn	17 21 46.7	-2.2
KSP	**Ksiaz**	**1.82**	**290**	*e*PN	Pn	17 21 25.0	-1.6
KSP				*i* PG	Pg	17 21 27.6	-2.6
KSP				*e*SG	Sg	17 21 52.6	-1.8
KSP	**Ksiaz**	**1.82**	**290**	*e*Pn	Pn	17 21 27.5	+0.8
KSP				*e*Sg	Sg	17 21 51.6	-2.8
KSP	**Ksiaz**	**1.82**	**290**	*e*Pn	Pn	17 21 25.1	-1.5
KSP				*i* Pg	Pg	17 21 27.4	-2.8
KSP				*e*Sg	Sg	17 21 51.6	-2.8
UPC	**Upice**	**1.92**	**279**	*e*PG	Pg	17 21 28.6	-3.6
UPC				*e*SG	Sg	17 21 54.2	-3.6
KECS	**Kecovo**	**2.01**	**150**	*e*PN	Pn	17 21 28.2	-1.2
KECS				*e*PG	Pg	17 21 31.5	-2.6
KECS				*e*SN	Sn	17 21 52.5	-3.2
CRVS	**Cervenica-Dubn**	**2.10**	**129**	*e*PG	Pg	17 21 32.9	-2.9
CRVS				*e*SN	Sn	17 21 59.6	+1.8
KWP	**Kalwaria**	**2.48**	**103**	*e*PN	Pn	17 21 37.0	+0.8
KWP				*e*PG	Pg	17 21 43.0	-0.5
KWP				*e*SG	Sg	17 22 20.0	+3.4
KWP	**Kalwaria**	**2.48**	**103**	*e*Pn	Pn	17 21 37.0	+0.8
KWP				*e*Pg	Pg	17 21 43.2	-0.3
KWP				*e*Sg	Sg	17 22 20.1	+3.5
KOLS	**Kolonicke sedl**	**2.51**	**120**	*e*PG	Pg	17 21 40.4	-3.6
KOLS				*e*		17 22 06.1	
PRU	**Pruhonice**	**2.87**	**267**	*e*SG	Sg	17 22 22.4	-7.0
PRU	**Pruhonice**	**2.87**	**267**	*e*Sg	Sg	17 22 22.4	-7.0
KHC	**Kasperske Hory**	**3.68**	**255**	*e*PN	Pn	17 21 51.0	-2.2
KHC				*e*PG	Pg	17 22 00.0	-7.3
KHC				*e*SG	Sg	17 22 48.8	-7.6
KHC	**Kasperske Hory**	**3.68**	**255**	*e*Sg	Sg	17 22 48.8	-7.6
CLL	**Collm**	**3.94**	**288**	*e*PG	Pg	17 22 08.0	-4.6
CLL				*e*SG	Sg	17 22 59.0	-6.1

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*PRU **16** 17:30:44.1,51.38N×16.24E*
*WAR **16** 17:30:44.5,51.40N×16.19E,h1^{km},ML2.5,Mining Induced*
*NEIC **16** 17:30:47.4±1.4,51.19N×15.98E,h5^{km},MG2.5(WAR), Error ellipse: s-maj=17.6km s-min=6.4km az=208.0*
ISC 16 17:30:42.4±1.1,**51.38N**±0.05×**16.15E**±0.06,**n14,**σ**1^{s}32**/29, **3D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.55**	**171**	⇓*i*PG	**Pg**	**17 30 54.8**	**+1.5**
KSP				⇓*e*SG	**Sg**	**17 31 02.8**	**+2.2**
KSP	**Ksiaz**	**0.55**	**171**	*e*Pg	**Pg**	**17 30 54.8**	**+1.5**
KSP				*e*Sg	**Sg**	**17 31 02.3**	**+1.6**
KSP	**Ksiaz**	**0.55**	**171**	⇓*i*Pg	**Pg**	**17 30 54.8**	**+1.5**
KSP				*e*Sg	**Sg**	**17 31 02.3**	**+1.7**
UPC	**Upice**	**0.88**	**186**	*e*PG	**Pg**	**17 31 01.0**	**+1.0**
DPC	**Dobruska-Polom**	**1.04**	**174**	*e*PG	**Pg**	**17 31 03.4**	**+0.2**
DPC				*e*SG	**Sg**	**17 31 17.5**	**+0.5**
	16nm,0.3s						
PVCC	**Panska Ves**	**1.32**	**230**	*e*PG	**Pg**	**17 31 09.1**	**+0.4**
BRG	**Berggiesshubel**	**1.48**	**251**	Pn	**Pn**	**17 31 12.3**	**+1.9**
BRG				Pg	**Pg**	**17 31 13.3**	**+1.3**
BRG				Sg	**Sg**	**17 31 33.1**	**+1.3**
PRU	**Pruhonice**	**1.73**	**217**	*e*PG	**Pg**	**17 31 16.2**	**-0.8**
PRU				*e*SG	**Sg**	**17 31 39.7**	**-0.3**
CLL	**Collm**	**1.98**	**269**	*i* PG	**Pg**	**17 31 21.2**	**-0.7**
CLL				*i* SG	**Sg**	**17 31 48.2**	**0.0**
OKC	**Ostrava-Krasne**	**2.00**	**140**	*e*PG	**Pg**	**17 31 21.0**	**-1.4**
OKC				*e*SG	**Sg**	**17 31 47.4**	**-1.7**
TREC	**Trest**	**2.13**	**192**	*e*PN	**Pn**	**17 31 21.5**	**+1.8**
TREC				*e*PG	**Pg**	**17 31 23.9**	**-1.1**
NKC	**Novy Kostel**	**2.62**	**245**	*e*PN	**Pn**	**17 31 27.2**	**+0.6**
NKC				*e*PG	**Pg**	**17 31 32.9**	**-1.7**
NKC				*e*SG	**Sg**	**17 32 07.6**	**-1.9**
KHC	**Kasperske Hory**	**2.79**	**217**	*e*PN	**Pn**	**17 31 29.7**	**+0.5**
KHC				*e*PG	**Pg**	**17 31 35.7**	**-2.5**
KHC				*e*SG	**Sg**	**17 32 14.3**	**-1.1**
MOX	**Moxa**	**2.96**	**257**	*e*Pg	**Pg**	**17 31 40.0**	**-1.5**
MOX				*e*Sg	**Sg**	**17 32 24.0**	**+3.1**

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*NEIC **16** 17:32:25.9±2.6,6.25S×149.65E,h75^{km}±22^{km},mb4.4/2, Error ellipse: s-maj=22.9km s-min=17.0km az=191.0*
*IDC **16** 17:32:25.6±4.8,6.24S×149.61E,h70^{km}±44^{km},mb3.8/5, mb1 4.1/6,mb1mx3.8/14,mbtmp4.2/6,ML3.6/1,Error ellipse: s-maj=31.3km s-min=25.7km az=26.0*
ISC 16 17:32:25.6±3.5,**6.3S**±0.2×**149.5E**±0.2,**h87**^{km}±28^{km},**n9,** σ**0^{s}31**/10,**mb3.8**/4,**New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.92**	**217**	P	**P**	**17 33 24.9**	**+0.1**
	28nm,0.3s,baz=0.5,slow=4.5,SNR=129						
PMG				S	**S**	**17 34 10.1**	**0.0**
	18nm,0.3s,baz=305,slow=14,SNR=15						
WRAB	**Tennant Creek**	**20.07**	**226**	*e*P	**P**	**17 36 54.2**	**-0.2**
	16nm,0.7s						
WRAB				*e*		17 37 05.6	
WB2	**Warramunga Arr**	**20.08**	**226**	*e*P	**P**	**17 36 54.4**	**-0.1**
WB2				*e*		17 37 06.1	
WRA	**Warramunga Arr**	**20.09**	**226**	P	**P**	**17 36 54.5**	**-0.1**
	8.5nm,0.7s,baz=50,slow=11,SNR=68						
DZM	**Mont Dzumac**	**22.67**	**136**	P	**P**	**17 37 20.1**	**-0.3**
	2.1nm,0.5s,mb3.7,baz=246,slow=20,SNR=7.9						
FITZ	**Fitzroy Crossi**	**26.13**	**241**	*e*P	**P**	**17 37 53.3**	**-0.2**
	3.3nm,0.3s,mb4.2						
FITZ	**Fitzroy Crossi**	**26.13**	**241**	P	**P**	**17 37 53.0**	**-0.5**
	3.5nm,0.4s,mb4.2,baz=53,slow=12,SNR=16						
STKA	**Stephens Creek**	**26.55**	**195**	P	**P**	**17 37 58.0**	**+0.7**
	1.0nm,0.5s,mb3.6,baz=343,slow=12,SNR=5.4						
SONM	**Songino Array**	**65.88**	**330**	P	**P**	**17 43 04.4**	**+0.2**
	0.5nm,0.5s,mb3.6,baz=145,slow=4.9,SNR=9.4						

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*ISK **16** 18:33:58.5,38.13N×26.78E,h28^{km},MD2.7*
*ATH **16** 18:33:58.3,38.12N×26.64E,h34^{km}±5^{km},MD3.1/3*
*CSEM **16** 18:33:58.8±0.2,38.13N×26.82E,h30^{km},MD2.7,Error ellipse: s-maj=8.3km s-min=4.4km az=102.0*
ISC 16 18:33:59.2±0.7,**38.12N**±0.04×**26.8E**±0.1,**h33**^{km}±7^{km},**n8,** σ**0^{s}46**/11,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.32**	**34**	*i* PG	**Pb**	**18 34 06.6**	**-0.5**
BLCB				*i* SG	**Sb**	**18 34 12.2**	**-0.4**
SMG	**Samos**	**0.41**	**178**	*e*PB	**Pb**	**18 34 08.3**	**-0.2**
SMG				*e*SB	**Sb**	**18 34 15.5**	**+0.7**
IZM	**Izmir**	**0.45**	**52**	*i* PG	**Pb**	**18 34 09.4**	**+0.4**
AKS	**Akhisar**	**1.09**	**46**	PN	**Pn**	**18 34 18.6**	**+0.2**
BODT	**Bodrum**	**1.13**	**160**	PN	**Pn**	**18 34 19.2**	**+0.3**
PRK	**Paraskevi**	**1.20**	**339**	*e*PN	**Pn**	**18 34 20.0**	**0.0**
PRK				*e*SN	**Sn**	**18 34 35.9**	**+0.6**
APE	**Apeiranthos**	**1.47**	**225**	*e*PN	**Pn**	**18 34 23.1**	**-0.7**
DAT	**Datca**	**1.52**	**156**	*e*PN	**Pn**	**18 34 24.1**	**-0.5**

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*NIED **16** 18:41:00,28.20N×129.50E,h44^{km},Mw3.7 Best double couple: M$_0$4.07×10^{14} NP1:φ$_s$277°,δ80°,λ84°. NP2:φ$_s$129°, δ11°,λ122°.*
*JMA **16** 18:41:46.8,28.21N×129.53E,h32^{km}±1^{km},M3.5*
JMA Felt I J1.
ISC 16 18:41:46.7±0.7,**28.19N**±0.07×**129.6E**±0.1,**h30**^{km}±5^{km}, **n11,**σ**0^{s}23**/17,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.23**	**12**	P	**Pb**	**18 41 53.2**	**-0.1**
JAM				S	**Sb**	**18 41 57.8**	**+0.1**
JZK	**Kikaishima**	**0.39**	**71**	P	**Pb**	**18 41 55.6**	**+0.1**
JTK	**Tokunoshima**	**0.66**	**233**	P	**Pb**	**18 41 59.4**	**-0.4**
JTK				S	**Sb**	**18 42 08.9**	**+0.1**
JNN	**Nakanoshima**	**1.67**	**10**	P	**Pn**	**18 42 14.7**	**+0.2**
JNN				*e*S	**Sn**	**18 42 35.0**	**-0.2**
JOW	**Kunigami**	**1.76**	**220**	P	**Pn**	**18 42 15.9**	**+0.1**
JIH	**Iheya**	**1.81**	**231**	P	**Pn**	**18 42 17.0**	**+0.5**
JKC	**Kuchinoerabu**	**2.34**	**14**	P	**Pn**	**18 42 24.3**	**+0.3**
JKC				S	**Sn**	**18 42 52.0**	**0.0**
JJT2	**Tamagusuku 2**	**2.60**	**219**	P	**Pn**	**18 42 27.4**	**-0.3**
JAGN	**Aguni-jima**	**2.60**	**233**	P	**Pn**	**18 42 27.9**	**+0.2**
JAGN				S	**Sn**	**18 42 58.7**	**+0.1**
JTN	**Tanegashima 3**	**2.76**	**27**	P	**Pn**	**18 42 29.7**	**-0.3**
JTN				*e*S	**Sn**	**18 43 02.8**	**+0.1**
JKE	**Kume jima 2**	**3.08**	**234**	P	**Pn**	**18 42 34.3**	**-0.3**

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*MOS **16** 18:50:00.5±1.2,24.14N×122.64E,h33^{km},mb4.7/14, MS4.0/6,Error ellipse: s-maj=13.7km s-min=7.2km az=117.0*
*NIED **16** 18:50:00,24.00N×122.50E,h38^{km},Mw4.6 Best double couple: M$_0$1.05×10^{16} NP1:φ$_s$64°,δ87°,λ82°. NP2:φ$_s$315°, δ8°,λ161°.*
*IDC **16** 18:50:00.5±3.3,24.16N×122.71E,h21^{km}±20^{km},mb4.3/15, mb1 4.3/16,mb1mx4.3/22,mbtmp4.3/16,ML3.5/1,MS3.9/13, Ms1 3.9/13,ms1mx3.6/31,Error ellipse: s-maj=25.6km s-min=14.1km az=71.0*
*BJI **16** 18:50:02.0,24.04N×122.55E,h44^{km},mB4.6,mb4.4, ML4.2,Ms4.3,Msz4.1*
*NEIC **16** 18:50:03.2±1.0,24.10N×122.56E,h42^{km}±8^{km},mb4.5/13, Error ellipse: s-maj=10.2km s-min=8.4km az=225.0*
*JMA **16** 18:50:03.0±0.2,24.04N×122.48E,h34^{km},M4.7*
ISC 16 18:50:01.9±0.4,**23.99N**±0.03×**122.44E**±0.02,**h42**^{km}±4^{km}, **h43**^{km}±4.7^{km}**:pP-P,n121,**σ**1^{s}43**/145,**mb4.4**/35,**MS4.0**/21, **6C-2D,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.70**	**48**	P	**P**	**18 50 15.6**	**+0.2**
YOJ				S	**S**	**18 50 24.3**	**-0.9**
NACB	**Ninganchiao**	**0.80**	**283**	⇑*i*P	**P**	**18 50 17.1**	**+0.3**
YHNB	**Yeheng**	**1.18**	**305**	*e*P	**P**	**18 50 23.8**	**+1.6**
IRIF	**Iriomote-Funau**	**1.23**	**74**	P	**P**	**18 50 23.6**	**+0.8**
IRIF				S	**S**	**18 50 39.4**	**+0.9**
HATJ	**Hateruma jima**	**1.25**	**87**	P	**P**	**18 50 24.1**	**+0.9**
HATJ				S	**S**	**18 50 40.0**	**+0.9**
TATO	**Taipei**	**1.31**	**319**	*e*P	**P**	**18 50 26.2**	**+2.1**
JKRS	**Kuro-shima**	**1.45**	**80**	P	**P**	**18 50 27.3**	**+1.1**
JKRS				*e*S	**S**	**18 50 44.7**	**+0.5**
JIJ	**Ishigaki jima**	**1.60**	**76**	P	**P**	**18 50 28.6**	**+0.4**
JIJ				S	**S**	**18 50 48.5**	**+0.7**
JTJ	**Tarama**	**2.16**	**72**	P	**P**	**18 50 37.4**	**+1.2**
JTJ				*e*S	**S**	**18 51 03.1**	**+1.2**
JMJ	**Miyako jima 2**	**2.73**	**72**	*e*S	**S**	**18 51 16.8**	**+0.5**
JOGS	**Gusukube**	**2.81**	**74**	P	**P**	**18 50 47.3**	**+1.8**
JOGS				*e*S	**S**	**18 51 18.7**	**+0.3**
BBP	**Basco**	**3.56**	**187**	*e*P	**P**	**18 50 53.4**	**-2.7**
BBP				*e*S	**S**	**18 51 31.0**	**-6.5**
QZH	**Quanzhou**	**3.63**	**286**	⇑*i*P	**P**	**18 50 57.0**	**-0.1**
QZH				S	**S**	**18 51 37.5**	**-1.8**
QZH				Smax			
	comp=N,540nm,0.9s						
QZH				Smax			
	comp=E,800nm,1.0s						
QZH				LR	LR		
	comp=N,2μm,12.3s						
QZH				LR	LR		
	comp=E,3μm,12.4s						
QZH				LR	LR		
	comp=Z,3μm,14.8s						
JKE	**Kume jima 2**	**4.57**	**59**	P	**P**	**18 51 09.6**	**-0.8**
JKE				*e*S	**S**	**18 52 02.1**	**-0.8**
SGCP	**Mt. Cagua**	**5.74**	**184**	*e*P	**P**	**18 51 22.6**	**-4.1**
SGCP				*e*S	**S**	**18 52 25.3**	**-6.9**
JIH	**Iheya**	**5.84**	**58**	*e*S	**S**	**18 52 32.2**	**-2.5**
JOW	**Kunigami**	**5.98**	**61**	Pn	**P**	**18 51 27.8**	**-2.4**
	comp=Z,15nm,0.3s,baz=236,slow=12,SNR=20						
JOW				Sn	**S**	**18 52 32.4**	**-6.0**
	baz=164,slow=29,SNR=1.6						
JOW	**Kunigami**	**5.98**	**61**	P	**P**	**18 51 27.8**	**-2.4**
JOW				*e*S	**S**	**18 52 36.7**	**-1.7**
APYP	**Conner**	**6.20**	**191**	*e*P	**P**	**18 51 30.4**	**-2.9**
APYP				*e*S	**S**	**18 52 38.2**	**-5.6**
ABRA	**Dolores**	**6.52**	**195**	*e*P	**P**	**18 51 36.5**	**-1.3**
ABRA				*e*S	**S**	**18 52 48.0**	**-3.7**
JTK	**Tokunoshima**	**6.97**	**56**	P	**P**	**18 51 40.9**	**-3.2**
CAUP	**Cauayan**	**7.04**	**185**	*e*P	**P**	**18 51 45.0**	**0.0**
SSE	**Sheshan**	**7.16**	**351**	*e*P	**P**	**18 51 45.4**	**-1.3**
SSE				S	**S**	**18 53 06.3**	**-1.3**
SSE				AMB	AMB		
	comp=Z,100nm,0.6s						
SSE				AMB	AMB		
	comp=Z,110nm,5.8s						
SSE				Smax			
	comp=N,50nm,0.9s						
SSE				Smax			
	comp=E,50nm,0.9s						
SSE				LR	LR		
	comp=N,910nm,14.4s						
SSE				LR	LR		
	comp=E,220nm,14.4s						
SSE				LR	LR		
	comp=Z,1μm,15.0s						
SSE	**Sheshan**	**7.16**	**351**	*e*Pn	**P**	**18 51 45.4**	**-1.3**
	comp=Z,102nm,0.6s						
SSE				Sn	**S**	**18 53 06.3**	**-1.3**
JAM	**Amami Oshima**	**7.79**	**54**	P	**P**	**18 51 51.8**	**-3.7**
SCZP	**Santa Cruz**	**8.52**	**197**	*e*P	**P**	**18 51 57.5**	**-8.0**
JNU	**Nakatsue**	**11.73**	**37**	LR	LR	18 57 46.6	
	comp=Z,286nm,18.1s,baz=224,slow=41						
QIZ	**Qiongzhong**	**12.72**	**250**	*e*P	**P**	**18 53 02.1**	**-0.7**
QIZ				S	**S**	**18 55 25.1**	**+1.1**
QIZ				LR	LR		
	comp=N,420nm,17.4s						
ENH	**Enshi**	**13.12**	**301**	P	**P**	**18 53 08.4**	**+0.4**
KS15	**Wonju Array Si**	**14.19**	**18**	*e*P	**P**	**18 53 26.7**	**+4.6**
XAN	**Xi’an**	**15.48**	**313**	P	**P**	**18 53 43.9**	**+5.0**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s						
SNY	**Shenyang**	**17.81**	**3**	⇑P	**P**	**18 54 04.8**	**-3.4**
CD2	**Chengdu**	**17.95**	**297**	P	**P**	**18 54 10.6**	**+0.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
CD2				LR	LR		
	comp=N,260nm,4.3s						
CD2				LR	LR		
	comp=Z,350nm,12.0s						
KMI	**Kunming**	**17.96**	**278**	P	**P**	**18 54 09.8**	**-0.4**
KMI				AP		18 54 19.8	
KMI				PP	PP	18 54 25.8	+0.7
KMI				XP		18 54 26.8	
KMI				S	**S**	**18 57 25.0**	**-1.1**
KMI				XS		18 57 41.0	
KMI				SS	SS	18 57 49.0	-0.9
KMI				AMB	AMB		
	comp=Z,160nm,4.5s						
KMI				LR	LR		
	comp=N,240nm,10.8s						
KMI				LR	LR		
	comp=E,440nm,13.8s						
KMI				LR	LR		
	comp=Z,560nm,12.9s						
KMI	**Kunming**	**17.96**	**278**	P	**P**	**18 54 09.7**	**-0.5**
	comp=Z,4.0nm,0.6s						
KMI				pP		18 54 19.7	
KMI				PP	PP	18 54 25.8	+0.7
KMI				sP		18 54 26.8	
KMI				PPP	PPP	18 54 34.4	0.0
KMI				S	**S**	**18 57 25.0**	**-1.1**
KMI				sS		18 57 41.0	
KMI				SS	SS	18 57 49.0	-0.9
KMI				SSS	SSS	18 58 02.3	-1.8
KMI	**Kunming**	**17.96**	**278**	P	**P**	**18 54 09.7**	**-0.5**
KMI				S	**S**	**18 57 25.0**	**-1.1**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CBIJ	**Chichi jima**	**18.08**	**76**	LR	LR	18 59 54.0	
	comp=Z,185nm,21.8s,baz=283,slow=33						
MJAR	**Matsushiro Arr**	**18.46**	**44**	P	**P**	**18 54 12.3**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=193,slow=16,SNR=3.7						
HHC	**Hu-ho-hao-te**	**19.12**	**334**	*e*P	**P**	**18 54 24.5**	**+0.4**
HHC				AP		18 54 38.0	
HHC				S	**S**	**18 57 57.8**	**+5.6**
HHC				AMB	AMB		
	comp=Z,120nm,4.1s						
HHC				LR	LR		
	comp=N,660nm,14.7s						
HHC				LR	LR		
	comp=E,440nm,11.4s						
HHC				LR	LR		
	comp=Z,820nm,15.5s						
CN2	**Changchun**	**19.91**	**6**	*e*P	**P**	**18 54 30.3**	**-2.4**
CN2				S	**S**	**18 58 06.8**	**-2.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
CN2				AMB	AMB		
	comp=Z,110nm,4.0s						
CN2				LR	LR		
	comp=N,680nm,13.0s						
CN2				LR	LR		
	comp=E,380nm,13.0s						
CN2				LR	LR		
	comp=Z,880nm,15.0s						
LZH	**Lanzhou**	**20.07**	**311**	*e*P	**P**	**18 54 36.3**	**+1.9**
LZH				AP		18 54 48.5	
LZH				XP		18 54 55.3	
LZH				PP	PP	18 54 56.5	+2.0
LZH				*e*S	**S**	**18 58 12.8**	**+0.2**
LZH				XS		18 58 31.3	
LZH				*e*SS	SS	18 58 43.5	+1.3
LZH				AMB	AMB		
	comp=Z,40nm,1.3s						
LZH				AMB	AMB		
	comp=Z,120nm,4.6s						
LZH				LR	LR		
	comp=E,670nm,11.3s						
LZH				LR	LR		
	comp=Z,1μm,14.9s,MS4.3						
LZH	**Lanzhou**	**20.07**	**311**	*e*P	**P**	**18 54 36.2**	**+1.8**
	comp=Z,46nm,1.3s						
LZH				pP		18 54 48.5	
LZH				sP		18 54 55.2	
LZH				PP	PP	18 54 56.5	+2.0
LZH				*e*S	**S**	**18 58 12.7**	**+0.1**
LZH				sS		18 58 31.2	
LZH				*e*SS	SS	18 58 43.5	+1.3
LZH				LR	LR		
	comp=Z,1μm,14.9s,MS4.3						
LZH	**Lanzhou**	**20.07**	**311**	*e*P	**P**	**18 54 36.2**	**+1.8**
LZH				*PP		18 54 48.5	
LZH				*SP		18 54 55.2	
LZH						18 54 56.5	
LZH				*e*S	**S**	**18 58 12.7**	**+0.1**
LZH				*e*SS	SS	18 58 43.5	+1.3
LZH				pmax	pmax		
	comp=Z,46nm,1.3s						
LZH				MLR	MLR		
	comp=Z,1μm,14.9s,MS4.3						
MDJ	**Mudanjiang**	**21.39**	**14**	P	**P**	**18 54 49.8**	**+2.0**
MDJ				AP		18 55 01.5	
MDJ				S	**S**	**18 58 44.4**	**+6.7**
MDJ				SCS	ScS	19 06 07.3	+1.6
MDJ				AMB	AMB		
	comp=Z,30nm,3.4s						
MDJ				LR	LR		
	comp=N,110nm,23.5s,MS3.5						
MDJ				LR	LR		
	comp=E,170nm,21.0s,MS3.5						
MDJ				LR	LR		
	comp=Z,210nm,19.8s,MS3.5						
GTA	**Gaotai**	**24.54**	**314**	*e*P	**P**	**18 55 20.1**	**+1.3**
GTA				AP		18 55 32.3	
GTA				XP		18 55 38.1	
GTA				PP	PP	18 55 58.8	+3.3
GTA				PCP	PcP	18 58 58.8	+1.3
GTA				S	**S**	**18 59 35.4**	**+1.6**
GTA				XS		18 59 58.3	
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
GTA				AMB	AMB		
	comp=Z,60nm,4.9s						
GTA				LR	LR		
	comp=N,190nm,11.4s,MS4.1						
GTA				LR	LR		
	comp=E,310nm,14.1s,MS4.1						
GTA				LR	LR		
	comp=Z,460nm,15.2s,MS4.1						
HIA	**Hailar**	**25.31**	**356**	*e*P	**P**	**18 55 26.0**	**-0.1**
ASAJ	**Asahikawa**	**25.98**	**35**	P	**P**	**18 55 29.3**	**-3.1**
	comp=Z,6.9nm,0.8s,mb4.2,baz=17,slow=18,SNR=6.0						
ASAJ				LR	LR	19 05 45.9	
	comp=Z,218nm,21.6s,MS3.6,baz=343,slow=37						
KLR	**Kul’dur**	**26.23**	**14**	*e*P	**P**	**18 55 31.3**	**-3.4**
KLR				MLR	MLR		
	comp=Z,2μm,13.0s,MS4.9						
ULN	**Ulaanbaatar**	**26.78**	**337**	*e*P	**P**	**18 55 36.6**	**-3.1**
	comp=Z,3.4nm,0.8s,mb3.9						
ULN	**Ulaanbaatar**	**26.78**	**337**	*i* P	**P**	**18 55 39.2**	**-0.6**
SONM	**Songino Array**	**27.00**	**336**	P	**P**	**18 55 40.8**	**-1.0**
	comp=Z,10nm,1.0s,mb4.3,baz=153,slow=7.2,SNR=42						
SONM				PcP	PcP	18 59 02.0	-0.9
	comp=Z,0.6nm,0.5s,baz=148,slow=4.2,SNR=4.5						
SONM				ScP		19 02 40.9	
	comp=Z,0.8nm,1.1s,SNR=4.4						
SONM				LR	LR	19 07 35.6	
	comp=Z,465nm,18.5s,MS4.1,baz=246,slow=39						
SHL	**Shillong**	**27.76**	**280**	*e*P	**P**	**18 55 53.0**	**+4.1**
LSA	**Lhasa**	**28.44**	**288**	P	**P**	**18 55 57.0**	**+2.0**
LSA	**Lhasa**	**28.44**	**288**	*e*P	**P**	**18 55 56.6**	**+1.7**
	comp=Z,3.5nm,0.7s,mb4.1						
LSA	**Lhasa**	**28.44**	**288**	*e*P	**P**	**18 55 56.6**	**+1.6**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.2						
ZAK	**Zakamensk**	**30.26**	**335**	*e*P	**P**	**18 56 08.1**	**-2.9**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.6						
WMQ	**Urumqi**	**34.62**	**313**	P	**P**	**18 56 49.8**	**+0.8**
WMQ				AP	pP	18 57 04.0	+3.4
WMQ				*e*S	**S**	**19 02 13.0**	**-1.5**
WMQ				XS		19 02 36.0	
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,150nm,4.8s						
WMQ				LR	LR		
	comp=N,120nm,15.8s						
WMQ				LR	LR		
	comp=E,180nm,24.5s						
WMQ				LR	LR		
	comp=Z,140nm,15.2s,MS3.8						
YAK	**Yakutsk**	**38.34**	**5**	*e*P	**P**	**18 57 17.4**	**-2.7**
	comp=Z,18nm,1.0s,mb4.8						
YAK	**Yakutsk**	**38.34**	**5**	*c i*P	**P**	**18 57 17.7**	**-2.4**
YAK				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.7						
YAK				MLR	MLR		
	comp=Z,100nm,14.0s,MS3.8						
MKAR	**Makanchi Array**	**39.27**	**316**	P	**P**	**18 57 28.7**	**+0.6**
	comp=Z,4.0nm,0.4s,mb4.5,baz=104,slow=10.0,SNR=44						
MKAR				PcP	PcP	18 59 35.7	-1.3
	comp=Z,1.1nm,0.7s,baz=90,slow=4.9,SNR=3.5						
MKAR				ScP		19 03 23.8	
	comp=Z,0.3nm,0.4s,baz=333,slow=2.7,SNR=3.5						
MKAR				LR	LR	19 15 05.2	
	comp=Z,154nm,18.8s,MS3.9,baz=2.5,slow=38						
MKAR	**Makanchi Array**	**39.27**	**316**	P	**P**	**18 57 28.7**	**+0.6**
MKAR				PcP	PcP	18 59 35.7	-1.3
MKAR				ScP		19 03 23.8	
MKAR				LR	LR	19 15 05.2	
PET	**Petropavlovsk**	**39.82**	**34**	*e*P	pP	18 57 43.1	-1.2
PET				pmax	pmax		
	comp=Z,35nm,1.1s,mb5.0						
ZAL	**Zalesovo**	**41.03**	**327**	P	**P**	**18 57 42.1**	**-0.4**
	comp=Z,4.9nm,0.8s,mb4.2,baz=0.2,slow=8.0,SNR=34						
ZAL				LR	LR	19 16 55.7	
	comp=Z,190nm,21.3s,MS3.9,baz=340,slow=39						
ZAL	**Zalesovo**	**41.03**	**327**	*i* P	**P**	**18 57 42.5**	**-0.1**
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**41.95**	**175**	*e*P	**P**	**18 57 50.6**	**0.0**
	comp=Z,4.4nm,0.7s,mb4.2						
FITZ	**Fitzroy Crossi**	**41.95**	**175**	P	**P**	**18 57 50.3**	**-0.2**
	comp=Z,6.9nm,0.8s,mb4.3,baz=23,slow=0.8,SNR=5.8						
NVS	**Novosibirsk**	**42.29**	**327**	*e*P	**P**	**18 57 50.7**	**-2.1**
TKM2	**Tokmak 2**	**42.79**	**308**	P	**P**	**18 57 59.4**	**+2.3**
	SNR=19						
KURK	**Kurchatov**	**42.98**	**320**	*e*P	**P**	**18 57 58.3**	**-0.2**
	comp=Z,10nm,0.9s,mb4.6						
KURK	**Kurchatov**	**42.98**	**320**	⇑*i*P	**P**	**18 57 58.4**	**-0.1**
KBK	**Karagaybulak**	**43.21**	**307**	P	**P**	**18 58 02.8**	**+2.3**
	SNR=17						
CHMS	**Chumysh**	**43.41**	**308**	P	**P**	**18 58 03.8**	**+1.6**
	SNR=13						
UCH	**Uchtor**	**43.45**	**307**	P	**P**	**18 58 05.5**	**+3.0**
	SNR=30						
AAK	**Ala-Archa**	**43.53**	**307**	P	**P**	**18 58 05.0**	**+1.8**
	SNR=7.3						
AAK	**Ala-Archa**	**43.53**	**307**	*e*P	**P**	**18 58 03.9**	**+0.7**
	comp=Z,7.9nm,0.9s,mb4.4						
AAK	**Ala-Archa**	**43.53**	**307**	*e*P	**P**	**18 58 03.9**	**+0.7**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.5						
USP	**Ospenovka**	**43.64**	**308**	P	**P**	**18 58 05.4**	**+1.4**
	SNR=9.1						

AML	Almayashu	44.04	306	P	P	18 58 09.9	+2.6
	SNR=20						
EKS2	Erkin-Say	44.06	307	P	P	18 58 09.2	+1.8
	SNR=13						
WRAB	Tennant Creek	45.18	164	*e*P	P	18 58 15.5	-1.1
	comp=Z,16nm,1.0s,mb4.8						
WRAB	Tennant Creek	45.18	164	*i* P	P	18 58 15.3	-1.4
WRA	Warramunga Arr	45.18	164	P	P	18 58 16.5	-0.3
	comp=Z,7.0nm,0.8s,mb4.5,baz=346,slow=8.9,SNR=47						
WRA	Warramunga Arr	45.18	164	*i* P	P	18 58 16.7	0.0
WRA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WB2	Warramunga Arr	45.19	164	*e*P	P	18 58 16.8	+0.1
KKAR	Karatay Array	46.50	307	*e*P	P	18 58 27.8	+1.0
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
TIXI	Tiksi	47.82	3	⇓*i*P	P	18 58 34.5	-2.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.4						
BVA0	Borovoye Array	48.55	321	*i* P	P	18 58 42.4	-0.3
BRVK	Borovoye	48.62	321	*e*P	P	18 58 42.8	-0.5
	comp=Z,5.4nm,0.9s,mb4.6						
BRVK	Borovoye	48.62	321	*e*P	P	18 58 42.8	-0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
ASPA	Alice Springs	48.66	166	*e*P	P	18 58 44.8	+0.8
CTAO	Charters Tower	49.58	150	P	P	18 58 52.5	+1.3
BILL	Bilibino	51.48	19	⇑*e*P	P	18 58 59.4	-5.5
BILL				*e*		19 00 58.5	
BILL				*e*S	S	19 06 10.9	-10
BILL				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.9						
AB31	Akbulak array	54.40	314	P	P	18 59 26.9	+0.1
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
ARU	Arti	55.95	323	*e*P	P	18 59 35.5	-2.5
ARU	Arti	55.95	323	⇑*i*P	P	18 59 36.1	-1.9
ARU				*e*S	S	19 07 23.9	+2.8
ARU				*e*SS	SS	19 11 12.0	+4.7
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
STKA	Stephens Creek	58.50	161	P	P	18 59 56.3	0.0
	comp=Z,4.6nm,0.6s,mb4.7,baz=349,slow=6.4,SNR=17						
STKA	Stephens Creek	58.50	161	*e*P	P	18 59 56.8	+0.4
STKA				*e*	pP	19 00 08.6	0.0
GNI	Garni	65.86	305	LR	LR	19 34 12.7	
	comp=Z,38nm,20.8s,MS3.6,baz=135,slow=40						
GNI	Garni	65.86	305	*i* P	P	19 00 46.2	+0.9
GNI				pmax	pmax		
	comp=Z,14nm,1.6s						
ZEI	Tsey	65.96	308	*i* P	P	19 00 43.0	-3.0
ZEI				*i* *PP	pP	19 00 54.2	-4.2
ZEI				*i*		19 01 13.9	
ZEI				*i*		19 03 10.1	
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
KIV	Kislovodsk	66.60	309	*e*P	P	19 00 49.4	-0.6
	comp=Z,20nm,1.1s,mb5.1						
KIV	Kislovodsk	66.60	309	*e*P	P	19 00 50.9	+0.9
KIV				*e*		19 01 21.0	
KIV				*e*		19 03 16.5	
KIV				*e*SS	SS	19 13 57.4	+1.5
KIV				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.1						
KIV				MLR	MLR		
	comp=Z,107nm,18.0s,MS4.1						
KDAK	Kodiak Island	67.40	35	LR	LR	19 29 35.7	
	comp=Z,120nm,18.6s,MS4.1,baz=299,slow=35						
OBN	Obninsk	68.36	322	⇓*e*P	P	19 01 01.4	+0.6
OBN				*e*		19 03 28.7	
OBN				*e*S	S	19 10 00.5	+3.0
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						
ILAR	Eielson Array	68.85	27	P	P	19 01 01.1	-2.7
	comp=Z,0.2nm,0.4s,mb3.4,baz=280,slow=5.3,SNR=5.4						
ARCES	ARCESS Array B	70.14	338	P	P	19 01 10.8	-0.7
	comp=Z,6.8nm,1.0s,mb4.5,baz=68,slow=6.5,SNR=4.6						
ARCES				LR	LR	19 34 19.4	
	comp=Z,110nm,18.3s,MS4.1,baz=17,slow=38						
ARCES	ARCESS Array B	70.14	338	P	P	19 01 10.8	-0.7
ARCES				LR	LR	19 34 19.4	
FINES	FINESS Array B	72.19	330	P	P	19 01 23.4	-0.5
	comp=Z,1.9nm,0.5s,mb4.2,baz=56,slow=5.0,SNR=13						
FINES				LR	LR	19 35 41.9	
	comp=Z,106nm,19.8s,MS4.1,baz=53,slow=38						
AKASG	Malin Array Be	73.77	319	P	P	19 01 32.3	-1.1
	comp=Z,1.9nm,0.7s,mb4.2,baz=60,slow=6.6,SNR=7.3						
BR131	Keskin Array S	74.21	307	*e*P	P	19 01 37.0	+0.9
	comp=Z,12nm,1.1s,mb4.7						
BRTR	Keskin Array B	74.21	307	P	P	19 01 36.5	+0.3
	comp=Z,6.9nm,0.8s,mb4.6,baz=112,slow=6.7,SNR=37						
ATD	Arta Tunnel	75.98	277	LR	LR	19 35 43.4	
	comp=Z,20nm,18.4s,MS3.5,baz=137,slow=36						
MLR	Muntele Rosu	77.61	314	LR	LR	19 39 41.2	
	comp=Z,89nm,18.9s,MS4.1,baz=260,slow=38						
NB2	NORSAR Subarra	78.93	332	P	P	19 02 02.0	-0.3
	comp=Z,1.4nm,0.7s,mb4.0,baz=57,slow=5.3						
NOA	NORSAR Array B	78.93	332	P	P	19 02 01.1	-1.2
	comp=Z,2.8nm,0.8s,mb4.2,baz=58,slow=5.5,SNR=6.3						
NOA				LR	LR	19 40 31.4	
	comp=Z,102nm,19.6s,MS4.2,baz=70,slow=38						
NAO	NORSAR Subarra	79.20	332	P	P	19 02 02.0	-1.7
	comp=Z,1.4nm,0.7s,mb4.0						
NAO	NORSAR Subarra	79.20	332	P	P	19 02 02.0	-1.7
NAO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
GERES	GERESS Array B	83.72	321	P	P	19 02 28.5	+1.0
	comp=Z,2.2nm,0.8s,mb4.3,baz=63,slow=6.0,SNR=10						
KMBO	Kilima Mbogo	86.06	267	P	P	19 02 42.2	+2.2
	comp=Z,0.7nm,0.7s,mb4.0,baz=44,slow=5.6,SNR=4.5						
KMBO	Kilima Mbogo	86.06	267	P	P	19 02 42.2	+2.2
EDM	Edmonton	89.20	30	*e*P	P	19 02 55.6	+1.4

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*ISK **16** 19:10:53.3, 36.73N×27.54E, h30^{km}, MD2.9*

*CSEM **16** 19:10:56.6±0.1, 36.85N×27.64E, h5^{km}, MD2.9, Error ellipse: s-maj=1.5km s-min=1.3km az=120.0*

*ATH **16** 19:10:57.9, 36.80N×27.54E, h27^{km}±9^{km}, MD2.9/3*

*NEIC **16** 19:10:57.9, 36.80N×27.54E, h27^{km}, MD2.9(ATH), MD2.9(ISK), After ATH.*

ISC 16 19:10:57.0±0.6**, 36.82N**±0.03×**27.61E**±0.06**, h8**^{km}±4^{km}**, n14, σ1^{s}.11**/22**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	Datca	0.09	197	*i* PG	Pg	19 10 59.0	-0.3
DAT				*i* SG	Sg	19 11 02.4	+1.4
BDRM	Kayabasi	0.28	332	*i* P	Pg	19 11 03.0	+0.3
BDRM				*i* S	Sg	19 11 07.3	+0.7
BODT	Bodrum	0.34	315	*i* PG	Pg	19 11 02.2	-1.7
BODT				*i* SG	Sg	19 11 08.9	+0.3
MLSB	Milas	0.49	15	PG	Pg	19 11 06.2	-0.8
YER	Yerkesik	0.62	59	PG	Pg	19 11 08.6	-0.9
ARG	Arkhangelos	0.73	145	*e*PN	Pn	19 11 12.6	-0.7
ARG				*e*SN	Sn	19 11 23.8	-0.8
DALT	Dalyan (Mudla)	0.82	93	PG	Pg	19 11 09.7	-3.8
AYDN	Tasoluk	0.87	14	*i* P	Pb	19 11 13.4	-0.4
AYDN				*i* S	Sb	19 11 25.3	-0.1
SMG	Samos	1.08	325	*e*PN	Pn	19 11 18.0	-0.3
SMG				*e*SN	Sn	19 11 34.3	+0.8
FETY	Fethiye	1.20	98	PN	Pn	19 11 14.6	-5.4
KARP	Karpathos	1.32	196	*e*PN	Pn	19 11 22.3	+0.6
DNZL	Cakiroluk	1.44	52	*i* P	Pn	19 11 25.9	+2.6
DNZL				*i* S	Sb	19 11 45.7	+3.8
GOLH	Golhisar	1.61	74	*i* P	Pn	19 11 28.6	+2.7
GOLH				*i* S	Sb	19 11 52.7	+5.7
APE	Apeiranthos	1.69	279	*e*PB	Pb	19 11 26.6	-1.2

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*IDC **16** 19:18:36.6±2.2, 43.94N×105.36W, mb3.8/1, mb1 3.7/5, mb1mx3.5/23, mbtmp3.5/5, ML3.3/4, MS2.9/1, Ms1 2.8/1, ms1mx2.2/30, Error ellipse: s-maj=81.8km s-min=7.7km az=148.0*

*NEIC **16** 19:18:37.5±0.4, 44.08N×105.33W, ML3.3, Error ellipse: s-maj=5.2km s-min=4.8km az=120.0, Suspected Mining explosion.*

NEIC 25 km [15 miles] SSE of Gillette.

ISC 16 19:18:36.4±0.6**, 44.05N**±0.04×**105.40W**±0.07**, n39, σ0^{s}.88**/41**, mb3.7**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.98	85	*e*P	Pb	19 18 56.4	+0.4
LAO	LASA Array	2.70	348	*e*P	Pn	19 19 22.7	+0.8
RWWY	Rawlins	2.71	210	*e*P	Pn	19 19 21.8	-0.2
PHWY	Pilot Hill	2.75	181	*e*P	Pn	19 19 24.2	+1.8
BW06	Boulder Array	3.29	249	*e*P	Pn	19 19 31.4	+1.2
PDAR	Pinedale Array	3.29	249	Pn	Pn	19 19 32.8	+2.5
	2.6nm,0.3s,baz=61,slow=16,SNR=64						
PDAR				Pg	Pg	19 19 37.8	-4.3
	15nm,0.3s,baz=63,slow=18,SNR=61						
PDAR				Lg		19 20 19.1	
	7.9nm,0.3s,baz=79,slow=24,SNR=6.8						
PDAR	Pinedale Array	3.29	249	Pn	Pn	19 19 32.8	+2.5
PDAR				Pg	Pg	19 19 37.8	-4.3
PDAR				Lg		19 20 19.1	
LOHW	Long Hollow	3.79	265	*e*P	Pn	19 19 37.2	-0.1
MOOW	Moose Ponds	3.88	267	*e*P	Pn	19 19 39.4	+0.9
SNOW	Snow King Moun	3.93	263	P	Pn	19 19 39.4	+0.1
YFT	Old Faithful	3.93	278	P	Pn	19 19 39.2	-0.1
IMW	Indian Meadow	4.00	270	*e*P	Pn	19 19 41.5	+1.1
REDW	Red Top Meadow	4.01	262	*e*P	Pn	19 19 40.9	+0.4
TPAW	Teton Pass	4.06	264	P	Pn	19 19 41.6	+0.5
ISCO	Idaho Springs	4.25	182	*e*P	Pn	19 19 43.9	+0.1
QLMT	Earthquake Lak	4.39	282	P	Pn	19 19 46.3	+0.4
DGMT	Dagmar	4.50	10	*e*P	Pn	19 19 46.6	-0.8
BOZ	Bozeman (W)	4.71	292	*e*P	Pn	19 19 49.7	-0.7
SMCO	Snowmass	5.01	194	P	Pn	19 19 54.8	+0.2
HWUT	Hardware Ranch	5.15	244	*e*P	Pn	19 19 56.6	0.0
HRY	Holter Researc	5.26	303	*e*P	Pn	19 19 57.9	-0.3
DLMT	Dillon	5.30	287	*e*P	Pn	19 19 57.7	-1.0
TCUT	Toone Canyon	5.32	239	*e*P	Pn	19 19 59.2	+0.3
MCMT	McKenzie Canyo	5.39	281	P	Pn	19 19 59.0	-1.0
DAU	Daniels Canyon	5.67	232	*e*P	Pn	19 20 04.2	+0.4
HVU	Hansel Valley	5.87	250	P	Pn	19 20 05.3	-1.5
SPUT	South Promonto	5.88	245	P	Pn	19 20 05.5	-1.3
NOQ	North Oquirrh	6.03	238	P	Pn	19 20 08.3	-0.6
RW3	Ridgway	6.04	197	P	Pn	19 20 08.2	-1.0
CHMT	Chamberlain Mo	6.22	300	*e*P	Pn	19 20 11.6	-0.1
SRU	San Rafael	6.25	220	P	Pn	19 20 10.2	-2.0
SDCO	Great Sand Dun	6.30	181	*e*P	Pn	19 20 11.8	-1.0
PV01	Paradox Valley	6.38	203	P	Pn	19 20 14.1	+0.2
DUG	Dugway	6.72	238	*e*P	Pn	19 20 18.2	-0.6
MSU	Marysvale	7.53	225	P	Pn	19 20 29.7	-0.3
ELK	Elko	8.00	249	Pn	Pn	19 20 38.1	+1.5
	0.2nm,0.3s,baz=64,slow=14,SNR=2.1						
ELK				Lg		19 22 48.9	
	0.3nm,0.3s,baz=109,slow=17,SNR=3.3						
ULM	Lac du Bonnet	8.97	43	Pn	P	19 20 45.4	-4.8
	1.9nm,0.3s,baz=222,slow=11,SNR=26						
ULM				Lg		19 23 17.8	
	0.2nm,0.3s,baz=150,slow=19,SNR=2.3						
ULM				LR	LR	19 24 20.9	
	comp=Z,67nm,18.7s,baz=271,slow=38						
NVAR	Mina Array Bea	11.22	244	Pn	P	19 21 21.7	+0.7
	0.1nm,0.3s,baz=63,slow=16,SNR=2.9						
MKAR	Makanchi Array	89.29	355	P	P	19 31 35.2	0.0
	0.4nm,0.7s,mb3.7,slow=3.6,SNR=3.8						

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*IDC **16** 19:30:56.5±6.5, 19.10S×68.73W, h149^{km}±44^{km}, mb3.6/5, mb1 3.9/7, mb1mx3.6/17, mbtmp4.1/7, Error ellipse: s-maj=72.9km s-min=21.0km az=29.0*

ISC 16 19:30:56.3±5.5**, 19.1S**±0.4×**68.7W**±0.3**, h163**^{km}±37^{km}**, n8, σ0^{s}.42**/8**, mb3.7**/4**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	2.86	10	P	P	19 31 43.2	+0.2
	3.3nm,0.3s,baz=206,slow=6.7,SNR=55						
LPAZ				S	S	19 32 18.8	-0.1
	1.9nm,0.3s,baz=201,slow=12,SNR=4.5						
SIV	San Ignacio	7.87	68	P	P	19 32 48.9	0.0
	6.5nm,0.3s,baz=265,slow=9.9,SNR=133						
BDFB	Brasilia	20.00	83	P	P	19 35 17.7	-0.4
	1.8nm,0.4s,baz=234,slow=19,SNR=4.1						
DBIC	Dimbokro	67.85	74	P	P	19 41 39.9	+0.5
	4.6nm,0.8s,mb4.3,baz=214,slow=6.3,SNR=9.4						
PDAR	Pinedale Array	72.18	330	P	P	19 42 04.9	-0.1
	0.3nm,0.5s,mb3.3,baz=122,slow=7.6,SNR=4.3						
NVAR	Mina Array Bea	73.78	321	P	P	19 42 14.1	-0.4
	0.1nm,0.3s,mb3.1,baz=153,slow=6.0,SNR=4.2						
YKA	Yellowknife Ar	89.03	341	P	P	19 43 33.6	+0.3
	1.4nm,0.6s,mb4.1,baz=133,slow=4.7,SNR=7.0						
SONM	Songino Array	151.07	7	PKPbc	PKPdf	19 50 32.8	+9.2
	0.5nm,0.5s,baz=321,slow=1.3,SNR=6.3						

IDC 16 19:39:29.6±3.9**, 2.41N**×**96.93E, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.5**/17**, mbtmp3.6**/4**, Error ellipse: s-maj=152.0km s-min=27.4km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	42.91	123	P	P	19 47 30.2	-1.8
	0.2nm,0.4s,baz=303,slow=9.0,SNR=2.9						
SONM	Songino Array	45.98	9	P	P	19 47 55.0	-1.3
	0.2nm,0.4s,baz=190,slow=10,SNR=3.6						
MKAR	Makanchi Array	46.01	346	P	P	19 47 54.4	-2.2
	0.5nm,0.4s,baz=157,slow=9.3,SNR=16						
ZAL	Zalesovo	52.32	351	P	P	19 48 43.0	-2.3
	1.2nm,0.5s,baz=283,slow=4.8,SNR=3.5						

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*PRU **16** 19:39:49.2, 50.32N×18.76E*

WAR 16 19:39:48.6, 50.27N×18.88E, h0^{km}, ML2.4, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.48	248	*e*PG	Pg	19 39 58.0	-0.2
RAC				*e*SG	Sg	19 40 05.0	+0.5
OJC	Ojcow	0.59	94	*e*PG	Pg	19 40 00.0	-0.4
OJC				*e*SG	Sg	19 40 09.0	+0.7
OKC	Ostrava-Krasne	0.64	228	*e*PG	Pg	19 40 00.9	-0.5
NIE	Niedzica	1.26	132	*e*PG	Pg	19 40 13.0	-0.7
NIE				*e*SG	Sg	19 40 30.0	-0.4
DPC	Dobruska-Polom	1.64	274	*e*PG	Pg	19 40 17.7	-3.7
DPC				*e*SG	Sg	19 40 38.8	-4.5
	17nm,0.5s						
KSP	Ksiaz	1.75	290	*e*PG	Pg	19 40 21.0	-2.5
KSP				*e*SG	Sg	19 40 44.0	-2.8
STHS	Stebnicka Huta	1.75	118	*e*PN	Pn	19 40 21.5	+1.1
STHS				*e*SN	Sn	19 40 46.9	+3.3
VYHS	Vyhne	1.77	181	*e*PN	Pn	19 40 19.9	-0.8
VYHS				*e*SN	Sn	19 40 44.0	-0.3
UPC	Upice	1.85	279	*e*PG	Pg	19 40 21.8	-3.8
UPC				*e*SG	Sg	19 40 46.3	-4.0
KECS	Kecovo	2.07	149	*e*PN	Pn	19 40 27.5	+2.6
KECS				*e*		19 40 48.9	
CRVS	Cervenica-Dubn	2.16	128	*e*PN	Pn	19 40 28.8	+2.5
CRVS				*e*SN	Sn	19 40 57.2	+3.0
KOLS	Kolonicke sedl	2.58	120	*e*	Pn	19 40 39.0	+6.8
KOLS				*e*		19 41 02.0	
PRU	Pruhonice	2.81	266	*e*SG	Sg	19 41 15.3	-6.7
KHC	Kasperske Hory	3.63	254	*e*PG	Pg	19 40 57.5	-3.5
KHC				*e*SG	Sg	19 41 42.2	-7.1

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*NEIC **16** 19:52:00.3, 34.86N×24.96E, h4^{km}, MD3.5(ATH), After ATH.*

*CSEM **16** 19:52:00.3, 34.86N×24.96E, h4^{km}, MD3.5/5, After ATH*

ATH 16 19:52:00.3, 34.86N×24.96E, h4^{km}±2^{km}**, MD3.5**/5**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	0.60	88	*e*PG	Pg	19 52 11.7	-0.7
NPS	Neapolis	0.67	53	*e*PG	Pg	19 52 13.1	-0.6
NPS				*e*SG	Sg	19 52 22.2	-0.4
GVD	Gavdhos	0.72	269	*e*PB	Pb	19 52 14.1	-0.9
VAM	Vamos	0.83	311	*e*PG	Pg	19 52 15.8	-1.1
VAM				*e*SG	Sg	19 52 27.8	-0.1
KARP	Karpathos	1.93	69	*e*PN	Pn	19 52 36.0	+1.8
KARP				*e*SN	Sn	19 53 02.0	+2.8

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*NIED **16** 20:24:00, 37.90N×144.40E, h11^{km}, Mw3.6 Best double couple: M$_0$3.04×10^{14} NP1:φ$_s$189°, δ65°, λ-88°. NP2:φ$_s$5°, δ26°, λ-93°.*

*IDC **16** 20:24:34.9±1.2, 37.72N×144.53E, mb3.6/3, mb1 3.9/5, mb1mx3.6/22, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=36.1km s-min=23.6km az=131.0*

*JMA **16** 20:24:38.8±0.2, 37.87N×144.38E, h54^{km}, M3.7*

ISC 16 20:24:38.3±1.3**, 37.89N**±0.05×**144.41E**±0.07**, h40**^{km}±16^{km}**, n16, σ0^{s}.92**/28**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.45	300	P	P	20 25 17.0	+0.2
OFUJ				*e*S	S	20 25 46.5	+0.7
JIO	Ouri	2.48	284	P	P	20 25 17.6	+0.5
JIO				*e*S	S	20 25 46.2	-0.2
MIYJ	Miyakonagasawa	2.63	310	P	P	20 25 19.5	+0.1
MIYJ				*e*S	S	20 25 50.4	+0.1
JMK	Ichinoseki	2.72	294	P	P	20 25 21.3	+0.7
JMM	Marumori	2.86	271	P	P	20 25 23.0	+0.4
JMM				*e*S	S	20 25 55.2	-1.0
JOM	Ohasama	2.90	304	P	P	20 25 24.1	+0.8
JOM				*e*S	S	20 25 58.0	+0.7
JYK	Kaneyama	3.34	289	P	P	20 25 30.4	+0.9
JYK				*e*S	S	20 26 09.4	+1.0
JANG	Nango	3.34	319	P	P	20 25 29.8	+0.3
JANG				*e*S	S	20 26 07.9	-0.6
JCH	Churui	4.78	351	P	P	20 25 48.5	-1.4
JCH				*e*S	S	20 26 40.7	-4.1
JRY	Ryogami san	4.79	249	P	P	20 25 48.9	-1.1
JRY				*e*S	S	20 26 40.7	-4.3
MJAR	Matsushiro Arr	5.13	257	Pn	P	20 25 55.1	+0.4
	3.9nm,0.3s,baz=77,slow=15,SNR=29						
MJAR				Sn	S	20 26 53.4	-0.1
	0.9nm,0.3s,baz=99,slow=22,SNR=3.2						
MAT	Matsushiro	5.13	257	P	P	20 25 54.6	-0.1
MAT				S	S	20 26 52.5	-1.0
ASAJ	Asahikawa	6.37	348	Pn	P	20 26 11.6	-0.5
	0.5nm,0.3s,baz=278,slow=20,SNR=9.5						
ASAJ				Sn	S	20 27 22.2	-2.2
	0.6nm,0.3s,baz=133,slow=19,SNR=3.8						
ILAR	Eielson Array	47.49	33	P	P	20 33 11.8	+1.0
	0.5nm,0.8s,mb3.5,baz=277,slow=6.8,SNR=4.8						
WRA	Warramunga Arr	58.30	191	P	P	20 34 30.0	-1.7
	0.6nm,0.8s,mb3.7,baz=12,slow=7.3,SNR=7.2						
NVAR	Mina Array Bea	72.56	55	P	P	20 36 04.8	+1.8
	0.5nm,0.7s,mb3.6,baz=278,slow=6.6,SNR=3.9						

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*BJI **16** 20:31:00.7, 34.63N×72.42E, h10^{km}, mb4.5, ML4.2*

*NDI **16** 20:31:08.5±5.5, 34.82N×72.90E, h10^{km}, MD3.8, ML3.7*

*IDC **16** 20:31:08.5±0.8, 34.65N×73.27E, mb4.1/9, mb1 4.2/12, mb1mx4.0/23, mbtmp4.0/12, ML4.0/3, MS3.7/2, Ms1 3.7/2, ms1mx3.0/28, Error ellipse: s-maj=25.0km s-min=18.4km az=103.0*

*NEIC **16** 20:31:09.8±0.6, 34.60N×73.32E, h10^{km}, mb3.5/7, Error ellipse: s-maj=12.2km s-min=9.3km az=71.0*

*MOS **16** 20:31:11.5±1.2, 34.72N×73.35E, h33^{km}, mb4.5/2, Error ellipse: s-maj=15.8km s-min=6.3km az=90.0*

*NNC **16** 20:31:20.1±4.8, 35.08N×72.77E, h69^{km}±50^{km}, mpv4.2, Error ellipse: s-maj=49.9km s-min=37.1km az=72.0*

ISC 16 20:31:11.9±0.3**, 34.72N**±0.02×**73.30E**±0.05**, h33**^{km}**, n76, σ1^{s}.24**/91**, mb3.9**/11**, MS3.6**/2**, 18C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.06	181	⇑P	P	20 31 31.2	+0.8
CHCP				S	S	20 31 49.0	+4.9
CEP	Cherat	1.45	233	⇑P	P	20 31 35.7	-0.4
CEP				S	S	20 32 09.0	+15
THW	Thamme Wali	2.31	214	P	P	20 31 49.5	+1.1
JMU	Jammu	2.40	146	*e*S	S	20 32 26.5	+8.3
SARP	Sargodha	2.84	191	P	P	20 31 56.4	+0.5
THN	Thein Dam	3.04	138	*e*P	P	20 32 01.9	+3.1
THN				*e*S	S	20 32 42.6	+8.1
DLH	Dalhousie	3.11	133	*e*P	P	20 32 04.0	+4.2
DLH				*e*SG	S	20 32 59.0	+23
SBDP	Sheikh Budin	3.18	221	⇑P	P	20 32 02.4	+1.6
DRP	Derazinda	3.94	222	P	P	20 32 05.8	-5.7
BHK	Bhakra	4.21	141	*e*x	x	20 33 10.6	
BHK				*e*SB	Sb	20 33 27.9	+12
SDNR	Sundarnagar	4.45	135	*e*P	P	20 32 20.0	+1.2
SDNR				*e*S	S	20 33 10.8	+0.7
SMLA	Simla	4.84	137	*e*P	P	20 32 24.4	+0.1
SMLA				*e*S	S	20 33 20.1	+0.2
KLP	Kalpa	5.23	126	*e*P	P	20 32 31.2	+1.4
KLP				*e*S	S	20 33 29.6	-0.2
KLP				AML	AML	20 34 02.2	
	comp=N,650nm,0.8s						
KLP				AML	AML	20 34 02.8	
	comp=E,602nm,0.6s						
NDI	New Delhi	6.88	150	*e*P	P	20 32 52.5	-0.5
NDI				*e*S	S	20 34 10.0	-1.0
KHET	Khetri	6.96	161	*e*P	P	20 32 52.0	-2.1
KHET				*e*S	S	20 34 08.2	-4.8
KHET				AML	AML	20 35 03.7	
	comp=E,26nm,0.5s						
KHET				AML	AML	20 35 03.8	
	comp=N,27nm,0.4s						
KUDL	Kundal	7.10	157	*e*P	P	20 32 53.5	-2.6
KUDL				*e*S	S	20 34 12.2	-4.2
SONA	Sohna	7.21	152	*e*P	P	20 32 57.1	-0.6
SONA				*e*S	S	20 34 13.5	-5.8
SONA				AML	AML	20 34 21.3	
	comp=E,34nm,0.2s						
SONA				AML	AML	20 34 21.9	
	comp=N,24nm,0.6s						
AML	Almayashu	7.41	2	P	P	20 33 01.9	+1.5
	SNR=22						
KZA	Kyzart	7.51	11	P	P	20 33 03.1	+1.4
	SNR=8.7						
UCH	Uchtor	7.56	7	P	P	20 33 04.0	+1.5
	SNR=21						
EKS2	Erkin-Say	7.94	3	P	P	20 33 09.2	+1.4
	SNR=12						
AAK	Ala-Archa	7.96	6	P	P	20 33 10.3	+2.3
	SNR=7.3						
AAK	Ala-Archa	7.96	6	⇑Pn	Pn	20 33 10.4	+2.1
	comp=N,6.2nm,0.8s						
AAK				⇑Sn	Sn	20 34 37.2	-0.9
	comp=N,32nm,1.0s						
AAK	Ala-Archa	7.96	6	⇑Pn	Pn	20 33 10.4	+2.1
	comp=N,6.2nm,0.8s						
AAK				Sn	Sn	20 34 37.2	-0.9
AAK	Ala-Archa	7.96	6	⇑P	Pn	20 33 10.4	+2.1
AAK						20 34 37.2	
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBK	Karagaybulak	8.03	9	P	P	20 33 10.7	+1.7
	SNR=5.4						
TKM2	Tokmak 2	8.38	12	P	P	20 33 16.1	+2.1
	SNR=7.3						
KK31	Karatay Array	8.65	346	Pn	P	20 33 17.5	-0.1
	comp=Z,11nm,0.4s,baz=159,slow=11,SNR=588						
KK31				⇑Sn	Sn	20 34 50.6	-4.7
	comp=Z,22nm,0.6s,baz=181,slow=24,SNR=14						
KK31	Karatay Array	8.65	346	Pn	P	20 33 17.5	-0.1
	comp=Z,11nm,0.4s						
KK31				Sn	Sn	20 34 50.6	-4.7
KK31	Karatay Array	8.65	346	P	P	20 33 17.5	-0.1
KK31						20 34 50.6	
KK31				pmax	pmax		
	comp=Z,11nm,0.4s						
KKAR	Karatay Array	8.65	346	*e*P	P	20 33 17.5	-0.1
KKAR				S	S	20 34 50.5	-4.6
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KKAR				smax			
	comp=Z,4.0nm,0.3s						
MK02	Makanchi Array	13.83	27	⇑P	P	20 34 26.9	-0.8
MK02				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MK31	Makanchi Array	13.84	27	⇑P	P	20 34 26.9	-1.0
	comp=Z,1.7nm,0.7s,baz=203,slow=10,SNR=7.9						
MKAR	Makanchi Array	13.84	27	Pn	P	20 34 27.0	-0.8
	comp=Z,0.2nm,0.3s,baz=207,slow=14,SNR=6.4						
MKAR	Makanchi Array	13.84	27	Pn	P	20 34 27.0	-0.8
WMQ	Urumqi	14.37	46	*e*P	P	20 34 35.3	+0.5
LSA	Lhasa	15.91	103	*e*P	P	20 34 52.2	-2.8
	comp=Z,2.4nm,0.5s						
LSA	Lhasa	15.91	103	*e*P	P	20 34 52.2	-2.7
LSA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
POO	Poona	16.13	178	*e*x	x	20 38 20.5	

KURK	**Kurchatov**	16.45	12	⇑P	P	20 34 58.6	-3.0
	comp=Z,2.9nm,1.0s						
KURK	**Kurchatov**	16.45	12	⇑P	P	20 34 58.6	-3.0
AB31	**Akbulak array**	17.55	330	⇑P	P	20 35 14.2	-1.2
	comp=Z,0.7nm,0.3s,baz=136,slow=13,SNR=36						
AB31				⇑S	S	20 38 18.3	-9.3
	comp=Z,1.8nm,0.5s,baz=148,slow=22,SNR=7.5						
AB31	**Akbulak array**	17.55	330	⇑P	P	20 35 14.2	-1.2
	comp=Z,0.7nm,0.3s						
AB31				S	S	20 38 18.3	-9.4
AB31	**Akbulak array**	17.55	330	⇑P	P	20 35 14.2	-1.2
AB31				S	S	20 38 18.3	-9.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VOSK	**Vostochnaya**	18.08	355	⇑P	P	20 35 19.9	-2.0
	comp=Z,3.7nm,1.2s						
VOSK	**Vostochnaya**	18.08	355	⇑P	P	20 35 19.9	-2.1
VOSK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BVA0	**Borovoye Array**	18.42	354	P	P	20 35 26.0	-0.2
	comp=Z,1.0nm,1.0s,baz=151,slow=8.8,SNR=28						
BVA0	**Borovoye Array**	18.42	354	P	P	20 35 26.0	-0.3
	comp=Z,1.0nm,1.0s						
BVA0	**Borovoye Array**	18.42	354	P	P	20 35 26.0	-0.3
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BVAR	**Borovoye Array**	18.42	354	P	P	20 35 26.5	+0.2
	comp=Z,1.2nm,0.3s,baz=156,slow=9.6,SNR=28						
BRVK	**Borovoye**	18.46	354	*e*P	P	20 35 25.4	-1.4
	comp=Z,1.8nm,0.6s						
BRVK	**Borovoye**	18.46	354	*e*P	P	20 35 25.4	-1.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VIS	**Vishakhapatnam**	19.15	150	*e*x	x	20 30 03.1	
VIS				*e*x	x	20 37 42.0	
AKTK	**Aktyubinsk**	19.26	329	⇓P	P	20 35 35.3	-0.9
AKTO	**Aktyubinsk**	19.26	329	⇓P	P	20 35 35.3	-0.9
	comp=Z,0.8nm,0.7s						
AKTO	**Aktyubinsk**	19.26	329	P	P	20 35 35.4	-0.9
	comp=Z,1.1nm,0.3s,baz=132,slow=11,SNR=9.5						
ZAL	**Zalesovo**	20.85	19	P	P	20 35 52.1	-1.1
	comp=Z,16nm,0.4s,baz=259,slow=6.5,SNR=70						
NVS	**Novosibirsk**	21.28	16	*e*P	P	20 35 55.2	-2.3
GTA	**Gaotai**	21.64	70	*e*P	P	20 36 01.5	+0.3
GTA				AP		20 36 08.6	
GTA				XP		20 36 11.8	
ARU	**Arti**	23.94	340	*e*P	P	20 36 24.9	+1.4
ARU	**Arti**	23.94	340	*e*P	P	20 36 24.9	+1.3
LZH	**Lanzhou**	24.89	78	*e*P	P	20 36 30.1	-3.0
LZH				AP		20 36 36.1	
LZH				XP		20 36 40.0	
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.4						
SONM	**Songino Array**	27.89	52	P	P	20 37 01.4	+0.7
	comp=Z,1.1nm,0.8s,mb3.5,baz=255,slow=9.4,SNR=7.8						
SONM				LR	LR	20 49 40.5	
	comp=Z,143nm,18.9s,MS3.6,baz=283,slow=40						
FINES	**FINESS Array B**	40.00	327	P	P	20 38 44.2	-0.6
	comp=Z,0.8nm,0.5s,mb3.7,baz=112,slow=10,SNR=5.9						
ARCES	**ARCESS Array B**	43.50	338	P	P	20 39 13.8	+0.4
	comp=Z,5.0nm,1.1s,mb4.2,baz=110,slow=7.4,SNR=13						
NB2	**NORSAR Subarra**	46.92	324	P	P	20 39 39.5	-1.2
	comp=Z,0.2nm,0.4s,mb3.4,baz=95,slow=7.4						
JNU	**Nakatsue**	47.24	75	LR	LR	21 00 17.1	
	comp=Z,90nm,21.6s,MS3.7,baz=51,slow=37						
KMBO	**Kilima Mbogo**	49.09	231	P	P	20 39 58.0	-0.3
	comp=Z,1.8nm,0.9s,mb4.1,baz=40,slow=9.9,SNR=4.6						
INK	**Inuvik**	75.35	10	P	P	20 42 53.5	+0.5
	comp=Z,0.7nm,0.4s,mb3.9,baz=23,slow=2.5,SNR=4.8						
INK	**Inuvik**	75.35	10	*e*P	P	20 42 53.6	+0.6
	comp=Z,0.9nm,0.5s,mb4.0						
INK	**Inuvik**	75.35	10	*e*P	P	20 42 53.6	+0.6
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	75.97	17	P	P	20 42 57.5	+0.9
	comp=Z,0.2nm,0.4s,mb3.4,baz=292,slow=3.9,SNR=4.3						
BOSA	**Boshof**	77.63	222	P	P	20 43 06.4	-0.4
	comp=Z,2.4nm,0.6s,mb4.3,baz=74,slow=4.6,SNR=8.4						
WRA	**Warramunga Arr**	79.46	123	P	P	20 43 16.8	-0.1
	comp=Z,1.3nm,0.7s,mb4.0,baz=323,slow=5.1,SNR=14						
WRAB	**Tennant Creek**	79.46	123	*e*P	P	20 43 16.8	-0.1
	comp=Z,2.2nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	79.46	123	*e*P	P	20 43 16.8	-0.1
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						

IDC 16 20:32:27.1±1.9**, 35.75S**×**107.64W, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.9**/14**, mbtmp3.8**/3**, MS3.9**/8**, Ms1 3.9**/8**, ms1mx3.7**/18**, Error ellipse: s-maj=73.1km s-min=44.4km az=18.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPN	**Rapa Nui**	8.71	350	LR	LR	20 36 48.8	
	comp=Z,796nm,18.4s,baz=147,slow=30						
PLCA	**Paso Flores**	29.40	111	LR	LR	20 46 52.4	
	comp=Z,86nm,19.4s,baz=270,slow=29						
LPAZ	**La Paz**	40.10	72	P	P	20 40 05.7	-0.5
	0.3nm,0.3s,baz=221,slow=11,SNR=3.5						
ROSC	**El Rosal**	51.06	45	LR	LR	20 58 43.8	
	comp=Z,96nm,20.4s,baz=200,slow=31						
BDFB	**Brasilia**	56.48	86	LR	LR	21 04 30.1	
	comp=Z,73nm,18.5s,baz=7.0,slow=34						
NVAR	**Mina Array Bea**	74.46	351	P	P	20 44 08.2	-0.7
	1.0nm,0.8s,baz=180,slow=5.4,SNR=4.4						
MAW	**Mawson**	76.72	176	LR	LR	21 16 39.6	
	comp=Z,44nm,18.9s,baz=240,slow=35						
PDAR	**Pinedale Array**	78.16	359	P	P	20 44 27.6	-2.0
	0.9nm,0.9s,baz=198,slow=2.9,SNR=3.5						
HNR	**Honiara**	86.51	261	LR	LR	21 16 15.3	
	comp=Z,144nm,18.2s,baz=303,slow=30						
STKA	**Stephens Creek**	86.55	233	LR	LR	21 15 45.3	
	comp=Z,124nm,19.2s,baz=24,slow=30						
NWAO	**Narrogin (SRO)**	99.80	217	LR	LR	21 23 34.4	
	comp=Z,60nm,18.7s,baz=121,slow=31						
AKASG	**Malin Array Be**	145.72	51	PKPbc	PKPbc	20 52 05.2	-2.5
	1.1nm,0.6s,baz=277,slow=4.1,SNR=7.7						
BRTR	**Keskin Array B**	149.28	71	PKPbc	PKPdf	20 52 17.9	+2.8
	0.3nm,0.4s,slow=5.8,SNR=2.8						
SONM	**Songino Array**	152.13	306	PKPbc	PKPdf	20 52 24.3	+5.3
	0.9nm,0.7s,baz=131,slow=3.0,SNR=7.6						

MAN 16 20:43:41.2, 8.77N×126.59E, mb4.2, ML3.1, MS2.8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	**Bislig**	0.62	201	⇑*i*P	Pg	20 43 55.1	+1.6
BIPH				*i* S	Sg	20 44 04.2	+2.5
BUTP	**Butuan**	0.98	282	*e*P	Pb	20 43 59.6	-1.0
BUTP				*e*S	Sg	20 44 13.5	-0.1
SCPH	**Surigao**	1.48	313	⇓*e*P	Pn	20 44 06.6	-2.5
BUKP	**Musuan**	1.75	240	*e*P	Pn	20 44 13.7	+0.7
BUKP				*e*S	Sn	20 44 38.7	+2.5
MATI	**Mati**	1.84	190	*e*P	Pn	20 44 13.6	-0.6
MATI				*e*S	Sn	20 44 37.8	-0.7
CGP	**Cagayan de Oro**	1.90	261	⇓*e*P	Pn	20 44 14.5	-0.6
CGP				*i* S	Sn	20 44 38.7	-1.3
MSLP	**Maasin**	2.18	309	*e*P	Pn	20 44 16.2	-3.0
MSLP				*e*S	Sn	20 44 44.1	-3.2
BESP	**Borongan**	3.04	338	*e*P	Pn	20 44 31.8	+0.4
BESP				*e*S	Sn	20 45 03.3	-5.7
PAGZ	**Pagadian**	3.30	254	*e*P	Pn	20 44 35.9	+0.8
PAGZ				*e*S	Sn	20 45 14.6	-1.0
GUIM	**Jordan**	4.36	295	*e*P	Pn	20 44 46.8	-3.3
GUIM				*e*S	Sn	20 45 38.8	-3.6

IDC ***16*** *20:52:30.4±1.3, 37.96N×144.91E, mb3.6/3, mb1 3.9/5, mb1mx3.6/22, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=37.3km s-min=23.9km az=131.0*

JMA ***16*** *20:52:34.8±0.1, 38.06N×144.64E, h55^{km}, M4.0*

ISC 16 20:52:34.9±1.4**, 38.14N**±0.06×**144.66E**±0.08**, h49**^{km}±16^{km}**, n15,** σ**0**^{s}**87**/25**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.52	293	P	P	20 53 14.9	+0.5
JIO	**Ouri**	2.62	278	P	P	20 53 15.9	+0.1
JIO				S	S	20 53 46.4	-0.2
MIYJ	**Miyakonagasawa**	2.64	304	P	P	20 53 16.4	+0.3
MIYJ				*e*S	S	20 53 47.9	+0.9
JMK	**Ichinoseki**	2.81	288	P	P	20 53 19.0	+0.4
JMK				*e*S	S	20 53 52.5	+1.0
JOM	**Ohasama**	2.95	298	P	P	20 53 21.1	+0.7
JOM				*e*S	S	20 53 55.6	+0.8
JMM	**Marumori**	3.06	266	P	P	20 53 21.7	-0.4
JMM				S	S	20 53 56.4	-1.4
JANG	**Nango**	3.30	313	P	P	20 53 25.8	+0.3
JANG				*e*S	S	20 54 03.9	0.0
JOT	**Ohata**	4.27	320	P	P	20 53 39.8	+0.7
JOT				*e*S	S	20 54 26.6	-1.6
JCH	**Churui**	4.58	348	P	P	20 53 42.1	-1.4
JCH				*e*S	S	20 54 32.9	-3.1
MJAR	**Matsushiro Arr**	5.38	255	Pn	P	20 53 54.5	-0.2
	6.3nm,0.3s,baz=79,slow=15,SNR=44						
MJAR				Sn	S	20 54 56.9	+0.8
	0.5nm,0.3s,baz=196,slow=25,SNR=2.6						
MAT	**Matsushiro**	5.38	255	P	P	20 53 54.8	+0.1
MAT				*e*S	S	20 54 55.0	-1.1
ASAJ	**Asahikawa**	6.17	346	Pn	P	20 54 05.6	-0.1
	0.7nm,0.3s,baz=99,slow=13,SNR=11						
ILAR	**Eielson Array**	47.18	33	P	P	21 01 04.3	+0.3
	0.7nm,0.8s,mb3.7,baz=245,slow=7.3,SNR=5.9						
WRA	**Warramunga Arr**	58.58	191	P	P	21 02 28.0	-1.2
	0.3nm,0.5s,mb3.6,baz=9.6,slow=7.1,SNR=5.2						
PDAR	**Pinedale Array**	75.04	47	P	P	21 04 14.3	+1.4
	0.4nm,0.6s,mb3.6,baz=315,slow=4.2,SNR=3.6						

CSEM ***16*** *21:24:53.2±0.2, 35.65N×22.05E, h40^{km}, MD3.6, Error ellipse: s-maj=8.2km s-min=2.4km az=79.0*

ATH ***16*** *21:24:54.5, 35.81N×22.14E, h41^{km}±3^{km}, MD3.6/5*

HLW ***16*** *21:24:54.2, 35.74N×22.18E, h19^{km}, Mb3.1*

NEIC ***16*** *21:24:54.5, 35.81N×22.14E, h41^{km}, MD3.6(ATH), After ATH.*

ISC 16 21:24:53.7±1.1**, 35.62N**±0.04×**22.2E**±0.2**, h41**^{km}**, n10,** σ**1**^{s}**16**/14**, 1C-1D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	**Kithira**	0.94	46	*e*P	P	21 25 11.5	+0.9
VLI	**Veliai**	1.24	28	*e*P	P	21 25 15.5	+0.6
VLI				*e*S	S	21 25 30.0	-0.8
ITM	**Ithomi**	1.57	352	*e*P	P	21 25 18.5	-1.1
VAM	**Vamos**	1.64	97	*e*P	P	21 25 23.9	+3.3
EVR	**Evrytania**	3.30	355	*e*P	P	21 25 43.8	-0.5
SLUM		4.82	148	P	P	21 26 06.9	+1.1
SLUM				S	S	21 26 59.9	-1.3
HMAT	**Matruh**	6.09	136	⇓*e*P	P	21 26 24.4	+0.9
HMAT				S	S	21 27 29.8	-3.2
SWA2		6.93	156	⇑*e*P	P	21 26 35.9	+0.6
SWA1		7.00	154	P	P	21 26 37.0	+0.7
SWA1				S	S	21 27 52.0	-3.5
HFRF	**Wahat Farafira**	9.93	147	P	P	21 27 16.4	-0.4

NIED ***16*** *22:00:00, 37.90N×144.40E, h8^{km}, Mw3.7 Best double couple: $M_0$3.67×10^{14} NP1:ϕ_s187°, δ66°, λ-93°. NP2:ϕ_s13°, δ24°, λ-84°.*

IDC ***16*** *22:00:18.9±1.4, 37.68N×144.80E, mb3.5/3, mb1 3.8/5, mb1mx3.6/21, mbtmp3.6/5, ML3.8/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/19, Error ellipse: s-maj=36.4km s-min=26.9km az=112.0*

JMA ***16*** *22:00:23.8±0.2, 37.90N×144.37E, h55^{km}, M3.8*

ISC 16 22:00:22.6±1.3**, 37.99N**±0.05×**144.43E**±0.09**, h55**^{km}±19^{km}**, n17,** σ**1**^{s}**24**/24**, mb3.6**/3**, MS3.2**/1**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.42	298	P	P	22 01 02.3	+1.6
JIO	**Ouri**	2.47	282	P	P	22 01 02.4	+1.0
JIO				*e*S	S	22 01 30.8	+0.4
JMK	**Ichinoseki**	2.70	292	*e*S	S	22 01 38.1	+2.0
JOT	**Ohata**	4.28	323	*e*S	S	22 02 15.6	-0.4
JKB	**Kayabe**	4.69	327	*e*S	S	22 02 25.7	-0.6
JCH	**Churui**	4.69	350	P	P	22 01 33.7	+1.1
JCH				*e*S	S	22 02 24.2	-2.2
JRY	**Ryogami san**	4.84	248	P	P	22 01 33.9	-0.9
JRY				*e*S	S	22 02 25.5	-4.7
JOD2	**Odawara 2**	5.09	239	P	P	22 01 37.5	-0.7
MJAR	**Matsushiro Arr**	5.17	256	Pn	P	22 01 40.1	+0.8
	3.2nm,0.3s,baz=83,slow=15,SNR=25						
MJAR				Sn	S	22 02 37.6	-0.8
	1.2nm,0.3s,baz=81,slow=7.1,SNR=3.1						
MAT	**Matsushiro**	5.17	256	P	P	22 01 38.0	-1.3
MAT				*e*S	S	22 02 37.7	-0.7
NEM2	**Nemuro 2**	5.46	10	P	P	22 01 41.6	-1.7
NEM2				*e*S	S	22 02 40.9	-4.7
JTKR	**Abashiri--Toko**	5.99	356	P	P	22 01 51.2	+0.6
JTKR				*e*S	S	22 02 55.4	-3.4
ASAJ	**Asahikawa**	6.28	348	Pn	P	22 01 56.1	+1.4
	1.3nm,0.3s,baz=183,slow=11,SNR=9.8						
ASAJ				Sn	S	22 03 05.7	-0.3
	0.6nm,0.3s,baz=207,slow=30,SNR=2.6						
GUMO	**Guam**	24.30	179	LR	LR	22 14 52.4	
	comp=Z,71nm,18.4s,MS3.2,baz=59,slow=36						
MKAR	**Makanchi Array**	45.65	302	P	P	22 08 45.0	+5.8
	0.5nm,0.8s,mb3.5,baz=72,slow=9.1,SNR=4.2						
ILAR	**Eielson Array**	47.40	33	P	P	22 08 55.4	+2.6
	0.6nm,0.8s,mb3.5,baz=254,slow=6.6,SNR=4.4						
WRA	**Warramunga Arr**	58.40	191	P	P	22 10 14.3	-0.6
	0.6nm,0.7s,mb3.7,baz=11,slow=7.2,SNR=5.4						

IDC 16 22:36:00.0±4.0**, 1.22N**×**97.40E, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/17**, mbtmp3.7**/4**, Error ellipse: s-maj=151.9km s-min=29.7km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	41.88	122	P	P	22 43 52.2	-1.8
	0.4nm,0.5s,baz=302,slow=9.2,SNR=4.3						
SONM	**Songino Array**	47.09	8	P	P	22 44 34.1	-1.4
	0.4nm,0.4s,baz=191,slow=9.5,SNR=8.8						
MKAR	**Makanchi Array**	47.27	346	P	P	22 44 34.8	-2.2
	0.4nm,0.4s,baz=164,slow=8.9,SNR=15						
ZAL	**Zalesovo**	53.56	351	P	P	22 45 22.3	-2.6
	1.0nm,0.3s,baz=289,slow=10.0,SNR=4.6						

MOS ***16*** *22:47:23.2±2.2, 52.71N×99.78E, h8^{km}, mb4.5/1, Error ellipse: s-maj=11.8km s-min=9.4km az=31.8*

MOS Felt (III) at Orlik.

NEIC ***16*** *22:47:23.2, 52.71N×99.78E, h8^{km}, After MOS.*

NEIC Felt [III] at Orlik.

BYKL 16 22:47:22.4±0.5**, 52.70N**×**99.69E, h8**^{km}±5^{km}**, 7C-5D, FELT I=IV MSK at Orlik, Sayany, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORL	**Orlik**	0.18	156	⇑*i*Pg	Pg	22 47 26.4	+0.2
	2μm,0.2s						
ORL				⇓*i*Pg	Pg	22 47 26.4	+0.2
	2μm,0.2s						
ORL				⇓*i*Pg	Pg	22 47 26.4	+0.2
	2μm,0.2s						
ORL				Pmax		22 47 26.5	
	2μm,0.1s						
ORL				*i* Sg	Sg	22 47 29.7	+0.9
ORL				Smax		22 47 29.9	
	12μm,0.3s						
ORL	**Orlik**	0.18	156	⇓*i*PG	Pg	22 47 26.4	+0.2
ORL				*e*S	Sg	22 47 29.7	+0.9
MOY	**Mondy**	1.31	142	⇓*i*Pg	Pg	22 47 46.5	-2.1
	151nm,0.7s						
MOY				⇑*i*Pg	Pg	22 47 46.5	-2.1
	83nm,0.7s						
MOY				⇑*i*Pg	Pg	22 47 46.5	-2.1
	332nm,0.7s						
MOY				Pmax		22 47 47.2	
	458nm,0.5s						
MOY				*e*Sg	Sg	22 48 03.2	-2.9
MOY				Smax		22 48 15.1	
	1μm,0.5s						
MOY	**Mondy**	1.31	142	⇑*i*PG	Pg	22 47 46.4	-2.2
MOY				*e*		22 48 03.2	
MOY				pmax	pmax		
	comp=Z,472nm,0.5s						
MOY				smax			
	comp=E,939nm,0.6s						
ARS	**Arshan**	1.85	114	⇑*i*Pg	Pg	22 47 55.3	-4.1
ARS				Pmax		22 47 58.3	
	comp=E,879nm,0.5s						
ARS				*e*Sg	Sg	22 48 20.1	-4.0
ARS				Smax		22 48 26.9	
	comp=E,2μm,0.5s						
ARS	**Arshan**	1.85	114	*e*PN	Pn	22 47 55.4	+0.6
ARS				*e*		22 48 20.0	
ARS				pmax	pmax		
	comp=Z,914nm,0.3s						
ARS				smax			
	comp=N,2μm,0.3s						
TDJR	**Todzha**	2.21	264	*e*Pg	Pg	22 48 01.3	-5.3
TDJR				*e*Sg	Sg	22 48 31.2	-4.9
TLY	**Talaya**	2.64	111	⇑*i*Pg	Pg	22 48 08.8	-6.3
TLY				Pmax		22 48 14.1	
	comp=N,178nm,0.3s						
TLY				*e*Sg	Sg	22 48 44.2	-6.1
TLY				Smax		22 48 48.4	
	comp=N,367nm,0.5s						
TLY	**Talaya**	2.64	111	⇓*i*PN	Pn	22 48 08.8	+2.8
TLY				*e*S	Sn	22 48 37.0	-1.6
TLY				*e*		22 48 43.7	
TLY				pmax	pmax		
	comp=Z,177nm,0.3s						
TLY				smax			
	comp=E,372nm,0.6s						
IRK	**Irkutsk**	2.84	97	*e*Pn	Pn	22 48 07.7	-1.2
IRK				*e*Pg	Pg	22 48 12.8	-6.3
IRK				Pmax		22 48 15.9	
	comp=E,198nm,0.3s						
IRK				*e*Sn	Sn	22 48 42.0	-1.7
IRK				*e*Sg	Sg	22 48 50.4	-6.5
IRK				Smax		22 48 51.4	
	comp=E,1μm,0.5s						
IRK	**Irkutsk**	2.84	97	*e*PN	Pn	22 48 08.3	-0.6
IRK				*e*S	Sn	22 48 49.2	+5.5
IRK				smax			
	comp=N,1μm,0.5s						
ZAK	**Zakamensk**	3.23	135	*e*Pg	Pg	22 48 19.5	-7.3
ZAK				Pmax		22 48 25.5	
	comp=N,67nm,0.5s						
ZAK				*e*Sg	Sg	22 49 03.3	-6.6
ZAK				Smax		22 49 07.3	
	comp=N,313nm,0.6s						
ZAK	**Zakamensk**	3.23	135	*e*PN	Pn	22 48 19.5	+5.1
ZAK				*e*		22 49 03.1	
ZAK				pmax	pmax		
	comp=Z,73nm,0.4s						
ZAK				smax			
	comp=N,313nm,0.6s						
LSTR	**Listvyanka**	3.27	103	*e*Pn	Pn	22 48 15.4	+0.4
LSTR				*e*Pg	Pg	22 48 22.5	-5.1
LSTR				Pmax		22 48 22.7	
	comp=N,71nm,0.7s						
LSTR				*e*Sn	Sn	22 48 55.4	+0.9
LSTR				*e*Sg	Sg	22 49 05.9	-5.3
LSTR				Smax		22 49 08.2	
	comp=N,178nm,0.8s						
BTMB	**Babushkin**	3.91	102	*e*Pn	Pn	22 48 24.1	0.0
BTMB				*e*Pg	Pg	22 48 32.3	-8.2
BTMB				Pmax		22 48 36.3	
	comp=N,32nm,0.2s						
BTMB				*e*Sn	Sn	22 49 10.3	-0.4
BTMB				*e*Sg	Sg	22 49 23.6	-9.0
BTMB				Smax		22 49 30.2	
	comp=N,389nm,0.6s						
TRG	**Tyrgan**	4.05	87	⇑*i*Pn	Pn	22 48 25.3	-0.8
TRG				max		22 48 29.0	
	comp=N,48nm,0.4s						
TRG				*e*		22 49 14.0	
TRG				*e*Sg	Sg	22 49 26.4	-11
TRG				Smax		22 49 30.7	
	comp=N,325nm,1.0s						
TRG	**Tyrgan**	4.05	87	*e*PN	Pn	22 48 25.2	-0.9
TRG				*e*		22 48 35.3	
TRG				*e*S	Sn	22 49 11.3	-3.0
TRG				*e*		22 49 26.0	
TRG				pmax	pmax		
	comp=Z,42nm,0.5s						
TRG				smax			
	comp=N,324nm,1.0s						
STDB	**Stepnoy Dvoret**	4.12	95	*e*Sg	Sg	22 49 29.2	-10
STDB				Smax		22 49 38.1	
	comp=N,742nm,0.8s						
KAB	**Kabansk**	4.32	96	*e*Pg	Pg	22 48 39.8	-8.8
KAB				Pmax		22 48 42.8	
	comp=N,110nm,1.0s						
KAB				*e*Sn	Sn	22 49 20.4	-0.7
KAB				*e*Sg	Sg	22 49 34.8	-11
KAB				Smax		22 49 40.7	
	comp=N,651nm,0.5s						
KAB	**Kabansk**	4.32	96	*e*PN	Pn	22 48 39.4	+9.5
KAB				*e*		22 49 33.8	
KAB				pmax	pmax		
	comp=Z,114nm,0.9s						
KAB				smax			
	comp=N,624nm,0.9s						
FFNB	**Fofonovo**	4.38	96	*e*Pn	Pn	22 48 30.6	-0.3
FFNB				*e*Pg	Pg	22 48 40.7	-9.2
FFNB				Pmax		22 48 42.6	
	comp=N,3.0nm,0.2s						
FFNB				*e*Sn	Sn	22 49 21.8	-1.0
FFNB				*e*Sg	Sg	22 49 36.5	-12
FFNB				Smax		22 49 40.3	
	comp=N,692nm,0.8s						
ZRHB	**Zarechye**	4.55	89	*e*Pn	Pn	22 48 32.5	-0.7
ZRHB				max		22 48 51.2	
	comp=N,183nm,1.3s						
ZRHB				*e*Sn	Sn	22 49 26.2	-0.8
ZRHB				*e*Sg	Sg	22 49 44.8	-9.1
ZRHB				Smax		22 49 57.1	
	comp=N,1μm,1.0s						
OGRR	**Ongureny**	4.85	76	*e*Pn	Pn	22 48 36.4	-1.1
OGRR				*e*Pg	Pg	22 48 49.7	-10
OGRR				Pmax		22 48 53.3	
	comp=N,40nm,0.3s						
OGRR				*e*Sn	Sn	22 49 30.8	-3.7
OGRR				*e*Sg	Sg	22 49 51.5	-12
OGRR				Smax		22 49 54.2	
	comp=N,597nm,0.7s						
OGRR	**Ongureny**	4.85	76	*e*PN	Pn	22 48 36.9	-0.6
OGRR				*e*		22 48 50.0	
OGRR				*e*S	Sn	22 49 31.0	-3.5
OGRR				*e*		22 49 51.8	
OGRR				pmax	pmax		
	comp=Z,43nm,0.4s						
OGRR				smax			
	comp=N,596nm,0.8s						
TRTB	**Turuntaevo**	4.88	92	*e*Pn	Pn	22 48 37.0	-0.9
TRTB				*e*Pg	Pg	22 48 48.5	-11
TRTB				Pmax		22 48 54.6	
	comp=N,34nm,0.7s						
TRTB				*e*Sn	Sn	22 49 34.2	-1.1
TRTB				*e*Sg	Sg	22 49 50.2	-15
TRTB				Smax		22 49 57.8	
	comp=N,246nm,0.9s						
CERR	**Cheremushki**	5.03	275	*e*PN	Pn	22 48 50.0	+10
CERR				*e*S	Sn	22 49 57.4	+18
MXMB	**Maximikha**	5.50	81	*e*Pn	Pn	22 48 46.2	-0.4
MXMB				*e*Pg	Pg	22 49 01.1	-11
MXMB				Pmax		22 49 03.2	
	comp=N,50nm,0.6s						
MXMB				*e*Sn	Sn	22 49 47.2	-3.7
MXMB				*e*Sg	Sg	22 50 12.4	-13
MXMB				Smax		22 50 20.8	
	comp=N,762nm,1.0s						
SYVR	**Suvo**	6.27	77	*e*Pn	Pn	22 48 55.6	-1.9
SYVR				max		22 48 59.5	
	comp=N,7.0nm,0.8s						
SYVR				*e*Sn	Sn	22 50 05.8	-4.4
SYVR				*e*Sg	Sg	22 50 36.9	-14
SYVR				Smax		22 50 40.9	
	comp=N,184nm,1.8s						
NIZ	**Nizh Angarsk**	6.54	58	*e*Pn	Pn	22 48 58.9	-2.5
NIZ				max		22 49 02.3	
	comp=N,35nm,0.8s						
NIZ				*e*Sn	Sn	22 50 10.1	-6.9
NIZ				*e*Sg	Sg	22 50 45.0	-15
NIZ				Smax		22 50 46.9	
	comp=N,311nm,1.2s						
YLYR	**Ulyunkhan**	7.14	68	*e*Pn	Pn	22 49 07.5	-2.2
YLYR				max		22 49 12.1	
	comp=N,8.0nm,0.3s						
YLYR				*e*Sn	Sn	22 50 26.7	-5.2

YLYR				*e*Sg	Sg	22 51 01.5	-19
YLYR				Smax		22 51 08.5	
	comp=N,195nm,2.1s						
YLYR	Ulyunkhan	7.14	68	*e*Pn	Pn	22 49 08.0	-1.7
TASR	Tashtagol	7.17	275	*e*Pn	Pn	22 49 29.3	+19
TASR				*e*S	Sn	22 51 03.9	+31
KMO	Kumora	7.45	60	*e*Pn	Pn	22 49 12.2	-1.9
KMO				max		22 49 14.8	
	comp=N,26nm,0.3s						
KMO				*e*Sn	Sn	22 50 32.5	-7.3
KMO				*e*Sg	Sg	22 51 13.9	-17
KMO				Smax		22 51 32.8	
	comp=N,172nm,1.1s						
KPC	Khapcheranga	8.51	106	*e*Pn	P	22 49 26.3	-2.6
KPC				max		22 50 06.1	
	comp=N,5.0nm,1.7s						
KPC				*e*Sn	Sn	22 50 59.6	-6.6
KPC				*e*Sg	Sg	22 51 47.6	-18
KPC				Smax		22 52 02.2	
	comp=N,27nm,1.3s						
KPC	Khapcheranga	8.51	106	*e*Pg	P	22 49 57.5	+29
UKT	Uakit	8.65	66	*e*Pn	P	22 49 28.5	-2.4
UKT				max		22 49 54.1	
	comp=N,9.0nm,1.4s						
UKT				*e*Sn	Sn	22 51 03.9	-5.8
UKT				*e*Sg	Sg	22 51 50.0	-21
UKT				Smax		22 52 03.4	
	comp=N,80nm,1.6s						
UKT	Uakit	8.65	66	*e*PG	P	22 49 57.3	+26
UKT				*e*		22 51 48.3	
UKT				pmax	pmax		
	comp=Z,3.0nm,0.5s						
UKT				smax			
	comp=N,21nm,0.7s						
SVKR	Severomuysk	8.78	62	*e*Sg	Sg	22 51 54.6	-20
SVKR				Smax		22 52 02.1	
	comp=N,188nm,1.0s						
BOD	Bodaibo	9.64	52	*e*P	P	22 49 39.7	-4.6
	comp=N,5.0nm,0.2s						
BOD	Bodaibo	9.64	52	*e*P	P	22 49 39.7	-4.6
BOD				pmax	pmax		
	comp=Z,5.0nm,0.2s						
CRS	Chara	11.51	61	*e*Sg	S	22 53 19.3	+60
CRS				Smax		22 53 27.2	
	comp=Z,101nm,1.6s						
TUP	Tupik	12.17	74	*e*Sg	S	22 53 40.5	+65
TUP				Smax		22 53 44.3	
	comp=Z,77nm,2.2s						
TIXI	Tiksi	22.93	23	*e*P	P	22 52 25.1	-2.3
SSE	Sheshan	26.68	136	*e*P	P	22 53 01.2	-2.3
	comp=Z,37nm,0.8s						

JMA 16 22:58:36.7±0.7, 34.34N×142.29E, h43^{km}, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.13	286	P	P	22 58 56.5	+0.3
BSO3	Boso 3	1.54	288	P	P	22 59 02.9	+0.7
BSO4	Boso 4	1.73	293	P	P	22 59 06.1	+1.2
BSO4				S	S	22 59 27.1	+1.1
JHJ2	Mitsune	2.40	240	P	P	22 59 15.3	+0.9
JOD2	Odawara 2	2.79	290	P	P	22 59 19.5	-0.5
JFK	Kawauchi	3.23	340	P	P	22 59 25.2	-1.1
JFK				S	S	22 59 58.8	-5.1
JYN	Shimob	3.29	292	P	P	22 59 26.8	-0.2
JYN				S	S	23 00 03.4	-1.9

NNC 16 23:05:43.2±15.0, 36.56N×70.47E, h151^{km}±440^{km}, mpv3.3, 1C-2D, Error ellipse: s-maj=186.4km s-min=85.3km az=43.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.53	0	P	P	23 07 17.1	-0.9
	0.8nm,0.3s,baz=191,slow=13,SNR=34						
KK31				⇑S	S	23 08 31.2	-0.4
	0.2nm,0.2s,baz=194,slow=23,SNR=4.9						
AAK	Ala-Archa	6.81	26	⇓Pn	P	23 07 20.9	-0.8
	0.9nm,0.4s						
AAK				⇓Sn	S	23 08 35.2	-3.2
	3.6nm,0.6s						
AB31	Akbulak array	14.82	332	P	P	23 09 05.0	-1.2
	1.5nm,0.5s,baz=150,slow=13,SNR=14						

*CSEM **16** 23:15:07.7±0.1, 40.00N×50.79E, h10^{km}, mb3.9/5, Error ellipse: s-maj=3.4km s-min=2.2km az=97.0*
*IDC **16** 23:15:08.5±1.5, 39.98N×50.93E, mb3.8/8, mb1 4.0/10, mb1mx3.9/20, mbtmp3.8/10, ML3.8/1, Error ellipse: s-maj=28.0km s-min=10.7km az=161.0*
*NEIC **16** 23:15:09.7±0.3, 39.97N×50.91E, h10^{km}, mb3.8/2, ML4.0(TEH), Error ellipse: s-maj=6.6km s-min=4.6km az=104.0*
*TEH **16** 23:15:13.5, 39.87N×50.88E, h21^{km}, Mn4.0*
*MOS **16** 23:15:13.8±0.9, 40.50N×50.85E, h27^{km}, mb4.1/3, Error ellipse: s-maj=15.9km s-min=10.7km az=83.2*
*NNC **16** 23:15:14.2±8.5, 40.63N×50.23E, h63^{km}±87^{km}, Error ellipse: s-maj=133.1km s-min=57.3km az=106.0*
*THR **16** 23:15:21.2±0.6, 38.79N×50.06E, h14^{km}±4^{km}, ML2.7*

ISC 16 23:15:07.7±0.3, 39.99N±0.03×50.91E±0.05, h10^{km}, n50, σ1^{s}06/59, mb3.7/12, 2C-2D, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRMI	Germi	2.62	244	*e*PG	Pn	23 15 52.0	+1.2
GRMI				AML	AML	23 16 23.6	
	comp=N,94nm,0.2s						
IHSH	Hashtroud	3.30	240	Pn	Pg	23 16 08.6	-5.0
IBST	Bostanabad	3.88	235	Pn	Pn	23 16 09.5	+0.7
THKV	Tehran--Karaj	4.07	180	*e*PN	Pn	23 16 09.7	-1.7
CHTH	Charan	4.08	178	*e*PN	Pn	23 16 10.8	-0.8
CHTH				*e*Sg	Sn	23 16 54.6	-5.4
IMRD	Marand	4.24	254	Pn	Pn	23 16 15.5	+1.7
DAMV	Damavand	4.43	169	*e*PN	Pn	23 16 17.3	+0.7
DAMV				SN	Sn	23 16 58.5	-10
DGRG	David-gareji	4.45	291	P	Sn	23 17 08.4	-1.0
IDMV	Damavand	4.50	168	Pn	Pn	23 16 18.5	+1.0
IDMV				Sn	Sn	23 17 06.3	-4.2
IFIR	Firoozkooh	4.58	161	Pn	Pn	23 16 19.2	+0.5
IRAZ	Razeghan	4.65	190	Pn	Pn	23 16 28.6	+9.0
GNI	Garni	4.74	274	Pn	Pn	23 16 25.4	+4.5
	comp=N,0.5nm,0.3s,baz=25,slow=15,SNR=4.1						
GNI				Sn	Sn	23 17 22.7	+6.2
	comp=N,2.3nm,0.3s,baz=284,slow=10,SNR=6.9						
MTA	Mtatsminda	4.94	292	S	Sn	23 17 21.9	+0.1
TBLG	Delisi	4.99	292	P	Sn	23 17 23.5	+0.4
IVRN	Varamin	5.03	172	Pn	Pn	23 16 23.3	-1.8
IQOM	Qom	5.14	179	Pn	Pn	23 16 26.8	+0.1
ASAO	Ashtian	5.48	188	*e*PN	Pn	23 16 27.6	-3.8
ASAO				SN	Sn	23 17 16.3	-19
ASAO				AML	AML	23 17 34.6	
	comp=N,7.3nm,0.4s						
SNGE	Sanandaj	5.65	211	*e*PN	Pn	23 16 28.3	-5.5
SNGE				AML	AML	23 17 46.6	
	comp=N,6.1nm,0.6s						
ZEI	Tsey	5.96	300	*e*P	Pn	23 16 49.0	+11
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.1s						
IVIS	Veys	6.34	212	Pn	Pn	23 16 43.5	-0.1
IDHR	Dehrash	6.39	216	Pn	Pn	23 16 43.6	-0.7
IGHG	Ghaleghazi	6.63	213	Pn	Pn	23 16 47.3	-0.3
AB31	Akbulak array	11.27	32	⇑P	P	23 17 50.5	-1.3
	comp=Z,0.5nm,0.5s						
AB31				⇓S	S	23 19 50.2	-8.6
	comp=Z,2.0nm,0.3s						
AKTK	Aktyubinsk	11.57	23	P	P	23 17 54.2	-1.8
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	11.57	23	⇓P	P	23 17 50.1	-5.9
	comp=Z,0.2nm,0.6s						
AKTO				⇑S	S	23 19 56.9	-9.5
	comp=Z,1.8nm,0.7s						
AKTO	Aktyubinsk	11.57	23	Pn	P	23 17 54.2	-1.8
	comp=Z,0.6nm,0.3s,baz=195,slow=11,SNR=6.6						
AKTO				Sn	S	23 19 57.2	-9.1
	comp=Z,1.6nm,0.3s,baz=117,slow=23,SNR=11						
AKTO	Aktyubinsk	11.57	23	P	P	23 17 54.2	-1.8
AKTO						23 19 57.3	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax			
	comp=N,2.0nm,0.3s						
KK31	Karatay Array	15.00	72	P	P	23 18 47.1	+5.8
	comp=N,3.9nm,0.7s,baz=264,slow=14,SNR=29						
ARU	Arti	17.20	14	*e*P	P	23 19 06.6	-2.9
ARU				*e*S	S	23 22 07.6	-12
AKASG	Malin Array Be	18.56	312	P	P	23 19 26.0	-0.4
	comp=N,1.8nm,0.3s,baz=122,slow=12,SNR=5.6						
BVAR	Borovoye Array	18.62	39	P	P	23 19 27.9	+0.8
	comp=N,0.9nm,0.3s,baz=230,slow=11,SNR=18						
KURK	Kurchatov	22.10	52	*e*P	P	23 20 05.3	+0.7
	comp=N,3.3nm,0.9s,mb3.8						
KURK	Kurchatov	22.10	52	*e*P	P	23 20 05.3	+0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.7						
KURK	Kurchatov	22.10	52	*e*P	P	23 20 05.3	+0.7
	comp=Z,3.3nm,0.9s,mb3.8						
MK31	Makanchi Array	23.68	63	P	P	23 20 21.6	+1.6
	comp=Z,1.2nm,0.8s,mb3.4,baz=262,slow=5.2,SNR=8.3						
MK31	Makanchi Array	23.68	63	P	P	23 20 21.6	+1.5
	comp=Z,1.2nm,0.8s,mb3.4,SNR=8.3						
MKAR	Makanchi Array	23.68	63	P	P	23 20 21.4	+1.4
	comp=Z,0.5nm,0.5s,mb3.2,baz=272,slow=6.5,SNR=8.2						
JOF	Joensuu	25.79	339	*e*p	P	23 20 39.9	-0.2
	comp=Z,2.6nm,0.3s,mb4.2						
FINES	FINESS Array B	26.31	333	P	P	23 20 44.9	0.0
	comp=Z,0.8nm,0.4s,mb3.6,baz=139,slow=9.9,SNR=23						
KAF	Kangasniemi	26.70	334	*e*p	P	23 20 49.2	+0.7
	comp=Z,1.4nm,0.6s,mb3.7						
KAF	Kangasniemi	26.70	334	*e*P	P	23 20 49.2	+0.7
KAF				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.5						
ZAL	Zalesovo	26.70	47	P	P	23 20 49.9	+1.2
	comp=Z,0.7nm,0.5s,mb3.5,baz=209,slow=9.3,SNR=5.3						
GERES	GERESS Array B	27.78	301	P	P	23 20 58.9	+0.4
	comp=Z,0.3nm,0.4s,mb3.3,baz=108,slow=8.4,SNR=3.6						
NB2	NORSAR Subarra	32.12	324	P	P	23 21 36.5	-0.5
	comp=Z,0.8nm,0.4s,mb3.9,baz=110,slow=7.9						
NOA	NORSAR Array B	32.12	324	P	P	23 21 36.5	-0.5
	comp=Z,1.0nm,0.4s,mb4.0,baz=113,slow=8.1,SNR=4.8						
NOA	NORSAR Array B	32.12	324	P	P	23 21 36.5	-0.5
ARCES	ARCESS Array B	32.51	344	P	P	23 21 40.5	+0.2
	comp=Z,2.0nm,0.8s,mb4.1,baz=146,slow=10.0,SNR=7.2						
SONM	Songino Array	39.97	60	P	P	23 22 44.3	+0.5
	comp=Z,0.5nm,0.6s,mb3.4,baz=278,slow=9.6,SNR=5.6						
YKA	Yellowknife Ar	77.20	353	P	P	23 27 03.1	+0.4
	comp=Z,1.2nm,0.6s,mb4.0,baz=3.8,slow=5.8,SNR=4.9						
YKA	Yellowknife Ar	77.20	353	P	P	23 27 03.1	+0.3
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						

*IDC **16** 23:15:56.8±1.1, 53.80N×163.47W, mb4.1/15, mb1 4.2/18, mb1mx4.1/27, mbtmp4.0/18, ML3.8/3, MS3.7/10, Ms1 3.7/10, ms1mx3.4/39, Error ellipse: s-maj=28.2km s-min=15.1km az=7.0*
*BJI **16** 23:15:59.6, 53.70N×163.40W, h36^{km}, mB5.0, mb4.7*
*NEIC **16** 23:16:01.6±0.7, 53.68N×163.40W, h36^{km}±5^{km}, mb4.5/7, Error ellipse: s-maj=10.1km s-min=4.7km az=175.0*
*MOS **16** 23:16:03.9±0.7, 54.54N×163.72W, h33^{km}, mb4.5/7, Error ellipse: s-maj=28.8km s-min=12.2km az=94.7*

ISC 16 23:16:01.7±0.8, 53.74N±0.08×163.37W±0.06, h51^{km}±6^{km}, n67, σ1^{s}03/70, mb4.3/27, MS3.8/11, 1C, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESS	West Dahl Sout	1.09	313	P	P	23 16 21.0	+0.1
WESS				S	S	23 16 41.9	+6.8
WESN	West Dahl Nort	1.09	320	P	P	23 16 21.7	+0.8
SSLW	Shishaldin Wes	1.12	337	P	P	23 16 23.9	+2.5
WFAR	Faris Peak	1.15	314	P	P	23 16 21.9	+0.2
AKUT	Akutan	1.48	286	P	P	23 16 25.9	-0.6
AKUT				S	S	23 16 46.3	+1.6
BALA	Baldy Mountain	1.49	13	P	P	23 16 27.7	+1.0
LVA	Lava Point	1.63	286	P	P	23 16 28.2	-0.4
LVA				S	S	23 16 52.3	+3.8
UNV	Unalaska Valle	1.86	274	P	P	23 16 29.8	-2.0
UNV				S	S	23 16 54.2	0.0
PN7A	Pavlof North-7	1.87	25	P	P	23 16 32.4	+0.5
MTBL	Makushin Table	1.98	278	P	P	23 16 32.7	-0.7
MTBL				S	S	23 16 58.7	+1.7
MSW	Makushin Switc	2.03	276	P	P	23 16 32.8	-1.4
MSW				S	S	23 16 58.9	+0.5
BLHA	Black Hill	2.10	20	P	P	23 16 35.1	-0.1
MSOM	Makushin Julie	2.13	273	P	P	23 16 34.0	-1.5
MSOM				S	S	23 17 00.4	-0.3
SDPT	Sand Point	2.33	45	P	P	23 16 37.0	-1.5
SDPT				S	S	23 17 05.4	-0.5
KDAK	Kodiak Island	7.30	52	Pn	P	23 17 43.6	-4.7
	0.8nm,0.3s,baz=156,slow=20,SNR=10.0						
KDAK				Sn	S	23 18 59.9	-11
	0.8nm,0.3s,baz=299,slow=7.7,SNR=7.9						
KDAK	Kodiak Island	7.30	52	Pn	P	23 17 43.6	-4.7
KDAK				Sn	S	23 18 59.9	-11
ILAR	Eielson Array	13.84	31	Pn	P	23 19 11.9	-4.6
	0.1nm,0.3s,baz=210,slow=14,SNR=4.1						
DLBC	Dease Lake	19.05	62	P	P	23 20 22.7	+0.6
	0.3nm,0.3s,baz=310,slow=17,SNR=3.1						
DLBC	Dease Lake	19.05	62	P	P	23 20 22.7	+0.6
INK	Inuvik	20.22	32	P	P	23 20 32.0	-2.5
	1.6nm,0.6s,baz=223,slow=12,SNR=12						
BBB	Bella Bella	21.16	80	LR	LR	23 27 31.3	
	comp=Z,104nm,19.1s,MS3.2,baz=179,slow=33						
YKA	Yellowknife Ar	26.58	51	P	P	23 21 37.4	+1.0
	1.8nm,0.7s,mb3.7,baz=268,slow=9.0,SNR=4.4						
YKA				LR	LR	23 33 10.2	
	comp=Z,244nm,18.8s,MS3.8,baz=275,slow=39						
TIXI	Tiksi	33.46	328	*e*P	P	23 22 34.9	-2.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,326nm,18.0s,MS4.1						
NVAR	Mina Array Bea	34.16	98	P	P	23 22 43.2	-0.5
	comp=Z,0.2nm,0.3s,mb3.5,baz=325,slow=11,SNR=2.6						
ELK	Elko	34.48	92	LR	LR	23 33 53.7	
	comp=Z,104nm,21.6s,MS3.5,baz=310,slow=31						
ELK	Elko	34.48	92	*e*P	P	23 22 46.0	-0.4
	comp=Z,4.7nm,0.8s,mb4.5						
ELK	Elko	34.48	92	*e*P	P	23 22 46.1	-0.4
ELK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TPNV	Topopah Spring	36.36	98	P	P	23 23 03.0	+0.5
	comp=Z,3.9nm,1.1s,mb4.2						
TPNV	Topopah Spring	36.36	98	P	P	23 23 03.0	+0.6
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
PDAR	Pinedale Array	36.63	85	P	P	23 23 05.8	+1.2
	comp=Z,0.3nm,0.5s,mb3.4,baz=201,slow=7.7,SNR=3.8						
PV10	Paradox Valley	39.68	90	*e*P	P	23 23 30.8	+0.7
PV01	Paradox Valley	40.12	90	*e*P	P	23 23 33.5	-0.2
SDCO	Great Sand Dun	42.20	88	P	P	23 23 51.9	+1.2
ANMO	Albuquerque	43.52	92	LR	LR	23 38 51.0	
	comp=Z,97nm,20.8s,MS3.7,baz=281,slow=32						
BOD	Bodaibo	43.92	310	*e*P	P	23 24 03.0	-1.5
BOD				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
CN2	Changchun	46.09	288	*e*P	P	23 24 21.1	-0.9
CN2				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
TXAR	Lajitas Array	49.17	95	P	P	23 24 46.7	+0.4
	comp=Z,0.6nm,0.4s,mb3.9,baz=296,slow=5.4,SNR=5.5						
TXAR				LR	LR	23 45 59.4	
	comp=Z,81nm,18.5s,MS3.8,baz=355,slow=37						
TXAR	Lajitas Array	49.17	95	P	P	23 24 46.7	+0.4
TXAR				LR	LR	23 45 59.4	
SFJD	Kangerlussuaq	49.50	28	LR	LR	23 46 17.2	
	comp=Z,94nm,19.4s,MS3.8,baz=300,slow=37						
SADO	Sadowa	52.61	63	LR	LR	23 47 09.5	
	comp=Z,108nm,18.2s,MS3.9,baz=349,slow=36						
SONM	Songino Array	53.64	303	P	P	23 25 19.5	-0.3
	comp=Z,2.7nm,1.0s,mb4.1,baz=48,slow=7.1,SNR=16						
SONM				PcP	PcP	23 26 25.3	-0.3
	comp=Z,1.2nm,0.9s,baz=44,slow=1.0,SNR=4.5						
ARCES	ARCESS Array B	56.86	356	P	P	23 25 41.2	-1.5
	comp=Z,4.3nm,0.9s,mb4.5,baz=31,slow=7.1,SNR=3.7						
ZAL	Zalesovo	58.79	320	P	P	23 25 56.1	-0.3
	comp=Z,0.7nm,0.3s,mb4.2,baz=315,slow=12,SNR=4.5						
KURK	Kurchatov	63.66	321	*e*P	P	23 26 28.7	-0.6
	comp=Z,7.0nm,1.0s,mb4.7						
KURK	Kurchatov	63.66	321	*e*P	P	23 26 28.7	-0.6
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
BVAR	Borovoye Array	64.60	327	P	P	23 26 35.4	+0.1
	comp=Z,6.3nm,0.9s,mb4.7,baz=45,slow=6.3,SNR=24						
FINES	FINESS Array B	64.92	355	P	P	23 26 35.9	-1.3
	comp=Z,2.1nm,0.9s,mb4.2,baz=90,slow=1.9,SNR=5.6						
FINES				LR	LR	23 57 41.0	
	comp=Z,66nm,18.2s,MS3.9,baz=339,slow=39						
ARU	Arti	64.95	336	*e*P	P	23 26 36.7	-0.8
MKAR	Makanchi Array	65.40	316	P	P	23 26 39.6	-0.9
	comp=Z,1.0nm,0.7s,mb3.9,baz=38,slow=5.7,SNR=9.2						
HFS	Hagfors	66.45	2	LR	LR	23 57 43.8	
	comp=Z,66nm,18.6s,MS3.9,baz=96,slow=38						
GYA	Guiyang	69.10	286	⇑*i*P	P	23 27 05.4	+1.3
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
AKTO	Aktyubinsk	70.52	333	P	P	23 27 13.1	+0.7
	comp=Z,11nm,0.9s,mb4.8,baz=25,slow=5.3,SNR=26						
AAK	Ala-Archa	71.96	319	*e*P	P	23 27 20.5	-0.6
	comp=Z,3.8nm,0.8s,mb4.4						
AAK	Ala-Archa	71.96	319	*e*P	P	23 27 20.5	-0.6
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
LSA	Lhasa	75.01	300	P	P	23 27 40.0	+0.8
LSA	Lhasa	75.01	300	*e*P	P	23 27 40.4	+1.3
	comp=Z,6.4nm,0.9s,mb4.5						
LSA	Lhasa	75.01	300	*e*P	P	23 27 40.4	+1.2
LSA				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
AKASG	Malin Array Be	75.39	352	P	P	23 27 40.6	-0.3
	comp=Z,2.6nm,0.6s,mb4.3,baz=4.1,slow=5.5,SNR=10.0						
VRAC	Vranov	77.32	0	LR	LR	00 02 41.2	
	comp=Z,39nm,18.0s,MS3.8,baz=218,slow=36						
GERES	GERESS Array B	77.76	2	P	P	23 27 55.3	+1.0
	comp=Z,1.2nm,0.7s,mb3.9,slow=5.3,SNR=6.6						
GUN	Gumba	79.15	303	*e*P	P	23 28 02.9	+0.6
	comp=Z,40nm,1.0s,mb5.3						
KKN	Kakani	79.55	303	*e*P	P	23 28 04.7	+0.2
	comp=Z,19nm,1.0s,mb5.0						
GKN	Gorkha	79.69	304	*e*P	P	23 28 05.4	+0.2
	comp=Z,19nm,1.0s,mb5.0						
DMN	Daman	79.78	303	*e*P	P	23 28 06.7	+1.0
KOLN	Koldanda	80.39	304	*e*P	P	23 28 09.3	+0.3
	comp=Z,15nm,0.9s,mb4.9						
BR131	Keskin Array S	85.76	347	*e*P	P	23 28 37.7	+1.8
	comp=Z,1.9nm,0.8s,mb4.4						
BRTR	Keskin Array B	85.76	347	P	P	23 28 37.8	+1.8
	comp=Z,2.6nm,0.9s,mb4.5,baz=31,slow=7.2,SNR=11						

GUC 16 23:19:36.1±0.6, 22.54S×68.80W, h141^{km}±7^{km}, MD3.9, ML3.4, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	0.67	124	*e*P	P	23 19 55.7	-2.1
SPCH				*i* S	S	23 20 12.6	-1.9
CEN1	Los Morros	1.55	236	⇑*i*P	P	23 20 08.4	+2.5
CEN1				*i* S	S	23 20 33.1	+4.5
CEN1				AMP		23 20 42.8	
	comp=N,255nm,0.6s						
ANCH	Antofagasta	1.87	232	*e*P	P	23 20 11.6	+2.0
ANCH				*i* S	S	23 20 35.8	+0.7
CPN1	Cerro Paranal	2.55	215	*i* P	P	23 20 19.4	+1.3
CPN1				*i* S	S	23 20 51.8	+1.7
CPN1				AMP		23 21 15.7	
	comp=E,188nm,0.4s						

*NIED **16** 23:48:00, 23.40N×142.70E, h53^{km}, Mw5.2 Best double couple: M₀6.79×10^{16} NP1:φ$_s$72°, δ82°, λ149°. NP2:φ$_s$166°, δ59°, λ9°.*
*IDC **16** 23:48:28.7±0.5, 23.32N×142.02E, mb4.4/26, mb1 4.5/28, mb1mx4.5/31, mbtmp4.4/28, ML4.3/2, MS4.6/28, Ms1 4.6/28, ms1mx4.5/36, Error ellipse: s-maj=19.0km s-min=12.5km az=86.0*
*MOS **16** 23:48:32.9±1.2, 23.34N×141.95E, h33^{km}, mb5.2/20, MS4.5/10, Error ellipse: s-maj=13.8km s-min=6.0km az=109.2*
*BJI **16** 23:48:33.0, 23.33N×142.48E, h51^{km}, mB5.1, mb4.6, Ms4.9, Msz4.6*
*HRVD **16** 23:48:35.8±0.2, 23.14N×142.28E, h12^{km}, MW5.1/74, Centroid moment Tensor Solution. LP body waves: s37,c58;Mantle waves: s74,c138; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.16±.15; $M_{\theta\theta}$1.05±.13; $M_{\phi\phi}$3.11±.14; $M_{r\theta}$-2.56±.42; $M_{\theta\phi}$-3.81±.10; $M_{\phi r}$-1.12±.40; Best double couple: M₀6.03×10^{16} NP1: φ$_s$351°, δ50°, λ-45°. NP2:φ$_s$114°, δ57°, λ-131°. Principal axes: T 6.075, Plg4°, Azm231°; N -.09, Plg33°, Azm138°; P -5.985, Plg57°, Azm327°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **16** 23:48:35.8±1.5, 23.32N×142.21E, h50^{km}±13^{km}, mb4.9/22, MS4.8/1, MW5.2(NIED) Error ellipse: s-maj=10.3km s-min=7.6km az=88.0*

ISC 16 23:48:32.4±0.3, 23.31N±0.04×142.24E±0.06, h33^{km}, n149, σ1^{s}26/145, mb4.6/56, MS4.7/48, 3C-2D, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	3.77	359	Pn	Pn	23 49 28.6	-1.1
	73nm,0.3s,baz=285,slow=15,SNR=25						
CBIJ				Sn	Sn	23 50 11.9	-1.6
	111nm,0.3s,baz=298,slow=22,SNR=5.9						
CBIJ				LR	LR	23 50 41.6	
	comp=Z,2µm,21.3s,baz=33,slow=35						
JHJ	Hachijo jima 2	10.01	348	LR	LR	23 54 11.7	
	comp=Z,2µm,20.8s,baz=132,slow=34						
JOW	Kunigami	13.13	288	LR	LR	23 56 09.5	
	comp=Z,4µm,18.6s,baz=121,slow=36						
MJAR	Matsushiro Arr	13.64	346	Pn	P	23 51 43.0	-2.8
	0.4nm,0.3s,baz=162,slow=12,SNR=4.0						
MAJO	Matsushiro	13.64	346	*e*P	P	23 51 45.0	-0.8
MAT	Matsushiro	13.64	346	P	P	23 51 45.4	-0.4
MAT				*e*S	S	23 54 17.7	+0.5
MAT	Matsushiro	13.64	346	P	P	23 51 46.0	+0.2
KS15	Wonju Array Si	18.72	322	P	P	23 52 52.3	+1.7
SSE	Sheshan	20.24	297	*e*P	P	23 53 00.6	-7.0
	32nm,0.6s						
SSE				pP		23 53 08.3	
SSE				sP		23 53 12.8	
SSE				S	S	23 56 43.3	-4.6
SSE				sS		23 56 56.9	
SSE				ScS	ScS	00 04 33.5	-0.9
SSE				LR	LR		
	comp=Z,800nm,11.8s,MS4.3						
ASAJ	Asahikawa	20.75	1	P	P	23 53 12.8	+0.1
	comp=Z,9.3nm,0.6s,baz=200,slow=15,SNR=2.5						
ASAJ				LR	LR	00 00 55.1	
	comp=Z,2µm,21.5s,MS4.5,baz=181,slow=36						
NJ2	Nanjing	22.43	298	*e*P	P	23 53 31.3	+1.7
NJ2				AP		23 53 40.5	
NJ2				XP		23 53 44.6	
NJ2				PP	PP	23 53 56.8	-0.7
NJ2				S	S	23 57 33.0	+4.0
NJ2				XS		23 57 48.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,950nm,4.4s						
NJ2				LR	LR		
	comp=N,4µm,9.9s						
NJ2				LR	LR		
	comp=E,4µm,8.4s						
NJ2				LR	LR		
	comp=Z,630nm,7.0s						
DL2	Dalian	23.43	316	*e*P	P	23 53 43.0	+3.5
DL2				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
DL2				LR	LR		
	comp=N,560nm,11.1s,MS4.4						
DL2				LR	LR		
	comp=E,480nm,11.5s,MS4.4						
DL2				LR	LR		
	comp=Z,560nm,14.4s,MS4.2						
YSS	Yuzh-Sakhalins	23.59	1	*i* P	P	23 53 40.9	0.0
YSS				pmax	pmax		
	comp=Z,157nm,2.0s,mb5.1						
YSS				MLR	MLR		
	comp=Z,1µm,18.0s,MS4.4						
MDJ	Mudanjiang	23.64	337	P	P	23 53 42.1	+0.7
MDJ				AP		23 53 51.9	
MDJ				XP		23 53 56.3	
MDJ				PP	PP	23 54 14.4	0.0
MDJ				S	S	23 57 56.9	+6.4
MDJ				SS	SS	23 58 34.5	-5.3

MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,110nm,3.2s						
MDJ				LR	LR		
	comp=N,200nm,14.8s,MS3.7						
MDJ				LR	LR		
	comp=E,60nm,17.6s,MS3.7						
MDJ				LR	LR		
	comp=Z,240nm,15.7s,MS3.8						
SNY	**Shenyang**	24.16	324	⇓P	P	23 53 44.8	-1.7
SNY				S	S	23 58 04.9	+5.4
SNY				LR	LR		
	comp=N,1µm,12.6s,MS4.7						
SNY				LR	LR		
	comp=E,1µm,12.9s,MS4.7						
SNY				LR	LR		
	comp=Z,1µm,15.6s,MS4.4						
TIA	**Tai'an**	25.22	306	*e*P	P	23 53 56.8	0.0
WHN	**Wuhan**	25.84	292	P	P	23 54 05.0	+2.3
WHN				LR	LR		
	comp=N,3µm,11.2s,MS5.2						
WHN				LR	LR		
	comp=E,3µm,11.3s,MS5.2						
WHN				LR	LR		
	comp=Z,3µm,13.4s,MS5.0						
GZH	**Guangzhou**	26.54	275	P	P	23 54 06.8	-2.4
GZH				S	S	23 58 33.8	-5.5
GZH				LR	LR		
	comp=N,800nm,13.4s,MS4.6						
GZH				LR	LR		
	comp=E,950nm,15.5s,MS4.6						
GZH				LR	LR		
	comp=Z,1µm,21.8s						
KLR	**Kul'dur**	27.16	345	*e*P	P	23 54 10.0	-4.6
KLR				*e*S	S	23 58 53.5	+4.4
KLR				MLR	MLR		
	comp=N,1µm,13.0s,MS4.8						
KLR				MLR	MLR		
	comp=E,2µm,13.0s,MS4.8						
KLR				MLR	MLR		
	comp=Z,4µm,13.0s,MS5.2						
ENH	**Enshi**	29.97	290	*e*P	P	23 54 40.2	+0.2
	comp=Z,3.8nm,0.6s,mb4.3						
XAN	**Xi'an**	31.00	298	P	P	23 54 49.1	0.0
XAN				AMB	AMB		
	comp=Z,10.0nm,1.9s,mb4.3						
XAN				LR	LR		
	comp=N,520nm,13.4s,MS4.9						
XAN				LR	LR		
	comp=E,2µm,12.1s,MS4.9						
XAN				LR	LR		
	comp=Z,1µm,12.5s,MS4.8						
HHC	**Hu-ho-hao-te**	31.11	311	*e*P	P	23 54 50.5	+0.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
PET	**Petropavlovsk**	32.19	19	*e*P	P	23 55 01.3	+1.9
PET				*e*S	S	00 00 13.7	+4.8
PET				smax			
	comp=N,300nm,21.6s						
PET				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.2						
CD2	**Chengdu**	34.95	291	P	P	23 55 24.3	+0.9
CD2				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
CD2				AMB	AMB		
	comp=Z,130nm,3.9s						
CD2				LR	LR		
	comp=N,990nm,13.8s						
CD2				LR	LR		
	comp=Z,680nm,19.8s						
LZH	**Lanzhou**	35.47	300	*e*P	P	23 55 28.0	+0.2
LZH				AP	pP	23 55 37.0	-0.5
LZH				PP	PP	23 56 52.1	+3.9
LZH				AMB	AMB		
	comp=Z,60nm,1.4s,mb5.3						
LZH				AMB	AMB		
	comp=Z,180nm,5.5s						
LZH				LR	LR		
	comp=E,910nm,12.9s						
LZH				LR	LR		
	comp=Z,2µm,15.4s,MS4.9						
LZH	**Lanzhou**	35.47	300	*e*P	P	23 55 28.0	+0.2
	comp=Z,62nm,1.4s,mb5.3						
LZH				pP	pP	23 55 37.0	-0.5
LZH				sP	sP	23 55 41.2	-0.6
LZH				PP	PP	23 56 52.1	+3.9
LZH				*e*S	S	00 01 04.3	+4.3
LZH				sS		00 01 19.0	
LZH				LR	LR		
	comp=Z,2µm,15.4s,MS4.9						
LZH	**Lanzhou**	35.47	300	*e*P	P	23 55 28.0	+0.2
LZH				*PP	pP	23 55 37.0	-0.5
LZH				*SP	sP	23 55 41.2	-0.6
LZH						23 56 52.1	
LZH				*e*S	S	00 01 04.3	+4.3
LZH				*SS		00 01 19.0	
LZH				pmax	pmax		
	comp=Z,62nm,1.4s,mb5.3						
LZH				MLR	MLR		
	comp=Z,2µm,15.4s,MS4.9						
KMI	**Kunming**	35.98	281	P	P	23 55 35.3	+3.1
KMI				AMB	AMB		
	comp=Z,20nm,1.7s,mb4.8						
KMI	**Kunming**	35.98	281	P	P	23 55 35.2	+3.0
	comp=Z,20nm,1.7s,mb4.8						
KMI	**Kunming**	35.98	281	P	P	23 55 35.2	+3.0
KMI				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.8						
MA2	**Magadan**	36.73	7	*i* P	P	23 55 37.3	-0.9
MA2				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.2						
MA2				MLR	MLR		
	comp=Z,300nm,15.0s,MS4.2						
ULN	**Ulaanbaatar**	37.17	320	*i* P	P	23 55 40.0	-2.0
SONM	**Songino Array**	37.54	320	P	P	23 55 44.2	-1.0
	comp=Z,0.8nm,0.6s,baz=131,slow=6.3,SNR=7.0						
SONM				ScP		00 01 49.8	
	comp=Z,1.7nm,1.2s,baz=180,slow=1.5,SNR=5.8						
SONM				LR	LR	00 11 43.0	
	comp=Z,636nm,19.2s,MS4.4,baz=270,slow=37						
GTA	**Gaotai**	39.23	304	*e*P	P	23 56 00.8	+1.5
GTA				PP	PP	23 57 34.0	+0.6
GTA				PCP	PcP	23 58 11.6	+3.0
GTA				AMB	AMB		
	comp=Z,180nm,7.6s						
GTA				LR	LR		
	comp=N,860nm,13.7s,MS4.8						
GTA				LR	LR		
	comp=E,760nm,14.8s,MS4.8						
GTA				LR	LR		
	comp=Z,630nm,14.1s,MS4.6						
SEY	**Seymchan**	40.19	7	*i* P	P	23 56 08.3	+1.3
ZAK	**Zakamensk**	40.54	322	*e*P	P	23 56 10.7	+0.7
ZAK				*e*		23 56 27.9	
ZAK				*e*		23 58 09.2	
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
CTA	**Charters Tower**	43.31	174	*e*P	P	23 56 33.4	+0.2
	comp=Z,11nm,0.9s,mb4.6						
CTA	**Charters Tower**	43.31	174	P	P	23 56 33.2	0.0
	comp=Z,17nm,1.1s,mb4.7,baz=5.1,slow=15,SNR=5.3						
CTA	**Charters Tower**	43.31	174	*e*P	P	23 56 33.4	+0.2
CTA				pmax	pmax		
	comp=Z,11nm,0.9s						
CTAO	**Charters Tower**	43.31	174	*e*P	P	23 56 33.5	+0.3
	comp=Z,18nm,1.0s,mb4.8						
CTAO	**Charters Tower**	43.31	174	*e*P	P	23 56 33.5	+0.3
CTAO				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
WRAB	**Tennant Creek**	43.66	191	*e*P	P	23 56 35.2	-0.8
	comp=Z,65nm,0.9s,mb5.4						
WRAB	**Tennant Creek**	43.66	191	*d* *i*P	P	23 56 35.3	-0.7
WB2	**Warramunga Arr**	43.67	191	*e*P	P	23 56 35.2	-0.9
WRA	**Warramunga Arr**	43.67	191	P	P	23 56 35.3	-0.8
	comp=Z,27nm,0.8s,mb5.0,baz=11,slow=8.6,SNR=139						
WRA				ScP		00 02 15.9	
	comp=Z,2.1nm,1.2s,baz=11,slow=4.5,SNR=3.4						
WRA	**Warramunga Arr**	43.67	191	*i* P	P	23 56 35.2	-0.9
WRA				pmax	pmax		
	comp=Z,27nm,0.8s						
KULM	**Kulim**	43.88	252	*e*P	P	23 56 39.5	+1.6
FITZ	**Fitzroy Crossi**	44.24	203	*e*P	P	23 56 39.8	-0.8
	comp=Z,24nm,0.9s,mb4.9						
FITZ	**Fitzroy Crossi**	44.24	203	P	P	23 56 39.8	-0.9
	comp=Z,34nm,0.9s,mb5.1,baz=47,slow=8.1,SNR=17						
SHL	**Shillong**	45.68	284	*e*P	P	23 56 53.0	+0.9
LSA	**Lhasa**	45.86	289	*e*P	P	23 56 55.8	+2.3
	comp=Z,18nm,1.1s,mb4.9						
LSA	**Lhasa**	45.86	289	*e*P	P	23 56 55.8	+2.3
LSA				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
BILL	**Bilibino**	47.12	12	*e*P	P	23 57 03.9	+1.0
	comp=Z,22nm,1.1s,mb5.0						
BILL	**Bilibino**	47.12	12	⇑*i*P	P	23 57 04.0	+1.1
BILL				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
WMQ	**Urumqi**	48.89	309	*e*P	P	23 57 18.6	+1.6
WMQ				AP	pP	23 57 28.5	+1.7
WMQ				XP	sP	23 57 32.0	+1.0
WMQ				PCP	PcP	23 58 42.0	+0.6
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.6						
WMQ				AMB	AMB		
	comp=Z,260nm,4.2s						
WMQ				LR	LR		
	comp=N,770nm,15.2s,MS4.9						
WMQ				LR	LR		
	comp=E,470nm,15.9s,MS4.9						
WMQ				LR	LR		
	comp=Z,530nm,15.9s,MS4.6						
TIXI	**Tiksi**	48.96	354	*e*P	P	23 57 15.4	-1.8
TIXI				*e*S	S	00 04 14.1	-3.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,522nm,16.0s,MS4.6						
GUN	**Gumba**	50.66	288	*e*P	P	23 57 32.0	+1.3
PKI	**Pulchoki**	51.12	287	*e*P	P	23 57 34.9	+0.7
KKN	**Kakani**	51.20	288	*e*P	P	23 57 35.1	+0.3
	comp=Z,16nm,0.9s,mb5.0						
KKN	**Kakani**	51.20	288	*e*P	P	23 57 35.1	+0.3
KKN				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
DMN	**Daman**	51.38	287	*e*P	P	23 57 37.1	+0.9
GKN	**Gorkha**	51.73	288	*e*P	P	23 57 39.0	+0.2
	comp=Z,54nm,1.1s,mb5.4						
ZAL	**Zalesovo**	52.42	321	P	P	23 57 42.5	-1.2
	comp=Z,0.6nm,0.4s,mb3.9,baz=92,slow=9.5,SNR=2.7						
ZAL				PcP	PcP	23 58 53.8	-0.4
	comp=Z,1.4nm,0.8s,baz=232,slow=1.1,SNR=4.8						
ZAL				LR	LR	00 21 31.8	
	comp=Z,611nm,18.4s,MS4.7,baz=17,slow=38						
KOLN	**Koldanda**	52.67	288	*e*P	P	23 57 46.2	+0.3
	comp=Z,42nm,1.1s,mb5.3						
MKAR	**Makanchi Array**	52.97	312	P	P	23 57 46.1	-1.7
	comp=Z,1.0nm,0.6s,mb3.9,baz=89,slow=7.5,SNR=13						
MKAR				PcP	PcP	23 58 56.5	+0.2
	comp=Z,2.2nm,0.9s,baz=82,slow=8.6,SNR=3.6						
MKAR				ScP		00 02 53.9	
	comp=Z,0.8nm,1.0s,baz=76,slow=5.0,SNR=3.7						
NVS	**Novosibirsk**	53.50	322	*e*P	P	23 57 51.9	+0.2
STKA	**Stephens Creek**	54.88	181	*e*P	P	23 58 00.1	-2.0
	comp=Z,5.7nm,0.6s,mb4.8						
STKA	**Stephens Creek**	54.88	181	P	P	23 58 00.3	-1.8
	comp=Z,5.9nm,0.8s,mb4.7,baz=0.3,slow=8.8,SNR=11						
STKA				LR	LR	00 20 13.9	
	comp=Z,462nm,20.5s,MS4.5,baz=7.7,slow=35						
FORT	**Forrest**	55.47	195	*e*P	P	23 58 05.1	-1.3
	comp=Z,36nm,1.2s,mb5.3						
KURK	**Kurchatov**	55.70	316	*e*P	P	23 58 05.0	-2.8
	comp=Z,9.3nm,1.1s,mb4.7						
KURK	**Kurchatov**	55.70	316	*i* P	P	23 58 04.5	-3.3
KDAK	**Kodiak Island**	57.39	35	P	P	23 58 20.4	+0.6
	comp=Z,11nm,1.0s,mb4.8,baz=339,slow=12,SNR=3.5						
FRU	**Bishkek**	58.40	307	*e*P	P	23 58 28.0	+1.0
FRU				*e*		23 58 35.0	
FRU				*e*		23 58 47.0	
FRU				MLR	MLR		
	comp=Z,500nm,16.0s,MS4.7						
AAK	**Ala-Archa**	58.50	307	*i* P	P	23 58 25.0	-2.7
AAK				pmax	pmax		
	comp=Z,6.0nm,2.1s,mb4.3						
AAK				MLR	MLR		
	comp=Z,400nm,15.0s,MS4.7						
HYB	**Hyderabad**	59.59	277	*i* P	P	23 58 35.0	-0.6
HYB	**Hyderabad**	59.59	277	*e*P	P	23 58 35.0	-0.6
COLA	**College**	60.62	27	*i* P	P	23 58 43.6	+1.6
NWAO	**Narrogin (SRO)**	60.80	204	LR	LR	00 24 16.5	
	comp=Z,385nm,20.1s,MS4.5,baz=194,slow=35						
BVAR	**Borovoye Array**	60.88	319	P	P	23 58 41.8	-2.2
	comp=Z,3.5nm,0.8s,mb4.5,baz=90,slow=7.4,SNR=15						
BRVK	**Borovoye**	60.95	319	*e*P	P	23 58 42.7	-1.7
	comp=Z,4.7nm,0.9s,mb4.6						
BRVK	**Borovoye**	60.95	319	*e*P	P	23 58 42.7	-1.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.6						
ILAR	**Eielson Array**	61.02	28	P	P	23 58 42.5	-2.2
	comp=Z,5.6nm,1.0s,mb4.7,baz=271,slow=4.2,SNR=20						
ILAR				LR	LR	00 23 46.2	
	comp=Z,501nm,19.9s,MS4.7,baz=246,slow=35						
POO	**Poona**	63.54	280	*e*P	P	23 59 01.0	-1.3
DAWY	**Dawson**	64.22	29	*e*P	P	23 59 05.3	-0.6
SVE	**Sverdlovsk**	66.26	324	*e*P	P	23 59 20.4	+1.2
SVE				*e*		23 59 48.7	
SVE				*e*S	S	00 08 05.0	+0.4
SVE				MLR	MLR		
	comp=N,400nm,16.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,300nm,16.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,400nm,16.0s,MS4.7						
INK	**Inuvik**	66.45	24	P	P	23 59 20.6	+0.5
	comp=Z,2.5nm,0.7s,mb4.3,baz=258,slow=8.6,SNR=6.6						
INK				LR	LR	00 25 23.4	
	comp=Z,316nm,21.6s,MS4.5,baz=263,slow=33						
ARU	**Arti**	67.45	323	*e*P	P	23 59 24.7	-1.9
	comp=Z,4.2nm,0.7s,mb4.6						
ARU	**Arti**	67.45	323	⇑*i*P	P	23 59 26.6	0.0
ARU				*e*PPP	PPP	00 03 29.0	-5.3
ARU				*e*S	S	00 08 19.5	+0.6
ARU				*e*SS	SS	00 12 35.5	-5.5
ARU				pmax	pmax		
	comp=Z,13nm,2.0s,mb4.6						
ARU				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.5						
ARU				MLR	MLR		
	comp=N,200nm,18.5s,MS4.5						
ARU				MLR	MLR		
	comp=E,200nm,19.0s,MS4.5						
AKTO	**Aktyubinsk**	68.79	317	P	P	23 59 34.3	-0.9
	comp=E,1.0nm,0.8s,mb3.8,baz=45,slow=7.1,SNR=3.2						
AKTO				LR	LR	00 32 07.1	
	comp=E,317nm,18.1s,MS4.6,baz=350,slow=38						
YKA	**Yellowknife Ar**	75.44	28	P	P	00 00 14.5	+0.2
	comp=E,1.3nm,0.7s,mb4.0,baz=294,slow=5.9,SNR=3.6						
ARCES	**ARCESS Array B**	77.12	341	P	P	00 00 24.0	+0.2
	comp=E,2.2nm,0.7s,mb4.2,baz=53,slow=6.1,SNR=5.0						
ARCES				LR	LR	00 36 23.6	
	comp=E,441nm,18.1s,MS4.8,baz=280,slow=37						
PPT	**Papeete**	78.01	115	LR	LR	00 35 04.8	
	comp=E,154nm,18.3s,MS4.4,baz=44,slow=36						
JOF	**Joensuu**	78.49	334	*e*p	P	00 00 30.4	-1.0
	comp=E,5.3nm,0.6s,mb4.7						
MOS	**Moscow**	78.85	326	*e*P	P	00 00 41.4	+7.8
MOS				pmax	pmax		
	comp=Z,54nm,1.2s,mb5.3						
KIV	**Kislovodsk**	80.68	314	*e*P	P	00 00 46.5	+2.9
	comp=Z,17nm,1.0s,mb4.9						
KIV	**Kislovodsk**	80.68	314	*c* *i*P	P	00 00 42.7	-0.9
KIV				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.1						
GNI	**Garni**	80.75	310	LR	LR	00 41 31.1	
	comp=Z,245nm,18.0s,MS4.6,baz=246,slow=40						
GNI	**Garni**	80.75	310	*i* P	P	00 00 43.6	-0.5
GNI				pmax	pmax		
	comp=Z,14nm,1.3s						
KAF	**Kangasniemi**	80.89	335	*e*p	P	00 00 49.7	+5.3
	comp=Z,4.6nm,0.8s,mb4.5						
KAF	**Kangasniemi**	80.89	335	*e*P	P	00 00 49.7	+5.3
KAF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
FINES	**FINESS Array B**	81.35	334	P	P	00 00 45.0	-1.9
	comp=Z,1.7nm,0.3s,mb4.4,baz=90,slow=5.7,SNR=21						
FINES				LR	LR	00 35 37.9	
	comp=Z,212nm,18.5s,MS4.5,baz=25,slow=35						
FINES	**FINESS Array B**	81.35	334	*i* P	P	00 00 45.4	-1.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NVAR	**Mina Array Bea**	82.83	51	P	P	00 00 56.5	+1.6
	comp=Z,1.0nm,0.8s,mb3.9,baz=261,slow=4.3,SNR=11						
NVAR				LR	LR	00 30 24.6	
	comp=Z,414nm,21.1s,MS4.8,baz=290,slow=30						
MSL	**Mosul**	83.47	307	*e*x	x	00 00 58.0	
BHD	**Baghdad**	83.71	303	*e*x	x	00 01 01.0	
JMIC	**Jan Mayen**	83.75	351	LR	LR	00 37 34.1	
	comp=Z,182nm,18.7s,MS4.5,baz=269,slow=35						
ELK	**Elko**	84.01	48	*e*P	P	00 01 03.4	+2.6
	comp=Z,30nm,1.7s,mb5.1						
ELK	**Elko**	84.01	48	*e*P	P	00 01 03.4	+2.5
ELK				pmax	pmax		
	comp=Z,30nm,1.7s						
MNK	**Minsk**	84.37	328	*e*P	P	00 01 02.0	-0.3
AKASG	**Malin Array Be**	85.69	324	P	P	00 01 07.6	-1.4
	comp=Z,1.0nm,0.4s,mb4.4,baz=48,slow=4.9,SNR=16						
AKASG	**Malin Array Be**	85.69	324	P	P	00 01 07.6	-1.4
AKASG	**Malin Array Be**	85.69	324	*i* P	P	00 01 07.5	-1.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PDAR	**Pinedale Array**	86.86	44	P	P	00 01 16.8	+1.9
	comp=Z,0.4nm,0.9s,mb3.7,baz=270,slow=1.8,SNR=3.0						
PDAR				LR	LR	00 32 42.6	
	comp=Z,629nm,20.9s,MS5.0,baz=316,slow=30						
SUW	**Suwalki**	86.90	329	*e*P	P	00 01 14.6	-0.1
SUW				MLR	MLR	00 40 46.6	
	comp=Z,300nm,22.4s,MS4.7						
SUW	**Suwalki**	86.90	329	*e*P	P	00 01 14.6	-0.2
HFS	**Hagfors**	86.91	337	P	P	00 01 13.7	-1.0
	comp=Z,2.1nm,0.5s,mb4.6,baz=88,slow=4.9,SNR=10.0						
HFS				LR	LR	00 43 21.9	
	comp=Z,360nm,19.1s,MS4.8,baz=45,slow=38						
NB2	**NORSAR Subarra**	87.13	338	P	P	00 01 14.7	-1.0
	comp=Z,23nm,1.4s,mb5.2,baz=48,slow=4.8						
NB2	**NORSAR Subarra**	87.13	338	P	P	00 01 14.7	-1.0
	baz=48,slow=5.1						
NOA	**NORSAR Array B**	87.13	338	P	P	00 01 15.3	-0.4
	comp=Z,5.6nm,1.0s,mb4.7,baz=44,slow=5.2,SNR=4.9						
NOA				LR	LR	00 45 47.0	
	comp=Z,315nm,18.9s,MS4.7,baz=45,slow=40						
NAO	**NORSAR Subarra**	87.42	338	P	P	00 01 14.7	-2.4
	comp=Z,23nm,1.4s,mb5.2						
NAO	**NORSAR Subarra**	87.42	338	P	P	00 01 14.7	-2.4
NAO				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.2						
BRTR	**Keskin Array B**	88.60	313	P	P	00 01 22.9	-0.4
	comp=Z,3.4nm,0.9s,mb4.7,baz=90,slow=2.5,SNR=14						
KWP	**Kalwaria**	89.75	326	*e*P	P	00 01 29.5	+1.0
KWP				MLR	MLR	00 45 16.2	
	comp=Z,700nm,18.5s,MS5.1						
KWP	**Kalwaria**	89.75	326	*e*P	P	00 01 29.5	+1.0
MLR	**Muntele Rosu**	90.39	321	P	P	00 01 32.4	+0.8
	comp=Z,0.8nm,0.4s,mb4.4,baz=81,slow=20,SNR=2.3						
MLR				LR	LR	00 45 00.6	
	comp=Z,424nm,18.2s,MS4.9,baz=290,slow=38						
ULM	**Lac du Bonnet**	90.58	33	LR	LR	00 40 58.2	
	comp=Z,163nm,18.9s,MS4.5,baz=312,slow=35						
OJC	**Ojcow**	90.87	327	*e*P	P	00 01 32.3	-1.5
BORG	**Borgarnes**	91.31	353	LR	LR	00 38 20.8	
	comp=Z,259nm,21.6s,MS4.6,baz=278,slow=33						
OKC	**Ostrava-Krasne**	91.94	328	*e*P	P	00 01 38.9	+0.2
OKC				*e*x	x	00 01 46.0	
KSP	**Ksiaz**	92.17	329	*e*P	P	00 01 41.0	+1.2
KSP				MLR	MLR	00 43 53.3	
	comp=Z,600nm,20.8s,MS5.0						
KSP	**Ksiaz**	92.17	329	*e*P	P	00 01 39.8	+0.1
DPC	**Dobruska-Polom**	92.48	329	*e*P	P	00 01 41.5	+0.3
UPC	**Upice**	92.53	329	*e*P	P	00 01 42.2	+0.8
ANMO	**Albuquerque**	92.86	50	*i* P	P	00 01 45.8	+2.5
VRAC	**Vranov**	93.05	328	P	P	00 01 44.0	+0.2
	comp=Z,2.4nm,0.3s,mb5.1,baz=36,slow=3.7,SNR=5.1						
VRAC				LR	LR	00 47 54.0	
	comp=Z,421nm,18.2s,MS4.9,baz=38,slow=38						
PVCC	**Panska Ves**	93.19	330	*e*P	P	00 01 44.4	0.0
PRU	**Pruhonice**	93.57	329	*e*P	P	00 01 46.3	+0.1
PRU				*e*x	x	00 01 52.9	
KHC	**Kasperske Hory**	94.62	329	*e*P	P	00 01 51.2	+0.3
KHC				*e*x	x	00 01 57.6	
GERES	**GERESS Array B**	94.76	329	P	P	00 01 51.3	-0.2
	comp=Z,2.1nm,1.0s,mb4.5,baz=34,slow=4.8,SNR=11						
GERES				LR	LR	00 45 49.7	
	comp=Z,397nm,20.6s,MS4.9,baz=288,slow=36						
GRA1	**Grafenberg Arr**	95.31	331	*e*P	P	00 01 55.0	+0.9
	comp=Z,18nm,1.8s,mb5.2						
GRF	**Grafenberg Arr**	95.31	331	*e*P	P	00 01 55.0	+0.9
	comp=Z,18nm,1.8s,mb5.2						
GRF				LR	LR		
	comp=Z,300nm,18.4s,MS4.8						
GRF	**Grafenberg Arr**	95.31	331	*e*P	P	00 01 55.0	+0.9
GRF				pmax	pmax		
	comp=Z,18nm,1.8s,mb5.2						
GRF				MLR	MLR		
	comp=Z,300nm,18.4s,MS4.8						
TXAR	**Lajitas Array**	97.81	54	P	P	00 02 08.6	+2.6
	comp=Z,0.3nm,0.8s,mb3.9,baz=315,slow=1.3,SNR=3.0						
TXAR				LR	LR	00 39 31.2	
	comp=Z,518nm,21.5s,MS5.0,baz=335,slow=31						
DAVOX	**Davos**	98.04	329	LR	LR	00 51 02.2	
	comp=Z,321nm,18.7s,MS4.8,baz=264,slow=38						
SCHQ	**Schefferville**	98.28	17	LR	LR	00 47 18.1	
	comp=Z,240nm,18.7s,MS4.7,baz=283,slow=36						
PLCA	**Paso Flores**	147.47	130	PKPbc	PKPdf	00 08 14.1	+3.5
	comp=Z,5.6nm,1.1s,baz=198,slow=2.1,SNR=5.8						
LPAZ	**La Paz**	150.63	82	PKP	PKPdf	00 08 18.5	+2.3
	comp=Z,1.1nm,1.0s,baz=243,slow=4.1,SNR=3.2						
LPAZ				PKPbc	PKPdf	00 08 24.4	+8.2
	comp=Z,1.8nm,0.5s,baz=325,slow=3.2,SNR=12						
LPAZ	**La Paz**	150.63	82	*e*PKPdf	PKPdf	00 08 18.5	+2.3
SAML	**Samuel**	151.78	64	*e*PKPdf	PKPdf	00 08 20.2	+2.2

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*NDI **16** 23:59:11.5±2.4, 34.58N×71.51E, h10^{km}, ML3.6*

*NNC **16** 23:59:36.0±111.0, 36.33N×76.26E, mpv3.3, Error ellipse: s-maj=1141.7km s-min=999.5km az=58.0*

ISC 16 23:59:16.2±2.1**, 34.1N**±0.1×**71.6E**±0.2**, h33^{km}, n7,** σ**1^{s}29**/9**,**
1C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	3.81	115	*e*P	P	00 00 15.8	+1.8
THN				*e*S	S	00 00 59.7	+1.4
DLH	**Dalhousie**	3.95	112	*e*SB	Sb	00 01 20.0	+7.1
DLH				*e*x	x	00 02 03.0	
SDNR	**Sundarnagar**	5.20	119	*e*P	P	00 00 34.2	+0.6
SDNR				*e*x	x	00 01 41.0	
KLP	**Kalpa**	6.14	113	*e*P	P	00 00 44.8	-2.0
KLP				*e*S	S	00 01 55.2	-1.6
KLP				AML	AML	00 02 10.6	
	comp=N,52nm,0.7s						
KLP				AML	AML	00 02 10.7	
	comp=E,91nm,0.5s						
KUDL	**Kundal**	7.27	144	*e*S	S	00 02 24.6	-0.4
KK31	**Karatay Array**	9.01	355	⇑P	P	00 01 34.7	+7.8
	comp=E,0.6nm,0.4s,baz=152,slow=11,SNR=20						
KK31				⇓S	S	00 03 08.1	-0.1
	comp=E,0.7nm,0.4s,baz=143,slow=23,SNR=6.7						
SHL	**Shillong**	19.50	111	*e*x	x	00 03 40.0	

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*IDC **17** 00:10:28.2±3.5, 23.32N×141.89E, h59^{km}±30^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.5/21, mbtmp3.9/6, ML3.9/1, MS3.8/1, Ms1 3.8/1, ms1mx2.4/27, Error ellipse: s-maj=40.9km s-min=20.1km az=100.0*

ISC 17 00:10:26.9±3.1**, 23.3N**±0.1×**141.9E**±0.3**, h65^{km}**±26^{km}**, n8,**
σ**0^{s}70**/7**, mb3.9**/5**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	3.77	4	P	P	00 11 24.1	0.0
	15nm,0.3s,baz=107,slow=19,SNR=7.4						
CBIJ				S	S	00 12 07.5	+0.1
	44nm,0.3s,baz=270,slow=20,SNR=5.9						
ASAJ	**Asahikawa**	20.75	1	LR	LR	00 22 22.3	
	comp=Z,290nm,19.9s,baz=177,slow=34						
WRA	**Warramunga Arr**	43.62	190	P	P	00 18 26.9	0.0
	3.8nm,0.8s,mb4.2,baz=11,slow=8.5,SNR=17						
MKAR	**Makanchi Array**	52.74	312	P	P	00 19 36.6	-0.6
	0.3nm,0.8s,mb3.4,baz=87,slow=10,SNR=4.7						
ILAR	**Eielson Array**	61.15	28	P	P	00 20 35.9	-0.7
	1.5nm,0.9s,mb4.0,baz=249,slow=6.1,SNR=9.8						
INK	**Inuvik**	66.57	24	P	P	00 21 12.2	+0.3
	1.0nm,0.7s,mb3.8,baz=303,slow=4.2,SNR=3.8						
FINES	**FINESS Array B**	81.22	334	P	P	00 22 37.7	+0.9
	1.7nm,0.8s,mb3.9,baz=90,slow=5.7,SNR=6.6						

LPAZ	**La Paz**	**150.93**	**82**	PKPbc	PKPdf	00 30 15.6	+8.5
	0.3nm,0.4s,baz=224,slow=5.3,SNR=3.3						

MAN 17 00:25:31.1,8.99N×125.10E,mb3.6,ML2.3,MS1.8,1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.52**	**93**	*e*P	Pg	00 25 41.5	-0.1
BUTP				*e*S	Sg	00 25 55.0	+6.5
SCPH	**Surigao**	**0.87**	**26**	⇓*e*P	Pg	00 25 48.4	-0.2
BUKP	**Musuan**	**1.11**	**182**	*e*P	Pb	00 25 52.7	-0.2
BUKP				*e*S	Sb	00 26 13.4	+5.7

*NEIC **17** 01:04:18.8±0.9, 15.61S×71.32W, h147^{km}±9^{km}, mb4.1/7, Error ellipse: s-maj=14.9km s-min=11.9km az=53.0*

*IDC **17** 01:04:22.3±2.2, 15.64S×71.14W, h176^{km}±20^{km}, mb3.5/7, mb1 3.6/10, mb1mx3.5/21, mbtmp3.9/10, Error ellipse: s-maj=26.3km s-min=18.7km az=75.0*

ISC 17 01:04:17.7±0.6**, 15.63S**±0.07×**71.37W**±0.07**, h152**^{km}±6^{km}**, n21, σ**$1^{s}.$**33**/25**, mb3.8**/9**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	**Arequipa**	**0.83**	**188**	⇑*i*P	**P**	**01 04 41.5**	**-0.1**
ARE				*i* S	**S**	**01 04 59.0**	**-1.0**
LPAZ	**La Paz**	**3.19**	**102**	P	**P**	**01 05 11.5**	**+3.2**
	9.1nm,0.3s,baz=294,slow=9.0,SNR=244						
LPAZ				S	**S**	**01 05 49.4**	**+2.4**
	2.4nm,0.3s,baz=190,slow=23,SNR=9.3						
LPAZ	**La Paz**	**3.19**	**102**	*e*Pn	**P**	**01 05 11.2**	**+2.9**
LPAZ				*e*		01 05 21.3	
LPAZ				*e*Sn	**S**	**01 05 47.8**	**+0.8**
LPAZ				S	**S**	**01 05 49.4**	**+2.4**
NNA	**Nana**	**6.43**	**304**	*e*Pn	**P**	**01 05 51.8**	**+0.6**
	9.4nm,0.3s						
NNA				*e*Sn	**S**	**01 06 55.9**	**-7.8**
SIV	**San Ignacio**	**9.92**	**93**	P	**P**	**01 06 36.1**	**-1.5**
	0.9nm,0.3s,baz=281,slow=11,SNR=23						
SAML	**Samuel**	**10.40**	**51**	*e*Pn	**P**	**01 06 43.2**	**-0.7**
	4.7nm,0.8s						
SAML				*e*		01 06 54.7	
CFAA	**Coronel Fontan**	**16.16**	**170**	P	**P**	**01 07 58.2**	**+0.7**
	0.1nm,0.3s,baz=354,slow=8.5,SNR=13						
CPUP	**Villa Florida**	**16.88**	**131**	*e*P	**P**	**01 08 05.4**	**-0.9**
	12nm,1.0s						
BDFB	**Brasilia**	**22.49**	**93**	P	**P**	**01 09 05.7**	**+0.5**
	3.5nm,0.5s,mb4.1,baz=269,slow=12,SNR=12						
TRQA	**Tornquist**	**23.83**	**161**	*e*P	**P**	**01 09 20.1**	**+2.2**
	5.5nm,1.0s,mb4.0						
SDV	**Santo Domingo**	**24.37**	**2**	P	**P**	**01 09 23.8**	**+0.5**
	2.9nm,0.4s,mb4.2,baz=336,SNR=4.3						
SDV	**Santo Domingo**	**24.37**	**2**	*e*P	**P**	**01 09 21.4**	**-1.9**
	11nm,1.4s,mb4.2						
PLCA	**Paso Flores**	**25.02**	**179**	P	**P**	**01 09 29.6**	**+0.4**
	2.1nm,0.8s,mb3.7,baz=14,slow=10,SNR=5.6						
PLCA	**Paso Flores**	**25.02**	**179**	*e*P	**P**	**01 09 27.6**	**-1.5**
	1.3nm,0.7s,mb3.6						
TXAR	**Lajitas Array**	**54.50**	**325**	P	**P**	**01 13 33.0**	**+0.8**
	0.1nm,0.5s,mb2.8,baz=158,slow=8.9,SNR=4.2						
TXAR	**Lajitas Array**	**54.50**	**325**	P	**P**	**01 13 33.0**	**+0.8**
SNAA	**Sanae**	**68.56**	**162**	*e*P	**P**	**01 15 04.2**	**-1.4**
	2.3nm,0.9s,mb3.9						
ULM	**Lac du Bonnet**	**69.05**	**343**	P	**P**	**01 15 08.5**	**-0.4**
	1.9nm,0.8s,mb3.9,baz=162,slow=9.6,SNR=3.3						
DBIC	**Dimbokro**	**69.48**	**77**	P	**P**	**01 15 09.9**	**-2.3**
	1.8nm,0.9s,mb3.8,baz=301,slow=5.9,SNR=3.6						
YKA	**Yellowknife Ar**	**84.91**	**341**	P	**P**	**01 16 38.3**	**+2.0**
	0.6nm,0.5s,mb3.6,baz=132,slow=5.1,SNR=4.8						
SONM	**Songino Array**	**147.84**	**3**	PKPbc	PKPdf	01 23 48.2	+6.6
	0.7nm,0.6s,baz=336,slow=3.2,SNR=6.2						

*BJI **17** 01:12:06.4, 23.32N×142.06E, h11^{km}, mB4.6, mb4.5, Ms4.2, Msz4.1*

*MOS **17** 01:12:07.7±1.4, 23.31N×141.92E, h33^{km}, mb4.8/11, Error ellipse: s-maj=24.0km s-min=10.6km az=104.9*

*NEIC **17** 01:12:07.8±0.6, 23.29N×142.28E, mb4.8/11, Error ellipse: s-maj=15.6km s-min=11.0km az=80.0*

*IDC **17** 01:12:10.8±2.3, 23.28N×142.02E, h47^{km}±20^{km}, mb3.9/17, mb1 4.1/19, mb1mx4.1/23, mbtmp4.2/19, ML4.2/2, MS4.0/21, Ms1 4.0/21, ms1mx4.0/29, Error ellipse: s-maj=20.6km s-min=13.1km az=83.0*

ISC 17 01:12:09.9±1.5**, 23.29N**±0.06×**142.25E**±0.08**, h53**^{km}±13^{km}**, n81, σ**$1^{s}.$**38**/73**, mb4.4**/32**, MS4.1**/19**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.79**	**359**	P	**P**	**01 13 08.7**	**+1.4**
	39nm,0.3s,baz=299,slow=22,SNR=12						
CBIJ				S	**S**	**01 13 50.0**	**-1.1**
	62nm,0.3s,baz=311,slow=22,SNR=3.7						
CBIJ				LR	LR	01 14 25.1	
	comp=Z,2µm,18.6s,baz=81,slow=35						
GUMO	**Guam**	**9.96**	**165**	LR	LR	01 17 12.4	
	comp=Z,361nm,19.4s,baz=332,slow=30						
JHJ	**Hachijo jima 2**	**10.03**	**348**	LR	LR	01 18 27.2	
	comp=Z,398nm,19.1s,baz=54,slow=38						
JOW	**Kunigami**	**13.14**	**288**	LR	LR	01 19 23.3	
	comp=Z,711nm,18.1s,baz=162,slow=33						
MJAR	**Matsushiro Arr**	**13.66**	**346**	P	**P**	**01 15 21.7**	**-0.8**
	0.6nm,0.3s,baz=161,slow=10,SNR=3.9						
MJAR				LR	LR	01 20 34.5	
	comp=Z,797nm,18.6s,baz=185,slow=37						
MAJO	**Matsushiro**	**13.66**	**346**	*e*P	**P**	**01 15 29.8**	**+7.2**
	23nm,1.1s						
MAJO	**Matsushiro**	**13.66**	**346**	*e*P	**P**	**01 15 29.8**	**+7.2**
MAJO				pmax	pmax		
	comp=Z,23nm,1.1s						
JNU	**Nakatsue**	**14.00**	**317**	LR	LR	01 20 36.6	
	comp=Z,147nm,18.3s,baz=226,slow=36						
NACB	**Ninganchiao**	**18.93**	**277**	P	**P**	**01 16 35.5**	**+6.4**
YHNB	**Yeheng**	**19.12**	**278**	*e*P	**P**	**01 16 31.9**	**+0.6**
SSE	**Sheshan**	**20.26**	**297**	P	**P**	**01 16 42.5**	**-1.0**
SSE				AP		01 16 48.3	
SSE				S	**S**	**01 20 24.6**	**+1.8**
SSE				XS		01 20 34.6	
SSE				AMB	AMB		
	comp=Z,100nm,1.2s						
SSE				AMB	AMB		
	comp=Z,70nm,3.5s						
SSE				LR	LR		
	comp=N,40nm,15.6s,MS3.1						
SSE				LR	LR		
	comp=E,60nm,15.6s,MS3.1						
SSE				LR	LR		
	comp=Z,60nm,17.7s,MS3.0						
SSE	**Sheshan**	**20.26**	**297**	P	**P**	**01 16 42.5**	**-1.0**
	comp=Z,101nm,1.2s						
SSE				pP		01 16 48.2	
SSE				S	**S**	**01 20 24.6**	**+1.8**
SSE				sS		01 20 34.6	
SSE				LR	LR		
	comp=Z,60nm,17.7s,MS3.0						
ASAJ	**Asahikawa**	**20.77**	**1**	P	**P**	**01 16 49.0**	**+0.3**
	comp=Z,4.2nm,0.3s,baz=223,slow=15,SNR=3.7						
ASAJ				LR	LR	01 24 29.7	
	comp=Z,702nm,21.0s,MS4.0,baz=347,slow=36						
MDJ	**Mudanjiang**	**23.66**	**337**	P	**P**	**01 17 18.6**	**+1.4**
MDJ				S	**S**	**01 21 25.5**	**+0.6**
MDJ				SS	SS	01 22 20.6	+4.0
MDJ				AMB	AMB		
	comp=Z,70nm,4.5s						
MDJ				LR	LR		
	comp=N,200nm,15.9s,MS3.8						
MDJ				LR	LR		
	comp=E,150nm,17.4s,MS3.8						
MDJ				LR	LR		
	comp=Z,300nm,17.4s,MS3.8						
CN2	**Changchun**	**24.70**	**330**	*e*P	**P**	**01 17 30.4**	**+3.1**
TIA	**Tai'an**	**25.24**	**306**	*e*P	**P**	**01 17 32.3**	**-0.2**
WHN	**Wuhan**	**25.86**	**292**	*e*P	**P**	**01 17 41.0**	**+2.7**
CD2	**Chengdu**	**34.96**	**291**	*e*P	**P**	**01 18 59.3**	**+0.4**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb5.1						
LZH	**Lanzhou**	**35.49**	**300**	*e*P	**P**	**01 19 03.5**	**+0.1**
LZH				AP	pP	01 19 10.3	-6.9
LZH				XP	sP	01 19 13.6	-10
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb5.0						
LZH				AMB	AMB		
	comp=Z,50nm,6.2s						
LZH				LR	LR		
	comp=N,250nm,13.6s						
LZH				LR	LR		
	comp=Z,370nm,17.2s,MS4.2						
LZH	**Lanzhou**	**35.49**	**300**	*e*P	**P**	**01 19 03.5**	**+0.1**
	comp=Z,39nm,1.5s,mb5.1						
LZH				pP	pP	01 19 10.2	-7.0
LZH				sP	sP	01 19 13.6	-10
LZH				LR	LR		
	comp=Z,380nm,17.2s,MS4.2						
LZH	**Lanzhou**	**35.49**	**300**	*e*P	**P**	**01 19 03.5**	**+0.1**
LZH				*SP	sP	01 19 13.6	-10
LZH				pmax	pmax		
	comp=Z,39nm,1.5s,mb5.1						
LZH				MLR	MLR		
	comp=Z,380nm,17.2s,MS4.2						
SONM	**Songino Array**	**37.56**	**320**	P	**P**	**01 19 20.9**	**+0.2**
	comp=Z,0.6nm,0.6s,mb3.5,baz=124,slow=6.2,SNR=5.0						
SONM				LR	LR	01 35 35.8	
	comp=Z,232nm,18.1s,MS4.0,baz=120,slow=38						
CTA	**Charters Tower**	**43.29**	**175**	P	**P**	**01 20 08.6**	**+0.2**
	comp=Z,2.1nm,0.3s,mb4.3,baz=39,slow=8.2,SNR=3.5						
CTAO	**Charters Tower**	**43.29**	**175**	*e*P	**P**	**01 20 08.8**	**+0.5**
	comp=Z,42nm,1.6s,mb4.9						
CTAO	**Charters Tower**	**43.29**	**175**	*e*P	**P**	**01 20 08.8**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,42nm,1.6s,mb4.9						
WRAB	**Tennant Creek**	**43.65**	**191**	*e*P	**P**	**01 20 10.6**	**-0.7**
	comp=Z,147nm,1.3s,mb5.5						
WRAB				*e*		01 20 16.4	
WRAB	**Tennant Creek**	**43.65**	**191**	*e*P	**P**	**01 20 10.6**	**-0.6**
WRAB				*e*		01 20 16.4	
WRAB				pmax	pmax		
	comp=Z,147nm,1.3s,mb5.5						
WRA	**Warramunga Arr**	**43.66**	**191**	P	**P**	**01 20 10.8**	**-0.5**
	comp=Z,22nm,0.8s,mb4.9,baz=11,slow=8.4,SNR=101						
KULM	**Kulim**	**43.89**	**252**	*e*P	**P**	**01 20 14.9**	**+1.6**
KULM				*e*		01 20 20.4	
SHL	**Shillong**	**45.69**	**284**	*e*P	**P**	**01 20 29.0**	**+1.5**
LSA	**Lhasa**	**45.88**	**289**	P	**P**	**01 20 31.8**	**+2.8**
LSA	**Lhasa**	**45.88**	**289**	*e*P	**P**	**01 20 31.3**	**+2.3**
	comp=Z,7.9nm,0.9s,mb4.6						
LSA				*e*		01 20 37.2	
LSA	**Lhasa**	**45.88**	**289**	*e*P	**P**	**01 20 31.3**	**+2.3**
LSA				*e*		01 20 37.2	
LSA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
BILL	**Bilibino**	**47.14**	**12**	P	**P**	**01 20 39.0**	**+0.6**
	comp=Z,10nm,0.9s,mb4.8						
BILL	**Bilibino**	**47.14**	**12**	P	**P**	**01 20 39.0**	**+0.6**
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
WMQ	**Urumqi**	**48.91**	**309**	*e*P	**P**	**01 20 54.5**	**+2.1**
TIXI	**Tiksi**	**48.98**	**354**	*e*P	**P**	**01 20 49.9**	**-2.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,125nm,13.0s,MS4.1						
ZAL	**Zalesovo**	**52.44**	**321**	P	**P**	**01 21 16.7**	**-2.4**
	comp=Z,0.5nm,0.3s,mb3.9,baz=342,slow=14,SNR=3.7						
ZAL				LR	LR	01 45 06.3	
	comp=Z,144nm,19.3s,MS4.0,baz=20,slow=38						
ZAL	**Zalesovo**	**52.44**	**321**	P	**P**	**01 21 16.7**	**-2.4**
ZAL				LR	LR	01 45 06.3	
MKAR	**Makanchi Array**	**52.99**	**312**	P	**P**	**01 21 22.2**	**-1.2**
	comp=Z,0.8nm,0.6s,mb3.8,baz=84,slow=9.1,SNR=10						
MKAR	**Makanchi Array**	**52.99**	**312**	P	**P**	**01 21 22.2**	**-1.2**
STKA	**Stephens Creek**	**54.86**	**181**	P	**P**	**01 21 34.6**	**-2.6**
	comp=Z,5.5nm,0.8s,mb4.6,baz=354,slow=9.9,SNR=8.1						
STKA				LR	LR	01 43 26.4	
	comp=Z,204nm,19.4s,MS4.2,baz=24,slow=34						
STKA	**Stephens Creek**	**54.86**	**181**	*e*P	**P**	**01 21 34.7**	**-2.6**
KURK	**Kurchatov**	**55.73**	**316**	*e*P	**P**	**01 21 40.5**	**-2.8**
	comp=Z,4.8nm,1.1s,mb4.4						
KURK	**Kurchatov**	**55.73**	**316**	*e*P	**P**	**01 21 40.5**	**-2.8**
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
KDAK	**Kodiak Island**	**57.40**	**35**	P	**P**	**01 21 55.3**	**+0.2**
	comp=Z,6.7nm,0.7s,mb4.8,baz=297,slow=6.8,SNR=4.6						
BVAR	**Borovoye Array**	**60.90**	**319**	P	**P**	**01 22 17.3**	**-2.1**
	comp=Z,1.8nm,0.6s,mb4.4,baz=86,slow=7.0,SNR=16						
BRVK	**Borovoye**	**60.97**	**319**	*e*P	**P**	**01 22 17.8**	**-2.0**
	comp=Z,2.8nm,1.0s,mb4.3						
BRVK	**Borovoye**	**60.97**	**319**	*e*P	**P**	**01 22 17.8**	**-2.0**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.4						
ILAR	**Eielson Array**	**61.03**	**28**	P	**P**	**01 22 19.5**	**-0.5**
	comp=Z,4.1nm,0.9s,mb4.6,baz=249,slow=6.1,SNR=22						
ILAR				LR	LR	01 47 10.4	
	comp=Z,113nm,20.4s,MS4.0,baz=182,slow=34						
DAWY	**Dawson**	**64.23**	**29**	*e*P	**P**	**01 22 42.0**	**+0.7**
INK	**Inuvik**	**66.46**	**24**	*e*P	**P**	**01 22 55.7**	**+0.2**
	comp=Z,4.8nm,0.9s,mb4.5						
INK	**Inuvik**	**66.46**	**24**	*e*P	**P**	**01 22 55.7**	**+0.2**
INK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	**Arti**	**67.47**	**323**	P	**P**	**01 23 00.0**	**-2.0**
	comp=Z,8.7nm,1.3s,mb4.6						
ARU	**Arti**	**67.47**	**323**	P	**P**	**01 23 00.0**	**-2.0**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.6						
AKTO	**Aktyubinsk**	**68.81**	**317**	P	**P**	**01 23 09.6**	**-0.9**
	comp=Z,0.4nm,0.5s,mb3.6,baz=72,slow=15,SNR=2.9						
RAR	**Rarotonga**	**71.73**	**124**	LR	LR	01 51 50.0	
	comp=Z,90nm,19.9s,MS4.0,baz=344,slow=33						
RPZ	**Rata Peaks**	**71.73**	**158**	LR	LR	01 48 32.8	
	comp=Z,140nm,20.6s,MS4.2,baz=353,slow=30						
YKA	**Yellowknife Ar**	**75.46**	**28**	P	**P**	**01 23 50.9**	**+1.3**
	comp=Z,1.9nm,0.6s,mb4.2,baz=293,slow=5.9,SNR=5.6						
YKA				LR	LR	01 53 16.9	
	comp=Z,133nm,20.0s,MS4.2,baz=125,slow=33						
ARCES	**ARCESS Array B**	**77.14**	**341**	P	**P**	**01 23 59.3**	**+0.3**
	comp=Z,4.3nm,0.9s,mb4.4,baz=40,slow=9.5,SNR=6.2						
ARCES				LR	LR	02 00 18.7	
	comp=Z,146nm,18.3s,MS4.3,baz=199,slow=38						
JOF	**Joensuu**	**78.51**	**334**	*e*p	**P**	**01 24 05.9**	**-0.7**
	comp=Z,3.9nm,0.6s,mb4.5						
JOF	**Joensuu**	**78.51**	**334**	*e*P	**P**	**01 24 05.9**	**-0.7**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KAF	**Kangasniemi**	**80.92**	**335**	*e*p	**P**	**01 24 09.2**	**-10**
	comp=Z,0.9nm,0.3s,mb4.2						
KAF	**Kangasniemi**	**80.92**	**335**	*e*P	**P**	**01 24 09.2**	**-10**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.2						
FINES	**FINESS Array B**	**81.38**	**334**	P	**P**	**01 24 21.8**	**-0.3**
	comp=Z,1.7nm,0.5s,mb4.3,baz=70,slow=5.1,SNR=29						
FINES				LR	LR	02 00 24.6	
	comp=Z,60nm,19.1s,MS4.0,baz=344,slow=36						
NVAR	**Mina Array Bea**	**82.83**	**51**	P	**P**	**01 24 32.1**	**+2.1**
	comp=Z,1.1nm,0.8s,mb3.9,baz=268,slow=4.0,SNR=9.8						
NVAR				LR	LR	01 54 10.3	
	comp=Z,90nm,21.9s,MS4.1,baz=120,slow=30						
ELK	**Elko**	**84.02**	**48**	*e*P	**P**	**01 24 39.8**	**+3.8**
	comp=Z,8.5nm,1.4s,mb4.7						
ELK	**Elko**	**84.02**	**48**	*e*P	**P**	**01 24 39.8**	**+3.8**
ELK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
AKASG	**Malin Array Be**	**85.71**	**324**	P	**P**	**01 24 44.0**	**-0.2**
	comp=Z,1.5nm,0.6s,mb4.4,baz=52,slow=5.2,SNR=11						
NEN	**Nelson**	**86.51**	**53**	*e*P	**P**	**01 24 51.3**	**+2.8**
PDAR	**Pinedale Array**	**86.87**	**44**	P	**P**	**01 24 55.0**	**+5.0**
	comp=Z,0.3nm,0.7s,mb3.6,slow=4.5,SNR=3.2						
NB2	**NORSAR Subarra**	**87.15**	**338**	PKPabc	**P**	**01 24 50.2**	**-0.7**
	comp=Z,0.8nm,0.7s,mb4.1,baz=10.0,slow=4.0						
NOA	**NORSAR Array B**	**87.15**	**338**	P	**P**	**01 24 50.9**	**0.0**
	comp=Z,1.8nm,0.8s,mb4.3,baz=45,slow=4.4,SNR=3.8						
NOA				LR	LR	02 09 22.2	
	comp=Z,90nm,19.1s,MS4.2,baz=20,slow=39						
BRTR	**Keskin Array B**	**88.62**	**313**	P	**P**	**01 24 55.6**	**-2.9**
	comp=Z,1.5nm,0.8s,mb4.4,baz=98,slow=3.4,SNR=7.3						
ULM	**Lac du Bonnet**	**90.59**	**33**	LR	LR	02 04 33.0	
	comp=Z,110nm,18.6s,MS4.3,baz=7.6,slow=35						
GERES	**GERESS Array B**	**94.78**	**329**	P	**P**	**01 25 26.6**	**-0.1**
	comp=Z,0.6nm,0.6s,mb4.2,baz=90,slow=1.3,SNR=5.5						
TXAR	**Lajitas Array**	**97.82**	**54**	LR	LR	02 02 31.4	
	comp=Z,104nm,21.3s,MS4.3,baz=350,slow=31						
SCHQ	**Schefferville**	**98.29**	**17**	LR	LR	02 09 36.2	
	comp=Z,91nm,19.0s,MS4.3,baz=200,slow=35						
PLCA	**Paso Flores**	**147.45**	**130**	PKPbc	PKPdf	01 31 50.1	+4.7
	comp=Z,2.7nm,0.9s,baz=226,slow=4.2,SNR=4.5						
LPAZ	**La Paz**	**150.62**	**82**	PKPbc	PKPdf	01 31 59.5	+8.4
	comp=Z,1.9nm,0.6s,baz=297,slow=2.8,SNR=12						
LPAZ				PKPab	PKPab	01 32 06.5	+0.7
	comp=Z,2.6nm,0.5s,baz=14,slow=4.2,SNR=10						
LPAZ	**La Paz**	**150.62**	**82**	*e*PKPdf	PKPdf	01 31 53.7	+2.6
LPAZ				*e*PKPbc	PKPdf	01 31 59.3	+8.2

*IDC **17** 01:45:35.6±1.8, 15.77S×176.14W, h329^{km}±21^{km}, mb3.2/5, mb1 3.6/6, mb1mx3.4/14, mbtmp3.9/6, Error ellipse: s-maj=107.8km s-min=18.9km az=154.0*

ISC 17 01:45:35.2±2.0**, 15.8S**±0.8×**176.2W**±0.4**, h337**^{km}±22^{km}**, n7, σ**$1^{s}.$**00**/7**, mb3.5**/5**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.65**	**67**	P	**P**	**01 46 51.9**	**+1.0**
	5.4nm,0.3s,slow=5.1,SNR=6.1						
AFI				S	**S**	**01 47 49.5**	**-0.7**
	2.1nm,0.3s,baz=197,slow=19,SNR=4.3						
WRA	**Warramunga Arr**	**47.14**	**257**	P	**P**	**01 53 36.2**	**-0.4**
	1.5nm,0.7s,mb3.3,baz=92,slow=8.0,SNR=12						
NVAR	**Mina Array Bea**	**76.41**	**43**	P	**P**	**01 56 49.8**	**0.0**
	0.6nm,0.8s,mb3.4,baz=225,slow=6.6,SNR=6.5						
TXAR	**Lajitas Array**	**83.05**	**57**	P	**P**	**01 57 25.7**	**+0.7**
	0.6nm,0.7s,mb3.5,baz=212,slow=6.9,SNR=6.2						
ILAR	**Eielson Array**	**83.33**	**12**	P	**P**	**01 57 26.1**	**+0.5**
	1.0nm,0.5s,mb3.9,baz=219,slow=5.6,SNR=29						
PDAR	**Pinedale Array**	**84.33**	**43**	P	**P**	**01 57 30.2**	**-1.0**
	0.4nm,0.8s,mb3.3,baz=225,slow=3.8,SNR=3.1						
BRTR	**Keskin Array B**	**144.68**	**318**	PKP	PKPdf	02 04 33.7	+1.5
	2.2nm,0.9s,baz=108,slow=2.9,SNR=9.8						

*NIED **17** 01:53:00, 36.40N×141.10E, h29^{km}, Mw4.6 Best double couple: $M_0$9.08×10^{15} NP1:ϕ_s30°, δ72°, λ88°. NP2:ϕ_s216°, δ18°, λ95°.*

*BJI **17** 01:53:12.5, 36.30N×141.08E, h48^{km}, mB4.8, mb4.8, Ms4.2, Msz4.0*

*MOS **17** 01:53:12.2±0.8, 36.46N×140.94E, h29^{km}, mb5.2/64, MS4.2/14, Error ellipse: s-maj=10.1km s-min=4.6km az=113.8*

*JMA **17** 01:53:13.4±0.1, 36.30N×141.07E, h48^{km}±2^{km}, M4.7 Broadband fault plane solution: P waves. NP1:ϕ_s210°, δ16°, λ106°. NP2:ϕ_s13°, δ75°, λ86°. Principal axes: T Plg60°, Azm277°; N Plg4°, Azm15°; P Plg30°, Azm107°;*

JMA Felt III J1.

*HRVD **17** 01:53:14.4±0.8, 36.32N×141.24E, h47^{km}±2^{km}, MW4.8/45, Centroid moment Tensor Solution. LP body waves: s15,c18;Mantle waves: s45,c60; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.18±.23; $M_{\theta\theta}$-0.06±.17; $M_{\phi\phi}$-1.12±.16; $M_{r\theta}$0.23±.11; $M_{\theta\phi}$-1.55±.13; $M_{\phi r}$0.90±.10; Best double couple: $M_0$2.011×10^{16} NP1:ϕ_s248°, δ41°, λ140°. NP2:ϕ_s10°, δ65°, λ56°. Principal axes: T 1.586, Plg56°, Azm235°; N .851, Plg30°, Azm26°; P -2.435, Plg14°, Azm124°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **17** 01:53:14.4±0.2, 36.33N×141.04E, mb4.9/75, MS4.3/3, MW4.6(NIED) Error ellipse: s-maj=6.4km s-min=3.7km az=165.0*

NEIC Recorded [2 JMA] in Chiba, Fukushima, Ibaraki and Tochigi; [1 JMA] in Gumma, Miyagi, Saitama and Tochigi Prefectures.

*IDC **17** 01:53:16.6±2.0, 36.24N×141.01E, h62^{km}±18^{km}, mb4.4/17, mb1 4.5/20, mb1mx4.5/24, mbtmp4.7/20, MS4.0/16, Ms1 4.0/16, ms1mx3.8/28, Error ellipse: s-maj=16.5km s-min=9.7km az=60.0*

*SKO **17** 01:53:17.6, 36.80N×139.47E, Mb5.7*

ISC 17 01:53:12.9±0.2**, 36.32N**±0.03×**141.10E**±0.03**, h41**^{km}**, h41**^{km}±.5^{km}**:pP-P, n343, σ**$0^{s}.$**99**/361**, mb4.9**/116**, MS4.2**/32**, 26C-25D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.52**	**305**	⇓P	**P**	**01 53 24.4**	**+0.4**
JHO				*e*S	**S**	**01 53 32.3**	**+0.5**
JYT	**Yasato**	**0.74**	**263**	⇓P	**P**	**01 53 27.3**	**+0.4**
JYT				*e*S	**S**	**01 53 36.7**	**-0.5**
ONAJ	**Iwakimizuishiy**	**0.82**	**343**	⇓P	**P**	**01 53 28.4**	**+0.3**
ONAJ				*e*S	**S**	**01 53 38.8**	**-0.5**
JFK	**Kawauchi**	**1.06**	**350**	⇓P	**P**	**01 53 31.6**	**0.0**
JFK				*e*S	**S**	**01 53 44.8**	**-0.6**
JAG	**Ashikaga**	**1.33**	**275**	⇓P	**P**	**01 53 35.8**	**+0.3**
JFT	**Otama**	**1.35**	**333**	⇓P	**P**	**01 53 37.1**	**+1.4**
JFT				*e*S	**S**	**01 53 53.7**	**+1.1**
JKT	**Katashina**	**1.56**	**287**	⇓P	**P**	**01 53 39.7**	**+1.0**
JFY	**Yanaizu**	**1.56**	**315**	⇓P	**P**	**01 53 39.8**	**+1.1**
JMM	**Marumori**	**1.57**	**351**	⇓P	**P**	**01 53 39.0**	**+0.2**
JMM				*e*S	**S**	**01 53 57.9**	**-0.2**
BSO3	**Boso 3**	**1.58**	**198**	P	**P**	**01 53 40.2**	**+1.2**
MJAR	**Matsushiro Arr**	**2.34**	**276**	P	**P**	**01 53 50.7**	**+0.9**
	107nm,0.3s,baz=107,slow=8.8,SNR=862						
MJAR				S	**S**	**01 54 19.4**	**+1.8**
	53nm,0.3s,baz=304,slow=32,SNR=5.6						
MJAR				LR	LR	01 55 03.2	
	comp=Z,3µm,18.8s,baz=120,slow=47						
MAJO	**Matsushiro**	**2.34**	**276**	⇓*i*Pn	**P**	**01 53 51.2**	**+1.3**
MAT	**Matsushiro**	**2.34**	**276**	P	**P**	**01 53 50.9**	**+1.0**
MAT				S	**S**	**01 54 18.7**	**+1.1**
MAT	**Matsushiro**	**2.34**	**276**	*e*P	**P**	**01 53 51.0**	**+1.1**
MAT				*e*S	**S**	**01 54 19.0**	**+1.4**
JHJ	**Hachijo jima 2**	**3.37**	**199**	P	**P**	**01 54 06.2**	**+1.8**
	84nm,0.3s,baz=256,slow=22,SNR=6.0						
JHJ				S	**S**	**01 54 42.4**	**-1.2**
	188nm,0.3s,baz=95,slow=24,SNR=7.3						
ASAJ	**Asahikawa**	**7.88**	**8**	P	**P**	**01 55 05.5**	**-2.2**
	6.9nm,0.3s,baz=200,slow=13,SNR=13						
ASAJ				S	**S**	**01 56 31.8**	**-4.8**
	3.7nm,0.3s,baz=252,slow=20,SNR=5.0						
ASAJ				LR	LR	01 59 16.5	
	comp=Z,219nm,18.5s,baz=192,slow=45						
ASAJ	**Asahikawa**	**7.88**	**8**	P	**P**	**01 55 05.5**	**-2.2**
ASAJ				S	**S**	**01 56 31.8**	**-4.7**
ASAJ				pmax	pmax		
	comp=Z,7.0nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,219nm,18.5s						
YUK	**Yuzh-Kuril'sk**	**8.53**	**24**	P	**P**	**01 55 20.7**	**+4.0**
YUK				*e*S	**S**	**01 56 42.4**	**-10**
YUK				smax			
	comp=N,2µm,0.7s						
YUK				smax			
	comp=E,500nm,0.6s						
YUK				smax			
	comp=N,2µm,0.7s						
YUK				smax			
	comp=E,2µm,0.6s						
JNU	**Nakatsue**	**9.00**	**252**	P	**P**	**01 55 24.5**	**+1.3**
	comp=E,0.9nm,0.3s,baz=54,slow=21,SNR=8.6						
JNU				LR	LR	01 59 05.0	
	comp=E,1µm,19.8s,baz=68,slow=39						
CBIJ	**Chichi jima**	**9.24**	**174**	P	**P**	**01 55 21.8**	**-4.7**
	comp=E,30nm,0.3s,baz=300,slow=22,SNR=10						
CBIJ				S	**S**	**01 56 56.5**	**-14**
	comp=E,21nm,0.3s,baz=204,slow=20,SNR=4.5						
KS15	**Wonju Array Si**	**10.65**	**280**	*e*Pn	**P**	**01 55 48.2**	**+2.3**
YSS	**Yuzh-Sakhalins**	**10.70**	**6**	*e*Pn	**P**	**01 55 44.1**	**-2.5**
YSS				*e*pP		01 55 50.5	
MDJ	**Mudanjiang**	**12.05**	**317**	P	**P**	**01 56 08.3**	**+3.4**
MDJ				AP		01 56 16.6	
MDJ				XP		01 56 22.6	
MDJ				S	**S**	**01 58 17.3**	**-1.7**
MDJ				SS	SS	01 58 35.1	+1.2
MDJ				SCS	ScS	02 08 52.3	+1.7
MDJ				AMB	AMB		
	comp=Z,40nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,50nm,3.7s						
MDJ				LR	LR		
	comp=N,310nm,24.9s						
MDJ				LR	LR		
	comp=E,240nm,22.6s						
MDJ				LR	LR		
	comp=Z,550nm,21.5s						
MDJ	**Mudanjiang**	**12.05**	**317**	*e*P	**P**	**01 56 05.2**	**+0.3**
	comp=Z,70nm,1.1s						
MDJ				*e*pP		01 56 09.6	
CN2	**Changchun**	**14.11**	**307**	*e*P	**P**	**01 56 32.8**	**+0.7**
CN2				*e*S	**S**	**01 59 07.8**	**-0.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						

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CN2                               LR     LR
      comp=N,600nm,14.0s
CN2                               LR     LR
      comp=E,370nm,14.0s
CN2                               LR     LR
      comp=Z,570nm,18.0s
JOW   Kunigami          14.44 233 LR     LR      02 01 38.4
      comp=Z,248nm,18.5s,baz=171,slow=35
KLR   Kul'dur           14.60 335 eP     P       01 56 40.3 +1.9
SNY   Shenyang          14.68 297 ⇓P     P       01 56 40.0 +0.6
SNY                               S      S       01 59 24.0 +2.5
SNY                               AMB    AMB
      comp=Z,20nm,1.0s
SNY                               AMB    AMB
      comp=Z,160nm,5.5s
SNY                               LR     LR
      comp=E,710nm,16.7s
SNY                               LR     LR
      comp=Z,850nm,18.4s
DL2   Dalian            15.65 285 P      P       01 56 56.3 +4.3
DL2                               AMB    AMB
      comp=Z,40nm,0.7s
DL2                               AMB    AMB
      comp=Z,300nm,4.1s
DL2                               LR     LR
      comp=N,270nm,11.6s
DL2                               LR     LR
      comp=E,380nm,12.4s
DL2                               LR     LR
      comp=Z,530nm,15.9s
SSE   Sheshan           17.36 258 P      P       01 57 13.8 +0.1
SSE                               AP             01 57 26.4
SSE                               S      S       02 00 23.0  -0.7
SSE                               AMB    AMB
      comp=Z,50nm,0.8s
SSE                               AMB    AMB
      comp=Z,120nm,4.6s
SSE                               LR     LR
      comp=N,200nm,22.3s
SSE                               LR     LR
      comp=E,230nm,22.3s
SSE                               LR     LR
      comp=Z,330nm,18.0s
SSE   Sheshan           17.36 258 P      P       01 57 13.8 +0.1
      comp=Z,57nm,0.8s
SSE                               pP             01 57 26.4
SSE                               S      S       02 00 23.0  -0.7
SSE                               sS             02 00 49.5
TIA   Tai'an            19.33 277 ⇓P     P       01 57 35.0  -2.5
TIA                               AMB    AMB
      comp=Z,30nm,1.0s
HIA   Hailar            20.24 316 eP     P       01 57 46.5  -0.7
      comp=Z,18nm,0.8s
HIA   Hailar            20.24 316 eP     P       01 57 46.5  -0.7
HIA                               pmax   pmax
      comp=Z,18nm,0.8s
CLNS  Chul'man          23.24 337 eP     P       01 58 15.2  -1.9
CLNS                              e*PP           01 58 20.9
CLNS                              e              01 58 41.7
CLNS                              ePPP   PPP     01 58 52.0  -6.9
CLNS                              eS     S       02 02 22.8 +0.4
CLNS                              eSS    SS      02 03 26.2  +16
CLNS                              pmax   pmax
      comp=N,31nm,1.1s
CLNS                              pmax   pmax
      comp=Z,41nm,1.1s,mb4.8
CLNS                              pmax   pmax
      comp=E,17nm,1.3s
CLNS                              pmax   pmax
      comp=Z,15nm,0.7s,mb4.5
CLNS                              pmax   pmax
      comp=N,15nm,1.1s
CLNS                              pmax   pmax
      comp=E,8.0nm,0.6s
CLNS                              smax
      comp=E,9.0nm,0.9s
CLNS                              MLR    MLR
      comp=Z,300nm,16.0s,MS3.8
CLNS                              MLR    MLR
      comp=N,200nm,13.0s,MS4.0
CLNS                              MLR    MLR
      comp=E,300nm,13.0s,MS4.0
HHC   Hu-ho-hao-te      23.47 290 eP     P       01 58 22.4 +2.9
HHC                               AP             01 58 33.8
HHC                               XP             01 58 39.3
HHC                               PCP    PcP     02 02 03.4  -2.9
HHC                               SCP            02 05 36.8
HHC                               PCS            02 05 41.8
HHC                               AMB    AMB
      comp=Z,10.0nm,1.5s,mb4.0
HHC                               AMB    AMB
      comp=Z,150nm,5.5s
HHC                               LR     LR
      comp=N,190nm,13.5s,MS4.0
HHC                               LR     LR
      comp=E,340nm,17.9s,MS4.0
HHC                               LR     LR
      comp=Z,420nm,20.2s,MS3.9
MA2   Magadan           24.11  12 eP     P       01 58 24.6  -0.9
      comp=Z,52nm,1.0s,mb4.9
MA2   Magadan           24.11  12 eP     P       01 58 26.6 +1.1
MA2                               eS     S       02 02 40.9 +3.4
MA2                               pmax   pmax
      comp=Z,30nm,1.0s,mb4.7
CIT   Chita             25.03 318 eP     P       01 58 33.3  -1.2
CIT                               e      pP      01 58 45.6 +0.4
XAN   Xi'an             26.34 275 P      P       01 58 45.1  -1.8
XAN                               AMB    AMB
      comp=Z,20nm,1.3s,mb4.5
YAK   Yakutsk           26.72 348 eP     P       01 58 48.0  -2.1
      comp=Z,104nm,1.0s,mb5.3
YAK   Yakutsk           26.72 348 eP     P       01 58 48.7  -1.4
YAK                               e*PP   pP      01 58 56.9  -4.1
YAK                               eS     S       02 03 20.0  -0.9
YAK                               e*SS           02 03 36.6
YAK                               pmax   pmax
      comp=N,23nm,1.1s
YAK                               pmax   pmax
      comp=Z,46nm,1.1s,mb4.9
YAK                               pmax   pmax
      comp=E,7.0nm,1.0s
YAK                               pmax   pmax
      comp=Z,18nm,1.1s,mb4.5
YAK                               pmax   pmax
      comp=N,5.0nm,0.9s
YAK                               pmax   pmax
      comp=E,11nm,1.1s
YAK                               smax
      comp=N,3.0nm,1.3s
YAK                               smax
      comp=Z,2.0nm,0.8s
YAK                               smax
      comp=E,2.0nm,1.0s
YAK                               MLR    MLR
      comp=Z,191nm,19.0s,MS3.7
YAK                               MLR    MLR
      comp=N,265nm,30.0s
ENH   Enshi             27.03 266 eP     P       01 58 51.5  -1.8
      comp=N,47nm,0.8s,mb5.1
SEY   Seymchan          27.54  11 i P    P       01 58 59.4 +1.8
ULN   Ulaanbaatar       27.56 305 eP     P       01 58 56.6  -1.3
      comp=N,11nm,0.8s,mb4.5
ULN                               ePcP   PcP     02 02 15.2  -0.2
ULN                               epPcP          02 02 28.1
ULN   Ulaanbaatar       27.56 305 eP     P       01 58 56.6  -1.3
ULN                               e              02 02 15.2
ULN                               pmax   pmax
      comp=Z,11nm,0.8s,mb4.5
SONM  Songino Array     27.98 305 P      P       01 59 00.6  -1.2
      comp=Z,15nm,0.8s,mb4.7,baz=104,slow=8.4,SNR=78
SONM                              LR     LR      02 10 26.2
      comp=Z,334nm,20.1s,MS3.9,baz=358,slow=37
BOD   Bodaibo           28.01 329 eP     P       01 59 00.6  -1.3
BOD                               pmax   pmax
      comp=Z,17nm,1.0s,mb4.6
LZH   Lanzhou           29.95 281 eP     P       01 59 17.5  -1.9
LZH                               AP     pP      01 59 28.6  -1.9
LZH                               XP     sP      01 59 33.4  -2.3
LZH                               PP     PP      02 00 15.6  -2.3
LZH                               eS     S       02 04 09.8  -3.1
LZH                               XS             02 04 28.3
LZH                               eSS    SS      02 05 46.8  -4.2
LZH                               AMB    AMB
      comp=Z,20nm,1.5s,mb4.6
LZH                               AMB    AMB
      comp=Z,120nm,5.3s
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LZH                               LR     LR
      comp=E,950nm,13.1s
LZH                               LR     LR
      comp=Z,1μm,17.0s,MS4.7
LZH   Lanzhou           29.95 281 eP     P       01 59 17.5  -1.9
      comp=Z,27nm,1.5s,mb4.8
LZH                               pP     pP      01 59 28.6  -1.9
LZH                               sP     sP      01 59 33.4  -2.3
LZH                               PP     PP      02 00 15.6  -2.3
LZH                               eS     S       02 04 09.7  -3.2
LZH                               sS             02 04 28.3
LZH                               eSS    SS      02 05 46.8  -4.2
LZH                               LR     LR
      comp=Z,1μm,17.0s,MS4.7
LZH   Lanzhou           29.95 281 eP     P       01 59 17.5  -1.9
LZH                               *PP    pP      01 59 28.6  -1.9
LZH                                              02 00 15.6
LZH                               eS     S       02 04 09.7  -3.2
LZH                               *SS            02 04 28.3
LZH                               eSS    SS      02 05 46.8  -4.2
LZH                               pmax   pmax
      comp=Z,27nm,1.5s,mb4.8
LZH                               MLR    MLR
      comp=Z,1μm,17.0s,MS4.7
ZAK   Zakamensk         30.52 309 eP     P       01 59 23.3  -1.1
ZAK                               e              02 02 21.6
ZAK                               pmax   pmax
      comp=Z,6.0nm,1.0s,mb4.4
ZAK                               pmax   pmax
      comp=Z,2.0nm,0.9s,mb4.0
ZAK                               pmax   pmax
      comp=Z,2.0nm,1.0s,mb3.9
GYA   Guiyang           30.86 261⇓iP     P       01 59 25.3  -2.3
GYA                               AP     pP      01 59 37.1  -1.6
GYA                               XP     sP      01 59 42.5  -1.4
GYA                               S      S       02 04 17.1   -10
GYA                               AMB    AMB
      comp=Z,20nm,1.1s,mb4.9
GYA                               AMB    AMB
      comp=Z,90nm,4.8s
GYA                               LR     LR
      comp=N,260nm,11.1s,MS4.4
GYA                               LR     LR
      comp=E,430nm,12.3s,MS4.4
GYA                               LR     LR
      comp=Z,410nm,12.8s,MS4.3
CD2   Chengdu           31.43 271 P      P       01 59 31.1  -1.5
CD2                               AP     pP      01 59 44.0 +0.3
CD2                               XP     sP      01 59 48.1  -0.8
CD2                               PP     PP      02 00 35.6  -1.5
CD2                               S      S       02 04 32.3  -4.0
CD2                               XS             02 04 53.5
CD2                               SS     SS      02 06 23.5  -2.1
CD2                               AMB    AMB
      comp=Z,10.0nm,0.7s,mb4.8
CD2                               AMB    AMB
      comp=Z,40nm,4.2s
CD2                               LR     LR
      comp=E,230nm,17.4s
CD2                               LR     LR
      comp=Z,260nm,17.4s,MS4.0
MOY   Mondy             32.22 311 eP     P       01 59 32.4  -6.8
GTA   Gaotai            32.54 288 P      P       01 59 41.1  -1.1
GTA                               AP     pP      01 59 50.8  -2.6
GTA                               XP     sP      01 59 54.8  -3.8
GTA                               PP     PP      02 00 50.8  -0.6
GTA                               PCP    PcP     02 02 28.6 +0.3
GTA                               S      S       02 04 53.3  -0.3
GTA                               XS             02 05 09.6
GTA                               SCP            02 06 07.9
GTA                               SS     SS      02 06 51.3  -0.3
GTA                               AMB    AMB
      comp=Z,10.0nm,0.7s,mb4.8
GTA                               AMB    AMB
      comp=Z,80nm,4.9s
GTA                               LR     LR
      comp=N,180nm,18.6s,MS4.1
GTA                               LR     LR
      comp=E,270nm,17.9s,MS4.1
GTA                               LR     LR
      comp=Z,350nm,19.0s,MS4.1
KMI   Kunming           34.61 262 P      P       01 59 58.9  -1.3
KMI                               AP     pP      02 00 10.8  -0.6
KMI                               XP     sP      02 00 15.8  -0.8
KMI                               PP     PP      02 01 18.0 +0.6
KMI                               S      S       02 05 27.3 +1.5
KMI                               XS             02 05 47.4
KMI                               AMB    AMB
      comp=Z,10.0nm,1.2s,mb4.6
KMI                               AMB    AMB
      comp=Z,110nm,4.7s
KMI                               LR     LR
      comp=N,220nm,15.1s,MS4.2
KMI                               LR     LR
      comp=E,330nm,16.5s,MS4.2
KMI                               LR     LR
      comp=Z,270nm,14.6s,MS4.1
KMI   Kunming           34.61 262 P      P       01 59 58.9  -1.3
      comp=Z,19nm,1.2s,mb4.9
KMI                               pP     pP      02 00 10.8  -0.6
KMI                               sP     sP      02 00 15.7  -0.9
KMI                               PP     PP      02 01 18.0 +0.6
KMI                               PPP    PPP     02 01 36.9 +1.4
KMI                               S      S       02 05 27.3 +1.5
KMI                               sS             02 05 47.4
KMI                               SS     SS      02 07 43.5 +4.2
KMI                               SSS    SSS     02 08 11.4 +5.1
KMI                               LR     LR
      comp=Z,270nm,14.6s,MS4.1
KMI   Kunming           34.61 262 P      P       01 59 58.9  -1.3
KMI                               *PP    pP      02 00 10.8  -0.6
KMI                                              02 01 18.0
KMI                               PPP    PPP     02 01 36.9 +1.4
KMI                               S      S       02 05 27.3 +1.5
KMI                               SS     SS      02 07 43.5 +4.2
KMI                               SSS    SSS     02 08 11.4 +5.1
KMI                               pmax   pmax
      comp=Z,19nm,1.2s,mb4.9
KMI                               MLR    MLR
      comp=Z,270nm,14.6s,MS4.1
BILL  Bilibino          34.79  16 eP     P       01 59 59.4  -1.8
      comp=Z,12nm,1.0s,mb4.8
BILL  Bilibino          34.79  16 eP     P       01 59 59.4  -1.9
BILL                              pmax   pmax
      comp=Z,12nm,1.0s,mb4.8
TIXI  Tiksi             35.97 353⇑iP     P       02 00 08.0  -3.3
TIXI                              pmax   pmax
      comp=Z,7.0nm,0.8s,mb4.6
TIXI                              MLR    MLR
      comp=Z,176nm,17.0s,MS3.9
WMQ   Urumqi            40.94 298⇑iP     P       02 00 53.8 +0.8
WMQ                               AP     pP      02 01 05.5 +1.0
WMQ                               XP     sP      02 01 11.0 +1.5
WMQ                               PP     PP      02 02 31.5 +0.8
WMQ                               PCP    PcP     02 02 55.0 +1.5
WMQ                               S      S       02 07 03.0 +1.2
WMQ                               XS             02 07 21.0
WMQ                               SS     SS      02 09 59.0  -1.2
WMQ                               AMB    AMB
      comp=Z,40nm,0.9s,mb5.0
WMQ                               AMB    AMB
      comp=Z,170nm,5.4s
WMQ                               LR     LR
      comp=N,440nm,18.6s,MS4.5
WMQ                               LR     LR
      comp=E,560nm,19.6s,MS4.5
WMQ                               LR     LR
      comp=Z,790nm,21.2s,MS4.5
LSA   Lhasa             42.03 276 P      P       02 01 04.3 +2.2
LSA   Lhasa             42.03 276 eP     P       02 01 03.1 +1.0
      comp=Z,37nm,1.2s,mb4.9
LSA   Lhasa             42.03 276 eP     P       02 01 03.1 +1.0
LSA                               pmax   pmax
      comp=Z,37nm,1.2s,mb4.9
ZAL   Zalesovo          42.23 313 P      P       02 01 03.4   0.0
      comp=Z,16nm,0.6s,mb4.8,baz=16,slow=7.4,SNR=65
ZAL                               LR     LR      02 19 51.5
      comp=Z,175nm,19.3s,MS4.0,baz=22,slow=38
ZAL   Zalesovo          42.23 313 i P    P       02 01 04.0 +0.6
ZAL                               pmax   pmax
      comp=Z,16nm,0.6s
SHL   Shillong          43.15 270 eP     P       02 01 11.0  -0.3
NVS   Novosibirsk       43.16 314⇑iP     P       02 01 09.9  -1.1
NVS                               pmax   pmax
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      comp=Z,23nm,1.0s,mb4.9
NVS                               pmax   pmax
      comp=E,18nm,1.0s
MKAR  Makanchi Array    44.29 303 P      P       02 01 20.1  -0.2
      comp=E,9.7nm,0.7s,mb4.7,baz=89,slow=9.4,SNR=72
MKAR                              PcP    PcP     02 03 03.7  -0.9
      comp=E,3.5nm,0.8s,baz=63,slow=5.4,SNR=3.7
MKAR                              LR     LR      02 20 32.6
      comp=E,249nm,19.4s,MS4.1,baz=87,slow=37
MKAR  Makanchi Array    44.29 303 P      P       02 01 20.1  -0.2
MKAR                              PcP    PcP     02 03 03.7  -0.9
MKAR                              LR     LR      02 20 32.6
KURK  Kurchatov         46.18 309 eP     P       02 01 34.4  -0.9
      comp=E,89nm,0.7s,mb5.8
KURK  Kurchatov         46.18 309c iP    P       02 01 34.7  -0.6
JIRN  Jiri              46.83 276 eP     P       02 01 41.0 +0.3
      comp=E,145nm,0.9s,mb5.9
GUN   Gumba             46.98 276 eP     P       02 01 42.2 +0.3
      comp=E,115nm,0.9s,mb5.8
PKI   Pulchoki          47.50 276 eP     P       02 01 45.7  -0.3
      comp=E,82nm,0.9s,mb5.7
KKN   Kakani            47.51 276 eP     P       02 01 46.0  -0.1
      comp=E,116nm,1.0s,mb5.9
DMN   Daman             47.73 276 eP     P       02 01 47.6  -0.2
      comp=E,76nm,1.0s,mb5.7
KDAK  Kodiak Island     47.80  41 P      P       02 01 48.0 +0.1
      comp=E,21nm,1.2s,mb5.0,baz=180,slow=5.1,SNR=3.2
GKN   Gorkha            47.94 277 eP     P       02 01 49.2  -0.2
      comp=E,279nm,0.9s
KOLN  Koldanda          48.87 277 eP     P       02 01 56.5  -0.1
      comp=E,53nm,0.8s,mb5.6
TKM2  Tokmak 2          49.75 299 P      P       02 02 04.1 +0.9
      SNR=21
COLA  College           49.82  32 eP     P       02 02 04.0 +0.6
      comp=E,6.4nm,0.8s,mb4.7
COLA  College           49.82  32 i P    P       02 02 04.3 +0.9
KZA   Kyzart            50.23 298 P      P       02 02 08.4 +1.5
      SNR=13
ILAR  Eielson Array     50.24  32 P      P       02 02 06.5  -0.1
      comp=E,7.6nm,0.8s,mb4.8,baz=272,slow=6.6,SNR=64
KBK   Karagaybulak      50.28 299 P      P       02 02 07.8 +0.5
      SNR=37
CHMS  Chumysh           50.33 299 P      P       02 02 07.7   0.0
      SNR=6.0
USP   Ospenovka         50.43 300 P      P       02 02 08.1  -0.3
      SNR=20
FRU   Bishkek           50.47 299 eP     P       02 02 08.5  -0.2
KSH   Kashi             50.47 295 eP     P       02 02 12.0 +3.3
KSH                               eAP    pP      02 02 23.1 +2.8
KSH                               eXP    sP      02 02 28.1 +2.9
KSH                               ePCP   PcP     02 03 28.5 +1.8
KSH                               ePP    PP      02 04 08.0 +2.6
KSH                               eSCP           02 07 19.0
KSH                               ePCS           02 07 24.0
KSH                               eS     S       02 09 22.3 +4.1
KSH                               eXS            02 09 42.3
KSH                               eSCS   ScS     02 11 54.4 +1.3
KSH                               eSS    SS      02 12 52.3 +2.8
KSH                               AMB    AMB
      comp=Z,590nm,5.2s
VOSK  Vostochnaya       50.58 312 P      P       02 02 08.5  -0.8
VOSK                              pmax   pmax
      comp=Z,23nm,0.8s,mb5.2
AAK   Ala-Archa         50.61 299 P      P       02 02 09.9 +0.1
      SNR=11
AAK   Ala-Archa         50.61 299 eP     P       02 02 08.6  -1.2
      comp=Z,10nm,0.9s,mb4.8
AAK   Ala-Archa         50.61 299c iP    P       02 02 08.7  -1.1
AAK                               pmax   pmax
      comp=Z,17nm,1.3s,mb4.8
AAK                               MLR    MLR
      comp=Z,600nm,24.0s,MS4.5
UCH   Uchtor            50.72 298 P      P       02 02 11.4 +0.9
      SNR=10
BVA0  Borovoye Array    50.87 313 i P    P       02 02 11.0  -0.6
BVA0                              pmax   pmax
      comp=Z,1.0nm,0.7s,mb3.9
BRVK  Borovoye          50.93 313 eP     P       02 02 10.8  -1.2
      comp=Z,22nm,0.9s,mb5.1
BRVK  Borovoye          50.93 313 eP     P       02 02 10.8  -1.2
BRVK                              pmax   pmax
      comp=Z,22nm,0.9s,mb5.1
EKS2  Erkin-Say         51.11 299 P      P       02 02 13.4  -0.1
      SNR=11
AML   Almayashu         51.33 298 P      P       02 02 15.9 +0.8
      SNR=44
KKAR  Karatay Array     53.27 300 i P    P       02 02 29.2  -0.5
KKAR                              pmax   pmax
      comp=Z,46nm,1.1s,mb5.3
NDI   New Delhi         53.56 281 ex     x       02 02 31.0
INK   Inuvik            55.14  27 eP     P       02 02 43.1   0.0
      comp=Z,8.1nm,0.9s,mb4.8
INK   Inuvik            55.14  27 eP     P       02 02 43.1   0.0
INK                               pmax   pmax
      comp=Z,8.0nm,0.9s
SVE   Sverdlovsk        55.52 319⇑iP     P       02 02 44.8  -1.1
SVE                               e      pP      02 02 55.0  -2.7
SVE                               eS     S       02 10 46.0   +19
SVE                               e              02 12 27.0
SVE                               pmax   pmax
      comp=Z,40nm,1.0s,mb5.4
SVE                               MLR    MLR
      comp=N,100nm,15.0s,MS4.4
SVE                               MLR    MLR
      comp=E,200nm,15.0s,MS4.4
SVE                               MLR    MLR
      comp=Z,300nm,15.0s,MS4.5
WRAB  Tennant Creek     56.30 188 P      P       02 02 49.9  -2.2
      comp=Z,13nm,0.8s,mb5.0
WRAB  Tennant Creek     56.30 188 i P    P       02 02 49.4  -2.7
WRA   Warramunga Arr    56.31 188 P      P       02 02 50.4  -1.8
      comp=Z,6.0nm,0.8s,mb4.7,baz=5.8,slow=7.4,SNR=19
ARU   Arti              56.73 319 eP     P       02 02 53.4  -1.3
      comp=Z,34nm,0.8s,mb5.4
ARU   Arti              56.73 319⇑iP     P       02 02 53.6  -1.1
ARU                               e              02 04 57.8
ARU                               eS     S       02 10 46.2 +3.5
ARU                               eSS    SS      02 14 35.7 +4.0
ARU                               pmax   pmax
      comp=Z,35nm,0.9s,mb5.4
ARU                               MLR    MLR
      comp=Z,200nm,18.0s,MS4.3
ARU                               MLR    MLR
      comp=N,30nm,16.5s,MS4.0
ARU                               MLR    MLR
      comp=E,100nm,18.0s,MS4.0
HYB   Hyderabad         57.93 269⇑iP     P       02 03 03.0  -0.6
HYB                               epP    pP      02 03 15.0  -0.4
HYB   Hyderabad         57.93 269⇑eP     P       02 03 03.0  -0.6
AB31  Akbulak array     58.21 310 i P    P       02 03 04.0  -1.2
AB31                              pmax   pmax
      comp=Z,12nm,0.8s,mb5.0
AKTO  Aktyubinsk        58.97 312 LR     LR      02 29 25.5
      comp=Z,130nm,20.2s,MS4.0,baz=321,slow=37
ORR   Orenburg          60.46 314⇓iP     P       02 03 19.7  -0.9
ORR                               pmax   pmax
      comp=Z,10.0nm,0.8s,mb4.9
PALK  Pallekele         61.97 258 eP     P       02 03 29.3  -2.0
      comp=Z,28nm,1.1s,mb5.3
YKA   Yellowknife Ar    64.56  30 P      P       02 03 47.2  -0.4
      comp=Z,3.8nm,0.8s,mb4.5,baz=298,slow=6.3,SNR=5.0
YKA                               LR     LR      02 32 08.9
      comp=Z,77nm,18.8s,MS3.9,baz=265,slow=36
YKA   Yellowknife Ar    64.56  30 P      P       02 03 47.2  -0.4
YKA                               LR     LR      02 32 08.9
ARCES ARCESS Array B    64.58 339 P      P       02 03 47.0  -0.7
      comp=Z,3.2nm,0.7s,mb4.4,baz=51,slow=7.8,SNR=9.0
ARCES                             LR     LR      02 34 15.7
      comp=Z,123nm,18.3s,MS4.1,baz=16,slow=38
JOF   Joensuu           66.48 332 ep     P       02 03 58.6  -1.3
      comp=Z,9.1nm,0.9s,mb4.8
AFI   Afiamalu          66.87 129 LR     LR      02 26 31.9
      comp=Z,183nm,20.4s,MS4.3,baz=321,slow=30
STKA  Stephens Creek    67.84 180 P      P       02 04 08.7  -0.3
      comp=Z,1.9nm,0.7s,mb4.2,baz=4.6,slow=8.0,SNR=4.7
STKA                              LR     LR      02 35 58.3
      comp=Z,98nm,18.0s,MS4.1,baz=25,slow=38
STKA  Stephens Creek    67.84 180 eP     P       02 04 07.5  -1.5
OBN   Obninsk           68.52 323 P      P       02 04 09.2  -3.6
OBN   Obninsk           68.52 323 eP     P       02 04 11.0  -1.8
OBN                               e      pP      02 04 23.0  -1.9
OBN                               pmax   pmax
      comp=Z,20nm,1.3s,mb4.9
OBN                               MLR    MLR
      comp=Z,100nm,16.0s,MS4.1
KAF   Kangasniemi       68.83 333 ep     P       02 04 13.4  -1.2
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       comp=Z,7.9nm,0.9s,mb4.6,baz=47,slow=5.4
KAF    Kangasniemi       68.83 333 eP      P      02 04 13.4 -1.2
KAF                                  pmax  pmax
       comp=Z,8.0nm,0.9s,mb4.7
FINES  FINESS Array B    69.33 332 P       P      02 04 17.3 -0.4
       comp=Z,12nm,0.9s,mb4.8,baz=63,slow=8.5,SNR=24
FINES                                LR    LR     02 36 53.5
       comp=Z,84nm,19.4s,MS4.0,baz=109,slow=38
FINES  FINESS Array B    69.33 332 i P     P      02 04 17.2 -0.5
FINES                                pmax  pmax
       comp=Z,12nm,0.9s
EDM    Edmonton          70.07  38 eP      P      02 04 21.5 -0.8
EDM                                epP     pP     02 04 35.0 +0.6
ZEI    Tsey              71.07 309 i P     P      02 04 25.5 -3.1
ZEI                                e*PP    pP     02 04 39.2 -1.5
ZEI                                  pmax  pmax
       comp=Z,7.0nm,0.9s,mb4.6
KIV    Kislovodsk        71.19 311 eP      P      02 04 29.7 +0.4
       comp=Z,38nm,1.0s,mb5.3
KIV    Kislovodsk        71.19 311 eP      P      02 04 29.3  0.0
KIV                                e              02 04 48.1
KIV                                ePPP    PPP    02 08 49.4 -1.3
KIV                                eS      S      02 13 42.0  0.0
KIV                                  pmax  pmax
       comp=Z,30nm,0.9s,mb5.2
KIV                                  MLR   MLR
       comp=Z,288nm,19.0s,MS4.6
SMDO   Samad             71.36 285 ⇓P      P      02 04 30.3 -0.3
SUMG   Summit            71.40 360 eP      P      02 04 31.0 +0.9
       comp=Z,18nm,1.0s,mb5.0
SUMG                               epP     pP     02 04 43.0 +0.8
JMDO   Jabal Madar       71.68 285 ⇓P      P      02 04 32.1 -0.5
GNI    Garni             71.93 307 eP      P      02 04 33.8  0.0
       comp=Z,40nm,1.3s,mb5.2
GNI    Garni             71.93 307 i P     P      02 04 33.9 +0.1
GNI                                  pmax  pmax
       comp=Z,19nm,1.3s
GNI                                  pmax  pmax
       comp=Z,100nm,21.0s
BSY    Bisya             72.19 285 ⇑P      P      02 04 35.3 -0.3
       SNR=7.8
ARQ    Araqi             72.40 286 ⇓P      P      02 04 36.7 -0.1
BMO    Blue Mountains    72.60  47 eP      P      02 04 38.2 +0.5
       comp=Z,2.7nm,0.8s,mb4.2
BMO                                epP     pP     02 04 51.3 +1.5
SOC    Sochi             73.19 312 eP      P      02 04 39.7 -1.4
SOC                                e*PP    pP     02 04 49.7 -3.6
SOC                                eS      S      02 14 04.7 -0.2
SOC                                e              02 14 42.3
SOC                                  pmax  pmax
       comp=Z,33nm,0.9s,mb5.3
SOC                                  MLR   MLR
       comp=Z,237nm,23.0s,MS4.4
ANN    Anapa             73.85 314 eP      P      02 04 48.2 +3.2
ANN                                  pmax  pmax
       comp=Z,139nm,1.1s,mb5.8
CMB    Columbia Colle    74.49  54 eP      P      02 04 49.2 +0.3
       comp=Z,4.2nm,0.9s,mb4.4
CMB                                epP     pP     02 05 00.6 -0.4
CMB    Columbia Colle    74.49  54 eP      P      02 04 49.2 +0.4
CMB                                e*PP    pP     02 05 00.6 -0.4
CMB                                  pmax  pmax
       comp=Z,4.0nm,0.9s,mb4.3
AKASG  Malin Array Be    74.71 322 P       P      02 04 49.1 -0.7
       comp=Z,9.5nm,0.5s,mb5.0,baz=46,slow=5.9,SNR=58
AKASG  Malin Array Be    74.71 322 i P     P      02 04 49.2 -0.6
AKASG                                pmax  pmax
       comp=Z,10.0nm,0.5s
NB2    NORSAR Subarra    74.75 337 P       P      02 04 49.5 -0.3
       comp=Z,24nm,1.1s,mb5.0,baz=41,slow=5.8
NB2    NORSAR Subarra    74.75 337 P       P      02 04 49.5 -0.3
       baz=41,slow=5.9
NOA    NORSAR Array B    74.75 337 P       P      02 04 49.8  0.0
       comp=Z,12nm,0.8s,mb4.8,baz=39,slow=5.8,SNR=28
NOA                                  LR    LR     02 40 50.7
       comp=Z,136nm,21.3s,MS4.2,baz=30,slow=38
DLMT   Dillon            75.03  44 eP      P      02 04 52.8 +1.1
       comp=Z,38nm,1.5s,mb5.1
DLMT                               epP     pP     02 05 04.6 +0.7
NAO    NORSAR Subarra    75.04 337 P       P      02 04 49.5 -2.0
       comp=Z,24nm,1.1s,mb5.0
NAO    NORSAR Subarra    75.04 337 P       P      02 04 49.5 -2.0
NAO                                  pmax  pmax
       comp=Z,24nm,1.1s,mb5.0
HLID   Hailey            75.05  47 eP      P      02 04 52.9 +1.0
       comp=Z,15nm,1.8s,mb4.6
HLID                               epP     pP     02 05 05.0 +1.0
SUW    Suwalki           75.36 327 eP      P      02 04 53.4  0.0
SUW    Suwalki           75.36 327 eP      P      02 04 53.4 -0.1
BOZ    Bozeman (W)       75.40  44 eP      P      02 04 54.3 +0.4
       comp=Z,6.9nm,0.9s,mb4.6
BOZ                                epP     pP     02 05 06.7 +0.7
BOZ    Bozeman (W)       75.40  44 eP      P      02 04 54.3 +0.4
BOZ                                e*PP    pP     02 05 06.7 +0.7
BOZ                                  pmax  pmax
       comp=Z,7.0nm,0.9s,mb4.6
NVAR   Mina Array Bea    75.62  53 P       P      02 04 56.5 +1.2
       comp=Z,2.9nm,0.9s,mb4.2,baz=292,slow=4.1,SNR=20
ELK    Elko              76.21  49 eP      P      02 04 59.8 +1.2
       comp=Z,13nm,1.7s,mb4.6
ELK                                epP     pP     02 05 11.7 +1.0
ELK    Elko              76.21  49 eP      P      02 04 59.8 +1.2
ELK                                e*PP    pP     02 05 11.7 +1.0
ELK                                  pmax  pmax
       comp=Z,13nm,1.7s
IMW    Indian Meadow     76.86  45 eP      P      02 05 04.0 +1.8
       comp=Z,9.3nm,0.9s,mb4.7
IMW                                epP     pP     02 05 16.2 +1.8
MOOW   Moose Ponds       77.06  45 eP      P      02 05 03.2 -0.2
       comp=Z,2.9nm,1.0s,mb4.2
MOOW                               epP     pP     02 05 17.6 +2.0
SNOW   Snow King Moun    77.23  45 eP      P      02 05 04.7 +0.4
       comp=Z,8.1nm,1.1s,mb4.6
SNOW                               epP     pP     02 05 17.6 +1.1
REDW   Red Top Meadow    77.24  45 eP      P      02 05 05.6 +1.2
       comp=Z,3.7nm,1.0s,mb4.3
REDW                               epP     pP     02 05 17.7 +1.2
WHFO   Wadi Hawf         77.52 283 P       P      02 05 05.4 -1.0
       SNR=12
TPNV   Topopah Spring    77.81  53 eP      P      02 05 08.1 +0.5
       comp=Z,8.9nm,1.1s,mb4.6
TPNV   Topopah Spring    77.81  53 eP      P      02 05 08.1 +0.5
TPNV                                 pmax  pmax
       comp=Z,9.0nm,1.1s,mb4.6
HWUT   Hardware Ranch    77.90  47 eP      P      02 05 08.0  0.0
       comp=Z,6.3nm,1.3s,mb4.4
HWUT                               epP     pP     02 05 19.6 -0.7
DUG    Dugway            78.02  49 eP      P      02 05 09.6 +0.9
       comp=Z,10nm,1.0s,mb4.7
DUG                                epP     pP     02 05 21.0 +0.1
DUG    Dugway            78.02  49 eP      P      02 05 09.6 +0.9
DUG                                e*PP    pP     02 05 21.0 +0.1
DUG                                  pmax  pmax
       comp=Z,10.0nm,1.0s,mb4.7
ABTO   Aybut             78.21 283 ⇓P      P      02 05 09.4 -0.7
       SNR=6.6
PDAR   Pinedale Array    78.35  45 P       P      02 05 11.0 +0.5
       comp=Z,1.4nm,0.6s,mb4.1,baz=282,slow=1.4,SNR=16
KWP    Kalwaria          78.57 324 eP      P      02 05 12.4 +0.9
KWP                                e       pP     02 05 24.2 +0.5
KWP    Kalwaria          78.57 324 eP      P      02 05 12.4 +0.9
KWP                                e       pP     02 05 24.2 +0.5
BURAR  Bucovina Array    78.72 322 ⇓P      P      02 05 12.6 +0.2
BURAR  Bucovina Array    78.72 322 ⇓P      P      02 05 12.6 +0.2
CFR    Carcaliu          78.82 318 ⇑P      P      02 05 11.5 -1.5
CFR    Carcaliu          78.82 318 ⇑P      P      02 05 11.5 -1.5
VRI    Vrincioaia        79.11 320 ⇑P      P      02 05 15.4 +0.8
VRI    Vrincioaia        79.11 320 ⇑P      P      02 05 15.4 +0.8
BR131  Keskin Array S    79.14 311 eP      P      02 05 14.9  0.0
       comp=Z,5.4nm,0.9s,mb4.5
BR131                              epP     pP     02 05 27.0 -0.1
BRTR   Keskin Array B    79.14 311 P       P      02 05 14.8 -0.1
       comp=Z,6.4nm,1.0s,mb4.5,baz=108,slow=3.9,SNR=22
KOLS   Kolonicke sedl    79.25 324 eP      P      02 05 15.2 -0.1
KOLS                               epP     pP     02 05 28.0 +0.5
STHS   Stebnicka Huta    79.40 325 eP      P      02 05 16.5 +0.4
STHS                               epP     pP     02 05 28.8 +0.5
MSU    Marysvale         79.44  50 eP      P      02 05 17.1 +0.6
MSU                                epP     pP     02 05 29.3 +0.5
NEN    Nelson            79.49  53 eP      P      02 05 17.2 +0.3
NEN                                epP     pP     02 05 28.4 -0.7
OJC    Ojcow             79.50 326 ⇑iP     P      02 05 16.1 -0.5
OJC                                ePcP    PcP    02 05 29.4 +4.6
ANTO   Ankara            79.56 312 eP      P      02 05 17.6 +0.5
       comp=Z,7.0nm,0.9s,mb4.6
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ANTO                               epP     pP     02 05 30.4 +1.0
ANTO   Ankara            79.56 312 eP      P      02 05 17.6 +0.5
ANTO                               e*PP    pP     02 05 30.4 +1.0
ANTO                                 pmax  pmax
       comp=Z,7.0nm,0.9s,mb4.6
CRVS   Cervenica-Dubn    79.66 324 eP      P      02 05 16.7 -0.8
CRVS                               esP     sP     02 05 32.6 -1.6
NIE    Niedzica          79.83 325 eP      P      02 05 19.6 +1.2
KECS   Kecovo            80.42 324 eP      P      02 05 21.2 -0.3
KECS                               e              02 05 29.5
OKC    Ostrava-Krasne    80.51 327 eP      P      02 05 22.6 +0.6
OKC                                epP     pP     02 05 34.8 +0.6
KSP    Ksiaz             80.58 328 eP      P      02 05 23.4 +1.1
KSP                                e       pP     02 05 35.4 +0.8
KSP    Ksiaz             80.58 328 eP      P      02 05 21.5 -0.9
KSP                                epP     pP     02 05 35.1 +0.5
BSEG   Bad Segeberg      80.59 333 eP      P      02 05 22.7 +0.4
MZLS   Mizel             80.62 293 P       P      02 05 23.3 +0.2
MORC   Moravsky Berou    80.82 327 eP      P      02 05 23.9 +0.3
       comp=Z,8.3nm,0.9s,mb4.7
MORC                               epP     pP     02 05 35.8 -0.1
MORC   Moravsky Berou    80.82 327 eP      P      02 05 23.9 +0.2
MORC                               e*PP    pP     02 05 35.8 -0.1
MORC                                 pmax  pmax
       comp=Z,8.0nm,0.9s,mb4.7
DPC    Dobruska-Polom    80.93 328 eP      P      02 05 25.0 +0.8
DPC                                epP     pP     02 05 37.3 +0.8
UPC    Upice             80.95 328 eP      P      02 05 24.0 -0.3
UPC                                epP     pP     02 05 36.7 +0.1
PSZ    Piszkesteto       81.09 324 eP      P      02 05 25.6 +0.5
       comp=Z,15nm,1.0s,mb4.9
PSZ                                epP     pP     02 05 37.5 +0.1
PSZ    Piszkesteto       81.09 324 eP      P      02 05 25.6 +0.5
PSZ                                e*PP    pP     02 05 37.5 +0.1
PSZ                                  pmax  pmax
       comp=Z,15nm,1.0s,mb4.9
HILS   Ha'il             81.17 297 P       P      02 05 26.6 +0.7
VYHS   Vyhne             81.17 325 eP      P      02 05 25.7 +0.2
VYHS                               epP     pP     02 05 38.0 +0.2
PV10   Paradox Valley    81.44  48 eP      P      02 05 28.5 +1.4
PV10                               epP     pP     02 05 39.7 +0.3
BRG    Berggiesshubel    81.54 329 i P     P      02 05 27.8 +0.3
       comp=Z,13nm,0.9s,mb4.8
BRG                                  pP    pP     02 05 40.0 +0.3
BRG    Berggiesshubel    81.54 329 i P     P      02 05 27.8 +0.4
BRG                                  *PP   pP     02 05 40.0 +0.3
BRG                                  pmax  pmax
       comp=Z,13nm,0.9s,mb4.9
PVCC   Panska Ves        81.54 329 eP      P      02 05 28.1 +0.7
PVCC                               epP     pP     02 05 40.7 +1.0
CLL    Collm             81.59 330 ⇑P      P      02 05 27.8 +0.1
       comp=Z,logA/T=1.3,mb5.0
CLL                                i *PP   pP     02 05 40.5 +0.6
CLL                                e              02 05 53.0
CLL    Collm             81.59 330 ⇑iP     P      02 05 27.8 +0.1
       comp=Z,19nm,0.9s,mb5.0
CLL                                i pP    pP     02 05 40.5 +0.6
CLL                                esP     sP     02 05 53.0 +8.6
CLL    Collm             81.59 330 ⇑iP     P      02 05 27.8 +0.1
CLL                                i *PP   pP     02 05 40.5 +0.6
CLL                                  pmax  pmax
       comp=Z,19nm,0.9s,mb5.0
SMOL   Smolenice         81.80 326 eP      P      02 05 29.7 +0.9
SMOL                               epP     pP     02 05 42.2 +1.1
PV01   Paradox Valley    81.88  48 eP      P      02 05 30.8 +1.4
PV01                               epP     pP     02 05 42.9 +1.2
PRU    Pruhonice         81.96 328 eP      P      02 05 30.0 +0.4
PRU                                epP     pP     02 05 40.8 -1.1
TREC   Trest             82.08 327 eP      P      02 05 30.6 +0.4
CLZ    Clausthal         82.21 332 eP      P      02 05 31.3 +0.5
       comp=Z,21nm,1.1s,mb5.0
CLZ    Clausthal         82.21 332 eP      P      02 05 31.3 +0.5
CLZ                                  pmax  pmax
       comp=Z,21nm,1.1s,mb5.0
AFFS   'Afif             82.32 294 P       P      02 05 32.3 +0.3
NKC    Novy Kostel       82.65 330 eP      P      02 05 33.6 +0.5
NKC                                epP     pP     02 05 45.1 -0.3
MOX    Moxa              82.66 330 i P     P      02 05 33.7 +0.5
       comp=Z,logA/T=1.1,mb4.9
MOX                                  pP    pP     02 05 46.0 +0.5
MOX    Moxa              82.66 330 eP      P      02 05 33.7 +0.5
       comp=Z,22nm,1.9s,mb4.9
MOX    Moxa              82.66 330 eP      P      02 05 33.7 +0.5
MOX                                  pmax  pmax
       comp=Z,22nm,1.9s,mb4.9
KHC    Kasperske Hory    83.02 328 eP      P      02 05 35.6 +0.6
KHC                                epP     pP     02 05 47.6 +0.3
KHC                                e              02 05 58.0
GEC2   GERESS Array S    83.19 328 eP      P      02 05 36.1 +0.2
       comp=Z,6.0nm,0.8s,mb4.7
GEC2   GERESS Array S    83.19 328 eP      P      02 05 36.1 +0.2
GEC2                                 pmax  pmax
       comp=Z,6.0nm,0.8s,mb4.7
GERES  GERESS Array B    83.19 328 P       P      02 05 36.0 +0.2
       comp=Z,4.8nm,0.7s,mb4.6,baz=36,slow=5.1,SNR=34
GERES                                LR    LR     02 47 39.5
       comp=Z,79nm,18.1s,MS4.1,baz=36,slow=39
KAMS   Al Khamasin       83.26 290 P       P      02 05 37.0 +0.2
WET    Wettzell          83.31 329 eP      P      02 05 37.0 +0.5
       comp=Z,10.0nm,1.1s,mb4.8
WET    Wettzell          83.31 329 eP      P      02 05 37.0 +0.5
WET                                  pmax  pmax
       comp=Z,10.0nm,1.1s,mb4.8
GRA1   Grafenberg Arr    83.57 330 eP      P      02 05 38.6 +0.9
       comp=Z,27nm,0.9s,mb5.4
GRA1                               epP     pP     02 05 50.9 +0.9
GRF    Grafenberg Arr    83.57 330 eP      P      02 05 38.6 +0.9
       comp=Z,27nm,0.9s,mb5.4
GRF                                epP     pP     02 05 50.9 +0.9
GRF    Grafenberg Arr    83.57 330 eP      P      02 05 38.6 +0.9
GRF                                e*PP    pP     02 05 50.9 +0.9
GRF                                  pmax  pmax
       comp=Z,27nm,0.9s,mb5.4
GRF    Grafenberg Arr    83.57 330 eP      P      02 05 38.6 +0.9
GRF                                e*PP    pP     02 05 50.9 +0.9
GRF                                  pmax  pmax
       comp=Z,27nm,0.9s,mb5.4
ARSA   Arzberg           83.60 326 ⇑eP     P      02 05 38.4 +0.4
       comp=Z,4.0nm,0.9s,mb4.5
ARSA   Arzberg           83.60 326 ⇑iP     P      02 05 44.2 +6.2
       comp=Z,8.5nm,1.4s,mb4.7
ARSA   Arzberg           83.60 326 ⇑eP     P      02 05 38.4 +0.4
       comp=Z,4.0nm,0.9s,mb4.5
ARSA                               e              02 05 44.2
MOA    Molln             83.70 327 ⇑eP     P      02 05 37.7 -0.8
       comp=Z,3.7nm,0.8s,mb4.6
MOA    Molln             83.70 327 ⇑eP     P      02 05 37.7 -0.8
       comp=Z,3.7nm,0.8s,mb4.6
KBRS   Khaybar           83.93 297 P       P      02 05 41.0 +0.8
TNS    Taunus Mts        84.24 332 eP      P      02 05 41.8 +0.7
       comp=Z,16nm,1.3s,mb5.0
TNS    Taunus Mts        84.24 332 eP      P      02 05 41.8 +0.7
TNS                                  pmax  pmax
       comp=Z,16nm,1.3s,mb5.0
PERS   Pernice           84.24 326 eP      P      02 05 41.7 +0.5
PERS                               e       pP     02 05 54.4 +0.9
TBKS   Tabuk             84.36 301 P       P      02 05 43.0 +0.8
VAY    Valandovo         84.42 318 eP      P      02 05 39.6 -2.7
       comp=Z,46nm,1.0s,mb5.6
VAY    Valandovo         84.42 318 eP      P      02 05 39.6 -2.6
DOBS   Dobrina           84.45 325 eP      P      02 05 42.5 +0.2
GOLS   Golise            84.48 325 eP      P      02 05 42.1 -0.3
PPT    Papeete           84.54 116 eLR     LR     02 31 49.8
       comp=Z,224nm,26.0s
PPT    Papeete           84.54 116 LR      LR     02 37 32.9
       comp=Z,168nm,20.3s,MS4.4,baz=287,slow=31
TATS   Tathlith          84.55 290 P       P      02 05 44.2 +0.9
SKO    Skopje            84.56 319 eP      P      02 05 40.2 -2.7
SKO    Skopje            84.56 319 eP      P      02 05 40.2 -2.7
OBKA   Obir              84.60 326 ⇑eP     P      02 05 43.1 +0.1
       comp=Z,5.3nm,1.0s,mb4.6
OBKA   Obir              84.60 326 ⇓iP     pP     02 05 55.7 +0.4
       comp=Z,12nm,1.3s
OBKA   Obir              84.60 326 ⇑eP     P      02 05 43.1 +0.1
       comp=Z,5.3nm,1.0s,mb4.6
OBKA                               e       pP     02 05 55.7 +0.4
LEGS   Legarje           84.67 325 eP      P      02 05 43.4  0.0
KBA    Koelnbreinsper    84.70 327 ⇓eP     P      02 05 45.8 +2.3
       comp=Z,4.3nm,0.5s,mb4.8
KBA    Koelnbreinsper    84.70 327 ⇓eP     P      02 05 45.8 +2.3
KBA                                  pmax  pmax
       comp=Z,4.0nm,0.5s,mb4.8
ALWS   Ilw as Safayha    84.70 303 P       P      02 05 43.5 -0.5
FUR    Furstenfeldbru    84.74 329 eP      P      02 05 44.4 +0.7
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       comp=Z,26nm,0.9s,mb5.4
FUR    Furstenfeldbru    84.74 329 eP      P      02 05 44.4 +0.7
FUR                                  pmax  pmax
       comp=Z,26nm,0.9s,mb5.4
JMOS   Jabal al Moall    84.76 302 P       P      02 05 44.5 +0.2
HAQS   Haql              84.95 302 P       P      02 05 45.5 +0.3
BDAS   Al Bad'           85.23 302 P       P      02 05 47.2 +0.7
ANMO   Albuquerque       85.24  50 i P     P      02 05 48.6 +2.1
AYUS   'Aynunah          85.26 302 P       P      02 05 47.8 +1.1
BIA    Bitola            85.30 319 eP      P      02 05 44.6 -2.0
TAYS   Tayyib Ism        85.31 302 P       P      02 05 47.3 +0.3
MOTA   Moosalm           85.45 328 ⇓iP     P      02 05 47.8 +0.6
       comp=Z,3.7nm,0.7s,mb4.6
OHR    Ohrid             85.51 319 eP      P      02 05 47.0 -0.7
OHR    Ohrid             85.51 319 eP      P      02 05 47.0 -0.7
DJNS   Zahran al Janu    85.58 289 P       P      02 05 49.8 +1.3
UMJS   Umm Lajj          85.66 298 P       P      02 05 49.7 +0.9
YNBS   Yanbu' al Bahr    85.72 297 P       P      02 05 50.9 +1.8
BLJS   Baljurashi        85.76 291 P       P      02 05 50.7 +1.3
BFO    Black Forest      85.81 331 eP      P      02 05 49.2 +0.3
       comp=Z,17nm,1.0s,mb5.2
BFO    Black Forest      85.81 331 eP      P      02 05 49.2 +0.3
BFO                                  pmax  pmax
       comp=Z,17nm,1.0s,mb5.2
BAIF   Baives            85.94 334 eP      P      02 05 49.5  0.0
DAVA   Damuels           86.01 329 ⇑iP     pP     02 06 03.9 +1.6
       comp=Z,14nm,1.0s
DAVA   Damuels           86.01 329 ⇓eP     P      02 05 50.7 +0.7
       comp=Z,15nm,0.9s,mb5.2
DAVA                               e       pP     02 06 03.9 +1.6
CDF    Champ du Feu      86.15 331 eP      P      02 05 50.6  0.0
       comp=Z,23nm,0.9s,mb5.1
CDF    Champ du Feu      86.15 331 eP      P      02 05 50.6  0.0
CDF                                  pmax  pmax
       comp=Z,11nm,0.9s,mb5.1
HINF   Hinteralfeld      86.80 331 eP      P      02 05 53.3 -0.5
HAU    Haudompre         86.84 331 eP      P      02 05 53.7 -0.3
       comp=Z,9.6nm,0.7s,mb4.8
HAU                                eR
       comp=Z,129nm,17.8s
HAU    Haudompre         86.84 331 eP      P      02 05 53.7 -0.3
HAU                                  pmax  pmax
       comp=Z,5.0nm,0.7s,mb4.8
HAU                                  MLR   MLR
       comp=Z,130nm,17.8s,MS4.4
MEZF   Maizieres J'vi    86.93 332 eP      P      02 05 54.2 -0.2
       comp=Z,7.8nm,0.6s,mb4.8
CABF   La Chapelle       88.09 331 eP      P      02 06 00.1 +0.1
TBI    Tubuai            88.38 121 eLR     LR     02 33 35.8
       comp=Z,175nm,25.2s
LOR    Lormes            88.40 332 eP      P      02 06 01.7 +0.2
       comp=Z,17nm,1.2s,mb4.8
LOR                                eR
       comp=Z,88nm,20.8s
LOR    Lormes            88.40 332 eP      P      02 06 01.7 +0.2
LOR                                  pmax  pmax
       comp=Z,8.0nm,1.2s,mb4.8
LOR                                  MLR   MLR
       comp=Z,90nm,20.8s,MS4.2
FLN    La Foliniere      88.66 336 eP      P      02 06 02.2 -0.5
       comp=Z,47nm,1.2s,mb5.4
FLN                                eR
       comp=Z,128nm,19.0s
FLN    La Foliniere      88.66 336 eP      P      02 06 02.2 -0.5
FLN                                  pmax  pmax
       comp=Z,23nm,1.2s,mb5.4
FLN                                  MLR   MLR
       comp=Z,130nm,19.0s,MS4.4
LDF    La Druitiere      88.69 335 eP      P      02 06 02.6 -0.2
SSF    Saint Saulge      88.71 333 eP      P      02 06 03.1 +0.1
LPL    La Plagne         88.73 330 eP      P      02 06 03.4 +0.3
       comp=Z,8.1nm,0.7s,mb4.9
LPL    La Plagne         88.73 330 eP      P      02 06 03.4 +0.3
LPL                                  pmax  pmax
       comp=Z,4.0nm,0.7s,mb4.9
LPG    La Plagne         88.74 330 eP      P      02 06 03.7 +0.5
       comp=Z,7.6nm,0.6s,mb4.9
LPG    La Plagne         88.74 330 eP      P      02 06 03.7 +0.5
LPG                                  pmax  pmax
       comp=Z,4.0nm,0.6s,mb4.9
SMF    Signal de Mont    88.93 332 eP      P      02 06 04.0 -0.1
AVF    Avril sur Loir    88.99 332 eP      P      02 06 04.2 -0.1
       comp=Z,19nm,0.8s,mb5.2
AVF    Avril sur Loir    88.99 332 eP      P      02 06 04.2 -0.1
AVF                                  pmax  pmax
       comp=Z,10.0nm,0.8s,mb5.2
GRR    Gorron            89.11 336 eP      P      02 06 04.7 -0.2
MBDF   Montbardon        89.36 329 eP      P      02 06 05.8 -0.3
       comp=Z,16nm,0.8s,mb5.1
MBDF   Montbardon        89.36 329 eP      P      02 06 05.8 -0.3
MBDF                                 pmax  pmax
       comp=Z,8.0nm,0.8s,mb5.1
BGF    Bois d'Agland     89.38 333 eP      P      02 06 06.1 -0.1
ORIF   Oris-en-Rattie    89.56 330 eP      P      02 06 06.5 -0.6
       comp=Z,11nm,0.8s,mb4.9
ORIF                               eR
       comp=Z,101nm,21.5s
SBF    Sospel            89.78 328 eP      P      02 06 07.6 -0.6
       comp=Z,38nm,0.8s,mb5.5
SBF    Sospel            89.78 328 eP      P      02 06 07.6 -0.6
SBF                                  pmax  pmax
       comp=Z,19nm,0.8s,mb5.5
TCF    Toulx Ste Croi    89.84 333 eP      P      02 06 08.4 +0.1
       comp=Z,64nm,1.6s,mb5.4
TCF    Toulx Ste Croi    89.84 333 eP      P      02 06 08.4 +0.1
TCF                                  pmax  pmax
       comp=Z,32nm,1.6s,mb5.4
VIVF   Saint-Julien-l    90.10 331 eP      P      02 06 09.4 -0.2
       comp=Z,18nm,1.1s,mb5.0
VIVF   Saint-Julien-l    90.10 331 eP      P      02 06 09.4 -0.2
VIVF                                 pmax  pmax
       comp=Z,9.0nm,1.1s,mb5.0
PGF    Pioggiola         90.17 327 eP      P      02 06 09.1 -0.9
QUIF   Quistinic         90.27 337 eP      P      02 06 10.0 -0.3
FRF    La Foret Royal    90.36 329 eP      P      02 06 10.1 -0.8
MFF    Saint Martin d    90.41 334 eP      P      02 06 11.0  0.0
       comp=Z,36nm,1.1s,mb5.3
MFF    Saint Martin d    90.41 334 eP      P      02 06 11.0  0.0
MFF                                  pmax  pmax
       comp=Z,18nm,1.1s,mb5.3
SMRF   Simiane la Rot    90.46 330 eP      P      02 06 10.8 -0.5
LMR    La Mourre         90.60 329 eP      P      02 06 11.7 -0.3
TXAR   Lajitas Array     90.76  52 P       P      02 06 14.2 +1.2
       comp=Z,1.2nm,0.8s,mb4.3,baz=293,slow=4.0,SNR=11
RJF    Les Rejaudoux     90.93 333 eP      P      02 06 13.3 -0.2
       comp=Z,17nm,0.8s,mb5.1
RJF                                eR
       comp=Z,110nm,20.2s
RJF    Les Rejaudoux     90.93 333 eP      P      02 06 13.3 -0.2
RJF                                  pmax  pmax
       comp=Z,9.0nm,0.8s,mb5.2
RJF                                  MLR   MLR
       comp=Z,110nm,20.3s,MS4.3
CAF    Calviac           91.05 332 eP      P      02 06 13.8 -0.3
       comp=Z,11nm,0.9s,mb4.9
CAF    Calviac           91.05 332 eP      P      02 06 13.8 -0.3
CAF                                  pmax  pmax
       comp=Z,5.0nm,0.9s,mb4.8
LASF   Ste Croix         91.07 331 eP      P      02 06 13.4 -0.8
LFF    La Frestale       91.53 333 eP      P      02 06 15.9 -0.4
       comp=Z,14nm,0.7s,mb5.1
LFF    La Frestale       91.53 333 eP      P      02 06 15.9 -0.4
LFF                                  pmax  pmax
       comp=Z,7.0nm,0.7s,mb5.1
MTLF   Montolieu         92.33 331 eP      P      02 06 19.1 -0.9
       comp=Z,12nm,0.9s,mb4.9
MTLF   Montolieu         92.33 331 eP      P      02 06 19.1 -0.9
MTLF                                 pmax  pmax
       comp=Z,6.0nm,0.9s,mb4.9
EPF    Esparros          93.31 332 eP      P      02 06 23.5 -1.0
SJPF   Ste Jean          93.82 333 eP      P      02 06 25.7 -1.1
RKT    Rikitea           98.72 112 eLR     LR     02 38 24.5
       comp=Z,173nm,30.8s
DBIC   Dimbokro         126.64 316   PKP   PKPdf  02 12 13.1 +0.4
       comp=Z,1.8nm,0.7s,baz=10,slow=6.4,SNR=5.6
NVL    N'lazarevskaya   136.53 202 ePKIKP         02 12 50.4
NVL                                e*PP           02 12 59.1
NVL                                e*SP           02 13 03.6
NVL                                  pmax  pmax
       comp=Z,1.0nm,1.2s
SNAA   Sanae            139.99 197   P     PKPdf  02 12 33.8 -2.2
VNA2   Neumayer--Watz   141.56 196   P     PKPdf  02 12 35.8 -2.9
VNA3   Neumayer Olymp   141.81 195   P     PKPdf  02 12 39.4 +0.3
LPAZ   La Paz           147.27  60   PKPbc PKPdf  02 12 54.7 +4.6
       comp=Z,3.6nm,0.7s,baz=8.7,slow=2.0,SNR=19
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LPAZ	**La Paz**	**147.27**	**60**	*e*PKPdf	PKPdf	02 12 53.5	+3.4
LPAZ				*e*pPKPdf		02 13 05.9	

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*STR **17** 02:01:06.8±0.1, 42.75N×1.90E, h5^{km}±1^{km}, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*NEIC **17** 02:01:06.5, 42.76N×1.92E, h10^{km}, ML2.6(LDG), ML2.5(STR), MN2.3(MDD), After STR.*
*LDG **17** 02:01:07.2±0.0, 42.76N×1.92E, h5^{km}, Md2.9/2, Ml2.6/19, Error ellipse: s-maj=0.7km s-min=0.6km az=82.0*
*CSEM **17** 02:01:07.1±0.0, 42.76N×1.91E, h10^{km}, ML2.6/18, Error ellipse: s-maj=0.8km s-min=0.7km az=169.0*
MDD 17 02:01:07.4±0.2**, 42.77N×1.92E, h10**^{km}±1^{km}**, mbLg2.3**/17**, 1C, Error ellipse: s-maj=1.6km s-min=1.4km az=24.0, PRXIMO, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CARF	**Carcanieres**	**0.15**	**109**	Pg	Pg	02 01 10.6	-0.2
CARF				Sg	Sg	02 01 12.9	-0.2
CARF	**Carcanieres**	**0.15**	**109**	Pg	Pg	02 01 10.6	-0.2
CARF				Lg		02 01 13.2	
LPEF	**Le Peyrat**	**0.18**	**358**	Pg	Pg	02 01 11.4	-0.1
LPEF				Sg	Sg	02 01 14.7	+0.5
LPEF	**Le Peyrat**	**0.18**	**358**	Pg	Pg	02 01 11.5	+0.1
LPEF				Lg		02 01 14.6	
CLLI	**Llivia**	**0.29**	**171**	Pg	Pg	02 01 13.0	-0.4
CLLI				Lg		02 01 17.0	
	32nm,0.1s						
GRBF	**Gourbit**	**0.29**	**285**	Pg	Pg	02 01 12.9	-0.6
GRBF				Lg		02 01 17.0	
PAND	**Andorre**	**0.36**	**228**	Pg	Pg	02 01 14.3	-0.5
PAND				Lg		02 01 19.2	
VALF	**Valcebollere**	**0.37**	**168**	Pg	Pg	02 01 14.5	-0.5
VALF				Sg	Sg	02 01 19.5	-0.6
VALF	**Valcebollere**	**0.37**	**168**	Pg	Pg	02 01 14.5	-0.5
VALF				Lg		02 01 19.5	
CBRU	**Bruguera**	**0.52**	**158**	Pg	Pg	02 01 17.2	-0.7
CBRU				Lg		02 01 24.2	
FILF	**Fillols**	**0.52**	**113**	Pg	Pg	02 01 15.0	-2.9
FILF				Sg	Sg	02 01 20.8	-4.1
FILF	**Fillols**	**0.52**	**113**	Pg	Pg	02 01 15.1	-2.8
FILF				Lg		02 01 21.1	
SALF	**Salau**	**0.53**	**270**	Pg	Pg	02 01 17.0	-1.2
SALF				Sg	Sg	02 01 24.4	-1.0
SALF	**Salau**	**0.53**	**270**	Pg	Pg	02 01 17.0	-1.2
SALF				Lg		02 01 24.3	
MTLF	**Montolieu**	**0.62**	**21**	*e*Pn	Pn	02 01 21.2	-0.7
MTLF				*e*Sg	Sg	02 01 26.9	-1.2
MTLF				*e*Sn	Sn	02 01 30.5	-1.3
	56nm,0.2s						
MTLF	**Montolieu**	**0.62**	**21**	Pg	Pg	02 01 18.8	-1.0
MTLF				Pn	Pn	02 01 21.2	-0.7
MTLF				Lg		02 01 26.9	
MTLF				Sn	Sn	02 01 30.5	-1.3
	28nm,0.2s						
MTLF	**Montolieu**	**0.62**	**21**	*e*Pg	Pg	02 01 18.8	-1.0
MTLF				*e*Pn	Pn	02 01 21.2	-0.7
MTLF				*e*Sg	Sg	02 01 26.9	-1.2
MTLF				*e*Sn	Sn	02 01 30.5	-1.3
MTLF	**Montolieu**	**0.62**	**21**	*e*Pn	Pn	02 01 21.2	-0.7
MTLF				*e*Sg	Sg	02 01 26.9	-1.2
MTLF				*e*Sn	Sn	02 01 30.5	-1.3
	28nm,0.2s						
MLS	**Moulis**	**0.63**	**288**	Pg	Pg	02 01 19.0	-1.1
MLS				Sg	Sg	02 01 27.4	-1.3
MLS	**Moulis**	**0.63**	**288**	Pg	Pg	02 01 19.0	-1.1
MLS				Lg		02 01 27.3	
CORG	**Organya**	**0.69**	**220**	Pg	Pg	02 01 20.5	-0.8
CORG				Lg		02 01 30.6	
	7.8nm,0.1s						
CSOR	**Sort**	**0.70**	**236**	Pg	Pg	02 01 20.4	-1.0
CSOR				Lg		02 01 29.9	
	26nm,0.1s						
SJAF	**Saint Jean de**	**0.77**	**111**	Pg	Pg	02 01 21.4	-1.4
SJAF				Sg	Sg	02 01 31.6	-1.5
SJAF	**Saint Jean de**	**0.77**	**111**	Pg	Pg	02 01 21.5	-1.3
SJAF				Lg		02 01 31.7	
EJON	**La Jonquera**	**0.79**	**113**	⇑Pg	Pg	02 01 21.9	-1.3
	3.5nm,0.1s,SNR=18						
EJON				Lg		02 01 32.5	
	14nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**0.79**	**113**	Pg	Pg	02 01 21.9	-1.3
	3.5nm,0.1s,SNR=18						
MELF	**Melles**	**0.86**	**278**	Pg	Pg	02 01 22.9	-1.7
MELF				Sg	Sg	02 01 34.4	-1.7
MELF	**Melles**	**0.86**	**278**	Pg	Pg	02 01 22.8	-1.8
MELF				Lg		02 01 34.3	
EMIR	**Miracle**	**0.90**	**199**	Pg	Pg	02 01 24.6	-0.8
	1.7nm,0.0s,SNR=41						
EMIR				Lg		02 01 36.2	
	13nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**0.90**	**199**	Pg	Pg	02 01 24.6	-0.8
	1.7nm,0.0s,SNR=41						
CFON	**Fontmartina**	**1.07**	**159**	Pg	Pg	02 01 27.7	-1.2
CFON				Lg		02 01 41.7	
	36nm,0.1s						
RESF	**Ens**	**1.16**	**273**	Pg	Pg	02 01 28.3	-2.3
RESF				Sg	Sg	02 01 43.8	-2.4
RESF	**Ens**	**1.16**	**273**	Pg	Pg	02 01 28.4	-2.3
RESF				Lg		02 01 43.9	
EPF	**Esparros**	**1.19**	**283**	*e*Pg	Pg	02 01 29.4	-1.8
EPF				*e*Sg	Sg	02 01 44.5	-2.5
	14nm,0.2s						
EPF	**Esparros**	**1.19**	**283**	Pn	Pn	02 01 28.6	-1.4
EPF				Pg	Pg	02 01 29.4	-1.8
EPF				Lg		02 01 44.5	
	7.2nm,0.2s						
EPF	**Esparros**	**1.19**	**283**	*e*Pn	Pn	02 01 28.6	-1.4
EPF				*e*Pg	Pg	02 01 29.4	-1.8
EPF				*e*Sg	Sg	02 01 44.5	-2.5
EPF	**Esparros**	**1.19**	**283**	*e*Pg	Pg	02 01 29.4	-1.8
EPF				*e*Sg	Sg	02 01 44.5	-2.5
	7.2nm,0.2s						
EBIE	**Bielsa**	**1.31**	**267**	Pg	Pg	02 01 31.3	-2.3
	1.0nm,0.1s,SNR=33						
EBIE				Lg		02 01 49.0	
	4.5nm,0.1s,SNR=6.7						
EBIE	**Bielsa**	**1.31**	**267**	Pg	Pg	02 01 31.3	-2.3
EBIE				Lg		02 01 53.2	
EBIE	**Bielsa**	**1.31**	**267**	Pg	Pg	02 01 31.3	-2.3
	1.0nm,0.1s,SNR=33						
EGRA	**Graus**	**1.31**	**245**	Pg	Pg	02 01 32.1	-1.6
	1.6nm,0.2s,SNR=7.9						
EGRA				Lg		02 01 51.4	
	6.6nm,0.1s,SNR=12						
EPOB	**Poblet**	**1.54**	**204**	Pg	Pg	02 01 35.2	-3.1
	2.3nm,0.1s,SNR=7.9						
EPOB				Lg		02 01 55.9	
	22nm,0.2s,SNR=30						
EPOB	**Poblet**	**1.54**	**204**	Pg	Pg	02 01 35.2	-3.0
	2.3nm,0.1s,SNR=7.9						
CGAR	**Garraf**	**1.58**	**202**	Lg		02 01 54.4	
	2.5nm,0.1s						
LASF	**Ste Croix**	**1.93**	**47**	*e*Pg	Pg	02 01 43.5	-2.4
LASF				*e*Sn	Sn	02 02 02.1	-3.0
LASF				*e*Sg	Sg	02 02 07.8	-3.9
	11nm,0.2s						
LASF	**Ste Croix**	**1.93**	**47**	Pn	Pn	02 01 38.6	-2.0
LASF				Pg	Pg	02 01 43.5	-2.4
LASF				Sn	Sn	02 02 02.1	-3.0
LASF				Lg		02 02 07.8	
	5.6nm,0.2s						
LASF	**Ste Croix**	**1.93**	**47**	*e*Pn	Pn	02 01 38.6	-2.0
LASF				*e*Pg	Pg	02 01 43.5	-2.4
LASF				*e*Sn	Sn	02 02 02.1	-3.0
LASF				*e*Sg	Sg	02 02 07.8	-3.9
LASF	**Ste Croix**	**1.93**	**47**	*e*Pg	Pg	02 01 43.5	-2.4
LASF				*e*Sn	Sn	02 02 02.1	-3.0
LASF				*e*Sg	Sg	02 02 07.8	-3.9
	5.6nm,0.2s						
ESAC	**San Caprasio**	**2.05**	**240**	Pn	Pn	02 01 43.1	+0.6
	4.0nm,0.1s,SNR=8.5						
ESAC				Pg	Pg	02 01 45.9	-2.5
	19nm,0.2s,SNR=7.9						
ESAC				Sn	Sn	02 02 08.7	+0.4
	16nm,0.2s,SNR=7.9						
ESAC				Lg		02 02 13.7	
	47nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**2.05**	**240**	Pn	Pn	02 01 43.1	+0.6
ESAC				Pg	Pg	02 01 45.9	-2.5
ESAC				Sn	Sn	02 02 08.9	+0.5
ESAC				Lg		02 02 13.7	
ESAC	**San Caprasio**	**2.05**	**240**	Pn	Pn	02 01 43.1	+0.7
	4.0nm,0.1s,SNR=8.5						
ESAC	**San Caprasio**	**2.05**	**240**	Pg	Pg	02 01 45.9	-2.5
	19nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.16**	**214**	Pn	Pn	02 01 44.4	+0.5
	0.3nm,0.1s,SNR=7.9						
ERTA				Pg	Pg	02 01 47.9	-2.6
	0.7nm,0.1s,SNR=7.9						
ERTA				Lg		02 02 15.5	
	4.4nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**2.16**	**214**	Pn	Pn	02 01 44.5	+0.5
ERTA				Pg	Pg	02 01 47.9	-2.6
ERTA				Lg		02 02 15.5	
ERTA	**Horta de San J**	**2.16**	**214**	Pn	Pn	02 01 44.4	+0.5
	0.3nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**2.16**	**214**	Pg	Pg	02 01 47.9	-2.6
	0.7nm,0.1s,SNR=7.9						
CAF	**Calviac**	**2.16**	**3**	*e*Pg	Pg	02 01 47.8	-2.8
CAF				*e*Sn	Sn	02 02 07.3	-3.8
CAF				*e*Sg	Sg	02 02 15.5	-4.0
	11nm,0.2s						
CAF	**Calviac**	**2.16**	**3**	Pn	Pn	02 01 42.4	-1.6
CAF				Pg	Pg	02 01 47.8	-2.8
CAF				Sn	Sn	02 02 07.3	-3.8
CAF				Lg		02 02 15.5	
	5.7nm,0.2s						
CAF	**Calviac**	**2.16**	**3**	*e*Pn	Pn	02 01 42.4	-1.6
CAF				*e*Pg	Pg	02 01 47.8	-2.8
CAF				*e*Sn	Sn	02 02 07.3	-3.8
CAF				*e*Sg	Sg	02 02 15.5	-4.0
CAF	**Calviac**	**2.16**	**3**	*e*Pg	Pg	02 01 47.8	-2.8
CAF				*e*Sn	Sn	02 02 07.3	-3.8
CAF				*e*Sg	Sg	02 02 15.5	-4.0
	5.7nm,0.2s						
EBR	**Ebro Roquetas**	**2.21**	**209**	*e*S*S*		02 02 21.0	
SJPF	**Ste Jean**	**2.33**	**280**	*e*Pg	Pg	02 01 50.2	-3.8
SJPF				*e*Sn	Sn	02 02 11.6	-3.8
SJPF				*e*Sg	Sg	02 02 20.5	-4.6
	3.3nm,0.3s						
SJPF	**Ste Jean**	**2.33**	**280**	Pn	Pn	02 01 44.4	-2.0
SJPF				Pg	Pg	02 01 50.2	-3.8
SJPF				Sn	Sn	02 02 11.6	-3.8
SJPF				Lg		02 02 20.5	
	1.6nm,0.3s						
SJPF	**Ste Jean**	**2.33**	**280**	*e*Pn	Pn	02 01 44.4	-2.0
SJPF				*e*Pg	Pg	02 01 50.2	-3.8
SJPF				*e*Sn	Sn	02 02 11.6	-3.8
SJPF				*e*Sg	Sg	02 02 20.5	-4.6
SJPF	**Ste Jean**	**2.33**	**280**	*e*Pg	Pg	02 01 50.2	-3.8
SJPF				*e*Sn	Sn	02 02 11.6	-3.8
SJPF				*e*Sg	Sg	02 02 20.5	-4.6
	1.6nm,0.3s						
LFF	**La Frestale**	**2.33**	**339**	*e*Pg	Pg	02 01 50.6	-3.4
LFF				*e*Sn	Sn	02 02 11.5	-4.0
LFF				*e*Sg	Sg	02 02 20.9	-4.2
	23nm,0.3s						
LFF	**La Frestale**	**2.33**	**339**	Pn	Pn	02 01 44.6	-1.9
LFF				Pg	Pg	02 01 50.6	-3.4
LFF				Sn	Sn	02 02 11.5	-4.0
LFF				Lg		02 02 20.9	
	12nm,0.3s						
LFF	**La Frestale**	**2.33**	**339**	*e*Pn	Pn	02 01 44.6	-1.9
LFF				*e*Pg	Pg	02 01 50.6	-3.4
LFF				*e*Sn	Sn	02 02 11.5	-4.0
LFF				*e*Sg	Sg	02 02 20.9	-4.2
LFF	**La Frestale**	**2.33**	**339**	*e*Pg	Pg	02 01 50.6	-3.4
LFF				*e*Sn	Sn	02 02 11.5	-4.0
LFF				*e*Sg	Sg	02 02 20.9	-4.2
	12nm,0.3s						
RJF	**Les Rejaudoux**	**2.56**	**354**	*e*Pg	Pg	02 01 54.7	-3.7
RJF				*e*Sn	Sn	02 02 17.5	-3.6
RJF				*e*Sg	Sg	02 02 28.1	-4.4
	10nm,0.2s						
RJF	**Les Rejaudoux**	**2.56**	**354**	Pn	Pn	02 01 47.7	-1.9
RJF				Pg	Pg	02 01 54.7	-3.7
RJF				Sn	Sn	02 02 17.5	-3.6
RJF				Lg		02 02 28.1	
	5.1nm,0.2s						
RJF	**Les Rejaudoux**	**2.56**	**354**	*e*Pn	Pn	02 01 47.7	-1.9
RJF				*e*Pg	Pg	02 01 54.7	-3.7
RJF				*e*Sn	Sn	02 02 17.5	-3.6
RJF				*e*Sg	Sg	02 02 28.1	-4.4
RJF	**Les Rejaudoux**	**2.56**	**354**	*e*Pg	Pg	02 01 54.7	-3.7
RJF				*e*Sn	Sn	02 02 17.5	-3.6
RJF				*e*Sg	Sg	02 02 28.1	-4.4
	5.1nm,0.2s						
VIVF	**Saint-Julien-l**	**2.89**	**43**	*e*Pg	Pg	02 02 00.7	-4.4
VIVF				*e*Sg	Sg	02 02 38.1	-5.6
	5.5nm,0.2s						
VIVF	**Saint-Julien-l**	**2.89**	**43**	Pn	Pn	02 01 51.8	-2.6
VIVF				Pg	Pg	02 02 00.7	-4.4
VIVF				Lg		02 02 38.1	
	2.8nm,0.2s						
VIVF	**Saint-Julien-l**	**2.89**	**43**	*e*Pn	Pn	02 01 51.8	-2.6
VIVF				*e*Pg	Pg	02 02 00.7	-4.4
VIVF				*e*Sg	Sg	02 02 38.1	-5.6
VIVF	**Saint-Julien-l**	**2.89**	**43**	*e*Pg	Pg	02 02 00.7	-4.4
VIVF				*e*Sg	Sg	02 02 38.1	-5.6
	2.8nm,0.2s						
SMRF	**Simiane la Rot**	**2.93**	**64**	*e*Pg	Pg	02 02 01.8	-4.1
SMRF				*e*Sg	Sg	02 02 39.2	-5.8
	3.7nm,0.4s						
SMRF	**Simiane la Rot**	**2.93**	**64**	Pn	Pn	02 01 51.2	-3.8
SMRF				Pg	Pg	02 02 01.8	-4.1
SMRF				Lg		02 02 39.2	
	3.7nm,0.4s						
SMRF	**Simiane la Rot**	**2.93**	**64**	*e*Pn	Pn	02 01 51.2	-3.8
SMRF				*e*Pg	Pg	02 02 01.8	-4.1
SMRF				*e*Sg	Sg	02 02 39.2	-5.8
LMR	**La Mourre**	**3.42**	**79**	*e*Pg	Pg	02 02 10.4	-5.2
LMR				*e*Sn	Sn	02 02 38.2	-4.6
LMR				*e*Sg	Sg	02 02 54.2	-6.9
	1.4nm,0.3s						
LMR	**La Mourre**	**3.42**	**79**	Pn	Pn	02 01 58.7	-3.1
LMR				Pg	Pg	02 02 10.4	-5.2
LMR				Sn	Sn	02 02 38.2	-4.6
LMR				Lg		02 02 54.2	
	0.7nm,0.3s						
LMR	**La Mourre**	**3.42**	**79**	*e*Pn	Pn	02 01 58.7	-3.1
LMR				*e*Pg	Pg	02 02 10.4	-5.2
LMR				*e*Sn	Sn	02 02 38.2	-4.6
LMR				*e*Sg	Sg	02 02 54.2	-6.9
TCF	**Toulx Ste Croi**	**3.53**	**3**	*e*Pg	Pg	02 02 12.4	-5.5
TCF				*e*Sg	Sg	02 02 58.2	-6.7
	3.8nm,0.4s						
TCF	**Toulx Ste Croi**	**3.53**	**3**	Pn	Pn	02 02 00.9	-2.6
TCF				Pg	Pg	02 02 12.4	-5.5
TCF				Lg		02 02 58.2	
	1.9nm,0.4s						
TCF	**Toulx Ste Croi**	**3.53**	**3**	*e*Pn	Pn	02 02 00.9	-2.6
TCF				*e*Pg	Pg	02 02 12.4	-5.5
TCF				*e*Sg	Sg	02 02 58.2	-6.7
FRF	**La Foret Royal**	**3.55**	**75**	*e*Pg	Pg	02 02 12.6	-5.7
FRF				*e*Sn	Sn	02 02 41.2	-5.1
FRF				*e*Sg	Sg	02 02 58.7	-7.0
	2.1nm,0.2s						
FRF	**La Foret Royal**	**3.55**	**75**	Pn	Pn	02 02 00.6	-3.2
FRF				Pg	Pg	02 02 12.6	-5.7
FRF				Sn	Sn	02 02 41.2	-5.1
FRF				Lg		02 02 58.7	
	1.1nm,0.2s						
FRF	**La Foret Royal**	**3.55**	**75**	*e*Pn	Pn	02 02 00.6	-3.2
FRF				*e*Pg	Pg	02 02 12.6	-5.7
FRF				*e*Sn	Sn	02 02 41.2	-5.1
FRF				*e*Sg	Sg	02 02 58.7	-7.0
ORIF	**Oris-en-Rattie**	**3.59**	**52**	*e*Pn	Pn	02 02 01.8	-2.5
ORIF				*e*Pg	Pg	02 02 13.6	-5.4
BGF	**Bois d'Agland**	**3.85**	**10**	*e*Pg	Pg	02 02 18.7	-5.6
BGF				*e*Sg	Sg	02 03 08.3	-7.3
	9.8nm,0.3s						
BGF	**Bois d'Agland**	**3.85**	**10**	Pn	Pn	02 02 05.0	-3.0
BGF				Pg	Pg	02 02 18.7	-5.6
BGF				Lg		02 03 08.3	
	4.9nm,0.3s						
BGF	**Bois d'Agland**	**3.85**	**10**	*e*Pn	Pn	02 02 05.0	-3.0
BGF				*e*Pg	Pg	02 02 18.7	-5.6
BGF				*e*Sg	Sg	02 03 08.3	-7.3
MFF	**Saint Martin d**	**4.11**	**340**	*e*Pg	Pg	02 02 23.3	-6.1
MFF				*e*Sn	Sn	02 02 53.8	-6.6
MFF				*e*Sg	Sg	02 03 16.2	-8.0
	2.4nm,0.3s						
MFF	**Saint Martin d**	**4.11**	**340**	Pn	Pn	02 02 09.0	-2.7
MFF				Pg	Pg	02 02 23.3	-6.1
MFF				Sn	Sn	02 02 53.8	-6.6
MFF				Lg		02 03 16.2	
	1.2nm,0.3s						
MFF	**Saint Martin d**	**4.11**	**340**	*e*Pn	Pn	02 02 09.0	-2.7
MFF				*e*Pg	Pg	02 02 23.3	-6.1
MFF				*e*Sn	Sn	02 02 53.8	-6.6
MFF				*e*Sg	Sg	02 03 16.2	-8.0
SMF	**Signal de Mont**	**4.12**	**19**	*e*Pg	Pg	02 02 23.3	-6.3
SMF				*e*Sg	Sg	02 03 16.5	-7.9
	0.8nm,0.3s						
AVF	**Avril sur Loir**	**4.15**	**14**	*e*Pg	Pg	02 02 23.9	-6.4
AVF				*e*Sg	Sg	02 03 19.3	-6.4
	1.2nm,0.2s						
SSF	**Saint Saulge**	**4.44**	**14**	*e*Pg	Pg	02 02 29.4	-6.7
SSF				*e*Sg	Sg	02 03 26.7	-8.6
	0.8nm,0.3s						
LOR	**Lormes**	**4.71**	**16**	*e*Sg	Sg	02 03 34.9	-9.3
	1.4nm,0.3s						
CABF	**La Chapelle**	**4.86**	**36**	*e*Pg	Pg	02 02 37.3	-7.1
CABF				*e*Sg	Sg	02 03 39.5	-10
	0.9nm,0.3s						
PGF	**Pioggiola**	**5.23**	**90**	*e*Pn	Pn	02 02 23.9	-3.7
ESDC	**Sonseca Array**	**5.40**	**237**	Pn	Pn	02 02 28.0	-2.0
	0.4nm,0.3s,baz=56,slow=14,SNR=12						
ESDC	**Sonseca Array**	**5.40**	**237**	Pn	Pn	02 02 28.0	-2.0
GRR	**Gorron**	**5.95**	**342**	*e*Sn	Sn	02 03 38.0	-8.8
LDF	**La Druitiere**	**6.00**	**347**	*e*Pn	Pn	02 02 34.5	-4.0
FLN	**La Foliniere**	**6.23**	**345**	*e*Pn	Pn	02 02 37.7	-4.0
QUIF	**Quistinic**	**6.27**	**327**	*e*Pn	Pn	02 02 38.4	-3.9
ROSF	**Rostrenen**	**6.66**	**329**	*e*Pn	Pn	02 02 43.7	-4.0

WEL 17 03:19:39.1±0.2**, 39.15S×177.98E, h12**^{km}**, ML3.6**/10**, 3C-1D, Error ellipse: s-maj=1.5km s-min=0.8km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KNZ	**Kokohu**	**0.27**	**298**	⇓P*	Pb	03 19 44.6	-0.9
KNZ				S*	Sb	03 19 48.7	-0.9
MWZ	**Matawai**	**0.89**	**336**	⇑P*	Pb	03 19 55.8	-0.2
MWZ				S*	Sb	03 20 08.0	+0.6
PUZ	**Puketiti**	**1.09**	**11**	P*	Pb	03 19 58.9	-0.6
PUZ				S*	Sb	03 20 13.9	+0.3
PUZ				S*	Sb	03 20 13.9	+0.4
URZ	**Urewera**	**1.12**	**322**	⇑P*	Pb	03 19 59.1	-0.8
URZ				S*	Sb	03 20 14.2	0.0
BKZ	**Black Stump Fm**	**1.16**	**269**	⇑P*	Pb	03 20 00.3	-0.3
BKZ				S*	Sb	03 20 15.8	+0.4
PXZ	**Pawanui**	**1.24**	**224**	P*	Pb	03 20 01.4	-0.5
TAZ	**Tarawera**	**1.47**	**308**	PN	Pn	03 20 04.4	-1.2
PATZ	**Paeroa**	**1.55**	**299**	PN	Pn	03 20 06.6	-0.2
MXZ	**Matakaoa Point**	**1.60**	**9**	PN	Pn	03 20 06.2	-1.3
UTU	**Utuhina**	**1.70**	**304**	PN	Pn	03 20 09.9	+0.9
WIZ	**White Island**	**1.73**	**339**	PN	Pn	03 20 10.5	+1.1
MOVZ	**Moawhango**	**1.75**	**261**	PN	Pn	03 20 09.1	-0.5
TSZ	**Takapari Road**	**1.81**	**239**	PN	Pn	03 20 09.0	-1.5
TUVZ	**Tukino**	**1.81**	**265**	PN	Pn	03 20 10.0	-0.5
NGZ	**Ngauruhoe**	**1.85**	**268**	PN	Pn	03 20 10.7	-0.3
WNVZ	**Wahianoa**	**1.86**	**264**	PN	Pn	03 20 10.6	-0.6
FWVZ	**Far West T-bar**	**1.89**	**266**	PN	Pn	03 20 10.8	-0.8
CNZ	**Chateau**	**1.89**	**268**	PN	Pn	03 20 11.1	-0.5
BFZ	**Birch Farm**	**2.03**	**221**	PN	Pn	03 20 11.5	-2.1
MRZ	**Mangatainoka R**	**2.39**	**230**	PN	Pn	03 20 16.6	-2.1
MRZ				SN	Sn	03 20 45.6	-2.6
MTW	**Mount Morrison**	**2.77**	**223**	PN	Pn	03 20 20.6	-3.5
KIW	**Kapiti Island**	**2.92**	**233**	PN	Pn	03 20 23.8	-2.5
PKE	**Pukeiti**	**3.11**	**268**	PN	Pn	03 20 28.7	-0.3
QRZ	**Quartz Range**	**4.51**	**246**	PN	Pn	03 20 44.3	-4.6
THZ	**Tophouse**	**4.67**	**234**	PN	Pn	03 20 46.4	-4.8

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*NEIC **17** 03:32:53.4, 32.71S×71.89W, h15^{km}, ML2.8(GUC), After GUC.*
GUC 17 03:32:53.4±0.8**, 32.71S×71.89W, h15**^{km}±7^{km}**, MD3.8, ML2.8, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**0.79**	**109**	⇑*i*P	Pb	03 33 06.9	-1.4
ROCH				*i* S	Sb	03 33 16.8	-1.6
LCCH	**Las Cruces**	**0.81**	**160**	*e*P	Pb	03 33 07.7	-1.0
JACH	**Jahuel**	**1.10**	**89**	⇓*i*P	Pb	03 33 11.3	-2.2
JACH				*i* S	Sb	03 33 25.0	-2.4
PEL	**Peldehue**	**1.10**	**113**	*e*P	Pb	03 33 11.5	-2.1
PEL				*i* S	Sb	03 33 25.6	-2.1
PEL				AMP		03 33 28.2	
	comp=E,873nm,0.3s						
RCDM	**Rinconada Maip**	**1.20**	**131**	*e*P	Pb	03 33 13.2	-2.1
RCDM				*i* S	Sb	03 33 27.6	-2.7
RCDM				AMP		03 33 33.7	
	comp=E,223nm,0.2s						
LNV	**Longovilo**	**1.30**	**162**	*e*P	Pb	03 33 14.6	-2.5
LNV				*i* S	Sb	03 33 30.2	-3.2
FCH	**Farellones**	**1.48**	**115**	⇓*i*P	Pn	03 33 17.9	-1.8
FCH				*i* S	Sb	03 33 36.4	-2.2
FCH				AMP		03 33 37.1	
	comp=N,136nm,0.2s						
CMCH	**Combarbala**	**1.71**	**27**	*e*P	Pn	03 33 20.7	-2.3
CMCH				*i* S	Sn	03 33 42.6	-2.0
CMCH				AMP		03 33 47.5	
	comp=E,326nm,0.5s						

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*IDC **17** 03:39:07.4±1.6, 5.38S×151.81E, mb3.8/5, mb1 4.1/5, mb1mx4.0/12, mbtmp3.8/5, Error ellipse: s-maj=54.2km s-min=31.2km az=130.0*
ISC 17 03:39:11.4±1.3**, 5.3S**±0.2×**151.7E**±0.3**, h33**^{km}**, n7,** σ**0**^{s}**94**/7**, mb3.8**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WB2	**Warramunga Arr**	**22.24**	**228**	*e*P	**P**	**03 44 08.1**	**+1.2**
WRA	**Warramunga Arr**	**22.25**	**228**	P	**P**	**03 44 06.7**	**-0.3**
	1.7nm,0.5s,mb3.7,baz=52,slow=10.0,SNR=23						
FITZ	**Fitzroy Crossi**	**28.41**	**241**	*e*P	**P**	**03 45 04.1**	**-1.2**
	5.2nm,0.6s,mb4.3						
SONM	**Songino Array**	**66.17**	**328**	P	**P**	**03 49 58.5**	**+0.6**
	0.6nm,0.6s,mb3.8,baz=145,slow=5.4,SNR=8.0						
MKAR	**Makanchi Array**	**79.98**	**319**	P	**P**	**03 51 19.3**	**+0.3**
	0.3nm,0.8s,mb3.3,baz=108,slow=4.6,SNR=4.6						
ILAR	**Eielson Array**	**83.07**	**22**	P	**P**	**03 51 33.2**	**-1.5**
	0.5nm,0.7s,mb3.7,baz=255,slow=4.9,SNR=4.3						
NVAR	**Mina Array Bea**	**93.30**	**52**	P	**P**	**03 52 25.2**	**+0.8**
	0.5nm,0.6s,mb4.1,baz=239,slow=5.3,SNR=6.1						

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*IDC **17** 04:10:47.2±1.3, 7.31N×125.83E, mb3.7/4, mb1 3.9/4, mb1mx3.7/17, mbtmp3.7/4, Error ellipse: s-maj=76.1km s-min=25.4km az=72.0*
*MAN **17** 04:10:49.5, 6.62N×125.65E, h46^{km}, mb4.5, ML3.3, MS3.2*
ISC 17 04:10:50.8±1.1**, 6.73N**±0.09×**125.62E**±0.05**, h62**^{km}±6^{km}**, n13,** σ**0**^{s}**72**/20**, mb3.6**/4**, 1C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DMPH	**Davao City--Mi**	**0.37**	**342**	*e*P	**P**	**04 11 01.6**	**-0.2**
DMPH				*i* S	**S**	**04 11 11.7**	**+1.9**
KCP	**Kidapawan**	**0.60**	**298**	⇓*i*P	**P**	**04 11 03.9**	**-0.1**
KCP				*i* S	**S**	**04 11 12.5**	**-1.3**
MATI	**Mati**	**0.67**	**71**	*e*P	**P**	**04 11 05.2**	**+0.4**
MATI				*e*S	**S**	**04 11 14.9**	**-0.4**
BUKP	**Musuan**	**1.27**	**334**	*e*P	**P**	**04 11 12.8**	**-0.1**
BUKP				*e*S	**S**	**04 11 28.9**	**-0.3**
BIPH	**Bislig**	**1.62**	**27**	⇑*i*P	**P**	**04 11 17.5**	**-0.2**
BIPH				*i* S	**S**	**04 11 36.6**	**-0.9**
CGP	**Cagayan de Oro**	**1.95**	**332**	⇓*e*P	**P**	**04 11 23.2**	**+1.0**
CGP				*e*S	**S**	**04 11 46.0**	**+0.6**
BUTP	**Butuan**	**2.23**	**360**	*e*P	**P**	**04 11 21.7**	**-4.5**
BUTP				*e*S	**S**	**04 11 46.0**	**-6.4**
PAGZ	**Pagadian**	**2.49**	**297**	*e*P	**P**	**04 11 29.6**	**-0.3**
SCPH	**Surigao**	**3.04**	**357**	⇓*e*P	**P**	**04 11 37.5**	**-0.2**
WRA	**Warramunga Arr**	**27.86**	**162**	P	**P**	**04 16 43.7**	**+6.8**
	0.4nm,0.4s,mb3.4,baz=341,slow=11,SNR=8.0						
STKA	**Stephens Creek**	**41.30**	**159**	P	**P**	**04 18 37.7**	**+5.7**
	0.7nm,0.4s,mb3.6,baz=323,slow=6.5,SNR=3.0						
MKAR	**Makanchi Array**	**54.48**	**325**	P	**P**	**04 20 14.2**	**-0.2**
	0.6nm,0.7s,mb3.6,baz=127,slow=8.7,SNR=5.3						
ILAR	**Eielson Array**	**82.89**	**26**	P	**P**	**04 23 10.4**	**+0.5**
	0.7nm,0.9s,mb3.7,baz=251,slow=6.2,SNR=6.2						

IDC 17 04:11:39.3±3.4**,9.99S**×**118.20E,h212**^{km}±51^{km}**,mb3.0**/2**, mb1 3.1**/4**,mb1mx3.0**/14**,mbtmp3.6**/4**,Error ellipse: s-maj=133.2km s-min=12.8km az=46.0,Sumbawa region**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                    Op       ISC       h  m  s    ISC
FITZ  Fitzroy Crossi     10.82 139  P        P         04 14 09.8  0.0
      0.4nm,0.3s,baz=330,slow=15,SNR=12
FITZ                                S        S         04 16 05.2 -2.7
      0.8nm,0.3s,baz=352,slow=18,SNR=10
WRA   Warramunga Arr     18.45 124  P        P         04 15 40.3 -1.1
      0.3nm,0.3s,baz=303,slow=13,SNR=26
WRA                                 S        S         04 18 59.6 +3.4
      0.1nm,0.3s,baz=295,slow=21,SNR=3.7
SONM  Songino Array      58.51 351  P        P         04 21 12.7 -2.7
      0.4nm,0.6s,baz=169,slow=7.3,SNR=4.9
MKAR  Makanchi Array     64.98 334  P        P         04 21 56.9 -1.5
      0.3nm,0.5s,baz=149,slow=6.0,SNR=5.1
```

CSEM ***17*** *04:15:31.6,28.46S×62.65W,h33*^{km}*,mb5.6*
BJI ***17*** *04:16:30.5,28.80S×62.90W,h607*^{km}*,mB5.1*
MOS ***17*** *04:16:30.0±0.9,28.77S×62.83W,h610*^{km}*,mb5.2/41, Error ellipse: s-maj=9.9km s-min=6.5km az=84.2*
HRVD ***17*** *04:16:30.6±0.4,28.90S×62.73W,h621*^{km}*±3*^{km}*,MW5.3/60, Centroid moment Tensor Solution. LP body waves: s60,c87; Half duration: 1*^{s}*1 Moment tensor: Scale 10*^{17} *Nm;* M_{rr}*-0.68±.04;* $M_{\theta\theta}$*-0.13±.06;* $M_{\phi\phi}$*0.81±.07;* $M_{r\theta}$*0.41±.06;* $M_{\theta\phi}$*0.18±.06;* $M_{\phi r}$*0.85±.07; Best double couple:* M_0*1.217×10*^{17} *NP1:*ϕ_s*354°,δ21°,λ-117°. NP2:* ϕ_s*203°,δ71°,λ-80°. Principal axes: T 1.278, Plg25°, Azm285°; N -.123, Plg10°, Azm20°; P -1.156, Plg63°, Azm129°; nsta1 refers to body waves, cutoff=40s.*
NEIC ***17*** *04:16:30.6±0.1,28.81S×62.86W,mb5.0/127 Error ellipse: s-maj=3.7km s-min=3.4km az=97.0*
IDC ***17*** *04:16:31.3±0.4,28.79S×62.84W,h613*^{km}*±4*^{km}*,mb4.4/19, mb1 4.5/23,mb1mx4.5/25,mbtmp5.4/23,Error ellipse: s-maj=10.0km s-min=7.2km az=75.0*
ISC 17 04:16:29.8±0.1**,28.79S**±0.02×**62.81W**±0.03**,h608**^{km}**, h608**^{km}±.8^{km}**:pP-P,n479,**σ**0**^{s}**83**/371**,mb4.9**/147**,22C-87D, Santiago del Estero Province**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                    Op       ISC       h  m  s    ISC
CPUP  Villa Florida       5.44  65  eP       P         04 18 09.0 +1.9
      1µm,0.5s
CPUP  Villa Florida       5.44  65  eP       P         04 18 09.0 +1.9
CPUP                                pmax     pmax
      comp=Z,1µm,0.5s
CFAA  Coronel Fontan      5.47 238  P        P         04 18 07.4  0.0
      comp=Z,12nm,0.3s,baz=63,slow=7.9,SNR=1571
CFAA                                S        S         04 19 24.9  0.0
      comp=Z,22nm,0.3s,baz=251,slow=12,SNR=24
CFAA                                ScP                04 26 26.9
      comp=Z,0.1nm,0.3s,baz=286,slow=2.4,SNR=3.2
CFAA  Coronel Fontan      5.47 238  P        P         04 18 07.4  0.0
CFAA                                S        S         04 19 24.9  0.0
CFAA                                ScP                04 26 26.9
ZON   Zonda               5.78 240⇓iP       P         04 18 13.6 +3.7
ZON                                 eS       S         04 19 36.9 +7.4
MDZ   Mendoza             6.61 230  eP       P         04 18 16.5 -0.6
MDZ                                 PP       PP        04 18 36.3  +18
MDZ                                 LQ                 04 20 46.4
MDZ                                 LR       LR        04 21 12.9
CPCH  Copiapo             6.82 280  eP       P         04 18 16.8 -2.1
CPCH                                i S      S         04 19 50.1 +4.3
TLL   Tololo Astrono      7.11 257⇓iP       P         04 18 22.3 +0.8
TLL                                 i S      S         04 19 51.4 +0.9
CDCH  Caldera             7.30 282⇓iP       P         04 18 22.8 -0.5
CDCH                                S        S         04 19 52.3 -1.5
CRCH  Chaqaral            7.35 287  eP       P         04 18 23.9 +0.2
LPA   La Plata            7.38 147α iP       P         04 18 24.0  0.0
      comp=Z,3µm,0.9s
LPA                                 i S      S         04 19 57.0 +2.0
CMCH  Combarbala          7.50 250⇓iP       P         04 18 24.6 -0.5
CMCH                                i S      S         04 19 56.9 -0.1
SPCH  San Pedro de A      7.61 319⇓eP       P         04 18 27.1 +1.0
SPCH                                i S      S         04 20 00.8 +1.9
JACH  Jahuel              7.74 238⇓iP       P         04 18 27.6 +0.3
FCH   Farellones          7.85 233⇑iP       P         04 18 29.3 +0.9
FCH                                 eS       S         04 20 04.6 +1.6
CPN1  Cerro Paranal       7.96 300⇓iP       P         04 18 29.6 +0.2
CPN1                                i S      S         04 20 05.1 +0.2
PEL   Peldehue            8.04 235⇓iP       P         04 18 29.8 -0.3
PEL                                 eS       S         04 20 06.1 -0.1
FSR   Penalolen           8.10 233  eP       P         04 18 30.8 +0.1
FSR   Penalolen           8.10 233  P        P         04 18 30.8 +0.1
ROCH  El Roble            8.19 237⇓iP       P         04 18 31.1 -0.4
ROCH                                i S      S         04 20 09.1 +0.2
ANTU  Antumapu            8.22 233  eP       P         04 18 31.6 -0.2
ANTU  Antumapu            8.22 233  P        P         04 18 31.6 -0.2
RCDM  Rinconada Maip      8.30 234⇑iP       P         04 18 32.3 -0.2
CHCH  Chadas Angostu      8.44 231⇓iP       P         04 18 33.7 -0.2
TACH  Talagante           8.48 233⇓iP       P         04 18 33.6 -0.7
TACH                                i S      S         04 20 15.2 +1.3
ANCH  Antofagasta         8.51 305⇓iP       P         04 18 34.4 -0.1
CICH  Cipreses            8.52 228⇓iP       P         04 18 34.6  0.0
CEN1  Los Morros          8.55 307⇑iP       P         04 18 35.0 +0.2
CEN1                                i S      S         04 20 17.3 +2.3
LCCH  Las Cruces          8.84 236⇓iP       P         04 18 37.0 -0.7
LCCH                                i S      S         04 20 19.6 -0.5
LCCH  Las Cruces          8.84 236  P        P         04 18 37.0 -0.7
LNV   Longovilo           8.98 233⇑iP       P         04 18 38.0 -1.0
SFDO  San Fernando        9.09 228⇓iP       P         04 18 39.4 -0.6
TRQA  Tornquist           9.27 176⇑iP       P         04 18 41.4 -0.3
      comp=Z,179nm,0.7s
TRQA                                eS       S         04 20 26.8 -0.8
LNCH  Linares            10.24 224  eP       P         04 18 57.0 +5.9
CCHI  Chillan            11.03 223⇑iP       P         04 18 58.0 -0.7
CCHI                                i S      S         04 20 59.4 +0.8
SIV   San Ignacio        12.84   8  P        P         04 19 17.3 +0.6
      comp=Z,11nm,0.3s,baz=200,slow=8.2,SNR=314
SIV                                 S        S         04 21 35.2 +4.6
      baz=222,slow=20,SNR=3.6
SIV                                 ScP                04 26 37.0
      comp=Z,0.5nm,0.3s,baz=249,slow=1.0,SNR=6.9
SIV                                 ScS      ScS       04 30 12.3 -1.0
      comp=Z,0.1nm,0.3s,baz=271,slow=20,SNR=5.5
SIV                                 PKiKP              04 31 55.8
      comp=Z,0.4nm,0.3s,baz=317,slow=1.7,SNR=8.0
LPAZ  La Paz             13.37 337  P        P         04 19 23.1 +1.2
      comp=Z,26nm,0.3s,baz=114,slow=5.9,SNR=576
LPAZ                                S        S         04 21 43.2 +3.0
      comp=Z,4.9nm,0.3s,baz=242,slow=22,SNR=5.7
LPAZ                                ScP                04 26 38.6
      comp=Z,0.5nm,0.3s,baz=172,slow=3.9,SNR=7.5
LPAZ                                ScS      ScS       04 30 15.1 +0.5
      comp=Z,0.0nm,0.3s,baz=247,slow=23,SNR=12
LPAZ                                PKiKP              04 31 57.1
      comp=Z,0.2nm,0.3s,baz=37,slow=6.7,SNR=6.1
LPAZ  La Paz             13.37 337  eP       P         04 19 23.0 +1.1
      comp=Z,110nm,0.6s
LPAZ                                eS       S         04 21 41.5 +1.3
LPAZ  La Paz             13.37 337  eP       P         04 19 23.0 +1.1
LPAZ                                eS       S         04 21 41.5 +1.3
LPAZ                                pmax     pmax
      comp=Z,110nm,0.6s
PLCA  Paso Flores        13.50 206  P        P         04 19 22.2 -0.9
      comp=Z,11nm,0.3s,baz=24,slow=10,SNR=544
PLCA                                S        S         04 21 44.0 +1.6
      baz=130,slow=21,SNR=3.6
PLCA                                PcP      PcP       04 24 00.9 -1.1
      comp=Z,1.6nm,0.3s,baz=60,slow=2.1,SNR=5.5
PLCA                                ScP                04 26 37.2
      comp=Z,1.0nm,0.3s,baz=46,slow=0.6,SNR=11
PLCA                                ScS      ScS       04 30 12.9 -1.9
      comp=Z,0.1nm,0.3s,baz=56,slow=24,SNR=5.1
PLCA                                PKiKP              04 31 56.3
      comp=Z,0.1nm,0.3s,baz=324,slow=3.4,SNR=4.0
PLCA  Paso Flores        13.50 206⇑iP       P         04 19 21.8 -1.3
      comp=Z,152nm,0.7s
PLCA                                eS       S         04 21 43.9 +1.6
PLCA  Paso Flores        13.50 206⇑iP       P         04 19 21.8 -1.3
PLCA                                eS       S         04 21 43.9 +1.6
PLCA                                pmax     pmax
      comp=Z,152nm,0.7s
VLCH  Valdivia           13.96 215  eP       P         04 19 18.9 -8.7
ARE   Arequipa           14.65 325⇑iP       P         04 19 35.5 +1.1
ARE                                 eS       S         04 22 19.0  +16
BDFB  Brasilia           18.91  49  P        P         04 20 15.3 +0.7
      comp=Z,16nm,0.3s,baz=229,slow=5.8,SNR=159
BDFB                                S        S         04 23 14.7 -0.5
      comp=Z,1.4nm,0.3s,baz=93,slow=21,SNR=1.8
BDFB                                PcP      PcP       04 24 09.8 -0.9
      comp=Z,2.7nm,0.3s,baz=160,slow=8.5,SNR=3.6
BDFB                                ScP                04 26 48.5
      comp=Z,1.5nm,0.3s,baz=27,slow=5.3,SNR=3.2
BAO   Brasilia Array     18.93  49  P        P         04 20 15.0 +0.2
CAM4  Nova Friburgo      19.34  75  eP       P         04 20 19.6 +1.1
CAM4                                i                  04 20 20.8
CAM4                                i                  04 20 21.4
CAM4                                i                  04 20 25.5
SAML  Samuel             19.74 359⇑eP       P         04 20 21.7 -0.5
      comp=Z,43nm,0.5s
NNA   Nana               21.24 319⇑iP       P         04 20 34.8 -1.0
      comp=Z,315nm,1.3s,mb5.8
EFI   East Falkland      23.14 172  eP       P         04 20 50.5 -2.1
      comp=Z,83nm,0.9s,mb5.4
EFI   East Falkland      23.14 172  eP       P         04 20 50.5 -2.1
EFI                                 pmax     pmax
      comp=Z,83nm,0.9s,mb5.4
USHA  Ushuaia            26.34 187  P        P         04 21 19.1 -1.7
      comp=Z,35nm,0.6s,mb5.2,baz=355,slow=6.4,SNR=55
USHA                                ScP                04 27 07.1
      comp=Z,5.1nm,0.6s,baz=8.8,slow=5.2,SNR=7.3
RCBR  Riachuelo          34.20  53  eP       P         04 22 28.9 +1.0
      comp=Z,39nm,0.9s,mb5.0
RCBR                                ePcP     PcP       04 24 46.5 -0.6
ROSC  El Rosal           35.24 340  P        P         04 22 36.8 +0.3
      comp=Z,21nm,0.7s,mb4.9,baz=97,slow=9.4,SNR=12
ROSC                                ScP                04 27 38.4
      comp=Z,6.5nm,0.6s,baz=99,slow=21,SNR=6.3
PMSA  Palmer Station     36.01 181  eP       P         04 22 42.0 -0.3
      comp=Z,91nm,1.0s,mb5.3
SDV   Santo Domingo      38.21 347  P        P         04 22 59.6 -1.2
      comp=Z,26nm,0.3s,mb5.2,SNR=42
SDV                                 ScP                04 27 49.6
      comp=Z,7.9nm,0.2s,baz=120,SNR=4.8
SDV   Santo Domingo      38.21 347  eP       P         04 22 58.9 -1.9
      comp=Z,60nm,0.9s,mb5.1
PAYG  Puerto Ayora       38.35 312⇑iP       P         04 23 02.1 +0.2
      comp=Z,196nm,1.3s,mb5.5
PAYG                                eScP               04 27 49.4
RPN   Rapa Nui           40.93 261  P        P         04 23 23.3 +0.8
      comp=Z,33nm,0.4s,mb5.2,baz=249,slow=1.9,SNR=4.9
MVM   Montagne Vaucl     43.13   3⇓eP       P         04 23 38.9 -1.0
FDF   Fort de France     43.29   2⇑eP       P         04 23 40.2 -1.0
CRM   Caravelle          43.32   3⇓eP       P         04 23 40.1 -1.4
JTS   JuntasAbangare     44.35 328  P        P         04 23 49.9 +0.4
      comp=Z,56nm,0.8s,mb5.1,baz=176,slow=0.9,SNR=39
JTS                                 ScP                04 28 13.9
      comp=Z,9.3nm,0.6s,baz=290,slow=4.8,SNR=8.3
JTS   JuntasAbangare     44.35 328⇑iP       P         04 23 49.7 +0.2
      comp=Z,85nm,0.9s,mb5.3
JTS   JuntasAbangare     44.35 328⇑iP       P         04 23 49.7 +0.2
JTS                                 pmax     pmax
      comp=Z,85nm,0.9s
CPD   Cerro la Pandu     46.65 356  eP       P         04 24 04.4 -2.6
SJG   San Juan           46.73 356  P        P         04 24 05.5 -2.1
      comp=Z,27nm,0.7s,mb4.9,baz=107,slow=5.3,SNR=6.5
SJG   San Juan           46.73 356  eP       P         04 24 05.2 -2.4
VNA3  Neumayer Olymp     51.41 161  e        P         04 24 42.7 +1.2
VNA3  Neumayer Olymp     51.41 161  e        tx        04 25 44.2
VNA3  Neumayer Olymp     51.41 161⇓iP       P         04 24 41.1 -0.4
VNA3                                e                  04 24 42.7
VNA3                                e                  04 25 44.2
VNA3                                e        pP        04 26 33.8 +0.5
VNA3                                e                  04 27 34.4
VNA1  Neumayer--Stat     51.58 160  e        P         04 24 44.5 +1.9
VNA1  Neumayer--Stat     51.58 160  e        tx        04 25 45.4
VNA1  Neumayer--Stat     51.58 160⇓iP       P         04 24 42.8 +0.2
VNA1                                e                  04 24 44.5
VNA1                                e                  04 25 45.4
VNA1                                e        pP        04 26 34.2 -0.4
VNA2  Neumayer--Watz     51.96 160  e        P         04 24 46.6 +1.3
VNA2  Neumayer--Watz     51.96 160  e        tx        04 25 46.3
VNA2  Neumayer--Watz     51.96 160  eS       S         04 31 23.5 -0.7
VNA2  Neumayer--Watz     51.96 160⇓iP       P         04 24 45.1 -0.2
VNA2                                e                  04 24 46.6
VNA2                                e                  04 25 46.3
VNA2                                e        pP        04 26 37.8 +0.3
VNA2                                e                  04 27 41.7
VNA2                                eS       S         04 31 23.5 -0.7
VNA2                                e                  04 31 32.8
SNAA  Sanae              53.60 160  e        P         04 24 58.0 +1.1
SNAA  Sanae              53.60 160  e        PcP       04 25 52.3 -1.2
SNAA  Sanae              53.60 160  eS       S         04 31 44.3 -1.5
SNAA  Sanae              53.60 160  P        P         04 24 56.2 -0.7
      comp=Z,43nm,0.8s,mb4.8,baz=289,slow=6.2,SNR=251
SNAA                                PcP      PcP       04 25 52.4 -1.1
      comp=Z,16nm,0.8s,baz=268,slow=4.5,SNR=6.5
SNAA                                pP       pP        04 26 50.5 +0.2
      comp=Z,40nm,1.2s,baz=303,slow=8.2,SNR=8.6
SNAA                                S        S         04 31 44.7 -1.1
      comp=Z,2.5nm,1.2s,baz=142,slow=24,SNR=7.0
SNAA  Sanae              53.60 160⇓iP       P         04 24 56.0 -0.9
SNAA                                e                  04 24 58.0
SNAA                                e                  04 25 52.3
SNAA                                e        pP        04 26 50.5 +0.2
SNAA                                eS       S         04 31 44.3 -1.5
SNAA                                e                  04 31 53.4
SNAA  Sanae              53.60 160⇓iP       P         04 24 56.0 -0.9
SNAA                                e                  04 25 52.3
SNAA                                e        pP        04 26 50.5 +0.2
SNAA                                eS       S         04 31 44.3 -1.5
SNAA                                e                  04 31 53.4
MAIT  Maitri             58.03 158⇓iP       P         04 25 27.2 -0.2
NVL   N'lazarevskaya     58.06 158⇓iP       P         04 25 26.6 -1.0
NVL                                 e                  04 28 29.5
NVL                                 pmax     pmax
      comp=Z,18nm,0.7s,mb4.3
BBSR  BB Station         60.85 358  eP       P         04 25 46.0 -0.5
      comp=Z,29nm,0.6s,mb4.7
QSPA  South Pole Qui     61.44 180⇓iP       P         04 25 49.7  0.0
      comp=Z,168nm,0.8s,mb5.3
RKT   Rikitea            64.25 257  eS       S         04 33 57.9 -2.0
LIC   Lamto              65.56  67⇓iP       P         04 26 16.0 -0.8
      comp=Z,149nm,0.7s,mb5.3
DBIC  Dimbokro           65.96  67  P        P         04 26 18.8 -0.5
      comp=Z,64nm,0.4s,mb5.4,baz=212,slow=6.9,SNR=322
DBIC  Dimbokro           65.96  67⇓iP       P         04 26 18.6 -0.7
      comp=Z,104nm,0.7s,mb5.4
DBIC  Dimbokro           65.96  67⇓iP       P         04 26 18.6 -0.6
DBIC                                pmax     pmax
      comp=Z,104nm,0.7s
CPCT  Cooper Cave        67.10 341  eP       P         04 26 24.4 -1.4
CPCT                                ePcP     PcP       04 26 47.2 -1.4
CPCT                                epP      pP        04 28 27.2 -0.6
SWET  Sewanee            67.30 340  eP       P         04 26 24.7 -2.4
SWET                                epP      pP        04 28 27.7 -1.5
NATX  Nacogdoches        67.41 331  eP       P         04 26 27.9 +0.1
      comp=Z,81nm,1.0s,mb5.1
BLA   Blacksburg         67.70 345  eP       P         04 26 29.0 -0.5
      comp=Z,26nm,1.0s,mb4.6
BLA   Blacksburg         67.70 345  eP       P         04 26 29.0 -0.4
BLA                                 pmax     pmax
      comp=Z,26nm,1.0s,mb4.6
SYO   Syowa Base         67.73 158 ⇓P        P         04 26 28.8 -0.3
SYO   Syowa Base         67.73 158 ⇑PcP      PcP       04 26 47.2 -3.6
SYO   Syowa Base         67.73 158⇓iP       P         04 26 28.8 -0.3
SYO                               ⇑ePcP     PcP       04 26 47.2 -3.6
SYO                                 eS       S         04 34 39.1 -0.9
PLAL  Pickwick Lake      67.77 338  eP       P         04 26 28.3 -1.6
      comp=Z,35nm,0.8s,mb4.8
PLAL                                epP      pP        04 28 30.2 -2.1
OXF   Oxford             67.80 336  eP       P         04 26 28.4 -1.6
      comp=Z,57nm,1.0s,mb5.0
OXF   Oxford             67.80 336  eP       P         04 26 28.5 -1.6
OXF                                 pmax     pmax
      comp=Z,57nm,1.0s,mb5.0
FWV   Forest Hill        68.14 345  eP       P         04 26 28.9 -3.2
JCT   Junction City      68.69 326  eP       P         04 26 34.5 -1.0
      comp=Z,74nm,1.4s,mb4.9
JCT   Junction City      68.69 326  eP       P         04 26 34.5 -1.0
JCT                                 pmax     pmax
      comp=Z,74nm,1.4s,mb4.9
WVT   Waverly            68.73 338  eP       P         04 26 33.8 -1.9
      comp=Z,20nm,0.9s,mb4.6
WVT                                 epP      pP        04 28 36.9 -1.6
WVT   Waverly            68.73 338  eP       P         04 26 33.8 -1.9
WVT                                 e*PP     pP        04 28 36.9 -1.6
WVT                                 pmax     pmax
      comp=Z,20nm,0.9s,mb4.5
GNAR  Gosnell            69.32 337  eP       P         04 26 38.7 -0.5
      comp=Z,340nm,1.1s,mb5.7
GNAR                                epP      pP        04 28 42.5 +0.2
MIAR  Mount Ida          69.38 333  eP       P         04 26 38.7 -0.8
      comp=Z,7.0nm,0.9s,mb4.1
MIAR  Mount Ida          69.38 333  eP       P         04 26 38.7 -0.8
MIAR                                pmax     pmax
      comp=Z,7.0nm,0.9s,mb4.1
MVL   Millersville       69.58 349  eP       P         04 26 40.3 -0.4
SBA   Scott Base         69.66 190  eP       P         04 26 40.5  0.0
      comp=Z,40nm,1.1s,mb4.8
SBA   Scott Base         69.66 190  eP       P         04 26 40.5  0.0
SBA                                 pmax     pmax
      comp=Z,40nm,1.1s,mb4.8
LTX   Lajitas            69.75 322  eP       P         04 26 40.8 -0.9
      comp=Z,12nm,1.1s,mb4.2
LTX   Lajitas            69.75 322  eP       P         04 26 40.8 -1.0
LTX                                 pmax     pmax
      comp=Z,12nm,1.1s,mb4.2
TXAR  Lajitas Array      69.75 322  P        P         04 26 41.2 -0.6
      comp=Z,4.4nm,0.5s,mb4.2,baz=152,slow=7.7,SNR=92
TXAR                                PP       PP        04 29 28.9 +2.1
      comp=Z,1.4nm,1.1s,baz=162,slow=4.0,SNR=3.5
TXAR                                PKP2bc             04 54 38.1
      comp=Z,2.3nm,1.0s,baz=270,slow=2.5,SNR=12
TXAR  Lajitas Array      69.75 322  P        P         04 26 41.2 -0.6
TXAR                                PP       PP        04 29 28.9 +2.1
TXAR                               ⇑e                  04 54 38.1
PARMO Parma              69.86 337  eP       P         04 26 40.6 -1.7
PARMO                               epP      pP        04 28 45.4 -0.3
WCI   Wyandotte Cave     70.20 341  eP       P         04 26 42.7 -1.5
      comp=Z,7.4nm,0.8s,mb4.2
WCI   Wyandotte Cave     70.20 341  eP       P         04 26 42.7 -1.5
WCI                                 pmax     pmax
      comp=Z,7.0nm,0.8s,mb4.1
SUR   Sutherland         70.25 117  P        P         04 26 45.8 +1.1
      comp=Z,93nm,0.5s,mb5.4,baz=239,slow=6.4,SNR=169
SUR   Sutherland         70.25 117  eP       P         04 26 45.6 +0.9
      comp=Z,104nm,0.6s,mb5.4
VNDA  Vanda              70.62 189  eP       P         04 26 46.4 +0.3
      comp=Z,45nm,0.9s,mb5.0
VNDA  Vanda              70.62 189  eP       P         04 26 46.4 +0.3
VNDA                                pmax     pmax
      comp=Z,45nm,0.9s
CHIE  El Hierro          70.73  41  P        P         04 26 47.2 -0.3
      comp=Z,42nm,0.9s,mb5.0
ACSO  Alum Creek Sta     71.18 344  eP       P         04 26 48.9 -1.1
CCM   Cathedral Cave     71.62 337  eP       P         04 26 51.2 -1.4
      comp=Z,12nm,0.8s,mb4.5
CCM                                 epP      pP        04 28 53.4 -3.4
CCM   Cathedral Cave     71.62 337  eP       P         04 26 51.2 -1.3
CCM                                 e*PP     pP        04 28 53.4 -3.4
CCM                                 pmax     pmax
      comp=Z,12nm,0.8s,mb4.5
WMOK  Wichita Mounta     71.74 329  eP       P         04 26 51.9 -1.4
      comp=Z,32nm,1.4s,mb4.7
WMOK                                epP      pP        04 28 55.9 -1.7
WMOK  Wichita Mounta     71.74 329  eP       P         04 26 51.9 -1.4
WMOK                                e*PP     pP        04 28 55.9 -1.7
WMOK                                pmax     pmax
      comp=Z,32nm,1.4s,mb4.7
CCAN  Las Canadas        71.90  42  P        P         04 26 54.2  0.0
      comp=Z,20nm,0.7s,mb4.8
GDL2  Guadalupe Moun     72.37 324  eP       P         04 26 56.2 -0.7
MNTX  Cornudas Mount     72.51 323  eP       P         04 26 55.5 -2.3
      comp=Z,12nm,0.8s,mb4.5
MNTX                                epP      pP        04 29 00.6 -1.8
CPRX  Cap Rock           72.78 325  eP       P         04 26 58.6 -0.7
TSUM  Tsumeb             72.84 103  P        P         04 27 00.2 +0.4
      comp=Z,56nm,0.8s,mb5.1,baz=223,slow=6.5,SNR=86
TSUM  Tsumeb             72.84 103  eP       P         04 26 59.4 -0.4
      comp=Z,22µm,3.0s
LBNH  Lisbon             73.15 353  eP       P         04 27 01.5 +0.4
      comp=Z,30nm,0.7s,mb4.9
LBNH  Lisbon             73.15 353  eP       P         04 27 01.5 +0.4
LBNH                                pmax     pmax
      comp=Z,30nm,0.7s,mb4.9
MIV   Mineville/With     73.17 352  eP       P         04 27 01.1 -0.2
CFTV  Fuerteventura      73.54  44  P        P         04 27 03.6  0.0
      comp=Z,19nm,0.8s,mb4.7
KSU1  Kansas State U     74.54 333  eP       P         04 27 07.9 -1.1
LFA   Lagoa do Fogo      74.88  30  eP       P         04 27 09.9 -1.0
BNM   Barren Site        75.08 324  eP       P         04 27 12.2 +0.1
LPM   Los Pinos Moun     75.20 324  eP       P         04 27 13.1 +0.3
LPM                                 epP      pP        04 29 19.0 +0.2
BOSA  Boshof             75.27 115  P        P         04 27 13.2 -0.1
      comp=Z,121nm,0.7s,mb5.6,baz=251,slow=4.5,SNR=317
BOSA  Boshof             75.27 115  eP       P         04 27 12.8 -0.4
      comp=Z,129nm,0.8s,mb5.5
BOSA  Boshof             75.27 115  eP       P         04 27 12.8 -0.5
BOSA                                pmax     pmax
      comp=Z,129nm,0.8s,mb5.5
LENM  Lemitar            75.27 323  eP       P         04 27 13.5 +0.4
CBKS  Cedar Bluff        75.58 331  eP       P         04 27 14.8 +0.1
      comp=Z,55nm,1.1s,mb4.9
CBKS                                epP      pP        04 29 20.1 -0.8
CBKS  Cedar Bluff        75.58 331  eP       P         04 27 14.8  0.0
CBKS                                e*PP     pP        04 29 20.1 -0.8
CBKS                                pmax     pmax
      comp=Z,55nm,1.1s,mb4.9
ANMO  Albuquerque        75.61 324  eP       P         04 27 15.2 +0.2
      comp=Z,17nm,0.9s,mb4.5
ANMO                                epP      pP        04 29 19.9 -1.3
ANMO                                ePP      PP        04 30 16.4 +0.4
ANMO  Albuquerque        75.61 324c iP       P         04 27 15.5 +0.5
ANMO                                i *PP    pP        04 29 21.1 -0.1
ANMO                                i *SP    sP        04 30 18.0 -3.9
MAW   Mawson             75.74 161  P        P         04 27 15.1 +0.1
      comp=Z,103nm,0.9s,mb5.3,baz=221,slow=6.2,SNR=74
MAW                                 pP       pP        04 29 20.7 -0.6
      comp=Z,12nm,0.8s,baz=222,slow=8.1,SNR=5.8
TUC   Tucson             75.95 320  eP       P         04 27 16.8 -0.2
      comp=Z,16nm,1.1s,mb4.4
TUC                                 epP      pP        04 29 23.9 +0.6
TUC   Tucson             75.95 320  eP       P         04 27 16.8 -0.2
TUC                                 e*PP     pP        04 29 23.9 +0.6
TUC                                 pmax     pmax
      comp=Z,16nm,1.1s,mb4.4
TBI   Tubuai             76.36 251  eS       S         04 36 16.3 +0.1
TBI                                 eLR      LR        04 51 37.9
      comp=Z,139nm,24.2s
LBTB  Lobatse            77.08 111  eP       P         04 27 23.1 -0.1
      comp=Z,146nm,0.6s,mb5.6
LBTB  Lobatse            77.08 111  eP       P         04 27 23.1 -0.1
LBTB                                pmax     pmax
      comp=Z,146nm,0.6s,mb5.6
SDCO  Great Sand Dun     77.33 327  eP       P         04 27 24.6 +0.3
      comp=Z,22nm,1.1s,mb4.5
WUAZ  Wupatki            78.65 321  eP       P         04 27 31.7 +0.4
      comp=Z,51nm,1.4s,mb4.7
WUAZ                                epP      pP        04 29 40.0 +1.2
PPT   Papeete            78.99 256  eS       S         04 36 41.6 -2.0
PPT                                 eLR      LR        04 52 43.8
      comp=Z,64nm,27.5s
ISCO  Idaho Springs      79.01 328  eP       P         04 27 34.0 +0.9
      comp=Z,26nm,1.3s,mb4.4
ISCO                                epP      pP        04 29 41.5 +0.8
ISCO  Idaho Springs      79.01 328  eP       P         04 27 34.0 +0.9
ISCO                                e*PP     pP        04 29 41.6 +0.9
ISCO                                pmax     pmax
      comp=Z,26nm,1.3s,mb4.4
PV01  Paradox Valley     79.15 325  eP       P         04 27 34.9 +1.0
SMCO  Snowmass           79.17 327  eP       P         04 27 35.2 +1.3
      comp=Z,30nm,1.1s,mb4.5
PV10  Paradox Valley     79.57 325  eP       P         04 27 36.3 +0.2
BAR   Barrett            79.68 316  eP       P         04 27 36.6 -0.2
BAR                                 epP      pP        04 29 44.4 -0.3
PFO   Pinyon Flat Ob     80.20 317  eP       P         04 27 39.6 +0.2
      comp=Z,22nm,1.3s,mb4.3
PFO                                 epP      pP        04 29 46.2 -1.3
PFO   Pinyon Flat Ob     80.20 317  eP       P         04 27 39.7 +0.3
PFO                                 e*PP     pP        04 29 46.2 -1.3
PFO                                 pmax     pmax
      comp=Z,22nm,1.3s,mb4.3
NEN   Nelson             80.69 319  eP       P         04 27 41.5 -0.4
NEN                                 epP      pP        04 29 50.4 +0.3
MSU   Marysvale          81.30 323  eP       P         04 27 45.9 +1.0
MSU                                 epP      pP        04 29 54.1 +0.7
MVU   Marysvale          81.31 323  eP       P         04 27 45.9 +0.9
      comp=Z,23nm,1.0s,mb4.6
MVU                                 epP      pP        04 29 54.1 +0.6
TMUT  Trail Mountain     81.37 324  eP       P         04 27 45.4 +0.2
ARUT  Antelope Range     81.44 322  eP       P         04 27 46.2 +0.6
ARUT                                epP      pP        04 29 55.8 +1.6
MPU   Maple Canyon       82.13 324  eP       P         04 27 49.6 +0.5
      comp=Z,4.3nm,0.8s,mb4.0
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MPU				*e*pP	pP	04 29 58.2	+0.3
DAU	**Daniels Canyon**	**82.23**	**325**	*e*P	**P**	**04 27 50.4**	**+0.7**
DAU				*e*pP	pP	04 29 59.0	+0.6
TPNV	**Topopah Spring**	**82.41**	**320**	*e*P	**P**	**04 27 51.4**	**+0.8**
	comp=Z,13nm,1.0s,mb4.4						
TPNV				*e*pP	pP	04 29 59.8	+0.3
TPNV	**Topopah Spring**	**82.41**	**320**	*e*P	**P**	**04 27 51.4**	**+0.8**
TPNV				*e**PP	pP	04 29 59.8	+0.3
TPNV				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.4						
DAC	**Darwin (Calif)**	**82.72**	**318**	*e*P	**P**	**04 27 52.4**	**+0.3**
	comp=Z,17nm,0.9s,mb4.6						
DAC				*e*pP	pP	04 30 00.1	-1.1
DAC	**Darwin (Calif)**	**82.72**	**318**	*e*P	**P**	**04 27 52.4**	**+0.3**
DAC				*e**PP	pP	04 30 00.1	-1.1
DAC				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.6						
TCUT	**Toone Canyon**	**82.83**	**325**	*e*P	**P**	**04 27 53.1**	**+0.5**
TCUT				*e*pP	pP	04 30 03.1	+1.4
DUG	**Dugway**	**82.87**	**324**	*e*P	**P**	**04 27 53.2**	**+0.4**
	comp=Z,3.6nm,0.8s,mb4.0						
DUG				pP	pP	04 30 02.2	+0.4
DUG	**Dugway**	**82.87**	**324**	*e*P	**P**	**04 27 53.2**	**+0.4**
DUG				*PP	pP	04 30 02.3	+0.4
DUG				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
PDAR	**Pinedale Array**	**83.18**	**327**	P	**P**	**04 27 54.5**	**+0.2**
	comp=Z,4.3nm,0.8s,mb4.0,baz=136,slow=6.6,SNR=32						
PDAR				pP	pP	04 30 04.2	+0.7
	comp=Z,2.9nm,0.5s,baz=128,slow=7.4,SNR=11						
PDAR				PKKPbc		04 46 09.8	
	comp=Z,0.6nm,0.3s,baz=206,slow=1.2,SNR=5.4						
PTEO	**Sao Teotonio**	**83.19**	**40**	*e*P	**P**	**04 27 55.4**	**+1.0**
	comp=Z,101nm,0.9s,mb5.3						
HWUT	**Hardware Ranch**	**83.28**	**325**	*e*P	**P**	**04 27 54.5**	**-0.3**
	comp=Z,40nm,1.2s,mb4.8						
HWUT				*e*pP	pP	04 30 03.8	-0.2
SCHQ	**Schefferville**	**83.35**	**358**	P	**P**	**04 27 54.6**	**-0.2**
	comp=Z,18nm,0.7s,mb4.7,baz=176,slow=4.0,SNR=40						
SCHQ				pP	pP	04 30 05.2	+1.1
	comp=Z,9.2nm,0.9s,baz=63,slow=17,SNR=3.3						
SCHQ	**Schefferville**	**83.35**	**358**	*e*P	**P**	**04 27 54.0**	**-0.9**
	comp=Z,24nm,0.8s,mb4.8						
SPUT	**South Promonto**	**83.50**	**325**	*e*P	**P**	**04 27 55.5**	**-0.4**
SPUT				*e*pP	pP	04 30 04.8	-0.4
LSZ	**Lusaka**	**83.64**	**104**	*e*P	**P**	**04 27 58.6**	**+1.4**
	comp=Z,147nm,0.9s,mb5.5						
LSZ				*e*pP	pP	04 30 06.7	+0.2
LSZ	**Lusaka**	**83.64**	**104**	*e*P	**P**	**04 27 58.6**	**+1.5**
LSZ				*e**PP	pP	04 30 06.7	+0.2
LSZ				pmax	pmax		
	comp=Z,147nm,0.9s,mb5.5						
TPH	**Tonopah**	**83.75**	**320**	*e*P	**P**	**04 27 57.5**	**+0.3**
	comp=Z,17nm,1.1s,mb4.5						
TPH				*e*pP	pP	04 30 08.0	+1.4
TPH	**Tonopah**	**83.75**	**320**	*e*P	**P**	**04 27 57.5**	**+0.3**
TPH				*e**PP	pP	04 30 08.0	+1.4
TPH				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.5						
PTRM	**Twissleman Ran**	**83.85**	**316**	*e*P	**P**	**04 27 58.7**	**+0.9**
PLOU	**Loures**	**83.89**	**39**	*e*P	**P**	**04 27 58.1**	**+0.3**
	comp=Z,78nm,1.6s,mb5.0						
EGRO	**El Granado**	**83.89**	**41**	P	**P**	**04 27 58.6**	**+0.7**
	comp=Z,91nm,0.4s,mb5.7						
ULM	**Lac du Bonnet**	**83.98**	**339**	P	**P**	**04 27 57.9**	**-0.1**
	comp=Z,11nm,0.7s,mb4.5,baz=146,slow=3.9,SNR=22						
ULM				pP	pP	04 30 08.2	+0.8
	comp=Z,5.1nm,0.6s,baz=169,slow=6.6,SNR=4.5						
ULM				PKKPbc		04 46 07.3	
	comp=Z,2.4nm,0.5s,baz=186,slow=13,SNR=7.4						
ULM	**Lac du Bonnet**	**83.98**	**339**	P	**P**	**04 27 57.9**	**-0.1**
ULM				pP	pP	04 30 08.2	+0.8
ULM				PKKPbc		04 46 07.3	
PBEJ	**Beja**	**84.01**	**41**	*i* P	**P**	**04 27 59.1**	**+0.6**
	comp=Z,63nm,1.1s,mb5.1						
HVU	**Hansel Valley**	**84.01**	**325**	*e*P	**P**	**04 27 58.4**	**0.0**
	comp=Z,8.6nm,0.9s,mb4.3						
HVU				*e*pP	pP	04 30 07.3	-0.6
HVU	**Hansel Valley**	**84.01**	**325**	*e*P	**P**	**04 27 58.4**	**0.0**
HVU				*e**PP	pP	04 30 07.3	-0.6
HVU				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
MTUM	**Tungsten Hills**	**84.02**	**319**	*e*P	**P**	**04 27 59.0**	**+0.5**
MTUM				*e*pP	pP	04 30 09.0	+1.0
REDW	**Red Top Meadow**	**84.25**	**327**	*e*P	**P**	**04 27 59.9**	**+0.4**
	comp=Z,17nm,1.1s,mb4.5						
REDW				*e*pP	pP	04 30 10.1	+1.0
EVO	**Evora**	**84.28**	**40⇓**	*i*P	**P**	**04 27 59.8**	**0.0**
	comp=Z,105nm,0.7s,mb5.2						
LOHW	**Long Hollow**	**84.32**	**327**	*e*P	**P**	**04 28 00.6**	**+0.7**
	comp=Z,19nm,1.1s,mb4.5						
LOHW				*e*pP	pP	04 30 09.2	-0.3
EJIF	**Jimena Fronter**	**84.34**	**43**	P	**P**	**04 28 01.5**	**+1.4**
	comp=Z,37nm,0.7s,mb5.0						
EJIF	**Jimena Fronter**	**84.34**	**43**	P	**P**	**04 28 01.5**	**+1.4**
EJIF				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.0						
TPAW	**Teton Pass**	**84.39**	**327**	*e*P	**P**	**04 28 00.7**	**+0.5**
	comp=Z,16nm,1.1s,mb4.5						
TPAW				*e*pP	pP	04 30 09.6	-0.2
ESPR	**Espera**	**84.39**	**42**	P	**P**	**04 28 01.2**	**+0.9**
	comp=Z,86nm,0.7s,mb5.4						
MOOW	**Moose Ponds**	**84.49**	**327**	*e*P	**P**	**04 28 01.1**	**+0.4**
	comp=Z,11nm,0.8s,mb4.4						
MOOW				*e*pP	pP	04 30 09.9	-0.4
EMIN	**Mina Concepcio**	**84.52**	**41**	P	**P**	**04 28 01.5**	**+0.5**
	comp=Z,88nm,0.9s,mb5.4						
MNV	**Mina**	**84.52**	**320**	*e*P	**P**	**04 28 01.1**	**+0.1**
	comp=Z,10nm,1.3s,mb4.3						
MNV				*e*pP	pP	04 30 10.3	-0.3
MNV	**Mina**	**84.52**	**320**	*e*P	**P**	**04 28 01.1**	**+0.1**
MNV				*e**PP	pP	04 30 10.3	-0.3
MNV				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.3						
ELK	**Elko**	**84.54**	**323**	*e*P	**P**	**04 28 01.3**	**+0.3**
	comp=Z,19nm,0.9s,mb4.7						
ELK				*e*pP	pP	04 30 10.3	-0.4
ELK	**Elko**	**84.54**	**323**	*e*P	**P**	**04 28 01.3**	**+0.3**
ELK				*e**PP	pP	04 30 10.3	-0.4
ELK				pmax	pmax		
	comp=Z,19nm,0.9s						
NVAR	**Mina Array Bea**	**84.61**	**319**	P	**P**	**04 28 01.9**	**+0.6**
	comp=Z,4.8nm,0.9s,mb4.1,baz=137,slow=5.7,SNR=33						
NVAR				pP	pP	04 30 12.0	+0.9
	comp=Z,1.5nm,0.9s,baz=140,slow=6.6,SNR=4.5						
NVAR				PP	PP	04 31 31.4	+2.4
	comp=Z,0.5nm,0.8s,baz=146,slow=6.5,SNR=4.0						
NVAR				PKKPbc		04 46 07.1	
	comp=Z,0.9nm,0.4s,baz=300,slow=2.4,SNR=12						
NVAR	**Mina Array Bea**	**84.61**	**319**	P	**P**	**04 28 01.9**	**+0.6**
NVAR				pP	pP	04 30 12.0	+0.9
NVAR				PP	PP	04 31 31.4	+2.4
NVAR				PKKPbc		04 46 07.1	
IMW	**Indian Meadow**	**84.69**	**327**	*e*P	**P**	**04 28 02.4**	**+0.7**
	comp=Z,42nm,0.9s,mb5.1						
IMW				*e*pP	pP	04 30 11.9	+0.5
LAO	**LASA Array**	**84.75**	**332**	*e*P	**P**	**04 28 01.5**	**-0.4**
	comp=Z,14nm,0.7s,mb4.7						
LAO				*e*pP	pP	04 30 11.2	-0.4
PTOM	**Tomar**	**84.81**	**39**	*e*P	**P**	**04 28 02.5**	**+0.2**
	comp=Z,109nm,1.0s,mb5.4						
EMIJ	**Mijas**	**84.84**	**43**	P	**P**	**04 28 02.7**	**+0.1**
	comp=Z,34nm,0.6s,mb5.2						
LRV	**Little Rabbit**	**84.85**	**317**	*e*P	**P**	**04 28 03.6**	**+1.0**
LRV				*e*pP	pP	04 30 13.4	+1.0
EBAD	**Badajoz**	**85.00**	**40**	P	**P**	**04 28 03.3**	**0.0**
	comp=Z,56nm,1.2s,mb5.1						
YFT	**Old Faithful**	**85.06**	**328**	*e*P	**P**	**04 28 04.7**	**+1.3**
CASY	**Casey**	**85.10**	**177**	*e*P	**P**	**04 28 03.3**	**+0.2**
YMR	**Madison River**	**85.29**	**328**	*e*P	**P**	**04 28 05.5**	**+0.9**
	comp=Z,36nm,1.2s,mb4.9						
YMR				*e*pP	pP	04 30 15.7	+1.2
DGMT	**Dagmar**	**85.37**	**334**	*e*P	**P**	**04 28 05.5**	**+0.7**
	comp=Z,35nm,1.0s,mb4.9						
DGMT				*e*pP	pP	04 30 15.7	+0.9
PCBR	**Castelo Branco**	**85.48**	**39**	*e*P	**P**	**04 28 05.3**	**-0.3**
	comp=Z,48nm,1.2s,mb5.0						
CMB	**Columbia Colle**	**85.55**	**318**	*e*P	**P**	**04 28 05.4**	**-0.5**
	comp=Z,7.1nm,1.2s,mb4.2						
CMB	**Columbia Colle**	**85.55**	**318**	*e*P	**P**	**04 28 05.4**	**-0.5**
CMB				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.2						
ELOJ	**Sierra Loja**	**85.60**	**43**	P	**P**	**04 28 06.7**	**+0.5**
	comp=Z,18nm,0.5s,mb5.0						
ELOJ	**Sierra Loja**	**85.60**	**43**	P	**P**	**04 28 06.7**	**+0.5**
ELOJ				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.0						
QLMT	**Earthquake Lak**	**85.63**	**328**	*e*P	**P**	**04 28 07.4**	**+1.2**
QLMT				*e*pP	pP	04 30 17.8	+1.6
ERON	**Agron**	**85.72**	**43**	P	**P**	**04 28 06.9**	**+0.1**
	comp=Z,8.9nm,0.4s,mb4.8						
EGUA	**Guajares**	**85.74**	**44**	P	**P**	**04 28 06.4**	**-0.5**
	comp=Z,1.8nm,0.4s,mb4.0						
EGUA	**Guajares**	**85.74**	**44**	P	**P**	**04 28 06.4**	**-0.5**
EGUA				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.1						
ELUQ	**Luque**	**85.80**	**43**	P	**P**	**04 28 07.8**	**+0.7**
	comp=Z,37nm,0.7s,mb5.1						
ELUQ	**Luque**	**85.80**	**43**	P	**P**	**04 28 07.8**	**+0.6**
ELUQ				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.1						
MTE	**Manteigas**	**85.83**	**39**	*e*P	**P**	**04 28 07.5**	**+0.3**
	comp=Z,80nm,1.4s,mb5.2						
MTE	**Manteigas**	**85.83**	**39**	*e*P	**P**	**04 28 06.7**	**-0.5**
	comp=Z,35nm,0.9s,mb5.0						
PVIS	**Viseu**	**85.86**	**39**	*e*P	**P**	**04 28 07.5**	**+0.1**
	comp=Z,42nm,1.9s,mb4.7						
EADA	**Adamuz**	**86.02**	**42**	P	**P**	**04 28 08.9**	**+0.7**
	comp=Z,13nm,0.7s,mb4.7						
ECOG	**Cogollos-Vega**	**86.03**	**43**	P	**P**	**04 28 08.8**	**+0.5**
	comp=Z,14nm,0.5s,mb4.9						
ECOG	**Cogollos-Vega**	**86.03**	**43**	P	**P**	**04 28 08.8**	**+0.5**
ECOG				pmax	pmax		
	comp=Z,15nm,0.5s,mb4.9						
HLID	**Hailey**	**86.14**	**325**	*e*P	**P**	**04 28 09.6**	**+1.0**
	comp=Z,16nm,0.9s,mb4.7						
HLID				*e*pP	pP	04 30 19.0	+0.1
EBER	**Berja**	**86.20**	**44**	P	**P**	**04 28 09.8**	**+0.7**
	comp=Z,21nm,0.8s,mb4.8						
MCMT	**McKenzie Canyo**	**86.30**	**327**	*e*P	**P**	**04 28 10.5**	**+1.1**
MCMT				*e*pP	pP	04 30 20.1	+0.5
PVRL	**Vila Real**	**86.34**	**38**	*e*P	**P**	**04 28 09.7**	**+0.1**
	comp=Z,60nm,1.6s,mb5.0						
EZAM	**Zamans**	**86.42**	**37**	P	**P**	**04 28 09.0**	**-1.0**
PCAB	**Cabril**	**86.47**	**38**	*e*P	**P**	**04 28 10.1**	**-0.1**
	comp=Z,45nm,1.1s,mb5.0						
EBAN	**Banos Encina**	**86.48**	**43**	P	**P**	**04 28 10.9**	**+0.5**
	comp=Z,33nm,0.5s,mb5.2						
EBAN	**Banos Encina**	**86.48**	**43**	P	**P**	**04 28 10.9**	**+0.5**
EBAN				pmax	pmax		
	comp=Z,33nm,0.5s,mb5.2						
ELOB	**Lobios**	**86.57**	**38**	P	**P**	**04 28 10.5**	**-0.2**
	comp=Z,12nm,0.8s,mb4.7						
DLMT	**Dillon**	**86.57**	**327**	*e*P	**P**	**04 28 11.3**	**+0.6**
	comp=Z,17nm,0.9s,mb4.8						
DLMT				*e*pP	pP	04 30 20.0	-1.0
EQES	**Quesada**	**86.67**	**43**	P	**P**	**04 28 11.0**	**-0.2**
	comp=Z,13nm,0.5s,mb4.9						
EHUE	**Huescar**	**86.97**	**43**	P	**P**	**04 28 12.0**	**-0.6**
	comp=Z,6.6nm,0.4s,mb4.7						
EHUE	**Huescar**	**86.97**	**43**	P	**P**	**04 28 12.0**	**-0.7**
EHUE				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.7						
HRY	**Holter Researc**	**87.22**	**329**	*e*P	**P**	**04 28 14.2**	**+0.6**
PBRG	**Braganca**	**87.24**	**38**	*e*P	**P**	**04 28 14.1**	**+0.3**
	comp=Z,28nm,1.4s,mb4.8						
ECAL	**Calabor**	**87.33**	**38**	P	**P**	**04 28 14.4**	**+0.2**
	comp=Z,19nm,0.9s,mb4.8						
ESDC	**Sonseca Array**	**87.37**	**41**	P	**P**	**04 28 14.8**	**+0.3**
	comp=Z,15nm,0.8s,mb4.8,baz=241,slow=3.7,SNR=48						
ESDC				pP	pP	04 30 26.7	+1.7
	comp=Z,2.4nm,0.9s,baz=226,slow=4.3,SNR=4.8						
ESDC	**Sonseca Array**	**87.37**	**41**	P	**P**	**04 28 14.8**	**+0.3**
ESLA	**Sonseca Array**	**87.37**	**41**	*e*P	**P**	**04 28 14.8**	**+0.3**
	comp=Z,2.2nm,0.8s,mb3.9						
ERUA	**La Rua**	**87.42**	**38**	P	**P**	**04 28 14.9**	**+0.2**
	comp=Z,20nm,0.7s,mb5.0						
ERUA	**La Rua**	**87.42**	**38**	P	**P**	**04 28 14.9**	**+0.2**
ERUA				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
WVOR	**Wild Horse Val**	**87.54**	**322**	*e*P	**P**	**04 28 15.3**	**+0.1**
	comp=Z,6.6nm,1.4s,mb4.2						
WVOR				*e*pP	pP	04 30 26.4	+0.5
WVOR	**Wild Horse Val**	**87.54**	**322**	*e*P	**P**	**04 28 15.3**	**+0.1**
WVOR				*e**PP	pP	04 30 26.4	+0.5
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.2						
EVIA	**Vianos**	**87.56**	**43**	P	**P**	**04 28 15.8**	**+0.4**
	comp=Z,20nm,0.6s,mb5.0						
EVIA	**Vianos**	**87.56**	**43**	P	**P**	**04 28 15.8**	**+0.4**
EVIA				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.0						
EMUR	**La Murta**	**87.81**	**44**	P	**P**	**04 28 18.0**	**+1.4**
	comp=Z,9.7nm,0.5s,mb4.8						
GUD	**Guadarrama**	**87.90**	**41**	P	**P**	**04 28 15.3**	**-1.7**
EPON	**Pontenova**	**88.06**	**37**	P	**P**	**04 28 17.4**	**-0.2**
	comp=Z,8.7nm,0.5s,mb4.7						
ETOB	**Tobarra**	**88.13**	**43**	P	**P**	**04 28 18.2**	**+0.1**
	comp=Z,19nm,0.7s,mb4.9						
BMO	**Blue Mountains**	**88.52**	**325**	*e*pP	pP	04 30 29.6	-1.1
	comp=Z,21nm,1.6s						
EBEN	**Beniarda**	**88.97**	**44**	P	**P**	**04 28 21.7**	**-0.3**
	comp=Z,22nm,0.6s,mb5.2						
ECHE	**Chera**	**89.08**	**43**	P	**P**	**04 28 23.3**	**+0.8**
	comp=Z,17nm,0.9s,mb4.9						
ECHE	**Chera**	**89.08**	**43**	P	**P**	**04 28 23.3**	**+0.8**
ECHE				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
ERTA	**Horta de San J**	**90.71**	**43**	P	**P**	**04 28 30.9**	**+0.9**
	comp=Z,20nm,0.6s,mb5.2						
HAWA	**Hanford**	**90.71**	**325**	*e*pP	pP	04 30 41.3	0.0
	comp=Z,3.5nm,1.6s						
ESAC	**San Caprasio**	**90.72**	**42**	P	**P**	**04 28 30.6**	**+0.6**
	comp=Z,39nm,0.8s,mb5.4						
FCC	**Fort Churchill**	**91.03**	**344**	*e*P	**P**	**04 28 30.8**	**-0.2**
SJPF	**Ste Jean**	**91.17**	**40⇓**	*i*P	**P**	**04 28 32.5**	**+0.5**
	comp=Z,50nm,1.0s,mb5.1						
SJPF	**Ste Jean**	**91.17**	**40⇓**	*i*P	**P**	**04 28 32.5**	**+0.5**
SJPF				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
EPOB	**Poblet**	**91.40**	**43**	P	**P**	**04 28 34.4**	**+1.3**
	comp=Z,20nm,1.1s,mb5.0						
EGRA	**Graus**	**91.47**	**42**	P	**P**	**04 28 34.4**	**+1.0**
	comp=Z,21nm,0.7s,mb5.2						
EBIE	**Bielsa**	**91.68**	**41**	P	**P**	**04 28 35.6**	**+1.3**
	comp=Z,7.1nm,1.0s,mb4.7						
EPF	**Esparros**	**92.01**	**41⇓**	*i*P	**P**	**04 28 35.9**	**+0.1**
	comp=Z,8.3nm,0.7s,mb4.6						
EPF	**Esparros**	**92.01**	**41⇓**	*i*P	**P**	**04 28 35.9**	**+0.1**
EPF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
EMIR	**Miracle**	**92.01**	**42**	P	**P**	**04 28 36.2**	**+0.4**
	comp=Z,23nm,0.7s,mb5.3						
EDM	**Edmonton**	**92.72**	**332**	*e*P	**P**	**04 28 37.6**	**-1.2**
EDM				*e*pP	pP	04 30 50.1	-0.4
QUIF	**Quistinic**	**93.21**	**36⇓**	*i*P	**P**	**04 28 40.6**	**-0.6**
	comp=Z,26nm,0.7s,mb5.0						
QUIF	**Quistinic**	**93.21**	**36⇓**	*i*P	**P**	**04 28 40.6**	**-0.6**
QUIF				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.1						
MTLF	**Montolieu**	**93.28**	**41⇓**	*i*P	**P**	**04 28 41.3**	**-0.3**
	comp=Z,53nm,1.1s,mb5.2						
MTLF	**Montolieu**	**93.28**	**41⇓**	*i*P	**P**	**04 28 41.3**	**-0.3**
MTLF				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
LFF	**La Frestale**	**93.41**	**40⇓**	*i*P	**P**	**04 28 42.3**	**+0.1**
	comp=Z,50nm,0.8s,mb5.3						
LFF	**La Frestale**	**93.41**	**40⇓**	*i*P	**P**	**04 28 42.3**	**+0.1**
LFF				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
ROSF	**Rostrenen**	**93.43**	**35⇓**	*i*P	**P**	**04 28 41.6**	**-0.6**
	comp=Z,54nm,0.9s,mb5.3						
ROSF	**Rostrenen**	**93.43**	**35⇓**	*i*P	**P**	**04 28 41.6**	**-0.6**
ROSF				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.3						
MFF	**Saint Martin d**	**93.96**	**38⇓**	*i*P	**P**	**04 28 44.6**	**0.0**
	comp=Z,51nm,0.9s,mb5.3						
MFF	**Saint Martin d**	**93.96**	**38⇓**	*i*P	**P**	**04 28 44.6**	**0.0**
MFF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.4						
RJF	**Les Rejaudoux**	**94.07**	**40**	*e*P	**P**	**04 28 44.9**	**-0.2**
	comp=Z,36nm,1.1s,mb5.1						
RJF	**Les Rejaudoux**	**94.07**	**40**	*e*P	**P**	**04 28 44.9**	**-0.2**
RJF				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.1						
CAF	**Calviac**	**94.15**	**40⇓**	*i*P	**P**	**04 28 45.6**	**+0.1**
	comp=Z,27nm,1.0s,mb5.0						
CAF	**Calviac**	**94.15**	**40⇓**	*i*P	**P**	**04 28 45.6**	**+0.1**
CAF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
LASF	**Ste Croix**	**94.67**	**42⇓**	*i*P	**P**	**04 28 47.7**	**-0.2**
GRR	**Gorron**	**94.70**	**36⇓**	*i*P	**P**	**04 28 47.2**	**-0.7**
	comp=Z,28nm,0.7s,mb5.2						
GRR	**Gorron**	**94.70**	**36⇓**	*i*P	**P**	**04 28 47.2**	**-0.7**
GRR				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.2						
DCN	**Croghan**	**94.91**	**30**	*e*P	**P**	**04 28 46.0**	**-2.7**
TCF	**Toulx Ste Croi**	**95.05**	**39⇓**	*i*P	**P**	**04 28 49.3**	**-0.2**
	comp=Z,24nm,0.8s,mb5.1						
TCF	**Toulx Ste Croi**	**95.05**	**39⇓**	*i*P	**P**	**04 28 49.3**	**-0.2**
TCF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
FLN	**La Foliniere**	**95.13**	**36**	*e*P	**P**	**04 28 49.3**	**-0.5**
DLF	**Lyons Farm**	**95.20**	**30**	*e*P	**P**	**04 28 48.0**	**-2.0**
LDF	**La Druitiere**	**95.21**	**36⇓**	*i*P	**P**	**04 28 49.6**	**-0.6**
	comp=Z,67nm,1.1s,mb5.4						
LDF	**La Druitiere**	**95.21**	**36⇓**	*i*P	**P**	**04 28 49.6**	**-0.6**
LDF				pmax	pmax		
	comp=Z,34nm,1.1s,mb5.4						
BGF	**Bois d’Agland**	**95.57**	**39⇓**	*i*P	**P**	**04 28 51.9**	**+0.1**
	comp=Z,52nm,1.0s,mb5.4						
BGF	**Bois d’Agland**	**95.57**	**39⇓**	*i*P	**P**	**04 28 51.9**	**+0.1**
BGF				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.4						
SMRF	**Simiane la Rot**	**95.62**	**42⇓**	*i*P	**P**	**04 28 52.3**	**+0.1**
	comp=Z,35nm,0.9s,mb5.3						
HYF	**Humbligny**	**95.88**	**39⇓**	*i*P	**P**	**04 28 53.2**	**0.0**
AVF	**Avril sur Loir**	**95.99**	**39⇓**	*i*P	**P**	**04 28 53.7**	**0.0**
	comp=Z,25nm,0.9s,mb5.2						
AVF	**Avril sur Loir**	**95.99**	**39⇓**	*i*P	**P**	**04 28 53.7**	**0.0**
AVF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.2						
SMF	**Signal de Mont**	**96.17**	**40⇓**	*i*P	**P**	**04 28 54.8**	**+0.2**
	comp=Z,50nm,0.8s,mb5.5						
SMF	**Signal de Mont**	**96.17**	**40⇓**	*i*P	**P**	**04 28 54.8**	**+0.2**
SMF				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.5						
SSF	**Saint Saulge**	**96.23**	**39⇓**	*i*P	**P**	**04 28 54.5**	**-0.3**
	comp=Z,18nm,0.8s,mb5.3						
SSF	**Saint Saulge**	**96.23**	**39⇓**	*i*P	**P**	**04 28 54.5**	**-0.3**
SSF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.3						
ORIF	**Oris-en-Rattie**	**96.34**	**42⇓**	*i*P	**P**	**04 28 56.2**	**+0.8**
	comp=Z,32nm,1.0s,mb5.2						
ORIF	**Oris-en-Rattie**	**96.34**	**42⇓**	*i*P	**P**	**04 28 56.2**	**+0.8**
ORIF				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.2						
LOR	**Lormes**	**96.55**	**39⇓**	*i*P	**P**	**04 28 56.0**	**-0.2**
	comp=Z,28nm,0.9s,mb5.2						
LOR	**Lormes**	**96.55**	**39⇓**	*i*P	**P**	**04 28 56.0**	**-0.2**
LOR				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.2						
SBF	**Sospel**	**96.67**	**43**	*e*P	**P**	**04 28 57.2**	**+0.3**
PGF	**Pioggiola**	**96.91**	**45⇓**	*i*P	**P**	**04 28 58.2**	**+0.2**
LPL	**La Plagne**	**97.18**	**42⇓**	*i*P	**P**	**04 28 59.3**	**+0.2**
	comp=Z,57nm,1.5s,mb5.3						
LPL	**La Plagne**	**97.18**	**42⇓**	*i*P	**P**	**04 28 59.3**	**+0.2**
LPL				pmax	pmax		
	comp=Z,28nm,1.5s,mb5.3						
LPG	**La Plagne**	**97.18**	**42⇓**	*i*P	**P**	**04 28 59.5**	**+0.4**
	comp=Z,33nm,1.2s,mb5.1						
LPG	**La Plagne**	**97.18**	**42⇓**	*i*P	**P**	**04 28 59.5**	**+0.4**
LPG				pmax	pmax		
	comp=Z,16nm,1.2s,mb5.1						
CABF	**La Chapelle**	**97.42**	**40**	*e*P	**P**	**04 29 00.1**	**-0.1**
	comp=Z,13nm,0.8s,mb4.9						
CABF	**La Chapelle**	**97.42**	**40**	*e*P	**P**	**04 29 00.1**	**-0.1**
CABF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
MEZF	**Maizieres J’vi**	**97.92**	**38⇓**	*i*P	**P**	**04 29 02.1**	**-0.3**
	comp=Z,21nm,0.7s,mb5.2						
ESK	**Eskdalemuir**	**98.00**	**30**	*e*P	**P**	**04 29 01.8**	**-0.8**
	comp=Z,6.0nm,0.6s,mb5.1						
ESK	**Eskdalemuir**	**98.00**	**30**	*e*P	**P**	**04 29 01.8**	**-0.8**
ESK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.1						
HAU	**Haudompre**	**98.35**	**39⇓**	*i*P	**P**	**04 29 03.7**	**-0.6**
	comp=Z,17nm,1.0s,mb5.0						
HAU	**Haudompre**	**98.35**	**39⇓**	*i*P	**P**	**04 29 03.7**	**-0.6**
HAU				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
BAIF	**Baives**	**98.36**	**37**	*e*P	**P**	**04 29 03.6**	**-0.7**
HINF	**Hinteralfeld**	**98.53**	**40**	*e*P	**P**	**04 29 05.8**	**+0.7**
GIVF	**Givet**	**98.71**	**37**	*e*P	**P**	**04 29 05.5**	**-0.4**
CDF	**Champ du Feu**	**99.09**	**39⇓**	*i*P	**P**	**04 29 07.3**	**-0.4**
YKA	**Yellowknife Ar**	**99.92**	**338**	P	**P**	**04 29 10.4**	**-0.7**
	comp=Z,1.4nm,0.6s,mb4.5,baz=127,slow=4.2,SNR=7.4						
YKA				PKiKP		04 33 34.2	
	comp=Z,1.3nm,0.7s,baz=148,slow=1.7,SNR=5.2						
YKA				PKKPbc		04 45 25.4	
	comp=Z,0.2nm,0.3s,baz=317,slow=4.0,SNR=9.2						
YKA	**Yellowknife Ar**	**99.92**	**338**	P	**P**	**04 29 10.4**	**-0.7**
GERES	**GERESS Array B**	**102.97**	**41**	PKiKP		04 33 40.6	
	comp=Z,1.0nm,0.7s,baz=180,slow=1.3,SNR=6.6						
GERES				PKKPbc		04 45 18.8	
	comp=Z,0.7nm,0.7s,baz=45,slow=1.9,SNR=4.5						
NOA	**NORSAR Array B**	**107.51**	**29**	PKiKP		04 33 48.6	
	comp=Z,0.8nm,0.5s,baz=247,slow=2.2,SNR=3.5						
HFS	**Hagfors**	**108.19**	**31**	PKKPbc		04 45 02.2	
	comp=Z,1.6nm,0.7s,baz=117,slow=3.3,SNR=8.6						
HFS				PKKP	PKKP	04 45 17.3	+63
	comp=Z,1.9nm,0.5s,baz=90,slow=5.9,SNR=11						
KWP	**Kalwaria**	**108.62**	**43**	*e*PKP		04 33 51.7	
KWP	**Kalwaria**	**108.62**	**43**	*e*PKP		04 33 51.7	
INK	**Inuvik**	**109.69**	**338**	PKKPbc		04 44 58.3	
	comp=Z,5.2nm,0.6s,baz=323,slow=2.6,SNR=34						
INK	**Inuvik**	**109.69**	**338**	*e*PKPdf		04 33 51.8	
SUW	**Suwalki**	**110.52**	**39**	*e*PKP	PKPdf	04 33 54.2	+0.8
BR131	**Keskin Array S**	**112.39**	**56**	*e*PKPdf	PKPdf	04 33 58.3	+0.8
BRTR	**Keskin Array B**	**112.39**	**56**	PKiKP		04 33 58.4	
	comp=Z,2.8nm,0.6s,baz=187,slow=3.2,SNR=18						
AKASG	**Malin Array Be**	**112.92**	**44**	PKiKP		04 33 58.2	
	comp=Z,3.4nm,0.4s,baz=260,slow=2.5,SNR=29						
AKASG	**Malin Array Be**	**112.92**	**44**	PKPdf	PKPdf	04 33 58.2	-0.1
ILAR	**Eielson Array**	**113.21**	**332**	PKiKP		04 33 58.9	
	comp=Z,1.6nm,0.5s,baz=194,slow=0.5,SNR=36						
ILAR				PP	PP	04 35 01.5	-2.5
	comp=Z,1.6nm,1.0s,baz=106,slow=5.3,SNR=4.9						
ILAR				SKiKP		04 36 37.3	
	comp=Z,0.8nm,0.6s,baz=252,slow=0.8,SNR=4.3						
ILAR				PKKPbc		04 44 46.0	
	comp=Z,4.4nm,1.1s,baz=302,slow=3.7,SNR=21						
ILAR	**Eielson Array**	**113.21**	**332**	PKPdf	PKPdf	04 33 58.9	+0.4
ILAR				PP	PP	04 35 01.5	-2.5
ILAR				PKKPbc		04 44 46.0	
FIB	**Fire Island**	**113.55**	**328**	*e*PKPdf	PKPdf	04 34 03.1	+3.9
COLA	**College**	**113.63**	**332**	*e*PKPdf	PKPdf	04 33 57.7	-1.6
FINES	**FINESS Array B**	**114.33**	**32**	PKP	PKPdf	04 34 01.4	+0.6
	comp=Z,2.2nm,0.4s,baz=219,slow=0.2,SNR=50						
FINES				PKKPbc		04 44 42.1	
	comp=Z,1.6nm,0.4s,baz=85,slow=4.2,SNR=20						
KAF	**Kangasniemi**	**114.61**	**31**	*e*p	PKPdf	04 34 01.3	0.0
	comp=Z,7.1nm,0.7s						
STKA	**Stephens Creek**	**115.36**	**203**	*e*P	PKPdf	04 34 04.0	+0.5
	comp=Z,2.0nm,0.6s						
STKA	**Stephens Creek**	**115.36**	**203**	PKP	PKPdf	04 34 03.9	+0.4
	comp=Z,2.0nm,0.5s,baz=62,slow=1.7,SNR=6.7						
STKA				PKKPbc		04 44 39.7	
	comp=Z,1.3nm,0.4s,baz=355,slow=5.6,SNR=7.2						
STKA				PKKPab		04 44 47.1	
	comp=Z,3.2nm,0.6s,baz=5.5,slow=4.5,SNR=8.0						
ARCES	**ARCESS Array B**	**116.06**	**23**	PKP	PKPdf	04 34 04.3	+0.3
	comp=Z,5.3nm,0.7s,baz=242,slow=3.9,SNR=40						
ARCES				PKKPbc		04 44 37.2	
	comp=Z,8.1nm,0.3s,baz=83,slow=3.6,SNR=151						
ANN	**Anapa**	**116.58**	**52**	*i* PKIKP	PKPdf	04 34 07.6	+2.1
ANN				pmax	pmax		
	comp=Z,110nm,1.0s						
JOF	**Joensuu**	**117.05**	**31**	*e*p	PKPdf	04 34 06.1	+0.1
	comp=Z,11nm,0.4s						
SOC	**Sochi**	**117.87**	**53**	*e*P	Pdif	04 30 33.3	+2.7
OBN	**Obninsk**	**118.31**	**40⇓**	*i*PKIKP	PKPdf	04 34 08.7	+0.1
OBN				pmax	pmax		
	comp=Z,54nm,1.1s						
NWAO	**Narrogin (SRO)**	**118.62**	**180**	PKP	PKPdf	04 34 10.1	+0.4
	comp=Z,7.9nm,0.5s,baz=220,slow=1.6,SNR=9.6						
MUN	**Mundaring**	**119.56**	**179**	*e*P	PKPdf	04 34 11.8	+0.2
FORT	**Forrest**	**119.87**	**191**	*e*P	PKPdf	04 34 12.4	+0.1
	comp=Z,21nm,0.5s						
KLBR	**Kellerberrin**	**119.95**	**181**	*e*P	PKPdf	04 34 12.4	0.0
	comp=Z,7.1nm,0.3s						
KIV	**Kislovodsk**	**120.05**	**54**	*e*PKIKP	PKPdf	04 34 12.7	+0.4
KIV				pmax	pmax		
	comp=Z,39nm,1.1s						
VRHR	**Novokhopersk**	**120.65**	**45**	*e*PKIKP	PKPdf	04 34 13.6	+0.4
VRHR				pmax	pmax		
	comp=Z,20nm,0.6s						

VRHR				pmax	pmax		
	comp=N,8.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,6.0nm,0.3s						
GNI	**Garni**	**120.70**	**58**	*i* PKIKP	PKPdf	04 34 11.0	-2.6
ABTO	**Aybut**	**120.72**	**86**	P	PKPdf	04 34 15.5	+1.3
	SNR=6.6						
CTA	**Charters Tower**	**123.89**	**213**	⇓*i*P	PKPdf	04 34 20.8	+0.6
	comp=E,9.5nm,0.6s						
ASPA	**Alice Springs**	**125.42**	**199**	*e*P	PKPdf	04 34 23.2	+0.1
ARQ	**Araqi**	**125.72**	**81**	P	PKPdf	04 34 24.2	+0.5
	SNR=17						
ASHO	**Ashiyiah**	**125.76**	**79**	P	PKPdf	04 34 24.2	+0.4
	SNR=12						
BSY	**Bisya**	**126.11**	**82**	P	PKPdf	04 34 24.9	+0.4
	SNR=23						
SMDO	**Samad**	**126.96**	**82**	P	PKPdf	04 34 26.6	+0.4
	SNR=25						
WB2	**Warramunga Arr**	**128.80**	**201**	⇓*i*P	PKPdf	04 34 30.1	+0.4
WB2				*e*S	PKS	04 37 52.0	-12
WRA	**Warramunga Arr**	**128.80**	**201**	PKP	PKPdf	04 34 29.8	0.0
	comp=E,16nm,0.4s,baz=172,slow=1.6,SNR=116						
WRA				pPKP		04 36 51.6	
	comp=E,7.8nm,0.7s,baz=161,slow=3.7,SNR=19						
WRA				PKKPbc		04 43 51.6	
	comp=E,0.9nm,0.6s,baz=341,slow=4.0,SNR=8.8						
WRA				SKKPbc		04 46 44.1	
	comp=E,1.3nm,0.8s,baz=340,slow=3.1,SNR=6.7						
WRAB	**Tennant Creek**	**128.81**	**201**	*e*PKPdf	PKPdf	04 34 29.7	-0.1
WRAB				*e*pPKPdf		04 36 52.1	
SOKR	**Solikamsk**	**129.28**	**35**	⇑*i*PKIKP	PKPdf	04 34 30.8	+1.2
SOKR				pmax	pmax		
	comp=Z,30nm,1.3s						
ARU	**Arti**	**130.71**	**39**	*e*PKPdf	PKPdf	04 34 33.9	+1.5
ARU				*e*SKP		04 37 01.5	
ARU	**Arti**	**130.71**	**39**	*i* PKIKP	PKPdf	04 34 34.4	+2.0
ARU				*e*		04 37 01.5	
AKTO	**Aktyubinsk**	**130.99**	**47**	PKIKP	PKPdf	04 34 26.3	-6.8
AKTO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BILL	**Bilibino**	**131.31**	**338**	*i* PKIKP	PKPdf	04 34 31.7	-1.5
PMG	**Port Moresby**	**132.26**	**222**	SKPbc		04 37 07.5	
	comp=Z,51nm,0.8s,baz=56,slow=2.9,SNR=20						
AB31	**Akbulak array**	**132.30**	**48**	*i* PKIKP	PKPdf	04 34 34.2	-1.4
AB31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
FITZ	**Fitzroy Crossi**	**132.68**	**191**	⇓*i*P	PKPdf	04 34 37.7	+0.6
	comp=Z,31nm,0.4s						
FITZ				*e*S	PKS	04 38 06.9	-4.3
FITZ	**Fitzroy Crossi**	**132.68**	**191**	PKP	PKPdf	04 34 37.8	+0.8
	comp=Z,39nm,0.4s,baz=210,slow=2.1,SNR=38						
FITZ				SKPbc		04 37 08.2	
	comp=Z,37nm,0.6s,baz=190,slow=6.3,SNR=22						
TIXI	**Tiksi**	**136.61**	**355**	*i* PKIKP	PKPdf	04 34 42.5	-0.4
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRVK	**Borovoye**	**138.06**	**41**	*e*PKPpre		04 34 37.7	
BRVK				*e*PKPdf	PKPdf	04 34 47.6	+1.6
BRVK				*e*SKP		04 37 24.5	
CHKZ	**Chkalovo**	**138.08**	**40**	*e*PKPpre		04 34 37.5	
CHKZ				*e*PKPdf	PKPdf	04 34 47.6	+1.5
CHKZ				*e*pPKPdf		04 37 08.4	
CHKZ				*e*SKP		04 37 25.1	
BVA0	**Borovoye Array**	**138.14**	**41**	*i* PKHKP		04 34 38.4	
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	**Borovoye Array**	**138.14**	**41**	SKPbc		04 37 25.6	
	comp=Z,5.3nm,0.6s,baz=272,slow=3.2,SNR=11						
BVAR				SKKPbc		04 46 09.5	
	comp=Z,2.6nm,0.8s,baz=117,slow=6.6,SNR=10						
VOSK	**Vostochnaya**	**138.57**	**42**	PKHKP		04 34 39.8	
VOSK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SEY	**Seymchan**	**138.95**	**336**	*e*PKIKP	PKPdf	04 34 48.1	+0.7
SEY				*e*		04 40 53.1	
SEY				pmax	pmax		
	comp=N,10.0nm,0.7s						
SEY				pmax	pmax		
	comp=Z,10.0nm,0.7s						
POO	**Poona**	**139.20**	**95**	*e*x	x	04 34 40.0	
KKAR	**Karatay Array**	**140.11**	**56**	*i* PKHKP		04 34 43.0	
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AJM	**Ajmer**	**142.38**	**83**	*e*P	PKPdf	04 34 50.1	-4.3
EKS2	**Erkin-Say**	**142.54**	**56**	P	PKPdf	04 34 53.5	-0.7
	SNR=51						
AML	**Almayashu**	**142.54**	**57**	P	PKPdf	04 34 53.3	-0.9
	SNR=51						
HYB	**Hyderabad**	**142.85**	**99**	⇓*i*PKP	PKPdf	04 34 54.0	-1.5
	comp=Z,190nm,1.0s						
HYB				*e*		04 35 28.0	
USP	**Ospenovka**	**142.98**	**55**	P	PKPdf	04 34 54.4	-0.5
	SNR=97						
AAK	**Ala-Archa**	**143.07**	**56**	P	PKPbc	04 34 55.5	+1.7
	SNR=31						
AAK	**Ala-Archa**	**143.07**	**56**	*e*PKPdf	PKPdf	04 34 54.1	-1.0
AAK				*e*SKP		04 37 37.2	
UCH	**Uchtor**	**143.14**	**57**	P	PKPbc	04 34 56.0	+2.0
	SNR=52						
CHMS	**Chumysh**	**143.20**	**56**	P	PKPbc	04 34 55.5	+1.3
	SNR=82						
KBK	**Karagaybulak**	**143.40**	**56**	P	PKPbc	04 34 56.7	+2.0
	SNR=308						
KZA	**Kyzart**	**143.70**	**57**	P	PKPbc	04 34 58.0	+2.4
	SNR=21						
KURK	**Kurchatov**	**143.72**	**42**	*e*PKPdf	PKPdf	04 34 56.8	+0.8
KURK				*e*SKP		04 37 37.9	
TKM2	**Tokmak 2**	**143.83**	**56**	P	PKPbc	04 34 58.0	+1.9
	SNR=37						
BHPL	**Bhopal**	**143.95**	**89**	⇓*e*P	PKPbc	04 34 57.8	+0.8
BHPL				AMb	AMB	04 34 59.0	
	comp=Z,206nm,0.7s						
NVS	**Novosibirsk**	**144.29**	**34**	⇓*i*PKIKP	PKPdf	04 34 58.0	+1.2
NVS				*e*		04 37 17.7	
NVS				pmax	pmax		
	comp=Z,340nm,1.3s						
NVS				pmax	pmax		
	comp=N,30nm,0.5s						
NVS				pmax	pmax		
	comp=E,72nm,0.9s						
ULHL	**Ulahol**	**144.41**	**57**	P	PKPdf	04 35 00.1	+2.6
	SNR=115						
NGP	**Nagpur**	**144.71**	**94**	*e*P	PKPdf	04 34 59.1	+0.5
NGP				AMb	AMB	04 35 02.0	
	comp=Z,140nm,0.7s						
NDI	**New Delhi**	**145.06**	**80**	*e*P	PKPdf	04 34 59.0	0.0
NDI				*e*P		04 34 59.7	
NDI				AMb	AMB	04 35 01.6	
	comp=Z,199nm,0.5s						
SMLA	**Simla**	**145.37**	**76**	*e*P	PKPdf	04 34 58.5	-1.0
SMLA				AMb	AMB	04 35 03.7	
	comp=Z,283nm,0.6s						
ZAL	**Zalesovo**	**145.55**	**34**	PKPbc	PKPbc	04 35 01.3	+1.0
	comp=Z,88nm,0.3s,baz=157,slow=3.3,SNR=131						
ZAL				pPKPbc		04 37 21.0	
	comp=Z,5.4nm,0.6s,baz=202,slow=4.3,SNR=2.8						
ZAL				SKPbc		04 37 44.0	
	comp=Z,12nm,0.7s,baz=169,slow=3.2,SNR=5.6						
YAK	**Yakutsk**	**145.75**	**350**	*e*PKPdf	PKPdf	04 34 59.5	+0.4
YAK	**Yakutsk**	**145.75**	**350**	*e*PKP2	PKPab	04 35 01.8	-3.9
YAK				pmax	pmax		
	comp=Z,77nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,16nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
VIS	**Vishakhapatnam**	**147.10**	**102**	*e*x	x	04 35 07.6	
VIS				AMb	AMB	04 35 08.7	
	comp=Z,89nm,0.8s						
MKAR	**Makanchi Array**	**147.43**	**47**	PKP	PKPdf	04 35 03.8	+1.4
	comp=Z,68nm,0.6s,baz=253,slow=1.7,SNR=117						
MKAR				PKPbc	PKPdf	04 35 07.2	+4.8
	comp=Z,70nm,0.6s,baz=288,slow=3.3,SNR=212						
MKAR				pPKPbc		04 37 25.9	
	comp=Z,11nm,0.6s,baz=288,slow=3.6,SNR=10.0						
MKAR				SKKPbc		04 45 31.4	
	comp=Z,2.4nm,0.6s,baz=104,slow=5.5,SNR=20						
MKAR	**Makanchi Array**	**147.43**	**47**	PKP	PKPdf	04 35 03.8	+1.4
MKAR				PKPbc	PKPdf	04 35 07.2	+4.8
MKAR				pPKPbc		04 37 25.9	
MKAR				SKKPbc		04 45 31.4	
BLSP	**Bilaspur**	**147.74**	**94**	*e*P	PKPdf	04 35 04.8	+1.2
BLSP				AMb	AMB	04 35 09.6	
	comp=Z,196nm,0.7s						
PTH	**Pithoragarh**	**147.79**	**79**	*e*P	PKPdf	04 35 06.3	+2.8
KGM	**Kluang**	**150.27**	**151**	P	PKPdf	04 35 14.7	+6.9
KOLN	**Koldanda**	**150.45**	**84**	*e*P	PKPdf	04 35 14.4	+6.7
	comp=Z,160nm,0.7s						
KOLN	**Koldanda**	**150.45**	**84**	*e*P	PKPdf	04 35 08.8	+1.1
KOLN				*e*P		04 35 14.4	
BOD	**Bodaibo**	**150.90**	**4**	*e*PKIKP	PKPdf	04 35 07.8	+0.4
BOD				*e*		04 35 13.6	
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BOD				pmax	pmax		
	comp=Z,34nm,0.8s						
GKN	**Gorkha**	**151.40**	**84**	*e*P	PKPdf	04 35 17.1	+8.1
	comp=Z,316nm,0.4s						
GKN	**Gorkha**	**151.40**	**84**	*e*P	PKPdf	04 35 10.4	+1.4
GKN				*e*P		04 35 17.1	
CLNS	**Chul'man**	**151.44**	**351**	*e*PKIKP	PKPdf	04 35 09.7	+1.5
CLNS				pmax	pmax		
	comp=Z,92nm,0.7s						
CLNS				pmax	pmax		
	comp=N,21nm,1.0s						
CLNS				pmax	pmax		
	comp=E,11nm,0.9s						
IPM	**Ipoh**	**151.45**	**144**	P	PKPdf	04 35 17.4	+7.8
BOK	**Bokaro**	**151.54**	**93**	⇓*e*x	x	04 35 17.5	
BOK				AMb	AMB	04 35 18.5	
	comp=Z,96nm,0.5s						
DMN	**Daman**	**151.74**	**85**	*e*P	PKPdf	04 35 18.2	+8.7
	comp=Z,246nm,0.6s						
DMN	**Daman**	**151.74**	**85**	*e*P	PKPdf	04 35 11.1	+1.6
DMN				*e*P		04 35 18.2	
KKN	**Kakani**	**151.92**	**84**	*e*P	PKPdf	04 35 18.3	+8.5
	comp=Z,200nm,0.6s						
KKN	**Kakani**	**151.92**	**84**	*e*P	PKPdf	04 35 11.2	+1.4
KKN				*e*P		04 35 18.3	
PKI	**Pulchoki**	**152.00**	**85**	*e*P	PKPdf	04 35 18.4	+8.5
	comp=Z,168nm,0.5s						
PKI	**Pulchoki**	**152.00**	**85**	*e*P	PKPdf	04 35 11.8	+1.9
PKI				*e*P		04 35 18.4	
WMQ	**Urumqi**	**152.07**	**50**	PKP	PKPdf	04 35 16.5	+7.0
WMQ				APKP		04 37 37.0	
WMQ				PP	PP		
	comp=Z,120nm,4.7s						
GUN	**Gumba**	**152.47**	**84**	*e*P	PKPdf	04 35 19.8	+9.3
	comp=Z,171nm,0.4s						
GUN	**Gumba**	**152.47**	**84**	*e*P	PKPdf	04 35 12.2	+1.7
GUN				*e*P		04 35 19.8	
JIRN	**Jiri**	**152.69**	**85**	*e*P	PKPdf	04 35 20.2	+9.3
	comp=Z,139nm,0.7s						
SNG	**Songkhla**	**153.41**	**141**	P	PKPdf	04 35 13.5	+1.3
ASAJ	**Asahikawa**	**154.61**	**314**	PKP	PKPdf	04 35 14.2	+1.2
	comp=Z,21nm,1.1s,baz=359,slow=33,SNR=3.9						
TSM	**Tawau**	**155.63**	**182**	P	PKPab	04 35 46.4	-1.5
ZAK	**Zakamensk**	**155.99**	**22**	*e*PKIKP	PKPdf	04 35 16.7	+2.1
ZAK				*e*		04 35 48.1	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LSA	**Lhasa**	**157.27**	**81**	PKP	PKPdf	04 35 20.4	+3.5
LSA	**Lhasa**	**157.27**	**81**	*e*PKPdf	PKPdf	04 35 19.3	+2.4
SHL	**Shillong**	**157.27**	**92**	⇓*i*P	PKPdf	04 35 19.0	+2.0
SHL				*e*x	x	04 39 20.0	
SONM	**Songino Array**	**159.22**	**21**	PKP	PKPdf	04 35 20.7	+2.2
	comp=Z,15nm,1.0s,baz=256,slow=1.1,SNR=90						
SONM				PKPab	PKPab	04 36 02.0	-0.3
	comp=Z,6.8nm,0.7s,baz=316,slow=4.3,SNR=11						
SONM				pPKP		04 37 43.0	
	comp=Z,3.1nm,1.1s,baz=315,slow=2.1,SNR=3.7						
SONM				pPKPab		04 38 16.0	
	comp=Z,2.8nm,1.0s,baz=329,slow=3.7,SNR=5.4						
SONM				PP	PP	04 39 46.3	+0.9
	comp=Z,1.4nm,1.1s,baz=315,slow=8.4,SNR=3.8						
SONM	**Songino Array**	**159.22**	**21**	PKP	PKPdf	04 35 20.7	+2.2
SONM				PKPab	PKPab	04 36 02.0	-0.3
SONM				pPKP		04 37 43.0	
SONM				pPKPab		04 38 16.0	
SONM				PP	PP	04 39 46.3	+0.9
SONM	**Songino Array**	**159.22**	**21**	PKIKP	PKPdf	04 35 20.7	+2.1
SONM						04 36 02.0	
SONM						04 37 43.0	
SONM						04 39 46.3	
ULN	**Ulaanbaatar**	**159.39**	**20**	*e*PKPdf	PKPdf	04 35 21.0	+2.2
NST	**Nakhon Sawan**	**159.55**	**126**	P	PKPdf	04 35 20.7	+0.8
CHG	**Chiang Mai**	**160.60**	**117**	P	PKPab	04 36 07.9	-1.1
	comp=Z,22nm,0.9s						
MJAR	**Matsushiro Arr**	**160.72**	**299**	PKP	PKPdf	04 35 23.6	+3.0
	comp=Z,1.3nm,0.4s,baz=89,slow=2.3,SNR=4.1						
GTA	**Gaotai**	**162.16**	**49**	PKP	PKPdf	04 35 24.3	+2.4
GTA				PKP2	PKPab	04 36 15.8	+0.5
GTA				APKP		04 37 45.1	
GTA				XPKP		04 38 40.6	
GTA				PKS	PKS	04 38 56.5	+3.1
GTA				PP	PP	04 40 06.5	+5.2
GTA				SKS	SKS	04 41 32.1	+3.1
GTA				SKKS		04 45 54.4	
GTA				SS	SS	04 59 39.5	+7.1
GTA				PP	PP		
	comp=Z,70nm,6.5s						
CN2	**Changchun**	**163.62**	**338**	*e*PKP	PKPdf	04 35 24.0	+0.8
LZH	**Lanzhou**	**166.59**	**54**	⇓PKP	PKPdf	04 35 27.9	+1.9
LZH				PKP2	PKPab	04 36 35.8	+1.2
LZH				APKP		04 37 50.1	
LZH				XPKP		04 38 45.9	
LZH				*e*PP	PP	04 40 26.8	+2.3
LZH				SKS	SKS	04 41 34.5	+2.5
LZH				SKKS		04 46 14.3	
LZH				*e*SS	SS	05 00 19.0	+2.1
LZH				PP	PP		
	comp=Z,110nm,8.5s						
HHC	**Hu-ho-hao-te**	**167.11**	**19**	*e*PKP	PKPdf	04 35 28.5	+2.3
HHC				APKP		04 37 49.8	
HHC				SKS	SKS	04 41 35.3	+3.1
HHC				SKKS		04 46 14.5	
HHC				SS	SS	05 00 24.0	+2.1
HHC				PP	PP		
	comp=Z,90nm,6.0s						
CD2	**Chengdu**	**168.15**	**76**	*e*PKP	PKPdf	04 35 28.6	+1.5
GYA	**Guiyang**	**170.38**	**101**	*i* PKP	PKPdf	04 35 30.6	+2.0
GYA				PKP2	PKPab	04 36 51.9	+0.3
GYA				APKP		04 37 52.0	
GYA				XPKP		04 38 48.1	
GYA				PP	PP	04 40 45.8	+2.1
GYA				PP	PP		
	comp=Z,390nm,5.7s						
XAN	**Xi'an**	**171.21**	**51**	PKP	PKPdf	04 35 30.4	+1.6
ENH	**Enshi**	**173.12**	**76**	*e*PKPdf	PKPdf	04 35 30.9	+1.0
SSE	**Sheshan**	**175.84**	**305**	PKP	PKPdf	04 35 31.1	+0.4
NJ2	**Nanjing**	**176.44**	**337**	*e*PKP	PKPdf	04 35 32.4	+1.6
NJ2				PKP2	PKPab	04 37 20.0	+1.7
NJ2				APKP		04 37 54.0	
NJ2				XPKP		04 38 50.0	
NJ2				PKS	PKS	04 39 03.0	+1.7
NJ2				PP	PP	04 41 13.0	-0.4
NJ2				PP	PP		
	comp=Z,160nm,5.0s						

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*NEIC **17** 04:27:20.6, 31.55S×71.73W, h41^{km}, MD4.1(GUC), After GUC.*

GUC 17 04:27:20.6±0.8**, 31.55S×71.73W, h41**^{km}±3^{km}**, MD4.1, ML3.3, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ILCH	**Illapel**	**0.48**	**101**	⇑*i*P	P	04 27 31.6	+0.4
ILCH				*i* S	S	04 27 39.7	+1.1
ILCH				AMP		04 27 40.6	
	comp=N,3μm,0.2s						
CMCH	**Combarbala**	**0.72**	**59**	⇓*i*P	P	04 27 34.4	0.0
CMCH				*i* S	S	04 27 45.3	+0.8
CMCH				AMP		04 27 45.7	
	comp=E,7μm,0.2s						
TLL	**Tololo Astrono**	**1.59**	**30**	*e*P	P	04 27 47.4	+0.7
TLL				*i* S	S	04 28 08.8	+2.6
TLL				AMP		04 28 13.8	
	comp=N,496nm,0.7s						
PEL	**Peldehue**	**1.82**	**151**	⇑*i*P	P	04 27 50.9	+0.8
PEL				*i* S	S	04 28 13.3	+1.3
PEL				AMP		04 28 25.8	
	comp=E,503nm,0.3s						
RCDM	**Rinconada Maip**	**2.09**	**158**	*e*P	P	04 27 54.0	+0.1
RCDM				*i* S	S	04 28 19.4	+0.6
RCDM				AMP		04 28 30.6	
	comp=E,224nm,0.1s						
FCH	**Farellones**	**2.15**	**146**	⇓*i*P	P	04 27 55.9	+1.2
FCH				*i* S	S	04 28 22.4	+2.0
FCH				AMP		04 28 28.1	
	comp=E,163nm,0.3s						
ANTU	**Antumapu**	**2.22**	**156**	*e*P	P	04 27 56.0	+0.3
ANTU				*i* S	S	04 28 22.9	+0.8
ANTU				AMP		04 28 33.6	
	comp=N,233nm,0.4s						
CHCH	**Chadas Angostu**	**2.55**	**159**	*e*P	P	04 28 00.8	+0.3

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*MOS **17** 04:55:44.0±0.8, 24.63S×179.80E, h511^{km}, mb4.6/11, Error ellipse: s-maj=16.5km s-min=11.5km az=139.0*

*BJI **17** 04:55:45.0, 24.70S×179.90E, h515^{km}, mB4.4, mb4.5*

*NEIC **17** 04:55:45.1±0.7, 24.72S×179.85E, h515^{km}±8^{km}, mb4.5/20, Error ellipse: s-maj=8.0km s-min=6.0km az=156.0*

*IDC **17** 04:55:45.0±1.4, 24.74S×179.83E, h512^{km}±15^{km}, mb4.1/17, mb1 4.2/20, mb1mx4.1/23, mbtmp4.9/20, Error ellipse: s-maj=16.1km s-min=10.9km az=166.0*

ISC 17 04:55:44.1±1.0**, 24.78S**±0.06×**179.82E**±0.06**, h512**^{km}±12^{km}**, h518**^{km}±2.6^{km}**: pP-P, n118, σ0.94**/106**, mb4.4**/38**, 4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.89**	**156**	P	**P**	**04 57 12.0**	**+0.5**
	52nm,0.3s,baz=69,slow=23,SNR=3.5						
RAO	**Raoul Island**	**4.89**	**156**	*e*Pn	**P**	**04 57 12.3**	**+0.7**
DZM	**Mont Dzumac**	**12.57**	**280**	*e*P	**P**	**04 58 29.9**	**+0.5**
DZM	**Mont Dzumac**	**12.57**	**280**	P	**P**	**04 58 31.5**	**+2.1**
	2.6nm,0.3s,baz=75,slow=19,SNR=17						
AFI	**Afiamalu**	**13.40**	**38**	S	**S**	**05 00 48.8**	**-9.2**
	1.3nm,0.3s,baz=18,slow=21,SNR=4.4						
URZ	**Urewera**	**13.64**	**189**	P	**P**	**04 58 40.0**	**-0.4**
	4.0nm,0.3s,baz=42,slow=2.1,SNR=19						
URZ				S	**S**	**05 01 06.5**	**+4.2**
	3.3nm,0.3s,baz=64,slow=22,SNR=12						
MRZ	**Mangatainoka R**	**16.23**	**192**	PN	**P**	**04 59 04.4**	**-2.0**
KIW	**Kapiti Island**	**16.56**	**193**	PN	**P**	**04 59 09.0**	**-0.5**
SNZO	**South Karori**	**17.03**	**193**	PN	**P**	**04 59 14.5**	**+0.4**
SNZO	**South Karori**	**17.03**	**193**	*e*P	**P**	**04 59 14.5**	**+0.4**
	65nm,0.8s						
QRZ	**Quartz Range**	**17.13**	**199**	PN	**P**	**04 59 16.0**	**+0.9**
NNZ	**Nelson**	**17.25**	**197**	PN	**P**	**04 59 15.5**	**-0.9**
THZ	**Tophouse**	**17.89**	**197**	PN	**P**	**04 59 22.4**	**-0.2**
KHZ	**Kahutara**	**18.34**	**195**	PN	**P**	**04 59 26.0**	**-1.0**
LTZ	**Lake Taylor**	**19.01**	**197**	PN	**P**	**04 59 32.5**	**-0.8**
RPZ	**Rata Peaks**	**20.21**	**199**	P	**P**	**04 59 43.9**	**-0.8**
	28nm,0.5s,baz=357,slow=2.3,SNR=23						
JCZ	**Jackson Bay**	**21.27**	**202**	PN	**P**	**04 59 53.8**	**-0.7**
CNB	**Canberra Magne**	**28.27**	**241**	*e*P	**P**	**05 00 58.8**	**+1.6**
	7.2nm,0.4s,mb4.7						
CTA	**Charters Tower**	**31.32**	**272**	*e*P	**P**	**05 01 24.3**	**+0.8**
	37nm,0.3s,mb5.4						
CTA	**Charters Tower**	**31.32**	**272**	P	**P**	**05 01 24.4**	**+0.9**
	64nm,0.4s,mb5.5,baz=97,slow=11,SNR=112						
CTAO	**Charters Tower**	**31.32**	**272**	*e*P	**P**	**05 01 23.9**	**+0.4**
	73nm,0.6s,mb5.4						
CTAO	**Charters Tower**	**31.32**	**272**	*e*P	**P**	**05 01 23.9**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,73nm,0.6s,mb5.4						
TOO	**Toolangi**	**31.84**	**238**	*e*P	**P**	**05 01 28.9**	**+1.2**
	comp=Z,13nm,0.7s,mb4.6						
TOO	**Toolangi**	**31.84**	**238**	*e*P	**P**	**05 01 28.9**	**+1.2**
TOO				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.6						
TAU	**Tasmania Unive**	**32.22**	**228**	*e*P	**P**	**05 01 31.8**	**+0.9**
	comp=Z,23nm,0.6s,mb4.9						
TAU	**Tasmania Unive**	**32.22**	**228**	*e*P	**P**	**05 01 31.8**	**+0.9**
TAU				pmax	pmax		
	comp=Z,23nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**34.25**	**249**	P	**P**	**05 01 48.1**	**+0.1**
	comp=Z,17nm,0.4s,mb4.9,baz=94,slow=9.8,SNR=15						
STKA				ScP		05 07 09.2	
	comp=Z,2.3nm,0.9s,baz=80,slow=4.6,SNR=4.9						
STKA	**Stephens Creek**	**34.25**	**249**	P	**P**	**05 01 43.2**	**-4.9**
STKA				ScP		05 07 09.2	
PMG	**Port Moresby**	**34.63**	**290**	P	**P**	**05 01 51.6**	**+0.2**
	comp=Z,24nm,0.9s,mb4.7,baz=117,slow=5.4,SNR=7.7						
PMG	**Port Moresby**	**34.63**	**290**	*e*P	**P**	**05 01 51.0**	**-0.4**
	comp=Z,34nm,1.0s,mb4.8						
PMG	**Port Moresby**	**34.63**	**290**	*e*P	**P**	**05 01 51.0**	**-0.4**
PMG				pmax	pmax		
	comp=Z,34nm,1.0s						
ASPA	**Alice Springs**	**41.74**	**262**	⇓*i*P	**P**	**05 02 49.5**	**+0.2**
WB2	**Warramunga Arr**	**42.18**	**267**	⇓*i*P	**P**	**05 02 52.5**	**-0.3**
WB2				*e*SCP		05 07 40.7	
WB2				*e*S	**S**	**05 08 33.1**	**-3.1**
WRAB	**Tennant Creek**	**42.18**	**267**	*e*P	**P**	**05 02 52.2**	**-0.7**
	comp=Z,84nm,0.8s,mb5.3						
WRAB				*e*ScP		05 07 39.9	
WRAB	**Tennant Creek**	**42.18**	**267**	*e*P	**P**	**05 02 52.2**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,84nm,0.8s,mb5.3						
WRA	**Warramunga Arr**	**42.19**	**267**	P	**P**	**05 02 52.3**	**-0.6**
	comp=Z,42nm,0.5s,mb5.2,baz=102,slow=8.0,SNR=289						
WRA				ScP		05 07 40.7	
	comp=Z,10.0nm,0.8s,baz=101,slow=4.0,SNR=27						
WRA				S	**S**	**05 08 33.3**	**-3.1**
	comp=Z,0.3nm,0.6s,baz=328,slow=14,SNR=4.9						
WRA	**Warramunga Arr**	**42.19**	**267**	P	**P**	**05 02 52.3**	**-0.6**
WRA				ScP		05 07 40.7	
WRA				S	**S**	**05 08 33.3**	**-3.1**
WRA	**Warramunga Arr**	**42.19**	**267**	P	**P**	**05 02 52.3**	**-0.6**
WRA				S	**S**	**05 08 33.3**	**-3.1**
FORT	**Forrest**	**45.85**	**250**	⇓*i*P	**P**	**05 03 20.7**	**-0.8**
	comp=Z,94nm,0.6s,mb5.5						
KAKA	**Kakadu**	**46.23**	**276**	⇓*i*P	**P**	**05 03 42.2**	**+18**
	comp=Z,30nm,0.8s,mb4.9						
FITZ	**Fitzroy Crossi**	**50.60**	**266**	*e*P	**P**	**05 03 56.9**	**-0.4**
	comp=Z,48nm,0.7s,mb4.9						
FITZ	**Fitzroy Crossi**	**50.60**	**266**	P	**P**	**05 03 57.0**	**-0.4**
	comp=Z,69nm,0.7s,mb5.1,baz=140,slow=7.2,SNR=54						
FITZ				ScP		05 08 16.3	
	comp=Z,7.3nm,0.9s,baz=140,slow=16,SNR=3.2						
VNDA	**Vanda**	**53.50**	**185**	*e*P	**P**	**05 04 17.9**	**+0.4**
	comp=Z,1.7nm,0.8s,mb3.4						
VNDA	**Vanda**	**53.50**	**185**	*e*P	**P**	**05 04 17.9**	**+0.4**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SBA	**Scott Base**	**53.50**	**183**	*e*P	**P**	**05 04 19.1**	**+1.7**
	comp=Z,7.5nm,1.2s,mb3.9						
SBA	**Scott Base**	**53.50**	**183**	*e*P	**P**	**05 04 19.2**	**+1.7**
SBA				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb3.9						
KLBR	**Kellerberrin**	**54.50**	**248**	*e*P	**P**	**05 04 24.2**	**-1.0**
	comp=Z,23nm,0.5s,mb4.8						
NWAO	**Narrogin (SRO)**	**54.73**	**246**	P	**P**	**05 04 25.9**	**-0.8**
	comp=Z,9.3nm,0.8s,mb4.1,baz=115,slow=8.5,SNR=5.4						
MUN	**Mundaring**	**55.73**	**247**	*e*P	**P**	**05 04 33.4**	**-0.4**
CASY	**Casey**	**59.25**	**206**	*e*P	**P**	**05 04 56.3**	**-0.9**
QSPA	**South Pole Qui**	**65.31**	**180**	*e*P	**P**	**05 05 37.0**	**+0.9**
	comp=Z,6.3nm,0.7s,mb4.2						
KKM	**Kota Kinabalu**	**69.00**	**287**	*e*P	**P**	**05 05 59.4**	**-0.4**
KSM	**Kuching**	**72.09**	**280**	*e*P	**P**	**05 06 17.9**	**-0.1**
MAW	**Mawson**	**76.87**	**201**	P	**P**	**05 06 44.8**	**+1.1**
	comp=Z,3.3nm,0.5s,mb4.0,baz=132,slow=7.4,SNR=21						
SSE	**Sheshan**	**78.94**	**312**	P	**P**	**05 06 57.3**	**+1.8**
SSE				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,50nm,5.2s						
NJ2	**Nanjing**	**81.11**	**311**	*e*P	**P**	**05 07 07.4**	**+0.7**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.5						
KULM	**Kulim**	**82.42**	**279**	P	**P**	**05 07 13.1**	**-0.6**
PTRM	**Twissleman Ran**	**82.61**	**45**	*e*P	**P**	**05 07 14.0**	**-0.2**
NSHM	**Saint Helena R**	**82.89**	**42**	*e*P	**P**	**05 07 15.6**	**0.0**
MDJ	**Mudanjiang**	**82.90**	**326**	P	**P**	**05 07 17.0**	**+1.5**
MDJ				AMB	AMB		
	comp=Z,60nm,4.3s						
ISA	**Isabella**	**83.75**	**46**	*e*P	**P**	**05 07 19.9**	**-0.1**
	comp=Z,1.4nm,0.3s,mb4.0						
ISA	**Isabella**	**83.75**	**46**	*e*P	**P**	**05 07 19.9**	**-0.1**
ISA				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.8						

SNAA	**Sanae**	**83.80**	**179**	P	**P**	**05 07 19.7**	**+0.3**
SNAA	**Sanae**	**83.80**	**179**	*e*P	**P**	**05 07 18.9**	**-0.4**
	comp=Z,1.0nm,0.6s,mb3.5						
SNAA	**Sanae**	**83.80**	**179**	*e*P	**P**	**05 07 18.9**	**-0.5**
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CMB	**Columbia Colle**	**83.95**	**43**	*e*P	**P**	**05 07 20.1**	**-0.8**
	comp=Z,8.5nm,0.9s,mb4.3						
CMB	**Columbia Colle**	**83.95**	**43**	*e*P	**P**	**05 07 20.1**	**-0.8**
CMB				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.2						
VNA3	**Neumayer Olymp**	**84.01**	**177**	P	**P**	**05 07 21.9**	**+1.5**
VNA3				*e*	pP	05 09 15.7	+2.3
VNA3				*e*		05 10 07.7	
WDC	**Whiskeytown Da**	**84.23**	**40**	*e*P	**P**	**05 07 22.2**	**0.0**
	comp=Z,10nm,1.0s,mb4.3						
WDC	**Whiskeytown Da**	**84.23**	**40**	*e*P	**P**	**05 07 22.2**	**0.0**
WDC				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.3						
VNA2	**Neumayer--Watz**	**84.43**	**178**	P	**P**	**05 07 23.1**	**+0.6**
VNA2				*e*	pP	05 09 18.3	+2.7
VNA2				*e*		05 10 09.4	
CN2	**Changchun**	**84.49**	**324**	*e*P	**P**	**05 07 25.6**	**+2.2**
MTUM	**Tungsten Hills**	**84.69**	**45**	*e*P	**P**	**05 07 24.4**	**-0.2**
NVAR	**Mina Array Bea**	**85.50**	**44**	P	**P**	**05 07 28.4**	**0.0**
	comp=Z,3.3nm,0.8s,mb3.9,baz=217,slow=7.7,SNR=26						
MNV	**Mina**	**85.59**	**44**	*e*P	**P**	**05 07 28.1**	**-0.7**
	comp=Z,3.6nm,1.0s,mb4.0						
MNV	**Mina**	**85.59**	**44**	*e*P	**P**	**05 07 28.2**	**-0.7**
MNV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
TPNV	**Topopah Spring**	**85.95**	**46**	*e*P	**P**	**05 07 30.8**	**+0.1**
	comp=Z,6.0nm,0.8s,mb4.3						
TPNV	**Topopah Spring**	**85.95**	**46**	*e*P	**P**	**05 07 30.8**	**+0.2**
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
TPH	**Tonopah**	**85.97**	**45**	*e*P	**P**	**05 07 30.1**	**-0.6**
NEN	**Nelson**	**86.15**	**48**	*e*P	**P**	**05 07 31.3**	**-0.3**
WVOR	**Wild Horse Val**	**87.68**	**41**	*e*P	**P**	**05 07 38.6**	**0.0**
	comp=Z,12nm,1.1s,mb4.5						
WVOR	**Wild Horse Val**	**87.68**	**41**	*e*P	**P**	**05 07 38.7**	**0.0**
WVOR				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.5						
PLCA	**Paso Flores**	**87.78**	**134**	P	**P**	**05 07 40.5**	**+1.4**
	comp=Z,0.9nm,0.6s,mb3.7,baz=227,slow=11,SNR=3.0						
ELK	**Elko**	**88.77**	**44**	P	**P**	**05 07 43.8**	**0.0**
	comp=Z,1.7nm,0.6s,mb4.0,baz=250,slow=4.1,SNR=11						
ELK	**Elko**	**88.77**	**44**	*e*P	**P**	**05 07 43.4**	**-0.4**
	comp=Z,5.2nm,1.2s,mb4.2						
ELK	**Elko**	**88.77**	**44**	*e*P	**P**	**05 07 43.4**	**-0.4**
ELK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BBB	**Bella Bella**	**89.11**	**29**	P	**P**	**05 07 44.8**	**-0.3**
	comp=Z,15nm,1.0s,mb4.8,baz=280,slow=13,SNR=3.6						
MVU	**Marysvale**	**89.48**	**47**	*e*P	**P**	**05 07 47.7**	**+0.6**
	comp=Z,4.4nm,1.3s,mb4.1						
MSU	**Marysvale**	**89.51**	**47**	*e*P	**P**	**05 07 47.9**	**+0.6**
TMUT	**Trail Mountain**	**90.56**	**46**	*e*P	**P**	**05 07 52.9**	**+0.8**
TXAR	**Lajitas Array**	**91.03**	**58**	P	**P**	**05 07 54.9**	**+0.3**
	comp=Z,4.6nm,0.8s,mb4.5,baz=217,slow=6.3,SNR=14						
DAU	**Daniels Canyon**	**91.12**	**45**	*e*P	**P**	**05 07 54.9**	**+0.2**
ANMO	**Albuquerque**	**91.63**	**52**	P	**P**	**05 07 57.5**	**+0.3**
	comp=Z,2.1nm,0.8s,mb4.2,baz=238,slow=6.0,SNR=4.4						
ANMO	**Albuquerque**	**91.63**	**52**	*e*P	**P**	**05 07 56.7**	**-0.4**
	comp=Z,2.7nm,0.8s,mb4.3						
ANMO	**Albuquerque**	**91.63**	**52**	*e*P	**P**	**05 07 56.7**	**-0.4**
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
COLA	**College**	**92.80**	**13**	P	**P**	**05 07 59.4**	**-2.4**
	comp=Z,6.5nm,1.1s,mb4.6						
COLA	**College**	**92.80**	**13**	P	**P**	**05 07 59.4**	**-2.4**
COLA				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
ILAR	**Eielson Array**	**92.92**	**14**	P	**P**	**05 08 00.5**	**-1.9**
	comp=Z,0.8nm,0.7s,mb3.9,baz=226,slow=5.1,SNR=11						
PDAR	**Pinedale Array**	**93.43**	**44**	P	**P**	**05 08 04.8**	**-0.5**
	comp=Z,1.4nm,0.8s,mb4.1,baz=225,slow=4.2,SNR=10						
LZH	**Lanzhou**	**93.78**	**308**	P	**P**	**05 08 08.6**	**+1.6**
LZH				AP	pP	05 10 03.8	+1.8
LZH				XP	sP	05 10 54.5	+1.9
LZH				*e*PP	PP	05 12 06.6	+3.8
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,50nm,8.3s						
INK	**Inuvik**	**98.91**	**16**	P	**P**	**05 08 27.6**	**-1.9**
	comp=Z,1.8nm,1.1s,mb4.3,baz=342,slow=24,SNR=4.2						
BVAR	**Borovoye Array**	**120.98**	**318**	PKP	PKPdf	05 13 38.0	+0.4
	comp=Z,1.0nm,0.5s,baz=180,slow=1.5,SNR=6.1						
ARCES	**ARCESS Array B**	**132.71**	**348**	PKP	PKPdf	05 14 00.6	+0.9
	comp=Z,5.5nm,0.9s,baz=31,slow=1.5,SNR=9.0						
ARCES				SKPbc		05 16 40.7	
	comp=Z,3.6nm,0.7s,slow=2.7,SNR=7.6						
ARCES	**ARCESS Array B**	**132.71**	**348**	PKP	PKPdf	05 14 00.6	+0.9
ARCES				SKPbc		05 16 40.7	
FINES	**FINESS Array B**	**139.22**	**341**	PKhKP		05 14 03.5	
	comp=Z,0.5nm,0.5s,baz=90,slow=3.8,SNR=5.3						
FINES				SKPbc		05 17 00.7	
	comp=Z,3.4nm,0.6s,baz=56,slow=5.0,SNR=10						
NB2	**NORSAR Subarra**	**142.92**	**351**	PKPabc	PKPdf	05 14 15.4	-2.7
	comp=Z,1.2nm,0.7s,baz=16,slow=3.1						
NOA	**NORSAR Array B**	**142.92**	**351**	PKhKP		05 14 15.9	
	comp=Z,1.9nm,0.8s,baz=16,slow=2.4,SNR=5.7						
AKASG	**Malin Array Be**	**145.61**	**326**	PKPbc	PKPbc	05 14 24.6	+0.3
	comp=Z,1.7nm,0.5s,baz=43,slow=3.9,SNR=16						
BRTR	**Keskin Array B**	**147.96**	**306**	PKPbc	PKPdf	05 14 32.5	+5.3
	comp=Z,0.5nm,0.6s,baz=106,slow=3.0,SNR=3.7						
KWP	**Kalwaria**	**149.44**	**330**	*e*PKP	PKPdf	05 14 36.0	+6.6
KWP	**Kalwaria**	**149.44**	**330**	*e*PKP	PKPdf	05 14 36.0	+6.7
KSP	**Ksiaz**	**151.04**	**338**	*e*PKP	PKPdf	05 14 40.1	+8.4
KSP	**Ksiaz**	**151.04**	**338**	*e*PKPdf	PKPdf	05 14 39.5	+7.8
UPC	**Upice**	**151.42**	**338**	*e*PKPbc	PKPdf	05 14 40.2	+7.9
DPC	**Dobruska-Polom**	**151.44**	**338**	*e*PKPbc	PKPdf	05 14 40.5	+8.2
CLL	**Collm**	**151.64**	**342**	*i* P	PKPdf	05 14 40.4	+7.8
CLL				*e*		05 15 23.0	
CLL	**Collm**	**151.64**	**342**	*i* PKIKP	PKPdf	05 14 40.4	+7.8
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BRG	**Berggiesshubel**	**151.76**	**341**	*i* P	PKPdf	05 14 40.8	+8.0

MOS ***17*** *05:25:36.3±1.0, 4.41S×152.95E, h37^{km}, mb5.0/6, Error ellipse: s-maj=19.7km s-min=15.6km az=58.2*

NEIC ***17*** *05:25:38.6±2.5, 4.61S×153.12E, h53^{km}±22^{km}, mb4.8/6, Error ellipse: s-maj=16.8km s-min=13.6km az=50.0*

IDC ***17*** *05:25:39.7±4.9, 4.65S×153.11E, h61^{km}±44^{km}, mb4.1/10, mb1 4.2/11, mb1mx4.0/17, mbtmp4.4/11, ML3.3/1, MS3.3/4, Ms1 3.3/4, ms1mx3.0/23, Error ellipse: s-maj=26.0km s-min=22.6km az=47.0*

ISC 17 05:25:35.4±3.9, **4.6S**±0.1×**153.1E**±0.1, **h35**^{km}±34^{km}, **n40**, σ**0^{s}95**/36, **mb4.6**/21, **MS3.6**/1, **New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.59**	**230**	P	**P**	**05 27 29.2**	**+2.9**
	2.8nm,0.3s,baz=46,slow=15,SNR=7.0						
PMG				S	**S**	**05 28 52.0**	**-0.1**
	3.4nm,0.3s,baz=205,slow=16,SNR=6.6						
PMG	**Port Moresby**	**7.59**	**230**	*e*Pn	**P**	**05 27 26.8**	**+0.5**
	18nm,0.7s						
PMG				*e*Sn	**S**	**05 28 49.5**	**-2.6**
PMG	**Port Moresby**	**7.59**	**230**	*e*P	**P**	**05 27 26.8**	**+0.4**
PMG				*e*		05 28 49.5	
PMG				pmax	pmax		
	comp=Z,18nm,0.7s						
HNR	**Honiara**	**8.36**	**126**	LR	LR	05 29 34.4	
	comp=Z,85nm,20.2s,baz=310,slow=28						
CTA	**Charters Tower**	**16.80**	**203**	LR	LR	05 34 47.0	
	comp=Z,100nm,20.0s,baz=232,slow=33						
GUMO	**Guam**	**19.79**	**336**	LR	LR	05 36 04.3	
	comp=Z,126nm,20.7s,baz=48,slow=31						
DZM	**Mont Dzumac**	**21.70**	**145**	P	**P**	**05 30 25.2**	**-0.1**
	comp=Z,19nm,0.8s,mb4.5,baz=324,slow=11,SNR=18						
WRAB	**Tennant Creek**	**23.79**	**228**	*e*P	**P**	**05 30 47.0**	**+0.9**
	comp=Z,9.9nm,0.5s,mb4.5						
WRAB	**Tennant Creek**	**23.79**	**228**	*e*P	**P**	**05 30 47.0**	**+1.0**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	**23.80**	**228**	P	**P**	**05 30 46.2**	**0.0**
	comp=Z,4.8nm,0.4s,mb4.2,baz=50,slow=10.0,SNR=26						
STKA	**Stephens Creek**	**29.23**	**200**	P	**P**	**05 31 35.3**	**-1.0**
	comp=Z,2.0nm,0.9s,mb3.8,baz=84,slow=10,SNR=3.3						
STKA				LR	LR	05 42 57.9	
	comp=Z,134nm,18.3s,MS3.6,baz=25,slow=36						
STKA	**Stephens Creek**	**29.23**	**200**	P	**P**	**05 31 35.3**	**-1.0**
STKA				P		05 31 38.6	
STKA				LR	LR	05 42 57.9	
FITZ	**Fitzroy Crossi**	**30.01**	**241**	P	**P**	**05 31 42.0**	**-1.4**
	comp=Z,5.4nm,0.3s,mb4.7,baz=76,slow=7.7,SNR=21						
SONM	**Songino Array**	**66.27**	**328**	P	**P**	**05 36 22.0**	**-0.4**
	comp=Z,0.8nm,0.5s,mb4.0,baz=140,slow=5.5,SNR=7.7						
SONM				PcP	PcP	05 36 52.4	+0.3
	comp=Z,0.4nm,0.5s,baz=138,slow=2.9,SNR=4.7						
JIRN	**Jiri**	**71.90**	**301**	*e*P	**P**	**05 36 58.4**	**+1.1**
	comp=Z,4.5nm,0.4s,mb4.7						
GUN	**Gumba**	**72.23**	**301**	*e*P	**P**	**05 37 00.1**	**+0.8**
	comp=Z,8.2nm,0.4s,mb5.0						
KKN	**Kakani**	**72.72**	**301**	*e*P	**P**	**05 37 02.6**	**+0.4**
	comp=Z,5.5nm,0.4s,mb4.9						
DMN	**Daman**	**72.82**	**301**	*e*P	**P**	**05 37 02.9**	**0.0**
	comp=Z,6.7nm,0.4s,mb4.9						
VNDA	**Vanda**	**73.05**	**178**	P	**P**	**05 37 05.4**	**+2.1**
VNDA				*e*	pP	05 37 17.6	+3.5
KOLN	**Koldanda**	**74.15**	**300**	*e*P	**P**	**05 37 11.3**	**+0.7**
	comp=Z,4.2nm,0.5s,mb4.6						
MKAR	**Makanchi Array**	**80.33**	**319**	P	**P**	**05 37 45.5**	**+0.8**
	comp=Z,1.2nm,0.4s,mb4.2,baz=90,slow=7.9,SNR=21						
MKAR	**Makanchi Array**	**80.33**	**319**	P	**P**	**05 37 45.5**	**+0.8**
ZAL	**Zalesovo**	**81.12**	**326**	P	**P**	**05 37 48.7**	**0.0**
	comp=Z,1.3nm,0.4s,mb4.2,baz=13,slow=5.3,SNR=3.4						
ZAL	**Zalesovo**	**81.12**	**326**	P	**P**	**05 37 48.7**	**0.0**
ILAR	**Eielson Array**	**81.84**	**22**	P	**P**	**05 37 50.9**	**-1.4**
	comp=Z,1.0nm,0.9s,mb3.7,baz=254,slow=5.7,SNR=6.5						
KURK	**Kurchatov**	**83.75**	**322**	*e*P	**P**	**05 38 02.4**	**+0.1**
	comp=Z,7.7nm,1.3s,mb4.7						
KURK	**Kurchatov**	**83.75**	**322**	*e*P	**P**	**05 38 02.4**	**+0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.7						
AAK	**Ala-Archa**	**84.70**	**313**	*e*P	**P**	**05 38 07.6**	**+0.3**
	comp=Z,4.8nm,0.6s,mb4.8						
AAK	**Ala-Archa**	**84.70**	**313**	*e*P	**P**	**05 38 07.6**	**+0.3**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
INK	**Inuvik**	**88.14**	**21**	P	**P**	**05 38 23.4**	**-0.1**
	comp=Z,1.1nm,1.0s,mb4.1,baz=292,slow=5.6,SNR=5.1						
CHKZ	**Chkalovo**	**89.18**	**324**	*e*P	**P**	**05 38 28.2**	**-0.5**
	comp=Z,5.9nm,0.8s,mb5.0						
CHKZ	**Chkalovo**	**89.18**	**324**	*e*P	**P**	**05 38 28.3**	**-0.5**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb5.0						
BVAR	**Borovoye Array**	**89.22**	**323**	P	**P**	**05 38 28.9**	**-0.1**
	comp=Z,7.8nm,0.6s,mb5.2,baz=109,slow=5.5,SNR=46						
BRVK	**Borovoye**	**89.29**	**323**	*e*P	**P**	**05 38 28.8**	**-0.5**
	comp=Z,4.3nm,0.8s,mb4.8						
BRVK	**Borovoye**	**89.29**	**323**	*e*P	**P**	**05 38 28.8**	**-0.5**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
ARU	**Arti**	**96.28**	**326**	*e*P	**P**	**05 38 58.6**	**-2.7**
	comp=Z,5.6nm,0.6s,mb5.2						
ARU	**Arti**	**96.28**	**326**	*e*P	**P**	**05 38 58.6**	**-2.7**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb5.2						
GERES	**GERESS Array B**	**124.00**	**329**	PKP	PKPdf	05 44 32.6	+2.2
	comp=Z,0.7nm,0.5s,baz=90,slow=1.3,SNR=6.7						
MDT	**Midelt**	**145.01**	**326**	PKPbc	PKPbc	05 45 11.7	+1.8
	comp=Z,1.3nm,0.4s,baz=31,slow=5.1,SNR=9.6						
BDFB	**Brasilia**	**151.03**	**134**	PKPbc	PKPdf	05 45 26.2	+6.3
	comp=Z,1.5nm,0.6s,baz=271,slow=1.3,SNR=4.0						

IDC ***17*** *05:37:39.5±1.2, 44.55S×37.76E, mb4.1/6, mb1 4.2/7, mb1mx3.9/18, mbtmp4.1/7, ML3.4/1, MS3.7/10, Ms1 3.6/10, ms1mx3.5/21, Error ellipse: s-maj=69.5km s-min=20.9km az=50.0*

NEIC ***17*** *05:37:40.8±0.6, 44.62S×37.65E, h10^{km}, mb4.5/4, Error ellipse: s-maj=24.6km s-min=10.7km az=69.0*

ISC 17 05:37:39.3±0.7, **44.6S**±0.1×**37.6E**±0.3, **h10**^{km}, **n20**, σ**0^{s}81**/12, **mb4.1**/10, **MS3.6**/8, **Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	**17.89**	**307**	LR	LR	05 47 17.5	
	comp=Z,139nm,19.2s,baz=180,slow=32						
BOSA	**Boshof**	**18.75**	**324**	P	**P**	**05 42 01.4**	**+0.9**
	0.1nm,0.3s,baz=147,slow=17,SNR=2.3						
BOSA				LR	LR	05 47 43.6	
	comp=Z,262nm,19.7s,baz=152,slow=32						
LBTB	**Lobatse**	**21.85**	**330**	P	**P**	**05 42 33.6**	**-0.2**
	3.0nm,0.9s,mb3.7,baz=145,slow=9.8,SNR=3.8						
LBTB				LR	LR	05 49 37.4	
	comp=Z,208nm,19.8s,MS3.5,baz=145,slow=33						
MATP	**Matopo**	**25.28**	**340**	P	**P**	**05 43 07.8**	**+0.6**
	2.3nm,0.8s,mb3.8,baz=184,slow=13,SNR=4.0						
MATP				LR	LR	05 51 28.3	
	comp=Z,198nm,20.5s,MS3.6,baz=179,slow=33						
MAW	**Mawson**	**26.62**	**159**	LR	LR	05 51 17.9	
	comp=Z,114nm,19.0s,MS3.4,baz=62,slow=31						
LSZ	**Lusaka**	**30.31**	**342**	P	**P**	**05 43 52.0**	**-1.1**
	2.2nm,0.7s,mb4.0,baz=153,slow=9.4,SNR=5.5						
LSZ				LR	LR	05 54 30.8	
	comp=Z,170nm,19.4s,MS3.7,baz=335,slow=33						
TSUM	**Tsumeb**	**30.34**	**320**	P	**P**	**05 43 53.0**	**-0.3**
	3.8nm,1.1s,mb4.0,baz=135,slow=14,SNR=3.8						
TSUM				LR	LR	05 55 05.5	
	comp=Z,164nm,19.6s,MS3.7,baz=136,slow=34						
SNAA	**Sanae**	**33.28**	**202**	LR	LR	05 54 55.4	
	comp=Z,49nm,19.7s,MS3.2,baz=22,slow=31						
SNAA	**Sanae**	**33.28**	**202**	P	**P**	**05 44 19.2**	**+0.6**
	5.1nm,1.2s,mb4.3						
KMBO	**Kilima Mbogo**	**43.31**	**360**	LR	LR	06 01 53.4	
	comp=Z,121nm,18.8s,MS3.8,baz=97,slow=34						
QSPA	**South Pole Qui**	**45.60**	**180**	P	**P**	**05 46 00.8**	**+0.2**
	4.4nm,0.7s,mb4.5						
DBIC	**Dimbokro**	**63.72**	**312**	LR	LR	06 11 23.6	
	comp=Z,49nm,18.2s,MS3.7,baz=56,slow=32						
STKA	**Stephens Creek**	**77.25**	**122**	P	**P**	**05 49 35.7**	**+0.5**
	1.8nm,0.7s,mb4.1,baz=301,slow=5.9,SNR=4.3						
STKA	**Stephens Creek**	**77.25**	**122**	*e*P	**P**	**05 49 35.0**	**-0.2**
WRA	**Warramunga Arr**	**80.89**	**109**	P	**P**	**05 49 55.0**	**-0.2**
	0.6nm,0.8s,mb3.6,baz=217,slow=4.1,SNR=5.9						
SAML	**Samuel**	**91.36**	**256**	*e*P	**P**	**05 50 45.0**	**-1.8**
	2.4nm,1.1s,mb4.4						
ESLA	**Sonseca Array**	**91.87**	**329**	*e*P	**P**	**05 50 49.7**	**+1.1**
	3.5nm,1.2s,mb4.6						
LTX	**Lajitas**	**145.84**	**257**	*e*P	PKPbc	05 57 20.1	+1.1
TXAR	**Lajitas Array**	**145.84**	**257**	PKPbc	PKPbc	05 57 20.3	+1.3
	4.1nm,0.8s,baz=135,slow=6.4,SNR=6.6						
TXAR	**Lajitas Array**	**145.84**	**257**	PKPbc	PKPbc	05 57 20.3	+1.3

IDC ***17*** *05:53:24.4±5.7, 21.04S×179.23W, h610^{km}±70^{km}, mb3.1/6, mb1 3.4/7, mb1mx3.2/14, mbtmp4.1/7, Error ellipse: s-maj=80.3km s-min=29.5km az=153.0*

ISC 17 05:53:25.1±4.5, **21.0S**±0.6×**179.3W**±0.4, **h633**^{km}±54^{km}, **n9**, σ**0^{s}06**/7, **mb3.6**/6, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.27**	**263**	P	**P**	**05 56 16.0**	**0.0**
	0.9nm,0.3s,baz=70,slow=20,SNR=12						
STKA	**Stephens Creek**	**36.42**	**245**	P	**P**	**05 59 40.1**	**0.0**
	2.2nm,0.4s,mb4.0,baz=101,slow=9.4,SNR=11						
WRA	**Warramunga Arr**	**43.28**	**263**	P	**P**	**06 00 35.1**	**0.0**
	1.7nm,0.3s,mb4.0,baz=96,slow=7.6,SNR=94						
FITZ	**Fitzroy Crossi**	**51.71**	**263**	P	**P**	**06 01 37.9**	**-0.1**
	2.2nm,0.5s,mb3.7,baz=103,slow=16,SNR=8.5						
NVAR	**Mina Array Bea**	**82.28**	**44**	P	**P**	**06 04 43.4**	**0.0**
	0.5nm,0.6s,mb3.3,baz=232,slow=11,SNR=4.9						
TXAR	**Lajitas Array**	**88.41**	**58**	P	**P**	**06 05 12.9**	**-0.1**
	0.5nm,0.9s,mb3.2,baz=191,slow=6.4,SNR=4.1						
ILAR	**Eielson Array**	**89.12**	**13**	P	**P**	**06 05 15.4**	**0.0**
	0.4nm,0.5s,mb3.5,baz=221,slow=5.8,SNR=7.6						
ARCES	**ARCESS Array B**	**129.22**	**349**	PKP	PKPdf	06 11 23.9	+1.5
	1.6nm,0.8s,slow=1.2,SNR=5.4						
AKASG	**Malin Array Be**	**142.86**	**330**	PKP	PKPdf	06 11 47.8	+0.1
	0.8nm,0.3s,baz=43,slow=4.0,SNR=14						

MOS ***17*** *06:10:22.7±0.7, 23.29N×141.96E, h33^{km}, mb4.9/4, Error ellipse: s-maj=36.3km s-min=14.2km az=98.3*

NEIC ***17*** *06:10:22.6±5.8, 23.27N×142.04E, h19^{km}±36^{km}, mb4.6/5, Error ellipse: s-maj=18.5km s-min=7.7km az=90.0*

IDC ***17*** *06:10:25.8±3.4, 23.26N×142.00E, h42^{km}±30^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.9/23, mbtmp4.1/12, ML3.8/2, MS3.6/6, Ms1 3.6/6, ms1mx3.1/27, Error ellipse: s-maj=27.8km s-min=18.1km az=87.0*

ISC 17 06:10:23.0±2.1, **23.28N**±0.07×**142.0E**±0.2, **h34**^{km}±20^{km}, **n30**, σ**0^{s}90**/24, **mb4.2**/14, **MS3.8**/5, **Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.81**	**3**	P	**P**	**06 11 22.6**	**+1.8**
	11nm,0.3s,baz=264,slow=18,SNR=3.7						
CBIJ				S	**S**	**06 12 04.2**	**-0.9**
	24nm,0.3s,baz=294,slow=23,SNR=3.3						
MJAR	**Matsushiro Arr**	**13.62**	**347**	P	**P**	**06 13 34.6**	**-1.5**
	0.5nm,0.3s,baz=166,slow=11,SNR=3.5						
JNU	**Nakatsue**	**13.84**	**318**	LR	LR	06 17 56.3	
	comp=Z,39nm,20.9s,baz=256,slow=32						
ASAJ	**Asahikawa**	**20.80**	**1**	LR	LR	06 22 43.3	
	comp=Z,142nm,18.6s,MS3.4,baz=161,slow=35						
SONM	**Songino Array**	**37.41**	**320**	P	**P**	**06 17 34.6**	**0.0**
	0.4nm,0.7s,mb3.4,baz=135,slow=6.7,SNR=3.8						
CTAO	**Charters Tower**	**43.30**	**174**	P	**P**	**06 18 22.2**	**-1.4**
	6.5nm,1.0s,mb4.3						
CTAO	**Charters Tower**	**43.30**	**174**	P	**P**	**06 18 22.2**	**-1.4**
CTAO				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
WRAB	**Tennant Creek**	**43.58**	**190**	*e*P	**P**	**06 18 26.0**	**+0.1**
	comp=Z,30nm,1.0s,mb5.0						
WRAB	**Tennant Creek**	**43.58**	**190**	*e*P	**P**	**06 18 26.0**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
WB2	**Warramunga Arr**	**43.59**	**190**	*e*P	**P**	**06 18 26.3**	**+0.3**
WRA	**Warramunga Arr**	**43.59**	**190**	P	**P**	**06 18 26.4**	**+0.4**
	comp=Z,12nm,0.8s,mb4.7,baz=11,slow=8.5,SNR=55						
FITZ	**Fitzroy Crossi**	**44.11**	**203**	*e*P	**P**	**06 18 30.9**	**+0.7**
	comp=Z,5.8nm,0.9s,mb4.3						
BILL	**Bilibino**	**47.21**	**12**	*e*P	**P**	**06 18 54.4**	**+0.3**
	comp=Z,4.5nm,0.6s,mb4.6						
BILL	**Bilibino**	**47.21**	**12**	*e*P	**P**	**06 18 54.4**	**+0.3**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
MKAR	**Makanchi Array**	**52.81**	**312**	P	**P**	**06 19 37.7**	**+0.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=87,slow=9.1,SNR=10						
STKA	**Stephens Creek**	**54.84**	**180**	P	**P**	**06 19 50.8**	**-1.6**
	comp=Z,2.4nm,0.8s,mb4.3,baz=3.2,slow=13,SNR=4.7						
BVAR	**Borovoye Array**	**60.75**	**319**	P	**P**	**06 20 33.2**	**-0.4**
	comp=Z,1.0nm,0.4s,mb4.3,baz=90,slow=7.4,SNR=7.9						
ILAR	**Eielson Array**	**61.16**	**28**	P	**P**	**06 20 35.5**	**-0.8**
	comp=Z,2.0nm,1.0s,mb4.2,baz=250,slow=6.4,SNR=8.1						
INK	**Inuvik**	**66.58**	**24**	P	**P**	**06 21 11.7**	**+0.2**
	comp=Z,3.6nm,1.1s,mb4.3,baz=309,slow=5.7,SNR=6.7						
INK	**Inuvik**	**66.58**	**24**	*e*P	**P**	**06 21 11.5**	**0.0**
	comp=Z,10nm,1.4s,mb4.7						
INK	**Inuvik**	**66.58**	**24**	*e*P	**P**	**06 21 11.5**	**0.0**
INK				pmax	pmax		
	comp=Z,10.0nm,1.4s						
DLBC	**Dease Lake**	**69.45**	**34**	LR	LR	06 47 58.3	
	comp=Z,68nm,21.4s,MS3.9,baz=284,slow=32						
YKA	**Yellowknife Ar**	**75.59**	**28**	LR	LR	06 52 16.2	
	comp=Z,39nm,20.0s,MS3.7,baz=95,slow=33						
FINES	**FINESS Array B**	**81.28**	**334**	P	**P**	**06 22 37.2**	**+0.3**
	comp=Z,1.2nm,0.5s,mb4.1,baz=68,slow=5.9,SNR=19						
NVAR	**Mina Array Bea**	**83.04**	**51**	P	**P**	**06 22 47.9**	**+1.5**
	comp=Z,0.7nm,0.8s,mb3.8,baz=256,slow=4.3,SNR=3.9						
NVAR	**Mina Array Bea**	**83.04**	**51**	P	**P**	**06 22 47.9**	**+1.4**
AKASG	**Malin Array Be**	**85.58**	**324**	P	**P**	**06 22 59.4**	**+0.5**
	comp=Z,0.6nm,0.5s,mb4.0,baz=51,slow=5.0,SNR=6.5						
PDAR	**Pinedale Array**	**87.06**	**44**	LR	LR	06 57 31.9	
	comp=Z,45nm,18.8s,MS3.9,baz=160,slow=32						
TXAR	**Lajitas Array**	**98.03**	**53**	LR	LR	07 01 44.2	
	comp=Z,52nm,19.7s,MS4.0,baz=255,slow=31						
LPAZ	**La Paz**	**150.87**	**82**	PKPbc	PKPdf	06 30 14.2	+7.2
	comp=Z,0.9nm,0.6s,baz=352,slow=4.7,SNR=7.9						

NDI ***17*** *06:46:49.0±4.1, 34.36N×73.22E, h10^{km}, ML3.6*

NNC ***17*** *06:46:59.5±4.2, 34.33N×73.20E, h60^{km}±35^{km}, mpv3.9, Error ellipse: s-maj=36.1km s-min=30.6km az=86.0*

ISC 17 06:46:49.6±0.7, **34.10N**±0.05×**73.20E**±0.10, **h10**^{km}, **n18**, σ**1^{s}42**/26, **7C-1D**, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**2.69**	**128**	*e*P	**Pn**	**06 47 35.6**	**+1.9**
THN				*e*S	**Sn**	**06 48 10.6**	**+4.0**
DLH	**Dalhousie**	**2.79**	**123**	*e*P	**Pn**	**06 47 38.0**	**+2.9**
DLH				*e*x	**Sb**	**06 48 14.0**	**+0.5**
BHK	**Bhakra**	**3.81**	**134**	*e*SB	**Sb**	**06 48 48.9**	**+5.8**
SDNR	**Sundarnagar**	**4.10**	**128**	*e*P	**Pn**	**06 47 53.0**	**-0.8**
SDNR				*e*x	**Sb**	**06 48 53.0**	**+1.5**
SMLA	**Simla**	**4.47**	**130**	*e*P	**Pn**	**06 47 57.8**	**-1.2**
SMLA				*e*S	**Sn**	**06 48 50.4**	**-1.4**
KLP	**Kalpa**	**4.96**	**120**	*e*P	**Pn**	**06 48 03.0**	**-3.0**
KLP				AML	AML	06 49 23.6	
	comp=E,174nm,0.4s						
KLP				AML	AML	06 49 26.5	
	comp=N,97nm,0.6s						
NDI	**New Delhi**	**6.40**	**147**	*e*x	x	06 48 47.0	
NDI				*e*S	**Sn**	**06 49 35.0**	**-5.2**
KHET	**Khetri**	**6.41**	**159**	*e*P	**Pn**	**06 48 27.2**	**+0.8**
KHET				*e*S	**Sn**	**06 49 39.1**	**-1.4**
KUDL	**Kundal**	**6.58**	**154**	*e*P	**Pn**	**06 48 27.7**	**-1.0**
KUDL				*e*S	**Sn**	**06 49 39.2**	**-5.3**
KALG	**Kalgarh**	**6.58**	**133**	*e*x	x	06 48 46.5	
KALG				*e*S	**Sn**	**06 49 39.2**	**-5.6**
AAK	**Ala-Archa**	**8.58**	**6**	⇓P	**P**	**06 48 57.8**	**+1.1**
	comp=N,3.8nm,0.8s						
AAK				⇑S	**Sn**	**06 50 32.7**	**-1.8**
	comp=N,1.8nm,0.7s						
KK31	**Karatay Array**	**9.23**	**348**	P	**P**	**06 49 06.2**	**+0.5**
	comp=N,1.5nm,0.3s,baz=160,slow=12,SNR=64						
KK31				⇑S	**Sn**	**06 50 46.7**	**-4.0**
	comp=N,1.3nm,0.3s,baz=169,slow=24,SNR=14						
MK31	**Makanchi Array**	**14.43**	**26**	⇑P	**P**	**06 50 19.2**	**+3.5**
	comp=N,0.8nm,0.8s,baz=206,slow=11,SNR=6.2						
AB31	**Akbulak array**	**18.05**	**331**	P	**P**	**06 51 03.7**	**+1.7**
	comp=N,0.8nm,0.5s,baz=137,slow=12,SNR=18						
VOSK	**Vostochnaya**	**18.68**	**356**	⇑P	**P**	**06 51 09.2**	**-0.5**
	comp=N,1.1nm,0.8s						
BVA0	**Borovoye Array**	**19.02**	**355**	⇑P	**P**	**06 51 12.9**	**-1.0**
	comp=N,0.3nm,0.8s,baz=155,slow=9.3,SNR=11						
CHKZ	**Chkalovo**	**19.65**	**355**	⇑P	**P**	**06 51 20.2**	**-1.0**
	comp=N,0.7nm,0.5s						
AKTO	**Aktyubinsk**	**19.75**	**330**	⇑P	**P**	**06 51 23.5**	**+1.2**
	comp=N,0.8nm,0.7s						

NDI ***17*** *07:09:33.5±3.6, 34.74N×72.80E, h10^{km}, MD3.8, ML3.6*

IDC ***17*** *07:09:33.2±1.6, 34.71N×73.26E, mb3.8/4, mb1 3.8/7, mb1mx3.6/21, mbtmp3.6/7, ML3.3/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/26, Error ellipse: s-maj=42.2km s-min=24.3km az=49.0*

NNC ***17*** *07:09:45.2±9.9, 35.04N×72.36E, h45^{km}±125^{km}, mpv3.6, Error ellipse: s-maj=90.5km s-min=71.3km az=64.0*

ISC 17 07:09:33.9±0.5, **34.84N**±0.04×**73.19E**±0.07, **h10**^{km}, **n28**, σ**1^{s}24**/38, **mb3.6**/4, **MS3.5**/1, **6C-3D**, **Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.18**	**177**	⇑P	**Pb**	**07 09 56.0**	**+0.1**
CEP	**Cherat**	**1.46**	**227**	⇑P	**Pn**	**07 10 00.0**	**-0.5**
THW	**Thamme Wali**	**2.37**	**211**	P	**Pn**	**07 10 14.7**	**+1.3**
THN	**Thein Dam**	**3.20**	**138**	*e*P	**Pn**	**07 10 27.1**	**+1.9**
THN				*e*SB	**Sb**	**07 11 14.6**	**+5.0**
DLH	**Dalhousie**	**3.26**	**134**	*e*P	**Pn**	**07 10 29.0**	**+2.9**
DLH				*e*SB	**Sb**	**07 11 17.0**	**+5.6**
BHK	**Bhakra**	**4.36**	**141**	*e*x	**Sn**	**07 11 34.9**	**+1.7**
SDNR	**Sundarnagar**	**4.60**	**135**	*e*P	**Pn**	**07 10 45.2**	**+0.1**
SDNR				*e*S	**Sn**	**07 11 39.4**	**+0.1**
SMLA	**Simla**	**4.99**	**137**	*e*P	**Pn**	**07 10 50.1**	**-0.6**
SMLA				*e*x	**Sn**	**07 11 43.0**	**-6.0**
KLP	**Kalpa**	**5.38**	**126**	*e*P	**Pn**	**07 10 56.2**	**+0.2**
KLP				*e*S	**Sn**	**07 11 57.7**	**-1.1**
KLP				AML	AML	07 12 25.0	
	comp=E,198nm,0.5s						
KLP				AML	AML	07 12 29.8	
	comp=N,282nm,0.8s						
NDI	**New Delhi**	**7.03**	**150**	*e*x	**Pb**	**07 11 32.0**	**-4.0**
NDI				*e*S	**Sn**	**07 12 32.0**	**-8.3**
KHET	**Khetri**	**7.11**	**161**	*e*x	**Pn**	**07 11 08.2**	**-12**
KHET				*e*S	**Sn**	**07 12 32.6**	**-10**
KHET				AML	AML	07 12 36.6	
	comp=E,26nm,0.8s						
KHET				AML	AML	07 12 53.8	
	comp=N,18nm,0.4s						
KALG	**Kalgarh**	**7.11**	**137**	*e*S	**Sn**	**07 12 35.4**	**-6.8**
AYAN	**Aya Nagar**	**7.17**	**151**	*e*P	**Pn**	**07 11 18.0**	**-3.4**
KUDL	**Kundal**	**7.25**	**156**	*e*P	**Pn**	**07 11 17.2**	**-5.2**
KUDL				*e*S	**Sn**	**07 12 39.2**	**-6.4**
SONA	**Sohna**	**7.36**	**152**	*e*S	**Sn**	**07 12 41.5**	**-7.0**

AAK	Ala-Archa	7.85	7	⇑P	Pn	07 11 35.6	+4.7
	comp=N,1.0nm,0.6s						
AAK				⇑S	Sn	07 13 01.6	+0.9
	comp=N,2.6nm,0.5s						
KK31	Karatay Array	8.51	347	⇑P	P	07 11 40.9	+0.8
	comp=N,2.1nm,0.4s,baz=154,slow=11,SNR=44						
KK31				S	Sn	07 13 16.6	-0.7
	comp=N,1.2nm,0.3s,baz=144,slow=24,SNR=6.1						
MKAR	Makanchi Array	13.78	27	Pn	P	07 12 50.5	-1.0
	comp=N,0.0nm,0.3s,baz=207,slow=16,SNR=2.3						
AB31	Akbulak array	17.40	330	⇑P	P	07 13 36.2	-2.1
	comp=N,2.1nm,0.9s,baz=138,slow=8.7,SNR=8.8						
AB31				⇓S	S	07 16 41.7	-8.6
	comp=N,1.1nm,0.7s						
BVA0	Borovoye Array	18.29	355	⇓P	P	07 13 52.9	+3.6
	comp=N,0.4nm,1.1s,baz=158,slow=10,SNR=4.2						
BVAR	Borovoye Array	18.29	355	P	P	07 13 50.8	+1.5
	comp=N,0.2nm,0.3s,baz=170,slow=9.0,SNR=4.2						
AKTO	Aktyubinsk	19.11	329	⇓P	P	07 13 59.5	+0.3
	comp=N,0.9nm,1.1s						
AKTO	Aktyubinsk	19.11	329	P	P	07 13 59.0	-0.2
	comp=N,0.3nm,0.3s,baz=132,slow=10,SNR=6.6						
SONM	Songino Array	27.88	52	P	P	07 15 25.5	-0.2
	comp=N,0.3nm,0.6s,mb3.1,baz=263,slow=12,SNR=3.0						
FINES	FINESS Array B	39.85	327	P	P	07 17 08.7	-0.2
	comp=N,1.2nm,0.9s,mb3.6,baz=120,slow=11,SNR=3.3						
ARCES	ARCESS Array B	43.35	338	P	P	07 17 37.9	+0.4
	comp=N,4.3nm,0.9s,mb4.2,baz=108,slow=8.0,SNR=14						
KMBO	Kilima Mbogo	49.10	231	LR	LR	07 39 13.7	
	comp=N,47nm,18.5s,MS3.5,baz=91,slow=36						
WRA	Warramunga Arr	79.60	123	P	P	07 21 41.8	-1.2
	comp=N,0.3nm,0.4s,mb3.6,baz=322,slow=4.9,SNR=10						

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*ATH **17** 07:57:58.6, 38.15N×26.08E, h28^{km}±2^{km}, MD3.3/4*
*ISK **17** 07:58:00.1, 38.27N×26.52E, h14^{km}, MD3.2*
*NEIC **17** 07:58:00.0, 38.27N×26.51E, h14^{km}, MD3.3(ATH), MD3.2(ISK), After ISK.*
*CSEM **17** 07:58:00.6±0.1, 38.28N×26.55E, h15^{km}, MD3.2, Error ellipse: s-maj=2.7km s-min=2.0km az=64.0*
ISC 17 07:57:59.8±0.9**, 38.31N**±0.03×**26.46E**±0.05**, h5**^{km}±5^{km}**, n21, σ0^{s}80**/30**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.12	65	*i* P	Pg	07 58 02.4	0.0
URLA				*i* S	Sg	07 58 04.9	+0.9
BLCB	Balcova	0.47	80	PG	Pg	07 58 08.9	-0.2
BLCB				SG	Sg	07 58 15.3	0.0
IZM	Izmir	0.64	82	PG	Pg	07 58 12.3	-0.2
IZM				SG	Sg	07 58 21.5	+0.4
KDAG	Bornova	0.64	81	*i* P	Pg	07 58 11.8	-0.8
KDAG				*i* S	Sg	07 58 19.7	-1.6
SMG	Samos	0.67	153	*e*PN	Pg	07 58 13.4	+0.2
SMG				*e*SN	Sg	07 58 24.0	+1.9
PRK	Paraskevi	0.95	351	*e*PN	Pn	07 58 19.8	+0.2
PRK				*e*SN	Sn	07 58 35.1	+1.5
AYVA	Ayvalik	1.01	10	*i* P	Pb	07 58 18.4	-1.1
AYVA				*i* S	Sb	07 58 37.0	+4.1
AKS	Akhisar	1.21	61	PN	Pn	07 58 22.6	-0.6
AYDN	Tasoluk	1.30	119	*i* P	Pb	07 58 24.6	+0.3
AYDN				*i* S	Sb	07 58 41.3	+0.2
BODT	Bodrum	1.42	151	*e*PN	Pn	07 58 25.6	-0.6
APE	Apeiranthos	1.44	211	*e*PN	Pn	07 58 25.9	-0.7
APE	Apeiranthos	1.44	211	*e*PN	Pn	07 58 20.7	-5.9
MLSB	Milas	1.46	134	*e*PN	Pn	07 58 26.3	-0.5
EZN	Ezine	1.52	356	*e*PN	Pn	07 58 28.6	+0.8
MANT	Manisa	1.66	83	*i* P	Pn	07 58 31.4	+1.6
MANT				*i* S	Sb	07 58 52.2	+0.5
BALB	Balikesir	1.73	39	*e*PN	Pn	07 58 30.9	+0.1
DAT	Datca	1.81	150	*e*PN	Pn	07 58 31.2	-0.7
YER	Yerkesik	1.86	128	*e*PN	Pn	07 58 32.2	-0.4
DST	Dursunbey	2.13	52	*e*PN	Pn	07 58 36.5	0.0
KHL	Karahalli	2.41	89	*e*PN	Pn	07 58 39.9	-0.6
RDO	Rodhopi	2.92	346	*e*PN	Pn	07 58 47.0	-0.8

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*IDC **17** 07:59:34.5±18.0, 37.19N×72.41E, h165^{km}±109^{km}, mb3.3/6, mb1 3.4/10, mb1mx3.2/23, mbtmp3.7/10, Error ellipse: s-maj=175.6km s-min=29.6km az=1.0*
*NEIC **17** 07:59:36.8±5.3, 37.42N×72.29E, h173^{km}±29^{km}, mb3.6/2, Error ellipse: s-maj=55.8km s-min=20.5km az=185.0*
*MOS **17** 07:59:38.6±0.8, 37.58N×72.29E, h197^{km}, mb3.6/1, Error ellipse: s-maj=31.0km s-min=10.5km az=87.8*
*NNC **17** 07:59:45.5±10.0, 38.19N×72.23E, h253^{km}±142^{km}, mpv4.0, Error ellipse: s-maj=139.1km s-min=76.8km az=25.0*
ISC 17 07:59:36.4±0.8**, 37.37N**±0.04×**72.3E**±0.1**, h190**^{km}±9^{km}**, n37, σ0^{s}91**/44**, mb3.5**/6**, 1C-7D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	4.87	12	P	P	08 00 49.6	+0.1
	SNR=578						
UCH	Uchtor	5.13	18	P	P	08 00 53.1	+0.2
	SNR=58						
KZA	Kyzart	5.21	25	P	P	08 00 53.7	-0.3
	SNR=13						
EKS2	Erkin-Say	5.40	11	P	P	08 00 56.4	0.0
	SNR=18						
AAK	Ala-Archa	5.51	17	P	P	08 00 58.2	+0.4
	SNR=46						
AAK	Ala-Archa	5.51	17	⇓P	P	08 00 57.9	0.0
	34nm,0.5s						
AAK				⇑S	S	08 01 57.5	-3.6
	13nm,0.9s						
AAK	Ala-Archa	5.51	17	⇓*i*Pn	P	08 00 57.1	-0.8
	42nm,0.4s						
AAK				*e*Sn	S	08 02 02.3	+1.1
AAK	Ala-Archa	5.51	17	⇓*i*PN	P	08 00 57.1	-0.8
AAK				*e*		08 02 02.3	
AAK				pmax	pmax		
	comp=Z,42nm,0.4s						
KBK	Karagaybulak	5.65	20	P	P	08 01 00.4	+0.8
	SNR=10.0						
THN	Thein Dam	5.66	150	*e*P	P	08 01 01.7	+1.9
THN				*e*S	S	08 02 05.8	+1.2
ULHL	Ulahol	5.72	31	P	P	08 01 00.4	-0.2
	SNR=9.8						
KK31	Karatay Array	5.89	347	⇓P	P	08 01 02.1	-0.7
	comp=Z,1.9nm,0.2s,baz=164,slow=11,SNR=62						
KK31				⇓S	S	08 02 04.1	-6.0
	comp=Z,7.7nm,0.3s,baz=119,slow=24,SNR=12						
CHMS	Chumysh	5.92	17	P	P	08 01 03.3	+0.2
	SNR=5.8						
TKM2	Tokmak 2	6.08	23	P	P	08 01 05.3	+0.1
	SNR=30						
USP	Ospenovka	6.12	15	P	P	08 01 05.0	-0.8
	SNR=9.1						
KLP	Kalpa	7.60	138	*e*P	P	08 01 26.8	+1.6
KLP				*e*S	S	08 02 50.1	-0.1
KLP				AML	AML	08 02 56.6	
	comp=N,57nm,0.5s						
KLP				AML	AML	08 02 59.1	
	comp=E,79nm,0.6s						
KHET	Khetri	9.72	162	*e*S	S	08 03 35.2	-4.6
KHET				AML	AML	08 03 37.5	
	comp=N,6.9nm,0.1s						
KHET				AML	AML	08 03 37.6	
	comp=E,12nm,0.1s						
AYAN	Aya Nagar	9.73	154	*e*S	S	08 03 37.2	-2.9
KUDL	Kundal	9.84	158	*e*P	P	08 01 53.9	-0.6
KUDL				*e*S	S	08 03 37.4	-5.3
KUDL				AML	AML	08 03 42.9	
	comp=Z,5.0nm,0.0s						
SONA	Sohna	9.93	155	*e*S	S	08 03 42.3	-2.5
MKAR	Makanchi Array	11.96	35	P	P	08 02 21.1	-0.6
	comp=Z,0.1nm,0.3s,baz=218,slow=15,SNR=4.2						
KURK	Kurchatov	14.08	17	*e*Pn	P	08 02 49.0	+0.6
	comp=Z,3.2nm,0.9s						
KURK	Kurchatov	14.08	17	*e*P	P	08 02 49.0	+0.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AB31	Akbulak array	14.89	327	⇓P	P	08 02 58.1	-0.4
	comp=Z,0.5nm,0.5s,baz=130,slow=12,SNR=17						
AB31				⇓S	S	08 05 29.5	-8.9
	comp=Z,0.8nm,0.6s,baz=135,slow=24,SNR=5.5						
BVAR	Borovoye Array	15.71	356	P	P	08 03 07.8	-0.8
	comp=Z,0.2nm,0.3s,baz=173,slow=12,SNR=7.5						
BRVK	Borovoye	15.75	355	P	P	08 03 07.4	-1.7
	comp=Z,2.5nm,0.9s						
BRVK	Borovoye	15.75	355	P	P	08 03 07.4	-1.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKTO	Aktyubinsk	16.60	326	P	P	08 03 20.1	+0.6
	comp=Z,0.2nm,0.3s,baz=122,slow=15,SNR=4.5						
ZAL	Zalesovo	18.67	23	P	P	08 03 41.7	-0.3
	comp=Z,0.8nm,0.3s,baz=254,slow=6.8,SNR=6.5						
ZAL	Zalesovo	18.67	23	P	P	08 03 41.7	-0.3
FINES	FINESS Array B	37.37	325	P	P	08 06 32.4	+0.5
	comp=Z,0.7nm,0.7s,mb3.4,baz=107,slow=14,SNR=3.6						
ARCES	ARCESS Array B	40.76	337	P	P	08 07 00.2	+0.4
	comp=Z,3.7nm,1.0s,mb4.0,baz=108,slow=8.6,SNR=6.7						
ARCES	ARCESS Array B	40.76	337	P	P	08 07 00.2	+0.4
NOA	NORSAR Array B	44.34	322	P	P	08 07 29.0	+0.3
	comp=Z,0.6nm,0.6s,mb3.4,baz=95,slow=7.6,SNR=3.1						
INK	Inuvik	72.87	10	P	P	08 10 45.9	+0.4
	comp=Z,0.6nm,0.5s,mb3.6,baz=344,slow=4.6,SNR=11						
ILAR	Eielson Array	73.65	16	P	P	08 10 50.4	+0.3
	comp=Z,0.2nm,0.5s,mb3.1,baz=344,slow=6.6,SNR=4.1						
YKA	Yellowknife Ar	80.32	3	P	P	08 11 27.4	+0.5
	comp=Z,0.6nm,0.5s,mb3.5,baz=349,slow=5.7,SNR=4.5						

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*NEIC **17** 08:04:15.3±4.5, 7.80S×118.96E, h140^{km}±39^{km}, mb3.8/2, Error ellipse: s-maj=37.7km s-min=22.8km az=78.0*
*IDC **17** 08:04:16.5±3.7, 8.37S×118.47E, h149^{km}±36^{km}, mb3.7/3, mb1 3.7/5, mb1mx3.5/16, mbtmp4.1/5, Error ellipse: s-maj=63.8km s-min=12.1km az=50.0*
ISC 17 08:04:05.5±3.9**, 8.3S**±0.2×**118.3E**±0.2**, h59**^{km}±38^{km}**, n11, σ0^{s}74**/13**, mb4.0**/4**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.10	145	P	P	08 07 02.4	+5.0
	0.7nm,0.3s,baz=256,slow=6.5,SNR=8.6						
FITZ				S	S	08 09 08.3	-3.1
	2.6nm,0.3s,baz=179,slow=17,SNR=8.9						
WRA	Warramunga Arr	19.38	128	P	P	08 08 29.4	+0.1
	0.7nm,0.3s,baz=302,slow=12,SNR=60						
WRA				S	S	08 11 58.6	-0.9
	0.2nm,0.3s,baz=297,slow=19,SNR=4.9						
WRAB	Tennant Creek	19.38	128	*e*P	P	08 08 28.9	-0.4
	10.0nm,0.9s						
WB2	Warramunga Arr	19.39	128	*e*P	P	08 08 29.4	0.0
WB2				*e*S	S	08 12 00.6	+0.9
ASPA	Alice Springs	21.39	138	*e*P	P	08 08 51.4	+1.2
STKA	Stephens Creek	31.95	141	P	P	08 10 28.1	+0.1
	1.8nm,0.5s,mb4.1,baz=322,slow=12,SNR=9.8						
STKA	Stephens Creek	31.95	141	*e*P	P	08 10 27.6	-0.5
SONM	Songino Array	56.84	350	P	P	08 13 46.6	+0.2
	0.9nm,0.5s,mb4.1,baz=166,slow=8.1,SNR=8.0						
MKAR	Makanchi Array	63.50	333	P	P	08 14 31.2	-0.6
	1.0nm,0.5s,mb4.2,baz=146,slow=6.2,SNR=14						
VNDA	Vanda	72.81	171	P	P	08 15 29.3	+0.1
	0.3nm,0.4s,mb3.6						
LPAZ	La Paz	154.78	165	PKPbc	PKPdf	08 24 01.8	+10
	0.4nm,0.3s,baz=135,slow=2.9,SNR=7.3						

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*NDI **17** 08:05:45.6±3.8, 32.60N×72.99E, h10^{km}, MD3.2, ML3.3*
*NNC **17** 08:05:45.3±138.0, 34.55N×72.75E, mpv3.5, Error ellipse: s-maj=1436.7km s-min=1258.4km az=79.0*
ISC 17 08:05:40.3±1.4**, 34.7N**±0.1×**74.2E**±0.3**, h10**^{km}**, n4, σ0^{s}99**/7**, 1C, Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	2.55	150	*e*P	Pn	08 06 21.5	-1.0
THN				*e*SB	Sb	08 06 57.3	-0.1
DLH	Dalhousie	2.57	145	*e*PG	Pg	08 06 35.0	+3.3
KLP	Kalpa	4.60	132	*e*P	Pn	08 06 57.2	+5.5
KLP				*e*S	Sn	08 07 45.7	-0.2
KLP				AML	AML	08 08 10.2	
	comp=E,80nm,0.6s						
KLP				AML	AML	08 08 14.1	
	comp=N,50nm,0.5s						
KK31	Karatay Array	8.90	342	P	P	08 07 52.7	+0.7
	comp=N,0.7nm,0.3s,baz=159,slow=12,SNR=30						
KK31				⇑S	Sn	08 09 33.0	-0.5
	comp=N,0.8nm,0.5s,baz=170,slow=23,SNR=9.8						

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*NIED **17** 08:10:00, 38.10N×142.70E, h38^{km}, Mw3.6 Best double couple: M$_0$2.89×10^{14} NP1:ϕ_s12°, δ59°, λ72°. NP2:ϕ_s224°, δ36°, λ117°.*
*JMA **17** 08:10:51.0±0.1, 38.10N×142.75E, h27^{km}±2^{km}, M3.7*
ISC 17 08:10:51.3±1.5**, 38.08N**±0.05×**142.76E**±0.10**, h27**^{km}**, n11, σ0^{s}71**/20**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	1.17	289	P	Pn	08 11 11.5	-0.7
JIO				S	Sn	08 11 26.1	-1.2
OFUJ	Ofunato	1.31	320	P	Pn	08 11 13.6	-0.6
OFUJ				*e*S	Sn	08 11 30.0	-0.9
JMK	Ichinoseki	1.49	306	P	Pn	08 11 16.3	-0.4
JMK				*e*S	Sn	08 11 35.5	+0.1
JMM	Marumori	1.57	263	P	Pn	08 11 17.2	-0.7
JMM				S	Sn	08 11 36.8	-0.7
JFK	Kawauchi	1.66	245	P	Pn	08 11 18.6	-0.5
JFK				*e*S	Sn	08 11 39.4	-0.3
JOU	Okura	1.68	280	P	Pn	08 11 19.4	0.0
JOU				S	Sn	08 11 40.6	+0.5
JOM	Ohasama	1.80	321	P	Pn	08 11 21.0	-0.2
JOM				*e*S	Sn	08 11 43.7	+0.4
JFT	Otama	2.00	254	P	Pn	08 11 24.4	+0.3
JFT				S	Sn	08 11 49.7	+1.3
JYK	Kaneyama	2.06	295	P	Pn	08 11 25.5	+0.6
JYK				*e*S	Sn	08 11 51.0	+1.1
JYA	Atsumi	2.45	283	P	Pn	08 11 31.4	+0.9
JANG	Nango	2.48	337	P	Pn	08 11 32.0	+1.1

NNC 17 08:13:03.5±7.3**, 37.35N×69.96E, mpv3.2, 5C, Error ellipse: s-maj=62.5km s-min=49.9km az=28.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	5.76	4	⇑P	Pn	08 14 30.2	-2.2
	0.7nm,0.3s,baz=177,slow=12,SNR=6.7						
KK31				⇑S	Sn	08 15 38.2	-2.0
	2.3nm,0.6s,baz=187,slow=24,SNR=6.4						
AAK	Ala-Archa	6.32	32	⇑P	Pn	08 14 38.2	-2.0
	1.0nm,0.5s						
AB31	Akbulak array	13.94	332	⇑P	P	08 16 22.0	-2.5
	0.8nm,0.8s,baz=106,slow=4.9,SNR=3.8						
AB31				⇑S	S	08 19 00.3	-0.9
	0.7nm,0.8s						

IDC 17 08:51:39.7±3.1**, 0.11N×98.52E, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.7**/16**, mbtmp3.9**/4**, Error ellipse: s-maj=131.7km s-min=28.4km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	40.34	122	P	P	08 59 19.3	-1.7
	0.4nm,0.9s,baz=301,slow=9.2,SNR=5.3						
SONM	Songino Array	48.03	7	P	P	09 00 21.0	-1.6
	1.4nm,0.8s,baz=188,slow=9.2,SNR=12						
SONM				PcP	PcP	09 01 49.2	-1.8
	0.9nm,0.7s,baz=188,slow=3.7,SNR=5.7						
MKAR	Makanchi Array	48.62	345	P	P	09 00 25.3	-1.9
	1.7nm,0.6s,baz=157,slow=7.6,SNR=19						
ZAL	Zalesovo	54.84	350	P	P	09 01 10.8	-3.2
	0.8nm,0.3s,baz=312,slow=6.6,SNR=3.7						
TXAR	Lajitas Array	143.87	34	PKP	PKPdf	09 11 16.4	-3.1
	0.2nm,0.6s,baz=90,slow=1.8,SNR=3.2						

NEIC 17 08:55:05.7, 38.81N×122.78W, h2^{km}**, MW3.8**(BRK)**, After NCEDC., Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPS	Hopland	0.29	309	*e*P	Pg	08 55 11.8	+0.3
NSHM	Saint Helena R	0.32	155	*e*P	Pg	08 55 12.2	0.0
KCPM	Cahto Peak	1.07	325	*e*P	Pb	08 55 26.6	0.0
KIPM	Iron Peak	1.13	332	*e*P	Pb	08 55 27.1	-0.5
SAC	San Andreas	1.26	167	*e*P	Pb	08 55 28.3	-1.6
WDC	Whiskeytown Da	1.77	6	*e*P	Pn	08 55 36.9	-0.7
CMB	Columbia Colle	2.04	112	*e*Pn	Pn	08 55 39.6	-1.7
KHMM	Horse Mountain	2.18	341	Pn	Pn	08 55 42.7	-0.7
SAO	San Andreas Ge	2.30	152	*e*Pn	Pn	08 55 42.7	-2.5
LRV	Little Rabbit	2.77	149	*e*Pn	Pn	08 55 49.6	-2.2
PAHR	Pah Rah Range	2.79	70	Pn	Pn	08 55 49.8	-2.3
YBH	Yreka Blue Hor	2.92	1	*e*Pn	Pn	08 55 52.7	-1.3
MOD	Modoc	3.62	31	*e*Pn	Pn	08 56 02.4	-1.5
MTUM	Tungsten Hills	3.63	112	*e*Pn	Pn	08 56 02.6	-1.6
MNV	Mina	3.65	95	*e*Pn	Pn	08 56 02.9	-1.4
PTRM	Twissleman Ran	3.76	146	*e*Pn	Pn	08 56 04.0	-2.0
HUMO	Hull Mountain	3.79	358	Pn	Pn	08 56 04.9	-1.5
KEBM	Edson Butte	4.22	344	Pn	Pn	08 56 12.1	-0.4
TPH	Tonopah	4.43	98	*e*Pn	Pn	08 56 13.1	-2.3
ISA	Isabella	4.66	131	*e*Pn	Pn	08 56 15.7	-3.1
WVOR	Wild Horse Val	4.80	40	*e*Pn	Pn	08 56 17.9	-2.7
DAC	Darwin (Calif)	4.84	120	*e*Pn	Pn	08 56 18.9	-2.4
TPNV	Topopah Spring	5.49	108	*e*Pn	Pn	08 56 27.2	-3.3
MWC	Mount Wilson	5.95	139	Pn	Pn	08 56 34.1	-2.9
ELK	Elko	6.12	69	*e*Pn	Pn	08 56 36.4	-3.0
ARUT	Antelope Range	7.42	95	Pn	Pn	08 56 55.0	-2.6
DUG	Dugway	7.83	77	*e*Pn	Pn	08 57 00.6	-2.8
MVU	Marysvale	8.28	89	Pn	P	08 57 06.0	-3.6
MSU	Marysvale	8.30	89	Pn	P	08 57 06.6	-3.4

NEIC 17 08:56:26.9, 38.80N×122.77W, h2^{km}**, ML3.5**(NCEDC)**, After NCEDC., Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPS	Hopland	0.30	309	*e*P	Pg	08 56 33.3	+0.4
NSHM	Saint Helena R	0.31	156	*e*P	Pg	08 56 33.2	+0.1
KCPM	Cahto Peak	1.08	325	*e*P	Pb	08 56 48.1	0.0
KIPM	Iron Peak	1.15	331	*e*P	Pb	08 56 50.1	+1.0
SAC	San Andreas	1.25	167	*e*P	Pb	08 56 49.1	-1.9
WDC	Whiskeytown Da	1.78	6	*e*P	Pn	08 56 58.8	-0.2
CMB	Columbia Colle	2.02	112	*e*Pn	Pn	08 57 01.1	-1.4
SAO	San Andreas Ge	2.29	152	*e*Pn	Pn	08 57 04.2	-2.1

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*LDG **17** 09:21:51.8±0.1, 44.53N×7.19E, h2^{km}, Md1.9/1, Ml1.9/7, Error ellipse: s-maj=1.9km s-min=1.0km az=68.0*
*NEIC **17** 09:21:51.7, 44.52N×7.18E, h14^{km}, ML2.5(GEN), ML2.1(STR), ML1.9(LDG), After GEN.*
*STR **17** 09:21:53.0±1.5, 44.47N×7.12E, h5^{km}±1^{km}, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 17 09:21:51.0±0.3**, 44.52N**±0.02×**7.17E**±0.03**, h13**^{km}±3^{km}**, n27, σ0^{s}69**/52**, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PZZ	Prazzo	0.05	253	P	Pb	09 21 54.5	+1.1
PZZ				S	Sb	09 21 56.3	+1.5
SURF	Saint Ours	0.26	262	Pg	Pg	09 21 57.7	+1.1
SURF				Sg	Sg	09 22 00.6	+0.3
STV2	Anna di Valdie	0.30	157	P	Pg	09 21 57.7	+0.4
STV2				S	Sg	09 22 01.7	+0.2
STV	Sta Anna Valdi	0.30	157	P	Pg	09 21 57.7	+0.4
STV				S	Sg	09 22 01.8	+0.2
BHB	Bricherasio	0.33	12	P	Pg	09 21 58.1	+0.1
BHB				S	Sg	09 22 02.6	0.0
ENR	Entracque	0.34	148	P	Pg	09 21 58.4	+0.2
ENR				S	Sg	09 22 03.0	0.0
MBDF	Montbardon	0.35	307	*e*Pg	Pg	09 21 59.2	+0.9
MBDF				*e*Sg	Sg	09 22 04.2	+1.0
	24nm,0.2s						
TOUF	Mont Tournerai	0.51	173	Pg	Pg	09 22 02.0	+0.6
TOUF				Sg	Sg	09 22 07.3	-1.0
FENE	Fenestrelle	0.52	352	P	Pb	09 22 01.5	+0.1
FENE				S	Sb	09 22 08.3	-0.1
ROB	Roburent	0.55	114	P	Pb	09 22 02.1	+0.1
ROB				S	Sb	09 22 09.3	-0.2
AUTN	L’Aution	0.56	160	Pg	Pg	09 22 02.7	+0.4
AUTN				Sg	Sg	09 22 09.5	-0.4
MONE	Monesi	0.61	136	P	Pb	09 22 02.9	0.0
MONE				S	Sb	09 22 10.8	-0.4
MVIF	Mont Vial	0.62	181	Pg	Pg	09 22 06.6	+3.0
MVIF				Sg	Sg	09 22 12.8	+0.8
RSP	Reno Superiore	0.64	6	P	Pb	09 22 03.6	+0.2
RSP				S	Sb	09 22 11.7	-0.3
SBF	Sospel	0.68	163	*e*Pg	Pg	09 22 05.1	+0.3
SBF				*e*Sg	Sg	09 22 13.6	-0.4
	4.9nm,0.2s						
NEGI	Negi	0.78	150	P	Pb	09 22 05.9	+0.1
NEGI				S	Sb	09 22 15.6	-0.3
IMI	Imperia	0.80	139	P	Pb	09 22 06.3	+0.1
IMI				S	Sb	09 22 16.2	-0.4
FIN	Finale Ligure	0.81	112	P	Pb	09 22 06.3	-0.1
FIN				S	Sb	09 22 16.3	-0.7
LSD	Ceresole Reale	0.94	360	P	Pb	09 22 09.2	+0.6
LSD				S	Sb	09 22 21.3	+0.6
PCP	Pian Castagno	0.99	88	P	Pb	09 22 09.5	+0.1
ORIF	Oris-en-Rattie	1.00	294	*e*Pg	Pg	09 22 11.0	-0.1
ORIF				*e*Sg	Sg	09 22 23.5	-1.0
	2.1nm,0.2s						
LPG	La Plagne	1.02	343	*e*Pg	Pg	09 22 10.8	-0.7
LPG				*e*Sg	Sg	09 22 24.4	-0.8
	1.8nm,0.2s						
FRF	La Foret Royal	1.03	202	*e*Pg	Pg	09 22 12.1	+0.5
FRF				*e*Sg	Sg	09 22 25.0	-0.4
	5.6nm,0.2s						
LPL	La Plagne	1.04	343	*e*Pg	Pg	09 22 11.7	-0.2
LPL				*e*Sg	Sg	09 22 25.1	-0.8
	2.3nm,0.2s						
SMRF	Simiane la Rot	1.27	245	*e*Pg	Pg	09 22 15.8	-0.5
SMRF				*e*Sg	Sg	09 22 32.7	-0.6
	2.9nm,0.3s						
LMR	La Mourre	1.28	202	*e*Pg	Pg	09 22 15.9	-0.6
LMR				*e*Sg	Sg	09 22 32.2	-1.4
	6.1nm,0.2s						
VIVF	Saint-Julien-l	1.81	282	*e*Sg	Sg	09 22 49.3	-2.0
	0.9nm,0.2s						

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*ATH **17** 09:43:58.1, 38.64N×21.54E, h12^{km}±3^{km}, MD3.4/5*
*SKO **17** 09:43:58.9, 38.55N×21.76E*
*NEIC **17** 09:43:58.1, 38.64N×21.54E, h12^{km}, MD3.4(ATH), After ATH.*
*CSEM **17** 09:43:58.8±0.1, 38.60N×21.66E, h5^{km}, MD3.4, Error ellipse: s-maj=2.4km s-min=2.0km az=102.0*
*THE **17** 09:43:59.4, 38.66N×21.68E, h2^{km}, ML3.1*
ISC 17 09:43:58.1±0.5**, 38.58N**±0.03×**21.68E**±0.04**, h12**^{km}**, n24, σ1^{s}27**/38**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVR	Evrytania	0.35	16	*e*PG	Pg	09 44 04.8	-0.5
EVR				*e*SB	Sb	09 44 10.4	-0.4
RLS	Riolos of Patr	0.55	198	*e*PB	Pb	09 44 09.6	+0.4
RLS				*e*SB	Sb	09 44 18.5	+1.7
AGG	Agios Georgios	0.67	49	*e*Pg	Pg	09 44 11.1	-0.6
AGG				*e*Sg	Sg	09 44 19.7	-0.9
VLS	Valsamata	0.95	245	*e*PG	Pg	09 44 14.8	-2.4
LKR	Lokris	1.03	86	*e*PG	Pg	09 44 19.3	+0.5
MEV	Metsovon	1.25	344	*e*Pg	Pg	09 44 21.3	-1.9
MEV				*e*Sg	Sg	09 44 38.8	-1.1
NEO	Neokhori	1.40	59	*e*PG	Pg	09 44 25.0	-1.2
XOR	Xorichti	1.41	56	*e*Pg	Pg	09 44 25.1	-1.3
XOR				*e*Sg	Sg	09 44 44.2	-1.0
IGT	Igoumenitsa	1.42	312	*e*Pg	Pg	09 44 24.1	-2.3
IGT				*e*Sg	Sg	09 44 43.9	-1.5
IGT	Igoumenitsa	1.42	312	*e*Pg	Pg	09 44 24.1	-2.3
IGT				*e*Sg	Sg	09 44 43.8	-1.5
ITM	Ithomi	1.42	172	*e*PG	Pg	09 44 25.8	-0.6
LIT	Litokhoron	1.64	22	*e*Pg	Pg	09 44 27.6	-3.3
KZN	Kozani	1.72	2	*e*PB	Pb	09 44 29.8	+0.6
AOS	Alonnisos	1.81	70	*e*Pb	Pb	09 44 30.3	-0.5
PAIG	Paliouri	2.05	49	*e*Pn	Pn	09 44 32.8	-0.1
FNA	Florina	2.21	354	*e*Pn	Pn	09 44 35.7	+0.6
FNA				*e*Sn	Sn	09 45 03.1	+0.5
GRG	Griva	2.43	13	*e*Pn	Pn	09 44 38.5	+0.2
GRG				*e*Sn	Sn	09 45 08.9	+0.6
BIA	Bitola	2.45	354	*e*Pn	Pn	09 44 40.6	+2.0
BIA				*e*Sn	Sn	09 45 11.9	+3.2
OUR	Ouranopolis	2.49	45	*e*Pn	Pn	09 44 39.6	+0.4
SOH	Sokhos	2.58	29	*e*Pn	Pn	09 44 40.9	+0.5
OHR	Ohrid	2.61	345	*e*Pn	Pn	09 44 43.3	+2.4
OHR				*e*Sn	Sn	09 45 16.0	+3.1
KNT	Kendrikon	2.74	20	*e*Pn	Pn	09 44 43.2	+0.5
KNT				*e*Sn	Sn	09 45 17.1	+1.0
KNT	Kendrikon	2.74	20	*e*Pn	Pn	09 44 43.2	+0.5
KNT				*e*Sn	Sn	09 45 17.1	+1.0
VAY	Valandovo	2.82	14	*e*Pn	Pn	09 44 45.2	+1.3
VAY				*e*Sn	Sn	09 45 20.2	+2.1

*IDC **17** 09:45:09.6±1.1, 61.87N×152.04W, mb3.4/2, mb1 3.4/4, mb1mx3.3/21, mbtmp3.3/4, ML2.9/2, Error ellipse: s-maj=24.6km s-min=12.1km az=115.0*
*NEIC **17** 09:45:14.5, 61.71N×150.83W, h56^{km}, ML3.1(AEIC), ML3.1(PMR), After AEIC.*
ISC 17 09:45:12.7±0.3, **61.70N**±0.02×**150.83W**±0.05, **h77**^{km}±5^{km}, **n54**, σ**0^{s}82**/68, **mb3.4**/2, **Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STLK	Strandline Lak	0.52	247	P	P	09 45 25.9	-0.6
FIB	Fire Island	0.63	149	P	P	09 45 27.8	+0.2
FIB				S	S	09 45 39.6	+1.1
NCG	North Capps Gl	0.70	245	P	P	09 45 27.8	-0.6
NCG				S	S	09 45 39.0	-1.0
CUT	Chulitna	0.75	20	P	P	09 45 28.4	-0.5
SPU	Mount Spurr	0.79	229	P	P	09 45 29.0	-0.3
SPU				S	S	09 45 40.6	-1.1
RC01	Rabbit Creek A	0.81	139	P	P	09 45 29.0	-0.6
PMR	Palmer	0.82	97	P	P	09 45 28.6	-1.0
CKL	Chakachamna La	0.89	235	P	P	09 45 30.4	0.0
GHO	Glory Hole Cre	0.91	85	P	P	09 45 30.5	-0.2
BKG	Blockade Glaci	0.94	228	P	P	09 45 31.0	0.0
BKG				S	S	09 45 44.5	-0.3
KNK	Knik Glacier	1.18	103	P	P	09 45 34.4	+0.4
SML	Sawmill	1.19	84	P	P	09 45 34.3	+0.1
SML				S	S	09 45 50.7	+0.3
RDT	Redoubt	1.37	215	P	P	09 45 36.8	+0.1
HUR	Hurricane	1.40	23	P	P	09 45 37.8	+0.7
HUR				S	S	09 45 56.1	+1.1
MPA	Moose Pass	1.41	149	P	P	09 45 37.4	+0.2
RSO	Redoubt South	1.56	218	P	P	09 45 39.9	+0.8
RSO				S	S	09 46 00.3	+1.6
SCM	Sheep Creek Mo	1.67	84	P	P	09 45 40.7	+0.1
SEW	Seward	1.74	157	P	P	09 45 43.0	+1.4
KTH	Kantishna Hill	1.86	359	P	P	09 45 44.1	+0.9
KTH				S	S	09 46 07.3	+1.7
INE	Iliamna NE	1.98	214	P	P	09 45 46.0	+1.2
GLI	Glacier Island	1.98	113	P	P	09 45 43.9	-1.0
ILW	Iliamna West	2.00	215	P	P	09 45 46.3	+1.2
DHY	Denali Highway	2.12	48	P	P	09 45 47.2	+0.5
CNPM	China Poot	2.19	185	P	P	09 45 48.3	+0.4
CNPM				S	S	09 46 14.7	+0.9
VLZ	Valdez	2.24	103	P	P	09 45 47.6	-0.8
VLZ				S	S	09 46 16.0	+1.0
KLU	Klutina	2.36	93	P	P	09 45 49.4	-0.7
SVW2	Sparrevohn	2.36	257	P	P	09 45 49.8	-0.4
DIV	Divide	2.50	101	P	P	09 45 51.2	-0.9
TZL	Tazlina	2.58	80	P	P	09 45 53.7	+0.4
SDG	Sourdough	2.62	69	P	P	09 45 54.2	+0.4
TT01	Tatalina	2.71	299	P	P	09 45 55.2	+0.2
EYAK	Cordova Ski Ar	2.73	113	P	P	09 45 55.7	+0.4
PAX	Paxson	2.81	61	P	P	09 45 57.3	+0.9
THY	Trims Highway	2.91	52	P	P	09 45 59.1	+1.2
NEA	Nenana	2.99	15	P	P	09 45 58.8	-0.2
WRH	Wood River Hil	3.04	23	P	P	09 45 59.6	-0.1
BMRM	Bremner River	3.09	101	P	P	09 46 00.7	+0.3
CCB	Clear Creek Bu	3.26	24	P	P	09 46 02.4	-0.3
MLY	Manley	3.34	1	P	P	09 46 03.9	+0.1
GLB	Gilahina Butte	3.37	91	P	P	09 46 03.3	-1.0
COLA	College	3.46	22	P	P	09 46 05.7	+0.2
MDM	Murphy Dome	3.47	19	P	P	09 46 05.9	+0.2
MENT	Mentasta	3.54	66	P	P	09 46 06.5	-0.1
ILAR	Eielson Array	3.56	28	Pn	P	09 46 05.8	-1.1
	1.1nm,0.3s,baz=218,slow=14,SNR=42						
ILAR				Sn	S	09 46 46.9	-1.0
	2.8nm,0.3s,baz=220,slow=22,SNR=15						
IL1	Eielson Array	3.56	28	P	P	09 46 06.5	-0.4
KDAK	Kodiak Island	4.03	193	Pn	P	09 46 11.9	-1.6
	0.5nm,0.3s,baz=313,slow=19,SNR=9.8						
KDAK				Sn	S	09 46 57.5	-2.3
	1.3nm,0.3s,baz=316,slow=22,SNR=4.0						
KDAK	Kodiak Island	4.03	193	P	P	09 46 12.2	-1.2
BALM	Baldy	4.14	96	P	P	09 46 14.3	-0.6
IM3	Indian Mountai	4.49	345	P	P	09 46 19.2	-0.5
INK	Inuvik	9.84	40	Pn	P	09 47 31.2	-1.9
	0.0nm,0.3s,baz=222,slow=12,SNR=3.2						
INK				Sn	S	09 49 22.1	-0.6
	0.1nm,0.3s,baz=346,slow=27,SNR=2.7						
INK	Inuvik	9.84	40	Pn	P	09 47 31.2	-1.9
INK				Sn	S	09 49 22.1	-0.6
SONM	Songino Array	54.64	306	P	P	09 54 35.1	0.0
	0.3nm,0.6s,mb3.5,baz=28,slow=7.0,SNR=3.7						
MKAR	Makanchi Array	63.75	322	P	P	09 55 39.0	+1.1
	0.2nm,0.4s,mb3.3,baz=45,slow=7.4,SNR=4.2						
MKAR	Makanchi Array	63.75	322	P	P	09 55 39.0	+1.1

JMA 17 09:56:25.5±0.2, **24.84N**×**122.43E**, **h125**^{km}±2^{km}, **M3.9**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.65	125	P	P	09 56 45.0	-0.1
YOJ				eS	S	09 57 00.2	+0.1
IRIF	Iriomote-Funau	1.29	113	P	P	09 56 50.8	-0.5
IRIF				eS	S	09 57 10.5	-0.2
HATJ	Hateruma jima	1.48	122	P	P	09 56 53.3	-0.1
HATJ				eS	S	09 57 14.2	-0.4
JKRS	Kuro-shima	1.56	112	P	P	09 56 54.3	-0.1
JKRS				S	S	09 57 15.6	-0.7
JIJ	Ishigaki jima	1.63	107	P	P	09 56 54.6	-0.6
JIJ				S	S	09 57 15.9	-1.8
JTJ	Tarama	2.08	95	P	P	09 57 00.6	0.0
JTJ				S	S	09 57 26.9	-0.3
JMJ	Miyako jima 2	2.60	90	P	P	09 57 07.8	+0.3
JMJ				eS	S	09 57 38.8	-0.6
JOGS	Gusukube	2.71	91	P	P	09 57 08.9	0.0
JOGS				eS	S	09 57 41.6	-0.2
JKE	Kume jima 2	4.20	68	P	P	09 57 28.4	-0.5
JKE				eS	S	09 58 16.2	-1.3
JIH	Iheya	5.44	65	P	P	09 57 43.7	-1.8
JOW	Kunigami	5.63	68	P	P	09 57 46.3	-1.7

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*BJI **17** 10:02:39.9, 19.54S×175.47W, h197^{km}, mB4.7, mb4.7*
*NEIC **17** 10:02:42.2±1.2, 19.47S×175.96W, h187^{km}±12^{km}, mb4.8/15, Error ellipse: s-maj=11.2km s-min=8.6km az=133.0*
*IDC **17** 10:02:42.6±2.2, 19.69S×175.89W, h191^{km}±21^{km}, mb4.1/7, mb1 4.2/10, mb1mx3.9/18, mbtmp4.7/10, Error ellipse: s-maj=18.7km s-min=11.2km az=117.0*
ISC 17 10:02:40.2±1.5, **19.55S**±0.06×**176.04W**±0.09, **h178**^{km}±16^{km}, **n61**, σ**0^{s}92**/51, **mb4.7**/19, **2C-2D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	6.93	37	P	P	10 04 20.6	+0.2
	7.4nm,0.3s,baz=45,slow=1.1,SNR=18						
AFI				S	S	10 05 30.4	-7.9
	14nm,0.3s,baz=40,slow=21,SNR=10.0						
AFI	Afiamalu	6.93	37	eP	P	10 04 20.0	-0.3
	50nm,0.3s						
AFI				eS	S	10 05 28.6	-10
RAR	Rarotonga	15.35	99	P	P	10 06 08.6	-0.2
	1.3nm,0.3s,baz=235,slow=12,SNR=2.8						
RAR				S	S	10 08 57.1	+3.4
	0.9nm,0.3s,baz=314,slow=20,SNR=2.3						
DZM	Mont Dzumac	16.57	258	eP	P	10 06 28.8	+5.0
DZM	Mont Dzumac	16.57	258	P	P	10 06 29.8	+6.0
	7.1nm,0.3s,baz=82,slow=16,SNR=83						
DZM	Mont Dzumac	16.57	258	eP	P	10 06 28.8	+4.9
NOUC	Port Laguerre	16.70	258	eP	P	10 06 31.0	+5.5
URZ	Urewera	19.58	196	P	P	10 06 55.8	-0.6
	9.5nm,0.3s,baz=356,slow=1.9,SNR=43						
URZ				S	S	10 10 23.0	+0.3
	0.8nm,0.3s,baz=269,slow=22,SNR=7.8						
URZ	Urewera	19.58	196	PN	P	10 06 54.9	-1.5
PXZ	Pawanui	21.31	195	PN	P	10 07 13.1	-0.7
SNZO	South Karori	23.09	198	eP	P	10 07 33.2	+2.2
	38nm,0.7s,mb4.9						
QRZ	Quartz Range	23.36	202	PN	P	10 07 35.5	+1.9
NNZ	Nelson	23.41	200	PN	P	10 07 33.8	-0.3
THZ	Tophouse	24.06	201	PN	P	10 07 39.9	-0.4
KHZ	Kahutara	24.45	199	PN	P	10 07 43.3	-0.7
LTZ	Lake Taylor	25.18	201	PN	P	10 07 49.4	-1.4
RPZ	Rata Peaks	26.42	201	P	P	10 08 00.8	-1.3
	12nm,0.6s,mb4.7,baz=77,slow=8.6,SNR=8.4						
CNB	Canberra Magne	34.28	236	eP	P	10 09 12.5	+1.2
	9.2nm,0.5s,mb4.8						
CTA	Charters Tower	35.43	263	⇓iP	P	10 09 22.5	+1.3
	35nm,0.4s,mb5.3						
CTAO	Charters Tower	35.43	263	eP	P	10 09 22.7	+1.5
	63nm,0.7s,mb5.3						
PMG	Port Moresby	36.95	281	P	P	10 09 35.2	+1.2
	23nm,0.8s,mb4.8,baz=86,slow=6.4,SNR=5.2						
STKA	Stephens Creek	39.86	243	eP	P	10 09 58.6	+0.6
	3.3nm,0.5s,mb4.2						
STKA	Stephens Creek	39.86	243	P	P	10 09 58.6	+0.6
	5.0nm,0.7s,mb4.3,baz=93,slow=11,SNR=14						
ASPA	Alice Springs	46.54	256	eP	P	10 10 51.8	0.0
WB2	Warramunga Arr	46.55	261	⇓iP	P	10 10 51.4	-0.6
WRAB	Tennant Creek	46.56	261	eP	P	10 10 51.4	-0.6
	19nm,0.4s,mb5.1						
WRA	Warramunga Arr	46.56	261	P	P	10 10 52.1	0.0
	15nm,0.4s,mb5.0,baz=99,slow=5.8,SNR=299						
KAKA	Kakadu	49.81	270	eP	P	10 11 35.5	+18
	30nm,0.4s,mb5.3						
FORT	Forrest	51.36	246	eP	P	10 11 27.5	-1.2
	12nm,0.5s,mb4.8						
FITZ	Fitzroy Crossi	54.99	261	eP	P	10 11 55.1	-0.3
	12nm,0.6s,mb4.8						
SBA	Scott Base	58.95	184	eP	P	10 12 23.9	+1.3
	6.2nm,0.8s,mb4.5						
SBA				e		10 12 33.1	
VNDA	Vanda	59.02	185	eP	P	10 12 23.6	+0.4
	2.7nm,0.8s,mb4.1						
VNDA				e		10 12 31.1	
NWAO	Narrogin (SRO)	60.44	243	eP	P	10 12 34.3	+1.0
	12nm,1.1s,mb4.7						
CASY	Casey	65.61	205	eP	P	10 13 05.4	-1.3
	11nm,0.9s,mb4.7						
QSPA	South Pole Qui	70.52	180	eP	P	10 13 37.0	+0.1
	5.8nm,0.7s,mb4.4						
KSM	Kuching	75.11	277	eP	P	10 14 04.0	-1.0
MDJ	Mudanjiang	80.81	324	P	P	10 14 34.8	-0.7
MDJ				AMB	AMB		
	comp=Z,40nm,3.1s						
CN2	Changchun	82.69	322	eP	P	10 14 45.4	+0.3
MAW	Mawson	83.08	199	P	P	10 14 46.8	+0.1
	comp=Z,4.7nm,0.6s,mb4.4,baz=131,slow=6.5,SNR=24						
TXAR	Lajitas Array	84.99	57	P	P	10 14 58.1	+1.0
	comp=Z,0.2nm,0.5s,baz=218,slow=8.9,SNR=4.1						
ILAR	Eielson Array	86.99	12	P	P	10 15 05.0	-0.9
	comp=Z,0.6nm,0.9s,baz=219,slow=5.5,SNR=5.6						
SYO	Syowa Base	88.05	192	⇑P	P	10 15 10.4	-0.5
SYO	Syowa Base	88.05	192	⇑eP	P	10 15 10.4	-0.5
INK	Inuvik	92.88	15	P	P	10 15 33.0	-0.4
	comp=Z,1.0nm,0.7s,mb4.0,baz=236,slow=6.4,SNR=4.5						
INK	Inuvik	92.88	15	P	P	10 15 33.0	-0.4
LZH	Lanzhou	93.66	307	P	P	10 15 38.5	+0.8
LZH				AP	pP	10 16 28.3	+5.8
LZH				AMB	AMB		
	comp=Z,20nm,1.3s,mb5.1						
LZH				AMB	AMB		
	comp=Z,50nm,7.4s						
LZH	Lanzhou	93.66	307	P	P	10 15 38.5	+0.8
	comp=Z,21nm,1.3s,mb5.1						
LZH				pP	pP	10 16 28.2	+5.7
LZH				sP	sP	10 16 39.7	-1.8
LZH				PP	PP	10 19 19.6	-8.0
ARCES	ARCESS Array B	128.30	351	PKP	PKPdf	10 21 25.0	0.0
	comp=Z,1.0nm,0.5s,slow=2.4,SNR=7.7						
FINES	FINESS Array B	135.35	345	PKP	PKPdf	10 21 37.9	-0.6
	comp=Z,1.5nm,0.9s,baz=280,slow=35,SNR=2.9						
AKASG	Malin Array Be	143.04	333	PKhKP		10 21 49.4	
	comp=Z,1.3nm,0.5s,baz=43,slow=4.0,SNR=7.8						
AKASG	Malin Array Be	143.04	333	PKP	PKPdf	10 21 49.4	-3.0
CLL	Collm	147.51	349	ePKP1	PKPdf	10 22 04.0	+3.9
BR131	Keskin Array S	147.52	315	ePKPbc	PKPdf	10 22 04.0	+3.6
BRTR	Keskin Array B	147.52	315	PKPbc	PKPdf	10 22 04.5	+4.1
	comp=Z,5.2nm,0.7s,baz=142,slow=4.6,SNR=21						
GRA1	Grafenberg Arr	149.37	351	ePKP	PKPdf	10 22 09.2	+6.1
JMQS	Jabal Moqyreh	149.52	294	P	PKPdf	10 22 10.4	+6.4
GERES	GERESS Array B	149.73	347	PKPbc	PKPdf	10 22 10.0	+6.4
	comp=Z,2.2nm,0.8s,slow=1.3,SNR=9.8						
JMOS	Jabal al Moall	150.13	295	P	PKPdf	10 22 11.7	+6.8
BDAS	Al Bad‘	150.27	293	P	PKPdf	10 22 12.0	+6.8
HAQS	Haql	150.30	295	P	PKPdf	10 22 12.1	+6.9
TAYS	Tayyib Ism	150.45	294	P	PKPdf	10 22 12.5	+7.0

GUC 17 10:33:44.1±0.7, **22.80S**×**68.66W**, **h117**^{km}±6^{km}, **MD3.7**, **ML3.2**, **2D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	San Pedro de A	0.43	105	⇓iP	P	10 34 01.9	+0.4
SPCH				iS	S	10 34 16.2	+1.6
CEN1	Los Morros	1.54	247	⇓iP	P	10 34 14.6	+2.3
CEN1				iS	S	10 34 38.2	+4.6
CEN1				AMP		10 34 43.2	
	comp=N,248nm,0.8s						
ANCH	Antofagasta	1.84	241	eP	P	10 34 16.1	+0.3
ANCH				iS	S	10 34 40.3	+0.5
CPN1	Cerro Paranal	2.43	221	iP	P	10 34 24.9	+1.3
CPN1				iS	S	10 34 55.0	+1.7
CPN1				AMP		10 35 27.6	
	comp=E,120nm,0.5s						

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*NIED **17** 10:58:00, 38.20N×144.80E, h5^{km}, Mw3.8 Best double couple: $M_0$5.41×10^{14} NP1:ϕ_s208°, δ69°, λ-91°. NP2:ϕ_s32°, δ21°, λ-86°.*
*IDC **17** 10:58:42.4±1.4, 38.03N×145.19E, mb3.5/3, mb1 3.8/5, mb1mx3.6/21, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=35.3km s-min=26.7km az=111.0*
*JMA **17** 10:58:47.3±0.1, 38.18N×144.78E, h57^{km}, M4.1*
ISC 17 10:58:46.6±1.4, **38.28N**±0.06×**144.85E**±0.09, **h53**^{km}±18^{km}, **n17**, σ**1^{s}05**/27, **mb3.6**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.62	289	P	P	10 59 28.0	+0.6
OFUJ				S	S	10 59 58.7	+0.6
MIYJ	Miyakonagasawa	2.69	300	P	P	10 59 29.2	+0.7
MIYJ				S	S	11 00 00.4	+0.3
JIO	Ouri	2.76	275	P	P	10 59 29.6	+0.2
JIO				S	S	11 00 01.2	-0.5
JMK	Ichinoseki	2.92	284	P	P	10 59 32.3	+0.5
JMK				S	S	11 00 06.2	+0.4
JOT	Ohata	4.26	318	P	P	10 59 51.4	+0.8
JOT				eS	S	11 00 38.1	-1.5
JCH	Churui	4.47	346	P	P	10 59 52.7	-0.9
JCH				eS	S	11 00 42.6	-2.4
JKB	Kayabe	4.64	322	P	P	10 59 57.0	+1.0
NEM2	Nemuro 2	5.12	7	P	P	10 59 59.7	-3.0
NEM2				eS	S	11 00 54.0	-7.2
JRY	Ryogami san	5.26	246	P	P	11 00 03.2	-1.4
JRY				S	S	11 00 59.5	-5.3
MJAR	Matsushiro Arr	5.57	254	Pn	P	11 00 09.0	+0.2
	1.9nm,0.3s,baz=77,slow=16,SNR=15						
MAT	Matsushiro	5.57	254	P	P	11 00 09.3	+0.5
MAT				S	S	11 01 11.2	-1.2
JOSM	Okushiri--Mats	5.60	314	P	P	11 00 10.4	+1.1
JTKR	Abashiri--Toko	5.73	353	P	P	11 00 10.3	-0.8
ASAJ	Asahikawa	6.07	344	Pn	P	11 00 16.8	+0.9
	1.3nm,0.3s,baz=198,slow=11,SNR=11						
ASAJ				Sn	S	11 01 25.6	+0.6
	1.0nm,0.3s,baz=29,slow=32,SNR=6.1						
MKAR	Makanchi Array	45.78	302	P	P	11 07 08.6	+4.1
	0.2nm,0.5s,mb3.3,baz=84,slow=9.2,SNR=2.5						
ILAR	Eielson Array	46.97	33	P	P	11 07 15.3	+1.7
	0.9nm,0.8s,mb3.7,baz=267,slow=7.0,SNR=8.2						
WRA	Warramunga Arr	58.75	192	P	P	11 08 40.5	-1.0
	0.6nm,0.8s,mb3.7,baz=8.9,slow=6.9,SNR=5.7						

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*IDC **17** 11:34:52.3±6.4, 31.49N×49.25E, mb3.7/5, mb1 3.7/6, mb1mx3.6/22, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=141.0km s-min=32.9km az=7.0*
*TEH **17** 11:35:01.3, 32.16N×49.43E, h10^{km}, Mn3.8*
*KISR **17** 11:35:01.4±0.8, 32.23N×49.75E, h45^{km}±782^{km}, ML3.7*
*CSEM **17** 11:35:01.6±0.1, 32.22N×49.64E, h16^{km}, ML3.3, Error ellipse: s-maj=2.6km s-min=1.5km az=131.0*
*THR **17** 11:35:02.5±1.3, 32.21N×49.53E, h35^{km}±10^{km}, ML3.3*
ISC 17 11:35:03.1±1.1, **32.25N**±0.03×**49.60E**±0.04, **h30**^{km}±12^{km}, **n39**, σ**1^{s}04**/43, **mb3.5**/5, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	Shooshtar-Gavs	0.69	259	ePG	Pb	11 35 15.3	-1.2
IPIR	Pirpir	1.18	68	Pn	Pn	11 35 22.5	-1.2
IKLH	Kalahroud	1.98	57	Pn	Pn	11 35 35.4	+0.2
IGAR	Garneh	2.20	89	Pn	Pn	11 35 37.0	-1.4
ASAO	Ashtian	2.32	9	ePN	Pn	11 35 42.1	+2.0
ASAO				eSG	Sn	11 36 15.5	+7.5
ASAO				AML	AML	11 36 31.3	
	comp=N,186nm,0.4s						
IZEF	Zefreh	2.40	74	Pn	Pn	11 35 41.2	+0.1
IKOM	Komasi	2.60	318	Pn	Pn	11 35 44.6	+0.5
NASN	Na’in	2.77	78	ePN	Pn	11 35 47.9	+1.5
IQOM	Qom	2.87	25	Lg		11 36 22.8	
IQOM	Qom	2.87	25	Pn	Pn	11 35 49.0	+1.2
ISFB	Sefidab	3.05	46	Pn	Pn	11 35 51.4	+1.0
MIB	Mutribah	3.11	219	eP	Pn	11 35 51.8	+0.4
UMR	Umm Al-Rimmam	3.13	212	eP	Pn	11 35 51.5	-0.1
IVIS	Veys	3.23	315	Pn	Pn	11 35 50.8	-2.2
IVRN	Varamin	3.27	32	Pn	Pn	11 35 54.9	+1.4
IGHG	Ghaleghazi	3.28	310	Pn	Pn	11 35 55.3	+1.6
SNGE	Sanandaj	3.40	327	ePn	Pn	11 35 55.0	-0.5
SNGE				AML	AML	11 36 56.1	
	comp=N,60nm,0.7s						
KBD	Kabd	3.47	209	eP	Pn	11 35 56.6	+0.2
KBD				eS	Sn	11 36 37.7	+0.7
KBD				AML	AML	11 36 42.4	
	comp=Z,343nm,0.4s						
ISAD	Sadrabad	3.48	94	Pn	Pn	11 35 57.5	+0.9
NAY	Al-Naaiem	3.61	215	eP	Pn	11 35 58.3	0.0
NAY				AML	AML	11 36 40.0	
	comp=Z,41nm,0.5s						
NAY				eS	Sn	11 36 41.5	+1.0
NAY	Al-Naaiem	3.61	215	eP	Pn	11 35 58.3	-0.1
NAY				eS	Sn	11 36 41.5	+1.0
IDHR	Dehrash	3.63	313	Pn	Pn	11 35 56.8	-1.9
RDF	Al-Radifah	3.75	209	eP	Pn	11 36 00.9	+0.5
RDF				AML	AML	11 36 48.7	
	comp=Z,143nm,0.4s						
QRN	Al-Qurain	3.78	203	eP	Pn	11 36 00.3	-0.4
QRN				eS	Sn	11 36 45.0	+0.3
QRN				AML	AML	11 36 46.9	
	comp=Z,112nm,0.3s						
THKV	Tehran--Karaj	3.81	16	ePN	Pn	11 36 02.4	+1.1
CHTH	Charan	3.87	19	ePn	Pn	11 36 02.3	+0.3
IDMV	Damavand	3.89	31	Pn	Pn	11 36 02.4	0.0
DAMV	Damavand	3.91	30	ePn	Pn	11 36 03.0	+0.3
ICHK	Chekchek	4.07	89	Pn	Pn	11 36 05.2	+0.2
IFIR	Firoozkooh	4.28	37	Pn	Pn	11 36 08.3	+0.3
IMEH	Mehriz	4.35	100	Pn	Pn	11 36 08.4	-0.5
IBAF	Bafgh	5.12	96	Pn	Pn	11 36 19.2	-0.5
KRBR	Kerman	6.54	108	ePn	Pn	11 36 38.8	-1.0
BRTR	Keskin Array B	14.91	304	Pn	P	11 38 28.9	-4.6
	comp=Z,0.1nm,0.3s,baz=61,slow=18,SNR=2.0						
BVAR	Borovoye Array	25.62	30	P	P	11 40 29.8	-1.5
	comp=Z,0.6nm,0.6s,mb3.3,baz=236,slow=5.2,SNR=5.0						
MKAR	Makanchi Array	28.86	50	P	P	11 40 59.6	-1.3
	comp=Z,0.9nm,0.7s,mb3.6,baz=243,slow=8.1,SNR=9.4						
HFS	Hagfors	36.56	330	P	P	11 42 04.2	-3.6
	comp=Z,2.5nm,0.9s,mb4.1,baz=124,slow=10,SNR=2.9						
SONM	Songino Array	45.17	53	P	P	11 43 17.0	-1.7
	comp=Z,0.3nm,0.7s,mb3.2,baz=264,slow=7.6,SNR=3.5						
ILAR	Eielson Array	82.44	7	P	P	11 47 19.1	-4.1
	comp=Z,0.5nm,0.8s,mb3.5,baz=333,slow=5.4,SNR=5.9						

NNC 17 11:54:39.4±2.1, **35.03N**×**69.66E**, **mpv3.8**, **5C**, **Error ellipse: s-maj=19.0km s-min=16.2km az=136.0**, **Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	Karatay Array	8.10	4	⇑P	P	11 56 38.3	-2.7
	1.1nm,0.3s,baz=184,slow=13,SNR=21						
KK31				⇑S	Sn	11 58 12.0	-2.3
	4.7nm,1.1s,baz=201,slow=25,SNR=4.1						
AAK	Ala-Archa	8.48	25	⇑P	P	11 56 43.5	-2.9
	3.3nm,0.5s						
AAK				⇑S	Sn	11 58 21.2	-2.8
	2.8nm,0.8s						
AB31	Akbulak array	15.92	336	⇑P	P	11 58 24.9	-1.4
	0.7nm,0.5s,baz=163,slow=13,SNR=10						
AB31				S	S	12 01 21.9	-1.9
	0.4nm,0.6s						

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*IDC **17** 12:15:17.3±2.9, 29.92S×71.72W, h50^{km}±25^{km}, mb4.2/6, mb1 4.3/10, mb1mx4.1/18, mbtmp4.4/10, ML4.3/4, MS3.5/3, Ms1 3.4/3, ms1mx3.2/21, Error ellipse: s-maj=24.2km s-min=17.9km az=90.0*
*NEIC **17** 12:15:18.7±0.5, 29.92S×71.46W, mb4.7/6, Error ellipse: s-maj=11.1km s-min=5.1km az=97.0*
NEIC Felt [III] at Alto del Carmen, Andacollo, Coquimbo, La Higuera, La Serena and Vallenar; [II] at Ovalle and Vicuna.
*GUC **17** 12:15:20.0±0.8, 30.05S×71.28W, h55^{km}±5^{km}, ML5.0*
ISC 17 12:15:17.3±0.7, **29.95S**±0.04×**71.60W**±0.08, **h61**^{km}±5^{km}, **h65**^{km}±5.7^{km}**:pP-P**, **n48**, σ**1^{s}08**/56, **mb4.5**/11, **9C-3D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	La Serena	0.31	82	⇑iP	P	12 15 28.8	+1.1
LSCH				iS	S	12 15 35.2	-0.2
LSCH				AMP		12 15 35.8	
	comp=N,137µm,0.3s						
TLL	Tololo Astrono	0.72	108	eP	P	12 15 31.5	-0.5
TLL				iS	S	12 15 40.6	-2.4
TLL				AMP		12 15 41.8	
	comp=E,147µm,0.5s						
CMCH	Combarbala	1.32	157	⇓iP	P	12 15 40.1	-0.1
CMCH				iS	S	12 15 55.4	-1.8
CMCH				AMP		12 15 57.6	
	comp=E,84µm,0.7s						
ILCH	Illapel	1.72	168	eP	P	12 15 46.5	+0.9
ILCH				iS	S	12 16 06.1	-0.4
ILCH				AMP		12 16 13.6	
	comp=N,12µm,0.5s						
CHNG	Los Chungos	1.93	177	⇑iP	P	12 15 49.5	+1.1
CHNG				iS	S	12 16 12.0	+0.5
CHNG				AMP		12 16 23.6	
	comp=E,8µm,0.8s						
JACH	Jahuel	2.86	163	eP	P	12 16 02.6	+0.9
ZON	Zonda	2.98	123	⇑iP	P	12 16 06.8	+3.5
ZON				eS	S	12 16 49.2	+11
IHA	Instituto Hidr	3.07	181	⇑iP	P	12 16 04.5	-0.1
CFAA	Coronel Fontan	3.33	121	P	P	12 16 08.4	+0.1
	comp=E,21nm,0.3s,baz=310,slow=11,SNR=212						
CFAA				S	S	12 16 48.9	+2.0
	comp=E,60nm,0.3s,baz=70,slow=18,SNR=18						
FCH	Farellones	3.55	162	⇑iP	P	12 16 12.6	+1.3
FCH				iS	S	12 16 52.0	-0.3
FCH				AMP		12 17 06.7	
	comp=E,4µm,0.4s						
CLCH	Cerro Calan	3.55	165	eP	P	12 16 11.0	-0.4
SAN	Santiago	3.58	167	eP	P	12 16 12.4	+0.6
RCDM	Rinconada Maip	3.59	169	eP	P	12 16 12.0	+0.1
RCDM				iS	S	12 16 51.6	-1.8
RCDM				AMP		12 17 09.1	
	comp=E,4µm,0.6s						
ANTU	Antumapu	3.70	167	eP	P	12 16 13.7	+0.2
TACH	Talagante	3.73	171	⇓eP	P	12 16 14.2	+0.2
MDZ	Mendoza	3.75	142	eP	P	12 16 16.2	+2.0
MDZ				i		12 16 18.8	
MDZ				i		12 16 31.4	
MDZ				i		12 16 47.8	
MDZ				iS	S	12 17 00.5	+3.0
MDZ				i		12 17 01.7	
PCH	Pirque	3.77	166	⇓iP	P	12 16 15.1	+0.6
LNV	Longovilo	4.00	178	⇑iP	P	12 16 16.9	-0.8
CACH	El Canelo	4.24	169	eP	P	12 16 21.4	+0.3
CICH	Cipreses	4.47	167	eP	P	12 16 24.2	-0.1
SFDO	San Fernando	4.68	174	eP	P	12 16 26.7	-0.5
CEN1	Los Morros	6.65	11	eP	P	12 16 49.3	-5.4
PLCA	Paso Flores	10.79	176	P	P	12 17 49.6	-1.8
	comp=E,0.9nm,0.3s,baz=342,slow=13,SNR=34						
PLCA				LR	LR	12 22 18.0	
	comp=E,181nm,19.5s,baz=344,slow=39						
PLCA	Paso Flores	10.79	176	P	P	12 17 49.6	-1.8
PLCA				LR	LR	12 22 18.0	
TRQA	Tornquist	11.36	138	ePn	P	12 17 55.9	-3.2
	comp=E,86nm,1.0s						
TRQA				eSn	S	12 19 50.8	-14
CPUP	Villa Florida	13.10	77	eP	P	12 18 17.6	-4.7
	comp=E,60nm,0.4s						
LPAZ	La Paz	13.97	14	P	P	12 18 33.8	0.0
	comp=E,0.4nm,0.3s,baz=200,slow=9.3,SNR=11						
SIV	San Ignacio	16.93	37	P	P	12 19 10.8	-0.7

	comp=E,0.7nm,0.3s,baz=224,slow=10,SNR=57						
SAML	**Samuel**	22.33	22	*e*P	P	12 20 10.4	-0.7
	comp=E,6.9nm,0.8s,mb4.1						
EFI	**East Falkland**	23.92	159	*e*P	P	12 20 23.2	-3.1
	comp=E,27nm,0.8s,mb4.7						
USHA	**Ushuaia**	24.97	176	P	P	12 20 35.3	-1.1
	comp=E,31nm,0.7s,mb5.0,baz=351,slow=7.0,SNR=16						
BDFB	**Brasilia**	25.92	62	P	P	12 20 44.9	-0.8
	comp=E,12nm,0.6s,mb4.6,baz=244,slow=7.5,SNR=17						
BDFB				LR	LR	12 31 25.1	
	comp=E,119nm,21.4s,baz=7.0,slow=37						
BAO	**Brasilia Array**	25.94	62	P	P	12 20 45.0	-0.9
VNA3	**Neumayer Olymp**	52.98	159	⇑*i*P	P	12 24 29.5	0.0
VNA3				*e*	pP	12 24 48.7	+3.1
VNA3				*e*		12 24 57.8	
VNA2	**Neumayer--Watz**	53.61	158	⇑*i*P	P	12 24 34.1	-0.1
VNA2				*e*	pP	12 24 53.3	+3.0
VNA2				*e*		12 25 01.7	
SNAA	**Sanae**	55.20	159	⇑*i*P	P	12 24 45.4	-0.4
SNAA				*e*	pP	12 25 06.2	+4.2
SNAA				*e*		12 25 12.7	
QSPA	**South Pole Qui**	60.27	180	*e*P	P	12 25 21.9	+0.6
	comp=E,7.3nm,0.8s,mb4.8						
QSPA				*e*pP	pP	12 25 36.8	-0.9
DBIC	**Dimbokro**	73.56	72	P	P	12 26 46.0	-0.1
	comp=E,3.4nm,0.6s,mb4.4,baz=162,slow=7.2,SNR=7.8						
DBIC	**Dimbokro**	73.56	72	*e*P	P	12 26 45.9	-0.1
	comp=E,4.5nm,0.6s,mb4.6						
DBIC				*e*pP	pP	12 27 00.2	-2.8
PV10	**Paradox Valley**	76.44	331	P	P	12 27 04.8	+2.7
PV10				*e*pP	pP	12 27 20.5	+1.4
SUR	**Sutherland**	76.48	120	P	P	12 27 03.8	+1.3
	comp=E,9.8nm,0.9s,mb4.7						
MAW	**Mawson**	76.95	164	P	P	12 27 04.3	-0.1
	comp=E,1.3nm,0.5s,mb4.2,baz=226,slow=6.8,SNR=13						
TPNV	**Topopah Spring**	78.62	325	*e*P	P	12 27 18.1	+3.9
	comp=E,8.8nm,1.6s,mb4.4						
NVAR	**Mina Array Bea**	80.79	325	P	P	12 27 25.5	-0.4
	comp=E,0.5nm,0.7s,mb3.6,baz=131,slow=9.6,SNR=4.0						
BOSA	**Boshof**	81.63	118	P	P	12 27 31.2	+0.7
	comp=E,3.3nm,0.8s,mb4.3,baz=257,slow=4.2,SNR=5.3						
BOSA				LR	LR	13 00 29.6	
	comp=E,34nm,20.2s,baz=350,slow=33						
WRA	**Warramunga Arr**	124.46	210	PKP	PKPdf	12 34 12.4	+2.2
	comp=E,1.9nm,0.5s,baz=152,slow=1.8,SNR=51						
BVAR	**Borovoye Array**	143.99	39	PKP	PKPdf	12 34 48.2	+2.8
	comp=E,0.4nm,0.4s,baz=303,slow=1.4,SNR=4.3						
AAK	**Ala-Archa**	150.09	56	*e*PKPbc	PKPdf	12 35 03.7	+7.9

CASC ***17*** *12:19:57.7±2.9, 11.97N×87.99W, h25^{km}±17^{km}, MD4.3, mb4.5(NEIC)*

BJI ***17*** *12:20:00.7, 12.10N×87.80W, h62^{km}, mB5.0, Ms5.2, Msz4.8*

NEIC ***17*** *12:20:00.9±0.9, 12.10N×87.84W, h62^{km}±10^{km}, mb4.5/19, Error ellipse: s-maj=14.2km s-min=5.8km az=54.0*

IDC ***17*** *12:20:00.1±2.6, 12.29N×87.65W, h48^{km}±26^{km}, mb3.9/10, mb1 4.2/11, mb1mx3.9/21, mbtmp4.2/11, ML3.3/1, MS3.5/3, Ms1 3.4/3, ms1mx3.0/25, Error ellipse: s-maj=43.4km s-min=14.2km az=52.0*

ISC 17 12:19:57.7±0.9**, 11.95N**±0.04×**88.02W**±0.05**, h51**^{km}±9^{km}**, n80,** σ**1**^{s}**00**/80**, mb4.4**/29**, MS4.3**/4**, 13C-8D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	**Leon**	1.20	67	⇑*e*P	P	12 20 18.0	-0.5
LEON				*e*S	S	12 20 34.1	+0.2
CRIN	**San Cristobal**	1.21	52	⇑*e*P	P	12 20 18.8	+0.2
CRIN				*e*S	S	12 20 36.3	+2.1
TEL3	**Telica 3**	1.31	62	⇑*e*P	P	12 20 19.5	-0.7
TEL3				*e*S	S	12 20 37.0	+0.2
CNCH	**Conchagua**	1.33	8	⇑*e*P	Px	12 20 29.1	
CNCH				*e*S	Sx	12 20 47.1	
TELN	**Telica**	1.34	61	⇑*e*P	P	12 20 19.8	-0.8
TELN				*e*S	S	12 20 38.6	+1.2
MIRN	**Miramar**	1.37	69	⇓*e*P	P	12 20 20.4	-0.6
MIRN				*e*S	S	12 20 38.2	-0.1
CNGN	**Cerro Negro**	1.41	67	⇑*e*P	P	12 20 20.6	-0.9
COPN	**Copaltepe**	1.42	80	⇓*e*P	P	12 20 21.3	-0.4
VSM	**San Miguel**	1.49	351	*e*P	Px	12 20 31.4	
VSM				*e*S	Sx	12 20 51.5	
BLLM	**Bellamira**	1.50	352	⇓*e*P	Px	12 20 31.7	
BLLM				*e*S	Sx	12 20 52.5	
MOMJ	**Momotombo**	1.52	72	⇑*e*P	P	12 20 22.3	-0.8
XAVN	**Gruta Xavier**	1.67	83	⇑*e*P	P	12 20 24.7	-0.4
XAVN				*e*S	S	12 20 46.8	+1.3
MGAN	**Managua**	1.75	83	⇑*e*P	P	12 20 25.7	-0.6
MGAN				*e*S	S	12 20 47.4	0.0
TICN	**Ticuantepe**	1.75	87	⇓*e*P	P	12 20 26.2	-0.1
TICN				*e*S	S	12 20 48.4	+0.9
WILN	**Americas 2**	1.81	83	*e*S	S	12 20 49.0	+0.1
APON	**Apoyo**	1.92	91	⇑*e*P	P	12 20 27.6	-0.9
APON				*e*S	S	12 20 52.3	+0.8
LCBS	**La Ceiba**	1.94	331	⇑*e*P	Px	12 20 36.6	
LCBS				*e*S	Sx	12 20 56.8	
LFRS	**El Faro**	1.95	329	*e*P	Px	12 20 36.7	
LFRS				*e*S	Sx	12 21 01.9	
LBRS	**Las Brisas**	2.04	331	⇑*e*P	Px	12 20 39.1	
LBRS				*e*S	Sx	12 21 05.2	
SSNN	**San Juan del S**	2.23	107	*e*P	P	12 20 31.8	-1.3
SSNN				*e*S	S	12 20 58.6	-0.8
CONN	**Concepcion**	2.38	99	*e*P	P	12 20 36.6	+1.4
MADN	**Villa Maderas**	2.50	102	⇓*e*P	P	12 20 35.4	-1.5
RTR	**El Retiro**	2.50	321	⇓*e*P	Px	12 20 45.1	
RTR				*e*S	Sx	12 21 17.7	
LIM1	**Limonal**	2.99	114	*i* S	S	12 21 18.8	+0.2
JTS	**JuntasAbangare**	3.43	118	P	P	12 20 49.4	-0.7
	3.2nm,0.3s,baz=327,slow=14,SNR=11						
JTS				S	S	12 21 28.1	-1.8
	12nm,0.3s,baz=292,slow=21,SNR=5.4						
JTS				LR	LR	12 22 25.0	
	comp=Z,325nm,20.5s,baz=202,slow=44						
JTS	**JuntasAbangare**	3.43	118	*e*P	P	12 20 48.7	-1.4
VPS2	**Volcan Poas 2**	4.11	115	*e*P	P	12 21 01.4	+1.8
PRS1	**Puriscal**	4.13	118	*e*P	P	12 21 00.4	+0.4
PRS1	**Puriscal**	4.13	118	*e*P	P	12 21 02.4	+2.4
LCR2	**La Lucha 2**	4.52	119	⇓*e*P	P	12 21 06.0	+0.7
BUS	**Buena Vista**	4.82	119	⇓*e*P	P	12 21 10.3	+0.7
BUS				*e*S	S	12 22 05.7	+0.9
ACR	**Cerro Adams**	5.79	124	⇑*e*P	P	12 21 23.2	+0.1
SDV	**Santo Domingo**	17.37	98	*e*P	P	12 23 57.7	-0.5
LRAL	**Lakeview Retre**	21.01	2	*e*P	P	12 24 39.1	-0.2
JCT	**Junction City**	21.43	331	*e*P	P	12 24 42.3	-1.2
	18nm,0.7s,mb4.5						
GOGA	**Godfrey**	21.77	10	*e*P	P	12 24 47.1	+0.3
	19nm,0.5s,mb4.8						
TXAR	**Lajitas Array**	22.61	322	P	P	12 24 56.3	+1.0
	5.2nm,0.5s,mb4.2,baz=136,slow=9.5,SNR=106						
LTX	**Lajitas**	22.62	322	*e*P	P	12 24 56.1	+0.9
	5.7nm,0.5s,mb4.3						
MIAR	**Mount Ida**	23.06	348	*e*P	P	12 24 59.5	0.0
	38nm,0.7s,mb4.9						
SWET	**Sewanee**	23.24	4	*e*P	P	12 25 00.5	-0.9
CPCT	**Cooper Cave**	23.61	7	*e*P	P	12 25 05.2	+0.3
WMOK	**Wichita Mounta**	24.71	338	*e*P	P	12 25 15.0	-0.5
	7.9nm,0.7s,mb4.3						
MNTX	**Cornudas Mount**	25.35	324	*e*P	P	12 25 20.9	-0.7
	4.3nm,0.8s,mb4.0						
CPRX	**Cap Rock**	25.52	328	*e*P	P	12 25 24.2	+0.9
AMTX	**Amarillo**	25.99	334	*e*P	P	12 25 27.4	-0.2
	12nm,0.5s,mb4.7						
CCM	**Cathedral Cave**	26.16	354	*e*P	P	12 25 27.5	-1.7
	8.7nm,0.5s,mb4.5						
WCI	**Wyandotte Cave**	26.22	3	*e*P	P	12 25 28.1	-1.7
	9.3nm,0.8s,mb4.4						
NNA	**Nana**	26.24	155	*e*P	P	12 25 29.2	-1.0
	6.1nm,0.5s,mb4.4						
LENM	**Lemitar**	28.06	325	P	P	12 25 46.8	+0.2
ANMO	**Albuquerque**	28.37	327	P	P	12 25 49.0	-0.3
SDCO	**Great Sand Dun**	30.08	332	*e*P	P	12 26 05.5	+1.0
SAML	**Samuel**	32.26	129	P	P	12 26 23.9	0.0
	33nm,1.1s,mb5.1						
SADO	**Sadowa**	33.58	11	P	P	12 26 33.1	-2.0
	6.8nm,0.6s,mb4.8,baz=146,slow=5.3,SNR=6.8						
SADO				LR	LR	12 41 19.2	
	comp=Z,96nm,18.3s,MS3.5,baz=266,slow=38						
LPAZ	**La Paz**	34.27	145	P	P	12 26 42.6	+1.4
	1.8nm,0.9s,mb4.0						
RSSD	**Black Hills**	34.90	340	*e*P	P	12 26 46.5	+0.1
	4.7nm,0.8s,mb4.5						
BW06	**Boulder Array**	35.95	333	P	P	12 26 56.3	+0.9
PDAR	**Pinedale Array**	35.95	333	P	P	12 26 55.5	+0.2
	0.7nm,0.6s,mb3.7,baz=127,slow=9.9,SNR=5.5						
PDAR				PcP	PcP	12 29 22.8	+1.2
	0.5nm,0.6s,baz=142,slow=2.9,SNR=4.3						
EYMN	**Ely**	36.00	356	*e*P	P	12 26 53.2	-2.5
HWUT	**Hardware Ranch**	36.01	329	*e*P	P	12 26 55.7	-0.2
	24nm,1.8s,mb4.8						
AHID	**Auburn Hatcher**	36.66	331	*e*P	P	12 27 02.2	+0.8
	5.0nm,0.7s,mb4.5						
SNOW	**Snow King Moun**	37.04	332	*e*P	P	12 27 05.2	+0.7
	15nm,0.9s,mb4.8						
TPAW	**Teton Pass**	37.15	332	*e*P	P	12 27 05.8	+0.3
	4.2nm,0.8s,mb4.3						
ELK	**Elko**	37.35	325	P	P	12 27 07.8	+0.7
IMW	**Indian Meadow**	37.46	332	*e*P	P	12 27 09.0	+1.0
	2.1nm,0.6s,mb4.1						
MNV	**Mina**	37.62	320	P	P	12 27 10.4	+1.0
NVAR	**Mina Array Bea**	37.72	320	P	P	12 27 12.1	+1.9
	0.3nm,0.6s,mb3.2,baz=127,slow=9.0,SNR=4.0						
SIV	**San Ignacio**	38.49	136	P	P	12 27 17.7	+0.8
	3.3nm,0.5s,mb4.3,baz=301,slow=11,SNR=12						
ULM	**Lac du Bonnet**	38.73	352	P	P	12 27 16.4	-2.2
	8.2nm,0.5s,mb4.7,baz=162,slow=9.6,SNR=23						
HLID	**Hailey**	38.88	329	*e*P	P	12 27 20.6	+0.8
	1.0nm,0.7s,mb3.6						
MCMT	**McKenzie Canyo**	39.05	332	*e*P	P	12 27 23.1	+1.8
SCHQ	**Schefferville**	45.92	17	P	P	12 28 14.4	-2.6
	4.6nm,0.6s,mb4.6,baz=232,slow=14,SNR=4.5						
BDFB	**Brasilia**	48.16	124	P	P	12 28 34.9	-0.3
	3.5nm,0.6s,mb4.6,baz=263,slow=5.5,SNR=4.2						
BDFB				LR	LR	12 52 03.6	
	comp=Z,68nm,18.4s,MS3.7,baz=120,slow=40						
YKA	**Yellowknife Ar**	53.95	345	P	P	12 29 16.8	-1.5
	1.0nm,0.6s,mb3.9,baz=146,slow=6.3,SNR=8.8						
YKA				PcP	PcP	12 30 22.0	-1.1
	0.8nm,0.6s,baz=152,slow=3.7,SNR=4.6						
ILAR	**Eielson Array**	66.25	336	P	P	12 30 41.8	-0.6
	0.4nm,0.6s,mb3.6,baz=168,slow=4.9,SNR=12						
SUMG	**Summit**	67.21	14	P	P	12 30 48.9	+0.5
CN2	**Changchun**	116.69	333	*e*PKP	PKPdf	12 38 38.4	+1.9
WMQ	**Urumqi**	124.37	4	*e*PKP	PKPdf	12 38 53.0	+1.6
SSE	**Sheshan**	128.83	327	PKP	PKPdf	12 39 00.4	0.0
NJ2	**Nanjing**	129.24	330	*e*PKP	PKPdf	12 39 03.1	+1.9
NJ2				PP	PP	12 41 16.0	+1.2
NJ2				PKS	PKS	12 42 38.0	+1.3
NJ2				SKS	SKS	12 46 09.0	+6.1
NJ2				PP	PP		
	comp=Z,60nm,5.4s						
NJ2				LR	LR		
	comp=N,500nm,19.3s,MS5.2						
NJ2				LR	LR		
	comp=E,240nm,22.9s,MS5.2						
NJ2				LR	LR		
	comp=Z,230nm,23.1s,MS4.8						
LZH	**Lanzhou**	130.93	347	*e*PKP	PKPdf	12 39 04.1	-0.2
LZH				LR	LR		
	comp=N,170nm,18.2s						
LZH				LR	LR		
	comp=Z,340nm,20.3s,MS5.0						

NIED ***17*** *12:26:00, 38.20N×144.70E, h5^{km}, Mw4.5 Best double couple: M$_0$6.83×10^{15} NP1:φ$_s$219°, δ68°, λ-91°. NP2:φ$_s$40°, δ22°, λ-89°.*

IDC ***17*** *12:26:34.7±0.6, 38.16N×144.94E, mb4.3/20, mb1 4.5/22, mb1mx4.5/27, mbtmp4.3/22, ML4.2/2, MS3.8/12, Ms1 3.8/12, ms1mx3.5/31, Error ellipse: s-maj=17.6km s-min=14.7km az=172.0*

BJI ***17*** *12:26:36.5, 38.33N×144.57E, h7^{km}, mB4.9, mb4.7, Ms4.2, Msz4.0*

HRVD ***17*** *12:26:36.5±0.9, 38.48N×145.05E, h12^{km}±3^{km}, MW4.7/45, Centroid moment Tensor Solution. LP body waves: s6,c8; Mantle waves: s45,c57; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.76±.14; M$_{\theta\theta}$0.33±.08; M$_{\phi\phi}$0.42±.09; M$_{r\theta}$1.00±.38; M$_{\theta\phi}$0.29±.05; M$_{\phi r}$-0.90±.35; Best double couple: M$_0$1.408×10^{16} NP1:φ$_s$143°, δ9°, λ-80°. NP2: φ$_s$313°, δ81°, λ-92°. Principal axes: T 1.072, Plg36°, Azm45°; N .672, Plg2°, Azm314°; P -1.745, Plg54°, Azm222°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***17*** *12:26:36.5±0.2, 38.15N×144.90E, h10^{km}, mb4.9/25, MW4.5(NIED) Error ellipse: s-maj=6.8km s-min=4.4km az=158.0*

MOS ***17*** *12:26:38.4±1.0, 38.17N×144.80E, h33^{km}, mb4.9/19, Error ellipse: s-maj=9.7km s-min=6.2km az=102.7*

JMA ***17*** *12:26:39.0±0.1, 38.24N×144.67E, h56^{km}, M4.6*

ISC 17 12:26:36.4±1.3**, 38.27N**±0.05×**144.75E**±0.04**, h16**^{km}±8^{km}**,** **h25**^{km}±.8^{km}**:pP-P, n149,** σ**1**^{s}**05**/156**, mb4.5**/51**, MS3.9**/13**, 6C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.54	289	P	Pn	12 27 18.4	+0.6
OFUJ				*e*S	Sn	12 27 47.8	-0.9
MIYJ	**Miyakonagasawa**	2.63	301	P	Pn	12 27 19.4	+0.3
MIYJ				*e*S	Sn	12 27 49.3	-1.6
JIO	**Ouri**	2.68	275	P	Pn	12 27 19.9	+0.1
JIO				S	Sn	12 27 50.5	-1.6
JMK	**Ichinoseki**	2.84	285	P	Pn	12 27 22.7	+0.5
JMK				S	Sn	12 27 55.6	-0.8
JOT	**Ohata**	4.21	319	*e*S	Sn	12 28 26.9	-4.1
JCH	**Churui**	4.46	347	P	Pn	12 27 43.5	-1.7
JCH				*e*S	Sn	12 28 32.4	-5.0
JKB	**Kayabe**	4.60	323	P	Pn	12 27 47.5	+0.4
JKB				*e*S	Sn	12 28 36.0	-4.8
BSO1	**Boso 1**	4.72	221	*e*S	Sn	12 28 40.3	-3.5
NEM2	**Nemuro 2**	5.14	8	P	Pn	12 27 51.2	-3.6
NEM2				*e*S	Sn	12 28 45.0	-10
JRY	**Ryogami san**	5.18	246	P	Pn	12 27 54.2	-1.1
JRY				*e*S	Sn	12 28 50.1	-5.4
JOD2	**Odawara 2**	5.44	238	*e*S	Sn	12 28 55.5	-6.6
MJAR	**Matsushiro Arr**	5.48	254	Pn	Pn	12 27 59.7	+0.1
	7.0nm,0.3s,baz=67,slow=8.2,SNR=74						
MJAR				Sn	Sn	12 29 06.9	+3.9
	2.6nm,0.3s,baz=66,slow=22,SNR=4.7						
MAJO	**Matsushiro**	5.48	254	*e*Pn	Pn	12 28 00.1	+0.5
	94nm,0.8s						
MAJO	**Matsushiro**	5.48	254	*e*P	Pn	12 28 00.1	+0.5
MAJO				pmax	pmax		
	comp=Z,94nm,0.8s						
MAT	**Matsushiro**	5.48	254	P	Pn	12 28 00.0	+0.4
MAT				S	Sn	12 29 01.6	-1.5
MAT	**Matsushiro**	5.48	254	*e*P	Pn	12 28 00.0	+0.4
	comp=Z,31nm,0.8s						
MAT				*e*S	Sn	12 29 04.0	+0.9
MAT	**Matsushiro**	5.48	254	*e*P	Pn	12 28 00.0	+0.4
MAT				*e*S	Sn	12 29 04.0	+0.9
MAT				pmax	pmax		
	comp=Z,31nm,0.8s						
JOSM	**Okushiri--Mats**	5.55	315	P	Pn	12 28 00.8	+0.3
JTKR	**Abashiri--Toko**	5.73	354	P	Pn	12 28 00.7	-2.3
JTKR				*e*S	Sn	12 29 03.2	-6.0
YUK	**Yuzh-Kuril'sk**	5.82	8	P	Pn	12 28 07.3	+3.0
JHR	**Hokuryu**	5.92	338	P	Pn	12 28 06.3	+0.5
ASAJ	**Asahikawa**	6.06	345	Pn	Pn	12 28 07.0	-0.8
	comp=Z,4.8nm,0.3s,baz=195,slow=14,SNR=31						
ASAJ				Sn	Sn	12 29 12.2	-5.2
	comp=Z,3.4nm,0.3s,baz=44,slow=26,SNR=6.7						
ASAJ				LR	LR	12 31 26.6	
	comp=Z,472nm,18.1s,baz=193,slow=47						
ASAJ	**Asahikawa**	6.06	345	P	Pn	12 28 07.0	-0.7
ASAJ						12 29 12.3	
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ASAJ				smax			
	comp=N,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,472nm,18.1s						
YSS	**Yuzh-Sakhalins**	8.80	351	*e*P	P	12 28 48.9	+2.9
YSS				pmax	pmax		
	comp=Z,22nm,1.3s						
CBIJ	**Chichi jima**	11.35	192	LR	LR	12 32 21.6	
	comp=Z,181nm,20.0s,baz=37,slow=31						
JNU	**Nakatsue**	12.38	250	LR	LR	12 34 40.6	
	comp=Z,187nm,18.4s,baz=52,slow=39						
MDJ	**Mudanjiang**	13.01	304	P	P	12 29 43.8	+0.5
MDJ				S	S	12 32 13.3	+4.6
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s						
MDJ				LR	LR		
	comp=N,100nm,21.3s						
MDJ				LR	LR		
	comp=E,220nm,20.1s						
MDJ				LR	LR		
	comp=Z,380nm,22.5s						
MDJ	**Mudanjiang**	13.01	304	*e*Pn	P	12 29 43.5	+0.2
	comp=Z,42nm,1.2s						
KLR	**Kul'dur**	14.40	324	*e*P	P	12 29 57.4	-4.2
KLR				MLR	MLR		
	comp=N,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,2µm,13.0s						
PET	**Petropavlovsk**	17.62	29	⇓*i*P	P	12 30 40.7	-2.0
PET				pmax	pmax		
	comp=Z,96nm,2.5s						
SSE	**Sheshan**	20.62	257	P	P	12 31 18.2	+0.5
	comp=Z,34nm,0.7s						
SSE				pP		12 31 31.2	
SSE				S	S	12 35 01.1	-1.5
SSE				sS		12 35 24.8	
HIA	**Hailar**	21.04	310	*e*Pn	P	12 31 21.7	-0.2
MA2	**Magadan**	21.67	8	*e*P	P	12 31 29.5	+1.3
	comp=Z,107nm,1.4s,mb5.1						
MA2	**Magadan**	21.67	8	*e*P	P	12 31 29.2	+1.1
MA2				pmax	pmax		
	comp=Z,30nm,1.3s,mb4.6						
GUMO	**Guam**	24.58	180	LR	LR	12 39 14.0	
	comp=Z,167nm,20.9s,MS3.5,baz=13,slow=31						
SEY	**Seymchan**	25.13	8	⇑*i*P	P	12 32 03.2	+1.4
YAK	**Yakutsk**	25.54	343	*d i*P	P	12 32 06.0	+0.3
YAK				pmax	pmax		
	comp=Z,51nm,1.3s,mb4.9						
HHC	**Hu-ho-hao-te**	25.63	286	*e*P	P	12 32 09.8	+3.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.1						
HHC				AMB	AMB		
	comp=Z,120nm,5.7s						
HHC				LR	LR		
	comp=N,160nm,12.0s						
HHC				LR	LR		
	comp=E,140nm,6.4s						
HHC				LR	LR		
	comp=Z,190nm,14.4s,MS3.8						
ULN	**Ulaanbaatar**	28.91	302	*e*P	P	12 32 37.2	+0.6
	comp=Z,5.6nm,1.2s,mb4.2						
ULN	**Ulaanbaatar**	28.91	302	⇓*i*P	P	12 32 38.5	+1.9
SONM	**Songino Array**	29.34	301	P	P	12 32 41.7	+1.1
	comp=Z,2.0nm,1.0s,mb3.8,baz=95,slow=8.9,SNR=10						
SONM				LR	LR	12 44 49.1	
	comp=Z,191nm,19.2s,MS3.7,baz=189,slow=37						
ENH	**Enshi**	30.07	265	*e*P	P	12 32 47.4	+0.1
	comp=Z,14nm,0.8s,mb4.8						
ZAK	**Zakamensk**	31.63	306	*e*P	P	12 33 01.1	+0.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.9						
BILL	**Bilibino**	32.12	15	P	P	12 33 03.8	-1.0
BILL	**Bilibino**	32.12	15	P	P	12 33 03.8	-1.0
LZH	**Lanzhou**	32.48	279	*e*P	P	12 33 08.9	+0.6
	comp=Z,29nm,1.3s,mb5.0						
LZH				pP	pP	12 33 15.8	+2.9
LZH				sP	sP	12 33 19.4	+4.5
LZH				PP	PP	12 34 17.0	+0.3
LZH				*e*S	S	12 38 20.5	-0.8
LZH				sS		12 38 32.3	
LZH				SS	SS	12 40 16.2	-1.3
LZH	**Lanzhou**	32.48	279	*e*P	P	12 33 08.9	+0.6
LZH				*SP	sP	12 33 19.4	+4.5
LZH						12 34 17.0	
LZH				*e*S	S	12 38 20.5	-0.8
LZH				*SS		12 38 32.3	
LZH				SS	SS	12 40 16.2	-1.3
LZH				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.0						
GYA	**Guiyang**	34.03	261	P	P	12 33 21.8	-0.1
GYA				AP	pP	12 33 29.3	+2.8
GYA				XP	sP	12 33 32.5	+4.0
GYA				PP	PP	12 34 36.8	+0.8
GYA				S	S	12 38 44.6	-0.9
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
GYA				AMB	AMB		
	comp=Z,120nm,4.0s						
GYA				LR	LR		
	comp=N,540nm,17.2s,MS4.5						
GYA				LR	LR		
	comp=E,670nm,18.0s,MS4.5						
GYA				LR	LR		
	comp=Z,590nm,16.4s,MS4.4						
TIXI	**Tiksi**	34.42	351	⇑*i*P	P	12 33 23.6	-1.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
GTA	**Gaotai**	34.74	286	*e*P	P	12 33 29.3	+1.4
GTA				AP	pP	12 33 36.5	+4.0
GTA				XP	sP	12 33 39.4	+4.9
GTA				AMB	AMB		
	comp=Z,80nm,4.6s						
GTA				LR	LR		
	comp=N,180nm,14.1s,MS4.2						
GTA				LR	LR		
	comp=E,220nm,15.2s,MS4.2						
GTA				LR	LR		
	comp=Z,330nm,16.4s,MS4.2						
KMI	**Kunming**	37.76	262	P	P	12 33 54.3	+0.8
KMI				S	S	12 39 42.8	-0.1
KMI				SS	SS	12 42 18.1	+0.1
KMI				LR	LR		
	comp=Z,100nm,26.1s,MS3.5						
KMI	**Kunming**	37.76	262	P	P	12 33 54.2	+0.7
KMI				S	S	12 39 42.7	-0.2
KMI				SS	SS	12 42 18.1	+0.1
KMI				SSS	SSS	12 42 48.1	-1.7
ZAL	**Zalesovo**	43.07	311	P	P	12 34 38.8	+1.8
ZAL				LR	LR	12 53 35.9	
	comp=Z,163nm,21.5s,MS3.9,baz=123,slow=38						
KDAK	**Kodiak Island**	44.40	43	P	P	12 34 46.4	-1.4
	comp=Z,12nm,0.7s,mb4.7,baz=170,slow=8.4,SNR=7.6						
MKAR	**Makanchi Array**	45.71	302	P	P	12 34 58.4	+0.1
	comp=Z,3.3nm,0.8s,mb4.3,baz=84,slow=9.3,SNR=37						
MKAR				LR	LR	12 54 47.7	
	comp=Z,107nm,20.7s,MS3.8,baz=142,slow=37						
MKAR	**Makanchi Array**	45.71	302	*i* P	P	12 34 59.0	+0.7
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
COLA	**College**	46.62	33	*e*P	P	12 35 05.0	-0.2
	comp=Z,5.3nm,0.9s,mb4.5						
COLA	**College**	46.62	33	*e*P	P	12 35 05.0	-0.2
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
ILAR	**Eielson Array**	47.03	33	P	P	12 35 07.5	-1.0
	comp=Z,2.6nm,0.8s,mb4.2,baz=261,slow=5.9,SNR=37						
KURK	**Kurchatov**	47.26	308	*e*P	P	12 35 10.4	-0.1
	comp=Z,6.2nm,0.6s,mb4.7						
KURK	**Kurchatov**	47.26	308	⇑*i*P	P	12 35 11.2	+0.7
PMG	**Port Moresby**	47.48	177	LR	LR	12 54 21.5	
	comp=Z,150nm,18.1s,MS4.0,baz=254,slow=35						
BVAR	**Borovoye Array**	51.70	312	P	P	12 35 44.1	-0.5
	comp=Z,3.4nm,0.8s,mb4.3,baz=68,slow=8.0,SNR=13						
BRVK	**Borovoye**	51.75	312	*e*P	P	12 35 45.7	+0.7
	comp=Z,1.4nm,0.6s,mb4.1						
BRVK	**Borovoye**	51.75	312	*e*P	P	12 35 45.7	+0.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
KAKA	**Kakadu**	52.01	195	*e*P	P	12 36 03.7	+16
	comp=Z,18nm,0.8s,mb5.1						
KAKA				*e*		12 36 12.6	
INK	**Inuvik**	52.07	28	*e*P	P	12 35 46.4	-0.8
	comp=Z,23nm,1.6s,mb4.9						
INK	**Inuvik**	52.07	28	*e*P	P	12 35 46.4	-0.8
INK				pmax	pmax		
	comp=Z,23nm,1.6s						
AAK	**Ala-Archa**	52.23	299	*e*P	P	12 35 48.4	-0.4
AAK				pmax	pmax		
	comp=Z,9.0nm,1.7s,mb4.4						
ARU	**Arti**	57.18	319	*e*P	P	12 36 24.4	-0.3
	comp=Z,16nm,1.3s,mb4.9						
ARU	**Arti**	57.18	319	*e*P	P	12 36 24.4	-0.3
ARU				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.9						
WRAB	**Tennant Creek**	58.71	191	*e*P	P	12 36 33.0	-2.9
	comp=Z,19nm,1.1s,mb5.0						
WRAB				*e*		12 36 41.5	
WRAB	**Tennant Creek**	58.71	191	*e*P	P	12 36 33.0	-2.9
WRAB				*e*		12 36 41.5	
WRAB				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.0						
WB2	**Warramunga Arr**	58.72	191	*e*P	P	12 36 33.2	-2.8

WB2				*e*		12 36 41.7	
WRA	**Warramunga Arr**	**58.72**	**191**	P	**P**	**12 36 33.2**	**-2.8**
	comp=Z,6.7nm,0.7s,mb4.8,baz=12,slow=7.2,SNR=46						
AKTO	**Aktyubinsk**	**59.81**	**312**	P	**P**	**12 36 42.8**	**-0.3**
	comp=Z,2.8nm,0.8s,mb4.3,baz=76,slow=12,SNR=9.0						
AKTO	**Aktyubinsk**	**59.81**	**312**	P	**P**	**12 36 42.8**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
YKA	**Yellowknife Ar**	**61.40**	**31**	P	**P**	**12 36 52.5**	**-1.2**
	comp=Z,1.8nm,0.7s,mb4.3,baz=301,slow=6.4,SNR=7.5						
YKA	**Yellowknife Ar**	**61.40**	**31**	P	**P**	**12 36 52.5**	**-1.2**
ARCES	**ARCESS Array B**	**63.76**	**340**	LR	LR	13 08 39.9	
	comp=Z,68nm,19.9s,MS3.8,baz=189,slow=40						
EDM	**Edmonton**	**66.72**	**40**	*e*P	**P**	**12 37 26.7**	**-1.9**
EDM				*e*		12 37 35.8	
HAWA	**Hanford**	**66.99**	**48**	*e*P	**P**	**12 37 30.1**	**-0.3**
	comp=Z,1.0nm,1.4s,mb3.6						
HAWA				*e*		12 37 38.4	
FINES	**FINESS Array B**	**68.93**	**333**	P	**P**	**12 37 41.7**	**-0.6**
	comp=Z,4.2nm,0.7s,mb4.5,baz=53,slow=9.5,SNR=12						
FINES	**FINESS Array B**	**68.93**	**333**	P	**P**	**12 37 41.7**	**-0.6**
FINES	**FINESS Array B**	**68.93**	**333**	*i* P	**P**	**12 37 42.0**	**-0.3**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
STKA	**Stephens Creek**	**69.85**	**183**	*e*P	**P**	**12 37 46.9**	**-1.5**
	comp=Z,2.3nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**69.85**	**183**	P	**P**	**12 37 46.5**	**-2.0**
	comp=Z,2.5nm,0.7s,mb4.3,baz=339,slow=7.3,SNR=7.4						
FORT	**Forrest**	**70.44**	**195**	*e*P	**P**	**12 37 50.8**	**-1.2**
	comp=Z,13nm,0.7s,mb5.0						
KIV	**Kislovodsk**	**72.07**	**312**	*e*P	**P**	**12 38 01.8**	**+0.2**
	comp=Z,24nm,0.8s,mb5.2						
KIV	**Kislovodsk**	**72.07**	**312**	*e*P	**P**	**12 38 01.7**	**+0.1**
KIV				*e*S	S	12 47 20.6	-0.8
KIV				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.1						
NVAR	**Mina Array Bea**	**72.12**	**55**	P	**P**	**12 38 01.2**	**-0.8**
	comp=Z,1.4nm,0.8s,mb4.0,baz=295,slow=3.5,SNR=14						
MNV	**Mina**	**72.22**	**55**	*e*P	**P**	**12 38 02.1**	**-0.5**
	comp=Z,4.6nm,1.0s,mb4.4						
MNV	**Mina**	**72.22**	**55**	*e*P	**P**	**12 38 02.1**	**-0.5**
MNV				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
QLMT	**Earthquake Lak**	**72.57**	**46**	*e*P	**P**	**12 38 04.5**	**+0.1**
ELK	**Elko**	**72.72**	**52**	*e*P	**P**	**12 38 05.5**	**+0.1**
	comp=Z,10nm,1.6s,mb4.5						
ELK	**Elko**	**72.72**	**52**	*e*P	**P**	**12 38 05.6**	**+0.1**
ELK				pmax	pmax		
	comp=Z,10.0nm,1.6s						
GNI	**Garni**	**73.06**	**308**	*i* P	**P**	**12 38 07.9**	**+0.4**
IMW	**Indian Meadow**	**73.41**	**47**	*e*P	**P**	**12 38 10.4**	**+0.9**
	comp=Z,26nm,1.4s,mb5.0						
NB2	**NORSAR Subarra**	**74.04**	**338**	P	**P**	**12 38 12.3**	**-0.4**
	comp=Z,1.4nm,0.8s,mb3.9,baz=36,slow=5.6						
NOA	**NORSAR Array B**	**74.04**	**338**	P	**P**	**12 38 12.4**	**-0.3**
	comp=Z,2.1nm,0.8s,mb4.1,baz=38,slow=5.7,SNR=6.4						
NOA				LR	LR	13 13 21.0	
	comp=Z,38nm,19.2s,MS3.7,baz=50,slow=38						
NAO	**NORSAR Subarra**	**74.32**	**338**	P	**P**	**12 38 12.3**	**-2.1**
	comp=Z,1.4nm,0.8s,mb3.9						
NAO	**NORSAR Subarra**	**74.32**	**338**	P	**P**	**12 38 12.3**	**-2.1**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
ANN	**Anapa**	**74.55**	**315**	*e*P	**P**	**12 38 20.9**	**+4.9**
PDAR	**Pinedale Array**	**74.90**	**47**	P	**P**	**12 38 16.9**	**-1.2**
	comp=Z,2.1nm,0.8s,mb4.2,baz=291,slow=3.4,SNR=20						
AKASG	**Malin Array Be**	**74.91**	**324**	P	**P**	**12 38 17.8**	**-0.1**
	comp=Z,1.8nm,0.7s,mb4.1,baz=44,slow=5.8,SNR=13						
AKASG	**Malin Array Be**	**74.91**	**324**	*i* P	**P**	**12 38 17.7**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DAU	**Daniels Canyon**	**75.35**	**50**	*e*P	**P**	**12 38 21.3**	**+0.6**
MSU	**Marysvale**	**75.95**	**52**	*e*P	**P**	**12 38 24.9**	**+0.7**
NEN	**Nelson**	**75.99**	**56**	*e*P	**P**	**12 38 24.5**	**0.0**
PV10	**Paradox Valley**	**77.96**	**51**	*e*P	**P**	**12 38 36.3**	**+0.9**
PV10				*e*		12 38 44.6	
PV10				*e*		12 38 52.3	
PV01	**Paradox Valley**	**78.40**	**50**	*e*P	**P**	**12 38 38.2**	**+0.5**
OJC	**Ojcow**	**79.45**	**328**	*e*P	**P**	**12 38 43.1**	**-0.1**
BRTR	**Keskin Array B**	**79.98**	**313**	P	**P**	**12 38 46.9**	**+0.6**
	comp=Z,0.9nm,0.8s,mb3.7,baz=79,slow=6.3,SNR=4.7						
CLL	**Collm**	**81.30**	**332**	⇓P	**P**	**12 38 53.2**	**+0.2**
	comp=Z,logA/T=1.1,mb4.8						
CLL				*i* PCP	PcP	12 38 58.8	-0.9
CLL				*i* *PP	pP	12 39 01.9	+3.9
VRAC	**Vranov**	**81.48**	**329**	P	**P**	**12 38 55.0**	**+1.0**
	comp=Z,1.4nm,0.3s,mb4.3,baz=360,slow=6.3,SNR=4.4						
ANMO	**Albuquerque**	**81.75**	**52**	P	**P**	**12 38 56.4**	**+0.7**
	comp=Z,2.6nm,0.9s,mb4.2,baz=334,slow=6.6,SNR=5.4						
ANMO	**Albuquerque**	**81.75**	**52**	*e*P	**P**	**12 38 56.4**	**+0.6**
	comp=Z,14nm,1.6s,mb4.7						
ANMO				*e*		12 39 05.1	
ANMO	**Albuquerque**	**81.75**	**52**	⇓*i*P	**P**	**12 38 56.1**	**+0.4**
KHC	**Kasperske Hory**	**82.83**	**330**	⇑*i*P	**P**	**12 39 02.4**	**+1.4**
PPT	**Papeete**	**82.86**	**119**	LR	LR	13 12 00.1	
	comp=Z,229nm,18.4s,MS4.6,baz=256,slow=33						
GERES	**GERESS Array B**	**83.01**	**330**	P	**P**	**12 39 02.1**	**+0.2**
	comp=Z,0.5nm,0.4s,mb3.9,baz=34,slow=4.8,SNR=6.5						
GERES				LR	LR	13 19 08.4	
	comp=Z,98nm,18.2s,MS4.2,baz=18,slow=38						
GDL2	**Guadalupe Moun**	**84.89**	**53**	*e*P	**P**	**12 39 11.5**	**-0.3**
GDL2				*e*		12 39 20.4	
CDF	**Champ du Feu**	**85.78**	**333**	*e*P	**P**	**12 39 16.4**	**+0.5**
	comp=Z,18nm,1.1s,mb4.9						
CDF	**Champ du Feu**	**85.78**	**333**	*e*P	**P**	**12 39 16.4**	**+0.5**
CDF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.0						
DAVOX	**Davos**	**86.19**	**331**	P	**P**	**12 39 19.3**	**+1.4**
	comp=Z,3.4nm,0.7s,mb4.7,baz=103,slow=16,SNR=2.6						
DAVOX	**Davos**	**86.19**	**331**	P	**P**	**12 39 19.3**	**+1.3**
HAU	**Haudompre**	**86.46**	**333**	*e*P	**P**	**12 39 19.7**	**+0.5**
HAU				*e*R			
	comp=Z,88nm,17.0s						
TXAR	**Lajitas Array**	**87.26**	**54**	P	**P**	**12 39 23.4**	**-0.2**
	comp=Z,1.3nm,0.7s,mb4.2,baz=302,slow=3.4,SNR=16						
LOR	**Lormes**	**87.95**	**335**	*e*P	**P**	**12 39 27.0**	**+0.6**
	comp=Z,16nm,1.0s,mb4.9						
LOR	**Lormes**	**87.95**	**335**	*e*P	**P**	**12 39 27.0**	**+0.6**
LOR				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
SMF	**Signal de Mont**	**88.50**	**334**	*e*P	**P**	**12 39 29.6**	**+0.5**
	comp=Z,22nm,1.1s,mb5.0						
SMF	**Signal de Mont**	**88.50**	**334**	*e*P	**P**	**12 39 29.6**	**+0.5**
SMF				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.0						
AVF	**Avril sur Loir**	**88.54**	**335**	*e*P	**P**	**12 39 29.9**	**+0.6**
	comp=Z,14nm,0.8s,mb5.0						
AVF	**Avril sur Loir**	**88.54**	**335**	*e*P	**P**	**12 39 29.9**	**+0.6**
AVF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb5.0						
BGF	**Bois d'Agland**	**88.91**	**335**	*e*P	**P**	**12 39 31.7**	**+0.6**
ORIF	**Oris-en-Rattie**	**89.26**	**332**	*e*P	**P**	**12 39 34.6**	**+1.8**
ORIF				*e*R			
	comp=Z,70nm,21.5s						
MFF	**Saint Martin d**	**89.84**	**337**	*e*P	**P**	**12 39 36.0**	**+0.6**
	comp=Z,12nm,1.0s,mb4.9						
MFF	**Saint Martin d**	**89.84**	**337**	*e*P	**P**	**12 39 36.0**	**+0.6**
MFF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.9						
CAF	**Calviac**	**90.61**	**334**	*e*P	**P**	**12 39 40.2**	**+1.2**
	comp=Z,13nm,0.9s,mb5.0						
CAF	**Calviac**	**90.61**	**334**	*e*P	**P**	**12 39 40.2**	**+1.2**
CAF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
LFF	**La Frestale**	**91.04**	**335**	*e*P	**P**	**12 39 42.0**	**+1.0**
VNA2	**Neumayer--Watz**	**144.22**	**195**	*e*	PKPbc	12 46 17.7	+7.8
VNA2	**Neumayer--Watz**	**144.22**	**195**	*e*	PKPbc	12 46 24.4	+15
VNA2	**Neumayer--Watz**	**144.22**	**195**	*e*	PKPbc	12 46 33.3	+23
VNA2	**Neumayer--Watz**	**144.22**	**195**	⇑*i*PKPdf	PKPdf	12 46 09.6	-4.5
VNA2				*e*		12 46 17.7	
VNA2				*e*		12 46 24.4	
VNA2				*e*		12 46 33.3	
VNA3	**Neumayer Olymp**	**144.42**	**194**	*e*	PKPbc	12 46 18.1	+7.7
VNA3	**Neumayer Olymp**	**144.42**	**194**	*e*	PKPbc	12 46 25.6	+15
VNA3	**Neumayer Olymp**	**144.42**	**194**	*e*	PKPbc	12 46 33.6	+23
VNA3	**Neumayer Olymp**	**144.42**	**194**	⇑*i*PKPdf	PKPdf	12 46 09.9	-4.5
VNA3				*e*		12 46 18.1	
VNA3				*e*		12 46 25.6	
VNA3				*e*		12 46 33.6	

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*NIED **17** 12:38:00, 38.20N×144.70E, h5^{km}, Mw4.0 Best double couple: $M_0$1.04×10^{15} NP1:ϕ_s190°, δ51°, λ-110°. NP2: ϕ_s40°, δ43°, λ-67°.*

*BJI **17** 12:38:03.2, 38.48N×145.36E, h15^{km}, mB4.9, mb4.5, Ms4.5, Msz4.3*

*IDC **17** 12:38:03.8±0.9, 38.05N×145.01E, mb4.1/10, mb1 4.3/12, mb1mx4.1/23, mbtmp4.1/12, ML4.4/2, MS3.2/2, Ms1 3.2/2, ms1mx2.7/28, Error ellipse: s-maj=24.7km s-min=19.6km az=143.0*

*NEIC **17** 12:38:04.8±0.6, 37.96N×145.02E, h10^{km}, mb4.6/13, MW3.9(NIED), Error ellipse: s-maj=12.2km s-min=8.4km az=147.0*

*MOS **17** 12:38:06.3±1.2, 38.00N×144.97E, h33^{km}, mb4.6/12, Error ellipse: s-maj=12.6km s-min=8.7km az=115.1*

*JMA **17** 12:38:08.7±0.2, 38.20N×144.66E, h54^{km}, M4.5*

ISC 17 12:38:07.5±1.4**, 38.29N**±0.04×**144.72E**±0.04**, h27**^{km}±10^{km}**, n75,** $\sigma1^{s}$**17**/91**, mb4.2**/25**, MS3.9**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.51**	**289**	P	**Pn**	**12 38 48.2**	**+0.6**
MIYJ	**Miyakonagasawa**	**2.60**	**301**	P	**Pn**	**12 38 49.3**	**+0.5**
MIYJ				S	**Sn**	**12 39 19.6**	**-0.3**
JIO	**Ouri**	**2.65**	**275**	P	**Pn**	**12 38 49.7**	**+0.2**
JIO				S	**Sn**	**12 39 20.1**	**-1.1**
JMK	**Ichinoseki**	**2.82**	**285**	P	**Pn**	**12 38 52.6**	**+0.7**
JMK				*e*S	**Sn**	**12 39 25.2**	**-0.2**
JOM	**Ohasama**	**2.92**	**295**	P	**Pn**	**12 38 54.2**	**+0.8**
JOM				*e*S	**Sn**	**12 39 28.4**	**+0.4**
JMM	**Marumori**	**3.12**	**263**	P	**Pn**	**12 38 55.8**	**-0.4**
JMM				S	**Sn**	**12 39 30.9**	**-2.2**
JANG	**Nango**	**3.24**	**311**	P	**Pn**	**12 38 58.1**	**+0.2**
JANG				*e*S	**Sn**	**12 39 35.9**	**-0.2**
JYK	**Kaneyama**	**3.47**	**282**	P	**Pn**	**12 39 02.0**	**+0.8**
JYK				*e*S	**Sn**	**12 39 42.1**	**+0.2**
JOT	**Ohata**	**4.19**	**319**	P	**Pn**	**12 39 11.6**	**+0.2**
JCH	**Churui**	**4.45**	**347**	P	**Pn**	**12 39 13.6**	**-1.4**
JCH				*e*S	**Sn**	**12 40 03.8**	**-2.7**
JKB	**Kayabe**	**4.57**	**323**	P	**Pn**	**12 39 17.7**	**+0.9**
NEM2	**Nemuro 2**	**5.13**	**8**	P	**Pn**	**12 39 21.2**	**-3.5**
JRY	**Ryogami san**	**5.17**	**246**	P	**Pn**	**12 39 23.4**	**-1.8**
JRY				*e*S	**Sn**	**12 40 19.1**	**-5.6**
MJAR	**Matsushiro Arr**	**5.46**	**253**	Pn	**Pn**	**12 39 29.0**	**-0.4**
	5.1nm,0.3s,baz=79,slow=15,SNR=35						
MJAR				Sn	**Sn**	**12 40 30.5**	**-1.7**
	2.5nm,0.3s,baz=197,slow=34,SNR=3.5						
MAJO	**Matsushiro**	**5.47**	**253**	*e*Pn	**Pn**	**12 39 28.9**	**-0.5**
	42nm,0.6s						
MAJO	**Matsushiro**	**5.47**	**253**	*e*P	**Pn**	**12 39 28.9**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,42nm,0.6s						
MAT	**Matsushiro**	**5.47**	**253**	P	**Pn**	**12 39 29.3**	**-0.1**
MAT				S	**Sn**	**12 40 30.1**	**-2.1**
MAT	**Matsushiro**	**5.47**	**253**	*e*P	**Pn**	**12 39 29.0**	**-0.4**
	comp=Z,115nm,1.0s						
MAT				*e*S	**Sn**	**12 40 34.0**	**+1.8**
MAT	**Matsushiro**	**5.47**	**253**	*e*P	**Pn**	**12 39 29.0**	**-0.4**
MAT				*e*S	**Sn**	**12 40 34.0**	**+1.8**
MAT				pmax	pmax		
	comp=Z,115nm,1.0s						
JOSM	**Okushiri--Mats**	**5.52**	**315**	P	**Pn**	**12 39 30.5**	**+0.3**
JTKR	**Abashiri--Toko**	**5.71**	**354**	P	**Pn**	**12 39 31.2**	**-1.7**
YUK	**Yuzh-Kuril'sk**	**5.81**	**8**	P	**Pn**	**12 39 29.3**	**-4.9**
JHR	**Hokuryu**	**5.90**	**338**	P	**Pn**	**12 39 36.4**	**+0.8**
JHR				*e*S	**Sn**	**12 40 41.6**	**-1.5**
ASAJ	**Asahikawa**	**6.04**	**345**	Pn	**Pn**	**12 39 37.3**	**-0.2**
	comp=Z,12nm,0.3s,baz=203,slow=11,SNR=95						
ASAJ				Sn	**Sn**	**12 40 45.9**	**-0.7**
	comp=Z,4.0nm,0.3s,baz=333,slow=32,SNR=5.7						
ASAJ	**Asahikawa**	**6.04**	**345**	P	**Pn**	**12 39 37.3**	**-0.2**
ASAJ						12 40 45.9	
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				smax			
	comp=N,4.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**8.78**	**351**	*e*Pn	**P**	**12 40 17.6**	**+1.8**
JNU	**Nakatsue**	**12.37**	**250**	LR	LR	12 46 08.7	
	comp=N,82nm,18.5s,baz=238,slow=39						
MDJ	**Mudanjiang**	**12.98**	**304**	P	**P**	**12 41 13.3**	**+0.4**
MDJ				S	**S**	**12 43 42.3**	**+4.9**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,30nm,3.4s						
MDJ	**Mudanjiang**	**12.98**	**304**	*e*Pn	**P**	**12 41 12.2**	**-0.8**
	comp=Z,18nm,1.2s						
KLR	**Kul'dur**	**14.38**	**324**	*e*P	**P**	**12 41 35.0**	**+3.8**
CN2	**Changchun**	**15.54**	**297**	*e*P	**P**	**12 41 50.0**	**+3.6**
HIA	**Hailar**	**21.01**	**310**	*e*P	**P**	**12 42 54.2**	**+2.9**
	comp=Z,4.8nm,0.6s,mb4.0						
HIA	**Hailar**	**21.01**	**310**	*e*P	**P**	**12 42 54.2**	**+2.9**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TIA	**Tai'an**	**22.03**	**273**	*e*P	**P**	**12 43 05.1**	**+3.5**
YAK	**Yakutsk**	**25.52**	**344**	*e*P	**P**	**12 43 35.3**	**+0.2**
	comp=Z,17nm,0.5s,mb4.8						
YAK	**Yakutsk**	**25.52**	**344**	*e*P	**P**	**12 43 35.3**	**+0.2**
YAK				pmax	pmax		
	comp=Z,17nm,0.5s,mb4.8						
HHC	**Hu-ho-hao-te**	**25.60**	**286**	*e*P	**P**	**12 43 35.5**	**-0.6**
HHC				AP	pP	12 43 39.9	-4.1
HHC				XP	sP	12 43 42.9	-4.7
HHC				PP	PP	12 44 13.9	-2.1
HHC				PCP	PcP	12 47 01.8	-5.6
HHC				S	**S**	**12 48 00.8**	**+0.9**
HHC				SS	SS	12 49 06.6	+2.6
HHC				SCP		12 50 39.5	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
HHC				AMB	AMB		
	comp=Z,190nm,3.0s						
HHC				LR	LR		
	comp=N,120nm,12.0s,MS3.9						
HHC				LR	LR		
	comp=E,160nm,12.0s,MS3.9						
HHC				LR	LR		
	comp=Z,190nm,12.0s,MS3.8						
BOD	**Bodaibo**	**27.96**	**324**	*e*P	**P**	**12 43 56.7**	**-0.8**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.0						
ULN	**Ulaanbaatar**	**28.88**	**302**	*e*P	**P**	**12 44 11.2**	**+5.3**
	comp=Z,3.0nm,0.9s,mb4.0						
ULN	**Ulaanbaatar**	**28.88**	**302**	*e*P	**P**	**12 44 11.2**	**+5.3**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
SONM	**Songino Array**	**29.32**	**301**	P	**P**	**12 44 11.4**	**+1.5**
	comp=Z,0.7nm,0.6s,mb3.5,baz=101,slow=9.6,SNR=6.8						
SONM				LR	LR	12 56 05.4	
	comp=Z,60nm,21.8s,MS3.2,baz=14,slow=36						
ENH	**Enshi**	**30.05**	**265**	*e*P	**P**	**12 44 19.7**	**+3.1**
	comp=Z,21nm,1.4s,mb4.7						
ZAK	**Zakamensk**	**31.60**	**306**	*e*P	**P**	**12 44 31.0**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
LZH	**Lanzhou**	**32.45**	**279**	*e*P	**P**	**12 44 38.5**	**+0.9**
LZH				AP	pP	12 44 41.8	-3.8
LZH				PP	PP	12 45 47.8	+1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
LZH				AMB	AMB		
	comp=Z,40nm,4.9s						
LZH				LR	LR		
	comp=N,490nm,13.2s						
LZH				LR	LR		
	comp=Z,890nm,17.4s,MS4.5						
LZH	**Lanzhou**	**32.45**	**279**	*e*P	**P**	**12 44 38.5**	**+0.9**
	comp=Z,21nm,1.2s,mb4.8						
LZH				pP	pP	12 44 41.7	-3.9
LZH				sP	sP	12 44 43.2	-5.9
LZH				PP	PP	12 45 47.8	+1.7
LZH				LR	LR		
	comp=Z,900nm,17.4s,MS4.5						
LZH	**Lanzhou**	**32.45**	**279**	*e*P	**P**	**12 44 38.5**	**+0.9**
LZH						12 45 47.8	
LZH				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.8						
LZH				MLR	MLR		
	comp=Z,900nm,17.4s,MS4.5						
WMQ	**Urumqi**	**42.63**	**296**	*e*P	**P**	**12 46 05.4**	**+2.3**
KDAK	**Kodiak Island**	**44.41**	**43**	P	**P**	**12 46 16.2**	**-1.1**
	comp=Z,15nm,1.1s,mb4.7,baz=270,slow=8.1,SNR=5.1						
MKAR	**Makanchi Array**	**45.69**	**302**	P	**P**	**12 46 28.7**	**+1.1**
	comp=Z,2.1nm,0.7s,mb4.2,baz=82,slow=9.5,SNR=26						
PMR	**Palmer**	**46.05**	**37**	P	**P**	**12 46 29.3**	**-1.0**
	comp=Z,5.0nm,1.0s,mb4.4						
PMR	**Palmer**	**46.05**	**37**	P	**P**	**12 46 29.3**	**-1.0**
PMR				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
ILAR	**Eielson Array**	**47.03**	**33**	P	**P**	**12 46 37.5**	**-0.5**
	comp=Z,1.5nm,0.9s,mb3.9,baz=259,slow=6.5,SNR=15						
KURK	**Kurchatov**	**47.23**	**308**	*e*P	**P**	**12 46 40.5**	**+0.7**
	comp=Z,6.9nm,1.0s,mb4.5						
KURK	**Kurchatov**	**47.23**	**308**	*e*P	**P**	**12 46 40.5**	**+0.7**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
CHKZ	**Chkalovo**	**51.38**	**313**	*e*P	**P**	**12 47 11.7**	**0.0**
	comp=Z,8.1nm,1.5s,mb4.4						
CHKZ	**Chkalovo**	**51.38**	**313**	*e*P	**P**	**12 47 11.7**	**0.0**
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.4						
BRVK	**Borovoye**	**51.73**	**312**	*e*P	**P**	**12 47 15.1**	**+0.8**
	comp=Z,1.3nm,0.7s,mb4.0						
BRVK	**Borovoye**	**51.73**	**312**	*e*P	**P**	**12 47 15.1**	**+0.8**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
INK	**Inuvik**	**52.07**	**28**	P	**P**	**12 47 16.2**	**-0.5**
	comp=Z,3.0nm,1.1s,mb4.2,baz=283,slow=5.5,SNR=10						
INK	**Inuvik**	**52.07**	**28**	*e*P	**P**	**12 47 16.6**	**-0.1**
	comp=Z,4.5nm,1.1s,mb4.3						
INK	**Inuvik**	**52.07**	**28**	*e*P	**P**	**12 47 16.6**	**-0.1**
INK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ARU	**Arti**	**57.16**	**319**	*e*P	**P**	**12 47 52.5**	**-1.4**
	comp=Z,16nm,1.4s,mb4.9						
ARU	**Arti**	**57.16**	**319**	*e*P	**P**	**12 47 52.6**	**-1.4**
ARU				pmax	pmax		
	comp=Z,16nm,1.4s,mb4.9						
WRAB	**Tennant Creek**	**58.72**	**191**	P	**P**	**12 47 58.9**	**-6.6**
	comp=Z,6.2nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	**58.72**	**191**	P	**P**	**12 47 58.9**	**-6.5**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	**58.73**	**191**	P	**P**	**12 48 02.0**	**-3.5**
	comp=Z,0.6nm,0.4s,mb4.0,baz=8.8,slow=7.0,SNR=16						
PALK	**Pallekele**	**65.19**	**259**	P	**P**	**12 48 47.7**	**-1.2**
	comp=Z,17nm,1.1s,mb5.0						
FINES	**FINESS Array B**	**68.91**	**333**	P	**P**	**12 49 11.8**	**+0.3**
	comp=Z,2.9nm,1.0s,mb4.2,baz=45,slow=8.1,SNR=5.6						
FINES	**FINESS Array B**	**68.91**	**333**	P	**P**	**12 49 11.8**	**+0.2**
KIV	**Kislovodsk**	**72.04**	**312**	P	**P**	**12 49 33.1**	**+2.2**
KIV	**Kislovodsk**	**72.04**	**312**	P	**P**	**12 49 33.1**	**+2.2**
AKASG	**Malin Array Be**	**74.88**	**324**	P	**P**	**12 49 47.7**	**+0.5**
	comp=Z,1.4nm,0.5s,mb4.1,baz=45,slow=5.9,SNR=12						
PDAR	**Pinedale Array**	**74.91**	**47**	P	**P**	**12 49 45.8**	**-1.8**
	comp=Z,0.7nm,0.8s,mb3.6,baz=287,slow=3.1,SNR=5.4						
CLL	**Collm**	**81.28**	**332**	P	**P**	**12 50 23.0**	**+0.7**
GERES	**GERESS Array B**	**82.99**	**330**	P	**P**	**12 50 32.6**	**+1.3**
	comp=Z,0.4nm,0.4s,mb3.8,baz=23,slow=7.5,SNR=3.5						

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*NDI **17** 12:48:44.6±4.2, 34.80N×72.94E, h10^{km}, MD3.5, ML3.3*

*NNC **17** 12:48:55.4±4.8, 35.08N×72.71E, h78^{km}±47^{km}, mpv3.4, Error ellipse: s-maj=51.4km s-min=34.8km az=100.0*

ISC 17 12:48:43.1±0.5**, 34.82N**±0.03×**73.25E**±0.05**, h10**^{km}**, n19,** $\sigma1^{s}$**09**/26**, 6C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	**Chirah Chowk**	**1.16**	**180**	P	**Pb**	**12 49 05.6**	**+0.8**
CEP	**Cherat**	**1.49**	**229**	P	**Pn**	**12 49 08.7**	**-1.4**
CEP				S	**Sb**	**12 49 29.0**	**-0.4**
THW	**Thamme Wali**	**2.38**	**212**	⇑P	**Pn**	**12 49 24.0**	**+1.1**
SARP	**Sargodha**	**2.93**	**190**	⇓P	**Pn**	**12 49 31.0**	**+0.3**
THN	**Thein Dam**	**3.15**	**138**	*e*P	**Pn**	**12 49 37.7**	**+3.9**
THN				*e*x	**Sg**	**12 50 27.5**	**-0.4**
DLH	**Dalhousie**	**3.21**	**134**	*e*P	**Pn**	**12 49 40.0**	**+5.3**
DLH				*e*x	**Sg**	**12 50 30.0**	**0.0**
SBDP	**Sheikh Budin**	**3.24**	**220**	P	**Pn**	**12 49 36.1**	**+1.0**
BHK	**Bhakra**	**4.31**	**141**	*e*x	**Sg**	**12 51 05.6**	**-1.0**
SDNR	**Sundarnagar**	**4.55**	**136**	*e*P	**Pn**	**12 49 55.5**	**+1.8**
SDNR				*e*S	**Sn**	**12 50 48.6**	**+1.3**
KLP	**Kalpa**	**5.32**	**127**	*e*P	**Pn**	**12 50 05.3**	**+0.7**
KLP				*e*S	**Sn**	**12 51 05.5**	**-1.2**
KLP				AML	AML	12 51 37.8	
	comp=E,138nm,0.5s						
KLP				AML	AML	12 51 38.4	
	comp=N,134nm,0.5s						
NDI	**New Delhi**	**6.99**	**150**	*e*x	x	12 51 15.0	
KHET	**Khetri**	**7.07**	**161**	*e*P	**Pn**	**12 50 27.0**	**-2.3**
KHET				*e*S	**Sn**	**12 51 44.3**	**-6.2**
KHET				AML	AML	12 51 47.8	
	comp=N,12nm,0.2s						
KHET				AML	AML	12 51 47.8	
	comp=E,20nm,0.2s						
KUDL	**Kundal**	**7.21**	**157**	*e*S	**Sn**	**12 51 48.9**	**-5.0**
KUDL				AML	AML	12 51 51.8	
	comp=Z,10nm,0.4s						
SONA	**Sohna**	**7.32**	**152**	*e*S	**Sn**	**12 51 50.5**	**-6.2**
SONA				AML	AML	12 51 55.3	
	comp=N,11nm,0.2s						
SONA				AML	AML	12 51 55.5	
	comp=E,21nm,0.3s						
AAK	**Ala-Archa**	**7.86**	**7**	⇑P	**Pn**	**12 50 45.3**	**+5.0**
	comp=E,1.5nm,0.8s						
AAK				⇑S	**Sn**	**12 52 10.2**	**-0.1**
	comp=E,6.5nm,1.1s						
KK31	**Karatay Array**	**8.54**	**346**	⇑P	**P**	**12 50 50.6**	**+0.8**
	comp=E,0.8nm,0.3s,baz=156,slow=12,SNR=17						
KK31				⇓S	**Sn**	**12 52 23.5**	**-3.7**
	comp=E,1.6nm,0.4s,baz=177,slow=23,SNR=7.7						
AB31	**Akbulak array**	**17.45**	**330**	⇓P	**P**	**12 52 47.5**	**-0.6**
	comp=E,0.2nm,0.3s,baz=136,slow=12,SNR=7.1						
BVA0	**Borovoye Array**	**18.31**	**354**	⇑P	**P**	**12 52 59.6**	**+0.7**
	comp=E,0.2nm,0.7s,slow=0.1,SNR=6.9						
AKTO	**Aktyubinsk**	**19.15**	**329**	⇑P	**P**	**12 53 07.8**	**-1.3**
	comp=E,0.3nm,0.6s						

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*NEIC **17** 13:09:39.9, 35.14S×70.57W, h20^{km}, ML2.8(GUC), After GUC.*

GUC 17 13:09:39.9±0.5**, 35.14S**×**70.57W, h20**^{km}±3^{km}**, MD3.6, ML2.8, 3C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFDO	**San Fernando**	**0.64**	**325**	⇑*i*P	Pb	13 09 51.9	-0.3
SFDO				*i* S	Sb	13 10 01.4	+0.9
CICH	**Cipreses**	**0.82**	**9**	⇓*i*P	Pb	13 09 55.3	-0.1
CICH				*i* S	Sb	13 10 07.1	+1.1
CACH	**El Canelo**	**1.02**	**359**	*e*P	Pb	13 09 58.5	-0.2
CACH				*i* S	Sb	13 10 12.4	+0.8
CHCH	**Chadas Angostu**	**1.20**	**357**	⇑*i*P	Pn	13 10 01.8	0.0
CHCH				*i* S	Sb	13 10 18.4	+1.5
LNV	**Longovilo**	**1.37**	**329**	*e*P	Pn	13 10 04.0	-0.1
LNV				*i* S	Sb	13 10 23.0	+1.3
TACH	**Talagante**	**1.51**	**348**	⇑*i*P	Pn	13 10 07.0	+0.8
TACH				*i* S	Sn	13 10 28.0	+2.5
PCH	**Pirque**	**1.51**	**2**	*i* P	Pn	13 10 07.0	+0.7
RCDM	**Rinconada Maip**	**1.65**	**353**	*e*P	Pn	13 10 09.6	+1.3
RCDM				*i* S	Sn	13 10 31.4	+2.3
RCDM				AMP		13 10 33.2	
	comp=E,290nm,0.1s						
FCH	**Farellones**	**1.82**	**7**	*e*P	Pn	13 10 12.9	+2.3
FCH				*i* S	Sn	13 10 38.0	+4.7
FCH				AMP		13 10 39.3	
	comp=E,77nm,0.2s						

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*TEH **17** 13:39:10.4, 30.73N×49.39E, h10^{km}, Mn3.0*

*THR **17** 13:39:10.1±0.4, 30.75N×49.36E, h18^{km}±6^{km}, ML2.8*

*KISR **17** 13:39:12.8±1.1, 30.92N×49.59E, h33^{km}, ML2.7*

*CSEM **17** 13:39:12.4±0.1, 31.02N×49.50E, h12^{km}, ML2.8, Error ellipse: s-maj=3.8km s-min=1.5km az=116.0*

ISC 17 13:39:12.4±1.8**, 31.01N**±0.06×**49.49E**±0.07**, h9**^{km}±13^{km}**, n19,** $\sigma1^{s}$**04**/24**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.24**	**332**	*e*PG	**Pg**	**13 39 36.5**	**-0.7**
SHGR				*e*Sg	**Sg**	**13 39 55.7**	**+2.0**
IPIR	**Pirpir**	**2.05**	**35**	Pn	**Pn**	**13 39 48.5**	**+1.1**
MIB	**Mutribah**	**2.21**	**238**	*e*P	**Pn**	**13 39 49.9**	**+0.1**
MIB				AML	AML	13 40 24.0	
	comp=Z,54nm,0.4s						
KBD	**Kabd**	**2.40**	**221**	*e*P	**Pn**	**13 39 53.2**	**+0.7**
IGAR	**Garneh**	**2.62**	**61**	Pn	**Pn**	**13 39 54.8**	**-0.7**
NAY	**Al-Naaiem**	**2.62**	**228**	*e*P	**Pn**	**13 39 55.7**	**+0.1**
NAY				*e*S	**Sn**	**13 40 28.3**	**+0.4**
QRN	**Al-Qurain**	**2.64**	**211**	*e*P	**Pn**	**13 39 55.4**	**-0.5**

QRN				*e*S	Sn	13 40 27.2	-1.2
QRN				AML	AML	13 40 28.4	
	comp=Z,40nm,0.2s						
RDF	**Al-Radifah**	2.67	219	*e*P	Pn	13 39 56.6	+0.2
RDF				*e*S	Sn	13 40 29.5	+0.3
RDF				AML	AML	13 40 37.2	
	comp=Z,28nm,0.3s						
IKLH	**Kalahroud**	2.90	37	Pn	Pn	13 40 00.1	+0.5
IZEF	**Zefreh**	3.06	51	Pn	Pn	13 40 01.5	-0.3
NASN	**Na'in**	3.34	57	*e*PN	Pn	13 40 07.2	+1.4
ASAO	**Ashtian**	3.55	7	*e*PN	Pn	13 40 10.5	+1.6
ASAO				*e*SG	Sg	13 41 09.0	-1.6
ASAO				AML	AML	13 41 14.0	
	comp=N,17nm,0.7s						
IKOM	**Komasi**	3.57	333	Pn	Pn	13 40 08.2	-0.9
IQOM	**Qom**	4.04	19	Pn	Pn	13 40 15.6	-0.2
IVRN	**Varamin**	4.39	25	Pn	Pn	13 40 24.1	+3.3
SNGE	**Sanandaj**	4.45	337	*e*PN	Pn	13 40 21.5	0.0
SNGE				AML	AML	13 41 16.0	
	comp=N,7.8nm,0.3s						
IDHR	**Dehrash**	4.51	325	Pn	Pn	13 40 21.0	-1.4
IDMV	**Damavand**	5.03	24	Pn	Pn	13 40 27.7	-2.1
IFIR	**Firoozkooh**	5.36	30	Pn	Pn	13 40 34.9	+0.4

SKHL 17 14:08:05.8±2.2, 54.50N×142.40E, h10^{km}, mb3.8/3, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKH	**Okha**	1.00	162	⇓*i*Pg	Pg	14 08 25.0	-0.9
OKH				AMB	AMB	14 08 25.1	
	500nm,0.8s						
OKH				*e*Sg	Sg	14 08 38.5	-0.8
OKH				A		14 08 38.9	
	1µm,0.5s						
NKL	**Nikolayevsk**	1.69	218	*e*Pg	Pg	14 08 40.1	+0.4
NKL				AMB	AMB	14 08 41.6	
	32nm,0.6s						
NKL				pP		14 08 44.8	
NKL				*e*Sg	Sg	14 09 04.2	+1.9
NKL				A		14 09 05.0	
	120nm,0.4s						
TYV	**Tymovskoe**	3.65	177	*e*Pg	Pg	14 09 21.0	+2.4
GRNR	**Gornyy**	5.22	227	*e*Sg	Sg	14 11 01.6	+2.1
GRNR				A		14 11 07.3	
	19nm,0.6s						
EKMR	**Ekimchan**	5.78	260	*e*Pg	Pg	14 10 02.2	+0.9
EKMR				AMB	AMB	14 10 06.9	
	3.0nm,0.3s						
EKMR				*e*Sg	Sg	14 11 20.5	+2.1
EKMR				A		14 11 25.0	
	15nm,0.5s						
EKMR				A		14 11 25.0	
	6.0nm,0.5s						

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*NEIC **17** 14:53:48.8, 40.49S×174.34E, h25^{km}, ML4.0(WEL), After WEL.*
NEIC Felt at Paekakariki on the North Island.
WEL 17 14:53:48.7±0.1, 40.50S×174.34E, h23^{km}±1^{km}, ML4.0/37, 9C-3D, Error ellipse: s-maj=1.0km s-min=0.6km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	0.44	226	⇓P*	Pb	14 53 58.0	+0.1
DUWZ				S*	Sb	14 54 05.2	+1.1
KIW	**Kapiti Island**	0.56	130	⇑P	Pb	14 54 00.2	+0.3
KIW				S	Sb	14 54 08.3	+0.7
KIW	**Kapiti Island**	0.56	130	⇑P*	Pb	14 54 00.2	+0.3
KIW				S*	Sb	14 54 08.2	+0.6
TCW	**Tory Channel**	0.72	184	⇑P	Pb	14 54 02.4	-0.1
TCW	**Tory Channel**	0.72	184	⇑P*	Pb	14 54 02.4	-0.1
TCW				S*	Sb	14 54 12.1	+0.2
MRW	**Makara Radio**	0.78	160	⇑P	Pb	14 54 03.4	-0.1
MRW				S	Sb	14 54 14.1	+0.4
MRW	**Makara Radio**	0.78	160	⇑P*	Pb	14 54 03.4	-0.1
MRW				S*	Sb	14 54 14.1	+0.4
CAW	**Cannon Point**	0.82	138	⇑P	Pb	14 54 04.1	-0.1
CAW	**Cannon Point**	0.82	138	⇑P*	Pb	14 54 04.2	-0.1
CAW				S*	Sb	14 54 14.8	-0.1
WEL	**Wellington**	0.85	158	P	Pb	14 54 04.6	-0.1
WEL	**Wellington**	0.85	158	P*	Pb	14 54 04.6	-0.1
WEL				S*	Sb	14 54 16.4	+0.7
SNZO	**South Karori**	0.86	161	⇑*e*P	Pb	14 54 04.5	-0.3
SNZO	**South Karori**	0.86	161	P*	Pb	14 54 04.5	-0.3
SNZO				S*	Sb	14 54 15.7	-0.2
WAZ	**Wanganui**	0.89	34	P	Pb	14 54 04.5	-0.9
WAZ	**Wanganui**	0.89	34	P*	Pb	14 54 04.5	-0.8
MRZ	**Mangatainoka R**	0.96	100	⇓*e*P	Pb	14 54 06.4	-0.1
MRZ	**Mangatainoka R**	0.96	100	PN	Pn	14 54 06.4	-0.4
MRZ				SN	Sn	14 54 18.5	-1.2
TUWZ	**Tuamarina**	0.98	198	PN	Pn	14 54 05.6	-1.6
BHW	**Baring Head**	1.00	156	P	Pb	14 54 06.7	-0.5
BHW	**Baring Head**	1.00	156	PN	Pn	14 54 06.7	-0.7
BHW				SN	Sn	14 54 20.3	-0.4
NNZ	**Nelson**	1.03	225	P	Pb	14 54 07.0	-0.7
NNZ	**Nelson**	1.03	225	PN	Pn	14 54 06.9	-0.9
NNZ				SN	Sn	14 54 21.3	-0.2
MTW	**Mount Morrison**	1.10	127	P	Pn	14 54 08.6	-0.3
MTW	**Mount Morrison**	1.10	127	PN	Pn	14 54 08.6	-0.2
MTW				SN	Sn	14 54 23.0	-0.4
MSWZ	**Moikau Station**	1.15	143	P	Pn	14 54 09.1	-0.4
MSWZ	**Moikau Station**	1.15	143	PN	Pn	14 54 09.0	-0.5
DFE	**Dawson Falls**	1.18	351	P	Pn	14 54 09.4	-0.6
DFE	**Dawson Falls**	1.18	351	PN	Pn	14 54 09.4	-0.7
NRZ	**Ngariki Road**	1.20	345	P	Pn	14 54 09.1	-1.2
NRZ	**Ngariki Road**	1.20	345	PN	Pn	14 54 09.7	-0.6
PAWZ	**Paruwai Farm**	1.21	137	P	Pn	14 54 09.8	-0.6
PAWZ	**Paruwai Farm**	1.21	137	PN	Pn	14 54 09.8	-0.6
RAEZ	**Rainy Point**	1.21	2	P	Pn	14 54 09.5	-0.9
RAEZ	**Rainy Point**	1.21	2	PN	Pn	14 54 09.5	-0.8
NEZ	**North Egmont**	1.24	351	P	Pn	14 54 10.3	-0.5
NEZ	**North Egmont**	1.24	351	PN	Pn	14 54 10.3	-0.6
CMWZ	**Cape Campbell**	1.25	184	PN	Pn	14 54 11.1	0.0
BSWZ	**Blackbirch Sta**	1.27	196	P	Pn	14 54 10.3	-0.9
BSWZ	**Blackbirch Sta**	1.27	196	PN	Pn	14 54 10.3	-1.0
NWEZ	**Newall Road**	1.27	343	P	Pn	14 54 10.5	-0.8
NWEZ	**Newall Road**	1.27	343	PN	Pn	14 54 10.4	-0.9
TSZ	**Takapari Road**	1.31	71	P	Pn	14 54 11.2	-0.7
TSZ	**Takapari Road**	1.31	71	PN	Pn	14 54 11.1	-0.8
PKE	**Pukeiti**	1.33	348	PN	Pn	14 54 11.5	-0.6
TRWZ	**Traveller**	1.36	132	PN	Pn	14 54 12.1	-0.5
VRZ	**Vera Road**	1.41	13	P	Pn	14 54 12.2	-1.0
VRZ	**Vera Road**	1.41	13	PN	Pn	14 54 12.0	-1.2
VRZ				SN	Sn	14 54 30.6	-0.5
BFZ	**Birch Farm**	1.46	98	PN	Pn	14 54 12.8	-1.2
WNVZ	**Wahianoa**	1.52	40	P	Pn	14 54 13.5	-1.3
WNVZ	**Wahianoa**	1.52	40	PN	Pn	14 54 13.5	-1.2
MOVZ	**Moawhango**	1.54	45	P	Pn	14 54 13.4	-1.7
DRZ	**Dome Shelter**	1.54	38	P	Pn	14 54 14.9	-0.2
FWVZ	**Far West T-bar**	1.55	37	P	Pn	14 54 14.0	-1.3
TUVZ	**Tukino**	1.59	40	P	Pn	14 54 14.8	-1.0
WPVZ	**Whakapapa**	1.59	36	P	Pn	14 54 14.6	-1.2
CNZ	**Chateau**	1.59	36	P	Pn	14 54 14.7	-1.2
NGZ	**Ngauruhoe**	1.64	37	P	Pn	14 54 15.4	-1.1
TWVZ	**Taurewa**	1.65	31	P	Pn	14 54 15.3	-1.5
THZ	**Tophouse**	1.67	220	P	Pn	14 54 16.6	-0.4
THZ	**Tophouse**	1.67	220	⇓PN	Pn	14 54 16.6	-0.3
WTVZ	**West Tongariro**	1.68	35	P	Pn	14 54 16.1	-1.0
KATZ	**Kakaramea**	1.84	35	P	Pn	14 54 18.8	-0.7
RATZ	**Rangitukua**	1.96	35	P	Pn	14 54 21.3	+0.1
RATZ	**Rangitukua**	1.96	35	PN	Pn	14 54 21.1	-0.1
KHZ	**Kahutara**	2.01	197	*e*P	Pn	14 54 20.8	-1.1
HIZ	**Hauiti**	2.02	12	P	Pn	14 54 20.7	-1.3
WATZ	**Wairara**	2.08	31	P	Pn	14 54 21.8	-1.1
BKZ	**Black Stump Fm**	2.12	52	*e*P	Pn	14 54 23.3	-0.2
BKZ	**Black Stump Fm**	2.12	52	PN	Pn	14 54 22.5	-1.0
DSZ	**Denniston Nort**	2.29	236	P	Pn	14 54 24.6	-1.3
DSZ	**Denniston Nort**	2.29	236	PN	Pn	14 54 24.5	-1.4
LTZ	**Lake Taylor**	2.76	214	*e*P	Pn	14 54 31.5	-1.1
TOZ	**Tahuroa Road**	2.91	18	P	Pn	14 54 33.2	-1.5
KNZ	**Kokohu**	2.96	61	*e*P	Pn	14 54 32.5	-2.9
URZ	**Urewera**	3.10	45	*e*P	Pn	14 54 34.7	-2.7
URZ	**Urewera**	3.10	45	PN	Pn	14 54 34.7	-2.7
MWZ	**Matawai**	3.28	50	*e*P	Pn	14 54 38.0	-1.9
MKAZ	**Moumakai**	3.44	11	P	Pn	14 54 40.1	-2.2
MQZ	**McQueen's Vall**	3.45	201	*e*P	Pn	14 54 39.2	-3.1
WTAZ	**Waiatarua**	3.56	3	P	Pn	14 54 41.8	-2.2
OTAZ	**Otara**	3.57	8	P	Pn	14 54 42.3	-1.8
WVZ	**Waitaha Valley**	3.73	225	P	Pn	14 54 45.2	-1.1
PUZ	**Puketiti**	3.88	53	*e*P	Pn	14 54 44.7	-3.8
KUZ	**Kuaotunu**	3.90	17	*e*P	Pn	14 54 46.1	-2.6
RPZ	**Rata Peaks**	4.04	216	*e*P	Pn	14 54 48.7	-2.1
WCZ	**Waipu Caves**	4.55	0	*e*P	Pn	14 54 55.0	-3.0
FOZ	**Fox Glacier**	4.63	227	*e*P	Pn	14 54 55.2	-3.9
ODZ	**Otahua Downs**	5.30	210	*e*P	Pn	14 55 04.9	-3.7
OUZ	**Omahuta**	5.30	353	*e*P	Pn	14 55 03.4	-5.2
JCZ	**Jackson Bay**	5.47	227	*e*P	Pn	14 55 07.6	-3.4

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*NEIC **17** 15:14:57.2±2.3, 5.80S×151.00E, h53^{km}±21^{km}, mb4.4/10, Error ellipse: s-maj=18.6km s-min=11.6km az=91.0*
*IDC **17** 15:14:57.1±4.5, 5.74S×150.94E, h47^{km}±41^{km}, mb4.0/8, mb1 4.3/9, mb1mx4.1/13, mbtmp4.3/9, ML2.9/1, MS3.5/6, Ms1 3.5/6, ms1mx3.4/18, Error ellipse: s-maj=35.5km s-min=25.6km az=107.0*
ISC 17 15:14:54.8±2.9, 5.77S±0.08×151.0E±0.1, h44^{km}±25^{km}, n39, σ1^{s}09/37, mb4.2/16, MS3.5/4, 1D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	5.23	226	P	P	15 16 14.0	+1.4
	2.9nm,0.3s,baz=44,slow=9.2,SNR=14						
PMG				S	S	15 17 11.9	-0.6
	13nm,0.3s,baz=100,slow=21,SNR=6.1						
PMG				LR	LR	15 18 14.9	
	comp=Z,456nm,19.7s,baz=9.5,slow=38						
PMG	**Port Moresby**	5.23	226	*e*Pn	P	15 16 13.4	+0.9
PMG				*e*Sn	S	15 17 09.1	-3.3
PMG				S	S	15 17 11.9	-0.6
PMG				LR	LR	15 18 14.9	
CTA	**Charters Tower**	14.96	197	LR	LR	15 23 15.2	
	comp=Z,94nm,20.1s,baz=226,slow=33						
CTAO	**Charters Tower**	14.96	197	*e*Pn	P	15 18 24.6	-0.4
KAKA	**Kakadu**	19.54	248	*e*P	P	15 19 39.6	+18
	8.6nm,1.2s						
KAKA	**Kakadu**	19.54	248	*e*P	P	15 19 39.6	+18
	10nm,0.4s						
GUMO	**Guam**	20.16	343	LR	LR	15 25 21.0	
	comp=Z,138nm,21.4s,MS3.3,baz=175,slow=31						
GUMO	**Guam**	20.16	343	P	P	15 19 26.4	-1.8
	74nm,1.0s						
WRAB	**Tennant Creek**	21.44	227	*e*P	P	15 19 40.9	-0.4
	10.0nm,0.6s,mb4.3						
WB2	**Warramunga Arr**	21.44	227	*e*P	P	15 19 41.2	-0.1
WB2	**Warramunga Arr**	21.44	227	⇓*i*P	P	15 19 41.2	-0.1
WRA	**Warramunga Arr**	21.45	227	P	P	15 19 41.4	0.0
	4.3nm,0.5s,mb4.0,baz=54,slow=10,SNR=20						
WRA				PcP	PcP	15 23 43.7	-0.2
	0.9nm,0.4s,baz=24,slow=1.7,SNR=5.7						
DZM	**Mont Dzumac**	22.06	139	LR	LR	15 25 40.4	
	comp=Z,219nm,18.4s,MS3.6,baz=196,slow=29						
ASPA	**Alice Springs**	24.23	221	*e*P	P	15 20 10.0	+1.3
ASPA	**Alice Springs**	24.23	221	*e*P	P	15 20 10.1	+1.4
STKA	**Stephens Creek**	27.42	198	*e*P	P	15 20 38.5	0.0
	0.7nm,0.6s,mb3.4						
STKA	**Stephens Creek**	27.42	198	*e*P	P	15 20 38.5	0.0
	2.7nm,0.8s,mb3.8						
STKA	**Stephens Creek**	27.42	198	P	P	15 20 38.6	0.0
	4.0nm,0.9s,mb4.0,baz=22,slow=7.5,SNR=9.3						
STKA				LR	LR	15 30 22.9	
	comp=Z,100nm,20.1s,MS3.4,baz=198,slow=34						
STKA	**Stephens Creek**	27.42	198	*e*P	P	15 20 37.1	-1.5
FITZ	**Fitzroy Crossi**	27.61	241	*e*P	P	15 20 40.1	-0.2
	1.2nm,0.9s,mb3.5						
FITZ	**Fitzroy Crossi**	27.61	241	*e*P	P	15 20 40.1	-0.2
	7.1nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	27.61	241	P	P	15 20 40.3	0.0
	8.5nm,0.6s,mb4.6,baz=87,slow=7.7,SNR=19						
FITZ				LR	LR	15 33 48.7	
	comp=Z,199nm,18.1s,MS3.7,baz=276,slow=41						
KKM	**Kota Kinabalu**	36.63	288	*e*P	P	15 21 59.0	-0.1
NACB	**Ninganchiao**	41.30	317	P	P	15 22 40.6	+2.8
YHNB	**Yeheng**	41.78	318	*e*P	P	15 22 43.2	+1.4
QIZ	**Qiongzhong**	47.42	302	*e*P	P	15 23 24.6	-2.5
	62nm,1.4s,mb5.3						
HIA	**Hailar**	61.19	337	P	P	15 25 07.9	+0.6
	3.9nm,0.9s,mb4.5						
SONM	**Songino Array**	66.19	329	P	P	15 25 41.2	+1.1
	0.8nm,0.5s,mb4.0,baz=142,slow=5.9,SNR=8.2						
VNDA	**Vanda**	71.94	178	P	P	15 26 14.6	-0.4
	0.9nm,0.9s,mb3.7						
BILL	**Bilibino**	74.42	6	P	P	15 26 28.0	-1.6
	3.3nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	79.86	319	P	P	15 27 00.2	-0.2
	0.8nm,0.8s,mb3.7,baz=98,slow=8.2,SNR=9.0						
MKAR				PP	PP	15 30 04.2	+0.7
	0.2nm,0.7s,baz=112,slow=6.5,SNR=3.6						
ZAL	**Zalesovo**	80.96	327	P	P	15 27 05.6	-0.5
	0.7nm,0.3s,mb4.0,baz=340,slow=3.8						
KURK	**Kurchatov**	83.41	322	P	P	15 27 18.4	-0.4
	5.6nm,1.3s,mb4.4						
COLA	**College**	83.42	22	P	P	15 27 18.8	+0.3
	4.7nm,1.0s,mb4.5						
ILAR	**Eielson Array**	83.73	22	P	P	15 27 19.1	-1.0
	1.4nm,0.5s,mb4.3,baz=276,slow=4.7,SNR=14						
AAK	**Ala-Archa**	84.01	314	P	P	15 27 22.1	+0.1
	1.9nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	94.11	52	P	P	15 28 12.3	+2.2
	2.6nm,0.8s,mb4.7,baz=244,slow=4.8,SNR=18						
PDAR	**Pinedale Array**	100.84	48	P	P	15 28 41.4	+0.8
	0.7nm,0.7s,baz=255,slow=2.9,SNR=5.2						
GERES	**GERESS Array B**	123.90	327	PKP	PKPdf	15 33 50.1	+1.7
	0.5nm,0.4s,baz=63,slow=3.0,SNR=5.4						

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*CSEM **17** 16:08:49.1±0.1, 35.28N×33.91E, h30^{km}, Mw2.8, Error ellipse: s-maj=2.9km s-min=2.1km az=34.0*
*GRAL **17** 16:08:50.7±0.3, 34.24N×33.67E, h59^{km}±61^{km}, MD3.3*
*NIC **17** 16:08:50.3±0.2, 35.13N×33.88E, h46^{km}, ML2.8, MW2.8*
ISC 17 16:08:49.2±0.7, 35.16N±0.06×33.94E±0.05, h55^{km}±9^{km}, n12, σ0^{s}39/19, 1C-3D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHNC	**Paralimni**	0.17	154	⇑*e*P	P	16 08 58.1	+0.2
	16nm,0.1s						
PHNC				S	S	16 09 04.5	+0.3
CSS	**Prodhromos**	0.54	249	⇓P	P	16 09 00.8	-0.4
CSS				S	S	16 09 09.4	-0.6
CSS	**Prodhromos**	0.54	249	⇓*e*P	P	16 09 00.8	-0.4
CSS				S	S	16 09 09.4	-0.6
MAMC	**Mammari**	0.59	271	P	P	16 09 02.5	+0.7
LEF	**Lefka**	0.86	268	PG	P	16 09 05.5	+0.2
SZAC	**Souni-Zanaja**	0.96	245	P	P	16 09 06.9	+0.3
IKL	**Isikli**	1.10	349	PG	P	16 09 08.7	+0.1
IKL				SG	S	16 09 22.7	-0.3
ALFC	**Alevga**	1.10	270	⇓*e*P	P	16 09 08.6	0.0
	3.3nm,0.2s						
ALFC				S	S	16 09 22.7	-0.3
PPCY	**Paphos**	1.34	259	P	P	16 09 12.3	+0.2
HWQ	**Hawqa**	1.87	117	*e*Pg	P	16 09 19.9	+0.4
HWQ				*e*Sg	S	16 09 41.5	-0.4
BHL	**Bhannes**	1.89	131	*e*Sg	S	16 09 36.7	-5.7
FKH	**Fakeheh**	2.23	114	*e*Pg	P	16 09 25.0	+0.5
FKH				*e*Sg	S	16 09 50.3	-0.6

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*PRU **17** 16:44:03.2, 50.30N×18.76E*
*NEIC **17** 16:44:03.4±4.2, 50.25N×18.79E, h5^{km}, MG2.7(WAR), Error ellipse: s-maj=57.2km s-min=11.9km az=159.0*
WAR 17 16:44:02.7, 50.26N×18.86E, h0^{km}, ML2.6, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	**Raciborz**	0.46	248	*e*PG	Pg	16 44 12.0	+0.1
RAC				*e*SG	Sg	16 44 18.0	-0.1
OJC	**Ojcow**	0.60	93	*e*PG	Pg	16 44 15.0	+0.2
OJC				*e*SG	Sg	16 44 23.0	+0.2
OKC	**Ostrava-Krasne**	0.62	228	*e*PG	Pg	16 44 14.8	-0.3
OKC				*e*SG	Sg	16 44 24.4	+1.0
	23nm,0.3s						
NIE	**Niedzica**	1.26	131	*e*PG	Pg	16 44 27.0	-0.8
NIE				*e*SG	Sg	16 44 45.0	+0.4
DPC	**Dobruska-Polom**	1.63	274	*e*PG	Pg	16 44 31.5	-3.7
DPC				*e*SG	Sg	16 44 53.3	-3.7
	19nm,0.3s						
KSP	**Ksiaz**	1.74	291	*e*PN	Pn	16 44 34.0	-0.3
KSP				*i* PG	Pg	16 44 35.1	-2.3
KSP				*e*SG	Sg	16 44 58.1	-2.5
KSP	**Ksiaz**	1.74	291	*e*Pg	Pg	16 44 35.1	-2.3
KSP				*e*Sg	Sg	16 44 57.7	-2.9
STHS	**Stebnicka Huta**	1.76	118	*e*PN	Pn	16 44 36.1	+1.5
STHS				*e*SN	Sn	16 44 59.3	+1.4
VYHS	**Vyhne**	1.76	181	*e*PN	Pn	16 44 33.7	-1.0
VYHS				*e*SN	Sn	16 44 55.9	-2.2
UPC	**Upice**	1.84	279	*e*SG	Sg	16 44 59.9	-4.1
KECS	**Kecovo**	2.07	148	*e*PN	Pn	16 44 38.0	-1.0
KECS				*e*		16 45 02.8	
CRVS	**Cervenica-Dubn**	2.17	128	*e*PN	Pn	16 44 42.6	+2.1
CRVS				*e*SN	Sn	16 45 10.9	+2.5
KOLS	**Kolonicke sedl**	2.58	119	*e*PN	Pn	16 44 49.2	+2.8
KOLS				*e*PG	Pg	16 44 54.3	0.0
PRU	**Pruhonice**	2.79	266	*e*PG	Pg	16 44 52.7	-5.7
PRU				*e*SG	Sg	16 45 28.9	-6.8
KHC	**Kasperske Hory**	3.61	254	*e*PG	Pg	16 45 06.7	-8.0
KHC				*e*SG	Sg	16 45 56.7	-6.2
CLL	**Collm**	3.86	288	*e*SG	Sg	16 46 06.0	-5.3

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*IDC **17** 16:49:43.8±2.7, 34.94N×26.52E, mb3.7/2, mb1 3.7/3, mb1mx3.5/18, mbtmp3.7/3, Error ellipse: s-maj=66.6km s-min=14.1km az=2.0*
*ATH **17** 16:49:47.9, 35.50N×26.41E, h25^{km}±2^{km}, MD3.5/8*
*NEIC **17** 16:49:47.9, 35.50N×26.41E, h25^{km}, MD3.5(ATH), After ATH.*
*HLW **17** 16:49:48.9, 35.64N×26.70E, h25^{km}, Mb3.2*
*CSEM **17** 16:49:48.8±0.1, 35.42N×26.42E, h25^{km}, MD3.5, Error ellipse: s-maj=4.1km s-min=2.7km az=158.0*
ISC 17 16:49:48.0±0.4, 35.42N±0.04×26.46E±0.05, h25^{km}, n21, σ1^{s}36/25, mb3.7/2, 1C, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	0.59	77	⇑*i*PN	Pn	16 50 00.1	-0.5
KARP				*e*SN	Sn	16 50 09.2	-0.2
NPS	**Neapolis**	0.71	258	*e*PN	Pn	16 50 01.6	-0.8
NPS				*e*SN	Sn	16 50 11.0	-1.6
XRY	**Khrisi**	0.83	230	*e*PN	Pn	16 50 04.5	+0.4
IDI	**Anoyia**	1.29	265	Pg	Pn	16 50 10.7	0.0
	61nm,0.3s,baz=73,slow=16,SNR=93						
IDI				Lg		16 50 27.3	
	291nm,0.3s,baz=336,slow=21,SNR=29						
NISR	**Nisiros**	1.31	24	*e*PN	Pn	16 50 12.0	+1.0
ARG	**Arkhangelos**	1.57	59	*e*PN	Pn	16 50 16.1	+1.4
APE	**Apeiranthos**	1.81	336	*e*PB	Pb	16 50 17.5	-2.9
VAM	**Vamos**	1.85	270	*e*PN	Pn	16 50 20.0	+1.3
KYTH	**Kithira**	2.91	288	*e*PN	Pn	16 50 33.8	-0.1
SLUM		4.05	195	P	Pn	16 50 52.4	+2.4
HMAT	**Matruh**	4.34	173	P	Pn	16 50 55.7	+1.5
HMAT				S	Sn	16 51 44.5	-0.2
SWA1		6.17	186	P	Pn	16 51 21.9	+2.0
SWA1				S	Sn	16 52 28.3	-2.2
SWA2		6.21	188	P	Pn	16 51 21.9	+1.3
AMAG	**Maghara**	7.40	128	P	Pn	16 51 35.0	-2.3
HNKL	**Nakhl**	8.37	129	P	P	16 51 48.5	-2.3
HFRF	**Wahat Farafira**	8.39	169	P	P	16 51 50.7	-0.4
HDK1	**Dakhla**	10.16	165	P	P	16 52 15.4	-0.2
HDK2	**Wahat Dakhilah**	11.27	168	P	P	16 52 31.2	+0.6
AKASG	**Malin Array Be**	15.41	7	Pn	P	16 53 28.0	+2.6
	0.4nm,0.3s,baz=195,slow=11,SNR=7.5						
MKAR	**Makanchi Array**	42.74	57	P	P	16 57 44.6	-0.2
	1.2nm,0.5s,mb3.9,baz=269,slow=8.1,SNR=23						
SONM	**Songino Array**	58.50	51	P	P	16 59 43.0	-1.3
	0.2nm,0.4s,mb3.5,baz=301,slow=8.4,SNR=3.4						

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*MOS **17** 16:51:15.7±0.9, 41.35S×90.41W, h10^{km}, mb5.2/5, Error ellipse: s-maj=30.4km s-min=21.8km az=97.4*
*IDC **17** 16:51:15.9±0.9, 41.38S×90.38W, mb4.0/7, mb1 4.3/8, mb1mx4.2/16, mbtmp4.0/8, ML3.3/1, MS4.0/10, Ms1 4.0/10, ms1mx3.8/17, Error ellipse: s-maj=32.0km s-min=22.5km az=82.0*
*NEIC **17** 16:51:17.1±0.6, 41.27S×90.43W, h10^{km}, mb4.7/10, Error ellipse: s-maj=19.3km s-min=15.7km az=57.0*
ISC 17 16:51:16.6±0.5, 41.25S±0.09×90.0W±0.1, h10^{km}, n40, σ1^{s}17/27, mb4.4/16, MS4.1/8, 2C-1D, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	14.72	94	Pn	P	16 54 50.6	+4.0
	0.0nm,0.3s,baz=271,slow=11,SNR=5.2						
PLCA				LR	LR	16 59 15.0	
	comp=Z,898nm,20.3s,baz=269,slow=32						
CFAA	**Coronel Fontan**	19.96	68	P	P	16 55 51.6	0.0
	0.3nm,0.7s,baz=237,slow=11,SNR=6.8						
CFAA				LR	LR	17 01 55.9	
	comp=Z,96nm,20.2s,baz=247,slow=32						
TRQA	**Tornquist**	21.79	91	*e*P	P	16 56 13.8	+3.4
	32nm,1.5s,mb4.5						
TRQA				*e*		16 56 21.5	
LPAZ	**La Paz**	31.24	44	P	P	16 57 41.4	+2.8
	1.3nm,1.0s,mb3.7,baz=234,slow=11,SNR=3.3						
LPAZ				LR	LR	17 07 24.0	
	comp=Z,451nm,22.0s,MS4.1,baz=270,slow=31						
LPAZ	**La Paz**	31.24	44	*e*P	P	16 57 39.4	+0.8
	5.4nm,1.2s,mb4.2						
LPAZ				LR	LR	17 07 24.0	
LPAZ	**La Paz**	31.24	44	*e*P	P	16 57 39.4	+0.8
LPAZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
PAYG	**Puerto Ayora**	40.39	360	P	P	16 58 56.0	-0.5
	comp=Z,4.6nm,0.7s,mb4.3						
RKT	**Rikitea**	41.60	282	*e*LR	LR	17 10 28.1	
	comp=Z,363nm,27.0s						
BDFB	**Brasilia**	44.30	67	LR	LR	17 17 25.8	
	comp=Z,456nm,18.7s,MS4.4,baz=50,slow=35						
ROSC	**El Rosal**	48.08	21	LR	LR	17 17 30.1	
	comp=Z,134nm,18.1s,MS4.0,baz=58,slow=33						
QSPA	**South Pole Qui**	48.98	180	*e*P	P	17 00 05.5	+1.0
	comp=Z,4.6nm,1.2s,mb4.4						
SNAA	**Sanae**	50.59	156	P	P	17 00 16.0	-1.0
	comp=Z,1.1nm,1.1s,mb3.7,baz=281,slow=16,SNR=3.5						
TBI	**Tubuai**	52.32	271	*e*S	S	17 07 55.3	+0.8
TBI				*e*LR	LR	17 15 16.7	
	comp=Z,500nm,27.5s						
SDV	**Santo Domingo**	52.99	24	P	P	17 00 35.6	-0.2
	comp=Z,0.8nm,0.4s,mb4.0,baz=176,SNR=3.1						
PPT	**Papeete**	55.84	276	*e*S	S	17 08 42.7	+0.8
PPT				*e*LR	LR	17 16 50.6	
	comp=Z,424nm,26.8s						
PPT	**Papeete**	55.84	276	LR	LR	17 17 43.4	
	comp=Z,280nm,21.7s,MS4.3,baz=240,slow=29						
MAW	**Mawson**	69.54	169	P	P	17 02 26.6	-0.3
	comp=Z,1.4nm,1.0s,mb3.9,baz=180,slow=3.0,SNR=3.9						
MAW				LR	LR	17 31 06.3	
	comp=Z,66nm,18.3s,MS3.9,baz=67,slow=34						
TXAR	**Lajitas Array**	71.36	347	P	P	17 02 38.1	-0.5
	comp=Z,2.1nm,0.9s,mb4.1,baz=157,slow=9.5,SNR=9.0						
TXAR				LR	LR	17 28 34.9	
	comp=Z,69nm,18.1s,MS4.0,baz=315,slow=31						
OXF	**Oxford**	75.40	1	*e*P	P	17 02 58.0	-4.1
	comp=Z,34nm,0.7s,mb5.4						
OXF	**Oxford**	75.40	1	*e*P	P	17 02 58.0	-4.1
OXF				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.4						
WVT	**Waverly**	77.03	2	P	P	17 03 10.4	-0.9
	comp=Z,9.0nm,1.3s,mb4.5						
WVT	**Waverly**	77.03	2	P	P	17 03 10.4	-0.9
WVT				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.5						
ANMO	**Albuquerque**	77.32	346	*e*P	P	17 03 12.7	-0.2
	comp=Z,4.8nm,1.1s,mb4.3						
ANMO	**Albuquerque**	77.32	346	⇓*i*P	P	17 03 13.7	+0.8
WCI	**Wyandotte Cave**	79.18	3	P	P	17 03 23.1	0.0
	comp=Z,14nm,0.6s,mb5.1						
WCI	**Wyandotte Cave**	79.18	3	P	P	17 03 23.1	+0.1
WCI				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
ACSO	**Alum Creek Sta**	81.36	5	*e*P	P	17 03 31.8	-2.8
	comp=Z,7.2nm,0.5s,mb4.9						
NVAR	**Mina Array Bea**	83.40	338	P	P	17 03 46.2	+1.1
	comp=Z,1.0nm,0.9s,mb3.8,baz=149,slow=5.8,SNR=6.2						
PDAR	**Pinedale Array**	85.48	346	P	P	17 03 56.0	+0.6
	comp=Z,1.6nm,1.1s,mb4.1,baz=180,slow=1.5,SNR=6.6						
DBIC	**Dimbokro**	90.73	82	LR	LR	17 39 12.2	
	comp=Z,85nm,21.3s,MS4.2,baz=296,slow=32						
LBTB	**Lobatse**	91.12	125	*e*P	P	17 04 21.0	-1.9
	comp=Z,15nm,1.6s,mb5.1						
LBTB	**Lobatse**	91.12	125	*e*P	P	17 04 21.0	-1.9
LBTB				pmax	pmax		
	comp=Z,15nm,1.6s,mb5.1						
ULM	**Lac du Bonnet**	91.27	356	LR	LR	17 44 50.0	
	comp=Z,65nm,18.8s,MS4.1,baz=352,slow=35						

GERES	**GERESS Array B**	**127.69**	**54**	PKP	PKPdf	17 10 21.4	-3.5
	comp=Z,0.4nm,0.6s,baz=180,slow=4.0,SNR=3.8						
TIXI	**Tiksi**	**143.99**	**340⇑**	*i*PKIKP	PKPdf	17 10 56.7	+2.7
YAK	**Yakutsk**	**148.51**	**325**	*e*PKPbc	PKPdf	17 11 02.8	+1.0
YAK	**Yakutsk**	**148.51**	**325⇑**	*i*PKP2	PKPdf	17 11 02.9	+1.0
BVAR	**Borovoye Array**	**162.29**	**42**	PKP	PKPdf	17 11 17.4	-2.7
	comp=Z,1.7nm,1.1s,slow=1.5,SNR=6.1						
SONM	**Songino Array**	**166.58**	**305**	PKP	PKPdf	17 11 20.2	-4.2
	comp=Z,0.5nm,0.9s,slow=8.9,SNR=3.7						
MKAR	**Makanchi Array**	**172.17**	**42**	PKP	PKPdf	17 11 24.1	-3.7
	comp=Z,0.4nm,0.9s,baz=307,slow=6.1,SNR=4.0						

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*TIR **17** 17:32:01.9, 39.69N×20.67E, h15^{km}*
*ATH **17** 17:32:03.1, 39.82N×20.62E, h19^{km}±2^{km}, MD3.2/5*
*THE **17** 17:32:03.7, 39.83N×20.64E, h4^{km}, ML2.8*
*NEIC **17** 17:32:03.1, 39.82N×20.62E, h19^{km}, MD3.2(ATH), After ATH.*
*SKO **17** 17:32:04.8, 39.86N×20.75E*
*CSEM **17** 17:32:04.3±0.1, 39.81N×20.61E, h20^{km}, MD3.2, Error ellipse: s-maj=2.5km s-min=2.4km az=130.0*
ISC 17 17:32:03.2±0.5**, 39.81N**±0.02×**20.72E**±0.03**, h3**^{km}±4^{km}**, n26, σ0**^{s}**96**/47**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	**0.18**	**146**	*e*PB	**Pb**	**17 32 08.3**	**-0.6**
JAN				*e*SB	**Sb**	**17 32 13.0**	**+0.5**
LSK	**Leskovik**	**0.35**	**345**	*i* Pg	**Pg**	**17 32 11.6**	**+1.3**
LSK				*i* Sg	**Sg**	**17 32 18.6**	**+3.6**
MEV	**Metsovon**	**0.39**	**93**	*e*Pg	**Pg**	**17 32 12.0**	**+0.9**
MEV				*e*Sg	**Sg**	**17 32 19.4**	**+3.1**
IGT	**Igoumenitsa**	**0.41**	**227**	*e*Pg	**Pg**	**17 32 10.6**	**-0.8**
IGT				*e*Sg	**Sg**	**17 32 17.1**	**+0.3**
SRN	**Sarande**	**0.56**	**278**	*i* Pg	**Pg**	**17 32 13.3**	**-1.1**
SRN				*i* Sg	**Sg**	**17 32 22.6**	**+0.8**
KEK	**Kerkira**	**0.72**	**263**	*e*PN	**Pn**	**17 32 15.7**	**-4.2**
KZN	**Kozani**	**0.95**	**58**	*e*PN	**Pn**	**17 32 22.0**	**-1.2**
KZN				*e*SN	**Sn**	**17 32 37.0**	**-0.4**
FNA	**Florina**	**1.10**	**27**	*e*Pg	**Pg**	**17 32 24.5**	**-0.6**
FNA				*e*Sg	**Sg**	**17 32 40.5**	**+0.7**
LKD	**Levkas**	**1.10**	**183**	*e*Pg	**Pg**	**17 32 24.1**	**-1.1**
LKD				*e*Sg	**Sg**	**17 32 40.8**	**+0.8**
EVR	**Evrytania**	**1.23**	**136**	*e*PN	**Pn**	**17 32 28.0**	**+0.7**
EVR				*e*SN	**Sn**	**17 32 45.0**	**+0.5**
BIA	**Bitola**	**1.29**	**21**	*e*Pn	**Pn**	**17 32 27.5**	**-0.7**
BIA				*e*Sn	**Sn**	**17 32 46.5**	**+0.3**
OHR	**Ohrid**	**1.30**	**3**	*e*Pn	**Pn**	**17 32 29.2**	**+0.9**
OHR				*e*Sn	**Sn**	**17 32 47.5**	**+1.0**
LIT	**Litokhoron**	**1.39**	**77**	*e*Pg	**Pg**	**17 32 30.2**	**-0.8**
LIT				*e*Sg	**Sg**	**17 32 49.9**	**+0.3**
LIT	**Litokhoron**	**1.39**	**77**	*e*Pg	**Pg**	**17 32 30.2**	**-0.8**
LIT				*e*Sg	**Sg**	**17 32 49.9**	**+0.3**
AGG	**Agios Georgios**	**1.48**	**122**	*e*Pg	**Pg**	**17 32 30.8**	**-1.9**
AGG				*e*Sg	**Sg**	**17 32 52.0**	**-0.3**
VLS	**Valsamata**	**1.63**	**184**	*e*PN	**Pn**	**17 32 32.8**	**-0.2**
VLS				*e*SN	**Sn**	**17 32 56.0**	**+1.2**
GRG	**Griva**	**1.72**	**48**	*e*Pb	**Pb**	**17 32 33.9**	**-1.3**
GRG				*e*Sb	**Sb**	**17 32 57.8**	**+0.7**
THE	**Thessaloniki**	**1.91**	**64**	*e*Pb	**Pb**	**17 32 37.2**	**-1.1**
VAY	**Valandovo**	**2.07**	**42**	*e*Pn	**Pn**	**17 32 39.6**	**+0.4**
VAY				*e*Sn	**Sn**	**17 33 05.0**	**-0.8**
KNT	**Kendrikon**	**2.14**	**50**	*e*Pn	**Pn**	**17 32 39.9**	**-0.5**
SKO	**Skopje**	**2.23**	**14**	*e*Pn	**Pn**	**17 32 42.1**	**+0.6**
SKO				*e*Sn	**Sn**	**17 33 09.4**	**-0.5**
SKO	**Skopje**	**2.23**	**14**	*e*Pn	**Pn**	**17 32 42.2**	**+0.6**
SKO				*e*Sn	**Sn**	**17 33 09.4**	**-0.6**
SOH	**Sokhos**	**2.25**	**62**	*e*Pn	**Pn**	**17 32 42.1**	**+0.2**
PAIG	**Paliouri**	**2.28**	**86**	*e*Pn	**Pn**	**17 32 42.6**	**+0.3**
STON	**Ston**	**3.81**	**324**	*i* Pn	**Pn**	**17 33 00.3**	**-3.8**
STON				*i* Sn	**Sn**	**17 33 42.5**	**-7.6**
STON	**Ston**	**3.81**	**324**	*i* Pn	**Pn**	**17 33 00.3**	**-3.8**
STON				*i* Sn	**Sn**	**17 33 42.4**	**-7.7**

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*NIED **17** 18:07:00, 31.40N×142.10E, h8^{km}, Mw4.3 Best double couple: $M_0$3.14×10^{15} NP1:ϕ_s141°, δ78°, λ79°. NP2:ϕ_s3°, δ16°, λ131°.*
*IDC **17** 18:07:02.1±0.7, 31.34N×142.09E, mb4.0/12, mb1 4.1/17, mb1mx4.1/24, mbtmp4.0/17, ML3.7/5, MS3.2/1, Ms1 3.2/1, ms1mx2.6/26, Error ellipse: s-maj=23.3km s-min=15.7km az=67.0*
*MOS **17** 18:07:05.1±1.0, 31.19N×141.68E, h32^{km}, mb4.4/11, Error ellipse: s-maj=24.2km s-min=8.9km az=117.3*
*JMA **17** 18:07:05.0±0.4, 31.37N×142.09E, h48^{km}, M4.1*
*BJI **17** 18:07:06.7, 31.33N×142.08E, h74^{km}, mB4.5, mb4.2, Ms4.1, Msz4.1*
*NEIC **17** 18:07:09.1±1.7, 31.29N×141.71E, h52^{km}±14^{km}, mb4.3/8, Error ellipse: s-maj=19.5km s-min=12.0km az=84.0*
ISC 17 18:07:06.9±0.8**, 31.32N**±0.04×**141.73E**±0.09**, h46**^{km}±6^{km}**, n64, σ1**^{s}**25**/77**, mb4.1**/20**, MS3.9**/2**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**2.41**	**318**	*e*S	**S**	**18 08 13.1**	**-0.2**
JHJ	**Hachijo jima 2**	**2.44**	**318**	Pn	**P**	**18 07 46.7**	**+1.6**
	26nm,0.3s,baz=50,slow=19,SNR=5.0						
JHJ				Sn	**S**	**18 08 13.2**	**-0.7**
	45nm,0.3s,baz=90,slow=20,SNR=3.9						
BSO1	**Boso 1**	**3.38**	**349**	P	**P**	**18 07 57.1**	**-1.5**
BSO1				S	**S**	**18 08 34.0**	**-3.9**
JKO	**Kozu shima**	**3.60**	**323**	P	**P**	**18 08 02.4**	**+0.8**
JKO				*e*S	**S**	**18 08 43.9**	**+0.6**
BSO3	**Boso 3**	**3.62**	**344**	P	**P**	**18 08 00.4**	**-1.5**
BSO3				S	**S**	**18 08 46.4**	**+2.5**
CBIJ	**Chichi jima**	**4.23**	**175**	Pn	**P**	**18 08 08.9**	**-1.6**
	26nm,0.3s,baz=272,slow=19,SNR=14						
CBIJ	**Chichi jima**	**4.23**	**175**	P	**P**	**18 08 08.9**	**-1.6**
CBIJ				*e*S	**S**	**18 09 00.3**	**+1.1**
JOD2	**Odawara 2**	**4.51**	**331**	P	**P**	**18 08 16.2**	**+1.7**
JOD2				*e*S	**S**	**18 09 04.3**	**-2.1**
JYN	**Shimob**	**4.95**	**328**	P	**P**	**18 08 23.1**	**+2.5**
JYN				*e*S	**S**	**18 09 20.6**	**+3.4**
JRY	**Ryogami san**	**5.25**	**334**	P	**P**	**18 08 25.4**	**+0.7**
JRY				*e*S	**S**	**18 09 23.5**	**-1.2**
MJAR	**Matsushiro Arr**	**5.97**	**332**	Pn	**P**	**18 08 35.1**	**+0.2**
	2.8nm,0.3s,baz=153,slow=11,SNR=26						
MJAR				Sn	**S**	**18 09 42.8**	**-0.2**
	0.8nm,0.3s,baz=175,slow=37,SNR=3.0						
MAJO	**Matsushiro**	**5.98**	**332**	*e*Pn	**P**	**18 08 35.3**	**+0.3**
MAJO				*e*Sn	**S**	**18 09 38.6**	**-4.4**
MAT	**Matsushiro**	**5.98**	**332**	P	**P**	**18 08 35.3**	**+0.4**
MAT				S	**S**	**18 09 42.4**	**-0.6**
MAT	**Matsushiro**	**5.98**	**332**	*e*P	**P**	**18 08 35.0**	**+0.1**
	12nm,0.9s						
MAT				*e*S	**S**	**18 09 42.0**	**-1.0**
MAT	**Matsushiro**	**5.98**	**332**	*e*P	**P**	**18 08 35.0**	**+0.1**
MAT				*e*S	**S**	**18 09 42.0**	**-1.0**
MAT				pmax	pmax		
	comp=Z,12nm,0.9s						
JMK	**Ichinoseki**	**7.63**	**357**	P	**P**	**18 08 53.3**	**-4.7**
JMK				*e*S	**S**	**18 10 13.8**	**-10**
JNU	**Nakatsue**	**9.37**	**284**	Pn	**P**	**18 09 21.7**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=90,slow=4.0,SNR=2.2						
JNU				LR	LR	18 13 28.9	
	comp=Z,114nm,18.0s,baz=68,slow=40						
ASAJ	**Asahikawa**	**12.79**	**3**	Pn	**P**	**18 10 04.0**	**-4.4**
	comp=Z,0.8nm,0.3s,baz=306,slow=17,SNR=11						
ASAJ	**Asahikawa**	**12.79**	**3**	P	**P**	**18 10 04.1**	**-4.4**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**15.63**	**3**	P		18 10 56.1	
	comp=Z,20nm,1.0s						
YSS	**Yuzh-Sakhalins**	**15.63**	**3**	P		18 10 56.1	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
MDJ	**Mudanjiang**	**16.34**	**328**	P	**P**	**18 10 53.9**	**-0.5**
MDJ				AMB	AMB		
	comp=Z,60nm,3.4s						
CN2	**Changchun**	**17.90**	**319**	*e*P	**P**	**18 11 15.0**	**+1.0**
HIA	**Hailar**	**24.40**	**324**	*e*P	**P**	**18 12 22.3**	**+0.4**
	comp=Z,4.9nm,0.8s,mb4.0						
HIA	**Hailar**	**24.40**	**324**	*e*P	**P**	**18 12 22.3**	**+0.4**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**26.06**	**300**	*e*P	**P**	**18 12 36.3**	**-1.4**
HHC				AP	pP	18 12 50.3	+0.7
HHC				PP	PP	18 13 19.1	-1.0
HHC				PCP	PcP	18 16 04.5	-0.7
HHC				S	**S**	**18 17 02.0**	**-1.3**
HHC				SCP		18 19 37.9	
HHC				PCS		18 19 45.1	
HHC				SCS	ScS	18 23 25.8	-2.2
HHC				AMB	AMB		
	comp=Z,50nm,4.8s						
HHC				LR	LR		
	comp=N,160nm,10.8s,MS3.8						
HHC				LR	LR		
	comp=E,130nm,15.6s,MS3.8						
HHC				LR	LR		
	comp=Z,140nm,13.2s,MS3.7						
ULN	**Ulaanbaatar**	**31.09**	**312**	*e*P	**P**	**18 13 23.5**	**+0.6**
	comp=Z,2.5nm,0.7s,mb4.2						
ULN	**Ulaanbaatar**	**31.09**	**312**	*e*P	**P**	**18 13 23.5**	**+0.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
SONM	**Songino Array**	**31.50**	**312**	P	**P**	**18 13 27.8**	**+1.4**
	comp=Z,1.4nm,0.7s,mb3.9,baz=118,slow=7.8,SNR=15						
LZH	**Lanzhou**	**31.74**	**289**	*e*P	**P**	**18 13 26.9**	**-1.8**
LZH				AP	pP	18 13 41.8	+0.9
LZH				PP	PP	18 14 33.0	-1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,40nm,4.9s						
LZH				LR	LR		
	comp=N,190nm,13.3s						
LZH				LR	LR		
	comp=Z,350nm,17.0s,MS4.1						
LZH	**Lanzhou**	**31.74**	**289**	*e*P	**P**	**18 13 26.9**	**-1.8**
	comp=Z,21nm,1.5s,mb4.8						
LZH				pP	pP	18 13 41.7	+0.8
LZH				sP	sP	18 13 49.5	+2.7
LZH				PP	PP	18 14 33.0	-1.7
LZH				LR	LR		
	comp=Z,360nm,17.0s,MS4.1						
LZH	**Lanzhou**	**31.74**	**289**	*e*P	**P**	**18 13 26.9**	**-1.8**
LZH				*PP	pP	18 13 41.7	+0.8
LZH						18 14 33.0	
LZH				pmax	pmax		
	comp=Z,21nm,1.5s,mb4.8						
LZH				MLR	MLR		
	comp=Z,360nm,17.0s,MS4.1						
BILL	**Bilibino**	**39.46**	**14**	P	**P**	**18 14 34.9**	**+1.0**
	comp=Z,2.1nm,0.8s,mb3.9						
BILL	**Bilibino**	**39.46**	**14**	P	**P**	**18 14 34.9**	**+1.0**
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.9						
WMQ	**Urumqi**	**43.89**	**302**	*e*P	**P**	**18 15 11.0**	**+0.5**
ZAL	**Zalesovo**	**46.11**	**317**	P	**P**	**18 15 29.8**	**+1.7**
	comp=Z,1.0nm,0.7s,mb3.9,baz=13,slow=7.3,SNR=6.0						
MKAR	**Makanchi Array**	**47.56**	**307**	P	**P**	**18 15 40.2**	**+0.7**
	comp=Z,0.9nm,0.5s,mb4.1,baz=86,slow=9.6,SNR=18						
MKAR	**Makanchi Array**	**47.56**	**307**	*e*P	**P**	**18 15 40.0**	**+0.4**
KURK	**Kurchatov**	**49.81**	**312**	P	**P**	**18 15 55.2**	**-1.7**
	comp=Z,4.9nm,0.8s,mb4.6						
KURK	**Kurchatov**	**49.81**	**312**	P	**P**	**18 15 55.2**	**-1.7**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**51.45**	**189**	*e*P	**P**	**18 16 08.3**	**-1.4**
	comp=Z,5.4nm,0.8s,mb4.5						
WRAB	**Tennant Creek**	**51.45**	**189**	*e*P	**P**	**18 16 08.4**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
WB2	**Warramunga Arr**	**51.46**	**189**	*e*P	**P**	**18 16 08.9**	**-0.9**
WRA	**Warramunga Arr**	**51.46**	**189**	P	**P**	**18 16 09.1**	**-0.7**
	comp=Z,2.9nm,0.6s,mb4.4,baz=6.5,slow=7.7,SNR=63						
ILAR	**Eielson Array**	**54.24**	**30**	P	**P**	**18 16 29.0**	**-0.9**
	comp=Z,1.2nm,1.0s,mb3.8,baz=275,slow=5.9,SNR=6.9						
CHKZ	**Chkalovo**	**54.51**	**316**	*e*P	**P**	**18 16 29.4**	**-2.7**
	comp=Z,2.3nm,0.8s,mb4.3						
CHKZ	**Chkalovo**	**54.51**	**316**	*e*P	**P**	**18 16 29.4**	**-2.6**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
KKAR	**Karatay Array**	**56.36**	**304**	*i* P	**P**	**18 16 45.9**	**+0.3**
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
ARU	**Arti**	**60.88**	**321**	*e*P	**P**	**18 17 16.8**	**0.0**
AB31	**Akbulak array**	**61.91**	**313**	P	**P**	**18 17 24.1**	**+0.3**
STKA	**Stephens Creek**	**62.85**	**180**	P	**P**	**18 17 30.5**	**+0.1**
	comp=Z,1.2nm,0.8s,mb4.1,baz=18,slow=10,SNR=3.6						
STKA	**Stephens Creek**	**62.85**	**180**	*e*P	**P**	**18 17 30.0**	**-0.4**
FINES	**FINESS Array B**	**74.00**	**333**	P	**P**	**18 18 39.8**	**+0.9**
	comp=Z,2.0nm,1.0s,mb4.0,baz=120,slow=11,SNR=4.1						
FINES	**FINESS Array B**	**74.00**	**333**	P	**P**	**18 18 39.8**	**+0.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NVAR	**Mina Array Bea**	**78.24**	**52**	P	**P**	**18 19 01.2**	**-2.1**
	comp=Z,0.1nm,0.3s,mb3.2,baz=248,slow=19,SNR=2.4						
AKASG	**Malin Array Be**	**79.00**	**323**	P	**P**	**18 19 08.7**	**+1.4**
	comp=Z,0.5nm,0.4s,mb3.8,baz=52,slow=5.4,SNR=4.3						
AKASG	**Malin Array Be**	**79.00**	**323**	P	**P**	**18 19 08.7**	**+1.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NB2	**NORSAR Subarra**	**79.56**	**338**	P	**P**	**18 19 10.7**	**+0.6**
	comp=Z,2.1nm,0.8s,mb4.1,baz=41,slow=5.6						
NOA	**NORSAR Array B**	**79.56**	**338**	P	**P**	**18 19 11.3**	**+1.2**
	comp=Z,0.9nm,0.7s,mb3.8,baz=41,slow=5.3,SNR=3.4						
NOA	**NORSAR Array B**	**79.56**	**338**	P	**P**	**18 19 11.3**	**+1.2**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**82.86**	**312**	P	**P**	**18 19 29.6**	**+1.8**
	comp=Z,0.9nm,0.8s,mb3.9,baz=34,slow=4.5,SNR=3.6						
BRTR	**Keskin Array B**	**82.86**	**312**	P	**P**	**18 19 29.6**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	**Lajitas Array**	**93.38**	**53**	P	**P**	**18 20 19.7**	**+1.2**
	comp=Z,0.6nm,0.6s,mb4.2,baz=315,slow=1.8,SNR=6.0						
TXAR	**Lajitas Array**	**93.38**	**53**	P	**P**	**18 20 19.7**	**+1.2**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

IDC 17 18:27:02.0±1.6**, 21.61S**×**66.60W, h194**^{km}±22^{km}**, mb1 3.2**/3**, mb1mx3.1**/16**, mbtmp3.6**/3**, Error ellipse: s-maj=27.6km s-min=16.0km az=98.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.49**	**344**	P	P	18 28 24.9	+1.5
	3.3nm,0.3s,baz=148,slow=9.2,SNR=27						
LPAZ				S	S	18 29 26.3	-0.2
	baz=28,slow=15,SNR=2.9						
SIV	**San Ignacio**	**7.66**	**44**	P	P	18 28 52.1	+0.5
	2.2nm,0.3s,baz=250,slow=12,SNR=35						
SIV				S	S	18 30 16.2	-1.0
	0.3nm,0.3s,baz=137,slow=23,SNR=7.0						
CFAA	**Coronel Fontan**	**10.06**	**188**	P	P	18 29 23.5	+0.6
	0.1nm,0.3s,baz=17,slow=13,SNR=6.4						
CFAA				S	S	18 31 10.7	-2.6
	0.1nm,0.3s,baz=255,slow=19,SNR=4.8						
PLCA	**Paso Flores**	**19.35**	**189**	P	P	18 31 16.7	+2.1
	0.1nm,0.3s,baz=357,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**133.91**	**208**	PKP	PKPdf	18 45 56.4	-0.4
	0.3nm,0.8s,baz=154,slow=1.8,SNR=4.8						
MKAR	**Makanchi Array**	**144.44**	**38**	PKP	PKPdf	18 46 13.9	-1.0
	0.4nm,0.7s,baz=316,slow=2.6,SNR=4.5						

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*MOS **17** 18:54:32.4±1.2, 51.13N×179.34W, h33^{km}, mb4.4/6, Error ellipse: s-maj=15.8km s-min=9.5km az=105.4*
*BJI **17** 18:54:34.0, 51.44N×179.90W, h26^{km}, mB4.6, mb4.5, Ms4.4, Msz4.0*
*NEIC **17** 18:54:35.9±0.7, 51.13N×179.39W, h49^{km}±5^{km}, mb4.4/11, ML4.0(AEIC), Error ellipse: s-maj=10.7km s-min=4.7km az=179.0*
*IDC **17** 18:54:36.6±3.6, 51.17N×179.31W, h51^{km}±31^{km}, mb3.9/16, mb1 4.1/18, mb1mx4.0/25, mbtmp4.1/18, ML3.5/2, MS3.6/3, Ms1 3.5/3, ms1mx3.0/33, Error ellipse: s-maj=24.2km s-min=14.9km az=175.0*
ISC 17 18:54:35.1±0.9**, 51.14N**±0.09×**179.42W**±0.06**, h55**^{km}±7^{km}**, n77, σ1**^{s}**15**/80**, mb4.3**/36**, MS3.9**/6**, 2C-5D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**1.50**	**65**	P	**P**	**18 54 59.7**	**-0.6**
KIKV	**Kanaga Island**	**1.59**	**61**	P	**P**	**18 55 01.1**	**-0.3**
ADAG	**Mount Adagdak**	**1.95**	**63**	P	**P**	**18 55 07.2**	**+0.7**
ADAG				S	**S**	**18 55 33.6**	**+3.9**
GSCK	**Great Sitkin C**	**2.21**	**65**	P	**P**	**18 55 10.4**	**+0.2**
GSCK				S	**S**	**18 55 37.8**	**+1.4**
GSTD	**Great Sitkin T**	**2.24**	**65**	P	**P**	**18 55 11.3**	**+0.8**
GSTD				S	**S**	**18 55 40.1**	**+3.1**
GSMY	**Great Sitkin M**	**2.29**	**65**	P	**P**	**18 55 10.7**	**-0.6**
ATKA	**Atka Island**	**3.42**	**70**	P	**P**	**18 55 26.5**	**-0.8**
SMY	**Shemya**	**4.31**	**294**	P	**P**	**18 55 40.5**	**+0.6**
FX1	**Attu Island--F**	**4.90**	**294**	P	**P**	**18 55 49.1**	**+1.0**
	3.5nm,0.3s,baz=230,slow=14,SNR=5.9						
FX1				S	**S**	**18 56 55.2**	**+11**
	5.4nm,0.3s,baz=90,slow=19,SNR=3.2						
FX1	**Attu Island--F**	**4.90**	**294**	P	**P**	**18 55 46.1**	**-2.0**
FX1				P		18 55 50.4	
SVW2	**Sparrevohn**	**16.52**	**44**	*e*P	**P**	**18 58 24.4**	**+0.4**
KDAK	**Kodiak Island**	**16.88**	**56**	P	**P**	**18 58 26.6**	**-2.0**
	0.5nm,0.3s,baz=300,slow=10,SNR=9.5						
BILL	**Bilibino**	**18.34**	**343⇑**	*e*P	**P**	**18 58 44.0**	**-2.8**
BILL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BILL				MLR	MLR		
	comp=Z,200nm,16.0s						
IMA2	**Indian Mountai**	**19.86**	**31**	*e*P	**P**	**18 59 02.7**	**-1.1**
COLA	**College**	**21.34**	**38⇓**	*e*P	**P**	**18 59 20.3**	**+1.2**
ILAR	**Eielson Array**	**21.68**	**39**	P	**P**	**18 59 20.9**	**-1.6**
	comp=Z,2.2nm,0.9s,mb3.6,baz=247,slow=9.5,SNR=12						
INK	**Inuvik**	**27.88**	**35**	P	**P**	**19 00 21.0**	**-0.2**
	comp=Z,1.9nm,0.9s,mb3.7,baz=256,slow=12,SNR=5.4						
INK	**Inuvik**	**27.88**	**35**	P	**P**	**19 00 21.0**	**-0.2**
YAK	**Yakutsk**	**29.28**	**312⇑**	*e*P	**P**	**19 00 33.0**	**-0.8**
YAK				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.3						
YAK				MLR	MLR		
	comp=Z,100nm,17.0s,MS3.5						
KLR	**Kul'dur**	**30.87**	**286**	*e*P	**P**	**19 00 45.2**	**-2.8**
MDJ	**Mudanjiang**	**34.23**	**279**	P	**P**	**19 01 15.4**	**-1.8**
MDJ				AMB	AMB		
	comp=Z,10.0nm,3.1s						
YKA	**Yellowknife Ar**	**35.68**	**46**	P	**P**	**19 01 29.0**	**-0.4**
	comp=Z,1.9nm,0.7s,mb4.2,baz=281,slow=7.9,SNR=5.2						
YKA				LR	LR	19 17 53.2	
	comp=Z,92nm,21.0s,MS3.5,baz=270,slow=39						
CN2	**Changchun**	**37.21**	**281**	*e*P	**P**	**19 01 43.0**	**+0.5**
BOD	**Bodaibo**	**37.81**	**307**	*e*P	**P**	**19 01 46.9**	**-0.4**
BOD				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
HLID	**Hailey**	**43.38**	**74**	*e*P	**P**	**19 02 33.9**	**+0.5**
	comp=Z,1.5nm,0.7s,mb3.8						
NVAR	**Mina Array Bea**	**43.97**	**82**	P	**P**	**19 02 39.1**	**+0.9**
	comp=Z,0.7nm,0.8s,mb3.4,baz=285,slow=6.1,SNR=4.8						
ELK	**Elko**	**44.49**	**77**	*e*P	**P**	**19 02 42.5**	**+0.2**
	comp=Z,1.6nm,0.7s,mb3.9						
ELK	**Elko**	**44.49**	**77**	*e*P	**P**	**19 02 42.5**	**+0.2**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ULN	**Ulaanbaatar**	**46.02**	**296⇓**	*e*P	**P**	**19 02 56.2**	**+1.8**
TPNV	**Topopah Spring**	**46.17**	**82**	*e*P	**P**	**19 02 55.8**	**0.0**
	comp=Z,4.7nm,1.0s,mb4.4						
TPNV	**Topopah Spring**	**46.17**	**82**	*e*P	**P**	**19 02 55.8**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
SONM	**Songino Array**	**46.40**	**296**	P	**P**	**19 02 59.1**	**+1.6**
	comp=Z,1.6nm,0.7s,mb4.1,baz=56,slow=9.1,SNR=12						
SONM				PcP	PcP	19 04 32.8	+0.8
	comp=Z,0.8nm,0.7s,baz=89,slow=2.0,SNR=4.8						
SONM				LR	LR	19 24 02.5	
	comp=Z,100nm,18.4s,MS3.8,baz=16,slow=38						
BW06	**Boulder Array**	**46.76**	**72**	*e*P	**P**	**19 03 00.3**	**0.0**
	comp=Z,2.1nm,0.6s,mb4.2						
PDAR	**Pinedale Array**	**46.76**	**72**	P	**P**	**19 03 01.0**	**+0.7**
	comp=Z,3.6nm,0.9s,mb4.3,baz=314,slow=4.6,SNR=26						
SSE	**Sheshan**	**47.60**	**269**	P	**P**	**19 03 06.0**	**-1.1**
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,30nm,5.6s						
SSE	**Sheshan**	**47.60**	**269**	P	**P**	**19 03 06.0**	**-1.1**
	comp=Z,21nm,0.7s,mb5.3						
NJ2	**Nanjing**	**48.43**	**272**	*e*P	**P**	**19 03 18.3**	**+4.8**
NJ2				S	**S**	**19 10 09.0**	**0.0**
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,150nm,4.1s						
NJ2				LR	LR		
	comp=N,820nm,29.2s,MS4.7						
NJ2				LR	LR		
	comp=E,870nm,30.0s,MS4.7						
NJ2				LR	LR		
	comp=Z,200nm,23.7s						
SDCO	**Great Sand Dun**	**52.29**	**74**	P	**P**	**19 03 41.6**	**-1.2**
	comp=Z,10.0nm,1.5s,mb4.5						
ZAL	**Zalesovo**	**53.93**	**313**	LR	LR	19 29 30.2	
	comp=Z,28nm,18.2s,MS3.4,baz=64,slow=39						
LZH	**Lanzhou**	**55.08**	**286**	*e*P	**P**	**19 04 02.8**	**-0.6**
LZH				AP	pP	19 04 13.3	-5.0
LZH				XP	sP	19 04 17.3	-7.4
LZH				*e*PP	PP	19 06 07.5	-0.9
LZH				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.6						
LZH				AMB	AMB		
	comp=Z,40nm,5.6s						
LZH				LR	LR		
	comp=N,260nm,15.2s						
LZH				LR	LR		
	comp=Z,340nm,17.9s,MS4.5						
LZH	**Lanzhou**	**55.08**	**286**	*e*P	**P**	**19 04 02.7**	**-0.7**
	comp=Z,17nm,1.5s,mb4.8						
LZH				pP	pP	19 04 13.2	-5.1
LZH				sP	sP	19 04 17.3	-7.4
LZH				*e*PP	PP	19 06 07.5	-0.9
LZH				LR	LR		
	comp=Z,350nm,17.9s,MS4.5						
LZH	**Lanzhou**	**55.08**	**286**	*e*P	**P**	**19 04 02.7**	**-0.7**
LZH				*PP	pP	19 04 13.2	-5.1
LZH				*SP	sP	19 04 17.3	-7.4
LZH				*e*		19 06 07.5	
LZH				pmax	pmax		
	comp=Z,17nm,1.5s,mb4.8						
LZH				MLR	MLR		
	comp=Z,350nm,17.9s,MS4.5						
GTA	**Gaotai**	**55.29**	**292**	*e*P	**P**	**19 04 05.9**	**+1.0**
GTA				AP	pP	19 04 16.0	-3.9
GTA				XP	sP	19 04 19.8	-6.4
MNTX	**Cornudas Mount**	**56.38**	**80**	*e*P	**P**	**19 04 11.7**	**-1.1**
	comp=Z,1.1nm,0.6s,mb4.1						
ARCES	**ARCESS Array B**	**58.26**	**350**	P	**P**	**19 04 24.1**	**-1.5**
	comp=Z,2.6nm,0.8s,mb4.3,baz=34,slow=4.4,SNR=4.3						
WMOK	**Wichita Mounta**	**58.34**	**73**	P	**P**	**19 04 25.9**	**-0.7**
KURK	**Kurchatov**	**58.90**	**313**	*e*P	**P**	**19 04 30.2**	**-0.1**
	comp=Z,5.8nm,0.6s,mb4.8						
KURK	**Kurchatov**	**58.90**	**313***d*	*i*P	**P**	**19 04 30.6**	**+0.3**
TXAR	**Lajitas Array**	**59.08**	**81**	P	**P**	**19 04 30.3**	**-1.4**
	comp=Z,0.6nm,0.5s,mb3.9,baz=326,slow=6.5,SNR=3.9						
WMQ	**Urumqi**	**59.14**	**303**	*e*P	**P**	**19 04 34.5**	**+2.5**
MKAR	**Makanchi Array**	**59.88**	**308**	P	**P**	**19 04 36.8**	**-0.3**
	comp=Z,3.1nm,0.4s,mb4.7,baz=51,slow=7.8,SNR=11						
CHKZ	**Chkalovo**	**60.25**	**320**	*e*P	**P**	**19 04 38.9**	**-0.6**
BRVK	**Borovoye**	**60.84**	**320**	*e*P	**P**	**19 04 43.1**	**-0.4**
	comp=Z,2.1nm,1.0s,mb4.2						
BRVK	**Borovoye**	**60.84**	**320**	*e*P	**P**	**19 04 43.1**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2						
KMI	**Kunming**	**63.37**	**278**	P	**P**	**19 04 59.0**	**-1.8**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.9						
JOF	**Joensuu**	**63.73**	**345**	*e*p	**P**	**19 05 01.7**	**-0.8**
	comp=Z,3.9nm,0.8s,mb4.5						
KAF	**Kangasniemi**	**65.26**	**347**	*e*p	**P**	**19 05 11.4**	**-1.0**
	comp=Z,3.3nm,0.8s,mb4.4						
KAF	**Kangasniemi**	**65.26**	**347**	*e*P	**P**	**19 05 11.4**	**-1.0**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
FINES	**FINESS Array B**	**65.93**	**347**	P	**P**	**19 05 16.3**	**-0.4**
	comp=Z,3.0nm,0.8s,mb4.4,baz=31,slow=11,SNR=9.5						
FINES	**FINESS Array B**	**65.93**	**347**	P	**P**	**19 05 16.3**	**-0.4**
NOA	**NORSAR Array B**	**67.85**	**354**	P	**P**	**19 05 27.5**	**-1.3**
	comp=Z,1.3nm,0.9s,mb4.0,baz=17,slow=6.1,SNR=3.7						
OBN	**Obninsk**	**69.95**	**339⇓**	*e*P	**P**	**19 05 42.0**	**+0.2**
OBN				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
GUN	**Gumba**	**71.58**	**292**	*e*P	**P**	**19 05 54.0**	**+1.9**
KKN	**Kakani**	**72.02**	**292**	*e*P	**P**	**19 05 56.2**	**+1.4**
	comp=Z,11nm,0.8s,mb4.8						
GKN	**Gorkha**	**72.24**	**293**	*e*P	**P**	**19 05 56.6**	**+0.6**
	comp=Z,14nm,0.9s,mb4.9						
DMN	**Daman**	**72.26**	**292**	*e*P	**P**	**19 05 57.7**	**+1.5**
KOLN	**Koldanda**	**73.02**	**293**	*e*P	**P**	**19 06 01.7**	**+1.1**
	comp=Z,11nm,1.0s,mb4.7						
AKASG	**Malin Array Be**	**75.66**	**342**	P	**P**	**19 06 15.7**	**+0.3**
	comp=Z,4.8nm,0.5s,mb4.7,baz=21,slow=6.5,SNR=19						

KIV	**Kislovodsk**	78.49	330	i P	P	19 06 32.2	+0.9
KHC	**Kasperske Hory**	79.49	351	deP	P	19 06 38.5	+1.8
GERES	**GERESS Array B**	79.76	351	P	P	19 06 39.4	+1.3
	comp=Z,1.0nm,0.6s,mb3.9,baz=18,slow=5.7,SNR=8.1						
WRAB	**Tennant Creek**	81.56	223	P	P	19 06 47.1	-1.1
WRA	**Warramunga Arr**	81.57	223	P	P	19 06 47.6	-0.7
	comp=Z,0.3nm,0.6s,mb3.4,baz=34,slow=6.1,SNR=6.3						
BRTR	**Keskin Array B**	85.00	335	P	P	19 07 07.4	+2.2
	comp=Z,1.6nm,0.8s,mb4.2,baz=52,slow=3.6,SNR=8.8						
STKA	**Stephens Creek**	89.51	212	P	P	19 07 28.2	+1.0
	comp=Z,1.6nm,0.8s,mb4.4,baz=141,slow=15,SNR=3.7						
STKA	**Stephens Creek**	89.51	212	P	P	19 07 28.2	+1.0
BOSA	**Boshof**	150.84	311	PKPbc	PKPdf	19 14 23.6	+8.3
	comp=Z,3.2nm,1.0s,baz=38,slow=9.5,SNR=4.0						

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*STR **17** 19:02:43.0±0.3, 43.54N×0.67W, h5$^{km}\pm1^{km}$, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*NEIC **17** 19:02:43.0, 43.54N×0.67W, h5^{km}, ML3.2(LDG), ML2.9(STR), MN2.6(MDD), After STR.*

*LDG **17** 19:02:44.3±0.1, 43.46N×0.67W, h10^{km}, Md3.0/2, Ml3.2/24, Error ellipse: s-maj=1.0km s-min=0.8km az=98.0*

*CSEM **17** 19:02:44.6±0.0, 43.48N×0.66W, h10^{km}, ML3.2/31, Error ellipse: s-maj=0.9km s-min=0.6km az=105.0*

*MDD **17** 19:02:44.4±0.2, 43.48N×0.65W, h10^{km}, mbLg2.5/28, Error ellipse: s-maj=2.1km s-min=1.7km az=154.0, PRXIMO*

ISC 17 19:02:40.7±0.2, **43.610N**±0.010×**0.66W**±0.02, **h8**$^{km}\pm2^{km}$, **n156**, σ1§26/313, **Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORDF	**Ordiarp**	0.44	207	Pg	Pg	19 02 50.5	+0.9
ORDF				Sg	Sg	19 02 55.8	+0.2
ORDF	**Ordiarp**	0.44	207	Pg	Pg	19 02 50.5	+0.9
ORDF				Lg		19 02 55.3	
ATE	**Arette**	0.53	183	Pg	Pg	19 02 51.6	+0.3
ATE				Sg	Sg	19 02 57.4	-0.9
ATE	**Arette**	0.53	183	Pg	Pg	19 02 51.6	+0.3
ATE				Lg		19 02 57.8	
OSSF	**Osses**	0.56	231	Pg	Pg	19 02 53.3	+1.3
OSSF				Sg	Sg	19 03 01.0	+1.5
OSSF	**Osses**	0.56	231	Pg	Pg	19 02 53.1	+1.1
OSSF				Lg		19 03 00.6	
REYF	**Montagne du Re**	0.58	160	Pg	Pg	19 02 52.6	+0.3
REYF				Sg	Sg	19 02 59.5	-0.5
REYF	**Montagne du Re**	0.58	160	Pg	Pg	19 02 52.5	+0.2
REYF				Lg		19 02 59.2	
LARF	**Larrau**	0.62	203	Pg	Pg	19 02 53.5	+0.4
LARF				Sg	Sg	19 03 00.9	-0.5
LARF	**Larrau**	0.62	203	Pg	Pg	19 02 53.4	+0.3
LARF				Lg		19 03 01.0	
SJPF	**Ste Jean**	0.64	220	ePg	Pg	19 02 54.2	+0.6
SJPF				eSg	Sg	19 03 02.0	-0.2
	96nm,0.2s						
EALK	**Alkurruntz**	0.73	238	Pg	Pg	19 02 56.3	+1.0
	70nm,0.3s,SNR=142						
EALK				Lg		19 03 06.6	
	219nm,0.4s,SNR=22						
LABF	**Labassere**	0.78	136	Pg	Pg	19 02 57.2	+0.9
LABF				Sg	Sg	19 03 07.3	+0.6
LABF	**Labassere**	0.78	136	Pg	Pg	19 02 56.9	+0.6
LABF				Lg		19 03 07.1	
FDAF	**Les Forges d'A**	0.79	175	Pg	Pg	19 02 56.2	-0.4
FDAF				Lg		19 03 05.9	
VIEF	**Viey**	0.88	145	Pg	Pg	19 02 58.1	-0.3
IUSE	**Utxeti**	0.93	225	Pg	Pg	19 03 00.1	+0.9
	12nm,0.2s,SNR=7.9						
IUSE				Lg		19 03 12.1	
	63nm,0.3s,SNR=7.9						
IUSE	**Utxeti**	0.93	225	Pg	Pg	19 02 59.9	+0.7
	15nm,0.1s,SNR=7.9						
EPF	**Esparros**	0.93	128	ePn	Pn	19 03 00.9	+0.9
EPF				eSg	Sg	19 03 11.2	-0.7
EPF				eSn	Sn	19 03 12.6	-1.0
	221nm,0.3s						
EPF	**Esparros**	0.93	128	ePg	Pg	19 03 00.2	+0.8
EPF				ePn	Pn	19 03 00.9	+0.9
EPF				eSg	Sg	19 03 11.2	-0.7
EPF				eSn	Sn	19 03 12.6	-1.0
EPF	**Esparros**	0.93	128	ePn	Pn	19 03 00.9	+0.9
EPF				eSg	Sg	19 03 11.2	-0.7
EPF				eSn	Sn	19 03 12.6	-1.0
	111nm,0.3s						
IPRE	**Itoiz**	0.95	212	Pg	Pg	19 03 00.8	+1.1
	18nm,0.2s,SNR=7.9						
IPRE				Lg		19 03 12.5	
	180nm,0.4s,SNR=56						
IPRE	**Itoiz**	0.95	212	Pg	Pg	19 03 00.3	+0.6
	16nm,0.2s,SNR=17						
IUNC	**Unciti**	1.05	216	Pg	Pg	19 03 02.2	+0.5
	6.8nm,0.2s,SNR=7.9						
IUNC				Lg		19 03 16.2	
	154nm,0.5s,SNR=7.9						
IUNC	**Unciti**	1.05	216	Pg	Pg	19 03 02.2	+0.5
	6.8nm,0.2s,SNR=7.9						
EARA	**Aranguren**	1.07	219	Pg	Pg	19 03 03.1	+1.0
	12nm,0.2s,SNR=7.0						
EARA				Lg		19 03 17.5	
	44nm,0.2s,SNR=10						
RESF	**Ens**	1.09	137	Pg	Pg	19 03 02.4	0.0
RESF	**Ens**	1.09	137	Pg	Pg	19 03 02.5	+0.1
RESF				Lg		19 03 15.3	
EBIE	**Bielsa**	1.10	147	Pg	Pg	19 03 02.0	-0.6
	5.1nm,0.1s,SNR=45						
EBIE				Lg		19 03 15.6	
	22nm,0.2s,SNR=9.9						
EBIE	**Bielsa**	1.10	147	Pg	Pg	19 03 02.0	-0.6
	5.1nm,0.1s,SNR=45						
MELF	**Melles**	1.27	125	Pg	Pg	19 03 05.5	-0.7
MELF	**Melles**	1.27	125	Pg	Pg	19 03 05.9	-0.2
MELF				Lg		19 03 21.2	
MLS	**Moulis**	1.44	116	Sn	Sn	19 03 25.8	-0.7
EGRA	**Graus**	1.59	153	Pg	Pg	19 03 11.4	-1.0
	12nm,0.4s,SNR=18						
EGRA				Lg		19 03 32.9	
	11nm,0.2s,SNR=5.1						
SALF	**Salau**	1.60	121	Pg	Pg	19 03 12.6	-0.1
SALF				Sg	Sg	19 03 35.3	+1.3
SALF	**Salau**	1.60	121	Pg	Pg	19 03 13.3	+0.7
SALF				Lg		19 03 34.2	
LFF	**La Frestale**	1.67	37	ePg	Pg	19 03 17.9	+3.9
LFF				eSg	Sg	19 03 41.5	+5.2
	121nm,0.4s						
LFF	**La Frestale**	1.67	37	Pn	Pn	19 03 13.8	+3.3
LFF				Pg	Pg	19 03 17.9	+3.9
LFF				Lg		19 03 41.5	
	60nm,0.4s						
LFF	**La Frestale**	1.67	37	ePn	Pn	19 03 13.8	+3.3
LFF				ePg	Pg	19 03 17.9	+3.9
LFF				eSg	Sg	19 03 41.5	+5.2
LFF	**La Frestale**	1.67	37	ePg	Pg	19 03 17.9	+3.9
LFF				eSg	Sg	19 03 41.5	+5.2
	60nm,0.4s						
GRBF	**Gourbit**	1.78	115	Pn	Pn	19 03 13.9	+1.7
ESAC	**San Caprasio**	1.89	176	Pn	Pn	19 03 15.2	+1.5
	18nm,0.3s,SNR=7.9						
ESAC				Pg	Pg	19 03 17.2	-1.3
	74nm,0.3s,SNR=30						
ESAC				Lg		19 03 40.4	
	513nm,0.3s,SNR=12						
ESAC	**San Caprasio**	1.89	176	Pn	Pn	19 03 15.2	+1.5
	18nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	1.89	176	Pg	Pg	19 03 17.2	-1.3
	74nm,0.3s,SNR=30						
PAND	**Andorre**	1.95	123	Lg		19 03 44.2	
MTLF	**Montolieu**	2.12	96	ePg	Pg	19 03 23.0	+0.1
MTLF				eSn	Sn	19 03 43.0	-0.6
MTLF				eSg	Sg	19 03 50.7	-0.4
	24nm,0.3s						
MTLF	**Montolieu**	2.12	96	Pn	Pn	19 03 18.3	+1.4
MTLF				Pg	Pg	19 03 23.0	+0.1
MTLF				Sn	Sn	19 03 43.0	-0.6
MTLF				Lg		19 03 50.7	
	12nm,0.3s						
MTLF	**Montolieu**	2.12	96	ePn	Pn	19 03 18.3	+1.4
MTLF				ePg	Pg	19 03 23.0	+0.1
MTLF				eSn	Sn	19 03 43.0	-0.6
MTLF				eSg	Sg	19 03 50.7	-0.4
MTLF	**Montolieu**	2.12	96	ePg	Pg	19 03 23.0	+0.1
MTLF				eSn	Sn	19 03 43.0	-0.6
MTLF				eSg	Sg	19 03 50.7	-0.4
	12nm,0.3s						
CARF	**Carcanieres**	2.21	113	Pg	Pg	19 03 24.2	-0.7
CARF	**Carcanieres**	2.21	113	Pg	Pg	19 03 24.2	-0.7
CARF				Lg		19 03 51.5	
RJF	**Les Rejaudoux**	2.30	42	ePg	Pg	19 03 29.3	+2.6
RJF				eSg	Sg	19 04 00.0	+2.6
	54nm,0.4s						
RJF	**Les Rejaudoux**	2.30	42	Pn	Pn	19 03 21.9	+2.3
RJF				Pg	Pg	19 03 29.3	+2.6
RJF				Lg		19 04 00.0	
	27nm,0.4s						
RJF	**Les Rejaudoux**	2.30	42	ePn	Pn	19 03 21.9	+2.3
RJF				ePg	Pg	19 03 29.3	+2.6
RJF				eSg	Sg	19 04 00.0	+2.6
RJF	**Les Rejaudoux**	2.30	42	ePg	Pg	19 03 29.3	+2.6
RJF				eSg	Sg	19 04 00.0	+2.6
	27nm,0.4s						
EMIR	**Miracle**	2.34	136	Pg	Pg	19 03 25.3	-2.1
	6.9nm,0.2s,SNR=10						
EMIR				Lg		19 03 54.6	
	26nm,0.2s,SNR=7.7						
EMIR	**Miracle**	2.34	136	Pg	Pg	19 03 25.3	-2.1
	6.9nm,0.2s,SNR=10						
CAF	**Calviac**	2.36	55	ePg	Pg	19 03 30.1	+2.3
CAF				eSn	Sn	19 03 51.8	+1.9
CAF				eSg	Sg	19 04 01.1	+1.8
	31nm,0.2s						
CAF	**Calviac**	2.36	55	Pn	Pn	19 03 22.7	+2.3
CAF				Pg	Pg	19 03 30.1	+2.3
CAF				Sn	Sn	19 03 51.8	+1.9
CAF				Lg		19 04 01.1	
	15nm,0.2s						
CAF	**Calviac**	2.36	55	ePn	Pn	19 03 22.7	+2.3
CAF				ePg	Pg	19 03 30.1	+2.3
CAF				eSn	Sn	19 03 51.8	+1.9
CAF				eSg	Sg	19 04 01.1	+1.8
CAF	**Calviac**	2.36	55	ePg	Pg	19 03 30.1	+2.3
CAF				eSn	Sn	19 03 51.8	+1.9
CAF				eSg	Sg	19 04 01.1	+1.8
	15nm,0.2s						
EPOB	**Poblet**	2.60	150	Pn	Pn	19 03 24.4	+0.6
	0.2nm,0.1s,SNR=4.0						
EPOB				Pg	Pg	19 03 29.5	-3.1
	3.0nm,0.2s,SNR=9.3						
EPOB				Sn	Sn	19 03 54.9	-1.1
	3.2nm,0.2s,SNR=7.9						
EPOB				Lg		19 04 01.0	
	8.1nm,0.2s,SNR=7.9						
EPOB	**Poblet**	2.60	150	Pn	Pn	19 03 24.4	+0.6
	0.2nm,0.1s,SNR=4.0						
EPOB	**Poblet**	2.60	150	Pg	Pg	19 03 29.5	-3.1
	3.0nm,0.2s,SNR=9.3						
EPOB				Sn	Sn	19 03 54.9	-1.0
	3.2nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	2.75	164	Pn	Pn	19 03 26.5	+0.5
	0.3nm,0.1s,SNR=7.9						
ERTA				Pg	Pg	19 03 32.5	-3.2
	1.9nm,0.2s,SNR=18						
ERTA				Lg		19 04 07.3	
	SNR=4.0						
ERTA	**Horta de San J**	2.75	164	Pn	Pn	19 03 26.5	+0.5
	0.3nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	2.75	164	Pg	Pg	19 03 32.5	-3.2
	1.9nm,0.2s,SNR=18						
EJON	**La Jonquera**	2.85	113	Lg		19 04 12.6	
	6.3nm,0.3s,SNR=7.9						
EBR	**Ebro Roquetas**	2.92	162	ePG	Pg	19 03 37.0	-1.9
EBR				eRs		19 04 19.0	
MFF	**Saint Martin d**	3.01	7	ePg	Pg	19 03 42.8	+1.9
MFF				eSn	Sn	19 04 07.0	+0.5
MFF				eSg	Sg	19 04 23.1	+2.0
	26nm,0.5s						
MFF	**Saint Martin d**	3.01	7	Pn	Pn	19 03 32.3	+2.6
MFF				Pg	Pg	19 03 42.8	+1.9
MFF				Sn	Sn	19 04 07.0	+0.5
MFF				Lg		19 04 23.1	
	13nm,0.5s						
MFF	**Saint Martin d**	3.01	7	ePn	Pn	19 03 32.3	+2.6
MFF				ePg	Pg	19 03 42.8	+1.9
MFF				eSn	Sn	19 04 07.0	+0.5
MFF				eSg	Sg	19 04 23.1	+2.0
LBL	**Lubilhac**	3.24	59	Pn	Pn	19 03 34.8	+1.9
EMOS	**Mosqueruela**	3.25	177	Pn	Pn	19 03 34.2	+1.2
	0.5nm,0.1s,SNR=7.5						
EMOS				Pg	Pg	19 03 41.8	-3.7
	3.8nm,0.3s,SNR=12						
EMOS				Sn	Sn	19 04 10.5	-1.9
	2.6nm,0.2s,SNR=4.0						
EMOS				Lg		19 04 23.5	
	6.9nm,0.3s,SNR=6.6						
EMOS	**Mosqueruela**	3.25	177	Pn	Pn	19 03 34.2	+1.2
	0.5nm,0.1s,SNR=7.5						
EMOS	**Mosqueruela**	3.25	177	Pg	Pg	19 03 41.8	-3.7
	3.8nm,0.3s,SNR=12						
EMOS				Sn	Sn	19 04 10.5	-1.8
	2.6nm,0.2s,SNR=4.0						
LASF	**Ste Croix**	3.30	80	ePg	Pg	19 03 46.2	-0.5
LASF				eSn	Sn	19 04 11.3	-2.5
LASF				eSg	Sg	19 04 28.9	-1.8
	40nm,0.7s						
LASF	**Ste Croix**	3.30	80	Pn	Pn	19 03 34.9	+1.1
LASF				Pg	Pg	19 03 46.2	-0.5
LASF				Sn	Sn	19 04 11.3	-2.5
LASF				Lg		19 04 28.9	
	20nm,0.7s						
LASF	**Ste Croix**	3.30	80	ePn	Pn	19 03 34.9	+1.1
LASF				ePg	Pg	19 03 46.2	-0.5
LASF				eSn	Sn	19 04 11.3	-2.5
LASF				eSg	Sg	19 04 28.9	-1.8
EARI	**Arriondas**	3.32	266	Pn	Pn	19 03 36.4	+2.3
	0.4nm,0.1s,SNR=6.2						
EARI				Sn	Sn	19 04 13.8	-0.5
	5.3nm,0.7s,SNR=4.7						
EARI				Lg		19 04 31.7	
	5.3nm,0.4s,SNR=4.0						
EARI	**Arriondas**	3.32	266	Pn	Pn	19 03 36.4	+2.3
	0.4nm,0.1s,SNR=6.2						
EARI				Sn	Sn	19 04 13.8	-0.5
	5.3nm,0.7s,SNR=4.7						
TCF	**Toulx Ste Croi**	3.37	36	ePg	Pg	19 03 49.1	+1.2
TCF				eSn	Sn	19 04 16.2	+0.8
TCF				eSg	Sg	19 04 34.4	+1.6
	20nm,0.4s						
TCF	**Toulx Ste Croi**	3.37	36	Pn	Pn	19 03 36.0	+1.3
TCF				Pg	Pg	19 03 49.1	+1.2
TCF				Sn	Sn	19 04 16.2	+0.8
TCF				Lg		19 04 34.4	
	9.9nm,0.4s						
TCF	**Toulx Ste Croi**	3.37	36	ePn	Pn	19 03 36.0	+1.3
TCF				ePg	Pg	19 03 49.1	+1.2
TCF				eSn	Sn	19 04 16.2	+0.8
TCF				eSg	Sg	19 04 34.4	+1.6
BGF	**Bois d'Agland**	3.86	39	ePg	Pg	19 03 57.8	+0.1
BGF				eSg	Sg	19 04 48.7	-0.4
	62nm,0.3s						
BGF	**Bois d'Agland**	3.86	39	Pn	Pn	19 03 42.9	+1.2
BGF				Pg	Pg	19 03 57.8	+0.1
BGF				Lg		19 04 48.7	
	0.0nm,0.3s						
BGF	**Bois d'Agland**	3.86	39	ePn	Pn	19 03 42.9	+1.2
BGF				ePg	Pg	19 03 57.8	+0.1
BGF				eSg	Sg	19 04 48.7	-0.4
PLDF	**La Plantade**	3.86	51	Pn	Pn	19 03 39.7	-2.0
GUD	**Guadarrama**	3.94	222	Pn	Pn	19 03 44.0	+1.1
	0.6nm,0.2s,SNR=4.0						
VIVF	**Saint-Julien-l**	4.03	70	ePg	Pg	19 04 00.0	-1.2
VIVF				eSg	Sg	19 04 51.2	-3.8
	14nm,0.5s						
VIVF	**Saint-Julien-l**	4.03	70	Pn	Pn	19 03 45.4	+1.2
VIVF				Pg	Pg	19 04 00.0	-1.2
VIVF				Lg		19 04 51.2	
	6.8nm,0.5s						
VIVF	**Saint-Julien-l**	4.03	70	ePn	Pn	19 03 45.4	+1.2
VIVF				ePg	Pg	19 04 00.0	-1.2
VIVF				eSg	Sg	19 04 51.2	-3.8
AVF	**Avril sur Loir**	4.26	40	ePg	Pg	19 04 05.3	-0.5
AVF				eSg	Sg	19 05 01.7	-0.9
	17nm,0.4s						
AVF	**Avril sur Loir**	4.26	40	Pn	Pn	19 03 48.4	+0.9
AVF				Pg	Pg	19 04 05.3	-0.5
AVF				Lg		19 05 01.7	
	8.5nm,0.4s						
AVF	**Avril sur Loir**	4.26	40	ePn	Pn	19 03 48.4	+0.9
AVF				ePg	Pg	19 04 05.3	-0.5
AVF				eSg	Sg	19 05 01.7	-0.9
HYF	**Humbligny**	4.33	31	ePn	Pn	19 03 49.7	+1.2
HYF				ePg	Pg	19 04 06.2	-1.0
HYF				eSg	Sg	19 05 04.4	-0.6
SMF	**Signal de Mont**	4.40	45	ePg	Pg	19 04 08.0	-0.6
SMF				eSg	Sg	19 05 06.1	-1.1
	17nm,0.6s						
SMF	**Signal de Mont**	4.40	45	Pn	Pn	19 03 50.5	+1.1
SMF				Pg	Pg	19 04 08.0	-0.6
SMF				Lg		19 05 06.1	
	8.4nm,0.6s						
SMF	**Signal de Mont**	4.40	45	ePn	Pn	19 03 50.5	+1.1
SMF				ePg	Pg	19 04 08.0	-0.6
SMF				eSg	Sg	19 05 06.1	-1.1
SMRF	**Simiane la Rot**	4.53	83	ePn	Pn	19 03 50.2	-1.1
SMRF				eSg	Sg	19 05 06.9	-4.7
	15nm,0.7s						
SSF	**Saint Saulge**	4.53	39	Pn	Pn	19 03 51.6	+0.3
SSF				Pg	Pg	19 04 10.5	-0.7
SSF				Lg		19 05 10.6	
	8.2nm,0.6s						
SSF	**Saint Saulge**	4.53	39	ePn	Pn	19 03 51.6	+0.3
SSF				ePg	Pg	19 04 10.5	-0.7
SSF				eSg	Sg	19 05 10.6	-1.0
SSF	**Saint Saulge**	4.53	39	ePg	Pg	19 04 10.5	-0.7
SSF				eSg	Sg	19 05 10.6	-1.0
	8.2nm,0.6s						
ETOS	**Mallorca**	4.64	145	Pn	Pn	19 03 52.8	0.0
ETOS				Sn	Sn	19 04 43.1	-4.5
ETOS	**Mallorca**	4.64	145	Pn	Pn	19 03 52.8	0.0
	SNR=4.0						
ETOS				Sn	Sn	19 04 43.1	-4.5
	SNR=4.0						
ESDC	**Sonseca Array**	4.64	213	Pn	Pn	19 03 52.5	-0.4
	0.4nm,0.3s,baz=38,slow=14,SNR=6.5						
ESDC				Pg	Pg	19 04 09.8	-3.7
	1.7nm,0.3s,baz=33,slow=17,SNR=6.8						
ESDC				Sn	Sn	19 04 46.1	-1.6
	2.0nm,0.2s,baz=35,slow=23,SNR=7.9						
ESDC				Lg		19 05 08.6	
	1.5nm,0.3s,baz=34,slow=29,SNR=3.6						
ESDC	**Sonseca Array**	4.64	213	Pn	Pn	19 03 52.5	-0.4
	0.4nm,0.3s,SNR=6.5						
ESDC	**Sonseca Array**	4.64	213	Pg	Pg	19 04 09.8	-3.6
	1.7nm,0.3s,SNR=6.8						
ESDC				Sn	Sn	19 04 46.1	-1.6
	2.0nm,0.2s,SNR=7.9						
QUIF	**Quistinic**	4.65	339	ePg	Pg	19 04 12.7	-0.8
QUIF				eSn	Sn	19 04 46.7	-1.1
QUIF				eSg	Sg	19 05 14.5	-1.0
	3.9nm,0.3s						
QUIF	**Quistinic**	4.65	339	Pn	Pn	19 03 54.2	+1.3
QUIF				Pg	Pg	19 04 12.7	-0.8
QUIF				Sn	Sn	19 04 46.7	-1.1
QUIF				Lg		19 05 14.5	
	1.9nm,0.3s						
QUIF	**Quistinic**	4.65	339	ePn	Pn	19 03 54.2	+1.3
QUIF				ePg	Pg	19 04 12.7	-0.8
QUIF				eSn	Sn	19 04 46.7	-1.1
QUIF				eSg	Sg	19 05 14.5	-1.0
EPON	**Pontenova**	4.73	269	Pn	Pn	19 03 56.3	+2.3
	0.2nm,0.1s,SNR=4.0						
EPON				Sn	Sn	19 04 47.8	-2.1
	3.2nm,0.3s,SNR=4.8						
EPON	**Pontenova**	4.73	269	Pn	Pn	19 03 56.3	+2.2
	0.2nm,0.1s,SNR=4.0						
EPON				Sn	Sn	19 04 47.8	-2.0
	3.2nm,0.3s,SNR=4.8						
ECAL	**Calabor**	4.77	252	Pn	Pn	19 03 56.0	+1.3
	0.8nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	19 04 48.9	-2.0
	1.6nm,0.3s,SNR=4.0						
ECAL				Lg		19 05 15.3	
	SNR=4.0						
ECAL	**Calabor**	4.77	252	Pn	Pn	19 03 56.0	+1.3
ECAL				Sn	Sn	19 04 49.8	-1.1
ECAL				Lg		19 05 15.3	
ECAL	**Calabor**	4.77	252	Pn	Pn	19 03 56.0	+1.3
	0.8nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	19 04 49.8	-1.1
	1.6nm,0.3s,SNR=4.0						
GRR	**Gorron**	4.78	358	ePg	Pg	19 04 15.5	-0.6
GRR				eSn	Sn	19 04 49.7	-1.5
GRR				eSg	Sg	19 05 19.3	-0.6
	7.5nm,0.4s						
GRR	**Gorron**	4.78	358	Pn	Pn	19 03 56.2	+1.4
GRR				Pg	Pg	19 04 15.5	-0.6
GRR				Sn	Sn	19 04 49.7	-1.5
GRR				Lg		19 05 19.3	
	3.8nm,0.4s						
GRR	**Gorron**	4.78	358	ePn	Pn	19 03 56.2	+1.4
GRR				ePg	Pg	19 04 15.5	-0.6
GRR				eSn	Sn	19 04 49.7	-1.5
GRR				eSg	Sg	19 05 19.3	-0.6
EIBI	**Ibiza**	4.82	161	Pn	Pn	19 03 55.0	-0.4
	0.5nm,0.2s,SNR=4.0						
EIBI	**Ibiza**	4.82	161	Pn	Pn	19 03 55.0	-0.4
	0.5nm,0.2s,SNR=4.0						
SGMF	**Saint Gilles**	4.83	345	ePg	Pg	19 04 16.1	-1.0
SGMF				eSn	Sn	19 04 51.2	-1.2
SGMF				eSg	Sg	19 05 20.0	-1.5
	7.3nm,0.4s						
SGMF	**Saint Gilles**	4.83	345	Pn	Pn	19 03 57.0	+1.5
SGMF				Pg	Pg	19 04 16.1	-1.0
SGMF				Sn	Sn	19 04 51.2	-1.2
SGMF				Lg		19 05 20.0	
	3.7nm,0.4s						
SGMF	**Saint Gilles**	4.83	345	ePn	Pn	19 03 57.0	+1.5
SGMF				ePg	Pg	19 04 16.1	-1.0
SGMF				eSn	Sn	19 04 51.2	-1.2
SGMF				eSg	Sg	19 05 20.0	-1.5
LOR	**Lormes**	4.85	39	ePn	Pn	19 03 56.9	+1.1
	baz=222						
LOR	**Lormes**	4.85	39	ePg	Pg	19 04 15.9	-1.6
	baz=219						
LOR				eSg	Sg	19 05 20.3	-1.8
	8.3nm,0.4s						
LOR	**Lormes**	4.85	39	Pn	Pn	19 03 56.9	+1.1
LOR				Pg	Pg	19 04 15.9	-1.6
LOR				Lg		19 05 20.3	
	4.2nm,0.4s						
LOR	**Lormes**	4.85	39	ePn	Pn	19 03 56.9	+1.1
LOR				ePg	Pg	19 04 15.9	-1.6
LOR				eSg	Sg	19 05 20.3	-1.8
EBEN	**Beniarda**	4.91	176	Pn	Pn	19 03 56.3	-0.4
	0.1nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	4.91	176	Pn	Pn	19 03 56.3	-0.4
	0.1nm,0.2s,SNR=7.9						
LDF	**La Druitiere**	5.00	4	ePg	Pg	19 04 19.5	-1.0
LDF				eSn	Sn	19 04 54.7	-2.0
LDF				eSg	Sg	19 05 26.4	-0.7
	11nm,0.5s						
LDF	**La Druitiere**	5.00	4	ePn	Pn	19 03 59.4	+1.5
LDF				ePg	Pg	19 04 19.5	-1.0
LDF				eSn	Sn	19 04 54.7	-2.0
LDF				eSg	Sg	19 05 26.4	-0.7
ETOB	**Tobarra**	5.00	188	Pn	Pn	19 03 57.6	-0.3
	2.4nm,0.2s,SNR=4.0						
ETOB	**Tobarra**	5.00	188	Pn	Pn	19 03 57.6	-0.4
	2.4nm,0.2s,SNR=4.0						
ROSF	**Rostrenen**	5.07	340	ePn	Pn	19 04 01.0	+2.2
ROSF				eSn	Sn	19 04 57.2	-1.1
ROSF				eSg	Sg	19 05 27.5	-1.8
	3.0nm,0.4s						
FLN	**La Foliniere**	5.16	1	ePg	Pg	19 04 22.4	-1.2
	baz=177						
FLN				eSn	Sn	19 04 58.8	-1.8
FLN				eSg	Sg	19 05 30.7	-1.6
	8.8nm,0.4s						
FLN	**La Foliniere**	5.16	1	Pn	Pn	19 04 01.6	+1.5
FLN				Pg	Pg	19 04 22.4	-1.2
FLN				Sn	Sn	19 04 58.8	-1.8
FLN				Lg		19 05 30.7	
	4.4nm,0.4s						
FLN	**La Foliniere**	5.16	1	ePn	Pn	19 04 01.6	+1.5
FLN				ePg	Pg	19 04 22.4	-1.2
FLN				eSn	Sn	19 04 58.8	-1.8
FLN				eSg	Sg	19 05 30.7	-1.6
EVIA	**Vianos**	5.16	196	Pn	Pn	19 03 59.9	-0.2
	2.7nm,0.2s,SNR=7.9						
FRF	**La Foret Royal**	5.31	88	ePn	Pn	19 04 01.9	-0.4
FRF				eSn	Sn	19 04 59.4	-5.1
FRF				eSg	Sg	19 05 30.5	-7.0
	1.8nm,0.3s						
LPG	**La Plagne**	5.62	68	ePn	Pn	19 04 06.6	-0.1

LPG				eSg	Sg	19 05 42.9	-5.1
	3.9nm,0.5s						
CABF	La Chapelle	5.64	56	eSg	Sg	19 05 44.3	-4.2
	16nm,0.7s						
EQES	Quesada	6.08	198	Pn	Pn	19 04 13.4	+0.2
	2.1nm,0.3s,SNR=6.9						
EQES	Quesada	6.08	198	Pn	Pn	19 04 13.4	+0.2
	2.1nm,0.3s,SNR=6.9						
EADA	Adamuz	6.19	210	Pn	Pn	19 04 14.4	-0.4
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	Sn	19 05 18.4	-8.2
	0.9nm,0.3s,SNR=7.9						
EADA	Adamuz	6.19	210	Pn	Pn	19 04 14.4	-0.4
EADA				Sn	Sn	19 05 21.0	-5.6
EADA	Adamuz	6.19	210	Pn	Pn	19 04 14.4	-0.3
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	Sn	19 05 21.0	-5.6
	0.9nm,0.3s,SNR=7.9						
EQUE	Quentar	6.74	199	Pn	Pn	19 04 22.1	-0.4
	1.6nm,0.3s,SNR=4.0						
EBAD	Badajoz	6.81	227	Pn	Pn	19 04 23.6	+0.1
	0.4nm,0.1s,SNR=4.0						
EBAD				Sn	Sn	19 05 36.1	-6.0
	0.9nm,0.2s,SNR=7.9						
EBAD	Badajoz	6.81	227	Pn	Pn	19 04 23.6	+0.1
	0.4nm,0.1s,SNR=4.0						
EBAD				Sn	Sn	19 05 36.1	-6.0
	0.9nm,0.2s,SNR=7.9						
EBER	Berja	6.92	195	Pn	Pn	19 04 25.4	+0.5
EBER				Sn	Sn	19 05 40.0	-4.7
EBER	Berja	6.92	195	Pn	Pn	19 04 25.4	+0.5
	1.4nm,0.4s,SNR=7.9						
EBER				Sn	Sn	19 05 40.0	-4.7
	0.6nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	7.41	220	Pn	Pn	19 04 29.5	-2.3
	0.4nm,0.4s,SNR=4.0						
EMIN				Sn	Sn	19 05 48.9	-8.0
	0.5nm,0.3s,SNR=4.0						
EMIN	Mina Concepcio	7.41	220	Pn	Pn	19 04 29.5	-2.3
	0.4nm,0.4s,SNR=4.0						
EMIN				Sn	Sn	19 05 48.9	-8.1
	0.5nm,0.3s,SNR=4.0						
EGRO	El Granado	7.98	223	Pn	Pn	19 04 37.7	-2.2
	0.0nm,0.3s,SNR=4.0						
EGRO				Sn	Sn	19 06 02.0	-9.3
	0.6nm,0.4s,SNR=4.0						
EGRO	El Granado	7.98	223	Pn	Pn	19 04 37.7	-2.2
	SNR=4.0						

JMA 17 19:17:44.6±0.2,38.29N×144.78E,h54^{km},M3.5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.56	289	P	P	19 18 24.9	+0.3
OFUJ				eS	S	19 18 55.0	+0.3
MIYJ	Miyakonagasawa	2.64	300	P	P	19 18 25.6	-0.2
MIYJ				eS	S	19 18 56.3	-0.5
JIO	Ouri	2.70	275	P	P	19 18 26.8	+0.1
JIO				S	S	19 18 58.3	0.0
JMK	Ichinoseki	2.87	284	P	P	19 18 29.4	+0.4
JMK				eS	S	19 19 02.9	+0.5
JCH	Churui	4.45	346	P	P	19 18 48.6	-2.7
JCH				eS	S	19 19 36.6	-5.8
NEM2	Nemuro 2	5.12	8	P	P	19 18 55.7	-5.0
JRY	Ryogami san	5.21	246	P	P	19 19 01.2	-0.8
JTKR	Abashiri--Toko	5.71	354	P	P	19 19 05.6	-3.3
JTKR				eS	S	19 20 06.5	-7.5

CRAAG **17** *19:26:47.6,22.38S×67.98W,Mb6.8*

IGIL **17** *19:26:48.8±41.0,25.88S×59.69W,h1^{km}±999^{km},MS6.2*

GUC **17** *19:26:52.3±0.8,23.08S×67.86W,h155^{km}±7^{km},ML6.8*

MOS **17** *19:26:54.2±1.0,22.20S×67.92W,h149^{km},mb6.1/73, MS6.3/23,Error ellipse: s-maj=7.3km s-min=4.8km az=75.4*

NEIC **17** *19:26:54.5±0.1,22.36S×67.90W,h147^{km},mb6.0/161, ME6.5,MW6.8,Error ellipse: s-maj=4.0km s-min=2.9km az=211.0 Broadband fault plane solution: P waves. NP1: φ$_s$15°,δ80°,λ-55°. NP2:φ$_s$119°,δ36°,λ-163°. Principal axes: T Plg27°, Azm78°; N Plg0°, Azm0°; P Plg44°, Azm319°; Moment Tensor Solution. s58 Moment tensor: Scale 10^{19} Nm; M$_{rr}$-0.98; M$_{θθ}$-0.35; M$_{φφ}$1.33; M$_{rθ}$-0.18; M$_{θφ}$0.18; M$_{φr}$-1.91; Best double couple: M$_0$2.2×10^{19} NP1: φ$_s$187°,δ16°,λ-88°. NP2:φ$_s$5°,δ74°,λ-91°. Principal axes: T 2.43, Plg29°, Azm96°; N -.37, Plg0°, Azm5°; P -2.06, Plg61°, Azm275°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Power outages occurred at Tocopilla, Chile. Felt [VI] at Mejillones and Tocopilla; [V] at Antofagasta, Calama, Caldera, Camina, Chanaral, Copiapo, Huara, Sierra Gorda and Taltal; [IV] at Diego de Almagro, El Salvador, Iquique, Maria Elena, San Pedro de Atacama, Tierra Amarilla and Vallenar; [III] at Arica and Camarones, Chile. Also felt [II] at Calana and Tacna, Peru.

IDC **17** *19:26:55.3±0.3,22.26S×67.68W,h151^{km}±2^{km},mb5.7/31, mb1 5.8/34,mb1mx5.8/34,mbtmp6.2/34,MS6.0/13, Ms1 6.0/13,ms1mx5.8/25 Error ellipse: s-maj=6.9km s-min=5.7km az=59.0*

BGS **17** *19:26:56.1,22.32S×67.89W,h165^{km},mb5.8*

BJI **17** *19:26:56.4,22.30S×67.90W,h162^{km},mB6.6*

HRVD **17** *19:26:56.4±0.1,22.46S×68.13W,h155^{km},MW6.8/94, Centroid moment Tensor Solution. LP body waves: s93,c253;Mantle waves: s94,c474; Half duration: 6^{s}1 Moment tensor: Scale 10^{19}Nm; M$_{rr}$-0.70±.01; M$_{θθ}$-0.36±.01; M$_{φφ}$1.07±.01; M$_{rθ}$-0.24±.01; M$_{θφ}$-0.58±.01; M$_{φr}$-1.56±.01; Best double couple: M$_0$1.914×10^{19} NP1: φ$_s$126°,δ26°,λ-149°. NP2:φ$_s$7°,δ77°,λ-68°. Principal axes: T 2.04, Plg29°, Azm79°; N -.25, Plg22°, Azm182°; P -1.788, Plg53°, Azm304°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

LDG **17** *19:26:59.7±0.4,21.30S×67.48W,h161^{km},Mb5.9/44, Ms6.2/10 Error ellipse: s-maj=22.9km s-min=17.7km az=16.0*

ISC 17 19:26:54.8±0.1,22.37S±0.03×67.94W±0.03,h162^{km}, h162^{km}±.7^{km}:pP-P,n1104,σ1^{s}07/726,mb5.9/201, 174C-27D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPCH	San Pedro de A	0.59	204	⇓iP	P	19 27 14.2	-4.1
SPCH				i S	S	19 27 31.8	-4.6
ANCH	Antofagasta	2.62	240	⇑eP	P	19 27 34.0	-4.6
ANCH				i S	S	19 28 04.9	-7.3
ANCH				AMP		19 28 13.6	
	comp=E,232µm,0.4s						
CPN1	Cerro Paranal	3.19	225	⇑eP	P	19 27 39.6	-6.1
CPN1				i S	S	19 28 15.0	-10
CPN1				AMP		19 28 23.4	
	comp=E,310µm,0.4s						
CRCH	Chaqaral	4.65	211	eP	P	19 27 57.5	-7.2
CDCH	Caldera	5.37	209	⇑eP	P	19 28 05.4	-8.7
CDCH				i S	S	19 29 01.2	-14
LPAZ	La Paz	6.05	358	P	P	19 28 22.6	-0.4
	comp=E,136nm,0.3s,baz=169,slow=10,SNR=367						
LPAZ				S	S	19 29 25.6	-6.1
	baz=204,slow=12,SNR=1.4						
LPAZ				LR	LR	19 30 21.6	
	comp=E,39µm,20.8s,baz=191,slow=35						
LPAZ	La Paz	6.05	358	Pn	P	19 28 22.7	-0.4
ARE	Arequipa	6.76	330	⇑iP	P	19 28 27.8	-4.8
TLL	Tololo Astrono	8.18	198	⇑eP	P	19 28 43.2	-8.3
SIV	San Ignacio	9.07	47	P	P	19 28 58.6	-4.6
	comp=E,1µm,0.3s,baz=246,slow=10,SNR=920						
SIV				S	S	19 30 36.3	-7.4
	comp=E,296nm,0.3s,baz=251,slow=18,SNR=5.6						
ZON	Zonda	9.16	184	eP	P	19 29 01.1	-3.3
CFAA	Coronel Fontan	9.20	182	P	P	19 28 57.4	-7.6
	comp=E,6.2nm,0.3s,baz=355,slow=12,SNR=96						
CFAA				S	S	19 30 35.0	-12
	comp=E,47nm,0.3s,baz=224,slow=18,SNR=12						
CFAA				LR	LR	19 32 34.5	
	comp=E,23µm,18.3s,baz=360,slow=36						
CPUP	Villa Florida	10.45	114	Pn	P	19 29 16.9	-4.5
MDZ	Mendoza	10.51	184	eP	P	19 29 17.4	-4.7
MDZ				PP	PP	19 29 36.4	+4.7
MDZ				S	S	19 31 22.5	+5.0
MDZ				LR	LR	19 32 24.9	
MDZ	Mendoza	10.51	184	eP	P	19 29 17.4	-4.7
MDZ				S	S	19 31 22.5	+5.0
NNA	Nana	13.37	319	Pn	P	19 29 57.4	-1.7
SAML	Samuel	14.10	20	Pn	P	19 30 05.6	-2.9
LPA	La Plata	15.26	147b	iP	P	19 30 21.0	-2.0
	comp=E,2µm,0.8s						
LPA	La Plata	15.26	147	eP	P	19 30 24.9	+1.9
TRQA	Tornquist	16.46	163	Pn	P	19 30 33.4	-4.3
PLCA	Paso Flores	18.44	186	P	P	19 30 56.7	-3.8
	comp=E,7.7nm,0.3s,baz=5.1,slow=13,SNR=67						
PLCA				S	S	19 34 18.6	+1.1
	comp=E,1.3nm,0.3s,baz=55,slow=12,SNR=1.4						
PLCA				LR	LR	19 39 44.4	
	comp=E,78µm,19.0s,baz=9.6,slow=41						
PLCA	Paso Flores	18.44	186	Pn	P	19 30 56.4	-4.1
	comp=E,638nm,1.2s						
PLCA	Paso Flores	18.44	186	P	P	19 30 56.7	-3.8
PLCA				S	S	19 34 18.6	+1.2
PLCA				pmax	pmax		
	comp=Z,8.0nm,0.3s						
PLCA				smax			
	comp=N,1.0nm,0.3s						
PLCA				MLR	MLR		
	comp=Z,78µm,19.0s						
BDFB	Brasilia	19.98	74	P	P	19 31 14.1	-2.5
	comp=Z,4.3nm,0.3s,baz=256,slow=12,SNR=49						
BDFB				S	S	19 34 48.9	+1.8
	comp=Z,8.6nm,0.3s,baz=252,slow=20,SNR=1.5						
BDFB				LR	LR	19 40 09.1	
	comp=Z,117µm,21.3s,baz=251,slow=40						
BAO	Brasilia Array	20.01	74	P	P	19 31 14.0	-2.8
CAM4	Nova Friburgo	23.46	95	eP	P	19 31 48.6	-2.2
CAM4				i		19 31 51.8	
CAM4				i		19 31 55.0	
CAM4				i		19 31 59.7	
ROSC	El Rosal	27.77	346	P	P	19 32 31.0	+0.2
	comp=Z,119nm,0.8s,mb5.7,baz=141,slow=3.0,SNR=21						
ROSC				LR	LR	19 45 34.0	
	comp=Z,60µm,19.6s,baz=186,slow=40						
EFI	East Falkland	30.24	168	P	P	19 32 49.9	-2.5
SDV	Santo Domingo	31.17	355	P	P	19 32 58.1	-2.8
	comp=Z,220nm,0.9s,mb5.9,baz=173,SNR=45						
SDV	Santo Domingo	31.17	355	P	P	19 32 58.0	-2.9
USHA	Ushuaia	32.42	181	P	P	19 33 10.4	-1.0
	comp=Z,94nm,0.9s,mb5.5,baz=346,slow=4.8,SNR=25						
USHA				S	S	19 38 10.5	-2.1
	comp=Z,28nm,1.0s,baz=30,slow=14,SNR=1.4						
SIPA	Siparia	32.92	12	eP	P	19 33 20.0	+4.0
ALNG	Atlantic LNG	32.92	11	eP	P	19 33 20.0	+3.9
TPP	Pointe-a-Pierr	33.10	12	⇓iP	P	19 33 21.2	+3.6
TRN	Trinidad (W)	33.43	12	eP	P	19 33 22.5	+2.1
BOT	Bacolet	34.07	13	eP	P	19 33 29.8	+4.0
TPR	Prospect	34.08	13	eP	P	19 33 27.4	+1.5
ACR	Cerro Adams	34.25	333	eP	P	19 33 28.3	+1.0
GRW	Mount Saint Ca	34.86	11	eP	P	19 33 32.9	+0.3
GRHS	Sauteurs	34.93	11	eP	P	19 33 33.4	+0.3
RCBR	Riachuelo	35.03	67	P	P	19 33 31.9	-2.1
	comp=Z,258nm,0.8s,mb5.9						
BUS	Buena Vista	35.31	332	eP	P	19 33 37.7	+1.4
LCR2	La Lucha 2	35.58	332	eP	P	19 33 39.7	+1.0
ICR	Volcan Irazu	35.72	332	eP	P	19 33 41.0	+1.2
LAJ	Bijagual	35.74	332	eP	P	19 33 41.5	+1.5
SJS	Escuela Geolog	35.78	332	eP	P	19 33 43.0	+2.7
FCV	Fort Charlotte	35.91	11	eP	P	19 33 43.3	+1.9
PRS1	Puriscal	35.93	332	eP	P	19 33 42.0	+0.4
SVB	Belmont	36.02	11	eP	P	19 33 43.3	+1.0
CGA2	Cerro Gallo 2	36.03	332	eP	P	19 33 45.2	+2.8
VPS2	Volcan Poas 2	36.08	332	eP	P	19 33 46.0	+3.2
BBSP	Saint Philip	36.22	14	eP	P	19 33 48.0	+4.0
JTS	JuntasAbangare	36.49	331	P	P	19 33 47.4	+1.2
	comp=Z,645nm,1.1s,mb6.2,baz=168,slow=1.8,SNR=43						
JTS				S	S	19 39 21.1	+5.5
	comp=Z,7.0nm,0.9s,baz=139,slow=20,SNR=2.6						
JTS	JuntasAbangare	36.49	331	P	P	19 33 47.4	+1.1
	comp=Z,847nm,1.4s,mb6.2						
JTS	JuntasAbangare	36.49	331	⇑iP	P	19 33 45.9	-0.4
VCR	Vista de Mar	36.66	330	eP	P	19 33 48.9	+1.3
MVM	Montagne Vaucl	37.34	11	eP	P	19 33 52.2	-1.2
FDF	Fort de France	37.47	11	⇑eP	P	19 33 53.5	-1.0
CRM	Caravelle	37.53	11	eP	P	19 33 53.5	-1.4
MADN	Villa Maderas	37.74	331	eP	P	19 33 57.8	+1.1
RPN	Rapa Nui	37.77	254	P	P	19 33 57.5	+0.6
	comp=Z,442nm,0.8s,mb6.2,baz=88,slow=3.1,SNR=28						
RPN				pP	pP	19 34 31.1	-1.0
	comp=Z,170nm,0.7s,baz=108,slow=3.4,SNR=2.7						
RPN				S	S	19 39 42.0	+7.1
	comp=Z,25nm,0.8s,baz=146,slow=3.6,SNR=1.9						
RPN	Rapa Nui	37.77	254	P	P	19 33 57.0	+0.2
SSNN	San Juan del S	37.77	331	eP	P	19 33 58.4	+1.3
DSHT	Scott’s Head	37.90	10	eP	P	19 33 57.5	-0.6
CONN	Concepcion	37.92	331	eP	P	19 33 58.2	0.0
DBCT	Belle View Cho	37.96	10	eP	P	19 34 02.6	+4.0
MDN	Morne-Daniel	38.00	10	eP	P	19 33 59.9	+1.0
BBL	Barber’s Block	38.19	10	eP	P	19 33 59.0	-1.5
BBL	Barber’s Block	38.19	10	⇓eP	PP	19 35 16.6	-17
APON	Apoyo	38.43	331	eP	P	19 34 03.5	+1.0
TBG	Guadaloupe-3	38.48	10	eP	P	19 34 02.5	-0.4
MGG	Marie-Galante	38.60	10	eP	P	19 34 04.6	+0.7
TICN	Ticuantepe	38.60	331	eP	P	19 34 03.5	-0.4
WILN	Americas 2	38.70	331	eP	P	19 34 05.4	+0.7
MGAN	Managua	38.71	331	eP	P	19 34 05.4	+0.6
LZG	Guadaloupe-1	38.74	9	eP	P	19 34 02.1	-3.0
XAVN	Gruta Xavier	38.75	330	eP	P	19 34 06.6	+1.5
COPN	Copaltepe	38.90	330	eP	P	19 34 06.7	+0.3
PYTN	Playitas	38.97	331	eP	P	19 34 08.5	+1.6
DEG	La Desirade	39.03	11	eP	P	19 34 04.9	-2.6
MOMJ	Momotombo	39.08	330	eP	P	19 34 08.4	+0.5
MIRN	Miramar	39.18	330	eP	P	19 34 10.1	+1.4
CNGN	Cerro Negro	39.23	330	eP	P	19 34 09.2	+0.1
LEON	Leon	39.24	330	eP	P	19 34 09.6	+0.3
TEL3	Telica 3	39.36	330	eP	P	19 34 10.4	+0.2
TELN	Telica	39.38	330	eP	P	19 34 09.1	-1.2
CRIN	San Cristobal	39.57	330	eP	P	19 34 13.2	+1.4
SJG	San Juan	40.27	3	P	P	19 34 14.9	-2.7
	comp=Z,1µm,0.6s,mb6.6,baz=212,slow=2.7,SNR=46						
SJG				S	S	19 40 09.0	-3.5
	comp=Z,65nm,0.8s,baz=358,slow=19,SNR=19						
SJG	San Juan	40.27	3	P	P	19 34 14.6	-3.0
SJG	San Juan	40.27	3	P	P	19 34 14.9	-2.7
SJG				S	S	19 40 09.0	-3.4
SJG				smax			
	comp=N,65nm,0.8s						
MTP	Monte Pirata	40.28	4	P	P	19 34 14.7	-3.0
HUMP	Col San Antoni	40.31	3	P	P	19 34 15.8	-2.1
MPR	Mayaguez	40.34	1	P	P	19 34 15.7	-2.4
CBYP	Canovanas	40.44	3	P	P	19 34 14.6	-4.4
PMSA	Palmer Station	42.47	178	eP	P	19 34 34.1	-0.9
	comp=N,1µm,1.5s,mb6.3						
IXG	Ixpaco	42.49	327	eP	P	19 34 37.2	+1.3
MASC	Masc	42.73	351	eP	P	19 34 38.3	+0.5
RCC	Rio Carpintero	42.78	349	eP	P	19 34 37.0	-1.2
RCC				eS	S	19 40 37.9	-11
	comp=N,1µm,12.0s						
	comp=E,3µm,7.8s						
MRL	Marmol	42.87	328	eP	P	19 34 38.7	-0.3
LMGC	Las Mercedes	43.09	347	eP	P	19 34 40.9	+0.2
LMGC				eS		19 40 20.9	
	comp=N,8µm,18.2s						
	comp=E,32µm,17.0s						
TP2	Tecpan 2	43.30	326	⇑eP	P	19 34 43.5	+1.1
MOAC	Moa	43.31	350	eP	P	19 34 42.1	-0.3
MOAC				eS	S	19 40 49.3	-7.7
	comp=N,9.2nm,5.5s						
	comp=E,19nm,9.5s						
CCCC	Cccc	44.35	347	eP	P	19 34 46.9	-3.9
CCIG	Comitan	45.13	326	i P	P	19 34 57.1	+0.1
HUIG	Huatulco	46.88	321	i P	P	19 35 11.4	+0.7
SOR	Soroa	47.22	341	eP	P	19 35 14.4	+1.0
TUIG	Tuzandepetl	47.78	325	eP	P	19 35 17.0	-0.8
VHO	Vista Hermosa	48.28	322	eP	P	19 35 18.2	-3.4
OXX	Oaxaca	48.28	322	eP	P	19 35 22.0	+0.4
PNIG	Pinotepa	48.55	320	i P	P	19 35 24.5	+0.8
TRIS	Tristan da Cun	49.83	120	eP	P	19 35 31.3	-2.0
	comp=E,424nm,0.8s,mb6.1						
CAIG	El Cayaco	50.35	318	eP	P	19 35 33.9	-3.6
PLIG	Platanillo	50.93	320	i P	P	19 35 41.5	-0.3
PPM	Popocatepetl	50.95	322	eP	P	19 35 43.0	+1.1
YAIG	Yautepec	51.04	321	eP	P	19 35 42.4	-0.2
UNM	Universidad Na	51.47	321	i P	P	19 35 46.2	+0.3
ZIIG	Zihuatanejo	51.52	318	eP	P	19 35 45.7	-0.6
DWPF	Disney	51.84	345	P	P	19 35 47.6	-1.0
DWPF				pP	pP	19 36 26.1	+0.5
ASCN	Ascension	53.40	83	P	P	19 35 58.7	-1.6
BBSR	BB Station	54.52	3	P	P	19 36 06.7	-1.5
CJM	Chamela	55.19	316	i P	P	19 36 12.4	-0.8
ZAIG	Zacatecas	56.12	321	eP	P	19 36 18.2	-1.7
NHSC	New Hope	56.38	348	P	P	19 36 21.1	-0.5
NHSC				pP	pP	19 36 58.6	-0.5
GOGA	Godfrey	57.41	345	P	P	19 36 26.7	-2.0
	comp=E,38nm,1.3s,mb5.1						
GOGA				pP	pP	19 37 04.2	-2.1
GOGA	Godfrey	57.41	345	P	P	19 36 26.7	-2.0
GOGA				*PP	pP	19 37 04.3	-2.1
GOGA				pmax	pmax		
	comp=Z,505nm,1.3s,mb6.2						
JSC	Jenkinsville	57.74	347	eP	P	19 36 29.4	-1.7
LRAL	Lakeview Retre	58.02	341	P	P	19 36 30.3	-2.7
	comp=Z,381nm,1.2s,mb6.1						
LRAL				pP	pP	19 37 09.7	-1.1
VNA3	Neumayer Olymp	58.97	161	⇑iP	P	19 36 39.2	0.0
VNA3	Neumayer Olymp	58.97	161	⇑i	pP	19 37 16.0	-1.0
VNA3	Neumayer Olymp	58.97	161	S	S	19 44 35.5	+4.8
VNA1	Neumayer--Stat	59.17	160	⇑iP	P	19 36 39.9	-0.7
VNA1	Neumayer--Stat	59.17	160		pP	19 37 17.3	-1.1
VNA2	Neumayer--Watz	59.54	161	⇑iP	P	19 36 42.1	-1.0
VNA2	Neumayer--Watz	59.54	161	⇑i	pP	19 37 20.2	-0.8
VNA2	Neumayer--Watz	59.54	161	S	S	19 44 42.7	+4.6
NATX	Nacogdoches	59.59	334	P	P	19 36 43.5	-0.4
NATX				pP	pP	19 37 21.7	-0.2
CPCT	Cooper Cave	59.61	344	P	P	19 36 42.0	-2.0
CPCT				pP	pP	19 37 20.8	-1.1
CPCT				P’P’		20 06 20.7	
SWET	Sewanee	59.76	343	P	P	19 36 42.0	-3.0
SWET				pP	pP	19 37 20.0	-3.0
OXF	Oxford	60.13	340	P	P	19 36 45.5	-2.1
OXF				pP	pP	19 37 22.9	-2.7
OXF				P’P’		20 06 16.7	
BLA	Blacksburg	60.41	349	eP	P	19 36 48.4	-1.1
	comp=Z,29µm,1.3s						
BLA				eS	S	19 44 54.5	+4.8
BLA	Blacksburg	60.41	349	eP	P	19 36 48.4	-1.0
BLA				eS	S	19 44 54.5	+4.8
BLA				pmax	pmax		
	comp=Z,2µm,1.3s,mb6.8						
TZTN	Tazewell	60.42	346	P	P	19 36 47.7	-1.7
TZTN				pP	pP	19 37 25.3	-2.3
ELN	Prospectdale	60.49	348	eP	P	19 36 48.8	-1.2
ELN				eS	S	19 44 55.0	+4.3
JCT	Junction City	60.81	329	P	P	19 36 49.2	-2.9
	comp=Z,220nm,0.8s,mb6.0						
JCT				pP	pP	19 37 29.7	-0.6
JCT				P’P’		20 06 12.0	
JCT	Junction City	60.81	329	P	P	19 36 49.3	-2.9
JCT				*PP	pP	19 37 29.7	-0.6
JCT				pmax	pmax		
	comp=Z,220nm,0.8s,mb6.0						
FWV	Forest Hill	60.85	348	eP	P	19 36 51.0	-1.4
MET	Memphis--Engin	60.86	339	P	P	19 36 49.0	-3.6
MET				pP	pP	19 37 28.6	-2.0
CBN	Corbin	60.90	352	P	P	19 36 50.6	-2.1
	comp=Z,206nm,0.7s,mb6.1						
CBN				pP	pP	19 37 31.1	+0.3
WVT	Waverly	61.15	342	eP	P	19 36 51.5	-2.9
	comp=Z,2µm,1.1s,mb6.8						
WVT				eS	S	19 45 04.6	+5.7
WVT	Waverly	61.15	342	eP	P	19 36 51.5	-2.9
WVT				eS	S	19 45 04.6	+5.7
WVT				pmax	pmax		
	comp=Z,2µm,1.1s,mb6.8						
SNAA	Sanae	61.17	161	⇑iP	P	19 36 52.5	-1.6
SNAA	Sanae	61.17	161	⇑i	pP	19 37 29.6	-2.7
SNAA	Sanae	61.17	161	S	S	19 45 02.0	+3.2
SNAA	Sanae	61.17	161	P	P	19 36 52.0	-2.1
	comp=Z,170nm,1.1s,mb5.8,baz=294,slow=5.5,SNR=131						
SNAA				pP	pP	19 37 28.3	-4.0
	comp=Z,15nm,0.6s,baz=259,slow=9.5,SNR=0.9						
SNAA				S	S	19 44 58.9	+0.1
	comp=Z,1.3nm,0.9s,baz=292,slow=16,SNR=2.0						
SNAA				LR	LR	20 04 50.7	
	comp=Z,5µm,18.8s,baz=291,slow=37						
SNAA	Sanae	61.17	161	P	P	19 36 52.0	-2.1
SNAA				*PP	pP	19 37 28.3	-4.0
SNAA				S	S	19 44 58.9	+0.1
SNAA				pmax	pmax		
	comp=Z,170nm,1.1s						
SNAA				pmax	pmax		
	comp=Z,15nm,0.6s						
SNAA				smax			
	comp=N,1.0nm,0.9s						
SNAA				MLR	MLR		
	comp=Z,5µm,18.8s						
RKT	Rikitea	61.30	255	eP	P	19 36 54.9	-0.7
	comp=Z,747nm,1.4s,mb6.3						
RKT				epP	pP	19 37 33.3	-0.5
	comp=Z,1µm,1.4s						
RKT	Rikitea	61.30	255	eLQ		19 52 27.4	
RKT				eLR	LR	19 55 00.7	
	comp=Z,86µm,30.5s						
HBAR	Harrisburg	61.50	339	eP	P	19 36 54.9	-1.8
MIAR	Mount Ida	61.62	336	P	P	19 36 54.7	-2.9
	comp=Z,389nm,1.2s,mb6.1						
MIAR				pP	pP	19 37 34.5	-1.3
MIAR				P’P’		20 06 23.5	
MIAR	Mount Ida	61.62	336	P	P	19 36 54.7	-2.9
MIAR				*PP	pP	19 37 34.5	-1.3
MIAR				pmax	pmax		
	comp=Z,389nm,1.2s,mb6.1						
GNAR	Gosnell	61.66	340	P	P	19 36 55.1	-2.8
GNAR				pP	pP	19 37 35.0	-1.1
LTX	Lajitas	61.85	325	P	P	19 36 57.8	-1.4
LTX				pP	pP	19 37 37.5	+0.1
TXAR	Lajitas Array	61.85	325	P	P	19 36 57.8	-1.5
	comp=Z,31nm,0.7s,mb5.2,baz=149,slow=7.3,SNR=63						
TXAR				pP	pP	19 37 35.8	-1.7
	comp=Z,47nm,0.9s,baz=157,slow=9.5,SNR=3.1						
TXAR				S	S	19 45 08.8	+0.9
	comp=Z,1.0nm,0.5s,baz=213,slow=40,SNR=2.8						
TXAR				PKPPKP		20 06 03.6	
	comp=Z,1.3nm,0.8s,SNR=5.4						
TXAR				PKP2bc		20 06 14.2	
	comp=Z,4.9nm,1.0s,baz=225,slow=1.8,SNR=8.9						
TXAR	Lajitas Array	61.85	325	P	P	19 36 57.8	-1.5
TXAR				pP	pP	19 37 35.8	-1.7
TXAR				S	S	19 45 08.8	+0.9
TXAR				P’P’		20 06 03.6	
TXAR				⇑e		20 06 14.2	
LPIG	La Paz	61.88	316	eP	P	19 36 58.4	-1.1
PARMO	Parma	62.22	340	eP	P	19 36 59.3	-2.3
PARMO				epP	pP	19 37 38.4	-1.4
MVL	Millersville	62.54	353	P	P	19 37 01.5	-2.1
MVL				pP	pP	19 37 43.4	+1.5
WCI	Wyandotte Cave	62.69	344	P	P	19 37 01.2	-3.4
	comp=Z,243nm,0.7s,mb6.1						
WCI				pP	pP	19 37 41.0	-2.0
WCI	Wyandotte Cave	62.69	344	P	P	19 37 01.3	-3.4
WCI				*PP	pP	19 37 41.0	-2.0
WCI				pmax	pmax		
	comp=Z,243nm,0.7s,mb6.1						
MCWV	Mont Chateau	62.70	350	P	P	19 37 03.3	-1.4
MCWV				pP	pP	19 37 44.2	+1.2
BRNJ	Basking Ridge	63.03	354	P	P	19 37 07.0	+0.1
BRNJ				pP	pP	19 37 45.8	+0.6
CPNY	Central Park	63.08	355	P	P	19 37 06.9	-0.3
CPNY				pP	pP	19 37 45.6	+0.1
PAL	Palisades	63.29	355	P	P	19 37 07.5	-1.0
	comp=Z,261nm,1.2s,mb5.9						
PAL				pP	pP	19 37 45.7	-1.2
PAL	Palisades	63.29	355	P	P	19 37 07.6	-1.0
PAL				*PP	pP	19 37 45.7	-1.2
PAL				pmax	pmax		
	comp=Z,261nm,1.2s,mb5.9						
ACSO	Alum Creek Sta	63.83	347	P	P	19 37 10.1	-2.0
	comp=Z,645nm,1.1s,mb6.4						
ACSO				pP	pP	19 37 47.5	-3.0
WMOK	Wichita Mounta	63.90	332	eP	P	19 37 10.4	-2.3
	comp=Z,516nm,1.6s,mb6.1						
WMOK	Wichita Mounta	63.90	332	eP	P	19 37 10.4	-2.3
WMOK				pmax	pmax		
	comp=Z,516nm,1.6s,mb6.1						
CCM	Cathedral Cave	63.97	340	P	P	19 37 10.8	-2.2
CCM				P’P’		20 06 04.2	
BRYW	Bryant College	64.04	357	eP	P	19 37 12.6	-0.9
	comp=Z,2µm,1.1s,mb6.8						
QUA2	Belchertown	64.45	356	eP	P	19 37 16.0	-0.1
	comp=Z,325nm,1.1s,mb6.1						

QUA2				*e*pP	pP	19 37 47.8	-6.7
GDL2	**Guadalupe Moun**	**64.48**	**326**	P	**P**	**19 37 15.5**	**-1.0**
GDL2				P'P'		20 06 05.1	
WES	**Weston**	**64.50**	**357**	P	**P**	**19 37 15.9**	**-0.5**
	comp=Z,184nm,1.2s,mb5.8						
WES	**Weston**	**64.50**	**357**	P	**P**	**19 37 15.9**	**-0.5**
WES				pmax	pmax		
	comp=Z,184nm,1.2s,mb5.8						
MNTX	**Cornudas Mount**	**64.62**	**325**	P	**P**	**19 37 15.2**	**-2.1**
	comp=Z,288nm,1.1s,mb6.0						
HRV	**Harvard--Oak R**	**64.63**	**357**	P	**P**	**19 37 16.3**	**-0.9**
	comp=Z,302nm,1.1s,mb6.0						
HRV	**Harvard--Oak R**	**64.63**	**357**	P	**P**	**19 37 16.3**	**-1.0**
HRV				pmax	pmax		
	comp=Z,302nm,1.1s,mb6.0						
ALLY	**Alegheny Colle**	**64.69**	**350**	P	**P**	**19 37 16.6**	**-1.1**
CPRX	**Cap Rock**	**64.89**	**327**	*e*P	**P**	**19 37 17.7**	**-1.4**
ERPA	**Erie**	**65.12**	**350**	P	**P**	**19 37 19.4**	**-1.0**
AMTX	**Amarillo**	**65.33**	**330**	P	**P**	**19 37 20.0**	**-1.9**
	comp=Z,272nm,1.0s,mb6.0						
FFD	**Franklin Falls**	**65.60**	**357**	*e*P	**P**	**19 37 25.2**	**+1.7**
	comp=Z,641nm,1.1s,mb6.4						
MAIT	**Maitri**	**65.67**	**159**	*e*P	**P**	**19 37 13.2**	**-10**
MAIT				*e*PsP		19 37 59.0	
MAIT				*e*PCp		19 38 17.3	
MAIT				*e*S	S	19 45 51.2	-3.4
MAIT	**Maitri**	**65.67**	**159**	*e*P	**P**	**19 37 22.1**	**-1.4**
NVL	**N'lazarevskaya**	**65.70**	**159**	*e*P	**P**	**19 37 20.4**	**-3.3**
NVL				*e*		19 38 16.9	
NVL				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.3						
NVL				MLR	MLR		
	comp=Z,836nm,20.6s						
HNH	**Hanover**	**65.86**	**357**	P	**P**	**19 37 24.2**	**-1.0**
AAM	**Ann Arbor**	**65.96**	**347**	P	**P**	**19 37 25.6**	**-0.2**
NCB	**Newcomb**	**66.26**	**355**	P	**P**	**19 37 26.8**	**-0.9**
	comp=Z,438nm,1.1s,mb6.2						
MIV	**Mineville/With**	**66.31**	**356**	P	**P**	**19 37 27.2**	**-0.8**
LBNH	**Lisbon**	**66.38**	**357**	P	**P**	**19 37 27.8**	**-0.7**
KSU1	**Kansas State U**	**66.78**	**336**	P	**P**	**19 37 29.0**	**-2.0**
FRNY	**Flat Rock**	**67.07**	**356**	P	**P**	**19 37 32.0**	**-0.8**
BNM	**Barren Site**	**67.18**	**326**	P	**P**	**19 37 33.3**	**-0.3**
BNM				pP	pP	19 38 15.0	+2.6
BNM				P'P'		20 06 02.2	
LPM	**Los Pinos Moun**	**67.31**	**326**	P	**P**	**19 37 34.1**	**-0.4**
LPM				pP	pP	19 38 14.2	+1.0
LPM				P'P'		20 06 01.6	
LENM	**Lemitar**	**67.37**	**326**	P	**P**	**19 37 34.6**	**-0.2**
LENM				P'P'		20 06 03.5	
SADO	**Sadowa**	**67.59**	**351**	P	**P**	**19 37 34.5**	**-1.5**
	comp=Z,305nm,1.0s,mb6.0,baz=186,slow=6.8						
SADO				S	S	19 46 19.4	+1.4
	comp=Z,14nm,1.0s,baz=288,slow=19,SNR=8.8						
LAZ	**Ladron**	**67.64**	**326**	*e*P	**P**	**19 37 36.0**	**-0.5**
ANMO	**Albuquerque**	**67.72**	**326**	P	**P**	**19 37 36.7**	**-0.3**
	comp=Z,461nm,1.3s,mb6.0						
ANMO				pP	pP	19 38 16.2	+0.5
ANMO				P'P'		20 05 57.8	
ANMO	**Albuquerque**	**67.72**	**326**	P	**P**	**19 37 36.7**	**-0.3**
ANMO				*PP	pP	19 38 16.3	+0.5
ANMO				pmax	pmax		
	comp=Z,461nm,1.3s						
CBKS	**Cedar Bluff**	**67.76**	**334**	P	**P**	**19 37 36.1**	**-1.0**
CBKS				pP	pP	19 38 15.1	-0.9
LIC	**Lamto**	**67.77**	**73**	⇑*i*P	**P**	**19 37 35.5**	**-2.1**
	comp=Z,964nm,0.8s,mb6.3						
LIC				*e*R			
	comp=Z,39µm,19.0s						
TUC	**Tucson**	**68.07**	**322**	P	**P**	**19 37 38.9**	**-0.3**
	comp=Z,450nm,1.4s,mb6.0						
TUC				pP	pP	19 38 17.7	-0.3
TUC	**Tucson**	**68.07**	**322**	P	**P**	**19 37 38.9**	**-0.3**
TUC				*PP	pP	19 38 17.7	-0.3
TUC				pmax	pmax		
	comp=Z,450nm,1.4s,mb6.0						
DBIC	**Dimbokro**	**68.13**	**73**	P	**P**	**19 37 38.1**	**-1.7**
	comp=Z,642nm,0.6s,mb6.5,baz=215,slow=6.1,SNR=218						
DBIC				S	S	19 46 22.6	-2.3
	comp=Z,10.0nm,0.9s,baz=221,slow=20,SNR=2.6						
DBIC				PKPPKP		20 05 52.6	
	comp=Z,6.4nm,0.9s,baz=246,slow=2.9,SNR=4.8						
DBIC				LR	LR	20 08 14.9	
	comp=Z,29µm,18.4s,baz=144,slow=36						
DBIC	**Dimbokro**	**68.13**	**73**	P	**P**	**19 37 38.0**	**-1.8**
DBIC				pP	pP	19 38 14.5	-4.2
CHIE	**El Hierro**	**69.36**	**47**	⇓P	**P**	**19 37 45.9**	**-1.2**
	comp=Z,62nm,1.0s,mb5.3						
SDCO	**Great Sand Dun**	**69.45**	**329**	P	**P**	**19 37 47.5**	**0.0**
SDCO				pP	pP	19 38 26.6	+0.2
SDCO				P'P'		20 05 59.6	
EHIG	**Higuera**	**70.00**	**46**	⇑P	**P**	**19 37 50.7**	**-0.3**
	comp=Z,76nm,0.7s,mb5.5						
EGOM	**La Gomera**	**70.14**	**47**	P	**P**	**19 37 50.4**	**-1.5**
	comp=Z,336nm,1.0s,mb6.0						
TAOE	**Nuku Hiva Isla**	**70.28**	**268**	*e*LQ		19 56 11.0	
TAOE				*e*LR	LR	19 59 12.4	
	comp=Z,78µm,28.3s						
CCAN	**Las Canadas**	**70.59**	**47**	⇑P	**P**	**19 37 53.9**	**-0.7**
	comp=Z,54nm,0.8s,mb5.3						
WUAZ	**Wupatki**	**70.76**	**324**	P	**P**	**19 37 56.0**	**+0.6**
WUAZ				pP	pP	19 38 35.2	+0.7
RW3	**Ridgway**	**70.91**	**328**	P	**P**	**19 37 56.5**	**+0.2**
EBAJ	**Bajamar**	**70.97**	**47**	P	**P**	**19 37 56.7**	**-0.2**
	comp=Z,438nm,2.1s,mb5.8						
GLA	**Glamis**	**70.98**	**320**	P	**P**	**19 37 57.0**	**+0.2**
GLA				pP	pP	19 38 36.8	+0.9
ISCO	**Idaho Springs**	**71.14**	**330**	P	**P**	**19 37 57.8**	**+0.1**
	comp=Z,560nm,1.4s,mb6.1						
ISCO				pP	pP	19 38 36.9	+0.1
ISCO	**Idaho Springs**	**71.14**	**330**	P	**P**	**19 37 57.8**	**+0.2**
ISCO				*PP	pP	19 38 36.9	+0.1
ISCO				pmax	pmax		
	comp=Z,603nm,1.4s,mb6.1						
EOSO	**Osorio**	**71.21**	**48**	⇑P	**P**	**19 37 58.0**	**-0.3**
	comp=Z,444nm,1.5s,mb6.0						
PV01	**Paradox Valley**	**71.26**	**327**	P	**P**	**19 37 58.6**	**+0.2**
SMCO	**Snowmass**	**71.29**	**329**	*e*P	**P**	**19 37 58.7**	**+0.2**
	comp=Z,32nm,0.5s,mb5.3						
PV10	**Paradox Valley**	**71.68**	**327**	*e*P	**P**	**19 37 60.0**	**-0.9**
ADH	**Angra Heroismo**	**71.70**	**33**	*e*P	**P**	**19 38 00.0**	**-1.0**
ADH				*i* S	S	19 47 20.0	+14
ADH	**Angra Heroismo**	**71.70**	**33**	*i* LR	LR	20 00 25.0	
PDA	**Ponta Delgada**	**71.80**	**34**	*e*P	**P**	**19 38 00.0**	**-1.6**
PDA				*e*pP	pP	19 38 29.0	-12
PDA	**Ponta Delgada**	**71.80**	**34**	*i* S	S	19 47 00.0	-7.2
PDA				*i*		19 47 38.4	
PDA				*i*		19 56 55.0	
PDA				*e*LR	LR	20 00 30.0	
BAR	**Barrett**	**71.84**	**318**	P	**P**	**19 38 01.4**	**-0.5**
BAR				pP	pP	19 38 40.4	-0.8
PHWY	**Pilot Hill**	**72.28**	**331**	P	**P**	**19 38 04.4**	**+0.1**
PHWY				pP	pP	19 38 43.1	-0.5
PFO	**Pinyon Flat Ob**	**72.34**	**319**	P	**P**	**19 38 05.3**	**+0.4**
PFO				pP	pP	19 38 44.7	+0.6
CFTV	**Fuerteventura**	**72.43**	**48**	⇑P	**P**	**19 38 04.3**	**-1.1**
	comp=Z,102nm,1.0s,mb5.5						
LDFC	**Landfair**	**72.56**	**321**	*e*P	**P**	**19 38 07.2**	**+1.0**
NEN	**Nelson**	**72.81**	**322**	*e*P	**P**	**19 38 07.1**	**-0.5**
SRU	**San Rafael**	**72.99**	**327**	P	**P**	**19 38 07.8**	**-0.8**
SRU				pP	pP	19 38 47.9	0.0
SRU	**San Rafael**	**72.99**	**327**	P	**P**	**19 38 07.8**	**-0.8**
SRU				*PP	pP	19 38 47.9	-0.1
EYMN	**Ely**	**73.12**	**344**	P	**P**	**19 38 07.5**	**-1.6**
	comp=Z,6µm,1.1s						
EYMN				pP	pP	19 38 46.4	-2.2
EFAM	**Famara**	**73.26**	**48**	⇑P	**P**	**19 38 10.6**	**+0.2**
	comp=Z,416nm,1.4s,mb6.0						
RWWY	**Rawlins**	**73.38**	**330**	P	**P**	**19 38 11.0**	**+0.2**
RWWY				pP	pP	19 38 51.0	+0.8
MSU	**Marysvale**	**73.40**	**325**	P	**P**	**19 38 11.6**	**+0.6**
MSU				pP	pP	19 38 51.8	+1.3
MVU	**Marysvale**	**73.41**	**325**	P	**P**	**19 38 11.3**	**+0.3**
	comp=Z,421nm,1.2s,mb6.0						
MVU				pP	pP	19 38 50.8	+0.2
TMUT	**Trail Mountain**	**73.48**	**326**	P	**P**	**19 38 11.8**	**+0.3**
TMUT				pP	pP	19 38 51.7	+0.8
ARUT	**Antelope Range**	**73.55**	**324**	*e*P	**P**	**19 38 12.6**	**+0.7**
SHPR	**Sheep Range**	**73.59**	**322**	P	**P**	**19 38 12.7**	**+0.5**
GSC	**Goldstone**	**73.71**	**320**	P	**P**	**19 38 12.0**	**-0.9**
GSC				pP	pP	19 38 53.1	+0.8
MWC	**Mount Wilson**	**73.74**	**319**	P	**P**	**19 38 13.3**	**+0.3**
MWC				pP	pP	19 38 53.3	+0.8
RSSD	**Black Hills**	**73.97**	**334**	P	**P**	**19 38 14.0**	**-0.2**
	comp=Z,397nm,1.1s,mb6.1						
RSSD				pP	pP	19 38 53.7	0.0
RSSD	**Black Hills**	**73.97**	**334**	P	**P**	**19 38 14.0**	**-0.1**
RSSD				*PP	pP	19 38 53.7	+0.1
RSSD				pmax	pmax		
	comp=Z,441nm,1.1s,mb6.1						
SNCC	**San Nicolas Is**	**74.00**	**317**	P	**P**	**19 38 14.8**	**+0.2**
	comp=Z,1.0nm,1.4s						
TBI	**Tubuai**	**74.06**	**251**	*e*LQ		19 57 53.8	
TBI	**Tubuai**	**74.06**	**251**	*e*P	**P**	**19 38 15.3**	**+0.2**
	comp=Z,3µm,1.5s,mb6.7						
TBI				*e*pP	pP	19 38 54.9	+0.3
	comp=Z,2µm,1.5s						
TBI	**Tubuai**	**74.06**	**251**	*e*LR	LR	20 00 54.8	
	comp=Z,34µm,25.0s						
MPU	**Maple Canyon**	**74.23**	**327**	P	**P**	**19 38 16.2**	**+0.5**
MPU				pP	pP	19 38 55.9	+0.6
DAU	**Daniels Canyon**	**74.34**	**327**	P	**P**	**19 38 16.9**	**+0.6**
NLU	**North Lily Min**	**74.41**	**326**	P	**P**	**19 38 17.5**	**+0.7**
TPNV	**Topopah Spring**	**74.53**	**322**	*e*P	**P**	**19 38 18.1**	**+0.6**
TPNV	**Topopah Spring**	**74.53**	**322**	P	**P**	**19 38 20.0**	**+2.5**
MEH	**Mehetia**	**74.54**	**257**	*e*P	**P**	**19 38 18.1**	**+0.2**
MEH				*e*pP	pP	19 38 57.5	0.0
DAC	**Darwin (Calif)**	**74.85**	**320**	P	**P**	**19 38 19.5**	**+0.1**
	comp=Z,350nm,1.2s,mb5.9						
DAC				pP	pP	19 38 59.6	+0.7
DAC	**Darwin (Calif)**	**74.85**	**320**	P	**P**	**19 38 19.5**	**+0.1**
DAC				*PP	pP	19 38 59.6	+0.6
DAC				pmax	pmax		
	comp=Z,350nm,1.2s,mb5.9						
TCUT	**Toone Canyon**	**74.94**	**327**	P	**P**	**19 38 20.6**	**+0.7**
TCUT				pP	pP	19 39 00.1	+0.7
NOQ	**North Oquirrh**	**74.96**	**327**	P	**P**	**19 38 20.7**	**+0.8**
NOQ				pP	pP	19 38 59.6	+0.2
ISA	**Isabella**	**74.96**	**319**	P	**P**	**19 38 19.6**	**-0.4**
	comp=Z,0.6nm,1.1s						
ISA				pP	pP	19 39 00.5	+0.9
ISA	**Isabella**	**74.96**	**319**	P	**P**	**19 38 19.6**	**-0.4**
ISA				*PP	pP	19 39 00.5	+0.9
ISA				pmax	pmax		
	comp=Z,384nm,1.1s,mb5.9						
DUG	**Dugway**	**74.97**	**326**	P	**P**	**19 38 20.4**	**+0.4**
	comp=Z,285nm,1.0s,mb5.8						
DUG				pP	pP	19 39 00.0	+0.4
DUG	**Dugway**	**74.97**	**326**	P	**P**	**19 38 20.4**	**+0.4**
DUG				*PP	pP	19 39 00.0	+0.4
DUG				pmax	pmax		
	comp=Z,285nm,1.0s,mb5.8						
VAH	**Vaihoa**	**75.00**	**259**	*e*P	**P**	**19 38 20.9**	**+0.3**
	comp=Z,820nm,1.4s,mb6.2						
VAH				*e*pP	pP	19 39 00.5	+0.3
	comp=Z,834nm,1.3s						
SBA	**Scott Base**	**75.14**	**190**	P	**P**	**19 38 20.7**	**+0.5**
SBA				pP	pP	19 38 59.7	-0.1
BW06	**Boulder Array**	**75.31**	**330**	P	**P**	**19 38 21.4**	**-0.4**
PDAR	**Pinedale Array**	**75.31**	**330**	P	**P**	**19 38 21.4**	**-0.4**
	comp=Z,83nm,0.8s,mb5.4,baz=136,slow=6.9,SNR=107						
PDAR				S	S	19 47 48.5	+2.3
	comp=Z,1.1nm,0.9s,baz=62,slow=17,SNR=2.7						
PDAR				PKPPKP		20 05 40.6	
	comp=Z,0.8nm,0.9s,SNR=4.1						
PMOR	**Pomariorio Ree**	**75.32**	**260**	*e*P	**P**	**19 38 22.9**	**+0.5**
	comp=Z,642nm,1.4s,mb6.1						
PMOR				*e*pP	pP	19 39 02.5	+0.5
	comp=Z,554nm,1.4s						
SYO	**Syowa Base**	**75.38**	**159**	⇑P	**P**	**19 38 20.7**	**-1.0**
SYO	**Syowa Base**	**75.38**	**159**	⇑PcP	PcP	19 38 28.6	-5.8
SYO	**Syowa Base**	**75.38**	**159**	⇑pP	pP	19 38 58.2	-3.1
SYO	**Syowa Base**	**75.38**	**159**	⇑*e*P	**P**	**19 38 20.7**	**-1.0**
SYO				⇑*i*PcP	PcP	19 38 28.6	-5.8
SYO				⇑*i*pP	pP	19 38 58.2	-3.1
SYO				*e*S	S	19 47 50.4	+4.0
SYO	**Syowa Base**	**75.38**	**159**	⇑*e*P	**P**	**19 38 20.7**	**-1.0**
SYO				*i* *PP	pP	19 38 58.2	-3.1
SYO				*e*S	S	19 47 50.4	+4.0
HWUT	**Hardware Ranch**	**75.39**	**328**	P	**P**	**19 38 21.6**	**-0.7**
	comp=Z,298nm,1.0s,mb5.9						
HWUT				pP	pP	19 39 01.5	-0.4
SPUT	**South Promonto**	**75.61**	**327**	P	**P**	**19 38 23.9**	**+0.3**
SPUT				pP	pP	19 39 03.8	+0.6
TVO	**Taravao**	**75.63**	**256**	*e*P	**P**	**19 38 24.6**	**+0.5**
	comp=Z,1µm,1.4s,mb6.3						
TVO				*e*pP	pP	19 39 04.3	+0.5
	comp=Z,985nm,1.5s						
TPH	**Tonopah**	**75.86**	**322**	P	**P**	**19 38 25.6**	**+0.6**
	comp=Z,398nm,1.2s,mb5.9						
TPH				pP	pP	19 39 04.8	0.0
TPH	**Tonopah**	**75.86**	**322**	P	**P**	**19 38 25.7**	**+0.7**
TPH				*PP	pP	19 39 04.8	+0.1
TPH				pmax	pmax		
	comp=Z,398nm,1.2s,mb5.9						
PAE	**Paea**	**75.97**	**256**	*e*P	**P**	**19 38 26.3**	**+0.3**
	comp=Z,1µm,1.4s,mb6.4						
PAE				*e*pP	pP	19 39 05.8	+0.1
	comp=Z,890nm,1.1s						
PPT	**Papeete**	**76.00**	**257**	*e*P	**P**	**19 38 26.8**	**+0.7**
	comp=Z,606nm,1.6s,mb6.0						
PPT				*e*pP	pP	19 39 06.5	+0.6
	comp=Z,444nm,1.5s						
PPT	**Papeete**	**76.00**	**257**	*e*LQ		19 58 36.8	
PPT				*e*LR	LR	20 01 37.1	
	comp=Z,76µm,30.0s						
PPT	**Papeete**	**76.00**	**257**	P	**P**	**19 38 27.8**	**+1.7**
	comp=Z,82nm,0.8s,mb5.4,baz=110,slow=13,SNR=14						
PPT				pP	pP	19 39 06.2	+0.3
	comp=Z,95nm,0.9s,baz=97,slow=10,SNR=2.3						
PPT				LR	LR	20 04 38.1	
	comp=Z,14µm,20.4s,baz=288,slow=30						
PTRM	**Twissleman Ran**	**76.01**	**318**	*e*P	**P**	**19 38 26.2**	**+0.3**
AHID	**Auburn Hatcher**	**76.04**	**329**	P	**P**	**19 38 26.2**	**+0.3**
AHID				pP	pP	19 39 05.4	-0.2
HVU	**Hansel Valley**	**76.12**	**327**	P	**P**	**19 38 26.5**	**+0.1**
HVU				pP	pP	19 39 05.9	-0.2
MTUM	**Tungsten Hills**	**76.15**	**321**	P	**P**	**19 38 27.0**	**+0.3**
VNDA	**Vanda**	**76.15**	**190**	P	**P**	**19 38 26.3**	**+0.4**
VNDA	**Vanda**	**76.15**	**190**	P	**P**	**19 38 25.8**	**-0.1**
REDW	**Red Top Meadow**	**76.37**	**329**	P	**P**	**19 38 28.0**	**+0.3**
SNOW	**Snow King Moun**	**76.40**	**329**	P	**P**	**19 38 28.4**	**+0.5**
SNOW				pP	pP	19 39 08.8	+1.1
ULM	**Lac du Bonnet**	**76.41**	**342**	P	**P**	**19 38 26.7**	**-1.1**
	comp=Z,462nm,0.7s,mb6.2,baz=154,slow=6.1,SNR=160						
ULM				S	S	19 47 58.4	+0.3
	comp=Z,4.0nm,0.9s,baz=52,slow=19,SNR=2.1						
LOHW	**Long Hollow**	**76.45**	**330**	P	**P**	**19 38 28.6**	**+0.4**
LOHW				pP	pP	19 39 08.8	+0.8
TPAW	**Teton Pass**	**76.52**	**329**	P	**P**	**19 38 29.1**	**+0.5**
TPAW				pP	pP	19 39 08.9	+0.6
MOOW	**Moose Ponds**	**76.62**	**330**	*e*P	**P**	**19 38 28.8**	**-0.3**
	comp=Z,774nm,1.4s,mb6.1						
MNV	**Mina**	**76.64**	**322**	P	**P**	**19 38 29.6**	**+0.3**
MNV				pP	pP	19 39 09.4	+0.2
ELK	**Elko**	**76.64**	**325**	P	**P**	**19 38 29.4**	**+0.1**
	comp=Z,260nm,1.1s,mb5.8						
ELK				pP	pP	19 39 09.4	+0.3
ELK	**Elko**	**76.64**	**325**	P	**P**	**19 38 29.4**	**+0.1**
ELK				*PP	pP	19 39 09.4	+0.3
ELK				pmax	pmax		
	comp=Z,259nm,1.1s						
NVAR	**Mina Array Bea**	**76.73**	**322**	P	**P**	**19 38 30.2**	**+0.4**
	comp=Z,161nm,0.9s,mb5.7,baz=137,slow=6.5,SNR=131						
IMW	**Indian Meadow**	**76.82**	**330**	P	**P**	**19 38 30.9**	**+0.7**
IMW				pP	pP	19 39 10.6	+0.5
SCHQ	**Schefferville**	**76.89**	**1**	P	**P**	**19 38 29.6**	**-0.7**
	comp=Z,278nm,0.9s,mb5.9,baz=175,slow=3.7,SNR=49						
SCHQ				S	S	19 48 04.8	+1.7
	comp=Z,5.4nm,0.8s,baz=299,slow=19,SNR=6.6						
SCHQ	**Schefferville**	**76.89**	**1**	P	**P**	**19 38 29.6**	**-0.7**
SCHQ				S	S	19 48 04.8	+1.7
LAO	**LASA Array**	**76.95**	**334**	P	**P**	**19 38 30.9**	**0.0**
LAO				pP	pP	19 39 10.2	-0.5
LRV	**Little Rabbit**	**77.01**	**319**	*e*P	**P**	**19 38 31.5**	**+0.1**
LKWY	**Lake**	**77.08**	**330**	P	**P**	**19 38 33.3**	**+1.6**
	comp=Z,446nm,1.2s,mb6.0						
LKWY	**Lake**	**77.08**	**330**	P	**P**	**19 38 33.3**	**+1.6**
LKWY				pmax	pmax		
	comp=Z,590nm,1.2s,mb6.1						
YFT	**Old Faithful**	**77.19**	**330**	P	**P**	**19 38 34.2**	**+1.9**
YFT				pP	pP	19 39 14.8	+2.7
SUR	**Sutherland**	**77.37**	**120**	P	**P**	**19 38 33.8**	**+0.2**
	comp=Z,134nm,0.7s,mb5.7,baz=255,slow=6.4,SNR=28						
SUR				pP	pP	19 39 10.0	-3.4
	comp=Z,37nm,0.7s,baz=128,slow=18,SNR=0.9						
SUR				S	S	19 48 12.7	+3.9
	comp=Z,4.9nm,0.8s,baz=50,slow=17,SNR=7.5						
SUR	**Sutherland**	**77.37**	**120**	P	**P**	**19 38 33.8**	**+0.3**
YMR	**Madison River**	**77.42**	**330**	*e*P	**P**	**19 38 34.6**	**+1.0**
	comp=Z,2µm,1.0s,mb6.7						
WAKR	**Walker**	**77.43**	**321**	P	**P**	**19 38 34.5**	**+0.8**
SAO	**San Andreas Ge**	**77.49**	**319**	P	**P**	**19 38 34.2**	**+0.1**
SAO				pP	pP	19 39 14.4	+0.5
DGMT	**Dagmar**	**77.62**	**336**	P	**P**	**19 38 35.0**	**+0.4**
CMB	**Columbia Colle**	**77.68**	**320**	P	**P**	**19 38 34.3**	**-0.8**
	comp=Z,895nm,2.0s,mb6.0						
CMB				pP	pP	19 39 15.5	+0.5
CMB	**Columbia Colle**	**77.68**	**320**	P	**P**	**19 38 34.3**	**-0.8**
CMB				*PP	pP	19 39 15.5	+0.5
CMB				pmax	pmax		
	comp=Z,895nm,2.0s,mb6.0						
GCMT	**Greycliff**	**77.70**	**332**	*e*P	**P**	**19 38 34.9**	**-0.1**
QLMT	**Earthquake Lak**	**77.76**	**330**	P	**P**	**19 38 36.5**	**+1.1**
PAHR	**Pah Rah Range**	**78.21**	**322**	P	**P**	**19 38 40.3**	**+2.3**
PAHR				pP	pP	19 39 18.7	+0.8
HLID	**Hailey**	**78.25**	**327**	P	**P**	**19 38 39.1**	**+1.0**
	comp=Z,606nm,1.1s,mb6.1						
HLID				pP	pP	19 39 19.1	+1.1
MCMT	**McKenzie Canyo**	**78.42**	**329**	P	**P**	**19 38 40.0**	**+1.0**
BOZ	**Bozeman (W)**	**78.47**	**330**	P	**P**	**19 38 39.2**	**-0.1**
BOZ				pP	pP	19 39 19.2	+0.1
SAC	**San Andreas**	**78.61**	**319**	P	**P**	**19 38 40.9**	**+0.7**
DLMT	**Dillon**	**78.70**	**330**	*e*P	**P**	**19 38 40.9**	**+0.4**
	comp=Z,1µm,1.2s,mb6.4						
TSUM	**Tsumeb**	**78.93**	**106**	P	**P**	**19 38 42.0**	**-0.3**
	comp=Z,287nm,0.8s,mb5.9,baz=229,slow=5.9,SNR=107						
TSUM				S	S	19 48 26.8	+1.1
	comp=Z,4.1nm,1.0s,baz=266,slow=15,SNR=2.5						
TSUM	**Tsumeb**	**78.93**	**106**	P	**P**	**19 38 41.9**	**-0.3**
	comp=Z,498nm,1.3s,mb6.0						
TSUM				pP	pP	19 39 18.0	-4.3
LRM	**Limekiln Ridge**	**78.98**	**330**	P	**P**	**19 38 42.6**	**+0.6**
OHCM	**Honcut**	**79.18**	**321**	P	**P**	**19 38 43.4**	**+0.1**
NSHM	**Saint Helena R**	**79.32**	**319**	*e*P	**P**	**19 38 44.0**	**0.0**
HRY	**Holter Researc**	**79.37**	**331**	P	**P**	**19 38 44.6**	**+0.6**
WVOR	**Wild Horse Val**	**79.64**	**324**	P	**P**	**19 38 45.8**	**+0.1**
HOPS	**Hopland**	**79.90**	**320**	P	**P**	**19 38 47.9**	**+0.8**
	comp=Z,420nm,1.4s,mb5.9						
HOPS				pP	pP	19 39 26.8	-0.3
CHMT	**Chamberlain Mo**	**80.16**	**330**	P	**P**	**19 38 48.7**	**+0.3**
MOD	**Modoc**	**80.20**	**323**	P	**P**	**19 38 49.2**	**+0.5**
	comp=Z,392nm,1.1s,mb6.0						
MOD				pP	pP	19 39 28.9	+0.2
MSO	**Missoula**	**80.42**	**330**	P	**P**	**19 38 49.3**	**-0.4**
MSO				pP	pP	19 39 30.8	+1.0
WDC	**Whiskeytown Da**	**80.60**	**321**	P	**P**	**19 38 48.4**	**-2.4**
WDC				pP	pP	19 39 29.7	-1.2
BMO	**Blue Mountains**	**80.63**	**327**	P	**P**	**19 38 50.6**	**-0.2**
	comp=Z,471nm,1.1s,mb6.0						
BMO				pP	pP	19 39 31.1	+0.1
BMO	**Blue Mountains**	**80.63**	**327**	P	**P**	**19 38 50.7**	**-0.2**
BMO				*PP	pP	19 39 31.1	+0.1
BMO				pmax	pmax		
	comp=Z,471nm,1.1s,mb6.0						
KCPM	**Cahto Peak**	**80.65**	**320**	*e*P	**P**	**19 38 51.3**	**+0.3**
KIPM	**Iron Peak**	**80.67**	**320**	*e*P	**P**	**19 38 51.5**	**+0.3**
YBH	**Yreka Blue Hor**	**81.44**	**322**	P	**P**	**19 38 54.3**	**-0.9**
MORF	**Marmelete**	**81.45**	**44**	*e*P	**P**	**19 38 56.0**	**+0.6**
MORF				*e*S	S	19 48 56.2	+4.7
MORF				*e*S	S	19 48 56.6	+5.2
MORF				AMS	AMS	20 13 18.6	
	comp=Z,12µm,24.9s						
MORF	**Marmelete**	**81.45**	**44**	*e*S	S	19 48 56.6	+5.1
KHMM	**Horse Mountain**	**81.49**	**321**	P	**P**	**19 38 56.4**	**+1.0**
PTEO	**Sao Teotonio**	**81.55**	**44**	*e*P	**P**	**19 38 56.9**	**+1.0**
	comp=Z,275nm,1.1s,mb5.8						
PTEO				*e*pP	pP	19 39 39.6	+3.6
BSMT	**Bassoo Peak**	**81.56**	**330**	P	**P**	**19 38 56.2**	**+0.5**
MDT	**Midelt**	**81.62**	**50**	P	**P**	**19 38 56.5**	**+0.2**
	comp=Z,48nm,0.7s,mb5.2,baz=248,slow=4.6,SNR=111						
MDT				pP	pP	19 39 33.6	-2.9
	comp=Z,31nm,0.8s,baz=257,slow=11,SNR=1.2						
MDT				S	S	19 48 55.8	+2.6
	comp=Z,4.2nm,1.2s,baz=236,slow=7.3,SNR=2.5						
LIS	**Lisbon**	**81.98**	**43**	*e*P	**P**	**19 38 57.8**	**-0.2**
LIS				*e*		19 39 10.2	
	baz=55,slow=6.2						
LIS				*e*S	S	19 49 02.8	+6.1
LIS				*e*S	S	19 49 03.9	+7.1
LIS				AMS	AMS	20 15 35.0	
	comp=Z,12µm,19.7s						
LIS	**Lisbon**	**81.98**	**43**	*e*S	S	19 49 02.8	+6.0
LIS	**Lisbon**	**81.98**	**43**	*e*P	**P**	**19 38 57.8**	**-0.2**
LIS				*e*S	S	19 49 02.8	+6.0
KRMB	**Red Mountain**	**82.00**	**321**	*e*P	**P**	**19 38 57.8**	**-0.3**
KRMB				*e*pP	pP	19 39 38.6	+0.3
KRMB				*e*PP	PP	19 42 10.4	+0.7
PLOU	**Loures**	**82.08**	**42**	*e*P	**P**	**19 38 59.3**	**+0.7**
	comp=Z,167nm,0.9s,mb5.7						
PLOU				*e*pP	pP	19 39 41.9	+3.1
FFC	**Flin Flon**	**82.14**	**341**	*e*P	**P**	**19 38 57.5**	**-1.0**
	comp=Z,645nm,1.2s,mb6.1						
FFC	**Flin Flon**	**82.14**	**341**	*e*P	**P**	**19 38 57.5**	**-1.0**
FFC				pmax	pmax		
	comp=Z,645nm,1.2s,mb6.1						
HUMO	**Hull Mountain**	**82.15**	**322**	P	**P**	**19 38 58.2**	**-0.6**
HUMO				pP	pP	19 39 38.0	-1.1
BBOR	**Butler Butte**	**82.17**	**323**	P	**P**	**19 38 58.2**	**-0.7**
BOSA	**Boshof**	**82.25**	**118**	P	**P**	**19 38 58.8**	**-0.9**
	comp=Z,192nm,0.8s,mb5.8,baz=255,slow=4.3,SNR=88						
BOSA				S	S	19 48 59.1	-0.6
	comp=Z,39nm,1.3s,baz=18,slow=18,SNR=6.5						
BOSA				PKKPbc		19 57 28.1	
	comp=Z,3.4nm,0.8s,baz=335,slow=3.9,SNR=7.3						
BOSA	**Boshof**	**82.25**	**118**	P	**P**	**19 38 58.9**	**-0.7**
	comp=Z,251nm,1.1s,mb5.8						
BOSA				pP	pP	19 39 34.4	-5.5
BOSA	**Boshof**	**82.25**	**118**	P	**P**	**19 38 58.8**	**-0.8**
BOSA				S	S	19 48 59.1	-0.6
BOSA				pmax	pmax		
	comp=Z,192nm,0.9s,mb5.7						
BOSA				smax			
	comp=N,39nm,1.3s						
EGRO	**El Granado**	**82.34**	**44**	⇑P	**P**	**19 39 00.9**	**+0.9**
	comp=N,214nm,1.2s,mb5.7						
PBEJ	**Beja**	**82.38**	**44**	*e*P	**P**	**19 39 01.0**	**+0.9**
	comp=N,89nm,1.0s,mb5.3						
PBEJ				*e*pP	pP	19 39 43.4	+3.0
SFS	**San Fernando**	**82.56**	**46**	P	**P**	**19 39 03.3**	**+2.2**
EVO	**Evora**	**82.58**	**43**	*e*P	**P**	**19 39 00.6**	**-0.6**
	comp=N,242nm,0.9s,mb5.6						
EVO				*e*R			
	comp=N,20µm,20.2s						
ALMR	**Almeirim**	**82.60**	**42**	*e*P	**P**	**19 39 01.6**	**+0.4**
KBO	**Bosley Butte**	**82.62**	**321**	P	**P**	**19 39 02.4**	**+1.2**
KBO				pP	pP	19 39 41.0	-0.5
KBO				PP	PP	19 42 18.0	+3.4
HAWA	**Hanford**	**82.82**	**327**	P	**P**	**19 39 02.5**	**+0.3**
NEW	**Newport**	**82.94**	**329**	S	S	19 49 11.6	+5.3
	comp=N,4.1nm,0.9s,baz=98,slow=15,SNR=3.2						
NEW	**Newport**	**82.94**	**329**	P	**P**	**19 39 02.1**	**-0.7**
PTOM	**Tomar**	**82.98**	**42**	*e*P	**P**	**19 39 03.8**	**+0.7**
	comp=N,196nm,1.2s,mb5.7						
PTOM				*e*pP	pP	19 39 46.4	+2.9
EMIN	**Mina Concepcio**	**83.00**	**44**	⇑P	**P**	**19 39 04.1**	**+0.8**
	comp=N,183nm,1.1s,mb5.7						
ESPR	**Espera**	**83.02**	**46**	⇑P	**P**	**19 39 04.4**	**+1.0**
	comp=N,187nm,1.2s,mb5.7						
EJIF	**Jimena Fronter**	**83.04**	**46**	⇑P	**P**	**19 39 05.0**	**+1.4**
	comp=N,22nm,0.8s,mb4.9						
EJIF	**Jimena Fronter**	**83.04**	**46**	⇑P	**P**	**19 39 05.0**	**+1.5**
EJIF				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
KEBM	**Edson Butte**	**83.10**	**322**	P	**P**	**19 39 04.7**	**+1.0**
KEBM				pP	pP	19 39 44.3	+0.3
OD2	**Odessa Site #2**	**83.10**	**328**	P	**P**	**19 39 03.9**	**+0.4**
HOOD	**Mount Hood Mea**	**83.20**	**325**	P	**P**	**19 39 01.1**	**-3.0**
MAW	**Mawson**	**83.25**	**163**	*e*S	S	19 49 11.1	+2.2
MAW				*e*PKKP	PKKP	19 57 21.8	+29
MAW				*e*PKPPKP		20 05 22.3	
MAW	**Mawson**	**83.25**	**163**	P	**P**	**19 39 03.5**	**-0.4**
	comp=Z,178nm,0.7s,mb5.9,baz=215,slow=6.3,SNR=216						
MAW				pP	pP	19 39 41.4	-2.8
	comp=Z,65nm,0.8s,baz=203,slow=9.2,SNR=1.8						
MAW				S	S	19 49 11.6	+2.6
	comp=Z,2.6nm,0.8s,baz=90,slow=20,SNR=3.3						
MAW				PKKPbc		19 57 23.0	
	comp=Z,11nm,0.8s,baz=0.4,slow=2.2,SNR=15						
MAW				PKPPKP		20 05 26.3	
	comp=Z,5.6nm,1.0s,baz=311,slow=5.4,SNR=5.5						
MAW				LR	LR	20 16 28.5	

	comp=Z,9µm,20.8s,baz=123,slow=36						
MAW	**Mawson**	**83.25**	**163**	eP	**P**	**19 39 03.4**	**-0.5**
	comp=Z,208nm,0.7s,mb6.0						
MAW				eS	S	19 49 11.1	+2.2
MAW				ePKKP	PKKP	19 57 21.8	+29
MAW				eP’P’		20 05 22.3	
MAW	**Mawson**	**83.25**	**163**	P	**P**	**19 39 03.5**	**-0.4**
MAW				*PP	pP	19 39 41.4	-2.8
MAW				S	S	19 49 11.6	+2.7
MAW				pmax	pmax		
	comp=Z,178nm,0.7s						
MAW				pmax	pmax		
	comp=Z,65nm,0.8s						
MAW				smax			
	comp=N,3.0nm,0.8s						
MAW				MLR	MLR		
	comp=Z,9µm,20.8s						
EBAD	**Badajoz**	**83.35**	**43**	⇑P	**P**	**19 39 05.9**	**+0.9**
	comp=Z,808nm,2.9s,mb6.0						
EMIJ	**Mijas**	**83.57**	**46**	⇑P	**P**	**19 39 06.5**	**+0.3**
	comp=Z,882nm,2.7s,mb6.0						
COR	**Corvallis**	**83.61**	**324**	P	**P**	**19 39 06.9**	**+0.7**
FCC	**Fort Churchill**	**83.68**	**347**	P	**P**	**19 39 06.4**	**+0.3**
	comp=Z,430nm,1.2s,mb6.0						
FCC	**Fort Churchill**	**83.68**	**347**	P	**P**	**19 39 06.4**	**+0.2**
FCC				pmax	pmax		
	comp=Z,430nm,1.2s,mb6.0						
PCBR	**Castelo Branco**	**83.69**	**42**	eP	**P**	**19 39 07.0**	**+0.3**
	comp=Z,84nm,1.8s,mb5.2						
PCBR				epP	pP	19 39 49.4	+2.3
EBG	**Ellensburg**	**83.70**	**327**	P	**P**	**19 39 07.4**	**+0.8**
RAR	**Rarotonga**	**83.77**	**250**	P	**P**	**19 39 09.4**	**+1.9**
	comp=Z,51nm,0.7s,mb5.3,baz=179,slow=4.8,SNR=9.3						
RAR				pP	pP	19 39 46.4	-1.6
	comp=Z,62nm,1.0s,baz=181,slow=5.4,SNR=3.6						
LBTB	**Lobatse**	**83.84**	**114**	P	**P**	**19 39 07.4**	**-0.4**
	comp=Z,257nm,0.8s,mb6.0,baz=264,slow=5.7,SNR=92						
LBTB				pP	pP	19 39 44.9	-3.4
	comp=Z,48nm,0.9s,baz=98,slow=7.1,SNR=0.5						
LBTB	**Lobatse**	**83.84**	**114**	P	**P**	**19 39 07.3**	**-0.5**
	comp=Z,409nm,1.3s,mb6.0						
LBTB	**Lobatse**	**83.84**	**114**	P	**P**	**19 39 07.4**	**-0.4**
LBTB				*PP	pP	19 39 44.9	-3.3
LBTB				pmax	pmax		
	comp=Z,257nm,0.8s,mb6.0						
LBTB				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.2						
PVIS	**Viseu**	**83.95**	**41**	eP	**P**	**19 39 08.4**	**+0.4**
	comp=Z,117nm,1.5s,mb5.4						
PVIS				epP	pP	19 39 51.0	+2.6
MTE	**Manteigas**	**83.98**	**42**	eP	**P**	**19 39 08.5**	**+0.4**
	comp=Z,378nm,1.9s,mb5.8						
MTE				epP	pP	19 39 47.1	-1.5
MTE				eS	S	19 49 18.3	+1.6
MTE	**Manteigas**	**83.98**	**42**	P	**P**	**19 39 08.3**	**+0.2**
LON	**Longmire**	**84.23**	**326**	P	**P**	**19 39 09.1**	**-0.1**
ELOJ	**Sierra Loja**	**84.31**	**46**	P	**P**	**19 39 10.7**	**+0.8**
	comp=Z,66nm,0.9s,mb5.4						
ELOJ	**Sierra Loja**	**84.31**	**46**	P	**P**	**19 39 10.7**	**+0.8**
ELOJ				pmax	pmax		
	comp=Z,66nm,0.9s,mb5.4						
EZAM	**Zamans**	**84.32**	**40**	P	**P**	**19 39 10.2**	**+0.4**
	comp=Z,57nm,1.1s,mb5.2						
EZAM	**Zamans**	**84.32**	**40**	P	**P**	**19 39 10.2**	**+0.4**
EZAM				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.2						
PVRL	**Vila Real**	**84.39**	**41**	eP	**P**	**19 39 10.6**	**+0.4**
	comp=Z,152nm,1.5s,mb5.5						
PVRL				epP	pP	19 39 53.3	+2.7
PCAB	**Cabril**	**84.45**	**41**	eP	**P**	**19 39 10.9**	**+0.4**
	comp=Z,167nm,1.1s,mb5.7						
PCAB				epP	pP	19 39 53.5	+2.5
ELUQ	**Luque**	**84.46**	**46**	P	**P**	**19 39 11.5**	**+0.9**
	comp=Z,143nm,1.0s,mb5.7						
ELUQ	**Luque**	**84.46**	**46**	P	**P**	**19 39 11.5**	**+0.9**
ELUQ				pmax	pmax		
	comp=Z,143nm,1.0s,mb5.7						
ERON	**Agron**	**84.47**	**46**	P	**P**	**19 39 11.2**	**+0.6**
	comp=Z,29nm,0.6s,mb5.2						
ELOB	**Lobios**	**84.53**	**40**	⇑P	**P**	**19 39 11.4**	**+0.6**
	comp=Z,486nm,2.3s,mb5.8						
EGUA	**Guajares**	**84.53**	**47**	P	**P**	**19 39 10.5**	**-0.5**
EADA	**Adamuz**	**84.59**	**45**	⇑P	**P**	**19 39 11.8**	**+0.5**
	comp=Z,150nm,1.2s,mb5.6						
EMAZ	**Mazaricos**	**84.63**	**39**	⇑P	**P**	**19 39 11.4**	**+0.1**
	comp=Z,143nm,1.4s,mb5.5						
ECOG	**Cogollos-Vega**	**84.77**	**46**	P	**P**	**19 39 12.2**	**+0.1**
	comp=Z,23nm,0.8s,mb5.0						
ECOG	**Cogollos-Vega**	**84.77**	**46**	P	**P**	**19 39 12.2**	**0.0**
ECOG				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
TTW	**Tolt Reservoir**	**84.79**	**327**	P	**P**	**19 39 12.0**	**0.0**
TTW				pP	pP	19 39 51.7	-0.8
STS	**Santiago**	**84.84**	**39**	P	**P**	**19 39 12.6**	**+0.2**
EDM	**Edmonton**	**84.92**	**335**	P	**P**	**19 39 11.4**	**-1.1**
EDM				pP	pP	19 39 51.5	-1.5
EBER	**Berja**	**85.02**	**47**	P	**P**	**19 39 13.9**	**+0.4**
	comp=Z,548nm,2.9s,mb5.8						
EBAN	**Banos Encina**	**85.11**	**45**	⇓P	**P**	**19 39 14.4**	**+0.6**
	comp=Z,221nm,1.1s,mb5.8						
EBAN	**Banos Encina**	**85.11**	**45**	⇓P	**P**	**19 39 14.4**	**+0.6**
EBAN				pmax	pmax		
	comp=Z,221nm,1.1s,mb5.8						
GNW	**Green Mountain**	**85.28**	**326**	P	**P**	**19 39 14.4**	**0.0**
GNW				pP	pP	19 39 54.5	-0.6
PBRG	**Braganca**	**85.29**	**41**	eP	**P**	**19 39 15.3**	**+0.7**
	comp=Z,106nm,1.3s,mb5.4						
PBRG				epP	pP	19 39 57.5	+2.3
ECAL	**Calabor**	**85.37**	**41**	⇑P	**P**	**19 39 15.7**	**+0.7**
	comp=Z,424nm,2.2s,mb5.8						
EQES	**Quesada**	**85.39**	**46**	⇑P	**P**	**19 39 15.2**	**0.0**
	comp=Z,200nm,1.2s,mb5.7						
ERUA	**La Rua**	**85.39**	**40**	⇑P	**P**	**19 39 15.8**	**+0.7**
	comp=Z,89nm,1.2s,mb5.4						
ERUA	**La Rua**	**85.39**	**40**	⇑P	**P**	**19 39 15.8**	**+0.7**
ERUA				pmax	pmax		
	comp=Z,89nm,1.2s,mb5.4						
SQM	**Sequim**	**85.73**	**327**	P	**P**	**19 39 19.0**	**+2.4**
ESDC	**Sonseca Array**	**85.82**	**44**	P	**P**	**19 39 17.4**	**+0.1**
	comp=Z,96nm,1.1s,mb5.5,baz=236,slow=4.8,SNR=136						
ESDC				pP	pP	19 39 55.7	-2.2
	comp=Z,18nm,0.9s,baz=254,slow=5.3,SNR=1.1						
ESDC				S	S	19 49 33.0	-1.7
	comp=Z,0.2nm,0.5s,baz=116,slow=28,SNR=3.0						
ESDC				PKKPbc		19 57 21.0	
	comp=Z,0.8nm,0.5s,baz=35,slow=2.4,SNR=6.6						
ESDC	**Sonseca Array**	**85.82**	**44**	⇓P	**P**	**19 39 17.8**	**+0.5**
	comp=Z,130nm,1.2s,mb5.5						
ESLA	**Sonseca Array**	**85.82**	**44**	P	**P**	**19 39 18.2**	**+0.9**
ESLA				pP	pP	19 39 55.6	-2.3
FRB	**Frobisher Bay**	**85.83**	**360**	P	**P**	**19 39 17.3**	**+0.6**
	comp=Z,322nm,1.0s,mb6.0,baz=173,slow=6.1,SNR=21						
FRB				S	S	19 49 30.7	-3.5
	comp=Z,20nm,1.0s,baz=259,slow=10,SNR=3.3						
FRB	**Frobisher Bay**	**85.83**	**360**	P	**P**	**19 39 17.3**	**+0.5**
FRB				S	S	19 49 30.7	-3.5
EPON	**Pontenova**	**85.93**	**40**	⇑P	**P**	**19 39 18.3**	**+0.5**
	comp=Z,266nm,1.7s,mb5.7						
OCWA	**Octopus Mounta**	**86.10**	**326**	P	**P**	**19 39 19.5**	**+1.0**
	comp=Z,392nm,1.1s,mb6.0						
OCWA				pP	pP	19 39 59.5	+0.4
EVIA	**Vianos**	**86.21**	**46**	⇑P	**P**	**19 39 19.8**	**+0.6**
	comp=Z,82nm,1.2s,mb5.3						
EVIA	**Vianos**	**86.21**	**46**	⇑P	**P**	**19 39 19.8**	**+0.6**
EVIA				pmax	pmax		
	comp=Z,82nm,1.2s,mb5.3						
GUD	**Guadarrama**	**86.24**	**43**	⇑P	**P**	**19 39 20.1**	**+0.9**
	comp=Z,32nm,1.0s,mb5.0						
GUD	**Guadarrama**	**86.24**	**43**	⇑P	**P**	**19 39 20.1**	**+0.8**
GUD				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.0						
PGC	**Sidney**	**86.31**	**327**	P	**P**	**19 39 20.0**	**+0.6**
PGC				pP	pP	19 39 59.6	-0.4
EMUR	**La Murta**	**86.63**	**47**	P	**P**	**19 39 23.1**	**+1.9**
	comp=Z,497nm,2.2s,mb6.0						
ETOB	**Tobarra**	**86.85**	**46**	⇑P	**P**	**19 39 23.0**	**+0.7**
	comp=Z,143nm,1.0s,mb5.8						
EARI	**Arriondas**	**87.07**	**41**	⇑P	**P**	**19 39 23.6**	**+0.4**
	comp=Z,440nm,2.9s,mb5.8						
ETRT	**Tiaret**	**87.14**	**50**	P	**P**	**19 39 25.0**	**+1.3**
EANR	**’Ain N’Sour**	**87.28**	**49**	P	**P**	**19 39 27.0**	**+2.6**
ECHF	**Ech Chlef**	**87.55**	**49**	P	**P**	**19 39 28.0**	**+2.3**
ECHA	**Ech Chlef**	**87.56**	**49**	P	**P**	**19 39 28.0**	**+2.2**
ECHE	**Chera**	**87.73**	**45**	P	**P**	**19 39 27.0**	**+0.5**
	comp=Z,5.1nm,0.4s						
ECHE	**Chera**	**87.73**	**45**	P	**P**	**19 39 27.0**	**+0.5**
ECHE				pmax	pmax		
	comp=Z,5.0nm,0.4s						
EBNR	**Beni Rached**	**87.75**	**49**	P	**P**	**19 39 28.0**	**+1.4**
EBEN	**Beniarda**	**87.76**	**46**	⇑P	**P**	**19 39 29.3**	**+2.7**
	comp=Z,1µm,2.4s,mb6.3						
MATP	**Matopo**	**88.06**	**111**	P	**P**	**19 39 28.7**	**+0.2**
	comp=Z,264nm,0.8s,mb6.1,baz=248,slow=4.4,SNR=83						
MATP				pP	pP	19 40 06.0	-3.3
	comp=Z,33nm,0.6s,baz=276,slow=9.2,SNR=0.6						
MATP				PP	PP	19 42 53.5	-6.2
	comp=Z,21nm,0.8s,baz=260,slow=8.7,SNR=5.5						
EMOS	**Mosqueruela**	**88.46**	**45**	P	**P**	**19 39 32.3**	**+2.4**
	comp=Z,514nm,2.4s,mb5.9						
EMHD	**Djebel Mahouad**	**88.71**	**50**	P	**P**	**19 39 32.0**	**+0.8**
DRV	**Dumont d’Urvil**	**88.78**	**191**	P	**P**	**19 39 32.0**	**+1.2**
DRV	**Dumont d’Urvil**	**88.78**	**191**	S	S	19 50 08.0	+6.2
DRV				SS	SS	19 56 10.0	+9.1
EIBI	**Ibiza**	**88.98**	**47**	P	**P**	**19 39 33.4**	**+1.0**
	comp=Z,575nm,2.4s,mb6.1						
ABA	**Alger-Bouzarea**	**89.06**	**49**	P	**P**	**19 39 33.0**	**+0.2**
ESAC	**San Caprasio**	**89.16**	**44**	P	**P**	**19 39 33.9**	**+0.7**
	comp=Z,448nm,1.2s,mb6.3						
ERTA	**Horta de San J**	**89.29**	**45**	P	**P**	**19 39 34.5**	**+0.7**
	comp=Z,137nm,1.2s,mb5.8						
EALK	**Alkurruntz**	**89.29**	**42**	P	**P**	**19 39 36.7**	**+2.9**
	comp=Z,377nm,2.2s,mb5.9						
EBR	**Ebro Roquetas**	**89.32**	**45**	ePCP	PcP	19 39 38.0	+2.6
SJPF	**Ste Jean**	**89.41**	**42**	⇑iP	**P**	**19 39 35.0**	**+0.7**
	comp=Z,292nm,1.3s,mb5.7						
SJPF	**Ste Jean**	**89.41**	**42**	⇑iP	**P**	**19 39 35.0**	**+0.7**
SJPF				pmax	pmax		
	comp=Z,146nm,1.3s,mb5.8						
OSSF	**Osses**	**89.46**	**42**	eP	**P**	**19 39 34.5**	**0.0**
VAL	**Valentia**	**89.48**	**32**	eP	**P**	**19 39 32.9**	**-1.5**
VAL				i S	S	19 49 55.5	-13
LARF	**Larrau**	**89.52**	**42**	eP	**P**	**19 39 35.8**	**+1.0**
FDAF	**Les Forges d’A**	**89.67**	**43**	eP	**P**	**19 39 33.7**	**-1.8**
LSZ	**Lusaka**	**89.79**	**106**	P	**P**	**19 39 37.8**	**+1.2**
	comp=Z,195nm,1.2s,mb5.9,baz=242,slow=4.4,SNR=48						
LSZ				pP	pP	19 40 15.4	-2.2
	comp=Z,33nm,0.8s,baz=90,slow=5.1,SNR=1.0						
LSZ				PP	PP	19 43 08.2	-5.4
	comp=Z,26nm,1.1s,baz=271,slow=10,SNR=3.7						
LSZ	**Lusaka**	**89.79**	**106**	P	**P**	**19 39 37.7**	**+1.0**
LSZ				pP	pP	19 40 15.9	-1.7
LSZ	**Lusaka**	**89.79**	**106**	P	**P**	**19 39 37.8**	**+1.1**
LSZ				*PP	pP	19 40 15.4	-2.2
LSZ						19 43 08.2	
LSZ				pmax	pmax		
	comp=Z,195nm,1.2s,mb5.9						
LSZ				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.3						
LSZ				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.1						
EGRA	**Graus**	**89.91**	**44**	⇑P	**P**	**19 39 37.4**	**+0.7**
	comp=Z,49nm,0.6s,mb5.6						
REYF	**Montagne du Re**	**89.91**	**43**	eP	**P**	**19 39 37.5**	**+0.9**
EPOB	**Poblet**	**89.97**	**45**	P	**P**	**19 39 37.3**	**+0.4**
	comp=Z,57nm,0.8s,mb5.5						
SFJD	**Kangerlussuaq**	**90.03**	**7**	P	**P**	**19 39 37.8**	**+1.1**
	comp=Z,70nm,1.0s,mb5.5,baz=171,slow=4.5,SNR=13						
SFJD	**Kangerlussuaq**	**90.03**	**7**	i S	S	19 50 14.7	+1.5
SFJD				i		19 51 25.2	
SFJD				i		20 02 53.1	
	comp=Z,8µm,21.0s						
SFJD	**Kangerlussuaq**	**90.03**	**7**	i P	**P**	**19 39 39.0**	**+2.3**
	comp=Z,87nm,1.1s,mb5.6						
SFJD				i S	S	19 50 14.7	+1.5
SFJD				i		19 51 25.2	
SFJD				i		20 02 53.1	
SFJD				LR	LR		
	comp=Z,8µm,21.0s						
SFJD	**Kangerlussuaq**	**90.03**	**7**	i P	**P**	**19 39 39.0**	**+2.3**
SFJD				i S	S	19 50 14.7	+1.5
SFJD				i		19 51 25.2	
SFJD				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.6						
SFJD				MLR	MLR		
	comp=Z,8µm,21.0s						
EBIE	**Bielsa**	**90.05**	**43**	P	**P**	**19 39 38.4**	**+1.1**
	comp=Z,95nm,1.2s,mb5.6						
LABF	**Labassere**	**90.19**	**43**	eP	**P**	**19 39 38.7**	**+0.7**
MIR	**Mirnyy**	**90.20**	**172**	eP	**P**	**19 39 39.0**	**+1.6**
MIR				eS	SKS	19 49 55.0	+3.8
MIR				ePS	SP	19 51 24.0	-1.3
MIR				smax			
	comp=E,11µm,12.0s						
MIR				MLR	MLR		
	comp=N,8µm,20.0s						
MIR				MLR	MLR		
	comp=E,4µm,20.0s						
MIR				MLR	MLR		
	comp=Z,15µm,20.0s						
RESF	**Ens**	**90.23**	**43**	eP	**P**	**19 39 39.2**	**+1.0**
EPF	**Esparros**	**90.35**	**43**	⇑iP	**P**	**19 39 39.3**	**+0.6**
	comp=Z,136nm,1.1s,mb5.5						
EPF	**Esparros**	**90.35**	**43**	⇑iP	**P**	**19 39 39.3**	**+0.6**
EPF				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.5						
CKHR	**Kef el Ahmar**	**90.45**	**51**	P	**P**	**19 39 44.0**	**+4.7**
SET	**Setif**	**90.45**	**51**	P	**P**	**19 39 45.0**	**+5.6**
MELF	**Melles**	**90.53**	**43**	eP	**P**	**19 39 40.8**	**+1.2**
CMER	**Merouana**	**90.54**	**52**	P	**P**	**19 39 39.0**	**-0.8**
EMIR	**Miracle**	**90.54**	**44**	P	**P**	**19 39 40.2**	**+0.6**
	comp=Z,96nm,0.7s,mb5.9						
SALF	**Salau**	**90.75**	**43**	eP	**P**	**19 39 41.7**	**+1.1**
CPZ	**Penzance**	**90.77**	**35**	eP	**P**	**19 39 40.0**	**-0.5**
CPZ				AMb	AMB	19 39 47.3	
	comp=Z,204nm,1.9s,mb5.8						
QUIF	**Quistinic**	**90.84**	**37**	⇑iP	**P**	**19 39 40.5**	**-0.4**
	comp=Z,329nm,1.5s,mb5.8						
QUIF	**Quistinic**	**90.84**	**37**	⇑iP	**P**	**19 39 40.5**	**-0.4**
QUIF				pmax	pmax		
	comp=Z,164nm,1.5s,mb5.8						
CGW	**Gweek**	**90.93**	**35**	eP	**P**	**19 39 40.9**	**-0.4**
CGH1	**Goonhilly**	**90.93**	**35**	eP	**P**	**19 39 40.9**	**-0.4**
DFRA	**Djebel Bou Aff**	**90.95**	**51**	P	**P**	**19 39 49.0**	**+7.3**
CCA1	**Carnmenellis**	**90.98**	**35**	eP	**P**	**19 39 41.0**	**-0.4**
CRQ2	**Rosemanowes 2**	**91.00**	**35**	eP	**P**	**19 39 40.8**	**-0.8**
ROSF	**Rostrenen**	**91.00**	**37**	⇑iP	**P**	**19 39 41.3**	**-0.4**
	comp=Z,326nm,1.3s,mb5.9						
ROSF				epP	pP	19 40 22.3	-0.3
ROSF	**Rostrenen**	**91.00**	**37**	⇑iP	**P**	**19 39 41.3**	**-0.4**
ROSF				e*PP	pP	19 40 22.3	-0.3
ROSF				pmax	pmax		
	comp=Z,163nm,1.3s,mb5.9						
LRYF	**La Roche-sur-Y**	**91.05**	**39**	eP	**P**	**19 39 41.7**	**-0.2**
CSA1	**St Austell**	**91.25**	**35**	eP	**P**	**19 39 42.0**	**-0.7**
CASM	**Ain Smara**	**91.26**	**51**	P	**P**	**19 39 45.0**	**+1.8**
LPEF	**Le Peyrat**	**91.30**	**44**	eP	**P**	**19 39 43.4**	**+0.2**
SGMF	**Saint Gilles**	**91.36**	**37**	⇑iP	**P**	**19 39 42.7**	**-0.6**
	comp=Z,280nm,1.5s,mb5.8						
SGMF	**Saint Gilles**	**91.36**	**37**	⇑iP	**P**	**19 39 42.7**	**-0.6**
SGMF				pmax	pmax		
	comp=Z,140nm,1.5s,mb5.8						
CKFL	**Kef-Lekhel**	**91.49**	**51**	P	**P**	**19 39 49.0**	**+4.8**
FILF	**Fillols**	**91.53**	**44**	eP	**P**	**19 39 44.4**	**+0.2**
LCHF	**La Chataignera**	**91.57**	**39**	eP	**P**	**19 39 44.4**	**+0.1**
LFF	**La Frestale**	**91.57**	**41**	⇑iP	**P**	**19 39 44.3**	**0.0**
	comp=Z,306nm,1.2s,mb5.9						
LFF	**La Frestale**	**91.57**	**41**	⇑iP	**P**	**19 39 44.3**	**0.0**
LFF				pmax	pmax		
	comp=Z,153nm,1.2s,mb5.9						
CASY	**Casey**	**91.62**	**179**	eP	**P**	**19 39 44.5**	**+0.4**
CASY				esP	pP	19 40 24.6	-0.5
CASY				eSKS	SKS	19 50 02.9	+3.4
CASY				eS	S	19 50 30.0	+2.7
CASY	**Casey**	**91.62**	**179**	P	**P**	**19 39 44.8**	**+0.7**
CASY				S	S	19 50 29.6	+2.2
CASY				sS		19 51 35.2	
CASY				SS	SS	19 56 48.8	+7.3
MTLF	**Montolieu**	**91.69**	**43**	⇑iP	**P**	**19 39 44.8**	**-0.2**
	comp=Z,222nm,1.2s,mb5.8						
MTLF	**Montolieu**	**91.69**	**43**	⇑iP	**P**	**19 39 44.8**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,111nm,1.2s,mb5.8						
SJAF	**Saint Jean de**	**91.70**	**44**	eP	**P**	**19 39 44.9**	**-0.1**
CAEH	**’Ain El Ouahch**	**91.75**	**51**	P	**P**	**19 39 47.0**	**+1.6**
DCN	**Croghan**	**91.77**	**32**	eP	**P**	**19 39 43.9**	**-1.2**
MFF	**Saint Martin d**	**91.88**	**40**	⇑iP	**P**	**19 39 45.6**	**-0.1**
	comp=Z,435nm,1.4s,mb6.0						
MFF				epP	pP	19 40 26.8	0.0
MFF	**Saint Martin d**	**91.88**	**40**	⇑iP	**P**	**19 39 45.6**	**-0.1**
MFF				e*PP	pP	19 40 26.8	0.0
MFF				pmax	pmax		
	comp=Z,217nm,1.4s,mb6.0						
CMAH	**Djebel Manchou**	**92.09**	**51**	P	**P**	**19 39 50.0**	**+3.0**
DLF	**Lyons Farm**	**92.10**	**32**	eP	**P**	**19 39 45.3**	**-1.3**
DSB	**Dublin**	**92.15**	**32**	P	**P**	**19 39 46.1**	**-0.7**
HEX	**Exmoor**	**92.22**	**35**	eP	**P**	**19 39 46.7**	**-0.5**
RJF	**Les Rejaudoux**	**92.23**	**41**	⇑iP	**P**	**19 39 47.2**	**-0.1**
	comp=Z,287nm,1.4s,mb5.8						
RJF				eR			
	comp=Z,25µm,19.2s						
RJF	**Les Rejaudoux**	**92.23**	**41**	⇑iP	**P**	**19 39 47.2**	**-0.1**
RJF				pmax	pmax		
	comp=Z,144nm,1.4s,mb5.8						
RJF				MLR	MLR		
	comp=Z,25µm,19.3s						
YKA	**Yellowknife Ar**	**92.30**	**340**	P	**P**	**19 39 47.0**	**-0.3**
	comp=Z,79nm,0.7s,mb5.9,baz=139,slow=4.7,SNR=118						
YKA				S	SKS	19 50 07.2	+3.9
	comp=Z,0.9nm,0.7s,baz=245,slow=8.7,SNR=2.4						
YKA				LR	LR	20 25 11.2	
	comp=Z,11µm,21.3s,baz=80,slow=38						
YKA	**Yellowknife Ar**	**92.30**	**340**	P	**P**	**19 39 47.0**	**-0.3**
YKA				S	SKS	19 50 07.2	+3.9
YKA				LR	LR	20 25 11.2	
YKW3	**Yellowknife Ar**	**92.35**	**340**	P	**P**	**19 39 47.3**	**-0.2**
CAF	**Calviac**	**92.38**	**42**	⇑iP	**P**	**19 39 47.9**	**-0.1**
	comp=Z,87nm,1.1s,mb5.4						
CAF	**Calviac**	**92.38**	**42**	⇑iP	**P**	**19 39 47.9**	**-0.1**
CAF				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.4						
GRR	**Gorron**	**92.39**	**38**	⇑iP	**P**	**19 39 47.5**	**-0.5**
	comp=Z,150nm,0.9s,mb5.7						
GRR	**Gorron**	**92.39**	**38**	⇑iP	**P**	**19 39 47.5**	**-0.5**
GRR				pmax	pmax		
	comp=Z,75nm,0.9s,mb5.7						
HSA	**Swansea**	**92.42**	**34**	eP	**P**	**19 39 47.3**	**-0.8**
FLN	**La Foliniere**	**92.80**	**38**	⇑iP	**P**	**19 39 48.9**	**-1.0**
	comp=Z,337nm,1.3s,mb6.0						
FLN				epP	pP	19 40 30.7	-0.2
FLN				eR			
	comp=Z,16µm,21.5s						
FLN	**La Foliniere**	**92.80**	**38**	⇑iP	**P**	**19 39 48.9**	**-1.0**
FLN				e*PP	pP	19 40 30.7	-0.2
FLN				pmax	pmax		
	comp=Z,168nm,1.3s,mb6.0						
FLN				MLR	MLR		
	comp=Z,16µm,21.5s						
LDF	**La Druitiere**	**92.92**	**38**	⇑iP	**P**	**19 39 50.0**	**-0.5**
	comp=Z,85nm,0.7s,mb5.7						
LDF	**La Druitiere**	**92.92**	**38**	⇑iP	**P**	**19 39 50.0**	**-0.5**
LDF				pmax	pmax		
	comp=Z,42nm,0.7s,mb5.7						
GMM	**Mts of Mourne**	**92.93**	**31**	eP	**P**	**19 39 50.0**	**-0.3**
YRE	**Yr Eifl**	**92.97**	**33**	eP	**P**	**19 39 50.2**	**-0.4**
VERF	**Verneugheol**	**93.04**	**41**	eP	**P**	**19 39 51.1**	**0.0**
LASF	**Ste Croix**	**93.09**	**43**	⇑iP	**P**	**19 39 51.6**	**+0.3**
	comp=Z,112nm,1.2s,mb5.6						
SWK	**Warminster**	**93.09**	**35**	eP	**P**	**19 39 50.1**	**-1.1**
WCB1	**Church Bay**	**93.13**	**32**	eP	**P**	**19 39 50.5**	**-0.8**
TCF	**Toulx Ste Croi**	**93.13**	**41**	⇑iP	**P**	**19 39 51.1**	**-0.4**
	comp=Z,124nm,1.2s,mb5.6						
TCF	**Toulx Ste Croi**	**93.13**	**41**	⇑iP	**P**	**19 39 51.1**	**-0.4**
TCF				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.6						
WLF1	**Llynfaes**	**93.15**	**33**	eP	**P**	**19 39 51.6**	**+0.2**
LBL	**Lubilhac**	**93.26**	**42**	eP	**P**	**19 39 52.4**	**+0.3**
SIW	**Isle of Wight**	**93.30**	**36**	eP	**P**	**19 39 51.0**	**-1.2**
PYM	**Petit Puy Mans**	**93.36**	**42**	eP	**P**	**19 39 53.1**	**+0.6**
WIM	**Isle of Man**	**93.50**	**32**	eP	**P**	**19 39 52.1**	**-0.9**
BGF	**Bois d’Agland**	**93.65**	**41**	⇑iP	**P**	**19 39 53.7**	**-0.1**
	comp=Z,302nm,1.4s,mb6.0						
BGF				epP	pP	19 40 34.8	-0.1
BGF	**Bois d’Agland**	**93.65**	**41**	⇑iP	**P**	**19 39 53.7**	**-0.1**
BGF				e*PP	pP	19 40 34.8	-0.1
BGF				pmax	pmax		
	comp=Z,151nm,1.4s,mb5.9						
COLF	**Collangettes**	**93.67**	**42**	eP	**P**	**19 39 54.3**	**+0.4**
GMK	**Mull of Kintyr**	**93.74**	**30**	eP	**P**	**19 39 53.4**	**-0.6**
GELF	**Grande-Etoile**	**93.77**	**44**	eP	**P**	**19 39 54.9**	**+0.5**
PRAF	**Pradon**	**93.80**	**44**	eP	**P**	**19 39 55.1**	**+0.5**
HYF	**Humbligny**	**93.87**	**40**	⇑iP	**P**	**19 39 54.6**	**-0.2**
GAL1	**Galloway**	**93.88**	**31**	eP	**P**	**19 39 54.1**	**-0.6**
BERF	**Bertagne**	**93.91**	**45**	eP	**P**	**19 39 57.2**	**+2.1**
BORG	**Borgarnes**	**93.96**	**18**	P	**P**	**19 39 54.6**	**-0.1**
	comp=Z,33nm,1.0s,mb5.4,baz=146,slow=3.0,SNR=5.8						
VIVF	**Saint-Julien-l**	**93.97**	**43**	⇑iP	**P**	**19 39 55.8**	**+0.5**
	comp=Z,216nm,1.4s,mb5.8						
VIVF	**Saint-Julien-l**	**93.97**	**43**	⇑iP	**P**	**19 39 55.8**	**+0.5**
VIVF				pmax	pmax		
	comp=Z,108nm,1.4s,mb5.8						
AVF	**Avril sur Loir**	**94.07**	**41**	⇑iP	**P**	**19 39 55.4**	**-0.3**
	comp=Z,263nm,1.5s,mb5.8						
AVF				epP	pP	19 40 36.6	-0.1
AVF	**Avril sur Loir**	**94.07**	**41**	⇑iP	**P**	**19 39 55.4**	**-0.3**
AVF				e*PP	pP	19 40 36.6	-0.1
AVF				pmax	pmax		
	comp=Z,132nm,1.5s,mb5.8						
SMRF	**Simiane la Rot**	**94.14**	**44**	⇑iP	**P**	**19 39 56.0**	**-0.1**
	comp=Z,329nm,1.5s,mb6.0						
SKP1	**Kophill**	**94.16**	**35**	eP	**P**	**19 39 55.0**	**-1.0**
VILF	**Villemus**	**94.17**	**44**	eP	**P**	**19 39 55.6**	**-0.6**
URZ	**Urewera**	**94.25**	**226**	LR	LR	20 14 38.0	
	comp=Z,8µm,20.7s,baz=291,slow=30						
SSF	**Saint Saulge**	**94.29**	**41**	⇑iP	**P**	**19 39 56.1**	**-0.6**
	comp=Z,106nm,1.5s,mb5.8						
SSF	**Saint Saulge**	**94.29**	**41**	⇑iP	**P**	**19 39 56.1**	**-0.6**
SSF				pmax	pmax		
	comp=Z,106nm,1.5s,mb5.8						
TAVF	**Tavernes**	**94.29**	**44**	eP	**P**	**19 39 57.5**	**+0.7**
SMF	**Signal de Mont**	**94.29**	**41**	⇑iP	**P**	**19 39 56.7**	**0.0**
	comp=Z,500nm,1.5s,mb6.1						
SMF	**Signal de Mont**	**94.29**	**41**	⇑iP	**P**	**19 39 56.7**	**0.0**
SMF				pmax	pmax		
	comp=Z,250nm,1.5s,mb6.1						
KWE	**Weaver Farm**	**94.30**	**34**	eP	**P**	**19 39 56.2**	**-0.4**
STOF	**St-Etienne Org**	**94.36**	**44**	eP	**P**	**19 39 58.2**	**+1.1**
LMR	**La Mourre**	**94.45**	**45**	⇑iP	**P**	**19 39 57.8**	**+0.3**
	comp=Z,80nm,0.6s,mb5.7						
LMR	**La Mourre**	**94.45**	**45**	⇑iP	**P**	**19 39 57.8**	**+0.3**
LMR				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.7						
KAR1	**Arisaig**	**94.53**	**29**	eP	**P**	**19 39 57.1**	**-0.4**
KAR1				AMb	AMB	19 40 04.4	
	comp=Z,180nm,1.7s,mb6.0						
KBI1	**Birley Grange**	**94.58**	**34**	eP	**P**	**19 39 57.3**	**-0.5**
LOR	**Lormes**	**94.60**	**40**	⇑iP	**P**	**19 39 57.5**	**-0.6**
	comp=Z,214nm,1.5s,mb5.8						
LOR				epP	pP	19 40 38.8	-0.3
LOR				eR			
	comp=Z,17µm,20.2s						
LOR	**Lormes**	**94.60**	**40**	⇑iP	**P**	**19 39 57.5**	**-0.6**
LOR				e*PP	pP	19 40 38.8	-0.3
LOR				pmax	pmax		
	comp=Z,107nm,1.5s,mb5.8						
LOR				MLR	MLR		
	comp=Z,17µm,20.3s						
OG25	**Le Caire**	**94.64**	**44**	eP	**P**	**19 39 59.3**	**+0.9**
FRF	**La Foret Royal**	**94.64**	**45**	⇑iP	**P**	**19 39 58.7**	**+0.3**
	comp=Z,372nm,1.5s,mb6.1						
FRF	**La Foret Royal**	**94.64**	**45**	⇑iP	**P**	**19 39 58.7**	**+0.3**
FRF				pmax	pmax		
	comp=Z,186nm,1.5s,mb6.1						
VSL	**Villasalto**	**94.73**	**49**	P	**P**	**19 39 59.5**	**+0.6**
ORIF	**Oris-en-Rattie**	**94.76**	**43**	⇑iP	**P**	**19 39 59.9**	**+1.0**
	comp=Z,211nm,1.1s,mb6.0						
ORIF				eR			
	comp=Z,12µm,19.8s						
EAB	**Aberfoyle**	**94.80**	**30**	eP	**P**	**19 39 58.3**	**-0.5**
EAB				AMb	AMB	19 40 02.4	
	comp=Z,83nm,1.4s,mb5.8						
ECK	**Cauldkaine Hil**	**94.82**	**31**	eP	**P**	**19 39 58.1**	**-0.8**
ECK				AMb	AMB	19 40 05.5	
	comp=Z,95nm,1.5s,mb5.8						
GRN	**Grenoble**	**94.82**	**43**	eP	**P**	**19 39 59.3**	**+0.1**
KPL	**Plockton**	**94.85**	**29**	eP	**P**	**19 39 58.4**	**-0.6**
KPL				AMb	AMB	19 40 04.5	
	comp=Z,95nm,1.6s,mb5.8						
ESK	**Eskdalemuir**	**94.85**	**31**	P	**P**	**19 39 57.8**	**-1.3**
ESK	**Eskdalemuir**	**94.85**	**31**	P	**P**	**19 40 01.2**	**+2.1**
KSB	**Sheil Bridge**	**94.88**	**29**	eP	**P**	**19 39 58.6**	**-0.5**
KSB				AMb	AMB	19 40 05.1	
	comp=Z,93nm,1.7s,mb5.8						
EKA	**Eskdalemuir Ar**	**94.89**	**31**	P	**P**	**19 39 59.2**	**0.0**
	comp=Z,36nm,1.1s,mb5.5,baz=236,slow=6.0,SNR=17						
RPZ	**Rata Peaks**	**94.89**	**219**	LR	LR	20 15 31.4	

	comp=Z,7µm,18.4s,baz=123,slow=31						
CALN	**Calern**	94.89	45	*e*P	P	19 40 00.8	+1.3
OG05	**Jujurieux**	95.01	42	*e*P	P	19 40 00.3	+0.3
EAU	**Auchinoon**	95.03	31	*e*P	P	19 39 59.9	0.0
EAU				AMb	AMB	19 40 07.6	
	comp=Z,178nm,1.5s,mb6.1						
KAC	**Achnashellach**	95.10	29	*e*P	P	19 39 59.9	-0.3
SURF	**Saint Ours**	95.16	44	*e*P	P	19 40 01.9	+1.1
EBL	**Broad Law**	95.18	31	*e*P	P	19 39 59.9	-0.7
EDI	**Edinburgh**	95.19	31	*e*P	P	19 40 00.1	-0.5
EDI				AMb	AMB	19 40 07.4	
	comp=Z,100nm,2.1s,mb5.7						
REVF	**Revere**	95.19	45	*e*P	P	19 40 02.3	+1.4
MBDF	**Montbardon**	95.24	44	⇑*i*P	P	19 40 01.9	+0.8
	comp=Z,300nm,1.5s,mb6.0						
MBDF	**Montbardon**	95.24	44	⇑*i*P	P	19 40 01.9	+0.8
MBDF				pmax	pmax		
	comp=Z,150nm,1.5s,mb6.0						
SBF	**Sospel**	95.29	45	⇑*i*P	P	19 40 01.4	0.0
	comp=Z,412nm,1.3s,mb6.2						
SBF	**Sospel**	95.29	45	⇑*i*P	P	19 40 01.4	0.0
SBF				pmax	pmax		
	comp=Z,206nm,1.3s,mb6.2						
RAO	**Raoul Island**	95.30	236	LR	LR	20 15 11.0	
	comp=Z,4µm,19.5s,baz=117,slow=30						
BNI	**Bardonecchia**	95.33	43	P	P	19 40 01.8	+0.3
BNI				pP	pP	19 40 40.6	-1.9
AUTN	**L'Aution**	95.34	45	*e*P	P	19 40 01.8	+0.2
PZZ	**Prazzo**	95.36	44	P	P	19 40 01.6	0.0
DLBC	**Dease Lake**	95.39	332	S		19 50 28.4	
	comp=Z,2.5nm,1.0s,baz=162,slow=20,SNR=2.6						
DLBC	**Dease Lake**	95.39	332	P	P	19 40 01.8	+0.4
STV	**Sta Anna Valdi**	95.39	44	P	P	19 40 01.0	-0.8
STV2	**Anna di Valdie**	95.39	44	P	P	19 40 00.6	-1.2
SAOF	**Saorge**	95.42	45	*e*P	P	19 40 03.0	+1.0
ENR	**Entracque**	95.44	44	P	P	19 40 01.6	-0.4
DOI	**San Damiano**	95.45	44	P	P	19 40 05.8	+3.7
	comp=Z,133nm,1.5s,mb6.0						
DOI	**San Damiano**	95.45	44	P	P	19 40 05.8	+3.7
DOI				pmax	pmax		
	comp=Z,133nm,1.5s,mb6.0						
NEGI	**Negi**	95.46	45	P	P	19 40 00.8	-1.3
FENE	**Fenestrelle**	95.56	43	P	P	19 40 01.8	-0.8
LPL	**La Plagne**	95.57	43	⇑*i*P	P	19 40 03.6	+1.0
	comp=Z,127nm,1.1s,mb5.8						
LPL	**La Plagne**	95.57	43	⇑*i*P	P	19 40 03.6	+1.0
LPL				pmax	pmax		
	comp=Z,64nm,1.1s,mb5.9						
LPG	**La Plagne**	95.57	43	⇑*i*P	P	19 40 03.9	+1.3
	comp=Z,153nm,1.0s,mb6.0						
LPG	**La Plagne**	95.57	43	⇑*i*P	P	19 40 03.9	+1.3
LPG				pmax	pmax		
	comp=Z,77nm,1.0s,mb6.0						
RSL	**Roselend**	95.58	43	*e*P	P	19 40 03.2	+0.6
MONE	**Monesi**	95.59	45	P	P	19 40 01.5	-1.3
IMI	**Imperia**	95.61	45	P	P	19 40 01.8	-1.0
BHB	**Bricherasio**	95.61	44	P	P	19 40 02.1	-0.7
CABF	**La Chapelle**	95.65	42	⇑*i*P	P	19 40 03.1	+0.2
	comp=Z,89nm,1.2s,mb5.7						
CABF	**La Chapelle**	95.65	42	⇑*i*P	P	19 40 03.1	+0.2
CABF				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.7						
RSP	**Reno Superiore**	95.74	43	P	P	19 40 02.8	-0.6
PGF	**Pioggiola**	95.76	46	⇑*i*P	P	19 40 03.3	-0.2
	comp=Z,384nm,1.6s,mb6.2						
PGF	**Pioggiola**	95.76	46	⇑*i*P	P	19 40 03.3	-0.2
PGF				pmax	pmax		
	comp=Z,192nm,1.6s,mb6.2						
ROB	**Roburent**	95.76	44	P	P	19 40 02.3	-1.2
LSD	**Ceresole Reale**	95.81	43	P	P	19 40 03.8	+0.1
MEZF	**Maizieres J'vi**	95.88	40	⇑*i*P	P	19 40 03.8	-0.1
	comp=Z,402nm,1.6s,mb6.2						
MEZF				*e*pP	pP	19 40 45.0	+0.1
EMV	**Vieux Emosson**	95.91	43	P	P	19 40 05.8	+1.7
FIN	**Finale Ligure**	95.94	45	P	P	19 40 04.9	+0.6
BAIF	**Baives**	96.11	38	⇑*i*P	P	19 40 04.4	-0.5
	comp=Z,184nm,1.7s,mb5.8						
BAIF	**Baives**	96.11	38	⇑*i*P	P	19 40 04.4	-0.5
BAIF				pmax	pmax		
	comp=Z,92nm,1.7s,mb5.8						
TRAV		96.21	43	P	P	19 40 04.1	-1.4
DIX	**Grande Dixence**	96.24	43	P	P	19 40 07.5	+1.9
PCP	**Pian Castagno**	96.30	44	P	P	19 40 03.9	-2.0
THEF	**They Montfort**	96.31	40	*e*P	P	19 40 05.7	-0.2
ORX	**Oropa**	96.41	43	P	P	19 40 05.4	-1.0
HAU	**Haudompre**	96.43	41	⇑*i*P	P	19 40 06.1	-0.3
	comp=Z,93nm,1.1s,mb5.7						
HAU				*e*R			
	comp=Z,13µm,21.0s						
HAU	**Haudompre**	96.43	41	⇑*i*P	P	19 40 06.1	-0.3
HAU				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.7						
HAU				MLR	MLR		
	comp=Z,13µm,21.0s						
LOMF	**Lomont**	96.44	41	*e*P	P	19 40 06.7	+0.3
GIVF	**Givet**	96.48	38	⇑*i*P	P	19 40 06.5	-0.1
	comp=Z,309nm,1.5s,mb6.1						
GIVF	**Givet**	96.48	38	⇑*i*P	P	19 40 06.5	-0.1
GIVF				pmax	pmax		
	comp=Z,155nm,1.5s,mb6.1						
LKBD	**Leukerbad**	96.51	42	⇑P	P	19 40 07.7	+0.9
MMK	**Mattmark**	96.58	43	P	P	19 40 08.6	+1.5
HINF	**Hinteralfeld**	96.65	41	⇑*i*P	P	19 40 07.1	-0.3
	comp=Z,147nm,1.6s,mb5.8						
HINF	**Hinteralfeld**	96.65	41	⇑*i*P	P	19 40 07.1	-0.3
HINF				pmax	pmax		
	comp=Z,74nm,1.6s,mb5.8						
SUMG	**Summit**	96.78	9	P	P	19 40 09.3	+1.8
	comp=Z,113nm,1.0s,mb6.2						
MOF	**Molkenrain**	96.84	41	*e*P	P	19 40 08.1	-0.2
BBS	**Basel-Blauen**	96.90	41	*e*P	P	19 40 10.0	+1.4
BOB	**Bobbio (Coli)**	96.98	44	P	P	19 40 10.4	+1.4
VAI	**Varese**	97.01	43	P	P	19 40 08.3	-0.8
	comp=Z,49nm,0.8s,mb5.9						
VAI	**Varese**	97.01	43	P	P	19 40 08.3	-0.8
VAI				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.9						
ECH	**Echery**	97.01	41	*e*P	P	19 40 09.0	-0.1
WLF	**Walferdange**	97.05	39	P	P	19 40 09.5	+0.2
	comp=Z,83nm,1.4s,mb5.9						
WLF				pP	pP	19 40 48.0	-2.3
WLF	**Walferdange**	97.05	39	P	P	19 40 09.5	+0.3
WLF				*PP	pP	19 40 48.0	-2.3
WLF				pmax	pmax		
	comp=Z,83nm,1.4s,mb5.9						
CODM		97.09	45	P	P	19 40 07.4	-2.2
CDF	**Champ du Feu**	97.17	40	⇑*i*P	P	19 40 09.5	-0.3
	comp=Z,315nm,1.8s,mb6.0						
CDF	**Champ du Feu**	97.17	40	⇑*i*P	P	19 40 09.5	-0.3
CDF				pmax	pmax		
	comp=Z,158nm,1.8s,mb6.0						
VINC	**Vinca**	97.19	45	P	P	19 40 07.7	-2.3
BACM		97.19	45	P	P	19 40 06.9	-3.1
MUGIO	**Muggio**	97.20	43	P	P	19 40 09.8	-0.2
LIBD	**Limburg**	97.25	41	*e*P	P	19 40 09.0	-1.2
GRAM		97.27	45	P	P	19 40 08.0	-2.3
VALM		97.33	45	P	P	19 40 07.9	-2.8
VLC	**Villacollemand**	97.35	45	P	P	19 40 10.6	-0.1
SARO	**Sassorosso**	97.37	45	P	P	19 40 08.7	-2.1
MUO	**Muotathal**	97.39	42	⇑P	P	19 40 11.6	+0.8
HGN	**Heimansgroeve**	97.41	38	⇓*i*P	P	19 40 11.2	+0.4
	comp=Z,68nm,1.9s,mb5.7						
HGN				*e*sP	pP	19 40 49.5	-2.4
HGN				*e*PP	PP	19 44 10.0	-2.0
HGN				*e*SKS	SKS	19 50 37.5	+6.1
HGN				*e*Sdif		19 51 21.5	
HGN				*e*ScSP		19 52 45.8	
HGN				*e*PKKP	PKKP	19 56 48.4	+19
HGN				*e*SS	SS	19 57 53.3	-10
ERBM	**Eremo**	97.47	45	P	P	19 40 06.7	-4.6
GSCL	**Gusciola**	97.56	45	P	P	19 40 13.6	+1.9
LLS	**Linth-Limmern**	97.57	42	⇑P	P	19 40 12.3	+0.7
TUE	**Stuetta**	97.62	43	P	P	19 40 14.2	+2.3
	comp=Z,198nm,2.2s,mb6.2						
SLE	**Schleitheim**	97.63	41	⇑P	P	19 40 12.0	+0.1
CSNT	**Castellina Chi**	97.67	46	P	P	19 40 14.9	+2.7
VDL	**Val di Lei**	97.71	43	⇑P	P	19 40 12.9	+0.6
LANF	**Langenberg**	97.73	40	*e*P	P	19 40 12.1	-0.2
WILA	**Wila**	97.74	42	⇑P	P	19 40 13.0	+0.6
BFO	**Black Forest**	97.77	41	*e*P	P	19 40 12.2	-0.3
BFO				*e*		19 44 08.4	
BFO				*e*		19 50 40.5	
BFO				*e*S	S	19 51 27.3	+7.0
BFO				*e*SP	SP	19 52 54.4	+4.3
BFO				*e*SS	SS	19 58 09.4	+1.0
ZCCA	**Zocca**	97.81	45	P	P	19 40 13.3	+0.5
FNVD	**Fontana Vidola**	97.84	45	P	P	19 40 14.0	+1.1
	comp=Z,651nm,2.8s,mb6.6						
KIP	**Kipapa**	97.96	290	P	P	19 40 19.7	+5.8
ABH	**Alteburg**	97.96	39	*e*P	P	19 40 13.0	-0.3
SAL	**Salo**	98.02	44	P	P	19 40 14.5	+0.8
	comp=Z,109nm,0.7s,mb6.4						
SAL	**Salo**	98.02	44	P	P	19 40 14.5	+0.8
SAL				pmax	pmax		
	comp=Z,109nm,0.7s,mb6.4						
SCO	**Scoresbysund**	98.06	14	*i* P	P	19 40 14.4	+1.1
	comp=Z,12nm,0.8s,mb5.4						
SCO	**Scoresbysund**	98.06	14	*e*P	P	19 40 14.4	+1.1
	comp=Z,12nm,0.8s,mb5.4						
SCO	**Scoresbysund**	98.06	14	*e*P	P	19 40 14.4	+1.1
SCO				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.4						
DAVOX	**Davos**	98.08	43	P	P	19 40 14.8	+0.9
	comp=Z,24nm,0.8s,mb5.7,baz=252,slow=5.4,SNR=16						
DAVOX				S		19 50 39.4	
	comp=Z,3.3nm,0.9s,baz=322,slow=17,SNR=2.8						
DAVOX				PKKPbc		19 56 49.6	
	comp=Z,5.1nm,0.5s,baz=256,slow=3.2,SNR=8.4						
DAVOX	**Davos**	98.08	43	P	P	19 40 17.4	+3.4
MABI	**Malga Bissina**	98.19	44	P	P	19 40 17.1	+2.6
	comp=Z,91nm,1.5s,mb6.0						
SFI	**Santa Sofia**	98.21	46	P	P	19 40 18.8	+4.2
	comp=Z,553nm,2.3s,mb6.6						
SFI	**Santa Sofia**	98.21	46	P	P	19 40 18.8	+4.2
SFI				pmax	pmax		
	comp=Z,553nm,2.3s,mb6.6						
FUORN	**Ofenpass**	98.26	43	P	P	19 40 17.6	+2.8
BRMO	**Bormio**	98.27	43	P	P	19 40 15.6	+0.8
DAVA	**Damuels**	98.29	42	⇓*i*P	PP	19 44 15.0	-3.8
	comp=Z,60nm,1.8s						
DAVA	**Damuels**	98.29	42	⇑*i*P	P	19 40 15.5	+0.6
	comp=Z,100nm,1.7s,mb6.0						
DAVA				*e*		19 44 15.0	
WTSB	**Winterswijk**	98.42	37	*e*P	P	19 40 15.8	+0.4
	comp=Z,68nm,3.9s						
WTSB				*e*sP	pP	19 40 54.0	-2.4
STU	**Stuttgart**	98.48	41	*e*P	P	19 40 15.6	-0.1
	comp=Z,40nm,0.9s,mb5.8						
STU	**Stuttgart**	98.48	41	*e*P	P	19 40 15.6	-0.1
STU				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.8						
TOD	**Tromm**	98.58	40	*e*P	P	19 40 14.9	-1.3
TNS	**Taunus Mts**	98.63	39	*e*P	P	19 40 16.6	+0.2
TNS				*e*		19 44 16.4	
TNS				*e*		19 50 45.5	
TNS				*e*S	S	19 51 35.1	+7.7
TNS				*e*SS	SS	19 58 22.5	+2.2
AQU	**L'Aquila**	98.67	48	P	P	19 40 21.4	+4.7
	comp=Z,95nm,1.5s,mb6.0						
AQU	**L'Aquila**	98.67	48	P	P	19 40 21.5	+4.8
AQU				pmax	pmax		
	comp=Z,95nm,1.5s,mb6.0						
CTI	**Castel Tesino**	98.92	44	P	P	19 40 18.5	+0.7
MOTA	**Moosalm**	99.08	43	⇑*i*P	PP	19 44 23.8	-0.5
	comp=Z,17nm,0.9s						
MOTA	**Moosalm**	99.08	43	*i* P	P	19 40 18.7	+0.2
	comp=Z,49nm,0.9s,mb5.9						
MOTA				*e*		19 44 23.8	
MOTA				*e*		19 56 41.3	
MOTA	**Moosalm**	99.08	43	*i* P	P	19 40 18.7	+0.2
MOTA				*e*		19 44 23.8	
MOTA				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.9						
WATA	**Walderalm**	99.37	43	⇑*i*P	P	19 40 20.2	+0.3
	comp=Z,37nm,0.7s,mb5.9,SNR=18						
WATA	**Walderalm**	99.37	43	⇑*i*P	PP	19 44 18.4	-8.3
	comp=Z,7.1nm,0.6s						
WATA	**Walderalm**	99.37	43	⇑*i*P	P	19 40 20.2	+0.4
WATA				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.9						
WTTA	**Wattenberg**	99.38	43	*i* P	P	19 40 20.2	+0.3
	comp=Z,118nm,0.9s,mb6.3,SNR=30						
WTTA	**Wattenberg**	99.38	43	⇑*i*P	sP	19 41 03.1	-15
	comp=Z,59nm,1.0s						
WTTA	**Wattenberg**	99.38	43	⇑*i*P	PP	19 44 30.6	+3.9
	comp=Z,41nm,1.3s						
WTTA	**Wattenberg**	99.38	43	*i* P	P	19 40 20.2	+0.3
	comp=Z,118nm,0.9s,mb6.3						
WTTA				*e*	pP	19 41 03.1	+2.2
WTTA				*e*		19 44 30.6	
WTTA	**Wattenberg**	99.38	43	*i* P	P	19 40 20.2	+0.3
WTTA				*e*	pP	19 41 03.1	+2.2
WTTA				*e*		19 44 30.6	
WTTA				pmax	pmax		
	comp=Z,118nm,0.9s,mb6.3						
FUR	**Furstenfeldbru**	99.50	42	*e*P	P	19 40 21.6	+1.2
FUR				*e*		19 44 22.8	
FUR				*e*		19 50 49.5	
FUR				*e*S	S	19 51 43.7	+8.9
FUR				*e*SP	SP	19 53 12.1	+3.7
FUR				*e*SS	SS	19 58 35.1	+2.6
TIP	**Timpagrande**	99.88	52	PP	PP	19 44 28.4	-2.5
GRA1	**Grafenberg Arr**	100.06	40	*e*Pdif	P	19 40 23.3	+0.4
GRA1				*e*PP	PP	19 44 27.9	-4.1
GRA1				*e*SKSac		19 50 53.3	
GRA1				*e*Sdif		19 51 48.3	
GRA1				*e*SP	SP	19 53 18.4	+4.4
GRA1				*e*PKKP	PKKP	19 56 42.0	+18
GRA1				*e*		19 57 08.7	
GRA1				*e*SS	SS	19 58 41.2	+1.0
GRA1				*e*		20 04 57.1	
GRF	**Grafenberg Arr**	100.06	40	*e*Pdif	P	19 40 23.3	+0.4
GRF				*e*PP	PP	19 44 27.9	-4.1
GRF				*e*SKS	SKS	19 50 53.3	+8.7
GRF				Sdif		19 51 48.3	
GRF				*e*SP	SP	19 53 18.4	+4.4
GRF				PKKP	PKKP	19 56 42.0	+18
GRF				*e*		19 57 08.7	
GRF				*e*SS	SS	19 58 41.2	+1.0
GRF				*e*		20 04 57.1	
GRF	**Grafenberg Arr**	100.06	40	*e*P	P	19 40 23.3	+0.4
GRF				*e*		19 44 27.9	
GRF				*e*		19 50 53.3	
GRF				S	S	19 51 48.3	+8.9
GRF				*e*SP	SP	19 53 18.4	+4.4
GRF				*e*SS	SS	19 58 41.2	+1.0
GRF	**Grafenberg Arr**	100.06	40	*e*P	P	19 40 23.3	+0.4
GRF				*e*		19 44 27.9	
GRF				*e*		19 50 53.3	
GRF				*e*S	S	19 51 48.3	+8.9
GRF				*e*SP	SP	19 53 18.4	+4.4
GRF				*e*SS	SS	19 58 41.2	+1.0
CADS	**Cadrg**	100.33	44	*e*Pdiff	P	19 40 24.7	+0.5
CADS				*e*		19 41 03.2	
CADS				*e*PP	PP	19 44 28.5	-5.8
CADS				*e*SKSac		19 50 51.5	
CADS				*e*Sdiff		19 51 51.7	
VOY	**Vojsko**	100.36	45	*e*Pdiff	P	19 40 26.3	+2.0
VOY				*e*		19 44 11.0	
VOY				*e*PP	PP	19 44 32.0	-2.5
KBA	**Koelnbreinsper**	100.39	43	⇑*i*P		19 41 06.9	
	comp=Z,41nm,1.6s						
KBA	**Koelnbreinsper**	100.39	43	⇑*i*P	PP	19 44 30.9	-3.8
	comp=Z,47nm,1.5s						
KBA	**Koelnbreinsper**	100.39	43	⇑*i*P	P	19 40 24.6	+0.2
	comp=Z,31nm,0.9s						
KBA				*e*		19 41 06.9	
KBA				*e*		19 44 30.9	
KBA	**Koelnbreinsper**	100.39	43	⇑*i*P	P	19 40 24.6	+0.2
KBA				*e*		19 44 31.0	
KBA				pmax	pmax		
	comp=Z,31nm,0.9s						
CLZ	**Clausthal**	100.39	38	*e*P	P	19 40 24.7	+0.4
CLZ				*e*		19 44 30.9	
CLZ				*e*		19 50 55.2	
CLZ				*e*S	S	19 51 48.8	+6.6
CLZ				*e*SP	SP	19 53 22.1	+4.6
NVLJ	**Novalja**	100.47	46	*i* P	P	19 40 36.6	+12
CEY	**Cerknica**	100.60	45	*e*Pdiff	P	19 40 25.8	+0.4
CEY				*e*PKKP	PKKP	19 56 42.1	+19
MOX	**Moxa**	100.66	40	*i* P	P	19 40 25.7	+0.2
	comp=Z,logA/T=1.3						
MOX				PP	PP	19 44 29.0	-7.8
MOX				SKS	SKS	19 50 57.0	+9.5
MOX				S	S	19 51 55.0	+11
MOX				PS	PS	19 53 25.0	-15
MOX				PPS	PPS	19 54 20.0	-11
MOX				PKKP	PKKP	19 56 30.0	+6.9
MOX				SS	SS	19 58 39.0	-10
MOX				L		20 25 03.0	
MOX	**Moxa**	100.66	40	*e*P	P	19 40 25.7	+0.2
	comp=Z,35nm,1.6s						
MOX				*e*PP	PP	19 44 28.9	-7.9
MOX				*e*SKS	SKS	19 50 57.0	+9.5
MOX				*e*S	S	19 51 55.0	+11
MOX				*e*PS	PS	19 53 25.0	-15
MOX				*e*PPS	PPS	19 54 20.0	-11
MOX				*e*PKKP	PKKP	19 56 30.0	+6.9
MOX				*e*SS	SS	19 58 39.0	-10
MOX				LR	LR		
	comp=Z,10µm,22.0s						
MOX	**Moxa**	100.66	40	*e*P	P	19 40 25.7	+0.2
MOX				*e*S	S	19 51 55.0	+11
MOX				*e*PS	PS	19 53 25.0	-15
MOX				pmax	pmax		
	comp=Z,35nm,1.6s						
MOX				MLR	MLR		
	comp=Z,10µm,22.0s						
LJU	**Ljubljana**	100.78	45	*e*PP	PP	19 44 33.1	-4.8
LJU				*e*SKSac		19 50 53.2	
LJU				*e*Sdiff		19 51 55.4	
LJU				*e*SS	SS	19 58 45.1	-5.3
WET	**Wettzell**	100.86	41	*e*P	P	19 40 26.6	+0.1
WET				*e*		19 44 34.9	
WET				*e*		19 50 55.9	
WET				*e*S	S	19 51 54.6	+8.5
WET				*e*SP	SP	19 53 26.3	+3.7
WET				*e*SS	SS	19 58 51.5	+0.1
OBKA	**Obir**	100.96	44	⇑*i*P	P	19 40 27.5	+0.5
	comp=Z,44nm,0.8s,SNR=23						
OBKA	**Obir**	100.96	44	⇑*e*P	PP	19 44 29.3	-10
	comp=Z,26nm,1.0s						
OBKA	**Obir**	100.96	44	⇑*i*P	P	19 40 27.5	+0.5
	comp=Z,44nm,0.8s						
OBKA				*e*		19 44 29.3	
NKC	**Novy Kostel**	101.00	40	*e*PDIF	P	19 40 27.6	+0.5
NKC				*e*pP		19 41 11.4	
NKC				*e*PP	PP	19 44 33.9	-5.6
NKC				*e*SKS	SKS	19 50 57.1	+7.9
NKC				*e*x	x	19 51 33.7	
NKC				*e*SDIF		19 51 55.5	
NKC				*e*XS		19 53 06.4	
NKC				*e*SS	SS	19 58 48.8	-4.5
NKC				AMS	AMS	20 25 40.0	
	comp=Z,10µm,21.0s						
NKC	**Novy Kostel**	101.00	40	*e*P	P	19 40 27.6	+0.5
NKC				*e*		19 44 33.9	
NKC				*e*		19 50 57.1	
NKC				*e*		19 51 55.5	
NKC				*e*SS	SS	19 58 48.8	-4.5
BSEG	**Bad Segeberg**	101.17	36	*e*P	P	19 40 27.3	-0.5
BSEG				*e*		19 44 36.2	
BSEG				*e*		19 50 58.6	
BSEG				*e*S	S	19 51 54.3	+5.7
BSEG				*e*SP	SP	19 53 29.7	+4.0
BSEG				*e*SS	SS	19 58 54.0	-1.7
MOA	**Molln**	101.25	43	⇑*i*P	P	19 40 28.3	0.0
	comp=Z,28nm,1.9s,SNR=14						
MOA	**Molln**	101.25	43	⇑*i*P	PP	19 44 33.1	-8.2
MOA	**Molln**	101.25	43	⇑*i*P	P	19 40 28.3	0.0
	comp=Z,28nm,1.8s						
MOA				*e*		19 41 11.5	
MOA				*e*		19 44 33.1	
MOA				*e*		19 56 60.0	
GEC2	**GERESS Array S**	101.25	42	*e*P	P	19 40 28.1	-0.1
GEC2				*e*		19 44 38.0	
GEC2				*e*		19 50 57.4	
GEC2				*e*S	S	19 51 58.5	+9.0
GEC2				*e*SP	SP	19 53 29.4	+2.8
GEC2				*e*SS	SS	19 58 59.1	+2.1
GERES	**GERESS Array B**	101.25	42	P	P	19 40 28.2	0.0
	comp=Z,6.1nm,0.8s,baz=225,slow=3.8,SNR=14						
GERES				PKiKP		19 44 49.5	
	comp=Z,3.1nm,0.6s,baz=211,slow=6.6,SNR=4.1						
GERES				PKKPbc		19 56 36.5	
	comp=Z,2.9nm,0.9s,baz=45,slow=1.9,SNR=7.7						
GERES				PKPPKP		20 04 47.9	
	comp=Z,0.9nm,0.9s,baz=297,slow=3.0,SNR=3.8						
LEGS	**Legarje**	101.26	45	*e*Pdiff	P	19 40 28.6	+0.3
KHC	**Kasperske Hory**	101.28	41	*e*PDIF	P	19 40 28.1	-0.3
KHC				*e*pP		19 41 11.5	
KHC				*e*x	x	19 43 52.5	
KHC				*e*PP	PP	19 44 32.2	-9.3
KHC				*e*SKS	SKS	19 50 54.7	+4.1
KHC				*e*SDIF		19 51 57.9	
KHC				*e*XS		19 53 06.3	
KHC				*e*PKKP	PKKP	19 56 39.4	+17
KHC				*e*x	x	19 57 02.1	
KHC				*e*SS	SS	19 58 48.5	-8.8
KHC				AMS	AMS	20 24 30.0	
	comp=Z,8µm,21.3s						
KHC	**Kasperske Hory**	101.28	41	*e*P	P	19 40 28.1	-0.3
KHC				*e*		19 50 54.7	
KHC				*e*		19 51 57.9	
KHC				MLR	MLR		
	comp=Z,8µm,21.3s						
BER	**Bergen**	101.31	29	*e*	P	19 40 30.6	+2.4
BER				*e*PP	PP	19 44 36.8	-4.6
BER				*e*SKSa		19 50 51.1	
BER				*e*SS	SS	19 59 00.9	+3.5
BER	**Bergen**	101.31	29	*e*P	P	19 40 31.2	+3.0
BER				*e*		19 50 58.4	
BER				*e*		19 59 02.0	
MUD	**Monsted U'grnd**	101.54	34	*i* P	P	19 40 32.6	+3.3
	comp=Z,55nm,1.1s						
MUD				*i*		19 44 40.1	
MUD				*i*		19 45 41.3	
MUD				*i* S		19 51 00.6	
MUD				*i* S	S	19 51 58.4	+6.7
	comp=Z,9µm,21.0s						
MUD	**Monsted U'grnd**	101.54	34	*i* P	P	19 40 32.6	+3.3
MUD				*i*		19 44 40.1	
MUD				pmax	pmax		
	comp=Z,55nm,1.1s						
GROS	**Grobnik**	101.56	45	*e*Pdiff	P	19 40 29.2	-0.5
GROS				*e*		19 41 07.7	
GROS				*e*PP	PP	19 44 38.0	-5.5
GROS				*e*SKSac		19 50 56.6	
CLL	**Collm**	101.72	39	*i* PDIF	P	19 40 30.2	0.0
CLL				*i*		19 41 14.7	
CLL				*i*		19 41 30.5	
CLL				*i*		19 41 48.4	
CLL				*i* PP	PP	19 44 42.5	-2.0
CLL				*e**PPP		19 44 58.0	
CLL				*i*		19 46 36.1	
CLL				*e*PPP	PPP	19 46 46.0	-12
CLL				*e*		19 51 01.0	
CLL				*e*		19 51 39.0	
CLL				*e*		19 51 59.0	
CLL				*e*SP	SP	19 53 12.0	-19
CLL				*e*PS	PS	19 53 35.0	-15
CLL				*e*PPS	PPS	19 54 38.0	-6.0
CLL				*i* PKKP	PKKP	19 56 38.8	+18
CLL				*i* PKKP	PKKP	19 57 05.2	+44
CLL				*e*SS	SS	19 58 55.0	-8.4
CLL				*e**SSS		20 00 14.0	
CLL				*e*		20 05 07.0	
CLL				*e*		20 08 39.0	
CLL				*e*		20 11 10.0	
CLL	**Collm**	101.72	39	*i* Pdif	P	19 40 30.2	0.0
	comp=Z,50nm,1.6s						
CLL				*e*SKS	SKS	19 51 01.0	+8.4
CLL				*e*SKKS		19 51 39.0	
CLL				*e*Sdif		19 51 59.0	
CLL				*i* PKKP	PKKP	19 56 38.8	+18
CLL				*i* PKKP	PKKP	19 57 05.2	+44
CLL				LR	LR		
	comp=Z,12µm,19.3s						
CLL	**Collm**	101.72	39	*i* P	P	19 40 30.2	0.0
CLL				*e*		19 51 01.0	
CLL				*e*S	S	19 51 59.0	+5.8
CLL				pmax	pmax		
	comp=Z,50nm,1.6s						
CLL				MLR	MLR		
	comp=Z,12µm,19.3s						
JMIC	**Jan Mayen**	101.72	17	*e*	P	19 40 22.3	-7.5
JMIC				*e*SKSa		19 50 56.0	
JMIC				*e*SS	SS	19 59 03.4	+0.4

STON	**Ston**	**101.82**	**48**	*i* P	P	19 40 38.1	+7.3
ARSA	**Arzberg**	**101.84**	**44**	⇑*i*P		19 41 14.6	
	comp=Z,13nm,1.0s						
ARSA	**Arzberg**	**101.84**	**44**	⇑*i*P	PP	19 44 42.0	-3.5
	comp=Z,21nm,1.1s						
ARSA	**Arzberg**	**101.84**	**44**	⇑*i*P	P	19 40 31.1	+0.2
	comp=Z,31nm,1.4s						
ARSA				*e*		19 41 14.6	
ARSA				*e*		19 44 42.0	
INK	**Inuvik**	**102.06**	**340**	P	Pdif	19 40 31.8	+0.5
	comp=Z,48nm,1.0s,baz=107,slow=5.7,SNR=24						
INK				S		19 50 57.5	
	comp=Z,5.1nm,1.0s,baz=333,slow=9.0,SNR=2.9						
INK				PKKPbc		19 56 35.9	
	comp=Z,8.4nm,0.9s,baz=134,slow=1.9,SNR=6.3						
INK	**Inuvik**	**102.06**	**340**	Pdif	Pdif	19 40 31.8	+0.5
BRG	**Berggiesshubel**	**102.12**	**40**	Pdif	Pdif	19 40 33.1	+1.1
	comp=Z,89nm,2.2s						
BRG	**Berggiesshubel**	**102.12**	**40**	P	Pdif	19 40 33.1	+1.1
BRG				pmax	pmax		
	comp=Z,89nm,2.2s						
PRA	**Prague**	**102.13**	**41**	PP	PP	19 44 40.0	-7.6
DAWY	**Dawson**	**102.14**	**335**	Pdif	Pdif	19 40 32.9	+1.1
PRU	**Pruhonice**	**102.17**	**41**	*e*PDIF	Pdif	19 40 32.8	+0.6
PRU				*e*pP		19 41 17.4	
PRU				*e*PP	PP	19 44 38.6	-9.3
PRU				*e*SKS	SKS	19 51 01.4	+6.6
PRU				*e*SDIF		19 52 05.1	
PRU				*e*XS		19 53 15.5	
PRU				*e*x	x	19 57 00.2	
PRU				*e*SS	SS	19 59 05.5	-4.3
PRU				AMS	AMS	20 24 00.0	
	comp=Z,11µm,21.8s						
PRU	**Pruhonice**	**102.17**	**41**	*e*P	Pdif	19 40 32.8	+0.6
PRU				*e*		19 51 01.4	
PRU				*e*		19 52 05.1	
PRU				*e*SS	SS	19 59 05.5	-4.3
PRU				MLR	MLR		
	comp=Z,11µm,21.8s						
PVCC	**Panska Ves**	**102.37**	**40**	*e*PDIF	Pdif	19 40 37.3	+4.2
PVCC				*e*pP		19 41 20.1	
PVCC				*e*PP	PP	19 44 43.8	-5.7
PVCC				*e*SKS	SKS	19 51 01.3	+5.6
PVCC				*e*XS		19 53 23.5	
PVCC				AMS	AMS	20 23 50.0	
	comp=Z,13µm,21.7s						
PVCC	**Panska Ves**	**102.37**	**40**	*e*P	Pdif	19 40 37.3	+4.2
PVCC				*e*		19 44 43.8	
PVCC				*e*		19 51 01.3	
PVCC				MLR	MLR		
	comp=Z,13µm,21.7s						
TREC	**Trest**	**102.51**	**42**	*e*PDIF	Pdif	19 40 34.6	+0.8
TREC				*e*pP		19 41 17.9	
TREC				*e*SKS	SKS	19 51 00.4	+4.0
TREC				*e*SDIF		19 52 09.2	
TREC				*e*XS		19 53 18.6	
TREC	**Trest**	**102.51**	**42**	*e*P	Pdif	19 40 34.6	+0.8
TREC				*e*		19 51 00.4	
TREC				*e*		19 52 09.2	
TREC				MLR	MLR		
	comp=Z,3µm,16.8s						
COP	**Copenhagen**	**102.95**	**35**	*i* P	Pdif	19 40 43.3	+7.8
COP				*e*		19 44 32.0	
COP				*i* S		19 51 05.9	
COP				*i*		19 51 46.1	
COP				*i*		19 53 49.2	
COP				*i*		19 58 43.2	
	comp=Z,2µm,18.0s						
COP	**Copenhagen**	**102.95**	**35**	*e*P	Pdif	19 40 43.3	+7.8
COP				*e*		19 44 32.0	
COP				*i* S		19 51 05.9	
COP				*i*		19 51 46.1	
COP				*i*		19 53 49.2	
COP				*i*		19 58 43.2	
COP				LR	LR		
	comp=Z,2µm,18.0s						
COP	**Copenhagen**	**102.95**	**35**	*e*P	Pdif	19 40 43.3	+7.8
COP				*i* S		19 51 05.9	
COP				*i*		19 51 46.1	
COP				*i*		19 53 49.2	
COP				MLR	MLR		
	comp=Z,2µm,18.0s						
KONO	**Kongsberg**	**102.97**	**31**	*e*	Pdif	19 40 38.9	+3.4
KONO				*e*PP	PP	19 44 50.6	-3.5
KONO				*e*		19 50 56.8	
KRUC	**Moravsky**	**103.00**	**42**	P	Pdif	19 40 36.9	+1.0
ZST	**Bratislava**	**103.16**	**43**	*e*P	Pdif	19 40 36.6	0.0
ZST				*e*PP	PP	19 44 48.5	-7.2
ZST				*e*S		19 51 03.7	
ZST				*e*		19 53 53.3	
ZST	**Bratislava**	**103.16**	**43**	*e*P	Pdif	19 40 36.6	0.0
ZST				*e*S		19 51 03.7	
ZST				*e*		19 53 53.3	
VRAC	**Vranov**	**103.20**	**42**	Pdiff	Pdif	19 40 37.5	+0.7
	comp=Z,2.2nm,0.3s,baz=293,slow=8.4,SNR=6.2						
VRAC				pPdiff		19 41 16.1	
	comp=Z,5.9nm,0.4s,baz=338,slow=11,SNR=4.0						
VRAC				PKiKP		19 44 53.3	
	comp=Z,19nm,1.0s,baz=263,slow=8.9,SNR=5.4						
VRAC				Sdiff		19 51 04.5	
	comp=Z,1.1nm,0.5s,baz=96,slow=10,SNR=1.8						
UPC	**Upice**	**103.23**	**41**	*e*PDIF	Pdif	19 40 36.9	0.0
UPC				*e*SKS	SKS	19 51 08.4	+8.7
UPC				*e*PKKP	PKKP	19 56 34.5	+16
DAG	**Danmarks Havn**	**103.25**	**10**	⇓*i*P	Pdif	19 40 38.6	+2.2
	comp=Z,23nm,1.2s						
DAG	**Danmarks Havn**	**103.25**	**10**	⇓*i*P	Pdif	19 40 38.6	+2.2
DAG				pmax	pmax		
	comp=Z,23nm,1.2s						
DPC	**Dobruska-Polom**	**103.37**	**41**	*e*PDIF	Pdif	19 40 38.4	+0.9
DPC				*e*pP		19 41 22.5	
DPC				*e*x	x	19 44 41.6	
DPC				*e*SKS	SKS	19 51 06.0	+5.7
DPC				*e*x	x	19 51 49.8	
DPC				*e*SDIF		19 52 16.8	
DPC				*e*XS		19 53 27.4	
DPC				*e*PKKP	PKKP	19 56 32.0	+14
DPC				*e*SS	SS	19 59 17.7	-8.5
DPC				AMS	AMS	20 24 30.0	
	comp=Z,8µm,20.2s						
DPC	**Dobruska-Polom**	**103.37**	**41**	*e*P	Pdif	19 40 38.4	+0.9
DPC				*e*		19 51 06.0	
DPC				*e*S	S	19 51 49.8	-17
DPC				*e*		19 52 16.8	
DPC				MLR	MLR		
	comp=Z,8µm,20.2s						
MENT	**Mentasta**	**103.44**	**333**	*e*P	Pdif	19 40 39.1	+1.6
SMOL	**Smolenice**	**103.47**	**43**	*e*P	Pdif	19 40 54.6	+17
SMOL				*e*PP	PP	19 45 11.1	+13
KSP	**Ksiaz**	**103.51**	**40**	*e*Pdiff	Pdif	19 40 40.9	+2.8
KSP				*e*PP	PP	19 44 56.0	-2.0
KSP				⇑*e*SKSa		19 51 09.1	
KSP				*e*Sdiff		19 52 21.9	
KSP				*e*SS	SS	19 59 39.5	+11
KSP				MLR	MLR	20 24 52.3	
	comp=Z,24µm,23.1s						
KSP	**Ksiaz**	**103.51**	**40**	*e*Pdif	Pdif	19 40 38.8	+0.7
KSP				*e*PP	PP	19 44 55.8	-2.3
KSP				*e*SKS	SKS	19 51 07.9	+7.0
KSP				*e*Sdif		19 52 17.5	
KSP				*e*SP	SP	19 53 48.6	-1.1
KSP				*e*SS	SS	19 59 27.5	-0.5
KSP				*e*		20 04 31.0	
KSP				LR	LR		
	comp=Z,28µm,23.1s						
KSP	**Ksiaz**	**103.51**	**40**	*e*P	Pdif	19 40 38.8	+0.7
KSP				*e*		19 44 55.8	
KSP				*e*		19 51 07.9	
KSP				*e*S	S	19 52 17.5	+9.2
KSP				*e*SP	SP	19 53 48.6	-1.1
KSP				*e*SS	SS	19 59 27.5	-0.5
KSP				MLR	MLR		
	comp=Z,28µm,23.1s						
PKSM	**Moragy**	**103.53**	**45**	⇑*i*P	Pdif	19 40 38.9	+0.6
KMBO	**Kilima Mbogo**	**103.60**	**97**	Pdiff	Pdif	19 40 42.3	+2.9
	comp=Z,2.4nm,0.9s,baz=242,slow=1.6,SNR=9.4						
KMBO				pPdiff		19 41 21.4	
	comp=Z,1.4nm,0.7s,baz=225,slow=2.9,SNR=2.4						
KMBO				Sdiff		19 51 14.0	
	comp=Z,1.1nm,0.9s,baz=228,slow=17,SNR=2.9						
KMBO	**Kilima Mbogo**	**103.60**	**97**	Pdif	Pdif	19 40 42.3	+2.9
KMBO				Sdif		19 51 14.0	
DIV	**Divide**	**103.66**	**331**	Pdif	Pdif	19 40 36.2	-2.3
DIV				PP	PP	19 44 53.1	-5.7
JAVC	**Velka Javorina**	**103.73**	**43**	P	Pdif	19 40 41.2	+2.1
BIA	**Bitola**	**103.79**	**51**	*e*P	Pdif	19 40 32.5	-7.1
BIA	**Bitola**	**103.79**	**51**	*e*P	Pdif	19 40 32.5	-7.1
SRO	**Srobarova**	**103.81**	**44**	*e*PP	PP	19 44 57.1	-3.2
MORC	**Moravsky Berou**	**103.94**	**42**	*e*Pdif	Pdif	19 40 40.5	+0.5
	comp=Z,15nm,1.0s						
MORC	**Moravsky Berou**	**103.94**	**42**	*e*P	Pdif	19 40 40.6	+0.6
MORC				pmax	pmax		
	comp=Z,15nm,1.0s						
NAO	**NORSAR Subarra**	**103.98**	**30**	P	Pdif	19 40 41.5	+1.6
	comp=Z,34nm,1.4s						
NAO	**NORSAR Subarra**	**103.98**	**30**	P	Pdif	19 40 41.5	+1.6
NAO				pmax	pmax		
	comp=Z,34nm,1.4s						
BSD	**Bornholm Skovb**	**104.10**	**36**	⇑*i*P	Pdif	19 40 31.8	-8.8
	comp=Z,25nm,1.0s						
SKO	**Skopje**	**104.16**	**50**	*e*P	Pdif	19 40 38.2	-3.0
SKO				*e*PP	PP	19 44 50.5	-13
SKO	**Skopje**	**104.16**	**50**	*e*P	Pdif	19 40 38.3	-2.9
SKO				*e*PP	PP	19 44 50.5	-13
NB2	**NORSAR Subarra**	**104.23**	**30**	P	Pdif	19 40 41.5	+0.5
	comp=Z,34nm,1.4s,baz=248,slow=4.5						
NB2	**NORSAR Subarra**	**104.23**	**30**	P	Pdif	19 40 41.5	+0.5
	baz=248,slow=4.6						
NOA	**NORSAR Array B**	**104.23**	**30**	Pdiff	Pdif	19 40 42.2	+1.2
	comp=Z,8.1nm,1.1s,baz=250,slow=4.3,SNR=4.1						
NOA				PP	PP	19 44 60.0	-3.1
	comp=Z,9.8nm,1.1s,baz=247,slow=7.2,SNR=3.3						
NOA				PKKP	PKKP	19 56 48.1	+32
	comp=Z,4.7nm,0.9s,baz=68,slow=4.5,SNR=6.5						
NOA				PKPPKP		20 04 50.5	
	comp=Z,4.4nm,1.1s,baz=260,slow=3.2,SNR=3.0						
OKC	**Ostrava-Krasne**	**104.33**	**42**	*e*PDIF	Pdif	19 40 45.2	+3.5
OKC				*e*PP	PP	19 44 59.6	-4.5
OKC				*e*SKS	SKS	19 51 12.4	+7.7
OKC				*e*x	x	19 51 55.3	
OKC				*e*SDIF		19 52 25.9	
OKC				*e*XS		19 53 35.7	
OKC				*e*PKKP	PKKP	19 56 30.2	+14
OKC				*e*x	x	19 56 49.9	
OKC				AMS	AMS	20 26 20.0	
	comp=Z,6µm,19.9s						
VYHS	**Vyhne**	**104.35**	**43**	*e*P	Pdif	19 40 41.4	-0.5
VYHS				*e*PP	PP	19 44 54.8	-10
VYHS				*e*S		19 51 10.1	
VYHS				*e*		19 52 24.5	
VYHS				*e*		19 56 27.0	
VYHS				*e*		19 56 50.9	
VYHS	**Vyhne**	**104.35**	**43**	*e*P	Pdif	19 40 41.4	-0.5
VYHS				*e*S		19 51 10.1	
VYHS				*e*		19 52 24.5	
IDI	**Anoyia**	**104.77**	**58**	Sdiff		19 51 14.1	
	comp=Z,5.3nm,0.7s,baz=10.0,slow=17,SNR=2.3						
VAY	**Valandovo**	**104.78**	**51**	*e*P	Pdif	19 40 40.6	-3.3
VAY				*e*PP	PP	19 44 53.7	-14
VAY	**Valandovo**	**104.78**	**51**	*e*P	Pdif	19 40 40.6	-3.3
VAY				*e*PP	PP	19 44 53.7	-14
PSZ	**Piszkesteto**	**104.86**	**44**	⇑*e*PP	PP	19 45 04.0	-4.4
SML	**Sawmill**	**105.05**	**331**	*e*Pdif	Pdif	19 40 43.7	-0.9
HFS	**Hagfors**	**105.08**	**31**	PP	PP	19 45 06.3	-3.5
	comp=Z,22nm,0.8s,baz=225,slow=6.3,SNR=11						
HFS				PKKPbc		19 56 27.1	
	comp=Z,2.4nm,0.8s,baz=117,slow=6.6,SNR=5.4						
HFS				PKKP	PKKP	19 56 45.3	+30
	comp=Z,5.5nm,0.8s,baz=45,slow=2.1,SNR=7.2						
PMR	**Palmer**	**105.34**	**331**	PKiKP		19 44 58.0	
KECS	**Kecovo**	**105.40**	**44**	*e*P	Pdif	19 40 46.4	-0.1
KECS				*e*PP	PP	19 45 02.1	-10
KECS				*e*S	SKS	19 51 13.9	+4.3
KECS				*e*		19 56 24.6	
KECS				*e*		19 56 44.2	
KECS				*e*		19 57 23.5	
KECS	**Kecovo**	**105.40**	**44**	*e*P	Pdif	19 40 46.4	-0.1
KECS				*e*S	SKS	19 51 13.9	+4.3
ILAR	**Eielson Array**	**105.41**	**334**	Pdiff	Pdif	19 40 45.4	-0.8
	comp=Z,8.0nm,0.8s,baz=141,slow=2.9,SNR=25						
ILAR				PKiKP		19 45 00.6	
	comp=Z,20nm,1.0s,baz=124,slow=5.9,SNR=7.3						
ILAR				PKKPbc		19 56 23.4	
	comp=Z,2.7nm,0.7s,baz=284,slow=3.5,SNR=8.8						
OJC	**Ojcow**	**105.46**	**42**	*e*Pdiff	Pdif	19 40 49.1	+2.4
OJC				*i* PP	PP	19 45 07.2	-5.5
OJC				⇑*e*SKSa		19 51 14.9	
OJC				*i* S		19 52 31.2	
OJC				*i* PS	PS	19 54 07.9	-20
OJC				*i* SS	SS	19 59 45.9	-8.9
OJC				MLR	MLR	20 29 23.2	
	comp=Z,8µm,21.1s						
OJC	**Ojcow**	**105.46**	**42**	*e*P	Pdif	19 40 49.1	+2.4
OJC				*i*		19 45 07.2	
OJC				*e*		19 51 14.9	
OJC				*i* S		19 52 31.2	
OJC				*i* PS	PS	19 54 07.9	-20
OJC				MLR	MLR		
	comp=Z,8µm,21.1s						
SLKM	**Skilak Lake**	**105.50**	**329**	Pdif	Pdif	19 40 49.7	+3.1
NSS	**Namsos**	**105.72**	**26**	*e*PP	PP	19 45 14.5	+0.3
NSS				*e*SKSa		19 51 11.4	
NSS				*e*SS	SS	20 00 00.4	+2.2
COLA	**College**	**105.84**	**334**	*e*Pdif	Pdif	19 40 47.1	-0.9
	comp=Z,60nm,1.0s						
COLA				*e*PKPdf		19 44 57.5	
KDAK	**Kodiak Island**	**105.85**	**326**	PKKPbc		19 56 24.1	
	comp=Z,9.4nm,0.7s,baz=278,slow=2.5,SNR=4.8						
CRVS	**Cervenica-Dubn**	**106.14**	**43**	*e*P	Pdif	19 40 51.9	+2.2
CRVS				*e*PP	PP	19 45 13.7	-3.9
CRVS				*e*S	SKS	19 51 18.1	+5.3
CRVS				*e*		19 52 39.9	
CRVS				*e*		19 54 21.4	
CRVS				*e*		19 56 25.5	
CRVS				*e*		19 56 41.4	
CRVS				*e*		19 57 20.9	
CRVS	**Cervenica-Dubn**	**106.14**	**43**	*e*P	Pdif	19 40 51.9	+2.2
CRVS				*e*		19 45 13.7	
CRVS				*e*S	SKS	19 51 18.1	+5.3
CRVS				*e*		19 54 21.4	
STHS	**Stebnicka Huta**	**106.14**	**43**	*e*P	Pdif	19 40 45.5	-4.2
STHS				*e*PP	PP	19 45 13.0	-4.6
STHS				*e*		19 56 26.4	
STHS				*e*		19 56 41.1	
KOLS	**Kolonicke sedl**	**106.66**	**44**	*e*P	Pdif	19 40 54.6	+2.6
KOLS				*e*PP	PP	19 45 11.1	-11
KWP	**Kalwaria**	**107.11**	**43**	*e*PKiKP		19 45 06.3	
KWP				*e*PP	PP	19 45 24.1	-1.2
KWP				⇑*e*SKSa		19 51 25.1	
KWP				*e*SKSdf		19 52 14.2	
KWP				*e*Sdiff		19 52 49.1	
KWP				*e*SS	SS	20 00 17.1	+0.1
KWP				MLR	MLR	20 30 41.0	
	comp=Z,12µm,21.1s						
KWP	**Kalwaria**	**107.11**	**43**	*e*PKPdf		19 45 06.3	
KWP				*e*PP	PP	19 45 24.1	-1.2
KWP				*e*SKSac		19 51 25.1	
KWP				*e*SKSdf		19 52 14.2	
KWP				*e*Sdif		19 52 49.1	
KWP				*e*SS	SS	20 00 17.1	+0.1
LVV	**L’vov**	**107.99**	**43**	*e*P	Pdif	19 41 14.6	+17
MLR	**Muntele Rosu**	**108.24**	**48**	Pdiff	Pdif	19 40 59.6	+0.5
	comp=Z,2.8nm,0.8s,baz=155,slow=17,SNR=2.5						
MLR				PKKPbc		19 56 18.6	
	comp=Z,3.5nm,0.6s,baz=256,slow=8.4,SNR=3.9						
BURAR	**Bucovina Array**	**108.25**	**45**	⇓*i*P	Pdif	19 41 04.3	+5.3
SUW	**Suwalki**	**108.43**	**38**	*e*PKiKP		19 45 07.1	
SUW				*e*PP	PP	19 45 32.0	-2.8
SUW				⇑*e*SKSa		19 51 27.5	
SUW				*e*SKSdf		19 52 20.7	
SUW				*e*Sdiff		19 53 00.3	
SUW				*e*SS	SS	20 00 31.9	-2.9
SUW				MLR	MLR	20 25 10.5	
	comp=Z,9µm,25.4s						
SUW	**Suwalki**	**108.43**	**38**	*e*PKPdf		19 45 07.1	
SUW				*e*PP	PP	19 45 32.0	-2.8
SUW				*e*SKSac		19 51 27.5	
SUW				*e*SKSdf		19 52 20.7	
SUW				*e*Sdif		19 53 00.3	
SUW				*e*SS	SS	20 00 31.9	-2.9
IMA2	**Indian Mountai**	**108.51**	**335**	*e*Pdif	Pdif	19 41 02.2	+2.4
IMA2				*e*PKPdf		19 45 05.7	
IMA2				*e*PP	PP	19 45 25.2	-10
TRO	**Tromso**	**109.68**	**22**	*e*	Pdif	19 41 09.1	+4.3
TRO				*e*PP	PP	19 45 40.5	-3.3
TRO				*e*SKSa		19 51 32.3	
TRO				*e*SS	SS	20 00 51.5	+0.1
KBS	**Kingsbay**	**109.86**	**12**	*e*	Pdif	19 41 09.1	+3.6
KBS				AMb	AMB	19 41 18.2	
	comp=Z,35nm,1.8s						
KBS				*e*PP	PP	19 45 41.6	-3.3
KBS				*e*SS	SS	20 00 57.4	+3.5
KBS	**Kingsbay**	**109.86**	**12**	*e*P	Pdif	19 41 10.4	+4.8
KIS	**Kishinev**	**110.51**	**47**	*e*P	Pdif	19 41 12.0	+3.0
KIS				*e*		19 45 10.0	
KIS				*e*		19 45 52.0	
KIS				*e*PPP	PPP	19 48 08.0	-4.2
KIS				*e*		19 51 28.0	
KIS				*e*PS	PS	19 55 18.0	+0.3
KIS				*e*SSS	SSS	20 05 14.0	+0.3
KIS				MLR	MLR		
	comp=Z,9µm,19.0s						
KIS				MLR	MLR		
	comp=N,2µm,16.0s						
KIS				MLR	MLR		
	comp=E,6µm,18.0s						
KIS				MLR	MLR		
	comp=Z,8µm,18.0s						
TAYS	**Tayyib Ism**	**111.13**	**67**	P	PP	19 45 50.5	-4.5
VSU	**Vasula**	**111.19**	**34**	⇑*e*PKP	PKPdf	19 45 09.9	+1.3
MNK	**Minsk**	**111.20**	**38**	*e*PKIKP	PKPdf	19 45 11.0	+2.3
FINES	**FINESS Array B**	**111.28**	**31**	Pdiff	Pdif	19 41 20.3	+8.2
	comp=Z,1.0nm,0.9s,baz=231,slow=8.9,SNR=2.3						
FINES				PKiKP		19 45 10.2	
	comp=Z,4.5nm,0.8s,baz=45,slow=2.7,SNR=6.4						
FINES				PP	PP	19 45 50.4	-4.8
	comp=Z,13nm,1.0s,baz=63,slow=4.3,SNR=6.1						
FINES				PKKPbc		19 56 05.2	
	comp=Z,3.7nm,0.7s,baz=45,slow=2.7,SNR=3.4						
HAQS	**Haql**	**111.31**	**66**	P	PP	19 45 51.8	-4.3
CSS	**Prodhromos**	**111.37**	**60**	*e*PKPdf	PKPdf	19 45 09.9	+0.3
CSS				*e*PP	PP	19 45 51.2	-5.3
AYUS	**‘Aynunah**	**111.38**	**67**	P	PP	19 45 54.0	-2.7
AKASG	**Malin Array Be**	**111.43**	**43**	PKiKP		19 45 10.0	
	comp=Z,1.9nm,0.4s,baz=265,slow=3.0,SNR=13						
AKASG				PP	PP	19 45 50.1	-6.4
	comp=Z,8.8nm,0.8s,baz=252,slow=8.5,SNR=7.5						
AKASG				PKKPbc		19 56 06.0	
	comp=Z,2.2nm,0.5s,baz=66,slow=3.9,SNR=14						
AKASG				tx	tx	19 56 46.6	
	comp=Z,4.5nm,0.7s,baz=67,slow=3.9,SNR=5.3						
AKASG	**Malin Array Be**	**111.43**	**43**	PKPdf	PKPdf	19 45 10.0	+0.7
AKASG				PP	PP	19 45 50.1	-6.4
AKASG				PKKPbc		19 56 06.0	
KAF	**Kangasniemi**	**111.48**	**30**	*e*p	PKPdf	19 45 10.2	+1.1
	comp=Z,9.8nm,0.7s						
ALWS	**Ilw as Safayha**	**111.48**	**66**	P	PP	19 45 54.3	-3.1
JMOS	**Jabal al Moall**	**111.49**	**66**	P	PP	19 45 54.6	-2.9
ARCES	**ARCESS Array B**	**111.95**	**22**	Pdiff	Pdif	19 41 22.1	+7.3
	comp=Z,8.9nm,1.1s,baz=292,slow=6.5,SNR=4.3						
ARCES				PKiKP		19 45 11.6	
	comp=Z,9.8nm,1.0s,baz=240,slow=3.0,SNR=11						
ARCES				PKKPbc		19 56 02.7	
	comp=Z,3.1nm,0.5s,baz=85,slow=4.4,SNR=16						
ARCES				PKKPab		19 56 13.8	
	comp=Z,18nm,0.8s,baz=72,slow=3.8,SNR=4.8						
ARCES	**ARCESS Array B**	**111.95**	**22**	Pdif	Pdif	19 41 22.1	+7.3
ARCES				PKPdf	PKPdf	19 45 11.6	+1.8
ARCES				PKKPbc		19 56 02.7	
ARCES				PKKPab		19 56 13.8	
ANTO	**Ankara**	**111.98**	**55**	*e*PKPdf	PKPdf	19 45 14.4	+3.8
ANTO				*e*SKP		19 48 36.3	
BR131	**Keskin Array S**	**112.59**	**55**	PKiKP		19 45 10.0	
BR131				PP	PP	19 45 56.8	-8.7
BRTR	**Keskin Array B**	**112.59**	**55**	Pdiff	Pdif	19 41 24.9	+6.6
	comp=Z,0.4nm,0.8s,baz=270,slow=4.3,SNR=2.2						
BRTR				PKiKP		19 45 14.1	
	comp=Z,7.2nm,0.9s,baz=158,slow=2.1,SNR=12						
BRTR				PP	PP	19 45 56.8	-8.7
	comp=Z,11nm,0.9s,baz=234,slow=5.1,SNR=6.2						
BRTR				PKKPab		19 56 13.9	
	comp=Z,3.6nm,0.9s,baz=101,slow=4.3,SNR=7.7						
BRTR				tx	tx	19 56 51.1	
	comp=Z,3.5nm,0.8s,baz=95,slow=4.2,SNR=5.8						
BHL	**Bhannes**	**113.02**	**61**	*e*P	PP	19 46 04.1	-5.0
PUL	**Pulkovo**	**113.18**	**33**	*i* P	Pdif	19 41 26.9	+6.5
PUL				*i*		19 46 05.0	
PUL				*i*		19 51 46.2	
PUL				*i* PS	PS	19 55 28.8	-14
PUL				*i* SS	SS	20 01 41.5	+3.4
PUL				pmax	pmax		
	comp=Z,354nm,15.5s						
PUL				smax			
	comp=N,6µm,15.1s						
PUL				MLR	MLR		
	comp=Z,1µm,18.0s						
SIM	**Simferopol’**	**113.81**	**49**	P	Pdif	19 41 31.8	+8.2
SIM						19 46 09.9	
SIM				PPP	PPP	19 48 32.6	-6.8
SIM						19 51 52.7	
SIM				PS	PS	19 55 43.2	-5.4
SIM				PPS	PPS	19 56 58.6	-7.8
SIM				SS	SS	20 01 49.5	+2.9
SIM				SSS	SSS	20 06 11.2	+7.2
SIM				pmax	pmax		
	comp=Z,910nm,13.0s						
SIM				MLR	MLR		
	comp=Z,6µm,17.0s						
JOF	**Joensuu**	**113.86**	**30**	*e*p	PKPdf	19 45 16.6	+2.8
	comp=Z,12nm,0.9s						
APA	**Apatity**	**114.79**	**24**	⇑*i*PKIKP	PKPdf	19 45 19.0	+3.4
APA				*i*		19 46 20.0	
APA				*i*		19 51 51.0	
APA				*i* SS	SS	20 01 54.0	-4.7
APA				pmax	pmax		
	comp=Z,64nm,1.5s						
APA				MLR	MLR		
	comp=Z,4µm,16.0s						
LVZ	**Lovozero**	**115.25**	**24**	*i* P	Pdif	19 41 30.1	+0.7
LVZ				*i*		19 46 25.4	
LVZ				*i*		19 51 56.6	
LVZ				*i*		19 55 51.4	
LVZ				*i* SS	SS	20 02 00.6	-4.1
LVZ				pmax	pmax		
	comp=Z,36nm,1.1s						
LVZ				pmax	pmax		
	comp=N,16nm,1.5s						
LVZ				pmax	pmax		
	comp=E,8.0nm,1.0s						
LVZ				smax			
	comp=N,5µm,16.6s						
LVZ				MLR	MLR		
	comp=Z,2µm,19.0s						
ANN	**Anapa**	**116.13**	**50**	*i* P	Pdif	19 41 34.2	+0.4
ANN				*i*		19 46 22.6	
ANN				*i*		19 51 58.3	
ANN				*i* PS	PS	19 56 02.6	-7.7
ANN				MLR	MLR		
	comp=Z,9µm,24.0s						
OBN	**Obninsk**	**116.29**	**38**	PKPdf	PKPdf	19 45 20.1	+1.4
OBN				PP	PP	19 46 26.1	-5.3
OBN	**Obninsk**	**116.29**	**38**	⇓*i*PKIKP	PKPdf	19 45 20.0	+1.3
OBN				*e*		19 46 02.6	
OBN				*i*		19 46 27.2	
OBN				*i*		19 48 59.6	
OBN				*i*		19 51 58.9	
OBN				PS	PS	19 55 57.1	-14
OBN				pmax	pmax		
	comp=Z,130nm,1.5s						
OBN				MLR	MLR		
	comp=Z,9µm,22.0s						
SOC	**Sochi**	**117.64**	**51**	*i* P	Pdif	19 41 38.5	-2.0
SOC				*i*		19 45 24.6	
SOC				*e*		19 46 34.5	
SOC				*e*		19 52 04.5	
SOC				*e*SP	SP	19 56 07.8	+2.5
SOC				*e*SS	SS	20 02 31.4	-4.7
SOC				MLR	MLR		
	comp=Z,4µm,19.0s						
KLMR	**Klimovskoe**	**117.77**	**32*c***	*i*PKIKP	PKPdf	19 45 22.3	+0.9
KLMR				pmax	pmax		
	comp=Z,60nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,11µm,28.0s						
MSEY	**Mahe Island**	**118.53**	**109**	PP	PP	19 46 44.5	-3.6
STKA	**Stephens Creek**	**119.10**	**209**	*e*PKP	PKPdf	19 45 25.7	+1.0
	comp=Z,13nm,0.7s						
STKA				*e*PP	PP	19 46 45.7	-5.9

STKA				*e*PKKP	PKKP	19 55 39.3	-10
STKA	**Stephens Creek**	**119.10**	**209**	PKP	PKPdf	19 45 26.2	+1.5
	comp=Z,28nm,1.1s,baz=99,slow=2.1,SNR=26						
STKA				PP	PP	19 46 46.0	-5.6
	comp=Z,6.6nm,1.0s,baz=138,slow=11,SNR=4.0						
STKA				PKKPbc		19 55 38.2	
	comp=Z,11nm,0.8s,baz=323,slow=4.0,SNR=9.3						
VRHR	**Novokhopersk**	**119.28**	**43**	*e*PKIKP	PKPdf	19 45 27.2	+2.6
VRHR				pmax	pmax		
	comp=Z,40nm,0.6s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,30nm,1.0s						
MSL	**Mosul**	**119.43**	**60**	*e*x	x	19 45 28.5	
MSL				*e*x	x	19 48 01.0	
MSL				*e*x	x	19 52 12.0	
MSL				*e*x	x	19 53 28.0	
MSL				*e*x	x	19 56 16.0	
MSL				*e*x	x	19 57 23.0	
KIV	**Kislovodsk**	**119.82**	**51**	PKPdf	PKPdf	19 45 28.6	+2.9
KIV				PP	PP	19 46 50.6	-4.9
KIV	**Kislovodsk**	**119.82**	**51**	*e*P	Pdif	19 41 52.9	+2.9
KIV				*i*		19 45 27.4	
KIV				*e*		19 46 52.3	
KIV				*i*		19 52 13.9	
KIV				*e*SP	SP	19 56 31.6	+6.8
KIV				*e*PS	PS	19 56 49.6	+6.5
KIV				*e*SS	SS	20 03 06.0	+1.8
KIV				pmax	pmax		
	comp=Z,69nm,1.2s						
KIV				pmax	pmax		
	comp=Z,161nm,12.6s						
KIV				MLR	MLR		
	comp=Z,5µm,20.0s						
BHD	**Baghdad**	**120.08**	**64**	*e*x	x	19 45 30.0	
BHD				*e*x	x	19 46 49.0	
BHD				*e*x	x	19 48 55.0	
BHD				*e*x	x	19 52 15.0	
GOF	**Gofitskoye**	**120.12**	**50**	*e*PKIKP	PKPdf	19 45 27.0	+0.7
ONI	**Oni**	**120.29**	**53**	P		19 45 04.8	
ONI				S	SKS	19 52 13.9	+6.0
ONI	**Oni**	**120.29**	**53**	P	PP	19 46 51.7	-7.1
ONI				S		19 54 43.2	
PECR	**Pechory**	**120.50**	**37**	*e*PKIKP	PKPdf	19 45 30.0	+3.2
PECR				*i*		19 46 56.0	
PECR				*i*		19 52 13.0	
PECR				*e*PPS	PPS	19 57 58.0	-17
PECR				*e*SS	SS	20 03 09.0	-3.8
PECR				pmax	pmax		
	comp=Z,900nm,1.2s						
PECR				MLR	MLR		
	comp=Z,9µm,21.0s						
PECR				MLR	MLR		
	comp=E,4µm,20.0s						
ZEI	**Tsey**	**120.64**	**53**	*i* PKIKP	PKPdf	19 45 29.0	+1.6
ZEI				*i*		19 47 00.0	
GNI	**Garni**	**121.11**	**56**	PKP	PKPdf	19 45 30.0	+1.6
	comp=E,26nm,0.7s,baz=19,slow=4.2,SNR=19						
GNI	**Garni**	**121.11**	**56**	PKPdf	PKPdf	19 45 30.9	+2.4
GNI				PP	PP	19 47 01.2	-3.3
GNI	**Garni**	**121.11**	**56**	PKIKP	PKPdf	19 45 30.0	+1.6
GNI				pmax	pmax		
	comp=Z,26nm,0.7s						
MTA	**Mtatsminda**	**121.24**	**54**	P	PP	19 47 03.6	-1.8
DGRG	**David-gareji**	**121.66**	**54**	P	PP	19 47 09.6	+1.3
NAY	**Al-Naaiem**	**121.88**	**69**	*e*P	PKPdf	19 45 31.9	+1.7
MIB	**Mutribah**	**122.05**	**68**	*e*P	PKPdf	19 45 29.9	-0.6
UMR	**Umm Al-Rimmam**	**122.34**	**68**	*e*P	PKPdf	19 45 32.6	+1.6
MAK	**Makhachkala**	**123.29**	**52**	*e*PKIKP	PKPdf	19 45 39.0	+6.4
MAK				*e*		19 46 22.0	
MAK				*i*		19 52 24.0	
MAK				pmax	pmax		
	comp=E,2µm,6.5s						
MAK				pmax	pmax		
	comp=Z,4µm,6.5s						
MAK				pmax	pmax		
	comp=N,3µm,6.0s						
MAK				pmax	pmax		
	comp=E,7µm,8.0s						
MAK				MLR	MLR		
	comp=Z,3µm,16.0s						
MAK				MLR	MLR		
	comp=N,4µm,16.0s						
BILL	**Bilibino**	**123.65**	**338**	*e*PKPdf	PKPdf	19 45 33.5	+0.8
BILL				*e*PKPr		19 45 36.7	
BILL				*e*PP	PP	19 47 13.4	-8.3
BILL	**Bilibino**	**123.65**	**338**	*e*PKIKP	PKPdf	19 45 33.5	+0.8
ABTO	**Aybut**	**124.80**	**84**	P	PKPdf	19 45 38.3	+2.1
	SNR=11						
NWAO	**Narrogin (SRO)**	**124.80**	**185**	PKPdf	PKPdf	19 45 35.8	0.0
FX1	**Attu Island--F**	**124.89**	**320**	PKPdf	PKPdf	19 45 37.5	+2.1
FORT	**Forrest**	**124.97**	**197**	*e*PKP	PKPdf	19 45 36.9	+0.7
	comp=N,79nm,0.7s						
WHFO	**Wadi Hawf**	**125.38**	**83**	⇑P	PKPdf	19 45 38.7	+1.5
	SNR=12						
MUN	**Mundaring**	**125.82**	**184**	*e*PKP	PKPdf	19 45 38.2	+0.5
MUN				*e*PP	PP	19 47 32.5	-4.2
MUN				*e*SKS		19 55 16.4	
MUN				*e*		20 04 21.0	
MUN	**Mundaring**	**125.82**	**184**	*e*PKIKP	PKPdf	19 45 38.2	+0.5
MUN				*e*		19 47 32.5	
MUN				*e*		20 04 21.0	
KLBR	**Kellerberrin**	**126.07**	**186**	*e*PKP	PKPdf	19 45 38.7	+0.5
	comp=N,208nm,1.5s						
CTA	**Charters Tower**	**126.19**	**221**	*e*PKP	PKPdf	19 45 39.7	+1.0
	comp=N,39nm,1.1s						
CTA				*i* PP	PP	19 47 36.9	-2.5
CTAO	**Charters Tower**	**126.19**	**221**	PKPdf	PKPdf	19 45 39.8	+1.1
CTAO				PP	PP	19 47 34.8	-4.7
SOKR	**Solikamsk**	**126.45**	**31**	*d i*PKIKP	PKPdf	19 45 40.8	+2.7
SOKR						19 47 39.4	
SOKR						19 52 35.2	
SOKR				SP	SP	19 57 25.6	+3.2
SOKR				SS	SS	20 04 33.4	+5.5
SOKR				pmax	pmax		
	comp=Z,90nm,1.0s						
SOKR				MLR	MLR		
	comp=Z,5µm,19.0s						
ORR	**Orenburg**	**127.41**	**41**	*c i*PKIKP	PKPdf	19 45 42.7	+2.4
ARU	**Arti**	**128.35**	**35**	⇑*i*PKIKP	PKPdf	19 45 44.0	+2.0
ARU				*e*		19 47 46.5	
ARU				*e*		19 52 40.6	
ARU				*e*PS	PS	19 57 38.8	-19
ARU				pmax	pmax		
	comp=Z,84nm,0.9s						
ARU				MLR	MLR		
	comp=Z,10µm,21.0s						
ARU				MLR	MLR		
	comp=E,7µm,20.0s						
ARQ	**Araqi**	**129.09**	**78**	⇓P	PKPdf	19 45 47.1	+2.8
	SNR=6.2						
WAKE	**Wake Island**	**129.11**	**277**	PKPdf	PKPdf	19 45 48.7	+4.3
WAKE				PP	PP	19 47 51.7	-7.3
BANOM	**Banah**	**129.31**	**74**	P	PKPdf	19 45 46.5	+1.8
	SNR=6.1						
ASPA	**Alice Springs**	**129.55**	**206**	*e*PKP	PKPdf	19 45 46.1	+1.0
ASPA				*e*sPKP		19 46 28.9	
AKTO	**Aktyubinsk**	**129.68**	**42**	PKP	PKPdf	19 45 46.7	+2.1
	comp=E,45nm,0.9s,baz=301,slow=3.3,SNR=43						
AKTO				pPKP		19 46 27.2	
	comp=E,27nm,0.9s,baz=329,slow=2.8,SNR=3.5						
AKTO	**Aktyubinsk**	**129.68**	**42**	PKIKP	PKPdf	19 45 46.4	+1.8
AKTO				pmax	pmax		
	comp=Z,24nm,1.3s						
SMDO	**Samad**	**130.42**	**78**	⇓P	PKPdf	19 45 48.0	+1.2
AB31	**Akbulak array**	**131.17**	**43**	*i* PKIKP	PKPdf	19 45 49.2	+1.7
AB31				pmax	pmax		
	comp=Z,197nm,1.1s						
DGAR	**Diego Garcia**	**131.21**	**123**	*i* PKIKP	PKPdf	19 45 49.4	+0.9
SEY	**Seymchan**	**131.25**	**337**	*i* PKP	PKPdf	19 45 51.3	+4.0
SEY	**Seymchan**	**131.25**	**337**	*e*PKHKP		19 45 39.4	
SEY				pmax	pmax		
	comp=N,50nm,1.0s						
SEY				pmax	pmax		
	comp=E,80nm,1.0s						
SEY				pmax	pmax		
	comp=Z,350nm,1.0s						
WB2	**Warramunga Arr**	**132.65**	**209**	*e*PKP	PKPdf	19 45 54.6	+3.5
WB2				*e*PP	PP	19 48 08.6	-12
WB2				*e*SKP		19 49 06.1	
WB2				*e*PKS	PKS	19 49 19.0	-7.2
WB2				*e*		19 50 13.2	
WB2	**Warramunga Arr**	**132.65**	**209**	*e*PKP		19 45 38.7	
WB2				*e*PKP	PKPdf	19 45 54.6	+3.5
WB2				*e*PP	PP	19 48 08.6	-12
WB2				*e*SKP		19 49 06.1	
WB2				*e*PKS	PKS	19 49 19.0	-7.2
WB2				*e*		19 50 13.2	
WRA	**Warramunga Arr**	**132.65**	**209**	PKhKP		19 45 35.1	
	comp=Z,3.1nm,0.7s,baz=154,slow=2.1,SNR=20						
WRA				PKP	PKPdf	19 45 52.1	+1.0
	comp=Z,78nm,0.7s,baz=163,slow=1.6,SNR=64						
WRA				pPKP		19 46 32.3	
	comp=Z,51nm,1.0s,baz=165,slow=1.6,SNR=2.8						
WRA				PP	PP	19 48 16.0	-4.9
	comp=Z,11nm,1.1s,baz=157,slow=5.2,SNR=5.2						
WRA				SKPbc		19 49 06.0	
	comp=Z,75nm,1.2s,baz=153,slow=3.2,SNR=8.1						
WRA				SKKPbc		19 58 27.1	
	comp=Z,5.9nm,0.9s,baz=343,slow=5.8,SNR=5.0						
WRAB	**Tennant Creek**	**132.65**	**209**	*e*PKPpre		19 45 37.9	
WRAB				*e*PKPdf	PKPdf	19 45 53.0	+1.9
WRAB				*e*pPKPdf		19 46 29.4	
WRAB				*e*SKP		19 49 05.8	
PET	**Petropavlovsk**	**133.29**	**323**	*e*PKPpre		19 45 41.6	
PET				*e*PKPdf	PKPdf	19 45 53.6	+2.2
PET				⇑*i*PKP	PKPdf	19 45 54.8	+3.4
PET	**Petropavlovsk**	**133.29**	**323**	*e*P	Pdif	19 42 51.6	+2.5
PET				*e*		19 45 35.1	
PET				*i*		19 45 54.6	
PET				*e*		19 46 48.5	
PET				*i*		19 48 22.3	
PET				*e*		19 52 52.5	
PET				*e*PS	PS	19 58 21.2	-19
PET				*e*PPS	PPS	20 00 04.9	-18
PET				*i* SS	SS	20 05 54.4	+1.9
PET				pmax	pmax		
	comp=Z,2µm,5.6s						
PET				pmax	pmax		
	comp=Z,90nm,1.3s						
PET				pmax	pmax		
	comp=Z,94nm,1.9s						
PET				pmax	pmax		
	comp=Z,72nm,2.2s						
PET				pmax	pmax		
	comp=Z,10µm,10.0s						
PET				pmax	pmax		
	comp=Z,10µm,18.0s						
PET				pmax	pmax		
	comp=Z,15µm,7.9s						
PET				pmax	pmax		
	comp=Z,88nm,4.2s						
PET				pmax	pmax		
	comp=Z,12µm,13.2s						
PET				pmax	pmax		
	comp=N,76nm,1.9s						
PET				pmax	pmax		
	comp=E,10µm,15.3s						
PET				pmax	pmax		
	comp=E,8µm,13.5s						
PET				MLR	MLR		
	comp=Z,4µm,21.0s						
PMG	**Port Moresby**	**133.30**	**231**	PKP	PKPdf	19 45 54.9	+2.4
	comp=Z,77nm,1.0s,baz=7.9,slow=6.6,SNR=6.2						
PMG				pPKP		19 46 34.7	
	comp=Z,45nm,0.9s,baz=74,slow=2.3,SNR=3.0						
PMG				PP	PP	19 48 22.7	-2.5
	comp=Z,23nm,0.9s,baz=93,slow=5.9,SNR=4.8						
PMG				SKPbc		19 49 10.1	
	comp=Z,62nm,1.0s,baz=76,slow=0.7,SNR=5.5						
PMG	**Port Moresby**	**133.30**	**231**	*e*PKPpre		19 45 42.6	
PMG				PKPdf	PKPdf	19 45 54.2	+1.7
PMG				*e*pPKPdf		19 46 37.2	
PMG				PP	PP	19 48 23.1	-2.1
PMG				*e*SKP		19 49 09.3	
MA2	**Magadan**	**133.89**	**334**	⇓*e*PKP	PKPdf	19 45 55.3	+3.0
MA2				PP	PP	19 48 21.0	-7.0
MA2	**Magadan**	**133.89**	**334**	*e*P	Pdif	19 42 56.1	+4.6
MA2				*e*		19 48 22.9	
MA2				*e*PS	PS	19 58 20.3	-24
MA2				*e*PPS	PPS	20 00 35.2	+6.9
MA2				*e*SS	SS	20 05 56.8	-2.6
MA2				MLR	MLR		
	comp=Z,11µm,24.0s						
CHKZ	**Chkalovo**	**135.80**	**34**	*e*PKPpre		19 45 49.9	
CHKZ				PKPdf	PKPdf	19 45 57.5	+1.5
CHKZ				pPKPdf		19 46 38.5	
CHKZ				*e*PP	PP	19 48 24.5	-15
CHKZ				*e*SKP		19 49 15.6	
BRVK	**Borovoye**	**135.92**	**35**	*e*PKPpre		19 45 51.7	
BRVK				*e*PKPdf	PKPdf	19 45 57.6	+1.4
BRVK				⇑*e*PKP	PKPdf	19 45 59.5	+3.3
BRVK				*e*PP	PP	19 48 44.0	+3.7
BRVK				*e*SKP		19 49 18.2	
BRVK	**Borovoye**	**135.92**	**35**	*e*PKIKP	PKPdf	19 45 51.7	-4.5
BRVK				*e*		19 48 44.0	
BVA0	**Borovoye Array**	**135.99**	**35**	*i* PKIKP	PKPdf	19 45 58.0	+1.6
BVAR	**Borovoye Array**	**135.99**	**35**	PKhKP		19 45 46.9	
	comp=Z,0.8nm,0.5s,baz=301,slow=3.2,SNR=7.7						
BVAR				PKP	PKPdf	19 45 58.3	+2.0
	comp=Z,33nm,0.8s,baz=278,slow=3.0,SNR=52						
BVAR				SKKPbc		19 58 17.5	
	comp=Z,4.1nm,0.9s,baz=129,slow=9.5,SNR=3.7						
MBWA	**Marble Bar**	**136.10**	**190**	*e*PKPdf	PKPdf	19 45 59.2	+1.8
MBWA				*e*pPKPdf		19 46 39.8	
VOSK	**Vostochnaya**	**136.45**	**35**	PKIKP	PKPdf	19 45 58.6	+1.4
VOSK						19 48 48.4	
VOSK				pmax	pmax		
	comp=Z,188nm,1.5s						
FITZ	**Fitzroy Crossi**	**137.64**	**199**	*e*PKP		19 45 49.2	
	comp=Z,34nm,0.8s						
FITZ	**Fitzroy Crossi**	**137.64**	**199**	*e*PKP	PKPdf	19 46 04.3	+4.0
FITZ				*e*sPKP		19 46 44.4	
FITZ				*i* PP	PP	19 48 45.5	-6.6
FITZ				*e*SKP		19 49 22.6	
FITZ	**Fitzroy Crossi**	**137.64**	**199**	PKhKP		19 45 48.4	
	comp=Z,25nm,0.7s,baz=205,slow=4.1,SNR=18						
FITZ				PKP	PKPdf	19 46 02.6	+2.3
	comp=Z,43nm,0.8s,baz=186,slow=4.5,SNR=12						
FITZ				pPKP		19 46 43.0	
	comp=Z,83nm,0.8s,baz=163,slow=4.9,SNR=3.6						
FITZ				SKPbc		19 49 22.2	
	comp=Z,56nm,0.9s,baz=228,slow=4.8,SNR=2.7						
FITZ	**Fitzroy Crossi**	**137.64**	**199**	*e*PKP		19 45 49.2	
FITZ				*e*PKP	PKPdf	19 46 04.3	+4.0
FITZ				*e*sPKP		19 46 44.4	
FITZ				*i* PP	PP	19 48 45.5	-6.6
FITZ				*e*SKP		19 49 22.6	
YAK	**Yakutsk**	**138.56**	**348**	*e*PKPpre		19 45 53.0	
YAK				⇓*i*PKP	PKPdf	19 46 04.3	+3.5
YAK	**Yakutsk**	**138.56**	**348**	*i* PKHKP		19 45 53.6	
YAK				*e*PPP	PPP	19 51 55.9	-4.7
YAK				*e*		19 52 58.4	
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,25nm,1.0s						
YAK				pmax	pmax		
	comp=Z,160nm,1.0s						
YAK				pmax	pmax		
	comp=Z,2µm,10.3s						
YAK				pmax	pmax		
	comp=N,743nm,12.0s						
YAK				pmax	pmax		
	comp=E,408nm,12.7s						
KAKA	**Kakadu**	**139.82**	**212**	*e*PKP	PKPdf	19 46 16.2	+12
	comp=E,86nm,0.7s						
KKAR	**Karatay Array**	**139.91**	**49**	PKIKP	PKPdf	19 46 01.4	-2.4
KKAR				pmax	pmax		
	comp=Z,35nm,1.1s						
BHJ	**Bhuj**	**141.00**	**80**	*e*P	PKPdf	19 46 04.7	-1.7
BHJ				AMb	AMB	19 46 10.6	
	comp=Z,225nm,1.5s						
BHJ				AMS	AMS	20 51 13.6	
	comp=Z,7µm,19.9s						
NVS	**Novosibirsk**	**141.06**	**26**	*e*PKIKP	PKPdf	19 46 02.2	-3.3
NVS				pmax	pmax		
	comp=Z,361nm,1.7s						
NVS				pmax	pmax		
	comp=N,27nm,1.4s						
NVS				pmax	pmax		
	comp=E,118nm,1.6s						
KURK	**Kurchatov**	**141.55**	**34**	*e*PKPpre		19 46 02.4	
KURK				*e*PKPdf	PKPdf	19 46 11.0	+4.6
KURK	**Kurchatov**	**141.55**	**34**	⇓*i*PKIKP	PKPdf	19 46 11.4	+4.9
EKS2	**Erkin-Say**	**142.32**	**48**	P	PKPdf	19 46 06.2	-1.9
	SNR=18						
AML	**Almayashu**	**142.44**	**49**	P	PKPdf	19 46 10.8	+2.6
	SNR=28						
USP	**Ospenovka**	**142.60**	**47**	P	PKPdf	19 46 06.7	-1.8
	SNR=14						
AAK	**Ala-Archa**	**142.83**	**48**	P	PKPdf	19 46 08.4	-0.5
	SNR=29						
AAK	**Ala-Archa**	**142.83**	**48**	PKIKP	PKPdf	19 46 08.5	-0.4
AAK				pmax	pmax		
	comp=Z,161nm,1.0s						
FRU	**Bishkek**	**142.84**	**48**	⇓*e*PKIKP	PKPdf	19 46 08.3	-0.6
FRU				*e*PPS	PPS	20 01 41.0	-12
FRU				*i* SS	SS	20 07 50.0	+5.2
FRU				pmax	pmax		
	comp=Z,570nm,2.0s						
FRU				MLR	MLR		
	comp=Z,7µm,20.0s						
CHMS	**Chumysh**	**142.87**	**47**	P	PKPdf	19 46 10.1	+1.1
	SNR=13						
UCH	**Uchtor**	**142.98**	**49**	P	PKPdf	19 46 09.1	-0.1
	SNR=29						
KBK	**Karagaybulak**	**143.13**	**48**	P	PKPbc	19 46 09.1	+1.5
	SNR=52						
BOM	**Bombay**	**143.18**	**88**	*e*P	PKPbc	19 46 09.6	+1.2
BOM				*e*x	x	19 49 12.9	
MNGI	**Mangalore**	**143.39**	**98**	*e*P	PKPbc	19 46 08.9	-0.3
MNGI				*e*x	x	19 56 03.6	
TKM2	**Tokmak 2**	**143.47**	**47**	P	PKPbc	19 46 09.8	+1.2
	SNR=41						
KZA	**Kyzart**	**143.55**	**49**	P	PKPbc	19 46 11.1	+2.3
	SNR=64						
TRD	**Trivandrum**	**143.58**	**107**	*e*P	PKPbc	19 46 10.5	+0.7
TRD				AMb	AMB	19 46 17.8	
	comp=Z,502nm,1.5s						
TRD				AMS	AMS	20 48 49.9	
	comp=Z,7µm,18.6s						
POO	**Poona**	**144.06**	**89**	*e*x	x	19 46 22.2	
POO				AMb	AMB	19 46 27.9	
	comp=Z,513nm,1.6s						
KAD	**Karad**	**144.08**	**91**	*e*P	PKPbc	19 46 10.5	-0.7
KAD				AMb	AMB	19 46 18.6	
	comp=Z,558nm,1.6s						
ULHL	**Ulahol**	**144.17**	**48**	P	PKPbc	19 46 13.6	+2.9
	SNR=12						
AAA	**Alma-Ata**	**144.24**	**46**	*i* PKIKP	PKPdf	19 46 13.6	+2.3
AAA						19 49 31.2	
AAA				pmax	pmax		
	comp=Z,5µm,1.6s						
AAA				MLR	MLR		
	comp=Z,6µm,12.8s						
BOD	**Bodaibo**	**144.56**	**358**	*e*PKIKP	PKPdf	19 46 10.8	-0.6
BOD				pmax	pmax		
	comp=Z,959nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**144.77**	**316**	*e*PKIKP	PKPdf	19 46 10.9	-1.3
YUK						19 49 28.0	
YUK				*e*		19 52 44.0	
YUK				pmax	pmax		
	comp=Z,35µm,3.0s						
YUK				pmax	pmax		
	comp=N,2µm,1.0s						
YUK				pmax	pmax		
	comp=E,16µm,3.6s						
YUK				pmax	pmax		
	comp=Z,950nm,0.6s						
YUK				pmax	pmax		
	comp=N,250nm,0.4s						
YUK				pmax	pmax		
	comp=E,500nm,0.5s						
YUK				MLR	MLR		
	comp=Z,5µm,14.0s						
YUK				MLR	MLR		
	comp=E,3µm,13.0s						
KSH	**Kashi**	**144.93**	**52**	*i* PKP	PKPdf	19 46 15.3	+2.6
KSH				PP	PP		
	comp=Z,2µm,2.3s						
KSH				LR	LR		
	comp=N,8µm,17.4s						
KSH				LR	LR		
	comp=E,13µm,20.0s						
YSS	**Yuzh-Sakhalins**	**145.18**	**322**	PKPbc	PKPbc	19 46 14.1	+0.8
YSS				SKKSac		19 56 14.9	
YSS	**Yuzh-Sakhalins**	**145.18**	**322**	*e*PKPdf	PKPdf	19 46 14.0	+1.1
YSS				*e*pPKPdf		19 46 56.6	
YSS				*e*SKP		19 49 34.8	
YSS	**Yuzh-Sakhalins**	**145.18**	**322**	⇓*i*PKIKP	PKPdf	19 46 14.2	+1.3
AJM	**Ajmer**	**145.77**	**75**	*e*P	PKPdf	19 46 16.8	+2.3
AJM				AMb	AMB	19 46 24.6	
	comp=Z,1µm,1.8s						
AJM				AMS	AMS	20 56 19.5	
	comp=Z,4µm,17.6s						
MKAR	**Makanchi Array**	**145.79**	**37**	PKPbc	PKPbc	19 46 15.4	+0.5
	comp=Z,84nm,0.7s,baz=318,slow=1.7,SNR=288						
MKAR				pPKPbc		19 46 56.0	
	comp=Z,80nm,0.8s,baz=297,slow=2.7,SNR=1.7						
MKAR				SKKPbc		19 57 36.5	
	comp=Z,6.1nm,0.9s,baz=127,slow=6.1,SNR=4.2						
MKAR	**Makanchi Array**	**145.79**	**37**	*i* PKP2	PKPab	19 46 15.7	-1.9
MKAR				pmax	pmax		
	comp=Z,2µm,1.6s						
PALK	**Pallekele**	**146.28**	**112**	PKPdf	PKPdf	19 46 18.3	+2.6
PALK				pPKPdf		19 46 56.4	
THN	**Thein Dam**	**146.35**	**65**	*e*P	PKPdf	19 46 17.3	+2.0
LATR	**Latur**	**146.54**	**90**	*e*P	PKPdf	19 46 18.0	+2.1
DLH	**Dalhousie**	**146.55**	**65**	*e*x	x	19 46 20.0	
DLH				*e*x	x	19 47 32.0	
ASAJ	**Asahikawa**	**146.79**	**318**	PKPbc	PKPbc	19 46 18.7	+1.4
	comp=Z,278nm,1.0s,baz=268,slow=5.9,SNR=5.6						
ASAJ	**Asahikawa**	**146.79**	**318**	PKP2	PKPab	19 46 18.7	-2.9
ASAJ				pmax	pmax		
	comp=Z,278nm,1.0s						
BHK	**Bhakra**	**147.08**	**66**	*e*x	x	19 46 26.8	
AKL	**Akola**	**147.40**	**86**	⇓*i*x	x	19 45 33.1	
AKL				*i* x	x	19 46 10.6	
SDNR	**Sundarnagar**	**147.54**	**66**	*e*P	PKPdf	19 46 20.0	+2.7
GUMO	**Guam**	**147.65**	**260**	PKP	PKPdf	19 46 20.6	+2.7
	comp=Z,1µm,0.9s,baz=175,slow=2.5,SNR=13						
GUMO	**Guam**	**147.65**	**260**	PKPdf	PKPdf	19 46 20.4	+2.5
SMLA	**Simla**	**147.75**	**67**	*e*P	PKPdf	19 46 19.2	+1.6
SMLA				*e*x	x	19 49 53.5	
NDI	**New Delhi**	**148.01**	**71**	*e*P	PKPdf	19 46 19.0	+0.8
NDI				*e*x	x	19 56 24.0	
BHPL	**Bhopal**	**148.10**	**82**	*e*P	PKPdf	19 46 20.2	+1.8
BHPL				AMb	AMB	19 46 33.5	
	comp=Z,749nm,1.6s						
BHPL				AMS	AMS	19 51 15.7	
	comp=N,132nm,18.4s						
HYB	**Hyderabad**	**148.15**	**93**	⇑*i*PKP	PKPdf	19 46 20.0	+1.3
	comp=N,870nm,1.0s						
HYB				*e*		19 46 22.5	
HYB				*e*PKPAB	PKPab	19 46 28.0	+0.4
HYB				*e*		19 46 35.0	
HYB				*e*pPKPAB		19 47 23.0	
HYB				*e*		19 47 37.5	
HYB				*e*sPKPAB		19 47 57.0	
HYB				*e*PP	PP	19 49 52.0	-3.2
HYB				*e*SKS	SKS	19 53 14.0	+5.1
HYB				*e*		19 56 28.0	
HYB				*e*		20 09 14.0	
HYB	**Hyderabad**	**148.15**	**93**	⇑*e*PKP	PKPdf	19 46 20.0	+1.3
HYB				*e*		19 46 22.5	
HYB				*e*		19 46 28.0	
HYB				*e*		19 46 35.0	
HYB				*e*		19 47 02.0	
HYB				*e*PP	PP	19 49 52.0	-3.2
HYB				*e*SKKS		19 56 30.0	
HYB				*e*		19 57 42.0	
HYB	**Hyderabad**	**148.15**	**93**	⇑*e*PKIKP	PKPdf	19 46 20.0	+1.3
HYB				*e*		19 46 28.0	
HYB				*e*		19 47 02.0	
HYB				*e*		19 49 52.0	
MDRS	**Chennai**	**148.38**	**102**	*e*x	PKPdf	19 46 23.1	+4.0
MDRS				AMb	AMB	19 46 36.6	
	comp=Z,272nm,1.2s						
MDRS				AMS	AMS	20 50 21.7	
	comp=Z,6µm,18.1s						
DDI	**Dehra Dun**	**148.60**	**68**	*e*x	PKPdf	19 46 25.0	+5.9
KLR	**Kul'dur**	**148.99**	**335**	*c e*PKHKP		19 46 17.2	
KLR				*e*		19 49 54.0	
KLR				*e*S	SKS	19 53 15.0	+5.8
KLR				pmax	pmax		
	comp=Z,1.0nm,2.4s						
KLR				pmax	pmax		
	comp=E,300nm,2.4s						
KLR				pmax	pmax		

	comp=N,5µm,13.5s						
KLR				pmax	pmax		
	comp=E,2µm,13.5s						
KLR				pmax	pmax		
	comp=Z,18µm,13.5s						
KLR				smax			
	comp=N,4µm,14.0s						
KLR				smax			
	comp=E,2µm,14.0s						
KLR				MLR	MLR		
	comp=Z,9µm,14.0s						
MOY	**Mondy**	**149.52**	**14**	*e*PKHKP		19 46 23.8	
MOY				pmax	pmax		
	comp=Z,1µm,2.5s						
IRK	**Irkutsk**	**149.58**	**9**	*e*PKHKP		19 46 24.6	
IRK				pmax	pmax		
	comp=Z,1µm,2.5s						
CIT	**Chita**	**150.38**	**358**	*e*PKIKP	PKPdf	19 46 25.3	+4.3
CIT				*e*		19 50 02.5	
CIT				*e*		20 09 09.8	
CIT				pmax	pmax		
	comp=Z,1µm,2.3s						
PTH	**Pithoragarh**	**150.56**	**69**	*e*x	PKPdf	19 46 28.0	+6.0
PTH				*e*x	x	19 50 06.6	
WMQ	**Urumqi**	**150.62**	**37**	PKP	PKPdf	19 46 24.6	+2.9
WMQ				PKP2	PKPab	19 46 40.0	+2.9
WMQ				PKS	PKS	19 49 58.0	+2.7
WMQ				PP	PP	19 50 10.5	+2.1
WMQ				SKKS		19 56 45.0	
WMQ				SS	SS	20 09 18.0	+5.7
WMQ				PP	PP		
	comp=Z,5µm,9.8s						
WMQ				PP	PP		
	comp=Z,6µm,16.5s						
WMQ				LR	LR		
	comp=N,15µm,25.8s						
WMQ				LR	LR		
	comp=E,14µm,22.9s						
WMQ				LR	LR		
	comp=Z,20µm,24.5s						
ZAK	**Zakamensk**	**151.20**	**12**	*e*PKIKP	PKPdf	19 46 24.7	+2.4
ZAK				*e*		19 46 26.4	
ZAK				*e*		19 50 09.8	
ZAK				pmax	pmax		
	comp=Z,104nm,0.9s						
ZAK				pmax	pmax		
	comp=Z,14nm,1.0s						
ALBI	**Allahabad**	**152.20**	**78**	*e*P	PKPdf	19 46 25.0	+0.4
CBIJ	**Chichi jima**	**152.27**	**286**	PKPbc	PKPdf	19 46 32.9	+8.2
	comp=Z,223nm,0.8s,baz=159,slow=4.4,SNR=5.4						
BLSP	**Bilaspur**	**152.32**	**85**	*e*P	PKPdf	19 46 26.6	+1.8
BLSP				AMb	AMB	19 46 49.6	
	comp=Z,547nm,1.1s						
HIA	**Hailar**	**152.47**	**349**	*e*PKPdf	PKPdf	19 46 26.8	+2.5
HIA				*e*PKPbc	PKPdf	19 46 33.2	+9.0
HIA				*e*PP	PP	19 50 12.9	-5.5
HIA	**Hailar**	**152.47**	**349**	*e*PKIKP	PKPdf	19 46 26.8	+2.5
HIA				*e*		19 50 12.9	
VIS	**Vishakhapatnam**	**152.64**	**95**	*e*P	PKPdf	19 46 27.8	+2.3
VIS				*e*x	x	19 46 30.1	
VIS				AMb	AMB	19 46 35.9	
	comp=Z,163nm,1.8s						
JHJ	**Hachijo jima 2**	**153.30**	**300**	PKPbc	PKPdf	19 46 35.9	+10
	comp=Z,349nm,0.8s,baz=249,slow=20,SNR=3.9						
MJAR	**Matsushiro Arr**	**153.31**	**308**	PKP	PKPdf	19 46 29.0	+3.1
	comp=Z,27nm,1.0s,baz=25,slow=0.4,SNR=28						
MJAR				PKPbc	PKPdf	19 46 37.5	+12
	comp=Z,89nm,0.7s,baz=85,slow=1.8,SNR=36						
MJAR				PKPab	PKPab	19 46 48.2	-0.4
	comp=Z,101nm,0.9s,baz=120,slow=1.8,SNR=8.1						
MJAR				pPKPbc		19 47 17.2	
	comp=Z,82nm,1.0s,baz=91,slow=0.3,SNR=2.7						
MJAR				PP	PP	19 50 22.5	-1.3
	comp=Z,9.4nm,1.0s,baz=50,slow=2.7,SNR=4.4						
MJAR	**Matsushiro Arr**	**153.31**	**308**	PKIKP	PKPdf	19 46 29.0	+3.2
MJAR						19 46 48.2	
MJAR						19 50 22.5	
MAJO	**Matsushiro**	**153.31**	**308**	PKPdf	PKPdf	19 46 28.3	+2.5
MAJO				PKPab	PKPab	19 46 49.6	+1.0
MAJO	**Matsushiro**	**153.31**	**308**	PKIKP	PKPdf	19 46 30.5	+4.7
MAT	**Matsushiro**	**153.31**	**308**	PKP	PKPdf	19 46 27.5	+1.7
MAT	**Matsushiro**	**153.31**	**308**	*e*PKP	PKPdf	19 46 29.0	+3.2
MAT				LR	LR		
	comp=Z,8µm,21.0s						
MDJ	**Mudanjiang**	**153.54**	**331**	PKP	PKPdf	19 46 28.4	+2.5
MDJ				PKP2	PKPab	19 46 52.0	+2.7
MDJ				APKP		19 47 14.0	
MDJ				XPKP		19 47 30.4	
MDJ				PKS	PKS	19 50 00.8	+1.7
MDJ				PP	PP	19 50 21.8	-3.1
MDJ				SKS	SKS	19 53 18.8	+3.9
MDJ				SKKS		19 56 58.3	
MDJ				SS	SS	20 09 45.3	+1.3
MDJ				PP	PP		
	comp=Z,5µm,5.6s						
MDJ				LR	LR		
	comp=E,10µm,35.7s						
MDJ				LR	LR		
	comp=Z,9µm,33.6s						
MDJ	**Mudanjiang**	**153.54**	**331**	*e*PKPdf	PKPdf	19 46 27.3	+1.4
MDJ				*e*pPKPdf		19 47 11.1	
KOLN	**Koldanda**	**153.70**	**72**	*e*P	PKPdf	19 46 28.3	+1.7
	comp=Z,792nm,1.4s						
SONM	**Songino Array**	**154.19**	**9**	PKP	PKPdf	19 46 28.8	+2.1
	comp=Z,71nm,1.0s,baz=329,slow=1.1,SNR=75						
SONM				PKPab	PKPab	19 46 53.0	+1.1
	comp=Z,96nm,0.8s,baz=338,slow=3.3,SNR=13						
ULN	**Ulaanbaatar**	**154.24**	**8**	PKPdf	PKPdf	19 46 29.1	+2.3
ULN				PKPab	PKPab	19 46 53.8	+1.6
ULN	**Ulaanbaatar**	**154.24**	**8**	⇓*e*PKIKP	PKPdf	19 46 29.0	+2.3
GKN	**Gorkha**	**154.59**	**72**	*e*P	PKPdf	19 46 29.5	+1.7
DMN	**Daman**	**155.04**	**72**	*e*P	PKPdf	19 46 30.4	+2.0
	comp=Z,527nm,0.8s						
KKN	**Kakani**	**155.18**	**72**	*e*P	PKPdf	19 46 30.5	+1.9
PKI	**Pulchoki**	**155.32**	**72**	*e*P	PKPdf	19 46 30.7	+1.9
GUN	**Gumba**	**155.69**	**72**	*e*P	PKPdf	19 46 31.3	+2.0
	comp=Z,319nm,1.0s						
BOK	**Bokaro**	**155.89**	**82**	*e*P	PKPdf	19 46 31.9	+2.2
BOK				AMb	AMB	19 46 39.9	
	comp=Z,147nm,1.9s						
BOK				AMS	AMS	20 55 47.4	
	comp=Z,8µm,18.5s						
KGM	**Kluang**	**158.06**	**156**	P	PKPdf	19 46 37.5	+4.6
CAL	**Calcutta**	**158.07**	**85**	*e*P	PKPdf	19 46 31.0	-1.6
SNY	**Shenyang**	**158.32**	**336**	⇓PKP	PKPdf	19 46 35.5	+3.2
SNY				SKKS		19 57 23.0	
SNY				LR	LR		
	comp=E,4µm,22.2s						
SNY				LR	LR		
	comp=Z,7µm,24.5s						
KSM	**Kuching**	**159.16**	**175**	*e*PKPdf	PKPdf	19 46 38.0	+3.9
KSM				*e*PKPab	PKPab	19 47 15.3	+1.0
KSM				*e*PP	PP	19 50 53.1	-3.3
IPM	**Ipoh**	**159.34**	**147**	P	PKPdf	19 46 38.3	+4.0
MATI	**Mati**	**159.44**	**224**	*e*P	PKPdf	19 46 38.3	+3.9
KS15	**Wonju Array Si**	**159.70**	**321**	PKPdf	PKPdf	19 46 38.3	+4.2
KS15				PKPab	PKPab	19 47 17.1	+1.2
KULM	**Kulim**	**159.75**	**145**	*e*PKPdf	PKPdf	19 46 38.7	+3.9
KULM				*e*PKPab	PKPab	19 47 15.4	-1.4
KULM				*e*PP	PP	19 50 54.9	-4.4
LSA	**Lhasa**	**159.86**	**64**	PKP	PKPdf	19 46 38.0	+3.5
LSA				LR	LR		
	comp=N,3µm,22.8s						
LSA				LR	LR		
	comp=E,1µm,22.8s						
LSA				LR	LR		
	comp=Z,3µm,22.8s						
LSA	**Lhasa**	**159.86**	**64**	*e*PKPdf	PKPdf	19 46 37.3	+2.8
LSA				*e*PKPab	PKPab	19 47 16.6	-0.2
LSA				*e*PP	PP	19 50 59.4	-0.1
DAV	**Davao City (W)**	**159.97**	**223**	⇑*e*P	PKPdf	19 46 41.0	+6.0
GTA	**Gaotai**	**160.06**	**29**	PKP	PKPdf	19 46 36.6	+2.2
GTA				PKP2	PKPab	19 47 17.8	+0.4
GTA				PKS	PKS	19 50 08.8	+2.1
GTA				PP	PP	19 51 00.3	+0.1
GTA				SKKS		19 57 36.6	
GTA				SS	SS	20 10 57.6	+4.3
GTA				PP	PP		
	comp=Z,1µm,7.2s						
GTA				LR	LR		
	comp=N,5µm,20.9s						
GTA				LR	LR		
	comp=E,4µm,21.3s						
GTA				LR	LR		
	comp=Z,9µm,25.5s						
JNU	**Nakatsue**	**160.23**	**307**	PKP	PKPdf	19 46 37.9	+3.2
	comp=Z,9.6nm,0.9s,baz=55,slow=9.8,SNR=5.6						
JNU				PKPab	PKPab	19 47 19.6	+1.3
	comp=Z,82nm,1.1s,baz=123,slow=9.8,SNR=10.0						
INCN	**Inchon**	**160.38**	**323**	PKPdf	PKPdf	19 46 38.3	+3.5
INCN				PKPab	PKPab	19 47 18.9	+0.1
BUKP	**Musuan**	**160.92**	**223**	*e*P	PKPdf	19 46 36.4	+0.5
TSM	**Tawau**	**161.17**	**198**	P	PKPdf	19 46 41.1	+4.8
SHL	**Shillong**	**161.29**	**76**	*e*P	PKPdf	19 46 39.0	+3.0
SHL				*e*x	x	19 47 22.0	
SHL				*e*SKS		19 57 42.0	
BUTP	**Butuan**	**161.37**	**226**	*e*P	PKPdf	19 46 41.8	+5.4
HHC	**Hu-ho-hao-te**	**161.57**	**1**	*e*PKP	PKPdf	19 46 39.8	+4.0
HHC				PKS	PKS	19 50 11.8	+3.7
HHC				PP	PP	19 51 07.6	-1.0
HHC				PP	PP		
	comp=Z,7µm,12.1s						
HHC				LR	LR		
	comp=N,4µm,25.2s						
HHC				LR	LR		
	comp=E,8µm,28.8s						
HHC				LR	LR		
	comp=Z,5µm,33.6s						
DL2	**Dalian**	**161.59**	**336**	*i* PKP	PKPdf	19 46 37.8	+1.9
DL2				PKP2	PKPab	19 47 24.8	+0.8
DL2				PKS	PKS	19 50 10.3	+2.1
DL2				PP	PP	19 51 07.8	-1.0
DL2				SKKS		19 57 42.8	
DL2				SS	SS	20 11 12.0	+2.8
DL2				PP	PP		
	comp=Z,3µm,5.7s						
DL2				LR	LR		
	comp=N,2µm,19.8s						
DL2				LR	LR		
	comp=E,990nm,19.8s						
DL2				LR	LR		
	comp=Z,3µm,19.3s						
BTO	**Baotou**	**161.74**	**5**	*e*PKP	PKPdf	19 46 39.3	+3.3
PAGZ	**Pagadian**	**161.91**	**219**	*e*P	PKPdf	19 46 38.6	+1.6
SCPH	**Surigao**	**162.04**	**228**	⇑*i*P	PKPab	19 47 28.6	+1.9
IPIL	**Ipil**	**162.32**	**217**	*e*P	PKPdf	19 46 39.6	+2.3
MSLP	**Maasin**	**162.73**	**227**	*e*P		19 46 23.1	
MSLP				*e*S	PKPab	19 47 28.9	-0.7
TBP	**Tagbilaran**	**163.06**	**224**	*e*P	PKPab	19 47 29.7	-1.4
KKM	**Kota Kinabalu**	**163.28**	**195**	*e*PKPdf	PKPdf	19 46 41.5	+3.1
KKM				*e*pPKPdf		19 47 23.7	
KKM				*e*PKPab	PKPab	19 47 32.7	+0.6
KKM	**Kota Kinabalu**	**163.28**	**195**	P	PKPdf	19 46 43.9	+5.5
LLP	**Lapu-Lapu**	**163.46**	**225**	*e*P	PKPab	19 47 34.0	+1.1
GUIM	**Jordan**	**164.57**	**222**	*e*P	PKPdf	19 46 41.5	+1.9
LZH	**Lanzhou**	**164.57**	**26**	⇓PKP	PKPdf	19 46 43.0	+4.0
LZH				APKP		19 47 25.6	
LZH				PKP2	PKPab	19 47 41.5	+4.4
LZH				XPKP		19 47 43.3	
LZH				PKS	PKS	19 50 15.0	+4.1
LZH				PP	PP	19 51 28.3	+3.5
LZH				SKS	SKS	19 53 29.5	+4.2
LZH				SKKS		19 57 57.3	
LZH				SS	SS	20 11 43.5	+3.0
LZH				PP	PP		
	comp=Z,6µm,9.0s						
LZH				LR	LR		
	comp=E,6µm,18.2s						
LZH				LR	LR		
	comp=Z,7µm,20.0s						
JOW	**Kunigami**	**164.60**	**290**	PKP	PKPdf	19 46 43.1	+3.8
	comp=Z,82nm,1.1s,baz=145,slow=9.5,SNR=4.9						
JOW				PKPab	PKPab	19 47 39.0	+1.6
	comp=Z,66nm,1.0s,baz=95,slow=7.0,SNR=4.9						
BATP	**Bataraza**	**165.42**	**203**	*e*P	PKPdf	19 46 45.4	+5.0
BATP				*e*S	PKPab	19 47 41.4	0.0
TIA	**Tai'an**	**165.52**	**343**	PKP	PKPdf	19 46 42.0	+2.2
TIA				APKP		19 47 24.4	
TIA				XPKP		19 47 41.0	
TIA				PP	PP	19 51 27.0	-2.5
TIA				SS	SS	20 11 49.0	-0.9
TIA				LR	LR		
	comp=N,3µm,20.0s						
TIA				LR	LR		
	comp=E,2µm,19.0s						
CUYO	**Cuyo Island**	**165.69**	**218**	*e*P		19 46 26.0	
OTRP	**Odiongan**	**166.24**	**225**	*e*P	PKPdf	19 46 43.8	+2.8
ENPP	**El Nido**	**166.85**	**214**	*e*P	PKPdf	19 46 40.8	-0.6
SJMP	**San Jose**	**166.90**	**223**	*e*P	PKPdf	19 46 44.9	+3.5
NST	**Nakhon Sawan**	**166.91**	**119**	P	PKPdf	19 46 44.5	+3.1
	comp=E,90nm,0.7s						
BUSP	**Coron**	**167.09**	**218**	*e*P	PKPdf	19 46 45.7	+4.2
BOAC	**Boac**	**167.15**	**228**	*e*P	PKPdf	19 46 46.3	+4.7
CHG	**Chiang Mai**	**167.22**	**104**	P	PKPdf	19 46 44.4	+2.9
	comp=E,122nm,1.5s						
XAN	**Xi'an**	**168.05**	**13**	PKP	PKPdf	19 46 44.9	+3.2
XAN				SS	SS	20 12 15.1	-0.2
XAN				PP	PP		
	comp=Z,4µm,14.0s						
XAN				LR	LR		
	comp=N,1µm,28.9s						
XAN				LR	LR		
	comp=E,6µm,37.8s						
XAN				LR	LR		
	comp=Z,7µm,24.5s						
SSE	**Sheshan**	**168.09**	**319**	PKP	PKPdf	19 46 45.3	+3.5
SSE				PP	PP	19 51 44.9	+2.4
SSE				PP	PP		
	comp=Z,3µm,15.7s						
SSE				LR	LR		
	comp=N,5µm,22.6s						
SSE				LR	LR		
	comp=E,11µm,22.6s						
SSE				LR	LR		
	comp=Z,7µm,22.9s						
SSE	**Sheshan**	**168.09**	**319**	PKP	PKPdf	19 46 45.2	+3.4
SSE				PP	PP	19 51 44.9	+2.4
SSE				LR	LR		
	comp=Z,7µm,22.9s						
TGY	**Tagaytay City**	**168.23**	**227**	PKPab	PKPab	19 47 55.0	+1.4
	comp=Z,116nm,0.5s,baz=136,slow=13,SNR=5.7						
CHRT	**Chiangrai**	**168.28**	**100**	⇑P	PKPdf	19 46 44.0	+1.8
	comp=Z,434nm,1.3s						
NJ2	**Nanjing**	**168.62**	**329**	*e*PKP	PKPdf	19 46 44.9	+2.8
NJ2				PKP2	PKPab	19 47 57.0	+2.1
NJ2				PKS	PKS	19 50 16.0	+2.4
NJ2				PP	PP		
	comp=Z,8µm,8.4s						
NJ2				LR	LR		
	comp=N,28µm,25.1s						
NJ2				LR	LR		
	comp=E,41µm,22.1s						
NJ2				LR	LR		
	comp=Z,5µm,27.6s						
CD2	**Chengdu**	**168.71**	**39**	PKP	PKPdf	19 46 45.0	+2.8
CD2				PP	PP		
	comp=Z,2µm,8.4s						
CD2				LR	LR		
	comp=E,7µm,15.6s						
CD2				LR	LR		
	comp=Z,5µm,28.8s						
BALP	**Baler**	**168.85**	**235**	*e*P	PKPdf	19 46 44.0	+1.3
KKTK	**Khon Kaen**	**169.42**	**123**	P	PKPdf	19 46 46.0	+3.0
SGCP	**Mt. Cagua**	**169.77**	**248**	*e*P	PKPdf	19 46 45.7	+2.6
SCZP	**Santa Cruz**	**170.10**	**230**	*e*P	PKPdf	19 46 46.5	+3.1
APYP	**Conner**	**170.28**	**244**	*e*P	PKPdf	19 46 42.4	-1.0
ABRA	**Dolores**	**170.61**	**242**	*e*P	PKPdf	19 46 48.5	+4.8
KMI	**Kunming**	**171.03**	**70**	PKP	PKPdf	19 46 46.8	+3.1
KMI				APKP		19 47 26.8	
KMI				XPKP		19 47 41.8	
KMI				PKP2	PKPab	19 48 06.8	+1.0
KMI				PKS	PKS	19 50 17.8	+2.6
KMI				PP	PP	19 51 58.1	+0.7
KMI				SKS	SKS	19 53 33.6	+4.2
KMI				SKKS		19 58 28.3	
KMI				SS	SS	20 12 44.0	-0.4
KMI				PP	PP		
	comp=Z,5µm,11.8s						
KMI				LR	LR		
	comp=N,5µm,19.1s						
KMI				LR	LR		
	comp=E,3µm,18.1s						
KMI				LR	LR		
	comp=Z,4µm,20.2s						
KMI	**Kunming**	**171.03**	**70**	PKP	PKPdf	19 46 46.7	+3.0
KMI				PKPab	PKPab	19 48 06.8	+1.0
KMI				PKS	PKS	19 50 17.8	+2.6
WHN	**Wuhan**	**171.60**	**346**	⇑PKP	PKPdf	19 46 48.0	+4.1
WHN				PKP2	PKPab	19 48 09.3	+1.2
WHN				PP	PP	19 51 57.0	-3.1
WHN				SS	SS	20 12 46.3	-3.6
WHN				PP	PP		
	comp=Z,15µm,4.9s						
WHN				LR	LR		
	comp=N,10µm,33.6s						
WHN				LR	LR		
	comp=E,88µm,57.6s						
WHN				LR	LR		
	comp=Z,42µm,54.0s						
ENH	**Enshi**	**171.80**	**16**	*e*PKPdf	PKPdf	19 46 45.4	+1.4
ENH				*e*pPKPdf		19 47 29.2	
ENH				*e*PKPab	PKPab	19 48 10.6	+1.5
ENH				*e*PP	PP	19 51 48.5	-13
QZH	**Quanzhou**	**173.48**	**294**	*i* PKP	PKPdf	19 46 49.3	+4.4
QZH				PKP2	PKPab	19 48 18.3	+1.7
QZH				PP	PP	19 52 07.6	-2.1
QZH				SKKS		19 58 41.3	
QZH				PP	PP		
	comp=Z,14µm,5.2s						
GYA	**Guiyang**	**173.62**	**49**	⇑*i*PKP	PKPdf	19 46 48.6	+3.7
GYA				APKP		19 47 29.0	
GYA				XPKP		19 47 46.4	
GYA				PKP2	PKPab	19 48 18.4	+1.2
GYA				PP	PP	19 52 12.8	+2.5
GYA				SKKS		19 58 44.3	
GYA				SS	SS	20 13 10.8	+1.2
GYA				PP	PP		
	comp=Z,3µm,8.9s						
GYA				LR	LR		
	comp=N,2µm,21.8s						
GYA				LR	LR		
	comp=E,2µm,22.0s						
GYA				LR	LR		
	comp=Z,3µm,21.7s						
QIZ	**Qiongzhong**	**176.09**	**148**	*e*PKP	PKPdf	19 46 48.4	+2.6
QIZ				XPKP		19 47 47.6	
QIZ				PP	PP	19 52 21.5	-1.2
QIZ				SKKS		19 58 56.3	
QIZ				PP	PP		
	comp=Z,3µm,10.8s						
QIZ	**Qiongzhong**	**176.09**	**148**	*e*PKPdf	PKPdf	19 46 47.7	+1.9
QIZ				*e*pPKPdf		19 47 31.5	
QIZ				*e*PKPab	PKPab	19 48 23.7	-4.5
HKC	**Hong Kong**	**178.04**	**269**	⇓*i*P	PKPdf	19 46 50.0	+4.0
HKC				*i* S	PP	19 52 30.0	-1.5

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*IDC **17** 19:48:18.3±2.2, 22.53S×67.95W, h125^{km}±19^{km}, mb3.9/7, mb1 4.1/10, mb1mx3.9/17, mbtmp4.4/10, Error ellipse: s-maj=24.6km s-min=14.8km az=88.0*

*BJI **17** 19:48:19.4, 22.50S×67.90W, h138^{km}, mB4.6*

*MOS **17** 19:48:19.3±1.7, 22.55S×67.89W, h148^{km}, mb4.5/3, Error ellipse: s-maj=22.5km s-min=15.2km az=105.6*

*NEIC **17** 19:48:19.5±0.6, 22.54S×67.87W, h138^{km}±6^{km}, mb4.3/11, Error ellipse: s-maj=11.2km s-min=7.9km az=99.0*

*GUC **17** 19:48:20.0±0.6, 23.06S×67.99W, h151^{km}±4^{km}, ML4.4*

ISC 17 19:48:18.9±0.5**, 22.57S**±0.05×**67.89W**±0.06**, h148**^{km}±5^{km}**, n48, σ1^{s}29**/51**, mb4.1**/13**, 2C-4D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**0.44**	**220**	⇓*i*P	**P**	**19 48 41.5**	**+1.3**
SPCH				*i* S	**S**	**19 48 57.7**	**+1.2**
SPCH				AMP		19 48 59.1	
	comp=E,4µm,0.6s						
CEN1	**Los Morros**	**2.28**	**248**	⇓*i*P	**P**	**19 48 58.8**	**+1.2**
CEN1				*i* S	**S**	**19 49 27.8**	**+0.4**
CEN1				AMP		19 49 29.0	
	comp=N,2µm,0.5s						
ANCH	**Antofagasta**	**2.57**	**244**	⇑*i*P	**P**	**19 49 02.3**	**+1.0**
ANCH				*i* S	**S**	**19 49 32.8**	**-1.0**
CPN1	**Cerro Paranal**	**3.08**	**228**	⇓*i*P	**P**	**19 49 06.7**	**-1.2**
CPN1				*e*S	**S**	**19 49 41.5**	**-4.0**
CPN1				AMP		19 49 43.1	
	comp=N,2µm,0.3s						
CRCH	**Chaqaral**	**4.51**	**213**	⇓*i*P	**P**	**19 49 24.4**	**-2.3**
CRCH				*i* S	**S**	**19 50 12.5**	**-6.4**
CDCH	**Caldera**	**5.22**	**210**	*e*P	**P**	**19 49 32.3**	**-3.7**
CDCH				*i* S	**S**	**19 50 27.4**	**-8.4**
LPAZ	**La Paz**	**6.25**	**358**	P	**P**	**19 49 50.2**	**+0.4**
	comp=N,5.8nm,0.3s,baz=177,slow=8.3,SNR=58						
LPAZ	**La Paz**	**6.25**	**358**	*e*Pn	**P**	**19 49 50.2**	**+0.4**
	comp=N,15nm,0.4s						
LPAZ	**La Paz**	**6.25**	**358**	*e*P	**P**	**19 49 50.2**	**+0.4**
LPAZ				pmax	pmax		
	comp=Z,15nm,0.4s						
CFAA	**Coronel Fontan**	**9.01**	**182**	P	**P**	**19 50 24.2**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=355,slow=13,SNR=17						
CFAA				S	**S**	**19 51 59.9**	**-6.7**
	comp=Z,0.7nm,0.3s,baz=220,slow=23,SNR=27						
SIV	**San Ignacio**	**9.18**	**46**	P	**P**	**19 50 26.9**	**-2.0**
	comp=Z,10nm,0.3s,baz=238,slow=9.9,SNR=101						
SIV				S	**S**	**19 52 02.5**	**-8.1**
	comp=Z,7.7nm,0.3s,baz=305,slow=24,SNR=9.1						
CPUP	**Villa Florida**	**10.33**	**113**	*e*Pn	**P**	**19 50 44.0**	**-0.1**
SAML	**Samuel**	**14.28**	**19**	Pn	**P**	**19 51 34.6**	**-0.7**
TRQA	**Tornquist**	**16.25**	**163**	*e*P	**P**	**19 52 01.5**	**+1.5**
	comp=Z,11nm,0.6s						
PLCA	**Paso Flores**	**18.25**	**186**	P	**P**	**19 52 22.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=3.8,slow=13,SNR=9.5						
PLCA	**Paso Flores**	**18.25**	**186**	*e*P	**P**	**19 52 22.0**	**-1.6**
	comp=Z,3.9nm,0.6s						
PLCA	**Paso Flores**	**18.25**	**186**	*e*P	**P**	**19 52 22.0**	**-1.5**
PLCA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BDFB	**Brasilia**	**20.00**	**73**	P	**P**	**19 52 42.3**	**+0.4**
	comp=Z,21nm,0.6s,baz=253,slow=13,SNR=17						
PMSA	**Palmer Station**	**42.27**	**178**	*e*P	**P**	**19 56 07.9**	**+9.0**
	comp=Z,10nm,0.7s,mb4.6						
VNA3	**Neumayer Olymp**	**58.77**	**161**		**P**	**19 58 05.5**	**+2.2**
VNA3	**Neumayer Olymp**	**58.77**	**161**		**P**	**19 58 10.9**	**+7.6**
VNA3	**Neumayer Olymp**	**58.77**	**161**		**P**	**19 58 19.2**	**+16**
VNA1	**Neumayer--Stat**	**58.97**	**160**		**P**	**19 58 14.9**	**+10**
VNA2	**Neumayer--Watz**	**59.34**	**161**		**P**	**19 58 09.3**	**+2.1**
VNA2	**Neumayer--Watz**	**59.34**	**161**		**P**	**19 58 18.3**	**+11**
SNAA	**Sanae**	**60.97**	**161**		**P**	**19 58 18.8**	**+0.5**
SNAA	**Sanae**	**60.97**	**161**	P	**P**	**19 58 18.5**	**+0.2**
	comp=Z,1.0nm,0.7s,mb3.8,baz=272,slow=8.4,SNR=11						
SNAA	**Sanae**	**60.97**	**161**	P	**P**	**19 58 18.8**	**+0.5**
WVT	**Waverly**	**61.35**	**342**	P	**P**	**19 58 18.9**	**-2.4**
	comp=Z,3.4nm,0.7s,mb4.3						
WVT	**Waverly**	**61.35**	**342**	P	**P**	**19 58 18.9**	**-2.4**
WVT				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
QSPA	**South Pole Qui**	**67.63**	**180**	*e*P	**P**	**19 59 02.5**	**+1.2**
	comp=Z,12nm,0.6s,mb4.8						
ANMO	**Albuquerque**	**67.91**	**326**	*e*P	**P**	**19 59 03.9**	**+0.2**
	comp=Z,3.3nm,0.7s,mb4.2						
ANMO	**Albuquerque**	**67.91**	**326**	*e*P	**P**	**19 59 03.9**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	**Dimbokro**	**68.14**	**73**	P	**P**	**19 59 04.8**	**-0.7**
	comp=Z,5.0nm,0.6s,mb4.4,baz=186,slow=6.4,SNR=7.5						
DBIC	**Dimbokro**	**68.14**	**73**	*e*P	**P**	**19 59 04.4**	**-1.1**
	comp=Z,12nm,1.0s,mb4.6						
DBIC	**Dimbokro**	**68.14**	**73**	*e*P	**P**	**19 59 04.4**	**-1.1**
DBIC				pmax	pmax		
	comp=Z,12nm,1.0s						
SDCO	**Great Sand Dun**	**69.64**	**329**	*e*P	**P**	**19 59 14.5**	**+0.2**
	comp=Z,2.2nm,1.0s,mb3.8						
SYO	**Syowa Base**	**75.18**	**159**	⇑pP	pP	20 00 17.3	-5.4
PDAR	**Pinedale Array**	**75.50**	**330**	P	**P**	**19 59 49.1**	**+0.6**
	comp=Z,0.5nm,0.6s,mb3.3,baz=121,slow=5.3,SNR=3.1						
HWUT	**Hardware Ranch**	**75.58**	**328**	P	**P**	**19 59 49.9**	**+0.9**
	comp=Z,2.2nm,0.6s,mb4.0						
ULM	**Lac du Bonnet**	**76.61**	**342**	P	**P**	**19 59 53.5**	**-1.0**
	comp=Z,2.4nm,0.5s,mb4.1,baz=113,slow=6.0,SNR=5.7						
HLID	**Hailey**	**78.44**	**327**	*e*P	**P**	**20 00 05.9**	**+1.1**
	comp=Z,2.5nm,0.8s,mb3.9						
MAW	**Mawson**	**83.04**	**163**	P	**P**	**20 00 30.3**	**+1.8**
	comp=Z,2.1nm,0.5s,mb4.1,baz=214,slow=9.3,SNR=8.7						
YKA	**Yellowknife Ar**	**92.50**	**340**	P	**P**	**20 01 13.3**	**-0.5**
	comp=Z,1.0nm,0.7s,mb4.0,baz=144,slow=4.7,SNR=5.4						
WRA	**Warramunga Arr**	**132.50**	**209**	PKP	PKPdf	20 07 18.2	+1.7
	comp=Z,0.8nm,0.7s,baz=163,slow=1.9,SNR=7.8						
MKAR	**Makanchi Array**	**145.92**	**38**	PKPbc	PKPbc	20 07 42.5	+1.6
	comp=Z,0.6nm,0.6s,baz=314,slow=2.6,SNR=6.8						
SONM	**Songino Array**	**154.37**	**9**	PKP	PKPdf	20 07 55.3	+2.6
	comp=Z,0.3nm,0.7s,slow=2.9,SNR=2.8						
SONM				PKPab	PKPab	20 08 18.6	+0.2
	comp=Z,0.2nm,0.5s,baz=324,slow=3.9,SNR=2.9						

CN2	Changchun	156.12	336	*e*PKP	PKPdf	20 07 54.4	-0.7

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*SOF **17** 19:48:16.9, 39.94N×24.57E, h2^{km}, MD2.5*

*ATH **17** 19:48:23.0, 40.05N×24.48E, h37^{km}±3^{km}, MD3.1/5*

*NEIC **17** 19:48:23.0, 40.05N×24.48E, h37^{km}, MD3.1(ATH), After ATH.*

*CSEM **17** 19:48:23.5±0.1, 40.12N×24.48E, h30^{km}, ML2.8, Error ellipse: s-maj=2.3km s-min=1.5km az=4.0*

*THE **17** 19:48:23.8, 40.08N×24.48E, h15^{km}, ML2.8*

ISC 17 19:48:21.1±0.5**, 40.14N**±0.03×**24.53E**±0.03**, h11**^{km}±5^{km}**, n22,** σ1^{s}**40**/30**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.46	295	*e*Pg	Pg	19 48 33.2	+2.6
OUR				*e*Sg	Sg	19 48 39.6	+2.7
LOS	Limnos	0.47	116	*e*Pg	Pg	19 48 33.6	+2.9
LIA	Limnos Island	0.56	115	*e*PN	Pn	19 48 35.5	+0.8
LIA				*e*SN	Sn	19 48 43.4	-0.5
PAIG	Paliouri	0.69	252	*e*Pg	Pg	19 48 35.8	+0.8
PAIG				*e*Sg	Sg	19 48 45.0	+0.9
PLG	Polygyros	0.86	286	*e*PN	Pn	19 48 39.9	+0.9
PLG				*e*SN	Sn	19 48 50.9	-0.8
AOS	Alonnisos	1.09	208	*e*Pg	Pg	19 48 42.6	-0.3
AOS				*e*Sg	Sg	19 48 57.2	-0.3
SOH	Sokhos	1.13	308	*e*Pg	Pg	19 48 44.7	+1.0
SOH				*e*Sg	Sg	19 49 00.4	+1.7
RDO	Rodhopi	1.27	37	*e*PN	Pn	19 48 47.2	+2.4
XOR	Xorichti	1.29	234	*e*Pg	Pg	19 48 45.2	-1.7
THE	Thessaloniki	1.29	293	*e*Pg	Pg	19 48 46.5	-0.5
NEO	Neokhori	1.31	231	*e*PN	Pn	19 48 45.3	-0.1
NVR	Nevrokopi	1.31	337	*e*PN	Pn	19 48 47.7	+2.2
ALN	Alexandroupoli	1.38	56	*e*Pg	Pg	19 48 48.7	-0.1
ALN				*e*Sg	Sg	19 49 07.1	-0.1
RZN	Rozhen	1.55	5	*i* Pg	Pg	19 48 51.5	-0.7
LIT	Litokhoron	1.56	269	*e*Pg	Pg	19 48 49.0	-3.4
MMB	Musomiste	1.57	337	*i* Pg	Pg	19 48 51.0	-1.5
KNT	Kendrikon	1.61	310	*e*Pg	Pg	19 48 51.1	-2.2
KNT				*e*Sg	Sg	19 49 12.3	-2.4
KDZ	Kurdzhali	1.65	24	*i* Pg	Pg	19 48 52.0	-2.2
GRG	Griva	1.82	297	*e*Pb	Pb	19 48 53.5	-0.5
PLD	Plovdiv	1.97	4	*i* Pg	Pg	19 49 05.0	+4.6
AGG	Agios Georgios	2.03	237	*e*Pb	Pb	19 48 56.5	-1.2
KKB	Krupnik	2.04	328	*i* Pg	Pg	19 49 01.5	-0.5

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*NEIC **17** 20:35:32.1, 32.86S×70.34W, h4^{km}, ML2.5(GUC), After GUC.*

GUC 17 20:35:32.1±0.8**, 32.86S**×**70.34W, h4**^{km}±2^{km}**, MD3.5, ML2.5, 8C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	Jahuel	0.27	309	⇑*i*P	Pg	20 35 37.8	+0.1
JACH				*i* S	Sg	20 35 41.7	+0.4
PEL	Peldehue	0.41	225	⇑*i*P	Pg	20 35 41.0	+0.7
PEL				*i* S	Sg	20 35 47.1	+1.4
PEL				*i* S	Sg	20 35 47.1	+1.4
PEL				AMP		20 35 47.5	
	comp=E,481nm,0.2s						
PEL	Peldehue	0.41	225	⇑*i*P	Pg	20 35 41.0	+0.7
PEL				*i* S	Sg	20 35 47.1	+1.4
FCH	Farellones	0.47	175	⇑*i*P	Pg	20 35 42.3	+0.8
FCH				⇓*i*P		20 35 42.4	
FCH				*i* S	Sg	20 35 49.4	+1.5
FCH				*i* S	Sg	20 35 49.5	+1.6
FCH				AMP		20 35 49.7	
	comp=E,478nm,0.1s						
FCH	Farellones	0.47	175	⇓*i*P	Pg	20 35 42.4	+0.8
FCH				*i* S	Sg	20 35 49.5	+1.6
CLCH	Cerro Calan	0.56	197	*e*P	Pg	20 35 43.7	+0.3
CLCH				*i* S	Sg	20 35 52.6	+1.7
RCDM	Rinconada Maip	0.74	212	⇑*i*P	Pg	20 35 47.0	+0.1
RCDM				*i* S	Sg	20 35 57.9	+1.1
RCDM				AMP		20 35 58.1	
	comp=E,1µm,0.1s						
PCH	Pirque	0.78	191	⇓*i*P	Pg	20 35 48.1	+0.5
PCH				*i* S	Sg	20 35 59.5	+1.6
TACH	Talagante	0.94	212	⇑*i*P	Pb	20 35 50.2	-0.4
TACH				*i* S	Sb	20 36 03.5	+0.3
CHCH	Chadas Angostu	1.11	194	*i* S	Sb	20 36 08.8	+0.8
LCCH	Las Cruces	1.20	239	⇑*i*P	Pb	20 35 54.3	-0.7
LCCH				*i* S	Sb	20 36 10.7	-0.1
LNV	Longovilo	1.42	219	⇑*i*P	Pn	20 35 57.6	-1.1
LNV				*i* S	Sb	20 36 16.8	-0.2
CICH	Cipreses	1.46	183	*e*S	Sb	20 36 18.7	+0.3

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*NAO **17** 20:35:44.7±1.1, 67.09N×21.06E, ML1.9*

*HEL **17** 20:35:44.7±0.1, 67.08N×20.86E, ML1.9, ML1.9(UPP), ML1.7(BER), Explosion*

*IDC **17** 20:35:44.4±0.9, 67.07N×21.13E, mb1 2.9/4, mb1mx2.9/22, mbtmp2.9/4, ML2.5/4, Error ellipse: s-maj=17.4km s-min=7.7km az=118.0*

*BER **17** 20:35:46.7±3.6, 67.13N×21.02E, ML1.7, ML1.9(NAO), Suspected explosion*

ISC 17 20:35:42.8±0.3**, 67.03N**±0.02×**20.96E**±0.06**, n42,** σ1^{s}**26**/68**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIF	Kilpisjarvi	1.98	358	*e*P	Pn	20 36 19.3	+1.4
KIF				*e*S	Sn	20 36 44.8	+1.0
KTK1	Kautokeino	2.17	22	*e*P	Pn	20 36 22.3	+1.7
KTK1				*e*SB	Sb	20 36 49.7	-0.3
KTK1				AML	AML	20 36 54.7	
	comp=Z,13nm,0.2s						
SGF	Sodankyl	2.21	77	*e*P	Pn	20 36 22.9	+1.8
SGF				*e*S	Sn	20 36 52.1	+2.6
SGF				*e*SG	Sg	20 36 55.3	-1.0
SGF				MSG		20 36 56.3	
	comp=Z,7.7nm,0.2s						
TRO	Tromso	2.72	345	*e*P	Pn	20 36 28.5	0.0
TRO				*e*SG	Sg	20 37 06.1	-7.2
TRO				AML	AML	20 37 11.6	
	comp=Z,7.3nm,0.3s						
MOR8	Moi Rana	2.74	255	*e*P	Pn	20 36 29.1	+0.3
OUL	Oulu	2.81	132	*e*P	Pn	20 36 31.9	+2.1
OUL				*e*S	Sn	20 37 07.0	+2.1
MELSS	Ber_school_2	2.85	270	*e*	Pn	20 36 33.7	+3.3
ARA0	ARCESS Array S	3.03	32	Pn	Pn	20 36 32.8	-0.2
	baz=206,slow=16						
ARA0				Sn	Sn	20 37 09.0	-1.4
	baz=210,slow=28						
ARA0	ARCESS Array S	3.03	32	*e*P	Pn	20 36 32.8	-0.2
ARA0				*e*S	Sn	20 37 09.0	-1.4
ARCES	ARCESS Array B	3.03	32	Pn	Pn	20 36 32.9	0.0
	comp=Z,0.5nm,0.3s,baz=208,slow=14,SNR=37						
ARCES				Sn	Sn	20 37 09.4	-1.1
	comp=Z,0.9nm,0.3s,baz=213,slow=26,SNR=12						
LOF	Lofoten	3.05	295	*e*	Sg	20 37 21.6	-2.7
LOF	Lofoten	3.05	295	*e*Sg	Sg	20 37 21.6	-2.7
UMAU	Umeaa	3.17	182	*e*S	Sn	20 37 14.4	+0.5
STOK	Stokkvaagen	3.23	261	*e*P	Pn	20 36 36.8	+1.0
KU4	Liikasenvaara	3.49	97	*e*P	Pn	20 36 41.1	+1.6
KU4				*e*S	Sn	20 37 23.4	+1.2
KEV	Kevo	3.53	37	*e*P	Pn	20 36 39.7	-0.3
KEV				*e*S	Sn	20 37 21.6	-1.6
KEV				*e*SB	Sb	20 37 29.8	0.0
KEV				MSG		20 37 30.6	
	comp=Z,2.6nm,0.2s						
HUSU	Husum	3.78	192	*e*P	Pn	20 36 44.7	+1.1
HUSU				*e*S	Sn	20 37 28.8	-0.6
VAF	Ylistaro	4.07	169	*e*P	Pn	20 36 48.9	+1.2
VAF				*e*S	Sn	20 37 35.3	-1.5
VAF				*e*SG	Sg	20 37 50.9	-7.6
VAF				MSG		20 37 56.5	
	comp=Z,1.3nm,0.2s						
KJN	Kajaani	4.08	133	*e*P	Pn	20 36 49.4	+1.6
KJN				*e*S	Sn	20 37 34.9	-2.1
SOLU	Sollefteaa	4.11	204	*e*P	Pn	20 36 48.9	+0.6
NOD	Norderasen	4.42	218	*e*S	Sn	20 37 46.0	+0.2
NSS	Namsos	4.47	240	*e*S	Sn	20 37 46.3	-0.7
HEMU	Hemsoen	4.55	197	*e*P	Pn	20 36 55.6	+1.1
APA0	Apatity Array	4.70	77	Pn	Pn	20 36 55.6	-1.0
	baz=258,slow=11						
APA0				Sn	Sn	20 37 50.2	-2.4
	baz=280,slow=28						
APA0				Lg		20 38 08.9	
	baz=273,slow=28						
APA0	Apatity Array	4.70	77	*e*P	Pn	20 36 55.6	-1.0
APA0				*e*S	Sn	20 37 50.2	-2.4
APA0				*e*SG		20 38 08.9	
SUF	Sumiainen	4.86	151	*e*P	Pn	20 36 60.0	+1.0
SUF				*e*S	Sn	20 37 56.8	0.0
KEF	Keuruu	5.17	159	*e*P	Pn	20 37 03.7	+0.4
KEF				*e*S	Sn	20 38 03.2	-1.3
HASU	Hassela	5.24	203	*e*P	Pn	20 37 05.0	+0.7
ARNU	Arnoeviken	5.58	198	*e*P	Pn	20 37 08.5	-0.6
JOF	Joensuu	6.03	128	*e*P	Pn	20 37 15.2	-0.2
JOF				*e*S	Sn	20 38 23.9	-2.1
FIA0	FINESS Array S	6.04	156	Pn	Pn	20 37 15.8	+0.3
	baz=346,slow=14						
FIA0				Sn	Sn	20 38 22.6	-3.8
	baz=348,slow=28						
FIA0				Lg		20 38 55.0	
	baz=346,slow=28						
FIA0	FINESS Array S	6.04	156	*e*P	Pn	20 37 15.8	+0.3
FIA0				*e*S	Sn	20 38 23.0	-3.3
FINES	FINESS Array B	6.04	156	Pn	Pn	20 37 15.5	0.0
	comp=Z,0.1nm,0.3s,baz=341,slow=13,SNR=8.7						
FINES				Sn	Sn	20 38 23.7	-2.6
	comp=Z,0.3nm,0.3s,baz=357,slow=22,SNR=5.0						
ROTU	Roteberg	6.06	204	*e*P	Pn	20 37 15.7	-0.2
IGGU	Iggoen	6.39	196	*e*P	Pn	20 37 19.8	-0.7
GRAU	Graesoe	6.81	190	*e*P	Pn	20 37 26.6	+0.1
NB2	NORSAR Subarra	7.37	220	Pn	Pn	20 37 32.5	-1.8
	baz=25,slow=14						
NB2	NORSAR Subarra	7.37	220	*e*P	Pn	20 37 32.5	-1.8
NOA	NORSAR Array B	7.37	220	Pn	Pn	20 37 33.0	-1.4
	comp=Z,0.1nm,0.3s,baz=16,slow=11,SNR=2.5						
NOA				Sn	Sn	20 38 53.9	-5.8
	comp=Z,0.1nm,0.3s,baz=266,slow=17,SNR=2.4						
HFS	Hagfors	7.64	208	*e*P	Pn	20 37 36.3	-1.8
HFS	Hagfors	7.64	208	Pn	Pn	20 37 35.6	-2.5
	comp=Z,0.0nm,0.3s,baz=23,slow=12,SNR=5.9						
HFS				Sn	Sn	20 39 01.6	-4.8
	comp=Z,0.0nm,0.3s,baz=30,slow=23,SNR=2.8						
HFS	Hagfors	7.64	208	P	Pn	20 37 36.3	-1.8
	baz=34,slow=12						

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*ISK **17** 21:01:29.8, 38.22N×26.61E, h17^{km}, MD2.7*

*ATH **17** 21:01:30.0, 38.10N×26.75E, h42^{km}±1^{km}, MD2.8/3*

*CSEM **17** 21:01:30.1±0.1, 38.10N×26.78E, h25^{km}, MD2.7, Error ellipse: s-maj=4.0km s-min=2.2km az=121.0*

ISC 17 21:01:30.5±0.7**, 38.17N**±0.03×**26.62E**±0.05**, h10**^{km}**, n12,** σ1^{s}**04**/20**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.19	355	*i* P	Pg	21 01 34.1	-0.6
URLA				*i* S	Sg	21 01 37.7	+0.1
BLCB	Balcova	0.40	57	*i* PG	Pg	21 01 38.2	-0.5
BLCB				*i* SG	Sg	21 01 43.9	-0.2
SMG	Samos	0.49	159	*e*P	Pg	21 01 40.0	-0.4
SMG				*e*S	Sg	21 01 47.2	+0.1
IZM	Izmir	0.56	65	*i* PG	Pg	21 01 41.0	-0.8
IZM				*i* SG	Sg	21 01 49.4	+0.1
KDAG	Bornova	0.56	65	*i* P	Pg	21 01 40.3	-1.6
KDAG				*i* S	Sg	21 01 48.4	-1.0
PRK	Paraskevi	1.11	346	*e*P	Pb	21 01 51.8	+0.5
PRK				*e*S	Sb	21 02 07.6	+2.0
AYDN	Tasoluk	1.12	116	*i* P	Pb	21 01 51.8	+0.3
AYDN				*i* S	Sb	21 02 08.5	+2.5
AKS	Akhisar	1.18	53	PN	Pn	21 01 51.8	-1.2
APE	Apeiranthos	1.40	219	*e*PN	Pn	21 01 55.6	-0.5
APE	Apeiranthos	1.40	219	*e*P	Pn	21 01 54.7	-1.4
APE	Apeiranthos	1.40	219	*e*Pn	Pn	21 01 55.6	-0.5
MANT	Manisa	1.56	77	*i* P	Pn	21 02 00.1	+1.7
MANT				*i* S	Sb	21 02 19.7	+1.0

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*NEIC **17** 21:02:45.0, 37.65S×178.56E, h65^{km}, ML3.7(WEL), After WEL.*

WEL 17 21:02:45.5±0.4**, 37.63S**×**178.47E, h65**^{km}±3^{km}**, ML3.6**/10**, 1C, Error ellipse: s-maj=4.1km s-min=2.5km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.14	297	P	P	21 02 55.0	-0.2
MXZ				S	S	21 03 02.0	-0.4
MXZ	Matakaoa Point	0.14	297	⇑PN	P	21 02 55.0	-0.2
MXZ				SN	S	21 03 01.9	-0.5
PUZ	Puketiti	0.47	201	P	P	21 02 57.7	0.0
PUZ				S	S	21 03 06.3	-0.3
PUZ	Puketiti	0.47	201	PN	P	21 02 57.7	0.0
PUZ				SN	S	21 03 06.3	-0.3
MWZ	Matawai	1.02	226	P	P	21 03 04.1	-0.2
MWZ				S	S	21 03 17.4	-0.9
MWZ	Matawai	1.02	226	PN	P	21 03 04.1	-0.2
MWZ				SN	S	21 03 17.4	-0.9
URZ	Urewera	1.25	239	P	P	21 03 06.9	-0.4
URZ	Urewera	1.25	239	PN	P	21 03 06.8	-0.5
URZ				SN	S	21 03 22.2	-1.3
KNZ	Kokohu	1.52	204	*e*P	P	21 03 09.8	-1.4
KNZ	Kokohu	1.52	204	PN	P	21 03 09.8	-1.4
KNZ				SN	S	21 03 28.8	-1.3
BKZ	Black Stump Fm	2.18	225	P	P	21 03 19.3	-1.0
BKZ	Black Stump Fm	2.18	225	PN	P	21 03 19.2	-1.1
BKZ				SN	S	21 03 44.1	-2.0
NGZ	Ngauruhoe	2.73	235	P	P	21 03 27.2	-0.9
NGZ	Ngauruhoe	2.73	235	PN	P	21 03 27.2	-0.9
CNZ	Chateau	2.78	235	P	P	21 03 27.8	-0.9
CNZ	Chateau	2.78	235	PN	P	21 03 27.6	-1.1
WNVZ	Wahianoa	2.82	232	P	P	21 03 28.0	-1.3
WNVZ	Wahianoa	2.82	232	PN	P	21 03 28.0	-1.3
TSZ	Takapari Road	3.12	218	PN	P	21 03 30.5	-3.0
BFZ	Birch Farm	3.50	209	P	P	21 03 35.0	-3.9
BFZ	Birch Farm	3.50	209	PN	P	21 03 35.0	-3.9
MRZ	Mangatainoka R	3.77	216	*e*P	P	21 03 38.5	-4.1
MRZ	Mangatainoka R	3.77	216	PN	P	21 03 38.5	-4.2
KIW	Kapiti Island	4.25	219	P	P	21 03 45.0	-4.3
KIW	Kapiti Island	4.25	219	PN	P	21 03 45.0	-4.3
THZ	Tophouse	5.95	224	PN	P	21 04 07.7	-5.3

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*SKO **17** 21:39:34.5, 40.19N×20.78E, h3^{km}*

*ATH **17** 21:39:36.3, 40.31N×20.53E, h2^{km}, MD2.9/4*

*NEIC **17** 21:39:36.3, 40.31N×20.53E, h2^{km}, MD2.9(ATH), After ATH.*

*CSEM **17** 21:39:36.4±0.5, 40.37N×20.56E, h35^{km}, MD2.9, Error ellipse: s-maj=17.1km s-min=9.2km az=129.0*

ISC 17 21:39:36.8±0.9**, 40.31N**±0.05×**20.6E**±0.1**, h24**^{km}±8^{km}**, n8,** σ0^{s}**99**/12**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBN	Korca	0.35	27	*i* Pg	Pb	21 39 43.9	-0.6
KBN				*i* Sg	Sb	21 39 49.9	+0.1
JAN	Janina	0.68	162	*e*PG	Pb	21 39 49.2	-0.7
OHR	Ohrid	0.82	12	*e*Pn	Pn	21 39 53.2	+0.3
OHR				*e*Sn	Sn	21 40 06.3	+2.0
KEK	Kerkira	0.84	226	*e*PG	Pb	21 39 52.2	-0.4
BIA	Bitola	0.91	38	*e*Pn	Pn	21 39 53.5	-0.7
BIA				*e*Sn	Sn	21 40 06.0	-0.5
KZN	Kozani	0.91	90	*e*PG	Pb	21 39 54.4	+0.6
EVR	Evrytania	1.68	145	*e*PB	Pb	21 40 09.1	+2.2
VAY	Valandovo	1.82	56	*e*Pn	Pn	21 40 05.8	-1.3
VAY				*e*Sn	Sn	21 40 29.3	-0.3

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*MOS **17** 21:42:24.3±1.8, 40.03N×72.70E, h10^{km}, mb3.8/1, Error ellipse: s-maj=19.9km s-min=9.2km az=95.0*

*IDC **17** 21:42:24.7±2.4, 40.04N×72.99E, mb3.8/6, mb1 3.8/9, mb1mx3.6/24, mbtmp3.7/9, ML3.3/3, Error ellipse: s-maj=40.5km s-min=18.4km az=179.0*

*NEIC **17** 21:42:27.2±0.8, 40.20N×72.94E, h10^{km}, mb4.7/2, Error ellipse: s-maj=15.6km s-min=12.7km az=68.0*

*NNC **17** 21:42:29.7±2.5, 40.47N×72.85E, mpv3.9, Error ellipse: s-maj=25.4km s-min=14.4km az=0.0*

ISC 17 21:42:25.0±0.8**, 40.14N**±0.07×**72.55E**±0.07**, h10**^{km}**, n34,** σ1^{s}**22**/36**, mb3.9**/8**, 9C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	2.17	23	P	Pn	21 43 02.4	+0.7
	SNR=455						
UCH	Uchtor	2.56	35	P	Pn	21 43 07.6	+0.4
	SNR=108						
EKS2	Erkin-Say	2.68	20	P	Pb	21 43 11.8	-0.9
	SNR=38						
KZA	Kyzart	2.81	46	P	Pn	21 43 10.4	-0.5
	SNR=65						
AAK	Ala-Archa	2.89	30	P	Pn	21 43 13.0	+1.0
	SNR=38						
AAK	Ala-Archa	2.89	30	⇓Pn	Pn	21 43 12.9	+0.9
	82nm,0.6s						
AAK				⇑Lg		21 43 46.3	
	206nm,0.4s						
AAK	Ala-Archa	2.89	30	PN	Pn	21 43 12.9	+0.9
AAK				S	Sn	21 43 46.7	-0.4
AAK				pmax	pmax		
	comp=Z,44nm,0.4s						
AAK				smax			
	comp=Z,93nm,0.3s						
KBK	Karagaybulak	3.10	35	P	Pn	21 43 16.1	+1.2
	SNR=45						
FRU	Bishkek	3.11	29	⇓*e*PN	Pn	21 43 18.9	+3.8
FRU				*i*		21 43 23.5	
FRU				*e*S	Sn	21 43 55.8	+3.1
FRU				*i*		21 43 56.7	
FRU				pmax	pmax		
	comp=Z,180nm,1.5s						
FRU				pmax	pmax		
	comp=E,2µm,1.8s						
CHMS	Chumysh	3.30	29	P	Pn	21 43 18.4	+0.6
	SNR=20						
KK31	Karatay Array	3.33	333	Pn	Pb	21 43 22.8	-1.1
	comp=E,7.2nm,0.3s,baz=132,slow=12,SNR=384						
KK31				⇑Lg		21 44 14.0	
	comp=E,37nm,0.3s,baz=150,slow=31,SNR=6.2						
KKAR	Karatay Array	3.33	333	*e*PN	Pb	21 43 22.7	-1.1
KKAR				*i*		21 44 14.0	
KKAR				pmax	pmax		
	comp=Z,12nm,0.4s						
KKAR				pmax	pmax		
	comp=Z,11nm,0.2s						
USP	Ospenovka	3.45	24	P	Pn	21 43 20.8	+0.8
	SNR=17						
ULHL	Ulahol	3.49	52	P	Pn	21 43 19.2	-1.3
	SNR=28						
TKM2	Tokmak 2	3.60	38	P	Pn	21 43 22.1	0.0
	SNR=14						
MK31	Makanchi Array	9.71	44	⇓Pn	P	21 44 48.3	+0.6
	comp=Z,1.4nm,0.6s,baz=221,slow=14,SNR=5.7						
MK31				⇓Lg		21 47 21.2	
	comp=Z,2.8nm,0.6s						
MKAR	Makanchi Array	9.71	44	Pn	P	21 44 44.2	-3.6
	comp=Z,0.1nm,0.3s,baz=229,slow=12,SNR=4.1						
VOSK	Vostochnaya	12.63	356	⇑Pn	P	21 45 27.2	-0.3
	comp=Z,1.3nm,0.6s						
VOSK				⇑Lg		21 48 59.3	
	comp=Z,18nm,1.3s						
AB31	Akbulak array	12.77	320	Pn	P	21 45 29.6	+0.3
	comp=Z,1.3nm,0.5s,baz=127,slow=13,SNR=14						
AB31				⇑Lg		21 49 13.6	
	comp=Z,4.1nm,0.5s,baz=155,slow=23,SNR=6.2						
BVA0	Borovoye Array	12.97	354	⇓Pn	P	21 45 31.6	-0.4
	comp=Z,0.4nm,0.6s,baz=167,slow=13,SNR=25						
BVA0				⇑Lg		21 49 09.8	
	comp=Z,1.3nm,0.8s,baz=157,slow=28,SNR=3.6						
BVAR	Borovoye Array	12.97	354	Pn	P	21 45 29.7	-2.3
	comp=Z,0.5nm,0.3s,baz=165,slow=13,SNR=19						
BRVK	Borovoye	13.01	354	*e*P	P	21 45 32.6	0.0
	comp=Z,3.7nm,0.8s						
BRVK	Borovoye	13.01	354	*e*P	P	21 45 32.6	0.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHKZ	Chkalovo	13.61	355	⇑Pn	P	21 45 39.0	-1.3
	comp=Z,2.2nm,1.3s						
CHKZ				⇑Lg		21 49 27.7	
	comp=Z,19nm,1.7s						
AKTO	Aktyubinsk	14.48	320	⇑Pn	P	21 45 52.1	+0.2
	comp=Z,0.7nm,0.7s						
AKTO				⇓Lg		21 50 05.9	
	comp=Z,2.5nm,1.7s						
AKTO	Aktyubinsk	14.48	320	Pn	P	21 45 52.7	+0.8
	comp=Z,0.2nm,0.3s,baz=134,slow=12,SNR=5.2						
SONM	Songino Array	25.38	61	P	P	21 47 51.6	-2.2
	comp=Z,0.1nm,0.4s,mb2.7,baz=252,slow=9.1,SNR=3.0						
CSS	Prodhromos	31.34	273	*e*P	P	21 48 45.0	-2.7
	comp=Z,9.7nm,1.0s,mb4.6						
PALK	Pallekele	33.53	165	P	P	21 49 07.0	-0.1
	comp=Z,10nm,1.0s,mb4.7						
FINES	FINESS Array B	35.23	323	P	P	21 49 23.3	+2.1
	comp=Z,0.7nm,0.3s,mb4.0,baz=109,slow=9.3,SNR=13						
ARCES	ARCESS Array B	38.30	335	P	P	21 49 48.6	+1.6
	comp=Z,3.0nm,0.9s,mb4.0,baz=108,slow=7.7,SNR=9.6						
HFS	Hagfors	41.03	319	P	P	21 50 11.8	+2.1
	comp=Z,1.4nm,0.6s,mb3.8,baz=100,slow=9.0,SNR=7.9						
NOA	NORSAR Array B	42.27	321	P	P	21 50 21.0	+1.2
	comp=Z,0.5nm,0.7s,mb3.3,baz=87,slow=8.0,SNR=2.7						
INK	Inuvik	70.12	10	P	P	21 53 38.3	-0.6
	comp=Z,0.6nm,0.3s,mb4.0,baz=324,slow=1.2,SNR=6.6						

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*IDC **17** 21:43:44.5±1.5, 36.57N×71.20E, mb4.0/7, mb1 4.1/9, mb1mx3.8/22, mbtmp4.0/9, ML4.2/3, MS4.4/1, Ms1 4.4/1, ms1mx3.4/29, Error ellipse: s-maj=32.2km s-min=24.0km az=26.0*

*MOS **17** 21:43:49.3±1.6, 36.92N×71.20E, h33^{km}, mb3.8/1, Error ellipse: s-maj=17.9km s-min=9.4km az=96.3*

*NEIC **17** 21:43:51.2±1.9, 36.90N×71.16E, h36^{km}±19^{km}, mb3.7/3, Error ellipse: s-maj=24.2km s-min=8.3km az=61.0*

ISC 17 21:43:55.6±1.3**, 37.12N**±0.07×**71.6E**±0.1**, h90**^{km}±16^{km}**, n33,** σ1^{s}**41**/37**, mb3.8**/7**, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	5.79	143	*e*P	P	21 45 21.8	+1.4
THN				*e*S	S	21 46 27.1	+0.9
DLH	Dalhousie	5.83	140	*e*P	P	21 45 24.0	+3.1
DLH				*e*S	S	21 46 29.0	+1.9
BHK	Bhakra	6.96	143	*e*S	S	21 46 54.5	-0.5
SDNR	Sundarnagar	7.17	140	*e*P	P	21 45 41.0	+1.4
SDNR				*e*S	S	21 46 56.0	-4.1
SMLA	Simla	7.57	141	*e*P	P	21 45 43.4	-1.6
SMLA				*e*x	x	21 46 28.0	
NDI	New Delhi	9.66	149	*e*x	x	21 47 22.0	
MKAR	Makanchi Array	12.52	36	Pn	P	21 46 53.4	+1.8
	1.2nm,0.3s,baz=227,slow=15,SNR=18						
KOLN	Koldanda	13.78	129	*e*Pn	P	21 47 06.6	-1.4
KOLN				*e*Sn	S	21 49 30.8	-8.3
	25nm,0.7s						
KOLN	Koldanda	13.78	129	*e*Pn	P	21 47 06.6	-1.4
	12nm,0.7s						
KOLN				*e*Sn	S	21 49 30.8	-8.3
GKN	Gorkha	14.27	126	*e*Pn	P	21 47 12.8	-1.7
GKN				*e*Sn	S	21 49 41.8	-9.1
	25nm,0.3s						
KKN	Kakani	14.84	125	*e*Pn	P	21 47 19.8	-1.9
DMN	Daman	14.85	126	*e*Pn	P	21 47 20.3	-1.5
GUN	Gumba	15.15	123	*e*Pn	P	21 47 24.8	-1.0
BVAR	Borovoye Array	15.92	357	Pn	P	21 47 33.7	-1.6
	0.5nm,0.3s,baz=253,slow=40,SNR=5.4						
BRVK	Borovoye	15.96	357	*e*P	P	21 47 35.9	+0.2
	7.5nm,1.0s						
BRVK	Borovoye	15.96	357	*e*P	P	21 47 35.9	+0.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AKTO	Aktyubinsk	16.48	328	Pn	P	21 47 42.0	-0.3
	comp=Z,1.7nm,0.3s,baz=132,slow=11,SNR=20						
AKTO	Aktyubinsk	16.48	328	P	P	21 47 42.0	-0.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CHKZ	Chkalovo	16.57	358	*e*P	P	21 47 40.6	-2.7
	comp=Z,2.9nm,0.7s						
CHKZ	Chkalovo	16.57	358	*e*P	P	21 47 40.6	-2.7
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LSA	Lhasa	17.93	109	*e*P	P	21 48 02.0	+1.7
	comp=Z,4.5nm,0.7s						
LSA	Lhasa	17.93	109	*e*P	P	21 48 02.0	+1.7
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZAL	Zalesovo	19.14	24	P	P	21 48 15.1	+1.1
	comp=Z,2.3nm,0.3s,baz=252,slow=7.3,SNR=20						
NVS	Novosibirsk	19.44	21	*e*P	P	21 48 16.3	-0.8
SONM	Songino Array	27.61	56	P	P	21 49 39.3	+3.1
	comp=Z,0.5nm,0.8s,mb3.1,baz=258,slow=11,SNR=3.7						
MLR	Muntele Rosu	34.88	298	LR	LR	22 08 23.1	
	comp=Z,559nm,19.0s,baz=273,slow=42						

FINES	**FINESS Array B**	**37.23**	**325**	P	**P**	**21 50 59.0**	**-0.6**
	comp=Z,1.1nm,0.3s,mb4.2,baz=108,slow=8.8,SNR=14						
ARCES	**ARCESS Array B**	**40.75**	**337**	P	**P**	**21 51 29.8**	**+1.2**
	comp=Z,4.5nm,0.9s,mb4.3,baz=108,slow=7.7,SNR=10						
HFS	**Hagfors**	**42.86**	**321**	P	**P**	**21 51 46.7**	**+0.7**
	comp=Z,2.3nm,0.5s,mb4.2,baz=98,slow=10,SNR=13						
NB2	**NORSAR Subarra**	**44.16**	**323**	P	**P**	**21 51 57.0**	**+0.5**
	comp=Z,0.9nm,0.6s,mb3.7,baz=91,slow=7.9						
NOA	**NORSAR Array B**	**44.16**	**323**	P	**P**	**21 51 56.8**	**+0.3**
	comp=Z,1.2nm,0.6s,mb3.8,baz=94,slow=7.8,SNR=4.9						
INK	**Inuvik**	**73.22**	**9**	P	**P**	**21 55 19.3**	**+1.6**
	comp=Z,0.6nm,0.5s,mb3.7,slow=2.0,SNR=5.1						
WRA	**Warramunga Arr**	**81.93**	**122**	P	**P**	**21 56 06.2**	**-0.7**
	comp=Z,0.6nm,0.8s,mb3.5,baz=324,slow=4.9,SNR=5.4						

NIED ***17*** *21:59:00, 33.50N×141.40E, h5^{km}, Mw5.5 Best double couple: M$_0$1.74×10^{17} NP1:ϕ$_s$343°, δ77°, λ76°. NP2:ϕ$_s$212°, δ19°, λ137°.*

BJI ***17*** *21:59:27.5, 33.33N×141.95E, h32^{km}, mB5.3, mb4.8, Ms5.4, Msz5.2*

HRVD ***17*** *21:59:29.9±0.8, 33.62N×141.66E, h28^{km}±2^{km}, MW5.7/48, Centroid moment Tensor Solution. LP body waves: s6,c6; Mantle waves: s48,c71; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M$_{rr}$3.74±.51; M$_{θθ}$-0.12±.29; M$_{ϕϕ}$-3.62±.32; M$_{rθ}$0.10±.70; M$_{θϕ}$-0.40±.18; M$_{ϕr}$1.23±.47; Best double couple: M$_0$3.902×10^{17} NP1:ϕ$_s$187°, δ36°, λ91°. NP2:ϕ$_s$6°, δ54°, λ89°. Principal axes: T 3.94, Plg81°, Azm273°; N -.075, Plg1°, Azm6°; P -3.864, Plg9°, Azm96°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***17*** *21:59:29.9±0.1, 33.32N×141.39E, h10^{km}, mb5.2/97, MS4.9/25, MW5.4(NIED) Error ellipse: s-maj=4.6km s-min=3.4km az=176.0*

SKO ***17*** *21:59:31.4, 36.97N×148.44E*

MOS ***17*** *21:59:32.3±1.1, 33.35N×141.32E, h33^{km}, mb5.3/79, MS5.2/35, Error ellipse: s-maj=7.9km s-min=4.1km az=111.2*

JMA ***17*** *21:59:33.7±0.3, 33.53N×141.40E, h44^{km}, M5.3*

IDC ***17*** *21:59:34.6±1.6, 33.40N×141.46E, h40^{km}±13^{km}, mb4.3/29, mb1 4.5/32, mb1mx4.5/34, mbtmp4.6/32, ML4.7/2, MS5.0/16, Ms1 5.0/16, ms1mx4.9/24, Error ellipse: s-maj=10.7km s-min=9.0km az=92.0*

ISC 17 21:59:29.7±0.1**, 33.33N**±0.02×**141.42E**±0.02**, h16^{km}, h16^{km}**±1.6^{km}**:pP-P, n498,** σ**1^{s}08**/498**, mb5.1**/169**, MS5.1**/65**, 26C-15D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.36**	**261**	⇑P	**Pn**	**21 59 57.7**	**+3.5**
BSO1	**Boso 1**	**1.37**	**345**	P	**Pn**	**21 59 54.2**	**-0.2**
JHJ	**Hachijo jima 2**	**1.38**	**262**	Pn	**Pn**	**21 59 57.9**	**+3.3**
	583nm,0.3s,baz=165,slow=9.8,SNR=55						
JHJ				Sn	**Sn**	**22 00 15.3**	**+2.7**
	2µm,0.3s,baz=70,slow=21,SNR=9.9						
BSO3	**Boso 3**	**1.65**	**333**	P	**Pn**	**21 59 58.4**	**0.0**
BSO4	**Boso 4**	**1.88**	**332**	P	**Pn**	**22 00 02.0**	**+0.3**
KTR	**Katsuura**	**2.03**	**334**	P	**Pn**	**22 00 04.4**	**+0.5**
JKO	**Kozu shima**	**2.08**	**295**	P	**Pn**	**22 00 06.3**	**+1.7**
JKO				*e*S	**Sn**	**22 00 28.2**	**-2.2**
JIM2	**Oshima 3**	**2.15**	**311**	P	**Pn**	**22 00 06.1**	**+0.5**
CHOJ	**Chosi**	**2.41**	**349**	P	**Pn**	**22 00 08.5**	**-0.8**
CHOJ				*e*S	**Sn**	**22 00 35.3**	**-3.5**
JIZS	**Izushimoda**	**2.52**	**304**	⇑P	**Pn**	**22 00 12.1**	**+1.2**
JOD2	**Odawara 2**	**2.73**	**316**	P	**Pn**	**22 00 13.9**	**+0.1**
JYN	**Shimob**	**3.21**	**313**	P	**Pn**	**22 00 21.7**	**+1.0**
JRY	**Ryogami san**	**3.39**	**323**	P	**Pn**	**22 00 23.2**	**0.0**
JAG	**Ashikaga**	**3.49**	**333**	P	**Pn**	**22 00 24.1**	**-0.5**
ONAJ	**Iwakimizuishiy**	**3.80**	**353**	*e*S	**Sn**	**22 01 10.0**	**-3.9**
MJAR	**Matsushiro Arr**	**4.15**	**321**	Pn	**Pn**	**22 00 34.9**	**+0.9**
	20nm,0.3s,baz=150,slow=12,SNR=122						
MJAR				Sn	**Sn**	**22 01 23.3**	**+0.6**
	26nm,0.3s,baz=269,slow=7.5,SNR=4.6						
MAJO	**Matsushiro**	**4.15**	**321**	*e*P	**Pn**	**22 00 34.7**	**+0.6**
MAT	**Matsushiro**	**4.15**	**321**	P	**Pn**	**22 00 34.7**	**+0.7**
MAT				S	**Sn**	**22 01 23.4**	**+0.6**
MAT	**Matsushiro**	**4.15**	**321**	*e*P	**Pn**	**22 00 35.0**	**+1.0**
MAT				*e*S	**Sn**	**22 01 24.0**	**+1.2**
CBIJ	**Chichi jima**	**6.25**	**174**	Pn	**Pn**	**22 01 03.2**	**-0.4**
	73nm,0.3s,baz=354,slow=6.6,SNR=18						
CBIJ				Sn	**Sn**	**22 02 10.4**	**-5.0**
	124nm,0.3s,baz=71,slow=23,SNR=6.8						
CBIJ				LR	LR	22 03 20.9	
	comp=Z,11µm,18.2s,baz=351,slow=36						
JNU	**Nakatsue**	**8.83**	**272**	Pn	**P**	**22 01 43.9**	**+4.1**
	1.0nm,0.3s,baz=65,slow=13,SNR=6.7						
JNU				LR	LR	22 05 06.5	
	comp=Z,15µm,20.2s,baz=94,slow=37						
ASAJ	**Asahikawa**	**10.81**	**5**	Pn	**P**	**22 02 01.2**	**-5.8**
	4.2nm,0.3s,baz=206,slow=7.4,SNR=20						
ASAJ				Sn	**S**	**22 03 55.8**	**-13**
	3.1nm,0.3s,baz=4.4,slow=32,SNR=3.6						
YUK	**Yuzh-Kuril'sk**	**11.24**	**17**	P	**P**	**22 02 15.4**	**+2.6**
YUK				pmax	pmax		
	comp=Z,190nm,0.5s						
YUK				MLR	MLR		
	comp=N,3µm,14.0s						
YUK				MLR	MLR		
	comp=E,5µm,14.0s						
YUK				MLR	MLR		
	comp=Z,2µm,14.0s						
KS15	**Wonju Array Si**	**11.78**	**294**	P	**P**	**22 02 17.6**	**-2.6**
INCN	**Inchon**	**12.75**	**293**	P	**P**	**22 02 31.9**	**-1.3**
	comp=Z,192nm,1.4s						
JOW	**Kunigami**	**13.09**	**244**	LR	LR	22 07 37.3	
	comp=Z,9µm,18.7s,baz=249,slow=37						
YSS	**Yuzh-Sakhalins**	**13.65**	**4**	*e*P	**P**	**22 02 40.3**	**-4.7**
	comp=Z,81nm,0.9s						
YSS	**Yuzh-Sakhalins**	**13.65**	**4**	*d i*P	**P**	**22 02 41.8**	**-3.2**
YSS				pmax	pmax		
	comp=Z,58nm,1.0s						
MDJ	**Mudanjiang**	**14.53**	**324**	P	**P**	**22 02 57.3**	**+0.7**
MDJ				AP		22 03 01.8	
MDJ				XP		22 03 05.6	
MDJ				PP	PP	22 03 08.3	+0.1
MDJ				S	**S**	**22 05 38.4**	**+0.2**
MDJ				SS	SS	22 05 53.9	-1.4
MDJ				AMB	AMB		
	comp=Z,40nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,1µm,6.3s						
MDJ				LR	LR		
	comp=N,7µm,14.4s						
MDJ				LR	LR		
	comp=E,3µm,13.4s						
MDJ				LR	LR		
	comp=Z,8µm,13.9s						
MDJ	**Mudanjiang**	**14.53**	**324**	*e*P	**P**	**22 02 56.4**	**-0.2**
	comp=Z,46nm,1.0s						
UGL	**Uglegorsk**	**15.74**	**2**	*e*P	**P**	**22 03 19.0**	**+6.6**
UGL				pmax	pmax		
	comp=Z,84nm,0.7s						
UGL				MLR	MLR		
	comp=N,13µm,18.0s						
UGL				MLR	MLR		
	comp=E,6µm,18.0s						
UGL				MLR	MLR		
	comp=Z,6µm,18.0s						
CN2	**Changchun**	**16.26**	**315**	*e*P	**P**	**22 03 21.9**	**+2.8**
CN2				*e*S	**S**	**22 06 19.0**	**+0.2**
CN2				AMB	AMB		
	comp=Z,30nm,1.0s						
CN2				AMB	AMB		
	comp=Z,2µm,10.0s						
CN2				LR	LR		
	comp=N,6µm,14.0s						
CN2				LR	LR		
	comp=E,6µm,14.0s						
CN2				LR	LR		
	comp=Z,7µm,18.0s						
SNY	**Shenyang**	**16.47**	**306**	PR		22 03 25.5	
SNY				AMB	AMB		
	comp=Z,30nm,0.7s						
SNY				AMB	AMB		
	comp=Z,2µm,12.0s						
SNY				LR	LR		
	comp=N,7µm,14.4s						
SNY				LR	LR		
	comp=Z,7µm,16.5s						
DL2	**Dalian**	**16.92**	**295**	⇑P	**P**	**22 03 28.0**	**+0.6**
DL2				S	**S**	**22 06 44.3**	**+10**
DL2				AMB	AMB		
	comp=Z,20nm,0.8s						
DL2				AMB	AMB		
	comp=Z,930nm,6.6s						
DL2				LR	LR		
	comp=N,4µm,14.2s						
DL2				LR	LR		
	comp=E,6µm,15.0s						
DL2				LR	LR		
	comp=Z,7µm,16.7s						
SSE	**Sheshan**	**17.26**	**268**	P	**P**	**22 03 31.3**	**-0.5**
SSE				S	**S**	**22 06 41.3**	**-0.7**
SSE				XS		22 06 55.8	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s						
SSE				AMB	AMB		
	comp=Z,1µm,10.3s						
SSE				LR	LR		
	comp=N,5µm,16.7s						
SSE				LR	LR		
	comp=E,3µm,16.7s						
SSE				LR	LR		
	comp=Z,7µm,11.3s						
SSE	**Sheshan**	**17.26**	**268**	P	**P**	**22 03 31.3**	**-0.5**
	comp=Z,35nm,0.7s						
SSE				sP		22 03 37.5	
SSE				S	**S**	**22 06 41.2**	**-0.8**
SSE				sS		22 06 55.8	
KLR	**Kul'dur**	**17.45**	**338**	*e*P	**P**	**22 03 31.0**	**-2.9**
JIJ	**Ishigaki jima**	**17.55**	**244**	P	**P**	**22 03 37.5**	**+2.0**
IRIF	**Iriomote-Funau**	**17.88**	**245**	P	**P**	**22 03 40.5**	**+1.0**
NJ2	**Nanjing**	**19.03**	**272**	*e*P	**P**	**22 03 54.8**	**+1.2**
NJ2				AP		22 03 58.4	
NJ2				PP	PP	22 04 11.3	+1.0
NJ2				S	**S**	**22 07 25.0**	**+2.9**
NJ2				XS		22 07 40.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
NJ2				LR	LR		
	comp=N,6µm,18.4s						
NJ2				LR	LR		
	comp=E,17µm,18.2s						
NJ2				LR	LR		
	comp=Z,7µm,18.8s						
GUMO	**Guam**	**19.90**	**170**	P	**P**	**22 04 05.0**	**+1.4**
	comp=Z,6.0nm,0.3s,baz=207,slow=4.0,SNR=9.5						
GUMO				S	**S**	**22 07 50.2**	**+8.9**
	comp=Z,6.8nm,0.3s,baz=199,slow=18,SNR=2.3						
GUMO	**Guam**	**19.90**	**170**	*e*P	**P**	**22 04 04.6**	**+1.0**
	comp=Z,516nm,1.0s						
GUMO	**Guam**	**19.90**	**170**	P	**P**	**22 04 05.0**	**+1.4**
GUMO				S	**S**	**22 07 50.2**	**+8.9**
GUMO				pmax	pmax		
	comp=Z,6.0nm,0.3s						
GUMO				smax			
	comp=N,7.0nm,0.3s						
QZH	**Quanzhou**	**21.58**	**253**	*e*P	**P**	**22 04 20.4**	**-0.5**
QZH				*e*S	**S**	**22 08 19.0**	**+4.6**
QZH				LR	LR		
	comp=N,4µm,13.1s,MS5.2						
QZH				LR	LR		
	comp=E,6µm,13.2s,MS5.2						
QZH				LR	LR		
	comp=Z,8µm,16.4s,MS5.2						
HIA	**Hailar**	**22.65**	**321**	*e*P	**P**	**22 04 30.0**	**-1.3**
	comp=Z,165nm,1.3s,mb5.3						
HIA	**Hailar**	**22.65**	**321**	*e*P	**P**	**22 04 30.0**	**-1.3**
HIA				pmax	pmax		
	comp=Z,165nm,1.3s						
WHN	**Wuhan**	**23.11**	**270**	*e*P	**P**	**22 04 37.4**	**+1.4**
WHN				LR	LR		
	comp=N,7µm,13.9s,MS5.5						
WHN				LR	LR		
	comp=E,10µm,13.6s,MS5.5						
WHN				LR	LR		
	comp=Z,15µm,16.4s,MS5.5						
PET	**Petropavlovsk**	**23.25**	**27**	*e*P	**P**	**22 04 37.4**	**+0.3**
PET				LR	LR		
	comp=Z,2µm,19.0s,MS4.6						
PET	**Petropavlovsk**	**23.25**	**27**	*e*P	**P**	**22 04 39.3**	**+2.2**
PET				*e*S	**S**	**22 08 45.0**	**+0.6**
PET				pmax	pmax		
	comp=Z,18nm,0.5s,mb4.8						
PET				smax			
	comp=E,900nm,14.5s						
PET				smax			
	comp=N,2µm,13.8s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s,MS4.8						
HHC	**Hu-ho-hao-te**	**24.89**	**296**	*e*P	**P**	**22 04 53.8**	**+0.7**
HHC				AP		22 04 57.9	
HHC				PP	PP	22 05 32.6	+2.3
HHC				PCP	PcP	22 08 26.6	-3.3
HHC				S	**S**	**22 09 18.0**	**+5.3**
HHC				SS	SS	22 10 19.1	+8.1
HHC				SCP		22 12 04.1	
HHC				PCS		22 12 05.9	
HHC				AMB	AMB		
	comp=Z,30nm,2.1s,mb4.5						
HHC				AMB	AMB		
	comp=Z,900nm,9.0s						
HHC				LR	LR		
	comp=N,5µm,21.2s,MS5.1						
HHC				LR	LR		
	comp=E,4µm,17.1s,MS5.1						
HHC				LR	LR		
	comp=Z,5µm,17.2s,MS5.1						
NRGR	**Nerungri**	**26.00**	**339**	*e*P	**P**	**22 04 56.6**	**-6.8**
BTO	**Baotou**	**26.02**	**295**	*e*P	**P**	**22 05 04.3**	**+0.5**
CLNS	**Chul'man**	**26.10**	**339**	*e*P	**P**	**22 05 04.5**	**+0.1**
CLNS				*e**PP	pP	22 05 14.1	+5.2
CLNS				*e*		22 05 39.3	
CLNS				*e*		22 08 30.4	
CLNS				*e*S	**S**	**22 09 34.6**	**+1.7**
CLNS				*e*SS	SS	22 10 44.3	+4.1
CLNS				pmax	pmax		
	comp=Z,72nm,0.9s,mb5.2						
CLNS				pmax	pmax		
	comp=N,84nm,1.0s						
CLNS				pmax	pmax		
	comp=E,45nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,96nm,1.6s,mb5.1						
CLNS				pmax	pmax		
	comp=N,56nm,1.0s						
CLNS				pmax	pmax		
	comp=E,94nm,1.5s						
CLNS				smax			
	comp=E,16nm,1.1s						
CLNS				smax			
	comp=N,12nm,1.0s						
CLNS				smax			
	comp=Z,5.0nm,1.0s						
CLNS				MLR	MLR		
	comp=N,1µm,16.0s,MS4.8						
CLNS				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.1						
CLNS				MLR	MLR		
	comp=E,2µm,13.0s,MS4.8						
WAKE	**Wake Island**	**26.51**	**116**	PFAKE		22 05 20.0	+12
WAKE				LR	LR		
	comp=Z,4µm,19.0s,MS4.9						
MA2	**Magadan**	**26.98**	**11**	*e*P	**P**	**22 05 11.5**	**-0.9**
MA2				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
MA2	**Magadan**	**26.98**	**11**	⇑*e*P	**P**	**22 05 14.1**	**+1.7**
MA2				pmax	pmax		
	comp=Z,194nm,2.5s,mb5.2						
MA2				MLR	MLR		
	comp=Z,2µm,17.0s,MS4.7						
XAN	**Xi'an**	**26.99**	**281**	P	**P**	**22 05 11.8**	**-1.0**
XAN				S	**S**	**22 09 55.8**	**+8.1**
XAN				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
XAN				LR	LR		
	comp=N,3µm,14.1s,MS5.3						
XAN				LR	LR		
	comp=E,6µm,15.9s,MS5.3						
XAN				LR	LR		
	comp=Z,8µm,15.9s,MS5.4						
ENH	**Enshi**	**27.25**	**272**	*e*P	**P**	**22 05 13.3**	**-1.9**
	comp=Z,52nm,0.8s,mb5.1						
CIT	**Chita**	**27.46**	**321**	*e*P	**P**	**22 05 17.7**	**+0.8**
CIT				pmax	pmax		
	comp=Z,152nm,1.8s,mb5.2						
ULN	**Ulaanbaatar**	**29.58**	**310**	⇑*i*P	**P**	**22 05 34.8**	**-1.2**
ULN				LR	LR		
	comp=Z,4µm,20.0s,MS5.0						
YAK	**Yakutsk**	**29.69**	**349**	*e*P	**P**	**22 05 34.4**	**-2.4**
	comp=Z,92nm,0.8s,mb5.6						
YAK				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
YAK	**Yakutsk**	**29.69**	**349**	*e*P	**P**	**22 05 34.8**	**-2.1**
YAK				*e**PP	pP	22 05 46.3	+4.9
YAK				*e*PPP	PPP	22 06 46.1	-1.1
YAK				*e*		22 08 42.9	
YAK				*e*S	**S**	**22 10 31.0**	**+0.3**
YAK				*e**SS		22 10 47.9	
YAK				*e*SS	SS	22 11 58.2	-7.0
YAK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
YAK				pmax	pmax		
	comp=E,13nm,0.9s						
YAK				smax			
	comp=E,2.0nm,1.2s						
YAK				smax			
	comp=Z,5.0nm,1.0s						
YAK				smax			
	comp=N,4.0nm,1.1s						
YAK				MLR	MLR		
	comp=N,1µm,16.0s,MS4.9						
YAK				MLR	MLR		
	comp=Z,2µm,16.0s,MS4.9						
YAK				MLR	MLR		
	comp=E,1µm,14.0s,MS4.9						
FX1	**Attu Island--F**	**29.95**	**40**	P	**P**	**22 05 39.9**	**+0.6**
	comp=E,26nm,0.7s,mb5.1,baz=305,slow=21,SNR=3.0						
FX1				LR	LR	22 17 53.1	
	comp=E,85nm,18.7s,baz=19,slow=37						
FX1	**Attu Island--F**	**29.95**	**40**	P	**P**	**22 05 39.9**	**+0.6**
FX1				pmax	pmax		
	comp=Z,26nm,0.7s						
FX1				MLR	MLR		
	comp=Z,85nm,18.7s						
SONM	**Songino Array**	**30.00**	**309**	P	**P**	**22 05 40.0**	**+0.3**
	comp=Z,8.9nm,0.6s,mb4.7,baz=108,slow=7.7,SNR=56						
SONM				PcP	PcP	22 08 41.9	-0.1
	comp=Z,3.3nm,0.9s,baz=118,slow=8.2,SNR=5.3						
SONM				LR	LR	22 18 11.6	
	comp=Z,3µm,19.2s,MS5.0,baz=121,slow=37						
SEY	**Seymchan**	**30.43**	**10**	⇓*e*P	**P**	**22 05 42.3**	**-1.1**
SEY	**Seymchan**	**30.43**	**10**	*e*P	**P**	**22 05 42.9**	**-0.5**
SEY				*e*		22 06 47.5	
SEY				*e*S	**S**	**22 10 38.1**	**-4.2**
SEY				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
SEY				pmax	pmax		
	comp=N,20nm,1.2s						
SEY				smax			
	comp=N,360nm,7.9s						
SEY				smax			
	comp=E,190nm,7.9s						
SEY				MLR	MLR		
	comp=N,2µm,19.0s,MS5.2						
SEY				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.3						
SEY				MLR	MLR		
	comp=E,4µm,17.0s,MS5.2						
BOD	**Bodaibo**	**30.72**	**331**	*e*P	**P**	**22 05 44.4**	**-1.6**
BOD				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.3						
GYA	**Guiyang**	**30.80**	**266**	⇓*i*P	**P**	**22 05 46.8**	**-0.2**
GYA				S	**S**	**22 10 46.6**	**-2.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
GYA				AMB	AMB		
	comp=Z,150nm,4.0s						
GYA				LR	LR		
	comp=N,2µm,19.2s,MS5.0						
GYA				LR	LR		
	comp=E,2µm,20.3s,MS5.0						
GYA				LR	LR		
	comp=Z,3µm,20.3s,MS4.9						
LZH	**Lanzhou**	**30.89**	**286**	*e*P	**P**	**22 05 47.8**	**+0.1**
LZH				PP	PP	22 06 49.0	-0.4
LZH				*e*S	**S**	**22 10 49.5**	**-0.4**
LZH				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.1						
LZH				AMB	AMB		
	comp=Z,180nm,5.3s						
LZH				LR	LR		
	comp=E,3µm,13.5s						
LZH				LR	LR		
	comp=Z,6µm,17.6s,MS5.3						
LZH	**Lanzhou**	**30.89**	**286**	*e*P	**P**	**22 05 47.8**	**+0.1**
	comp=Z,41nm,1.4s,mb5.1						
LZH				pP	pP	22 05 51.0	-1.3
LZH				sP	sP	22 05 52.6	-1.7
LZH				PP	PP	22 06 49.0	-0.4
LZH				*e*S	**S**	**22 10 49.5**	**-0.4**
LZH				sS		22 10 56.7	
LZH				SS	SS	22 12 31.8	-1.5
LZH				LR	LR		
	comp=Z,6µm,17.6s,MS5.3						
CD2	**Chengdu**	**31.88**	**276**	P	**P**	**22 05 55.4**	**-1.1**
CD2				XP	sP	22 06 05.4	+2.4
CD2				PP	PP	22 07 00.4	-1.9
CD2				S	**S**	**22 11 03.8**	**-1.6**
CD2				SS	SS	22 12 57.4	+0.4
CD2				AMB	AMB		
	comp=Z,10.0nm,0.3s,mb5.1						
CD2				AMB	AMB		
	comp=Z,310nm,5.9s						
CD2				LR	LR		
	comp=E,7µm,15.0s						
CD2				LR	LR		
	comp=Z,9µm,15.3s,MS5.6						
ZAK	**Zakamensk**	**32.68**	**313**	⇑*i*P	**P**	**22 06 03.6**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
IRK	**Irkutsk**	**32.69**	**317**	*e*P	**P**	**22 06 03.7**	**+0.4**
IRK				*e*		22 07 18.0	
IRK				pmax	pmax		
	comp=Z,692nm,2.6s,mb6.1						
GTA	**Gaotai**	**33.82**	**292**	P	**P**	**22 06 13.4**	**+0.1**
GTA				AP	pP	22 06 17.5	-0.4
GTA				PP	PP	22 07 25.5	-1.2
GTA				PCP	PcP	22 08 53.8	+1.4
GTA				S	**S**	**22 11 34.3**	**-1.2**
GTA				SS	SS	22 13 42.0	+0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
GTA				AMB	AMB		
	comp=Z,330nm,4.6s						
GTA				LR	LR		
	comp=N,2µm,14.1s,MS5.0						
GTA				LR	LR		
	comp=E,2µm,16.3s,MS5.0						
GTA				LR	LR		
	comp=Z,2µm,12.9s,MS5.0						
KWAJ	**Kwajalein Atol**	**34.35**	**129**	PFAKE		22 06 30.0	+12
KWAJ				LR	LR		
	comp=Z,671nm,20.0s,MS4.4						
MOY	**Mondy**	**34.43**	**314**	*e*P	**P**	**22 06 20.5**	**+2.1**
MOY				pmax	pmax		
	comp=Z,74nm,1.7s,mb5.3						
KMI	**Kunming**	**34.57**	**267**	P	**P**	**22 06 19.0**	**-0.9**
KMI				PP	PP	22 07 35.3	-1.1
KMI				S	**S**	**22 11 47.3**	**0.0**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
KMI				LR	LR		
	comp=N,3µm,14.9s,MS5.5						
KMI				LR	LR		
	comp=E,6µm,16.4s,MS5.5						
KMI				LR	LR		
	comp=Z,6µm,15.8s,MS5.4						
KMI	**Kunming**	**34.57**	**267**	P	**P**	**22 06 19.0**	**-0.9**
	comp=Z,13nm,0.7s,mb5.0						
KMI				pP	pP	22 06 21.3	-3.2
KMI				sP	sP	22 06 22.7	-3.8
KMI				PP	PP	22 07 35.2	-1.2
KMI				PPP	PPP	22 07 53.2	-1.2
KMI				S	**S**	**22 11 47.3**	**0.0**
KMI				sS		22 11 51.1	

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KMI                                 SS      SS       22 13 57.9 -1.3
KMI                                 SSS     SSS      22 14 24.4 -1.4
KMI                                 LR      LR
       comp=Z,6µm,15.8s,MS5.4
KMI    Kunming            34.57 267   P     P        22 06 19.0 -0.9
KMI                                                  22 07 35.2
KMI                                 PPP     PPP      22 07 53.2 -1.2
KMI                                 S       S        22 11 47.3  0.0
KMI                                 SS      SS       22 13 57.9 -1.3
KMI                                 SSS     SSS      22 14 24.4 -1.4
KMI                                 pmax    pmax
       comp=Z,13nm,0.7s,mb5.0
KMI                                 MLR     MLR
       comp=Z,6µm,15.8s,MS5.4
MIDW   Midway             35.61  87   PFAKE              22 06 40.0  +11
MIDW                                LR      LR
       comp=Z,3µm,19.0s,MS5.0
KKM    Kota Kinabalu      35.85 226   P     P        22 06 28.9 -2.0
BILL   Bilibino           37.59  15  eP     P        22 06 44.8 -0.2
       comp=Z,16nm,0.9s,mb4.8
BILL                                LR      LR
       comp=Z,2µm,21.0s,MS4.9
BILL   Bilibino           37.59  15⇑iP     P        22 06 44.6 -0.4
BILL                                pmax    pmax
       comp=Z,34nm,2.5s,mb4.6
BILL                                MLR     MLR
       comp=Z,2µm,17.0s,MS4.9
KKTK   Khon Kaen          38.63 254   P     P        22 06 52.5 -1.8
TIXI   Tiksi              38.96 354  eP     P        22 06 54.1 -2.4
TIXI                                e                22 08 27.8
TIXI                               eS       S        22 12 49.6 -4.5
TIXI                               eSS      SS       22 15 41.9 +4.1
TIXI                                pmax    pmax
       comp=Z,17nm,1.1s,mb4.7
TIXI                                MLR     MLR
       comp=Z,3µm,16.0s,MS5.2
CHRT   Chiangrai          39.31 261  ⇑P     P        22 06 57.0 -2.9
       comp=Z,210nm,1.1s,mb5.8
CHG    Chiang Mai         40.51 260   P     P        22 07 09.3 -0.5
       comp=Z,43nm,1.1s,mb5.0
NST    Nakhon Sawan       41.16 255   P     P        22 07 15.6 +0.4
UNV    Unalaska Valle     41.81  45   PFAKE              22 07 30.0  +10
UNV                                 LR      LR
       comp=Z,4µm,21.0s,MS5.2
WMQ    Urumqi             42.62 300⇑iP     P        22 07 27.0 +0.2
WMQ                                 AP      pP       22 07 32.0 +0.5
WMQ                                 XP      sP       22 07 34.8 +1.4
WMQ                                 PP      PP       22 09 07.5 -1.0
WMQ                                 S       S        22 13 50.0 +1.2
WMQ                                 SCS     ScS      22 17 26.0 +0.4
WMQ                                 AMB     AMB
       comp=Z,120nm,1.0s,mb5.6
WMQ                                 AMB     AMB
       comp=Z,510nm,4.1s
WMQ                                 LR      LR
       comp=N,2µm,16.2s,MS5.3
WMQ                                 LR      LR
       comp=E,2µm,15.8s,MS5.3
WMQ                                 LR      LR
       comp=Z,2µm,18.4s,MS5.0
LSA    Lhasa              42.67 279   P     P        22 07 28.4 +0.9
LSA    Lhasa              42.67 279  eP     P        22 07 27.6 +0.1
       comp=Z,18nm,1.0s,mb4.8
LSA    Lhasa              42.67 279  eP     P        22 07 27.6 +0.1
LSA                                 pmax    pmax
       comp=Z,18nm,1.0s,mb4.8
PMG    Port Moresby       42.84 172   P     P        22 07 31.3 +2.2
       comp=Z,7.0nm,0.5s,mb4.7,baz=284,slow=9.2,SNR=3.9
PMG    Port Moresby       42.84 172   P     P        22 07 31.3 +2.2
PMG                                 LR      LR
       comp=Z,674nm,19.0s,MS4.6
PMG    Port Moresby       42.84 172 i P     P        22 07 29.9 +0.8
KSM    Kuching            43.06 229  eP     P        22 07 30.2 -0.7
SHL    Shillong           43.49 273  eP     P        22 07 35.0 +0.8
SHL                                ex       x        22 13 08.0
ZAL    Zalesovo           44.49 315   P     P        22 07 41.2 -0.7
       comp=Z,3.4nm,0.6s,mb4.3,baz=3.5,slow=9.3,SNR=21
ZAL                                 PcP     PcP      22 09 26.1 +0.3
       comp=Z,4.6nm,0.6s,baz=17,slow=6.2,SNR=4.4
ZAL                                 LR      LR       22 27 48.6
       comp=Z,3µm,18.0s,MS5.2,baz=19,slow=38
NVS    Novosibirsk        45.46 316  eP     P        22 07 48.4 -1.2
NVS                                i                 22 09 40.1
NVS                                eS       S        22 14 24.2 -5.6
NVS                                 pmax    pmax
       comp=N,9.0nm,1.2s
NVS                                 pmax    pmax
       comp=E,38nm,1.2s
NVS                                 pmax    pmax
       comp=Z,44nm,1.2s,mb5.2
NVS                                 smax
       comp=N,38nm,2.1s
NVS                                 smax
       comp=E,12nm,1.2s
HNR    Honiara            46.03 154   LR    LR       22 25 32.3
       comp=E,1µm,20.8s,MS4.8,baz=330,slow=34
HNR    Honiara            46.03 154   PFAKE              22 08 10.0  +15
HNR                                 LR      LR
       comp=Z,1µm,19.0s,MS4.9
MKAR   Makanchi Array     46.17 305   P     P        22 07 54.7 -0.6
       comp=Z,8.5nm,0.6s,mb4.8,baz=87,slow=9.7,SNR=61
MKAR                                PcP     PcP      22 09 31.9 +0.2
       comp=Z,8.1nm,0.9s,baz=89,slow=4.7,SNR=3.6
MKAR                                S       S        22 14 40.8 +0.7
       comp=Z,2.7nm,1.1s,baz=72,slow=9.1,SNR=3.2
MKAR                                LR      LR       22 29 07.9
       comp=Z,2µm,18.7s,MS5.2,baz=90,slow=38
KAKA   Kakadu             46.57 192  eP     P        22 08 17.2  +18
       comp=Z,128nm,0.7s,mb6.0
KULM   Kulim              47.04 243   P     P        22 08 01.4 -1.3
GUN    Gumba              47.63 279  eP     P        22 08 07.1 -0.1
       comp=Z,158nm,0.9s,mb6.0
PKI    Pulchoki           48.14 279  eP     P        22 08 11.2 +0.1
       comp=Z,121nm,1.2s,mb5.8
KKN    Kakani             48.17 279  eP     P        22 08 10.4 -0.9
       comp=Z,140nm,0.9s,mb6.0
KURK   Kurchatov          48.28 311  eP     P        22 08 10.2 -1.7
       comp=Z,53nm,0.8s,mb5.6
KURK                                LR      LR
       comp=Z,880nm,20.0s,MS4.7
KURK   Kurchatov          48.28 311c iP     P        22 08 10.8 -1.1
DMN    Daman              48.38 279  eP     P        22 08 12.6 -0.4
       comp=Z,130nm,1.2s,mb5.8
GKN    Gorkha             48.62 280  eP     P        22 08 14.1 -0.7
       comp=Z,315nm,1.2s
BOK    Bokaro             49.20 274  eP     P        22 08 20.6 +1.3
BOK                                 AMb     AMB      22 08 20.8
       comp=Z,24nm,1.1s,mb5.2
KOLN   Koldanda           49.56 280  eP     P        22 08 21.3 -0.8
       comp=Z,243nm,1.3s,mb6.1
KDAK   Kodiak Island      49.90  40   P     P        22 08 22.9 -1.3
       comp=Z,6.7nm,0.5s,mb5.0,baz=288,slow=9.0,SNR=11
KDAK                                LR      LR       22 27 05.2
       comp=Z,600nm,21.8s,MS4.6,baz=267,slow=33
KDAK   Kodiak Island      49.90  40   P     P        22 08 22.9 -1.3
KDAK                                LR      LR       22 27 05.2
TKM2   Tokmak 2           51.47 301   P     P        22 08 38.2 +1.8
       SNR=17
PMR    Palmer             51.63  35   PFAKE              22 08 50.0  +13
PMR                                 LR      LR
       comp=Z,973nm,19.0s,MS4.8
KZA    Kyzart             51.91 300   P     P        22 08 42.2 +2.5
       SNR=10
KBK    Karagaybulak       51.99 301   P     P        22 08 41.3 +0.9
       SNR=12
KSH    Kashi              52.00 297  eP     P        22 08 43.3 +2.9
KSH                                eAP      pP       22 08 47.3 +2.1
KSH                                eXP      sP       22 08 50.1 +3.1
KSH                                ePCP     PcP      22 09 53.1 +0.2
KSH                                ePP      PP       22 10 42.1 +2.8
KSH                                ePCS              22 13 51.4
KSH                                eS       S        22 16 06.3 +4.7
KSH                                 XS               22 16 14.3
KSH                                eSS      SS       22 19 43.1 +6.2
KSH                                 AMB     AMB
       comp=Z,370nm,3.2s
KSH                                 LR      LR
       comp=N,4µm,14.4s,MS5.7
KSH                                 LR      LR
       comp=E,3µm,14.3s,MS5.7
USP    Ospenovka          52.17 302   P     P        22 08 42.3 +0.6
       SNR=7.3
FRU    Bishkek            52.19 301  eP     P        22 08 42.0 +0.2
FRU                                e                 22 08 54.5
FRU                                 pmax    pmax
       comp=Z,110nm,2.2s,mb5.4
FRU                                 MLR     MLR
       comp=E,3µm,16.0s
FRU                                 MLR     MLR
       comp=Z,3µm,16.0s,MS5.4
COLA   College            52.23  31⇓eP     P        22 08 42.3 +0.4
COLA                                LR      LR
       comp=Z,632nm,20.0s,MS4.7
AAK    Ala-Archa          52.32 301   P     P        22 08 43.5 +0.7
       SNR=6.1
ILAR   Eielson Array      52.65  31   P     P        22 08 42.6 -2.3
       comp=Z,2.6nm,0.7s,mb4.2,baz=269,slow=5.4,SNR=22
VOSK   Vostochnaya        52.80 314   P     P        22 08 44.7 -1.6
VOSK                                pmax    pmax
       comp=Z,68nm,1.1s,mb5.5
CHKZ   Chkalovo           52.89 315  eP     P        22 08 45.2 -1.7
       comp=Z,48nm,1.1s,mb5.3
CHKZ   Chkalovo           52.89 315  eP     P        22 08 45.2 -1.7
CHKZ                                pmax    pmax
       comp=Z,47nm,1.1s,mb5.3
AML    Almayashu          53.02 300   P     P        22 08 48.6 +0.5
       SNR=16
BLSP   Bilaspur           53.03 274  eP     P        22 08 47.7 -0.7
BLSP                                AMb     AMB      22 08 51.0
       comp=Z,57nm,1.4s,mb5.3
BVA0   Borovoye Array     53.11 314 i P     P        22 08 43.9 -4.7
BVA0                                pmax    pmax
       comp=Z,9.0nm,1.1s,mb4.6
BVAR   Borovoye Array     53.11 314   P     P        22 08 47.5 -1.1
       comp=Z,8.6nm,0.7s,mb4.8,baz=84,slow=8.0,SNR=53
BVAR                                PcP     PcP      22 09 57.3 +0.5
       comp=Z,6.5nm,0.6s,baz=72,slow=4.2,SNR=5.4
BRVK   Borovoye           53.17 314  eP     P        22 08 47.5 -1.5
       comp=Z,35nm,1.1s,mb5.2
BRVK                                LR      LR
       comp=Z,336nm,20.0s,MS4.4
BRVK   Borovoye           53.17 314  eP     P        22 08 47.5 -1.5
BRVK                                pmax    pmax
       comp=Z,35nm,1.1s,mb5.2
BRVK                                MLR     MLR
       comp=Z,336nm,20.0s,MS4.4
FITZ   Fitzroy Crossi     53.31 199   P     P        22 08 50.4 -0.2
       comp=Z,105nm,0.6s,mb5.9,baz=26,slow=7.2,SNR=3.7
CTA    Charters Tower     53.31 174  eP     P        22 08 50.1 -0.4
       comp=Z,11nm,0.8s,mb4.8
CTA    Charters Tower     53.31 174  eP     P        22 08 50.1 -0.4
CTA                                 pmax    pmax
       comp=Z,11nm,0.8s
CTAO   Charters Tower     53.31 174   PFAKE              22 09 00.0 +9.5
CTAO                                LR      LR
       comp=Z,817nm,21.0s,MS4.8
WRAB   Tennant Creek      53.39 188  eP     P        22 08 49.3 -1.8
       comp=Z,87nm,0.9s,mb5.7
WRAB                                LR      LR
       comp=Z,250nm,21.0s,MS4.2
WRAB   Tennant Creek      53.39 188d iP     P        22 08 50.5 -0.6
WB2    Warramunga Arr     53.40 188⇑iP     P        22 08 50.0 -1.1
WB2                                eS       S        22 16 19.5 -1.4
WRA    Warramunga Arr     53.40 188   P     P        22 08 50.0 -1.1
       comp=Z,33nm,0.6s,mb5.5,baz=5.5,slow=7.6,SNR=287
WRA                                 S       S        22 16 19.3 -1.6
       comp=Z,4.3nm,1.0s,baz=4.1,slow=14,SNR=3.5
VIS    Vishakhapatnam     54.04 268  eP     P        22 08 55.7 -0.1
VIS                                 AMb     AMB      22 08 59.2
       comp=Z,38nm,1.1s,mb5.2
THN    Thein Dam          54.32 288  eP     P        22 08 55.0 -2.7
NDI    New Delhi          54.46 284  eP     P        22 08 56.5 -2.3
KKAR   Karatay Array      55.05 302   P     P        22 09 02.1 -0.8
KKAR                                pmax    pmax
       comp=Z,9.0nm,0.7s,mb4.9
DAWY   Dawson             55.93  31  eP     P        22 09 09.7 +0.7
BHPL   Bhopal             56.48 277  eP     P        22 09 13.3 -0.2
BHPL                                AMb     AMB      22 09 15.4
       comp=Z,59nm,1.5s,mb5.4
ASPA   Alice Springs      57.13 188  eP     P        22 09 17.8 -0.3
ASPA                               eS       S        22 17 13.2 +2.5
AJM    Ajmer              57.42 282  eP     P        22 09 19.6 -0.6
AJM                                 AMb     AMB      22 09 21.1
       comp=Z,38nm,0.9s,mb5.4
INK    Inuvik             57.70  26   P     P        22 09 19.7 -1.8
       comp=Z,2.3nm,0.7s,mb4.3,baz=313,slow=8.5,SNR=8.7
INK    Inuvik             57.70  26  eP     P        22 09 20.2 -1.4
       comp=Z,46nm,1.6s,mb5.3
INK    Inuvik             57.70  26  eP     P        22 09 20.2 -1.3
INK                                 pmax    pmax
       comp=Z,46nm,1.6s
HYB    Hyderabad          58.18 271 i P     P        22 09 23.0 -2.6
       comp=Z,60nm,1.0s,mb5.6
HYB                                e                 22 09 33.0
HYB    Hyderabad          58.18 271  eP     P        22 09 23.0 -2.6
       comp=Z,60nm,1.0s,mb5.6
HYB                                e                 22 09 33.0
HYB    Hyderabad          58.18 271  eP     P        22 09 23.0 -2.6
HYB                                e                 22 09 33.0
HYB                                 pmax    pmax
       comp=Z,60nm,1.0s,mb5.6
ARU    Arti               59.17 320⇑iP     P        22 09 30.2 -1.7
ARU                                e                 22 10 14.5
ARU                                eS       S        22 17 36.8 -0.2
ARU                                e                 22 19 15.2
ARU                                eSS      SS       22 21 29.0 -4.2
ARU                                 pmax    pmax
       comp=Z,55nm,0.7s,mb5.7
ARU                                 MLR     MLR
       comp=N,1µm,17.0s,MS5.3
ARU                                 MLR     MLR
       comp=E,2µm,17.0s,MS5.3
ARU                                 MLR     MLR
       comp=Z,2µm,17.0s,MS5.4
SIT    Sitka              59.22  39   PFAKE              22 09 40.0 +7.7
SIT                                 LR      LR
       comp=Z,1µm,19.0s,MS5.1
SOKR   Solikamsk          59.30 324  eP     P        22 09 36.9 +4.1
SOKR                                pmax    pmax
       comp=Z,40nm,1.9s,mb5.1
SOKR                                MLR     MLR
       comp=Z,3µm,18.0s,MS5.4
LATR   Latur              59.37 273  eP     P        22 09 32.9 -1.0
AB31   Akbulak array      60.37 312  eP     P        22 09 38.9 -1.4
AB31                                pmax    pmax
       comp=Z,9.0nm,0.6s,mb5.0
DLBC   Dease Lake         61.56  37   P     P        22 09 47.0 -1.3
       comp=Z,2.1nm,0.7s,mb4.4,baz=337,slow=24,SNR=2.8
DLBC   Dease Lake         61.56  37   P     P        22 09 47.0 -1.3
POO    Poona              61.58 274   AMb   AMB      22 10 00.9
       comp=Z,112nm,0.7s,mb6.1
PALK   Pallekele          61.64 260   P     P        22 09 47.4 -2.0
       comp=Z,46nm,1.3s,mb5.5
KAD    Karad              61.89 273  eP     P        22 09 50.0 -1.1
KAD                                 AMb     AMB      22 09 52.2
       comp=Z,102nm,0.7s,mb6.1
COCO   West Island        62.07 231   PFAKE              22 10 00.0 +7.7
COCO                                LR      LR
       comp=Z,200nm,19.0s,MS4.3
ORR    Orenburg           62.75 316⇓iP     P        22 09 54.8 -1.5
ORR                                 pmax    pmax
       comp=Z,50nm,2.2s,mb5.3
BHJ    Bhuj               62.89 281  eP     P        22 09 58.8 +1.2
BHJ                                 AMb     AMB      22 09 59.6
       comp=Z,48nm,0.5s,mb5.8
TRD    Trivandrum         64.06 263  eP     P        22 10 06.6 +1.1
TRD                                 AMb     AMB      22 10 12.2
       comp=Z,21nm,0.7s,mb5.3
ARMA   Armidale           64.13 170  eP     P        22 10 07.9 +2.2
STKA   Stephens Creek     64.85 180  eP     P        22 10 09.8 -0.6
       comp=Z,14nm,0.7s,mb5.1
STKA                               eS       S        22 18 53.4 +4.2
STKA   Stephens Creek     64.85 180   P     P        22 10 09.9 -0.4
       comp=Z,15nm,0.8s,mb5.0,baz=334,slow=7.2,SNR=21
FORT   Forrest            65.00 193  eP     P        22 10 12.4 +1.1
       comp=Z,85nm,0.6s,mb6.0
APA    Apatity            66.07 336⇑eP     P        22 10 19.0 +1.4
APA                                eS       S        22 19 05.0 +1.4
APA                                e                 22 20 05.0
APA                                 pmax    pmax
       comp=Z,40nm,1.2s,mb5.3
APA                                 MLR     MLR
       comp=Z,2µm,18.0s,MS5.5
PECR   Pechory            66.76 323  eP     P        22 10 20.7 -1.5
PECR                               e                 22 12 48.5
PECR                                MLR     MLR
       comp=E,2µm,18.0s
PECR                                MLR     MLR
       comp=Z,4µm,18.0s,MS5.7
KLMR   Klimovskoe         66.90 329  eP     P        22 10 21.1 -1.9
KLMR                                pmax    pmax
       comp=Z,30nm,1.1s,mb5.2
KLMR                                MLR     MLR
       comp=Z,1µm,18.0s,MS5.1
YKA    Yellowknife Ar     67.02  29   P     P        22 10 22.3 -1.4
       comp=Z,5.0nm,0.9s,mb4.5,baz=303,slow=6.1,SNR=4.2
YKA    Yellowknife Ar     67.02  29   P     P        22 10 22.3 -1.4
YKA    Yellowknife Ar     67.02  29 i P     P        22 10 26.2 +2.5
YKA                                 pmax    pmax
       comp=Z,5.0nm,0.9s
ARCES  ARCESS Array B     67.47 340   P     P        22 10 24.5 -1.9
       comp=Z,4.9nm,0.8s,mb4.6,baz=68,slow=6.5,SNR=7.9
ARCES                               LR      LR       22 45 30.4
       comp=Z,1µm,18.5s,MS5.2,baz=228,slow=41
KLBR   Kellerberrin       68.32 202  eP     P        22 10 32.4 -0.1
       comp=Z,35nm,1.0s,mb5.3
MUN    Mundaring          69.17 203  eP     P        22 10 39.8 +2.1
MUN                                eS       S        22 19 41.2 -0.1
JOF    Joensuu            69.24 333  ep     P        22 10 35.4 -2.1
       comp=Z,5.6nm,0.6s,mb4.7
DAG    Danmarks Havn      69.46 355⇓iP     P        22 10 38.0 -0.7
       comp=Z,3.4nm,0.7s,mb4.4
DAG    Danmarks Havn      69.46 355⇓eP     P        22 10 38.0 -0.7
       comp=Z,3.4nm,0.7s,mb4.4
DAG    Danmarks Havn      69.46 355⇓eP     P        22 10 38.0 -0.7
DAG                                 pmax    pmax
       comp=Z,3.0nm,0.7s,mb4.3
NWAO   Narrogin (SRO)     69.72 202   P     P        22 10 40.9 -0.2
       comp=Z,61nm,0.6s,mb5.8,baz=20,slow=6.1,SNR=72
NWAO   Narrogin (SRO)     69.72 202  eP     P        22 10 40.5 -0.5
       comp=Z,48nm,0.6s,mb5.6
NWAO   Narrogin (SRO)     69.72 202  eP     P        22 10 40.5 -0.5
NWAO                                pmax    pmax
       comp=Z,48nm,0.6s
TOO    Toolangi           70.64 177  eP     P        22 10 45.2 -1.3
       comp=Z,11nm,1.2s,mb4.7
TOO    Toolangi           70.64 177  eP     P        22 10 45.2 -1.3
TOO                                 pmax    pmax
       comp=Z,11nm,1.2s,mb4.7
MAK    Makhachkala        70.77 309  eP     P        22 10 40.0 -7.2
OBN    Obninsk            71.08 324⇑eP     P        22 10 49.7 +0.8
OBN                                 LR      LR
       comp=Z,3µm,19.0s,MS5.5
OBN    Obninsk            71.08 324⇓eP     P        22 10 49.6 +0.7
OBN                                e                 22 11 07.2
OBN                                 pmax    pmax
       comp=Z,32nm,1.5s,mb5.0
OBN                                 MLR     MLR
       comp=Z,3µm,19.0s,MS5.5
KAF    Kangasniemi        71.61 333  ep     P        22 10 50.7 -1.2
       comp=Z,12nm,0.9s,mb4.8
KAF    Kangasniemi        71.61 333  eP     P        22 10 50.7 -1.2
KAF                                 pmax    pmax
       comp=Z,12nm,0.9s,mb4.8
FINES  FINESS Array B     72.10 333   P     P        22 10 53.6 -1.3
       comp=Z,10nm,0.7s,mb4.8,baz=74,slow=4.5,SNR=22
FINES                               LR      LR       22 45 35.9
       comp=Z,685nm,19.5s,MS4.9,baz=250,slow=38
EDM    Edmonton           72.26  38  eP     P        22 10 55.3 -0.7
GOF    Gofitskoye         72.59 313  eP     P        22 10 56.0 -2.0
GOF                                 pmax    pmax
       comp=Z,41nm,1.5s,mb5.1
YBH    Yreka Blue Hor     72.63  51  eP     P        22 10 57.7 -0.7
       comp=Z,10nm,1.1s,mb4.7
YBH    Yreka Blue Hor     72.63  51  eP     P        22 10 57.7 -0.7
YBH                                 pmax    pmax
       comp=Z,11nm,1.1s
JMDO   Jabal Madar        72.71 286   P     P        22 10 59.7 +0.5
       SNR=9.2
NEW    Newport            72.80  43   P     P        22 10 58.2 -1.0
       comp=Z,1.1nm,0.4s,mb4.1,baz=313,slow=13,SNR=3.3
NEW    Newport            72.80  43   P     P        22 10 59.1 -0.1
       comp=Z,9.9nm,0.8s,mb4.8
NEW    Newport            72.80  43   P     P        22 10 59.1 -0.1
NEW                                 pmax    pmax
       comp=Z,10.0nm,0.8s
KCPM   Cahto Peak         73.05  53  eP     P        22 11 01.5 +0.7
KIPM   Iron Peak          73.06  53   P     P        22 11 01.8 +0.9
ZEI    Tsey               73.18 310  eP     P        22 10 59.7 -1.9
ZEI                                e*PP     pP       22 11 09.0 +2.6
ZEI                                 pmax    pmax
       comp=Z,15nm,0.9s,mb4.9
BSY    Bisya              73.26 286   P     P        22 11 02.6 +0.2
       SNR=36
WDC    Whiskeytown Da     73.31  52  eP     P        22 11 03.4 +1.1
       comp=Z,17nm,1.1s,mb4.9
WDC    Whiskeytown Da     73.31  52  eP     P        22 11 03.4 +1.1
WDC                                 pmax    pmax
       comp=Z,17nm,1.1s,mb4.9
KIV    Kislovodsk         73.35 312  eP     P        22 11 02.5  0.0
       comp=Z,59nm,1.0s,mb5.5
KIV    Kislovodsk         73.35 312  eP     P        22 11 01.4 -1.1
KIV                                e                 22 11 16.8
KIV                                e                 22 13 43.4
KIV                                eS       S        22 20 27.8 -1.6
KIV                                eSS      SS       22 25 10.0 -4.1
KIV                                 pmax    pmax
       comp=Z,31nm,0.7s,mb5.3
KIV                                 MLR     MLR
       comp=Z,2µm,17.0s,MS5.4
ARQ    Araqi              73.51 287   P     P        22 11 04.2 +0.3
       SNR=11
VSU    Vasula             73.65 330 i P     P        22 11 03.9 -0.1
VSU    Vasula             73.65 330d iP     P        22 11 03.8 -0.2
GNI    Garni              73.94 308   P     P        22 11 05.7 -0.3
       comp=Z,4.6nm,0.7s,mb4.5,baz=219,slow=12,SNR=4.8
GNI    Garni              73.94 308   P     P        22 11 05.0 -1.0
       comp=Z,40nm,1.1s,mb5.3
GNI    Garni              73.94 308c iP     P        22 11 06.4 +0.4
GNI                                 pmax    pmax
       comp=Z,32nm,1.7s
GNI                                 MLR     MLR
       comp=Z,1µm,20.0s
MOD    Modoc              74.11  50  eP     P        22 11 07.2 +0.3
       comp=Z,12nm,0.3s,mb5.3
SUMG   Summit             74.38 360  eP     P        22 11 08.8 +0.9
       comp=Z,22nm,0.8s,mb5.1
BMO    Blue Mountains     74.46  46  eP     P        22 11 08.7 -0.3
       comp=Z,51nm,1.6s,mb5.2
BMO    Blue Mountains     74.46  46  eP     P        22 11 08.7 -0.2
BMO                                 pmax    pmax
       comp=Z,51nm,1.6s,mb5.2
OHCM   Honcut             74.64  53  eP     P        22 11 09.8 -0.3
WVOR   Wild Horse Val     74.90  49  eP     P        22 11 13.0 +1.5
       comp=Z,28nm,1.2s,mb5.1
WVOR   Wild Horse Val     74.90  49  eP     P        22 11 13.0 +1.5
WVOR                                pmax    pmax
       comp=Z,28nm,1.2s,mb5.1
SOC    Sochi              75.39 313  eP     P        22 11 14.2 -0.1
SOC                                e*PP     pP       22 11 22.4 +3.2
SOC                                e                 22 13 59.1
SOC                                ePPP     PPP      22 15 51.7 +0.6
SOC                                eS       S        22 20 52.1  0.0
SOC                                eSSS     SSS      22 28 58.3 -1.1
SOC                                 pmax    pmax
       comp=Z,195nm,2.2s,mb5.7
MSO    Missoula           75.39  43  eP     P        22 11 14.0 -0.2
       comp=Z,13nm,1.3s,mb4.7
MNK    Minsk              75.59 326  eP     P        22 11 17.0 +1.8
CHMT   Chamberlain Mo     75.74  43  eP     P        22 11 15.8 -0.4
SCO    Scoresbysund       75.79 354 i P     P        22 11 16.9 +0.8
SCO    Scoresbysund       75.79 354  eP     P        22 11 16.9 +0.8
HAKT   HAKKARI            75.96 306 i P     P        22 11 16.4 -1.2
CMB    Columbia Colle     76.04  54  eP     P        22 11 17.9 -0.3
       comp=Z,34nm,1.1s,mb5.2
CMB    Columbia Colle     76.04  54  eP     P        22 11 17.9 -0.2
CMB                                 pmax    pmax
       comp=Z,34nm,1.1s,mb5.2
ANN    Anapa              76.11 315  eP     P        22 11 21.6 +3.2
ANN                                eS       S        22 21 06.3 +6.3
ANN                                 pmax    pmax
       comp=Z,126nm,1.0s,mb5.8
ANN                                 MLR     MLR
       comp=Z,1µm,19.0s,MS5.1
ERZM   Erzurum            76.29 309 i P     P        22 11 19.9 +0.4
HRY    Holter Researc     76.66  43  eP     P        22 11 21.6 +0.2
SHAO   Shalim             76.90 283   P     P        22 11 24.8 +1.4
       SNR=5.6
HLID   Hailey             76.91  46  eP     P        22 11 23.4 +0.5
       comp=Z,16nm,1.3s,mb4.8
DLMT   Dillon             76.98  44  eP     P        22 11 23.4 +0.2
       comp=Z,87nm,1.4s,mb5.5
MCMT   McKenzie Canyo     77.14  45  eP     P        22 11 23.2 -0.9
NVAR   Mina Array Bea     77.22  52   P     P        22 11 24.1 -0.6
       comp=Z,2.9nm,0.8s,mb4.2,baz=281,slow=4.9,SNR=17
NVAR                                LR      LR       22 47 30.9
       comp=Z,818nm,18.3s,MS5.1,baz=285,slow=37
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AKASG	Malin Array Be	77.24	323	P	P	22 11 23.2	-1.3
	comp=Z,3.3nm,0.5s,mb4.5,baz=47,slow=6.1,SNR=27						
AKASG	Malin Array Be	77.24	323	P	P	22 11 23.2	-1.3
AKASG	Malin Array Be	77.24	323	i P	P	22 11 24.1	-0.4
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BOZ	Bozeman (W)	77.38	43	eP	P	22 11 25.9	+0.5
	comp=Z,18nm,1.0s,mb5.0						
BOZ	Bozeman (W)	77.38	43	eP	P	22 11 26.0	+0.6
BOZ				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
KELT	Kelkit	77.53	310	i P	P	22 11 27.9	+1.6
NB2	NORSAR Subarra	77.60	338	P	P	22 11 26.1	-0.2
	comp=Z,8.2nm,0.8s,mb4.7,baz=41,slow=5.6						
NOA	NORSAR Array B	77.60	338	P	P	22 11 25.4	-0.9
	comp=Z,8.4nm,0.8s,mb4.7,baz=40,slow=5.6,SNR=29						
NOA				LR	LR	22 49 09.8	
	comp=Z,1µm,19.9s,MS5.3,baz=45,slow=38						
MTUM	Tungsten Hills	77.63	53	eP	P	22 11 26.7	-0.3
GRSN	GIRESUNGRSN	77.73	311	i P	P	22 11 21.4	-6.1
NAO01	NORSAR Array S	77.86	338	P	P	22 11 26.4	-1.3
NAO	NORSAR Subarra	77.89	338	P	P	22 11 26.1	-1.8
	comp=Z,8.2nm,0.8s,mb4.7						
NAO	NORSAR Subarra	77.89	338	P	P	22 11 26.1	-1.8
NAO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
ELK	Elko	77.95	49	P	P	22 11 29.4	+0.8
	comp=Z,2.0nm,0.8s,mb4.1,baz=319,slow=4.1,SNR=10						
ELK	Elko	77.95	49	eP	P	22 11 28.9	+0.2
	comp=Z,21nm,1.2s,mb4.9						
ELK	Elko	77.95	49	eP	P	22 11 28.9	+0.2
ELK				pmax	pmax		
	comp=Z,21nm,1.2s						
QLMT	Earthquake Lak	77.97	44	eP	P	22 11 28.9	+0.3
SIM	Simferopol’	77.98	316	P	P	22 11 30.8	+2.1
SIM				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.2						
SIM				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.2						
SUW	Suwalki	78.01	328	eP	P	22 11 33.0	+4.3
SUW	Suwalki	78.01	328	eP	P	22 11 28.0	-0.7
	comp=Z,43nm,1.1s,mb5.3						
SUW	Suwalki	78.01	328	eP	P	22 11 28.0	-0.7
SUW				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.3						
MARD	Mardin	78.06	307	i P	P	22 11 29.4	0.0
TPH	Tonopah	78.13	52	eP	P	22 11 30.2	+0.5
	comp=Z,24nm,1.3s,mb5.0						
TPH	Tonopah	78.13	52	eP	P	22 11 30.2	+0.5
TPH				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.0						
YMR	Madison River	78.33	44	eP	P	22 11 31.4	+0.8
	comp=Z,22nm,0.9s,mb5.1						
YFT	Old Faithful	78.53	44	P	P	22 11 32.9	+1.2
LKWY	Lake	78.72	44	P	P	22 11 32.9	+0.2
	comp=Z,30nm,0.9s,mb5.2						
LKWY	Lake	78.72	44	P	P	22 11 32.9	+0.1
LKWY				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
IMW	Indian Meadow	78.79	45	eP	P	22 11 33.8	+0.6
	comp=Z,33nm,1.1s,mb5.2						
DAC	Darwin (Calif)	78.86	54	eP	P	22 11 33.5	-0.3
	comp=Z,15nm,1.1s,mb4.8						
DAC	Darwin (Calif)	78.86	54	eP	P	22 11 33.5	-0.3
DAC				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
HVU	Hansel Valley	78.91	47	eP	P	22 11 33.8	-0.1
	comp=Z,17nm,1.0s,mb4.9						
HVU	Hansel Valley	78.91	47	eP	P	22 11 33.8	-0.1
HVU				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
MOOW	Moose Ponds	78.99	45	eP	P	22 11 34.3	0.0
	comp=Z,17nm,1.1s,mb4.9						
TPAW	Teton Pass	79.02	45	eP	P	22 11 34.9	+0.4
	comp=Z,32nm,1.0s,mb5.2						
ABTO	Aybut	79.14	284	P	P	22 11 37.0	+1.4
	SNR=14						
REDW	Red Top Meadow	79.16	45	eP	P	22 11 36.1	+0.9
	comp=Z,42nm,1.4s,mb5.2						
TPNV	Topopah Spring	79.40	53	eP	P	22 11 36.1	-0.6
	comp=Z,36nm,1.1s,mb5.2						
TPNV	Topopah Spring	79.40	53	eP	P	22 11 36.1	-0.6
TPNV				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
BOYT	Boyabat	79.55	313	i P	P	22 11 38.6	+1.2
SFJD	Kangerlussuaq	79.57	5	P	P	22 11 37.4	+0.4
	comp=Z,6.6nm,0.8s,mb4.6,baz=170,slow=16,SNR=2.3						
MWC	Mount Wilson	79.67	56	eP	P	22 11 38.3	+0.1
HWUT	Hardware Ranch	79.75	47	eP	P	22 11 39.0	+0.5
	comp=Z,56nm,1.4s,mb5.3						
LAO	LASA Array	79.78	40	P	P	22 11 38.7	+0.2
	comp=Z,33nm,1.0s,mb5.2						
DUG	Dugway	79.79	49	eP	P	22 11 38.6	-0.1
	comp=Z,24nm,1.3s,mb5.0						
DUG	Dugway	79.79	49	eP	P	22 11 38.6	-0.1
DUG				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.0						
GSC	Goldstone	79.93	54	P	P	22 11 39.2	-0.4
TCUT	Toone Canyon	80.13	47	eP	P	22 11 40.7	+0.2
GZT	Gaziantep	80.17	308	i P	P	22 11 40.6	-0.2
BW06	Boulder Array	80.27	45	eP	P	22 11 41.2	0.0
	comp=Z,7.7nm,1.0s,mb4.6						
PDAR	Pinedale Array	80.27	45	P	P	22 11 41.2	0.0
	comp=Z,1.9nm,0.6s,mb4.2,baz=296,slow=2.5,SNR=16						
PDAR				LR	LR	22 48 30.0	
	comp=Z,427nm,18.1s,MS4.8,baz=179,slow=37						
DAU	Daniels Canyon	80.64	48	P	P	22 11 44.9	+1.7
CDAG	Cicekdag	80.92	312	i P	P	22 11 44.0	-0.7
ELDT	Eldivan	81.00	313	i P	P	22 11 44.6	-0.5
NEN	Nelson	81.06	53	eP	P	22 11 46.2	+0.7
PFO	Pinyon Flat Ob	81.11	56	eP	P	22 11 46.2	+0.3
	comp=Z,39nm,1.3s,mb5.2						
PFO	Pinyon Flat Ob	81.11	56	eP	P	22 11 46.2	+0.3
PFO				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.2						
KWP	Kalwaria	81.14	325	eP	P	22 11 46.6	+0.9
KWP	Kalwaria	81.14	325	eP	P	22 11 46.6	+0.9
MSU	Marysvale	81.17	50	eP	P	22 11 47.4	+1.3
LDFC	Landfair	81.21	54	P	P	22 11 46.4	0.0
BURAR	Bucovina Array	81.22	322	⇑P	P	22 11 46.8	+0.7
BURAR	Bucovina Array	81.22	322	⇑P	P	22 11 46.8	+0.7
CFR	Carcaliu	81.23	319	⇓P	P	22 11 47.8	+1.6
CFR	Carcaliu	81.23	319	⇓P	P	22 11 47.8	+1.6
BR131	Keskin Array S	81.32	312	eP	P	22 11 46.9	+0.1
	comp=Z,10nm,0.8s,mb4.8						
BRTR	Keskin Array B	81.32	312	P	P	22 11 46.4	-0.4
	comp=Z,11nm,0.8s,mb4.8,baz=119,slow=4.1,SNR=27						
TMUT	Trail Mountain	81.32	49	P	P	22 11 46.9	0.0
BAR	Barrett	81.48	57	eP	P	22 11 47.0	-0.8
COBT	Iskenderun	81.51	308	i P	P	22 11 48.9	+1.0
VRI	Vrincioaia	81.56	320	⇑P	P	22 11 49.5	+1.6
VRI	Vrincioaia	81.56	320	⇑P	P	22 11 49.5	+1.6
HARR	Harsova	81.65	319	⇑P	P	22 11 49.6	+1.2
HARR	Harsova	81.65	319	⇑P	P	22 11 49.6	+1.2
ANTO	Ankara	81.76	313	eP	P	22 11 48.3	-0.8
	comp=Z,11nm,0.7s,mb4.9						
ANTO	Ankara	81.76	313	eP	P	22 11 48.3	-0.8
ANTO				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
SGKT	Sivrigoynuk	81.79	313	i P	P	22 11 49.2	0.0
MUD	Monsted U’grnd	81.82	335	i P	P	22 11 50.8	+1.8
MUD	Monsted U’grnd	81.82	335	i S	S	22 22 01.4	+1.2
	comp=Z,1µm,17.0s						
MUD	Monsted U’grnd	81.82	335	eP	P	22 11 50.8	+1.8
MUD				i S	S	22 22 01.4	+1.2
KOLS	Kolonicke sedl	81.82	324	eP	P	22 11 48.2	-1.0
KOLS				e		22 12 01.5	
SRU	San Rafael	81.86	48	eP	P	22 11 49.5	-0.1
	comp=Z,16nm,0.7s,mb5.0						
SRU	San Rafael	81.86	48	eP	P	22 11 49.5	-0.1
SRU				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
STHS	Stebnicka Huta	81.99	325	eP	P	22 11 48.9	-1.2
STHS				e		22 12 07.8	
MZLS	Mizel	82.03	293	P	P	22 11 51.1	+0.3
OJC	Ojcow	82.12	326	eP	P	22 11 51.1	+0.4
MLR	Muntele Rosu	82.22	320	P	P	22 11 51.0	-0.4
	comp=Z,9.0nm,1.2s,mb4.6,baz=160,slow=15,SNR=2.8						
CRVS	Cervenica-Dubn	82.24	325	eP	P	22 11 52.9	+1.5
RWWY	Rawlins	82.31	45	P	P	22 11 52.5	+0.6
	comp=Z,21nm,1.0s,mb5.0						
ULM	Lac du Bonnet	82.60	33	P	P	22 11 53.1	-0.1
	comp=Z,3.0nm,0.9s,mb4.3,baz=18,slow=9.2,SNR=2.6						
HILS	Ha’il	82.78	298	P	P	22 11 55.4	+0.7
KDHN	Kadinhani	82.99	312	i P	P	22 11 54.4	-1.1
PPT	Papeete	82.99	116	eLR	LR	22 37 12.8	
	comp=Z,2µm,25.8s,baz=316						
PPT	Papeete	82.99	116	LR	LR	22 48 18.9	
	comp=Z,775nm,18.8s,MS5.1,baz=122,slow=35						
KECS	Kecovo	83.00	325	eP	P	22 11 55.1	-0.2
OKC	Ostrava-Krasne	83.15	327	eP	P	22 11 56.7	+0.6
OKC				epP	pP	22 12 00.4	-0.6
OKC				ex	x	22 12 08.2	
OKC				ex	x	22 15 17.2	
OKC				eS	S	22 22 19.4	+5.5
OKC				AMS	AMS	22 52 40.0	
	comp=Z,1µm,15.8s						
OKC	Ostrava-Krasne	83.15	327	eP	P	22 11 56.7	+0.6
OKC				e		22 12 08.2	
OKC				eS	S	22 22 19.4	+5.5
ESKT	Eskisehir	83.16	313	i P	P	22 11 55.3	-1.0
PV10	Paradox Valley	83.23	48	eP	P	22 11 57.5	+0.8
KSP	Ksiaz	83.25	329	eP	P	22 11 56.6	0.0
KSP	Ksiaz	83.25	329	eP	P	22 11 56.4	-0.2
KSP				LR	LR		
	comp=Z,4µm,18.2s,MS5.8						
WUAZ	Wupatki	83.44	52	P	P	22 11 57.9	0.0
	comp=Z,14nm,1.0s,mb5.0						
MORC	Moravsky Berou	83.46	327	eP	P	22 11 56.8	-0.8
	comp=Z,26nm,1.3s,mb5.1						
MORC	Moravsky Berou	83.46	327	eP	P	22 11 56.8	-0.9
MORC				pmax	pmax		
	comp=Z,26nm,1.3s,mb5.1						
DPC	Dobruska-Polom	83.60	328	eP	P	22 11 59.1	+0.8
DPC				epP	pP	22 12 03.5	+0.2
DPC				ex	x	22 12 10.1	
DPC				ePP	PP	22 15 09.8	-3.0
DPC				eS	S	22 22 20.4	+2.0
DPC				AMS	AMS	22 53 30.0	
	comp=Z,2µm,16.4s						
DPC	Dobruska-Polom	83.60	328	eP	P	22 11 59.1	+0.8
DPC				e		22 12 10.1	
DPC				e		22 15 09.8	
DPC				eS	S	22 22 20.4	+2.0
DPC				MLR	MLR		
	comp=Z,2µm,16.4s,MS5.5						
UPC	Upice	83.62	328	eP	P	22 11 59.0	+0.6
UPC				epP	pP	22 12 03.1	-0.3
UPC				ex	x	22 12 10.4	
UPC	Upice	83.62	328	eP	P	22 11 59.0	+0.6
UPC				e		22 12 10.4	
PV01	Paradox Valley	83.67	48	eP	P	22 11 59.7	+0.7
PSZ	Piszkesteto	83.67	325	⇓eP	P	22 11 59.8	+1.0
QURS	Qurayyt al Mil	83.74	303	P	P	22 12 00.2	+0.7
AFFS	‘Afif	83.78	294	P	P	22 12 00.7	+0.8
VYHS	Vyhne	83.78	326	eP	P	22 12 00.0	+0.7
VYHS				ePP	PP	22 15 11.6	-2.7
SMCO	Snowmass	84.01	47	eP	P	22 12 01.7	+1.0
	comp=Z,26nm,1.2s,mb5.2						
RW3	Ridgway	84.14	48	eP	P	22 12 02.6	+1.2
PVCC	Panska Ves	84.23	329	eP	P	22 12 01.9	+0.4
PVCC				epP	pP	22 12 06.6	+0.1
PVCC				ex	x	22 12 12.8	
PVCC				AMS	AMS	22 52 40.0	
	comp=Z,2µm,17.9s						
PVCC	Panska Ves	84.23	329	eP	P	22 12 01.9	+0.4
PVCC				e		22 12 12.8	
PVCC				MLR	MLR		
	comp=Z,2µm,17.9s,MS5.4						
VRAC	Vranov	84.23	327	P	P	22 12 01.5	0.0
	comp=Z,11nm,0.9s,mb5.0,baz=46,slow=5.3,SNR=8.6						
BRG	Berggiesshubel	84.24	330	i P	P	22 12 02.3	+0.7
	comp=Z,11nm,0.9s,mb5.0						
BRG				i	pP	22 12 06.3	-0.2
BRG				i		22 12 14.3	
BRG				e		22 14 48.8	
BRG				PP	PP	22 15 21.9	+3.9
BRG				S	S	22 22 24.0	-0.8
BRG				LR	LR		
	comp=Z,1µm,17.6s,MS5.4						
BRG	Berggiesshubel	84.24	330	i P	P	22 12 02.3	+0.8
BRG				i		22 12 14.3	
BRG						22 15 21.9	
BRG				S	S	22 22 24.0	-0.8
BRG				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.0						
BRG				MLR	MLR		
	comp=Z,1µm,17.6s,MS5.4						
CLL	Collm	84.31	330	P	P	22 12 00.0	-1.9
	comp=Z,logA/T=0.9,mb4.8						
CLL				i	pP	22 12 03.1	-3.7
CLL				i *PP	pP	22 12 06.1	-0.7
CLL				i		22 12 13.6	
CLL				i PP	PP	22 15 21.1	+2.6
CLL	Collm	84.31	330	eP	P	22 12 00.0	-1.9
	comp=Z,12nm,1.4s,mb4.8						
CLL				i	pP	22 12 06.1	-0.7
CLL				i pP	pP	22 12 13.6	+6.8
CLL				S	S	22 22 13.0	-12
CLL				LR	LR		
	comp=Z,2µm,16.9s,MS5.5						
CLL	Collm	84.31	330	eP	P	22 12 00.0	-1.9
CLL				i	pP	22 12 06.1	-0.7
CLL				i *PP	pP	22 12 13.6	+6.8
CLL				eS	S	22 22 13.0	-12
CLL				pmax	pmax		
	comp=Z,12nm,1.4s,mb4.8						
CLL				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.3						
CLL				MLR	MLR		
	comp=Z,2µm,16.9s,MS5.5						
CSS	Prodhromos	84.35	308	eP	P	22 12 02.8	+0.3
	comp=Z,24nm,0.6s,mb5.5						
SMOL	Smolenice	84.42	326	e	P	22 12 01.5	-1.0
KAMS	Al Khamasin	84.54	291	P	P	22 12 03.6	-0.1
PRU	Pruhonice	84.64	329	eP	P	22 12 04.4	+0.8
PRU				epP	pP	22 12 08.5	-0.1
PRU				ex	x	22 12 16.9	
PRU				ePP	PP	22 15 24.1	+2.9
PRU				eS	S	22 22 30.8	+2.0
PRU				AMS	AMS	22 53 30.0	
	comp=Z,2µm,17.1s						
PRU	Pruhonice	84.64	329	eP	P	22 12 04.4	+0.8
PRU				e		22 12 16.9	
PRU				e		22 15 24.1	
PRU				eS	S	22 22 30.8	+2.0
PRU				MLR	MLR		
	comp=Z,2µm,17.1s,MS5.5						
TREC	Trest	84.74	328	epP	pP	22 12 09.0	0.0
TREC				ex	x	22 12 16.8	
TREC				eS	S	22 22 30.7	+1.0
TREC				AMS	AMS	22 53 50.0	
ZST	Bratislava	84.80	326	eS	S	22 22 36.8	+6.4
ZST				eL		22 55 13.7	
ZST	Bratislava	84.80	326	eP	P	22 12 05.6	+1.2
ZST				eS	S	22 22 36.8	+6.4
TAOE	Nuku Hiva Isla	85.28	104	eLR	LR	22 38 19.2	
	comp=Z,4µm,24.3s						
NKC	Novy Kostel	85.35	330	eP	P	22 12 05.2	-1.9
NKC				epP	pP	22 12 12.4	+0.3
NKC				eS	S	22 22 35.8	+0.1
NKC				AMS	AMS	22 56 20.0	
	comp=Z,1µm,13.8s						
MOX	Moxa	85.39	331	i P	P	22 12 08.5	+1.2
	comp=Z,logA/T=1.3,mb5.2						
MOX				L		22 56 52.0	
MOX	Moxa	85.39	331	eP	P	22 12 08.5	+1.2
	comp=Z,27nm,1.5s,mb5.2						
MOX				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
MOX	Moxa	85.39	331	eP	P	22 12 08.5	+1.2
MOX				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.2						
MOX				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.2						
PKSM	Moragy	85.48	324	⇑iP	P	22 12 08.9	+1.0
KBRS	Khaybar	85.54	298	P	P	22 12 10.1	+1.4
KHC	Kasperske Hory	85.70	329	eP	P	22 12 08.7	-0.2
KHC				epP	pP	22 12 13.7	-0.2
KHC				ex	x	22 12 22.0	
KHC				eS	S	22 22 39.0	-0.1
KHC				AMS	AMS	22 54 50.0	
	comp=Z,2µm,16.8s						
TUC	Tucson	85.75	54	eP	P	22 12 09.3	-0.2
SDCO	Great Sand Dun	85.81	47	eP	P	22 12 08.3	-1.4
	comp=Z,6.3nm,0.8s,mb4.9						
TATS	Tathlith	85.83	291	P	P	22 12 10.7	+0.5
GERES	GERESS Array B	85.86	328	P	P	22 12 09.7	0.0
	comp=Z,3.0nm,0.8s,mb4.6,baz=34,slow=4.8,SNR=12						
GERES				LR	LR	22 57 16.3	
	comp=Z,1µm,19.2s,MS5.4,baz=211,slow=40						
TBKS	Tabuk	86.12	301	P	P	22 12 12.2	+0.8
ARSA	Arzberg	86.22	326	⇑P	P	22 12 14.4	+2.9
	comp=Z,9.6nm,1.2s,mb4.9						
EYMN	Ely	86.25	33	eP	P	22 12 11.9	+0.2
GRA1	Grafenberg Arr	86.28	330	eP	P	22 12 11.0	-0.7
	comp=Z,20nm,1.1s,mb5.3						
GRF	Grafenberg Arr	86.28	330	eP	P	22 12 11.0	-0.7
	comp=Z,20nm,1.1s,mb5.3						
GRF	Grafenberg Arr	86.28	330	eP	P	22 12 11.0	-0.7
GRF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.3						
GRF	Grafenberg Arr	86.28	330	eP	P	22 12 11.0	-0.7
GRF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.3						
MOA	Molln	86.35	327	⇓eP	P	22 12 14.6	+2.5
	comp=Z,7.8nm,1.0s,mb4.9						
TBI	Tubuai	86.63	121	eLR	LR	22 38 53.0	
	comp=Z,1µm,24.0s,baz=324						
HAQS	Haql	86.78	303	P	P	22 12 16.1	+1.4
DJNS	Zahran al Janu	86.79	289	P	P	22 12 16.3	+1.3
VAY	Valandovo	86.82	319	eP	P	22 12 20.1	+5.5
VAY	Valandovo	86.82	319	eP	P	22 12 20.1	+5.5
ANMO	Albuquerque	86.97	50	P	P	22 12 15.2	-0.3
	comp=Z,1.2nm,0.5s,mb4.4,baz=333,slow=5.1,SNR=2.5						
ANMO	Albuquerque	86.97	50	eP	P	22 12 15.2	-0.3
	comp=Z,6.7nm,1.1s,mb4.8						
ANMO	Albuquerque	86.97	50	⇑iP	P	22 12 17.8	+2.3
SKO	Skopje	87.00	320	eP	P	22 12 15.8	+0.4
SKO	Skopje	87.00	320	eP	P	22 12 15.8	+0.4
BDAS	Al Bad‘	87.03	302	P	P	22 12 17.1	+1.2
AYUS	‘Aynunah	87.05	302	P	P	22 12 17.5	+1.4
BLJS	Baljurashi	87.10	292	P	P	22 12 17.3	+0.9
UMJS	Umm Lajj	87.30	298	P	P	22 12 19.1	+1.8
KBA	Koelnbreinsper	87.34	327	⇑eP	P	22 12 19.8	+2.8
	comp=Z,8.2nm,0.9s,mb5.0						
KBA	Koelnbreinsper	87.34	327	⇑eP	P	22 12 19.8	+2.8
	comp=Z,8.2nm,0.9s,mb5.0						
KBA	Koelnbreinsper	87.34	327	⇑eP	P	22 12 19.8	+2.8
KBA				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb5.0						
BNM	Barren Site	87.37	50	eP	P	22 12 18.0	+0.6
BIA	Bitola	87.71	319	eP	P	22 12 22.2	+3.3
BIA	Bitola	87.71	319	eP	P	22 12 22.2	+3.3
OHR	Ohrid	87.94	319	eP	P	22 12 22.7	+2.7
OHR	Ohrid	87.94	319	eP	P	22 12 22.7	+2.7
BAIF	Baives	88.73	334	eP	P	22 12 23.7	+0.1
CDF	Champ du Feu	88.89	331	eP	P	22 12 24.8	+0.4
	comp=Z,7.1nm,0.8s,mb4.8						
CDF	Champ du Feu	88.89	331	eP	P	22 12 24.8	+0.4
CDF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.8						
SCHQ	Schefferville	88.89	16	LR	LR	22 58 50.0	
	comp=Z,333nm,18.8s,MS4.8,baz=283,slow=40						
HAU	Haudompre	89.59	332	eP	P	22 12 27.3	-0.4
HAU				eR			
	comp=Z,1µm,22.2s						
MEZF	Maizieres J’vi	89.69	333	eP	P	22 12 28.0	-0.1
CABF	La Chapelle	90.82	331	eP	P	22 12 33.2	-0.2
LOR	Lormes	91.17	333	eP	P	22 12 35.1	+0.1
	comp=Z,4.2nm,0.7s,mb4.6						
LOR				eR			
	comp=Z,832nm,19.2s						
LOR	Lormes	91.17	333	eP	P	22 12 35.1	+0.1
LOR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.6						
LOR				MLR	MLR		
	comp=Z,830nm,19.3s,MS5.2						
LPL	La Plagne	91.44	330	eP	P	22 12 36.2	-0.1
LPG	La Plagne	91.44	330	eP	P	22 12 37.1	+0.8
SSF	Saint Saulge	91.47	333	eP	P	22 12 36.5	+0.1
	comp=Z,8.4nm,1.0s,mb5.0						
SSF	Saint Saulge	91.47	333	eP	P	22 12 36.5	+0.1
SSF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.0						
FLN	La Foliniere	91.49	336	eP	P	22 12 36.1	-0.3
	comp=Z,21nm,0.9s,mb5.2						
FLN				eR			
	comp=Z,2µm,18.2s						
FLN	La Foliniere	91.49	336	eP	P	22 12 36.1	-0.3
FLN				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.2						
FLN				MLR	MLR		
	comp=Z,2µm,18.3s,MS5.5						
LDF	La Druitiere	91.51	336	eP	P	22 12 36.5	0.0
	comp=Z,6.6nm,0.7s,mb4.8						
LDF	La Druitiere	91.51	336	eP	P	22 12 36.5	0.0
LDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.7						
SMF	Signal de Mont	91.69	332	eP	P	22 12 36.8	-0.6
AVF	Avril sur Loir	91.76	333	eP	P	22 12 36.9	-0.8
	comp=Z,27nm,0.8s,mb5.3						
AVF	Avril sur Loir	91.76	333	eP	P	22 12 36.9	-0.8
AVF				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.3						
GRR	Gorron	91.94	336	eP	P	22 12 38.1	-0.4
	comp=Z,36nm,1.0s,mb5.4						
GRR	Gorron	91.94	336	eP	P	22 12 38.1	-0.4
GRR				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.4						
MBDF	Montbardon	92.06	330	eP	P	22 12 39.2	+0.1
	comp=Z,21nm,0.8s,mb5.2						
MBDF	Montbardon	92.06	330	eP	P	22 12 39.2	+0.1
MBDF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.2						
BGF	Bois d’Agland	92.14	333	eP	P	22 12 39.2	-0.3
ORIF	Oris-en-Rattie	92.28	330	eP	P	22 12 39.9	-0.2
	comp=Z,29nm,1.1s,mb5.2						
ORIF				eR			
	comp=Z,841nm,17.8s						
LTX	Lajitas	92.38	52	eP	P	22 12 40.0	-1.0
	comp=Z,27nm,1.5s,mb5.3						
LTX	Lajitas	92.38	52	eP	P	22 12 40.0	-1.0
LTX				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.4						
TXAR	Lajitas Array	92.38	52	P	P	22 12 40.9	-0.1
	comp=Z,1.4nm,0.6s,mb4.5,baz=288,slow=4.0,SNR=8.1						
SBF	Sospel	92.46	329	eP	P	22 12 40.3	-0.7
	comp=Z,31nm,0.8s,mb5.4						
SBF	Sospel	92.46	329	eP	P	22 12 40.3	-0.7
SBF				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.4						
TCF	Toulx Ste Croi	92.61	333	eP	P	22 12 41.3	-0.3
	comp=Z,12nm,0.9s,mb5.0						
TCF	Toulx Ste Croi	92.61	333	eP	P	22 12 41.3	-0.3
TCF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb5.0						
SGMF	Saint Gilles	92.62	337	eP	P	22 12 41.8	+0.2
	comp=Z,12nm,0.9s,mb5.0						
SGMF	Saint Gilles	92.62	337	eP	P	22 12 41.8	+0.2
SGMF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb5.0						
ROSF	Rostrenen	92.78	337	eP	P	22 12 42.0	-0.4
	comp=Z,36nm,1.1s,mb5.4						
ROSF	Rostrenen	92.78	337	eP	P	22 12 42.0	-0.4
ROSF				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.4						
PGF	Pioggiola	92.80	327	eP	P	22 12 42.2	-0.4
	comp=Z,204nm,1.5s,mb6.0						
PGF	Pioggiola	92.80	327	eP	P	22 12 42.2	-0.4
PGF				pmax	pmax		
	comp=Z,102nm,1.5s,mb6.0						
VIVF	Saint-Julien-l	92.83	331	eP	P	22 12 42.8	+0.1
	comp=Z,9.9nm,0.7s,mb5.0						
VIVF	Saint-Julien-l	92.83	331	eP	P	22 12 42.8	+0.1
VIVF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb5.0						
FRF	La Foret Royal	93.05	329	eP	P	22 12 43.0	-0.7
	comp=Z,83nm,1.2s,mb5.7						
FRF	La Foret Royal	93.05	329	eP	P	22 12 43.0	-0.7
FRF				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.7						
QUIF	Quistinic	93.12	337	eP	P	22 12 43.9	0.0
SMRF	Simiane la Rot	93.17	330	eP	P	22 12 43.4	-0.9
MFF	Saint Martin d	93.22	335	eP	P	22 12 44.2	-0.2
	comp=Z,20nm,1.0s,mb5.2						
MFF	Saint Martin d	93.22	335	eP	P	22 12 44.2	-0.2
MFF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb5.2						
LMR	La Mourre	93.29	329	eP	P	22 12 43.8	-1.0
RJF	Les Rejaudoux	93.70	333	eP	P	22 12 46.5	-0.2
	comp=Z,10nm,0.8s,mb5.0						
RJF				eR			
	comp=Z,1µm,22.5s						

RJF	Les Rejaudoux	93.70	333	*e*P	P	22 12 46.5	-0.2
RJF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb5.0						
RJF				MLR	MLR		
	comp=Z,1µm,22.5s,MS5.2						
LASF	Ste Croix	93.80	331	*e*P	P	22 12 46.4	-0.8
	comp=Z,29nm,1.1s,mb5.3						
CAF	Calviac	93.81	332	*e*P	P	22 12 46.6	-0.6
	comp=Z,13nm,1.0s,mb5.0						
CAF	Calviac	93.81	332	*e*P	P	22 12 46.6	-0.6
CAF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
LFF	La Frestale	94.30	333	*e*P	P	22 12 48.2	-1.3
MTLF	Montolieu	95.07	331	*e*P	P	22 12 51.5	-1.5
	comp=Z,13nm,1.0s,mb5.0						
MTLF	Montolieu	95.07	331	*e*P	P	22 12 51.5	-1.5
MTLF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
EPF	Esparros	96.07	332	*e*P	P	22 12 56.2	-1.5
	comp=Z,8.6nm,1.0s,mb4.8						
EPF	Esparros	96.07	332	*e*P	P	22 12 56.2	-1.5
EPF				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.8						
NATX	Nacogdoches	96.41	45	P	P	22 12 58.7	-0.8
RKT	Rikitea	97.34	113	*e*LR	LR	22 43 52.3	
	comp=Z,1µm,34.8s,baz=318						
EVO	Evora	103.07	336	*e*P	Pdif	22 13 28.2	-1.1
EVO				*e*R			
	comp=Z,1µm,19.2s						
MAW	Mawson	116.19	205	PP	PP	22 19 19.5	-2.5
	comp=Z,3.0nm,1.0s,baz=64,slow=9.5,SNR=4.3						
BOSA	Boshof	125.81	257	PKP	PKPdf	22 18 33.5	-1.4
	comp=Z,1.9nm,0.8s,baz=150,slow=20,SNR=3.1						
SDV	Santo Domingo	128.12	42	PKP	PKPdf	22 18 37.0	-2.8
	comp=Z,3.9nm,0.6s,baz=165,slow=0.1,SNR=5.9						
SDV	Santo Domingo	128.12	42	*e*PKPdf	PKPdf	22 18 36.3	-3.5
DBIC	Dimbokro	128.94	315	PKP	PKPdf	22 18 37.2	-4.2
	comp=Z,2.9nm,1.0s,baz=90,slow=9.9,SNR=3.7						
DBIC	Dimbokro	128.94	315	PKP	PKPdf	22 18 37.2	-4.2
LIC	Lamto	129.40	315	*e*PKIKP	PKPdf	22 18 37.4	-4.8
LIC				*e*R			
	comp=Z,917nm,21.8s						
VNA2	Neumayer--Watz	138.76	195	P	PKPdf	22 18 56.0	-2.1
VNA2	Neumayer--Watz	138.76	195		PKPdf	22 18 59.7	+1.6
VNA3	Neumayer Olymp	138.98	194	P	PKPdf	22 18 53.9	-4.6
VNA3	Neumayer Olymp	138.98	194		PKPdf	22 19 00.0	+1.5
VNA3	Neumayer Olymp	138.98	194		PKPdf	22 19 04.4	+5.9
ARE	Arequipa	145.94	69	P	PKPbc	22 19 13.0	+3.6
LPAZ	La Paz	148.42	65	PKPbc	PKPdf	22 19 18.0	+1.8
	comp=Z,13nm,0.9s,baz=358,slow=4.5,SNR=21						
LPAZ	La Paz	148.42	65	*e*PKPbc	PKPdf	22 19 18.5	+2.3
LPAZ	La Paz	148.42	65	PKP2	PKPab	22 19 18.0	-3.5
LPAZ				pmax	pmax		
	comp=Z,13nm,0.9s						
PLCA	Paso Flores	153.53	115	PKPbc	PKPdf	22 19 30.9	+7.8
	comp=Z,3.4nm,0.9s,baz=345,slow=1.9,SNR=4.2						
CPUP	Villa Florida	162.32	72	PKP	PKPdf	22 19 32.4	-1.8

MOS ***17*** *22:06:05.0±1.2, 33.50N×141.93E, h33^{km}, mb4.7/6, Error ellipse: s-maj=21.3km s-min=9.7km az=116.3*
BJI ***17*** *22:06:07.2, 33.14N×141.21E, h36^{km}, mB4.4, mb4.5, Ms4.4, Msz4.4*
IDC ***17*** *22:06:07.5±6.1, 33.34N×141.57E, h30^{km}±44^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.8/22, mbtmp4.1/10, ML3.9/2, Error ellipse: s-maj=24.7km s-min=16.1km az=68.0*
JMA ***17*** *22:06:07.3±0.3, 33.45N×141.55E, h82^{km}±5^{km}, M3.4*
NEIC ***17*** *22:06:09.7±1.8, 33.37N×141.45E, h48^{km}±14^{km}, mb4.5/5, Error ellipse: s-maj=22.0km s-min=13.0km az=74.0*
ISC 17 22:06:06.4±1.0, **33.38N**±0.04×**141.61E**±0.08, **h40**^{km}±8^{km}, **n47**, σ**0**^{s}**98**/54, **mb4.2**/14, **MS4.8**/1, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.38	338	P	P	22 06 30.2	+0.7
JHJ2	Mitsune	1.53	261	P	P	22 06 32.8	+1.2
JHJ2				*e*S	S	22 06 52.8	+2.3
JHJ	Hachijo jima 2	1.55	261	Pn	P	22 06 32.2	+0.2
	106nm,0.3s,baz=76,slow=18,SNR=11						
JHJ				Sn	S	22 06 50.0	-1.2
	153nm,0.3s,baz=92,slow=19,SNR=6.2						
BSO3	Boso 3	1.69	328	P	P	22 06 34.9	+1.0
JKO	Kozu shima	2.21	292	P	P	22 06 41.6	+0.2
JIM2	Oshima 3	2.25	307	P	P	22 06 41.3	-0.6
KTJJ	Kamata 2	2.62	307	P	P	22 06 47.3	+0.1
JIZS	Izushimoda	2.63	301	P	P	22 06 47.5	+0.1
JOD2	Odawara 2	2.81	313	P	P	22 06 49.2	-0.7
JOD2				*e*S	S	22 07 21.8	-1.1
MJAR	Matsushiro Arr	4.21	319	Pn	P	22 07 09.8	-0.1
	3.6nm,0.3s,baz=146,slow=15,SNR=12						
MJAR				Sn	S	22 07 57.6	-0.9
	1.9nm,0.3s,baz=163,slow=13,SNR=3.4						
MAJO	Matsushiro	4.22	319	*e*Pn	P	22 07 10.5	+0.6
MAT	Matsushiro	4.22	319	P	P	22 07 10.0	+0.1
MAT				S	S	22 07 57.5	-1.1
MAT	Matsushiro	4.22	319	P	P	22 07 11.0	+1.1
MAT				*e*S	S	22 07 58.0	-0.6
CBIJ	Chichi jima	6.28	175	Pn	P	22 07 36.8	-2.1
	11nm,0.3s,baz=284,slow=20,SNR=5.2						
CBIJ				Sn	S	22 08 42.4	-7.9
	7.1nm,0.3s,baz=116,slow=24,SNR=3.0						
ASAJ	Asahikawa	10.75	4	Pn	P	22 08 36.0	-4.8
	0.5nm,0.3s,baz=227,slow=22,SNR=3.5						
ASAJ				Sn	S	22 10 31.1	-10
	0.3nm,0.3s,baz=148,slow=15,SNR=2.2						
ASAJ	Asahikawa	10.75	4	P	P	22 08 36.0	-4.8
ASAJ						22 10 31.2	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MDJ	Mudanjiang	14.59	324	P	P	22 09 31.9	+0.2
CN2	Changchun	16.34	314	*e*P	P	22 09 54.4	+0.1
PET	Petropavlovsk	23.13	27	*e*P	P	22 11 05.8	-3.8
PET				*e*S	S	22 15 14.7	+0.6
PET				MLR	MLR		
	comp=Z,2µm,13.0s,MS4.8						
ENH	Enshi	27.41	272	P	P	22 11 47.6	-2.7
ULN	Ulaanbaatar	29.68	310	*e*P	P	22 12 10.4	+0.1
	comp=Z,3.8nm,0.8s,mb4.2						
ULN	Ulaanbaatar	29.68	310	*e*P	P	22 12 10.4	0.0
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
FX1	Attu Island--F	29.81	40	P	P	22 12 16.1	+4.6
	comp=Z,22nm,0.6s,mb5.0,baz=293,slow=14,SNR=5.0						
FX1	Attu Island--F	29.81	40	P	P	22 12 16.1	+4.6
FX1				pmax	pmax		
	comp=Z,22nm,0.6s						
SONM	Songino Array	30.09	309	P	P	22 12 14.8	+0.7
	comp=Z,2.3nm,1.0s,mb3.9,baz=106,slow=9.4,SNR=4.3						
DAV	Davao City (W)	30.10	213	P	P	22 12 20.8	+6.2
	comp=Z,198nm,0.5s						
MKAR	Makanchi Array	46.27	305	P	P	22 14 29.7	0.0
	comp=Z,1.4nm,0.7s,mb4.0,baz=80,slow=11,SNR=5.4						
KURK	Kurchatov	48.38	311	*e*P	P	22 14 44.5	-1.5
	comp=Z,5.0nm,0.9s,mb4.5						
KURK	Kurchatov	48.38	311	*e*P	P	22 14 44.5	-1.5
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.5						
ILAR	Eielson Array	52.52	31	P	P	22 15 17.4	0.0
	comp=Z,0.6nm,0.9s,mb3.5,baz=268,slow=6.6,SNR=4.0						
BVAR	Borovoye Array	53.20	314	P	P	22 15 22.8	+0.2
	comp=Z,1.6nm,0.8s,mb4.0,baz=101,slow=7.6,SNR=5.0						
BRVK	Borovoye	53.25	314	*e*P	P	22 15 22.9	-0.1
	comp=Z,1.5nm,0.8s,mb4.0						
BRVK	Borovoye	53.25	314	*e*P	P	22 15 22.9	-0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
WRAB	Tennant Creek	53.46	189	*e*P	P	22 15 24.6	-0.4
	comp=Z,8.9nm,0.7s,mb4.8						
WRAB	Tennant Creek	53.46	189	*e*P	P	22 15 24.6	-0.4
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
WRA	Warramunga Arr	53.47	189	P	P	22 15 24.8	-0.2
	comp=Z,5.3nm,0.6s,mb4.7,baz=5.4,slow=7.6,SNR=23						
STKA	Stephens Creek	64.90	180	P	P	22 16 43.2	-0.8
	comp=Z,1.6nm,0.7s,mb4.2,slow=10,SNR=3.3						
STKA	Stephens Creek	64.90	180	P	P	22 16 42.9	-1.0
NWAO	Narrogin (SRO)	69.83	202	*e*P	P	22 17 16.9	+2.1
	comp=Z,7.6nm,0.8s,mb4.7						
NWAO	Narrogin (SRO)	69.83	202	*e*P	P	22 17 16.9	+2.1
NWAO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
FINES	FINESS Array B	72.13	333	P	P	22 17 28.0	-0.1
	comp=Z,1.6nm,0.8s,mb4.0,baz=72,slow=4.4,SNR=2.9						
KIV	Kislovodsk	73.44	312	P	P	22 17 37.1	+0.9
KIV	Kislovodsk	73.44	312	P	P	22 17 37.1	+0.9
BRTR	Keskin Array B	81.41	312	P	P	22 18 22.0	+1.5
	comp=Z,1.5nm,0.8s,mb4.0,baz=95,slow=3.5,SNR=6.4						
BRTR	Keskin Array B	81.41	312	P	P	22 18 22.0	+1.5
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LPAZ	La Paz	148.25	65	PKPbc	PKPdf	22 25 52.6	+7.4
	comp=Z,1.9nm,0.9s,baz=315,slow=5.7,SNR=6.5						
LPAZ	La Paz	148.25	65	*e*PKPbc	PKPdf	22 25 52.6	+7.3

CSEM ***17*** *22:43:08.9±0.1, 49.33N×6.82E, h2^{km}, ML2.6/4, Error ellipse: s-maj=2.1km s-min=1.8km az=107.0*
LDG ***17*** *22:43:09.2±0.3, 49.32N×6.84E, h1^{km}, Md2.7/1, Ml2.6/5, Error ellipse: s-maj=5.1km s-min=2.9km az=149.0, Suspected Mining induced.*
BGR ***17*** *22:43:09.6±0.5, 49.34N×6.85E, h1^{km}, ML1.9/1, Error ellipse: s-maj=6.7km s-min=4.4km az=35.0*
NEIC ***17*** *22:43:09.2, 49.32N×6.85E, h1^{km}, ML2.6(LDG), ML2.1(STR), After LDG.*
ISC 17 22:43:07.9±0.5, **49.31N**±0.02×**6.86E**±0.04, **n11**, σ**0**^{s}**59**/21, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	Walferdange	0.58	308	*e*Pg	Pg	22 43 20.0	+0.5
	SNR=1.9						
WLF				*e*Sg	Sg	22 43 27.6	+0.3
CDF	Champ du Feu	0.94	163	*e*Pg	Pg	22 43 26.8	+0.2
CDF				*e*Sg	Sg	22 43 38.9	-0.2
	12nm,0.2s						
ECH	Echery	1.11	170	Pg	Pg	22 43 30.7	+0.6
ECH				Sg	Sg	22 43 45.8	+0.9
RFYF	Reffroy	1.14	234	*e*Pg	Pg	22 43 30.4	-0.2
	baz=52						
RFYF				*e*Sg	Sg	22 43 46.7	+1.0
	10nm,0.2s,baz=58						
THEF	They Montfort	1.23	208	Pg	Pg	22 43 31.7	-0.7
THEF				Sg	Sg	22 43 48.2	-0.5
TOD	Tromm	1.30	76	Pg	Pg	22 43 33.7	-0.3
TOD				Sg	Sg	22 43 52.1	+0.7
HAU	Haudompre	1.34	195	*e*Pg	Pg	22 43 34.1	-0.7
HAU				*e*Sg	Sg	22 43 52.2	-0.5
	12nm,0.3s						
BFO	Black Forest	1.38	135	*e*Pg	Pg	22 43 36.1	+0.6
	SNR=1.4						
BFO				*e*Sg	Sg	22 43 54.3	+0.5
TNS	Taunus Mts	1.38	48	*e*Pg	Pg	22 43 35.1	-0.3
	SNR=1.7						
TNS				*e*Sg	Sg	22 43 52.9	-1.0
MOF	Molkenrain	1.47	173	Pg	Pg	22 43 37.1	-0.1
MOF				Sg	Sg	22 43 57.0	+0.2
HINF	Hinteralfeld	1.49	180	*e*Sg	Sg	22 43 56.5	-1.1
	11nm,0.2s						

NEIC ***17*** *22:59:32.6, 9.43N×84.61W, h12^{km}, MD3.9(CASC), After CASC.*
CASC 17 22:59:32.8±2.2, **9.40N**×**84.61W**, **h5**^{km}±7^{km}, **MD3.8**, **ML3.1**, **10C-25D**, **Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAO	Cobano	0.57	301⇑	*e*P	Pg	22 59 43.8	-0.3
EPA	Esparza	0.58	2⇑	*e*P	Pg	22 59 44.1	-0.3
CGA2	Cerro Gallo 2	0.62	13⇓	*e*P	Pg	22 59 45.3	0.0
CGA2	Cerro Gallo 2	0.62	13⇓	*e*P	Pg	22 59 45.1	-0.2
CGA2				*e*S	Sg	22 59 56.3	+2.6
PRS1	Puriscal	0.65	27⇓	*i*P	Pg	22 59 43.7	-2.0
PRS1	Puriscal	0.65	27⇓	*i*P	Pg	22 59 43.7	-2.1
LAJ	Bijagual	0.67	47⇑	*i*P	Pg	22 59 39.5	-6.6
LAJ	Bijagual	0.67	47⇑	*i*P	Pg	22 59 39.5	-6.6
LCR2	La Lucha 2	0.69	61⇓	*i*P	Pg	22 59 46.5	-0.1
LCR2	La Lucha 2	0.69	61⇓	*i*P	Pg	22 59 46.4	-0.2
SJS	Escuela Geolog	0.77	46⇑	*i*P	Pg	22 59 47.8	-0.3
SJS			⇓	*i*P		22 59 47.9	
SJS				*e*S	Sg	22 59 59.4	+1.1
SJS	Escuela Geolog	0.77	46⇑	*i*P	Pg	22 59 47.7	-0.4
SJS				*e*S	Sg	22 59 59.6	+1.3
OCM	Ochomogo	0.81	53⇓	*e*P	Pb	22 59 48.2	-0.7
POA2	Poas 2	0.85	25⇓	*e*P	Pb	22 59 49.5	-0.1
BUS	Buena Vista	0.86	80⇓	*e*P	Pb	22 59 49.6	-0.2
BUS				*e*S	Sb	23 00 03.3	+2.0
BUS	Buena Vista	0.86	80⇓	*e*P	Pb	22 59 49.6	-0.2
BUS				*e*S	Sb	23 00 04.3	+3.0
VPS2	Volcan Poas 2	0.86	25⇑	*i*P	Pb	22 59 49.5	-0.4
VPS2				*e*S	Sb	23 00 05.5	+3.9
IRZ2	Volcan Irazu 2	0.90	51⇓	*e*P	Pb	22 59 50.3	-0.2
URSC	Urasca	0.93	62⇓	*i*P	Pb	22 59 50.9	-0.1
URSC	Urasca	0.93	62⇓	*i*P	Pb	22 59 50.8	-0.2
JTS	JuntasAbangare	0.94	339	*e*Pg	Pg	22 59 49.8	-1.8
JTS				*e*Sg	Sg	22 59 59.7	-4.5
ICR	Volcan Irazu	0.96	53⇓	*i*P	Pb	22 59 52.3	+0.7
ICR				*e*S	Sb	23 00 06.5	+2.2
ICR	Volcan Irazu	0.96	53⇓	*e*P	Pb	22 59 52.3	+0.7
PICA	Picada	1.02	53⇑	*e*P	Pb	22 59 53.2	+0.6
VTU	Volcan Turrial	1.04	54	*e*P	Pb	22 59 53.8	+0.9
FORC	Fortuna	1.06	357⇓	*e*P	Pb	22 59 51.6	-1.7
FORC			⇑	*e*P		22 59 52.6	
FORC				*i* S	Sb	23 00 07.2	-0.1
FORC	Fortuna	1.06	357	*e*P	Pb	22 59 51.3	-2.0
VACR	Volcan Arenal	1.06	357⇓	*e*P	Pb	22 59 52.6	-0.7
VCR	Vista de Mar	1.23	306⇓	*e*P	Pb	22 59 55.7	-0.6
VCR				*e*S	Sb	23 00 14.6	+2.3
VCR	Vista de Mar	1.23	306	*e*P	Pb	22 59 55.7	-0.5
VCR				*e*S	Sb	23 00 14.7	+2.4
LIM1	Limonal	1.43	334	*i* P	Pn	22 59 58.1	-1.4
RIN3	Volcan Rincon	1.57	331⇑	*e*P	Pn	23 00 00.1	-1.4
ACR	Cerro Adams	1.61	117⇓	*e*P	Pn	23 00 00.2	-1.9
ACR				*e*S	Sb	23 00 22.5	-0.7
ACR	Cerro Adams	1.61	117⇓	*e*P	Pn	23 00 00.1	-1.9
ACR				*e*S	Sb	23 00 26.3	+3.1
CTCR	Cotoan	1.90	105⇓	*e*P	Pn	23 00 04.7	-1.5
MADN	Villa Maderas	2.19	336⇓	*e*P	Pn	23 00 11.2	+0.9
MADN				*i*		23 00 50.2	
	comp=Z,171nm,0.4s						
SSNN	San Juan del S	2.23	327⇓	*e*P	Pn	23 00 12.9	+2.0
CONN	Concepcion	2.37	335⇓	*e*P	Pn	23 00 13.6	+0.8
COPN	Copaltepe	3.38	325	*e*P	Pn	23 00 28.1	+0.8
LEON	Leon	3.74	323	*e*P	Pn	23 00 33.1	+0.7

IDC ***17*** *23:11:46.0±1.3, 12.96N×146.82E, mb3.9/6, mb1 4.0/6, mb1mx3.8/19, mbtmp3.9/6, Error ellipse: s-maj=34.3km s-min=27.8km az=97.0*
MOS ***17*** *23:11:49.6±1.0, 12.96N×146.71E, h33^{km}, mb4.7/3, Error ellipse: s-maj=30.9km s-min=17.1km az=41.5*
NEIC ***17*** *23:11:51.7±0.9, 12.95N×146.66E, h35^{km}, mb4.5/3, Error ellipse: s-maj=21.8km s-min=19.7km az=67.0*
ISC 17 23:11:48.2±6.4, **12.9N**±0.2×**146.7E**±0.1, **h25**^{km}±44^{km}, **n16**, σ**0**^{s}**62**/17, **mb4.1**/9, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.91	290	Pn	Pn	23 12 20.1	+0.3
	61nm,0.3s,baz=110,slow=2.4,SNR=12						
GUMO				Sn	Sn	23 12 42.9	-0.4
	188nm,0.3s,baz=262,slow=22,SNR=21						
GUMO	Guam	1.91	290	*e*Pn	Pn	23 12 19.7	-0.1
GUMO				*e*Sn	Sn	23 12 42.5	-0.8
KS15	Wonju Array Si	29.64	329	P	P	23 17 49.1	-4.9
WRA	Warramunga Arr	34.88	201	P	P	23 18 39.6	-0.3
	0.4nm,0.8s,mb3.4,baz=26,slow=9.5,SNR=2.9						
SONM	Songino Array	48.30	324	P	P	23 20 29.8	+0.3
	0.8nm,0.6s,mb3.9,baz=135,slow=7.4,SNR=6.8						
LSA	Lhasa	53.89	297	P	P	23 21 13.2	+1.2
	4.8nm,1.0s,mb4.4						
LSA	Lhasa	53.89	297	P	P	23 21 13.2	+1.2
LSA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
MKAR	Makanchi Array	63.20	316	P	P	23 22 17.0	+0.3
	comp=Z,1.2nm,0.7s,mb4.1,baz=100,slow=8.8,SNR=9.8						
KURK	Kurchatov	66.23	320	*e*P	P	23 22 35.8	-0.5
	comp=Z,9.4nm,1.4s,mb4.6						
KURK				*e*		23 22 47.4	
KURK	Kurchatov	66.23	320	*e*P	P	23 22 35.8	-0.5
KURK				*e*		23 22 47.4	
KURK				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
ILAR	Eielson Array	68.38	25	P	P	23 22 48.6	-1.0
	comp=Z,0.8nm,0.7s,mb3.9,baz=246,slow=6.3,SNR=9.4						
BVAR	Borovoye Array	71.54	322	P	P	23 23 09.3	+0.2
	comp=Z,0.9nm,0.5s,mb4.0,baz=96,slow=7.7,SNR=8.8						
BRVK	Borovoye	71.61	322	P	P	23 23 10.2	+0.7
	comp=Z,4.3nm,1.4s,mb4.2						
BRVK	Borovoye	71.61	322	P	P	23 23 10.2	+0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.4s,mb4.2						
FINES	FINESS Array B	92.50	336	P	P	23 24 57.7	-0.5
	comp=Z,0.4nm,0.5s,mb4.0,baz=34,slow=6.9,SNR=6.7						
DBIC	Dimbokro	145.69	303	PKPbc	PKPbc	23 31 27.9	+1.5
	comp=Z,2.5nm,0.7s,baz=23,slow=4.5,SNR=5.6						

MOS ***17*** *23:14:01.2±1.0, 18.88N×145.55E, h202^{km}, mb5.2/3, Error ellipse: s-maj=37.5km s-min=16.4km az=102.5*
NEIC ***17*** *23:14:05.3±4.1, 18.86N×145.56E, h224^{km}±41^{km}, mb4.8/2, Error ellipse: s-maj=24.9km s-min=13.2km az=77.0*
IDC ***17*** *23:14:09.0±5.3, 18.92N×145.46E, h254^{km}±50^{km}, mb3.4/10, mb1 3.6/12, mb1mx3.5/22, mbtmp4.1/12, Error ellipse: s-maj=25.3km s-min=20.9km az=90.0*
ISC 17 23:14:02.1±4.8, **18.9N**±0.1×**145.6E**±0.2, **h207**^{km}±47^{km}, **n17**, σ**0**^{s}**91**/17, **mb3.6**/11, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	17.79	300	P	P	23 17 58.6	+1.0
	8.9nm,0.3s,baz=131,slow=16,SNR=11						
MJAR	Matsushiro Arr	18.76	341	P	P	23 18 06.5	-1.1
	0.3nm,0.3s,baz=173,slow=12,SNR=4.2						
HNR	Honiara	31.49	152	P	P	23 20 05.5	-1.2
	70nm,0.9s						
HNR	Honiara	31.49	152	P	P	23 20 05.6	-1.1
HNR				pmax	pmax		
	comp=Z,70nm,0.9s						
WRAB	Tennant Creek	40.10	197	P	P	23 21 18.9	-0.2
	comp=Z,8.8nm,1.0s,mb4.1						
WRAB	Tennant Creek	40.10	197	P	P	23 21 18.9	-0.2
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.2						
WRA	Warramunga Arr	40.11	197	P	P	23 21 20.1	+0.9
	comp=Z,0.2nm,0.3s,mb3.0,baz=21,slow=9.1,SNR=4.7						
SONM	Songino Array	42.94	321	P	P	23 21 42.6	+0.6
	comp=Z,0.3nm,0.4s,mb3.1,baz=133,slow=10.0,SNR=3.3						
MKAR	Makanchi Array	58.26	314	P	P	23 23 36.8	-0.2
	comp=Z,0.6nm,0.6s,mb3.4,baz=90,slow=7.6,SNR=5.6						
ILAR	Eielson Array	63.55	26	P	P	23 24 12.0	-0.2
	comp=Z,1.2nm,0.9s,mb3.5,baz=257,slow=5.4,SNR=7.4						
BVAR	Borovoye Array	66.27	320	P	P	23 24 29.6	-0.3
	comp=Z,1.4nm,0.5s,mb3.9,baz=96,slow=7.5,SNR=12						
INK	Inuvik	69.27	23	P	P	23 24 49.0	+0.8
	comp=Z,0.5nm,0.4s,mb3.5,baz=237,slow=4.7,SNR=5.3						
AKTO	Aktyubinsk	74.16	318	P	P	23 25 17.2	-0.2
	comp=Z,0.8nm,0.7s,mb3.5,baz=90,slow=7.1,SNR=3.5						
ARCES	ARCESS Array B	82.30	342	P	P	23 26 00.8	-0.4
	comp=Z,1.9nm,0.8s,mb3.8,baz=45,slow=3.4,SNR=4.4						
NVAR	Mina Array Bea	83.13	52	P	P	23 26 08.4	+2.3
	comp=Z,1.4nm,0.6s,mb3.9,baz=266,slow=4.4,SNR=10.0						
FINES	FINESS Array B	86.68	335	P	P	23 26 21.7	-1.4
	comp=Z,0.9nm,0.6s,mb3.7,baz=64,slow=4.9,SNR=9.0						
FINES	FINESS Array B	86.68	335	P	P	23 26 21.7	-1.4

ATH ***17*** *23:14:55.6, 40.31N×22.75E, h20^{km}, MD3.1/4*
THE ***17*** *23:14:55.6, 40.34N×22.76E, h1^{km}, ML2.4*
NEIC ***17*** *23:14:55.6, 40.34N×22.76E, h2^{km}, MD3.1(ATH), ML2.4(THE), After THE.*
CSEM ***17*** *23:14:55.7±0.1, 40.34N×22.76E, h12^{km}, ML2.4*
SKO ***17*** *23:14:57.8, 40.42N×22.76E, ML1.8*
ISC 17 23:14:54.5±0.4, **40.34N**±0.02×**22.75E**±0.03, **h10**^{km}, **n20**, σ**0**^{s}**93**/36, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIT	Litokhoron	0.31	221	*e*Pg	Pg	23 15 01.8	+0.9
LIT				*e*Sg	Sg	23 15 06.7	+1.4
THE	Thessaloniki	0.34	29	*e*Pg	Pg	23 15 01.9	+0.3
THE				*e*Sg	Sg	23 15 07.2	+1.0
PLG	Polygyros	0.53	86	*e*PN	Pn	23 15 05.9	-1.9
PLG				*e*SN	Sn	23 15 13.4	-3.4
SOH	Sokhos	0.67	43	*e*Pg	Pg	23 15 08.1	+0.1
SOH				*e*Sg	Sg	23 15 17.5	+0.5
GRG	Griva	0.68	337	*e*Pg	Pg	23 15 08.2	0.0
GRG				*e*Sg	Sg	23 15 18.2	+1.0
KZN	Kozani	0.75	268	*e*PN	Pn	23 15 10.3	-0.6
KZN				*e*SN	Sn	23 15 21.0	-1.4
PAIG	Paliouri	0.82	119	*e*Pg	Pg	23 15 11.1	+0.1
PAIG				*e*Sg	Sg	23 15 22.2	+0.2
PAIG	Paliouri	0.82	119	*e*Pg	Pg	23 15 11.1	+0.1
PAIG				*e*Sg	Sg	23 15 22.2	+0.2
KNT	Kendrikon	0.83	8	*e*Pg	Pg	23 15 10.9	-0.4
KNT				*e*Sg	Sg	23 15 22.6	+0.1
OUR	Ouranopolis	0.94	90	*e*Pg	Pg	23 15 13.3	-0.2
VAY	Valandovo	0.99	352	*e*Pg	Pg	23 15 13.6	-0.9
VAY				*e*Sg	Sg	23 15 27.2	-0.6
XOR	Xorichti	1.03	161	*e*Pg	Pg	23 15 14.9	-0.2
NEO	Neokhori	1.09	160	*e*PN	Pn	23 15 15.9	+0.1
FNA	Florina	1.14	294	*e*Pg	Pg	23 15 16.4	-0.9
FNA				*e*Sg	Sg	23 15 33.5	+0.9
BIA	Bitola	1.28	303	*e*Pg	Pg	23 15 19.9	-0.3
BIA				*e*Sg	Sg	23 15 37.0	-0.3
BIA	Bitola	1.28	303	*e*Pg	Pg	23 15 19.9	-0.3
BIA				*e*Sg	Sg	23 15 37.0	-0.4
NVR	Nevrokopi	1.32	39	*e*PN	Pn	23 15 21.0	+1.9
AGG	Agios Georgios	1.35	194	*e*Pg	Pg	23 15 20.2	-1.4
AGG				*e*Sg	Sg	23 15 40.6	+1.0
OHR	Ohrid	1.67	298	*e*Pn	Pn	23 15 28.2	+4.0
OHR				*e*Sn	Sn	23 15 50.4	+4.5
OHR	Ohrid	1.67	298	*e*Pn	Pn	23 15 28.2	+4.0
OHR				*e*Sn	Sn	23 15 50.3	+4.5

KRSC 17 23:20:10.1±0.6, **52.86N**×**156.93E**, **h328**^{km}±5^{km}, **ML3.9**, **Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APC	Apacha	0.15	65	*i* P	P	23 20 50.5	-1.1
KRMR	Karymshinskiy	0.73	92	*e*P	P	23 20 51.6	-1.1
GRL	Gorelyy	0.76	113	*e*P	P	23 20 53.6	+0.8
GNL	Ganaly	1.03	36	*e*P	P	23 20 53.1	-0.7
GNL				*e*S	S	23 21 24.6	-3.5
RUS	Russkaya	1.05	113	*i* P	P	23 20 53.9	0.0
RUS				*e*S	S	23 21 25.7	-2.5
PET	Petropavlovsk	1.06	80	*i* P	P	23 20 54.1	+0.2
PET	Petropavlovsk	1.06	80	*i* P	P	23 20 54.0	+0.1
PET				pmax	pmax		
	comp=Z,124nm,0.6s						
PET				pmax	pmax		
	comp=E,46nm,0.5s						
PET				pmax	pmax		
	comp=N,39nm,0.4s						
KOK	Koryaka	1.12	67	*e*P	P	23 20 54.5	+0.3
AVH	Avacha	1.16	69	*e*P	P	23 20 54.9	+0.4
UGLR	Uglovaya	1.20	72	*i* P	P	23 20 55.5	+0.9
SMAR	Somma	1.20	70	*i* P	P	23 20 55.2	+0.5
PAU	Pauzhetka	1.40	183	*e*P	P	23 20 55.8	+0.1
NLC	Nalytchevo	1.49	77	*i* P	P	23 20 56.0	-0.3
NLC				*e*S	S	23 21 30.4	-2.1
SPN	Mys Shipunski	1.89	82	*i* P	P	23 20 58.7	-0.2
SPN				*e*S	S	23 21 34.1	-2.9
TUMR	Tumrok	3.08	37	*i* P	P	23 21 09.6	+0.6
MKZ	Mys Kozlova	3.32	57	*e*P	P	23 21 11.0	-0.3
MKZ				*e*S	S	23 21 55.7	-3.6
KMNR	Kamenistaya	3.49	32	*e*P	P	23 21 13.7	+0.7
KPT	Kopyto	3.66	30	*e*P	P	23 21 15.0	+0.3
ZLN	Zelenaya	3.89	34	*e*P	P	23 21 17.6	+0.5
ZLN				*e*S	S	23 22 06.6	-3.0
KRSR	Krestovskiy	3.97	31	*e*P	P	23 21 18.6	+0.6
KBG	Krutoberegovo	4.78	42	*e*S	S	23 22 21.0	-6.0
KBG				Smax			
	comp=N,100nm,0.5s						
KBTR	Krutoberegovo	4.80	43	*e*P	P	23 21 26.2	-0.8
KBTR				*e*S	S	23 22 21.4	-5.9

MOS ***17*** *23:22:46.2±1.1, 51.71N×178.68W, h33^{km}, mb4.5/6, Error ellipse: s-maj=14.3km s-min=10.2km az=63.0*
BJI ***17*** *23:22:49.3, 52.51N×178.15W, h55^{km}, mB4.6, mb4.9, Ms4.5, Msz4.2*
NEIC ***17*** *23:22:49.8±0.5, 51.56N×178.48W, h57^{km}±3^{km}, mb4.4/10,*

ML4.5(AEIC),Error ellipse: s-maj=10.3km s-min=4.1km az=181.0
*IDC **17** 23:22:51.4±2.6,51.66N×178.54W,h70^{km}±21^{km},mb3.7/21, mb1 3.9/22,mb1mx3.9/27,mbtmp4.1/22,Error ellipse: s-maj=21.4km s-min=11.0km az=177.0*
ISC 17 23:22:49.3±0.6,**51.61N**±0.09×**178.51W**±0.05,**h65**^{km}±4^{km}, **n91**,σ**0^{s}.82**/95,**mb4.2**/33,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	Kanaga Island	0.81	79	P	P	23 23 03.9	-1.4
KICM	Kanaga Island	0.87	69	P	P	23 23 05.9	-0.2
KICM				S	S	23 23 20.2	+1.6
KIKV	Kanaga Island	0.87	72	P	P	23 23 05.5	-0.7
KINC	Kanaga Island	0.92	69	P	P	23 23 06.4	-0.3
KIRH	Kanaga Island	0.93	71	P	P	23 23 06.3	-0.5
ADK	Adak	1.17	76	P	P	23 23 08.8	-1.1
ADK				S	S	23 23 25.1	-0.4
ADAG	Mount Adagdak	1.24	72	P	P	23 23 11.1	+0.1
ADAG				S	S	23 23 27.3	+0.1
GSCK	Great Sitkin C	1.51	74	P	P	23 23 14.4	-0.4
GSSP	Great Sitkin S	1.52	71	P	P	23 23 15.2	+0.2
GSSP				S	S	23 23 34.2	+0.3
GSTD	Great Sitkin T	1.53	72	P	P	23 23 15.0	-0.1
GSTD				S	S	23 23 35.2	+1.0
GSMY	Great Sitkin M	1.58	73	P	P	23 23 15.4	-0.3
GSTR	Great Sitkin T	1.59	71	P	P	23 23 16.1	+0.2
ATKA	Atka Island	2.74	76	P	P	23 23 31.3	-0.6
ATKA				S	S	23 24 04.4	+0.5
SMY	Shemya	4.69	287	P	P	23 24 00.3	+1.1
FX1	Attu Island--F	5.27	287	P	P	23 24 07.2	0.0
	7.4nm,0.3s,baz=118,slow=23,SNR=10						
FX1				S	S	23 25 07.8	+0.4
	4.9nm,0.3s,baz=141,slow=17,SNR=1.9						
FX1	Attu Island--F	5.27	287	P	P	23 24 07.2	-0.1
MSOM	Makushin Julie	7.36	68	P	P	23 24 36.9	+0.5
MNAT	Makushin Natee	7.53	68	P	P	23 24 39.5	+0.8
UNV	Unalaska Valle	7.63	68	P	P	23 24 40.4	+0.4
KDAK	Kodiak Island	16.14	57	P	P	23 26 29.8	-3.3
	2.0nm,0.3s,baz=274,slow=7.9,SNR=39						
KDAK				S	S	23 29 30.1	+0.4
	0.1nm,0.3s,baz=104,slow=16,SNR=4.4						
KDAK	Kodiak Island	16.14	57	P	P	23 26 29.8	-3.3
KDAK				S	S	23 29 30.1	+0.4
SLKM	Skilak Lake	18.00	49	*e*P	P	23 26 57.1	+0.9
FIB	Fire Island	18.22	47	P	P	23 26 59.2	+0.4
IMA2	Indian Mountai	19.15	31	*e*P	P	23 27 10.3	+0.7
ILAR	Eielson Array	20.95	39	P	P	23 27 26.9	-1.6
	0.7nm,0.5s,baz=238,slow=8.9,SNR=16						
ILAR				PcP	PcP	23 31 32.4	-1.9
	0.6nm,0.4s,baz=291,slow=3.6,SNR=8.8						
INK	Inuvik	27.16	35	P	P	23 28 27.6	-0.4
	1.1nm,0.3s,mb3.8,baz=255,slow=5.3,SNR=14						
INK				PcP	PcP	23 31 46.3	-0.9
	1.6nm,0.6s,baz=305,slow=1.7,SNR=6.7						
MJAR	Matsushiro Arr	34.00	261	P	P	23 29 26.7	-1.8
	0.8nm,0.3s,mb4.0,baz=40,slow=7.2,SNR=4.9						
YKA	Yellowknife Ar	34.94	47	P	P	23 29 36.1	-0.2
	0.8nm,0.4s,mb3.9,baz=283,slow=7.4,SNR=6.5						
YKA				PcP	PcP	23 32 07.5	-0.3
	1.3nm,0.8s,baz=284,slow=3.0,SNR=5.1						
NEW	Newport	38.63	70	P	P	23 30 07.9	+0.5
	5.9nm,0.4s,mb4.7,baz=304,slow=6.5,SNR=8.6						
NEW	Newport	38.63	70	*e*P	P	23 30 07.6	+0.2
	5.3nm,0.8s,mb4.4						
NEW	Newport	38.63	70	*e*P	P	23 30 07.6	+0.2
NEW				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BMO	Blue Mountains	40.26	75	*e*P	P	23 30 20.8	-0.2
WVOR	Wild Horse Val	40.78	79	*e*P	P	23 30 26.0	+0.8
	comp=Z,3.0nm,0.7s,mb4.2						
WVOR	Wild Horse Val	40.78	79	*e*P	P	23 30 26.0	+0.7
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
HLID	Hailey	42.70	75	P	P	23 30 41.7	+0.7
MCMT	McKenzie Canyo	42.93	72	*e*P	P	23 30 43.1	+0.2
BOZ	Bozeman (W)	43.20	70	*e*P	P	23 30 45.4	+0.3
	comp=Z,6.1nm,0.6s,mb4.5						
BOZ	Bozeman (W)	43.20	70	*e*P	P	23 30 45.4	+0.3
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
NVAR	Mina Array Bea	43.34	83	P	P	23 30 47.2	+0.9
	comp=Z,0.5nm,0.6s,mb3.4,baz=302,slow=6.5,SNR=4.7						
ELK	Elko	43.83	78	*e*P	P	23 30 50.6	+0.4
	comp=Z,2.9nm,0.7s,mb4.1						
ELK	Elko	43.83	78	*e*P	P	23 30 50.7	+0.5
ELK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HVU	Hansel Valley	44.72	76	*e*P	P	23 30 57.7	+0.4
TPNV	Topopah Spring	45.54	83	*e*P	P	23 31 04.0	0.0
DUG	Dugway	45.64	78	*e*P	P	23 31 04.8	+0.1
	comp=Z,1.9nm,0.6s,mb4.0						
DUG	Dugway	45.64	78	*e*P	P	23 31 04.8	+0.1
DUG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
BW06	Boulder Array	46.07	73	*e*P	P	23 31 08.1	0.0
	comp=Z,5.8nm,0.9s,mb4.3						
PDAR	Pinedale Array	46.07	73	P	P	23 31 08.3	+0.3
	comp=Z,3.5nm,0.5s,mb4.3,baz=338,slow=3.1,SNR=47						
SONM	Songino Array	46.71	297	P	P	23 31 13.6	+0.6
	comp=Z,0.4nm,0.5s,mb3.5,baz=43,slow=6.9,SNR=6.2						
SONM				PcP	PcP	23 32 46.4	+0.4
	comp=Z,1.1nm,0.6s,baz=113,slow=2.2,SNR=6.1						
NJ2	Nanjing	48.99	272	*e*P	P	23 31 36.9	+6.0
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.0						
ULM	Lac du Bonnet	49.40	57	P	P	23 31 33.0	-0.9
	comp=Z,3.6nm,0.9s,mb4.3,baz=315,slow=7.1,SNR=2.9						
ULM	Lac du Bonnet	49.40	57	P	P	23 31 33.0	-0.9
SDCO	Great Sand Dun	51.61	75	*e*P	P	23 31 49.8	-1.0
	comp=Z,9.9nm,1.4s,mb4.7						
ZAL	Zalesovo	54.02	313	PcP	PcP	23 33 12.9	+0.1
	comp=Z,1.2nm,0.5s,baz=37,slow=5.4,SNR=5.2						
LZH	Lanzhou	55.49	286	*e*P	P	23 32 19.6	+0.1
LZH				AP	pP	23 32 34.5	-2.1
LZH				XP	sP	23 32 41.6	-2.4
LZH				*e*PP	PP	23 34 25.8	+0.4
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.9						
LZH				AMB	AMB		
	comp=Z,50nm,6.7s						
LZH				LR	LR		
	comp=E,260nm,15.2s						
LZH				LR	LR		
	comp=Z,370nm,18.1s						
LZH	Lanzhou	55.49	286	*e*P	P	23 32 19.6	+0.1
	comp=Z,22nm,1.5s,mb5.0						
LZH				pP	pP	23 32 34.5	-2.1
LZH				sP	sP	23 32 41.6	-2.4
LZH				*e*PP	PP	23 34 25.7	+0.3
LZH				LR	LR		
	comp=Z,380nm,18.1s						
LZH	Lanzhou	55.49	286	*e*P	P	23 32 19.6	+0.1
LZH				*PP	pP	23 32 34.5	-2.1
LZH				*e*		23 34 25.7	
LZH				pmax	pmax		
	comp=Z,22nm,1.5s,mb5.0						
LZH				MLR	MLR		
	comp=Z,380nm,18.1s						
GTA	Gaotai	55.65	292	*e*P	P	23 32 21.0	+0.4
MNTX	Cornudas Mount	55.73	81	*e*P	P	23 32 20.4	-0.9
MNTX				*e*		23 32 29.1	
ARCES	ARCESS Array B	57.89	350	P	P	23 32 34.7	-1.4
	comp=Z,5.7nm,1.0s,mb4.6,baz=27,slow=7.9,SNR=18						
TXAR	Lajitas Array	58.44	82	P	P	23 32 39.6	-0.8
	comp=Z,0.4nm,0.3s,mb4.0,baz=288,slow=4.0,SNR=5.6						
KURK	Kurchatov	58.99	314	*e*P	P	23 32 44.1	+0.1
WMQ	Urumqi	59.37	303	*e*P	P	23 32 47.0	+0.3
MKAR	Makanchi Array	60.03	308	P	P	23 32 48.6	-2.6
	comp=Z,0.5nm,0.5s,mb3.8,baz=43,slow=5.7,SNR=9.6						
MKAR				PcP	PcP	23 33 35.5	-0.8
	comp=Z,0.4nm,0.5s,baz=42,slow=2.4,SNR=5.2						
BVAR	Borovoye Array	60.83	320	P	P	23 32 55.9	-0.6
	comp=Z,0.9nm,0.4s,mb4.2,baz=53,slow=7.1,SNR=17						
BVAR				PcP	PcP	23 33 39.1	-0.3
	comp=Z,0.6nm,0.4s,baz=58,slow=3.0,SNR=5.5						
BRVK	Borovoye	60.85	320	*e*P	P	23 32 55.9	-0.7
JOF	Joensuu	63.42	345	*e*p	P	23 33 12.2	-1.5
	comp=Z,3.5nm,1.0s,mb4.2						
KAF	Kangasniemi	64.92	347	*e*p	P	23 33 22.0	-1.3
	comp=Z,1.2nm,0.5s,mb4.0						
KAF	Kangasniemi	64.92	347	*e*P	P	23 33 22.0	-1.3
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
FINES	FINESS Array B	65.60	347	P	P	23 33 26.9	-0.8
	comp=Z,0.7nm,0.3s,mb3.9,baz=15,slow=8.5,SNR=18						
AAK	Ala-Archa	66.86	310	*e*P	P	23 33 36.2	+0.3
NOA	NORSAR Array B	67.43	355	P	P	23 33 38.4	-0.9
	comp=Z,0.4nm,0.5s,mb3.5,baz=0.1,slow=5.8,SNR=2.9						
NOA	NORSAR Array B	67.43	355	P	P	23 33 38.4	-0.9
LSA	Lhasa	67.53	290	P	P	23 33 43.0	+2.6
LSA	Lhasa	67.53	290	*e*P	P	23 33 41.9	+1.5
	comp=Z,7.7nm,0.4s,mb4.9						
LSA	Lhasa	67.53	290	*e*P	P	23 33 41.9	+1.5
LSA				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.9						
HFS	Hagfors	68.18	353	P	P	23 33 42.8	-1.1
	comp=Z,1.3nm,0.5s,mb4.0,baz=30,slow=7.5,SNR=8.1						
GUN	Gumba	71.94	292	*e*P	P	23 34 08.2	+0.9
	comp=Z,112nm,0.5s						
KKN	Kakani	72.38	292	*e*P	P	23 34 10.9	+1.0
	comp=Z,43nm,0.5s						
PKI	Pulchoki	72.47	292	*e*P	P	23 34 11.3	+0.9
	comp=Z,30nm,0.6s,mb5.3						
GKN	Gorkha	72.58	293	*e*P	P	23 34 11.4	+0.3
	comp=Z,34nm,0.6s,mb5.4						
DMN	Daman	72.61	292	*e*P	P	23 34 12.5	+1.2
KOLN	Koldanda	73.35	294	*e*P	P	23 34 16.5	+0.9
EKA	Eskdalemuir Ar	73.36	3	P	P	23 34 15.6	+0.6
	comp=Z,1.0nm,0.6s,mb3.8,baz=1.9,slow=5.2,SNR=4.5						
AKASG	Malin Array Be	75.38	342	P	P	23 34 26.6	-0.2
	comp=Z,1.0nm,0.4s,mb3.9,baz=18,slow=6.0,SNR=6.0						
GERES	GERESS Array B	79.38	352	P	P	23 34 49.7	+0.6
	comp=Z,0.4nm,0.5s,mb3.5,baz=14,slow=5.5,SNR=5.9						
BRTR	Keskin Array B	84.81	336	P	P	23 35 18.5	+1.2
	comp=Z,1.3nm,0.7s,mb4.0,baz=41,slow=2.5,SNR=7.6						
STKA	Stephens Creek	90.22	213	P	P	23 35 43.2	-0.3
	comp=Z,1.4nm,0.6s,mb4.3,baz=359,slow=9.5,SNR=4.2						
DBIC	Dimbokro	121.69	7	PKP	PKPdf	23 41 36.9	+1.0
	comp=Z,1.5nm,0.5s,baz=297,slow=1.5,SNR=14						
MAW	Mawson	146.78	218	PKPbc	PKPbc	23 42 23.4	+1.4
	comp=Z,1.3nm,0.6s,baz=43,slow=1.7,SNR=5.4						
LBTB	Lobatse	147.69	316	*e*PKPbc	PKPdf	23 42 28.1	+4.8
BOSA	Boshof	150.95	313	PKPbc	PKPdf	23 42 35.9	+7.6
	comp=Z,5.5nm,0.7s,baz=55,slow=3.2,SNR=12						

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*LDG **17** 23:44:48.6±0.1,44.27N×7.48E,h2^{km},Md2.5/2,Ml2.5/9, Error ellipse: s-maj=1.3km s-min=0.6km az=74.0*
*STR **17** 23:44:48.9±0.3,44.26N×7.44E,h5^{km}±1^{km},Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*ROM **17** 23:44:48.1±0.3,44.25N×7.45E,h12^{km},Md2.4/3,Error ellipse: s-maj=7.5km s-min=1.8km az=130.0*
*NEIC **17** 23:44:48.8,44.24N×7.41E,h3^{km},MD2.4(ROM), ML2.5(LDG),ML2.4(GEN),ML2.3(STR),After GEN.*
*CSEM **17** 23:44:48.3±0.1,44.27N×7.41E,h5^{km},ML2.4/9,Error ellipse: s-maj=1.2km s-min=0.8km az=70.0*
*GEN **17** 23:44:48.8,44.24N×7.41E,h3^{km},ML2.0*
ISC 17 23:44:48.4±0.2,**44.27N**±0.01×**7.41E**±0.02,**h3**^{km},**n51**, σ**0^{s}.84**/90,**1C**,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENR	Entracque	0.04	171	P	Pg	23 44 49.6	+0.3
ENR				S	Sg	23 44 50.2	+0.3
ENR	Entracque	0.04	171	P	Pg	23 44 49.6	+0.3
STV2	Anna di Valdie	0.07	252	P	Pg	23 44 50.4	+0.6
STV2				S	Sg	23 44 51.4	+0.7
STV2	Anna di Valdie	0.07	252	P	Pg	23 44 50.3	+0.5
STV	Sta Anna Valdi	0.07	251	P	Pg	23 44 50.3	+0.5
STV				S	Sg	23 44 51.4	+0.7
STV	Sta Anna Valdi	0.07	251	P	Pg	23 44 50.3	+0.5
DOI	San Damiano	0.27	334	Pg	Pg	23 44 54.8	+1.1
DOI				Sg	Sg	23 44 59.3	+2.0
	112nm,0.2s						
AUTN	L'Aution	0.27	178	Pg	Pg	23 44 54.2	+0.4
AUTN				Sg	Sg	23 44 57.7	+0.3
TOUF	Mont Tournerai	0.28	205	Pg	Pg	23 44 54.5	+0.6
TOUF				Sg	Sg	23 44 58.2	+0.5
SAOF	Saorge	0.30	160	Pg	Pg	23 44 54.4	+0.1
SAOF				Sg	Sg	23 44 58.5	+0.2
MONE	Monesi	0.31	127	P	Pg	23 44 54.3	-0.2
MONE				S	Sg	23 44 58.7	0.0
MONE	Monesi	0.31	127	P	Pg	23 44 54.3	-0.3
PZZ	Prazzo	0.33	317	P	Pg	23 44 55.6	+0.7
PZZ				S	Sg	23 45 00.4	+1.1
PZZ	Prazzo	0.33	317	P	Pg	23 44 55.6	+0.7
ROB	Roburent	0.33	85	P	Pg	23 44 55.7	+0.7
ROB				S	Sg	23 45 00.4	+1.0
SBF	Sospel	0.40	178	*e*Pg	Pg	23 44 56.7	+0.3
SBF				*e*Sn	Sn	23 45 02.1	-6.6
	103nm,0.3s						
MVIF	Mont Vial	0.41	207	Pg	Pg	23 44 57.3	+0.7
MVIF				Sg	Sg	23 45 03.1	+0.9
NEGI	Negi	0.47	153	P	Pg	23 44 57.6	-0.2
NEGI				S	Sg	23 45 03.6	-0.4
NEGI	Negi	0.47	153	P	Pg	23 44 57.6	-0.1
SURF	Saint Ours	0.48	297	Pg	Pg	23 44 58.9	+0.9
SURF				Sg	Sg	23 45 05.0	+0.6
IMI	Imperia	0.49	136	⇑ *i*Pg	Pg	23 44 58.1	-0.2
IMI				Sg	Sg	23 45 05.0	+0.1
	19nm,0.1s						
REVF	Revere	0.53	183	Pg	Pg	23 44 59.8	+0.9
FIN	Finale Ligure	0.57	95	Pg	Pg	23 44 59.8	-0.1
FIN				Sg	Sg	23 45 07.9	+0.4
	16nm,0.1s						
BHB	Bricherasio	0.58	350	P	Pg	23 45 00.4	+0.4
BHB				S	Sg	23 45 08.2	+0.3
BHB	Bricherasio	0.58	350	P	Pg	23 45 00.4	+0.3
CALN	Calern	0.64	216	Pg	Pg	23 45 02.0	+0.9
OG22	Abries	0.65	329	Pg	Pg	23 45 01.7	+0.4
OG22				Sg	Sg	23 45 10.7	+0.7
MBDF	Montbardon	0.65	315	*e*Pg	Pg	23 45 01.8	+0.5
MBDF				*e*Sg	Sg	23 45 10.6	+0.6
	32nm,0.2s						
FENE	Fenestrelle	0.80	342	P	Pg	23 45 04.4	0.0
FENE				S	Sg	23 45 15.1	-0.1
FENE	Fenestrelle	0.80	342	P	Pg	23 45 04.4	0.0
PCP	Pian Castagno	0.86	71	P	Pg	23 45 04.9	-0.6
PCP				S	Sg	23 45 16.0	-0.9
PCP	Pian Castagno	0.86	71	P	Pg	23 45 04.9	-0.6
RSP	Reno Superiore	0.89	353	P	Pb	23 45 05.1	-1.0
RSP	Reno Superiore	0.89	353	P	Pb	23 45 05.1	-1.0
FRF	La Foret Royal	0.90	218	*e*Pn	Pn	23 45 07.1	-0.5
FRF				*e*Sg	Sg	23 45 17.8	-0.4
	22nm,0.2s						
FRF				*e*Sn	Sn	23 45 20.6	-0.7
FRF	La Foret Royal	0.90	218	*e*Pg	Pg	23 45 05.8	-0.5
FRF				*e*Pn	Pn	23 45 07.1	-0.5
FRF				*e*Sg	Sg	23 45 17.8	-0.4
FRF				*e*Sn	Sn	23 45 20.6	-0.7
FRF	La Foret Royal	0.90	218	*e*Pn	Pn	23 45 07.1	-0.5
FRF				*e*Sg	Sg	23 45 17.8	-0.4
	11nm,0.2s						
FRF				*e*Sn	Sn	23 45 20.6	-0.7
LMR	La Mourre	1.14	215	*e*Pg	Pg	23 45 10.5	-0.6
LMR				*e*Sg	Sg	23 45 25.3	-1.0
	92nm,0.3s						
LMR				*e*Sn	Sn	23 45 26.0	-1.4
LSD	Ceresole Reale	1.21	351	P	Pb	23 45 11.9	+0.4
LSD	Ceresole Reale	1.21	351	P	Pb	23 45 11.9	+0.4
TRAV		1.27	11	P	Pb	23 45 12.1	-0.5
TRAV		1.27	11	P	Pb	23 45 12.1	-0.5
ORIF	Oris-en-Rattie	1.27	301	*e*Pg	Pg	23 45 13.3	-0.5
ORIF				*e*Sg	Sg	23 45 30.5	-0.3
	6.1nm,0.2s						
LPG	La Plagne	1.32	339	*e*Pg	Pg	23 45 13.7	-1.0
LPG				*e*Sg	Sg	23 45 31.0	-1.3
	8.9nm,0.4s						
LPL	La Plagne	1.34	339	*e*Pg	Pg	23 45 14.2	-0.9
LPL				*e*Sg	Sg	23 45 31.4	-1.6
	6.7nm,0.3s						
SMRF	Simiane la Rot	1.35	258	*e*Pg	Pg	23 45 14.9	-0.5
SMRF				*e*Sg	Sg	23 45 33.0	-0.4
	18nm,0.4s						
VIVF	Saint-Julien-l	2.04	288	*e*Pg	Pg	23 45 27.6	-1.6
VIVF				*e*Sn	Sn	23 45 48.1	-2.3
	2.4nm,0.3s						
VIVF	Saint-Julien-l	2.04	288	*e*P	Pn	23 45 25.2	+1.1
VIVF				*e*Pg	Pg	23 45 27.6	-1.6
VIVF				*e*Sn	Sn	23 45 48.1	-2.3
VIVF	Saint-Julien-l	2.04	288	*e*Pg	Pg	23 45 27.6	-1.6
VIVF				*e*Sn	Sn	23 45 48.1	-2.3
	1.2nm,0.3s						
PGF	Pioggiola	2.07	145	*e*Pn	Pn	23 45 22.3	-2.1
PGF				*e*Sn	Sn	23 45 46.3	-4.8
	2.1nm,0.3s						
LASF	Ste Croix	2.56	267	*e*Sn	Sn	23 46 00.6	-3.1
	7.6nm,0.9s						

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*IDC **18** 00:18:32.6±1.7,2.24N×96.90E,mb3.9/8,mb1 4.0/8, mb1mx3.8/19,mbtmp3.9/8,Error ellipse: s-maj=70.2km s-min=27.0km az=50.0*
*NEIC **18** 00:18:37.2±0.6,2.24N×96.89E,h30^{km},mb4.2/5,Error ellipse: s-maj=16.5km s-min=10.2km az=222.0*
ISC 18 00:18:35.2±0.9,**2.3N**±0.1×**96.9E**±0.1,**h30**^{km},**n16**, σ**0^{s}.37**/16,**mb4.1**/13,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	4.82	51	*e*Pn	Pn	00 19 48.2	+0.4
WRA	Warramunga Arr	42.87	123	P	P	00 26 32.7	-0.3
	1.1nm,0.6s,mb3.8,baz=301,slow=9.2,SNR=5.1						
WRAB	Tennant Creek	42.88	123	P	P	00 26 33.2	+0.2
	2.2nm,0.5s,mb4.1						
AAK	Ala-Archa	44.91	337	*e*P	P	00 26 49.7	+0.5
	1.2nm,0.6s,mb3.9						
SONM	Songino Array	46.14	9	P	P	00 26 58.6	-0.2
	0.4nm,0.3s,mb3.8,baz=189,slow=9.3,SNR=8.7						
MKAR	Makanchi Array	46.14	346	P	P	00 26 59.1	+0.2
	3.2nm,0.9s,mb4.2,baz=156,slow=8.3,SNR=14						
ULN	Ulaanbaatar	46.28	9	*e*P	P	00 26 59.1	-0.8
	2.6nm,0.4s,mb4.5						
ZAL	Zalesovo	52.46	351	P	P	00 27 47.4	0.0
	1.6nm,0.4s,mb4.3,baz=304,slow=4.8,SNR=3.6						
ZAL	Zalesovo	52.46	351	P	P	00 27 47.4	0.0
BVAR	Borovoye Array	55.15	341	P	P	00 28 07.0	-0.3
	1.7nm,0.8s,mb4.2,baz=137,slow=8.3,SNR=15						
BRVK	Borovoye	55.21	341	*e*P	P	00 28 07.6	-0.1
	1.0nm,0.8s,mb3.9						
CHKZ	Chkalovo	55.63	341	*e*P	P	00 28 10.6	0.0
	4.7nm,0.9s,mb4.5						
AKTO	Aktyubinsk	58.15	332	P	P	00 28 28.3	-0.3
	0.5nm,0.4s,mb3.9,baz=112,slow=5.4,SNR=3.2						
AKASG	Malin Array Be	74.23	322	P	P	00 30 11.4	+0.2
	0.5nm,0.4s,mb3.8,baz=91,slow=5.3,SNR=4.2						
FINES	FINESS Array B	78.92	332	P	P	00 30 37.9	+0.7
	1.7nm,0.8s,mb4.0,baz=90,slow=5.7,SNR=6.0						
FINES	FINESS Array B	78.92	332	P	P	00 30 37.9	+0.7

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*ATH **18** 00:29:34.2,40.32N×22.72E,h23^{km}±1^{km},MD3.2/6*
*THE **18** 00:29:34.4,40.33N×22.76E,h10^{km},ML2.7*
*SKO **18** 00:29:34.3,40.35N×22.85E,ML2.3*
*NEIC **18** 00:29:34.2,40.32N×22.72E,h23^{km},MD3.2(ATH),After ATH.*
*CSEM **18** 00:29:34.4±0.1,40.36N×22.74E,h15^{km},ML2.7,Error ellipse: s-maj=1.4km s-min=1.2km az=129.0*
ISC 18 00:29:33.7±0.3,**40.33N**±0.02×**22.74E**±0.03,**h12**^{km}±4^{km}, **n23**,σ**0^{s}.90**/37,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIT	Litokhoron	0.30	219	*e*Pg	Pg	00 29 40.6	+0.6
LIT				*e*Sg	Sg	00 29 45.6	+1.3
THE	Thessaloniki	0.35	30	*e*Pg	Pg	00 29 40.6	-0.3
THE				*e*Sg	Sg	00 29 46.3	+0.5
PLG	Polygyros	0.55	86	*e*PN	Pg	00 29 44.8	+0.1
PLG				*e*SN	Sg	00 29 53.4	+1.2
GRG	Griva	0.67	338	*e*Pg	Pg	00 29 47.0	-0.2
GRG				*e*Sg	Sg	00 29 57.6	+1.3
GRG	Griva	0.67	338	*e*Pg	Pg	00 29 47.0	-0.3
GRG				*e*Sg	Sg	00 29 57.6	+1.3
SOH	Sokhos	0.68	44	*e*Pg	Pg	00 29 47.0	-0.3
SOH				*e*Sg	Sg	00 29 56.4	-0.1
KZN	Kozani	0.74	268	*e*PN	Pn	00 29 48.1	-1.5
KZN				*e*SN	Sn	00 29 59.3	-1.4
PAIG	Paliouri	0.83	119	*e*Pg	Pg	00 29 50.0	-0.4
PAIG				*e*Sg	Sg	00 30 02.1	+0.6
KNT	Kendrikon	0.84	8	*e*Pg	Pg	00 29 49.8	-0.7
OUR	Ouranopolis	0.95	90	*e*Pg	Pg	00 29 52.2	-0.6
VAY	Valandovo	0.99	353	*e*Pg	Pg	00 29 52.6	-1.1
VAY				*e*Sg	Sg	00 30 06.1	-0.8
XOR	Xorichti	1.03	160	*e*Pg	Pg	00 29 53.6	-0.7
NEO	Neokhori	1.09	160	*e*PN	Pn	00 29 54.7	0.0
FNA	Florina	1.13	294	*e*Pg	Pn	00 29 55.2	0.0
FNA				*e*Sg	Sg	00 30 12.5	+1.1
BIA	Bitola	1.27	303	*e*Pg	Pn	00 29 57.3	0.0
BIA				*e*Sg	Sg	00 30 16.6	+0.4
BIA	Bitola	1.27	303	*e*Pn	Pn	00 29 57.3	0.0
BIA				*e*Sn	Sn	00 30 16.5	+2.2
MEV	Metsovon	1.28	245	*e*Pg	Pg	00 29 58.8	-0.5
NVR	Nevrokopi	1.33	40	*e*PN	Pg	00 29 59.5	-0.7
AGG	Agios Georgios	1.35	194	*e*Pg	Pg	00 29 58.9	-1.7
AGG				*e*Sg	Sg	00 30 18.6	0.0
AOS	Alonnisos	1.46	142	*e*Pg	Pn	00 30 00.4	+0.4
EVR	Evrytania	1.59	207	*e*PN	Pn	00 30 02.8	+1.1
OHR	Ohrid	1.66	298	*e*Pn	Pg	00 30 05.7	-1.2
OHR				*e*Sn	Sg	00 30 29.5	+0.4
RDO	Rodhopi	2.28	68	*e*PN	Pn	00 30 13.1	+1.4

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*ATH **18** 00:37:52.3,34.81N×23.11E,h12^{km},MD3.3/3*
*NEIC **18** 00:37:52.3,34.81N×23.11E,h12^{km},MD3.3(ATH),After ATH.*
*HLW **18** 00:37:54.5,35.05N×23.59E,h33^{km},Mb3.5*
*CSEM **18** 00:37:54.6±0.2,34.78N×23.14E,h40^{km},ML3.5,Error ellipse: s-maj=7.2km s-min=3.6km az=92.0*
ISC 18 00:37:51.7±1.3,**34.68N**±0.05×**23.1E**±0.1,**h12**^{km},**n11**, σ**1^{s}.17**/13,**2D**,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	Gavdhos	0.83	79	*e*Pn	Pn	00 38 09.4	+0.3
GVD	Gavdhos	0.83	79	*e*Pn	Pn	00 38 09.4	+0.3
VAM	Vamos	1.16	51	*e*PN	Pn	00 38 12.8	-0.9
VAM				*e*SB	Sb	00 38 28.0	-0.1
KYTH	Kithira	1.59	358	*e*PB	Pb	00 38 20.0	-0.6
NPS	Neapolis	2.15	74	*e*PN	Pn	00 38 29.3	+1.4
HMAT	Matruh	4.92	136	P	Pn	00 39 06.8	-0.5
SWA2		5.78	159	P	Pn	00 39 21.4	+2.0
SWA1		5.84	157	⇓ *e*P	Pn	00 39 22.0	+1.7
SWA1				S	Sn	00 40 25.9	-2.1
HFRF	Wahat Farafira	8.74	148	P	P	00 40 00.8	-0.2
AMAG	Maghara	9.43	112	⇓P	P	00 40 05.9	-4.5
HDK2	Wahat Dakhilah	11.52	152	P	P	00 40 38.0	-1.1

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*CSEM **18** 00:47:23.4±0.2,38.09N×26.96E,h40^{km},MD2.8,Error ellipse: s-maj=9.6km s-min=4.1km az=106.0*
*ISK **18** 00:47:24.2,38.48N×26.61E,h28^{km},MD2.8*
*ATH **18** 00:47:24.0,38.16N×26.52E,h10^{km},MD3.0/3*
*NEIC **18** 00:47:24.0,38.45N×26.61E,h30^{km},MD3.0(ATH), MD2.8(ISK),After ISK.*
ISC 18 00:47:24.5±0.8,**38.16N**±0.03×**26.59E**±0.05,**h5**^{km}±7^{km}, **n10**,σ**0^{s}.73**/17,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.20	1	*i* P	Pg	00 47 28.6	-0.1
URLA				*i* S	Sg	00 47 32.0	+0.6
BLCB	Balcova	0.42	57	*i* PG	Pg	00 47 32.9	-0.1
BLCB				*i* SG	Sg	00 47 38.4	-0.2
SMG	Samos	0.49	157	*e*P	Pg	00 47 34.0	-0.4
SMG				*e*S	Sg	00 47 42.2	+1.3
IZM	Izmir	0.58	66	*i* PG	Pg	00 47 35.7	-0.4
IZM				*i* SG	Sg	00 47 44.2	+0.3
KDAG	Bornova	0.58	65	*i* P	Pg	00 47 36.8	+0.6
KDAG				*i* S	Sg	00 47 42.7	-1.3
PRK	Paraskevi	1.11	347	*e*P	Pb	00 47 44.8	-1.1
PRK				*e*S	Sb	00 48 01.6	+1.1
AKS	Akhisar	1.20	53	*i* PG	Pn	00 47 42.7	-5.2
APE	Apeiranthos	1.38	218	*e*PB	Pb	00 47 49.4	-1.0
MANT	Manisa	1.58	77	*i* P	Pn	00 47 53.8	+0.4
MANT				*i* S	Sb	00 48 14.3	+0.2
BALB	Balikesir	1.79	34	*e*PN	Pn	00 47 50.6	-5.7

GUC 18 01:03:18.5±0.5,**22.96S**×**68.08W**,**h146**^{km}±4^{km},**MD3.8**, **ML3.5**,**1C-1D**,**Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	San Pedro de A	0.12	294	*e*P	P	01 03 38.8	+0.3
SPCH				*i* S	S	01 03 54.8	+1.1
SPCH				AMP		01 03 56.0	
	comp=E,794nm,0.5s						

CEN1	**Los Morros**	**2.00**	**257**	⇓iP	P	01 03 56.3	+2.6
CEN1				iS	S	01 04 24.7	+4.1
CEN1				AMP		01 04 28.4	
	comp=E,131nm,0.3s						
ANCH	**Antofagasta**	**2.26**	**251**	eP	P	01 03 57.2	+0.3
ANCH				iS	S	01 04 26.8	+0.5
ANCH				AMP		01 04 29.9	
	comp=N,358nm,0.2s						
CPN1	**Cerro Paranal**	**2.70**	**232**	⇑eP	P	01 04 03.8	+1.3
CPN1				iS	S	01 04 38.0	+1.8
CPN1				AMP		01 04 40.2	
	comp=N,314nm,0.5s						

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*BUG **18** 01:36:01.2,51.54N×6.81E,h1^{km},ML1.7*

*NEIC **18** 01:36:01.5±0.5,51.61N×6.81E,h10^{km},ML2.8(LDG),ML2.2(SZGRF),Error ellipse: s-maj=8.4km s-min=4.7km az=149.0*

*LDG **18** 01:36:02.5±0.3,51.59N×6.84E,h1^{km},Ml2.8/10,Error ellipse: s-maj=4.7km s-min=2.8km az=31.0,Suspected Mining induced.*

*CSEM **18** 01:36:02.3±0.1,51.59N×6.85E,h2^{km},ML2.8/8,Error ellipse: s-maj=3.1km s-min=1.7km az=121.0*

*BNS **18** 01:36:02.6±1.1,51.58N×6.86E,h1^{km},ML2.2*

*BGR **18** 01:36:02.7±0.3,51.54N×6.93E,h1^{km},ML2.2/2,Error ellipse: s-maj=3.3km s-min=2.2km az=91.0*

ISC 18 01:36:00.3±0.3,**51.54N**±0.02×**6.71E**±0.04,**n42**,σ1^{s}**44**/74,**3D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BZER	**Hlnxe**	**0.13**	**53**	Pg	**Pg**	**01 36 02.7**	**-0.1**
BZER				Sg	**Sg**	**01 36 04.2**	**-0.3**
LAUG	**Laupendahl**	**0.24**	**142**	ePg	**Pg**	**01 36 06.7**	**+1.6**
BUG	**Bochum--Univer**	**0.37**	**106**	⇓ePg	**Pg**	**01 36 08.0**	**+0.4**
BUG				Sg	**Sg**	**01 36 13.0**	**+0.5**
BUG	**Bochum--Univer**	**0.37**	**106**	ePg	**Pg**	**01 36 07.9**	**+0.3**
BUG				eSg	**Sg**	**01 36 09.9**	**-2.6**
WTSB	**Winterswijk**	**0.43**	**8**	⇓iPg	**Pg**	**01 36 09.9**	**+1.1**
	35nm,0.3s,baz=170						
WTSB				eSg	**Sg**	**01 36 16.1**	**+1.6**
WTSB	**Winterswijk**	**0.43**	**8**	ePg	**Pg**	**01 36 09.8**	**+1.0**
	SNR=32						
WTSB				eSg	**Sg**	**01 36 16.2**	**+1.6**
	SNR=2.1						
RODG	**Roetgen-Dahlhe**	**0.52**	**220**	ePg	**Pg**	**01 36 14.1**	**+3.5**
BNS	**Bensberg**	**0.65**	**153**	ePg	**Pg**	**01 36 15.2**	**+1.9**
BNS				eSg	**Sg**	**01 36 24.4**	**+2.4**
	115nm,0.5s						
HOBG	**Hohbusch**	**0.69**	**145**	ePg	**Pg**	**01 36 15.2**	**+1.2**
HOBG				eSg	**Sg**	**01 36 24.2**	**+1.1**
	94nm,0.7s						
HGN	**Heimansgroeve**	**0.92**	**212**	⇓ePg	**Pg**	**01 36 21.6**	**+2.9**
	29nm,0.1s,baz=40						
HGN				eSg	**Sg**	**01 36 35.5**	**+4.5**
HGN	**Heimansgroeve**	**0.92**	**212**	ePg	**Pg**	**01 36 21.6**	**+3.0**
	SNR=24						
HGN				eSg	**Sg**	**01 36 35.5**	**+4.6**
	SNR=15						
KLL	**Kalltalsperre**	**0.93**	**196**	ePg	**Pg**	**01 36 21.1**	**+2.2**
KLL				eSg	**Sg**	**01 36 35.1**	**+3.8**
	92nm,0.3s						
STB	**Steinbach**	**0.95**	**175**	ePg	**Pg**	**01 36 21.3**	**+2.0**
STB				eSg	**Sg**	**01 36 34.9**	**+2.8**
	58nm,0.7s						
IBBN	**Ibbenburen**	**1.00**	**40**	ePg	**Pg**	**01 36 19.3**	**-1.0**
	SNR=5.0						
IBBN				eSg	**Sg**	**01 36 32.1**	**-1.6**
	SNR=4.3						
HILG	**Hillesheim**	**1.25**	**181**	eSg	**Sg**	**01 36 44.1**	**+2.1**
	58nm,0.7s						
WIT	**Witteveen**	**1.27**	**359**	ePg	**Pg**	**01 36 26.4**	**+0.8**
	SNR=3.0						
WIT				eSg	**Sg**	**01 36 45.0**	**+2.4**
	SNR=2.0						
BGG	**Burgeitz**	**1.40**	**163**	ePg	**Pg**	**01 36 28.1**	**-0.1**
BGG				eSg	**Sg**	**01 36 46.9**	**+0.1**
	46nm,0.1s						
TNS	**Taunus Mts**	**1.72**	**139**	eSg	**Sg**	**01 36 55.2**	**-2.4**
	SNR=2.4						
GIVF	**Givet**	**1.87**	**220**	ePg	**Pg**	**01 36 38.4**	**+0.7**
GIVF				eSg	**Sg**	**01 37 03.3**	**+0.7**
	24nm,0.3s						
GIVF	**Givet**	**1.87**	**220**	ePn	**Pn**	**01 36 34.4**	**+0.5**
GIVF				ePg	**Pg**	**01 36 38.4**	**+0.7**
GIVF				eSg	**Sg**	**01 37 03.3**	**+0.7**
GIVF	**Givet**	**1.87**	**220**	ePg	**Pg**	**01 36 38.4**	**+0.7**
GIVF				eSg	**Sg**	**01 37 03.3**	**+0.7**
	12nm,0.3s						
WLF	**Walferdange**	**1.91**	**191**	ePg	**Pg**	**01 36 39.4**	**+0.9**
	SNR=3.6						
WLF				eSg	**Sg**	**01 37 02.9**	**-1.1**
	SNR=2.4						
BAIF	**Baives**	**2.17**	**228**	ePn	**Pn**	**01 36 39.7**	**+1.5**
BAIF				eSg	**Sg**	**01 37 11.9**	**-0.7**
	8.8nm,0.3s						
CLZ	**Clausthal**	**2.30**	**81**	ePn	**Pn**	**01 36 38.1**	**-1.9**
	SNR=4.2						
CLZ				eSg	**Sg**	**01 37 11.4**	**-5.5**
	SNR=2.6						
RFYF	**Reffroy**	**3.02**	**196**	ePn	**Pn**	**01 36 51.4**	**+1.1**
CDF	**Champ du Feu**	**3.16**	**173**	ePn	**Pn**	**01 36 52.2**	**0.0**
CDF				eSg	**Sg**	**01 37 44.7**	**-0.7**
	1.9nm,0.2s						
MEZF	**Maizieres J'vi**	**3.23**	**200**	ePn	**Pn**	**01 36 54.0**	**+0.8**
	baz=32						
MEZF				eSg	**Sg**	**01 37 45.1**	**-2.6**
	5.0nm,0.3s						
SFTF	**Sexfontaines**	**3.51**	**199**	ePg	**Pg**	**01 37 09.0**	**-1.4**
SFTF				eSg	**Sg**	**01 37 54.7**	**-2.5**
	3.7nm,0.3s						
SFTF	**Sexfontaines**	**3.51**	**199**	ePn	**Pn**	**01 36 58.5**	**+1.2**
SFTF				ePg	**Pg**	**01 37 09.0**	**-1.4**
SFTF				eSg	**Sg**	**01 37 54.7**	**-2.5**
WERD	**Werda**	**3.70**	**105**	ePn	**Pn**	**01 36 58.4**	**-1.6**
	SNR=2.7						
TANN	**Tannenbergstha**	**3.81**	**105**	ePn	**Pn**	**01 36 60.0**	**-1.5**
	SNR=2.6						
TANN				eSg	**Sg**	**01 37 59.1**	**-8.0**
	SNR=1.5						
LOR	**Lormes**	**4.67**	**205**	ePn	**Pn**	**01 37 13.2**	**-0.4**
	baz=28						
LOR				eSn	**Sn**	**01 38 05.9**	**-3.4**
LOR				eSg	**Sg**	**01 38 30.7**	**-4.9**
	1.8nm,0.3s						
SSF	**Saint Saulge**	**4.95**	**206**	ePn	**Pn**	**01 37 17.2**	**-0.5**
AVF	**Avril sur Loir**	**5.24**	**206**	ePn	**Pn**	**01 37 20.7**	**-1.1**
SMF	**Signal de Mont**	**5.25**	**202**	ePn	**Pn**	**01 37 20.1**	**-1.8**
LDF	**La Druitiere**	**5.30**	**239**	ePn	**Pn**	**01 37 21.9**	**-0.7**
LDF				eSn	**Sn**	**01 38 21.3**	**-3.9**
	2.3nm,0.3s						
FLN	**La Foliniere**	**5.39**	**242**	ePn	**Pn**	**01 37 23.6**	**-0.3**
	baz=57						
FLN				eSn	**Sn**	**01 38 23.1**	**-4.6**
	2.1nm,0.3s						
BGF	**Bois d'Agland**	**5.60**	**208**	ePn	**Pn**	**01 37 25.2**	**-1.6**
GRR	**Gorron**	**5.81**	**240**	ePn	**Pn**	**01 37 29.2**	**-0.6**
GRR				eSn	**Sn**	**01 38 32.8**	**-5.4**
	2.3nm,0.2s						
TCF	**Toulx Ste Croi**	**6.04**	**211**	ePn	**Pn**	**01 37 31.9**	**-1.1**
MFF	**Saint Martin d**	**6.69**	**225**	ePn	**Pn**	**01 37 40.3**	**-1.9**
SGMF	**Saint Gilles**	**6.83**	**245**	ePn	**Pn**	**01 37 42.3**	**-1.9**

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*ATH **18** 01:38:04.7,34.95N×23.03E,h29^{km}±3^{km},MD3.6/7,ML3.9*

*NEIC **18** 01:38:04.7,34.95N×23.03E,h29^{km},ML3.9(ATH),After ATH.*

*HLW **18** 01:38:05.1,35.08N×23.28E,h33^{km},Mb3.8*

*CSEM **18** 01:38:05.1±0.1,34.83N×23.09E,h68^{km}±1^{km},ML3.9,Error ellipse: s-maj=5.1km s-min=2.0km az=61.0*

*IDC **18** 01:38:07.3±6.2,35.06N×23.04E,h53^{km}±32^{km},mb3.8/7,mb1 3.8/8,mb1mx3.6/22,mbtmp3.9/8,ML3.7/1,Error ellipse: s-maj=77.0km s-min=21.0km az=19.0*

ISC 18 01:38:04.6±0.7,**34.82N**±0.04×**22.98E**±0.07,**h65**^{km}±8^{km},**n31**,σ0^{s}**80**/36,**mb3.8**/7,**Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVD	**Gavdhos**	**0.91**	**89**	ePn	**P**	**01 38 22.0**	**0.0**
GVD				eSn	**S**	**01 38 35.9**	**+1.1**
GVD	**Gavdhos**	**0.91**	**89**	ePn	**P**	**01 38 22.0**	**+0.1**
GVD				eSn	**S**	**01 38 35.9**	**+1.1**
VAM	**Vamos**	**1.16**	**60**	ePN	**P**	**01 38 24.7**	**-0.5**
VAM				eSN	**S**	**01 38 40.3**	**-0.3**
IDI	**Anoyia**	**1.64**	**73**	P	**P**	**01 38 32.0**	**+0.2**
	19nm,0.3s,baz=270,slow=13,SNR=118						
IDI				S	**S**	**01 38 51.5**	**-0.4**
	22nm,0.3s,baz=309,slow=19,SNR=8.6						
NPS	**Neapolis**	**2.21**	**78**	ePN	**P**	**01 38 40.6**	**+0.9**
ITM	**Ithomi**	**2.50**	**340**	ePB	**P**	**01 38 45.4**	**+1.5**
SANT	**Santorini**	**2.54**	**52**	ePn	**P**	**01 38 43.1**	**-1.4**
SANT	**Santorini**	**2.54**	**52**	ePn	**P**	**01 38 43.1**	**-1.4**
NAIG	**Nisos Aigina**	**2.96**	**8**	ePN	**P**	**01 38 50.3**	**-0.1**
ATH	**Athens Observa**	**3.20**	**11**	ePN	**P**	**01 38 53.3**	**-0.4**
MPAR	**Parnis Oros**	**3.38**	**10**	ePN	**P**	**01 38 55.8**	**-0.4**
RLS	**Riolos of Patr**	**3.45**	**340**	ePN	**P**	**01 38 58.1**	**+0.8**
KARP	**Karpathos**	**3.50**	**77**	ePN	**P**	**01 38 58.1**	**+0.1**
LKR	**Lokris**	**3.82**	**0**	ePN	**P**	**01 39 02.3**	**-0.1**
NEO	**Neokhori**	**4.48**	**2**	ePN	**P**	**01 39 11.4**	**-0.3**
HMAT	**Matruh**	**5.08**	**136**	P	**P**	**01 39 19.8**	**-0.2**
SWA2		**5.95**	**159**	P	**P**	**01 39 33.4**	**+1.4**
SWA1		**6.01**	**157**	P	**P**	**01 39 33.9**	**+1.1**
SWA1				S	**S**	**01 40 39.0**	**-2.1**
TIP	**Timpagrande**	**6.61**	**313**	ePn	**P**	**01 39 40.6**	**-0.6**
TIP	**Timpagrande**	**6.61**	**313**	ePn	**P**	**01 39 40.6**	**-0.7**
AWBH		**8.22**	**140**	P	**P**	**01 40 03.0**	**-0.5**
HFRF	**Wahat Farafira**	**8.91**	**148**	P	**P**	**01 40 12.7**	**-0.3**
GERES	**GERESS Array B**	**15.60**	**337**	P	**P**	**01 41 40.6**	**-1.2**
	0.1nm,0.3s,baz=156,slow=12,SNR=3.0						
HFS	**Hagfors**	**26.04**	**349**	P	**P**	**01 43 33.6**	**+0.4**
	1.3nm,0.5s,mb3.6,baz=164,slow=11,SNR=11						
FINES	**FINESS Array B**	**26.71**	**3**	P	**P**	**01 43 39.0**	**-0.4**
	3.1nm,1.0s,mb3.8,baz=163,slow=9.8,SNR=3.3						
NOA	**NORSAR Array B**	**27.30**	**348**	P	**P**	**01 43 45.5**	**+0.7**
	1.7nm,0.9s,mb3.6,baz=160,slow=10,SNR=2.8						
NOA	**NORSAR Array B**	**27.30**	**348**	P	**P**	**01 43 45.5**	**+0.7**
ARCES	**ARCESS Array B**	**34.79**	**2**	P	**P**	**01 44 49.6**	**-0.9**
	2.5nm,0.8s,mb4.1,baz=187,slow=9.8,SNR=8.1						
MKAR	**Makanchi Array**	**45.45**	**56**	P	**P**	**01 46 19.4**	**+0.6**
	0.5nm,0.3s,mb3.8,baz=267,slow=8.2,SNR=27						
ZAL	**Zalesovo**	**46.51**	**46**	P	**P**	**01 46 27.1**	**+0.1**
	1.1nm,0.3s,mb4.1,baz=146,slow=5.7,SNR=3.3						
SONM	**Songino Array**	**61.08**	**50**	P	**P**	**01 48 15.0**	**+1.0**
	0.5nm,0.5s,mb3.8,baz=297,slow=6.4,SNR=3.7						

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*NEIC **18** 01:54:25.3,15.93N×94.94W,h20^{km},MD3.9(MEX),After MEX.*

MEX 18 01:54:25.2±0.5,**15.96N**×**94.97W**,**h50**^{km}±20^{km},**MD3.9,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.11**	**260**	iP	P	01 54 42.6	-2.1
HUIG				iS	S	01 54 56.8	-2.3
CMIG	**Matias Romero**	**1.13**	**4**	iP	P	01 54 43.0	-1.9
CMIG				iS	S	01 54 57.3	-2.3
OXX	**Oaxaca**	**2.02**	**304**	eP	P	01 54 56.0	-1.5
OXX				iS	S	01 55 18.5	-3.0
CCIG	**Comitan**	**2.74**	**83**	iP	P	01 55 06.0	-1.9
CCIG				iS	S	01 55 36.5	-3.4

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*IDC **18** 02:14:09.6±3.8,1.15N×97.64E,mb4.0/5,mb1 4.2/5,mb1mx3.8/18,mbtmp4.0/5,Error ellipse: s-maj=156.5km s-min=21.1km az=57.0*

*NEIC **18** 02:14:11.4±0.9,0.75N×97.07E,h30^{km},mb4.0/2,Error ellipse: s-maj=22.9km s-min=11.2km az=62.0*

ISC 18 02:14:09.3±1.1,**0.8N**±0.1×**97.1E**±0.2,**h30**^{km},**n10**,σ0^{s}**40**/10,**mb4.0**/7,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**5.75**	**39**	ePn	**Pn**	**02 15 34.8**	**-0.1**
KULM				epPn		02 15 41.8	
FITZ	**Fitzroy Crossi**	**33.80**	**125**	P	**P**	**02 20 51.0**	**-0.1**
	2.9nm,0.9s,mb4.2,baz=338,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**41.94**	**121**	P	**P**	**02 21 59.9**	**+0.5**
	0.7nm,0.5s,mb3.5,baz=304,slow=8.8,SNR=10.0						
WRAB	**Tennant Creek**	**41.94**	**121**	eP	**P**	**02 21 59.1**	**-0.3**
	1.5nm,0.5s,mb3.9						
WB2	**Warramunga Arr**	**41.95**	**121**	eP	**P**	**02 21 59.5**	**0.0**
SONM	**Songino Array**	**47.57**	**9**	P	**P**	**02 22 44.5**	**+0.3**
	0.9nm,0.8s,mb3.8,baz=188,slow=7.8,SNR=5.5						
MKAR	**Makanchi Array**	**47.62**	**346**	P	**P**	**02 22 45.2**	**+0.6**
	1.3nm,0.6s,mb4.2,baz=160,slow=8.6,SNR=18						
MKAR	**Makanchi Array**	**47.62**	**346**	P	**P**	**02 22 45.2**	**+0.5**
ZAL	**Zalesovo**	**53.95**	**351**	P	**P**	**02 23 32.5**	**+0.1**
	2.5nm,0.4s,mb4.5,baz=342,slow=3.3,SNR=7.1						
CHKZ	**Chkalovo**	**57.08**	**342**	eP	**P**	**02 23 54.4**	**-0.8**
	1.1nm,0.8s,mb3.9						

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*ISK **18** 02:19:37.0,37.83N×27.01E,h28^{km},MD2.9*

*ATH **18** 02:19:38.3,37.92N×27.28E,h9^{km},MD3.0/3*

*CSEM **18** 02:19:38.1±0.2,37.87N×27.33E,h8^{km},MD2.9,Error ellipse: s-maj=4.7km s-min=3.4km az=42.0*

ISC 18 02:19:38.5±0.6,**37.87N**±0.03×**27.27E**±0.04,**h12**^{km}±5^{km},**n18**,σ1^{s}**01**/26,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.38**	**245**	ePG	**Pg**	**02 19 46.1**	**-0.3**
SMG				eSB	**Sb**	**02 19 52.3**	**+0.2**
AYDN	**Tasoluk**	**0.52**	**113**	iP	**Pb**	**02 19 49.4**	**+0.3**
AYDN				iS	**Sg**	**02 19 57.2**	**+0.9**
IZM	**Izmir**	**0.53**	**359**	iPG	**Pg**	**02 19 49.7**	**+0.4**
KDAG	**Bornova**	**0.54**	**360**	iP	**Pb**	**02 19 48.8**	**-0.5**
KDAG				iS	**Sg**	**02 19 56.8**	**+0.1**
BLCB	**Balcova**	**0.55**	**341**	iPG	**Pg**	**02 19 49.8**	**+0.1**
BLCB				iSG	**Sg**	**02 19 57.3**	**+0.2**
MLSB	**Milas**	**0.70**	**145**	PG	**Pg**	**02 19 52.1**	**-0.5**
URLA	**Izmir**	**0.72**	**313**	iP	**Pb**	**02 19 52.2**	**-0.4**
URLA				iS	**Sb**	**02 20 02.3**	**+0.1**
BODT	**Bodrum**	**0.81**	**178**	PG	**Pg**	**02 19 52.4**	**-2.3**
BDRM	**Kayabasi**	**0.81**	**170**	iP	**Pb**	**02 19 54.4**	**+0.4**
BDRM				iS	**Sb**	**02 20 05.3**	**+0.6**
YER	**Yerkesik**	**1.09**	**132**	PN	**Pn**	**02 19 59.3**	**-0.2**
AKS	**Akhisar**	**1.10**	**23**	ePN	**Pn**	**02 19 59.1**	**-0.5**
DAT	**Datca**	**1.16**	**168**	ePN	**Pn**	**02 19 58.1**	**-2.4**
MANT	**Manisa**	**1.19**	**58**	iP	**Pb**	**02 20 02.9**	**+2.4**
MANT				iS	**Sb**	**02 20 14.3**	**-1.3**
DENT	**Denizli**	**1.40**	**94**	ePN	**Pn**	**02 20 04.0**	**+0.1**
DNZL	**Cakiroluk**	**1.42**	**97**	iP	**Pn**	**02 20 07.3**	**+3.1**
DNZL				iS	**Sb**	**02 20 28.9**	**+6.6**
PRK	**Paraskevi**	**1.58**	**331**	ePB	**Pb**	**02 20 07.2**	**0.0**
APE	**Apeiranthos**	**1.60**	**241**	ePB	**Pb**	**02 20 09.1**	**+1.6**
DST	**Dursunbey**	**2.03**	**31**	ePN	**Pn**	**02 20 12.1**	**-0.9**

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*NEIC **18** 02:35:46.2,34.10S×69.21W,h11^{km},ML2.9(GUC),After GUC.*

GUC 18 02:35:46.2±0.8,**34.10S**×**69.21W**,**h11**^{km}±4^{km},**MD3.5,ML2.9,7C-3D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMEL	**Las Melosas**	**0.86**	**286**	⇑iP	Pb	02 36 02.5	-0.1
LMEL				iS	Sb	02 36 15.1	+1.1
LMEL				AMP		02 36 15.9	
	comp=N,307nm,0.4s						
CICH	**Cipreses**	**1.03**	**257**	⇑iP	Pb	02 36 05.3	-0.2
CICH				iS	Sb	02 36 19.8	+1.0
CACH	**El Canelo**	**1.15**	**269**	⇓iP	Pb	02 36 07.3	-0.3
CACH				iS	Sb	02 36 23.3	+0.9
FCH	**Farellones**	**1.18**	**310**	eP	Pb	02 36 08.2	+0.1
FCH				iS	Sb	02 36 24.9	+1.7
FCH				AMP		02 36 25.5	
	comp=N,631nm,0.4s						
CHCH	**Chadas Angostu**	**1.21**	**277**	⇑iP	Pb	02 36 08.6	0.0
CHCH				iS	Sb	02 36 25.5	+1.5
RCDM	**Rinconada Maip**	**1.46**	**294**	⇑iP	Pn	02 36 13.3	+0.7
RCDM				iS	Sb	02 36 33.6	+2.3
RCDM				AMP		02 36 34.0	
	comp=N,311nm,0.4s						
TACH	**Talagante**	**1.50**	**287**	⇑iP	Pn	02 36 13.6	+0.4
TACH				iS	Sb	02 36 34.4	+1.9
PEL	**Peldehue**	**1.55**	**307**	eP	Pn	02 36 14.1	+0.2
PEL				iS	Sb	02 36 35.9	+1.8
PEL				AMP		02 36 38.6	
	comp=N,520nm,0.4s						
SFDO	**San Fernando**	**1.58**	**250**	⇑iP	Pn	02 36 14.9	+0.6
SFDO				iS	Sb	02 36 36.5	+1.7
JACH	**Jahuel**	**1.82**	**320**	⇑iP	Pn	02 36 19.9	+2.1
LNV	**Longovilo**	**1.83**	**274**	⇓iP	Pn	02 36 18.8	+0.9
LNV				iS	Sn	02 36 43.6	+2.4
ROCH	**El Roble**	**1.87**	**306**	eP	Pn	02 36 20.4	+1.9
ROCH				iS	Sn	02 36 46.7	+4.4
LCCH	**Las Cruces**	**2.06**	**287**	⇓iP	Pn	02 36 22.9	+1.7
LCCH				iS	Sn	02 36 50.6	+3.6

GUC 18 02:46:03.1±0.9,**21.31S**×**69.21W**,**h120**^{km},**ML3.6,1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**1.85**	**150**	iP	P	02 46 35.9	+0.8
SPCH				iS	S	02 47 01.2	+1.9
SPCH				AMP		02 47 17.8	
	comp=N,316nm,0.6s						
CEN1	**Los Morros**	**2.27**	**204**	⇓iP	P	02 46 45.3	+4.8
CEN1				iS	S	02 47 16.6	+7.8
CEN1				AMP		02 47 22.5	
	comp=N,172nm,0.5s						
ANCH	**Antofagasta**	**2.61**	**205**	eP	P	02 46 45.9	+0.8
CPN1	**Cerro Paranal**	**3.48**	**198**	iP	P	02 46 57.6	+0.8
CPN1				iS	S	02 47 39.3	+1.7
CPN1				AMP		02 48 13.2	
	comp=E,128nm,0.3s						

GUC 18 02:46:12.1±0.6,**31.38S**×**71.74W**,**h15**^{km}±6^{km},**MD3.5,ML2.4,3C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.54**	**158**	⇑iP	Pb	02 46 22.5	-0.2
CHNG				iS	Sb	02 46 30.0	0.0
CHNG				AMP		02 46 30.6	
	comp=E,112nm,0.2s						
ILCH	**Illapel**	**0.55**	**118**	⇑iP	Pb	02 46 22.9	0.0
ILCH				iS	Sb	02 46 30.9	+0.7
ILCH				AMP		02 46 31.2	
	comp=E,704nm,0.1s						
CMCH	**Combarbala**	**0.67**	**72**	⇑iP	Pb	02 46 24.6	-0.3
CMCH				iS	Sb	02 46 34.3	+0.7
CMCH				AMP		02 46 36.0	
	comp=E,872nm,0.5s						
TLL	**Tololo Astrono**	**1.45**	**34**	eP	Pn	02 46 37.7	-0.3
TLL				iS	Sb	02 46 56.6	+0.2
TLL				AMP		02 47 03.4	
	comp=N,94nm,0.6s						

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*CRAAG **18** 03:13:14.7,36.82N×3.53E,Ml3.5*

*NEIC **18** 03:13:14.4±1.5,36.84N×3.65E,h10^{km},ML3.5(ALG),Error ellipse: s-maj=19.5km s-min=5.7km az=114.0*

*MDD **18** 03:13:16.0±0.8,36.95N×3.48E,mb3.8/10,Error ellipse: s-maj=8.6km s-min=6.2km az=105.0,PRXIMO*

*CSEM **18** 03:13:19.4±0.1,37.13N×3.37E,h40^{km},ML3.5,Error ellipse: s-maj=2.5km s-min=2.2km az=72.0*

ISC 18 03:13:16.8±0.6,**37.13N**±0.03×**3.37E**±0.05,**h10**^{km},**n42**,σ1^{s}**10**/65,**Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	**Boumerdes**	**0.39**	**167**	P	**Pg**	**03 13 17.2**	**-7.6**
ABA	**Alger-Bouzarea**	**0.43**	**220**	P	**Pg**	**03 13 23.5**	**-2.0**
EMHD	**Djebel Mahouad**	**0.99**	**200**	P	**Pb**	**03 13 30.0**	**-5.6**
EBNR	**Beni Rached**	**1.70**	**241**	P	**Pn**	**03 13 47.0**	**+0.1**
SET	**Setif**	**1.88**	**119**	P	**Pn**	**03 13 50.0**	**+0.6**
ECHA	**Ech Chlef**	**1.89**	**239**	P	**Pn**	**03 13 49.0**	**-0.5**
ECHF	**Ech Chlef**	**1.90**	**240**	P	**Pn**	**03 13 49.0**	**-0.7**
DFRA	**Djebel Bou Aff**	**2.09**	**105**	P	**Pn**	**03 13 50.0**	**-2.5**
EANR	**'Ain N'Sour**	**2.18**	**238**	P	**Pn**	**03 13 58.0**	**+4.3**
ETRT	**Tiaret**	**2.41**	**225**	P	**Pn**	**03 13 58.0**	**+1.0**
EIBI	**Ibiza**	**2.48**	**320**	P	**Pn**	**03 13 59.1**	**+1.1**
	3.8nm,0.2s,SNR=9.7						
EIBI				S	**Sn**	**03 14 29.6**	**+1.0**
	8.8nm,0.3s,SNR=7.9						
EIBI	**Ibiza**	**2.48**	**320**	P	**Pn**	**03 13 59.1**	**+1.1**
	3.8nm,0.2s,SNR=9.7						
EIBI				S	**Sn**	**03 14 29.6**	**+1.0**
	8.8nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**2.67**	**351**	P	**Pn**	**03 14 01.3**	**+0.6**
	5.3nm,0.2s,SNR=17						
ETOS				S	**Sn**	**03 14 33.0**	**-0.4**
	1.6nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**2.67**	**351**	P	**Pn**	**03 14 01.3**	**+0.6**
	5.3nm,0.2s,SNR=17						
ETOS				S	**Sn**	**03 14 33.0**	**-0.4**
	1.6nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.25**	**300**	P	**Pn**	**03 14 09.4**	**+0.4**
	0.9nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**03 14 48.9**	**+0.8**
	1.1nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.25**	**300**	P	**Pn**	**03 14 09.4**	**+0.5**
	0.9nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**03 14 48.9**	**+0.8**
	1.1nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**3.74**	**282**	S	**Sn**	**03 15 00.0**	**-0.4**
	2.0nm,0.3s,SNR=7.9						
EMUR	**La Murta**	**3.74**	**282**	S	**Sn**	**03 15 00.0**	**-0.4**
	2.0nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**4.17**	**293**	P	**Pn**	**03 14 22.6**	**+0.5**
	2.9nm,0.2s,SNR=13						
ETOB				S	**Sn**	**03 15 11.4**	**-0.2**
	1.0nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.17**	**293**	P	**Pn**	**03 14 22.8**	**+0.7**
ETOB				S	**Sn**	**03 15 11.4**	**-0.2**
ETOB	**Tobarra**	**4.17**	**293**	P	**Pn**	**03 14 22.6**	**+0.5**
	2.9nm,0.2s,SNR=13						
ETOB				S	**Sn**	**03 15 11.4**	**-0.2**
	1.0nm,0.2s,SNR=7.9						
ECHE	**Chera**	**4.20**	**307**	P	**Pn**	**03 14 23.6**	**+1.1**
	2.2nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.41**	**318**	P	**Pn**	**03 14 25.8**	**+0.4**
	0.9nm,0.3s,SNR=6.6						
EMOS				S	**Sn**	**03 15 17.0**	**-0.5**
	0.9nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.41**	**318**	P	**Pn**	**03 14 27.0**	**+1.6**
EMOS				S	**Sn**	**03 15 17.0**	**-0.5**
EMOS	**Mosqueruela**	**4.41**	**318**	P	**Pn**	**03 14 25.8**	**+0.4**
	0.9nm,0.3s,SNR=6.6						
EMOS				S	**Sn**	**03 15 17.0**	**-0.5**
	0.9nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**4.49**	**329**	P	**Pn**	**03 14 27.1**	**+0.5**
	0.4nm,0.2s,SNR=7.9						
ERTA				S	**Sn**	**03 15 18.1**	**-1.5**
	0.4nm,0.2s,SNR=7.9						
ERTA	**Horta de San J**	**4.49**	**329**	P	**Pn**	**03 14 27.1**	**+0.5**
	0.4nm,0.2s,SNR=7.9						
ERTA				S	**Sn**	**03 15 18.1**	**-1.5**
	0.4nm,0.2s,SNR=7.9						
EPOB	**Poblet**	**4.58**	**338**	P	**Pn**	**03 14 28.1**	**+0.3**
	0.8nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**03 15 19.2**	**-2.5**
	0.1nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**4.58**	**338**	P	**Pn**	**03 14 28.1**	**+0.3**
	0.8nm,0.2s,SNR=7.9						
EPOB				S	**Sn**	**03 15 19.2**	**-2.5**
	0.1nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**4.99**	**344**	P	**Pn**	**03 14 34.8**	**+1.2**
	6.8nm,0.2s,SNR=13						
EMIR				S	**Sn**	**03 15 29.0**	**-3.0**
	0.7nm,0.1s,SNR=4.0						
EMIR	**Miracle**	**4.99**	**344**	P	**Pn**	**03 14 34.9**	**+1.3**
EMIR				S	**Sn**	**03 15 29.8**	**-2.2**
EMIR	**Miracle**	**4.99**	**344**	P	**Pn**	**03 14 34.8**	**+1.2**
	6.8nm,0.2s,SNR=13						
EMIR				S	**Sn**	**03 15 29.8**	**-2.2**
EBER	**Berja**	**5.02**	**269**	S	**Sn**	**03 15 28.6**	**-4.2**
	0.7nm,0.2s,SNR=7.9						
EBER	**Berja**	**5.02**	**269**	S	**Sn**	**03 15 28.6**	**-4.2**
	0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.17**	**279**	P	**Pn**	**03 14 36.1**	**-0.1**
	1.2nm,0.3s,SNR=5.1						
EQES				S	**Sn**	**03 15 35.3**	**-1.3**
	1.6nm,0.3s,SNR=6.5						
EQES	**Quesada**	**5.17**	**279**	P	**Pn**	**03 14 36.2**	**0.0**
EQES				S	**Sn**	**03 15 35.3**	**-1.3**
EQES	**Quesada**	**5.17**	**279**	P	**Pn**	**03 14 36.1**	**-0.1**
	1.2nm,0.3s,SNR=5.1						
EQES				S	**Sn**	**03 15 35.3**	**-1.3**
	1.6nm,0.3s,SNR=6.5						
EJON	**La Jonquera**	**5.32**	**356**	P	**Pn**	**03 14 38.4**	**0.0**
	2.4nm,0.2s,SNR=7.9						
EJON	**La Jonquera**	**5.32**	**356**	P	**Pn**	**03 14 38.4**	**0.0**

	2.4nm,0.2s,SNR=7.9						
EQUE	Quentar	5.44	273	P	Pn	03 14 42.1	+2.1
	0.2nm,0.2s,SNR=7.9						
EQUE				S	Sn	03 15 38.6	-4.9
	2.1nm,0.5s,SNR=7.9						
EBIE	Bielsa	6.08	337	P	Pn	03 14 49.5	+0.5
	0.6nm,0.3s,SNR=7.9						
EBIE	Bielsa	6.08	337	P	Pn	03 14 49.5	+0.5
	0.6nm,0.3s,SNR=7.9						

MOS ***18*** *03:15:42.9±0.9, 13.66N×88.64W, h56^{km}, mb5.1/63, MS4.4/6, Error ellipse: s-maj=7.8km s-min=5.4km az=103.6*

HRVD ***18*** *03:15:46.9±0.2, 13.38N×89.39W, h54^{km}±3^{km}, MW5.4/84, Centroid moment Tensor Solution. LP body waves: s59,c98;Mantle waves: s84,c165; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.28±.05; M$_{\theta\theta}$0.18±.04; M$_{\phi\phi}$0.10±.04; M$_{r\theta}$1.05±.04; M$_{\theta\phi}$-0.26±.03; M$_{\phi r}$-0.81±.04; Best double couple: M$_{0}$1.368×10^{17} NP1: ϕ_s138°,δ7°,λ-79°. NP2:ϕ_s308°,δ83°,λ-91°. Principal axes: T 1.426, Plg38°, Azm39°; N -.116, Plg1°, Azm308°; P -1.31, Plg52°, Azm216°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***18*** *03:15:46.9±0.2, 13.30N×89.07W, mb5.0/119, MD4.8(CASC) Error ellipse: s-maj=5.7km s-min=3.6km az=40.0*

NEIC Felt [V] at Antiguo Cuscatlan, Nueva San Salvador and San Salvador. Felt at Aguilares, La Libertad, Mejicanos, Nuevo Cuscatlan, Quezaltepeque, Santa Ana and Tonacatepeque.

BJI ***18*** *03:15:47.6, 13.77N×89.32W, h91^{km}, mB5.2*

IDC ***18*** *03:15:47.9±0.4, 13.60N×88.77W, h84^{km}±3^{km}, mb4.6/19, mb1 4.8/19, mb1mx4.8/20, mbtmp4.9/19, MS4.2/15, Ms1 4.2/15, ms1mx4.1/22, Error ellipse: s-maj=14.9km s-min=9.5km az=60.0*

CASC ***18*** *03:15:48.2±2.0, 13.32N×89.25W, h78^{km}±7^{km}, MD4.7, ML5.5, mb5.0(NEIC)*

ISC 18 03:15:46.5±0.2**, 13.43N**±0.03×**89.18W**±0.03**, h85^{km}, h85^{km}**±1.6^{km}**:pP-P, n474,** σ**1^{s}45**/393**, mb4.9**/134**, 78C-32D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LFRS	El Faro	0.22	30	⇓iP	Px	03 16 02.5	
SNET	Serv Nac Est T	0.26	348	⇓eP	Px	03 16 00.7	
SNET				eS	Sx	03 16 10.8	
SNET				i		03 16 12.2	
	comp=Z,456µm,0.4s						
LCBS	La Ceiba	0.29	41	⇓iP	Px	03 16 03.0	
LBRS	Las Brisas	0.33	23	⇓iP	Px	03 16 03.4	
SNVI	San Vicente	0.38	61	⇓iP	Px	03 16 03.8	
SBLS	San Blas	0.60	313	⇓iP	Px	03 16 04.7	
SNJE	San Jose	0.60	316	⇓iP	Px	03 16 04.7	
RTR	El Retiro	0.65	316	⇓iP	Px	03 16 05.4	
VSM	San Miguel	0.88	90	⇓iP	Px	03 16 09.0	
CAHU	Cacacuatique	1.00	70	eP	Px	03 16 10.8	
CNCH	Conchagua	1.31	96	⇓iP	Px	03 16 14.3	
IXG	Ixpaco	1.45	301	⇓eP	P	03 16 12.1	+0.2
IXG				eS	S	03 16 31.7	+1.2
IXG				AML	AML	03 16 34.0	
	comp=E,445µm,0.4s						
NBG	Las Nubes	1.62	316	⇑eP	P	03 16 16.3	+2.2
PCG	Pacaya	1.69	305	eP	P	03 16 16.8	+1.8
MRL	Marmol	1.70	343	⇓eP	P	03 16 18.4	+3.3
MRL				eS	S	03 16 39.2	+3.0
CRIN	San Cristobal	2.19	109	⇓eP	P	03 16 24.5	+2.7
CHIN	Chinandega	2.23	110	i	P	03 16 27.4	+5.1
	comp=Z,153µm,0.5s						
TP2	Tecpan 2	2.24	307	⇓eP	P	03 16 24.4	+1.9
TP2				eS	S	03 16 55.5	+6.4
TP2				AML	AML	03 16 57.6	
	comp=N,16µm,0.4s						
TEL3	Telica 3	2.43	110	⇑eP	P	03 16 26.6	+1.6
TELN	Telica	2.43	109	⇓eP	P	03 16 26.7	+1.6
LEON	Leon	2.44	114	⇓eP	P	03 16 26.0	+0.7
CNGN	Cerro Negro	2.58	111	⇓eP	P	03 16 28.8	+1.5
MIRN	Miramar	2.60	112	⇑eP	P	03 16 28.6	+1.1
MOMJ	Momotombo	2.76	111	⇑eP	P	03 16 31.3	+1.5
MOMJ				eS	S	03 17 04.2	+2.1
COPN	Copaltepe	2.81	116	⇑eP	P	03 16 31.1	+0.7
XAVN	Gruta Xavier	3.06	114	⇑eP	P	03 16 35.0	+1.2
MGAN	Managua	3.13	114	⇑eP	P	03 16 36.0	+1.1
MGAN				⇓eP		03 16 37.0	
MGAN				eS	S	03 17 11.1	-0.1
MGAN				i		03 17 13.6	
	comp=E,10µm,0.6s						
WILN	Americas 2	3.18	113	⇑eP	P	03 16 36.7	+1.2
WILN				eS	S	03 17 11.4	-0.9
TICN	Ticuantepe	3.19	115	⇑eP	P	03 16 36.8	+1.2
MASN	Masaya	3.28	116	eP	P	03 16 37.6	+0.7
APON	Apoyo	3.39	116	⇑eP	P	03 16 39.0	+0.6
SSNN	San Juan del S	3.88	123	⇑eP	P	03 16 46.1	+0.8
CONN	Concepcion	3.93	118	⇑eP	P	03 16 46.7	+0.8
CCIG	Comitan	4.03	315	i P	P	03 16 50.0	+2.7
CCIG				i S	S	03 17 33.2	-0.3
CCIG				eS	S	03 17 36.0	+2.5
MADN	Villa Maderas	4.09	119	eP	P	03 16 48.4	+0.4
LIM1	Limonal	4.70	125	eP	P	03 16 57.5	+1.0
VCR	Vista de Mar	4.78	133	⇓eP	P	03 16 58.6	+1.0
VCR	Vista de Mar	4.78	133	⇓eP	P	03 16 58.5	+0.9
JTS	JuntasAbangare	5.18	127	P	P	03 17 03.8	+0.7
	comp=E,35nm,0.3s,baz=299,slow=22,SNR=156						
JTS				S	S	03 17 57.0	-5.0
	baz=205,slow=14,SNR=1.9						
JTS	JuntasAbangare	5.18	127	ePn	P	03 17 03.8	+0.8
	comp=E,978nm,0.7s						
JTS	JuntasAbangare	5.18	127	eP	P	03 17 03.8	+0.7
JTS				pmax	pmax		
	comp=Z,978nm,0.7s						
FORC	Fortuna	5.30	123	eP	P	03 17 06.5	+1.8
FORC	Fortuna	5.30	123	eP	P	03 17 06.8	+2.0
CGA2	Cerro Gallo 2	5.72	126	eP	P	03 17 12.2	+1.7
CGA2				eS	S	03 18 18.0	+2.4
CGA2	Cerro Gallo 2	5.72	126	eP	P	03 17 12.4	+1.8
VPS2	Volcan Poas 2	5.81	123	eP	P	03 17 13.5	+1.8
VPS2	Volcan Poas 2	5.81	123	eP	P	03 17 15.1	+3.4
PRS1	Puriscal	5.87	125	⇓eP	P	03 17 14.8	+2.3
PRS1				eS	S	03 18 21.2	+2.1
PRS1	Puriscal	5.87	125	eP	P	03 17 14.7	+2.2
LAJ	Bijagual	6.09	125	eP	P	03 17 13.6	-2.0
LAJ				eS	S	03 18 19.0	-5.5
LAJ	Bijagual	6.09	125	eP	P	03 17 13.6	-2.0
SJS	Escuela Geolog	6.10	124	eP	P	03 17 19.2	+3.5
SJS				eS	S	03 18 26.0	+1.3
SJS	Escuela Geolog	6.10	124	eP	P	03 17 19.0	+3.3
SJS				eS	S	03 18 39.4	+15
LCR2	La Lucha 2	6.25	125	eP	P	03 17 19.9	+2.0
LCR2				eS	S	03 18 31.3	+2.7
LCR2	La Lucha 2	6.25	125	eP	P	03 17 19.9	+2.0
ICR	Volcan Irazu	6.26	123	eP	P	03 17 21.6	+3.7
ICR	Volcan Irazu	6.26	123	eP	P	03 17 20.4	+2.4
URSC	Urasca	6.38	123	⇑eP	P	03 17 21.9	+2.2
URSC	Urasca	6.38	123	eP	P	03 17 21.6	+1.9
BUS	Buena Vista	6.56	125	eP	P	03 17 24.4	+2.2
BUS				eS	S	03 18 38.5	+2.4
BUS	Buena Vista	6.56	125	eP	P	03 17 24.5	+2.4
CMIG	Matias Romero	6.60	304	i P	P	03 17 22.9	+0.1
HUIG	Huatulco	7.10	290	i P	P	03 17 27.6	-2.1
ACR	Cerro Adams	7.57	128	eP	P	03 17 37.3	+1.3
ACR				eS	S	03 19 00.4	-0.6
ACR	Cerro Adams	7.57	128	eP	P	03 17 37.2	+1.2
OXX	Oaxaca	8.14	297	eP	P	03 17 45.0	+1.2
VHO	Vista Hermosa	8.14	297	i P	P	03 17 44.0	+0.1
VHO				eS	S	03 19 13.6	-1.5
PPM	Popocatepetl	10.66	303	i P	P	03 18 19.0	+0.9
YAIG	Yautepec	10.93	301	i P	P	03 18 22.4	+0.8
SOR	Soroa	11.00	31	eP	P	03 18 25.8	+3.2
PLIG	Platanillo	11.09	298	i P	P	03 18 24.8	+0.9
CAIG	El Cayaco	11.29	290	i P	P	03 18 26.3	-0.2
MCJ	Malvern	11.93	67	⇓iP	P	03 18 39.2	+4.2
PCJ	Portland Cotta	12.35	68	⇓eP	P	03 18 44.3	+3.7
BNJ	Bonny Gate	12.72	66	⇓eP	P	03 18 47.9	+2.4
STH	Stony Hill	12.77	67	⇓iP	P	03 18 50.5	+4.4
HOJ	Hope	12.80	68	⇓iP	P	03 18 51.0	+4.4
GWJ	Greenwich	12.84	67	⇓iP	P	03 18 51.8	+4.7
LMGC	Las Mercedes	13.39	59	eP	P	03 18 56.8	+2.6
RCC	Rio Carpintero	14.46	61	eP	P	03 19 00.9	-7.4
GTMO	Guantanamo	14.97	62	eP	P	03 19 17.1	+2.2
SABC	Sabc	15.06	61	eP	P	03 19 20.7	+4.8
ZAIG	Zacatecas	15.75	308	i P	P	03 19 29.1	+4.4
DWPF	Disney	16.29	25	⇑eP	P	03 19 33.7	+2.3
	comp=Z,241nm,0.9s						
ROSC	El Rosal	16.94	119	P	P	03 19 40.6	+1.0
	comp=Z,2.8nm,0.3s,baz=297,slow=3.6,SNR=23						
ROSC				PcP	PcP	03 24 21.5	-1.1
	comp=Z,0.6nm,0.3s,baz=90,slow=20,SNR=4.8						
ROSC				LR	LR	03 26 21.3	
	comp=Z,266nm,19.3s,baz=177,slow=38						
ROSC				ScP		03 27 50.8	
	comp=Z,1.0nm,0.3s,baz=89,slow=23,SNR=5.4						
SDV	Santo Domingo	18.74	102	P	P	03 20 00.1	-1.1
	comp=Z,10nm,0.3s,baz=156,SNR=142						
SDV				PcP	PcP	03 24 26.0	+0.4
	comp=Z,0.8nm,0.3s,baz=325,SNR=4.6						
SDV				ScP		03 27 54.2	
	comp=Z,0.3nm,0.3s,baz=347,SNR=8.4						
SDV				LR	LR	03 28 04.3	
	comp=Z,427nm,18.5s,baz=226,slow=40						
SDV	Santo Domingo	18.74	102	⇑iP	P	03 19 59.8	-1.4
	comp=Z,198nm,0.7s						
NATX	Nacogdoches	18.93	345	⇑eP	P	03 20 04.0	+0.8
	comp=Z,628nm,1.1s						
JCT	Junction City	19.60	332	⇑iP	P	03 20 10.2	-0.3
	comp=Z,114nm,0.9s						
JCT	Junction City	19.60	332	⇑iP	P	03 20 10.2	-0.3
JCT				pmax	pmax		
	comp=Z,114nm,0.9s						
LRAL	Lakeview Retre	19.62	5	⇑iP	P	03 20 12.5	+1.8
	comp=Z,114nm,0.9s						
GOGA	Godfrey	20.56	14	⇑eP	P	03 20 21.8	+1.3
	comp=Z,168nm,1.0s						
GOGA				epP		03 20 38.4	
GOGA	Godfrey	20.56	14	⇑eP	P	03 20 21.8	+1.3
GOGA				e*PP		03 20 38.4	
GOGA				pmax	pmax		
	comp=Z,168nm,1.0s						
LTX	Lajitas	20.76	322	⇑eP	P	03 20 23.4	+0.8
	comp=Z,62nm,1.0s						
LTX				epP		03 20 41.1	
LTX	Lajitas	20.76	322	⇑eP	P	03 20 23.4	+0.9
LTX				e*PP		03 20 41.1	
LTX				pmax	pmax		
	comp=Z,62nm,1.0s						
TXAR	Lajitas Array	20.76	322	P	P	03 20 23.9	+1.3
	comp=Z,26nm,0.6s,baz=144,slow=10,SNR=270						
TXAR				PcP	PcP	03 24 28.8	-0.3
	comp=Z,16nm,1.1s,baz=153,slow=2.8,SNR=8.8						
TXAR				ScP		03 27 58.9	
	comp=Z,2.8nm,0.9s,baz=146,slow=4.5,SNR=9.5						
TXAR				PKiKP		03 32 15.2	
	comp=Z,1.3nm,0.9s,baz=153,slow=2.8,SNR=7.4						
OXF	Oxford	20.99	359	⇑iP	P	03 20 26.2	+1.4
	comp=Z,389nm,0.9s						
OXF				epP		03 20 43.0	
OXF				eScP		03 27 59.0	
OXF	Oxford	20.99	359	⇑iP	P	03 20 26.2	+1.4
OXF				e*PP		03 20 43.0	
OXF				pmax	pmax		
	comp=Z,389nm,0.9s						
NHSC	New Hope	21.24	21	eP	P	03 20 29.2	+1.9
	comp=Z,346nm,1.1s,mb5.6						
NHSC				epP		03 20 45.2	
MIAR	Mount Ida	21.40	350	⇑eP	P	03 20 29.9	+1.0
	comp=Z,193nm,0.9s,mb5.4						
MIAR	Mount Ida	21.40	350	⇑eP	P	03 20 29.9	+1.0
MIAR				pmax	pmax		
	comp=Z,193nm,0.9s,mb5.4						
SWET	Sewanee	21.89	7	eP	P	03 20 34.2	+0.5
JSC	Jenkinsville	21.97	18	eP	P	03 20 36.6	+2.1
HBAR	Harrisburg	22.07	357	eP	P	03 20 38.3	+2.8
CPCT	Cooper Cave	22.32	10	⇑iP	P	03 20 39.9	+1.9
CPCT				epP		03 20 58.1	
HALT	Halls	22.39	360	eP	P	03 20 40.2	+1.6
HALT				epP		03 20 59.3	
GNAR	Gosnell	22.45	358	⇑iP	P	03 20 41.5	+2.2
	comp=Z,2µm,1.2s						
GNAR				epP		03 21 00.3	
SJG	San Juan	22.64	75	P	P	03 20 39.0	-2.3
	comp=Z,20nm,0.5s,mb4.7,baz=321,slow=4.3,SNR=7.2						
SJG				PcP	PcP	03 24 31.0	-2.0
	comp=Z,18nm,0.2s,baz=353,slow=17,SNR=4.7						
SJG	San Juan	22.64	75	eP	P	03 20 38.9	-2.4
	comp=Z,23nm,0.7s,mb4.6						
SJG				ePcP	PcP	03 24 31.3	-1.7
SJG	San Juan	22.64	75	eP	P	03 20 38.9	-2.3
SJG				e		03 24 31.3	
SJG				pmax	pmax		
	comp=Z,23nm,0.7s						
WVT	Waverly	22.64	3	eP	P	03 20 42.6	+1.5
	comp=Z,47nm,1.0s,mb4.8						
WVT	Waverly	22.64	3	eP	P	03 20 42.6	+1.5
WVT				pmax	pmax		
	comp=Z,47nm,1.0s,mb4.8						
GLAT	Glass	22.74	360	⇑iP	P	03 20 43.9	+1.8
GLAT				epP		03 21 01.9	
CPD	Cerro la Pandu	22.84	75	eP	P	03 20 41.9	-1.4
CLNB	Carlsbad	23.08	327	eP	P	03 20 46.6	+1.2
CLNB				epP		03 21 05.9	
CLNB				esP		03 21 14.7	
PARMO	Parma	23.14	359	eP	P	03 20 48.2	+2.2
MTP	Monte Pirata	23.19	75	eP	P	03 20 46.2	-0.3
MTP				epP		03 21 06.1	
GDL2	Guadalupe Moun	23.30	326	eP	P	03 20 48.0	+0.5
GDL2				epP		03 21 07.4	
MNTX	Cornudas Mount	23.49	323	⇑iP	P	03 20 49.8	+0.4
	comp=Z,43nm,1.4s,mb4.6						
MNTX				ePcP	PcP	03 24 33.7	-0.9
MNTX				eScP		03 28 04.9	
TZTN	Tazewell	23.56	11	eP	P	03 20 51.6	+1.6
CPRX	Cap Rock	23.67	328	eP	P	03 20 51.8	+0.7
AMTX	Amarillo	24.17	334	⇑iP	P	03 20 56.4	+0.5
	comp=Z,207nm,1.1s,mb5.4						
AMTX				ePcP	PcP	03 24 35.1	-0.9
CCM	Cathedral Cave	24.59	356	⇑iP	P	03 21 00.6	+0.5
	comp=Z,177nm,0.8s,mb5.5						
CCM				epP		03 21 20.4	
CCM				ePcP	PcP	03 24 35.1	-1.7
CCM				eScP		03 28 07.3	
CCM	Cathedral Cave	24.59	356	⇑iP	P	03 21 00.6	+0.6
CCM				e*PP		03 21 20.4	
CCM				e		03 24 35.1	
CCM				pmax	pmax		
	comp=Z,177nm,0.8s,mb5.5						
WCI	Wyandotte Cave	24.83	5	⇑iP	P	03 21 02.3	0.0
	comp=Z,49nm,0.6s,mb5.1						
WCI				epP		03 21 19.6	
WCI	Wyandotte Cave	24.83	5	⇑iP	P	03 21 02.3	0.0
WCI				e*PP		03 21 19.6	
WCI				pmax	pmax		
	comp=Z,49nm,0.6s,mb5.1						
ELN	Prospectdale	24.87	16	eP	P	03 21 03.6	+0.9
ELN				epP		03 21 23.6	
BLA	Blacksburg	24.94	17	eP	P	03 21 04.6	+1.3
	comp=Z,178nm,1.3s,mb5.3						
BLA				epP		03 21 23.6	
BLA	Blacksburg	24.94	17	eP	P	03 21 04.6	+1.2
BLA				e*PP		03 21 23.7	
BLA				pmax	pmax		
	comp=Z,178nm,1.3s,mb5.3						
FWV	Forest Hill	25.18	16	eP	P	03 21 06.5	+0.9
BNM	Barren Site	26.01	325	eP	P	03 21 14.6	+1.3
BNM				epP	pP	03 21 33.3	+0.8
BNM				ePcP	PcP	03 24 39.8	-0.2
LPM	Los Pinos Moun	26.13	326	⇑iP	P	03 21 15.4	+0.9
LENM	Lemitar	26.21	325	eP	P	03 21 16.4	+1.2
LENM				ePcP	PcP	03 24 40.3	-0.2
KSU1	Kansas State U	26.40	347	eP	P	03 21 16.4	-0.5
ANMO	Albuquerque	26.52	327	P	P	03 21 18.9	+0.9
	comp=Z,4.8nm,0.6s,mb4.2,baz=146,slow=12,SNR=20						
ANMO				PcP	PcP	03 24 40.6	-0.6
	comp=Z,4.8nm,0.8s,baz=154,slow=6.8,SNR=4.3						
ANMO				ScP		03 28 12.5	
	comp=Z,2.3nm,0.9s,baz=164,slow=11,SNR=3.9						
ANMO				PKiKP		03 32 19.0	
	comp=Z,1.1nm,0.8s,baz=205,slow=3.1,SNR=3.8						
ANMO	Albuquerque	26.52	327	eP	P	03 21 18.4	+0.4
	comp=Z,6.2nm,0.8s,mb4.2						
ANMO				ePcP	PcP	03 24 40.8	-0.4
ANMO	Albuquerque	26.52	327	eP	P	03 21 18.4	+0.4
ANMO				e		03 24 40.8	
ANMO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CBN	Corbin	26.81	21	eP	P	03 21 21.1	+0.4
	comp=Z,63nm,0.6s,mb5.3						
CBN				epP	pP	03 21 41.1	+1.1
CBKS	Cedar Bluff	26.96	342	eP	P	03 21 21.7	-0.3
	comp=Z,44nm,0.8s,mb5.0						
CBKS				ePcP	PcP	03 24 41.1	-1.1
CBKS				eScP		03 28 14.6	
CBKS	Cedar Bluff	26.96	342	eP	P	03 21 21.7	-0.4
CBKS				e		03 24 41.1	
CBKS				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.0						
ACSO	Alum Creek Sta	27.25	10	eP	P	03 21 24.4	-0.3
	comp=Z,35nm,1.1s,mb4.8						
TUC	Tucson	27.28	317	P	P	03 21 25.2	+0.2
	comp=Z,12nm,0.9s,mb4.4						
TUC				ePcP	PcP	03 24 43.0	0.0
TUC	Tucson	27.28	317	P	P	03 21 25.2	+0.1
TUC				e		03 24 43.0	
TUC				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.4						
MCWV	Mont Chateau	27.39	16	eP	P	03 21 25.7	-0.3
	comp=Z,44nm,1.0s,mb5.0						
NNA	Nana	28.06	154	eP	P	03 21 31.4	-0.8
	comp=Z,9.1nm,0.7s,mb4.4						
SDCO	Great Sand Dun	28.25	332	eP	P	03 21 34.4	+0.7
	comp=Z,33nm,1.0s,mb4.8						
MVL	Millersville	28.77	21	eP	P	03 21 38.4	0.0
MVL				epP	pP	03 21 58.9	+1.0
BBSR	BB Station	29.27	46	⇑iP	P	03 21 43.0	+0.1
	comp=Z,108nm,0.8s,mb5.5						
WUAZ	Wupatki	29.73	322	eP	P	03 21 48.0	+1.1
	comp=Z,9.7nm,0.8s,mb4.5						
WUAZ				epP	pP	03 22 06.8	+0.2
WUAZ				eScP		03 24 48.5	
ISCO	Idaho Springs	29.99	334	⇑iP	P	03 21 49.4	+0.2
	comp=Z,34nm,0.9s,mb5.0						
ISCO				ePcP	PcP	03 24 49.0	-0.6
ISCO				eScP		03 28 24.1	
ISCO	Idaho Springs	29.99	334	⇑iP	P	03 21 49.4	+0.2
ISCO				e		03 24 49.1	
ISCO				e		03 28 24.1	
ISCO				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.0						
PV01	Paradox Valley	30.04	328	eP	P	03 21 50.5	+0.8
PV01				ePcP	PcP	03 24 49.3	-0.5
SMCO	Snowmass	30.09	332	⇑iP	P	03 21 50.7	+0.6
	comp=Z,49nm,0.9s,mb5.1						
SMCO				ePcP	PcP	03 24 49.3	-0.6
SMCO				eScP		03 28 25.5	
CPNY	Central Park	30.34	23	eP	P	03 21 51.6	-0.7
CPNY				epP	pP	03 22 09.4	-2.6
PV10	Paradox Valley	30.46	328	eP	P	03 21 53.8	+0.3
PAL	Palisades	30.54	23	eP	P	03 21 53.5	-0.6
	comp=Z,104nm,1.1s,mb5.5						
PAL				epP	pP	03 22 12.0	-1.8
PAL	Palisades	30.54	23	eP	P	03 21 53.5	-0.6
PAL				e*PP	pP	03 22 12.0	-1.8
PAL				pmax	pmax		
	comp=Z,105nm,1.1s,mb5.5						
PHWY	Pilot Hill	31.19	336	⇑iP	P	03 21 59.8	0.0
PHWY				ePcP	PcP	03 24 51.2	-1.5
PHWY				eScP		03 28 28.9	
SRU	San Rafael	31.78	327	eP	P	03 22 05.3	+0.4
	comp=Z,25nm,0.8s,mb5.0						
SRU	San Rafael	31.78	327	eP	P	03 22 05.3	+0.3
SRU				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.0						
PFO	Pinyon Flat Ob	31.91	314	eP	P	03 22 06.6	+0.4
	comp=Z,8.5nm,1.2s,mb4.3						
PFO				epP	pP	03 22 27.4	+1.3
PFO	Pinyon Flat Ob	31.91	314	eP	P	03 22 06.6	+0.5
PFO				e*PP	pP	03 22 27.4	+1.4
PFO				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
NEN	Nelson	31.99	318	eP	P	03 22 07.2	+0.5
NEN				ePcP	PcP	03 24 54.4	-0.6
NEN				eScP		03 28 30.4	
QUA2	Belchertown	32.23	24	eP	P	03 22 08.0	-0.9
	comp=Z,87nm,1.0s,mb5.4						
QUA2				epP	pP	03 22 28.8	+0.1
RWWY	Rawlins	32.23	334	⇑iP	P	03 22 09.5	+0.6
	comp=Z,116nm,0.9s,mb5.6						
MSU	Marysvale	32.25	325	eP	P	03 22 09.6	+0.5
MSU				ePcP	PcP	03 24 55.8	+0.1
MSU				eScP		03 28 32.5	
TMUT	Trail Mountain	32.28	327	eP	P	03 22 09.6	+0.3
TMUT				ePcP	PcP	03 24 55.5	-0.3
TMUT				eScP		03 28 29.3	
SADO	Sadowa	32.39	13	P	P	03 22 09.0	-1.2
	comp=Z,27nm,0.6s,mb5.2,baz=215,slow=8.7,SNR=29						
ARUT	Antelope Range	32.48	323	eP	P	03 22 10.1	-0.9
MPU	Maple Canyon	33.03	327	eP	P	03 22 16.2	+0.4
	comp=Z,47nm,1.0s,mb5.3						
DAU	Daniels Canyon	33.13	328	eP	P	03 22 17.9	+1.3
DAU				ePcP	PcP	03 24 57.7	-0.4
DAU				eScP		03 28 35.5	
RSSD	Black Hills	33.13	340	⇑iP	P	03 22 17.0	+0.4
	comp=Z,30nm,0.6s,mb5.3						
RSSD				ePcP	PcP	03 24 57.0	-1.0
RSSD	Black Hills	33.13	340	⇑iP	P	03 22 17.0	+0.4
RSSD				e		03 24 57.0	
RSSD				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.3						
NLU	North Lily Min	33.22	327	eP	P	03 22 15.8	-1.6
TPNV	Topopah Spring	33.67	319	eP	P	03 22 22.3	+0.9
	comp=Z,6.7nm,0.8s,mb4.5						
TPNV				ePcP	PcP	03 24 59.5	-0.1
TPNV				eScP		03 28 37.6	
TPNV	Topopah Spring	33.67	319	eP	P	03 22 22.3	+0.9
TPNV				e		03 24 59.5	
TPNV				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
TCUT	Toone Canyon	33.73	329	eP	P	03 22 23.1	+1.3
NOQ	North Oquirrh	33.75	328	eP	P	03 22 23.1	+1.1
	comp=Z,60nm,0.8s,mb5.5						
DUG	Dugway	33.78	326	eP	P	03 22 23.9	+1.6
	comp=Z,11nm,0.9s,mb4.7						
DUG				ePcP	PcP	03 24 59.2	-0.7
DUG	Dugway	33.78	326	eP	P	03 22 23.9	+1.6
DUG				e		03 24 59.2	
DUG				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.7						
FRNY	Flat Rock	34.00	20	eP	P	03 22 23.0	-1.1
FRNY				epP	pP	03 22 43.9	-0.4
SAML	Samuel	34.06	129	⇑iP	P	03 22 22.7	-2.2
	comp=Z,173nm,0.9s,mb5.9						
SAML				epP	pP	03 22 41.9	-3.2
SAML				ePcP	PcP	03 25 00.2	-0.7
BW06	Boulder Array	34.13	333	eP	P	03 22 25.0	-0.2
	comp=Z,14nm,0.8s,mb4.8						
PDAR	Pinedale Array	34.13	333	P	P	03 22 24.9	-0.3
	comp=Z,15nm,1.0s,mb4.8,baz=128,slow=10,SNR=78						
PDAR				pP	pP	03 22 44.9	-0.4
	comp=Z,7.6nm,0.8s,baz=124,slow=5.3,SNR=6.0						
PDAR				PcP	PcP	03 24 59.5	-1.3
	comp=Z,5.7nm,0.7s,baz=102,slow=4.9,SNR=18						
PDAR				pPcP		03 25 22.2	
	comp=Z,2.0nm,0.6s,baz=122,slow=4.9,SNR=4.0						
PDAR				ScP		03 28 37.3	
	comp=Z,11nm,1.2s,baz=153,slow=3.3,SNR=13						
PDAR				PKiKP		03 32 22.6	
	comp=Z,0.9nm,0.8s,baz=108,slow=4.7,SNR=5.9						
PDAR				LR	LR	03 38 41.6	
	comp=Z,253nm,21.8s,baz=157,slow=40						
HWUT	Hardware Ranch	34.17	329	⇑iP	P	03 22 25.8	+0.1
	comp=Z,38nm,1.1s,mb5.1						
HWUT				ePcP	PcP	03 25 00.3	-0.7
HWUT				eScP		03 28 37.5	
SPUT	South Promonto	34.40	328	eP	P	03 22 28.4	+0.9
EYMN	Ely	34.47	357	⇑iP	P	03 22 26.6	-1.4
	comp=Z,77nm,0.7s,mb5.6						
EYMN				epP	pP	03 22 46.4	-1.8
AHID	Auburn Hatcher	34.83	331	eP	P	03 22 31.9	+0.7
	comp=Z,25nm,0.6s,mb5.2						
HVU	Hansel Valley	34.91	328	eP	P	03 22 32.6	+0.8
	comp=Z,15nm,0.7s,mb4.9						
HVU	Hansel Valley	34.91	328	eP	P	03 22 32.6	+0.7
HVU				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.9						
REDW	Red Top Meadow	35.18	332	eP	P	03 22 34.7	+0.5
	comp=Z,150nm,0.8s,mb5.9						
SNOW	Snow King Moun	35.21	332	eP	P	03 22 35.1	+0.7
	comp=Z,157nm,0.8s,mb5.9						

SNOW				*e*ScP		03 28 42.9	
LOHW	**Long Hollow**	**35.26**	**333**⇑	*e*P	**P**	**03 22 35.2**	**+0.3**
	comp=Z,64nm,0.8s,mb5.5						
LOHW				*e*PcP	PcP	03 25 03.1	-1.0
LOHW				*e*ScP		03 28 42.5	
TPAW	**Teton Pass**	**35.33**	**332**	*e*P	**P**	**03 22 36.0**	**+0.7**
	comp=Z,65nm,0.9s,mb5.5						
TPAW				*e*ScP		03 28 42.2	
MOOW	**Moose Ponds**	**35.44**	**333**	*e*P	**P**	**03 22 36.5**	**+0.2**
	comp=Z,23nm,0.9s,mb5.0						
MOOW				*e*PcP	PcP	03 25 03.6	-1.0
MOOW				*e*ScP		03 28 43.0	
ELK	**Elko**	**35.50**	**325**	*e*P	**P**	**03 22 37.9**	**+1.0**
	comp=Z,7.6nm,0.9s,mb4.5						
ELK	**Elko**	**35.50**	**325**	*e*P	**P**	**03 22 37.9**	**+1.0**
ELK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
IMW	**Indian Meadow**	**35.64**	**333**	*e*P	**P**	**03 22 38.8**	**+0.8**
	comp=Z,22nm,0.6s,mb5.3						
IMW				*e*PcP	PcP	03 25 04.8	-0.4
IMW				*e*ScP		03 28 44.0	
MNV	**Mina**	**35.77**	**319**	*e*P	**P**	**03 22 40.2**	**+1.0**
	comp=Z,12nm,1.0s,mb4.8						
MNV				*e*PcP	PcP	03 25 05.6	-0.1
MNV				*e*ScP		03 28 44.5	
MNV	**Mina**	**35.77**	**319**	*e*P	**P**	**03 22 40.3**	**+1.1**
MNV				*e*		03 25 05.6	
MNV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
NVAR	**Mina Array Bea**	**35.87**	**319**	P	**P**	**03 22 41.5**	**+1.4**
	comp=Z,9.4nm,0.8s,mb4.8,baz=125,slow=8.3,SNR=39						
NVAR				pP	pP	03 23 01.9	+1.6
	comp=Z,6.6nm,0.7s,baz=126,slow=8.4,SNR=6.1						
NVAR				PcP	PcP	03 25 06.3	+0.4
	comp=Z,15nm,1.1s,baz=130,slow=4.1,SNR=8.6						
NVAR				pPcP		03 25 28.2	
	comp=Z,6.9nm,0.9s,baz=134,slow=4.3,SNR=5.9						
NVAR				ScP		03 28 44.6	
	comp=Z,3.4nm,0.8s,baz=129,slow=5.2,SNR=13						
NVAR				PKiKP		03 32 24.6	
	comp=Z,0.4nm,0.5s,baz=180,slow=2.7,SNR=3.8						
NVAR				LR	LR	03 38 56.0	
	comp=Z,448nm,21.9s,baz=145,slow=39						
YFT	**Old Faithful**	**36.03**	**333**⇑	*e*P	**P**	**03 22 42.9**	**+1.5**
YFT				*e*PcP	PcP	03 25 06.5	+0.1
YFT				*e*ScP		03 28 45.9	
LPAZ	**La Paz**	**36.12**	**144**	P	**P**	**03 22 42.8**	**+0.4**
	comp=Z,5.0nm,0.7s,mb4.6,baz=338,slow=12,SNR=23						
LPAZ				PcP	PcP	03 25 08.3	+1.4
	comp=Z,3.7nm,0.7s,baz=298,slow=16,SNR=4.2						
LPAZ	**La Paz**	**36.12**	**144**	*e*P	**P**	**03 22 42.3**	**-0.1**
	comp=Z,4.7nm,0.7s,mb4.5						
LPAZ	**La Paz**	**36.12**	**144**	*e*P	**P**	**03 22 42.3**	**-0.1**
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LAO	**LASA Array**	**36.12**	**340**⇑	*i*P	**P**	**03 22 42.0**	**-0.1**
	comp=Z,100nm,0.9s,mb5.8						
LAO				*e*PcP	PcP	03 25 05.3	-1.3
LAO				*e*ScP		03 28 45.3	
YMR	**Madison River**	**36.26**	**333**⇑	*i*P	**P**	**03 22 44.5**	**+1.2**
	comp=Z,93nm,1.0s,mb5.7						
YMR				*e*PcP	PcP	03 25 06.4	-0.6
YMR				*e*ScP		03 28 46.1	
QLMT	**Earthquake Lak**	**36.59**	**333**	*e*P	**P**	**03 22 47.9**	**+1.8**
QLMT				*e*PcP	PcP	03 25 08.2	+0.1
CMB	**Columbia Colle**	**36.99**	**317**	*e*P	**P**	**03 22 49.5**	**0.0**
	comp=Z,5.4nm,1.1s,mb4.4						
CMB				*e*pP	pP	03 23 08.9	-0.9
CMB				*e*PcP	PcP	03 25 09.2	-0.1
CMB	**Columbia Colle**	**36.99**	**317**	*e*P	**P**	**03 22 49.5**	**0.0**
CMB				*e**PP	pP	03 23 08.9	-0.9
CMB				*e*		03 25 09.2	
CMB				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
HLID	**Hailey**	**37.03**	**329**	*e*P	**P**	**03 22 50.0**	**+0.2**
	comp=Z,3.8nm,0.6s,mb4.5						
HLID				*e*PcP	PcP	03 25 08.9	-0.5
HLID				*e*ScP		03 28 49.3	
DGMT	**Dagmar**	**37.09**	**343**⇑	*i*P	**P**	**03 22 50.7**	**+0.5**
	comp=Z,222nm,0.7s						
DGMT				*e*PcP	PcP	03 25 08.3	-1.2
DGMT				*e*ScP		03 28 49.4	
ULM	**Lac du Bonnet**	**37.12**	**353**	P	**P**	**03 22 49.1**	**-1.4**
	comp=Z,58nm,0.9s,mb5.5,baz=171,slow=8.9,SNR=49						
ULM				pP	pP	03 23 09.8	-0.9
	comp=Z,36nm,0.9s,baz=169,slow=10.0,SNR=6.9						
ULM				ScP		03 28 47.9	
	comp=Z,5.3nm,0.9s,baz=260,slow=3.9,SNR=5.3						
ULM				LR	LR	03 39 32.6	
	comp=Z,713nm,21.9s,baz=327,slow=38						
MCMT	**McKenzie Canyo**	**37.23**	**332**	*e*P	**P**	**03 22 52.8**	**+1.4**
MCMT				*e*pP	pP	03 23 11.9	+0.2
MCMT				*e*ScP		03 28 50.6	
BOZ	**Bozeman (W)**	**37.32**	**334**⇑	*i*P	**P**	**03 22 52.4**	**+0.2**
	comp=Z,21nm,0.9s,mb5.1						
BOZ	**Bozeman (W)**	**37.32**	**334**⇑	*i*P	**P**	**03 22 52.4**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
DLMT	**Dillon**	**37.52**	**333**⇑	*i*P	**P**	**03 22 54.7**	**+0.9**
	comp=Z,16nm,0.8s,mb4.9						
HRY	**Holter Researc**	**38.25**	**335**	*e*P	**P**	**03 23 00.2**	**+0.3**
WVOR	**Wild Horse Val**	**38.53**	**324**	*e*P	**P**	**03 23 02.7**	**+0.5**
	comp=Z,7.4nm,0.8s,mb4.6						
WVOR				*e*PcP	PcP	03 25 14.1	+0.1
WVOR	**Wild Horse Val**	**38.53**	**324**	*e*P	**P**	**03 23 02.7**	**+0.5**
WVOR				*e*		03 25 14.1	
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
CHMT	**Chamberlain Mo**	**39.01**	**334**	*e*P	**P**	**03 23 06.3**	**+0.1**
CHMT				*e*pP	pP	03 23 26.5	-0.1
CHMT				*e*ScP		03 28 56.2	
MSO	**Missoula**	**39.25**	**333**	*e*P	**P**	**03 23 08.2**	**+0.1**
	comp=Z,12nm,1.1s,mb4.6						
MSO				*e*PcP	PcP	03 25 15.3	-1.0
MSO				*e*ScP		03 28 57.4	
BMO	**Blue Mountains**	**39.42**	**328**	*e*P	**P**	**03 23 09.0**	**-0.6**
	comp=Z,18nm,1.3s,mb4.8						
HAWA	**Hanford**	**41.61**	**328**	*e*P	**P**	**03 23 27.9**	**+0.3**
	comp=Z,0.4nm,0.7s						
NEW	**Newport**	**41.75**	**332**	*e*P	**P**	**03 23 28.0**	**-0.8**
	comp=Z,5.5nm,0.7s,mb4.4						
NEW				*e*PcP	PcP	03 25 22.4	-2.0
NEW	**Newport**	**41.75**	**332**	*e*P	**P**	**03 23 28.0**	**-0.8**
NEW				*e*		03 25 22.4	
NEW				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FFC	**Flin Flon**	**42.41**	**349**⇑	*i*P	**P**	**03 23 34.0**	**-0.1**
	comp=Z,47nm,0.7s,mb5.3						
FFC	**Flin Flon**	**42.41**	**349**⇑	*i*P	**P**	**03 23 34.0**	**-0.1**
FFC				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.3						
EDM	**Edmonton**	**44.10**	**339**⇑	*i*P	**P**	**03 23 47.4**	**-0.5**
EDM				*e*pP	pP	03 24 07.7	-0.7
RPN	**Rapa Nui**	**44.81**	**206**	P	**P**	**03 23 53.4**	**-0.6**
	comp=Z,123nm,1.2s,mb5.5,baz=6.1,slow=4.4,SNR=4.4						
SCHQ	**Schefferville**	**44.85**	**18**	P	**P**	**03 23 52.5**	**-1.4**
	comp=Z,69nm,1.0s,mb5.4,baz=217,slow=6.4,SNR=36						
SCHQ				LR	LR	03 45 15.6	
	comp=Z,278nm,18.0s,baz=83,slow=40						
SCHQ	**Schefferville**	**44.85**	**18**⇑	*i*P	**P**	**03 23 52.4**	**-1.5**
	comp=Z,98nm,1.0s,mb5.5						
SCHQ				*e*pP	pP	03 24 13.2	-1.2
OCWA	**Octopus Mounta**	**44.91**	**327**	*e*P	**P**	**03 23 54.4**	**-0.1**
PGC	**Sidney**	**45.09**	**328**	*e*P	**P**	**03 23 55.3**	**-0.5**
	comp=Z,19nm,0.8s,mb4.9						
FCC	**Fort Churchill**	**45.40**	**356**	*e*P	**P**	**03 23 56.1**	**-2.0**
	comp=Z,70nm,0.8s,mb5.4						
FCC	**Fort Churchill**	**45.40**	**356**	*e*P	**P**	**03 23 56.1**	**-2.0**
FCC				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.4						
FCH	**Farellones**	**49.87**	**159**⇑	*i*P	**P**	**03 24 32.8**	**-0.5**
BDFB	**Brasilia**	**49.91**	**124**	P	**P**	**03 24 31.2**	**-2.7**
	comp=Z,17nm,0.5s,mb5.2,baz=300,slow=8.8,SNR=33						
BDFB				pP	pP	03 24 52.4	-2.4
	comp=Z,15nm,0.6s,baz=285,slow=8.1,SNR=5.7						
BDFB				PcP	PcP	03 25 53.6	+0.3
	comp=Z,35nm,0.9s,baz=292,slow=4.8,SNR=7.7						
BDFB				LR	LR	03 48 09.9	
	comp=Z,311nm,18.1s,baz=304,slow=39						
BAO	**Brasilia Array**	**49.93**	**124**	P	**P**	**03 24 31.5**	**-2.5**
CPUP	**Villa Florida**	**50.21**	**142**	*e*P	**P**	**03 24 34.1**	**-2.0**
	comp=Z,201nm,1.4s,mb5.9						
CPUP				*e*pP	pP	03 24 54.6	-2.4
CPUP	**Villa Florida**	**50.21**	**142**	*e*P	**P**	**03 24 34.1**	**-2.0**
CPUP				*e**PP	pP	03 24 54.6	-2.4
CPUP				pmax	pmax		
	comp=Z,201nm,1.4s						
YKA	**Yellowknife Ar**	**52.24**	**345**	P	**P**	**03 24 49.5**	**-1.3**
	comp=Z,85nm,0.9s,mb5.8,baz=142,slow=7.7,SNR=77						
YKA	**Yellowknife Ar**	**52.24**	**345**	P	**P**	**03 24 49.5**	**-1.3**
YKW3	**Yellowknife Ar**	**52.30**	**345**⇑	*i*P	**P**	**03 24 50.0**	**-1.3**
YKW3				*e*pP	pP	03 25 11.4	-0.9
DLBC	**Dease Lake**	**54.31**	**335**⇑	*e*P	**P**	**03 25 06.2**	**0.0**
DLBC				*e*pP	pP	03 25 26.3	-1.1
TAOE	**Nuku Hiva Isla**	**55.24**	**249**	*e*LR	LR	03 40 49.0	
	comp=Z,3µm,29.6s,baz=74						
RCBR	**Riachuelo**	**56.25**	**106**	*e*P	**P**	**03 25 17.6**	**-3.2**
	comp=Z,39nm,1.1s,mb5.3						
PLCA	**Paso Flores**	**56.59**	**163**	P	**P**	**03 25 22.1**	**-0.7**
	comp=Z,18nm,1.0s,mb5.0,baz=338,slow=8.4,SNR=22						
PLCA				LR	LR	03 43 38.8	
	comp=Z,288nm,21.5s,baz=349,slow=30						
PLCA	**Paso Flores**	**56.59**	**163**	*e*P	**P**	**03 25 22.2**	**-0.7**
	comp=Z,33nm,1.2s,mb5.2						
PLCA	**Paso Flores**	**56.59**	**163**	*e*P	**P**	**03 25 22.2**	**-0.6**
PLCA				pmax	pmax		
	comp=Z,33nm,1.2s						
TRQA	**Tornquist**	**57.21**	**155**	*e*P	**P**	**03 25 25.6**	**-1.8**
	comp=Z,19nm,1.1s,mb5.0						
RKT	**Rikitea**	**57.69**	**231**	*e*LR	LR	03 42 02.9	
	comp=Z,1µm,30.8s						
CAM4	**Nova Friburgo**	**57.89**	**127**⇓	*i*P	**P**	**03 25 30.4**	**-1.9**
CAM4				*i*		03 25 34.1	
SFJD	**Kangerlussuaq**	**59.25**	**17**	*i* P	**P**	**03 25 38.4**	**-2.7**
	comp=Z,63nm,1.0s,mb5.6						
	comp=Z,240nm,24.0s						
SFJD	**Kangerlussuaq**	**59.25**	**17**	*i* P	**P**	**03 25 38.4**	**-2.7**
SFJD				pmax	pmax		
	comp=Z,63nm,1.0s,mb5.6						
SFJD				MLR	MLR		
	comp=Z,250nm,24.0s						
DAWY	**Dawson**	**61.25**	**337**	*e*P	**P**	**03 25 52.5**	**-2.2**
INK	**Inuvik**	**61.77**	**343**⇑	*i*P	**P**	**03 25 56.8**	**-1.5**
	comp=Z,41nm,0.9s,mb5.5						
INK	**Inuvik**	**61.77**	**343**⇑	*i*P	**P**	**03 25 56.8**	**-1.4**
INK				pmax	pmax		
	comp=Z,41nm,0.9s						
ILAR	**Eielson Array**	**64.45**	**336**	P	**P**	**03 26 14.2**	**-1.7**
	comp=Z,26nm,1.0s,mb5.0,baz=123,slow=5.3,SNR=98						
COLA	**College**	**64.87**	**336**	*e*P	**P**	**03 26 16.8**	**-1.8**
	comp=Z,14nm,0.9s,mb4.8						
COLA				*e*pP	pP	03 26 39.4	-1.1
COLA	**College**	**64.87**	**336**	*e*P	**P**	**03 26 16.8**	**-1.8**
COLA				*e**PP	pP	03 26 39.4	-1.1
COLA				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.8						
SUMG	**Summit**	**66.07**	**15**	*e*P	**P**	**03 26 24.8**	**-1.4**
	comp=Z,69nm,1.1s,mb5.4						
SUMG				*e*pP	pP	03 26 47.0	-1.2
PPT	**Papeete**	**67.09**	**244**	*e*LR	LR	03 46 25.4	
	comp=Z,2µm,29.0s						
PPT	**Papeete**	**67.09**	**244**	LR	LR	03 46 52.7	
	comp=Z,373nm,19.4s,baz=70,slow=28						
TBI	**Tubuai**	**69.37**	**239**	*e*LR	LR	03 47 29.2	
	comp=Z,1µm,30.2s						
SCO	**Scoresbysund**	**69.88**	**19**	*i* P	**P**	**03 26 48.1**	**-1.8**
	comp=Z,8.5nm,0.7s,mb4.7						
SCO	**Scoresbysund**	**69.88**	**19**	*i* P	**P**	**03 26 48.1**	**-1.8**
SCO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
DAG	**Danmarks Havn**	**72.58**	**13**⇓	*i*P	**P**	**03 27 04.0**	**-1.9**
	comp=Z,17nm,1.0s,mb4.8						
DAG	**Danmarks Havn**	**72.58**	**13**⇓	*i*P	**P**	**03 27 04.0**	**-1.9**
DAG				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.8						
PTEO	**Sao Teotonio**	**74.44**	**54**	*e*P	**P**	**03 27 16.8**	**-0.6**
	comp=Z,26nm,1.3s,mb4.8						
PTOM	**Tomar**	**74.50**	**52**	*e*P	**P**	**03 27 16.7**	**-1.1**
	comp=Z,21nm,1.0s,mb4.8						
PVIS	**Viseu**	**74.81**	**51**	*e*P	**P**	**03 27 18.6**	**-0.9**
	comp=Z,17nm,1.4s,mb4.6						
PVRL	**Vila Real**	**74.90**	**51**	*e*P	**P**	**03 27 17.6**	**-2.3**
	comp=Z,32nm,1.8s,mb4.8						
EVO	**Evora**	**74.91**	**53**⇑	*i*P	**P**	**03 27 16.3**	**-3.8**
	comp=Z,17nm,0.8s,mb4.5						
EVO				*e*R			
	comp=Z,309nm,21.0s						
PBEJ	**Beja**	**75.07**	**54**	*e*P	**P**	**03 27 20.3**	**-0.7**
	comp=Z,9.0nm,1.1s,mb4.4						
MTE	**Manteigas**	**75.10**	**51**	*e*P	**P**	**03 27 19.3**	**-1.8**
	comp=Z,23nm,0.8s,mb5.0						
MTE				*e*S	S	03 36 55.5	+4.4
PCBR	**Castelo Branco**	**75.20**	**52**	*e*P	**P**	**03 27 21.6**	**-0.1**
	comp=Z,11nm,1.1s,mb4.5						
PBRG	**Braganca**	**75.58**	**50**	*e*P	**P**	**03 27 23.2**	**-0.6**
	comp=Z,20nm,1.2s,mb4.7						
ROSF	**Rostrenen**	**77.39**	**43**	*e*P	**P**	**03 27 29.9**	**-4.0**
	comp=Z,31nm,1.1s,mb4.7						
ROSF	**Rostrenen**	**77.39**	**43**	*e*P	**P**	**03 27 29.9**	**-4.0**
ROSF				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.7						
QUIF	**Quistinic**	**77.51**	**43**	*e*P	**P**	**03 27 30.8**	**-3.7**
	comp=Z,29nm,0.9s,mb4.7						
QUIF	**Quistinic**	**77.51**	**43**	*e*P	**P**	**03 27 30.8**	**-3.7**
QUIF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
SGMF	**Saint Gilles**	**77.88**	**43**	*e*P	**P**	**03 27 32.7**	**-3.8**
	comp=Z,62nm,1.5s,mb4.8						
SGMF	**Saint Gilles**	**77.88**	**43**	*e*P	**P**	**03 27 32.7**	**-3.8**
SGMF				pmax	pmax		
	comp=Z,31nm,1.5s,mb4.8						
ESDC	**Sonseca Array**	**77.91**	**52**	P	**P**	**03 27 33.6**	**-3.3**
	comp=Z,6.2nm,0.9s,mb4.3,baz=284,slow=5.3,SNR=14						
ESDC				pP	pP	03 27 57.9	-1.6
	comp=Z,5.7nm,0.9s,baz=283,slow=5.2,SNR=4.2						
GRR	**Gorron**	**78.98**	**43**	*e*P	**P**	**03 27 39.4**	**-3.2**
	comp=Z,50nm,1.0s,mb5.0						
GRR	**Gorron**	**78.98**	**43**	*e*P	**P**	**03 27 39.4**	**-3.2**
GRR				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.0						
FLN	**La Foliniere**	**79.18**	**42**	*e*P	**P**	**03 27 40.6**	**-3.1**
	comp=Z,39nm,0.9s,mb4.9						
FLN				*e*R			
	comp=Z,234nm,19.5s						
FLN	**La Foliniere**	**79.18**	**42**	*e*P	**P**	**03 27 40.6**	**-3.1**
FLN				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
FLN				MLR	MLR		
	comp=Z,230nm,19.5s						
LDF	**La Druitiere**	**79.44**	**42**	*e*P	**P**	**03 27 41.8**	**-3.3**
	comp=Z,37nm,1.0s,mb4.9						
LDF	**La Druitiere**	**79.44**	**42**	*e*P	**P**	**03 27 41.8**	**-3.3**
LDF				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.9						
SJPF	**Ste Jean**	**79.48**	**48**	*e*P	**P**	**03 27 41.7**	**-3.7**
	comp=Z,36nm,1.1s,mb4.8						
SJPF	**Ste Jean**	**79.48**	**48**	*e*P	**P**	**03 27 41.7**	**-3.7**
SJPF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
MFF	**Saint Martin d**	**79.72**	**44**	*e*P	**P**	**03 27 43.3**	**-3.3**
	comp=Z,31nm,1.1s,mb4.8						
MFF	**Saint Martin d**	**79.72**	**44**	*e*P	**P**	**03 27 43.3**	**-3.3**
MFF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
LFF	**La Frestale**	**80.59**	**46**	*e*P	**P**	**03 27 47.7**	**-3.6**
	comp=Z,14nm,0.8s,mb4.5						
LFF	**La Frestale**	**80.59**	**46**	*e*P	**P**	**03 27 47.7**	**-3.6**
LFF				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
EPF	**Esparros**	**80.62**	**48**	*e*P	**P**	**03 27 47.8**	**-3.7**
	comp=Z,43nm,1.4s,mb4.8						
EPF	**Esparros**	**80.62**	**48**	*e*P	**P**	**03 27 47.8**	**-3.7**
EPF				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.8						
RJF	**Les Rejaudoux**	**81.07**	**46**	*e*P	**P**	**03 27 50.3**	**-3.5**
RJF				*e*R			
	comp=Z,230nm,22.5s						
TCF	**Toulx Ste Croi**	**81.38**	**45**	*e*P	**P**	**03 27 51.8**	**-3.6**
	comp=Z,6.6nm,0.7s,mb4.3						
TCF	**Toulx Ste Croi**	**81.38**	**45**	*e*P	**P**	**03 27 51.8**	**-3.6**
TCF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
CAF	**Calviac**	**81.52**	**46**	*e*P	**P**	**03 27 52.4**	**-3.8**
BGF	**Bois d'Agland**	**81.76**	**44**	*e*P	**P**	**03 27 53.7**	**-3.7**
	comp=Z,12nm,0.8s,mb4.5						
BGF	**Bois d'Agland**	**81.76**	**44**	*e*P	**P**	**03 27 53.7**	**-3.7**
BGF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.5						
MTLF	**Montolieu**	**81.92**	**47**	*e*P	**P**	**03 27 54.8**	**-3.5**
	comp=Z,20nm,1.0s,mb4.6						
MTLF	**Montolieu**	**81.92**	**47**	*e*P	**P**	**03 27 54.8**	**-3.5**
MTLF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.6						
BAIF	**Baives**	**81.99**	**41**	*e*P	**P**	**03 27 55.2**	**-3.3**
AVF	**Avril sur Loir**	**82.06**	**44**	*e*P	**P**	**03 27 54.5**	**-4.4**
	comp=Z,27nm,1.2s,mb4.6						
AVF	**Avril sur Loir**	**82.06**	**44**	*e*P	**P**	**03 27 54.5**	**-4.4**
AVF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.7						
SSF	**Saint Saulge**	**82.11**	**44**	*e*P	**P**	**03 27 54.9**	**-4.3**
	comp=Z,3.1nm,0.7s,mb4.2						
SSF	**Saint Saulge**	**82.11**	**44**	*e*P	**P**	**03 27 54.9**	**-4.3**
SSF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
LOR	**Lormes**	**82.31**	**43**	*e*P	**P**	**03 27 56.9**	**-3.3**
	comp=Z,43nm,1.2s,mb4.9						
LOR				*e*R			
	comp=Z,170nm,18.8s						
LOR	**Lormes**	**82.31**	**43**	*e*P	**P**	**03 27 56.9**	**-3.3**
LOR				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.8						
LOR				MLR	MLR		
	comp=Z,170nm,18.8s						
SMF	**Signal de Mont**	**82.42**	**44**	*e*P	**P**	**03 27 56.4**	**-4.4**
	comp=Z,15nm,0.9s,mb4.5						
MEZF	**Maizieres J'vi**	**82.84**	**42**	*e*P	**P**	**03 27 59.1**	**-3.8**
	comp=Z,18nm,0.8s,mb4.7						
LIC	**Lamto**	**82.91**	**85**	*e*P	**P**	**03 28 01.0**	**-2.9**
	comp=Z,34nm,0.8s,mb4.9						
LIC				*e*R			
	comp=Z,103nm,21.9s						
LASF	**Ste Croix**	**82.94**	**46**	*e*P	**P**	**03 28 00.1**	**-3.4**
DBIC	**Dimbokro**	**82.97**	**85**	P	**P**	**03 28 01.4**	**-2.9**
	comp=Z,13nm,0.9s,mb4.8,baz=276,slow=3.7,SNR=21						
DBIC				LR	LR	04 00 23.5	
	comp=Z,187nm,21.9s,baz=264,slow=32						
DBIC	**Dimbokro**	**82.97**	**85**	*e*P	**P**	**03 27 60.0**	**-4.3**
	comp=Z,20nm,1.1s,mb4.9						
DBIC				*e*pP	pP	03 28 24.7	-2.4
DBIC	**Dimbokro**	**82.97**	**85**	*e*P	**P**	**03 28 00.0**	**-4.3**
DBIC				*e**PP	pP	03 28 24.7	-2.4
DBIC				pmax	pmax		
	comp=Z,20nm,1.1s						
BILL	**Bilibino**	**83.00**	**338**	*e*P	**P**	**03 28 02.4**	**-0.9**
	comp=Z,17nm,0.9s,mb4.9						
BILL	**Bilibino**	**83.00**	**338**⇑	*i*P	**P**	**03 28 02.3**	**-1.0**
BILL				*e*		03 31 13.6	
BILL				pmax	pmax		
	comp=Z,40nm,1.4s,mb5.1						
NAO	**NORSAR Subarra**	**83.21**	**29**	P	**P**	**03 28 03.8**	**-0.7**
	comp=Z,3.2nm,0.7s,mb4.3						
NAO	**NORSAR Subarra**	**83.21**	**29**	P	**P**	**03 28 03.8**	**-0.7**
NAO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
NB2	**NORSAR Subarra**	**83.33**	**29**	P	**P**	**03 28 03.8**	**-1.3**
	comp=Z,3.2nm,0.7s,mb4.3,baz=287,slow=5.0						
NOA	**NORSAR Array B**	**83.33**	**29**	P	**P**	**03 28 03.6**	**-1.5**
	comp=Z,4.9nm,0.8s,mb4.4,baz=288,slow=5.0,SNR=16						
NOA				pP	pP	03 28 25.8	-2.1
	comp=Z,4.1nm,0.9s,baz=286,slow=5.1,SNR=4.5						
NOA				LR	LR	04 02 32.7	
	comp=Z,149nm,19.8s,baz=275,slow=34						
VIVF	**Saint-Julien-l**	**83.35**	**46**	*e*P	**P**	**03 28 02.0**	**-3.5**
	comp=Z,31nm,1.3s,mb4.7						
VIVF	**Saint-Julien-l**	**83.35**	**46**	*e*P	**P**	**03 28 02.0**	**-3.5**
VIVF				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.7						
HAU	**Haudompre**	**83.80**	**42**	*e*P	**P**	**03 28 04.8**	**-2.9**
	comp=Z,6.9nm,0.6s,mb4.4						
HAU				*e*R			
	comp=Z,102nm,20.4s						
HAU	**Haudompre**	**83.80**	**42**	*e*P	**P**	**03 28 04.8**	**-2.9**
HAU				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
HAU				MLR	MLR		
	comp=Z,100nm,20.4s						
CABF	**La Chapelle**	**83.94**	**44**	*e*P	**P**	**03 28 05.1**	**-3.3**
	comp=Z,14nm,0.9s,mb4.5						
CABF	**La Chapelle**	**83.94**	**44**	*e*P	**P**	**03 28 05.1**	**-3.3**
CABF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
HINF	**Hinteralfeld**	**84.17**	**42**	*e*P	**P**	**03 28 06.3**	**-3.3**
	comp=Z,9.1nm,0.7s,mb4.4						
HINF	**Hinteralfeld**	**84.17**	**42**	*e*P	**P**	**03 28 06.3**	**-3.3**
HINF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
ORIF	**Oris-en-Rattie**	**84.18**	**45**	*e*P	**P**	**03 28 06.4**	**-3.3**
	comp=Z,14nm,1.0s,mb4.4						
ORIF				*e*R			
	comp=Z,178nm,21.2s						
CDF	**Champ du Feu**	**84.31**	**42**	*e*P	**P**	**03 28 07.0**	**-3.2**
	comp=Z,13nm,1.0s,mb4.4						
CDF	**Champ du Feu**	**84.31**	**42**	*e*P	**P**	**03 28 07.0**	**-3.2**
CDF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
TNS	**Taunus Mts**	**84.61**	**40**	*e*P	**P**	**03 28 11.2**	**-0.5**
	comp=Z,16nm,1.0s,mb4.9						
TNS	**Taunus Mts**	**84.61**	**40**	*e*P	**P**	**03 28 11.2**	**-0.5**
TNS				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.9						
LPL	**La Plagne**	**84.62**	**45**	*e*P	**P**	**03 28 09.0**	**-2.9**
	comp=Z,6.0nm,0.8s,mb4.3						
LPL	**La Plagne**	**84.62**	**45**	*e*P	**P**	**03 28 09.0**	**-2.9**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
LPG	**La Plagne**	**84.64**	**45**	*e*P	**P**	**03 28 08.8**	**-3.2**
HFS	**Hagfors**	**84.76**	**29**	LR	LR	04 09 23.4	
	comp=Z,41nm,18.8s,baz=280,slow=38						
BSEG	**Bad Segeberg**	**84.77**	**36**	*e*P	**P**	**03 28 11.2**	**-1.2**
MBDF	**Montbardon**	**84.84**	**45**	*e*P	**P**	**03 28 09.8**	**-3.2**
	comp=Z,8.7nm,0.7s,mb4.5						
MBDF	**Montbardon**	**84.84**	**45**	*e*P	**P**	**03 28 09.8**	**-3.2**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
LMR	**La Mourre**	**84.98**	**47**	*e*P	**P**	**03 28 10.4**	**-3.4**
BFO	**Black Forest**	**85.01**	**42**	*e*P	**P**	**03 28 12.3**	**-1.4**
	comp=Z,21nm,1.4s,mb4.9						
BFO	**Black Forest**	**85.01**	**42**	*e*P	**P**	**03 28 12.3**	**-1.4**
BFO				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
FRF	**La Foret Royal**	**85.03**	**47**	*e*P	**P**	**03 28 10.6**	**-3.4**
CLZ	**Clausthal**	**85.36**	**38**	*e*P	**P**	**03 28 13.6**	**-1.8**
	comp=Z,5.0nm,1.2s,mb4.3						
CLZ	**Clausthal**	**85.36**	**38**	*e*P	**P**	**03 28 13.6**	**-1.8**
CLZ				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
SBF	**Sospel**	**85.51**	**46**	*e*P	**P**	**03 28 13.2**	**-3.1**
	comp=Z,32nm,0.7s,mb5.1						
SBF	**Sospel**	**85.51**	**46**	*e*P	**P**	**03 28 13.2**	**-3.1**
SBF				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
ARCES	**ARCESS Array B**	**85.81**	**19**	P	**P**	**03 28 15.9**	**-1.3**
	comp=Z,3.8nm,0.6s,mb4.5,baz=287,slow=4.0,SNR=17						
ARCES				LR	LR	04 07 49.6	
	comp=Z,128nm,18.3s,baz=318,slow=36						
MOX	**Moxa**	**86.45**	**39**	*i* P	**P**	**03 28 19.8**	**-1.0**
	comp=Z,logA/T=1.0,mb4.7						
MOX				PP	PP	03 31 46.0	+1.2
MOX	**Moxa**	**86.45**	**39**	*e*P	**P**	**03 28 19.8**	**-1.0**
	comp=Z,15nm,1.5s,mb4.7						
MOX				*e*PP	PP	03 31 46.3	+1.5
GRA1	**Grafenberg Arr**	**86.48**	**40**	*e*P	**P**	**03 28 18.9**	**-2.0**
	comp=Z,15nm,1.1s,mb4.8						
GRA1				*e*pP	pP	03 28 37.3	-6.7
GRA1				*e*sP	sP	03 28 45.2	-7.8
GRA1				*e*PP	PP	03 31 44.7	-0.4
GRF	**Grafenberg Arr**	**86.48**	**40**	*e*P	**P**	**03 28 18.9**	**-2.0**
	comp=Z,15nm,1.1s,mb4.8						
GRF				*e*pP	pP	03 28 37.3	-6.7
GRF				*e*sP	sP	03 28 45.2	-7.8
GRF				*e*PP	PP	03 31 44.7	-0.4
GRF	**Grafenberg Arr**	**86.48**	**40**	*e*P	**P**	**03 28 18.9**	**-2.0**
GRF				*e**PP	pP	03 28 37.3	-6.7
GRF				*e**SP	sP	03 28 45.2	-7.8
GRF				*e*		03 31 44.7	
GRF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
GRF	**Grafenberg Arr**	**86.48**	**40**	*e*P	**P**	**03 28 18.9**	**-2.0**
GRF				*e**PP	pP	03 28 37.3	-6.7
GRF				*e**SP	sP	03 28 45.2	-7.8
GRF				*e*		03 31 44.7	
GRF				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.8						
PGF	**Pioggiola**	**86.95**	**47**	*e*P	**P**	**03 28 19.8**	**-3.6**
	comp=Z,72nm,1.2s,mb5.2						
PGF	**Pioggiola**	**86.95**	**47**	*e*P	**P**	**03 28 19.8**	**-3.6**
PGF				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.2						

NKC	**Novy Kostel**	**87.08**	**39**	*e*P	**P**	**03 28 21.4**	**-2.5**
NKC				*e*pP	pP	03 28 47.7	+0.8
CLL	**Collm**	**87.09**	**38**	P	**P**	**03 28 21.0**	**-2.9**
	comp=Z,logA/T=0.9,mb4.6						
CLL				*i* *PP	pP	03 28 48.3	+1.4
CLL	**Collm**	**87.09**	**38**	*e*P	**P**	**03 28 21.0**	**-2.9**
	comp=Z,8.0nm,0.9s,mb4.7						
CLL				*i* pP	pP	03 28 48.3	+1.4
CLL	**Collm**	**87.09**	**38**	*e*P	**P**	**03 28 21.0**	**-2.9**
CLL				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
WET	**Wettzell**	**87.67**	**40**	*e*P	**P**	**03 28 25.3**	**-1.4**
	comp=Z,23nm,1.4s,mb5.0						
WET				*e*PP	PP	03 31 55.5	+0.3
WET	**Wettzell**	**87.67**	**40**	*e*P	**P**	**03 28 25.3**	**-1.4**
WET				*e*		03 31 55.5	
WET				pmax	pmax		
	comp=Z,23nm,1.4s,mb5.0						
BRG	**Berggiesshubel**	**87.79**	**38**	*e*P	**P**	**03 28 25.2**	**-2.1**
	comp=Z,8.7nm,1.2s,mb4.7						
BRG	**Berggiesshubel**	**87.79**	**38**	*e*P	**P**	**03 28 25.2**	**-2.0**
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.7						
KHC	**Kasperske Hory**	**88.11**	**40**	*e*P	**P**	**03 28 27.1**	**-1.7**
KHC				*e*pP	pP	03 28 52.7	+0.7
PVCC	**Panska Ves**	**88.28**	**38**	*e*P	**P**	**03 28 28.9**	**-0.7**
GEC2	**GERESS Array S**	**88.28**	**40**	*e*P	**P**	**03 28 27.6**	**-2.0**
	comp=Z,14nm,1.6s,mb4.7						
GEC2	**GERESS Array S**	**88.28**	**40**	*e*P	**P**	**03 28 27.6**	**-2.0**
GEC2				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.7						
GERES	**GERESS Array B**	**88.28**	**40**	P	**P**	**03 28 27.6**	**-2.0**
	comp=Z,5.1nm,1.2s,mb4.4,baz=270,slow=4.0,SNR=11						
GERES				pP	pP	03 28 50.9	-1.9
	comp=Z,1.9nm,0.8s,baz=297,slow=3.0,SNR=5.2						
GERES				LR	LR	04 08 37.4	
	comp=Z,145nm,19.3s,baz=191,slow=36						
PRU	**Pruhonice**	**88.44**	**39**	*e*P	**P**	**03 28 27.8**	**-2.5**
ROBS	**Robic**	**88.98**	**43**	*e*P	**P**	**03 28 33.8**	**+0.8**
UPC	**Upice**	**89.15**	**38**	*e*P	**P**	**03 28 32.2**	**-1.5**
DPC	**Dobruska-Polom**	**89.39**	**38**	*e*P	**P**	**03 28 32.9**	**-1.9**
FINES	**FINESS Array B**	**89.83**	**26**	P	**P**	**03 28 34.9**	**-1.8**
	comp=Z,2.7nm,0.9s,mb4.4,slow=1.9,SNR=6.5						
FINES				LR	LR	04 08 47.3	
	comp=Z,149nm,20.8s,baz=324,slow=36						
SEY	**Seymchan**	**90.39**	**336**	⇓*i*P	**P**	**03 28 38.0**	**-1.2**
TIXI	**Tiksi**	**91.37**	**349**	⇑*e*P	**P**	**03 28 41.9**	**-1.7**
TIXI	**Tiksi**	**91.37**	**349**	⇓*i*P	**P**	**03 28 41.1**	**-2.5**
TIXI				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,294nm,25.0s						
VSU	**Vasula**	**91.56**	**28**	⇑*e*P	**P**	**03 28 43.5**	**-1.3**
AKASG	**Malin Array Be**	**96.67**	**34**	PP	PP	03 32 59.5	-6.6
	comp=Z,0.2nm,0.3s,baz=298,slow=7.6,SNR=4.8						
OBN	**Obninsk**	**97.92**	**28**	⇑*i*P	**P**	**03 29 12.9**	**-0.9**
OBN				LR	LR		
	comp=Z,300nm,22.0s						
OBN	**Obninsk**	**97.92**	**28**	*c* *i*P	**P**	**03 29 12.8**	**-1.0**
OBN				*e*		03 33 11.3	
OBN				pmax	pmax		
	comp=Z,15nm,1.2s,mb5.4						
YAK	**Yakutsk**	**98.84**	**343**	⇑*e*P	**P**	**03 29 16.1**	**-1.8**
VNA3	**Neumayer Olymp**	**99.27**	**161**	⇑*i*Pdif	**P**	**03 29 19.9**	**+0.3**
VNA3				*e*	pP	03 29 42.1	-0.8
VNA3				*e*		03 29 49.3	
VNA1	**Neumayer--Stat**	**99.58**	**161**	⇑*i*Pdif	**P**	**03 29 17.2**	**-3.8**
VNA1				*e*	pP	03 29 36.1	-8.2
VNA1				*e*	pP	03 29 43.3	-1.0
VNA2	**Neumayer--Watz**	**99.92**	**161**	⇑*i*Pdif	**P**	**03 29 23.6**	**+1.0**
VNA2				*e*	pP	03 29 44.6	-1.3
VNA2				*e*		03 29 52.1	
SNAA	**Sanae**	**101.49**	**161**	⇑*i*P	P	03 29 27.5	-2.1
AKTO	**Aktyubinsk**	**110.22**	**22**	PP	PP	03 34 41.1	-7.2
	comp=Z,3.1nm,0.9s,baz=270,slow=6.0,SNR=5.6						
CHKZ	**Chkalovo**	**110.96**	**13**	*e*PKP	PKPdf	03 34 09.4	-0.2
BRVK	**Borovoye**	**111.47**	**13**	⇑*i*PKP	PKPdf	03 34 09.8	-0.8
BVAR	**Borovoye Array**	**111.52**	**13**	PKiKP		03 34 10.2	
	comp=Z,0.8nm,0.7s,baz=333,slow=6.4,SNR=3.7						
ZAL	**Zalesovo**	**112.71**	**4**	PKiKP		03 34 13.6	
	comp=Z,1.8nm,0.5s,baz=234,slow=2.6,SNR=9.1						
ZAL				PP	PP	03 35 00.2	-6.2
	comp=Z,6.1nm,1.0s,baz=125,slow=8.2,SNR=9.6						
ZAL	**Zalesovo**	**112.71**	**4**	PKPdf	PKPdf	03 34 13.6	+0.6
ZAL				PP	PP	03 35 00.2	-6.2
CN2	**Changchun**	**114.87**	**333**	*e*PKP	PKPdf	03 34 17.3	-0.3
KURK	**Kurchatov**	**115.24**	**9**	*e*PKPdf	PKPdf	03 34 17.6	-0.5
ULN	**Ulaanbaatar**	**117.29**	**348**	*e*PKPdf	PKPdf	03 34 22.2	+0.2
SONM	**Songino Array**	**117.45**	**348**	PKP	PKPdf	03 34 23.0	+0.7
	comp=Z,3.7nm,0.7s,baz=341,slow=1.5,SNR=28						
SONM				PP	PP	03 35 34.7	-5.4
	comp=Z,3.3nm,1.1s,baz=9.1,slow=6.9,SNR=5.8						
SONM				PKKPbc		03 44 46.1	
	comp=Z,1.2nm,0.8s,baz=194,slow=3.9,SNR=8.3						
BOSA	**Boshof**	**117.63**	**115**	PKP	PKPdf	03 34 24.2	+1.1
	comp=Z,19nm,0.8s,baz=274,slow=0.8,SNR=22						
BOSA				PKKPbc		03 44 47.8	
	comp=Z,5.2nm,1.1s,baz=129,slow=6.7,SNR=3.9						
BOSA	**Boshof**	**117.63**	**115**	*e*PKPdf	PKPdf	03 34 24.6	+1.4
LBTB	**Lobatse**	**117.84**	**111**	PKP	PKPdf	03 34 25.0	+1.3
	comp=Z,6.9nm,0.5s,baz=284,slow=2.6						
LBTB	**Lobatse**	**117.84**	**111**	*e*PKPdf	PKPdf	03 34 24.7	+1.1
LSZ	**Lusaka**	**119.48**	**100**	PKP	PKPdf	03 34 27.9	+0.9
	comp=Z,5.2nm,0.7s,baz=228,slow=2.2						
LSZ	**Lusaka**	**119.48**	**100**	*e*PKPdf	PKPdf	03 34 28.0	+1.0
MKAR	**Makanchi Array**	**119.57**	**7**	PKP	PKPdf	03 34 25.4	-1.2
	comp=Z,1.0nm,0.4s,baz=321,slow=3.1,SNR=13						
MKAR				PP	PP	03 35 47.0	-7.2
	comp=Z,1.1nm,0.7s,slow=6.1,SNR=4.9						
MATP	**Matopo**	**120.26**	**106**	PKP	PKPdf	03 34 29.4	+1.0
	comp=Z,11nm,0.6s,baz=290,slow=2.5,SNR=11						
USP	**Ospenovka**	**121.64**	**14**	P	PKPdf	03 34 31.3	+0.7
	SNR=8.6						
EKS2	**Erkin-Say**	**122.03**	**15**	P	PKPdf	03 34 32.9	+1.5
	SNR=5.6						
TKM2	**Tokmak 2**	**122.21**	**13**	P	PKPdf	03 34 32.5	+0.7
	SNR=5.2						
AAK	**Ala-Archa**	**122.23**	**14**	P	PKPdf	03 34 32.7	+0.9
	SNR=5.7						
AAK	**Ala-Archa**	**122.23**	**14**	*e*PKPdf	PKPdf	03 34 31.3	-0.5
AML	**Almayashu**	**122.51**	**15**	P	PKPdf	03 34 33.5	+1.2
	SNR=6.9						
UCH	**Uchtor**	**122.62**	**14**	P	PKPdf	03 34 34.2	+1.7
	SNR=7.7						
HHC	**Hu-ho-hao-te**	**122.68**	**341**	*e*PKP	PKPdf	03 34 33.8	+1.1
HHC				PKS	PKS	03 38 09.5	+0.9
HHC				SKS	SKS	03 41 33.3	+8.7
HHC				PP	PP		
	comp=Z,60nm,8.4s						
HHC				LR	LR		
	comp=N,230nm,19.2s						
HHC				LR	LR		
	comp=E,150nm,18.0s						
HHC				LR	LR		
	comp=Z,320nm,25.2s						
MAW	**Mawson**	**122.86**	**168**	*e*PKP	PKPdf	03 34 34.8	+2.4
	comp=Z,9.8nm,0.7s						
MAW				*e*pPKP		03 34 55.2	
MAW	**Mawson**	**122.86**	**168**	PKP	PKPdf	03 34 34.9	+2.6
	comp=Z,12nm,0.7s,baz=197,slow=2.3,SNR=33						
WMQ	**Urumqi**	**122.96**	**3**	*e*PKP	PKPdf	03 34 33.3	+0.1
WMQ				XPKP		03 35 11.0	
WMQ				PP	PP	03 36 18.5	+0.8
WMQ				PKS	PKS	03 38 08.5	-0.6
WMQ				SKS	SKS	03 41 33.0	+7.6
WMQ				SKKS		03 43 00.0	
WMQ				SS	SS	03 52 51.0	-0.5
WMQ				PP	PP		
	comp=Z,110nm,4.8s						
WMQ				LR	LR		
	comp=N,580nm,27.0s						
WMQ				LR	LR		
	comp=E,250nm,28.5s						
WMQ				LR	LR		
	comp=Z,530nm,29.8s						
TATS	**Tathlith**	**123.03**	**56**	P	PKPdf	03 34 34.6	+0.8
KAMS	**Al Khamasin**	**123.50**	**54**	P	PKPdf	03 34 34.9	+0.2
DJNS	**Zahran al Janu**	**124.02**	**58**	P	PKPdf	03 34 37.1	+1.3
KMBO	**Kilima Mbogo**	**125.60**	**82**	PKP	PKPdf	03 34 41.2	+2.1
	comp=Z,2.0nm,0.9s,baz=48,slow=22,SNR=3.9						
KMBO	**Kilima Mbogo**	**125.60**	**82**	PKP	PKPdf	03 34 41.2	+2.1
GTA	**Gaotai**	**126.77**	**351**	PKP	PKPdf	03 34 41.8	+1.1
GTA				XPKP		03 35 19.4	
GTA				PP	PP	03 36 40.8	-1.9
GTA				PKS	PKS	03 38 17.0	+0.6
GTA				SKS	SKS	03 41 41.3	+4.3
GTA				SKKS		03 43 22.8	
GTA				SS	SS	03 53 33.4	-5.8
GTA				PP	PP		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=N,220nm,22.8s						
GTA				LR	LR		
	comp=E,140nm,19.4s						
GTA				LR	LR		
	comp=Z,380nm,27.0s						
SSE	**Sheshan**	**126.99**	**327**	P	PKPdf	03 34 32.5	-8.8
NJ2	**Nanjing**	**127.41**	**330**	*e*PKP	PKPdf	03 34 42.3	+0.2
NJ2				XPKP		03 35 19.4	
NJ2				PP	PP	03 36 49.0	+1.8
NJ2				PKS	PKS	03 38 18.0	+0.2
NJ2				SKS	SKS	03 41 42.0	+2.9
NJ2				SKKS		03 43 29.0	
NJ2				PP	PP		
	comp=Z,300nm,5.4s						
NJ2				LR	LR		
	comp=N,3µm,28.0s						
NJ2				LR	LR		
	comp=E,4µm,28.6s						
NJ2				LR	LR		
	comp=Z,4µm,34.3s						
LZH	**Lanzhou**	**129.24**	**346**	*e*PKP	PKPdf	03 34 46.0	+0.5
LZH				XPKP		03 35 15.6	
LZH				*e*PP	PP	03 36 59.0	-0.7
LZH				SKS	SKS	03 41 48.3	+4.4
LZH				SKKS		03 43 41.5	
LZH				*e*SS	SS	03 54 09.3	-0.9
LZH				PP	PP		
	comp=Z,130nm,7.2s						
LZH				LR	LR		
	comp=E,280nm,18.3s						
LZH				LR	LR		
	comp=Z,640nm,20.0s						
LZH	**Lanzhou**	**129.24**	**346**	*e*PKP	PKPdf	03 34 46.0	+0.5
LZH				pPKP		03 35 07.0	
LZH				sPKP		03 35 15.6	
LZH				*e*PP	PP	03 36 59.0	-0.7
LZH				SKS	SKS	03 41 48.2	+4.3
LZH				SKKS		03 43 41.5	
LZH				*e*SS	SS	03 54 09.3	-0.9
LZH				LR	LR		
	comp=Z,640nm,20.0s						
LZH	**Lanzhou**	**129.24**	**346**	*e*PKIKP	PKPdf	03 34 46.0	+0.5
LZH						03 35 07.0	
LZH				*e*		03 36 59.0	
LZH						03 41 48.2	
LZH				*e*SS	SS	03 54 09.3	-0.9
LZH				MLR	MLR		
	comp=Z,640nm,20.0s						
XAN	**Xi'an**	**129.75**	**340**	PKP	PKPdf	03 34 48.1	+1.5
STKA	**Stephens Creek**	**130.15**	**240**	*e*PKP	PKPdf	03 34 49.3	+1.9
	comp=Z,2.4nm,0.6s						
STKA				*e*pPKP		03 35 13.1	
STKA				*e*SKP		03 38 06.7	
STKA	**Stephens Creek**	**130.15**	**240**	PKP	PKPdf	03 34 49.8	+2.4
	comp=Z,2.8nm,0.6s,baz=331,slow=16,SNR=5.9						
STKA				SKPbc		03 38 06.0	
	comp=Z,7.5nm,1.2s,baz=336,slow=3.9,SNR=4.7						
WHN	**Wuhan**	**130.77**	**333**	PKP	PKPdf	03 34 47.5	-1.1
ENH	**Enshi**	**132.98**	**338**	*e*PKPdf	PKPdf	03 34 53.3	+0.5
LSA	**Lhasa**	**137.12**	**360**	PKP	PKPdf	03 35 02.4	+2.0
LSA	**Lhasa**	**137.12**	**360**	*e*PKPdf	PKPdf	03 35 01.6	+1.2
GYA	**Guiyang**	**137.47**	**339**	PKP	PKPdf	03 35 01.9	+0.8
GYA				XPKP		03 35 39.3	
GYA				PKS	PKS	03 38 36.5	+0.2
GYA				PP	PP		
	comp=Z,120nm,7.9s						
GYA				LR	LR		
	comp=N,180nm,21.8s						
GYA				LR	LR		
	comp=E,210nm,22.0s						
GYA				LR	LR		
	comp=Z,160nm,21.9s						
OPO	**Ambohidratompo**	**137.82**	**103**	PKP	PKPdf	03 35 03.4	+1.4
	comp=Z,3.3nm,0.6s,baz=255,slow=2.2,SNR=11						
OPO				SKPbc		03 38 30.0	
	comp=Z,18nm,1.3s,baz=265,slow=3.3,SNR=5.3						
WB2	**Warramunga Arr**	**137.90**	**255**	*e*PKP	PKPdf	03 34 57.0	-5.1
WB2				*e*		03 35 25.1	
WB2				*e*SKP		03 38 31.1	
WRAB	**Tennant Creek**	**137.90**	**255**	*e*PKPdf	PKPdf	03 35 04.0	+2.0
WRAB				*e*pPKPdf		03 35 25.7	
WRAB				*e*SKPdf		03 38 31.4	
WRA	**Warramunga Arr**	**137.91**	**255**	PKhKP		03 34 56.1	
	comp=Z,1.4nm,0.9s,baz=91,slow=3.7,SNR=14						
WRA				PKP	PKPdf	03 35 04.3	+2.2
	comp=Z,12nm,0.7s,baz=87,slow=2.7,SNR=44						
WRA				pPKP		03 35 25.9	
	comp=Z,20nm,1.0s,baz=94,slow=1.8,SNR=9.4						
WRA				PP	PP	03 37 51.1	-3.2
	comp=Z,2.9nm,1.1s,baz=92,slow=6.3,SNR=4.5						
WRA				SKPbc		03 38 32.2	
	comp=Z,8.6nm,1.0s,baz=91,slow=2.6,SNR=14						
GKN	**Gorkha**	**138.38**	**8**	*e*P	PKPdf	03 35 02.7	-0.1
KOLN	**Koldanda**	**138.45**	**10**	*e*P	PKPdf	03 35 02.2	-0.7
	comp=Z,47nm,1.2s						
GUN	**Gumba**	**138.63**	**7**	*e*P	PKPdf	03 35 01.9	-1.3
	comp=Z,48nm,0.9s						
KKN	**Kakani**	**138.68**	**7**	*e*P	PKPdf	03 35 03.5	+0.2
	comp=Z,5.4nm,0.2s						
PKI	**Pulchoki**	**138.91**	**7**	*e*P	PKPdf	03 35 03.3	-0.4
JIRN	**Jiri**	**138.91**	**6**	*e*P	PKPdf	03 35 03.3	-0.4
KAKA	**Kakadu**	**139.49**	**266**	*e*PKP	PKPdf	03 35 27.1	+22
	comp=Z,10nm,0.7s						
KAKA				*e*pPKP		03 35 49.7	
KAKA				*e*SKP		03 38 56.6	
KMI	**Kunming**	**139.96**	**343**	PKP	PKPdf	03 35 04.8	-0.9
FORT	**Forrest**	**141.65**	**237**	*e*PKP	PKPdf	03 35 12.5	+3.9
	comp=Z,19nm,0.6s						
POO	**Poona**	**144.10**	**28**	*e*P	PKPbc	03 35 08.5	-4.0
KAD	**Karad**	**145.32**	**29**	*e*P	PKPdf	03 35 14.0	-1.3
CHRT	**Chiangrai**	**145.76**	**345**	⇑P	PKPdf	03 35 14.0	-2.0
	comp=Z,145nm,1.0s						
FITZ	**Fitzroy Crossi**	**146.21**	**258**	*e*PKP	PKPdf	03 35 20.4	+3.6
	comp=Z,28nm,1.0s						
FITZ				*e*pPKP		03 35 42.6	
FITZ	**Fitzroy Crossi**	**146.21**	**258**	PKPbc	PKPbc	03 35 20.2	+2.2
	comp=Z,67nm,1.1s,baz=142,slow=3.6,SNR=33						
FITZ				pPKPbc		03 35 43.2	
	comp=Z,161nm,1.0s,baz=134,slow=2.4,SNR=20						
CHG	**Chiang Mai**	**146.98**	**346**	P	PKPdf	03 35 20.1	+2.0
	comp=Z,26nm,0.8s						
HYB	**Hyderabad**	**147.04**	**22**	*i* PKP	PKPdf	03 35 19.0	+0.8
	comp=Z,80nm,1.0s						
HYB				*e*		03 35 44.0	
HYB	**Hyderabad**	**147.04**	**22**	*e*P	PKPdf	03 35 19.0	+0.8
HYB				*e*		03 35 44.0	
TSM	**Tawau**	**147.89**	**301**	P	PKPdf	03 35 23.5	+3.8
KKTK	**Khon Kaen**	**148.14**	**338**	P	PKPdf	03 35 20.6	+0.6
	comp=Z,1µm,1.0s						
KKM	**Kota Kinabalu**	**148.22**	**306**	*e*PKPbc	PKPdf	03 35 25.5	+5.3
KKM	**Kota Kinabalu**	**148.22**	**306**	P	PKPdf	03 35 22.7	+2.5
NWAO	**Narrogin (SRO)**	**149.07**	**227**	PKPbc	PKPdf	03 35 26.5	+5.5
	comp=Z,41nm,1.1s,baz=87,slow=2.0,SNR=10						
NWAO				pPKPbc		03 35 50.3	
	comp=Z,41nm,1.0s,baz=117,slow=3.5,SNR=6.6						
NWAO	**Narrogin (SRO)**	**149.07**	**227**	*e*PKPbc	PKPdf	03 35 26.2	+5.1
NST	**Nakhon Sawan**	**149.66**	**342**	P	PKPdf	03 35 28.0	+5.6
	comp=Z,50nm,1.0s						
MUN	**Mundaring**	**150.31**	**227**	*e*PKP	PKPdf	03 35 33.5	+10
MUN				*e*pPKP		03 35 53.6	
KSM	**Kuching**	**155.66**	**306**	*e*PKPdf	PKPdf	03 35 32.5	+1.4
KSM				*e*PKPab	PKPab	03 35 60.0	-0.2
KULM	**Kulim**	**159.00**	**332**	*e*PKPdf	PKPdf	03 35 36.6	+1.3
IPM	**Ipoh**	**159.44**	**330**	P	PKPdf	03 35 39.0	+3.2

NSSP **18** *04:16:51.6,41.00N×47.75E,h10^{km},ML3.3*

MOS **18** *04:16:52.3±2.3,40.80N×48.94E,h10^{km},mb4.3/7,Error ellipse: s-maj=8.4km s-min=6.2km az=112.6*

IDC **18** *04:16:52.8±1.4,40.96N×48.61E,mb4.1/7,mb1 4.1/10, mb1mx3.9/21,mbtmp4.0/10,ML3.9/2,MS3.5/1,Ms1 3.6/1, ms1mx2.7/25,Error ellipse: s-maj=29.3km s-min=11.5km az=151.0*

CSEM **18** *04:16:56.6±0.1,41.19N×48.67E,h30^{km},mb4.1/5,Error ellipse: s-maj=5.3km s-min=1.7km az=171.0*

NNC **18** *04:16:58.8±4.3,40.99N×49.22E,h14^{km}±35^{km},Error ellipse: s-maj=40.9km s-min=15.9km az=95.0*

BJI **18** *04:16:58.0,40.90N×48.70E,h67^{km},mB4.9,mb4.6,Ms4.5, Msz4.3*

NEIC **18** *04:17:00.0±1.2,40.90N×48.70E,h67^{km}±17^{km},mb4.0/10, Error ellipse: s-maj=21.2km s-min=6.9km az=183.0*

ISC 18 04:16:51.7±0.5**,40.73N**±0.05×**48.96E**±0.03**,h10**^{km}**,n91,** σ**1^{s}58**/119**,mb4.1**/16**,MS4.1**/2**,12C-7D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAK	**Makhachkala**	**2.48**	**335**	*e*PN	**Pn**	**04 17 36.8**	**+4.0**
MAK				*i*		04 17 41.5	
MAK				*i* S	**Sn**	**04 18 06.0**	**+2.6**
MAK				*i*		04 18 14.0	
MAK				pmax	pmax		
	comp=Z,528nm,1.0s						
MAK				smax			
	comp=N,1µm,0.9s						
MAK				smax			
	comp=E,1µm,0.9s						
MAK				MLR	MLR		
	comp=N,2µm,6.0s						
MAK				MLR	MLR		
	comp=Z,1µm,6.0s						
MAK	**Makhachkala**	**2.48**	**335**	*e*Pn	**Pn**	**04 17 36.8**	**+4.0**
	comp=Z,528nm,1.0s						
MAK	**Makhachkala**	**2.48**	**335**	*i* Pg	**Pg**	**04 17 41.5**	**+0.3**
MAK				*i* Sn	**Sn**	**04 18 06.0**	**+2.6**
MAK				*i* Sg	**Sg**	**04 18 14.0**	**-0.3**
DGRG	**David-gareji**	**2.80**	**286**	P	**Pn**	**04 17 37.2**	**-0.2**
DGRG				S	**Sn**	**04 18 11.3**	**-0.4**
GNI	**Garni**	**3.27**	**261**	Pn	**Pn**	**04 17 46.0**	**+1.9**
	comp=Z,7.1nm,0.3s,baz=147,slow=3.4,SNR=18						
GNI				Sn	**Sn**	**04 18 29.1**	**+5.7**
	comp=Z,11nm,0.3s,baz=240,slow=7.6,SNR=4.1						
GNI	**Garni**	**3.27**	**261**	*e*Pn	**Pn**	**04 17 47.7**	**+3.6**
GNI	**Garni**	**3.27**	**261**	PN	**Pn**	**04 17 46.0**	**+1.9**
GNI						04 18 29.1	
GNI				pmax	pmax		
	comp=Z,7.0nm,0.3s						
GNI				smax			
	comp=N,11nm,0.3s						
GNI	**Garni**	**3.27**	**261**	*e*Pn	**Pn**	**04 17 47.7**	**+3.6**
GNI				Sn	**Sn**	**04 18 29.1**	**+5.6**
MTA	**Mtatsminda**	**3.29**	**288**	P	**Pn**	**04 17 49.0**	**+4.7**
MTA				S	**Sn**	**04 18 26.8**	**+2.9**
TI2	**Plekhanov**	**3.33**	**289**	*e*PN	**Pn**	**04 17 49.6**	**+4.7**
TI2				*i*		04 17 56.6	
TI2				*e*S	**Sn**	**04 18 31.6**	**+6.7**
TI2				*e*S	**Sn**	**04 18 31.6**	**+6.7**
TI2				*e*		04 18 43.6	
TI2				pmax	pmax		
	comp=E,10.0nm,0.4s						
TI2				pmax	pmax		
	comp=E,20nm,0.4s						
TI2				pmax	pmax		
	comp=E,40nm,0.6s						
TI2				pmax	pmax		
	comp=E,30nm,0.8s						
TI2				smax			
	comp=E,130nm,1.0s						
TI2	**Plekhanov**	**3.33**	**289**	*i* Pg	**Pg**	**04 17 56.6**	**-1.6**
TI2				*e*Sn	**Sn**	**04 18 31.6**	**+6.7**
TI2				*e*Sg	**Sg**	**04 18 43.6**	**+1.1**
TBLG	**Delisi**	**3.33**	**289**	P	**Pn**	**04 17 43.5**	**-1.5**
TBLG				S	**Sn**	**04 18 25.6**	**+0.5**
GOR	**Gori**	**3.86**	**291**	P	**Pn**	**04 17 53.4**	**+0.9**
GOR				S	**Sn**	**04 18 38.6**	**+0.2**
ZEI	**Tsey**	**4.30**	**300**	*i* PN	**Pn**	**04 18 00.3**	**+1.6**
ZEI				*e*		04 18 13.5	
ZEI				*e*		04 18 52.6	
ZEI				*e*		04 19 12.3	
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.1s						
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.2s						
ZEI				smax			
	comp=E,49nm,0.5s						
ZEI				smax			
	comp=E,137nm,0.7s						
ZEI	**Tsey**	**4.30**	**300**	*i* Pn	**Pn**	**04 18 00.3**	**+1.6**
	comp=E,3.0nm,0.1s						
ZEI				*e*Sn	**Sn**	**04 18 52.6**	**+3.1**
ZEI				*e*Sg	**Sg**	**04 19 12.3**	**-2.5**
ONI	**Oni**	**4.52**	**296**	P	**Pn**	**04 18 02.3**	**+0.4**
ONI				S	**Sn**	**04 18 54.3**	**-0.9**
KUBR	**Kubataba**	**5.13**	**309**	*e*Pn	**Pn**	**04 18 14.5**	**+4.0**
SHAR	**Shatzhatmas**	**5.55**	**305**	*e*P	**Pn**	**04 18 20.2**	**+3.7**
KIV	**Kislovodsk**	**5.65**	**307**	Pn	**Pn**	**04 18 21.0**	**+3.1**
	comp=E,33nm,0.9s						
KIV	**Kislovodsk**	**5.65**	**307**	*e*P	**Pn**	**04 18 21.3**	**+3.4**
KIV				*e*S	**Sn**	**04 19 24.5**	**+0.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV	**Kislovodsk**	**5.65**	**307**	Pn	**Pn**	**04 18 21.0**	**+3.1**
	comp=Z,33nm,0.9s						
KIV	**Kislovodsk**	**5.65**	**307**	*e*P	**Pn**	**04 18 21.3**	**+3.4**
	comp=Z,6.0nm,1.0s						
KIV				*e*S	**Sn**	**04 19 24.5**	**+0.8**
GOF	**Gofitskoye**	**6.13**	**317**	*e*P	**Pn**	**04 18 28.7**	**+4.1**
GOF				*e*S	**Sn**	**04 19 37.8**	**+2.2**
GOF				smax			
	comp=N,110nm,1.3s						
GOF	**Gofitskoye**	**6.13**	**317**	*e*P	**Pn**	**04 18 28.7**	**+4.1**
	comp=N,110nm,1.3s						
GOF				*e*S	**Sn**	**04 19 37.8**	**+2.2**
AB31	**Akbulak array**	**11.53**	**39**	⇓P	**P**	**04 19 39.2**	**-0.2**
	comp=N,1.0nm,0.4s,baz=234,slow=12,SNR=23						
AB31				⇑S	**S**	**04 21 43.7**	**-5.5**
	comp=N,11nm,0.9s						
AB31	**Akbulak array**	**11.53**	**39**	*e*P	**P**	**04 19 39.4**	**+0.1**
AB31				S	**S**	**04 21 43.7**	**-5.5**
	comp=N,11nm,0.9s						
AKTK	**Aktyubinsk**	**11.59**	**30**	P	**P**	**04 19 38.3**	**-1.8**
AKTK				S	**S**	**04 21 42.8**	**-7.8**
AKTO	**Aktyubinsk**	**11.59**	**30**	⇑P	**P**	**04 19 38.5**	**-1.6**
	comp=N,0.6nm,0.6s						
AKTO				⇓S	**S**	**04 21 46.7**	**-3.9**
	comp=N,1.9nm,1.1s						
AKTO	**Aktyubinsk**	**11.59**	**30**	Pn	**P**	**04 19 38.3**	**-1.8**
	comp=N,0.4nm,0.3s,baz=216,slow=12,SNR=6.9						
AKTO				Sn	**S**	**04 21 42.8**	**-7.8**
	comp=N,0.2nm,0.3s,baz=31,slow=19,SNR=2.4						
ORR	**Orenburg**	**11.60**	**18**	*c* *i*P	**P**	**04 19 41.5**	**+1.2**
ORR				*i*		04 21 41.1	
BRTR	**Keskin Array B**	**11.76**	**270**	Pn	**P**	**04 19 40.9**	**-1.6**
	comp=N,0.0nm,0.3s,baz=63,slow=6.4,SNR=2.6						
TIRR	**Tirgusor**	**15.58**	**291**	⇑P	**P**	**04 20 39.0**	**+6.1**
TIRR	**Tirgusor**	**15.58**	**291**	⇑P	**P**	**04 20 39.0**	**+6.1**
KK31	**Karatay Array**	**16.21**	**74**	⇑P	**P**	**04 20 41.7**	**+0.6**
	comp=N,3.6nm,0.5s,baz=270,slow=14,SNR=31						
OBN	**Obninsk**	**16.57**	**334**	*e*P	**P**	**04 20 43.9**	**-1.7**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
OBN	**Obninsk**	**16.57**	**334**	*e*P	**P**	**04 20 43.9**	**-1.7**
	comp=Z,5.0nm,1.2s						
ARU	**Arti**	**16.92**	**19**	*e*P	**P**	**04 20 46.5**	**-3.4**
ARU				*e*S	**S**	**04 23 49.9**	**-7.1**
AKASG	**Malin Array Be**	**16.96**	**313**	Pn	**P**	**04 20 49.5**	**-1.0**
	baz=118,slow=13,SNR=3.4						
VOIR		**18.06**	**293**	⇓P	**P**	**04 21 04.8**	**+0.5**
VOIR		**18.06**	**293**	⇓P	**P**	**04 21 04.8**	**+0.5**
BURAR	**Bucovina Array**	**18.32**	**300**	⇓P	**P**	**04 21 05.1**	**-2.5**
BURAR	**Bucovina Array**	**18.32**	**300**	⇓P	**P**	**04 21 05.1**	**-2.5**
BRVK	**Borovoye**	**19.00**	**42**	*e*P	**P**	**04 21 16.1**	**+0.4**
	comp=Z,4.5nm,0.6s						
BRVK	**Borovoye**	**19.00**	**42**	*e*P	**P**	**04 21 16.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
BRVK	**Borovoye**	**19.00**	**42**	*e*P	**P**	**04 21 16.1**	**+0.4**
	comp=Z,4.5nm,0.6s						
BVA0	**Borovoye Array**	**19.04**	**43**	⇑P	**P**	**04 21 16.7**	**+0.5**
	comp=Z,1.1nm,1.1s,baz=216,slow=14,SNR=5.2						
BVAR	**Borovoye Array**	**19.04**	**43**	P	**P**	**04 21 16.3**	**+0.2**
	comp=Z,0.7nm,0.3s,baz=226,slow=12,SNR=20						
AAK	**Ala-Archa**	**19.15**	**76**	⇑P	**P**	**04 21 19.6**	**+2.0**
	comp=Z,8.3nm,0.8s						
AAK	**Ala-Archa**	**19.15**	**76**	*e*P	**P**	**04 21 18.6**	**+1.0**
	comp=Z,7.4nm,0.8s						
AAK	**Ala-Archa**	**19.15**	**76**	*e*P	**P**	**04 21 18.6**	**+1.0**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	**Ala-Archa**	**19.15**	**76**	*e*P	**P**	**04 21 18.6**	**+1.0**

	comp=Z,7.0nm,0.8s						
VOSK	**Vostochnaya**	19.19	44	⇑P	P	04 21 17.5	-0.5
	comp=Z,4.2nm,0.7s						
CHKZ	**Chkalovo**	19.50	41	⇑P	P	04 21 22.0	+0.5
	comp=Z,4.2nm,1.1s						
CHKZ	**Chkalovo**	19.50	41	*e*P	P	04 21 21.6	0.0
	comp=Z,2.7nm,0.7s						
CHKZ	**Chkalovo**	19.50	41	*e*P	P	04 21 21.6	0.0
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHKZ	**Chkalovo**	19.50	41	*e*P	P	04 21 21.6	0.0
	comp=Z,3.0nm,0.7s						
DRGR		19.85	297	⇑P	P	04 21 22.1	-3.5
DRGR		19.85	297	⇑P	P	04 21 22.1	-3.4
KWP	**Kalwaria**	20.45	305	*e*P	P	04 21 29.5	-2.4
	comp=Z,20nm,1.0s						
KWP	**Kalwaria**	20.45	305	*e*P	P	04 21 29.5	-2.3
KWP				pmax	pmax		
	comp=Z,20nm,1.0s						
KWP	**Kalwaria**	20.45	305	*e*P	P	04 21 29.5	-2.3
	comp=Z,20nm,1.0s						
KLMR	**Klimovskoe**	20.97	347	*e*P	P	04 21 37.2	+0.1
KLMR				pmax	pmax		
	comp=Z,20nm,1.5s						
PSZ	**Piszkesteto**	21.91	299	*e*P	P	04 21 45.1	-1.7
	comp=Z,4.8nm,0.9s,mb3.9						
PSZ	**Piszkesteto**	21.91	299	*e*P	P	04 21 45.1	-1.6
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb3.9						
PSZ	**Piszkesteto**	21.91	299	*e*P	P	04 21 45.1	-1.6
	comp=Z,5.0nm,0.9s,mb3.9						
KURK	**Kurchatov**	22.85	54	*e*P	P	04 21 58.5	+2.6
	comp=Z,12nm,1.0s,mb4.3						
KURK	**Kurchatov**	22.85	54	*e*P	P	04 21 58.6	+2.7
KURK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
KURK	**Kurchatov**	22.85	54	*e*P	P	04 21 58.6	+2.7
	comp=Z,12nm,1.0s,mb4.3						
JOF	**Joensuu**	24.58	341	*e*p	P	04 22 11.3	-1.4
	comp=Z,3.4nm,0.5s,mb4.1						
MK31	**Makanchi Array**	24.70	65	⇓P	P	04 22 16.6	+2.6
	comp=Z,2.9nm,0.6s,mb4.0						
MKAR	**Makanchi Array**	24.70	65	P	P	04 22 16.6	+2.6
	comp=Z,3.5nm,0.6s,mb4.1,baz=268,slow=7.8,SNR=33						
FINES	**FINESS Array B**	24.98	334	P	P	04 22 14.4	-2.1
	comp=Z,5.0nm,0.5s,mb4.3,baz=136,slow=10,SNR=47						
KAF	**Kangasniemi**	25.39	335	*e*p	P	04 22 19.8	-0.6
	comp=Z,1.5nm,0.4s,mb3.9,baz=138,slow=10						
KAF	**Kangasniemi**	25.39	335	*e*P	P	04 22 19.8	-0.6
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
GERES	**GERESS Array B**	26.11	300	P	P	04 22 26.6	-0.7
	comp=Z,0.3nm,0.4s,mb3.1,baz=96,slow=8.9,SNR=3.9						
CLL	**Collm**	26.86	305	P	P	04 22 41.0	+6.9
HFS	**Hagfors**	29.16	324	P	P	04 22 51.9	-2.9
	comp=Z,5.8nm,0.7s,mb4.4,baz=121,slow=8.6,SNR=14						
NB2	**NORSAR Subarra**	30.65	324	P	P	04 23 04.6	-3.5
	comp=Z,3.2nm,0.7s,mb4.3,baz=120,slow=8.6						
NOA	**NORSAR Array B**	30.65	324	P	P	04 23 05.0	-3.1
	comp=Z,3.9nm,0.7s,mb4.4,baz=117,slow=8.0,SNR=7.8						
NAO01	**NORSAR Array S**	30.72	324	P	P	04 23 05.6	-3.1
	comp=Z,4.5nm,0.7s,mb4.4						
NAO01	**NORSAR Array S**	30.72	324	P	P	04 23 05.6	-3.1
	comp=Z,4.5nm,0.7s,mb4.4						
NAO	**NORSAR Subarra**	30.73	324	P	P	04 23 04.6	-4.2
NAO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
NAO	**NORSAR Subarra**	30.73	324	P	P	04 23 04.6	-4.2
	comp=Z,3.0nm,0.7s,mb4.2						
ARCES	**ARCESS Array B**	31.39	344	P	P	04 23 12.7	-1.9
	comp=Z,3.9nm,1.0s,mb4.2,baz=150,slow=7.3,SNR=3.3						
ARCES				LR	LR	04 37 20.1	
	comp=Z,88nm,18.2s,MS3.5,baz=106,slow=40						
SONM	**Songino Array**	40.90	60	P	P	04 24 37.3	+1.8
	comp=Z,0.6nm,0.7s,mb3.4,baz=280,slow=7.9,SNR=5.9						
ULN	**Ulaanbaatar**	41.32	60	*e*P	P	04 24 40.9	+1.9
	comp=Z,1.6nm,0.6s,mb3.8						
ULN	**Ulaanbaatar**	41.32	60	*e*P	P	04 24 40.9	+2.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
ULN	**Ulaanbaatar**	41.32	60	*e*P	P	04 24 40.9	+2.0
	comp=Z,2.0nm,0.6s,mb3.9						
NJ2	**Nanjing**	55.59	75	*e*P	P	04 26 30.6	+0.8
NJ2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
SSE	**Sheshan**	57.79	75	P	P	04 26 43.6	-1.9
SSE				XP	sP	04 27 06.5	+17
SSE				PCP	PcP	04 27 34.8	-3.2
SSE				PP	PP	04 28 52.3	-3.0
SSE				S	S	04 34 42.1	-0.7
SSE				XS		04 35 07.1	
SSE				SS	SS	04 38 31.8	-3.1
SSE				AMB	AMB		
	comp=Z,150nm,5.0s						
SSE				LR	LR		
	comp=N,470nm,19.5s,MS4.8						
SSE				LR	LR		
	comp=E,530nm,20.0s,MS4.8						
SSE				LR	LR		
	comp=Z,630nm,20.3s,MS4.7						
SSE	**Sheshan**	57.79	75	P	P	04 26 43.6	-1.9
	comp=Z,31nm,0.7s						
SSE				sP	sP	04 27 06.5	+17
SSE				PcP	PcP	04 27 34.7	-3.3
SSE				PP	PP	04 28 52.3	-3.0
SSE				S	S	04 34 42.1	-0.7
SSE				sS		04 35 07.1	
SSE				SS	SS	04 38 31.8	-3.1
SSE				LR	LR		
	comp=Z,640nm,20.3s,MS4.7						

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*IDC **18** 04:18:15.0±2.8, 16.58S×174.00W, h50^{km}±27^{km}, mb4.0/8, mb1 4.3/9, mb1mx4.1/16, mbtmp4.3/9, ML4.8/1, MS3.7/3, Ms1 3.8/3, ms1mx3.4/24, Error ellipse: s-maj=35.6km s-min=16.1km az=135.0*

*NEIC **18** 04:18:16.3±1.9, 16.50S×174.05W, h71^{km}±16^{km}, mb4.5/7, Error ellipse: s-maj=21.3km s-min=11.9km az=125.0*

ISC 18 04:18:12.7±2.0**, 16.6S**±0.1×**174.1W**±0.1**, h42**^{km}±17^{km}**, n56,** σ**0^{s}81**/25**, mb4.3**/14**, MS4.1**/1**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	3.49	40	P	P	04 19 06.2	+0.3
	246nm,0.3s,baz=225,slow=0.6,SNR=323						
AFI				S	S	04 19 40.7	-5.7
	3µm,0.3s,baz=59,slow=20,SNR=24						
AFI	**Afiamalu**	3.49	40	*e*Pn	P	04 19 05.8	0.0
AFI				*e*Sn	S	04 19 38.1	-8.3
RAO	**Raoul Island**	13.08	195	LR	LR	04 25 22.1	
	comp=Z,284nm,18.5s,baz=330,slow=33						
RAR	**Rarotonga**	14.32	111	P	P	04 21 34.4	-0.2
	4.0nm,0.3s,baz=258,slow=6.3,SNR=9.5						
RAR				S	S	04 23 59.5	-13
	1.1nm,0.3s,baz=186,slow=6.3,SNR=2.6						
RAR				LR	LR	04 26 11.5	
	comp=Z,179nm,18.5s,baz=257,slow=34						
RAR				T		04 36 07.8	
	11nm,0.3s,baz=95,slow=19,SNR=5.1						
URZ	**Urewera**	22.92	198	S	S	04 27 12.5	-4.2
	4.7nm,0.6s,baz=255,slow=21,SNR=3.0						
PPT	**Papeete**	23.46	96	*e*LR	LR	04 27 50.3	
	462nm,36.0s						
TBI	**Tubuai**	24.09	110	*e*LR	LR	04 28 12.0	
	194nm,32.2s						
RPZ	**Rata Peaks**	29.83	202	P	P	04 24 17.2	-0.8
	5.0nm,0.5s,mb4.5,baz=1.4,slow=5.0,SNR=5.8						
TOO	**Toolangi**	41.19	231	*e*P	P	04 25 55.3	+0.4
	9.4nm,0.6s,mb4.6						
STKA	**Stephens Creek**	42.86	241	*e*P	P	04 26 08.9	+0.2
	4.6nm,0.6s,mb4.4						
STKA	**Stephens Creek**	42.86	241	P	P	04 26 09.0	+0.2
	5.5nm,0.6s,mb4.5,baz=88,slow=9.1,SNR=17						
WRA	**Warramunga Arr**	48.92	258	P	P	04 26 57.3	+0.4
	1.1nm,0.5s,mb4.2,baz=96,slow=7.0,SNR=11						
SBA	**Scott Base**	62.01	185	*e*P	P	04 28 31.4	+0.7
	2.9nm,0.7s,mb4.5						
VNDA	**Vanda**	62.12	186	*e*P	P	04 28 30.2	-1.2
	2.8nm,0.9s,mb4.4						
NVAR	**Mina Array Bea**	75.66	42	P	P	04 29 55.1	-0.4
	0.9nm,0.8s,mb3.8,baz=222,slow=6.5,SNR=8.0						
NVAR				LR	LR	04 58 09.4	
	comp=Z,94nm,20.8s,MS4.1,baz=110,slow=32						
ELK	**Elko**	78.92	42	*e*P	P	04 30 13.2	-0.4
	4.4nm,1.2s,mb4.3						
MSU	**Marysvale**	79.75	45	*e*P	P	04 30 18.9	+0.8
TXAR	**Lajitas Array**	81.83	56	P	P	04 30 29.9	+0.6
	1.8nm,1.0s,mb4.0,baz=217,slow=6.3,SNR=5.0						
PV01	**Paradox Valley**	82.03	46	*e*P	P	04 30 30.5	+0.3
ANMO	**Albuquerque**	82.08	50	*e*P	P	04 30 32.4	+1.9
	3.0nm,1.0s,mb4.2						
PDAR	**Pinedale Array**	83.60	42	P	P	04 30 37.1	-0.9
	2.0nm,0.8s,mb4.3,baz=211,slow=2.9,SNR=16						
SMCO	**Snowmass**	83.62	46	*e*P	P	04 30 38.5	+0.3
COLA	**College**	83.66	11	*e*P	P	04 30 36.8	-1.0
	13nm,1.0s,mb5.0						
ILAR	**Eielson Array**	83.74	11	P	P	04 30 36.8	-1.5
	3.1nm,1.1s,mb4.4,baz=235,slow=6.0,SNR=18						
MAW	**Mawson**	86.45	199	P	P	04 30 52.3	+0.7
	1.0nm,0.6s,mb4.2,baz=153,slow=11,SNR=5.5						
MORC	**Moravsky Berou**	145.58	347	*e*P	PKPdf	04 37 48.3	+2.0
VRAC	**Vranov**	146.23	347	PKPbc	PKPbc	04 37 50.3	+1.7
	1.8nm,0.4s,baz=18,slow=6.4,SNR=2.7						
BRTR	**Keskin Array B**	146.63	319	PKPbc	PKPbc	04 37 51.4	+1.6
	2.3nm,0.9s,baz=117,slow=3.2,SNR=12						
MLR	**Muntele Rosu**	146.65	334	PKPbc	PKPbc	04 37 52.3	+2.6
	2.1nm,0.8s,baz=318,slow=14,SNR=3.1						
KHC	**Kasperske Hory**	146.95	351	*e*PKP	PKPdf	04 37 52.0	+3.3
KHC				*e*x	x	04 38 21.5	
KHC				x	x	04 38 39.0	
KHC	**Kasperske Hory**	146.95	351	*e*P	PKPdf	04 37 52.0	+3.3
KHC				*e*		04 38 21.5	
KHC				*e*		04 38 39.0	
GERES	**GERESS Array B**	147.21	350	PKPbc	PKPdf	04 37 52.6	+3.5
	1.1nm,0.8s,slow=2.7,SNR=7.8						
ROSF	**Rostrenen**	147.46	11	*e*PKIKP	PKPdf	04 37 48.2	-1.3
FLN	**La Foliniere**	147.50	8	*e*PKIKP	PKPdf	04 37 48.5	-1.0
SGMF	**Saint Gilles**	147.67	11	*e*PKIKP	PKPdf	04 37 49.0	-0.8
LDF	**La Druitiere**	147.71	7	*e*PKIKP	PKPdf	04 37 49.0	-0.9
GRR	**Gorron**	147.81	8	*e*PKIKP	PKPdf	04 37 49.3	-0.8
	1.4nm,0.3s						
QUIF	**Quistinic**	147.89	11	*e*PKIKP	PKPdf	04 37 49.2	-1.0
CDF	**Champ du Feu**	148.25	358	*e*PKIKP	PKPdf	04 37 49.7	-1.1
HAU	**Haudompre**	148.67	359	*e*PKIKP	PKPdf	04 37 50.7	-0.8
HINF	**Hinteralfeld**	148.85	359	*e*PKIKP	PKPdf	04 37 50.6	-1.1
LOR	**Lormes**	149.37	3	*e*PKIKP	PKPdf	04 37 51.8	-0.8
	5.6nm,0.9s						
SSF	**Saint Saulge**	149.56	3	*e*PKIKP	PKPdf	04 37 51.9	-1.0
	18nm,1.3s						
DAVOX	**Davos**	149.72	355	PKPbc	PKPdf	04 37 58.8	+5.6
	3.9nm,0.8s,baz=37,slow=8.7,SNR=3.6						
AVF	**Avril sur Loir**	149.82	3	*e*PKIKP	PKPdf	04 37 52.2	-1.1
SMF	**Signal de Mont**	149.99	3	*e*PKIKP	PKPdf	04 37 52.6	-1.0
BGF	**Bois d'Agland**	150.02	4	*e*PKIKP	PKPdf	04 37 52.6	-1.1
	8.0nm,0.8s						
CABF	**La Chapelle**	150.07	360	*e*PKIKP	PKPdf	04 37 52.3	-1.4
	59nm,1.5s						
TCF	**Toulx Ste Croi**	150.24	5	*e*PKIKP	PKPdf	04 37 53.0	-1.0
LPL	**La Plagne**	151.16	359	*e*PKIKP	PKPdf	04 37 54.4	-1.0
LPG	**La Plagne**	151.18	359	*e*PKIKP	PKPdf	04 37 54.5	-0.9
	7.0nm,1.0s						
ORIF	**Oris-en-Rattie**	151.76	0	*e*PKIKP	PKPdf	04 37 55.0	-1.3
	21nm,1.3s						
VIVF	**Saint-Julien-l**	151.81	2	*e*PKIKP	PKPdf	04 37 55.5	-0.9
	6.1nm,0.7s						
MBDF	**Montbardon**	151.95	359	*e*PKIKP	PKPdf	04 37 55.3	-1.3
	13nm,0.9s						
LASF	**Ste Croix**	152.55	3	*e*PKIKP	PKPdf	04 37 56.5	-1.0
SMRF	**Simiane la Rot**	152.71	1	*e*PKIKP	PKPdf	04 37 56.7	-1.0
	22nm,1.0s						

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*IDC **18** 04:18:13.4±2.0, 1.08N×96.88E, mb4.3/6, mb1 4.4/6, mb1mx3.9/18, mbtmp4.3/6, Error ellipse: s-maj=87.9km s-min=25.0km az=53.0*

*BJI **18** 04:18:15.5, 0.99N×97.50E, h30^{km}, mB5.0, mb4.7, Ms4.6, Msz4.5*

*NEIC **18** 04:18:17.8±0.7, 1.19N×97.14E, mb4.7/8, Error ellipse: s-maj=16.4km s-min=9.2km az=219.0*

ISC 18 04:18:16.0±0.9**, 1.2N**±0.1×**97.16E**±0.10**, h23**^{km}**, h23**^{km}±3.5^{km}**:pP-P, n34,** σ**0^{s}92**/32**, mb4.6**/23**, MS4.5**/3**, 4D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	5.36	40	*e*Pn	Pn	04 19 36.5	-0.1
KKM	**Kota Kinabalu**	19.61	75	*e*P	P	04 22 46.5	+0.6
KMI	**Kunming**	24.39	12	⇓P	P	04 23 36.0	+2.0
KMI				AP		04 23 42.1	
KMI				XP		04 23 44.8	
KMI				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.6						
KMI				LR	LR		
	comp=N,940nm,13.4s,MS4.5						
KMI				LR	LR		
	comp=E,480nm,11.3s,MS4.5						
KMI				LR	LR		
	comp=Z,920nm,14.0s,MS4.4						
KMI	**Kunming**	24.39	12	⇓P	P	04 23 36.0	+2.0
	comp=Z,33nm,1.1s,mb4.7						
KMI				pP		04 23 42.1	
KMI				sP		04 23 44.8	
KMI				PP	PP	04 24 02.8	-6.8
KMI				PPP	PPP	04 24 12.4	-7.6
KMI				S	S	04 27 33.3	-16
KMI				sS		04 27 43.5	
KMI				SS	SS	04 28 12.1	-32
KMI				SSS	SSS	04 28 26.8	-34
KMI				LR	LR		
	comp=Z,920nm,14.0s,MS4.4						
GYA	**Guiyang**	26.73	19	⇓*i*P	P	04 23 55.9	0.0
GYA				AP	pP	04 24 07.8	+5.1
GYA				XP	sP	04 24 13.4	+7.6
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.6						
GYA				AMB	AMB		
	comp=Z,190nm,5.9s						
GYA				LR	LR		
	comp=N,740nm,12.9s,MS4.5						
GYA				LR	LR		
	comp=E,330nm,10.5s,MS4.5						
GYA				LR	LR		
	comp=Z,820nm,13.8s,MS4.4						
JIRN	**Jiri**	28.34	339	*e*P	P	04 24 10.5	0.0
	comp=Z,45nm,0.9s,mb5.1						
PKI	**Pulchoki**	28.55	338	*e*P	P	04 24 13.3	+1.0
GUN	**Gumba**	28.68	339	*e*P	P	04 24 13.7	+0.2
	comp=Z,36nm,0.8s,mb5.1						
DMN	**Daman**	28.70	337	*e*P	P	04 24 15.9	+2.2
KKN	**Kakani**	28.80	338	*e*P	P	04 24 15.3	+0.7
	comp=Z,62nm,1.3s,mb5.2						
LSA	**Lhasa**	28.92	349	P	P	04 24 16.8	+1.1
LSA	**Lhasa**	28.92	349	P	P	04 24 15.8	+0.1
	comp=Z,7.5nm,0.8s,mb4.5						
GKN	**Gorkha**	29.23	337	*e*P	P	04 24 18.2	-0.3
	comp=Z,33nm,0.9s,mb5.1						
KOLN	**Koldanda**	29.45	335	*e*P	P	04 24 21.0	+0.5
	comp=Z,21nm,0.8s,mb4.9						
ENH	**Enshi**	31.20	21	*e*P	P	04 24 34.7	-1.3
	comp=Z,25nm,0.8s,mb5.1						
ENH				*e*pP	pP	04 24 41.2	-1.6
XAN	**Xi'an**	34.48	17	P	P	04 25 03.3	-1.2
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
XAN				LR	LR		
	comp=N,390nm,13.8s,MS4.6						
XAN				LR	LR		
	comp=E,540nm,12.5s,MS4.6						
XAN				LR	LR		
	comp=Z,1µm,14.1s,MS4.7						
GTA	**Gaotai**	38.12	3	*e*P	P	04 25 35.1	0.0
GTA				AP	pP	04 25 42.3	+0.2
GTA				XP	sP	04 25 45.3	+0.3
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WRA	**Warramunga Arr**	42.06	122	P	P	04 26 08.4	+0.4
	comp=Z,1.9nm,0.8s,mb3.8,baz=302,slow=9.0,SNR=9.0						
WB2	**Warramunga Arr**	42.07	122	*e*P	P	04 26 08.4	+0.3
WMQ	**Urumqi**	43.28	350	⇓*i*P	P	04 26 18.9	+1.3
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,250nm,7.0s						
SONM	**Songino Array**	47.15	8	P	P	04 26 48.4	-0.1
	comp=Z,5.9nm,0.8s,mb4.5,baz=188,slow=8.8,SNR=33						
MKAR	**Makanchi Array**	47.24	346	P	P	04 26 49.3	+0.1
	comp=Z,2.3nm,0.7s,mb4.2,baz=160,slow=8.5,SNR=14						
ULN	**Ulaanbaatar**	47.28	9	*e*P	P	04 26 49.4	-0.1
	comp=Z,7.5nm,1.0s,mb4.6						
CN2	**Changchun**	49.33	27	*e*P	P	04 27 04.8	-0.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
HIA	**Hailar**	51.66	19	*e*P	P	04 27 22.6	-0.6
	comp=Z,6.2nm,0.8s,mb4.6						
KURK	**Kurchatov**	51.79	345	*e*P	P	04 27 23.8	-0.3
	comp=Z,3.2nm,0.8s,mb4.3						
BVAR	**Borovoye Array**	56.25	341	P	P	04 27 55.5	-1.4
	comp=Z,2.1nm,0.6s,mb4.3,baz=143,slow=7.4,SNR=10.0						
CHKZ	**Chkalovo**	56.72	341	*e*P	P	04 27 59.2	-1.0
	comp=Z,7.0nm,0.8s,mb4.7						
CHKZ				*e*pP	pP	04 28 05.0	-2.4
AKTO	**Aktyubinsk**	59.22	332	P	P	04 28 15.3	-2.5
	comp=Z,1.6nm,0.7s,mb4.2,baz=157,slow=5.6,SNR=4.6						
ARCES	**ARCESS Array B**	82.53	340	P	P	04 30 37.5	-0.5
	comp=Z,5.4nm,1.1s,mb4.5,baz=90,slow=4.5,SNR=3.0						
ARCES	**ARCESS Array B**	82.53	340	P	P	04 30 37.5	-0.5
NVAR	**Mina Array Bea**	128.81	36	PKP	PKPdf	04 37 25.4	-1.4
	comp=Z,0.4nm,0.8s,baz=27,slow=2.0,SNR=3.8						
NVAR	**Mina Array Bea**	128.81	36	PKP	PKPdf	04 37 25.4	-1.4
TXAR	**Lajitas Array**	143.70	32	PKhKP		04 37 45.4	
	comp=Z,0.3nm,0.8s,baz=315,slow=1.3,SNR=3.0						
TXAR				PKP	PKPdf	04 37 50.1	-4.2
	comp=Z,0.6nm,1.0s,baz=128,slow=0.4,SNR=4.3						

ISC 18 04:21:44.2±0.6**, 46.99N**±0.03×**13.65E**±0.04**, h9**^{km}±12^{km}**, n16,** σ**0^{s}58**/21**, 7C-5D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBA	**Koelnbreinsper**	0.23	294	⇑*i*Pg	Pg	04 21 49.4	+0.3
	comp=Z,21nm,0.1s						
KBA				⇓*i*Sg	Sg	04 21 52.2	0.0
	comp=E,23nm,0.1s						
PLRO	**Paularo**	0.56	218	⇓*i*Pg	Pg	04 21 55.6	+0.1
PLRO				*i* Sg	Sg	04 22 02.7	-0.2
GORS	**Gorjuse**	0.71	160	*e*Pg	Pg	04 21 58.8	+0.3
GORS				*i* Sg	Sg	04 22 08.2	+0.2
	comp=Z,3.0nm,0.1s						
ROBS	**Robic**	0.75	187	*i* Pg	Pg	04 21 59.3	0.0
ROBS				*i* Sg	Sg	04 22 09.9	+0.6
CADS	**Cadrg**	0.76	175	*i* Pg	Pg	04 21 58.8	-0.7
CADS				*i* Sg	Sg	04 22 10.3	+0.5
	comp=Z,2.0nm,0.1s						
OBKA	**Obir**	0.78	127	⇓*i*Pg	Pg	04 22 00.2	+0.3
	comp=Z,0.7nm,0.1s						
OBKA	**Obir**	0.78	127	⇑*i*Sg	Sg	04 22 10.4	-0.1
	comp=Z,5.8nm,0.2s						
MOA	**Molln**	0.96	26	⇑*i*Pg	Pg	04 22 03.1	-0.4
	comp=Z,0.1nm,0.1s						
MOA	**Molln**	0.96	26	⇑*i*Sg	Sg	04 22 17.5	+1.1
	comp=Z,9.5nm,0.3s						
PERS	**Pernice**	1.07	109	*i* Pg	Pg	04 22 04.9	-0.8
GROS	**Grobnik**	1.38	112	*i* Sg	Sg	04 22 30.1	-0.2
WTTA	**Wattenberg**	1.40	282	⇓*i*Pn	Pn	04 22 10.4	+0.4
WTTA	**Wattenberg**	1.40	282	⇑*i*Sg	Sg	04 22 31.8	+0.9
	comp=Z,1.8nm,0.3s						
WATA	**Walderalm**	1.46	285	⇑*i*Pg	Pg	04 22 11.9	-1.5
MOTA	**Moosalm**	1.77	283	⇑*i*Pg	Pg	04 22 18.9	-0.8
MOTA	**Moosalm**	1.77	283	⇓*i*Sg	Sg	04 22 43.3	0.0
	comp=Z,1.1nm,0.2s						

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*MAN **18** 04:33:59.9, 14.75N×123.23E, h15^{km}, mb5.8, ML4.8, MS5.2*

*SKO **18** 04:33:59.8, 14.53N×123.20E*

*BJI **18** 04:34:00.7, 14.39N×123.61E, h53^{km}, mB4.9, mb4.6, Ms4.7, Msz4.5*

*MOS **18** 04:34:00.8±1.1, 14.68N×123.30E, h33^{km}, mb5.2/31, MS4.7/8, Error ellipse: s-maj=10.7km s-min=6.2km az=117.6*

*IDC **18** 04:34:01.8±5.3, 14.65N×123.27E, h30^{km}±38^{km}, mb4.6/20, mb1 4.7/21, mb1mx4.7/23, mbtmp4.8/21, ML4.7/2, MS4.3/13, Ms1 4.4/13, ms1mx4.2/23, Error ellipse: s-maj=17.9km s-min=10.8km az=69.0*

*HRVD **18** 04:34:03.7±0.3, 14.66N×123.21E, h12^{km}, MW5.1/60, Centroid moment Tensor Solution. LP body waves: s22,c29;Mantle waves: s60,c118; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.65±.18; M$_{\theta\theta}$1.54±.13; M$_{\phi\phi}$2.11±.17; M$_{r\theta}$-1.51±.52; M$_{\theta\phi}$2.88±.12; M$_{\phi r}$4.30±.58; Best double couple: M$_0$6.136×10^{16} NP1: ϕ_s68°,δ38°,λ-36°. NP2:ϕ_s187°,δ69°,λ-122°. Principal axes: T 5.433, Plg18°, Azm301°; N 1.407, Plg30°, Azm200°; P -6.84, Plg54°, Azm57°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **18** 04:34:03.7±0.7, 14.64N×123.29E, h46^{km}±6^{km}, mb4.9/35 Error ellipse: s-maj=5.5km s-min=3.8km az=70.0*

NEIC Felt [III PIVS] at Daet; [II PIVS] at Legaspi and Naga.

ISC 18 04:33:60.0±0.7**, 14.76N**±0.02×**123.32E**±0.03**, h25**^{km}±5^{km}**, h42**^{km}±2.6^{km}**:pP-P, n238,** σ**1^{s}10**/246**, mb4.9**/71**, MS4.5**/28**, 14C-5D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
POLP	**Polilio Island**	1.34	269	*e*P	Pn	04 34 21.7	-1.6
POLP				*e*S	Sn	04 34 39.9	-0.6
PVCP	**Virac**	1.41	145	*e*P	Pn	04 34 24.0	-0.3
PVCP				*e*S	Sn	04 34 43.1	+0.8
AUQP	**San Andres**	1.56	204	*e*P	Pn	04 34 28.1	+1.6
AUQP				*e*S	Sn	04 34 46.3	+0.2
BOAC	**Boac**	1.93	228	*e*P	Pn	04 34 32.8	+0.9
BOAC				*e*S	Sn	04 34 58.8	+3.2
BALP	**Baler**	1.95	300	*e*P	Pn	04 34 30.8	-1.3
BALP				*e*S	Sn	04 34 54.2	-1.8
PCPH	**Palayan**	2.29	291	⇑*e*P	Pn	04 34 35.5	-1.6
PCPH				*e*S	Sn	04 35 04.8	0.0
TGY	**Tagaytay City**	2.40	255	Pn	Pn	04 34 39.6	+1.0
	479nm,0.3s,baz=36,slow=1.4,SNR=38						
TGY				Sn	Sn	04 35 13.1	+5.6
	2µm,0.3s,baz=309,slow=17,SNR=8.7						
TGY	**Tagaytay City**	2.40	255	*e*P	Pn	04 34 40.0	+1.4
TGY				*e*S	Sn	04 35 09.2	+1.6
MMPH	**Masbate**	2.40	173	⇑*e*P	Pb	04 34 41.9	-0.5
MMPH				*i* S	Sb	04 35 13.8	+2.0
CNP	**Catarman**	2.59	150	*e*P	Pb	04 34 43.2	-2.4
CNP				*e*S	Sb	04 35 17.5	+0.4
CAUP	**Cauayan**	2.61	327	*e*P	Pn	04 34 41.0	-0.6
CAUP				*e*S	Sn	04 35 12.5	-0.3
PGP	**Puerto Galera**	2.62	242	*e*P	Pn	04 34 42.3	+0.6
OTRP	**Odiongan**	2.70	208	*e*P	Pn	04 34 42.7	-0.1
SJMP	**San Jose**	3.13	223	*e*P	Pn	04 34 50.4	+1.5
SJMP				*e*S	Sn	04 35 30.3	+4.4
LUBP	**Lubang**	3.15	252	*e*P	Pn	04 34 49.2	-0.1
CVP	**Callao Caves**	3.26	334	*e*P	Pn	04 34 51.0	+0.2
SCZP	**Santa Cruz**	3.44	288	*e*P	Pn	04 34 52.8	-0.7
BOLP	**Bolinao**	3.66	297	*e*P	Pn	04 34 56.2	-0.3
SGCP	**Mt. Cagua**	3.67	341	*e*P	Pn	04 34 56.1	-0.6
APYP	**Conner**	3.68	327	*e*P	Pn	04 34 56.4	-0.3
APYP				*e*S	Sn	04 35 38.7	-1.0
BESP	**Borongan**	3.75	146	*e*P	Pb	04 35 04.7	-0.7
BESP				*e*S	Sb	04 35 54.2	+3.4
ABRA	**Dolores**	3.81	319	*e*P	Pn	04 34 59.2	+0.6
ABRA				*e*S	Sn	04 35 44.0	+0.7
PLP	**Palo**	3.92	155	*e*P	Pn	04 35 00.8	+0.6
BUSP	**Coron**	4.09	228	*e*P	Pn	04 35 01.4	-1.2
GUIM	**Jordan**	4.17	190	*e*P	Pn	04 35 03.8	+0.1
LLP	**Lapu-Lapu**	4.46	172	*e*P	Pn	04 35 08.2	+0.4
CUYO	**Cuyo Island**	4.49	210	*e*P	Pn	04 35 07.2	-1.0
MSLP	**Maasin**	4.83	162	*e*P	Pn	04 35 14.0	+0.8
TBP	**Tagbilaran**	5.06	174	*e*P	Pn	04 35 21.6	+5.3
TBP				*e*S	Sn	04 36 15.2	+0.4
ENPP	**El Nido**	5.19	228	*e*P	Pn	04 35 11.2	-6.9
BUTP	**Butuan**	6.18	158	*e*P	Pn	04 35 33.0	+0.9
BUTP				*e*S	Sn	04 36 52.9	+10
PAGZ	**Pagadian**	6.87	180	*e*P	Pn	04 35 42.5	+0.7
IPIL	**Ipil**	6.97	186	*e*P	Pn	04 35 42.1	-1.1
BUKP	**Musuan**	7.05	166	*e*P	Pn	04 35 45.5	+1.2
DAV	**Davao City (W)**	7.96	164	*e*P	Pn	04 36 04.0	+7.0
DAV	**Davao City (W)**	7.96	164	P	Pn	04 35 56.9	-0.1
YHNB	**Yeheng**	10.03	350	*e*Pn	P	04 36 26.5	+0.8
QIZ	**Qiongzhong**	13.58	290	P	P	04 37 13.8	+0.1
QIZ				S	S	04 39 48.5	+3.8
QIZ				LR	LR		
	comp=N,1µm,19.0s						
QIZ				LR	LR		
	comp=E,2µm,19.0s						
QIZ				LR	LR		
	comp=Z,3µm,18.2s						
SSE	**Sheshan**	16.38	353	P	P	04 37 52.3	+2.3

	comp=Z,25nm,0.7s						
WHN	**Wuhan**	**17.75**	**334**	⇓P	**P**	**04 38 08.5**	**+1.4**
WHN				S	**S**	**04 41 31.0**	**+9.3**
WHN				LR	LR		
	comp=Z,3µm,19.4s						
KSM	**Kuching**	**18.43**	**225**	*e*P	**P**	**04 38 15.5**	**-0.2**
GYA	**Guiyang**	**19.43**	**309**	⇑*i*P	**P**	**04 38 32.6**	**+5.0**
GYA				AP		04 38 42.8	
GYA				XP		04 38 48.9	
GYA				S	**S**	**04 42 05.5**	**+5.6**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s						
GYA				AMB	AMB		
	comp=Z,190nm,8.6s						
GYA				LR	LR		
	comp=N,2µm,16.5s						
GYA				LR	LR		
	comp=E,2µm,16.8s						
GYA				LR	LR		
	comp=Z,3µm,17.3s						
JNU	**Nakatsue**	**19.53**	**19**	P	**P**	**04 38 28.9**	**+0.3**
	comp=Z,1.2nm,0.3s,baz=180,slow=14,SNR=15						
JNU				LR	LR	04 44 52.9	
	comp=Z,373nm,19.2s,baz=39,slow=33						
ENH	**Enshi**	**20.01**	**323**	*e*P	**P**	**04 38 32.9**	**-1.0**
	comp=Z,30nm,0.9s						
GUMO	**Guam**	**20.92**	**90**	P	**P**	**04 38 43.1**	**-0.3**
	comp=Z,154nm,0.9s,baz=212,slow=7.2,SNR=6.3						
GUMO	**Guam**	**20.92**	**90**	*e*P	**P**	**04 38 43.5**	**+0.1**
	comp=Z,194nm,1.0s						
GUMO	**Guam**	**20.92**	**90**	*e*P	**P**	**04 38 43.5**	**+0.1**
GUMO				pmax	pmax		
	comp=Z,194nm,1.0s						
CBIJ	**Chichi jima**	**21.44**	**52**	LR	LR	04 46 17.4	
	comp=Z,306nm,18.5s,MS3.7,baz=101,slow=34						
KMI	**Kunming**	**21.90**	**301**	P	**P**	**04 38 56.3**	**+3.1**
KMI				AP		04 39 08.3	
KMI				XP		04 39 14.3	
KMI				PP	PP	04 39 22.6	+3.8
KMI				S	**S**	**04 42 48.3**	**-0.3**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
KMI				LR	LR		
	comp=N,1µm,16.2s,MS4.5						
KMI				LR	LR		
	comp=E,960nm,20.6s,MS4.5						
KMI				LR	LR		
	comp=Z,2µm,20.6s,MS4.5						
KMI	**Kunming**	**21.90**	**301**	P	**P**	**04 38 56.2**	**+3.0**
	comp=Z,12nm,1.0s,mb4.3						
KMI				pP		04 39 08.2	
KMI				sP		04 39 14.2	
KMI				PP	PP	04 39 22.6	+3.8
KMI				PPP	PPP	04 39 32.4	+3.8
KMI				S	**S**	**04 42 48.2**	**-0.4**
KMI				PcP	PcP	04 42 57.0	+4.3
KMI				sS		04 43 08.1	
KMI				SS	SS	04 43 26.5	-0.5
KMI				SSS	SSS	04 43 41.4	-0.2
KMI				LR	LR		
	comp=Z,2µm,20.6s,MS4.5						
KMI	**Kunming**	**21.90**	**301**	P	**P**	**04 38 56.2**	**+3.0**
KMI				*PP		04 39 08.2	
KMI						04 39 22.6	
KMI				PPP	PPP	04 39 32.4	+3.8
KMI				S	**S**	**04 42 48.2**	**-0.4**
KMI						04 42 57.0	
KMI				SS	SS	04 43 26.5	-0.5
KMI				SSS	SSS	04 43 41.4	-0.2
KMI				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.3						
KMI				MLR	MLR		
	comp=Z,2µm,20.6s,MS4.5						
TIA	**Tai'an**	**22.07**	**347**	*e*P	**P**	**04 38 55.8**	**+1.0**
XAN	**Xi'an**	**23.20**	**328**	P	**P**	**04 39 06.9**	**+0.9**
XAN				S	**S**	**04 43 09.8**	**-2.3**
XAN				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.5						
XAN				LR	LR		
	comp=N,640nm,21.3s,MS4.1						
XAN				LR	LR		
	comp=E,340nm,19.3s,MS4.1						
XAN				LR	LR		
	comp=Z,610nm,25.5s						
CD2	**Chengdu**	**24.09**	**315**	⇓*i*P	**P**	**04 39 16.3**	**+1.6**
CD2				AP		04 39 27.6	
CD2				XP		04 39 34.9	
CD2				PP	PP	04 39 52.6	+3.2
CD2				S	**S**	**04 43 30.4**	**+2.7**
CD2				SS	SS	04 44 26.6	+6.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.5						
CD2				AMB	AMB		
	comp=Z,240nm,4.5s						
CD2				LR	LR		
	comp=E,2µm,15.6s						
CD2				LR	LR		
	comp=Z,2µm,16.5s,MS4.6						
DL2	**Dalian**	**24.10**	**357**	P	**P**	**04 39 16.8**	**+2.1**
DL2				S	**S**	**04 43 37.3**	**+10**
DL2				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.5						
DL2				AMB	AMB		
	comp=Z,250nm,4.3s						
DL2				LR	LR		
	comp=N,520nm,15.5s,MS4.2						
DL2				LR	LR		
	comp=E,450nm,15.6s,MS4.2						
DL2				LR	LR		
	comp=Z,530nm,15.3s,MS4.1						
KULM	**Kulim**	**24.20**	**249**	*e*P	**P**	**04 39 14.9**	**-1.1**
MAT	**Matsushiro**	**25.44**	**29**	P	**P**	**04 39 27.3**	**-0.3**
MAT	**Matsushiro**	**25.44**	**29**	P	**P**	**04 39 26.0**	**-1.6**
MAT				S	**S**	**04 44 10.0**	**+20**
MJAR	**Matsushiro Arr**	**25.44**	**29**	P	**P**	**04 39 27.2**	**-0.3**
	comp=Z,1.8nm,0.5s,mb3.9,baz=193,slow=8.1,SNR=6.2						
MJAR				PcP	PcP	04 42 58.5	-1.5
	comp=Z,5.2nm,0.7s,baz=167,slow=2.9,SNR=8.9						
SNY	**Shenyang**	**26.97**	**0**	⇑P	**P**	**04 39 41.8**	**+0.1**
SNY				S	**S**	**04 44 20.9**	**+5.3**
SNY				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.2						
SNY				AMB	AMB		
	comp=Z,120nm,5.6s						
SNY				LR	LR		
	comp=E,1µm,20.4s						
SNY				LR	LR		
	comp=Z,1µm,17.8s,MS4.4						
LZH	**Lanzhou**	**27.47**	**324**	*e*P	**P**	**04 39 47.5**	**+1.2**
LZH				AP	pP	04 39 59.6	+5.9
LZH				PP	PP	04 40 36.6	+2.3
LZH				*e*S	**S**	**04 44 24.1**	**+0.4**
LZH				XS		04 44 44.5	
LZH				SS	SS	04 45 45.3	+3.4
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.7						
LZH				AMB	AMB		
	comp=Z,200nm,4.6s						
LZH				LR	LR		
	comp=E,1µm,12.5s						
LZH				LR	LR		
	comp=Z,2µm,15.6s,MS4.7						
LZH	**Lanzhou**	**27.47**	**324**	*e*P	**P**	**04 39 47.5**	**+1.2**
	comp=Z,33nm,1.3s,mb4.7						
LZH				pP	pP	04 39 59.6	+5.9
LZH				sP	sP	04 40 15.0	+18
LZH				PP	PP	04 40 36.6	+2.3
LZH				*e*S	**S**	**04 44 24.1**	**+0.4**
LZH				sS		04 44 44.5	
LZH				SS	SS	04 45 45.3	+3.4
LZH				LR	LR		
	comp=Z,2µm,15.6s,MS4.8						
HHC	**Hu-ho-hao-te**	**27.94**	**341**	*e*P	**P**	**04 39 51.1**	**+0.6**
HHC				AP	pP	04 40 02.9	+5.0
HHC				XP	sP	04 40 08.4	+7.2
HHC				PP	PP	04 40 43.8	+3.5
HHC				PCP	PcP	04 43 03.0	-2.8
HHC				S	**S**	**04 44 33.8**	**+2.6**
HHC				XS		04 44 53.5	
HHC				SS	SS	04 46 00.3	+7.2
HHC				SCP		04 46 39.1	
HHC				PCS		04 46 44.0	
HHC				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.2						
HHC				AMB	AMB		
	comp=Z,180nm,7.4s						
HHC				LR	LR		
	comp=N,920nm,22.5s,MS4.5						
HHC				LR	LR		
	comp=E,820nm,18.1s,MS4.5						
HHC				LR	LR		
	comp=Z,1µm,26.2s						
KAKA	**Kakadu**	**28.75**	**161**	*e*P	**P**	**04 40 13.5**	**+16**
	comp=Z,9.5nm,0.6s,mb4.7						
KAKA				*e*		04 43 26.3	
CN2	**Changchun**	**29.00**	**3**	*e*P	**P**	**04 39 58.3**	**-1.7**
CN2				*e*S	**S**	**04 44 46.3**	**-1.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.4						
CN2				LR	LR		
	comp=N,800nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=E,770nm,15.0s,MS4.6						
CN2				LR	LR		
	comp=Z,910nm,17.0s,MS4.5						
MDJ	**Mudanjiang**	**30.23**	**9**	P	**P**	**04 40 11.3**	**+0.3**
MDJ				AP	pP	04 40 24.8	+6.4
MDJ				XP	sP	04 40 31.9	+10
MDJ				S	**S**	**04 45 14.5**	**+6.8**
MDJ				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,80nm,3.2s						
MDJ				LR	LR		
	comp=N,190nm,23.6s,MS4.1						
MDJ				LR	LR		
	comp=E,440nm,18.7s,MS4.1						
MDJ				LR	LR		
	comp=Z,430nm,17.7s,MS4.1						
MDJ	**Mudanjiang**	**30.23**	**9**	*e*P	**P**	**04 40 11.2**	**+0.2**
	comp=Z,16nm,0.9s,mb4.8						
GTA	**Gaotai**	**32.08**	**324**	*e*P	**P**	**04 40 27.8**	**+0.6**
GTA				AP	pP	04 40 39.4	+4.7
GTA				XP	sP	04 40 45.3	+7.3
GTA				PP	PP	04 41 35.3	+1.2
GTA				PCP	PcP	04 43 18.8	+2.3
GTA				S	**S**	**04 45 35.1**	**-1.6**
GTA				AMB	AMB		
	comp=Z,140nm,4.6s						
GTA				LR	LR		
	comp=N,620nm,16.0s,MS4.6						
GTA				LR	LR		
	comp=E,860nm,16.0s,MS4.6						
GTA				LR	LR		
	comp=Z,940nm,14.8s,MS4.6						
FITZ	**Fitzroy Crossi**	**32.73**	**176**	*e*P	**P**	**04 40 30.4**	**-2.7**
	comp=Z,11nm,0.8s,mb4.8						
FITZ	**Fitzroy Crossi**	**32.73**	**176**	P	**P**	**04 40 29.8**	**-3.3**
	comp=Z,13nm,0.8s,mb4.9,baz=13,slow=6.0,SNR=13						
LSA	**Lhasa**	**33.15**	**302**	P	**P**	**04 40 37.8**	**+1.1**
LSA	**Lhasa**	**33.15**	**302**	*e*P	**P**	**04 40 36.7**	**0.0**
	comp=Z,23nm,0.9s,mb5.1						
LSA	**Lhasa**	**33.15**	**302**	*e*P	**P**	**04 40 36.7**	**0.0**
LSA				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
KLR	**Kul'dur**	**35.06**	**10**	*e*P	**P**	**04 40 49.9**	**-3.1**
KLR				*e*		04 43 29.0	
KLR				*e*S	**S**	**04 46 20.0**	**-3.0**
KLR				*e*SS	SS	04 48 39.5	+0.6
KLR				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.0						
ULN	**Ulaanbaatar**	**35.66**	**341**	*e*P	**P**	**04 40 58.4**	**+0.3**
	comp=Z,56nm,1.0s,mb5.5						
ULN	**Ulaanbaatar**	**35.66**	**341**	*e*P	**P**	**04 40 58.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,57nm,1.0s,mb5.5						
SONM	**Songino Array**	**35.84**	**340**	P	**P**	**04 40 59.7**	**+0.1**
	comp=Z,23nm,0.8s,mb5.2,baz=160,slow=9.5,SNR=141						
SONM				LR	LR	04 57 10.0	
	comp=Z,872nm,19.4s,MS4.5,baz=156,slow=39						
WRAB	**Tennant Creek**	**36.14**	**162**	*e*P	**P**	**04 40 59.4**	**-3.0**
	comp=Z,19nm,0.9s,mb5.0						
WRAB	**Tennant Creek**	**36.14**	**162**	*e*P	**P**	**04 40 59.4**	**-3.0**
WRAB				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
WRA	**Warramunga Arr**	**36.15**	**162**	P	**P**	**04 40 59.4**	**-3.1**
	comp=Z,10.0nm,0.8s,mb4.8,baz=342,slow=9.5,SNR=51						
WRA				PcP	PcP	04 43 27.2	-0.9
	comp=Z,4.9nm,0.8s,baz=342,slow=3.3,SNR=7.7						
WB2	**Warramunga Arr**	**36.15**	**162**	*e*P	**P**	**04 40 59.5**	**-3.0**
JIRN	**Jiri**	**36.77**	**297**	*e*P	**P**	**04 41 07.5**	**-0.1**
	comp=Z,50nm,1.0s,mb5.3						
GUN	**Gumba**	**37.10**	**297**	*e*P	**P**	**04 41 10.3**	**-0.1**
	comp=Z,79nm,1.0s,mb5.5						
PKI	**Pulchoki**	**37.43**	**296**	*e*P	**P**	**04 41 12.9**	**-0.3**
	comp=Z,38nm,0.8s,mb5.3						
KKN	**Kakani**	**37.59**	**296**	*e*P	**P**	**04 41 14.0**	**-0.5**
	comp=Z,48nm,1.1s,mb5.1						
DMN	**Daman**	**37.70**	**296**	*e*P	**P**	**04 41 15.1**	**-0.4**
	comp=Z,72nm,1.2s,mb5.3						
CIT	**Chita**	**37.98**	**350**	*e*P	**P**	**04 41 18.3**	**+0.7**
CIT				*e*		04 43 32.2	
CIT				pmax	pmax		
	comp=Z,67nm,2.2s,mb5.0						
GKN	**Gorkha**	**38.19**	**297**	*e*P	**P**	**04 41 18.6**	**-1.0**
	comp=Z,59nm,1.0s,mb5.3						
KOLN	**Koldanda**	**39.04**	**296**	*e*P	**P**	**04 41 26.5**	**-0.2**
	comp=Z,56nm,0.9s,mb5.3						
ZAK	**Zakamensk**	**39.08**	**340**	⇑*e*P	**P**	**04 41 27.1**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
MOY	**Mondy**	**40.94**	**339**	*e*P	**P**	**04 41 41.7**	**-0.4**
CTA	**Charters Tower**	**41.32**	**146**	*e*P	**P**	**04 41 40.1**	**-5.4**
	comp=Z,11nm,1.0s,mb4.4						
CTA	**Charters Tower**	**41.32**	**146**	P	**P**	**04 41 44.9**	**-0.7**
	comp=Z,12nm,0.9s,mb4.5,baz=314,slow=9.3,SNR=7.1						
CTA	**Charters Tower**	**41.32**	**146**	*e*P	**P**	**04 41 40.1**	**-5.4**
CTA				pmax	pmax		
	comp=Z,11nm,1.0s						
CTAO	**Charters Tower**	**41.32**	**146**	*e*P	**P**	**04 41 45.1**	**-0.4**
	comp=Z,22nm,1.1s,mb4.7						
CTAO	**Charters Tower**	**41.32**	**146**	*e*P	**P**	**04 41 45.1**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.7						
WMQ	**Urumqi**	**41.94**	**321**	*e*P	**P**	**04 41 52.0**	**+1.6**
WMQ				AP	pP	04 42 05.0	+7.0
WMQ				XP	sP	04 42 10.0	+8.9
WMQ				PP	PP	04 43 33.0	+2.4
WMQ				S	**S**	**04 48 08.0**	**+0.9**
WMQ				SCS	ScS	04 51 50.0	+0.7
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,190nm,4.8s						
WMQ				LR	LR		
	comp=N,810nm,16.0s,MS5.0						
WMQ				LR	LR		
	comp=E,1µm,16.0s,MS5.0						
WMQ				LR	LR		
	comp=Z,1µm,17.0s,MS4.8						
HYB	**Hyderabad**	**43.03**	**280**	*i* P	**P**	**04 41 59.0**	**-0.6**
HYB	**Hyderabad**	**43.03**	**280**	*e*P	**P**	**04 41 59.0**	**-0.6**
HNR	**Honiara**	**43.54**	**121**	LR	LR	04 57 09.9	
	comp=Z,622nm,18.4s,MS4.5,baz=302,slow=32						
FORT	**Forrest**	**45.50**	**174**	*e*P	**P**	**04 42 17.8**	**-1.6**
	comp=Z,28nm,0.8s,mb5.2						
KLBR	**Kellerberrin**	**46.39**	**187**	⇑*i*P	**P**	**04 42 23.7**	**-2.7**
	comp=Z,22nm,0.7s,mb5.2						
MKAR	**Makanchi Array**	**46.74**	**322**	P	**P**	**04 42 29.1**	**+0.2**
	comp=Z,5.1nm,0.7s,mb4.5,baz=119,slow=9.4,SNR=37						
MKAR				LR	LR	05 03 14.3	
	comp=Z,399nm,21.2s,MS4.3,baz=100,slow=38						
MUN	**Mundaring**	**46.97**	**188**	*e*P	**P**	**04 42 28.1**	**-2.9**
YAK	**Yakutsk**	**47.43**	**4**	*e*P	**P**	**04 42 33.1**	**-1.1**
	comp=Z,44nm,0.8s,mb5.4						
YAK	**Yakutsk**	**47.43**	**4**	*e*P	**P**	**04 42 33.1**	**-1.1**
YAK				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.4						
NWAO	**Narrogin (SRO)**	**47.77**	**187**	P	**P**	**04 42 34.9**	**-2.4**
	comp=Z,26nm,0.6s,mb5.4,baz=12,slow=8.1,SNR=14						
NWAO	**Narrogin (SRO)**	**47.77**	**187**	*e*P	**P**	**04 42 34.5**	**-2.8**
	comp=Z,18nm,0.6s,mb5.3						
NWAO	**Narrogin (SRO)**	**47.77**	**187**	*e*P	**P**	**04 42 34.5**	**-2.8**
NWAO				pmax	pmax		
	comp=Z,18nm,0.6s						
STKA	**Stephens Creek**	**49.57**	**159**	*e*P	**P**	**04 42 49.2**	**-2.0**
	comp=Z,7.1nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**49.57**	**159**	P	**P**	**04 42 49.1**	**-2.1**
	comp=Z,8.9nm,0.7s,mb4.9,baz=334,slow=4.7,SNR=18						
STKA				LR	LR	05 04 51.3	
	comp=Z,232nm,21.8s,MS4.1,baz=117,slow=37						
AAK	**Ala-Archa**	**50.15**	**314**	*e*P	**P**	**04 42 55.0**	**-0.4**
	comp=Z,7.0nm,1.3s,mb4.5						
AAK	**Ala-Archa**	**50.15**	**314**	*e*P	**P**	**04 42 55.1**	**-0.4**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.5						
NVS	**Novosibirsk**	**50.61**	**331**	*i* P	**P**	**04 42 57.8**	**-1.0**
KURK	**Kurchatov**	**50.76**	**325**	*e*P	**P**	**04 42 59.4**	**-0.6**
	comp=Z,43nm,1.0s,mb5.3						
KURK				*e*pP	pP	04 43 13.4	+5.7
KURK	**Kurchatov**	**50.76**	**325**	*e*P	**P**	**04 42 59.4**	**-0.6**
KURK				*e**PP	pP	04 43 13.4	+5.6
KURK				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.3						
ARMA	**Armidale**	**52.54**	**149**	*e*P	**P**	**04 43 13.4**	**-0.3**
DZM	**Mont Dzumac**	**55.91**	**130**	P	**P**	**04 43 36.9**	**-1.7**
	comp=Z,6.9nm,0.8s,mb4.7,baz=270,slow=13,SNR=4.4						
TOO	**Toolangi**	**56.07**	**159**	*e*P	**P**	**04 43 38.4**	**-1.1**
	comp=Z,7.1nm,0.9s,mb4.7						
TOO	**Toolangi**	**56.07**	**159**	*e*P	**P**	**04 43 38.4**	**-1.1**
TOO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
BRVK	**Borovoye**	**56.43**	**325**	*e*P	**P**	**04 43 40.7**	**-1.2**
	comp=Z,7.0nm,1.0s,mb4.7						
BRVK	**Borovoye**	**56.43**	**325**	*e*P	**P**	**04 43 40.7**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
CHKZ	**Chkalovo**	**56.48**	**325**	*e*P	**P**	**04 43 41.3**	**-0.9**
	comp=Z,6.7nm,1.1s,mb4.6						
CHKZ	**Chkalovo**	**56.48**	**325**	*e*P	**P**	**04 43 41.3**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.6						
TIXI	**Tiksi**	**56.97**	**2**	*e*P	**P**	**04 43 41.5**	**-4.0**
TIXI				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
TIXI				MLR	MLR		
	comp=Z,450nm,17.0s,MS4.6						
BILL	**Bilibino**	**59.94**	**17**	*e*P	**P**	**04 44 05.3**	**-0.9**
BILL	**Bilibino**	**59.94**	**17**	⇑*i*P	**P**	**04 44 05.9**	**-0.3**
ARU	**Arti**	**63.92**	**326**	⇓*i*P	**P**	**04 44 31.5**	**-1.5**
ARU				pmax	pmax		
	comp=Z,16nm,1.7s,mb4.8						
ARU				MLR	MLR		
	comp=N,200nm,18.0s,MS4.6						
ARU				MLR	MLR		
	comp=E,300nm,18.0s,MS4.6						
ARU				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.6						
ORR	**Orenburg**	**65.27**	**320**	*i* P	**P**	**04 44 41.9**	**+0.1**
ZEI	**Tsey**	**72.42**	**311**	*i* P	**P**	**04 45 23.0**	**-3.2**
ZEI				*i* *PP	pP	04 45 29.5	-4.6
ZEI				*i*		04 45 39.8	
ZEI				*i*		04 48 05.4	
ZEI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
RPZ	**Rata Peaks**	**72.69**	**146**	P	**P**	**04 45 26.4**	**-1.4**
	comp=Z,21nm,0.7s,mb5.2,baz=172,slow=2.8,SNR=9.9						
KIV	**Kislovodsk**	**73.22**	**312**	*e*P	**P**	**04 45 31.1**	**+0.2**
	comp=Z,27nm,1.0s,mb5.1						
KIV	**Kislovodsk**	**73.22**	**312**	⇓*i*P	**P**	**04 45 30.9**	**0.0**
KIV				*e*S	S	04 55 04.0	+7.9
KIV				pmax	pmax		
	comp=Z,41nm,1.6s,mb5.1						
KIV				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.7						
IMA2	**Indian Mountai**	**73.78**	**25**	*e*P	**P**	**04 45 34.6**	**+0.9**
KLMR	**Klimovskoe**	**74.23**	**330*c***	*i*P	**P**	**04 45 36.2**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
KLMR				MLR	MLR		
	comp=Z,720nm,16.0s,MS5.1						
KAMS	**Al Khamasin**	**74.66**	**287**	P	**P**	**04 45 38.6**	**-1.1**
AFFS	**'Afif**	**75.47**	**291**	P	**P**	**04 45 44.2**	**-0.1**
TATS	**Tathlith**	**75.82**	**287**	P	**P**	**04 45 46.7**	**+0.3**
OBN	**Obninsk**	**76.19**	**324**	⇓*i*P	**P**	**04 45 47.3**	**-0.4**
OBN				*e*		04 45 57.5	
OBN				pmax	pmax		
	comp=Z,38nm,1.6s,mb5.1						
OBN				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.8						
COLA	**College**	**76.27**	**26**	*e*P	**P**	**04 45 48.0**	**0.0**
	comp=Z,6.7nm,0.8s,mb4.6						
COLA	**College**	**76.27**	**26**	*e*P	**P**	**04 45 48.0**	**0.0**
COLA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
SML	**Sawmill**	**76.35**	**29**	*e*P	**P**	**04 45 48.7**	**+0.2**
APA	**Apatity**	**76.45**	**337**	⇑*i*P	**P**	**04 45 49.5**	**+0.6**
APA				pmax	pmax		
	comp=Z,51nm,1.5s,mb5.2						
ILAR	**Eielson Array**	**76.69**	**26**	P	**P**	**04 45 49.2**	**-1.1**
	comp=Z,3.8nm,0.7s,mb4.4,baz=249,slow=3.8,SNR=50						
ILAR				LR	LR	05 20 54.8	
	comp=Z,74nm,18.1s,MS4.0,baz=176,slow=37						
ANN	**Anapa**	**76.87**	**313**	*e*P	**P**	**04 45 50.6**	**-1.2**
ANN				pmax	pmax		
	comp=Z,140nm,1.6s,mb5.6						
THY	**Trims Highway**	**77.35**	**27**	*e*P	**P**	**04 45 54.1**	**+0.1**
BLJS	**Baljurashi**	**77.49**	**287**	P	**P**	**04 45 56.5**	**+0.9**
DIV	**Divide**	**77.65**	**30**	*e*P	**P**	**04 45 56.2**	**+0.5**
	comp=Z,84nm,0.7s,mb5.8						
JOF	**Joensuu**	**77.91**	**332**	*e*p	**P**	**04 45 56.3**	**-0.8**
	comp=Z,16nm,0.6s,mb5.1						
KEV	**Kevo**	**78.45**	**339**	*e*p	**P**	**04 46 00.3**	**+0.4**
	comp=Z,7.5nm,0.7s,mb4.7						
KEV	**Kevo**	**78.45**	**339**	*e*P	**P**	**04 46 00.3**	**+0.4**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
ARCES	**ARCESS Array B**	**79.01**	**339**	P	**P**	**04 46 03.0**	**0.0**
	comp=Z,12nm,0.8s,mb4.9,baz=74,slow=7.3,SNR=21						
ARCES				LR	LR	05 27 35.6	
	comp=Z,206nm,18.1s,MS4.5,baz=326,slow=41						
ARCES	**ARCESS Array B**	**79.01**	**339**	P	**P**	**04 46 03.0**	**0.0**
ARCES				LR	LR	05 27 35.6	
ARE0	**ARCESS Array S**	**79.01**	**339**	*e*P	**P**	**04 46 03.4**	**+0.4**
DAWY	**Dawson**	**80.01**	**26**	*e*P	**P**	**04 46 09.5**	**+1.0**
UMJS	**Umm Lajj**	**80.31**	**294**	P	**P**	**04 46 12.9**	**+2.0**
KAF	**Kangasniemi**	**80.34**	**332**	*e*p	**P**	**04 46 09.4**	**-0.9**
	comp=Z,11nm,0.8s,mb4.8,baz=73,slow=4.3						
KAF	**Kangasniemi**	**80.34**	**332**	*e*P	**P**	**04 46 09.4**	**-0.9**
KAF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
BRTR	**Keskin Array B**	**80.49**	**309**	P	**P**	**04 46 11.2**	**-0.4**
	comp=Z,1.0nm,0.8s,mb3.8,baz=94,slow=5.3,SNR=5.8						
FINES	**FINESS Array B**	**80.60**	**331**	P	**P**	**04 46 11.3**	**-0.3**
	comp=Z,6.3nm,0.7s,mb4.7,baz=59,slow=5.8,SNR=33						
FINES				LR	LR	05 25 09.6	
	comp=Z,282nm,18.7s,MS4.6,baz=77,slow=38						
FINES	**FINESS Array B**	**80.60**	**331**	P	**P**	**04 46 11.3**	**-0.4**
FINES				LR	LR	05 25 09.7	
INK	**Inuvik**	**81.19**	**21**	*e*P	**P**	**04 46 15.2**	**+0.5**
	comp=Z,21nm,1.0s,mb5.0						
INK	**Inuvik**	**81.19**	**21**	*e*P	**P**	**04 46 15.2**	**+0.5**
INK				pmax	pmax		
	comp=Z,21nm,1.0s						
AKASG	**Malin Array Be**	**81.29**	**320**	P	**P**	**04 46 14.6**	**-0.9**
	comp=Z,4.7nm,0.7s,mb4.5,baz=68,slow=5.6,SNR=15						
JMOS	**Jabal al Moall**	**81.42**	**298**	P	**P**	**04 46 18.4**	**+1.7**
AYUS	**'Aynunah**	**81.49**	**297**	P	**P**	**04 46 18.3**	**+1.2**
BDAS	**Al Bad'**	**81.59**	**297**	P	**P**	**04 46 19.7**	**+2.2**
HAQS	**Haql**	**81.60**	**298**	P	**P**	**04 46 19.3**	**+1.7**
TAYS	**Tayyib Ism**	**81.76**	**297**	P	**P**	**04 46 20.2**	**+1.8**
SUW	**Suwalki**	**84.04**	**324**	*e*P	**P**	**04 46 29.7**	**+0.1**
SUW	**Suwalki**	**84.04**	**324**	*e*P	**P**	**04 46 29.7**	**+0.1**
VRI	**Vrincioaia**	**84.06**	**316**	⇑P	**P**	**04 46 30.4**	**+0.5**
VRI	**Vrincioaia**	**84.06**	**316**	⇑P	**P**	**04 46 30.4**	**+0.4**
BURAR	**Bucovina Array**	**84.60**	**318**	⇑P	**P**	**04 46 33.9**	**+1.3**
BURAR	**Bucovina Array**	**84.60**	**318**	⇑P	**P**	**04 46 33.9**	**+1.3**
KWP	**Kalwaria**	**85.62**	**320**	*e*P	**P**	**04 46 38.4**	**+0.8**
KWP	**Kalwaria**	**85.62**	**320**	*e*P	**P**	**04 46 38.4**	**+0.8**
KOLS	**Kolonicke sedl**	**86.10**	**320**	*e*P	**P**	**04 46 40.8**	**+0.8**
DRGR		**86.47**	**317**	⇑P	**P**	**04 46 42.0**	**+0.1**
KMBO	**Kilima Mbogo**	**86.48**	**268**	P	**P**	**04 46 43.3**	**+0.5**
	comp=Z,1.7nm,0.7s,mb4.4,baz=32,slow=8.3,SNR=5.8						
KMBO				LR	LR	05 24 21.0	
	comp=Z,135nm,19.4s,MS4.4,baz=276,slow=35						
STHS	**Stebnicka Huta**	**86.59**	**320**	*e*P	**P**	**04 46 42.5**	**+0.1**
STHS				*e*		04 46 54.9	
CRVS	**Cervenica-Dubn**	**86.62**	**320**	*i* P	**P**	**04 46 43.5**	**+0.9**
HFS	**Hagfors**	**86.76**	**332**	P	**P**	**04 46 43.2**	**+0.2**
	baz=90,slow=4.3						
OJC	**Ojcow**	**87.21**	**321**	*e*P	**P**	**04 46 47.3**	**+1.9**
KECS	**Kecovo**	**87.37**	**320**	*i* P	**P**	**04 46 46.8**	**+0.6**
NB2	**NORSAR Subarra**	**87.48**	**333**	P	**P**	**04 46 46.0**	**-0.5**
	comp=Z,7.3nm,0.8s,mb5.0,baz=67,slow=4.6						
NOA	**NORSAR Array B**	**87.48**	**333**	P	**P**	**04 46 45.7**	**-0.8**

	comp=Z,4.3nm,0.7s,mb4.8,baz=65,slow=4.9,SNR=15						
NOA				LR	LR	05 28 59.5	
	comp=Z,391nm,21.4s,MS4.8,baz=60,slow=38						
NOA	**NORSAR Array B**	87.48	333	P	P	04 46 45.7	-0.8
NOA				LR	LR	05 28 59.5	
NAO	**NORSAR Subarra**	87.75	333	P	P	04 46 46.0	-1.7
	comp=Z,7.3nm,0.8s,mb5.0						
NAO	**NORSAR Subarra**	87.75	333	P	P	04 46 46.0	-1.7
NAO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.9						
PSZ	**Piszkesteto**	87.93	319	*e*P	P	04 46 49.2	+0.3
	comp=Z,5.2nm,1.0s,mb4.7						
PSZ	**Piszkesteto**	87.93	319	*e*P	P	04 46 49.2	+0.3
PSZ				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.7						
VAY	**Valandovo**	88.25	312	*e*P	P	04 46 48.9	-1.8
VAY	**Valandovo**	88.25	312	*e*P	P	04 46 48.8	-1.8
VYHS	**Vyhne**	88.39	320	*e*P	P	04 46 52.0	+0.9
MORC	**Moravsky Berou**	88.73	321	*e*P	P	04 46 52.8	+0.1
	comp=Z,1.5nm,0.7s,mb4.4						
MORC	**Moravsky Berou**	88.73	321	*e*P	P	04 46 52.8	+0.1
MORC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.6						
SKO	**Skopje**	88.85	313	*e*P	P	04 46 49.5	-3.9
SKO	**Skopje**	88.85	313	*e*P	P	04 46 49.5	-4.0
BIA	**Bitola**	89.24	312	*e*P	P	04 46 51.6	-3.8
BIA	**Bitola**	89.24	312	*e*P	P	04 46 51.6	-3.8
OHR	**Ohrid**	89.58	312	*e*P	P	04 46 53.1	-3.9
OHR	**Ohrid**	89.58	312	*e*P	P	04 46 53.1	-3.9
YKW3	**Yellowknife Ar**	90.78	23	*e*P	P	04 47 03.1	+1.1
YKA	**Yellowknife Ar**	90.82	23	P	P	04 47 02.8	+0.6
	comp=Z,8.6nm,0.6s,mb5.2,baz=301,slow=4.5,SNR=22						
GERES	**GERESS Array B**	91.41	322	P	P	04 47 05.4	+0.2
	comp=Z,0.7nm,0.7s,mb4.1,baz=72,slow=4.2,SNR=5.9						
GERES				LR	LR	05 32 39.6	
	comp=Z,309nm,21.2s,MS4.7,baz=332,slow=38						
PPT	**Papeete**	91.68	108	*e*LR	LR	05 16 19.0	
	comp=Z,438nm,30.2s						
PPT	**Papeete**	91.68	108	LR	LR	05 24 25.1	
	comp=Z,231nm,18.3s,MS4.7,baz=247,slow=33						
SUMG	**Summit**	92.03	355	*e*P	P	04 47 09.3	+1.8
	comp=Z,57nm,1.9s,mb5.6						
TBI	**Tubuai**	93.24	113	*e*LR	LR	05 17 01.9	
	comp=Z,478nm,33.5s						
VNDA	**Vanda**	94.73	172	*e*P	P	04 47 19.2	-0.6
	comp=Z,9.4nm,1.0s,mb5.2						
VNDA	**Vanda**	94.73	172	*e*P	P	04 47 19.3	-0.6
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
EDM	**Edmonton**	96.74	30	*e*P	P	04 47 31.0	+1.5
NEW	**Newport**	97.50	36	*e*P	P	04 47 33.8	+0.7
	comp=Z,1.8nm,0.8s,mb4.5						
NEW	**Newport**	97.50	36	*e*P	P	04 47 33.8	+0.7
NEW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	**Mina Array Bea**	101.79	45	P	P	04 47 54.0	+1.3
	comp=Z,0.8nm,0.7s,baz=275,slow=6.0,SNR=5.6						
RKT	**Rikitea**	106.23	110	*e*LR	LR	05 23 03.2	
	comp=Z,201nm,34.8s						
ANMO	**Albuquerque**	111.64	42	*e*PKP	PKPdf	04 52 34.6	-2.7
MNTX	**Cornudas Mount**	114.32	45	*e*PKP	PKPdf	04 52 39.4	-3.2
SNAA	**Sanae**	114.88	196	PKPdf	PKPdf	04 52 32.0	-11
SNAA				*e*		04 52 49.3	
VNA2	**Neumayer--Watz**	116.52	196	PKPdf	PKPdf	04 52 42.2	-3.8
VNA2				*e*		04 52 58.2	
VNA1	**Neumayer--Stat**	116.92	196	PKPdf	PKPdf	04 52 43.8	-3.0
VNA1				*e*		04 53 01.9	
LTX	**Lajitas**	116.93	46	*e*PKPdf	PKPdf	04 52 44.2	-3.6
TXAR	**Lajitas Array**	116.93	46	PKP	PKPdf	04 52 44.8	-3.0
	comp=Z,2.7nm,0.7s,baz=261,slow=0.3,SNR=34						
JCT	**Junction City**	118.80	42	*e*PKPdf	PKPdf	04 52 48.0	-3.4
WCI	**Wyandotte Cave**	120.42	27	*e*PKPdf	PKPdf	04 52 50.5	-3.9
WVT	**Waverly**	121.44	29	*e*PKPdf	PKPdf	04 52 52.6	-3.8
DBIC	**Dimbokro**	124.39	289	PKP	PKPdf	04 52 57.9	-4.7
	comp=Z,2.5nm,0.8s,baz=37,slow=3.5,SNR=5.6						
DBIC	**Dimbokro**	124.39	289	PKP	PKPdf	04 52 57.9	-4.7
CPD	**Cerro la Pandu**	146.16	16	*e*PKPbc	PKPbc	04 53 40.6	+1.5
MTP	**Monte Pirata**	146.20	15	*e*PKPbc	PKPbc	04 53 40.8	+1.6
PLCA	**Paso Flores**	151.44	158	PKPbc	PKPdf	04 53 53.7	+3.4
	comp=Z,21nm,0.7s,baz=213,slow=2.8,SNR=51						
PLCA	**Paso Flores**	151.44	158	*e*PKPdf	PKPdf	04 53 47.5	-2.9
PLCA				PKPbc	PKPdf	04 53 53.7	+3.3
PLCA				*e*PKPbc	PKPdf	04 53 54.0	+3.6
PLCA	**Paso Flores**	151.44	158	*e*PKIKP	PKPdf	04 53 47.5	-2.9
PLCA				*e*		04 53 54.0	
SDV	**Santo Domingo**	152.74	31	*e*PKPdf	PKPdf	04 53 50.6	-2.4
SDV				*e*PKPbc	PKPdf	04 53 57.6	+4.6
TRQA	**Tornquist**	156.32	170	*e*PKPab	PKPab	04 54 21.4	-1.8
LPAZ	**La Paz**	168.86	99	PKP	PKPdf	04 54 07.9	-2.1
	comp=Z,0.8nm,0.9s,baz=195,slow=3.0,SNR=3.7						
LPAZ				PKPab	PKPab	04 55 20.1	+1.9
	comp=Z,1.9nm,0.8s,baz=328,slow=3.0,SNR=7.6						
LPAZ	**La Paz**	168.86	99	PKP	PKPdf	04 54 07.9	-2.1
LPAZ				*e*PKPab	PKPab	04 55 19.6	+1.4
LPAZ				PKPab	PKPab	04 55 20.1	+1.9

MAN 18 04:39:27.2, 15.06N×123.69E, h111^{km}, mb4.3, ML3.1, MS2.9, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVCP	**Virac**	1.52	163	*e*P	P	04 39 55.1	+0.4
PVCP				*e*S	S	04 40 16.1	+0.6
GQP	**Guinayangan**	1.66	227	*e*P	P	04 39 52.6	-3.8
GQP				*e*S	S	04 40 09.7	-8.8
POLP	**Polilio Island**	1.73	259	*e*P	P	04 39 54.6	-2.6
POLP				*e*S	S	04 40 12.3	-7.5
BALP	**Baler**	2.15	289	*e*P	P	04 40 02.5	-0.3
BALP				*e*S	S	04 40 26.4	-3.0
BOAC	**Boac**	2.39	229	*e*P	P	04 40 06.0	0.0
BOAC				*e*S	S	04 40 31.7	-3.4
PCPH	**Palayan**	2.56	282	*e*P	P	04 40 08.8	+0.6
PCPH				*e*S	S	04 40 39.3	+0.3

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*NEIC **18** 05:20:31.0, 14.83N×93.37W, h26^{km}, mb4.1/1, MD4.1(MEX), After MEX.*

MEX 18 05:20:30.9±0.7**, 14.83N×93.37W, h26^{km}**±76^{km}**, MD4.1, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	**Comitan**	1.87	39	*i* P	Pn	05 20 59.2	-2.6
CCIG				*i* S	Sn	05 21 20.7	-4.2
SCX	**San Cristobal**	2.03	20	*i* P	Pn	05 21 02.0	-2.1
SCX				*i* S	Sn	05 21 26.0	-2.8
CMIG	**Matias Romero**	2.68	327	*i* P	Pn	05 21 10.4	-3.0
CMIG				*i* S	Sn	05 21 41.0	-4.4
OXX	**Oaxaca**	3.93	305	*e*P	Pn	05 21 27.0	-4.1
OXX				*i* S	Sn	05 22 18.0	+1.0
VHO	**Vista Hermosa**	3.93	305	*i* P	Pn	05 21 34.6	+3.4
VHO				*e*S	Sn	05 22 12.7	-4.4
GDL2	**Guadalupe Moun**	19.99	332	*e*P	P	05 25 04.7	+0.1
AMTX	**Amarillo**	21.33	341	*e*P	P	05 25 13.3	-4.9
	4.5nm,0.6s						

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*NEIC **18** 05:30:09.3, 37.31S×180.00E, h33^{km}, ML3.9(WEL), After WEL.*

WEL 18 05:30:08.9±0.5**, 37.47S×179.84E, h5^{km}, ML3.7**/6**, Error ellipse: s-maj=4.7km s-min=3.5km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	1.22	265	P	Pb	05 30 31.3	-0.8
MXZ				S	Sb	05 30 47.9	-0.1
MXZ	**Matakaoa Point**	1.22	265	P*	Pb	05 30 31.3	-0.8
MXZ				S*	Sb	05 30 48.1	+0.1
PUZ	**Puketiti**	1.39	244	P	Pb	05 30 34.4	-0.6
PUZ				S	Sb	05 30 53.2	+0.3
PUZ	**Puketiti**	1.39	244	PN	Pn	05 30 34.4	-0.6
PUZ				SN	Sn	05 30 53.2	-0.8
MWZ	**Matawai**	2.02	244	P	Pn	05 30 43.0	-1.1
MWZ				S	Sn	05 31 08.4	-1.6
MWZ	**Matawai**	2.02	244	PN	Pn	05 30 43.0	-1.1
MWZ				SN	Sn	05 31 08.4	-1.6
URZ	**Urewera**	2.30	249	P	Pn	05 30 47.5	-0.5
URZ	**Urewera**	2.30	249	PN	Pn	05 30 47.3	-0.7
URZ				SN	Sn	05 31 15.2	-1.8
KNZ	**Kokohu**	2.31	227	*e*P	Pn	05 30 46.5	-1.6
KNZ	**Kokohu**	2.31	227	PN	Pn	05 30 46.5	-1.6
BKZ	**Black Stump Fm**	3.13	236	P	Pn	05 30 58.6	-1.3
BKZ	**Black Stump Fm**	3.13	236	PN	Pn	05 30 58.6	-1.3
BFZ	**Birch Farm**	4.26	220	*e*P	Pn	05 31 09.8	-6.1
BFZ	**Birch Farm**	4.26	220	SN	Sn	05 31 59.8	-6.8
MRZ	**Mangatainoka R**	4.60	225	*e*P	Pn	05 31 16.3	-4.5
MRZ	**Mangatainoka R**	4.60	225	PN	Pn	05 31 16.2	-4.6

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*IDC **18** 05:44:02.6±0.4, 5.10N×96.13E, mb4.4/26, mb1 4.5/26, mb1mx4.4/29, mbtmp4.4/26, MS4.2/13, Ms1 4.2/13, ms1mx4.1/15, Error ellipse: s-maj=14.8km s-min=12.1km az=64.0*

*MOS **18** 05:44:06.4±1.3, 5.08N×96.05E, h33^{km}, mb5.0/24, MS4.4/5, Error ellipse: s-maj=13.3km s-min=7.2km az=116.2*

*BJI **18** 05:44:07.6, 4.76N×95.69E, h47^{km}, mB4.9, mb4.7, Ms4.7, Msz4.4*

*NEIC **18** 05:44:09.2±1.3, 5.05N×96.10E, h43^{km}±12^{km}, mb4.8/29, Error ellipse: s-maj=7.7km s-min=5.6km az=50.0*

NEIC Felt [II] at Banda Aceh.

ISC 18 05:44:05.0±1.2**, 4.96N**±0.04×**96.04E**±0.03**, h22^{km}**±8^{km}**, h31^{km}**±1.4^{km}**:pP-P, n153, σ1^{s}25**/159**, mb4.6**/60**, MS4.3**/28**, 7C-1D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	4.60	86	*e*Pn	Pn	05 45 15.2	+0.1
IPM	**Ipoh**	4.98	94	P	Pn	05 45 20.8	+0.3
SNG	**Songkhla**	5.06	64	P	Pn	05 45 18.0	-3.5
	1µm,1.0s						
KGM	**Kluang**	7.83	112	P	Pn	05 45 59.3	-1.2
NST	**Nakhon Sawan**	11.38	20	P	P	05 46 51.0	+1.5
	67nm,1.0s						
CHG	**Chiang Mai**	14.06	11	P	P	05 47 29.8	+4.5
	28nm,1.2s						
KSM	**Kuching**	14.66	103	*e*Pn	P	05 47 35.5	+2.3
PALK	**Pallekele**	15.42	279	P	P	05 47 43.9	+0.7
	21nm,0.9s						
VIS	**Vishakhapatnam**	17.76	317	*e*P	P	05 48 11.6	-1.2
VIS				AMb	AMB	05 48 28.5	
	comp=Z,80nm,1.5s						
CAL	**Calcutta**	19.00	338	*e*x	x	05 56 44.3	
QIZ	**Qiongzhong**	19.41	43	*e*P	P	05 48 32.5	-0.2
QIZ				S	S	05 52 04.4	-0.6
QIZ				LR	LR		
	comp=N,2µm,20.0s						
QIZ				LR	LR		
	comp=E,2µm,17.9s						
QIZ				LR	LR		
	comp=Z,710nm,20.0s						
KKM	**Kota Kinabalu**	20.11	86	*e*P	P	05 48 41.6	+1.2
KKM	**Kota Kinabalu**	20.11	86	P	P	05 48 45.4	+5.0
SHL	**Shillong**	20.87	349	*e*P	P	05 48 49.0	+0.8
SHL				*e*x	x	05 52 46.0	
KMI	**Kunming**	21.06	17	P	P	05 48 54.1	+4.0
KMI				AP		05 49 03.6	
KMI				XP		05 49 07.5	
KMI				PP	PP	05 49 17.9	+4.7
KMI				S	S	05 52 42.5	+4.0
KMI				XS		05 52 57.4	
KMI				SS	SS	05 53 16.4	+4.9
KMI				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.6						
KMI				AMB	AMB		
	comp=Z,170nm,3.8s						
KMI				LR	LR		
	comp=N,550nm,11.2s,MS4.5						
KMI				LR	LR		
	comp=E,1µm,12.4s,MS4.5						
KMI				LR	LR		
	comp=Z,690nm,18.0s						
KMI	**Kunming**	21.06	17	P	P	05 48 54.1	+4.0
	comp=Z,30nm,1.0s,mb4.6						
KMI				pP		05 49 03.6	
KMI				sP		05 49 07.5	
KMI				PP	PP	05 49 17.9	+4.7
KMI				PPP	PPP	05 49 27.3	+5.0
KMI				S	S	05 52 42.5	+4.0
KMI				sS		05 52 57.4	
KMI				SS	SS	05 53 16.4	+4.9
KMI				SSS	SSS	05 53 30.7	+4.6
KMI				LR	LR		
	comp=Z,700nm,18.0s,MS4.1						
HYB	**Hyderabad**	21.13	307	⇑*i*P	P	05 48 51.5	+0.7
	comp=Z,50nm,1.0s,mb4.8						
HYB				*e*S	S	05 52 56.0	+16
HYB	**Hyderabad**	21.13	307	⇑*e*P	P	05 48 51.5	+0.7
	comp=Z,50nm,1.0s,mb4.8						
HYB				*e*S	S	05 52 56.0	+16
HYB	**Hyderabad**	21.13	307	⇑*e*P	P	05 48 51.5	+0.7
HYB				*e*S	S	05 52 56.0	+16
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb4.8						
BOK	**Bokaro**	21.13	333	*e*P	P	05 48 48.5	-2.3
TSM	**Tawau**	21.77	91	P	P	05 49 02.3	+4.9
GYA	**Guiyang**	23.67	24	⇓*i*P	P	05 49 19.0	+3.0
GYA				AP		05 49 28.1	
GYA				XP		05 49 32.8	
GYA				PP	PP	05 49 54.0	+5.1
GYA				S	S	05 53 32.0	+5.9
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
GYA				AMB	AMB		
	comp=Z,250nm,6.0s						
GYA				LR	LR		
	comp=N,1µm,18.3s,MS4.6						
GYA				LR	LR		
	comp=E,1µm,15.6s,MS4.6						
GYA				LR	LR		
	comp=Z,1µm,16.6s,MS4.4						
KAD	**Karad**	24.67	302	*e*P	P	05 49 26.6	+0.8
KAD				AMb	AMB	05 49 35.2	
	comp=Z,18nm,0.5s,mb4.9						
LSA	**Lhasa**	25.04	350	P	P	05 49 30.4	+1.1
LSA	**Lhasa**	25.04	350	*e*P	P	05 49 29.9	+0.7
	comp=Z,17nm,0.7s,mb4.7						
LSA	**Lhasa**	25.04	350	*e*P	P	05 49 29.9	+0.6
LSA				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.7						
POO	**Poona**	25.52	304	*e*P	P	05 49 34.0	+0.1
BHPL	**Bhopal**	25.56	317	*e*P	P	05 49 34.5	+0.3
BHPL				AMb	AMB	05 49 37.4	
	comp=Z,21nm,0.5s,mb4.9						
CD2	**Chengdu**	26.82	15	⇑*i*P	P	05 49 47.6	+1.8
CD2				PP	PP	05 50 31.6	+0.6
CD2				S	S	05 54 19.5	+0.6
CD2				SS	SS	05 55 33.8	+2.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
CD2				AMB	AMB		
	comp=Z,120nm,5.4s						
CD2				LR	LR		
	comp=E,670nm,14.4s						
CD2				LR	LR		
	comp=Z,420nm,12.8s,MS4.2						
ENH	**Enshi**	28.19	25	P	P	05 49 58.3	0.0
	comp=Z,18nm,1.0s,mb4.7						
WHN	**Wuhan**	30.75	32	P	P	05 50 25.0	+3.9
XAN	**Xi'an**	31.31	21	P	P	05 50 26.8	+0.8
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
XAN				LR	LR		
	comp=N,410nm,20.0s,MS4.5						
XAN				LR	LR		
	comp=E,1µm,20.3s,MS4.5						
XAN				LR	LR		
	comp=Z,550nm,14.6s						
LZH	**Lanzhou**	31.80	12	*e*P	P	05 50 30.5	+0.2
LZH				AP	pP	05 50 39.5	+2.7
LZH				PP	PP	05 51 36.8	+0.9
LZH				*e*S	S	05 55 37.5	-0.6
LZH				SS	SS	05 57 31.4	+2.1
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.0						
LZH				AMB	AMB		
	comp=Z,150nm,5.4s						
LZH				LR	LR		
	comp=E,760nm,12.7s						
LZH				LR	LR		
	comp=Z,1µm,16.5s,MS4.7						
LZH	**Lanzhou**	31.80	12	*e*P	P	05 50 30.5	+0.2
	comp=Z,32nm,1.3s,mb5.0						
LZH				pP	pP	05 50 39.5	+2.7
LZH				sP	sP	05 50 43.6	+4.0
LZH				PP	PP	05 51 36.7	+0.8
LZH				*e*S	S	05 55 37.5	-0.6
LZH				sS		05 55 53.6	
LZH				SS	SS	05 57 31.4	+2.1
LZH				LR	LR		
	comp=Z,1µm,16.5s,MS4.7						
LZH	**Lanzhou**	31.80	12	*e*P	P	05 50 30.5	+0.2
LZH				*PP	pP	05 50 39.5	+2.7
LZH				*SP	sP	05 50 43.6	+4.0
LZH						05 51 36.7	
LZH				*e*S	S	05 55 37.5	-0.6
LZH				*SS		05 55 53.6	
LZH				SS	SS	05 57 31.4	+2.1
LZH				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.0						
LZH				MLR	MLR		
	comp=Z,1µm,16.5s,MS4.7						
NJ2	**Nanjing**	34.39	36	*e*P	P	05 50 54.1	+1.3
NJ2				AP	pP	05 51 03.9	+4.5
NJ2				XP	sP	05 51 08.0	+5.8
NJ2				PP	PP	05 52 10.3	+1.7
NJ2				S	S	05 56 20.0	+1.6
NJ2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,260nm,4.8s						
NJ2				LR	LR		
	comp=N,690nm,15.1s,MS4.7						
NJ2				LR	LR		
	comp=E,540nm,12.6s,MS4.7						
NJ2				LR	LR		
	comp=Z,130nm,22.6s						
GTA	**Gaotai**	34.47	5	P	P	05 50 54.0	+0.6
GTA				AP	pP	05 51 02.6	+2.7
GTA				PP	PP	05 52 10.4	+0.9
GTA				PCP	PcP	05 53 29.1	+0.5
GTA				S	S	05 56 18.3	-1.2
GTA				SCP		05 57 11.9	
GTA				SS	SS	05 58 30.3	-0.5
GTA				AMB	AMB		
	comp=Z,90nm,4.2s						
GTA				LR	LR		
	comp=N,230nm,21.3s,MS4.2						
GTA				LR	LR		
	comp=E,320nm,18.2s,MS4.2						
GTA				LR	LR		
	comp=Z,280nm,21.3s,MS4.0						
SSE	**Sheshan**	35.13	39	P	P	05 50 58.8	-0.4
SSE				PP	PP	05 52 19.1	+0.9
SSE				PCP	PcP	05 53 28.4	-2.3
SSE				S	S	05 56 31.3	+1.3
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,140nm,4.2s						
SSE				LR	LR		
	comp=N,490nm,26.8s,MS4.2						
SSE				LR	LR		
	comp=E,420nm,27.2s,MS4.2						
SSE				LR	LR		
	comp=Z,280nm,20.9s						
SSE	**Sheshan**	35.13	39	P	P	05 50 58.8	-0.4
	comp=Z,38nm,0.7s,mb5.4						
SSE				sP	sP	05 51 11.4	+2.8
SSE				PP	PP	05 52 19.1	+0.9
SSE				PcP	PcP	05 53 28.4	-2.3
SSE				S	S	05 56 31.2	+1.2
SSE				sS		05 56 45.9	
SSE				SS	SS	05 59 05.4	+19
SSE				LR	LR		
	comp=Z,280nm,20.9s,MS4.0						
FITZ	**Fitzroy Crossi**	37.12	129	*e*P	P	05 51 14.5	-1.5
	comp=Z,16nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	37.12	129	P	P	05 51 13.9	-2.1
	comp=Z,23nm,0.8s,mb5.1,baz=284,slow=3.9,SNR=16						
FITZ				ScP		05 57 22.3	
	comp=Z,7.1nm,0.9s,baz=285,slow=0.6,SNR=4.6						
BTO	**Baotou**	37.65	18	*e*P	P	05 51 21.1	+0.8
HHC	**Hu-ho-hao-te**	38.35	19	*e*P	P	05 51 31.8	+5.6
HHC				AP	pP	05 51 41.4	+8.6
HHC				XP	sP	05 51 45.3	+10
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
HHC				AMB	AMB		
	comp=Z,140nm,3.9s						
HHC				LR	LR		
	comp=N,600nm,22.6s,MS4.8						
HHC				LR	LR		
	comp=E,1µm,21.6s,MS4.8						
HHC				LR	LR		
	comp=Z,410nm,23.8s,MS4.2						
WMQ	**Urumqi**	39.40	350	*e*P	P	05 51 35.5	+0.6
WMQ				AP	pP	05 51 45.0	+3.5
WMQ				XP	sP	05 51 49.0	+4.7
WMQ				PP	PP	05 53 10.0	+0.7
WMQ				*e*S	S	05 57 34.0	-0.9
WMQ				SCS	ScS	06 01 40.0	-0.1
WMQ				AMB	AMB		
	comp=Z,90nm,5.2s						
WMQ				LR	LR		
	comp=N,320nm,27.0s,MS4.4						
WMQ				LR	LR		
	comp=E,810nm,29.8s,MS4.4						
WMQ				LR	LR		
	comp=Z,410nm,31.4s,MS4.1						
KAKA	**Kakadu**	40.20	116	*e*P	Px	05 52 02.7	
	comp=Z,7.6nm,0.6s						
SMDO	**Samad**	40.83	300	P	P	05 51 50.0	+3.1
	SNR=9.2						
BIDO	**Bidbid**	40.92	301	P	P	05 51 53.1	+5.4
	SNR=6.9						
MUN	**Mundaring**	41.45	154	*e*P	P	05 51 52.7	+0.8
BSY	**Bisya**	41.46	299	P	P	05 51 55.4	+3.3
	SNR=6.5						
KLBR	**Kellerberrin**	41.83	152	*e*P	P	05 51 55.3	+0.2
	comp=Z,14nm,0.8s,mb4.7						
AAK	**Ala-Archa**	42.11	336	*e*P	P	05 51 56.6	-0.7
	comp=Z,5.6nm,1.0s,mb4.2						
AAK	**Ala-Archa**	42.11	336	*e*P	P	05 51 56.6	-0.7
AAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
NWAO	**Narrogin (SRO)**	42.71	153	P	P	05 52 01.9	-0.4
	comp=Z,18nm,0.8s,mb4.9,baz=326,slow=10,SNR=11						
NWAO	**Narrogin (SRO)**	42.71	153	*e*P	P	05 52 02.0	-0.3
	comp=Z,37nm,1.1s,mb5.0						
NWAO	**Narrogin (SRO)**	42.71	153	*e*P	P	05 52 02.0	-0.3
NWAO				pmax	pmax		
	comp=Z,37nm,1.1s						
JNU	**Nakatsue**	42.87	45	P	P	05 52 01.4	-2.2
	comp=Z,10.0nm,1.0s,mb4.5,baz=229,slow=11,SNR=1.7						
WHFO	**Wadi Hawf**	43.26	291	P	P	05 52 08.4	+1.4
	SNR=15						
MKAR	**Makanchi Array**	43.34	346	P	P	05 52 06.8	-0.4
	comp=Z,4.7nm,0.8s,mb4.3,baz=164,slow=8.8,SNR=34						
MKAR				LR	LR	06 15 51.4	
	comp=Z,124nm,18.1s,MS3.9,baz=169,slow=44						
SONM	**Songino Array**	43.63	10	P	P	05 52 09.3	-0.3
	comp=Z,11nm,0.8s,mb4.7,baz=187,slow=8.1,SNR=30						
SONM				PcP	PcP	05 53 55.1	-2.3
	comp=Z,1.4nm,0.7s,baz=180,slow=4.8,SNR=2.6						
SONM				LR	LR	06 12 09.1	
	comp=Z,560nm,18.1s,MS4.5,baz=3.3,slow=39						
SONM	**Songino Array**	43.63	10	P	P	05 52 09.3	-0.3
SONM				PcP	PcP	05 53 55.1	-2.3
SONM				LR	LR	06 12 09.1	
ULN	**Ulaanbaatar**	43.78	11	*e*P	P	05 52 11.3	+0.5
	comp=Z,7.2nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	43.78	11	*e*P	P	05 52 11.3	+0.5
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	45.05	125	P	P	05 52 20.4	-1.0
	comp=Z,9.8nm,0.6s,mb4.8,baz=301,slow=9.2,SNR=64						
WRAB	**Tennant Creek**	45.06	125	*e*P	P	05 52 20.3	-1.2
	comp=Z,19nm,0.6s,mb5.1						
WRAB	**Tennant Creek**	45.06	125	*e*P	P	05 52 20.3	-1.2
WRAB				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.1						
WB2	**Warramunga Arr**	45.06	125	*e*P	P	05 52 20.7	-0.8
CN2	**Changchun**	46.55	29	*e*P	P	05 52 34.8	+1.8
CN2				*e*S	S	05 59 21.3	+1.7
CN2				LR	LR		
	comp=N,430nm,16.0s,MS4.7						
CN2				LR	LR		
	comp=E,540nm,16.0s,MS4.7						

CN2				LR	LR		
	comp=Z,320nm,16.0s,MS4.4						
ASPA	**Alice Springs**	**46.61**	**129**	⇑*i*P	**P**	**05 52 33.3**	**-0.4**
FORT	**Forrest**	**46.90**	**141**	⇑*i*P	**P**	**05 52 36.0**	**+0.1**
	comp=Z,63nm,0.7s,mb5.7						
KURK	**Kurchatov**	**47.88**	**345**	*e*P	**P**	**05 52 41.7**	**-1.7**
	comp=Z,1.6nm,0.9s,mb4.0						
KURK	**Kurchatov**	**47.88**	**345**	*e*P	**P**	**05 52 41.7**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
HIA	**Hailar**	**48.51**	**21**	*e*P	**P**	**05 52 47.8**	**-0.4**
	comp=Z,4.9nm,0.6s,mb4.7						
HIA	**Hailar**	**48.51**	**21**	*e*P	**P**	**05 52 47.8**	**-0.4**
HIA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MDJ	**Mudanjiang**	**49.22**	**31**	P	**P**	**05 52 57.5**	**+3.7**
MDJ				AP	pP	05 53 04.6	+4.1
MDJ				XP	sP	05 53 09.3	+6.1
MDJ				PP	PP	05 54 47.9	-0.1
MDJ				S	**S**	**05 59 59.8**	**+2.6**
MDJ				SS	SS	06 03 27.8	+3.2
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,40nm,3.1s						
MDJ				LR	LR		
	comp=N,270nm,20.2s,MS4.5						
MDJ				LR	LR		
	comp=E,400nm,19.3s,MS4.5						
MDJ				LR	LR		
	comp=Z,230nm,14.9s,MS4.3						
ZAL	**Zalesovo**	**49.68**	**351**	LR	LR	06 18 04.1	
	comp=Z,242nm,18.9s,MS4.2,baz=291,slow=41						
MJAR	**Matsushiro Arr**	**49.79**	**45**	P	**P**	**05 52 57.8**	**-0.5**
	comp=Z,0.8nm,0.4s,mb4.2,baz=244,slow=8.0,SNR=2.7						
MJAR				LR	LR	06 16 01.5	
	comp=Z,232nm,20.1s,MS4.2,baz=240,slow=39						
NVS	**Novosibirsk**	**50.80**	**350**	*e*P	**P**	**05 52 59.9**	**-5.8**
KAMS	**Al Khamasin**	**52.25**	**292**	P	**P**	**05 53 17.3**	**+0.2**
BVAR	**Borovoye Array**	**52.34**	**341**	P	**P**	**05 53 15.7**	**-1.7**
	comp=Z,2.2nm,0.7s,mb4.2,baz=135,slow=8.4,SNR=14						
MZLS	**Mizel**	**52.40**	**297**	P	**P**	**05 53 24.0**	**+5.7**
BRVK	**Borovoye**	**52.41**	**341**	P	**P**	**05 53 15.8**	**-2.1**
	comp=Z,2.3nm,0.8s,mb4.2						
BRVK	**Borovoye**	**52.41**	**341**	P	**P**	**05 53 15.8**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	**52.82**	**341**	*e*P	**P**	**05 53 18.6**	**-2.3**
	comp=Z,12nm,0.7s,mb4.9						
CHKZ	**Chkalovo**	**52.82**	**341**	*e*P	**P**	**05 53 18.6**	**-2.4**
CHKZ				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
DJNS	**Zahran al Janu**	**52.83**	**288**	P	**P**	**05 53 26.6**	**+5.0**
KLR	**Kul’dur**	**53.48**	**28**	*e*P	**P**	**05 53 27.0**	**+1.1**
OPO	**Ambohidratompo**	**53.51**	**243**	P	**P**	**05 53 26.8**	**+0.3**
	comp=Z,2.9nm,1.0s,mb4.2,baz=58,slow=9.5,SNR=2.5						
AFFS	**‘Afif**	**54.35**	**296**	P	**P**	**05 53 36.0**	**+3.4**
CTA	**Charters Tower**	**55.26**	**118**	*e*P	**P**	**05 53 38.8**	**-0.5**
	comp=Z,7.4nm,0.9s,mb4.7						
CTA	**Charters Tower**	**55.26**	**118**	*e*P	**P**	**05 53 38.8**	**-0.5**
CTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CTAO	**Charters Tower**	**55.26**	**118**	*e*P	**P**	**05 53 41.1**	**+1.7**
	comp=Z,30nm,1.4s,mb5.1						
CTAO	**Charters Tower**	**55.26**	**118**	*e*P	**P**	**05 53 41.1**	**+1.8**
CTAO				pmax	pmax		
	comp=Z,31nm,1.4s,mb5.2						
AKTO	**Aktyubinsk**	**55.39**	**331**	P	**P**	**05 53 36.5**	**-3.4**
	comp=Z,2.3nm,0.7s,mb4.3,baz=134,slow=1.7,SNR=11						
AKTO				LR	LR	06 19 30.9	
	comp=Z,166nm,18.5s,MS4.2,baz=238,slow=38						
STKA	**Stephens Creek**	**56.74**	**133**	⇑*i*P	**P**	**05 53 48.8**	**-1.1**
	comp=Z,7.4nm,0.6s,mb4.9						
STKA	**Stephens Creek**	**56.74**	**133**	P	**P**	**05 53 49.0**	**-0.8**
	comp=Z,8.8nm,0.7s,mb4.9,baz=314,slow=7.2,SNR=12						
STKA				LR	LR	06 23 02.9	
	comp=Z,311nm,18.1s,MS4.5,baz=155,slow=41						
GNI	**Garni**	**57.81**	**315**	*e*P	**P**	**05 53 56.5**	**-0.8**
	comp=Z,14nm,1.0s,mb4.9						
GNI	**Garni**	**57.81**	**315**	*e*P	**P**	**05 53 56.5**	**-0.8**
GNI				pmax	pmax		
	comp=Z,14nm,1.0s						
KMBO	**Kilima Mbogo**	**59.03**	**266**	P	**P**	**05 54 07.2**	**+1.1**
	comp=Z,4.9nm,0.9s,mb4.5,baz=58,slow=8.8,SNR=15						
KMBO				LR	LR	06 14 56.4	
	comp=Z,202nm,21.7s,MS4.2,baz=277,slow=31						
KMBO	**Kilima Mbogo**	**59.03**	**266**	P	**P**	**05 54 07.2**	**+1.1**
KMBO				LR	LR	06 14 56.4	
ARU	**Arti**	**59.29**	**337**	*e*P	**P**	**05 54 04.1**	**-3.3**
ARU				*e*		05 56 12.0	
ARU				*e*S	**S**	**06 02 10.1**	**-2.5**
ARU				*e*SS	SS	06 06 04.0	-5.0
ARU				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.6						
ARU				MLR	MLR		
	comp=N,200nm,19.0s,MS4.6						
ARU				MLR	MLR		
	comp=E,400nm,19.0s,MS4.6						
ZEI	**Tsey**	**59.45**	**318**	*i* P	**P**	**05 54 05.2**	**-3.4**
ZEI				*i* *PP	pP	05 54 16.2	+0.7
ZEI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
KIV	**Kislovodsk**	**60.73**	**318**	*e*P	**P**	**05 54 16.3**	**-1.1**
KIV				*i*		05 54 28.0	
KIV				*e*S	**S**	**06 02 33.0**	**+1.7**
KIV				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
KIV				MLR	MLR		
	comp=Z,200nm,20.0s,MS4.3						
JMQS	**Jabal Moqyreh**	**61.58**	**300**	P	**P**	**05 54 24.2**	**+0.9**
BDAS	**Al Bad‘**	**62.17**	**299**	P	**P**	**05 54 28.3**	**+1.0**
BRTR	**Keskin Array B**	**65.75**	**311**	P	**P**	**05 54 48.2**	**-2.4**
	comp=Z,3.7nm,0.9s,mb4.4,baz=124,slow=8.2,SNR=17						
OBN	**Obninsk**	**68.83**	**328**	*e*P	**P**	**05 55 08.8**	**-1.0**
OBN				*e*		05 55 36.7	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.9						
OBN				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.4						
TIXI	**Tiksi**	**69.72**	**11**	*e*P	**P**	**05 55 11.6**	**-3.3**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
LSZ	**Lusaka**	**70.12**	**252**	P	**P**	**05 55 18.6**	**+0.3**
	comp=Z,2.5nm,0.7s,mb4.3,baz=105,slow=5.7,SNR=3.7						
LSZ	**Lusaka**	**70.12**	**252**	P	**P**	**05 55 18.6**	**+0.3**
MATP	**Matopo**	**70.90**	**247**	P	**P**	**05 55 23.8**	**+0.8**
	comp=Z,3.8nm,0.8s,mb4.3,baz=82,slow=8.8,SNR=3.3						
AKASG	**Malin Array Be**	**71.60**	**322**	P	**P**	**05 55 23.8**	**-2.9**
	comp=Z,3.9nm,0.8s,mb4.4,baz=89,slow=5.3,SNR=8.2						
AKASG	**Malin Array Be**	**71.60**	**322**	P	**P**	**05 55 23.8**	**-2.9**
LBTB	**Lobatse**	**74.55**	**243**	*e*P	**P**	**05 55 45.6**	**+1.2**
	comp=Z,7.2nm,0.8s,mb4.7						
LBTB	**Lobatse**	**74.55**	**243**	*e*P	**P**	**05 55 45.6**	**+1.1**
LBTB				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
KWP	**Kalwaria**	**75.46**	**320**	*e*P	**P**	**05 55 47.9**	**-1.3**
	comp=Z,15nm,1.0s,mb4.9						
KWP	**Kalwaria**	**75.46**	**320**	*e*P	**P**	**05 55 47.9**	**-1.3**
KWP				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
KOLS	**Kolonicke sedl**	**75.63**	**319**	*e*	**P**	**05 55 54.1**	**+3.9**
BOSA	**Boshof**	**75.68**	**239**	P	**P**	**05 55 51.7**	**+0.8**
	comp=Z,3.9nm,0.6s,mb4.5,baz=92,slow=4.8,SNR=5.9						
BOSA				LR	LR	06 27 25.5	
	comp=Z,131nm,18.0s,MS4.3,baz=320,slow=34						
BOSA	**Boshof**	**75.68**	**239**	P	**P**	**05 55 52.0**	**+1.1**
	comp=Z,16nm,1.3s,mb4.8						
BOSA	**Boshof**	**75.68**	**239**	P	**P**	**05 55 52.0**	**+1.1**
BOSA				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
MAW	**Mawson**	**76.10**	**192**	*e*P	**P**	**05 55 53.9**	**+1.4**
	comp=Z,3.5nm,0.9s,mb4.3						
MAW	**Mawson**	**76.10**	**192**	P	**P**	**05 55 53.3**	**+0.8**
	comp=Z,1.4nm,0.6s,mb4.0,baz=27,slow=10.0,SNR=5.2						
MAW				LR	LR	06 24 48.0	
	comp=Z,96nm,19.9s,MS4.1,baz=241,slow=32						
MAW	**Mawson**	**76.10**	**192**	*e*P	**P**	**05 55 53.9**	**+1.4**
MAW				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CRVS	**Cervenica-Dubn**	**76.15**	**319**	*e*P	**P**	**05 55 53.8**	**+0.7**
CRVS				*e*		05 56 30.2	
FINES	**FINESS Array B**	**76.15**	**332**	P	**P**	**05 55 51.0**	**-1.9**
	comp=Z,1.6nm,0.7s,mb4.1,baz=108,slow=6.0,SNR=4.3						
FINES				LR	LR	06 34 08.7	
	comp=Z,97nm,20.1s,MS4.1,baz=136,slow=40						
STHS	**Stebnicka Huta**	**76.37**	**320**	*e*P	**P**	**05 55 54.8**	**+0.4**
STHS				*e*		05 55 59.5	
PSZ	**Piszkesteto**	**77.05**	**318**	*e*P	**P**	**05 55 56.9**	**-1.3**
	comp=Z,14nm,1.2s,mb4.8						
PSZ	**Piszkesteto**	**77.05**	**318**	*e*P	**P**	**05 55 56.9**	**-1.3**
PSZ				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
OJC	**Ojcow**	**77.41**	**320**	*e*P	**P**	**05 55 59.5**	**-0.6**
ARCES	**ARCESS Array B**	**78.63**	**340**	P	**P**	**05 56 05.4**	**-1.0**
	comp=Z,2.6nm,0.8s,mb4.2,baz=90,slow=4.9,SNR=7.5						
ARCES				LR	LR	06 33 53.5	
	comp=Z,490nm,19.0s,MS4.9,baz=226,slow=38						
MORC	**Moravsky Berou**	**78.80**	**320**	*e*P	**P**	**05 56 07.0**	**-0.7**
	comp=Z,6.6nm,1.2s,mb4.4						
MORC	**Moravsky Berou**	**78.80**	**320**	*e*P	**P**	**05 56 07.1**	**-0.7**
MORC				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
TSUM	**Tsumeb**	**80.77**	**250**	P	**P**	**05 56 19.9**	**+1.0**
	comp=Z,2.8nm,0.8s,mb4.2,baz=31,slow=19,SNR=3.1						
TSUM	**Tsumeb**	**80.77**	**250**	P	**P**	**05 56 19.9**	**+1.0**
GERES	**GERESS Array B**	**81.24**	**319**	P	**P**	**05 56 20.2**	**-0.6**
	comp=Z,3.3nm,0.8s,mb4.3,baz=90,slow=6.7,SNR=14						
GERES				LR	LR	06 32 43.2	
	comp=Z,68nm,20.2s,MS4.0,baz=56,slow=36						
KHC	**Kasperske Hory**	**81.34**	**319**	*e*P	**P**	**05 56 22.5**	**+1.2**
KHC				*e*x	x	05 57 06.0	
HFS	**Hagfors**	**81.91**	**330**	P	**P**	**05 56 24.3**	**+0.3**
	comp=Z,1.8nm,0.5s,mb4.3,baz=108,slow=4.7,SNR=8.6						
GRA1	**Grafenberg Arr**	**82.89**	**319**	*e*P	**P**	**05 56 35.0**	**+5.6**
	comp=Z,5.0nm,1.0s,mb4.5						
GRF	**Grafenberg Arr**	**82.89**	**319**	*e*P	**P**	**05 56 35.0**	**+5.6**
GRF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
NOA	**NORSAR Array B**	**83.18**	**331**	P	**P**	**05 56 28.8**	**-1.8**
	comp=Z,1.4nm,0.9s,mb4.0,baz=92,slow=5.5,SNR=2.9						
NOA				LR	LR	06 38 14.8	
	comp=Z,176nm,19.8s,MS4.4,baz=110,slow=39						
DAVOX	**Davos**	**83.79**	**316**	P	**P**	**05 56 33.6**	**-0.4**
	comp=Z,6.8nm,0.6s,mb5.0,baz=112,slow=8.9,SNR=5.6						
EKA	**Eskdalemuir Ar**	**91.18**	**326**	P	**P**	**05 57 09.3**	**-0.2**
	comp=Z,1.7nm,0.8s,mb4.4,baz=106,slow=5.2,SNR=2.8						
ULM	**Lac du Bonnet**	**124.06**	**9**	PKP	PKPdf	06 03 02.8	-3.6
	comp=Z,2.2nm,0.7s,baz=47,slow=6.8,SNR=4.8						
NVAR	**Mina Array Bea**	**126.37**	**33**	PKP	PKPdf	06 03 08.5	-2.5
	comp=Z,0.6nm,0.7s,baz=358,slow=1.6,SNR=4.3						
NVAR	**Mina Array Bea**	**126.37**	**33**	PKP	PKPdf	06 03 08.5	-2.5
PDAR	**Pinedale Array**	**127.13**	**24**	PKP	PKPdf	06 03 08.9	-3.5
	comp=Z,0.4nm,0.8s,baz=45,slow=1.3,SNR=3.0						
ANMO	**Albuquerque**	**135.00**	**26**	PKP	PKPdf	06 03 27.4	-0.2
	comp=Z,1.3nm,0.4s,baz=6.4,slow=6.5,SNR=6.8						
TXAR	**Lajitas Array**	**141.00**	**28**	PKP	PKPdf	06 03 34.8	-4.0
	comp=Z,0.4nm,0.7s,baz=181,slow=2.3,SNR=4.2						
BDFB	**Brasilia**	**143.14**	**251**	PKP	PKPdf	06 03 37.6	-5.1
	comp=Z,1.4nm,0.5s,baz=114,slow=2.8,SNR=7.2						
CPUP	**Villa Florida**	**146.84**	**227**	*e*PKPbc	PKPbc	06 03 49.3	+3.3
CFAA	**Coronel Fontan**	**149.66**	**207**	PKPbc	PKPdf	06 03 54.4	+1.1
	comp=Z,0.6nm,0.6s,baz=179,slow=2.9,SNR=16						
LPAZ	**La Paz**	**160.82**	**233**	PKP	PKPdf	06 04 06.3	-2.1
	comp=Z,0.5nm,0.8s,baz=39,slow=14,SNR=2.4						
LPAZ				PKPab	PKPab	06 04 49.8	+1.0
	comp=Z,1.4nm,0.8s,baz=148,slow=9.5,SNR=3.4						
SDV	**Santo Domingo**	**160.88**	**316**	PKPab	PKPab	06 04 49.1	-0.1
	comp=Z,3.8nm,1.0s,baz=54,SNR=3.9						

MAN 18 05:51:33.6, 14.49N×119.61E, h83^{km}, mb4.0, ML2.8, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.97**	**141**	*e*P	P	05 51 53.3	+0.5
LUBP				*e*S	S	05 51 57.0	-10
PGP	**Puerto Galera**	**1.63**	**127**	*e*P	P	05 52 01.5	+0.2
BOAC	**Boac**	**2.40**	**115**	*e*P	P	05 52 12.5	+0.8
BOAC				*e*S	S	05 52 37.7	-2.3
SJMP	**San Jose**	**2.50**	**144**	*e*P	P	05 52 11.4	-1.7
SJMP				*e*S	S	05 52 29.4	-13
BUSP	**Coron**	**2.54**	**167**	*e*P	P	05 52 11.5	-2.2
BUSP				*e*S	S	05 52 30.2	-13
ENPP	**El Nido**	**3.27**	**183**	*e*P	P	05 52 24.3	+0.4
ENPP				*e*S	S	05 52 50.9	-11

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*CSEM **18** 06:01:37.9±0.4, 68.02N×9.58E, h2^{km}, ML2.5, Error ellipse: s-maj=8.2km s-min=5.4km az=91.0, Suspected Mining explosion.*

*IDC **18** 06:01:42.9±3.4, 68.00N×10.19E, h25^{km}±30^{km}, mb1 3.1/4, mb1mx3.0/22, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=31.1km s-min=11.1km az=123.0*

*NAO **18** 06:01:43.9±4.5, 67.86N×10.73E, h10^{km}±35^{km}, ML2.3*

*NEIC **18** 06:01:43.8, 67.78N×10.41E, ML2.5(BER), After BER.*

*BER **18** 06:01:43.7±4.2, 67.83N×10.25E, h7^{km}±24^{km}, MD2.7, ML2.0, ML2.3(NAO)*

*UPP **18** 06:01:45.6, 67.87N×11.08E, h1^{km}, ML2.3, Suspected Mining explosion.*

HEL 18 06:01:42.9±0.3, 67.85N×10.57E, h10^{km}, ML2.5, ML2.4(UPP), ML2.5(BER), Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOF	**Lofoten**	**1.15**	**74**	*e*P	Pb	06 02 05.9	+1.4
LOF				*e*S	Sb	06 02 25.6	+6.2
LOF				AML	AML	06 02 26.4	
	comp=Z,128nm,0.4s						
LOF	**Lofoten**	**1.15**	**74**	*e*P	Pb	06 02 05.9	+1.4
LOF				*e*S	Sb	06 02 25.8	+6.4
LOF	**Lofoten**	**1.15**	**74**	P	Pb	06 02 05.8	+1.3
	comp=Z,128nm,0.4s						
LOF				*e*S	Sb	06 02 25.6	+6.3
	comp=Z,128nm,0.4s,SNR=50						
MELSS	**Ber_school_2**	**1.57**	**128**	*e*P	Pn	06 02 11.1	+0.1
STOK	**Stokkvaagen**	**1.80**	**147**	*e*P	Pn	06 02 14.1	-0.2
STOK				*e*S	Sn	06 02 36.1	-1.2
STOK				AML	AML	06 02 45.6	
	comp=Z,16nm,0.2s						
MOR8	**Moi Rana**	**2.27**	**136**	*e*P	Pn	06 02 21.3	+0.3
MOR8				*e*S	Sn	06 02 49.1	-0.2
SALU	**Saltoluokta**	**3.07**	**95**	*e*P	Pn	06 02 32.8	+0.3
NIKU	**Nikkaluokta**	**3.21**	**86**	*e*P	Pn	06 02 34.3	-0.1
NSS	**Namsos**	**3.38**	**170**	*e*P	Pn	06 02 34.7	-2.2
NSS				*e*S	Sn	06 03 12.6	-4.9
NSS				AML	AML	06 03 14.2	
	comp=Z,5.4nm,0.2s						
KUA	**Kurravaara**	**3.69**	**84**	*e*P	Pn	06 02 41.2	-0.1
DUNU	**Dundret**	**3.91**	**96**	*e*P	Pn	06 02 43.9	-0.6
KIF	**Kilpisjarvi**	**3.95**	**68**	*e*P	Pn	06 02 43.3	-1.7
KIF				MPN		06 02 45.7	
	comp=Z,0.7nm,0.2s						
KIF				*e*S	Sn	06 03 28.2	-3.7
KIF				*e*SG	Sg	06 03 47.6	-6.9
LANU	**Lannavaara**	**4.31**	**82**	*e*P	Pn	06 02 49.1	-0.9
LILU	**Lilltraesk**	**4.51**	**120**	*e*P	Pn	06 02 52.5	-0.4
LILU				*e*S	Sn	06 03 43.7	-2.4
ERTU	**Ertsjaerv**	**4.70**	**101**	*e*P	Pn	06 02 53.8	-1.8
KTK1	**Kautokeino**	**4.82**	**70**	*e*P	Pn	06 02 55.3	-2.0
PAJU	**Pajala**	**4.90**	**94**	*e*P	Pn	06 02 56.8	-1.6
SJUU	**Sjulsmark**	**4.97**	**113**	*e*P	Pn	06 02 58.5	-1.0
MOL	**Molde**	**5.45**	**195**	*e*P	Pn	06 03 03.4	-2.9
BURU	**Burvik**	**5.46**	**122**	*e*P	Pn	06 03 05.5	-0.8
ARA0	**ARCESS Array S**	**5.70**	**66**	Pn	Pn	06 03 07.1	-2.6
	baz=243,slow=12						
ARA0				Sn	Sn	06 04 09.4	-6.6
	baz=247,slow=22						
ARA0				Lg		06 04 44.1	
	baz=262,slow=28						
ARA0	**ARCESS Array S**	**5.70**	**66**	*e*P	Pn	06 03 07.1	-2.6
ARA0				*e*S	Sn	06 04 09.4	-6.6
ARA0				*e*		06 04 44.1	
ARCES	**ARCESS Array B**	**5.70**	**66**	Pn	Pn	06 03 06.9	-2.8
	comp=Z,0.1nm,0.3s,baz=250,slow=13,SNR=9.6						
ARCES				Sn	Sn	06 04 09.5	-6.4
	comp=Z,0.3nm,0.3s,baz=261,slow=17,SNR=3.2						
ARCES				Lg		06 04 43.6	
	comp=Z,0.6nm,0.3s,baz=258,slow=27,SNR=4.1						
ARCES	**ARCESS Array B**	**5.70**	**66**	Pn	Pn	06 03 06.9	-2.8
ARCES				Sn	Sn	06 04 09.5	-6.4
ARCES				Lg		06 04 43.6	
SGF	**Sodankyl**	**6.10**	**86**	*e*P	Pn	06 03 12.4	-3.0
SGF				MPN		06 03 15.8	
	comp=Z,0.3nm,0.2s						
SGF				*e*S	Sn	06 04 19.2	-6.8
KEV	**Kevo**	**6.25**	**65**	*e*P	Pn	06 03 14.1	-3.5
KEV				*e*S	Sn	06 04 22.0	-7.8
OUL	**Oulu**	**6.73**	**107**	*e*P	Pn	06 03 21.0	-3.2
OUL				*e*S	Sn	06 04 32.8	-8.9
NB2	**NORSAR Subarra**	**6.84**	**177**	Pn	Pn	06 03 23.2	-2.6
	baz=359,slow=16						
NB2	**NORSAR Subarra**	**6.84**	**177**	*e*P	Pn	06 03 23.2	-2.6
NOA	**NORSAR Array B**	**6.84**	**177**	Pn	Pn	06 03 22.8	-3.1
	comp=Z,0.1nm,0.3s,baz=360,slow=13,SNR=2.5						
NOA				Sn	Sn	06 04 38.6	-6.0
	comp=Z,0.2nm,0.3s,baz=246,slow=14,SNR=2.6						
VAF	**Ylistaro**	**6.97**	**128**	*e*P	Pn	06 03 24.0	-3.6
VAF				MPN		06 03 26.6	
	comp=Z,0.7nm,0.2s						
VAF				*e*S	Sn	06 04 40.0	-7.7
KU4	**Liikasenvaara**	**7.55**	**92**	*e*P	Pn	06 03 31.1	-4.7
KU4				*e*S	Sn	06 04 53.6	-8.7
HFS	**Hagfors**	**7.87**	**169**	Pn	Pn	06 03 36.6	-3.6
	baz=356,slow=12						
HFS				Sn	Sn	06 05 01.6	-8.5
	baz=2.5,slow=22						
HFS	**Hagfors**	**7.87**	**169**	*e*P	Pn	06 03 36.6	-3.6
HFS				*e*S	Sn	06 05 01.6	-8.5
HFS	**Hagfors**	**7.87**	**169**	Pn	Pn	06 03 36.7	-3.5
	comp=Z,0.0nm,0.3s,baz=353,slow=12,SNR=5.5						
HFS				Sn	Sn	06 05 05.4	-4.7
	comp=Z,0.0nm,0.3s,baz=345,slow=28,SNR=3.2						
SUF	**Sumiainen**	**8.29**	**121**	*e*P	P	06 03 41.1	-5.0
SUF				*e*S	Sn	06 05 11.6	-9.3
KEF	**Keuruu**	**8.30**	**127**	*e*P	P	06 03 41.1	-5.1
KEF				MPN		06 03 43.6	
	comp=Z,0.4nm,0.3s						
KEF				*e*S	Sn	06 05 12.3	-8.7
APA0	**Apatity Array**	**8.50**	**81**	Pn	P	06 03 45.0	-4.0
	baz=279,slow=12						
APA0	**Apatity Array**	**8.50**	**81**	*e*P	P	06 03 45.0	-4.0
FIA0	**FINESS Array S**	**9.22**	**127**	Pn	P	06 03 55.9	-3.1
	baz=327,slow=14						
FIA0				Sn	Sn	06 05 35.3	-8.6
	baz=326,slow=22						
FIA0				Lg		06 06 24.5	
	baz=318,slow=28						
FIA0	**FINESS Array S**	**9.22**	**127**	*e*P	P	06 03 55.9	-3.1
FIA0				*e*S	Sn	06 05 35.3	-8.6
FIA0				*e*SG		06 06 24.5	
FINES	**FINESS Array B**	**9.22**	**127**	Pn	P	06 03 55.6	-3.4
	comp=Z,0.2nm,0.3s,baz=326,slow=15,SNR=3.8						
FINES				Sn	Sn	06 05 35.8	-8.1
	comp=Z,0.2nm,0.3s,baz=328,slow=21,SNR=3.3						
JOF	**Joensuu**	**9.93**	**110**	*e*P	P	06 04 01.8	-6.8
JOF				*e*S	Sn	06 05 48.2	-13
SPA0	**Spitsbergen Ar**	**10.51**	**7**	Pn	P	06 04 10.5	-6.0
	baz=174,slow=16						
SPA0	**Spitsbergen Ar**	**10.51**	**7**	*e*P	P	06 04 10.5	-6.0

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*ISK **18** 06:24:34.5, 38.11N×26.66E, h12^{km}, MD3.1*

*CSEM **18** 06:24:34.7±0.2, 38.13N×26.68E, h15^{km}, MD3.1, Error ellipse: s-maj=5.0km s-min=3.2km az=119.0*

*ATH **18** 06:24:35.3, 38.17N×26.56E, h33^{km}, MD3.3/3*

ISC 18 06:24:34.4±0.8, 38.20N±0.03×26.56E±0.05, h8^{km}±5^{km}, n19, σ1^{s}01/29, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.16**	**10**	*i* P	**Pg**	**06 24 37.7**	**-0.2**
URLA				*i* S	**Sg**	**06 24 40.9**	**+0.7**
BLCB	**Balcova**	**0.42**	**64**	*i* PG	**Pg**	**06 24 42.8**	**-0.1**
BLCB				*i* SG	**Sg**	**06 24 48.8**	**+0.2**
SMG	**Samos**	**0.54**	**156**	*e*PN	**Pg**	**06 24 46.5**	**+1.2**
IZM	**Izmir**	**0.59**	**70**	*i* PG	**Pg**	**06 24 45.9**	**-0.3**
IZM				*i* SG	**Sg**	**06 24 54.9**	**+0.8**
KDAG	**Bornova**	**0.59**	**70**	*i* P	**Pg**	**06 24 45.4**	**-0.9**
KDAG				*i* S	**Sg**	**06 24 53.6**	**-0.6**
PRK	**Paraskevi**	**1.07**	**348**	*e*PN	**Pn**	**06 24 55.9**	**+0.4**
PRK				*e*SN	**Sn**	**06 25 10.8**	**+0.2**
AYDN	**Tasoluk**	**1.18**	**117**	*i* P	**Pb**	**06 24 57.6**	**+1.1**
AYDN				*i* S	**Sb**	**06 25 13.4**	**+1.6**
AKS	**Akhisar**	**1.19**	**55**	PN	**Pn**	**06 24 57.3**	**0.0**
BODT	**Bodrum**	**1.29**	**152**	PN	**Pn**	**06 24 57.3**	**-1.4**
MLSB	**Milas**	**1.32**	**133**	PN	**Pn**	**06 24 57.3**	**-1.9**
BDRM	**Kayabasi**	**1.34**	**148**	*i* P	**Pg**	**06 25 02.1**	**+1.0**
BDRM				*i* S	**Sg**	**06 25 19.1**	**+0.2**
APE	**Apeiranthos**	**1.40**	**216**	PN	**Pn**	**06 25 00.3**	**0.0**
APE	**Apeiranthos**	**1.40**	**216**	*e*PN	**Pn**	**06 25 00.1**	**-0.2**
MANT	**Manisa**	**1.60**	**79**	*i* P	**Pg**	**06 25 05.2**	**-1.2**
MANT				*i* S	**Sg**	**06 25 26.3**	**-1.4**
YER	**Yerkesik**	**1.73**	**127**	PN	**Pn**	**06 25 03.2**	**-1.9**
BALB	**Balikesir**	**1.77**	**35**	*e*PN	**Pn**	**06 25 06.7**	**+1.1**
DNZL	**Cakiroluk**	**2.03**	**104**	*i* P	**Pg**	**06 25 14.4**	**-0.6**
DNZL				*i* S	**Sg**	**06 25 43.4**	**+1.3**
ORLT	**Orhaneli**	**2.59**	**44**	*e*PN	**Pn**	**06 25 18.4**	**+1.1**
ULDT	**Uludag**	**2.79**	**45**	*i* P	**Pg**	**06 25 26.6**	**-3.5**
ULDT				*i* S	**Sg**	**06 26 00.8**	**-6.4**

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*IDC **18** 06:38:13.3±1.7, 3.09N×127.57E, mb4.0/4, mb1 4.2/4, mb1mx3.9/17, mbtmp4.0/4, Error ellipse: s-maj=95.5km s-min=23.2km az=68.0*

*NEIC **18** 06:38:25.2±1.1, 2.94N×127.49E, h100^{km}, mb4.2/1, Error ellipse: s-maj=61.5km s-min=15.7km az=69.0*

ISC 18 06:38:16.5±1.6, 3.1N±0.3×127.5E±0.6, h33^{km}, n8, σ0^{s}50/7, mb4.1/5, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**16.44**	**163**	*e*P	Px	06 42 28.6	
	15nm,1.5s						
FITZ	**Fitzroy Crossi**	**21.12**	**185**	P	**P**	**06 43 00.6**	**-0.2**
	2.2nm,0.6s,mb3.7,baz=29,slow=10,SNR=2.3						
WRAB	**Tennant Creek**	**23.84**	**164**	*e*P	**P**	**06 43 28.2**	**+0.4**
	6.1nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	**23.85**	**164**	P	**P**	**06 43 28.3**	**+0.4**
	2.8nm,0.3s,mb4.1,baz=343,slow=10,SNR=54						
WB2	**Warramunga Arr**	**23.85**	**164**	*e*P	**P**	**06 43 28.2**	**+0.3**
STKA	**Stephens Creek**	**37.26**	**160**	P	**P**	**06 45 26.1**	**-1.1**
	2.3nm,0.3s,mb4.5,baz=351,slow=7.6,SNR=12						
STKA	**Stephens Creek**	**37.26**	**160**	*e*P	**P**	**06 45 26.2**	**-1.0**
MKAR	**Makanchi Array**	**58.51**	**325**	P	**P**	**06 48 12.0**	**+0.1**
	0.4nm,0.4s,mb3.8,baz=117,slow=8.3,SNR=8.0						

MAN 18 06:48:12.2, 15.18N×123.34E, h10^{km}, mb4.5, ML3.4, MS3.2, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**1.42**	**252**	*e*P	Pn	06 48 41.0	+2.9
POLP				*e*S	Sb	06 48 59.7	+3.3
PVCP	**Virac**	**1.77**	**153**	*e*P	Pn	06 48 42.5	-0.6
PVCP				*e*S	Sn	06 49 02.8	-2.9
PCPH	**Palayan**	**2.19**	**280**	*e*P	Pn	06 49 06.0	+17
BOAC	**Boac**	**2.24**	**220**	*e*P	Pn	06 48 49.3	-0.6
BOAC				*e*S	Sn	06 49 19.3	+1.5
OTRP	**Odiongan**	**3.08**	**205**	*e*P	Pn	06 49 08.7	+6.9
APYP	**Conner**	**3.34**	**323**	*e*P	Pn	06 49 05.2	-0.3
APYP				*e*S	Sn	06 49 58.7	+13
SJMP	**San Jose**	**3.46**	**219**	*e*P	Pn	06 49 07.5	+0.3

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*IDC **18** 07:07:00.8±0.8, 52.66S×18.47E, mb4.0/6, mb1 4.1/6, mb1mx4.0/13, mbtmp4.0/6, MS3.6/7, Ms1 3.5/7, ms1mx3.5/12, Error ellipse: s-maj=38.0km s-min=23.2km az=56.0*

*NEIC **18** 07:07:02.1±0.5, 52.63S×18.59E, h10^{km}, mb4.4/7, Error ellipse: s-maj=17.8km s-min=10.4km az=87.0*

ISC 18 07:07:00.9±0.6, 52.60S±0.09×18.6E±0.2, h10^{km}, n39, σ1^{s}03/27, mb4.2/10, MS3.5/7, 4C-2D, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	**Syowa Base**	**19.20**	**157**	⇓P	**P**	**07 11 23.8**	**-3.3**
SYO	**Syowa Base**	**19.20**	**157**	⇓*e*P	**P**	**07 11 23.8**	**-3.3**
SUR	**Sutherland**	**20.27**	**5**	P	**P**	**07 11 39.9**	**+0.6**
	13nm,0.9s						
SNAA	**Sanae**	**21.35**	**199**	⇑*i*	**P**	**07 11 53.5**	**+3.5**
SNAA	**Sanae**	**21.35**	**199**	*e*	**P**	**07 11 55.6**	**+5.6**
SNAA	**Sanae**	**21.35**	**199**	*e*	**P**	**07 12 01.9**	**+12**
SNAA	**Sanae**	**21.35**	**199**	P	**P**	**07 11 48.1**	**-2.0**
	4.0nm,0.9s,mb3.7,baz=16,slow=14,SNR=11						
SNAA				LR	LR	07 17 50.8	
	comp=Z,58nm,20.2s,MS3.0,baz=182,slow=31						
SNAA	**Sanae**	**21.35**	**199**	*e*P	**P**	**07 11 49.7**	**-0.4**
	13nm,1.0s,mb4.2						
VNA2	**Neumayer--Watz**	**21.77**	**203**	*e*	**P**	**07 11 56.6**	**+2.3**
VNA2	**Neumayer--Watz**	**21.77**	**203**	*e*	**P**	**07 12 02.2**	**+7.9**

VNA2	Neumayer--Watz	21.77	203	⇑*i*P	P	07 11 54.1	-0.2
VNA2				*e*		07 11 56.6	
VNA2				*e*		07 12 02.2	
VNA1	Neumayer--Stat	21.79	204	*e*	P	07 11 57.0	+2.5
VNA1	Neumayer--Stat	21.79	204	*e*	P	07 12 02.4	+7.9
VNA1	Neumayer--Stat	21.79	204	⇑*i*P	P	07 11 54.7	+0.2
VNA1				*e*		07 11 57.0	
VNA1				*e*		07 12 02.4	
VNA3	Neumayer Olymp	22.53	204	*e*	P	07 12 01.8	+0.1
VNA3	Neumayer Olymp	22.53	204	*e*	P	07 12 08.7	+7.0
VNA3	Neumayer Olymp	22.53	204	⇑*i*P	P	07 11 59.7	-2.0
VNA3				*e*		07 12 01.8	
VNA3				*e*		07 12 08.7	
BOSA	Boshof	24.47	14	LR	LR	07 20 08.1	
	comp=Z,193nm,19.9s,MS3.6,baz=182,slow=32						
BOSA	Boshof	24.47	14	P	P	07 12 26.9	+5.8
	17nm,1.3s,mb4.3						
MAW	Mawson	25.94	142	P	P	07 12 34.6	+0.1
	5.3nm,0.9s,mb4.1,baz=277,slow=10,SNR=16						
MAW				LR	LR	07 20 40.4	
	comp=Z,73nm,20.5s,MS3.2,baz=249,slow=32						
LBTB	Lobatse	28.06	14	LR	LR	07 22 15.5	
	comp=Z,162nm,19.1s,MS3.6,baz=158,slow=32						
QSPA	South Pole Qui	37.63	180	*e*P	P	07 14 17.2	+0.2
	16nm,0.8s,mb4.8						
VNDA	Vanda	48.15	170	*e*P	P	07 15 42.2	-0.2
	5.9nm,1.2s,mb4.5						
KMBO	Kilima Mbogo	53.62	23	LR	LR	07 36 34.7	
	comp=Z,75nm,21.1s,MS3.7,baz=89,slow=33						
DBIC	Dimbokro	62.33	334	P	P	07 17 24.3	-1.5
	2.3nm,0.6s,mb4.5,baz=163,slow=9.2,SNR=4.9						
DBIC				LR	LR	07 37 39.5	
	comp=Z,57nm,20.1s,MS3.7,baz=69,slow=30						
LPAZ	La Paz	75.26	262	P	P	07 18 45.6	-0.1
	1.0nm,0.9s,mb3.8,baz=74,slow=5.1,SNR=4.4						
LPAZ				LR	LR	07 47 21.8	
	comp=Z,34nm,18.8s,MS3.7,baz=63,slow=32						
LPAZ	La Paz	75.26	262	*e*P	P	07 18 46.9	+1.2
	2.8nm,1.2s,mb4.1						
SAML	Samuel	77.95	271	*e*P	P	07 19 00.7	-0.2
	3.9nm,1.0s,mb4.3						
STKA	Stephens Creek	82.31	134	P	P	07 19 23.5	-0.3
	2.1nm,0.8s,mb4.1,baz=217,slow=7.2,SNR=3.7						
WRA	Warramunga Arr	88.89	122	P	P	07 19 57.6	+1.0
	0.5nm,0.9s,mb3.8,baz=210,slow=4.4,SNR=5.1						
SONM	Songino Array	124.74	55	PKP	PKPdf	07 26 00.9	-2.3
	0.5nm,0.7s,baz=174,slow=3.2,SNR=3.9						
BW06	Boulder Array	144.44	275	*e*PKPdf	PKPdf	07 26 36.2	-3.4
PDAR	Pinedale Array	144.44	275	PKP	PKPdf	07 26 36.1	-3.5
	1.9nm,1.0s,baz=117,slow=4.6,SNR=11						
DUG	Dugway	144.92	269	*e*PKPdf	PKPdf	07 26 38.4	-2.2
HWUT	Hardware Ranch	145.00	272	*e*PKPdf	PKPdf	07 26 38.3	-2.3
ELK	Elko	146.73	268	*e*PKPbc	PKPbc	07 26 44.3	+2.3
NVAR	Mina Array Bea	147.16	262	PKPbc	PKPdf	07 26 45.6	+1.2
	1.2nm,0.8s,baz=139,slow=5.0,SNR=11						
MSO	Missoula	149.22	279	*e*PKPbc	PKPdf	07 26 50.6	+3.2
ILAR	Eielson Array	165.70	334	PKPab	PKPab	07 28 06.0	+0.7
	0.7nm,0.8s,baz=12,slow=4.4,SNR=5.3						

MAN 18 07:28:10.2, 14.76N×123.31E, h39^{km}, mb4.2, ML3.0, MS2.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	Polilio Island	1.32	269	*e*P	P	07 28 32.7	+0.2
POLP				*e*S	S	07 28 50.6	+1.4
PVCP	Virac	1.42	144	*e*P	P	07 28 34.2	+0.3
PVCP				*e*S	S	07 28 53.5	+1.8
AUQP	San Andres	1.55	203	*e*P	P	07 28 42.6	+6.7
AUQP				*e*S	S	07 29 01.6	+6.6
BOAC	Boac	1.92	228	*e*P	P	07 28 44.1	+3.1
BOAC				*e*S	S	07 29 09.7	+5.6
BALP	Baler	1.93	301	*e*P	P	07 28 41.5	+0.2
BALP				*e*S	S	07 29 05.9	+1.5

SKHL 18 07:38:47.0±1.6, 54.10N×142.20E, h10^{km}, mb4.3/1, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKH	Okha	0.70	141	*e*Pg	Pg	07 39 00.5	-0.6
OKH				pP		07 39 03.0	
OKH				*i* Sg	Sg	07 39 09.9	-0.7
OKH				A		07 39 10.2	
	2µm,0.5s						
NKL	Nikolayevsk	1.31	224	*e*Pg	Pg	07 39 13.0	-0.3
NKL				AMB	AMB	07 39 14.0	
	90nm,0.3s						
NKL				pP		07 39 15.0	
NKL				*e*Sg	Sg	07 39 31.1	+0.3
NKL				A		07 39 33.0	
	180nm,0.3s						
EKMR	Ekimchan	5.61	263	*e*Sg	Sg	07 41 54.5	+0.8
EKMR				A		07 42 10.0	
	8.0nm,0.5s						

*IDC **18** 07:46:41.2±1.6, 14.54N×123.18E, mb3.8/3, mb1 3.9/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=156.7km s-min=25.3km az=68.0*

*MAN **18** 07:46:42.6, 14.79N×123.32E, h21^{km}, mb4.7, ML3.6, MS3.5*

ISC 18 07:46:41.3±0.6, 14.82N±0.03×123.36E±0.05, h10^{km}, n19, σ1^{s}18/27, mb3.9/3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	Guinayangan	1.27	225	⇑*e*P	Pb	07 47 03.4	-1.4
GQP				*e*S	Sb	07 47 20.6	-0.4
POLP	Polilio Island	1.38	267	*e*P	Pn	07 47 05.9	-0.7
POLP				*e*S	Sb	07 47 23.6	-0.7
PVCP	Virac	1.43	148	*e*P	Pn	07 47 07.4	-0.1
PVCP				*e*S	Sb	07 47 26.7	+0.8
AUQP	San Andres	1.63	204	*e*P	Pn	07 47 08.5	-1.7
AUQP				*e*S	Sn	07 47 35.5	+4.2
BALP	Baler	1.96	298	*e*P	Pn	07 47 14.7	-0.2
BALP				*e*S	Sn	07 47 39.5	-0.2
BOAC	Boac	2.00	228	*e*P	Pn	07 47 16.7	+1.2
BOAC				*e*S	Sn	07 47 42.3	+1.5
PCPH	Palayan	2.31	289	*e*P	Pn	07 47 20.2	+0.2
TGY	Tagaytay City	2.46	254	*e*P	Pn	07 47 26.3	+4.2
CAUP	Cauayan	2.58	325	*e*P	Pn	07 47 21.4	-2.6
CAUP				*e*S	Sn	07 47 55.3	-0.4
PGP	Puerto Galera	2.68	241	*e*P	Pn	07 47 28.8	+3.6
OTRP	Odiongan	2.77	208	*e*P	Pn	07 47 26.7	+0.2
SJMP	San Jose	3.20	223	*e*P	Pn	07 47 32.0	-0.7
LUBP	Lubang	3.21	251	*e*P	Pn	07 47 35.0	+2.2
SCZP	Santa Cruz	3.46	286	*e*P	Pn	07 47 47.0	+11
APYP	Conner	3.65	326	*e*P	Pn	07 47 39.0	-0.1
APYP				*e*S	Sn	07 48 24.2	+1.5
ABRA	Dolores	3.80	318	*e*P	Pn	07 47 41.0	-0.2
SONM	Songino Array	35.80	340	P	P	07 53 44.0	+1.3
	2.3nm,0.8s,mb4.1,baz=155,slow=8.8,SNR=12						
WRA	Warramunga Arr	36.19	162	P	P	07 53 43.9	-2.3
	0.5nm,0.5s,mb3.7,baz=342,slow=9.1,SNR=7.1						
MKAR	Makanchi Array	46.72	322	P	P	07 55 12.8	+0.5
	0.9nm,0.8s,mb3.7,baz=120,slow=7.0,SNR=5.9						

*UCR **18** 08:01:39.6, 8.96N×84.23W, h21^{km}, MD4.6, MW4.4*

*NEIC **18** 08:01:40.7, 8.94N×84.26W, h21^{km}, MD4.7(CASC), After CASC.*

CASC 18 08:01:40.8±1.9, 9.01N×84.18W, h4^{km}±7^{km}, MD4.1, mb4.7(NEIC), 12C-9D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUS	Buena Vista	0.69	37	⇓*i*P	Pg	08 01 54.6	+0.2
LCR2	La Lucha 2	0.75	13	⇓*e*P	Pg	08 01 55.7	-0.1
URSC	Urasca	0.91	26	*e*P	Pb	08 01 58.5	-0.3
URSC	Urasca	0.91	26	*e*P	Pb	08 01 57.1	-1.8
SJS	Escuela Geolog	0.94	7	⇑*e*P	Pb	08 01 58.9	-0.4
SJS				*e*S	Sb	08 02 12.8	+1.0
SJS	Escuela Geolog	0.94	7	⇑*e*P	Pb	08 01 58.8	-0.5
SJS				*e*S	Sb	08 02 13.0	+1.2
PRS1	Puriscal	0.98	352	⇓*e*P	Pb	08 01 58.0	-2.0
PRS1				*e*S	Sb	08 02 13.6	+0.5
IRZ2	Volcan Irazu 2	1.00	16	⇓*e*P	Pb	08 02 00.2	-0.1
ICR	Volcan Irazu	1.03	19	*e*P	Pb	08 02 01.3	+0.5
ICR				*e*S	Sb	08 02 16.3	+1.8
ICR	Volcan Irazu	1.03	19	⇓*e*P	Pb	08 02 01.3	+0.5
ICR				*e*S	Sb	08 02 16.9	+2.4
CGA2	Cerro Gallo 2	1.04	344	⇑*e*P	Pb	08 02 00.6	-0.5
CGA2				*e*S	Sb	08 02 14.8	-0.1
CGA2	Cerro Gallo 2	1.04	344	⇑*e*P	Pb	08 02 00.6	-0.5
CGA2				*e*S	Sb	08 02 15.6	+0.6
ACR	Cerro Adams	1.06	109	⇑*e*P	Pb	08 02 00.7	-0.6
ACR				*e*S	Sb	08 02 15.7	+0.4
ACR	Cerro Adams	1.06	109	⇑*e*P	Pb	08 02 00.7	-0.6
ACR				*e*S	Sb	08 02 15.7	+0.3
EPA	Esparza	1.06	337	⇓*e*P	Pb	08 02 00.5	-0.9
PICA	Picada	1.08	21	⇑*e*P	Pb	08 02 02.4	+0.6
VTU	Volcan Turrial	1.09	22	*e*P	Pb	08 02 01.9	+0.1
CAO	Cobano	1.15	307	⇓*e*P	Pb	08 02 00.9	-2.0
POA2	Poas 2	1.17	356	⇑*i*P	Pb	08 02 03.1	-0.1
VPS2	Volcan Poas 2	1.18	357	⇓*e*P	Pb	08 02 03.2	-0.1
VPS2				*e*S	Sb	08 02 21.0	+2.1
VPS2	Volcan Poas 2	1.18	357	⇓*e*P	Pb	08 02 03.2	-0.1
VPS2				*e*S	Sb	08 02 21.4	+2.5
CTCR	Cotoan	1.41	94	⇑*e*P	Pb	08 02 06.3	-0.9
BRU2	Volcan	1.48	98	*e*P	Pn	08 02 07.7	-0.7
BRU2	Volcan	1.48	98	⇑*e*P	Pn	08 02 07.7	-0.7
BRU2				*e*S	Sb	08 02 29.6	+1.9
JTS	JuntasAbangare	1.49	329	⇑*e*P	Pn	08 02 06.3	-2.1
JTS	JuntasAbangare	1.49	329	*e*Pn	Pn	08 02 06.0	-2.4
FORC	Fortuna	1.54	342	*e*P	Pn	08 02 06.8	-2.3
FORC				*i* P		08 02 08.1	
FORC	Fortuna	1.54	342	*e*P	Pn	08 02 07.2	-2.0
FORC				*e*S	Sb	08 02 28.5	-0.7
VACR	Volcan Arenal	1.54	341	⇑*e*P	Pn	08 02 08.5	-0.7
VCR	Vista de Mar	1.82	308	*e*P	Pn	08 02 11.8	-1.4
VCR	Vista de Mar	1.82	308	*e*P	Pn	08 02 10.2	-2.9
AZU2	Pedas	4.36	109	*e*P	Pn	08 02 46.6	-2.8

*ISK **18** 08:42:44.6, 38.11N×26.68E, h5^{km}, MD2.9*

*ATH **18** 08:42:45.6, 38.18N×26.53E, h10^{km}, MD3.1/3*

*CSEM **18** 08:42:45.7±0.2, 38.15N×26.75E, h10^{km}, MD2.9, Error ellipse: s-maj=5.7km s-min=3.5km az=142.0*

ISC 18 08:42:45.5±0.6, 38.20N±0.03×26.62E±0.05, h10^{km}, n13, σ1^{s}19/20, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.17	353	*i* P	Pg	08 42 47.5	-1.8
URLA				*i* S	Sg	08 42 50.4	-1.4
BLCB	Balcova	0.38	60	PG	Pg	08 42 52.5	-0.9
SMG	Samos	0.52	160	*e*PB	Pg	08 42 55.7	-0.3
IZM	Izmir	0.55	68	*i* PG	Pg	08 42 56.0	-0.5
IZM				*i* SG	Sg	08 43 03.8	-0.1
KDAG	Bornova	0.55	68	*i* P	Pg	08 42 55.0	-1.7
KDAG				*i* S	Sg	08 43 03.1	-0.9
PRK	Paraskevi	1.08	346	*e*Pb	Pb	08 43 06.1	+0.2
PRK				*e*Sb	Sb	08 43 22.2	+2.3
AYVA	Ayvalik	1.11	3	*i* P	Pb	08 43 06.3	-0.1
AYVA				*i* S	Sb	08 43 22.3	+1.6
AKS	Akhisar	1.16	54	*e*PN	Pn	08 43 07.7	-0.1
BODT	Bodrum	1.26	154	*e*PN	Pn	08 43 07.2	-2.0
BDRM	Kayabasi	1.30	150	*i* P	Pb	08 43 11.0	+1.3
BDRM				*i* S	Sb	08 43 27.5	+1.2
APE	Apeiranthos	1.42	218	*e*PB	Pb	08 43 11.3	-0.3
MANT	Manisa	1.55	78	*i* P	Pn	08 43 14.3	+0.9
MANT				*i* S	Sb	08 43 35.2	+1.7
BALB	Balikesir	1.75	34	*e*PN	Pn	08 43 17.3	+1.2

*IDC **18** 09:02:02.6±4.8, 0.55N×126.35E, h83^{km}±43^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.8/17, mbtmp4.2/7, ML3.8/1, Error ellipse: s-maj=83.2km s-min=11.2km az=68.0*

*NEIC **18** 09:02:03.9±0.7, 0.58N×126.48E, h100^{km}, mb4.4/1, Error ellipse: s-maj=55.1km s-min=9.9km az=70.0*

ISC 18 09:01:51.2±3.8, 0.7N±0.2×126.5E±0.4, h4^{km}±23^{km}, n10, σ0^{s}50/11, mb4.3/7, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	14.60	156	*e*P	Px	09 05 47.5	
	5.8nm,0.6s						
FITZ	Fitzroy Crossi	18.74	183	P	P	09 06 13.6	+0.3
	0.3nm,0.3s,baz=14,slow=7.1,SNR=2.8						
WRAB	Tennant Creek	21.93	160	*e*P	P	09 06 47.5	-0.1
	6.1nm,0.3s,mb4.5						
WRA	Warramunga Arr	21.94	160	P	P	09 06 47.7	0.0
	16nm,0.5s,mb4.8,baz=340,slow=10.0,SNR=155						
WRA				S	S	09 10 45.8	+0.3
	0.7nm,0.9s,baz=332,slow=20,SNR=4.8						
WB2	Warramunga Arr	21.94	160	*e*P	P	09 06 47.6	-0.2
WB2				*e*S	S	09 10 45.4	-0.2
STKA	Stephens Creek	35.45	158	P	P	09 08 50.5	-0.2
	6.1nm,0.6s,mb4.7,baz=334,slow=8.1,SNR=20						
SONM	Songino Array	50.05	342	P	P	09 10 50.1	+1.0
	0.3nm,0.4s,mb3.7,baz=172,slow=10,SNR=2.8						
MKAR	Makanchi Array	59.89	326	P	P	09 11 59.9	-0.7
	1.2nm,0.3s,mb4.3,baz=121,slow=7.7,SNR=27						
MKAR				PcP	PcP	09 12 45.8	-1.0
	0.5nm,0.5s,baz=110,slow=4.2,SNR=3.5						
BVAR	Borovoye Array	69.70	328	P	P	09 13 03.4	-0.7
	3.0nm,1.0s,mb4.2,baz=135,slow=6.3,SNR=7.6						
AKTO	Aktyubinsk	75.86	322	P	P	09 13 40.9	+0.4
	1.2nm,0.4s,mb4.1,baz=98,slow=7.7,SNR=6.1						

*NEIC **18** 09:20:02.0, 30.85S×71.71W, h24^{km}, ML3.6(GUC), After GUC.*

GUC 18 09:20:02.0±0.7, 30.85S×71.71W, h24^{km}±3^{km}, MD4.0, ML3.6, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	0.68	118	⇓*i*P	Pb	09 20 15.1	-0.1
CMCH				*i* S	Sb	09 20 24.7	+0.4
CMCH				AMP		09 20 26.0	
	comp=E,7µm,0.3s						
ILCH	Illapel	0.91	150	⇑*i*P	Pb	09 20 18.3	-0.6
ILCH				*i* S	Sb	09 20 30.6	0.0
ILCH				AMP		09 20 33.0	
	comp=N,2µm,0.2s						
LSCH	La Serena	1.02	23	⇑*i*P	Pb	09 20 19.9	-1.0
LSCH				*i* S	Sb	09 20 33.8	-0.1
LSCH				AMP		09 20 37.6	
	comp=N,846nm,0.5s						
CHNG	Los Chungos	1.04	170	*e*P	Pn	09 20 20.1	-1.2
CHNG				*i* S	Sb	09 20 34.5	-0.1
CHNG				AMP		09 20 37.6	
	comp=E,2µm,0.6s						
JACH	Jahuel	2.06	153	*e*P	Pn	09 20 36.4	+0.7
JACH				*i* S	Sn	09 21 02.2	+1.4
ROCH	El Roble	2.19	165	*e*P	Pn	09 20 38.4	+0.6
PEL	Peldehue	2.44	159	*e*P	Pn	09 20 41.6	+0.4
PEL				*i* S	Sn	09 21 12.1	+1.4
PEL				AMP		09 21 17.7	
	comp=E,889nm,0.4s						
LCCH	Las Cruces	2.62	178	*e*P	Pn	09 20 44.5	+0.7
FCH	Farellones	2.74	154	*e*P	Pn	09 20 46.4	+0.8
FCH				*i* S	Sn	09 21 20.8	+2.4
FCH				AMP		09 21 29.6	
	comp=E,299nm,0.4s						
TACH	Talagante	2.87	167	*e*P	Pn	09 20 47.4	+0.1
TACH				*i* S	Sn	09 21 21.8	+0.4
CHCH	Chadas Angostu	3.20	164	*e*P	Pn	09 20 52.6	+0.6
LMEL	Las Melosas	3.25	157	*i* S	Sn	09 21 31.6	+0.6
LMEL				AMP		09 21 45.5	
	comp=N,314nm,0.5s						
SFDO	San Fernando	3.80	171	*e*P	Pn	09 21 00.0	-0.5

*NIED **18** 09:30:00, 43.20N×145.40E, h101^{km}, Mw3.9 Best double couple: M$_0$7.75×10^{14} NP1:φ$_s$83°, δ80°, λ74°. NP2:φ$_s$322°, δ19°, λ147°.*

*MOS **18** 09:30:26.9±0.7, 43.33N×145.16E, h102^{km}, mb4.3/13, Error ellipse: s-maj=14.6km s-min=10.8km az=101.4*

*BJI **18** 09:30:27.1, 43.54N×145.04E, h78^{km}, mB4.8, mb4.5, Ms3.8, Msz3.4*

*NEIC **18** 09:30:27.8±1.2, 43.29N×145.24E, h98^{km}±13^{km}, mb4.2/13, Error ellipse: s-maj=10.9km s-min=7.0km az=177.0*

NEIC Recorded [2 JMA] in eastern Hokkaido.

*JMA **18** 09:30:29.2±0.1, 43.25N×145.36E, h104^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1:φ$_s$307°, δ26°, λ132°. NP2:φ$_s$82°, δ71°, λ72°. Principal axes: T Plg60°, Azm326°; N Plg17°, Azm88°; P Plg24°, Azm186°;*

JMA Felt II J1.

*IDC **18** 09:30:31.0±1.7, 43.40N×145.26E, h122^{km}±13^{km}, mb3.9/16, mb1 4.1/17, mb1mx4.0/24, mbtmp4.3/17 Error ellipse: s-maj=20.5km s-min=13.7km az=177.0*

ISC 18 09:30:27.6±0.4, 43.25N±0.05×145.35E±0.05, h114^{km}±2^{km}, n67, σ0^{s}84/79, mb4.2/32, 5C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.31	67	⇑P	P	09 30 44.2	+0.3
NEM2				*e*S	S	09 30 55.3	-0.9
JAK	Akkeshi	0.54	243	⇑P	P	09 30 45.8	+0.6
JAK				*e*S	S	09 30 58.2	-0.3
JNK	Nakash	0.57	307	⇓P	P	09 30 45.7	+0.3
JNK				*e*S	S	09 30 58.3	-0.6
JRA	Rausu	0.71	347	⇓P	P	09 30 47.2	+0.7
JRA				*e*S	S	09 31 00.8	0.0
YUK	Yuzh-Kuril'sk	0.87	25	κ *i*PN	P	09 30 47.0	-1.1
YUK				*i* S	S	09 31 01.9	-1.5
YUK				pmax	pmax		
	comp=Z,14µm,0.3s						
YUK				pmax	pmax		
	comp=N,2µm,0.3s						
YUK				pmax	pmax		
	comp=E,3µm,0.3s						
YUK				pmax	pmax		
	comp=N,2µm,0.8s						
YUK				pmax	pmax		
	comp=Z,10µm,0.8s						
YUK				pmax	pmax		
	comp=E,2µm,0.3s						
YUK				smax			
	comp=N,20µm,1.0s						
YUK				smax			
	comp=E,55µm,0.8s						
YUK				smax			
	comp=N,13µm,0.5s						
YUK				smax			
	comp=E,21µm,0.5s						
JAR	Ashorobuto	1.15	273	⇑P	P	09 30 51.8	+0.8
JAR				*e*S	S	09 31 08.6	0.0
JOB	Onbets	1.16	253	⇑P	P	09 30 52.0	+0.9
JOB				*e*S	S	09 31 08.8	+0.1
JTKR	Abashiri--Toko	1.27	305	⇓P	P	09 30 53.1	+0.7
JTKR				*e*S	S	09 31 11.1	+0.1
JCH	Churui	1.59	247	⇑P	P	09 30 56.9	+0.8
JCH				*e*S	S	09 31 17.0	-0.5
JMP	Maruseppu	1.63	299	⇓P	P	09 30 57.4	+0.8
JMP				*e*S	S	09 31 18.6	+0.1
ASAJ	Asahikawa	2.18	295	P	P	09 31 05.2	+1.6
	comp=E,33nm,0.3s,baz=113,slow=10,SNR=151						
ASAJ				S	S	09 31 31.8	+1.2
	comp=E,14nm,0.3s,baz=84,slow=34,SNR=16						
MAJO	Matsushiro	8.65	222	*e*Pn	P	09 32 29.9	-1.3
MJAR	Matsushiro Arr	8.65	222	P	P	09 32 30.3	-0.9
	comp=E,1.0nm,0.3s,baz=35,slow=12,SNR=9.5						
HIA	Hailar	18.65	298	P	P	09 34 36.4	-2.4
	comp=E,2.5nm,0.4s						
HIA	Hailar	18.65	298	P	P	09 34 36.4	-2.4
HIA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SSE	Sheshan	22.66	246	P	P	09 35 18.1	-1.6
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.6						
SSE				AMB	AMB		
	comp=Z,150nm,5.9s						
SSE	Sheshan	22.66	246	P	P	09 35 18.1	-1.6
	comp=Z,20nm,0.7s,mb4.6						
NJ2	Nanjing	23.67	251	*e*P	P	09 35 35.0	+5.7
NJ2				S	S	09 39 34.0	+1.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,260nm,5.4s						
NJ2				LR	LR		
	comp=N,350nm,16.7s						
NJ2				LR	LR		
	comp=E,380nm,18.6s						
NJ2				LR	LR		
	comp=Z,150nm,25.8s						
ULN	Ulaanbaatar	27.02	293	*e*P	P	09 36 00.6	+0.1
	comp=Z,3.6nm,0.8s,mb4.0						
ULN	Ulaanbaatar	27.02	293	*e*P	P	09 36 00.6	0.0
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
SONM	Songino Array	27.46	293	P	P	09 36 04.9	+0.3
	comp=Z,6.3nm,0.6s,mb4.3,baz=84,slow=8.3,SNR=47						
ZAK	Zakamensk	29.34	299	*e*P	P	09 36 17.9	-3.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
TIXI	Tiksi	29.60	350	*e*P	P	09 36 15.1	-8.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5						
IMA2	Indian Mountai	39.83	34	*e*P	P	09 37 51.0	+0.3
ZAL	Zalesovo	40.27	307	P	P	09 37 54.4	-0.1
	comp=Z,2.9nm,0.3s,mb4.6,baz=34,slow=6.8,SNR=11						
ZAL	Zalesovo	40.27	307	P	P	09 37 54.4	-0.1
KDAK	Kodiak Island	40.55	47	P	P	09 37 56.7	-0.1
	comp=Z,3.8nm,0.8s,mb4.3,baz=26,slow=21,SNR=6.5						
KDAK	Kodiak Island	40.55	47	P	P	09 37 56.7	-0.1
COLA	College	42.25	36	*e*P	P	09 38 11.7	+1.2
	comp=Z,5.5nm,0.7s,mb4.4						
COLA	College	42.25	36	*e*P	P	09 38 11.7	+1.2
COLA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
ILAR	Eielson Array	42.67	36	P	P	09 38 14.5	+0.6
	comp=Z,2.4nm,0.7s,mb4.1,baz=252,slow=5.4,SNR=39						
MKAR	Makanchi Array	43.65	297	P	P	09 38 22.4	+0.3
	comp=Z,2.8nm,0.5s,mb4.2,baz=82,slow=8.9,SNR=28						
MKAR	Makanchi Array	43.65	297	P	P	09 38 22.4	+0.3
KURK	Kurchatov	44.72	304	*e*P	P	09 38 30.5	-0.2
	comp=Z,6.3nm,0.6s,mb4.5						
KURK	Kurchatov	44.72	304	*e*P	P	09 38 30.5	-0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
INK	Inuvik	47.50	30	P	P	09 38 52.5	+0.1
	comp=Z,1.9nm,0.4s,mb4.2,baz=283,slow=5.8,SNR=39						
INK	Inuvik	47.50	30	*e*P	P	09 38 52.4	0.0
	comp=Z,2.1nm,0.4s,mb4.2						
INK	Inuvik	47.50	30	*e*P	P	09 38 52.4	+0.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CHKZ	Chkalovo	48.45	310	*e*P	P	09 38 59.6	-0.3
	comp=Z,3.3nm,0.6s,mb4.3						
CHKZ	Chkalovo	48.45	310	*e*P	P	09 38 59.6	-0.3
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
BRVK	Borovoye	48.85	309	*e*P	P	09 39 02.8	-0.2
	comp=Z,1.3nm,0.4s,mb4.2						
BRVK	Borovoye	48.85	309	*e*P	P	09 39 02.8	-0.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
AAK	Ala-Archa	50.39	295	P	P	09 39 13.9	-1.1
	comp=Z,1.0nm,0.4s,mb4.1						
AAK	Ala-Archa	50.39	295	P	P	09 39 13.9	-1.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.1						
ARU	Arti	53.81	317	⇓*i*P	P	09 39 38.7	-1.6
ARU				*e*		09 41 37.8	
ARU				*e*S	S	09 47 11.1	+6.8
ARU				*e*SS	SS	09 50 51.5	+5.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.5						
AKTO	Aktyubinsk	56.87	310	P	P	09 40 01.6	-0.8
	comp=Z,1.7nm,0.5s,mb4.3,baz=72,slow=9.9,SNR=7.3						
AKTO	Aktyubinsk	56.87	310	P	P	09 40 01.6	-0.8
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
ARCES	ARCESS Array B	59.26	339	P	P	09 40 17.8	-1.0
	comp=Z,2.2nm,0.7s,mb4.3,baz=39,slow=7.8,SNR=7.3						
WRA	Warramunga Arr	63.68	192	P	P	09 40 50.2	+1.1
	comp=Z,0.4nm,0.8s,mb3.3,baz=10,slow=6.8,SNR=4.3						
KAF	Kangasniemi	64.17	333	*e*p	P	09 40 51.0	-0.6
SUMG	Summit	64.45	1	*e*P	P	09 40 53.5	+0.2
	comp=Z,5.4nm,0.7s,mb4.5						
FINES	FINESS Array B	64.72	332	P	P	09 40 54.5	-0.7
	comp=Z,7.3nm,0.5s,mb4.8,baz=47,slow=8.0,SNR=35						
FINES	FINESS Array B	64.72	332	P	P	09 40 54.5	-0.7
BOZ	Bozeman (W)	68.22	47	*e*P	P	09 41 18.2	+0.7
	comp=Z,1.4nm,0.7s,mb3.9						
BOZ	Bozeman (W)	68.22	47	*e*P	P	09 41 18.2	+0.6
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
NVAR	Mina Array Bea	68.96	57	P	P	09 41 23.3	+1.1
	comp=Z,0.8nm,0.7s,mb3.7,baz=309,slow=4.7,SNR=9.6						
KIV	Kislovodsk	69.11	311	*e*P	P	09 41 23.2	+0.1
KIV				pmax	pmax		

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	comp=Z,12nm,1.0s,mb4.7						
NB2	NORSAR Subarra	69.59	338	P	P	09 41 25.1	-0.6
	comp=Z,3.8nm,0.6s,mb4.4,baz=32,slow=6.5						
NOA	NORSAR Array B	69.59	338	P	P	09 41 25.4	-0.3
	comp=Z,3.1nm,0.5s,mb4.4,baz=34,slow=6.3,SNR=13						
MOOW	Moose Ponds	69.93	48	*e*P	P	09 41 28.6	+0.6
	comp=Z,1.4nm,0.9s,mb3.8						
AKASG	Malin Array Be	71.20	323	P	P	09 41 35.0	-0.6
	comp=Z,1.5nm,0.4s,mb4.2,baz=40,slow=6.0,SNR=8.1						
AKASG	Malin Array Be	71.20	323	P	P	09 41 35.0	-0.6
BW06	Boulder Array	71.23	49	*e*P	P	09 41 36.3	+0.4
	comp=Z,0.9nm,0.4s,mb4.0						
PDAR	Pinedale Array	71.23	49	P	P	09 41 36.5	+0.6
	comp=Z,0.9nm,0.5s,mb3.9,baz=294,slow=0.7,SNR=8.8						
GERES	GERESS Array B	78.95	330	P	P	09 42 19.6	0.0
	comp=Z,0.4nm,0.2s,mb3.8,baz=23,slow=7.5,SNR=2.7						
TXAR	Lajitas Array	84.02	55	P	P	09 42 48.0	+1.5
	comp=Z,0.7nm,0.6s,mb3.6,baz=288,slow=4.0,SNR=9.6						
CFAA	Coronel Fontan	151.10	78	PKPbc	PKPdf	09 50 09.1	+8.2
	comp=Z,0.2nm,0.5s,baz=214,slow=3.6,SNR=4.1						

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*IDC **18** 09:40:01.4±0.9,29.03S×75.06E,mb4.0/9,mb1 4.1/9, mb1mx4.0/17,mbtmp4.0/9,MS4.1/8,Ms1 4.1/8, ms1mx3.8/17,Error ellipse: s-maj=29.9km s-min=22.3km az=21.0*

*NEIC **18** 09:40:02.9±0.4,29.09S×75.04E,h10^{km},mb4.4/4,Error ellipse: s-maj=15.7km s-min=12.0km az=214.0*

ISC 18 09:40:01.0±0.6,**29.2S**±0.1×**75.1E**±0.1,**h10^{km},n21,** σ**0^{s}63**/16,**mb4.2**/12,**MS4.1**/8,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	Narrogin (SRO)	36.15	107	LR	LR	09 58 49.0	
	comp=Z,237nm,19.1s,MS4.0,baz=258,slow=31						
MAW	Mawson	39.16	187	LR	LR	09 59 57.4	
	comp=Z,252nm,20.1s,MS4.0,baz=63,slow=30						
BOSA	Boshof	43.35	258	LR	LR	10 02 26.2	
	comp=Z,297nm,19.3s,MS4.2,baz=89,slow=31						
LSZ	Lusaka	45.26	277	P	P	09 48 21.3	+0.7
	2.5nm,0.7s,mb4.2,baz=122,slow=7.2,SNR=6.7						
LSZ				LR	LR	10 04 48.9	
	comp=Z,189nm,19.1s,MS4.0,baz=20,slow=33						
LSZ	Lusaka	45.26	277	P	P	09 48 21.3	+0.7
LSZ				LR	LR	10 04 48.9	
KMBO	Kilima Mbogo	45.55	301	P	P	09 48 23.7	+0.6
	0.5nm,0.2s,mb4.1,baz=230,slow=7.2,SNR=2.9						
KMBO	Kilima Mbogo	45.55	301	P	P	09 48 23.7	+0.6
FITZ	Fitzroy Crossi	47.31	88	LR	LR	10 07 13.3	
	comp=Z,458nm,18.4s,MS4.5,baz=269,slow=34						
WRA	Warramunga Arr	54.21	94	P	P	09 49 29.7	+0.5
	4.8nm,1.0s,mb4.4,baz=252,slow=7.5,SNR=14						
WRAB	Tennant Creek	54.22	94	*e*P	P	09 49 29.8	+0.5
	67nm,1.9s,mb5.2						
STKA	Stephens Creek	56.55	111	P	P	09 49 46.6	+0.5
	1.4nm,0.6s,mb4.2,baz=212,slow=5.6,SNR=5.4						
STKA				LR	LR	10 10 49.2	
	comp=Z,200nm,21.2s,MS4.2,baz=212,slow=33						
SNAA	Sanae	58.81	201	P	P	09 50 00.9	-0.6
	0.8nm,1.0s,mb3.7,baz=106,slow=8.4,SNR=3.9						
SNAA	Sanae	58.81	201	*e*P	P	09 50 01.1	-0.3
	5.2nm,1.3s,mb4.4						
VNDA	Vanda	61.06	166	*e*P	P	09 50 16.1	-0.7
	2.8nm,1.2s,mb4.3						
MKAR	Makanchi Array	75.88	5	P	P	09 51 47.8	-1.5
	1.5nm,0.9s,mb3.9,baz=191,slow=7.3,SNR=8.9						
MKAR				LR	LR	10 21 25.7	
	comp=Z,88nm,21.5s,MS4.0,baz=187,slow=33						
SONM	Songino Array	81.66	21	P	P	09 52 20.8	+0.2
	0.4nm,0.4s,mb3.7,baz=225,slow=6.1,SNR=4.9						
BVAR	Borovoye Array	81.94	357	P	P	09 52 21.5	-0.4
	0.9nm,0.7s,mb3.8,baz=169,slow=7.3,SNR=6.3						
CHKZ	Chkalovo	82.58	357	*e*P	P	09 52 25.2	-0.1
	0.9nm,0.4s,mb4.2						
DBIC	Dimbokro	84.49	281	LR	LR	10 29 13.0	
	comp=Z,80nm,19.0s,MS4.1,baz=80,slow=35						
AKASG	Malin Array Be	89.24	333	P	P	09 52 58.5	+0.3
	0.2nm,0.3s,mb4.0,baz=135,slow=4.5,SNR=4.2						
AKASG	Malin Array Be	89.24	333	P	P	09 52 58.5	+0.3

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*NEIC **18** 10:32:33.7,35.78S×178.60E,h223^{km},MG4.1(WEL), After WEL.*

WEL 18 10:32:34.1±0.3,**35.82S×178.52E,h225^{km}**±5^{km},**ML4.0**/12, **Error ellipse: s-maj=6.2km s-min=5.7km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	1.75	186	P	P	10 33 12.3	-0.2
MXZ				*e*S	S	10 33 40.9	-1.3
MXZ	Matakaoa Point	1.75	186	PN	P	10 33 12.3	-0.2
MXZ				*e*SN	S	10 33 41.6	-0.5
PUZ	Puketiti	2.26	185	*e*P	P	10 33 17.5	0.0
PUZ	Puketiti	2.26	185	PN	P	10 33 17.2	-0.2
PUZ				SN	S	10 33 49.6	-1.4
MWZ	Matawai	2.63	197	*e*P	P	10 33 21.5	+0.1
MWZ				S	S	10 33 59.1	+1.0
MWZ	Matawai	2.63	197	PN	P	10 33 21.3	-0.1
MWZ				SN	S	10 33 57.6	-0.5
URZ	Urewera	2.68	204	P	P	10 33 21.5	-0.5
URZ	Urewera	2.68	204	PN	P	10 33 21.5	-0.5
URZ				SN	S	10 33 58.8	-0.3
KNZ	Kokohu	3.27	192	P	P	10 33 28.0	-0.6
KNZ	Kokohu	3.27	192	PN	P	10 33 28.0	-0.6
BKZ	Black Stump Fm	3.71	205	*e*P	P	10 33 33.1	-0.8
BKZ	Black Stump Fm	3.71	205	PN	P	10 33 33.1	-0.8
CNZ	Chateau	4.12	214	P	P	10 33 38.8	0.0
CNZ	Chateau	4.12	214	PN	P	10 33 38.8	0.0
FWVZ	Far West T-bar	4.16	214	*e*P	P	10 33 38.9	-0.5
FWVZ	Far West T-bar	4.16	214	PN	P	10 33 38.9	-0.5
WNVZ	Wahianoa	4.20	213	P	P	10 33 39.0	-0.8
WNVZ	Wahianoa	4.20	213	PN	P	10 33 39.0	-0.9
MOVZ	Moawhango	4.20	211	P	P	10 33 38.3	-1.5
TSZ	Takapari Road	4.69	205	PN	P	10 33 44.2	-1.7
BFZ	Birch Farm	5.17	200	*e*P	P	10 33 50.2	-1.7
MRZ	Mangatainoka R	5.36	205	P	P	10 33 51.8	-2.5
MRZ	Mangatainoka R	5.36	205	PN	P	10 33 51.7	-2.6
KIW	Kapiti Island	5.78	208	P	P	10 33 56.7	-2.9
KIW	Kapiti Island	5.78	208	PN	P	10 33 56.7	-2.9
MTW	Mount Morrison	5.83	203	P	P	10 33 57.4	-2.9
MTW	Mount Morrison	5.83	203	PN	P	10 33 57.4	-2.9
CAW	Cannon Point	5.93	206	P	P	10 33 58.4	-3.2
MSWZ	Moikau Station	6.14	204	P	P	10 34 01.4	-2.9
TCW	Tory Channel	6.33	210	P	P	10 34 03.1	-3.5
NNZ	Nelson	6.73	215	*e*P	P	10 34 07.9	-3.8
KHZ	Kahutara	7.64	209	*e*P	P	10 34 19.8	-3.7
LTZ	Lake Taylor	8.47	213	*e*P	P	10 34 30.4	-3.8

JMA 18 10:36:21.9±0.3,**25.58N×123.83E,h191^{km},M3.7, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTJ	Tarama	1.22	140	P	P	10 36 52.6	-0.1
JTJ				*e*S	S	10 37 16.4	-0.2
IRIF	Iriomote-Funau	1.24	184	P	P	10 36 52.4	-0.5
IRIF				S	S	10 37 16.7	-0.1
JIJ	Ishigaki jima	1.24	167	P	P	10 36 52.4	-0.5
JIJ				*e*S	S	10 37 15.6	-1.3
JKRS	Kuro-shima	1.35	173	P	P	10 36 53.6	-0.2
JKRS				S	S	10 37 17.9	-0.5
HATJ	Hateruma jima	1.52	181	P	P	10 36 55.4	+0.1
HATJ				*e*S	S	10 37 20.8	-0.3
JMJ	Miyako jima 2	1.53	120	P	P	10 36 55.3	-0.2
JMJ				*e*S	S	10 37 20.6	-0.7

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*NEIC **18** 10:51:26.1±1.0,7.92S×75.72W,h35^{km},mb3.5/1,Error ellipse: s-maj=19.0km s-min=15.7km az=99.0*

*IDC **18** 10:51:34.2±7.4,7.65S×74.94W,h108^{km}±85^{km},mb3.2/2, mb1 3.4/4,mb1mx3.3/18,mbtmp3.5/4,ML3.2/1,MS3.0/1, Ms1 2.9/1,ms1mx2.3/10,Error ellipse: s-maj=162.6km s-min=52.0km az=46.0*

ISC 18 10:51:24.8±2.9,**7.9S**±0.1×**75.7W**±0.1,**h34^{km}**±35^{km},**n10,** σ**1^{s}18**/9,**mb3.6**/2,**MS2.9**/1,**Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	4.18	196	*e*Pn	P	10 52 27.5	-0.5
NNA				Sn	S	10 53 16.3	-0.1
LPAZ	La Paz	11.10	139	P	P	10 54 06.8	+2.4
	0.1nm,0.3s,baz=13,slow=11,SNR=2.2						
SAML	Samuel	12.40	96	*e*Pn	P	10 54 21.9	0.0
	3.5nm,0.5s						
SIV	San Ignacio	16.37	121	P	P	10 55 12.5	-1.2
	0.5nm,0.3s,baz=286,slow=11,SNR=7.7						
SDV	Santo Domingo	17.45	17	P	P	10 55 37.3	+10
	0.3nm,0.3s,baz=164,slow=0.1,SNR=5.0						
SDV	Santo Domingo	17.45	17	P	P	10 55 26.7	-0.7
	3.1nm,0.7s						
BDFB	Brasilia	28.11	108	LR	LR	11 07 55.6	
	comp=Z,33nm,19.7s,MS2.9,baz=176,slow=36						
TXAR	Lajitas Array	45.82	325	P	P	10 59 47.3	+1.6
	0.4nm,0.8s,mb3.4,baz=153,slow=8.4,SNR=4.8						
ILAR	Eielson Array	89.27	336	P	P	11 04 17.2	-1.2
	0.4nm,0.9s,mb3.7,baz=102,slow=5.1,SNR=4.9						
WRA	Warramunga Arr	139.50	226	PKP	PKPdf	11 10 52.4	+2.6
	0.2nm,0.5s,baz=116,slow=2.3,SNR=4.9						

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*IDC **18** 11:19:32.5±1.2,1.18N×124.14E,mb4.0/4,mb1 4.2/5, mb1mx4.0/16,mbtmp4.1/5,ML4.3/1,Error ellipse: s-maj=105.2km s-min=19.7km az=68.0*

*NEIC **18** 11:19:53.7±0.7,0.92N×124.00E,h200^{km},mb4.4/2,Error ellipse: s-maj=59.7km s-min=11.1km az=69.0*

ISC 18 11:19:35.7±0.9,**1.2N**±0.2×**124.0E**±0.5,**h33^{km},n9,**σ**0^{s}67**/8, **mb4.1**/5,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	16.12	149	*e*P	Px	11 23 47.7	
	7.3nm,0.6s						
FITZ	Fitzroy Crossi	19.20	175	*e*P	P	11 24 00.2	+0.6
	5.4nm,0.9s						
FITZ	Fitzroy Crossi	19.20	175	P	P	11 23 59.8	+0.2
	0.7nm,0.3s,baz=15,slow=9.4,SNR=11						
WRAB	Tennant Creek	23.28	155	*e*P	P	11 24 41.6	+0.1
	13nm,0.7s,mb4.5						
WRA	Warramunga Arr	23.29	155	P	P	11 24 42.0	+0.4
	7.3nm,0.6s,mb4.3,baz=332,slow=11,SNR=95						
WB2	Warramunga Arr	23.29	155	*e*P	P	11 24 42.0	+0.4
STKA	Stephens Creek	36.84	155	P	P	11 26 41.5	-1.3
	1.0nm,0.3s,mb4.1,baz=342,slow=10.0,SNR=7.1						
SONM	Songino Array	48.94	344	P	P	11 28 21.5	+0.7
	0.7nm,0.8s,mb3.8,baz=153,slow=8.1,SNR=4.6						
MKAR	Makanchi Array	58.17	327	P	P	11 29 28.1	-0.7
	0.6nm,0.3s,mb4.1,baz=122,slow=6.4,SNR=6.4						

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*HLW **18** 11:55:31.3,35.76N×31.83E,h5^{km},Mb3.2*

*NEIC **18** 11:55:34.2,36.05N×32.15E,h25^{km},ML3.1(NIC),After NIC.*

*NIC **18** 11:55:34.2±0.3,36.05N×32.15E,h25^{km},ML3.1,MW3.0*

*CSEM **18** 11:55:34.8±0.6,35.52N×31.74E,h40^{km},Mw3.0,Error ellipse: s-maj=16.5km s-min=4.4km az=173.0*

ISC 18 11:55:33.2±2.2,**35.7N**±0.2×**31.64E**±0.06,**h40^{km},n10,** σ**1^{s}07**/14,**Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALFC	Alevga	0.95	125	P	P	11 55 50.2	0.0
	8.0nm,0.2s						
ALFC				S	S	11 56 02.7	-0.2
PPCY	Paphos	1.00	145	P	P	11 55 53.0	+2.1
SZAC	Souni-Zanaja	1.39	133	P	P	11 55 57.1	+0.6
SZAC				S	S	11 56 15.2	+1.3
CSS	Prodhromos	1.57	118	P	P	11 55 57.4	-1.6
CSS				S	S	11 56 14.7	-3.6
AMAG	Maghara	5.21	165	P	P	11 56 49.7	-1.1
HMAT	Matruh	5.96	221	P	P	11 57 01.9	+0.7
HMAT				S	S	11 58 08.2	-1.0
HNKL	Nakhl	6.08	160	P	P	11 57 01.9	-1.1
SWA1		8.14	220	P	P	11 57 31.8	+0.1
SWA2		8.29	221	P	P	11 57 34.6	+0.8
HFRF	Wahat Farafira	8.99	199	P	P	11 57 43.5	+0.1

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*NEIC **18** 11:58:58.0±0.3,49.31N×6.80E,h10^{km},ML3.1(LDG), ML2.6(STR),Error ellipse: s-maj=3.7km s-min=3.4km az=129.0*

*LDG **18** 11:58:58.8±0.1,49.32N×6.81E,h1^{km},Md3.0/2,Ml3.1/16, Error ellipse: s-maj=2.1km s-min=1.7km az=93.0, Suspected Mining induced.*

*STR **18** 11:58:58.2±0.2,49.33N×6.77E,h1^{km}±1^{km},Ml2.6,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **18** 11:58:58.6±0.1,49.34N×6.84E,h2^{km},ML3.1/17,Error ellipse: s-maj=1.1km s-min=0.9km az=78.0*

*BGR **18** 11:58:58.5±0.2,49.32N×6.81E,h1^{km},ML2.5/2,Error ellipse: s-maj=2.2km s-min=1.1km az=83.0*

*BNS **18** 11:58:59.9±1.0,49.36N×6.79E,h1^{km},ML2.3*

ISC 18 11:58:56.6±0.2,**49.30N**±0.01×**6.77E**±0.02,**n59,**σ**1^{s}12**/118, **2C,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WLF	Walferdange	0.54	312	*e*Pg	Pg	11 59 09.2	+1.8
	SNR=5.5						
WLF				*e*Sg	Sg	11 59 15.9	+1.3
	SNR=2.5						
WLF	Walferdange	0.54	312	*e*Pg	Pg	11 59 09.1	+1.7
LANF	Langenberg	0.75	115	Pg	Pg	11 59 11.8	+0.1
LANF	Langenberg	0.75	115	*e*Pg	Pg	11 59 12.2	+0.5
LANF				*e*Sg	Sg	11 59 21.9	+0.2
	SNR=1.7						
ABH	Alteburg	0.77	41	*e*Pg	Pg	11 59 12.1	+0.1
ABH				*e*Sg	Sg	11 59 22.6	+0.3
	SNR=3.5						
ABH	Alteburg	0.77	41	Pg	Pg	11 59 12.4	+0.4
ABH				Sg	Sg	11 59 22.7	+0.4
KTD	Kalmit	0.86	88	*e*Pg	Pg	11 59 14.7	+0.8
KTD				*e*Sg	Sg	11 59 25.7	+0.4
	SNR=2.3						
KTD	Kalmit	0.86	88	Pg	Pg	11 59 15.2	+1.4
KTD				Sg	Sg	11 59 26.6	+1.3
CDF	Champ du Feu	0.95	159	*e*Pn	Pn	11 59 17.1	0.0
CDF				*e*Sg	Sg	11 59 29.1	+0.7
	98nm,0.2s						
CDF				*e*Sn	Sn	11 59 31.3	-0.2
CDF	Champ du Feu	0.95	159	*e*Pg	Pg	11 59 16.2	+0.5
CDF				*e*Pn	Pn	11 59 17.1	0.0
CDF				*e*Sg	Sg	11 59 29.1	+0.7
CDF				*e*Sn	Sn	11 59 31.3	-0.2
BGG	Burgeitz	0.98	22	*e*Pg	Pg	11 59 17.2	+1.1
BGG				*e*Sg	Sg	11 59 30.0	+0.9
	70nm,0.3s						
HILG	Hillesheim	0.99	357	*e*Pg	Pg	11 59 17.8	+1.4
HILG				*e*Sg	Sg	11 59 31.2	+1.6
	158nm,0.5s						
RFYF	Reffroy	1.09	232	*e*Pg	Pg	11 59 20.3	+2.0
	baz=51						
RFYF				*e*Sg	Sg	11 59 34.5	+1.7
	69nm,0.2s						
ECH	Echery	1.12	166	Pg	Pg	11 59 20.0	+1.0
ECH				Sg	Sg	11 59 35.5	+1.6
ECH	Echery	1.12	166	*e*Pg	Pg	11 59 20.0	+1.1
ECH				*e*Sg	Sg	11 59 34.9	+1.0
	SNR=10						
THEF	They Montfort	1.20	206	Pg	Pg	11 59 21.2	+0.7
THEF				Sg	Sg	11 59 38.1	+1.7
THEF	They Montfort	1.20	206	*e*Pg	Pg	11 59 21.3	+0.8
THEF				*e*Sg	Sg	11 59 37.6	+1.1
	SNR=3.0						
THEF	They Montfort	1.20	206	Pg	Pg	11 59 21.3	+0.8
THEF				Sg	Sg	11 59 38.1	+1.7
LIBD	Limburg	1.28	154	*e*Pg	Pg	11 59 23.1	+0.9
LIBD	Limburg	1.28	154	Pg	Pg	11 59 23.1	+0.9
LIBD				Sg	Sg	11 59 41.2	+2.0
STB	Steinbach	1.29	2	*e*Pg	Pg	11 59 22.6	+0.1
STB				*e*Sg	Sg	11 59 39.3	-0.4
	41nm,0.5s						
HAU	Haudompre	1.33	192	*e*Pg	Pg	11 59 24.0	+0.8
HAU				*e*Sn	Sn	11 59 40.5	-0.6
	85nm,0.3s						
HAU	Haudompre	1.33	192	*e*Pn	Pn	11 59 22.8	+0.4
HAU				*e*Pg	Pg	11 59 24.0	+0.8
HAU				*e*Sn	Sn	11 59 40.5	-0.6
TOD	Tromm	1.36	76	*e*Pn	Pn	11 59 22.4	-0.5
	SNR=2.7						
TOD				*e*Sg	Sg	11 59 41.0	-1.0
	SNR=3.8						
TOD	Tromm	1.36	76	Pg	Pg	11 59 22.9	-0.9
TOD				Sg	Sg	11 59 42.4	+0.4
TOD	Tromm	1.36	76	Pg	Pg	11 59 22.9	-0.9
TOD				Sg	Sg	11 59 41.0	-1.0
	SNR=3.8						
KLL	Kalltalsperre	1.38	348	*e*Pg	Pg	11 59 23.9	-0.2
KLL				*e*Sg	Sg	11 59 40.4	-2.1
	24nm,0.9s						
MEZF	Maizieres J'vi	1.39	235	*e*Pn	Pn	11 59 24.8	+1.5
	baz=48						
MEZF				*e*Sn	Sn	11 59 44.4	+1.8
	24nm,0.3s						
BFO	Black Forest	1.42	133	*e*Pn	Pn	11 59 23.8	+0.1
	SNR=1.2						
BFO				*e*Pg	Pg	11 59 25.2	+0.2
BFO				*e*Sg	Sg	11 59 43.6	-0.3
	SNR=8.9						
BFO	Black Forest	1.42	133	*e*Pn	Pn	11 59 23.8	+0.1
BFO				*e*Pg	Pg	11 59 25.2	+0.2
BFO				*e*Sg	Sg	11 59 43.6	-0.3
BFO	Black Forest	1.42	133	Pg	Pg	11 59 25.2	+0.2
BFO				Sg	Sg	11 59 43.6	-0.3
	SNR=8.9						
TNS	Taunus Mts	1.43	49	*e*Pn	Pn	11 59 24.2	+0.4
	SNR=2.8						
TNS				*e*Sg	Sg	11 59 42.6	-1.5
	SNR=3.1						
TNS	Taunus Mts	1.43	49	*e*Pn	Pn	11 59 24.2	+0.4
TNS				*e*Sg	Sg	11 59 42.6	-1.5
MOF	Molkenrain	1.47	170	*e*Pg	Pg	11 59 26.8	+0.8
MOF				*e*Sg	Sg	11 59 46.0	+0.3
	SNR=9.8						
MOF	Molkenrain	1.47	170	Pg	Pg	11 59 26.6	+0.6
MOF				Sg	Sg	11 59 46.6	+0.9
HINF	Hinteralfeld	1.49	178	*e*Pg	Pg	11 59 26.3	-0.1
HINF				*e*Sn	Sn	11 59 44.1	-1.1
HINF				*e*Sg	Sg	11 59 46.6	+0.4
	88nm,0.2s						
GIVF	Givet	1.49	303	*e*Pn	Pn	11 59 25.6	+0.8
GIVF				*e*Sg	Sg	11 59 46.7	+0.3
	38nm,0.4s						
HGN	Heimansgroeve	1.56	340	*e*Pg	Pg	11 59 27.3	-0.5
	8.9nm,0.2s						
HGN				*e*Sg	Sg	11 59 46.8	-1.7
HGN	Heimansgroeve	1.56	340	*e*Pn	Pn	11 59 26.2	+0.5
	SNR=1.3						
HGN				*e*Pg	Pg	11 59 27.8	0.0
HGN				*e*Sg	Sg	11 59 47.9	-0.7
	SNR=5.6						
SFTF	Sexfontaines	1.59	227	*e*Pg	Pg	11 59 27.0	-1.3
	baz=47						
SFTF				*e*Sg	Sg	11 59 49.7	+0.2
	31nm,0.3s						
FELD	Feldberg	1.65	150	*e*Sg	Sg	11 59 50.2	-1.2
	SNR=3.1						
HOBG	Hohbusch	1.72	12	*e*Pg	Pg	11 59 29.2	-1.7
HOBG				*e*Sg	Sg	11 59 49.8	-4.2
	70nm,1.1s						
BAIF	Baives	1.83	295	*e*Pg	Pg	11 59 33.1	0.0
BAIF				*e*Sg	Sg	11 59 57.5	0.0
	42nm,0.7s						
BAIF	Baives	1.83	295	*e*Pn	Pn	11 59 29.9	+0.3
BAIF				*e*Pg	Pg	11 59 33.1	0.0
BAIF				*e*Sg	Sg	11 59 57.5	0.0
BAIF	Baives	1.83	295	*e*Pg	Pg	11 59 33.1	0.0
BAIF				*e*Sg	Sg	11 59 57.5	0.0
	21nm,0.7s						
LOMF	Lomont	1.96	179	*e*Pg	Pg	11 59 35.7	+0.1
LOMF				*e*Sg	Sg	12 00 01.1	-0.6
	SNR=2.1						
LOMF	Lomont	1.96	179	Pg	Pg	11 59 35.5	-0.2
LOMF				Sg	Sg	12 00 02.8	+1.1
BUG	Bochum--Univer	2.16	8	*e*Pg	Pg	11 59 38.3	-1.5
CABF	La Chapelle	2.73	190	*e*Pn	Pn	11 59 42.4	-0.1
CABF				*e*Sg	Sg	12 00 25.6	-2.0
	11nm,0.4s						
LOR	Lormes	2.81	225	*e*Pn	Pn	11 59 43.2	-0.5
	baz=43						
LOR				*e*Sn	Sn	12 00 17.5	-1.3
	16nm,0.3s						
DAVA	Damuels	2.90	133	⇑*i*Sg	Sg	12 00 30.9	-2.1
	comp=E,7.8nm,0.3s						
SSF	Saint Saulge	3.13	225	*e*Pn	Pn	11 59 47.4	-0.8
SSF				*e*Sn	Sn	12 00 26.6	-0.2
	10nm,0.4s						
SMF	Signal de Mont	3.31	218	*e*Pn	Pn	11 59 49.4	-1.3
SMF				*e*Sn	Sn	12 00 29.1	-2.2
	7.6nm,0.4s						
AVF	Avril sur Loir	3.40	224	*e*Pn	Pn	11 59 50.9	-1.1
AVF				*e*Sn	Sn	12 00 30.6	-3.1
	4.9nm,0.4s						
HYF	Humbligny	3.43	235	*e*Pn	Pn	11 59 52.6	+0.2
MOTA	Moosalm	3.49	122	⇑*i*Sg	Sg	12 00 49.0	-3.9
	comp=Z,5.0nm,0.3s						
BGF	Bois d'Agland	3.81	225	*e*Pn	Pn	11 59 55.0	-2.8
BGF				*e*Sn	Sn	12 00 40.4	-3.6
	24nm,0.4s						
TCF	Toulx Ste Croi	4.30	227	*e*Sg	Sg	12 01 17.2	-2.8
	3.9nm,0.4s						
FLN	La Foliniere	4.80	266	*e*Pn	Pn	12 00 10.5	-1.4
FLN				*e*Sn	Sn	12 01 03.9	-5.2

MAN 18 12:30:19.2,14.57N×123.19E,h157^{km},mb4.2,ML3.0, MS2.7,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	Guinayangan	0.98	227	⇑*e*P	P	12 30 44.5	-0.1
GQP				*e*S	S	12 31 00.9	-3.3
POLP	Polilio Island	1.22	277	*e*P	P	12 30 46.8	0.0
POLP				*e*S	S	12 31 04.4	-3.7
AUQP	San Andres	1.34	202	*e*P	P	12 30 47.3	-0.7
AUQP				*e*S	S	12 31 13.7	+3.5
PVCP	Virac	1.35	136	*e*P	P	12 30 48.6	+0.5
PVCP				*e*S	S	12 31 08.6	-1.8
BOAC	Boac	1.71	230	*e*P	P	12 30 54.1	+2.2
BOAC				*e*S	S	12 31 24.1	+7.0

IDC 18 13:05:53.5±1.9,**1.30N×127.66E,mb3.7**/3,**mb1 3.9**/3, **mb1mx3.7**/14,**mbtmp3.8**/3,**Error ellipse: s-maj=177.5km s-min=27.6km az=69.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.10	163	P	P	13 10 50.6	-1.7
	1.1nm,0.5s,baz=343,slow=11,SNR=7.9						
SONM	Songino Array	49.88	341	P	P	13 14 48.9	-1.8
	0.4nm,0.7s,baz=145,slow=8.3,SNR=3.6						
MKAR	Makanchi Array	60.07	326	P	P	13 16 02.5	-2.4
	1.1nm,0.3s,baz=113,slow=7.5,SNR=18						

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*NEIC **18** 13:48:32.7±0.9,9.03S×159.72E,h132^{km}±9^{km},mb4.3/5, Error ellipse: s-maj=25.0km s-min=14.5km az=122.0*

*IDC **18** 13:48:32.0±0.7,9.03S×159.77E,h128^{km}±10^{km},mb4.0/6, mb1 4.1/7,mb1mx3.9/12,mbtmp4.3/7,Error ellipse: s-maj=42.8km s-min=19.7km az=118.0*

ISC 18 13:48:31.4±0.8,**9.1S**±0.1×**159.7E**±0.2,**h134^{km}**±9^{km},**n16,** σ**0^{s}87**/18,**mb4.1**/10,**3C,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	0.43	142	P	P	13 48 51.8	+0.6
	156nm,0.3s,baz=178,slow=2.2,SNR=46						
HNR				S	S	13 49 05.9	-0.4
	619nm,0.3s,baz=90,slow=20,SNR=50						
HNR	Honiara	0.43	142	*e*Pn	P	13 48 51.7	+0.5
HNR				*e*Sn	S	13 49 05.6	-0.7
CTA	Charters Tower	16.96	228	P	P	13 52 24.5	+2.5
	0.4nm,0.3s,baz=62,slow=13,SNR=3.3						
WRAB	Tennant Creek	26.74	243	*e*P	P	13 53 59.8	-0.6
	15nm,0.7s,mb4.7						
WB2	Warramunga Arr	26.75	243	⇑*i*P	P	13 54 00.3	-0.2
WRA	Warramunga Arr	26.75	243	P	P	13 54 00.4	-0.2
	8.7nm,0.6s,mb4.5,baz=70,slow=9.7,SNR=45						
STKA	Stephens Creek	28.21	214	*e*P	P	13 54 13.5	-0.2
	3.4nm,0.6s,mb4.2						
STKA	Stephens Creek	28.21	214	P	P	13 54 13.6	-0.1
	2.9nm,0.5s,mb4.3,baz=47,slow=15,SNR=6.0						
ASPA	Alice Springs	28.59	236	⇑*i*P	P	13 54 15.8	-1.4
FITZ	Fitzroy Crossi	34.22	251	⇑*i*P	P	13 55 05.8	-0.5
	7.2nm,0.6s,mb4.6						
VNDA	Vanda	68.41	179	*e*P	P	13 59 20.0	-0.2
	1.7nm,0.7s,mb3.9						
ULN	Ulaanbaatar	73.29	326	*e*P	P	13 59 51.2	+1.3

	3.5nm,1.3s,mb3.9						
SONM	**Songino Array**	73.63	326	P	P	13 59 52.1	+0.3
	1.9nm,0.5s,mb4.1,baz=142,slow=6.1,SNR=16						
ILAR	**Eielson Array**	83.67	20	P	P	14 00 45.2	-0.6
	0.7nm,0.4s,mb3.7,baz=256,slow=5.6,SNR=28						
MAW	**Mawson**	84.25	202	P	P	14 00 49.8	+1.1
	1.0nm,0.5s,mb3.8,baz=108,slow=9.0,SNR=8.9						
MKAR	**Makanchi Array**	88.05	318	P	P	14 01 07.2	-0.5
	0.8nm,0.6s,mb3.7,baz=93,slow=6.2,SNR=7.6						

MAN 18 13:55:05.7, 14.95N×123.37E, mb4.1, ML2.9, MS2.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	**Guinayangan**	1.37	221	*e*P	Pb	13 55 30.0	-1.9
POLP	**Polilio Island**	1.40	261	*e*P	Pb	13 55 31.6	-0.8
POLP				*e*S	Sb	13 55 50.1	-0.7
PVCP	**Virac**	1.54	151	*e*P	Pn	13 55 33.9	-0.6
PVCP				*e*S	Sb	13 55 53.5	-1.4
AUQP	**San Andres**	1.75	203	*e*S	Sn	13 56 02.5	+1.6
BOAC	**Boac**	2.10	225	*e*P	Pn	13 55 43.6	+1.1
BOAC				*e*S	Sn	13 56 09.6	0.0

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*NDI **18** 14:20:38.2±2.9, 34.80N×72.92E, h10^{km}, MD3.7, ML3.3*
*NNC **18** 14:20:48.5±9.3, 35.28N×71.62E, mpv3.4, Error ellipse: s-maj=124.1km s-min=73.1km az=107.0*
ISC 18 14:20:34.9±1.5, **34.59N**±0.09×**73.0E**±0.1, **h9**^{km}±8^{km}, **n9, σ1^{s}18**/15, **2C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	3.14	132	*e*P	Pb	14 21 31.0	+0.4
THN				*e*SB	Sg	14 22 19.3	-0.2
DLH	**Dalhousie**	3.23	128	*e*PB	Pg	14 21 40.0	+0.7
DLH				*e*x	Sg	14 22 21.0	-1.3
SDNR	**Sundarnagar**	4.55	131	*e*P	Pn	14 21 48.8	+3.1
SDNR				*e*S	Sn	14 22 41.8	+2.3
KLP	**Kalpa**	5.38	123	*e*P	Pn	14 22 00.8	+3.5
KLP				*e*S	Sn	14 22 59.2	-0.9
KLP				AML	AML	14 23 38.4	
	comp=E,104nm,0.4s						
KLP				AML	AML	14 23 39.4	
	comp=N,57nm,0.4s						
KHET	**Khetri**	6.93	159	*e*S	Sn	14 23 38.0	-1.1
KUDL	**Kundal**	7.09	154	*e*P	Pn	14 22 22.6	+1.1
KUDL				*e*S	Sn	14 23 42.5	-0.6
KUDL				AML	AML	14 23 45.3	
	comp=Z,6.3nm,0.5s						
KK31	**Karatay Array**	8.71	348	⇑P	P	14 22 43.2	-0.9
	comp=Z,0.7nm,0.3s,baz=158,slow=12,SNR=24						
KK31				⇓S	Sn	14 24 15.1	-8.4
	comp=Z,1.6nm,0.5s,baz=174,slow=22						
AB31	**Akbulak array**	17.53	331	P	P	14 24 41.6	+0.5
	comp=Z,0.1nm,0.3s,baz=142,slow=14,SNR=9.2						
AKTO	**Aktyubinsk**	19.24	330	⇑P	P	14 25 01.0	-0.9
	comp=Z,0.2nm,0.4s						

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*IDC **18** 14:23:33.1±1.3, 59.03N×152.66W, h46^{km}±18^{km}, mb3.5/6, mb1 4.0/10, mb1mx3.7/22, mbtmp4.0/10, ML4.2/4, Error ellipse: s-maj=23.7km s-min=9.5km az=104.0*
*NEIC **18** 14:23:36.0, 58.92N×152.45W, h67^{km}, ML3.6(AEIC), After AEIC.*
ISC 18 14:23:33.6±0.4, **58.92N**±0.03×**152.40W**±0.06, **h84**^{km}±3^{km}, **n69, σ0^{s}84**/80, **mb3.7**/6, **Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYI	**Shuyak Island**	0.31	179	P	P	14 23 46.4	-0.1
SYI				S	S	14 23 54.6	-1.6
XLV	**Seldovia**	0.64	33	P	P	14 23 49.7	+0.4
XLV				S	S	14 24 01.1	+0.2
AUI	**Augustine Isla**	0.67	309	P	P	14 23 49.6	+0.1
AUI				S	S	14 24 00.6	-0.9
AUP	**Augustine Pinn**	0.69	311	P	P	14 23 50.2	+0.4
AUL	**Augustine Lava**	0.71	311	P	P	14 23 50.0	+0.1
HOM	**Homer**	0.84	27	P	P	14 23 52.1	+0.9
OPT	**Oil Point**	0.85	330	P	P	14 23 51.8	+0.4
CNPM	**China Poot**	0.85	44	P	P	14 23 52.2	+0.7
CNPM				S	S	14 24 05.1	+0.3
MCNL	**McNeil River**	1.03	286	P	P	14 23 53.6	+0.1
KAPH	**Katmai Pasha**	1.06	253	P	P	14 23 54.3	+0.4
KAPH				S	S	14 24 08.7	-0.5
IVE	**Iliamna Volcan**	1.14	344	P	P	14 23 55.3	+0.3
IVE				S	S	14 24 10.5	-0.4
KDAK	**Kodiak Island**	1.15	185	P	P	14 23 55.1	+0.2
	136nm,0.3s,baz=26,slow=8.5,SNR=1345						
KDAK				S	S	14 24 09.5	-1.5
	282nm,0.3s,baz=20,slow=20,SNR=26						
KDAK	**Kodiak Island**	1.15	185	P	P	14 23 55.1	+0.2
KDAK				S	S	14 24 11.1	+0.2
INE	**Iliamna NE**	1.19	344	P	P	14 23 55.9	+0.3
ILW	**Iliamna West**	1.20	342	P	P	14 23 56.0	+0.3
NNL	**Ninilchik**	1.26	26	P	P	14 23 58.0	+1.6
PDB	**Pedro Bay**	1.27	314	P	P	14 23 56.5	+0.1
RSO	**Redoubt South**	1.56	354	P	P	14 24 01.2	+0.8
KABR	**Katmai Barrier**	1.56	241	P	P	14 24 00.6	+0.2
RDT	**Redoubt**	1.66	360	P	P	14 24 02.3	+0.6
CAHL	**Cahill**	1.75	242	P	P	14 24 03.4	+0.5
KJL	**Kejulik**	1.88	244	P	P	14 24 05.3	+0.8
SEW	**Seward**	1.92	50	P	P	14 24 05.2	+0.1
NKA	**Nikishka**	1.92	17	P	P	14 24 07.6	+2.5
SLKM	**Skilak Lake**	1.94	34	P	P	14 24 05.9	+0.5
MPA	**Moose Pass**	2.20	43	P	P	14 24 09.3	+0.3
SPU	**Mount Spurr**	2.28	4	P	P	14 24 10.8	+0.7
CKL	**Chakachamna La**	2.28	1	P	P	14 24 11.0	+0.8
FIB	**Fire Island**	2.52	25	P	P	14 24 14.8	+1.4
RC01	**Rabbit Creek A**	2.56	30	P	P	14 24 14.4	+0.5
STLK	**Strandline Lak**	2.60	6	P	P	14 24 15.4	+0.8
SVW2	**Sparrevohn**	2.71	325	P	P	14 24 15.7	-0.3
PMR	**Palmer**	3.14	30	P	P	14 24 21.7	-0.3
KNK	**Knik Glacier**	3.18	37	P	P	14 24 22.6	-0.1
GHO	**Glory Hole Cre**	3.34	30	P	P	14 24 24.8	0.0
SML	**Sawmill**	3.53	33	P	P	14 24 27.4	-0.1
EYAK	**Cordova Ski Ar**	3.74	61	P	P	14 24 30.2	-0.2
VLZ	**Valdez**	3.77	51	P	P	14 24 30.4	-0.3
SCM	**Sheep Creek Mo**	3.86	39	P	P	14 24 32.3	+0.3
DIV	**Divide**	4.00	54	*e*P	P	14 24 31.6	-2.3
KLU	**Klutina**	4.14	49	P	P	14 24 35.9	+0.1
TT01	**Tatalina**	4.37	338	P	P	14 24 38.6	-0.6
KTH	**Kantishna Hill**	4.70	8	P	P	14 24 43.5	-0.2
RND	**Reindeer**	4.82	19	P	P	14 24 45.0	-0.3
DHY	**Denali Highway**	4.83	28	P	P	14 24 45.4	-0.1
BWN	**Browne**	5.45	14	P	P	14 24 53.6	-0.4
BALM	**Baldy**	5.48	63	P	P	14 24 54.0	-0.2
THY	**Trims Highway**	5.54	33	P	P	14 24 53.3	-1.8
MENT	**Mentasta**	5.84	43	*e*P	P	14 25 00.5	+1.2
WRH	**Wood River Hil**	5.94	18	P	P	14 24 59.5	-1.1
CCB	**Clear Creek Bu**	6.14	19	P	P	14 25 02.2	-1.3
GCSA	**Galena City Sc**	6.22	342	P	P	14 25 03.3	-1.2
COLA	**College**	6.35	18	P	P	14 25 05.3	-1.1
MDM	**Murphy Dome**	6.37	16	P	P	14 25 05.7	-1.0
ILAR	**Eielson Array**	6.42	22	P	P	14 25 06.0	-1.3
	2.0nm,0.3s,baz=210,slow=14,SNR=167						
ILAR				S	S	14 26 13.8	-6.1
	2.9nm,0.3s,baz=210,slow=25,SNR=12						
IL1	**Eielson Array**	6.42	22	P	P	14 25 06.1	-1.3
PNL	**Peninsula**	6.70	78	P	P	14 25 10.3	-1.0
IM3	**Indian Mountai**	7.12	356	P	P	14 25 15.7	-1.3
IMA2	**Indian Mountai**	7.20	356	*e*P	P	14 25 17.5	-0.6
DLBC	**Dease Lake**	11.64	83	P	P	14 26 19.4	+1.3
	1.5nm,0.3s,baz=290,slow=12,SNR=32						
DLBC				S	S	14 28 22.9	-3.8
	0.4nm,0.3s,baz=89,slow=20,SNR=6.3						
INK	**Inuvik**	12.55	34	P	P	14 26 30.4	+0.3
	0.2nm,0.3s,baz=222,slow=16,SNR=7.1						
INK				S	S	14 28 34.3	-14
	0.3nm,0.3s,baz=304,slow=9.4,SNR=5.4						
FX1	**Attu Island--F**	20.06	268	P	P	14 28 02.3	+0.2
	4.7nm,0.3s,baz=294,slow=10.0,SNR=8.2						
FX1	**Attu Island--F**	20.06	268	P	P	14 28 00.7	-1.4
PDAR	**Pinedale Array**	30.85	102	P	P	14 29 47.4	+3.8
	0.5nm,0.8s,mb3.3,baz=297,slow=3.3,SNR=3.8						
ARCES	**ARCESS Array B**	51.83	1	P	P	14 32 34.0	-0.3
	1.8nm,0.7s,mb4.2,slow=7.3,SNR=9.5						
SONM	**Songino Array**	55.68	307	P	P	14 33 03.8	+0.9
	1.0nm,0.6s,mb4.0,baz=30,slow=6.6,SNR=5.5						
FINES	**FINESS Array B**	59.96	1	P	P	14 33 33.5	+0.9
	2.0nm,0.8s,mb4.2,baz=350,slow=8.5,SNR=4.3						
MKAR	**Makanchi Array**	65.47	322	P	P	14 34 08.9	-0.4
	0.3nm,0.5s,mb3.4,baz=38,slow=6.9,SNR=5.8						
GERES	**GERESS Array B**	71.99	10	P	P	14 34 50.9	+1.6
	0.3nm,0.6s,mb3.3,baz=22,slow=5.3,SNR=3.6						

MAN 18 14:54:45.3, 9.90N×122.19E, h21^{km}, mb4.5, ML3.4, MS3.3, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	0.82	28	*e*P	Pb	14 55 00.6	-0.2
GUIM				*e*S	Sb	14 55 11.0	-0.4
CUYO	**Cuyo Island**	1.49	309	*e*P	Pn	14 55 11.6	+0.3
CUYO				*e*S	Sn	14 55 29.1	-1.1
TBP	**Tagbilaran**	1.66	97	*e*P	Pn	14 55 11.0	-2.6
TBP				*e*S	Sn	14 55 33.0	-1.5
DCPH	**Dipolog City**	1.74	139	*e*P	Pn	14 55 13.8	-1.0
RCP	**Roxas**	1.74	18	⇓*e*P	Pn	14 55 16.6	+1.8
RCP				*e*S	Sn	14 55 38.3	+1.8
LLP	**Lapu-Lapu**	1.80	76	⇑*e*P	Pn	14 55 15.4	-0.2
LLP				*i* S	Sn	14 55 34.1	-3.9
IPIL	**Ipil**	2.13	170	*e*P	Pn	14 55 19.6	-0.8
IPIL				*e*S	Sn	14 55 43.6	-2.9
PAGZ	**Pagadian**	2.35	150	*e*P	Pn	14 55 24.3	+0.7
PAGZ				*e*S	Sn	14 55 54.2	+2.1
OTRP	**Odiongan**	2.45	356	*e*P	Pn	14 55 25.1	+0.1
OTRP				*e*S	Sn	14 55 58.1	+3.4
MSLP	**Maasin**	2.64	85	*e*P	Pn	14 55 27.4	-0.3
MSLP				*e*S	Sn	14 55 59.8	+0.4
SJMP	**San Jose**	2.75	338	*e*P	Pn	14 55 29.0	-0.3
SJMP				*e*S	Sn	14 55 59.7	-2.7
BUSP	**Coron**	2.86	317	*e*P	Pn	14 55 30.4	-0.5
BUSP				*e*S	Sn	14 56 03.6	-1.5
ENPP	**El Nido**	3.02	296	*e*P	Pn	14 55 32.7	-0.3
ENPP				*e*S	Sn	14 56 06.0	-2.9
BUKP	**Musuan**	3.47	125	*e*P	Pn	14 55 40.6	+1.1
BUKP				*e*S	Sn	14 56 27.1	+6.6
LUBP	**Lubang**	4.26	334	*e*P	Pn	14 55 49.4	-1.3
LUBP				*e*S	Sn	14 56 38.8	-1.7
BATP	**Bataraza**	4.47	256	*e*P	Pn	14 55 47.9	-5.8
BATP				*e*S	Sn	14 56 46.0	+0.3
MATI	**Mati**	4.98	126	*e*P	Pn	14 55 56.8	-4.1

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*BJI **18** 14:57:24.4, 36.61N×70.12E, h216^{km}, mB4.9, mb4.8*
*MOS **18** 14:57:24.9±0.9, 36.53N×70.17E, h220^{km}, mb4.9/32, Error ellipse: s-maj=6.0km s-min=4.1km az=110.0*
*NEIC **18** 14:57:25.2±0.6, 36.48N×70.18E, h209^{km}±6^{km}, mb4.7/64, Error ellipse: s-maj=4.7km s-min=2.8km az=215.0*
*IDC **18** 14:57:26.7±0.6, 36.49N×70.21E, h222^{km}±5^{km}, mb4.4/30, mb1 4.5/33, mb1mx4.4/35, mbtmp5.0/33, Error ellipse: s-maj=7.9km s-min=7.9km az=145.0*
*NNC **18** 14:57:30.1±2.4, 36.95N×70.10E, h215^{km}±19^{km}, mpv5.1, Error ellipse: s-maj=21.5km s-min=15.6km az=29.0*
ISC 18 14:57:24.7±0.1, **36.50N**±0.02×**70.18E**±0.02, **h219**^{km}, **h219**^{km}±3.8^{km}**:pP-P, n340, σ0^{s}97**/366, **mb4.6**/99, **33C-31D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	3.02	152	⇑P	P	14 58 18.0	+2.0
CHCP	**Chirah Chowk**	3.80	137	⇑P	P	14 58 26.0	+0.7
THW	**Thamme Wali**	3.91	160	⇓P	P	14 58 28.0	+1.3
SBDP	**Sheikh Budin**	4.22	173	⇓P	P	14 58 29.7	-0.8
SRNI	**Srinagar**	4.50	121	*e*S	S	14 59 26.0	-1.8
SRNI				*e*x	x	14 59 32.0	
DRP	**Derazinda**	4.74	180	⇓P	P	14 58 38.6	+1.6
SARP	**Sargodha**	5.01	155	P	P	14 58 41.3	+1.0
JMU	**Jammu**	5.42	133	*e*S	S	14 59 45.0	-3.4
KSH	**Kashi**	5.47	55	⇓*i*P	P	14 58 47.3	+1.1
KSH				S	S	14 59 49.4	-0.3
KSH				Smax			
	comp=N,4μm,0.4s						
KSH				Smax			
	comp=E,7μm,0.5s						
THN	**Thein Dam**	6.11	130	*e*P	P	14 58 54.2	-0.1
THN				*e*x	x	15 00 03.1	
DLH	**Dalhousie**	6.19	128	*e*P	P	14 58 57.0	+1.6
DLH				*e*x	x	15 00 06.0	
AML	**Almayashu**	6.25	25	P	P	14 58 56.0	-0.1
	SNR=158						
KK31	**Karatay Array**	6.60	2	P	P	14 58 59.6	-1.1
	comp=E,116nm,0.8s,baz=194,slow=16,SNR=784						
KK31				⇑S	S	15 00 10.8	-4.8
	comp=E,263nm,0.9s,baz=196,slow=23,SNR=6.6						
UCH	**Uchtor**	6.63	29	P	P	14 59 01.2	+0.2
	SNR=338						
EKS2	**Erkin-Say**	6.75	23	P	P	14 59 02.5	0.0
	SNR=105						
KZA	**Kyzart**	6.82	34	P	P	14 59 03.4	0.0
	SNR=406						
AAK	**Ala-Archa**	6.97	27	P	P	14 59 05.5	+0.1
	SNR=249						
AAK	**Ala-Archa**	6.97	27	⇓P	P	14 59 05.4	-0.1
	comp=E,179nm,0.8s						
AAK				⇓S	S	15 00 22.0	-2.1
	comp=E,1μm,0.9s						
AAK	**Ala-Archa**	6.97	27	⇓P	P	14 59 05.3	-0.1
	comp=E,179nm,0.8s						
AAK				S	S	15 00 22.0	-2.1
AAK	**Ala-Archa**	6.97	27	⇓PN	P	14 59 05.4	0.0
AAK				S	S	15 00 22.0	-2.1
AAK				pmax	pmax		
	comp=Z,179nm,0.8s						
KBK	**Karagaybulak**	7.17	29	P	P	14 59 08.3	+0.3
	SNR=141						
FRU	**Bishkek**	7.19	27	⇓*i*PN	P	14 59 08.5	+0.3
FRU				*e*S	S	15 00 27.0	-2.2
FRU				pmax	pmax		
	comp=Z,200nm,1.5s						
FRU				smax			
	comp=N,2μm,1.5s						
BHK	**Bhakra**	7.24	133	*e*x	x	14 59 13.3	
BHK				*e*x	x	15 00 30.4	
CHMS	**Chumysh**	7.38	27	P	P	14 59 10.5	-0.3
	SNR=30						
ULHL	**Ulahol**	7.41	37	P	P	14 59 11.6	+0.5
	SNR=69						
SDNR	**Sundarnagar**	7.52	130	*e*P	P	14 59 10.8	-1.7
SDNR				*e*S	S	15 00 30.2	-6.6
USP	**Ospenovka**	7.53	25	P	P	14 59 12.0	-0.6
	SNR=20						
TKM2	**Tokmak 2**	7.65	31	P	P	14 59 15.2	+1.0
	SNR=33						
SMLA	**Simla**	7.90	131	*e*P	P	14 59 16.2	-1.3
SMLA				*e*S	S	15 00 41.5	-4.1
AAA	**Alma-Ata**	8.53	35	*d i*PN	P	14 59 26.0	+0.4
AAA				*i* S	S	15 00 58.7	-1.4
AAA				pmax	pmax		
	comp=Z,400nm,1.0s						
AAA				smax			
	comp=N,900nm,2.3s						
AAA				MLR	MLR		
	comp=Z,1μm,5.2s						
DDI	**Dehra Dun**	9.01	131	*e*P	P	14 59 31.2	-0.6
DDI				*e*S	S	15 01 08.2	-3.0
KHET	**Khetri**	9.65	149	*e*P	P	14 59 38.4	-1.6
KHET				AMb	AMB	14 59 39.1	
	comp=Z,162nm,0.5s						
NDI	**New Delhi**	9.79	141	*e*P	P	14 59 39.5	-2.3
NDI				*e*S	S	15 01 22.0	-7.2
AJM	**Ajmer**	10.69	158	*e*P	P	14 59 51.5	-1.8
AJM				AMb	AMB	14 59 53.0	
	comp=Z,160nm,0.5s						
AJM				*e*S	S	15 01 43.5	-6.4
PTH	**Pithoragarh**	10.90	127	*e*P	P	14 59 55.3	-0.7
PTH				*e*S	S	15 01 51.0	-3.8
BHJ	**Bhuj**	13.21	182	*e*P	P	15 00 24.9	-0.1
BHJ				AMb	AMB	15 00 31.1	
	comp=Z,214nm,0.6s						
BHJ				*e*S	S	15 02 44.0	-3.5
MK02	**Makanchi Array**	13.68	38	⇓P	P	15 00 30.3	-0.5
MK02				pmax	pmax		
	comp=Z,120nm,0.6s						
MK31	**Makanchi Array**	13.69	38	⇓P	P	15 00 30.3	-0.6
	comp=Z,120nm,0.7s,baz=222,slow=12,SNR=972						
MKAR	**Makanchi Array**	13.69	38	P	P	15 00 30.4	-0.5
	comp=Z,5.5nm,0.3s,baz=229,slow=12,SNR=108						
MKAR				S	S	15 03 01.6	+3.5
	baz=198,slow=18,SNR=1.8						
KOLN	**Koldanda**	14.30	124	*e*P	P	15 00 38.1	-0.6
	comp=Z,106nm,0.2s						
BHPL	**Bhopal**	14.62	153	*e*P	P	15 00 42.9	+0.3
BHPL				*e*x	x	15 03 16.7	
AB31	**Akbulak array**	14.78	333	P	P	15 00 42.7	-1.7
	comp=Z,29nm,0.7s,baz=148,slow=12,SNR=405						
AB31	**Akbulak array**	14.78	333	P	P	15 00 42.7	-1.7
	comp=Z,29nm,0.7s						
AB31	**Akbulak array**	14.78	333	P	P	15 00 42.7	-1.6
AB31				pmax	pmax		
	comp=Z,29nm,0.7s						
GKN	**Gorkha**	14.86	121	*e*P	P	15 00 44.6	-0.9
	comp=Z,597nm,0.4s						
GKN				*e*S	S	15 03 19.0	-5.6
ALBI	**Allahabad**	14.95	135	*e*P	P	15 00 43.5	-3.1
WMQ	**Urumqi**	15.24	56	⇑*i*P	P	15 00 50.6	+0.5
WMQ				XP		15 01 44.0	
WMQ				S	S	15 03 34.0	+1.1
WMQ				AMB	AMB		
	comp=Z,160nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,370nm,4.6s						
DMN	**Daman**	15.43	121	*e*P	P	15 00 52.1	-0.4
	comp=Z,216nm,0.3s						
KKN	**Kakani**	15.44	120	*e*P	P	15 00 51.8	-0.8
	comp=Z,919nm,0.5s						
KURK	**Kurchatov**	15.45	20	⇑P	P	15 00 51.2	-1.4
	comp=Z,53nm,1.5s						
PKI	**Pulchoki**	15.67	120	*e*P	P	15 00 55.2	-0.2
	comp=Z,407nm,0.4s						
GUN	**Gumba**	15.79	118	*e*P	P	15 00 56.8	-0.1
	comp=Z,807nm,0.6s						
BANOM	**Banah**	15.86	232	P	P	15 00 56.9	-0.8
	SNR=20						
BANOM				P		15 00 56.9	
	SNR=20						
BANOM				P		15 00 56.9	
	SNR=20						
BANOM				P		15 00 56.9	
	SNR=20						
BANOM				P		15 00 56.9	
	SNR=20						
BANOM	**Banah**	15.86	232	P	P	15 00 56.7	-1.0
	SNR=24						
BANOM				P		15 00 56.7	
	SNR=24						
BANOM				P		15 00 56.7	
	SNR=24						
BANOM				P		15 00 56.7	
	SNR=24						
BANOM				P		15 00 56.7	
	SNR=24						
BANOM	**Banah**	15.86	232	P	P	15 00 56.9	-0.8
	SNR=20						
BANOM				P		15 00 56.9	
	SNR=20						
BANOM				P		15 00 56.9	
	SNR=20						
BANOM				P		15 00 56.9	
	SNR=20						
VOSK	**Vostochnaya**	16.23	2	⇑P	P	15 01 00.8	-1.2
	comp=Z,22nm,0.5s						
VOSK	**Vostochnaya**	16.23	2	⇑P	P	15 01 00.8	-1.2
VOSK				pmax	pmax		
	comp=Z,22nm,0.4s						
AKTK	**Aktyubinsk**	16.46	332	⇑P	P	15 01 03.9	-0.9
AKTK				S	S	15 04 00.1	+0.2
AKTO	**Aktyubinsk**	16.46	332	⇑P	P	15 01 03.9	-0.8
	comp=Z,26nm,1.1s						
AKTO				⇑S	S	15 04 00.1	+0.2
	comp=Z,8.8nm,1.3s						
AKTO	**Aktyubinsk**	16.46	332	P	P	15 01 04.0	-0.7
	comp=Z,9.7nm,0.3s,baz=143,slow=10,SNR=286						
AKTO				S	S	15 04 01.7	+1.7
	comp=Z,0.8nm,0.3s,baz=13,slow=19,SNR=5.7						
AKTO	**Aktyubinsk**	16.46	332	P	P	15 01 04.0	-0.7
AKTO				S	S	15 04 01.7	+1.7
AKTO				pmax	pmax		
	comp=Z,10.0nm,0.3s						
AKTO				smax			
	comp=N,1.0nm,0.3s						
BVA0	**Borovoye Array**	16.53	0	P	P	15 01 04.6	-0.9
	comp=N,16nm,1.0s,baz=176,slow=14,SNR=317						
BVA0	**Borovoye Array**	16.53	0	P	P	15 01 04.6	-0.9
	comp=N,16nm,1.0s						
BVA0	**Borovoye Array**	16.53	0	P	P	15 01 04.6	-0.9
BVA0				pmax	pmax		
	comp=Z,16nm,1.0s						
BVAR	**Borovoye Array**	16.53	0	P	P	15 01 04.7	-0.7
	comp=Z,16nm,0.3s,baz=172,slow=8.1,SNR=186						
BVAR				S	S	15 04 08.1	+6.8
	baz=168,slow=21,SNR=7.3						
BRVK	**Borovoye**	16.56	0	⇑*i*P	P	15 01 04.9	-0.9
	comp=Z,110nm,1.0s						
BRVK				*e*S	S	15 04 07.8	+5.8
BRVK	**Borovoye**	16.56	0	⇑*i*P	P	15 01 04.9	-0.9
BRVK				*e*S	S	15 04 07.8	+5.7
BRVK				pmax	pmax		
	comp=Z,110nm,1.0s						
BIDO	**Bidbid**	16.60	222	P	P	15 01 06.5	-0.1
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO	**Bidbid**	16.60	222	P	P	15 01 06.5	-0.1
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
BIDO				P		15 01 06.5	
	SNR=9.6						
ASHO	**Ashiyiah**	16.90	230	P	P	15 01 09.2	-0.8
	SNR=120						
ASHO				P		15 01 09.2	
	SNR=120						
ASHO				P		15 01 09.2	
	SNR=120						
ASHO				P		15 01 09.2	
	SNR=120						
ASHO				P		15 01 09.2	
	SNR=120						
ASHO	**Ashiyiah**	16.90	230	P	P	15 01 09.3	-0.6
	SNR=56						
ASHO				P		15 01 09.3	
	SNR=56						
ASHO				P		15 01 09.3	
	SNR=56						
ASHO				P		15 01 09.3	
	SNR=56						
ASHO				P		15 01 09.3	
	SNR=56						
ASHO	**Ashiyiah**	16.90	230	P	P	15 01 09.3	-0.6
	SNR=56						
ASHO				P		15 01 09.3	
	SNR=56						
ASHO				P		15 01 09.3	
	SNR=56						
ASHO				P		15 01 09.3	
	SNR=56						
WBK	**Wadi Bani Khal**	16.91	218	P	P	15 01 10.2	+0.2
	SNR=38						
WBK				P		15 01 10.2	
	SNR=38						
WBK				P		15 01 10.2	
	SNR=38						
WBK				P		15 01 10.2	
	SNR=38						
WBK				P		15 01 10.2	
	SNR=38						
WBK				P		15 01 10.2	
	SNR=38						
WBK				P		15 01 10.2	
	SNR=38						
WBK				P		15 01 10.2	
	SNR=38						

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WBK                                P              15 01 10.2
      SNR=38
WBK                                P              15 01 10.2
      SNR=38
WBK   Wadi Bani Khal    16.91 218  P       P      15 01 10.2 +0.2
      SNR=38
WBK                                P              15 01 10.2
      SNR=38
WBK                                P              15 01 10.2
      SNR=38
WBK                                P              15 01 10.2
      SNR=38
HOQ   Hoqain            17.00 224  P       P      15 01 09.6  -1.4
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ   Hoqain            17.00 224  P       P      15 01 09.6  -1.4
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
HOQ                                P              15 01 09.6
      SNR=9.8
SMDO  Samad             17.02 221  P       P      15 01 10.6  -0.7
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
SMDO  Samad             17.02 221  P       P      15 01 10.6  -0.7
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
SMDO                               P              15 01 10.6
      SNR=30
CHKZ  Chkalovo          17.18   1 ⇑P       P      15 01 11.3  -1.5
      comp=Z,18nm,0.5s
JMDO  Jabal Madar       17.55 220  P       P      15 01 17.1 +0.2
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
JMDO  Jabal Madar       17.55 220  P       P      15 01 17.1 +0.2
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
JMDO                               P              15 01 17.1
      SNR=53
ARQ   Araqi             17.64 226  P       P      15 01 17.8  -0.1
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
ARQ                                P              15 01 17.8
      SNR=16
BLSP  Bilaspur          17.68 141 eP       P      15 01 17.6  -0.7
BLSP                               AMb     AMB    15 01 22.1
      comp=Z,228nm,0.8s
BLSP                              eS       S      15 04 27.4 +1.7
BOM   Bombay            17.69 172 eP       P      15 01 19.2 +0.8
BOM                               eS       S      15 04 33.0 +7.2
BSY   Bisya             17.73 223  P       P      15 01 18.8 +0.1
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
BSY   Bisya             17.73 223  P       P      15 01 18.8 +0.1
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
BSY                                P              15 01 18.8
      SNR=40
POO   Poona             18.19 169 ex       x      15 01 34.8
BOK   Bokaro            18.53 129 eP       P      15 01 26.6  -0.4
BOK                                AMb     AMB    15 01 29.0
      comp=Z,144nm,0.5s
ORR   Orenburg          18.69 329d iP      P      15 01 27.7  -0.7
ORR                               i               15 04 48.5
ORR                                pmax    pmax
      comp=Z,190nm,0.9s
LSA   Lhasa             18.81 105  P       P      15 01 33.0 +3.2
LSA   Lhasa             18.81 105 eP       P      15 01 32.3 +2.4
      comp=Z,55nm,0.4s
LSA                               ePcP     PcP    15 05 47.2  -0.2
LSA   Lhasa             18.81 105 eP       P      15 01 32.3 +2.5
LSA                                pmax    pmax
      comp=Z,55nm,0.4s
LATR  Latur             18.87 161 eP       P      15 01 31.5 +1.0
KAD   Karad             19.44 168 eP       P      15 01 36.8 +0.4
UMR   Umm Al-Rimmam     20.05 256 eP       P      15 01 42.5 +0.1
UMR                                AMb     AMB    15 01 46.7
      comp=Z,86nm,0.7s
KBD   Kabd              20.23 255 eP       P      15 01 45.5 +1.1
KBD                                AMb     AMB    15 01 47.6
      comp=Z,253nm,0.4s
MIB   Mutribah          20.23 257 eP       P      15 01 44.5 +0.2
MIB                                AMb     AMB    15 01 48.3
      comp=Z,83nm,0.7s
GNI   Garni             20.27 288  P       P      15 01 47.5 +2.9
      comp=Z,14nm,0.7s,baz=357,slow=3.3,SNR=14
GNI   Garni             20.27 288⇑iP       P      15 01 47.4 +2.8
      comp=Z,54nm,1.3s
GNI   Garni             20.27 288⇑iP       P      15 01 47.4 +2.8
GNI                                pmax    pmax
      comp=Z,54nm,1.3s
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TI2   Plekhanov         20.38 293⇓iP       P      15 01 46.4 +0.7
TI2                                pmax    pmax
      comp=Z,30nm,1.0s
HYB   Hyderabad         20.40 157⇓iP       P      15 01 47.0 +1.0
      comp=Z,220nm,1.0s
HYB                               eS       S      15 05 30.0  +13
HYB   Hyderabad         20.40 157⇓eP       P      15 01 47.0 +1.0
      comp=Z,220nm,1.0s
HYB                               eS       S      15 05 30.0  +13
HYB   Hyderabad         20.40 157⇓eP       P      15 01 47.0 +1.0
HYB                                pmax    pmax
      comp=Z,220nm,1.0s
NVS   Novosibirsk       20.42  22 i P      P      15 01 45.7  -0.3
NVS                               e*PP            15 02 24.8
NVS                               i S      S      15 05 22.1 +4.9
NVS                               e               15 05 45.6
NVS                               eSS      SS     15 06 07.0  -2.4
NVS                                pmax    pmax
      comp=N,122nm,1.2s
NVS                                pmax    pmax
      comp=Z,200nm,1.2s
NVS                                pmax    pmax
      comp=E,68nm,1.0s
NVS                                smax
      comp=N,75nm,1.5s
NVS                                smax
      comp=E,22nm,1.7s
RDF   Al-Radifah        20.46 255 eP       P      15 01 46.6 +0.1
RDF                                AMb     AMB    15 01 50.4
      comp=Z,101nm,0.6s
NAY   Al-Naaiem         20.55 256 eP       P      15 01 47.7 +0.2
NAY                                AMb     AMB    15 01 51.0
      comp=Z,38nm,0.4s
ZEI   Tsey              21.14 295 eP       P      15 01 54.5 +1.3
ZEI                               i *PP           15 02 29.9
ZEI                                pmax    pmax
      comp=Z,20nm,1.0s,mb4.6
ARU   Arti              21.43 342 eP       P      15 01 56.6 +0.7
      comp=Z,184nm,1.0s,mb5.6
ARU   Arti              21.43 342 eP       P      15 01 56.6 +0.8
ARU                                pmax    pmax
      comp=Z,184nm,1.0s,mb5.6
SHL   Shillong          21.50 114 eP       P      15 01 58.3 +1.5
SHL                               eS       S      15 05 40.3 +3.7
VIS   Vishakhapatnam    22.02 145 eP       P      15 02 01.3  -0.5
VIS                                AMb     AMB    15 02 05.8
      comp=Z,84nm,0.5s,mb5.5
GOF   Gofitskoye        22.19 301 eP       P      15 02 03.4 +0.1
GOF                               i               15 02 42.2
GOF                                pmax    pmax
      comp=Z,43nm,0.6s,mb5.2
KIV   Kislovodsk        22.21 298 eP       P      15 02 04.0 +0.5
      comp=Z,17nm,0.9s,mb4.6
KIV   Kislovodsk        22.21 298⇑iP       P      15 02 05.1 +1.6
KIV                               e*PP            15 02 38.9
KIV                                pmax    pmax
      comp=Z,16nm,0.9s,mb4.5
KIV                                MLR     MLR
      comp=Z,100nm,17.0s
SHAO  Shalim            22.45 219  P       P      15 02 08.1 +2.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
SHAO                               P              15 02 08.1
      SNR=22
GTA   Gaotai            23.50  74 ⇑P       P      15 02 18.1 +2.2
GTA                                AP             15 02 57.5
GTA                                PP      PP     15 03 00.6 +4.2
GTA                                XP             15 03 20.6
GTA                                S       S      15 06 12.6 +2.1
GTA                                SCS     ScS    15 12 58.4 +0.8
GTA                                AMB     AMB
      comp=Z,30nm,0.6s,mb5.0
GTA                                AMB     AMB
      comp=Z,180nm,4.6s
GTA                                LR      LR
      comp=N,110nm,11.0s
GTA                                LR      LR
      comp=E,120nm,10.6s
GTA                                LR      LR
      comp=Z,150nm,11.4s
WHFO  Wadi Hawf         23.50 222  P       P      15 02 16.2   0.0
      SNR=191
WHFO                               P              15 02 16.2
      SNR=191
WHFO                               P              15 02 16.2
      SNR=191
WHFO                               P              15 02 16.2
      SNR=191
WHFO                               P              15 02 16.2
      SNR=191
RBK   Rabkut            23.61 221  P       P      15 02 17.2  -0.1
      SNR=81
RBK                                P              15 02 17.2
      SNR=81
RBK                                P              15 02 17.2
      SNR=81
RBK                                P              15 02 17.2
      SNR=81
RBK                                P              15 02 17.2
      SNR=81
ABTO  Aybut             24.23 223  P       P      15 02 22.6  -0.3
      SNR=23
ABTO                               P              15 02 22.6
      SNR=23
ABTO                               P              15 02 22.6
      SNR=23
ABTO                               P              15 02 22.6
      SNR=23
ABTO                               P              15 02 22.6
      SNR=23
VRHR  Novokhopersk      25.05 315 eP       P      15 02 29.3  -1.0
VRHR                               pmax    pmax
      comp=Z,20nm,0.9s,mb4.8
VRHR                               pmax    pmax
      comp=N,10.0nm,0.6s
VRHR                               pmax    pmax
      comp=E,10.0nm,0.7s
AFFS  ‘Afif             26.52 249  P       P      15 02 43.9  -0.2
MOY   Mondy             26.57  45 eP       P      15 02 45.8 +1.5
MOY                                pmax    pmax
      comp=Z,42nm,2.0s,mb4.7
VOR   Voronezh          26.70 315 eP       P      15 02 45.0  -0.4
VOR                                pmax    pmax
      comp=Z,60nm,1.5s,mb5.0
LZH   Lanzhou           27.06  81 eP       P      15 02 49.0 +0.2
LZH                                AP      pP     15 03 31.3  -0.7
LZH                                PP      PP     15 03 45.0 +1.1
LZH                                XP      sP     15 03 54.5  -3.4
LZH                               eS       S      15 07 09.3 +0.4
LZH                                XS             15 08 23.5
LZH                                SS      SS     15 08 43.9  -1.7
LZH                                AMB     AMB
      comp=Z,20nm,1.2s,mb4.6
LZH                                AMB     AMB
      comp=Z,100nm,4.3s
LZH   Lanzhou           27.06  81 eP       P      15 02 49.0 +0.2
      comp=Z,27nm,1.2s,mb4.8
LZH                                pP      pP     15 03 31.2  -0.8
LZH                                PP      PP     15 03 45.0 +1.1
LZH                                sP      sP     15 03 54.5  -3.4
LZH                               eS       S      15 07 09.2 +0.3
LZH                                sS             15 08 23.5
LZH                                SS      SS     15 08 43.9  -1.7
LZH   Lanzhou           27.06  81 eP       P      15 02 49.0 +0.2
LZH                                *PP     pP     15 03 31.2  -0.8
LZH                                               15 03 45.0
LZH                                *SP     sP     15 03 54.5  -3.4
LZH                               eS       S      15 07 09.2 +0.3
LZH                                *SS            15 08 23.5
LZH                                SS      SS     15 08 43.9  -1.7
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LZH                                pmax    pmax
      comp=Z,27nm,1.2s,mb4.8
ZAK   Zakamensk         27.49  49⇓iP       P      15 02 53.6 +1.1
ZAK                                pmax    pmax
      comp=Z,16nm,1.0s,mb4.6
KAMS  Al Khamasin       27.58 241  P       P      15 02 52.4  -1.3
CD2   Chengdu           28.39  91 eP       P      15 03 02.0 +1.2
CD2                                AMB     AMB
      comp=Z,10.0nm,0.5s,mb4.7
KBRS  Khaybar           28.42 257  P       P      15 03 02.6 +1.4
TRD   Trivandrum        28.54 166 ex       x      15 10 08.7
TRD                               ex       x      15 14 30.7
BR131 Keskin Array S    28.81 288 eP       P      15 03 04.5 +0.1
      comp=Z,1.7nm,0.7s,mb3.8
BRTR  Keskin Array B    28.81 288  P       P      15 03 04.5   0.0
      comp=Z,1.2nm,0.6s,mb3.7,baz=97,slow=8.0,SNR=6.3
TATS  Tathlith          28.86 241  P       P      15 03 04.6  -0.5
SONM  Songino Array     28.88  56  P       P      15 03 06.4 +1.5
      comp=Z,20nm,0.6s,mb4.9,baz=269,slow=9.0,SNR=144
ULN   Ulaanbaatar       29.32  56⇑iP       P      15 03 09.9 +1.0
      comp=Z,20nm,0.6s,mb4.9
ULN   Ulaanbaatar       29.32  56⇑iP       P      15 03 09.9 +1.0
ULN                                pmax    pmax
      comp=Z,20nm,0.6s,mb4.9
OBN   Obninsk           29.51 320⇑iP       P      15 03 10.0  -0.5
      comp=Z,48nm,0.6s,mb5.3
OBN   Obninsk           29.51 320c iP      P      15 03 10.1  -0.4
OBN                               e*PP     pP     15 03 53.7  -0.9
OBN                                pmax    pmax
      comp=Z,49nm,0.5s,mb5.4
BLJS  Baljurashi        29.99 244  P       P      15 03 15.5 +0.5
KMI   Kunming           30.04 103  P       P      15 03 15.8 +0.4
KMI                                PP      PP     15 04 22.8 +0.3
KMI                                S       S      15 07 57.8 +1.6
KMI                                AMB     AMB
      comp=Z,10.0nm,0.7s,mb4.5
KMI   Kunming           30.04 103  P       P      15 03 15.8 +0.4
      comp=Z,15nm,0.7s,mb4.7
KMI                                pP      pP     15 03 53.9  -5.7
KMI                                sP      sP     15 04 14.9   -10
KMI                                PP      PP     15 04 22.8 +0.3
KMI                                S       S      15 07 57.8 +1.6
DJNS  Zahran al Janu    30.05 239  P       P      15 03 15.8 +0.2
AYUS  ‘Aynunah          30.51 264  P       P      15 03 20.2 +0.6
PALK  Pallekele         30.64 159 eP       P      15 03 20.4  -0.3
      comp=Z,14nm,0.9s,mb4.6
CHG   Chiang Mai        30.80 117  P       P      15 03 23.0 +0.9
      comp=Z,12nm,0.6s,mb4.7
KLMR  Klimovskoe        31.16 331c iP      P      15 03 24.2  -0.7
KLMR                               pmax    pmax
      comp=Z,30nm,1.9s,mb4.6
XAN   Xi’an             31.58  83  P       P      15 03 29.1 +0.3
XAN                                AMB     AMB
      comp=Z,20nm,1.0s,mb4.6
FRSS  Farasan al Kab    31.70 239  P       P      15 03 30.4 +0.4
AKASG Malin Array Be    32.44 309  P       P      15 03 34.9  -1.1
      comp=Z,11nm,0.4s,mb4.7,baz=82,slow=7.8,SNR=93
AKASG                              PP      PP     15 04 54.5 +2.1
      comp=Z,2.7nm,0.7s,baz=92,slow=11,SNR=6.8
AKASG                              PcP     PcP    15 06 16.4  -1.5
      comp=Z,2.0nm,0.6s,baz=84,slow=3.2,SNR=6.9
AKASG                              ScP            15 09 37.8
      comp=Z,1.2nm,0.6s,baz=79,slow=4.2,SNR=6.1
GYA   Guiyang           32.52  97  P       P      15 03 37.8 +0.8
GYA                                S       S      15 08 37.5 +2.7
GYA                                AMB     AMB
      comp=Z,10.0nm,0.7s,mb4.5
GYA                                AMB     AMB
      comp=Z,120nm,3.6s
GYA                                LR      LR
      comp=N,240nm,5.4s
GYA                                LR      LR
      comp=E,220nm,5.7s
GYA                                LR      LR
      comp=Z,220nm,6.0s
ENH   Enshi             33.23  89 eP       P      15 03 43.4 +0.3
      comp=Z,15nm,0.8s,mb4.6
NST   Nakhon Sawan      33.74 120  P       P      15 03 49.0 +1.5
CIT   Chita             34.15  49 eP       P      15 03 51.1 +0.5
CIT                               e        pP     15 04 37.7 +1.9
CIT                               e               15 05 00.8
CIT                                pmax    pmax
      comp=Z,100nm,1.4s,mb5.2
MLR   Muntele Rosu      34.21 299  P       P      15 03 52.9 +1.7
      comp=Z,18nm,0.9s,mb4.6,baz=125,slow=2.6,SNR=22
MLR   Muntele Rosu      34.21 299 ⇓P       P      15 03 52.6 +1.4
MLR   Muntele Rosu      34.21 299 ⇓P       P      15 03 52.6 +1.4
BURAR Bucovina Array    34.73 303 ⇓P       P      15 03 56.6 +1.0
BURAR Bucovina Array    34.73 303 ⇓P       P      15 03 56.6 +1.0
VOIR                    34.84 299 ⇑P       P      15 03 57.8 +1.3
ATD   Arta Tunnel       35.00 232  P       P      15 03 59.4 +1.2
      comp=Z,10nm,0.8s,mb4.4,baz=58,slow=13,SNR=4.4
KKTK  Khon Kaen         35.21 116  P       P      15 04 00.0   0.0
      comp=Z,926nm,0.9s
JOF   Joensuu           35.54 330 ep       P      15 04 02.6 +0.3
      comp=Z,41nm,0.3s,mb5.4
BOD   Bodaibo           35.77  39 eP       P      15 04 04.1  -0.1
BOD                                pmax    pmax
      comp=Z,37nm,1.0s,mb4.9
KWP   Kalwaria          36.48 306 eP       P      15 04 11.5 +1.2
SUW   Suwalki           36.64 314 eP       P      15 04 11.6   0.0
SUW   Suwalki           36.64 314 eP       P      15 04 11.6   0.0
KOLS  Kolonicke sedl    36.74 305 i P      P      15 04 13.6 +1.1
WHN   Wuhan             37.05  86 eP       P      15 04 11.1  -4.2
FINES FINESS Array B    37.12 326  P       P      15 04 15.7 +0.2
      comp=Z,29nm,0.6s,mb5.0,baz=110,slow=9.7,SNR=146
KAF   Kangasniemi       37.27 327 ep       P      15 04 17.0 +0.2
      comp=Z,12nm,0.4s,mb4.8,baz=115,slow=7.9
KAF   Kangasniemi       37.27 327 eP       P      15 04 17.0 +0.2
KAF                                pmax    pmax
      comp=Z,12nm,0.4s,mb4.8
CRVS  Cervenica-Dubn    37.27 305 e        P      15 04 15.8  -1.1
APA   Apatity           37.39 338⇓iP       P      15 04 18.4 +0.7
APA                                pmax    pmax
      comp=Z,31nm,0.6s,mb5.0
STHS  Stebnicka Huta    37.43 306 i P      P      15 04 19.1 +0.9
HIA   Hailar            37.83  54 eP       P      15 04 22.3 +0.8
      comp=Z,10nm,0.7s,mb4.5
HIA   Hailar            37.83  54 eP       P      15 04 22.3 +0.8
HIA                                pmax    pmax
      comp=Z,10.0nm,0.7s
KECS  Kecovo            37.92 304 i P      P      15 04 23.6 +1.3
PSZ   Piszkesteto       38.33 303 eP       P      15 04 26.5 +0.8
      comp=Z,3.0nm,0.6s,mb4.0
PSZ   Piszkesteto       38.33 303 eP       P      15 04 26.5 +0.8
PSZ                                pmax    pmax
      comp=Z,3.0nm,0.6s,mb4.0
OJC   Ojcow             38.38 307 eP       P      15 04 26.8 +0.7
VYHS  Vyhne             39.02 304 eP       P      15 04 32.8 +1.4
MORC  Moravsky Berou    39.84 306 eP       P      15 04 39.1 +1.0
      comp=Z,1.4nm,0.6s,mb3.6
MORC  Moravsky Berou    39.84 306 eP       P      15 04 39.1 +1.0
MORC                               pmax    pmax
      comp=Z,1.0nm,0.6s
NJ2   Nanjing           40.13  82 eP       P      15 04 42.0 +1.3
NJ2                                AP      pP     15 05 22.8  -4.2
NJ2                                PP      PP     15 06 21.1 +1.8
NJ2                                S       S      15 10 33.0 +2.6
NJ2                                AMB     AMB
      comp=Z,20nm,0.8s,mb4.6
NJ2                                AMB     AMB
      comp=Z,190nm,4.8s
NJ2                                LR      LR
      comp=N,470nm,18.0s
NJ2                                LR      LR
      comp=E,530nm,23.9s
NJ2                                LR      LR
      comp=Z,210nm,24.0s
DL2   Dalian            40.34  71  P       P      15 04 44.0 +1.7
DL2                                AMB     AMB
      comp=Z,30nm,0.6s,mb4.9
VRAC  Vranov            40.47 306  P       P      15 04 44.1 +0.8
      comp=Z,1.7nm,0.4s,mb3.8,baz=97,slow=16,SNR=4.7
KEV   Kevo              40.56 339 ep       P      15 04 44.3 +0.4
      comp=Z,39nm,0.4s,mb5.2
KEV   Kevo              40.56 339 eP       P      15 04 44.3 +0.4
KEV                                pmax    pmax
      comp=Z,39nm,0.4s,mb5.2
ARCES ARCESS Array B    40.90 338  P       P      15 04 47.2 +0.6
      comp=Z,63nm,0.7s,mb5.2,baz=109,slow=7.5,SNR=363
ARE0  ARCESS Array S    40.90 338⇑iP       P      15 04 47.1 +0.5
SNY   Shenyang          41.19  66 ⇓P       P      15 04 50.1 +0.8
SNY                                AMB     AMB
      comp=Z,40nm,0.6s,mb5.0
KTK1  Kautokeino        41.36 337 eP       P      15 04 50.8 +0.4
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PERS	Pernice	41.66	302	eP	P	15 04 53.8	+0.8
KULM	Kulim	41.77	131	eP	P	15 04 54.3	0.0
MOA	Molln	42.11	304	⇓eP	P	15 04 57.5	+0.9
	comp=Z,3.8nm,0.7s,mb4.0						
CN2	Changchun	42.19	62	eP	P	15 04 58.5	+1.1
CN2				eAP	pP	15 05 39.8	-4.1
CN2				eS	S	15 11 02.9	+2.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
CN2				AMB	AMB		
	comp=Z,170nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s						
CN2				LR	LR		
	comp=E,230nm,18.0s						
CN2				LR	LR		
	comp=Z,340nm,21.0s						
SSE	Sheshan	42.33	82	P	P	15 04 57.3	-1.3
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.7						
SSE				AMB	AMB		
	comp=Z,170nm,4.3s						
SSE	Sheshan	42.33	82	P	P	15 04 57.3	-1.3
	comp=Z,23nm,0.7s,mb4.7						
GERES	GERESS Array B	42.39	305	P	P	15 04 59.6	+0.7
	comp=Z,0.9nm,0.7s,baz=117,slow=3.0,SNR=7.2						
GERES				pP	pP	15 05 46.3	+0.8
	comp=Z,0.3nm,0.3s,baz=101,slow=5.0,SNR=2.0						
GERES				PcP	PcP	15 06 47.3	-1.1
	comp=Z,1.5nm,0.7s,baz=90,slow=4.9,SNR=5.5						
GERES				ScP		15 10 16.7	
	comp=Z,0.6nm,0.7s,baz=90,slow=5.3,SNR=4.1						
HFS	Hagfors	42.66	322	P	P	15 05 01.2	+0.2
	comp=Z,50nm,0.5s,mb5.2,baz=98,slow=10,SNR=233						
CLL	Collm	42.68	309	⇓P	P	15 05 01.6	+0.4
	comp=Z,logA/T=1.0,mb4.2						
CLL	Collm	42.68	309	⇓iP	P	15 05 01.6	+0.4
	comp=Z,8.0nm,0.8s,mb4.2						
CLL				i pP	pP	15 05 56.2	+8.3
CLL	Collm	42.68	309	⇓iP	P	15 05 01.6	+0.4
CLL				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
ROBS	Robic	42.81	301	eP	P	15 05 02.8	+0.5
TRO	Tromso	43.01	336	eP	P	15 05 03.0	-0.6
MOR8	Moi Rana	43.50	331	eP	P	15 05 07.2	-0.4
MOR8				AMb	AMB	15 05 07.8	
	comp=Z,88nm,0.6s,mb5.3						
MOR8	Moi Rana	43.50	331	eP	P	15 05 07.2	-0.4
	comp=Z,88nm,0.6s,mb5.4						
NB2	NORSAR Subarra	43.99	323	P	P	15 05 11.0	-0.6
	comp=Z,22nm,0.5s,mb4.7,baz=98,slow=7.9						
NB2	NORSAR Subarra	43.99	323	P	P	15 05 11.0	-0.6
	baz=98,slow=7.9						
NOA	NORSAR Array B	43.99	323	P	P	15 05 11.0	-0.6
	comp=Z,24nm,0.5s,mb4.8,baz=98,slow=7.8,SNR=92						
NOA				PP	PP	15 06 57.4	-0.5
	comp=Z,2.3nm,0.7s,baz=99,slow=10,SNR=3.8						
STOK	Stokkvaagen	44.10	331	eP	P	15 05 12.5	+0.1
NAO01	NORSAR Array S	44.13	323	eP	P	15 05 11.9	-0.7
	comp=Z,7.0nm,0.5s,mb4.2						
NAO	NORSAR Subarra	44.15	323	P	P	15 05 11.0	-1.8
	comp=Z,22nm,0.5s,mb4.7						
NAO	NORSAR Subarra	44.15	323	P	P	15 05 11.0	-1.8
NAO				pmax	pmax		
	comp=Z,22nm,0.5s,mb4.7						
YAK	Yakutsk	44.35	36	⇑iP	P	15 05 14.6	+0.1
	comp=Z,81nm,0.8s,mb5.1						
YAK	Yakutsk	44.35	36	⇑iP	P	15 05 14.6	+0.2
YAK				pmax	pmax		
	comp=Z,81nm,0.8s,mb5.1						
LOF	Lofoten	44.35	333	eP	P	15 05 15.9	+1.5
LOF				AMb	AMB	15 05 22.9	
	comp=Z,135nm,1.6s,mb5.0						
LOF	Lofoten	44.35	333	eP	P	15 05 15.9	+1.5
	comp=Z,135nm,1.6s,mb5.0						
MDJ	Mudanjiang	44.98	60	P	P	15 05 15.8	-3.8
MDJ				AMB	AMB		
	comp=Z,40nm,3.2s						
BJO	Bjornoya	45.03	343	eP	P	15 05 19.8	+0.1
BJO1	Bjornoya	45.07	343	eP	P	15 05 19.8	-0.2
DAVA	Damuels	45.13	303	⇑iP	P	15 05 21.1	+0.3
	comp=Z,7.7nm,0.5s,mb4.3						
DAVA	Damuels	45.13	303	⇑iP	P	15 05 21.1	+0.3
	comp=Z,7.7nm,0.4s,mb4.4						
DAVOX	Davos	45.21	303	P	P	15 05 21.5	+0.1
	comp=Z,2.4nm,0.3s,mb4.0,baz=45,slow=8.6,SNR=4.7						
KS15	Wonju Array Si	45.48	71	eP	P	15 05 23.5	-0.2
KLR	Kul'dur	45.68	54	eP	P	15 05 23.2	-1.9
MOL	Molde	45.86	325	eP	P	15 05 27.2	+0.8
MOL				AMb	AMB	15 05 30.4	
	comp=Z,48nm,1.8s,mb4.5						
MOL	Molde	45.86	325	eP	P	15 05 27.2	+0.8
	comp=Z,48nm,1.8s,mb4.5						
TIXI	Tiksi	46.02	22	⇑iP	P	15 05 25.2	-2.3
TIXI				e	pP	15 06 14.8	0.0
TIXI				e		15 07 17.7	
TIXI				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.0						
PGF	Pioggiola	46.69	297	eP	P	15 05 32.6	-0.4
	comp=Z,18nm,0.9s,mb4.1						
PGF	Pioggiola	46.69	297	eP	P	15 05 32.6	-0.4
PGF				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.1						
HINF	Hinteralfeld	47.06	305	eP	P	15 05 35.0	-0.8
LPG	La Plagne	47.59	302	eP	P	15 05 39.9	-0.1
	comp=Z,7.1nm,0.7s,mb3.8						
LPG	La Plagne	47.59	302	eP	P	15 05 39.9	-0.1
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.9						
LPL	La Plagne	47.60	302	eP	P	15 05 39.7	-0.4
MBDF	Montbardon	47.75	301	eP	P	15 05 40.6	-0.6
	comp=Z,5.5nm,0.5s,mb3.9						
MBDF	Montbardon	47.75	301	eP	P	15 05 40.6	-0.6
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.9						
CABF	La Chapelle	47.80	303	eP	P	15 05 41.3	-0.4
	comp=Z,10nm,0.6s,mb4.0						
CABF	La Chapelle	47.80	303	eP	P	15 05 41.3	-0.4
CABF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
ORIF	Oris-en-Rattie	48.32	301	eP	P	15 05 44.5	-1.1
KMBO	Kilima Mbogo	48.35	227	P	P	15 05 47.3	+1.0
	comp=Z,21nm,0.6s,mb4.6,baz=36,slow=12,SNR=81						
KBS	Kingsbay	48.47	347	eP	P	15 05 47.1	+0.8
KBS				AMb	AMB	15 05 49.0	
	comp=Z,77nm,0.9s,mb5.0						
KBS	Kingsbay	48.47	347	eP	P	15 05 47.1	+0.8
	comp=Z,77nm,0.9s,mb5.0						
SMRF	Simiane la Rot	48.76	300	eP	P	15 05 48.2	-0.8
LOR	Lormes	49.16	304	eP	P	15 05 51.5	-0.5
VIVF	Saint-Julien-l	49.17	301	eP	P	15 05 51.3	-0.8
JNU	Nakatsue	49.23	75	P	P	15 05 54.0	+1.3
	comp=Z,24nm,0.7s,mb4.6,baz=0.6,slow=12,SNR=16						
SMF	Signal de Mont	49.31	304	eP	P	15 05 52.2	-0.9
	comp=Z,9.8nm,0.6s,mb4.0						
SMF	Signal de Mont	49.31	304	eP	P	15 05 52.2	-0.9
SMF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.0						
SSF	Saint Saulge	49.44	304	eP	P	15 05 53.2	-0.9
AVF	Avril sur Loir	49.60	304	eP	P	15 05 54.4	-1.0
	comp=Z,11nm,0.7s,mb4.0						
AVF	Avril sur Loir	49.60	304	eP	P	15 05 54.4	-1.0
AVF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
LASF	Ste Croix	49.93	300	eP	P	15 05 57.3	-0.6
BGF	Bois d'Agland	49.99	304	eP	P	15 05 57.5	-0.8
TCF	Toulx Ste Croi	50.49	304	eP	P	15 06 00.6	-1.5
	comp=Z,8.6nm,0.7s,mb3.9						
TCF	Toulx Ste Croi	50.49	304	eP	P	15 06 00.6	-1.5
TCF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb3.9						
KSM	Kuching	50.87	124	eP	P	15 06 05.0	-0.4
MTLF	Montolieu	51.28	300	eP	P	15 06 07.6	-0.4
LDF	La Druitiere	51.45	307	eP	P	15 06 08.7	-0.5
FLN	La Foliniere	51.64	307	eP	P	15 06 10.0	-0.6
	comp=Z,5.9nm,0.3s,mb4.1						
FLN	La Foliniere	51.64	307	eP	P	15 06 10.0	-0.6
FLN				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.2						
KKM	Kota Kinabalu	51.81	114	eP	P	15 06 12.9	+0.6
EKA	Eskdalemuir Ar	51.83	316	P	P	15 06 11.6	-0.4
	comp=Z,4.6nm,0.7s,mb4.0,baz=97,slow=6.7,SNR=9.4						
MFF	Saint Martin d	51.98	304	eP	P	15 06 12.6	-0.5
SGMF	Saint Gilles	53.11	307	eP	P	15 06 20.2	-1.3
YSS	Yuzh-Sakhalins	53.36	55	eP	P	15 06 23.5	+0.2
	comp=Z,42nm,0.6s,mb5.0						
YSS	Yuzh-Sakhalins	53.36	55	⇑eP	P	15 06 23.0	-0.3
YSS				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.1						
ROSF	Rostrenen	53.55	307	eP	P	15 06 23.7	-1.0
	comp=Z,17nm,0.8s,mb4.3						
ROSF	Rostrenen	53.55	307	eP	P	15 06 23.7	-1.0
ROSF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.3						
MAJO	Matsushiro	53.56	68	eP	P	15 06 24.6	-0.3
	comp=Z,16nm,0.8s,mb4.6						
MAJO	Matsushiro	53.56	68	eP	P	15 06 24.7	-0.3
MAJO				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.6						
MAT	Matsushiro	53.56	68	P	P	15 06 24.4	-0.6
MAT	Matsushiro	53.56	68	eP	P	15 06 24.0	-1.0
	comp=Z,18nm,0.8s,mb4.7						
MAT	Matsushiro	53.56	68	eP	P	15 06 24.0	-1.0
MAT				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.7						
MJAR	Matsushiro Arr	53.57	68	P	P	15 06 25.1	+0.1
	comp=Z,12nm,0.8s,mb4.5,baz=290,slow=10,SNR=22						
SJPF	Ste Jean	53.74	301	eP	P	15 06 25.2	-1.0
	comp=Z,3.0nm,0.5s,mb3.8						
SJPF	Ste Jean	53.74	301	eP	P	15 06 25.2	-1.0
SJPF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.9						
DAG	Danmarks Havn	54.55	344	⇓iP	P	15 06 31.7	+0.1
	comp=Z,33nm,0.9s,mb4.9						
DAG	Danmarks Havn	54.55	344	⇓iP	P	15 06 31.7	+0.1
DAG				pmax	pmax		
	comp=Z,33nm,0.9s,mb4.9						
BILL	Bilibino	58.90	26	eP	P	15 07 02.6	+0.3
	comp=Z,8.0nm,0.4s,mb4.7						
BILL	Bilibino	58.90	26	eP	P	15 07 02.6	+0.3
BILL				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb4.7						
OPO	Ambohidratompo	58.92	206	P	P	15 07 04.0	+0.9
	comp=Z,11nm,0.8s,mb4.6,baz=21,slow=6.1,SNR=22						
SUMG	Summit	60.85	341	eP	P	15 07 16.0	+0.6
	comp=Z,31nm,1.0s,mb4.9						
LSZ	Lusaka	64.98	225	P	P	15 07 43.2	-0.2
	comp=Z,7.1nm,0.6s,mb4.5,baz=44,slow=5.7,SNR=18						
LSZ	Lusaka	64.98	225	eP	P	15 07 42.2	-1.2
	comp=Z,4.0nm,0.6s,mb4.2						
LSZ	Lusaka	64.98	225	eP	P	15 07 42.2	-1.1
LSZ				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
SFJD	Kangerlussuaq	67.52	339	P	P	15 07 58.5	0.0
	comp=Z,3.8nm,0.4s,mb4.4,baz=21,slow=8.6,SNR=4.7						
FX1	Attu Island--F	68.82	39	eP	P	15 08 06.1	-0.7
MATP	Matopo	68.96	222	P	P	15 08 07.8	-0.3
	comp=Z,25nm,0.5s,mb5.1,baz=30,slow=6.0,SNR=76						
INK	Inuvik	74.01	9	P	P	15 08 37.9	+0.6
	comp=Z,18nm,0.5s,mb4.9,baz=354,slow=6.3,SNR=122						
INK				pP	pP	15 09 29.0	-0.3
	comp=Z,5.3nm,1.0s,baz=348,slow=5.3,SNR=1.7						
INK	Inuvik	74.01	9	eP	P	15 08 38.1	+0.8
	comp=Z,24nm,0.7s,mb4.9						
INK	Inuvik	74.01	9	P	P	15 08 37.9	+0.5
INK				*PP	pP	15 09 29.0	-0.3
INK				pmax	pmax		
	comp=Z,18nm,0.5s						
INK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DBIC	Dimbokro	74.04	266	P	P	15 08 37.4	-1.3
	comp=Z,2.2nm,0.5s,mb4.1,baz=17,slow=6.0,SNR=9.4						
DBIC				pP	pP	15 09 29.1	-1.4
	comp=Z,2.9nm,0.8s,baz=18,slow=6.4,SNR=2.6						
DBIC	Dimbokro	74.04	266	eP	P	15 08 37.5	-1.1
	comp=Z,2.6nm,0.5s,mb4.1						
DBIC	Dimbokro	74.04	266	P	P	15 08 37.4	-1.2
DBIC				*PP	pP	15 09 29.2	-1.4
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LBTB	Lobatse	74.24	221	eP	P	15 08 39.8	+0.2
	comp=Z,13nm,0.6s,mb4.7						
LBTB	Lobatse	74.24	221	eP	P	15 08 39.8	+0.3
LBTB				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.7						
TSUM	Tsumeb	74.40	231	P	P	15 08 40.4	-0.1
	comp=Z,2.5nm,0.6s,mb4.0,baz=61,slow=23,SNR=8.7						
TSUM	Tsumeb	74.40	231	eP	P	15 08 40.2	-0.3
	comp=Z,3.3nm,0.6s,mb4.1						
LIC	Lamto	74.44	266	eP	P	15 08 38.7	-2.2
	comp=Z,10nm,0.7s,mb4.2						
LIC				eR			
	comp=Z,252nm,19.8s						
COLA	College	74.66	16	eP	P	15 08 42.2	+1.1
	comp=Z,24nm,0.9s,mb4.8						
COLA	College	74.66	16	eP	P	15 08 42.2	+1.1
COLA				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.8						
ILAR	Eielson Array	74.96	16	P	P	15 08 42.7	-0.1
	comp=Z,5.3nm,0.6s,mb4.3,baz=308,slow=4.9,SNR=90						
ILAR				pP	pP	15 09 33.9	-1.0
	comp=Z,3.0nm,1.1s,baz=313,slow=5.0,SNR=2.9						
ILAR				PP	PP	15 11 31.1	-4.0
	comp=Z,2.3nm,1.0s,baz=322,slow=8.9,SNR=6.7						
FITZ	Fitzroy Crossi	75.42	126	eP	P	15 08 47.1	+0.7
	comp=Z,3.1nm,0.3s,mb4.4						
FITZ	Fitzroy Crossi	75.42	126	P	P	15 08 45.9	-0.5
	comp=Z,4.8nm,0.3s,mb4.7,baz=331,slow=13						
KAKA	Kakadu	76.32	117	eP	P	15 09 09.2	+18
	comp=Z,4.9nm,0.5s,mb4.4						
DAWY	Dawson	77.07	13	eP	P	15 08 55.0	+0.4
SML	Sawmill	77.19	18	eP	P	15 08 55.8	+0.6
BOSA	Boshof	77.32	220	P	P	15 08 56.5	-0.2
	comp=Z,5.1nm,0.5s,mb4.4,baz=49,slow=3.9,SNR=15						
BOSA				pP	pP	15 09 51.8	+2.7
	comp=Z,5.5nm,1.0s,baz=75,slow=7.9,SNR=3.1						
BOSA	Boshof	77.32	220	eP	P	15 08 56.3	-0.4
	comp=Z,9.4nm,0.9s,mb4.4						
BOSA	Boshof	77.32	220	P	P	15 08 56.5	-0.2
BOSA				*PP	pP	15 09 51.8	+2.8
BOSA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
BOSA				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.2						
YKW3	Yellowknife Ar	81.21	2	eP	P	15 09 17.4	+0.6
YKA	Yellowknife Ar	81.28	2	P	P	15 09 17.9	+0.8
	comp=Z,7.6nm,0.7s,mb4.4,baz=350,slow=5.4,SNR=23						
YKA	Yellowknife Ar	81.28	2	P	P	15 09 17.9	+0.8
SCHQ	Schefferville	81.84	337	P	P	15 09 20.6	+0.4
	comp=Z,4.6nm,0.8s,mb4.2,baz=168,slow=12,SNR=4.0						
NWAO	Narrogin (SRO)	81.87	142	P	P	15 09 19.8	-1.0
	comp=Z,7.6nm,0.5s,mb4.6,baz=320,slow=4.7,SNR=11						
WRA	Warramunga Arr	82.55	121	P	P	15 09 23.5	-1.0
	comp=Z,7.6nm,0.5s,mb4.7,baz=322,slow=4.9,SNR=42						
WRAB	Tennant Creek	82.55	121	eP	P	15 09 23.1	-1.4
	comp=Z,14nm,0.5s,mb5.0						
WRAB	Tennant Creek	82.55	121	eP	P	15 09 23.1	-1.4
WRAB				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.0						
WB2	Warramunga Arr	82.56	121	⇓iP	P	15 09 23.3	-1.3
ASPA	Alice Springs	84.79	124	eP	P	15 09 34.9	-0.9
FORT	Forrest	86.14	133	eP	P	15 09 41.9	-0.4
	comp=Z,36nm,0.6s,mb5.3						
CTA	Charters Tower	91.14	114	eP	P	15 10 05.6	-0.4
	comp=Z,3.6nm,0.6s,mb4.5						
CTA	Charters Tower	91.14	114	eP	P	15 10 05.6	-0.4
CTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CTAO	Charters Tower	91.14	114	eP	P	15 10 06.3	+0.4
	comp=Z,7.1nm,0.8s,mb4.7						
CTAO	Charters Tower	91.14	114	eP	P	15 10 06.3	+0.3
CTAO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
STKA	Stephens Creek	95.32	126	P	P	15 10 25.2	+0.3
	comp=Z,1.2nm,0.5s,mb4.3,baz=302,slow=9.5,SNR=5.6						
STKA	Stephens Creek	95.32	126	P	P	15 10 25.2	+0.2
SNAA	Sanae	119.17	200	⇑iP	PKPdf	15 15 48.3	+1.6
SNAA	Sanae	119.17	200	eP	PKPdf	15 15 48.1	+1.4
VNA2	Neumayer--Watz	120.15	202	⇑iPKPdf	PKPdf	15 15 52.8	+4.2
VNA3	Neumayer Olymp	120.96	202	⇑iPKPdf	PKPdf	15 15 53.9	+3.7
VNDA	Vanda	125.67	164	ePKPdf	PKPdf	15 16 00.3	+1.3
QSPA	South Pole Qui	126.29	180	ePKPdf	PKPdf	15 16 02.0	+1.9
CPUP	Villa Florida	134.56	267	ePKPdf	PKPdf	15 16 17.8	+0.6
TRQA	Tornquist	142.23	253	ePKPdf	PKPdf	15 16 32.9	+2.3
PLCA	Paso Flores	149.21	250	PKPbc	PKPdf	15 16 49.3	+7.0
	comp=Z,4.6nm,0.9s,baz=121,slow=3.8,SNR=5.2						
PLCA	Paso Flores	149.21	250	ePKPbc	PKPdf	15 16 49.3	+7.0

IDC 18 15:04:41.9±3.0, 15.20S×66.45E, mb3.8/4, mb1 4.0/4, mb1mx3.7/17, mbtmp3.8/4, MS4.3/12, Ms1 4.3/12, ms1mx4.1/19, 6C, Error ellipse: s-maj=104.6km s-min=35.6km az=55.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	32.03	293	LR	LR	15 21 25.6	
	comp=Z,493nm,21.5s,baz=100,slow=31						
BOSA	Boshof	40.28	244	LR	LR	15 26 58.4	
	comp=Z,620nm,18.3s,baz=125,slow=33						
MAW	Mawson	52.41	182	LR	LR	15 30 57.0	
	comp=Z,284nm,20.5s,baz=50,slow=30						
MKAR	Makanchi Array	63.33	12	P	P	15 15 13.7	-1.4
	1.0nm,0.9s,baz=214,slow=10,SNR=4.3						
MKAR				LR	LR	15 42 04.0	
	comp=Z,174nm,20.7s,baz=206,slow=35						
WRA	Warramunga Arr	64.52	105	P	P	15 15 21.0	-2.3
	5.4nm,1.1s,baz=268,slow=6.0,SNR=11						
BVAR	Borovoye Array	68.03	3	P	P	15 15 42.0	-3.2
	0.3nm,0.5s,baz=127,slow=7.2,SNR=3.0						
SNAA	Sanae	69.19	198		P	15 15 54.3	+2.2
SNAA	Sanae	69.19	198		Px	15 16 00.2	
SNAA	Sanae	69.19	198		Px	15 16 15.6	
STKA	Stephens Creek	69.67	119	LR	LR	15 42 01.0	
	comp=Z,297nm,18.7s,baz=214,slow=32						
VNA2	Neumayer--Watz	70.46	200	⇑i	P	15 16 05.1	+5.3
VNA2	Neumayer--Watz	70.46	200	⇑i	Px	15 16 10.2	
VNA2	Neumayer--Watz	70.46	200	⇑i	Px	15 16 16.2	
VNA2	Neumayer--Watz	70.46	200		Px	15 16 22.0	
ZAL	Zalesovo	70.63	11	LR	LR	15 48 15.3	
	comp=Z,171nm,18.7s,baz=270,slow=37						
VNA3	Neumayer Olymp	71.25	199	⇑i	P	15 16 08.6	+4.0
VNA3	Neumayer Olymp	71.25	199	⇑i	Px	15 16 15.4	
VNA3	Neumayer Olymp	71.25	199	⇑i	Px	15 16 21.4	
SONM	Songino Array	72.17	27	P	P	15 16 08.9	-1.6
	0.7nm,0.9s,baz=207,slow=3.2,SNR=3.6						
SONM				LR	LR	15 46 31.5	
	comp=Z,318nm,20.5s,baz=48,slow=35						
DBIC	Dimbokro	73.90	282	LR	LR	15 47 56.0	
	comp=Z,203nm,19.3s,baz=95,slow=35						
FINES	FINESS Array B	82.82	342	LR	LR	15 53 59.3	
	comp=Z,67nm,19.4s,baz=163,slow=36						
MDT	Midelt	82.92	307	LR	LR	15 55 13.6	
	comp=Z,154nm,18.4s,baz=253,slow=37						
MJAR	Matsushiro Arr	84.90	50	LR	LR	15 51 18.2	
	comp=Z,134nm,19.9s,baz=220,slow=33						
ARCES	ARCESS Array B	89.28	347	LR	LR	15 56 55.3	
	comp=Z,94nm,21.4s,baz=3.6,slow=35						
PDAR	Pinedale Array	152.32	354	PKPbc	PKPdf	15 24 40.6	+5.8
	0.6nm,0.6s,baz=63,slow=2.5,SNR=5.0						

MEX 18 15:12:57.0±0.5, 16.00N×97.57W, h16km±16km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.66	306	eP	Pb	15 13 07.7	-2.1
PNIG				i S	Sb	15 13 15.9	-2.5
VHO	Vista Hermosa	1.33	37	i P	Pn	15 13 17.4	-3.6
VHO				i S	Sb	15 13 33.4	-4.5
OXX	Oaxaca	1.35	37	i P	Pn	15 13 17.3	-4.0
OXX				i S	Sb	15 13 33.5	-4.8

MAN 18 15:16:02.0, 8.51N×126.92E, h1km, mb4.3, ML3.2, MS2.9, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.64	240	⇓iP	Pg	15 16 15.5	+0.8
BIPH				i S	Sg	15 16 21.9	-1.2
BUTP	Butuan	1.36	290	eP	Pb	15 16 27.8	-0.1
BUTP				eS	Sb	15 16 46.1	+0.5
MATI	Mati	1.68	203	eP	Pn	15 16 32.6	-0.1
MATI				eS	Sb	15 16 53.0	-2.0
SCPH	Surigao	1.89	312	eP	Pn	15 16 35.7	0.0
SCPH				eS	Sn	15 17 01.1	+0.5
BUKP	Musuan	1.94	251	eP	Pn	15 16 37.7	+1.3
BUKP				eS	Sn	15 17 02.4	+0.7
CGP	Cagayan de Oro	2.20	269	⇓eP	Pn	15 16 40.5	+0.4
CGP				eS	Sn	15 17 08.1	-0.2
MSLP	Maasin	2.59	309	eP	Pn	15 16 47.2	+1.4
MSLP				eS	Sn	15 17 21.8	+3.4
BESP	Borongan	3.40	335	eP	Sn	15 17 36.5	-2.3

NEIC 18 15:19:25.1, 15.43N×93.80W, h16km, MD4.0(MEX), After MEX.

MEX 18 15:19:25.1±0.6, 15.43N×93.80W, h16km±11km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	San Cristobal	1.72	41	i P	Pn	15 19 51.8	-2.9
SCX				i S	Sn	15 20 10.7	-5.7
CCIG	Comitan	1.81	62	eP	Pn	15 19 52.5	-3.5
CCIG				i S	Sn	15 20 13.0	-5.8
CMIG	Matias Romero	1.96	328	eP	Pn	15 19 54.5	-3.6
CMIG				i S	Sn	15 20 17.2	-5.2
HUIG	Huatulco	2.25	279	i P	Pn	15 19 59.0	-3.4
HUIG				i S	Sn	15 20 24.0	-5.9
VHO	Vista Hermosa	3.26	301	i P	Pn	15 20 14.3	-2.4
VHO				i S	Sn	15 20 50.9	-4.6

NEIC 18 15:34:43.7, 34.74S×72.40W, h21km, ML2.6(GUC), After GUC.

GUC 18 15:34:43.7±0.8, 34.74S×72.40W, h21km±7km, MD3.7, ML2.6, 4C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNV	Longovilo	1.13	46	⇑iP	Pn	15 35 03.7	-0.7
LNV				i S	Sb	15 35 18.6	-0.2
SFDO	San Fernando	1.15	84	⇑iP	Pn	15 35 04.1	-0.6
SFDO				i S	Sb	15 35 18.6	-0.6
LCCH	Las Cruces	1.44	29	eP	Pn	15 35 08.0	-0.9
CACH	El Canelo	1.61	68	i P	Pn	15 35 12.2	+0.9
CACH				i S	Sn	15 35 33.3	+1.7
TACH	Talagante	1.63	48	⇑iP	Pn	15 35 11.1	-0.4
CHCH	Chadas Angostu	1.66	61	eP	Pn	15 35 12.3	+0.4
CHCH				i S	Sn	15 35 33.3	+0.6
CICH	Cipreses	1.69	76	⇑iP	Pn	15 35 13.6	+1.2
CICH				i S	Sn	15 35 34.2	+0.7
PCH	Pirque	1.92	55	eP	Pn	15 35 16.0	+0.2
FCH	Farellones	2.25	52	eP	Pn	15 35 21.0	+0.6
FCH				i S	Sn	15 35 50.7	+2.9
FCH				AMP		15 35 52.5	
	comp=N,44nm,0.3s						

PRU 18 15:39:41.6, 50.22N×18.92E

WAR 18 15:39:41.4, 50.23N×19.04E, h0km, ML2.5, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.48	91	ePG	Pg	15 39 51.0	-0.1
OJC				eSG	Sg	15 39 58.0	+0.4
OKC	Ostrava-Krasne	0.70	236	ePG	Pg	15 39 54.6	-0.8
NIE	Niedzica	1.16	134	ePG	Pg	15 40 04.0	-0.5
NIE				eSG	Sg	15 40 20.0	0.0
NIE	Niedzica	1.16	134	ePg	Pg	15 40 03.8	-0.7
NIE				e		15 40 19.3	
NIE				eSg	Sg	15 40 20.4	+0.4
LIKS	Likavka	1.19	178	ePG	Pg	15 40 02.4	-2.7
STHS	Stebnicka Huta	1.64	119	ePN	Pn	15 40 12.7	+1.1
STHS				eSN	Sn	15 40 34.1	+0.4
VYHS	Vyhne	1.75	185	ePN	Pn	15 40 12.2	-0.9
VYHS				eSN	Sn	15 40 34.4	-2.0
DPC	Dobruska-Polom	1.75	275	ePG	Pg	15 40 12.2	-4.1
DPC				eSG	Sg	15 40 34.8	-4.8
	11nm,0.2s						
KSP	Ksiaz	1.86	290	ePG	Pg	15 40 16.0	-2.5
KSP				eSG	Sg	15 40 39.0	-4.2
UPC	Upice	1.96	279	eSG	Sg	15 40 41.3	-5.4
KECS	Kecovo	1.99	151	ePN	Pn	15 40 16.0	-0.6
KECS				eSN	Sn	15 40 39.6	-3.0
CRVS	Cervenica-Dubn	2.06	129	ePN	Pn	15 40 20.1	+2.5
CRVS				eSN	Sn	15 40 43.9	-0.5
KOLS	Kolonicke sedl	2.47	121	eSN	Sn	15 40 53.3	-1.5
PRU	Pruhonice	2.91	267	eSG	Sg	15 41 10.0	-8.2
KHC	Kasperske Hory	3.72	255	ePN	Pn	15 40 37.5	-3.7

KHC				*e*PG	Pg	15 40 53.0	-2.6
KHC				*e*SG	Sg	15 41 35.3	-10
CLL	**Collm**	**3.98**	**288**	*e*SG	Sg	15 41 48.0	-6.0

IDC 18 16:05:17.6±4.2, 2.21N×97.43E, mb3.6/4, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, MS4.0/1, Ms1 4.0/1, ms1mx3.3/24, Error ellipse: s-maj=164.5km s-min=29.0km az=57.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.38**	**123**	P	P	16 13 13.9	-1.8
	0.4nm,0.7s,baz=303,slow=9.2,SNR=5.5						
SONM	**Songino Array**	**46.11**	**8**	P	P	16 13 43.9	-1.5
	0.3nm,0.4s,baz=188,slow=9.5,SNR=5.3						
MKAR	**Makanchi Array**	**46.33**	**346**	P	P	16 13 45.0	-2.2
	0.8nm,0.7s,baz=161,slow=8.7,SNR=7.4						
ZAL	**Zalesovo**	**52.60**	**351**	P	P	16 14 33.1	-2.3
	0.8nm,0.4s,baz=156,slow=2.5,SNR=3.4						
ATD	**Arta Tunnel**	**54.89**	**282**	LR	LR	16 32 29.1	
	comp=Z,145nm,20.6s,baz=299,slow=30						

SKO 18 16:14:50.0, 5.51N×99.50E

BJI 18 16:14:50.8, 2.01N×93.90E, h26^{km}, mB5.2, mb4.6, Ms5.3, Msz5.1

IDC 18 16:14:54.4±0.5, 2.91N×94.07E, mb4.5/20, mb1 4.6/20, mb1mx4.5/24, mbtmp4.5/20, MS4.7/17, Ms1 4.7/17, ms1mx4.5/28, Error ellipse: s-maj=23.4km s-min=13.8km az=63.0

MOS 18 16:14:58.0±1.0, 2.99N×94.08E, h33^{km}, mb5.0/25, MS5.0/7, Error ellipse: s-maj=15.0km s-min=6.8km az=114.7

NEIC 18 16:14:58.8±0.3, 2.88N×94.03E, mb4.8/30, Error ellipse: s-maj=8.7km s-min=6.3km az=219.0

ISC 18 16:14:57.5±0.3, 2.83N±0.04×94.07E±0.04, h29^{km}, h29^{km}±1.4^{km}:pP-P, n186, σ1^{s}25/188, mb4.7/68, MS4.8/36, 14C-1D, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**7.00**	**69**	*e*Pn	**Pn**	**16 16 39.7**	**-1.2**
SNG	**Songkhla**	**7.82**	**56**	P	**Pn**	**16 16 51.0**	**-1.3**
	610nm,0.8s						
PALK	**Pallekele**	**14.03**	**289**	*e*Pn	**P**	**16 18 15.7**	**-1.1**
NST	**Nakhon Sawan**	**14.09**	**25**	P	**P**	**16 18 15.0**	**-2.6**
KKTK	**Khon Kaen**	**15.95**	**32**	P	**P**	**16 18 43.3**	**+1.6**
	432nm,1.0s						
KSM	**Kuching**	**16.28**	**94**	*e*P	**P**	**16 18 46.8**	**+0.8**
UBT	**Ubonrachathani**	**16.39**	**41**	P	**P**	**16 18 58.0**	**+11**
CHG	**Chiang Mai**	**16.59**	**16**	⇑P	**P**	**16 18 52.1**	**+2.3**
	49nm,1.0s						
CHRT	**Chiangrai**	**17.83**	**18**	⇑P	**P**	**16 19 08.0**	**+2.6**
	197nm,1.1s						
TRD	**Trivandrum**	**17.93**	**289**	*e*P	**P**	**16 19 06.2**	**-0.5**
TRD				*e*x	x	16 22 18.4	
VIS	**Vishakhapatnam**	**18.17**	**325**	*e*P	**P**	**16 19 09.2**	**-0.4**
VIS				AMb	AMB	16 19 30.1	
	comp=Z,56nm,1.4s						
VIS				*e*x	x	16 22 19.1	
CAL	**Calcutta**	**20.37**	**345**	*e*x	x	16 19 39.5	
CAL				*e*x	x	16 23 29.0	
HYB	**Hyderabad**	**21.03**	**315**	*i* P	**P**	**16 19 38.0**	**-3.5**
HYB				*e*S	**S**	**16 23 36.0**	**+6.9**
HYB	**Hyderabad**	**21.03**	**315**	*e*P	**P**	**16 19 38.0**	**-3.5**
HYB				*e*S	**S**	**16 23 36.0**	**+6.9**
MNGI	**Mangalore**	**21.53**	**299**	*e*P	**P**	**16 19 47.2**	**+0.7**
MNGI				*e*x	x	16 23 57.6	
BOK	**Bokaro**	**22.29**	**340**	*e*P	**P**	**16 19 53.9**	**-0.3**
BOK				AMb	AMB	16 20 07.4	
	comp=Z,132nm,1.3s,mb5.2						
QIZ	**Qiongzhong**	**22.30**	**43**	P	**P**	**16 19 53.6**	**-0.7**
QIZ				S	**S**	**16 23 54.0**	**+1.2**
QIZ				LR	LR		
	comp=E,4µm,15.3s						
QIZ				LR	LR		
	comp=Z,3µm,15.3s,MS4.9						
KKM	**Kota Kinabalu**	**22.31**	**81**	P	**P**	**16 19 55.9**	**+1.5**
BLSP	**Bilaspur**	**22.41**	**330**	*e*P	**P**	**16 19 54.5**	**-0.9**
BLSP				AMb	AMB	16 20 09.9	
	comp=Z,116nm,1.4s,mb5.1						
BLSP				*e*S	**S**	**16 24 00.0**	**+5.2**
KMI	**Kunming**	**23.69**	**20**	P	**P**	**16 20 10.1**	**+2.3**
KMI				AP		16 20 17.8	
KMI				XP		16 20 20.9	
KMI				PP	PP	16 20 42.8	+1.9
KMI				S	**S**	**16 24 19.8**	**+2.4**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.0						
KMI				AMB	AMB		
	comp=Z,860nm,9.3s						
KMI				LR	LR		
	comp=N,7µm,11.6s,MS5.4						
KMI				LR	LR		
	comp=E,2µm,10.1s,MS5.4						
KMI				LR	LR		
	comp=Z,7µm,11.6s,MS5.3						
KMI	**Kunming**	**23.69**	**20**	P	**P**	**16 20 10.1**	**+2.3**
	comp=Z,13nm,1.7s,mb4.1						
KMI				pP		16 20 17.7	
KMI				sP		16 20 20.9	
KMI				PP	PP	16 20 42.8	+1.9
KMI				PPP	PPP	16 20 53.2	+2.3
KMI				S	**S**	**16 24 19.7**	**+2.3**
KMI				sS		16 24 32.5	
KMI				SS	SS	16 25 08.9	+2.0
KMI				SSS	SSS	16 25 24.6	+1.4
KMI				LR	LR		
	comp=Z,7µm,11.6s,MS5.3						
KMI	**Kunming**	**23.69**	**20**	P	**P**	**16 20 10.1**	**+2.3**
KMI				*PP		16 20 17.7	
KMI				*SP		16 20 20.9	
KMI						16 20 42.8	
KMI				PPP	PPP	16 20 53.2	+2.3
KMI				S	**S**	**16 24 19.7**	**+2.3**
KMI				*SS		16 24 32.5	
KMI				SS	SS	16 25 08.9	+2.0
KMI				SSS	SSS	16 25 24.6	+1.4
KMI				pmax	pmax		
	comp=Z,13nm,1.7s,mb4.1						
KMI				MLR	MLR		
	comp=Z,7µm,11.6s,MS5.3						
KAD	**Karad**	**24.25**	**308**	*e*P	**P**	**16 20 14.5**	**+1.1**
KAD				AMb	AMB	16 20 28.0	
	comp=Z,35nm,1.3s,mb4.6						
POO	**Poona**	**25.21**	**310**	*e*x	x	16 20 32.3	
BHPL	**Bhopal**	**25.91**	**323**	*e*P	**P**	**16 20 30.3**	**+1.1**
BHPL				AMb	AMB	16 20 44.7	
	comp=Z,38nm,1.9s,mb4.6						
DMN	**Daman**	**26.09**	**342**	*e*P	**P**	**16 20 32.3**	**+1.6**
GUN	**Gumba**	**26.14**	**343**	*e*P	**P**	**16 20 31.1**	**-0.1**
KKN	**Kakani**	**26.20**	**342**	*e*P	**P**	**16 20 31.0**	**-0.7**
BOM	**Bombay**	**26.22**	**309**	*e*P	**P**	**16 20 33.0**	**+1.0**
GKN	**Gorkha**	**26.60**	**341**	*e*P	**P**	**16 20 35.0**	**-0.4**
	comp=Z,38nm,1.1s,mb4.8						
KOLN	**Koldanda**	**26.74**	**339**	*e*P	**P**	**16 20 36.5**	**-0.2**
	comp=Z,46nm,1.0s,mb5.0						
LSA	**Lhasa**	**26.87**	**354**	P	**P**	**16 20 40.0**	**+2.2**
LSA				AP	pP	16 20 49.6	+3.2
LSA				XP	sP	16 20 51.4	+1.1
LSA				XS		16 25 32.3	
LSA				AMB	AMB		
	comp=Z,20nm,1.8s,mb4.3						
LSA				LR	LR		
	comp=N,6µm,6.1s						
LSA				LR	LR		
	comp=E,6µm,6.1s						
LSA				LR	LR		
	comp=Z,6µm,6.6s						
LSA	**Lhasa**	**26.87**	**354**	*e*P	**P**	**16 20 40.2**	**+2.4**
	comp=Z,84nm,1.1s,mb5.2						
LSA	**Lhasa**	**26.87**	**354**	*e*P	**P**	**16 20 40.2**	**+2.4**
LSA				pmax	pmax		
	comp=Z,84nm,1.1s,mb5.2						
TGY	**Tagaytay City**	**28.80**	**66**	LR	LR	16 30 50.1	
	comp=Z,5.1nm,20.8s,baz=85,slow=33						
CD2	**Chengdu**	**29.39**	**17**	*e*P	**P**	**16 21 03.0**	**+2.3**
CD2				AP	pP	16 21 07.3	-2.0
CD2				XP	sP	16 21 10.5	-2.6
CD2				PP	PP	16 21 57.4	+1.1
CD2				S	**S**	**16 25 54.3**	**+3.1**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.4s,mb4.9						
CD2				AMB	AMB		
	comp=Z,150nm,7.8s						
CD2				LR	LR		
	comp=E,2µm,15.8s						
CD2				LR	LR		
	comp=Z,3µm,11.0s,MS5.1						
AJM	**Ajmer**	**30.00**	**323**	*e*P	**P**	**16 21 08.5**	**+2.3**
AJM				AMb	AMB	16 21 21.2	
	comp=Z,21nm,1.8s,mb4.6						
NDI	**New Delhi**	**30.31**	**330**	*e*P	**P**	**16 21 06.0**	**-2.8**
ENH	**Enshi**	**30.95**	**27**	P	**P**	**16 21 13.0**	**-1.5**
	comp=Z,13nm,0.9s,mb4.8						
ENH				*e*pP	pP	16 21 21.2	-1.9
XAN	**Xi’an**	**34.00**	**22**	P	**P**	**16 21 39.5**	**-1.5**
XAN				SS	SS	16 29 19.5	+8.1
XAN				LR	LR		
	comp=N,990nm,16.9s,MS5.0						
XAN				LR	LR		
	comp=E,2µm,12.6s,MS5.0						
XAN				LR	LR		
	comp=Z,3µm,15.9s,MS5.2						
LZH	**Lanzhou**	**34.30**	**14**	*e*P	**P**	**16 21 51.5**	**+7.9**
	comp=Z,32nm,1.3s,mb5.1						
LZH				pP	pP	16 22 00.5	+8.2
LZH				sP	sP	16 22 04.6	+8.5
LZH				PP	PP	16 23 07.5	+8.4
LZH				*e*S	**S**	**16 27 16.4**	**+8.4**
LZH				sS		16 27 31.6	
LZH				SS	SS	16 29 27.7	+9.3
LZH				LR	LR		
	comp=Z,2µm,16.8s,MS5.0						
LZH	**Lanzhou**	**34.30**	**14**	*e*P	**P**	**16 21 51.5**	**+7.9**
LZH				*PP	pP	16 22 00.5	+8.2
LZH				*SP	sP	16 22 04.6	+8.5
LZH						16 23 07.5	
LZH				pmax	pmax		
	comp=Z,32nm,1.3s,mb5.1						
LZH				MLR	MLR		
	comp=Z,2µm,16.8s,MS5.0						
GTA	**Gaotai**	**36.78**	**7**	*e*P	**P**	**16 22 04.0**	**-0.6**
GTA				AP	pP	16 22 12.9	-0.5
GTA				XP	sP	16 22 16.9	-0.2
GTA				PP	PP	16 23 29.9	-0.4
GTA				S	**S**	**16 27 45.8**	**-0.4**
GTA				AMB	AMB		
	comp=Z,140nm,7.6s						
GTA				LR	LR		
	comp=N,2µm,12.2s,MS5.1						
GTA				LR	LR		
	comp=E,1µm,11.0s,MS5.1						
GTA				LR	LR		
	comp=Z,1µm,12.2s,MS5.0						
NJ2	**Nanjing**	**37.26**	**36**	*e*P	**P**	**16 22 09.0**	**+0.3**
NJ2				AP	pP	16 22 18.8	+1.4
NJ2				XP	sP	16 22 22.8	+1.7
NJ2				PP	PP	16 23 36.5	+0.2
NJ2				S	**S**	**16 27 53.0**	**-0.5**
NJ2				XS		16 28 10.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,190nm,6.7s						
NJ2				LR	LR		
	comp=N,6µm,23.2s,MS5.5						
NJ2				LR	LR		
	comp=E,5µm,21.8s,MS5.5						
NJ2				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
SSE	**Sheshan**	**38.02**	**39**	P	**P**	**16 22 14.5**	**-0.6**
SSE				XP	sP	16 22 27.1	-0.4
SSE				PCP	PcP	16 24 29.3	-1.4
SSE				S	**S**	**16 28 05.5**	**+0.4**
SSE				XS		16 28 20.8	
SSE				SS	SS	16 30 52.3	+10
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,80nm,3.6s						
SSE				LR	LR		
	comp=N,650nm,18.8s,MS4.6						
SSE				LR	LR		
	comp=E,510nm,18.8s,MS4.6						
SSE				LR	LR		
	comp=Z,1µm,18.6s,MS4.7						
SSE	**Sheshan**	**38.02**	**39**	P	**P**	**16 22 14.5**	**-0.6**
	comp=Z,22nm,0.7s,mb5.0						
SSE				sP	sP	16 22 27.1	-0.4
SSE				PP	PP	16 23 41.7	-3.7
SSE				PcP	PcP	16 24 29.2	-1.5
SSE				S	**S**	**16 28 05.5**	**+0.4**
SSE				sS		16 28 20.8	
SSE				SS	SS	16 30 52.3	+10
SSE				LR	LR		
	comp=Z,1µm,18.6s,MS4.7						
HHC	**Hu-ho-hao-te**	**41.01**	**20**	*e*P	**P**	**16 22 40.9**	**+1.1**
HHC				AP	pP	16 22 50.8	+2.2
HHC				XP	sP	16 22 54.8	+2.6
HHC				PP	PP	16 24 19.8	+2.5
HHC				PCP	PcP	16 24 40.3	+0.2
HHC				SCP		16 28 26.1	
HHC				PCS		16 28 30.1	
HHC				S	**S**	**16 28 53.0**	**+3.1**
HHC				XS		16 29 08.3	
HHC				SCS	ScS	16 32 40.4	+0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
HHC				AMB	AMB		
	comp=Z,160nm,5.7s						
HHC				LR	LR		
	comp=N,2µm,11.0s,MS5.5						
HHC				LR	LR		
	comp=E,3µm,14.7s,MS5.5						
HHC				LR	LR		
	comp=Z,2µm,13.1s,MS5.2						
WMQ	**Urumqi**	**41.21**	**353**	*e*P	**P**	**16 22 42.3**	**+0.9**
WMQ				AP	pP	16 22 52.0	+1.8
WMQ				XP	sP	16 22 56.0	+2.2
WMQ				PCP	PcP	16 24 42.0	+1.3
WMQ				*e*S	**S**	**16 28 53.0**	**+0.2**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
WMQ				AMB	AMB		
	comp=Z,460nm,7.6s						
WMQ				LR	LR		
	comp=N,660nm,23.2s,MS4.8						
WMQ				LR	LR		
	comp=E,1µm,23.3s,MS4.8						
WMQ				LR	LR		
	comp=Z,870nm,26.0s,MS4.5						
NWAO	**Narrogin (SRO)**	**41.78**	**150**	P	**P**	**16 22 46.5**	**+0.3**
	comp=Z,7.4nm,0.9s,mb4.3,baz=341,slow=7.2,SNR=3.7						
UCH	**Uchtor**	**42.95**	**339**	P	**P**	**16 22 56.3**	**+0.6**
	SNR=6.5						
KBK	**Karagaybulak**	**43.17**	**339**	P	**P**	**16 22 58.3**	**+0.8**
	SNR=8.5						
AML	**Almayashu**	**43.18**	**338**	P	**P**	**16 22 57.6**	**+0.1**
	SNR=9.8						
AAK	**Ala-Archa**	**43.32**	**339**	*e*P	**P**	**16 22 57.3**	**-1.3**
	comp=Z,6.4nm,0.9s,mb4.3						
AAK	**Ala-Archa**	**43.32**	**339**	*e*P	**P**	**16 22 57.3**	**-1.4**
AAK				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
FRU	**Bishkek**	**43.45**	**339**	*e*P	**P**	**16 23 02.5**	**+2.8**
EKS2	**Erkin-Say**	**43.60**	**338**	P	**P**	**16 23 01.1**	**+0.1**
	SNR=6.8						
USP	**Ospenovka**	**43.87**	**339**	P	**P**	**16 23 03.0**	**-0.1**
	SNR=9.8						
MKAR	**Makanchi Array**	**44.97**	**349**	P	**P**	**16 23 11.5**	**-0.5**
	comp=Z,9.2nm,0.6s,mb4.8,baz=165,slow=8.4,SNR=50						
MKAR				LR	LR	16 44 44.7	
	comp=Z,523nm,20.2s,MS4.5,baz=136,slow=40						
WRA	**Warramunga Arr**	**45.55**	**122**	P	**P**	**16 23 16.2**	**-0.7**
	comp=Z,10nm,0.9s,mb4.7,baz=301,slow=8.8,SNR=40						
WRAB	**Tennant Creek**	**45.55**	**122**	*e*P	**P**	**16 23 17.1**	**+0.2**
	comp=Z,41nm,1.0s,mb5.3						
WRAB	**Tennant Creek**	**45.55**	**122**	*e*P	**P**	**16 23 17.1**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.3						
WB2	**Warramunga Arr**	**45.56**	**122**	*e*P	**P**	**16 23 17.0**	**0.0**
JNU	**Nakatsue**	**45.75**	**45**	LR	LR	16 45 15.2	
	comp=Z,3µm,18.3s,MS5.2,baz=60,slow=40						
SONM	**Songino Array**	**46.08**	**12**	P	**P**	**16 23 20.1**	**-0.6**
	comp=Z,5.8nm,0.6s,mb4.7,baz=195,slow=8.1,SNR=5.3						
SONM				LR	LR	16 45 24.5	
	comp=Z,641nm,18.0s,MS4.6,baz=187,slow=40						
ASPA	**Alice Springs**	**46.87**	**126**	*e*P	**P**	**16 23 27.2**	**-0.1**
ZAK	**Zakamensk**	**48.02**	**8**	*e*P	**P**	**16 23 35.1**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
CN2	**Changchun**	**49.36**	**30**	*e*P	**P**	**16 23 46.8**	**+0.4**
CN2				*e*AP	pP	16 23 57.1	+1.7
CN2				PP	PP	16 25 42.5	+1.6
CN2				*e*S	**S**	**16 30 50.3**	**+0.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CN2				AMB	AMB		
	comp=Z,490nm,6.0s						
CN2				LR	LR		
	comp=N,1µm,16.0s,MS5.2						
CN2				LR	LR		
	comp=E,2µm,16.0s,MS5.2						
CN2				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
KURK	**Kurchatov**	**49.47**	**347**	*e*P	**P**	**16 23 46.0**	**-1.2**
	comp=Z,50nm,1.4s,mb5.3						
KURK	**Kurchatov**	**49.47**	**347**	*e*P	**P**	**16 23 46.0**	**-1.1**
KURK				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.3						
KAMS	**Al Khamasin**	**51.25**	**294**	P	**P**	**16 24 01.4**	**+0.3**
GUMO	**Guam**	**51.30**	**75**	LR	LR	16 44 29.2	
	comp=Z,805nm,20.6s,MS4.7,baz=321,slow=35						
ZAL	**Zalesovo**	**51.51**	**353**	P	**P**	**16 24 02.5**	**-0.2**
	comp=Z,5.8nm,0.5s,mb4.7,baz=285,slow=5.9,SNR=20						
ZAL				LR	LR	16 50 48.9	
	comp=Z,523nm,18.3s,MS4.6,baz=296,slow=42						
CIT	**Chita**	**51.65**	**15**	*e*P	**P**	**16 24 11.5**	**+7.7**
DJNS	**Zahran al Janu**	**51.68**	**290**	P	**P**	**16 24 05.2**	**+0.8**
CBIJ	**Chichi jima**	**51.92**	**57**	LR	LR	16 44 37.6	
	comp=Z,512nm,18.6s,MS4.6,baz=276,slow=34						
MDJ	**Mudanjiang**	**52.05**	**32**	P	**P**	**16 24 07.8**	**+0.9**
MDJ				AP	pP	16 24 16.1	+0.2
MDJ				XP	sP	16 24 22.5	+3.1
MDJ				PP	PP	16 26 04.8	-1.0
MDJ				S	**S**	**16 31 29.3**	**+2.1**
MDJ				XS		16 31 48.1	
MDJ				SS	SS	16 35 07.5	+5.0
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,150nm,5.3s						
MDJ				LR	LR		
	comp=N,120nm,19.1s,MS4.8						
MDJ				LR	LR		
	comp=E,860nm,20.4s,MS4.8						
MDJ				LR	LR		
	comp=Z,1µm,20.4s,MS4.9						
JHJ	**Hachijo jima 2**	**52.27**	**49**	LR	LR	16 45 14.9	
	comp=Z,511nm,19.3s,MS4.6,baz=174,slow=35						
NVS	**Novosibirsk**	**52.59**	**352**	*e*P	**P**	**16 24 08.8**	**-2.0**
NVS				*e*S	**S**	**16 31 34.9**	**+0.5**
NVS				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
NVS				pmax	pmax		
	comp=N,24nm,1.4s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.4s						
NVS				smax			
	comp=N,17nm,1.9s						
NVS				smax			
	comp=E,19nm,1.9s						
MAT	**Matsushiro**	**52.67**	**45**	P	**P**	**16 24 20.0**	**+8.3**
MAT				S	**S**	**16 31 27.6**	**-8.1**
MAT	**Matsushiro**	**52.67**	**45**	*e*P	**P**	**16 24 20.0**	**+8.3**
MAT				*e*S	**S**	**16 31 28.0**	**-7.7**
MJAR	**Matsushiro Arr**	**52.67**	**45**	LR	LR	16 49 10.9	
	comp=E,1µm,18.3s,MS5.1,baz=240,slow=39						
AFFS	**‘Afif**	**53.55**	**298**	P	**P**	**16 24 18.6**	**+0.3**
BVAR	**Borovoye Array**	**53.73**	**342**	P	**P**	**16 24 17.6**	**-1.6**
	comp=E,4.1nm,0.7s,mb4.5,baz=143,slow=7.4,SNR=25						
BRVK	**Borovoye**	**53.79**	**342**	*e*P	**P**	**16 24 17.3**	**-2.3**
	comp=E,9.8nm,0.9s,mb4.7						
BRVK	**Borovoye**	**53.79**	**342**	*e*P	**P**	**16 24 17.3**	**-2.3**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
CHKZ	**Chkalovo**	**54.23**	**343**	*e*P	**P**	**16 24 20.7**	**-2.2**
	comp=Z,38nm,1.1s,mb5.2						
CHKZ	**Chkalovo**	**54.23**	**343**	*e*P	**P**	**16 24 20.7**	**-2.1**
CHKZ				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
KLR	**Kul’dur**	**56.27**	**29**	*e*P	**P**	**16 24 36.0**	**-1.8**
KLR				*e*S	**S**	**16 32 20.5**	**-3.4**
KLR				smax			
	comp=N,700nm,9.0s						
KLR				smax			
	comp=E,500nm,9.0s						
KLR				MLR	MLR		
	comp=N,2µm,13.0s						
KLR				MLR	MLR		
	comp=Z,10µm,13.0s						
AKTO	**Aktyubinsk**	**56.35**	**333**	P	**P**	**16 24 36.2**	**-2.1**
	comp=Z,2.2nm,0.8s,mb4.2,baz=114,slow=9.6,SNR=7.9						
STKA	**Stephens Creek**	**56.77**	**131**	*e*P	**P**	**16 24 40.4**	**-1.2**
	comp=Z,7.0nm,0.8s,mb4.7						
STKA	**Stephens Creek**	**56.77**	**131**	P	**P**	**16 24 40.7**	**-0.9**
	comp=Z,7.8nm,0.7s,mb4.8,baz=284,slow=6.0,SNR=14						
KMBO	**Kilima Mbogo**	**56.94**	**267**	P	**P**	**16 24 43.5**	**+0.5**
	comp=Z,4.0nm,1.0s,mb4.4,baz=53,slow=10.0,SNR=11						
KMBO				LR	LR	16 45 46.7	
	comp=Z,1µm,19.1s,MS5.0,baz=94,slow=32						
KMBO	**Kilima Mbogo**	**56.94**	**267**	P	**P**	**16 24 43.5**	**+0.5**
KMBO				LR	LR	16 45 46.7	
BOD	**Bodaibo**	**57.05**	**13**	*e*P	**P**	**16 24 42.2**	**-1.0**
BOD				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
GNI	**Garni**	**57.96**	**317**	*e*P	**P**	**16 24 48.5**	**-1.3**
	comp=Z,7.6nm,0.8s,mb4.8						
GNI	**Garni**	**57.96**	**317**	*e*P	**P**	**16 24 48.5**	**-1.3**
GNI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ASAJ	**Asahikawa**	**59.31**	**39**	LR	LR	16 50 11.8	
	comp=Z,1µm,21.7s,MS5.0,baz=195,slow=36						
ZEI	**Tsey**	**59.72**	**319**	*e*P	**P**	**16 24 59.2**	**-2.8**
ZEI				*i* *PP	pP	16 25 09.4	-1.8
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
SVE	**Sverdlovsk**	**60.05**	**340**	*e*P	pP	16 25 15.0	+1.7
SVE				*e*		16 33 09.0	
SVE				*e*		16 37 12.0	
SVE				MLR	MLR		
	comp=N,400nm,14.0s,MS4.9						
SVE				MLR	MLR		
	comp=E,500nm,14.0s,MS4.9						
SVE				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.8						
TBKS	**Tabuk**	**60.24**	**301**	P	**P**	**16 25 06.5**	**+0.7**
QURS	**Qurayyt al Mil**	**60.41**	**305**	P	**P**	**16 25 08.4**	**+1.5**
ARU	**Arti**	**60.50**	**338**	*e*P	**P**	**16 25 04.6**	**-2.5**
	comp=Z,19nm,1.2s,mb5.0						
ARU	**Arti**	**60.50**	**338**	⇓*i*P	**P**	**16 25 05.0**	**-2.1**
ARU				*e*		16 25 46.2	
ARU				*e*		16 27 16.6	
ARU				*e*S	**S**	**16 33 19.4**	**+0.5**
ARU				*e*SS	SS	16 37 16.4	-1.9
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
ARU				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.5						
ARU				MLR	MLR		
	comp=N,300nm,20.5s,MS4.5						
ARU				MLR	MLR		
	comp=E,100nm,16.0s,MS4.5						
YSS	**Yuzh-Sakhalins**	**60.83**	**36**	P	pP	16 25 21.0	+2.3
YSS				*e*S	**S**	**16 33 31.0**	**+7.7**
YSS				MLR	MLR		
	comp=Z,900nm,14.0s,MS5.1						
YSS				MLR	MLR		
	comp=N,800nm,15.0s,MS5.2						
YSS				MLR	MLR		
	comp=E,900nm,15.0s,MS5.2						
KIV	**Kislovodsk**	**61.05**	**320**	*e*P	**P**	**16 25 11.5**	**+0.5**
KIV				*e*S	**S**	**16 33 35.0**	**+8.9**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.0						
BDAS	**Al Bad‘**	**61.53**	**301**	P	**P**	**16 25 15.5**	**+1.0**
TAYS	**Tayyib Ism**	**61.75**	**301**	P	**P**	**16 25 16.4**	**+0.3**
SOKR	**Solikamsk**	**63.46**	**340**	*e*P	**P**	**16 25 28.3**	**+1.4**
SOKR				S	**S**	**16 34 02.0**	**+5.6**
SOKR				pmax	pmax		

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       comp=Z,10.0nm,1.0s,mb4.9
SOKR                                 MLR     MLR
       comp=Z,370nm,17.0s,MS4.6
YAK    Yakutsk           64.78  18   eP      P        16 25 33.7  -1.8
       comp=Z,34nm,1.1s,mb5.3
YAK    Yakutsk           64.78  18   eP      P        16 25 33.7  -1.8
YAK                                  pmax    pmax
       comp=Z,34nm,1.1s,mb5.3
BR131  Keskin Array S    65.71 313   eP      P        16 25 40.0  -1.8
       comp=Z,0.4nm,0.4s,mb3.8
BR131                                epP     pP       16 25 47.5  -3.6
BRTR   Keskin Array B    65.71 313   P       P        16 25 40.5  -1.4
       comp=Z,2.4nm,0.8s,mb4.3,baz=126,slow=6.2,SNR=11
OBN    Obninsk           69.61 329   eP      P        16 26 04.4  -1.6
OBN                                  pmax    pmax
       comp=Z,5.0nm,1.0s,mb4.4
OBN                                  MLR     MLR
       comp=Z,100nm,19.0s,MS4.1
CASY   Casey             69.96 173   eP      P        16 26 09.3  +1.4
       comp=Z,17nm,0.6s,mb5.2
LBTB   Lobatse           71.83 243   eP      P        16 26 20.0   0.0
       comp=Z,14nm,1.2s,mb4.8
LBTB                                 epP     pP       16 26 27.6  -1.5
LBTB   Lobatse           71.83 243   eP      P        16 26 20.0   0.0
LBTB                                 e*PP    pP       16 26 27.7  -1.5
LBTB                                 pmax    pmax
       comp=Z,14nm,1.2s,mb4.8
AKASG  Malin Array Be    72.07 323   P       P        16 26 18.5  -2.5
       comp=Z,1.4nm,0.6s,mb4.0,baz=93,slow=5.1,SNR=9.6
TIXI   Tiksi             72.16  11⇑iP      P        16 26 19.3  -1.9
TIXI                                 e                16 28 58.9
TIXI                                 ePPP    PPP      16 30 48.8  +3.4
TIXI                                 eS      S        16 35 35.7  -4.5
TIXI                                 pmax    pmax
       comp=Z,23nm,1.1s,mb5.0
TIXI                                 MLR     MLR
       comp=Z,998nm,14.0s,MS5.2
MLR    Muntele Rosu      72.74 317   P       P        16 26 25.1  +0.1
       comp=Z,5.4nm,0.8s,mb4.5,baz=190,slow=7.2,SNR=5.9
BOSA   Boshof            72.90 239   P       P        16 26 25.8  -0.6
       comp=Z,4.3nm,0.8s,mb4.4,baz=90,slow=8.8,SNR=5.5
BOSA                                 LR      LR       16 56 06.5
       comp=Z,664nm,18.4s,MS5.0,baz=77,slow=34
BOSA   Boshof            72.90 239   eP      P        16 26 26.2  -0.2
       comp=Z,5.4nm,0.8s,mb4.5
BOSA   Boshof            72.90 239   eP      P        16 26 26.2  -0.2
BOSA                                 pmax    pmax
       comp=Z,5.0nm,0.8s,mb4.5
MAW    Mawson            73.61 192   P       P        16 26 29.9  +0.2
       comp=Z,0.9nm,0.7s,mb3.8,baz=344,slow=8.8,SNR=4.7
MAW                                  LR      LR       16 55 19.5
       comp=Z,450nm,18.1s,MS4.8,baz=52,slow=33
VAY    Valandovo         74.28 312   eP      P        16 26 36.1  +2.0
VAY    Valandovo         74.28 312   eP      P        16 26 36.1  +2.0
BIA    Bitola            75.15 312   eP      P        16 26 43.1  +4.0
SKO    Skopje            75.22 313   eP      P        16 26 42.4  +2.9
SKO    Skopje            75.22 313   eP      P        16 26 42.4  +2.9
JOF    Joensuu           75.35 335   ep      P        16 26 37.2  -2.6
OHR    Ohrid             75.56 312   eP      P        16 26 49.1  +7.6
OHR    Ohrid             75.56 312   eP      P        16 26 49.1  +7.6
KOLS   Kolonicke sedl    75.96 320   i P     P        16 26 43.6  +0.1
CRVS   Cervenica-Dubn    76.48 320   eP      P        16 26 48.6  +2.1
APA    Apatity           76.52 340⇑eP      P        16 26 52.0  +5.7
APA                                  pmax    pmax
       comp=Z,18nm,1.2s,mb4.9
APA                                  MLR     MLR
       comp=Z,800nm,15.0s,MS5.2
STHS   Stebnicka Huta    76.72 320   eP      P        16 26 49.0  +1.2
KECS   Kecovo            77.03 319   eP      P        16 26 52.2  +2.6
FINES  FINESS Array B    77.12 333   P       P        16 26 48.6  -1.2
       comp=Z,3.1nm,0.8s,mb4.3,baz=104,slow=7.9,SNR=8.9
KAF    Kangasniemi       77.23 333   ep      P        16 26 49.6  -0.8
SUR    Sutherland        77.45 236   LR      LR       16 57 46.1
       comp=Z,654nm,19.0s,MS5.0,baz=13,slow=33
VYHS   Vyhne             78.11 319   eP      P        16 26 57.9  +2.4
MORC   Moravsky Berou    79.15 320   eP      P        16 26 59.7  -1.4
       comp=Z,29nm,2.0s,mb4.9
MORC   Moravsky Berou    79.15 320   eP      P        16 26 59.7  -1.5
MORC                                 pmax    pmax
       comp=Z,29nm,2.0s,mb4.9
ZST    Bratislava        79.21 318   eP      P        16 27 01.3  -0.2
ARCES  ARCESS Array B    79.96 341   P       P        16 27 04.0  -1.1
       comp=Z,3.8nm,0.8s,mb4.4,baz=90,slow=3.6,SNR=5.0
KSP    Ksiaz             80.09 321   eP      P        16 27 06.8  +0.6
BOJS   Bojanci           80.15 316   eP      P        16 27 06.6   0.0
ARSA   Arzberg           80.15 317⇑eP      P        16 27 07.3  +0.7
       comp=Z,5.6nm,0.8s,mb4.5
VISS   Visnje            80.47 316   eP      P        16 27 08.0  -0.3
BILL   Bilibino          80.78  21   eP      P        16 27 09.8  +0.3
BILL                                 pmax    pmax
       comp=Z,4.0nm,1.5s,mb4.1
GERES  GERESS Array B    81.53 319   P       P        16 27 14.0  +0.2
       comp=Z,5.0nm,0.8s,mb4.5,baz=104,slow=5.5,SNR=32
BRG    Berggiesshubel    81.58 321   eP      P        16 27 14.0   0.0
       comp=Z,8.7nm,1.3s,mb4.5
BRG    Berggiesshubel    81.58 321   eP      P        16 27 14.0   0.0
BRG                                  pmax    pmax
       comp=Z,9.0nm,1.3s,mb4.5
KHC    Kasperske Hory    81.64 319   eP      P        16 27 14.5  +0.1
HFS    Hagfors           82.76 330   P       P        16 27 19.7  -0.3
       comp=Z,2.6nm,0.8s,mb4.3,baz=100,slow=9.0,SNR=4.2
WTTA   Wattenberg        82.79 317⇑eP      P        16 27 20.5  +0.1
       comp=Z,12nm,1.3s,mb4.8
WTTA   Wattenberg        82.79 317⇑eP      P        16 27 20.5  +0.1
WTTA                                 pmax    pmax
       comp=Z,12nm,1.3s,mb4.8
SQTA   Sankt Quirin      83.08 317⇑iP      P        16 27 21.3  -0.6
       comp=Z,6.1nm,0.8s,mb4.7
SQTA   Sankt Quirin      83.08 317⇑iP      P        16 27 21.3  -0.6
       comp=Z,6.1nm,0.8s,mb4.7
SQTA   Sankt Quirin      83.08 317⇑iP      P        16 27 21.3  -0.6
SQTA                                 pmax    pmax
       comp=Z,6.0nm,0.8s,mb4.7
MOTA   Moosalm           83.16 317⇑iP      P        16 27 22.1  -0.1
       comp=Z,6.8nm,0.8s,mb4.7
MOTA   Moosalm           83.16 317⇑iP      P        16 27 22.1  -0.2
MOTA                                 pmax    pmax
       comp=Z,7.0nm,0.8s,mb4.7
GRA1   Grafenberg Arr    83.22 320   eP      P        16 27 23.7  +1.1
       comp=Z,8.0nm,1.4s,mb4.6
GRF    Grafenberg Arr    83.22 320   eP      P        16 27 23.7  +1.1
       comp=Z,8.0nm,1.4s,mb4.6
GRF    Grafenberg Arr    83.22 320   eP      P        16 27 23.7  +1.1
GRF                                  pmax    pmax
       comp=Z,8.0nm,1.4s,mb4.6
GRF    Grafenberg Arr    83.22 320   eP      P        16 27 23.7  +1.1
GRF                                  pmax    pmax
       comp=Z,8.0nm,1.4s,mb4.6
DAVOX  Davos             83.97 317   P       P        16 27 26.9  +0.4
       comp=Z,7.1nm,0.6s,mb5.0,baz=113,slow=12,SNR=7.9
DAVOX                                LR      LR       17 06 31.1
       comp=Z,158nm,19.0s,MS4.4,baz=88,slow=37
DAVA   Damuels           83.99 317⇑iP      P        16 27 27.1  +0.6
       comp=Z,9.9nm,0.9s,mb4.9
DAVA   Damuels           83.99 317⇑iP      P        16 27 27.1  +0.6
       comp=Z,9.9nm,0.9s,mb4.9
NB2    NORSAR Subarra    84.07 331   P       P        16 27 25.7  -0.9
       comp=Z,1.2nm,0.8s,mb4.1,baz=96,slow=5.6
NOA    NORSAR Array B    84.07 331   P       P        16 27 26.2  -0.4
       comp=Z,2.4nm,0.9s,mb4.3,baz=93,slow=5.5,SNR=6.0
NOA    NORSAR Array B    84.07 331   P       P        16 27 26.2  -0.4
NAO    NORSAR Subarra    84.24 331   P       P        16 27 25.7  -1.8
       comp=Z,1.2nm,0.8s,mb4.1
NAO    NORSAR Subarra    84.24 331   P       P        16 27 25.7  -1.8
NAO                                  pmax    pmax
       comp=Z,1.0nm,0.8s,mb4.0
VNDA   Vanda             88.04 168   eP      P        16 27 46.9  +1.1
       comp=Z,3.0nm,1.1s,mb4.4
VNDA   Vanda             88.04 168   eP      P        16 27 46.9  +1.1
VNDA                                 pmax    pmax
       comp=Z,3.0nm,1.1s
SNAA   Sanae             94.85 198   LR      LR       17 06 05.7
       comp=Z,100nm,18.8s,MS4.3,baz=23,slow=32
MDT    Midelt            95.77 303   LR      LR       17 13 06.6
       comp=Z,249nm,18.4s,MS4.7,baz=12,slow=36
DBIC   Dimbokro          98.53 277   LR      LR       17 08 54.8
       comp=Z,256nm,19.3s,MS4.7,baz=71,slow=33
NVAR   Mina Array Bea   129.21  33   PKP     PKPdf    16 34 05.7  -3.0
       comp=Z,0.5nm,0.8s,baz=315,slow=2.2,SNR=4.4
NVAR   Mina Array Bea   129.21  33   PKP     PKPdf    16 34 05.7  -3.0
PDAR   Pinedale Array   129.84  23   PKP     PKPdf    16 34 06.0  -3.8
       comp=Z,0.6nm,0.9s,baz=45,slow=6.4,SNR=3.1
TXAR   Lajitas Array    143.78  27   PKP     PKPdf    16 34 30.9  -4.6
       comp=Z,0.8nm,0.6s,baz=243,slow=2.8,SNR=5.5
CPUP   Villa Florida    143.96 227   ePKPdf  PKPdf    16 34 30.5  -5.5
JCT    Junction City    144.33  21   ePKPdf  PKPdf    16 34 32.5  -4.1
SAML   Samuel           156.58 254   ePKPab  PKPab    16 35 21.4  -0.7
LPAZ   La Paz           157.97 231   PKP     PKPdf    16 34 54.8  -2.6
       comp=Z,0.3nm,0.5s,baz=114,slow=5.2,SNR=3.6
LPAZ                                 PKPab   PKPab    16 35 28.6  +0.7
       comp=Z,1.3nm,1.0s,baz=137,slow=3.6,SNR=7.5
```

MOS ***18*** *16:19:32.4±1.6, 52.96N×108.40E, h14km, mb4.3/1, Error ellipse: s-maj=24.9km s-min=14.4km az=49.0*

BYKL 18 16:19:32.9±0.2**, 52.96N×108.39E, h20km**±**4km, 4C-10D, Lake Baykal region**

```
Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                     Op      ISC      h  m  s     ISC
MXMB   Maximikha          0.37  35⇓iPg     Pb       16 19 40.3  -0.4
       485nm,0.2s
MXMB                                ⇓iPg     Pb       16 19 40.3  -0.4
       370nm,0.2s
MXMB                                ⇓iPg     Pb       16 19 40.3  -0.4
       1µm,0.2s
MXMB                                 i Sg    Sb       16 19 45.7  -0.4
MXMB                                 Pmax
       1µm,0.1s
MXMB                                 Smax
       4µm,0.4s
OGRR   Ongureny           0.83 325⇑iPg     Pb       16 19 48.3  -0.3
       161nm,0.4s
OGRR                                ⇓iPg     Pb       16 19 48.3  -0.3
       54nm,0.4s
OGRR                                ⇑iPg     Pb       16 19 48.3  -0.3
       218nm,0.4s
OGRR                                 i Sg    Sb       16 19 59.6  +0.3
OGRR                                 eSb     Sb       16 20 02.4  +3.1
OGRR                                 Pmax
       255nm,0.2s
OGRR                                 max
       586nm,0.2s
OGRR   Ongureny           0.83 325   ePG     Pb       16 19 48.4  -0.2
OGRR                                 e                16 19 59.6
OGRR                                 pmax    pmax
       comp=Z,256nm,0.8s
OGRR                                 smax
       comp=N,606nm,0.2s
ZRHB   Zarechye           0.85 242   ePg     Pb       16 19 48.9   0.0
ZRHB                                 ePb     Pb       16 19 50.6  +1.7
ZRHB                                 eSg     Sb       16 20 01.3  +1.4
ZRHB                                 max
       comp=N,460nm,0.1s
ZRHB                                 Smax
       comp=N,2µm,0.5s
TRTB   Turuntaevo         0.87 213⇑iPg     Pb       16 19 49.0  -0.1
       comp=N,106nm,0.4s
TRTB                                ⇑iPg     Pb       16 19 49.0  -0.1
       comp=N,83nm,0.4s
TRTB                                ⇓iPg     Pb       16 19 49.0  -0.1
       comp=N,140nm,0.4s
TRTB                                 eSg     Sb       16 20 00.9  +0.6
TRTB                                 Pmax
       comp=N,163nm,0.2s
TRTB                                 Smax
       comp=N,583nm,0.2s
SYVR   Suvo               1.19  53⇓iPg     Pn       16 19 54.3  -0.3
       comp=N,26nm,0.3s
SYVR                                ⇓iPg     Pn       16 19 54.3  -0.3
       comp=N,19nm,0.3s
SYVR                                ⇓iPg     Pn       16 19 54.3  -0.3
       comp=N,34nm,0.3s
SYVR                                 eSg     Sb       16 20 10.8  +1.1
SYVR                                 Pmax
       comp=N,37nm,0.2s
SYVR                                 Smax
       comp=N,204nm,0.4s
SYVR   Suvo               1.19  53   ePG     Pn       16 19 53.6  -1.0
SYVR                                 e                16 20 09.0
SYVR                                 pmax    pmax
       comp=Z,39nm,0.1s
SYVR                                 smax
       comp=E,205nm,0.3s
TRG    Tyrgan             1.25 262⇓iPg     Pn       16 19 55.7  +0.2
TRG                                  e                16 19 56.1
TRG                                  eSg     Sb       16 20 13.3  +1.8
TRG                                  max
       comp=E,99nm,0.2s
TRG                                  Smax
       comp=E,1µm,0.3s
TRG    Tyrgan             1.25 262   ePG     Pn       16 19 55.5   0.0
TRG                                  e                16 20 13.2
TRG                                  pmax    pmax
       comp=Z,102nm,0.2s
TRG                                  smax
       comp=E,1µm,0.1s
FFNB   Fofonovo           1.35 228   ePg     Pn       16 19 57.6  +0.7
FFNB                                 eSg     Sb       16 20 15.8  +1.6
FFNB                                 Pmax
       comp=E,680nm,0.1s
FFNB                                 Smax
       comp=E,992nm,0.1s
KAB    Kabansk            1.40 230   ePg     Pn       16 19 58.6  +1.0
KAB                                  eSg     Sn       16 20 18.1  +2.5
KAB                                  Pmax
       comp=E,100nm,0.1s
KAB                                  Smax
       comp=E,926nm,0.3s
KAB    Kabansk            1.40 230   ePG     Pn       16 19 58.6  +1.0
KAB                                  e                16 20 17.6
KAB                                  pmax    pmax
       comp=Z,205nm,0.4s
KAB                                  smax
       comp=N,1µm,0.5s
STDB   Stepnoy Dvoret     1.47 238   ePg     Pn       16 20 00.2  +1.6
STDB                                 e                16 20 01.4
STDB                                 eSg     Sn       16 20 21.3  +4.0
STDB                                 e                16 20 23.1
STDB                                 max
       comp=N,129nm,0.2s
STDB                                 Smax
       comp=N,1µm,0.5s
BTMB   Babushkin          2.01 232   ePg     Pn       16 20 08.8  +2.4
BTMB                                 eSg     Sn       16 20 36.1  +4.9
BTMB                                 Pmax
       comp=N,112nm,0.2s
BTMB                                 Smax
       comp=N,525nm,0.7s
LSTR   Listvyanka         2.44 245   ePn     Pn       16 20 12.0  -0.5
LSTR                                 ePg     Pn       16 20 16.3  +3.8
LSTR                                 eSn     Sn       16 20 41.8  -0.2
LSTR                                 eSg     Sn       16 20 47.3  +5.3
LSTR                                 Pmax
       comp=N,11nm,0.3s
LSTR                                 Smax
       comp=N,97nm,0.4s
YLYR   Ulyunkhan          2.52  39⇓iPn     Pn       16 20 13.7   0.0
YLYR                                 ePg     Pn       16 20 17.9  +4.2
YLYR                                 eSg     Sn       16 20 51.4  +7.2
YLYR                                 Pmax
       comp=N,10.0nm,0.4s
YLYR                                 Smax
       comp=N,70nm,0.7s
IRK    Irkutsk            2.61 256   eSg     Sn       16 20 53.1  +6.7
IRK                                  Smax
       comp=N,996nm,0.4s
IRK    Irkutsk            2.61 256   ePN     Pn       16 20 19.5  +4.5
IRK                                  e                16 20 52.6
IRK                                  pmax    pmax
       comp=Z,40nm,0.1s
IRK                                  smax
       comp=N,1µm,0.4s
NIZ    Nizh Angarsk       2.90  13   ePg     Pn       16 20 24.1  +5.0
NIZ                                  eSg     Sn       16 21 01.1  +7.4
NIZ                                  Pmax
       comp=N,8.0nm,0.3s
NIZ                                  Smax
       comp=N,49nm,0.5s
TLY    Talaya             3.18 248   ePn     Pn       16 20 22.5  -0.5
TLY                                  ePg     Pn       16 20 29.7  +6.7
TLY                                  eSn     Sn       16 21 00.5  -0.3
TLY                                  eSg     Sn       16 21 10.2  +9.4
TLY                                  Pmax
       comp=N,24nm,0.3s
TLY                                  Smax
       comp=N,85nm,0.2s
TLY    Talaya             3.18 248   ePN     Pn       16 20 22.5  -0.5
TLY                                  e                16 20 29.1
TLY                                  e                16 21 09.6
TLY                                  pmax    pmax
       comp=Z,24nm,0.3s
TLY                                  smax
       comp=N,88nm,0.4s
CIT    Chita              3.29 105   ePg     Pn       16 20 31.3  +6.7
CIT                                  eSn     Sn       16 21 03.4  -0.2
CIT                                  eSg     Sn       16 21 14.2   +11
CIT                                  Pmax
       comp=N,20nm,0.3s
CIT                                  Smax
       comp=N,96nm,0.4s
KMO    Kumora             3.36  28   ePn     Pn       16 20 27.3  +1.7
KMO                                  ePg     Pn       16 20 33.4  +7.8
KMO                                  eSg     Sn       16 21 16.9   +12
KMO                                  Pmax
       comp=N,13nm,0.5s
KMO                                  Smax
       comp=N,91nm,1.2s
KMO    Kumora             3.36  28   ePN     Pn       16 20 24.8  -0.8
KMO                                  e                16 20 32.3
KMO                                  eS      Sn       16 21 04.9  -0.5
KMO                                  e                16 21 15.8
KMO                                  pmax    pmax
       comp=Z,12nm,0.4s
KMO                                  smax
       comp=N,93nm,1.2s
ARS    Arshan             3.80 256   ePg     Pn       16 20 39.5  +7.7
ARS                                  eSg     Sn       16 21 27.7   +11
ARS                                  Pmax
       comp=N,31nm,0.5s
ARS                                  Smax
       comp=N,394nm,0.8s
ARS    Arshan             3.80 256   ePN     Pn       16 20 31.7  -0.1
ARS                                  e                16 20 40.1
ARS                                  e                16 21 27.9
ARS                                  pmax    pmax
       comp=Z,31nm,0.3s
ARS                                  smax
       comp=E,291nm,0.3s
UKT    Uakit              3.98  48   ePg     Pn       16 20 44.6   +10
UKT                                  eSg     Sn       16 21 36.6   +15
UKT                                  Pmax
       comp=E,9.0nm,1.1s
UKT                                  Smax
       comp=E,36nm,1.3s
ZAK    Zakamensk          4.10 233   ePg     Pn       16 20 46.3   +10
ZAK                                  e                16 21 31.3
ZAK                                  eSg     Sn       16 21 39.7   +16
ZAK                                  Pmax
       comp=E,5.0nm,0.3s
ZAK                                  Smax
       comp=E,25nm,0.4s
KPC    Khapcheranga       4.11 141   ePn     Pn       16 20 34.2  -2.0
KPC                                  ePg     Pn       16 20 45.9   +10
KPC                                  eSn     Sn       16 21 21.3  -3.0
KPC                                  eSg     Sn       16 21 39.8   +15
KPC                                  Pmax
       comp=E,10.0nm,0.3s
KPC                                  Smax
       comp=E,38nm,0.5s
MOY    Mondy              4.72 257   e       Sn       16 21 40.2  +0.4
MOY                                  eSg     Sn       16 21 57.5   +18
MOY                                  Smax
       comp=E,59nm,1.2s
ORL    Orlik              5.23 269   ePn     Pn       16 20 51.7  -0.4
ORL                                  eSn     Sn       16 21 50.7  -1.9
ORL                                  eSg     Sn       16 22 14.3   +22
ORL                                  max
       comp=E,3.0nm,0.3s
ORL                                  Smax
       comp=E,27nm,0.8s
NLYR   Nelyaty            5.52  47   eSg     Sn       16 22 25.3   +25
NLYR                                 Smax
       comp=E,48nm,1.0s
CRS    Chara              6.92  51   eSg     Sn       16 23 06.9   +32
CRS                                  Smax
       comp=E,36nm,1.9s
TUP    Tupik              7.02  73   eSg     Sn       16 23 09.1   +32
TUP                                  Smax
       comp=E,41nm,0.9s
TUP    Tupik              7.02  73   ePG     Pn       16 21 40.2   +23
TUP                                  e                16 23 07.9
TUP                                  pmax    pmax
       comp=Z,2.0nm,0.3s
TUP                                  smax
       comp=N,39nm,0.9s
TDJR   Todzha             7.50 271   eSg     Sn       16 23 24.8   +36
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SKO ***18*** *16:35:37.8, 50.11N×170.10E*

BJI ***18*** *16:35:58.9, 51.06N×158.16E, h51km, mB5.2, mb4.9, Ms4.9, Msz4.6*

MOS ***18*** *16:35:59.2±0.9, 50.97N×158.17E, h46km, mb5.2/88, MS4.2/11, Error ellipse: s-maj=7.4km s-min=3.9km az=88.4*

KRSC ***18*** *16:36:00.2±2.4, 50.93N×158.29E, h42km±17km, ML5.2*

IDC ***18*** *16:36:00.8±0.4, 51.08N×158.04E, h45km±4km, mb4.6/25, mb1 4.8/26, mb1mx4.8/27, mbtmp4.8/26, MS4.3/9, Ms1 4.3/9, ms1mx3.9/28, Error ellipse: s-maj=12.2km s-min=9.1km az=135.0*

HRVD ***18*** *16:36:01.3±0.5, 50.92N×158.49E, h36km±1km, MW5.0/48, Centroid moment Tensor Solution. LP body waves: s35,c47;Mantle waves: s48,c76; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.21±.24; $M_{\theta\theta}$-2.65±.14; $M_{\phi\phi}$-0.56±.15; $M_{r\theta}$-0.61±.13; $M_{\theta\phi}$-1.36±.10; $M_{\phi r}$-0.63±.14; Best double couple: $M_0$3.381×10^{16} NP1:ϕ_s69°,δ38°,λ98°. NP2:ϕ_s239°,δ52°,λ84°. Principal axes: T 3.339, Plg81°, Azm118°; N .082, Plg5°, Azm243°; P -3.424, Plg7°, Azm333°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***18*** *16:36:01.3±0.1, 51.06N×158.09E, mb5.1/135 Error ellipse: s-maj=3.8km s-min=2.4km az=169.0*

ISC 18 16:35:59.1±0.1**, 50.90N**±0.02×**158.21E**±0.03**, h47km, h47km**±1.0km**:pP-P, n541,** σ0.95/527**, mb5.0**/177**, MS4.4**/21**, 76C-16D, East of Kuril Islands**

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Code   Station Name        Δ°   AZ°    Phase ID          Time       Res
                                     Op      ISC      h  m  s     ISC
PAU    Pauzhetka          1.05 304   i P     P        16 36 20.2  +2.5
PAU                                  eS      S        16 36 33.3  +1.8
PAU                                  Smax
       54µm,0.2s
SKR    Severo-Kuril's     1.35 262   i P     P        16 36 20.9  -1.1
SKR                                  i S     S        16 36 38.5  -0.5
RUS    Russkaya           1.55   7   i P     P        16 36 25.0  +0.1
MIPR   Malaya Ipel'ka     1.65 327   eP      P        16 36 28.7  +2.4
GRL    Gorelyy            1.66 357   i P     P        16 36 27.9  +1.5
ALID   Alaid              1.69 270   i P     P        16 36 29.9  +3.2
KRMR   Karymshinskiy      1.94 359   i P     P        16 36 31.5  +1.2
KRMR                                 eS      S        16 36 53.9  +0.4
APC    Apacha             2.13 343   i P     P        16 36 35.1  +2.0
PET    Petropavlovsk      2.15   7   P       P        16 36 33.9  +0.6
PET                                  S       S        16 36 56.0  -2.8
PET    Petropavlovsk      2.15   7   eP      P        16 36 33.8  +0.5
PET                                  eS      S        16 36 58.6  -0.2
PET    Petropavlovsk      2.15   7   ePn     P        16 36 33.4  +0.1
PET    Petropavlovsk      2.15   7⇓iPN     P        16 36 33.7  +0.4
PET                                  eS      S        16 36 58.1  -0.7
PET                                  pmax    pmax
       comp=Z,4µm,2.3s
PET                                  pmax    pmax
       comp=Z,3µm,1.0s
PET                                  pmax    pmax
       comp=N,4µm,2.2s
PET                                  smax
       comp=N,13µm,1.7s
PET                                  smax
       comp=E,8µm,0.6s
PET                                  smax
       comp=E,14µm,3.1s
PET                                  smax
       comp=N,9µm,0.9s
PET                                  MLR     MLR
       comp=Z,5µm,14.0s
UGLR   Uglovaya           2.35   9   eP      P        16 36 37.2  +1.1
NLC    Nalytchevo         2.38  17   eP      P        16 36 35.6  -1.1
AVH    Avacha             2.40   8   i P     P        16 36 38.0  +1.2
SMAR   Somma              2.40   8   i P     P        16 36 37.8  +0.9
SMAR                                 eS      S        16 37 05.9  +0.7
KOK    Koryaka            2.41   6   i P     P        16 36 38.7  +1.6
SPN    Mys Shipunski      2.47  26   P       P        16 36 37.9   0.0
SPN                                  S       S        16 37 02.6  -4.5
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SPN	**Mys Shipunski**	**2.47**	**26**	*i* P	**P**	**16 36 37.8**	**-0.1**
SPN				*e*S	**S**	**16 37 04.6**	**-2.5**
GNL	**Ganaly**	**2.81**	**357**	*i* P	**P**	**16 36 44.1**	**+1.4**
KII	**Karymskiy**	**3.23**	**13**	*e*P	**P**	**16 36 50.2**	**+1.5**
TUMR	**Tumrok**	**4.55**	**14**	*i* P	**P**	**16 37 08.1**	**+0.8**
KMNR	**Kamenistaya**	**5.02**	**13**	*i* P	**P**	**16 37 15.0**	**+1.1**
ESO	**Esso**	**5.05**	**3**	*i* P	**P**	**16 37 15.2**	**+0.9**
ESO				*e*S	**S**	**16 38 09.3**	**-2.8**
ESO				Smax			
	comp=Z,430nm,1.0s						
KPT	**Kopyto**	**5.22**	**13**	*i* P	**P**	**16 37 17.3**	**+0.6**
KOZ	**Kozyrevsk**	**5.27**	**10**	P	**P**	**16 37 17.8**	**+0.5**
KOZ	**Kozyrevsk**	**5.27**	**10**	*i* P	**P**	**16 37 17.7**	**+0.4**
KOZR	**Kozyr**	**5.28**	**10**	PN	**P**	**16 37 17.8**	**+0.3**
ZLN	**Zelenaya**	**5.36**	**16**	*i* P	**P**	**16 37 20.0**	**+1.4**
ZLN				*e*S	**S**	**16 38 15.9**	**-4.0**
LGNR	**Loginova**	**5.40**	**15**	*i* P	**P**	**16 37 20.6**	**+1.4**
LGNR				*e*S	**S**	**16 38 17.5**	**-3.5**
CIRR	**Tsirk**	**5.44**	**15**	*i* P	**P**	**16 37 21.2**	**+1.4**
SRDR	**Sredinnyy**	**5.50**	**9**	*i* P	**P**	**16 37 21.1**	**+0.5**
KRSR	**Krestovskiy**	**5.51**	**14**	*e*P	**P**	**16 37 20.3**	**-0.4**
KLY	**Klyuchi**	**5.62**	**14**	P	**P**	**16 37 23.2**	**+1.0**
KLY	**Klyuchi**	**5.62**	**14**	*i* P	**P**	**16 37 23.3**	**+1.1**
KBTR	**Krutoberegovo**	**5.99**	**25**	P	**P**	**16 37 25.9**	**-1.5**
KBTR	**Krutoberegovo**	**5.99**	**25**	*i* P	**P**	**16 37 26.1**	**-1.3**
KBG	**Krutoberegovo**	**6.00**	**25**	*i* P	**P**	**16 37 26.8**	**-0.7**
KBG				Smax			
	comp=Z,2µm,1.1s						
BKI	**Bering**	**6.36**	**44**	*i* P	**P**	**16 37 29.7**	**-3.0**
BKI				*e*S	**S**	**16 38 33.2**	**-12**
BKI				Smax			
	comp=Z,370nm,0.3s						
FX1	**Attu Island--F**	**9.46**	**72**	P	**P**	**16 38 13.3**	**-2.2**
	comp=Z,12nm,0.3s,baz=266,slow=3.1,SNR=63						
FX1				S	**S**	**16 39 49.2**	**-12**
	comp=Z,56nm,0.3s,baz=124,slow=23,SNR=11						
FX1				LR	LR	16 41 24.2	
	comp=Z,40nm,19.3s,baz=264,slow=34						
MA2	**Magadan**	**9.67**	**337**	*e*Pn	**P**	**16 38 16.5**	**-1.9**
	comp=Z,35nm,0.6s						
MA2	**Magadan**	**9.67**	**337**	*e*PN	**P**	**16 38 17.4**	**-1.0**
MA2				S	**S**	**16 40 07.9**	**+1.1**
MA2				pmax	pmax		
	comp=Z,20nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**10.81**	**235**	*e*PN	**P**	**16 38 34.6**	**+0.6**
YUK				pmax	pmax		
	comp=N,190nm,0.5s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				pmax	pmax		
	comp=Z,380nm,0.5s						
YSS	**Yuzh-Sakhalins**	**10.91**	**255**	*e*Pn	**P**	**16 38 38.4**	**+3.1**
	comp=Z,49nm,0.6s						
YSS	**Yuzh-Sakhalins**	**10.91**	**255**	*e*PN	**P**	**16 38 38.4**	**+3.1**
YSS				pmax	pmax		
	comp=Z,49nm,0.6s						
SEY	**Seymchan**	**12.47**	**348**	*e*PN	**P**	**16 38 57.9**	**+1.6**
SEY				*e*S	**S**	**16 41 16.5**	**+1.8**
SEY				pmax	pmax		
	comp=Z,20nm,0.6s						
SEY				pmax	pmax		
	comp=N,10.0nm,0.5s						
SEY				pmax	pmax		
	comp=E,9.0nm,0.5s						
SEY				MLR	MLR		
	comp=Z,600nm,18.0s						
SEY				MLR	MLR		
	comp=E,150nm,16.0s						
ASAJ	**Asahikawa**	**12.54**	**243**	P	**P**	**16 38 58.6**	**+1.5**
	comp=E,4.9nm,0.3s,baz=68,slow=14,SNR=34						
ASAJ	**Asahikawa**	**12.54**	**243**	PN	**P**	**16 38 58.7**	**+1.5**
ASAJ				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KLR	**Kul'dur**	**17.04**	**275**	*e*P	**P**	**16 39 56.3**	**+1.0**
BILL	**Bilibino**	**17.65**	**10**	*e*P	**P**	**16 40 00.7**	**-2.1**
	comp=Z,40nm,0.5s						
BILL	**Bilibino**	**17.65**	**10**	*d* *i*P	**P**	**16 40 02.2**	**-0.6**
BILL				pmax	pmax		
	comp=Z,35nm,0.6s						
BILL				MLR	MLR		
	comp=Z,500nm,18.0s						
YAK	**Yakutsk**	**19.12**	**317**	*e*P	**P**	**16 40 17.2**	**-3.4**
	comp=Z,111nm,0.6s						
YAK	**Yakutsk**	**19.12**	**317**	*e*P	**P**	**16 40 17.2**	**-3.4**
YAK				pmax	pmax		
	comp=Z,111nm,0.6s						
MDJ	**Mudanjiang**	**20.16**	**263**	P	**P**	**16 40 30.1**	**-1.8**
MDJ				AMB	AMB		
	comp=Z,50nm,0.8s						
MDJ				AMB	AMB		
	comp=Z,90nm,3.0s						
MDJ	**Mudanjiang**	**20.16**	**263**	*e*P	**P**	**16 40 29.6**	**-2.3**
	comp=Z,37nm,0.9s						
MAJO	**Matsushiro**	**20.28**	**233**	*e*P	**P**	**16 40 33.5**	**+0.3**
	comp=Z,66nm,0.6s						
MAJO	**Matsushiro**	**20.28**	**233**	*e*P	**P**	**16 40 33.6**	**+0.4**
MAJO				pmax	pmax		
	comp=Z,66nm,0.6s						
MAT	**Matsushiro**	**20.28**	**233**	P	**P**	**16 40 33.6**	**+0.4**
MAT	**Matsushiro**	**20.28**	**233**	*e*P	**P**	**16 40 34.0**	**+0.8**
	comp=Z,59nm,0.7s						
MAT				LR	LR		
	comp=Z,2µm,21.0s,MS4.4						
MAT	**Matsushiro**	**20.28**	**233**	*e*P	**P**	**16 40 34.0**	**+0.8**
MAT				pmax	pmax		
	comp=Z,59nm,0.7s						
MAT				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.4						
MJAR	**Matsushiro Arr**	**20.28**	**233**	P	**P**	**16 40 33.3**	**+0.1**
	comp=Z,34nm,0.8s,baz=29,slow=9.2,SNR=68						
CLNS	**Chul'man**	**20.38**	**300**	*e*P	**P**	**16 40 35.5**	**+1.4**
CLNS				*e*		16 40 50.2	
CLNS				*e*S	**S**	**16 44 17.1**	**+2.2**
CLNS				*e*		16 44 44.6	
CLNS				*e*SS	SS	16 44 51.6	+5.3
CLNS				pmax	pmax		
	comp=Z,37nm,0.9s						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,17nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,45nm,0.8s						
CLNS				pmax	pmax		
	comp=N,39nm,1.0s						
CLNS				pmax	pmax		
	comp=E,47nm,1.1s						
CLNS				smax			
	comp=N,14nm,1.2s						
CLNS				smax			
	comp=Z,10.0nm,1.0s						
CLNS				smax			
	comp=E,14nm,1.3s						
CN2	**Changchun**	**23.16**	**265**	*e*P	**P**	**16 40 59.0**	**-2.9**
CN2				*e*S	**S**	**16 45 02.1**	**-4.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
CN2				AMB	AMB		
	comp=Z,330nm,4.0s						
CN2				LR	LR		
	comp=N,2µm,12.0s,MS4.8						
CN2				LR	LR		
	comp=E,1µm,12.0s,MS4.8						
CN2				LR	LR		
	comp=Z,1µm,12.0s,MS4.7						
HIA	**Hailar**	**24.56**	**281**	*e*P	**P**	**16 41 15.1**	**-0.3**
	comp=Z,35nm,0.8s,mb4.9						
HIA				*e*pP		16 41 26.6	
HIA	**Hailar**	**24.56**	**281**	*e*P	**P**	**16 41 15.1**	**-0.3**
HIA				*e**PP		16 41 26.6	
HIA				pmax	pmax		
	comp=Z,35nm,0.8s						
TIXI	**Tiksi**	**24.64**	**338**	*e*P	**P**	**16 41 12.3**	**-3.7**
TIXI				*e*S	**S**	**16 45 30.5**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,51nm,0.7s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,281nm,14.0s,MS3.9						
SNY	**Shenyang**	**25.36**	**263**	⇑P	**P**	**16 41 22.3**	**-0.9**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
KS15	**Wonju Array Si**	**25.37**	**250**	*e*P	**P**	**16 41 23.6**	**+0.4**
BOD	**Bodaibo**	**26.27**	**303**	*e*P	**P**	**16 41 29.1**	**-2.4**
BOD				*e*	pP	16 41 43.8	+0.2
BOD				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.4						
JNU	**Nakatsue**	**26.75**	**239**	P	**P**	**16 41 37.8**	**+1.6**
	comp=Z,22nm,0.7s,mb4.8,baz=78,slow=11,SNR=20						
IMA2	**Indian Mountai**	**28.46**	**40**	*e*P	**P**	**16 41 50.4**	**-0.9**
KDAK	**Kodiak Island**	**28.94**	**57**	P	**P**	**16 41 53.4**	**-2.2**
	comp=Z,10.0nm,0.7s,mb4.7,baz=186,slow=16,SNR=5.8						
KDAK				PcP	PcP	16 45 02.2	-1.7
	comp=Z,9.1nm,0.7s,baz=252,slow=3.2,SNR=4.3						
KDAK	**Kodiak Island**	**28.94**	**57**	P	**P**	**16 41 53.4**	**-2.2**
KDAK				PcP	PcP	16 45 02.2	-1.7
PMR	**Palmer**	**30.30**	**49**	*e*P	**P**	**16 42 05.6**	**-2.1**
	comp=Z,16nm,0.8s,mb4.8						
PMR	**Palmer**	**30.30**	**49**	*e*P	**P**	**16 42 05.6**	**-2.1**
PMR				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
SML	**Sawmill**	**30.67**	**48**	*e*P	**P**	**16 42 10.0**	**-0.9**
SML				*e*pP	pP	16 42 22.9	-0.4
COLA	**College**	**30.80**	**42**	*e*P	**P**	**16 42 11.0**	**-1.0**
	comp=Z,21nm,0.8s,mb5.0						
COLA	**College**	**30.80**	**42**	*e*P	**P**	**16 42 11.0**	**-1.0**
COLA				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.0						
ILAR	**Eielson Array**	**31.21**	**43**	P	**P**	**16 42 14.0**	**-1.7**
	comp=Z,7.1nm,0.7s,mb4.6,baz=247,slow=7.4,SNR=79						
ILAR				PcP	PcP	16 45 07.2	-2.5
	comp=Z,2.0nm,0.6s,baz=275,slow=4.2,SNR=4.7						
ILAR				LR	LR	16 56 02.6	
	comp=Z,204nm,19.3s,MS3.8,baz=324,slow=39						
DIV	**Divide**	**31.96**	**49**	⇑*i*P	**P**	**16 42 21.1**	**-1.1**
	comp=Z,184nm,0.9s,mb5.9						
ULN	**Ulaanbaatar**	**32.90**	**285**	*e*P	**P**	**16 42 29.7**	**-1.0**
	comp=Z,6.0nm,0.6s,mb4.7						
ULN	**Ulaanbaatar**	**32.90**	**285**	*e*P	**P**	**16 42 29.7**	**-1.0**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
SONM	**Songino Array**	**33.32**	**285**	P	**P**	**16 42 33.1**	**-1.1**
	comp=Z,2.5nm,0.5s,mb4.4,baz=69,slow=8.1,SNR=28						
SONM				PcP	PcP	16 45 15.2	-0.3
	comp=Z,7.7nm,0.8s,baz=86,slow=2.3,SNR=12						
SONM				LR	LR	16 56 11.3	
	comp=Z,571nm,19.5s,MS4.3,baz=276,slow=36						
SSE	**Sheshan**	**33.75**	**248**	P	**P**	**16 42 39.3**	**+1.1**
SSE				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
SSE				AMB	AMB		
	comp=Z,2µm,11.6s						
SSE	**Sheshan**	**33.75**	**248**	P	**P**	**16 42 39.3**	**+1.1**
	comp=Z,41nm,0.7s,mb5.5						
ZAK	**Zakamensk**	**34.16**	**291**	*e*P	**P**	**16 42 40.1**	**-1.4**
NJ2	**Nanjing**	**34.46**	**252**	*e*P	**P**	**16 42 44.3**	**+0.1**
NJ2				AP	pP	16 42 56.4	-0.4
NJ2				XP	sP	16 43 01.6	-1.2
NJ2				PP	PP	16 43 59.8	-1.3
NJ2				S	**S**	**16 48 06.0**	**-2.3**
NJ2				XS		16 48 27.0	
NJ2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.2						
NJ2				LR	LR		
	comp=N,1µm,22.5s,MS4.7						
NJ2				LR	LR		
	comp=E,1µm,23.0s,MS4.7						
NJ2				LR	LR		
	comp=Z,560nm,18.3s,MS4.3						
DAWY	**Dawson**	**34.50**	**43**	*e*P	**P**	**16 42 43.4**	**-0.8**
DAWY				*e*pP	pP	16 42 55.7	-1.1
INK	**Inuvik**	**36.33**	**36**	P	**P**	**16 42 59.5**	**-0.3**
	comp=Z,15nm,0.7s,mb5.0,baz=286,slow=7.8,SNR=44						
INK	**Inuvik**	**36.33**	**36**	*e*P	**P**	**16 42 59.4**	**-0.4**
	comp=Z,17nm,0.7s,mb5.1						
INK	**Inuvik**	**36.33**	**36**	*e*P	**P**	**16 42 59.4**	**-0.4**
INK				pmax	pmax		
	comp=Z,17nm,0.7s						
WHN	**Wuhan**	**38.26**	**255**	*e*P	**P**	**16 43 14.5**	**-1.8**
DLBC	**Dease Lake**	**40.32**	**51**	*e*P	**P**	**16 43 34.6**	**+1.5**
LZH	**Lanzhou**	**41.18**	**271**	*e*P	**P**	**16 43 40.3**	**-0.1**
LZH				AP	pP	16 43 52.8	-0.4
LZH				XP	sP	16 43 58.5	-0.4
LZH				PP	PP	16 45 18.3	-0.5
LZH				PCP	PcP	16 45 40.0	+0.4
LZH				SCP		16 49 25.3	
LZH				PCS		16 49 30.3	
LZH				S	**S**	**16 49 48.5**	**-1.7**
LZH				XS		16 50 10.3	
LZH				SS	SS	16 52 48.3	-1.6
LZH				SCS	ScS	16 53 38.5	+0.2
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.7						
LZH				AMB	AMB		
	comp=Z,240nm,6.2s						
LZH				LR	LR		
	comp=N,1µm,13.5s						
LZH				LR	LR		
	comp=Z,2µm,17.2s,MS5.0						
LZH	**Lanzhou**	**41.18**	**271**	*e*P	**P**	**16 43 40.3**	**-0.1**
	comp=Z,35nm,1.4s,mb4.8						
LZH				pP	pP	16 43 52.8	-0.4
LZH				sP	sP	16 43 58.5	-0.4
LZH				PP	PP	16 45 18.2	-0.6
LZH				PcP	PcP	16 45 40.0	+0.4
LZH				ScP		16 49 25.3	
LZH				PcS		16 49 30.2	
LZH				S	**S**	**16 49 48.5**	**-1.7**
LZH				sS		16 50 10.3	
LZH				SS	SS	16 52 48.2	-1.7
LZH				ScS	ScS	16 53 38.5	+0.2
LZH				LR	LR		
	comp=Z,2µm,17.2s,MS5.0						
LZH	**Lanzhou**	**41.18**	**271**	*e*P	**P**	**16 43 40.3**	**-0.1**
LZH				*PP	pP	16 43 52.8	-0.4
LZH				*SP	sP	16 43 58.5	-0.4
LZH						16 45 18.2	
LZH						16 45 40.0	
LZH				S	**S**	**16 49 48.5**	**-1.7**
LZH				*SS		16 50 10.3	
LZH				SS	SS	16 52 48.2	-1.7
LZH						16 53 38.5	
LZH				pmax	pmax		
	comp=Z,35nm,1.4s,mb4.8						
LZH				MLR	MLR		
	comp=Z,2µm,17.2s,MS5.0						
ENH	**Enshi**	**41.45**	**259**	*e*P	**P**	**16 43 42.1**	**-0.6**
	comp=Z,12nm,0.7s,mb4.6						
ENH				*e*PcP	PcP	16 45 40.2	-0.4
GTA	**Gaotai**	**41.72**	**277**	*e*P	**P**	**16 43 45.0**	**+0.3**
GTA				AP	pP	16 43 57.6	+0.1
GTA				XP	sP	16 44 02.8	-0.4
GTA				PP	PP	16 45 25.8	+1.2
GTA				PCP	PcP	16 45 41.8	+0.5
GTA				S	**S**	**16 49 59.3**	**+1.2**
GTA				XS		16 50 19.8	
GTA				SS	SS	16 53 01.4	+1.7
GTA				AMB	AMB		
	comp=Z,590nm,4.2s						
GTA				LR	LR		
	comp=N,470nm,13.3s,MS4.6						
GTA				LR	LR		
	comp=E,380nm,14.1s,MS4.6						
GTA				LR	LR		
	comp=Z,440nm,12.5s,MS4.5						
ZAL	**Zalesovo**	**43.03**	**304**	P	**P**	**16 43 53.9**	**-1.4**
	comp=Z,2.4nm,0.5s,mb4.2,baz=56,slow=7.3,SNR=11						
ZAL				PcP	PcP	16 45 45.5	+0.1
	comp=Z,3.7nm,0.4s,baz=33,slow=4.9,SNR=7.5						
ZAL				LR	LR	17 03 02.8	
	comp=Z,316nm,18.6s,MS4.2,baz=53,slow=38						
ZAL	**Zalesovo**	**43.03**	**304**	P	**P**	**16 43 53.9**	**-1.4**
ZAL				PcP	PcP	16 45 45.5	+0.1
ZAL				LR	LR	17 03 02.8	
NVS	**Novosibirsk**	**43.43**	**306**	*i* P	**P**	**16 43 56.0**	**-2.5**
NVS				*i*	pP	16 44 07.1	-4.2
NVS				*i*		16 45 44.9	
NVS				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
NVS				pmax	pmax		
	comp=N,5.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,15nm,1.2s						
CD2	**Chengdu**	**44.60**	**265**	*e*P	**P**	**16 44 08.4**	**+0.1**
YKA	**Yellowknife Ar**	**45.58**	**40**	P	**P**	**16 44 15.4**	**-0.2**
	comp=E,5.3nm,0.7s,mb4.6,baz=295,slow=7.3,SNR=13						
YKA				pP	pP	16 44 28.9	+0.4
	comp=E,8.2nm,0.6s,baz=297,slow=7.6,SNR=12						
YKA	**Yellowknife Ar**	**45.58**	**40**	P	**P**	**16 44 15.4**	**-0.3**
YKA				pP	pP	16 44 28.9	+0.4
GYA	**Guiyang**	**45.89**	**258**	⇓*i*P	**P**	**16 44 19.6**	**+0.9**
GYA				AP	pP	16 44 32.0	+0.5
GYA				XP	sP	16 44 37.3	+0.2
GYA				PP	PP	16 46 07.5	+0.7
GYA				S	**S**	**16 50 59.4**	**+0.5**
GYA				XS		16 51 19.6	
GYA				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.5						
GYA				AMB	AMB		
	comp=Z,180nm,3.4s						
GYA				LR	LR		
	comp=N,540nm,18.4s,MS4.7						
GYA				LR	LR		
	comp=E,640nm,19.0s,MS4.7						
GYA				LR	LR		
	comp=Z,610nm,18.9s,MS4.6						
WMQ	**Urumqi**	**46.62**	**290**	*e*P	**P**	**16 44 24.3**	**+0.2**
WMQ				AP	pP	16 44 37.0	+0.1
WMQ				XP	sP	16 44 42.0	-0.6
WMQ				PCP	PcP	16 46 00.0	+2.1
WMQ				*e*S	**S**	**16 51 08.0**	**-0.9**
WMQ				XS		16 51 29.0	
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,490nm,8.8s						
WMQ				LR	LR		
	comp=N,600nm,16.7s						
WMQ				LR	LR		
	comp=E,400nm,24.7s						
WMQ				LR	LR		
	comp=Z,620nm,22.3s						
KURK	**Kurchatov**	**47.92**	**303**	⇓*e*P	**P**	**16 44 32.1**	**-2.1**
	comp=Z,32nm,0.6s,mb5.5						
KURK	**Kurchatov**	**47.92**	**303**	⇓*e*P	**P**	**16 44 32.1**	**-2.2**
KURK				pmax	pmax		
	comp=Z,32nm,0.6s,mb5.5						
MKAR	**Makanchi Array**	**48.08**	**296**	P	**P**	**16 44 33.8**	**-1.7**
	comp=Z,6.1nm,0.4s,mb5.0,baz=64,slow=7.1,SNR=79						
MKAR				LR	LR	17 04 36.4	
	comp=Z,432nm,20.6s,MS4.4,baz=48,slow=36						
KBS	**Kingsbay**	**48.89**	**352**	*e*P	**P**	**16 44 40.5**	**-0.9**
	comp=Z,17nm,0.7s,mb5.2						
KBS	**Kingsbay**	**48.89**	**352**	*e*P	**P**	**16 44 40.5**	**-0.9**
KBS				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2						
MBW	**Mount Baker**	**49.16**	**59**	P	**P**	**16 44 44.0**	**+0.2**
KMI	**Kunming**	**49.30**	**260**	P	**P**	**16 44 46.0**	**+0.8**
KMI				AP	pP	16 44 58.3	+0.2
KMI				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.2						
KMI	**Kunming**	**49.30**	**260**	P	**P**	**16 44 46.0**	**+0.8**
	comp=Z,37nm,1.1s,mb5.3						
KMI				pP	pP	16 44 58.2	+0.1
KMI	**Kunming**	**49.30**	**260**	P	**P**	**16 44 46.0**	**+0.8**
KMI				*PP	pP	16 44 58.2	+0.1
KMI				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.3						
CHKZ	**Chkalovo**	**50.37**	**309**	⇓*e*P	**P**	**16 44 49.8**	**-3.2**
	comp=Z,23nm,0.5s,mb5.5						
CHKZ	**Chkalovo**	**50.37**	**309**	⇓*e*P	**P**	**16 44 49.8**	**-3.3**
CHKZ				pmax	pmax		
	comp=Z,23nm,0.5s,mb5.5						
BVAR	**Borovoye Array**	**50.85**	**309**	P	**P**	**16 44 54.2**	**-2.5**
	baz=59,slow=8.6						
BRVK	**Borovoye**	**50.89**	**309**	*e*P	**P**	**16 44 53.8**	**-3.2**
	comp=Z,10nm,0.6s,mb4.9						
BRVK	**Borovoye**	**50.89**	**309**	*e*P	**P**	**16 44 53.8**	**-3.2**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
EBG	**Ellensburg**	**50.98**	**61**	P	**P**	**16 44 58.3**	**+0.6**
EDM	**Edmonton**	**51.04**	**51**	*e*P	**P**	**16 44 57.7**	**-0.4**
EDM				*e*pP	pP	16 45 10.7	-0.4
VLL	**Laurance Lake**	**51.22**	**63**	P	**P**	**16 45 00.2**	**+0.6**
EPH	**Ephrata**	**51.25**	**60**	P	**P**	**16 44 59.5**	**-0.3**
VFP	**Flag Point**	**51.42**	**63**	P	**P**	**16 45 01.8**	**+0.6**
OD2	**Odessa Site #2**	**51.71**	**59**	P	**P**	**16 45 02.9**	**-0.4**
HAWA	**Hanford**	**51.86**	**61**	*e*P	**P**	**16 45 04.1**	**-0.3**
	comp=Z,2.3nm,1.1s,mb4.0						
NEW	**Newport**	**52.04**	**58**	*e*P	**P**	**16 45 04.8**	**-1.0**
	comp=Z,45nm,1.3s,mb5.2						
NEW	**Newport**	**52.04**	**58**	*e*P	**P**	**16 45 04.8**	**-0.9**
NEW				pmax	pmax		
	comp=Z,45nm,1.3s						
VIPM	**Ingram Point**	**52.39**	**63**	P	**P**	**16 45 08.7**	**+0.2**
KTRM	**Thompson Ridge**	**52.41**	**67**	P	**P**	**16 45 09.7**	**+1.1**
DAG	**Danmarks Havn**	**52.59**	**359**	⇑*i*P	**P**	**16 45 08.3**	**-1.2**
	comp=Z,22nm,0.8s,mb5.2						
DAG	**Danmarks Havn**	**52.59**	**359**	⇑*i*P	**P**	**16 45 08.3**	**-1.2**
DAG				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
YBH	**Yreka Blue Hor**	**52.91**	**67**	*e*P	**P**	**16 45 13.3**	**+1.0**
	comp=Z,28nm,1.4s,mb5.0						
YBH	**Yreka Blue Hor**	**52.91**	**67**	*e*P	**P**	**16 45 13.4**	**+1.0**
YBH				pmax	pmax		
	comp=Z,28nm,1.4s						
LSA	**Lhasa**	**53.40**	**274**	P	**P**	**16 45 19.0**	**+2.8**
LSA	**Lhasa**	**53.40**	**274**	*e*P	**P**	**16 45 16.9**	**+0.8**
	comp=Z,11nm,0.7s,mb4.9						
LSA	**Lhasa**	**53.40**	**274**	*e*P	**P**	**16 45 17.0**	**+0.8**
LSA				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
BSMT	**Bassoo Peak**	**53.53**	**57**	P	**P**	**16 45 17.1**	**+0.2**
WDC	**Whiskeytown Da**	**53.74**	**68**	*e*P	**P**	**16 45 19.0**	**+0.5**
	comp=Z,30nm,1.4s,mb5.0						
WDC	**Whiskeytown Da**	**53.74**	**68**	*e*P	**P**	**16 45 19.0**	**+0.5**
WDC				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0						
BMO	**Blue Mountains**	**54.03**	**61**	*e*P	**P**	**16 45 20.3**	**-0.3**
	comp=Z,22nm,1.2s,mb5.0						
BMO				*e*pP	pP	16 45 34.3	+0.6
BMO				*e*PcP	PcP	16 46 23.8	-1.3
MOD	**Modoc**	**54.20**	**66**	⇑*i*P	**P**	**16 45 22.4**	**+0.5**
	comp=Z,18nm,0.6s,mb5.2						
TKM2	**Tokmak 2**	**54.20**	**296**	P	**P**	**16 45 20.8**	**-1.1**
	SNR=5.3						
ARU	**Arti**	**54.23**	**318**	*e*P	**P**	**16 45 18.8**	**-3.1**
	comp=Z,16nm,0.4s,mb5.3						
ARU	**Arti**	**54.23**	**318**	⇓*i*P	**P**	**16 45 18.5**	**-3.4**
ARU				*e*	pP	16 45 32.4	-2.6
ARU				*e*S	**S**	**16 52 51.4**	**-2.7**
ARU				*e*SS	SS	16 56 29.8	-6.0
ARU				*e*SSS	SSS	16 58 33.8	+0.3
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
KEV	**Kevo**	**54.53**	**341**	*e*p	**P**	**16 45 21.5**	**-2.4**
USP	**Ospenovka**	**54.60**	**297**	P	**P**	**16 45 23.0**	**-1.8**
	SNR=7.2						
MSO	**Missoula**	**54.62**	**57**	⇑*e*P	**P**	**16 45 24.4**	**-0.5**
	comp=Z,32nm,1.3s,mb5.2						
KBK	**Karagaybulak**	**54.74**	**296**	P	**P**	**16 45 24.5**	**-1.3**
	SNR=8.3						
FRU	**Bishkek**	**54.81**	**297**	*e*P	**P**	**16 45 25.0**	**-1.3**
WVOR	**Wild Horse Val**	**54.82**	**64**	⇑*i*P	**P**	**16 45 26.8**	**+0.4**
	comp=Z,78nm,0.8s,mb5.8						
WVOR	**Wild Horse Val**	**54.82**	**64**	⇑*i*P	**P**	**16 45 26.8**	**+0.4**
WVOR				pmax	pmax		
	comp=Z,79nm,0.8s,mb5.8						
CHMT	**Chamberlain Mo**	**54.93**	**57**	*e*P	**P**	**16 45 26.2**	**-0.9**
CHRT	**Chiangrai**	**55.00**	**258**	⇑P	**P**	**16 45 27.0**	**-1.0**
	comp=Z,184nm,1.0s,mb6.1						
AAK	**Ala-Archa**	**55.01**	**296**	P	**P**	**16 45 26.1**	**-1.7**
	SNR=8.5						
AAK	**Ala-Archa**	**55.01**	**296**	*e*P	**P**	**16 45 24.8**	**-3.0**
	comp=Z,4.4nm,0.6s,mb4.7						
AAK	**Ala-Archa**	**55.01**	**296**	*e*P	**P**	**16 45 24.8**	**-3.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
ARCES	**ARCESS Array B**	**55.01**	**342**	P	**P**	**16 45 25.1**	**-2.4**
	comp=Z,2.0nm,0.6s,mb4.3,baz=43,slow=8.5,SNR=26						
ARCES				LR	LR	17 15 19.6	
	comp=Z,289nm,19.0s,MS4.4,baz=246,slow=43						
OHCM	**Honcut**	**55.16**	**69**	*e*P	**P**	**16 45 28.5**	**-0.4**
EKS2	**Erkin-Say**	**55.40**	**297**	P	**P**	**16 45 29.4**	**-1.2**
	SNR=5.9						
HRY	**Holter Researc**	**55.81**	**56**	*e*P	**P**	**16 45 33.3**	**-0.2**
KKTK	**Khon Kaen**	**55.83**	**253**	P	**P**	**16 45 33.8**	**-0.2**
	comp=Z,432nm,1.0s						
FCC	**Fort Churchill**	**55.93**	**37**	*e*P	**P**	**16 45 33.2**	**-1.0**
	comp=Z,25nm,0.6s,mb5.4						
FCC	**Fort Churchill**	**55.93**	**37**	*e*P	**P**	**16 45 33.2**	**-1.0**
FCC				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.4						
SUMG	**Summit**	**56.28**	**6**	*e*P	**P**	**16 45 36.0**	**-0.5**
	comp=Z,25nm,0.6s,mb5.4						

DLMT	Dillon	56.28	58	eP	P	16 45 36.6	-0.2
	comp=Z,17nm,1.2s,mb5.0						
CHG	Chiang Mai	56.31	258	⇑P	P	16 45 38.2	+0.7
	comp=Z,70nm,0.9s,mb5.7						
HLID	Hailey	56.46	61	eP	P	16 45 37.9	-0.3
	comp=Z,14nm,0.9s,mb5.0						
MCMT	McKenzie Canyo	56.49	59	eP	P	16 45 38.1	-0.3
BOZ	Bozeman (W)	56.61	57	⇑iP	P	16 45 39.5	+0.2
	comp=Z,37nm,0.9s,mb5.4						
BOZ	Bozeman (W)	56.61	57	⇑iP	P	16 45 39.5	+0.3
BOZ				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.4						
CMB	Columbia Colle	56.66	69	eP	P	16 45 39.6	-0.1
	comp=Z,18nm,1.1s,mb5.0						
CMB	Columbia Colle	56.66	69	eP	P	16 45 39.6	-0.1
CMB				pmax	pmax		
	comp=Z,18nm,1.1s,mb5.0						
QLMT	Earthquake Lak	57.25	58	eP	P	16 45 44.0	+0.1
YMR	Madison River	57.61	58	⇑iP	P	16 45 46.6	+0.3
	comp=Z,78nm,1.4s,mb5.5						
NVAR	Mina Array Bea	57.62	68	P	P	16 45 47.2	+0.7
	comp=Z,12nm,0.8s,mb5.0,baz=305,slow=5.7,SNR=76						
NVAR	Mina Array Bea	57.62	68	P	P	16 45 47.2	+0.7
YFT	Old Faithful	57.82	58	⇑iP	P	16 45 49.2	+1.4
ELK	Elko	57.85	64	⇑iP	P	16 45 48.5	+0.4
	comp=Z,12nm,0.8s,mb5.0						
ELK	Elko	57.85	64	⇑iP	P	16 45 48.5	+0.4
ELK				pmax	pmax		
	comp=Z,12nm,0.8s						
GUN	Gumba	57.96	276	eP	P	16 45 48.8	-0.2
	comp=Z,35nm,0.4s,mb5.7						
NST	Nakhon Sawan	57.97	255	P	P	16 45 50.0	+0.8
IMW	Indian Meadow	58.13	58	⇑eP	P	16 45 50.9	+0.9
	comp=Z,35nm,0.9s,mb5.4						
MTUM	Tungsten Hills	58.19	69	eP	P	16 45 50.9	+0.4
MOOW	Moose Ponds	58.34	58	⇑iP	P	16 45 52.1	+0.7
	comp=Z,28nm,1.0s,mb5.2						
TPAW	Teton Pass	58.40	59	⇑iP	P	16 45 52.7	+0.8
	comp=Z,85nm,1.2s,mb5.7						
KKN	Kakani	58.43	276	eP	P	16 45 52.2	0.0
	comp=Z,50nm,0.5s,mb5.8						
AKTO	Aktyubinsk	58.45	312	LR	LR	17 13 17.4	
	comp=Z,331nm,18.0s,MS4.5,slow=38						
TPH	Tonopah	58.49	67	⇑iP	P	16 45 52.6	+0.1
	comp=Z,48nm,1.2s,mb5.4						
TPH	Tonopah	58.49	67	⇑iP	P	16 45 52.6	0.0
TPH				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.4						
PKI	Pulchoki	58.50	276	eP	P	16 45 52.6	-0.1
LOHW	Long Hollow	58.51	58	⇑iP	P	16 45 53.5	+0.9
	comp=Z,54nm,1.2s,mb5.5						
LOHW				epP	pP	16 46 08.7	+2.9
SNOW	Snow King Moun	58.52	59	⇑iP	P	16 45 53.5	+0.8
	comp=Z,20nm,0.8s,mb5.2						
DGMT	Dagmar	58.54	51	eP	P	16 45 52.2	-0.5
	comp=Z,7.6nm,0.5s,mb5.0						
REDW	Red Top Meadow	58.54	59	⇑iP	P	16 45 53.5	+0.7
	comp=Z,85nm,1.3s,mb5.6						
DMN	Daman	58.66	276	eP	P	16 45 53.9	0.0
	comp=Z,66nm,0.6s,mb5.8						
GKN	Gorkha	58.68	277	eP	P	16 45 53.7	-0.3
	comp=Z,56nm,0.6s,mb5.8						
LAO	LASA Array	58.73	53	eP	P	16 45 54.2	+0.1
	comp=Z,39nm,1.0s,mb5.4						
AHID	Auburn Hatcher	58.80	59	⇑iP	P	16 45 55.2	+0.6
	comp=Z,25nm,0.9s,mb5.2						
SCO	Scoresbysund	58.93	0	i P	P	16 45 55.5	+0.3
	comp=Z,4.5nm,0.5s,mb4.8						
SCO				i	pP	16 46 06.3	-2.1
SCO	Scoresbysund	58.93	0	i P	P	16 45 55.5	+0.3
SCO				i	pP	16 46 06.3	-2.1
SCO				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
SPUT	South Promonto	59.04	61	⇑iP	P	16 45 56.8	+0.4
JOF	Joensuu	59.06	335	ep	P	16 45 53.7	-2.5
	comp=Z,3.3nm,0.5s,mb4.6						
HWUT	Hardware Ranch	59.33	61	⇑iP	P	16 45 58.7	+0.3
	comp=Z,29nm,1.0s,mb5.3						
ISA	Isabella	59.39	70	eP	P	16 45 57.9	-0.9
	comp=Z,1.0nm,0.6s,mb4.0						
ISA	Isabella	59.39	70	eP	P	16 45 57.9	-0.9
ISA				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
DAC	Darwin (Calif)	59.49	69	⇑eP	P	16 45 59.4	-0.1
	comp=Z,21nm,1.5s,mb5.0						
DAC				ePcP	PcP	16 46 46.1	-0.3
DAC	Darwin (Calif)	59.49	69	⇑eP	P	16 45 59.4	-0.1
DAC				e		16 46 46.1	
DAC				pmax	pmax		
	comp=Z,21nm,1.5s,mb5.0						
KOLN	Koldanda	59.50	277	eP	P	16 45 59.4	-0.3
	comp=Z,41nm,0.5s,mb5.7						
DUG	Dugway	59.59	63	⇑iP	P	16 46 00.3	+0.2
	comp=Z,43nm,1.1s,mb5.4						
DUG	Dugway	59.59	63	⇑iP	P	16 46 00.3	+0.2
DUG				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.4						
BW06	Boulder Array	59.64	59	⇑iP	P	16 46 00.6	+0.2
	comp=Z,40nm,0.9s,mb5.5						
BW06				epP	pP	16 46 13.8	+0.1
PDAR	Pinedale Array	59.64	59	P	P	16 46 00.7	+0.2
	comp=Z,35nm,0.8s,mb5.4,baz=311,slow=2.6,SNR=203						
TCUT	Toone Canyon	59.75	61	eP	P	16 46 01.4	+0.2
TPNV	Topopah Spring	59.82	68	⇑iP	P	16 46 01.7	-0.1
	comp=Z,22nm,0.9s,mb5.2						
TPNV	Topopah Spring	59.82	68	⇑iP	P	16 46 01.7	-0.1
TPNV				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.2						
NLU	North Lily Min	60.17	62	eP	P	16 46 04.0	-0.2
DAU	Daniels Canyon	60.31	62	eP	P	16 46 05.7	+0.6
MPU	Maple Canyon	60.37	62	⇑eP	P	16 46 06.1	+0.5
	comp=Z,32nm,1.0s,mb5.3						
PMG	Port Moresby	60.81	193	eP	P	16 46 08.3	-0.6
	comp=Z,29nm,1.1s,mb5.3						
PMG	Port Moresby	60.81	193	eP	P	16 46 08.3	-0.6
PMG				pmax	pmax		
	comp=Z,29nm,1.1s						
ARUT	Antelope Range	60.88	65	eP	P	16 46 09.0	0.0
BOK	Bokaro	60.88	273	eP	P	16 46 08.5	-0.7
BOK				AMb	AMB	16 46 11.2	
	comp=Z,15nm,0.9s,mb5.1						
KAF	Kangasniemi	61.04	336	ep	P	16 46 07.7	-2.1
	comp=Z,1.7nm,0.4s,mb4.5,baz=28,slow=5.9						
KAF	Kangasniemi	61.04	336	eP	P	16 46 07.7	-2.1
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.6						
MVU	Marysvale	61.09	64	eP	P	16 46 10.8	+0.4
	comp=Z,17nm,1.1s,mb5.1						
MSU	Marysvale	61.10	64	eP	P	16 46 10.6	+0.1
MSU				ePcP	PcP	16 46 53.4	+0.6
TMUT	Trail Mountain	61.11	62	⇑eP	P	16 46 10.9	+0.4
ULM	Lac du Bonnet	61.19	45	P	P	16 46 10.3	-0.6
	comp=Z,2.4nm,0.6s,mb4.5,baz=322,slow=12,SNR=5.3						
ULM				pP	pP	16 46 23.8	-0.4
	comp=Z,6.2nm,0.5s,baz=312,slow=8.9,SNR=5.5						
RSSD	Black Hills	61.62	54	⇑iP	P	16 46 13.7	-0.2
	comp=Z,44nm,0.9s,mb5.6						
RSSD				epP	pP	16 46 26.7	-0.5
RSSD	Black Hills	61.62	54	⇑iP	P	16 46 13.7	-0.2
RSSD				e*PP	pP	16 46 26.7	-0.5
RSSD				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.6						
SRU	San Rafael	61.62	62	⇑iP	P	16 46 14.0	+0.1
	comp=Z,48nm,0.8s,mb5.7						
SRU	San Rafael	61.62	62	⇑iP	P	16 46 14.0	+0.1
SRU				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.7						
FINES	FINESS Array B	61.67	336	P	P	16 46 11.8	-2.2
	comp=Z,1.9nm,0.5s,mb4.5,baz=36,slow=7.9,SNR=33						
FINES				LR	LR	17 15 57.8	
	comp=Z,322nm,18.1s,MS4.5,baz=161,slow=39						
PHWY	Pilot Hill	62.85	57	eP	P	16 46 22.1	-0.1
PV10	Paradox Valley	62.96	62	eP	P	16 46 23.7	+0.8
PV10				epP	pP	16 46 36.2	-0.2
PV10				ePcP	PcP	16 47 00.3	-0.1
PV01	Paradox Valley	63.39	62	eP	P	16 46 25.6	-0.2
PV01				ePcP	PcP	16 47 02.1	-0.1
SMCO	Snowmass	63.54	60	⇑iP	P	16 46 26.9	+0.3
	comp=Z,42nm,0.9s,mb5.5						
KSM	Kuching	63.63	236	eP	P	16 46 27.7	+0.1
KSM				epP	pP	16 46 40.5	-0.5
WUAZ	Wupatki	63.65	66	⇑iP	P	16 46 27.8	+0.4
	comp=Z,45nm,1.2s,mb5.4						
OBN	Obninsk	63.73	327	eP	P	16 46 24.0	-3.6
OBN				e		16 47 01.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.3						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.4						
RW3	Ridgway	63.80	61	eP	P	16 46 28.8	+0.4
ISCO	Idaho Springs	63.84	59	⇑iP	P	16 46 29.4	+0.9
	comp=Z,44nm,0.9s,mb5.5						
ISCO	Idaho Springs	63.84	59	⇑iP	P	16 46 29.4	+0.8
ISCO				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.5						
SNG	Songkhla	64.35	248	P	P	16 46 34.0	+1.7
SNG	Songkhla	64.35	248	P	P	16 46 34.0	+1.7
BLSP	Bilaspur	64.46	274	eP	P	16 46 31.4	-1.5
BLSP				AMb	AMB	16 46 33.1	
	comp=Z,23nm,0.8s,mb5.2						
EYMN	Ely	64.83	44	eP	P	16 46 33.7	-1.2
	comp=Z,14nm,0.7s,mb5.1						
NB2	NORSAR Subarra	65.32	343	P	P	16 46 36.2	-1.6
	comp=Z,14nm,0.6s,mb5.2,baz=24,slow=6.5						
NB2	NORSAR Subarra	65.32	343	P	P	16 46 36.2	-1.6
	baz=24,slow=6.9						
NOA	NORSAR Array B	65.32	343	P	P	16 46 36.5	-1.3
	comp=Z,17nm,0.7s,mb5.2,baz=22,slow=6.6,SNR=79						
NOA				LR	LR	17 18 16.8	
	comp=Z,114nm,19.0s,MS4.1,baz=100,slow=39						
SDCO	Great Sand Dun	65.37	60	eP	P	16 46 38.7	+0.2
	comp=Z,45nm,1.4s,mb5.3						
SDCO				epP	pP	16 46 54.0	+1.9
NAO01	NORSAR Array S	65.56	343	eP	P	16 46 37.2	-2.1
	comp=Z,8.8nm,0.8s,mb4.8						
NAO	NORSAR Subarra	65.59	343	P	P	16 46 36.2	-3.3
	comp=Z,14nm,0.6s,mb5.2						
NAO	NORSAR Subarra	65.59	343	P	P	16 46 36.2	-3.3
NAO				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
HFS	Hagfors	65.68	341	LR	LR	17 18 13.8	
	comp=Z,338nm,18.9s,MS4.6,baz=56,slow=39						
KULM	Kulim	65.85	247	eP	P	16 46 42.9	+0.9
KULM				epP	pP	16 46 55.0	-0.4
AJM	Ajmer	66.00	283	ex	x	16 46 33.0	
TUC	Tucson	66.28	68	eP	P	16 46 44.1	-0.3
	comp=Z,17nm,1.3s,mb4.9						
TUC	Tucson	66.28	68	eP	P	16 46 44.1	-0.3
TUC				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
BHPL	Bhopal	66.61	278	eP	P	16 46 45.5	-1.1
BHPL				AMb	AMB	16 46 46.9	
	comp=Z,49nm,1.1s,mb5.4						
BHPL				ex	x	16 53 33.0	
ANMO	Albuquerque	66.86	63	eP	P	16 46 48.4	+0.4
	comp=Z,21nm,1.0s,mb5.1						
ANMO				epP	pP	16 47 03.9	+2.4
ANMO	Albuquerque	66.86	63	eP	P	16 46 48.4	+0.4
ANMO				e*PP	pP	16 47 03.9	+2.4
ANMO				pmax	pmax		
	comp=Z,21nm,1.0s						
KONO	Kongsberg	66.91	343	eP	P	16 46 46.2	-1.7
VIS	Vishakhapatnam	66.95	270	eP	P	16 46 48.4	-0.4
VIS				AMb	AMB	16 46 51.7	
	comp=Z,29nm,1.8s,mb5.0						
KAKA	Kakadu	67.21	207	eP	P	16 47 09.7	+19
	comp=Z,59nm,0.6s,mb5.8						
KAKA				epP	pP	16 47 23.7	+20
CBKS	Cedar Bluff	67.68	56	eP	P	16 46 51.9	-1.2
	comp=Z,46nm,1.2s,mb5.4						
CBKS	Cedar Bluff	67.68	56	eP	P	16 46 51.9	-1.2
CBKS				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.4						
SCHQ	Schefferville	68.14	26	P	P	16 46 54.5	-1.1
	comp=Z,9.9nm,0.8s,mb4.9,baz=335,slow=4.1,SNR=5.3						
GOF	Gofitskoye	69.21	317	eP	P	16 46 52.7	-10
AMTX	Amarillo	69.56	60	eP	P	16 47 04.5	-0.3
	comp=Z,48nm,1.2s,mb5.3						
MNTX	Cornudas Mount	69.85	64	eP	P	16 47 06.7	+0.1
	comp=Z,28nm,1.0s,mb5.1						
AKASG	Malin Array Be	69.89	328	P	P	16 47 03.8	-2.7
	comp=Z,1.8nm,0.4s,mb4.4,baz=31,slow=6.5,SNR=18						
AKASG				pP	pP	16 47 18.1	-2.0
	comp=Z,4.5nm,0.6s,baz=30,slow=6.2,SNR=7.4						
HYB	Hyderabad	70.20	273	i P	P	16 47 09.0	+0.1
HYB				epP	pP	16 47 20.0	-2.5
HYB	Hyderabad	70.20	273	eP	P	16 47 09.0	+0.1
HYB				e	pP	16 47 20.0	-2.5
KIV	Kislovodsk	70.23	316	i P	P	16 47 11.9	+3.2
KIV				e	pP	16 47 27.0	+4.7
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
KIV				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.2						
ZEI	Tsey	70.63	315	i P	P	16 47 07.3	-3.9
ZEI				i *PP	pP	16 47 22.7	-2.1
ZEI				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
WMOK	Wichita Mounta	71.24	58	eP	P	16 47 14.7	-0.3
	comp=Z,25nm,1.0s,mb5.1						
WMOK	Wichita Mounta	71.24	58	eP	P	16 47 14.7	-0.3
WMOK				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
CTA	Charters Tower	71.45	192	eP	P	16 47 16.8	+0.3
	comp=Z,10nm,0.8s,mb4.8						
CTA				epP	pP	16 47 30.8	+0.7
CTA	Charters Tower	71.45	192	P	P	16 47 16.4	0.0
	comp=Z,16nm,0.9s,mb4.9,baz=356,slow=7.2,SNR=13						
CTA				pP	pP	16 47 30.5	+0.4
	comp=Z,12nm,0.8s,baz=6.8,slow=9.1,SNR=7.2						
CTA	Charters Tower	71.45	192	P	P	16 47 16.5	0.0
CTA				*PP	pP	16 47 30.5	+0.4
CTA				pmax	pmax		
	comp=Z,16nm,1.0s						
CTAO	Charters Tower	71.45	192	eP	P	16 47 16.0	-0.5
	comp=Z,17nm,1.0s,mb4.9						
CTAO				epP	pP	16 47 29.8	-0.3
CTAO	Charters Tower	71.45	192	eP	P	16 47 16.0	-0.5
CTAO				e*PP	pP	16 47 29.8	-0.3
CTAO				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
BSEG	Bad Segeberg	72.12	341	eP	P	16 47 19.9	0.0
GNI	Garni	72.32	312	P	P	16 47 19.7	-1.6
	comp=Z,4.8nm,0.6s,mb4.6						
GNI	Garni	72.32	312	P	P	16 47 26.5	+5.2
GNI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CCM	Cathedral Cave	72.56	51	eP	P	16 47 21.3	-1.4
	comp=Z,11nm,0.8s,mb4.8						
CCM	Cathedral Cave	72.56	51	eP	P	16 47 21.3	-1.4
CCM				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
LTX	Lajitas	72.60	65	eP	P	16 47 23.1	0.0
	comp=Z,49nm,0.7s,mb5.5						
LTX	Lajitas	72.60	65	eP	P	16 47 23.1	0.0
LTX				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.5						
TXAR	Lajitas Array	72.60	65	P	P	16 47 23.8	+0.7
	comp=Z,38nm,0.6s,mb5.5,baz=297,slow=4.4,SNR=187						
TXAR				pP	pP	16 47 37.0	+0.3
	comp=Z,11nm,0.7s,baz=299,slow=4.3,SNR=7.8						
TXAR	Lajitas Array	72.60	65	P	P	16 47 23.8	+0.7
TXAR				pP	pP	16 47 37.0	+0.3
KWP	Kalwaria	72.89	332	eP	P	16 47 24.8	+0.4
KWP	Kalwaria	72.89	332	eP	P	16 47 24.8	+0.4
ESK	Eskdalemuir	73.03	349	eP	P	16 47 25.0	-0.1
	comp=Z,15nm,0.7s,mb5.0						
ESK				epP	pP	16 47 37.4	-1.3
ESK	Eskdalemuir	73.03	349	eP	P	16 47 25.0	-0.1
ESK				e*PP	pP	16 47 37.4	-1.3
ESK				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
KAD	Karad	73.04	277	eP	P	16 47 25.8	0.0
KAD				AMb	AMB	16 47 27.0	
	comp=Z,34nm,1.1s,mb5.2						
KAD				AML	AML	16 47 40.3	
	comp=N,8.8nm,0.6s						
KAD				AML	AML	16 47 40.4	
	comp=E,7.5nm,0.6s						
OJC	Ojcow	73.21	334	eP	P	16 47 26.0	-0.3
STHS	Stebnicka Huta	73.52	332	i P	P	16 47 28.7	+0.6
WRAB	Tennant Creek	73.58	203	eP	P	16 47 28.9	-0.1
	comp=E,94nm,1.0s,mb5.7						
WRAB				epP	pP	16 47 41.1	-1.6
WRAB	Tennant Creek	73.58	203	eP	P	16 47 28.9	-0.2
WRAB				e*PP	pP	16 47 41.1	-1.6
WRAB				pmax	pmax		
	comp=Z,94nm,1.0s,mb5.7						
WB2	Warramunga Arr	73.59	203	eP	P	16 47 29.5	+0.4
WB2				epP	pP	16 47 42.5	-0.3
KSP	Ksiaz	73.59	336	eP	P	16 47 22.9	-5.6
KSP	Ksiaz	73.59	336	eP	P	16 47 27.9	-0.6
WRA	Warramunga Arr	73.60	203	P	P	16 47 29.5	+0.4
	comp=Z,42nm,0.8s,mb5.4,baz=19,slow=6.2,SNR=129						
WRA				pP	pP	16 47 41.7	-1.1
	comp=Z,16nm,0.7s,baz=20,slow=6.2,SNR=11						
KOLS	Kolonicke sedl	73.64	331	i P	P	16 47 28.3	-0.5
BURAR	Bucovina Array	73.88	329	⇓P	P	16 47 29.6	-0.6
BURAR	Bucovina Array	73.88	329	⇓P	P	16 47 29.6	-0.6
CRVS	Cervenica-Dubn	73.91	332	i P	P	16 47 29.9	-0.5
JCT	Junction City	73.92	62	⇑iP	P	16 47 30.8	0.0
	comp=Z,66nm,1.3s,mb5.4						
JCT	Junction City	73.92	62	⇑iP	P	16 47 30.8	0.0
JCT				pmax	pmax		
	comp=Z,66nm,1.3s,mb5.4						
UPC	Upice	73.97	336	eP	P	16 47 30.6	-0.1
CLL	Collm	73.98	338	⇑P	P	16 47 30.2	-0.5
	comp=Z,logA/T=1.3,mb5.0						
CLL				i *PP	pP	16 47 45.9	+1.5
CLL				i		16 47 55.5	
CLL	Collm	73.98	338	⇑iP	P	16 47 30.2	-0.5
	comp=Z,19nm,1.0s,mb5.0						
CLL				i pP	pP	16 47 45.9	+1.5
CLL				i sP	sP	16 47 55.5	+6.0
CLL	Collm	73.98	338	⇑iP	P	16 47 30.2	-0.5
CLL				i *PP	pP	16 47 45.9	+1.5
CLL				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
OKC	Ostrava-Krasne	74.02	334	eP	P	16 47 30.7	-0.3
DPC	Dobruska-Polom	74.04	336	eP	P	16 47 31.0	-0.1
CLZ	Clausthal	74.08	340	eP	P	16 47 31.6	+0.3
	comp=Z,18nm,1.1s,mb4.9						
CLZ	Clausthal	74.08	340	eP	P	16 47 31.6	+0.3
CLZ				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.9						
BRG	Berggiesshubel	74.16	337	eP	P	16 47 31.1	-0.6
	comp=Z,7.4nm,1.0s,mb4.6						
BRG	Berggiesshubel	74.16	337	eP	P	16 47 31.1	-0.6
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
MORC	Moravsky Berou	74.24	335	eP	P	16 47 31.6	-0.6
	comp=Z,9.9nm,0.9s,mb4.7						
MORC	Moravsky Berou	74.24	335	eP	P	16 47 31.6	-0.6
MORC				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
PVCC	Panska Ves	74.32	337	eP	P	16 47 32.8	+0.1
FITZ	Fitzroy Crossi	74.42	212	eP	P	16 47 35.1	+1.2
	comp=Z,41nm,1.0s,mb5.3						
FITZ				epP	pP	16 47 48.6	+1.0
FITZ	Fitzroy Crossi	74.42	212	P	P	16 47 35.1	+1.2
	comp=Z,50nm,0.9s,mb5.5,baz=21,slow=4.8,SNR=25						
FITZ				pP	pP	16 47 47.4	-0.2
	comp=Z,34nm,0.9s,baz=11,slow=5.9,SNR=6.8						
KECS	Kecovo	74.58	332	i P	P	16 47 34.0	-0.2
WCI	Wyandotte Cave	74.80	47	P	P	16 47 35.6	-0.1
PRU	Pruhonice	74.83	337	eP	P	16 47 35.6	0.0
MOX	Moxa	74.92	339	i P	P	16 47 35.9	-0.3
	comp=Z,logA/T=1.0,mb4.7						
MOX				L		17 14 41.0	
MOX	Moxa	74.92	339	eP	P	16 47 35.9	-0.3
	comp=Z,8.0nm,0.8s,mb4.7						
MOX				LR	LR		
	comp=Z,200nm,17.0s,MS4.5						
MOX	Moxa	74.92	339	eP	P	16 47 35.9	-0.3
MOX				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
MOX				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.5						
CFR	Carcaliu	75.01	326	⇓P	P	16 47 36.9	+0.1
VYHS	Vyhne	75.04	333	i P	P	16 47 37.0	+0.1
NKC	Novy Kostel	75.11	338	eP	P	16 47 37.1	-0.2
TREC	Trest	75.22	336	eP	P	16 47 38.0	+0.1
DLF	Lyons Farm	75.39	351	⇑iP	P	16 47 39.5	+0.7
DLF	Lyons Farm	75.39	351	⇑iP	pP	16 47 51.2	-1.3
SMOL	Smolenice	75.42	334	eP	P	16 47 39.5	+0.4
DCN	Croghan	75.42	351	⇑iP	P	16 47 39.6	+0.6
DCN	Croghan	75.42	351	⇑iP	pP	16 47 51.4	-1.2
MLR	Muntele Rosu	75.50	327	P	P	16 47 39.2	-0.4
	comp=Z,5.5nm,0.6s,mb4.7,baz=93,slow=18,SNR=12						
MLR	Muntele Rosu	75.50	327	⇓P	P	16 47 39.0	-0.6
NATX	Nacogdoches	75.73	57	eP	P	16 47 41.5	+0.3
	comp=Z,29nm,0.5s,mb5.5						
WVT	Waverly	75.75	50	eP	P	16 47 40.5	-0.7
	comp=Z,3.9nm,0.8s,mb4.4						
WVT	Waverly	75.75	50	eP	P	16 47 40.5	-0.7
WVT				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
VOIR		75.84	328	⇓P	P	16 47 41.9	+0.3
VOIR		75.84	328	⇓P	P	16 47 41.9	+0.3
KHC	Kasperske Hory	75.86	337	eP	P	16 47 41.8	+0.2
GRA1	Grafenberg Arr	75.90	339	eP	P	16 47 42.2	+0.4
	comp=Z,24nm,1.0s,mb5.1						
GRF	Grafenberg Arr	75.90	339	eP	P	16 47 42.2	+0.4
	comp=Z,24nm,1.0s,mb5.1						
GRF				LR	LR		
	comp=Z,200nm,20.2s,MS4.4						
GRF	Grafenberg Arr	75.90	339	eP	P	16 47 42.2	+0.4
GRF				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
GRF				MLR	MLR		
	comp=Z,200nm,20.2s,MS4.4						
TNS	Taunus Mts	76.02	341	eP	P	16 47 42.1	-0.3
	comp=Z,8.0nm,0.6s,mb4.8						
TNS	Taunus Mts	76.02	341	eP	P	16 47 42.1	-0.3
TNS				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
WET	Wettzell	76.02	337	eP	P	16 47 42.8	+0.3
	comp=Z,14nm,0.8s,mb4.9						
WET	Wettzell	76.02	337	eP	P	16 47 42.8	+0.3
WET				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.9						
GEC2	GERESS Array S	76.09	337	eP	P	16 47 43.0	+0.1
	comp=Z,9.0nm,0.7s,mb4.8						
GEC2	GERESS Array S	76.09	337	eP	P	16 47 43.0	+0.1
GEC2				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
GERES	GERESS Array B	76.09	337	P	P	16 47 42.7	-0.2
	comp=Z,5.8nm,0.5s,mb4.8,baz=32,slow=5.6,SNR=59						
PALK	Pallekele	76.51	265	eP	P	16 47 46.3	+0.3
	comp=Z,14nm,0.8s,mb5.0						
GIVF	Givet	76.85	343	eP	P	16 47 47.3	+0.1
MOA	Molln	76.87	336	⇑eP	P	16 47 47.6	+0.3
	comp=Z,7.1nm,0.9s,mb4.6						
BAIF	Baives	77.01	343	eP	P	16 47 48.1	0.0
	comp=Z,10nm,0.6s,mb4.7						
BAIF	Baives	77.01	343	eP	P	16 47 48.1	0.0
BAIF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
ARSA	Arzberg	77.09	335	⇑iP	P	16 47 49.3	+0.7
	comp=Z,9.1nm,1.0s,mb4.7						
ASPA	Alice Springs	77.28	203	eP	P	16 47 51.3	+1.2
FUR	Furstenfeldbru	77.32	338	eP	P	16 47 50.5	+0.7
	comp=Z,14nm,0.5s,mb5.2						
FUR	Furstenfeldbru	77.32	338	eP	P	16 47 50.5	+0.7
FUR				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
BR131	Keskin Array S	77.56	319	eP	P	16 47 50.4	-0.9
	comp=Z,3.5nm,0.8s,mb4.3						
BRTR	Keskin Array B	77.56	319	P	P	16 47 50.8	-0.6
	comp=Z,2.5nm,0.7s,mb4.3,baz=43,slow=2.3,SNR=13						
PERS	Pernice	77.77	335	eP	P	16 47 52.6	+0.3
PERS				e		16 47 56.7	
KBA	Koelnbreinsper	77.82	336	i P	P	16 47 53.9	+1.3
	comp=Z,42nm,0.7s,mb5.5,SNR=7.7						
KBA	Koelnbreinsper	77.82	336	i P	P	16 47 53.9	+1.3
KBA				pmax	pmax		
	comp=Z,42nm,0.7s,mb5.5						
BFO	Black Forest	77.83	340	eP	P	16 47 52.9	+0.3
	comp=Z,8.0nm,1.0s,mb4.6						
BFO	Black Forest	77.83	340	eP	P	16 47 52.9	+0.3
BFO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
CDF	Champ du Feu	77.98	341	eP	P	16 47 53.4	0.0
	comp=Z,16nm,0.8s,mb4.7						
CDF	Champ du Feu	77.98	341	eP	P	16 47 53.4	0.0
CDF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
WATA	Walderalm	78.02	338	⇑iP	P	16 47 54.4	+0.8
	comp=Z,6.3nm,0.4s,mb4.9						
WATA	Walderalm	78.02	338	⇑iP	P	16 47 54.4	+0.7
WATA				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.9						
OBKA	Obir	78.03	335	⇑iP	P	16 47 54.4	+0.6
	comp=Z,9.8nm,0.8s,mb4.8						
WTTA	Wattenberg	78.07	337	⇑iP	P	16 47 55.1	+1.1
	comp=Z,8.1nm,0.5s,mb5.0,SNR=7.7						

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WTTA Wattenberg       78.07 337⇑iP     P        16 47 55.1 +1.1
WTTA                               pmax   pmax
     comp=Z,8.0nm,0.5s,mb4.9
MOTA Moosalm          78.12 338 i P     P        16 47 55.0 +0.7
     comp=Z,8.9nm,0.8s,mb4.8,SNR=7.8
MOTA Moosalm          78.12 338 i P     P        16 47 55.0 +0.7
MOTA                               pmax   pmax
     comp=Z,9.0nm,0.8s,mb4.8
SQTA Sankt Quirin     78.22 338⇑iP     P        16 47 55.9 +1.1
     comp=Z,9.4nm,0.7s,mb4.8
SQTA Sankt Quirin     78.22 338⇑iP     P        16 47 55.9 +1.1
SQTA                               pmax   pmax
     comp=Z,9.0nm,0.7s,mb4.8
MEZF Maizieres J'vi   78.34 342 eP     P        16 47 55.7 +0.3
     comp=Z,29nm,0.6s,mb5.1
PTCC Patocco-Chiusa   78.44 336  P     P        16 47 55.7 -0.3
DAVA Damuels          78.47 339⇑iP     P        16 47 56.8 +0.6
     comp=Z,16nm,1.1s,mb4.9
DAVA Damuels          78.47 339⇑iP     P        16 47 56.8 +0.6
     comp=Z,16nm,1.1s,mb4.9
ROBS Robic            78.55 336 i P     P        16 47 56.9 +0.3
HAU  Haudompre        78.56 341 eP     P        16 47 56.5 -0.1
     comp=Z,8.3nm,0.5s,mb4.6
HAU                             eR
     comp=Z,136nm,18.2s
HAU  Haudompre        78.56 341 eP     P        16 47 56.5 -0.1
HAU                               pmax   pmax
     comp=Z,4.0nm,0.5s,mb4.6
HAU                               MLR    MLR
     comp=Z,140nm,18.3s,MS4.3
HINF Hinteralfeld     78.63 341 eP     P        16 47 56.6 -0.4
BOJS Bojanci          78.77 334 eP     P        16 47 57.9  0.0
VTS  Vitosha          78.98 328 eP     P        16 47 59.0 -0.1
FLN  La Foliniere     79.06 346 eP     P        16 47 59.1 -0.3
FLN                             eR
     comp=Z,127nm,17.2s
LDF  La Druitiere     79.16 346 eP     P        16 47 59.5 -0.4
MIB  Mutribah         79.25 304 eP     P        16 48 00.1 -0.7
MIB                               AMb    AMB    16 48 01.3
     comp=Z,157nm,0.8s,mb6.0
UMR  Umm Al-Rimmam    79.25 304 eP     P        16 48 00.2 -0.6
UMR                               AMb    AMB    16 48 01.3
     comp=Z,72nm,0.7s,mb5.7
RZN  Rozhen           79.26 326 eP     P        16 48 01.0 +0.4
GRR  Gorron           79.48 346 eP     P        16 48 01.8 +0.1
KBD  Kabd             79.56 304 eP     P        16 48 02.2 -0.3
KKB  Krupnik          79.67 328 eP     P        16 48 02.8  0.0
MMB  Musomiste        79.69 327 eP     P        16 48 03.0  0.0
NAY  Al-Naaiem        79.74 304 eP     P        16 48 02.9 -0.6
NAY                               AMb    AMB    16 48 04.0
     comp=Z,62nm,0.6s,mb5.7
LOR  Lormes           79.75 343 eP     P        16 48 03.2  0.0
     comp=Z,18nm,0.6s,mb4.9
LOR  Lormes           79.75 343 eP     P        16 48 03.2  0.0
LOR                               pmax   pmax
     comp=Z,9.0nm,0.6s,mb4.9
QRN  Al-Qurain        79.78 303 eP     P        16 48 03.4 -0.4
QRN                               AMb    AMB    16 48 04.4
     comp=Z,108nm,0.6s,mb5.9
RDF  Al-Radifah       79.83 304 eP     P        16 48 03.7 -0.3
RDF                               AMb    AMB    16 48 04.9
     comp=Z,185nm,0.7s,mb6.1
SGMF Saint Gilles     79.86 347 eP     P        16 48 03.5 -0.2
     comp=Z,29nm,0.8s,mb4.9
SGMF Saint Gilles     79.86 347 eP     P        16 48 03.5 -0.2
SGMF                              pmax   pmax
     comp=Z,14nm,0.8s,mb4.9
ROSF Rostrenen        79.88 348 eP     P        16 48 03.7 -0.1
CABF La Chapelle      79.94 341 eP     P        16 48 04.1 -0.1
     comp=Z,10.0nm,0.6s,mb4.6
CABF La Chapelle      79.94 341 eP     P        16 48 04.1 -0.1
CABF                              pmax   pmax
     comp=Z,5.0nm,0.6s,mb4.6
SSF  Saint Saulge     80.02 343 eP     P        16 48 04.8 +0.2
     comp=Z,4.6nm,0.6s,mb4.6
SSF  Saint Saulge     80.02 343 eP     P        16 48 04.8 +0.2
SSF                               pmax   pmax
     comp=Z,5.0nm,0.6s,mb4.6
GOGA Godfrey          80.05  48  P     P        16 48 05.3 +0.3
AVF  Avril sur Loir   80.31 343 eP     P        16 48 06.0 -0.1
     comp=Z,16nm,0.6s,mb4.8
AVF  Avril sur Loir   80.31 343 eP     P        16 48 06.0 -0.1
AVF                               pmax   pmax
     comp=Z,8.0nm,0.6s,mb4.8
VAY  Valandovo        80.33 328 eP     P        16 48 05.7 -0.6
VAY  Valandovo        80.33 328 eP     P        16 48 05.7 -0.7
SMF  Signal de Mont   80.35 342 eP     P        16 48 06.6 +0.2
     comp=Z,5.5nm,0.5s,mb4.5
SMF  Signal de Mont   80.35 342 eP     P        16 48 06.6 +0.2
SMF                               pmax   pmax
     comp=Z,3.0nm,0.5s,mb4.5
JSC  Jenkinsville     80.36  46  P     P        16 48 06.0 -0.7
JSC  Jenkinsville     80.36  46 eP     P        16 48 06.4 -0.3
LPL  La Plagne        80.85 340 eP     P        16 48 09.0  0.0
     comp=Z,19nm,0.6s,mb4.9
LPL  La Plagne        80.85 340 eP     P        16 48 09.0  0.0
LPL                               pmax   pmax
     comp=Z,10.0nm,0.6s,mb4.9
LPG  La Plagne        80.86 340 eP     P        16 48 09.2 +0.1
     comp=Z,24nm,0.6s,mb5.0
LPG  La Plagne        80.86 340 eP     P        16 48 09.2 +0.1
LPG                               pmax   pmax
     comp=Z,12nm,0.6s,mb5.0
TCF  Toulx Ste Croi   81.00 343 eP     P        16 48 09.9 +0.1
BIA  Bitola           81.02 328 eP     P        16 48 09.1 -0.9
BIA  Bitola           81.02 328 eP     P        16 48 09.1 -0.9
MFF  Saint Martin d   81.10 345 eP     P        16 48 10.3  0.0
     comp=Z,15nm,0.6s,mb4.8
MFF  Saint Martin d   81.10 345 eP     P        16 48 10.3  0.0
MFF                               pmax   pmax
     comp=Z,8.0nm,0.6s,mb4.8
OHR  Ohrid            81.11 329 eP     P        16 48 09.1 -1.4
OHR  Ohrid            81.11 329 eP     P        16 48 09.0 -1.5
FSSB Fossombrone      81.12 335  P     P        16 48 11.6 +1.1
SFI  Santa Sofia      81.16 336  P     P        16 48 12.4 +1.7
     comp=Z,14nm,0.8s,mb4.9
SFI  Santa Sofia      81.16 336  P     P        16 48 12.4 +1.7
SFI                               pmax   pmax
     comp=Z,14nm,0.8s,mb4.9
PGD  Poggio Sodo      81.22 336  P     P        16 48 13.1 +2.1
     comp=Z,31nm,0.8s,mb5.3
PGD  Poggio Sodo      81.22 336  P     P        16 48 13.1 +2.1
PGD                               pmax   pmax
     comp=Z,31nm,0.8s,mb5.3
BNI  Bardonecchia     81.30 340 eP     P        16 48 10.7 -0.7
     comp=Z,6.6nm,0.6s,mb4.7
BNI  Bardonecchia     81.30 340  P     P        16 48 13.1 +1.7
BNI                               pmax   pmax
     comp=Z,7.0nm,0.6s,mb4.8
MBDF Montbardon       81.59 340 eP     P        16 48 12.9  0.0
     comp=Z,7.2nm,0.5s,mb4.6
MBDF Montbardon       81.59 340 eP     P        16 48 12.9  0.0
MBDF                              pmax   pmax
     comp=Z,4.0nm,0.5s,mb4.6
BHL  Bhannes          81.59 315 eP     P        16 48 12.9 -0.2
ORIF Oris-en-Rattie   81.60 341 eP     P        16 48 13.4 +0.4
     comp=Z,15nm,0.8s,mb4.7
ORIF                            eR
     comp=Z,155nm,17.8s
HASS Wahat al Ahsa'   81.64 300  P     P        16 48 13.0 -0.6
NRCA Norcia           81.83 335  P     P        16 48 15.0 +0.8
VIVF Saint-Julien-l   81.91 341 eP     P        16 48 14.6  0.0
     comp=Z,8.6nm,0.6s,mb4.5
VIVF Saint-Julien-l   81.91 341 eP     P        16 48 14.6  0.0
VIVF                              pmax   pmax
     comp=Z,4.0nm,0.6s,mb4.5
RJF  Les Rejaudoux    82.08 344 eP     P        16 48 15.2 -0.2
RJF                             eR
     comp=Z,226nm,20.8s
CAF  Calviac          82.34 343 eP     P        16 48 17.1 +0.3
MNS  Montasola        82.36 335  P     P        16 48 15.3 -1.6
     comp=Z,21nm,1.0s,mb5.0
MNS  Montasola        82.36 335  P     P        16 48 15.3 -1.6
MNS                               pmax   pmax
     comp=Z,21nm,1.0s,mb5.0
HNTI Hanita           82.50 315  P     P        16 48 18.0 +0.2
SMRF Simiane la Rot   82.56 340 eP     P        16 48 18.0 +0.1
LFF  La Frestale      82.57 344 eP     P        16 48 17.9  0.0
FRF  La Foret Royal   82.73 340 eP     P        16 48 19.1 +0.3
     comp=Z,20nm,0.9s,mb4.8
FRF  La Foret Royal   82.73 340 eP     P        16 48 19.1 +0.3
FRF                               pmax   pmax
     comp=Z,10.0nm,0.9s,mb4.8
LASF Ste Croix        82.82 342 eP     P        16 48 19.2  0.0
     comp=Z,20nm,1.1s,mb4.8
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MMLI Mount Malkishu   82.93 314  P     P        16 48 20.6 +0.6
QURS Qurayyt al Mil   82.93 312  P     P        16 48 21.4 +1.3
LMR  La Mourre        82.97 340 eP     P        16 48 20.0  0.0
PGF  Pioggiola        83.14 338 eP     P        16 48 21.2 +0.3
     comp=Z,36nm,0.9s,mb5.1
PGF  Pioggiola        83.14 338 eP     P        16 48 21.2 +0.3
PGF                               pmax   pmax
     comp=Z,18nm,0.9s,mb5.1
SLTI Sal'it           83.27 314  P     P        16 48 22.0 +0.2
MKRJ Makawir          83.57 314  P     P        16 48 23.8 +0.5
STKA Stephens Creek   83.71 194 eP     P        16 48 25.2 +1.2
     comp=Z,8.6nm,0.9s,mb4.9
STKA                            epP    pP       16 48 39.6 +1.7
STKA Stephens Creek   83.71 194  P     P        16 48 25.5 +1.6
     comp=Z,9.6nm,0.8s,mb5.0,baz=342,slow=5.7,SNR=14
MTLF Montolieu        83.85 343 eP     P        16 48 24.7 +0.3
MZDA Masada           83.91 314  P     P        16 48 25.2 +0.2
HILS Ha'il            84.06 307  P     P        16 48 26.6 +0.8
TIP  Timpagrande      84.15 331 eP     P        16 48 26.0  0.0
RTMM Retamin          84.43 314  P     P        16 48 27.7 +0.1
MASH Mash'abbe Sade   84.43 314  P     P        16 48 27.8 +0.2
EPF  Esparros         84.49 344 eP     P        16 48 28.0 +0.4
ZFRI Zfri             84.63 313  P     P        16 48 29.0 +0.4
SJPF Ste Jean         84.67 345 eP     P        16 48 28.8 +0.3
KZIT Kziot            84.69 314  P     P        16 48 29.1 +0.2
PRNI Paran            84.88 313  P     P        16 48 30.3 +0.4
MZLS Mizel            85.01 302  P     P        16 48 30.8 +0.1
KMTI Karmit           85.21 314  P     P        16 48 31.6 +0.1
AQBJ Aqaba            85.38 313  P     P        16 48 33.0 +0.6
EIL  Elat             85.48 313  P     P        16 48 33.2 +0.4
FORT Forrest          85.57 206 eP     P        16 48 34.6 +1.3
     comp=Z,42nm,0.7s,mb5.8
FORT                            epP    pP       16 48 48.2 +1.0
ALWS Ilw as Safayha   85.73 313  P     P        16 48 34.9 +0.8
JMOS Jabal al Moall   85.83 313  P     P        16 48 35.4 +0.8
TBKS Tabuk            85.94 311  P     P        16 48 36.0 +0.9
HAQS Haql             86.01 313  P     P        16 48 36.1 +0.7
AFFS 'Afif            86.26 304  P     P        16 48 37.0 +0.2
BDAS Al Bad'          86.45 312  P     P        16 48 38.3 +0.6
TAYS Tayyib Ism       86.46 313  P     P        16 48 38.4 +0.7
AYUS 'Aynunah         86.58 312  P     P        16 48 39.0 +0.7
UMJS Umm Lajj         88.08 309  P     P        16 48 46.2 +0.6
KAMS Al Khamasin      88.35 301  P     P        16 48 46.8 -0.2
ESDC Sonseca Array    88.46 346  P     P        16 48 46.6 -0.5
     comp=Z,2.9nm,0.7s,mb4.6,baz=0.4,slow=4.4,SNR=12
ESDC                              pP     pP     16 49 00.2 -0.9
     comp=Z,2.5nm,0.6s,baz=6.9,slow=4.4,SNR=4.5
TOO  Toolangi         88.80 190 eP     P        16 48 51.1 +2.4
     comp=Z,13nm,0.9s,mb5.3
TOO  Toolangi         88.80 190 eP     P        16 48 51.1 +2.4
TOO                               pmax   pmax
     comp=Z,13nm,0.9s,mb5.3
TATS Tathlith         89.58 301  P     P        16 48 53.3 +0.5
BLJS Baljurashi       90.31 303  P     P        16 48 56.7 +0.5
USTO Oran             91.74 343  P     P        16 49 08.0 +5.5
DBIC Dimbokro        120.83 340  PKP    PKPdf   16 54 47.2 +0.8
     comp=Z,5.9nm,0.7s,baz=59,slow=1.6,SNR=12
DBIC Dimbokro        120.83 340 ePKPdf  PKPdf   16 54 47.4 +1.0
LPAZ La Paz          129.46  64  PKP    PKPdf   16 55 05.2 +2.3
     comp=Z,2.2nm,0.9s,baz=20,slow=7.6,SNR=11
LPAZ La Paz          129.46  64 ePKPdf  PKPdf   16 55 04.7 +1.8
LPAZ La Paz          129.46  64  PKIKP  PKPdf   16 55 05.3 +2.4
LPAZ                              pmax   pmax
     comp=Z,2.0nm,0.9s
LBTB Lobatse         135.60 287 ePKPdf  PKPdf   16 55 17.5 +3.3
BOSA Boshof          138.43 284  PKP    PKPdf   16 55 21.7 +2.4
     comp=Z,1.9nm,0.6s,baz=102,slow=2.0,SNR=6.1
QSPA South Pole Qui  140.64 180  P      PKPdf   16 55 16.6 -5.2
CPUP Villa Florida   143.50  61 ePKPdf  PKPdf   16 55 26.4 -1.9
SUR  Sutherland      143.79 284  PKPdf  PKPdf   16 55 30.4 +1.9
PLCA Paso Flores     145.11  92  PKP    PKPdf   16 55 32.0 +1.3
     comp=Z,19nm,0.9s,baz=287,slow=4.6,SNR=16
PLCA Paso Flores     145.11  92 ePKPbc  PKPbc   16 55 32.1 +1.2
SYO  Syowa Base      146.22 215 ⇑PKPdf  PKPdf   16 55 34.5 +2.8
SYO  Syowa Base      146.22 215 ⇓pPKPdf         16 55 48.6
SYO  Syowa Base      146.22 215⇑ePKPdf  PKPdf   16 55 34.5 +2.8
SYO                            ⇓epPKPdf         16 55 48.6
CAM4 Nova Friburgo   147.23  37 eP      PKPdf   16 55 37.2 +2.4
CAM4                            i               16 55 38.6
CAM4                            i               16 55 41.2
TRQA Tornquist       148.98  81 ePKPdf  PKPdf   16 55 38.9 +1.8
TRQA                            ePKPbc  PKPdf   16 55 42.5 +5.4
USHA Ushuaia         151.98 116  PKPbc  PKPdf   16 55 49.2 +8.1
     comp=Z,6.8nm,0.7s,baz=284,slow=9.5,SNR=5.0
SNAA Sanae           157.47 196⇑iP      PKPdf   16 56 21.6  +33
SNAA Sanae           157.47 196         PKPdf   16 56 35.6  +47
SNAA Sanae           157.47 196  PKPab  PKPab   16 56 22.2 -0.1
     comp=Z,1.5nm,0.7s,baz=170,slow=4.0,SNR=12
SNAA Sanae           157.47 196  PKP2   PKPab   16 56 22.2 -0.2
SNAA                             pmax   pmax
     comp=Z,2.0nm,0.7s
VNA2 Neumayer--Watz  158.84 193         PKPdf   16 56 05.8  +16
VNA2 Neumayer--Watz  158.84 193⇑i       PKPdf   16 56 14.2  +24
VNA2 Neumayer--Watz  158.84 193⇑i       PKPdf   16 56 29.9  +40
VNA2 Neumayer--Watz  158.84 193⇑i       PKPdf   16 56 44.3  +54
VNA2 Neumayer--Watz  158.84 193⇑i       PKPdf   16 56 48.9  +59
VNA2 Neumayer--Watz  158.84 193⇑iPKPdf  PKPdf   16 55 55.1 +5.3
VNA2                             P              16 56 05.8
VNA2                           ⇑iP              16 56 14.2
VNA3 Neumayer Olymp  158.84 191         PKPdf   16 56 12.4  +23
VNA3 Neumayer Olymp  158.84 191         PKPdf   16 56 16.7  +27
VNA3 Neumayer Olymp  158.84 191⇑i       PKPdf   16 56 29.0  +39
VNA3 Neumayer Olymp  158.84 191⇑i       PKPdf   16 56 34.0  +44
VNA3 Neumayer Olymp  158.84 191⇑i       PKPdf   16 56 43.9  +54
VNA3 Neumayer Olymp  158.84 191  PKPdf  PKPdf   16 56 00.3  +10
VNA3                             P              16 56 12.4
VNA3                             P              16 56 16.7
VNA1 Neumayer--Stat  159.21 193  P      PKPdf   16 56 32.3  +42
VNA1 Neumayer--Stat  159.21 193         PKPdf   16 56 46.8  +57
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CSEM ***18*** *16:38:42.9, 36.02N×25.95E, h5^{km}, MD3.5/4, After ATH*

ATH 18 16:38:42.9, 36.02N×25.95E, h5^{km}, MD3.5/4,
Dodecanese Islands

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Code Station Name       Δ°  AZ°   Phase ID            Time    Res
                                 Op      ISC        h  m  s   ISC
NPS  Neapolis          0.80 200 ePB     Pb        16 38 57.7 -1.3
KARP Karpathos         1.09 115 ePB     Pb        16 39 03.6 -0.3
APE  Apeiranthos       1.10 342 ePB     Pb        16 39 03.6 -0.4
VAM  Vamos             1.55 247 ePB     Pb        16 39 12.3 +0.6
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MOS ***18*** *16:45:03.6±0.9, 8.48S×113.20E, h33^{km}, mb5.1/21, Error ellipse: s-maj=13.6km s-min=7.9km az=116.4*

BJI ***18*** *16:45:08.7, 8.50S×113.20E, h64^{km}, mB5.1, mb4.9, Ms5.1, Msz4.6*

HRVD ***18*** *16:45:08.8±0.8, 8.70S×113.19E, h100^{km}±7^{km}, MW4.8/48, Centroid moment Tensor Solution. LP body waves: s7,c7; Mantle waves: s48,c60; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.14±.16; $M_{\theta\theta}$-1.95±.15; $M_{\phi\phi}$0.81±.19; $M_{r\theta}$-0.27±.11; $M_{\theta\phi}$1.52±.21; $M_{\phi r}$0.70±.12; Best double couple: $M_0$2.294×10^{16} NP1:ϕ_s74°, δ58°, λ23°. NP2:ϕ_s331°, δ71°, λ146°. Principal axes: T 1.891, Plg37°, Azm289°; N .81, Plg52°, Azm125°; P -2.696, Plg8°, Azm25°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***18*** *16:45:08.8±1.1, 8.51S×113.23E, h64^{km}±10^{km}, mb4.9/26 Error ellipse: s-maj=8.8km s-min=4.8km az=59.0*

IDC ***18*** *16:45:10.5±2.6, 8.51S×113.24E, h78^{km}±22^{km}, mb4.4/16, mb1 4.4/17, mb1mx4.4/19, mbtmp4.7/17, MS3.9/2, Ms1 3.9/2, ms1mx3.5/12, Error ellipse: s-maj=19.1km s-min=12.5km az=68.0*

ISC 18 16:45:06.5±0.2, **8.53S**±0.05×**113.14E**±0.06, **h57^{km}**, **h57^{km}**±2.4^{km}**:pP-P, n164,** σ1$\overset{s}{.}$**15**/148, **mb4.9**/57, **MS4.5**/6, **15C-2D, Jawa**

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Code Station Name       Δ°  AZ°   Phase ID            Time    Res
                                 Op      ISC        h  m  s   ISC
KSM  Kuching          10.33 344 eP     P        16 47 34.5 -0.1
FITZ Fitzroy Crossi   15.43 129 eP     P        16 48 42.6 +0.5
     50nm,1.3s
FITZ                            eS     S        16 51 17.6  -14
FITZ Fitzroy Crossi   15.43 129  P     P        16 48 42.4 +0.3
     8.4nm,0.3s,baz=319,slow=11,SNR=30
FITZ                             S     S        16 51 17.5  -14
     6.5nm,0.3s,baz=141,slow=19,SNR=7.6
FITZ                             LR    LR       16 54 30.3
     comp=Z,552nm,18.2s,baz=312,slow=36
KULM Kulim            18.54 317 eP     P        16 49 20.1 -0.9
KAKA Kakadu           19.41 104 eP     P        16 49 48.8  +18
     12nm,0.4s
KLBR Kellerberrin     23.34 170 eP              16 50 23.6
     20nm,0.5s
WRA  Warramunga Arr   23.44 121  P     P        16 50 11.7 +0.2
     11nm,0.6s,mb4.5,baz=298,slow=12,SNR=50
WRA                              PcP   PcP      16 53 57.1 -0.9
     2.5nm,0.7s,baz=298,slow=1.9,SNR=4.7
WRAB Tennant Creek    23.44 121 eP     P        16 50 11.5 -0.1
WB2  Warramunga Arr   23.45 121 eP     P        16 50 11.8 +0.2
WB2                             eS     S        16 54 27.2  +10
WB2                             eSCS   ScS      17 01 09.6 -5.3
MUN  Mundaring        23.50 173 eP              16 50 27.0
MUN                             eS     S        16 54 27.2 +9.0
NWAO Narrogin (SRO)   24.57 172  P     P        16 50 21.9 -0.5
     3.9nm,0.8s,mb4.0,baz=311,slow=11,SNR=4.1
NWAO                             LR    LR       16 58 50.0
     comp=Z,219nm,18.3s,MS3.7,baz=107,slow=33
NWAO Narrogin (SRO)   24.57 172  P     P        16 50 21.5 -0.9
     9.6nm,0.5s,mb4.6
NWAO Narrogin (SRO)   24.57 172  P     P        16 50 21.5 -0.9
NWAO                             pmax  pmax
     comp=Z,10.0nm,0.5s
ASPA Alice Springs    24.93 130 eP     P        16 50 26.0  0.0
ASPA                            esP             16 50 47.7
ASPA                            eS     S        16 55 05.1  +23
FORT Forrest          26.15 150 eP     P        16 50 35.5 -1.9
     comp=Z,32nm,0.5s,mb5.1
FORT                            esP    sP       16 50 58.7 +0.3
FORT                            eS     S        16 55 28.2  +25
CTA  Charters Tower   34.01 113  P     P        16 51 46.2 -0.9
     comp=Z,1.4nm,0.6s,mb4.1,baz=295,slow=14,SNR=3.2
CTA  Charters Tower   34.01 113  P     P        16 51 46.2 -0.9
CTAO Charters Tower   34.01 113  P     P        16 51 45.6 -1.5
     comp=Z,8.1nm,1.0s,mb4.6
CTAO Charters Tower   34.01 113  P     P        16 51 45.6 -1.5
CTAO                             pmax  pmax
     comp=Z,8.0nm,1.0s,mb4.6
KMI  Kunming          34.95 343  P     P        16 51 56.3 +1.1
     comp=Z,5.0nm,0.8s,mb4.5
KMI  Kunming          34.95 343  P     P        16 51 56.3 +1.1
KMI                              pmax  pmax
     comp=Z,5.0nm,0.8s,mb4.5
STKA Stephens Creek   35.19 135 eP     P        16 51 57.2 +0.1
     comp=Z,9.2nm,0.7s,mb4.8
STKA                            esP    sP       16 52 19.4 +0.5
STKA Stephens Creek   35.19 135  P     P        16 51 57.2 +0.1
     comp=Z,11nm,0.6s,mb4.9,baz=309,slow=9.1,SNR=24
STKA                             PcP   PcP      16 54 27.0 -0.5
     comp=Z,7.4nm,0.7s,baz=330,slow=6.0,SNR=3.7
GYA  Guiyang          35.34 350  P     P        16 52 00.8 +2.3
GYA                              AP    pP       16 52 15.9 +2.7
GYA                              XP    sP       16 52 24.3 +4.0
GYA                              PP    PP       16 53 22.6 +3.2
GYA                              S     S        16 57 31.8 +3.9
GYA                              SCP            16 58 08.3
GYA                              SCS   ScS      17 02 11.8 +1.3
GYA                              AMB   AMB
     comp=Z,20nm,0.8s,mb5.1
GYA                              AMB   AMB
     comp=Z,90nm,3.3s
GYA                              LR    LR
     comp=N,480nm,17.9s,MS4.4
GYA                              LR    LR
     comp=E,460nm,17.6s,MS4.4
GYA                              LR    LR
     comp=Z,510nm,18.0s,MS4.3
SSE  Sheshan          40.15  11  P     P        16 52 39.9 +1.3
SSE                              AMB   AMB
     comp=Z,10.0nm,0.7s,mb4.7
SSE                              AMB   AMB
     comp=Z,520nm,5.3s
SSE  Sheshan          40.15  11  P     P        16 52 39.9 +1.3
     comp=Z,18nm,0.7s,mb4.9
CD2  Chengdu          40.24 347⇑iP     P        16 52 41.5 +2.2
CD2                              AMB   AMB
     comp=Z,10.0nm,0.5s,mb4.8
NJ2  Nanjing          40.72   7 eP     P        16 52 45.0 +1.7
NJ2                              AP    pP       16 53 00.3 +2.1
NJ2                              XP    sP       16 53 07.4 +2.4
NJ2                              PP    PP       16 54 23.3 +2.3
NJ2                              S     S        16 58 52.0 +2.7
NJ2                              XS             16 59 19.0
NJ2                              AMB   AMB
     comp=Z,20nm,0.9s,mb4.8
NJ2                              AMB   AMB
     comp=Z,190nm,6.7s
NJ2                              LR    LR
     comp=N,6µm,21.2s
NJ2                              LR    LR
     comp=E,5µm,27.8s
NJ2                              LR    LR
     comp=Z,3µm,22.0s,MS5.2
HYB  Hyderabad        42.81 307 i P    P        16 53 00.0 -0.8
HYB  Hyderabad        42.81 307 eP     P        16 53 00.0 -0.8
LSA  Lhasa            43.51 332  P     P        16 53 09.0 +2.7
LSA  Lhasa            43.51 332 eP     P        16 53 08.1 +1.9
     comp=Z,6.8nm,0.6s,mb4.5
LSA  Lhasa            43.51 332 eP     P        16 53 08.1 +1.8
LSA                              pmax  pmax
     comp=Z,7.0nm,0.6s,mb4.6
GUN  Gumba            44.81 325 eP     P        16 53 17.6 +0.9
     comp=Z,38nm,0.6s,mb5.4
PKI  Pulchoki         44.82 324 eP     P        16 53 17.5 +0.6
DMN  Daman            45.03 324 eP     P        16 53 18.7 +0.2
     comp=Z,42nm,0.8s,mb5.3
KKN  Kakani           45.06 324 eP     P        16 53 18.8  0.0
     comp=Z,15nm,0.8s,mb4.9
LZH  Lanzhou          45.23 349 eP     P        16 53 23.5 +3.5
     comp=Z,31nm,1.5s,mb4.9
LZH                              pP    pP       16 53 39.5 +4.5
LZH                              sP    sP       16 53 46.6 +4.9
LZH                              PP    PP       16 55 11.7 +4.6
LZH                             eS     S        16 59 59.6 +4.4
LZH                              sS             17 00 26.4
LZH                              SS    SS       17 03 15.7 +5.6
LZH                              LR    LR
     comp=Z,1µm,17.5s,MS5.0
LZH  Lanzhou          45.23 349 eP     P        16 53 23.5 +3.5
LZH                              *PP   pP       16 53 39.5 +4.5
LZH                                             16 55 11.7
LZH                             eS     S        16 59 59.6 +4.4
LZH                              SS    SS       17 03 15.7 +5.6
LZH                              pmax  pmax
     comp=Z,31nm,1.5s,mb4.9
LZH                              MLR   MLR
     comp=Z,1µm,17.5s,MS5.0
GKN  Gorkha           45.60 324 eP     P        16 53 23.1 +0.1
     comp=Z,18nm,0.4s,mb5.3
KOLN Koldanda         46.04 323 eP     P        16 53 26.5  0.0
     comp=Z,26nm,0.8s,mb5.2
AGRA Agra             49.26 317 eP     P        16 54 00.5 +8.8
AGRA                             AMb   AMB      16 54 03.3
     comp=Z,150nm,0.3s
GTA  Gaotai           49.28 346 eP     P        16 53 54.4 +2.8
GTA                              AP    pP       16 54 09.8 +3.1
GTA                              XP    sP       16 54 17.0 +3.7
GTA                              PCP   PcP      16 55 15.0 +0.9
GTA                              PP    PP       16 55 48.8 +2.6
GTA                              SCP            16 59 00.3
GTA                              S     S        17 00 55.9 +3.7
GTA                              XS             17 01 22.9
GTA                              SS    SS       17 04 23.5 +3.3
GTA                              AMB   AMB
     comp=Z,320nm,4.6s
GTA                              LR    LR
     comp=N,320nm,12.2s,MS4.6
GTA                              LR    LR
     comp=E,290nm,13.3s,MS4.6
GTA                              LR    LR
     comp=Z,310nm,12.9s,MS4.5
BISR Bishrakh         50.48 318 eP     P        16 53 59.2 -1.8
BISR                             AMb   AMB      16 54 00.9
     comp=Z,26nm,0.6s,mb5.4
JOSI Joshimath        50.49 322 ex     x        16 53 14.4
JOSI                             AMb   AMB      16 53 15.8
     comp=Z,144nm,0.6s
SONA Sohna            50.51 318 eP     P        16 53 59.4 -1.8
AYAN Aya Nagar        50.63 318 eP     P        16 53 59.8 -2.4
AYAN                             AMb   AMB      16 54 01.1
     comp=Z,21nm,0.8s,mb5.1
MAJO Matsushiro       50.64  26 eP     P        16 54 00.9 -1.2
     comp=Z,4.6nm,0.4s,mb4.8
MAJO Matsushiro       50.64  26 eP     P        16 54 00.9 -1.2
MAJO                             pmax  pmax
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	comp=Z,5.0nm,0.4s,mb4.8						
MAT	Matsushiro	50.64	26	P	P	16 54 00.4	-1.7
MAT	Matsushiro	50.64	26	eP	P	16 54 01.0	-1.1
MJAR	Matsushiro Arr	50.64	26	P	P	16 54 00.8	-1.4
	comp=Z,5.6nm,0.6s,mb4.7,baz=205,slow=8.7,SNR=16						
MJAR				ScP		16 59 06.8	
	comp=Z,1.2nm,0.7s,baz=194,slow=5.2,SNR=4.9						
KUDL	Kundal	50.83	317	eP	P	16 54 01.2	-2.5
KUDL				AMb	AMB	16 54 02.6	
	comp=Z,20nm,0.7s,mb5.2						
KHET	Khetri	51.25	317	eP	P	16 54 04.9	-1.9
RTK	Rohtak	51.46	318	ex	x	16 54 37.1	
KLP	Kalpa	51.97	322	eP	P	16 54 11.0	-1.2
KLP				AMb	AMB	16 54 12.4	
	comp=Z,17nm,0.7s,mb5.1						
CN2	Changchun	53.27	11	eP	P	16 54 24.5	+2.8
THN	Thein Dam	54.16	321	eP	P	16 54 25.9	-2.5
MDJ	Mudanjiang	54.95	14	P	P	16 54 36.9	+2.9
MDJ				AP	pP	16 54 50.3	+0.9
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
MDJ				AMB	AMB		
	comp=Z,230nm,4.4s						
ULN	Ulaanbaatar	56.41	355	eP	P	16 54 42.9	-1.6
	comp=Z,3.6nm,0.7s,mb4.5						
ULN	Ulaanbaatar	56.41	355	eP	P	16 54 42.9	-1.5
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
SONM	Songino Array	56.44	355	P	P	16 54 45.0	+0.3
	comp=Z,2.0nm,0.3s,mb4.6,baz=175,slow=8.6,SNR=24						
SONM				ScP		16 59 31.0	
	comp=Z,1.0nm,0.6s,baz=162,slow=4.7,SNR=5.0						
WMQ	Urumqi	56.99	338	eP	P	16 54 49.5	+0.8
WMQ				AP	pP	16 55 05.0	+0.8
WMQ				XP	sP	16 55 12.0	+1.3
WMQ				eS	S	17 02 38.0	+1.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
WMQ				LR	LR		
	comp=N,160nm,14.5s,MS4.4						
WMQ				LR	LR		
	comp=E,190nm,15.2s,MS4.4						
WMQ				LR	LR		
	comp=Z,160nm,16.4s,MS4.2						
KZA	Kyzart	61.14	329	P	P	16 55 17.8	+0.5
	SNR=22						
YSS	Yuzh-Sakhalins	61.20	23	eP	P	16 55 17.2	-0.6
	comp=Z,12nm,0.6s,mb5.2						
YSS	Yuzh-Sakhalins	61.20	23	eP	P	16 55 17.2	-0.5
YSS				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.2						
MKAR	Makanchi Array	61.55	336	P	P	16 55 19.6	-0.5
	comp=Z,6.8nm,0.5s,mb5.0,baz=148,slow=7.5,SNR=62						
TKM2	Tokmak 2	61.57	329	P	P	16 55 20.1	-0.2
	SNR=21						
UCH	Uchtor	61.63	328	P	P	16 55 21.1	+0.5
	SNR=8.3						
KBK	Karagaybulak	61.71	329	P	P	16 55 21.6	+0.5
	SNR=42						
AAK	Ala-Archa	61.93	329	P	P	16 55 22.9	+0.2
	SNR=17						
AAK	Ala-Archa	61.93	329	eP	P	16 55 21.4	-1.2
	comp=Z,18nm,1.0s,mb5.2						
AAK	Ala-Archa	61.93	329	eP	P	16 55 21.4	-1.2
AAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.2						
AML	Almayashu	61.99	328	P	P	16 55 23.4	+0.3
	SNR=45						
EKS2	Erkin-Say	62.32	328	P	P	16 55 25.2	-0.1
	SNR=21						
USP	Ospenovka	62.38	329	P	P	16 55 24.9	-0.8
	SNR=11						
KURK	Kurchatov	66.15	337	eP	P	16 55 48.9	-1.2
	comp=Z,13nm,0.8s,mb5.0						
KURK	Kurchatov	66.15	337	eP	P	16 55 48.9	-1.2
KURK				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.0						
ZAL	Zalesovo	66.68	342	P	P	16 55 52.8	-0.5
	comp=Z,3.9nm,0.4s,mb4.8,baz=326,slow=4.1,SNR=20						
MAW	Mawson	67.77	199	P	P	16 55 59.5	-0.4
	comp=Z,13nm,0.9s,mb5.0,baz=58,slow=9.4,SNR=19						
NVS	Novosibirsk	67.93	342	eP	P	16 55 59.4	-1.8
NVS				e		17 05 31.3	
NVS				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.7						
NVS				pmax	pmax		
	comp=N,2.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.2s						
HASS	Wahat al Ahsa’	70.23	301	P	P	16 56 14.8	-1.0
BRVK	Borovoye	71.33	334	eP	P	16 56 21.4	-0.6
	comp=E,3.4nm,0.9s,mb4.3						
BRVK	Borovoye	71.33	334	eP	P	16 56 21.4	-0.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
YAK	Yakutsk	71.52	8	eP	P	16 56 22.2	-0.7
	comp=Z,13nm,0.7s,mb5.0						
YAK	Yakutsk	71.52	8	eP	P	16 56 22.2	-0.7
YAK				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
CHKZ	Chkalovo	71.63	335	⇑eP	P	16 56 23.3	-0.5
	comp=Z,12nm,0.7s,mb4.9						
CHKZ	Chkalovo	71.63	335	⇑eP	P	16 56 23.3	-0.4
CHKZ				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
QRN	Al-Qurain	72.93	303	eP	P	16 56 30.9	-1.0
QRN				AMb	AMB	16 56 31.8	
	comp=Z,52nm,0.6s,mb5.7						
KBD	Kabd	73.27	304	eP	P	16 56 33.0	-0.9
RDF	Al-Radifah	73.30	304	eP	P	16 56 33.1	-1.0
RDF				AMb	AMB	16 56 35.3	
	comp=Z,53nm,1.2s,mb5.3						
UMR	Umm Al-Rimmam	73.38	304	eP	P	16 56 33.7	-0.9
UMR				AMb	AMB	16 56 34.5	
	comp=Z,59nm,0.5s,mb5.8						
DJNS	Zahran al Janu	73.49	291	P	P	16 56 36.7	+1.3
NAY	Al-Naaiem	73.66	304	eP	P	16 56 35.0	-1.2
NAY				AMb	AMB	16 56 37.2	
	comp=Z,26nm,1.0s,mb5.1						
MZLS	Mizel	73.73	298	P	P	16 56 36.5	-0.2
MIB	Mutribah	73.77	304	eP	P	16 56 35.8	-1.1
TATS	Tathlith	74.03	293	P	P	16 56 38.5	0.0
KMBO	Kilima Mbogo	75.88	271	P	P	16 56 50.2	+0.9
	comp=Z,6.4nm,0.8s,mb4.6,baz=58,slow=8.0,SNR=23						
SYO	Syowa Base	76.21	201	⇑P	P	16 56 49.5	-0.5
SYO	Syowa Base	76.21	201	⇑eP	P	16 56 49.5	-0.5
SYO				⇓ePP	PP	16 59 44.8	+1.5
ORR	Orenburg	78.00	327	⇑iP	P	16 57 00.5	+0.2
ORR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ARU	Arti	78.70	333	eP	P	16 57 03.8	-0.3
	comp=Z,17nm,1.0s,mb4.9						
ARU	Arti	78.70	333	⇓iP	P	16 57 04.0	-0.1
ARU				e		17 00 02.3	
ARU				eS	S	17 06 59.9	+4.4
ARU				eSS	SS	17 12 06.1	+2.7
ARU				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
GNI	Garni	79.37	314	P	P	16 57 09.0	+0.9
	comp=Z,6.2nm,0.8s,mb4.6,baz=207,slow=8.3,SNR=5.0						
GNI	Garni	79.37	314	eP	P	16 57 08.7	+0.6
	comp=Z,8.0nm,0.8s,mb4.7						
GNI	Garni	79.37	314	eP	P	16 57 08.7	+0.6
GNI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YNBS	Yanbu‘ al Bahr	80.16	297	P	P	16 57 13.7	+1.0
TIXI	Tiksi	80.69	5	eP	P	16 57 13.1	-1.4
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
ZEI	Tsey	80.89	316	i P	P	16 57 13.9	-2.2
ZEI				i *PP	pP	16 57 23.4	-9.0
ZEI				i		17 00 17.8	
ZEI				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
UMJS	Umm Lajj	80.98	297	P	P	16 57 18.0	+1.0
QSPA	South Pole Qui	81.46	180	⇑iP	P	16 57 18.4	-0.1
	comp=Z,11nm,1.0s,mb4.8						
KIV	Kislovodsk	82.12	317	eP	P	16 57 24.1	+1.5
	comp=Z,12nm,0.8s,mb4.9						
KIV	Kislovodsk	82.12	317	⇑iP	P	16 57 23.9	+1.3
KIV				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.8						
GOF	Gofitskoye	82.27	318	eP	P	16 57 22.3	-1.0
LSZ	Lusaka	82.96	256	⇑iP	P	16 57 28.0	+0.6
	comp=Z,18nm,0.8s,mb5.2						
LSZ	Lusaka	82.96	256	⇑iP	P	16 57 28.0	+0.7
LSZ				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.2						
AYUS	‘Aynunah	83.44	300	P	P	16 57 30.3	+0.7
BDAS	Al Bad‘	83.64	300	P	P	16 57 31.1	+0.4
MKRJ	Makawir	83.92	303	P	P	16 57 33.1	+1.1
AQBJ	Aqaba	83.98	301	P	P	16 57 33.1	+0.7
EIL	Elat	84.05	301	P	P	16 57 33.3	+0.6
ZFRI	Zfri	84.07	302	P	P	16 57 33.6	+0.8
BOSA	Boshof	84.13	242	P	P	16 57 34.1	+1.0
	comp=Z,8.8nm,0.9s,mb4.9,baz=113,slow=4.2,SNR=6.9						
BOSA	Boshof	84.13	242	eP	P	16 57 33.8	+0.7
	comp=Z,8.9nm,0.8s,mb5.0						
BOSA	Boshof	84.13	242	eP	P	16 57 33.8	+0.7
BOSA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
PRNI	Paran	84.17	302	P	P	16 57 34.2	+0.9
LBTB	Lobatse	84.23	246	eP	P	16 57 34.5	+0.7
	comp=Z,8.4nm,0.4s,mb5.2						
LBTB	Lobatse	84.23	246	eP	P	16 57 34.5	+0.8
LBTB				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb5.2						
KMTI	Karmit	84.34	301	P	P	16 57 34.7	+0.5
HNTI	Hanita	84.66	304	P	P	16 57 37.0	+1.3
KZIT	Kziot	84.80	302	P	P	16 57 37.1	+0.7
BR131	Keskin Array S	87.41	311	eP	P	16 57 49.1	+0.1
	comp=Z,10nm,0.9s,mb5.1						
BRTR	Keskin Array B	87.41	311	P	P	16 57 49.5	+0.5
	comp=Z,10nm,0.9s,mb5.1,baz=127,slow=6.2,SNR=48						
BRTR				PP	PP	17 01 15.7	-0.8
	comp=Z,0.6nm,0.7s,baz=135,slow=6.1,SNR=3.7						
OBN	Obninsk	89.35	326	⇑iP	P	16 57 58.0	+0.2
OBN				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.4						
SNAA	Sanae	89.84	197	⇑iP	P	16 58 00.7	+0.9
SNAA	Sanae	89.84	197	P	P	16 58 00.9	+1.1
	comp=Z,5.1nm,0.9s,mb4.8,baz=147,slow=4.9,SNR=16						
VNA2	Neumayer--Watz	91.49	196	⇑iP	P	16 58 10.5	+3.0
VNA2				P		16 58 38.2	
VNA1	Neumayer--Stat	91.88	197	⇑iP	P	16 58 12.7	+3.4
VNA3	Neumayer Olymp	91.94	196	⇑iP	P	16 58 12.5	+2.9
VNA3				P		16 58 39.1	
AKASG	Malin Array Be	92.70	321	P	P	16 58 12.9	-0.6
	comp=Z,3.8nm,0.8s,mb4.9,baz=84,slow=5.0,SNR=14						
FINES	FINESS Array B	96.02	331	P	P	16 58 27.4	-0.9
	comp=Z,1.8nm,0.8s,mb4.5,baz=166,slow=7.9,SNR=4.7						
KOLS	Kolonicke sedl	96.93	318	i P	P	16 58 33.7	+0.9
YKA	Yellowknife Ar	116.06	22	PKP	PKPdf	17 03 43.4	+0.6
	comp=Z,2.4nm,0.6s,baz=323,slow=1.5,SNR=9.9						
YKA	Yellowknife Ar	116.06	22	PKP	PKPdf	17 03 43.4	+0.6
DBIC	Dimbokro	118.57	273	PKP	PKPdf	17 03 49.6	+0.8
	comp=Z,3.0nm,0.5s,baz=10,slow=2.0,SNR=9.5						
DBIC	Dimbokro	118.57	273	ePKPdf	PKPdf	17 03 49.7	+0.8
NVAR	Mina Array Bea	125.13	49	PKP	PKPdf	17 04 03.6	+2.5
	comp=Z,0.9nm,0.7s,baz=211,slow=1.7,SNR=7.1						
TRQA	Tornquist	133.43	185	ePKPdf	PKPdf	17 04 18.9	+2.0
JCT	Junction City	142.28	50	ePKPdf	PKPdf	17 04 33.8	+0.7
CPUP	Villa Florida	144.13	195	ePKPdf	PKPdf	17 04 36.5	+0.1
ACSO	Alum Creek Sta	145.31	22	ePKPdf	PKPdf	17 04 39.3	+1.1
WCI	Wyandotte Cave	145.63	28	ePKPbc	PKPbc	17 04 40.7	+1.2
RCBR	Riachuelo	146.00	246	ePKPbc	PKPbc	17 04 42.3	+1.2
WVT	Waverly	146.53	32	ePKPdf	PKPdf	17 04 41.7	+1.4
WVT				ePKPbc	PKPbc	17 04 43.7	+1.9
MCWV	Mont Chateau	146.90	19	ePKPbc	PKPbc	17 04 44.5	+2.1
PAL	Palisades	147.06	10	ePKPbc	PKPdf	17 04 44.5	+3.4
FWV	Forest Hill	148.44	21	ePKPbc	PKPdf	17 04 48.5	+5.1
ELN	Prospectdale	148.78	22	ePKPbc	PKPdf	17 04 48.6	+4.7
LRAL	Lakeview Retre	149.32	35	ePKPbc	PKPdf	17 04 50.2	+5.2
BAO	Brasilia Array	149.57	218	PKPdf	PKPdf	17 04 51.0	+5.2
BDFB	Brasilia	149.58	218	PKPbc	PKPdf	17 04 52.8	+7.0
	comp=Z,22nm,0.7s,baz=145,slow=1.3,SNR=27						
GOGA	Godfrey	150.88	29	ePKPbc	PKPdf	17 04 54.3	+6.9
LPAZ	La Paz	155.31	177	PKP	PKPdf	17 04 57.4	+3.4
	comp=Z,0.5nm,0.2s,slow=3.0,SNR=3.6						
LPAZ				PKPab	PKPab	17 05 22.4	+0.6
	comp=Z,2.0nm,0.6s,baz=202,slow=2.7,SNR=7.1						
LPAZ	La Paz	155.31	177	PKP	PKPdf	17 04 57.4	+3.4
LPAZ				ePKPab	PKPab	17 05 21.8	-0.1
LPAZ				PKPab	PKPab	17 05 22.4	+0.6

ATH ***18*** *16:57:40.9, 39.20N×20.58E, h9^{km}, MD3.8/8, ML4.0*
SKO ***18*** *16:57:41.8, 39.08N×21.14E, h5^{km}, ML3.4*
CSEM ***18*** *16:57:41.9±0.1, 39.16N×20.51E, h2^{km}, ML3.6, Error ellipse: s-maj=1.6km s-min=1.1km az=30.0*
THE ***18*** *16:57:42.3, 39.17N×20.57E, h1^{km}, ML3.6*
IDC ***18*** *16:57:42.6±2.9, 39.08N×20.35E, h38^{km}±23^{km}, mb3.7/7, mb1 3.9/10, mb1mx3.7/25, mbtmp3.9/10, ML3.9/3, MS3.2/2, Ms1 3.2/2, ms1mx2.9/35, Error ellipse: s-maj=36.1km s-min=17.9km az=41.0*
NEIC ***18*** *16:57:42.3, 39.17N×20.57E, h2^{km}, mb3.9/1, MD3.5(PDG), ML4.0(ATH), After THE.*
PDG ***18*** *16:57:44.4±0.2, 39.35N×19.70E, h4^{km}±11^{km}*
ISC 18 16:57:41.8±0.4**, 39.19N**±0.02×**20.48E**±0.03**, h20**^{km}±4^{km}**, n95, σ1^{s}38**/134**, mb3.8**/8**, MS3.5**/1**, 8C-11D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	Igoumenitsa	0.36	342	ePg	Pb	16 57 49.3	0.0
IGT				eSg	Sb	16 57 55.9	+1.4
LKD	Levkas	0.50	164	ePg	Pb	16 57 51.0	-0.8
LKD				eSg	Sb	16 57 58.3	-0.3
JAN	Janina	0.55	32	ePB	Pb	16 57 50.6	-1.9
KEK	Kerkira	0.74	315	ePB	Pb	16 57 56.0	+0.2
SRN	Sarande	0.78	332	i Pg	Pb	16 57 57.1	+0.6
SRN				i Sg	Sb	16 58 13.7	+7.1
MEV	Metsovon	0.83	44	ePg	Pb	16 57 55.8	-1.6
LSK	Leskovik	0.96	6	i Pn	Pn	16 57 59.9	-0.3
LSK				i Sn	Sn	16 58 19.5	+6.1
VLS	Valsamata	1.02	175	ePB	Pb	16 58 00.5	0.0
EVR	Evrytania	1.07	104	ePN	Pn	16 58 00.3	-1.5
TPE	Tepelena	1.16	342	ePn	Pn	16 58 05.2	+2.2
TPE				i Sn	Sn	16 58 23.0	+4.6
RLS	Riolos of Patr	1.37	145	ePB	Pb	16 58 06.0	-0.6
KBN	Korca	1.45	9	i Pn	Pn	16 58 10.9	+3.7
KBN	Korca	1.45	9	ePn	Pn	16 58 10.9	+3.7
AGG	Agios Georgios	1.45	96	ePg	Pn	16 58 07.0	-0.3
AGG				eSg	Sn	16 58 26.8	+0.9
AGG	Agios Georgios	1.45	96	ePg	Pn	16 58 06.9	-0.4
AGG				eSg	Sn	16 58 26.8	+0.9
KZN	Kozani	1.50	42	ePB	Pb	16 58 08.0	-0.7
FNA	Florina	1.73	23	ePb	Pb	16 58 12.9	+0.2
LIT	Litokhoron	1.80	59	ePb	Pb	16 58 13.0	-0.9
LIT				eSb	Sb	16 58 36.9	+0.7
LIT	Litokhoron	1.80	59	ePb	Pb	16 58 13.0	-0.9
LIT				eSb	Sb	16 58 36.8	+0.7
OHR	Ohrid	1.93	7	ePn	Pn	16 58 16.1	+1.9
OHR				eSn	Sn	16 58 43.0	+4.9
BIA	Bitola	1.94	19	ePn	Pn	16 58 15.6	+1.4
BIA				eSn	Sn	16 58 40.8	+2.7
LKR	Lokris	2.04	105	ePN	Pn	16 58 16.8	+1.1
XOR	Xorichti	2.12	84	ePn	Pn	16 58 17.5	+0.8
NEO	Neokhori	2.14	86	ePN	Pn	16 58 18.0	+1.0
LCI	Lecce	2.15	303	Pn	Pn	16 58 18.9	+1.7
GRG	Griva	2.30	39	ePn	Pn	16 58 20.5	+1.1
QSH	Qafa e Shtames	2.37	350	i Pn	Pn	16 58 21.5	+1.2
QSH				i Sn	Sn	16 59 07.5	+18
QSH	Qafa e Shtames	2.37	350	ePn	Pn	16 58 21.5	+1.2
THE	Thessaloniki	2.39	52	ePn	Pn	16 58 21.8	+1.1
PLG	Polygyros	2.58	62	ePN	Pn	16 58 23.5	+0.2
PAIG	Paliouri	2.58	72	ePn	Pn	16 58 23.8	+0.3
PAIG				eSn	Sn	16 58 55.7	+1.1
AOS	Alonnisos	2.65	89	ePn	Pn	16 58 24.5	+0.2
VAY	Valandovo	2.66	36	ePn	Pn	16 58 23.4	-1.2
VAY				eSn	Sn	16 58 53.8	-2.8
KNT	Kendrikon	2.70	43	ePn	Pn	16 58 25.6	+0.5
SOH	Sokhos	2.75	53	ePn	Pn	16 58 26.5	+0.8
MPAR	Parnis Oros	2.76	111	ePN	Pn	16 58 26.5	+0.6
ATH	Athens Observa	2.82	115	ePB	Pb	16 58 27.3	-3.9
SKO	Skopje	2.87	15	ePn	Pn	16 58 28.9	+1.4
SKO				eSn	Sn	16 59 03.3	+1.4
TIP	Timpagrande	2.89	271	ePn	Pn	16 58 29.4	+1.6
TIP				eSn	Sn	16 59 05.3	+2.9
TIP	Timpagrande	2.89	271	ePn	Pn	16 58 29.4	+1.6
TIP				eSn	Sn	16 59 05.3	+3.0
ULC	Ulcinj	2.92	342	⇓iPn	Pn	16 58 28.8	+0.6
ULC				eSn	Sn	16 59 03.6	+0.5
OUR	Ouranopolis	2.93	66	ePn	Pn	16 58 29.2	+0.8
BRT	Bari-Castellan	3.02	305	Pn	Pn	16 58 31.4	+1.7
BRT				Sn	Sn	16 59 19.5	+14
BUM	Brajici-Budva	3.33	339	⇓iPn	Pn	16 58 34.0	0.0
BUM				eSn	Sn	16 59 12.3	-1.1
TTG	Podgorica	3.36	344	ePn	Pn	16 58 34.5	0.0
TTG				eSn	Sn	16 59 14.4	+0.1
PVY	Plav	3.42	354	⇓iPn	Pn	16 58 37.5	+2.2
PVY				eSn	Sn	16 59 18.0	+2.2
HCY	Herceg Novi	3.58	336	⇑iPn	Pn	16 58 37.1	-0.5
HCY				eSn	Sn	16 59 17.3	-2.5
IVA	Berane	3.70	353	⇑iPn	Pn	16 58 40.7	+1.4
IVA				eSn	Sn	16 59 24.8	+1.9
CDT	Castel del Mon	3.73	302	ePn	Pn	16 58 40.0	+0.2
NKY	Niksic	3.79	343	⇓iPn	Pn	16 58 40.2	-0.3
NKY				eSn	Sn	16 59 24.3	-0.7
SLCN	Sala Consilina	3.92	289	Pn	Pn	16 58 45.4	+3.0
SLCN				Sn	Sn	16 59 34.1	+5.7
BRY	Bratogost	3.98	339	⇑iPn	Pn	16 58 42.2	-1.1
BRY				eSn	Sn	16 59 27.4	-2.5
UPM	Unac-Piva	4.18	344	⇑iPn	Pn	16 58 46.5	+0.5
UPM				eSn	Sn	16 59 33.4	-1.6
SGO	Sicignano	4.20	291	Pn	Pn	16 58 49.1	+2.6
SGO				Sn	Sn	16 59 37.4	+1.8
PLE	Pljevlja	4.21	349	⇓iPn	Pn	16 58 47.5	+0.9
PLE				eSn	Sn	16 59 35.3	-0.6
STON	Ston	4.23	331	i Pn	Pn	16 58 45.8	-1.1
STON				i Sn	Sn	16 59 33.5	-2.9
STON	Ston	4.23	331	i Pn	Pn	16 58 45.7	-1.2
STON				i Sn	Sn	16 59 33.4	-2.9
NVSS	Nova Varos 2	4.35	353	⇓iPn	Pn	16 58 49.0	+0.4
RGNG	Rignano Grg	4.48	305	Pn	Pn	16 58 51.1	+0.7
RGNG				Sn	Sn	16 59 43.2	+0.6
ALN	Alexandroupoli	4.60	67	ePn	Pn	16 58 51.7	-0.4
DIVS	Divcibare	4.92	356	⇓iPn	Pn	16 58 55.6	-0.9
SGG	Gregorio Mates	5.15	297	Pn	Pn	16 59 03.7	+3.8
IDI	Anoyia	5.25	137	Pn	Pn	16 58 58.0	-3.3
	0.8nm,0.3s,baz=170,slow=24,SNR=6.8						
IDI				Sn	Sn	16 59 57.7	-4.4
	3.3nm,0.3s,baz=199,slow=12,SNR=9.2						
IDI				LR	LR	17 00 48.0	
	comp=Z,133nm,20.3s,baz=339,slow=35						
CII	Carovilli	5.34	300	Pn	Pn	16 59 04.2	+1.6
NRCA	Norcia	6.65	306	Pn	Pn	16 59 21.3	+0.3
NRCA				Sn	Sn	17 00 36.8	-0.2
SNTG	Esanatoglia	6.98	308	Pn	Pn	16 59 25.3	-0.3
FSSB	Fossombrone	7.32	310	Pn	Pn	16 59 29.2	-1.2
BOJS	Bojanci	7.40	330	i Pn	Pn	16 59 29.9	-1.6
BOJS				eSn	Sn	17 00 49.7	-6.0
MLR	Muntele Rosu	7.48	31	Pn	Pn	16 59 33.8	+1.1
	0.8nm,0.3s,baz=284,slow=18,SNR=13						
VISS	Visnje	7.81	330	ePn	Pn	16 59 35.1	-2.1
VISS				eSn	Sn	17 00 59.9	-6.1
VOY	Vojsko	8.38	327	ePn	P	16 59 43.0	-2.2
VOY				eSn	Sn	17 01 14.0	-6.2
PERS	Pernice	8.41	334	i Pn	P	16 59 43.0	-2.6
OBKA	Obir	8.51	331	⇓iPn	P	16 59 45.2	-1.8
	comp=Z,5.8nm,0.5s						
OBKA	Obir	8.51	331	⇑iSn	Sn	17 01 17.6	-5.8
	comp=E,7.2nm,0.5s						
CADS	Cadrg	8.60	327	ePn	P	16 59 46.2	-2.1
PTCC	Patocco-Chiusa	8.90	326	Pn	P	16 59 50.4	-2.1
MOA	Molln	9.75	335	⇑iPn	P	17 00 03.1	-1.0
	comp=Z,1.4nm,0.3s						
MOA	Molln	9.75	335	⇑iSn	Sn	17 01 48.3	-5.8
	comp=E,0.7nm,0.3s						
MOA	Molln	9.75	335	⇑Pn	P	17 00 03.1	-1.0
	1.4nm,0.3s						
MOA				Sn	Sn	17 01 48.3	-5.8
BRTR	Keskin Array B	10.20	83	Pn	P	17 00 12.9	+2.7
	0.1nm,0.3s,baz=276,slow=13,SNR=3.0						
MOTA	Moosalm	10.63	323	⇓iPn	P	17 00 15.2	-0.9
	comp=Z,12nm,0.8s						
MOTA	Moosalm	10.63	323	⇓iSn	S	17 02 09.3	-6.3
	comp=Z,4.1nm,0.7s						
MOTA	Moosalm	10.63	323	⇓Pn	P	17 00 15.2	-0.9
	12nm,0.8s						
MOTA				Sn	S	17 02 09.3	-6.3
GERES	GERESS Array B	10.81	335	Pn	P	17 00 15.7	-2.8
	0.4nm,0.3s,baz=157,slow=14,SNR=12						
KHC	Kasperske Hory	11.10	336	eP	P	17 00 20.0	-2.5
HFS	Hagfors	21.39	351	P	P	17 02 28.4	-1.8
	1.2nm,0.4s,mb3.6,baz=153,slow=9.9,SNR=7.6						
NAO	NORSAR Subarra	22.48	348	P	P	17 02 41.3	+0.3
	4.7nm,1.1s,mb3.8						
FINES	FINESS Array B	22.55	7	P	P	17 02 38.8	-2.8
	2.2nm,0.8s,mb3.7,baz=186,slow=13,SNR=3.7						
EKA	Eskdalemuir Ar	22.59	323	P	P	17 02 41.7	-0.4
	3.3nm,0.7s,mb3.9,baz=124,slow=9.5,SNR=12						
NB2	NORSAR Subarra	22.62	348	P	P	17 02 41.3	-1.0
	4.7nm,1.1s,mb3.8,baz=156,slow=9.3						
NOA	NORSAR Array B	22.62	348	P	P	17 02 41.1	-1.2
	2.1nm,0.9s,mb3.6,baz=164,slow=11,SNR=3.5						
ARCES	ARCESS Array B	30.52	3	P	P	17 03 51.8	-3.8
	4.6nm,1.0s,mb4.3,baz=186,slow=12,SNR=9.0						
KMBO	Kilima Mbogo	42.98	155	LR	LR	17 23 42.3	
	comp=Z,67nm,19.4s,MS3.5,baz=84,slow=36						
MKAR	Makanchi Array	44.81	59	P	P	17 05 53.5	-2.4
	0.8nm,0.6s,mb3.8,baz=275,slow=7.5,SNR=11						
ZAL	Zalesovo	45.04	49	P	P	17 05 55.7	-1.9
	1.1nm,0.5s,mb4.0,baz=203,slow=4.4,SNR=4.7						

IDC ***18*** *17:11:06.8±4.2, 0.96N×97.68E, mb3.7/4, mb1 3.9/4, mb1mx3.6/17, mbtmp3.7/4, Error ellipse: s-maj=165.7km s-min=28.3km az=56.0*
NEIC ***18*** *17:11:10.0±1.0, 0.78N×97.42E, h30^{km}, mb4.0/3, Error ellipse: s-maj=22.6km s-min=15.9km az=52.0*
ISC 18 17:11:08.0±1.4**, 0.8N**±0.2×**97.4E**±0.2**, h30**^{km}**, n8, σ0^{s}50**/8**, mb3.9**/7**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.51	36	ePn	Pn	17 12 30.0	-0.3
LSA	Lhasa	29.34	349	P	P	17 17 11.2	+0.6
	2.7nm,0.8s,mb4.0						
WRA	Warramunga Arr	41.66	122	P	P	17 18 55.9	+0.1
	0.4nm,0.5s,mb3.3,baz=302,slow=9.0,SNR=5.9						
SONM	Songino Array	47.49	8	P	P	17 19 42.7	+0.5
	0.3nm,0.4s,mb3.6,baz=185,slow=10,SNR=4.3						
MKAR	Makanchi Array	47.67	346	P	P	17 19 44.0	+0.4
	1.2nm,0.5s,mb4.2,baz=160,slow=9.2,SNR=22						
KURK	Kurchatov	52.22	345	eP	P	17 20 18.2	-0.2
	1.9nm,0.8s,mb4.1						
ZAL	Zalesovo	53.97	351	P	P	17 20 31.3	+0.1
	0.9nm,0.6s,mb3.9,baz=289,slow=6.3,SNR=6.6						
CHKZ	Chkalovo	57.16	341	eP	P	17 20 53.3	-1.1
	1.2nm,0.8s,mb4.0						

MOS ***18*** *17:23:56.3±1.0, 10.23N×126.25E, h37^{km}, mb4.4/6, Error ellipse: s-maj=40.0km s-min=12.3km az=108.1*
MAN ***18*** *17:23:57.6, 10.25N×126.22E, h12^{km}, mb5.1, ML4.1, MS4.2*
BJI ***18*** *17:23:57.4, 9.33N×126.06E, h96^{km}, mB4.9, mb4.4*
NEIC ***18*** *17:24:02.3±1.6, 10.24N×126.27E, h75^{km}±14^{km}, mb4.2/8, Error ellipse: s-maj=25.9km s-min=6.5km az=74.0*
IDC ***18*** *17:24:02.7±8.1, 10.23N×126.24E, h76^{km}±75^{km}, mb3.9/13, mb1 4.0/13, mb1mx3.9/19, mbtmp4.2/13, MS3.5/2, Ms1 3.5/2, ms1mx2.8/25, Error ellipse: s-maj=45.8km s-min=15.0km az=75.0*
ISC 18 17:23:58.9±0.7**, 10.28N**±0.03×**126.27E**±0.05**, h58**^{km}±6^{km}**, n61, σ1^{s}06**/76**, mb4.2**/22**, MS3.6**/1**, 3C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.91	238	eP	P	17 24 13.6	-2.2
SCPH				eS	S	17 24 25.0	-3.5
MSLP	Maasin	1.40	264	eP	P	17 24 21.9	-0.8
MSLP				eS	S	17 24 39.8	-0.5
BUTP	Butuan	1.45	206	eP	P	17 24 22.7	-0.7
BUTP				eS	S	17 24 40.9	-0.6
PLP	Palo	1.55	305	i P	P	17 24 24.8	0.0
PLP				i S	S	17 24 44.4	+0.6
BESP	Borongan	1.55	328	eP	P	17 24 26.1	+1.4
BESP				eS	S	17 24 48.6	+4.7
BIPH	Bislig	2.08	178	⇓iP	P	17 24 30.8	-1.3
BIPH						17 24 53.8	
LLP	Lapu-Lapu	2.27	271	⇓iP	P	17 24 35.2	+0.4
LLP				i S	S	17 25 00.1	-1.4
CGP	Cagayan de Oro	2.39	221	⇓iP	P	17 24 36.3	-0.2
CGP				eS	S	17 25 03.3	-1.3
TBP	Tagbilaran	2.44	256	⇑eP	P	17 24 36.8	-0.5
TBP				i S	S	17 25 05.9	-0.1

BUKP	**Musuan**	**2.67**	**207**	*e*P	**P**	**17 24 41.1**	**+0.7**
BUKP				*e*S	**S**	**17 25 13.7**	**+2.1**
CNP	**Catarman**	**2.72**	**325**	*e*P	**P**	**17 24 41.5**	**+0.3**
CNP				*e*S	**S**	**17 25 14.6**	**+1.5**
DAV	**Davao City (W)**	**3.26**	**192**	*e*Pn	**P**	**17 24 50.7**	**+1.9**
MATI	**Mati**	**3.31**	**180**	*e*P	**P**	**17 24 49.2**	**-0.3**
MATI				*e*S	**S**	**17 25 30.7**	**+2.8**
DCPH	**Dipolog City**	**3.34**	**240**	⇑*e*P	**P**	**17 24 49.5**	**-0.4**
KCP	**Kidapawan**	**3.45**	**200**	⇑*e*P	**P**	**17 24 54.2**	**+2.7**
KCP				*i* S	**S**	**17 25 36.5**	**+5.1**
GUIM	**Jordan**	**3.64**	**276**	*e*P	**P**	**17 24 54.0**	**-0.1**
GUIM				*e*S	**S**	**17 25 35.9**	**-0.3**
RCP	**Roxas**	**3.69**	**291**	*e*P	**P**	**17 24 55.9**	**+1.0**
PAGZ	**Pagadian**	**3.74**	**230**	*e*P	**P**	**17 24 55.5**	**0.0**
PAGZ				*e*S	**S**	**17 25 39.2**	**+0.6**
PVCP	**Virac**	**3.90**	**328**	*e*P	**P**	**17 24 57.1**	**-0.7**
PVCP				*e*S	**S**	**17 25 42.5**	**-0.2**
IPIL	**Ipil**	**4.41**	**236**	*e*P	**P**	**17 25 06.4**	**+1.4**
IPIL				*e*S	**S**	**17 25 58.3**	**+2.6**
OTRP	**Odiongan**	**4.66**	**297**	*e*P	**P**	**17 25 06.9**	**-1.5**
BUSP	**Coron**	**6.20**	**287**	*e*P	**P**	**17 25 29.6**	**-0.3**
ENPP	**El Nido**	**6.79**	**278**	*e*P	**P**	**17 25 37.9**	**-0.3**
LUBP	**Lubang**	**6.82**	**301**	*e*P	**P**	**17 25 39.5**	**+0.9**
CAUP	**Cauayan**	**7.91**	**327**	*e*P	**P**	**17 25 50.5**	**-3.2**
BATP	**Bataraza**	**8.48**	**261**	*e*P	**P**	**17 26 06.3**	**+4.8**
GUMO	**Guam**	**18.49**	**78**	LR	LR	17 34 12.7	
	comp=Z,102nm,19.5s,baz=180,slow=33						
KAKA	**Kakadu**	**23.64**	**165**	*e*P	**P**	**17 29 25.2**	**+19**
	14nm,0.6s,mb4.6						
FITZ	**Fitzroy Crossi**	**28.20**	**181**	*e*P	**P**	**17 29 47.8**	**-0.7**
	3.6nm,0.7s,mb4.1						
FITZ	**Fitzroy Crossi**	**28.20**	**181**	P	**P**	**17 29 47.9**	**-0.6**
	3.8nm,0.4s,mb4.3,baz=6.2,slow=15,SNR=11						
WRAB	**Tennant Creek**	**31.05**	**165**	*e*P	**P**	**17 30 12.2**	**-1.6**
	2.9nm,0.7s,mb4.2						
WRAB	**Tennant Creek**	**31.05**	**165**	*e*P	**P**	**17 30 12.2**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**31.06**	**165**	P	**P**	**17 30 12.2**	**-1.6**
	comp=Z,1.1nm,0.5s,mb4.0,baz=344,slow=9.3,SNR=21						
WB2	**Warramunga Arr**	**31.06**	**165**	*e*P	**P**	**17 30 12.2**	**-1.6**
ASPA	**Alice Springs**	**34.55**	**168**	*e*P	**P**	**17 30 43.3**	**-0.7**
GTA	**Gaotai**	**37.38**	**325**	*e*P	**P**	**17 31 08.3**	**+0.5**
ULN	**Ulaanbaatar**	**40.82**	**340**	*e*P	**P**	**17 31 37.9**	**+1.7**
	comp=Z,6.1nm,0.9s,mb4.2						
ULN	**Ulaanbaatar**	**40.82**	**340**	*e*P	**P**	**17 31 37.9**	**+1.7**
ULN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.2						
FORT	**Forrest**	**40.85**	**178**	*e*P	**P**	**17 31 37.1**	**+0.4**
	comp=Z,22nm,0.7s,mb4.9						
SONM	**Songino Array**	**41.01**	**340**	P	**P**	**17 31 39.5**	**+1.6**
	comp=Z,1.0nm,0.4s,mb3.8,baz=156,slow=9.5,SNR=11						
SONM				PcP	PcP	17 33 38.4	+0.7
	comp=Z,0.9nm,0.8s,baz=160,slow=1.5,SNR=3.9						
KLBR	**Kellerberrin**	**42.42**	**191**	*e*P	**P**	**17 31 49.9**	**+0.2**
	comp=Z,30nm,1.5s,mb4.7						
NWAO	**Narrogin (SRO)**	**43.82**	**191**	P	**P**	**17 32 01.1**	**+0.1**
	comp=Z,5.4nm,0.6s,mb4.5,baz=14,slow=7.6,SNR=7.0						
STKA	**Stephens Creek**	**44.41**	**161**	P	**P**	**17 32 06.2**	**+0.4**
	comp=Z,2.3nm,0.5s,mb4.1,baz=338,slow=7.7,SNR=8.9						
MKAR	**Makanchi Array**	**52.02**	**323**	P	**P**	**17 33 04.4**	**-0.3**
	comp=Z,2.1nm,0.6s,mb4.2,baz=122,slow=8.3,SNR=17						
MKAR				PcP	PcP	17 34 16.1	-0.3
	comp=Z,0.8nm,0.5s,baz=112,slow=5.1,SNR=3.8						
MKAR				LR	LR	17 56 48.8	
	comp=Z,60nm,20.3s,MS3.6,baz=3.6,slow=38						
ZAL	**Zalesovo**	**54.62**	**331**	P	**P**	**17 33 23.4**	**-0.5**
	comp=Z,1.0nm,0.3s,mb4.3,baz=330,slow=8.6,SNR=3.1						
TIXI	**Tiksi**	**61.35**	**1**	*e*P	**P**	**17 34 09.6**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.5						
BRVK	**Borovoye**	**61.73**	**325**	*e*P	**P**	**17 34 12.4**	**-1.1**
	comp=Z,1.6nm,0.9s,mb4.2						
BRVK	**Borovoye**	**61.73**	**325**	*e*P	**P**	**17 34 12.4**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
CHKZ	**Chkalovo**	**61.79**	**326**	P	**P**	**17 34 12.7**	**-1.1**
	comp=Z,0.7nm,0.5s,mb4.0						
CHKZ	**Chkalovo**	**61.79**	**326**	P	**P**	**17 34 12.7**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2						
ILAR	**Eielson Array**	**79.43**	**26**	P	**P**	**17 36 00.6**	**+0.3**
	comp=Z,0.6nm,0.8s,mb3.6,baz=221,slow=5.8,SNR=5.1						
JOF	**Joensuu**	**83.19**	**333**	*e*p	**P**	**17 36 20.2**	**+0.3**
ARCES	**ARCESS Array B**	**84.19**	**340**	P	**P**	**17 36 25.2**	**+0.5**
	comp=Z,3.4nm,1.0s,mb4.4,baz=63,slow=5.4,SNR=5.7						
BRTR	**Keskin Array B**	**85.53**	**309**	P	**P**	**17 36 32.1**	**0.0**
	comp=Z,0.9nm,0.8s,mb4.1,baz=118,slow=4.5,SNR=5.1						
FINES	**FINESS Array B**	**85.89**	**332**	P	**P**	**17 36 33.9**	**+0.6**
	comp=Z,1.5nm,0.6s,mb4.4,baz=63,slow=4.3,SNR=10.0						
FINES	**FINESS Array B**	**85.89**	**332**	P	**P**	**17 36 33.9**	**+0.6**
AKASG	**Malin Array Be**	**86.56**	**321**	P	**P**	**17 36 36.7**	**-0.2**
	comp=Z,0.2nm,0.3s,mb3.9,baz=67,slow=4.7,SNR=5.1						
AKASG	**Malin Array Be**	**86.56**	**321**	P	**P**	**17 36 36.7**	**-0.2**
MAW	**Mawson**	**89.70**	**200**	P	**P**	**17 36 52.0**	**+0.5**
	comp=Z,1.6nm,0.7s,mb4.5,baz=89,slow=4.4,SNR=5.3						
VNDA	**Vanda**	**89.93**	**173**	P	**P**	**17 36 53.3**	**+0.8**
	comp=Z,1.0nm,0.8s,mb4.2						
VNDA	**Vanda**	**89.93**	**173**	P	**P**	**17 36 53.3**	**+0.9**
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

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*ATH **18** 17:47:33.0, 38.13N×26.56E, h30^{km}±5^{km}, MD3.4/5*
*CSEM **18** 17:47:33.4±0.2, 38.18N×26.69E, h12^{km}, MD3.4, Error ellipse: s-maj=4.6km s-min=3.0km az=88.0*
*ISK **18** 17:47:34.1, 38.14N×26.74E, h15^{km}, MD3.1*
*NEIC **18** 17:47:34.0, 38.14N×26.74E, h16^{km}, MD3.4(ATH), MD3.2(ISK), After ISK.*
ISC 18 17:47:32.3±1.0, **38.16N**±0.03×**26.58E**±0.05, **h3**^{km}±6^{km}, **n21**, σ**0**^{s}**83**/31, **3C-1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.20**	**4**	*i* P	**Pg**	**17 47 36.9**	**+0.5**
URLA				*i* S	**Sg**	**17 47 40.2**	**+1.1**
SMG	**Samos**	**0.49**	**155**	⇑*i*PB	**Pb**	**17 47 43.4**	**+0.2**
SMG				*e*SB	**Sb**	**17 47 50.7**	**+0.1**
IZM	**Izmir**	**0.59**	**66**	*i* PG	**Pg**	**17 47 44.5**	**+0.5**
IZM				*i* SG	**Sg**	**17 47 51.7**	**-0.2**
KDAG	**Bornova**	**0.60**	**65**	*i* P	**Pg**	**17 47 43.4**	**-0.8**
KDAG				*i* S	**Sg**	**17 47 50.7**	**-1.4**
PRK	**Paraskevi**	**1.11**	**348**	⇑*i*PN	**Pn**	**17 47 54.3**	**-0.4**
PRK				*e*SN	**Sn**	**17 48 10.0**	**-0.7**
AYDN	**Tasoluk**	**1.14**	**115**	*i* P	**Pb**	**17 47 54.5**	**+0.2**
AYDN				*i* S	**Sb**	**17 48 09.2**	**-0.2**
AYVA	**Ayvalik**	**1.15**	**4**	*i* P	**Pb**	**17 47 54.0**	**-0.5**
AYVA				*i* S	**Sb**	**17 48 11.8**	**+2.0**
AKS	**Akhisar**	**1.21**	**53**	*e*PN	**Pn**	**17 47 55.7**	**-0.3**
BODT	**Bodrum**	**1.24**	**152**	*e*PN	**Pn**	**17 47 56.5**	**0.0**
BODT				*e*SN	**Sn**	**17 48 13.0**	**-0.9**
MLSB	**Milas**	**1.28**	**132**	*e*PN	**Pn**	**17 47 56.7**	**-0.4**
BDRM	**Kayabasi**	**1.29**	**147**	*i* P	**Pb**	**17 47 57.6**	**+0.8**
BDRM				*i* S	**Sb**	**17 48 15.2**	**+1.5**
APE	**Apeiranthos**	**1.37**	**218**	*e*PN	**Pn**	**17 47 59.7**	**+1.4**
APE	**Apeiranthos**	**1.37**	**218**	*e*PN	**Pn**	**17 47 57.7**	**-0.6**
MANT	**Manisa**	**1.59**	**77**	*i* P	**Pn**	**17 48 02.6**	**+1.0**
MANT				*i* S	**Sb**	**17 48 23.1**	**+0.6**
YER	**Yerkesik**	**1.69**	**126**	*e*PN	**Pn**	**17 48 02.5**	**-0.5**
BALB	**Balikesir**	**1.80**	**34**	*e*PN	**Pn**	**17 48 05.0**	**+0.5**
DENT	**Denizli**	**1.98**	**101**	*e*PN	**Pn**	**17 48 05.9**	**-1.2**
LIA	**Limnos Island**	**2.05**	**328**	⇑*i*PB	**Pb**	**17 48 08.2**	**-1.7**
BNT	**Bandirma**	**2.43**	**25**	*e*PN	**Pn**	**17 48 14.2**	**+0.7**
RDO	**Rodhopi**	**3.09**	**345**	⇓*i*PN	**Pn**	**17 48 22.4**	**-0.6**
YLV	**Yalova**	**3.24**	**41**	*e*PN	**Pn**	**17 48 24.8**	**-0.3**

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*ISK **18** 18:04:19.1, 38.15N×26.67E, h25^{km}, MD2.8*
*ATH **18** 18:04:19.3, 38.12N×26.47E, h10^{km}, MD3.0/3*
*CSEM **18** 18:04:19.9±0.1, 38.10N×26.77E, h40^{km}, MD2.8, Error ellipse: s-maj=3.5km s-min=1.8km az=109.0*
ISC 18 18:04:18.9±0.6, **38.15N**±0.03×**26.58E**±0.05, **h10**^{km}, **n13**, σ**1**^{s}**16**/19, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.21**	**3**	*i* P	**Pg**	**18 04 22.6**	**-0.9**
URLA				*i* S	**Sg**	**18 04 25.9**	**-0.7**
SMG	**Samos**	**0.48**	**155**	*e*PB	**Pg**	**18 04 29.0**	**+0.3**
IZM	**Izmir**	**0.59**	**65**	PG	**Pg**	**18 04 30.5**	**-0.3**
IZM				SG	**Sg**	**18 04 38.8**	**0.0**
KDAG	**Bornova**	**0.60**	**64**	*i* P	**Pg**	**18 04 29.6**	**-1.3**
KDAG				*i* S	**Sg**	**18 04 37.5**	**-1.4**
PRK	**Paraskevi**	**1.12**	**348**	*e*PB	**Pb**	**18 04 40.7**	**+0.8**
AYVA	**Ayvalik**	**1.16**	**4**	*i* P	**Pb**	**18 04 41.9**	**+1.3**
AYVA				*i* S	**Sb**	**18 04 58.2**	**+2.6**
AKS	**Akhisar**	**1.21**	**53**	*e*PN	**Pn**	**18 04 40.5**	**-1.4**
BODT	**Bodrum**	**1.23**	**152**	*e*PN	**Pn**	**18 04 41.6**	**-0.5**
MLSB	**Milas**	**1.27**	**132**	*e*PN	**Pn**	**18 04 40.7**	**-2.1**
BDRM	**Kayabasi**	**1.28**	**147**	*i* P	**Pb**	**18 04 43.6**	**+1.0**
BDRM				*i* S	**Sb**	**18 05 00.2**	**+1.3**
APE	**Apeiranthos**	**1.36**	**218**	*e*PN	**Pn**	**18 04 43.4**	**-0.6**
APE	**Apeiranthos**	**1.36**	**218**	*e*Pb	**Pb**	**18 04 43.7**	**-0.3**
MANT	**Manisa**	**1.59**	**77**	*i* P	**Pn**	**18 04 48.9**	**+1.6**
MANT				*i* S	**Sb**	**18 05 09.5**	**+1.5**

MAN 18 18:10:14.4, 10.10N×125.97E, h19^{km}, mb4.5, ML3.3, MS3.2, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.57**	**236**	*e*P	Pb	18 10 25.9	+0.3
SCPH				*e*S	Sb	18 10 36.6	+3.3
MSLP	**Maasin**	**1.10**	**272**	*e*P	Pb	18 10 34.4	-0.1
MSLP				*e*S	Sb	18 10 51.7	+3.3
BUTP	**Butuan**	**1.18**	**197**	*e*P	Pb	18 10 34.6	-1.3
BUTP				*e*S	Sb	18 10 53.1	+2.4
BESP	**Borongan**	**1.58**	**341**	*e*P	Pn	18 10 40.3	-1.5
BESP				*e*S	Sn	18 11 02.3	+0.4
BUKP	**Musuan**	**2.38**	**202**	*e*P	Pn	18 10 53.6	+0.3
PAGZ	**Pagadian**	**3.40**	**229**	*e*P	Pn	18 11 07.8	0.0

MAN 18 18:21:00.9, 8.43N×124.35E, mb3.9, ML2.7, MS2.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.89**	**128**	*e*P	Pg	18 21 18.3	-0.3
BUKP				*e*S	Sg	18 21 29.4	-1.1
DCPH	**Dipolog City**	**1.00**	**279**	*e*P	Pb	18 21 20.6	-0.1
PAGZ	**Pagadian**	**1.12**	**239**	*e*P	Pb	18 21 22.7	-0.1
PAGZ				*e*S	Sb	18 21 38.0	+0.3
BUTP	**Butuan**	**1.37**	**67**	*e*P	Pb	18 21 26.5	-0.5
IPIL	**Ipil**	**1.87**	**250**	*e*P	Pn	18 21 30.4	-4.1
IPIL				*e*S	Sn	18 21 59.8	+0.7

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*IDC **18** 18:35:20.3±3.1, 39.10N×17.01E, mb3.6/6, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, ML3.8/2, Error ellipse: s-maj=64.3km s-min=19.1km az=52.0*
*ROM **18** 18:35:22.6±0.3, 39.12N×17.21E, h20^{km}±3^{km}, Md3.3/6, Ml3.5/14, Error ellipse: s-maj=4.3km s-min=3.2km az=48.0*
*NEIC **18** 18:35:22.6, 39.12N×17.21E, h20^{km}, mb3.8/1, MD3.8(PDG), ML4.2(THE), ML3.5(ROM), After ROM.*
*PDG **18** 18:35:23.0±0.3, 39.31N×17.05E, h9^{km}±11^{km}*
*THE **18** 18:35:23.0, 39.25N×17.04E, h15^{km}, ML4.2*
*CSEM **18** 18:35:24.9±0.1, 39.09N×17.17E, h20^{km}, MD3.3/6, Error ellipse: s-maj=2.2km s-min=1.5km az=12.0*
*SKO **18** 18:35:27.5, 39.52N×17.55E, ML3.5*
ISC 18 18:35:24.0±0.4, **39.21N**±0.02×**17.15E**±0.03, **h26**^{km}±5^{km}, **n104**, σ**1**^{s}**18**/141, **mb3.7**/7, **12C-5D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIP	**Timpagrande**	**0.30**	**264**	⇓*i*Pg	**Pb**	**18 35 31.1**	**-0.1**
TIP				Sg	**Sb**	**18 35 36.6**	**+0.6**
	9µm,1.0s						
SERS	**Sersale**	**0.40**	**244**	⇓*i*Pg	**Pb**	**18 35 32.0**	**-0.6**
SERS				Sg	**Sb**	**18 35 37.8**	**-0.6**
	7µm,0.9s						
GRI	**Girifalco**	**0.69**	**236**	Pg	**Pb**	**18 35 36.4**	**-0.9**
GRI				Sg	**Sb**	**18 35 46.6**	**+0.2**
	2µm,0.5s						
TDS	**Terranova Siba**	**0.77**	**306**	⇑*i*Pg	**Pb**	**18 35 39.3**	**+0.6**
PLAC	**Placanica**	**0.94**	**216**	Pg	**Pn**	**18 35 40.6**	**-1.0**
	562nm,0.9s						
ORI	**Oriolo Calabro**	**1.01**	**328**	Pn	**Pn**	**18 35 44.7**	**+2.1**
ORI				Sn	**Sn**	**18 36 01.9**	**+5.9**
	3µm,0.4s						
CUC	**Castrocucco**	**1.29**	**308**	Pn	**Pn**	**18 35 49.1**	**+2.5**
LCI	**Lecce**	**1.35**	**33**	Pn	**Pn**	**18 35 48.8**	**+1.4**
	741nm,0.5s						
CEL	**Celeste**	**1.36**	**226**	Pn	**Pn**	**18 35 47.7**	**0.0**
	2µm,1.3s						
SOI	**Samo**	**1.42**	**217**	Pn	**Pn**	**18 35 49.6**	**+1.1**
	158nm,0.4s						
SCLL	**Scilla**	**1.47**	**230**	Pn	**Pn**	**18 35 51.4**	**+2.2**
	38nm,0.4s						
MGR	**Morigerati**	**1.54**	**307**	Pn	**Pn**	**18 35 52.1**	**+1.9**
	202nm,0.6s						
NOCI	**Noci**	**1.58**	**358**	Pn	**Pn**	**18 35 51.8**	**+1.1**
	1µm,0.8s						
PE1	**Pezze di Greco**	**1.61**	**8**	*e*Pn	**Pn**	**18 35 52.2**	**+1.1**
SLCN	**Sala Consilina**	**1.66**	**316**	Pn	**Pn**	**18 35 54.5**	**+2.6**
	411nm,0.9s						
MTTG	**Motta San Giov**	**1.66**	**224**	Pn	**Pn**	**18 35 52.7**	**+0.8**
	456nm,0.6s						
BRT	**Bari-Castellan**	**1.67**	**2**	Pn	**Pn**	**18 35 52.9**	**+0.9**
	268nm,0.4s						
AMUR	**Altamura**	**1.74**	**346**	Pn	**Pn**	**18 35 54.5**	**+1.4**
	329nm,0.7s						
CMPR	**Campora**	**1.80**	**308**	Pn	**Pn**	**18 35 56.1**	**+2.2**
	531nm,1.2s						
BAI	**Bari**	**1.90**	**354**	*e*Pn	**Pn**	**18 35 56.2**	**+0.8**
CDRU	**Civita di Ruta**	**1.91**	**313**	Pn	**Pn**	**18 35 57.3**	**+1.8**
	423nm,1.1s						
SGO	**Sicignano**	**1.95**	**314**	Pn	**Pn**	**18 35 57.8**	**+1.7**
CDT	**Castel del Mon**	**1.98**	**341**	*e*Pn	**Pn**	**18 35 57.9**	**+1.3**
MRLC	**Muro Lucano**	**2.00**	**321**	Pn	**Pn**	**18 35 59.1**	**+2.3**
KEK	**Kerkira**	**2.11**	**75**	*e*P	**Pn**	**18 35 58.5**	**+0.1**
KEK	**Kerkira**	**2.11**	**75**	Pn	**Pn**	**18 35 58.6**	**+0.2**
	571nm,0.8s						
MCRV	**Calabrutti - M**	**2.18**	**317**	Pn	**Pn**	**18 36 01.6**	**+2.2**
	237nm,0.8s						
SNAL	**S. Angelo Dei**	**2.27**	**320**	Pn	**Pn**	**18 36 02.8**	**+2.2**
IGT	**Igoumenitsa**	**2.49**	**82**	*e*Pn	**Pn**	**18 36 04.3**	**+0.4**
IGT				*e*Sn	**Sn**	**18 36 35.4**	**+1.7**
SSY	**Sortino**	**2.62**	**219**	Pn	**Pn**	**18 36 03.3**	**-2.4**
	137nm,0.5s						
FGMS	**Monte Sant'Ang**	**2.65**	**340**	Pn	**Pn**	**18 36 07.6**	**+1.5**
RGNG	**Rignano Grg**	**2.73**	**335**	Pn	**Pn**	**18 36 08.2**	**+0.9**
HAVL	**Avola**	**2.76**	**216**	Pn	**Pn**	**18 36 05.0**	**-2.6**
	108nm,0.5s						
LKD	**Levkas**	**2.78**	**99**	*e*Pn	**Pn**	**18 36 07.4**	**-0.6**
LKD				*e*Sn	**Sn**	**18 36 42.7**	**+1.8**
VLS	**Valsamata**	**2.89**	**110**	*e*P	**Pn**	**18 36 08.5**	**-0.9**
JAN	**Janina**	**2.90**	**80**	*e*P	**Pn**	**18 36 10.1**	**+0.4**
TIR	**Tirane**	**2.98**	**43**	Pn	**Pn**	**18 36 11.5**	**+0.7**
	567nm,0.9s						
QSH	**Qafa e Shtames**	**3.12**	**42**	*i* Pn	**Pn**	**18 36 12.5**	**-0.3**
ULC	**Ulcinj**	**3.18**	**30**	*e*Pn	**Pn**	**18 36 13.6**	**-0.1**
ULC				*e*Sn	**Sn**	**18 36 53.2**	**+2.0**
MEV	**Metsovon**	**3.21**	**78**	*e*Pn	**Pn**	**18 36 14.8**	**+0.7**
BUM	**Brajici-Budva**	**3.36**	**23**	⇑*i*Pn	**Pn**	**18 36 15.8**	**-0.4**
BUM				*e*Sn	**Sn**	**18 36 56.7**	**+1.1**
OHR	**Ohrid**	**3.38**	**55**	*e*Pn	**Pn**	**18 36 15.5**	**-1.0**
OHR				*e*Sn	**Sn**	**18 36 51.9**	**-4.3**
HCY	**Herceg Novi**	**3.39**	**17**	⇑*i*Pn	**Pn**	**18 36 16.1**	**-0.5**
HCY				*e*Sn	**Sn**	**18 36 57.2**	**+0.8**
PUK	**Puka**	**3.52**	**36**	*i* Pn	**Pn**	**18 36 18.5**	**+0.1**
TTG	**Podgorica**	**3.59**	**26**	⇑*i*Pn	**Pn**	**18 36 19.3**	**-0.2**
TTG				*e*Sn	**Sn**	**18 37 02.0**	**+0.5**
FNA	**Florina**	**3.61**	**63**	*e*Pn	**Pn**	**18 36 20.3**	**+0.6**
FNA				*e*Sn	**Sn**	**18 37 03.0**	**+1.0**
EVR	**Evrytania**	**3.64**	**93**	*e*P	**Pn**	**18 36 20.9**	**+0.7**
BIA	**Bitola**	**3.68**	**59**	*e*Pn	**Pn**	**18 36 20.4**	**-0.3**
BIA				*e*Sn	**Sn**	**18 36 58.3**	**-5.4**
STON	**Ston**	**3.68**	**6**	*i* Pn	**Pn**	**18 36 20.0**	**-0.7**
STON				*i* Sn	**Sn**	**18 37 02.8**	**-1.0**
BRY	**Bratogost**	**3.83**	**16**	⇑*i*Pn	**Pn**	**18 36 22.8**	**-0.1**
BRY				*e*Sn	**Sn**	**18 37 08.2**	**+0.5**
NKY	**Niksic**	**3.86**	**21**	*e*Pn	**Pn**	**18 36 22.7**	**-0.6**
NKY				*e*Sn	**Sn**	**18 37 08.2**	**-0.2**
PVY	**Plav**	**4.00**	**31**	*e*Pn	**Pn**	**18 36 25.7**	**+0.4**
PVY				*e*Sn	**Sn**	**18 37 12.6**	**+0.6**
AGG	**Agios Georgios**	**4.04**	**91**	*e*Pn	**Pn**	**18 36 26.5**	**+0.7**
UPM	**Unac-Piva**	**4.20**	**18**	⇑*i*Pn	**Pn**	**18 36 28.3**	**+0.1**
UPM				*e*Sn	**Sn**	**18 37 17.1**	**0.0**
UPM	**Unac-Piva**	**4.20**	**18**	⇑*i*Pn	**Pn**	**18 36 28.3**	**+0.1**
UPM				*e*Sn	**Sn**	**18 37 17.0**	**0.0**
IVA	**Berane**	**4.21**	**29**	⇑*i*Pn	**Pn**	**18 36 28.3**	**+0.1**
IVA				*e*Sn	**Sn**	**18 37 17.1**	**0.0**
LIT	**Litokhoron**	**4.22**	**76**	*e*Pn	**Pn**	**18 36 28.5**	**+0.1**
SKO	**Skopje**	**4.28**	**48**	*e*Pn	**Pn**	**18 36 28.4**	**-0.8**
SKO				*e*Sn	**Sn**	**18 37 12.5**	**-6.4**
ITM	**Ithomi**	**4.28**	**117**	*e*P	**Pn**	**18 36 29.5**	**+0.3**
GRG	**Griva**	**4.39**	**65**	*e*Pn	**Pn**	**18 36 30.1**	**-0.7**
PLE	**Pljevlja**	**4.45**	**22**	*e*Pn	**Pn**	**18 36 31.9**	**+0.2**
PLE				*e*Sn	**Sn**	**18 37 22.6**	**-0.7**
VAY	**Valandovo**	**4.65**	**61**	*e*Pn	**Pn**	**18 36 32.5**	**-2.0**
VAY				*e*Sn	**Sn**	**18 37 21.9**	**-6.6**
VAY	**Valandovo**	**4.65**	**61**	*e*Pn	**Pn**	**18 36 32.5**	**-2.0**
VAY				*e*Sn	**Sn**	**18 37 21.8**	**-6.6**
XOR	**Xorichti**	**4.69**	**86**	*e*Pn	**Pn**	**18 36 35.3**	**+0.2**
XOR				*e*Sn	**Sn**	**18 37 31.4**	**+2.0**
NVSS	**Nova Varos 2**	**4.70**	**23**	⇓*i*Pn	**Pn**	**18 36 42.3**	**+7.1**
NVSS				Sn	**Sn**	**18 37 30.3**	**+0.7**
NEO	**Neokhori**	**4.72**	**87**	*e*P	**Pn**	**18 36 37.0**	**+1.5**
KNT	**Kendrikon**	**4.82**	**64**	*e*Pn	**Pn**	**18 36 35.8**	**-1.0**
PLG	**Polygyros**	**4.99**	**75**	*e*P	**Pn**	**18 36 36.5**	**-2.8**
SOH	**Sokhos**	**5.03**	**69**	*e*Pn	**Pn**	**18 36 39.2**	**-0.7**
PAIG	**Paliouri**	**5.10**	**80**	*e*Pn	**Pn**	**18 36 40.1**	**-0.8**
VLI	**Veliai**	**5.21**	**117**	*e*P	**Pn**	**18 36 41.9**	**-0.5**
AOS	**Alonnisos**	**5.23**	**88**	*e*Pn	**Pn**	**18 36 41.6**	**-1.1**
MPAR	**Parnis Oros**	**5.26**	**100**	*e*P	**Pn**	**18 36 42.6**	**-0.5**
DIVS	**Divcibare**	**5.33**	**23**	*i* Pn	**Pn**	**18 36 42.9**	**-1.1**
DIVS				Sn	**Sn**	**18 37 44.9**	**-0.4**
OUR	**Ouranopolis**	**5.38**	**76**	*e*Pn	**Pn**	**18 36 44.2**	**-0.7**
KYTH	**Kithira**	**5.51**	**120**	*e*P	**Pn**	**18 36 45.5**	**-1.1**
BOJS	**Bojanci**	**6.44**	**348**	*i* Pn	**Pn**	**18 36 59.3**	**-0.4**
BOJS				*e*Sn	**Sn**	**18 38 10.6**	**-2.6**
GCIS	**Gornji Cirnik**	**6.75**	**351**	*i* Pn	**Pn**	**18 37 03.0**	**-1.1**
VISS	**Visnje**	**6.80**	**346**	*e*Pn	**Pn**	**18 37 04.0**	**-0.9**
VISS				*e*Sn	**Sn**	**18 38 19.5**	**-2.8**
PDKS	**Podkum**	**7.03**	**348**	*i* Pn	**Pn**	**18 37 07.2**	**-0.8**
ALN	**Alexandroupoli**	**7.03**	**73**	*e*Pn	**Pn**	**18 37 06.7**	**-1.3**
LJU	**Ljubljana**	**7.09**	**345**	*e*Pn	**Pn**	**18 37 08.2**	**-0.7**
VOY	**Vojsko**	**7.22**	**342**	*e*Pn	**Pn**	**18 37 09.4**	**-1.4**
VOY				*e*Sn	**Sn**	**18 38 29.0**	**-3.8**
IDI	**Anoyia**	**7.31**	**120**	Pn	**Pn**	**18 37 08.3**	**-3.7**
	2.6nm,0.3s,baz=304,slow=16,SNR=20						
IDI				Sn	**Sn**	**18 38 26.8**	**-8.2**
	2.1nm,0.3s,baz=332,slow=22,SNR=3.7						
CADS	**Cadrg**	**7.45**	**341**	*i* Pn	**Pn**	**18 37 12.8**	**-1.0**
ROBS	**Robic**	**7.52**	**340**	*e*Pn	**Pn**	**18 37 14.0**	**-0.8**
ROBS				*e*Sn	**Sn**	**18 38 35.2**	**-5.0**
OBKA	**Obir**	**7.54**	**346**	⇓*i*Pn	**Pn**	**18 37 14.4**	**-0.8**
	comp=Z,9.9nm,0.4s						
OBKA	**Obir**	**7.54**	**346**	⇑*i*Sn	**Sn**	**18 38 39.9**	**-0.7**
	comp=E,9.2nm,0.4s						
OBKA	**Obir**	**7.54**	**346**	⇓Pn	**Pn**	**18 37 14.4**	**-0.8**
	9.9nm,0.4s						
OBKA				Sn	**Sn**	**18 38 39.9**	**-0.7**
PERS	**Pernice**	**7.57**	**349**	*e*Pn	**Pn**	**18 37 14.4**	**-1.2**
PERS				*e*Sn	**Sn**	**18 38 35.8**	**-5.6**
ARSA	**Arzberg**	**8.12**	**352**	⇑Sn	**Sn**	**18 38 54.2**	**-1.0**
	comp=Z,1.4nm,0.4s						
ARSA	**Arzberg**	**8.12**	**352**	⇑*i*Pn	**P**	**18 37 21.9**	**-1.3**
	5.0nm,0.4s						
ARSA				Sn	**Sn**	**18 38 54.2**	**-1.0**
MOA	**Molln**	**8.88**	**347**	⇑*i*Pn	**P**	**18 37 32.8**	**-1.1**
	3.7nm,0.4s						
MOA				Sn	**Sn**	**18 39 08.5**	**-5.6**
MLR	**Muntele Rosu**	**9.04**	**43**	Pn	**P**	**18 37 37.2**	**+1.2**
	0.3nm,0.3s,baz=174,slow=15,SNR=3.7						
GERES	**GERESS Array B**	**9.94**	**347**	Pn	**P**	**18 37 45.8**	**-2.6**
	0.2nm,0.3s,baz=162,slow=14,SNR=8.0						
GERES				Sn	**Sn**	**18 39 38.2**	**-2.0**
	0.2nm,0.3s,baz=166,slow=25,SNR=3.0						
KHC	**Kasperske Hory**	**10.24**	**347**	*e*P	**P**	**18 37 50.5**	**-2.0**
KHC				*e*x	x	18 38 10.5	
HFS	**Hagfors**	**21.06**	**355**	P	**P**	**18 40 07.0**	**-1.2**
	2.1nm,0.7s,mb3.6,baz=149,slow=8.6,SNR=6.0						
EKA	**Eskdalemuir Ar**	**21.09**	**327**	P	**P**	**18 40 06.7**	**-1.9**
	0.7nm,0.6s,mb3.1,baz=135,slow=13,SNR=5.0						
NAO	**NORSAR Subarra**	**21.99**	**352**	P	**P**	**18 40 20.2**	**+2.6**
	3.5nm,1.0s,mb3.7						
NB2	**NORSAR Subarra**	**22.16**	**352**	P	**P**	**18 40 20.2**	**+0.9**
	3.5nm,1.0s,mb3.7,baz=165,slow=9.3						
NOA	**NORSAR Array B**	**22.16**	**352**	P	**P**	**18 40 20.6**	**+1.3**
	1.7nm,0.7s,mb3.6,baz=168,slow=9.4,SNR=3.9						
FINES	**FINESS Array B**	**22.93**	**11**	P	**P**	**18 40 26.8**	**0.0**
	2.5nm,0.8s,mb3.7,baz=190,slow=12,SNR=4.6						
ARCES	**ARCESS Array B**	**30.71**	**6**	P	**P**	**18 41 37.5**	**-1.2**
	1.3nm,0.7s,mb3.8,baz=188,slow=8.6,SNR=7.3						
MKAR	**Makanchi Array**	**47.01**	**58**	P	**P**	**18 43 54.6**	**-0.2**
	0.7nm,0.4s,mb4.0,baz=282,slow=7.5,SNR=19						

WEL 18 18:35:50.6±0.2, **37.37S×177.54E, h115**^{km}±2^{km}, **ML3.5**/10, **Error ellipse: s-maj=2.0km s-min=1.9km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**0.64**	**108**	PN	P	18 36 08.8	-0.2
MXZ				SN	S	18 36 22.8	-0.2
PUZ	**Puketiti**	**0.90**	**141**	PN	P	18 36 11.2	-0.3
PUZ				SN	S	18 36 26.2	-0.9
URZ	**Urewera**	**0.95**	**201**	PN	P	18 36 11.7	-0.3
URZ				SN	S	18 36 27.6	-0.3
MWZ	**Matawai**	**0.96**	**181**	PN	P	18 36 11.8	-0.2
MWZ				SN	S	18 36 27.9	-0.2
KNZ	**Kokohu**	**1.65**	**176**	PN	P	18 36 19.1	-0.8
BKZ	**Black Stump Fm**	**1.97**	**204**	PN	P	18 36 22.8	-1.1
KRVZ	**Karewarewa**	**2.28**	**220**	PN	P	18 36 28.0	0.0
CNZ	**Chateau**	**2.41**	**220**	PN	P	18 36 29.9	+0.3
FWVZ	**Far West T-bar**	**2.45**	**219**	PN	P	18 36 29.3	-0.8
MOVZ	**Moawhango**	**2.47**	**214**	PN	P	18 36 29.2	-1.3
WNVZ	**Wahianoa**	**2.48**	**217**	PN	P	18 36 30.0	-0.6
KIW	**Kapiti Island**	**4.04**	**210**	PN	P	18 36 47.9	-3.7
TCW	**Tory Channel**	**4.60**	**212**	PN	P	18 36 54.4	-4.8
KHZ	**Kahutara**	**5.90**	**210**	PN	P	18 37 11.1	-5.7

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*ATH **18** 18:39:25.1, 39.33N×20.61E, h38^{km}, MD3.0/4*
*THE **18** 18:39:25.6, 39.21N×20.46E, h10^{km}*
*CSEM **18** 18:39:25.5±0.2, 39.23N×20.58E, h12^{km}, MD3.0, Error ellipse: s-maj=5.3km s-min=2.8km az=77.0*
ISC 18 18:39:25.1±0.7, **39.23N**±0.04×**20.53E**±0.07, **h12**^{km}±7^{km}, **n10**, σ**1**^{s}**01**/15, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGT	**Igoumenitsa**	**0.34**	**333**	*e*Pg	**Pg**	**18 39 32.1**	**0.0**
IGT				*e*Sg	**Sg**	**18 39 37.7**	**+0.8**
JAN	**Janina**	**0.49**	**30**	*e*PB	**Pb**	**18 39 34.1**	**-1.0**
LKD	**Levkas**	**0.53**	**170**	*e*Pg	**Pg**	**18 39 35.3**	**-0.6**
LKD				*e*Sg	**Sg**	**18 39 43.5**	**+0.3**
KEK	**Kerkira**	**0.74**	**310**	*e*PN	**Pn**	**18 39 40.1**	**-1.0**
MEV	**Metsovon**	**0.77**	**44**	*e*Pg	**Pg**	**18 39 39.7**	**-0.9**
EVR	**Evrytania**	**1.04**	**107**	*e*PN	**Pn**	**18 39 44.8**	**-0.6**
VLS	**Valsamata**	**1.05**	**178**	*e*PN	**Pn**	**18 39 46.5**	**+0.9**
AGG	**Agios Georgios**	**1.41**	**98**	*e*Pg	**Pg**	**18 39 52.5**	**-0.9**
AGG				*e*Sg	**Sg**	**18 40 13.4**	**+1.1**
BIA	**Bitola**	**1.89**	**19**	*e*Pn	**Pn**	**18 39 59.9**	**+2.5**
BIA				*e*Pn	**Sn**	**18 40 26.0**	**+4.7**
BIA	**Bitola**	**1.89**	**19**	*e*Pn	**Pn**	**18 39 59.9**	**+2.5**
BIA				*e*Sn	**Sn**	**18 40 26.0**	**+4.7**

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*LDG **18** 18:46:26.9±0.1, 49.38N×6.86E, h1^{km}, Md2.6/1, Ml2.5/7, Error ellipse: s-maj=2.6km s-min=2.5km az=105.0, Suspected Mining induced.*
*BGR **18** 18:46:27.0±0.3, 49.37N×6.86E, h1^{km}, ML1.8/2, Error ellipse: s-maj=3.3km s-min=2.2km az=116.0*
*NEIC **18** 18:46:26.1, 49.38N×6.79E, h1^{km}, ML2.5(LDG), ML2.1(STR), After STR.*
*CSEM **18** 18:46:26.9±0.1, 49.38N×6.86E, h2^{km}, ML2.5/6, Error ellipse: s-maj=1.4km s-min=1.0km az=128.0*
ISC 18 18:46:25.2±0.4, **49.36N**±0.02×**6.82E**±0.03, **n28**, σ**0**^{s}**94**/55, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLF	**Walferdange**	**0.53**	**305**	*e*Pg	**Pg**	**18 46 37.7**	**+1.9**
	SNR=2.2						
WLF				*e*Sg	**Sg**	**18 46 44.1**	**+1.3**
	SNR=4.2						
ABH	**Alteburg**	**0.71**	**42**	Pg	**Pg**	**18 46 39.3**	**0.0**
ABH				Sg	**Sg**	**18 46 48.9**	**+0.2**
LANF	**Langenberg**	**0.75**	**120**	*e*Pg	**Pg**	**18 46 40.2**	**+0.1**
	SNR=3.4						
LANF				*e*Sg	**Sg**	**18 46 50.2**	**+0.1**
	SNR=2.2						

LANF	Langenberg	0.75	120	Pg	Pg	18 46 40.0	-0.2
LANF				Sg	Sg	18 46 52.2	+2.0
KTD	Kalmit	0.83	92	ePg	Pg	18 46 42.6	+0.8
	SNR=1.8						
CDF	Champ du Feu	0.99	162	ePn	Pn	18 46 46.3	+0.1
CDF				eSg	Sg	18 46 58.2	-0.1
	5.3nm,0.2s						
CDF	Champ du Feu	0.99	162	ePg	Pg	18 46 45.7	+0.6
CDF				ePn	Pn	18 46 46.3	+0.1
CDF				eSg	Sg	18 46 58.2	-0.1
CDF	Champ du Feu	0.99	162	ePn	Pn	18 46 46.3	+0.1
CDF				eSg	Sg	18 46 58.2	-0.1
	2.7nm,0.2s						
RFYF	Reffroy	1.15	231	ePg	Pg	18 46 49.7	+1.6
	baz=42						
RFYF				eSg	Sg	18 47 04.3	+0.9
	15nm,0.2s						
ECH	Echery	1.17	169	ePg	Pg	18 46 49.3	+0.8
	SNR=3.1						
ECH				eSg	Sg	18 47 04.4	+0.3
	SNR=4.4						
ECH	Echery	1.17	169	Pg	Pg	18 46 49.2	+0.7
ECH				Sg	Sg	18 47 05.0	+1.0
ECH	Echery	1.17	169	Pg	Pg	18 46 49.2	+0.7
ECH				Sg	Sg	18 47 04.4	+0.4
	SNR=4.4						
THEF	They Montfort	1.26	206	ePg	Pg	18 46 51.0	+0.6
	SNR=5.5						
THEF				eSg	Sg	18 47 07.2	+0.1
	SNR=2.4						
THEF	They Montfort	1.26	206	Pg	Pg	18 46 50.1	-0.3
THEF				Sg	Sg	18 47 07.6	+0.4
THEF	They Montfort	1.26	206	Pg	Pg	18 46 51.0	+0.6
	SNR=5.5						
THEF				Sg	Sg	18 47 07.6	+0.4
TOD	Tromm	1.32	78	ePg	Pg	18 46 50.4	-1.2
	SNR=3.4						
TOD				eSg	Sg	18 47 07.7	-1.4
	SNR=3.7						
TOD	Tromm	1.32	78	Pg	Pg	18 46 51.2	-0.3
TOD				Sg	Sg	18 47 07.7	-1.4
	SNR=3.7						
TNS	Taunus Mts	1.36	50	ePn	Pn	18 46 51.8	+0.3
TNS				eSg	Sg	18 47 10.1	-0.5
	SNR=2.5						
TNS	Taunus Mts	1.36	50	ePn	Pn	18 46 51.8	+0.3
TNS				eSg	Sg	18 47 10.1	-0.5
HAU	Haudompre	1.39	193	ePg	Pg	18 46 53.1	+0.1
HAU				eSg	Sg	18 47 11.2	-0.3
	7.9nm,0.2s						
BFO	Black Forest	1.43	135	ePn	Pn	18 46 53.6	+1.1
BFO				eSg	Sg	18 47 11.9	-1.1
	SNR=2.6						
BFO	Black Forest	1.43	135	ePn	Pn	18 46 53.6	+1.1
BFO				eSg	Sg	18 47 11.9	-1.1
GIVF	Givet	1.49	301	ePg	Pg	18 46 54.1	-0.9
MOF	Molkenrain	1.52	172	Pg	Pg	18 46 55.8	+0.2
MOF				Sg	Sg	18 47 16.1	+0.2
	SNR=3.5						
HINF	Hinteralfeld	1.54	179	ePg	Pg	18 46 55.7	-0.3
HINF				eSg	Sg	18 47 16.3	-0.3
	14nm,0.2s						
BAIF	Baives	1.83	293	ePg	Pg	18 47 01.8	0.0
BAIF				eSg	Sg	18 47 24.8	-1.5
	2.9nm,0.3s						
LOR	Lormes	2.88	224	ePn	Pn	18 47 12.4	-0.8
	baz=56						
LOR				eSn	Sn	18 47 46.2	-2.8
LOR				eSg	Sg	18 47 58.1	-2.9
	3.2nm,0.4s						
SSF	Saint Saulge	3.19	225	ePn	Pn	18 47 16.6	-1.1

*LDG **18** 18:56:45.8±0.2, 26.19N×96.46E, h33^{km}, Mb4.9/24,*
Ms3.3/1, Error ellipse: s-maj=8.8km s-min=5.4km az=144.0
*SKO **18** 18:56:45.0, 23.58N×94.47E*
*MOS **18** 18:56:47.2±0.8, 26.40N×96.45E, h33^{km}, mb5.0/56, Error*
ellipse: s-maj=8.5km s-min=4.5km az=125.2
*BJI **18** 18:56:53.4, 26.49N×96.37E, h94^{km}, mB4.9, mb4.8*
*NEIC **18** 18:56:55.5±0.2, 26.47N×96.38E, mb4.8/65, Error ellipse:*
s-maj=5.8km s-min=3.9km az=212.0
NEIC Felt at Shillong, India.
*IDC **18** 18:56:55.7±0.8, 26.51N×96.51E, h92^{km}±6^{km}, mb4.4/20,*
mb1 4.5/20, mb1mx4.5/23, mbtmp4.7/20, MS3.6/4,
Ms1 3.6/4, ms1mx3.3/17, Error ellipse: s-maj=14.6km
s-min=11.0km az=45.0
ISC 18 18:56:52.0±0.6**, 26.46N**±0.03×**96.40E**±0.02**, h74**^{km}±5^{km}**,**
h91^{km}±2.5^{km}**:pP-P, n303,** σ1.04/314**, mb4.7**/96**, 30C-32D,**
Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	Shillong	4.16	259	eP	P	18 57 57.0	+2.4
SHL				eS	S	18 58 41.5	-0.8
LSA	Lhasa	5.65	306	P	P	18 58 17.0	+1.8
LSA				S	S	18 59 19.8	+0.3
LSA				Smax			
	comp=N,220nm,1.1s						
LSA	Lhasa	5.65	306	⇓ePn	P	18 58 17.1	+1.9
	comp=N,590nm,0.6s						
LSA	Lhasa	5.65	306	⇓eP	P	18 58 17.1	+1.9
LSA				pmax	pmax		
	comp=Z,590nm,0.6s						
KMI	Kunming	5.87	102	P	P	18 58 21.8	+3.7
KMI				XP		18 58 41.8	
KMI				S	S	18 59 24.8	+0.1
KMI				AMB	AMB		
	comp=Z,50nm,0.8s						
KMI				LR	LR		
	comp=N,590nm,3.9s						
KMI				LR	LR		
	comp=E,430nm,3.8s						
KMI				LR	LR		
	comp=Z,360nm,7.9s						
KMI	Kunming	5.87	102	P	P	18 58 21.8	+3.7
	comp=Z,59nm,0.8s						
KMI				sP		18 58 41.8	
KMI				S	S	18 59 24.7	0.0
KMI	Kunming	5.87	102	P	P	18 58 21.8	+3.7
KMI				S	S	18 59 24.7	0.0
KMI				pmax	pmax		
	comp=Z,59nm,0.8s						
CHRT	Chiangrai	7.25	154	⇑P	P	18 58 39.0	+1.6
	comp=Z,421nm,0.8s						
CD2	Chengdu	7.84	54	eP	P	18 58 47.4	+2.0
CHG	Chiang Mai	7.96	162	⇑P	P	18 58 51.0	+3.9
	comp=Z,50nm,0.8s						
GYA	Guiyang	9.20	88	P	P	18 59 05.3	+1.3
GYA				S	S	19 00 47.8	+1.0
GYA				SCS	ScS	19 12 15.9	-0.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.7s						
GYA				AMB	AMB		
	comp=Z,220nm,5.4s						
GYA				LR	LR		
	comp=N,460nm,6.0s						
GYA				LR	LR		
	comp=E,270nm,6.0s						
GYA				LR	LR		
	comp=Z,350nm,7.2s						
GUN	Gumba	9.48	281	ePn	P	18 59 07.0	-0.9
GUN				eSn	S	19 00 48.2	-5.5
	comp=Z,622nm,0.4s						
GUN	Gumba	9.48	281	ePn	P	18 59 07.0	-0.9
	comp=Z,311nm,0.4s						
GUN				eSn	S	19 00 48.2	-5.5
PKI	Pulchoki	9.87	279	ePn	P	18 59 11.8	-1.3
PKI				eSn	S	19 00 54.3	-8.8
	comp=Z,409nm,0.6s						
BOK	Bokaro	9.89	257	eP	P	18 59 12.6	-0.9
BOK				eS	S	19 00 56.2	-7.5
KKN	Kakani	10.00	280	ePn	P	18 59 13.7	-1.2
KKN				eSn	S	19 00 57.1	-9.2
	comp=Z,622nm,0.6s						
DMN	Daman	10.14	279	ePn	P	18 59 15.2	-1.6
DMN				eSn	S	19 01 00.8	-8.8
	comp=Z,422nm,0.5s						
GKN	Gorkha	10.58	281	ePn	P	18 59 20.8	-2.1
GKN				eSn	S	19 01 12.8	-7.6
NST	Nakhon Sawan	11.28	161	⇑P	P	18 59 37.0	+4.8
	comp=Z,83nm,0.5s						
KOLN	Koldanda	11.48	279	ePn	P	18 59 32.1	-2.8
KOLN				eSn	S	19 01 32.6	-9.4
	comp=Z,339nm,0.6s						
LZH	Lanzhou	11.51	32	eP	P	18 59 35.0	-0.3
LZH				XP		19 00 04.1	
LZH				eS	S	19 01 41.9	-0.9
LZH				AMB	AMB		
	comp=Z,40nm,1.0s						
LZH				AMB	AMB		
	comp=Z,300nm,4.1s						
LZH				LR	LR		
	comp=E,710nm,7.2s						
LZH				LR	LR		
	comp=Z,1µm,10.2s						
LZH	Lanzhou	11.51	32	eP	P	18 59 35.0	-0.3
	comp=Z,42nm,1.0s						
LZH				pP		18 59 50.7	
LZH				PP	PP	18 59 55.2	+10
LZH				sP		19 00 04.1	
LZH				SS	SS	19 01 30.5	-28
LZH				eS	S	19 01 41.9	-0.9
LZH				sS		19 02 29.5	
LZH	Lanzhou	11.51	32	eP	P	18 59 35.0	-0.3
LZH				eS	S	19 01 41.9	-0.9
LZH				pmax	pmax		
	comp=Z,42nm,1.0s						
ENH	Enshi	12.13	69	ePn	P	18 59 41.7	-1.9
	comp=Z,39nm,0.8s						
ALBI	Allahabad	13.19	268	ex	x	18 59 53.5	
GTA	Gaotai	13.23	12	eP	P	18 59 55.8	-2.3
GTA				AP		19 00 06.8	
GTA				S	S	19 02 17.6	-6.2
GTA				PCP	PcP	19 05 23.8	-0.2
GTA				AMB	AMB		
	comp=Z,70nm,5.7s						
GTA				LR	LR		
	comp=N,190nm,14.1s						
GTA				LR	LR		
	comp=E,240nm,12.9s						
GTA				LR	LR		
	comp=Z,280nm,15.2s						
BLSP	Bilaspur	13.71	255	eP	P	19 00 02.1	-2.3
BLSP				AMb	AMB	19 00 04.0	
	comp=Z,34nm,0.7s						
BLSP				eS	S	19 02 25.6	-9.5
PTH	Pithoragarh	14.63	286	eP	P	19 00 15.0	-1.3
PTH				ex	x	19 02 50.0	
VIS	Vishakhapatnam	14.90	237	eP	P	19 00 22.3	+2.4
VIS				AMb	AMB	19 00 24.3	
	comp=Z,19nm,0.7s						
WHN	Wuhan	16.29	71	eP	P	19 00 38.0	+0.5
NDI	New Delhi	17.16	282	eP	P	19 00 46.5	-1.8
NDI				eS	S	19 03 38.0	-17
SMLA	Simla	17.49	290	ex	x	19 00 48.4	
SMLA				eS	S	19 03 51.3	-11
BHPL	Bhopal	17.52	264	ex	x	19 00 50.7	
BHPL				AMb	AMB	19 00 56.0	
	comp=Z,62nm,0.7s						
BHPL				eS	S	19 03 54.1	-8.9
BHK	Bhakra	18.17	290	eP	P	19 01 04.7	+4.0
WMQ	Urumqi	18.71	340	⇓iP	P	19 01 07.5	+0.5
WMQ				AP		19 01 26.0	
WMQ				XP		19 01 41.0	
WMQ				S	S	19 04 28.0	-1.6
WMQ				PCP	PcP	19 05 32.0	-0.1
WMQ				PCS		19 09 06.0	
WMQ				AMB	AMB		
	comp=Z,130nm,0.8s						
WMQ				AMB	AMB		
	comp=Z,270nm,3.2s						
WMQ				LR	LR		
	comp=N,270nm,17.7s						
WMQ				LR	LR		
	comp=E,110nm,13.8s						
WMQ				LR	LR		
	comp=Z,220nm,14.8s						
DLH	Dalhousie	18.78	294	ex	x	19 01 06.0	
DLH				ex	x	19 01 10.0	
HYB	Hyderabad	18.82	245	i P	P	19 01 09.0	+0.6
HYB				eS	S	19 04 30.5	-1.8
HYB	Hyderabad	18.82	245	eP	P	19 01 09.0	+0.6
HYB				eS	S	19 04 30.5	-1.8
THN	Thein Dam	18.96	293	ex	x	19 01 06.6	
THN				ex	x	19 04 30.8	
TIA	Tai’an	20.16	56	⇑P	P	19 01 21.4	-1.3
TIA				AMB	AMB		
	comp=Z,30nm,0.7s						
NJ2	Nanjing	20.35	69	eP	P	19 01 24.0	-0.7
NJ2				AP		19 01 39.6	
NJ2				PP	PP	19 01 47.1	0.0
NJ2				S	S	19 05 05.0	+1.4
NJ2				XS		19 05 28.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,230nm,5.1s						
NJ2				LR	LR		
	comp=N,340nm,15.7s						
NJ2				LR	LR		
	comp=E,350nm,23.1s						
NJ2				LR	LR		
	comp=Z,190nm,19.2s						
KULM	Kulim	21.43	168	eP	P	19 01 36.1	+0.4
KSH	Kashi	21.46	312	⇑iP	P	19 01 38.3	+2.4
KSH				AMB	AMB		
	comp=Z,640nm,3.5s						
SSE	Sheshan	22.19	72	P	P	19 01 43.8	+0.7
SSE				XP		19 02 18.3	
SSE				S	S	19 05 41.1	+3.4
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.6						
SSE				AMB	AMB		
	comp=Z,150nm,3.9s						
SSE				LR	LR		
	comp=N,30nm,20.0s						
SSE				LR	LR		
	comp=E,20nm,20.1s						
SSE				LR	LR		
	comp=Z,50nm,19.7s						
SSE	Sheshan	22.19	72	P	P	19 01 43.7	+0.6
	comp=Z,23nm,0.7s,mb4.6						
SSE				sP		19 02 18.2	
SSE				S	S	19 05 41.1	+3.4
SSE				sS		19 06 18.3	
SSE				LR	LR		
	comp=Z,50nm,19.7s						
POO	Poona	22.26	254	ex	x	19 01 49.5	
POO				ex	x	19 05 47.0	
KAD	Karad	22.51	251	ex	x	19 01 47.6	
SONM	Songino Array	22.74	18	P	P	19 01 48.9	+0.6
	comp=Z,2.7nm,0.6s,mb3.7,baz=204,slow=8.6,SNR=17						
SONM				ScP		19 09 08.9	
	comp=Z,0.7nm,0.7s,baz=270,slow=1.4,SNR=3.4						
SONM				LR	LR	19 11 50.8	
	comp=Z,188nm,21.5s,baz=12,slow=40						
ULHL	Ulahol	22.83	319	P	P	19 01 52.7	+3.4
	SNR=11						
ULN	Ulaanbaatar	22.95	19	⇓eP	P	19 01 50.9	+0.5
	comp=Z,9.8nm,0.8s,mb4.2						
ULN	Ulaanbaatar	22.95	19	⇓eP	P	19 01 50.9	+0.5
ULN				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.2						
MKAR	Makanchi Array	23.18	335	P	P	19 01 53.6	+1.1
	comp=Z,38nm,0.6s,mb4.9,baz=151,slow=6.7,SNR=318						
MKAR				PcP	PcP	19 05 39.6	-0.9
	comp=Z,1.1nm,0.5s,baz=203,slow=2.3,SNR=5.9						
MKAR				ScP		19 09 08.2	
	comp=Z,2.5nm,0.7s,baz=117,slow=5.4,SNR=15						
MKAR				LR	LR	19 11 56.3	
	comp=Z,140nm,18.4s,baz=184,slow=39						
KZA	Kyzart	23.32	317	P	P	19 01 57.3	+3.2
	SNR=14						
TKM2	Tokmak 2	23.62	319	P	P	19 02 00.1	+3.2
	SNR=49						
KBK	Karagaybulak	23.84	318	P	P	19 02 02.2	+3.2
	SNR=52						
UCH	Uchtor	23.86	317	P	P	19 02 02.6	+3.5
	SNR=32						
AAK	Ala-Archa	24.10	318	P	P	19 02 04.5	+2.9
	SNR=43						
FRU	Bishkek	24.14	318	eP	P	19 02 04.5	+2.5
FRU				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.0						
CHMS	Chumysh	24.16	319	P	P	19 02 04.9	+2.8
	SNR=28						
AML	Almayashu	24.31	316	P	P	19 02 06.8	+3.2
	SNR=21						
USP	Ospenovka	24.47	319	P	P	19 02 07.1	+2.0
	SNR=22						
ZAK	Zakamensk	24.47	11	⇓iP	P	19 02 06.7	+1.6
ZAK				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.2						
EKS2	Erkin-Say	24.55	317	P	P	19 02 08.3	+2.3
	SNR=96						
MOY	Mondy	25.42	7	eP	P	19 02 13.7	-0.4
SNY	Shenyang	27.07	49	⇑P	P	19 02 28.6	-0.9
SNY				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
KURK	Kurchatov	27.78	335	⇑iP	P	19 02 36.1	+0.2
	comp=Z,23nm,0.8s,mb4.8						
KURK	Kurchatov	27.78	335	⇑iP	P	19 02 36.1	+0.2
KURK				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.8						
KSM	Kuching	28.21	149	eP	P	19 02 40.1	0.0
JOW	Kunigami	28.45	82	P	P	19 02 41.2	-0.9
	comp=Z,20nm,0.7s,mb4.8,baz=110,slow=24,SNR=3.3						
ZAL	Zalesovo	28.77	346	P	P	19 02 45.4	+0.8
	comp=Z,15nm,0.6s,mb4.8,baz=309,slow=7.0,SNR=77						
ZAL				ScP		19 09 24.2	
	comp=Z,0.8nm,0.6s,baz=315,slow=4.4,SNR=4.0						
ZAL	Zalesovo	28.77	346	P	P	19 02 45.4	+0.8
ZAL				ScP		19 09 24.2	
HIA	Hailar	29.07	32	eP	P	19 02 47.3	-0.1
	comp=Z,3.4nm,0.6s,mb4.2						
HIA	Hailar	29.07	32	eP	P	19 02 47.3	-0.1
HIA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CN2	Changchun	29.18	46	eP	P	19 02 47.0	-1.4
NVS	Novosibirsk	29.96	345	⇓iP	P	19 02 54.6	-0.6
NVS				pmax	pmax		
	comp=N,16nm,0.8s						
NVS				pmax	pmax		
	comp=E,12nm,0.8s						
NVS				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.9						
MDJ	Mudanjiang	32.23	47	P	P	19 03 13.8	-1.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,3.1s						
BVAR	Borovoye Array	32.88	331	P	P	19 03 21.6	+0.8
	comp=Z,13nm,0.7s,mb4.9,baz=135,slow=10,SNR=84						
BVAR				ScP		19 09 38.1	
	comp=Z,2.3nm,0.6s,baz=144,slow=3.7,SNR=14						
BRVK	Borovoye	32.95	331	⇓iP	P	19 03 22.1	+0.7
	comp=Z,15nm,0.8s,mb4.9						
BRVK	Borovoye	32.95	331	⇓iP	P	19 03 22.1	+0.7
BRVK				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
CHKZ	Chkalovo	33.24	332	⇓iP	P	19 03 24.6	+0.7
	comp=Z,19nm,0.6s,mb5.1						
CHKZ	Chkalovo	33.24	332	⇓iP	P	19 03 24.6	+0.7
CHKZ				pmax	pmax		
	comp=Z,19nm,0.6s,mb5.1						
WBK	Wadi Bani Khal	34.19	272	⇓P	P	19 03 33.8	+1.4
BIDO	Bidbid	34.73	274	⇑P	P	19 03 38.2	+1.2
SMDO	Samad	34.91	273	⇑P	P	19 03 40.0	+1.5
JMDO	Jabal Madar	35.02	272	⇓P	P	19 03 40.9	+1.4
HOQ	Hoqain	35.45	274	⇓P	P	19 03 40.7	-2.4
MAT	Matsushiro	36.79	64	P	P	19 03 52.8	-1.5
MAT	Matsushiro	36.79	64	P	P	19 03 53.0	-1.3
MJAR	Matsushiro Arr	36.79	64	P	P	19 03 54.2	-0.2
	comp=Z,4.5nm,0.6s,mb4.5,baz=272,slow=8.5,SNR=12						
MJAR				ScP		19 09 52.0	
	comp=Z,5.3nm,0.8s,baz=248,slow=4.8,SNR=9.8						
MJAR	Matsushiro Arr	36.79	64	P	P	19 03 54.2	-0.2
MJAR				ScP		19 09 52.0	
ARU	Arti	40.38	328	⇓iP	P	19 04 25.0	+1.1
	comp=Z,37nm,0.6s,mb5.4						
ARU	Arti	40.38	328	⇓iP	P	19 04 25.1	+1.2
ARU				e		19 05 55.3	
ARU				ePPP	PPP	19 06 24.7	-4.9
ARU				eS	S	19 10 34.3	+8.0
ARU				e		19 14 24.6	
ARU				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.3						
ASAJ	Asahikawa	41.03	52	P	P	19 04 29.4	0.0
	comp=Z,7.2nm,0.5s,mb4.8,baz=267,slow=11,SNR=17						
UMR	Umm Al-Rimmam	42.85	286	eP	P	19 04 45.2	+0.7
UMR				AMb	AMB	19 04 45.8	
	comp=Z,45nm,0.6s,mb5.4						
SOKR	Solikamsk	42.87	332	⇓iP	P	19 04 44.1	-0.1
SOKR				pmax	pmax		
	comp=Z,40nm,0.9s,mb5.2						
KBD	Kabd	42.92	285	eP	P	19 04 45.9	+0.7
RDF	Al-Radifah	43.09	285	eP	P	19 04 47.1	+0.7
RDF				AMb	AMB	19 04 48.3	
	comp=Z,86nm,0.6s,mb5.7						
MIB	Mutribah	43.14	286	eP	P	19 04 47.7	+0.8
MIB				AMb	AMB	19 04 48.4	
	comp=Z,87nm,0.5s,mb5.7						
NAY	Al-Naaiem	43.30	285	eP	P	19 04 48.9	+0.6
NAY				AMb	AMB	19 04 50.3	
	comp=Z,62nm,0.7s,mb5.4						
GNI	Garni	44.70	301	eP	P	19 05 01.1	+1.8
	comp=Z,23nm,0.9s,mb4.9						
GNI	Garni	44.70	301	eP	P	19 05 01.1	+1.8
GNI				pmax	pmax		
	comp=Z,23nm,0.9s						
ZEI	Tsey	45.44	305	eP	P	19 05 04.3	-0.9
ZEI				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.9						
MZLS	Mizel	46.12	279	P	P	19 05 11.7	+0.9
KIV	Kislovodsk	46.40	306	eP	P	19 05 13.5	+0.7
	comp=Z,16nm,0.7s,mb4.9						
KIV	Kislovodsk	46.40	306	d iP	P	19 05 13.6	+0.9
KIV				pmax	pmax		
	comp=Z,16nm,0.6s,mb4.9						
VRHR	Novokhopersk	47.94	316	eP	P	19 05 24.7	0.0
VRHR				pmax	pmax		
	comp=Z,30nm,0.4s,mb5.5						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
HILS	Ha’il	48.37	284	P	P	19 05 29.1	+0.8
TIXI	Tiksi	48.71	13	eP	P	19 05 27.9	-2.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
DJNS	Zahran al Janu	49.47	271	P	P	19 05 37.7	+0.8
OBN	Obninsk	51.57	321	⇓iP	P	19 05 52.3	-0.2
OBN				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
FITZ	Fitzroy Crossi	52.61	144	eP	P	19 06 00.3	-0.4
	comp=Z,11nm,1.1s,mb4.8						
TBKS	Tabuk	52.72	286	P	P	19 06 02.3	+0.9
JOF	Joensuu	55.47	330	ep	P	19 06 21.3	+0.2
APA	Apatity	55.57	336	⇓iP	P	19 06 22.3	+0.6
APA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
AKASG	Malin Array Be	55.73	315	P	P	19 06 22.0	-1.1
	comp=Z,9.8nm,0.5s,mb5.1,baz=79,slow=7.0,SNR=62						
AKASG	Malin Array Be	55.73	315	P	P	19 06 22.0	-1.1
CFR	Carcaliu	56.77	308	⇓P	P	19 06 29.3	-1.3
CFR	Carcaliu	56.77	308	⇓P	P	19 06 29.3	-1.3
HARR	Harsova	56.96	308	⇓P	P	19 06 30.6	-1.4
HARR	Harsova	56.96	308	⇓P	P	19 06 30.6	-1.4
VRI	Vrincioaia	57.69	309	⇑P	P	19 06 37.4	+0.3
VRI	Vrincioaia	57.69	309	⇑P	P	19 06 37.4	+0.4
FINES	FINESS Array B	57.75	328	P	P	19 06 36.8	-0.5
	comp=Z,3.6nm,0.7s,mb4.5,baz=93,slow=7.5,SNR=12						
BILL	Bilibino	58.22	25	eP	P	19 06 39.1	-1.4
	comp=Z,6.3nm,1.2s,mb4.5						
BILL	Bilibino	58.22	25	eP	P	19 06 39.1	-1.4
BILL				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.5						
MLR	Muntele Rosu	58.27	309	P	P	19 06 41.4	+0.3
	comp=Z,20nm,0.8s,mb5.2,baz=83,slow=8.1,SNR=33						
MLR	Muntele Rosu	58.27	309	⇑P	P	19 06 41.5	+0.4
KEV	Kevo	58.32	337	ep	P	19 06 41.1	0.0
	comp=Z,5.0nm,0.4s,mb4.9						
KEV	Kevo	58.32	337	eP	P	19 06 41.1	0.0
KEV				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb4.9						
BURAR	Bucovina Array	58.54	311	⇑P	P	19 06 43.2	+0.2
BURAR	Bucovina Array	58.54	311	⇑P	P	19 06 43.2	+0.2
ARCES	ARCESS Array B	58.80	337	P	P	19 06 44.5	+0.1
	comp=Z,7.4nm,0.6s,mb4.9,baz=81,slow=7.6,SNR=58						
ARCES				LR	LR	19 34 07.3	
	comp=Z,37nm,21.8s,baz=176,slow=38						
ARE0	ARCESS Array S	58.80	337	eP	P	19 06 44.0	-0.4
VOIR		58.90	309	⇓P	P	19 06 45.1	-0.4
VOIR		58.90	309	⇓P	P	19 06 45.1	-0.4
WRA	Warramunga Arr	59.01	138	P	P	19 06 46.0	-0.6

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           comp=Z,26nm,0.6s,mb5.4,baz=325,slow=7.4,SNR=394
WRA                                   pP        pP        19 07 09.1 +3.2
           comp=Z,9.4nm,0.7s,baz=328,slow=7.4,SNR=5.0
WRAB  Tennant Creek       59.01 138⇑iP        P         19 06 46.0 -0.5
           comp=Z,40nm,0.6s,mb5.6
WRAB  Tennant Creek       59.01 138⇑iP        P         19 06 46.0 -0.6
WRAB                                  pmax      pmax
           comp=Z,40nm,0.6s,mb5.6
WB2   Warramunga Arr      59.02 138  eP       P         19 06 46.0 -0.6
SUW   Suwalki             59.31 319  eP       P         19 06 47.4 -0.8
SUW   Suwalki             59.31 319  eP       P         19 06 47.4 -0.8
KWP   Kalwaria            59.98 314  eP       P         19 06 53.0 +0.1
KWP   Kalwaria            59.98 314  eP       P         19 06 53.0 +0.1
SANT  Santorini           60.14 298  eP       P         19 06 52.5 -1.6
           comp=Z,14nm,0.6s,mb5.2
KOLS  Kolonicke sedl      60.34 313  i P      P         19 06 55.1 -0.3
PMG   Port Moresby        60.81 119  eP       P         19 06 58.5 -0.5
           comp=Z,13nm,0.8s,mb5.0
PMG   Port Moresby        60.81 119  eP       P         19 06 58.5 -0.5
PMG                                   pmax      pmax
           comp=Z,13nm,0.8s
CRVS  Cervenica-Dubn      60.88 313  i P      P         19 06 59.8 +0.8
STHS  Stebnicka Huta      60.95 314  i P      P         19 06 59.3 -0.2
MUN   Mundaring           61.10 161  eP       P         19 07 00.3 -0.5
VAY   Valandovo           61.35 304  eP       P         19 06 59.6 -2.7
VAY   Valandovo           61.35 304  eP       P         19 06 59.6 -2.7
ASPA  Alice Springs       61.62 141  eP       P         19 07 04.2 -0.2
OJC   Ojcow               61.77 315  eP       P         19 07 04.9 -0.1
SKO   Skopje              62.05 305  eP       P         19 07 03.7 -3.3
SKO   Skopje              62.05 305  eP       P         19 07 03.7 -3.3
BIA   Bitola              62.33 304  eP       P         19 07 06.1 -2.8
BIA   Bitola              62.33 304  eP       P         19 07 06.1 -2.8
VYHS  Vyhne               62.66 313  i P      P         19 07 10.5 -0.5
OHR   Ohrid               62.70 305  eP       P         19 07 08.7 -2.7
OHR   Ohrid               62.70 305  eP       P         19 07 08.7 -2.6
KMBO  Kilima Mbogo        63.19 254   P       P         19 07 15.7 +0.7
           comp=Z,2.6nm,0.6s,mb4.3,baz=50,slow=22,SNR=13
MORC  Moravsky Berou      63.28 315  eP       P         19 07 15.1 +0.1
           comp=Z,5.2nm,0.9s,mb4.5
MORC  Moravsky Berou      63.28 315  eP       P         19 07 15.1  0.0
MORC                                  pmax      pmax
           comp=Z,5.0nm,0.9s,mb4.4
KSP   Ksiaz               63.88 316  eP       P         19 07 19.2 +0.3
KSP   Ksiaz               63.88 316  eP       P         19 07 19.1 +0.2
DPC   Dobruska-Polom      63.95 315  eP       P         19 07 19.8 +0.4
UPC   Upice               64.11 316  eP       P         19 07 20.6 +0.2
FORT  Forrest             64.46 150  eP       P         19 07 22.9 -0.1
           comp=Z,10nm,0.6s,mb4.8
NB2   NORSAR Subarra      64.93 328   P       P         19 07 24.6 -1.0
           comp=Z,2.6nm,0.6s,mb4.2,baz=80,slow=6.5
NOA   NORSAR Array B      64.93 328   P       P         19 07 24.9 -0.6
           comp=Z,2.4nm,0.6s,mb4.2,baz=82,slow=6.4,SNR=11
NOA                                   pP        pP        19 07 47.0 +1.9
           comp=Z,2.6nm,0.7s,baz=82,slow=6.4,SNR=4.0
NOA                                   PP        PP        19 09 49.6 -1.6
           comp=Z,1.1nm,0.8s,baz=79,slow=8.5,SNR=3.7
NOA   NORSAR Array B      64.93 328   P       P         19 07 24.9 -0.6
NOA                                   pP        pP        19 07 47.0 +1.9
NOA                                   PP        PP        19 09 49.6 -1.6
NOA   NORSAR Array B      64.93 328   P       P         19 07 24.9 -0.7
NOA                                                       19 09 49.6
PVCC  Panska Ves          65.01 316  eP       P         19 07 26.2 -0.1
ARSA  Arzberg             65.09 312⇑iP        P         19 07 26.5 -0.3
           comp=Z,2.5nm,0.5s,mb4.3
ARSA  Arzberg             65.09 312⇑iP        P         19 07 26.5 -0.3
           comp=Z,2.5nm,0.5s,mb4.3
PRU   Pruhonice           65.14 315  eP       P         19 07 27.5 +0.4
NAO   NORSAR Subarra      65.15 327   P       P         19 07 24.6 -2.4
           comp=Z,2.6nm,0.6s,mb4.2
NAO   NORSAR Subarra      65.15 327   P       P         19 07 24.6 -2.4
NAO                                   pmax      pmax
           comp=Z,3.0nm,0.6s,mb4.3
BRG   Berggiesshubel      65.33 316  eP       P         19 07 28.6 +0.3
           comp=Z,6.7nm,0.8s,mb4.5
BRG   Berggiesshubel      65.33 316  eP       P         19 07 28.6 +0.3
BRG                                   pmax      pmax
           comp=Z,7.0nm,0.8s,mb4.5
PERS  Pernice             65.50 312  eP       P         19 07 29.2 -0.3
MOA   Molln               65.79 313⇑iP        P         19 07 31.1 -0.2
           comp=Z,7.8nm,0.5s,mb4.8
CLL   Collm               65.82 317   P       P         19 07 31.0 -0.4
CLL   Collm               65.82 317  i P      P         19 07 31.0 -0.4
VISS  Visnje              65.88 311  eP       P         19 07 31.8 -0.2
OBKA  Obir                65.91 312⇑eP        P         19 07 31.1 -0.9
           comp=Z,20nm,1.5s,mb4.7
GEC2  GERESS Array S      65.93 314  eP       P         19 07 32.5 +0.3
           comp=Z,7.0nm,0.6s,mb4.7
GEC2  GERESS Array S      65.93 314  eP       P         19 07 32.5 +0.3
GEC2                                  pmax      pmax
           comp=Z,7.0nm,0.6s,mb4.7
GERES GERESS Array B      65.93 314   P       P         19 07 32.5 +0.3
           comp=Z,5.2nm,0.5s,mb4.6,baz=66,slow=6.3,SNR=67
GERES                                 pP        pP        19 07 56.3 +4.6
           comp=Z,2.8nm,0.9s,baz=76,slow=5.5,SNR=3.3
GERES                                 LR        LR        19 39 49.6
           comp=Z,57nm,18.1s,baz=140,slow=39
KHC   Kasperske Hory      65.94 314  eP       P         19 07 32.4 +0.2
WET   Wettzell            66.39 315  eP       P         19 07 35.4 +0.3
           comp=Z,10.0nm,0.6s,mb4.8
WET   Wettzell            66.39 315  eP       P         19 07 35.4 +0.3
WET                                   pmax      pmax
           comp=Z,10.0nm,0.6s,mb4.8
NKC   Novy Kostel         66.40 316  eP       P         19 07 35.2 +0.1
ROBS  Robic               66.67 311  eP       P         19 07 36.0 -0.9
MOX   Moxa                66.82 316  i P      P         19 07 37.9 +0.1
MOX   Moxa                66.82 316  eP       P         19 07 37.9 +0.1
BSEG  Bad Segeberg        66.83 320  eP       P         19 07 38.7 +1.0
CTA   Charters Tower      66.92 129  eP       P         19 07 38.7 -0.2
           comp=Z,10nm,0.7s,mb4.8
CTA   Charters Tower      66.92 129  eP       P         19 07 38.7 -0.2
CTA                                   pmax      pmax
           comp=Z,10.0nm,0.7s
CTAO  Charters Tower      66.92 129⇑iP        P         19 07 38.3 -0.6
           comp=Z,13nm,0.8s,mb4.8
CTAO  Charters Tower      66.92 129⇑iP        P         19 07 38.3 -0.6
CTAO                                  pmax      pmax
           comp=Z,13nm,0.8s,mb4.8
CLZ   Clausthal           67.29 318  eP       P         19 07 41.2 +0.5
           comp=Z,15nm,0.6s,mb5.0
CLZ   Clausthal           67.29 318  eP       P         19 07 41.2 +0.5
CLZ                                   pmax      pmax
           comp=Z,15nm,0.6s,mb5.0
GRA1  Grafenberg Arr      67.30 315  eP       P         19 07 41.8 +1.0
           comp=Z,10.0nm,1.2s,mb4.5
GRF   Grafenberg Arr      67.30 315  eP       P         19 07 41.8 +1.0
           comp=Z,10.0nm,1.2s,mb4.5
GRF   Grafenberg Arr      67.30 315  eP       P         19 07 41.8 +1.0
GRF                                   pmax      pmax
           comp=Z,10.0nm,1.2s,mb4.5
GRF   Grafenberg Arr      67.30 315  eP       P         19 07 41.8 +1.0
GRF                                   pmax      pmax
           comp=Z,10.0nm,1.2s,mb4.5
FUR   Furstenfeldbru      67.66 314  eP       P         19 07 43.7 +0.7
           comp=Z,17nm,0.6s,mb5.0
FUR   Furstenfeldbru      67.66 314  eP       P         19 07 43.7 +0.7
FUR                                   pmax      pmax
           comp=Z,17nm,0.6s,mb5.0
WTTA  Wattenberg          67.66 313⇓iP        P         19 07 42.7 -0.4
           comp=Z,6.6nm,0.5s,mb4.7
WTTA  Wattenberg          67.66 313⇓iP        P         19 07 42.6 -0.4
           comp=Z,6.6nm,0.5s,mb4.7
WTTA  Wattenberg          67.66 313⇓iP        P         19 07 42.7 -0.3
WTTA                                  pmax      pmax
           comp=Z,7.0nm,0.5s,mb4.8
WATA  Walderalm           67.68 313⇓eP        P         19 07 43.1 -0.1
           comp=Z,3.4nm,0.5s,mb4.5
WATA  Walderalm           67.68 313⇓eP        P         19 07 43.1 -0.1
WATA                                  pmax      pmax
           comp=Z,3.0nm,0.5s,mb4.4
SQTA  Sankt Quirin        67.95 313⇑iP        P         19 07 44.3 -0.6
           comp=Z,9.6nm,0.5s,mb4.9
SQTA  Sankt Quirin        67.95 313⇑iP        P         19 07 44.3 -0.6
           comp=Z,9.6nm,0.5s,mb4.9
SQTA  Sankt Quirin        67.95 313⇑iP        P         19 07 44.3 -0.6
SQTA                                  pmax      pmax
           comp=Z,10.0nm,0.5s,mb4.9
MOTA  Moosalm             67.98 313⇑eP        P         19 07 44.8 -0.3
           comp=Z,7.6nm,0.7s,mb4.7
MOTA  Moosalm             67.98 313⇑eP        P         19 07 44.8 -0.3
MOTA                                  pmax      pmax
           comp=Z,8.0nm,0.7s,mb4.7
DAVA  Damuels             68.80 313⇓iP        P         19 07 50.0 -0.1
           comp=Z,5.8nm,0.5s,mb4.7
STU   Stuttgart           68.83 315  eP       P         19 07 50.8 +0.5
           comp=Z,16nm,0.7s,mb5.0
STU   Stuttgart           68.83 315  eP       P         19 07 50.8 +0.5
STU                                   pmax      pmax
           comp=Z,16nm,0.7s,mb5.0
TNS   Taunus Mts          68.89 317  eP       P         19 07 51.2 +0.6
           comp=Z,8.0nm,0.7s,mb4.7
TNS   Taunus Mts          68.89 317  eP       P         19 07 51.2 +0.6
TNS                                   pmax      pmax
           comp=Z,8.0nm,0.7s,mb4.7
BFO   Black Forest        69.50 315  eP       P         19 07 54.5  0.0
           comp=Z,3.0nm,0.9s,mb4.1
BFO   Black Forest        69.50 315  eP       P         19 07 54.5  0.0
BFO                                   pmax      pmax
           comp=Z,3.0nm,0.9s,mb4.1
CDF   Champ du Feu        70.15 315  eP       P         19 07 58.2 -0.2
           comp=Z,6.5nm,0.6s,mb4.4
CDF   Champ du Feu        70.15 315  eP       P         19 07 58.2 -0.2
CDF                                   pmax      pmax
           comp=Z,3.0nm,0.6s,mb4.3
WLF   Walferdange         70.47 316  eP       P         19 08 01.4 +1.1
           comp=Z,20nm,0.7s,mb5.0
WLF   Walferdange         70.47 316  eP       P         19 08 01.4 +1.1
WLF                                   pmax      pmax
           comp=Z,20nm,0.7s,mb5.1
HINF  Hinteralfeld        70.60 314  eP       P         19 08 00.6 -0.5
LPG   La Plagne           71.41 312  eP       P         19 08 06.7 +0.7
           comp=Z,23nm,0.8s,mb4.8
LPG   La Plagne           71.41 312  eP       P         19 08 06.7 +0.7
LPG                                   pmax      pmax
           comp=Z,12nm,0.8s,mb4.8
LPL   La Plagne           71.41 312  eP       P         19 08 06.4 +0.4
           comp=Z,22nm,0.6s,mb4.8
LPL   La Plagne           71.41 312  eP       P         19 08 06.4 +0.4
LPL                                   pmax      pmax
           comp=Z,11nm,0.6s,mb4.9
SBF   Sospel              71.48 310  eP       P         19 08 06.3 -0.1
MEZF  Maizieres J'vi      71.53 315  eP       P         19 08 06.8 +0.2
           comp=Z,25nm,0.6s,mb4.9
BAIF  Baives              71.54 317  eP       P         19 08 06.3 -0.4
BNI   Bardonecchia        71.60 312  eP       P         19 08 06.9 -0.2
           comp=Z,3.6nm,0.6s,mb4.4
BNI   Bardonecchia        71.60 312  eP       P         19 08 06.9 -0.3
BNI                                   pmax      pmax
           comp=Z,4.0nm,0.6s,mb4.4
MBDF  Montbardon          71.65 311  eP       P         19 08 06.9 -0.5
           comp=Z,12nm,0.6s,mb4.6
MBDF  Montbardon          71.65 311  eP       P         19 08 06.9 -0.5
MBDF                                  pmax      pmax
           comp=Z,6.0nm,0.6s,mb4.6
ORIF  Oris-en-Rattie      72.18 312  eP       P         19 08 10.2 -0.4
           comp=Z,12nm,0.8s,mb4.5
ORIF  Oris-en-Rattie      72.18 312  eP       P         19 08 10.2 -0.4
ORIF                                  pmax      pmax
           comp=Z,6.0nm,0.8s,mb4.5
STKA  Stephens Creek      72.27 141  eP       P         19 08 11.1 -0.2
           comp=Z,9.8nm,0.6s,mb4.8
STKA  Stephens Creek      72.27 141   P       P         19 08 10.8 -0.5
           comp=Z,14nm,0.7s,mb4.9,baz=321,slow=6.8,SNR=32
LOR   Lormes              72.70 315  eP       P         19 08 13.2 -0.4
           comp=Z,5.7nm,0.6s,mb4.3
LOR   Lormes              72.70 315  eP       P         19 08 13.2 -0.4
LOR                                   pmax      pmax
           comp=Z,3.0nm,0.6s,mb4.3
SMRF  Simiane la Rot      72.71 311  eP       P         19 08 14.0 +0.3
SMF   Signal de Mont      72.93 314  eP       P         19 08 14.8 -0.1
           comp=Z,11nm,0.6s,mb4.6
SMF   Signal de Mont      72.93 314  eP       P         19 08 14.8 -0.1
SMF                                   pmax      pmax
           comp=Z,5.0nm,0.6s,mb4.5
SSF   Saint Saulge        73.00 314  eP       P         19 08 15.3  0.0
           comp=Z,7.5nm,0.7s,mb4.6
SSF   Saint Saulge        73.00 314  eP       P         19 08 15.3  0.0
SSF                                   pmax      pmax
           comp=Z,8.0nm,0.7s,mb4.7
VIVF  Saint-Julien-l      73.01 312  eP       P         19 08 15.5 +0.1
           comp=Z,4.4nm,0.6s,mb4.2
VIVF  Saint-Julien-l      73.01 312  eP       P         19 08 15.5 +0.1
VIVF                                  pmax      pmax
           comp=Z,2.0nm,0.6s,mb4.1
AVF   Avril sur Loir      73.19 314  eP       P         19 08 16.4 -0.1
           comp=Z,12nm,0.8s,mb4.5
AVF   Avril sur Loir      73.19 314  eP       P         19 08 16.4 -0.1
AVF                                   pmax      pmax
           comp=Z,6.0nm,0.8s,mb4.5
BGF   Bois d'Agland       73.60 314  eP       P         19 08 18.2 -0.7
LASF  Ste Croix           73.83 311  eP       P         19 08 20.6 +0.3
           comp=Z,25nm,1.1s,mb4.6
TCF   Toulx Ste Croi      74.11 314  eP       P         19 08 22.0 +0.1
           comp=Z,10nm,0.6s,mb4.4
TCF   Toulx Ste Croi      74.11 314  eP       P         19 08 22.0 +0.1
TCF                                   pmax      pmax
           comp=Z,5.0nm,0.6s,mb4.4
LDF   La Druitiere        74.71 317  eP       P         19 08 25.3 +0.1
           comp=Z,12nm,0.7s,mb4.4
LDF   La Druitiere        74.71 317  eP       P         19 08 25.3 +0.1
LDF                                   pmax      pmax
           comp=Z,6.0nm,0.7s,mb4.4
CAF   Calviac             74.71 313  eP       P         19 08 25.2 -0.1
RJF   Les Rejaudoux       74.93 313  eP       P         19 08 26.6  0.0
           comp=Z,28nm,1.0s,mb4.7
RJF   Les Rejaudoux       74.93 313  eP       P         19 08 26.6  0.0
RJF                                   pmax      pmax
           comp=Z,14nm,1.0s,mb4.7
MTLF  Montolieu           75.21 311  eP       P         19 08 28.4 +0.2
           comp=Z,18nm,1.0s,mb4.4
MTLF  Montolieu           75.21 311  eP       P         19 08 28.4 +0.2
MTLF                                  pmax      pmax
           comp=Z,9.0nm,1.0s,mb4.5
LFF   La Frestale         75.58 313  eP       P         19 08 30.9 +0.6
           comp=Z,20nm,0.9s,mb4.6
LFF   La Frestale         75.58 313  eP       P         19 08 30.9 +0.6
LFF                                   pmax      pmax
           comp=Z,10.0nm,0.9s,mb4.5
SGMF  Saint Gilles        76.33 317  eP       P         19 08 35.0 +0.5
           comp=Z,38nm,0.9s,mb4.8
SGMF  Saint Gilles        76.33 317  eP       P         19 08 35.0 +0.5
SGMF                                  pmax      pmax
           comp=Z,19nm,0.9s,mb4.8
COLA  College             76.44  23  eP       P         19 08 34.3 -0.4
           comp=Z,3.7nm,0.6s,mb4.3
COLA  College             76.44  23  eP       P         19 08 34.3 -0.5
COLA                                  pmax      pmax
           comp=Z,4.0nm,0.6s,mb4.3
ROSF  Rostrenen           76.73 317  eP       P         19 08 36.6 -0.1
           comp=Z,24nm,0.8s,mb4.7
ROSF  Rostrenen           76.73 317  eP       P         19 08 36.6 -0.1
ROSF                                  pmax      pmax
           comp=Z,12nm,0.8s,mb4.7
ILAR  Eielson Array       76.84  23   P       P         19 08 36.0 -1.1
           comp=Z,1.1nm,0.6s,mb3.8,baz=294,slow=4.1,SNR=14
QUIF  Quistinic           76.84 317  eP       P         19 08 37.3 -0.1
LSZ   Lusaka              78.16 246  eP       P         19 08 45.2  0.0
           comp=Z,3.2nm,0.4s,mb4.4
LSZ   Lusaka              78.16 246  eP       P         19 08 45.2 -0.1
LSZ                                   pmax      pmax
           comp=Z,3.0nm,0.4s,mb4.4
INK   Inuvik              78.65  17  eP       P         19 08 47.1 +0.1
           comp=Z,17nm,1.4s,mb4.7
INK   Inuvik              78.65  17  eP       P         19 08 47.1 +0.2
INK                                   pmax      pmax
           comp=Z,17nm,1.4s
EVO   Evora               84.27 310  eP       P         19 09 17.2 +0.3
           comp=Z,65nm,1.5s,mb4.9
LBTB  Lobatse             85.35 239  eP       P         19 09 23.4 +0.9
           comp=Z,8.1nm,0.5s,mb4.9
LBTB  Lobatse             85.35 239  eP       P         19 09 23.4 +0.9
LBTB                                  pmax      pmax
           comp=Z,8.0nm,0.5s,mb4.9
BOSA  Boshof              87.50 236   P       P         19 09 34.0 +1.1
           comp=Z,2.3nm,0.6s,mb4.4,baz=67,slow=5.8,SNR=16
BOSA  Boshof              87.50 236  eP       P         19 09 33.6 +0.7
           comp=Z,3.3nm,0.8s,mb4.4
BOSA  Boshof              87.50 236  eP       P         19 09 33.7 +0.7
BOSA                                  pmax      pmax
           comp=Z,3.0nm,0.8s,mb4.4
YKA   Yellowknife Ar      87.95  14   P       P         19 09 34.1 -0.2
           comp=Z,1.2nm,0.5s,mb4.2,baz=335,slow=4.9,SNR=7.4
CASY  Casey               93.07 174  eP       P         19 09 57.9 -0.2
           comp=Z,6.5nm,0.6s,mb5.1
DBIC  Dimbokro            97.05 281   P       P         19 10 17.1 -0.3
           comp=Z,1.1nm,0.4s,mb4.6,baz=231,slow=9.8,SNR=5.5
SNAA  Sanae              117.77 201   P       PKPdf     19 15 29.6 +0.5
SNAA  Sanae              117.77 201   PKP     PKPdf     19 15 29.2 +0.1
           comp=Z,0.3nm,0.7s,baz=351,slow=2.6,SNR=6.7
VNA2  Neumayer--Watz     119.26 201⇑iP        PKPdf     19 15 34.7 +2.7
VNA2  Neumayer--Watz     119.26 201⇑i         PKPdf     19 15 51.5  +19
VNA1  Neumayer--Stat     119.56 202   P       PKPdf     19 15 35.1 +2.5
VNA3  Neumayer Olymp     119.97 201⇑iP        PKPdf     19 15 35.4 +2.0
SDV   Santo Domingo      142.68 339   PKhKP             19 16 14.2
           comp=Z,3.7nm,0.6s,baz=75,slow=4.5,SNR=7.1
BDFB  Brasilia           145.20 281   PKPbc   PKPbc     19 16 23.5 +1.4
           comp=Z,5.4nm,0.5s,baz=98,slow=2.3,SNR=9.8
ROSC  El Rosal           147.60 343   PKPbc   PKPdf     19 16 31.1 +5.3
           comp=Z,26nm,0.6s,baz=260,slow=23,SNR=16
USHA  Ushuaia            149.54 197   PKPbc   PKPdf     19 16 34.5 +6.8
           comp=Z,6.5nm,0.6s,baz=203,slow=10,SNR=6.7
SAML  Samuel             153.97 308  ePKPbc   PKPdf     19 16 44.9  +10
```

MAN 18 18:58:07.7, 19.00N×121.42E, h29^{km}, mb3.7, ML2.5, MS2.0, Luzon

```
Code  Station Name         Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
SGCP  Mt. Cagua           0.95 142  eP       Pn        18 58 25.3  0.0
APYP  Conner              1.14 189  eP       Pn        18 58 27.0 -1.0
APYP                                eS       Sn        18 58 42.6 -0.1
CVP   Callao Caves        1.34 164  eP       Pn        18 58 31.0 +0.2
ABRA  Dolores             1.50 207  eP       Pn        18 58 32.9 -0.2
ABRA                                eS       Sn        18 58 52.6 +0.8
BBP   Basco               1.52  19  eP       Pn        18 58 33.0 -0.5
BBP                                 eS       Sn        18 58 52.4 -0.1
CAUP  Cauayan             2.08 169  eP       Pn        18 58 41.8 +0.5
CAUP                                eS       Sn        18 59 18.8  +12
```

GUC 18 19:04:24.1±0.7, 22.86S×68.03W, h147^{km}±6^{km}, ML3.7, 2C, Northern Chile

```
Code  Station Name         Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
SPCH  San Pedro de A      0.16 251⇑iP        P         19 04 44.5 +0.2
SPCH                                i S      S         19 05 00.6 +1.0
SPCH                                 AMP               19 05 01.5
           comp=E,416nm,0.6s
CEN1  Los Morros          2.06 255⇑iP        P         19 05 02.4 +2.2
CEN1                                i S      S         19 05 31.3 +3.4
CEN1                                 AMP               19 05 32.6
           comp=N,428nm,0.2s
ANCH  Antofagasta         2.34 249  eP       P         19 05 03.6 +0.1
ANCH                                i S      S         19 05 33.1 -0.7
ANCH                                 AMP               19 05 35.8
           comp=N,1µm,0.1s
CPN1  Cerro Paranal       2.80 231  eP       P         19 05 10.4 +1.0
CPN1                                i S      S         19 05 45.3 +1.2
CPN1                                 AMP               19 05 47.0
           comp=N,383nm,0.4s
CDCH  Caldera             4.91 211  i S      S         19 06 32.3 -1.2
```

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*ISK **18** 19:58:38.0, 39.91N×41.25E, h5^{km}, MD3.5*

*CSEM **18** 19:58:38.0±0.0, 39.91N×41.25E, h5^{km}, MD3.5, Error ellipse: s-maj=0.9km s-min=0.6km az=7.0, After ISK*

ISC 18 19:58:39.0±0.5**, 39.91N**±0.04×**41.35E**±0.04**, h5^{km}, n15,** σ**1^{s}28**/22**, Turkey**

```
Code  Station Name         Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
EZM   Erzurum             0.01  92  ePG      Pg        19 58 39.6 -0.3
ERZM  Erzurum             0.01  91  i P      Pg        19 58 38.6 -1.3
ERZM                                i S      Sg        19 58 39.4 -1.2
BNGL  BINGOL              0.96 189  i P      Pb        19 58 56.1 -1.8
BNGL                                i S      Sb        19 59 10.5 -0.2
BINT  Bingol              1.23 213  ePN      Pn        19 59 01.3 -1.5
KARS  Kars                1.51  62  ePN      Pn        19 59 08.1 +1.3
GUMT  Gumushane           1.54 292  i PN     Pn        19 59 06.7 -0.6
GUMT                                i SN     Sn        19 59 27.4 -0.4
MACK  Trabzon             1.59 311  i P      Pn        19 59 07.5 -0.6
MACK                                i S      Sb        19 59 30.0 +1.1
KELT  Kelkit              1.63 279  i P      Pn        19 59 10.1 +1.5
KELT                                i S      Sb        19 59 34.1 +4.1
DIGO  Kars                1.63  71  i P      Pn        19 59 06.8 -1.8
DIGO                                i S      Sb        19 59 28.3 -1.8
BTMT  Batman              1.71 176  ePN      Pn        19 59 11.5 +1.7
PTK   Pertek              1.82 237  ePN      Pn        19 59 11.2 -0.2
VANB  Van                 2.05 129  ePN      Pn        19 59 15.9 +1.2
TVAN  Van                 2.11 130  i P      Pn        19 59 16.2 +0.9
TVAN                                i S      Sn        19 59 47.9 +5.6
CLDR  Caldiran            2.12 110  ePN      Pn        19 59 17.3 +1.6
GNI   Garni               2.62  84  ePN      Pn        19 59 24.8 +2.2
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*NEIC **18** 20:16:41.3, 32.98S×72.18W, h29^{km}, ML3.3(GUC), After GUC.*

GUC 18 20:16:41.3±0.8**, 32.98S×72.18W, h29^{km}**±3^{km}**, MD3.8, ML3.3, 6C-3D, Off coast of central Chile**

```
Code  Station Name         Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
LCCH  Las Cruces          0.71 134⇑iP        Pb        20 16 54.5 -0.5
LCCH                                i S      Sb        20 17 03.8 -0.6
ROCH  El Roble            0.98  90⇑iP        Pn        20 16 58.9 -0.3
LNV   Longovilo           1.16 147  eP       Pn        20 17 01.6 -0.2
LNV                                 i S      Sn        20 17 16.6 -0.2
TACH  Talagante           1.23 123⇑iP        Pn        20 17 02.8 -0.1
TACH                                i S      Sn        20 17 19.3 +0.7
CHNG  Los Chungos         1.24  28  i P      Pn        20 17 03.0 +0.1
CHNG                                i S      Sn        20 17 19.0 +0.2
CHNG                                 AMP               20 17 21.1
           comp=E,258nm,0.4s
RCDM  Rinconada Maip      1.25 114  eP       Pn        20 17 02.8 -0.3
RCDM                                i S      Sn        20 17 19.8 +0.6
RCDM                                 AMP               20 17 22.2
           comp=N,717nm,0.1s
PEL   Peldehue            1.26  98⇑iP        Pn        20 17 03.8 +0.5
PEL                                 i S      Sn        20 17 20.3 +0.9
JACH  Jahuel              1.37  78⇑iP        Pn        20 17 04.9 +0.1
JACH                                i S      Sn        20 17 24.9 +2.9
ANTU  Antumapu            1.42 115  eP       Pn        20 17 06.3 +0.8
ANTU                                i S      Sn        20 17 24.7 +1.4
CLCH  Cerro Calan         1.44 107  eP       Pn        20 17 06.9 +1.1
CLCH                                i S      Sn        20 17 26.1 +2.4
CLCH                                 AMP               20 17 32.1
           comp=E,1µm,0.4s
PCH   Pirque              1.53 115  eP       Pn        20 17 07.9 +0.8
PCH                                 i S      Sn        20 17 28.1 +1.9
CHCH  Chadas Angostu      1.59 127⇓iP        Pn        20 17 08.8 +0.9
CHCH                                i S      Sn        20 17 29.4 +1.8
FCH   Farellones          1.62 103⇓iP        Pn        20 17 09.3 +1.0
FCH                                 i S      Sn        20 17 30.7 +2.3
FCH                                  AMP               20 17 37.4
           comp=E,659nm,0.3s
CACH  El Canelo           1.73 131⇓iP        Pn        20 17 11.5 +1.5
CACH                                i S      Sn        20 17 35.0 +3.6
LMEL  Las Melosas         1.86 118  i P      Pn        20 17 13.3 +1.4
LMEL                                i S      Sn        20 17 36.7 +2.1
LMEL                                 AMP               20 17 44.2
           comp=N,1µm,0.3s
SFDO  San Fernando        1.89 150  eP       Pn        20 17 13.3 +1.0
SFDO                                i S      Sn        20 17 37.1 +1.7
CICH  Cipreses            1.98 133⇑iP        Pn        20 17 14.6 +1.0
CICH                                i S      Sn        20 17 41.1 +3.4
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*NEIC **18** 20:23:50.8±1.7, 10.94S×162.42E, h58^{km}±14^{km}, mb4.1/6, Error ellipse: s-maj=16.6km s-min=13.1km az=70.0*

*IDC **18** 20:23:51.1±3.0, 10.98S×162.46E, h66^{km}±24^{km}, mb3.7/5, mb1 4.0/9, mb1mx3.8/17, mbtmp4.2/9, MS3.6/9, Ms1 3.6/9, ms1mx3.4/26, Error ellipse: s-maj=28.7km s-min=17.3km az=67.0*

ISC 18 20:23:49.9±1.8**, 11.05S**±0.08×**162.4E**±0.1**, h69^{km}**±15^{km}**, n24,** σ**1^{s}03**/25**, mb4.2**/11**, Bougainville - Solomon Islands region**

```
Code  Station Name         Δ°   AZ°    Phase ID           Time      Res
                                      Op      ISC       h  m  s    ISC
HNR   Honiara             2.89 304  P        P         20 24 33.8 -1.0
           136nm,0.3s,baz=148,slow=1.9,SNR=66
HNR                                 S        S         20 25 09.8 +1.3
           246nm,0.3s,baz=161,slow=21,SNR=16
HNR                                 LR       LR        20 25 16.5
           comp=Z,358nm,20.8s,baz=77,slow=29
HNR   Honiara             2.89 304  ePn      P         20 24 33.3 -1.5
HNR                                 eSn      S         20 25 08.2 -0.3
DZM   Mont Dzumac        11.63 161  P        P         20 26 34.8 -0.2
           0.6nm,0.3s,baz=292,slow=23,SNR=25
DZM                                 S        S         20 28 39.2 -4.7
           0.4nm,0.3s,baz=124,slow=23,SNR=3.8
DZM                                 LR       LR        20 30 05.8
           comp=Z,264nm,20.5s,baz=16,slow=32
```

DZM	Mont Dzumac	11.63	161	P	P	20 26 34.8	-0.2
DZM				S	S	20 28 39.2	-4.7
DZM				LR	LR	20 30 05.8	
PMG	Port Moresby	15.08	275	P	P	20 27 22.8	+2.3
	0.2nm,0.3s,baz=101,slow=7.7,SNR=3.2						
PMG	Port Moresby	15.08	275	eP	P	20 27 22.0	+1.5
	16nm,1.0s						
CTA	Charters Tower	17.94	238	P	P	20 27 59.0	+2.6
	0.7nm,0.3s,baz=74,slow=13,SNR=8.4						
CTA				LR	LR	20 33 37.4	
	comp=Z,121nm,18.2s,baz=235,slow=32						
CTAO	Charters Tower	17.94	238	eP	P	20 27 59.0	+2.6
	3.1nm,0.5s						
STKA	Stephens Creek	28.25	220	P	P	20 29 39.2	+0.4
	1.5nm,0.6s,mb3.7,baz=40,slow=7.9,SNR=5.4						
STKA				LR	LR	20 40 24.1	
	comp=Z,157nm,19.5s,baz=26,slow=35						
WRAB	Tennant Creek	28.39	248	eP	P	20 29 39.6	-0.6
	1.3nm,0.4s,mb3.8						
WB2	Warramunga Arr	28.39	248	eP	P	20 29 39.3	-0.9
WRA	Warramunga Arr	28.41	248	P	P	20 29 39.4	-0.9
	1.0nm,0.3s,mb3.8,baz=77,slow=9.1,SNR=32						
KAKA	Kakadu	29.35	264	eP	P	20 30 06.1	+17
	11nm,0.5s,mb4.7						
ASPA	Alice Springs	29.88	241	eP	P	20 29 52.1	-1.3
GUMO	Guam	30.02	324	LR	LR	20 41 58.5	
	comp=Z,78nm,18.2s,baz=107,slow=36						
FITZ	Fitzroy Crossi	36.20	254	eP	P	20 30 47.5	-0.7
	12nm,0.6s,mb5.0						
FITZ	Fitzroy Crossi	36.20	254	LR	LR	20 45 21.0	
	comp=Z,112nm,18.8s,baz=318,slow=36						
NWAO	Narrogin (SRO)	46.75	235	LR	LR	20 51 16.1	
	comp=Z,96nm,18.6s,baz=239,slow=35						
PET	Petropavlovsk	63.90	357	eP	P	20 34 18.0	+0.3
	43nm,0.9s,mb5.3						
VNDA	Vanda	66.46	180	eP	P	20 34 35.3	+1.5
	1.5nm,0.8s,mb3.9						
ULN	Ulaanbaatar	76.40	325	eP	P	20 35 34.0	+0.4
	10.0nm,1.5s,mb4.3						
SONM	Songino Array	76.75	325	P	P	20 35 35.8	+0.2
	1.7nm,0.7s,mb3.9,baz=143,slow=6.1,SNR=14						
SONM				LR	LR	21 05 27.5	
	comp=Z,71nm,18.9s,baz=91,slow=32						
ILAR	Eielson Array	84.59	19	P	P	20 36 16.9	+0.3
	0.3nm,0.6s,mb3.4,baz=242,slow=5.8,SNR=5.2						
MKAR	Makanchi Array	91.28	317	P	P	20 36 48.5	-0.7
	0.5nm,0.5s,mb3.9,baz=88,slow=6.7,SNR=4.7						
MKAR				LR	LR	21 19 25.6	
	comp=Z,26nm,20.8s,baz=185,slow=36						

ISK 18 20:32:36.5, 36.93N×27.73E, h12^{km}, MD3.2
ATH 18 20:32:36.6, 36.97N×27.77E, h27^{km}±3^{km}, MD3.4/6
NEIC 18 20:32:36.6, 36.97N×27.77E, h27^{km}, MD3.4(ATH), After ATH.
CSEM 18 20:32:36.6±0.1, 36.94N×27.73E, h10^{km}, MD3.2, Error ellipse: s-maj=2.4km s-min=1.8km az=170.0
ISC 18 20:32:36.9±0.4, **36.92N**±0.03×**27.73E**±0.04, **h13**^{km}±4^{km}, **n19**, σ**0^{s}76**/28, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	Datca	0.22	212	iPG	Pg	20 32 41.5	-0.4
DAT				iSG	Sg	20 32 46.0	+0.8
BDRM	Kayabasi	0.27	304	iP	Pg	20 32 42.8	+0.1
BDRM				iS	Sg	20 32 46.9	+0.2
BODT	Bodrum	0.36	294	PG	Pg	20 32 43.9	-0.6
BODT				SG	Sg	20 32 49.9	+0.3
MLSB	Milas	0.38	6	iPG	Pg	20 32 44.4	-0.4
MLSB				iSG	Sg	20 32 50.4	+0.2
YER	Yerkesik	0.50	64	iPG	Pg	20 32 46.8	-0.3
YER				iSG	Sg	20 32 53.6	-0.2
DALT	Dalyan (Mudla)	0.75	101	ePG	Pg	20 32 50.8	-1.1
AYDN	Tasoluk	0.75	9	iP	Pb	20 32 51.3	0.0
AYDN				iS	Sb	20 33 01.1	-0.1
ARG	Arkhangelos	0.77	155	ePN	Pn	20 32 52.3	-0.9
ARG				eSN	Sn	20 33 04.2	-0.3
SMG	Samos	1.06	318	ePN	Pn	20 32 57.0	-0.3
FETY	Fethiye	1.13	104	ePN	Pn	20 32 59.1	+0.8
DENT	Denizli	1.34	51	iPN	Pn	20 33 01.8	+0.5
KARP	Karpathos	1.44	199	ePN	Pn	20 33 03.6	+0.8
GOLH	Golhisar	1.50	77	iP	Pn	20 33 05.3	+1.7
GOLH				iS	Sb	20 33 32.8	+10
AKAS	Kas	1.66	114	iP	Pn	20 33 08.3	+2.4
AKAS				iS	Sn	20 33 25.9	-1.3
ELL	Elmali	1.76	95	ePN	Pn	20 33 07.8	+0.5
APE	Apeiranthos	1.76	276	ePN	Pn	20 33 07.5	+0.1
AKS	Akhisar	1.96	2	ePN	Pn	20 33 09.8	-0.4
NPS	Neapolis	2.38	227	ePB	Pb	20 33 18.0	-1.1
PRK	Paraskevi	2.59	334	ePN	Pn	20 33 18.9	-0.4

IDC 18 20:36:14.9±1.8, **2.87N**×**127.57E**, **mb3.9**/3, **mb1 4.0**/3, **mb1mx3.7**/15, **mbtmp3.9**/3, **Error ellipse: s-maj=138.1km s-min=24.2km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.63	164	P	P	20 41 27.3	-1.5
	1.8nm,0.5s,baz=344,slow=11,SNR=38						
WB2	Warramunga Arr	23.63	164	eP	P	20 41 27.7	-1.1
STKA	Stephens Creek	37.04	160	P	P	20 43 27.4	-1.1
	1.3nm,0.4s,baz=341,slow=9.7,SNR=5.7						
MKAR	Makanchi Array	58.73	325	P	P	20 46 14.6	-2.5
	0.4nm,0.5s,baz=128,slow=7.3,SNR=9.9						

NEIC 18 20:49:46.7, 15.88N×96.48W, h42^{km}, MD3.7(MEX), After MEX.
MEX 18 20:49:46.7±0.3, **15.88N**×**96.48W**, **h42**^{km}±7^{km}, **MD3.7, 2D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.37	108	⇓iP	P	20 49 54.5	-1.3
HUIG				iS	S	20 50 00.6	-1.7
VHO	Vista Hermosa	1.21	348	⇓iP	P	20 50 05.7	-1.7
VHO				iS	S	20 50 20.2	-2.6
OXX	Oaxaca	1.22	349	iP	P	20 50 05.5	-2.0
OXX				iS	S	20 50 20.5	-2.6
CMIG	Matias Romero	1.94	52	iP	P	20 50 15.2	-2.7
CMIG				iS	S	20 50 38.4	-2.8

ROM 18 20:54:59.9±0.3, 46.27N×13.60E, h8^{km}±3^{km}, Md2.6/5, Ml2.3/5, Error ellipse: s-maj=5.9km s-min=2.3km az=23.0
NEIC 18 20:54:59.9, 46.27N×13.60E, h8^{km}, ML2.6(LJU), ML2.3(ROM), After ROM.
LJU 18 20:55:00.2, 46.31N×13.63E, h12^{km}, ML2.2
PRU 18 20:55:02.9, 46.33N×13.53E
ISC 18 20:55:00.3±0.2, **46.34N**±0.01×**13.64E**±0.01, **h0**^{km}±3^{km}, **n66**, σ**0^{s}97**/107, **22C-14D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADS	Cadrg	0.13	150	⇑iPg	Pg	20 55 03.5	+0.6
CADS				iSg	Sg	20 55 05.4	+0.8
	comp=Z,922nm,0.1s						
ROBS	Robic	0.13	224	⇓iPg	Pg	20 55 03.2	+0.3
ROBS				iSg	Sg	20 55 04.9	+0.1
	comp=Z,957nm,0.1s						
LSR	Lussari	0.16	329	⇓iPg	Pg	20 55 04.9	+1.5
LSR				iSg	Sg	20 55 08.1	+2.5
DRE	Drenchia	0.17	180	⇑iPg	Pg	20 55 03.8	+0.1
DRE				iSg	Sg	20 55 06.0	+0.1
PTCC	Patocco-Chiusa	0.21	288	⇑iPg	Pg	20 55 05.0	+0.5
PTCC				Sg	Sg	20 55 09.2	+1.9
GORS	Gorjuse	0.24	96	⇑iPg	Pg	20 55 06.0	+0.9
GORS				iSg	Sg	20 55 10.4	+2.0
	comp=Z,744nm,0.2s						
COLI	Coloredo	0.28	222	⇓iPg	Pg	20 55 05.8	0.0
COLI				Sg	Sg	20 55 09.8	+0.2
GMNA	Gemona	0.29	257	Pg	Pg	20 55 07.2	+1.1
GMNA				Sg	Sg	20 55 12.8	+2.9
	comp=Z,528nm,0.3s						
BAD	Bernadia	0.30	250	⇑ePg	Pg	20 55 06.0	-0.2
BAD				eSg	Sg	20 55 10.7	+0.5
VOJS	Vojsko	0.35	152	⇓iPg	Pg	20 55 07.3	0.0
VOJS				iSg	Sg	20 55 12.6	+0.6
VOY	Vojsko	0.35	151	⇓iPg	Pg	20 55 07.3	-0.1
VOY				eSg	Sg	20 55 12.4	+0.3
BOO	Bordano	0.38	267	⇑iPg	Pg	20 55 07.4	-0.4
BUA	Buia	0.38	251	⇓iPg	Pg	20 55 07.7	-0.2
BUA				iSg	Sg	20 55 13.9	+0.9
PLRO	Paularo	0.40	301	⇓iPg	Pg	20 55 08.7	+0.4
PLRO				iSg	Sg	20 55 15.5	+1.8
MPRI	Monte Prat	0.47	258	⇑ePg	Pg	20 55 08.9	-0.7
MPRI				eSg	Sg	20 55 16.2	+0.4
ZOU	Zoufplan	0.51	295	⇑iPg	Pg	20 55 10.8	+0.3
ZOU				iSg	Sg	20 55 18.7	+1.4
JAVS	Javornik	0.54	147	iPg	Pg	20 55 10.4	-0.6
JAVS				iSg	Sg	20 55 18.6	+0.5
	comp=Z,36nm,0.1s						
TLI	Talmassons	0.56	222	⇓iPg	Pg	20 55 10.9	-0.7
TRI	Trieste	0.64	172	Pg	Pg	20 55 11.6	-1.4
TRI				Sg	Sg	20 55 21.3	-0.2
	comp=Z,76nm,0.3s						
OBKA	Obir	0.65	75	⇓ePg	Pg	20 55 13.5	+0.3
	SNR=22						
OBKA	Obir	0.65	75	⇑iSg	Sg	20 55 23.7	+1.9
	comp=Z,106nm,0.3s						
FVI	Forni Avoltri	0.65	293	Pg	Pg	20 55 13.1	-0.2
FVI				Sg	Sg	20 55 23.2	+1.3
	comp=Z,82nm,0.4s						
LJU	Ljubljana	0.68	116	iPg	Pg	20 55 14.2	+0.3
LJU				iSg	Sg	20 55 23.9	+0.9
	comp=Z,44nm,0.1s						
MLNI	Malnisio	0.74	255	⇑iPg	Pg	20 55 14.3	-0.8
MLNI				Sg	Sg	20 55 25.8	+0.8
KBA	Koelnbreinsper	0.77	345	⇑ePg	Pg	20 55 16.1	+0.5
	comp=Z,2.7nm,0.1s						
KBA	Koelnbreinsper	0.77	345	⇑iSg	Sg	20 55 27.0	+1.2
	comp=Z,17nm,0.2s						
CEY	Cerknica	0.81	138	iPg	Pg	20 55 15.5	-1.0
CEY				eSg	Sg	20 55 27.8	+0.5
	comp=Z,61nm,0.2s						
CAE	Caneva	0.90	249	ePg	Pg	20 55 17.4	-1.0
KNDS	Knezji Dol	0.96	147	iPg	Pg	20 55 18.1	-1.5
KNDS				iSg	Sg	20 55 33.0	+0.7
	comp=Z,22nm,0.2s						
PDKS	Podkum	0.98	106	⇑iPg	Pg	20 55 19.6	-0.3
PDKS				iSg	Sg	20 55 33.9	+0.9
	comp=Z,21nm,0.1s						
VISS	Visnje	0.99	122	iPg	Pg	20 55 19.5	-0.6
VISS				iSg	Sg	20 55 33.5	+0.3
PERS	Pernice	1.06	73	iPg	Pg	20 55 21.0	-0.4
PERS				iSg	Sg	20 55 35.7	+0.1
	comp=Z,11nm,0.1s						
SEST	Monte Rota	1.07	293	Pg	Pg	20 55 21.0	-0.6
	comp=Z,45nm,0.7s						
BISS	Bistriski jare	1.07	73	iPg	Pg	20 55 21.2	-0.5
BISS				iSg	Sg	20 55 36.4	+0.5
	comp=Z,32nm,0.1s						
FAU	Forcella Aurin	1.16	265	ePg	Pg	20 55 22.9	-0.5
LEGS	Legarje	1.23	108	iPg	Pg	20 55 24.0	-0.8
LEGS				iSg	Sg	20 55 41.3	+0.1
DOBS	Dobrina	1.28	98	iPg	Pg	20 55 25.0	-0.9
	comp=Z,9.0nm,0.1s						
GROS	Grobnik	1.29	84	iPg	Pg	20 55 24.8	-1.3
	comp=Z,5.0nm,0.1s						
CGRP	Cima Grappa	1.36	251	⇑ePg	Pg	20 55 26.4	-1.1
CGRP				eSg	Sg	20 55 45.0	-0.7
CRES	Cresnjev	1.36	112	ePg	Pg	20 55 26.4	-1.1
CRES				iSg	Sg	20 55 46.0	+0.3
BOJS	Bojanci	1.40	126	iPg	Pg	20 55 26.9	-1.4
BOJS				iSg	Sg	20 55 46.4	-0.5
	comp=Z,16nm,0.2s						
GOLS	Golise	1.42	103	iPg	Pg	20 55 27.4	-1.1
GOLS				iSg	Sg	20 55 47.8	+0.4
	comp=Z,18nm,0.2s						
CTI	Castel Tesino	1.42	259	Pg	Pg	20 55 27.3	-1.3
CTI				Sg	Sg	20 55 47.0	-0.4
	comp=Z,151nm,0.3s						
GCIS	Gornji Cirnik	1.46	108	iPg	Pg	20 55 28.7	-0.7
GCIS				iSg	Sg	20 55 49.2	+0.4
	comp=Z,12nm,0.2s						
MOA	Molln	1.57	16	ePn	Pg	20 55 32.0	+0.4
	SNR=14						
MOA	Molln	1.57	16	⇑iSg	Sg	20 55 54.0	+1.5
	comp=Z,3.9nm,0.2s						
ARSA	Arzberg	1.58	54	iPg	Pg	20 55 30.9	-0.9
	comp=Z,2.0nm,0.2s,SNR=12						
ARSA	Arzberg	1.58	54	⇓iSg	Sg	20 55 52.1	-0.7
	comp=Z,7.8nm,0.2s						
WTTA	Wattenberg	1.66	305	⇑ePn	Pn	20 55 31.9	+1.2
	comp=Z,8.6nm,0.3s,SNR=20						
WTTA	Wattenberg	1.66	305	⇑iSg	Sg	20 55 54.3	-1.2
	comp=Z,28nm,0.6s						
APPI	Appiano	1.68	276	Pg	Pg	20 55 32.0	-1.8
APPI				Sg	Sg	20 55 56.1	0.0
	comp=Z,45nm,0.5s						
TEOL	Teolo	1.69	235	⇑iPg	Pn	20 55 30.4	-0.8
TEOL				iSg	Sn	20 55 52.5	-1.4
WATA	Walderalm	1.73	306	⇑ePn	Pn	20 55 33.4	+1.6
	comp=Z,6.2nm,0.2s,SNR=14						
WATA	Walderalm	1.73	306	⇓iSg	Sg	20 55 57.4	-0.6
	comp=Z,13nm,0.4s						
SQTA	Sankt Quirin	1.89	299	⇑ePn	Pg	20 55 36.0	-2.0
	comp=Z,10nm,0.3s,SNR=13						
SQTA	Sankt Quirin	1.89	299	⇓iSg	Sg	20 56 02.9	-0.3
	comp=Z,5.5nm,0.2s						
NVLJ	Novalja	1.98	154	iPn	Pn	20 55 35.7	+0.4
NVLJ				iSn	Sn	20 56 02.3	+1.1
MOTA	Moosalm	2.01	301	⇓ePn	Pn	20 55 36.3	+0.5
	comp=Z,4.4nm,0.4s,SNR=9.7						
MOTA	Moosalm	2.01	301	⇑iSg	Sg	20 56 07.1	-0.2
	comp=Z,7.9nm,0.4s						
DAVA	Damuels	2.75	291	⇓ePn	Pn	20 55 47.9	+1.5
	comp=Z,1.4nm,0.2s						
DAVA	Damuels	2.75	291	⇑iSg	Sg	20 56 31.1	-0.8
	comp=Z,5.3nm,0.4s						
KHC	Kasperske Hory	2.79	359	ePN	Pn	20 55 48.1	+1.1
KHC				ePG	Pg	20 55 55.0	-1.0
KHC				eSN	Sn	20 56 22.3	+0.5
KHC				eSG	Sg	20 56 31.3	-1.9
PRU	Pruhonice	3.70	9	eSG	Sg	20 57 01.6	-1.8
NKC	Novy Kostel	3.98	349	eSN	Sn	20 56 50.6	-1.2
NKC				eSG	Sg	20 57 10.9	-1.8
CLL	Collm	4.99	355	eSG	Sg	20 57 41.0	-5.4
CSM	Casamicciola	5.59	178	ePg	Pg	20 56 51.9	-0.1
CSM				eSg	Sg	20 58 02.3	-4.2

WEL 18 20:55:58.0±0.3, **38.43S**×**178.30E**, **h29**^{km}±2^{km}, **ML3.6**/4, **4C-1D, Error ellipse: s-maj=4.2km s-min=1.9km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	0.36	355	⇑P*	Pb	20 56 05.6	-0.5
PUZ				S*	Sb	20 56 11.3	-0.5
PUZ				S*	Sb	20 56 11.4	-0.3
MWZ	Matawai	0.61	279	⇑P*	Pb	20 56 09.3	-0.8
MWZ				S*	Sb	20 56 18.1	-0.3
KNZ	Kokohu	0.76	219	⇓ePN	Pn	20 56 11.9	-0.9
MXZ	Matakaoa Point	0.87	1	⇑PN	Pn	20 56 13.8	-0.5
MXZ				SN	Sn	20 56 25.9	-0.2
URZ	Urewera	0.95	280	⇑PN	Pn	20 56 14.5	-1.0
URZ				SN	Sn	20 56 27.8	-0.3
WIZ	White Island	1.26	316	PN	Pn	20 56 18.8	-1.1
EDRZ	Edgecumbe	1.27	284	PN	Pn	20 56 19.9	-0.1
MARZ	Manawahe	1.35	289	PN	Pn	20 56 20.8	-0.4
TAZ	Tarawera	1.42	278	PN	Pn	20 56 21.8	-0.5
BKZ	Black Stump Fm	1.59	242	ePN	Pn	20 56 24.0	-0.6
PATZ	Paeroa	1.60	271	PN	Pn	20 56 24.1	-0.7
WNVZ	Wahianoa	2.29	246	PN	Pn	20 56 33.6	-1.0
TSZ	Takapari Road	2.44	227	PN	Pn	20 56 34.2	-2.5
BFZ	Birch Farm	2.75	215	PN	Pn	20 56 38.1	-3.1
MRZ	Mangatainoka R	3.06	222	PN	Pn	20 56 44.0	-1.6

LJU 18 20:56:37.8, 46.31N×13.63E, h12^{km}, ML2.5
ROM 18 20:56:37.4±0.3, 46.30N×13.63E, h10^{km}±2^{km}, Md2.9/6, Ml2.6/6, Error ellipse: s-maj=5.9km s-min=2.5km az=18.0
NEIC 18 20:56:37.4, 46.30N×13.63E, h10^{km}, ML2.9(SZGRF), ML2.6(ROM), ML2.6(FUR), ML2.5(LJU), After ROM.
CSEM 18 20:56:37.7±0.0, 46.32N×13.62E, h12^{km}, ML3.5/16, Error ellipse: s-maj=1.2km s-min=0.7km az=11.0
VIE 18 20:56:38.7±0.3, 46.32N×13.64E, mb2.1/6, ML2.8/9, Error ellipse: s-maj=3.0km s-min=1.9km az=15.0
PRU 18 20:56:41.6, 46.44N×13.67E
ISC 18 20:56:37.9±0.2, **46.32N**±0.01×**13.64E**±0.01, **h10**^{km}, **n103**, σ**1^{s}15**/178, **24C-20D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CADS	Cadrg	0.12	146	⇑iPg	Pg	20 56 41.1	+0.3
CADS				iSg	Sg	20 56 43.0	+0.3
	comp=Z,2µm,0.1s						
CADS	Cadrg	0.12	146	⇑iPg	Pg	20 56 41.1	+0.3
CADS				iSg	Sg	20 56 43.0	+0.2
	comp=Z,2µm,0.1s						
ROBS	Robic	0.12	229	⇑iPg	Pg	20 56 40.8	-0.1
ROBS				iSg	Sg	20 56 42.4	-0.6
	comp=Z,3µm,0.1s						
ROBS	Robic	0.12	229	⇑iPg	Pg	20 56 40.8	-0.1
ROBS				iSg	Sg	20 56 42.4	-0.5
	comp=Z,3µm,0.1s						
DRE	Drenchia	0.15	180	⇓iPg	Pg	20 56 41.4	0.0
DRE				iSg	Sg	20 56 43.6	-0.1
LSR	Lussari	0.17	332	⇓iPg	Pg	20 56 42.5	+0.7
LSR				iSg	Sg	20 56 45.6	+1.2
PTCC	Patocco-Chiusa	0.22	292	⇑iPg	Pg	20 56 42.6	0.0
PTCC				Sg	Sg	20 56 47.2	+1.5
GORS	Gorjuse	0.24	91	⇑iPg	Pg	20 56 43.6	+0.6
GORS				iSg	Sg	20 56 48.0	+1.4
	comp=Z,523nm,0.1s						
GORS	Gorjuse	0.24	91	⇑iPg	Pg	20 56 43.6	+0.5
GORS				iSg	Sg	20 56 48.0	+1.4
	comp=Z,523nm,0.1s						
COLI	Coloredo	0.27	224	⇑ePg	Pg	20 56 43.3	-0.1
COLI				eSg	Sg	20 56 47.3	+0.1
GMNA	Gemona	0.29	260	Pg	Pg	20 56 44.8	+0.9
GMNA				Sg	Sg	20 56 50.9	+3.0
	comp=Z,582nm,0.2s						
BAD	Bernadia	0.29	253	⇑iPg	Pg	20 56 43.5	-0.4
BAD				iSg	Sg	20 56 48.6	+0.6
VOJS	Vojsko	0.34	150	⇓iPg	Pg	20 56 44.9	0.0
VOJS				iSg	Sg	20 56 50.3	+0.8
VOY	Vojsko	0.34	149	⇓iPg	Pg	20 56 44.8	-0.1
VOY				eSg	Sg	20 56 50.0	+0.4
BUA	Buia	0.38	254	ePg	Pg	20 56 45.2	-0.4
BUA				eSg	Sg	20 56 51.4	+0.7
PLRO	Paularo	0.41	304	⇑ePg	Pg	20 56 46.1	-0.1
PLRO				eSg	Sg	20 56 52.8	+0.9
MPRI	Monte Prat	0.46	260	⇓ePg	Pg	20 56 46.6	-0.7
MPRI				eSg	Sg	20 56 54.2	+0.7
ZOU	Zoufplan	0.52	297	⇑ePg	Pg	20 56 48.1	-0.3
ZOU				eSg	Sg	20 56 56.5	+1.1
JAVS	Javornik	0.52	146	iPg	Pg	20 56 48.0	-0.5
JAVS				iSg	Sg	20 56 55.8	+0.3
	comp=Z,104nm,0.1s						
JAVS	Javornik	0.52	146	iPg	Pg	20 56 48.0	-0.4
JAVS				iSg	Sg	20 56 55.8	+0.3
	comp=Z,104nm,0.1s						
TLI	Talmassons	0.55	223	⇑iPg	Pg	20 56 48.4	-0.6
TLI				iSg	Sg	20 56 56.2	-0.2
TRI	Trieste	0.62	172	⇓iPg	Pg	20 56 49.3	-1.1
TRI				Sg	Sg	20 56 59.2	+0.4
	comp=Z,97nm,0.3s						
OBKA	Obir	0.65	73	⇓iPg	Pg	20 56 51.0	-0.1
	comp=Z,8.5nm,0.1s						
OBKA	Obir	0.65	73	⇓iPg	Pg	20 56 51.0	-0.1
OBKA				Sg	Sg	20 57 01.4	+1.5
OBKA	Obir	0.65	73	Pg	Pg	20 56 51.0	-0.1
	comp=Z,8.5nm,0.1s						
OBKA				Sg	Sg	20 57 01.4	+1.5
	comp=Z,85nm,0.1s						
FVI	Forni Avoltri	0.66	295	Pg	Pg	20 56 50.6	-0.5
FVI				Sg	Sg	20 57 00.8	+0.9
	comp=Z,175nm,0.5s						
LJU	Ljubljana	0.68	114	iPg	Pg	20 56 51.6	+0.1
LJU				iSg	Sg	20 57 01.4	+0.8
	comp=Z,112nm,0.1s						
LJU	Ljubljana	0.68	114	iPg	Pg	20 56 51.6	+0.1
LJU				iSg	Sg	20 57 01.4	+0.8
	comp=Z,112nm,0.1s						
CSMI	Casera Mimoias	0.71	286	ePg	Pg	20 56 51.8	-0.4
CSMI				eSg	Sg	20 57 02.3	+0.6
MLNI	Malnisio	0.74	257	⇑iPg	Pg	20 56 51.8	-0.9
MLNI				iSg	Sg	20 57 03.4	+0.8
KBA	Koelnbreinsper	0.78	345	⇑iPg	Pg	20 56 53.7	+0.1
	comp=Z,5.7nm,0.1s						
KBA	Koelnbreinsper	0.78	345	⇑iPg	Pg	20 56 53.7	+0.1
KBA				Sg	Sg	20 57 04.5	+0.4
KBA	Koelnbreinsper	0.78	345	Pg	Pg	20 56 53.7	+0.1
	comp=Z,5.7nm,0.1s						
KBA				Sg	Sg	20 57 04.5	+0.4
	comp=Z,22nm,0.2s						
CEY	Cerknica	0.80	137	iPg	Pg	20 56 53.0	-1.0
CEY				iSg	Sg	20 57 05.0	+0.3
	comp=Z,147nm,0.2s						
CEY	Cerknica	0.80	137	iPg	Pg	20 56 53.0	-1.0
CEY				iSg	Sg	20 57 05.0	+0.3
	comp=Z,147nm,0.2s						
CAE	Caneva	0.90	250	⇓ePg	Pg	20 56 54.9	-1.0
CSO	Casso	0.92	267	ePg	Pg	20 56 54.4	-1.8
KNDS	Knezji Dol	0.95	147	iPg	Pg	20 56 55.2	-1.6
KNDS				iSg	Sg	20 57 10.7	+1.1
	comp=Z,48nm,0.2s						
KNDS	Knezji Dol	0.95	147	iPg	Pg	20 56 55.2	-1.7
KNDS				iSg	Sg	20 57 10.7	+1.1
	comp=Z,48nm,0.2s						
PDKS	Podkum	0.98	105	⇑iPg	Pg	20 56 57.1	-0.4
PDKS				iSg	Sg	20 57 12.2	+1.6
	comp=Z,81nm,0.1s						
PDKS	Podkum	0.98	105	⇑iPg	Pg	20 56 57.1	-0.4
PDKS				iSg	Sg	20 57 12.1	+1.5
	comp=Z,81nm,0.1s						
VISS	Visnje	0.98	122	iPg	Pg	20 56 56.9	-0.7
VISS				eSg	Sg	20 57 11.4	+0.7
	comp=Z,32nm,0.1s						
VISS	Visnje	0.98	122	iPg	Pg	20 56 56.9	-0.7
VISS				eSg	Sg	20 57 11.4	+0.7
	comp=Z,32nm,0.1s						
PERS	Pernice	1.06	72	iPg	Pg	20 56 58.4	-0.8
PERS				iSg	Sg	20 57 13.3	-0.1
	comp=Z,22nm,0.1s						
PERS	Pernice	1.06	72	iPg	Pg	20 56 58.4	-0.8
PERS				iSg	Sg	20 57 13.3	-0.2
	comp=Z,22nm,0.1s						
SEST	Monte Rota	1.07	294	Pg	Pg	20 56 58.4	-1.0
SEST				Sg	Sg	20 57 13.7	0.0
	comp=Z,57nm,0.5s						
BISS	Bistriski jare	1.08	72	iPg	Pg	20 56 58.6	-0.9
	comp=Z,47nm,0.1s						
BISS	Bistriski jare	1.08	72	iPg	Pg	20 56 58.6	-0.8
	comp=Z,47nm,0.1s						
IESO	Jesolo	1.11	224	ePg	Pg	20 57 00.3	+0.2
FAU	Forcella Aurin	1.16	266	ePg	Pg	20 56 59.9	-1.1
LEGS	Legarje	1.22	107	iPg	Pg	20 57 01.6	-0.8
LEGS				iSg	Sg	20 57 19.1	+0.4
DOBS	Dobrina	1.28	97	iPg	Pg	20 57 02.3	-1.2
	comp=Z,54nm,0.2s						
DOBS	Dobrina	1.28	97	iPg	Pg	20 57 02.3	-1.2
	comp=Z,54nm,0.2s						
GROS	Grobnik	1.29	83	iPg	Pg	20 57 02.2	-1.6
GROS				iSg	Sg	20 57 20.9	-0.1
	comp=Z,10.0nm,0.1s						
GROS	Grobnik	1.29	83	iPg	Pg	20 57 02.2	-1.6
GROS				iSg	Sg	20 57 20.9	-0.2
	comp=Z,10.0nm,0.1s						
CESS	Cesta pri Krsk	1.31	105	iPg	Pg	20 57 03.2	-0.9
CESS				eSg	Sg	20 57 22.6	+0.9
	comp=Z,30nm,0.1s						
CESS	Cesta pri Krsk	1.31	105	iPg	Pg	20 57 03.2	-1.0
CESS				eSg	Sg	20 57 22.6	+0.9
	comp=Z,30nm,0.1s						
CGRP	Cima Grappa	1.36	252	⇑ePg	Pg	20 57 04.0	-1.1
CGRP				eSg	Sg	20 57 22.5	-0.7
CRES	Cresnjev	1.36	111	iPg	Pg	20 57 03.9	-1.1
CRES				iSg	Sg	20 57 23.4	+0.3
BRES	Bressanone	1.37	287	Pg	Pg	20 57 03.9	-1.4
	comp=Z,71µm,16.0s						
CTI	Castel Tesino	1.41	259	Pg	Pg	20 57 04.9	-1.2
CTI				Sg	Sg	20 57 24.9	-0.1
	comp=Z,241nm,0.3s						
GOLS	Golise	1.41	102	iPg	Pg	20 57 04.9	-1.2
GOLS				eSg	Sg	20 57 26.5	+1.5
	comp=Z,68nm,0.3s						
GOLS	Golise	1.41	102	iPg	Pg	20 57 04.9	-1.2
GOLS				eSg	Sg	20 57 26.5	+1.5
	comp=Z,68nm,0.3s						
GCIS	Gornji Cirnik	1.46	108	iPg	Pg	20 57 05.8	-1.2
GCIS				iSg	Sg	20 57 26.6	+0.2
	comp=Z,80nm,0.3s						
SCE	Schlegeis	1.51	299	⇓iPg	Pg	20 57 06.5	-1.6
MOA	Molln	1.58	15	⇓iPg	Pg	20 57 09.8	+0.2

	comp=Z,0.8nm,0.1s,SNR=17						
MOA	Molln	1.58	15	⇓iPg	Pg	20 57 09.8	+0.2
MOA				Sg	Sg	20 57 32.3	+1.6
MOA	Molln	1.58	15	Pg	Pg	20 57 09.8	+0.2
	comp=Z,0.8nm,0.1s,SNR=17						
MOA				Sg	Sg	20 57 32.3	+1.6
	comp=Z,9.6nm,0.2s						
ARSA	Arzberg	1.59	54	⇓ePg	Pg	20 57 08.3	-1.4
	comp=Z,11nm,0.2s,SNR=5.6						
ARSA	Arzberg	1.59	54	⇓ePg	Pg	20 57 08.3	-1.4
ARSA				Sg	Sg	20 57 29.6	-1.3
ARSA	Arzberg	1.59	54	Pg	Pg	20 57 08.3	-1.4
	comp=Z,11nm,0.2s,SNR=5.6						
ARSA				Sg	Sg	20 57 29.6	-1.3
	comp=Z,16nm,0.2s						
WTTA	Wattenberg	1.67	305	⇓ePn	Pn	20 57 09.6	+2.1
	comp=Z,12nm,0.2s,SNR=25						
WTTA	Wattenberg	1.67	305	⇓iSg	Sg	20 57 32.1	-1.5
	comp=Z,40nm,0.5s						
WTTA	Wattenberg	1.67	305	⇓ePn	Pn	20 57 09.6	+2.1
WTTA				Sg	Sg	20 57 32.0	-1.5
WTTA	Wattenberg	1.67	305	Pn	Pn	20 57 09.6	+2.2
	comp=Z,12nm,0.2s,SNR=25						
WTTA				Sg	Sg	20 57 32.0	-1.5
APPI	Appiano	1.68	276	Pg	Pg	20 57 09.7	-1.7
APPI				Sg	Sg	20 57 33.7	-0.1
	comp=Z,56nm,0.4s						
TEOL	Teolo	1.68	236	ePg	Pg	20 57 08.1	-3.5
WATA	Walderalm	1.74	306	⇑ePn	Pn	20 57 11.0	+2.5
	comp=Z,24nm,0.4s,SNR=25						
WATA	Walderalm	1.74	306	⇓iSg	Sg	20 57 37.9	+1.9
	comp=Z,6.8nm,0.2s						
WATA	Walderalm	1.74	306	⇑ePn	Pn	20 57 11.0	+2.5
WATA				Sg	Sg	20 57 37.9	+1.9
WATA	Walderalm	1.74	306	Pn	Pn	20 57 11.0	+2.5
	comp=Z,24nm,0.4s,SNR=25						
WATA				Sg	Sg	20 57 37.9	+1.9
KOGS	Kog	1.81	85	i Pg	Pg	20 57 11.4	-2.6
KOGS	Kog	1.81	85	i Pg	Pg	20 57 11.4	-2.6
SQTA	Sankt Quirin	1.90	299	ePn	Pn	20 57 13.8	+3.1
	comp=Z,8.0nm,0.3s,SNR=18						
SQTA	Sankt Quirin	1.90	299	⇓iSg	Sg	20 57 42.7	+1.5
	comp=Z,23nm,0.4s						
SQTA	Sankt Quirin	1.90	299	ePn	Pn	20 57 13.8	+3.1
SQTA				Sg	Sg	20 57 42.7	+1.5
NVLJ	Novalja	1.96	153	i Pn	Pn	20 57 12.8	+1.2
NVLJ				i Sn	Sn	20 57 39.3	+2.8
MOTA	Moosalm	2.02	301	⇑ePn	Pn	20 57 15.9	+3.4
	comp=Z,8.4nm,0.4s,SNR=14						
MOTA	Moosalm	2.02	301	⇓iSg	Sg	20 57 44.5	-0.7
	comp=Z,14nm,0.4s						
MOTA	Moosalm	2.02	301	⇑ePn	Pn	20 57 15.9	+3.4
MOTA				Sg	Sg	20 57 44.5	-0.7
MABI	Malga Bissina	2.19	264	Pn	Pn	20 57 16.5	+1.6
GEC2	GERESS Array S	2.52	1	ePg	Pg	20 57 22.1	-6.2
GEC2				eSg	Sg	20 57 58.8	-3.1
DAVA	Damuels	2.76	292	⇑ePn	Pn	20 57 25.8	+2.7
	comp=Z,2.0nm,0.2s						
DAVA	Damuels	2.76	292	⇑ePn	Pn	20 57 25.8	+2.7
DAVA				Sg	Sg	20 58 08.1	-1.6
DAVA	Damuels	2.76	292	Pn	Pn	20 57 25.8	+2.8
	comp=Z,2.0nm,0.2s						
DAVA				Sg	Sg	20 58 08.1	-1.7
	comp=Z,24nm,0.6s						
KHC	Kasperske Hory	2.81	359	ePN	Pn	20 57 26.4	+2.7
KHC				ePG	Pg	20 57 31.0	-3.0
KHC				eSN	Sn	20 58 01.2	+3.2
KHC				eSG	Sg	20 58 09.2	-2.3
KHC	Kasperske Hory	2.81	359	ePg	Pg	20 57 31.0	-3.0
KHC				eSg	Sg	20 58 09.2	-2.3
WET	Wettzell	2.87	350	ePg	Pn	20 57 25.7	+1.1
WET				eSg	Sn	20 58 00.7	+1.2
PRU	Pruhonice	3.72	9	eSG	Sg	20 58 36.6	-5.0
NKC	Novy Kostel	3.99	349	eSG	Sg	20 58 46.1	-4.7
DPC	Dobruska-Polom	4.41	23	eSG	Sg	20 58 57.9	-6.8
UPC	Upice	4.47	20	eSG	Sg	20 58 58.2	-8.7
CLL	Collm	5.01	355	ePN	Pn	20 57 58.0	+3.1
CLL				eSN	Sn	20 58 53.0	-0.6
CLL				eSG	Sg	20 59 19.0	-5.6

NNC 18 20:59:52.0±55.0**,35.12N**×**72.14E,mpv3.3,1D,Error ellipse: s-maj=1485.9km s-min=388.3km az=94.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	4.01	131	eP	Pn	21 00 40.1	-16
THN				eS	Sn	21 01 27.2	-17
KK31	Karatay Array	8.07	351	P	P	21 01 50.9	-2.4
	0.6nm,0.3s,baz=155,slow=11,SNR=22						
KK31				⇓S	Sn	21 03 23.7	-2.8
	1.0nm,0.3s,baz=166,slow=23						
AKTO	Aktyubinsk	18.43	330	P	P	21 04 08.3	-2.2
	2.0nm,2.8s,baz=54,slow=18						

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*NEIC **18** 21:08:58.7±6.4, 10.79S×162.12E, h112^{km}±34^{km}, mb3.9/2, Error ellipse: s-maj=85.9km s-min=20.3km az=108.0*

*IDC **18** 21:09:15.3±17.0, 11.22S×161.83E, h265^{km}±151^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.4/15, mbtmp4.1/6, MS3.6/3, Ms1 3.5/3, ms1mx3.1/18, Error ellipse: s-maj=99.6km s-min=55.5km az=91.0*

ISC 18 21:08:44.9±4.7**,11.2S**±0.1×**163.1E**±0.2**,h48**^{km}±33^{km}**,n9, σ1§39**/10**,mb3.9**/6**,MS3.6**/2**,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.56	300	ePn	P	21 09 38.3	-0.9
HNR				eSn	S	21 10 21.2	+0.8
CTA	Charters Tower	18.43	239	P	P	21 13 00.6	+1.9
	0.1nm,0.3s,baz=69,slow=13,SNR=6.9						
CTA				LR	LR	21 18 39.3	
	comp=Z,110nm,21.7s,baz=49,slow=32						
CTAO	Charters Tower	18.43	239	eP	P	21 13 00.5	+1.9
	8.6nm,0.9s						
STKA	Stephens Creek	28.55	221	P	P	21 14 40.5	+2.0
	0.7nm,0.5s,mb3.7,baz=47,slow=14,SNR=3.1						
STKA				LR	LR	21 25 13.5	
	comp=Z,109nm,19.1s,MS3.5,baz=192,slow=34						
WRAB	Tennant Creek	28.96	249	eP	P	21 14 40.7	-1.4
	1.1nm,0.5s,mb3.8						
WRA	Warramunga Arr	28.97	249	P	P	21 14 40.5	-1.8
	0.8nm,0.6s,mb3.6,baz=80,slow=9.4,SNR=9.6						
FITZ	Fitzroy Crossi	36.81	255	P	P	21 15 48.6	-1.7
	3.7nm,0.7s,mb4.4,baz=98,slow=14,SNR=3.8						
FITZ				LR	LR	21 28 03.2	
	comp=Z,126nm,18.0s,MS3.7,baz=93,slow=32						
SONM	Songino Array	77.29	325	P	P	21 20 36.5	+0.5
	1.3nm,0.9s,mb3.9,baz=145,slow=4.8,SNR=6.2						
MKAR	Makanchi Array	91.87	317	P	P	21 21 50.1	+0.8
	0.5nm,0.8s,mb3.9,baz=90,slow=7.3,SNR=5.3						

JMA 18 21:10:06.1±0.2**,38.10N**×**144.70E,h57**^{km}**,M3.8,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.57	293	P	P	21 10 46.5	+0.2
JIO	Ouri	2.66	279	P	P	21 10 47.7	+0.1
JIO				S	S	21 11 18.4	-0.3
MIYJ	Miyakonagasawa	2.69	304	P	P	21 10 47.7	-0.3
MIYJ				eS	S	21 11 19.4	-0.1
JMK	Ichinoseki	2.86	288	P	P	21 10 50.7	+0.3
JOT	Ohata	4.32	320	eS	S	21 11 58.5	-2.1
JCH	Churui	4.62	348	P	P	21 11 13.2	-2.0
JCH				eS	S	21 12 02.5	-5.7
JKB	Kayabe	4.72	324	eS	S	21 12 07.9	-2.6
JRY	Ryogami san	5.08	248	eS	S	21 12 15.5	-4.2
NEM2	Nemuro 2	5.32	8	P	P	21 11 20.1	-4.8
NEM2				eS	S	21 12 16.4	-9.2
JOD2	Odawara 2	5.33	240	eS	S	21 12 20.4	-5.3
JTKR	Abashiri--Toko	5.90	354	P	P	21 11 30.3	-2.6
JTKR				eS	S	21 12 33.5	-6.5

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*MOS **18** 21:24:38.1±2.0, 44.10N×46.07E, h10^{km}, mb4.0/1, Error ellipse: s-maj=7.8km s-min=5.7km az=48.7*

*IDC **18** 21:24:39.1±4.7, 43.34N×45.76E, h88^{km}±47^{km}, mb3.4/6, mb1 3.5/9, mb1mx3.4/21, mbtmp3.8/9, MS3.1/2, Ms1 3.1/2, ms1mx2.6/23, Error ellipse: s-maj=31.5km s-min=17.2km az=169.0*

*CSEM **18** 21:24:41.2±0.1, 43.68N×45.91E, h105^{km}±1^{km}, mb4.0, Error ellipse: s-maj=3.6km s-min=1.6km az=6.0*

*NEIC **18** 21:24:42.4±0.7, 43.49N×45.75E, h119^{km}±10^{km}, mb3.9/4, Error ellipse: s-maj=10.0km s-min=7.3km az=160.0*

*TIF **18** 21:24:45.3, 43.26N×45.71E, h13^{km}±5^{km}*

*NNC **18** 21:24:52.1±3.3, 43.93N×46.71E, h133^{km}±17^{km}, Error ellipse: s-maj=36.2km s-min=28.1km az=132.0*

ISC 18 21:24:41.1±0.3**,43.50N**±0.04×**45.90E**±0.04**,h124**^{km}±5^{km}**, n67,σ1§02**/82**,mb3.5**/6**,6C-3D,Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBC	Dubki	0.83	124	ePG	P	21 25 01.0	-1.0
TRKR	Terskaya	0.88	286	i PG	P	21 25 03.8	+1.3
VLKR	Vladikavkaz	1.00	244	i PG	P	21 25 03.9	+0.2
KRNR	Karanay	1.00	132	i PG	P	21 25 05.0	+1.3
BUJR	Buynaksk	1.11	127	ePg	P	21 25 06.0	+1.2
KMSR	Komsomolskaya	1.17	265	i PG	P	21 25 06.7	+1.2
PRTR	Priterechnaya	1.20	283	i PG	P	21 25 06.9	+1.1
ARNR	Ardon	1.22	256	i PG	P	21 25 06.6	+0.6
MAK	Makhachkala	1.29	114	i Pg	P	21 25 06.0	-0.8
LACR	Lac	1.35	241	i PN	P	21 25 06.9	-0.6
KORR	Kora	1.40	254	i PN	P	21 25 08.1	+0.1
LSNR	Lesken	1.53	262	i PN	P	21 25 09.9	+0.4
ZEI	Tsey	1.63	244	i Pn	P	21 25 10.0	-0.7
DIGR	Digorskoe uzhe	1.79	251	i PN	P	21 25 12.2	-0.4
KUBR	Kubataba	1.83	280	i Pn	P	21 25 13.4	+0.3
TI2	Plekhanov	1.95	206	i S	S	21 25 38.0	-1.9
	220nm,0.4s						
TBLG	Delisi	1.96	206	P	P	21 25 15.1	+0.4
TBLG				S	S	21 25 39.3	-0.7
MTA	Mtatsminda	1.98	205	P	P	21 25 15.2	+0.3
MTA				S	S	21 25 39.3	-1.1
GOR	Gori	2.00	222	P	P	21 25 15.6	+0.5
GOR				S	S	21 25 41.0	0.0
ONI	Oni	2.01	244	P	P	21 25 15.9	+0.6
ONI				S	S	21 25 41.0	-0.2
DGRG	David-gareji	2.08	191	P	P	21 25 16.3	+0.1
DGRG				S	S	21 25 42.9	+0.2
BEYR	Belyy Ugol+	2.29	284	i Pn	P	21 25 18.3	-0.7
SHAR	Shatzhatmas	2.36	277	i PN	P	21 25 19.4	-0.4
KIV0	Kislovodsk Arr	2.37	282	i Pn	P	21 25 19.5	-0.5
KIV	Kislovodsk	2.37	282	ePn	P	21 25 19.4	-0.7
KIV				eSn	S	21 25 42.6	-6.9
KIV	Kislovodsk	2.37	282	ePN	P	21 25 19.4	-0.6
GOF	Gofitskoye	2.58	308	ePN	P	21 25 22.9	+0.1
GOF				i S	S	21 25 53.4	-1.0
GOF				pmax	pmax		
	comp=Z,62nm,0.8s						
GOF				smax			
	comp=E,781nm,0.6s						
GOF	Gofitskoye	2.58	308	ePn	P	21 25 22.9	+0.1
	comp=E,62nm,0.8s						
GUMR	Gum-Bashi	2.66	277	i Pn	P	21 25 25.0	+1.1
AKH	Akhalkalaki	2.74	221	P	P	21 25 25.4	+0.5
GNI	Garni	3.45	195	P	P	21 25 34.9	+0.4
	comp=E,8.7nm,0.3s,baz=284,slow=3.4,SNR=55						
GNI	Garni	3.45	195	ePn	P	21 25 34.7	+0.3
ORR	Orenburg	10.09	33	⇑iP	P	21 27 02.0	-1.6
ORR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
AKTK	Aktyubinsk	10.80	46	P	P	21 27 12.2	-0.8
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	10.80	46	⇑P	P	21 27 12.1	-0.9
	comp=Z,0.4nm,0.6s						
AKTO				⇑S	S	21 29 04.0	-8.1
	comp=Z,2.2nm,0.8s						
AKTO	Aktyubinsk	10.80	46	P	P	21 27 12.2	-0.8
	comp=Z,0.8nm,0.3s,baz=236,slow=10,SNR=22						
AKTO				S	S	21 29 04.0	-8.0
	comp=Z,0.4nm,0.3s,baz=237,slow=8.4,SNR=4.2						
AKTO	Aktyubinsk	10.80	46	P	P	21 27 12.2	-0.8
AKTO				S	S	21 29 04.1	-8.0
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31	Akbulak array	11.28	54	P	P	21 27 19.4	0.0
	comp=Z,0.5nm,0.2s,baz=241,slow=12,SNR=60						
AB31				⇓S	S	21 29 18.1	-5.4
	comp=Z,13nm,0.5s,baz=241,slow=23						
MLR	Muntele Rosu	14.38	285	P	P	21 28 02.9	+3.3
	comp=Z,0.2nm,0.3s,baz=174,slow=6.4,SNR=7.3						
ARU	Arti	15.26	28	ePn	P	21 28 10.4	-0.4
	comp=Z,3.4nm,0.4s						
ARU	Arti	15.26	28	eP	P	21 28 10.1	-0.7
ARU				eS	S	21 30 59.2	+2.7
ARU	Arti	15.26	28	ePn	P	21 28 10.4	-0.4
	comp=Z,3.4nm,0.4s						
KK31	Karatay Array	17.91	83	P	P	21 28 43.8	+0.3
	comp=Z,0.5nm,0.3s,baz=300,slow=12,SNR=25						
KK31				⇑S	S	21 31 57.5	+1.4
	comp=Z,1.2nm,0.6s,baz=279,slow=25,SNR=5.8						
IDI	Anoyia	18.15	250	P	P	21 28 44.0	-2.3
	comp=Z,0.4nm,0.3s,baz=38,slow=12,SNR=6.9						
BRVK	Borovoye	18.76	51	eP	P	21 28 53.1	+0.4
	comp=Z,2.7nm,0.6s						
BRVK	Borovoye	18.76	51	eP	P	21 28 53.1	+0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	18.76	51	eP	P	21 28 53.1	+0.4
	comp=Z,2.7nm,0.6s						
BVA0	Borovoye Array	18.81	51	P	P	21 28 53.6	+0.4
	comp=Z,0.4nm,0.8s,baz=241,slow=8.4,SNR=17						
BVA0				S	S	21 32 13.2	-2.1
	comp=Z,0.7nm,1.1s,baz=234,slow=22,SNR=9.5						
BVAR	Borovoye Array	18.81	51	P	P	21 28 53.4	+0.1
	comp=Z,0.7nm,0.3s,baz=247,slow=9.4,SNR=20						
BVAR				S	S	21 32 12.9	-2.3
	comp=Z,0.5nm,0.3s,baz=249,slow=25,SNR=8.2						
VOSK	Vostochnaya	19.04	52	⇓P	P	21 28 56.2	+0.5
	comp=Z,2.1nm,0.7s						
VOSK				⇓S	S	21 32 20.5	+0.4
	comp=Z,4.6nm,1.1s						
CHKZ	Chkalovo	19.17	49	⇑P	P	21 28 57.5	+0.4
	comp=Z,2.5nm,0.5s						
CHKZ				⇑S	S	21 32 21.0	-1.6
	comp=Z,3.5nm,1.1s						
CHKZ	Chkalovo	19.17	49	eP	P	21 28 57.4	+0.3
	comp=Z,5.4nm,0.4s						
CHKZ	Chkalovo	19.17	49	eP	P	21 28 57.4	+0.3
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MORC	Moravsky Berou	20.38	298	eP	P	21 29 08.1	-1.6
	comp=Z,1.0nm,0.6s						
JOF	Joensuu	21.23	341	ep	P	21 29 18.0	0.0
FINES	FINESS Array B	21.49	334	P	P	21 29 21.2	+0.6
	comp=Z,2.2nm,0.8s,mb3.5,baz=141,slow=12,SNR=12						
FINES	FINESS Array B	21.49	334	P	P	21 29 21.2	+0.5
KAF	Kangasniemi	21.92	335	ep	P	21 29 25.6	+0.7
GERES	GERESS Array B	22.82	295	P	P	21 29 35.3	+1.6
	comp=Z,0.2nm,0.3s,mb2.9,baz=97,slow=7.9,SNR=4.8						
MKAR	Makanchi Array	25.73	70	P	P	21 30 02.9	+1.4
	comp=Z,0.2nm,0.3s,mb3.0,baz=267,slow=8.7,SNR=7.0						
MKAR	Makanchi Array	25.73	70	P	P	21 30 02.8	+1.4
ZAL	Zalesovo	27.38	54	LR	LR	21 43 01.5	
	comp=Z,45nm,19.1s,baz=108,slow=40						
ARCES	ARCESS Array B	28.12	345	P	P	21 30 22.9	0.0
	comp=Z,4.6nm,1.1s,mb3.9,baz=150,slow=11,SNR=11						
ATD	Arta Tunnel	31.96	186	LR	LR	21 45 25.4	
	comp=Z,28nm,18.6s,baz=41,slow=39						
SONM	Songino Array	41.56	62	P	P	21 32 19.4	+1.8
	comp=Z,0.2nm,0.4s,mb3.2,baz=280,slow=9.4,SNR=4.6						
DBIC	Dimbokro	57.55	246	P	P	21 34 17.8	-2.3
	comp=Z,1.0nm,0.3s,mb4.3,baz=29,slow=8.2,SNR=7.1						
DBIC	Dimbokro	57.55	246	P	P	21 34 17.8	-2.3

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*NIED **18** 21:30:00, 33.90N×141.80E, h5^{km}, Mw4.3 Best double couple: $M_0$3.3×10^{15} NP1:ϕ_s339°, δ75°, λ59°. NP2:ϕ_s226°, δ34°, λ152°.*

*IDC **18** 21:30:34.1±0.7, 33.97N×141.59E, mb4.2/17, mb1 4.3/19, mb1mx4.3/24, mbtmp4.2/19, ML4.1/2, MS3.7/7, Ms1 3.7/7, ms1mx3.5/20, Error ellipse: s-maj=17.2km s-min=15.4km az=114.0*

*JMA **18** 21:30:35.1±0.4, 33.86N×141.79E, h30^{km}, M4.4*

*MOS **18** 21:30:36.4±0.9, 33.78N×141.55E, h33^{km}, mb4.7/17, MS4.1/5, Error ellipse: s-maj=19.8km s-min=7.0km az=125.5*

*BJI **18** 21:30:38.5, 34.30N×141.69E, h50^{km}, mB4.8, mb4.5, Ms4.4, Msz4.1*

*NEIC **18** 21:30:40.2±1.2, 33.91N×141.45E, h44^{km}±9^{km}, mb4.6/14, MW4.3(NIED), Error ellipse: s-maj=10.1km s-min=8.5km az=151.0*

ISC 18 21:30:34.6±1.2**,33.86N**±0.04×**141.78E**±0.05**,h23**^{km}±7^{km}**, h31**^{km}±1.8^{km}**:pP-P,n97,σ1§11**/111**,mb4.4**/40**,MS4.0**/11**, 3C-1D,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.03	320	P	Pb	21 30 53.9	+0.2
BSO3	Boso 3	1.41	312	P	Pn	21 30 59.6	+0.4
BSO4	Boso 4	1.64	314	P	Pn	21 31 03.6	+1.1
BSO4				eS	Sn	21 31 25.2	+2.2
KTR	Katsuura	1.76	317	P	Pn	21 31 05.1	+0.8
JHJ2	Mitsune	1.81	246	P	Pn	21 31 05.6	+0.7
JHJ2				eS	Sn	21 31 28.7	+1.5
JHJ	Hachijo jima 2	1.83	247	Pn	Pn	21 31 05.3	+0.1
	183nm,0.3s,baz=241,slow=24,SNR=21						
JHJ				Sn	Sn	21 31 27.5	-0.3
	343nm,0.3s,baz=71,slow=22,SNR=14						
JIM2	Oshima 3	2.12	294	P	Pn	21 31 09.1	-0.3
JIZS	Izushimoda	2.55	290	P	Pn	21 31 15.7	+0.2
JOD2	Odawara 2	2.62	303	P	Pn	21 31 15.7	-0.9
JYN	Shimob	3.13	302	P	Pn	21 31 23.8	+0.1
SHZ3	Shizuoka 3	3.19	293	P	Pn	21 31 25.7	+1.1
JAG	Ashikaga	3.19	324	⇑P	Pn	21 31 24.6	0.0
JRY	Ryogami san	3.19	313	P	Pn	21 31 24.9	+0.2
JRY				eS	Sn	21 32 02.2	-0.3
JSB	Shiboa	3.45	334	eS	Sn	21 32 08.6	-0.3
MJAR	Matsushiro Arr	3.96	313	Pn	Pn	21 31 34.6	-1.0
	4.2nm,0.3s,baz=160,slow=3.9,SNR=6.3						
MJAR				Sn	Sn	21 32 22.1	+0.3
	16nm,0.3s,baz=145,slow=16,SNR=6.8						
MJAR				LR	LR	21 32 32.4	
	comp=Z,182nm,21.5s,baz=140,slow=32						
MAJO	Matsushiro	3.96	313	ePn	Pn	21 31 35.8	+0.1
MAT	Matsushiro	3.96	313	P	Pn	21 31 35.7	+0.1
MAT				eS	Sn	21 32 19.7	-2.2
MAT	Matsushiro	3.96	313	eP	Pn	21 31 36.0	+0.4
MAT				S	Sn	21 32 20.0	-1.9
CBIJ	Chichi jima	6.75	177	Pn	Pn	21 32 13.3	-1.8
	18nm,0.3s,baz=243,slow=18,SNR=9.9						
CBIJ				Sn	Sn	21 33 25.1	-7.0
	24nm,0.3s,baz=290,slow=22,SNR=4.3						
JNU	Nakatsue	9.14	268	Pn	P	21 32 50.6	+2.4
	0.5nm,0.3s,baz=95,slow=8.4,SNR=4.1						
ASAJ	Asahikawa	10.26	3	Pn	P	21 32 59.5	-4.2
	3.6nm,0.3s,baz=238,slow=12,SNR=12						
ASAJ				Sn	S	21 34 49.0	-10
	1.5nm,0.3s,baz=89,slow=31,SNR=3.2						
YSS	Yuzh-Sakhalins	13.10	3	eP	P	21 33 40.0	-1.9
YSS				MLR	MLR		
	comp=N,700nm,15.0s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
MDJ	Mudanjiang	14.28	322	P	P	21 33 52.3	-5.2
MDJ				AP		21 34 00.5	
MDJ				XP		21 34 05.1	
MDJ				S	S	21 36 22.4	-14
MDJ				PCS		21 42 52.0	
MDJ				AMB	AMB		
	comp=Z,140nm,3.5s						
MDJ				LR	LR		
	comp=N,490nm,13.7s						
MDJ				LR	LR		
	comp=E,220nm,18.6s						
MDJ				LR	LR		
	comp=Z,530nm,12.7s						
SSE	Sheshan	17.59	267	P	P	21 34 50.6	+11
SSE				sP		21 35 02.8	
SSE				S	S	21 38 12.4	+19
SSE				sS		21 38 30.5	
SSE				PcP	PcP	21 39 23.2	+3.5
NJ2	Nanjing	19.32	271	eP	P	21 35 06.6	+5.6
NJ2				S	S	21 38 34.0	+1.8
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,250nm,3.8s						
NJ2				LR	LR		
	comp=N,720nm,11.2s						
NJ2				LR	LR		
	comp=E,770nm,15.3s						
NJ2				LR	LR		
	comp=Z,440nm,12.7s						
WHN	Wuhan	23.42	269	P	P	21 35 42.8	-0.1
ENH	Enshi	27.54	271	eP	P	21 36 19.5	-2.2
	comp=Z,9.2nm,0.7s,mb4.5						
ULN	Ulaanbaatar	29.48	309	eP	P	21 36 39.0	-0.1
	comp=Z,3.0nm,1.0s,mb4.0						
ULN	Ulaanbaatar	29.48	309	eP	P	21 36 39.0	0.0
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
SONM	Songino Array	29.90	308	P	P	21 36 43.2	+0.4
	comp=Z,2.7nm,1.0s,mb3.9,baz=111,slow=9.8,SNR=13						
SONM				LR	LR	21 49 23.8	
	comp=Z,163nm,18.6s,MS3.7,baz=180,slow=38						
BOD	Bodaibo	30.40	330	eP	P	21 36 48.6	+1.5
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
LZH	Lanzhou	31.04	285	eP	P	21 36 50.0	-2.9
LZH				PP	PP	21 37 52.5	-2.8
LZH				eS	S	21 41 51.3	-4.2
LZH				SS	SS	21 43 36.0	-4.4
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,50nm,5.2s						
LZH				LR	LR		
	comp=E,510nm,13.2s						
LZH				LR	LR		
	comp=Z,880nm,16.7s,MS4.5						
LZH	Lanzhou	31.04	285	eP	P	21 36 50.0	-2.9
	comp=Z,24nm,1.4s,mb4.8						
LZH				pP	pP	21 36 59.1	-0.7
LZH				sP	sP	21 37 03.2	+0.4
LZH				PP	PP	21 37 52.5	-2.8
LZH				eS	S	21 41 51.3	-4.2
LZH				sS		21 42 06.5	
LZH				SS	SS	21 43 36.0	-4.4
LZH				LR	LR		
	comp=Z,890nm,16.7s,MS4.5						
LZH	Lanzhou	31.04	285	eP	P	21 36 50.0	-2.9
LZH				*PP	pP	21 36 59.1	-0.7
LZH				*SP	sP	21 37 03.2	+0.4
LZH						21 37 52.5	
LZH				eS	S	21 41 51.3	-4.2
LZH				*SS		21 42 06.5	
LZH				SS	SS	21 43 36.0	-4.4
LZH				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.8						
LZH				MLR	MLR		
	comp=Z,890nm,16.7s,MS4.5						
GYA	Guiyang	31.14	266	⇑iP	P	21 36 51.8	-2.1
GYA				PP	PP	21 37 51.8	-4.9
GYA				S	S	21 41 50.5	-6.6
GYA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
GYA				AMB	AMB		
	comp=Z,150nm,6.0s						
ZAK	Zakamensk	32.54	312	eP	P	21 37 04.2	-1.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
GTA	Gaotai	33.90	292	eP	P	21 37 16.8	-1.1
GTA				AP	pP	21 37 24.8	+0.1
TIXI	Tiksi	38.47	353	eP	P	21 37 56.3	+0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,202nm,14.0s,MS4.1						
WMQ	Urumqi	42.61	300	⇑iP	P	21 38 32.6	+2.0
WMQ				AP	pP	21 38 42.8	+5.2
WMQ				XP	sP	21 38 46.8	+6.3
WMQ				PP	PP	21 40 14.0	+1.9
WMQ				eS	S	21 44 51.0	-0.9
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.3						
WMQ				AMB	AMB		
	comp=Z,160nm,4.7s						
WMQ				LR	LR		
	comp=N,170nm,16.3s						
WMQ				LR	LR		
	comp=E,90nm,24.4s						
WMQ				LR	LR		
	comp=Z,80nm,15.9s,MS3.7						
ZAL	Zalesovo	44.33	315	P	P	21 38 44.5	+0.1
	comp=Z,1.9nm,1.0s,mb3.8,baz=13,slow=8.7,SNR=9.3						

ZAL				LR	LR	21 58 38.7	
	comp=Z,64nm,20.2s,MS3.5,baz=157,slow=38						
NVS	Novosibirsk	45.28	316	*e*P	P	21 38 51.8	-0.3
NVS				pmax	pmax		
	comp=Z,11nm,2.0s,mb4.3						
NVS				pmax	pmax		
	comp=E,8.0nm,1.9s						
MKAR	Makanchi Array	46.11	305	P	P	21 38 58.5	-0.2
	comp=E,2.9nm,0.9s,mb4.2,baz=90,slow=11,SNR=11						
MKAR				LR	LR	21 58 55.2	
	comp=E,99nm,18.0s,MS3.8,baz=76,slow=37						
GUN	Gumba	47.85	279	*e*P	P	21 39 12.3	-0.4
	comp=E,20nm,0.8s,mb5.2						
KURK	Kurchatov	48.17	310	*e*P	P	21 39 13.8	-1.0
	comp=E,9.3nm,1.0s,mb4.8						
KURK	Kurchatov	48.17	310	*e*P	P	21 39 13.8	-1.0
KURK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
PKI	Pulchoki	48.36	278	*e*P	P	21 39 15.7	-1.0
KKN	Kakani	48.39	279	*e*P	P	21 39 16.0	-0.9
	comp=Z,30nm,1.0s,mb5.3						
DMN	Daman	48.60	279	*e*P	P	21 39 17.7	-0.8
GKN	Gorkha	48.84	279	*e*P	P	21 39 19.3	-1.0
	comp=Z,41nm,1.0s,mb5.4						
KOLN	Koldanda	49.77	280	*e*P	P	21 39 26.5	-1.1
ILAR	Eielson Array	52.03	31	P	P	21 39 45.0	+0.8
	comp=Z,2.0nm,0.7s,mb4.2,baz=265,slow=6.1,SNR=13						
CHKZ	Chkalovo	52.73	315	*e*P	P	21 39 48.7	-0.8
	comp=Z,7.9nm,1.0s,mb4.6						
CHKZ	Chkalovo	52.73	315	*e*P	P	21 39 48.7	-0.9
CHKZ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
BVAR	Borovoye Array	52.96	314	P	P	21 39 50.0	-1.3
	comp=Z,4.8nm,0.9s,mb4.4,baz=90,slow=7.4,SNR=30						
BRVK	Borovoye	53.02	314	*e*P	P	21 39 51.3	-0.4
	comp=Z,2.8nm,0.8s,mb4.2						
BRVK	Borovoye	53.02	314	*e*P	P	21 39 51.3	-0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
WRA	Warramunga Arr	53.97	189	P	P	21 39 59.0	-0.1
	comp=Z,1.8nm,0.4s,mb4.3,baz=3.5,slow=7.5,SNR=17						
INK	Inuvik	57.08	26	P	P	21 40 21.3	+0.2
	comp=Z,1.3nm,0.8s,mb4.0,baz=351,slow=8.4,SNR=5.0						
INK	Inuvik	57.08	26	P	P	21 40 21.3	+0.2
HYB	Hyderabad	58.48	271	*i* P	P	21 40 30.0	-1.5
HYB	Hyderabad	58.48	271	*e*P	P	21 40 30.0	-1.5
ARU	Arti	58.95	320	*e*P	P	21 40 33.4	-0.9
	comp=Z,5.7nm,0.5s,mb4.9						
ARU	Arti	58.95	320	⇓*i*P	P	21 40 34.0	-0.3
ARU				*e*		21 41 19.0	
ARU				*e*		21 42 43.2	
ARU				*e*S	S	21 48 41.1	+3.7
ARU				*e*SS	SS	21 52 38.4	+5.4
ARU				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
ARU				MLR	MLR		
	comp=N,60nm,17.0s,MS4.1						
ARU				MLR	MLR		
	comp=E,100nm,17.0s,MS4.1						
ARU				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.3						
AKTO	Aktyubinsk	61.04	313	P	P	21 40 48.7	0.0
	comp=Z,4.6nm,0.8s,mb4.7,baz=85,slow=12,SNR=12						
AKTO	Aktyubinsk	61.04	313	P	P	21 40 48.7	0.0
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
STKA	Stephens Creek	65.39	180	P	P	21 41 20.0	+2.4
	comp=Z,1.6nm,0.9s,mb4.0,baz=29,slow=10,SNR=2.4						
ARCES	ARCESS Array B	67.07	340	P	P	21 41 27.6	-0.1
	comp=Z,2.7nm,0.8s,mb4.3,baz=76,slow=7.4,SNR=3.5						
ARCES				LR	LR	22 17 47.8	
	comp=Z,151nm,18.9s,MS4.2,baz=182,slow=42						
JOF	Joensuu	68.90	333	*e*p	P	21 41 38.8	-0.5
	comp=Z,1.2nm,0.4s,mb4.2						
OBN	Obninsk	70.82	324	*e*P	P	21 41 51.9	+0.8
OBN				*e*		21 42 07.7	
OBN				pmax	pmax		
	comp=Z,13nm,1.4s,mb4.7						
OBN				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.2						
KAF	Kangasniemi	71.26	333	*e*p	P	21 41 53.5	-0.2
	baz=45,slow=5.1						
FINES	FINESS Array B	71.76	333	P	P	21 41 56.1	-0.5
	comp=Z,5.2nm,0.8s,mb4.5,baz=54,slow=6.4,SNR=10						
GOF	Gofitskoye	72.45	313	*e*P	P	21 41 59.6	-1.4
KIV	Kislovodsk	73.22	312	*e*P	P	21 42 05.8	+0.3
	comp=Z,11nm,0.9s,mb4.8						
KIV	Kislovodsk	73.22	312	*e*P	P	21 42 06.4	+0.8
KIV				*e*		21 42 21.2	
KIV				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
NVAR	Mina Array Bea	76.66	53	P	P	21 42 28.5	+3.1
	comp=Z,0.2nm,0.3s,mb3.5,baz=259,slow=4.6,SNR=3.1						
NVAR				LR	LR	22 09 29.4	
	comp=Z,45nm,21.1s,MS3.8,baz=215,slow=30						
MSL	Mosul	76.98	305	*e*x	x	21 42 29.5	
AKASG	Malin Array Be	76.99	323	P	P	21 42 26.9	0.0
	comp=Z,3.6nm,0.7s,mb4.4,baz=46,slow=5.8,SNR=25						
NB2	NORSAR Subarra	77.22	338	P	P	21 42 28.8	+0.8
	comp=Z,1.5nm,0.8s,mb4.0,baz=40,slow=5.6						
NOA	NORSAR Array B	77.22	338	P	P	21 42 28.4	+0.4
	comp=Z,2.0nm,0.7s,mb4.2,baz=40,slow=5.6,SNR=7.5						
NAO	NORSAR Subarra	77.51	338	P	P	21 42 28.8	-0.8
	comp=Z,1.5nm,0.8s,mb4.0						
NAO	NORSAR Subarra	77.51	338	P	P	21 42 28.8	-0.8
NAO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
PDAR	Pinedale Array	79.68	45	P	P	21 42 43.9	+2.1
	comp=Z,0.6nm,0.7s,mb3.6,baz=27,slow=3.3,SNR=4.3						
BRG	Berggiesshubel	83.93	330	*e*P	P	21 43 05.4	+1.7
	comp=Z,2.5nm,0.9s,mb4.3						
BRG	Berggiesshubel	83.93	330	*e*P	P	21 43 05.4	+1.6
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
VRAC	Vranov	83.94	327	P	P	21 43 05.7	+1.8
	comp=Z,1.3nm,0.4s,mb4.4,baz=172,slow=3.6,SNR=4.4						
CLL	Collm	83.99	331	P	P	21 43 05.0	+0.9
	comp=Z,logA/T=0.8,mb4.7						
CLL	Collm	83.99	331	*i* P	P	21 43 05.0	+0.9
	comp=Z,7.0nm,1.0s,mb4.8						
CLL	Collm	83.99	331	*i* P	P	21 43 05.0	+0.9
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.8						
KHC	Kasperske Hory	85.40	329	*e*P	P	21 43 12.5	+1.4
GERES	GERESS Array B	85.56	329	P	P	21 43 12.8	+0.8
	comp=Z,1.3nm,0.8s,mb4.2,baz=34,slow=4.8,SNR=12						
GERES				LR	LR	22 28 01.0	
	comp=Z,77nm,19.0s,MS4.1,baz=339,slow=40						
GRA1	Grafenberg Arr	85.97	330	*e*P	P	21 43 15.3	+1.4
	comp=Z,3.0nm,0.9s,mb4.5						
GRF	Grafenberg Arr	85.97	330	*e*P	P	21 43 15.3	+1.4
	comp=Z,3.0nm,0.9s,mb4.5						
GRF	Grafenberg Arr	85.97	330	*e*P	P	21 43 15.3	+1.4
GRF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
GRF	Grafenberg Arr	85.97	330	*e*P	P	21 43 15.3	+1.4
GRF				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.5						
SAML	Samuel	146.20	49	*e*PKPdf	PKPdf	21 50 16.4	-0.8
LPAZ	La Paz	147.91	64	PKPbc	PKPdf	21 50 22.9	+3.0
	comp=Z,1.8nm,0.8s,baz=343,slow=7.1,SNR=7.2						
LPAZ	La Paz	147.91	64	*e*PKPbc	PKPdf	21 50 22.7	+2.9

*NEIC **18** 21:32:32.1, 51.40N×174.69W, h7^{km}, ML3.3(AEIC), After AEIC.*
*IDC **18** 21:32:38.2±4.7, 51.74N×174.71W, h79^{km}±39^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.3/23, mbtmp3.7/5, ML3.6/2, Error ellipse: s-maj=77.4km s-min=23.0km az=1.0*
ISC 18 21:32:32.0±1.7,**51.4N**±0.1×**174.6W**±0.1,**h53**^{km}±13^{km},**n14,** σ**0**^{s}.**82**/17,**mb3.8**/3,**Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.85	18	P	P	21 32 47.5	-0.4
ATKA				S	S	21 33 00.1	+0.4
GSMY	Great Sitkin M	1.10	306	P	P	21 32 50.8	-0.6
GSTR	Great Sitkin T	1.13	309	P	P	21 32 51.8	0.0
GSTD	Great Sitkin T	1.15	305	P	P	21 32 51.7	-0.3
GSTD				S	S	21 33 07.1	+0.1
GSSP	Great Sitkin S	1.19	306	P	P	21 32 52.5	0.0
GSSP				S	S	21 33 08.5	+0.6
ADAG	Mount Adagdak	1.36	296	P	P	21 32 55.3	+0.1
KIKV	Kanaga Island	1.66	288	P	P	21 32 58.9	-0.4
KIMD	Kanaga Island	1.67	284	P	P	21 32 58.6	-0.8
FX1	Attu Island--F	7.66	286	P	P	21 34 25.2	+1.8
	1.4nm,0.3s,baz=117,slow=11,SNR=5.1						
KDAK	Kodiak Island	14.25	55	P	P	21 35 58.2	+6.2
	1.2nm,0.3s,baz=269,slow=5.5,SNR=7.6						
ILAR	Eielson Array	19.63	36	P	P	21 36 57.2	-1.2
	0.3nm,0.3s,baz=225,slow=8.5,SNR=7.7						
PDAR	Pinedale Array	43.80	75	P	P	21 40 35.9	+2.0
	0.4nm,0.7s,mb3.3,baz=333,slow=6.0,SNR=2.6						
MKAR	Makanchi Array	62.03	311	P	P	21 42 47.9	-0.9
	0.5nm,0.3s,mb4.1,baz=47,slow=6.1,SNR=14						
BVAR	Borovoye Array	62.52	322	P	P	21 42 51.8	-0.2
	0.5nm,0.5s,mb4.0,baz=58,slow=6.1,SNR=5.0						

*THR **18** 21:41:32.7±0.3, 30.77N×51.68E, h15^{km}±3^{km}, ML3.9*
*OMAN **18** 21:41:34.6, 30.38N×51.24E, h2^{km}, Error ellipse: s-maj=80.1km s-min=6.0km az=330.0*
*CSEM **18** 21:41:34.2±0.3, 30.73N×51.55E, h33^{km}±2^{km}, mb4.5/12, Error ellipse: s-maj=5.6km s-min=2.3km az=69.0*
*MOS **18** 21:41:35.6±1.4, 30.82N×51.54E, h36^{km}, mb4.5/9, Error ellipse: s-maj=14.2km s-min=8.2km az=106.4*
*IDC **18** 21:41:35.2±4.7, 30.83N×51.47E, h20^{km}±29^{km}, mb3.9/15, mb1 4.0/15, mb1mx3.9/26, mbtmp4.1/15, MS3.2/3, Ms1 3.2/3, ms1mx2.9/20, Error ellipse: s-maj=23.2km s-min=16.3km az=129.0*
*NEIC **18** 21:41:35.0±8.5, 30.82N×51.49E, h18^{km}±53^{km}, mb4.6/13, Error ellipse: s-maj=15.0km s-min=9.1km az=154.0*
ISC 18 21:41:33.8±1.7,**30.68N**±0.04×**51.57E**±0.06,**h31**^{km}±14^{km}, **n88,**σ**1**^{s}.**16**/87,**mb4.2**/26,**MS3.0**/2,**11C-11D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NASN	Na’in	2.36	26	*e*PG	Pn	21 42 13.6	+2.3
NASN				*e*SG	Sn	21 42 43.4	+3.8
GHIR	Ghir-Karzin	2.69	152	*e*PN	Pn	21 42 18.2	+2.2
GHIR				*e*SG	Sn	21 42 58.1	+10
GHIR				AML	AML	21 43 14.6	
	comp=N,443nm,0.6s						
SHGR	Shooshtar-Gavs	2.77	302	*e*PN	Pn	21 42 18.8	+1.7
ASAO	Ashtian	4.07	342	*e*Pn	Pn	21 42 36.1	+0.4
ASAO				AML	AML	21 44 05.1	
	comp=N,126nm,0.7s						
DAMV	Damavand	4.95	4	*e*PN	Pn	21 42 47.6	-0.5
BNDS	Bandar-Abbas	5.19	128	*e*PN	Pn	21 42 51.8	+0.4
CHTH	Charan	5.23	356	*e*PN	Pn	21 42 51.6	-0.5
THKV	Tehran--Karaj	5.25	354	*e*PN	Pn	21 42 51.8	-0.6
SNGE	Sanandaj	5.66	322	*e*PN	Pn	21 42 58.3	+0.2
SNGE				AML	AML	21 44 09.8	
	comp=N,67nm,0.6s						
BANOM	Banah	6.31	138	P	Pn	21 43 07.7	+0.3
	SNR=21						
BHD	Baghdad	6.63	295	*e*x	x	21 43 50.0	
BHD				*e*x	x	21 45 27.0	
BHD				*e*x	x	21 47 44.0	
ASHO	Ashiyiah	7.17	145	P	Pn	21 43 19.8	+0.3
	SNR=32						
ARQ	Araqi	8.54	148	P	P	21 43 38.5	-0.1
	SNR=10						
BSY	Bisya	9.37	146	P	P	21 43 49.4	-0.6
	SNR=14						
BSYO	Bisya	9.40	146	P	P	21 43 49.4	-0.9
	SNR=14						
SMDO	Samad	9.54	141	P	P	21 43 52.9	+0.5
	SNR=10						
WBK	Wadi Bani Khal	10.41	139	P	P	21 44 04.6	+0.4
	SNR=6.4						
GNI	Garni	10.96	331	LR	LR	21 48 47.9	
	comp=N,116nm,19.6s,baz=142,slow=40						
WHFO	Wadi Hawf	12.86	171	P	P	21 44 35.7	-1.7
	SNR=22						
RBK	Rabkut	13.34	169	P	P	21 44 42.3	-1.3
	SNR=9.6						
ABTO	Aybut	13.36	173	P	P	21 44 42.8	-1.2
	SNR=13						
KIV	Kislovodsk	15.00	334	*e*Pn	P	21 45 03.6	-1.8
	comp=N,28nm,0.7s						
KIV	Kislovodsk	15.00	334	*e*P	P	21 45 03.6	-1.9
KIV				pmax	pmax		
	comp=Z,28nm,0.7s						
KIV	Kislovodsk	15.00	334	*e*Pn	P	21 45 03.6	-1.9
	comp=Z,28nm,0.7s						
AKTK	Aktyubinsk	20.32	12	P	P	21 46 07.9	-2.1
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	20.32	12	P	P	21 46 07.9	-2.1
	comp=Z,2.5nm,0.6s,baz=190,slow=11,SNR=10.0						
AKTO	Aktyubinsk	20.32	12	P	P	21 46 07.9	-2.1
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ATD	Arta Tunnel	20.70	205	LR	LR	21 54 57.4	
	comp=Z,68nm,18.1s,MS3.1,baz=97,slow=39						
SANT	Santorini	22.46	292	*e*P	P	21 46 32.0	+0.1
	comp=Z,28nm,0.5s,mb5.0						
SANT	Santorini	22.46	292	*e*P	P	21 46 32.0	+0.2
	comp=Z,28nm,0.5s,mb5.0						
IDI	Anoyia	22.82	289	P	P	21 46 35.9	+0.6
	comp=Z,6.8nm,0.5s,mb4.3,baz=187,slow=16,SNR=13						
CFR	Carcaliu	23.37	315	⇑P	P	21 46 41.3	+0.8
CFR	Carcaliu	23.37	315	⇑P	P	21 46 41.2	+0.7
CFR	Carcaliu	23.37	315	⇑P	P	21 46 41.2	+0.7
MLR	Muntele Rosu	24.87	314	P	P	21 46 56.9	+1.8
	comp=Z,5.0nm,0.7s,mb4.2,baz=122,slow=17,SNR=8.8						
MLR	Muntele Rosu	24.87	314	⇓P	P	21 46 58.0	+2.9
MLR	Muntele Rosu	24.87	314	⇓P	P	21 46 58.0	+2.9
VOIR		25.41	313	⇓P	P	21 47 02.3	+2.1
VOIR		25.41	313	⇓P	P	21 47 02.2	+2.1
VOIR		25.41	313	⇓P	P	21 47 02.2	+2.0
AKASG	Malin Array Be	26.03	327	P	P	21 47 05.0	-0.9
	comp=Z,3.1nm,0.4s,mb4.2,baz=135,slow=9.4,SNR=28						
BRVK	Borovoye	26.19	26	*e*P	P	21 47 08.0	+0.6
	comp=Z,2.4nm,0.8s,mb3.8						
BRVK	Borovoye	26.19	26	*e*P	P	21 47 08.0	+0.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
BRVK	Borovoye	26.19	26	*e*P	P	21 47 08.0	+0.6
	comp=Z,2.4nm,0.8s,mb3.8						
BVAR	Borovoye Array	26.20	26	P	P	21 47 07.7	+0.2
	comp=Z,2.9nm,0.5s,mb4.0,baz=222,slow=7.4,SNR=21						
BVAR				ScP		21 54 13.0	
	comp=Z,0.4nm,0.6s,baz=225,slow=2.1,SNR=4.1						
ARU	Arti	26.21	9	*e*P	P	21 47 05.3	-2.1
	comp=Z,2.2nm,0.6s,mb3.9						
ARU	Arti	26.21	9	*e*P	P	21 47 05.4	-2.1
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
ARU	Arti	26.21	9	*e*P	P	21 47 05.4	-2.1
	comp=Z,2.0nm,0.6s,mb3.8						
BURAR	Bucovina Array	26.34	317	⇑P	P	21 47 11.8	+3.0
BURAR	Bucovina Array	26.34	317	⇑P	P	21 47 11.8	+3.0
CHKZ	Chkalovo	26.80	26	*e*P	P	21 47 13.5	+0.6
	comp=Z,2.5nm,1.1s,mb3.7						
CHKZ	Chkalovo	26.80	26	*e*P	P	21 47 13.5	+0.5
CHKZ				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.6						
CHKZ	Chkalovo	26.80	26	*e*P	P	21 47 13.5	+0.5
	comp=Z,2.5nm,1.1s,mb3.7						
KURK	Kurchatov	28.39	37	*e*P	P	21 47 28.4	+1.0
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
KURK	Kurchatov	28.39	37	*e*P	P	21 47 28.4	+1.0
	comp=Z,2.3nm,0.9s,mb3.8						
MKAR	Makanchi Array	28.62	47	P	P	21 47 29.7	+0.2
	comp=Z,1.4nm,0.9s,mb3.7,baz=246,slow=8.8,SNR=7.2						
ZAL	Zalesovo	33.32	36	P	P	21 48 11.2	+0.3
	comp=Z,0.9nm,0.5s,mb4.0,baz=168,slow=12,SNR=2.7						
ZAL	Zalesovo	33.32	36	P	P	21 48 11.2	+0.2
GERES	GERESS Array B	33.86	313	P	P	21 48 14.2	-1.5
	comp=Z,0.4nm,0.4s,mb3.7,baz=117,slow=6.0,SNR=7.1						
KHC	Kasperske Hory	34.03	314	*e*P	P	21 48 20.0	+2.9
WTTA	Wattenberg	34.75	310	⇑*i*P	P	21 48 22.3	-1.0
	comp=Z,4.8nm,0.5s,mb4.7						
WTTA	Wattenberg	34.75	310	⇑P	P	21 48 22.3	-1.0
	comp=Z,4.8nm,0.5s,mb4.7						
WTTA	Wattenberg	34.75	310	⇑P	P	21 48 22.3	-1.0
WTTA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
JOF	Joensuu	34.78	344	*e*p	P	21 48 24.8	+1.4
WATA	Walderalm	34.81	310	⇓*i*P	P	21 48 23.7	-0.1
	comp=Z,8.4nm,0.6s,mb4.9						
WATA	Walderalm	34.81	310	⇓P	P	21 48 23.7	-0.1
WATA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
SQTA	Sankt Quirin	35.02	310	⇓*i*P	P	21 48 24.8	-0.9
	comp=Z,7.1nm,0.3s,mb5.0						
SQTA	Sankt Quirin	35.02	310	⇓P	P	21 48 24.8	-0.9
	comp=Z,7.1nm,0.3s,mb5.1						
SQTA	Sankt Quirin	35.02	310	⇓P	P	21 48 24.8	-0.9
SQTA				pmax	pmax		
	comp=Z,7.0nm,0.3s,mb5.1						
FINES	FINESS Array B	35.02	339	P	P	21 48 24.7	-0.8
	comp=Z,1.4nm,0.8s,mb3.9,slow=23,SNR=7.0						
MOTA	Moosalm	35.12	310	⇑*i*P	P	21 48 25.6	-0.9
	comp=Z,4.5nm,0.5s,mb4.7						
MOTA	Moosalm	35.12	310	⇑P	P	21 48 25.6	-0.9
	comp=Z,4.5nm,0.5s,mb4.7						
MOTA	Moosalm	35.12	310	⇑P	P	21 48 25.6	-0.9
MOTA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
KAF	Kangasniemi	35.47	340	*e*p	P	21 48 25.1	-4.2
DAVOX	Davos	35.81	309	P	P	21 48 31.7	-0.7
	comp=Z,3.2nm,0.7s,mb4.3,baz=117,slow=14,SNR=6.0						
DAVA	Damuels	35.92	309	⇓*i*P	P	21 48 32.5	-0.8
	comp=Z,14nm,0.5s,mb5.2						
BNI	Bardonecchia	37.74	305	*e*P	P	21 48 49.6	+1.0
BNI				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
BNI	Bardonecchia	37.74	305	*e*P	P	21 48 49.6	+1.0
	comp=Z,3.8nm,0.6s,mb4.3						
NOA	NORSAR Array B	40.27	331	P	P	21 49 08.7	-0.8
	comp=Z,0.9nm,0.8s,mb3.5,baz=170,slow=4.1,SNR=3.1						
NOA				LR	LR	22 06 09.1	
	comp=Z,24nm,21.4s,MS3.0,baz=270,slow=37						
ARCES	ARCESS Array B	41.63	347	P	P	21 49 20.1	-0.4
	comp=Z,2.9nm,0.9s,mb3.9,baz=59,slow=7.1,SNR=7.1						
LSZ	Lusaka	50.93	210	P	P	21 50 36.3	+1.6
	comp=Z,1.8nm,0.8s,mb4.0,baz=27,slow=6.8,SNR=3.7						
LSZ	Lusaka	50.93	210	P	P	21 50 36.3	+1.6
MATP	Matopo	55.44	207	P	P	21 51 09.5	+1.3
	comp=Z,1.5nm,0.7s,mb4.1,baz=30,slow=9.7,SNR=4.5						
DBIC	Dimbokro	57.87	258	P	P	21 51 24.9	-0.7
	comp=Z,3.9nm,0.5s,mb4.7,baz=42,slow=7.3,SNR=13						
DBIC	Dimbokro	57.87	258	*e*P	P	21 51 25.2	-0.3
	comp=Z,5.2nm,0.7s,mb4.7						
DBIC	Dimbokro	57.87	258	*e*P	P	21 51 25.2	-0.3
DBIC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DBIC	Dimbokro	57.87	258	*e*P	P	21 51 25.2	-0.3
	comp=Z,5.0nm,0.7s,mb4.7						
SUMG	Summit	61.05	340	*e*P	P	21 51 46.8	+0.1
	comp=Z,3.6nm,0.6s,mb4.7						

*NEIC **18** 22:07:13.2, 30.84S×71.66W, h15^{km}, ML3.2(GUC), After GUC.*
GUC 18 22:07:13.2±0.7,**30.84S**×**71.66W,h15**^{km}±4^{km},**MD3.9, ML3.2,2C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	0.66	120	⇑*i*P	Pb	22 07 25.8	0.0
CMCH				*i* S	Sb	22 07 35.1	+0.7
CMCH				AMP		22 07 36.6	
	comp=E,4μm,0.4s						
ILCH	Illapel	0.90	152	*i* P	Pb	22 07 29.3	-0.6
ILCH				*i* S	Sb	22 07 41.2	-0.2
ILCH				AMP		22 07 43.7	
	comp=N,1μm,0.2s						
LSCH	La Serena	1.00	21	⇑*i*P	Pb	22 07 30.6	-1.0
LSCH				*i* S	Sb	22 07 44.0	-0.3
LSCH				AMP		22 07 48.5	
	comp=N,530nm,0.4s						
TLL	Tololo Astrono	1.00	48	⇓*i*P	Pb	22 07 31.5	-0.2
TLL				*i* S	Sb	22 07 45.4	+1.0
TLL				AMP		22 07 50.6	
	comp=N,2μm,0.8s						
CHNG	Los Chungos	1.05	172	⇓*i*P	Pb	22 07 31.5	-0.9
CHNG				*i* S	Sb	22 07 45.5	-0.1
CHNG				AMP		22 07 48.3	
	comp=E,764nm,0.5s						
JACH	Jahuel	2.05	154	*e*P	Pn	22 07 47.6	0.0
JACH				*i* S	Sn	22 08 14.0	+1.0
ROCH	El Roble	2.19	166	*i* P	Pn	22 07 50.6	+0.9
PEL	Peldehue	2.44	160	*i* P	Pn	22 07 54.0	+0.8
PEL				*i* S	Sn	22 08 23.8	+0.8
PEL				AMP		22 08 29.2	
	comp=E,457nm,0.3s						
LCCH	Las Cruces	2.63	178	*e*P	Pn	22 07 55.8	-0.1
FCH	Farellones	2.74	155	*e*P	Pn	22 07 58.5	+1.0
FCH				*i* S	Sn	22 08 32.6	+2.1
FCH				AMP		22 08 40.3	
	comp=E,129nm,0.3s						

*FUNV **18** 22:11:57.9, 10.78N×62.42W, h99^{km}, MW2.6*
*TRN **18** 22:12:01.7, 10.96N×62.34W, h11^{km}, MD3.1*
ISC 18 22:11:58.0±1.0,**10.73N**±0.05×**62.52W**±0.04,**h95**^{km}±9^{km}, **n9,**σ**1**^{s}.**08**/18,**Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	Guiria	0.30	106	*e*P	P	22 12 12.7	+0.7
GUIV				*e*S	S	22 12 21.7	-1.0
GUNV	Guanoco	0.70	217	*e*P	P	22 12 16.1	+0.8
GUNV				*e*S	S	22 12 29.8	+1.8
ITEV	Isla Los Testi	0.87	316	*e*P	P	22 12 16.6	-0.2
ITEV				*e*S	S	22 12 30.4	-0.5
TRN	Trinidad (W)	1.10	94	*e*P	P	22 12 20.5	+1.1
TRN				*e*S	S	22 12 34.7	-0.8
GRW	Mount Saint Ca	1.65	30	*e*P	P	22 12 27.2	+0.9
GRW				*e*S	S	22 12 45.2	-2.0
TPR	Prospect	1.77	75	*e*P	P	22 12 29.5	+1.7
TPR				*e*S	S	22 12 50.0	+0.2
ORIV	Oritupano	1.87	208	*e*P	P	22 12 29.9	+0.8
ORIV				*e*S	S	22 12 52.0	-0.2
PCRV	Puerto La Cruz	2.16	255	*e*P	P	22 12 32.7	-0.3
PCRV				*e*S	S	22 12 59.1	+0.1
GURV	El Guri	3.00	191	*e*P	P	22 12 43.5	-1.2
GURV				*e*S	S	22 13 17.2	-2.6

*ISK **18** 22:39:44.6, 38.30N×26.37E, h20^{km}, MD3.4*
*ATH **18** 22:39:46.4, 38.16N×26.55E, h30^{km}±5^{km}, MD3.3/5*
*NEIC **18** 22:39:46.4, 38.16N×26.55E, h30^{km}, MD3.3(ATH), After ATH.*
*CSEM **18** 22:39:47.8±0.1, 38.15N×26.58E, h30^{km}, MD3.3, Error ellipse: s-maj=3.5km s-min=1.8km az=74.0*
ISC 18 22:39:46.0±0.7,**38.23N**±0.03×**26.57E**±0.05,**h6**^{km}±5^{km}, **n17,**σ**1**^{s}.**00**/26,**1C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.13	8	*i* P	Pg	22 39 49.0	+0.1
URLA				*i* S	Sg	22 39 51.6	+0.7
SMG	Samos	0.56	158	⇑*i*PN	Pg	22 39 57.3	+0.1
SMG				*e*SN	Sg	22 40 05.2	+0.5
KDAG	Bornova	0.57	72	*i* P	Pg	22 39 56.5	-1.0
KDAG				*i* S	Sg	22 40 04.4	-0.8
PRK	Paraskevi	1.04	347	*e*PN	Pn	22 40 07.0	0.0
PRK				*e*SN	Sn	22 40 22.3	+0.3
AYVA	Ayvalik	1.08	5	*i* P	Pb	22 40 07.9	+1.2
AYVA				*i* S	Sb	22 40 24.6	+3.7
AKS	Akhisar	1.17	56	PN	Pn	22 40 07.6	-1.3
AKS				SN	Sn	22 40 24.7	-0.5
AYDN	Tasoluk	1.18	118	*i* P	Pb	22 40 08.2	-0.2
AYDN				*i* S	Sb	22 40 23.8	0.0
BODT	Bodrum	1.30	153	*e*PN	Pn	22 40 09.5	-1.2
MLSB	Milas	1.33	134	*e*PN	Pn	22 40 11.2	0.0
BDRM	Kayabasi	1.35	149	*i* P	Pb	22 40 14.0	+2.7
BDRM				*i* S	Sb	22 40 29.4	+0.7
APE	Apeiranthos	1.42	216	*e*PN	Pn	22 40 09.6	-2.8
APE	Apeiranthos	1.42	216	*e*Pn	Pn	22 40 11.2	-1.2
MANT	Manisa	1.58	80	*i* P	Pn	22 40 15.9	+1.1
MANT				*i* S	Sb	22 40 36.5	+1.1
DAT	Datca	1.70	152	*e*PN	Pn	22 40 16.4	0.0
LIA	Limnos Island	1.99	328	*e*PN	Pn	22 40 20.9	+0.4
BNT	Bandirma	2.37	26	*e*PN	Pn	22 40 23.5	-2.5
RDO	Rodhopi	3.02	345	*e*PN	Pn	22 40 35.3	0.0

GUC 18 23:11:13.9±0.7,**30.85S**×**71.64W,h13**^{km}±6^{km},**MD3.7, ML2.7,2C,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	0.63	121	*i* P	Pb	23 11 26.3	0.0
CMCH				*i* S	Sb	23 11 35.6	+0.8
CMCH				AMP		23 11 37.9	

	comp=E,1µm,0.5s						
ILCH	Illapel	0.88	153	*i* P	Pb	23 11 29.8	-0.7
ILCH				*i* S	Sb	23 11 41.9	-0.1
ILCH				AMP		23 11 44.3	
	comp=N,437nm,0.2s						
TLL	Tololo Astrono	0.99	47	⇑*i*P	Pb	23 11 32.1	-0.3
TLL				*i* S	Sb	23 11 46.1	+0.9
TLL				AMP		23 11 51.4	
	comp=N,634nm,0.7s						
CHNG	Los Chungos	1.03	173	⇑*i*P	Pb	23 11 32.1	-1.1
CHNG				*i* S	Sb	23 11 46.3	-0.1
CHNG				AMP		23 11 49.1	
	comp=E,210nm,0.5s						
FCH	Farellones	2.72	155	*e*P	Pn	23 11 59.7	+1.5
FCH				*i* S	Sn	23 12 33.3	+2.1
FCH				AMP		23 12 45.9	
	comp=E,44nm,0.3s						

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*ATH **18** 23:46:18.1, 39.94N×23.45E, h30^{km}, MD3.1/6*
*NEIC **18** 23:46:18.1, 39.94N×23.45E, h30^{km}, MD3.1(ATH), After ATH.*
*CSEM **18** 23:46:18.9±0.1, 39.93N×23.50E, h15^{km}, ML2.5, Error ellipse: s-maj=1.7km s-min=1.2km az=66.0*
*THE **18** 23:46:19.2, 39.93N×23.45E, h6^{km}, ML2.5*
ISC 18 23:46:18.9±0.5**, 39.90N**±0.03×**23.47E**±0.05**, h15**^{km}±7^{km}**, n24, $\sigma 0\overset{s}{.}$97**/36**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAIG	Paliouri	0.16	82	*e*Pg	Pb	23 46 22.7	-0.4
PAIG				*e*Sg	Sb	23 46 25.6	-0.3
PLG	Polygyros	0.47	358	⇑*i*PB	Pb	23 46 27.5	-0.8
PLG				*e*SB	Sb	23 46 34.1	-0.6
XOR	Xorichti	0.58	202	*e*Pg	Pb	23 46 30.4	+0.2
OUR	Ouranopolis	0.58	42	*e*Pg	Pb	23 46 30.4	+0.2
OUR				*e*Sg	Sb	23 46 39.0	+1.1
NEO	Neokhori	0.63	198	*e*PN	Pn	23 46 31.3	-1.6
NEO				*e*SN	Sn	23 46 41.2	-1.3
LIT	Litokhoron	0.78	285	*e*Pg	Pb	23 46 34.0	+0.5
AOS	Alonnisos	0.80	156	*e*Pg	Pb	23 46 34.7	+0.8
AOS				*e*Sg	Sb	23 46 47.2	+3.0
THE	Thessaloniki	0.82	332	*e*Pg	Pb	23 46 33.9	-0.4
THE				*e*Sg	Sb	23 46 45.7	+0.8
SOH	Sokhos	0.92	355	*e*Pg	Pb	23 46 35.6	-0.3
LOS	Limnos	1.24	88	*e*Pg	Pb	23 46 41.5	+0.1
LOS				*e*Sg	Sb	23 47 00.7	+3.6
AGG	Agios Georgios	1.25	225	*e*Pg	Pb	23 46 41.8	+0.3
LKR	Lokris	1.30	196	*e*PN	Pn	23 46 42.6	0.0
LIA	Limnos Island	1.32	90	*e*PN	Pn	23 46 42.5	-0.3
KNT	Kendrikon	1.33	341	*e*Pg	Pn	23 46 43.5	+0.6
GRG	Griva	1.33	323	*e*Pg	Pn	23 46 43.5	+0.6
NVR	Nevrokopi	1.48	12	*e*PN	Pn	23 46 44.2	-0.8
VAY	Valandovo	1.57	334	*e*Pg	Pn	23 46 48.4	+1.9
VAY				*e*Sg	Sn	23 46 58.2	-8.4
VAY	Valandovo	1.57	334	*e*Pg	Pn	23 46 48.4	+2.0
VAY				*e*Sg	Sn	23 46 58.2	-8.4
FNA	Florina	1.82	299	*e*Pb	Pb	23 46 50.2	-1.2
BIA	Bitola	1.98	305	*e*Pn	Pn	23 46 52.7	+0.5
BIA				*e*Sn	Sn	23 47 05.8	-11
BIA	Bitola	1.98	305	*e*Pn	Pn	23 46 52.7	+0.4
BIA				*e*Sn	Sn	23 47 05.8	-11
RDO	Rodhopi	2.01	51	*e*PB	Pb	23 46 52.4	-2.1
ALN	Alexandroupoli	2.20	62	*e*Pn	Pn	23 46 55.1	-0.4
SKO	Skopje	2.58	324	*e*Pn	Pn	23 47 01.6	+0.9
SKO				*e*Sn	Sn	23 47 23.9	-8.2

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*BJI **19** 01:18:36.9, 61.50N×149.80W, h43^{km}, mB4.9, mb4.7, Ms4.2, Msz4.0*
*NEIC **19** 01:18:40.0, 61.51N×149.78W, h43^{km}, mb4.0/12, ML4.5(PMR), ML4.3(AEIC), After AEIC.*
NEIC Felt [IV] at Chugiak; [III] at Anchorage, Eagle River, Elmendorf AFB, Fort Richardson, Palmer and Wasilla; [II] at Girdwood and Willow. Also felt at Indian.
*IDC **19** 01:18:39.5±2.1, 61.59N×150.09W, h55^{km}±19^{km}, mb3.8/18, mb1 4.0/21, mb1mx3.9/26, mbtmp4.1/21, ML3.8/3, MS3.8/3, Ms1 3.8/3, ms1mx3.1/25, Error ellipse: s-maj=16.7km s-min=11.7km az=46.0*
ISC 19 01:18:38.2±0.2**, 61.53N**±0.02×**149.83W**±0.04**, h59**^{km}±2^{km}**, n120, $\sigma 0\overset{s}{.}$89**/132**, mb4.1**/30**, MS4.7**/1**, 3C-1D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMR	Palmer	0.34	78	P	P	01 18 48.0	-0.6
PMR				S	S	01 18 54.8	-1.5
FIB	Fire Island	0.40	205	P	P	01 18 49.4	+0.2
FIB				S	S	01 18 57.5	+0.3
RC01	Rabbit Creek A	0.44	174	P	P	01 18 49.3	-0.3
RC01				S	S	01 18 57.3	-0.6
GHO	Glory Hole Cre	0.50	60	P	P	01 18 50.0	-0.1
GHO				S	S	01 18 58.7	-0.2
KNK	Knik Glacier	0.67	99	P	P	01 18 52.2	+0.1
SML	Sawmill	0.77	68	P	P	01 18 53.3	0.0
SML				S	S	01 19 04.3	-0.3
CUT	Chulitna	0.91	347	P	P	01 18 55.6	+0.4
STLK	Strandline Lak	0.96	269	P	P	01 18 56.9	+0.9
SLKM	Skilak Lake	1.04	191	⇓*e*P	P	01 18 56.9	-0.1
NKA	Nikishka	1.04	222	P	P	01 18 59.2	+2.1
MPA	Moose Pass	1.06	168	P	P	01 18 57.3	-0.1
SPU	Mount Spurr	1.13	253	P	P	01 18 59.0	+0.8
SCM	Sheep Creek Mo	1.23	74	P	P	01 19 00.0	+0.4
CKL	Chakachamna La	1.25	256	P	P	01 19 00.9	+0.9
SEW	Seward	1.44	172	P	P	01 19 02.4	-0.2
SEW				S	S	01 19 20.8	+0.2
GLI	Glacier Island	1.47	115	P	P	01 19 02.2	-0.9
RDT	Redoubt	1.58	234	P	P	01 19 05.0	+0.5
JPK	Jack Peak	1.63	105	P	P	01 19 05.3	+0.1
JPK				S	S	01 19 26.0	+0.9
VLZ	Valdez	1.73	102	P	P	01 19 06.4	-0.2
VLZ				S	S	01 19 27.4	-0.1
RSO	Redoubt South	1.78	235	P	P	01 19 08.0	+0.7
FID	Port Fidalgo	1.80	114	P	P	01 19 06.8	-0.7
FID				S	S	01 19 28.8	-0.4
KLU	Klutina	1.87	89	P	P	01 19 08.5	-0.1
DHY	Denali Highway	1.93	35	P	P	01 19 10.5	+1.1
DHY				S	S	01 19 35.0	+2.6
HIN	Hinchinbrook I	1.98	123	P	P	01 19 09.8	-0.2
DIV	Divide	1.99	100	P	P	01 19 09.8	-0.5
DIV				S	S	01 19 34.5	+0.6
KTH	Kantishna Hill	2.10	346	P	P	01 19 12.8	+1.1
CNPM	China Poot	2.12	200	P	P	01 19 11.8	-0.3
TZL	Tazlina	2.15	74	P	P	01 19 13.5	+0.9
INE	Iliamna NE	2.16	229	P	P	01 19 13.1	+0.5
ILW	Iliamna West	2.19	229	P	P	01 19 13.7	+0.6
ILW				S	S	01 19 38.9	0.0
EYAK	Cordova Ski Ar	2.21	114	P	P	01 19 13.3	0.0
SDG	Sourdough	2.25	62	P	P	01 19 14.7	+0.7
XLV	Seldovia	2.28	205	P	P	01 19 13.9	-0.4
SGAM	Sherman Glacie	2.47	113	P	P	01 19 16.9	-0.2
PAX	Paxson	2.50	53	P	P	01 19 18.8	+1.3
PAX				S	S	01 19 48.7	+1.8
OPT	Oil Point	2.52	223	P	P	01 19 18.2	+0.4
BMRM	Bremner River	2.58	100	P	P	01 19 18.8	+0.1
BWN	Browne	2.66	3	P	P	01 19 20.8	+1.0
THY	Trims Highway	2.68	43	*e*P	P	01 19 19.7	-0.3
AUP	Augustine Pinn	2.81	221	P	P	01 19 22.1	+0.3
SVW2	Sparrevohn	2.81	264	P	P	01 19 21.8	0.0
GLB	Gilahina Butte	2.89	89	P	P	01 19 22.2	-0.7
WRH	Wood River Hil	3.06	14	P	P	01 19 25.8	+0.4
MENT	Mentasta	3.19	61	P	P	01 19 27.2	0.0
TT01	Tatalina	3.22	298	P	P	01 19 27.4	-0.1
CCB	Clear Creek Bu	3.27	15	P	P	01 19 28.0	-0.3
COLA	College	3.48	14	P	P	01 19 31.6	+0.3
IL1	Eielson Array	3.52	21	P	P	01 19 32.3	+0.5
ILAR	Eielson Array	3.52	21	P	P	01 19 32.0	+0.2
	11nm,0.3s,baz=204,slow=14,SNR=233						
ILAR				S	S	01 20 17.6	+5.0
	71nm,0.3s,baz=204,slow=23,SNR=11						
MDM	Murphy Dome	3.52	11	P	P	01 19 32.2	+0.4
MLY	Manley	3.54	354	P	P	01 19 32.1	-0.1
BALM	Baldy	3.64	94	P	P	01 19 32.0	-1.5
BALM				S	S	01 20 15.3	-0.3
KAHC	Katmai Hardscr	3.88	224	P	P	01 19 36.8	-0.1
KARR	Katmai Rainbow	3.90	221	P	P	01 19 36.9	-0.2
KDAK	Kodiak Island	4.01	202	P	P	01 19 37.5	-1.1
	10nm,0.3s,baz=30,slow=11,SNR=73						
KDAK				S	S	01 20 35.5	+11
	34nm,0.3s,baz=239,slow=6.5,SNR=3.9						
KDAK				LR	LR	01 21 39.0	
	comp=Z,526nm,19.0s,baz=104,slow=45						
KDAK	Kodiak Island	4.01	202	P	P	01 19 37.6	-1.0
KABR	Katmai Barrier	4.28	220	P	P	01 19 41.6	-0.9
MGLS	Mageik LS	4.33	222	P	P	01 19 43.2	+0.1
CAHL	Cahill	4.45	221	P	P	01 19 44.3	-0.6
CNTC	Contact Creek	4.47	226	P	P	01 19 44.6	-0.6
GCSA	Galena City Sc	4.55	318	P	P	01 19 45.6	-0.7
IM3	Indian Mountai	4.80	340	P	P	01 19 48.8	-1.0
IMA2	Indian Mountai	4.87	341	*e*P	P	01 19 50.9	+0.1
DAWY	Dawson	5.42	57	P	P	01 19 57.9	-0.5
BM3	Burnt Mountain	6.33	19	P	P	01 20 11.0	-0.1
WHY	Whitehorse	7.30	90	P	P	01 20 22.1	-2.4
TNA	Tin City	9.02	304	*e*P	P	01 20 47.7	-0.5
INK	Inuvik	9.68	38	P	P	01 20 56.0	-1.1
	0.2nm,0.3s,baz=193,slow=17,SNR=3.0						
INK				S	S	01 22 44.2	-1.0
	1.8nm,0.3s,baz=218,slow=9.2,SNR=6.2						
INK	Inuvik	9.68	38	*e*P	P	01 20 55.4	-1.6
DLBC	Dease Lake	10.38	99	P	P	01 21 04.4	-2.2
	0.3nm,0.3s,baz=261,slow=12,SNR=5.6						
DLBC	Dease Lake	10.38	99	*e*P	P	01 21 03.7	-3.0
YKA	Yellowknife Ar	16.44	71	P	P	01 22 24.6	-1.3
	0.3nm,0.3s,baz=281,slow=10,SNR=10.0						
YKA				LR	LR	01 28 52.3	
	comp=Z,132nm,20.3s,baz=280,slow=37						
EDM	Edmonton	21.09	97	*e*P	P	01 23 18.1	-1.2
FX1	Attu Island--F	21.56	263	P	P	01 23 23.2	-0.8
	14nm,0.7s,mb4.5,baz=34,slow=11,SNR=5.5						
NEW	Newport	22.71	111	P	P	01 23 37.8	+2.5
	3.3nm,0.9s,mb3.8,baz=304,slow=4.4,SNR=7.3						
NEW	Newport	22.71	111	*e*P	P	01 23 37.5	+2.2
	1.9nm,0.9s,mb3.5						
NEW				*e*		01 23 49.4	
BMO	Blue Mountains	25.26	116	*e*P	P	01 24 00.7	+0.7
	3.0nm,0.8s,mb3.9						
HLID	Hailey	27.55	114	*e*P	P	01 24 21.0	-0.1
	1.0nm,0.5s,mb3.7						
IMW	Indian Meadow	28.82	110	*e*P	P	01 24 33.7	+1.1
	5.2nm,1.0s,mb4.2						
ELK	Elko	29.49	119	P	P	01 24 40.3	+1.8
	2.1nm,0.8s,mb3.9,baz=320,slow=8.7,SNR=12						
ELK	Elko	29.49	119	*e*P	P	01 24 39.5	+1.0
	3.2nm,0.9s,mb4.0						
NVAR	Mina Array Bea	30.22	125	P	P	01 24 46.1	+1.1
	1.8nm,0.7s,mb3.9,baz=325,slow=8.4,SNR=17						
MNV	Mina	30.27	125	*e*P	P	01 24 46.0	+0.5
	4.7nm,1.2s,mb4.1						
BW06	Boulder Array	30.34	110	*e*P	P	01 24 46.4	+0.4
	1.4nm,0.6s,mb3.9						
PDAR	Pinedale Array	30.34	110	P	P	01 24 47.0	+1.0
	1.5nm,0.5s,mb4.0,baz=318,slow=4.9,SNR=15						
PDAR				PcP	PcP	01 27 44.0	-1.1
	0.5nm,0.6s,baz=284,slow=3.7,SNR=3.8						
ULM	Lac du Bonnet	31.35	86	P	P	01 24 55.1	+0.3
	2.2nm,1.0s,mb4.0,baz=314,slow=11,SNR=6.2						
ULM				PcP	PcP	01 27 46.0	-1.6
	2.1nm,0.8s,baz=297,slow=6.8,SNR=2.7						
ULM	Lac du Bonnet	31.35	86	P	P	01 24 55.1	+0.3
ULM				PcP	PcP	01 27 46.0	-1.7
SRU	San Rafael	32.87	115	*e*P	P	01 25 09.0	+0.8
	6.0nm,1.1s,mb4.4						
PV01	Paradox Valley	34.53	113	*e*P	P	01 25 23.0	+0.5
WUAZ	Wupatki	35.53	119	*e*P	P	01 25 30.7	-0.4
	9.5nm,1.1s,mb4.6						
SDCO	Great Sand Dun	36.22	110	*e*P	P	01 25 37.3	+0.5
	1.4nm,0.5s,mb4.2						
MNTX	Cornudas Mount	41.36	115	*e*P	P	01 26 20.0	+0.4
	0.7nm,0.6s,mb3.5						
WMOK	Wichita Mounta	41.76	106	*e*P	P	01 26 22.9	+0.1
TXAR	Lajitas Array	44.14	115	P	P	01 26 43.6	+1.4
	0.9nm,0.6s,mb3.7,baz=321,slow=6.1,SNR=10						
TXAR				PcP	PcP	01 28 26.5	-0.4
	0.3nm,0.4s,baz=40,slow=1.6,SNR=6.0						
TXAR	Lajitas Array	44.14	115	P	P	01 26 43.6	+1.4
TXAR				PcP	PcP	01 28 26.5	-0.4
MDJ	Mudanjiang	47.91	288	P	P	01 27 11.0	-0.9
MDJ				AMB	AMB		
	comp=Z,60nm,3.5s						
ARCES	ARCESS Array B	49.19	2	P	P	01 27 20.3	-1.2
	comp=Z,2.0nm,0.8s,mb4.2,slow=7.3,SNR=5.5						
ARCES	ARCESS Array B	49.19	2	P	P	01 27 20.3	-1.2
CN2	Changchun	50.41	291	*e*P	P	01 27 30.1	-1.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
SONM	Songino Array	55.13	307	P	P	01 28 06.3	+0.1
	comp=Z,1.6nm,0.7s,mb4.2,baz=45,slow=6.5,SNR=10						
NOA	NORSAR Array B	56.90	11	P	P	01 28 17.1	-1.6
	comp=Z,0.5nm,0.7s,mb3.7,baz=350,slow=7.3,SNR=2.7						
ZAL	Zalesovo	57.06	325	P	P	01 28 17.6	-2.3
	comp=Z,1.3nm,0.4s,mb4.3,baz=96,slow=4.5,SNR=4.5						
FINES	FINESS Array B	57.32	2	P	P	01 28 20.9	-0.8
	comp=Z,0.9nm,0.8s,mb3.9,baz=349,slow=9.7,SNR=11						
CHKZ	Chkalovo	60.76	334	*e*P	P	01 28 42.8	-2.8
	comp=Z,2.2nm,0.5s,mb4.5						
SSE	Sheshan	62.72	285	P	P	01 28 58.8	-0.2
SSE				AMB	AMB		
	comp=Z,70nm,5.1s						
NJ2	Nanjing	62.99	288	*e*P	P	01 29 05.5	+4.7
MKAR	Makanchi Array	64.18	323	P	P	01 29 06.2	-2.1
	comp=Z,1.0nm,0.4s,mb4.2,baz=38,slow=6.8,SNR=30						
GTA	Gaotai	64.80	307	*e*P	P	01 29 13.3	+0.9
WMQ	Urumqi	65.21	318	*e*P	P	01 29 18.5	+3.5
LZH	Lanzhou	66.08	302	*e*P	P	01 29 22.3	+1.7
LZH				AP	pP	01 29 35.1	-1.7
LZH				XP	sP	01 29 40.5	-2.9
LZH				PP	PP	01 31 49.8	+0.9
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.9						
AKTO	Aktyubinsk	66.19	341	P	P	01 29 19.8	-1.3
	comp=Z,1.8nm,0.4s,mb4.5,baz=36,slow=6.0,SNR=6.6						
AKASG	Malin Array Be	68.12	1	P	P	01 29 32.3	-0.9
	comp=Z,2.2nm,0.4s,mb4.5,baz=360,slow=6.4,SNR=17						
GERES	GERESS Array B	69.19	12	P	P	01 29 40.5	+0.7
	comp=Z,0.2nm,0.4s,mb3.4,baz=342,slow=6.2,SNR=3.2						
ESDC	Sonseca Array	75.41	27	P	P	01 30 17.5	+0.8
	comp=Z,0.8nm,0.6s,mb3.8,baz=343,slow=5.7,SNR=5.7						
MDT	Midelt	81.84	29	P	P	01 30 52.9	+1.0
	comp=Z,0.8nm,0.5s,mb3.9,baz=336,slow=12,SNR=6.1						
RAO	Raoul Island	93.28	204	LR	LR	02 09 16.6	
	comp=Z,266nm,20.3s,MS4.7,baz=159,slow=33						
BOSA	Boshof	146.93	8	PKPbc	PKPbc	01 38 15.3	+2.4
	comp=Z,2.4nm,0.9s,slow=4.0,SNR=3.8						
VNA3	Neumayer Olymp	161.72	139	⇑*i*	PKPab	01 39 17.3	-0.7
VNA1	Neumayer--Stat	162.29	137	⇑*i*	PKPab	01 39 15.4	-5.1
VNA2	Neumayer--Watz	162.51	138	⇑*i*	PKPab	01 39 20.6	-0.8

MEX 19 01:21:10.8±0.6**, 16.00N**×**97.65W, h15**^{km}±168^{km}**, MD3.5, 1D, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.60	310	*i* P	Pb	01 21 20.4	-2.0
PNIG				*i* S	Sb	01 21 28.8	-1.5
VHO	Vista Hermosa	1.38	40	⇓*i*P	Pn	01 21 32.0	-3.6
VHO				*i* S	Sb	01 21 48.5	-4.6
OXX	Oaxaca	1.39	40	*i* P	Pn	01 21 32.5	-3.3
OXX				*i* S	Sb	01 21 48.3	-5.2

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*BUG **19** 01:26:26.0, 51.53N×6.81E, h1^{km}, ML1.6*
*LDG **19** 01:26:27.3±0.2, 51.59N×6.84E, h1^{km}, Ml2.7/8, Error ellipse: s-maj=4.1km s-min=2.6km az=30.0, Suspected Mining induced.*
*BNS **19** 01:26:27.8±1.3, 51.56N×6.86E, h1^{km}, ML2.1*
*CSEM **19** 01:26:27.3±0.2, 51.56N×6.88E, h2^{km}, ML2.7/7, Error ellipse: s-maj=3.5km s-min=2.9km az=155.0, Suspected Mining induced.*
*NEIC **19** 01:26:27.3, 51.59N×6.84E, h1^{km}, ML2.7(LDG), ML2.2(SZGRF), After LDG.*
BGR 19 01:26:24.8±1.1**, 51.59N**×**6.88E, h1**^{km}**, ML2.2**/4**, 2D, Error ellipse: s-maj=22.2km s-min=8.9km az=136.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAUG	Laupendahl	0.24	170	*e*Pg	Pg	01 26 31.6	+1.9
LAUG				*e*Sg	Sg	01 26 35.2	+2.4
	175nm,0.5s						
BUG	Bochum--Univer	0.29	121	⇓*e*Pg	Pg	01 26 32.6	+2.1
BUG				Sg	Sg	01 26 37.5	+3.2
BUG	Bochum--Univer	0.29	121	*e*Pg	Pg	01 26 32.5	+2.0
WTSB	Winterswijk	0.38	353	⇓*i*Pg	Pg	01 26 34.5	+2.2
	baz=170						
WTSB				*e*Sg	Sg	01 26 41.8	+4.4
WTSB	Winterswijk	0.38	353	*e*Sg	Sg	01 26 41.8	+4.4
RODG	Roetgen-Dahlhe	0.62	225	*e*Pg	Pg	01 26 38.8	+1.6
RODG				*e*Sg	Sg	01 26 47.7	+2.2
	346nm,0.7s						
BNS	Bensberg	0.66	163	*e*Pg	Pg	01 26 40.1	+2.2
BNS				*e*Sg	Sg	01 26 48.9	+2.3
	108nm,0.5s						
HOBG	Hohbusch	0.67	154	*e*Pg	Pg	01 26 40.0	+1.8
HOBG				*e*Sg	Sg	01 26 49.1	+1.9
	79nm,0.7s						
STB	Steinbach	1.00	181	*e*Pg	Pg	01 26 46.4	+1.7
STB				*e*Sg	Sg	01 26 59.5	+1.5
	46nm,0.5s						
KLL	Kalltalsperre	1.01	201	*e*Pg	Pg	01 26 46.1	+1.2
KLL				*e*Sg	Sg	01 27 00.1	+1.8
	43nm,0.2s						
HGN	Heimansgroeve	1.02	216	*e*Pg	Pg	01 26 46.3	+1.2
	21nm,0.2s,baz=40						
HGN				*e*Sg	Sg	01 27 00.3	+1.7
HILG	Hillesheim	1.31	186	*e*Pg	Pg	01 26 52.0	+1.2
HILG				*e*Sg	Sg	01 27 08.6	+0.4
	47nm,0.9s						
BGG	Burgeitz	1.42	168	*e*Pg	Pg	01 26 52.8	-0.2
BGG				*e*Sg	Sg	01 27 12.4	+0.4
	24nm,0.4s						
TNS	Taunus Mts	1.69	143	*e*Pg	Pg	01 26 56.6	-2.0
TNS				*e*Sg	Sg	01 27 19.1	-2.0
GIVF	Givet	1.98	222	*e*Pn	Pn	01 26 59.1	-0.6
GIVF				*e*Sg	Sg	01 27 28.1	-2.5
	19nm,0.3s						
WLF	Walferdange	1.98	194	*e*Pg	Pg	01 27 03.4	-0.9
WLF				*e*Sg	Sg	01 27 27.6	-3.2
CLZ	Clausthal	2.19	82	*e*Pg	Pg	01 27 02.9	-5.6
CLZ				*e*Sg	Sg	01 27 35.9	-1.8
CLZ	Clausthal	2.19	82	*e*Pg	Pg	01 27 02.9	-5.6
CLZ				*e*Sg	Sg	01 27 35.9	-1.8
NRDL	Niedersach Rie	2.19	64	*e*Sg	Sg	01 27 40.7	+3.0
BAIF	Baives	2.28	229	*e*Pn	Pn	01 27 04.6	+0.5
BAIF				*e*Sg	Sg	01 27 37.3	-3.5
	7.4nm,0.2s						
RFYF	Reffroy	3.10	197	*e*Pn	Pn	01 27 16.2	+0.5
RFYF				*e*Sg	Sg	01 28 04.1	-3.8
	6.5nm,0.4s						
CDF	Champ du Feu	3.19	175	*e*Pn	Pn	01 27 16.8	-0.3
CDF				*e*Sg	Sg	01 28 08.1	-2.9
	3.4nm,0.4s						
MEZF	Maizieres J’vi	3.31	202	*e*Pn	Pn	01 27 18.3	-0.4
	baz=25						
MEZF				*e*Sg	Sg	01 28 09.7	-5.2
	5.5nm,0.4s						
SFTF	Sexfontaines	3.59	200	*e*Sg	Sg	01 28 19.4	-4.9
	4.4nm,0.3s						
LOR	Lormes	4.75	206	*e*Pn	Pn	01 27 37.9	-1.3
	baz=21						
LOR				*e*Sn	Sn	01 28 30.1	-5.7
LOR				*e*Sg	Sg	01 28 55.1	-7.9
	1.4nm,0.2s						
SSF	Saint Saulge	5.04	207	*e*Pn	Pn	01 27 41.3	-2.0
AVF	Avril sur Loir	5.33	207	*e*Pn	Pn	01 27 45.4	-2.0
SMF	Signal de Mont	5.33	203	*e*Pn	Pn	01 27 45.1	-2.4
LDF	La Druitiere	5.41	239	*e*Pn	Pn	01 27 46.7	-1.8
LDF				*e*Sn	Sn	01 28 45.9	-6.5
FLN	La Foliniere	5.51	242	*e*Pn	Pn	01 27 48.2	-1.7
	baz=64						
FLN				*e*Sn	Sn	01 28 47.4	-7.5
BGF	Bois d’Agland	5.69	209	*e*Pn	Pn	01 27 50.3	-2.2
GRR	Gorron	5.93	240	*e*Pn	Pn	01 27 53.8	-2.0
GRR				*e*Sn	Sn	01 28 57.1	-8.3

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*NEIC **19** 01:33:23.2, 38.99S×178.46E, h20^{km}, ML3.8(WEL), After WEL.*
WEL 19 01:33:24.8±0.3**, 38.99S**×**178.39E, h33**^{km}**, ML3.7**/12**, 11C-5D, Error ellipse: s-maj=3.1km s-min=1.6km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNZ	Kokohu	0.56	266	⇓P	P	01 33 35.8	-0.2
KNZ				S	S	01 33 44.2	0.0
KNZ	Kokohu	0.56	266	⇓PN	Pn	01 33 35.8	-0.5
KNZ				SN	Sn	01 33 44.2	-0.2
PUZ	Puketiti	0.92	354	⇑P	P	01 33 40.5	-0.7
PUZ				S	S	01 33 52.4	-1.0
PUZ	Puketiti	0.92	354	⇑PN	Pn	01 33 40.5	-1.0
PUZ				SN	Sn	01 33 52.4	-1.1
MWZ	Matawai	0.93	314	⇑P	P	01 33 40.8	-0.7
MWZ	Matawai	0.93	314	⇑PN	Pn	01 33 40.8	-0.9
MWZ				SN	Sn	01 33 52.3	-1.7
URZ	Urewera	1.23	306	⇑P	P	01 33 45.2	-0.5
URZ	Urewera	1.23	306	⇑PN	Pn	01 33 45.2	-0.8
URZ				*e*SN	Sn	01 34 01.6	0.0
MXZ	Matakaoa Point	1.42	357	⇑P	P	01 33 48.0	-0.5
MXZ	Matakaoa Point	1.42	357	⇑PN	Pn	01 33 48.0	-0.7
MXZ				*e*SN	Sn	01 34 05.8	-0.6
BKZ	Black Stump Fm	1.48	262	P	P	01 33 49.0	-0.4
BKZ	Black Stump Fm	1.48	262	PN	Pn	01 33 49.0	-0.6
BKZ				*e*SN	Sn	01 34 06.1	-1.9
EDRZ	Edgecumbe	1.56	304	PN	Pn	01 33 50.1	-0.6
PXZ	Pawanui	1.57	228	⇓PN	Pn	01 33 49.3	-1.6
PXZ				SN	Sn	01 34 08.8	-1.5
TAZ	Tarawera	1.65	296	PN	Pn	01 33 51.4	-0.6
MARZ	Manawahe	1.67	306	P	P	01 33 51.9	-0.2
MARZ	Manawahe	1.67	306	PN	Pn	01 33 51.9	-0.4
WIZ	White Island	1.73	327	P	P	01 33 51.8	-1.2
WIZ	White Island	1.73	327	PN	Pn	01 33 51.4	-1.7
PATZ	Paeroa	1.77	289	P	P	01 33 53.0	-0.5
PATZ	Paeroa	1.77	289	PN	Pn	01 33 52.5	-1.1
MOVZ	Moawhango	2.09	258	P	P	01 33 58.0	-0.1
MOVZ	Moawhango	2.09	258	PN	Pn	01 33 57.9	-0.3
KATZ	Kakaramea	2.10	269	P	P	01 33 58.2	0.0
KATZ	Kakaramea	2.10	269	PN	Pn	01 33 58.1	-0.2
KRVZ	Karewarewa	2.14	266	PN	Pn	01 33 58.5	-0.5
TUVZ	Tukino	2.14	262	P	P	01 33 58.8	0.0
TUVZ	Tukino	2.14	262	PN	Pn	01 33 58.9	-0.1
TSZ	Takapari Road	2.16	239	⇓P	P	01 33 57.4	-1.7
TSZ	Takapari Road	2.16	239	⇓PN	Pn	01 33 57.4	-1.9
NGZ	Ngauruhoe	2.17	264	P	P	01 33 59.2	-0.1
NGZ	Ngauruhoe	2.17	264	PN	Pn	01 33 59.1	-0.3
WTVZ	West Tongariro	2.18	266	P	P	01 33 59.4	0.0
WTVZ	West Tongariro	2.18	266	PN	Pn	01 33 59.4	-0.2
WNVZ	Wahianoa	2.19	260	P	P	01 33 59.5	-0.1
WNVZ	Wahianoa	2.19	260	PN	Pn	01 33 59.3	-0.4
CNZ	Chateau	2.22	264	P	P	01 33 59.8	-0.1
CNZ	Chateau	2.22	264	PN	Pn	01 33 59.8	-0.3
FWVZ	Far West T-bar	2.22	262	⇑P	P	01 33 59.8	-0.1
FWVZ	Far West T-bar	2.22	262	⇑PN	Pn	01 33 59.8	-0.4
WPVZ	Whakapapa	2.22	263	P	P	01 33 59.9	0.0
WPVZ	Whakapapa	2.22	263	PN	Pn	01 33 59.9	-0.3
TRVZ	Turoa	2.23	261	⇑PN	Pn	01 33 59.8	-0.4
TWVZ	Taurewa	2.30	267	P	P	01 34 00.6	-0.4
TWVZ	Taurewa	2.30	267	PN	Pn	01 34 00.6	-0.7
BFZ	Birch Farm	2.36	224	P	P	01 33 59.4	-2.6
BFZ	Birch Farm	2.36	224	*e*PN	Pn	01 33 59.4	-2.7
MRZ	Mangatainoka R	2.73	231	P	P	01 34 04.7	-2.6
MRZ	Mangatainoka R	2.73	231	PN	Pn	01 34 04.7	-2.8
MRZ				SN	Sn	01 34 35.8	-3.9
HIZ	Hauiti	2.80	279	*e*PN	Pn	01 34 07.7	-0.7
VRZ	Vera Road	2.83	266	P	P	01 34 07.9	-0.7
VRZ	Vera Road	2.83	266	*e*PN	Pn	01 34 07.6	-1.2
MTW	Mount Morrison	3.10	225	P	P	01 34 08.6	-3.9
MTW	Mount Morrison	3.10	225	PN	Pn	01 34 08.6	-4.1
TRWZ	Traveller	3.17	220	PN	Pn	01 34 09.7	-4.0
KIW	Kapiti Island	3.26	234	P	P	01 34 12.2	-2.6
PAWZ	Paruwai Farm	3.30	222	P	P	01 34 11.4	-3.9
CAW	Cannon Point	3.31	229	P	P	01 34 12.2	-3.3
NEZ	North Egmont	3.35	264	P	P	01 34 16.7	+0.7
MSWZ	Moikau Station	3.41	224	P	P	01 34 12.4	-4.6
PKE	Pukeiti	3.43	265	P	P	01 34 17.3	+0.1
MRW	Makara Radio	3.61	230	P	P	01 34 15.9	-3.8
TCW	Tory Channel	3.86	233	P	P	01 34 19.3	-4.0
BSWZ	Blackbirch Sta	4.39	230	P	P	01 34 26.0	-4.9
NNZ	Nelson	4.44	238	*e*P	P	01 34 27.4	-4.1
QRZ	Quartz Range	4.87	246	P	P	01 34 33.0	-4.6
DSZ	Denniston Nort	5.73	239	*e*P	P	01 34 44.3	-5.4
LTZ	Lake Taylor	5.99	229	*e*P	P	01 34 48.0	-5.3
MQZ	McQueen’s Vall	6.39	221	*e*P	P	01 34 51.8	-7.2
ODZ	Otahua Downs	8.36	221	*e*P	P	01 35 19.7	-6.7

*IDC **19** 02:02:44.4±3.9,1.37N×97.43E,mb3.8/4,mb1 4.0/4,mb1mx3.7/17,mbtmp3.8/4,Error ellipse: s-maj=148.9km s-min=28.9km az=57.0*

*NEIC **19** 02:02:48.7±1.0,1.40N×97.52E,h30^{km},mb3.9/1,Error ellipse: s-maj=25.9km s-min=14.5km az=61.0*

ISC 19 02:02:46.8±1.3**,1.4N**±0.2×**97.5E**±0.2**,h30**^{km}**,n8,**σ**0**^{s}**61**/8**,mb3.8**/5**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**4.97**	**39**	*e*P	**Pn**	**02 04 01.1**	**-0.3**
WRA	**Warramunga Arr**	**41.90**	**122**	P	**P**	**02 10 37.1**	**+0.5**
	0.6nm,0.7s,mb3.4,baz=300,slow=9.1,SNR=5.0						
WRAB	**Tennant Creek**	**41.91**	**122**	P	**P**	**02 10 36.1**	**-0.5**
	1.5nm,0.6s,mb3.8						
SONM	**Songino Array**	**46.87**	**8**	P	**P**	**02 11 17.3**	**+1.2**
	1.1nm,0.7s,mb3.9,baz=184,slow=7.8,SNR=8.4						
MKAR	**Makanchi Array**	**47.10**	**346**	P	**P**	**02 11 17.9**	**-0.1**
	0.9nm,0.5s,mb3.9,baz=156,slow=8.9,SNR=12						
MKAR	**Makanchi Array**	**47.10**	**346**	P	**P**	**02 11 17.9**	**-0.1**
KURK	**Kurchatov**	**51.66**	**345**	P	**P**	**02 11 52.1**	**-0.9**
ZAL	**Zalesovo**	**53.38**	**351**	P	**P**	**02 12 05.9**	**+0.1**
	1.5nm,0.7s,mb4.0,baz=286,slow=5.7,SNR=6.8						

*MDD **19** 02:29:35.5±1.0,32.35N×6.16W,mb3.6/2,Error ellipse: s-maj=17.0km s-min=6.7km az=139.0,PRXIMO*

*CSEM **19** 02:29:36.3±0.3,32.47N×6.26W,h40^{km},MD3.2,Error ellipse: s-maj=8.6km s-min=4.3km az=127.0*

*CNRM **19** 02:29:36.4,32.50N×6.26W,h6^{km},MD3.2*

ISC 19 02:29:34.9±0.7**,32.56N**±0.04×**6.36W**±0.06**,h10**^{km}**,n12,**σ**1**^{s}**14**/19**,Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CZD	**Col de Zad**	**1.20**	**66**	*i* P	**Pb**	**02 29 57.0**	**-0.4**
CZD				*i* S	**Sb**	**02 30 13.0**	**+0.2**
OUK	**Oukaimeden**	**1.86**	**224**	*i* P	**Pn**	**02 30 06.5**	**-0.7**
OUK				*i* S	**Sn**	**02 30 31.0**	**0.0**
CIA	**Chichaoua**	**2.27**	**245**	*e*P	**Pn**	**02 30 15.0**	**+1.9**
CIA				*i* S	**Sn**	**02 30 40.0**	**-1.3**
EMIJ	**Mijas**	**4.20**	**18**	S	**Sn**	**02 31 30.3**	**-0.1**
	1.0nm,0.4s,SNR=7.9						
EGRO	**El Granado**	**5.05**	**350**	S	**Sn**	**02 31 53.1**	**+1.4**
	1.4nm,0.2s,SNR=7.9						
EGRO	**El Granado**	**5.05**	**350**	S	**Sn**	**02 31 53.1**	**+1.4**
	1.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.20**	**357**	P	**Pn**	**02 30 55.3**	**+0.5**
	0.3nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**02 31 55.8**	**+0.2**
	0.7nm,0.5s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.20**	**357**	P	**Pn**	**02 30 55.3**	**+0.5**
	0.3nm,0.2s,SNR=7.9						
EMIN				S	**Sn**	**02 31 55.8**	**+0.2**
	0.7nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**5.78**	**14**	S	**Sn**	**02 32 08.5**	**-1.6**
	0.5nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**5.78**	**14**	S	**Sn**	**02 32 08.5**	**-1.6**
	0.5nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**6.21**	**355**	P	**Pn**	**02 31 10.8**	**+1.9**
	0.9nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**02 32 18.9**	**-1.8**
	0.9nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**6.21**	**355**	P	**Pn**	**02 31 10.8**	**+1.9**
	0.9nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**02 32 18.9**	**-1.8**
	0.9nm,0.2s,SNR=7.9						

NEIC 19 03:04:31.0,51.72N×**178.05E,h71**^{km}**,MG3.5**(AEIC)**, After AEIC.,Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	**Shemya**	**2.63**	**294**	P	P	03 05 11.8	-0.4
KIMD	**Kanaga Island**	**2.93**	**87**	P	P	03 05 15.9	-0.4
FX1	**Attu Island--F**	**3.22**	**293**	P	P	03 05 20.1	-0.3
ADK	**Adak**	**3.27**	**85**	P	P	03 05 20.2	-1.0

*NEIC **19** 03:13:21.9±1.1,36.39S×179.49E,h196^{km}±7^{km},mb4.7/1,Error ellipse: s-maj=18.4km s-min=13.0km az=101.0*

*IDC **19** 03:13:21.8±3.5,36.31S×179.62E,h195^{km}±30^{km},mb4.2/1,mb1 4.2/3,mb1mx3.7/11,mbtmp4.5/3,Error ellipse: s-maj=51.4km s-min=40.3km az=165.0*

ISC 19 03:13:16.7±1.6**,36.3S**±0.1×**179.9W**±0.2**,h201**^{km}±8^{km}**,n68,**σ**0**^{s}**97**/73**,mb4.5**/2**,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.89**	**229**	PN	**P**	**03 13 53.5**	**-0.9**
MXZ				*e*SN	**S**	**03 14 25.5**	**+2.0**
MXZ				T		03 16 41.6	
MXZ	**Matakaoa Point**	**1.89**	**229**	P	**P**	**03 13 53.6**	**-0.9**
MXZ				S	**S**	**03 14 25.3**	**+1.7**
PUZ	**Puketiti**	**2.27**	**220**	PN	**P**	**03 14 00.0**	**+1.4**
PUZ				*e*SN	**S**	**03 14 35.2**	**+4.3**
PUZ	**Puketiti**	**2.27**	**220**	P	**P**	**03 14 00.1**	**+1.5**
PUZ				S	**S**	**03 14 38.0**	**+7.1**
WIZ	**White Island**	**2.62**	**242**	PN	**P**	**03 13 59.8**	**-2.7**
WIZ	**White Island**	**2.62**	**242**	P	**P**	**03 13 59.8**	**-2.6**
MWZ	**Matawai**	**2.86**	**225**	PN	**P**	**03 14 06.1**	**+0.8**
MWZ	**Matawai**	**2.86**	**225**	P	**P**	**03 14 06.1**	**+0.9**
URZ	**Urewera**	**3.06**	**230**	P	**P**	**03 14 07.0**	**-0.6**
	39nm,0.3s,baz=330,slow=1.6,SNR=139						
URZ				S	**S**	**03 14 46.5**	**-0.4**
	36nm,0.3s,baz=326,slow=19,SNR=12						
URZ	**Urewera**	**3.06**	**230**	PN	**P**	**03 14 06.9**	**-0.7**
URZ				SN	**S**	**03 14 49.6**	**+2.7**
URZ	**Urewera**	**3.06**	**230**	P	**P**	**03 14 07.0**	**-0.6**
MARZ	**Manawahe**	**3.19**	**238**	P	**P**	**03 14 08.6**	**-0.6**
EDRZ	**Edgecumbe**	**3.21**	**236**	P	**P**	**03 14 08.8**	**-0.6**
MYRZ	**Mayor Island**	**3.24**	**252**	PN	**P**	**03 14 05.8**	**-3.9**
KNZ	**Kokohu**	**3.30**	**215**	PN	**P**	**03 14 12.1**	**+1.6**
KNZ				SN	**S**	**03 14 58.9**	**+6.9**
KNZ	**Kokohu**	**3.30**	**215**	P	**P**	**03 14 12.1**	**+1.6**
TAZ	**Tarawera**	**3.43**	**236**	P	**P**	**03 14 12.0**	**-0.1**
PATZ	**Paeroa**	**3.68**	**235**	*e*PN	**P**	**03 14 14.8**	**-0.3**
PATZ	**Paeroa**	**3.68**	**235**	P	**P**	**03 14 15.3**	**+0.2**
BKZ	**Black Stump Fm**	**4.02**	**224**	PN	**P**	**03 14 19.6**	**+0.3**
BKZ	**Black Stump Fm**	**4.02**	**224**	P	**P**	**03 14 19.8**	**+0.4**
KRVZ	**Karewarewa**	**4.48**	**231**	PN	**P**	**03 14 24.9**	**-0.3**
PXZ	**Pawanui**	**4.48**	**214**	*e*PN	**P**	**03 14 26.2**	**+1.0**
PXZ				SN	**S**	**03 15 25.4**	**+7.1**
OTVZ	**Oturere**	**4.51**	**230**	*e*PN	**P**	**03 14 25.2**	**-0.3**
NGZ	**Ngauruhoe**	**4.55**	**230**	*e*PN	**P**	**03 14 26.0**	**-0.1**
NGZ	**Ngauruhoe**	**4.55**	**230**	P	**P**	**03 14 26.0**	**-0.1**
TUVZ	**Tukino**	**4.58**	**229**	*e*PN	**P**	**03 14 26.7**	**+0.3**
TUVZ	**Tukino**	**4.58**	**229**	P	**P**	**03 14 26.7**	**+0.3**
TWVZ	**Taurewa**	**4.59**	**232**	*e*PN	**P**	**03 14 26.6**	**0.0**
TWVZ	**Taurewa**	**4.59**	**232**	P	**P**	**03 14 26.6**	**0.0**
CNZ	**Chateau**	**4.60**	**230**	P	**P**	**03 14 27.6**	**+0.9**
MOVZ	**Moawhango**	**4.61**	**227**	P	**P**	**03 14 26.5**	**-0.3**
FWVZ	**Far West T-bar**	**4.63**	**230**	PN	**P**	**03 14 27.6**	**+0.5**
FWVZ	**Far West T-bar**	**4.63**	**230**	P	**P**	**03 14 27.7**	**+0.6**
WNVZ	**Wahianoa**	**4.65**	**229**	*e*PN	**P**	**03 14 27.3**	**0.0**
WNVZ	**Wahianoa**	**4.65**	**229**	P	**P**	**03 14 27.5**	**+0.2**
MTVZ	**Mangateitei**	**4.76**	**229**	*e*PN	**P**	**03 14 28.2**	**-0.6**
BFZ	**Birch Farm**	**5.29**	**214**	*e*PN	**P**	**03 14 37.0**	**+1.5**
BFZ	**Birch Farm**	**5.29**	**214**	*e*P	**P**	**03 14 36.7**	**+1.2**
MRZ	**Mangatainoka R**	**5.59**	**218**	PN	**P**	**03 14 38.7**	**-0.6**
MRZ				SN	**S**	**03 15 47.8**	**+4.2**
MRZ	**Mangatainoka R**	**5.59**	**218**	P	**P**	**03 14 38.8**	**-0.5**
MTW	**Mount Morrison**	**6.01**	**215**	PN	**P**	**03 14 44.3**	**-0.4**
MTW	**Mount Morrison**	**6.01**	**215**	P	**P**	**03 14 44.6**	**-0.2**
KIW	**Kapiti Island**	**6.08**	**220**	PN	**P**	**03 14 44.6**	**-1.0**
KIW	**Kapiti Island**	**6.08**	**220**	P	**P**	**03 14 45.1**	**-0.6**
TRWZ	**Traveller**	**6.11**	**213**	*e*PN	**P**	**03 14 46.8**	**+0.6**
CAW	**Cannon Point**	**6.18**	**218**	PN	**P**	**03 14 45.8**	**-1.2**
CAW	**Cannon Point**	**6.18**	**218**	P	**P**	**03 14 46.3**	**-0.7**
MSWZ	**Moikau Station**	**6.33**	**215**	P	**P**	**03 14 48.7**	**-0.2**
MRW	**Makara Radio**	**6.45**	**219**	P	**P**	**03 14 50.4**	**-0.2**
TCW	**Tory Channel**	**6.66**	**221**	P	**P**	**03 14 52.2**	**-1.1**
NNZ	**Nelson**	**7.16**	**225**	P	**P**	**03 14 58.3**	**-1.5**
BSWZ	**Blackbirch Sta**	**7.23**	**220**	P	**P**	**03 14 59.7**	**-1.0**
QRZ	**Quartz Range**	**7.43**	**231**	*e*P	**P**	**03 15 00.8**	**-2.5**
KHZ	**Kahutara**	**7.91**	**218**	*e*P	**P**	**03 15 09.7**	**+0.1**
RPZ	**Rata Peaks**	**10.12**	**220**	P	**P**	**03 15 37.7**	**-0.4**
	2.1nm,0.3s,baz=70,slow=2.2,SNR=12						
RPZ				S	**S**	**03 17 29.2**	**+0.2**
	1.8nm,0.3s,baz=320,slow=21,SNR=6.8						
RPZ	**Rata Peaks**	**10.12**	**220**	P	**P**	**03 15 37.7**	**-0.4**
RPZ				S	**S**	**03 17 29.2**	**+0.2**
ODZ	**Otahua Downs**	**11.27**	**217**	*e*P	**P**	**03 15 53.3**	**+0.3**
ASPA	**Alice Springs**	**41.59**	**275**	*e*P	**P**	**03 20 48.3**	**+1.9**
WB2	**Warramunga Arr**	**43.11**	**280**	*e*P	**P**	**03 20 59.3**	**+0.5**
WRAB	**Tennant Creek**	**43.11**	**280**	*e*P	**P**	**03 20 58.8**	**0.0**
	10nm,0.4s,mb4.6						
WRA	**Warramunga Arr**	**43.12**	**280**	P	**P**	**03 20 59.5**	**+0.7**
	6.0nm,0.4s,mb4.3,baz=120,slow=7.5,SNR=30						
ARCES	**ARCESS Array B**	**143.98**	**345**	PKP	PKPdf	03 32 30.5	+3.6
	2.4nm,0.8s,baz=79,slow=4.6,SNR=4.0						
JOF	**Joensuu**	**147.21**	**334**	*e*p	PKPdf	03 32 37.6	+5.1
	3.4nm,0.7s						
KAF	**Kangasniemi**	**149.46**	**336**	*e*p	PKPdf	03 32 44.8	+8.7
	1.0nm,0.4s						
FINES	**FINESS Array B**	**150.02**	**335**	PKPbc	PKPdf	03 32 47.3	+10
	4.2nm,0.9s,baz=24,slow=4.0,SNR=15						
BRTR	**Keskin Array B**	**153.46**	**288**	PKPbc	PKPdf	03 32 56.8	+14
	0.6nm,0.5s,baz=159,slow=2.4,SNR=10						
NOA	**NORSAR Array B**	**154.29**	**348**	PKPbc	PKPdf	03 32 58.6	+15
	0.4nm,0.5s,baz=52,slow=2.1,SNR=3.1						

*MOS **19** 03:36:02.9±0.9,50.94N×153.11E,h283^{km},mb3.6/5,Error ellipse: s-maj=25.3km s-min=14.0km az=52.3*

*KRSC **19** 03:36:02.9±2.1,50.25N×153.79E,h270^{km}±10^{km},ML4.4*

*IDC **19** 03:36:05.4±2.9,50.83N×153.20E,h298^{km}±35^{km},mb3.1/10,mb1 3.4/13,mb1mx3.3/24,mbtmp3.9/13,Error ellipse: s-maj=28.4km s-min=11.9km az=170.0*

ISC 19 03:36:03.0±0.6**,50.8N**±0.1×**153.3E**±0.1**,h288**^{km}±6^{km}**,n45,**σ**1**^{s}**30**/55**,mb3.3**/10**,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALID	**Alaid**	**1.44**	**85**	*e*P	**P**	**03 36 43.9**	**-1.0**
SKR	**Severo-Kuril's**	**1.80**	**92**	*e*P	**P**	**03 36 42.9**	**-4.5**
PAU	**Pauzhetka**	**2.33**	**71**	*i* P	**P**	**03 36 51.1**	**-0.8**
APC	**Apacha**	**3.23**	**47**	*i* P	**P**	**03 37 00.8**	**+0.1**
GRL	**Gorelyy**	**3.48**	**57**	*i* P	**P**	**03 37 03.8**	**+0.4**
RUS	**Russkaya**	**3.66**	**61**	P	**P**	**03 37 04.8**	**-0.6**
RUS				S	**S**	**03 37 50.4**	**-3.6**
RUS	**Russkaya**	**3.66**	**61**	*i* P	**P**	**03 37 04.7**	**-0.7**
RUS				*e*S	**S**	**03 37 50.5**	**-3.5**
GNL	**Ganaly**	**4.10**	**42**	*e*P	**P**	**03 37 10.6**	**+0.4**
KOK	**Koryaka**	**4.16**	**50**	*e*P	**P**	**03 37 11.8**	**+0.9**
AVH	**Avacha**	**4.19**	**51**	*e*P	**P**	**03 37 12.2**	**+0.9**
AVH				*e*S	**S**	**03 38 03.3**	**-1.3**
UGLR	**Uglovaya**	**4.21**	**52**	*i* P	**P**	**03 37 13.0**	**+1.6**
UGLR				*e*S	**S**	**03 38 01.8**	**-3.0**
SMAR	**Somma**	**4.22**	**52**	*e*P	**P**	**03 37 12.4**	**+0.8**
SMAR				*e*S	**S**	**03 38 01.3**	**-3.9**
NLC	**Nalytchevo**	**4.45**	**55**	*e*P	**P**	**03 37 12.7**	**-1.5**
NLC				*e*S	**S**	**03 38 04.6**	**-5.3**
SPN	**Mys Shipunski**	**4.78**	**58**	P	**P**	**03 37 16.6**	**-1.4**
SPN				S	**S**	**03 38 10.0**	**-6.6**
SPN	**Mys Shipunski**	**4.78**	**58**	*e*P	**P**	**03 37 16.6**	**-1.4**
SPN				*e*S	**S**	**03 38 10.7**	**-5.9**
ESO	**Esso**	**6.10**	**30**	*e*P	**P**	**03 37 37.9**	**+4.1**
TUMR	**Tumrok**	**6.13**	**40**	*e*P	**P**	**03 37 36.3**	**+2.1**
KMNR	**Kamenistaya**	**6.51**	**37**	*e*P	**P**	**03 37 40.9**	**+2.1**
SRDR	**Sredinnyy**	**6.75**	**32**	*e*P	**P**	**03 37 45.4**	**+3.6**
ZLN	**Zelenaya**	**6.92**	**38**	*e*P	**P**	**03 37 46.5**	**+2.7**
CIRR	**Tsirk**	**6.97**	**37**	*e*P	**P**	**03 37 47.9**	**+3.5**
KRSR	**Krestovskiy**	**6.97**	**36**	*e*P	**P**	**03 37 47.8**	**+3.3**
KBTR	**Krutoberegovo**	**7.87**	**43**	P	**P**	**03 37 55.5**	**-0.2**
BKI	**Bering**	**8.85**	**55**	*e*P	**P**	**03 38 05.3**	**-2.4**
ASAJ	**Asahikawa**	**9.83**	**232**	P	**P**	**03 38 20.4**	**+0.6**
	0.7nm,0.3s,baz=0.1,slow=16,SNR=4.6						
ASAJ	**Asahikawa**	**9.83**	**232**	PN	**P**	**03 38 20.5**	**+0.7**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FX1	**Attu Island--F**	**12.47**	**73**	P	**P**	**03 38 54.5**	**+2.0**
	comp=Z,1.2nm,0.3s,baz=227,slow=19,SNR=4.9						
FX1				S	**S**	**03 41 12.0**	**+5.3**
	comp=Z,1.3nm,0.3s,baz=109,slow=18,SNR=4.0						
FX1	**Attu Island--F**	**12.47**	**73**	PN	**P**	**03 38 54.5**	**+2.0**
FX1				S	**S**	**03 41 12.0**	**+5.3**
FX1				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FX1				smax			
	comp=N,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**17.87**	**223**	P	**P**	**03 39 54.2**	**+0.5**
	comp=N,1.4nm,0.3s,baz=14,slow=12,SNR=18						
MJAR	**Matsushiro Arr**	**17.87**	**223**	P	**P**	**03 39 54.2**	**+0.5**
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**30.32**	**283**	P	**P**	**03 41 48.7**	**-1.1**
	comp=Z,0.3nm,0.5s,mb3.1,baz=69,slow=6.8,SNR=3.6						
ILAR	**Eielson Array**	**33.41**	**42**	P	**P**	**03 42 16.0**	**-0.3**
	comp=Z,0.6nm,0.6s,mb3.3,baz=265,slow=5.8,SNR=11						
ILAR	**Eielson Array**	**33.41**	**42**	P	**P**	**03 42 16.0**	**-0.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZAL	**Zalesovo**	**40.48**	**302**	P	**P**	**03 43 15.5**	**+0.3**
	comp=Z,1.8nm,0.4s,mb3.7,baz=130,slow=5.4,SNR=4.5						
ZAL	**Zalesovo**	**40.48**	**302**	P	**P**	**03 43 15.5**	**+0.3**
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MKAR	**Makanchi Array**	**45.30**	**294**	P	**P**	**03 43 53.0**	**-0.8**
	comp=Z,1.4nm,0.7s,mb3.3,baz=57,slow=6.9,SNR=6.9						
MKAR	**Makanchi Array**	**45.30**	**294**	P	**P**	**03 43 53.0**	**-0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**47.67**	**39**	P	**P**	**03 44 12.0**	**0.0**
	comp=Z,0.4nm,0.4s,mb3.1,baz=301,slow=6.7,SNR=5.4						
BVAR	**Borovoye Array**	**48.47**	**307**	P	**P**	**03 44 17.5**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.1,baz=59,slow=7.9,SNR=4.6						
FINES	**FINESS Array B**	**60.47**	**334**	P	**P**	**03 45 42.4**	**-1.6**
	comp=Z,2.5nm,0.8s,mb3.8,baz=51,slow=8.9,SNR=3.8						
FINES	**FINESS Array B**	**60.47**	**334**	P	**P**	**03 45 42.4**	**-1.7**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NVAR	**Mina Array Bea**	**60.53**	**64**	P	**P**	**03 45 44.7**	**-0.1**
	comp=Z,0.2nm,0.5s,mb2.9,baz=291,slow=7.7,SNR=3.6						
PDAR	**Pinedale Array**	**62.33**	**56**	P	**P**	**03 45 57.0**	**+0.4**
	comp=Z,0.9nm,0.5s,mb3.7,baz=324,slow=1.9,SNR=9.0						
TXAR	**Lajitas Array**	**75.44**	**62**	P	**P**	**03 47 17.0**	**+0.1**
	comp=Z,0.5nm,0.5s,mb3.4,baz=298,slow=4.9,SNR=10						
TXAR	**Lajitas Array**	**75.44**	**62**	P	**P**	**03 47 17.0**	**+0.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*IDC **19** 04:05:51.1±1.0,12.83N×92.42E,mb3.9/11,mb1 4.1/11,mb1mx3.9/21,mbtmp3.9/11,MS2.5/1,Ms1 2.5/1,ms1mx2.5/30,Error ellipse: s-maj=45.0km s-min=17.0km az=53.0*

*NEIC **19** 04:05:55.5±0.5,12.84N×92.47E,h30^{km},mb4.5/1,Error ellipse: s-maj=24.1km s-min=7.6km az=55.0*

ISC 19 04:05:53.2±0.7**,12.8N**±0.1×**92.4E**±0.2**,h30**^{km}**,n18,**σ**0**^{s}**41**/19**,mb3.9**/12**,Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.16**	**162**	*e*P	**Pn**	**04 06 21.6**	**+8.0**
PBA				*e*S	**Sn**	**04 06 40.0**	**+11**
PBA				AML	AML	04 06 43.3	
	comp=N,4µm,0.6s						
PBA				AML	AML	04 06 43.8	
	comp=E,4µm,0.3s						
VIS	**Vishakhapatnam**	**10.03**	**301**	*e*P	**P**	**04 08 17.8**	**-0.8**
VIS				*e*S	**S**	**04 09 59.7**	**-11**
TGY	**Tagaytay City**	**27.80**	**84**	LR	LR	04 22 30.8	
	comp=E,9.3nm,19.3s,baz=250,slow=36						
MKAR	**Makanchi Array**	**34.97**	**348**	P	**P**	**04 12 44.7**	**-0.1**
	comp=E,1.9nm,0.8s,mb4.1,baz=173,slow=9.8,SNR=6.9						
SONM	**Songino Array**	**36.87**	**16**	P	**P**	**04 13 00.2**	**-0.7**
	comp=E,0.3nm,0.5s,mb3.4,baz=188,slow=10,SNR=2.7						
KURK	**Kurchatov**	**39.48**	**346**	P	**P**	**04 13 22.7**	**0.0**
ZAL	**Zalesovo**	**41.51**	**353**	P	**P**	**04 13 39.7**	**+0.3**
	comp=E,0.9nm,0.6s,mb3.6,baz=304,slow=4.8,SNR=4.5						
ZAL	**Zalesovo**	**41.51**	**353**	P	**P**	**04 13 39.7**	**+0.3**
BVAR	**Borovoye Array**	**43.83**	**341**	P	**P**	**04 13 58.6**	**+0.3**
	comp=E,0.3nm,0.4s,mb3.4,baz=153,slow=9.7,SNR=2.7						
FITZ	**Fitzroy Crossi**	**44.92**	**132**	P	**P**	**04 14 08.1**	**+0.5**
	comp=E,6.3nm,0.5s,mb4.7,baz=324,slow=3.9,SNR=16						
AKTO	**Aktyubinsk**	**46.86**	**330**	P	**P**	**04 14 22.9**	**+0.5**
	comp=E,1.0nm,0.6s,mb4.0,baz=112,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**52.55**	**128**	P	**P**	**04 15 06.6**	**0.0**
	comp=E,1.4nm,0.6s,mb4.1,baz=305,slow=8.5,SNR=18						
WRAB	**Tennant Creek**	**52.55**	**128**	*e*P	**P**	**04 15 06.0**	**-0.6**
	comp=E,2.7nm,0.5s,mb4.4						
WB2	**Warramunga Arr**	**52.56**	**128**	*e*P	**P**	**04 15 06.4**	**-0.2**
BRTR	**Keskin Array B**	**57.98**	**309**	P	**P**	**04 15 46.0**	**+0.4**
	comp=E,1.1nm,0.8s,mb4.0,baz=133,slow=9.5,SNR=7.5						
FINES	**FINESS Array B**	**67.61**	**332**	P	**P**	**04 16 49.0**	**-0.1**
	comp=E,2.5nm,1.0s,mb4.2,baz=90,slow=3.8,SNR=4.9						
GERES	**GERESS Array B**	**73.06**	**317**	P	**P**	**04 17 22.5**	**+0.1**
	comp=E,0.6nm,0.8s,mb3.6,baz=90,slow=5.3,SNR=5.7						
NOA	**NORSAR Array B**	**74.65**	**330**	P	**P**	**04 17 31.8**	**+0.4**
	comp=E,0.3nm,0.5s,mb3.5,baz=111,slow=3.8,SNR=2.9						

NNC 19 04:07:34.4±5.3**,38.94N**×**71.36E,h6**^{km}±10^{km}**,mpv3.2, 5C-2D,Error ellipse: s-maj=43.7km s-min=25.3km az=153.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.20**	**352**	⇓Pn	Pn	04 08 41.8	+1.3
	2.2nm,0.5s,baz=176,slow=14,SNR=41						
KK31				⇑Sn	Sn	04 09 34.5	+3.9
	2.2nm,0.3s						
KK31				⇑Lg		04 09 46.9	
	6.7nm,0.5s,baz=181,slow=28,SNR=7.2						
AAK	**Ala-Archa**	**4.39**	**32**	⇓Pg	Pg	04 08 53.1	-8.9
	2.3nm,0.5s						
AAK				⇑Lg		04 09 54.7	
	6.1nm,0.6s						
AB31	**Akbulak array**	**13.16**	**325**	⇑Pn	P	04 10 33.6	-11
	0.4nm,0.3s,baz=2.3,slow=27,SNR=18						
AKTO	**Aktyubinsk**	**14.87**	**325**	⇑Pn	P	04 11 05.2	-1.6
	0.3nm,0.5s						

JMA 19 04:37:49.7±0.2**,38.21N**×**144.70E,h57**^{km}**,M3.7,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.53**	**291**	P	P	04 38 29.6	+0.3
MIYJ	**Miyakonagasawa**	**2.63**	**302**	P	P	04 38 30.7	0.0
MIYJ				*e*S	S	04 39 01.3	-0.2
JIO	**Ouri**	**2.65**	**276**	P	P	04 38 31.3	+0.3
JIO				*e*S	S	04 39 02.2	+0.2
JMK	**Ichinoseki**	**2.83**	**286**	P	P	04 38 33.9	+0.4
JMK				*e*S	S	04 39 07.2	+0.7
JCH	**Churui**	**4.52**	**347**	P	P	04 38 54.4	-2.9
JCH				*e*S	S	04 39 43.2	-5.9
JRY	**Ryogami san**	**5.12**	**246**	P	P	04 39 05.0	-0.8
JRY				*e*S	S	04 40 00.9	-3.4
NEM2	**Nemuro 2**	**5.21**	**8**	P	P	04 39 01.1	-5.9
NEM2				*e*S	S	04 39 56.3	-10
JOD2	**Odawara 2**	**5.38**	**239**	P	P	04 39 08.2	-1.1
JOD2				*e*S	S	04 40 06.8	-3.9
MAT	**Matsushiro**	**5.43**	**254**	P	P	04 39 10.9	+0.9
MAT				*e*S	S	04 40 11.8	-0.2
JTKR	**Abashiri--Toko**	**5.79**	**354**	P	P	04 39 11.9	-3.0
JTKR				*e*S	S	04 40 14.0	-6.8

*ATH **19** 04:52:26.2,38.09N×26.46E,h23^{km}±1^{km},MD3.4/4*

*ISK **19** 04:52:27.6,38.17N×26.70E,h22^{km},MD3.3*

*NEIC **19** 04:52:27.0,38.17N×26.70E,h22^{km},MD3.4(ATH),MD3.3(ISK),After ISK.*

*CSEM **19** 04:52:27.3±0.1,38.17N×26.69E,h20^{km},MD3.4,Error ellipse: s-maj=2.2km s-min=1.4km az=90.0*

ISC 19 04:52:26.9±0.7**,38.17N**±0.03×**26.63E**±0.05**,h12**^{km}±5^{km}**,n27,**σ**0**^{s}**88**/37**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.19**	**353**	*i* P	**Pg**	**04 52 30.7**	**-0.6**
URLA				*i* S	**Sg**	**04 52 34.4**	**+0.1**
SMG	**Samos**	**0.49**	**160**	*e*PB	**Pb**	**04 52 36.2**	**-0.7**
SMG				*e*SB	**Sb**	**04 52 43.5**	**-0.2**
IZM	**Izmir**	**0.55**	**65**	*i* PG	**Pg**	**04 52 37.9**	**-0.2**
IZM				*i* SG	**Sg**	**04 52 46.2**	**+0.6**
KDAG	**Bornova**	**0.56**	**65**	*i* P	**Pb**	**04 52 36.8**	**-1.2**
KDAG				*i* S	**Sb**	**04 52 43.5**	**-2.1**
PRK	**Paraskevi**	**1.11**	**346**	*e*PN	**Pn**	**04 52 48.5**	**+0.4**
PRK	**Paraskevi**	**1.11**	**346**	*e*PN	**Pn**	**04 52 48.0**	**-0.1**
PRK	**Paraskevi**	**1.11**	**346**	*e*Pn	**Pn**	**04 52 48.0**	**-0.1**
PRK				*e*Pn	**Pn**	**04 52 48.5**	**+0.4**
AYDN	**Tasoluk**	**1.11**	**117**	*i* P	**Pb**	**04 52 47.9**	**+0.3**
AYDN				*i* S	**Sb**	**04 53 01.8**	**-0.1**
AYVA	**Ayvalik**	**1.14**	**3**	*i* P	**Pb**	**04 52 48.8**	**+0.8**
AYVA				*i* S	**Sb**	**04 53 05.4**	**+3.0**
AKS	**Akhisar**	**1.17**	**52**	*i* PN	**Pn**	**04 52 48.6**	**-0.5**
AKS				*i* SN	**Sn**	**04 53 03.7**	**-1.1**
BODT	**Bodrum**	**1.23**	**154**	PN	**Pn**	**04 52 49.5**	**-0.4**
MLSB	**Milas**	**1.26**	**133**	*e*PN	**Pn**	**04 52 50.6**	**+0.3**
BDRM	**Kayabasi**	**1.28**	**149**	*i* P	**Pb**	**04 52 50.9**	**+0.4**
BDRM				*i* S	**Sb**	**04 53 09.1**	**+2.4**
APE	**Apeiranthos**	**1.40**	**219**	*e*PN	**Pn**	**04 52 52.3**	**-0.1**
APE	**Apeiranthos**	**1.40**	**219**	*e*PN	**Pn**	**04 52 50.3**	**-2.1**
MANT	**Manisa**	**1.55**	**78**	*i* P	**Pn**	**04 52 56.0**	**+1.5**
MANT				*i* S	**Sb**	**04 53 16.0**	**+1.4**
DAT	**Datca**	**1.63**	**152**	*e*PN	**Pn**	**04 52 55.7**	**+0.1**
EZN	**Ezine**	**1.67**	**352**	*e*PN	**Pn**	**04 52 57.0**	**+0.9**
YER	**Yerkesik**	**1.67**	**128**	PN	**Pn**	**04 52 55.9**	**-0.4**
BALB	**Balikesir**	**1.76**	**33**	*e*PN	**Pn**	**04 52 57.2**	**-0.3**
DENT	**Denizli**	**1.95**	**102**	*e*PN	**Pn**	**04 52 59.5**	**-0.7**
LIA	**Limnos Island**	**2.06**	**327**	*e*PN	**Pn**	**04 53 01.7**	**0.0**
DST	**Dursunbey**	**2.12**	**47**	*e*PN	**Pn**	**04 53 02.6**	**0.0**
LPK	**Lapseki**	**2.20**	**3**	*e*PN	**Pn**	**04 53 03.6**	**-0.1**
BNT	**Bandirma**	**2.40**	**24**	*e*PN	**Pn**	**04 53 06.3**	**-0.4**
MRMT	**Marmara Adasi**	**2.54**	**17**	*e*PN	**Pn**	**04 53 08.9**	**+0.3**
MFT	**Murefte**	**2.66**	**11**	*e*PN	**Pn**	**04 53 10.2**	**-0.1**

JMA 19 05:12:30.5±0.1**,38.39N**×**144.74E,h46**^{km}**,M3.6,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.50**	**287**	P	P	05 13 10.0	+0.4
MIYJ	**Miyakonagasawa**	**2.57**	**298**	P	P	05 13 10.6	0.0
MIYJ				*e*S	S	05 13 41.1	+0.3
JIO	**Ouri**	**2.66**	**272**	P	P	05 13 12.3	+0.3
JIO				S	S	05 13 43.2	-0.1
JMK	**Ichinoseki**	**2.81**	**283**	P	P	05 13 14.7	+0.6
JMK				*e*S	S	05 13 48.0	+1.0
NEM2	**Nemuro 2**	**5.03**	**8**	P	P	05 13 40.7	-4.7
NEM2				*e*S	S	05 14 33.0	-10
JRY	**Ryogami san**	**5.23**	**245**	P	P	05 13 47.3	-0.9
JRY				*e*S	S	05 14 45.0	-3.0
JTKR	**Abashiri--Toko**	**5.61**	**354**	*e*S	S	05 14 50.6	-7.0

*IDC **19** 05:23:08.1±1.3,5.16N×94.65E,mb4.2/9,mb1 4.3/9,mb1mx4.0/20,mbtmp4.2/9,Error ellipse: s-maj=62.9km s-min=19.5km az=53.0*

*NEIC **19** 05:23:12.6±0.6,5.17N×94.69E,h30^{km},mb4.5/2,Error ellipse: s-maj=20.4km s-min=6.4km az=46.0*

ISC 19 05:23:11.0±0.8**,5.2N**±0.1×**94.7E**±0.2**,h30**^{km}**,n24,**σ**0**^{s}**71**/24**,mb4.3**/15**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.89**	**89**	P	**Pn**	**05 24 38.9**	**+0.3**
JIRN	**Jiri**	**23.80**	**341**	*e*P	**P**	**05 28 23.4**	**+1.1**
	6.0nm,0.3s,mb4.5						
PKI	**Pulchoki**	**23.99**	**339**	*e*P	**P**	**05 28 25.1**	**+1.0**
DMN	**Daman**	**24.13**	**339**	*e*P	**P**	**05 28 27.4**	**+1.9**
GUN	**Gumba**	**24.14**	**341**	*e*P	**P**	**05 28 25.0**	**-0.6**
	6.5nm,0.5s,mb4.3						
KKN	**Kakani**	**24.23**	**339**	*e*P	**P**	**05 28 26.5**	**0.0**
	3.1nm,0.3s,mb4.3						
GKN	**Gorkha**	**24.66**	**338**	*e*P	**P**	**05 28 30.0**	**-0.7**
	6.1nm,0.3s,mb4.6						
KOLN	**Koldanda**	**24.85**	**336**	*e*P	**P**	**05 28 33.2**	**+0.7**
FITZ	**Fitzroy Crossi**	**38.26**	**128**	P	**P**	**05 30 30.8**	**+0.2**
	3.4nm,0.9s,mb4.1,baz=317,slow=12,SNR=3.2						
MKAR	**Makanchi Array**	**42.84**	**347**	P	**P**	**05 31 08.3**	**+0.2**
	1.8nm,0.4s,mb4.1,baz=162,slow=7.9,SNR=29						
MKAR	**Makanchi Array**	**42.84**	**347**	P	**P**	**05 31 08.3**	**+0.2**
SONM	**Songino Array**	**43.67**	**11**	P	**P**	**05 31 14.2**	**-0.7**
	0.9nm,0.6s,mb3.6,baz=195,slow=9.4,SNR=4.9						
WRA	**Warramunga Arr**	**46.24**	**124**	P	**P**	**05 31 36.0**	**+0.2**
	3.1nm,0.7s,mb4.4,baz=303,slow=9.1,SNR=21						
WRAB	**Tennant Creek**	**46.25**	**124**	*e*P	**P**	**05 31 35.6**	**-0.2**
	4.5nm,0.5s,mb4.7						
WB2	**Warramunga Arr**	**46.25**	**124**	*e*P	**P**	**05 31 35.9**	**0.0**
KURK	**Kurchatov**	**47.36**	**346**	*e*P	**P**	**05 31 43.5**	**-0.8**
ZAL	**Zalesovo**	**49.29**	**352**	P	**P**	**05 31 59.2**	**0.0**
	4.0nm,0.4s,mb4.8,baz=290,slow=5.5,SNR=16						

ZAL	**Zalesovo**	**49.29**	**352**	P	**P**	**05 31 59.2**	**0.0**
BVAR	**Borovoye Array**	**51.73**	**342**	P	**P**	**05 32 16.8**	**-0.9**
	1.1nm,0.5s,mb4.0,baz=153,slow=9.7,SNR=8.9						
CHKZ	**Chkalovo**	**52.22**	**342**	*e*P	**P**	**05 32 20.3**	**-1.0**
	2.5nm,0.5s,mb4.4						
FINES	**FINESS Array B**	**75.37**	**332**	P	**P**	**05 34 52.6**	**-0.7**
	2.5nm,1.0s,mb4.1,baz=90,slow=1.9,SNR=7.2						
ARCES	**ARCESS Array B**	**78.00**	**340**	P	**P**	**05 35 07.6**	**-0.3**
	2.6nm,0.9s,mb4.2,baz=105,slow=6.7,SNR=13						
ARCES	**ARCESS Array B**	**78.00**	**340**	P	**P**	**05 35 07.6**	**-0.3**
GERES	**GERESS Array B**	**80.23**	**319**	P	**P**	**05 35 20.9**	**+0.5**
	0.7nm,0.5s,mb3.8,baz=104,slow=5.5,SNR=9.4						

*NEIC **19** 06:19:50.1±1.2, 4.95N×72.52W, h50^{km}±13^{km}, mb3.4/3, Error ellipse: s-maj=16.1km s-min=10.3km az=65.0*

*IDC **19** 06:19:51.0±1.6, 5.03N×72.52W, h57^{km}±16^{km}, mb3.4/5, mb1 3.7/6, mb1mx3.5/22, mbtmp3.8/6, Error ellipse: s-maj=17.6km s-min=9.4km az=142.0*

ISC 19 06:19:50.5±1.2**, 5.07N**±0.08×**72.52W**±0.08**, h65**^{km}±12^{km}**, n14, σ0**^{s}**67**/16**, mb3.7**/8**, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROSC	**El Rosal**	**1.82**	**263**	P	**P**	**06 20 19.0**	**-1.2**
	120nm,0.3s,baz=102,slow=14,SNR=416						
ROSC				S	**S**	**06 20 42.8**	**+0.7**
	76nm,0.3s,baz=285,slow=23,SNR=7.3						
SDV	**Santo Domingo**	**4.23**	**26**	P	**P**	**06 20 54.4**	**+0.3**
	10nm,0.3s,baz=198,slow=13,SNR=64						
SDV				S	**S**	**06 21 42.6**	**+0.1**
	19nm,0.3s,baz=15,slow=16,SNR=13						
SDV	**Santo Domingo**	**4.23**	**26**	P	**P**	**06 20 54.4**	**+0.3**
SDV				S	**S**	**06 21 42.6**	**+0.1**
SAML	**Samuel**	**16.75**	**146**	*e*P	**P**	**06 23 38.0**	**-4.3**
	3.5nm,1.0s						
LPAZ	**La Paz**	**21.66**	**169**	P	**P**	**06 24 37.7**	**+0.3**
	2.1nm,0.7s,mb3.6,baz=333,slow=9.0,SNR=9.0						
LPAZ	**La Paz**	**21.66**	**169**	P	**P**	**06 24 37.7**	**+0.3**
SIV	**San Ignacio**	**23.79**	**152**	P	**P**	**06 24 58.4**	**+0.1**
	1.0nm,0.7s,mb3.2,baz=330,slow=10,SNR=7.4						
CCM	**Cathedral Cave**	**37.00**	**335**	*e*P	**P**	**06 26 55.1**	**-0.5**
	5.9nm,0.6s,mb4.7						
TXAR	**Lajitas Array**	**38.08**	**313**	P	**P**	**06 27 04.6**	**-0.1**
	0.5nm,0.9s,mb3.4,baz=128,slow=10,SNR=3.9						
MNTX	**Cornudas Mount**	**40.62**	**315**	P	**P**	**06 27 25.7**	**0.0**
	0.3nm,0.5s,mb3.4						
SDCO	**Great Sand Dun**	**44.28**	**322**	P	**P**	**06 27 57.0**	**+1.3**
	0.4nm,0.6s,mb3.3						
ULM	**Lac du Bonnet**	**49.13**	**340**	P	**P**	**06 28 32.8**	**-0.8**
	1.6nm,0.5s,mb4.2,baz=144,slow=8.8,SNR=8.0						
YKA	**Yellowknife Ar**	**65.11**	**340**	P	**P**	**06 30 26.2**	**-0.2**
	0.8nm,0.6s,mb3.8,baz=131,slow=5.9,SNR=6.4						
WRA	**Warramunga Arr**	**149.98**	**238**	PKPbc	PKPdf	06 39 35.5	+6.1
	0.4nm,0.3s,baz=108,slow=3.1,SNR=15						

*BYKL **19** 06:26:11.5±0.5, 57.44N×120.66E, h4^{km}±15^{km}*

*IDC **19** 06:26:13.0±3.1, 57.61N×120.57E, mb3.5/6, mb1 3.7/6, mb1mx3.5/20, mbtmp3.5/6, Error ellipse: s-maj=77.6km s-min=27.9km az=157.0*

*MOS **19** 06:26:14.1±2.0, 57.31N×120.48E, h18^{km}, mb4.0/4, Error ellipse: s-maj=18.1km s-min=13.0km az=45.2*

ISC 19 06:26:10.6±1.2**, 57.34N**±0.05×**120.56E**±0.06**, h4**^{km}±8^{km}**, n44, σ1**^{s}**10**/50**, mb3.6**/5**, 2D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.33**	**252**	⇓*i*Pg	**Pg**	**06 26 37.4**	**+0.3**
CRS				Pmax		06 26 46.6	
	201nm,1.0s						
CRS				*e*Sg	**Sg**	**06 26 55.0**	**+0.2**
CRS				Smax		06 26 56.4	
	1µm,0.5s						
CRS	**Chara**	**1.33**	**252**	*e*P	**Pg**	**06 26 37.4**	**+0.3**
CRS				*e*		06 26 55.2	
CRS				pmax	pmax		
	comp=Z,203nm,0.6s						
CRS				smax			
	comp=E,158nm,0.5s						
CLNS	**Chul'man**	**2.42**	**100**	*e*Pg	**Pg**	**06 26 55.0**	**-3.8**
CLNS				Pmax		06 26 59.8	
	comp=E,122nm,0.3s						
CLNS				*e*		06 27 22.0	
CLNS				*e*Sg	**Sg**	**06 27 25.6**	**-5.5**
CLNS				Smax		06 27 28.0	
	comp=E,2µm,0.3s						
CLNS	**Chul'man**	**2.42**	**100**	*e*P	**Pn**	**06 26 52.2**	**+0.7**
CLNS				*e*S	**Sn**	**06 27 22.7**	**+0.8**
CLNS				pmax	pmax		
	comp=N,2.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,2.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,29nm,0.4s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,11nm,0.3s						
CLNS				smax			
	comp=N,38nm,0.3s						
CLNS				smax			
	comp=Z,18nm,0.3s						
CLNS				smax			
	comp=E,11nm,0.2s						
CLNS				smax			
	comp=N,219nm,0.3s						
CLNS				smax			
	comp=Z,213nm,0.4s						
CLNS				smax			
	comp=E,138nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,100nm,11.0s						
NLYR	**Nelyaty**	**2.80**	**254**	*i* Pn	**Pn**	**06 26 59.0**	**+2.0**
NLYR				*e*Pg	**Pg**	**06 27 03.1**	**-3.4**
NLYR				*e*		06 27 06.4	
NLYR				max		06 27 07.4	
	comp=Z,124nm,0.8s						
NLYR				*e*Sg	**Sg**	**06 27 39.7**	**-4.1**
NLYR				Smax		06 27 44.3	
	comp=Z,747nm,1.1s						
NLYR	**Nelyaty**	**2.80**	**254**	*e*P	**Pn**	**06 26 58.8**	**+1.8**
NLYR				*e*		06 27 39.0	
NLYR				pmax	pmax		
	comp=Z,130nm,0.4s						
NLYR				smax			
	comp=N,762nm,1.0s						
ALDR	**Aldan**	**2.88**	**62**	*e*	**Pn**	**06 26 57.5**	**-0.6**
ALDR				*e*		06 27 03.8	
ALDR				max		06 27 09.3	
	comp=N,110nm,0.3s						
ALDR				*e*Sg	**Sg**	**06 27 37.5**	**-8.9**
ALDR				Smax		06 27 45.1	
	comp=N,2µm,0.4s						
TUP	**Tupik**	**2.94**	**187**	*e*Pn	**Pn**	**06 27 00.0**	**+1.0**
TUP				*e*Pg	**Pg**	**06 27 04.7**	**-4.6**
TUP				Pmax		06 27 05.9	
	comp=N,184nm,0.6s						
TUP				*e*Sg	**Sg**	**06 27 44.2**	**-4.4**
TUP				Smax		06 27 45.2	
	comp=N,842nm,1.0s						
TUP	**Tupik**	**2.94**	**187**	*e*P	**Pn**	**06 26 59.7**	**+0.7**
TUP				*e*S	**Sn**	**06 27 35.6**	**+0.3**
TUP				pmax	pmax		
	comp=Z,183nm,0.7s						
TUP				smax			
	comp=E,844nm,0.7s						
BOD	**Bodaibo**	**3.56**	**281**	*e*Pn	**Pn**	**06 27 08.6**	**+0.7**
BOD				*e*Pg	**Pg**	**06 27 15.6**	**-6.2**
BOD				Pmax		06 27 18.6	
	comp=E,41nm,0.7s						
BOD				*e*Sg	**Sg**	**06 28 01.3**	**-8.0**
BOD				Smax		06 28 08.3	
	comp=E,270nm,0.6s						
BOD	**Bodaibo**	**3.56**	**281**	*e*P	**Pn**	**06 27 08.1**	**+0.2**
BOD				pmax	pmax		
	comp=Z,247nm,0.7s						
SVKR	**Severomuysk**	**4.05**	**255**	*e*	**Pn**	**06 27 14.6**	**-0.2**
SVKR				*e*Pg	**Pg**	**06 27 26.2**	**-5.3**
SVKR				Pmax		06 27 29.2	
	comp=Z,69nm,0.5s						
SVKR				*e*Sg	Sx	06 28 19.3	
SVKR				Smax		06 28 32.3	
	comp=Z,398nm,0.7s						
UKT	**Uakit**	**4.28**	**247**	*e*Pn	**Pn**	**06 27 18.8**	**+0.8**
UKT				⇓*i*Pg	**Pg**	**06 27 29.8**	**-6.2**
UKT				Pmax		06 27 35.3	
	comp=Z,28nm,1.3s						
UKT				*e*Sg	Sx	06 28 25.3	
UKT				Smax		06 28 32.0	
	comp=Z,129nm,1.2s						
UKT	**Uakit**	**4.28**	**247**	*e*P	**Pg**	**06 27 29.4**	**-6.6**
UKT				pmax	pmax		
	comp=Z,20nm,0.7s						
KROS	**Kirovskiy**	**4.63**	**126**	*e*	**Pn**	**06 27 22.7**	**-0.4**
KROS				*e*	**Pg**	**06 27 35.0**	**-8.2**
KROS				*e*Sg	Sx	06 28 36.1	
YOA	**Uoyan**	**5.02**	**260**	*e*P	Px	06 27 43.8	
YOA				pmax	pmax		
	comp=Z,73nm,0.4s						
ZEA	**Zeya**	**5.24**	**131**	*e*	**Pn**	**06 27 29.6**	**-2.0**
ZEA				*e*		06 27 44.9	
ZEA				*e*Sg	Sx	06 28 52.6	
KMO	**Kumora**	**5.37**	**258**	*e*Pn	**Pn**	**06 27 33.6**	**+0.1**
KMO				*e*Pg	Px	06 27 49.0	
KMO				Pmax		06 28 01.0	
	comp=Z,14nm,0.7s						
KMO				*e*Sg	Sx	06 28 58.8	
KMO				Smax		06 29 24.9	
	comp=Z,183nm,1.6s						
KMO	**Kumora**	**5.37**	**258**	*e*P	**Pn**	**06 27 33.6**	**+0.1**
KMO				*e*S	**Sn**	**06 28 34.5**	**-2.2**
KMO				pmax	pmax		
	comp=Z,12nm,0.4s						
KMO				smax			
	comp=N,182nm,1.3s						
YLYR	**Ulyunkhan**	**5.81**	**249**	*e*	**Pn**	**06 27 39.7**	**0.0**
YLYR				*e*	**Pg**	**06 27 56.5**	**-10**
YLYR				max		06 28 10.1	
	comp=N,6.0nm,0.5s						
YLYR				*e*Sg	Sx	06 29 13.9	
YLYR				Smax		06 29 24.9	
	comp=N,106nm,1.1s						
YLYR	**Ulyunkhan**	**5.81**	**249**	*e*P	**Pg**	**06 27 58.4**	**-8.2**
YLYR				pmax	pmax		
	comp=Z,12nm,0.6s						
NIZ	**Nizh Angarsk**	**6.29**	**260**	*e*	rx	06 29 02.2	
NIZ				*e*Sg	Sx	06 29 26.9	
NIZ				Smax		06 29 39.9	
	comp=Z,78nm,1.1s						
YAK	**Yakutsk**	**6.59**	**41**	*e*	rx	06 28 57.6	
YAK				*e*Sg	Sx	06 29 29.5	
YAK				Smax		06 29 31.5	
	comp=Z,1µm,1.4s						
YAK	**Yakutsk**	**6.59**	**41**	*e*P	Px	06 27 43.1	
YAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YAK				MLR	MLR		
	comp=Z,45nm,19.0s						
CIT	**Chita**	**6.70**	**220**	*e*	**Pn**	**06 27 50.3**	**-1.9**
CIT				*e*Pg	**Pg**	**06 28 13.8**	**-11**
CIT				Pmax		06 28 17.1	
	comp=Z,9.0nm,0.7s						
CIT				*e*Sg	Sx	06 29 40.8	
CIT				Smax		06 29 58.1	
	comp=Z,216nm,1.4s						
SYVR	**Suvo**	**7.04**	**243**	*e*	rx	06 28 49.8	
SYVR				*e*Sg	Sx	06 29 53.2	
SYVR				Smax		06 30 03.2	
	comp=Z,130nm,1.4s						
OGRR	**Ongureny**	**8.24**	**249**	*e*	rx	06 29 52.7	
OGRR				*e*Sg	Sx	06 30 30.6	
OGRR				Smax		06 30 55.9	
	comp=Z,55nm,1.5s						
KPC	**Khapcheranga**	**9.06**	**216**	*e*	rx	06 29 58.1	
KPC				*e*Sg	Sx	06 30 53.6	
KPC				Smax		06 31 06.6	
	comp=Z,52nm,0.5s						
TRG	**Tyrgan**	**9.36**	**247**	*e*	rx	06 30 03.9	
TRG				*e*Sg	Sx	06 31 04.5	
TRG				Smax		06 31 22.4	
	comp=Z,47nm,1.8s						
ARS	**Arshan**	**11.81**	**250**	*e*	rx	06 32 09.0	
ARS				*e*Sg	Sx	06 32 20.7	
ARS				Smax		06 32 34.7	
	comp=Z,40nm,1.6s						
SONM	**Songino Array**	**12.81**	**228**	Lg		06 32 53.4	
	comp=Z,0.7nm,0.3s,baz=29,slow=28,SNR=12						
ORL	**Orlik**	**12.84**	**257**	*e*	rx	06 30 12.8	
ORL				*e*		06 31 56.0	
ORL				*e*Sg	Sx	06 32 51.0	
ORL				Smax		06 33 13.5	
	comp=Z,24nm,2.8s						
ZAL	**Zalesovo**	**20.32**	**276**	P	**P**	**06 30 51.0**	**+0.9**
	comp=Z,0.6nm,0.7s,baz=49,slow=8.1,SNR=3.9						
ZAL	**Zalesovo**	**20.32**	**276**	P	**P**	**06 30 51.1**	**+1.0**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**25.45**	**262**	P	**P**	**06 31 41.9**	**+1.2**
	comp=Z,0.8nm,0.6s,mb3.4,baz=53,slow=9.6,SNR=5.6						
MKAR	**Makanchi Array**	**25.45**	**262**	P	**P**	**06 31 41.9**	**+1.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ILAR	**Eielson Array**	**41.51**	**40**	P	**P**	**06 33 59.7**	**-0.1**
	comp=Z,0.3nm,0.6s,mb3.1,baz=302,slow=7.3,SNR=6.2						
FINES	**FINESS Array B**	**44.24**	**317**	P	**P**	**06 34 20.8**	**-1.3**
	comp=Z,1.1nm,0.6s,mb3.8,baz=53,slow=9.5,SNR=7.4						
FINES	**FINESS Array B**	**44.24**	**317**	P	**P**	**06 34 20.8**	**-1.2**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	**NORSAR Subarra**	**49.72**	**323**	P	**P**	**06 35 04.0**	**-1.1**
	comp=Z,0.5nm,0.5s,mb3.8,baz=40,slow=7.4						
NOA	**NORSAR Array B**	**49.72**	**323**	P	**P**	**06 35 04.1**	**-1.0**
	comp=Z,1.3nm,1.0s,mb3.9,baz=41,slow=7.4,SNR=3.4						
NOA	**NORSAR Array B**	**49.72**	**323**	P	**P**	**06 35 04.1**	**-1.0**
NOA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
AKASG	**Malin Array Be**	**50.18**	**304**	P	**P**	**06 35 10.2**	**+1.3**
	comp=Z,1.0nm,0.5s,mb4.1,baz=36,slow=8.2,SNR=6.1						
AKASG	**Malin Array Be**	**50.18**	**304**	P	**P**	**06 35 10.2**	**+1.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						

*BYKL **19** 06:33:10.8±0.5, 57.41N×120.72E*

*IDC **19** 06:33:12.5±10.0, 57.72N×120.75E, mb3.7/5, mb1 4.0/5, mb1mx3.7/20, mbtmp3.8/5, Error ellipse: s-maj=207.8km s-min=49.2km az=126.0*

*MOS **19** 06:33:13.9±1.4, 57.62N×120.50E, h27^{km}, mb3.9/5, Error ellipse: s-maj=18.5km s-min=15.6km az=82.6*

ISC 19 06:33:14.6±0.4**, 57.55N**±0.05×**120.38E**±0.05**, h27**^{km}**, n42, σ1**^{s}**23**/40**, mb3.8**/4**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.32**	**241**	*e*Pg	**Pn**	**06 33 36.1**	**-1.4**
CRS				Pmax		06 33 37.3	
	261nm,0.9s						
CRS				*e*Sg	**Sn**	**06 33 54.9**	**+0.6**
CRS				Smax		06 33 56.6	
	820nm,1.3s						
CRS	**Chara**	**1.32**	**241**	*e*P	**Pn**	**06 33 36.6**	**-0.9**
CRS				*e*		06 33 55.6	
CRS				pmax	pmax		
	comp=Z,195nm,0.4s						
CRS				smax			
	comp=E,868nm,0.5s						
NRGR	**Nerungri**	**2.54**	**109**	*e*P	**Pn**	**06 33 55.0**	**+0.1**
NRGR				S	**Sn**	**06 34 24.8**	**-0.4**
CLNS	**Chul'man**	**2.56**	**104**	*e*Pg	**Pn**	**06 33 53.8**	**-1.5**
CLNS				Pmax		06 33 58.3	
	comp=E,244nm,0.3s						
CLNS				*e*Sg	**Sn**	**06 34 25.9**	**0.0**
CLNS				Smax		06 34 27.4	
	comp=E,5µm,0.5s						
CLNS	**Chul'man**	**2.56**	**104**	*e*P	**Pn**	**06 33 51.6**	**-3.7**
CLNS				*e*		06 34 24.6	
CLNS				pmax	pmax		
	comp=N,13nm,0.3s						
CLNS				pmax	pmax		
	comp=E,2.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,27nm,0.3s						
CLNS				smax			
	comp=N,136nm,0.2s						
CLNS				smax			
	comp=Z,90nm,0.3s						
CLNS				smax			
	comp=E,560nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,100nm,11.0s						
NLYR	**Nelyaty**	**2.77**	**249**	*e*Pg	**Pn**	**06 34 02.7**	**+4.5**
NLYR				Pmax		06 34 03.8	
	comp=Z,190nm,0.7s						
NLYR				*i* Sg	**Sn**	**06 34 39.5**	**+8.4**
NLYR				Smax		06 34 44.3	
	comp=Z,905nm,1.1s						
NLYR	**Nelyaty**	**2.77**	**249**	*e*P	**Pn**	**06 34 02.9**	**+4.7**
NLYR				*e*		06 34 38.3	
NLYR				pmax	pmax		
	comp=Z,160nm,0.3s						
NLYR				smax			
	comp=N,905nm,1.0s						
ALDR	**Aldan**	**2.88**	**66**	*e*	**Pn**	**06 33 59.2**	**-0.6**
ALDR				*e*Sg	**Sn**	**06 34 36.5**	**+2.6**
ALDR				Smax		06 34 40.0	
	comp=N,1µm,0.3s						
TUP	**Tupik**	**3.14**	**184**	*e*	**Pn**	**06 34 00.7**	**-2.8**
TUP				*e*Pg	**Pn**	**06 34 04.6**	**+1.1**
TUP				Pmax		06 34 05.6	
	comp=N,280nm,0.6s						
TUP				*e*Sg	**Sn**	**06 34 42.7**	**+2.2**
TUP				Smax		06 34 50.1	
	comp=N,781nm,1.0s						
TUP	**Tupik**	**3.14**	**184**	*e*P	**Pn**	**06 34 05.1**	**+1.6**
TUP				*e*S	**Sn**	**06 34 34.8**	**-5.7**
TUP				pmax	pmax		
	comp=Z,258nm,0.5s						
TUP				smax			
	comp=E,707nm,0.8s						
BOD	**Bodaibo**	**3.43**	**277**	*e*Pn	**Pn**	**06 34 08.8**	**+1.1**
BOD				*e*Pg	**Pn**	**06 34 16.2**	**+8.5**
BOD				Pmax		06 34 18.2	
	comp=E,50nm,0.9s						
BOD				*e*Sg	**Sn**	**06 35 03.0**	**+15**
BOD				Smax		06 35 09.0	
	comp=E,308nm,0.7s						
BOD	**Bodaibo**	**3.43**	**277**	*e*P	**Pn**	**06 34 07.3**	**-0.4**
BOD				*e*S	**Sn**	**06 34 49.2**	**+1.3**
BOD				pmax	pmax		
	comp=Z,44nm,0.6s						
BOD				smax			
	comp=N,220nm,0.5s						
SVKR	**Severomuysk**	**4.01**	**252**	*e*Pg	Px	06 34 26.8	
SVKR				Pmax		06 34 29.1	
	comp=N,62nm,0.5s						
SVKR				*e*Sg	Sx	06 35 19.8	
SVKR				Smax		06 36 33.4	
	comp=N,526nm,1.0s						
UKT	**Uakit**	**4.27**	**244**	*e*Pg	Px	06 34 29.5	
UKT				Pmax		06 34 40.5	
	comp=N,28nm,1.2s						
UKT				*e*Sg	Sx	06 35 25.3	
UKT				Smax		06 35 32.1	
	comp=N,132nm,1.2s						
UKT	**Uakit**	**4.27**	**244**	*e*P	Px	06 34 29.2	
UKT				pmax	pmax		
	comp=Z,21nm,0.4s						
YOA	**Uoyan**	**4.96**	**257**	*e*	rx	06 35 31.6	
YOA				*e*Sg	Sx	06 35 49.8	
YOA				Smax		06 36 08.1	
	comp=Z,1µm,1.3s						
YOA	**Uoyan**	**4.96**	**257**	*e*P	Px	06 34 44.3	
YOA				pmax	pmax		
	comp=Z,66nm,0.5s						
KMO	**Kumora**	**5.32**	**256**	*e*Pn	**Pn**	**06 34 31.6**	**-2.8**
KMO				*e*Pg	Px	06 34 47.1	
KMO				Pmax		06 34 57.3	
	comp=Z,20nm,1.0s						
KMO				*e*		06 35 35.3	
KMO				*e*Sg	Sx	06 35 58.8	
KMO				Smax		06 36 08.1	
	comp=Z,247nm,1.5s						
KMO	**Kumora**	**5.32**	**256**	*e*P	**Pn**	**06 34 33.6**	**-0.8**
KMO				*e*S	**Sn**	**06 35 34.8**	**-0.8**
KMO				pmax	pmax		
	comp=Z,13nm,0.4s						
KMO				smax			
	comp=N,255nm,0.9s						
YLYR	**Ulyunkhan**	**5.80**	**246**	*e*Pn	**Pn**	**06 34 39.7**	**-1.4**
YLYR				*e*		06 34 56.8	
YLYR				max		06 35 06.0	
	comp=N,30nm,1.8s						
YLYR				*e*		06 35 50.4	
YLYR				*e*Sg	Sx	06 36 12.6	
YLYR				Smax		06 36 30.5	
	comp=N,135nm,1.1s						
NIZ	**Nizh Angarsk**	**6.23**	**258**	*e*	rx	06 36 05.9	
NIZ				*e*Sg	Sx	06 36 26.6	
NIZ				Smax		06 36 36.2	
	comp=N,91nm,0.8s						
YAK	**Yakutsk**	**6.50**	**42**	*e*	rx	06 35 58.8	
YAK				*e*Sg	Sx	06 36 29.0	
YAK				Smax		06 36 33.3	
	comp=N,798nm,0.7s						
YAK	**Yakutsk**	**6.50**	**42**	*e*P	**Pn**	**06 34 48.9**	**-2.1**
YAK				*e*S	**Sn**	**06 36 05.8**	**+0.7**
YAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax			
	comp=N,26nm,0.9s						
YAK				smax			
	comp=E,25nm,1.0s						
YAK				smax			
	comp=Z,18nm,1.0s						
YAK				smax			
	comp=N,73nm,0.9s						
YAK				smax			
	comp=E,67nm,0.9s						
YAK				smax			
	comp=Z,64nm,0.9s						
YAK				MLR	MLR		
	comp=Z,18nm,15.0s						
CIT	**Chita**	**6.80**	**218**	*e*Pg	Px	06 35 13.4	
CIT				Pmax		06 35 17.2	
	comp=Z,18nm,0.6s						
CIT				*e*		06 36 18.8	
CIT				*e*Sg	Sx	06 36 41.3	
CIT				Smax		06 36 52.1	
	comp=Z,221nm,1.4s						
SYVR	**Suvo**	**7.05**	**241**	*e*	Px	06 35 23.2	
SYVR				*e*		06 36 31.9	
SYVR				*e*Sg	Sx	06 36 52.2	
SYVR				Smax		06 37 00.1	
	comp=Z,158nm,1.4s						
OGRR	**Ongureny**	**8.22**	**247**	*e*Sg	Sx	06 37 30.8	
OGRR				Smax		06 37 43.6	
	comp=Z,80nm,2.0s						
KPC	**Khapcheranga**	**9.18**	**214**	*e*	Px	06 35 53.4	
KPC				max		06 36 03.5	
	comp=Z,2.0nm,1.0s						
KPC				*e*		06 37 30.6	
KPC				*e*Sg	Sx	06 37 52.6	
KPC				Smax		06 37 59.9	
	comp=Z,92nm,1.4s						
TRG	**Tyrgan**	**9.35**	**245**	*e*Sg	Sx	06 38 05.3	
TRG				Smax		06 38 17.4	
	comp=Z,43nm,2.2s						
ARS	**Arshan**	**11.79**	**249**	*e*Sg	Sx	06 39 20.6	
ARS				Smax		06 39 45.1	
	comp=Z,55nm,1.4s						
ORL	**Orlik**	**12.79**	**256**	*e*Sg	Sx	06 39 52.8	
ORL				Smax		06 40 14.4	
	comp=Z,20nm,2.6s						
SONM	**Songino Array**	**12.88**	**227**	Lg		06 39 57.4	
	comp=Z,0.7nm,0.3s,baz=33,slow=29,SNR=9.7						
ZAL	**Zalesovo**	**20.20**	**275**	P	**P**	**06 37 50.6**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=57,slow=7.4,SNR=4.6						
ZAL	**Zalesovo**	**20.20**	**275**	P	**P**	**06 37 50.6**	**+0.8**
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**25.38**	**261**	P	**P**	**06 38 43.2**	**+2.4**
	comp=Z,1.0nm,0.7s,mb3.4,baz=45,slow=8.6,SNR=3.9						
MKAR	**Makanchi Array**	**25.38**	**261**	P	**P**	**06 38 43.2**	**+2.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**44.01**	**316**	P	**P**	**06 41 21.1**	**+0.3**
	comp=Z,2.3nm,0.7s,mb4.0,baz=56,slow=10.0,SNR=8.7						

FINES	**FINESS Array B**	**44.01**	**316**	P	**P**	**06 41 21.1**	**+0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB2	**NORSAR Subarra**	**49.49**	**323**	P	**P**	**06 42 04.0**	**0.0**
	comp=Z,0.7nm,0.5s,mb4.0,baz=40,slow=7.0						
NOA	**NORSAR Array B**	**49.49**	**323**	P	**P**	**06 42 04.1**	**+0.1**
	comp=Z,0.8nm,0.5s,mb4.0,baz=44,slow=8.1,SNR=3.3						
NOA	**NORSAR Array B**	**49.49**	**323**	P	**P**	**06 42 04.1**	**+0.1**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GERES	**GERESS Array B**	**57.99**	**312**	P	**P**	**06 43 06.5**	**-0.1**
	comp=Z,0.5nm,0.6s,mb3.7,baz=27,slow=6.0,SNR=5.2						
GERES	**GERESS Array B**	**57.99**	**312**	P	**P**	**06 43 06.5**	**-0.2**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						

ISK ***19*** *06:33:42.5, 38.23N×26.60E, h19^{km}, MD2.8*
ATH ***19*** *06:33:43.2, 38.14N×26.60E, h37^{km}±1^{km}, MD3.1/3*
CSEM ***19*** *06:33:43.7±0.3, 38.21N×26.72E, h20^{km}, MD2.8, Error ellipse: s-maj=7.8km s-min=4.6km az=96.0*
ISC 19 06:33:42.2±1.0**, 38.20N**±0.03×**26.58E**±0.05**, h1**^{km}±6^{km}**, n14, σ1^{s}02**/24**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.16**	**4**	*i* P	**Pg**	**06 33 45.5**	**0.0**
URLA				*i* S	**Sg**	**06 33 47.5**	**-0.2**
SMG	**Samos**	**0.53**	**157**	*e*PB	**Pb**	**06 33 53.8**	**-0.1**
SMG				*e*SB	**Sb**	**06 34 01.9**	**+0.1**
IZM	**Izmir**	**0.57**	**69**	*i* PG	**Pg**	**06 33 54.1**	**+0.4**
IZM				*i* SG	**Sg**	**06 34 02.1**	**+0.8**
KDAG	**Bornova**	**0.58**	**69**	*i* P	**Pg**	**06 33 52.9**	**-0.9**
KDAG				*i* S	**Sg**	**06 34 00.5**	**-1.0**
PRK	**Paraskevi**	**1.07**	**347**	*e*PN	**Pn**	**06 34 04.1**	**-0.2**
PRK				*e*SN	**Sn**	**06 34 19.8**	**-0.2**
AYVA	**Ayvalik**	**1.11**	**4**	*i* P	**Pb**	**06 34 05.7**	**+1.7**
AYVA				*i* S	**Sb**	**06 34 20.5**	**+1.7**
AYDN	**Tasoluk**	**1.16**	**117**	*i* P	**Pb**	**06 34 04.5**	**-0.2**
AYDN				*i* S	**Sb**	**06 34 20.6**	**+0.5**
AKS	**Akhisar**	**1.18**	**54**	*e*PN	**Pn**	**06 34 03.7**	**-2.1**
AKS				*e*SN	**Sn**	**06 34 20.9**	**-1.8**
BODT	**Bodrum**	**1.27**	**153**	*e*PN	**Pn**	**06 34 06.2**	**-0.9**
BDRM	**Kayabasi**	**1.32**	**148**	*i* P	**Pb**	**06 34 09.7**	**+2.2**
BDRM				*i* S	**Sb**	**06 34 25.6**	**+0.8**
APE	**Apeiranthos**	**1.40**	**217**	*e*PN	**Pn**	**06 34 07.6**	**-1.3**
APE	**Apeiranthos**	**1.40**	**217**	*e*Pn	**Pn**	**06 34 07.7**	**-1.2**
MANT	**Manisa**	**1.58**	**79**	*i* P	**Pn**	**06 34 12.6**	**+1.0**
MANT				*i* S	**Sb**	**06 34 32.6**	**+0.2**
DAT	**Datca**	**1.67**	**151**	*e*PN	**Pn**	**06 34 12.2**	**-0.5**

IDC ***19*** *06:38:50.1±0.5, 2.81N×95.44E, mb4.6/23, mb1 4.7/23, mb1mx4.6/26, mbtmp4.6/23, MS4.7/21, Ms1 4.7/21, ms1mx4.6/25, Error ellipse: s-maj=15.9km s-min=12.8km az=62.0*
BJI ***19*** *06:38:52.4, 2.82N×95.47E, h29^{km}, mB5.3, mb5.2, Ms5.3, Msz5.1*
MOS ***19*** *06:38:53.4±0.9, 2.89N×95.52E, h33^{km}, mb5.3/35, MS4.9/24, Error ellipse: s-maj=11.2km s-min=6.1km az=103.2*
HRVD ***19*** *06:38:54.6±0.3, 2.46N×95.38E, h31^{km}±1^{km}, MW5.1/73, Centroid moment Tensor Solution. LP body waves: s50,c76;Mantle waves: s73,c115; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.06±.27; $M_{\theta\theta}$-2.91±.17; $M_{\phi\phi}$-1.15±.20; $M_{r\theta}$3.26±.22; $M_{\theta\phi}$3.52±.12; $M_{\phi r}$-2.23±.27; Best double couple: $M_0$6.264×10^{16} NP1: ϕ_s313°,δ26°,λ97°. NP2:ϕ_s125°,δ65°,λ87°. Principal axes: T 5.472, Plg70°, Azm28°; N 1.585, Plg3°, Azm126°; P -7.057, Plg20°, Azm217°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***19*** *06:38:54.6±0.2, 2.82N×95.47E, h30^{km}, mb5.1/36, MS5.0/103 Error ellipse: s-maj=5.6km s-min=4.2km az=222.0*
ISC 19 06:38:52.3±0.2**, 2.82N**±0.04×**95.47E**±0.03**, h26**^{km}**, h26**^{km}±.8^{km}**:pP-P, n299, σ1^{s}10**/219**, mb4.9**/86**, MS5.0**/141**, 20C-6D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULM	**Kulim**	**5.72**	**64**	*e*P	**Pn**	**06 40 18.6**	**+0.7**
IPM	**Ipoh**	**5.82**	**72**	P	**Pn**	**06 40 19.3**	**+0.1**
SNG	**Songkhla**	**6.71**	**50**	P	**Pn**	**06 40 32.5**	**+0.7**
	320nm,0.8s						
KGM	**Kluang**	**7.89**	**96**	P	**Pn**	**06 40 48.9**	**+0.6**
KSM	**Kuching**	**14.89**	**95**	*e*P	**P**	**06 42 24.4**	**+1.2**
KKTK	**Khon Kaen**	**15.26**	**28**	P	**P**	**06 42 32.0**	**+4.1**
	3µm,0.5s						
PALK	**Pallekele**	**15.35**	**287**	*e*P	**P**	**06 42 28.6**	**-0.6**
	34nm,0.8s						
CHG	**Chiang Mai**	**16.26**	**12**	P	**P**	**06 42 40.3**	**-0.4**
	19nm,0.8s						
VIS	**Vishakhapatnam**	**19.00**	**322**	*e*P	**P**	**06 43 07.8**	**-7.0**
VIS				AMb	AMB	06 43 26.7	
	comp=Z,47nm,1.6s						
VIS				*e*S	**S**	**06 46 34.5**	**-8.0**
CAL	**Calcutta**	**20.79**	**341**	*e*P	**P**	**06 43 35.0**	**+0.8**
CAL				*e*x	**S**	**06 47 30.1**	**+10**
KKM	**Kota Kinabalu**	**20.93**	**80**	*e*P	**P**	**06 43 35.5**	**-0.2**
KKM	**Kota Kinabalu**	**20.93**	**80**	P	**P**	**06 43 36.1**	**+0.4**
QIZ	**Qiongzhong**	**21.39**	**40**	P	**P**	**06 43 40.3**	**0.0**
QIZ				S	**S**	**06 47 33.6**	**+2.3**
QIZ				XS		06 47 48.5	
QIZ				LR	LR		
	comp=N,5µm,15.3s						
QIZ				LR	LR		
	comp=Z,5µm,16.4s,MS5.0						
QIZ	**Qiongzhong**	**21.39**	**40**	PFAKE		06 43 50.0	+10
QIZ				LR	LR		
	comp=Z,4µm,19.0s,MS4.9						
HYB	**Hyderabad**	**22.05**	**312**	*i* P	**P**	**06 43 50.0**	**+3.1**
HYB				*e*S	**S**	**06 47 56.0**	**+12**
HYB	**Hyderabad**	**22.05**	**312**	*e*P	**P**	**06 43 50.0**	**+3.1**
HYB				*e*S	**S**	**06 47 56.0**	**+12**
TSM	**Tawau**	**22.41**	**86**	P	**P**	**06 43 51.8**	**+1.3**
MNGI	**Mangalore**	**22.76**	**297**	*e*P	**P**	**06 44 01.6**	**+7.5**
MNGI				*e*S	**S**	**06 48 08.2**	**+12**
BOK	**Bokaro**	**22.82**	**337**	*e*P	**P**	**06 43 54.7**	**+0.2**
BOK				AMb	AMB	06 44 03.8	
	comp=Z,48nm,1.0s,mb4.9						
BOK				*e*S	**S**	**06 48 00.2**	**+2.6**
SHL	**Shillong**	**22.88**	**352**	*e*P	**P**	**06 43 51.5**	**-3.7**
SHL				*e*S	**S**	**06 48 02.0**	**+3.3**
BLSP	**Bilaspur**	**23.16**	**327**	*e*P	**P**	**06 43 55.6**	**-2.2**
BLSP				AMb	AMB	06 44 08.3	
	comp=Z,73nm,1.4s,mb4.9						
BLSP				*e*S	**S**	**06 48 02.5**	**-1.1**
KMI	**Kunming**	**23.26**	**17**	P	**P**	**06 43 59.6**	**+0.8**
KMI				AP		06 44 08.4	
KMI				PP	PP	06 44 30.5	+0.5
KMI				S	**S**	**06 48 08.0**	**+2.6**
KMI				XS		06 48 22.9	
KMI				SS	SS	06 48 53.9	+1.9
KMI				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.9						
KMI				AMB	AMB		
	comp=Z,780nm,5.1s						
KMI				LR	LR		
	comp=N,8µm,12.8s						
KMI				LR	LR		
	comp=E,3µm,21.6s						
KMI				LR	LR		
	comp=Z,9µm,13.0s,MS5.4						
KMI	**Kunming**	**23.26**	**17**	P	**P**	**06 43 59.6**	**+0.8**
	comp=Z,51nm,1.0s,mb4.9						
KMI				pP		06 44 08.4	
KMI				PP	PP	06 44 30.5	+0.5
KMI				PPP	PPP	06 44 41.5	+1.5
KMI				S	**S**	**06 48 08.0**	**+2.6**
KMI				sS		06 48 22.9	
KMI				SS	SS	06 48 53.9	+1.9
KMI				LR	LR		
	comp=Z,9µm,13.0s,MS5.4						
KMI	**Kunming**	**23.26**	**17**	P	**P**	**06 43 59.6**	**+0.8**
KMI				*PP		06 44 08.4	
KMI						06 44 30.5	
KMI				PPP	PPP	06 44 41.5	+1.5
KMI				S	**S**	**06 48 08.0**	**+2.6**
KMI				*SS		06 48 22.9	
KMI				SS	SS	06 48 53.9	+1.9
KMI				pmax	pmax		
	comp=Z,51nm,1.0s,mb4.9						
KMI				MLR	MLR		
	comp=Z,9µm,13.0s,MS5.4						
DGAR	**Diego Garcia**	**25.11**	**246**	PFAKE		06 44 30.0	+13
DGAR				LR	LR		
	comp=Z,629nm,19.0s,MS4.1						
GYA	**Guiyang**	**25.84**	**24**	⇑*i*P	**P**	**06 44 23.6**	**0.0**
GYA				AP	pP	06 44 32.8	+1.5
GYA				XP	sP	06 44 37.3	+2.5
GYA				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.7						
GYA				AMB	AMB		
	comp=Z,530nm,8.1s						
GYA				LR	LR		
	comp=N,5µm,16.1s,MS5.1						
GYA				LR	LR		
	comp=E,890nm,17.7s,MS5.1						
GYA				LR	LR		
	comp=Z,5µm,16.5s,MS5.1						
ALBI	**Allahabad**	**25.94**	**331**	*e*P	**P**	**06 44 27.0**	**+2.5**
JIRN	**Jiri**	**26.24**	**341**	*e*P	**P**	**06 44 28.2**	**+0.9**
	comp=Z,207nm,0.9s,mb5.6						
POO	**Poona**	**26.30**	**308**	*e*P	**P**	**06 44 23.7**	**-4.2**
POO				*e*x	x	06 45 37.0	
PKI	**Pulchoki**	**26.42**	**340**	*e*P	**P**	**06 44 30.6**	**+1.6**
	comp=Z,74nm,0.8s,mb5.3						
DMN	**Daman**	**26.57**	**339**	*e*P	**P**	**06 44 31.8**	**+1.5**
	comp=Z,85nm,0.9s,mb5.3						
GUN	**Gumba**	**26.58**	**341**	*e*P	**P**	**06 44 31.3**	**+0.9**
	comp=Z,90nm,0.6s,mb5.5						
KKN	**Kakani**	**26.67**	**340**	*e*P	**P**	**06 44 31.8**	**+0.6**
	comp=Z,117nm,0.8s,mb5.5						
BHPL	**Bhopal**	**26.78**	**321**	*e*P	**P**	**06 44 29.9**	**-2.4**
BHPL				AMb	AMB	06 44 42.5	
	comp=Z,20nm,0.7s,mb4.8						
BHPL				*e*S	**S**	**06 49 00.7**	**-4.1**
LSA	**Lhasa**	**27.05**	**352**	P	**P**	**06 44 36.0**	**+1.4**
LSA	**Lhasa**	**27.05**	**352**	*e*P	**P**	**06 44 34.7**	**0.0**
	comp=Z,45nm,0.6s,mb5.2						
LSA				LR	LR		
	comp=Z,2µm,22.0s,MS4.7						
LSA	**Lhasa**	**27.05**	**352**	*e*P	**P**	**06 44 34.7**	**+0.1**
LSA				pmax	pmax		
	comp=Z,45nm,0.6s,mb5.2						
LSA				MLR	MLR		
	comp=Z,2µm,22.0s,MS4.7						
GKN	**Gorkha**	**27.09**	**339**	*e*P	**P**	**06 44 35.3**	**+0.2**
	comp=Z,126nm,0.8s,mb5.5						
KOLN	**Koldanda**	**27.28**	**337**	*e*P	**P**	**06 44 37.1**	**+0.3**
	comp=Z,111nm,0.8s,mb5.4						
CD2	**Chengdu**	**29.02**	**15**	P	**P**	**06 44 51.1**	**-1.4**
CD2				AP	pP	06 45 01.1	+0.9
CD2				XP	sP	06 45 05.8	+2.2
CD2				S	**S**	**06 49 38.0**	**-2.7**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
CD2				AMB	AMB		
	comp=Z,190nm,4.2s						
CD2				LR	LR		
	comp=N,3µm,13.2s						
CD2				LR	LR		
	comp=Z,3µm,14.4s,MS5.1						
DAV	**Davao City (W)**	**30.29**	**81**	P	**P**	**06 45 03.2**	**-0.8**
ENH	**Enshi**	**30.36**	**24**	*e*P	**P**	**06 45 02.9**	**-1.6**
	comp=Z,36nm,0.8s,mb5.2						
ENH				LR	LR		
	comp=Z,2µm,21.0s,MS4.7						
AJM	**Ajmer**	**30.86**	**322**	*e*P	**P**	**06 45 05.6**	**-3.3**
NDI	**New Delhi**	**31.04**	**328**	*e*x	**P**	**06 45 09.0**	**-1.5**
WHN	**Wuhan**	**32.86**	**31**	*e*P	**P**	**06 45 25.4**	**-0.9**
WHN				LR	LR		
	comp=N,5µm,13.3s,MS5.6						
WHN				LR	LR		
	comp=E,7µm,14.0s,MS5.6						
WHN				LR	LR		
	comp=Z,11µm,14.1s,MS5.7						
XAN	**Xi’an**	**33.50**	**20**	P	**P**	**06 45 30.6**	**-1.3**
XAN				AP	pP	06 45 37.6	-2.1
XAN				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.3						
LZH	**Lanzhou**	**34.00**	**12**	*e*P	**P**	**06 45 35.0**	**-1.2**
LZH				AP	pP	06 45 43.3	-0.7
LZH				XP	sP	06 45 46.6	-0.7
LZH				PP	PP	06 46 55.0	+4.7
LZH				S	**S**	**06 51 06.0**	**+7.3**
LZH				AMB	AMB		
	comp=Z,50nm,1.5s,mb5.2						
LZH				AMB	AMB		
	comp=Z,340nm,4.0s						
LZH				LR	LR		
	comp=E,4µm,12.8s						
LZH				LR	LR		
	comp=Z,2µm,18.0s						
LZH	**Lanzhou**	**34.00**	**12**	*e*P	**P**	**06 45 35.0**	**-1.2**
	comp=Z,50nm,1.5s,mb5.2						
LZH				pP	pP	06 45 43.3	-0.7
LZH				sP	sP	06 45 46.6	-0.7
LZH				PP	PP	06 46 55.0	+4.7
LZH				S	**S**	**06 51 06.0**	**+7.3**
LZH				sS		06 51 22.0	
LZH				*e*SS	SS	06 53 30.4	+24
LZH				LR	LR		
	comp=Z,2µm,18.0s,MS5.0						
LZH	**Lanzhou**	**34.00**	**12**	*e*P	**P**	**06 45 35.0**	**-1.2**
LZH				*SP	sP	06 45 46.6	-0.7
LZH						06 46 55.0	
LZH				S	**S**	**06 51 06.0**	**+7.3**
LZH				*SS		06 51 22.0	
LZH				*e*SS	SS	06 53 30.4	+24
LZH				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.2						
LZH				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.0						
FITZ	**Fitzroy Crossi**	**36.28**	**126**	*e*P	**P**	**06 45 54.7**	**-1.0**
	comp=Z,22nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**36.28**	**126**	P	**P**	**06 45 54.8**	**-1.0**
	comp=Z,28nm,0.7s,mb5.3,baz=198,slow=4.9,SNR=34						
NJ2	**Nanjing**	**36.46**	**35**	*e*P	**P**	**06 45 56.0**	**-1.2**
NJ2				AP	pP	06 46 05.9	+0.9
NJ2				XP	sP	06 46 09.8	+1.5
NJ2				PP	PP	06 47 20.4	-0.9
NJ2				S	**S**	**06 51 36.0**	**-0.8**
NJ2				XS		06 51 52.0	
NJ2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,400nm,5.2s						
NJ2				LR	LR		
	comp=N,2µm,14.0s,MS5.0						
NJ2				LR	LR		
	comp=E,1µm,17.8s,MS5.0						
NJ2				LR	LR		
	comp=Z,10µm,13.1s,MS5.8						
GTA	**Gaotai**	**36.64**	**6**	⇑P	**P**	**06 45 58.0**	**-0.6**
GTA				AP	pP	06 46 06.9	+0.5
GTA				XP	sP	06 46 11.0	+1.3
GTA				PP	PP	06 47 22.3	-1.2
GTA				PCP	PcP	06 48 22.3	+0.7
GTA				S	**S**	**06 51 36.8**	**-2.6**
GTA				XS		06 51 52.6	
GTA				SCP		06 52 06.6	
GTA				SS	SS	06 54 02.3	-4.4
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
GTA				AMB	AMB		
	comp=Z,260nm,6.8s						
GTA				LR	LR		
	comp=N,2µm,13.7s,MS5.0						
GTA				LR	LR		
	comp=E,1µm,15.6s,MS5.0						
GTA				LR	LR		
	comp=Z,2µm,13.3s,MS5.1						
SSE	**Sheshan**	**37.15**	**38**	P	**P**	**06 46 02.6**	**-0.4**
SSE				XP	sP	06 46 15.3	+1.2
SSE				PP	PP	06 47 28.6	-1.6
SSE				PCP	PcP	06 48 20.1	-3.2
SSE				S	**S**	**06 51 50.4**	**+3.0**
SSE				XS		06 52 05.6	
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,210nm,6.1s						
SSE				LR	LR		
	comp=N,850nm,15.6s,MS4.8						
SSE				LR	LR		
	comp=E,960nm,15.6s,MS4.8						
SSE				LR	LR		
	comp=Z,2µm,16.6s,MS5.0						
SSE	**Sheshan**	**37.15**	**38**	P	**P**	**06 46 02.6**	**-0.4**
	comp=Z,28nm,0.7s,mb5.2						
SSE				sP	sP	06 46 15.3	+1.2
SSE				PP	PP	06 47 28.6	-1.6
SSE				PcP	PcP	06 48 20.1	-3.2
SSE				S	**S**	**06 51 50.4**	**+3.0**
SSE				sS		06 52 05.6	
SSE				SS	SS	06 54 35.6	+17
SSE				LR	LR		
	comp=Z,2µm,16.6s,MS5.0						
TIA	**Tai’an**	**38.79**	**28**	*e*P	**P**	**06 46 17.0**	**+0.3**
TIA				LR	LR		
	comp=N,3µm,15.0s,MS5.3						
TIA				LR	LR		
	comp=E,3µm,15.0s,MS5.3						
MUN	**Mundaring**	**39.82**	**152**	*e*P	**P**	**06 46 27.1**	**+1.8**
KAKA	**Kakadu**	**39.83**	**114**	*e*P	**P**	**06 46 43.3**	**+18**
	comp=E,13nm,0.7s,mb4.8						
BTO	**Baotou**	**39.85**	**17**	*e*P	**P**	**06 46 25.3**	**-0.2**
HHC	**Hu-ho-hao-te**	**40.55**	**19**	*e*P	**P**	**06 46 32.6**	**+1.4**
HHC				AP	pP	06 46 42.3	+3.2
HHC				XP	sP	06 46 46.3	+4.0
HHC				PP	PP	06 48 10.5	+2.5
HHC				PCP	PcP	06 48 33.8	-0.1
HHC				SCP		06 52 19.6	
HHC				PCS		06 52 23.4	
HHC				S	**S**	**06 52 41.3**	**+2.7**
HHC				XS		06 52 57.3	
HHC				SS	SS	06 55 37.9	+4.3
HHC				SCS	ScS	06 56 30.9	-2.1
HHC				AMB	AMB		
	comp=Z,40nm,1.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,560nm,3.0s						
HHC				LR	LR		
	comp=N,5µm,11.7s,MS5.6						
HHC				LR	LR		
	comp=E,3µm,15.5s,MS5.6						
HHC				LR	LR		
	comp=Z,4µm,15.5s,MS5.4						
KSH	**Kashi**	**40.60**	**337**	*e*P	**P**	**06 46 32.0**	**+0.4**
KSH				*e*AP	pP	06 46 41.3	+1.8
KSH				*e*XP	sP	06 46 45.0	+2.3
KSH				*e*PP	PP	06 48 09.3	+0.9
KSH				*e*PCP	PcP	06 48 34.1	+0.1
KSH				*e*SCP		06 52 19.3	
KSH				*e*PCS		06 52 24.1	
KSH				*e*S	**S**	**06 52 38.0**	**-1.3**
KSH				*e*XS		06 52 55.3	
KSH				*e*SS	SS	06 55 34.1	-0.5
KSH				*e*SCS	ScS	06 56 32.6	-0.7
KSH				AMB	AMB		
	comp=Z,480nm,10.3s						
KSH				LR	LR		
	comp=N,1µm,14.0s,MS5.2						
KSH				LR	LR		
	comp=E,2µm,16.5s,MS5.2						
MSEY	**Mahe Island**	**40.64**	**260**	PFAKE		06 46 40.0	+7.8
MSEY				LR	LR		
	comp=Z,331nm,20.0s,MS4.2						
NWAO	**Narrogin (SRO)**	**41.09**	**152**	P	**P**	**06 46 36.0**	**+0.3**
	comp=Z,3.9nm,0.7s,mb4.1,baz=309,slow=9.5,SNR=5.1						
NWAO	**Narrogin (SRO)**	**41.09**	**152**	*e*P	**P**	**06 46 35.9**	**+0.2**
	comp=Z,42nm,1.6s,mb4.8						
NWAO				LR	LR		
	comp=Z,696nm,19.0s,MS4.5						
NWAO	**Narrogin (SRO)**	**41.09**	**152**	*e*P	**P**	**06 46 35.9**	**+0.2**
NWAO				pmax	pmax		
	comp=Z,42nm,1.6s						
NWAO				MLR	MLR		
	comp=Z,696nm,19.0s						
WMQ	**Urumqi**	**41.41**	**351**	⇑*i*P	**P**	**06 46 39.0**	**+0.8**
WMQ				AP	pP	06 46 47.8	+1.8
WMQ				XP	sP	06 46 51.6	+2.3
WMQ				PCP	PcP	06 48 36.8	+0.2
WMQ				SCP		06 52 25.0	
WMQ				S	**S**	**06 52 58.0**	**+6.8**
WMQ				SS	SS	06 55 55.0	+4.1
WMQ				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,260nm,3.3s						
WMQ				LR	LR		
	comp=N,2µm,18.8s,MS5.2						
WMQ				LR	LR		
	comp=E,3µm,19.7s,MS5.2						
WMQ				LR	LR		
	comp=Z,1µm,22.6s,MS4.8						
DL2	**Dalian**	**43.11**	**30**	P	**P**	**06 46 53.5**	**+1.2**
DL2				AP	pP	06 47 00.4	+0.3
DL2				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.3						
DL2				AMB	AMB		
	comp=Z,250nm,4.0s						
DL2				LR	LR		
	comp=N,1µm,16.5s,MS5.0						
DL2				LR	LR		
	comp=E,1µm,14.2s,MS5.0						
DL2				LR	LR		
	comp=Z,1µm,14.8s,MS4.9						
UCH	**Uchtor**	**43.49**	**337**	P	**P**	**06 46 56.7**	**+1.4**
	SNR=24						
TKM2	**Tokmak 2**	**43.68**	**339**	P	**P**	**06 46 57.8**	**+1.0**
	SNR=6.5						
KBK	**Karagaybulak**	**43.69**	**338**	P	**P**	**06 46 58.7**	**+1.8**
	SNR=6.2						
AML	**Almayashu**	**43.73**	**336**	P	**P**	**06 46 58.7**	**+1.5**
	SNR=20						
AAK	**Ala-Archa**	**43.84**	**338**	P	**P**	**06 47 00.9**	**+2.7**
	SNR=8.7						
FRU	**Bishkek**	**43.97**	**338**	*e*P	**P**	**06 47 00.0**	**+0.9**
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.0						
FRU				MLR	MLR		
	comp=Z,1µm,18.0s,MS4.8						
EKS2	**Erkin-Say**	**44.14**	**337**	P	**P**	**06 47 01.9**	**+1.4**
	SNR=18						
WRA	**Warramunga Arr**	**44.36**	**122**	P	**P**	**06 47 02.3**	**-0.3**
	comp=Z,12nm,0.8s,mb4.7,baz=299,slow=9.2,SNR=46						
WRAB	**Tennant Creek**	**44.36**	**122**	*e*P	**P**	**06 47 02.1**	**-0.6**
	comp=Z,108nm,1.5s,mb5.4						
WRAB				LR	LR		
	comp=Z,333nm,20.0s,MS4.3						
WRAB	**Tennant Creek**	**44.36**	**122**	*e*P	**P**	**06 47 02.1**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,108nm,1.5s,mb5.4						
WRAB				MLR	MLR		
	comp=Z,333nm,20.0s,MS4.3						
WB2	**Warramunga Arr**	**44.37**	**122**	*e*P	**P**	**06 47 01.9**	**-0.8**
USP	**Ospenovka**	**44.38**	**338**	P	**P**	**06 47 03.4**	**+0.8**
	SNR=31						
JNU	**Nakatsue**	**44.79**	**44**	P	**P**	**06 47 06.4**	**+0.5**
	comp=Z,14nm,0.8s,mb4.8,baz=174,slow=17,SNR=5.6						
JNU				LR	LR	07 07 09.8	
	comp=Z,810nm,18.6s,MS4.7,baz=240,slow=38						
INCN	**Inchon**	**44.81**	**36**	PFAKE		06 47 20.0	+14
INCN				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
MKAR	**Makanchi Array**	**45.28**	**347**	P	**P**	**06 47 09.8**	**+0.2**
	comp=Z,42nm,0.7s,mb5.4,baz=165,slow=7.6,SNR=182						
MKAR				LR	LR	07 09 04.6	
	comp=Z,756nm,21.6s,MS4.6,baz=166,slow=40						
KS15	**Wonju Array Si**	**45.52**	**37**	*e*P	**P**	**06 47 11.8**	**+0.2**
FORT	**Forrest**	**45.62**	**140**	*e*P	**P**	**06 47 13.1**	**+0.5**
	comp=Z,31nm,0.6s,mb5.4						
ASPA	**Alice Springs**	**45.75**	**127**	*e*P	**P**	**06 47 13.6**	**0.0**
ASPA				*i*	pP	06 47 22.2	+0.7
SONM	**Songino Array**	**45.83**	**10**	P	**P**	**06 47 13.9**	**0.0**
	comp=Z,26nm,0.8s,mb5.2,baz=190,slow=8.4,SNR=135						
SONM				PcP	PcP	06 48 50.5	-1.0
	comp=Z,5.7nm,0.6s,baz=192,slow=3.2,SNR=8.4						
SONM				LR	LR	07 08 11.8	
	comp=Z,2µm,21.7s,MS4.9,baz=98,slow=38						
ULN	**Ulaanbaatar**	**45.98**	**11**	*e*P	**P**	**06 47 14.6**	**-0.5**
	comp=Z,14nm,0.9s,mb4.9						
ULN				LR	LR		
	comp=Z,1µm,21.0s,MS4.9						
ULN	**Ulaanbaatar**	**45.98**	**11**	*e*P	**P**	**06 47 14.6**	**-0.5**
ULN				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
ULN				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.9						

SNY	**Shenyang**	**46.30**	**29**	⇑P	**P**	**06 47 16.8**	**-1.0**
SNY				S	**S**	**06 54 06.3**	**+3.9**
SNY				XS		06 54 14.6	
SNY				SS	SS	06 57 25.0	+4.8
SNY				AMB	AMB		
	comp=Z,40nm,2.1s,mb5.0						
SNY				AMB	AMB		
	comp=Z,240nm,6.6s						
SNY				LR	LR		
	comp=N,2µm,16.3s						
SNY				LR	LR		
	comp=Z,2µm,14.7s,MS5.3						
ZAK	**Zakamensk**	**47.85**	**7**	⇑*i*P	**P**	**06 47 29.9**	**0.0**
ZAK				*e*	pP	06 47 38.2	+0.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
CN2	**Changchun**	**48.69**	**29**	*e*P	**P**	**06 47 35.8**	**-0.7**
CN2				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.3						
CN2				AMB	AMB		
	comp=Z,330nm,3.0s						
CN2				LR	LR		
	comp=N,2µm,15.0s,MS5.4						
CN2				LR	LR		
	comp=E,2µm,15.0s,MS5.4						
CN2				LR	LR		
	comp=Z,2µm,16.0s,MS5.1						
KURK	**Kurchatov**	**49.80**	**346**	*e*P	**P**	**06 47 44.6**	**-0.3**
	comp=Z,30nm,1.0s,mb5.3						
KURK				LR	LR		
	comp=Z,237nm,20.0s,MS4.2						
KURK	**Kurchatov**	**49.80**	**346**	*e*P	**P**	**06 47 44.6**	**-0.3**
KURK				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
KURK				MLR	MLR		
	comp=Z,237nm,20.0s,MS4.2						
GUMO	**Guam**	**49.95**	**75**	LR	LR	07 08 19.4	
	comp=Z,626nm,19.1s,MS4.6,baz=155,slow=35						
GUMO	**Guam**	**49.95**	**75**	PFAKE		06 48 00.0	+13
GUMO				LR	LR		
	comp=Z,781nm,19.0s,MS4.7						
HIA	**Hailar**	**50.70**	**20**	*e*P	**P**	**06 47 51.3**	**-0.5**
	comp=Z,9.9nm,0.7s,mb4.8						
HIA				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
HIA	**Hailar**	**50.70**	**20**	*e*P	**P**	**06 47 51.3**	**-0.5**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HIA				MLR	MLR		
	comp=Z,2µm,20.0s						
JHJ	**Hachijo jima 2**	**51.22**	**49**	P	**P**	**06 47 57.1**	**+1.1**
	comp=Z,158nm,0.7s,baz=53,slow=22,SNR=2.4						
CIT	**Chita**	**51.31**	**14**	*e*P	**P**	**06 47 55.4**	**-0.9**
CIT				*e*		06 49 06.8	
CIT				*e*		06 49 46.7	
MDJ	**Mudanjiang**	**51.34**	**31**	P	**P**	**06 47 55.8**	**-0.9**
MDJ				AP	pP	06 48 04.8	+0.1
MDJ				XP	sP	06 48 08.8	+1.0
MDJ				PCP	PcP	06 49 09.9	-1.6
MDJ				PP	PP	06 49 52.3	-2.2
MDJ				SCP		06 53 04.1	
MDJ				PCS		06 53 08.0	
MDJ				S	**S**	**06 55 14.0**	**+1.2**
MDJ				XS		06 55 29.1	
MDJ				SCS	ScS	06 57 43.8	+1.7
MDJ				AMB	AMB		
	comp=Z,240nm,5.5s						
MDJ				LR	LR		
	comp=N,850nm,14.6s,MS5.2						
MDJ				LR	LR		
	comp=E,1µm,15.7s,MS5.2						
MDJ				LR	LR		
	comp=Z,1µm,17.8s,MS5.0						
MDJ	**Mudanjiang**	**51.34**	**31**	*e*P	**P**	**06 47 56.0**	**-0.6**
	comp=Z,58nm,1.6s,mb5.3						
MDJ				LR	LR		
	comp=Z,763nm,20.0s,MS4.7						
ZAL	**Zalesovo**	**51.70**	**352**	P	**P**	**06 47 59.6**	**+0.3**
	comp=Z,38nm,0.7s,mb5.4,baz=299,slow=6.6,SNR=152						
MAJO	**Matsushiro**	**51.71**	**44**	PFAKE		06 48 10.0	+10
MAJO				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
MAT	**Matsushiro**	**51.71**	**44**	P	**P**	**06 47 57.8**	**-1.8**
MAT				S	**S**	**06 55 17.0**	**-1.0**
MAT	**Matsushiro**	**51.71**	**44**	P	**P**	**06 47 58.0**	**-1.6**
MAT				*e*S	**S**	**06 55 17.0**	**-1.0**
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
MJAR	**Matsushiro Arr**	**51.71**	**44**	P	**P**	**06 48 00.1**	**+0.5**
	comp=Z,3.3nm,0.7s,mb4.4,baz=250,slow=8.6,SNR=5.7						
MJAR				LR	LR	07 11 45.1	
	comp=Z,673nm,19.7s,MS4.7,baz=235,slow=38						
OPO	**Ambohidratompo**	**52.04**	**244**	P	**P**	**06 48 02.5**	**+0.2**
	comp=Z,1.8nm,0.6s,mb4.2,baz=77,slow=9.4,SNR=8.3						
NVS	**Novosibirsk**	**52.81**	**351**	⇑*i*P	**P**	**06 48 05.9**	**-1.7**
NVS				*i*	pP	06 48 13.9	-1.7
NVS				*e*		06 49 23.0	
NVS				*i* S	**S**	**06 55 31.9**	**-0.8**
NVS				*i* PS	PS	06 55 46.2	0.0
NVS				pmax	pmax		
	comp=Z,62nm,1.6s,mb5.3						
NVS				pmax	pmax		
	comp=N,59nm,1.7s						
NVS				pmax	pmax		
	comp=E,20nm,1.4s						
NVS				smax			
	comp=N,32nm,2.1s						
NVS				smax			
	comp=E,57nm,2.2s						
ATD	**Arta Tunnel**	**52.84**	**282**	LR	LR	07 07 27.6	
	comp=E,360nm,18.4s,MS4.5,baz=354,slow=32						
PMG	**Port Moresby**	**52.92**	**104**	PFAKE		06 48 20.0	+11
PMG				LR	LR		
	comp=Z,671nm,19.0s,MS4.7						
BVAR	**Borovoye Array**	**54.17**	**342**	P	**P**	**06 48 17.2**	**-0.4**
	comp=Z,17nm,0.7s,mb5.1,baz=145,slow=8.6,SNR=84						
BRVK	**Borovoye**	**54.23**	**342**	*e*P	**P**	**06 48 17.0**	**-1.1**
	comp=Z,10nm,0.6s,mb4.9						
BRVK				LR	LR		
	comp=Z,124nm,19.0s,MS4.0						
BRVK	**Borovoye**	**54.23**	**342**	*e*P	**P**	**06 48 17.0**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
BRVK				MLR	MLR		
	comp=Z,124nm,19.0s,MS4.0						
CHKZ	**Chkalovo**	**54.66**	**342**	*e*P	**P**	**06 48 20.5**	**-0.7**
	comp=Z,31nm,0.7s,mb5.4						
CHKZ	**Chkalovo**	**54.66**	**342**	*e*P	**P**	**06 48 20.5**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.5						
CTA	**Charters Tower**	**54.77**	**117**	*e*P	**P**	**06 48 22.2**	**-0.3**
	comp=Z,8.9nm,1.5s,mb4.6						
CTA				*e*	pP	06 48 30.0	-0.6
CTA	**Charters Tower**	**54.77**	**117**	*e*P	**P**	**06 48 22.2**	**-0.3**
CTA				*e*	pP	06 48 30.0	-0.6
CTA				pmax	pmax		
	comp=Z,9.0nm,1.5s						
CTAO	**Charters Tower**	**54.77**	**117**	*e*P	**P**	**06 48 21.9**	**-0.6**
	comp=Z,44nm,1.3s,mb5.3						
CTAO				*e*pP	pP	06 48 29.5	-1.1
CTAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
CTAO	**Charters Tower**	**54.77**	**117**	*e*P	**P**	**06 48 21.9**	**-0.6**
CTAO				*e**PP	pP	06 48 29.5	-1.1
CTAO				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.0						
KLR	**Kul’dur**	**55.62**	**28**	*e*P	**P**	**06 48 27.6**	**-0.7**
KLR				*e*S	**S**	**06 56 15.5**	**+4.8**
KLR				pmax	pmax		
	comp=Z,130nm,2.6s,mb5.5						
KLR				MLR	MLR		
	comp=E,2µm,14.0s						
KLR				MLR	MLR		
	comp=Z,11µm,14.0s						
STKA	**Stephens Creek**	**55.72**	**132**	⇑*i*P	**P**	**06 48 28.7**	**-0.6**
	comp=Z,9.1nm,1.2s,mb4.7						
STKA	**Stephens Creek**	**55.72**	**132**	P	**P**	**06 48 28.6**	**-0.6**
	comp=Z,3.0nm,0.7s,mb4.5,baz=291,slow=8.5,SNR=6.4						
STKA				LR	LR	07 13 55.0	
	comp=Z,633nm,19.7s,MS4.7,baz=298,slow=38						
BOD	**Bodaibo**	**56.77**	**12**	⇓*i*P	**P**	**06 48 35.0**	**-1.4**
BOD				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
AKTO	**Aktyubinsk**	**57.00**	**332**	P	**P**	**06 48 36.9**	**-1.2**
	comp=Z,3.2nm,0.6s,mb4.6,baz=140,slow=7.3,SNR=13						
KMBO	**Kilima Mbogo**	**58.33**	**267**	P	**P**	**06 48 48.4**	**+0.4**
	comp=Z,1.5nm,0.6s,mb4.2,baz=61,slow=10,SNR=5.1						
KMBO				LR	LR	07 11 16.9	
	comp=Z,2µm,19.1s,MS5.1,baz=277,slow=33						
ASAJ	**Asahikawa**	**58.45**	**38**	LR	LR	07 16 22.3	
	comp=Z,950nm,18.9s,MS4.9,baz=0.4,slow=38						
CLNS	**Chul’man**	**58.74**	**18**	*e*P	**P**	**06 48 49.6**	**-0.6**
CLNS				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.4						
CLNS				pmax	pmax		
	comp=N,11nm,0.6s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,1µm,17.1s						
CLNS				pmax	pmax		
	comp=Z,100nm,14.2s						
CLNS				pmax	pmax		
	comp=N,300nm,12.8s						
CLNS				MLR	MLR		
	comp=Z,5µm,15.0s,MS5.8						
CLNS				MLR	MLR		
	comp=N,1µm,14.0s,MS5.6						
CLNS				MLR	MLR		
	comp=E,3µm,15.0s,MS5.6						
GNI	**Garni**	**58.93**	**316**	LR	LR	07 16 16.0	
	comp=E,323nm,21.7s,MS4.4,baz=113,slow=38						
GNI	**Garni**	**58.93**	**316**	PFAKE		06 49 00.0	+8.2
GNI				LR	LR		
	comp=Z,365nm,20.0s,MS4.5						
ORR	**Orenburg**	**59.32**	**332**	*i* P	**P**	**06 49 01.7**	**+7.3**
ORR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
YSS	**Yuzh-Sakhalins**	**60.02**	**36**	⇑*e*P	**P**	**06 48 59.3**	**+0.1**
YSS				LR	LR		
	comp=Z,920nm,19.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**60.02**	**36**	P	**P**	**06 48 58.4**	**-0.8**
YSS				MLR	MLR		
	comp=E,1µm,14.0s,MS5.2						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s,MS5.2						
YSS				MLR	MLR		
	comp=N,1µm,15.0s,MS5.2						
ZEI	**Tsey**	**60.64**	**319**	*i* P	**P**	**06 49 00.5**	**-3.0**
ZEI				*i* *PP	pP	06 49 10.6	-1.1
ZEI				*i*		06 49 43.7	
ZEI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
ARU	**Arti**	**61.03**	**338**	*e*P	**P**	**06 49 04.5**	**-1.5**
	comp=Z,50nm,1.4s,mb5.5						
ARU				*e*pP	pP	06 49 12.4	-1.7
ARU				LR	LR		
	comp=Z,218nm,20.0s,MS4.3						
ARU	**Arti**	**61.03**	**338**	⇑*i*P	**P**	**06 49 04.8**	**-1.2**
ARU				*e*		06 49 42.9	
ARU				*e*		06 51 17.2	
ARU				*e*PPP	PPP	06 52 44.5	-6.1
ARU				*e*S	**S**	**06 57 23.6**	**+2.4**
ARU				*e*SS	SS	07 01 24.9	+2.5
ARU				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.3						
ARU				MLR	MLR		
	comp=N,500nm,18.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,600nm,18.0s,MS4.9						
ARU				MLR	MLR		
	comp=Z,900nm,18.0s,MS5.0						
KIV	**Kislovodsk**	**61.96**	**319**	PFAKE		06 49 20.0	+7.6
KIV				LR	LR		
	comp=Z,97nm,21.0s,MS3.9						
SOC	**Sochi**	**63.76**	**318**	*i* P	**P**	**06 49 22.7**	**-1.7**
SOC				*e*		06 51 42.8	
SOC				*e*S	**S**	**06 57 51.9**	**-4.0**
SOC				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.3						
SOC				MLR	MLR		
	comp=Z,353nm,20.0s,MS4.5						
SOKR	**Solikamsk**	**63.96**	**339**	*d* *i*P	**P**	**06 49 25.3**	**-0.1**
SOKR				*e*	pP	06 49 33.3	-0.3
SOKR				S	**S**	**06 57 56.9**	**-1.1**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,710nm,20.0s,MS4.8						
YAK	**Yakutsk**	**64.38**	**17**	*e*P	**P**	**06 49 26.4**	**-1.6**
	comp=Z,59nm,0.8s,mb5.7						
YAK				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
YAK	**Yakutsk**	**64.38**	**17**	*c* *i*P	**P**	**06 49 26.7**	**-1.4**
YAK				*i* *PP	pP	06 49 35.6	-0.7
YAK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,180nm,21.4s						
YAK				pmax	pmax		
	comp=N,651nm,19.0s						
YAK				pmax	pmax		
	comp=E,766nm,18.8s						
YAK				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.2						
YAK				MLR	MLR		
	comp=N,901nm,16.0s,MS5.1						
YAK				MLR	MLR		
	comp=E,558nm,18.0s,MS5.1						
VRHR	**Novokhopersk**	**65.82**	**326**	*e*P	**P**	**06 49 35.5**	**-2.1**
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
BR131	**Keskin Array S**	**66.75**	**312**	*e*P	**P**	**06 49 43.1**	**-0.6**
BR131				LR	LR		
	comp=Z,270nm,19.0s,MS4.5						
BRTR	**Keskin Array B**	**66.75**	**312**	P	**P**	**06 49 43.2**	**-0.5**
	comp=Z,1.1nm,0.4s,mb4.2,baz=104,slow=5.9,SNR=5.2						
ANTO	**Ankara**	**67.41**	**312**	PFAKE		06 50 00.0	+12
ANTO				LR	LR		
	comp=Z,296nm,20.0s,MS4.5						
LSZ	**Lusaka**	**68.93**	**253**	P	**P**	**06 49 57.6**	**-0.1**
	comp=Z,1.3nm,0.6s,mb4.0,baz=83,slow=4.6,SNR=4.4						
LSZ				LR	LR	07 16 55.7	
	comp=Z,585nm,18.4s,MS4.8,baz=71,slow=33						
LSZ	**Lusaka**	**68.93**	**253**	*e*P	**P**	**06 49 56.9**	**-0.8**
	comp=Z,10nm,1.2s,mb4.6						
LSZ				*e*pP	pP	06 50 04.8	-1.1
LSZ				LR	LR		
	comp=Z,709nm,19.0s,MS4.9						
LSZ	**Lusaka**	**68.93**	**253**	*e*P	**P**	**06 49 56.9**	**-0.8**
LSZ				*e**PP	pP	06 50 04.8	-1.1
LSZ				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
LSZ				MLR	MLR		
	comp=Z,709nm,19.0s,MS4.9						
MATP	**Matopo**	**69.54**	**247**	LR	LR	07 17 44.0	
	comp=Z,514nm,18.3s,MS4.8,baz=79,slow=34						
CASY	**Casey**	**69.79**	**174**	PFAKE		06 50 10.0	+7.9
CASY				LR	LR		
	comp=Z,806nm,21.0s,MS4.9						
OBN	**Obninsk**	**70.34**	**329**	⇓*i*P	**P**	**06 50 05.2**	**-0.5**
OBN				LR	LR		
	comp=Z,300nm,23.0s,MS4.5						
OBN	**Obninsk**	**70.34**	**329**	⇓*i*P	**P**	**06 50 05.2**	**-0.5**
OBN				*i*	pP	06 50 12.9	-1.0
OBN				*i*		06 50 33.0	
OBN				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
OBN				MLR	MLR		
	comp=Z,300nm,23.0s,MS4.5						
MA2	**Magadan**	**70.65**	**26**	PFAKE		06 50 20.0	+13
MA2				LR	LR		
	comp=Z,419nm,20.0s,MS4.7						
MA2	**Magadan**	**70.65**	**26**	*e*P	**P**	**06 50 14.9**	**+7.4**
MA2				*e*		06 59 41.8	
PET	**Petropavlovsk**	**71.88**	**35**	PFAKE		06 50 30.0	+15
PET				LR	LR		
	comp=Z,875nm,19.0s,MS5.0						
PET	**Petropavlovsk**	**71.88**	**35**	*e*P	**P**	**06 50 14.8**	**-0.2**
PET				*e*PPP	PPP	06 54 31.6	-6.6
PET				*e*S	S	06 59 33.3	+0.6
PET				*e*SS	SS	07 04 15.4	+4.3
PET				pmax	pmax		
	comp=Z,100nm,16.0s						
PET				pmax	pmax		
	comp=Z,100nm,14.1s						
PET				pmax	pmax		
	comp=Z,100nm,14.3s						
PET				smax			
	comp=N,100nm,15.5s						
PET				smax			
	comp=E,100nm,12.5s						
PET				MLR	MLR		
	comp=Z,900nm,16.0s,MS5.1						
PET				smax			
	comp=N,48nm,0.6s						
TIXI	**Tiksi**	**71.91**	**11**	⇑*i*P	**P**	**06 50 14.1**	**-0.8**
TIXI				LR	LR		
	comp=Z,680nm,20.0s,MS4.9						
TIXI	**Tiksi**	**71.91**	**11**	*e*P	**P**	**06 50 12.2**	**-2.7**
TIXI				*e*		06 50 28.0	
TIXI				*e*PPP	PPP	06 54 33.9	-4.4
TIXI				*e*SS	SS	07 04 11.4	0.0
TIXI				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.2						
IDI	**Anoyia**	**72.55**	**306**	LR	LR	07 23 02.8	
	comp=Z,176nm,20.2s,MS4.3,baz=97,slow=37						
AKASG	**Malin Array Be**	**72.93**	**322**	P	**P**	**06 50 19.9**	**-1.3**
	comp=Z,2.5nm,0.6s,mb4.3,baz=91,slow=5.4,SNR=20						
LBTB	**Lobatse**	**73.06**	**243**	*e*P	**P**	**06 50 22.9**	**+0.3**
	comp=Z,15nm,0.8s,mb5.0						
LBTB				*e*pP	pP	06 50 30.2	-0.6
LBTB				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
LBTB	**Lobatse**	**73.06**	**243**	*e*P	**P**	**06 50 22.9**	**+0.3**
LBTB				*e**PP	pP	06 50 30.2	-0.6
LBTB				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
LBTB				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
VRI	**Vrincioaia**	**73.26**	**317**	⇑*i*P	**P**	**06 50 23.3**	**0.0**
MAW	**Mawson**	**73.90**	**192**	P	**P**	**06 50 26.0**	**-0.6**
	comp=Z,0.7nm,0.3s,mb4.1,baz=314,slow=11,SNR=3.9						
MAW				LR	LR	07 19 33.2	
	comp=Z,386nm,18.2s,MS4.7,baz=58,slow=33						
BOSA	**Boshof**	**74.09**	**239**	P	**P**	**06 50 28.5**	**0.0**
	comp=Z,2.0nm,0.8s,mb4.1,baz=77,slow=10,SNR=3.2						
BOSA				LR	LR	07 20 55.5	
	comp=Z,909nm,18.2s,MS5.1,baz=71,slow=34						
BOSA	**Boshof**	**74.09**	**239**	*e*P	**P**	**06 50 28.0**	**-0.5**
BOSA				LR	LR		
	comp=Z,942nm,19.0s,MS5.1						
BURAR	**Bucovina Array**	**74.67**	**319**	⇓*i*P	**P**	**06 50 32.0**	**+0.6**
JOF	**Joensuu**	**75.95**	**335**	*e*p	**P**	**06 50 38.0**	**-0.4**
	comp=Z,5.4nm,0.8s,mb4.5						
APA	**Apatity**	**77.01**	**340**	⇑*e*P	**P**	**06 50 45.3**	**+1.0**
APA				*i*	pP	06 50 52.4	-0.2
APA				*e*S	S	07 00 27.0	-2.7
APA				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.2						
SUW	**Suwalki**	**77.36**	**325**	*e*P	pP	06 50 54.3	-0.5
SUW	**Suwalki**	**77.36**	**325**	*e*P	**P**	**06 50 45.1**	**-1.3**
	comp=Z,47nm,0.9s,mb5.4						
SUW				*e*P	pP	06 50 54.3	-0.5
SUW	**Suwalki**	**77.36**	**325**	*e*P	**P**	**06 50 45.2**	**-1.3**
SUW				*e*	pP	06 50 54.3	-0.5
SUW				pmax	pmax		
	comp=Z,47nm,0.9s,mb5.4						
FINES	**FINESS Array B**	**77.77**	**333**	P	**P**	**06 50 48.4**	**-0.2**
	comp=Z,4.2nm,0.6s,mb4.6,baz=105,slow=6.5,SNR=27						
FINES				LR	LR	07 30 35.8	
	comp=Z,464nm,20.8s,MS4.8,baz=122,slow=40						
KAF	**Kangasniemi**	**77.87**	**333**	*e*p	**P**	**06 50 47.5**	**-1.6**
	comp=Z,8.1nm,0.8s,mb4.7						
KAF	**Kangasniemi**	**77.87**	**333**	*e*P	**P**	**06 50 47.5**	**-1.6**
KAF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
OJC	**Ojcow**	**78.68**	**321**	*e*P	**P**	**06 50 54.0**	**+0.2**
TSUM	**Tsumeb**	**79.50**	**250**	LR	LR	07 25 01.0	
	comp=Z,441nm,18.1s,MS4.8,baz=320,slow=35						
TSUM	**Tsumeb**	**79.50**	**250**	PFAKE		06 51 10.0	+11
TSUM				LR	LR		
	comp=Z,513nm,19.0s,MS4.9						
OKC	**Ostrava-Krasne**	**79.68**	**320**	*e*P	**P**	**06 51 03.0**	**+3.8**
KEV	**Kevo**	**80.01**	**341**	PFAKE		06 51 10.0	+9.4
KEV				LR	LR		
	comp=Z,897nm,20.0s,MS5.1						
MORC	**Moravsky Berou**	**80.06**	**320**	*e*P	**P**	**06 51 01.1**	**-0.2**
	comp=Z,28nm,1.6s,mb5.0						
MORC	**Moravsky Berou**	**80.06**	**320**	*e*P	**P**	**06 51 01.1**	**-0.2**
MORC				pmax	pmax		
	comp=Z,28nm,1.6s,mb4.9						
BILL	**Bilibino**	**80.28**	**21**	PFAKE		06 51 10.0	+7.9
BILL				LR	LR		
	comp=Z,878nm,19.0s,MS5.1						
FX1	**Attu Island--F**	**80.34**	**37**	P	**P**	**06 51 03.1**	**+0.4**
	comp=Z,11nm,0.6s,mb5.0,baz=129,slow=22,SNR=4.0						
FX1	**Attu Island--F**	**80.34**	**37**	P	**P**	**06 51 02.7**	**0.0**
ARCES	**ARCESS Array B**	**80.44**	**340**	P	**P**	**06 51 03.2**	**+0.3**
	comp=Z,4.9nm,0.7s,mb4.6,baz=99,slow=5.7,SNR=18						
ARCES				LR	LR	07 32 24.1	
	comp=Z,904nm,20.1s,MS5.1,baz=236,slow=40						
ARE0	**ARCESS Array S**	**80.44**	**340**	P	**P**	**06 51 02.2**	**-0.7**
SMY	**Shemya**	**80.88**	**37**	PFAKE		06 51 20.0	+14
SMY				LR	LR		
	comp=Z,2µm,22.0s,MS5.5						
DPC	**Dobruska-Polom**	**80.91**	**320**	*e*P	**P**	**06 51 06.9**	**+1.1**
DPC				*e*pP	pP	06 51 15.0	+0.9
KSP	**Ksiaz**	**80.98**	**321**	*e*P	**P**	**06 51 06.6**	**+0.4**
SYO	**Syowa Base**	**81.00**	**198**	⇑pP	pP	06 51 15.8	+1.5
ARSA	**Arzberg**	**81.11**	**317**	⇑*e*P	**P**	**06 51 09.0**	**+2.1**
	comp=Z,4.1nm,0.9s,mb4.3						
ARSA				⇑*i*P	pP	06 51 16.6	+1.3
	comp=Z,12nm,1.1s						
UPC	**Upice**	**81.12**	**321**	*e*P	**P**	**06 51 07.9**	**+1.0**
UPC				*e*	pP	06 51 15.7	+0.5
PRU	**Pruhonice**	**82.01**	**320**	*e*P	**P**	**06 51 15.4**	**+3.9**
PRU				*e*pP	pP	06 51 21.0	+1.1
GERES	**GERESS Array B**	**82.46**	**319**	P	**P**	**06 51 14.9**	**+1.0**
	comp=Z,1.6nm,0.6s,mb4.1,baz=102,slow=5.6,SNR=18						
BRG	**Berggiesshubel**	**82.47**	**321**	*e*P	pP	06 51 22.7	+0.5
	comp=Z,7.3nm,1.0s						
BRG				LR	LR		
	comp=Z,470nm,17.4s,MS4.9						
BRG	**Berggiesshubel**	**82.47**	**321**	*e*P	pP	06 51 22.7	+0.5
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BRG				MLR	MLR		
	comp=Z,470nm,17.4s,MS4.9						
KHC	**Kasperske Hory**	**82.56**	**319**	*e*P	**P**	**06 51 16.1**	**+1.7**
KHC				*e*pP	pP	06 51 22.5	-0.3
CLL	**Collm**	**83.09**	**321**	P	**P**	**06 51 18.0**	**+0.9**
	comp=Z,logA/T=0.7,mb4.5						
CLL				*e**PP	pP	06 51 26.0	+0.5
CLL	**Collm**	**83.09**	**321**	*e*P	**P**	**06 51 18.0**	**+0.9**
	comp=Z,6.0nm,1.1s,mb4.5						
CLL				*e*pP	pP	06 51 26.0	+0.5
CLL	**Collm**	**83.09**	**321**	*e*P	**P**	**06 51 18.0**	**+0.9**
CLL				*e**PP	pP	06 51 26.0	+0.5
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
WTTA	**Wattenberg**	**83.75**	**317**	⇓*e*P	pP	06 51 29.0	+0.1
	comp=Z,10nm,1.2s						
SNZO	**South Karori**	**83.78**	**132**	PFAKE		06 51 30.0	+9.1
SNZO				LR	LR		
	comp=Z,957nm,20.0s,MS5.2						
SQTA	**Sankt Quirin**	**84.04**	**317**	⇑*i*P	pP	06 51 30.3	-0.1
	comp=Z,4.8nm,0.5s						
MOTA	**Moosalm**	**84.11**	**317**	⇑*i*P	**P**	**06 51 22.8**	**+0.5**
	comp=Z,3.3nm,0.9s,mb4.5						
MOTA	**Moosalm**	**84.11**	**317**	⇑*i*P	pP	06 51 30.1	-0.7
	comp=Z,3.3nm,0.6s						
MOTA	**Moosalm**	**84.11**	**317**	⇑P	**P**	**06 51 22.8**	**+0.4**
MOTA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
GRA1	**Grafenberg Arr**	**84.13**	**319**	*e*P	**P**	**06 51 23.8**	**+1.4**
	comp=Z,7.0nm,1.6s,mb4.5						
GRA1				*e*pP	pP	06 51 30.3	-0.5
GRF	**Grafenberg Arr**	**84.13**	**319**	*e*P	**P**	**06 51 23.8**	**+1.4**
	comp=Z,7.0nm,1.6s,mb4.5						
GRF				*e*pP	pP	06 51 30.3	-0.5
GRF	**Grafenberg Arr**	**84.13**	**319**	*e*P	**P**	**06 51 23.8**	**+1.4**
GRF				*e**PP	pP	06 51 30.3	-0.5

GRF				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.5						
GRF	**Grafenberg Arr**	**84.13**	**319**	*e*P	**P**	**06 51 23.8**	**+1.4**
GRF				e*PP	pP	06 51 30.3	-0.5
GRF				pmax	pmax		
	comp=Z,7.0nm,1.6s,mb4.5						
NB2	**NORSAR Subarra**	**84.76**	**331**	P	**P**	**06 51 25.2**	**-0.1**
	comp=Z,6.5nm,0.9s,mb4.8,baz=92,slow=5.6						
NOA	**NORSAR Array B**	**84.76**	**331**	P	**P**	**06 51 26.1**	**+0.8**
	comp=Z,2.3nm,1.0s,mb4.3,baz=94,slow=5.5,SNR=4.3						
NOA				LR	LR	07 32 52.4	
	comp=Z,318nm,20.6s,MS4.7,baz=80,slow=38						
NAO	**NORSAR Subarra**	**84.93**	**331**	P	**P**	**06 51 25.2**	**-0.9**
	comp=Z,6.5nm,0.9s,mb4.8						
NAO	**NORSAR Subarra**	**84.93**	**331**	P	**P**	**06 51 25.2**	**-0.9**
NAO				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.8						
KONO	**Kongsberg**	**85.49**	**329**	PFAKE		06 51 40.0	+11
KONO				LR	LR		
	comp=Z,249nm,19.0s,MS4.6						
KBS	**Kingsbay**	**86.00**	**349**	PFAKE		06 51 40.0	+8.8
KBS				LR	LR		
	comp=Z,581nm,19.0s,MS5.0						
VNDA	**Vanda**	**87.75**	**168**	P	**P**	**06 51 40.0**	**+0.3**
	comp=Z,18nm,1.7s,mb5.0						
VNDA				LR	LR		
	comp=Z,288nm,19.0s,MS4.7						
VNDA	**Vanda**	**87.75**	**168**	P	**P**	**06 51 40.0**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,18nm,1.7s						
VNDA				MLR	MLR		
	comp=Z,288nm,19.0s						
SBA	**Scott Base**	**88.85**	**168**	P	**P**	**06 51 46.1**	**+1.2**
	comp=Z,37nm,1.9s,mb5.4						
SBA				LR	LR		
	comp=Z,308nm,21.0s,MS4.7						
SBA	**Scott Base**	**88.85**	**168**	P	**P**	**06 51 46.1**	**+1.2**
SBA				pmax	pmax		
	comp=Z,37nm,1.9s,mb5.4						
SBA				MLR	MLR		
	comp=Z,308nm,21.0s,MS4.7						
TNA	**Tin City**	**90.20**	**24**	PFAKE		06 52 00.0	+8.5
TNA				LR	LR		
	comp=Z,575nm,19.0s,MS5.0						
QSPA	**South Pole Qui**	**92.75**	**180**	PFAKE		06 52 20.0	+17
QSPA				LR	LR		
	comp=Z,893nm,19.0s,MS5.2						
ILAR	**Eielson Array**	**98.89**	**23**	PP	PP	06 56 33.6	-1.7
	comp=Z,0.7nm,0.8s,baz=300,slow=7.9,SNR=5.2						
ILAR				LR	LR	07 44 59.7	
	comp=Z,413nm,18.0s,MS5.0,baz=170,slow=40						
FIB	**Fire Island**	**99.03**	**27**	PFAKE		06 52 40.0	+8.1
FIB				LR	LR		
	comp=Z,4μm,21.0s,MS5.8						
DBIC	**Dimbokro**	**99.91**	**277**	LR	LR	07 38 53.5	
	comp=Z,274nm,18.0s,MS4.8,baz=63,slow=36						
DBIC	**Dimbokro**	**99.91**	**277**	PFAKE		06 52 50.0	+13
DBIC				LR	LR		
	comp=Z,328nm,20.0s,MS4.8						
INK	**Inuvik**	**101.44**	**17**	P	P	06 52 45.4	+2.7
	comp=Z,0.8nm,0.8s,baz=13,slow=5.3,SNR=3.0						
SCHQ	**Schefferville**	**120.71**	**348**	PFAKE		06 58 00.0	+13
SCHQ				LR	LR		
	comp=Z,796nm,19.0s,MS5.4						
FFC	**Flin Flon**	**120.86**	**12**	PFAKE		06 58 00.0	+13
FFC				LR	LR		
	comp=Z,103nm,19.0s,MS4.5						
COR	**Corvallis**	**121.49**	**32**	PFAKE		06 58 00.0	+11
COR				LR	LR		
	comp=Z,224nm,20.0s,MS4.8						
NEW	**Newport**	**121.73**	**25**	PFAKE		06 58 00.0	+11
NEW				LR	LR		
	comp=Z,387nm,19.0s,MS5.1						
HUMO	**Hull Mountain**	**123.01**	**33**	PFAKE		06 58 00.0	+8.5
HUMO				LR	LR		
	comp=Z,255nm,19.0s,MS4.9						
YBH	**Yreka Blue Hor**	**123.73**	**34**	PFAKE		06 58 00.0	+7.0
YBH				LR	LR		
	comp=Z,339nm,20.0s,MS5.0						
MSO	**Missoula**	**124.19**	**24**	PFAKE		06 58 00.0	+6.2
MSO				LR	LR		
	comp=Z,246nm,19.0s,MS4.9						
BMO	**Blue Mountains**	**124.27**	**28**	PFAKE		06 58 00.0	+6.0
BMO				LR	LR		
	comp=Z,397nm,22.0s,MS5.0						
TAOE	**Nuku Hiva Isla**	**124.40**	**99**	*e*LR	LR	07 36 45.9	
	comp=Z,768nm,24.9s						
WDC	**Whiskeytown Da**	**124.60**	**35**	PFAKE		06 58 00.0	+5.3
WDC				LR	LR		
	comp=Z,313nm,19.0s,MS5.0						
MOD	**Modoc**	**124.92**	**32**	PFAKE		06 58 00.0	+4.7
MOD				LR	LR		
	comp=Z,246nm,20.0s,MS4.9						
WVOR	**Wild Horse Val**	**125.41**	**31**	PFAKE		06 58 00.0	+3.8
WVOR				LR	LR		
	comp=Z,422nm,21.0s,MS5.1						
BOZ	**Bozeman (W)**	**126.08**	**23**	PFAKE		06 58 10.0	+13
BOZ				LR	LR		
	comp=Z,537nm,19.0s,MS5.2						
DGMT	**Dagmar**	**126.12**	**16**	PFAKE		06 58 10.0	+13
DGMT				LR	LR		
	comp=Z,377nm,21.0s,MS5.0						
ULM	**Lac du Bonnet**	**126.25**	**9**	PKP	PKPdf	06 57 54.6	-3.0
	comp=Z,2.2nm,0.7s,slow=1.0,SNR=4.3						
HLID	**Hailey**	**126.58**	**27**	PFAKE		06 58 10.0	+12
HLID				LR	LR		
	comp=Z,427nm,20.0s,MS5.1						
LAO	**LASA Array**	**127.12**	**19**	PFAKE		06 58 10.0	+11
LAO				LR	LR		
	comp=Z,637nm,19.0s,MS5.3						
YMR	**Madison River**	**127.16**	**23**	PFAKE		06 58 10.0	+11
YMR				LR	LR		
	comp=Z,831nm,20.0s,MS5.4						
RKT	**Rikitea**	**127.21**	**117**	*e*LR	LR	07 38 03.9	
	comp=Z,210nm,23.2s						
LKWY	**Lake**	**127.47**	**23**	PFAKE		06 58 10.0	+10
LKWY				LR	LR		
	comp=Z,550nm,21.0s,MS5.2						
CMB	**Columbia Colle**	**127.54**	**36**	PFAKE		06 58 10.0	+10
CMB				LR	LR		
	comp=Z,279nm,19.0s,MS5.0						
ELK	**Elko**	**128.37**	**30**	*e*PKP	PKPdf	06 57 59.1	-2.9
ELK				LR	LR		
	comp=Z,310nm,20.0s,MS5.0						
NVAR	**Mina Array Bea**	**128.45**	**34**	PKP	PKPdf	06 58 00.5	-1.7
	comp=Z,0.5nm,0.6s,baz=292,slow=1.0,SNR=7.5						
MNV	**Mina**	**128.54**	**34**	PFAKE		06 58 10.0	+7.6
MNV				LR	LR		
	comp=Z,318nm,19.0s,MS5.0						
AHID	**Auburn Hatcher**	**128.67**	**25**	PFAKE		06 58 10.0	+7.5
AHID				LR	LR		
	comp=Z,307nm,19.0s,MS5.0						
EYMN	**Ely**	**129.08**	**6**	PFAKE		06 58 10.0	+6.9
EYMN				LR	LR		
	comp=Z,584nm,19.0s,MS5.3						
BW06	**Boulder Array**	**129.30**	**24**	PFAKE		06 58 10.0	+6.3
BW06				LR	LR		
	comp=Z,313nm,19.0s,MS5.0						
PDAR	**Pinedale Array**	**129.30**	**24**	PKP	PKPdf	06 58 00.8	-2.9
	comp=Z,0.4nm,0.5s,baz=128,slow=1.2,SNR=5.0						
HWUT	**Hardware Ranch**	**129.41**	**26**	PFAKE		06 58 10.0	+6.0
HWUT				LR	LR		
	comp=Z,462nm,19.0s,MS5.2						
DUG	**Dugway**	**129.97**	**28**	PFAKE		06 58 10.0	+4.9
DUG				LR	LR		
	comp=Z,317nm,22.0s,MS5.0						
RSSD	**Black Hills**	**130.11**	**18**	PFAKE		06 58 10.0	+4.8
RSSD				LR	LR		
	comp=Z,902nm,20.0s,MS5.5						
MPU	**Maple Canyon**	**130.66**	**27**	PFAKE		06 58 20.0	+14
MPU				LR	LR		
	comp=Z,751nm,20.0s,MS5.4						
RCBR	**Riachuelo**	**131.43**	**265**	PFAKE		06 58 20.0	+11
RCBR				LR	LR		
	comp=Z,367nm,19.0s,MS5.1						
MSU	**Marysvale**	**131.59**	**29**	PKP	PKPdf	06 58 05.1	-3.1
LBNH	**Lisbon**	**131.81**	**348**	PFAKE		06 58 20.0	+12
LBNH				LR	LR		
	comp=Z,526nm,20.0s,MS5.2						
NCB	**Newcomb**	**132.51**	**350**	PFAKE		06 58 20.0	+10
NCB				LR	LR		
	comp=Z,367nm,20.0s,MS5.1						
HRV	**Harvard--Oak R**	**133.38**	**347**	PFAKE		06 58 20.0	+8.6
HRV				LR	LR		
	comp=Z,293nm,21.0s,MS5.0						
ISCO	**Idaho Springs**	**133.38**	**22**	PFAKE		06 58 20.0	+8.5
ISCO				LR	LR		
	comp=Z,530nm,20.0s,MS5.2						
WES	**Weston**	**133.44**	**347**	PFAKE		06 58 20.0	+8.5
WES				LR	LR		
	comp=Z,593nm,19.0s,MS5.3						
WUAZ	**Wupatki**	**134.33**	**31**	PFAKE		06 58 20.0	+6.6
WUAZ				LR	LR		
	comp=Z,489nm,19.0s,MS5.2						
ERPA	**Erie**	**135.09**	**355**	PFAKE		06 58 20.0	+5.4
ERPA				LR	LR		
	comp=Z,423nm,21.0s,MS5.1						
SDCO	**Great Sand Dun**	**135.20**	**24**	PFAKE		06 58 20.0	+5.0
SDCO				LR	LR		
	comp=Z,441nm,20.0s,MS5.2						
CBKS	**Cedar Bluff**	**136.26**	**17**	PFAKE		06 58 30.0	+13
CBKS				LR	LR		
	comp=Z,617nm,22.0s,MS5.3						
TUC	**Tucson**	**137.10**	**33**	PFAKE		06 58 30.0	+11
TUC				LR	LR		
	comp=Z,233nm,20.0s,MS4.9						
ACSO	**Alum Creek Sta**	**137.13**	**358**	PFAKE		06 58 30.0	+12
ACSO				LR	LR		
	comp=Z,286nm,20.0s,MS5.0						
ANMO	**Albuquerque**	**137.16**	**27**	PFAKE		06 58 30.0	+11
ANMO				LR	LR		
	comp=Z,265nm,20.0s,MS5.0						
CBN	**Corbin**	**138.65**	**351**	PFAKE		06 58 30.0	+8.8
CBN				LR	LR		
	comp=Z,436nm,19.0s,MS5.2						
CCM	**Cathedral Cave**	**138.86**	**8**	PFAKE		06 58 30.0	+8.4
CCM				LR	LR		
	comp=Z,511nm,20.0s,MS5.3						
WCI	**Wyandotte Cave**	**139.13**	**2**	PFAKE		06 58 30.0	+7.9
WCI				LR	LR		
	comp=Z,405nm,20.0s,MS5.2						
AMTX	**Amarillo**	**139.19**	**22**	PFAKE		06 58 30.0	+7.7
AMTX				LR	LR		
	comp=Z,386nm,21.0s,MS5.1						
TRQA	**Tornquist**	**139.30**	**208**	PFAKE		06 58 30.0	+7.6
TRQA				LR	LR		
	comp=Z,287nm,19.0s,MS5.0						
BLA	**Blacksburg**	**139.99**	**355**	PFAKE		06 58 30.0	+6.3
BLA				LR	LR		
	comp=Z,587nm,22.0s,MS5.3						
WMOK	**Wichita Mounta**	**140.32**	**19**	PFAKE		06 58 30.0	+5.6
WMOK				LR	LR		
	comp=Z,312nm,19.0s,MS5.1						
MNTX	**Cornudas Mount**	**140.36**	**28**	PFAKE		06 58 30.0	+5.5
MNTX				LR	LR		
	comp=Z,316nm,19.0s,MS5.1						
WVT	**Waverly**	**141.13**	**4**	PFAKE		06 58 30.0	+4.2
WVT				LR	LR		
	comp=Z,523nm,19.0s,MS5.3						
MIAR	**Mount Ida**	**141.87**	**12**	PFAKE		06 58 40.0	+13
MIAR				LR	LR		
	comp=Z,126nm,20.0s,MS4.7						
MYNC	**Murphy**	**142.31**	**359**	PFAKE		06 58 40.0	+12
MYNC				LR	LR		
	comp=Z,488nm,21.0s,MS5.2						
OXF	**Oxford**	**142.59**	**7**	PFAKE		06 58 40.0	+12
OXF				LR	LR		
	comp=Z,530nm,21.0s,MS5.3						
LTX	**Lajitas**	**143.15**	**28**	PFAKE		06 58 40.0	+17
LTX				LR	LR		
	comp=Z,272nm,19.0s,MS5.0						
TXAR	**Lajitas Array**	**143.15**	**28**	PKP	PKPdf	06 58 24.2	-5.2
	comp=Z,1.2nm,0.7s,baz=265,slow=2.4,SNR=12						
TXAR				PP	PP	07 01 42.2	+3.2
	comp=Z,0.4nm,0.7s,baz=333,slow=2.0,SNR=3.9						
TXAR	**Lajitas Array**	**143.15**	**28**	PKP	PKPdf	06 58 24.2	-5.2
TXAR				PP	PP	07 01 42.2	+3.2
JCT	**Junction City**	**143.82**	**23**	*e*PKP	PKPdf	06 58 25.6	-4.9
JCT				LR	LR		
	comp=Z,349nm,20.0s,MS5.1						
GOGA	**Godfrey**	**143.95**	**358**	PFAKE		06 58 40.0	+15
GOGA				LR	LR		
	comp=Z,442nm,19.0s,MS5.2						
NHSC	**New Hope**	**144.03**	**354**	PFAKE		06 58 40.0	+15
NHSC				LR	LR		
	comp=Z,447nm,20.0s,MS5.2						
NATX	**Nacogdoches**	**144.29**	**15**	PFAKE		06 58 40.0	+14
NATX				LR	LR		
	comp=Z,477nm,19.0s,MS5.3						
CPUP	**Villa Florida**	**144.96**	**226**	*e*PKP	PKPdf	06 58 28.9	-3.9
SJG	**San Juan**	**152.42**	**320**	PFAKE		06 58 50.0	+5.2
SJG				LR	LR		
	comp=Z,237nm,19.0s,MS5.0						
LPAZ	**La Paz**	**159.03**	**229**	PKP	PKPdf	06 58 51.1	-2.4
	comp=Z,1.2nm,1.0s,baz=37,slow=0.5,SNR=3.5						
LPAZ				PKPab	PKPab	06 59 29.4	+1.6
	comp=Z,0.5nm,0.5s,baz=94,slow=2.7,SNR=4.0						
LPAZ	**La Paz**	**159.03**	**229**	PKP	PKPdf	06 58 51.2	-2.4
LPAZ				LR	LR		
	comp=Z,401nm,21.0s,MS5.2						
SDV	**Santo Domingo**	**161.91**	**310**	PFAKE		06 59 10.0	+13
SDV				LR	LR		
	comp=Z,336nm,21.0s						
JTS	**JuntasAbangare**	**166.97**	**2**	PFAKE		06 59 10.0	+8.7
JTS				LR	LR		
	comp=Z,82nm,20.0s						
NNA	**Nana**	**168.12**	**220**	PFAKE		06 59 10.0	+8.0
NNA				LR	LR		
	comp=Z,103nm,19.0s						

MOS ***19*** *06:55:15.4±1.4, 57.45N×120.55E, h10^{km}, mb4.1/8, Error ellipse: s-maj=12.8km s-min=10.8km az=85.6*

BYKL ***19*** *06:55:15.5±0.4, 57.39N×120.66E*

IDC ***19*** *06:55:16.5±1.3, 57.60N×120.58E, mb3.9/9, mb1 4.1/11, mb1mx3.9/23, mbtmp4.0/11, ML3.3/2, Error ellipse: s-maj=30.5km s-min=21.7km az=168.0*

NEIC ***19*** *06:55:17.8±0.9, 57.62N×120.65E, h10^{km}, mb3.9/1, Error ellipse: s-maj=21.8km s-min=9.0km az=142.0*

ISC 19 06:55:15.5±0.4**, 57.38N**±0.05×**120.56E**±0.06**, h10^{km}, n59, σ1^{s}23**/64**, mb3.8**/9**, 4C-2D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	**Chara**	**1.34**	**250**	⇓*i*Pg	**Pg**	**06 55 41.4**	**-0.9**
CRS				Pmax		06 55 45.5	
	648nm,1.0s						
CRS				*e*Sg	**Sg**	**06 55 59.2**	**-1.0**
CRS				Smax		06 56 01.4	
	2μm,1.5s						
CRS	**Chara**	**1.34**	**250**	*e*P	**Pb**	**06 55 41.7**	**+1.4**
CRS				*e*		06 55 59.3	
CRS				pmax	pmax		
	comp=Z,632nm,0.7s						
CRS				smax			
	comp=N,2μm,1.1s						
NRGR	**Nerungri**	**2.39**	**106**	*i* P	**Pn**	**06 55 58.6**	**+3.3**
NRGR				S	**Sn**	**06 56 29.4**	**+4.5**
CLNS	**Chul’man**	**2.42**	**101**	*e*	**Pn**	**06 55 57.7**	**+1.8**
CLNS				*e*Pg	**Pg**	**06 55 59.3**	**-4.6**
CLNS				Pmax		06 56 01.9	
	comp=N,452nm,0.3s						
CLNS				*e*Sg	**Sg**	**06 56 30.2**	**-6.0**
CLNS				Smax		06 56 31.8	
	comp=N,17μm,0.7s						
CLNS	**Chul’man**	**2.42**	**101**	*e*P	**Pn**	**06 55 57.5**	**+1.6**
CLNS				*e*S	**Sn**	**06 56 25.1**	**-0.7**
CLNS				pmax	pmax		
	comp=N,1.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,1.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,2.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,54nm,0.3s						
CLNS				pmax	pmax		
	comp=N,12nm,0.2s						
CLNS				pmax	pmax		
	comp=E,36nm,0.3s						
CLNS				smax			
	comp=E,30nm,0.2s						
CLNS				smax			
	comp=N,17nm,0.3s						
CLNS				smax			
	comp=Z,40nm,0.3s						
CLNS				smax			
	comp=N,192nm,0.3s						
CLNS				smax			
	comp=Z,515nm,0.5s						
CLNS				smax			
	comp=E,355nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,400nm,11.1s						
NLYR	**Nelyaty**	**2.81**	**254**	⇑*i*Pn	**Pn**	**06 56 03.4**	**+2.0**
NLYR				*e*Pg	**Pg**	**06 56 07.3**	**-4.3**
NLYR				Pmax		06 56 08.1	
	comp=Z,372nm,0.7s						
NLYR				*e*Sn	**Sn**	**06 56 36.1**	**+0.5**
NLYR				*e*Sg	**Sg**	**06 56 43.2**	**-5.8**
NLYR				Smax		06 56 48.2	
	comp=Z,2μm,1.8s						
NLYR	**Nelyaty**	**2.81**	**254**	⇑*i*P	**Pn**	**06 56 03.2**	**+1.8**
NLYR				*e*		06 56 42.9	
NLYR				pmax	pmax		
	comp=Z,369nm,0.4s						
NLYR				smax			
	comp=N,2μm,1.2s						
ALDR	**Aldan**	**2.86**	**62**	*e*	**Pn**	**06 56 04.2**	**+2.1**
ALDR				*e*Pg	**Pg**	**06 56 05.7**	**-7.0**
ALDR				Pmax		06 56 09.8	
	comp=N,1μm,0.8s						
ALDR				*e*		06 56 36.3	
ALDR				*e*Sg	**Sg**	**06 56 41.6**	**-9.3**
ALDR				Smax		06 56 43.0	
	comp=N,6μm,0.6s						
TUP	**Tupik**	**2.98**	**187**	*e*Pn	**Pn**	**06 56 04.1**	**+0.3**
TUP				⇑*i*Pg	**Pg**	**06 56 09.1**	**-5.9**
TUP				Pmax		06 56 09.7	
	comp=N,462nm,0.8s						
TUP				*e*Sg	**Sg**	**06 56 47.6**	**-7.1**
TUP				Smax		06 56 54.7	
	comp=N,2μm,1.2s						
TUP	**Tupik**	**2.98**	**187**	*e*P	**Pn**	**06 56 03.9**	**+0.1**
TUP				*e*S	**Sn**	**06 56 38.8**	**-1.1**
TUP				pmax	pmax		
	comp=Z,464nm,0.6s						
TUP				smax			
	comp=N,2μm,1.0s						
BOD	**Bodaibo**	**3.56**	**280**	⇓*i*Pn	**Pn**	**06 56 13.0**	**+1.0**
BOD				*e*Pg	**Pg**	**06 56 20.6**	**-6.0**
BOD				Pmax		06 56 22.4	
	comp=N,95nm,0.6s						
BOD				*e*Sg	**Sg**	**06 57 06.3**	**-7.7**
BOD				Smax		06 57 12.1	
	comp=N,767nm,1.1s						
BOD	**Bodaibo**	**3.56**	**280**	*e*P	**Pn**	**06 56 12.4**	**+0.4**
BOD				pmax	pmax		
	comp=Z,95nm,0.6s						
SVKR	**Severomuysk**	**4.06**	**255**	*e*Pn	**Pn**	**06 56 19.0**	**-0.1**
SVKR				*e*Pg	Px	06 56 28.8	
SVKR				Pmax		06 56 36.3	
	comp=Z,119nm,1.2s						
SVKR				*e*Sn	**Sn**	**06 57 02.9**	**-4.4**
SVKR				*e*Sg	Sx	06 57 20.4	
SVKR				Smax		06 57 37.5	
	comp=Z,1μm,1.2s						
SVKR	**Severomuysk**	**4.06**	**255**	*e*P	Px	06 56 30.4	
SVKR				*e*S	**Sn**	**06 57 03.4**	**-3.9**
SVKR				pmax	pmax		
	comp=Z,98nm,0.6s						
SVKR				smax			
	comp=N,917nm,0.9s						
UKT	**Uakit**	**4.29**	**247**	⇑*i*Pn	**Pn**	**06 56 23.0**	**+0.6**
UKT				*e*Pg	Px	06 56 33.4	
UKT				Pmax		06 56 39.0	
	comp=N,61nm,1.2s						
UKT				*e*Sg	Sx	06 57 28.4	
UKT				Smax		06 57 35.8	
	comp=N,382nm,2.3s						
UKT	**Uakit**	**4.29**	**247**	*e*P	Px	06 56 33.1	
UKT				pmax	pmax		
	comp=Z,49nm,0.6s						
YOA	**Uoyan**	**5.02**	**259**	*e*Pg	Px	06 56 47.4	
YOA				Pmax		06 56 59.5	
	comp=Z,341nm,1.2s						
YOA				*e*Sg	Sx	06 57 52.8	
YOA				Smax		06 58 02.8	
	comp=Z,3μm,1.6s						
YOA	**Uoyan**	**5.02**	**259**	*e*P	Px	06 56 46.9	
YOA				pmax	pmax		
	comp=Z,300nm,1.0s						
ZEA	**Zeya**	**5.26**	**131**	*e*	Px	06 56 48.7	
ZEA				*e*		06 57 29.9	
ZEA				*e*Sg	Sx	06 57 55.7	
KMO	**Kumora**	**5.38**	**258**	*e*	**Pn**	**06 56 41.4**	**+3.6**
KMO				*e*Pg	Px	06 56 53.3	
KMO				Pmax		06 56 57.2	
	comp=Z,45nm,1.4s						
KMO				*e*Sg	Sx	06 58 02.9	
KMO				Smax		06 58 13.3	
	comp=Z,565nm,1.5s						
KMO	**Kumora**	**5.38**	**258**	*e*P	**Pn**	**06 56 36.8**	**-1.0**
KMO				pmax	pmax		
	comp=Z,34nm,0.7s						
YLYR	**Ulyunkhan**	**5.82**	**249**	*e*	**Pn**	**06 56 45.4**	**+1.3**
YLYR				*e*Pg	Px	06 57 01.3	
YLYR				Pmax		06 57 19.4	
	comp=Z,33nm,1.9s						
YLYR				*e*Sg	Sx	06 58 16.5	
YLYR				Smax		06 58 34.4	
	comp=Z,393nm,1.3s						
YLYR	**Ulyunkhan**	**5.82**	**249**	*e*P	**Pn**	**06 56 45.3**	**+1.2**
YLYR				*e*S	**Sn**	**06 57 47.1**	**-4.6**
NIZ	**Nizh Angarsk**	**6.30**	**260**	*e*Pg	Px	06 57 09.7	
NIZ				Pmax		06 57 28.3	
	comp=Z,27nm,1.2s						
NIZ				*e*Sg	Sx	06 58 30.8	
NIZ				Smax		06 58 39.7	
	comp=Z,217nm,1.0s						
NIZ	**Nizh Angarsk**	**6.30**	**260**	*e*P	Px	06 57 10.5	
NIZ				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK	**Yakutsk**	**6.56**	**41**	Pn	**Pn**	**06 56 51.0**	**-3.5**
YAK				*e*S	Sx	06 58 26.1	
YAK	**Yakutsk**	**6.56**	**41**	*e*P	**Pn**	**06 56 46.7**	**-7.8**
YAK				*e*S	**Sn**	**06 58 03.1**	**-7.1**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				smax			
	comp=E,44nm,1.0s						
YAK				smax			
	comp=N,48nm,0.9s						
YAK				smax			
	comp=Z,19nm,0.9s						
YAK				smax			
	comp=E,221nm,0.9s						
YAK				smax			
	comp=Z,174nm,0.9s						
YAK				smax			
	comp=N,193nm,0.8s						
YAK				MLR	MLR		
	comp=Z,97nm,18.0s						
CIT	**Chita**	**6.73**	**220**	*e*Pn	**Pn**	**06 56 56.3**	**-0.5**
CIT				*e*Pg	Px	06 57 17.1	
CIT				Pmax		06 57 21.6	
	comp=Z,41nm,1.8s						
CIT				*e*		06 58 11.4	
CIT				*e*Sg	Sx	06 58 43.9	
CIT				Smax		06 59 02.1	
	comp=Z,604nm,1.4s						
CIT	**Chita**	**6.73**	**220**	*e*P	Px	06 57 17.1	
CIT				pmax	pmax		
	comp=Z,37nm,1.5s						
SYVR	**Suvo**	**7.06**	**243**	*e*Pg	Px	06 57 24.4	
SYVR				Pmax		06 57 30.2	
	comp=Z,13nm,0.1s						
SYVR				*e*Sg	Sx	06 58 55.8	
SYVR				Smax		06 59 04.6	
	comp=Z,445nm,1.7s						
OGRR	**Ongureny**	**8.25**	**249**	*e*	rx	06 57 47.5	
OGRR				*e*Sg	Sx	06 59 34.2	
OGRR				Smax		06 59 44.6	
	comp=Z,138nm,1.6s						
KPC	**Khapcheranga**	**9.09**	**216**	*e*	Px	06 57 28.6	
KPC				*e*		06 59 39.4	
KPC				*e*Sg	Sx	06 59 56.4	
KPC				Smax		07 00 07.6	
	comp=Z,238nm,1.3s						

KPC	Khapcheranga	9.09	216	eP	P	06 57 28.8	-1.0
KPC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TRG	Tyrgan	9.37	246	e	rx	06 58 25.5	
TRG				eSg	Sx	07 00 08.5	
TRG				Smax		07 00 19.3	
	comp=Z,121nm,1.8s						
KLR	Kul'dur	10.54	136	eP	P	06 57 48.0	-1.6
ARS	Arshan	11.83	250	e	rx	07 00 34.9	
ARS				eSg	Sx	07 01 24.2	
ARS				Smax		07 01 38.5	
	comp=Z,156nm,1.6s						
SONM	Songino Array	12.83	228	Pn	P	06 58 23.3	+2.6
	comp=Z,0.1nm,0.3s,baz=34,slow=11,SNR=4.8						
SONM				Lg		07 02 00.0	
	comp=Z,0.9nm,0.3s,baz=45,slow=27,SNR=15						
ORL	Orlik	12.85	257	e	Px	06 58 22.5	
ORL				Smax		07 01 16.1	
	comp=Z,63nm,2.2s						
ORL				eSg	Sx	07 01 52.5	
ASAJ	Asahikawa	19.13	124	P	P	06 59 42.5	+1.4
	comp=Z,0.2nm,0.3s,baz=90,slow=32,SNR=2.8						
ZAL	Zalesovo	20.32	276	P	P	06 59 54.3	+0.1
	comp=Z,2.1nm,0.3s,baz=50,slow=9.3,SNR=12						
ZAL	Zalesovo	20.32	276	P	P	06 59 54.3	+0.2
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	Makanchi Array	25.45	262	P	P	07 00 46.0	+1.2
	comp=Z,2.0nm,0.7s,mb3.8,baz=63,slow=8.8,SNR=9.5						
MKAR	Makanchi Array	25.45	262	P	P	07 00 46.0	+1.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	Borovoye Array	28.42	283	P	P	07 01 11.4	-0.5
	comp=Z,0.4nm,0.4s,mb3.4,baz=56,slow=10,SNR=3.6						
AKTO	Aktyubinsk	36.30	287	P	P	07 02 20.4	-0.3
	comp=Z,0.8nm,0.6s,mb3.9,baz=82,slow=14,SNR=3.9						
AKTO	Aktyubinsk	36.30	287	P	P	07 02 20.4	-0.3
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
ARCES	ARCESS Array B	39.64	327	P	P	07 02 49.0	+0.5
	comp=Z,1.9nm,0.7s,mb4.0,baz=56,slow=8.7,SNR=6.1						
ARCES	ARCESS Array B	39.64	327	P	P	07 02 49.0	+0.5
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	41.49	40	P	P	07 03 02.9	-0.9
	comp=Z,0.5nm,0.6s,mb3.3,baz=290,slow=3.9,SNR=8.8						
ILAR	Eielson Array	41.49	40	P	P	07 03 02.9	-0.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FINES	FINESS Array B	44.21	317	P	P	07 03 25.0	-0.8
	comp=Z,3.6nm,0.7s,mb4.2,baz=49,slow=10,SNR=17						
FINES	FINESS Array B	44.21	317	P	P	07 03 25.0	-0.8
FINES				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NB2	NORSAR Subarra	49.69	323	P	P	07 04 07.5	-1.4
	comp=Z,1.1nm,0.7s,mb4.0,baz=57,slow=5.6						
NOA	NORSAR Array B	49.69	323	P	P	07 04 07.8	-1.1
	comp=Z,1.9nm,0.6s,mb4.3,baz=44,slow=8.0,SNR=6.6						
NOA	NORSAR Array B	49.69	323	P	P	07 04 07.8	-1.1
NOA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
NAO	NORSAR Subarra	49.98	323	P	P	07 04 07.5	-3.6
	comp=Z,1.1nm,0.7s,mb4.0						
KHC	Kasperske Hory	58.01	312	eP	P	07 05 09.5	-0.8
GERES	GERESS Array B	58.18	312	P	P	07 05 10.7	-0.8
	comp=Z,1.1nm,0.8s,mb4.0,baz=53,slow=6.7,SNR=9.5						
GERES	GERESS Array B	58.18	312	P	P	07 05 10.7	-0.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						

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*BYKL **19** 06:56:34.5±0.5, 57.40N×120.67E*
*MOS **19** 06:56:35.2±1.3, 57.54N×120.42E, h10^{km}, mb3.9/7, Error ellipse: s-maj=45.8km s-min=34.2km az=127.4*
*IDC **19** 06:56:35.6±3.3, 57.49N×120.47E, mb3.7/6, mb1 3.9/6, mb1mx3.7/19, mbtmp3.7/6, Error ellipse: s-maj=80.8km s-min=29.7km az=157.0*
ISC 19 06:56:33.0±0.6, **57.17N**±0.05×**120.74E**±0.06, **h10^{km}, n30,** σ**1^{s}02**/29, **mb3.7**/5, **Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	Chara	1.38	260	ePg	Pg	06 57 00.7	+0.1
CRS				Pmax		06 57 04.9	
	470nm,1.5s						
CRS				eSg	Sg	06 57 18.2	-0.9
CRS				Smax		06 57 21.0	
	964nm,1.0s						
NRGR	Nerungri	2.24	102	eP	Pn	06 57 18.6	+7.8
NRGR				S	Sn	06 57 46.7	+8.0
CLNS	Chul'man	2.29	97	ePg	Pg	06 57 18.1	-0.8
CLNS				Pmax		06 57 20.7	
	536nm,0.4s						
CLNS				eSg	Sg	06 57 48.9	-0.6
CLNS				Smax		06 57 53.5	
	3µm,0.4s						
CLNS	Chul'man	2.29	97	eP	Pn	06 57 17.8	+6.3
CLNS				e		06 57 47.4	
CLNS				pmax	pmax		
	comp=Z,84nm,0.5s						
CLNS				pmax	pmax		
	comp=N,56nm,0.3s						
CLNS				pmax	pmax		
	comp=E,33nm,0.3s						
CLNS				smax			
	comp=E,246nm,0.3s						
CLNS				smax			
	comp=Z,206nm,0.4s						
CLNS				smax			
	comp=N,847nm,0.7s						
CLNS				MLR	MLR		
	comp=Z,200nm,12.0s						
TUP	Tupik	2.79	190	ePg	Pg	06 57 28.5	-0.2
TUP				Pmax		06 57 29.2	
	comp=Z,413nm,1.2s						
TUP				eSg	Sg	06 58 06.5	+0.6
TUP				Smax		06 58 08.6	
	comp=Z,1µm,0.9s						
NLYR	Nelyaty	2.85	258	ePg	Pg	06 57 26.8	-3.2
NLYR				Pmax		06 57 27.3	
	comp=Z,313nm,0.6s						
NLYR				eSg	Sg	06 58 02.5	-5.6
NLYR				Smax		06 58 07.8	
	comp=Z,931nm,1.2s						
ALDR	Aldan	2.88	58	eSg	Sg	06 58 01.8	-7.1
ALDR				Smax		06 58 02.6	
	comp=Z,410nm,0.2s						
BOD	Bodaibo	3.70	283	ePg	Pg	06 57 40.4	-6.4
BOD				Pmax		06 57 41.8	
	comp=Z,155nm,0.7s						
BOD				eSg	Sg	06 58 25.9	-10
BOD				Smax		06 58 33.5	
	comp=Z,491nm,1.0s						
SVKR	Severomuysk	4.11	258	eSg	Sg	06 58 42.9	-6.8
SVKR				Smax		06 58 57.2	
	comp=Z,650nm,1.0s						
UKT	Uakit	4.31	250	ePg	Px	06 57 53.2	
UKT				Pmax		06 58 02.9	
	comp=Z,145nm,1.8s						
UKT				eSg	Sx	06 58 48.2	
UKT				Smax		06 58 50.4	
	comp=Z,199nm,0.6s						
YOA	Uoyan	5.09	262	eSg	Sx	06 59 09.0	
YOA				Smax		06 59 24.3	
	comp=Z,2µm,1.7s						
KMO	Kumora	5.44	260	eSg	Sx	06 59 23.4	
KMO				Smax		06 59 31.6	
	comp=Z,292nm,1.0s						
YLYR	Ulyunkhan	5.84	251	eSg	Sx	06 59 35.9	
YLYR				Smax		06 59 39.6	
	comp=Z,161nm,1.8s						
NIZ	Nizh Angarsk	6.37	262	eSg	Sx	06 59 50.8	
NIZ				Smax		07 00 01.7	
	comp=Z,159nm,1.1s						
CIT	Chita	6.64	222	eSg	Sx	07 00 03.5	
CIT				Smax		07 00 21.7	
	comp=Z,356nm,1.5s						
SONM	Songino Array	12.77	229	Lg		07 03 23.1	
	comp=Z,0.6nm,0.3s,baz=45,slow=27,SNR=2.7						
ZAL	Zalesovo	20.44	276	P	P	07 01 13.4	+0.6
	comp=Z,1.1nm,0.4s,baz=43,slow=12,SNR=4.3						
ZAL	Zalesovo	20.44	276	P	P	07 01 13.5	+0.6
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NVS	Novosibirsk	20.93	280	eP	P	07 01 19.4	+1.4
NVS				pmax	pmax		
	comp=N,10.0nm,1.7s						
NVS				pmax	pmax		
	comp=Z,14nm,1.7s						
NVS				pmax	pmax		
	comp=E,11nm,1.4s						
MKAR	Makanchi Array	25.52	263	P	P	07 02 04.2	+1.2
	comp=E,1.3nm,0.7s,mb3.6,baz=59,slow=9.1,SNR=3.8						
MKAR	Makanchi Array	25.52	263	P	P	07 02 04.2	+1.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	Eielson Array	41.58	40	P	P	07 04 23.4	+1.6
	comp=Z,0.5nm,0.7s,mb3.3,baz=296,slow=5.1,SNR=4.3						
ILAR	Eielson Array	41.58	40	P	P	07 04 23.4	+1.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	44.43	317	P	P	07 04 44.6	-0.5
	comp=Z,2.3nm,0.8s,mb4.0,baz=50,slow=9.7,SNR=7.7						
FINES	FINESS Array B	44.43	317	P	P	07 04 44.6	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NB2	NORSAR Subarra	49.91	323	P	P	07 05 26.9	-1.2
	comp=Z,0.9nm,0.4s,mb4.2,baz=44,slow=7.9						
NOA	NORSAR Array B	49.91	323	P	P	07 05 27.6	-0.5
	comp=Z,1.0nm,0.6s,mb4.0,baz=42,slow=7.7,SNR=3.9						
NOA	NORSAR Array B	49.91	323	P	P	07 05 27.6	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	58.39	312	P	P	07 06 30.1	-0.4
	comp=Z,0.5nm,0.6s,mb3.7,baz=45,slow=5.7,SNR=3.9						
GERES	GERESS Array B	58.39	312	P	P	07 06 30.1	-0.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						

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*NEIC **19** 07:02:16.5, 36.66S×71.54W, h156^{km}, MD3.2(GUC), After GUC.*
GUC 19 07:02:16.5±0.7, **36.66S×71.54W, h156^{km}**±4^{km}**, MD3.2, ML3.7, 3C-5D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	0.43	278	⇑iP	P	07 02 38.5	-0.2
CCHI				iS	S	07 02 54.8	-0.9
CCHI				AMP		07 02 56.0	
	comp=N,499nm,0.9s						
CCHI				AMP		07 02 58.3	
	comp=N,898nm,0.7s						
LNCH	Linares	0.81	357	⇑iP	P	07 02 48.6	+7.9
LNCH				iS	S	07 03 06.9	+7.6
LNCH				AMP		07 03 07.7	
	comp=N,2µm,0.7s						
TALC	Talca	1.26	357	iP	P	07 02 44.6	+0.1
TALC				iS	S	07 03 05.1	-0.9
TALC				AMP		07 03 06.3	
	comp=E,3µm,0.1s						
NICH	Los Niches	1.68	9	iP	P	07 02 49.1	+0.4
NICH				iS	S	07 03 13.1	-0.5
SFDO	San Fernando	2.09	12	⇑iP	P	07 02 53.5	+0.1
SFDO				iS	S	07 03 21.7	-0.1
CICH	Cipreses	2.51	22	⇓iP	P	07 02 58.8	+0.2
CICH				iS	S	07 03 31.4	+0.5
CACH	El Canelo	2.66	17	⇓iP	P	07 03 00.3	-0.1
LNV	Longovilo	2.70	2	iP	P	07 03 01.1	+0.1
LNV				iS	S	07 03 34.8	-0.3
CHCH	Chadas Angostu	2.82	15	⇓iP	P	07 03 02.4	-0.1
CHCH				iS	S	07 03 37.3	-0.4
ANTU	Antumapu	3.18	14	AMP		07 03 51.6	
	comp=N,128nm,0.5s						
LCCH	Las Cruces	3.18	360	⇓iP	P	07 03 06.9	-0.2
LCCH				iS	S	07 03 45.4	-0.5
RCDM	Rinconada Maip	3.22	11	⇓iP	P	07 03 06.9	-0.8
RCDM				iS	S	07 03 45.9	-1.0
RCDM				AMP		07 03 49.4	
	comp=E,278nm,0.1s						
FCH	Farellones	3.48	18	AMP		07 03 54.4	
	comp=N,126nm,0.3s						
PLCA	Paso Flores	4.14	169	eP	P	07 03 15.4	-4.1

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*NAO **19** 07:13:07.7±1.0, 64.60N×18.89E, ML2.1*
*BER **19** 07:13:09.9±4.1, 64.61N×18.96E, h0^{km}±14^{km}, MD2.8, ML1.9, ML2.1(NAO)*
HEL 19 07:13:12.0±0.1, **64.62N×18.86E, h25^{km}**±1^{km}**, ML2.1, ML1.7**(UPP)**, ML1.9**(BER)**, 4C-2D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BREU	Bredtraesk	0.74	190	⇑iP	Pb	07 13 25.1	-1.1
BREU				iS	Sb	07 13 34.7	-1.2
LILU	Lilltraesk	0.79	32	⇑iP	Pb	07 13 26.6	-0.4
LILU				iS	Sb	07 13 37.2	-0.1
UMAU	Umeaa	1.08	132	⇓eP	Pn	07 13 30.9	-0.9
UMAU				eS	Sb	07 13 44.7	-1.0
BURU	Burvik	1.08	91	⇓eP	Pn	07 13 31.2	-0.6
BURU				eS	Sb	07 13 45.5	-0.3
HUSU	Husum	1.29	173	⇑eP	Pn	07 13 34.4	-0.3
HUSU				eS	Sn	07 13 50.6	-0.7
SJUU	Sjulsmark	1.47	51	eP	Pn	07 13 37.3	+0.1
SJUU				eS	Sn	07 13 57.2	+1.4
SOLU	Sollefteaa	1.55	208	eP	Pn	07 13 38.6	+0.2
SOLU				eS	Sn	07 13 57.9	+0.1
HEMU	Hemsoen	1.98	191	eP	Pn	07 13 44.4	-0.3
NOD	Norderasen	2.12	238	eP	Pn	07 13 47.1	+0.5
VAF	Ylistaro	2.31	131	eP	Pn	07 13 49.5	+0.1
VAF				eS	Sn	07 14 18.9	+1.6
VAF				MSG		07 14 25.6	
	comp=Z,12nm,0.3s						
ERTU	Ertsjaerv	2.39	34	⇑eP	Pn	07 13 48.4	-2.0
MOR8	Moi Rana	2.42	312	eP	Pn	07 13 50.2	-0.7
MOR8				eS	Sn	07 14 18.9	-1.1
MOR8				AML	AML	07 14 30.4	
	comp=Z,11nm,0.2s						
DUNU	Dundret	2.61	15	eP	Pn	07 13 52.6	-1.0
HASU	Hassela	2.67	203	eP	Pn	07 13 54.1	-0.4
NSS	Namsos	2.98	271	eP	Pn	07 13 56.2	-2.6
NSS				AML	AML	07 14 46.9	
	comp=Z,6.3nm,0.2s						
STOK	Stokkvaagen	2.98	308	eP	Pn	07 13 59.0	+0.1
STOK				eS	Sn	07 14 32.9	-1.4
STOK				AML	AML	07 14 51.5	
	comp=Z,13nm,0.8s						
OUL	Oulu	3.04	78	eP	Pn	07 13 58.2	-1.5
OUL				eS	Sn	07 14 34.4	-1.3
OUL				MSG		07 14 47.9	
	comp=Z,2.9nm,0.2s						
MELSS	Ber_school_2	3.10	319	eS	Sn	07 14 34.7	-2.5
MELSS				eS	Sn	07 14 36.2	-0.9
ROTU	Roteberg	3.50	205	eP	Pn	07 14 06.0	-0.2
KEF	Keuruu	3.65	130	eP	Pn	07 14 07.2	-1.2
KEF				MSG		07 15 05.6	
	comp=Z,4.7nm,0.2s						
SUF	Sumiainen	3.77	117	eP	Pn	07 14 08.6	-1.4
SUF				eS	Sn	07 14 50.9	-3.2
SUF				MSG		07 15 09.1	
	comp=Z,1.9nm,0.2s						
KJN	Kajaani	3.88	94	eP	Pn	07 14 10.2	-1.5
KJN				eS	Sn	07 14 56.0	-1.1
KJN				MSG		07 15 12.9	
	comp=Z,4.5nm,0.2s						
LOF	Lofoten	4.13	331	eS	Sn	07 14 59.7	-3.5
LOF				AML	AML	07 15 28.7	
	comp=Z,6.5nm,0.6s						
SGF	Sodankyl	4.22	44	eS	Sn	07 15 00.4	-5.2
SGF				eSB	Sb	07 15 18.2	+1.8
SGF				MSG		07 15 23.0	
	comp=Z,2.9nm,0.2s						
KIF	Kilpisjarvi	4.47	9	eP	Pn	07 14 18.8	-1.3
KIF				eS	Sn	07 15 08.3	-3.7
AAL	Aland	4.49	173	eP	Pn	07 14 18.9	-1.3
FIA0	FINESS Array S	4.58	131	Pn	Pn	07 14 17.4	-4.2
	baz=321,slow=12						
FIA0				Pg	Pn	07 14 30.7	+9.2
	baz=321,slow=14						
FIA0				Sn	Sn	07 15 12.2	-2.3
	baz=324,slow=18						
FIA0				Lg		07 15 30.1	
	baz=322,slow=28						
FIA0	FINESS Array S	4.58	131	eP	Pn	07 14 21.9	+0.4
FIA0				eS	Sn	07 15 11.4	-3.2
FIA0				MSG		07 15 31.4	
	comp=Z,2.9nm,0.2s						
KTK1	Kautokeino	4.74	19	eP	Pn	07 14 20.8	-3.0
KU4	Liikasenvaara	4.79	64	eS	Sn	07 15 14.7	-5.4
NRTU	Norrtaelje	4.96	181	eP	Pn	07 14 25.2	-1.8
NB2	NORSAR Subarra	5.02	228	eP	Pn	07 14 23.1	-4.7
NB2				eS	Sn	07 15 20.4	-5.3
NB2				e		07 15 45.7	
NB2	NORSAR Subarra	5.02	228	Pn	Pn	07 14 23.1	-4.7
NB2				Sn	Sn	07 15 20.4	-5.3
NB2				Lg		07 15 45.7	
	baz=31,slow=28						
HFS	Hagfors	5.10	210	Pn	Pn	07 14 25.1	-3.8
	baz=32,slow=12						
HFS				Sn	Sn	07 15 23.1	-4.7
	baz=28,slow=22						
HFS				Lg		07 15 44.6	
	baz=30,slow=37						
HFS	Hagfors	5.10	210	eP	Pn	07 14 25.1	-3.8
HFS				eS	Sn	07 15 23.1	-4.7
HFS				eSB	Sb	07 15 44.6	+2.7
ARA0	ARCESS Array S	5.58	25	Pn	Pn	07 14 31.7	-3.9
	baz=207,slow=14						
ARA0				Sn	Sn	07 15 31.1	-8.6
	baz=207,slow=28						
ARA0				Lg		07 15 59.7	
	baz=201,slow=37						
ARA0	ARCESS Array S	5.58	25	eP	Pn	07 14 31.7	-3.9
ARA0				eS	Sn	07 15 31.1	-8.6
ARA0				e		07 15 59.7	
KEV	Kevo	6.05	28	eP	Pn	07 14 38.5	-3.8
KEV				eS	Sn	07 15 44.1	-7.4
KEV				MSG		07 16 19.7	
	comp=Z,0.8nm,0.2s						
SPA0	Spitsbergen Ar	13.65	358	P	P	07 16 23.2	-2.8
	baz=161,slow=18						
SPA0	Spitsbergen Ar	13.65	358	eP	P	07 16 23.2	-2.8

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*ISK **19** 07:19:00.4, 38.22N×26.57E, h11^{km}, MD2.8*
*ATH **19** 07:19:01.1, 38.19N×26.55E, h28^{km}±1^{km}, MD3.1/3*
*CSEM **19** 07:19:01.0±0.2, 38.24N×26.61E, h12^{km}, MD2.8, Error ellipse: s-maj=5.4km s-min=3.8km az=100.0*
ISC 19 07:19:00.6±0.8, **38.23N**±0.03×**26.57E**±0.05, **h5^{km}**±5^{km}, **n13,** σ**0^{s}71**/22, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.13	10	iP	Pg	07 19 03.7	+0.3
URLA				iS	Sg	07 19 06.4	+1.1
SMG	Samos	0.56	158	ePN	Pg	07 19 12.1	+0.1
SMG				eSN	Sg	07 19 20.1	+0.6
IZM	Izmir	0.57	73	PG	Pg	07 19 12.3	+0.2
IZM				SG	Sg	07 19 20.5	+0.7
KDAG	Bornova	0.58	73	iP	Pg	07 19 11.2	-1.0
KDAG				iS	Sg	07 19 19.1	-0.8
PRK	Paraskevi	1.04	347	ePN	Pn	07 19 21.8	+0.1
PRK				eSN	Sn	07 19 36.9	+0.2
AKS	Akhisar	1.17	56	ePN	Pn	07 19 23.0	-0.7
AKS				eSN	Sn	07 19 40.9	+0.7
AYDN	Tasoluk	1.19	118	iP	Pb	07 19 23.9	+0.7
AYDN				iS	Sb	07 19 38.7	0.0
BODT	Bodrum	1.31	153	ePN	Pn	07 19 25.8	+0.2
MLSB	Milas	1.34	134	ePN	Pn	07 19 25.4	-0.7
APE	Apeiranthos	1.42	216	ePN	Pn	07 19 26.6	-0.6
MANT	Manisa	1.59	80	iP	Pn	07 19 30.7	+1.1
MANT				iS	Sb	07 19 50.8	+0.4
YER	Yerkesik	1.75	128	ePN	Pn	07 19 30.8	-1.1
BTOK	Tokmak	1.91	36	iP	Pg	07 19 38.7	-0.1
BTOK				iS	Sg	07 20 02.6	-1.6

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*NDI **19** 07:26:40.5±3.7, 34.45N×73.05E, h10^{km}, MD3.5, ML3.3*
*NNC **19** 07:26:53.0±0.9, 34.99N×72.98E, mpv3.4, Error ellipse: s-maj=20.5km s-min=5.5km az=92.0*
ISC 19 07:26:44.7±0.8, **35.02N**±0.09×**74.5E**±0.2, **h10^{km}, n14,** σ**1^{s}20**/19, **2C-2D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	Dalhousie	2.75	154	eP	Pn	07 27 30.0	+0.3
DLH				eS	Sn	07 28 07.0	+3.7
THN	Thein Dam	2.77	159	eP	Pn	07 27 29.5	-0.4
THN				eS	Sn	07 28 04.6	+0.9
SDNR	Sundarnagar	4.07	149	eP	Pn	07 27 46.8	-1.6
SDNR				ex	Sn	07 28 31.6	-5.0
KLP	Kalpa	4.67	137	eP	Pn	07 27 58.3	+1.3
KLP				eS	Sn	07 28 53.8	+1.8
KLP				AML	AML	07 29 14.4	
	comp=E,67nm,0.5s						
KLP				AML	AML	07 29 15.1	
	comp=N,49nm,0.5s						
KUDL	Kundal	7.06	166	eS	Sn	07 29 34.7	-17
KK31	Karatay Array	8.65	340	⇑Pn	P	07 28 57.6	+4.7
	comp=N,0.7nm,0.3s,baz=158,slow=12,SNR=23						
KK31				⇓Sn	Sn	07 30 36.1	+4.5
	comp=N,0.6nm,0.3s,baz=174,slow=24,SNR=7.2						
KOLN	Koldanda	10.60	131	eP	P	07 29 17.5	-2.2
GKN	Gorkha	11.10	126	eP	P	07 29 26.5	-0.2
KKN	Kakani	11.67	125	eP	P	07 29 34.2	-0.2
PKI	Pulchoki	11.90	126	eP	P	07 29 36.2	-1.3
	comp=N,5.0nm,0.3s						
GUN	Gumba	12.00	123	eP	P	07 29 39.6	+0.7
JIRN	Jiri	12.37	123	eP	P	07 29 43.8	-0.1
	comp=N,3.9nm,0.3s						
AB31	Akbulak array	17.82	327	⇓P	P	07 30 54.6	+0.3
	comp=N,1.1nm,0.9s,baz=140,slow=12,SNR=9.2						
AKTO	Aktyubinsk	19.54	327	⇑P	P	07 31 14.7	-0.3
	comp=N,0.2nm,0.7s						

BJI 19 07:31:54.1, 32.25N×101.64E, h13^{km}, ML3.5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	Guiyang	7.25	142	ePG	Pg	07 33 58.8	-20

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*CSEM **19** 07:37:28.7±0.2, 35.33N×3.91W, h35^{km}, MD2.7, Error ellipse: s-maj=6.4km s-min=4.4km az=55.0*
*MDD **19** 07:37:29.8±0.4, 35.53N×3.85W, mbLg2.1/3, Error ellipse: s-maj=5.2km s-min=3.3km az=82.0, PRXIMO*
*CNRM **19** 07:37:29.2, 35.49N×3.93W, h30^{km}, MD2.7*
ISC 19 07:37:29.2±0.5, **35.49N**±0.05×**3.90W**±0.04, **h20^{km}**±11^{km}, **n18,** σ**0^{s}95**/34, **Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	Palemas	0.26	188	iP	Pb	07 37 35.5	+0.2
MPAL				iS	Sb	07 37 39.5	+0.1
TOU	Touzarine	0.54	167	iP	Pb	07 37 41.0	+1.2
TOU				iS	Sb	07 37 48.0	+1.0
EMEL	Melilla	0.79	103	P	Pb	07 37 43.8	-0.4
	109nm,0.2s,SNR=7.9						
EMEL				S	Sb	07 37 53.8	-0.6
	193nm,0.2s,SNR=7.9						
EMLI	Melilla	0.80	103	P	Pb	07 37 43.8	-0.5
	109nm,0.2s,SNR=7.9						
EMLI				S	Sb	07 37 53.8	-0.8
	193nm,0.2s,SNR=7.9						
ZAI	Zaio	1.07	118	eP	Pb	07 37 46.0	-3.0
ZAI				iS	Sb	07 38 02.0	-0.6
EMIJ	Mijas	1.29	327	P	Pn	07 37 53.1	+0.7
	0.9nm,0.1s,SNR=7.9						
EMIJ				S	Sb	07 38 08.9	+0.1
	3.1nm,0.1s,SNR=7.9						
EMIJ	Mijas	1.29	327	P	Pn	07 37 53.1	+0.7
	0.9nm,0.1s,SNR=7.9						
EMIJ				S	Sb	07 38 08.9	+0.1
	3.1nm,0.1s,SNR=7.9						
EBER	Berja	1.63	30	P	Pn	07 37 57.8	+0.6
	0.5nm,0.2s,SNR=7.9						
EBER				S	Sn	07 38 18.5	+0.7
	2.5nm,0.2s,SNR=7.9						
EBER	Berja	1.63	30	P	Pn	07 37 57.8	+0.6
	0.5nm,0.2s,SNR=7.9						
EBER				S	Sn	07 38 18.5	+0.7
	2.5nm,0.2s,SNR=7.9						
EQUE	Quentar	1.76	12	P	Pn	07 38 00.0	+1.0
	0.4nm,0.2s,SNR=7.9						
EQUE				S	Sn	07 38 22.4	+1.3
	1.4nm,0.3s,SNR=7.9						
EADA	Adamuz	2.73	349	P	Pn	07 38 13.5	+0.5
	0.1nm,0.1s,SNR=4.0						
EADA				S	Sn	07 38 46.5	+0.7
	0.4nm,0.2s,SNR=4.0						
EADA	Adamuz	2.73	349	P	Pn	07 38 13.5	+0.5
	0.1nm,0.1s,SNR=4.0						

EADA				S	Sn	07 38 46.5	+0.7
	0.4nm,0.2s,SNR=4.0						
ECAB	**El Cabril**	2.86	335	S	Sn	07 38 47.5	-1.6
	0.3nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	2.86	335	S	Sn	07 38 47.5	-1.6
	0.3nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	3.19	316	P	Pn	07 38 19.8	+0.3
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	07 38 55.6	-1.8
	0.3nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	3.19	316	P	Pn	07 38 19.8	+0.3
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	07 38 55.6	-1.8
	0.3nm,0.2s,SNR=7.9						
EGRO	**El Granado**	3.54	306	P	Pn	07 38 24.7	+0.2
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	07 39 04.7	-1.5
	0.5nm,0.2s,SNR=7.9						
EGRO	**El Granado**	3.54	306	P	Pn	07 38 24.7	+0.2
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	07 39 04.7	-1.5
	0.5nm,0.2s,SNR=7.9						

JMA 19 07:51:06.2±0.2**, 38.21N**×**144.64E, h47**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	2.48	291	P	P	07 51 45.3	+0.2
MIYJ	**Miyakonagasawa**	2.59	303	P	P	07 51 46.6	0.0
MIYJ				*e*S	S	07 52 16.9	-0.2
JIO	**Ouri**	2.60	276	P	P	07 51 47.5	+0.7
JIO				*e*S	S	07 52 17.4	+0.1
JMK	**Ichinoseki**	2.78	287	P	P	07 51 50.2	+0.8
JMK				*e*S	S	07 52 22.4	+0.5
JOT	**Ohata**	4.21	320	*e*S	S	07 52 55.2	-2.8
JCH	**Churui**	4.51	348	P	P	07 52 11.4	-2.4
JCH				*e*S	S	07 53 00.9	-4.6
JKB	**Kayabe**	4.60	324	*e*S	S	07 53 05.0	-2.9
JRY	**Ryogami san**	5.08	246	P	P	07 52 20.8	-1.0
JRY				*e*S	S	07 53 16.4	-3.6
NEM2	**Nemuro 2**	5.22	9	P	P	07 52 19.3	-4.4
NEM2				*e*S	S	07 53 13.9	-9.5
JTKR	**Abashiri--Toko**	5.78	355	*e*S	S	07 53 30.2	-7.3

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*NIED **19** 08:14:00, 38.20N×144.60E, h5^{km}, Mw4.0 Best double couple: M$_0$1.23×10^{15} NP1:φ$_s$210°, δ66°, λ-95°. NP2:φ$_s$43°, δ25°, λ-78°.*

*IDC **19** 08:14:09.1±1.0, 38.03N×144.99E, mb3.8/10, mb1 4.0/12, mb1mx3.9/23, mbtmp3.8/12, ML3.7/2, MS3.4/6, Ms1 3.4/6, ms1mx3.1/30, Error ellipse: s-maj=25.5km s-min=23.6km az=103.0*

*NEIC **19** 08:14:10.5±0.4, 37.99N×144.98E, h10^{km}, mb4.2/3, Error ellipse: s-maj=11.2km s-min=8.5km az=155.0*

*MOS **19** 08:14:12.5±1.1, 38.07N×144.83E, h33^{km}, mb4.3/4, Error ellipse: s-maj=15.5km s-min=12.7km az=128.5*

*JMA **19** 08:14:14.7±0.1, 38.18N×144.63E, h57^{km}, M4.1*

ISC 19 08:14:12.8±1.7**, 38.28N**±0.04×**144.69E**±0.05**, h26**^{km}±13^{km}**, n51, σ1^{s}26**/57**, mb3.9**/13**, MS3.6**/4**, 3C-3D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	2.50	290	P	Pn	08 14 54.0	+1.4
MIYJ	**Miyakonagasawa**	2.59	301	P	Pn	08 14 55.2	+1.3
MIYJ				S	Sn	08 15 25.5	+0.6
JIO	**Ouri**	2.63	275	P	Pn	08 14 55.3	+0.7
JIO				S	Sn	08 15 25.7	-0.3
JMK	**Ichinoseki**	2.80	285	P	Pn	08 14 58.2	+1.2
JMK				*e*S	Sn	08 15 31.0	+0.7
JOT	**Ohata**	4.18	319	*e*S	Sn	08 16 05.0	-0.2
JCH	**Churui**	4.45	347	P	Pn	08 15 19.9	-0.5
JCH				*e*S	Sn	08 16 10.1	-1.9
JKB	**Kayabe**	4.57	323	P	Pn	08 15 23.9	+1.8
JKB				*e*S	Sn	08 16 13.8	-1.2
NEM2	**Nemuro 2**	5.14	9	P	Pn	08 15 27.6	-2.6
NEM2				*e*S	Sn	08 16 24.0	-5.5
JRY	**Ryogami san**	5.14	246	P	Pn	08 15 28.9	-1.3
JRY				*e*S	Sn	08 16 24.3	-5.2
JOD2	**Odawara 2**	5.41	238	P	Pn	08 15 33.3	-0.7
JOD2				*e*S	Sn	08 16 29.7	-6.5
MJAR	**Matsushiro Arr**	5.44	253	Pn	Pn	08 15 33.3	-1.1
	3.4nm,0.3s,baz=333,slow=15,SNR=14						
MJAR				Sn	Sn	08 16 35.3	-1.7
	1.2nm,0.3s,baz=137,slow=13,SNR=3.6						
MJAR				LR	LR	08 18 09.3	
	comp=Z,132nm,18.9s,baz=80,slow=43						
MAJO	**Matsushiro**	5.44	253	*e*Pn	Pn	08 15 33.0	-1.5
	17nm,0.6s						
MAJO	**Matsushiro**	5.44	253	*e*P	Pn	08 15 33.0	-1.4
MAJO				pmax	pmax		
	comp=Z,17nm,0.6s						
MAT	**Matsushiro**	5.44	253	P	Pn	08 15 34.7	+0.3
MAT				S	Sn	08 16 35.8	-1.2
MAT	**Matsushiro**	5.44	253	*e*P	Pn	08 15 35.0	+0.6
	comp=Z,12nm,0.8s						
MAT				*e*S	Sn	08 16 36.0	-1.0
MAT	**Matsushiro**	5.44	253	*e*P	Pn	08 15 35.0	+0.6
MAT				*e*S	Sn	08 16 36.0	-1.0
MAT				pmax	pmax		
	comp=Z,12nm,0.8s						
JTKR	**Abashiri--Toko**	5.72	354	P	Pn	08 15 37.4	-0.9
JTKR				*e*S	Sn	08 16 40.5	-3.4
JHR	**Hokuryu**	5.90	339	P	Pn	08 15 42.9	+2.0
JHR				*e*S	Sn	08 16 48.2	-0.3
ASAJ	**Asahikawa**	6.04	346	Pn	Pn	08 15 42.8	-0.1
	comp=Z,1.5nm,0.3s,baz=290,slow=30,SNR=20						
ASAJ				Sn	Sn	08 16 49.0	-2.9
	comp=Z,0.8nm,0.3s,baz=216,slow=24,SNR=4.6						
ASAJ				LR	LR	08 18 26.1	
	comp=Z,82nm,19.8s,baz=16,slow=40						
ASAJ	**Asahikawa**	6.04	346	P	Pn	08 15 42.8	-0.1
ASAJ						08 16 49.1	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				smax			
	comp=N,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,82nm,19.8s						
JHJ	**Hachijo jima 2**	6.51	219	Sn	Sn	08 16 53.7	-10
	comp=Z,5.8nm,0.3s,baz=270,slow=19,SNR=3.0						
BOD	**Bodaibo**	27.95	324	*e*P	P	08 20 02.8	0.0
SONM	**Songino Array**	29.30	301	P	P	08 20 16.9	+1.7
	comp=Z,0.3nm,0.4s,mb3.4,baz=117,slow=6.4,SNR=2.9						
SONM				LR	LR	08 32 24.1	
	comp=Z,61nm,18.7s,MS3.2,baz=82,slow=37						
ZAL	**Zalesovo**	43.03	311	LR	LR	08 40 52.8	
	comp=Z,49nm,18.5s,MS3.4,baz=40,slow=37						
MKAR	**Makanchi Array**	45.67	302	P	P	08 22 34.2	+1.3
	comp=Z,1.0nm,0.8s,mb3.8,baz=86,slow=9.9,SNR=5.6						
MKAR	**Makanchi Array**	45.67	302	P	P	08 22 34.2	+1.3
ILAR	**Eielson Array**	47.05	33	P	P	08 22 42.4	-1.1
	comp=Z,0.8nm,0.9s,mb3.6,baz=272,slow=7.1,SNR=5.2						
KURK	**Kurchatov**	47.22	308	*e*P	P	08 22 46.3	+1.1
	comp=Z,1.6nm,0.8s,mb4.0						
KURK	**Kurchatov**	47.22	308	*e*P	P	08 22 46.3	+1.2
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	51.37	313	*e*P	P	08 23 17.5	+0.6
	comp=Z,1.1nm,0.8s,mb3.8						
CHKZ	**Chkalovo**	51.37	313	*e*P	P	08 23 17.5	+0.5
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
BVAR	**Borovoye Array**	51.66	312	P	P	08 23 19.7	+0.5
	comp=Z,1.0nm,0.7s,mb3.9,baz=101,slow=7.6,SNR=6.3						
WRA	**Warramunga Arr**	58.72	191	P	P	08 24 07.0	-3.8
	comp=Z,1.4nm,0.7s,mb4.1,baz=9.5,slow=7.3,SNR=12						
AKTO	**Aktyubinsk**	59.77	312	P	P	08 24 18.6	+0.9
	comp=Z,0.4nm,0.4s,mb3.9,baz=74,slow=9.9,SNR=3.7						
FINES	**FINESS Array B**	68.91	333	P	P	08 25 16.2	-0.7
	comp=Z,2.0nm,0.8s,mb4.1,baz=127,slow=9.5,SNR=3.9						
FINES				LR	LR	08 56 25.8	
	comp=Z,55nm,20.3s,MS3.8,baz=24,slow=37						
STKA	**Stephens Creek**	69.85	183	*e*P	P	08 25 19.7	-3.6
STKA				*e*pP	pP	08 25 35.7	+4.3
AKASG	**Malin Array Be**	74.88	324	P	P	08 25 53.2	+0.6
	comp=Z,0.7nm,0.5s,mb3.9,baz=45,slow=5.7,SNR=6.2						
AKASG	**Malin Array Be**	74.88	324	P	P	08 25 53.2	+0.6
PDAR	**Pinedale Array**	74.93	47	P	P	08 25 52.9	-0.2
	comp=Z,0.5nm,0.6s,mb3.6,baz=276,slow=2.3,SNR=4.9						
CLL	**Collm**	81.28	332	⇓P	P	08 26 29.5	+1.8
	comp=Z,logA/T=0.9,mb4.6						
CLL	**Collm**	81.28	332	⇓*i*P	P	08 26 29.5	+1.8
	comp=Z,8.0nm,1.0s,mb4.6						
CLL	**Collm**	81.28	332	⇓*i*P	P	08 26 29.5	+1.8
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
GERES	**GERESS Array B**	82.99	330	P	P	08 26 38.1	+1.5
	comp=Z,0.1nm,0.3s,mb3.3,baz=27,slow=6.0,SNR=4.1						
GERES				LR	LR	09 04 30.6	
	comp=Z,52nm,19.0s,MS3.9,baz=316,slow=36						
VNA2	**Neumayer--Watz**	144.22	195	*e*	PKPbc	08 33 53.5	+9.0
VNA2	**Neumayer--Watz**	144.22	195	*e*	PKPbc	08 34 00.4	+16
VNA2	**Neumayer--Watz**	144.22	195	⇑*i*P	PKPbc	08 33 44.6	+0.1
VNA2				*e*		08 33 53.5	
VNA2				*e*		08 34 00.4	
VNA3	**Neumayer Olymp**	144.42	194	*e*	PKPbc	08 33 53.8	+8.7
VNA3	**Neumayer Olymp**	144.42	194	*e*	PKPbc	08 34 00.6	+16
VNA3	**Neumayer Olymp**	144.42	194	⇑*i*P	PKPbc	08 33 44.8	-0.3
VNA3				*e*		08 33 53.8	
VNA3				*e*		08 34 00.6	
VNA1	**Neumayer--Stat**	144.62	195	*e*	PKPbc	08 33 54.7	+9.1
VNA1	**Neumayer--Stat**	144.62	195	⇑*i*P	PKPbc	08 33 46.2	+0.6
VNA1				*e*		08 33 54.7	

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*IDC **19** 09:11:11.9±2.1, 30.83N×51.44E, mb4.0/9, mb1 4.1/9, mb1mx3.9/22, mbtmp4.1/9, MS3.6/2, Ms1 3.5/2, ms1mx2.9/22, Error ellipse: s-maj=46.9km s-min=22.0km az=157.0*

*THR **19** 09:11:11.8±0.9, 30.70N×51.55E, h14^{km}, ML3.5*

*KISR **19** 09:11:12.9±0.7, 30.63N×51.74E, h33^{km}, ML3.5*

*TEH **19** 09:11:14.2, 30.62N×51.54E, h15^{km}, Mn3.8*

*CSEM **19** 09:11:14.9±0.1, 30.70N×51.74E, h63^{km}±2^{km}, ML3.8*

*OMAN **19** 09:11:19.6±0.1, 30.22N×51.23E, h75^{km}±17^{km}, Error ellipse: s-maj=11.7km s-min=7.3km az=11.0*

ISC 19 09:11:15.1±0.3**, 30.72N**±0.02×**51.70E**±0.03**, h54**^{km}±7^{km}**, n57, σ1^{s}19**/67**, mb4.0**/9**, MS3.6**/2**, 6C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPAR	**Pars**	1.46	126	Pn	P	09 11 40.5	+0.8
IGAR	**Garneh**	1.58	16	Pn	P	09 11 42.6	+1.2
ISRV	**Sarvestan**	1.81	137	Pn	P	09 11 45.2	+0.7
IMOK	**Mook**	1.88	152	Pn	P	09 11 45.5	-0.1
IPIR	**Pirpir**	2.08	341	Pn	P	09 11 47.0	-1.3
ISAD	**Sadrabad**	2.08	54	Pn	P	09 11 50.6	+2.3
IZEF	**Zefreh**	2.24	14	Pn	P	09 11 51.3	+0.7
NASN	**Na’in**	2.28	24	*e*Pn	P	09 11 52.6	+1.3
IMEH	**Mehriz**	2.59	74	Pn	P	09 11 58.0	+2.4
IKLH	**Kalahroud**	2.60	358	Pn	P	09 11 55.3	-0.4
ICHK	**Chekchek**	2.77	56	Pn	P	09 11 59.9	+1.7
SHGR	**Shooshtar-Gavs**	2.84	300	*e*Pn	P	09 11 57.6	-1.5
IBAF	**Bafgh**	3.43	74	Pn	P	09 12 08.9	+1.4
UMR	**Umm Al-Rimmam**	3.64	252	*e*P	P	09 12 10.4	0.0
UMR				AML	AML	09 12 53.3	
	comp=Z,76nm,0.4s						
UMR				*e*S	S	09 12 53.7	+1.2
UMR	**Umm Al-Rimmam**	3.64	252	*e*P	P	09 12 10.4	0.0
UMR				*e*S	S	09 12 53.7	+1.2
ISFB	**Sefidab**	3.66	7	Pn	P	09 12 10.5	-0.2
KBD	**Kabd**	3.80	247	*e*P	P	09 12 13.0	+0.3
KBD				*e*S	S	09 12 57.5	+1.0
QRN	**Al-Qurain**	3.83	240	*e*P	P	09 12 12.8	-0.3
QRN				*e*S	S	09 12 58.0	+0.8
QRN				AML	AML	09 12 59.0	
	comp=Z,116nm,0.4s						
MIB	**Mutribah**	3.88	258	*e*P	P	09 12 14.5	+0.7
RDF	**Al-Radifah**	4.02	245	*e*P	P	09 12 15.8	0.0
RDF				*e*S	S	09 13 03.6	+1.5
RDF				AML	AML	09 13 04.8	
	comp=Z,115nm,0.5s						
ASAO	**Ashtian**	4.07	340	*e*Pn	P	09 12 15.6	-1.0
ASAO				AML	AML	09 13 34.6	
	comp=N,53nm,0.8s						
NAY	**Al-Naaiem**	4.13	250	*e*P	P	09 12 17.4	+0.1
NAY				*e*S	S	09 13 05.9	+1.0
NAY				AML	AML	09 13 08.7	
	comp=Z,25nm,0.5s						
IQOM	**Qom**	4.15	353	Pn	P	09 12 17.0	-0.6
IQOM				Sn	S	09 13 04.6	-0.7
IVRN	**Varamin**	4.27	0	Pn	P	09 12 19.6	+0.3
IVRN				Sn	S	09 13 07.8	-0.6
KRBR	**Kerman**	4.44	98	*e*Pn	P	09 12 23.3	+1.7
IDMV	**Damavand**	4.86	3	Pn	P	09 12 27.6	+0.1
IDMV				Sn	S	09 13 21.9	-1.2
DAMV	**Damavand**	4.91	3	*e*Pn	P	09 12 27.2	-1.0
DAMV				AML	AML	09 13 50.4	
	comp=N,25nm,0.6s						
IKOM	**Komasi**	4.94	315	Pn	P	09 12 27.1	-1.6
IFIR	**Firoozkooh**	4.99	10	Pn	P	09 12 29.7	+0.3
BNDS	**Bandar-Abbas**	5.12	129	*e*Pn	P	09 12 31.0	-0.2
IAFJ	**Afjeh**	5.13	0	Pn	P	09 12 30.8	-0.5
CHTH	**Charan**	5.20	355	*e*Pn	P	09 12 31.2	-1.1
THKV	**Tehran--Karaj**	5.23	353	*e*Pn	P	09 12 31.8	-1.0
SNGE	**Sanandaj**	5.70	321	*e*Pn	P	09 12 37.1	-2.1
SNGE				AML	AML	09 13 57.2	
	comp=N,32nm,0.7s						
IDHR	**Dehrash**	5.98	313	Pn	P	09 12 37.4	-5.8
BANOM	**Banah**	6.26	139	P	P	09 12 48.6	+1.4
	SNR=8.2						
BANOM				⇑S	S	09 13 58.7	+0.5
BHD	**Baghdad**	6.72	294	*e*x	x	09 13 14.0	
BHD				*e*x	x	09 15 12.0	
BHD				*e*x	x	09 17 25.0	
ASHO	**Ashiyiah**	7.14	146	P	P	09 12 59.2	-0.2
	SNR=14						
ASHO				⇑S	S	09 14 17.7	-2.4
ARQ	**Araqi**	8.51	149	⇑P	P	09 13 16.6	-1.8
ARQ				⇑S	S	09 14 50.4	-3.6
BSY	**Bisya**	9.34	147	⇓P	P	09 13 28.9	-0.7
BSYO	**Bisya**	9.37	147	P	P	09 13 28.9	-1.2
SMDO	**Samad**	9.50	142	⇓P	P	09 13 31.1	-0.9
JMDO	**Jabal Madar**	10.10	144	⇑P	P	09 13 39.3	-0.8
WBK	**Wadi Bani Khal**	10.36	139	⇑P	P	09 13 41.8	-1.9
WHFO	**Wadi Hawf**	12.88	171	P	P	09 14 14.9	-2.7
	SNR=16						
ABTO	**Aybut**	13.38	173	P	P	09 14 21.1	-3.0
	SNR=9.0						
AKTO	**Aktyubinsk**	20.26	12	P	P	09 15 48.6	+0.1
	comp=N,3.0nm,0.8s,baz=195,slow=11,SNR=12						
IDI	**Anoyia**	22.91	289	P	P	09 16 14.9	-0.2
	comp=N,15nm,1.1s,mb4.3,baz=72,slow=13,SNR=2.5						
MLR	**Muntele Rosu**	24.92	314	P	P	09 16 37.1	+2.6
	comp=N,5.1nm,1.1s,mb4.0,baz=43,slow=11,SNR=2.9						
AKASG	**Malin Array Be**	26.06	326	P	P	09 16 45.0	-0.2
	comp=N,1.5nm,0.4s,mb3.9,baz=133,slow=9.5,SNR=13						
BVAR	**Borovoye Array**	26.13	26	P	P	09 16 47.1	+1.3
	comp=N,1.5nm,0.6s,mb3.7,baz=207,slow=6.6,SNR=6.6						
MKAR	**Makanchi Array**	28.52	47	P	P	09 17 09.6	+2.1
	comp=N,1.0nm,0.8s,mb3.6,baz=243,slow=8.1,SNR=4.4						
ZAL	**Zalesovo**	33.23	36	P	P	09 17 51.2	+2.2
	comp=N,1.2nm,0.4s,mb4.2,baz=229,slow=9.3,SNR=3.4						
GERES	**GERESS Array B**	33.91	313	P	P	09 17 54.2	-0.6
	comp=N,0.3nm,0.5s,mb3.5,baz=140,slow=7.7,SNR=3.3						
FINES	**FINESS Array B**	35.03	339	P	P	09 18 04.1	-0.2
	comp=N,2.4nm,0.8s,mb4.2,baz=146,slow=6.9,SNR=5.3						
DBIC	**Dimbokro**	57.98	258	P	P	09 21 05.4	+0.5
	comp=N,2.9nm,0.8s,mb4.4,baz=26,slow=8.4,SNR=5.2						
DBIC				LR	LR	09 46 49.7	
	comp=N,47nm,19.4s,MS3.6,baz=350,slow=37						
BOSA	**Boshof**	64.16	206	LR	LR	09 53 17.1	
	comp=N,44nm,18.2s,MS3.7,baz=330,slow=39						

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*ATH **19** 09:20:48.6, 38.31N×21.91E, h22^{km}±2^{km}, MD3.2/6*

*NEIC **19** 09:20:48.6, 38.31N×21.91E, h22^{km}, MD3.2(ATH), After ATH.*

*CSEM **19** 09:20:48.9±0.2, 38.32N×21.92E, h2^{km}, MD3.2, Error ellipse: s-maj=7.4km s-min=3.9km az=132.0*

*THE **19** 09:20:51.2, 38.39N×22.06E, h10^{km}, ML2.8*

ISC 19 09:20:48.2±1.2**, 38.32N**±0.05×**21.97E**±0.06**, h7**^{km}±9^{km}**, n11, σ1^{s}12**/15**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	0.47	237	*e*PB	Pb	09 20 57.5	-0.9
RLS				*e*SB	Sb	09 21 04.4	-0.8
EVR	**Evrytania**	0.61	348	*e*PB	Pb	09 21 00.3	-0.5
EVR				*e*SN	Sn	09 21 09.9	-3.2
AGG	**Agios Georgios**	0.76	22	*e*Pg	Pg	09 21 02.7	-0.7
LKR	**Lokris**	0.88	67	*e*PN	Pn	09 21 06.3	-0.5
LKR				*e*SN	Sn	09 21 19.1	-0.7
ITM	**Ithomi**	1.13	182	*e*PN	Pn	09 21 10.3	-0.1
NEO	**Neokhori**	1.40	44	*e*PN	Pn	09 21 15.0	+0.8
XOR	**Xorichti**	1.42	42	*e*Pg	Pg	09 21 15.6	-1.0
XOR				*e*Sg	Sg	09 21 35.6	0.0
IGT	**Igoumenitsa**	1.76	314	*e*Pb	Pb	09 21 21.9	+1.5
VLI	**Veliai**	1.77	154	*e*PN	Pn	09 21 20.9	+1.4
LIT	**Litokhoron**	1.83	13	*e*Pb	Pb	09 21 22.7	+1.1
FNA	**Florina**	2.51	350	*e*Pn	Pn	09 21 32.4	+2.3

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*ISK **19** 09:39:48.2, 38.23N×26.63E, h11^{km}, MD3.0*

*ATH **19** 09:39:48.5, 38.16N×26.52E, h10^{km}, MD3.0/3*

*CSEM **19** 09:39:48.9±0.5, 38.20N×26.73E, h10^{km}, MD3.0, Error ellipse: s-maj=13.0km s-min=2.3km az=115.0*

ISC 19 09:39:47.6±1.0**, 38.22N**±0.04×**26.62E**±0.06**, h1**^{km}±9^{km}**, n12, σ0^{s}77**/18**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	0.14	353	*i* P	Pg	09 39 50.0	-0.5
URLA				*i* S	Sg	09 39 53.2	+0.8
SMG	**Samos**	0.54	161	*e*PB	Pb	09 39 58.6	-0.9
IZM	**Izmir**	0.54	70	*i* PG	Pg	09 39 58.8	+0.4
KDAG	**Bornova**	0.54	70	*i* P	Pg	09 39 57.4	-1.1
KDAG				*i* S	Sg	09 40 05.8	+0.1
PRK	**Paraskevi**	1.06	345	*e*PB	Pb	09 40 09.3	+0.8
AYDN	**Tasoluk**	1.14	119	*i* P	Pb	09 40 09.5	-0.4
AYDN				*i* S	Sb	09 40 25.2	+0.2
AKS	**Akhisar**	1.15	54	*e*PN	Pn	09 40 09.9	-0.8
AKS				*e*SN	Sn	09 40 27.0	-0.3
BODT	**Bodrum**	1.28	154	*e*PN	Pn	09 40 12.8	+0.2
BODT				*e*SN	Sn	09 40 30.4	-0.2
MLSB	**Milas**	1.30	135	*e*PN	Pn	09 40 13.4	+0.5
BDRM	**Kayabasi**	1.32	150	*i* P	Pb	09 40 15.1	+2.1
BDRM				*i* S	Sb	09 40 31.3	+0.9
APE	**Apeiranthos**	1.44	217	*e*PB	Pb	09 40 14.0	-0.9
YER	**Yerkesik**	1.71	129	*e*PN	Pn	09 40 18.3	-0.5

IDC 19 10:14:28.0±2.3**, 31.18N**×**113.84W, mb1 3.3**/5**, mb1mx3.3**/23**, mbtmp3.0**/5**, ML2.5**/3**, Error ellipse: s-maj=32.7km s-min=11.5km az=43.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANMO	**Albuquerque**	7.25	57	Pn	Pn	10 16 16.8	-0.9
	baz=236,slow=7.3,SNR=2.5						
ANMO				Lg		10 18 22.3	
	baz=36,slow=19,SNR=3.5						
NVAR	**Mina Array Bea**	8.11	334	Pn	P	10 16 29.3	-0.5
	0.1nm,0.3s,baz=135,slow=15,SNR=3.0						
NVAR				Lg		10 18 41.9	
	0.0nm,0.3s,baz=223,slow=29,SNR=2.5						
TXAR	**Lajitas Array**	8.99	99	Pn	P	10 16 39.5	-2.5
	0.1nm,0.3s,baz=276,slow=13,SNR=9.1						
TXAR				Lg		10 19 12.9	
	0.0nm,0.3s,baz=272,slow=24,SNR=3.2						
ELK	**Elko**	9.61	354	Pn	P	10 16 47.8	-2.9
	0.1nm,0.3s,baz=146,slow=18,SNR=2.7						
ELK				Lg		10 19 29.7	
	0.1nm,0.3s,baz=221,slow=21,SNR=2.2						
PDAR	**Pinedale Array**	12.06	15	Pn	P	10 17 25.8	+1.6
	0.0nm,0.3s,baz=191,slow=7.6,SNR=4.4						
PDAR				Lg		10 20 48.8	
	0.0nm,0.3s,baz=166,slow=15,SNR=2.9						

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*NIED **19** 10:18:00, 38.30N×144.60E, h5^{km}, Mw3.8 Best double couple: M$_0$5.41×10^{14} NP1:φ$_s$215°, δ73°, λ-89°. NP2:φ$_s$33°, δ17°, λ-92°.*

JMA 19 10:18:23.1±0.2**, 38.28N**×**144.64E, h57**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	2.46	290	P	P	10 19 02.0	+0.3
MIYJ	**Miyakonagasawa**	2.55	301	P	P	10 19 03.0	-0.1
MIYJ				*e*S	S	10 19 32.5	-0.5
JIO	**Ouri**	2.59	275	P	P	10 19 03.9	+0.3
JIO				*e*S	S	10 19 34.4	+0.4
JMK	**Ichinoseki**	2.76	285	P	P	10 19 06.3	+0.3
JMK				*e*S	S	10 19 39.1	+0.8
JOT	**Ohata**	4.15	319	*e*S	S	10 20 10.8	-2.5
JCH	**Churui**	4.44	348	S	S	10 20 16.3	-4.2
JRY	**Ryogami san**	5.11	246	P	P	10 19 38.1	-0.9
JRY				*e*S	S	10 20 34.1	-3.3
JOD2	**Odawara 2**	5.38	238	P	P	10 19 42.2	-0.5
JOD2				*e*S	S	10 20 39.9	-4.2
MAT	**Matsushiro**	5.41	253	P	P	10 19 43.9	+0.8
MAT				S	S	10 20 46.6	+1.8
JTKR	**Abashiri--Toko**	5.71	355	*e*S	S	10 20 46.9	-5.5

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*ATH **19** 11:05:50.2, 38.10N×26.70E, h43^{km}, MD3.3/3*

*CSEM **19** 11:05:50.7±0.1, 38.13N×26.65E, h25^{km}, MD3.0, Error ellipse: s-maj=3.0km s-min=2.3km az=88.0*

*ISK **19** 11:05:51.2, 38.13N×26.68E, h28^{km}, MD3.0*

*NEIC **19** 11:05:51.0, 38.13N×26.68E, h28^{km}, MD3.3(ATH), MD3.1(ISK), After ISK.*

ISC 19 11:05:50.1±0.5**, 38.15N**±0.02×**26.68E**±0.04**, h12**^{km}±4^{km}**, n24, σ1^{s}20**/38**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	0.22	343	*i* P	Pg	11 05 54.8	-0.1
URLA				*i* S	Sg	11 05 58.5	+0.3
SMG	**Samos**	0.46	164	*e*P	Pg	11 06 00.5	+1.0
SMG				*e*S	Sg	11 06 07.7	+1.9
IZM	**Izmir**	0.52	62	PG	Pg	11 06 02.8	+2.1
IZM				SG	Sg	11 06 11.1	+3.3
KDAG	**Bornova**	0.53	61	*i* P	Pb	11 06 00.6	-0.1
KDAG				*i* S	Sg	11 06 08.2	+0.2
AYDN	**Tasoluk**	1.07	117	*i* P	Pb	11 06 11.2	+1.2
AYDN				*i* S	Sb	11 06 25.3	+1.6
PRK	**Paraskevi**	1.14	344	*e*P	Pb	11 06 11.8	+0.6
PRK				*e*S	Sb	11 06 27.3	+1.5
AKS	**Akhisar**	1.15	50	PN	Pn	11 06 12.2	+0.3
AYVA	**Ayvalik**	1.16	0	*i* P	Pg	11 06 10.8	-2.4
AYVA				*i* S	Sg	11 06 29.3	+0.6
BODT	**Bodrum**	1.20	155	PN	Pn	11 06 13.0	+0.3
BODT				SN	Sn	11 06 26.8	-2.1
MLSB	**Milas**	1.22	134	*e*PN	Pn	11 06 13.0	0.0
BDRM	**Kayabasi**	1.24	150	*i* P	Pg	11 06 13.8	-1.2
BDRM				*i* S	Sg	11 06 31.8	+0.1
APE	**Apeiranthos**	1.41	220	*e*PN	Pn	11 06 14.3	-1.4
APE	**Apeiranthos**	1.41	220	*e*P	Pn	11 06 14.5	-1.2
MANT	**Manisa**	1.52	77	*i* P	Pg	11 06 19.8	-0.6
MANT				*i* S	Sg	11 06 38.9	-1.8
DAT	**Datca**	1.59	153	*e*PN	Pn	11 06 18.2	-0.1
YER	**Yerkesik**	1.63	128	*e*PN	Pn	11 06 18.9	+0.1
EZN	**Ezine**	1.69	351	*e*PN	Pn	11 06 19.7	0.0
BALB	**Balikesir**	1.76	32	*e*PN	Pn	11 06 20.9	+0.3
BTOK	**Tokmak**	1.92	33	*i* P	Pg	11 06 28.7	+0.2
BTOK				*i* S	Sg	11 06 47.0	-7.2
SANT	**Santorini**	2.03	209	*e*P	Pn	11 06 30.0	+5.5
ULDT	**Uludag**	2.76	43	*i* P	Pg	11 06 42.7	-2.5
ULDT				*i* S	Sg	11 07 22.1	+0.2
TKTP	**Tekketepe**	2.88	91	*i* P	Pg	11 06 45.8	-1.7
TKTP				*i* S	Sg	11 07 29.1	+3.2
ZKR	**Zakros**	3.05	187	*e*P	Pn	11 06 39.3	+0.1
ESKT	**Eskisehir**	3.53	66	*i* P	Pg	11 06 58.9	-1.7
ESKT				*i* S	Sg	11 07 42.1	-5.6

WEL 19 11:13:32.1±0.2**, 44.86S**×**167.68E, h77**^{km}±1^{km}**, ML3.5**/8**, 2C-5D, Error ellipse: s-maj=1.6km s-min=1.2km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	0.26	43	⇑PN	P	11 13 43.9	0.0
MSZ				SN	S	11 13 52.4	-0.3
MLZ	**Mavora Lakes**	0.60	145	PN	P	11 13 46.4	-0.3
MLZ				SN	S	11 13 56.8	-0.6
DCZ	**Deep Cove**	0.72	211	PN	P	11 13 47.4	-0.6
DCZ				SN	S	11 13 58.6	-1.1
WKZ	**Wanaka**	0.95	88	⇓PN	P	11 13 50.7	+0.1
WKZ				SN	S	11 14 03.6	-0.9
WHZ	**Wether Hill Ro**	1.05	170	⇓PN	P	11 13 51.5	-0.4

WHZ				SN	S	11 14 05.7	-0.9
JCZ	**Jackson Bay**	1.10	45	⇑PN	P	11 13 52.1	-0.4
JCZ				SN	S	11 14 06.7	-1.0
EAZ	**Earnscleugh**	1.21	108	⇓PN	P	11 13 53.7	-0.2
EAZ				SN	S	11 14 09.0	-1.2
TUZ	**Tuapeka**	1.75	129	PN	P	11 14 00.4	-0.9
TUZ				*e*SN	S	11 14 20.6	-2.1
LBZ	**Lake Benmore**	1.85	76	⇓PN	P	11 14 01.1	-1.3
LBZ				SN	S	11 14 22.3	-2.5
FOZ	**Fox Glacier**	1.94	49	PN	P	11 14 02.9	-0.9
FOZ				*e*SN	S	11 14 25.3	-1.7
ODZ	**Otahua Downs**	2.11	96	⇓PN	P	11 14 04.7	-1.4
ODZ				SN	S	11 14 26.8	-4.4
RPZ	**Rata Peaks**	2.68	66	PN	P	11 14 11.5	-2.5
RPZ				*e*SN	S	11 14 41.0	-4.4
WVZ	**Waitaha Valley**	2.84	52	*e*PN	P	11 14 13.6	-2.7
LTZ	**Lake Taylor**	3.92	60	*e*PN	P	11 14 27.4	-3.8
DSZ	**Denniston Nort**	4.33	45	PN	P	11 14 33.8	-3.2
THZ	**Tophouse**	4.91	53	PN	P	11 14 41.1	-4.0
THZ				*e*SN	S	11 15 35.3	-5.8
QRZ	**Quartz Range**	5.38	43	*e*PN	P	11 14 50.3	-1.2

*NEIC **19** 11:15:48.9,61.50N×149.78W,h46^{km},mb3.5/5, ML4.2(PMR),ML3.9(AEIC),After AEIC.*

NEIC Felt [IV] at Chugiak and Wasilla; [III] at Anchorage, Eagle River, Girdwood, Palmer and Willow. Also felt at Elmendorf AFB and Indian.

*IDC **19** 11:15:48.0±2.3,61.55N×150.20W,h61^{km}±21^{km},mb3.5/8, mb1 3.8/11,mb1mx3.6/22,mbtmp3.8/11,ML3.6/3,MS3.2/2, Ms1 3.2/2,ms1mx2.7/26,Error ellipse: s-maj=21.9km s-min=15.1km az=55.0*

ISC 19 11:15:47.2±0.2**,61.52N**±0.02×**149.80W**±0.04**,h60**^{km}±3^{km}**, n79,**σ**0**^{s}**83**/93**,mb3.7**/12**,Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMR	**Palmer**	0.33	77	P	P	11 15 56.7	-1.0
PMR				S	S	11 16 03.8	-1.5
FIB	**Fire Island**	0.40	207	P	P	11 15 58.1	-0.1
FIB				S	S	11 16 06.9	+0.5
RC01	**Rabbit Creek A**	0.43	176	P	P	11 15 58.0	-0.6
RC01				S	S	11 16 06.0	-1.0
SML	**Sawmill**	0.76	67	P	P	11 16 02.2	-0.1
SML				S	S	11 16 12.9	-0.6
CUT	**Chulitna**	0.92	346	P	P	11 16 04.5	+0.2
STLK	**Strandline Lak**	0.98	270	P	P	11 16 05.6	+0.4
SLKM	**Skilak Lake**	1.04	192	P	P	11 16 06.0	0.0
SLKM				S	S	11 16 19.9	0.0
NKA	**Nikishka**	1.05	223	P	P	11 16 08.0	+1.8
MPA	**Moose Pass**	1.06	168	P	P	11 16 05.8	-0.4
MPA				S	S	11 16 20.3	-0.1
SPU	**Mount Spurr**	1.14	254	P	P	11 16 07.7	+0.3
SCM	**Sheep Creek Mo**	1.22	74	P	P	11 16 09.0	+0.5
CKL	**Chakachamna La**	1.27	256	P	P	11 16 09.6	+0.5
CKL				S	S	11 16 25.9	+0.5
HUR	**Hurricane**	1.47	3	P	P	11 16 12.8	+0.9
HUR				S	S	11 16 32.0	+1.7
RDT	**Redoubt**	1.59	234	P	P	11 16 13.7	0.0
RDT				S	S	11 16 33.7	+0.5
VLZ	**Valdez**	1.71	102	P	P	11 16 15.2	-0.2
VLZ				S	S	11 16 36.8	+0.6
REF	**Redoubt East F**	1.75	235	P	P	11 16 16.1	+0.2
REF				S	S	11 16 38.9	+1.7
RSO	**Redoubt South**	1.79	235	P	P	11 16 16.7	+0.3
KLU	**Klutina**	1.86	89	P	P	11 16 17.4	0.0
HIN	**Hinchinbrook I**	1.96	124	P	P	11 16 18.7	-0.1
DIV	**Divide**	1.98	100	P	P	11 16 18.7	-0.3
DIV				S	S	11 16 43.3	+0.7
KTH	**Kantishna Hill**	2.11	346	P	P	11 16 21.6	+0.8
CNPM	**China Poot**	2.12	200	P	P	11 16 20.6	-0.5
TZL	**Tazlina**	2.14	74	P	P	11 16 22.4	+1.0
INE	**Iliamna NE**	2.17	229	P	P	11 16 21.9	+0.1
INE				S	S	11 16 48.5	+1.1
EYAK	**Cordova Ski Ar**	2.20	115	P	P	11 16 22.0	-0.1
ILW	**Iliamna West**	2.20	230	P	P	11 16 22.4	+0.3
SDG	**Sourdough**	2.25	61	P	P	11 16 23.9	+1.1
XLV	**Seldovia**	2.28	206	P	P	11 16 23.5	+0.2
PAX	**Paxson**	2.49	52	P	P	11 16 28.0	+1.7
OPT	**Oil Point**	2.53	224	P	P	11 16 27.2	+0.4
BMRM	**Bremner River**	2.57	100	P	P	11 16 27.5	0.0
BWN	**Browne**	2.67	3	P	P	11 16 29.7	+0.9
THY	**Trims Highway**	2.67	43	*e*P	P	11 16 28.8	-0.1
AUP	**Augustine Pinn**	2.81	221	P	P	11 16 30.9	+0.1
SVW2	**Sparrevohn**	2.82	264	P	P	11 16 30.6	-0.4
GLB	**Gilahina Butte**	2.87	89	P	P	11 16 30.9	-0.8
WRH	**Wood River Hil**	3.06	14	P	P	11 16 35.0	+0.6
NEA	**Nenana**	3.09	6	P	P	11 16 35.0	+0.3
HDA	**Harding Lake**	3.17	23	P	P	11 16 36.2	+0.3
MENT	**Mentasta**	3.18	61	P	P	11 16 35.9	-0.2
TT01	**Tatalina**	3.23	298	P	P	11 16 36.2	-0.5
CCB	**Clear Creek Bu**	3.27	15	P	P	11 16 37.1	-0.1
COLA	**College**	3.48	14	P	P	11 16 40.8	+0.6
ILAR	**Eielson Array**	3.52	21	P	P	11 16 41.0	+0.2
	3.6nm,0.3s,baz=207,slow=14,SNR=75						
ILAR				S	S	11 17 26.4	+4.8
	36nm,0.3s,baz=219,slow=28,SNR=11						
IL1	**Eielson Array**	3.52	21	P	P	11 16 41.0	+0.2
MDM	**Murphy Dome**	3.52	11	P	P	11 16 40.8	-0.1
MLY	**Manley**	3.55	354	P	P	11 16 40.8	-0.5
KDAK	**Kodiak Island**	4.01	202	P	P	11 16 45.0	-2.6
	4.5nm,0.3s,baz=51,slow=10,SNR=62						
KDAK				S	S	11 17 44.0	+10
	14nm,0.3s,baz=155,slow=20,SNR=3.1						
KAWH	**Katmai**	4.03	221	P	P	11 16 46.9	-1.0
KABR	**Katmai Barrier**	4.29	220	P	P	11 16 50.3	-1.3
MGLS	**Mageik LS**	4.33	222	P	P	11 16 51.9	-0.3
ANCK	**Angle Creek**	4.40	223	P	P	11 16 52.3	-0.9
CAHL	**Cahill**	4.45	221	P	P	11 16 53.5	-0.4
CNTC	**Contact Creek**	4.48	226	P	P	11 16 53.4	-0.9
GCSA	**Galena City Sc**	4.56	318	P	P	11 16 54.6	-0.8
IM3	**Indian Mountai**	4.81	340	P	P	11 16 57.9	-1.0
IMA2	**Indian Mountai**	4.88	341	*e*P	P	11 16 59.6	-0.3
DAWY	**Dawson**	5.41	57	*e*P	P	11 17 06.2	-1.0
INK	**Inuvik**	9.67	38	P	P	11 18 06.6	+0.8
	0.3nm,0.3s,baz=235,slow=14,SNR=18						
INK				S	S	11 19 52.4	-1.6
	0.7nm,0.3s,baz=252,slow=8.3,SNR=4.8						
INK	**Inuvik**	9.67	38	*e*P	P	11 18 04.1	-1.8
YKA	**Yellowknife Ar**	16.43	71	LR	LR	11 25 38.5	
	comp=Z,70nm,18.1s,baz=265,slow=36						
NEW	**Newport**	22.70	111	LR	LR	11 31 09.0	
	comp=Z,83nm,20.5s,baz=242,slow=40						
NEW	**Newport**	22.70	111	*e*P	P	11 20 44.0	-0.1
	0.7nm,0.6s,mb3.3						
HLID	**Hailey**	27.53	114	*e*P	P	11 21 28.9	-0.9
	0.5nm,0.5s,mb3.4						
ELK	**Elko**	29.48	119	P	P	11 21 48.2	+1.0
	1.1nm,0.8s,mb3.6,baz=281,slow=7.7,SNR=6.4						
ELK	**Elko**	29.48	119	*e*P	P	11 21 47.6	+0.4
	0.6nm,0.6s,mb3.5						
NVAR	**Mina Array Bea**	30.20	125	P	P	11 21 54.5	+0.8
	1.0nm,0.8s,mb3.6,baz=318,slow=7.0,SNR=7.6						
BW06	**Boulder Array**	30.32	110	*e*P	P	11 21 55.0	+0.3
	0.8nm,0.5s,mb3.7						
PDAR	**Pinedale Array**	30.32	110	P	P	11 21 55.7	+1.0
	0.8nm,0.6s,mb3.6,baz=326,slow=5.3,SNR=8.7						
PDAR				PcP	PcP	11 24 52.3	-1.5
	0.4nm,0.7s,baz=56,slow=3.3,SNR=3.4						
MSU	**Marysvale**	32.64	117	*e*P	P	11 22 15.1	0.0
PV10	**Paradox Valley**	34.11	114	P	P	11 22 28.7	+0.9
SDCO	**Great Sand Dun**	36.20	110	*e*P	P	11 22 46.5	+0.9
	0.6nm,0.5s,mb3.8						
MNTX	**Cornudas Mount**	41.34	115	P	P	11 23 29.4	+1.1
WMOK	**Wichita Mounta**	41.74	106	*e*P	P	11 23 31.9	+0.4
TXAR	**Lajitas Array**	44.12	115	P	P	11 23 51.5	+0.5
	0.5nm,0.6s,mb3.4,baz=329,slow=5.7,SNR=7.6						
TXAR				PcP	PcP	11 25 34.1	-1.6
	0.1nm,0.4s,baz=45,slow=1.3,SNR=6.5						
SONM	**Songino Array**	55.15	307	P	P	11 25 14.3	-0.8
	1.1nm,0.7s,mb4.0,baz=45,slow=8.2,SNR=3.6						
BVAR	**Borovoye Array**	61.43	334	P	P	11 25 56.6	-2.3
	0.6nm,0.5s,mb4.0,baz=34,slow=5.3,SNR=5.2						
MKAR	**Makanchi Array**	64.19	323	P	P	11 26 14.4	-2.7
	0.5nm,0.5s,mb3.8,baz=38,slow=6.9,SNR=5.7						
AKASG	**Malin Array Be**	68.13	1	P	P	11 26 40.3	-1.7
	0.9nm,0.4s,mb4.2,baz=358,slow=6.0,SNR=5.2						

IDC 19 11:19:25.2±23.0**,85.66N**×**36.56E,mb3.5**/4**,mb1 4.0**/4**, mb1mx3.6**/19**,mbtmp3.5**/4**,MS3.4**/9**,Ms1 3.4**/9**, ms1mx3.1**/30**,Error ellipse: s-maj=483.5km s-min=80.2km az=144.0,North of Franz Josef Land**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARCES	**ARCESS Array B**	16.33	194	LR	LR	11 29 21.5	
	comp=Z,65nm,20.5s,baz=17,slow=36						
NOA	**NORSAR Array B**	25.24	209	LR	LR	11 35 37.3	
	comp=Z,26nm,18.2s,baz=95,slow=38						
HFS	**Hagfors**	26.06	206	LR	LR	11 36 13.4	
	comp=Z,69nm,19.6s,baz=72,slow=39						
ILAR	**Eielson Array**	29.74	3	P	P	11 25 32.8	-1.9
	1.5nm,1.0s,baz=354,slow=7.9,SNR=5.8						
YKA	**Yellowknife Ar**	31.55	335	LR	LR	11 38 08.3	
	comp=Z,126nm,18.0s,baz=290,slow=36						
AKTO	**Aktyubinsk**	35.72	156	LR	LR	11 42 24.5	
	comp=Z,62nm,19.8s,slow=39						
MKAR	**Makanchi Array**	40.45	131	LR	LR	11 46 44.3	
	comp=Z,48nm,18.8s,baz=16,slow=40						
ULM	**Lac du Bonnet**	42.99	316	LR	LR	11 44 10.8	
	comp=Z,70nm,19.0s,baz=32,slow=35						
PDAR	**Pinedale Array**	51.09	328	P	P	11 28 28.9	-1.9
	0.5nm,0.9s,baz=7.1,slow=7.3,SNR=3.5						
NVAR	**Mina Array Bea**	55.73	336	P	P	11 29 03.0	-2.3
	0.2nm,0.6s,slow=2.7,SNR=3.1						
NVAR				LR	LR	11 52 11.0	
	comp=Z,38nm,18.1s,baz=315,slow=35						
TXAR	**Lajitas Array**	64.22	322	P	P	11 30 01.8	-1.8
	0.5nm,0.8s,slow=2.5,SNR=5.8						
TXAR				LR	LR	11 58 32.4	
	comp=Z,53nm,20.4s,baz=170,slow=36						

MAN 19 11:26:08.8,15.04N×**119.90E,h1**^{km}**,mb4.5,ML3.4,MS3.2, 1D,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCZP	**Santa Cruz**	0.73	1	*e*P	Pg	11 26 23.0	-0.4
SCZP				*e*S	Sg	11 26 33.6	+0.4
PCPH	**Palayan**	1.27	66	⇓*e*P	Pb	11 26 33.6	+0.4
PCPH				*e*S	Sb	11 26 51.6	+1.7
BOLP	**Bolinao**	1.33	1	*e*P	Pb	11 26 33.7	-0.6
LUBP	**Lubang**	1.34	165	*e*P	Pb	11 26 34.9	+0.5
BALP	**Baler**	1.77	66	*e*P	Pn	11 26 42.2	+1.5
BALP				*e*S	Sn	11 27 05.5	+1.4
POLP	**Polilio Island**	2.00	99	*e*P	Pn	11 26 43.0	-1.1
POLP				*e*S	Sn	11 27 15.4	+5.3
BOAC	**Boac**	2.46	129	*e*P	Pn	11 26 41.3	-9.3
CAUP	**Cauayan**	2.65	44	*e*P	Pn	11 26 46.6	-6.8
ABRA	**Dolores**	2.71	17	*e*P	Pn	11 26 54.7	+0.4
ABRA				*e*S	Sn	11 27 30.5	+2.4
SJMP	**San Jose**	2.83	155	*e*P	Pn	11 26 56.3	+0.5
SJMP				*e*S	Sn	11 27 35.8	+4.7
BUSP	**Coron**	3.03	174	*e*P	Pn	11 26 58.3	-0.5
BUSP				*e*S	Sn	11 27 32.1	-4.2
APYP	**Conner**	3.09	25	*e*P	Pn	11 27 02.6	+2.9
APYP				*e*S	Sn	11 27 44.4	+6.6

*BJI **19** 11:37:59.5,34.40N×73.03E,h30^{km},mB4.8,mb4.5,ML4.7, Ms4.2,Msz4.3*

*IDC **19** 11:38:02.0±0.9,34.35N×73.64E,mb4.3/14,mb1 4.5/17, mb1mx4.4/23,mbtmp4.3/17,ML4.5/3,MS3.7/4,Ms1 3.7/4, ms1mx3.2/23,Error ellipse: s-maj=20.7km s-min=18.8km az=18.0*

*NDI **19** 11:38:02.2±4.5,34.42N×73.13E,h10^{km},MD4.0,ML4.0, mb4.3(NEIC)*

*NEIC **19** 11:38:02.8±0.4,34.23N×73.64E,h10^{km},mb4.3/8,Error ellipse: s-maj=11.2km s-min=4.6km az=46.0*

*MOS **19** 11:38:04.6±1.2,34.33N×73.75E,h33^{km},mb4.7/10,Error ellipse: s-maj=12.3km s-min=5.5km az=100.7*

*NNC **19** 11:38:13.7±4.4,35.00N×72.83E,h11^{km}±71^{km},mpv4.4, Error ellipse: s-maj=71.0km s-min=33.7km az=165.0*

ISC 19 11:38:02.6±0.2**,34.38N**±0.02×**73.71E**±0.03**,h10**^{km}**,n116,** σ**1**^{s}**40**/141**,mb4.4**/24**,MS3.6**/4**,24C-2D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	**Chirah Chowk**	0.81	207	P	Pb	11 38 20.2	+1.9
SRNI	**Srinagar**	0.98	106	*e*x	Pg	11 38 23.0	+0.6
SRNI				*e*x	Sb	11 38 40.0	+5.8
CEP	**Cherat**	1.59	250	P	Pn	11 38 32.7	+1.6
JMU	**Jammu**	1.93	149	*e*P	Pn	11 38 41.0	+5.1
JMU				*e*S	Sn	11 39 07.5	+7.0
THW	**Thamme Wali**	2.28	227	⇑P	Pn	11 38 43.2	+2.3
THN	**Thein Dam**	2.56	139	*e*P	Pn	11 38 48.9	+3.9
THN				*e*x	Sg	11 39 27.2	-0.9
SARP	**Sargodha**	2.60	200	P	Pn	11 38 48.1	+2.6
SARP				S	Sn	11 39 21.0	+3.6
DLH	**Dalhousie**	2.63	133	*e*P	Pn	11 38 51.0	+5.1
DLH				*e*x	Sg	11 39 30.0	-0.2
SBDP	**Sheikh Budin**	3.19	230	P	Pn	11 38 55.9	+2.0
BHK	**Bhakra**	3.73	142	*e*P	Pg	11 39 20.1	+3.0
BHK				*e*S	Sg	11 40 07.3	+0.5
DRP	**Derazinda**	3.94	229	P	Pn	11 39 17.6	+13
SDNR	**Sundarnagar**	3.97	135	*e*P	Pn	11 39 07.0	+2.0
SDNR				*e*x	Sn	11 39 53.4	+1.3
SMLA	**Simla**	4.36	137	*e*P	Pn	11 39 12.6	+2.1
SMLA				*e*x	Sn	11 40 19.1	+17
KLP	**Kalpa**	4.75	125	*e*P	Pn	11 39 18.5	+2.4
KLP				*e*x	Sn	11 40 12.7	+0.7
KLP				AML	AML	11 40 47.6	
	comp=E,870nm,0.9s						
KLP				AML	AML	11 40 47.7	
	comp=N,802nm,0.6s						
DDI	**Dehra Dun**	5.46	137	*e*x	Pb	11 39 39.0	+1.0
DDI				*e*x	Sg	11 41 05.5	+0.9
NDI	**New Delhi**	6.42	151	*e*P	Pn	11 39 38.0	-1.6
NDI				*e*S	Sn	11 40 50.0	-3.7
KHET	**Khetri**	6.54	163	*e*P	Pn	11 39 41.3	+0.1
KHET				*e*S	Sn	11 40 51.9	-4.7
AYAN	**Aya Nagar**	6.56	153	*e*P	Pn	11 39 42.2	+0.6
ASOR	**Ausora**	6.59	147	*e*P	Pn	11 39 43.8	+1.8
BISR	**Bishrakh**	6.61	150	*e*x	Pb	11 39 53.5	-4.0
KUDL	**Kundal**	6.65	158	*e*P	Pn	11 39 43.1	+0.2
SONA	**Sohna**	6.75	154	*e*P	Pn	11 39 44.5	+0.1
SONA				*e*S	Sn	11 41 01.1	-1.0
SONA				AML	AML	11 41 04.5	
	comp=N,67nm,0.4s						
SONA				AML	AML	11 41 52.3	
	comp=E,81nm,0.5s						
SONA				AML	AML	11 41 54.2	
	comp=N,50nm,0.5s						
PTH	**Pithoragarh**	7.33	129	*e*P	Pn	11 39 57.0	+4.6
PTH				*e*S	Sn	11 41 15.0	-1.5
AML	**Almayashu**	7.74	360	P	Pn	11 40 00.5	+2.3
	SNR=25						
KZA	**Kyzart**	7.78	8	P	Pn	11 40 01.3	+2.5
	SNR=21						
JASL	**Jaisalmer**	7.81	199	*e*x	Pn	11 39 59.0	-0.2
UCH	**Uchtor**	7.86	4	P	Pn	11 40 01.8	+1.9
	SNR=29						
ULHL	**Ulahol**	8.10	13	P	P	11 40 05.8	+2.5
	SNR=9.0						
AAK	**Ala-Archa**	8.27	4	P	P	11 40 07.8	+2.3
	SNR=12						
AAK	**Ala-Archa**	8.27	4	⇑Pn	P	11 40 07.5	+2.0
	comp=N,12nm,0.8s						
AAK				⇓Sn	Sn	11 41 37.8	-2.1
	comp=N,29nm,0.6s						
AAK	**Ala-Archa**	8.27	4	⇑P	P	11 40 07.5	+2.0
AAK						11 41 37.8	
AAK				pmax	pmax		
	comp=Z,12nm,0.8s						
EKS2	**Erkin-Say**	8.27	0	P	P	11 40 07.5	+1.9
	SNR=24						
KBK	**Karagaybulak**	8.32	6	P	P	11 40 08.8	+2.5
	SNR=7.9						
FRU	**Bishkek**	8.47	5	*e*P	P	11 40 11.0	+2.6
FRU				*e*		11 41 49.0	
FRU				pmax	pmax		
	comp=E,200nm,1.8s						
CHMS	**Chumysh**	8.65	5	P	P	11 40 13.1	+2.3
	SNR=8.6						
TKM2	**Tokmak 2**	8.66	9	P	P	11 40 13.1	+2.1
	SNR=14						
KK31	**Karatay Array**	9.06	345	⇑Pn	P	11 40 16.4	-0.2
	comp=E,9.2nm,0.3s,baz=156,slow=11,SNR=288						
KK31				⇑Sn	Sn	11 41 54.5	-5.2
	comp=E,32nm,0.6s,baz=170,slow=23,SNR=6.8						
KK31	**Karatay Array**	9.06	345	⇑Pn	P	11 40 16.4	-0.2
	comp=E,9.2nm,0.3s						
KK31				Sn	Sn	11 41 54.5	-5.2
KK31	**Karatay Array**	9.06	345	⇑P	P	11 40 16.4	-0.1
KK31						11 41 54.5	
KK31				pmax	pmax		
	comp=Z,9.0nm,0.3s						
KOLN	**Koldanda**	10.73	125	*e*P	P	11 40 38.1	-1.4
	comp=Z,20nm,0.3s						
GKN	**Gorkha**	11.31	121	*e*P	P	11 40 44.9	-2.5
	comp=Z,66nm,0.4s						
DMN	**Daman**	11.87	122	*e*P	P	11 40 52.2	-2.9
	comp=Z,29nm,0.3s						
KKN	**Kakani**	11.89	120	*e*P	P	11 40 52.1	-3.2
	comp=Z,54nm,0.5s						
PKI	**Pulchoki**	12.11	121	*e*P	P	11 40 54.8	-3.5
	comp=Z,71nm,0.5s						
GUN	**Gumba**	12.25	118	*e*P	P	11 40 56.6	-3.6
	comp=Z,74nm,0.5s						
MK02	**Makanchi Array**	13.98	25	⇑P	P	11 41 28.4	+5.4
MK02				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MK31	**Makanchi Array**	14.00	25	⇑P	P	11 41 28.4	+5.2
	comp=Z,1.7nm,0.5s,baz=216,slow=17,SNR=17						
MKAR	**Makanchi Array**	14.00	25	Pn	P	11 41 24.0	+0.8
	comp=Z,0.5nm,0.3s,baz=217,slow=12,SNR=6.3						
LSA	**Lhasa**	15.51	103	P	P	11 41 45.0	+1.9
LSA	**Lhasa**	15.51	103	*e*Pn	P	11 41 41.1	-1.9
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	15.51	103	*e*P	P	11 41 41.1	-2.0
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
POO	**Poona**	15.78	180	*e*x	x	11 41 36.5	
POO				*e*S	S	11 44 41.5	-0.5
KURK	**Kurchatov**	16.72	11	⇑P	P	11 41 57.8	-0.6
	comp=Z,5.0nm,0.7s						
KURK	**Kurchatov**	16.72	11	⇑P	P	11 41 57.8	-0.6
KAD	**Karad**	17.00	178	*e*P	P	11 42 01.5	-0.7
KAD				*e*x	x	11 45 00.9	
HYB	**Hyderabad**	17.44	164	*i* P	P	11 42 08.0	+0.3
HYB				*e*S	S	11 45 18.0	-2.1
HYB	**Hyderabad**	17.44	164	*e*P	P	11 42 08.0	+0.3
HYB				*e*S	S	11 44 55.0	-25
SHL	**Shillong**	18.01	114	*e*x	P	11 42 11.0	-3.8
SHL				*e*x	S	11 45 23.0	-10
AB31	**Akbulak array**	18.02	330	⇑P	P	11 42 13.7	-1.0
	comp=Z,4.9nm,0.6s						
AB31				⇑S	S	11 45 20.7	-12
	comp=Z,2.3nm,0.5s,baz=151,slow=22,SNR=6.3						
VOSK	**Vostochnaya**	18.44	355	⇑P	P	11 42 19.8	-0.2
	comp=Z,12nm,1.0s						
VOSK	**Vostochnaya**	18.44	355	⇑P	P	11 42 19.8	-0.2
	comp=Z,12nm,1.0s						
VOSK	**Vostochnaya**	18.44	355	⇑P	P	11 42 19.8	-0.2
VOSK				pmax	pmax		
	comp=Z,12nm,1.0s						
BVA0	**Borovoye Array**	18.79	354	⇑P	P	11 42 24.1	-0.1
	comp=Z,1.3nm,0.6s,baz=238,slow=37,SNR=25						
BVA0	**Borovoye Array**	18.79	354	⇑P	P	11 42 24.1	-0.1
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	18.79	354	P	P	11 42 23.3	-0.9
	comp=Z,2.4nm,0.3s,baz=156,slow=9.3,SNR=24						
BRVK	**Borovoye**	18.83	354	*e*P	P	11 42 24.5	-0.2
	comp=Z,9.8nm,0.8s						
BRVK	**Borovoye**	18.83	354	*e*P	P	11 42 24.5	-0.2
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHKZ	**Chkalovo**	19.42	354	⇑P	P	11 42 29.6	-2.0
	comp=Z,3.6nm,0.6s						
AKTK	**Aktyubinsk**	19.73	329	⇑P	P	11 42 34.2	-0.9
AKTK				S	S	11 46 06.4	-5.1
AKTO	**Aktyubinsk**	19.73	329	⇑P	P	11 42 34.2	-0.9
	comp=Z,3.2nm,0.7s						
AKTO				⇓S	S	11 46 06.4	-5.1
	comp=Z,1.7nm,1.6s						
AKTO	**Aktyubinsk**	19.73	329	P	P	11 42 33.6	-1.5
	comp=Z,3.6nm,0.3s,baz=132,slow=11,SNR=86						
AKTO				S	S	11 46 06.7	-4.8
	comp=Z,0.3nm,0.3s,baz=346,slow=19,SNR=4.3						
AKTO	**Aktyubinsk**	19.73	329	P	P	11 42 33.6	-1.5
AKTO				S	S	11 46 06.7	-4.8
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ZAL	**Zalesovo**	21.06	18	P	P	11 42 48.1	-1.0
	comp=Z,12nm,0.5s,mb4.5,baz=260,slow=7.4,SNR=30						
ZAL				S	S	11 46 36.2	-2.4
	comp=Z,0.8nm,0.6s,baz=16,slow=24,SNR=5.0						
ZAL	**Zalesovo**	21.06	18	P	P	11 42 48.1	-1.0
ZAL				S	S	11 46 36.2	-2.4
GTA	**Gaotai**	21.44	69	*e*P	P	11 42 53.5	+0.4
GTA				AP		11 42 57.9	
GTA				XP		11 43 00.8	
NVS	**Novosibirsk**	21.52	15	*e*P	P	11 42 51.4	-2.3
NVS				*e*S	S	11 46 49.3	+2.1
NVS				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
NVS				pmax	pmax		
	comp=N,7.0nm,0.5s						
NVS				smax			
	comp=N,15nm,2.0s						
ORR	**Orenburg**	22.01	327	⇑*i*P	P	11 42 57.7	-0.9
ORR				pmax	pmax		
	comp=Z,10.0nm,0.4s,mb4.6						
UMR	**Umm Al-Rimmam**	22.55	265	*e*P	P	11 43 04.4	+0.2
KBD	**Kabd**	22.69	264	*e*P	P	11 43 05.6	0.0
KBD				AMb	AMB	11 43 11.7	
	comp=Z,155nm,0.7s,mb5.5						
MIB	**Mutribah**	22.78	266	*e*P	P	11 43 06.8	+0.3
MIB				AMb	AMB	11 43 13.2	
	comp=Z,64nm,0.6s,mb5.2						
RDF	**Al-Radifah**	22.89	263	*e*P	P	11 43 07.8	+0.2
RDF				AMb	AMB	11 43 08.6	
	comp=Z,53nm,0.7s,mb5.1						
NAY	**Al-Naaiem**	23.04	264	*e*P	P	11 43 09.3	+0.3
NAY				AMb	AMB	11 43 16.9	
	comp=Z,22nm,0.8s,mb4.6						
GNI	**Garni**	23.70	293	LR	LR	11 53 09.2	
	comp=Z,26nm,18.3s,MS2.7,baz=105,slow=38						
ARU	**Arti**	24.38	339	⇑*i*P	P	11 43 22.6	+0.8
	comp=Z,15nm,0.5s,mb4.7						
ARU	**Arti**	24.38	339	⇑*i*P	P	11 43 22.6	+0.9
ARU				pmax	pmax		
	comp=Z,15nm,0.5s,mb4.7						
ZAK	**Zakamensk**	26.84	44	*e*P	P	11 43 43.0	-1.9
ZAK				*e*		11 44 27.1	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.6						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
SONM	**Songino Array**	27.83	51	P	P	11 43 53.7	-0.3
	comp=Z,2.1nm,0.8s,mb3.8,baz=262,slow=9.5,SNR=12						
SONM				LR	LR	11 56 29.0	
	comp=Z,281nm,18.6s,MS3.9,baz=248,slow=40						
AKASG	**Malin Array Be**	36.00	311	P	P	11 45 05.0	-0.6
	comp=Z,0.4nm,0.3s,mb3.9,baz=83,slow=7.7,SNR=5.2						
JOF	**Joensuu**	38.80	330	*e*p	P	11 45 28.2	-0.8
	comp=Z,2.5nm,0.4s,mb4.3						
IDI	**Anoyia**	39.76	286	P	P	11 45 36.1	-1.1
	comp=Z,6.5nm,0.9s,mb4.4,baz=358,slow=22,SNR=2.6						
FINES	**FINESS Array B**	40.47	327	P	P	11 45 41.5	-1.3
	comp=Z,1.8nm,0.6s,mb4.0,baz=117,slow=8.5,SNR=16						
ARCES	**ARCESS Array B**	43.94	338	P	P	11 46 10.6	-0.4
	comp=Z,2.6nm,0.7s,mb4.1,baz=114,slow=8.2,SNR=16						
GERES	**GERESS Array B**	45.97	307	P	P	11 46 27.1	-0.4
	comp=Z,0.6nm,0.8s,mb3.6,baz=52,slow=11,SNR=2.9						
HFS	**Hagfors**	46.09	323	P	P	11 46 27.0	-1.3
	baz=98,slow=10						
NB2	**NORSAR Subarra**	47.40	324	P	P	11 46 37.0	-1.6
	comp=Z,6.4nm,0.7s,mb4.7,baz=95,slow=7.4						
NOA	**NORSAR Array B**	47.40	324	P	P	11 46 37.1	-1.5
	comp=Z,5.2nm,0.6s,mb4.6,baz=96,slow=7.6,SNR=24						
NOA				LR	LR	12 07 48.6	
	comp=Z,28nm,18.8s,MS3.2,baz=15,slow=38						
NAO	**NORSAR Subarra**	47.57	324	P	P	11 46 37.0	-2.9
	comp=Z,6.4nm,0.7s,mb4.8						
NAO	**NORSAR Subarra**	47.57	324	P	P	11 46 37.0	-2.9
NAO				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
INK	**Inuvik**	75.62	10	P	P	11 49 48.3	-0.6
	comp=Z,5.7nm,0.5s,mb4.7,baz=353,slow=7.0,SNR=73						
INK	**Inuvik**	75.62	10	*e*P	P	11 49 48.1	-0.8
	comp=Z,4.9nm,0.6s,mb4.6						
INK	**Inuvik**	75.62	10	*e*P	P	11 49 48.1	-0.8
INK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ILAR	**Eielson Array**	76.19	17	P	P	11 49 51.4	-0.8
	comp=Z,1.6nm,0.7s,mb4.0,baz=302,slow=4.8,SNR=20						

ILAR	Eielson Array	76.19	17	P	P	11 49 51.4	-0.8
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DBIC	Dimbokro	76.84	269	P	P	11 49 55.5	-1.3
	comp=Z,3.5nm,1.0s,mb4.2,baz=45,slow=5.7,SNR=3.6						
DBIC	Dimbokro	76.84	269	P	P	11 49 55.5	-1.3
DBIC				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BOSA	Boshof	77.61	222	P	P	11 50 00.1	-0.8
	comp=Z,3.4nm,0.9s,mb4.3,baz=55,slow=10,SNR=2.9						
BOSA	Boshof	77.61	222	P	P	11 50 00.1	-0.7
BOSA				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
DAWY	Dawson	78.46	14	eP	P	11 50 04.3	-0.4
WRA	Warramunga Arr	78.98	123	P	P	11 50 08.5	0.0
	comp=Z,5.4nm,0.7s,mb4.6,baz=325,slow=5.4,SNR=14						
WRA	Warramunga Arr	78.98	123	P	P	11 50 08.5	0.0
WRA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WRAB	Tennant Creek	78.99	123	eP	P	11 50 08.2	-0.3
WB2	Warramunga Arr	78.99	123	eP	P	11 50 08.4	-0.2
ASPA	Alice Springs	81.22	126	eP	P	11 50 20.3	-0.1
YKA	Yellowknife Ar	83.23	4	P	P	11 50 30.0	0.0
	comp=Z,3.9nm,0.7s,mb4.5,baz=346,slow=5.5,SNR=6.6						
YKA	Yellowknife Ar	83.23	4	P	P	11 50 30.0	0.0
YKA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
HNR	Honiara	92.17	100	LR	LR	12 28 26.4	
	comp=Z,233nm,21.0s,MS4.6,baz=164,slow=33						

GUC 19 12:08:38.7±0.6, 24.18S×67.61W, h260^{km}, ML3.8, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEN1	Los Morros	2.50	288	⇓iP	P	12 09 29.4	+2.4
CEN1				i S	S	12 10 07.5	+2.9
CEN1				AMP		12 10 10.8	
	comp=N,96nm,0.9s						
CPN1	Cerro Paranal	2.58	260	eP	P	12 09 30.1	+2.2
CPN1				i S	S	12 10 09.4	+3.3
CPN1				AMP		12 10 12.1	
	comp=E,188nm,0.4s						
ANCH	Antofagasta	2.61	280	⇑iP	P	12 09 29.8	+1.6
ANCH				i S	S	12 10 08.7	+2.1
CRCH	Chaqaral	3.48	231	i S	S	12 10 26.2	+3.1
CDCH	Caldera	4.09	225	i S	S	12 10 38.7	+3.0

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*NEIC **19** 12:17:19.0±0.2, 22.15S×178.36W, mb4.6/34, Error ellipse: s-maj=9.2km s-min=5.0km az=148.0*

*IDC **19** 12:17:19.1±0.7, 22.13S×178.42W, h373^{km}±6^{km}, mb4.2/11, mb1 4.3/13, mb1mx4.3/16, mbtmp4.9/13, Error ellipse: s-maj=15.0km s-min=10.8km az=148.0*

ISC 19 12:17:18.1±0.2, 22.33S±0.03×178.36W±0.05, h378^{km}, h378^{km}±2.8^{km}:pP-P, n172, σ1^{s}23/120, mb4.5/42, 8C-9D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	6.90	177	S	S	12 20 19.8	-1.8
	296nm,0.3s,baz=72,slow=24,SNR=9.8						
AFI	Afiamalu	10.46	38	P	P	12 19 34.1	-8.6
	57nm,0.3s,baz=231,slow=2.4,SNR=44						
AFI				S	S	12 21 19.8	-17
	27nm,0.3s,baz=212,slow=24,SNR=7.8						
AFI	Afiamalu	10.46	38	eP	P	12 19 34.1	-8.6
	150nm,0.4s						
FUNA	Funafuti	13.93	350	eP	P	12 20 23.3	+0.6
FUNA				eS	S	12 22 53.1	+3.0
DZM	Mont Dzumac	14.08	268	P	P	12 20 24.8	+0.6
	5.3nm,0.3s,baz=81,slow=17,SNR=60						
NOUC	Port Laguerre	14.20	268	eP	P	12 20 26.6	+1.0
NOUC	Port Laguerre	14.20	268	eP	P	12 20 26.6	+1.0
OUZ	Omahuta	14.64	207	PN	P	12 20 31.0	+0.9
KUZ	Kuaotunu	15.25	198	PN	P	12 20 37.7	+1.2
MXZ	Matakaoa Point	15.45	190	ePN	P	12 20 36.9	-1.6
MXZ				SN	S	12 23 17.2	-2.5
MTAZ	Motutapu	15.54	201	ePN	P	12 20 40.4	+1.0
OTAZ	Otara	15.68	200	PN	P	12 20 42.8	+1.8
PUZ	Puketiti	15.96	190	ePN	P	12 20 39.6	-4.1
TOZ	Tahuroa Road	16.23	198	PN	P	12 20 47.9	+1.3
MWZ	Matawai	16.34	192	ePN	P	12 20 44.9	-2.7
MWZ				eSN	S	12 23 40.4	+3.8
URZ	Urewera	16.34	193	P	P	12 20 47.6	-0.1
	42nm,0.3s,baz=332,slow=2.9,SNR=110						
URZ				S	S	12 23 41.1	+4.3
	25nm,0.3s,baz=95,slow=23,SNR=17						
URZ	Urewera	16.34	193	PN	P	12 20 44.6	-3.2
URZ				SN	S	12 23 37.5	+0.8
TAZ	Tarawera	16.45	194	PN	P	12 20 49.5	+0.7
KNZ	Kokohu	16.98	191	ePN	P	12 20 53.5	-0.7
KNZ				SN	S	12 23 51.2	+2.6
HIZ	Hauiti	17.14	198	PN	P	12 20 57.2	+1.3
RAR	Rarotonga	17.31	90	P	P	12 20 56.4	-1.3
	1.1nm,0.3s,baz=219,slow=11,SNR=4.5						
BKZ	Black Stump Fm	17.35	194	PN	P	12 20 55.0	-2.9
BKZ				eSN	S	12 23 57.7	+2.2
VRZ	Vera Road	17.74	198	ePN	P	12 21 02.5	+0.5
PXZ	Pawanui	18.10	192	PN	P	12 21 04.0	-1.6
PXZ				eSN	S	12 24 11.3	+1.8
TSZ	Takapari Road	18.32	194	PN	P	12 21 04.9	-2.8
TSZ				eSN	S	12 24 18.5	+5.1
MRZ	Mangatainoka R	18.98	194	ePN	P	12 21 12.5	-1.8
MRZ				eSN	S	12 24 25.1	-0.2
SNZO	South Karori	19.80	196	eP	P	12 21 21.6	-0.7
	206nm,0.6s						
QRZ	Quartz Range	19.98	201	PN	P	12 21 24.7	+0.7
NNZ	Nelson	20.07	198	ePN	P	12 21 23.7	-1.2
THZ	Tophouse	20.72	199	PN	P	12 21 30.5	-0.6
DSZ	Denniston Nort	21.05	201	PN	P	12 21 34.5	+0.2
KHZ	Kahutara	21.14	197	ePN	P	12 21 34.1	-1.1
LTZ	Lake Taylor	21.84	199	PN	P	12 21 40.3	-1.6
WVZ	Waitaha Valley	22.59	201	PN	P	12 21 47.1	-1.7
RPZ	Rata Peaks	23.06	200	P	P	12 21 54.4	+1.3
	133nm,0.6s,mb5.4,baz=327,slow=1.6,SNR=40						
RPZ	Rata Peaks	23.06	200	ePN	P	12 21 51.7	-1.4
FOZ	Fox Glacier	23.38	202	PN	P	12 21 53.2	-2.9
JCZ	Jackson Bay	24.15	203	ePN	P	12 22 01.3	-1.9
TUZ	Tuapeka	25.51	200	ePN	P	12 22 14.1	-1.3
ARMA	Armidale	28.00	247	eP	P	12 22 38.7	+0.9
CNB	Canberra Magne	30.95	238	⇓iP	P	12 23 04.8	+1.5
	38nm,0.7s,mb4.7						
CTA	Charters Tower	33.02	267	eP	P	12 23 21.4	+0.2
	27nm,0.7s,mb4.6						
CTA	Charters Tower	33.02	267	ScP		12 29 04.0	
	2.2nm,0.8s,baz=207,slow=6.8,SNR=2.5						
CTAO	Charters Tower	33.02	267	⇑iP	P	12 23 21.4	+0.2
	41nm,0.9s,mb4.7						
TOO	Toolangi	34.57	236	eP	P	12 23 35.1	+1.0
	19nm,0.5s,mb4.6						
PMG	Port Moresby	35.47	286	P	P	12 23 41.7	-0.3
	62nm,0.9s,mb4.8,baz=99,slow=6.7,SNR=20						
PMG	Port Moresby	35.47	286	eP	P	12 23 41.5	-0.4
	66nm,0.9s,mb4.9						
STKA	Stephens Creek	36.72	246	⇑iP	P	12 23 52.6	+0.4
	12nm,0.4s,mb4.5						
STKA	Stephens Creek	36.72	246	P	P	12 23 52.7	+0.5
	14nm,0.5s,mb4.5,baz=90,slow=9.8,SNR=92						
STKA				ScP		12 29 18.0	
	2.8nm,0.9s,baz=124,slow=5.7,SNR=3.1						
ASPA	Alice Springs	43.80	259	eP	P	12 24 49.8	-0.1
WB2	Warramunga Arr	44.03	264	eP	P	12 24 50.7	-1.0
WRAB	Tennant Creek	44.03	264	⇑iP	P	12 24 50.6	-1.2
	33nm,0.9s,mb4.5						
WRA	Warramunga Arr	44.04	264	P	P	12 24 51.1	-0.8
	15nm,0.7s,mb4.2,baz=99,slow=8.1,SNR=13						
WRA				ScP		12 29 47.2	
	4.9nm,0.9s,baz=94,slow=4.2,SNR=12						
WRA				S	S	12 30 54.4	-0.9
	1.4nm,0.8s,baz=99,slow=13,SNR=3.7						
KAKA	Kakadu	47.70	273	eP	P	12 25 38.0	+18
	9.6nm,0.6s,mb4.2						
FORT	Forrest	48.28	248	eP	P	12 25 23.4	-1.2
	45nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	52.47	264	eP	P	12 25 55.2	-0.8
	21nm,0.6s,mb4.6						
SBA	Scott Base	56.03	184	eP	P	12 26 23.3	+2.7
	35nm,0.8s,mb4.7						
VNDA	Vanda	56.06	185	eP	P	12 26 22.2	+1.3
	12nm,0.7s,mb4.3						
KLBR	Kellerberrin	56.99	246	eP	P	12 26 27.4	-0.5
	39nm,0.7s,mb4.8						
MUN	Mundaring	58.24	245	eP	P	12 26 36.3	-0.1
CASY	Casey	62.17	206	eP	P	12 27 03.9	+1.8
QSPA	South Pole Qui	67.74	180	⇓iP	P	12 27 39.1	+1.9
MJAR	Matsushiro Arr	71.48	324	P	P	12 27 58.5	-1.8
	3.0nm,0.6s,mb4.2,baz=152,slow=5.6,SNR=9.8						
MAW	Mawson	79.73	200	eP	P	12 28 49.9	+4.1
	4.8nm,0.6s,mb4.4						
MAW	Mawson	79.73	200	P	P	12 28 48.3	+2.5
	7.0nm,0.8s,mb4.5,baz=131,slow=5.8,SNR=18						
KIPM	Iron Peak	80.25	40	eP	P	12 28 47.5	-1.6
CMB	Columbia Colle	81.03	43	eP	P	12 28 51.9	-1.3
	3.7nm,0.8s,mb4.2						
YBH	Yreka Blue Hor	81.93	39	eP	P	12 28 56.9	-0.8
	5.8nm,0.8s,mb4.5						
YBH				epP	pP	12 30 25.7	+1.4
HUMO	Hull Mountain	82.34	38	eP	P	12 28 59.7	-0.1
	9.5nm,1.2s,mb4.5						
NVAR	Mina Array Bea	82.58	43	P	P	12 29 01.6	+0.5
	3.4nm,0.7s,mb4.3,baz=209,slow=6.9,SNR=28						
NVAR				pP	pP	12 30 27.4	-0.5
	2.1nm,0.9s,baz=210,slow=6.5,SNR=7.5						
MNV	Mina	82.68	43	eP	P	12 29 01.3	-0.3
	7.8nm,1.0s,mb4.5						
LDFC	Landfair	82.78	48	eP	P	12 29 02.0	-0.1
TPNV	Topopah Spring	83.06	46	eP	P	12 29 02.7	-0.8
	5.0nm,0.9s,mb4.3						
TPNV				epP	pP	12 30 32.1	+1.7
MOD	Modoc	83.44	40	eP	P	12 29 05.3	0.0
	5.3nm,0.8s,mb4.4						
WVOR	Wild Horse Val	84.75	40	eP	P	12 29 11.8	0.0
	5.0nm,1.1s,mb4.3						
WVOR				epP	pP	12 30 37.5	-1.5
WVOR				ePP	PP	12 32 31.9	-2.9
ELK	Elko	85.85	43	eP	P	12 29 17.1	-0.1
	3.3nm,1.0s,mb4.1						
VNA3	Neumayer Olymp	86.34	176	e	P	12 29 25.6	+6.8
VNA3	Neumayer Olymp	86.34	176	e	P	12 29 32.4	+14
VNA3	Neumayer Olymp	86.34	176	e	tx	12 29 49.8	
VNA3	Neumayer Olymp	86.34	176	⇓iP	P	12 29 19.5	+0.7
VNA3				e		12 29 32.4	
VNA3				e		12 29 49.8	
VNA3				e	pP	12 30 48.1	+1.7
MSU	Marysvale	86.62	46	⇑iP	P	12 29 21.9	+1.0
VNA2	Neumayer--Watz	86.78	177	e	P	12 29 27.3	+6.4
VNA2	Neumayer--Watz	86.78	177	e	P	12 29 37.2	+16
VNA2	Neumayer--Watz	86.78	177	e	tx	12 29 52.8	
VNA2	Neumayer--Watz	86.78	177	⇓iP	P	12 29 21.9	+1.0
VNA2				e		12 29 37.2	
VNA2				e		12 29 52.8	
VNA2				e	pP	12 30 50.6	+2.0
BMO	Blue Mountains	86.95	39	eP	P	12 29 22.1	-0.3
	3.3nm,0.7s,mb4.3						
VNA1	Neumayer--Stat	87.01	177	e	P	12 29 29.5	+7.5
VNA1	Neumayer--Stat	87.01	177	e	tx	12 29 53.5	
VNA1	Neumayer--Stat	87.01	177	⇓iP	P	12 29 23.4	+1.4
VNA1				e		12 29 29.5	
VNA1				e		12 29 53.5	
VNA1				e	pP	12 30 51.9	+2.2
TMUT	Trail Mountain	87.67	46	eP	P	12 29 26.7	+0.8
SRU	San Rafael	88.03	46	eP	P	12 29 27.8	+0.2
	6.6nm,0.7s,mb4.6						
MNTX	Cornudas Mount	88.08	55	eP	P	12 29 28.2	+0.1
	9.7nm,1.0s,mb4.6						
PLCA	Paso Flores	88.26	134	P	P	12 29 30.0	+1.3
	2.2nm,0.7s,mb4.1,baz=224,slow=7.5,SNR=7.4						
TXAR	Lajitas Array	88.33	57	P	P	12 29 30.1	+0.9
	2.4nm,0.7s,mb4.1,baz=219,slow=6.5,SNR=32						
TXAR				pP	pP	12 30 57.7	+0.5
	3.5nm,1.0s,baz=217,slow=6.3,SNR=12						
TXAR	Lajitas Array	88.33	57	P	P	12 29 30.1	+0.9
TXAR				pP	pP	12 30 57.7	+0.5
PV10	Paradox Valley	88.66	47	eP	P	12 29 27.8	-2.8
GDL2	Guadalupe Moun	89.08	55	eP	P	12 29 33.5	+0.8
CLNB	Carlsbad	89.48	55	eP	P	12 29 34.8	+0.3
MCMT	McKenzie Canyo	89.56	40	eP	P	12 29 34.9	+0.2
MCMT				epP	pP	12 31 00.6	-2.3
REDW	Red Top Meadow	90.01	42	eP	P	12 29 36.2	-0.5
	12nm,1.2s,mb4.7						
REDW				epP	pP	12 31 07.5	+2.4
TPAW	Teton Pass	90.02	42	eP	P	12 29 37.5	+0.7
	8.0nm,1.1s,mb4.6						
TPAW				epP	pP	12 31 01.3	-3.7
COLA	College	90.06	13	P	P	12 29 35.1	-1.3
	5.6nm,0.7s,mb4.6						
SNOW	Snow King Moun	90.12	42	⇓iP	P	12 29 38.3	+1.0
	7.1nm,0.6s,mb4.8						
ILAR	Eielson Array	90.17	13	P	P	12 29 35.3	-1.6
	1.8nm,0.5s,mb4.2,baz=220,slow=5.7,SNR=29						
ILAR				pP	pP	12 31 02.8	-2.4
	1.7nm,1.1s,baz=226,slow=5.6,SNR=4.6						
IMW	Indian Meadow	90.23	42	eP	P	12 29 38.2	+0.5
	7.3nm,0.7s,mb4.7						
MOOW	Moose Ponds	90.28	42	eP	P	12 29 37.7	-0.2
	3.0nm,0.7s,mb4.3						
LOHW	Long Hollow	90.30	42	eP	P	12 29 38.0	0.0
	5.1nm,0.6s,mb4.6						
QLMT	Earthquake Lak	90.42	41	eP	P	12 29 39.8	+1.2
PDAR	Pinedale Array	90.52	43	P	P	12 29 39.0	0.0
	4.4nm,0.7s,mb4.5,baz=215,slow=2.7,SNR=42						
YMR	Madison River	90.62	41	eP	P	12 29 40.3	+0.8
	9.9nm,0.8s,mb4.8						
BOZ	Bozeman (W)	90.73	40	eP	P	12 29 40.3	+0.3
	5.4nm,0.8s,mb4.5						
BOZ				epP	pP	12 31 07.2	-1.2
LKWY	Lake	90.91	42	P	P	12 29 42.9	+2.0
	4.5nm,0.7s,mb4.5						
MKAR	Makanchi Array	112.20	313	PKiKP		12 35 10.1	
	0.5nm,0.4s,baz=154,slow=0.5,SNR=13						
BVAR	Borovoye Array	120.25	319	PKP	PKPdf	12 35 24.3	-0.3
	2.0nm,0.4s,baz=120,slow=1.4,SNR=27						
SUR	Sutherland	122.59	199	PKP	PKPdf	12 35 31.5	+1.8
	6.8nm,0.9s,baz=204,slow=12,SNR=2.7						
AKTO	Aktyubinsk	128.19	317	PKP	PKPdf	12 35 40.0	0.0
	1.8nm,0.7s,baz=75,slow=3.2,SNR=4.4						
KEV	Kevo	130.19	349	ep	PKPdf	12 35 45.4	+2.0
	7.8nm,0.9s						
ARCES	ARCESS Array B	130.65	349	PKP	PKPdf	12 35 44.4	+0.1
	3.4nm,0.5s,baz=63,slow=2.7,SNR=28						
ARCES				SKPbc		12 38 38.4	
	16nm,0.9s,baz=27,slow=5.4,SNR=12						
JOF	Joensuu	134.76	341	ep	PKPdf	12 35 50.0	-2.0
	4.9nm,0.5s						
KAF	Kangasniemi	136.81	343	ep	PKPdf	12 35 55.9	+0.1
	2.7nm,0.5s						
FINES	FINESS Array B	137.42	343	PKhKP		12 35 45.0	
	2.1nm,1.0s,slow=3.8,SNR=3.5						
FINES				PKP	PKPdf	12 35 58.2	+1.2
	2.4nm,0.7s,baz=79,slow=2.7,SNR=11						
FINES				SKPbc		12 38 56.7	
	2.2nm,0.8s,baz=342,slow=6.0,SNR=3.7						
KMBO	Kilima Mbogo	138.17	241	PKP	PKPdf	12 36 03.5	+3.9
	1.2nm,0.5s,baz=41,slow=3.2,SNR=6.0						
NB2	NORSAR Subarra	140.75	353	PKPabc	PKPdf	12 35 56.6	-6.3
	0.5nm,0.4s,baz=10.0,slow=3.1						
NOA	NORSAR Array B	140.75	353	PKhKP		12 35 57.4	
	1.0nm,0.5s,baz=9.1,slow=2.3,SNR=7.9						
NOA				PKP	PKPdf	12 36 04.9	+2.0
	1.1nm,0.5s,baz=13,slow=4.0,SNR=4.4						
AFFS	‘Afif	142.02	281	P	PKPdf	12 36 09.3	+3.1
AKASG	Malin Array Be	144.43	330	PKP	PKPdf	12 36 08.6	-0.9
	2.7nm,0.3s,baz=42,slow=4.4,SNR=24						
AKASG				SKPbc		12 39 14.9	
	0.3nm,0.3s,baz=42,slow=1.9,SNR=5.3						
KWP	Kalwaria	148.08	334	ePKPdf	PKPdf	12 36 14.4	-1.2
KWP				ePKPbc	PKPdf	12 36 20.4	+4.8
BURAR	Bucovina Array	148.47	329	⇑P	PKPdf	12 36 22.9	+6.6
JMQS	Jabal Moqyreh	148.52	289	P	PKPdf	12 36 21.1	+4.2
KOLS	Kolonicke sedl	148.81	333	ePKP	PKPdf	12 36 22.6	+5.8
STHS	Stebnicka Huta	148.84	335	ePKP	PKPdf	12 36 23.2	+6.4
VRI	Vrincioaia	148.89	325	⇓P	PKPdf	12 36 24.3	+7.3
CRVS	Cervenica-Dubn	149.16	334	ePKP	PKPdf	12 36 22.5	+5.1
JMOS	Jabal al Moall	149.16	290	P	PKPdf	12 36 24.0	+6.0
ALWS	Ilw as Safayha	149.19	290	P	PKPdf	12 36 24.0	+5.9
BDAS	Al Bad‘	149.23	288	P	PKPdf	12 36 25.8	+7.7
HAQS	Haql	149.33	290	P	PKPdf	12 36 24.6	+6.3
TAYS	Tayyib Ism	149.42	289	P	PKPdf	12 36 26.8	+8.4
OKC	Ostrava-Krasne	149.62	339	ePKPbc	PKPdf	12 36 25.1	+7.0
UPC	Upice	149.71	342	ePKPbc	PKPdf	12 36 24.4	+6.2
DPC	Dobruska-Polom	149.75	341	ePKPbc	PKPdf	12 36 24.4	+6.1
CLL	Collm	149.76	346	⇑iPKP1	PKPdf	12 36 24.4	+6.2
CLL				i		12 36 26.1	
CLL				e*PPKP		12 37 54.0	
KECS	Kecovo	149.89	335	ePKP	PKPdf	12 36 25.1	+6.6
PVCC	Panska Ves	150.09	343	ePKPbc	PKPdf	12 36 25.6	+6.8
DRGR		150.24	330	⇓P	PKPdf	12 36 25.3	+6.2
VYHS	Vyhne	150.51	336	ePKP	PKPdf	12 36 26.0	+6.5
VYHS				epP		12 52 12.4	
VYHS				e		12 52 17.9	
PRU	Pruhonice	150.59	343	ePKPbc	PKPdf	12 36 26.4	+6.8
NKC	Novy Kostel	150.89	346	ePKPbc	PKPdf	12 36 27.1	+7.1
TREC	Trest	150.94	341	ePKPbc	PKPdf	12 36 28.9	+8.8
KHC	Kasperske Hory	151.63	343	ePKPbc	PKPdf	12 36 28.7	+7.6
KHC	Kasperske Hory	151.63	343	ePKPbc	PKPdf	12 36 28.5	+7.4
GERES	GERESS Array B	151.86	343	PKPbc	PKPdf	12 36 29.2	+7.8
	5.0nm,0.6s,baz=40,slow=2.0,SNR=32						
GIVF	Givet	152.17	356	ePKIKP	PKPdf	12 36 30.5	+8.6
	22nm,0.7s						
BAIF	Baives	152.25	356	ePKIKP	PKPdf	12 36 30.5	+8.5
	15nm,0.9s						
MOA	Molln	152.60	341	⇑eP	PKPdf	12 36 31.9	+9.3
	comp=Z,3.0nm,0.5s						
FLN	La Foliniere	153.57	3	ePKIKP	PKPdf	12 36 32.5	+8.7
	11nm,0.6s						
CDF	Champ du Feu	153.59	352	ePKIKP	PKPdf	12 36 33.5	+10
	15nm,1.1s						
LDF	La Druitiere	153.76	3	ePKIKP	PKPdf	12 36 33.0	+8.9
	8.0nm,0.6s						
ROSF	Rostrenen	153.76	7	ePKIKP	PKPdf	12 36 33.3	+9.2
WATA	Walderalm	153.80	345	⇑eP	PKPdf	12 36 35.0	+11
	comp=Z,3.6nm,0.5s						
WTTA	Wattenberg	153.85	344	⇓eP	PKPdf	12 36 35.6	+11
	comp=Z,4.2nm,0.4s						
SGMF	Saint Gilles	153.92	6	ePKIKP	PKPdf	12 36 33.2	+8.9
GRR	Gorron	153.93	4	ePKIKP	PKPdf	12 36 33.5	+9.2
DAVOX	Davos	154.71	347	PKPbc	PKPdf	12 36 35.8	+10
	4.5nm,0.7s,baz=27,slow=2.3,SNR=5.1						
LOR	Lormes	155.06	356	ePKIKP	PKPdf	12 36 34.7	+8.9
	5.6nm,0.6s						
SSF	Saint Saulge	155.28	357	ePKIKP	PKPdf	12 36 35.1	+9.0
LPL	La Plagne	156.50	351	ePKIKP	PKPdf	12 36 37.7	+10
LPG	La Plagne	156.52	351	ePKIKP	PKPdf	12 36 37.8	+10
	2.2nm,0.3s						
MBDF	Montbardon	157.27	350	ePKIKP	PKPdf	12 36 38.5	+10
	8.0nm,0.7s						
FRF	La Foret Royal	158.43	350	ePKIKP	PKPdf	12 36 39.7	+9.3
	18nm,0.9s						
MTLF	Montolieu	159.04	359	ePKIKP	PKPdf	12 36 40.5	+9.4
DBIC	Dimbokro	163.22	157	PKP	PKPdf	12 36 37.0	+0.8
	3.7nm,1.0s,baz=193,slow=2.5,SNR=4.4						

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*IDC **19** 12:27:46.4±1.7, 20.09S×177.54W, h491^{km}±19^{km}, mb3.5/13, mb1 3.7/16, mb1mx3.7/21, mbtmp4.4/16, Error ellipse: s-maj=24.3km s-min=10.9km az=147.0*

*NEIC **19** 12:27:47.4±1.0, 20.06S×177.59W, h502^{km}±12^{km}, mb4.4/5, Error ellipse: s-maj=15.2km s-min=8.4km az=144.0*

ISC 19 12:27:45.3±1.1, 20.0S±0.1×177.6W±0.1, h484^{km}±13^{km}, n46, σ0^{s}97/36, mb3.9/17, 1C-4D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.25	43	P	P	12 29 46.1	+0.9
	12nm,0.3s,baz=49,slow=11,SNR=10						
AFI				S	S	12 31 19.1	-1.2
	19nm,0.3s,baz=75,slow=17,SNR=8.9						
DZM	Mont Dzumac	15.04	259	P	P	12 30 59.2	+2.5
	1.1nm,0.3s,baz=78,slow=19,SNR=17						
URZ	Urewera	18.73	193	P	P	12 31 32.2	-1.0
	3.0nm,0.3s,baz=340,slow=2.1,SNR=19						
CTA	Charters Tower	33.92	264	eP	P	12 33 48.5	+0.2
	4.6nm,0.6s,mb4.1						
CTA	Charters Tower	33.92	264	P	P	12 33 48.6	+0.3
	5.9nm,0.6s,mb4.2,baz=100,slow=9.8,SNR=17						
CTAO	Charters Tower	33.92	264	eP	P	12 33 48.1	-0.2
	17nm,1.3s,mb4.3						
PMG	Port Moresby	35.62	282	P	P	12 34 03.0	+0.5
	13nm,0.8s,mb4.4,baz=68,slow=9.8,SNR=5.0						
TOO	Toolangi	36.48	233	eP	P	12 34 10.0	+0.5
	6.4nm,0.5s,mb4.3						
STKA	Stephens Creek	38.33	244	P	P	12 34 25.1	+0.4
	3.1nm,0.5s,mb4.0,slow=9.1,SNR=5.9						
ASPA	Alice Springs	45.00	256	eP	P	12 35 18.1	-0.1
WB2	Warramunga Arr	45.03	261	eP	P	12 35 17.3	-1.1
WRA	Warramunga Arr	45.05	261	P	P	12 35 17.7	-0.9
	1.8nm,0.3s,mb4.0,baz=96,slow=7.4,SNR=29						
KAKA	Kakadu	48.35	271	⇑iP	P	12 36 01.6	+18
	6.3nm,0.6s,mb4.1						
FITZ	Fitzroy Crossi	53.47	262	eP	P	12 36 20.5	-0.9
	7.7nm,1.5s,mb3.8						
QSPA	South Pole Qui	70.03	180	⇓iP	P	12 38 08.8	+0.4
	13nm,0.7s,mb4.6						
NVAR	Mina Array Bea	80.43	43	P	P	12 39 07.9	+1.1
	1.6nm,0.9s,mb3.6,baz=207,slow=7.1,SNR=10						
MAW	Mawson	82.13	200	P	P	12 39 14.2	-0.7
	1.9nm,0.6s,mb3.8,baz=142,slow=3.4,SNR=8.0						
ELK	Elko	83.68	43	P	P	12 39 23.7	+0.4
	0.3nm,0.4s,mb3.1,baz=243,slow=5.5,SNR=6.1						
ELK	Elko	83.68	43	P	P	12 39 23.7	+0.4
TXAR	Lajitas Array	86.48	57	P	P	12 39 38.6	+1.5
	1.4nm,0.7s,mb3.7,baz=220,slow=6.6,SNR=25						
NEW	Newport	86.78	36	P	P	12 39 36.9	-1.2
	0.7nm,0.4s,mb3.8,baz=63,slow=4.5,SNR=2.9						
ANMO	Albuquerque	86.82	51	P	P	12 39 39.3	+0.7
	1.2nm,0.6s,mb3.8,baz=309,slow=6.5,SNR=6.0						
MCMT	McKenzie Canyo	87.35	40	eP	P	12 39 42.1	+1.2
ILAR	Eielson Array	87.78	13	P	P	12 39 41.4	-1.0
	0.6nm,0.5s,mb3.5,baz=222,slow=5.7,SNR=14						
PDAR	Pinedale Array	88.36	43	P	P	12 39 46.0	+0.4
	1.5nm,0.6s,mb3.9,baz=219,slow=2.8,SNR=15						
VNA3	Neumayer Olymp	88.58	176	e	P	12 39 52.7	+6.7
VNA3	Neumayer Olymp	88.58	176	e	P	12 39 55.5	+9.5
VNA3	Neumayer Olymp	88.58	176	⇓iP	P	12 39 45.6	-0.4
VNA3				e		12 39 52.7	
VNA3				e		12 39 55.5	
VNA2	Neumayer--Watz	89.02	177	e	P	12 39 54.8	+6.7
VNA2	Neumayer--Watz	89.02	177	e	P	12 39 57.8	+10
VNA2	Neumayer--Watz	89.02	177	⇓iP	P	12 39 47.9	-0.2
VNA2				e		12 39 54.8	
VNA2				e		12 39 57.8	
VNA1	Neumayer--Stat	89.25	176	e	P	12 39 56.8	+7.6
VNA1	Neumayer--Stat	89.25	176	e	P	12 39 59.4	+10
VNA1	Neumayer--Stat	89.25	176	⇓iP	P	12 39 49.2	0.0
VNA1				e		12 39 56.8	
VNA1				e		12 39 59.4	
INK	Inuvik	93.73	15	P	P	12 40 08.3	-1.5
	1.0nm,1.0s,mb3.8,baz=229,slow=9.3,SNR=3.6						
MKAR	Makanchi Array	111.16	314	PKiKP		12 45 21.6	
	1.1nm,0.9s,baz=195,slow=1.3,SNR=5.1						
CHKZ	Chkalovo	118.78	321	ePKPdf	PKPdf	12 45 33.8	-3.6
BVAR	Borovoye Array	118.97	320	PKP	PKPdf	12 45 37.2	-0.6
	0.8nm,0.5s,baz=102,slow=1.4,SNR=7.4						
ARCES	ARCESS Array B	128.54	350	PKP	PKPdf	12 45 55.4	-0.5
	3.1nm,0.9s,baz=45,slow=6.9,SNR=5.6						
AKASG	Malin Array Be	142.79	332	PKhKP		12 46 19.1	
	0.8nm,0.3s,baz=42,slow=4.3,SNR=13						
CLL	Collm	147.70	348	P	PKPdf	12 46 34.7	+4.1
	logA/T=1.1						
CLL	Collm	147.70	348	i P	PKPdf	12 46 34.7	+4.1
BRG	Berggiesshubel	147.91	346	eP	PKPdf	12 46 35.4	+4.5
GRA1	Grafenberg Arr	149.59	349	ePKP	PKPdf	12 46 39.9	+6.2
GRF	Grafenberg Arr	149.59	349	ePKP	PKPdf	12 46 39.9	+6.2
GERES	GERESS Array B	149.86	345	PKPbc	PKPdf	12 46 40.3	+6.2
	2.4nm,0.8s,baz=45,slow=1.9,SNR=19						

JMA 19 12:36:30.6±0.2, 38.24N×144.68E, h54^{km}, M3.8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.50	291	P	P	12 37 10.0	+0.2
MIYJ	Miyakonagasawa	2.60	302	P	P	12 37 11.1	-0.1
MIYJ				eS	S	12 37 41.3	-0.4
JIO	Ouri	2.63	276	P	P	12 37 11.7	+0.1
JIO				eS	S	12 37 42.4	0.0
JMK	Ichinoseki	2.80	286	P	P	12 37 14.4	+0.3
JMK				eS	S	12 37 47.3	+0.5
JOT	Ohata	4.20	319	eS	S	12 38 19.0	-3.2
JCH	Churui	4.48	347	P	P	12 37 35.1	-2.7
JCH				eS	S	12 38 23.8	-5.4
JKB	Kayabe	4.59	324	P	P	12 37 39.4	+0.1
JRY	Ryogami san	5.12	246	P	P	12 37 45.8	-0.9
JRY				eS	S	12 38 41.6	-3.6
NEM2	Nemuro 2	5.18	9	P	P	12 37 42.7	-4.8
NEM2				eS	S	12 38 37.9	-8.8
JOD2	Odawara 2	5.38	238	P	P	12 37 49.5	-0.8
JOD2				eS	S	12 38 47.4	-4.4
MAT	Matsushiro	5.42	254	P	P	12 37 51.5	+0.6
MAT				eS	S	12 38 53.5	+0.7
JOSM	Okushiri--Mats	5.53	316	P	P	12 37 52.9	+0.5

JTKR	Abashiri--Toko	5.75	354	P	P	12 37 52.8	-2.7
JTKR				*e*S	S	12 38 54.2	-6.8

PGC ***19*** *12:40:01.1, 48.44N×128.95W, $h10^{km}$, MLSn4.8/1, Mw5.4/9, Mw5.4, mb5.1/70(NEIC), MS4.7/67(NEIC), MW5.3(HRVD), Northern Juan de Fuca ridge.*

MOS ***19*** *12:40:02.9±1.6, 48.70N×128.58W, $h9^{km}$, mb5.3/52, MS4.7/33, Error ellipse: s-maj=7.1km s-min=4.1km az=110.2*

IDC ***19*** *12:40:03.6±0.6, 48.55N×128.67W, mb4.5/17, mb1 4.7/26, mb1mx4.7/29, mbtmp4.6/26, ML4.0/8, MS4.7/25, Ms1 4.7/25, ms1mx4.6/30, Error ellipse: s-maj=16.4km s-min=9.0km az=50.0*

BJI ***19*** *12:40:04.3, 48.80N×128.60W, $h10^{km}$, mB5.4, mb4.8, Ms5.3, Msz4.9*

HRVD ***19*** *12:40:04.4±0.2, 48.52N×128.88W, $h16^{km}$, MW5.3/76, Centroid moment Tensor Solution. LP body waves: s54,c93;Mantle waves: s76,c165; Half duration: $1^{s}0$ Moment tensor: Scale 10^{16}Nm; M_{rr}-0.80±.20; $M_{\theta\theta}$-1.96±.17; $M_{\phi\phi}$2.76±.18; $M_{r\theta}$-0.32±.49; $M_{\theta\phi}$8.79±.17; $M_{\phi r}$-2.95±.53; Best double couple: $M_0$9.551×10^{16} NP1: ϕ_s263°, δ73°, λ2°. NP2:ϕ_s172°, δ88°, λ163°. Principal axes: T 10.099, Plg13°, Azm126°; N -1.099, Plg73°, Azm348°; P -9.003, Plg11°, Azm219°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***19*** *12:40:04.4±0.2, 48.79N×128.60W, $h10^{km}$, mb5.1/70, MS4.7/67, MW5.3(PGC) Error ellipse: s-maj=4.9km s-min=2.4km az=50.0*

ISC 19 12:40:02.5±0.7**, 48.68N**±0.02×**128.65W**±0.02**, $h9^{km}$**$\pm 4^{km}$**, $h15^{km}$**$\pm .9^{km}$**:pP-P, n449,** σ**$1^{s}21$**/420**, mb4.9**/89**, MS4.7**/96**,**
20C-13D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ETB	Estevan Point	1.56	63	Pn	Pn	12 40 31.1	+0.5
ETB				Trac		12 41 13.2	
	comp=Z,1µm,0.8s						
EDB	Eliza Dome	1.56	39	⇓Pn	Pn	12 40 30.9	+0.3
EDB				Sn	Sn	12 40 51.2	+0.1
EDB				Trac		12 42 10.1	
	comp=Z,885nm,0.8s						
BPBC	Brooks Peninsu	1.58	21	⇓Pn	Pn	12 40 31.3	+0.3
BPBC				Sn	Sn	12 40 51.2	-0.5
	comp=Z,546nm,0.4s						
BPBC				Trac		12 40 55.2	
	comp=Z,546nm,0.4s						
MAYB	Maynard	1.97	29	⇓Pn	Pn	12 40 37.2	+0.6
HOLB	Holberg	1.99	10	⇓Pn	Pn	12 40 36.9	+0.1
HOLB				Sn	Sn	12 41 02.9	+0.9
	comp=Z,270nm,0.3s						
HOLB				Trac		12 41 06.5	
	comp=Z,270nm,0.3s						
WOSB	Woss	2.01	42	⇓Pn	Pn	12 40 37.9	+0.8
OZB	Mount Ozzard	2.10	81	Pn	Pn	12 40 37.6	-0.8
OZB				Sn	Sn	12 41 05.0	0.0
OZB	Mount Ozzard	2.10	81	P	Pn	12 40 37.6	-0.8
PHC	Port Hardy	2.18	21	Pn	Pn	12 40 39.7	+0.2
PHC				Trac		12 41 21.6	
	comp=Z,579nm,0.9s						
BTB	Buttle Lake	2.20	68	Pn	Pn	12 40 40.0	+0.1
BTB				Sn	Sn	12 41 09.1	+1.6
	comp=Z,610nm,0.3s						
BTB				Trac		12 41 10.5	
	comp=Z,610nm,0.3s						
NCRB	Newcastle Ridg	2.41	43	⇓Pn	Pn	12 40 44.0	+1.1
NCRB				Sn	Sn	12 41 14.8	+1.9
	comp=Z,413nm,0.5s						
NCRB				Trac		12 41 16.6	
	comp=Z,413nm,0.5s						
CBB	Campbell River	2.54	57	Pn	Pn	12 40 45.4	+0.7
CBB				Sn	Sn	12 41 18.2	+2.2
CBB				Trac		12 41 19.3	
	comp=Z,184nm,0.3s						
ALB	Alberni	2.58	75	Pn	Pn	12 40 44.8	-0.6
ALB				Sn	Sn	12 41 16.6	-0.6
	comp=Z,136nm,0.4s						
ALB				Trac		12 41 18.5	
	comp=Z,136nm,0.4s						
MGB	Mount Grey	2.63	82	Pn	Pn	12 40 45.0	-1.0
MGB				Sn	Sn	12 41 17.6	-0.8
PFB	Port Renfrew	2.79	91	Pn	Pn	12 40 47.3	-1.0
PFB				Sn	Sn	12 41 21.0	-1.5
OTR	Olympics--Tyee	2.93	100	P	Pn	12 40 49.9	-0.4
TXB	Texada	2.94	68	⇓Pn	Pn	12 40 50.7	+0.3
TXB				Sn	Sn	12 41 26.6	+0.3
	comp=Z,156nm,0.3s						
TXB				Trac		12 41 29.9	
	comp=Z,156nm,0.3s						
NLLB	Nanaimo Lost L	3.12	78	Pn	Pn	12 40 52.8	-0.1
NLLB				Sn	Sn	12 41 31.2	+0.4
NLLB				Trac		12 41 37.5	
	comp=Z,203nm,0.6s						
OCWA	Octopus Mounta	3.13	106	P	Pn	12 40 51.6	-1.5
OCWA				Sn	Sn	12 41 29.9	-1.2
OCWA	Octopus Mounta	3.13	106	⇑*e*Pn	Pn	12 40 50.6	-2.6
OCWA				*e*Sn	Sn	12 41 29.9	-1.2
LZB	Mount Lazard	3.20	89	Pn	Pn	12 40 53.0	-1.1
LZB				Sn	Sn	12 41 32.9	+0.1
SHB	Sechelt	3.27	72	Pn	Pn	12 40 55.2	+0.2
SHB				Sn	Sn	12 41 35.3	+0.8
SHB				Trac		12 41 40.9	
	comp=Z,299nm,0.5s						
OSR	Olympics--Salm	3.35	109	P	Pn	12 40 55.4	-0.9
STW	Striped Peak	3.36	97	P	Pn	12 40 55.6	-0.8
GOBB	Galiano Island	3.41	84	Pn	Pn	12 40 57.0	0.0
GOBB				Sn	Sn	12 41 36.9	-1.1
	comp=Z,472nm,0.7s						
GOBB				Trac		12 41 42.8	
	comp=Z,472nm,0.7s						
PGC	Sidney	3.45	89	Pn	Pn	12 40 56.8	-0.7
PGC				Sn	Sn	12 41 38.0	-1.0
PGC				Trac		12 41 42.1	
	comp=Z,121nm,0.6s						
PGC	Sidney	3.45	89	⇑*i*Pn	Pn	12 40 56.4	-1.2
BBB	Bella Bella	3.52	5	Pn	Pn	12 40 59.4	+0.7
	276nm,0.3s,baz=196,slow=12,SNR=1337						
BBB				Sn	Sn	12 41 39.6	-1.4
	40nm,0.3s,baz=270,slow=17,SNR=5.8						
BBB				LR	LR	12 42 17.9	
	comp=Z,9µm,20.0s,baz=197,slow=37						
BBB	Bella Bella	3.52	5	Pn	Pn	12 40 59.4	+0.7
BBB				⇓Pn	Pn	12 40 59.8	+1.1
BBB				Sn	Sn	12 41 39.6	-1.4
BBB				Sn	Sn	12 41 40.9	-0.1
BBB				Trac		12 41 45.6	
	comp=Z,739nm,0.6s						
VGZ	Gonzales	3.55	92	Pn	Pn	12 40 57.0	-2.0
VGZ				Sn	Sn	12 41 38.5	-3.1
VGZ				Trac		12 41 42.6	
	comp=Z,111nm,0.3s						
BIB	Bowen Island	3.59	76	Pn	Pn	12 40 59.6	0.0
BIB				Sn	Sn	12 41 43.2	+0.6
	comp=Z,119nm,0.5s						
BIB				Trac		12 41 47.1	
	comp=Z,119nm,0.5s						
SNB	Saturna Island	3.63	86	Pn	Pn	12 41 00.2	0.0
SNB				Sn	Sn	12 41 43.6	0.0
SNB				Trac		12 41 51.3	
	comp=Z,312nm,0.9s						
WPB	Watts Point	3.70	73	Pn	Pn	12 41 01.5	+0.3
WPB				Sn	Sn	12 41 47.3	+1.9
	comp=Z,872nm,1.3s						
WPB				Trac		12 41 54.5	
	comp=Z,872nm,1.3s						
HDW	Hoodsport	3.88	103	P	Pn	12 41 03.1	-0.7
WSLR	Whistler	4.01	67	Pn	Pn	12 41 06.5	+0.9
WSLR				Sn	Sn	12 41 56.3	+3.0
WSLR				Trac		12 42 08.2	
	comp=Z,253nm,0.9s						
HNB	Haney	4.04	79	Pn	Pn	12 41 05.7	-0.4
HNB				Sn	Sn	12 41 53.9	-0.2
HNB				Trac		12 41 58.6	
	comp=Z,208nm,0.8s						
CPW	Capitol Peak	4.09	113	P	Pn	12 41 05.5	-1.2
VDB	Vedder Mountai	4.34	83	P	Pn	12 41 09.5	-0.7
VDB				Sn	Sn	12 42 02.4	+0.9
	comp=Z,54nm,0.4s						
VDB				Trac		12 42 03.5	
	comp=Z,54nm,0.4s						
VDB	Vedder Mountai	4.34	83	P	Pn	12 41 09.5	-0.7
CMW	Cultus Mountai	4.35	91	P	Pn	12 41 10.6	+0.2
BNB	Barry Inlet	4.37	334	Pn	Pn	12 41 11.5	+0.8
BNB				Sn	Sn	12 41 59.0	-3.4
	comp=Z,1µm,0.6s						
BNB				Trac		12 42 45.0	
	comp=Z,1µm,0.6s						
MBW	Mount Baker	4.47	86	P	Pn	12 41 12.1	0.0
JCW	Jim Creek	4.50	94	P	Pn	12 41 11.7	-0.8
HTW	Haystack Looko	4.68	98	P	Pn	12 41 14.7	-0.4
RPW	Rockport	4.74	90	P	Pn	12 41 15.6	-0.4
LLLB	Lillooet	4.80	64	Pn	Pn	12 41 17.5	+0.7
LLLB				Sn	Sn	12 42 13.3	0.0
LLLB				Trac		12 42 22.4	
	comp=Z,86nm,0.7s						
HOPB	Hope	4.81	79	Pn	Pn	12 41 16.6	-0.3
HOPB				Sn	Sn	12 42 12.9	-0.5
HOPB				Trac		12 42 17.6	
	comp=Z,65nm,0.5s						
MOBC	Moresby Island	4.97	337	Pn	Pn	12 41 18.7	-0.4
MOBC				Sg	Sg	12 42 39.5	-8.3
MOBC				Trac		12 42 57.8	
	comp=Z,25nm,0.8s						
BNAB	Bonilla	4.98	346	Pn	Pn	12 41 20.0	+0.7
BNAB				Sn	Sn	12 42 07.2	-11
	comp=Z,30nm,0.6s						
BNAB				Trac		12 42 21.6	
	comp=Z,30nm,0.6s						
FMW	Mount Fremont	5.02	108	P	Pn	12 41 19.3	-0.5
VIB	Van Inlet	5.20	333	Pn	Pn	12 41 20.9	-1.5
VIB				Sn	Sn	12 42 23.1	-0.1
VIB				Trac		12 43 06.0	
	comp=Z,19nm,0.8s						
COR	Corvallis	5.51	136	*e*P	Pn	12 41 25.3	-1.5
RUBB	Prince Rupert	5.74	351	Pn	Pn	12 41 30.0	-0.1
RUBB				Sn	Sn	12 42 34.5	-2.4
RUBB				Trac		12 42 41.6	
	comp=Z,265nm,0.9s						
VFP	Flag Point	5.96	122	P	Pn	12 41 33.5	+0.4
PNT	Penticton	5.98	81	Pn	Pn	12 41 32.1	-1.3
PNT				Sn	Sn	12 42 46.2	+3.3
PNT				Trac		12 43 14.5	
	comp=Z,69nm,0.9s						
MDW	Midway	6.35	106	P	Pn	12 41 38.8	+0.1
FSB	Fort Saint Jam	6.40	23	Pn	Pn	12 41 40.5	+1.2
FSB				Sg	Sg	12 43 29.2	-6.3
FSB				Trac		12 43 37.0	
	comp=Z,1µm,2.1s						
KEBM	Edson Butte	6.54	151	*e*P	Pn	12 41 40.0	-1.5
GBL	Gable Mountain	6.55	105	P	Pn	12 41 41.2	-0.3
HAWA	Hanford	6.58	107	*e*P	Pn	12 41 41.1	-0.9
OD2	Odessa Site #2	6.79	97	P	Pn	12 41 43.2	-1.7
DOWB	Downie Slide	7.11	63	Pn	Pn	12 41 48.8	-0.5
KBO	Bosley Butte	7.18	153	*e*P	Pn	12 41 50.2	-0.1
SLEB	Sale Mountain	7.23	66	Pn	Pn	12 41 51.1	+0.1
SLEB				Trac		12 44 03.9	
	comp=Z,71nm,1.4s						
HUMO	Hull Mountain	7.27	145	*e*P	Pn	12 41 51.1	-0.4
MNB	Mounoet Dainar	7.44	58	Pn	Pn	12 41 54.9	+0.9
NEW	Newport	7.67	89	Pn	Pn	12 41 55.1	-2.2
	1.4nm,0.3s,baz=285,slow=12,SNR=20						
NEW				Sn	Sn	12 43 27.4	+2.1
	baz=129,slow=20,SNR=2.4						
NEW	Newport	7.67	89	⇑*e*P	Pn	12 41 55.1	-2.1
YBH	Yreka Blue Hor	8.11	147	*e*P	P	12 42 04.2	+0.8
BMBC	Bull Mountain	8.38	26	Pn	P	12 42 08.9	+1.8
BMBC				Trac		12 43 58.1	
	comp=Z,24nm,0.7s						
BMBC				Trac		12 45 06.8	
	comp=Z,24nm,1.0s						
KHMM	Horse Mountain	8.55	154	*e*P	P	12 42 08.8	-0.6
BMO	Blue Mountains	8.68	112	*e*P	P	12 42 09.4	-1.8
MOD	Modoc	8.97	136	⇑*e*P	P	12 42 15.7	+0.4
WDC	Whiskeytown Da	9.19	150	*e*P	P	12 42 19.2	+0.9
WVOR	Wild Horse Val	9.39	128	*e*P	P	12 42 21.3	+0.2
KIPM	Iron Peak	9.61	155	*e*P	P	12 42 24.0	0.0
KCPM	Cahto Peak	9.70	156	*e*P	P	12 42 25.5	+0.2
WALA	Waterton Lakes	9.72	82	P	P	12 42 23.4	-2.1
WALA				Trac		12 45 02.8	
	comp=Z,16nm,1.2s						
DLBC	Dease Lake	9.81	356	Pn	P	12 42 29.1	+2.4
	1.0nm,0.3s,baz=180,slow=13,SNR=22						
DLBC				LR	LR	12 46 08.5	
	comp=Z,4µm,18.1s,baz=175,slow=37						
DLBC	Dease Lake	9.81	356	qP		12 42 23.6	
DLBC				P		12 42 29.2	
DLBC				Sn	Sn	12 44 17.3	-0.8
DLBC				Trac		12 45 11.2	
	comp=Z,13nm,1.0s						
DLBC	Dease Lake	9.81	356	P	P	12 42 23.6	-3.1
DLBC				Pn	P	12 42 29.1	+2.4
DLBC				LR	LR	12 46 08.5	
MSO	Missoula	10.08	95	*e*P	P	12 42 27.7	-2.8
HOPS	Hopland	10.48	155	*e*P	P	12 42 36.2	+0.2
CHMT	Chamberlain Mo	10.51	94	*e*P	P	12 42 34.0	-2.4
EDM	Edmonton	10.66	59	P	P	12 42 38.2	-0.2
EDM	Edmonton	10.66	59	*e*P	P	12 42 37.3	-1.2
FNBB	Fort Nelson	10.75	16	P	P	12 42 40.4	+0.7
FNBB				Trac		12 45 58.7	
	comp=Z,30nm,1.7s						
HLID	Hailey	11.12	112	*e*P	P	12 42 43.8	-1.0
PAHR	Pah Rah Range	11.16	140	P	P	12 42 45.3	0.0
DLMT	Dillon	11.45	101	*e*P	P	12 42 47.0	-2.2
MCMT	McKenzie Canyo	11.50	104	*e*P	P	12 42 48.4	-1.6
HRY	Holter Researc	11.51	94	*e*P	P	12 42 47.5	-2.6
BOZ	Bozeman (W)	11.98	98	*e*P	P	12 42 54.6	-1.8
CMB	Columbia Colle	12.21	148	*e*P	P	12 42 58.9	-0.7
ELK	Elko	12.39	125	Pn	P	12 43 03.4	+1.4
	0.1nm,0.3s,baz=312,slow=12,SNR=39						
ELK				LR	LR	12 47 51.5	
	comp=Z,4µm,20.1s,baz=334,slow=38						
ELK	Elko	12.39	125	*e*P	P	12 43 02.6	+0.6
QLMT	Earthquake Lak	12.42	102	*e*P	P	12 43 00.9	-1.4
WHY	Whitehorse	12.53	346	P	P	12 43 07.0	+3.3
NVAR	Mina Array Bea	12.69	140	Pn	P	12 43 07.6	+1.7
	0.4nm,0.3s,baz=323,slow=7.8,SNR=186						
NVAR				LR	LR	12 47 47.7	
	comp=Z,7µm,19.7s,baz=325,slow=37						
MNV	Mina	12.75	140	*e*P	P	12 43 08.1	+1.3
YMR	Madison River	12.79	102	*e*P	P	12 43 06.8	-0.4
YFT	Old Faithful	12.96	102	*e*P	P	12 43 09.6	0.0
SAO	San Andreas Ge	13.03	153	*e*P	P	12 43 09.6	-0.8
HVU	Hansel Valley	13.13	116	*e*P	P	12 43 12.8	+1.0
IMW	Indian Meadow	13.14	105	*e*P	P	12 43 11.7	-0.3
HYT	Haines Junctio	13.18	341	P	P	12 43 13.7	+1.3
LKWY	Lake	13.20	101	*e*P	P	12 43 13.4	+0.8
GCMT	Greycliff	13.22	96	*e*P	P	12 43 11.0	-1.9
TPAW	Teton Pass	13.33	106	*e*P	P	12 43 15.4	+0.9
MOOW	Moose Ponds	13.34	105	*e*P	P	12 43 14.9	+0.4
REDW	Red Top Meadow	13.45	107	*e*P	P	12 43 17.3	+1.2
SNOW	Snow King Moun	13.47	106	*e*P	P	12 43 17.0	+0.8
LRV	Little Rabbit	13.47	153	*e*P	P	12 43 16.1	-0.2
LOHW	Long Hollow	13.49	105	*e*P	P	12 43 17.1	+0.6
MTUM	Tungsten Hills	13.50	143	*e*P	P	12 43 17.5	+0.8
AHID	Auburn Hatcher	13.60	109	*e*P	P	12 43 19.7	+1.7
SPUT	South Promonto	13.61	117	*e*P	P	12 43 18.6	+0.5
HWUT	Hardware Ranch	13.96	114	*e*P	P	12 43 24.4	+1.7
DUG	Dugway	14.12	121	*e*P	P	12 43 24.6	-0.2
NOQ	North Oquirrh	14.22	118	*e*P	P	12 43 27.1	+1.0
TCUT	Toone Canyon	14.35	115	*e*P	P	12 43 29.1	+1.3
PTRM	Twissleman Ran	14.43	151	*e*P	P	12 43 29.3	+0.4
BW06	Boulder Array	14.57	107	*e*P	P	12 43 32.4	+1.7
	101nm,1.3s						
PDAR	Pinedale Array	14.57	107	Pn	P	12 43 33.0	+2.3
	0.2nm,0.3s,baz=304,slow=11,SNR=53						
PDAR				LR	LR	12 49 26.8	
	comp=Z,5µm,20.4s,baz=304,slow=39						
NLU	North Lily Min	14.70	120	*e*P	P	12 43 32.4	0.0
TPNV	Topopah Spring	14.82	138	*e*P	P	12 43 35.5	+1.5
	455nm,1.6s						
TPNV	Topopah Spring	14.82	138	*e*P	P	12 43 35.5	+1.5
TPNV				pmax	pmax		
	comp=Z,455nm,1.6s						
DAU	Daniels Canyon	14.88	117	*e*P	P	12 43 36.2	+1.5
MPU	Maple Canyon	14.92	119	*e*P	P	12 43 35.8	+0.5
	comp=Z,98nm,1.6s						
LAO	LASA Array	15.23	89	*e*P	P	12 43 39.8	+0.5
	comp=Z,138nm,1.4s						
ARUT	Antelope Range	15.51	129	*e*P	P	12 43 43.2	+0.2
TMUT	Trail Mountain	15.64	120	*e*P	P	12 43 45.4	+0.8
MSU	Marysvale	15.64	124	*e*P	P	12 43 46.8	+2.1
DIV	Divide	15.82	328	P	P	12 43 45.0	-1.8
	comp=Z,578nm,1.5s						
YKA	Yellowknife Ar	15.90	24	Pn	P	12 43 47.5	-0.3
	comp=Z,0.2nm,0.3s,baz=207,slow=13,SNR=12						
YKA				LR	LR	12 50 40.9	
	comp=Z,2µm,18.9s,baz=215,slow=40						
YKA	Yellowknife Ar	15.90	24	Pn	P	12 43 47.5	-0.3
YKA				LR	LR	12 50 40.9	
YKW3	Yellowknife Ar	15.95	24	P	P	12 43 46.2	-2.3
YKW3				P		12 43 47.0	
YKW3				P		12 43 48.1	
YKW3	Yellowknife Ar	15.95	24	*e*P	P	12 43 48.1	-0.4
SRU	San Rafael	16.16	120	*e*P	P	12 43 51.8	+0.5
	comp=Z,155nm,1.4s						
SRU	San Rafael	16.16	120	*e*P	P	12 43 51.8	+0.5
SRU				pmax	pmax		
	comp=Z,155nm,1.4s						
DGMT	Dagmar	16.17	82	*e*P	P	12 43 52.0	+0.5
	comp=Z,225nm,1.3s						
MWC	Mount Wilson	16.46	147	*e*P	P	12 43 55.5	+0.4
DAWY	Dawson	16.49	343	P	P	12 43 56.1	+0.8
DAWY	Dawson	16.49	343	*e*P	P	12 43 55.1	-0.2
NEN	Nelson	16.53	137	*e*P	P	12 43 56.6	+0.5
RWWY	Rawlins	16.62	107	*e*P	P	12 43 57.2	+0.1
	comp=Z,113nm,1.3s						
LDFC	Landfair	16.89	139	*e*P	P	12 44 00.6	+0.1
KDAK	Kodiak Island	16.90	312	Pn	P	12 44 02.1	+1.6
	comp=Z,0.5nm,0.3s,baz=117,slow=4.6,SNR=6.4						
KDAK				LR	LR	12 48 51.0	
	comp=Z,6µm,21.0s,baz=126,slow=31						
SLKM	Skilak Lake	17.12	322	*e*P	P	12 44 03.7	+0.4
PMR	Palmer	17.34	326	*e*P	P	12 44 06.8	+0.7
	comp=Z,204nm,2.0s						
PMR				*e*P		12 44 09.9	
PMR	Palmer	17.34	326	*e*P	P	12 44 06.8	+0.8
PMR				pmax	pmax		
	comp=Z,204nm,2.0s						
PV10	Paradox Valley	17.51	119	*e*P	P	12 44 09.6	+1.2
FFC	Flin Flon	17.54	60	*e*P	P	12 44 06.1	-2.5
	comp=Z,212nm,1.1s						
FFC	Flin Flon	17.54	60	*e*P	P	12 44 06.1	-2.5
FFC				pmax	pmax		
	comp=Z,212nm,1.1s						
RSSD	Black Hills	17.55	96	*e*P	P	12 44 08.5	-0.3
	comp=Z,16nm,1.0s						
RSSD	Black Hills	17.55	96	*e*P	P	12 44 08.5	-0.3
RSSD				pmax	pmax		
	comp=Z,16nm,1.0s						
PFO	Pinyon Flat Ob	17.60	144	*e*P	P	12 44 09.2	-0.4
	comp=Z,78nm,1.6s						
PFO	Pinyon Flat Ob	17.60	144	*e*P	P	12 44 09.2	-0.4
PFO				pmax	pmax		
	comp=Z,77nm,1.6s						
PHWY	Pilot Hill	17.94	106	*e*P	P	12 44 13.3	-0.4
PV01	Paradox Valley	17.95	119	*e*P	P	12 44 14.3	+0.5
SMCO	Snowmass	18.22	113	*e*P	P	12 44 17.4	+0.1
	comp=Z,144nm,1.4s						
WUAZ	Wupatki	18.31	130	*e*P	P	12 44 19.2	+0.8
	comp=Z,274nm,1.5s						
BAR	Barrett	18.35	146	*e*P	P	12 44 18.8	-0.1
ISCO	Idaho Springs	18.68	110	⇑*e*P	P	12 44 23.4	+0.5
	comp=Z,149nm,1.5s						
ISCO	Idaho Springs	18.68	110	⇑*e*P	P	12 44 23.4	+0.5
ISCO				pmax	pmax		
	comp=Z,149nm,1.5s						
ILAR	Eielson Array	18.85	335	P	P	12 44 26.6	+1.8
	comp=Z,0.1nm,0.3s,baz=145,slow=9.7,SNR=66						
ILAR				PcP	PcP	12 48 51.4	-0.3
	comp=Z,0.0nm,0.3s,baz=162,slow=2.9,SNR=4.3						
ILAR				LR	LR	12 51 02.4	
	comp=Z,3µm,19.7s,baz=159,slow=35						
COLA	College	19.20	335	*e*P	P	12 44 29.4	+0.5
	comp=Z,153nm,1.4s						
COLA	College	19.20	335	*e*P	P	12 44 29.4	+0.5
COLA				pmax	pmax		
	comp=Z,153nm,1.4s						
SVW2	Sparrevohn	19.68	319	*e*P	P	12 44 35.8	+1.3
INK	Inuvik	19.84	355	P	P	12 44 38.3	+2.1
	comp=Z,0.2nm,0.3s,baz=169,slow=11,SNR=20						
INK	Inuvik	19.84	355	P	P	12 44 36.4	+0.2
INK	Inuvik	19.84	355	*e*P	P	12 44 35.6	-0.6
	comp=Z,47nm,1.3s						
INK	Inuvik	19.84	355	*e*P	P	12 44 35.6	-0.6
INK				pmax	pmax		
	comp=Z,47nm,1.3s						
SDCO	Great Sand Dun	20.02	114	*e*P	P	12 44 38.4	0.0
	comp=Z,104nm,1.5s						
SDCO				LR	LR		
	comp=Z,2µm,21.0s,MS4.5						
TUC	Tucson	21.18	134	*e*P	P	12 44 50.8	+0.5
	comp=Z,80nm,1.4s,mb4.9						
TUC				LR	LR		
	comp=Z,2µm,20.0s,MS4.6						
TUC	Tucson	21.18	134	*e*P	P	12 44 50.8	+0.4
TUC				pmax	pmax		
	comp=Z,80nm,1.4s,mb4.9						
TUC				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.6						
ULM	Lac du Bonnet	21.27	73	P	P	12 44 52.1	+0.9
	comp=Z,36nm,1.1s,mb4.6,baz=277,slow=9.6,SNR=16						
ULM				LR	LR	12 53 32.3	
	comp=Z,1µm,18.6s,MS4.3,baz=272,slow=38						
ULM	Lac du Bonnet	21.27	73	P	P	12 44 52.0	+0.8
ULM				LR	LR	12 53 32.3	
ANMO	Albuquerque	21.39	122	P	P	12 44 53.5	+1.0
	comp=Z,46nm,1.1s,mb4.7,baz=318,slow=10,SNR=89						
ANMO				LR	LR	12 53 13.1	
	comp=Z,1µm,21.0s,MS4.2,baz=80,slow=37						
ANMO	Albuquerque	21.39	122	*e*P	P	12 44 53.2	+0.7
	comp=Z,152nm,1.3s,mb5.2						
ANMO				LR	LR		
	comp=Z,1µm,21.0s,MS4.3						
ANMO	Albuquerque	21.39	122	*e*P	P	12 44 53.2	+0.7
ANMO				pmax	pmax		
	comp=Z,152nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,1µm,21.0s						
LAZ	Ladron	21.41	124	*e*P	P	12 44 53.1	+0.4
LENM	Lemitar	21.68	124	*e*P	P	12 44 55.1	-0.3
LPM	Los Pinos Moun	21.76	123	*e*P	P	12 44 57.2	+1.0
IMA2	Indian Mountai	21.77	332	*e*P	P	12 44 56.1	-0.1
BNM	Barren Site	21.88	123	*e*P	P	12 44 59.0	+1.5
FCC	Fort Churchill	22.55	50	P	P	12 45 06.1	+2.2
FCC	Fort Churchill	22.55	50	*e*P	P	12 45 02.4	-1.4
	comp=Z,240nm,1.3s,mb5.5						
FCC	Fort Churchill	22.55	50	*e*P	P	12 45 02.4	-1.4
FCC				pmax	pmax		
	comp=Z,240nm,1.3s,mb5.5						
CBKS	Cedar Bluff	22.97	105	*e*P	P	12 45 09.8	+1.5
	comp=Z,256nm,1.4s,mb5.5						
CBKS				LR	LR		
	comp=Z,3µm,22.0s,MS4.7						
CBKS	Cedar Bluff	22.97	105	*e*P	P	12 45 09.8	+1.6
CBKS				pmax	pmax		
	comp=Z,256nm,1.4s,mb5.5						
CBKS				MLR	MLR		
	comp=Z,3µm,22.0s,MS4.7						
UNV	Unalaska Valle	24.03	297	PFAKE		12 45 30.0	+12
UNV				LR	LR		
	comp=Z,6µm,19.0s,MS5.1						
AMTX	Amarillo	24.23	115	*e*P	P	12 45 21.8	+1.4
	comp=Z,367nm,1.3s,mb5.7						
AMTX				LR	LR		
	comp=Z,2µm,19.0s,MS4.7						
CPRX	Cap Rock	24.26	121	*e*P	P	12 45 22.0	+1.3
MNTX	Cornudas Mount	24.42	125	*e*P	P	12 45 23.8	+1.4
	comp=Z,106nm,1.3s,mb5.1						
MNTX				LR	LR		
	comp=Z,3µm,19.0s,MS4.8						
EYMN	Ely	24.57	78	*e*P	P	12 45 23.6	0.0
	comp=Z,398nm,1.9s,mb5.6						
EYMN				LR	LR		
	comp=Z,1µm,22.0s,MS4.4						
GDL2	Guadalupe Moun	24.59	123	*e*P	P	12 45 24.7	+0.7
CLNB	Carlsbad	24.82	122	*e*P	P	12 45 27.1	+1.0
KSU1	Kansas State U	24.84	101	*e*P	P	12 45 27.0	+0.7
WMOK	Wichita Mounta	26.09	111	*e*P	P	12 45 38.2	+0.1
	comp=Z,108nm,1.4s,mb5.2						
WMOK				LR	LR		
	comp=Z,3µm,19.0s,MS4.9						
WMOK	Wichita Mounta	26.09	111	*e*P	P	12 45 38.3	+0.2
WMOK				pmax	pmax		
	comp=Z,107nm,1.4s,mb5.2						
WMOK				MLR	MLR		
	comp=Z,3µm,19.0s,MS4.9						
TNA	Tin City	26.57	324	PFAKE		12 45 50.0	+7.8
TNA				LR	LR		
	comp=Z,1µm,19.0s,MS4.4						

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LTX    Lajitas           27.18 126  eP      P        12 45 46.8  -1.4
       comp=Z,40nm,1.3s,mb4.8
LTX                                  LR     LR
       comp=Z,4µm,20.0s,MS5.0
LTX    Lajitas           27.18 126  eP      P        12 45 46.8  -1.4
LTX                                  pmax   pmax
       comp=Z,40nm,1.3s,mb4.8
LTX                                  MLR    MLR
       comp=Z,4µm,20.0s,MS5.0
TXAR   Lajitas Array     27.18 126   P      P        12 45 49.5  +1.3
       comp=Z,10nm,1.1s,mb4.3,baz=327,slow=5.3,SNR=27
TXAR                                 PcP    PcP      12 49 09.4  +0.5
       comp=Z,0.8nm,0.8s,baz=318,slow=0.8,SNR=5.6
TXAR                                 LR     LR       12 57 21.0
       comp=Z,4µm,18.7s,MS5.0,baz=270,slow=38
TXAR   Lajitas Array     27.18 126   P      P        12 45 49.5  +1.3
TXAR                                 PcP    PcP      12 49 09.4  +0.5
TXAR                                 LR     LR       12 57 21.0
JCT    Junction City     28.47 119  eP      P        12 45 59.0  -0.8
       comp=Z,90nm,1.2s,mb5.3
JCT                                  LR     LR
       comp=Z,1µm,20.0s,MS4.5
JCT    Junction City     28.47 119  eP      P        12 45 59.0  -0.8
JCT                                  pmax   pmax
       comp=Z,90nm,1.2s,mb5.3
JCT                                  MLR    MLR
       comp=Z,1µm,20.0s,MS4.5
CCM    Cathedral Cave    28.92  97  eP      P        12 46 02.7  -1.1
       comp=Z,28nm,1.3s,mb4.8
CCM                                  LR     LR
       comp=Z,695nm,19.0s,MS4.3
CCM    Cathedral Cave    28.92  97  eP      P        12 46 02.7  -1.1
CCM                                  pmax   pmax
       comp=Z,28nm,1.3s,mb4.8
CCM                                  MLR    MLR
       comp=Z,695nm,19.0s,MS4.3
NATX   Nacogdoches       30.64 111  eP      P        12 46 18.9  -0.3
       comp=Z,78nm,1.4s,mb5.3
NATX                                 LR     LR
       comp=Z,4µm,19.0s,MS5.1
MET    Memphis--Engin    31.48 101   P      P        12 46 26.9  +0.3
WCI    Wyandotte Cave    32.09  93   PFAKE           12 46 40.0  +8.1
WCI                                  LR     LR
       comp=Z,2µm,20.0s,MS4.7
OXF    Oxford            32.20 101  eP      P        12 46 32.9   0.0
       comp=Z,160nm,1.3s,mb5.7
OXF                                  LR     LR
       comp=Z,882nm,19.0s,MS4.5
OXF    Oxford            32.20 101  eP      P        12 46 32.9   0.0
OXF                                  pmax   pmax
       comp=Z,160nm,1.3s,mb5.7
OXF                                  MLR    MLR
       comp=Z,882nm,19.0s,MS4.5
WVT    Waverly           32.26  98   PFAKE           12 46 40.0  +6.6
WVT                                  LR     LR
       comp=Z,628nm,20.0s,MS4.3
ACSO   Alum Creek Sta    33.25  87   PFAKE           12 46 50.0  +8.1
ACSO                                 LR     LR
       comp=Z,1µm,20.0s,MS4.5
SADO   Sadowa            33.68  78   P      P        12 46 48.0  +2.3
       comp=Z,11nm,1.0s,mb4.7,baz=321,slow=13,SNR=2.3
ERPA   Erie              34.31  82   PFAKE           12 47 00.0  +8.9
ERPA                                 LR     LR
       comp=Z,796nm,19.0s,MS4.5
MYNC   Murphy            35.32  96   PFAKE           12 47 10.0   +10
MYNC                                 LR     LR
       comp=Z,2µm,20.0s,MS4.9
MCWV   Mont Chateau      35.61  86   PFAKE           12 47 10.0  +7.7
MCWV                                 LR     LR
       comp=Z,1µm,20.0s,MS4.6
FWV    Forest Hill       36.08  90   P      P        12 47 06.3  +0.1
FX1    Attu Island--F    36.16 299   LR     LR       12 58 46.3
       comp=Z,50nm,20.5s,baz=278,slow=31
BLA    Blacksburg        36.54  90   P      P        12 47 20.0   +10
BLA    Blacksburg        36.54  90   PFAKE           12 47 20.0   +10
BLA                                  LR     LR
       comp=Z,1µm,20.0s,MS4.6
GOGA   Godfrey           36.76  98   PFAKE           12 47 20.0  +8.0
GOGA                                 LR     LR
       comp=Z,707nm,22.0s,MS4.4
BILL   Bilibino          36.98 325  eP      P        12 47 13.6  +0.1
       comp=Z,73nm,1.8s,mb5.2
BILL                                 LR     LR
       comp=Z,1µm,22.0s,MS4.7
BILL   Bilibino          36.98 325⇑iP      P        12 47 14.4  +0.9
BILL                                 pmax   pmax
       comp=Z,25nm,1.4s,mb4.8
BILL                                 MLR    MLR
       comp=Z,700nm,15.0s,MS4.6
SCHQ   Schefferville     37.64  57   P      P        12 47 21.0  +1.8
       comp=Z,14nm,1.1s,mb4.6,baz=280,slow=11,SNR=4.2
SCHQ                                 LR     LR       13 03 16.0
       comp=Z,2µm,18.3s,MS5.0,baz=100,slow=37
SCHQ   Schefferville     37.64  57  eP      P        12 47 17.8  -1.4
       comp=Z,42nm,1.2s,mb5.0
SCHQ                                 P      pP       12 47 21.0  -0.8
SCHQ                                 LR     LR       13 03 16.0
JSC    Jenkinsville      37.69  95  eP      P        12 47 18.6  -1.2
CBN    Corbin            38.02  86   PFAKE           12 47 30.0  +7.5
CBN                                  LR     LR
       comp=Z,2µm,19.0s,MS4.9
LBNH   Lisbon            38.56  75   PFAKE           12 47 40.0   +13
LBNH                                 LR     LR
       comp=Z,1µm,20.0s,MS4.8
NHSC   New Hope          39.12  95   P      P        12 47 30.8  -1.0
WES    Weston            39.83  77   PFAKE           12 47 50.0   +12
WES                                  LR     LR
       comp=Z,1µm,20.0s,MS4.8
SEY    Seymchan          43.62 319  eP      P        12 48 09.0  +0.7
SEY                                                  12 49 50.0
SEY                                 eS      S        12 54 33.5  -4.0
SEY                                  SS     SS       12 57 48.1  +3.0
SEY                                  SSS    SSS      12 58 36.6  -0.1
SEY                                  pmax   pmax
       comp=Z,30nm,0.9s,mb5.0
SEY                                  pmax   pmax
       comp=N,20nm,1.4s
SEY                                  smax
       comp=N,110nm,6.2s
SEY                                  smax
       comp=E,100nm,11.3s
SEY                                  MLR    MLR
       comp=Z,1µm,17.0s,MS4.9
SEY                                  MLR    MLR
       comp=N,440nm,20.0s,MS4.7
SEY                                  MLR    MLR
       comp=E,730nm,16.0s,MS4.7
PET    Petropavlovsk     44.29 304   PFAKE           12 48 30.0   +16
PET                                  LR     LR
       comp=Z,1µm,22.0s,MS4.8
PET    Petropavlovsk     44.29 304  eP      P        12 48 17.5  +3.6
PET                                 e                12 50 04.3
PET                                 eS      S        12 54 53.3  +6.0
PET                                 eSS     SS       12 58 12.7   +15
PET                                  pmax   pmax
       comp=Z,100nm,14.3s
PET                                  pmax   pmax
       comp=Z,100nm,13.1s
PET                                  smax
       comp=N,100nm,12.0s
PET                                  smax
       comp=E,300nm,14.4s
PET                                  MLR    MLR
       comp=Z,500nm,19.0s,MS4.5
SUMG   Summit            44.49  25  eP      P        12 48 15.0  -0.3
       comp=Z,64nm,1.2s,mb5.2
MA2    Magadan           45.59 315   PFAKE           12 48 40.0   +16
MA2                                  LR     LR
       comp=Z,725nm,22.0s,MS4.6
MA2    Magadan           45.59 315  eP      P        12 48 24.0  -0.2
MA2                                 eS      S        12 54 59.8  -6.1
MA2                                  pmax   pmax
       comp=Z,20nm,1.3s,mb4.9
MA2                                  MLR    MLR
       comp=Z,1µm,18.0s,MS4.8
DAG    Danmarks Havn     47.43  17⇑iP      P        12 48 40.9  +2.4
       comp=Z,4.1nm,0.7s,mb4.5
DAG    Danmarks Havn     47.43  17⇑iP      P        12 48 40.9  +2.4
DAG                                  pmax   pmax
       comp=Z,4.0nm,0.7s,mb4.5
KBS    Kingsbay          50.53   9   PFAKE           12 49 10.0  +7.6
KBS                                  LR     LR
       comp=Z,641nm,21.0s,MS4.6
JTS    JuntasAbangare    52.81 121   PFAKE           12 49 30.0   +10
JTS                                  LR     LR
       comp=Z,200nm,22.0s,MS4.1
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YAK    Yakutsk           53.33 325  eP      P        12 49 23.4  -0.3
       comp=Z,51nm,0.9s,mb5.5
YAK                                  LR     LR
       comp=Z,987nm,21.0s,MS4.8
YAK    Yakutsk           53.33 325  eP      P        12 49 23.1  -0.6
YAK                                 i *PP   pP       12 49 28.1  +1.7
YAK                                 e                12 56 57.6
YAK                                  pmax   pmax
       comp=N,3.0nm,0.9s
YAK                                  pmax   pmax
       comp=Z,20nm,0.9s,mb5.0
YAK                                  pmax   pmax
       comp=E,6.0nm,1.1s
YAK                                  pmax   pmax
       comp=N,329nm,22.1s
YAK                                  pmax   pmax
       comp=Z,137nm,24.1s
YAK                                  pmax   pmax
       comp=E,194nm,21.5s
YAK                                  MLR    MLR
       comp=Z,567nm,16.0s,MS4.7
YAK                                  MLR    MLR
       comp=N,441nm,22.0s
YAK                                  MLR    MLR
       comp=E,401nm,20.0s
YSS    Yuzh-Sakhalins    56.17 304   PFAKE           12 50 00.0   +15
YSS                                  LR     LR
       comp=Z,546nm,20.0s,MS4.6
TAOE   Nuku Hiva Isla    58.18 193  eLR     LR       13 06 35.3
       comp=Z,3µm,27.4s
SJG    San Juan          58.51  98   PFAKE           12 50 10.0  +8.5
SJG                                  LR     LR
       comp=Z,520nm,20.0s,MS4.7
CLNS   Chul'man          58.51 322  eP      P        12 49 59.8  -1.2
CLNS                                 pmax   pmax
       comp=N,12nm,1.0s
CLNS                                 pmax   pmax
       comp=Z,27nm,1.0s,mb5.2
CLNS                                 pmax   pmax
       comp=E,14nm,0.9s
CLNS                                 MLR    MLR
       comp=Z,700nm,18.0s,MS4.8
CLNS                                 MLR    MLR
       comp=N,400nm,17.0s,MS4.7
CLNS                                 MLR    MLR
       comp=E,300nm,17.0s,MS4.7
CPD    Cerro la Pandu    58.71  98  eP      P        12 50 03.6  +0.7
KLR    Kul'dur           60.46 312  eP      P        12 50 12.8  -1.8
ARCES  ARCESS Array B    60.58  10   LR     LR       13 15 17.0
       comp=E,326nm,20.7s,MS4.5,baz=348,slow=35
BOD    Bodaibo           61.99 327  eP      P        12 50 22.7  -2.1
BOD                                  pmax   pmax
       comp=Z,25nm,1.1s,mb5.3
SDV    Santo Domingo     62.50 109  eP      P        12 50 27.1  -1.7
       comp=Z,28nm,1.4s,mb5.2
SDV                                  LR     LR
       comp=Z,275nm,21.0s,MS4.4
ROSC   El Rosal          63.37 115   P      P        12 50 36.1  +1.5
       comp=Z,4.8nm,0.4s,mb5.0,baz=280,slow=15,SNR=5.0
ROSC                                 LR     LR       13 20 26.4
       comp=Z,186nm,19.6s,MS4.3,baz=1.9,slow=38
MDJ    Mudanjiang        64.68 309   PFAKE           12 50 50.0  +7.4
MDJ                                  LR     LR
       comp=Z,551nm,21.0s,MS4.7
MJAR   Matsushiro Arr    65.50 298   P      P        12 50 47.3  -0.8
       comp=Z,2.0nm,0.9s,mb4.1,baz=23,slow=9.5,SNR=4.1
MJAR                                 LR     LR       13 14 20.3
       comp=Z,309nm,21.8s,MS4.5,baz=80,slow=31
MAJO   Matsushiro        65.50 298  eP      P        12 50 45.6  -2.5
MAJO                                 LR     LR
       comp=Z,557nm,21.0s,MS4.7
NB2    NORSAR Subarra    65.95  20   P      P        12 50 52.8  +2.3
       comp=Z,59nm,1.4s,mb5.4,baz=333,slow=6.5
NB2    NORSAR Subarra    65.95  20   P      P        12 50 52.8  +2.3
       baz=333,slow=6.5
NOA    NORSAR Array B    65.95  20   P      P        12 50 52.9  +2.4
       comp=Z,17nm,1.1s,mb5.0,baz=333,slow=6.4,SNR=7.8
NOA                                  LR     LR       13 20 46.5
       comp=Z,294nm,18.3s,MS4.5,baz=340,slow=37
NAO01  NORSAR Array S    66.05  20  eP      P        12 50 48.7  -2.4
       comp=Z,53nm,1.2s,mb5.4
HIA    Hailar            66.05 318  eP      P        12 50 49.5  -1.8
       comp=Z,19nm,1.2s,mb5.0
HIA                                  LR     LR
       comp=Z,608nm,19.0s,MS4.8
HIA    Hailar            66.05 318  eP      P        12 50 49.5  -1.8
HIA                                  pmax   pmax
       comp=Z,19nm,1.2s
HIA                                  MLR    MLR
       comp=Z,608nm,19.0s
NAO    NORSAR Subarra    66.05  20   P      P        12 50 52.8  +1.7
       comp=Z,59nm,1.4s,mb5.4
NAO    NORSAR Subarra    66.05  20   P      P        12 50 52.8  +1.7
NAO                                  pmax   pmax
       comp=Z,59nm,1.4s,mb5.4
KONO   Kongsberg         66.80  22   PFAKE           12 51 10.0   +14
KONO                                 LR     LR
       comp=Z,295nm,20.0s,MS4.5
CN2    Changchun         67.36 311  eP      P        12 50 58.9  -0.9
CN2                                  AMB    AMB
       comp=Z,20nm,1.5s,mb4.9
CN2                                  LR     LR
       comp=N,510nm,19.0s,MS4.9
CN2                                  LR     LR
       comp=E,480nm,19.0s,MS4.9
CN2                                  LR     LR
       comp=Z,580nm,25.0s
FINES  FINESS Array B    68.36  13   P      P        12 51 07.2  +1.5
       comp=Z,2.0nm,0.8s,mb4.2,baz=348,slow=13,SNR=3.8
FINES                                LR     LR       13 21 40.6
       comp=Z,384nm,18.0s,MS4.7,baz=346,slow=36
PPT    Papeete           68.54 201  eLR     LR       13 11 24.1
       comp=Z,1µm,28.2s
PPT    Papeete           68.54 201   LR     LR       13 13 43.8
       comp=Z,554nm,19.1s,MS4.8,baz=54,slow=30
SNY    Shenyang          69.74 311 ⇑P       P        12 51 13.8  -0.7
SNY                                  AP     pP       12 51 20.5  +3.2
SNY                                  AMB    AMB
       comp=Z,20nm,1.3s,mb4.9
IRK    Irkutsk           69.83 328  eP      P        12 51 14.0  -0.9
IRK                                  pmax   pmax
       comp=Z,60nm,1.2s,mb5.4
KLMR   Klimovskoe        70.40   6  eP      P        12 51 18.5  +0.2
KLMR                                eS      S        13 00 26.3  -3.4
KLMR                                 pmax   pmax
       comp=Z,80nm,1.5s,mb5.4
KLMR                                 pmax   pmax
       comp=Z,100nm,6.7s
KLMR                                 smax
       comp=E,520nm,4.1s
KLMR                                 MLR    MLR
       comp=Z,610nm,17.0s,MS4.9
INCN   Inchon            71.35 306   PFAKE           12 51 40.0   +16
INCN                                 LR     LR
       comp=Z,323nm,20.0s,MS4.6
RKT    Rikitea           71.69 186  eLR     LR       13 12 50.3
       comp=Z,389nm,27.2s
ZAK    Zakamensk         71.72 328  eP      P        12 51 26.9  +0.5
ZAK                                  pmax   pmax
       comp=Z,4.0nm,1.3s,mb4.2
ZAK                                  pmax   pmax
       comp=Z,2.0nm,1.4s,mb3.9
ULN    Ulaanbaatar       72.41 324  eP      P        12 51 30.4  -0.1
       comp=Z,13nm,1.3s,mb4.7
ULN                                  LR     LR
       comp=Z,793nm,21.0s,MS5.0
ULN    Ulaanbaatar       72.41 324  eP      P        12 51 30.5  -0.1
ULN                                  pmax   pmax
       comp=Z,13nm,1.3s,mb4.7
ULN                                  MLR    MLR
       comp=Z,793nm,21.0s,MS5.0
ROSF   Rostrenen         72.44  35  eP      P        12 51 29.7  -1.0
SONM   Songino Array     72.69 325   P      P        12 51 33.1  +1.0
       comp=Z,5.1nm,1.0s,mb4.4,baz=45,slow=4.2,SNR=23
SONM                                 LR     LR       13 24 01.4
       comp=Z,1µm,20.5s,MS5.2,baz=24,slow=36
SGMF   Saint Gilles      72.78  34  eP      P        12 51 31.7  -0.9
       comp=Z,243nm,1.9s,mb5.5
SGMF   Saint Gilles      72.78  34  eP      P        12 51 31.7  -0.9
SGMF                                 pmax   pmax
       comp=Z,121nm,1.9s,mb5.5
QUIF   Quistinic         72.83  35  eP      P        12 51 31.9  -1.0
FLN    La Foliniere      73.11  33  eP      P        12 51 33.0  -1.6
FLN                                 eR
       comp=Z,857nm,22.0s
NVS    Novosibirsk       73.42 341  eP      P        12 51 35.9  -0.3
NVS                                  pmax   pmax
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       comp=Z,51nm,1.4s,mb5.3
NVS                                  pmax   pmax
       comp=N,32nm,1.6s
NVS                                  pmax   pmax
       comp=E,29nm,1.4s
BAIF   Baives            73.62  30  eP      P        12 51 35.5  -2.0
       comp=E,32nm,1.2s,mb4.8
BAIF   Baives            73.62  30  eP      P        12 51 35.5  -2.0
BAIF                                 pmax   pmax
       comp=Z,16nm,1.3s,mb4.8
ZAL    Zalesovo          73.92 340   P      P        12 51 40.7  +1.6
       comp=Z,1.1nm,0.7s,mb3.9,baz=130,slow=6.7,SNR=9.2
ZAL                                  LR     LR       13 28 39.9
       comp=Z,738nm,18.2s,MS5.0,baz=83,slow=39
ZAL    Zalesovo          73.92 340   P      P        12 51 40.7  +1.6
ZAL                                  LR     LR       13 28 39.9
TBI    Tubuai            74.08 200  eLR     LR       13 13 58.4
       comp=Z,852nm,29.8s
RUE    Ruedersdorf       74.27  23  eP      P        12 51 38.8  -2.3
SUW    Suwalki           74.95  17  eP      P        12 51 53.4  +8.3
SUW                                  MLR    MLR      13 24 09.1
       comp=Z,400nm,19.7s,MS4.7
SUW    Suwalki           74.95  17  eP      P        12 51 44.4  -0.7
SUW                                 eP               12 51 53.4
MFF    Saint Martin d    75.06  34  eP      P        12 51 44.6  -1.3
       comp=Z,46nm,1.4s,mb4.9
MFF    Saint Martin d    75.06  34  eP      P        12 51 44.6  -1.3
MFF                                  pmax   pmax
       comp=Z,23nm,1.4s,mb4.9
ARU    Arti              75.09 356   P      P        12 51 44.5  -1.3
       comp=Z,27nm,1.4s,mb5.0
ARU                                  LR     LR
       comp=Z,74nm,20.0s,MS4.0
ARU    Arti              75.09 356⇓iP      P        12 51 51.1  +5.3
ARU                                 e                12 52 04.9
ARU                                 e                12 54 38.6
ARU                                 ePPP    PPP      12 56 23.8  +2.5
ARU                                 eS      S        13 01 24.9  +2.1
ARU                                 eSS     SS       13 06 09.7  -4.3
ARU                                  pmax   pmax
       comp=Z,14nm,1.1s,mb4.8
ARU                                  MLR    MLR
       comp=N,300nm,21.0s,MS4.6
ARU                                  MLR    MLR
       comp=Z,300nm,21.0s,MS4.6
ARU                                  MLR    MLR
       comp=E,100nm,19.0s,MS4.6
CLL    Collm             75.13  24   P      P        12 51 48.0  +1.8
       comp=E,logA/T=1.1,mb4.8
CLL                                 i *SP   sP       12 51 55.1  +5.1
CLL                                 e                12 52 18.0
CLL    Collm             75.13  24  i P     P        12 51 48.9  +2.7
       comp=E,18nm,1.5s,mb4.8
CLL                                 i                12 51 55.1
CLL                                 e                12 52 18.0
CLL    Collm             75.13  24  i P     P        12 51 48.9  +2.7
CLL                                 i                12 51 55.1
CLL                                  pmax   pmax
       comp=Z,18nm,1.5s,mb4.8
MEZF   Maizieres J'vi    75.25  30  eP      P        12 51 45.1  -1.8
       comp=Z,19nm,0.8s,mb4.8
MOX    Moxa              75.35  25  i P     P        12 51 50.5  +3.0
       comp=Z,logA/T=1.4,mb5.1
MOX                                  L               13 25 00.0
MOX    Moxa              75.35  25  eP      P        12 51 50.5  +3.0
       comp=Z,37nm,1.6s,mb5.1
MOX                                  LR     LR
       comp=Z,400nm,20.0s,MS4.7
MOX    Moxa              75.35  25  eP      P        12 51 50.5  +3.0
MOX                                  pmax   pmax
       comp=Z,37nm,1.6s,mb5.1
MOX                                  MLR    MLR
       comp=Z,400nm,20.0s,MS4.7
BRG    Berggiesshubel    75.77  23  eP      P        12 51 53.0  +3.2
       comp=Z,39nm,1.8s,mb5.0
BRG                                 i                12 51 59.3
BRG                                 i                12 52 07.3
BRG                                  LR     LR
       comp=Z,670nm,15.9s,MS5.0
BRG    Berggiesshubel    75.77  23  eP      P        12 51 53.0  +3.1
BRG                                 i                12 51 59.3
BRG                                 i                12 52 07.3
BRG                                  pmax   pmax
       comp=Z,39nm,1.8s,mb5.0
BRG                                  MLR    MLR
       comp=Z,670nm,15.9s,MS5.0
OBN    Obninsk           75.83   9   PFAKE           12 52 00.0   +10
OBN                                  LR     LR
       comp=Z,96nm,20.0s,MS4.1
OBN    Obninsk           75.83   9⇑iP      P        12 51 57.7  +7.6
OBN                                 e                12 52 09.2
OBN                                  pmax   pmax
       comp=Z,49nm,1.4s,mb5.2
OBN                                  MLR    MLR
       comp=Z,300nm,17.0s,MS4.7
LOR    Lormes            75.92  31  eP      P        12 51 49.2  -1.6
       comp=Z,91nm,1.8s,mb5.1
LOR                                 eR
       comp=Z,824nm,19.2s
LOR    Lormes            75.92  31  eP      P        12 51 49.2  -1.6
LOR                                  pmax   pmax
       comp=Z,45nm,1.8s,mb5.1
LOR                                  MLR    MLR
       comp=Z,820nm,19.3s,MS5.0
SSF    Saint Saulge      75.97  31  eP      P        12 51 49.4  -1.7
       comp=Z,19nm,1.2s,mb4.9
SSF    Saint Saulge      75.97  31  eP      P        12 51 49.4  -1.7
SSF                                  pmax   pmax
       comp=Z,19nm,1.2s,mb4.9
CDF    Champ du Feu      76.05  29  eP      P        12 51 49.9  -1.6
       comp=Z,35nm,1.2s,mb4.9
CDF    Champ du Feu      76.05  29  eP      P        12 51 49.9  -1.6
CDF                                  pmax   pmax
       comp=Z,17nm,1.2s,mb4.8
GRA1   Grafenberg Arr    76.09  26  eP      P        12 51 54.9  +3.2
       comp=Z,47nm,1.5s,mb5.2
GRF    Grafenberg Arr    76.09  26  eP      P        12 51 54.9  +3.2
       comp=Z,47nm,1.5s,mb5.2
GRF                                  LR     LR
       comp=Z,300nm,20.1s,MS4.6
GRF    Grafenberg Arr    76.09  26  eP      P        12 51 54.9  +3.2
GRF                                  pmax   pmax
       comp=Z,47nm,1.5s,mb5.2
GRF                                  MLR    MLR
       comp=Z,300nm,20.1s,MS4.6
AVF    Avril sur Loir    76.15  32  eP      P        12 51 50.8  -1.3
       comp=Z,84nm,1.6s,mb5.1
AVF    Avril sur Loir    76.15  32  eP      P        12 51 50.8  -1.3
AVF                                  pmax   pmax
       comp=Z,42nm,1.6s,mb5.1
BGF    Bois d'Agland     76.18  32  eP      P        12 51 51.1  -1.1
       comp=Z,45nm,1.2s,mb5.0
BGF    Bois d'Agland     76.18  32  eP      P        12 51 51.1  -1.1
BGF                                  pmax   pmax
       comp=Z,22nm,1.2s,mb5.0
TCF    Toulx Ste Croi    76.18  33  eP      P        12 51 51.1  -1.2
       comp=Z,68nm,1.5s,mb5.0
TCF    Toulx Ste Croi    76.18  33  eP      P        12 51 51.1  -1.2
TCF                                  pmax   pmax
       comp=Z,34nm,1.5s,mb5.1
HHC    Hu-ho-hao-te      76.22 317  eP      P        12 52 00.1  +7.5
HHC                                  AP     pP       12 52 04.8  +9.4
HHC                                  XP     sP       12 52 07.1   +11
HHC                                  PCP    PcP      12 52 09.6  +4.5
HHC                                  AMB    AMB
       comp=Z,10.0nm,1.4s,mb4.5
HHC                                  AMB    AMB
       comp=Z,200nm,4.4s
HHC                                  LR     LR
       comp=N,520nm,16.1s,MS5.1
HHC                                  LR     LR
       comp=E,480nm,14.3s,MS5.1
HHC                                  LR     LR
       comp=Z,810nm,11.8s,MS5.3
PVCC   Panska Ves        76.25  23  eP      P        12 51 55.6  +3.0
PVCC                                ex      x        12 52 01.9
KSP    Ksiaz             76.40  22  eP      P        12 51 56.6  +3.2
KSP                                  MLR    MLR      13 22 18.8
       comp=Z,500nm,27.3s,MS4.7
KSP    Ksiaz             76.40  22⇓eP      P        12 51 56.7  +3.3
KSP                                 epP     pP       12 52 01.8  +5.6
HINF   Hinteralfeld      76.43  29  eP      P        12 51 51.8  -1.9
SMF    Signal de Mont    76.45  32  eP      P        12 51 52.8  -1.0
       comp=Z,24nm,1.2s,mb4.7
SMF    Signal de Mont    76.45  32  eP      P        12 51 52.8  -1.0
SMF                                  pmax   pmax
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      comp=Z,12nm,1.2s,mb4.7
UPC   Upice              76.64  22 eP      P       12 51 57.5 +2.8
CHKZ  Chkalovo           76.72 348 eP      P       12 51 53.8 -1.3
      comp=Z,22nm,1.6s,mb4.8
CHKZ  Chkalovo           76.72 348 eP      P       12 51 53.8 -1.3
CHKZ                                pmax   pmax
      comp=Z,22nm,1.6s,mb4.8
PRU   Pruhonice          76.74  23 eP      P       12 51 57.5 +2.2
PRU                                ex      x       12 52 03.2
RJF   Les Rejaudoux      76.77  34 eP      P       12 51 54.3 -1.3
      comp=Z,90nm,1.4s,mb5.2
RJF                                eR
      comp=Z,792nm,18.0s
RJF   Les Rejaudoux      76.77  34 eP      P       12 51 54.3 -1.3
RJF                                 pmax   pmax
      comp=Z,45nm,1.4s,mb5.2
RJF                                 MLR    MLR
      comp=Z,790nm,18.0s,MS5.1
LFF   La Frestale        76.80  34 eP      P       12 51 54.7 -1.0
      comp=Z,137nm,1.5s,mb5.3
LFF   La Frestale        76.80  34 eP      P       12 51 54.7 -1.0
LFF                                 pmax   pmax
      comp=Z,68nm,1.5s,mb5.4
DPC   Dobruska-Polom     76.86  22 eP      P       12 51 58.5 +2.5
DPC                                ex      x       12 52 05.4
DPC                                 AMS    AMS     13 27 30.0
      comp=Z,800nm,17.3s
CABF  La Chapelle        77.24  30 eP      P       12 51 56.9 -1.3
      comp=Z,52nm,1.3s,mb5.0
CABF  La Chapelle        77.24  30 eP      P       12 51 56.9 -1.3
CABF                                pmax   pmax
      comp=Z,26nm,1.3s,mb5.0
KHC   Kasperske Hory     77.26  24 eP      P       12 52 01.5 +3.3
KHC                                ex      x       12 52 07.5
KHC                                 AMS    AMS     13 29 00.0
      comp=Z,900nm,12.5s
CAF   Calviac            77.30  34 eP      P       12 51 57.6 -0.9
      comp=Z,9.8nm,1.0s,mb4.4
CAF   Calviac            77.30  34 eP      P       12 51 57.6 -0.9
CAF                                 pmax   pmax
      comp=Z,5.0nm,1.0s,mb4.4
BRVK  Borovoye           77.37 348 eP      P       12 51 58.0 -0.7
      comp=Z,27nm,1.8s,mb4.9
BRVK                                LR     LR
      comp=Z,57nm,19.0s,MS3.9
BRVK  Borovoye           77.37 348 eP      P       12 51 58.0 -0.7
BRVK                                pmax   pmax
      comp=Z,27nm,1.8s,mb4.9
BRVK                                MLR    MLR
      comp=Z,57nm,19.0s,MS3.9
GERES GERESS Array B     77.56  24  P      P       12 52 02.9 +3.1
      comp=Z,2.9nm,0.9s,mb4.2,baz=333,slow=3.0,SNR=16
GERES                               LR     LR      13 25 54.0
      comp=Z,259nm,19.4s,MS4.6,baz=201,slow=35
SJPF  Ste Jean           77.58  37 eP      P       12 51 59.2 -0.9
TREC  Trest              77.62  23 eP      P       12 52 03.7 +3.5
TREC                               ex      x       12 52 09.4
MORC  Moravsky Berou     77.69  22 eP      P       12 51 59.3 -1.3
      comp=Z,26nm,1.4s,mb5.0
MORC  Moravsky Berou     77.69  22 eP      P       12 51 59.3 -1.3
MORC                                pmax   pmax
      comp=Z,26nm,1.4s,mb5.0
OKC   Ostrava-Krasne     77.78  21 eP      P       12 52 01.7 +0.6
OKC                                ex      x       12 52 10.2
OJC   Ojcow              77.81  20 eP      P       12 52 00.8 -0.4
KURK  Kurchatov          78.26 343 eP      P       12 52 03.7 +0.1
      comp=Z,25nm,1.5s,mb4.9
KURK                                LR     LR
      comp=Z,116nm,19.0s,MS4.2
KURK  Kurchatov          78.26 343 eP      P       12 52 03.7  0.0
KURK                                pmax   pmax
      comp=Z,25nm,1.5s,mb4.9
KURK                                MLR    MLR
      comp=Z,116nm,19.0s,MS4.2
VIVF  Saint-Julien-l     78.29  32 eP      P       12 52 02.6 -1.4
LPL   La Plagne          78.42  30 eP      P       12 52 03.0 -1.7
      comp=Z,8.5nm,0.8s,mb4.4
LPL   La Plagne          78.42  30 eP      P       12 52 03.0 -1.7
LPL                                 pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.4
LPG   La Plagne          78.44  30 eP      P       12 52 03.2 -1.6
      comp=Z,45nm,1.5s,mb4.9
LPG   La Plagne          78.44  30 eP      P       12 52 03.2 -1.6
LPG                                 pmax   pmax
      comp=Z,23nm,1.5s,mb4.9
ORIF  Oris-en-Rattie     78.65  31 eP      P       12 52 04.5 -1.5
ORIF                               eR
      comp=Z,1µm,21.0s
MTLF  Montolieu          78.71  34 eP      P       12 52 05.1 -1.2
STHS  Stebnicka Huta     78.89  20 eP      P       12 52 11.1 +3.9
STHS                               e               12 52 16.8
KWP   Kalwaria           79.01  19 eP      P       12 52 15.6 +7.8
KWP                                 MLR    MLR     13 24 49.8
      comp=Z,400nm,23.6s,MS4.7
KWP   Kalwaria           79.01  19 eP      P       12 52 15.6 +7.8
ZST   Bratislava         79.05  23 epP     pP      12 52 11.8 +0.9
SSE   Sheshan            79.11 305  P      P       12 52 09.6 +0.8
SSE                                 PP     PP      12 55 07.8 -2.1
SSE                                 S      S       13 02 08.5 +1.5
SSE                                 SCS    ScS     13 02 31.3 +3.1
SSE                                 SS     SS      13 07 14.5 -1.4
SSE                                 AMB    AMB
      comp=Z,20nm,0.8s,mb5.1
SSE                                 AMB    AMB
      comp=Z,100nm,3.6s
SSE                                 LR     LR
      comp=N,180nm,21.4s,MS4.5
SSE                                 LR     LR
      comp=E,170nm,21.4s,MS4.5
SSE                                 LR     LR
      comp=Z,340nm,23.5s,MS4.6
SSE   Sheshan            79.11 305  P      P       12 52 09.6 +0.8
      comp=Z,26nm,0.8s,mb5.2
SSE                                 sP     sP      12 52 14.1 +1.5
SSE                                 PP     PP      12 55 07.8 -2.1
SSE                                 S      S       13 02 08.5 +1.5
SSE                                 sS             13 02 14.3
SSE                                 ScS    ScS     13 02 31.2 +3.0
SSE                                 SS     SS      13 07 14.5 -1.4
SSE                                 LR     LR
      comp=Z,340nm,23.5s,MS4.6
MBDF  Montbardon         79.12  31 eP      P       12 52 07.1 -1.5
AKASG Malin Array Be     79.19  14  P      P       12 52 10.6 +1.8
      comp=Z,4.5nm,0.9s,mb4.4,baz=342,slow=5.2,SNR=9.9
AKASG Malin Array Be     79.19  14  P      P       12 52 10.6 +1.8
VYHS  Vyhne              79.20  21 eP      P       12 52 12.4 +3.5
VYHS                               e               12 52 17.9
ESDC  Sonseca Array      79.33  40  P      P       12 52 12.2 +2.4
      comp=Z,1.7nm,0.8s,mb4.0,baz=333,slow=2.9,SNR=7.0
CRVS  Cervenica-Dubn     79.43  20 eP      P       12 52 09.9 -0.2
CRVS                               epP     pP      12 52 13.7 +0.8
CRVS                               e               12 52 18.8
CRVS                               e               12 52 25.8
KOLS  Kolonicke sedl     79.58  19 eP      P       12 52 14.1 +3.2
KECS  Kecovo             79.60  20 eP      P       12 52 11.4 +0.3
KECS                               e               12 52 20.2
KECS                               e               12 52 30.2
NJ2   Nanjing            79.62 307 eP      P       12 52 10.9 -0.6
NJ2                                 PP     PP      12 55 10.8 -3.1
NJ2                                 XS             13 02 29.0
NJ2                                 AMB    AMB
      comp=Z,10.0nm,1.0s,mb4.7
NJ2                                 AMB    AMB
      comp=Z,1µm,5.2s
NJ2                                 LR     LR
      comp=N,2µm,24.0s,MS5.5
NJ2                                 LR     LR
      comp=E,2µm,22.8s,MS5.5
NJ2                                 LR     LR
      comp=Z,7µm,23.2s
PSZ   Piszkesteto        79.99  21 eP      P       12 52 13.4 +0.3
      comp=Z,66nm,1.4s,mb5.4
PSZ   Piszkesteto        79.99  21 eP      P       12 52 13.5 +0.3
PSZ                                 pmax   pmax
      comp=Z,66nm,1.4s,mb5.4
FRF   La Foret Royal     80.11  31 eP      P       12 52 11.4 -2.5
      comp=Z,34nm,1.0s,mb5.0
FRF   La Foret Royal     80.11  31 eP      P       12 52 11.4 -2.5
FRF                                 pmax   pmax
      comp=Z,17nm,1.0s,mb4.9
SAML  Samuel             81.02 114 eP      P       12 52 17.8 -1.5
      comp=Z,6.7nm,1.2s,mb4.5
SAML                                LR     LR
      comp=Z,346nm,21.0s,MS4.7
AKTO  Aktyubinsk         81.10 356  P      P       12 52 19.6 +0.6
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      comp=Z,5.5nm,1.1s,mb4.4,baz=26,slow=5.8,SNR=8.1
MKAR  Makanchi Array     81.17 339  P      P       12 52 19.9 +0.5
      comp=Z,6.1nm,0.9s,mb4.5,baz=18,slow=3.8,SNR=8.5
MKAR                                LR     LR      13 31 15.7
      comp=Z,558nm,20.8s,MS4.9,baz=32,slow=38
BURAR Bucovina Array     81.44  18 ⇓P      P       12 52 29.2 +8.4
BURAR Bucovina Array     81.44  18 ⇓P      P       12 52 29.2 +8.4
DRGR                     81.70  19 ⇑P      P       12 52 30.1 +7.9
GTA   Gaotai             82.36 324 eP      P       12 52 32.9 +7.2
GTA                                 AP     pP      12 52 37.3 +8.7
GTA                                 XP     sP      12 52 39.3  +10
GTA                                 PP     PP      12 55 40.8 +4.2
GTA                                 S      S       13 02 43.3 +2.9
GTA                                 SKS    SKS     13 02 47.4 +0.2
GTA                                 XS             13 02 51.3
GTA                                 SS     SS      13 08 03.0 -1.3
GTA                                 AMB    AMB
      comp=Z,70nm,4.6s
GTA                                 LR     LR
      comp=N,490nm,15.6s,MS5.0
GTA                                 LR     LR
      comp=E,350nm,19.8s,MS5.0
GTA                                 LR     LR
      comp=Z,730nm,17.5s,MS5.1
WMQ   Urumqi             82.52 334  P      P       12 52 30.5 +4.0
WMQ                                 AP     pP      12 52 35.0 +5.7
WMQ                                 PP     PP      12 55 40.0 +2.2
WMQ                                 S      S       13 02 46.0 +4.0
WMQ                                 XS             13 02 54.0
WMQ                                 SS     SS      13 08 10.0 +3.4
WMQ                                 AMB    AMB
      comp=Z,10.0nm,1.2s,mb4.7
WMQ                                 AMB    AMB
      comp=Z,180nm,4.4s
WMQ                                 LR     LR
      comp=N,860nm,18.4s,MS5.3
WMQ                                 LR     LR
      comp=E,740nm,17.6s,MS5.3
WMQ                                 LR     LR
      comp=Z,540nm,19.8s,MS4.9
XAN   Xi'an              82.99 315  P      P       12 52 31.0 +1.9
XAN                                 AP     pP      12 52 36.1 +4.1
XAN                                 AMB    AMB
      comp=Z,10.0nm,1.4s,mb4.7
VRI   Vrincioaia         83.41  17 ⇑P      P       12 52 34.7 +3.6
VRI   Vrincioaia         83.41  17 ⇑P      P       12 52 34.7 +3.6
LZH   Lanzhou            83.55 320 eP      P       12 52 39.6 +7.7
LZH                                 AP     pP      12 52 44.3  +10
LZH                                 XP     sP      12 52 46.5  +11
LZH                                 PP     PP      12 55 53.0 +6.7
LZH                                 S      S       13 02 54.0 +1.4
LZH                                 XS             13 03 12.0
LZH                                eSS     SS      13 08 25.0 +3.2
LZH                                 AMB    AMB
      comp=Z,30nm,1.0s,mb5.4
LZH                                 AMB    AMB
      comp=Z,250nm,4.0s
LZH                                 LR     LR
      comp=N,2µm,14.8s
LZH                                 LR     LR
      comp=Z,2µm,17.6s,MS5.5
LPAZ  La Paz             84.00 123  P      P       12 52 36.0 +1.3
      comp=Z,2.5nm,0.6s,mb4.5,baz=355,slow=4.5,SNR=9.0
LPAZ                                LR     LR      13 32 38.6
      comp=Z,177nm,18.8s,MS4.5,baz=322,slow=38
LPAZ  La Paz             84.00 123 eP      P       12 52 33.7 -0.9
      comp=Z,5.1nm,0.8s,mb4.7
LPAZ                                LR     LR
      comp=Z,311nm,22.0s,MS4.6
LPAZ  La Paz             84.00 123 eP      P       12 52 33.7 -0.9
LPAZ                                pmax   pmax
      comp=Z,5.0nm,0.8s
LPAZ                                MLR    MLR
      comp=Z,311nm,22.0s
CFR   Carcaliu           84.34  16 ⇑P      P       12 52 43.5 +7.8
CFR   Carcaliu           84.34  16 ⇑P      P       12 52 43.5 +7.8
MDT   Midelt             84.75  44  P      P       12 52 41.1 +3.0
      comp=Z,2.6nm,0.9s,mb4.3,baz=338,slow=8.6,SNR=2.6
ENH   Enshi              85.82 313  PFAKE          12 53 00.0  +17
ENH                                 LR     LR
      comp=Z,459nm,19.0s,MS4.9
ANN   Anapa              86.11  10 eP      P       12 52 49.1 +4.6
ANN                                eS      S       13 03 08.4 -9.1
ANN                                 pmax   pmax
      comp=Z,31nm,0.7s,mb5.7
ANN                                 MLR    MLR
      comp=Z,422nm,21.0s,MS4.8
KIV   Kislovodsk         87.44   6  PFAKE          12 53 00.0 +9.0
KIV                                 LR     LR
      comp=Z,75nm,19.0s,MS4.1
KIV   Kislovodsk         87.44   6⇓iP      P       12 52 59.6 +8.6
KIV                                 pmax   pmax
      comp=Z,11nm,1.2s,mb5.0
KIV                                 MLR    MLR
      comp=Z,300nm,17.0s,MS4.8
SOC   Sochi              87.55   8 eP      P       12 52 59.3 +7.7
SOC                                eS      S       13 03 20.8  -10
SOC                                 pmax   pmax
      comp=Z,24nm,1.1s,mb5.3
SOC                                 MLR    MLR
      comp=Z,442nm,17.0s,MS4.9
ANTO  Ankara             90.31  14  PFAKE          12 53 20.0  +15
ANTO                                LR     LR
      comp=Z,227nm,19.0s,MS4.6
GNI   Garni              91.36   5  LR     LR      13 36 24.0
      comp=Z,206nm,18.6s,MS4.6,baz=160,slow=37
GNI   Garni              91.36   5  PFAKE          12 53 20.0  +10
GNI                                 LR     LR
      comp=Z,231nm,19.0s,MS4.6
PMG   Port Moresby       93.17 259  PFAKE          12 53 30.0  +12
PMG                                 LR     LR
      comp=Z,332nm,19.0s,MS4.8
KMI   Kunming            93.37 315  P      P       12 53 21.8 +2.7
KMI                                 XP     sP      12 53 26.1 +3.2
KMI                                 S      S       13 04 24.8 +0.8
KMI                                 LR     LR
      comp=N,410nm,17.0s,MS5.1
KMI                                 LR     LR
      comp=E,350nm,17.0s,MS5.1
KMI                                 LR     LR
      comp=Z,420nm,21.4s,MS4.9
KMI   Kunming            93.37 315  P      P       12 53 21.7 +2.6
      comp=Z,3.0nm,0.8s,mb4.8
KMI                                 sP     sP      12 53 26.1 +3.2
KMI                                 S      S       13 04 24.7 +0.7
KMI                                 LR     LR
      comp=Z,420nm,21.4s,MS4.9
KMI   Kunming            93.37 315  P      P       12 53 21.7 +2.6
KMI                                 *SP    sP      12 53 26.1 +3.2
KMI                                 S      S       13 04 24.7 +0.7
KMI                                 pmax   pmax
      comp=Z,3.0nm,0.8s,mb4.8
KMI                                 MLR    MLR
      comp=Z,420nm,21.4s,MS4.9
LSA   Lhasa              94.24 326  PFAKE          12 53 40.0  +17
LSA                                 LR     LR
      comp=Z,491nm,20.0s,MS5.0
QIZ   Qiongzhong         94.87 306  PFAKE          12 53 40.0  +14
QIZ                                 LR     LR
      comp=Z,478nm,20.0s,MS5.0
DAV   Davao City (W)     95.00 287  PFAKE          12 53 40.0  +13
DAV                                 LR     LR
      comp=Z,849nm,22.0s,MS5.2
BDFB  Brasilia           95.55 107  LR     LR      13 39 07.4
      comp=Z,272nm,20.8s,MS4.7,baz=67,slow=37
RCBR  Riachuelo          96.15  92  PFAKE          12 53 40.0 +7.8
RCBR                                LR     LR
      comp=Z,274nm,20.0s,MS4.7
DBIC  Dimbokro          106.25  59  PFAKE          12 58 40.0
DBIC                                LR     LR
      comp=Z,338nm,20.0s,MS4.9
WRAB  Tennant Creek     109.25 262  PFAKE          12 58 50.0
WRAB                                LR     LR
      comp=Z,79nm,22.0s,MS4.2
PALK  Pallekele         118.61 326  PFAKE          12 59 00.0 +5.9
PALK                                LR     LR
      comp=Z,60nm,22.0s,MS4.2
KMBO  Kilima Mbogo      131.09  19  PKP    PKPdf   12 59 19.1 +1.0
      comp=Z,0.7nm,0.6s,baz=350,slow=6.1,SNR=3.1
SBA   Scott Base        132.19 195  PFAKE          12 59 30.0  +11
SBA                                 LR     LR
      comp=Z,274nm,19.0s,MS5.0
VNDA  Vanda             132.88 196  PFAKE          12 59 30.0  +10
VNDA                                LR     LR
      comp=Z,323nm,19.0s,MS5.1
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QSPA  South Pole Qui    138.49 180 ePKP    PKPdf   12 59 29.6 -0.6
VNA3  Neumayer Olymp    144.34 151 e       PKPbc   12 59 41.3 +4.3
VNA3  Neumayer Olymp    144.34 151 e       PKPbc   12 59 44.3 +7.3
VNA3  Neumayer Olymp    144.34 151 e       PKPbc   12 59 47.4  +10
VNA3  Neumayer Olymp    144.34 151 e       PKPbc   12 59 52.7  +16
VNA3  Neumayer Olymp    144.34 151⇑iPKPdf  PKPdf   12 59 38.6 -1.8
VNA3                               e               12 59 41.3
VNA3                               e               12 59 44.3
VNA3                               e               12 59 47.4
VNA3                               e               12 59 52.7
VNA1  Neumayer--Stat    144.86 150 e       PKPbc   12 59 43.6 +5.1
VNA1  Neumayer--Stat    144.86 150 e       PKPbc   12 59 46.4 +7.9
VNA1  Neumayer--Stat    144.86 150 e       PKPbc   12 59 49.3  +11
VNA1  Neumayer--Stat    144.86 150 e       PKPbc   12 59 54.6  +16
VNA1  Neumayer--Stat    144.86 150⇑iPKPdf  PKPdf   12 59 40.6 -0.8
VNA1                               e               12 59 43.6
VNA1                               e               12 59 46.4
VNA1                               e               12 59 49.3
VNA1                               e               12 59 54.6
VNA2  Neumayer--Watz    145.11 151 e       PKPbc   12 59 41.1 +1.9
VNA2  Neumayer--Watz    145.11 151 e       PKPbc   12 59 44.3 +5.1
VNA2  Neumayer--Watz    145.11 151 e       PKPbc   12 59 47.0 +7.8
VNA2  Neumayer--Watz    145.11 151 e       PKPbc   12 59 52.5  +13
VNA2  Neumayer--Watz    145.11 151⇑iPKPdf  PKPdf   12 59 39.0 -2.8
VNA2                               e               12 59 41.1
VNA2                               e               12 59 44.3
VNA2                               e               12 59 47.0
VNA2                               e               12 59 52.5
SNAA  Sanae             146.41 152 e       PKPbc   12 59 44.8 +2.5
SNAA  Sanae             146.41 152 e       PKPbc   12 59 48.0 +5.7
SNAA  Sanae             146.41 152 e       PKPbc   12 59 51.2 +8.9
SNAA  Sanae             146.41 152 e       PKPbc   12 59 53.8  +11
SNAA  Sanae             146.41 152⇑iPKPdf  PKPdf   12 59 42.5 -1.5
SNAA                               e               12 59 44.8
SNAA                               e               12 59 48.0
SNAA                               e               12 59 51.2
SNAA                               e               12 59 53.8
BOSA  Boshof            151.65  55  PKPbc  PKPdf   13 00 00.2 +6.6
      comp=Z,8.9nm,1.0s,baz=326,slow=2.7,SNR=6.1
BOSA  Boshof            151.65  55 ePKP    PKPdf   12 59 52.1 -1.5
BOSA                                PKPbc  PKPdf   13 00 00.2 +6.6
MAW   Mawson            160.14 193  PKPab  PKPab   13 00 42.6 -0.4
      comp=Z,1.9nm,0.9s,baz=80,slow=6.1,SNR=4.5
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*ISK **19** 12:57:28.6, 38.77N×26.15E, h28km, MD2.9*
*ATH **19** 12:57:28.3, 38.96N×26.78E, h2km, MD3.0/3*
*CSEM **19** 12:57:30.7±0.1, 38.93N×26.48E, h12km, MD2.9, Error ellipse: s-maj=3.6km s-min=2.3km az=70.0*
ISC 19 12:57:29.4±0.8**, 38.85N**±0.03×**26.28E**±0.07**, h14**km±6km**, n14,** σ**0.97**/24**, Aegean Sea**

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Code  Station Name       Δ°   AZ°   Phase ID         Time       Res
                                    Op     ISC       h  m  s    ISC
PRK   Paraskevi          0.40 359 ePG      Pg      12 57 37.8  0.0
PRK                               eSG      Sg      12 57 44.7 +1.3
URLA  Izmir              0.54 153 i P      Pb      12 57 38.3 -1.9
URLA                              i S      Sb      12 57 45.9 -1.6
AYVA  Ayvalik            0.56  35 i P      Pb      12 57 40.4 -0.2
AYVA                              i S      Sb      12 57 47.8 -0.3
IZM   Izmir              0.89 120  PG      Pg      12 57 46.6 -0.8
IZM                                SG      Sg      12 57 59.3 -0.1
KDAG  Bornova            0.89 119 i P      Pb      12 57 45.7 -0.4
KDAG                              i S      Sb      12 57 58.1 +0.5
EZN   Ezine              0.98   2  PG      Pg      12 57 48.2 -1.0
AKS   Akhisar            1.20  88  PN      Pn      12 57 51.5 -0.2
AKS                                SN      Sn      12 58 07.9 +0.1
SMG   Samos              1.22 159 ePB      Pb      12 57 51.9 +0.2
SMG                               eSB      Sb      12 58 08.9 +1.8
BALB  Balikesir          1.48  57  PN      Pn      12 57 55.4 -0.3
BALB                               SN      Sn      12 58 16.1 +1.3
BTOK  Tokmak             1.64  55 i P      Pn      12 57 58.1  0.0
BTOK                              i S      Sn      12 58 18.5 -0.6
MANT  Manisa             1.82 101 i P      Pn      12 58 02.5 +1.8
MANT                              i S      Sn      12 58 27.2 +3.6
APE   Apeiranthos        1.87 199 ePG      Pg      12 58 08.0 +1.2
BNT   Bandirma           1.97  40  PN      Pn      12 58 02.5 -0.3
MFT   Murefte            2.09  21 ePN      Pn      12 58 03.6 -0.9
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*MOS **19** 13:17:51.1±1.2, 2.02N×99.18E, h33km, mb4.9/13, Error ellipse: s-maj=23.1km s-min=8.4km az=117.0*
*BJI **19** 13:18:00.4, 1.78N×98.81E, h120km, mB5.4, mb4.8*
*NEIC **19** 13:18:01.8±0.3, 1.79N×98.94E, mb4.6/15, Error ellipse: s-maj=13.8km s-min=5.7km az=54.0*
*IDC **19** 13:18:02.0±0.6, 1.90N×99.09E, h122km±4km, mb4.2/13, mb1 4.3/13, mb1mx4.1/19, mbtmp4.6/13, Error ellipse: s-maj=36.2km s-min=9.8km az=59.0*
ISC 19 13:18:00.1±0.3**, 1.77N**±0.06×**98.90E**±0.08**, h119**km**, h119**km±1.1km**:pP-P, n90,** σ**1.15**/91**, mb4.8**/37**, 2C-11D, Northern Sumatera**

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Code  Station Name       Δ°   AZ°   Phase ID         Time       Res
                                    Op     ISC       h  m  s    ISC
KULM  Kulim              3.91  26⇓iP       P       13 18 59.9 +0.4
SNG   Songkhla           5.64  18  P       P       13 19 23.0 +0.3
      350nm,0.8s
KSM   Kuching           11.40  91⇑iP       P       13 20 42.6 +2.1
NST   Nakhon Sawan      13.87   5  P       P       13 21 13.8 +1.1
      158nm,0.5s
CHG   Chiang Mai        16.94   0  P       P       13 21 50.7 -0.6
KMI   Kunming           23.51   9  P       P       13 23 03.0 +2.8
KMI                                AMB     AMB
      comp=Z,10.0nm,0.7s,mb4.2
KMI   Kunming           23.51   9  P       P       13 23 03.0 +2.8
      comp=Z,10.0nm,0.7s,mb4.2
SHL   Shillong          24.61 345 eP       P       13 23 11.0 +0.2
SHL                               eS       S       13 27 19.0 -1.4
HYB   Hyderabad         25.33 309 i P      P       13 23 19.0 +1.3
HYB   Hyderabad         25.33 309 eP       P       13 23 19.0 +1.3
ALBI  Allahabad         28.63 326 eP       P       13 23 46.0 -1.6
PKI   Pulchoki          28.73 334 eP       P       13 23 48.0 -0.5
      comp=Z,18nm,0.8s,mb4.7
PKI   Pulchoki          28.73 334 eP       P       13 23 48.0 -0.5
PKI                                pmax    pmax
      comp=Z,9.0nm,0.8s,mb4.5
LSA   Lhasa             28.74 346  P       P       13 23 49.6 +1.0
LSA   Lhasa             28.74 346⇓iP       P       13 23 49.0 +0.4
      comp=Z,52nm,0.5s,mb5.4
LSA   Lhasa             28.74 346⇓iP       P       13 23 49.0 +0.4
LSA                                pmax    pmax
      comp=Z,52nm,0.5s,mb5.4
GUN   Gumba             28.83 336 eP       P       13 23 49.2 -0.2
      comp=Z,27nm,0.3s,mb5.4
DMN   Daman             28.89 334 eP       P       13 23 49.4 -0.6
      comp=Z,17nm,0.7s,mb4.8
KKN   Kakani            28.97 334 eP       P       13 23 50.2 -0.5
      comp=Z,15nm,0.4s,mb4.9
GKN   Gorkha            29.44 334 eP       P       13 23 54.2 -0.7
      comp=Z,12nm,0.3s,mb5.0
KOLN  Koldanda          29.71 332 eP       P       13 23 57.1 -0.2
      comp=Z,36nm,0.7s,mb5.1
FITZ  Fitzroy Crossi    32.91 128 eP       P       13 24 22.8 -2.5
      comp=Z,19nm,0.6s,mb5.1
FITZ  Fitzroy Crossi    32.91 128  P       P       13 24 22.8 -2.4
      comp=Z,26nm,0.6s,mb5.2,baz=297,slow=6.2,SNR=28
NDI   New Delhi         33.83 324 eP       P       13 24 31.5 -1.6
KAKA  Kakadu            36.27 114 eP       P       13 25 11.4  +18
      comp=Z,11nm,1.0s,mb4.7
MUN   Mundaring         37.36 155 eP       P       13 25 04.9 +2.0
GTA   Gaotai            37.47   1 eP       P       13 25 04.3 +0.5
KLBR  Kellerberrin      37.70 153 eP       P       13 25 07.1 +1.4
      comp=Z,4.2nm,0.4s,mb4.6
NWAO  Narrogin (SRO)    38.61 155  P       P       13 25 14.8 +1.5
      comp=Z,4.7nm,0.4s,mb4.6,baz=332,slow=7.4,SNR=5.1
WRA   Warramunga Arr    40.91 124  P       P       13 25 31.5 -0.8
      comp=Z,54nm,0.4s,mb5.7,baz=302,slow=9.0,SNR=186
WRA                                PcP     PcP     13 27 30.4 -0.9
      comp=Z,1.7nm,0.6s,baz=314,slow=2.6,SNR=4.8
WRA                                ScP             13 31 07.6
      comp=Z,0.7nm,0.8s,baz=315,slow=2.9,SNR=3.9
WRAB  Tennant Creek     40.91 124 eP       P       13 25 31.5 -0.9
      comp=Z,80nm,0.5s,mb5.8
WRAB  Tennant Creek     40.91 124 eP       P       13 25 31.5 -0.9
WRAB                               pmax    pmax
      comp=Z,80nm,0.5s,mb5.8
WB2   Warramunga Arr    40.92 124 eP       P       13 25 31.4 -1.0
WB2                               i                13 25 34.2
ASPA  Alice Springs     42.40 129⇑iP       P       13 25 43.4 -1.2
ASPA                              i                13 25 46.6
FORT  Forrest           42.64 142 eP       P       13 25 46.7 +0.2
      comp=Z,29nm,0.5s,mb5.3
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ULHL	Ulahol	45.14	336	P	P	13 26 07.6	+1.1
	SNR=12						
KZA	Kyzart	45.41	335	P	P	13 26 09.5	+0.9
	SNR=12						
UCH	Uchtor	45.84	335	P	P	13 26 13.6	+1.6
	SNR=22						
TKM2	Tokmak 2	45.96	336	P	P	13 26 14.3	+1.4
	SNR=19						
KBK	Karagaybulak	46.01	335	P	P	13 26 14.8	+1.4
	SNR=32						
AML	Almayashu	46.12	334	P	P	13 26 15.3	+1.2
	SNR=20						
AAK	Ala-Archa	46.18	335	P	P	13 26 15.7	+1.0
	SNR=14						
SONM	Songino Array	46.34	7	P	P	13 26 15.7	-0.2
	comp=Z,5.5nm,0.4s,mb4.6,baz=190,slow=9.1,SNR=35						
SONM				ScP		13 31 29.5	
	comp=Z,2.6nm,0.9s,baz=200,slow=4.5,SNR=12						
CHMS	Chumysh	46.37	335	P	P	13 26 16.7	+0.5
	SNR=9.4						
EKS2	Erkin-Say	46.51	334	P	P	13 26 18.4	+1.1
	SNR=23						
USP	Ospenovka	46.70	335	P	P	13 26 20.0	+1.3
	SNR=8.7						
MKAR	Makanchi Array	47.13	344	P	P	13 26 21.9	-0.2
	comp=Z,18nm,0.6s,mb5.0,baz=158,slow=7.7,SNR=116						
MKAR				pP	pP	13 26 49.2	-0.6
	comp=Z,4.2nm,0.6s,baz=166,slow=10.0,SNR=4.4						
MKAR				ScP		13 31 33.4	
	comp=Z,0.6nm,0.7s,baz=162,slow=7.7,SNR=4.0						
MKAR	Makanchi Array	47.13	344	P	P	13 26 21.9	-0.2
MKAR				pP	pP	13 26 49.2	-0.6
MKAR				ScP		13 31 33.4	
ZAK	Zakamensk	48.58	4	*e*	P	13 26 34.9	+1.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.8						
CTA	Charters Tower	51.24	118	*e*P	P	13 26 53.3	-0.7
	comp=Z,3.7nm,0.6s,mb4.6						
CTA	Charters Tower	51.24	118	*e*P	P	13 26 53.3	-0.7
CTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CTAO	Charters Tower	51.24	118	*e*P	P	13 26 53.5	-0.5
	comp=Z,4.1nm,0.6s,mb4.6						
CTAO	Charters Tower	51.24	118	*e*P	P	13 26 53.5	-0.5
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
KURK	Kurchatov	51.71	344⇓	*e*P	P	13 26 56.4	-0.7
	comp=Z,11nm,0.7s,mb5.0						
KURK	Kurchatov	51.71	344⇓	*e*P	P	13 26 56.4	-0.7
KURK				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
STKA	Stephens Creek	52.49	133	*e*P	P	13 27 02.0	-1.2
	comp=Z,4.4nm,0.6s,mb4.7						
STKA	Stephens Creek	52.49	133	P	P	13 27 02.0	-1.2
	comp=Z,5.5nm,0.6s,mb4.8,baz=307,slow=7.8,SNR=20						
ZAL	Zalesovo	53.28	350	P	P	13 27 08.4	-0.3
	comp=Z,22nm,0.4s,mb5.5,baz=316,slow=5.8,SNR=40						
ZAL				pP	pP	13 27 37.2	+0.1
	comp=Z,4.5nm,0.5s,baz=302,slow=6.1,SNR=3.8						
ZAL				S	S	13 34 28.1	-0.9
	comp=Z,0.6nm,0.5s,baz=185,slow=21,SNR=3.4						
ZAL	Zalesovo	53.28	350	P	P	13 27 08.4	-0.3
ZAL				pP	pP	13 27 37.2	+0.1
ZAL				S	S	13 34 28.1	-0.9
ZAL	Zalesovo	53.28	350	P	P	13 27 08.5	-0.3
ZAL				S	S	13 34 28.1	-0.9
NVS	Novosibirsk	54.43	349	*e*P	P	13 27 14.9	-2.2
NVS				*e*S	S	13 34 41.8	-2.7
NVS				pmax	pmax		
	comp=N,13nm,1.3s						
NVS				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
NVS				pmax	pmax		
	comp=E,6.0nm,1.0s						
NVS				smax			
	comp=E,17nm,2.1s						
NVS				smax			
	comp=N,10.0nm,1.7s						
BVAR	Borovoye Array	56.29	340	P	P	13 27 29.2	-1.4
	comp=N,6.6nm,0.5s,mb5.0,baz=142,slow=9.7,SNR=8.9						
BVAR				S	S	13 35 07.9	-1.4
	comp=N,0.6nm,0.7s,baz=131,slow=14,SNR=3.7						
BRVK	Borovoye	56.35	340⇓	*i*P	P	13 27 29.6	-1.5
	comp=N,4.2nm,0.6s,mb4.7						
BRVK	Borovoye	56.35	340⇓	*i*P	P	13 27 29.6	-1.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
CHKZ	Chkalovo	56.75	340⇓	*i*P	P	13 27 32.7	-1.1
	comp=Z,19nm,0.9s,mb5.1						
CHKZ				*e*	pP	13 28 01.2	-1.2
CHKZ	Chkalovo	56.75	340⇓	*i*P	P	13 27 32.7	-1.1
CHKZ				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.1						
BOD	Bodaibo	57.16	10	*e*P	P	13 27 32.7	-3.9
BOD				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
AKTO	Aktyubinsk	59.55	331	P	P	13 27 52.0	-1.3
	comp=Z,3.4nm,0.5s,mb4.6,baz=120,slow=11						
AKTO				pP	pP	13 28 20.6	-1.7
	comp=Z,4.7nm,0.5s,baz=122,slow=9.1,SNR=4.6						
ARU	Arti	63.34	336⇓	*i*P	P	13 28 17.2	-1.5
	comp=Z,2.8nm,0.4s,mb4.5						
ARU				*e*	pP	13 28 46.6	-1.3
ARU	Arti	63.34	336⇓	*i*P	P	13 28 17.2	-1.5
ARU				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.6						
KIV	Kislovodsk	65.00	319	*e*P	P	13 28 29.2	-0.5
KIV				*i*	pP	13 28 59.3	+0.2
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
PET	Petropavlovsk	70.81	34	*i* P	P	13 29 04.9	-0.7
PET				pmax	pmax		
	comp=Z,29nm,0.5s,mb5.4						
AKASG	Malin Array Be	75.85	322	P	P	13 29 34.4	-0.5
	comp=Z,0.7nm,0.4s,mb3.7,baz=88,slow=5.7,SNR=6.4						
AKASG				pP	pP	13 30 04.3	-0.9
	comp=Z,3.2nm,0.7s,baz=87,slow=5.2,SNR=12						
AKASG	Malin Array Be	75.85	322	P	P	13 29 34.4	-0.5
AKASG				pP	pP	13 30 04.3	-0.9
FINES	FINESS Array B	80.29	332	P	P	13 29 59.2	+0.1
	comp=Z,3.2nm,0.5s,mb4.4,baz=101,slow=5.4,SNR=22						
FINES				pP	pP	13 30 30.0	+0.5
	comp=Z,3.7nm,0.5s,baz=101,slow=7.1,SNR=8.7						
FINES	FINESS Array B	80.29	332	P	P	13 29 59.2	+0.1
FINES				pP	pP	13 30 30.0	+0.5
KAF	Kangasniemi	80.35	333	*e*p	P	13 29 59.4	0.0
	comp=Z,3.3nm,0.5s,mb4.4						
KAF	Kangasniemi	80.35	333	*e*P	P	13 29 59.4	0.0
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
ARCES	ARCESS Array B	82.58	340	P	P	13 30 10.8	0.0
	comp=Z,6.8nm,1.1s,mb4.4,baz=104,slow=3.7,SNR=7.8						
ARCES				pP	pP	13 30 42.6	+1.1
	comp=Z,1.9nm,0.5s,baz=98,slow=4.9,SNR=12						
ARCES	ARCESS Array B	82.58	340	P	P	13 30 10.8	0.0
ARCES				pP	pP	13 30 42.6	+1.1
GERES	GERESS Array B	85.51	319	P	P	13 30 28.0	+2.1
	comp=Z,0.4nm,0.6s,baz=72,slow=3.1,SNR=2.8						
GERES				pP	pP	13 30 58.2	+1.4
	comp=Z,0.6nm,0.6s,baz=101,slow=6.8,SNR=6.0						
NB2	NORSAR Subarra	87.34	331	P	P	13 30 35.5	+1.0
	comp=Z,1.6nm,0.8s,mb4.0,baz=93,slow=4.8						
NB2	NORSAR Subarra	87.34	331	P	pP	13 31 05.9	+0.4
	comp=Z,4.7nm,0.7s,baz=94,slow=4.8						
NOA	NORSAR Array B	87.34	331	P	P	13 30 36.1	+1.6
	comp=Z,1.1nm,0.8s,mb3.8,baz=95,slow=4.9,SNR=4.4						
NOA				pP	pP	13 31 06.2	+0.7
	comp=Z,4.0nm,0.7s,baz=93,slow=4.9,SNR=13						
NAO	NORSAR Subarra	87.52	331	P	P	13 30 35.5	+0.1
	comp=Z,1.6nm,0.8s,mb4.1						
NAO	NORSAR Subarra	87.52	331	P	P	13 30 35.5	+0.1
NAO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
NVAR	Mina Array Bea	127.32	37	PKP	PKPdf	13 36 53.5	+2.3
	comp=Z,1.1nm,0.8s,baz=273,slow=1.6,SNR=6.7						
PDAR	Pinedale Array	128.78	27	PKP	PKPdf	13 36 55.9	+1.9
	comp=Z,0.5nm,0.6s,baz=90,slow=1.5,SNR=5.0						
TXAR	Lajitas Array	142.28	33	PKP	PKPdf	13 37 18.4	-0.8
	comp=Z,0.4nm,0.4s,baz=180,slow=0.9,SNR=4.7						
TXAR				SKPbc		13 40 46.9	
	comp=Z,0.8nm,0.7s,baz=270,slow=2.5,SNR=6.9						
BDFB	Brasilia	144.60	245	PKP	PKPdf	13 37 25.6	+2.1
	comp=Z,1.5nm,0.5s,baz=120,slow=4.6,SNR=6.7						

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*MOS **19** 13:43:52.9±1.1, 18.33N×146.45E, h111^{km}, mb4.7/4, Error ellipse: s-maj=25.3km s-min=10.1km az=96.7*

*NEIC **19** 13:43:53.5±0.4, 18.33N×146.46E, mb4.5/7, Error ellipse: s-maj=15.7km s-min=6.6km az=85.0*

*IDC **19** 13:43:53.9±3.2, 18.34N×146.53E, h102^{km}±29^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.9/21, mbtmp4.2/14, MS3.4/3, Ms1 3.4/3, ms1mx3.0/24, Error ellipse: s-maj=29.1km s-min=13.2km az=82.0*

ISC 19 13:43:52.1±2.3**, 18.35N**±0.07×**146.5E**±0.2**, h105**^{km}±20^{km}**,**
n36, σ0^{s}95/36**, mb4.2**/18**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
GUMO	Guam	4.99	199	P	P	13 45 04.8	-1.2
	19nm,0.3s,baz=138,slow=3.5,SNR=9.4						
GUMO				S	S	13 46 04.9	+1.9
	8.3nm,0.3s,baz=6.2,slow=24,SNR=2.4						
GUMO				LR	LR	13 46 59.8	
	comp=Z,215nm,21.1s,baz=250,slow=37						
GUMO	Guam	4.99	199	P	P	13 45 04.8	-1.2
GUMO				*e*Sn	S	13 46 03.3	+0.3
GUMO				LR	LR	13 46 59.8	
JHJ	Hachijo jima 2	15.91	339	LR	LR	13 52 30.0	
	comp=Z,125nm,19.8s,baz=153,slow=32						
MJAR	Matsushiro Arr	19.56	340	P	P	13 48 15.1	+1.1
	0.3nm,0.3s,baz=163,slow=11,SNR=4.3						
NACB	Ninganchiao	23.93	288	*e*P	P	13 48 57.7	+0.2
PMG	Port Moresby	27.58	179	P	P	13 49 31.2	-0.5
	11nm,0.7s,mb4.5,baz=4.4,slow=13,SNR=6.4						
PMG				LR	LR	13 59 49.8	
	comp=Z,121nm,18.1s,baz=178,slow=35						
PMG	Port Moresby	27.58	179	*e*P	P	13 49 31.3	-0.4
PMG				LR	LR	13 59 49.9	
MDJ	Mudanjiang	29.79	335	*e*P	P	13 49 51.0	-0.1
	3.5nm,0.4s,mb4.3						
CTA	Charters Tower	38.20	180	P	P	13 51 04.5	+1.2
	3.4nm,0.8s,mb4.2,baz=4.9,slow=10.0,SNR=5.0						
CTAO	Charters Tower	38.20	180	*e*P	P	13 51 03.6	+0.3
	9.6nm,1.2s,mb4.5						
CTAO	Charters Tower	38.20	180	*e*P	P	13 51 03.6	+0.3
CTAO				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.5						
WRAB	Tennant Creek	39.87	198	*e*P	P	13 51 17.5	+0.3
	comp=Z,10nm,0.9s,mb4.7						
WRAB	Tennant Creek	39.87	198	*e*P	P	13 51 17.5	+0.3
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
WB2	Warramunga Arr	39.88	198	*e*P	P	13 51 17.2	-0.1
WRA	Warramunga Arr	39.88	198	P	P	13 51 18.0	+0.7
	comp=Z,3.7nm,0.8s,mb4.2,baz=18,slow=8.3,SNR=23						
ULN	Ulaanbaatar	43.54	322	P	P	13 51 46.6	-0.3
SONM	Songino Array	43.91	321	P	P	13 51 50.2	+0.3
	comp=Z,1.0nm,0.6s,mb3.7,baz=136,slow=8.4,SNR=7.9						
YAK	Yakutsk	45.22	349	*e*P	P	13 52 01.0	+0.8
	comp=Z,11nm,0.8s,mb4.6						
YAK	Yakutsk	45.22	349	*e*P	P	13 52 01.0	+0.8
YAK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
STKA	Stephens Creek	50.16	185	*e*P	P	13 52 38.0	-1.1
	comp=Z,1.4nm,0.5s,mb4.2						
STKA	Stephens Creek	50.16	185	P	P	13 52 37.1	-2.0
	comp=Z,2.9nm,0.8s,mb4.2,baz=358,slow=7.3,SNR=6.5						
ZAL	Zalesovo	58.79	322	P	P	13 53 40.4	-1.1
	comp=Z,0.5nm,0.3s,mb4.0,baz=37,slow=5.1,SNR=4.2						
MKAR	Makanchi Array	59.28	314	P	P	13 53 45.4	+0.4
	comp=Z,0.6nm,0.6s,mb3.8,baz=92,slow=7.7,SNR=8.4						
KURK	Kurchatov	62.06	318	P	P	13 54 03.5	-0.3
KURK				*e*pP	pP	13 54 28.7	-1.2
ILAR	Eielson Array	63.61	26	P	P	13 54 12.1	-1.7
	comp=Z,0.4nm,0.8s,mb3.3,baz=253,slow=4.2,SNR=4.2						
CHKZ	Chkalovo	67.11	321	*e*P	P	13 54 35.6	-0.8
CHKZ				*e*pP	pP	13 55 00.8	-2.0
BRVK	Borovoye	67.31	321	*e*P	P	13 54 37.3	-0.4
	comp=Z,2.1nm,0.8s,mb4.0						
BRVK	Borovoye	67.31	321	*e*P	P	13 54 37.3	-0.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
INK	Inuvik	69.39	23	P	P	13 54 50.2	0.0
	comp=Z,1.1nm,0.8s,mb3.7,baz=271,slow=5.3,SNR=4.1						
KEV	Kevo	82.51	342	*e*p	P	13 56 03.8	-0.2
	comp=Z,6.8nm,0.6s,mb4.7						
KEV	Kevo	82.51	342	*e*P	P	13 56 03.8	-0.2
KEV				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.7						
NVAR	Mina Array Bea	82.73	52	P	P	13 56 08.2	+2.4
	comp=Z,0.7nm,0.7s,mb3.6,baz=260,slow=5.1,SNR=6.9						
ARCES	ARCESS Array B	83.07	342	P	P	13 56 08.4	+1.5
	comp=Z,7.3nm,0.6s,mb4.7,baz=68,slow=7.4,SNR=43						
JOF	Joensuu	84.67	335	*e*p	P	13 56 13.4	-1.5
	comp=Z,6.0nm,0.6s,mb4.7						
FINES	FINESS Array B	87.53	336	P	P	13 56 29.8	+0.8
	comp=Z,1.3nm,0.6s,mb4.1,baz=66,slow=6.1,SNR=20						
LPAZ	La Paz	146.87	92	PKPbc	PKPbc	14 03 26.3	+3.7
	comp=Z,0.9nm,0.7s,baz=338,slow=5.4,SNR=4.0						

SKHL 19 14:03:22.3±0.2**, 55.22N×124.42E, h8**^{km}±1^{km}**, mb3.8**/6**,**
Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KROS	Kirovskiy	1.67	117	*e*Pg	Pg	14 03 53.0	-2.7
KROS				AMB	AMB	14 03 54.7	
	22nm,0.4s						
KROS				sPg		14 03 56.8	
KROS				*i* Sg	Sg	14 04 15.5	-2.6
KROS				A		14 04 17.4	
	100nm,0.4s						
ZEA	Zeya	2.22	131	*e*Pg	Pg	14 04 01.5	-5.2
ZEA				AMB	AMB	14 04 01.6	
	11nm,0.2s						
ZEA				*e*Sg	Sg	14 04 30.6	-5.7
ZEA				A		14 04 32.7	
	170nm,0.4s						
BMKR	Bomnak	2.60	100	*e*Pn	Pn	14 04 06.0	+0.6
BMKR				*e*Pg	Pg	14 04 09.0	-5.2
BMKR				AMB	AMB	14 04 09.5	
	19nm,0.3s						
BMKR				pPg		14 04 11.8	
BMKR				*e*Sg	Sg	14 04 43.1	-5.8
BMKR				A		14 04 45.0	
	54nm,0.4s						
BMKR				A		14 04 45.0	
	82nm,0.4s						
TUP	Tupik	2.70	255	*e*Pn	Pn	14 04 07.3	+0.4
TUP				*e*Pg	Pg	14 04 12.1	-4.2
TUP				AMB	AMB	14 04 17.5	
	17nm,0.3s						
TUP				*e*Sn	Sn	14 04 40.2	+0.1
TUP				*e*Sg	Sg	14 04 47.2	-5.2
TUP				A		14 04 49.8	
	79nm,0.4s						
YASR	Yasnyy	2.85	131	*e*Pn	Pn	14 04 09.7	+0.8
YASR				*e*Pg	Pg	14 04 13.0	-6.1
YASR				*e*Sg	Sg	14 04 49.6	-7.5
YASR				A		14 04 51.8	
	23nm,0.5s						
YASR				A		14 04 51.8	
	40nm,0.5s						
YASR				A		14 04 51.8	
	13nm,0.5s						
CRS	Chara	3.84	299	*e*Pn	Pn	14 04 24.0	+1.0
CRS				AMB	AMB	14 04 34.4	
	4.0nm,0.1s						
CRS				*e*Sg	Sg	14 05 21.6	-8.5
CRS				A		14 05 30.5	
	44nm,0.7s						
EKMR	Ekimchan	5.46	110	*e*Pn	Pn	14 04 41.1	-4.8
EKMR				AMB	AMB	14 04 43.6	
	2.0nm,0.5s						
EKMR				*e*Pg	Pg	14 04 59.5	-12
EKMR				*e*Sg	Sg	14 06 11.0	-13
EKMR				A		14 06 21.9	
	8.0nm,0.6s						
EKMR				A		14 06 21.9	
	6.0nm,0.6s						

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*IDC **19** 14:09:16.5±0.5, 2.07N×96.80E, mb5.0/18, mb1 5.1/18, mb1mx5.1/19, mbtmp5.0/18, Error ellipse: s-maj=16.5km s-min=14.0km az=62.0*

*BJI **19** 14:09:17.0, 1.71N×96.88E, h35^{km}, mB5.5, mb5.2, Ms6.4, Msz6.0*

*MOS **19** 14:09:19.6±1.0, 2.06N×96.82E, h33^{km}, mb5.4/30, Error ellipse: s-maj=9.2km s-min=5.6km az=107.8*

*NEIC **19** 14:09:21.1±0.2, 2.03N×96.79E, mb5.2/35, Error ellipse: s-maj=6.0km s-min=4.3km az=206.0*

ISC 19 14:09:19.4±0.2**, 2.07N**±0.04×**96.81E**±0.03**, h30**^{km}**,**
h30^{km}±.9^{km}**:pP-P, n293,** σ1^{s}04/244**, mb5.2**/86**, MS5.9**/2**,**
25C-14D, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
IPM	Ipoh	4.89	59	P	Pn	14 10 34.3	+1.3
KULM	Kulim	5.00	50⇑	*e*P	Pn	14 10 35.5	+1.1
SNG	Songkhla	6.34	37	PG	Pn	14 10 54.0	+0.7
KGM	Kluang	6.51	90	P	Pn	14 10 56.4	+0.8
NNT	Nongplab	10.85	15	P	P	14 11 55.0	-0.9
KSM	Kuching	13.51	92	*e*Pn	P	14 12 32.5	+0.8
NST	Nakhon Sawan	13.91	13	P	P	14 12 35.1	-1.9
CHG	Chiang Mai	16.77	7	P	P	14 13 13.4	-0.6
	21nm,0.8s						
PALK	Pallekele	16.86	288	*e*Pn	P	14 13 14.8	-0.3
	146nm,1.1s						
CHRT	Chiangrai	17.93	9	PG	P	14 13 35.5	+7.1
KKM	Kota Kinabalu	19.75	78	*e*P	P	14 13 49.5	-0.6
KKM	Kota Kinabalu	19.75	78	P	P	14 13 51.3	+1.3
QIZ	Qiongzhong	21.15	36	*e*P	P	14 14 04.1	-0.3
	223nm,1.6s,mb5.2						
TSM	Tawau	21.15	83	P	P	14 14 04.6	+0.1
BATP	Bataraza	21.93	71	*e*P	P	14 14 12.2	-0.2
IMP	Imphal	22.75	353	*e*x	x	14 14 20.0	
IMP				*e*x	x	14 15 14.0	
PPR	Puerto Princes	23.10	70⇑	*e*P	P	14 14 25.7	+1.7
HYB	Hyderabad	23.55	312	*i* P	P	14 14 29.0	+0.7
HYB				*e*		14 14 37.0	
HYB	Hyderabad	23.55	312	*e*P	P	14 14 29.0	+0.7
KMI	Kunming	23.63	14	P	P	14 14 31.3	+2.3
KMI				AMB	AMB		
	comp=Z,60nm,1.2s,mb4.9						
KMI	Kunming	23.63	14	P	P	14 14 31.2	+2.2
	comp=Z,65nm,1.2s,mb4.9						
KMI	Kunming	23.63	14	P	P	14 14 31.2	+2.2
KMI				pmax	pmax		
	comp=Z,65nm,1.2s,mb4.9						
SHL	Shillong	23.84	349	*e*x	P	14 14 30.0	-1.1
ENPP	El Nido	24.21	67	*e*P	P	14 14 36.3	+1.5
BUSP	Coron	25.20	66	*e*P	P	14 14 45.0	+0.8
CUYO	Cuyo Island	25.57	69	*e*P	P	14 14 48.6	+0.8
LATR	Latur	25.66	311	*e*x	P	14 14 50.2	+1.7
LUBP	Lubang	25.91	62	*e*P	P	14 14 51.3	+0.4
GYA	Guiyang	26.04	20	P	P	14 14 51.8	-0.2
GYA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.3						
SJMP	San Jose	26.20	66	*e*P	P	14 14 54.1	+0.5
IPIL	Ipil	26.28	77	*e*P	P	14 14 54.7	+0.3
TGY	Tagaytay City	26.67	62	P	P	14 14 59.6	+1.6
	comp=Z,88nm,0.4s,mb5.7,baz=135,slow=1.2,SNR=7.0						
AKL	Akola	26.76	315	*e*x	pP	14 15 07.3	-0.1
AKL				*e*x	S	14 19 36.9	+6.3
GUIM	Jordan	26.97	71	*e*P	P	14 15 00.1	-0.6
OTRP	Odiongan	26.99	67	*e*P	P	14 15 01.9	+1.1
PAGZ	Pagadian	27.08	77	*e*P	P	14 15 01.9	+0.2
BOAC	Boac	27.23	64	*e*P	P	14 15 02.5	-0.5
ALBI	Allahabad	27.26	329	*e*x	P	14 15 02.0	-1.2
PKI	Pulchoki	27.61	338	*e*P	P	14 15 06.7	+0.3
	comp=Z,62nm,0.6s,mb5.4						
PKI	Pulchoki	27.61	338	*e*P	P	14 15 06.7	+0.3
PKI				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.1						
GUN	Gumba	27.74	339	*e*P	P	14 15 08.0	+0.4
	comp=Z,229nm,0.6s,mb6.0						
DMN	Daman	27.76	337	*e*P	P	14 15 08.2	+0.5
	comp=Z,102nm,0.8s,mb5.5						
POLP	Polilio Island	27.82	62	*e*P	P	14 15 09.3	+1.0
KKN	Kakani	27.86	338	*e*P	P	14 15 08.7	+0.1
	comp=Z,100nm,0.7s,mb5.5						
AUQP	San Andres	27.93	65	*e*P	P	14 15 10.8	+1.5
BALP	Baler	27.93	59	*e*P	P	14 14 59.2	-10
GQP	Guinayangan	27.94	64⇓	*e*P	P	14 15 09.4	0.0
LSA	Lhasa	28.00	349	P	P	14 15 11.0	+1.1
LSA	Lhasa	28.00	349	*e*P	P	14 15 09.3	-0.6
	comp=Z,183nm,0.7s,mb5.8						
LSA	Lhasa	28.00	349	*e*P	P	14 15 09.3	-0.6
LSA				pmax	pmax		
	comp=Z,183nm,0.7s,mb5.8						
ABRA	Dolores	28.12	55	*e*P	P	14 15 11.1	+0.1
GKN	Gorkha	28.29	337	*e*P	P	14 15 12.5	0.0
	comp=Z,186nm,0.9s,mb5.7						
KOLN	Koldanda	28.51	335	*e*P	P	14 15 14.6	+0.1
	comp=Z,207nm,0.8s,mb5.9						
APYP	Conner	28.66	55	*e*P	P	14 15 16.2	+0.3
BUKP	Musuan	28.72	77	*e*P	P	14 15 16.8	+0.2
MSLP	Maasin	29.00	73	*e*P	P	14 15 18.2	-0.8
PVCP	Virac	29.37	66	*e*P	P	14 15 19.9	-2.5
BUTP	Butuan	29.47	75	*e*P	P	14 15 24.9	+1.7
CNP	Catarman	29.48	68	*e*P	P	14 15 20.9	-2.4
MATI	Mati	29.75	80	*e*P	P	14 15 23.2	-2.5
ENH	Enshi	30.52	22	*e*P	P	14 15 30.9	-1.6
	comp=Z,108nm,0.8s,mb5.7						
ENH				*e*	pP	14 15 40.0	-1.3
SONA	Sohna	32.14	326	*e*x	P	14 15 46.0	-0.6
SONA				AMb	AMB	14 15 50.8	
	comp=Z,72nm,0.6s,mb5.7						
BISR	Bishrakh	32.19	327	*e*x	P	14 15 46.7	-0.4
BISR				AMb	AMB	14 15 51.8	
	comp=Z,33nm,1.2s,mb5.0						
KALG	Kalgarh	32.24	330	*e*x	P	14 15 44.2	-3.3
KALG				AMb	AMB	14 15 48.8	
	comp=Z,106nm,0.7s,mb5.8						
AYAN	Aya Nagar	32.29	326	*e*x	P	14 15 47.4	-0.6
AYAN				AMb	AMB	14 15 52.0	
	comp=Z,48nm,0.8s,mb5.3						
KUDL	Kundal	32.39	325	*e*x	P	14 15 48.6	-0.2
KUDL				AMb	AMB	14 15 53.1	
	comp=Z,31nm,0.9s,mb5.1						
KHET	Khetri	32.73	324	*e*x	P	14 15 51.8	0.0
KHET				AMb	AMB	14 15 57.4	
	comp=Z,34nm,1.0s,mb5.2						
WHN	Wuhan	32.84	29	*e*P	P	14 15 53.0	+0.3
KKR	Kurukshetra	33.61	328	*e*x	P	14 15 54.8	-4.7
KKR				AMb	AMB	14 15 59.1	
	comp=Z,231nm,0.6s						
XAN	Xi’an	33.76	18	P	P	14 15 59.0	-1.7
XAN				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
LZH	Lanzhou	34.47	10	*e*P	P	14 16 06.8	0.0
LZH				AP	pP	14 16 17.0	+1.2
LZH				XP	sP	14 16 25.0	+5.4
LZH				AMB	AMB		
	comp=Z,120nm,1.2s,mb5.7						
LZH	Lanzhou	34.47	10	*e*P	P	14 16 06.7	-0.1
	comp=Z,120nm,1.2s,mb5.7						
LZH				pP	pP	14 16 17.0	+1.2
LZH				sP	sP	14 16 25.0	+5.4
LZH	Lanzhou	34.47	10	*e*P	P	14 16 06.7	-0.1
LZH				*PP	pP	14 16 17.0	+1.2
LZH				*SP	sP	14 16 25.0	+5.4
LZH				pmax	pmax		
	comp=Z,120nm,1.2s,mb5.7						
FITZ	Fitzroy Crossi	34.75	126	P	P	14 16 08.3	-1.1
	comp=Z,20nm,0.6s,mb5.2,baz=312,slow=6.1,SNR=20						
JASL	Jaisalmer	35.04	317	*e*x	pP	14 16 18.8	-1.9
JASL				AMb	AMB	14 16 19.6	
NJ2	Nanjing	36.34	33	*e*P	P	14 16 23.8	+1.1
NJ2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
GTA	Gaotai	37.27	4	⇑P	P	14 16 30.3	-0.2
GTA				AP	pP	14 16 39.6	+0.2
GTA				XP	sP	14 16 43.8	+0.6
GTA				AMB	AMB		
	comp=Z,130nm,0.9s,mb5.8						
KAKA	Kakadu	38.30	113	*e*P	P	14 16 56.5	+17
	comp=Z,46nm,0.6s,mb5.4						
TIA	Tai’an	38.83	27	*e*P	P	14 16 43.3	-0.3
JOW	Kunigami	38.95	48	P	P	14 16 45.8	+1.1
	comp=Z,79nm,0.7s,mb5.5,baz=207,slow=14,SNR=8.3						
BTO	Baotou	40.19	16	*e*P	P	14 16 53.8	-1.0
HHC	Hu-ho-hao-te	40.85	17	*e*P	P	14 17 01.0	+0.8
HHC				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.7						
KSH	Kashi	41.83	336	*e*P	P	14 17 10.0	+1.7
KSH				*e*AP	pP	14 17 20.1	+2.8
KSH				*e*XP	sP	14 17 24.0	+3.0
KSH				AMB	AMB		
	comp=Z,680nm,8.2s						
WBK	Wadi Bani Khal	42.01	302	⇑P	P	14 17 10.0	0.0
WMQ	Urumqi	42.36	350⇑	*i*P	P	14 17 13.3	+0.7
WMQ				AP	pP	14 17 23.0	+1.4

WMQ				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,640nm,4.6s						
JMDO	Jabal Madar	42.66	301	⇓P	P	14 17 16.3	+1.0
WRA	Warramunga Arr	42.83	123	P	P	14 17 15.7	-1.0
	comp=Z,27nm,0.6s,mb5.1,baz=300,slow=9.2,SNR=20						
WRAB	Tennant Creek	42.83	123	eP	P	14 17 15.7	-1.1
	comp=Z,366nm,1.1s,mb6.0						
WRAB	Tennant Creek	42.83	123	eP	P	14 17 15.7	-1.1
WRAB				pmax	pmax		
	comp=Z,366nm,1.1s,mb6.0						
WB2	Warramunga Arr	42.84	123	eP	P	14 17 15.7	-1.1
SMDO	Samad	42.97	302	⇑P	P	14 17 19.6	+1.7
BIDO	Bidbid	43.09	303	P	P	14 17 22.3	+3.5
	SNR=6.2						
DL2	Dalian	43.10	29	P	P	14 17 19.8	+1.1
DL2				AP	pP	14 17 28.3	+0.5
DL2				XP	sP	14 17 36.3	+4.8
DL2				S	S	14 23 51.4	+8.9
DL2				AMB	AMB		
	comp=Z,100nm,0.7s,mb5.7						
DL2				AMB	AMB		
	comp=Z,260nm,4.8s						
DL2				LR	LR		
	comp=N,16µm,19.3s						
DL2				LR	LR		
	comp=E,23µm,17.2s						
DL2				LR	LR		
	comp=Z,14µm,19.7s,MS5.9						
FORT	Forrest	44.19	140	eP	P	14 17 28.6	+0.9
	comp=Z,48nm,0.6s,mb5.4						
ASPA	Alice Springs	44.23	128	eP	P	14 17 27.4	-0.7
KZA	Kyzart	44.29	337	P	P	14 17 29.3	+1.0
	SNR=20						
UCH	Uchtor	44.70	336	P	P	14 17 32.5	+0.9
	SNR=42						
TKM2	Tokmak 2	44.87	338	P	P	14 17 33.6	+0.6
	SNR=36						
KBK	Karagaybulak	44.90	337	P	P	14 17 34.3	+1.1
	SNR=68						
AML	Almayashu	44.96	336	P	P	14 17 34.8	+1.1
	SNR=43						
AAK	Ala-Archa	45.05	337	P	P	14 17 36.2	+1.7
	SNR=26						
WHFO	Wadi Hawf	45.06	293	P	P	14 17 35.4	+0.6
	SNR=32						
FRU	Bishkek	45.17	337	eP	P	14 17 37.0	+1.6
FRU				i		14 28 20.0	
FRU				pmax	pmax		
	comp=Z,80nm,2.0s,mb5.2						
FRU				pmax	pmax		
	comp=Z,6µm,3.0s						
FRU				MLR	MLR		
	comp=N,42µm,20.0s						
FRU				MLR	MLR		
	comp=E,52µm,20.0s						
FRU				MLR	MLR		
	comp=Z,53µm,20.0s						
CHMS	Chumysh	45.26	337	P	P	14 17 36.1	0.0
	SNR=16						
KS15	Wonju Array Si	45.34	35	eP	P	14 17 36.4	-0.3
KS15				e	pP	14 17 46.0	+0.3
ABTO	Aybut	45.35	292	P	P	14 17 38.3	+1.3
	SNR=6.0						
EKS2	Erkin-Say	45.37	336	P	P	14 17 37.9	+1.0
	SNR=32						
USP	Ospenovka	45.59	337	P	P	14 17 39.0	+0.4
	SNR=84						
MKAR	Makanchi Array	46.31	346	P	P	14 17 44.1	-0.2
	comp=Z,83nm,0.9s,mb5.7,baz=159,slow=8.5,SNR=297						
SNY	Shenyang	46.32	28	⇑P	P	14 17 43.3	-1.2
SNY				AMB	AMB		
	comp=Z,50nm,0.7s,mb5.5						
SONM	Songino Array	46.34	9	P	P	14 17 44.6	+0.1
	comp=Z,44nm,0.9s,mb5.4,baz=191,slow=8.7,SNR=93						
ULN	Ulaanbaatar	46.48	10	⇑iP	P	14 17 45.6	0.0
ZAK	Zakamensk	48.45	6	⇑iP	P	14 18 01.1	0.0
ZAK				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
ZAK				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
CN2	Changchun	48.72	28	eP	P	14 18 02.5	-0.7
CN2				AMB	AMB		
	comp=Z,70nm,0.7s,mb5.8						
CN2				AMB	AMB		
	comp=Z,530nm,7.0s						
MOY	Mondy	49.55	3	eP	P	14 18 10.5	+1.0
MOY				pmax	pmax		
	comp=Z,383nm,4.8s						
VAN	Vannovskaya	50.32	320	⇓iP	P	14 18 14.7	-0.9
KURK	Kurchatov	50.86	345	eP	P	14 18 18.9	-0.6
	comp=Z,180nm,0.8s,mb6.0						
KURK	Kurchatov	50.86	345	eP	P	14 18 18.9	-0.6
KURK				pmax	pmax		
	comp=Z,180nm,0.8s,mb6.0						
HIA	Hailar	50.95	19	eP	P	14 18 19.9	-0.3
	comp=Z,60nm,0.9s,mb5.5						
HIA				epP	pP	14 18 28.7	-0.8
HIA	Hailar	50.95	19	eP	P	14 18 19.9	-0.3
HIA				e*PP	pP	14 18 28.7	-0.7
HIA				pmax	pmax		
	comp=Z,60nm,0.9s						
MDJ	Mudanjiang	51.31	30	P	P	14 18 22.3	-0.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.9s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,360nm,7.3s						
MDJ	Mudanjiang	51.31	30	eP	P	14 18 22.4	-0.6
	comp=Z,25nm,0.8s,mb5.2						
MDJ				epP	pP	14 18 32.9	+0.7
MAJO	Matsushiro	51.32	43	eP	P	14 18 22.7	-0.5
	comp=Z,29nm,0.8s,mb5.3						
MAJO				epP	pP	14 18 32.6	+0.2
MAJO	Matsushiro	51.32	43	eP	P	14 18 22.7	-0.5
MAJO				e*PP	pP	14 18 32.6	+0.2
MAJO				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
MAT	Matsushiro	51.32	43	P	P	14 18 21.8	-1.4
MAT	Matsushiro	51.32	43	eP	P	14 18 22.0	-1.2
	comp=Z,24nm,0.9s,mb5.1						
MAT	Matsushiro	51.32	43	eP	P	14 18 22.0	-1.2
MAT				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
MJAR	Matsushiro Arr	51.32	43	P	P	14 18 23.1	-0.1
	comp=Z,26nm,0.8s,mb5.2,baz=215,slow=6.6,SNR=29						
PMG	Port Moresby	51.44	104	eP	P	14 18 23.6	-0.8
	comp=Z,382nm,0.8s						
PMG				epP	pP	14 18 33.4	-0.2
PMG	Port Moresby	51.44	104	eP	P	14 18 23.6	-0.8
PMG				e*PP	pP	14 18 33.4	-0.2
PMG				pmax	pmax		
	comp=Z,382nm,0.8s						
CIT	Chita	51.72	13	eP	P	14 18 26.1	+0.1
CIT				e		14 19 33.0	
CIT				e		14 21 21.6	
CIT				pmax	pmax		
	comp=Z,818nm,1.6s						
ZAL	Zalesovo	52.64	351	P	P	14 18 32.8	-0.1
	comp=Z,65nm,0.7s,mb5.7,baz=300,slow=4.0,SNR=174						
CTA	Charters Tower	53.24	117	eP	P	14 18 37.3	-0.5
	comp=Z,23nm,0.8s,mb5.2						
CTA	Charters Tower	53.24	117	eP	P	14 18 37.3	-0.5
CTA				pmax	pmax		
	comp=Z,23nm,0.8s						
CTAO	Charters Tower	53.24	117	eP	P	14 18 37.5	-0.3
	comp=Z,32nm,0.8s,mb5.3						
CTAO				epP	pP	14 18 46.7	-0.3
CTAO	Charters Tower	53.24	117	eP	P	14 18 37.5	-0.3
CTAO				e*PP	pP	14 18 46.7	-0.3
CTAO				pmax	pmax		
	comp=Z,32nm,0.8s,mb5.3						
NVS	Novosibirsk	53.76	350	eP	P	14 18 39.3	-1.8
NVS				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.5						
NVS				pmax	pmax		
	comp=N,24nm,0.8s						
STKA	Stephens Creek	54.22	132	eP	P	14 18 44.0	-0.9
	comp=N,19nm,0.6s,mb5.2						
STKA	Stephens Creek	54.22	132	P	P	14 18 44.1	-0.7
	comp=N,7.2nm,0.6s,mb4.8,baz=304,slow=8.9,SNR=15						
BRVK	Borovoye	55.37	341	⇑iP	P	14 18 51.7	-1.3
KLR	Kul'dur	55.66	27	eP	P	14 18 53.7	-1.4
CHKZ	Chkalovo	55.79	341	eP	P	14 18 54.9	-1.0
	comp=N,5.2nm,1.1s,mb4.5						
CHKZ	Chkalovo	55.79	341	eP	P	14 18 54.9	-1.0
CHKZ				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
BOD	Bodaibo	57.24	11	eP	P	14 19 05.4	-0.9
BOD				e		14 19 57.7	
BOD				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.6						
BOD				pmax	pmax		
	comp=Z,153nm,1.1s,mb5.9						
BHD	Baghdad	57.99	308	ex	x	14 19 03.0	
CLNS	Chul'man	59.04	18	eP	P	14 19 18.4	-0.4
CLNS				pmax	pmax		
	comp=N,30nm,0.7s						
CLNS				pmax	pmax		
	comp=E,24nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,75nm,0.7s,mb5.8						
KMBO	Kilima Mbogo	59.63	267	P	P	14 19 24.6	+1.1
	comp=Z,2.1nm,0.8s,mb4.2,baz=57,slow=13,SNR=9.4						
TOO	Toolangi	59.83	136	eP	pP	14 19 35.6	+1.6
	comp=Z,8.5nm,0.7s						
YSS	Yuzh-Sakhalins	59.86	35	iP	P	14 19 24.3	-0.4
YSS	Yuzh-Sakhalins	59.86	35	⇓iP	P	14 19 25.0	+0.3
YSS				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.8						
YSS				pmax	pmax		
	comp=N,20nm,0.8s						
MSL	Mosul	60.07	311	ex	x	14 19 26.5	
HKR	Hakkari	60.08	313	eP	Px	14 19 21.9	
HAKT	HAKKARI	60.09	313	iP	P	14 19 23.5	-2.9
GNI	Garni	60.40	316	eP	Px	14 19 20.9	
GNI	Garni	60.40	316	⇑iP	P	14 19 28.0	-0.5
DGRG	David-gareji	60.53	318	P	P	14 19 35.4	+6.1
CLDR	Caldiran	60.57	315	eP	Px	14 19 21.2	
ORR	Orenburg	60.62	331	⇑iP	P	14 19 28.0	-1.8
ORR				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
MTA	Mtatsminda	61.03	318	P	P	14 19 32.0	-0.7
TI2	Plekhanov	61.08	318	⇓iP	P	14 19 31.2	-1.8
ARMA	Armidale	61.36	126	eP	P	14 19 37.5	+2.4
KARS	Kars	61.74	316	eP	Px	14 19 36.9	
BTMT	Batman	61.96	313	eP	Px	14 19 24.9	
MARD	Mardin	62.17	312	iP	P	14 19 38.9	-1.6
ARU	Arti	62.24	337	⇑eP	P	14 19 39.4	-1.3
ARU	Arti	62.24	337	⇑iP	P	14 19 38.9	-1.8
ARU				e		14 20 13.2	
ARU				eS	S	14 28 02.8	+0.1
ARU				e		14 29 24.8	
ARU				eSS	SS	14 32 10.1	+2.3
ARU				eSSS	SSS	14 34 50.2	-0.3
ARU				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.4						
EZM	Erzurum	62.68	315	eP	Px	14 19 35.4	
KIV	Kislovodsk	63.40	319	⇑eP	P	14 19 48.2	-0.3
URFA	Urfa	63.68	311	eP	Px	14 19 41.4	
PTK	Pertek	63.74	313	eP	Px	14 19 42.5	
HNR	Honiara	63.92	101	P	P	14 19 51.3	-1.1
	comp=Z,123nm,0.9s,mb5.9						
HNR	Honiara	63.92	101	P	P	14 19 51.3	-1.1
HNR				pmax	pmax		
	comp=Z,123nm,0.9s,mb5.9						
GUMT	Gumushane	64.23	315	eP	Px	14 19 45.1	
MYA	Malataya	64.27	312	eP	Px	14 19 53.3	
GZT	Gaziantep	64.60	311	iP	P	14 19 56.0	-0.6
YAK	Yakutsk	64.70	16	eP	P	14 19 55.4	-1.3
GAZ	Gaziantep	64.81	310	eP	Px	14 19 53.3	
SOKR	Solikamsk	65.14	339	d iP	P	14 20 00.3	+0.7
SOKR				S	S	14 28 47.2	+8.5
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,39µm,22.0s						
SOC	Sochi	65.22	318	eP	P	14 19 58.3	-2.1
SOC				eS	S	14 28 39.6	-0.4
SOC				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2						
SOC				MLR	MLR		
	comp=Z,9µm,22.0s,MS5.9						
CEYT	Ceyhan	65.89	310	eP	Px	14 19 58.6	
KOZT	Kozan	65.96	310	eP	Px	14 20 01.4	
BNN	Bunyan	66.35	312	eP	Px	14 20 01.6	
KARA	Karaisali	66.49	310	eP	Px	14 20 01.4	
MERS	Mersin	66.79	309	eP	Px	14 20 00.8	
KVT	Kavak	66.89	314	eP	Px	14 20 09.8	
VRHR	Novokhopersk	67.19	326	eP	P	14 20 11.0	-1.9
VRHR				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.3						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
CORM	Corum	67.64	313	eP	Px	14 20 07.5	
BYBT	Boyabat	67.93	314	eP	Px	14 20 15.7	
KAMT	Kaman	68.09	312	eP	Px	14 20 08.3	
TOS	Tosya	68.34	314	eP	Px	14 20 10.5	
CANT	Cankiri	68.50	313	eP	Px	14 20 15.0	
VOR	Voronezh	68.84	326	P	P	14 20 27.0	+3.9
VOR				pmax	pmax		
	comp=N,40nm,1.4s						
VOR				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.2						
ANTO	Ankara	68.91	312	eP	Px	14 20 15.6	
ANTO	Ankara	68.91	312	eP	P	14 20 24.5	+0.7
	comp=Z,11nm,0.7s,mb4.9						
ANTO	Ankara	68.91	312	eP	P	14 20 24.5	+0.7
ANTO				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
KIZT	Kizilcal	69.33	311	eP	Px	14 20 11.3	
LSZ	Lusaka	69.99	253	eP	P	14 20 30.3	-0.3
	comp=Z,9.7nm,0.9s,mb4.7						
LSZ	Lusaka	69.99	253	eP	P	14 20 30.3	-0.4
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ISP	Isparta	70.13	310	eP	Px	14 20 22.5	
MDU	Mudurnu	70.23	312	eP	Px	14 20 24.0	
ESKT	Eskisehir	70.27	311	eP	Px	14 20 24.7	
ELL	Elmali	70.35	308	eP	Px	14 20 21.7	
MA2	Magadan	70.73	26	iP	P	14 20 34.4	-0.1
MA2	Magadan	70.73	26	deP	P	14 20 35.7	+1.2
MA2				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
FETY	Fethiye	70.97	308	eP	Px	14 20 29.2	
YLV	Yalova	71.62	312	eP	Px	14 20 27.7	
OBN	Obninsk	71.68	328	iP	P	14 20 40.3	0.0
OBN	Obninsk	71.68	328	⇓iP	P	14 20 39.8	-0.5
OBN				i	pP	14 20 48.1	-1.6
OBN				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.2						
PET	Petropavlovsk	71.74	34	iP	P	14 20 40.6	-0.1
PET	Petropavlovsk	71.74	34	c iP	P	14 20 39.7	-1.0
PET				e	pP	14 20 47.7	-2.4
PET				e		14 29 51.1	
PET				pmax	pmax		
	comp=Z,96nm,0.6s,mb5.9						
PET				pmax	pmax		
	comp=Z,300nm,9.3s						
PET				pmax	pmax		
	comp=Z,500nm,7.0s						
PET				pmax	pmax		
	comp=Z,300nm,6.7s						
MLSB	Milas	72.13	309	eP	Px	14 20 34.4	
DAT	Datca	72.18	308	eP	Px	14 20 45.0	
BODT	Bodrum	72.45	308	eP	Px	14 20 32.2	
IZM	Izmir	72.75	310	eP	Px	14 20 39.6	
KLMR	Klimovskoe	72.81	334	eP	P	14 20 44.1	-2.8
KLMR				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
SEY	Seymchan	73.12	23	⇑iP	P	14 20 48.4	-0.3
MAW	Mawson	73.46	193	eP	P	14 20 49.9	-0.7
	comp=Z,5.5nm,0.6s,mb4.7						
MAW	Mawson	73.46	193	P	P	14 20 50.9	+0.4
	comp=Z,4.5nm,0.6s,mb4.5,baz=10,slow=5.1,SNR=15						
MAW	Mawson	73.46	193	eP	P	14 20 49.9	-0.7
MAW				pmax	pmax		
	comp=Z,6.0nm,0.6s						
EDRB	Edirne	73.83	313	eP	Px	14 20 47.1	
APE	Apeiranthos	73.86	308	eP	Px	14 20 36.7	
LBTB	Lobatse	73.92	243	eP	P	14 20 54.6	+0.6
	comp=Z,17nm,0.9s,mb5.0						
LBTB				epP	pP	14 21 02.3	-1.2
LBTB	Lobatse	73.92	243	eP	P	14 20 54.7	+0.6
LBTB				e*PP	pP	14 21 02.3	-1.2
LBTB				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
AKASG	Malin Array Be	74.34	322	P	P	14 20 54.2	-1.7
	comp=Z,7.8nm,0.6s,mb4.8,baz=91,slow=5.4,SNR=28						
BOSA	Boshof	74.87	240	P	P	14 20 59.0	-0.5
	comp=Z,5.3nm,1.1s,mb4.4,baz=135,slow=9.1,SNR=5.3						
PUL	Pulkovo	76.55	332	iP	P	14 21 09.5	+1.1
JOF	Joensuu	77.20	335	ep	P	14 21 11.6	-0.3
	comp=Z,8.0nm,0.7s,mb4.8						
VSU	Vasula	77.91	330	iP	P	14 21 16.3	+0.4
APA	Apatity	78.18	339	⇑eP	P	14 21 18.2	+1.0
APA				i		14 21 25.0	
KOLS	Kolonicke sedl	78.31	320	eP	P	14 21 19.7	+1.4
KOLS	Kolonicke sedl	78.31	320	eP	P	14 21 19.7	+1.4
SUW	Suwalki	78.75	325	eP	P	14 21 20.1	-0.5
	comp=Z,34nm,0.8s,mb5.3						
SUW	Suwalki	78.75	325	eP	P	14 21 20.1	-0.5
SUW				pmax	pmax		
	comp=Z,34nm,0.8s,mb5.3						
CRVS	Cervenica-Dubn	78.83	319	eP	P	14 21 22.9	+1.7
CRVS				e		14 21 29.3	
CRVS	Cervenica-Dubn	78.83	319	eP	P	14 21 22.9	+1.7
CRVS				e		14 21 29.3	
FINES	FINESS Array B	79.06	332	P	P	14 21 21.8	-0.3
	comp=Z,14nm,0.7s,mb5.0,baz=97,slow=5.5,SNR=45						
STHS	Stebnicka Huta	79.06	320	eP	P	14 21 23.4	+1.0
STHS				e	pP	14 21 31.8	-0.2
STHS	Stebnicka Huta	79.06	320	eP	P	14 21 23.4	+1.0
STHS				e	pP	14 21 31.8	-0.2
KAF	Kangasniemi	79.14	333	ep	P	14 21 22.3	-0.3
	comp=Z,16nm,0.7s,mb5.1,baz=106,slow=4.5						
KAF	Kangasniemi	79.14	333	eP	P	14 21 22.3	-0.3
KAF				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
KECS	Kecovo	79.40	319	eP	P	14 21 23.7	-0.6
KECS				e	pP	14 21 33.9	+0.1
KECS	Kecovo	79.40	319	eP	P	14 21 23.7	-0.6
KECS				e	pP	14 21 33.9	+0.1
PSZ	Piszkesteto	79.71	318	eP	P	14 21 25.6	-0.4
	comp=Z,51nm,1.0s,mb5.4						
PSZ	Piszkesteto	79.71	318	eP	P	14 21 25.6	-0.3
PSZ				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.4						
PKSM	Moragy	80.32	316	⇑eP	P	14 21 29.2	-0.1
PKSM				i		14 22 21.5	
PKS8	Sarbogard	80.38	317	⇑eP	P	14 21 30.0	+0.4
BILL	Bilibino	80.50	21	⇓iP	P	14 21 29.8	0.0
PKSG		80.64	318	eP	P	14 21 31.4	+0.5
KEV	Kevo	81.16	341	ep	P	14 21 31.5	-1.7
	comp=Z,22nm,1.0s,mb5.0						
KEV	Kevo	81.16	341	eP	P	14 21 31.5	-1.7
KEV				pmax	pmax		
	comp=Z,22nm,1.0s,mb5.0						
ARCES	ARCESS Array B	81.59	340	P	P	14 21 35.7	+0.2
	comp=Z,8.8nm,0.6s,mb4.8,baz=89,slow=4.5,SNR=35						
ARCES	ARCESS Array B	81.59	340	P	P	14 21 35.7	+0.2
ARSA	Arzberg	82.57	317	⇑eP	P	14 21 42.5	+1.6
	comp=Z,16nm,1.4s,mb4.9						
ARSA	Arzberg	82.57	317	⇑eP	P	14 21 42.5	+1.6
	comp=Z,16nm,1.4s,mb4.8						
GERES	GERESS Array B	83.91	319	P	P	14 21 48.8	+1.0
	comp=Z,3.8nm,0.8s,mb4.6,baz=90,slow=5.3,SNR=29						
KHC	Kasperske Hory	84.01	319	eP	P	14 21 48.5	+0.2
KBA	Koelnbreinsper	84.04	317	⇑eP	P	14 21 49.2	+0.7
	comp=Z,8.6nm,0.7s,mb5.0						
KBA	Koelnbreinsper	84.04	317	⇑eP	P	14 21 49.2	+0.7
KBA				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.0						
CLL	Collm	84.52	321	P	P	14 21 52.0	+1.2
CLL				e	pP	14 22 00.0	-0.5
CLL				i		14 22 28.4	
CLL	Collm	84.52	321	eP	P	14 21 52.0	+1.2
CLL				e	pP	14 22 00.0	-0.5
MOX	Moxa	85.36	320	iP	P	14 21 53.4	-1.6
MOX				pP	pP	14 22 04.0	-0.7
MOX	Moxa	85.36	320	eP	P	14 21 53.4	-1.6
MOX				epP	pP	14 22 04.0	-0.7
SQTA	Sankt Quirin	85.50	317	iP	P	14 21 55.8	-0.1
	comp=Z,3.8nm,0.5s,mb4.8						
SQTA	Sankt Quirin	85.50	317	P	P	14 21 55.8	0.0
SQTA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.8						
GRA1	Grafenberg Arr	85.57	320	eP	P	14 21 57.3	+1.2
	comp=Z,14nm,0.9s,mb5.2						
GRA1				epP	pP	14 22 06.9	+1.1
GRF	Grafenberg Arr	85.57	320	eP	P	14 21 57.3	+1.2
	comp=Z,14nm,0.9s,mb5.2						
GRF				epP	pP	14 22 06.9	+1.1
GRF	Grafenberg Arr	85.57	320	eP	P	14 21 57.3	+1.2
GRF				e*PP	pP	14 22 06.9	+1.1
GRF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.2						
GRF	Grafenberg Arr	85.57	320	eP	P	14 21 57.3	+1.2
GRF				e*PP	pP	14 22 06.9	+1.1
GRF				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.2						
MOTA	Moosalm	85.58	317	⇓iP	P	14 21 57.3	+1.1
	comp=Z,4.0nm,0.8s,mb4.7						
MOTA	Moosalm	85.58	317	⇑iX	pP	14 22 06.8	+1.0
	comp=Z,20nm,1.0s						
MOTA	Moosalm	85.58	317	⇓P	P	14 21 57.3	+1.1
	comp=Z,4.0nm,0.8s,mb4.7						
MOTA	Moosalm	85.58	317	⇓P	P	14 21 57.3	+1.1
MOTA				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
NB2	NORSAR Subarra	86.06	331	P	P	14 21 57.3	-1.0
	comp=Z,9.3nm,0.9s,mb5.0,baz=94,slow=5.0						
NOA	NORSAR Array B	86.06	331	P	P	14 21 58.9	+0.6
	comp=Z,4.2nm,0.8s,mb4.7,baz=94,slow=5.0,SNR=13						
NAO	NORSAR Subarra	86.24	331	P	P	14 21 57.3	-1.9
	comp=Z,9.3nm,0.9s,mb5.0						
NAO	NORSAR Subarra	86.24	331	P	P	14 21 57.3	-1.9
NAO				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb5.0						
DAVA	Damuels	86.41	317	⇓P	P	14 22 02.3	+2.0
	comp=Z,21nm,1.1s,mb5.3						
DAVA	Damuels	86.41	317	⇓P	P	14 22 02.3	+2.0
	comp=Z,21nm,1.1s,mb5.3						
KONO	Kongsberg	86.82	329	iP	P	14 22 03.6	+1.6
DAG	Danmarks Havn	93.68	348	iP	P	14 22 34.0	+0.2
DAG				i		14 23 26.3	
	comp=Z,14µm,20.0s						
DAG	Danmarks Havn	93.68	348	eP	P	14 22 34.0	+0.2
DAG				i		14 23 26.3	
COLA	College	98.64	23	iP	P	14 22 57.2	+0.6
ILAR	Eielson Array	99.06	23	P	P	14 22 57.6	-0.8
	comp=Z,0.5nm,0.5s,mb4.3,baz=302,slow=4.2,SNR=12						
ILAR				PP	PP	14 27 00.9	-2.1
	comp=Z,3.5nm,0.9s,baz=280,slow=7.8,SNR=4.0						
PMR	Palmer	99.41	26	P	P	14 22 56.5	-3.6
ULM	Lac du Bonnet	126.76	10	PKP	PKPdf	14 28 20.6	-4.8
	comp=Z,4.8nm,0.7s,baz=72,slow=2.4,SNR=6.3						
NVAR	Mina Array Bea	128.31	35	PKP	PKPdf	14 28 25.9	-2.9
	comp=Z,0.6nm,0.6s,baz=83,slow=3.1,SNR=5.4						
PDAR	Pinedale Array	129.43	25	PKP	PKPdf	14 28 27.1	-3.7
	comp=Z,1.6nm,0.6s,baz=138,slow=1.1,SNR=15						
PLCA	Paso Flores	139.84	195	PKP	PKPdf	14 28 46.3	-3.9
	comp=Z,1.7nm,0.9s,baz=151,slow=6.5,SNR=3.5						
TXAR	Lajitas Array	143.13	31	PKP	PKPdf	14 28 51.2	-5.1
	comp=Z,1.9nm,0.6s,baz=326,slow=2.6,SNR=12						
TXAR	Lajitas Array	143.13	31	PKP	PKPdf	14 28 51.2	-5.1
CFAA	Coronel Fontan	147.41	204	PKPbc	PKPdf	14 29 02.4	-1.2
	comp=Z,1.8nm,0.6s,baz=160,slow=2.6,SNR=27						
SIV	San Ignacio	154.19	236	PKP	PKPdf	14 29 11.4	-2.7
	comp=Z,0.6nm,0.6s,baz=96,slow=3.5,SNR=4.6						
SIV				PKPbc	PKPdf	14 29 21.3	+7.2
	comp=Z,2.2nm,0.8s,baz=121,slow=3.1,SNR=8.2						
SIV				PKPab	PKPab	14 29 34.2	+0.7
	comp=Z,2.0nm,0.8s,baz=80,slow=6.6,SNR=5.5						
SDV	Santo Domingo	163.41	311	PKPab	PKPab	14 30 14.0	+0.7
	comp=Z,3.3nm,0.6s,baz=284,slow=1.6,SNR=4.7						

CRAAG ***19*** *14:10:09.6, 2.24N×96.83E, Mb6.5*

BJI ***19*** *14:10:09.6, 1.86N×96.83E, h28^{km}, mB6.4, mb5.8, Ms6.8, Msz6.6*

BGS ***19*** *14:10:12.6, 2.16N×96.79E, h21^{km}, mb5.9*

MOS ***19*** *14:10:13.9±1.0, 2.31N×96.73E, h33^{km}, mb6.1/72, MS6.2/36, Error ellipse: s-maj=8.3km s-min=4.3km az=118.0*

HRVD ***19*** *14:10:13.0±0.1, 1.89N×96.51E, h23^{km}, MW6.3/91, Centroid moment Tensor Solution. LP body waves: s91,c226;Mantle waves: s82,c297; Half duration: $3^{s}5$ Moment tensor: Scale 10^{18}Nm; M_{rr}1.81±.02; $M_{\theta\theta}$-1.00±.02; $M_{\phi\phi}$-0.80±.02; $M_{r\theta}$2.20±.04; $M_{\theta\phi}$1.07±.01;*

$M_{\phi r}$-2.50±.04; Best double couple: $M_0$3.831×10^{18} NP1: ϕ_s306°,δ15°,λ78°. NP2:ϕ_s138°,δ75°,λ93°. Principal axes: T 3.757, Plg60°, Azm52°; N .153, Plg3°, Azm317°; P -3.905, Plg30°, Azm225°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=125s.

*NEIC **19** 14:10:13.0±0.1,2.16N×96.79E,h21^{km},mb6.0/116,ME6.0, MS6.1/20,MW6.5 Error ellipse: s-maj=5.1km s-min=3.7km az=27.0 Broadband fault plane solution: P waves. NP1: ϕ_s125°,δ80°,λ90°. NP2:ϕ_s305°,δ10°,λ90°. Principal axes: T Plg55°, Azm35°; N Plg0°, Azm0°; P Plg35°, Azm215°; Moment Tensor Solution. s35 Moment tensor: Scale 10^{18} Nm; M_{rr}2.01; $M_{\theta\theta}$-2.14; $M_{\phi\phi}$0.13; $M_{r\theta}$4.56; $M_{\theta\phi}$0.78; $M_{\phi r}$-3.56; Best double couple: $M_0$6.2×10^{18} NP1: ϕ_s267°,δ13°,λ50°. NP2:ϕ_s127°,δ80°,λ98°. Principal axes: T 6.16, Plg54°, Azm47°; N .07, Plg8°, Azm305°; P -6.23, Plg35°, Azm210°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Sinabang. Felt at Banda Aceh, Medan, Sibolga and on Samosir, Sumatra. Also felt on Nias. Felt at Ayer Itam, Malaysia.

*IDC **19** 14:10:13.3±1.6,2.05N×96.95E,h25^{km}±9^{km},mb5.4/18, mb1 5.5/18,mb1mx5.5/18,mbtmp5.6/18,MS6.2/5, Ms1 6.2/5,ms1mx5.8/10 Error ellipse: s-maj=12.3km s-min=9.3km az=50.0*

ISC 19 14:10:12.5±0.1,**2.18N**±0.03×**96.81E**±0.02,**h28**^{km}, **h28**^{km}±.6^{km}**:pP-P,n784,**σ**1**^{s}**16**/657,**mb5.9**/180,**MS6.3**/76, **86C-20D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**4.93**	**51**	ePn	**Pn**	**14 11 26.0**	**-0.7**
SNG	**Songkhla**	**6.25**	**37**	SG	**Pn**	**14 11 54.0**	**+8.6**
PBA	**Port Blair**	**10.24**	**337**	ex	x	14 12 47.6	
PBA				ex	x	14 15 25.8	
KSM	**Kuching**	**13.52**	**93**	ePn	**P**	**14 13 25.9**	**+0.7**
COCO	**West Island**	**14.27**	**180**	ePn	**P**	**14 13 29.2**	**-5.9**
	2µm,1.6s						
UBT	**Ubonrachathani**	**15.30**	**31**	P	**P**	**14 13 51.0**	**+2.4**
	625nm,1.0s						
PALK	**Pallekele**	**16.82**	**288**	eP	**P**	**14 14 07.0**	**-0.9**
PALK				eS	**S**	**14 16 54.0**	**-19**
CHRT	**Chiangrai**	**17.82**	**9**	SG	**P**	**14 14 22.0**	**+1.6**
MDRS	**Chennai**	**19.64**	**304**	eP	**P**	**14 14 40.0**	**-2.1**
MDRS				AMb	AMB	14 14 51.8	
	comp=Z,169nm,0.2s						
MDRS				eS	**S**	**14 18 25.1**	**+8.7**
MDRS				AMS	AMS	14 21 57.4	
	comp=Z,66µm,21.8s						
KKM	**Kota Kinabalu**	**19.73**	**78**	⇑eP	**P**	**14 14 42.1**	**-1.1**
VIS	**Vishakhapatnam**	**20.34**	**320**	ex	**P**	**14 14 52.9**	**+3.4**
VIS				ex	**S**	**14 18 26.3**	**-4.5**
TRD	**Trivandrum**	**20.73**	**288**	ex	**P**	**14 14 49.1**	**-4.5**
TRD				ex	x	14 15 10.1	
TRD				AMb	AMB	14 15 11.8	
	comp=Z,599nm,1.4s						
TRD				ex	**S**	**14 18 39.0**	**+0.3**
TRD				AMS	AMS	14 22 28.8	
	comp=Z,142µm,19.4s,MS6.3						
QIZ	**Qiongzhong**	**21.06**	**36**	i P	**P**	**14 14 57.5**	**+0.6**
QIZ				XP		14 15 11.3	
QIZ				S	**S**	**14 18 46.5**	**+1.6**
QIZ				LR	LR		
	comp=N,161µm,19.6s,MS6.5						
QIZ				LR	LR		
	comp=E,133µm,19.6s,MS6.5						
QIZ				LR	LR		
	comp=Z,121µm,18.6s,MS6.3						
QIZ	**Qiongzhong**	**21.06**	**36**	eP	**P**	**14 14 57.0**	**0.0**
	comp=Z,596nm,1.4s,mb5.7						
CAL	**Calcutta**	**21.85**	**339**	eP	**P**	**14 15 05.3**	**+0.5**
CAL				eS	**S**	**14 19 05.4**	**+5.7**
BATP	**Bataraza**	**21.90**	**72**	eS	**P**	**14 15 05.7**	**+0.2**
PPR	**Puerto Princes**	**23.06**	**70**	eS	**P**	**14 15 17.5**	**+0.5**
HYB	**Hyderabad**	**23.47**	**311**	⇑iP	**P**	**14 15 24.0**	**+3.1**
	comp=Z,360nm,1.0s,mb5.8						
HYB				eS	**S**	**14 19 34.0**	**+5.1**
HYB				LR	LR		
	comp=Z,128nm,20.0s						
HYB	**Hyderabad**	**23.47**	**311**	⇑eP	**P**	**14 15 24.0**	**+3.1**
	comp=Z,360nm,1.0s,mb5.8						
HYB				eS	**S**	**14 19 34.0**	**+5.1**
HYB	**Hyderabad**	**23.47**	**311**	⇑eP	**P**	**14 15 24.0**	**+3.1**
HYB				eS	**S**	**14 19 34.0**	**+5.1**
HYB				pmax	pmax		
	comp=Z,360nm,1.0s,mb5.8						
KMI	**Kunming**	**23.52**	**14**	⇑P	**P**	**14 15 23.1**	**+1.7**
KMI				AP		14 15 31.0	
KMI				XP		14 15 36.3	
KMI				PP	PP	14 15 56.3	+2.6
KMI				S	**S**	**14 19 34.4**	**+4.6**
KMI				XS		14 19 48.8	
KMI				SS	SS	14 20 22.1	+4.0
KMI				AMB	AMB		
	comp=Z,200nm,1.3s,mb5.4						
KMI				AMB	AMB		
	comp=Z,12µm,7.0s						
KMI				LR	LR		
	comp=N,98µm,14.1s						
KMI				LR	LR		
	comp=E,158µm,19.8s						
KMI				LR	LR		
	comp=Z,119µm,16.7s,MS6.4						
KMI	**Kunming**	**23.52**	**14**	⇑P	**P**	**14 15 23.1**	**+1.7**
	comp=Z,203nm,1.3s,mb5.4						
KMI				pP		14 15 31.0	
KMI				sP		14 15 36.2	
KMI				PP	PP	14 15 56.3	+2.6
KMI				PPP	PPP	14 16 07.4	+3.7
KMI				S	**S**	**14 19 34.4**	**+4.6**
KMI				sS		14 19 48.8	
KMI				SS	SS	14 20 22.1	+4.0
KMI				SSS	SSS	14 20 36.6	+2.4
KMI				LR	LR		
	comp=Z,119µm,16.7s,MS6.4						
KMI	**Kunming**	**23.52**	**14**	⇑P	**P**	**14 15 23.1**	**+1.7**
KMI				*PP		14 15 31.0	
KMI				*SP		14 15 36.2	
KMI						14 15 56.3	
KMI				PPP	PPP	14 16 07.4	+3.7
KMI				S	**S**	**14 19 34.4**	**+4.6**
KMI				*SS		14 19 48.8	
KMI				SS	SS	14 20 22.1	+4.0
KMI				SSS	SSS	14 20 36.6	+2.4
KMI				pmax	pmax		
	comp=Z,203nm,1.3s,mb5.4						
KMI				MLR	MLR		
	comp=Z,119µm,16.7s,MS6.4						
SHL	**Shillong**	**23.73**	**349**	eS	**S**	**14 19 40.0**	**+6.6**
BOK	**Bokaro**	**23.95**	**335**	⇑iP	**P**	**14 15 25.4**	**-0.1**
BOK				AMb	AMB	14 15 39.8	
	comp=Z,2µm,1.1s,mb6.4						
BOK				eS	**S**	**14 19 43.2**	**+6.0**
BOK				AMS	AMS	14 27 26.6	
	comp=Z,80µm,18.9s,MS6.2						
ENPP	**El Nido**	**24.17**	**67**	eS	**P**	**14 15 29.8**	**+2.0**
MNGI	**Mangalore**	**24.24**	**297**	ex	x	14 15 34.5	
MNGI				eS	**S**	**14 19 49.9**	**+7.6**
BLSP	**Bilaspur**	**24.43**	**325**	eP	**P**	**14 15 29.8**	**-0.5**
BLSP				AMb	AMB	14 15 44.9	
	comp=Z,1µm,1.4s,mb6.1						
BLSP				eS	**S**	**14 19 49.7**	**+4.4**
BLSP				AMS	AMS	14 25 40.2	
	comp=Z,107µm,20.9s,MS6.3						
BUSP	**Coron**	**25.16**	**66**	eS	**P**	**14 15 38.8**	**+1.5**
CUYO	**Cuyo Island**	**25.53**	**69**	eS	**P**	**14 15 41.2**	**+0.4**
LUBP	**Lubang**	**25.86**	**62**	eS	**P**	**14 15 44.0**	**+0.1**
GYA	**Guiyang**	**25.93**	**21**	⇑iP	**P**	**14 15 44.4**	**0.0**
GYA				AP	pP	14 15 53.8	+1.1
GYA				XP	sP	14 15 57.8	+1.3
GYA				AMB	AMB		
	comp=Z,260nm,1.0s,mb5.7						
GYA				AMB	AMB		
	comp=Z,8µm,13.5s						
GYA				LR	LR		
	comp=N,75µm,18.5s,MS6.5						
GYA				LR	LR		
	comp=E,92µm,17.9s,MS6.5						
GYA				LR	LR		
	comp=Z,69µm,19.9s,MS6.2						
DGAR	**Diego Garcia**	**26.10**	**248**	eP	**P**	**14 15 45.5**	**-0.5**
	comp=Z,2µm,1.9s,mb6.3						
DGAR				LR	LR		
	comp=Z,26µm,20.0s,MS5.8						
DGAR	**Diego Garcia**	**26.10**	**248**	eP	**P**	**14 15 45.5**	**-0.6**
DGAR				pmax	pmax		
	comp=Z,2µm,1.9s,mb6.3						
DGAR				MLR	MLR		
	comp=Z,26µm,20.0s,MS5.8						
SJMP	**San Jose**	**26.16**	**66**	eS	**P**	**14 15 49.0**	**+2.4**
HKC	**Hong Kong**	**26.17**	**39**	⇑iP	**P**	**14 15 46.0**	**-0.7**
HKC				i S	**S**	**14 20 16.0**	**+1.4**
IPIL	**Ipil**	**26.26**	**77**	eS	**P**	**14 15 50.0**	**+2.4**
PGP	**Puerto Galera**	**26.40**	**64**	⇓eP	**P**	**14 15 49.5**	**+0.7**
TGY	**Tagaytay City**	**26.62**	**62**	P	**P**	**14 15 51.3**	**+0.4**
	comp=Z,547nm,0.7s,mb6.2,baz=338,slow=3.4,SNR=14						
KAD	**Karad**	**26.83**	**306**	eP	**P**	**14 15 53.2**	**+0.4**
KAD				AMb	AMB	14 16 15.1	
	comp=Z,364nm,1.0s,mb5.9						
KAD				eS	**S**	**14 20 27.7**	**+2.2**
KAD				AMS	AMS	14 23 47.0	
	comp=Z,41µm,20.2s,MS6.0						
GUIM	**Jordan**	**26.94**	**71**	eS	**P**	**14 15 55.1**	**+1.3**
OTRP	**Odiongan**	**26.95**	**67**	eS	**P**	**14 15 54.8**	**+0.9**
KALP	**Kalibo**	**27.02**	**68**	eP	**P**	**14 15 59.1**	**+4.6**
PAGZ	**Pagadian**	**27.06**	**77**	eS	**P**	**14 15 54.9**	**+0.1**
ALBI	**Allahabad**	**27.16**	**329**	ex	**P**	**14 15 52.5**	**-3.2**
BOAC	**Boac**	**27.18**	**64**	eS	**P**	**14 15 57.6**	**+1.6**
SNPH	**Sibulan**	**27.23**	**74**	eP	**P**	**14 15 58.0**	**+1.6**
RCP	**Roxas**	**27.36**	**69**	⇑eP	**P**	**14 15 57.7**	**0.0**
PCPH	**Palayan**	**27.39**	**60**	i P	**P**	**14 15 55.8**	**-2.1**
PKI	**Pulchoki**	**27.51**	**338**	eP	**P**	**14 15 59.2**	**+0.4**
	comp=Z,1µm,1.3s,mb6.4						
PKI	**Pulchoki**	**27.51**	**338**	eP	**P**	**14 15 59.2**	**+0.4**
PKI				pmax	pmax		
	comp=Z,738nm,1.3s,mb6.2						
GUN	**Gumba**	**27.64**	**339**	eP	**P**	**14 16 00.7**	**+0.7**
	comp=Z,3µm,1.3s,mb6.8						
DMN	**Daman**	**27.66**	**337**	eP	**P**	**14 16 00.3**	**+0.1**
	comp=Z,738nm,0.9s,mb6.3						
KKN	**Kakani**	**27.75**	**338**	eP	**P**	**14 16 01.4**	**+0.3**
	comp=Z,2µm,1.4s,mb6.6						
POO	**Poona**	**27.75**	**307**	ex	x	14 16 24.4	
POO				ex	x	14 20 51.9	
POO				AMS	AMS	14 26 54.3	
	comp=Z,96µm,19.9s,MS6.4						
POLP	**Polilio Island**	**27.77**	**62**	eS	**P**	**14 15 54.4**	**-6.9**
BALP	**Baler**	**27.88**	**60**	eS	**P**	**14 16 06.7**	**+4.3**
AUQP	**San Andres**	**27.88**	**65**	eS	**P**	**14 16 05.8**	**+3.5**
LSA	**Lhasa**	**27.89**	**349**	P	**P**	**14 16 03.3**	**+1.0**
LSA				AP	pP	14 16 12.0	+1.4
LSA				XP	sP	14 16 15.8	+1.4
LSA				PCP	PcP	14 19 14.8	-3.1
LSA				S	**S**	**14 20 44.3**	**+1.9**
LSA				XS		14 21 03.9	
LSA				PCS		14 22 57.5	
LSA				SCS	ScS	14 26 46.8	+0.6
LSA				AMB	AMB		
	comp=Z,320nm,1.5s,mb5.7						
LSA				LR	LR		
	comp=N,13µm,17.5s,MS5.9						
LSA				LR	LR		
	comp=E,22µm,16.2s,MS5.9						
LSA				LR	LR		
	comp=Z,26µm,17.5s,MS5.9						
TBP	**Tagbilaran**	**27.91**	**73**	eP	**P**	**14 16 01.7**	**-0.9**
ABRA	**Dolores**	**28.06**	**55**	eS	**P**	**14 16 05.2**	**+1.3**
BHPL	**Bhopal**	**28.13**	**320**	eP	**P**	**14 16 04.3**	**-0.2**
BHPL				eS	**S**	**14 20 48.2**	**+1.9**
BHPL				AMS	AMS	14 25 25.7	
	comp=Z,40µm,20.9s,MS6.0						
LLP	**Lapu-Lapu**	**28.16**	**72**	⇑eP	**P**	**14 16 04.3**	**-0.5**
GKN	**Gorkha**	**28.19**	**337**	eP	**P**	**14 16 05.5**	**+0.5**
	comp=Z,1µm,1.1s,mb6.5						
KOLN	**Koldanda**	**28.41**	**335**	eP	**P**	**14 16 06.6**	**-0.4**
	comp=Z,764nm,0.9s,mb6.3						
CGP	**Cagayan de Oro**	**28.45**	**76**	⇓iP	**P**	**14 16 07.6**	**+0.2**
	comp=Z,167µm,1.0s						
APYP	**Conner**	**28.60**	**55**	eS	**P**	**14 16 09.3**	**+0.5**
BUKP	**Musuan**	**28.70**	**78**	eS	**P**	**14 16 10.2**	**+0.5**
BOM	**Bombay**	**28.78**	**307**	ex	**P**	**14 16 14.5**	**+4.1**
BOM				eS	**S**	**14 20 59.5**	**+2.8**
MSLP	**Maasin**	**28.97**	**73**	eS	**P**	**14 16 12.2**	**0.0**
DAV	**Davao City (W)**	**29.08**	**79**	⇓eP	**P**	**14 16 14.0**	**+0.8**
DAV	**Davao City (W)**	**29.08**	**79**	⇑iP	**P**	**14 16 13.4**	**+0.3**
	comp=Z,796nm,1.3s,mb6.3						
DAV				LR	LR		
	comp=Z,17µm,22.0s,MS5.6						
CD2	**Chengdu**	**29.32**	**12**	⇑iP	**P**	**14 16 14.1**	**-1.1**
CD2				AP	pP	14 16 25.8	+2.2
CD2				PP	PP	14 17 08.4	-2.2
CD2				S	**S**	**14 21 00.8**	**-4.6**
CD2				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.1						
CD2				AMB	AMB		
	comp=Z,4µm,9.7s						
CD2				LR	LR		
	comp=E,109µm,19.2s						
CD2				LR	LR		
	comp=Z,46µm,21.0s,MS6.1						
PVCP	**Virac**	**29.33**	**66**	eS	**P**	**14 16 15.8**	**+0.4**
BUTP	**Butuan**	**29.45**	**76**	eS	**P**	**14 16 18.5**	**+2.0**
SCPH	**Surigao**	**29.49**	**74**	eP	**P**	**14 16 15.0**	**-1.9**
MATI	**Mati**	**29.73**	**80**	eS	**P**	**14 16 20.9**	**+1.9**
BIPH	**Bislig**	**30.02**	**77**	⇑iP	**P**	**14 16 19.9**	**-1.7**
QZH	**Quanzhou**	**30.89**	**41**	⇑iP	**P**	**14 16 28.6**	**-0.5**
QZH				PP	PP	14 17 31.3	+0.4
QZH				S	**S**	**14 21 27.9**	**-2.2**
QZH				XS		14 21 41.9	
QZH				AMB	AMB		
	comp=Z,560nm,1.3s,mb6.2						
QZH				AMB	AMB		
	comp=Z,7µm,7.2s						
QZH				LR	LR		
	comp=N,179µm,15.8s,MS6.9						
QZH				LR	LR		
	comp=E,125µm,13.8s,MS6.9						
QZH				LR	LR		
	comp=Z,265µm,15.5s,MS7.0						
PTH	**Pithoragarh**	**31.46**	**332**	eP	**P**	**14 16 31.0**	**-3.1**
PTH				ex	**S**	**14 21 46.6**	**+7.6**
AJM	**Ajmer**	**32.20**	**321**	i P	**P**	**14 16 39.2**	**-1.4**
AJM				AMb	AMB	14 16 55.5	
	comp=Z,596nm,1.3s,mb6.3						
AJM				eS	**S**	**14 21 52.0**	**+1.4**
AJM				AMS	AMS	14 24 25.1	
	comp=Z,5µm,19.9s						
AJM				AMS	AMS	14 25 47.1	
	comp=E,18µm,19.4s						
NDI	**New Delhi**	**32.30**	**327**	ex	**S**	**14 21 48.0**	**-4.2**
NACB	**Ninganchiao**	**32.44**	**46**	⇑iP	**P**	**14 16 41.6**	**-1.1**
YHNB	**Yeheng**	**32.60**	**45**	⇑iP	**P**	**14 16 43.8**	**-0.3**
WHN	**Wuhan**	**32.74**	**29**	P	**P**	**14 16 44.5**	**-0.8**
WHN				S	**S**	**14 22 09.0**	**+10**
WHN				LR	LR		
	comp=N,94µm,13.3s,MS6.8						
WHN				LR	LR		
	comp=E,110µm,14.0s,MS6.8						
WHN				LR	LR		
	comp=Z,144µm,20.4s						
TATO	**Taipei**	**32.87**	**44**	⇑eP	**P**	**14 16 46.1**	**-0.3**
	comp=Z,534nm,1.4s,mb6.3						
TATO				e		14 17 03.7	
TATO				LR	LR		
	comp=Z,44µm,20.0s,MS6.2						
BHJ	**Bhuj**	**33.63**	**311**	eP	**P**	**14 16 53.0**	**-0.1**
BHJ				eS	**S**	**14 22 14.0**	**+1.1**
BHJ				AMS	AMS	14 25 49.6	
	comp=Z,4µm,18.0s						
XAN	**Xi'an**	**33.66**	**18**	P	**P**	**14 16 51.4**	**-1.8**
XAN				AP	pP	14 17 00.0	-1.7
XAN				S	**S**	**14 22 12.6**	**-0.6**
XAN				AMB	AMB		
	comp=Z,240nm,1.1s,mb6.0						
XAN				LR	LR		
	comp=N,33µm,23.7s,MS6.5						
XAN				LR	LR		
	comp=E,102µm,23.0s,MS6.5						
XAN				LR	LR		
	comp=Z,62µm,17.9s						
SMLA	**Simla**	**34.26**	**329**	eP	**P**	**14 16 57.4**	**-1.0**
SMLA				eS	**S**	**14 22 22.3**	**-0.2**
LZH	**Lanzhou**	**34.37**	**10**	P	**P**	**14 16 59.0**	**-0.3**
LZH				AP	pP	14 17 09.8	+2.1
LZH				XP	sP	14 17 12.5	+1.1
LZH				S	**S**	**14 22 25.0**	**+0.9**
LZH				XS		14 22 42.0	
LZH				eSS	SS	14 24 39.0	+4.0
LZH				AMB	AMB		
	comp=Z,280nm,1.0s,mb6.2						
LZH				AMB	AMB		
	comp=Z,6µm,5.8s						
LZH				LR	LR		
	comp=E,204µm,16.4s						
LZH				LR	LR		
	comp=Z,127µm,22.4s						
LZH	**Lanzhou**	**34.37**	**10**	P	**P**	**14 16 59.0**	**-0.3**
	comp=Z,280nm,1.0s,mb6.2						
LZH				pP	pP	14 17 09.8	+2.1
LZH				sP	sP	14 17 12.5	+1.1
LZH				PP	PP	14 18 23.0	+8.0
LZH				S	**S**	**14 22 25.0**	**+0.9**
LZH				sS		14 22 42.0	
LZH				eSS	SS	14 24 39.0	+4.0
LZH				LR	LR		
	comp=Z,127µm,22.4s,MS6.6						
SDNR	**Sundarnagar**	**34.66**	**329**	eP	**P**	**14 17 02.4**	**+0.6**
FITZ	**Fitzroy Crossi**	**34.82**	**127**	eP	**P**	**14 17 01.1**	**-2.3**
	comp=Z,161nm,0.8s,mb6.0						
FITZ				i S	**S**	**14 22 25.1**	**-6.2**
FITZ	**Fitzroy Crossi**	**34.82**	**127**	P	**P**	**14 17 01.3**	**-2.1**
	comp=Z,138nm,1.1s,mb5.8,baz=312,slow=7.2,SNR=14						
FITZ				S	**S**	**14 22 23.0**	**-8.3**
	comp=Z,13nm,0.8s,baz=168,slow=20,SNR=1.5						
BHK	**Bhakra**	**34.88**	**329**	ex	**P**	**14 17 09.8**	**+6.1**
DLH	**Dalhousie**	**36.00**	**329**	ex	**P**	**14 17 18.0**	**+4.7**
THN	**Thein Dam**	**36.04**	**329**	eP	**P**	**14 17 12.9**	**-0.7**
NJ2	**Nanjing**	**36.25**	**33**	eP	**P**	**14 17 14.5**	**-0.9**
NJ2				AP	pP	14 17 23.9	+0.1
NJ2				XP	sP	14 17 28.3	+0.9
NJ2				PP	PP	14 18 38.3	-0.3
NJ2				S	**S**	**14 22 53.0**	**-0.3**
NJ2				XS		14 23 08.0	
NJ2				AMB	AMB		
	comp=Z,580nm,1.2s,mb6.4						
NJ2				AMB	AMB		
	comp=Z,10µm,11.0s						
NJ2				LR	LR		
	comp=N,110µm,20.0s,MS6.8						
NJ2				LR	LR		
	comp=E,96µm,16.0s,MS6.8						
NJ2				LR	LR		
	comp=Z,195µm,20.0s,MS6.9						
SSE	**Sheshan**	**36.85**	**36**	P	**P**	**14 17 20.3**	**-0.1**
SSE				AP	pP	14 17 29.1	+0.2
SSE				XP	sP	14 17 32.9	+0.4
SSE				PP	PP	14 18 45.3	-1.1
SSE				PCP	PcP	14 19 39.9	-2.4
SSE				S	**S**	**14 23 06.4**	**+3.8**
SSE				XS		14 23 20.3	
SSE				SCS	ScS	14 27 32.3	+0.8
SSE				AMB	AMB		
	comp=Z,180nm,1.2s,mb5.8						
SSE				AMB	AMB		
	comp=Z,4µm,8.3s						
SSE				LR	LR		
	comp=N,109µm,16.5s,MS6.8						
SSE				LR	LR		
	comp=E,70µm,16.8s,MS6.8						
SSE				LR	LR		
	comp=Z,156µm,16.8s,MS6.9						
SSE	**Sheshan**	**36.85**	**36**	P	**P**	**14 17 20.3**	**-0.1**
	comp=Z,184nm,1.2s,mb5.8						
SSE				pP	pP	14 17 29.1	+0.2
SSE				sP	sP	14 17 32.9	+0.4
SSE				PP	PP	14 18 45.2	-1.2
SSE				PcP	PcP	14 19 39.9	-2.4
SSE				S	**S**	**14 23 06.4**	**+3.8**
SSE				sS		14 23 20.3	
SSE				SS	SS	14 25 48.3	+17
SSE				ScS	ScS	14 27 32.2	+0.7
SSE				LR	LR		
	comp=Z,156µm,16.8s,MS6.9						
GTA	**Gaotai**	**37.16**	**4**	⇑P	**P**	**14 17 23.1**	**+0.2**
GTA				AP	pP	14 17 32.3	+0.9
GTA				XP	sP	14 17 36.4	+1.4
GTA				PP	PP	14 18 49.3	-0.9
GTA				PCP	PcP	14 19 44.5	+1.4
GTA				S	**S**	**14 23 04.6**	**-2.6**
GTA				XS		14 23 20.8	
GTA				SCP		14 23 27.9	
GTA				SCS	ScS	14 27 33.4	+0.2
GTA				AMB	AMB		
	comp=Z,420nm,0.9s,mb6.3						
GTA				AMB	AMB		
	comp=Z,6µm,9.5s						
GTA				LR	LR		
	comp=N,27µm,23.6s,MS6.2						
GTA				LR	LR		
	comp=E,39µm,25.9s,MS6.2						
GTA				LR	LR		
	comp=Z,31µm,27.4s,MS6.0						
TIY	**Taiyuan**	**38.17**	**20**	⇑P	**P**	**14 17 28.0**	**-3.4**
TIY				PP	PP	14 19 00.0	-2.2
TIY				S	**S**	**14 23 23.0**	**+0.5**
TIY				LR	LR		
	comp=N,137µm,15.0s						
KAKA	**Kakadu**	**38.35**	**114**	eP	**P**	**14 17 49.5**	**+16**
	comp=N,302nm,0.9s,mb6.0						
MUN	**Mundaring**	**38.64**	**153**	eP	**P**	**14 17 39.2**	**+3.8**
MUN				eS	**S**	**14 23 30.1**	**+0.4**
TIA	**Tai'an**	**38.73**	**27**	eP	**P**	**14 17 35.3**	**-0.9**
TIA				PP	PP	14 19 10.0	+1.2
TIA				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.7						
TIA				AMB	AMB		
	comp=Z,3µm,8.0s						
TIA				LR	LR		
	comp=N,71µm,15.0s,MS6.7						
TIA				LR	LR		
	comp=E,62µm,15.0s,MS6.7						
JOW	**Kunigami**	**38.87**	**48**	P	**P**	**14 17 37.8**	**+0.3**
	comp=E,150nm,0.6s,mb5.9,baz=240,slow=10,SNR=12						
KLBR	**Kellerberrin**	**39.04**	**151**	eP	**P**	**14 17 41.2**	**+2.4**
	comp=E,86nm,0.9s,mb5.5						
NWAO	**Narrogin (SRO)**	**39.90**	**153**	P	**P**	**14 17 46.6**	**+0.7**
	comp=E,30nm,0.8s,mb5.1,baz=324,slow=9.4,SNR=6.7						
NWAO				S	**S**	**14 23 47.9**	**-0.9**
	comp=E,8.6nm,1.0s,baz=235,slow=20,SNR=1.7						
NWAO	**Narrogin (SRO)**	**39.90**	**153**	eP	**P**	**14 17 46.3**	**+0.4**
	comp=E,209nm,1.2s,mb5.7						
NWAO	**Narrogin (SRO)**	**39.90**	**153**	eP	**P**	**14 17 46.3**	**+0.4**
NWAO				pmax	pmax		
	comp=Z,209nm,1.2s						
HHC	**Hu-ho-hao-te**	**40.74**	**17**	⇑iP	**P**	**14 17 53.6**	**+0.9**
HHC				AP	pP	14 18 03.4	+2.1
HHC				XP	sP	14 18 07.5	+2.7
HHC				PP	PP	14 19 33.0	+3.2
HHC				PCP	PcP	14 19 53.8	-0.6
HHC				SCP		14 23 40.8	
HHC				PCS		14 23 44.5	
HHC				S	**S**	**14 24 02.4**	**+1.2**
HHC				XS		14 24 18.3	
HHC				SS	SS	14 26 59.0	+1.4
HHC				SCS	ScS	14 27 54.0	+0.2
HHC				AMB	AMB		
	comp=Z,180nm,2.2s,mb5.3						
HHC				AMB	AMB		
	comp=Z,10µm,11.8s						
HHC				LR	LR		
	comp=N,53µm,14.8s,MS6.7						
HHC				LR	LR		
	comp=E,70µm,18.8s,MS6.7						
HHC				LR	LR		
	comp=Z,54µm,17.8s,MS6.5						
KSH	**Kashi**	**41.72**	**336**	⇑iP	**P**	**14 18 01.5**	**+0.7**
KSH				eAP	pP	14 18 10.9	+1.5
KSH				eXP	sP	14 18 14.6	+1.7
KSH				PP	PP	14 19 40.5	+0.1
KSH				ePCP	PcP	14 19 58.4	+0.7
KSH				eSCP		14 23 45.1	
KSH				ePCS		14 23 48.3	
KSH				eS	**S**	**14 24 14.5**	**-1.3**
KSH				XS		14 24 31.5	
KSH				eSS	SS	14 27 15.8	-0.9
KSH				eSCS	ScS	14 28 00.0	+0.2
KSH				AMB	AMB		

	comp=Z,8µm,8.7s						
KSH				LR	LR		
	comp=N,41µm,15.9s,MS6.6						
KSH				LR	LR		
	comp=E,45µm,15.6s,MS6.6						
MSEY	**Mahe Island**	**41.85**	**261**	eP	**P**	**14 18 01.9**	**-0.3**
	comp=E,198nm,1.3s,mb5.6						
MSEY				LR	LR		
	comp=Z,9µm,20.0s,MS5.7						
WMQ	**Urumqi**	**42.25**	**350⇑**	iP	**P**	**14 18 05.5**	**+0.4**
WMQ				AP	pP	14 18 15.0	+1.4
WMQ				XP	sP	14 18 19.0	+1.8
WMQ				PCP	PcP	14 19 59.0	-0.3
WMQ				SCP		14 23 48.0	
WMQ				S	**S**	**14 24 23.0**	**-0.5**
WMQ				XS		14 24 41.0	
WMQ				SCS	ScS	14 28 03.0	+0.1
WMQ				AMB	AMB		
	comp=Z,240nm,1.5s,mb5.6						
WMQ				AMB	AMB		
	comp=Z,7µm,9.0s						
WMQ				LR	LR		
	comp=N,36µm,15.8s						
WMQ				LR	LR		
	comp=E,44µm,21.4s						
WMQ				LR	LR		
	comp=Z,48µm,23.0s						
WRA	**Warramunga Arr**	**42.89**	**123**	P	**P**	**14 18 08.9**	**-1.7**
	comp=Z,104nm,0.8s,mb5.6,baz=300,slow=9.4,SNR=28						
WRA				ScP		14 23 51.1	
	comp=Z,7.6nm,1.0s,baz=307,slow=3.7,SNR=4.4						
WRA				S	**S**	**14 24 26.8**	**-6.4**
	comp=Z,4.3nm,0.9s,baz=292,slow=14,SNR=3.6						
WRA	**Warramunga Arr**	**42.89**	**123**	P	**P**	**14 18 08.9**	**-1.7**
WRA				S	**S**	**14 24 26.8**	**-6.4**
WRAB	**Tennant Creek**	**42.89**	**123⇑**	iP	**P**	**14 18 09.0**	**-1.7**
WRAB				LR	LR		
	comp=Z,7µm,20.0s,MS5.5						
WB2	**Warramunga Arr**	**42.90**	**123**	eP	**P**	**14 18 09.0**	**-1.7**
WB2				eS	**S**	**14 24 22.5**	**-11**
FORT	**Forrest**	**44.27**	**140**	eP	**P**	**14 18 22.2**	**+0.4**
	comp=Z,393nm,0.7s,mb6.2						
FORT				i S	**S**	**14 24 52.6**	**-0.6**
ASPA	**Alice Springs**	**44.30**	**128**	eP	**P**	**14 18 20.7**	**-1.3**
INCN	**Inchon**	**44.56**	**34⇑**	iP	**P**	**14 18 22.6**	**-1.4**
	comp=Z,252nm,1.2s,mb5.9						
AAA	**Alma-Ata**	**44.58**	**339**	eP	**P**	**14 18 25.0**	**+0.9**
AAA				eS	**S**	**14 25 02.0**	**+4.6**
AAA				pmax	pmax		
	comp=Z,7µm,3.5s						
AAA				smax			
	comp=E,21µm,5.0s						
AAA				MLR	MLR		
	comp=Z,36µm,7.5s						
MKAR	**Makanchi Array**	**46.20**	**346**	P	**P**	**14 18 37.0**	**+0.1**
	comp=Z,296nm,0.8s,mb6.2,baz=166,slow=6.1,SNR=28						
SNY	**Shenyang**	**46.22**	**28⇑**	iP	**P**	**14 18 36.3**	**-0.8**
SNY				AP	pP	14 18 41.5	-4.2
SNY				PP	PP	14 20 24.3	-1.3
SNY				S	**S**	**14 25 25.8**	**+4.8**
SNY				XS		14 25 34.9	
SNY				SS	SS	14 28 42.1	+3.5
SNY				AMB	AMB		
	comp=Z,260nm,1.1s,mb6.1						
SNY				LR	LR		
	comp=N,73µm,18.2s,MS6.7						
SNY				LR	LR		
	comp=E,28µm,14.5s,MS6.7						
SNY				LR	LR		
	comp=Z,81µm,15.6s,MS6.8						
SONM	**Songino Array**	**46.23**	**9**	P	**P**	**14 18 37.6**	**+0.5**
	comp=Z,126nm,0.9s,mb5.8,baz=192,slow=8.6,SNR=34						
SONM				PcP	PcP	14 20 11.7	-1.2
	comp=Z,37nm,0.7s,baz=199,slow=4.5,SNR=5.5						
SONM				ScP		14 24 05.1	
	comp=Z,13nm,1.1s,baz=194,slow=4.1,SNR=4.0						
SONM				S	**S**	**14 25 31.9**	**+11**
	comp=Z,2.0nm,1.1s,baz=315,slow=14,SNR=2.2						
SONM				LR	LR	14 41 09.5	
	comp=Z,54µm,20.3s,MS6.5,baz=188,slow=40						
SONM	**Songino Array**	**46.23**	**9**	P	**P**	**14 18 37.6**	**+0.5**
SONM						14 20 11.7	
SONM				S	**S**	**14 25 31.9**	**+11**
ULN	**Ulaanbaatar**	**46.37**	**10⇑**	iP	**P**	**14 18 38.2**	**+0.1**
ZAK	**Zakamensk**	**48.34**	**6⇑**	eP	**P**	**14 18 54.0**	**+0.4**
ZAK				e		14 20 22.3	
ZAK				pmax	pmax		
	comp=Z,80nm,0.9s,mb5.8						
CN2	**Changchun**	**48.62**	**28**	⇑P	**P**	**14 18 55.3**	**-0.6**
CN2				eAP	pP	14 19 05.0	+0.5
CN2				SCP		14 24 15.1	
CN2				eS	**S**	**14 25 53.5**	**-1.4**
CN2				AMB	AMB		
	comp=Z,170nm,1.2s,mb6.0						
CN2				AMB	AMB		
	comp=Z,8µm,10.0s						
CN2				LR	LR		
	comp=N,89µm,17.0s,MS6.9						
CN2				LR	LR		
	comp=E,39µm,17.0s,MS6.9						
CN2				LR	LR		
	comp=Z,73µm,16.0s,MS6.8						
IRK	**Irkutsk**	**50.28**	**6**	eP	**P**	**14 19 07.6**	**-0.9**
IRK				eS	**S**	**14 26 20.4**	**+2.5**
IRK				pmax	pmax		
	comp=Z,530nm,2.2s,mb6.2						
HIA	**Hailar**	**50.85**	**19**	eP	**P**	**14 19 12.5**	**-0.4**
	comp=Z,236nm,1.0s,mb6.1						
HIA	**Hailar**	**50.85**	**19**	eP	**P**	**14 19 12.5**	**-0.4**
HIA				pmax	pmax		
	comp=Z,236nm,1.0s						
MDJ	**Mudanjiang**	**51.22**	**30**	P	**P**	**14 19 15.9**	**+0.2**
MDJ				AP	pP	14 19 25.0	+0.6
MDJ				XP	sP	14 19 28.9	+1.1
MDJ				PCP	PcP	14 20 30.6	-0.3
MDJ				PP	PP	14 21 13.0	-0.3
MDJ				SCP		14 24 24.8	
MDJ				PCS		14 24 28.4	
MDJ				S	**S**	**14 26 33.0**	**+2.1**
MDJ				XS		14 26 48.9	
MDJ				AMB	AMB		
	comp=Z,80nm,1.7s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,6µm,9.5s						
MDJ				LR	LR		
	comp=N,60µm,18.4s,MS6.7						
MDJ				LR	LR		
	comp=E,33µm,18.4s,MS6.7						
MDJ				LR	LR		
	comp=Z,84µm,17.1s,MS6.8						
MDJ	**Mudanjiang**	**51.22**	**30**	eP	**P**	**14 19 15.5**	**-0.2**
	comp=Z,164nm,1.0s,mb5.9						
MAT	**Matsushiro**	**51.24**	**43**	P	**P**	**14 19 14.7**	**-1.3**
MAT				S	**S**	**14 26 30.0**	**-1.4**
MAT	**Matsushiro**	**51.24**	**43**	eP	**P**	**14 19 15.0**	**-1.0**
	comp=Z,266nm,1.2s,mb6.0						
MAT				eS	**S**	**14 26 30.0**	**-1.4**
MAT				LR	LR		
	comp=Z,32µm,20.0s,MS6.3						
MAT	**Matsushiro**	**51.24**	**43**	eP	**P**	**14 19 15.0**	**-1.0**
MAT				eS	**S**	**14 26 30.0**	**-1.4**
MAT				pmax	pmax		
	comp=Z,266nm,1.2s,mb6.0						
MAT				MLR	MLR		
	comp=Z,32µm,20.0s,MS6.3						
MJAR	**Matsushiro Arr**	**51.24**	**43**	P	**P**	**14 19 15.2**	**-0.8**
	comp=Z,115nm,0.9s,mb5.8,baz=211,slow=4.6,SNR=30						
MJAR				ScP		14 24 27.3	
	comp=Z,5.2nm,1.0s,baz=214,slow=4.4,SNR=4.6						
LBOS		**52.24**	**286**	eP	**P**	**14 19 24.7**	**+0.9**
ZAL	**Zalesovo**	**52.53**	**351**	P	**P**	**14 19 25.8**	**+0.3**
	comp=Z,103nm,0.5s,mb6.0,baz=299,slow=7.1,SNR=21						
ZAL				S	**S**	**14 26 51.8**	**+3.1**
	comp=Z,6.4nm,0.8s,baz=192,slow=21,SNR=11						
ZAL				LR	LR	14 46 08.3	
	comp=Z,25µm,21.1s,MS6.2,baz=294,slow=41						
DHBB	**Dhamar BB**	**53.16**	**287⇑**	eP	**P**	**14 19 32.4**	**+1.7**
CTA	**Charters Tower**	**53.29**	**117**	eP	**P**	**14 19 30.2**	**-1.4**
	comp=Z,135nm,1.3s,mb5.7						
CTA				eS	**S**	**14 26 59.5**	**0.0**
CTA	**Charters Tower**	**53.29**	**117**	eP	**P**	**14 19 30.2**	**-1.4**
CTA				eS	**S**	**14 26 59.5**	**0.0**
CTA				pmax	pmax		
	comp=Z,135nm,1.3s						
NVS	**Novosibirsk**	**53.65**	**350**	i P	**P**	**14 19 31.8**	**-2.0**
NVS				eS	**S**	**14 27 01.8**	**-2.2**
NVS				pmax	pmax		
	comp=Z,288nm,1.0s,mb6.2						
NVS				pmax	pmax		
	comp=N,298nm,1.9s						
NVS				pmax	pmax		
	comp=E,188nm,1.5s						
NVS				smax			
	comp=E,369nm,1.7s						
NVS				smax			
	comp=N,363nm,2.3s						
KBD	**Kabd**	**53.82**	**305**	eP	**P**	**14 19 35.5**	**+0.1**
RDF	**Al-Radifah**	**53.85**	**305**	eP	**P**	**14 19 35.1**	**-0.4**
RDF				AMb	AMB	14 20 05.2	
	comp=Z,507nm,0.7s,mb6.5						
UMR	**Umm Al-Rimmam**	**53.93**	**305**	eP	**P**	**14 19 35.5**	**-0.7**
UMR				AMb	AMB	14 19 40.5	
	comp=Z,227nm,0.8s,mb6.2						
STKA	**Stephens Creek**	**54.30**	**132**	eP	**P**	**14 19 37.2**	**-1.6**
	comp=Z,186nm,1.0s,mb6.0						
STKA				i S	**S**	**14 27 10.7**	**-2.4**
STKA	**Stephens Creek**	**54.30**	**132**	P	**P**	**14 19 37.6**	**-1.2**
	comp=Z,104nm,1.0s,mb5.7,baz=308,slow=7.0,SNR=12						
STKA				S	**S**	**14 27 12.0**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=332,slow=21,SNR=2.3						
STKA				LR	LR	14 44 33.7	
	comp=Z,23µm,21.2s,MS6.2,baz=301,slow=38						
BRVK	**Borovoye**	**55.27**	**341⇑**	iP	**P**	**14 19 44.5**	**-1.1**
KLR	**Kul'dur**	**55.56**	**27κ**	iP	**P**	**14 19 46.3**	**-1.5**
KLR				eS	**S**	**14 27 33.5**	**+3.8**
KLR				eSS	SS	14 31 16.5	+1.7
KLR				pmax	pmax		
	comp=E,720nm,3.0s						
KLR				pmax	pmax		
	comp=Z,1µm,3.0s						
KLR				pmax	pmax		
	comp=N,5µm,14.0s						
KLR				pmax	pmax		
	comp=E,3µm,14.0s						
KLR				pmax	pmax		
	comp=Z,13µm,14.0s						
BHD	**Baghdad**	**57.92**	**308**	ex	x	14 20 01.0	
BHD				ex	x	14 20 09.0	
BHD				ex	x	14 27 58.0	
BHD				ex	x	14 29 50.0	
CLNS	**Chul'man**	**58.93**	**18**	eP	**P**	**14 20 11.5**	**0.0**
CLNS				e*PP	pP	14 20 21.2	+0.8
CLNS				e		14 20 56.9	
CLNS				eS	**S**	**14 28 14.1**	**+0.1**
CLNS				e		14 29 50.5	
CLNS				eSS	SS	14 32 04.7	-4.8
CLNS				pmax	pmax		
	comp=E,47nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,130nm,0.7s,mb6.1						
CLNS				pmax	pmax		
	comp=N,66nm,0.9s						
CLNS				smax			
	comp=N,2µm,11.1s						
CLNS				smax			
	comp=Z,3µm,13.5s						
CLNS				smax			
	comp=E,6µm,16.6s						
CLNS				MLR	MLR		
	comp=N,13µm,15.0s,MS6.7						
CLNS				MLR	MLR		
	comp=Z,77µm,15.0s,MS7.0						
CLNS				MLR	MLR		
	comp=E,40µm,14.0s,MS6.7						
KMBO	**Kilima Mbogo**	**59.63**	**267**	P	**P**	**14 20 17.8**	**+0.8**
	comp=E,16nm,0.9s,mb5.0,baz=50,slow=8.3,SNR=12						
KMBO				S	**S**	**14 28 28.7**	**+5.0**
	comp=E,0.3nm,0.3s,baz=319,slow=19,SNR=4.6						
KMBO	**Kilima Mbogo**	**59.63**	**267**	P	**P**	**14 20 17.8**	**+0.8**
KMBO				S	**S**	**14 28 28.7**	**+5.0**
MAK	**Makhachkala**	**59.73**	**320d**	iP	**P**	**14 20 14.0**	**-3.3**
MAK				e		14 22 31.0	
MAK				eS	**S**	**14 28 18.0**	**-6.6**
MAK				pmax	pmax		
	comp=Z,4µm,12.0s						
MAK				smax			
	comp=N,8µm,16.0s						
MAK				smax			
	comp=E,4µm,10.0s						
YSS	**Yuzh-Sakhalins**	**59.77**	**35⇑**	iP	**P**	**14 20 17.4**	**-0.1**
	comp=E,794nm,1.3s,mb6.6						
YSS				e	pP	14 20 27.8	+1.4
YSS	**Yuzh-Sakhalins**	**59.77**	**35α**	iP	**P**	**14 20 17.0**	**-0.5**
YSS				e*PP	pP	14 20 27.0	+0.6
YSS				e*SP	sP	14 20 29.0	-0.6
YSS				ePPP	PPP	14 23 52.0	-4.9
YSS				eS	**S**	**14 28 28.0**	**+3.0**
YSS				ePS	PS	14 28 42.0	-1.9
YSS				pmax	pmax		
	comp=N,50nm,1.0s						
YSS				pmax	pmax		
	comp=E,100nm,1.0s						
YSS				pmax	pmax		
	comp=Z,280nm,1.0s,mb6.2						
YSS				pmax	pmax		
	comp=Z,7µm,10.0s						
YSS				pmax	pmax		
	comp=N,2µm,8.0s						
YSS				pmax	pmax		
	comp=E,2µm,8.0s						
YSS				smax			
	comp=N,3µm,12.0s						
YSS				MLR	MLR		
	comp=Z,22µm,17.0s,MS6.4						
YSS				MLR	MLR		
	comp=N,10µm,16.0s,MS6.4						
YSS				MLR	MLR		
	comp=E,24µm,18.0s,MS6.4						
TOO	**Toolangi**	**59.91**	**136**	eP	**P**	**14 20 18.8**	**+0.2**
	comp=E,58nm,0.9s,mb5.6						
TOO				i S	**S**	**14 28 30.7**	**+3.7**
TOO	**Toolangi**	**59.91**	**136**	eP	**P**	**14 20 18.8**	**+0.2**
TOO				i S	**S**	**14 28 30.7**	**+3.7**
TOO				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.6						
MSL	**Mosul**	**60.00**	**311**	ex	x	14 20 19.0	
MSL				ex	x	14 20 26.5	
MSL				ex	x	14 20 39.5	
MSL				ex	x	14 28 25.5	
MSL				ex	x	14 28 40.0	
YUK	**Yuzh-Kuril'sk**	**60.10**	**39**	eP	**P**	**14 20 17.0**	**-2.8**
YUK				e		14 21 03.0	
YUK				eS	**S**	**14 28 44.0**	**+15**
YUK				pmax	pmax		
	comp=Z,5µm,2.0s						
YUK				MLR	MLR		
	comp=N,25µm,15.0s,MS6.8						
YUK				MLR	MLR		
	comp=Z,52µm,15.0s,MS6.8						
YUK				MLR	MLR		
	comp=E,56µm,16.0s,MS6.8						
GNI	**Garni**	**60.32**	**316⇑**	eP	**P**	**14 20 20.1**	**-1.2**
	comp=E,205nm,1.0s,mb6.1						
GNI	**Garni**	**60.32**	**316⇑**	eP	**P**	**14 20 20.1**	**-1.2**
GNI				pmax	pmax		
	comp=Z,205nm,1.0s						
DGRG	**David-gareji**	**60.45**	**317**	P	**P**	**14 20 21.2**	**-1.0**
DGRG				S	**S**	**14 28 34.2**	**+0.5**
ORR	**Orenburg**	**60.52**	**331⇑**	iP	**P**	**14 20 20.7**	**-1.8**
ORR				i S	**S**	**14 28 29.1**	**-5.4**
ORR				pmax	pmax		
	comp=Z,170nm,1.2s,mb6.0						
ORR				MLR	MLR		
	comp=Z,25µm,24.0s,MS6.3						
TI2	**Plekhanov**	**60.99**	**318**	i P	**P**	**14 20 24.4**	**-1.5**
TI2				i	pP	14 20 34.4	-0.3
TI2				eS	**S**	**14 28 40.4**	**-0.3**
TI2				eS	**S**	**14 28 40.4**	**-0.3**
TI2				MLR	MLR		
	comp=E,4µm,16.0s						
TI2				MLR	MLR		
	comp=Z,7µm,16.0s,MS5.9						
TBLG	**Delisi**	**61.00**	**318**	P	**P**	**14 20 25.2**	**-0.7**
ARMA	**Armidale**	**61.43**	**126**	eP	**P**	**14 20 28.9**	**-0.1**
ARMA				eS	**S**	**14 28 49.9**	**+3.5**
SVE	**Sverdlovsk**	**61.64**	**338c**	iP	**P**	**14 20 27.0**	**-3.0**
SVE				ePPP	PPP	14 24 15.0	-1.6
SVE				e		14 35 32.0	
SVE				pmax	pmax		
	comp=N,2µm,13.0s						
SVE				pmax	pmax		
	comp=E,2µm,13.0s						
SVE				pmax	pmax		
	comp=Z,5µm,13.0s						
SVE				MLR	MLR		
	comp=N,22µm,19.0s,MS6.4						
SVE				MLR	MLR		
	comp=E,9µm,19.0s,MS6.4						
SVE				MLR	MLR		
	comp=Z,34µm,19.0s,MS6.5						
AKH	**Akhalkalaki**	**61.71**	**317**	P	**P**	**14 20 31.8**	**+1.1**
ARU	**Arti**	**62.13**	**337⇑**	iP	**P**	**14 20 31.5**	**-1.9**
ARU	**Arti**	**62.13**	**337⇑**	iP	**P**	**14 20 31.6**	**-1.8**
ARU				i S	**S**	**14 28 56.0**	**+1.0**
ARU				e		14 30 20.1	
ARU				pmax	pmax		
	comp=Z,240nm,1.4s,mb6.1						
ARU				MLR	MLR		
	comp=Z,28µm,21.0s,MS6.4						
ARU				MLR	MLR		
	comp=N,24µm,20.0s,MS6.5						
ARU				MLR	MLR		
	comp=E,17µm,20.0s,MS6.5						
ONI	**Oni**	**62.23**	**318**	P	**P**	**14 20 34.5**	**+0.3**
ONI				S	**S**	**14 28 57.2**	**+0.9**
BNGL	**BINGOL**	**62.41**	**313**	i P	**P**	**14 20 33.2**	**-2.2**
ERZM	**Erzurum**	**62.60**	**314**	i P	**P**	**14 20 36.6**	**-0.2**
KIV	**Kislovodsk**	**63.31**	**319⇑**	iP	**P**	**14 20 40.2**	**-1.1**
KIV	**Kislovodsk**	**63.31**	**319c**	iP	**P**	**14 20 40.1**	**-1.2**
GOF	**Gofitskoye**	**63.56**	**320**	eP	**P**	**14 20 33.7**	**-9.3**
TAU	**Tasmania Unive**	**63.82**	**141**	eP	**P**	**14 20 44.1**	**-0.6**
	comp=E,156nm,1.0s,mb6.0						
TAU				e	pP	14 20 54.6	+1.0
TAU	**Tasmania Unive**	**63.82**	**141**	eP	**P**	**14 20 44.1**	**-0.6**
TAU				e	pP	14 20 54.6	+1.0
TAU				pmax	pmax		
	comp=Z,156nm,1.0s,mb6.0						
HNR	**Honiara**	**63.94**	**102**	eP	**P**	**14 20 43.0**	**-3.0**
	comp=Z,489nm,1.0s,mb6.5						
HNR	**Honiara**	**63.94**	**102**	eP	**P**	**14 20 43.1**	**-2.9**
HNR				pmax	pmax		
	comp=Z,489nm,1.0s,mb6.5						
MKRJ	**Makawir**	**64.46**	**304**	P	**P**	**14 20 49.1**	**0.0**
YAK	**Yakutsk**	**64.60**	**16⇑**	iP	**P**	**14 20 48.1**	**-1.4**
YAK	**Yakutsk**	**64.60**	**16c**	iP	**P**	**14 20 48.0**	**-1.5**
YAK				i *PP	pP	14 20 59.4	+1.0
YAK				i		14 21 06.2	
YAK				e		14 23 09.7	
YAK				eS	**S**	**14 29 26.3**	**+0.7**
YAK				pmax	pmax		
	comp=N,220nm,1.1s						
YAK				pmax	pmax		
	comp=Z,501nm,1.1s,mb6.5						
YAK				pmax	pmax		
	comp=E,161nm,1.2s						
YAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
YAK				smax			
	comp=E,2µm,18.6s						
YAK				smax			
	comp=Z,2µm,18.9s						
YAK				smax			
	comp=N,4µm,18.1s						
YAK				MLR	MLR		
	comp=Z,32µm,16.0s,MS6.6						
YAK				MLR	MLR		
	comp=N,20µm,15.0s,MS6.6						
YAK				MLR	MLR		
	comp=E,23µm,17.0s,MS6.6						
EIL	**Elat**	**64.61**	**302**	P	**P**	**14 20 49.8**	**-0.3**
ZFRI	**Zfri**	**64.61**	**303**	P	**P**	**14 20 50.0**	**-0.1**
MBH	**Mount Berech**	**64.66**	**302**	P	**P**	**14 20 50.4**	**-0.1**
PRNI	**Paran**	**64.71**	**303**	P	**P**	**14 20 50.8**	**0.0**
MMLI	**Mount Malkishu**	**64.86**	**305**	P	**P**	**14 20 52.0**	**+0.3**
KMTI	**Karmit**	**64.89**	**302**	P	**P**	**14 20 51.7**	**-0.2**
SOKR	**Solikamsk**	**65.03**	**339c**	iP	**P**	**14 20 49.1**	**-3.2**
SOKR				i S	S	14 29 28.0	-3.0
SOKR				PPS	SKS	14 30 37.9	-11
SOKR				SS	SS	14 33 41.4	-3.7
SOKR				pmax	pmax		
	comp=Z,190nm,1.0s,mb6.1						
SOKR				MLR	MLR		
	comp=Z,32µm,19.0s,MS6.5						
BHL	**Bhannes**	**65.04**	**307**	eP	**P**	**14 20 52.3**	**-0.5**
MASH	**Mash'abbe Sade**	**65.04**	**303**	P	**P**	**14 20 52.6**	**-0.3**
SLTI	**Sal'it**	**65.12**	**305**	P	**P**	**14 20 53.5**	**+0.1**
SOC	**Sochi**	**65.13**	**318c**	iP	**P**	**14 20 51.3**	**-2.0**
SOC				e*PP	pP	14 20 59.9	-2.2
SOC				e*SP	sP	14 21 04.2	-1.1
SOC				e		14 21 30.1	
SOC				e		14 23 12.9	
SOC				ePPP	PPP	14 24 52.0	-0.8
SOC				i S	S	14 29 29.8	-2.7
SOC				e*SS		14 29 43.2	
SOC				e		14 30 43.1	
SOC				eSS	SS	14 33 50.1	+3.2
SOC				pmax	pmax		
	comp=Z,2µm,6.0s						
SOC				pmax	pmax		
	comp=Z,83nm,0.7s,mb5.9						
SOC				MLR	MLR		
	comp=Z,9µm,22.0s,MS5.9						
RTMM	**Retamin**	**65.14**	**303**	P	**P**	**14 20 53.2**	**-0.3**
HNTI	**Hanita**	**65.22**	**306**	P	**P**	**14 20 54.3**	**+0.3**
HAF	**Haifa**	**65.27**	**305**	P	**P**	**14 20 54.3**	**0.0**
COBT	**Iskenderun**	**65.28**	**309**	i P	**P**	**14 20 53.8**	**-0.6**
KZIT	**Kziot**	**65.35**	**303**	P	**P**	**14 20 54.6**	**-0.3**
VRHR	**Novokhopersk**	**67.10**	**326**	eP	**P**	**14 21 03.1**	**-2.6**
VRHR				e*PP	pP	14 21 12.0	-2.6
VRHR				eS	S	14 29 50.4	-5.9
VRHR				eSSS	SSS	14 37 04.6	-10
VRHR				pmax	pmax		
	comp=N,50nm,0.8s						
VRHR				pmax	pmax		
	comp=E,30nm,0.8s						
VRHR				pmax	pmax		
	comp=Z,120nm,0.8s,mb6.0						
VRHR				smax			
	comp=N,4µm,8.8s						
VRHR				smax			
	comp=Z,620nm,5.8s						
VRHR				smax			
	comp=E,3µm,8.9s						
VRHR				MLR	MLR		
	comp=Z,23µm,22.0s,MS6.3						
VRHR				MLR	MLR		
	comp=N,13µm,23.0s,MS6.2						
VRHR				MLR	MLR		
	comp=E,14µm,23.0s,MS6.2						
ANN	**Anapa**	**67.11**	**318**	eP	**P**	**14 21 01.1**	**-4.8**
ANN				e		14 21 30.2	
ANN				i S	S	14 29 52.0	-4.5
ANN				pmax	pmax		
	comp=Z,2µm,10.5s						
ANN				pmax	pmax		
	comp=Z,69nm,1.2s,mb5.6						
ANN				MLR	MLR		
	comp=Z,12µm,20.0s,MS6.1						
CSS	**Prodhromos**	**67.17**	**307**	eP	**P**	**14 21 05.7**	**-0.7**
	comp=Z,229nm,1.4s,mb6.0						
CSS				e	pP	14 21 14.9	-0.4
CDAG	**Cicekdag**	**67.59**	**312**	i P	**P**	**14 21 06.3**	**-2.7**
BOYT	**Boyabat**	**67.74**	**314**	i P	**P**	**14 21 07.8**	**-2.0**
PECR	**Pechory**	**68.37**	**332d**	iP	**P**	**14 21 11.0**	**-2.6**
PECR				e		14 21 40.5	
PECR				i S	S	14 30 07.6	-3.8
PECR				pmax	pmax		
	comp=E,1µm,14.0s						
PECR				pmax	pmax		
	comp=Z,4µm,14.0s						
PECR				smax			
	comp=N,6µm,10.0s						
PECR				smax			
	comp=E,4µm,10.0s						
ELDT	**Eldivan**	**68.54**	**313**	i P	**P**	**14 21 14.2**	**-0.6**
MIR	**Mirnyy**	**68.63**	**182**	eP	**P**	**14 21 16.0**	**+1.0**
MIR				eS	S	14 30 14.0	-0.3
MIR				pmax	pmax		
	comp=N,99µm,16.0s						
MIR				smax			
	comp=E,3µm,20.0s						
MIR				smax			
	comp=N,9µm,21.0s						
VOR	**Voronezh**	**68.75**	**326**	eP	**P**	**14 21 14.5**	**-1.4**

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VOR                              e*PP   pP    14 21 21.0 -3.8
VOR                                S    S     14 30 13.0 -2.9
VOR                                pmax pmax
       comp=E,280nm,1.6s
VOR                                pmax pmax
       comp=Z,520nm,1.6s,mb6.2
VOR                                pmax pmax
       comp=N,280nm,1.2s
VOR                                smax
       comp=N,250nm,1.7s
VOR                                smax
       comp=E,70nm,1.7s
VOR                                smax
       comp=Z,90nm,1.7s
BALT   Daday           68.86 314  i P   P     14 21 16.3 -0.5
CASY   Casey           69.01 174  eP    P     14 21 17.4  0.0
       comp=Z,111nm,1.2s,mb5.7
SIM    Simferopol'     69.38 318c iP    P     14 21 18.9 -1.1
SIM                               i S   S     14 30 20.9 -2.7
SIM                                pmax pmax
       comp=Z,110nm,1.0s,mb5.7
LSZ    Lusaka          70.02 253  eP    P     14 21 24.6 +0.3
       comp=Z,89nm,1.3s,mb5.5
LSZ    Lusaka          70.02 253  eP    P     14 21 24.6 +0.3
LSZ                                pmax pmax
       comp=Z,89nm,1.3s,mb5.5
ISP    Isparta         70.06 310  eP    P     14 21 22.1 -2.2
       comp=Z,283nm,1.5s,mb6.0
ISP    Isparta         70.06 310  eP    P     14 21 22.1 -2.1
ISP                                pmax pmax
       comp=Z,283nm,1.5s,mb6.0
BORA   Eskisehir       70.58 312  i P   P     14 21 24.6 -2.8
MA2    Magadan         70.63  26  eP    P     14 21 26.6 -0.7
       comp=Z,298nm,1.3s,mb6.1
MA2    Magadan         70.63  26ceP     P     14 21 26.8 -0.5
MA2                               e           14 21 44.5
MA2                               e           14 24 04.9
MA2                               eS    S     14 30 37.7 -0.3
MA2                               ePS   PS    14 31 02.9 -6.3
MA2                               e           14 31 14.7
MA2                                pmax pmax
       comp=Z,100nm,1.2s,mb5.6
MA2                                pmax pmax
       comp=E,80nm,1.4s
MA2                                MLR  MLR
       comp=Z,74µm,21.0s,MS6.9
GOLH   Golhisar        70.66 309  i P   P     14 21 24.9 -3.0
GDZ    Gediz           71.12 311  i P   P     14 21 25.3 -5.4
OBN    Obninsk         71.58 328  eP    P     14 21 32.0 -1.1
       comp=Z,627nm,1.4s,mb6.3
OBN                               e     pP    14 21 42.5 +0.4
OBN    Obninsk         71.58 328c iP    P     14 21 32.1 -1.1
OBN                               i     pP    14 21 39.5 -2.6
OBN                               i           14 21 51.2
OBN                               e           14 24 13.2
OBN                               i S   S     14 30 46.3 -2.8
OBN                               i SS  SS    14 35 19.5 -6.9
OBN                                pmax pmax
       comp=Z,189nm,1.1s,mb5.9
OBN                                MLR  MLR
       comp=Z,21µm,22.0s,MS6.4
PET    Petropavlovsk   71.65  34  eP    P     14 21 33.2 -0.4
       comp=Z,545nm,1.4s,mb6.3
PET    Petropavlovsk   71.65  34  eP    P     14 21 33.2 -0.4
PET                                pmax pmax
       comp=Z,545nm,1.4s,mb6.3
NOUC   Port Laguerre   71.91 114  eP    P     14 21 34.5 -1.2
NOUC   Port Laguerre   71.91 114  eP    P     14 21 34.5 -1.2
KLMR   Klimovskoe      72.70 334c iP    P     14 21 38.7 -1.0
KLMR                              i           14 24 20.2
KLMR                              i S   S     14 31 00.4 -1.4
KLMR                               pmax pmax
       comp=Z,520nm,1.5s,mb6.2
KLMR                               pmax pmax
       comp=Z,3µm,14.6s
KLMR                               smax
       comp=E,3µm,4.3s
KLMR                               MLR  MLR
       comp=Z,23µm,22.0s,MS6.4
SEY    Seymchan        73.02  23⥣iP    P     14 21 41.6 +0.1
SEY    Seymchan        73.02  23c iP    P     14 21 41.4 -0.1
SEY                                           14 22 02.4
SEY                                           14 24 26.6
SEY                               e           14 26 11.9
SEY                               eS    S     14 31 07.4 +2.0
SEY                               e           14 31 43.3
SEY                                pmax pmax
       comp=N,60nm,1.2s
SEY                                pmax pmax
       comp=Z,270nm,1.2s,mb6.0
SEY                                pmax pmax
       comp=E,90nm,1.5s
SEY                                smax
       comp=N,20µm,19.6s
SEY                                smax
       comp=E,12µm,17.1s
SEY                                MLR  MLR
       comp=E,87µm,18.0s,MS7.2
SEY                                MLR  MLR
       comp=Z,138µm,18.0s,MS7.3
SEY                                MLR  MLR
       comp=N,111µm,21.0s,MS7.2
PSN    Preselentsi     73.13 315  i P   P     14 21 42.3 -0.2
TIRR   Tirgusor        73.15 316  ⥥P    P     14 21 41.8 -0.8
TIRR   Tirgusor        73.15 316  ⥥P    P     14 21 41.8 -0.8
NPS    Neapolis        73.42 306  eP    pP    14 21 52.0 -1.4
CFR    Carcaliu        73.51 317  ⥣P    P     14 21 43.3 -1.4
CFR    Carcaliu        73.51 317  ⥣P    P     14 21 43.3 -1.4
HARR   Harsova         73.54 316  ⥥P    P     14 21 43.8 -1.1
HARR   Harsova         73.54 316  ⥥P    P     14 21 43.8 -1.1
MAW    Mawson          73.57 193  eP    P     14 21 44.6  0.0
       comp=N,30nm,0.9s,mb5.2
MAW                               eS    S     14 31 13.3 +1.9
MAW    Mawson          73.57 193   P    P     14 21 44.3 -0.3
       comp=N,8.3nm,0.6s,mb4.9,baz=43,slow=5.8,SNR=9.0
MAW                                S    S     14 31 12.6 +1.2
       comp=N,1.0nm,0.8s,baz=180,slow=20,SNR=1.7
MAW    Mawson          73.57 193  eP    P     14 21 44.6  0.0
MAW                               eS    S     14 31 13.3 +1.9
MAW                                pmax pmax
       comp=Z,30nm,0.9s
PRD    Provadia        73.57 314  i P   P     14 21 43.3 -1.8
LBTB   Lobatse         73.97 243  eP    P     14 21 47.2 -0.5
       comp=Z,120nm,1.1s,mb5.7
LBTB   Lobatse         73.97 243  eP    P     14 21 47.2 -0.6
LBTB                               pmax pmax
       comp=Z,120nm,1.1s,mb5.7
JMB    Yambol          74.00 314  i P   P     14 21 47.5 -0.1
IDI    Anoyia          74.01 306   LR   LR    14 57 51.9
       comp=Z,7µm,19.9s,MS5.9,baz=97,slow=38
AKASG  Malin Array Be  74.25 322   P    P     14 21 47.4 -1.5
       comp=Z,42nm,0.7s,mb5.5,baz=90,slow=5.1,SNR=15
AKASG                              S    S     14 31 16.4 -2.9
       comp=Z,0.1nm,0.2s,baz=117,slow=8.3,SNR=4.1
AKASG  Malin Array Be  74.25 322   P    P     14 21 47.4 -1.5
AKASG                              S    S     14 31 16.4 -2.9
VAM    Vamos           74.58 306  eP    P     14 21 51.0 -0.1
VRI    Vrincioaia      74.64 317  ⥣P    P     14 21 51.9 +0.7
VRI    Vrincioaia      74.64 317  ⥣P    P     14 21 51.9 +0.7
DIM    Dimitrovgrad    74.68 313   P    P     14 21 51.5 -0.1
BOSA   Boshof          74.92 240   P    P     14 21 52.3 -0.9
       comp=Z,11nm,0.8s,mb4.9,baz=92,slow=4.6,SNR=12
BOSA   Boshof          74.92 240  eP    P     14 21 53.6 +0.4
       comp=Z,68nm,1.1s,mb5.5
BOSA   Boshof          74.92 240  eP    P     14 21 53.6 +0.3
BOSA                               pmax pmax
       comp=Z,67nm,1.1s,mb5.5
PVL    Pavlikeni       75.06 314  i P   P     14 21 54.5 +0.8
MLR    Muntele Rosu    75.09 317   LR   LR    15 01 55.5
       comp=Z,15µm,20.6s,MS6.3,baz=260,slow=41
DRV    Dumont d'Urvil  75.19 164   P    pP    14 22 03.0  0.0
DRV                                SP   S     14 31 32.0 +2.5
DRV                                L          14 41 00.0
RZN    Rozhen          75.22 313   P    P     14 21 52.5 -2.1
KYTH   Kithira         75.64 307  eP    sP    14 22 10.5 +1.2
VLI    Veliai          75.78 307  eP    pP    14 22 05.5 -1.5
MMB    Musomiste       75.93 312   P    P     14 21 57.0 -1.7
BURAR  Bucovina Array  76.03 319  ⥣P    P     14 21 59.5 +0.3
BURAR  Bucovina Array  76.03 319  ⥣P    P     14 21 59.5 +0.4
MNK    Minsk           76.12 326  eP    P     14 21 55.0 -4.5
MNK                               e     pP    14 22 03.0 -5.5
MNK                               ePPP  PPP   14 26 38.0 -1.4
MNK                               eS    S     14 31 34.0 -6.0
MNK                               ePS   PS    14 32 22.0 +0.4
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MNK                                MLR  MLR
       comp=Z,9µm,20.0s,MS6.1
MNK                                MLR  MLR
       comp=E,10µm,20.0s
PUL    Pulkovo         76.45 331  i P   P     14 22 00.2 -1.0
PUL    Pulkovo         76.45 331  i P   P     14 22 00.4 -0.8
PUL                               i PPP PPP   14 26 46.3 +4.1
PUL                               i S   S     14 31 42.9 -0.5
PUL                               i           14 32 01.4
PUL                               i           14 32 16.7
PUL                                pmax pmax
       comp=E,153nm,0.9s
PUL                                pmax pmax
       comp=Z,163nm,0.9s,mb6.0
PUL                                pmax pmax
       comp=N,76nm,0.8s
PUL                                smax
       comp=N,3µm,9.4s
PUL                                smax
       comp=Z,261nm,9.3s
PUL                                smax
       comp=E,2µm,9.6s
PUL                                MLR  MLR
       comp=E,20µm,21.0s,MS6.5
PUL                                MLR  MLR
       comp=Z,22µm,21.0s,MS6.5
PUL                                MLR  MLR
       comp=N,14µm,19.0s,MS6.5
ITM    Ithomi          76.65 308  eP    pP    14 22 10.5 -1.3
VAY    Valandovo       76.74 312  i P   P     14 22 01.2 -2.1
IDID   Didziasalis     76.95 327  eP    P     14 22 03.9 -0.3
IDID                               AMb  AMB   14 22 06.8
       comp=Z,28nm,1.0s,mb5.1
EVR    Evrytania       76.97 309  eP    pP    14 22 12.5 -1.1
JOF    Joensuu         77.10 335  ep    P     14 22 03.6 -1.2
       comp=Z,32nm,0.9s,mb5.2
LVV    L'vov           77.27 321  eP    P     14 22 04.1 -1.9
LVV                               i S   S     14 31 50.0 -2.5
LVV                                MLR  MLR
       comp=Z,10µm,19.0s,MS6.2
IZAR   Zarasai         77.34 327  eP    P     14 22 05.8 -0.4
IZAR                               AMb  AMB   14 22 08.8
       comp=Z,24nm,0.9s,mb5.1
ISAL   Salakas         77.36 327  eP    P     14 22 06.0 -0.4
ISAL                               AMb  AMB   14 22 09.0
       comp=Z,23nm,1.0s,mb5.1
DRGR                   77.55 317  ⥣P    P     14 22 07.4 -0.2
DRGR                   77.55 317  ⥣P    P     14 22 07.4 -0.2
BOLS   Boljevac        77.58 314⥣iP     P     14 22 08.2 +0.4
BIA    Bitola          77.63 311  i P   P     14 22 05.6 -2.6
BIA    Bitola          77.63 311  i P   P     14 22 05.6 -2.6
SKO    Skopje          77.68 312  i P   P     14 22 06.0 -2.4
SKO    Skopje          77.68 312  i P   P     14 22 06.0 -2.4
LVZ    Lovozero        77.78 340  i P   P     14 22 09.1 +0.6
LVZ                               i           14 25 09.2
LVZ                               i PPP PPP   14 27 00.9 +6.1
LVZ                               i S   S     14 31 57.0 -0.7
LVZ                               i           14 32 17.0
LVZ                               i           14 32 25.9
LVZ                               i SS  SS    14 37 00.1 -1.1
LVZ                               i SSS SSS   14 40 21.8 +3.1
LVZ                                pmax pmax
       comp=N,1.0nm,0.6s
LVZ                                pmax pmax
       comp=Z,78nm,0.8s,mb5.7
LVZ                                pmax pmax
       comp=E,23nm,1.1s
LVZ                                smax
       comp=N,5µm,7.3s
LVZ                                smax
       comp=Z,2µm,5.7s
LVZ                                smax
       comp=E,4µm,7.7s
LVZ                                MLR  MLR
       comp=Z,30µm,22.0s,MS6.6
LVZ                                MLR  MLR
       comp=N,21µm,23.0s,MS6.5
LVZ                                MLR  MLR
       comp=E,17µm,21.0s,MS6.5
VSU    Vasula          77.81 330  i P   P     14 22 08.6 -0.2
VLS    Valsamata       77.83 308  eP    P     14 22 08.0 -1.3
OHR    Ohrid           78.03 311  i P   P     14 22 06.8 -3.6
OHR    Ohrid           78.03 311  i P   P     14 22 06.8 -3.6
KWP    Kalwaria        78.07 320  eP    P     14 22 09.8 -0.6
KWP                               ePcP  PcP   14 22 18.2 -2.1
KWP                               eS    S     14 32 00.7 -0.4
KWP                               esS         14 32 17.4
KWP                                MLR  MLR   14 59 32.3
       comp=E,11µm,24.0s,MS6.1
KWP    Kalwaria        78.07 320  eP    P     14 22 09.8 -0.6
KWP                               ePcP  PcP   14 22 18.2 -2.2
KWP                               eS    S     14 32 00.7 -0.5
KWP                               eSS         14 32 17.5
APA    Apatity         78.08 339⥣iP     P     14 22 10.6 +0.5
APA                               i           14 22 21.8
APA                               ePPP  PPP   14 27 03.0 +5.3
APA                               i S   S     14 32 00.0 -0.9
APA                               e           14 32 18.0
APA                               i SSS SSS   14 40 20.0 -3.7
APA                                pmax pmax
       comp=Z,130nm,1.2s,mb5.7
APA                                pmax pmax
       comp=Z,5µm,10.0s
APA                                smax
       comp=N,8µm,12.0s
APA                                smax
       comp=E,5µm,10.0s
UZH    Uzhgorod        78.16 319  eP    P     14 22 09.0 -1.9
UZH                               i S   S     14 31 57.0 -5.1
SVIS   Svilajnac       78.17 315⥥iP     P     14 22 17.9 +6.9
KOLS   Kolonicke sedl  78.22 320  eP    P     14 22 12.5 +1.2
KOLS                              esP   sP    14 22 21.6 -1.7
KOLS                              eS    S     14 32 05.3 +2.5
SUW    Suwalki         78.65 325  eP    P     14 22 12.7 -0.8
SUW                               ePcP  PcP   14 22 20.8 -2.0
SUW                               eS    S     14 32 04.8 -2.5
SUW                               esS         14 32 21.4
SUW                                MLR  MLR   15 04 18.9
       comp=E,13µm,20.7s,MS6.2
SUW    Suwalki         78.65 325  eP    P     14 22 12.7 -0.8
SUW                               ePcP  PcP   14 22 20.8 -2.0
SUW                               eS    S     14 32 04.8 -2.5
SUW                               eSS         14 32 21.4
CRVS   Cervenica-Dubn  78.74 319  eP    P     14 22 15.0 +0.9
CRVS                              esP   sP    14 22 23.1 -3.1
CRVS                              eS    S     14 32 08.1 -0.3
CRVS                              e           14 42 26.4
FINES  FINESS Array B  78.95 332   P    P     14 22 14.8 -0.2
       comp=E,28nm,0.7s,mb5.3,baz=104,slow=7.9,SNR=17
FINES  FINESS Array B  78.95 332   P    P     14 22 14.8 -0.2
STHS   Stebnicka Huta  78.97 320  eP    P     14 22 16.6 +1.2
STHS                              epP   pP    14 22 23.7 -0.7
STHS                              eS    S     14 32 18.5 +7.7
DIVS   Divcibare       79.02 314⥣iP     P     14 22 13.4 -2.4
KAF    Kangasniemi     79.04 333  ep    P     14 22 15.0 -0.5
       comp=E,47nm,0.8s,mb5.5,baz=106,slow=4.4
KAF    Kangasniemi     79.04 333  eP    P     14 22 15.0 -0.5
KAF                                pmax pmax
       comp=Z,47nm,0.8s,mb5.5
NVSS   Nova Varos 2    79.16 314⥥iP     pP    14 22 23.9 -1.6
KECS   Kecovo          79.31 319  eP    P     14 22 17.1 -0.1
KECS                              epP   pP    14 22 25.1 -1.2
KECS                              eS    S     14 32 15.6 +1.2
SUR    Sutherland      79.36 237   P    P     14 22 16.5 -1.4
       comp=Z,50nm,0.8s,mb5.5
NIE    Niedzica        79.57 320⥥iP     P     14 22 20.2 +1.6
NIE                               ePcP  PcP   14 22 28.8 +2.0
PSZ    Piszkesteto     79.62 318  esP   P     14 22 19.8 +0.9
LBZ    Lake Benmore    79.71 136   PN   P     14 22 24.8 +5.3
WVZ    Waitaha Valley  79.81 134  ePN   P     14 22 21.3 +1.3
OJC    Ojcow           80.02 321⥣iP     P     14 22 20.4 -0.6
OJC                               i PcP PcP   14 22 29.0 +0.2
OJC                               i S   S     14 32 21.1 -0.7
OJC                                MLR  MLR   15 02 52.3
       comp=Z,16µm,20.8s,MS6.3
FX1    Attu Island--F  80.05  37  eP    P     14 22 21.9 +0.8
DSZ    Denniston Nort  80.30 133  ePN   P     14 22 21.8 -0.8
BILL   Bilibino        80.40  21⥣iP     P     14 22 22.0 -0.7
VYHS   Vyhne           80.40 319  eP    P     14 22 23.2 +0.1
VYHS                              epP   pP    14 22 30.9 -1.2
VYHS                              eS    S     14 32 24.0 -1.8
VYHS                              e           14 42 54.9
OUZ    Omahuta         80.49 126  ePN   pP    14 22 33.2 +0.4
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STON   Ston            80.53 313  i P   P     14 22 22.1 -1.8
TSUM   Tsumeb          80.54 250  eP    P     14 22 24.6 +0.2
       comp=Z,47nm,1.0s,mb5.4
SMY    Shemya          80.58  37  eP    P     14 22 24.0 +0.1
       comp=Z,722nm,1.3s,mb6.4
SMY                                LR   LR
       comp=Z,18µm,23.0s,MS6.4
SMY    Shemya          80.58  37  eP    P     14 22 24.0 +0.1
SMY                                pmax pmax
       comp=Z,722nm,1.3s,mb6.4
SMY                                MLR  MLR
       comp=Z,18µm,23.0s,MS6.4
QRZ    Quartz Range    80.65 132  ePN   P     14 22 23.3 -1.3
SRO    Srobarova       80.66 318  eP    P     14 22 24.0 -0.5
SRO                               esP   sP    14 22 34.5 -2.0
SRO1   Iza             80.71 318  epP   pP    14 22 33.0 -0.8
SYO    Syowa Base      80.81 198  ⥥PcP  PcP   14 22 31.8  0.0
SYO    Syowa Base      80.81 198  ⥣pP   pP    14 22 36.7 +2.8
SYO    Syowa Base      80.81 198  ⥥PKiKP      14 27 50.4
TIP    Timpagrande     80.91 309   P    P     14 22 26.1 +0.1
OKC    Ostrava-Krasne  81.02 320  eP    P     14 22 26.1 -0.2
OKC                               epP   pP    14 22 34.9 -0.5
OKC                               eS    S     14 32 31.0 -1.2
OKC                                AMS  AMS   15 03 30.0
       comp=Z,11µm,19.6s
RAC    Raciborz        81.03 320  eP    P     14 22 27.3 +1.0
RAC                               epP   pP    14 22 35.4  0.0
RAC                               eS    S     14 32 33.9 +1.7
RAC                                LMN        15 00 03.5
RAC                                LME        15 01 32.2
RAC                                MLR  MLR   15 05 32.2
       comp=Z,8µm,20.0s,MS6.1
RAC    Raciborz        81.03 320  eP    P     14 22 27.3 +1.0
RAC                               epP   pP    14 22 35.4  0.0
RAC                               eS    S     14 32 33.9 +1.7
RAC                                LR   LR
       comp=Z,8µm,20.0s,MS6.1
KEV    Kevo            81.05 341  ep    P     14 22 22.9 -3.2
       comp=Z,44nm,0.9s,mb5.4
KEV    Kevo            81.05 341  eP    P     14 22 26.4 +0.3
       comp=Z,50nm,0.9s,mb5.4
KEV    Kevo            81.05 341  eP    P     14 22 26.4 +0.3
KEV                                pmax pmax
       comp=Z,50nm,0.9s,mb5.4
ORI    Oriolo Calabro  81.22 310   P    P     14 22 29.5 +2.0
TDS    Terranova Siba  81.27 310   P    P     14 22 30.0 +2.2
       comp=Z,434nm,0.9s,mb6.4
TDS    Terranova Siba  81.27 310   P    P     14 22 30.0 +2.2
TDS                                pmax pmax
       comp=Z,434nm,0.9s,mb6.4
MORC   Moravsky Berou  81.41 320  eP    P     14 22 28.2 -0.1
       comp=Z,87nm,1.3s,mb5.5
MORC   Moravsky Berou  81.41 320  eP    P     14 22 28.2 -0.1
MORC                               pmax pmax
       comp=Z,87nm,1.3s,mb5.5
ARCES  ARCESS Array B  81.49 340   P    P     14 22 28.6 +0.3
       comp=Z,52nm,0.7s,mb5.5,baz=99,slow=7.0,SNR=15
ARE0   ARCESS Array S  81.49 340  eP    P     14 22 28.3 -0.1
ZST    Bratislava      81.51 318  eS    S     14 32 41.4 +4.1
ZST                               e           14 42 55.5
ZST    Bratislava      81.51 318  eP    P     14 22 28.9  0.0
ZST                               e     pP    14 22 38.3 +0.3
ZST                               e           14 32 41.4
ZST                               e           14 42 55.5
KHZ    Kahutara        81.70 133  ePN   pP    14 22 37.6 -1.4
FG4    Candela         82.01 311   P    P     14 22 32.9 +1.3
       comp=Z,604nm,1.3s,mb6.4
FG4    Candela         82.01 311   P    P     14 22 32.9 +1.3
FG4                                pmax pmax
       comp=Z,604nm,1.3s,mb6.4
HIZ    Hauiti          82.02 129  ePN   P     14 22 31.3 -0.4
KTK1   Kautokeino      82.12 340⥣iP     P     14 22 31.8 +0.2
KTK1                               AMb  AMB   14 22 44.2
       comp=Z,360nm,1.5s,mb6.1
KTK1   Kautokeino      82.12 340  eP    P     14 22 32.0 +0.3
SGO    Sicignano       82.12 310   P    P     14 22 33.1 +0.9
       comp=Z,245nm,1.5s,mb5.9
SGO    Sicignano       82.12 310   P    P     14 22 33.1 +0.9
SGO                                pmax pmax
       comp=Z,245nm,1.5s,mb5.9
DPC    Dobruska-Polom  82.25 320  eP    P     14 22 33.6 +0.9
DPC                               epP   pP    14 22 41.1 -0.7
DPC                               ePP   PP    14 25 49.7 +6.4
DPC                               eS    S     14 32 44.7 -0.1
DPC                                AMS  AMS   15 05 00.0
       comp=Z,9µm,21.4s
KSP    Ksiaz           82.32 321⥣eP     P     14 22 33.4 +0.3
KSP                               eS    S     14 32 45.0 -0.5
KSP                               esS         14 33 01.8
KSP                                MLR  MLR   15 03 56.9
       comp=Z,18µm,22.5s,MS6.4
KSP    Ksiaz           82.32 321⥣eP     P     14 22 33.3 +0.3
KSP                               epP   pP    14 22 41.5 -0.6
KSP                               ePP   PP    14 25 46.0 +2.1
KSP                               eS    S     14 32 45.0 -0.5
KSP                               eSS   SS    14 37 59.0  -11
KSP                                LR   LR
       comp=Z,21µm,22.5s,MS6.5
KSP    Ksiaz           82.32 321⥣eP     P     14 22 33.3 +0.3
KSP                               e*PP  pP    14 22 41.5 -0.6
KSP                               e           14 25 46.0
KSP                               eS    S     14 32 45.0 -0.5
KSP                                MLR  MLR
       comp=Z,21µm,22.5s,MS6.5
CSSN   Cassano Irpino  82.36 311   P    P     14 22 35.7 +2.2
UPC    Upice           82.47 321  eP    P     14 22 34.5 +0.7
UPC                               epP   pP    14 22 42.4 -0.5
UPC                               ex    x     14 25 31.8
ARSA   Arzberg         82.48 317⥣eP     P     14 22 34.4 +0.5
       comp=Z,38nm,1.0s,mb5.3,SNR=7.4
ARSA   Arzberg         82.48 317⥣iP     pP    14 22 44.3 +1.2
       comp=Z,177nm,1.8s
TREC   Trest           82.69 319  eP    P     14 22 34.9 -0.1
TREC                              epP   pP    14 22 42.9 -1.2
TREC                              eS    S     14 32 49.7 +0.4
OBKA   Obir            83.09 316⥣eP     P     14 22 37.5 +0.4
       comp=Z,126nm,1.5s,mb5.7
INTR   Introdacqua     83.27 312   P    P     14 22 39.1 +1.0
PRU    Pruhonice       83.36 320  eP    P     14 22 38.4  0.0
PRU                               epP   pP    14 22 45.6 -1.9
PRU                               eS    S     14 32 56.8 +0.8
PRU                                AMS  AMS   15 05 30.0
       comp=Z,10µm,21.1s
BKZ    Black Stump Fm  83.38 130  ePN   P     14 22 37.8 -1.0
MOA    Molln           83.38 318⥣eP     P     14 22 38.3 -0.3
       comp=Z,18nm,1.0s,mb5.0
MOA    Molln           83.38 318⥥iP     pP    14 22 47.1 -0.6
       comp=Z,59nm,1.2s
PVCC   Panska Ves      83.38 320  eP    P     14 22 38.6 +0.1
PVCC                              epP   pP    14 22 46.6 -1.0
PVCC                              eS    S     14 32 57.6 +1.3
PVCC                               AMS  AMS   15 09 00.0
       comp=Z,9µm,19.5s
PRA    Prague          83.44 320   P    P     14 22 40.0 +1.2
PRA                                AMS  AMS   15 12 00.0
VVLD   Villa Vallelon  83.47 312   P    P     14 22 40.0 +0.8
VOY    Vojsko          83.51 316  eP    P     14 22 39.1 -0.2
VOY                               e     pP    14 22 48.3 -0.1
VOY                               e           14 22 53.5
VOY                               e           14 23 17.6
BSD    Bornholm Skovb  83.58 325  i P   P     14 22 42.1 +2.7
       comp=Z,48nm,0.9s,mb5.6
BSD    Bornholm Skovb  83.58 325  eP    P     14 22 42.1 +2.7
       comp=Z,48nm,0.9s,mb5.6
BSD    Bornholm Skovb  83.58 325  eP    P     14 22 42.1 +2.7
BSD                                pmax pmax
       comp=Z,48nm,0.9s,mb5.6
PTQR   Pietraquaria    83.64 312   P    P     14 22 41.9 +1.8
AQU    L'Aquila        83.66 312   P    P     14 22 41.9 +1.7
AQU    L'Aquila        83.66 312   P    P     14 22 42.6 +2.4
AQU                                pmax pmax
       comp=Z,560nm,1.4s,mb6.5
TRO    Tromso          83.75 340  eP    P     14 22 40.5 +0.6
TRO                                AMb  AMB   14 22 51.5
       comp=Z,307nm,1.5s,mb6.2
TRO                               ePP   PP    14 25 56.2 +1.3
TRO                               eSS   SS    14 38 33.3 +3.4
TRO                                AMS  AMS   15 03 20.7
       comp=Z,19µm,18.5s,MS6.5
BRG    Berggiesshubel  83.81 321  i P   P     14 22 40.8 +0.1
       comp=Z,42nm,1.2s,mb5.4
BRG                               i PcP PcP   14 22 50.2 +5.1
BRG                               i           14 23 06.5
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BRG				PP	PP	14 26 01.0	+5.2
BRG				SKS	SKS	14 33 03.0	-2.9
BRG				S	S	14 33 16.0	+15
BRG				SS	SS	14 38 37.0	+6.0
BRG				LR	LR		
	comp=Z,8µm,20.1s,MS6.1						
BRG	**Berggiesshubel**	83.81	321	*i* P	P	14 22 40.8	+0.1
BRG				*i*	pP	14 22 50.2	+0.4
BRG						14 26 01.0	
BRG						14 33 03.0	
BRG				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.4						
BRG				MLR	MLR		
	comp=Z,8µm,20.1s,MS6.1						
GEC2	**GERESS Array S**	83.82	319	*e*P	P	14 22 41.0	+0.2
	comp=Z,329nm,1.5s,mb6.2						
GEC2	**GERESS Array S**	83.82	319	*e*P	P	14 22 41.0	+0.2
GEC2				pmax	pmax		
	comp=Z,329nm,1.5s,mb6.2						
GERES	**GERESS Array B**	83.82	319	P	P	14 22 41.4	+0.6
	comp=Z,26nm,0.9s,mb5.4,baz=108,slow=4.2,SNR=18						
GERES				S	S	14 33 03.9	+3.2
	comp=Z,0.1nm,0.3s,baz=13,slow=13,SNR=2.3						
NRCA	**Norcia**	83.89	313	P	P	14 22 42.8	+1.5
PTCC	**Patocco-Chiusa**	83.91	316	P	P	14 22 41.7	+0.4
KHC	**Kasperske Hory**	83.92	319	*e*P	P	14 22 41.0	-0.3
KHC				*e*S	S	14 33 02.1	+0.4
KHC				AMS	AMS	15 07 10.0	
	comp=Z,10µm,20.0s						
KBA	**Koelnbreinsper**	83.95	317⇑	*e*P	P	14 22 42.4	+0.9
	comp=Z,88nm,1.6s,mb5.6						
KBA	**Koelnbreinsper**	83.95	317⇑	*e*P	P	14 22 42.4	+0.9
	comp=Z,88nm,1.6s,mb5.6						
KBA	**Koelnbreinsper**	83.95	317⇑	*e*P	P	14 22 42.4	+0.9
KBA				pmax	pmax		
	comp=Z,88nm,1.6s,mb5.6						
GMNA	**Gemona**	83.98	316	P	P	14 22 43.3	+1.6
RUE	**Ruedersdorf**	84.03	322	*e*P	P	14 22 41.9	+0.2
	comp=Z,365nm,1.4s,mb6.3						
ARV	**Arcevia**	84.05	313	P	P	14 22 43.8	+1.7
FSSB	**Fossombrone**	84.18	314	P	P	14 22 44.3	+1.5
FVI	**Forni Avoltri**	84.31	316	P	P	14 22 42.9	-0.5
WET	**Wettzell**	84.38	319	*e*P	P	14 22 43.7	+0.1
	comp=Z,115nm,1.3s,mb5.8						
WET	**Wettzell**	84.38	319	*e*P	P	14 22 43.7	+0.1
WET				pmax	pmax		
	comp=Z,115nm,1.3s,mb5.8						
CLL	**Collm**	84.43	321	P	P	14 22 43.3	-0.5
	comp=Z,logA/T=1.5,mb5.4						
CLL				*i* *PP	pP	14 22 51.5	-1.4
CLL				*e*PP	PP	14 26 03.0	+2.3
CLL				*e*PPP	PPP	14 27 54.0	-2.2
CLL				*e*		14 29 33.0	
CLL				*e*S	S	14 33 06.0	-0.7
CLL				*e*PS	PS	14 33 56.0	-9.3
CLL				*e*SS	SS	14 39 00.0	+20
CLL				*e*SSS	SSS	14 42 06.0	-1.6
CLL				*e*		14 45 18.0	
CLL	**Collm**	84.43	321	*i* P	P	14 22 43.3	-0.5
	comp=Z,32nm,1.1s,mb5.4						
CLL				*i*	pP	14 22 51.5	-1.4
CLL				*e*S	S	14 33 06.0	-0.7
CLL				LR	LR		
	comp=Z,10µm,19.8s,MS6.2						
CLL	**Collm**	84.43	321	*i* P	P	14 22 43.3	-0.5
CLL				*i*	pP	14 22 51.5	-1.4
CLL				*e*S	S	14 33 06.0	-0.7
CLL				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.4						
CLL				MLR	MLR		
	comp=Z,10µm,19.8s,MS6.2						
BJO	**Bjornoya**	84.61	345	*e*P	P	14 22 43.9	-0.3
BJO				*e*PP	PP	14 26 01.2	-0.5
BJO				AMS	AMS	15 05 01.5	
	comp=Z,20µm,20.4s,MS6.5						
BJO1	**Bjornoya**	84.66	345	*e*P	P	14 22 43.9	-0.6
BJO1				LR	LR		
	comp=Z,14µm,23.2s,MS6.3						
NKC	**Novy Kostel**	84.72	320	*e*P	P	14 22 45.2	-0.1
NKC				*e*S	S	14 33 10.7	+1.1
NKC				AMS	AMS	15 08 10.0	
	comp=Z,8µm,18.3s						
SFI	**Santa Sofia**	84.86	314	P	P	14 22 47.9	+1.7
	comp=Z,685nm,1.5s,mb6.6						
SFI	**Santa Sofia**	84.86	314	P	P	14 22 47.9	+1.7
SFI				pmax	pmax		
	comp=Z,685nm,1.5s,mb6.6						
MOR8	**Moi Rana**	84.93	336	*e*P	P	14 22 45.9	0.0
MOR8				AMb	AMB	14 22 58.1	
	comp=Z,236nm,1.4s,mb6.1						
MOR8	**Moi Rana**	84.93	336	*e*P	P	14 22 47.8	+1.9
PGD	**Poggio Sodo**	84.95	314	P	P	14 22 49.2	+2.6
	comp=Z,269nm,1.3s,mb6.2						
PGD	**Poggio Sodo**	84.95	314	P	P	14 22 49.2	+2.6
PGD				pmax	pmax		
	comp=Z,269nm,1.3s,mb6.2						
COP	**Copenhagen**	85.03	326	*i* S	S	14 33 13.3	+0.8
	comp=Z,7µm,20.0s						
COP	**Copenhagen**	85.03	326	*i* P	P	14 22 47.9	+1.2
	comp=Z,54nm,1.1s,mb5.6						
COP				*i* S	S	14 33 13.3	+0.8
COP				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
COP	**Copenhagen**	85.03	326	*i* P	P	14 22 47.9	+1.2
COP				*i* S	S	14 33 13.3	+0.8
COP				pmax	pmax		
	comp=Z,54nm,1.1s,mb5.6						
COP				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.0						
CTI	**Castel Tesino**	85.07	316	P	P	14 22 47.9	+0.7
	comp=Z,275nm,1.2s,mb6.3						
CTI	**Castel Tesino**	85.07	316	P	P	14 22 47.9	+0.7
CTI				pmax	pmax		
	comp=Z,275nm,1.2s,mb6.3						
VMG	**Vicchio**	85.08	314	P	P	14 22 49.2	+1.9
WTTA	**Wattenberg**	85.13	317	*i* P	P	14 22 48.6	+1.2
	SNR=6.4						
WTTA	**Wattenberg**	85.13	317	*i* P	P	14 22 48.6	+1.2
WATA	**Walderalm**	85.17	317⇑	*i*P	P	14 22 47.6	0.0
MOX	**Moxa**	85.27	320	*i* P	P	14 22 49.5	+1.5
	comp=Z,logA/T=2.0,mb5.9						
MOX				PP	PP	14 26 05.0	-2.5
MOX				S	S	14 33 17.0	+2.1
MOX				L		15 05 53.0	
MOX	**Moxa**	85.27	320	*e*P	P	14 22 49.5	+1.5
	comp=Z,184nm,1.8s,mb5.9						
MOX				*e*PP	PP	14 26 05.2	-2.3
MOX				*e*S	S	14 33 17.0	+2.1
MOX				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
MOX	**Moxa**	85.27	320	*e*P	P	14 22 49.5	+1.5
MOX				*e*		14 26 05.2	
MOX				*e*S	S	14 33 17.0	+2.1
MOX				pmax	pmax		
	comp=Z,184nm,1.8s,mb5.9						
MOX				MLR	MLR		
	comp=Z,6µm,20.0s,MS6.0						
MELSS	**Ber_school_2**	85.28	337	*e*P	P	14 22 50.7	+3.0
FUR	**Furstenfeldbru**	85.40	318	*e*P	P	14 22 48.2	-0.5
	comp=Z,105nm,1.1s,mb5.9						
FUR	**Furstenfeldbru**	85.40	318	*e*P	P	14 22 48.2	-0.5
FUR				pmax	pmax		
	comp=Z,105nm,1.1s,mb5.9						
SQTA	**Sankt Quirin**	85.42	317	*i* P	P	14 22 49.2	+0.4
	comp=Z,29nm,1.0s,mb5.4,SNR=6.8						
SQTA	**Sankt Quirin**	85.42	317	*i* P	pP	14 22 58.7	+0.8
	comp=Z,56nm,0.8s						
SQTA	**Sankt Quirin**	85.42	317	*i* P	P	14 22 49.2	+0.4
	comp=Z,29nm,1.0s,mb5.4						
SQTA	**Sankt Quirin**	85.42	317	*i* P	P	14 22 49.2	+0.4
SQTA				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.4						
GRFL	**Gerfalco**	85.47	313	P	P	14 22 49.2	0.0
	comp=Z,77nm,1.2s,mb5.7						
LOF	**Lofoten**	85.47	338	*e*P	P	14 22 51.4	+2.8
LOF				AMb	AMB	14 23 02.7	
	comp=Z,272nm,1.6s,mb6.1						
GRA1	**Grafenberg Arr**	85.49	319	*e*P	P	14 22 49.6	+0.5
	comp=Z,157nm,1.0s,mb6.1						
GRA1				*e*pP	pP	14 22 58.0	-0.3
GRA1				*e*PP	PP	14 26 07.0	-2.3
GRA1				*e*pPP		14 26 20.3	
GRA1				*e*S	S	14 33 18.4	+1.3
GRF	**Grafenberg Arr**	85.49	319	*e*P	P	14 22 49.6	+0.5
	comp=Z,157nm,1.0s,mb6.1						
GRF				*e*pP	pP	14 22 58.0	-0.3
GRF				*e*PP	PP	14 26 07.0	-2.3
GRF				*e*pPP		14 26 20.3	
GRF				*e*S	S	14 33 18.4	+1.3
GRF				LR	LR		
	comp=Z,8µm,20.6s,MS6.1						
GRF	**Grafenberg Arr**	85.49	319	*e*P	P	14 22 49.6	+0.5
GRF				*e**PP	pP	14 22 58.0	-0.3
GRF				*e*		14 26 07.0	
GRF				*e*S	S	14 33 18.4	+1.3
GRF				pmax	pmax		
	comp=Z,157nm,1.0s,mb6.1						
GRF	**Grafenberg Arr**	85.49	319	*e*P	P	14 22 49.6	+0.5
GRF				*e**PP	pP	14 22 58.0	-0.3
GRF				*e*		14 26 07.0	
GRF				*e*S	S	14 33 18.4	+1.3
GRF				pmax	pmax		
	comp=Z,157nm,1.0s,mb6.1						
GRF				MLR	MLR		
	comp=Z,8µm,20.6s,MS6.1						
MOTA	**Moosalm**	85.49	317⇓	*i*P	P	14 22 49.1	-0.1
	comp=Z,36nm,0.9s,mb5.5,SNR=6.1						
MOTA	**Moosalm**	85.49	317⇓	*i*P	P	14 22 49.1	-0.1
MOTA				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.5						
GSCL	**Gusciola**	85.78	314	P	P	14 22 53.0	+2.3
NSS	**Namsos**	85.82	334	*e*P	P	14 22 50.5	0.0
NSS				*e*SKSa		14 33 15.0	
NSS				AMS	AMS	15 09 06.3	
	comp=Z,14µm,18.7s,MS6.4						
MAIM		85.84	314	P	P	14 22 49.6	-1.5
MABI	**Malga Bissina**	85.86	316	P	P	14 22 51.3	+0.2
SARO	**Sassorosso**	85.91	314	P	P	14 22 50.0	-1.3
NB2	**NORSAR Subarra**	85.97	331	P	P	14 22 50.9	-0.3
	comp=Z,229nm,1.4s,mb6.2,baz=91,slow=5.0						
NB2	**NORSAR Subarra**	85.97	331	P	P	14 22 50.9	-0.3
	baz=91,slow=5.3						
NOA	**NORSAR Array B**	85.97	331	P	P	14 22 51.2	-0.1
	comp=Z,23nm,0.9s,mb5.4,baz=94,slow=5.0,SNR=14						
NOA	**NORSAR Array B**	85.97	331	P	P	14 22 51.2	-0.1
BRMO	**Bormio**	85.97	316	P	P	14 22 52.1	+0.5
VALM		86.02	314	P	P	14 22 50.7	-1.2
FUORN	**Ofenpass**	86.05	316	P	P	14 22 53.0	+1.0
VINC	**Vinca**	86.09	314	P	P	14 22 50.9	-1.3
CLZ	**Clausthal**	86.09	322	*e*P	P	14 22 52.2	+0.1
	comp=Z,87nm,1.1s,mb5.9						
CLZ	**Clausthal**	86.09	322	*e*P	P	14 22 52.2	+0.1
CLZ				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.9						
NAO01	**NORSAR Array S**	86.12	331	*e*P	P	14 22 52.7	+0.7
	comp=Z,114nm,1.2s,mb6.0						
NAO01				*e*	pP	14 23 01.9	+0.8
NAO	**NORSAR Subarra**	86.14	331	P	P	14 22 50.9	-1.2
	comp=Z,229nm,1.4s,mb6.2						
NAO	**NORSAR Subarra**	86.14	331	P	P	14 22 50.9	-1.2
NAO				pmax	pmax		
	comp=Z,229nm,1.4s,mb6.2						
BACM		86.15	314	P	P	14 22 51.1	-1.4
GRAM		86.16	314	P	P	14 22 51.5	-1.1
BSEG	**Bad Segeberg**	86.18	324	*e*P	P	14 22 52.8	+0.3
CODM		86.31	314	P	P	14 22 52.5	-0.8
DAVOX	**Davos**	86.32	317	P	P	14 22 54.8	+1.5
DAVA	**Damuels**	86.32	317	*e*P	P	14 22 54.3	+1.0
	comp=Z,107nm,1.1s,mb6.0,SNR=8.2						
VSL	**Villasalto**	86.64	309	*e*P	P	14 22 54.5	-0.5
	comp=Z,120nm,1.1s,mb6.0						
VSL				*e*	pP	14 23 04.7	+0.5
KONO	**Kongsberg**	86.72	329	*e*P	P	14 22 56.4	+1.5
KONO				*e*SKSa		14 33 19.8	
KONO	**Kongsberg**	86.72	329	P	P	14 22 55.4	+0.4
KONO				pmax	pmax		
	comp=Z,250nm,1.4s,mb6.2						
STU	**Stuttgart**	86.80	319	*e*P	P	14 22 55.2	-0.4
	comp=Z,48nm,0.8s,mb5.8						
STU				*e*	pP	14 23 05.9	+1.1
STU	**Stuttgart**	86.80	319	*e*P	P	14 22 55.2	-0.4
STU				*e*	pP	14 23 05.9	+1.1
STU				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.8						
KBS	**Kingsbay**	86.89	349	*e*P	P	14 22 54.0	-1.4
KBS				*e*SKSa		14 33 15.8	
KBS				AMS	AMS	15 07 41.4	
	comp=Z,16µm,20.7s,MS6.4						
KBS	**Kingsbay**	86.89	349	*e*P	P	14 22 54.0	-1.4
KBS				LR	LR		
	comp=Z,15822µm,20.7s						
MUD	**Monsted U'grnd**	86.89	326	*i* S	S	14 33 30.1	-0.3
MUD				*i*		14 34 45.8	
MUD				*i*		14 39 20.9	
	comp=Z,14µm,19.0s						
MUD	**Monsted U'grnd**	86.89	326⇑	*i*P	P	14 22 56.8	+0.9
	comp=Z,142nm,1.2s,mb6.1						
MUD				*i* S	S	14 33 30.1	-0.3
MUD				*i*		14 34 45.8	
MUD				*i*		14 39 20.9	
MUD	**Monsted U'grnd**	86.89	326⇑	*i*P	P	14 22 56.8	+0.9
MUD				*i* S	S	14 33 30.1	-0.3
MUD				*i*		14 34 45.8	
MUD				*i*		14 39 20.9	
MUD				pmax	pmax		
	comp=Z,142nm,1.2s,mb6.1						
PGF	**Pioggiola**	86.92	312	*e*P	P	14 22 56.9	+0.5
	comp=Z,258nm,1.5s,mb6.0						
PGF	**Pioggiola**	86.92	312	*e*P	P	14 22 56.9	+0.5
PGF				pmax	pmax		
	comp=Z,129nm,1.5s,mb5.9						
DOMB	**Dombas**	87.03	332	*e*P	P	14 22 57.6	+1.2
DOMB				AMb	AMB	14 23 09.4	
	comp=Z,167nm,1.5s,mb6.0						
DOMB	**Dombas**	87.03	332	*e*P	P	14 22 57.6	+1.2
	comp=Z,167nm,1.5s,mb6.0						
TOD	**Tromm**	87.06	319	*e*P	P	14 22 57.5	+0.6
PCP	**Pian Castagno**	87.24	314	P	P	14 22 57.2	-0.6
TNS	**Taunus Mts**	87.29	320	*e*P	P	14 22 58.2	+0.2
	comp=Z,86nm,1.0s,mb5.9						
TNS				*e*pPP		14 26 36.4	
TNS	**Taunus Mts**	87.29	320	*e*P	P	14 22 58.2	+0.2
TNS				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.9						
BFO	**Black Forest**	87.37	318	*e*P	P	14 22 57.9	-0.5
	comp=Z,52nm,1.2s,mb5.6						
BFO				*e*pP	pP	14 23 06.7	-0.9
BFO				*e*PP	PP	14 26 22.5	-2.9
BFO	**Black Forest**	87.37	318	*e*P	P	14 22 57.9	-0.5
BFO				*e**PP	pP	14 23 06.7	-0.9
BFO				*e*		14 26 22.5	
BFO				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.6						
FIN	**Finale Ligure**	87.49	314	P	P	14 23 00.3	+1.2
MCGN	**Macugnaga**	87.63	316	P	P	14 23 01.6	+1.9
ORX	**Oropa**	87.63	315	P	P	14 23 00.5	+0.8
LANF	**Langenberg**	87.71	319	*e*P	P	14 23 00.3	+0.3
IMI	**Imperia**	87.72	314	P	P	14 23 01.4	+1.2
ROB	**Roburent**	87.73	314	P	P	14 22 58.6	-1.6
MOL	**Molde**	87.74	332	*e*P	P	14 23 01.6	+1.8
MOL				AMb	AMB	14 23 14.9	
	comp=Z,226nm,1.6s,mb6.2						
MOL	**Molde**	87.74	332	*e*P	P	14 23 01.6	+1.8
	comp=Z,226nm,1.6s,mb6.2						
TRAV		87.80	315	P	P	14 23 00.2	-0.3
MONE	**Monesi**	87.82	314	P	P	14 22 58.7	-1.9
NEGI	**Negi**	87.86	314	P	P	14 22 57.6	-3.2
LIBD	**Limburg**	87.86	318	*e*P	P	14 23 02.0	+1.2
ABH	**Alteburg**	87.87	320	*e*P	P	14 22 59.6	-1.2
SBA	**Scott Base**	87.95	169	*e*P	P	14 23 01.9	+1.3
	comp=Z,49nm,1.0s,mb5.7						
SBA	**Scott Base**	87.95	169	*e*P	P	14 23 01.9	+1.3
SBA				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.7						
SBF	**Sospel**	88.05	314	*e*P	P	14 23 01.7	-0.1
	comp=Z,136nm,1.0s,mb5.8						
SBF	**Sospel**	88.05	314	*e*P	P	14 23 01.7	-0.1
SBF				pmax	pmax		
	comp=Z,68nm,1.0s,mb5.8						
AUTN	**L'Aution**	88.05	314	*e*P	P	14 22 59.9	-1.9
ENR	**Entracque**	88.06	314	P	P	14 22 59.8	-2.0
CDF	**Champ du Feu**	88.07	318	*e*P	P	14 23 01.7	-0.1
	comp=Z,164nm,1.5s,mb5.7						
CDF	**Champ du Feu**	88.07	318	*e*P	P	14 23 01.7	-0.1
CDF				pmax	pmax		
	comp=Z,82nm,1.5s,mb5.7						
STV2	**Anna di Valdie**	88.12	314	P	P	14 22 59.4	-2.7
STV	**Sta Anna Valdi**	88.12	314	P	P	14 22 59.7	-2.4
RSP	**Reno Superiore**	88.15	315	P	P	14 23 01.7	-0.5
BHB	**Bricherasio**	88.15	315	P	P	14 23 01.5	-0.8
ECH	**Echery**	88.16	318	*e*P	P	14 23 03.5	+1.3
MOF	**Molkenrain**	88.18	318	*e*P	P	14 23 02.7	+0.4
ABSA	**Djebel Ababsia**	88.18	306	P	P	14 23 07.0	+4.4
LSD	**Ceresole Reale**	88.22	315	P	P	14 23 03.0	+0.4
CMAH	**Djebel Manchou**	88.22	306	P	P	14 23 04.0	+1.2
CGMA	**Guelma**	88.23	306	P	P	14 23 03.0	+0.2
MVIF	**Mont Vial**	88.25	314	*e*P	P	14 23 00.9	-1.9
PZZ	**Prazzo**	88.28	314	P	P	14 23 00.8	-2.0
FENE	**Fenestrelle**	88.29	315	P	P	14 23 01.3	-1.6
WTSB	**Winterswijk**	88.31	322⇑	*i*P	P	14 23 02.9	+0.2
	comp=Z,56nm,1.4s,mb5.6						
WTSB				*e*pP	pP	14 23 10.8	-1.1
BLS5	**Blasjo**	88.32	329	*e*P	P	14 23 04.9	+2.2
BLS5				AMb	AMB	14 23 17.1	
	comp=Z,105nm,1.6s,mb5.8						
BLS5	**Blasjo**	88.32	329	*e*P	P	14 23 04.9	+2.2
	comp=Z,105nm,1.6s,mb5.8						
LOMF	**Lomont**	88.40	317	*e*P	P	14 23 03.7	+0.3
CALN	**Calern**	88.45	314	*e*P	P	14 22 59.3	-4.4
SURF	**Saint Ours**	88.48	314	*e*P	P	14 23 01.8	-2.0
RRL	**Cesana Torines**	88.49	315	P	P	14 23 03.3	-0.6
LPG	**La Plagne**	88.50	315	*e*P	P	14 23 04.1	+0.2
	comp=Z,72nm,1.3s,mb5.5						
LPG	**La Plagne**	88.50	315	*e*P	P	14 23 04.1	+0.2
LPG				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.5						
MBDF	**Montbardon**	88.51	315	*e*P	P	14 23 04.1	+0.2
	comp=Z,106nm,1.3s,mb5.7						
MBDF	**Montbardon**	88.51	315	*e*P	P	14 23 04.1	+0.2
MBDF				pmax	pmax		
	comp=Z,53nm,1.3s,mb5.7						
BNI	**Bardonecchia**	88.56	315	*e*P	P	14 23 05.6	+1.4
	comp=Z,54nm,1.1s,mb5.8						
BNI				*e*	pP	14 23 13.8	+0.5
BNI	**Bardonecchia**	88.56	315	*e*P	P	14 23 05.6	+1.4
BNI				*e*	pP	14 23 13.8	+0.5
BNI				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.8						
HAU	**Haudompre**	88.70	318	*e*P	P	14 23 04.4	-0.4
	comp=Z,191nm,1.2s,mb6.0						
HAU				*e*R			
	comp=Z,7µm,18.5s						
HAU	**Haudompre**	88.70	318	*e*P	P	14 23 04.4	-0.4
HAU				pmax	pmax		
	comp=Z,95nm,1.2s,mb6.0						
HAU				MLR	MLR		
	comp=Z,7µm,18.5s,MS6.1						
WLF	**Walferdange**	88.78	319	*e*P	P	14 23 05.1	0.0
	comp=Z,233nm,1.5s,mb6.3						
WLF				*e*	pP	14 23 15.6	+1.3
WLF	**Walferdange**	88.78	319	*e*P	P	14 23 05.1	0.0
WLF				*e*	pP	14 23 15.6	+1.3
WLF				pmax	pmax		
	comp=Z,233nm,1.5s,mb6.3						
BER	**Bergen**	88.85	330	*e*P	P	14 23 06.6	+1.3
BER				AMb	AMB	14 23 20.7	
	comp=Z,148nm,2.3s,mb5.9						
BER				*e*PP	PP	14 26 38.4	+1.5
BER				*e*SS	SS	14 39 44.1	-0.4
BER				AMS	AMS	15 07 42.8	
	comp=Z,15µm,21.5s,MS6.4						
BER	**Bergen**	88.85	330	*e*P	P	14 23 06.6	+1.3
	comp=Z,148nm,2.3s,mb5.9						
BER				LR	LR		
	comp=Z,15110µm,21.5s						
HGN	**Heimansgroeve**	88.88	321⇑	*e*P	P	14 23 05.6	0.0
	comp=Z,27nm,1.9s,mb5.3						
HGN				*e*pP	pP	14 23 15.1	+0.4
HGN				*e*PP	PP	14 26 25.8	-12
HGN				*e*PPP	PPP	14 28 41.2	+4.9
HGN				*e*SKS	SKS	14 33 55.2	+16
HGN				*e*SS	SS	14 39 44.9	-0.2
HGN				*e*SSS	SSS	14 43 56.4	+38
THEF	**They Montfort**	88.94	318	*e*P	P	14 23 06.6	+0.7
CASM	**Ain Smara**	88.98	306	P	P	14 23 10.0	+3.6
CTEI	**Djebel Teioual**	89.06	306	P	P	14 23 11.0	+4.2
TAVF	**Tavernes**	89.06	313	*e*P	P	14 23 08.3	+1.7
VILF	**Villemus**	89.30	314	*e*P	P	14 23 08.9	+1.2
DFRA	**Djebel Bou Aff**	89.47	306	P	P	14 23 13.0	+4.3
CMER	**Merouana**	89.48	305	P	pP	14 23 19.0	+1.0
PRAF	**Pradon**	89.69	314	*e*P	P	14 23 10.7	+1.1
CKHR	**Kef el Ahmar**	89.78	306	P	P	14 23 16.0	+5.8
SET	**Setif**	89.86	306	P	P	14 23 16.0	+5.4
BAIF	**Baives**	90.02	320	*e*P	P	14 23 11.3	+0.4
	comp=Z,388nm,1.2s,mb6.3						
NVL	**N'lazarevskaya**	90.38	199	*e*P	P	14 23 14.2	+2.1
NVL				*e**PP	pP	14 23 25.7	+4.4
NVL				*e**SP	sP	14 23 30.2	+6.0
NVL				*e*		14 34 02.8	
NVL				*e*SS	SS	14 40 01.4	-5.2
NVL				*e*SSS	SSS	14 43 49.9	+7.6
NVL				pmax	pmax		
	comp=Z,14nm,1.3s,mb5.1						
NVL				MLR	MLR		
	comp=Z,1µm,20.7s						
MAIT	**Maitri**	90.41	199	*e*P	P	14 23 16.7	+4.4
MAIT				*e*PP	PP	14 26 49.4	+0.2
MAIT				*e*S	S	14 34 09.8	+7.1
COLF	**Collangettes**	90.65	315	*e*P	P	14 23 14.6	+0.6
PLDF	**La Plantade**	90.67	316	*e*P	P	14 23 15.3	+1.3
SSF	**Saint Saulge**	90.67	317	*e*P	P	14 23 14.2	+0.2
	comp=Z,239nm,1.6s,mb6.3						
SSF	**Saint Saulge**	90.67	317	*e*P	P	14 23 14.2	+0.2
SSF				pmax	pmax		
	comp=Z,239nm,1.6s,mb6.3						
NIKO	**Nikolski**	90.90	37⇓	*i*P	P	14 23 16.0	+1.1
LBL	**Lubilhac**	90.98	315	*e*P	P	14 23 18.0	+2.5
PYM	**Petit Puy Mans**	91.11	316	*e*P	P	14 23 16.9	+0.8
BGF	**Bois d'Agland**	91.16	316	*e*P	P	14 23 16.7	+0.4
	comp=Z,620nm,1.5s,mb6.4						
BGF	**Bois d'Agland**	91.16	316	*e*P	P	14 23 16.7	+0.4
BGF				pmax	pmax		
	comp=Z,310nm,1.5s,mb6.4						
EJON	**La Jonquera**	91.44	312	P	P	14 23 15.9	-1.8
	comp=Z,228nm,3.0s						
FRNF	**Fournols**	91.45	315	*e*P	P	14 23 19.1	+1.4
VERF	**Verneugheol**	91.48	316	*e*P	P	14 23 19.3	+1.5
ETOS	**Mallorca**	91.69	310	P	pP	14 23 26.8	-1.3
	comp=Z,307nm,1.7s						
ABA	**Alger-Bouzarea**	91.73	307	P	P	14 23 20.0	+0.8
EMHD	**Djebel Mahouad**	91.84	306	P	pP	14 23 31.0	+2.2
VALF	**Valcebollere**	92.09	312	*e*P	P	14 23 22.3	+1.6
QSPA	**South Pole Qui**	92.11	180	*e*P	P	14 23 21.8	+1.9
	comp=Z,68nm,1.4s,mb5.8						
RJF	**Les Rejaudoux**	92.19	315	*e*P	P	14 23 20.9	-0.2
	comp=Z,461nm,1.6s,mb6.2						
RJF				*e*R			
	comp=Z,9µm,20.8s						
RJF	**Les Rejaudoux**	92.19	315	*e*P	P	14 23 20.9	-0.2
RJF				pmax	pmax		
	comp=Z,230nm,1.6s,mb6.3						
RJF				MLR	MLR		
	comp=Z,9µm,20.8s,MS6.2						
UNV	**Unalaska Valle**	92.21	36	*e*P	P	14 23 20.9	0.0
	comp=Z,94nm,0.7s,mb6.2						
WAL1	**Walls**	92.31	330	*e*P	P	14 23 21.2	0.0
EMIR	**Miracle**	92.49	312	P	P	14 23 29.4	+6.8
	comp=Z,102nm,1.6s,mb5.9						
LMK	**Market Rasen**	92.52	324	*e*P	P	14 23 22.8	+0.4
LMK				AMb	AMB	14 23 34.6	
	comp=Z,311nm,1.7s,mb6.5						
EPOB	**Poblet**	92.88	311	P	P	14 23 25.3	+1.0
	comp=Z,188nm,2.0s,mb6.2						
EIBI	**Ibiza**	92.89	309	P	pP	14 23 33.4	-0.2
	comp=Z,568nm,2.0s						
JMIC	**Jan Mayen**	92.92	342	*e*P	P	14 23 26.5	+2.7
JMIC				*e*SS	SS	14 40 45.5	+2.5
JMIC				AMS	AMS	15 11 04.6	
	comp=Z,13µm,18.2s,MS6.4						
JMIC	**Jan Mayen**	92.92	342	*e*P	P	14 23 26.5	+2.7
JMIC				LR	LR		
	comp=Z,13416µm,18.2s						
EBNR	**Beni Rached**	92.98	306	P	pP	14 23 36.0	+1.9
ECHA	**Ech Chlef**	93.12	306	P	pP	14 23 37.1	+2.4
FLN	**La Foliniere**	93.19	319	*e*P	P	14 23 25.1	-0.4
	comp=Z,346nm,1.5s,mb6.3						
FLN				*e*R			
	comp=Z,12µm,21.0s						
FLN	**La Foliniere**	93.19	319	*e*P	P	14 23 25.1	-0.4
FLN				pmax	pmax		
	comp=Z,173nm,1.5s,mb6.3						
FLN				MLR	MLR		
	comp=Z,12µm,21.0s,MS6.3						

ETRT	Tiaret	93.24	305	P	pP	14 23 38.5	+3.2
KBI1	Birley Grange	93.26	323	eP	P	14 23 26.1	+0.3
RESF	Ens	93.28	313	eP	P	14 23 27.8	+1.7
EANR	’Ain N’Sour	93.36	306	P	pP	14 23 37.5	+1.7
EGRA	Graus	93.36	312	P	P	14 23 26.8	+0.2
	comp=Z,47nm,1.0s,mb5.9						
EBR	Ebro Roquetas	93.37	311	eTs		14 23 37.2	
LHO	Holmfirth	93.41	324	eP	P	14 23 26.4	0.0
LHO				AMb	AMB	14 23 38.4	
	comp=Z,129nm,1.6s,mb6.1						
EBIE	Bielsa	93.44	313	P	P	14 23 31.5	+4.7
	comp=Z,200nm,2.0s,mb6.2						
ERTA	Horta de San J	93.48	311	P	P	14 23 32.0	+4.9
	comp=Z,303nm,1.7s,mb6.5						
KWE	Weaver Farm	93.48	323	eP	P	14 23 27.1	+0.3
EDI	Edinburgh	93.81	326	eP	P	14 23 28.0	-0.2
EDI				AMb	AMB	14 23 41.1	
	comp=Z,69nm,1.9s,mb5.8						
ECK	Cauldkaine Hil	93.90	326	eP	P	14 23 28.7	+0.1
ECK				AMb	AMB	14 23 39.8	
	comp=Z,52nm,1.9s,mb5.6						
ESK	Eskdalemuir	93.92	326	eP	P	14 23 29.0	+0.3
	comp=Z,32nm,1.0s,mb5.7						
ESK	Eskdalemuir	93.92	326	eP	P	14 23 29.0	+0.3
ESK				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.7						
ETSF	Etsaut	93.93	313	eP	P	14 23 28.8	-0.3
	comp=Z,122nm,1.3s,mb5.9						
ETSF	Etsaut	93.93	313	eP	P	14 23 28.8	-0.3
ETSF				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.9						
EAU	Auchinoon	93.97	326	eP	P	14 23 29.2	+0.3
EAU				AMb	AMB	14 23 42.2	
	comp=Z,91nm,1.9s,mb5.9						
ESAC	San Caprasio	94.00	312	P	P	14 23 32.0	+2.5
	comp=Z,330nm,2.1s,mb6.4						
EBEN	Beniarda	94.14	309	P	sP	14 23 43.4	+1.2
EMOS	Mosqueruela	94.15	311	P	pP	14 23 38.2	-1.1
	comp=Z,360nm,1.7s						
EAB	Aberfoyle	94.40	327	eP	P	14 23 31.2	+0.2
EAB				AMb	AMB	14 23 44.0	
	comp=Z,62nm,1.8s,mb5.8						
ECHE	Chera	94.62	310	P	P	14 23 35.9	+3.5
	comp=Z,88nm,1.9s,mb5.9						
EMUR	La Murta	95.03	308	P	pP	14 23 44.1	+0.7
	comp=Z,106nm,1.6s						
SNAA	Sanae	95.09	198	e	pP	14 23 43.3	+0.4
SNAA	Sanae	95.09	198	e	sP	14 23 46.6	+0.7
SNAA	Sanae	95.09	198	S	SKS	14 34 04.0	-10
	comp=Z,0.4nm,1.0s,baz=260,slow=19,SNR=3.5						
SNAA				PKKPbc		14 40 27.5	
	comp=Z,1.4nm,0.8s,baz=243,slow=2.8,SNR=9.5						
SNAA	Sanae	95.09	198	⇑iP	P	14 23 34.5	+0.7
SNAA				e	pP	14 23 43.3	+0.4
SNAA				e		14 23 46.6	
SNAA				e		14 27 24.0	
SNAA				e		14 28 12.8	
SNAA				e		14 40 27.3	
SNAA				e		14 40 37.1	
SNAA				e		14 48 09.3	
SNAA	Sanae	95.09	198	⇑iP	P	14 23 34.5	+0.7
SNAA				e		14 23 46.6	
SNAA				e		14 27 24.0	
ETOB	Tobarra	95.17	309	P	pP	14 23 46.1	+2.0
ECRI	Cripan	95.39	313	P	pP	14 23 46.1	+1.1
	comp=Z,71nm,1.7s						
IMA2	Indian Mountai	95.84	23	eP	P	14 23 34.9	-2.4
EVIA	Vianos	95.92	309	P	pP	14 23 48.3	+0.8
	comp=Z,52nm,1.5s						
EBER	Berja	96.45	307	P	P	14 23 40.7	-0.1
	comp=Z,36nm,1.3s,mb5.6						
EQES	Quesada	96.47	308	P	P	14 23 44.4	+3.5
	comp=Z,286nm,2.4s,mb6.3						
SVW2	Sparrevohn	96.54	28	P	P	14 23 37.5	-3.1
VNA2	Neumayer--Watz	96.67	199	e	pP	14 23 51.8	+1.6
VNA2	Neumayer--Watz	96.67	199	e	sP	14 23 54.5	+1.4
VNA2	Neumayer--Watz	96.67	199	⇑iP	P	14 23 42.9	+1.9
VNA2				e	pP	14 23 51.8	+1.6
VNA2				e		14 23 54.5	
VNA2				e		14 27 35.5	
VNA2				e		14 28 18.4	
VNA2				e		14 28 30.6	
VNA2				e		14 40 23.6	
VNA2				e		14 40 34.1	
VNA2				e		14 40 45.0	
VNA2				e		14 41 37.1	
VNA2				e		14 48 26.7	
GUD	Guadarrama	96.90	311	P	P	14 23 46.7	+4.0
	comp=Z,22nm,1.2s,mb5.5						
ESDC	Sonseca Array	96.90	310	P	P	14 23 42.4	-0.3
	comp=Z,0.8nm,0.6s,baz=75,slow=4.9,SNR=3.0						
ESDC				PKKPbc		14 40 35.9	
	comp=Z,1.3nm,0.8s,baz=271,slow=3.1,SNR=5.0						
ESLA	Sonseca Array	96.90	310	P	P	14 23 43.1	+0.4
	comp=Z,11nm,1.6s,mb5.0						
EBAN	Banos Encina	96.98	309	P	P	14 23 44.0	+0.8
	comp=Z,27nm,1.3s,mb5.5						
VNA1	Neumayer--Stat	97.02	199	e	pP	14 23 52.4	+0.7
VNA1	Neumayer--Stat	97.02	199	e	sP	14 23 55.3	+0.7
VNA1	Neumayer--Stat	97.02	199	⇑iP	P	14 23 44.1	+1.5
VNA1				e	pP	14 23 52.4	+0.7
VNA1				e		14 23 55.3	
VNA1				e		14 27 41.1	
VNA1				e		14 28 21.5	
VNA1				e		14 40 24.9	
VNA1				e		14 40 33.7	
SCO	Scoresbysund	97.24	343	iP	P	14 23 44.0	+0.4
SCO	Scoresbysund	97.24	343	eP	P	14 23 44.0	+0.4
VNA3	Neumayer Olymp	97.32	198	e	pP	14 23 52.4	-0.7
VNA3	Neumayer Olymp	97.32	198	e	sP	14 23 55.6	-0.4
VNA3	Neumayer Olymp	97.32	198	⇑iP	P	14 23 44.4	+0.5
VNA3				e	pP	14 23 52.4	-0.7
VNA3				e		14 23 55.6	
VNA3				e		14 27 40.2	
VNA3				e		14 28 14.4	
VNA3				e		14 28 27.1	
VNA3				e		14 40 22.4	
VNA3				e		14 40 32.0	
VNA3				e		14 40 43.2	
VNA3				e		14 41 35.1	
COLA	College	98.54	23	iP	P	14 23 49.3	-0.2
ILAR	Eielson Array	98.96	23	PP	PP	14 27 56.0	+0.2
	comp=Z,5.5nm,0.8s,baz=296,slow=7.5,SNR=4.8						
ILAR				PKKPbc		14 40 19.3	
	comp=Z,1.3nm,0.9s,baz=153,slow=1.8,SNR=5.7						
MTE	Manteigas	99.48	311	eP	P	14 23 59.9	+5.5
MTE	Manteigas	99.48	311	ePP	PP	14 28 05.2	+4.7
MTE				eS	S	14 35 24.3	+3.1
MTE				eSS	SS	14 42 22.4	+6.6
MTE	Manteigas	99.48	311	eLQ		14 55 02.5	
MTE				eLR	LR	14 59 41.2	
	comp=Z,8µm,15.1s						
EVO	Evora	100.20	310	eP	P	14 23 57.7	0.0
	comp=Z,63nm,1.4s						
EVO				eR			
	comp=Z,11µm,20.5s						
SUMG	Summit	100.25	348	ePdif	P	14 23 58.7	+1.5
	comp=Z,25nm,1.3s						
DBIC	Dimbokro	101.32	277	Pdiff	P	14 24 07.7	+4.3
	comp=Z,3.1nm,0.8s,baz=79,slow=7.3,SNR=4.6						
INK	Inuvik	101.66	17	ePdif	P	14 24 03.5	-0.1
	comp=Z,12nm,1.1s						
INK	Inuvik	101.66	17	P	P	14 24 04.8	+1.2
INK				pmax	pmax		
	comp=Z,12nm,1.0s						
DAWY	Dawson	102.16	22	ePdif	Pdif	14 24 09.0	+3.2
YKA	Yellowknife Ar	111.26	15	PP	PP	14 29 23.3	-4.5
	comp=Z,9.6nm,1.0s,baz=329,slow=7.2,SNR=4.4						
YKA				PKKPbc		14 39 49.9	
	comp=Z,2.6nm,0.8s,baz=150,slow=3.5,SNR=5.2						
TBI	Tubuai	112.61	114	ePP	PP	14 29 31.8	-7.1
TBI	Tubuai	112.61	114	ePS	PS	14 39 10.7	+2.6
TBI	Tubuai	112.61	114	eSS	SS	14 45 08.1	-6.9
TBI				eLR	LR	15 02 23.2	
	comp=Z,14µm,24.0s						
PPT	Papeete	113.16	108	ePP	PP	14 29 31.8	-11
PPT	Papeete	113.16	108	ePS	PS	14 39 16.2	+2.7
PPT	Papeete	113.16	108	eSS	SS	14 45 23.8	+1.3
PPT				eLR	LR	15 02 29.3	
	comp=Z,12µm,23.2s						
OCWA	Octopus Mounta	118.77	30	ePKPdf	PKPdf	14 29 01.6	-1.7
EDM	Edmonton	119.30	20	ePKPdf	PKPdf	14 29 00.2	-4.0
TBM	Table Mountain	120.93	29	P	PKPdf	14 29 04.8	-2.8
FFC	Flin Flon	121.20	13	ePKPdf	PKPdf	14 29 03.8	-4.1
SCHQ	Schefferville	121.60	349	PKP	PKPdf	14 29 04.2	-4.4
	comp=Z,6.2nm,0.8s,baz=236,slow=14,SNR=3.7						
SCHQ				PP	PP	14 30 40.2	-0.2
	comp=Z,17nm,1.0s,baz=31,slow=12,SNR=3.0						
SCHQ	Schefferville	121.60	349	PKP	PKPdf	14 29 04.2	-4.4
SCHQ				PP	PP	14 30 40.2	-0.2
NEW	Newport	121.73	26	ePKPdf	PKPdf	14 29 05.9	-3.2
KEBM	Edson Butte	121.85	35	ePKPdf	PKPdf	14 29 06.2	-3.2
KEBM				ePP	PP	14 30 39.7	-2.8
HAWA	Hanford	122.00	29	ePKPdf	PKPdf	14 29 06.1	-3.5
VIPM	Ingram Point	122.78	31	P	PKPdf	14 29 08.2	-3.0
HUMO	Hull Mountain	122.80	34	ePKPdf	PKPdf	14 29 08.2	-3.1
TAOE	Nuku Hiva Isla	122.98	99	ePP	PP	14 30 39.3	-12
TAOE	Nuku Hiva Isla	122.98	99	eSP	SP	14 40 43.8	+4.3
TAOE				eSS	SS	14 47 27.5	-2.8
TAOE				eLR	LR	15 07 11.3	
	comp=Z,24µm,24.9s						
KTRM	Thompson Ridge	123.01	35	P	PKPdf	14 29 08.8	-2.9
KHMM	Horse Mountain	123.46	36	ePKPdf	PKPdf	14 29 09.6	-3.0
KHMM				ePP	PP	14 30 52.9	-0.8
YBH	Yreka Blue Hor	123.50	35	ePKPdf	PKPdf	14 29 08.9	-3.8
LHEM	Herd Peak	123.85	35	P	PKPdf	14 29 09.9	-3.5
BMO	Blue Mountains	124.19	29	ePKPdf	PKPdf	14 29 10.3	-3.7
MSO	Missoula	124.21	25	ePKPdf	PKPdf	14 29 09.8	-4.2
MSO				ePP	PP	14 31 01.4	+2.7
MSO				eSKPdf		14 32 44.8	
KIPM	Iron Peak	124.27	37	ePKPdf	PKPdf	14 29 12.4	-1.8
KCPM	Cahto Peak	124.29	37	ePKPdf	PKPdf	14 29 11.1	-3.2
WDC	Whiskeytown Da	124.34	36	ePKPdf	PKPdf	14 29 11.3	-3.0
CHMT	Chamberlain Mo	124.44	25	ePKPdf	PKPdf	14 29 10.2	-4.2
HOPS	Hopland	125.03	38	ePKPdf	PKPdf	14 29 12.8	-3.0
HRY	Holter Researc	125.18	24	ePKPdf	PKPdf	14 29 11.6	-4.2
HRY				ePP	PP	14 30 59.7	-5.0
WVOR	Wild Horse Val	125.26	32	ePKPdf	PKPdf	14 29 13.0	-3.1
RKT	Rikitea	125.73	117	ePP	PP	14 31 02.9	-6.3
RKT	Rikitea	125.73	117	ePS	PS	14 41 09.6	+2.9
DLMT	Dillon	125.94	25	ePKPdf	PKPdf	14 29 14.0	-3.3
DLMT				ePP	PP	14 31 04.5	-5.6
BOZ	Bozeman (W)	126.12	24	ePKPdf	PKPdf	14 29 13.8	-3.9
MCMT	McKenzie Canyo	126.26	26	ePKPdf	PKPdf	14 29 14.9	-3.0
MCMT				ePP	PP	14 31 11.6	-0.5
SAC	San Andreas	126.31	39	ePKPdf	PKPdf	14 29 15.3	-2.9
DGMT	Dagmar	126.35	17	ePKPdf	PKPdf	14 29 15.5	-2.4
HLID	Hailey	126.54	28	ePKPdf	PKPdf	14 29 14.5	-4.0
ULM	Lac du Bonnet	126.65	10	PKP	PKPdf	14 29 14.8	-3.6
	comp=Z,24nm,1.0s,baz=321,slow=3.1,SNR=10						
ULM	Lac du Bonnet	126.65	10	PKP	PKPdf	14 29 14.8	-3.6
QLMT	Earthquake Lak	126.87	25	ePKPdf	PKPdf	14 29 16.5	-2.6
QLMT				ePP	PP	14 31 18.9	+3.2
YMR	Madison River	127.19	25	ePKPdf	PKPdf	14 29 17.1	-2.6
YMR				ePP	PP	14 31 16.3	-1.6
CMB	Columbia Colle	127.26	37	ePKPdf	PKPdf	14 29 16.2	-3.8
CMB				ePP	PP	14 31 15.8	-2.7
LAO	LASA Array	127.28	20	ePKPdf	PKPdf	14 29 16.7	-3.1
SAO	San Andreas Ge	127.42	39	ePKPdf	PKPdf	14 29 16.6	-3.8
SAO				epPKPdf		14 29 26.7	
YFT	Old Faithful	127.42	25	ePKPdf	PKPdf	14 29 18.6	-1.5
LKWY	Lake	127.51	24	ePKPdf	PKPdf	14 29 18.8	-1.5
IMW	Indian Meadow	127.83	25	ePKPdf	PKPdf	14 29 17.7	-3.3
IMW				ePP	PP	14 31 21.2	-1.1
LRV	Little Rabbit	127.90	39	ePKPdf	PKPdf	14 29 18.8	-2.6
LRV				ePP	PP	14 31 22.9	-0.2
MOOW	Moose Ponds	128.03	25	ePKPdf	PKPdf	14 29 18.1	-3.4
TPAW	Teton Pass	128.15	26	ePKPdf	PKPdf	14 29 18.7	-2.9
LOHW	Long Hollow	128.20	25	ePKPdf	PKPdf	14 29 18.1	-3.6
NVAR	Mina Array Bea	128.22	35	PKP	PKPdf	14 29 17.6	-4.3
	comp=Z,18nm,1.1s,baz=328,slow=0.8,SNR=18						
NVAR				PKKPbc		14 38 50.1	
	comp=Z,0.8nm,0.9s,baz=152,slow=6.3,SNR=3.6						
ELK	Elko	128.25	31	ePKPdf	PKPdf	14 29 18.8	-3.1
ELK				ePP	PP	14 31 23.1	-2.2
SNOW	Snow King Moun	128.26	25	ePKPdf	PKPdf	14 29 18.8	-3.0
SNOW				ePP	PP	14 31 23.9	-1.4
REDW	Red Top Meadow	128.30	26	ePKPdf	PKPdf	14 29 18.8	-3.1
MNV	Mina	128.31	35	ePKPdf	PKPdf	14 29 19.2	-2.9
MNV				ePP	PP	14 31 16.2	-10
HVU	Hansel Valley	128.68	28	ePKPdf	PKPdf	14 29 19.6	-3.1
MTUM	Tungsten Hills	128.80	36	ePKPdf	PKPdf	14 29 20.3	-2.8
PTRM	Twissleman Ran	128.90	39	ePKPdf	PKPdf	14 29 20.4	-2.9
PDAR	Pinedale Array	129.33	25	PKP	PKPdf	14 29 20.1	-3.9
	comp=Z,5.8nm,0.8s,SNR=16						
PDAR				PP	PP	14 31 32.7	+0.1
	comp=Z,8.1nm,1.1s,baz=354,slow=2.8,SNR=3.9						
PDAR				SKPbc		14 32 41.2	
	comp=Z,8.8nm,1.1s,slow=1.5,SNR=4.0						
HWUT	Hardware Ranch	129.38	27	ePKPdf	PKPdf	14 29 20.0	-4.1
EYMN	Ely	129.56	7	ePKPdf	PKPdf	14 29 19.9	-4.3
TCUT	Toone Canyon	129.84	28	ePKPdf	PKPdf	14 29 20.9	-4.1
NOQ	North Oquirrh	129.86	29	ePKPdf	PKPdf	14 29 22.1	-2.9
DUG	Dugway	129.88	30	ePKPdf	PKPdf	14 29 21.9	-3.1
DUG				ePP	PP	14 31 26.9	-9.0
RSSD	Black Hills	130.27	20	ePKPdf	PKPdf	14 29 21.9	-3.8
TPNV	Topopah Spring	130.42	35	ePKPdf	PKPdf	14 29 22.8	-3.3
NLU	North Lily Min	130.43	29	ePKPdf	PKPdf	14 29 23.3	-2.8
DAU	Daniels Canyon	130.46	28	ePKPdf	PKPdf	14 29 23.4	-2.7
DAU				ePP	PP	14 31 40.6	+0.7
MPU	Maple Canyon	130.59	29	ePKPdf	PKPdf	14 29 23.8	-2.6
MWC	Mount Wilson	131.17	39	ePKPdf	PKPdf	14 29 24.5	-3.1
RWWY	Rawlins	131.20	24	ePKPdf	PKPdf	14 29 24.4	-3.1
TMUT	Trail Mountain	131.36	29	ePKPdf	PKPdf	14 29 24.8	-3.0
ARUT	Antelope Range	131.37	32	ePKPdf	PKPdf	14 29 25.3	-2.6
MSU	Marysvale	131.48	30	ePKPdf	PKPdf	14 29 25.0	-3.2
SRU	San Rafael	131.83	29	ePKPdf	PKPdf	14 29 25.5	-3.2
NEN	Nelson	132.14	35	ePKPdf	PKPdf	14 29 26.9	-2.5
LDFC	Landfair	132.39	36	ePKPdf	PKPdf	14 29 27.3	-2.7
PFO	Pinyon Flat Ob	132.57	38	ePKPdf	PKPdf	14 29 27.7	-2.6
PFO	Pinyon Flat Ob	132.57	38	PKIKP	PKPdf	14 29 23.6	-6.7
BAR	Barrett	133.05	40	ePKPdf	PKPdf	14 29 28.5	-2.7
MIV	Mineville/With	133.15	350	ePKPdf	PKPdf	14 29 28.0	-3.1
SMCO	Snowmass	133.40	26	ePKPdf	PKPdf	14 29 28.9	-2.8
ISCO	Idaho Springs	133.44	24	ePKPdf	PKPdf	14 29 26.6	-5.2
PV01	Paradox Valley	133.53	28	ePKPdf	PKPdf	14 29 29.4	-2.5
WUAZ	Wupatki	134.17	32	ePKPdf	PKPdf	14 29 30.3	-2.9
HRV	Harvard--Oak R	134.29	348	ePKPdf	PKPdf	14 29 32.4	-0.8
QUA2	Belchertown	134.67	349	ePKPdf	PKPdf	14 29 29.5	-4.5
SDCO	Great Sand Dun	135.23	25	ePKPdf	PKPdf	14 29 32.1	-3.1
TUC	Tucson	136.88	35	ePKPdf	PKPdf	14 29 35.7	-2.6
ANMO	Albuquerque	137.11	28	ePKPdf	PKPdf	14 29 35.2	-3.4
KSU1	Kansas State U	137.11	15	ePKPdf	PKPdf	14 29 35.3	-3.2
LAZ	Ladron	137.22	30	ePKPdf	PKPdf	14 29 35.8	-3.0
LENM	Lemitar	137.49	30	ePKPdf	PKPdf	14 29 36.8	-2.5
LPM	Los Pinos Moun	137.54	29	ePKPdf	PKPdf	14 29 36.6	-2.9
MVL	Millersville	137.56	352	ePKPdf	PKPdf	14 29 36.0	-3.3
BNM	Barren Site	137.67	29	ePKPdf	PKPdf	14 29 36.8	-3.0
ACSO	Alum Creek Sta	137.80	360	ePKPdf	PKPdf	14 29 36.6	-3.2
CCM	Cathedral Cave	139.28	10	ePKPdf	PKPdf	14 29 33.2	-9.3
WCI	Wyandotte Cave	139.69	4	ePKPdf	PKPdf	14 29 40.1	-3.2
LPA	La Plata	139.84	213	cePKP	PKPdf	14 29 39.0	-4.6
LPA				ePP	PP	14 32 35.0	-3.8
LPA				eSKP		14 33 11.0	
LPA				eSKP		14 33 25.0	
LPA				ePKS	PKS	14 33 26.0	+12
LPA				eSKKP		14 42 34.0	
	comp=Z,14µm,18.0s						
PLCA	Paso Flores	139.95	195	PKP	PKPdf	14 29 40.8	-2.9
	comp=Z,4.8nm,0.8s,baz=185,slow=4.9,SNR=4.9						
FWV	Forest Hill	140.38	357	ePKPdf	PKPdf	14 29 42.2	-2.3
WMOK	Wichita Mounta	140.47	20	ePKPdf	PKPdf	14 29 33.3	-11
ELN	Prospectdale	140.73	357	ePKPdf	PKPdf	14 29 40.9	-4.3
PARMO	Parma	140.88	8	ePKPdf	PKPdf	14 29 40.0	-5.5
GLAT	Glass	141.33	8	ePKPdf	PKPdf	14 29 44.0	-2.3
TZTN	Tazewell	141.48	0	ePKPdf	PKPdf	14 29 38.5	-8.0
GNAR	Gosnell	141.52	9	ePKPdf	PKPdf	14 29 38.0	-8.6
WVT	Waverly	141.65	6	ePKPdf	PKPdf	14 29 38.7	-8.2
HALT	Halls	141.68	8	ePKPdf	PKPdf	14 29 42.5	-4.4
MIAR	Mount Ida	142.19	14	ePKPdf	PKPdf	14 29 39.9	-7.9
CPCT	Cooper Cave	142.55	2	ePKPdf	PKPdf	14 29 42.3	-6.1
SWET	Sewanee	142.72	4	ePKPdf	PKPdf	14 29 38.9	-10
BDFB	Brasilia	142.84	247	PKP	PKPdf	14 29 45.4	-4.0
	comp=Z,12nm,1.1s,baz=184,slow=7.3,SNR=4.8						
MYNC	Murphy	142.94	1	ePKPdf	PKPdf	14 29 42.0	-7.0
LTX	Lajitas	143.04	31	ePKPdf	PKPdf	14 29 42.9	-6.6
OXF	Oxford	143.04	9	ePKPdf	PKPdf	14 29 40.7	-8.5
TXAR	Lajitas Array	143.04	31	PKP	PKPdf	14 29 44.5	-4.9
	comp=Z,8.0nm,0.7s,baz=256,slow=2.4,SNR=21						
TXAR				PP	PP	14 33 05.1	+6.8
	comp=Z,9.8nm,1.1s,baz=342,slow=5.7,SNR=3.8						
JSC	Jenkinsville	143.69	357	ePKPdf	PKPdf	14 29 43.5	-6.9
JCT	Junction City	143.87	25	ePKPdf	PKPdf	14 29 43.9	-6.9
NATX	Nacogdoches	144.54	17	ePKPdf	PKPdf	14 29 47.3	-4.7
GOGA	Godfrey	144.60	0	ePKPdf	PKPdf	14 29 47.3	-4.7
RPN	Rapa Nui	144.75	137	ePKPdf	PKPdf	14 29 48.6	-3.9
NHSC	New Hope	144.79	356	ePKPdf	PKPdf	14 29 48.5	-3.9
FCH	Farellones	146.74	200	iP	PKPbc	14 29 54.5	+2.3
CFAA	Coronel Fontan	147.50	204	PKPbc	PKPdf	14 29 57.0	0.0
	comp=Z,7.0nm,0.8s,baz=174,slow=1.2,SNR=10						
TLL	Tololo Astrono	149.78	202	iP	PKPdf	14 30 01.7	+1.0
DEG	La Desirade	151.44	311	eP	PKPdf	14 30 05.3	+1.8
MGG	Marie-Galante	151.88	310	eP	PKPdf	14 30 05.0	+0.8
BBL	Barber’s Block	152.23	310	eP	PKPdf	14 30 04.2	-0.5
SJG	San Juan	153.76	321	PKPbc	PKPdf	14 30 12.5	+5.7
	comp=Z,9.3nm,0.5s,baz=304,slow=19,SNR=4.1						
SIV	San Ignacio	154.25	236	PKP	PKPdf	14 30 03.4	-4.1
	comp=Z,2.5nm,0.7s,baz=114,slow=7.2,SNR=4.5						
SIV				PKPbc	PKPdf	14 30 12.1	+4.6
	comp=Z,6.1nm,0.8s,baz=176,slow=1.7,SNR=7.5						
SIV				PKPab	PKPab	14 30 23.9	-3.2
	comp=Z,15nm,0.8s,baz=125,slow=2.7,SNR=10						
MOAC	Moa	155.91	341	P	PKPdf	14 30 06.9	-2.7
OXX	Oaxaca	156.67	34	eP	PKPdf	14 30 11.0	+0.3
SAML	Samuel	158.99	251	ePKPdf	PKPdf	14 30 10.3	-3.4
LPAZ	La Paz	159.59	226	PKP	PKPdf	14 30 11.5	-2.8
	comp=Z,3.1nm,0.8s,baz=126,slow=3.0,SNR=6.2						
LPAZ	La Paz	159.59	226	ePKPdf	PKPdf	14 30 08.2	-6.1
LPAZ				PKP	PKPdf	14 30 11.5	-2.8
LPAZ	La Paz	159.59	226	ePKIKP	PKPdf	14 30 09.9	-4.4
ARE	Arequipa	161.72	218	P	PKPdf	14 30 12.0	-4.5
SDV	Santo Domingo	163.34	311	PKPab	PKPab	14 31 06.3	-0.1
	comp=Z,16nm,0.9s,baz=62,slow=3.9,SNR=5.6						
SDV				PP	PP	14 34 58.2	+5.7
	comp=Z,15nm,1.2s,baz=24,slow=2.6,SNR=3.2						
SDV	Santo Domingo	163.34	311	ePKPdf	PKPdf	14 30 15.0	-3.2
ROSC	El Rosal	168.72	308	PKP	PKPdf	14 30 20.3	-2.2
	comp=Z,3.0nm,0.3s,baz=104,slow=20,SNR=6.4						

*NEIC **19** 15:15:16.1, 18.30N×68.37W, h102^{km}, MD3.7(RSPR), After RSPR.*

RSPR 19 15:15:16.1, 18.30N×68.37W, h102^{km}±2^{km}, MD3.7/11, **MD3.7**/11, **8C-4D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSP	Las Mesas	1.23	96	⇑eP	P	15 15 38.9	-0.8
LSP				eS	S	15 15 55.9	-1.4
CRPR	Cabo Rojo, PR	1.23	104	⇑eP	P	15 15 38.6	-1.2
CRPR				eS	S	15 15 55.9	-1.6
MGP	Maguayo	1.25	103	⇓iP	P	15 15 39.0	-1.0
MGP				eS	S	15 15 57.6	-0.2
AOPR	Arecibo Observ	1.54	88	⇑eP	P	15 15 42.8	-0.6
AOPR				eS	S	15 16 03.0	-0.7
CELP	Cerrillos	1.72	97	⇓eP	P	15 15 45.4	-0.3
CELP				eS	S	15 16 07.5	-0.1
ICM	Isla Caja Muer	1.81	103	⇓iP	P	15 15 45.7	-1.0
ICM				eS	S	15 16 09.0	-0.5
SJG	San Juan	2.12	95	⇑eP	P	15 15 50.2	-0.6
SJG				eS	S	15 16 16.6	-0.2
SJG	San Juan	2.12	95	⇑eP	P	15 15 50.1	-0.8
SJG				eS	S	15 16 16.9	+0.2
CBYP	Canovanas	2.39	90	⇑eP	P	15 15 53.8	-0.8
CBYP				eS	S	15 16 22.3	-1.0
HUMP	Col San Antoni	2.40	93	⇑eP	P	15 15 53.7	-1.0
HUMP				eS	S	15 16 23.0	-0.6
MTP	Monte Pirata	2.68	94	⇓eP	P	15 15 58.0	-0.6
MTP				eS	S	15 16 29.6	-0.8
TBVI	Tortola	3.57	88	⇑eP	P	15 16 09.3	-1.4
TBVI				eS	S	15 16 49.9	-2.3

JMA 19 16:03:04.6±0.2**, 38.22N×144.79E, h47^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.59	290	P	P	16 03 45.4	+0.4
MIYJ	Miyakonagasawa	2.68	301	P	P	16 03 46.5	+0.1
MIYJ				eS	S	16 04 17.6	-0.3
JIO	Ouri	2.72	276	P	P	16 03 47.5	+0.7
JIO				eS	S	16 04 18.9	+0.2
JMK	Ichinoseki	2.89	286	P	P	16 03 49.9	+0.6
JMK				eS	S	16 04 23.7	+0.6
JOT	Ohata	4.28	319	eS	S	16 04 56.1	-2.0
JCH	Churui	4.52	347	eS	S	16 04 58.7	-5.6
JKB	Kayabe	4.66	323	P	P	16 04 15.9	+1.6
NEM2	Nemuro 2	5.19	8	P	P	16 04 17.3	-4.4
JRY	Ryogami san	5.19	247	P	P	16 04 21.1	-0.7
JRY				eS	S	16 05 17.9	-3.3
JOD2	Odawara 2	5.45	239	P	P	16 04 25.5	+0.2
JOD2				eS	S	16 05 23.8	-3.7
JTKR	Abashiri--Toko	5.78	354	eS	S	16 05 29.3	-6.6

*NNC **19** 16:33:37.0±6.4, 44.89N×85.70E, mpv3.0, Error ellipse: s-maj=120.7km s-min=41.8km az=51.0*

BJI 19 16:33:37.1, 44.57N×85.32E, h14^{km}, ML3.2, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	Urumqi	1.86	113	PG	Pg	16 34 08.8	-5.6
WMQ				SG	Sg	16 34 34.4	-4.9
WMQ				Smax			
	comp=N,60nm,0.4s						
WMQ				Smax			
	comp=E,60nm,0.4s						
MK31	Makanchi Array	3.08	317	⇓Pn	Pn	16 34 27.1	+0.9
	comp=E,1.3nm,0.3s,baz=135,slow=17,SNR=35						
MK31				⇓Pg	Pg	16 34 34.7	-3.8
	comp=E,1.5nm,0.2s,baz=144,slow=16,SNR=7.9						
MK31				⇑Lg		16 35 12.9	
	comp=E,14nm,0.5s,baz=136,slow=30,SNR=19						
KURK	Kurchatov	7.63	326	⇑Pn	Pn	16 35 29.8	-0.8
	comp=E,2.3nm,1.4s						
KURK				⇑Sn	Sn	16 36 52.8	-4.9
KURK				⇓Lg		16 37 36.3	
	comp=E,3.1nm,0.8s						

JMA 19 16:43:44.5±0.1**, 38.26N×144.71E, h52^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.52	290	P	P	16 44 24.1	+0.2
MIYJ	Miyakonagasawa	2.61	301	P	P	16 44 25.1	-0.1
MIYJ				eS	S	16 44 55.4	-0.4
JIO	Ouri	2.65	275	P	P	16 44 26.0	+0.2
JIO				eS	S	16 44 57.0	+0.1
JMK	Ichinoseki	2.82	285	P	P	16 44 28.5	+0.3
JMK				eS	S	16 45 01.9	+0.7
JOM	Ohasama	2.93	295	P	P	16 44 30.2	+0.4
JOM				eS	S	16 45 04.6	+0.6
JMM	Marumori	3.12	264	P	P	16 44 32.5	+0.1
JMM				eS	S	16 45 08.5	-0.2
JCH	Churui	4.47	347	P	P	16 44 48.9	-2.6
JCH				eS	S	16 45 36.8	-6.0
JRY	Ryogami san	5.15	246	P	P	16 45 00.5	-0.5
NEM2	Nemuro 2	5.16	8	P	P	16 44 56.1	-5.0
JOD2	Odawara 2	5.41	238	eS	S	16 46 03.1	-3.4

*SKO **19** 17:11:33.6, 9.88S×100.11E*

*IDC **19** 17:11:42.5±2.3, 4.05S×103.39E, h20^{km}±13^{km}, mb4.7/21, mb1 4.8/21, mb1mx4.8/22, mbtmp4.8/21, MS4.4/6, Ms1 4.4/6, ms1mx4.0/22, Error ellipse: s-maj=17.5km s-min=12.5km az=56.0*

*BJI **19** 17:11:43.8, 4.00S×103.50E, h30^{km}, mB5.3, mb4.7, Ms5.0, Msz4.6*

*HRVD **19** 17:11:43.8±0.7, 4.31S×103.45E, h23^{km}±1^{km}, MW5.0/54, Centroid moment Tensor Solution. LP body waves: s21,c23;Mantle waves: s54,c82; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.09±.56; $M_{\theta\theta}$-4.87±.35; $M_{\phi\phi}$1.78±.36; $M_{r\theta}$-1.08±.41; $M_{\theta\phi}$0.64±.22; $M_{\phi r}$1.00±.62; Best double couple: $M_0$4.391×10^{16} NP1:ϕ_s70°,δ43°,λ51°. NP2:ϕ_s298°,δ58°,λ120°. Principal axes: T 3.682, Plg63°, Azm260°; N 1.419, Plg25°, Azm100°; P -5.101, Plg8°, Azm7°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **19** 17:11:43.8±0.2, 4.00S×103.51E, h30^{km}, mb5.1/37, MS4.6/1 Error ellipse: s-maj=7.4km s-min=6.1km az=61.0*

*MOS **19** 17:11:43.1±1.9, 4.07S×103.55E, h33^{km}, mb5.3/29, Error*

ellipse: s-maj=12.3km s-min=6.2km az=119.0

ISC 19 17:11:43.8±0.2, **4.06S**±0.04×**103.46E**±0.05, **h43**^{km}, **h43**^{km}±1.5^{km}**:pP-P, n265,** σ**1**^{s}**32**/246, **mb5.0**/89, **MS4.6**/15, **21C-5D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSM	**Kuching**	**8.77**	**51**	*e*Pn	**P**	**17 13 47.0**	**-4.0**
KULM	**Kulim**	**9.70**	**343**	*e*Pn	**P**	**17 14 04.1**	**+0.3**
KULM				*e*pPn		17 14 07.8	
COCO	**West Island**	**10.41**	**219**	Pn	**P**	**17 14 13.6**	**+0.1**
KKM	**Kota Kinabalu**	**16.21**	**52**	Pn	**P**	**17 15 27.8**	**-2.5**
KKM				*e*pPn		17 15 38.3	
NST	**Nakhon Sawan**	**19.88**	**351**	P	**P**	**17 16 17.4**	**+3.0**
KKTK	**Khon Kaen**	**20.27**	**358**	P	**P**	**17 16 20.0**	**+1.4**
	309nm,0.8s						
CHG	**Chiang Mai**	**23.16**	**349**	P	**P**	**17 16 49.9**	**+2.3**
	19nm,1.2s,mb4.4						
QIZ	**Qiongzhong**	**23.78**	**15**	P	**P**	**17 16 55.3**	**+1.7**
QIZ				S	**S**	**17 21 01.3**	**-1.8**
QIZ				AMB	AMB		
	comp=Z,50nm,2.1s,mb4.6						
QIZ				LR	LR		
	comp=Z,1μm,13.0s,MS4.5						
QIZ	**Qiongzhong**	**23.78**	**15**	P	**P**	**17 16 54.4**	**+0.7**
CHRT	**Chiangrai**	**24.05**	**351**	⇑P	**P**	**17 16 59.0**	**+2.8**
	comp=Z,174nm,2.2s,mb5.1						
TGY	**Tagaytay City**	**25.02**	**44**	P	**P**	**17 17 05.7**	**+0.1**
	comp=Z,25nm,0.4s,mb5.1,baz=291,slow=8.6,SNR=1.4						
FITZ	**Fitzroy Crossi**	**25.81**	**124**	⇑*i*P	**P**	**17 17 12.8**	**-0.3**
	comp=Z,45nm,0.6s,mb5.2						
FITZ	**Fitzroy Crossi**	**25.81**	**124**	P	**P**	**17 17 12.9**	**-0.1**
	comp=Z,66nm,0.7s,mb5.3,baz=296,slow=6.3,SNR=71						
FITZ				PcP	PcP	17 20 42.6	+0.2
	comp=Z,6.9nm,0.6s,baz=262,slow=5.7,SNR=4.3						
KMI	**Kunming**	**29.01**	**359**	P	**P**	**17 17 44.4**	**+2.3**
KMI				AP	pP	17 17 56.0	+2.5
KMI				XP	sP	17 18 01.1	+2.2
KMI				PP	PP	17 18 39.9	+3.1
KMI				S	**S**	**17 22 32.3**	**+3.4**
KMI				SS	SS	17 24 04.4	+4.7
KMI				SCS	ScS	17 28 20.6	+1.4
KMI				AMB	AMB		
	comp=Z,130nm,5.3s						
KMI				LR	LR		
	comp=N,2μm,13.7s,MS4.9						
KMI				LR	LR		
	comp=E,1μm,14.2s,MS4.9						
KMI	**Kunming**	**29.01**	**359**	P	**P**	**17 17 44.4**	**+2.3**
	comp=E,7.0nm,1.2s,mb4.3						
KMI				pP	pP	17 17 56.0	+2.5
KMI				sP	sP	17 18 01.1	+2.2
KMI				PP	PP	17 18 39.9	+3.1
KMI				PPP	PPP	17 18 53.7	+3.8
KMI				S	**S**	**17 22 32.3**	**+3.4**
KMI				sS		17 22 52.5	
KMI				SS	SS	17 24 04.4	+4.7
KMI				SSS	SSS	17 24 25.1	+4.9
KMI				ScS	ScS	17 28 20.6	+1.4
KMI	**Kunming**	**29.01**	**359**	P	**P**	**17 17 44.4**	**+2.3**
KMI				*PP	pP	17 17 56.0	+2.5
KMI				*SP	sP	17 18 01.1	+2.2
KMI						17 18 39.9	
KMI				PPP	PPP	17 18 53.7	+3.8
KMI				S	**S**	**17 22 32.3**	**+3.4**
KMI				*SS		17 22 52.5	
KMI				SS	SS	17 24 04.4	+4.7
KMI				SSS	SSS	17 24 25.1	+4.9
KMI						17 28 20.6	
KMI				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.3						
KAKA	**Kakadu**	**29.90**	**108**	*e*P	**P**	**17 18 07.0**	**+17**
	comp=Z,15nm,0.8s,mb4.8						
GYA	**Guiyang**	**30.49**	**6**	P	**P**	**17 17 59.4**	**+4.1**
GYA				PCP	PcP	17 20 54.3	+0.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
GYA				AMB	AMB		
	comp=Z,250nm,4.2s						
GYA				LR	LR		
	comp=N,680nm,12.0s,MS4.7						
GYA				LR	LR		
	comp=E,760nm,12.0s,MS4.7						
GYA				LR	LR		
	comp=Z,850nm,10.8s,MS4.7						
NWAO	**Narrogin (SRO)**	**31.48**	**157**	P	**P**	**17 18 03.8**	**-0.1**
	comp=Z,4.5nm,0.6s,mb4.5,baz=280,slow=6.1,SNR=4.4						
NWAO				LR	LR	17 30 03.2	
	comp=Z,492nm,19.2s,MS4.2,baz=276,slow=35						
SHL	**Shillong**	**31.52**	**340**	*e*P	**P**	**17 18 03.5**	**-0.8**
BOK	**Bokaro**	**32.55**	**329**	*e*P	**P**	**17 18 13.1**	**-0.3**
BOK				AMb	AMB	17 18 17.9	
	comp=Z,24nm,1.0s,mb5.1						
HYB	**Hyderabad**	**32.55**	**312**	*i* P	**P**	**17 18 15.0**	**+1.6**
HYB	**Hyderabad**	**32.55**	**312**	*e*P	**P**	**17 18 15.0**	**+1.6**
BLSP	**Bilaspur**	**33.35**	**322**	*e*P	**P**	**17 18 19.9**	**-0.4**
BLSP				AMb	AMB	17 18 27.0	
	comp=Z,64nm,1.4s,mb5.4						
WRA	**Warramunga Arr**	**33.98**	**120**	P	**P**	**17 18 25.0**	**-0.7**
	comp=Z,18nm,0.6s,mb5.2,baz=298,slow=9.0,SNR=137						
WRA				PcP	PcP	17 21 03.0	-0.3
	comp=Z,2.8nm,0.5s,baz=301,slow=2.1,SNR=5.6						
WRAB	**Tennant Creek**	**33.98**	**120**	*e*P	**P**	**17 18 24.6**	**-1.2**
	comp=Z,38nm,0.6s,mb5.5						
WRAB	**Tennant Creek**	**33.98**	**120**	*e*P	**P**	**17 18 24.6**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,38nm,0.6s,mb5.5						
WB2	**Warramunga Arr**	**33.99**	**120**	⇑*i*P	**P**	**17 18 25.2**	**-0.6**
WB2				*e*PCP	PcP	17 21 03.1	-0.2
ENH	**Enshi**	**34.62**	**9**	*e*P	**P**	**17 18 30.9**	**-0.2**
CD2	**Chengdu**	**34.77**	**0**	*e*P	**P**	**17 18 35.1**	**+2.7**
CD2				AP	pP	17 18 47.1	+3.0
CD2				PP	PP	17 19 53.8	+3.3
CD2				S	**S**	**17 24 02.4**	**+3.4**
CD2				SS	SS	17 26 18.6	+4.8
CD2				AMB	AMB		
	comp=Z,80nm,3.0s						
CD2				LR	LR		
	comp=E,940nm,18.5s						
CD2				LR	LR		
	comp=Z,660nm,13.2s						
ASPA	**Alice Springs**	**35.26**	**126**	⇑*i*P	**P**	**17 18 36.7**	**+0.1**
ASPA				*e*PCP	PcP	17 21 06.9	-0.1
FORT	**Forrest**	**35.28**	**142**	*e*P	**P**	**17 18 36.5**	**-0.3**
	comp=Z,18nm,0.6s,mb5.2						
LSA	**Lhasa**	**35.58**	**341**	P	**P**	**17 18 39.6**	**+0.3**
LSA	**Lhasa**	**35.58**	**341**	*e*P	**P**	**17 18 39.5**	**+0.2**
	comp=Z,14nm,1.1s,mb4.8						
LSA	**Lhasa**	**35.58**	**341**	*e*P	**P**	**17 18 39.5**	**+0.2**
LSA				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
KAD	**Karad**	**35.86**	**307**	*e*P	**P**	**17 18 41.7**	**-0.2**
KAD				AMb	AMB	17 18 46.8	
	comp=Z,33nm,1.3s,mb5.1						
GUN	**Gumba**	**36.02**	**333**	*e*P	**P**	**17 18 42.3**	**-0.8**
	comp=Z,21nm,0.4s,mb5.4						
DMN	**Daman**	**36.12**	**332**	*e*P	**P**	**17 18 42.6**	**-1.3**
	comp=Z,25nm,1.0s,mb5.1						
KKN	**Kakani**	**36.19**	**332**	*e*P	**P**	**17 18 42.9**	**-1.6**
	comp=Z,20nm,0.8s,mb5.1						
GKN	**Gorkha**	**36.67**	**331**	*e*P	**P**	**17 18 47.5**	**-1.1**
	comp=Z,36nm,0.9s,mb5.2						
KOLN	**Koldanda**	**36.98**	**330**	*e*P	**P**	**17 18 50.2**	**-1.0**
	comp=Z,26nm,0.8s,mb5.1						
BHPL	**Bhopal**	**37.17**	**318**	*e*P	**P**	**17 18 51.8**	**-1.0**
BHPL				AMb	AMB	17 18 57.6	
	comp=Z,62nm,1.1s,mb5.4						
XAN	**Xi’an**	**38.24**	**7**	P	**P**	**17 19 03.1**	**+1.5**
XAN				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
NJ2	**Nanjing**	**38.78**	**21**	*e*P	**P**	**17 19 05.5**	**-0.6**
NJ2				AP	pP	17 19 15.3	-2.6
NJ2				XP	sP	17 19 19.3	-3.9
NJ2				PP	PP	17 20 38.3	-0.8
NJ2				S	**S**	**17 25 00.0**	**-0.3**
NJ2				XS		17 25 16.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,410nm,4.2s						
NJ2				LR	LR		
	comp=N,11μm,24.0s						
NJ2				LR	LR		
	comp=E,11μm,18.0s						
SSE	**Sheshan**	**38.83**	**25**	P	**P**	**17 19 06.8**	**+0.2**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.7						
SSE				AMB	AMB		
	comp=Z,200nm,4.9s						
SSE	**Sheshan**	**38.83**	**25**	P	**P**	**17 19 06.8**	**+0.2**
	comp=Z,17nm,0.7s,mb4.9						
JOW	**Kunigami**	**38.97**	**37**	LR	LR	17 32 20.7	
	comp=Z,555nm,21.4s,MS4.3,baz=110,slow=32						
LZH	**Lanzhou**	**39.93**	**0**	*e*P	**P**	**17 19 20.8**	**+5.1**
LZH				PP	PP	17 20 57.8	+6.2
LZH				*e*S	**S**	**17 25 23.8**	**+6.2**
LZH				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,190nm,4.0s						
LZH				LR	LR		
	comp=N,2μm,13.2s						
LZH				LR	LR		
	comp=Z,2μm,13.5s,MS5.1						
LZH	**Lanzhou**	**39.93**	**0**	*e*P	**P**	**17 19 20.7**	**+5.0**
	comp=Z,30nm,1.0s,mb5.0						
LZH				pP	pP	17 19 32.9	+5.5
LZH				sP	sP	17 19 39.0	+6.3
LZH				PP	PP	17 20 57.7	+6.1
LZH				*e*S	**S**	**17 25 23.7**	**+6.1**
LZH				sS		17 25 43.7	
LZH				*e*SS	SS	17 28 16.7	+7.4
LZH				LR	LR		
	comp=Z,2μm,13.5s,MS5.1						
LZH	**Lanzhou**	**39.93**	**0**	*e*P	**P**	**17 19 20.7**	**+5.0**
LZH				*PP	pP	17 19 32.9	+5.5
LZH						17 20 57.7	
LZH				*e*S	**S**	**17 25 23.7**	**+6.1**
LZH				*SS		17 25 43.7	
LZH				*e*SS	SS	17 28 16.7	+7.4
LZH				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.0						
LZH				MLR	MLR		
	comp=Z,2μm,13.5s,MS5.1						
AYAN	**Aya Nagar**	**41.09**	**324**	*e*P	**P**	**17 19 23.7**	**-1.6**
AYAN				AMb	AMB	17 19 29.8	
	comp=Z,45nm,1.2s,mb5.0						
NDI	**New Delhi**	**41.19**	**324**	*e*x	**P**	**17 19 21.5**	**-4.6**
KUDL	**Kundal**	**41.23**	**323**	*e*P	**P**	**17 19 25.4**	**-1.0**
KUDL				AMb	AMB	17 19 32.7	
	comp=Z,56nm,1.3s,mb5.0						
BHGR	**Bahadurgarh**	**41.35**	**324**	*e*P	**P**	**17 19 25.8**	**-1.7**
BHGR				AMb	AMB	17 19 28.3	
	comp=Z,111nm,0.2s,mb6.1						
KHET	**Khetri**	**41.59**	**322**	*e*P	**P**	**17 19 27.6**	**-1.9**
KHET				AMb	AMB	17 19 36.8	
	comp=Z,75nm,2.0s,mb5.0						
GTA	**Gaotai**	**43.38**	**356**	*e*P	**P**	**17 19 45.4**	**+1.4**
GTA				AP	pP	17 19 57.8	+1.9
GTA				XP	sP	17 20 02.9	+1.8
GTA				PP	PP	17 21 29.0	+1.9
GTA				PCP	PcP	17 21 34.9	+2.4
GTA				S	**S**	**17 26 10.0**	**+1.5**
GTA				XS		17 26 30.5	
GTA				SS	SS	17 29 17.4	+1.4
GTA				AMB	AMB		
	comp=Z,130nm,5.7s						
GTA				LR	LR		
	comp=N,620nm,14.4s,MS4.8						
GTA				LR	LR		
	comp=E,610nm,17.5s,MS4.8						
GTA				LR	LR		
	comp=Z,670nm,17.1s,MS4.6						
CTA	**Charters Tower**	**44.60**	**115**	*e*P	**P**	**17 19 53.7**	**-0.4**
	comp=Z,14nm,0.8s,mb4.8						
CTA				*e*PCP	PcP	17 21 37.3	+0.3
CTA	**Charters Tower**	**44.60**	**115**	*e*P	**P**	**17 19 53.7**	**-0.4**
CTA				*e*		17 21 37.3	
CTA				pmax	pmax		
	comp=Z,14nm,0.8s						
CTAO	**Charters Tower**	**44.60**	**115**	*e*P	**P**	**17 19 51.0**	**-3.1**
	comp=Z,21nm,0.8s,mb5.0						
CTAO				LR	LR		
	comp=Z,669nm,20.0s,MS4.6						
CTAO	**Charters Tower**	**44.60**	**115**	*e*P	**P**	**17 19 51.0**	**-3.1**
CTAO				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.0						
CTAO				MLR	MLR		
	comp=Z,669nm,20.0s,MS4.6						
STKA	**Stephens Creek**	**45.22**	**132**	⇑*i*P	**P**	**17 19 59.2**	**+0.3**
	comp=Z,20nm,0.5s,mb5.2						
STKA	**Stephens Creek**	**45.22**	**132**	P	**P**	**17 19 58.9**	**0.0**
	comp=Z,27nm,0.6s,mb5.3,baz=307,slow=8.0,SNR=113						
STKA				PcP	PcP	17 21 38.7	-0.2
	comp=Z,4.3nm,0.6s,baz=304,slow=3.8,SNR=3.0						
WMQ	**Urumqi**	**49.73**	**345**	⇑*i*P	**P**	**17 20 35.4**	**+1.4**
WMQ				AP	pP	17 20 48.0	+2.1
WMQ				XP	sP	17 20 53.0	+2.0
WMQ				PCP	PcP	17 21 56.0	+1.2
WMQ				*e*S	**S**	**17 27 40.0**	**+1.3**
WMQ				XS		17 28 00.8	
WMQ				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,560nm,7.8s						
WMQ				LR	LR		
	comp=N,580nm,24.4s,MS4.7						
WMQ				LR	LR		
	comp=E,700nm,25.6s,MS4.7						
WMQ				LR	LR		
	comp=Z,490nm,26.7s,MS4.4						
KSH	**Kashi**	**50.21**	**332**	*e*P	**P**	**17 20 38.0**	**+0.3**
KSH				*e*AP	pP	17 20 50.3	+0.6
KSH				*e*XP	sP	17 20 55.4	+0.7
KSH				*e*PCP	PcP	17 21 56.3	-0.3
KSH				*e*PP	PP	17 22 34.1	+0.1
KSH				*e*SCP		17 25 47.3	
KSH				*e*PCS		17 25 52.0	
KSH				*e*S	**S**	**17 27 44.4**	**-1.0**
KSH				*e*XS		17 28 06.3	
KSH				*e*SCS	ScS	17 30 22.0	-0.1
KSH				*e*SS	SS	17 31 16.0	+0.1
KSH				AMB	AMB		
	comp=Z,380nm,3.8s						
KSH				LR	LR		
	comp=N,390nm,4.9s						
KSH				LR	LR		
	comp=E,460nm,6.3s						
CN2	**Changchun**	**51.59**	**20**	*e*P	**P**	**17 20 50.4**	**+2.3**
CN2				*e*S	**S**	**17 28 07.8**	**+3.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
CN2				AMB	AMB		
	comp=Z,330nm,6.0s						
CN2				LR	LR		
	comp=N,430nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=E,240nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=Z,200nm,19.0s,MS4.2						
SONM	**Songino Array**	**51.73**	**3**	P	**P**	**17 20 50.2**	**+1.1**
	comp=Z,15nm,1.1s,mb4.8,baz=184,slow=8.4,SNR=27						
SONM				PcP	PcP	17 22 01.3	-0.9
	comp=Z,3.1nm,0.8s,baz=183,slow=4.3,SNR=5.3						
SONM				ScP		17 25 57.8	
	comp=Z,0.5nm,0.7s,baz=194,slow=5.1,SNR=4.1						
SONM	**Songino Array**	**51.73**	**3**	P	**P**	**17 20 50.2**	**+1.1**
SONM				PcP	PcP	17 22 01.3	-0.9
SONM				ScP		17 25 57.8	
MJAR	**Matsushiro Arr**	**51.80**	**36**	P	**P**	**17 20 50.4**	**+0.7**
	comp=Z,4.4nm,0.8s,mb4.4,baz=232,slow=7.0,SNR=13						
ULN	**Ulaanbaatar**	**51.80**	**3**	*e*P	**P**	**17 20 48.0**	**-1.5**
	comp=Z,10nm,1.1s,mb4.7						
ULN	**Ulaanbaatar**	**51.80**	**3**	*e*P	**P**	**17 20 48.0**	**-1.6**
ULN				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
ARMA	**Armidale**	**52.40**	**126**	*e*P	**P**	**17 20 55.8**	**+1.4**
KZA	**Kyzart**	**52.59**	**334**	P	**P**	**17 20 55.8**	**+0.2**
	SNR=11						
TKM2	**Tokmak 2**	**53.12**	**335**	P	**P**	**17 20 58.8**	**-0.8**
	SNR=13						
KBK	**Karagaybulak**	**53.19**	**334**	P	**P**	**17 20 59.4**	**-0.7**
	SNR=9.5						
AML	**Almayashu**	**53.33**	**333**	P	**P**	**17 21 00.2**	**-1.0**
	SNR=11						
FRU	**Bishkek**	**53.47**	**334**	*e*P	**P**	**17 21 02.0**	**-0.2**
EKS2	**Erkin-Say**	**53.71**	**333**	P	**P**	**17 21 03.3**	**-0.7**
	SNR=14						
MDJ	**Mudanjiang**	**53.81**	**23**	P	**P**	**17 21 03.3**	**-1.4**
MDJ				AP	pP	17 21 14.9	-1.9
MDJ				XP	sP	17 21 19.8	-2.0
MDJ				PCP	PcP	17 22 08.6	-1.4
MDJ				PP	PP	17 23 02.9	-4.5
MDJ				SCP		17 26 02.8	
MDJ				PCS		17 26 08.3	
MDJ				S	**S**	**17 28 35.0**	**+0.4**
MDJ				XS		17 28 54.3	
MDJ				SCS	ScS	17 30 47.8	+0.9
MDJ				SS	SS	17 32 13.9	-1.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.0s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,150nm,3.7s						
MDJ				LR	LR		
	comp=N,120nm,33.0s						
MDJ				LR	LR		
	comp=E,130nm,22.7s						
MDJ				LR	LR		
	comp=Z,180nm,22.0s						
USP	**Ospenovka**	**53.87**	**334**	P	**P**	**17 21 03.5**	**-1.6**
	SNR=8.1						
MKAR	**Makanchi Array**	**53.98**	**342**	P	**P**	**17 21 04.9**	**-1.0**
	comp=Z,10nm,0.8s,mb4.8,baz=152,slow=8.9,SNR=56						
ZAK	**Zakamensk**	**54.22**	**360**	*e*P	**P**	**17 21 08.2**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
OPO	**Ambohidratompo**	**56.80**	**251**	P	**P**	**17 21 27.0**	**+0.4**
	comp=Z,3.0nm,1.0s,mb4.3,baz=84,slow=10,SNR=3.4						
KURK	**Kurchatov**	**58.58**	**342**	*e*P	**P**	**17 21 36.3**	**-2.4**
	comp=Z,24nm,1.0s,mb5.2						
KURK	**Kurchatov**	**58.58**	**342**	*e*P	**P**	**17 21 36.3**	**-2.4**
KURK				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
NVS	**Novosibirsk**	**61.04**	**347**	*e*P	**P**	**17 21 53.8**	**-1.7**
NVS				*e*S	**S**	**17 30 08.6**	**-0.9**
NVS				pmax	pmax		
	comp=N,15nm,1.5s						
NVS				pmax	pmax		
	comp=Z,18nm,1.5s,mb5.0						
NVS				pmax	pmax		
	comp=E,12nm,1.4s						
NVS				smax			
	comp=E,26nm,2.2s						
YSS	**Yuzh-Sakhalins**	**61.47**	**30**	*e*P	**P**	**17 22 02.0**	**+3.5**
BOD	**Bodaibo**	**62.26**	**6**	*e*P	**P**	**17 22 02.0**	**-1.6**
BOD				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.9						
KAMS	**Al Khamasin**	**62.63**	**295**	P	**P**	**17 22 04.7**	**-2.0**
KBD	**Kabd**	**62.83**	**306**	*e*P	**P**	**17 22 07.0**	**-0.8**
KBD				AMb	AMB	17 22 12.2	
	comp=Z,187nm,1.0s						
RDF	**Al-Radifah**	**62.85**	**305**	*e*P	**P**	**17 22 07.0**	**-1.1**
RDF				AMb	AMB	17 22 12.2	
	comp=Z,102nm,1.2s,mb5.8						
DJNS	**Zahran al Janu**	**62.91**	**292**	P	**P**	**17 22 09.3**	**+0.7**
UMR	**Umm Al-Rimmam**	**62.95**	**306**	*e*P	**P**	**17 22 07.6**	**-1.1**
UMR				AMb	AMB	17 22 12.8	
	comp=Z,78nm,0.9s,mb5.8						
MZLS	**Mizel**	**63.16**	**299**	P	**P**	**17 22 13.4**	**+3.2**
NAY	**Al-Naaiem**	**63.22**	**306**	*e*P	**P**	**17 22 09.1**	**-1.4**
NAY				AMb	AMB	17 22 14.2	
	comp=Z,32nm,0.7s,mb5.5						
BVAR	**Borovoye Array**	**63.32**	**338**	P	**P**	**17 22 08.6**	**-2.2**
	comp=Z,5.7nm,0.6s,mb4.9,baz=142,slow=9.3,SNR=3.9						
MIB	**Mutribah**	**63.35**	**306**	*e*P	**P**	**17 22 10.2**	**-1.1**
MIB				AMb	AMB	17 22 15.6	
	comp=Z,76nm,0.8s,mb5.9						
BRVK	**Borovoye**	**63.39**	**338**	*e*P	**P**	**17 22 09.1**	**-2.1**
	comp=Z,7.8nm,1.1s,mb4.8						
BRVK	**Borovoye**	**63.39**	**338**	*e*P	**P**	**17 22 09.1**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
TATS	**Tathlith**	**63.43**	**294**	P	**P**	**17 22 15.1**	**+3.1**
CHKZ	**Chkalovo**	**63.76**	**339**	*e*P	**P**	**17 22 11.0**	**-2.6**
	comp=Z,32nm,1.1s,mb5.3						
CHKZ	**Chkalovo**	**63.76**	**339**	*e*P	**P**	**17 22 11.0**	**-2.6**
CHKZ				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.3						
AFFS	**‘Afif**	**65.06**	**299**	P	**P**	**17 22 22.7**	**+0.1**
BLJS	**Baljurashi**	**65.23**	**294**	P	**P**	**17 22 24.7**	**+1.0**
KMBO	**Kilima Mbogo**	**66.19**	**271**	P	**P**	**17 22 30.1**	**+0.1**
	comp=Z,1.5nm,0.7s,mb4.2,baz=52,slow=20,SNR=4.2						
AKTO	**Aktyubinsk**	**66.82**	**330**	P	**P**	**17 22 32.0**	**-1.3**
	comp=Z,3.0nm,0.7s,mb4.4,baz=138,slow=7.9,SNR=7.3						
BHD	**Baghdad**	**66.98**	**309**	*e*x	x	17 22 35.0	
HILS	**Ha’il**	**67.12**	**302**	P	**P**	**17 22 39.5**	**+3.9**
KBRS	**Khaybar**	**68.83**	**299**	P	**P**	**17 22 50.9**	**+4.5**
YAK	**Yakutsk**	**68.90**	**13**	*e*P	**P**	**17 22 44.6**	**-1.5**
	comp=Z,46nm,1.4s,mb5.2						
YAK	**Yakutsk**	**68.90**	**13**	*e*P	**P**	**17 22 44.6**	**-1.5**
YAK				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.2						
MSL	**Mosul**	**69.08**	**311**	*e*x	x	17 22 48.5	
ORR	**Orenburg**	**69.18**	**330**	⇑*i*P	**P**	**17 22 47.4**	**-0.6**
ORR				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.9						
MAW	**Mawson**	**69.20**	**195**	*e*P	**P**	**17 22 47.7**	**-0.1**
	comp=Z,4.8nm,1.0s,mb4.4						
MAW	**Mawson**	**69.20**	**195**	P	**P**	**17 22 47.7**	**-0.2**
	comp=Z,3.2nm,0.7s,mb4.4,baz=34,slow=6.7,SNR=8.8						
MAW				LR	LR	17 47 28.4	
	comp=Z,268nm,18.5s,MS4.5,baz=62,slow=31						
MAW	**Mawson**	**69.20**	**195**	*e*P	**P**	**17 22 47.7**	**-0.1**
MAW				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GNI	**Garni**	**69.39**	**316**	P	**P**	**17 22 50.1**	**+0.6**
	comp=Z,23nm,0.9s,mb5.1,baz=343,slow=1.3,SNR=3.3						
GNI	**Garni**	**69.39**	**316**	*e*P	**P**	**17 22 48.9**	**-0.6**
	comp=Z,52nm,1.1s,mb5.4						
GNI	**Garni**	**69.39**	**316**	*e*P	**P**	**17 22 48.9**	**-0.6**
GNI				pmax	pmax		
	comp=Z,52nm,1.1s						
DGRG	**David-gareji**	**69.51**	**317**	P	**P**	**17 22 53.4**	**+3.2**
MTA	**Mtatsminda**	**70.00**	**317**	P	**P**	**17 22 53.2**	**-0.1**
TI2	**Plekhanov**	**70.05**	**317**	*i*	**P**	**17 22 52.6**	**-0.9**
TI2				pmax	pmax		
	comp=Z,30nm,0.4s,mb5.6						
TI2				pmax	pmax		
	comp=Z,80nm,0.6s,mb5.8						
TBLG	**Delisi**	**70.06**	**317**	P	**P**	**17 22 53.3**	**-0.2**
UMJS	**Umm Lajj**	**70.39**	**298**	P	**P**	**17 23 01.0**	**+5.1**
ARU	**Arti**	**70.48**	**335**	*e*P	**P**	**17 22 53.4**	**-2.4**
	comp=Z,18nm,1.0s,mb5.0						
ARU	**Arti**	**70.48**	**335**	⇓*i*P	**P**	**17 22 55.2**	**-0.6**
ARU				*e*		17 25 30.5	
ARU				*e*PPP	PPP	17 27 11.8	-2.9
ARU				*e*S	S	17 32 05.5	+1.1
ARU				*e*SS	SS	17 36 38.8	+1.0
ARU				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.9						
TBKS	**Tabuk**	**71.81**	**301**	P	**P**	**17 23 08.6**	**+4.3**
QURS	**Qurayyt al Mil**	**72.02**	**305**	P	**P**	**17 23 09.6**	**+4.1**
KIV	**Kislovodsk**	**72.35**	**319**	*e*P	**P**	**17 23 07.3**	**+0.1**
	comp=Z,66nm,1.0s,mb5.5						
KIV	**Kislovodsk**	**72.35**	**319**	*d i*P	**P**	**17 23 07.5**	**+0.3**
KIV				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
GOF	**Gofitskoye**	**72.58**	**320**	*e*P	**P**	**17 23 07.1**	**-1.5**
AYUS	**‘Aynunah**	**72.89**	**301**	P	**P**	**17 23 11.2**	**+0.4**
AYUS	**‘Aynunah**	**72.89**	**301**	P	**P**	**17 23 11.2**	**+0.4**
BDAS	**Al Bad‘**	**73.10**	**301**	P	**P**	**17 23 16.2**	**+4.1**
JMOS	**Jabal al Moall**	**73.27**	**302**	P	**P**	**17 23 16.1**	**+3.1**
TAYS	**Tayyib Ism**	**73.32**	**301**	P	**P**	**17 23 15.4**	**+2.1**
ALWS	**Ilw as Safayha**	**73.35**	**302**	P	**P**	**17 23 16.1**	**+2.7**
HAQS	**Haql**	**73.40**	**302**	P	**P**	**17 23 17.5**	**+3.8**
HAQS	**Haql**	**73.40**	**302**	P	**P**	**17 23 17.5**	**+3.8**
SOC	**Sochi**	**74.19**	**317**	*e*P	**P**	**17 23 16.8**	**-1.3**
SOC				*e*		17 23 36.8	
SOC				*e*		17 26 10.4	
SOC				*e*S	S	17 32 48.9	+1.9
SOC				*e*		17 33 21.6	
SOC				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.3						
SOC				MLR	MLR		
	comp=Z,289nm,19.0s,MS4.6						
ANN	**Anapa**	**76.16**	**318**	*e*P	**P**	**17 23 21.6**	**-7.7**
ANN				*e*		17 23 27.7	
ANN				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.5						
CSS	**Prodhromos**	**76.21**	**307**	*e*P	**P**	**17 23 29.1**	**-0.7**
	comp=Z,39nm,1.0s,mb5.3						
SYO	**Syowa Base**	**77.07**	**199**	⇑PcP	PcP	17 23 42.6	-2.5
LBTB	**Lobatse**	**77.30**	**245**	P	**P**	**17 23 35.7**	**-0.5**

VOR	Voronezh	77.62	325	eP	P	17 23 37.0	-0.4
VOR				pmax	pmax		
	comp=N,80nm,1.3s						
VOR				pmax	pmax		
	comp=Z,110nm,1.3s,mb5.6						
BOSA	Boshof	77.72	242	P	P	17 23 37.5	-0.9
	comp=Z,4.8nm,0.8s,mb4.5,baz=89,slow=6.3,SNR=6.6						
BOSA				LR	LR	17 53 22.3	
	comp=Z,268nm,20.5s,MS4.5,baz=177,slow=32						
BOSA	Boshof	77.72	242	eP	P	17 23 37.4	-1.0
ANTO	Ankara	77.92	312	eP	P	17 23 38.2	-1.1
	comp=Z,7.5nm,0.8s,mb4.7						
ANTO	Ankara	77.92	312	eP	P	17 23 38.2	-1.1
ANTO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
VNDA	Vanda	79.50	169	eP	P	17 23 45.5	-1.8
	comp=Z,5.8nm,1.0s,mb4.5						
VNDA	Vanda	79.50	169	eP	P	17 23 45.5	-1.7
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
OBN	Obninsk	80.36	328	eP	P	17 23 52.4	+0.2
	comp=Z,94nm,1.2s,mb5.6						
OBN	Obninsk	80.36	328c	iP	P	17 23 53.0	+0.8
OBN				pmax	pmax		
	comp=Z,128nm,1.4s,mb5.7						
SBA	Scott Base	80.58	169	eP	P	17 23 52.2	-0.8
	comp=Z,4.7nm,0.8s,mb4.5						
SBA	Scott Base	80.58	169	eP	P	17 23 52.2	-0.8
SBA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
KLMR	Klimovskoe	81.18	334c	iP	P	17 23 59.7	+3.3
KLMR				pmax	pmax		
	comp=Z,100nm,1.6s,mb5.5						
IDI	Anoyia	83.03	306	P	P	17 24 07.3	+0.8
	comp=Z,18nm,0.8s,mb5.2,baz=145,slow=2.8,SNR=6.1						
AKASG	Malin Array Be	83.22	322	P	P	17 24 05.8	-1.3
	comp=Z,7.5nm,0.8s,mb4.8,baz=88,slow=5.0,SNR=29						
AKASG	Malin Array Be	83.22	322	P	P	17 24 05.8	-1.3
VRI	Vrincioaia	83.70	317	⇑P	P	17 24 10.8	+1.1
VRI	Vrincioaia	83.70	317	⇑P	P	17 24 10.8	+1.1
BILL	Bilibino	83.89	20	iP	P	17 24 11.4	+1.3
MLR	Muntele Rosu	84.16	316	P	P	17 24 12.9	+0.9
	comp=Z,45nm,1.0s,mb5.5,baz=42,slow=4.0,SNR=10.0						
TSUM	Tsumeb	84.79	251	eP	P	17 24 16.4	+0.6
BURAR	Bucovina Array	85.08	318	⇑P	P	17 24 18.8	+2.3
BURAR	Bucovina Array	85.08	318	⇑P	P	17 24 18.8	+2.3
VAY	Valandovo	85.83	312	eP	P	17 24 19.3	-1.1
VAY	Valandovo	85.83	312	eP	P	17 24 19.3	-1.1
QSPA	South Pole Qui	85.92	180	eP	P	17 24 20.2	+0.3
	comp=Z,8.5nm,0.9s,mb5.0						
VSU	Vasula	86.52	329	iP	P	17 24 23.9	+0.6
DRGR		86.61	317	⇑P	P	17 24 28.0	+3.9
DRGR		86.61	317	⇑P	P	17 24 28.0	+3.9
BIA	Bitola	86.71	311	eP	P	17 24 20.2	-4.5
BIA	Bitola	86.71	311	eP	P	17 24 20.2	-4.5
SKO	Skopje	86.76	312	eP	P	17 24 22.3	-2.7
SKO	Skopje	86.76	312	eP	P	17 24 22.3	-2.6
KWP	Kalwaria	87.08	320	eP	P	17 24 26.8	+0.5
KWP				e		17 24 30.3	
KWP	Kalwaria	87.08	320	eP	P	17 24 26.8	+0.5
OHR	Ohrid	87.12	311	eP	P	17 24 22.5	-4.2
KOLS	Kolonicke sedl	87.25	319	eP	P	17 24 28.6	+1.5
KOLS				e		17 24 32.2	
FINES	FINESS Array B	87.53	332	P	P	17 24 28.2	+0.1
	comp=Z,6.6nm,0.8s,mb4.9,baz=45,slow=11,SNR=13						
SUW	Suwalki	87.55	324	eP	P	17 24 29.1	+0.6
SUW				e		17 24 32.5	
SUW	Suwalki	87.55	324	eP	P	17 24 29.1	+0.6
KAF	Kangasniemi	87.58	333	ep	P	17 24 28.6	+0.2
	comp=Z,14nm,1.0s,mb5.2						
KAF	Kangasniemi	87.58	333	eP	P	17 24 28.6	+0.2
KAF				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.2						
CRVS	Cervenica-Dubn	87.77	319	eP	P	17 24 30.1	+0.4
CRVS				e		17 24 36.0	
CRVS				ePP	PP	17 27 59.9	+1.8
STHS	Stebnicka Huta	87.99	320	eP	P	17 24 31.5	+0.8
STHS				e		17 24 35.4	
DIVS	Divcibare	88.11	314	⇑iP	P	17 24 35.4	+4.0
KECS	Kecovo	88.35	319	eP	P	17 24 32.7	+0.3
KECS				e		17 24 36.4	
PSZ	Piszkesteto	88.67	318	eP	P	17 24 35.3	+1.3
	comp=Z,28nm,1.1s,mb5.5						
PSZ	Piszkesteto	88.67	318	eP	P	17 24 35.3	+1.3
PSZ				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.5						
OJC	Ojcow	89.03	320	eP	P	17 24 39.4	+3.8
VYHS	Vyhne	89.44	319	e	P	17 24 41.7	+4.1
ARCES	ARCESS Array B	89.57	340	LR	LR	18 08 06.4	
	comp=Z,223nm,18.5s,MS4.6,baz=353,slow=38						
SRO2	Moca	89.65	318	e	P	17 24 43.5	+4.9
SRO	Srobarova	89.71	318	eP	P	17 24 41.5	+2.6
SRO				e		17 24 44.0	
SRO1	Iza	89.76	318	e	P	17 24 44.1	+5.0
OKC	Ostrava-Krasne	90.04	320	eP	P	17 24 44.4	+4.0
SMOL	Smolenice	90.38	318	eP	P	17 24 41.6	-0.4
MORC	Moravsky Berou	90.43	320	eP	P	17 24 41.8	-0.4
	comp=Z,28nm,1.1s,mb5.5						
MORC	Moravsky Berou	90.43	320	eP	P	17 24 41.8	-0.4
MORC				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.5						
ZST	Bratislava	90.56	318	eP	P	17 24 47.0	+4.1
SNAA	Sanae	91.26	198	P	P	17 24 47.2	+1.6
SNAA	Sanae	91.26	198		sP	17 25 05.5	+2.6
DPC	Dobruska-Polom	91.26	320	eP	P	17 24 50.4	+4.3
KSP	Ksiaz	91.32	321	eP	P	17 24 47.4	+1.1
KSP				e		17 24 51.2	
UPC	Upice	91.47	320	eP	P	17 24 51.3	+4.2
ARSA	Arzberg	91.55	317	⇑eP	P	17 24 51.8	+4.3
	comp=Z,16nm,1.2s,mb5.2						
TREC	Trest	91.72	319	eP	P	17 24 52.4	+4.2
OBKA	Obir	92.16	316	⇑iP	P	17 24 54.3	+4.0
	comp=Z,24nm,1.5s,mb5.3						
OBKA	Obir	92.16	316	⇑P	P	17 24 54.3	+4.0
	comp=Z,24nm,1.5s,mb5.3						
PRU	Pruhonice	92.38	320	eP	P	17 24 51.5	+0.3
PVCC	Panska Ves	92.39	320	eP	P	17 24 55.5	+4.2
MOA	Molln	92.43	318	⇑eP	P	17 24 55.2	+3.7
	comp=Z,6.1nm,1.1s,mb4.8						
BRG	Berggiesshubel	92.81	321	eP	P	17 24 53.6	+0.4
	comp=Z,3.3nm,0.8s,mb4.8						
BRG	Berggiesshubel	92.81	321	eP	P	17 24 53.6	+0.4
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.8						
GERES	GERESS Array B	92.86	319	P	P	17 24 54.2	+0.7
	comp=Z,2.0nm,0.8s,mb4.6,baz=63,slow=6.0,SNR=7.9						
VNA2	Neumayer--Watz	92.89	198	P	P	17 24 56.3	+3.2
KHC	Kasperske Hory	92.96	319	eP	P	17 24 53.6	-0.3
HFS	Hagfors	93.37	330	P	P	17 24 55.5	0.0
	comp=Z,2.4nm,0.8s,mb4.7,baz=27,slow=3.2,SNR=3.7						
CLL	Collm	93.42	321	P	P	17 25 00.0	+4.0
	comp=Z,logA/T=0.8,mb5.0						
CLL	Collm	93.42	321	eP	P	17 25 00.0	+4.0
	comp=Z,7.0nm,1.0s,mb5.0						
CLL	Collm	93.42	321	eP	P	17 25 00.0	+4.0
CLL				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.0						
VNA3	Neumayer Olymp	93.46	197	P	P	17 24 57.9	+2.2
NKC	Novy Kostel	93.74	320	eP	P	17 25 01.9	+4.5
MOX	Moxa	94.28	320	eP	P	17 25 04.0	+4.2
GRA1	Grafenberg Arr	94.52	319	eP	P	17 25 00.5	-0.4
	comp=Z,13nm,1.1s,mb5.3						
GRA1				epP	pP	17 25 05.4	-8.5
GRF	Grafenberg Arr	94.52	319	eP	P	17 25 00.5	-0.4
	comp=Z,13nm,1.1s,mb5.3						
GRF				epP	pP	17 25 05.4	-8.5
GRF	Grafenberg Arr	94.52	319	eP	P	17 25 00.5	-0.4
GRF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.3						
GRF	Grafenberg Arr	94.52	319	eP	P	17 25 00.5	-0.4
GRF				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.3						
MOTA	Moosalm	94.55	317	⇓eP	P	17 25 05.3	+4.2
	comp=Z,8.4nm,1.1s,mb5.1						
MOTA	Moosalm	94.55	317	⇓eP	P	17 25 05.3	+4.2
	comp=Z,8.4nm,1.1s,mb5.1						
MOTA	Moosalm	94.55	317	⇓eP	P	17 25 05.3	+4.1
MOTA				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb5.1						
NB2	NORSAR Subarra	94.61	331	P	P	17 25 00.8	-0.3
	comp=Z,7.8nm,1.0s,mb5.1,baz=92,slow=4.6						
NOA	NORSAR Array B	94.61	331	P	P	17 25 00.9	-0.2
	comp=Z,3.2nm,0.9s,mb4.8,baz=91,slow=4.5,SNR=5.2						
NOA				LR	LR	18 11 13.8	
	comp=Z,111nm,18.5s,MS4.4,baz=100,slow=38						
NAO	NORSAR Subarra	94.80	331	P	P	17 25 00.8	-1.2
	comp=Z,7.8nm,1.0s,mb5.1						
NAO	NORSAR Subarra	94.80	331	P	P	17 25 00.8	-1.2
NAO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb5.1						
KONO	Kongsberg	95.43	329	P	P	17 25 06.2	+1.3
ILAR	Eielson Array	101.96	24	PKiKP		17 29 55.1	
	comp=Z,0.2nm,0.7s,baz=290,slow=3.4,SNR=4.4						
MOD	Modoc	125.77	40	PKP	PKPdf	17 30 41.1	-0.3
WVOR	Wild Horse Val	126.53	38	PKP	PKPdf	17 30 44.6	+1.7
NVAR	Mina Array Bea	128.89	42	PKP	PKPdf	17 30 50.8	+3.2
	comp=Z,0.8nm,0.6s,baz=274,slow=2.9,SNR=12						
ELK	Elko	129.58	38	ePKP	PKPdf	17 30 51.2	+2.4
ULM	Lac du Bonnet	131.16	16	PKP	PKPdf	17 30 52.4	+0.9
	comp=Z,3.0nm,0.5s,baz=349,slow=1.7,SNR=9.5						
ULM	Lac du Bonnet	131.16	16	PKP	PKPdf	17 30 52.4	+0.9
DUG	Dugway	131.39	37	ePKPdf	PKPdf	17 30 55.1	+2.8
PDAR	Pinedale Array	131.56	32	PKP	PKPdf	17 30 54.0	+1.5
	comp=Z,1.0nm,0.5s,baz=326,slow=0.7,SNR=11						
PDAR				SKPbc		17 34 18.4	
	comp=Z,1.2nm,1.0s,slow=1.8,SNR=5.9						
MSU	Marysvale	132.81	39	ePKPdf	PKPdf	17 30 58.0	+3.0
RSSD	Black Hills	133.31	27	ePKPdf	PKPdf	17 30 56.1	+0.3
WMOK	Wichita Mounta	143.15	31	ePKPdf	PKPdf	17 31 11.5	-2.3
TXAR	Lajitas Array	144.04	43	PKP	PKPdf	17 31 15.8	+0.3
	comp=Z,1.6nm,0.5s,baz=297,slow=2.8,SNR=9.4						
TXAR				SKPbc		17 34 55.5	
	comp=Z,1.6nm,0.8s,baz=225,slow=1.3,SNR=5.7						
TXAR	Lajitas Array	144.04	43	PKP	PKPdf	17 31 15.8	+0.3
TXAR				SKPbc		17 34 55.5	
CPUP	Villa Florida	144.53	211	ePKPdf	PKPdf	17 31 16.8	+0.3
WCI	Wyandotte Cave	144.84	13	ePKPdf	PKPdf	17 31 16.5	-0.2
BAO	Brasilia Array	145.63	235	PKPdf	PKPdf	17 31 21.0	+2.4
BDFB	Brasilia	145.65	235	PKPbc	PKPbc	17 31 20.9	+1.5
	comp=Z,5.2nm,0.4s,baz=136,slow=3.3,SNR=9.5						
JCT	Junction City	145.75	37	ePKP	PKPdf	17 31 20.5	+2.0
MIAR	Mount Ida	145.79	25	ePKPdf	PKPdf	17 31 19.9	+1.6
WVT	Waverly	146.43	17	ePKPdf	PKPdf	17 31 20.7	+1.2
TZTN	Tazewell	147.03	10	ePKPdf	PKPdf	17 31 18.5	-2.0
TZTN				ePKPbc	PKPdf	17 31 23.4	+3.0
OXF	Oxford	147.42	20	ePKPdf	PKPdf	17 31 22.6	+1.5
SWET	Sewanee	147.80	15	ePKPdf	PKPdf	17 31 23.7	+2.0
CPCT	Cooper Cave	147.90	12	ePKPbc	PKPdf	17 31 25.9	+4.0
JSC	Jenkinsville	149.61	8	ePKPdf	PKPdf	17 31 25.3	+0.7
JSC				ePKPbc	PKPdf	17 31 30.3	+5.6
GOGA	Godfrey	150.09	12	ePKPbc	PKPdf	17 31 32.0	+6.6
LPAZ	La Paz	158.14	202	PKPab	PKPab	17 32 12.1	-1.1
	comp=Z,1.0nm,0.7s,baz=153,slow=1.4,SNR=3.6						

*BJI **19** 17:22:12.7, 1.67N×96.94E, h35^{km}, mB5.3, mb4.7, Ms4.7, Msz4.5*
*IDC **19** 17:22:13.0±0.9, 2.16N×96.79E, mb4.3/14, mb1 4.4/14, mb1mx4.3/19, mbtmp4.3/14, Error ellipse: s-maj=41.1km s-min=16.3km az=49.0*
*MOS **19** 17:22:16.3±0.7, 2.23N×96.88E, h33^{km}, mb4.8/14, Error ellipse: s-maj=17.5km s-min=9.1km az=106.5*
*NEIC **19** 17:22:17.5±0.3, 2.13N×96.78E, h30^{km}, mb4.6/14, Error ellipse: s-maj=9.7km s-min=5.3km az=45.0*
ISC 19 17:22:16.3±0.5**, 2.16N**±0.07×**96.86E**±0.07**, h33**^{km}**, n72, σ0^{s}98**/71**, mb4.5**/33**, 2C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	4.89	50	ePn	Pn	17 23 31.3	+1.6
KSM	Kuching	13.46	93	Pn	P	17 25 27.5	0.0
KMI	Kunming	23.52	13	P	P	17 27 26.8	+2.3
	12nm,0.9s,mb4.3						
KMI	Kunming	23.52	13	P	P	17 27 26.8	+2.3
KMI				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.3						
SHL	Shillong	23.76	349	eP	P	17 27 26.0	-0.8
PKI	Pulchoki	27.54	338	eP	P	17 28 02.8	+0.4
GUN	Gumba	27.67	339	eP	P	17 28 04.1	+0.5
DMN	Daman	27.69	337	eP	P	17 28 03.6	-0.1
	comp=Z,15nm,0.8s,mb4.7						
KKN	Kakani	27.79	338	eP	P	17 28 04.3	-0.3
	comp=Z,30nm,1.1s,mb4.8						
LSA	Lhasa	27.92	349	P	P	17 28 07.4	+1.6
LSA	Lhasa	27.92	349	eP	P	17 28 05.5	-0.3
	comp=Z,11nm,0.9s,mb4.5						
LSA	Lhasa	27.92	349	eP	P	17 28 05.5	-0.3
LSA				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
GKN	Gorkha	28.23	337	eP	P	17 28 08.6	0.0
	comp=Z,11nm,0.7s,mb4.6						
KOLN	Koldanda	28.45	335	eP	P	17 28 10.7	+0.2
	comp=Z,13nm,0.6s,mb4.7						
ENH	Enshi	30.41	22	eP	P	17 28 26.3	-1.7
XAN	Xi'an	33.66	18	P	P	17 28 54.9	-1.4
FITZ	Fitzroy Crossi	34.76	127	P	P	17 29 05.5	-0.4
	comp=Z,5.2nm,0.9s,mb4.5,baz=265,slow=12,SNR=3.6						
GTA	Gaotai	37.17	4	P	P	17 29 26.3	+0.1
GTA				AP	pP	17 29 35.8	-0.1
GTA				XP	sP	17 29 39.9	-0.3
GTA				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
WRA	Warramunga Arr	42.83	123	P	P	17 30 13.7	+0.4
	comp=Z,3.8nm,0.9s,mb4.1,baz=300,slow=9.0,SNR=16						
WB2	Warramunga Arr	42.84	123	eP	P	17 30 13.3	-0.1
ASPA	Alice Springs	44.24	128	eP	P	17 30 25.0	+0.3
UCH	Uchtor	44.64	336	P	P	17 30 29.0	+1.3
	SNR=9.5						
TKM2	Tokmak 2	44.80	338	P	P	17 30 29.9	+0.9
	SNR=5.9						
KBK	Karagaybulak	44.83	337	P	P	17 30 31.1	+1.9
	SNR=14						
AML	Almayashu	44.89	336	P	P	17 30 32.9	+3.2
	SNR=9.3						
EKS2	Erkin-Say	45.30	336	P	P	17 30 34.2	+1.2
	SNR=7.3						
USP	Ospenovka	45.52	337	P	P	17 30 35.4	+0.7
	SNR=12						
MKAR	Makanchi Array	46.23	346	P	P	17 30 40.1	-0.1
	comp=Z,12nm,0.7s,mb4.9,baz=160,slow=8.0,SNR=51						
SONM	Songino Array	46.24	9	P	P	17 30 40.7	+0.4
	comp=Z,6.1nm,0.8s,mb4.6,baz=191,slow=7.9,SNR=45						
SONM				PcP	PcP	17 32 16.3	+0.4
	comp=Z,1.3nm,0.7s,baz=189,slow=3.6,SNR=4.6						
ULN	Ulaanbaatar	46.37	9	eP	P	17 30 41.6	+0.2
	comp=Z,5.7nm,1.0s,mb4.5						
ULN	Ulaanbaatar	46.37	9	eP	P	17 30 41.6	+0.3
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
ZAK	Zakamensk	48.35	5	eP	P	17 30 56.9	+0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
KURK	Kurchatov	50.78	345	eP	P	17 31 15.2	-0.2
	comp=Z,5.4nm,0.8s,mb4.5						
KURK	Kurchatov	50.78	345	eP	P	17 31 15.2	-0.2
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
HIA	Hailar	50.84	19	eP	P	17 31 16.0	+0.1
MDJ	Mudanjiang	51.20	30	eP	P	17 31 19.3	+0.6
MJAR	Matsushiro Arr	51.22	43	P	P	17 31 18.5	-0.4
	comp=Z,2.0nm,0.7s,mb4.2,baz=206,slow=6.4,SNR=6.7						
PMG	Port Moresby	51.41	104	eP	P	17 31 20.5	-0.2
	comp=Z,13nm,0.8s,mb4.9						
PMG	Port Moresby	51.41	104	eP	P	17 31 20.5	-0.1
PMG				pmax	pmax		
	comp=Z,13nm,0.8s						
CTA	Charters Tower	53.23	117	eP	P	17 31 34.6	+0.4
	comp=Z,4.8nm,0.9s,mb4.4						
CTA	Charters Tower	53.23	117	eP	P	17 31 34.6	+0.4
CTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CTAO	Charters Tower	53.23	117	eP	P	17 31 34.5	+0.3
	comp=Z,7.7nm,0.9s,mb4.6						
CTAO	Charters Tower	53.23	117	eP	P	17 31 34.6	+0.4
CTAO				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.7						
NVS	Novosibirsk	53.68	350	iP	P	17 31 35.4	-1.7
NVS				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
NVS				pmax	pmax		
	comp=N,6.0nm,0.8s						
STKA	Stephens Creek	54.25	132	P	P	17 31 41.9	+0.3
	comp=N,2.8nm,0.8s,mb4.2,baz=324,slow=5.6,SNR=6.1						
BVAR	Borovoye Array	55.24	341	P	P	17 31 47.3	-1.2
	comp=N,2.1nm,0.7s,mb4.3,baz=143,slow=7.4,SNR=12						
BRVK	Borovoye	55.30	341	eP	P	17 31 47.0	-1.9
	comp=N,2.8nm,0.8s,mb4.3						
BRVK	Borovoye	55.30	341	eP	P	17 31 47.0	-1.9
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KLR	Kul'dur	55.55	27	eP	P	17 31 50.7	-0.1
CHKZ	Chkalovo	55.71	341	eP	P	17 31 51.0	-0.9
	comp=Z,9.9nm,1.1s,mb4.8						
CHKZ	Chkalovo	55.71	341	eP	P	17 31 51.0	-0.9
CHKZ				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
AKTO	Aktyubinsk	58.23	332	P	P	17 32 08.5	-1.3
	comp=Z,3.3nm,0.9s,mb4.4,baz=112,slow=6.0,SNR=5.9						
ARU	Arti	62.17	337	eP	P	17 32 35.5	-1.1
	comp=Z,4.9nm,1.1s,mb4.5						
ARU	Arti	62.17	337	eP	P	17 32 35.5	-1.2
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
ARU	Arti	62.17	337	eP	P	17 32 35.5	-1.2
ARU				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.6						
HNR	Honiara	63.88	102	eP	P	17 32 47.5	-1.2
	comp=Z,59nm,1.4s,mb5.4						
HNR	Honiara	63.88	102	eP	P	17 32 47.5	-1.2
HNR				pmax	pmax		
	comp=Z,59nm,1.4s,mb5.4						
YAK	Yakutsk	64.60	16	eP	P	17 32 51.3	-1.2
	comp=Z,24nm,0.9s,mb5.2						
YAK	Yakutsk	64.60	16	eP	P	17 32 50.4	-2.1
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
SANT	Santorini	73.78	307	P	P	17 33 46.5	-2.9
AKASG	Malin Array Be	74.30	322	P	P	17 33 51.4	-0.8
	comp=N,1.9nm,0.7s,mb4.1,baz=92,slow=5.3,SNR=7.2						
FINES	FINESS Array B	79.00	332	P	P	17 34 18.4	0.0
	comp=N,2.8nm,0.7s,mb4.3,baz=117,slow=8.5,SNR=6.0						
FINES	FINESS Array B	79.00	332	P	P	17 34 18.4	0.0
KAF	Kangasniemi	79.08	333	ep	P	17 34 18.5	-0.3
	comp=N,4.8nm,0.9s,mb4.4						
KAF	Kangasniemi	79.08	333	eP	P	17 34 18.5	-0.3
KAF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
SYO	Syowa Base	80.81	198	⇑P	P	17 34 28.8	+0.8
SYO	Syowa Base	80.81	198	⇑eP	P	17 34 28.8	+0.8
ARCES	ARCESS Array B	81.52	340	P	P	17 34 32.1	+0.4
	comp=Z,2.0nm,0.8s,mb4.1,baz=101,slow=4.6,SNR=4.3						
GERES	GERESS Array B	83.87	319	P	P	17 34 45.1	+0.9
	comp=Z,1.5nm,0.8s,mb4.2,baz=104,slow=5.5,SNR=7.2						
NOA	NORSAR Array B	86.01	331	P	P	17 34 54.9	+0.4
	comp=Z,1.3nm,0.8s,mb4.2,baz=90,slow=5.3,SNR=4.2						
DAVOX	Davos	86.37	317	P	P	17 34 58.0	+1.5
	comp=Z,3.4nm,0.6s,mb4.8,baz=112,slow=7.0,SNR=5.3						
NVAR	Mina Array Bea	128.20	35	PKP	PKPdf	17 41 20.0	0.0
	comp=Z,0.3nm,0.7s,SNR=3.4						

KRSC 19 17:25:00.7±1.6**, 54.90N**×**168.82E, h20**^{km}±12^{km}**, ML3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.67	282	iP	Pn	17 25 27.9	-1.3
BKI				eS	Sn	17 25 47.9	-2.3
BKI				Smax			
	180nm,0.4s						
KBTR	Krutoberegovo	3.65	293	eP	Pn	17 25 55.4	-2.1
KBG	Krutoberegovo	3.73	294	eP	Pn	17 25 55.4	-3.2
ZLN	Zelenaya	4.70	287	eP	Pn	17 26 12.5	+0.1
ZLN				eS	Sn	17 27 03.9	-3.1
KMNR	Kamenistaya	4.98	283	eP	Pn	17 26 16.9	+0.6
KMNR				eS	Sn	17 27 10.5	-3.5
TUMR	Tumrok	5.00	278	eP	Pn	17 26 16.6	0.0
TUMR				eS	Sn	17 27 12.5	-2.1
KOZ	Kozyrevsk	5.22	286	eP	Pn	17 26 19.9	+0.2
KOZ				eS	Sn	17 27 17.8	-2.3
SRDR	Sredinnyy	5.35	289	eP	Pn	17 26 20.9	-0.7
SPN	Mys Shipunski	5.49	254	eP	Pn	17 26 22.9	-0.7
SPN				eS	Sn	17 27 22.7	-4.3
NLC	Nalytchevo	5.85	257	eP	Pn	17 26 27.8	-0.8
SMAR	Somma	6.12	259	eP	Pn	17 26 31.6	-0.9
AVH	Avacha	6.16	259	eP	Pn	17 26 32.8	-0.2
AVH				eS	Sn	17 27 39.4	-4.2
KOK	Koryaka	6.21	259	eP	Pn	17 26 34.4	+0.8

*HLW **19** 17:26:29.6, 35.59N×26.30E, h9^{km}, Mb3.9*
*MOS **19** 17:26:31.5±1.5, 35.35N×26.10E, h10^{km}, mb4.5/17, Error ellipse: s-maj=6.6km s-min=3.9km az=114.1*
*CSEM **19** 17:26:33.7, 35.25N×26.11E, h20^{km}, mb4.5*
*ATH **19** 17:26:33.7, 35.41N×26.08E, h19^{km}±1^{km}, MD4.0/16, ML4.2*
*NEIC **19** 17:26:33.6, 35.42N×26.08E, h19^{km}, mb4.2/28, ML4.2(ATH), ML4.1(NIC), ML4.0(THE), After ATH.*
*BJI **19** 17:26:33.6, 35.40N×26.10E, h19^{km}, mB5.1, mb4.8*
*IDC **19** 17:26:34.5±3.8, 35.51N×25.95E, h14^{km}±24^{km}, mb4.2/18, mb1 4.2/20, mb1mx4.2/25, mbtmp4.2/20, ML4.1/1, Error ellipse: s-maj=18.9km s-min=11.0km az=154.0*
*ISK **19** 17:26:37.0, 35.48N×26.01E, h32^{km}, ML4.0*
*NIC **19** 17:26:37.0±0.3, 35.39N×26.18E, h25^{km}, mb4.6, ML4.1, MW3.7*
*THE **19** 17:26:39.2, 35.28N×26.05E, h25^{km}, ML4.1*
ISC 19 17:26:33.7±0.3**, 35.15N**±0.02×**26.06E**±0.02**, h40**^{km}±3^{km}**, n231, σ1^{s}40**/247**, mb4.4**/42**, 8C-2D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	Neapolis	0.38	287	⇑iPB	P	17 26 42.0	-0.9
NPS				eSB	S	17 26 47.5	-1.8
IDI	Anoyia	0.97	279	Pg	P	17 26 51.7	+0.8
	317nm,0.3s,baz=103,slow=9.4,SNR=565						
IDI				Lg		17 27 04.7	
	785nm,0.3s,baz=350,slow=17,SNR=20						
KARP	Karpathos	0.98	66	⇑iPN	P	17 26 50.7	-0.5
KARP				eSN	S	17 27 03.4	-0.7
SANT	Santorini	1.31	338	ePn	P	17 26 55.5	-0.5
SANT	Santorini	1.31	338	ePn	P	17 26 55.5	-0.4
VAM	Vamos	1.54	280	ePN	P	17 27 02.2	+3.0
VAM				eSN	S	17 27 23.0	+4.8
GVD	Gavdhos	1.65	260	ePn	P	17 27 05.5	+4.9
GVD	Gavdhos	1.65	260	ePn	P	17 27 05.5	+4.8
NISR	Nisiros	1.70	30	ePN	P	17 27 01.1	-0.3
APE	Apeiranthos	1.96	348	iPN	P	17 27 04.3	-0.8
APE				iSN	S	17 27 24.0	-4.7
APE	Apeiranthos	1.96	348	ePn	P	17 27 04.6	-0.5
APE				iSn	S	17 27 24.0	-4.7
ARG	Arkhangelos	1.99	57	ePN	P	17 27 06.6	+1.1
DAT	Datca	2.00	38	PN	P	17 27 06.3	+0.6
BODT	Bodrum	2.16	28	PN	P	17 27 08.3	+0.3
MLSB	Milas	2.55	32	PN	P	17 27 13.9	+0.3
SMG	Samos	2.63	14	ePN	P	17 27 13.4	-1.3
DALT	Dalyan (Mudla)	2.64	52	PN	P	17 27 16.0	+1.1
YER	Yerkesik	2.68	42	PN	P	17 27 16.7	+1.4
KYTH	Kithira	2.71	296	ePN	P	17 27 16.1	+0.3
FETY	Fethiye	2.87	58	PN	P	17 27 19.6	+1.5
AYDN	Tasoluk	2.91	30	iP	P	17 27 20.5	+1.9
VLI	Veliai	2.98	303	ePN	P	17 27 20.4	+0.8
KSL	Kastellorizon	3.04	70	ePN	P	17 27 22.2	+1.7
AKAS	Kas	3.08	68	iP	P	17 27 22.1	+1.0
URLA	Izmir	3.23	7	iP	P	17 27 21.0	-2.3
NAIG	Nisos Aigina	3.33	322	ePB	P	17 27 26.0	+1.4
IZM	Izmir	3.38	16	PN	P	17 27 24.4	-1.0
KDAG	Bornova	3.39	16	iP	P	17 27 23.5	-1.9
PTL	Penteli	3.39	329	ePN	P	17 27 25.9	+0.4
ATH	Athens Observa	3.39	327	ePB	P	17 27 27.0	+1.5
DNZL	Cakiroluk	3.50	43	iP	P	17 27 28.3	+1.3
ELL	Elmali	3.51	62	PN	P	17 27 29.6	+2.5
GOLH	Golhisar	3.52	53	iP	P	17 27 28.2	+1.0
MPAR	Parnis Oros	3.53	329	ePN	P	17 27 28.0	+0.5
DENT	Denizli	3.54	42	PN	P	17 27 29.0	+1.5
ITM	Ithomi	3.91	302	ePN	P	17 27 34.0	+1.2
AKS	Akhisar	3.98	20	PN	P	17 27 34.0	+0.2
HMAT	Matruh	4.14	168	P	P	17 27 38.5	+2.4
LKR	Lokris	4.27	326	ePN	P	17 27 38.9	+1.0
BCK	Bucak	4.33	56	PN	P	17 27 40.4	+1.7
ISP	Isparta	4.48	52	ePN	P	17 27 42.0	+1.1
TKTP	Tekketepe	4.48	49	iP	P	17 27 40.2	-0.8
BALB	Balikesir	4.71	17	ePN	P	17 27 43.2	-1.0
GDZ	Gediz	4.79	34	iP	P	17 27 45.3	0.0
XOR	Xorichti	4.79	332	ePn	P	17 27 45.7	+0.4
AGG	Agios Georgios	4.88	323	ePn	P	17 27 48.2	+1.6
AGG				eSn	S	17 28 41.9	-0.7
ALT	Altintas	5.07	39	ePN	P	17 27 48.8	-0.4

EVR	Evrytania	5.07	319	*e*PN	P	17 27 50.8	+1.6
PPCY	Paphos	5.17	91	P	P	17 27 50.4	-0.2
VLS	Valsamata	5.33	306	*e*PN	P	17 27 54.8	+1.9
ALFC	Alevga	5.36	88	⇑P	P	17 27 53.7	+0.5
	14nm,0.5s						
ALFC				S	S	17 28 53.3	-1.3
LKD	Levkas	5.60	311	*e*Pn	P	17 27 58.4	+1.8
LKD				*e*Sn	S	17 28 58.7	-1.9
SZAC	Souni-Zanaja	5.62	92	P	P	17 27 57.2	+0.3
SZAC				S	S	17 29 00.5	-0.6
LIT	Litokhoron	5.70	331	*e*Pn	P	17 27 58.5	+0.6
LIT	Litokhoron	5.70	331	*e*Pn	P	17 27 58.5	+0.5
MAMC	Mammari	5.86	88	P	P	17 28 03.2	+2.9
SWA1		5.88	183	P	P	17 28 03.0	+2.6
SWA2		5.91	185	P	P	17 28 03.4	+2.4
KIZT	Kizilcal	5.96	50	*e*PN	P	17 28 02.3	+0.6
CSS	Prodhromos	5.97	90	P	P	17 28 01.8	+0.1
	5.2nm,0.4s						
CSS				S	S	17 29 08.0	-1.8
PHNC	Paralimni	6.54	89	P	P	17 28 11.2	+1.4
HMYD	Mayadein	6.67	142	P	P	17 28 11.3	-0.4
HNAT	Natroun	6.71	144	P	P	17 28 12.0	-0.4
FNA	Florina	6.73	328	*e*Pn	P	17 28 13.1	+0.5
FNA				*e*Sn	S	17 29 26.1	-2.7
AYT	Al ‘Ayyat	6.93	140	P	P	17 28 14.6	-0.7
KOT	Kottamia	7.13	135	P	P	17 28 16.9	-1.2
HSAF	As Saff	7.21	138	P	P	17 28 18.2	-1.0
AWBH		7.22	160	P	P	17 28 20.2	+0.8
AMAG	Maghara	7.50	125	P	P	17 28 21.3	-2.0
SUZ		7.79	131	P	P	17 28 25.5	-1.8
HNTI	Hanita	7.83	103	Pn	P	17 28 28.0	+0.1
HNTI				Sn	S	17 29 51.6	-4.6
SLTI	Sal’it	8.03	109	Pn	P	17 28 30.3	-0.2
SLTI				Sn	S	17 29 55.5	-5.5
ZAF		8.03	135	P	P	17 28 29.3	-1.3
KZIT	Kziot	8.18	119	Pn	P	17 28 30.7	-1.9
KZIT				Sn	S	17 29 57.8	-7.0
HWQ	Hawqa	8.19	93	*e*Pn	P	17 28 33.6	+0.8
HFRF	Wahat Farafira	8.21	166	P	P	17 28 34.0	+1.0
HFRF	Wahat Farafira	8.21	166	P	P	17 28 34.0	+1.0
RTMM	Retamin	8.31	117	Pn	P	17 28 32.8	-1.7
COBT	Iskenderun	8.39	78	*i* P	P	17 28 34.6	-1.0
TIP	Timpagrande	8.44	301	*e*Pn	P	17 28 35.0	-1.3
HNKL	Nakhl	8.47	126	P	P	17 28 33.9	-2.8
HNKL				S	S	17 30 05.7	-6.4
SOI	Samo	8.56	293	P	P	17 28 38.1	+0.2
SOI				pmax	pmax		
	comp=Z,9.0nm,0.3s						
SOI	Samo	8.56	293	Pn	P	17 28 38.1	+0.2
	comp=Z,9.3nm,0.3s						
FKH	Fakeheh	8.57	93	*e*Pn	P	17 28 37.8	-0.3
MZDA	Masada	8.68	114	Pn	P	17 28 37.8	-1.8
MKRJ	Makawir	8.78	111	Pn	P	17 28 39.6	-1.4
KMTI	Karmit	8.87	122	Pn	P	17 28 41.2	-1.0
KMTI				Sn	S	17 30 15.2	-6.8
PRNI	Paran	8.92	120	Pn	P	17 28 41.3	-1.6
PRNI				Sn	S	17 30 16.4	-6.9
ZFRI	Zfri	8.93	118	Pn	P	17 28 41.1	-2.0
MBH	Mount Berech	9.19	123	Pn	P	17 28 45.7	-0.9
EIL	Elat	9.29	124	Pn	P	17 28 47.2	-0.8
HKAT	Jabal Katrina	9.44	132	P	P	17 28 48.4	-1.6
CUC	Castrocucco	9.46	304	Pn	P	17 28 50.5	+0.2
	comp=Z,39nm,0.5s						
TIRR	Tirgusor	9.47	10	⇑P	P	17 28 46.1	-4.4
TIRR	Tirgusor	9.47	10	⇑P	P	17 28 46.1	-4.4
HARR	Harsova	9.64	8	⇑P	P	17 28 49.5	-3.3
HARR	Harsova	9.64	8	⇑P	P	17 28 49.5	-3.2
HARR	Harsova	9.64	8	P	P	17 28 49.6	-3.2
HDHB	Dhahab	9.69	129	P	P	17 28 51.8	-1.7
SLCN	Sala Consilina	9.77	305	Pn	P	17 28 54.9	+0.3
HDK1	Dakhla	10.00	162	P	P	17 28 59.0	+1.2
SGO	Sicignano	10.07	306	P	P	17 28 59.5	+0.8
SGO				pmax	pmax		
	comp=Z,9.0nm,0.3s						
SGO	Sicignano	10.07	306	Pn	P	17 28 59.5	+0.8
	comp=Z,9.4nm,0.3s						
CFR	Carcaliu	10.14	8	⇓P	P	17 28 56.8	-2.9
CFR	Carcaliu	10.14	8	⇓P	P	17 28 56.8	-2.9
HHRG	Al Ghardaqah	10.19	139	P	P	17 28 59.2	-1.2
MLR	Muntele Rosu	10.33	360	Pn	P	17 29 01.7	-0.6
	comp=Z,0.3nm,0.3s,baz=166,slow=17,SNR=4.5						
GTR	Jabal at Tayr	10.36	157	P	P	17 29 03.8	+1.0
HSFG		10.90	140	P	P	17 29 08.4	-1.7
SGG	Gregorio Mates	11.09	308	Pn	P	17 29 16.3	+3.7
PSZ	Piszkesteto	13.56	342	*e*Pn	P	17 29 49.3	+3.8
KIV	Kislovodsk	15.53	51	*e*Pn	P	17 30 16.6	+5.3
	comp=Z,16nm,0.8s						
KIV				pP		17 30 31.0	
KIV	Kislovodsk	15.53	51	*e*P	P	17 30 16.6	+5.3
KIV				pmax	pmax		
	comp=Z,15nm,0.8s						
GNI	Garni	15.61	66	Pn	P	17 30 17.2	+4.8
	comp=Z,0.4nm,0.3s,baz=6.0,slow=19,SNR=3.2						
AKASG	Malin Array Be	15.71	7	Pn	P	17 30 12.9	-0.6
	comp=Z,4.5nm,0.3s,baz=200,slow=12,SNR=26						
AKASG				PcP	PcP	17 35 14.8	+1.5
	comp=Z,0.6nm,0.3s,baz=202,slow=0.7,SNR=7.7						
AKASG	Malin Array Be	15.71	7	Pn	P	17 30 12.9	-0.7
OJC	Ojcow	15.74	345	*e*P	P	17 30 16.7	+2.8
VRAC	Vranov	15.77	337	Pn	P	17 30 17.5	+3.1
	comp=Z,0.4nm,0.3s,baz=160,slow=15,SNR=4.0						
MORC	Moravsky Berou	15.89	339	*e*Pn	P	17 30 13.1	-2.8
MORC	Moravsky Berou	15.89	339	*e*Pn	P	17 30 13.1	-2.8
GOF	Gofitskoye	16.30	48	*e*P	P	17 30 24.0	+3.0
GERES	GERESS Array B	16.45	330	Pn	P	17 30 22.4	-0.5
	comp=Z,0.3nm,0.3s,baz=144,slow=12,SNR=7.9						
KHC	Kasperske Hory	16.73	330	*e*P	P	17 30 25.0	-1.4
KHC				pP		17 30 31.5	
KHC	Kasperske Hory	16.73	330	*e*P	P	17 30 25.0	-1.4
KHC				*e*		17 30 31.5	
SBF	Sospel	16.77	307	*e*P	P	17 30 28.4	+1.4
	comp=Z,22nm,0.7s						
SBF	Sospel	16.77	307	*e*P	P	17 30 28.4	+1.4
SBF				pmax	pmax		
	comp=Z,11nm,0.7s						
MBDF	Montbardon	17.58	309	*e*P	P	17 30 38.4	+1.3
	comp=Z,19nm,1.1s						
MBDF	Montbardon	17.58	309	*e*P	P	17 30 38.4	+1.3
MBDF				pmax	pmax		
	comp=Z,10.0nm,1.1s						
LPG	La Plagne	17.95	311	*e*P	P	17 30 42.3	+0.6
	comp=Z,10nm,0.7s						
LPG	La Plagne	17.95	311	*e*P	P	17 30 42.3	+0.6
LPG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LPL	La Plagne	17.97	311	*e*P	P	17 30 42.4	+0.5
	comp=Z,4.1nm,0.5s						
LPL	La Plagne	17.97	311	*e*P	P	17 30 42.4	+0.5
LPL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRG	Berggiesshubel	18.00	335	P	P	17 30 40.1	-2.2
	comp=Z,8.4nm,1.6s						
BRG	Berggiesshubel	18.00	335	P	P	17 30 40.1	-2.2
BRG				pmax	pmax		
	comp=Z,8.0nm,1.6s						
BRG	Berggiesshubel	18.00	335	P	P	17 30 40.1	-2.2
	comp=Z,8.4nm,1.6s						
GRA1	Grafenberg Arr	18.15	328	*e*P	P	17 30 45.6	+1.4
	comp=Z,5.0nm,1.3s						
GRF	Grafenberg Arr	18.15	328	*e*P	P	17 30 45.6	+1.4
GRF				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GRF	Grafenberg Arr	18.15	328	*e*P	P	17 30 45.6	+1.4
GRF				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GRF	Grafenberg Arr	18.15	328	*e*P	P	17 30 45.6	+1.4
	comp=Z,5.0nm,1.3s						
ORIF	Oris-en-Rattie	18.23	308	*e*P	P	17 30 45.8	+0.5
CLL	Collm	18.70	334	P	P	17 30 48.0	-2.9
	comp=Z,logA/T=0.5						
CLL				*i*		17 30 52.3	
CLL				*i*		17 31 01.0	
CLL	Collm	18.70	334	*e*P	P	17 30 48.0	-2.9
	comp=Z,3.0nm,0.9s						
CLL				*i*		17 30 52.3	
CLL	Collm	18.70	334	*e*P	P	17 30 48.0	-2.9
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MIB	Mutribah	18.72	101	*e*P	P	17 30 53.2	+1.9
NAY	Al-Naaiem	18.85	102	*e*P	P	17 30 55.1	+2.1
CABF	La Chapelle	18.89	313	*e*P	P	17 30 52.6	-0.7
	comp=Z,31nm,0.8s						
CABF	La Chapelle	18.89	313	*e*P	P	17 30 52.6	-0.7
CABF				pmax	pmax		
	comp=Z,15nm,0.8s						
SUW	Suwalki	18.97	355	*e*P	P	17 30 51.8	-2.3
VIVF	Saint-Julien-l	18.99	307	*e*P	P	17 30 54.1	-0.3
HINF	Hinteralfeld	19.10	317	*e*P	P	17 30 55.0	-0.6
	comp=Z,3.9nm,0.5s						
HINF	Hinteralfeld	19.10	317	*e*P	P	17 30 55.0	-0.6
HINF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CDF	Champ du Feu	19.21	319	*e*P	P	17 30 56.3	-0.6
	comp=Z,10.0nm,0.8s						
CDF	Champ du Feu	19.21	319	*e*P	P	17 30 56.3	-0.6
CDF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HAU	Haudompre	19.49	317	*e*P	P	17 30 58.7	-1.2
SMF	Signal de Mont	20.27	311	*e*P	P	17 31 07.0	-1.3
	comp=Z,8.0nm,0.7s						
SMF	Signal de Mont	20.27	311	*e*P	P	17 31 07.0	-1.3
SMF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MEZF	Maizieres J’vi	20.48	317	*e*P	P	17 31 08.7	-1.8
	comp=Z,10nm,0.5s						
LOR	Lormes	20.55	313	*e*P	P	17 31 10.2	-1.0
	comp=Z,6.6nm,0.6s						
LOR	Lormes	20.55	313	*e*P	P	17 31 10.2	-1.0
LOR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AVF	Avril sur Loir	20.64	311	*e*P	P	17 31 10.8	-1.3
	comp=Z,30nm,1.2s						
AVF	Avril sur Loir	20.64	311	*e*P	P	17 31 10.8	-1.3
AVF				pmax	pmax		
	comp=Z,15nm,1.2s						
SSF	Saint Saulge	20.67	312	*e*P	P	17 31 11.2	-1.2
SSF				pmax	pmax		
	comp=Z,19nm,0.9s						
SSF	Saint Saulge	20.67	312	*e*P	P	17 31 11.2	-1.2
	comp=Z,20nm,0.9s						
BGF	Bois d’Agland	20.85	310	*e*P	P	17 31 12.9	-1.5
RJF	Les Rejaudoux	21.23	306	*e*P	P	17 31 16.8	-1.4
OBN	Obninsk	21.25	17	*e*P	P	17 31 17.6	-0.7
OBN				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.2						
OBN	Obninsk	21.25	17	*e*P	P	17 31 17.6	-0.7
	comp=Z,13nm,1.1s,mb4.2						
BAIF	Baives	21.81	320	*e*P	P	17 31 22.4	-1.5
	comp=Z,24nm,0.7s,mb4.4						
BAIF	Baives	21.81	320	*e*P	P	17 31 22.4	-1.5
BAIF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.4						
MFF	Saint Martin d	22.77	308	*e*P	P	17 31 32.0	-1.4
	comp=Z,24nm,0.8s,mb4.4						
MFF	Saint Martin d	22.77	308	*e*P	P	17 31 32.0	-1.4
MFF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
LDF	La Druitiere	23.54	313	*e*P	P	17 31 39.3	-1.5
	comp=Z,15nm,0.6s,mb4.3						
LDF	La Druitiere	23.54	313	*e*P	P	17 31 39.3	-1.5
LDF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.3						
FLN	La Foliniere	23.82	313	*e*P	P	17 31 42.2	-1.4
	comp=Z,16nm,0.6s,mb4.4						
FLN	La Foliniere	23.82	313	*e*P	P	17 31 42.2	-1.4
FLN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.3						
GRR	Gorron	23.90	312	*e*P	P	17 31 42.8	-1.5
	comp=Z,8.7nm,0.5s,mb4.1						
GRR	Gorron	23.90	312	*e*P	P	17 31 42.8	-1.5
GRR				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
ESDC	Sonseca Array	24.21	290	P	P	17 31 49.3	+1.8
	comp=Z,1.8nm,0.6s,mb3.7,baz=82,slow=9.7,SNR=8.2						
MDT	Midelt	25.49	274	P	P	17 32 02.8	+2.9
	comp=Z,1.5nm,0.7s,mb3.6,baz=100,slow=12,SNR=3.4						
HFS	Hagfors	26.26	346	P	P	17 32 04.1	-2.6
	comp=Z,0.5nm,0.3s,mb3.5,baz=135,slow=6.1,SNR=4.9						
FINES	FINESS Array B	26.31	0	P	P	17 32 05.3	-1.9
	comp=Z,1.5nm,0.8s,mb3.6,baz=170,slow=8.5,SNR=6.8						
FINES				PcP	PcP	17 35 34.3	+1.2
	comp=Z,1.0nm,0.4s,baz=146,slow=3.3,SNR=8.9						
FINES	FINESS Array B	26.31	0	P	P	17 32 05.3	-1.9
FINES				PcP	PcP	17 35 34.3	+1.2
ORR	Orenburg	26.33	42	⇑*i*P	P	17 32 06.8	-0.6
NOA	NORSAR Array B	27.60	344	PcP	PcP	17 35 37.5	+1.4
	comp=Z,1.0nm,0.7s,baz=134,slow=2.6,SNR=4.5						
AKTO	Aktyubinsk	27.72	47	P	P	17 32 20.9	+0.7
	comp=Z,2.5nm,0.3s,mb4.4,baz=231,slow=6.7,SNR=11						
AKTO	Aktyubinsk	27.72	47	P	P	17 32 20.9	+0.7
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.4						
AKTO	Aktyubinsk	27.72	47	P	P	17 32 20.9	+0.7
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.4						
JOF	Joensuu	27.99	5	*e*p	P	17 32 20.5	-2.0
	comp=Z,2.4nm,0.8s,mb3.9						
EKA	Eskdalemuir Ar	28.48	324	P	P	17 32 25.6	-1.3
	comp=Z,1.4nm,0.5s,mb3.9,baz=125,slow=9.7,SNR=12						
EKA	Eskdalemuir Ar	28.48	324	P	P	17 32 25.6	-1.3
ARCES	ARCESS Array B	34.44	360	P	P	17 33 17.3	-1.8
	comp=Z,2.6nm,0.8s,mb4.2,baz=180,slow=9.7,SNR=5.6						
ARCES				PcP	PcP	17 35 55.0	+0.8
	comp=Z,1.7nm,0.6s,baz=201,slow=3.6,SNR=8.4						
BRVK	Borovoye	35.77	46	*e*P	P	17 33 31.1	+0.5
	comp=Z,3.8nm,0.9s,mb4.3						
BRVK	Borovoye	35.77	46	*e*P	P	17 33 31.1	+0.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BVAR	Borovoye Array	35.82	46	P	P	17 33 32.4	+1.4
	comp=Z,1.8nm,0.5s,mb4.3,baz=236,slow=7.2,SNR=15						
CHKZ	Chkalovo	36.09	45	*e*P	P	17 33 34.0	+0.6
DBIC	Dimbokro	40.14	232	P	P	17 34 10.3	+2.8
	comp=Z,2.0nm,0.6s,mb4.1,baz=20,slow=11,SNR=7.7						
DBIC	Dimbokro	40.14	232	*e*P	P	17 34 10.1	+2.6
LIC	Lamto	40.59	232	*e*P	P	17 34 11.0	-0.2
	comp=Z,3.2nm,0.5s,mb4.2						
KURK	Kurchatov	40.62	51	*e*P	P	17 34 12.3	+1.2
	comp=Z,13nm,0.4s,mb4.9						
KURK	Kurchatov	40.62	51	*e*P	P	17 34 12.3	+1.2
KURK				pmax	pmax		
	comp=Z,13nm,0.4s,mb4.9						
MKAR	Makanchi Array	43.17	57	P	P	17 34 33.9	+1.8
	comp=Z,14nm,0.5s,mb5.0,baz=270,slow=8.0,SNR=212						
MKAR				PcP	PcP	17 36 23.5	+1.9
	comp=Z,2.1nm,0.8s,baz=277,slow=2.8,SNR=4.7						
NVS	Novosibirsk	43.58	45	*e*P	P	17 34 35.8	+0.6
NVS				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
NVS				pmax	pmax		
	comp=E,7.0nm,1.0s						
KOLN	Koldanda	49.05	82	*e*P	P	17 35 21.3	+2.5
	comp=E,6.3nm,0.4s,mb5.0						
GKN	Gorkha	49.80	81	*e*P	P	17 35 26.5	+1.9
	comp=E,15nm,0.5s,mb5.3						
DMN	Daman	50.34	81	*e*P	P	17 35 30.9	+2.2
	comp=E,16nm,0.7s,mb5.2						
KKN	Kakani	50.41	81	*e*P	P	17 35 31.1	+1.9
	comp=E,9.9nm,0.5s,mb5.1						
PKI	Pulchoki	50.60	81	*e*P	P	17 35 32.8	+2.1
	comp=E,10nm,0.6s,mb5.0						
GUN	Gumba	50.84	81	*e*P	P	17 35 35.2	+2.7
	comp=E,9.5nm,0.4s,mb5.1						
LSA	Lhasa	54.35	76	*e*P	P	17 36 01.0	+2.4
	comp=E,2.1nm,0.7s,mb4.2						
LSA	Lhasa	54.35	76	*e*P	P	17 36 01.0	+2.3
LSA				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
ZAK	Zakamensk	56.20	49	*e*P	P	17 36 08.7	-3.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.1						
ZAK	Zakamensk	56.20	49	*e*P	P	17 36 08.7	-3.0
	comp=Z,2.0nm,1.0s,mb4.1						
SONM	Songino Array	58.92	51	P	P	17 36 32.4	+1.5
	comp=Z,3.5nm,0.6s,mb4.5,baz=286,slow=7.5,SNR=38						
SONM				PcP	PcP	17 37 22.5	+2.9
	comp=Z,0.7nm,0.7s,baz=278,slow=5.4,SNR=5.3						
ULN	Ulaanbaatar	59.33	51	*e*P	P	17 36 33.6	-0.2
	comp=Z,3.5nm,0.6s,mb4.6						
ULN	Ulaanbaatar	59.33	51	*e*P	P	17 36 33.6	-0.2
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
BOD	Bodaibo	60.01	38	*e*P	P	17 36 37.4	-0.9
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BOD	Bodaibo	60.01	38	*e*P	P	17 36 37.4	-0.9
	comp=Z,5.0nm,0.8s,mb4.6						
BOSA	Boshof	63.42	181	P	P	17 37 05.0	+3.3
	comp=Z,2.1nm,0.9s,mb4.3,baz=19,slow=5.2,SNR=4.4						
SCHQ	Schefferville	63.67	320	P	P	17 37 03.0	+0.2
	comp=Z,4.4nm,0.7s,mb4.6,baz=74,slow=11,SNR=11						
SCHQ	Schefferville	63.67	320	P	P	17 37 03.0	+0.2
YAK	Yakutsk	65.52	30	*e*P	P	17 37 13.5	-1.1
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
YAK	Yakutsk	65.52	30	*e*P	P	17 37 13.5	-1.1
	comp=Z,4.6nm,0.8s,mb4.6						
NJ2	Nanjing	74.41	62	*e*P	P	17 38 11.5	+2.2
NJ2				PP	PP	17 41 02.5	+4.8
NJ2				S	S	17 47 42.0	+2.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
SSE	Sheshan	76.60	61	P	P	17 38 21.4	-0.5
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,160nm,7.2s						
SSE	Sheshan	76.60	61	P	P	17 38 21.4	-0.5
	comp=Z,19nm,0.7s,mb5.1						
YKA	Yellowknife Ar	77.69	342	P	P	17 38 28.0	+0.8
	comp=Z,1.6nm,0.8s,mb4.0,baz=30,slow=5.0,SNR=6.6						
ILAR	Eielson Array	80.26	357	P	P	17 38 42.5	+1.4
	comp=Z,0.7nm,0.6s,mb3.8,baz=341,slow=3.7,SNR=15						
ULM	Lac du Bonnet	80.73	326	P	P	17 38 45.2	+1.2
	comp=Z,1.9nm,0.4s,mb4.4,baz=39,slow=5.7,SNR=8.1						
ULM	Lac du Bonnet	80.73	326	P	P	17 38 45.2	+1.2
MJAR	Matsushiro Arr	84.78	49	P	P	17 39 07.8	+2.8
	comp=Z,6.5nm,0.9s,mb4.7,baz=306,slow=4.8,SNR=10						
BDFB	Brasilia	86.38	248	P	P	17 39 17.9	+4.6
	comp=Z,3.6nm,0.6s,mb4.8,baz=62,slow=7.1,SNR=5.2						

THE ***19*** *17:26:51.5, 40.33N×26.06E, h23^{km}, ML3.3*
SOF ***19*** *17:26:53.2, 40.62N×25.62E, h2^{km}, MD3.0*
CSEM ***19*** *17:26:53.7±0.5, 40.54N×25.66E, h2^{km}, ML3.3, Error ellipse: s-maj=13.1km s-min=5.6km az=135.0*
ISC 19 17:26:52.9±0.9**, 40.50N**±0.06×**25.69E**±0.09**, h4**^{km}±8^{km}**, n17,** σ1^{s}**29**/23**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ALN	Alexandroupoli	0.48	35	*e*Pg	Pg	17 27 01.9	-0.6
ALN				*e*Sg	Sg	17 27 10.9	+2.0
LOS	Limnos	0.73	219	*e*Pg	Pg	17 27 07.6	+0.1
LOS				*e*Sg	Sg	17 27 19.2	+1.9
KDZ	Kurdzhali	1.16	350	*i* P	Pb	17 27 13.7	-1.5
OUR	Ouranopolis	1.31	263	*e*Pg	Pg	17 27 16.6	-2.5
OUR				*e*Sg	Sg	17 27 37.3	+0.7
RZN	Rozhen	1.39	329	*i* P	Pb	17 27 17.7	-1.4
DIM	Dimitrovgrad	1.55	356	*i* P	Pn	17 27 21.5	+0.1
PAIG	Paliouri	1.64	250	*e*Pb	Pb	17 27 21.3	-2.1
PAIG				*e*Sb	Sb	17 27 44.9	+0.6
SOH	Sokhos	1.80	281	*e*Pn	Pn	17 27 25.2	+0.2
SOH				*e*Sn	Sn	17 27 50.9	+2.3
SOH	Sokhos	1.80	281	*e*Pn	Pn	17 27 25.2	+0.2
SOH				*e*Sn	Sn	17 27 50.9	+2.3
MMB	Musomiste	1.84	307	P	Pn	17 27 25.5	0.0
JMB	Yambol	2.07	19	P	Pn	17 27 30.0	+1.1
KNT	Kendrikon	2.22	288	*e*Pn	Pn	17 27 30.7	-0.2
XOR	Xorichti	2.23	240	*e*Pn	Pn	17 27 28.6	-2.6
KKB	Krupnik	2.39	306	P	Pn	17 27 33.0	-0.4
GRG	Griva	2.54	281	*e*Pn	Pn	17 27 35.5	0.0
GRG	Griva	2.54	281	*e*Pn	Pn	17 27 35.5	0.0
VTS	Vitosha	2.79	319	P	Pn	17 27 40.5	+1.3

MAN 19 17:35:34.9, 6.21N×124.74E, h33^{km}, mb4.8, ML3.7, MS3.7, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	0.87	23	⇑*e*P	P	17 35 51.1	+0.5
KCP				*i* S	S	17 36 02.8	+0.5
MATI	Mati	1.67	64	*e*P	P	17 36 02.2	+0.1
MATI				*e*S	S	17 36 22.9	+0.3
BUKP	Musuan	1.69	11	*e*P	P	17 36 01.5	-0.9
BUKP				*e*S	S	17 36 23.2	+0.1
PAGZ	Pagadian	2.12	320	*e*P	P	17 36 08.7	+0.2
PAGZ				*e*S	S	17 36 33.7	-0.3
CGP	Cagayan de Oro	2.23	359	⇓*e*P	P	17 36 09.7	-0.5
CGP				*i* S	S	17 36 37.3	+0.5
IPIL	Ipil	2.67	306	*e*P	P	17 36 17.4	+1.0
IPIL				*e*S	S	17 36 50.7	+2.8
BUTP	Butuan	2.88	18	*e*P	P	17 36 20.4	+0.9
MSLP	Maasin	3.90	2	*e*P	P	17 36 28.1	-5.9
GUIM	Jordan	4.88	334	*e*P	P	17 36 47.2	-0.7
CUYO	Cuyo Island	5.90	322	*e*P	P	17 37 01.8	-0.4

MOS ***19*** *17:55:01.5±1.4, 6.26N×125.75E, h33^{km}, mb5.5/33, MS4.3/4, Error ellipse: s-maj=10.5km s-min=5.7km az=103.4*
IDC ***19*** *17:55:07.6±1.3, 6.29N×125.80E, h72^{km}±10^{km}, mb4.8/25, mb1 4.9/25, mb1mx4.9/26, mbtmp5.1/25, MS4.2/15, Ms1 4.2/15, ms1mx4.0/29, Error ellipse: s-maj=15.0km s-min=9.4km az=77.0*
MAN ***19*** *17:55:08.6, 6.25N×125.93E, h71^{km}, mb5.9, ML5.0, MS5.4*
BJI ***19*** *17:55:08.2, 5.97N×125.95E, h112^{km}, mB5.3, mb5.4*
HRVD ***19*** *17:55:10.0±0.2, 6.28N×125.94E, h88^{km}±2^{km}, MW5.3/83, Centroid moment Tensor Solution. LP body waves: s48,c66;Mantle waves: s83,c167; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.53±.03; $M_{\theta\theta}$0.27±.03; $M_{\phi\phi}$-0.79±.03; $M_{r\theta}$0.46±.02; $M_{\theta\phi}$-0.66±.03; $M_{\phi r}$-0.18±.02; Best double couple: $M_0$1.081×10^{17} NP1:ϕ_s170°,δ60°,λ33°. NP2:ϕ_s62°,δ62°,λ145°. Principal axes: T 1.049, Plg43°, Azm25°; N .064, Plg46°, Azm208°; P -1.112, Plg2°, Azm116°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***19*** *17:55:10.0±0.2, 6.24N×125.90E, mb5.4/51 Error ellipse: s-maj=6.9km s-min=4.8km az=72.0*
NEIC Felt [III PIVS] at General Santos.
ISC 19 17:55:08.3±0.2**, 6.19N**±0.02×**125.93E**±0.03**, h94**^{km}**, h94**^{km}±2.2^{km}**:pP-P, n356,** σ1^{s}**16**/327**, mb5.3**/102**, 28C-17D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.82	23	*e*P	P	17 55 25.5	-1.1
MATI				*e*S	S	17 55 37.4	-2.7
DAV	Davao City (W)	0.94	338	*i* P	P	17 55 28.0	+0.1
DAV	Davao City (W)	0.94	338	⇓*i*Pn	P	17 55 28.1	+0.2
KCP	Kidapawan	1.17	314	⇓*e*P	P	17 55 32.4	+1.8
KCP				*i* S	S	17 55 48.5	+1.2
BUKP	Musuan	1.89	333	*e*P	P	17 55 39.9	+0.3
BUKP				*e*S	S	17 56 03.1	+0.3
BIPH	Bislig	2.03	12	⇓*i*P	P	17 55 41.6	0.0
BIPH				*i* S	S	17 56 08.9	+2.8
CGP	Cagayan de Oro	2.56	332	⇑*i*P	P	17 55 48.4	-0.5
CGP				*i* S	S	17 56 20.6	+1.3
BUTP	Butuan	2.78	354	*e*P	P	17 55 52.4	+0.5
BUTP				*e*S	S	17 56 26.1	+1.5
PAGZ	Pagadian	3.02	303	*e*P	P	17 55 55.0	-0.2
DCPH	Dipolog City	3.49	313	⇓*e*P	P	17 56 02.1	+0.4
SCPH	Surigao	3.60	353	*e*P	P	17 56 01.4	-1.8
SCPH				*i* S	S	17 56 38.6	-6.2
IPIL	Ipil	3.69	296	*e*P	P	17 56 04.5	0.0
IPIL				*e*S	S	17 56 48.6	+1.5
MSLP	Maasin	4.06	345	*e*P	P	17 56 08.0	-1.6
MSLP				*e*S	S	17 56 52.6	-3.6
SNPH	Sibulan	4.12	320	*e*P	P	17 56 16.0	+5.7
LLP	Lapu-Lapu	4.54	335	⇓*e*P	P	17 56 16.0	-0.1
LLP				*i* S	S	17 57 07.0	-1.0
PLP	Palo	5.04	349	*i* P	P	17 56 22.3	-0.5
BESP	Borongan	5.40	355	*e*P	P	17 56 24.4	-3.4
BESP				*e*S	S	17 57 31.9	+2.6
GUIM	Jordan	5.51	323	*e*P	P	17 56 29.1	-0.2
RCP	Roxas	6.20	330	⇓*e*P	P	17 56 39.0	+0.2
CNP	Catarman	6.41	349	*e*P	P	17 56 40.8	-0.9
CNP				*e*S	S	17 57 54.1	+0.1
KALP	Kalibo	6.51	327	*e*P	P	17 56 45.1	+2.0
CUYO	Cuyo Island	6.71	314	*e*P	P	17 56 46.3	+0.3
OTRP	Odiongan	7.25	328	*e*P	P	17 56 54.0	+0.7
PVCP	Virac	7.57	347	*e*P	P	17 56 57.1	-0.5
AUQP	San Andres	7.78	336	*e*P	P	17 57 03.1	+2.5
SJMP	San Jose	7.83	323	*e*P	P	17 57 01.7	+0.4
PPR	Puerto Princes	7.97	297	*e*P	P	17 57 02.5	-0.6
BUSP	Coron	8.09	316	*e*P	P	17 57 04.2	-0.5
ENPP	El Nido	8.14	308	*e*P	P	17 57 05.2	-0.1
BOAC	Boac	8.27	331	*e*P	P	17 57 05.7	-1.5

BATP	Bataraza	8.47	288	*e*P	P	17 57 08.1	-1.7
PGP	Puerto Galera	8.77	326	⇓*e*P	P	17 57 16.4	+2.5
TGY	Tagaytay City	9.27	328	P	P	17 57 26.5	+5.7
	31nm,0.3s,baz=137,slow=5.5,SNR=8.8						
POLP	Polilio Island	9.35	336	*e*P	P	17 57 23.9	+2.1
LUBP	Lubang	9.36	324	*e*P	P	17 57 22.4	+0.5
KKM	Kota Kinabalu	9.66	270	*e*Pn	P	17 57 27.6	+1.5
BALP	Baler	10.41	336	*e*P	P	17 57 38.7	+2.5
SCZP	Santa Cruz	11.21	329	*e*P	P	17 57 38.6	-8.3
CAUP	Cauayan	11.42	340	*e*P	P	17 57 49.8	+0.1
BOLP	Bolinao	11.72	330	*e*P	P	17 57 55.5	+1.8
APYP	Conner	12.47	339	*e*P	P	17 58 05.6	+1.9
ABRA	Dolores	12.48	336	*e*P	P	17 58 04.8	+1.0
KSM	Kuching	16.27	254	*e*P	P	17 58 54.1	+1.5
YHNB	Yeheng	18.89	347	*e*P	P	17 59 23.5	-0.5
KAKA	Kakadu	19.86	161	*e*P	P	17 59 53.8	+19
	1µm,0.6s						
QZH	Quanzhou	19.93	340	⇑*i*P	P	17 59 35.6	+0.5
QZH				S	S	18 03 20.0	+11
QZH				AMB	AMB		
	comp=Z,390nm,1.2s						
GUMO	Guam	20.04	67	P	P	17 59 35.8	-0.5
	comp=Z,269nm,0.9s,baz=188,slow=8.9,SNR=8.3						
GUMO				LR	LR	18 05 51.1	
	comp=Z,663nm,19.3s,baz=93,slow=32						
GUMO	Guam	20.04	67	*e*P	P	17 59 35.3	-1.0
	comp=Z,879nm,1.5s						
GUMO	Guam	20.04	67	*e*P	P	17 59 35.3	-1.0
GUMO				pmax	pmax		
	comp=Z,879nm,1.5s						
QIZ	Qiongzhong	20.21	311	P	P	17 59 38.3	+0.3
QIZ				XP		18 00 11.5	
QIZ				S	S	18 03 12.5	-1.9
QIZ				AMB	AMB		
	comp=Z,290nm,1.2s						
QIZ	Qiongzhong	20.21	311	*e*P	P	17 59 38.6	+0.7
	comp=Z,274nm,1.0s						
JOW	Kunigami	20.65	6	P	P	17 59 41.8	-0.7
	comp=Z,144nm,0.9s,baz=206,slow=11,SNR=9.2						
GZH	Guangzhou	20.72	325	P	P	17 59 45.8	+2.6
GZH				LR	LR		
	comp=N,610nm,15.5s						
GZH				LR	LR		
	comp=E,570nm,15.2s						
GZH				LR	LR		
	comp=Z,630nm,18.6s						
UBT	Ubonrachathani	22.41	295	⇑P		18 00 22.0	
FITZ	Fitzroy Crossi	24.14	181	⇑*i*P	P	18 00 17.5	+0.8
	comp=Z,94nm,0.4s,mb5.5						
FITZ				*e*S	S	18 04 23.1	-1.7
FITZ				*e*SCP		18 07 27.4	
FITZ	Fitzroy Crossi	24.14	181	P	P	18 00 17.6	+0.9
	comp=Z,126nm,0.5s,mb5.5,baz=12,slow=8.8,SNR=142						
FITZ				S	S	18 04 29.2	+4.3
	comp=Z,70nm,1.1s,baz=23,slow=14,SNR=4.5						
FITZ				ScP		18 07 27.7	
	comp=Z,44nm,0.8s,baz=86,slow=5.2,SNR=6.0						
KKTK	Khon Kaen	24.77	296	P	P	18 00 22.0	-0.9
SNG	Songkhla	25.16	274	P	P	18 00 28.0	+1.4
	comp=Z,510nm,0.9s,mb6.0						
KULM	Kulim	25.17	269	*e*P	P	18 00 27.1	+0.4
SSE	Sheshan	25.18	350	P	P	18 00 27.9	+1.3
SSE				AP	pP	18 00 47.8	+0.5
SSE				PCP	PcP	18 04 01.1	+2.2
SSE				S	S	18 04 47.1	+4.9
SSE				XS		18 05 20.8	
SSE				AMB	AMB		
	comp=Z,80nm,0.9s,mb5.2						
SSE				LR	LR		
	comp=N,220nm,27.0s						
SSE				LR	LR		
	comp=E,220nm,27.0s						
SSE				LR	LR		
	comp=Z,260nm,21.5s						
SSE	Sheshan	25.18	350	P	P	18 00 27.9	+1.3
	comp=Z,88nm,0.9s,mb5.2						
SSE				pP	pP	18 00 47.8	+0.5
SSE				sP	sP	18 00 58.8	-0.1
SSE				PcP	PcP	18 04 01.1	+2.2
SSE				S	S	18 04 47.1	+4.9
SSE				sS		18 05 20.7	
SSE				ScP		18 07 31.5	
SSE				LR	LR		
	comp=Z,260nm,21.5s						
CBIJ	Chichi jima	25.92	35	P	P	18 00 31.7	-1.8
	comp=Z,116nm,0.5s,mb5.6,baz=288,slow=9.6,SNR=13						
CBIJ				LR	LR	18 10 36.1	
	comp=Z,139nm,18.3s,baz=301,slow=36						
PMG	Port Moresby	26.22	126	P	P	18 00 36.4	-0.1
	comp=Z,120nm,0.8s,mb5.4,baz=335,slow=6.7,SNR=26						
PMG				S	S	18 05 01.8	+2.2
	comp=Z,11nm,0.9s,baz=160,slow=20,SNR=3.3						
PMG				ScP		18 07 35.2	
	comp=Z,27nm,1.1s,baz=305,slow=0.8,SNR=5.0						
PMG	Port Moresby	26.22	126	*e*P	P	18 00 35.4	-1.1
	comp=Z,93nm,0.7s,mb5.3						
PMG	Port Moresby	26.22	126	*e*P	P	18 00 35.4	-1.1
PMG				pmax	pmax		
	comp=Z,93nm,0.7s						
WHN	Wuhan	26.56	337	P	P	18 00 39.8	+0.3
NJ2	Nanjing	26.57	346	*e*P	P	18 00 40.0	+0.5
NJ2				AP	pP	18 01 04.8	+4.4
NJ2				XP	sP	18 01 17.6	+5.9
NJ2				PP	PP	18 01 30.1	+3.5
NJ2				S	S	18 05 06.0	+0.9
NJ2				XS		18 05 48.0	
NJ2				AMB	AMB		
	comp=Z,80nm,0.6s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,600nm,5.2s						
NJ2				LR	LR		
	comp=N,230nm,16.0s						
NJ2				LR	LR		
	comp=E,230nm,18.0s						
NJ2				LR	LR		
	comp=Z,4µm,14.0s						
NST	Nakhon Sawan	27.00	293	P	P	18 00 44.0	+0.5
JNU	Nakatsue	27.19	9	P	P	18 00 44.2	-1.0
	comp=Z,62nm,1.0s,mb5.1,baz=147,slow=12,SNR=18						
JNU				ScP		18 07 37.8	
	comp=Z,6.9nm,0.8s,baz=161,slow=3.8,SNR=4.0						
WRAB	Tennant Creek	27.25	162	*e*P	P	18 00 44.8	-1.0
	comp=Z,259nm,0.7s,mb5.9						
WRAB	Tennant Creek	27.25	162	*e*P	P	18 00 44.8	-1.0
WRAB				pmax	pmax		
	comp=Z,259nm,0.7s,mb5.9						
WRA	Warramunga Arr	27.25	163	P	P	18 00 45.3	-0.5
	comp=Z,17nm,0.5s,mb4.9,baz=343,slow=10.0,SNR=90						
WRA				S	S	18 05 15.9	-0.4
	comp=Z,11nm,1.0s,baz=335,slow=16,SNR=6.7						
WRA				ScP		18 07 37.0	
	comp=Z,3.8nm,0.6s,baz=343,slow=3.0,SNR=5.0						
WRA				ScS	ScS	18 11 25.1	+0.8
	comp=Z,6.3nm,1.2s,baz=309,slow=4.8,SNR=5.9						
WRA	Warramunga Arr	27.25	163	P	P	18 00 45.3	-0.6
WRA				S	S	18 05 15.9	-0.4
WRA						18 11 25.1	
WB2	Warramunga Arr	27.25	162	⇑*i*P	P	18 00 45.2	-0.7
WB2				*e*S	S	18 05 16.8	+0.4
WB2				*e*SCS	ScS	18 11 25.7	+1.4
GYA	Guiyang	27.27	320	⇓*i*P	P	18 00 46.9	+0.9
GYA				S	S	18 05 14.4	-2.3
GYA				AMB	AMB		
	comp=Z,30nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,300nm,3.6s						
GYA				LR	LR		
	comp=N,690nm,15.4s						
GYA				LR	LR		
	comp=E,710nm,16.4s						
GYA				LR	LR		
	comp=Z,840nm,16.0s						
ENH	Enshi	28.52	329	*e*P	P	18 00 56.1	-1.1
	comp=Z,40nm,0.8s,mb5.1						
CHRT	Chiangrai	28.81	301	⇓P	P	18 01 00.0	+0.1
	comp=Z,358nm,1.2s,mb5.9						
KMI	Kunming	29.11	313	P	P	18 01 03.9	+1.4
KMI				AP	pP	18 01 25.0	+1.2
KMI				XP	sP	18 01 36.8	+2.0
KMI				PP	PP	18 02 03.3	+3.1
KMI				PCP	PcP	18 04 10.3	+2.0
KMI				S	S	18 05 48.6	+2.5
KMI				XS		18 06 24.5	
KMI				SS	SS	18 07 24.9	+2.2
KMI				PCS		18 07 51.8	
KMI				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.2						
KMI				AMB	AMB		
	comp=Z,220nm,3.1s						
KMI				LR	LR		
	comp=N,520nm,14.1s						
KMI				LR	LR		
	comp=E,570nm,12.9s						
KMI				LR	LR		
	comp=Z,750nm,23.1s						
KMI	Kunming	29.11	313	P	P	18 01 03.9	+1.4
	comp=Z,77nm,1.1s,mb5.2						
KMI				pP	pP	18 01 25.0	+1.2
KMI				sP	sP	18 01 36.7	+1.9
KMI				PP	PP	18 02 03.3	+3.1
KMI				PPP	PPP	18 02 16.9	+3.4
KMI				PcP	PcP	18 04 10.2	+1.9
KMI				S	S	18 05 48.6	+2.5
KMI				sS		18 06 24.5	
KMI				SS	SS	18 07 24.9	+2.2
KMI				ScP		18 07 42.0	
KMI				SSS	SSS	18 07 47.2	+1.5
KMI				PcS		18 07 51.7	
KMI				ScS	ScS	18 11 34.9	+2.2
KMI				LR	LR		
	comp=Z,750nm,23.1s						
KMI	Kunming	29.11	313	P	P	18 01 03.9	+1.4
KMI						18 02 03.3	
KMI						18 04 10.2	
KMI				S	S	18 05 48.6	+2.5
KMI						18 07 42.0	
KMI						18 11 34.9	
KMI				pmax	pmax		
	comp=Z,77nm,1.1s,mb5.2						
KMI				MLR	MLR		
	comp=Z,750nm,23.1s						
CHG	Chiang Mai	29.12	298	P	P	18 01 02.4	-0.3
	comp=Z,54nm,1.0s,mb5.1						
JHJ	Hachijo jima 2	29.73	24	LR	LR	18 10 24.2	
	comp=Z,435nm,20.7s,baz=140,slow=31						
ASPA	Alice Springs	30.68	166	⇑*i*P	P	18 01 16.1	-0.3
ASPA				*e*S	S	18 06 09.5	-1.2
ASPA				*e*SCS	ScS	18 11 41.2	+1.1
TIA	Tai'an	30.95	346	*e*P	P	18 01 18.3	-0.4
INCN	Inchon	31.16	1	*e*P	P	18 01 20.6	+0.1
	comp=Z,35nm,0.8s,mb5.1						
KS15	Wonju Array Si	31.16	3	*e*P	P	18 01 19.2	-1.3
XAN	Xi'an	31.88	333	P	P	18 01 25.6	-1.2
XAN				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.2						
CD2	Chengdu	32.21	323	*e*P	P	18 01 28.6	-1.1
CD2				AP	pP	18 01 50.6	-0.8
CD2				PP	PP	18 02 37.4	-2.0
CD2				S	S	18 06 32.0	-2.7
CD2				SS	SS	18 08 32.3	-2.3
CD2				AMB	AMB		
	comp=Z,90nm,1.8s,mb5.2						
CD2				LR	LR		
	comp=N,630nm,6.1s						
CD2				LR	LR		
	comp=Z,420nm,13.8s						
MJAR	Matsushiro Arr	32.24	19	P	P	18 01 26.7	-3.2
	comp=Z,12nm,0.8s,mb4.7,baz=187,slow=8.6,SNR=36						
MJAR				PcP	PcP	18 04 17.1	+0.7
	comp=Z,5.4nm,0.8s,baz=177,slow=2.6,SNR=6.4						
MJAR				ScP		18 07 53.1	
	comp=Z,6.4nm,0.9s,baz=205,slow=3.3,SNR=8.5						
MJAR				LR	LR	18 13 18.7	
	comp=Z,161nm,19.4s,baz=210,slow=34						
MAJO	Matsushiro	32.24	19	*e*P	P	18 01 26.9	-3.0
	comp=Z,19nm,0.9s,mb4.8						
MAJO	Matsushiro	32.24	19	*e*P	P	18 01 26.9	-3.0
MAJO				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.8						
MAT	Matsushiro	32.24	19	P	P	18 01 26.5	-3.4
MAT				*e*S	S	18 06 44.0	+8.9
MAT	Matsushiro	32.24	19	*e*P	P	18 01 27.0	-2.9
	comp=Z,14nm,0.8s,mb4.8						
MAT	Matsushiro	32.24	19	*e*P	P	18 01 27.0	-2.9
MAT				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.7						
DL2	Dalian	32.80	354	P	P	18 01 35.9	+1.1
DL2				AP	pP	18 01 56.8	+0.3
DL2				XP	sP	18 02 09.6	+1.8
DL2				S	S	18 06 49.0	+5.2
DL2				AMB	AMB		
	comp=Z,140nm,0.8s,mb5.8						
DL2				AMB	AMB		
	comp=Z,180nm,5.9s						
DL2				LR	LR		
	comp=N,170nm,13.5s						
DL2				LR	LR		
	comp=E,280nm,14.8s						
DL2				LR	LR		
	comp=Z,290nm,16.5s						
CTA	Charters Tower	32.88	143	*e*P	P	18 01 35.7	0.0
	comp=Z,28nm,0.6s,mb5.3						
CTA				*e*SCP		18 07 56.7	
CTA	Charters Tower	32.88	143	LR	LR	18 16 07.7	
	comp=Z,478nm,20.0s,baz=333,slow=38						
CTA	Charters Tower	32.88	143	*e*P	P	18 01 35.7	0.0
CTA				pmax	pmax		
	comp=Z,29nm,0.6s						
CTAO	Charters Tower	32.88	143	*e*P	P	18 01 36.2	+0.5
	comp=Z,31nm,0.6s,mb5.3						
CTAO	Charters Tower	32.88	143	*e*P	P	18 01 36.2	+0.5
CTAO				pmax	pmax		
	comp=Z,31nm,0.6s,mb5.3						
SNY	Shenyang	35.55	357	⇑*i*P	P	18 01 59.3	+1.0
SNY				AMB	AMB		
	comp=Z,240nm,1.1s,mb6.0						
SNY				AMB	AMB		
	comp=Z,930nm,3.5s						
LZH	Lanzhou	36.00	329	*e*P	P	18 02 01.3	-0.8
LZH				AP	pP	18 02 24.3	+0.2
LZH				XP	sP	18 02 36.1	+0.7
LZH				PP	PP	18 03 28.0	+1.4
LZH				PCP	PcP	18 04 30.0	+3.0
LZH				*e*S	S	18 07 35.3	+2.1
LZH				SCP		18 08 05.0	
LZH				PCS		18 08 14.5	
LZH				*e*SS	SS	18 10 05.0	+4.3
LZH				SCS	ScS	18 12 09.0	+1.4
LZH				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.7						
LZH				AMB	AMB		
	comp=Z,250nm,4.6s						
LZH				LR	LR		
	comp=E,2µm,14.0s						
LZH				LR	LR		
	comp=Z,1µm,15.2s						
LZH	Lanzhou	36.00	329	*e*P	P	18 02 01.3	-0.8
	comp=Z,90nm,1.0s,mb5.7						
LZH				pP	pP	18 02 24.3	+0.2
LZH				sP	sP	18 02 36.1	+0.7
LZH				PP	PP	18 03 28.0	+1.4
LZH				PcP	PcP	18 04 30.0	+3.0
LZH				*e*S	S	18 07 35.2	+2.0
LZH				ScP		18 08 05.0	
LZH				PcS		18 08 14.5	
LZH				sS		18 08 15.0	
LZH				*e*SS	SS	18 10 05.0	+4.3
LZH				ScS	ScS	18 12 09.0	+1.4
LZH				LR	LR		
	comp=Z,1µm,15.2s						
LZH	Lanzhou	36.00	329	*e*P	P	18 02 01.3	-0.8
LZH						18 03 28.0	
LZH						18 04 30.0	
LZH				*e*S	S	18 07 35.2	+2.0
LZH						18 12 09.0	
LZH				pmax	pmax		
	comp=Z,90nm,1.0s,mb5.7						
LZH				MLR	MLR		
	comp=Z,1µm,15.2s						
FORT	Forrest	36.81	177	⇑*i*P	P	18 02 09.4	+0.4
	comp=Z,61nm,0.5s,mb5.8						
FORT				*e*SCP		18 08 08.3	
HHC	Hu-ho-hao-te	36.83	342	*e*P	P	18 02 09.3	+0.2
HHC				AP	pP	18 02 29.9	-1.2
HHC				XP	sP	18 02 43.1	+0.8
HHC				PP	PP	18 03 37.0	+0.4
HHC				PCP	PcP	18 04 28.6	-0.9
HHC				S	S	18 07 45.3	-0.5
HHC				SCP		18 08 08.0	
HHC				PCS		18 08 16.4	
HHC				SS	SS	18 10 21.0	+2.0
HHC				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.9						
HHC				AMB	AMB		
	comp=Z,200nm,6.0s						
HHC				LR	LR		
	comp=N,320nm,18.0s						
HHC				LR	LR		
	comp=E,640nm,18.0s						
HHC				LR	LR		
	comp=Z,450nm,20.4s						
BTO	Baotou	37.12	340	*e*P	P	18 02 10.0	-1.5
HNR	Honiara	37.28	114	P	P	18 02 12.9	-0.2
	comp=Z,36nm,0.6s,mb5.5,baz=215,slow=4.5,SNR=4.1						
HNR				LR	LR	18 17 15.9	
	comp=Z,298nm,19.3s,baz=100,slow=36						
CN2	Changchun	37.47	359	*e*P	P	18 02 14.9	+0.6
CN2				*e*AP	pP	18 02 35.5	-0.9
CN2				PCP	PcP	18 04 29.4	-2.0
CN2				*e*S	S	18 07 53.9	-1.5
CN2				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.5						
CN2				AMB	AMB		
	comp=Z,210nm,4.0s						
CN2				LR	LR		
	comp=N,390nm,18.0s						
CN2				LR	LR		
	comp=E,610nm,18.0s						
CN2				LR	LR		
	comp=Z,330nm,17.0s						
SHL	Shillong	37.81	304	*e*P	P	18 02 18.0	+0.6
SHL				*e*S	S	18 08 02.0	+1.1
KLBR	Kellerberrin	38.37	191	*e*P	P	18 02 22.2	+0.3
	comp=Z,39nm,0.5s,mb5.5						
MDJ	Mudanjiang	38.41	4	P	P	18 02 23.5	+1.3
MDJ				AP	pP	18 02 44.5	+0.2
MDJ				PP	PP	18 03 53.3	-1.3
MDJ				PCP	PcP	18 04 34.4	0.0
MDJ				S	S	18 08 12.9	+3.1
MDJ				SCP		18 08 13.8	
MDJ				PCS		18 08 23.8	
MDJ				XS		18 08 50.1	
MDJ				AMB	AMB		
	comp=Z,160nm,1.2s,mb5.7						
MDJ				AMB	AMB		
	comp=Z,280nm,7.3s						
MDJ				LR	LR		
	comp=N,300nm,38.4s						
MDJ				LR	LR		
	comp=E,120nm,21.1s						
MDJ				LR	LR		
	comp=Z,400nm,38.8s						
MDJ	Mudanjiang	38.41	4	*e*P	P	18 02 23.5	+1.3
	comp=Z,198nm,1.1s,mb5.9						
MUN	Mundaring	39.07	193	⇑*i*P	P	18 02 28.3	+0.6
NWAO	Narrogin (SRO)	39.77	191	P	P	18 02 34.4	+0.9
	comp=Z,75nm,0.8s,mb5.6,baz=18,slow=9.0,SNR=67						
NWAO	Narrogin (SRO)	39.77	191	*e*P	P	18 02 34.3	+0.8
	comp=Z,65nm,0.8s,mb5.5						
NWAO	Narrogin (SRO)	39.77	191	*e*P	P	18 02 34.3	+0.8
NWAO				pmax	pmax		
	comp=Z,65nm,0.8s						
LSA	Lhasa	40.24	310	P	P	18 02 39.6	+2.1
LSA	Lhasa	40.24	310	*e*P	P	18 02 39.2	+1.7
	comp=Z,36nm,0.8s,mb5.2						
LSA	Lhasa	40.24	310	*e*P	P	18 02 39.2	+1.7
LSA				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.2						
GTA	Gaotai	40.60	328	⇑P	P	18 02 40.8	+0.5
GTA				AP	pP	18 03 03.4	+0.9
GTA				XP	sP	18 03 14.8	+1.3
GTA				PP	PP	18 04 19.0	+0.4
GTA				PCP	PcP	18 04 41.8	+0.4
GTA				S	S	18 08 42.1	-0.4
GTA				SS	SS	18 11 40.4	-0.8
GTA				SCS	ScS	18 12 33.9	-0.1
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.9						
GTA				AMB	AMB		
	comp=Z,320nm,5.7s						
GTA				LR	LR		
	comp=N,630nm,20.9s						
GTA				LR	LR		
	comp=E,690nm,17.5s						
GTA				LR	LR		
	comp=Z,790nm,15.2s						
STKA	Stephens Creek	40.69	159	⇑*i*P	P	18 02 42.4	+1.2
	comp=Z,81nm,0.6s,mb5.7						
STKA				*e*PCP	PP	18 04 21.2	+1.5
STKA				*e*SCP		18 08 24.4	
STKA				*e*S	S	18 08 45.0	+1.0
STKA	Stephens Creek	40.69	159	P	P	18 02 42.5	+1.3
	comp=Z,91nm,0.6s,mb5.8,baz=335,slow=7.8,SNR=301						
STKA				PP	PP	18 04 19.6	-0.1
	comp=Z,65nm,0.8s,baz=338,slow=11,SNR=4.3						
STKA				ScP		18 08 24.4	
	comp=Z,8.9nm,0.8s,baz=4.5,slow=7.4,SNR=3.3						
STKA				S	S	18 08 44.6	+0.6
	comp=Z,29nm,1.2s,baz=103,slow=18,SNR=4.6						
STKA				LR	LR	18 21 39.2	
	comp=Z,189nm,18.6s,baz=132,slow=39						
BOK	Bokaro	42.26	299	*e*P	P	18 02 55.3	+1.2
BOK				AMb	AMB	18 02 58.2	
	comp=Z,41nm,0.8s,mb5.2						
VIS	Vishakhapatnam	43.12	289	*e*P	P	18 02 58.6	-2.7
VIS				AMb	AMB	18 03 05.8	
	comp=Z,40nm,1.0s,mb5.1						
YSS	Yuzh-Sakhalins	43.12	17	*e*P	P	18 03 01.3	+0.4
	comp=Z,71nm,1.0s,mb5.3						
YSS	Yuzh-Sakhalins	43.12	17	P	P	18 03 01.0	+0.1
YSS				pmax	pmax		
	comp=N,30nm,0.9s						
YSS				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.3						
KLR	Kul'dur	43.18	6κ	*i*P	P	18 03 01.9	+0.6
KLR				*e*S	S	18 09 19.5	-0.8
KLR				pmax	pmax		
	comp=E,57nm,1.6s						
KLR				pmax	pmax		
	comp=Z,100nm,1.6s,mb5.3						
HIA	Hailar	43.25	354	*e*P	P	18 03 02.4	+0.5
	comp=Z,78nm,1.0s,mb5.4						
HIA	Hailar	43.25	354	*e*P	P	18 03 02.4	+0.5
HIA				pmax	pmax		
	comp=Z,78nm,1.0s						
GUN	Gumba	43.66	304	*e*P	P	18 03 06.3	+0.7
	comp=Z,198nm,0.8s,mb5.9						
PKI	Pulchoki	43.93	304	*e*P	P	18 03 08.1	+0.4
	comp=Z,49nm,0.8s,mb5.3						
ARMA	Armidale	43.95	147	*e*P	P	18 03 09.0	+1.1
ARMA				*e*SCP		18 08 39.6	
KKN	Kakani	44.11	304	*e*P	P	18 03 09.2	0.0
	comp=Z,49nm,0.8s,mb5.3						
DMN	Daman	44.19	304	*e*P	P	18 03 10.0	+0.1
	comp=Z,84nm,0.9s,mb5.5						
ULN	Ulaanbaatar	44.55	342	*e*P	P	18 03 12.2	-0.3
	comp=Z,53nm,1.1s,mb5.2						
ULN				*e*PcP	PcP	18 04 54.5	0.0
ULN				*e*PP	PP	18 04 58.7	-0.4
ULN	Ulaanbaatar	44.55	342	*e*P	P	18 03 12.2	-0.2
ULN				*e*		18 04 54.5	
ULN				*e*		18 04 58.7	
ULN				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.2						
GKN	Gorkha	44.72	304	*e*P	P	18 03 13.9	-0.2
	comp=Z,66nm,1.0s,mb5.3						
SONM	Songino Array	44.73	341	P	P	18 03 13.5	-0.4
	comp=Z,11nm,0.8s,mb4.6,baz=167,slow=5.7,SNR=56						
SONM				PcP	PcP	18 04 55.2	+0.1
	comp=Z,9.0nm,0.7s,baz=160,slow=3.4,SNR=9.0						
SONM				ScP		18 08 38.8	
	comp=Z,4.3nm,1.0s,baz=169,slow=4.9,SNR=5.4						
SONM				LR	LR	18 22 25.2	
	comp=Z,307nm,18.4s,baz=151,slow=37						
BLSP	Bilaspur	45.13	295	*e*P	P	18 03 16.8	-0.6
BLSP				AMb	AMB	18 03 19.0	
	comp=Z,61nm,1.0s,mb5.3						
KOLN	Koldanda	45.50	303	*e*P	P	18 03 19.8	-0.4
	comp=Z,81nm,0.7s,mb5.6						
CNB	Canberra Magne	46.81	154	*e*P	P	18 03 32.1	+1.6
	comp=Z,47nm,0.9s,mb5.2						
CIT	Chita	46.82	350	*e*P	P	18 03 31.0	+0.6
CIT				*e*		18 05 02.6	
TOO	Toolangi	47.20	159	⇑*i*P	P	18 03 35.7	+2.1
	comp=Z,34nm,0.9s,mb5.1						

TOO	Toolangi	47.20	159⇑	iP	P	18 03 35.7	+2.1
TOO				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.1						
HYB	Hyderabad	47.57	288	i P	P	18 03 36.0	-0.7
HYB				epP	pP	18 04 00.5	+1.2
HYB				eS	S	18 10 24.0	+0.4
HYB	Hyderabad	47.57	288	eP	P	18 03 36.0	-0.7
ZAK	Zakamensk	47.96	341	eP	P	18 03 37.3	-2.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
NOUC	Port Laguerre	48.52	127	eP	P	18 03 44.1	+0.1
IRK	Irkutsk	49.26	343	eP	P	18 03 42.8	-6.5
IRK				pmax	pmax		
	comp=Z,58nm,1.9s,mb5.2						
BHPL	Bhopal	49.62	295	eP	P	18 03 52.0	-0.4
BHPL				AMb	AMB	18 03 55.2	
	comp=Z,53nm,1.2s,mb5.3						
MOY	Mondy	49.81	340	eP	P	18 03 53.8	+0.2
MOY				pmax	pmax		
	comp=Z,65nm,2.7s,mb5.1						
WMQ	Urumqi	50.27	324⇑	iP	P	18 03 56.6	-0.6
WMQ				PCP	PcP	18 05 15.0	+0.1
WMQ				S	S	18 11 01.0	+0.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,100nm,4.2s						
WMQ				LR	LR		
	comp=N,1µm,17.6s						
WMQ				LR	LR		
	comp=E,810nm,16.6s						
WMQ				LR	LR		
	comp=Z,810nm,19.2s						
CLNS	Chul'man	50.52	359	eP	P	18 04 00.2	+1.3
CLNS				pmax	pmax		
	comp=Z,179nm,0.9s,mb6.1						
CLNS				pmax	pmax		
	comp=N,108nm,1.0s						
CLNS				pmax	pmax		
	comp=E,43nm,0.9s						
NDI	New Delhi	51.13	302	ex	x	18 04 00.5	
KAD	Karad	51.70	287	eP	P	18 04 07.1	-1.3
POO	Poona	52.15	289	eP	P	18 04 11.2	-0.5
BOD	Bodaibo	52.34	352	eP	P	18 04 11.2	-1.3
BOD				pmax	pmax		
	comp=Z,965nm,1.3s						
THN	Thein Dam	53.47	306	eP	P	18 04 19.8	-1.5
PET	Petropavlovsk	53.80	24	eP	P	18 04 23.5	+0.1
PET				pmax	pmax		
	comp=Z,89nm,2.8s,mb5.3						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
MKAR	Makanchi Array	55.10	325	P	P	18 04 31.5	-1.5
	comp=Z,16nm,0.8s,mb5.1,baz=118,slow=6.5,SNR=92						
MKAR				ScP		18 09 23.3	
	comp=Z,2.5nm,0.7s,baz=114,slow=5.8,SNR=5.1						
KSH	Kashi	55.76	314	eP	P	18 04 39.0	+1.2
KSH				eAP	pP	18 05 02.0	+0.9
KSH				eXP	sP	18 05 13.1	+1.4
KSH				ePCP	PcP	18 05 36.3	+0.6
KSH				ePP	PP	18 06 46.3	+1.7
KSH				eSCP		18 09 25.0	
KSH				ePCS		18 09 35.3	
KSH				eS	S	18 12 15.0	-0.4
KSH				eXS		18 12 58.1	
KSH				eSCS	ScS	18 14 14.0	0.0
KSH				eSS	SS	18 16 03.3	+1.2
KSH				AMB	AMB		
	comp=Z,150nm,1.8s,mb5.7						
KSH				LR	LR		
	comp=N,380nm,5.6s						
KSH				LR	LR		
	comp=E,490nm,5.2s						
YAK	Yakutsk	55.80	2	eP	P	18 04 37.4	-0.4
	comp=E,556nm,0.8s						
YAK	Yakutsk	55.80	2d	iP	P	18 04 37.8	0.0
YAK				eS	S	18 12 16.8	+1.3
YAK				i		18 14 15.1	
YAK				i SSS	SSS	18 18 04.1	-8.9
YAK				smax			
	comp=N,16nm,1.0s						
YAK				smax			
	comp=Z,7.0nm,1.1s						
YAK				smax			
	comp=E,11nm,1.3s						
MA2	Magadan	56.54	15	eP	P	18 04 42.8	-0.3
	comp=E,97nm,1.1s,mb5.7						
MA2	Magadan	56.54	15c	iP	P	18 04 43.5	+0.4
MA2				eS	S	18 12 27.6	+2.2
MA2				pmax	pmax		
	comp=N,20nm,0.9s						
MA2				pmax	pmax		
	comp=Z,60nm,0.9s,mb5.6						
BHJ	Bhuj	56.65	294	eP	P	18 04 42.2	-2.2
BHJ				AMb	AMB	18 04 46.1	
	comp=Z,47nm,1.0s,mb5.5						
KZA	Kyzart	57.28	317	P	P	18 04 48.3	-0.3
	SNR=9.5						
TKM2	Tokmak 2	57.40	318	P	P	18 04 48.5	-0.9
	SNR=5.9						
KBK	Karagaybulak	57.72	317	P	P	18 04 51.1	-0.6
	SNR=11						
UCH	Uchtor	57.84	317	P	P	18 04 52.5	0.0
	SNR=9.9						
FRU	Bishkek	58.02	317	eP	P	18 04 50.0	-3.7
USP	Ospenovka	58.27	318	P	P	18 04 54.2	-1.3
	SNR=9.9						
AML	Almayashu	58.37	316	P	P	18 04 55.9	-0.2
	SNR=9.1						
EKS2	Erkin-Say	58.52	317	P	P	18 04 56.6	-0.6
	SNR=7.6						
KURK	Kurchatov	59.26	327⇑	eP	P	18 05 00.2	-1.9
	comp=Z,35nm,0.9s,mb5.4						
KURK	Kurchatov	59.26	327⇑	eP	P	18 05 00.2	-2.0
KURK				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.4						
NVS	Novosibirsk	59.33	333⇑	iP	P	18 04 59.4	-3.2
NVS				e*PP	pP	18 05 14.6	-12
NVS				e		18 05 47.0	
NVS				i S	S	18 12 59.4	-2.6
NVS				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
NVS				pmax	pmax		
	comp=N,21nm,1.3s						
NVS				pmax	pmax		
	comp=E,17nm,1.1s						
NVS				smax			
	comp=E,18nm,1.7s						
NVS				smax			
	comp=N,10.0nm,1.6s						
SEY	Seymchan	59.84	14	eP	P	18 05 07.5	+1.5
SEY				e		18 05 48.1	
SEY				e		18 13 20.9	
SEY				pmax	pmax		
	comp=N,20nm,0.8s						
SEY				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.4						
FX1	Attu Island--F	60.38	31	eP	P	18 05 09.9	+0.1
RPZ	Rata Peaks	64.22	145	LR	LR	18 31 39.1	
	comp=Z,395nm,19.8s,baz=306,slow=34						
BVAR	Borovoye Array	64.84	327	P	P	18 05 37.3	-2.1
	comp=Z,6.6nm,0.7s,mb4.6,baz=127,slow=7.4,SNR=27						
URZ	Urewera	64.87	137	LR	LR	18 30 37.0	
	comp=Z,364nm,22.0s,baz=245,slow=33						
BRVK	Borovoye	64.91	327	eP	P	18 05 37.9	-2.0
	comp=Z,16nm,0.8s,mb4.9						
BRVK	Borovoye	64.91	327	eP	P	18 05 37.9	-2.0
BRVK				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.9						
CHKZ	Chkalovo	65.00	327	eP	P	18 05 38.0	-2.4
	comp=Z,31nm,1.3s,mb5.0						
CHKZ	Chkalovo	65.00	327	eP	P	18 05 38.0	-2.4
CHKZ				pmax	pmax		
	comp=Z,31nm,1.3s,mb5.0						
BILL	Bilibino	67.40	15	eP	P	18 05 55.5	0.0
	comp=Z,75nm,1.1s,mb5.4						
BILL	Bilibino	67.40	15c	iP	P	18 05 55.7	+0.3
BILL				pmax	pmax		
	comp=Z,182nm,2.0s,mb5.6						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s						
AKTO	Aktyubinsk	71.25	321	P	P	18 06 18.0	-1.3
	comp=Z,4.3nm,0.5s,mb4.5,baz=105,slow=9.7,SNR=16						
UNV	Unalaska Valle	71.88	35	eP	P	18 06 23.1	+0.2
	comp=Z,291nm,1.0s,mb6.1						
AKUT	Akutan	72.37	35	eP	P	18 06 26.9	+1.1
	comp=Z,561nm,1.2s,mb6.3						
ARU	Arti	72.45	327	eP	P	18 06 23.7	-2.5
	comp=Z,25nm,0.8s,mb5.1						
ARU				PcP	PcP	18 06 41.6	-2.1
ARU	Arti	72.45	327⇑	iP	P	18 06 24.5	-1.7
ARU				e		18 06 41.1	
ARU				e		18 09 02.3	
ARU				ePPP	PPP	18 10 43.3	-10
ARU				eS	S	18 15 38.2	-3.0
ARU				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.0						
ORR	Orenburg	73.52	322⇑	iP	P	18 06 32.4	-0.2
HASS	Wahat al Ahsa'	74.95	294	P	P	18 06 40.7	-0.7
MIR	Mirnyy	76.35	193	eP	P	18 06 49.0	+0.5
MIR				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.8						
UMR	Umm Al-Rimmam	76.73	299	eP	P	18 06 50.1	-1.3
UMR				AMb	AMB	18 06 52.5	
	comp=Z,101nm,0.8s,mb5.6						
KBD	Kabd	76.75	298	eP	P	18 06 50.0	-1.6
KBD				AMb	AMB	18 06 51.8	
	comp=Z,335nm,0.8s,mb6.2						
MIB	Mutribah	77.06	299	eP	P	18 06 51.4	-1.8
MIB				AMb	AMB	18 06 53.2	
	comp=Z,165nm,0.8s,mb5.8						
NAY	Al-Naaiem	77.15	298	eP	P	18 06 51.5	-2.3
NAY				AMb	AMB	18 06 54.7	
	comp=Z,72nm,0.8s,mb5.4						
DGRG	David-gareji	78.86	311	P	P	18 07 01.8	-1.0
SVW2	Sparrevohn	79.05	29	eP	P	18 07 05.4	+1.9
MZLS	Mizel	79.05	293	P	P	18 07 04.0	-0.2
MTA	Mtatsminda	79.30	311	P	P	18 07 12.4	+7.1
GNI	Garni	79.31	310	P	P	18 07 06.6	+1.2
	comp=Z,1.6nm,0.3s,mb4.3,baz=225,slow=2.9,SNR=7.7						
GNI	Garni	79.31	310	eP	P	18 07 05.8	+0.5
	comp=Z,42nm,1.2s,mb5.2						
GNI	Garni	79.31	310	eP	P	18 07 05.8	+0.4
GNI				pmax	pmax		
	comp=Z,42nm,1.2s						
BHD	Baghdad	79.58	303	ex	x	18 07 05.0	
KAMS	Al Khamasin	79.79	289	P	P	18 07 08.8	+0.5
IMA2	Indian Mountai	80.47	24	eP	P	18 07 13.1	+2.0
MSL	Mosul	80.61	306	ex	x	18 07 13.0	
TATS	Tathlith	80.86	289	P	P	18 07 14.1	+0.1
KIV	Kislovodsk	80.88	313	eP	P	18 07 12.0	-1.7
	comp=Z,10nm,0.8s,mb4.7						
KIV	Kislovodsk	80.88	313c	iP	P	18 07 12.7	-1.0
KIV				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.8						
DJNS	Zahran al Janu	80.91	287	P	P	18 07 14.6	+0.2
AFFS	'Afif	81.07	293	P	P	18 07 15.0	-0.1
OPO	Ambohidratompo	81.36	250	P	P	18 07 15.7	-1.0
	comp=Z,2.0nm,0.8s,baz=75,slow=8.7,SNR=3.2						
SLKM	Skilak Lake	81.62	30	eP	P	18 07 17.7	+0.5
HILS	Ha'il	81.99	297	P	P	18 07 20.0	+0.1
PMR	Palmer	82.19	29	eP	P	18 07 20.9	+0.8
	comp=Z,362nm,1.8s,mb5.9						
PMR	Palmer	82.19	29	eP	P	18 07 20.9	+0.8
PMR				pmax	pmax		
	comp=Z,363nm,1.8s,mb5.9						
SML	Sawmill	82.57	29	eP	P	18 07 23.4	+1.4
BLJS	Baljurashi	82.61	289	P	P	18 07 23.6	+0.6
COLA	College	82.83	25	eP	P	18 07 24.0	+0.7
	comp=Z,72nm,0.8s,mb5.5						
COLA	College	82.83	25	eP	P	18 07 24.0	+0.7
COLA				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.5						
KLMR	Klimovskoe	82.89	331	eP	P	18 07 23.2	-0.5
KLMR				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.1						
ILAR	Eielson Array	83.24	26	P	P	18 07 25.6	+0.2
	comp=Z,74nm,0.8s,mb5.5,baz=242,slow=4.9,SNR=482						
ILAR				PKKPbc		18 25 45.3	
	comp=Z,0.7nm,1.0s,baz=131,slow=0.3,SNR=8.0						
THY	Trims Highway	83.76	27	eP	P	18 07 29.9	+2.0
DIV	Divide	83.80	29	eP	P	18 07 30.6	+2.3
	comp=Z,970nm,0.9s						
KBRS	Khaybar	84.35	295	P	P	18 07 32.7	+0.9
OBN	Obninsk	84.61	325	eP	P	18 07 31.9	-0.5
	comp=Z,63nm,1.1s,mb5.5						
OBN	Obninsk	84.61	325c	iP	P	18 07 31.9	-0.5
OBN				i		18 07 37.9	
OBN				i		18 07 48.7	
OBN				i S	S	18 17 43.6	-6.5
OBN				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.4						
MENT	Mentasta	84.70	27	eP	P	18 07 32.7	0.0
YNBS	Yanbu' al Bahr	85.61	294	P	P	18 07 39.2	+1.0
QURS	Qurayyt al Mil	85.63	301	P	P	18 07 38.7	+0.7
MAW	Mawson	85.77	200⇑	iP	P	18 07 38.8	+0.9
	comp=Z,11nm,0.6s,mb5.0						
MAW	Mawson	85.77	200	P	P	18 07 38.5	+0.7
	comp=Z,12nm,0.7s,mb5.0,baz=68,slow=5.0,SNR=32						
MAW	Mawson	85.77	200⇑	iP	P	18 07 38.8	+0.9
MAW				pmax	pmax		
	comp=Z,11nm,0.6s						
VNDA	Vanda	85.95	173	eP	P	18 07 39.1	+0.5
	comp=Z,5.0nm,0.6s,mb4.6						
VNDA	Vanda	85.95	173	eP	P	18 07 39.1	+0.5
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
DAWY	Dawson	86.53	26	eP	P	18 07 43.3	+1.6
TBKS	Tabuk	86.57	298	P	P	18 07 43.0	+0.3
PPT	Papeete	86.62	108	eLR	LR	18 35 09.3	
	comp=Z,488nm,25.8s						
PPT	Papeete	86.62	108	LR	LR	18 40 01.0	
	comp=Z,357nm,18.6s,baz=238,slow=31						
JOF	Joensuu	86.64	333	ep	P	18 07 39.4	-2.8
	comp=Z,12nm,0.7s,mb4.9						
KEV	Kevo	87.33	340	ep	P	18 07 45.0	-0.4
	comp=Z,5.6nm,0.7s,mb4.6						
KEV	Kevo	87.33	340	eP	P	18 07 45.0	-0.4
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
TBI	Tubuai	87.50	114	eLR	LR	18 35 33.1	
	comp=Z,345nm,30.5s						
AYUS	'Aynunah	87.70	298	P	P	18 07 48.2	0.0
JMOS	Jabal al Moall	87.74	299	P	P	18 07 49.3	+0.9
ALWS	Ilw as Safayha	87.76	299	P	P	18 07 49.5	+1.0
BDAS	Al Bad'	87.82	298	P	P	18 07 49.3	+0.5
ARCES	ARCESS Array B	87.88	340	P	P	18 07 47.7	-0.4
	comp=Z,11nm,0.6s,mb5.0,baz=84,slow=5.3,SNR=33						
ARCES				PKKPbc		18 25 34.8	
	comp=Z,1.1nm,0.6s,baz=244,slow=3.9,SNR=13						
ARCES				LR	LR	18 48 14.7	
	comp=Z,206nm,19.5s,baz=337,slow=36						
ARCES	ARCESS Array B	87.88	340	P	P	18 07 47.7	-0.4
ARCES				PKKPbc		18 25 34.8	
ARCES				LR	LR	18 48 14.7	
ARE0	ARCESS Array S	87.88	340	eP	P	18 07 47.8	-0.3
HAQS	Haql	87.91	299	P	P	18 07 49.2	0.0
TAYS	Tayyib Ism	88.01	298	P	P	18 07 50.4	+0.8
INK	Inuvik	88.18	21	PKKPbc		18 25 33.6	
	comp=Z,1.7nm,0.6s,baz=27,slow=3.3,SNR=8.7						
INK	Inuvik	88.18	21⇑	eP	P	18 07 50.1	+0.5
	comp=Z,86nm,1.0s,mb5.7						
INK	Inuvik	88.18	21⇑	eP	P	18 07 50.1	+0.6
INK				pmax	pmax		
	comp=Z,86nm,1.0s						
KMBO	Kilima Mbogo	88.81	269	P	P	18 07 53.8	0.0
	comp=Z,3.6nm,1.0s,mb4.3,baz=45,slow=7.3,SNR=10.0						
KMBO				LR	LR	18 44 10.3	
	comp=Z,80nm,19.7s,baz=94,slow=33						
KAF	Kangasniemi	89.06	332	ep	P	18 07 51.5	-2.3
	comp=Z,10nm,1.0s,mb4.8						
KAF	Kangasniemi	89.06	332	eP	P	18 07 51.5	-2.3
KAF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
FINES	FINESS Array B	89.31	332	P	P	18 07 53.9	-1.1
	comp=Z,4.7nm,0.7s,mb4.7,baz=50,slow=5.7,SNR=40						
FINES				PKiKP		18 12 52.9	
	comp=Z,2.6nm,0.9s,baz=90,slow=3.8,SNR=3.5						
FINES				PKKP	PKKP	18 25 30.1	+18
	comp=Z,1.9nm,0.9s,baz=180,slow=1.9,SNR=5.7						
FINES				LR	LR	18 49 28.8	
	comp=Z,137nm,18.1s,baz=110,slow=37						
AKASG	Malin Array Be	89.50	321	P	P	18 07 54.4	-1.7
	comp=Z,1.1nm,0.4s,mb4.2,baz=71,slow=4.4,SNR=12						
AKASG	Malin Array Be	89.50	321	P	P	18 07 54.4	-1.7
VRI	Vrincioaia	91.98	316⇓	iP	P	18 08 06.0	-1.8
SUW	Suwalki	92.47	325	eP	P	18 08 05.8	-4.1
SUW	Suwalki	92.47	325	eP	P	18 08 06.1	-3.8
	comp=Z,42nm,1.0s,mb5.6						
SUW	Suwalki	92.47	325	eP	P	18 08 06.1	-3.7
SUW				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.6						
BURAR	Bucovina Array	92.65	318⇑	iP	P	18 08 11.4	+0.6
SYO	Syowa Base	94.42	201 ⇓	P	P	18 08 20.0	+1.7
SYO	Syowa Base	94.42	201⇓	eP	P	18 08 20.0	+1.7
DAG	Danmarks Havn	94.73	352⇓	iP	P	18 08 19.6	-0.1
	comp=Z,17nm,0.7s,mb5.6						
DAG	Danmarks Havn	94.73	352⇓	iP	P	18 08 19.6	-0.1
DAG				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.6						
TAOE	Nuku Hiva Isla	94.79	98	eLR	LR	18 38 57.3	
	comp=Z,1µm,28.7s						
OJC	Ojcow	95.47	322	eP	P	18 08 21.1	-2.5
QSPA	South Pole Qui	96.08	180	eP	P	18 08 26.8	+1.1
	comp=Z,11nm,1.0s,mb5.2						
NB2	NORSAR Subarra	96.25	334	P	P	18 08 24.9	-1.9
	comp=Z,17nm,1.4s,mb5.3,baz=65,slow=4.5						
NB2	NORSAR Subarra	96.25	334	P	P	18 08 24.9	-1.9
	baz=65,slow=4.6						
NOA	NORSAR Array B	96.25	334	P	P	18 08 25.2	-1.7
	comp=Z,2.3nm,0.6s,mb4.8,baz=66,slow=4.5,SNR=11						
NOA				LR	LR	18 53 11.4	
	comp=Z,198nm,21.9s,baz=75,slow=36						
NOA	NORSAR Array B	96.25	334	P	P	18 08 25.2	-1.7
NOA				LR	LR	18 53 11.4	
NAO	NORSAR Subarra	96.51	333	P	P	18 08 24.9	-3.1
	comp=Z,17nm,1.4s,mb5.3						
NAO	NORSAR Subarra	96.51	333	P	P	18 08 24.9	-3.1
NAO				pmax	pmax		
	comp=Z,17nm,1.4s,mb5.3						
YKA	Yellowknife Ar	97.60	24	P	P	18 08 34.2	+1.2
	comp=Z,23nm,0.9s,mb5.7,baz=299,slow=4.7,SNR=32						
YKA				PKKP	PKKP	18 25 08.8	+11
	comp=Z,2.6nm,0.5s,baz=123,slow=3.3,SNR=22						
YKA	Yellowknife Ar	97.60	24	P	P	18 08 34.2	+1.2
YKA				PKKP	PKKP	18 25 08.8	+11
BRG	Berggiesshubel	98.80	324	eP	P	18 08 38.9	+0.1
	comp=Z,6.6nm,1.0s,mb5.1						
BRG	Berggiesshubel	98.80	324	eP	P	18 08 38.9	+0.2
BRG				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb5.2						
CLL	Collm	99.19	324	P	P	18 08 40.0	-0.5
CLL				e		18 08 46.0	
CLL	Collm	99.19	324	eP	P	18 08 40.0	-0.5
GERES	GERESS Array B	99.68	322	P	P	18 08 41.8	-1.0
	comp=Z,2.1nm,1.0s,mb4.7,baz=72,slow=4.2,SNR=6.4						
RKT	Rikitea	100.75	112	eLR	LR	18 41 41.6	
	comp=Z,184nm,33.2s						
GRA1	Grafenberg Arr	100.86	323	eP	P	18 08 46.9	-1.2
GRF	Grafenberg Arr	100.86	323	eP	P	18 08 46.9	-1.2
HUMO	Hull Mountain	101.08	45	ePdif	P	18 08 50.6	+1.4
	comp=Z,6.1nm,0.9s						
EDM	Edmonton	102.70	32	ePdif	Pdif	18 08 57.3	+1.2
NEW	Newport	102.79	38	Pdiff	Pdif	18 08 58.4	+1.8
	baz=287,slow=4.0						
NEW	Newport	102.79	38	ePdif	Pdif	18 08 57.9	+1.3
	comp=Z,12nm,0.9s						
NEW	Newport	102.79	38	eP	Pdif	18 08 57.9	+1.3
NEW				pmax	pmax		
	comp=Z,12nm,0.9s						
EKA	Eskdalemuir Ar	105.69	333	PP	PP	18 13 28.4	-6.9
	comp=Z,1.1nm,0.8s,baz=346,slow=3.4,SNR=3.6						
CHMT	Chamberlain Mo	105.74	38	ePdif	Pdif	18 09 11.5	+1.9
NVAR	Mina Array Bea	105.86	47	Pdiff	Pdif	18 09 12.7	+2.4
	comp=Z,2.5nm,1.0s,baz=286,slow=4.4,SNR=12						
NVAR				PP	PP	18 13 33.5	-3.4
	comp=Z,1.2nm,0.9s,baz=297,slow=4.0,SNR=4.8						
ELK	Elko	107.14	44	Pdiff	Pdif	18 09 18.4	+2.5
	comp=Z,1.4nm,0.9s,baz=88,slow=2.0,SNR=5.5						
SNAA	Sanae	107.37	195		PKKP	18 24 40.8	+0.6
SNAA	Sanae	107.37	195	PKKPbc		18 24 41.2	
	comp=Z,1.1nm,1.0s,baz=287,slow=3.3,SNR=4.9						
SNAA				PKKP	PKKP	18 24 54.5	+14
	comp=Z,0.9nm,0.7s,baz=300,slow=3.9,SNR=5.4						
VNA2	Neumayer--Watz	108.99	195	P	Px	18 13 21.3	
VNA2	Neumayer--Watz	108.99	195			18 13 30.6	
VNA2	Neumayer--Watz	108.99	195			18 13 32.7	
VNA2	Neumayer--Watz	108.99	195			18 13 35.6	
VNA2	Neumayer--Watz	108.99	195	P		18 13 30.6	
VNA3	Neumayer Olymp	109.33	194	P	Px	18 13 22.2	
VNA3	Neumayer Olymp	109.33	194			18 13 30.9	
VNA3	Neumayer Olymp	109.33	194			18 13 33.2	
VNA3	Neumayer Olymp	109.33	194			18 13 35.4	
VNA3	Neumayer Olymp	109.33	194	P		18 13 30.9	
PDAR	Pinedale Array	110.02	40	PKiKP		18 13 32.5	
	comp=Z,0.4nm,0.7s,baz=333,slow=2.0,SNR=3.2						
PDAR				PP	PP	18 14 06.0	-2.0
	comp=Z,1.0nm,0.9s,baz=315,slow=2.1,SNR=4.4						
PDAR				PKKPbc		18 24 31.9	
	comp=Z,0.7nm,0.7s,baz=121,slow=3.5,SNR=5.6						
PDAR				PKKPab		18 24 43.0	
	comp=Z,0.9nm,0.8s,baz=112,slow=6.4,SNR=5.4						
ULM	Lac du Bonnet	113.19	28	PKiKP		18 13 35.6	
	comp=Z,1.5nm,0.5s,baz=350,slow=6.1,SNR=4.7						
ANMO	Albuquerque	115.94	46	PKP	PKPdf	18 13 43.9	+3.3
	comp=Z,1.6nm,0.7s,baz=225,slow=1.4,SNR=3.7						
SCHQ	Schefferville	118.28	8	PKP	PKPdf	18 13 46.8	+2.3
	comp=Z,2.6nm,0.5s,baz=337,slow=5.9,SNR=9.6						
SCHQ	Schefferville	118.28	8	ePKPdf	PKPdf	18 13 46.6	+2.1
KSU1	Kansas State U	120.19	37	ePKPdf	PKPdf	18 13 50.4	+1.8
TXAR	Lajitas Array	120.70	51	PKP	PKPdf	18 13 52.7	+2.8
	comp=Z,1.5nm,0.7s,baz=234,slow=0.9,SNR=19						
TXAR				PP	PP	18 15 22.2	-0.9
	comp=Z,2.0nm,1.0s,baz=297,slow=2.8,SNR=5.2						
TXAR				SKP		18 17 20.9	
	comp=Z,1.4nm,0.9s,baz=34,slow=3.3,SNR=3.9						
TXAR	Lajitas Array	120.70	51	PKP	PKPdf	18 13 52.7	+2.8
TXAR				PP	PP	18 15 22.2	-0.9
TXAR				SKP		18 17 20.9	
JCT	Junction City	123.03	48	ePKPdf	PKPdf	18 13 56.8	+2.5
CCM	Cathedral Cave	124.03	35	ePKPdf	PKPdf	18 13 57.3	+1.1
SADO	Sadowa	124.50	21	PKP	PKPdf	18 13 59.2	+2.3
	comp=Z,15nm,1.0s,baz=29,slow=3.8,SNR=3.9						
SADO	Sadowa	124.50	21	PKP	PKPdf	18 13 59.2	+2.3
MIAR	Mount Ida	124.95	40	ePKPdf	PKPdf	18 14 00.8	+2.7
WCI	Wyandotte Cave	126.62	32	ePKPdf	PKPdf	18 14 03.5	+2.3
ACSO	Alum Creek Sta	126.69	27	ePKPdf	PKPdf	18 14 03.3	+2.1
NCB	Newcomb	126.86	18	ePKPdf	PKPdf	18 14 03.5	+2.1
WVT	Waverly	127.33	34	ePKPdf	PKPdf	18 14 04.6	+2.0
DBIC	Dimbokro	129.26	284	PKP	PKPdf	18 14 08.3	+1.4
	comp=Z,5.4nm,0.6s,baz=35,slow=1.2,SNR=11						
DBIC				SKPbc		18 17 21.9	
	comp=Z,9.5nm,0.9s,baz=56,slow=1.8,SNR=7.7						
DBIC	Dimbokro	129.26	284	ePKPdf	PKPdf	18 14 07.1	+0.3
PLCA	Paso Flores	142.57	159	PKhKP		18 14 29.8	
	comp=Z,5.2nm,0.7s,baz=219,slow=3.6,SNR=20						
PLCA				SKPbc		18 18 04.3	
	comp=Z,2.9nm,0.9s,baz=201,slow=5.0,SNR=4.9						
JTS	JuntasAbangare	145.16	62	PKPbc	PKPbc	18 14 38.5	+2.2
	baz=307,slow=5.0						
JTS	JuntasAbangare	145.16	62	ePKPdf	PKPdf	18 14 38.6	+2.7
LMGC	Las Mercedes	145.51	40	P	PKPdf	18 14 40.7	+4.4
PINC	Pinares de May	145.97	38	P	PKPdf	18 14 40.5	+3.5
MOAC	Moa	146.34	37	P	PKPdf	18 14 42.6	+4.9
RCC	Rio Carpintero	146.39	39	P	PKPdf	18 14 41.5	+3.6
SABC	Sabc	146.41	38	P	PKPdf	18 14 42.2	+4.4
TRQA	Tornquist	147.47	168	ePKPbc	PKPdf	18 14 44.1	+5.0
MDZ	Mendoza	150.09	155	eP	PKPdf	18 14 51.2	+7.8
SJG	San Juan	153.07	26	PKPbc	PKPdf	18 14 57.9	+10
	comp=Z,18nm,0.5s,baz=288,slow=3.2,SNR=4.9						
SJG				PKPab	PKPab	18 15 09.9	0.0
	comp=Z,30nm,0.7s,baz=356,slow=5.0,SNR=4.5						
SJG	San Juan	153.07	26	ePKPbc	PKPdf	18 14 58.1	+10
SJG				ePKPab	PKPab	18 15 09.1	-0.8
SJG				epPKPdf		18 15 15.1	
MTP	Monte Pirata	153.34	25	ePKPbc	PKPdf	18 14 58.2	+10
MTP				ePKPab	PKPab	18 15 11.0	0.0
ROSC	El Rosal	156.99	62	PKP	PKPdf	18 14 57.5	+4.0
	comp=Z,8.3nm,0.6s,baz=90,slow=20,SNR=5.0						
SDV	Santo Domingo	157.71	48	PKP	PKPdf	18 14 57.0	+2.5
	comp=Z,8.5nm,0.8s,baz=117,slow=1.2,SNR=13						
SDV				PKPab	PKPab	18 15 30.2	+0.5
	comp=Z,21nm,0.8s,baz=109,slow=1.3,SNR=6.7						
SDV	Santo Domingo	157.71	48	ePKPdf	PKPdf	18 14 56.9	+2.5
SDV				ePKPab	PKPab	18 15 30.2	+0.4
LPAZ	La Paz	162.96	127	PKP	PKPdf	18 15 04.0	+4.0
	comp=Z,2.8nm,0.8s,baz=48,slow=3.6,SNR=15						
LPAZ				PKPab	PKPab	18 15 55.8	+3.5
	comp=Z,19nm,0.8s,baz=246,slow=3.9,SNR=21						
LPAZ	La Paz	162.96	127	ePKPdf	PKPdf	18 15 04.0	+4.1
LPAZ				ePKPab	PKPab	18 15 55.5	+3.2
SIV	San Ignacio	168.08	145	PKP	PKPdf	18 15 06.9	+2.6
	comp=Z,3.0nm,0.8s,baz=179,slow=2.4,SNR=14						
SIV				PKPab	PKPab	18 16 15.2	+0.6
	comp=Z,7.1nm,0.8s,baz=232,slow=4.1,SNR=10						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDFB	Brasilia	168.88	212	PKPab	PKPab	18 16 18.1	-0.1
	comp=Z,3.9nm,0.8s,baz=139,slow=5.1,SNR=3.6						
SAML	Samuel	170.56	107	*e*PKPdf	PKPdf	18 15 08.2	+2.4
SAML				*e*PKPab	PKPab	18 16 26.2	+0.5

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*NEIC **19** 18:01:41.5,40.46S×178.81E,h33^{km},ML3.8(WEL),After WEL.*

WEL 19 18:01:43.6±0.5,**40.36S×178.59E,h33**^{km}**,ML3.6**/7**,2C-1D, Error ellipse: s-maj=4.8km s-min=2.3km az=90.0,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PXZ	Pawanui	1.36	283	⇑PN	Pn	18 02 06.3	-0.3
PXZ				SN	Sn	18 02 22.3	-1.4
KNZ	Kokohu	1.51	332	P	P	18 02 07.5	-1.1
KNZ	Kokohu	1.51	332	PN	Pn	18 02 07.5	-1.3
KNZ				*e*SN	Sn	18 02 24.5	-3.0
KNZ				SN	Sn	18 02 24.6	-2.9
BFZ	Birch Farm	1.81	259	*e*P	P	18 02 12.2	-0.7
BKZ	Black Stump Fm	2.01	306	P	P	18 02 15.3	-0.4
BKZ				S	S	18 02 37.2	-2.6
BKZ	Black Stump Fm	2.01	306	PN	Pn	18 02 15.3	-0.5
BKZ				SN	Sn	18 02 37.2	-2.9
TSZ	Takapari Road	2.03	278	P	P	18 02 15.5	-0.6
TSZ	Takapari Road	2.03	278	⇓PN	Pn	18 02 15.6	-0.7
TSZ				SN	Sn	18 02 37.8	-3.0
MWZ	Matawai	2.18	338	P	P	18 02 16.8	-1.4
MWZ				S	S	18 02 39.8	-4.5
MWZ	Matawai	2.18	338	PN	Pn	18 02 16.8	-1.6
MWZ				SN	Sn	18 02 40.2	-4.3
PUZ	Puketiti	2.30	353	SN	Sn	18 02 42.2	-5.3
MRZ	Mangatainoka R	2.31	262	*e*P	P	18 02 18.9	-1.2
MRZ	Mangatainoka R	2.31	262	PN	Pn	18 02 18.9	-1.4
MRZ				SN	Sn	18 02 44.3	-3.6
MOVZ	Moawhango	2.38	293	P	P	18 02 21.0	0.0
MOVZ	Moawhango	2.38	293	PN	Pn	18 02 21.0	-0.2
URZ	Urewera	2.39	331	P	P	18 02 20.0	-1.2
URZ	Urewera	2.39	331	PN	Pn	18 02 19.9	-1.5
TRWZ	Traveller	2.43	244	PN	Pn	18 02 19.4	-2.5
MTW	Mount Morrison	2.48	250	P	P	18 02 20.4	-2.0
MTW	Mount Morrison	2.48	250	⇑PN	Pn	18 02 20.4	-2.2
TUVZ	Tukino	2.51	295	P	P	18 02 23.4	+0.5
TUVZ	Tukino	2.51	295	*e*PN	Pn	18 02 23.2	+0.2
WNVZ	Wahianoa	2.52	293	P	P	18 02 23.4	+0.4
WNVZ	Wahianoa	2.52	293	PN	Pn	18 02 23.2	0.0
OTVZ	Oturere	2.55	297	PN	Pn	18 02 23.8	+0.2
TRVZ	Turoa	2.57	293	PN	Pn	18 02 23.9	0.0
FWVZ	Far West T-bar	2.58	294	P	P	18 02 24.0	+0.1
FWVZ	Far West T-bar	2.58	294	*e*PN	Pn	18 02 23.2	-0.9
NGZ	Ngauruhoe	2.59	296	P	P	18 02 24.3	+0.3
NGZ	Ngauruhoe	2.59	296	PN	Pn	18 02 24.0	-0.1
KRVZ	Karewarewa	2.60	298	PN	Pn	18 02 24.0	-0.3
WPVZ	Whakapapa	2.61	295	P	P	18 02 24.4	+0.1
WPVZ	Whakapapa	2.61	295	PN	Pn	18 02 24.4	-0.1
CNZ	Chateau	2.61	295	P	P	18 02 24.4	+0.1
CNZ	Chateau	2.61	295	PN	Pn	18 02 23.9	-0.6
WTVZ	West Tongariro	2.62	297	P	P	18 02 24.9	+0.4
WTVZ	West Tongariro	2.62	297	*e*PN	Pn	18 02 24.7	0.0
CAW	Cannon Point	2.78	253	PN	Pn	18 02 24.7	-2.2
MXZ	Matakaoa Point	2.80	355	*e*P	P	18 02 25.0	-2.0
MXZ	Matakaoa Point	2.80	355	PN	Pn	18 02 25.1	-2.0
WAZ	Wanganui	2.83	281	P	P	18 02 28.8	+1.4
WAZ	Wanganui	2.83	281	PN	Pn	18 02 28.7	+1.1
KIW	Kapiti Island	2.84	259	P	P	18 02 26.3	-1.4
KIW	Kapiti Island	2.84	259	PN	Pn	18 02 26.3	-1.5
MRW	Makara Radio	3.08	252	P	P	18 02 28.7	-2.3
MRW	Makara Radio	3.08	252	PN	Pn	18 02 28.6	-2.5
SNZO	South Karori	3.10	251	P	P	18 02 29.1	-2.1
SNZO	South Karori	3.10	251	PN	Pn	18 02 29.0	-2.4
VRZ	Vera Road	3.20	291	*e*P	P	18 02 32.8	+0.1
VRZ	Vera Road	3.20	291	*e*PN	Pn	18 02 31.3	-1.6
TCW	Tory Channel	3.38	254	P	P	18 02 33.0	-2.3
TCW	Tory Channel	3.38	254	PN	Pn	18 02 32.9	-2.5
RAEZ	Rainy Point	3.40	287	P	P	18 02 35.5	-0.1
DUWZ	D'Urville Isla	3.58	261	PN	Pn	18 02 36.6	-1.7
NWEZ	Newall Road	3.79	285	P	P	18 02 40.3	-0.8
NNZ	Nelson	4.05	256	*e*P	P	18 02 42.1	-2.6
NNZ	Nelson	4.05	256	PN	Pn	18 02 42.2	-2.7
KHZ	Kahutara	4.32	240	*e*P	P	18 02 44.6	-4.0
KHZ	Kahutara	4.32	240	PN	Pn	18 02 44.4	-4.4
THZ	Tophouse	4.52	250	*e*P	P	18 02 48.3	-3.2
QRZ	Quartz Range	4.64	262	*e*P	P	18 02 50.6	-2.5
DSZ	Denniston Nort	5.31	253	*e*P	P	18 02 59.1	-3.5
MQZ	McQueen's Vall	5.54	231	*e*P	P	18 03 02.1	-3.8

IDC 19 18:08:43.4±7.9**,18.46S×178.52W,h645**^{km}±96^{km}**, mb2.9**/5**,mb1 3.2**/5**,mb1mx3.0**/14**,mbtmp3.9**/5**,Error ellipse: s-maj=100.0km s-min=37.2km az=159.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	34.45	280	P	P	18 14 40.7	-1.1
	6.3nm,0.8s,baz=153,slow=14,SNR=3.6						
WRA	Warramunga Arr	44.43	260	P	P	18 15 59.7	-1.8
	0.3nm,0.5s,baz=97,slow=7.5,SNR=9.5						
NVAR	Mina Array Bea	79.89	44	P	P	18 19 47.2	-1.3
	0.2nm,0.6s,baz=228,slow=10,SNR=4.9						
TXAR	Lajitas Array	86.38	58	P	P	18 20 20.4	-0.4
	0.5nm,0.6s,baz=213,slow=4.9,SNR=5.0						
PDAR	Pinedale Array	87.83	43	P	P	18 20 25.9	-1.3
	0.5nm,0.7s,baz=243,slow=4.0,SNR=3.8						
GERES	GERESS Array B	148.12	345	PKPbc	PKPdf	18 27 18.0	+4.3
	0.4nm,0.5s,baz=45,slow=3.8,SNR=5.6						

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*MOS **19** 18:09:35.7±1.3,30.12S×177.93W,h33^{km},mb5.1/4,Error ellipse: s-maj=17.6km s-min=14.1km az=87.7*

*IDC **19** 18:09:37.4±2.2,30.11S×177.81W,h39^{km}±17^{km},mb4.2/10, mb1 4.4/11,mb1mx4.4/13,mbtmp4.4/11,ML4.5/1,MS3.8/1, Ms1 3.8/1,ms1mx3.1/16,Error ellipse: s-maj=19.0km s-min=15.4km az=113.0*

*HRVD **19** 18:09:38.7±0.7,30.06S×177.79W,h48^{km}±3^{km},MW5.2/22, Centroid moment Tensor Solution. LP body waves: s22,c26;Mantle waves: s20,c25; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.88±.74; M$_{\theta\theta}$1.49±.60; M$_{\phi\phi}$-7.37±.56; M$_{r\theta}$0.20±.56; M$_{\theta\phi}$0.92±.70; M$_{\phi r}$-1.16±.61; Best double couple: M$_0$6.775×10^{16} NP1:ϕ_s355°,δ40°,λ92°. NP2:ϕ_s173°,δ50°,λ89°. Principal axes: T 5.984, Plg85°, Azm72°; N 1.583, Plg1°, Azm174°; P -7.567, Plg5°, Azm264°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **19** 18:09:38.7±1.4,30.02S×177.93W,h52^{km}±11^{km},mb5.0/14 Error ellipse: s-maj=12.5km s-min=9.8km az=107.0*

ISC 19 18:09:30.2±2.3**,30.42S**±0.04×**178.0W**±0.1**,h2**^{km}±14^{km}**, n119,**σ**1**$\overset{s}{.}$**22**/93**,mb4.8**/24**,MS3.7**/1**,14C-4D,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.17	3	Pn	Pn	18 09 53.3	-0.1
	1µm,0.3s,baz=103,slow=9.9,SNR=44						
RAO				Sn	Sn	18 10 04.4	-5.7
	10µm,0.3s,baz=61,slow=19,SNR=48						
RAO	Raoul Island	1.17	3	Pn	Pn	18 09 53.3	-0.1
RAO				Sn	Sn	18 10 04.4	-5.7
RAO				*e*Sn	Sn	18 10 04.9	-5.2
MXZ	Matakaoa Point	7.76	202	PN	Pn	18 11 27.4	+0.5
MXZ				*e*SN	Sn	18 12 55.9	-0.5
PUZ	Puketiti	8.24	201	*e*PN	P	18 11 33.3	-0.3
PUZ				*e*SN	Sn	18 13 05.1	-3.3
OUZ	Omahuta	8.55	234	PN	P	18 11 48.7	+11
MWZ	Matawai	8.72	204	PN	P	18 11 39.8	-0.4
MWZ				*e*SN	Sn	18 13 20.2	-0.1
URZ	Urewera	8.81	206	Pn	P	18 11 41.6	+0.1
	2.0nm,0.3s,baz=313,slow=4.0,SNR=16						
URZ				Sn	Sn	18 13 23.3	+0.8
	9.9nm,0.3s,baz=197,slow=18,SNR=18						
URZ	Urewera	8.81	206	*e*PN	P	18 11 40.7	-0.8
URZ				*e*SN	Sn	18 13 21.0	-1.4
PXZ	Pawanui	10.47	202	SN	S	18 13 57.6	-5.9
TSZ	Takapari Road	10.81	206	*e*PN	P	18 12 09.2	+0.2
TSZ				SN	S	18 14 07.1	-4.8
MRZ	Mangatainoka R	11.48	205	*e*PN	P	18 12 14.8	-3.4
MRZ				SN	S	18 14 20.1	-8.1
THZ	Tophouse	13.50	211	*e*PN	P	18 12 43.5	-1.7
THZ				*e*SN	S	18 15 09.6	-7.2
KHZ	Kahutara	13.77	207	*e*PN	P	18 12 45.3	-3.5
KHZ				*e*SN	S	18 15 13.5	-10
MQZ	McQueen's Vall	15.21	207	*e*SN	S	18 15 44.4	-13
RPZ	Rata Peaks	15.88	210	Pn	P	18 13 20.9	+4.7
	1.7nm,0.3s,baz=356,slow=0.8,SNR=8.5						
RPZ				Sn	S	18 16 02.5	-11
	1.5nm,0.3s,baz=6.3,slow=18,SNR=5.5						
DZM	Mont Dzumac	16.25	297	Pn	P	18 13 29.2	+8.0
	0.8nm,0.3s,baz=131,slow=19,SNR=12						
NOUC	Port Laguerre	16.34	297	*e*P	P	18 13 31.4	+9.0
NOUC	Port Laguerre	16.34	297	*e*P	P	18 13 31.4	+9.0
ARMA	Armidale	26.18	262	⇓*i*P	P	18 15 13.0	+5.2
TBI	Tubuai	26.34	81	*e*LR	LR	18 21 21.6	
	352nm,27.2s						
CNB	Canberra Magne	27.79	251	*e*P	P	18 15 26.4	+3.9
	22nm,0.7s,mb4.9						
PPT	Papeete	28.84	70	*e*LR	LR	18 22 24.5	
	256nm,21.2s						
PPT	Papeete	28.84	70	LR	LR	18 24 50.3	
	comp=Z,221nm,21.5s,MS3.7,baz=221,slow=32						
TOO	Toolangi	30.97	247	*e*P	P	18 15 54.2	+3.3
	12nm,0.7s,mb4.8						
TOO	Toolangi	30.97	247	*e*P	P	18 15 54.2	+3.3
TOO				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.8						
CTA	Charters Tower	33.82	279	⇓*i*P	P	18 16 18.2	+2.2
	comp=Z,54nm,0.4s,mb5.8						
CTA	Charters Tower	33.82	279	P	P	18 16 18.6	+2.6
	comp=Z,78nm,0.5s,mb5.9,baz=103,slow=10,SNR=278						
CTA	Charters Tower	33.82	279	⇓*i*P	P	18 16 18.2	+2.2
CTA				pmax	pmax		
	comp=Z,54nm,0.4s						
CTAO	Charters Tower	33.82	279	*e*P	P	18 16 18.2	+2.2
	comp=Z,65nm,0.5s,mb5.8						
CTAO	Charters Tower	33.82	279	*e*P	P	18 16 18.2	+2.2
CTAO				pmax	pmax		
	comp=Z,65nm,0.5s,mb5.8						
STKA	Stephens Creek	34.49	257	*e*P	P	18 16 24.8	+3.1
	comp=Z,32nm,0.8s,mb5.3						
STKA	Stephens Creek	34.49	257	P	P	18 16 24.8	+3.1
	comp=Z,81nm,1.1s,mb5.6,baz=98,slow=9.7,SNR=87						
STKA	Stephens Creek	34.49	257	*e*P	P	18 16 24.4	+2.7
STKA				*e*pP	pP	18 16 32.0	+10
RKT	Rikitea	38.90	90	*e*LR	LR	18 27 15.4	
	comp=Z,196nm,28.0s						
ASPA	Alice Springs	43.13	267	*e*P	P	18 17 34.3	+0.5
WB2	Warramunga Arr	44.11	272	⇑*i*P	P	18 17 42.1	+0.3
WRAB	Tennant Creek	44.11	272	*e*P	P	18 17 42.1	+0.3
	comp=Z,60nm,0.8s,mb5.4						
WRAB	Tennant Creek	44.11	272	*e*P	P	18 17 42.1	+0.3
WRAB				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.4						
WRA	Warramunga Arr	44.12	272	P	P	18 17 42.2	+0.3
	comp=Z,29nm,0.3s,mb5.5,baz=110,slow=8.1,SNR=624						
WRA				PcP	PcP	18 19 27.1	-0.5
	comp=Z,1.5nm,0.7s,baz=116,slow=2.7,SNR=3.1						
WRA				ScP		18 23 17.7	
	comp=Z,1.1nm,1.0s,baz=104,slow=3.6,SNR=3.9						
WRA				S	S	18 24 09.3	-5.7
	comp=Z,0.6nm,1.0s,baz=109,slow=15,SNR=2.5						
WRA				PKiKP		18 26 25.8	
	comp=Z,0.3nm,0.6s,baz=114,slow=0.4,SNR=5.8						
WRA	Warramunga Arr	44.12	272	P	P	18 17 42.2	+0.3
WRA				PcP	PcP	18 19 27.1	-0.5
WRA				ScP		18 23 17.8	
WRA				S	S	18 24 09.3	-5.7
WRA	Warramunga Arr	44.12	272	P	P	18 17 42.2	+0.3
WRA						18 19 27.1	
WRA				S	S	18 24 09.3	-5.7
FORT	Forrest	46.06	255	*e*P	P	18 17 57.3	+0.1
	comp=Z,34nm,0.6s,mb5.5						
SBA	Scott Base	48.02	184	*e*P	P	18 18 17.0	+4.9
	comp=Z,11nm,0.7s,mb5.0						
SBA	Scott Base	48.02	184	*e*P	P	18 18 17.0	+4.9
SBA				pmax	pmax		
	comp=Z,11nm,0.7s,mb5.0						
VNDA	Vanda	48.08	186	*e*P	P	18 18 16.6	+4.1
	comp=Z,2.6nm,0.6s,mb4.4						
VNDA	Vanda	48.08	186	*e*P	P	18 18 16.7	+4.2
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KAKA	Kakadu	48.96	280	*e*P	P	18 18 39.3	+19
	comp=Z,11nm,0.6s,mb5.1						
FITZ	Fitzroy Crossi	52.38	270	*e*P	P	18 18 45.6	-0.6
	comp=Z,17nm,0.6s,mb5.2						
FITZ	Fitzroy Crossi	52.38	270	P	P	18 18 45.9	-0.3
	comp=Z,24nm,0.7s,mb5.2,baz=175,slow=6.4,SNR=24						
KLBR	Kellerberrin	54.36	251	*e*P	P	18 18 59.7	-0.9
	comp=Z,6.9nm,0.4s,mb4.9						
CASY	Casey	55.13	208	*e*P	P	18 19 06.5	+0.7
QSPA	South Pole Qui	59.69	180	*e*P	P	18 19 40.1	+2.2
	comp=Z,5.5nm,0.5s,mb4.8						
MIR	Mirnyy	62.11	207	*c i*P	P	18 19 55.2	+0.7
MIR				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.3						
MAW	Mawson	72.29	201	*e*P	P	18 21 00.0	+1.4
	comp=Z,4.3nm,0.6s,mb4.6						
MAW	Mawson	72.29	201	P	P	18 21 00.3	+1.7
	comp=Z,4.6nm,0.6s,mb4.6,baz=136,slow=9.0,SNR=15						
MAW	Mawson	72.29	201	*e*P	P	18 21 00.0	+1.4
MAW				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SNAA	Sanae	78.13	178	⇑*i*	P	18 21 32.8	+1.1
SNAA	Sanae	78.13	178	⇑*i*	P	18 21 39.0	+7.3
SNAA	Sanae	78.13	178	⇑*i*	P	18 21 41.9	+10
SNAA	Sanae	78.13	178	P	P	18 21 33.1	+1.4
	comp=Z,0.8nm,0.5s,mb3.9,baz=175,slow=9.4,SNR=20						
SNAA	Sanae	78.13	178	*e*P	P	18 21 32.9	+1.2
	comp=Z,2.9nm,0.7s,mb4.3						
SNAA	Sanae	78.13	178	*e*P	P	18 21 32.9	+1.2
SNAA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJAR	Matsushiro Arr	78.27	325	P	P	18 21 31.8	-1.4
	comp=Z,1.9nm,0.7s,mb4.1,baz=154,slow=3.7,SNR=8.3						
MJAR	Matsushiro Arr	78.27	325	P	P	18 21 31.8	-1.4
MAJO	Matsushiro	78.27	325	*e*P	P	18 21 32.1	-1.1
VNA3	Neumayer Olymp	78.28	176	⇑*i*	P	18 21 35.9	+3.4
VNA3	Neumayer Olymp	78.28	176	⇑*i*	P	18 21 39.5	+7.0
VNA3	Neumayer Olymp	78.28	176	⇑*i*	P	18 21 43.2	+11
VNA2	Neumayer--Watz	78.72	177	⇑*i*	P	18 21 38.7	+3.8
VNA2	Neumayer--Watz	78.72	177	⇑*i*	P	18 21 42.2	+7.3
VNA2	Neumayer--Watz	78.72	177	⇑*i*	P	18 21 44.7	+10
VNA1	Neumayer--Stat	78.95	177	⇑*i*	P	18 21 40.2	+4.0
VNA1	Neumayer--Stat	78.95	177	⇑*i*	P	18 21 43.5	+7.3
VNA1	Neumayer--Stat	78.95	177	⇑*i*	P	18 21 47.6	+11
JNU	Nakatsue	79.59	318	P	P	18 21 39.3	-1.1
	comp=Z,5.4nm,0.7s,mb4.6,baz=151,slow=6.5,SNR=5.1						
PLCA	Paso Flores	82.48	133	P	P	18 21 57.5	+2.1
	comp=Z,2.1nm,0.8s,mb4.1,baz=243,slow=4.5,SNR=3.1						
NVAR	Mina Array Bea	88.24	43	P	P	18 22 24.1	-0.1
	comp=Z,2.2nm,0.7s,mb4.5,baz=210,slow=7.2,SNR=22						
ENH	Enshi	91.63	304	*e*P	P	18 22 40.0	-0.3
	comp=Z,3.6nm,0.6s,mb4.9						
TXAR	Lajitas Array	92.38	57	P	P	18 22 43.0	-0.7
	comp=Z,0.2nm,0.3s,mb3.9,baz=236,slow=9.0,SNR=3.5						
PDAR	Pinedale Array	96.14	44	P	P	18 22 59.5	-1.2
	comp=Z,0.3nm,0.7s,mb3.9,baz=180,slow=3.0,SNR=3.9						
ILAR	Eielson Array	97.94	13	P	P	18 23 06.7	-1.6
	comp=Z,1.0nm,0.9s,mb4.3,baz=221,slow=5.8,SNR=6.9						
YKA	Yellowknife Ar	105.45	26	PKKPbc		18 39 20.7	
	comp=Z,1.4nm,0.8s,baz=49,slow=2.8,SNR=4.9						
BOSA	Boshof	117.25	203	PKP	PKPdf	18 28 20.7	+1.2
	comp=Z,1.6nm,0.5s,baz=171,slow=1.3,SNR=3.8						
MKAR	Makanchi Array	117.80	310	PKP	PKPdf	18 28 17.5	-2.6
	comp=Z,1.2nm,0.5s,baz=149,slow=0.9,SNR=18						
KURK	Kurchatov	121.08	314	*e*PKPdf	PKPdf	18 28 23.4	-3.1
CHKZ	Chkalovo	126.34	317	*e*PKPdf	PKPdf	18 28 33.2	-3.2
BRVK	Borovoye	126.50	316	*e*PKPdf	PKPdf	18 28 34.2	-2.4
LSZ	Lusaka	128.05	213	PKP	PKPdf	18 28 41.0	+0.2
	comp=Z,4.7nm,0.7s,baz=171,slow=3.1,SNR=12						
ARU	Arti	133.12	321	*e*PKPdf	PKPdf	18 28 47.9	-1.3
ARU	Arti	133.12	321	*e*PKIKP	PKPdf	18 28 47.9	-1.4
KMBO	Kilima Mbogo	134.08	233	PKP	PKPdf	18 28 52.8	+0.7
	comp=Z,0.7nm,0.7s,baz=25,slow=7.2,SNR=3.8						
ARCES	ARCESS Array B	138.62	348	PKhKP		18 28 48.6	
	comp=Z,3.9nm,0.9s,baz=72,slow=2.9,SNR=8.4						
GNI	Garni	144.10	298	PKP	PKPdf	18 29 08.6	-0.8
	comp=Z,4.4nm,0.7s,baz=27,slow=6.8,SNR=3.7						
FINES	FINESS Array B	145.17	340	PKP	PKPdf	18 29 07.5	-3.2
	comp=Z,33nm,0.5s,baz=62,slow=3.7,SNR=416						
FINES	FINESS Array B	145.17	340	PKP	PKPdf	18 29 07.5	-3.2
OBN	Obninsk	145.20	325	*e*PKPbc	PKPbc	18 29 08.1	-1.1
KIV	Kislovodsk	145.26	304	*e*PKP2	PKPab	18 29 08.1	-3.0
MSL	Mosul	145.39	291	*e*x	x	18 29 12.5	
NB2	NORSAR Subarra	148.78	351	PKPabc	PKPdf	18 29 18.2	+1.6
	comp=Z,9.2nm,0.6s,baz=13,slow=2.7						
NOA	NORSAR Array B	148.78	351	PKPbc	PKPdf	18 29 18.1	+1.4
	comp=Z,7.6nm,0.6s,baz=15,slow=4.3,SNR=27						
NAO01	NORSAR Array S	149.01	352	*e*PKPdf	PKPdf	18 29 18.3	+1.3
NAO	NORSAR Subarra	149.03	352	PKPab	PKPab	18 29 18.2	-7.2
KONO	Kongsberg	150.33	352	*e*PKPbc	PKPdf	18 29 21.9	+2.8
AKASG	Malin Array Be	151.33	323	PKPbc	PKPdf	18 29 24.9	+4.0
	comp=Z,10nm,0.4s,baz=48,slow=3.1,SNR=159						
KSDI	Kefar Szold	151.35	284	P	PKPdf	18 29 27.5	+6.0
ZFRI	Zfri	151.48	279	P	PKPdf	18 29 28.0	+6.2
MMLI	Mount Malkishu	151.49	283	P	PKPdf	18 29 27.4	+5.6
EIL	Elat	151.54	277	P	PKPdf	18 29 27.2	+5.3
MBH	Mount Berech	151.59	277	P	PKPdf	18 29 27.8	+5.8
PRNI	Paran	151.60	278	P	PKPdf	18 29 27.3	+5.3
SLTI	Sal'it	151.80	282	P	PKPdf	18 29 27.5	+5.3
SUW	Suwalki	151.91	333	*e*PKPbc	PKPdf	18 29 26.2	+4.5
KZIT	Kziot	152.20	279	P	PKPdf	18 29 28.6	+5.7
ANTO	Ankara	153.24	299	*e*PKPbc	PKPdf	18 29 29.5	+5.5
CSS	Prodhromos	153.33	288	*e*PKPbc	PKPdf	18 29 30.5	+6.2
DBIC	Dimbokro	155.50	163	PKPab	PKPab	18 29 54.8	+0.8
	comp=Z,2.2nm,0.7s,baz=173,slow=4.9,SNR=4.4						
CLL	Collm	157.59	342	⇓P	PKPab	18 29 59.4	-2.4
	comp=Z,logA/T=1.0						
CLL				*i*		18 30 02.7	
KHC	Kasperske Hory	159.36	338	*e*PKPab	PKPab	18 30 07.5	-2.0
GERES	GERESS Array B	159.56	337	PKPab	PKPab	18 30 08.5	-1.9
	comp=Z,1.4nm,0.7s,baz=45,slow=3.8,SNR=8.7						

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*ATH **19** 18:58:36.3,38.17N×26.73E,h43^{km},MD3.4/3*

*CSEM **19** 18:58:37.2±0.2,38.15N×26.66E,h11^{km}±1^{km},MD3.3, Error ellipse: s-maj=4.3km s-min=1.9km az=88.0*

*ISK **19** 18:58:38.2,38.18N×26.70E,h20^{km},MD3.3*

ISC 19 18:58:36.7±0.7**,38.21N**±0.02×**26.62E**±0.05**,h4**^{km}±5^{km}**, n24,**σ**0**$\overset{s}{.}$**90**/34**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.15	351	*i* P	Pg	18 58 39.0	-0.8
URLA				*i* S	Sg	18 58 42.2	+0.2
SMG	Samos	0.53	161	*e*P	Pg	18 58 47.4	+0.1
SMG				*e*S	Sg	18 58 55.4	+1.1
IZM	Izmir	0.54	69	*i* PG	Pg	18 58 48.5	+1.1
KDAG	Bornova	0.54	69	*i* P	Pg	18 58 46.4	-1.1
KDAG				*i* S	Sg	18 58 54.7	-0.1
PRK	Paraskevi	1.07	345	*e*P	Pb	18 58 57.0	-0.5
AYVA	Ayvalik	1.10	3	*i* P	Pb	18 58 57.3	-0.6
AYVA				*i* S	Sb	18 59 14.5	+2.1
AYDN	Tasoluk	1.13	119	*i* P	Pb	18 58 58.4	-0.1
AYDN				*i* S	Sb	18 59 13.7	+0.2
AKS	Akhisar	1.15	54	*e*PN	Pn	18 58 58.4	-1.1
AKS				*e*SN	Sn	18 59 14.4	-1.5
BODT	Bodrum	1.27	154	*e*PN	Pn	18 59 01.0	-0.2
MLSB	Milas	1.29	135	*e*PN	Pn	18 59 00.9	-0.6
BDRM	Kayabasi	1.31	150	*i* P	Pb	18 59 01.7	0.0
BDRM				*i* S	Sb	18 59 20.0	+1.3
APE	Apeiranthos	1.43	218	*e*PN	Pn	18 59 03.5	-0.1
APE	Apeiranthos	1.43	218	*e*P	Pn	18 59 01.5	-2.1
APE	Apeiranthos	1.43	218	*e*Pn	Pn	18 59 03.5	-0.1
MANT	Manisa	1.55	79	*i* P	Pn	18 59 05.9	+0.7
MANT				*i* S	Sb	18 59 25.8	+0.3
EZN	Ezine	1.63	352	*e*PN	Pn	18 59 07.6	+1.2
DAT	Datca	1.66	153	*e*PN	Pn	18 59 06.0	-0.9
YER	Yerkesik	1.70	129	*i* PN	Pn	18 59 06.9	-0.5
BALB	Balikesir	1.73	34	*e*PN	Pn	18 59 08.6	+0.7
BTOK	Tokmak	1.90	35	*i* P	Pn	18 59 13.7	+3.5
BTOK				*i* S	Sn	18 59 39.4	+4.5
DENT	Denizli	1.96	103	*e*PN	Pn	18 59 10.9	-0.2
DNZL	Cakiroluk	1.98	104	*i* P	Pn	18 59 11.1	-0.4
DNZL				*i* S	Sn	18 59 43.0	+5.9
DST	Dursunbey	2.10	48	*e*PN	Pn	18 59 12.2	-0.8
ORLT	Orhaneli	2.55	43	*e*PN	Pn	18 59 20.1	+0.6

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*ATH **19** 19:00:10.4,38.14N×26.84E,h42^{km},MD3.3/3*

*CSEM **19** 19:00:10.8±0.3,38.13N×26.69E,h10^{km}±2^{km},MD3.3, Error ellipse: s-maj=7.3km s-min=4.5km az=98.0*

*ISK **19** 19:00:11.8,38.13N×26.79E,h9^{km},MD3.3*

*NEIC **19** 19:00:11.0,38.14N×26.76E,h8^{km},MD3.3(ISK), MD3.3(ATH),After ISK.*

ISC 19 19:00:11.2±0.7**,38.16N**±0.02×**26.71E**±0.05**,h3**^{km}±6^{km}**, n21,**σ**0**$\overset{s}{.}$**94**/32**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.22	337	*i* P	Pg	19 00 15.5	-0.1
URLA				*i* S	Sg	19 00 19.1	+0.5
SMG	Samos	0.46	167	*e*P	Pg	19 00 20.9	+0.6
SMG				*e*S	Sg	19 00 28.3	+1.9
IZM	Izmir	0.50	61	*i* PG	Pg	19 00 21.4	+0.2
IZM				*i* SG	Sg	19 00 27.9	+0.1
KDAG	Bornova	0.51	61	*i* P	Pg	19 00 20.3	-1.0
KDAG				*i* S	Sg	19 00 27.0	-1.0
AYDN	Tasoluk	1.05	118	*i* P	Pb	19 00 31.8	+0.2
AYDN				*i* S	Sb	19 00 45.0	-0.6
AKS	Akhisar	1.13	50	*e*PN	Pn	19 00 33.2	-0.7
PRK	Paraskevi	1.14	343	*e*P	Pb	19 00 32.0	-1.2
AYVA	Ayvalik	1.15	359	*i* P	Pb	19 00 33.0	-0.4
AYVA				*i* S	Sb	19 00 49.4	+0.8
BODT	Bodrum	1.19	156	*e*PN	Pn	19 00 33.1	-1.6
BODT				*e*SN	Sn	19 00 50.8	-0.8
MLSB	Milas	1.21	135	*e*PN	Pn	19 00 34.6	-0.4
BDRM	Kayabasi	1.23	151	*i* P	Pb	19 00 34.7	-0.1
BDRM				*i* S	Sb	19 00 52.3	+1.3
APE	Apeiranthos	1.43	221	*e*PN	Pn	19 00 38.3	+0.2
APE	Apeiranthos	1.43	221	*e*P	Pn	19 00 36.3	-1.8
APE	Apeiranthos	1.43	221	*e*Pn	Pn	19 00 38.3	+0.2
MANT	Manisa	1.49	76	*i* P	Pn	19 00 39.7	+0.7
MANT				*i* S	Sb	19 00 58.4	-0.1
DAT	Datca	1.58	154	*e*PN	Pn	19 00 39.2	-1.1
YER	Yerkesik	1.61	129	*i* PN	Pn	19 00 40.5	-0.2
BALB	Balikesir	1.74	31	*e*PN	Pn	19 00 42.9	+0.3
DNZL	Cakiroluk	1.91	103	*i* P	Pn	19 00 48.6	+3.7
DNZL				*i* S	Sn	19 01 13.5	+3.7
BTOK	Tokmak	1.91	32	*i* P	Pn	19 00 45.6	+0.6
BTOK				*i* S	Sn	19 01 13.1	+3.3
DST	Dursunbey	2.08	45	*e*PN	Pn	19 00 48.1	+0.6

JMA 19 19:42:26.0±0.1**,35.52N×140.93E,h39**^{km}±1^{km}**,M1.3, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.19	342	P	P	19 42 33.1	0.0
CHOJ				S	S	19 42 38.3	+0.3
KTR	Katsuura	0.62	234	P	P	19 42 37.9	-0.5
BSO2	Boso 2	0.78	191	*e*S	S	19 42 51.6	+0.3
JIM2	Oshima 3	1.47	237	P	P	19 42 50.1	-0.3
JOD2	Odawara 2	1.53	261	P	P	19 42 50.9	-0.4

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*IDC **19** 19:42:28.9±1.2,35.43N×141.20E,mb3.5/3,mb1 3.7/7, mb1mx3.6/22,mbtmp3.7/7,ML3.7/3,MS2.6/2,Ms1 2.6/2, ms1mx2.4/17,Error ellipse: s-maj=26.8km s-min=18.1km az=91.0*

*JMA **19** 19:42:33.4±0.1,35.55N×141.00E,h41^{km}±1^{km},M3.0*

*NEIC **19** 19:42:34.2±0.9,35.40N×140.98E,h40^{km},MG3.0(JMA), Error ellipse: s-maj=21.0km s-min=13.0km az=195.0*

ISC 19 19:42:32.8±0.8**,35.53N**±0.04×**141.09E**±0.08**,h42**^{km}±7^{km}**, n23,**σ**0**$\overset{s}{.}$**90**/31**,mb3.5**/3**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.25	312	P	P	19 42 40.8	+0.1
CHOJ				S	S	19 42 46.0	-0.2
JCN	Nagara	0.73	261	P	P	19 42 47.3	+0.6
KTR	Katsuura	0.74	239	P	P	19 42 46.4	-0.4
BSO4	Boso 4	0.82	229	P	P	19 42 48.4	+0.5
BSO3	Boso 3	0.87	213	P	P	19 42 48.4	-0.2
BSO3				S	S	19 43 02.1	+1.8
BSO1	Boso 1	0.88	186	P	P	19 42 49.0	+0.2
JYT	Yasato	1.00	314	P	P	19 42 50.3	-0.2
JYT				S	S	19 43 03.3	-0.4
JHO	Hitachi	1.15	339	P	P	19 42 53.2	+0.6
JIM2	Oshima 3	1.58	240	P	P	19 42 57.8	-1.0
JAG	Ashikaga	1.59	304	P	P	19 43 00.0	+1.0
JOD2	Odawara 2	1.66	261	P	P	19 42 59.2	-0.7

JOD2				S	S	19 43 19.1	-1.0
MJAR	Matsushiro Arr	2.54	294	Pn	P	19 43 12.4	-0.1
	2.3nm,0.3s,baz=85,slow=13,SNR=29						
MJAR				Sn	S	19 43 47.0	+4.6
	3.2nm,0.3s,baz=141,slow=13,SNR=6.1						
MAJO	Matsushiro	2.54	294	*e*Pn	P	19 43 12.9	+0.4
MAT	Matsushiro	2.54	294	P	P	19 43 12.3	-0.2
MAT				*e*S	S	19 43 42.6	+0.1
MAT	Matsushiro	2.54	294	P	P	19 43 12.0	-0.5
MAT				S	S	19 43 46.0	+3.5
JHJ	Hachijo jima 2	2.64	204	Pn	P	19 43 13.8	0.0
	16nm,0.3s,baz=74,slow=19,SNR=3.7						
JHJ				Sn	S	19 43 44.7	-0.2
	23nm,0.3s,baz=270,slow=20,SNR=3.7						
CBIJ	Chichi jima	8.46	173	Pn	P	19 44 30.9	-4.8
	4.1nm,0.3s,baz=282,slow=19,SNR=3.4						
CBIJ				Sn	S	19 46 03.0	-7.9
	2.2nm,0.3s,baz=270,slow=19,SNR=1.5						
ASAJ	Asahikawa	8.65	7	Pn	P	19 44 35.3	-2.9
	1.2nm,0.3s,baz=215,slow=12,SNR=9.1						
ASAJ				LR	LR	19 48 46.6	
	comp=Z,52nm,21.0s,baz=166,slow=43						
JNU	Nakatsue	8.78	257	LR	LR	19 47 26.3	
	comp=Z,32nm,18.4s,baz=47,slow=34						
MKAR	Makanchi Array	44.71	303	P	P	19 50 44.5	+1.2
	0.4nm,0.7s,mb3.3,baz=79,slow=10.0,SNR=3.1						
PMR	Palmer	49.99	36	*e*P	P	19 51 24.7	+0.3
	72nm,1.2s						
ILAR	Eielson Array	50.90	32	P	P	19 51 32.5	+1.1
	0.4nm,0.6s,mb3.5,baz=271,slow=6.3,SNR=7.8						
WRA	Warramunga Arr	55.54	188	P	P	19 52 04.3	-2.0
	0.3nm,0.5s,mb3.6,baz=5.7,slow=7.6,SNR=10						

*JMA **19** 19:51:23.3±0.1,35.55N×140.99E,h41^{km}±1^{km},M2.6*
*IDC **19** 19:51:26.3±3.6,35.40N×140.79E,h65^{km}±40^{km},mb3.1/2,mb1 3.4/4,mb1mx3.1/21,mbtmp3.3/4,ML2.9/2,MS3.0/2,Ms1 3.0/2,ms1mx2.7/5,Error ellipse: s-maj=63.1km s-min=16.3km az=89.0*
ISC 19 19:51:22.8±0.8**,35.50N**±0.04×**141.03E**±0.08**,h45**^{km}±8^{km}**,n18,**σ**0**^{s}**93**/23**,mb3.5**/2**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.25	326	P	P	19 51 30.6	-0.4
CHOJ				S	S	19 51 35.8	-0.9
KTR	Katsuura	0.68	239	P	P	19 51 36.8	+0.7
JCN	Nagara	0.68	264	P	P	19 51 37.1	+1.0
BSO4	Boso 4	0.76	228	P	P	19 51 38.1	+0.9
BSO3	Boso 3	0.81	212	P	P	19 51 38.2	+0.2
BSO3				S	S	19 51 50.0	+0.9
BSO1	Boso 1	0.84	183	P	P	19 51 39.4	+1.0
JYT	Yasato	1.00	317	P	P	19 51 40.5	-0.1
JHO	Hitachi	1.17	342	P	P	19 51 42.7	-0.3
JIM2	Oshima 3	1.52	240	P	P	19 51 47.6	-0.5
JIM2				S	S	19 52 05.9	-1.0
JAG	Ashikaga	1.58	306	P	P	19 51 48.9	0.0
JAG				*e*S	S	19 52 06.7	-1.6
JOD2	Odawara 2	1.60	262	P	P	19 51 49.2	0.0
JOD2				S	S	19 52 08.2	-0.7
MJAR	Matsushiro Arr	2.51	295	P	P	19 52 03.0	+0.8
	1.2nm,0.3s,baz=101,slow=8.2,SNR=17						
MAT	Matsushiro	2.51	295	P	P	19 52 03.0	+0.8
MAT				*e*S	S	19 52 33.7	+1.9
JHJ	Hachijo jima 2	2.58	204	P	P	19 52 02.5	-0.7
	17nm,0.3s,baz=23,slow=14,SNR=5.3						
JHJ				S	S	19 52 32.6	-0.9
	11nm,0.3s,baz=45,slow=19,SNR=2.6						
ASAJ	Asahikawa	8.70	7	LR	LR	19 57 36.3	
	comp=Z,58nm,19.6s,baz=267,slow=42						
JOW	Kunigami	13.91	235	LR	LR	19 59 18.6	
	comp=Z,103nm,19.9s,baz=27,slow=34						
ILAR	Eielson Array	50.96	32	P	P	20 00 22.4	+0.8
	0.4nm,0.8s,mb3.4,baz=277,slow=8.1,SNR=4.4						
WRA	Warramunga Arr	55.50	188	P	P	20 00 53.6	-2.1
	0.3nm,0.5s,mb3.6,baz=1.7,slow=7.6,SNR=5.5						

*IDC **19** 19:52:48.8±1.6,35.89N×69.18E,mb3.7/7,mb1 3.9/9,mb1mx3.8/20,mbtmp3.7/9,ML3.7/2,Error ellipse: s-maj=34.8km s-min=23.3km az=18.0*
*NEIC **19** 19:52:50.0±0.8,35.97N×69.10E,h10^{km},mb3.4/5,Error ellipse: s-maj=15.4km s-min=6.8km az=52.0*
*MOS **19** 19:52:52.0±1.3,36.08N×69.07E,h33^{km},mb4.1/1,Error ellipse: s-maj=14.0km s-min=7.2km az=90.4*
*NNC **19** 19:52:57.7±2.8,36.75N×68.72E,mpv4.0,Error ellipse: s-maj=26.9km s-min=20.2km az=14.0*
ISC 19 19:52:48.6±0.6**,36.00N**±0.05×**69.08E**±0.07**,h10**^{km}**,n53,**σ**1**^{s}**15**/61**,mb3.7**/8**,11C-3D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	6.55	121	*e*P	Pn	19 54 32.0	+4.6
THN				*e*S	Sn	19 55 48.4	+5.5
AML	Almayashu	7.10	29	P	Pn	19 54 36.2	+1.1
	SNR=134						
KK31	Karatay Array	7.18	8	Pn	Pn	19 54 36.7	+0.5
	1.1nm,0.2s,baz=200,slow=15,SNR=55						
KK31				⇓Sn	Sn	19 55 55.7	-3.0
	5.9nm,0.5s,baz=197,slow=25,SNR=5.8						
KK31	Karatay Array	7.18	8	Pn	Pn	19 54 36.7	+0.5
	1.1nm,0.3s						
KK31				Sn	Sn	19 55 55.7	-3.0
UCH	Uchtor	7.52	33	P	Pn	19 54 42.2	+1.2
	SNR=49						
EKS2	Erkin-Say	7.58	27	P	Pn	19 54 42.9	+1.0
	SNR=22						
KZA	Kyzart	7.74	36	P	Pn	19 54 45.2	+1.1
	SNR=30						
AAK	Ala-Archa	7.84	31	P	Pn	19 54 46.5	+1.0
	SNR=44						
AAK	Ala-Archa	7.84	31	⇑Pn	Pn	19 54 46.4	+0.9
	10nm,0.3s						
AAK				⇓Sn	Sn	19 56 12.9	-2.4
	13nm,0.6s						
AAK	Ala-Archa	7.84	31	⇑P	Pn	19 54 46.4	+0.9
AAK						19 56 12.9	
AAK				pmax	pmax		
	comp=Z,10.0nm,0.3s						
KBK	Karagaybulak	8.05	33	P	P	19 54 49.4	+1.0
	SNR=26						
CHMS	Chumysh	8.25	30	P	P	19 54 51.5	+0.3
	SNR=47						
ULHL	Ulahol	8.36	40	P	P	19 54 54.0	+1.3
	SNR=37						
USP	Ospenovka	8.38	28	P	P	19 54 52.8	-0.2
	SNR=30						
TKM2	Tokmak 2	8.55	34	P	P	19 54 56.0	+0.6
	SNR=5.8						
MK02	Makanchi Array	14.62	39	⇑P	P	19 56 26.5	+9.2
MK02				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR	Makanchi Array	14.63	38	Pn	P	19 56 16.6	-0.8
	comp=Z,0.2nm,0.3s,baz=221,slow=15,SNR=8.7						
MK31	Makanchi Array	14.63	38	⇑P	P	19 56 26.5	+9.2
	comp=Z,2.1nm,0.6s,baz=212,slow=10,SNR=6.5						
KOLN	Koldanda	14.81	120	*e*P	P	19 56 18.1	-1.7
	comp=Z,4.4nm,0.3s						
AB31	Akbulak array	14.84	336	P	P	19 56 18.0	-2.1
	comp=Z,0.7nm,0.3s,baz=154,slow=13,SNR=38						
AB31				⇓S	S	19 58 56.0	-9.5
	comp=Z,1.4nm,0.7s,baz=170,slow=22,SNR=3.1						
AB31	Akbulak array	14.84	336	P	P	19 56 18.0	-2.1
	comp=Z,0.7nm,0.3s						
AB31				S	S	19 58 56.0	-9.5
AB31	Akbulak array	14.84	336	P	P	19 56 18.0	-2.1
AB31				S	S	19 58 56.0	-9.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GKN	Gorkha	15.41	117	*e*P	P	19 56 26.6	-1.1
	comp=Z,14nm,0.3s						
GKN				*e*S	S	19 59 12.8	-6.3
DMN	Daman	15.98	117	*e*P	P	19 56 34.3	-0.7
KKN	Kakani	16.00	116	*e*P	P	19 56 34.9	-0.4
	comp=Z,14nm,0.5s						
PKI	Pulchoki	16.22	117	*e*P	P	19 56 38.2	+0.1
	comp=Z,27nm,0.6s						
KURK	Kurchatov	16.24	22	⇑P	P	19 56 37.9	-0.3
	comp=Z,8.4nm,2.6s						
KURK	Kurchatov	16.24	22	*e*Pn	P	19 56 39.4	+1.2
	comp=Z,2.6nm,0.8s						
KURK	Kurchatov	16.24	22	*e*P	P	19 56 39.4	+1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GUN	Gumba	16.37	115	*e*P	P	19 56 40.5	+0.5
AKTK	Aktyubinsk	16.50	334	⇑P	P	19 56 41.7	+0.2
AKTO	Aktyubinsk	16.50	334	⇑P	P	19 56 41.7	+0.2
	comp=Z,0.5nm,1.2s						
AKTO	Aktyubinsk	16.50	334	Pn	P	19 56 40.0	-1.5
	comp=Z,0.5nm,0.3s,baz=161,slow=11,SNR=4.7						
VOSK	Vostochnaya	16.78	4	⇑P	P	19 56 39.5	-5.5
	comp=Z,2.8nm,1.1s						
BVA0	Borovoye Array	17.05	3	⇑P	P	19 56 49.0	+0.5
	comp=Z,0.7nm,1.2s,baz=184,slow=9.8,SNR=11						
BVA0	Borovoye Array	17.05	3	⇑P	P	19 56 49.0	+0.5
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.3s						
BVAR	Borovoye Array	17.05	3	P	P	19 56 47.4	-1.0
	comp=Z,0.3nm,0.3s,baz=166,slow=11,SNR=7.8						
BRVK	Borovoye	17.08	2	*e*Pn	P	19 56 48.0	-0.8
	comp=Z,1.1nm,0.7s						
BRVK	Borovoye	17.08	2	*e*P	P	19 56 48.0	-0.8
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CHKZ	Chkalovo	17.71	3	⇑P	P	19 56 53.9	-2.8
	comp=Z,3.4nm,1.4s						
LSA	Lhasa	19.56	102	*e*P	P	19 57 22.5	+3.2
	comp=Z,4.1nm,0.8s						
LSA	Lhasa	19.56	102	*e*P	P	19 57 22.5	+3.2
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAL	Zalesovo	21.02	27	P	P	19 57 34.4	-0.2
	comp=Z,3.2nm,0.4s,mb4.0,baz=260,slow=11,SNR=12						
NVS	Novosibirsk	21.23	23	*e*P	P	19 57 34.7	-2.0
SONM	Songino Array	29.90	55	P	P	19 58 59.3	+0.8
	comp=Z,0.6nm,0.6s,mb3.5,baz=250,slow=9.0,SNR=5.9						
AKASG	Malin Array Be	32.06	310	P	P	19 59 18.6	+1.2
	comp=Z,0.2nm,0.3s,mb3.5,baz=85,slow=8.1,SNR=4.6						
FINES	FINESS Array B	37.04	327	P	P	20 00 01.6	+1.5
	comp=Z,1.3nm,0.8s,mb3.8,baz=130,slow=11,SNR=4.1						
NB2	NORSAR Subarra	43.85	323	P	P	20 00 57.1	+0.9
	comp=Z,0.8nm,0.5s,mb3.7,baz=99,slow=7.9						
NOA	NORSAR Array B	43.85	323	P	P	20 00 57.5	+1.2
	comp=Z,1.3nm,0.7s,mb3.8,baz=99,slow=8.1,SNR=7.1						
NAO	NORSAR Subarra	44.01	323	P	P	20 00 57.1	-0.4
	comp=Z,0.8nm,0.5s,mb3.7						
NAO	NORSAR Subarra	44.01	323	P	P	20 00 57.1	-0.4
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
ILAR	Eielson Array	75.68	15	P	P	20 04 34.9	-0.3
	comp=Z,0.6nm,1.1s,mb3.4,baz=306,slow=5.6,SNR=4.7						
WRA	Warramunga Arr	83.06	121	P	P	20 05 15.6	-0.3
	comp=Z,0.4nm,0.7s,mb3.5,baz=322,slow=5.5,SNR=5.0						

*NEIC **19** 19:52:58.7±0.6,52.35S×19.21E,h10^{km},mb4.6/1,Error ellipse: s-maj=27.2km s-min=12.3km az=96.0*
*IDC **19** 19:52:58.2±0.9,52.57S×18.67E,mb4.0/5,mb1 4.2/5,mb1mx3.9/12,mbtmp4.1/5,MS3.9/9,Ms1 3.9/9,ms1mx3.9/11,Error ellipse: s-maj=39.4km s-min=25.3km az=62.0*
ISC 19 19:52:57.6±0.8**,52.3S**±0.1×**19.0E**±0.3**,h10**^{km}**,n28,**σ**1**^{s}**19**/17**,mb4.2**/6**,MS3.9**/8**,3C,Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	19.97	5	P	P	19 57 40.6	+7.8
	5.2nm,0.6s,baz=177,slow=13,SNR=7.7						
SUR				LR	LR	20 03 48.4	
	comp=Z,487nm,18.2s,baz=289,slow=32						
SUR	Sutherland	19.97	5	P	P	19 57 32.5	-0.3
SUR				LR	LR	20 03 48.4	
SNAA	Sanae	21.70	199		P	19 57 47.5	-2.8
SNAA	Sanae	21.70	199		P	19 57 51.1	+0.8
SNAA	Sanae	21.70	199		P	19 58 02.9	+13
SNAA	Sanae	21.70	199	P	P	19 57 46.7	-3.5
	3.8nm,0.8s,mb3.9,baz=40,slow=10.0,SNR=17						
SNAA				LR	LR	20 03 48.1	
	comp=Z,159nm,20.3s,MS3.4,baz=20,slow=30						
SNAA	Sanae	21.70	199	P	P	19 57 51.1	+0.8
VNA2	Neumayer--Watz	22.13	203	⇑*i*	P	19 57 55.0	+0.4
VNA2	Neumayer--Watz	22.13	203	⇑*i*	P	19 58 04.5	+10
VNA1	Neumayer--Stat	22.15	204		P	19 57 54.5	-0.4
VNA3	Neumayer Olymp	22.89	203	⇑*i*	P	19 58 02.5	+0.5
VNA3	Neumayer Olymp	22.89	203		P	19 58 14.2	+12
BOSA	Boshof	24.13	14	LR	LR	20 06 06.9	
	comp=Z,483nm,20.2s,MS4.0,baz=149,slow=32						
MAW	Mawson	26.02	143	P	P	19 58 31.1	-0.9
	5.2nm,1.0s,mb4.0,baz=293,slow=12,SNR=6.9						
MAW				LR	LR	20 06 36.7	
	comp=Z,173nm,20.0s,MS3.6,baz=121,slow=32						
VNDA	Vanda	48.40	170	*e*P	P	20 01 37.5	-3.4
	9.1nm,1.5s,mb4.6						
KMBO	Kilima Mbogo	53.26	23	LR	LR	20 22 57.4	
	comp=Z,182nm,21.8s,MS4.1,baz=93,slow=34						
PLCA	Paso Flores	58.87	243	LR	LR	20 23 04.3	
	comp=Z,119nm,19.6s,MS4.0,baz=180,slow=31						
DBIC	Dimbokro	62.17	333	P	P	20 03 20.9	-0.7
	1.7nm,0.7s,mb4.3,baz=149,slow=13,SNR=3.8						
DBIC				LR	LR	20 24 10.4	
	comp=Z,109nm,18.4s,MS4.0,baz=73,slow=30						
BDFB	Brasilia	63.72	279	LR	LR	20 24 11.6	
	comp=Z,93nm,21.3s,MS3.9,baz=277,slow=30						
LPAZ	La Paz	75.53	262	P	P	20 04 44.5	+0.5
	0.5nm,0.3s,mb4.0,baz=343,slow=1.5,SNR=3.7						
LPAZ				LR	LR	20 34 55.6	
	comp=Z,58nm,20.3s,MS3.9,baz=123,slow=33						
WRA	Warramunga Arr	88.85	122	P	P	20 05 55.7	+2.5
	1.1nm,1.0s,mb4.2,baz=193,slow=6.9,SNR=4.8						
SONM	Songino Array	124.39	55	PKP	PKPdf	20 11 57.4	-2.0
	0.5nm,0.8s,baz=75,slow=3.4,SNR=3.8						
PDAR	Pinedale Array	144.65	275	PKP	PKPdf	20 12 33.0	-3.7
	2.2nm,0.9s,baz=108,slow=4.7,SNR=9.5						
HWUT	Hardware Ranch	145.22	272	*e*PKPdf	PKPdf	20 12 35.3	-2.5
ELK	Elko	146.98	268	*e*PKPdf	PKPdf	20 12 40.2	-0.6
NVAR	Mina Array Bea	147.44	262	PKPbc	PKPdf	20 12 42.7	+1.1
	2.3nm,0.8s,baz=128,slow=5.3,SNR=18						
NVAR	Mina Array Bea	147.44	262	PKPbc	PKPdf	20 12 42.7	+1.1
ILAR	Eielson Array	165.54	335	PKPab	PKPab	20 14 04.2	+2.8
	1.2nm,0.9s,baz=15,slow=2.2,SNR=7.4						

*IDC **19** 20:09:45.2±2.8,71.64N×4.22W,mb3.5/2,mb1 3.8/7,mb1mx3.6/23,mbtmp3.7/7,ML3.5/5,MS3.0/4,Ms1 3.1/4,ms1mx2.8/26,Error ellipse: s-maj=52.0km s-min=18.3km az=173.0*
*CSEM **19** 20:09:46.0±0.1,71.57N×3.62W,h10^{km},mb3.8/1,Error ellipse: s-maj=5.3km s-min=2.5km az=17.0*
*NAO **19** 20:09:47.4±1.5,71.38N×4.15W*
*NEIC **19** 20:09:47.9±0.7,71.57N×3.76W,h10^{km},mb3.8/1,Error ellipse: s-maj=12.8km s-min=8.2km az=198.0*
*BER **19** 20:09:48.9±3.1,71.80N×4.28W,h10^{km},MD3.0,mb3.8(NEIC)*
ISC 19 20:09:46.0±0.5**,71.51N**±0.05×**3.7W**±0.1**,h10**^{km}**,n34,**σ**1**^{s}**21**/35**,mb3.5**/3**,MS3.1**/1**,2D,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	1.64	254	Pn	Pn	20 10 15.4	+0.2
JMIC				Lg		20 10 33.5	
JMIC	Jan Mayen	1.64	254	Pn	Pn	20 10 14.2	-1.0
	6.9nm,0.3s,baz=328,slow=1.6,SNR=4.8						
JMIC				Sn	Sn	20 10 33.8	-2.6
	5.8nm,0.3s,baz=148,slow=20,SNR=7.6						
JMIC	Jan Mayen	1.64	254	*e*P	Pn	20 10 15.8	+0.7
JMIC				*e*S	Sn	20 10 33.9	-2.5
SCO	Scoresbysund	6.04	269	*i* P	Pn	20 11 18.0	+0.4
DAG	Danmarks Havn	6.66	329	⇓*i*P	Pn	20 11 26.0	-0.4
	3.3nm,0.6s						
DAG	Danmarks Havn	6.66	329	⇓*e*P	Pn	20 11 26.0	-0.4
	3.3nm,0.6s						
LOF	Lofoten	6.85	111	*e*P	Pn	20 11 30.1	+1.1
LOF				AMb	AMB	20 11 33.6	
	comp=Z,78nm,1.8s						
LOF	Lofoten	6.85	111	*e*P	Pn	20 11 30.1	+1.0
	comp=Z,78nm,1.8s,SNR=47						
MELSS	Ber_school_2	7.74	118	*e*P	Pn	20 11 41.2	-0.4
TRO	Tromso	7.76	93	*e*P	Pn	20 11 39.5	-2.3
STOK	Stokkvaagen	7.93	123	*e*P	Pn	20 11 43.6	-0.6
KBS	Kingsbay	8.41	21	Pn	P	20 11 52.4	+1.5
MOR8	Moi Rana	8.44	120	*e*P	P	20 11 51.5	+0.2
SPA0	Spitsbergen Ar	8.45	29	Pn	P	20 11 52.1	+0.7
	baz=212,slow=16						
NSS	Namsos	9.11	132	*e*P	P	20 11 58.5	-2.1
KTK1	Kautokeino	9.41	92	*e*P	P	20 12 04.6	-0.1
ARA0	ARCESS Array S	9.90	87	Pn	P	20 12 09.9	-1.3
	baz=296,slow=12						
ARCES	ARCESS Array B	9.90	87	Pn	P	20 12 10.3	-0.8
	comp=Z,0.3nm,0.3s,baz=294,slow=11,SNR=8.7						
ARCES				LR	LR	20 15 51.1	
	comp=Z,49nm,18.6s,baz=181,slow=36						
MOL	Molde	9.97	149	*e*P	P	20 12 14.5	+2.2
FOO	Floro	10.53	157	*e*P	P	20 12 18.6	-1.3
DOMB	Dombas	10.72	146	*e*P	P	20 12 22.4	-0.1
NB2	NORSAR Subarra	12.05	143	P	P	20 12 41.3	+0.7
	baz=331,slow=16						
NOA	NORSAR Array B	12.05	143	Pn	P	20 12 40.4	-0.2
	comp=Z,0.3nm,0.3s,baz=330,slow=14,SNR=3.5						
NOA				LR	LR	20 16 14.7	
	comp=Z,47nm,18.7s,baz=335,slow=32						
HFS	Hagfors	13.38	140	P	P	20 12 58.4	+0.1
	baz=332,slow=14						
HFS	Hagfors	13.38	140	Pn	P	20 12 58.8	+0.5
	comp=Z,0.2nm,0.3s,baz=333,slow=9.9,SNR=34						
HFS				LR	LR	20 17 37.0	
	comp=Z,112nm,20.2s,baz=187,slow=35						
KAF	Kangasniemi	14.91	114	*e*p	P	20 13 18.2	0.0
	comp=Z,3.7nm,0.6s						
FIA0	FINESS Array S	15.38	116	P	P	20 13 24.8	+0.5
	baz=327,slow=14						
FINES	FINESS Array B	15.38	116	Pn	P	20 13 25.0	+0.7
	comp=Z,0.3nm,0.3s,baz=315,slow=12,SNR=12						
JOF	Joensuu	15.80	105	*e*p	P	20 13 28.4	-1.3
	comp=Z,4.2nm,0.9s						
EKA	Eskdalemuir Ar	16.24	179	Pn	P	20 13 37.4	+2.0
	comp=Z,0.1nm,0.3s,baz=357,slow=13,SNR=4.3						
BRG	Berggiesshubel	22.20	149	P	P	20 14 48.1	+4.4
	comp=Z,4.1nm,1.1s,mb3.8						
GERES	GERESS Array B	24.13	151	P	P	20 15 03.7	+1.2
	comp=Z,0.4nm,0.5s,mb3.1,slow=9.3,SNR=5.0						
VRAC	Vranov	24.16	146	LR	LR	20 23 30.4	
	comp=Z,68nm,20.1s,MS3.1,baz=137,slow=34						
AKASG	Malin Array Be	25.62	127	P	P	20 15 18.8	+2.1
	comp=Z,1.4nm,0.6s,mb3.6,baz=335,slow=10.0,SNR=4.3						

*CRAAG **19** 20:40:23.8,36.38N×4.97E,Ml3.9*
*MDD **19** 20:40:25.1±0.4,36.57N×5.23E,mb3.9/7,Error ellipse: s-maj=5.9km s-min=3.7km az=48.0,PRXIMO*
*NEIC **19** 20:40:25.8±1.1,36.53N×5.30E,h20^{km}±17^{km},ML3.9(ALG),Error ellipse: s-maj=8.8km s-min=6.1km az=171.0*
*CSEM **19** 20:40:27.1±0.1,36.49N×5.27E,h35^{km},ML2.9/7,Error ellipse: s-maj=3.5km s-min=1.6km az=30.0*
*LDG **19** 20:40:28.4±0.4,36.68N×5.38E,h10^{km},Ml2.9/5,Error ellipse: s-maj=8.4km s-min=3.8km az=152.0*
ISC 19 20:40:25.3±0.4**,36.84N**±0.04×**5.31E**±0.04**,h10**^{km}**,n67,**σ**1**^{s}**27**/86**,mb4.6**/1**,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DFRA	Djebel Bou Aff	0.54	122	P	Pg	20 40 39.0	+2.8
SET	Setif	0.64	173	P	Pb	20 40 32.0	-6.1
CKHR	Kef el Ahmar	0.84	169	P	Pb	20 40 36.5	-4.9
CASM	Ain Smara	1.11	121	P	Pb	20 40 45.0	-1.1
CTEI	Djebel Teioual	1.17	131	P	Pb	20 40 45.0	-2.2
CKFL	Kef-Lekhel	1.22	111	P	Pb	20 40 48.0	+0.1
CAEH	’Ain El Ouahch	1.24	92	P	Pb	20 40 49.0	+0.7
CMER	Merouana	1.31	158	P	Pb	20 40 41.5	-8.0
ABMS	Boumerdes	1.47	267	P	Pn	20 40 50.7	-1.3
CMAH	Djebel Manchou	1.71	97	P	Pn	20 40 56.0	+0.6
CGMA	Guelma	1.73	102	P	Pn	20 41 03.0	+7.3
ABA	Alger-Bouzarea	1.83	270	P	Pn	20 40 54.0	-3.1
ABSA	Djebel Ababsia	1.83	107	P	Pg	20 41 03.0	+1.1
CABS	Djebel Ababsia	1.83	107	Pg	Pg	20 41 03.0	+1.1
EMHD	Djebel Mahouad	2.00	252	P	Pn	20 41 03.0	+3.4
EANR	’Ain N’Sour	3.51	257	P	Pn	20 41 16.5	-4.6
ETOS	Mallorca	3.52	327	Pn	Pn	20 41 23.4	+2.1
	1.1nm,0.1s,SNR=19						
ETOS				Sn	Sn	20 42 03.4	0.0
	1.2nm,0.1s,SNR=7.9						
ETOS	Mallorca	3.52	327	Pn	Pn	20 41 23.4	+2.1
	1.1nm,0.1s,SNR=19						
ETOS				Sn	Sn	20 42 03.4	0.0
	1.2nm,0.1s,SNR=7.9						
ETRT	Tiaret	3.55	247	P	Pn	20 41 20.0	-1.7
EIBI	Ibiza	3.82	306	Pn	Pn	20 41 26.9	+1.4
	1.9nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	20 42 10.2	-0.8
	2.8nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.82	306	Pn	Pn	20 41 26.9	+1.4
EIBI				Sn	Sn	20 42 11.0	0.0
EIBI	Ibiza	3.82	306	Pn	Pn	20 41 26.9	+1.4
	1.9nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	20 42 10.2	-0.8
	2.8nm,0.2s,SNR=7.9						
VSL	Villasalto	4.16	49	*e*Pn	Pn	20 41 30.0	-0.4
VSL	Villasalto	4.16	49	*e*Pn	Pn	20 41 30.0	-0.3
EBEN	Beniarda	4.76	295	Pn	Pn	20 41 38.2	-0.7
	0.6nm,0.2s,SNR=7.9						
EBEN	Beniarda	4.76	295	Pn	Pn	20 41 38.2	-0.7
	0.6nm,0.2s,SNR=7.9						
EPOB	Poblet	5.58	325	Pn	Pn	20 41 51.4	+1.0
	0.4nm,0.1s,SNR=7.0						
EPOB				Sn	Sn	20 42 52.6	-2.8
	1.3nm,0.2s,SNR=7.9						
EPOB	Poblet	5.58	325	Pn	Pn	20 41 51.4	+1.0
	0.4nm,0.1s,SNR=7.0						
EPOB				Sn	Sn	20 42 52.6	-2.8
	1.3nm,0.2s,SNR=7.9						
ERTA	Horta de San J	5.65	318	Pn	Pn	20 41 52.3	+0.8
	0.2nm,0.1s,SNR=4.0						
ERTA	Horta de San J	5.65	318	Pn	Pn	20 41 52.3	+0.8
	0.2nm,0.1s,SNR=4.0						
ECHE	Chera	5.66	301	Pn	Pn	20 41 52.6	+1.2
	0.2nm,0.1s,SNR=7.9						
ETOB	Tobarra	5.73	290	Pn	Pn	20 41 52.4	-0.1
	0.7nm,0.2s,SNR=8.0						
ETOB				Sn	Sn	20 42 53.2	-5.8
	SNR=4.0						
ETOB	Tobarra	5.73	290	Pn	Pn	20 41 52.4	-0.1
ETOB				Sn	Sn	20 42 51.1	-7.9
ETOB	Tobarra	5.73	290	Pn	Pn	20 41 52.4	-0.1
	0.7nm,0.2s,SNR=8.0						
ETOB				Sn	Sn	20 42 53.2	-5.8
	SNR=4.0						
EMOS	Mosqueruela	5.74	310	Pn	Pn	20 41 53.9	+1.3
	0.2nm,0.1s,SNR=6.2						
EMOS	Mosqueruela	5.74	310	Pn	Pn	20 41 53.9	+1.3
	0.2nm,0.1s,SNR=6.2						
EMIR	Miracle	5.86	331	Pn	Pn	20 41 55.0	+0.8
	9.1nm,0.1s,SNR=6.0						
EMIR	Miracle	5.86	331	Pn	Pn	20 41 55.0	+0.7
	9.1nm,0.1s,SNR=6.0						
EJON	La Jonquera	5.91	342	Pn	Pn	20 41 56.0	+1.0
	1.4nm,0.2s,SNR=4.0						
EJON	La Jonquera	5.91	342	Pn	Pn	20 41 56.4	+1.3
EJON	La Jonquera	5.91	342	Pn	Pn	20 41 56.3	+1.3
PGF	Pioggiola	6.37	25	*e*Pn	Pn	20 42 01.4	-0.2
PGF				*e*Sn	Sn	20 43 13.0	-2.2
	1.9nm,0.3s						
LMR	La Mourre	6.55	8	*e*Pn	Pn	20 42 04.2	+0.1
LMR				*e*Sn	Sn	20 43 15.2	-4.5
	1.0nm,0.2s						
EGRA	Graus	6.60	326	Pn	Pn	20 42 06.4	+1.7
	0.5nm,0.2s,SNR=7.9						
EGRA	Graus	6.60	326	Pn	Pn	20 42 07.1	+2.3
ESAC	San Caprasio	6.62	319	Pn	Pn	20 42 05.6	+0.5
	5.0nm,0.3s,SNR=4.0						
ESAC				Sn	Sn	20 43 18.0	-3.5
	SNR=5.0						
ESAC	San Caprasio	6.62	319	Pn	Pn	20 42 03.5	-1.6
ESAC	San Caprasio	6.62	319	Pn	Pn	20 42 05.6	+0.5
	5.0nm,0.3s,SNR=4.0						
ESAC				Sn	Sn	20 43 18.0	-3.5
	SNR=5.0						
EQES	Quesada	6.75	281	Pn	Pn	20 42 06.7	-0.2
	0.9nm,0.3s,SNR=4.0						
EQES				Sn	Sn	20 43 18.0	-6.6
	SNR=5.0						
EQES	Quesada	6.75	281	Pn	Pn	20 42 06.7	-0.2
	0.9nm,0.3s,SNR=4.0						
EQES				Sn	Sn	20 43 18.0	-6.6
	SNR=5.0						
FRF	La Foret Royal	6.79	8	*e*Pn	Pn	20 42 07.5	0.0
FRF				*e*Sn	Sn	20 43 23.1	-2.6
	1.0nm,0.2s						
MTLF	Montolieu	6.91	341	*e*Pn	Pn	20 42 09.0	-0.2
MTLF				*e*Sn	Sn	20 43 25.8	-2.9
	1.0nm,0.3s						
SMRF	Simiane la Rot	7.13	2	*e*Pn	Pn	20 42 12.7	+0.4
SMRF				*e*Sn	Sn	20 43 31.2	-3.0
	0.9nm,0.3s						

SBF	Sospel	7.20	12	*e*Pn	Pn	20 42 13.0	-0.3
EPF	Esparros	7.27	330	*e*Pn	Pn	20 42 15.2	+1.0
LASF	Ste Croix	7.32	352	*e*Pn	Pn	20 42 13.7	-1.1
ETSF	Etsaut	7.55	325	*e*Pn	Pn	20 42 18.9	+0.8
VIVF	Saint-Julien-l	8.03	357	*e*Pn	P	20 42 24.2	-0.6
SJPF	Ste Jean	8.03	323	*e*Pn	P	20 42 25.9	+1.1
ORIF	Oris-en-Rattie	8.08	3	*e*Pn	P	20 42 25.8	+0.2
CAF	Calviac	8.45	344	*e*Pn	P	20 42 30.5	-0.1
LPG	La Plagne	8.72	7	*e*Pn	P	20 42 36.2	+1.8
LPL	La Plagne	8.74	7	*e*Pn	P	20 42 36.3	+1.6
CABF	La Chapelle	9.78	3	*e*Pn	P	20 42 49.5	+0.4
HINF	Hinteralfeld	11.03	5	*e*Pn	P	20 43 05.5	-0.7
HAU	Haudompre	11.19	4	*e*Pn	P	20 43 07.7	-0.6
KIV	Kislovodsk	29.15	64	*e*P	P	20 46 26.9	-1.7
	5.3nm,0.4s,mb4.6						

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*INMG **19** 20:42:37.6±1.4, 42.80N×7.23W, h11^{km}±3^{km}, ML2.3, Error ellipse: s-maj=2.7km s-min=1.9km az=90.0*

*CSEM **19** 20:42:37.7±0.1, 42.81N×7.23W, h10^{km}, ML3.1/5, Error ellipse: s-maj=1.2km s-min=1.1km az=9.0*

MDD 19 20:42:37.5±0.2**, 42.80N×7.23W, h6^{km}±4^{km}, mbLg2.4**/13, **1D, Error ellipse: s-maj=3.5km s-min=1.4km az=89.0, PRXIMO PROFUNDIDAD POBRE, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERUA	La Rua	0.41	171	⇓Pg	Pg	20 42 45.4	-0.4
	18nm,0.1s,SNR=18						
ERUA				Lg		20 42 50.5	
	47nm,0.2s,SNR=25						
EPON	Pontenova	0.53	7	Pg	Pg	20 42 47.4	-0.8
	14nm,0.1s,SNR=20						
EPON				Lg		20 42 54.1	
	58nm,0.2s,SNR=19						
EPON	Pontenova	0.53	7	Pg	Pg	20 42 47.4	-0.8
	14nm,0.1s,SNR=20						
EPON				Lg		20 42 54.1	
	58nm,0.2s,SNR=19						
ECAL	Calabor	0.93	157	Pg	Pg	20 42 55.0	-1.1
	8.3nm,0.1s,SNR=17						
ECAL				Lg		20 43 07.4	
	92nm,0.3s,SNR=5.0						
ECAL	Calabor	0.93	157	Pg	Pg	20 42 55.0	-1.1
	8.3nm,0.1s,SNR=17						
ECAL				Lg		20 43 07.4	
	92nm,0.3s,SNR=5.0						
STS	Santiago	0.97	276	Pg	Pg	20 42 55.6	-1.3
	7.7nm,0.2s,SNR=6.2						
STS				Lg		20 43 08.7	
	36nm,0.2s,SNR=22						
PBRG	Braganca	1.06	160	*e*P	Pb	20 42 56.8	-1.0
PBRG				*e*S	Sb	20 43 10.7	-1.0
	35nm,0.3s						
PBRG	Braganca	1.06	160	Pg	Pg	20 42 57.6	-1.0
PBRG				*e*S	Sb	20 43 10.7	-1.0
	35nm,0.3s						
ELOB	Lobios	1.11	214	Pn	Pn	20 42 57.4	-2.2
	1.8nm,0.1s,SNR=6.7						
ELOB				Pg	Pg	20 42 58.6	-1.1
	21nm,0.1s,SNR=184						
ELOB				Lg		20 43 12.6	
	36nm,0.1s,SNR=14						
ELOB	Lobios	1.11	214	Pn	Pn	20 42 57.4	-2.1
	1.8nm,0.1s,SNR=6.7						
ELOB	Lobios	1.11	214	Pg	Pg	20 42 58.7	-1.1
	21nm,0.1s,SNR=184						
ELOB				Lg		20 43 12.6	
	36nm,0.1s,SNR=14						
PCAB	Cabril	1.24	209	*e*P	Pb	20 42 59.8	-1.1
PCAB				*e*S	Sb	20 43 15.7	-1.2
	40nm,0.1s						
PCAB	Cabril	1.24	209	Pg	Pg	20 43 00.7	-1.5
PCAB				Lg		20 43 15.5	
PCAB	Cabril	1.24	209	Pg	Pg	20 43 00.7	-1.5
PCAB				*e*S	Sb	20 43 15.7	-1.2
	40nm,0.1s						
EZAM	Zamans	1.26	239	Pn	Pn	20 42 59.8	-1.8
	1.1nm,0.1s,SNR=5.6						
EZAM				Pg	Pg	20 43 01.1	-1.6
	8.8nm,0.2s,SNR=9.6						
EZAM				Lg		20 43 16.1	
	21nm,0.3s,SNR=8.4						
EMAZ	Mazaricos	1.29	277	Pg	Pg	20 43 01.4	-1.9
	7.7nm,0.2s,SNR=8.8						
EMAZ				Lg		20 43 18.4	
	61nm,0.2s,SNR=5.0						
EMAZ	Mazaricos	1.29	277	Pg	Pg	20 43 01.4	-1.9
	7.7nm,0.2s,SNR=8.8						
EMAZ				Lg		20 43 18.4	
	61nm,0.2s,SNR=5.0						
PVRL	Vila Real	1.56	193	*e*Pn	Pn	20 43 04.2	-1.8
PVRL	Vila Real	1.56	193	*e*Pg	Pg	20 43 07.0	-1.7
PVRL				*e*Sg	Sg	20 43 26.8	-2.8
	41nm,0.3s						
PVRL	Vila Real	1.56	193	Pn	Pn	20 43 04.2	-1.8
PVRL				Pg	Pg	20 43 06.9	-1.8
PVRL				Lg		20 43 26.3	
PVRL	Vila Real	1.56	193	Pg	Pg	20 43 06.9	-1.8
PVRL				*e*Sg	Sg	20 43 26.8	-2.8
	41nm,0.3s						
EARI	Arriondas	1.57	71	Pg	Pg	20 43 06.3	-2.4
	2.9nm,0.1s,SNR=17						
EARI				Lg		20 43 26.8	
	13nm,0.2s,SNR=7.8						
EARI	Arriondas	1.57	71	Pg	Pg	20 43 06.3	-2.5
	2.9nm,0.1s,SNR=17						
EARI				Lg		20 43 26.8	
	13nm,0.2s,SNR=7.8						
PVIS	Viseu	2.14	194	*e*Pn	Pn	20 43 12.1	-2.1
PVIS				*e*Sg	Sg	20 43 44.3	-4.4
	18nm,0.1s						
PVIS	Viseu	2.14	194	Pn	Pn	20 43 12.1	-2.1
PVIS				Lg		20 43 44.0	
PVIS	Viseu	2.14	194	*e*Pn	Pn	20 43 12.1	-2.1
PVIS				*e*Sg	Sg	20 43 44.3	-4.4
	18nm,0.1s						
MTE	Manteigas	2.41	186	*e*Sg	Sg	20 43 54.0	-3.7
	13nm,0.3s						
MTE	Manteigas	2.41	186	*e*Sg	Sg	20 43 54.0	-3.7
	13nm,0.3s						
ELAN	Lanestosa	2.82	80	Pn	Pn	20 43 23.0	-0.9
	0.2nm,0.1s,SNR=7.9						
ELAN				Pg	Pg	20 43 28.2	-5.5
	1.3nm,0.2s,SNR=6.0						
ELAN				Sn	Sn	20 43 54.6	-4.0
	1.5nm,0.1s,SNR=5.0						
ELAN				Lg		20 44 04.9	
	7.1nm,0.2s,SNR=5.0						
ELAN	Lanestosa	2.82	80	Pn	Pn	20 43 23.0	-0.9
	0.2nm,0.1s,SNR=7.9						
ELAN	Lanestosa	2.82	80	Pg	Pg	20 43 28.2	-5.6
	1.3nm,0.2s,SNR=6.0						
ELAN				Sn	Sn	20 43 54.6	-4.0
	1.5nm,0.1s,SNR=5.0						
ELAN				Lg		20 44 04.9	
	7.1nm,0.2s,SNR=5.0						
PCBR	Castelo Branco	2.96	184	*e*Sn	Sn	20 43 57.3	-4.9
PCBR				*e*Sg	Sg	20 44 10.6	-5.5
	5.8nm,0.5s						
PCBR	Castelo Branco	2.96	184	Sn	Sn	20 43 57.3	-4.9
PCBR				Lg		20 44 09.9	
GUD	Guadarrama	3.15	132	Pg	Pg	20 43 35.5	-5.0
	0.8nm,0.2s,SNR=7.5						
GUD				Lg		20 44 14.7	
	3.1nm,0.2s,SNR=5.8						
PTOM	Tomar	3.30	196	*e*Sn	Sn	20 44 06.4	-4.4
PTOM				*e*Sg	Sg	20 44 22.2	-5.2
	7.7nm,0.5s						
PTOM	Tomar	3.30	196	Sn	Sn	20 44 06.4	-4.4
PTOM				Lg		20 44 21.6	
ESDC	Sonseca Array	3.98	141	Pg	Pg	20 43 50.5	-6.4
	0.5nm,0.2s,baz=320,slow=18,SNR=4.7						
ESDC				Lg		20 44 38.9	
	1.2nm,0.3s,baz=319,slow=29,SNR=8.6						
ESDC	Sonseca Array	3.98	141	Pg	Pg	20 43 50.5	-6.4
	0.5nm,0.2s,SNR=4.7						
ESDC				Lg		20 44 38.9	
	1.2nm,0.3s,SNR=8.6						
EBAD	Badajoz	4.04	178	Sn	Sn	20 44 22.9	-6.6
	0.5nm,0.2s,SNR=7.9						
EBAD				Lg		20 44 43.1	
	6.1nm,0.3s,SNR=5.2						
EBAD	Badajoz	4.04	178	Sn	Sn	20 44 23.0	-6.6
	0.5nm,0.2s,SNR=7.9						
EBAD				Lg		20 44 43.2	
	6.1nm,0.3s,SNR=5.2						
EMIN	Mina Concepcio	5.04	175	Lg		20 45 12.9	
	0.1nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.04	175	Lg		20 45 12.9	
	0.1nm,0.1s,SNR=7.9						
EADA	Adamuz	5.05	155	Pg	Pg	20 44 10.8	-7.6
	0.4nm,0.2s,SNR=7.9						
EADA				Lg		20 45 14.1	
	0.6nm,0.2s,SNR=7.9						
EADA	Adamuz	5.05	155	Pg	Pg	20 44 10.8	-7.5
	0.4nm,0.2s,SNR=7.9						
ESAC	San Caprasio	5.13	100	Sn	Sn	20 44 48.0	-9.2
	0.9nm,0.1s,SNR=7.9						
ESAC				Lg		20 45 18.2	
	3.8nm,0.2s,SNR=7.9						
EBIE	Bielsa	5.43	89	Pn	Pn	20 43 57.8	-3.2
	0.2nm,0.2s,SNR=7.9						
EBIE				Sn	Sn	20 44 57.2	-7.5
	0.3nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	5.62	113	Sn	Sn	20 45 01.9	-7.6
	0.2nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.99	132	Pn	Pn	20 44 07.3	-1.6
	0.4nm,0.4s,SNR=7.9						
ETOB				Lg		20 45 45.6	
	0.5nm,0.2s,SNR=7.9						

TRN 19 20:55:26.6, 17.53N×61.61W, h16^{km}, MD3.6, M3.7(FDF)**, 1C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPB	Codrington	0.23	299	⇑*i*P	Pb	20 55 32.9	+0.9
CPB				*e*S	Sb	20 55 38.2	+2.7
BPA	Boggy Peak	0.53	206	*e*P	Pb	20 55 38.8	+1.7
BPA				*e*S	Sb	20 55 49.0	+4.7
NVRH	Round Hill, Ne	1.00	250	*e*P	Pb	20 55 48.0	+2.9
NVRH				*e*S	Sb	20 56 03.2	+5.4
SKTB	Turtle Beach	1.01	252	*e*P	Pb	20 55 48.0	+2.8
SKTB				*e*S	Sb	20 56 03.2	+5.2
SKI	Saint Kitts	1.09	260	*e*P	Pb	20 55 48.9	+2.3
SKI				*e*S	Sb	20 56 05.3	+4.9
SKDB	Saint Kitts 2	1.15	264	*e*P	Pb	20 55 50.9	+3.3
SKDB				*e*S	Sb	20 56 09.0	+6.9
BSK	Brimstone Hill	1.18	261	*e*P	Pb	20 55 49.8	+1.6
BSK				*e*S	Sb	20 56 07.5	+4.4
DEG	La Desirade	1.32	156	*e*P	Pn	20 55 50.0	-0.5
LZG	Guadaloupe-1	1.39	186	*e*P	Pn	20 55 52.1	+0.7
BCG	Bois Riant Cap	1.44	180	*e*P	Pn	20 55 53.4	+1.3
DOG	Dongo Capester	1.49	180	*e*P	Pn	20 55 54.8	+1.9
SCG	Saint Claude	1.49	182	*e*P	Pn	20 55 54.2	+1.3
SCG				*e*S	Sb	20 56 17.8	+5.7
MGG	Marie-Galante	1.63	170	*e*P	Pn	20 55 56.8	+1.9
TBG	Guadaloupe-3	1.67	181	*e*P	Pn	20 55 57.5	+2.0
TBG				*e*S	Sn	20 56 22.1	+5.5
BBL	Barber's Block	2.00	176	*e*P	Pn	20 56 01.9	+1.8

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*NEIC **19** 21:02:59.1±0.3, 43.82N×105.32W, ML3.4, Error ellipse: s-maj=4.6km s-min=4.1km az=52.0, Suspected Mining explosion.*

NEIC 55 km [35 miles] SSE of Gillette.

*IDC **19** 21:02:59.4±1.5, 43.76N×105.48W, mb4.1/1, mb1 3.8/5, mb1mx3.6/21, mbtmp3.6/5, ML3.5/4, Error ellipse: s-maj=45.9km s-min=7.4km az=149.0*

ISC 19 21:02:57.4±0.5**, 43.81N**±0.04×**105.30W**±0.06**, n39, σ0^{s}91**/41**, mb4.3**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	0.96	71	*e*P	Pg	21 03 18.1	+1.5
PHWY	Pilot Hill	2.51	183	*e*P	Pn	21 03 40.6	+0.5
RWWY	Rawlins	2.55	214	*e*P	Pn	21 03 42.2	+1.5
LAO	LASA Array	2.95	348	*e*P	Pn	21 03 47.2	+0.9
BW06	Boulder Array	3.28	253	*e*P	Pn	21 03 52.2	+1.1
PDAR	Pinedale Array	3.28	253	Pn	Pn	21 03 52.6	+1.5
	4.4nm,0.3s,baz=72,slow=15,SNR=104						
PDAR				Pg	Pg	21 03 59.0	-3.9
	11nm,0.3s,baz=77,slow=18,SNR=56						
PDAR				Lg		21 04 37.7	
	20nm,0.3s,baz=75,slow=35,SNR=11						
PDAR	Pinedale Array	3.28	253	Pn	Pn	21 03 52.6	+1.5
PDAR				Pg	Pg	21 03 59.0	-3.9
PDAR				Lg		21 04 37.7	
GCMT	Greycliff	3.68	304	*e*P	Pn	21 03 56.2	-0.7
LKWY	Lake	3.74	283	P	Pn	21 03 57.9	+0.3
LOHW	Long Hollow	3.85	269	P	Pn	21 04 00.3	+1.1
MOOW	Moose Ponds	3.94	271	P	Pn	21 04 00.5	0.0
SNOW	Snow King Moun	3.97	267	P	Pn	21 04 01.4	+0.5
ISCO	Idaho Springs	4.02	183	*e*P	Pn	21 04 01.8	+0.2
REDW	Red Top Meadow	4.06	266	*e*P	Pn	21 04 03.0	+0.9
IMW	Indian Meadow	4.08	273	P	Pn	21 04 03.1	+0.6
TPAW	Teton Pass	4.11	267	*e*P	Pn	21 04 02.9	-0.1
YMR	Madison River	4.16	284	P	Pn	21 04 02.9	-0.7
QLMT	Earthquake Lak	4.51	285	P	Pn	21 04 07.1	-1.5
SMCO	Snowmass	4.80	196	P	Pn	21 04 12.9	+0.3
BOZ	Bozeman (W)	4.87	294	*e*P	Pn	21 04 12.5	-1.2
HWUT	Hardware Ranch	5.12	247	*e*P	Pn	21 04 16.7	-0.4
TCUT	Toone Canyon	5.26	241	*e*P	Pn	21 04 18.6	-0.5
HRY	Holter Researc	5.44	304	P	Pn	21 04 21.9	+0.1
MCMT	McKenzie Canyo	5.51	283	P	Pn	21 04 21.7	-1.0
DAU	Daniels Canyon	5.58	235	*e*P	Pn	21 04 23.7	0.0
RW3	Ridgway	5.84	199	P	Pn	21 04 26.8	-0.6
HVU	Hansel Valley	5.86	252	*e*P	Pn	21 04 27.1	-0.6
SDCO	Great Sand Dun	6.06	182	*e*P	Pn	21 04 29.7	-0.8
SRU	San Rafael	6.12	222	*e*P	Pn	21 04 31.0	-0.3
PV01	Paradox Valley	6.19	205	*e*P	Pn	21 04 30.8	-1.4
CHMT	Chamberlain Mo	6.40	302	*e*P	Pn	21 04 35.8	+0.5
CBKS	Cedar Bluff	6.52	138	P	Pn	21 04 37.1	+0.3
DUG	Dugway	6.66	240	*e*P	Pn	21 04 37.7	-1.2
MSU	Marysvale	7.41	227	*e*P	Pn	21 04 49.1	-0.4
ELK	Elko	7.98	251	Pn	Pn	21 04 58.5	+1.1
	0.3nm,0.3s,baz=72,slow=10,SNR=4.6						
ELK				Lg		21 07 06.3	
	0.1nm,0.3s,baz=171,slow=15,SNR=3.0						
ULM	Lac du Bonnet	9.10	42	Pn	P	21 05 11.4	-1.6
	2.1nm,0.3s,baz=234,slow=11,SNR=16						
ULM				Lg		21 07 47.5	
	0.6nm,0.3s,baz=131,slow=21,SNR=2.9						
WUAZ	Wupatki	9.51	211	P	P	21 05 17.5	-1.1
NVAR	Mina Array Bea	11.18	246	Pn	P	21 05 43.3	+1.7
	0.1nm,0.3s,baz=55,slow=11,SNR=3.3						
ARCES	ARCESS Array B	61.35	18	P	P	21 13 16.2	-0.5
	2.0nm,0.8s,mb4.3,baz=337,slow=7.0,SNR=9.2						

GUC 19 21:07:24.8±0.5**, 25.23S×70.86W, h44^{km}±3^{km}, MD3.5, ML3.1, 3C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	Cerro Paranal	0.73	35	⇑*i*P	P	21 07 39.6	+0.9
CPN1				AMP		21 07 50.4	
	comp=E,4μm,0.3s						
CPN1				*i* S	S	21 07 51.0	+2.1
CRCH	Chaqaral	1.14	169	⇑*i*P	P	21 07 45.0	+0.5
CRCH				*i* S	S	21 08 00.4	+1.2
CRCH				AMP		21 08 03.8	
	comp=E,469nm,0.2s						
ANCH	Antofagasta	1.59	15	⇑*i*P	P	21 07 51.3	+0.3
ANCH				*i* S	S	21 08 11.0	+0.5
CDCH	Caldera	1.84	179	*i* P	P	21 07 54.5	-0.1
CDCH				*i* S	S	21 08 17.1	+0.4
CEN1	Los Morros	1.92	18	*i* P	P	21 07 53.2	-2.6
CEN1				*i* S	S	21 08 14.3	-4.5
CEN1				AMP		21 08 25.9	
	comp=N,250nm,0.6s						

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*NEIC **19** 21:27:48.1, 38.54S×175.79E, h186^{km}, MG4.3(WEL), After WEL.*

*WEL **19** 21:27:48.8±0.2, 38.54S×175.81E, h179^{km}±1^{km}, ML4.3/20, Error ellipse: s-maj=1.3km s-min=1.0km az=90.0*

ISC 19 21:27:46.9±0.5**, 38.69S**±0.03×**175.72E**±0.06**, h193**^{km}±3^{km}**, n142, σ0^{s}97**/180**, 22C-8D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WATZ	Wairara	0.03	150	P	P	21 28 12.9	+0.5
WATZ				S	S	21 28 31.4	-0.5
WATZ	Wairara	0.03	150	PN	P	21 28 12.9	+0.6
WATZ				SN	S	21 28 31.4	-0.5
RATZ	Rangitukua	0.19	167	P	P	21 28 13.0	+0.4
RATZ	Rangitukua	0.19	167	⇑PN	P	21 28 13.0	+0.4
RATZ				SN	S	21 28 31.4	-0.9
KATZ	Kakaramea	0.29	183	P	P	21 28 13.4	+0.6
KATZ				S	S	21 28 32.9	+0.1
KATZ	Kakaramea	0.29	183	PN	P	21 28 13.4	+0.6
RITZ	Rihia Road	0.31	159	P	P	21 28 13.5	+0.6
RITZ	Rihia Road	0.31	159	PN	P	21 28 13.4	+0.5
HATZ	Hinemaiaia	0.36	125	P	P	21 28 13.1	+0.1
HATZ				S	S	21 28 31.0	-2.2
HATZ	Hinemaiaia	0.36	125	PN	P	21 28 13.1	0.0
HATZ				SN	S	21 28 31.0	-2.2
KRVZ	Karewarewa	0.41	188	PN	P	21 28 13.9	+0.7
KRVZ				*e*SN	S	21 28 33.2	-0.3
WTVZ	West Tongariro	0.44	193	P	P	21 28 14.0	+0.7
WTVZ				S	S	21 28 32.9	-0.8
WTVZ	West Tongariro	0.44	193	⇑PN	P	21 28 14.0	+0.7
WTVZ				SN	S	21 28 32.9	-0.8
TWVZ	Taurewa	0.44	209	⇑PN	P	21 28 14.0	+0.7
TWVZ				SN	S	21 28 33.0	-0.7
OTVZ	Oturere	0.48	185	PN	P	21 28 14.2	+0.8
OTVZ				SN	S	21 28 33.9	0.0
NGZ	Ngauruhoe	0.50	190	P	P	21 28 14.3	+0.8
NGZ	Ngauruhoe	0.50	190	PN	P	21 28 14.2	+0.7
NGZ				*e*SN	S	21 28 33.7	-0.3
PATZ	Paeroa	0.52	55	P	P	21 28 13.3	-0.3
PATZ	Paeroa	0.52	55	PN	P	21 28 13.2	-0.4
CNZ	Chateau	0.53	194	P	P	21 28 14.4	+0.8
CNZ	Chateau	0.53	194	PN	P	21 28 14.3	+0.7
WPVZ	Whakapapa	0.54	194	P	P	21 28 14.5	+0.9
WPVZ	Whakapapa	0.54	194	PN	P	21 28 14.4	+0.8
WPVZ				*e*SN	S	21 28 34.9	+0.6
FWVZ	Far West T-bar	0.58	193	⇓PN	P	21 28 14.8	+1.0
FWVZ				SN	S	21 28 35.1	+0.5
TUVZ	Tukino	0.58	185	P	P	21 28 14.9	+1.1
TUVZ	Tukino	0.58	185	PN	P	21 28 14.9	+1.0
TUVZ				*e*SN	S	21 28 34.4	-0.2
DRZ	Dome Shelter	0.60	191	P	P	21 28 15.3	+1.4
DRZ	Dome Shelter	0.60	191	PN	P	21 28 15.2	+1.3
TRVZ	Turoa	0.63	192	PN	P	21 28 15.3	+1.3
TRVZ				SN	S	21 28 35.2	+0.2
UTU	Utuhina	0.63	36	P	P	21 28 13.6	-0.4
UTU	Utuhina	0.63	36	⇓PN	P	21 28 13.6	-0.5
WNVZ	Wahianoa	0.65	188	P	P	21 28 15.3	+1.2
WNVZ	Wahianoa	0.65	188	⇑PN	P	21 28 15.3	+1.2
WNVZ				*e*SN	S	21 28 35.5	+0.4
PKVZ	Pokaka	0.67	205	⇑PN	P	21 28 15.2	+1.0
PKVZ				SN	S	21 28 35.2	-0.1
HIZ	Hauiti	0.70	284	P	P	21 28 14.5	+0.2
HIZ				S	S	21 28 34.6	-1.0
HIZ	Hauiti	0.70	284	⇓PN	P	21 28 14.5	+0.2
HIZ				SN	S	21 28 34.6	-0.9
MOVZ	Moawhango	0.72	178	P	P	21 28 15.4	+0.9
MOVZ	Moawhango	0.72	178	⇑PN	P	21 28 15.4	+0.9
MOVZ				SN	S	21 28 34.8	-1.0
MTVZ	Mangateitei	0.72	195	⇑PN	P	21 28 15.6	+1.1
TAZ	Tarawera	0.77	54	P	P	21 28 14.2	-0.5
TAZ	Tarawera	0.77	54	PN	P	21 28 14.2	-0.5
BKZ	Black Stump Fm	0.77	129	P	P	21 28 15.4	+0.7
BKZ	Black Stump Fm	0.77	129	⇑PN	P	21 28 15.4	+0.7
BKZ				SN	S	21 28 34.7	-1.6
VRZ	Vera Road	0.87	239	P	P	21 28 16.2	+1.0
VRZ	Vera Road	0.87	239	⇑PN	P	21 28 16.2	+1.0
VRZ				SN	S	21 28 38.2	+1.0
EDRZ	Edgecumbe	0.99	55	P	P	21 28 15.2	-0.8
EDRZ	Edgecumbe	0.99	55	PN	P	21 28 15.2	-0.8
URZ	Urewera	1.17	69	P	P	21 28 16.4	-1.1
URZ	Urewera	1.17	69	⇓PN	P	21 28 16.4	-1.1
URZ				SN	S	21 28 37.2	-4.0
RAEZ	Rainy Point	1.19	239	P	P	21 28 19.0	+1.4
RAEZ	Rainy Point	1.19	239	PN	P	21 28 19.0	+1.3
WAZ	Wanganui	1.21	208	P	P	21 28 19.2	+1.4
WAZ	Wanganui	1.21	208	⇑PN	P	21 28 19.2	+1.4
TSZ	Takapari Road	1.39	172	P	P	21 28 20.7	+1.4
TSZ	Takapari Road	1.39	172	⇑PN	P	21 28 20.7	+1.4
TSZ				SN	S	21 28 43.8	-0.5
NEZ	North Egmont	1.39	245	P	P	21 28 20.9	+1.5
NEZ	North Egmont	1.39	245	⇓PN	P	21 28 20.8	+1.5
DFE	Dawson Falls	1.41	242	P	P	21 28 20.9	+1.4
DFE	Dawson Falls	1.41	242	PN	P	21 28 20.9	+1.4
PKE	Pukeiti	1.44	249	P	P	21 28 20.9	+1.1
PKE	Pukeiti	1.44	249	PN	P	21 28 21.0	+1.2
MYRZ	Mayor Island	1.46	17	PN	P	21 28 18.7	-1.3
MWZ	Matawai	1.46	77	PN	P	21 28 19.3	-0.7
MWZ				*e*SN	S	21 28 41.6	-3.9
NRZ	Ngariki Road	1.53	244	P	P	21 28 21.2	+0.6
NRZ	Ngariki Road	1.53	244	PN	P	21 28 21.1	+0.5
NWEZ	Newall Road	1.56	247	P	P	21 28 22.1	+1.2
NWEZ	Newall Road	1.56	247	⇑PN	P	21 28 22.0	+1.2
KNZ	Kokohu	1.56	103	P	P	21 28 21.3	+0.4
KNZ	Kokohu	1.56	103	PN	P	21 28 21.2	+0.3
PXZ	Pawanui	1.61	147	⇑PN	P	21 28 22.6	+1.3
MKAZ	Moumakai	1.63	344	P	P	21 28 20.6	-1.0
MKAZ	Moumakai	1.63	344	⇓PN	P	21 28 20.6	-0.9
OTAZ	Otara	1.84	340	P	P	21 28 21.9	-1.7
OTAZ	Otara	1.84	340	PN	P	21 28 22.7	-0.9
WTAZ	Waiatarua	1.97	332	P	P	21 28 24.5	-0.4
WTAZ	Waiatarua	1.97	332	⇓PN	P	21 28 24.5	-0.4
MRZ	Mangatainoka R	1.98	183	P	P	21 28 26.0	+1.0
MRZ	Mangatainoka R	1.98	183	⇑PN	P	21 28 26.0	+1.0
MRZ				SN	S	21 28 54.3	0.0
MTAZ	Motutapu	2.00	341	P	P	21 28 24.2	-1.0
MTAZ	Motutapu	2.00	341	⇓PN	P	21 28 24.2	-1.0
KAAZ	Kauri Point	2.02	336	P	P	21 28 24.7	-0.8
KAAZ	Kauri Point	2.02	336	PN	P	21 28 24.6	-0.9
BFZ	Birch Farm	2.03	169	P	P	21 28 26.7	+1.1
BFZ	Birch Farm	2.03	169	PN	P	21 28 26.7	+1.1
PUZ	Puketiti	2.09	74	*e*P	P	21 28 25.1	-1.1
PUZ	Puketiti	2.09	74	PN	P	21 28 25.0	-1.1
KIW	Kapiti Island	2.26	196	P	P	21 28 28.8	+0.7
KIW	Kapiti Island	2.26	196	⇑PN	P	21 28 28.8	+0.7
KIW				SN	S	21 28 59.2	-0.7
MXZ	Matakaoa Point	2.33	62	P	P	21 28 27.7	-1.2
MXZ	Matakaoa Point	2.33	62	PN	P	21 28 27.7	-1.2
MXZ				SN	S	21 28 56.6	-4.7
CAW	Cannon Point	2.47	191	P	P	21 28 31.3	+0.8
CAW	Cannon Point	2.47	191	PN	P	21 28 31.3	+0.8
CAW				SN	S	21 29 04.0	-0.1
MTW	Mount Morrison	2.48	184	P	P	21 28 31.0	+0.5
MTW	Mount Morrison	2.48	184	⇑PN	P	21 28 31.0	+0.4
DUWZ	D'Urville Isla	2.53	213	PN	P	21 28 31.4	+0.3
MRW	Makara Radio	2.66	197	P	P	21 28 33.2	+0.6
MRW	Makara Radio	2.66	197	PN	P	21 28 33.2	+0.5
MRW				SN	S	21 29 07.1	-0.9
WEL	Wellington	2.70	195	P	P	21 28 33.7	+0.6
WEL	Wellington	2.70	195	PN	P	21 28 33.7	+0.6
PAWZ	Paruwai Farm	2.70	185	P	P	21 28 33.5	+0.3
PAWZ	Paruwai Farm	2.70	185	PN	P	21 28 33.5	+0.4
TRWZ	Traveller	2.71	180	PN	P	21 28 33.7	+0.4
TRWZ				SN	S	21 29 08.3	-0.7
SNZO	South Karori	2.73	196	P	P	21 28 33.9	+0.4
SNZO				*e*Sn	S	21 29 07.3	-2.2
SNZO	South Karori	2.73	196	PN	P	21 28 33.9	+0.4
MSWZ	Moikau Station	2.75	187	P	P	21 28 34.0	+0.3
MSWZ	Moikau Station	2.75	187	⇑PN	P	21 28 34.0	+0.3
TCW	Tory Channel	2.76	203	P	P	21 28 34.3	+0.5
TCW	Tory Channel	2.76	203	PN	P	21 28 34.3	+0.5
TCW				SN	S	21 29 09.3	-0.7
BHW	Baring Head	2.80	193	P	P	21 28 34.6	+0.3
BHW	Baring Head	2.80	193	⇑PN	P	21 28 34.6	+0.4
BHW				SN	S	21 29 09.4	-1.5
TUWZ	Tuamarina	3.06	206	PN	P	21 28 37.4	0.0
NNZ	Nelson	3.10	215	*e*P	P	21 28 37.8	-0.1
NNZ	Nelson	3.10	215	*e*PN	P	21 28 37.8	-0.1
NNZ				SN	S	21 29 17.5	+0.2
QRZ	Quartz Range	3.26	228	*e*P	P	21 28 38.9	-0.9
QRZ	Quartz Range	3.26	228	*e*PN	P	21 28 38.9	-1.0
QRZ				SN	S	21 29 19.3	-1.4
BSWZ	Blackbirch Sta	3.34	204	P	P	21 28 41.1	+0.3
BSWZ	Blackbirch Sta	3.34	204	⇑PN	P	21 28 41.1	+0.3
THZ	Tophouse	3.75	214	*e*P	P	21 28 45.7	-0.3
THZ	Tophouse	3.75	214	PN	P	21 28 45.2	-0.7
THZ				SN	S	21 29 31.5	-0.1
KHZ	Kahutara	4.08	203	P	P	21 28 50.3	+0.2
KHZ	Kahutara	4.08	203	⇑PN	P	21 28 50.3	+0.2
DSZ	Denniston Nort	4.28	223	*e*P	P	21 28 51.3	-1.3
DSZ	Denniston Nort	4.28	223	PN	P	21 28 51.2	-1.4
LTZ	Lake Taylor	4.86	212	P	P	21 28 59.3	-0.7
LTZ	Lake Taylor	4.86	212	PN	P	21 28 59.2	-0.8
MQZ	McQueen's Vall	5.52	204	P	P	21 29 06.9	-1.7

MQZ	McQueen's Vall	5.52	204	PN	P	21 29 06.9	-1.7
WVZ	Waitaha Valley	5.79	219	*e*P	P	21 29 10.9	-1.1
WVZ	Waitaha Valley	5.79	219	*e*PN	P	21 29 09.7	-2.3
RPZ	Rata Peaks	6.13	213	P	P	21 29 15.3	-1.2
RPZ	Rata Peaks	6.13	213	*e*PN	P	21 29 15.1	-1.4
FOZ	Fox Glacier	6.67	221	*e*P	P	21 29 20.4	-3.1
FOZ	Fox Glacier	6.67	221	*e*PN	P	21 29 19.5	-4.0
ODZ	Otahua Downs	7.39	209	P	P	21 29 31.7	-1.3
ODZ	Otahua Downs	7.39	209	*e*PN	P	21 29 31.4	-1.6
WKZ	Wanaka	7.92	217	*e*P	P	21 29 35.0	-4.9
EAZ	Earnscleugh	8.10	214	*e*P	P	21 29 40.3	-1.9
EAZ	Earnscleugh	8.10	214	*e*PN	P	21 29 40.3	-2.0
TUZ	Tuapeka	8.55	210	*e*P	P	21 29 46.7	-1.4
QSPA	South Pole Qui	51.44	180	P	P	21 36 37.1	+3.6
VNA3	Neumayer Olymp	70.31	178	⇑*i*	P	21 38 44.0	+3.5
VNA2	Neumayer--Watz	70.67	179	⇑*i*	P	21 38 46.6	+3.9

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*NEIC **19** 22:26:24.5±2.3, 5.25S×152.78E, h76^{km}±20^{km}, mb4.2/7, Error ellipse: s-maj=17.4km s-min=14.2km az=76.0*

*IDC **19** 22:26:24.2±4.7, 5.31S×152.79E, h74^{km}±44^{km}, mb3.9/7, mb1 4.0/9, mb1mx3.9/15, mbtmp4.2/9, ML3.5/2, MS3.6/4, Ms1 3.6/4, ms1mx3.3/19, Error ellipse: s-maj=26.4km s-min=24.0km az=26.0*

ISC 19 22:26:21.4±3.4, **5.3S**±0.1×**152.8E**±0.1, **h59**^{km}±29^{km}, **n27, σ0^{s}.74**/27, **mb4.5**/16, **MS3.9**/2, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.96	233	P	P	22 28 03.0	-0.1
	3.0nm,0.3s,baz=42,slow=10,SNR=17						
PMG				S	S	22 29 20.4	-1.1
	11nm,0.3s,baz=77,slow=12,SNR=9.1						
PMG	Port Moresby	6.96	233	*e*Pn	P	22 28 02.7	-0.4
	27nm,0.7s						
PMG				*e*Sn	S	22 29 21.5	0.0
HNR	Honiara	8.20	121	LR	LR	22 30 15.6	
	comp=Z,130nm,18.7s,baz=107,slow=28						
CTA	Charters Tower	16.07	203	*e*P	P	22 30 06.9	+1.9
	2.8nm,0.9s						
CTA	Charters Tower	16.07	203	P	P	22 30 06.4	+1.4
	0.3nm,0.3s,baz=27,slow=13,SNR=7.3						
CTA				LR	LR	22 35 28.1	
	comp=Z,132nm,19.5s,baz=235,slow=34						
CTAO	Charters Tower	16.07	203	*e*P	P	22 30 06.6	+1.6
	2.6nm,0.7s						
DZM	Mont Dzumac	21.30	143	P	P	22 31 04.9	-0.2
	6.2nm,0.6s,mb4.1,baz=184,slow=23,SNR=12						
WB2	Warramunga Arr	23.15	229	*e*P	P	22 31 23.9	+0.4
WRA	Warramunga Arr	23.16	229	P	P	22 31 24.0	+0.4
	2.3nm,0.5s,mb3.9,baz=53,slow=10.0,SNR=13						
ASPA	Alice Springs	25.83	223	*e*P	P	22 31 49.4	+0.2
STKA	Stephens Creek	28.50	200	*e*P	P	22 32 13.0	-0.4
	2.9nm,0.9s,mb3.9						
STKA	Stephens Creek	28.50	200	P	P	22 32 12.3	-1.1
	1.7nm,0.5s,mb3.9,baz=12,slow=12,SNR=6.6						
STKA				LR	LR	22 44 37.1	
	comp=Z,140nm,18.2s,MS3.6,baz=24,slow=38						
FITZ	Fitzroy Crossi	29.46	242	*e*P	P	22 32 20.7	-1.4
	8.1nm,0.9s,mb4.5						
FITZ	Fitzroy Crossi	29.46	242	P	P	22 32 20.4	-1.7
	8.1nm,0.6s,mb4.6,baz=68,slow=6.8,SNR=7.1						
RPZ	Rata Peaks	41.55	160	LR	LR	22 49 15.9	
	comp=Z,282nm,20.6s,MS4.1,baz=268,slow=33						
SONM	Songino Array	66.71	328	P	P	22 37 08.4	0.0
	0.6nm,0.5s,mb3.9,baz=142,slow=5.8,SNR=9.2						
GUN	Gumba	72.36	301	*e*P	P	22 37 44.2	+0.9
	12nm,0.5s,mb5.1						
PKI	Pulchoki	72.67	301	*e*P	P	22 37 45.6	+0.4
	7.7nm,0.8s,mb4.7						
KKN	Kakani	72.84	301	*e*P	P	22 37 46.2	0.0
	11nm,0.8s,mb4.8						
DMN	Daman	72.94	301	*e*P	P	22 37 47.4	+0.6
	20nm,0.8s,mb5.1						
GKN	Gorkha	73.45	301	*e*P	P	22 37 50.2	+0.5
	17nm,0.9s,mb5.0						
BILL	Bilibino	73.74	5	*e*P	P	22 37 50.8	+0.2
	15nm,0.8s,mb5.0						
KOLN	Koldanda	74.27	301	*e*P	P	22 37 53.9	-0.7
	16nm,0.8s,mb5.0						
MKAR	Makanchi Array	80.67	319	P	P	22 38 30.4	+0.7
	1.4nm,0.7s,mb4.0,baz=98,slow=7.5,SNR=9.7						
ILAR	Eielson Array	82.57	22	P	P	22 38 37.9	-1.2
	0.9nm,0.8s,mb3.9,baz=260,slow=5.0,SNR=9.5						
QSPA	South Pole Qui	84.71	180	*e*P	P	22 38 49.7	+0.1
	5.2nm,1.0s,mb4.6						
CHKZ	Chkalovo	89.58	324	*e*P	P	22 39 12.8	-0.9
	1.5nm,0.6s,mb4.5						

MAN 19 22:48:41.0, 14.85N×120.24E, h5^{km}, mb3.6, ML2.3, MS1.9, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.97	341	*e*P	Pb	22 48 51.2	-8.7
SCZP				*e*S	Sb	22 49 02.0	-11
PCPH	Palayan	1.09	49	*e*P	Pb	22 49 01.3	-0.6
PCPH				*e*S	Sb	22 49 18.1	+1.9
LUBP	Lubang	1.11	180	*e*P	Pb	22 49 01.9	-0.4
BALP	Baler	1.56	55	*e*P	Pn	22 49 09.6	0.0
BALP				*e*S	Sb	22 49 32.9	+2.9
SJMP	San Jose	2.53	160	*e*P	Pn	22 49 26.4	+3.0
APYP	Conner	3.14	18	*e*P	Pn	22 49 32.0	-0.2
APYP				*e*S	Sn	22 50 15.4	+4.9

NNC 19 23:02:46.9±6.2, **37.07N×70.46E, h150**^{km}±165^{km}, **mpv2.9, 3C-1D, Error ellipse: s-maj=66.1km s-min=48.4km az=38.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.03	0	⇑Pn	P	23 04 15.0	+0.2
	0.6nm,0.5s,baz=193,slow=15,SNR=9.5						
KK31				⇓Sn	S	23 05 24.8	+1.6
	2.4nm,0.6s,baz=188,slow=23,SNR=14						
AAK	Ala-Archa	6.37	28	⇑Sn	S	23 05 30.6	-0.7
	1.3nm,0.5s						
AB31	Akbulak array	14.38	331	⇑P	P	23 06 03.2	-1.0
	0.3nm,0.5s,baz=155,slow=12,SNR=4.1						

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*ISK **19** 23:28:32.6, 37.13N×27.56E, h5^{km}, MD3.2*

*CSEM **19** 23:28:32.6±0.1, 37.11N×27.57E, h8^{km}, MD3.2, Error ellipse: s-maj=2.7km s-min=1.9km az=151.0*

*ATH **19** 23:28:33.2, 37.16N×27.58E, h31^{km}, MD3.2/3*

ISC 19 23:28:33.1±0.4, **37.14N**±0.03×**27.53E**±0.04, **h9**^{km}±4^{km}, **n18, σ0^{s}.88**/27, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.10	223	*i* P	Pg	23 28 36.3	+0.6
BDRM				*i* S	Sg	23 28 38.6	+1.1
BODT	Bodrum	0.20	246	*i* PG	Pg	23 28 37.3	0.0
BODT				*i* SG	Sg	23 28 41.2	+1.0
MLSB	Milas	0.25	52	*i* PG	Pg	23 28 38.1	-0.2
MLSB				*i* SG	Sg	23 28 41.8	0.0
DAT	Datca	0.41	175	PG	Pg	23 28 41.2	-0.3
DAT				SG	Sg	23 28 46.1	-1.1
AYDN	Tasoluk	0.59	28	*i* P	Pg	23 28 44.8	-0.1
AYDN				*i* S	Sg	23 28 53.1	+0.3
YER	Yerkesik	0.60	91	PG	Pg	23 28 43.9	-1.2
SMG	Samos	0.79	316	*e*PN	Pn	23 28 49.3	-0.9
DALT	Dalyan (Mudla)	0.96	113	PG	Pg	23 28 50.7	-1.6
ARG	Arkhangelos	1.04	153	*e*PN	Pn	23 28 53.0	-0.7
ARG				*e*SN	Sn	23 29 07.8	-0.6
KDAG	Bornova	1.28	351	*i* P	Pb	23 28 56.0	-0.8
KDAG				*i* S	Sb	23 29 12.2	-1.0
DNZL	Cakiroluk	1.32	65	*i* P	Pb	23 28 57.6	0.0
DNZL				*i* S	Sb	23 29 17.9	+3.4
DENT	Denizli	1.34	62	PN	Pn	23 28 58.6	+0.6
FETY	Fethiye	1.34	112	PN	Pn	23 28 58.4	+0.4
APE	Apeiranthos	1.60	268	*e*PN	Pn	23 29 02.0	+0.2
GOLH	Golhisar	1.62	86	*i* P	Pn	23 29 03.4	+1.4
GOLH				*i* S	Sn	23 29 25.4	+2.2
AKS	Akhisar	1.75	7	PN	Pn	23 29 03.7	-0.2
ELL	Elmali	1.94	101	PN	Pn	23 29 07.3	+0.7
BCK	Bucak	2.46	82	*e*PN	Pn	23 29 13.9	-0.1

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*IDC **19** 23:31:08.9±1.2, 36.48S×97.97W, mb4.4/10, mb1 4.6/10, mb1mx4.5/18, mbtmp4.5/10, MS4.3/17, Ms1 4.2/17, ms1mx4.2/21, Error ellipse: s-maj=35.7km s-min=18.7km az=32.0*

*MOS **19** 23:31:09.1±1.2, 36.40S×97.99W, h10^{km}, mb4.8/9, Error ellipse: s-maj=23.6km s-min=17.7km az=95.6*

*NEIC **19** 23:31:11.4±0.3, 36.32S×97.86W, h10^{km}, mb4.7/13, Error ellipse: s-maj=11.1km s-min=7.1km az=64.0*

ISC 19 23:31:09.6±0.4, **36.37S**±0.07×**97.9W**±0.1, **h10**^{km}, **n74, σ0^{s}.90**/45, **mb4.5**/21, **MS4.3**/16, **3C, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPN	Rapa Nui	13.40	310	LR	LR	23 37 54.8	
	comp=Z,2µm,20.4s,baz=81,slow=30						
PLCA	Paso Flores	21.77	110	P	P	23 36 03.5	+0.2
	22nm,1.1s,mb4.5,baz=283,slow=9.6,SNR=12						
PLCA				LR	LR	23 42 57.5	
	comp=Z,218nm,18.4s,MS3.6,baz=276,slow=32						
PLCA	Paso Flores	21.77	110	*e*P	P	23 36 04.4	+1.1
	47nm,1.3s,mb4.8						
PLCA	Paso Flores	21.77	110	*e*P	P	23 36 04.4	+1.1
PLCA				pmax	pmax		
	comp=Z,47nm,1.3s						
CFAA	Coronel Fontan	24.98	88	P	P	23 36 34.4	-0.3
	comp=Z,2.3nm,0.9s,mb3.7,baz=254,slow=8.4,SNR=21						
CFAA				LR	LR	23 43 01.8	
	comp=Z,29nm,20.1s,baz=255,slow=28						
USHA	Ushuaia	27.35	142	P	P	23 36 54.7	-1.8
	comp=Z,14nm,0.9s,mb4.5,baz=252,slow=3.2,SNR=3.2						
USHA				LR	LR	23 45 10.7	
	comp=Z,1µm,19.9s,MS4.5,baz=239,slow=31						
LPAZ	La Paz	33.11	61	P	P	23 37 48.9	+0.9
	comp=Z,13nm,0.8s,mb4.9,baz=220,slow=7.3,SNR=50						
LPAZ				LR	LR	23 48 13.2	
	comp=Z,143nm,18.9s,MS3.7,baz=45,slow=31						
LPAZ	La Paz	33.11	61	*e*P	P	23 37 49.0	+1.0
	comp=Z,21nm,0.9s,mb5.1						
LPAZ	La Paz	33.11	61	*e*P	P	23 37 49.0	+1.0
LPAZ				pmax	pmax		
	comp=Z,21nm,0.9s						
RKT	Rikitea	34.60	282	*e*LQ		23 45 27.5	
RKT				*e*LR	LR	23 46 55.0	
	comp=Z,458nm,28.0s						
CPUP	Villa Florida	35.82	85	*e*P	P	23 38 10.3	-0.8
	comp=Z,14nm,1.0s,mb4.8						
CPUP	Villa Florida	35.82	85	*e*P	P	23 38 10.4	-0.8
CPUP				pmax	pmax		
	comp=Z,14nm,1.0s						
SIV	San Ignacio	38.44	68	P	P	23 38 33.1	-0.2
	comp=Z,3.0nm,0.7s,mb4.1,baz=236,slow=11,SNR=16						
SAML	Samuel	41.67	58	*e*P	P	23 38 59.8	-0.3
	comp=Z,45nm,1.6s,mb4.8						
TBI	Tubuai	46.09	272	*e*LR	LR	23 52 15.7	
	comp=Z,206nm,26.5s						
ROSC	El Rosal	46.55	33	P	P	23 39 39.8	+0.4
	comp=Z,4.5nm,0.6s,mb4.6,baz=260,slow=22,SNR=9.5						
ROSC				LR	LR	23 56 12.2	
	comp=Z,387nm,19.2s,MS4.4,baz=23,slow=32						
BDFB	Brasilia	48.74	78	P	P	23 39 56.0	-0.5
	comp=Z,7.0nm,1.0s,mb4.7,baz=251,slow=7.9,SNR=6.8						
BDFB				LR	LR	23 59 21.8	
	comp=Z,328nm,18.1s,MS4.4,baz=246,slow=35						
PPT	Papeete	49.13	278	*e*LR	LR	23 53 38.9	
	comp=Z,283nm,22.2s						
PPT	Papeete	49.13	278	LR	LR	23 54 43.1	
	comp=Z,336nm,20.0s,MS4.3,baz=219,slow=29						
QSPA	South Pole Qui	53.85	180	*e*P	P	23 40 34.7	+0.3
	comp=Z,7.4nm,1.1s,mb4.5						
VNA3	Neumayer Olymp	55.48	157	⇑*i*	P	23 40 47.4	+1.1
VNA1	Neumayer--Stat	56.05	156	⇑*i*	P	23 40 52.0	+1.5
VNA2	Neumayer--Watz	56.27	157	⇑*i*	P	23 40 53.2	+1.2
VNDA	Vanda	56.98	195	P	P	23 40 55.3	-1.8
	comp=Z,5.5nm,1.3s,mb4.4						
VNDA	Vanda	56.98	195	P	P	23 40 55.3	-1.8
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SNAA	Sanae	57.48	158		P	23 40 59.7	-1.0
TXAR	Lajitas Array	65.58	354	P	P	23 41 54.2	-1.5
	comp=Z,1.6nm,1.0s,mb4.0,baz=164,slow=9.1,SNR=8.0						
TXAR				LR	LR	00 04 22.1	
	comp=Z,124nm,19.4s,MS4.1,baz=195,slow=30						
TXAR	Lajitas Array	65.58	354	P	P	23 41 54.2	-1.5
TXAR				LR	LR	00 04 22.1	
AMTX	Amarillo	70.97	357	*e*P	P	23 42 28.5	-0.8
	comp=Z,10nm,0.8s,mb4.8						
ANMO	Albuquerque	71.40	353	LR	LR	00 08 24.2	
	comp=Z,113nm,20.9s,MS4.1,slow=31						
CCM	Cathedral Cave	74.30	5	*e*P	P	23 42 47.3	-1.5
	comp=Z,48nm,1.5s,mb5.2						
CCM	Cathedral Cave	74.30	5	*e*P	P	23 42 47.3	-1.5
CCM				pmax	pmax		
	comp=Z,48nm,1.5s,mb5.2						
PV01	Paradox Valley	74.78	351	*e*P	P	23 42 52.0	+0.4
TPNV	Topopah Spring	74.91	345	*e*P	P	23 42 51.2	-1.1
	comp=Z,9.0nm,1.4s,mb4.5						
TPNV	Topopah Spring	74.91	345	*e*P	P	23 42 51.3	-1.1
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
MAW	Mawson	75.33	172	LR	LR	00 15 09.7	
	comp=Z,147nm,18.5s,MS4.3,baz=56,slow=35						
MTUM	Tungsten Hills	75.81	343	*e*P	P	23 42 57.3	-0.2
MNV	Mina	76.75	344	*e*P	P	23 43 02.9	+0.2
	comp=Z,4.2nm,0.9s,mb4.4						
MNV	Mina	76.75	344	*e*P	P	23 43 02.9	+0.2
MNV				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
NVAR	Mina Array Bea	76.78	344	P	P	23 43 03.3	+0.4
	comp=Z,4.4nm,1.0s,mb4.4,baz=160,slow=6.7,SNR=21						
NVAR				LR	LR	00 09 00.1	
	comp=Z,187nm,20.3s,MS4.4,baz=160,slow=30						
DAU	Daniels Canyon	77.39	350	*e*P	P	23 43 06.6	+0.4
ELK	Elko	78.37	347	*e*P	P	23 43 11.7	+0.1
	comp=Z,3.8nm,1.1s,mb4.2						
ELK	Elko	78.37	347	*e*P	P	23 43 11.7	+0.1
ELK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
OHCM	Honcut	78.41	342	*e*P	P	23 43 11.8	-0.1
KIPM	Iron Peak	79.38	340	*e*P	P	23 43 17.1	-0.1
PDAR	Pinedale Array	79.47	351	P	P	23 43 17.3	-0.3
	comp=Z,2.2nm,0.5s,mb4.3,baz=158,slow=6.8,SNR=15						
WVOR	Wild Horse Val	80.68	345	*e*P	P	23 43 24.2	+0.1
	comp=Z,9.8nm,1.3s,mb4.6						
WVOR	Wild Horse Val	80.68	345	*e*P	P	23 43 24.2	+0.1
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
HLID	Hailey	80.96	348	*e*P	P	23 43 25.9	+0.4
	comp=Z,6.5nm,0.9s,mb4.6						
QLMT	Earthquake Lak	81.75	350	*e*P	P	23 43 31.1	+1.6
MCMT	McKenzie Canyo	81.94	349	*e*P	P	23 43 31.9	+1.3
SADO	Sadowa	82.52	13	LR	LR	00 18 26.4	
	comp=Z,111nm,18.7s,MS4.2,baz=79,slow=34						
FFD	Franklin Falls	82.96	19	P	P	23 43 36.8	+0.9
	comp=Z,61nm,0.3s						
NEW	Newport	85.99	347	LR	LR	00 18 06.9	
	comp=Z,220nm,19.4s,MS4.6,baz=32,slow=33						
STKA	Stephens Creek	92.21	227	LR	LR	00 16 36.9	
	comp=Z,258nm,21.1s,MS4.7,baz=205,slow=30						
SCHQ	Schefferville	94.67	17	LR	LR	00 22 13.6	
	comp=Z,131nm,21.4s,MS4.4,baz=61,slow=32						
BOSA	Boshof	96.12	132	LR	LR	00 21 11.1	
	comp=Z,104nm,19.3s,MS4.3,baz=237,slow=31						
YKA	Yellowknife Ar	99.44	352	LR	LR	00 26 06.2	
	comp=Z,123nm,20.4s,MS4.4,baz=225,slow=33						
GRA1	Grafenberg Arr	128.34	51	*e*PKP	PKPdf	23 50 18.2	-1.1
GRF	Grafenberg Arr	128.34	51	*e*PKP	PKPdf	23 50 18.2	-1.1
GERES	GERESS Array B	129.74	53	PKP	PKPdf	23 50 20.1	-1.9
	comp=Z,0.8nm,0.8s,baz=214,slow=4.8,SNR=3.7						
OBN	Obninsk	143.89	44	*e*PKIKP	PKPdf	23 50 42.8	-4.6
OBN				pmax	pmax		
	comp=Z,15nm,0.8s						
MSL	Mosul	148.69	78	*e*x	x	23 51 01.5	
BHD	Baghdad	148.99	84	*e*x	x	23 51 02.0	
KIV	Kislovodsk	149.15	63	*e*PKP2	PKPab	23 50 58.8	-5.6
KIV				pmax	pmax		
	comp=Z,12nm,1.6s						
GOF	Gofitskoye	149.37	61	*e*PKP2	PKPab	23 51 00.3	-4.9
BOD	Bodaibo	149.94	326	*e*PKIKP	PKPdf	23 50 53.6	-3.8
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NAY	Al-Naaiem	149.95	94	*e*P	PKPdf	23 51 01.1	+2.8
NAY				AMb	AMB	23 51 03.5	
	comp=Z,17nm,1.1s						
RDF	Al-Radifah	150.07	94	*e*P	PKPdf	23 51 01.6	+3.1
RDF				AMb	AMB	23 51 03.9	
	comp=Z,28nm,0.9s						
MIB	Mutribah	150.24	93	*e*P	PKPdf	23 51 02.3	+3.5
MIB				AMb	AMB	23 51 14.3	
	comp=Z,28nm,0.8s						
UMR	Umm Al-Rimmam	150.45	93	*e*P	PKPdf	23 51 02.6	+3.5
UMR				AMb	AMB	23 51 09.5	
	comp=Z,44nm,0.6s						
SONM	Songino Array	158.75	310	PKPab	PKPab	23 51 42.7	-2.1
	comp=Z,1.8nm,1.0s,baz=53,slow=3.1,SNR=8.2						
ZAK	Zakamensk	159.30	319	*e*PKP2	PKPab	23 51 45.3	-1.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MKAR	Makanchi Array	169.58	359	PKPab	PKPab	23 52 33.8	+1.8
	comp=Z,3.9nm,1.1s,baz=349,slow=6.2,SNR=6.4						

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*ISK **20** 00:35:54.6, 38.14N×27.09E, h25^{km}, MD2.8*

*ATH **20** 00:35:54.6, 38.09N×27.37E, h4^{km}, MD3.0/3*

*CSEM **20** 00:35:55.5±0.2, 38.09N×27.32E, h5^{km}, MD2.8, Error ellipse: s-maj=6.0km s-min=3.2km az=116.0*

ISC 20 00:35:55.5±0.6, **38.11N**±0.02×**27.25E**±0.04, **h1**^{km}±7^{km}, **n14, σ0^{s}.90**/22, **1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IZM	Izmir	0.28	3	*i* PG	Pg	00 36 01.8	+0.6
KDAG	Bornova	0.29	3	*i* P	Pg	00 36 01.1	-0.2
KDAG				*i* S	Sg	00 36 05.2	0.0
SMG	Samos	0.52	219	⇑*i*PG	Pg	00 36 05.4	-0.5
SMG				*e*SG	Sg	00 36 13.3	+0.6
URLA	Izmir	0.57	296	*i* P	Pg	00 36 05.8	-1.1
URLA				*i* S	Sg	00 36 14.0	-0.5
AYDN	Tasoluk	0.68	132	*i* P	Pg	00 36 09.2	+0.2
AYDN				*i* S	Sg	00 36 19.3	+1.2
AKS	Akhisar	0.89	30	*i* PG	Pg	00 36 13.1	-0.1
AKS				*i* SG	Sg	00 36 25.5	+0.5
MLSB	Milas	0.92	153	*e*PG	Pg	00 36 13.2	-0.7
BODT	Bodrum	1.05	177	*e*PN	Pn	00 36 14.2	-3.1
BDRM	Kayabasi	1.06	171	*i* P	Pb	00 36 15.4	-1.0
BDRM				*i* S	Sb	00 36 32.1	+1.6
MANT	Manisa	1.10	70	*i* P	Pb	00 36 17.6	+0.6
MANT				*i* S	Sb	00 36 30.2	-1.5
AYVA	Ayvalik	1.27	340	*i* P	Pb	00 36 21.0	+1.0
AYVA				*i* S	Sb	00 36 37.5	+0.8
YER	Yerkesik	1.28	140	*e*PN	Pn	00 36 19.5	-1.0
PRK	Paraskevi	1.36	326	*e*PB	Pb	00 36 21.6	0.0
APE	Apeiranthos	1.71	233	*e*PB	Pb	00 36 28.3	+0.7

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*NEIC **20** 00:43:49.7, 42.68S×172.89E, h42^{km}, ML3.9(WEL), After WEL.*

NEIC Felt in Marlborough Sounds.

WEL 20 00:43:49.9±0.2, **42.68S×172.91E, h33**^{km}, **ML4.0**/26, **4C-1D, Error ellipse: s-maj=2.2km s-min=1.3km az=90.0, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LTZ	Lake Taylor	0.48	257	⇑PN	Pn	00 44 00.4	+0.1
LTZ				SN	Sn	00 44 07.6	0.0
KHZ	Kahutara	0.54	61	⇑P	P	00 44 01.0	+0.1
KHZ				S	S	00 44 09.8	+0.9
KHZ	Kahutara	0.54	61	⇓PN	Pn	00 44 01.0	-0.2
KHZ				*e*SN	Sn	00 44 09.5	+0.4
THZ	Tophouse	0.92	360	P	P	00 44 05.4	-1.0
THZ	Tophouse	0.92	360	PN	Pn	00 44 05.4	-1.2
THZ				SN	Sn	00 44 16.7	-2.0
CRLZ	Canterbury Las	0.92	193	P	P	00 44 06.0	-0.4
CRLZ				S	S	00 44 18.2	-0.5
CRLZ	Canterbury Las	0.92	193	PN	Pn	00 44 06.0	-0.6
CRLZ				SN	Sn	00 44 18.2	-0.6
MQZ	McQueen's Vall	1.04	190	P	P	00 44 07.4	-0.8
MQZ				S	S	00 44 20.4	-1.4
MQZ	McQueen's Vall	1.04	190	PN	Pn	00 44 07.4	-1.1
MQZ				SN	Sn	00 44 20.4	-1.5
BSWZ	Blackbirch Sta	1.20	37	P	P	00 44 10.0	-0.5
BSWZ	Blackbirch Sta	1.20	37	PN	Pn	00 44 10.0	-0.8
BSWZ				*e*SN	Sn	00 44 23.6	-2.4
DSZ	Denniston Nort	1.24	318	P	P	00 44 09.9	-1.1
DSZ	Denniston Nort	1.24	318	PN	Pn	00 44 09.9	-1.3
DSZ				SN	Sn	00 44 24.1	-2.9
TUWZ	Tuamarina	1.47	32	PN	Pn	00 44 13.2	-1.2
NNZ	Nelson	1.50	14	P	P	00 44 14.3	-0.5
NNZ	Nelson	1.50	14	PN	Pn	00 44 14.3	-0.6
WVZ	Waitaha Valley	1.64	255	*e*P	P	00 44 16.3	-0.5
WVZ				S	S	00 44 34.9	-2.1
WVZ	Waitaha Valley	1.64	255	*e*PN	Pn	00 44 16.1	-0.9
WVZ				SN	Sn	00 44 34.8	-2.4
RPZ	Rata Peaks	1.71	232	PN	Pn	00 44 16.4	-1.5
RPZ				SN	Sn	00 44 36.1	-2.6
TCW	Tory Channel	1.79	35	PN	Pn	00 44 17.3	-1.8
TCW				SN	Sn	00 44 38.0	-2.8
QRZ	Quartz Range	1.87	351	PN	Pn	00 44 18.8	-1.5
QRZ				SN	Sn	00 44 39.3	-3.7
SNZO	South Karori	1.92	45	*e*P	P	00 44 18.9	-1.9
SNZO	South Karori	1.92	45	PN	Pn	00 44 18.9	-2.0
SNZO				SN	Sn	00 44 40.9	-3.2
BHW	Baring Head	1.94	50	⇑PN	Pn	00 44 19.0	-2.2
BHW				SN	Sn	00 44 41.3	-3.3
MRW	Makara Radio	1.97	43	⇑PN	Pn	00 44 19.6	-2.1
DUWZ	D'Urville Isla	2.02	22	PN	Pn	00 44 21.5	-0.9
MSWZ	Moikau Station	2.15	55	PN	Pn	00 44 21.7	-2.7
CAW	Cannon Point	2.25	47	PN	Pn	00 44 23.2	-2.5
KIW	Kapiti Island	2.35	40	PN	Pn	00 44 24.9	-2.3
TRWZ	Traveller	2.44	59	PN	Pn	00 44 25.5	-2.8
MTW	Mount Morrison	2.46	53	PN	Pn	00 44 25.9	-2.8
FOZ	Fox Glacier	2.52	248	*e*P	P	00 44 27.4	-1.9
FOZ	Fox Glacier	2.52	248	*e*PN	Pn	00 44 27.0	-2.5
LBZ	Lake Benmore	2.61	228	P	P	00 44 28.6	-2.1
LBZ	Lake Benmore	2.61	228	PN	Pn	00 44 28.6	-2.2
LBZ				SN	Sn	00 44 57.3	-4.5
ODZ	Otahua Downs	2.88	214	P	P	00 44 32.1	-2.3
ODZ	Otahua Downs	2.88	214	PN	Pn	00 44 32.1	-2.6
WAZ	Wanganui	3.31	29	*e*PN	Pn	00 44 36.7	-4.1
NRZ	Ngariki Road	3.43	13	*e*PN	Pn	00 44 41.6	-0.8
TSZ	Takapari Road	3.48	42	PN	Pn	00 44 39.2	-4.0
WKZ	Wanaka	3.54	231	PN	Pn	00 44 40.9	-3.2
PKE	Pukeiti	3.58	14	*e*PN	Pn	00 44 42.7	-1.8
EAZ	Earnscleugh	3.64	224	*e*PN	Pn	00 44 42.5	-2.9
VRZ	Vera Road	3.82	22	*e*PN	Pn	00 44 45.9	-2.1
MOVZ	Moawhango	3.91	34	PN	Pn	00 44 46.7	-2.6
TRVZ	Turoa	3.92	32	PN	Pn	00 44 47.0	-2.5
TUZ	Tuapeka	4.03	215	PN	Pn	00 44 47.8	-3.2
MLZ	Mavora Lakes	4.33	230	*e*P	P	00 44 52.3	-2.9
WHZ	Wether Hill Ro	4.79	226	*e*P	P	00 44 57.1	-4.6
OUZ	Omahuta	7.47	4	*e*P	P	00 45 36.7	-2.5
OUZ	Omahuta	7.47	4	PN	Pn	00 45 36.5	-2.9

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*NIED **20** 01:03:00, 40.00N×143.60E, h14^{km}, Mw4.1 Best double couple: M$_0$1.72×10^{15} NP1:φ$_s$37°, δ65°, λ111°. NP2:φ$_s$175°, δ32°, λ52°.*

*BJI **20** 01:03:32.3, 40.28N×143.48E, h17^{km}, mB4.6, mb4.3, Ms4.1, Msz3.9*

*MOS **20** 01:03:32.7±0.7, 39.95N×143.66E, h33^{km}, mb4.6/7, Error ellipse: s-maj=14.0km s-min=10.0km az=100.4*

*JMA **20** 01:03:32.5±0.2, 40.01N×143.55E, h21^{km}, M4.1*

*NEIC **20** 01:03:35.0±4.7, 39.96N×143.65E, h34^{km}±35^{km}, mb4.5/6, MW4.1(NIED), Error ellipse: s-maj=15.5km s-min=13.1km az=191.0*

*IDC **20** 01:03:35.8±3.8, 39.96N×143.62E, h39^{km}±32^{km}, mb3.6/10, mb1 3.7/12, mb1mx3.7/22, mbtmp3.8/12, ML3.4/2, MS3.1/4, Ms1 3.1/4, ms1mx3.0/24, Error ellipse: s-maj=23.9km s-min=20.3km az=106.0*

ISC 20 01:03:33.1±0.5, **39.99N**±0.03×**143.62E**±0.05, **h33**^{km}, **n67, σ0^{s}.75**/62, **mb4.0**/19, **MS3.9**/1, **4C, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.35	269	P	P	01 03 55.6	-0.2
MIYJ	Miyakonagasawa	1.45	254	P	P	01 03 57.4	+0.2
MIYJ				*e*S	S	01 04 16.1	+0.9
JANG	Nango	1.66	284	P	P	01 04 00.2	0.0
JANG				*e*S	S	01 04 20.1	-0.4
JOM	Ohasama	1.87	255	P	P	01 04 04.0	+0.8
JEM	Erimo	2.06	350	P	P	01 04 06.5	+0.6
JEM				*e*S	S	01 04 31.1	+0.5
JTM	Tenmabayashi	2.11	293	P	P	01 04 07.3	+0.7
JMK	Ichinoseki	2.13	242	P	P	01 04 07.0	+0.1
JMK				*e*S	S	01 04 32.9	+0.5
JNBK	Urakawa-nobuka	2.38	344	P	P	01 04 12.0	+1.4

JOT	Ohata	2.40	306	eS	S	01 04 38.9	-0.5
JCH	Churui	2.63	356	P	P	01 04 14.4	+0.3
JCH				eS	S	01 04 45.2	-0.1
JKB	Kayabe	2.73	315	eS	S	01 04 46.5	-1.2
JYK	Kaneyama	2.74	248	P	P	01 04 16.2	+0.5
JMM	Marumori	3.06	227	P	P	01 04 18.8	-1.4
JMM				eS	S	01 04 53.9	-2.1
JAK	Akkeshi	3.11	15	P	P	01 04 20.6	-0.4
JAK				S	S	01 04 55.8	-1.7
ASAJ	Asahikawa	4.20	350	Pn	Pn	01 04 37.5	+1.0
	1.5nm,0.3s,baz=26,slow=32,SNR=9.5						
ASAJ				Sn	Sn	01 05 24.4	-0.7
	2.2nm,0.3s,baz=0.6,slow=29,SNR=2.8						
ASAJ				LR	LR	01 06 56.4	
	comp=Z,189nm,18.7s,baz=3.9,slow=48						
ASAJ	Asahikawa	4.20	350	P	Pn	01 04 37.5	+1.0
ASAJ						01 05 24.4	
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,189nm,18.7s						
MJAR	Matsushiro Arr	5.47	233	Pn	Pn	01 04 54.4	-0.1
	comp=Z,1.3nm,0.3s,baz=35,slow=12,SNR=20						
MJAR				LR	LR	01 06 58.8	
	comp=Z,189nm,20.0s,baz=60,slow=37						
MAJO	Matsushiro	5.47	233	eP	P	01 04 54.0	-0.3
	comp=Z,25nm,0.6s						
MAJO	Matsushiro	5.47	233	eP	P	01 04 54.0	-0.4
MAJO				pmax	pmax		
	comp=Z,25nm,0.6s						
MAT	Matsushiro	5.47	233	P	P	01 04 54.4	0.0
MAT	Matsushiro	5.47	233	eP	P	01 04 54.0	-0.4
	comp=Z,20nm,1.0s						
MAT				eS	S	01 06 24.0	+27
MAT	Matsushiro	5.47	233	eP	P	01 04 54.0	-0.4
MAT				pmax	pmax		
	comp=Z,20nm,1.0s						
JHJ	Hachijo jima 2	7.51	205	LR	LR	01 08 41.4	
	comp=Z,62nm,19.3s,baz=66,slow=41						
JNU	Nakatsue	12.32	240	LR	LR	01 11 26.2	
	comp=Z,208nm,18.6s,baz=58,slow=38						
YAK	Yakutsk	23.65	344	eP	P	01 08 41.3	-0.5
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.2						
BOD	Bodaibo	26.08	323	eP	P	01 09 04.2	-1.0
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb3.9						
ULN	Ulaanbaatar	27.29	299	eP	P	01 09 16.3	0.0
	comp=Z,9.7nm,1.1s,mb4.2						
ULN	Ulaanbaatar	27.29	299	eP	P	01 09 16.3	0.0
ULN				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.3						
SONM	Songino Array	27.73	299	P	P	01 09 21.1	+0.8
	comp=Z,2.7nm,0.7s,mb4.0,baz=89,slow=8.9,SNR=23						
ZAK	Zakamensk	29.93	304	eP	P	01 09 40.2	+0.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
GTA	Gaotai	33.46	283	eP	P	01 10 11.8	+0.8
GTA				AP	pP	01 10 19.9	-0.8
GTA				XP	sP	01 10 24.8	-0.2
GTA				PP	PP	01 11 19.4	-4.1
GTA				S	S	01 15 22.8	-6.5
GTA				XS		01 15 39.5	
GTA				AMB	AMB		
	comp=Z,60nm,5.7s						
GTA				LR	LR		
	comp=N,100nm,14.8s,MS3.9						
GTA				LR	LR		
	comp=E,150nm,13.3s,MS3.9						
GTA				LR	LR		
	comp=Z,190nm,15.6s,MS3.9						
NVS	Novosibirsk	42.12	311	eP	P	01 11 23.7	+0.3
MKAR	Makanchi Array	44.08	300	P	P	01 11 40.0	+0.5
	comp=Z,0.8nm,0.7s,mb3.6,baz=90,slow=8.5,SNR=3.8						
KURK	Kurchatov	45.53	306	eP	P	01 11 51.4	+0.3
	comp=Z,12nm,0.9s,mb4.8						
KURK	Kurchatov	45.53	306	eP	P	01 11 51.4	+0.3
KURK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
ILAR	Eielson Array	46.08	34	P	P	01 11 56.3	+1.1
	comp=Z,0.3nm,0.8s,mb3.3,baz=248,slow=7.2,SNR=3.9						
CHKZ	Chkalovo	49.60	312	eP	P	01 12 22.7	-0.1
	comp=Z,3.3nm,0.8s,mb4.4						
CHKZ	Chkalovo	49.60	312	eP	P	01 12 22.7	-0.1
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
BVAR	Borovoye Array	49.91	311	P	P	01 12 24.8	-0.4
	comp=Z,0.9nm,0.7s,mb3.9,baz=85,slow=16,SNR=4.2						
INK	Inuvik	50.97	28	P	P	01 12 32.1	-0.9
	comp=Z,0.6nm,0.5s,mb3.8						
INK	Inuvik	50.97	28	P	P	01 12 32.1	-1.0
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTK	Aktyubinsk	58.01	311	P	P	01 13 24.5	-0.2
AKTO	Aktyubinsk	58.01	311	P	P	01 13 24.5	-0.2
	comp=Z,2.0nm,0.8s,mb4.2,baz=61,slow=9.7,SNR=7.5						
WRA	Warramunga Arr	60.24	190	P	P	01 13 39.8	-0.8
	comp=Z,0.6nm,0.5s,mb3.9,baz=6.6,slow=7.0,SNR=2.2						
FINES	FINESS Array B	67.01	332	P	P	01 14 24.5	+0.3
	comp=Z,1.0nm,0.6s,mb4.0,baz=76,slow=7.9,SNR=6.3						
KIV	Kislovodsk	70.28	311	eP	P	01 14 46.1	+1.3
	comp=Z,9.5nm,0.9s,mb4.7						
KIV	Kislovodsk	70.28	311	eP	P	01 14 46.1	+1.4
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
NVAR	Mina Array Bea	71.86	55	P	P	01 14 54.6	+0.3
	comp=Z,0.1nm,0.4s,mb3.1,baz=304,slow=3.3,SNR=2.4						
NB2	NORSAR Subarra	72.12	338	P	P	01 14 56.0	+0.5
	comp=Z,4.1nm,1.1s,mb4.3,baz=36,slow=6.2						
NOA	NORSAR Array B	72.12	338	P	P	01 14 56.6	+1.2
	comp=Z,1.6nm,0.8s,mb4.0,baz=36,slow=6.0,SNR=5.3						
NAO	NORSAR Subarra	72.41	338	P	P	01 14 56.0	-1.2
	comp=Z,4.1nm,1.1s,mb4.3						
NAO	NORSAR Subarra	72.41	338	P	P	01 14 56.0	-1.2
NAO				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
AKASG	Malin Array Be	73.01	323	P	P	01 15 00.8	-0.1
	comp=Z,0.9nm,0.9s,mb3.7,baz=41,slow=6.0,SNR=4.6						
AKASG	Malin Array Be	73.01	323	P	P	01 15 00.8	-0.1
KHC	Kasperske Hory	80.91	329	eP	P	01 15 55.0	+10
SNAA	Sanae	144.07	197	⇑i	PKPbc	01 22 58.4	-4.8
SNAA	Sanae	144.07	197	e	PKPbc	01 23 13.7	+10
SNAA	Sanae	144.07	197	e	PKPbc	01 23 28.1	+25
VNA2	Neumayer--Watz	145.63	196	⇑i	PKPdf	01 23 05.5	-1.2
VNA2	Neumayer--Watz	145.63	196	e	PKPdf	01 23 19.0	+12
VNA2	Neumayer--Watz	145.63	196	e	PKPdf	01 23 33.8	+27
VNA3	Neumayer Olymp	145.86	195	⇑i	PKPdf	01 22 59.8	-7.3
VNA3	Neumayer Olymp	145.86	195	e	PKPdf	01 23 14.2	+7.1
VNA3	Neumayer Olymp	145.86	195	e	PKPdf	01 23 29.4	+22
VNA1	Neumayer--Stat	146.03	196	⇑i	PKPdf	01 23 08.0	+0.6
VNA1	Neumayer--Stat	146.03	196	e	PKPdf	01 23 22.0	+15
VNA1	Neumayer--Stat	146.03	196	e	PKPdf	01 23 36.4	+29

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*BJI **20** 01:06:38.9, 2.03N×128.77E, h140^{km}, mB5.0, mb4.7*

*IDC **20** 01:06:42.3±1.7, 2.34N×128.33E, h124^{km}±14^{km}, mb4.2/19, mb1 4.3/20, mb1mx4.3/21, mbtmp4.6/20, MS3.3/2, Ms1 3.3/2, ms1mx2.7/21, Error ellipse: s-maj=20.1km s-min=9.0km az=78.0*

*MOS **20** 01:06:43.7±1.2, 2.46N×128.44E, h153^{km}, mb4.9/16, Error ellipse: s-maj=15.8km s-min=7.5km az=113.5*

*NEIC **20** 01:06:43.9±1.4, 2.39N×128.49E, h141^{km}±13^{km}, mb4.8/20, Error ellipse: s-maj=9.3km s-min=5.3km az=73.0*

ISC 20 01:06:42.6±1.1**, 2.42N**±0.04×**128.52E**±0.07**, h142**^{km}±10^{km}**, h148**^{km}±8.9^{km}**:pP-P, n108, σ1§02**/109**, mb4.6**/52**, 6C-1D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	Kidapawan	5.70	323	⇑eP	P	01 08 05.6	-0.5
KKM	Kota Kinabalu	12.79	287	eP	P	01 09 41.5	+1.3
TGY	Tagaytay City	13.81	328	P	P	01 09 52.5	-0.9
	baz=94,slow=20,SNR=4.7						
KAKA	Kakadu	15.53	166	eP	Px	01 10 36.0	
	6.0nm,0.6s						
KSM	Kuching	18.22	267	eP	P	01 10 46.5	-1.1
FITZ	Fitzroy Crossi	20.59	188	eP	P	01 11 10.5	-1.6
	3.8nm,0.6s						
FITZ	Fitzroy Crossi	20.59	188	P	P	01 11 10.4	-1.6
	6.5nm,0.8s,baz=14,slow=13,SNR=10						
FITZ				LR	LR	01 20 06.9	
	comp=Z,120nm,18.3s,baz=30,slow=39						
PMG	Port Moresby	21.98	123	P	P	01 11 27.9	+2.1
	5.6nm,0.8s,mb4.0,baz=264,slow=9.5,SNR=2.9						
PMG				LR	LR	01 19 58.9	
	comp=Z,53nm,20.4s,baz=35,slow=36						
WRAB	Tennant Creek	22.94	166	eP	P	01 11 36.5	+1.2
	18nm,0.6s,mb4.7						
WRAB	Tennant Creek	22.94	166	eP	P	01 11 36.5	+1.3
WRAB				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.7						
WRA	Warramunga Arr	22.95	166	P	P	01 11 36.5	+1.2
	comp=Z,16nm,0.7s,mb4.6,baz=346,slow=10,SNR=95						
WRA				S	S	01 15 35.8	+4.7
	comp=Z,3.5nm,0.8s,baz=344,slow=18,SNR=6.6						
WRA				ScP		01 18 48.2	
	comp=Z,2.3nm,0.8s,baz=335,slow=2.9,SNR=13						
WB2	Warramunga Arr	22.95	166	eP	P	01 11 36.2	+0.9
CTA	Charters Tower	28.34	143	P	P	01 12 30.3	+4.8
	comp=Z,2.1nm,0.5s,mb4.1,baz=312,slow=10.0,SNR=7.1						
JNU	Nakatsue	30.62	4	P	P	01 12 45.0	-0.6
	comp=Z,15nm,0.8s,mb4.7,baz=161,slow=17,SNR=6.2						
ENH	Enshi	33.05	329	eP	P	01 13 06.9	+0.2
	comp=Z,16nm,0.9s,mb4.7						
KMI	Kunming	33.56	315	P	P	01 13 12.5	+1.4
KMI				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
KMI	Kunming	33.56	315	P	P	01 13 12.5	+1.4
	comp=Z,24nm,0.8s,mb5.0						
MJAR	Matsushiro Arr	35.11	14	P	P	01 13 23.2	-1.0
	comp=Z,7.8nm,0.5s,mb4.6,baz=184,slow=9.1,SNR=28						
MJAR	Matsushiro Arr	35.11	14	P	P	01 13 23.2	-1.0
MAJO	Matsushiro	35.11	14	eP	P	01 13 23.1	-1.1
	comp=Z,25nm,1.0s,mb4.8						
MAJO	Matsushiro	35.11	14	eP	P	01 13 23.1	-1.1
MAJO				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.8						
MAT	Matsushiro	35.11	14	P	P	01 13 23.2	-1.0
MAT	Matsushiro	35.11	14	eP	P	01 13 23.0	-1.2
	comp=Z,21nm,1.0s,mb4.7						
MAT	Matsushiro	35.11	14	eP	P	01 13 23.0	-1.2
MAT				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.7						
KLBR	Kellerberrin	35.34	196	eP	P	01 13 24.5	-1.6
	comp=Z,12nm,0.8s,mb4.6						
MUN	Mundaring	36.15	198	eP	P	01 13 31.5	-1.5
STKA	Stephens Creek	36.30	161	eP	P	01 13 34.5	+0.3
	comp=Z,4.0nm,0.4s,mb4.4						
STKA	Stephens Creek	36.30	161	P	P	01 13 34.0	-0.2
	comp=Z,5.1nm,0.6s,mb4.4,baz=332,slow=8.3,SNR=24						
STKA				S	S	01 19 01.9	-1.9
	comp=Z,1.6nm,1.0s,baz=228,slow=22,SNR=2.1						
STKA				ScP		01 19 31.6	
	comp=Z,1.0nm,0.6s,baz=21,slow=12,SNR=2.9						
XAN	Xi’an	36.39	332	P	P	01 13 34.6	-0.4
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
NWAO	Narrogin (SRO)	36.74	196	P	P	01 13 35.9	-2.1
	comp=Z,14nm,1.1s,mb4.5,baz=6.0,slow=16,SNR=3.9						
NWAO	Narrogin (SRO)	36.74	196	eP	P	01 13 35.7	-2.2
CD2	Chengdu	36.75	323	P	P	01 13 38.0	0.0
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
LZH	Lanzhou	40.53	329	⇑P	P	01 14 11.0	+1.6
LZH				PP	PP	01 15 50.5	+2.7
LZH				eS	S	01 20 08.1	+0.7
LZH				XS		01 21 09.8	
LZH				eSS	SS	01 23 09.1	+1.7
LZH				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.9						
LZH	Lanzhou	40.53	329	⇑P	P	01 14 11.0	+1.6
	comp=Z,42nm,1.2s,mb4.9						
LZH				pP	pP	01 14 47.0	+5.9
LZH				sP	sP	01 15 04.5	+6.5
LZH				PP	PP	01 15 50.5	+2.7
LZH				eS	S	01 20 08.1	+0.7
LZH				sS		01 21 09.8	
LZH				eSS	SS	01 23 09.1	+1.7
LZH	Lanzhou	40.53	329	⇑P	P	01 14 11.0	+1.6
LZH				*PP	pP	01 14 47.0	+5.9
LZH				*SP	sP	01 15 04.5	+6.5
LZH						01 15 50.5	
LZH				eS	S	01 20 08.1	+0.7
LZH				*SS		01 21 09.8	
LZH				eSS	SS	01 23 09.1	+1.7
LZH				pmax	pmax		
	comp=Z,42nm,1.2s,mb4.9						
HHC	Hu-ho-hao-te	41.21	340	eP	P	01 14 16.9	+2.1
HHC				PP	PP	01 15 59.4	+4.7
HHC				PCP	PcP	01 16 12.6	+0.8
HHC				SCP		01 19 46.0	
HHC				PCS		01 20 00.4	
HHC				S	S	01 20 19.5	+2.2
HHC				SS	SS	01 23 23.0	+2.3
HHC				SCS	ScS	01 24 01.3	-0.2
HHC				AMB	AMB		
	comp=Z,90nm,7.2s						
HHC				LR	LR		
	comp=N,250nm,13.2s						
HHC				LR	LR		
	comp=E,230nm,13.2s						
HHC				LR	LR		
	comp=Z,110nm,12.0s						
MDJ	Mudanjiang	42.03	1	P	P	01 14 22.6	+1.0
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,90nm,8.5s						
MDJ	Mudanjiang	42.03	1	eP	P	01 14 22.2	+0.7
	comp=Z,3.5nm,0.6s,mb4.2						
LSA	Lhasa	44.64	311	P	P	01 14 45.0	+2.2
LSA	Lhasa	44.64	311	eP	P	01 14 44.6	+1.8
	comp=Z,15nm,0.8s,mb4.7						
LSA	Lhasa	44.64	311	eP	P	01 14 44.6	+1.8
LSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
VIS	Vishakhapatnam	46.85	292	ex	x	01 15 01.6	
JIRN	Jiri	47.58	306	eP	P	01 15 06.8	+0.8
	comp=Z,21nm,0.3s,mb5.3						
GUN	Gumba	47.93	306	eP	P	01 15 09.4	+0.7
	comp=Z,114nm,0.7s,mb5.6						
PKI	Pulchoki	48.18	306	eP	P	01 15 10.7	+0.1
KKN	Kakani	48.37	306	eP	P	01 15 12.2	+0.1
	comp=Z,51nm,0.9s,mb5.2						
DMN	Daman	48.44	305	eP	P	01 15 13.0	+0.4
	comp=Z,80nm,1.0s,mb5.3						
ULN	Ulaanbaatar	48.92	341	eP	P	01 15 16.3	+0.2
	comp=Z,19nm,0.9s,mb4.7						
ULN	Ulaanbaatar	48.92	341	eP	P	01 15 16.3	+0.3
ULN				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.7						
GKN	Gorkha	48.98	306	eP	P	01 15 16.7	-0.1
	comp=Z,59nm,1.0s,mb5.2						
SONM	Songino Array	49.11	340	P	P	01 15 17.7	+0.2
	comp=Z,7.3nm,0.7s,mb4.4,baz=152,slow=8.0,SNR=54						
SONM				PcP	PcP	01 16 39.6	+0.5
	comp=Z,1.9nm,0.7s,baz=165,slow=3.8,SNR=6.0						
SONM				ScP		01 20 23.4	
	comp=Z,0.5nm,0.9s,baz=180,slow=4.4,SNR=3.6						
KOLN	Koldanda	49.73	305	eP	P	01 15 23.1	+0.6
	comp=Z,115nm,0.7s,mb5.6						
HYB	Hyderabad	51.24	290	i P	P	01 15 34.0	-0.1
	comp=Z,50nm,1.0s,mb5.1						
HYB				epP	pP	01 16 05.0	-2.0
HYB				esP	sP	01 16 21.0	-1.7
HYB	Hyderabad	51.24	290	eP	P	01 15 34.0	-0.1
	comp=Z,50nm,1.0s,mb5.1						
HYB	Hyderabad	51.24	290	eP	P	01 15 34.0	-0.1
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.1						
ZAK	Zakamensk	52.35	340	eP	P	01 15 37.4	-4.6
ZAK				e	pP	01 16 09.2	-5.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
WMQ	Urumqi	54.81	325	⇓iP	P	01 16 00.8	+0.7
WMQ				AP	pP	01 16 38.0	+4.6
WMQ				PCP	PcP	01 17 01.0	+0.5
WMQ				SCP		01 20 43.0	
WMQ				S	S	01 23 27.0	-1.0
WMQ				XS		01 24 32.0	
WMQ				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,170nm,4.5s						
NDI	New Delhi	55.33	304	ex	x	01 16 01.0	
BOD	Bodaibo	56.42	351	eP	P	01 16 09.4	-2.1
BOD				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
YAK	Yakutsk	59.47	1	eP	P	01 16 32.1	-0.6
	comp=Z,22nm,0.6s,mb5.2						
YAK				e		01 16 38.8	
YAK	Yakutsk	59.47	1	eP	P	01 16 32.1	-0.6
YAK				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.2						
MKAR	Makanchi Array	59.64	325	P	P	01 16 33.6	-0.4
	comp=Z,10nm,0.6s,mb4.8,baz=114,slow=8.3,SNR=76						
MKAR				PcP	PcP	01 17 19.6	+0.3
	comp=Z,7.5nm,0.8s,baz=117,slow=5.4,SNR=8.0						
MKAR				ScP		01 21 08.4	
	comp=Z,2.2nm,1.1s,baz=131,slow=2.9,SNR=4.0						
KZA	Kyzart	61.78	317	P	P	01 16 49.5	+0.9
	SNR=8.8						
TKM2	Tokmak 2	61.90	318	P	P	01 16 49.4	0.0
	SNR=6.1						
UCH	Uchtor	62.34	317	P	P	01 16 53.1	+0.8
	SNR=9.2						
FX1	Attu Island--F	62.34	29	P	P	01 16 54.3	+2.1
	comp=Z,32nm,0.7s,mb5.3,baz=268,slow=3.4,SNR=10						
FX1	Attu Island--F	62.34	29	eP	P	01 16 54.1	+1.9
AAK	Ala-Archa	62.52	318	eP	P	01 16 52.2	-1.3
USP	Ospenovka	62.78	318	P	P	01 16 54.9	-0.3
	SNR=11						
AML	Almayashu	62.86	317	P	P	01 16 56.2	+0.4
	SNR=11						
EKS2	Erkin-Say	63.01	317	P	P	01 16 57.1	+0.4
	SNR=8.5						
KURK	Kurchatov	63.80	327	eP	P	01 17 00.3	-1.4
	comp=Z,20nm,0.8s,mb5.0						
KURK	Kurchatov	63.80	327	eP	P	01 17 00.3	-1.4
KURK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.0						
NVS	Novosibirsk	63.84	333	eP	P	01 16 59.8	-2.1
NVS				pmax	pmax		
	comp=N,8.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,13nm,1.2s						
NVS				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.9						
BVAR	Borovoye Array	69.38	327	P	P	01 17 36.3	-0.6
	comp=Z,12nm,0.8s,mb4.7,baz=127,slow=7.4,SNR=40						
BRVK	Borovoye	69.46	327	eP	P	01 17 36.8	-0.5
	comp=Z,15nm,1.0s,mb4.7						
BRVK	Borovoye	69.46	327	eP	P	01 17 36.8	-0.5
BRVK				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
CHKZ	Chkalovo	69.54	327	eP	P	01 17 36.8	-1.0
	comp=Z,11nm,1.0s,mb4.6						
CHKZ	Chkalovo	69.54	327	eP	P	01 17 36.8	-1.0
CHKZ				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.5						
AKTK	Aktyubinsk	75.79	322	P	P	01 18 14.0	-0.4
AKTO	Aktyubinsk	75.79	322	P	P	01 18 14.0	-0.4
	comp=Z,7.7nm,0.8s,mb4.4,baz=107,slow=7.5,SNR=28						
ARU	Arti	76.99	328	eP	P	01 18 19.5	-1.5
	comp=Z,15nm,1.0s,mb4.6						
ARU	Arti	76.99	328	⇑iP	P	01 18 20.3	-0.7
ARU				eSS	ScS	01 28 28.4	+7.1
ARU				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
ORR	Orenburg	78.06	322	⇑iP	P	01 18 26.0	-1.0
ORR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.5						
HASS	Wahat al Ahsa’	78.86	295	P	P	01 18 31.5	-0.4
RDF	Al-Radifah	80.93	299	eP	P	01 18 42.1	-0.9
RDF				AMb	AMB	01 18 43.3	
	comp=Z,29nm,1.0s,mb4.9						
MIB	Mutribah	81.15	300	eP	P	01 18 43.3	-0.8
MIB				AMb	AMB	01 18 44.5	
	comp=Z,27nm,0.9s,mb4.9						
NAY	Al-Naaiem	81.21	299	eP	P	01 18 43.5	-0.9
NAY				AMb	AMB	01 18 44.6	
	comp=Z,13nm,0.7s,mb4.7						
VNDA	Vanda	81.92	173	eP	P	01 18 47.3	+0.1
	comp=Z,2.4nm,0.9s,mb3.8						
VNDA	Vanda	81.92	173	eP	P	01 18 47.3	+0.1
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OPO	Ambohidratompo	82.55	251	P	P	01 18 51.3	-0.3
	comp=Z,2.6nm,0.8s,mb4.0,baz=252,slow=4.8,SNR=3.6						
MZLS	Mizel	82.91	294	P	P	01 18 53.4	+0.1
MAW	Mawson	83.16	201	P	P	01 18 54.0	+0.4
	comp=Z,0.7nm,0.3s,mb3.9,baz=113,slow=5.1,SNR=4.5						
TATS	Tathlith	84.53	289	P	P	01 19 03.0	+1.5
AFFS	‘Afif	84.93	294	P	P	01 19 04.0	+0.5
ILAR	Eielson Array	85.51	25	P	P	01 19 05.8	+0.4
	comp=Z,1.0nm,1.1s,mb3.5,baz=254,slow=4.7,SNR=6.7						
FRSS	Farasan al Kab	85.87	287	P	P	01 19 09.6	+1.4
HILS	Ha’il	85.99	297	P	P	01 19 09.8	+1.2
BLJS	Baljurashi	86.29	290	P	P	01 19 11.4	+1.2
QURS	Qurayyt al Mil	89.77	301	P	P	01 19 27.1	+0.6
KMBO	Kilima Mbogo	91.31	269	P	P	01 19 34.8	+0.6
	comp=Z,0.9nm,0.7s,mb3.9,baz=58,slow=21,SNR=5.5						
ARCES	ARCESS Array B	92.28	340	P	P	01 19 36.6	-0.7
	comp=Z,7.0nm,0.8s,mb4.8,baz=81,slow=5.8,SNR=19						
QSPA	South Pole Qui	92.33	180	eP	P	01 19 38.7	+1.3
FINES	FINESS Array B	93.82	332	P	P	01 19 44.0	-0.4
	comp=Z,2.9nm,1.0s,mb4.3,baz=63,slow=4.3,SNR=5.3						
AKASG	Malin Array Be	94.03	321	P	P	01 19 44.6	-1.0
	comp=Z,0.6nm,0.6s,mb3.9,baz=72,slow=4.4,SNR=8.5						
NOA	NORSAR Array B	100.74	334	P	P	01 20 15.0	-0.9
	comp=Z,1.3nm,0.8s,baz=68,slow=4.7,SNR=3.9						
TXAR	Lajitas Array	120.96	54	PKP	PKPdf	01 25 21.1	+2.3
	comp=Z,0.4nm,0.8s,baz=180,slow=2.5,SNR=3.5						
DBIC	Dimbokro	132.59	281	PKP	PKPdf	01 25 43.9	+2.3
	comp=Z,1.6nm,0.6s,baz=114,slow=8.4,SNR=4.5						

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*NNC **20** 01:58:58.1±48.0, 35.44N×71.70E, mpv3.1, Error ellipse: s-maj=2628.2km s-min=475.5km az=83.0*

NDI 20 01:58:47.9±0.3**, 34.24N×72.13E, h10**^{km}**, MD3.5, 1C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.50	120	eP	Pn	01 59 38.6	-5.0
THN				eS	Sn	02 00 18.5	-7.1
DLH	Dalhousie	3.63	117	eP	Pn	01 59 44.0	-1.4
DLH				eS	Sn	02 00 25.0	-3.8
NDI	New Delhi	7.04	140	eS	Sn	02 01 45.5	-9.0
KK31	Karatay Array	8.94	352	Pn	P	02 00 54.3	-5.9
	0.3nm,0.3s,baz=154,slow=12,SNR=14						
KK31				⇑Sn	Sn	02 02 26.2	-16
	0.4nm,0.3s,baz=177,slow=25,SNR=6.7						

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*NIED **20** 02:16:00, 23.70N×125.60E, h26^{km}, Mw3.8 Best double couple: $M_0$5.49×10^{14} NP1:ϕ_s108°, δ85°, λ8°. NP2:ϕ_s18°, δ82°, λ175°.*

*NEIC **20** 02:16:10.6±3.4, 23.69N×125.77E, h30^{km}±25^{km}, mb4.2/3, Error ellipse: s-maj=12.7km s-min=11.5km az=48.0*

*JMA **20** 02:16:10.5±0.2, 23.70N×125.61E, h66^{km}, M3.6*

*IDC **20** 02:16:12.0±4.4, 23.77N×125.93E, h44^{km}±45^{km}, mb3.7/6, mb1 3.8/8, mb1mx3.6/20, mbtmp4.0/8, ML3.8/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/25, Error ellipse: s-maj=35.7km s-min=21.0km az=75.0*

ISC 20 02:16:09.1±1.1**, 23.71N**±0.06×**125.74E**±0.04**, h35**^{km}±10^{km}**, n27, σ1§13**/38**, mb3.9**/9**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	1.09	344	P	P	02 16 30.0	+1.9
JOGS				eS	S	02 16 45.0	+2.8
JMJ	Miyako jima 2	1.17	340	P	P	02 16 30.9	+1.6
JMJ				S	S	02 16 46.4	+2.1
JTJ	Tarama	1.33	315	P	P	02 16 32.3	+0.8
JTJ				S	S	02 16 48.2	0.0
JIJ	Ishigaki jima	1.60	294	P	P	02 16 35.8	+0.4
JIJ				S	S	02 16 54.0	-1.1
JKRS	Kuro-shima	1.67	289	P	P	02 16 37.0	+0.6
JKRS				S	S	02 16 55.9	-0.9
HATJ	Hateruma jima	1.81	281	S	S	02 16 58.6	-1.7
IRIF	Iriomote-Funau	1.94	289	S	S	02 17 02.8	-0.9
YOJ	Yonaguni jima	2.60	287	eS	S	02 17 17.9	-2.7
JKE	Kume jima 2	2.77	20	P	P	02 16 52.6	+0.4
JKE				S	S	02 17 24.7	-0.1
NAH1	Naha	3.05	35	eS	S	02 17 32.1	+0.3
JAGN	Aguni-jima	3.17	25	P	P	02 16 58.4	+0.5
JAGN				S	S	02 17 34.0	-1.0
JOW	Kunigami	3.86	36	P	P	02 17 08.4	+0.7
	15nm,0.3s,baz=206,slow=15,SNR=15						
JOW				S	S	02 17 49.5	-3.1

	16nm,0.3s,baz=117,slow=26,SNR=8.1						
JOW	Kunigami	3.86	36	P	P	02 17 07.7	0.0
JOW				S	S	02 17 49.9	-2.6
JIH	Iheya	3.88	31	P	P	02 17 07.8	0.0
JIH				S	S	02 17 50.9	-1.9
TATO	Taipei	4.08	289	P	P	02 17 11.6	+0.9
JTK	Tokunoshima	4.98	35	P	P	02 17 22.6	-1.0
JTK				S	S	02 18 15.7	-5.1
JNU	Nakatsue	10.41	25	P	P	02 18 37.8	-1.4
	0.7nm,0.3s,baz=127,slow=16,SNR=5.8						
JNU				LR	LR	02 22 38.2	
	comp=Z,79nm,18.6s,baz=182,slow=38						
MJAR	Matsushiro Arr	16.71	37	P	P	02 20 08.4	+6.3
	0.2nm,0.3s,baz=226,slow=9.8,SNR=5.1						
ASAJ	Asahikawa	24.61	30	P	P	02 21 26.8	-0.6
	4.1nm,0.6s,mb4.2,baz=21,slow=5.6,SNR=6.0						
SONM	Songino Array	28.58	332	P	P	02 22 03.3	-0.7
	0.4nm,0.5s,mb3.4,baz=166,slow=11,SNR=4.4						
MKAR	Makanchi Array	41.61	315	P	P	02 23 55.5	+0.2
	0.8nm,0.4s,mb3.7,baz=99,slow=10.0,SNR=18						
WRAB	Tennant Creek	44.18	168	*e*P	P	02 24 16.8	+0.1
	3.7nm,0.7s,mb4.2						
WRA	Warramunga Arr	44.19	168	P	P	02 24 16.6	-0.2
	3.2nm,0.7s,mb4.2,baz=348,slow=8.9,SNR=21						
KURK	Kurchatov	45.16	319	*e*P	P	02 24 24.8	+0.6
	1.9nm,0.3s,mb4.4						
BVAR	Borovoye Array	50.70	320	P	P	02 25 08.0	+0.8
	0.4nm,0.5s,mb3.6,baz=95,slow=7.5,SNR=5.3						
BRVK	Borovoye	50.77	320	*e*P	P	02 25 08.4	+0.6
	0.8nm,0.6s,mb3.8						
FINES	FINESS Array B	73.94	330	P	P	02 27 43.7	+1.5
	1.3nm,0.9s,mb3.9,baz=68,slow=10,SNR=5.4						

WEL 20 02:25:50.4±0.9**, 37.37S**×**177.07E, h313**^{km}±8^{km}**, ML3.5**/4**, Error ellipse: s-maj=25.5km s-min=17.1km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.89	178	*e*PN	P	02 26 31.3	-0.7
URZ				SN	S	02 27 04.1	-0.4
URZ				SN	S	02 27 04.4	0.0
MWZ	Matawai	1.03	160	PN	P	02 26 32.8	+0.2
MWZ				SN	S	02 27 04.6	-0.9
BKZ	Black Stump Fm	1.85	194	PN	P	02 26 37.7	+0.1
WNVZ	Wahianoa	2.27	210	PN	P	02 26 40.9	0.0
TSZ	Takapari Road	2.82	198	*e*PN	P	02 26 45.8	0.0
TCW	Tory Channel	4.41	209	PN	P	02 27 01.5	-0.8

BJI ***20*** *02:25:57.5, 21.75S×178.62W, h569^{km}, mB4.5, mb4.6*

IDC ***20*** *02:25:58.2±1.6, 21.36S×178.68W, h552^{km}±18^{km}, mb3.5/9, mb1 3.7/12, mb1mx3.5/18, mbtmp4.4/12, Error ellipse: s-maj=21.3km s-min=14.1km az=150.0*

NEIC ***20*** *02:25:59.1±0.9, 21.02S×178.78W, h551^{km}±10^{km}, mb4.0/11, Error ellipse: s-maj=13.7km s-min=8.1km az=151.0*

ISC 20 02:25:55.8±1.1**, 21.22S**±0.07×**178.69W**±0.09**, h524**^{km}±14^{km}**, n50, σ1^{s}01**/34**, mb3.9**/20**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	9.81	43	P	P	02 28 13.6	+1.1
	3.6nm,0.3s,baz=138,slow=2.9,SNR=6.3						
AFI				S	S	02 30 00.2	-1.3
	1.0nm,0.3s,baz=193,slow=23,SNR=2.2						
AFI	Afiamalu	9.81	43	*e*P	P	02 28 13.8	+1.3
DZM	Mont Dzumac	13.85	264	P	P	02 28 57.1	+3.1
	0.2nm,0.3s,baz=93,slow=18,SNR=3.6						
URZ	Urewera	17.36	191	P	P	02 29 27.9	-0.8
	2.9nm,0.3s,baz=333,slow=0.2,SNR=11						
URZ				S	S	02 32 19.6	-1.0
	0.1nm,0.3s,baz=246,slow=21,SNR=2.1						
CTA	Charters Tower	32.78	266	P	P	02 31 47.3	+0.6
	1.4nm,0.4s,mb3.9,baz=87,slow=15,SNR=9.2						
CTAO	Charters Tower	32.78	266	*e*P	P	02 31 46.9	+0.2
	1.6nm,0.4s,mb3.9						
PMG	Port Moresby	34.88	284	P	P	02 32 04.9	+0.5
	16nm,0.8s,mb4.6,baz=151,slow=1.1,SNR=6.2						
PMG	Port Moresby	34.88	284	*e*P	P	02 32 04.4	0.0
	15nm,0.8s,mb4.6						
WRAB	Tennant Creek	43.86	263	*e*P	P	02 33 15.9	-1.0
	4.0nm,0.7s,mb4.1						
WRA	Warramunga Arr	43.87	263	P	P	02 33 16.5	-0.5
	1.3nm,0.7s,mb3.5,baz=104,slow=2.0,SNR=24						
SBA	Scott Base	57.11	184	*e*P	P	02 34 54.9	+1.5
	4.1nm,0.6s,mb3.8						
VNDA	Vanda	57.14	185	*e*P	P	02 34 54.3	+0.7
	1.4nm,0.6s,mb3.4						
QSPA	South Pole Qui	68.85	180	*e*P	P	02 36 08.9	+0.4
	8.8nm,0.8s,mb4.3						
MJAR	Matsushiro Arr	70.41	324	P	P	02 36 17.1	-1.3
	0.7nm,0.6s,mb3.4,baz=152,slow=1.1,SNR=5.3						
ASAJ	Asahikawa	74.05	332	P	P	02 36 37.9	-1.4
	10nm,0.9s,mb4.2,baz=25,slow=16,SNR=2.8						
MDJ	Mudanjiang	80.74	325	P	P	02 37 15.9	+0.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.2s,mb3.9						
MDJ				AMB	AMB		
	comp=Z,80nm,6.1s						
NVAR	Mina Array Bea	81.99	44	P	P	02 37 22.6	+1.0
	comp=Z,1.2nm,0.5s,mb3.5,baz=221,slow=7.6,SNR=16						
CN2	Changchun	82.48	323	*e*P	P	02 37 25.8	+1.8
TPNV	Topopah Spring	82.51	46	*e*P	P	02 37 25.0	+0.7
	comp=Z,2.3nm,0.8s,mb3.8						
HLID	Hailey	87.29	41	*e*P	P	02 37 48.1	+0.7
	comp=Z,1.9nm,1.0s,mb3.7						
SNAA	Sanae	87.31	179	*e*	P	02 37 57.3	+10
VNA3	Neumayer Olymp	87.47	176	*e*	P	02 37 46.9	-0.7
MNTX	Cornudas Mount	87.69	55	*e*P	P	02 37 49.8	+0.2
	comp=Z,1.6nm,1.0s,mb3.7						
VNA2	Neumayer--Watz	87.90	177	*e*	P	02 37 49.1	-0.5
TXAR	Lajitas Array	87.99	58	P	P	02 37 52.0	+1.0
	comp=Z,1.0nm,0.8s,mb3.6,baz=225,slow=5.3,SNR=8.8						
VNA1	Neumayer--Stat	88.13	177	*e*	P	02 37 50.5	-0.2
COLA	College	89.05	13	*e*P	P	02 37 53.2	-1.9
	comp=Z,1.8nm,0.7s,mb4.0						
ILAR	Eielson Array	89.16	13	P	P	02 37 54.2	-1.4
	comp=Z,1.1nm,0.6s,mb3.9,baz=226,slow=5.1,SNR=20						
BW06	Boulder Array	89.93	43	*e*P	P	02 37 59.1	-0.6
	comp=Z,1.3nm,0.6s,mb3.9						
PDAR	Pinedale Array	89.93	43	P	P	02 38 00.0	+0.3
	comp=Z,1.5nm,0.7s,mb3.9,baz=225,slow=3.2,SNR=14						
LZH	Lanzhou	92.69	308	*e*P	P	02 38 12.8	+0.2
LZH				AP	pP	02 40 12.8	+3.1
LZH				PP	PP	02 42 06.8	+1.7
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.9						
LZH	Lanzhou	92.69	308	*e*P	P	02 38 12.8	+0.2
	comp=Z,23nm,1.6s,mb5.0						
LZH				pP	pP	02 40 12.7	+3.0
LZH				sP	sP	02 41 05.8	+4.4
LZH				PP	PP	02 42 06.7	+1.6
ARCES	ARCESS Array B	129.51	349	PKP	PKPdf	02 44 03.7	-0.4
	comp=Z,2.9nm,0.8s,slow=1.2,SNR=7.4						
FINES	FINESS Array B	136.28	343	PKP	PKPdf	02 44 14.8	-2.0
	comp=Z,2.2nm,0.9s,baz=63,slow=3.1,SNR=5.3						
FINES				SKPbc		02 46 56.5	
	comp=Z,2.1nm,1.1s,baz=307,slow=9.5,SNR=4.8						
FINES	FINESS Array B	136.28	343	PKP	PKPdf	02 44 14.8	-2.0
FINES				SKPbc		02 46 56.5	
NB2	NORSAR Subarra	139.61	353	PKPabc	PKPdf	02 44 15.3	-7.7
	comp=Z,0.6nm,0.8s,baz=17,slow=2.6						
NOA	NORSAR Array B	139.61	353	PKhKP		02 44 16.7	
	comp=Z,0.3nm,0.6s,baz=42,slow=0.6,SNR=2.8						
NOA				PKP	PKPdf	02 44 24.7	+1.8
	comp=Z,1.1nm,1.0s,baz=5.4,slow=4.0,SNR=4.1						
AKASG	Malin Array Be	143.32	330	PKP	PKPdf	02 44 27.2	-2.3
	comp=Z,8.1nm,0.5s,baz=44,slow=4.3,SNR=65						
KWP	Kalwaria	146.96	334	*e*PKPbc	PKPbc	02 44 39.2	+1.1
OKC	Ostrava-Krasne	148.48	339	*e*PKPbc	PKPdf	02 44 43.4	+5.2
UPC	Upice	148.56	342	*e*PKPbc	PKPdf	02 44 43.7	+5.3
CLL	Collm	148.61	346	⇓*i*P	PKPdf	02 44 43.4	+5.0
CLL				*e*		02 44 49.0	
CLL				*e*		02 45 11.0	
DPC	Dobruska-Polom	148.61	341	*e*PKPbc	PKPdf	02 44 43.7	+5.3
DPC				*e*PKPab	PKPab	02 44 49.8	-1.1
PVCC	Panska Ves	148.94	344	*e*PKPbc	PKPdf	02 44 44.5	+5.5
PRU	Pruhonice	149.44	343	*e*PKPbc	PKPdf	02 44 45.2	+5.4
NKC	Novy Kostel	149.74	346	*e*PKPbc	PKPdf	02 44 46.4	+6.1
TREC	Trest	149.80	341	*e*PKPbc	PKPdf	02 44 46.5	+6.1
KHC	Kasperske Hory	150.48	344	*e*PKPbc	PKPdf	02 44 48.1	+6.7
KHC				*e*PKPab	PKPab	02 44 57.9	-0.7
GRA1	Grafenberg Arr	150.52	347	*e*PKP	PKPdf	02 44 48.6	+7.1
GERES	GERESS Array B	150.71	343	PKPbc	PKPdf	02 44 48.3	+6.5
	comp=Z,1.8nm,0.7s,baz=45,slow=1.9,SNR=11						

GUC ***20*** *02:26:08.0±0.7, 29.11S×71.37W, h44^{km}±3^{km}, MD4.0, ML4.2*

NEIC ***20*** *02:26:08.1±0.9, 29.09S×71.61W, h41^{km}±8^{km}, mb4.3/2, MD4.0(GUC), Error ellipse: s-maj=17.1km s-min=5.7km az=95.0*

IDC ***20*** *02:26:12.0±3.7, 29.06S×71.30W, h73^{km}±30^{km}, mb3.7/3, mb1 3.8/6, mb1mx3.6/16, mbtmp3.9/6, Error ellipse: s-maj=41.8km s-min=19.6km az=71.0*

ISC 20 02:26:06.2±0.8**, 29.09S**±0.03×**71.64W**±0.10**, h47**^{km}±8^{km}**, h52**^{km}±10.0^{km}**:pP-P, n39, σ1^{s}06**/37**, mb4.0**/5**, 11C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	La Serena	0.88	157	⇑*i*P	P	02 26 23.6	+1.2
LSCH				*i* S	S	02 26 34.6	+0.2
LSCH				AMP		02 26 35.9	
	comp=E,9µm,0.5s						
TLL	Tololo Astrono	1.29	146	⇑*i*P	P	02 26 29.6	+1.3
TLL				*i* S	S	02 26 45.4	+0.7
TLL				AMP		02 26 47.3	
	comp=N,8µm,0.6s						
CPCH	Copiapo	2.07	34	⇑*i*P	P	02 26 39.2	0.0
CPCH				*i* S	S	02 27 03.5	-0.3
CPCH				AMP		02 27 08.6	
	comp=E,9µm,0.1s						
CDCH	Caldera	2.13	20	⇑*i*P	P	02 26 39.7	-0.5
CDCH				*i* S	S	02 27 05.0	-0.5
CRCH	Chaqaral	2.88	18	*i* P	P	02 26 50.1	-0.7
CRCH				*i* S	S	02 27 23.1	-1.4
CRCH				AMP		02 27 46.1	
	comp=N,798nm,0.6s						
CFAA	Coronel Fontan	3.86	131	P	P	02 27 06.5	+1.9
	comp=N,1.6nm,0.3s,baz=314,slow=12,SNR=3.6						
CFAA				S	S	02 27 49.0	-0.3
	comp=N,2.6nm,0.3s,baz=231,slow=23,SNR=4.7						
PEL	Peldehue	4.12	169	*e*P	P	02 27 08.7	+0.4
RCDM	Rinconada Maip	4.44	171	⇑*i*P	P	02 27 13.2	+0.4
RCDM				*i* S	S	02 28 02.1	-1.8
MDZ	Mendoza	4.47	148	*e*P	P	02 27 18.3	+5.0
MDZ				*e*		02 28 30.6	
TACH	Talagante	4.59	173	⇑*i*P	P	02 27 15.1	+0.1
TACH				*i* S	S	02 28 06.1	-1.5
CHCH	Chadas Angostu	4.90	170	*e*P	P	02 27 19.1	-0.2
CICH	Cipreses	5.31	169	*e*P	P	02 27 25.0	-0.1
PLCA	Paso Flores	11.65	176	P	P	02 28 50.8	-1.7
	comp=N,0.1nm,0.3s,baz=275,slow=12,SNR=3.7						
PLCA	Paso Flores	11.65	176	*e*P	P	02 28 50.9	-1.5
TRQA	Tornquist	12.03	141	*e*P	P	02 28 55.3	-2.2
	comp=N,16nm,1.2s						
CPUP	Villa Florida	12.97	81	P	P	02 29 10.3	+0.1
	comp=N,18nm,0.6s						
LPAZ	La Paz	13.15	15	P	P	02 29 15.2	+2.7
	comp=N,0.3nm,0.3s,baz=209,slow=12,SNR=5.6						
LPAZ	La Paz	13.15	15	*e*P	P	02 29 15.2	+2.7
SIV	San Ignacio	16.27	39	P	P	02 29 55.1	+2.0
	comp=N,0.5nm,0.3s,baz=210,slow=11,SNR=21						
SAML	Samuel	21.55	23	*e*P	P	02 30 53.4	-0.2
	comp=N,2.2nm,0.7s,mb3.7						
SAML				*e*pP		02 31 07.2	
BDFB	Brasilia	25.56	64	P	P	02 31 31.0	-1.6
	comp=N,2.3nm,0.5s,mb3.9,baz=232,slow=7.6,SNR=4.3						
VNA3	Neumayer Olymp	53.79	159	⇑*i*P	P	02 35 26.0	+0.1
VNA3				*e*	pP	02 35 38.5	-0.5
VNA3				*e*	pP	02 35 42.7	+3.7
VNA1	Neumayer--Stat	54.07	158	⇑*i*P	P	02 35 29.3	+1.4
VNA1				*e*		02 37 50.5	
VNA2	Neumayer--Watz	54.42	159	⇑*i*P	P	02 35 30.3	-0.2
VNA2				*e*	pP	02 35 42.1	-1.5
VNA2				*e*	pP	02 35 47.6	+4.0
SNAA	Sanae	56.01	159	⇑*i*P	P	02 35 41.8	-0.2
SNAA				*e*	pP	02 35 53.4	-1.8
SNAA				*e*	pP	02 35 58.0	+2.8
QSPA	South Pole Qui	61.13	180	*e*P	P	02 36 09.1	-8.4
	comp=N,8.8nm,0.8s,mb4.9						
TXAR	Lajitas Array	65.66	329	P	P	02 36 48.9	+0.9
	comp=N,0.2nm,0.8s,mb3.2,baz=135,slow=5.3,SNR=3.4						
BOSA	Boshof	82.06	118	P	P	02 38 23.9	+0.6
	comp=N,3.3nm,1.0s,mb4.2,baz=260,slow=5.5,SNR=3.9						
BOSA	Boshof	82.06	118	*e*P	P	02 38 23.9	+0.6
MOX	Moxa	107.91	42	*e*P	PP	02 44 50.0	-4.8
VYHS	Vyhne	111.47	46	*e*PKP	PKPdf	02 44 45.2	+10
VYHS				*e*		02 44 52.8	
KECS	Kecovo	112.50	46	*e*PKP	PKPdf	02 44 43.4	+6.4
KECS				*e*		02 44 50.3	
CRVS	Cervenica-Dubn	113.25	46	*e*PKP	PKPdf	02 44 41.6	+3.2
STHS	Stebnicka Huta	113.27	45	*e*PKP	PKPdf	02 44 44.3	+5.9
DRGR		113.39	48	⇓*i*P	PKPdf	02 44 43.8	+5.0
KOLS	Kolonicke sedl	113.77	46	*e*PKP	PKPdf	02 44 41.3	+1.8
BURAR	Bucovina Array	115.27	48	⇑*i*P	PKPdf	02 44 41.5	-1.0
WRA	Warramunga Arr	125.18	210	PKP	PKPdf	02 45 05.0	+2.7
	comp=N,0.8nm,0.4s,baz=161,slow=1.7,SNR=12						
MKAR	Makanchi Array	153.08	42	PKPbc	PKPdf	02 46 01.1	+10
	comp=N,0.7nm,0.8s,baz=309,slow=1.8,SNR=5.8						

NEIC ***20*** *02:39:36.9±1.9, 17.55N×145.61E, h193^{km}±17^{km}, mb3.8/2, Error ellipse: s-maj=48.5km s-min=14.9km az=116.0*

IDC ***20*** *02:39:36.3±3.2, 17.62N×145.53E, h188^{km}±31^{km}, mb3.5/6, mb1 3.8/7, mb1mx3.5/17, mbtmp4.1/7, Error ellipse: s-maj=56.7km s-min=16.7km az=118.0*

ISC 20 02:39:36.2±2.4**, 17.5N**±0.2×**145.7E**±0.4**, h197**^{km}±22^{km}**, n11, σ1^{s}00**/13**, mb3.7**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	3.92	191	P	P	02 40 39.0	+1.6
	14nm,0.3s,baz=322,slow=16,SNR=4.7						
GUMO				S	S	02 41 22.9	-1.9
	7.6nm,0.3s,baz=216,slow=14,SNR=4.4						
GUMO	Guam	3.92	191	*e*P	P	02 40 38.6	+1.1
GUMO				*e*S	S	02 41 24.3	-0.4
WRAB	Tennant Creek	38.78	197	*e*P	P	02 46 43.6	+0.2
	2.6nm,0.9s,mb3.8						
WRA	Warramunga Arr	38.79	197	P	P	02 46 43.1	-0.4
	0.6nm,0.6s,mb3.3,baz=11,slow=8.3,SNR=7.9						
FITZ	Fitzroy Crossi	40.45	210	P	P	02 46 57.4	+0.2
	1.4nm,0.3s,mb3.9,baz=25,slow=7.8,SNR=24						
ILAR	Eielson Array	64.78	26	P	P	02 49 52.9	-2.4
	0.6nm,0.4s,mb3.6,baz=246,slow=5.9,SNR=17						
YKA	Yellowknife Ar	79.10	28	P	P	02 51 19.3	-0.6
	0.6nm,0.6s,mb3.4,baz=284,slow=5.7,SNR=3.0						
NVAR	Mina Array Bea	83.94	52	P	P	02 51 46.4	+0.9
	0.8nm,0.4s,mb3.8,baz=266,slow=6.0,SNR=15						
NVAR	Mina Array Bea	83.94	52	P	P	02 51 46.4	+0.9
ELK	Elko	85.47	49	*e*P	P	02 51 53.7	+0.7
	0.9nm,0.6s,mb3.7						
FINES	FINESS Array B	87.99	335	P	P	02 52 04.9	+0.3
	2.0nm,1.0s,mb3.9,baz=90,slow=5.6,SNR=2.8						

ROM ***20*** *02:59:37.1±0.2, 45.71N×7.86E, h13^{km}±3^{km}, Md2.9/10, Ml2.9/7, Error ellipse: s-maj=2.7km s-min=2.2km az=104.0*

NEIC ***20*** *02:59:37.6, 45.68N×7.86E, h15^{km}, ML3.3(SZGRF), ML3.1(LDG), ML3.0(GEN), ML2.9(ROM), ML2.9(STR), ML2.7(ZUR), After GEN.*

GEN ***20*** *02:59:37.6, 45.68N×7.86E, h15^{km}, ML3.0*

LDG ***20*** *02:59:38.3±0.1, 45.68N×7.87E, h3^{km}, Md3.2/2, Ml3.1/26, Error ellipse: s-maj=1.6km s-min=1.1km az=100.0*

CSEM ***20*** *02:59:38.1±0.1, 45.67N×7.86E, h25^{km}, ML3.2/21, Error ellipse: s-maj=1.0km s-min=0.9km az=108.0*

STR ***20*** *02:59:38.4±0.1, 45.67N×7.82E, h5^{km}±1^{km}, Ml2.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 20 02:59:36.5±0.2**, 45.68N**±0.01×**7.84E**±0.02**, h9**^{km}±1^{km}**, n163, σ1^{s}43**/286**, 12C-16D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORX	Oropa	0.11	116	P	Pg	02 59 40.8	+1.5
ORX				S	Sg	02 59 43.2	+2.1
ORX	Oropa	0.11	116	P	Pg	02 59 40.8	+1.5
ORX				S	Sg	02 59 43.2	+2.1
ORO	Oropa	0.11	118	⇓*i*Pg	Pg	02 59 40.8	+1.5
ORO				Sg	Sg	02 59 42.4	+1.2
TRAV		0.18	202	P	Pg	02 59 41.9	+1.4
TRAV				S	Sg	02 59 45.0	+1.9
TRAV		0.18	202	P	Pg	02 59 41.9	+1.4
TRAV				S	Sg	02 59 45.0	+1.8
MCGN	Macugnaga	0.30	20	Pg	Pg	02 59 43.9	+1.2
MCGN				Sg	Sg	02 59 47.6	+0.8
	910nm,0.4s						
MMK	Mattmark	0.38	13	⇑*i*Pg	Pg	02 59 45.6	+1.2
MMK				Sg	Sg	02 59 50.2	+0.6
DIX	Grande Dixence	0.50	323	⇓*e*Pg	Pg	02 59 47.6	+0.9
DIX				Sg	Sg	02 59 54.1	+0.6
LSD	Ceresole Reale	0.53	246	P	Pg	02 59 48.4	+1.1
LSD				S	Sg	02 59 55.9	+1.4
LSD	Ceresole Reale	0.53	246	P	Pg	02 59 48.4	+1.1
LSD				S	Sg	02 59 55.9	+1.4
MRGE	Morge	0.56	280	⇓*e*Pg	Pg	02 59 48.9	+1.1
	431nm,0.7s						
MONC	Moncucco Torin	0.61	174	Pg	Pg	02 59 52.0	+3.2
	757nm,0.3s						
RSP	Reno Superiore	0.67	218	P	Pb	02 59 50.3	+0.3
RSP				S	Sb	02 59 59.0	0.0
RSP	Reno Superiore	0.67	218	P	Pb	02 59 50.3	+0.4
RSP				S	Sb	02 59 59.0	0.0
VAI	Varese	0.67	73	⇓*e*Pg	Pg	02 59 50.8	+0.7
LKBD	Leukerbad	0.72	348	⇓*i*Pg	Pg	02 59 51.9	+0.8
EMV	Vieux Emosson	0.76	301	⇓*i*Pg	Pg	02 59 52.6	+0.7
EMV				Sg	Sg	03 00 03.1	+1.0
SALAN	Lac Salanfe	0.77	308	⇓*i*Pg	Pg	02 59 52.6	+0.7
GRYON	Gryon	0.77	318	⇓*i*P	Pb	02 59 52.4	+0.8
GRYON	Gryon	0.77	318	⇓*i*Pg	Pg	02 59 52.5	+0.6
SENIN	Lac Senin	0.78	331	⇓*i*Pg	Pg	02 59 52.7	+0.4
LPG	La Plagne	0.79	257	*e*Pg	Pg	02 59 53.1	+0.7
LPG				*e*Sg	Sg	03 00 03.7	+0.8
	280nm,0.4s						
LPL	La Plagne	0.80	259	*e*Pg	Pg	02 59 53.2	+0.7
LPL				*e*Sg	Sg	03 00 03.2	0.0
	290nm,0.4s						
FENE	Fenestrelle	0.85	221	P	Pb	02 59 53.3	+0.3
FENE				S	Sb	03 00 04.2	0.0
FENE	Fenestrelle	0.85	221	P	Pb	02 59 53.3	+0.3
MUGIO	Muggio	0.87	73	Pg	Pg	02 59 54.3	+0.2
MUGIO	Muggio	0.87	73	⇓*i*Pg	Pg	02 59 54.2	+0.1
AIGLE	Aigle	0.91	317	*e*Pg	Pg	02 59 55.0	+0.3
BHB	Bricherasio	0.93	206	P	Pb	02 59 54.3	-0.1
BHB				S	Sb	03 00 06.2	-0.5
BHB	Bricherasio	0.93	206	P	Pb	02 59 54.3	-0.1
WIMIS	Wimmis	1.00	351	*e*Pg	Pg	02 59 57.1	+0.6
BNI	Bardonecchia	1.03	233	Pg	Pg	02 59 57.7	+0.5
	167nm,0.6s						
RRL	Cesana Torines	1.06	225	P	Pb	02 59 57.5	+0.8
RRL				S	Sb	03 00 10.9	+0.5
RRL	Cesana Torines	1.06	225	P	Pb	02 59 57.5	+0.8
RRL				S	Sb	03 00 10.9	+0.4
HASLI	Hasliberg	1.10	11	*e*P	Pb	02 59 58.6	+1.4
MBDF	Montbardon	1.22	219	*e*Pg	Pg	03 00 01.0	+0.1
MBDF				*e*Sn	Sn	03 00 15.3	-1.0
MBDF				*e*Sg	Sg	03 00 17.3	+0.1
	109nm,0.3s						
MBDF	Montbardon	1.22	219	*e*Pn	Pn	02 59 59.9	+0.2
MBDF				*e*Pg	Pg	03 00 01.0	+0.1
MBDF				*e*Sn	Sn	03 00 15.3	-1.0
MBDF				*e*Sg	Sg	03 00 17.3	+0.1
MBDF	Montbardon	1.22	219	*e*Pg	Pg	03 00 01.0	+0.1
MBDF				*e*Sn	Sn	03 00 15.3	-1.0
MBDF				*e*Sg	Sg	03 00 17.3	+0.1
	54nm,0.3s						
BNALP	Bannalp	1.26	18	⇑*i*Pn	Pn	03 00 01.4	+1.1
PZZ	Prazzo	1.29	204	P	Pb	02 59 59.5	-0.9
PZZ				S	Sb	03 00 14.7	-2.2
PZZ	Prazzo	1.29	204	P	Pb	02 59 59.5	-1.0
GDM	Grand'Maison	1.31	249	Pg	Pg	03 00 02.7	0.0
GDM				Sg	Sg	03 00 20.2	+0.1
MDI	Monti di Nese	1.31	85	Pg	Pg	03 00 01.9	-0.9
MDI				Sg	Sg	03 00 20.2	-0.1
	486nm,0.3s						
TUE	Stuetta	1.31	52	Pg	Pg	03 00 00.8	-2.0
	103nm,0.3s						
SURF	Saint Ours	1.40	212	Pg	Pg	03 00 04.5	-0.1
SURF				Sg	Sg	03 00 23.7	+0.3
BOB	Bobbio (Coli)	1.46	128	Pg	Pg	03 00 06.0	+0.3
BOB				Sg	Sg	03 00 26.7	+1.6
FIN	Finale Ligure	1.49	170	Pg	Pg	03 00 04.7	-1.7
	40nm,0.2s						
CABF	La Chapelle	1.54	308	*e*Pg	Pg	03 00 07.6	+0.3
CABF				*e*Sg	Sg	03 00 27.8	0.0
	19nm,0.3s						
GRN	Grenoble	1.54	254	Pg	Pg	03 00 07.2	-0.1
GRN				Sg	Sg	03 00 28.3	+0.4
SAOF	Saorge	1.71	187	Pg	Pg	03 00 11.2	+0.6
AUTN	L'Aution	1.71	190	Pg	Pg	03 00 10.5	-0.2
AUTN	L'Aution	1.71	190	Pg	Pg	03 00 10.0	-0.7
AUTN	L'Aution	1.71	190	Pg	Pg	03 00 10.0	-0.7
AUTN				Pg	Pg	03 00 10.5	-0.2
TOUF	Mont Tournerai	1.72	194	Pg	Pg	03 00 11.0	+0.1
IMI	Imperia	1.77	179	Pg	Pg	03 00 08.7	-3.2
	16nm,0.3s						
DAVOX	Davos	1.79	51	Pg	Pg	03 00 09.6	-2.8
BBS	Basel-Blauen	1.80	353	Pg	Pg	03 00 11.8	-0.7
BBS				Sg	Sg	03 00 37.7	+1.1
LOMF	Lomont	1.81	338	Pn	Pn	03 00 09.1	+0.9
SBF	Sospel	1.84	189	*e*Pn	Pn	03 00 08.3	-0.3
SBF				*e*Sn	Sn	03 00 31.4	-0.7
	34nm,0.3s						
MVIF	Mont Vial	1.85	196	Pg	Pg	03 00 12.7	-0.8
SALO	Salr	1.88	91	Pg	Pg	03 00 10.0	-4.1
MABI	Malga Bissina	1.90	78	Pg	Pg	03 00 11.1	-3.5
	108nm,0.4s						
BRMO	Bormio	1.93	65	Pg	Pg	03 00 13.0	-2.2
CALN	Calern	2.04	200	Pg	Pg	03 00 16.5	-0.9
DAVA	Damuels	2.14	40	⇑Pn	Pn	03 00 15.8	+3.0
	comp=Z,8.4nm,0.2s						
DAVA	Damuels	2.14	40	⇑*i*Sg	Sg	03 00 47.2	-0.5
	comp=E,50nm,0.3s						
DAVA	Damuels	2.14	40	⇑Pn	Pn	03 00 15.8	+3.0
DAVA				Sg	Sg	03 00 47.2	-0.5
DAVA	Damuels	2.14	40	Pn	Pn	03 00 15.8	+3.0
DAVA				Sg	Sg	03 00 47.2	-0.5
STOF	St-Etienne Org	2.17	220	Pg	Pg	03 00 18.6	-1.4
MOF	Molkenrain	2.23	348	Pg	Pg	03 00 20.6	-0.4
MOF				Sg	Sg	03 00 51.6	+0.8
HINF	Hinteralfeld	2.24	343	*e*Pg	Pg	03 00 20.2	-1.2
HINF				*e*Sn	Sn	03 00 41.9	-0.5
HINF				*e*Sg	Sg	03 00 49.0	-2.3
	50nm,0.4s						
HINF	Hinteralfeld	2.24	343	*e*P	Pn	03 00 16.5	+2.1
HINF				*e*Pg	Pg	03 00 20.2	-1.2
HINF				*e*Sn	Sn	03 00 41.9	-0.5
HINF				*e*Sg	Sg	03 00 49.0	-2.3
HINF	Hinteralfeld	2.24	343	*e*Pg	Pg	03 00 20.2	-1.2
HINF				*e*Sn	Sn	03 00 41.9	-0.5
HINF				*e*Sg	Sg	03 00 49.0	-2.3
	25nm,0.4s						
FRF	La Foret Royal	2.28	202	*e*Pg	Pg	03 00 20.9	-1.3
FRF				*e*Sg	Sg	03 00 50.3	-2.3
	23nm,0.4s						
FRF	La Foret Royal	2.28	202	*e*Pn	Pn	03 00 15.8	+0.8
FRF				*e*Pg	Pg	03 00 20.9	-1.3
FRF				*e*Sg	Sg	03 00 50.3	-2.3
FRF	La Foret Royal	2.28	202	*e*Pg	Pg	03 00 20.9	-1.3
FRF				*e*Sg	Sg	03 00 50.3	-2.3
	12nm,0.4s						
SMRF	Simiane la Rot	2.35	224	*e*Pg	Pg	03 00 21.8	-1.6
SMRF				*e*Sg	Sg	03 00 52.4	-2.3
	18nm,0.4s						
SMRF	Simiane la Rot	2.35	224	*e*P	Pn	03 00 19.3	+3.5
SMRF				*e*Pg	Pg	03 00 21.8	-1.6
SMRF				*e*Sg	Sg	03 00 52.4	-2.3
SMRF	Simiane la Rot	2.35	224	*e*Pg	Pg	03 00 21.8	-1.6
SMRF				*e*Sg	Sg	03 00 52.4	-2.3
	8.8nm,0.4s						
VIVF	Saint-Julien-l	2.38	251	*e*P	Pn	03 00 19.6	+3.2
VIVF	Saint-Julien-l	2.38	251	*e*Pg	Pg	03 00 22.9	-1.3
VIVF				*e*Sn	Sn	03 00 45.2	-0.8
VIVF				*e*Sg	Sg	03 00 53.8	-2.2
	30nm,0.4s						
VIVF	Saint-Julien-l	2.38	251	*e*Pn	Pn	03 00 17.4	+1.0
VIVF				*e*P		03 00 19.6	
VIVF				*e*Pg	Pg	03 00 22.9	-1.3
VIVF				*e*Sn	Sn	03 00 45.2	-0.8
VIVF				*e*Sg	Sg	03 00 53.8	-2.2
VIVF	Saint-Julien-l	2.38	251	*e*P	Pn	03 00 19.6	+3.2
VIVF	Saint-Julien-l	2.38	251	*e*Pg	Pg	03 00 22.9	-1.3
VIVF				*e*Sn	Sn	03 00 45.2	-0.8
VIVF				*e*Sg	Sg	03 00 53.8	-2.2

	15nm,0.4s						
TAVF	**Tavernes**	2.42	212	Pg	Pg	03 00 23.4	-1.6
LMR	**La Mourre**	2.53	203	*e*Pg	Pg	03 00 25.0	-2.1
LMR				*e*Sn	Sn	03 00 48.9	-0.8
	7.1nm,0.2s						
LMR	**La Mourre**	2.53	203	*e*Pn	Pn	03 00 18.9	+0.4
LMR				*e*Pg	Pg	03 00 25.0	-2.1
LMR				*e*Sn	Sn	03 00 48.9	-0.8
LMR	**La Mourre**	2.53	203	*e*Pg	Pg	03 00 25.0	-2.1
LMR				*e*Sn	Sn	03 00 48.9	-0.8
	3.5nm,0.2s						
HAU	**Haudompre**	2.54	337	*e*Pg	Pg	03 00 25.3	-2.1
HAU				*e*Sn	Sn	03 00 48.8	-1.2
HAU				*e*Sg	Sg	03 00 58.6	-2.7
	34nm,0.3s						
HAU	**Haudompre**	2.54	337	*e*Pn	Pn	03 00 19.3	+0.6
HAU				*e*Pg	Pg	03 00 25.3	-2.1
HAU				*e*Sn	Sn	03 00 48.8	-1.2
HAU				*e*Sg	Sg	03 00 58.6	-2.7
HAU	**Haudompre**	2.54	337	*e*Pg	Pg	03 00 25.3	-2.1
HAU				*e*Sn	Sn	03 00 48.8	-1.2
HAU				*e*Sg	Sg	03 00 58.6	-2.7
	17nm,0.3s						
BFO	**Black Forest**	2.67	7	*e*Pn	Pn	03 00 21.5	+1.0
BFO				*e*Sn	Sn	03 00 54.3	+1.0
BFO				*e*Sg	Sg	03 01 03.0	-2.6
CDF	**Champ du Feu**	2.76	352	*e*Pn	Pn	03 00 23.3	+1.5
CDF				*e*Sn	Sn	03 00 54.1	-1.5
CDF				*e*Sg	Sg	03 01 05.4	-3.1
	25nm,0.5s						
SQTA	**Sankt Quirin**	2.79	55	⇑Pn	Pn	03 00 24.6	+2.4
	comp=Z,0.6nm,0.1s						
SQTA	**Sankt Quirin**	2.79	55	⇓*i*Sg	Sg	03 01 06.0	-3.5
	comp=Z,8.1nm,0.2s						
SQTA	**Sankt Quirin**	2.79	55	⇑Pn	Pn	03 00 24.6	+2.4
SQTA				Sg	Sg	03 01 06.0	-3.5
SQTA	**Sankt Quirin**	2.79	55	Pn	Pn	03 00 24.6	+2.4
SQTA				Sg	Sg	03 01 06.0	-3.5
MOTA	**Moosalm**	2.80	52	⇑*i*Pn	Pn	03 00 23.7	+1.4
	comp=Z,0.3nm,0.1s						
MOTA	**Moosalm**	2.80	52	⇓*i*Sg	Sg	03 01 08.2	-1.6
	comp=Z,13nm,0.4s						
MOTA	**Moosalm**	2.80	52	⇑*i*Pn	Pn	03 00 23.7	+1.4
MOTA				Sg	Sg	03 01 08.2	-1.6
MOTA	**Moosalm**	2.80	52	Pn	Pn	03 00 23.7	+1.4
MOTA				Sg	Sg	03 01 08.2	-1.6
SMF	**Signal de Mont**	2.94	291	*e*P	Pn	03 00 27.5	+3.1
SMF	**Signal de Mont**	2.94	291	*e*Pg	Pg	03 00 33.3	-2.1
SMF				*e*Sg	Sg	03 01 10.5	-4.1
	17nm,0.3s						
SMF	**Signal de Mont**	2.94	291	*e*Pn	Pn	03 00 25.5	+1.1
SMF				*e*P		03 00 27.5	
SMF				*e*Pg	Pg	03 00 33.3	-2.1
SMF				*e*Sg	Sg	03 01 10.5	-4.1
SMF	**Signal de Mont**	2.94	291	*e*P	Pn	03 00 27.5	+3.1
SMF	**Signal de Mont**	2.94	291	*e*Pg	Pg	03 00 33.3	-2.1
SMF				*e*Sg	Sg	03 01 10.5	-4.1
	8.3nm,0.3s						
PLDF	**La Plantade**	2.97	277	Pn	Pn	03 00 24.9	+0.2
WTTA	**Wattenberg**	3.06	57	⇑*i*Pn	Pn	03 00 29.0	+3.0
	comp=Z,0.6nm,0.1s						
WTTA	**Wattenberg**	3.06	57	⇓*i*Sg	Sg	03 01 16.6	-1.9
	comp=N,5.0nm,0.3s						
WTTA	**Wattenberg**	3.06	57	⇑Pn	Pn	03 00 29.0	+3.0
WTTA				Sg	Sg	03 01 16.6	-2.0
WTTA	**Wattenberg**	3.06	57	Pn	Pn	03 00 29.0	+2.9
WTTA				Sg	Sg	03 01 16.6	-2.0
WATA	**Walderalm**	3.06	56	⇓*i*Pn	Pn	03 00 30.6	+4.5
	comp=Z,0.6nm,0.2s						
WATA	**Walderalm**	3.06	56	⇑*i*Sg	Sg	03 01 16.6	-2.0
	comp=Z,7.2nm,0.4s						
WATA	**Walderalm**	3.06	56	⇓Pn	Pn	03 00 30.6	+4.5
WATA				Sg	Sg	03 01 16.6	-2.0
WATA	**Walderalm**	3.06	56	Pn	Pn	03 00 30.6	+4.5
WATA				Sg	Sg	03 01 16.6	-2.0
SFTF	**Sexfontaines**	3.17	324	*e*P	Pn	03 00 30.3	+2.7
	baz=137						
SFTF	**Sexfontaines**	3.17	324	*e*Pg	Pg	03 00 37.6	-2.3
SFTF				*e*Sg	Sg	03 01 18.4	-3.9
	41nm,0.6s						
SFTF	**Sexfontaines**	3.17	324	*e*P	Pn	03 00 30.3	+2.7
SFTF				*e*Pg	Pg	03 00 37.6	-2.3
SFTF				*e*Sg	Sg	03 01 18.4	-3.9
SFTF	**Sexfontaines**	3.17	324	*e*Pg	Pg	03 00 37.6	-2.3
SFTF				*e*Sg	Sg	03 01 18.4	-3.9
	21nm,0.6s						
LOR	**Lormes**	3.18	301	*e*P	Pn	03 00 30.3	+2.6
	baz=126						
LOR	**Lormes**	3.18	301	*e*Pg	Pg	03 00 36.4	-3.6
	baz=124						
LOR				*e*Sg	Sg	03 01 19.0	-3.4
	10nm,0.3s						
LOR	**Lormes**	3.18	301	*e*P	Pn	03 00 30.3	+2.6
LOR				*e*Pg	Pg	03 00 36.4	-3.6
LOR				*e*Sg	Sg	03 01 19.0	-3.4
LOR	**Lormes**	3.18	301	*e*Pg	Pg	03 00 36.4	-3.6
LOR				*e*Sg	Sg	03 01 19.0	-3.4
	5.2nm,0.3s						
STU	**Stuttgart**	3.23	16	*e*Pn	Pn	03 00 28.9	+0.5
STU				P		03 00 30.5	
STU				*e*Sn	Sn	03 01 06.7	-0.7
STU	**Stuttgart**	3.23	16	P	Pn	03 00 30.5	+2.1
PGF	**Pioggiola**	3.24	165	*e*Sn	Sn	03 01 05.7	-1.9
	9.3nm,0.6s						
LASF	**Ste Croix**	3.26	242	*e*P	Pn	03 00 31.4	+2.6
LASF				*e*Sg	Sg	03 01 21.2	-3.8
	9.7nm,0.5s						
LASF	**Ste Croix**	3.26	242	*e*Pn	Pn	03 00 30.1	+1.3
LASF				*e*P		03 00 31.4	
LASF				*e*Sg	Sg	03 01 21.2	-3.8
LASF	**Ste Croix**	3.26	242	*e*P	Pn	03 00 31.4	+2.6
LASF				*e*Sg	Sg	03 01 21.2	-3.8
	4.8nm,0.5s						
LBL	**Lubilhac**	3.27	264	Pn	Pn	03 00 28.9	0.0
SSF	**Saint Saulge**	3.31	296	*e*P	Pn	03 00 32.1	+2.6
SSF				*e*Sn	Sn	03 01 07.0	-2.3
SSF				*e*Sg	Sg	03 01 21.9	-4.7
	5.3nm,0.4s						
AVF	**Avril sur Loir**	3.31	291	*e*Pg	Pg	03 00 40.0	-2.6
AVF				*e*Sg	Sg	03 01 22.0	-4.7
	11nm,0.5s						
AVF	**Avril sur Loir**	3.31	291	*e*P	Pn	03 00 31.9	+2.3
AVF				*e*Pg	Pg	03 00 40.0	-2.6
AVF				*e*Sg	Sg	03 01 22.0	-4.7
AGO	**Saint Agoulin**	3.31	278	Pn	Pn	03 00 29.9	+0.3
RFYF	**Reffroy**	3.37	332	*e*P	Pn	03 00 32.9	+2.6
	baz=140						
RFYF				*e*Sg	Sg	03 01 24.4	-4.2
	26nm,0.3s						
MEZF	**Maizieres J’vi**	3.41	327	*e*P	Pn	03 00 33.9	+2.9
	baz=151						
MEZF	**Maizieres J’vi**	3.41	327	*e*Pg	Pg	03 00 41.9	-2.7
	baz=138						
MEZF				*e*Sg	Sg	03 01 25.6	-4.4
	42nm,0.5s						
MEZF	**Maizieres J’vi**	3.41	327	*e*P	Pn	03 00 33.9	+2.9
MEZF				*e*Pg	Pg	03 00 41.9	-2.7
MEZF				*e*Sg	Sg	03 01 25.6	-4.4
MEZF	**Maizieres J’vi**	3.41	327	*e*Pg	Pg	03 00 41.9	-2.7
MEZF				*e*Sg	Sg	03 01 25.6	-4.4
	21nm,0.5s						
FUR	**Furstenfeldbru**	3.42	42	*e*Pn	Pn	03 00 33.0	+1.8
FUR				*e*Sn	Sn	03 01 11.5	-0.8
BGF	**Bois d’Agland**	3.58	286	*e*Pg	Pg	03 00 45.8	-2.3
BGF				*e*Sg	Sg	03 01 31.1	-4.8
	23nm,0.4s						
BGF	**Bois d’Agland**	3.58	286	*e*P	Pn	03 00 35.8	+2.3
BGF				*e*Pg	Pg	03 00 45.8	-2.3
BGF				*e*Sg	Sg	03 01 31.1	-4.8
HYF	**Humbligny**	3.93	296	*e*P	Pn	03 00 41.0	+2.6
TCF	**Toulx Ste Croi**	3.97	281	*e*Pn	Pn	03 00 39.1	+0.1
TCF				*e*Sn	Sn	03 01 23.4	-2.8
TCF				*e*Sg	Sg	03 01 43.4	-5.5
	18nm,0.5s						
CAF	**Calviac**	4.15	262	*e*P	Pn	03 00 44.3	+2.8
CAF				*e*Sg	Sg	03 01 49.0	-5.6
	12nm,0.6s						
WLF	**Walferdange**	4.15	345	*e*P	Pn	03 00 43.9	+2.4
WLF	**Walferdange**	4.15	345	*e*P	Pn	03 00 43.8	+2.3
RJF	**Les Rejaudoux**	4.46	267	*e*Sg	Sg	03 01 59.3	-5.9
	6.9nm,0.4s						
TNS	**Taunus Mts**	4.56	5	*e*Pn	Pn	03 00 49.3	+1.9
GRA1	**Grafenberg Arr**	4.62	28	*e*Sg	Sg	03 02 05.1	-5.2
MTLF	**Montolieu**	4.65	242	*e*P	Pn	03 00 50.5	+1.8
WET	**Wettzell**	4.87	43	*e*Pn	Pn	03 00 51.2	-0.5
WET				*e*Sn	Sn	03 01 43.1	-5.7
GIVF	**Givet**	4.87	336	*e*Pg	Pg	03 01 08.4	-5.4
VISS	**Visnje**	4.90	86	*e*Pn	Pn	03 00 52.0	-0.1
VISS				*e*Sn	Sn	03 01 48.5	-1.1
BAIF	**Baives**	5.02	332	*e*Pn	Pn	03 00 52.9	-0.9
GEC2	**GERESS Array S**	5.09	49	*e*Pn	Pn	03 00 54.0	-0.9
BOJS	**Bojanci**	5.20	89	*e*Pn	Pn	03 00 59.2	+2.8
BOJS				*e*Sn	Sn	03 01 53.7	-3.6
KHC	**Kasperske Hory**	5.20	46	*e*PN	Pn	03 00 57.5	+1.1
KHC				*e*PG	Pg	03 01 15.5	-4.9
KHC				*e*SN	Sn	03 01 51.6	-5.7
KHC				*e*x	x	03 02 21.5	
KHC	**Kasperske Hory**	5.20	46	*e*Pn	Pn	03 00 57.5	+1.1
KHC				*e*Sn	Sn	03 01 51.6	-5.7
NKC	**Novy Kostel**	5.51	32	*e*SG	Sg	03 02 33.6	-6.3
FLN	**La Foliniere**	6.45	302	*e*Pn	Pn	03 01 14.6	+0.5
	baz=128						
CLL	**Collm**	6.59	29	*e*SG	Sg	03 03 14.0	-2.0
CLL	**Collm**	6.59	29	*e*Sg	Sg	03 03 14.0	-2.0

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*LDG **20** 03:21:06.5±0.1,45.69N×7.84E,h3^{km},Md2.2/2,Ml1.8/9, Error ellipse: s-maj=1.3km s-min=0.7km az=102.0*

*ROM **20** 03:21:06.1±0.3,45.70N×7.89E,h12^{km},Md2.2/5,Ml1.4/2, Error ellipse: s-maj=3.6km s-min=2.7km az=97.0*

*NEIC **20** 03:21:06.1,45.70N×7.89E,h12^{km},MD2.2(ROM), ML2.5(GEN),ML1.8(LDG),After ROM.*

*ZUR **20** 03:21:07.3,45.75N×7.78E,h2^{km},ML1.4/5*

ISC 20 03:21:05.6±0.3,**45.71N**±0.02×**7.78E**±0.03,**h8**^{km}±3^{km},**n38**, σ**1**^{s}**30**/75,**3C-2D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORX	**Oropa**	0.16	120	P	Pg	03 21 09.4	+0.2
ORX				S	Sg	03 21 11.0	-0.6
ORO	**Oropa**	0.17	121	⇓*i*Pg	Pg	03 21 09.5	+0.3
ORO				Sg	Sg	03 21 11.1	-0.5
TRAV		0.20	186	P	Pg	03 21 10.5	+0.6
TRAV				S	Sg	03 21 13.2	+0.4
MCGN	**Macugnaga**	0.28	31	Pg	Pg	03 21 12.6	+1.2
MCGN				Sg	Sg	03 21 16.3	+1.0
	29nm,0.2s						
MMK	**Mattmark**	0.36	21	⇑*i*Pg	Pg	03 21 14.2	+1.3
MMK				Sg	Sg	03 21 18.8	+0.9
MMK	**Mattmark**	0.36	21	⇑*i*Pg	Pg	03 21 14.2	+1.3
MMK				*i* Sg	Sg	03 21 18.8	+0.9
DIX	**Grande Dixence**	0.45	325	⇓*i*Pg	Pg	03 21 16.2	+1.6
MRGE	**Morge**	0.51	277	Pg	Pg	03 21 17.6	+1.8
	252nm,2.6s						
LSD	**Ceresole Reale**	0.51	240	P	Pg	03 21 17.1	+1.3
LSD				S	Sg	03 21 24.4	+1.8
RSP	**Reno Superiore**	0.67	213	P	Pg	03 21 19.4	+0.3
RSP				S	Sg	03 21 28.2	+0.1
LKBD	**Leukerbad**	0.68	351	*e*Pg	Pg	03 21 21.1	+1.9
EMV	**Vieux Emosson**	0.71	300	⇑*i*Pg	Pg	03 21 21.4	+1.6
VAI	**Varese**	0.71	77	Pg	Pg	03 21 19.6	-0.2
VAI				Sg	Sg	03 21 28.3	-1.0
	9.0nm,0.2s						
LPG	**La Plagne**	0.75	254	*e*Pg	Pg	03 21 21.7	+1.0
LPG				*e*Sg	Sg	03 21 32.3	+1.5
	12nm,0.3s						
LPL	**La Plagne**	0.76	255	*e*Pg	Pg	03 21 21.8	+1.0
LPL				*e*Sg	Sg	03 21 32.1	+1.1
	10nm,0.3s						
FENE	**Fenestrelle**	0.85	217	P	Pb	03 21 22.6	+0.5
FENE				S	Sb	03 21 33.5	+0.1
BHB	**Bricherasio**	0.94	203	P	Pb	03 21 24.1	+0.3
RRL	**Cesana Torines**	1.06	222	P	Pb	03 21 26.6	+0.9
RRL				S	Sb	03 21 40.2	+0.7
MBDF	**Montbardon**	1.22	216	*e*Pg	Pg	03 21 29.6	-0.3
MBDF				*e*Sg	Sg	03 21 45.4	-0.8
	3.2nm,0.3s						
MBDF	**Montbardon**	1.22	216	*e*Pn	Pn	03 21 28.5	-0.3
MBDF				*e*Pg	Pg	03 21 29.6	-0.3
MBDF				*e*Sg	Sg	03 21 45.4	-0.8
PZZ	**Prazzo**	1.30	202	P	Pb	03 21 28.9	-0.9
PZZ				S	Sb	03 21 45.6	-0.9
ROB	**Roburent**	1.42	177	P	Pn	03 21 31.6	-0.1
CABF	**La Chapelle**	1.48	308	*e*Pg	Pg	03 21 35.2	+0.1
CABF				*e*Sg	Sg	03 21 54.9	0.0
	0.4nm,0.2s						
HINF	**Hinteralfeld**	2.20	344	*e*Pg	Pg	03 21 48.3	-1.2
HINF				*e*Sg	Sg	03 22 16.7	-2.1
	1.3nm,0.2s						
HINF	**Hinteralfeld**	2.20	344	*e*Pn	Pn	03 21 42.7	-0.2
HINF				*e*Pg	Pg	03 21 48.3	-1.2
HINF				*e*Sg	Sg	03 22 16.7	-2.1
FRF	**La Foret Royal**	2.30	201	*e*Pg	Pg	03 21 49.2	-2.3
FRF				*e*Sg	Sg	03 22 19.0	-3.2
	0.5nm,0.2s						
FRF	**La Foret Royal**	2.30	201	*e*Pn	Pn	03 21 43.5	-0.8
FRF				*e*Pg	Pg	03 21 49.2	-2.3
FRF				*e*Sg	Sg	03 22 19.0	-3.2
SMRF	**Simiane la Rot**	2.34	223	*e*Pg	Pg	03 21 50.2	-2.1
SMRF	**Simiane la Rot**	2.34	223	*e*P	Pn	03 21 46.8	+1.9
SMRF				*e*Pg	Pg	03 21 50.2	-2.1
VIVF	**Saint-Julien-l**	2.35	250	*e*Pg	Pg	03 21 51.0	-1.6
VIVF				*e*Sg	Sg	03 22 22.2	-1.8
	0.8nm,0.3s						
VIVF	**Saint-Julien-l**	2.35	250	*e*Pn	Pn	03 21 44.6	-0.5
VIVF				*e*Pg	Pg	03 21 51.0	-1.6
VIVF				*e*Sg	Sg	03 22 22.2	-1.8
HAU	**Haudompre**	2.49	337	*e*Pg	Pg	03 21 53.7	-1.7
HAU				*e*Sg	Sg	03 22 26.2	-2.4
	2.4nm,0.4s						
HAU	**Haudompre**	2.49	337	*e*Pn	Pn	03 21 46.9	-0.2
HAU				*e*Pg	Pg	03 21 53.7	-1.7
HAU				*e*Sg	Sg	03 22 26.2	-2.4
SMF	**Signal de Mont**	2.89	290	*e*Pg	Pg	03 22 01.0	-2.3
SMF				*e*Sg	Sg	03 22 39.4	-2.4
	0.6nm,0.2s						
SMF	**Signal de Mont**	2.89	290	*e*P	Pn	03 21 54.9	+2.1
SMF				*e*Pg	Pg	03 22 01.0	-2.3
SMF				*e*Sg	Sg	03 22 39.4	-2.4
LOR	**Lormes**	3.12	301	*e*Sg	Sg	03 22 46.0	-3.5
	0.3nm,0.2s						
AVF	**Avril sur Loir**	3.25	291	*e*Pg	Pg	03 22 07.4	-3.1
AVF				*e*Sg	Sg	03 22 49.8	-4.1
	0.5nm,0.3s						
AVF	**Avril sur Loir**	3.25	291	*e*P	Pn	03 22 00.6	+2.7
AVF				*e*Pg	Pg	03 22 07.4	-3.1
AVF				*e*Sg	Sg	03 22 49.8	-4.1

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*IDC **20** 03:56:21.5±4.1,29.98S×177.66W,h44^{km}±29^{km},mb4.3/5, mb1 4.5/5,mb1mx4.1/13,mbtmp4.6/5,Error ellipse: s-maj=47.0km s-min=22.7km az=146.0*

*NEIC **20** 03:56:44.8±0.5,30.21S×178.11W,h250^{km},mb4.4/7, Error ellipse: s-maj=14.8km s-min=11.4km az=45.0*

ISC 20 03:56:20.5±2.1,**30.1S**±0.2×**177.7W**±0.1,**h46**^{km}±24^{km}, **h48**^{km}±1.2^{km}**:pP-P,n36,**σ**0**^{s}**88**/22,**mb4.5**/9,**4C,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	0.84	349	P	P	03 56 35.9	-0.2
	934nm,0.3s,baz=118,slow=7.6,SNR=72						
RAO				S	S	03 56 47.5	0.0
	4μm,0.3s,baz=116,slow=23,SNR=26						
URZ	**Urewera**	9.20	206	P	P	03 58 26.3	-7.1
	0.6nm,0.3s,baz=308,slow=22,SNR=4.7						
DZM	**Mont Dzumac**	16.28	296	P		04 00 20.9	
	0.7nm,0.3s,baz=92,slow=13,SNR=10						
CTA	**Charters Tower**	33.97	279	*e*P	P	04 03 03.0	+1.3
	7.9nm,0.4s,mb5.0						
CTA	**Charters Tower**	33.97	279	P	P	04 03 03.0	+1.3
	12nm,0.5s,mb5.1,baz=100,slow=11,SNR=40						
CTAO	**Charters Tower**	33.97	279	*e*P	P	04 03 02.6	+0.8
	7.2nm,0.5s,mb4.9						
STKA	**Stephens Creek**	34.77	256	*e*P	P	04 03 09.6	+1.1
	3.8nm,0.4s,mb4.7						
STKA	**Stephens Creek**	34.77	256	P	P	04 03 09.5	+1.0
	4.6nm,0.4s,mb4.8,baz=94,slow=9.5,SNR=10						
ASPA	**Alice Springs**	43.35	266	*e*P	P	04 04 20.1	+0.1
WB2	**Warramunga Arr**	44.30	272	*e*P	P	04 04 27.4	-0.3
WRAB	**Tennant Creek**	44.30	272	*e*P	P	04 04 27.8	+0.1
	8.9nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	44.31	272	P	P	04 04 26.8	-1.0
	3.3nm,0.3s,mb4.5,baz=110,slow=8.1,SNR=130						
SBA	**Scott Base**	48.37	184	P	P	04 05 00.7	+1.5
	3.8nm,1.0s,mb4.4						
VNDA	**Vanda**	48.43	186	*e*P	P	04 05 00.1	+0.4
	0.6nm,0.6s,mb3.8						
FITZ	**Fitzroy Crossi**	52.58	270	*e*P	P	04 05 31.1	-0.8
	4.8nm,0.7s,mb4.5						
FITZ	**Fitzroy Crossi**	52.58	270	P	P	04 05 30.8	-1.1
	5.0nm,0.6s,mb4.6,baz=134,slow=7.1,SNR=6.9						
QSPA	**South Pole Qui**	60.03	180	*e*P	P	04 06 24.5	+0.2
	12nm,0.8s,mb5.0						
QSPA				*e*		04 06 31.0	
SNAA	**Sanae**	78.47	178	*e*	PcP	04 08 24.4	-2.5
SNAA	**Sanae**	78.47	178	*e*	pP	04 08 29.5	-1.6
SNAA	**Sanae**	78.47	178	⇑*i*P	P	04 08 15.5	-2.0
SNAA				*e*	PcP	04 08 24.4	-2.5
SNAA				*e*	pP	04 08 29.5	-1.6
VNA3	**Neumayer Olymp**	78.61	176	*e*	PcP	04 08 25.8	-1.7
VNA3	**Neumayer Olymp**	78.61	176	*e*	pP	04 08 31.9	0.0
VNA3	**Neumayer Olymp**	78.61	176	⇑*i*P	P	04 08 17.3	-1.0
VNA3				*e*	PcP	04 08 25.8	-1.7
VNA3				*e*	pP	04 08 31.9	0.0
VNA2	**Neumayer--Watz**	79.05	177	*e*	PcP	04 08 28.4	-1.0
VNA2	**Neumayer--Watz**	79.05	177	*e*	pP	04 08 33.6	-0.7
VNA2	**Neumayer--Watz**	79.05	177	⇑*i*P	P	04 08 20.1	-0.6
VNA2				*e*	PcP	04 08 28.4	-1.0
VNA2				*e*	pP	04 08 33.6	-0.7
VNA1	**Neumayer--Stat**	79.27	176	*e*	PcP	04 08 30.1	-0.3
VNA1	**Neumayer--Stat**	79.27	176	⇑*i*P	P	04 08 22.4	+0.4
VNA1				*e*	PcP	04 08 30.1	-0.3
NVAR	**Mina Array Bea**	87.85	43	P	P	04 09 07.2	+1.0
	0.5nm,0.7s,mb3.9,baz=223,slow=8.7,SNR=5.3						
KAF	**Kangasniemi**	144.32	341	*e*pkp	PKPdf	04 15 48.9	-1.8
	baz=31,slow=2.8						
FINES	**FINESS Array B**	144.92	340	PKP	PKPdf	04 15 51.6	-0.1
	7.3nm,0.5s,baz=65,slow=3.8,SNR=61						
NB2	**NORSAR Subarra**	148.47	352	PKPabc	PKPdf	04 16 01.3	+3.7
	1.5nm,0.6s,baz=14,slow=4.1						
NOA	**NORSAR Array B**	148.47	352	PKPbc	PKPdf	04 16 02.0	+4.4
	1.3nm,0.6s,baz=14,slow=4.2,SNR=7.4						
NAO01	**NORSAR Array S**	148.70	352	*e*PKPdf	PKPdf	04 15 59.3	+1.3
AKASG	**Malin Array Be**	151.18	323	PKPbc	PKPdf	04 16 08.7	+6.5
	3.1nm,0.6s,baz=48,slow=2.9,SNR=17						
GERES	**GERESS Array B**	159.33	338	PKPab	PKPab	04 16 51.1	-2.0
	0.1nm,0.3s,baz=63,slow=6.0,SNR=3.7						

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*IDC **20** 04:01:12.8±1.0,6.19S×103.79E,mb4.5/11,mb1 4.5/11, mb1mx4.3/16,mbtmp4.5/11,MS3.7/1,Ms1 3.6/1, ms1mx2.8/24,Error ellipse: s-maj=35.1km s-min=15.9km az=49.0*

*MOS **20** 04:01:17.1±1.0,6.07S×103.93E,h37^{km},mb4.7/7,Error ellipse: s-maj=19.5km s-min=12.5km az=118.3*

*BJI **20** 04:01:19.1,6.20S×103.80E,h45^{km},mB4.9,mb4.8,Ms4.5, Msz4.5*

*NEIC **20** 04:01:19.1±0.4,6.21S×103.84E,mb4.6/9,Error ellipse: s-maj=15.0km s-min=4.9km az=46.0*

ISC 20 04:01:17.4±0.7,**6.2S**±0.1×**103.9E**±0.1,**h45**^{km}, **h45**^{km}±.9^{km}**:pP-P,n45,**σ**0**^{s}**85**/45,**mb4.7**/26,**MS4.1**/3, **Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	24.30	121	*e*P	P	04 06 32.4	+0.3
	4.5nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	24.30	121	P	P	04 06 32.6	+0.5
	6.9nm,0.7s,mb4.2,baz=284,slow=5.1,SNR=5.2						
TGY	**Tagaytay City**	26.34	40	P	P	04 06 51.3	0.0
	53nm,0.3s,mb5.6,baz=185,slow=12,SNR=1.6						
KAKA	**Kakadu**	28.89	105	*e*P	P	04 07 31.2	+17
	10nm,0.9s,mb4.6						
WRA	**Warramunga Arr**	32.58	118	P	P	04 07 46.6	-0.5
	4.9nm,0.7s,mb4.5,baz=289,slow=11,SNR=27						
WRA				PcP	PcP	04 10 32.7	-0.1
	0.2nm,0.4s,baz=309,slow=1.8,SNR=2.6						
WRAB	**Tennant Creek**	32.59	118	*e*P	P	04 07 46.9	-0.3
	9.3nm,0.5s,mb5.0						
WRAB	**Tennant Creek**	32.59	118	*e*P	P	04 07 46.9	-0.2
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
WB2	**Warramunga Arr**	32.59	118	*e*P	P	04 07 46.8	-0.4
ASPA	**Alice Springs**	33.69	124	*e*P	P	04 07 56.6	0.0
JIRN	**Jiri**	37.76	334	*e*P	P	04 08 31.4	+0.4
	comp=Z,35nm,0.6s,mb5.3						
PKI	**Pulchoki**	38.03	333	*e*P	P	04 08 33.3	0.0
GUN	**Gumba**	38.11	334	*e*P	P	04 08 34.5	+0.5
	comp=Z,45nm,0.5s,mb5.5						
DMN	**Daman**	38.20	333	*e*P	P	04 08 34.5	-0.2
KKN	**Kakani**	38.27	333	*e*P	P	04 08 35.3	0.0
	comp=Z,23nm,0.6s,mb5.1						
GKN	**Gorkha**	38.75	332	*e*P	P	04 08 39.5	+0.2
	comp=Z,9.8nm,0.3s,mb5.0						
KOLN	**Koldanda**	39.05	331	*e*P	P	04 08 42.1	+0.4
	comp=Z,23nm,0.7s,mb5.0						
LZH	**Lanzhou**	42.07	360	*e*P	P	04 09 10.1	+3.4
LZH				AP	pP	04 09 22.3	+3.3
LZH				XP	sP	04 09 27.8	+3.3
LZH				PP	PP	04 10 51.8	+4.4
LZH				*e*S	S	04 15 27.1	+4.6
LZH				XS		04 15 48.1	
LZH				*e*SS	SS	04 18 31.1	+5.8
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.5						
LZH				LR	LR		
	comp=N,320nm,14.6s						
LZH				LR	LR		
	comp=Z,450nm,15.3s,MS4.5						
LZH	**Lanzhou**	42.07	360	*e*P	P	04 09 10.1	+3.4
	comp=Z,22nm,1.6s,mb4.5						
LZH				pP	pP	04 09 22.3	+3.3
LZH				sP	sP	04 09 27.8	+3.3
LZH				PP	PP	04 10 51.7	+4.3
LZH				*e*S	S	04 15 27.1	+4.6
LZH				sS		04 15 48.1	
LZH				*e*SS	SS	04 18 31.1	+5.8
LZH				LR	LR		
	comp=Z,450nm,15.3s,MS4.5						
LZH	**Lanzhou**	42.07	360	*e*P	P	04 09 10.1	+3.4
LZH				*PP	pP	04 09 22.3	+3.3
LZH				*SP	sP	04 09 27.8	+3.3
LZH						04 10 51.7	
LZH				*e*S	S	04 15 27.1	+4.6
LZH				*SS		04 15 48.1	
LZH				pmax	pmax		
	comp=Z,22nm,1.6s,mb4.5						
LZH				MLR	MLR		
	comp=Z,450nm,15.3s,MS4.5						
PMG	**Port Moresby**	42.98	97	P	P	04 09 14.9	+0.4
	comp=Z,18nm,0.8s,mb4.9,baz=234,slow=8.0,SNR=8.1						
CTA	**Charters Tower**	43.37	113	P	P	04 09 17.6	0.0
	comp=Z,1.4nm,0.6s,mb3.9,baz=286,slow=7.9,SNR=4.2						
STKA	**Stephens Creek**	43.49	131	*e*P	P	04 09 19.0	+0.6
	comp=Z,9.4nm,0.5s,mb4.8						
STKA	**Stephens Creek**	43.49	131	P	P	04 09 19.2	+0.8
	comp=Z,13nm,0.6s,mb4.8,baz=303,slow=7.4,SNR=35						
STKA				LR	LR	04 28 04.1	
	comp=Z,87nm,18.4s,MS3.7,baz=25,slow=37						
HHC	**Hu-ho-hao-te**	47.35	8	*e*P	P	04 09 52.3	+3.3
HHC				AP	pP	04 10 04.5	+3.1
HHC				XP	sP	04 10 09.3	+2.6
HHC				PCP	PcP	04 11 21.3	+1.7
HHC				PP	PP	04 11 44.0	+4.2
HHC				SCP		04 15 10.3	
HHC				PCS		04 15 17.4	
HHC				S	S	04 16 43.8	+5.2
HHC				XS		04 17 04.1	
HHC				SCS	ScS	04 19 38.8	+2.6
HHC				SS	SS	04 20 05.1	+5.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
HHC				AMB	AMB		
	comp=Z,90nm,6.0s						
HHC				LR	LR		
	comp=N,130nm,10.8s,MS4.3						
HHC				LR	LR		
	comp=E,150nm,12.0s,MS4.3						
HHC				LR	LR		
	comp=Z,140nm,14.4s,MS4.1						
WMQ	**Urumqi**	51.90	345	*e*P	P	04 10 25.0	+1.2
WMQ				AMB	AMB		
	comp=Z,80nm,3.3s						
MJAR	**Matsushiro Arr**	53.31	35	P	P	04 10 32.8	-1.6
	comp=Z,1.3nm,0.4s,mb4.2,baz=272,slow=6.3,SNR=7.4						
CN2	**Changchun**	53.46	19	*e*P	P	04 10 34.3	-1.1
CN2				*e*AP	pP	04 10 46.5	-1.5

CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
SONM	Songino Array	53.85	2	P	P	04 10 38.4	+0.1
	comp=Z,6.2nm,0.7s,mb4.6,baz=179,slow=8.6,SNR=37						
ULN	Ulaanbaatar	53.91	3	eP	P	04 10 38.4	-0.3
	comp=Z,2.7nm,0.8s,mb4.2						
ULN	Ulaanbaatar	53.91	3	eP	P	04 10 38.4	-0.3
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
MDJ	Mudanjiang	55.63	22	P	P	04 10 52.5	+1.3
MDJ				AMB	AMB		
	comp=Z,50nm,4.4s						
MKAR	Makanchi Array	56.14	342	P	P	04 10 53.9	-1.0
	comp=Z,1.4nm,0.4s,mb4.4,baz=152,slow=8.9,SNR=45						
KURK	Kurchatov	60.74	342	eP	P	04 11 26.2	-0.7
	comp=Z,3.8nm,0.8s,mb4.6						
KURK	Kurchatov	60.74	342	eP	P	04 11 26.2	-0.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
BRVK	Borovoye	65.53	338	eP	P	04 11 56.9	-1.5
	comp=Z,3.0nm,1.1s,mb4.2						
BRVK				e	pP	04 12 10.3	-1.1
BRVK	Borovoye	65.53	338	eP	P	04 11 56.9	-1.5
BRVK				e	pP	04 12 10.4	-1.0
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
CHKZ	Chkalovo	65.90	339	eP	P	04 11 59.6	-1.2
	comp=Z,4.5nm,0.6s,mb4.7						
CHKZ				e	pP	04 12 12.9	-0.9
CHKZ	Chkalovo	65.90	339	eP	P	04 11 59.6	-1.2
CHKZ				e	pP	04 12 12.9	-0.9
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
AKASG	Malin Array Be	85.15	322	P	P	04 13 50.3	+0.1
	comp=Z,1.2nm,0.5s,mb4.3,baz=89,slow=5.4,SNR=11						
FINES	FINESS Array B	89.61	332	P	P	04 14 11.8	+0.5
	comp=Z,0.6nm,0.5s,mb4.2,baz=95,slow=5.4,SNR=8.8						
ARCES	ARCESS Array B	91.72	340	P	P	04 14 21.1	0.0
	comp=Z,5.8nm,1.0s,mb4.9,baz=79,slow=6.2,SNR=4.7						
BDFB	Brasilia	144.70	232	PKP	PKPdf	04 20 51.3	+1.0
	comp=Z,2.3nm,0.4s,baz=84,slow=3.3,SNR=7.8						
TXAR	Lajitas Array	145.29	45	PKPbc	PKPbc	04 20 53.7	+2.2
	comp=Z,4.7nm,0.6s,baz=304,slow=1.2,SNR=60						
TXAR	Lajitas Array	145.29	45	PKPbc	PKPbc	04 20 53.7	+2.2
JCT	Junction City	147.17	40	ePKP	PKPdf	04 20 56.5	+2.3

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*BJI **20** 04:21:29.9, 6.73N×127.21E, h66^{km}, mB4.8, mb4.6*

*MOS **20** 04:21:33.3±0.6, 7.41N×126.65E, h33^{km}, mb4.6/7, Error ellipse: s-maj=47.7km s-min=12.7km az=112.2*

*IDC **20** 04:21:38.6±8.6, 7.57N×127.01E, h60^{km}±82^{km}, mb4.0/13, mb1 4.1/13, mb1mx4.0/20, mbtmp4.3/13, MS3.7/1, Ms1 3.7/1, ms1mx2.7/32, Error ellipse: s-maj=36.7km s-min=15.3km az=78.0*

*NEIC **20** 04:21:39.2±2.0, 7.59N×127.00E, h66^{km}±18^{km}, mb4.3/10, Error ellipse: s-maj=19.5km s-min=7.7km az=69.0*

ISC 20 04:21:35.8±1.3**, 7.62N**±0.05×**127.2E**±0.1**, h51**^{km}±11^{km}**, n51,** σ**1^{s}07**/54**, mb4.3**/19**, MS3.6**/1**, 2C-1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.97	305	⇑iP	P	04 21 52.0	-1.3
BIPH				i S	S	04 22 04.4	-1.9
MATI	Mati	1.11	233	eP	P	04 21 54.6	-0.8
DAV	Davao City (W)	1.66	251	eP	P	04 22 06.0	+3.0
DAV	Davao City (W)	1.66	251	eP	P	04 22 04.3	+1.3
BUTP	Butuan	2.03	312	eP	P	04 22 08.7	+0.5
BUKP	Musuan	2.09	277	eP	P	04 22 10.8	+1.7
KCP	Kidapawan	2.14	254	⇑eP	S	04 22 39.6	+4.4
CGP	Cagayan de Oro	2.58	289	⇓eP	P	04 22 16.2	+0.2
SCPH	Surigao	2.71	323	eP	P	04 22 18.1	+0.2
SCPH				eS	S	04 22 49.9	+0.3
MSLP	Maasin	3.38	318	eP	P	04 22 26.7	-0.7
PAGZ	Pagadian	3.75	274	eP	P	04 22 32.8	+0.2
TBP	Tagbilaran	3.85	303	eP	P	04 22 35.2	+1.1
TBP				eS	S	04 23 14.5	-4.0
LLP	Lapu-Lapu	4.14	311	eP	P	04 22 37.3	-0.7
LLP				eS	S	04 23 27.9	+2.2
KSM	Kuching	17.86	251	P	P	04 25 41.0	-1.4
KAKA	Kakadu	20.87	165	eP	P	04 26 33.2	+17
	15nm,0.6s						
KNA	Kununurra	23.27	176	eP	P	04 26 39.1	-0.7
	4.3nm,0.5s,mb4.1						
FITZ	Fitzroy Crossi	25.60	183	eP	P	04 27 03.0	+0.8
	9.5nm,0.7s,mb4.4						
FITZ	Fitzroy Crossi	25.60	183	P	P	04 27 02.9	+0.6
	5.7nm,0.5s,mb4.4,baz=2.9,slow=8.1,SNR=20						
JNU	Nakatsue	25.61	7	P	P	04 27 02.6	+0.4
	8.8nm,0.8s,mb4.3,baz=275,slow=12,SNR=3.5						
WRAB	Tennant Creek	28.28	166	eP	P	04 27 25.4	-1.3
	5.0nm,0.6s,mb4.3						
WRAB	Tennant Creek	28.28	166	eP	P	04 27 25.4	-1.3
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
WRA	Warramunga Arr	28.29	166	P	P	04 27 25.0	-1.8
	comp=Z,1.7nm,0.6s,mb3.9,baz=346,slow=10,SNR=12						
WB2	Warramunga Arr	28.29	166	eP	P	04 27 28.6	+1.8
MJAR	Matsushiro Arr	30.50	18	LR	LR	04 40 42.2	
	comp=Z,124nm,18.1s,MS3.6,baz=190,slow=37						
CTA	Charters Tower	33.34	146	eP	P	04 28 11.9	+0.6
	comp=Z,3.4nm,0.9s,mb4.3						
CTA	Charters Tower	33.34	146	P	P	04 28 11.5	+0.2
	comp=Z,2.7nm,0.6s,mb4.4,baz=353,slow=8.1,SNR=6.5						
CTA	Charters Tower	33.34	146	eP	P	04 28 11.9	+0.6
CTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CTAO	Charters Tower	33.34	146	eP	P	04 28 11.4	+0.1
	comp=Z,13nm,1.6s,mb4.6						
CTAO	Charters Tower	33.34	146	eP	P	04 28 11.4	+0.1
CTAO				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.6						
MDJ	Mudanjiang	36.91	3	P	P	04 28 41.4	-0.1
MDJ				AMB	AMB		
	comp=Z,30nm,5.6s						
FORT	Forrest	38.19	179	eP	P	04 28 52.4	+0.1
	comp=Z,17nm,0.6s,mb5.0						
MUN	Mundaring	40.74	194	eP	P	04 29 14.3	+0.9
NWAO	Narrogin (SRO)	41.41	193	P	P	04 29 19.3	+0.3
	comp=Z,6.7nm,0.7s,mb4.4,baz=9.6,slow=6.8,SNR=6.2						
NWAO	Narrogin (SRO)	41.41	193	eP	P	04 29 19.9	+1.0
	comp=Z,4.2nm,0.6s,mb4.2						
NWAO	Narrogin (SRO)	41.41	193	eP	P	04 29 19.9	+0.9
NWAO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
STKA	Stephens Creek	41.62	161	eP	P	04 29 20.9	+0.1
	comp=Z,4.0nm,1.0s,mb4.0						
STKA	Stephens Creek	41.62	161	P	P	04 29 20.7	-0.1
	comp=Z,2.3nm,0.9s,mb3.8,baz=337,slow=6.8,SNR=4.8						
KLR	Kul'dur	41.65	5	eP	P	04 29 22.0	+1.3
SONM	Songino Array	43.79	340	P	P	04 29 38.9	+0.6
	comp=Z,0.6nm,0.7s,mb3.5,baz=142,slow=6.2,SNR=3.6						
BOD	Bodaibo	51.11	351	eP	P	04 30 34.7	-0.6
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
MKAR	Makanchi Array	54.66	324	P	P	04 31 01.1	-0.7
	comp=Z,6.6nm,0.7s,mb4.8,baz=122,slow=8.2,SNR=25						
KURK	Kurchatov	58.74	326	eP	P	04 31 29.1	-1.6
	comp=Z,5.8nm,0.8s,mb4.7						
KURK	Kurchatov	58.74	326	eP	P	04 31 29.2	-1.6
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
BVAR	Borovoye Array	64.33	326	P	P	04 32 07.6	-0.7
	comp=Z,3.0nm,0.7s,mb4.4,baz=118,slow=8.4,SNR=14						
BRVK	Borovoye	64.41	326	eP	P	04 32 07.3	-1.5
	comp=Z,2.4nm,0.8s,mb4.3						
BRVK	Borovoye	64.41	326	eP	P	04 32 07.4	-1.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ILAR	Eielson Array	81.43	26	P	P	04 33 50.7	+2.1
	comp=Z,0.8nm,0.6s,mb3.8,baz=242,slow=5.3,SNR=10						
ARCES	ARCESS Array B	86.97	340	P	P	04 34 16.4	+0.2
	comp=Z,2.4nm,0.8s,mb4.5,baz=74,slow=5.5,SNR=6.2						
FINES	FINESS Array B	88.63	332	P	P	04 34 24.4	+0.1
	comp=Z,1.5nm,0.7s,mb4.5,baz=85,slow=4.8,SNR=9.1						
AKASG	Malin Array Be	89.16	321	P	P	04 34 26.5	-0.6
	comp=Z,0.2nm,0.2s,mb4.0,baz=71,slow=4.5,SNR=4.8						
AKASG	Malin Array Be	89.16	321	P	P	04 34 26.5	-0.6

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*IDC **20** 04:21:45.0±2.7, 16.04N×119.50E, h72^{km}±30^{km}, mb3.7/10, mb1 3.8/12, mb1mx3.7/19, mbtmp4.0/12, MS3.6/4, Ms1 3.6/4, ms1mx3.1/35, Error ellipse: s-maj=37.6km s-min=20.3km az=62.0*

*NEIC **20** 04:21:46.2±1.4, 16.10N×119.48E, h80^{km}±14^{km}, mb4.3/5, Error ellipse: s-maj=21.5km s-min=10.5km az=61.0*

ISC 20 04:21:40.8±1.2**, 15.96N**±0.05×**119.11E**±0.10**, h45**^{km}±13^{km}**, n33,** σ**1^{s}24**/32**, mb4.0**/13**, MS3.6**/4**, 2D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.79	103	eP	P	04 21 55.3	-0.3
BOLP	Bolinao	0.88	61	eP	P	04 21 56.4	-0.5
BCPH	Baguio City Da	1.47	73	⇓eP	P	04 22 05.0	-0.3
PCPH	Palayan	1.95	101	⇓eP	P	04 22 13.4	+1.3
PCPH				eS	S	04 22 38.9	+3.5
BALP	Baler	2.38	95	eP	P	04 22 19.8	+1.5
LUBP	Lubang	2.47	153	eP	P	04 22 20.6	+1.2
TGY	Tagaytay City	2.55	136	P	P	04 22 23.8	+3.1
	54nm,0.3s,baz=299,slow=6.7,SNR=4.1						
TGY				S	S	04 22 50.1	-0.6
	83nm,0.3s,baz=119,slow=10,SNR=4.6						
CAUP	Cauayan	2.78	69	eP	P	04 22 26.3	+2.4
APYP	Conner	2.78	47	eP	P	04 22 22.5	-1.5
APYP				eS	S	04 22 56.1	-0.5
POLP	Polilio Island	2.99	114	eP	P	04 22 25.8	-1.1
BUSP	Coron	4.07	165	eP	P	04 22 40.9	-1.3
ENPP	El Nido	4.73	176	eP	P	04 22 50.0	-1.5
JNU	Nakatsue	20.14	30	P	P	04 26 10.9	-2.9
	0.2nm,0.3s,baz=218,slow=28,SNR=2.0						
LZH	Lanzhou	24.23	329	eP	P	04 26 58.0	+3.5
	26nm,1.2s,mb4.5						
LZH				pP		04 27 03.5	
LZH				sP		04 27 09.5	
GUMO	Guam	25.01	92	LR	LR	04 34 54.9	
	comp=Z,86nm,18.5s,MS3.3,baz=189,slow=32						
SHL	Shillong	27.15	295	ex	x	04 27 22.5	
SONM	Songino Array	33.48	344	P	P	04 28 17.6	-0.2
	0.7nm,0.6s,mb3.8,baz=164,slow=9.6,SNR=7.6						
SONM				LR	LR	04 41 21.4	
	comp=Z,48nm,21.4s,MS3.2,baz=159,slow=35						
MKAR	Makanchi Array	43.31	323	P	P	04 29 41.5	+1.5
	1.9nm,0.7s,mb3.9,baz=130,slow=9.5,SNR=11						
MKAR	Makanchi Array	43.31	323	P	P	04 29 41.5	+1.4
CTA	Charters Tower	44.66	142	P	P	04 29 50.0	-1.2
	2.3nm,0.6s,mb4.2,baz=342,slow=8.5,SNR=4.6						
CTAO	Charters Tower	44.66	142	eP	P	04 29 51.9	+0.7
	3.5nm,0.8s,mb4.2						
KURK	Kurchatov	47.47	326	eP	P	04 30 13.9	+0.9
	14nm,1.0s,mb4.8						
KURK				e		04 30 19.8	
BVAR	Borovoye Array	53.05	325	P	P	04 30 54.5	-1.1
	1.0nm,0.7s,mb3.9,baz=112,slow=8.0,SNR=6.1						
CHKZ	Chkalovo	53.21	326	eP	P	04 30 56.9	+0.1
	1.1nm,0.6s,mb4.0						
CHKZ				e	pP	04 31 04.5	-4.8
AKTO	Aktyubinsk	59.51	319	LR	LR	04 58 37.6	
	comp=Z,43nm,18.5s,MS3.6,baz=100,slow=37						
AFI	Afiamalu	74.47	110	LR	LR	05 02 24.5	
	comp=Z,168nm,22.0s,MS4.3,baz=100,slow=33						
JOF	Joensuu	74.94	332	ep	P	04 33 18.5	-0.1
ARCES	ARCESS Array B	76.44	339	P	P	04 33 26.3	-0.7
	4.1nm,1.0s,mb4.3,baz=80,slow=7.4,SNR=6.6						
ILAR	Eielson Array	77.40	26	P	P	04 33 30.6	-2.0
	0.2nm,0.5s,mb3.3,baz=277,slow=5.8,SNR=5.1						
FINES	FINESS Array B	77.58	331	P	P	04 33 34.2	+0.7
	1.4nm,0.5s,mb4.2,baz=54,slow=5.8,SNR=25						
AKASG	Malin Array Be	77.76	319	P	P	04 33 34.6	-0.1
	1.1nm,0.6s,mb4.0,baz=66,slow=5.7,SNR=5.2						
NOA	NORSAR Array B	84.56	332	P	P	04 34 10.7	+0.5
	0.6nm,0.6s,mb3.9,baz=67,slow=4.9,SNR=4.1						
GERES	GERESS Array B	87.92	320	P	P	04 34 28.2	+1.3
	0.2nm,0.5s,mb3.6,baz=63,slow=6.6,SNR=3.1						

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*IDC **20** 04:46:18.9±1.5, 29.83N×79.90E, mb3.7/9, mb1 3.9/10, mb1mx3.8/20, mbtmp3.7/10, ML3.5/1, MS3.6/1, Ms1 3.6/1, ms1mx2.7/29, Error ellipse: s-maj=40.5km s-min=23.4km az=37.0*

*MOS **20** 04:46:22.5±0.7, 29.98N×79.94E, h33^{km}, mb3.8/3, Error ellipse: s-maj=51.3km s-min=18.2km az=29.3*

*DMN **20** 04:46:23.1±0.7, 29.84N×80.33E, h10^{km}, Ml4.5/6, Error ellipse: s-maj=41.0km s-min=12.5km az=25.0*

*NDI **20** 04:46:24.1±4.1, 29.92N×80.06E, h15^{km}, MD3.5, ML3.5*

*NEIC **20** 04:46:25.4±1.1, 29.96N×79.97E, h44^{km}±10^{km}, mb3.7/3, Error ellipse: s-maj=18.3km s-min=6.7km az=52.0*

*NNC **20** 04:46:37.6±13.0, 31.11N×79.73E, h50^{km}±99^{km}, Error ellipse: s-maj=106.0km s-min=69.6km az=176.0*

ISC 20 04:46:21.4±0.2**, 30.03N**±0.02×**80.09E**±0.02**, h15**^{km}**, n59,** σ**1^{s}30**/85**, mb3.6**/12**, MS3.6**/1**, 4C-2D, Western Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	Pithoragarh	0.49	167	eP	Pb	04 46 31.0	-0.1
PTH				eS	Sb	04 46 37.0	-0.7
LGTI	Lohaghat	0.59	166	eP	Pb	04 46 34.0	+1.1
LGTI				eS	Sb	04 46 38.0	-2.7
KALG	Kalgarh	1.27	246	eP	Pb	04 46 44.2	-0.3
KALG				eS	Sb	04 47 00.3	-0.2
DDI	Dehra Dun	1.79	280	eP	Pn	04 46 53.6	+1.6
DDI				eS	Sn	04 47 19.0	+4.5
KLP	Kalpa	2.18	314	eP	Pn	04 47 02.0	+4.3
KLP				eS	Sn	04 47 28.2	+3.6
BISR	Bishrakh	2.73	239	eP	Pn	04 47 11.8	+6.3
BISR				eS	Sn	04 47 44.0	+5.5
SMLA	Simla	2.75	294	eP	Pn	04 47 06.5	+0.7
SMLA				eSB	Sb	04 47 48.0	+4.5
NDI	New Delhi	2.84	243	ePN	Pn	04 47 10.5	+3.4
NDI				ePG	Pg	04 47 18.0	-0.2
NDI				eSN	Sn	04 47 41.0	-0.4
NDI				eSB	Sb	04 47 49.5	+3.4
AYAN	Aya Nagar	3.01	240	eP	Pn	04 47 11.8	+2.2
AYAN				eS	Sn	04 47 45.9	+0.3
SDNR	Sundarnagar	3.06	299	eP	Pn	04 47 13.2	+2.9
SDNR				eSB	Sb	04 47 59.4	+6.9
AGRA	Agra	3.36	215	eP	Pn	04 47 15.1	+0.5
AGRA				i PG	Pg	04 47 24.8	-3.8
AGRA				eS	Sn	04 47 53.5	-1.1
AGRA				AML	AML	04 47 55.5	
	comp=N,257nm,0.2s						
AGRA				AML	AML	04 47 56.1	
	comp=E,335nm,0.1s						
BHK	Bhakra	3.45	295	ePG	Pg	04 47 31.1	+0.7
BHK				eSG	Sg	04 48 16.5	+0.1
KUDL	Kundal	3.67	240	eP	Pn	04 47 16.8	-2.1
KOLN	Koldanda	3.81	125	ePn	Pn	04 47 22.5	+1.6
KOLN				eSn	Sn	04 48 07.7	+1.8
	comp=E,245nm,0.5s						
KHET	Khetri	4.22	244	eP	Pn	04 47 26.4	-0.4
KHET				eS	Sn	04 48 10.5	-5.9
KHET				AML	AML	04 48 36.0	
	comp=E,83nm,0.4s						
KHET				AML	AML	04 48 37.4	
	comp=N,105nm,0.4s						
DLH	Dalhousie	4.33	306	eP	Pn	04 47 31.0	+2.7
DLH				eS	Sn	04 48 20.0	+1.0
THN	Thein Dam	4.45	304	eP	Pn	04 47 30.3	+0.3
THN				eS	Sn	04 48 21.7	-0.3
GKN	Gorkha	4.46	116	ePn	Pn	04 47 31.5	+1.3
GKN				eSn	Sn	04 48 22.4	-0.1
	comp=N,222nm,0.2s						
ALBI	Allahabad	4.94	162	eP	Pn	04 47 38.0	+1.1
DMN	Daman	5.02	117	ePn	Pn	04 47 39.0	+1.0
DMN				eSn	Sn	04 48 36.2	-0.2
KKN	Kakani	5.07	115	ePn	Pn	04 47 40.0	+1.3
KKN				eSn	Sn	04 48 37.7	+0.1
	comp=N,87nm,0.2s						
PKI	Pulchoki	5.27	116	ePn	Pn	04 47 42.6	+1.0
PKI				eSn	Sn	04 48 41.8	-1.0
	comp=N,110nm,0.3s						
GUN	Gumba	5.49	111	ePn	Pn	04 47 46.4	+1.6
GUN				eSn	Sn	04 48 47.7	-0.7
	comp=N,73nm,0.2s						
JIRN	Jiri	5.85	112	ePn	Pn	04 47 50.9	+1.1
JIRN				eSn	Sn	04 48 55.7	-1.5
	comp=N,141nm,0.3s						
AJM	Ajmer	5.96	235	ex	x	04 48 16.0	
AJM				eS	Sn	04 48 54.2	-5.9
BLSP	Bilaspur	8.07	166	eP	P	04 48 20.6	-0.4
LSA	Lhasa	9.61	89	P	P	04 48 43.0	+0.7
LSA				eS	Sn	04 50 29.6	-1.5
SHL	Shillong	11.35	110	eP	P	04 49 08.0	+1.9
SHL				eS	S	04 51 02.0	-12
LATR	Latur	11.99	196	eS	S	04 51 17.0	-12
HYB	Hyderabad	12.63	187	i P	P	04 49 25.0	+1.6
POO	Poona	12.78	208	eP	P	04 49 23.0	-2.4
POO				ex	x	04 51 41.0	
BOM	Bombay	12.90	212	eP	P	04 49 23.0	-4.1
AAK	Ala-Archa	13.36	342	eP	P	04 49 33.8	+0.7
	comp=N,2.7nm,0.8s						
AAK	Ala-Archa	13.36	342	eP	P	04 49 33.8	+0.8
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KAD	Karad	13.76	204	ex	x	04 52 00.5	
KAD				ex	x	04 53 27.8	
KK31	Karatay Array	15.14	332	⇑P	P	04 49 53.8	-2.5
	comp=Z,1.4nm,0.6s,baz=159,slow=13,SNR=17						
KK31				⇓S	S	04 52 28.6	-16
	comp=Z,1.9nm,0.6s,baz=159,slow=24,SNR=5.8						
MK31	Makanchi Array	16.83	5	⇓P	P	04 50 17.2	-0.8
	comp=Z,5.3nm,0.9s,baz=181,slow=10,SNR=9.9						
MKAR	Makanchi Array	16.83	5	P	P	04 50 18.3	+0.3
	comp=Z,0.2nm,0.3s,baz=186,slow=11,SNR=8.8						
KURK	Kurchatov	20.70	357	⇑P	P	04 51 01.1	-2.3
	comp=Z,3.2nm,1.6s						
KURK	Kurchatov	20.70	357	eP	P	04 51 01.0	-2.5
	comp=Z,2.3nm,0.7s						
KURK	Kurchatov	20.70	357	eP	P	04 51 01.0	-2.5
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	Borovoye Array	24.06	346	P	P	04 51 36.1	-0.7
	comp=Z,0.3nm,0.4s,mb3.1,baz=135,slow=12,SNR=2.7						
BRVK	Borovoye	24.11	345	eP	P	04 51 35.8	-1.5
	comp=Z,2.3nm,0.8s,mb3.7						
BRVK	Borovoye	24.11	345	eP	P	04 51 35.8	-1.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.6						
AB31	Akbulak array	24.55	327	⇑P	P	04 51 42.0	+0.4
	comp=Z,1.4nm,0.6s,mb3.7,baz=146,slow=8.3,SNR=20						
CHKZ	Chkalovo	24.62	346	eP	P	04 51 41.6	-0.6
	comp=Z,1.6nm,0.6s,mb3.7						
CHKZ	Chkalovo	24.62	346	eP	P	04 51 41.6	-0.6
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.8						
AKTK	Aktyubinsk	26.27	327	P	P	04 51 56.1	-1.7
AKTO	Aktyubinsk	26.27	327	⇑P	P	04 51 58.7	+0.9
	comp=Z,0.8nm,1.3s,mb3.1						
AKTO	Aktyubinsk	26.27	327	P	P	04 51 56.1	-1.7
	comp=Z,0.8nm,0.5s,mb3.5,baz=158,slow=11,SNR=3.5						
SONM	Songino Array	26.91	41	P	P	04 52 05.0	+1.4
	comp=Z,1.4nm,0.6s,mb3.6,baz=232,slow=10,SNR=12						
AKASG	Malin Array Be	42.92	314	P	P	04 54 19.7	-1.3
	comp=Z,0.2nm,0.3s,mb3.4,baz=81,slow=7.6,SNR=7.1						
FINES	FINESS Array B	47.04	328	P	P	04 54 52.6	-1.2
	comp=Z,0.7nm,0.4s,mb3.9,baz=113,slow=7.4,SNR=13						
ARCES	ARCESS Array B	50.00	338	P	P	04 55 15.8	-0.8
	comp=Z,2.4nm,0.8s,mb4.2,baz=99,slow=7.4,SNR=5.5						
ARCES	ARCESS Array B	50.00	338	P	P	04 55 15.8	-0.8
HFS	Hagfors	52.78	325	LR	LR	05 18 46.6	
	comp=Z,57nm,18.8s,MS3.6,baz=259,slow=37						
NOA	NORSAR Array B	54.05	326	P	P	04 55 45.7	-1.5
	comp=Z,0.5nm,0.8s,mb3.5,baz=105,slow=6.9,SNR=3.1						
WRA	Warramunga Arr	72.07	127	P	P	04 57 45.2	-2.1
	comp=Z,0.6nm,0.8s,mb3.6,baz=320,slow=6.1,SNR=5.1						
ILAR	Eielson Array	78.69	19	P	P	04 58 23.1	-0.9
	comp=Z,0.4nm,0.7s,mb3.4,baz=315,slow=5.1,SNR=5.8						

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*IDC **20** 04:57:42.9±0.8, 24.63S×179.47E, h524^{km}±8^{km}, mb4.1/18, mb1 4.1/23, mb1mx4.1/25, mbtmp5.0/23, Error ellipse: s-maj=11.2km s-min=9.1km az=166.0*

*BJI **20** 04:57:43.6, 24.60S×179.60E, h538^{km}, mB4.9, mb4.8*

*HRVD **20** 04:57:43.6±1.6, 24.62S×179.29E, h541^{km}±11^{km}, MW5.3/15, Centroid moment Tensor Solution. LP body waves: s15,c16; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.25±.11; M$_{\theta\theta}$-0.97±.19; M$_{\phi\phi}$0.72±.21; M$_{r\theta}$-0.18±.17; M$_{\theta\phi}$-0.36±.18; M$_{\phi r}$-0.35±.18; Best double couple: M$_{0}$1.014×10^{17} NP1:ϕ_s122°, δ65°, λ169°. NP2: ϕ_s216°, δ80°, λ26°. Principal axes: T .939, Plg25°, Azm82°; N .15, Plg63°, Azm236°; P -1.089, Plg11°, Azm347°; nsta1 refers to body waves, cutoff=40s.*

*NEIC **20** 04:57:43.6±0.6, 24.64S×179.58E, h539^{km}±6^{km}, mb4.9/14 Error ellipse: s-maj=7.6km s-min=7.1km az=190.0*

ISC 20 04:57:42.5±0.6**, 24.68S**±0.06×**179.49E**±0.06**, h527**^{km}±8^{km}**, h534**^{km}±3.6^{km}**:pP-P, n193,** σ**1^{s}01**/79**, mb4.7**/33**, 24C-22D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.11	154	P	P	04 59 13.9	+1.2
	180nm,0.3s,baz=247,slow=15,SNR=8.1						
RAO				S	S	05 00 23.9	-0.2
	116nm,0.3s,baz=262,slow=23,SNR=3.0						
DZM	Mont Dzumac	12.26	280	P	P	05 00 25.7	+1.4
	5.7nm,0.3s,baz=81,slow=13,SNR=79						
DZM				S	S	05 02 43.3	+8.9
	baz=243,slow=9.2,SNR=5.1						
NOUC	Port Laguerre	12.38	279	eP	P	05 00 27.7	+2.2
NOUC				eS	S	05 02 44.0	+7.4
NOUC	Port Laguerre	12.38	279	eP	P	05 00 27.7	+2.2
NOUC				eS	S	05 02 44.0	+7.4
AFI	Afiamalu	13.51	39	P	P	05 00 35.7	-1.5
	5.9nm,0.3s,baz=190,slow=11,SNR=5.3						
AFI				S	S	05 02 49.6	-8.2
	2.5nm,0.3s,baz=32,slow=23,SNR=5.2						
URZ	Urewera	13.69	188	P	P	05 00 38.6	-0.3
	5.3nm,0.3s,baz=107,slow=11,SNR=42						
URZ				S	S	05 02 59.5	-1.4
	1.2nm,0.3s,baz=69,slow=21,SNR=9.8						
RAR	Rarotonga	19.41	84	P	P	05 01 33.6	-1.3
	5.6nm,0.3s,baz=245,slow=7.8,SNR=3.5						
RPZ	Rata Peaks	20.21	198	P	P	05 01 43.2	+0.9
	9.7nm,0.6s,baz=27,slow=4.5,SNR=2.7						
HNR	Honiara	24.01	306	P	P	05 02 15.7	-1.5
	92nm,0.7s,mb5.5,baz=157,slow=13,SNR=5.8						
HNR	Honiara	24.01	306	P	P	05 02 15.7	-1.5
ARMA	Armidale	25.32	251	eP	P	05 02 30.0	+1.3
CTA	Charters Tower	31.02	272	⇓iP	P	05 03 18.9	+0.5
	23nm,0.3s,mb5.2						
CTA	Charters Tower	31.02	272	ScP		05 08 52.4	
	4.7nm,0.8s,baz=144,slow=3.3,SNR=3.8						
CTAO	Charters Tower	31.02	272	eP	P	05 03 18.9	+0.5
	43nm,0.6s,mb5.2						
STKA	Stephens Creek	34.01	249	eP	P	05 03 43.7	+0.3
	6.8nm,0.6s,mb4.3						
STKA				ePCP	PcP	05 06 06.9	+0.1
STKA	Stephens Creek	34.01	249	P	P	05 03 43.9	+0.5
	6.8nm,0.5s,mb4.4,baz=95,slow=9.6,SNR=42						
STKA				PcP	PcP	05 06 06.8	0.0
	5.9nm,0.8s,baz=80,slow=5.8,SNR=5.4						
PMG	Port Moresby	34.32	291	P	P	05 03 45.7	-0.5
	44nm,0.8s,mb5.0,baz=120,slow=6.1,SNR=19						
PMG	Port Moresby	34.32	291	eP	P	05 03 45.4	-0.8
ASPA	Alice Springs	41.46	262	⇓iP	P	05 04 44.2	-0.1
WB2	Warramunga Arr	41.88	267	⇓iP	P	05 04 47.1	-0.7
WB2				ePCS		05 09 33.4	
WB2				eS	S	05 10 21.5	-7.0
WRAB	Tennant Creek	41.89	267	eP	P	05 04 47.0	-0.9
	45nm,0.8s,mb5.0						
WRA	Warramunga Arr	41.90	267	P	P	05 04 47.3	-0.7
	19nm,0.6s,mb4.8,baz=100,slow=6.8,SNR=424						
WRA				PcP	PcP	05 06 31.1	-0.8
	6.2nm,0.8s,baz=101,slow=3.9,SNR=8.8						
WRA				ScP		05 09 33.1	
	4.8nm,0.7s,baz=102,slow=3.7,SNR=17						
WRA				S	S	05 10 24.5	-4.1
	6.7nm,1.1s,baz=100,slow=14,SNR=11						
FORT	Forrest	45.61	250	⇓iP	P	05 05 15.5	-1.4
	39nm,0.5s,mb5.2						
FORT				ePCP	PcP	05 06 43.8	-0.8
KAKA	Kakadu	45.92	276	⇓iP	P	05 05 37.3	+18
	15nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	50.31	266	eP	P	05 05 51.5	-0.9
	35nm,0.8s,mb4.8						
FITZ				eS	S	05 12 25.2	-0.3
FITZ	Fitzroy Crossi	50.31	266	P	P	05 05 51.7	-0.7
	44nm,0.7s,mb5.0,baz=140,slow=7.2,SNR=38						
FITZ				PcP	PcP	05 07 01.3	-0.5
	6.3nm,0.7s,baz=100,slow=6.1,SNR=1.8						
FITZ				S	S	05 12 22.5	-3.0
	11nm,1.1s,baz=260,slow=15,SNR=3.6						
GUMO	Guam	50.88	315	P	P	05 05 54.4	-2.2
	64nm,0.7s,mb5.1,baz=180,slow=20,SNR=2.9						
GUMO	Guam	50.88	315	P	P	05 05 54.4	-2.2
VNDA	Vanda	53.57	185	eP	P	05 06 14.9	-0.3
SBA	Scott Base	53.58	183	eP	P	05 06 16.0	+0.7
KLBR	Kellerberrin	54.26	248	⇓iP	P	05 06 19.1	-1.6
	15nm,0.6s,mb4.5						

NWAO	Narrogin (SRO)	54.49	246	P	P	05 06 20.7	-1.6
	6.4nm,0.9s,mb3.9,baz=95,slow=11,SNR=2.3						
QSPA	South Pole Qui	65.41	180	*e*P	P	05 07 34.2	+0.4
	32nm,0.6s,mb4.9						
JOW	Kunigami	71.17	313	P	P	05 08 08.9	-0.5
	34nm,0.8s,mb4.9,baz=136,slow=9.1,SNR=2.7						
MJAR	Matsushiro Arr	72.28	326	P	P	05 08 15.0	-0.7
	27nm,0.9s,mb4.7,baz=160,slow=5.3,SNR=47						
MAJO	Matsushiro	72.28	326	*e*P	P	05 08 14.7	-1.0
	29nm,0.8s,mb4.8						
MAT	Matsushiro	72.28	326	P	P	05 08 14.7	-1.0
MAT	Matsushiro	72.28	326	*e*P	P	05 08 15.0	-0.7
	27nm,0.9s,mb4.7						
JNU	Nakatsue	73.80	319	P	P	05 08 23.9	-0.6
	16nm,0.7s,mb4.6,baz=108,slow=9.8,SNR=10						
ASAJ	Asahikawa	76.35	334	P	P	05 08 38.9	+0.6
	17nm,0.9s,mb4.5,baz=299,slow=2.7,SNR=5.1						
MAW	Mawson	76.86	201	*e*P	P	05 08 41.0	+0.4
	6.3nm,0.6s,mb4.2						
MAW	Mawson	76.86	201	P	P	05 08 41.3	+0.7
	7.5nm,0.6s,mb4.3,baz=129,slow=7.5,SNR=23						
FX1	Attu Island--F	77.43	356	P	P	05 08 43.4	-0.5
	25nm,0.8s,mb4.7,baz=278,slow=7.1						
KS15	Wonju Array Si	78.56	320	*e*P	P	05 08 50.6	+0.3
SNAA	Sanae	83.90	179	*e*	P	05 09 21.6	+4.8
SNAA	Sanae	83.90	179	⇓*i*P	P	05 09 16.3	-0.5
SNAA				*e*		05 09 21.6	
SNAA				*e*	pP	05 11 13.6	+1.1
VNA3	Neumayer Olymp	84.13	177	*e*	P	05 09 22.7	+4.8
VNA3	Neumayer Olymp	84.13	177	⇓*i*P	P	05 09 17.8	-0.1
VNA3				*e*		05 09 22.7	
VNA3				*e*	pP	05 11 12.7	-1.0
CN2	Changchun	84.24	324	*e*P	P	05 09 19.6	+0.5
CN2				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.0						
VNA2	Neumayer--Watz	84.54	178	*e*	P	05 09 24.4	+4.4
VNA2	Neumayer--Watz	84.54	178	⇓*i*P	P	05 09 19.8	-0.2
VNA2				*e*		05 09 24.4	
VNA2				*e*	pP	05 11 17.9	+2.1
VNA1	Neumayer--Stat	84.78	177	*e*	P	05 09 26.2	+5.0
VNA1	Neumayer--Stat	84.78	177	⇓*i*P	P	05 09 21.4	+0.2
VNA1				*e*		05 09 26.2	
VNA1				*e*	pP	05 11 19.4	+2.3
NVAR	Mina Array Bea	85.63	44	P	P	05 09 26.6	+0.6
	comp=Z,1.5nm,0.8s,mb3.7,baz=208,slow=6.8,SNR=16						
ENH	Enshi	86.51	305	*e*P	P	05 09 30.8	+0.3
	comp=Z,42nm,1.2s,mb4.9						
NST	Nakhon Sawan	87.11	289	P	P	05 09 34.0	+0.5
XAN	Xi'an	88.86	308	P	P	05 09 42.4	+1.1
XAN				AMB	AMB		
	comp=Z,30nm,0.9s,mb5.1						
KMI	Kunming	89.22	298	P	P	05 09 44.9	+1.7
KMI				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.6						
KMI	Kunming	89.22	298	P	P	05 09 44.9	+1.7
	comp=Z,17nm,1.1s,mb4.8						
CHG	Chiang Mai	89.52	291	P	P	05 09 46.2	+1.5
	comp=Z,19nm,0.9s,mb4.9						
MSU	Marysvale	89.66	47	*e*P	P	05 09 46.0	+1.1
HHC	Hu-ho-hao-te	90.64	315	*e*P	P	05 09 50.5	+1.1
HHC				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
HHC				AMB	AMB		
	comp=Z,120nm,8.4s						
CD2	Chengdu	91.12	304	P	P	05 09 53.4	+1.6
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.0						
TXAR	Lajitas Array	91.24	58	P	P	05 09 53.9	+1.5
	comp=Z,0.9nm,0.8s,mb3.8,baz=205,slow=6.0,SNR=9.3						
MCMT	McKenzie Canyo	92.62	41	*e*P	P	05 09 58.8	+0.4
ILAR	Eielson Array	92.89	14	P	P	05 09 57.8	-1.4
	comp=Z,1.0nm,0.6s,mb4.0,baz=210,slow=5.0,SNR=18						
LZH	Lanzhou	93.49	308	*e*P	P	05 10 03.0	+0.4
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.9						
PDAR	Pinedale Array	93.57	44	P	P	05 10 02.4	-0.4
	comp=Z,0.3nm,0.7s,baz=207,slow=3.3,SNR=3.6						
SONM	Songino Array	97.39	319	P	P	05 10 20.4	+0.3
	comp=Z,0.8nm,0.7s,mb4.1,baz=132,slow=4.9,SNR=4.7						
GTA	Gaotai	97.83	310	*e*P	P	05 10 23.3	+1.0
MKAR	Makanchi Array	112.33	313	PKiKP		05 15 18.0	
	comp=Z,0.7nm,0.5s,baz=218,slow=0.7,SNR=9.3						
KURK	Kurchatov	115.44	316	*e*PKPdf	PKPdf	05 15 23.5	-0.2
BDFB	Brasilia	118.74	126	PKP	PKPdf	05 15 31.3	+0.3
	comp=Z,0.7nm,0.4s,baz=64,slow=15,SNR=2.6						
CHKZ	Chkalovo	120.59	319	*e*PKPdf	PKPdf	05 15 33.1	-0.6
BVAR	Borovoye Array	120.71	318	PKP	PKPdf	05 15 34.2	+0.3
	comp=Z,4.5nm,0.5s,baz=77,slow=1.4,SNR=30						
BRVK	Borovoye	120.78	318	*e*PKPdf	PKPdf	05 15 34.2	+0.1
BOSA	Boshof	121.50	207	PKP	PKPdf	05 15 36.5	+0.5
	comp=Z,3.2nm,0.8s,baz=90,slow=5.7,SNR=5.2						
SCHQ	Schefferville	123.37	39	PKP	PKPdf	05 15 38.5	-0.5
	comp=Z,4.4nm,1.0s,baz=65,slow=18,SNR=2.4						
SCHQ	Schefferville	123.37	39	PKP	PKPdf	05 15 38.5	-0.6
ARU	Arti	127.23	323	*e*PKPdf	PKPdf	05 15 46.7	+0.4
AKTK	Aktyubinsk	128.53	316	PKP	PKPdf	05 15 49.6	+0.5
AKTO	Aktyubinsk	128.53	316	PKP	PKPdf	05 15 49.6	+0.5
	comp=Z,2.8nm,0.6s,baz=131,slow=3.9,SNR=13						
ARCES	ARCESS Array B	132.55	348	PKhKP		05 15 47.9	
	comp=Z,2.4nm,0.9s,baz=88,slow=1.1,SNR=12						
ARCES				PKP	PKPdf	05 15 55.0	-1.1
	comp=Z,4.4nm,0.6s,baz=59,slow=0.9,SNR=20						
ARCES				SKPbc		05 18 34.9	
	comp=Z,4.9nm,0.8s,baz=63,slow=5.4,SNR=5.9						
JOF	Joensuu	136.30	340	*e*pkp	PKPdf	05 15 52.9	-10
KAF	Kangasniemi	138.44	341	*e*pkp	PKPdf	05 15 58.0	-9.2
	baz=34,slow=2.8						
FINES	FINESS Array B	139.03	341	PKhKP		05 15 57.4	
	comp=Z,0.5nm,0.3s,baz=49,slow=3.5,SNR=16						
FINES				PKP	PKPdf	05 16 06.2	-2.0
	comp=Z,1.0nm,0.4s,baz=87,slow=4.1,SNR=8.3						
FINES				SKPbc		05 18 54.6	
	comp=Z,7.4nm,0.7s,baz=46,slow=3.9,SNR=15						
NB2	NORSAR Subarra	142.77	351	PKPabc	PKPdf	05 16 12.4	-2.3
	comp=Z,20nm,0.8s,baz=16,slow=3.1						
NOA	NORSAR Array B	142.77	351	PKP	PKPdf	05 16 12.8	-1.8
	comp=Z,18nm,0.8s,baz=16,slow=4.9,SNR=55						
NOA				SKPbc		05 19 04.4	
	comp=Z,1.0nm,0.6s,baz=16,slow=4.2,SNR=3.7						
NAO	NORSAR Subarra	143.04	351	PKPab	PKPab	05 16 12.4	-3.6
HFS	Hagfors	143.21	348	PKP	PKPdf	05 16 14.0	-1.4
	comp=Z,33nm,0.3s,baz=57,slow=4.2,SNR=623						
KONO	Kongsberg	144.34	351	*e*PKP	PKPdf	05 16 17.7	+0.3
AKASG	Malin Array Be	145.37	326	PKPbc	PKPbc	05 16 20.9	+0.3
	comp=Z,20nm,0.7s,baz=45,slow=4.3,SNR=65						
AKASG				SKPbc		05 19 10.0	
	comp=Z,3.3nm,0.6s,baz=46,slow=2.8,SNR=9.6						
AKASG	Malin Array Be	145.37	326	PKPbc	PKPbc	05 16 20.9	+0.3
AKASG				SKPbc		05 19 10.0	
SUW	Suwalki	145.78	335	*e*PKP	PKPdf	05 16 22.5	+2.4
SUW	Suwalki	145.78	335	*e*P	PKPdf	05 16 22.5	+2.4
TBKS	Tabuk	146.72	284	P	PKPdf	05 16 27.4	+5.0
MUD	Monsted U'grnd	147.48	350	⇓*i*P	PKPdf	05 16 27.0	+4.2
	comp=Z,16nm,0.7s						
MKRJ	Makawir	147.49	290	Pn	PKPdf	05 16 29.6	+6.0
BSD	Bornholm Skovb	147.53	343	*i* P	PKPdf	05 16 12.7	-10
	comp=Z,22nm,0.9s						
BSD				*i*		05 16 27.3	
AYUS	'Aynunah	147.84	284	P	PKPdf	05 16 29.8	+5.5
SLTI	Sal'it	147.96	292	Pn	PKPdf	05 16 30.1	+5.8
BDAS	Al Bad'	148.00	285	P	PKPdf	05 16 30.4	+5.9
JMOS	Jabal al Moall	148.00	286	P	PKPdf	05 16 30.1	+5.6
ALWS	Ilw as Safayha	148.04	286	P	PKPdf	05 16 30.5	+5.9
PRNI	Paran	148.09	288	Pn	PKPdf	05 16 30.1	+5.5
EIL	Elat	148.14	287	Pn	PKPdf	05 16 30.6	+5.9
HAQS	Haql	148.16	286	P	PKPdf	05 16 30.7	+5.9
MBH	Mount Berech	148.17	287	Pn	PKPdf	05 16 30.6	+5.9
ANTO	Ankara	148.24	307	*e*PKPbc	PKPdf	05 16 30.1	+5.6
ANTO				*e*PKPab	PKPab	05 16 35.0	-1.0
KZIT	Kziot	148.59	289	Pn	PKPdf	05 16 32.3	+6.9
CFR	Carcaliu	149.12	319	⇓P	PKPdf	05 16 31.3	+5.5
CFR	Carcaliu	149.12	319	⇓P	PKPdf	05 16 31.3	+5.6
KWP	Kalwaria	149.21	330	*e*PKP	PKPdf	05 16 32.2	+6.4
KWP	Kalwaria	149.21	330	*e*P	PKPdf	05 16 32.2	+6.4
EKA	Eskdalemuir Ar	149.32	3	PKPbc	PKPdf	05 16 31.2	+5.4
	comp=Z,4.9nm,0.6s,baz=344,slow=3.1,SNR=25						
BURAR	Bucovina Array	149.34	325	⇓P	PKPdf	05 16 32.9	+6.8
BURAR	Bucovina Array	149.34	325	⇓P	PKPdf	05 16 32.9	+6.8
VRI	Vrincioaia	149.57	321	⇓P	PKPdf	05 16 33.1	+6.6
VRI	Vrincioaia	149.57	321	⇓P	PKPdf	05 16 33.1	+6.7
BSEG	Bad Segeberg	149.68	347	*e*PKPbc	PKPdf	05 16 33.0	+6.6
BSEG				*e*PKPab	PKPab	05 16 39.8	-1.7
KOLS	Kolonicke sedl	149.91	329	*e*PKP	PKPdf	05 16 34.4	+7.5
STHS	Stebnicka Huta	150.03	331	*i* PKP	PKPdf	05 16 34.5	+7.4
RUE	Ruedersdorf	150.19	342	*e*PKPbc	PKPdf	05 16 34.4	+7.2
MLR	Muntele Rosu	150.23	321	PKPbc	PKPdf	05 16 34.1	+6.6
	comp=Z,9.3nm,0.7s,baz=10,slow=3.4,SNR=12						
CRVS	Cervenica-Dubn	150.31	330	*i* PKP	PKPdf	05 16 34.6	+7.1
VOIR		150.77	322	⇑P	PKPdf	05 16 36.3	+8.0
VOIR		150.77	322	⇑P	PKPdf	05 16 36.3	+8.0
KSP	Ksiaz	150.84	338	*e*PKP	PKPdf	05 16 36.2	+7.9
KSP	Ksiaz	150.84	338	⇓*i*PKP	PKPdf	05 16 36.2	+8.0
KSP				*e*		05 16 45.7	
DCN	Croghan	150.92	8	*e*P	PKPdf	05 16 34.6	+6.3
OKC	Ostrava-Krasne	150.99	335	*e*PKP	PKPdf	05 16 36.2	+7.7
KECS	Kecovo	151.05	330	*e*PKP	PKPdf	05 16 36.8	+8.2
KECS				*e*		05 16 46.1	
DLF	Lyons Farm	151.06	7	*e*P	PKPdf	05 16 34.8	+6.3
DRGR		151.18	326	⇑P	PKPdf	05 16 35.8	+6.9
DRGR		151.18	326	⇑P	PKPdf	05 16 35.8	+6.9
UPC	Upice	151.22	338	*e*PKPbc	PKPdf	05 16 36.6	+7.8
DPC	Dobruska-Polom	151.24	337	*e*PKPbc	PKPdf	05 16 36.9	+8.1
DPC				*e*PKPab	PKPab	05 16 47.3	-0.8
MORC	Moravsky Berou	151.27	335	*e*PKPbc	PKPdf	05 16 36.8	+7.9
CLL	Collm	151.46	342	⇓*i*PKP1	PKPdf	05 16 36.8	+7.7
CLL				*i* PKP2	PKPab	05 16 47.9	-1.1
CLL	Collm	151.46	342	⇓*i*PKP	PKPdf	05 16 36.8	+7.7
CLL				⇑*i*PKP	PKPab	05 16 47.9	-1.1
BRG	Berggiesshubel	151.57	341	*e*PKP	PKPdf	05 16 30.8	+1.5
BRG				*i*		05 16 37.4	
BRG				*i*		05 16 48.0	
BRG				PP	PP	05 20 24.0	+0.7
CLZ	Clausthal	151.63	346	*e*PKPbc	PKPdf	05 16 37.3	+8.0
PVCC	Panska Ves	151.68	340	*e*PKPbc	PKPdf	05 16 37.5	+8.0
PVCC				*e*PKPab	PKPab	05 16 49.4	-0.6
PSZ	Piszkesteto	151.74	330	*e*PKPbc	PKPdf	05 16 37.8	+8.2
VYHS	Vyhne	151.76	332	*i* PKP	PKPdf	05 16 37.9	+8.3
VYHS				*e*		05 16 49.6	
VRAC	Vranov	152.01	336	PKPbc	PKPdf	05 16 38.3	+8.4
	comp=Z,2.2nm,0.4s,baz=298,slow=3.7,SNR=3.9						
VRAC				PKPab	PKPab	05 16 49.9	-1.5
	comp=Z,2.7nm,0.4s,baz=283,slow=11,SNR=4.6						
PRU	Pruhonice	152.15	339	*e*PKP	PKPdf	05 16 37.9	+7.8
PRU				*e*		05 16 50.7	
TREC	Trest	152.42	337	*e*PKPbc	PKPdf	05 16 38.9	+8.4
NKC	Novy Kostel	152.58	342	*e*PKP	PKPdf	05 16 39.6	+8.9
NKC				*e*		05 16 52.4	
KHC	Kasperske Hory	153.21	339	*e*PKP	PKPdf	05 16 32.9	+1.3
KHC				*e*		05 16 40.8	
KHC				*e*		05 16 55.8	
GRA1	Grafenberg Arr	153.41	343	*e*PKPab	PKPab	05 16 56.9	-0.4
GEC2	GERESS Array S	153.42	339	*e*PKPbc	PKPdf	05 16 41.2	+9.3
GERES	GERESS Array B	153.42	339	PKP	PKPdf	05 16 31.9	0.0
	comp=Z,1.6nm,1.0s,slow=1.3,SNR=6.6						
GERES				PKPbc	PKPdf	05 16 41.0	+9.1
	comp=Z,3.0nm,0.9s,baz=27,slow=3.0,SNR=11						
GERES				PKPab	PKPab	05 16 56.1	-1.2
	comp=Z,1.7nm,0.6s,baz=27,slow=3.0,SNR=7.3						
WET	Wettzell	153.42	340	*e*PKPab	PKPab	05 16 56.8	-0.5
TNS	Taunus Mts	153.57	347	*e*PKPbc	PKPdf	05 16 41.8	+10
TNS				*e*PKPab	PKPab	05 16 57.0	-0.9
BAIF	Baives	154.40	353	*e*PKIKP	PKPdf	05 16 33.2	0.0
FUR	Furstenfeldbru	154.77	341	*e*PKPbc	PKPdf	05 16 44.3	+11
FUR				*e*PKPab	PKPab	05 17 02.3	-0.7
WATA	Walderalm	155.43	340	⇑*i*P	PKPdf	05 16 31.5	-3.2
	comp=Z,1.1nm,0.4s						
WATA	Walderalm	155.43	340	⇑*i*P	PKPab	05 17 05.3	-0.6
	comp=Z,4.1nm,0.5s						
WATA	Walderalm	155.43	340	⇑*i*P	PKPdf	05 16 31.5	-3.2
WATA				⇑*e*P		05 17 05.3	
WTTA	Wattenberg	155.47	340	⇑P	PKPdf	05 16 36.9	+2.2
	comp=Z,7.2nm,1.3s						
WTTA	Wattenberg	155.47	340	⇑*i*P	PKPab	05 17 05.8	-0.2
	comp=Z,10.0nm,0.7s						
WTTA	Wattenberg	155.47	340	⇑P	PKPdf	05 16 36.9	+2.2
WTTA				⇑*e*P		05 17 05.8	
MOTA	Moosalm	155.56	341	⇑*i*P	PKPdf	05 16 35.2	+0.4
	comp=Z,3.8nm,0.9s						
MOTA	Moosalm	155.56	341	⇑*i*P	PKPdf	05 16 44.3	+9.5
	comp=Z,2.8nm,0.9s						
MOTA	Moosalm	155.56	341	⇓*i*P	PKPab	05 17 06.2	-0.2
	comp=Z,8.1nm,0.9s						
MOTA	Moosalm	155.56	341	⇑P	PKPdf	05 16 35.2	+0.4
MOTA				⇑*e*P		05 16 44.3	
MOTA				⇓*e*P		05 17 06.2	
SQTA	Sankt Quirin	155.64	340	⇑*i*P	PKPdf	05 16 35.7	+0.7
	comp=Z,4.8nm,0.9s						
SQTA	Sankt Quirin	155.64	340	⇑*i*P	PKPab	05 17 06.4	-0.4
	comp=Z,9.7nm,0.9s						
SQTA	Sankt Quirin	155.64	340	⇑P	PKPdf	05 16 35.6	+0.7
SQTA				⇑*e*P		05 17 06.4	
MEZF	Maizieres J'vi	155.82	351	*e*PKIKP	PKPdf	05 16 35.3	+0.2
	comp=Z,24nm,1.2s						
DAVA	Damuels	155.97	342	⇑*i*P	PKPdf	05 16 36.1	+0.7
DAVA	Damuels	155.97	342	⇑*i*P	PKPab	05 17 07.7	-0.5
	comp=Z,9.3nm,0.8s						
DAVA	Damuels	155.97	342	⇑P	PKPdf	05 16 36.1	+0.7
HINF	Hinteralfeld	156.18	348	*e*PKIKP	PKPdf	05 16 35.6	0.0
ROSF	Rostrenen	156.29	5	*e*PKIKP	PKPdf	05 16 35.1	-0.6
DAVOX	Davos	156.43	342	PKPbc	PKPdf	05 16 50.9	+15
	comp=Z,2.1nm,0.6s,baz=168,slow=3.6,SNR=5.6						
DAVOX				PKPab	PKPab	05 17 09.4	-0.8
	comp=Z,10nm,0.7s,baz=8.1,slow=4.5,SNR=12						
LOR	Lormes	157.19	352	*e*PKIKP	PKPdf	05 16 36.7	-0.3
	comp=Z,39nm,1.5s						
SSF	Saint Saulge	157.44	353	*e*PKIKP	PKPdf	05 16 37.2	-0.1
BGF	Bois d'Agland	158.00	354	*e*PKIKP	PKPdf	05 16 38.3	+0.3
	comp=Z,12nm,0.8s						
TCF	Toulx Ste Croi	158.33	355	*e*PKIKP	PKPdf	05 16 38.4	0.0
	comp=Z,53nm,1.6s						
LPL	La Plagne	158.40	346	*e*PKIKP	PKPdf	05 16 38.5	0.0
LPG	La Plagne	158.41	346	*e*PKIKP	PKPdf	05 16 38.4	-0.1
MBDF	Montbardon	159.14	345	*e*PKIKP	PKPdf	05 16 39.4	0.0
	comp=Z,8.7nm,1.0s						
VIVF	Saint-Julien-l	159.44	349	*e*PKIKP	PKPdf	05 16 39.6	-0.1
CAF	Calviac	159.69	355	*e*PKIKP	PKPdf	05 16 40.0	0.0
	comp=Z,89nm,1.8s						
LFF	La Frestale	159.76	357	*e*PKIKP	PKPdf	05 16 40.0	-0.1
LASF	Ste Croix	160.32	351	*e*PKIKP	PKPdf	05 16 40.5	-0.2
PGF	Pioggiola	160.52	339	*e*PKIKP	PKPdf	05 16 40.4	-0.6
	comp=Z,57nm,1.2s						
LIC	Lamto	161.15	166	*e*PKIKP	PKPdf	05 16 41.3	-1.1
	comp=Z,11nm,1.1s						
MTLF	Montolieu	161.25	354	*e*PKIKP	PKPdf	05 16 41.8	+0.2
	comp=Z,13nm,1.0s						
EPF	Esparros	161.68	358	*e*PKIKP	PKPdf	05 16 41.7	-0.3
ESDC	Sonseca Array	164.77	10	PKPab	PKPab	05 17 45.3	-1.1
	comp=Z,1.5nm,0.8s,baz=344,slow=4.5,SNR=8.5						

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*ATH **20** 05:03:05.3, 38.15N×26.82E, h8^{km}, MD3.5/5, ML3.8*
*NEIC **20** 05:03:05.3, 38.15N×26.82E, h8^{km}, MD3.4(ISK), ML3.9(ATH), After ATH.*
*ISK **20** 05:03:07.0, 38.27N×26.57E, h18^{km}, MD3.4*
*CSEM **20** 05:03:07.0±0.1, 38.26N×26.65E, h12^{km}, ML3.9, Error ellipse: s-maj=3.7km s-min=1.9km az=59.0*
ISC 20 05:03:06.8±0.4**, 38.25N**±0.03×**26.57E**±0.03**, h10**^{km}**, n38, σ1§16**/52**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.12	11	*i* P	Pg	05 03 09.3	-0.4
URLA				*i* S	Sg	05 03 12.0	+0.3
IZM	Izmir	0.57	74	*i* PG	Pg	05 03 18.5	+0.2
IZM				*i* SG	Sg	05 03 26.9	+0.9
KDAG	Bornova	0.57	74	*i* P	Pg	05 03 17.3	-1.1
KDAG				*i* S	Sg	05 03 25.6	-0.5
SMG	Samos	0.58	158	*e*PB	Pg	05 03 14.0	-4.5
PRK	Paraskevi	1.02	347	*e*PB	Pb	05 03 27.8	+1.6
PRK				*e*SB	Sb	05 03 43.8	+4.3
AYVA	Ayvalik	1.06	5	*i* P	Pb	05 03 28.3	+1.4
AYVA				*i* S	Sb	05 03 46.1	+5.4
AKS	Akhisar	1.16	57	PN	Pn	05 03 28.4	-0.8
AYDN	Tasoluk	1.19	119	*i* P	Pb	05 03 30.2	+1.2
AYDN				*i* S	Sb	05 03 46.1	+1.7
BODT	Bodrum	1.32	153	PN	Pn	05 03 31.3	-0.1
MLSB	Milas	1.35	134	PN	Pn	05 03 31.9	+0.1
BDRM	Kayabasi	1.37	149	*i* P	Pn	05 03 33.4	+1.3
BDRM				*i* S	Sb	05 03 51.6	+2.1
APE	Apeiranthos	1.43	215	PN	Pn	05 03 32.9	-0.1
APE	Apeiranthos	1.43	215	*e*PG	Pg	05 03 33.0	-2.5
MANT	Manisa	1.58	80	*i* P	Pn	05 03 37.0	+1.8
MANT				*i* S	Sb	05 03 58.6	+2.9
EZN	Ezine	1.59	353	PN	Pn	05 03 34.7	-0.5
DAT	Datca	1.71	152	PN	Pn	05 03 37.7	+0.7
BALB	Balikesir	1.73	36	PN	Pn	05 03 37.1	-0.1
YER	Yerkesik	1.76	129	PN	Pn	05 03 37.5	-0.1
BTOK	Tokmak	1.90	37	*i* P	Pn	05 03 40.1	+0.5
DENT	Denizli	2.01	103	*e*PN	Pn	05 03 41.2	0.0
DNZL	Cakiroluk	2.04	105	*i* P	Pg	05 03 46.0	-1.5
DNZL				*i* S	Sg	05 04 14.8	+0.1
DST	Dursunbey	2.10	49	*e*PN	Pn	05 03 42.4	-0.2
ATH	Athens Observa	2.27	264	*e*PG	Pg	05 03 51.0	-1.1
GDZ	Gediz	2.43	69	*i* P	Pg	05 03 53.4	-2.0
GDZ				*i* S	Sg	05 04 24.0	-3.9
KCT	Karacabey	2.45	34	*e*PN	Pn	05 03 46.4	-1.1
FETY	Fethiye	2.57	128	*e*PN	Pn	05 03 49.3	+0.1
GOLH	Golhisar	2.58	112	*i* P	Pg	05 03 56.5	-1.9
GOLH				*i* S	Sg	05 04 30.9	-1.9
ULDT	Uludag	2.75	46	*i* P	Pg	05 03 57.1	-4.7
ULDT				*i* S	Sg	05 04 34.1	-4.4
ALT	Altintas	2.89	73	*e*PN	Pn	05 03 52.8	-1.0
TKTP	Tekketepe	2.97	93	*i* P	Pg	05 04 02.5	-3.6
TKTP				*i* S	Sg	05 04 47.2	+1.5
RDO	Rodhopi	3.00	345	*e*PN	Pn	05 03 56.7	+1.2
KDZ	Kurdzhali	3.51	346	*i* P	Pn	05 04 03.0	+0.3
ESKT	Eskisehir	3.58	68	*i* P	Pg	05 04 13.6	-4.7
ESKT				*i* S	Sg	05 05 02.4	-3.6
RZN	Rozhen	3.72	338	*i* P	Pn	05 04 06.0	+0.4
MMB	Musomiste	3.99	328	*i* P	Pn	05 04 09.0	-0.5
KIZT	Kizilcal	4.21	80	*e*PN	Pn	05 04 11.9	-0.7
KKB	Krupnik	4.50	325	*i* P	Pn	05 04 17.0	+0.3
VTS	Vitosha	5.04	331	*i* P	Pn	05 04 25.0	+0.6

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*NDI **20** 05:35:01.8±6.6, 34.88N×73.00E, h10^{km}, mb4.9, ML4.6, mb4.9(NEIC)*
*BJI **20** 05:35:01.1, 34.77N×73.04E, h11^{km}, mB5.0, mb4.7, ML5.4, Ms4.6, Msz4.3*
*HRVD **20** 05:35:02.9±0.4, 34.68N×73.12E, h20^{km}±1^{km}, MW4.8/51, Centroid moment Tensor Solution. LP body waves: s19,c22;Mantle waves: s51,c74; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.24±.17; $M_{\theta\theta}$-0.40±.12; $M_{\phi\phi}$-1.84±.12; $M_{r\theta}$0.55±.24; $M_{\theta\phi}$0.87±.07; $M_{\phi r}$-0.12±.18; Best double couple: $M_0$2.313×10^{16} NP1:ϕ_s345°, δ42°, λ106°. NP2:ϕ_s144°, δ50°, λ76°. Principal axes: T 2.35, Plg78°, Azm356°; N -.078, Plg11°, Azm153°; P -2.276, Plg4°, Azm244°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **20** 05:35:02.9±0.2, 34.71N×73.13E, h10^{km}, mb4.9/74 Error ellipse: s-maj=5.4km s-min=2.9km az=210.0*
NEIC Felt strongly at Chakesar and in Abbottabad, Batagram, Kohistan and Mansehra. Also felt at Peshawar.
*MOS **20** 05:35:03.7±0.9, 34.83N×73.07E, h22^{km}, mb5.1/56, MS4.0/14, Error ellipse: s-maj=7.7km s-min=4.2km az=124.9*
*NNC **20** 05:35:10.4±3.2, 35.28N×72.20E, mpv4.9, Error ellipse: s-maj=37.2km s-min=26.7km az=133.0*
*IDC **20** 05:35:12.2±3.4, 34.91N×73.18E, h78^{km}±30^{km}, mb4.4/22, mb1 4.6/25, mb1mx4.6/26, mbtmp4.8/25, MS3.9/13, Ms1 3.9/13, ms1mx3.7/26, Error ellipse: s-maj=13.3km s-min=10.7km az=133.0*
ISC 20 05:35:01.9±0.1**, 34.75N**±0.02×**73.18E**±0.02**, h13**^{km}**, h13**^{km}±2.0^{km}**:pP-P, n354, σ1§28**/398**, mb4.9**/107**, MS4.0**/30**, 30C-18D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.09	176	P	Pb	05 35 25.6	+3.5
CEP	Cherat	1.40	229	⇓P	Pn	05 35 28.3	+1.1
SRNI	Srinagar	1.52	115	*e*P	Pn	05 35 33.0	+4.0
SRNI				*e*SG	Sg	05 35 58.0	+5.2
THW	Thamme Wali	2.29	212	⇓P	Pn	05 35 43.6	+3.6
JMU	Jammu	2.48	144	*e*P	Pg	05 35 55.5	+4.0
JMU				*e*S	Sg	05 36 26.5	+1.9
THN	Thein Dam	3.13	137	*e*P	Pn	05 35 56.3	+4.3
THN				*e*SB	Sb	05 36 39.9	+4.6
SBDP	Sheikh Budin	3.15	220	P	Pn	05 35 56.3	+4.1
DLH	Dalhousie	3.20	133	*e*PB	Pb	05 35 58.0	-0.2
DLH				*e*x	Sn	05 36 39.0	+7.7
DRP	Derazinda	3.90	221	P	Pn	05 36 05.6	+2.7
BHK	Bhakra	4.29	140	*e*PB	Pb	05 36 17.8	+0.9
BHK				*e*x	x	05 36 18.6	
SDNR	Sundarnagar	4.54	135	*e*P	Pn	05 36 14.0	+2.1
SDNR				*e*S	Sn	05 37 07.6	+2.5
SMLA	Simla	4.92	136	*e*P	Pn	05 36 19.1	+1.7
SMLA				*e*P		05 36 19.8	
SMLA				*e*S	Sn	05 37 12.6	-2.3
SMLA				*e*x	x	05 37 18.8	
SMLA				AML	AML	05 37 42.0	
	comp=E,3µm,0.7s						
SMLA				AML	AML	05 37 42.6	
	comp=N,2µm,0.5s						
KLP	Kalpa	5.33	126	*e*P	Pn	05 36 26.0	+3.0
KLP				*e*S	Sn	05 37 28.9	+4.0
KLP				AML	AML	05 37 59.2	
	comp=E,3µm,0.7s						
KLP				AML	AML	05 37 59.5	
	comp=N,4µm,1.0s						
DDI	Dehra Dun	6.03	136	*e*P	Pn	05 36 34.0	+0.9
DDI				*e*x	Sn	05 37 48.5	+5.8
NDI	New Delhi	6.96	149	*e*P	Pn	05 36 47.0	+1.0
NDI				*e*S	Sn	05 38 00.5	-5.2
NDI				AML	AML	05 38 58.2	
	comp=E,364nm,0.6s						
KHET	Khetri	7.02	161	*e*P	Pn	05 36 47.0	0.0
KHET				*e*S	Sn	05 38 03.6	-3.8
KHET				AML	AML	05 38 08.3	
	comp=N,208nm,0.5s						
KHET				AML	AML	05 38 09.3	
	comp=E,386nm,0.5s						
KALG	Kalgarh	7.04	136	*e*P	Pn	05 36 48.4	+1.0
KALG				*e*S	Sn	05 38 06.7	-1.3
KALG				AML	AML	05 38 44.1	
	comp=E,708nm,0.6s						
KUDL	Kundal	7.16	156	*e*P	Pn	05 36 49.2	+0.2
KUDL				*e*S	Sn	05 38 09.5	-1.5
SONA	Sohna	7.28	152	*e*S	Sn	05 38 11.7	-2.3
SONA				AML	AML	05 38 13.7	
	comp=E,308nm,0.3s						
SONA				AML	AML	05 38 13.8	
	comp=N,165nm,0.5s						
AML	Almayashu	7.38	3	P	Pn	05 36 54.5	+2.5
	SNR=71						
KZA	Kyzart	7.49	12	P	Pn	05 36 56.4	+2.8
	SNR=56						
UCH	Uchtor	7.54	8	P	Pn	05 36 56.8	+2.6
	SNR=115						
ULHL	Ulahol	7.86	17	P	Pn	05 37 01.9	+3.2
	SNR=7.3						
PTH	Pithoragarh	7.90	129	*e*P	Pn	05 36 59.0	-0.3
PTH				*e*S	Sn	05 38 25.0	-4.4
EKS2	Erkin-Say	7.91	3	P	Pn	05 37 01.8	+2.4
	SNR=34						
AAK	Ala-Archa	7.94	7	P	Pn	05 37 02.5	+2.7
	SNR=25						
AAK	Ala-Archa	7.94	7	⇑Pn	Pn	05 37 02.3	+2.5
	comp=N,41nm,0.8s						
AAK				⇓Sn	Sn	05 38 28.4	-1.9
	comp=N,360nm,1.1s						
AAK				⇓Rg		05 39 40.2	
	comp=N,1µm,10.1s						
AAK	Ala-Archa	7.94	7	*e*P	Pn	05 37 00.7	+0.8
	comp=N,68nm,0.6s						
AAK	Ala-Archa	7.94	7	*e*P	Pn	05 37 00.7	+0.9
AAK				pmax	pmax		
	comp=Z,68nm,0.6s						
LGTI	Lohaghat	7.99	129	*e*P	Pn	05 37 03.0	+2.5
LGTI				*e*S	Sn	05 38 28.0	-3.5
KBK	Karagaybulak	8.02	9	P	P	05 37 03.7	+2.8
	SNR=18						
FRU	Bishkek	8.15	7	*e*P	P	05 37 07.0	+4.3
FRU				pmax	pmax		
	comp=Z,100nm,1.8s						
CHMS	Chumysh	8.33	8	P	P	05 37 07.3	+2.1
	SNR=9.7						
AJM	Ajmer	8.34	171	*e*P	P	05 37 05.0	-0.4
AJM				*e*S	Sn	05 38 31.4	-8.9
AJM				AML	AML	05 38 37.6	
	comp=E,341nm,0.6s						
AJM				AML	AML	05 38 38.9	
	comp=N,370nm,0.5s						
TKM2	Tokmak 2	8.37	12	P	P	05 37 08.8	+3.0
	SNR=60						
KK31	Karatay Array	8.60	347	⇑Pn	P	05 37 09.7	+0.8
	comp=N,45nm,0.5s,baz=161,slow=12,SNR=455						

KK31				⇓Sn	**Sn**	**05 38 43.5**	**-3.2**
	comp=N,186nm,0.8s,baz=174,slow=20,SNR=12						
AAA	**Alma-Ata**	**9.00**	**18**	*i* P	**P**	**05 37 18.1**	**+3.6**
AAA				*e*S	**Sn**	**05 38 54.6**	**-2.1**
AAA				pmax	pmax		
	comp=Z,400nm,2.1s						
AAA				smax			
	comp=N,400nm,1.1s						
AAA				MLR	MLR		
	comp=Z,3µm,6.3s						
KOLN	**Koldanda**	**11.30**	**125**	*e*Pn	**P**	**05 37 44.6**	**-1.6**
KOLN				*e*Sn	**S**	**05 39 46.6**	**-6.7**
	comp=Z,486nm,0.8s						
BHJ	**Bhuj**	**11.86**	**196**	*e*P	**P**	**05 37 52.3**	**-1.4**
BHJ				*e*S	**S**	**05 39 55.6**	**-11**
BHJ				AML	AML	05 41 33.2	
	comp=E,63nm,0.7s						
BHJ				AML	AML	05 41 42.2	
	comp=N,93nm,0.8s						
GKN	**Gorkha**	**11.87**	**121**	*e*Pn	**P**	**05 37 51.4**	**-2.5**
GKN				*e*Sn	**S**	**05 39 59.1**	**-8.0**
	comp=N,717nm,0.8s						
ALBI	**Allahabad**	**12.01**	**139**	*e*x	x	05 38 51.5	
BHPL	**Bhopal**	**12.05**	**161**	*e*P	**P**	**05 37 54.8**	**-1.5**
BHPL				*e*x	x	05 39 51.5	
DMN	**Daman**	**12.44**	**122**	*e*Pn	**P**	**05 37 59.1**	**-2.4**
DMN				*e*Sn	**S**	**05 40 13.3**	**-7.6**
	comp=N,539nm,0.8s						
KKN	**Kakani**	**12.45**	**121**	*e*Pn	**P**	**05 37 59.4**	**-2.3**
KKN				*e*Sn	**S**	**05 40 13.6**	**-7.7**
	comp=N,390nm,0.8s						
VAN	**Vannovskaya**	**12.57**	**289**	⇑*i*P	**P**	**05 38 01.4**	**-1.8**
VAN				S	**S**	**05 40 18.7**	**-5.3**
PKI	**Pulchoki**	**12.68**	**121**	*e*Pn	**P**	**05 38 02.4**	**-2.3**
PKI				*e*Sn	**S**	**05 40 18.0**	**-8.6**
	comp=N,512nm,1.0s						
GUN	**Gumba**	**12.81**	**119**	*e*Pn	**P**	**05 38 04.4**	**-2.1**
GUN				*e*Sn	**S**	**05 40 21.6**	**-8.3**
	comp=N,256nm,0.8s						
JIRN	**Jiri**	**13.18**	**119**	*e*Pn	**P**	**05 38 09.3**	**-2.1**
JIRN				*e*Sn	**S**	**05 40 30.0**	**-8.8**
	comp=N,309nm,0.6s						
MK31	**Makanchi Array**	**13.86**	**27**	⇑P	**P**	**05 38 21.9**	**+1.7**
	comp=N,13nm,0.7s,baz=211,slow=15,SNR=36						
MKAR	**Makanchi Array**	**13.86**	**27**	P	**P**	**05 38 21.2**	**+1.0**
	comp=N,0.4nm,0.3s,baz=209,slow=12,SNR=25						
MKAR				LR	LR	05 43 11.5	
	comp=N,266nm,18.6s,baz=213,slow=35						
WMQ	**Urumqi**	**14.42**	**47**	P	**P**	**05 38 27.8**	**+0.2**
WMQ				AP		05 38 31.5	
WMQ				XP		05 38 34.5	
WMQ				*e*S	**S**	**05 41 08.5**	**+0.3**
WMQ				AMB	AMB		
	comp=Z,50nm,1.2s						
WMQ				AMB	AMB		
	comp=Z,330nm,5.2s						
WMQ				LR	LR		
	comp=N,2µm,8.2s						
WMQ				LR	LR		
	comp=E,3µm,6.4s						
WMQ				LR	LR		
	comp=Z,1µm,15.1s						
NGP	**Nagpur**	**14.50**	**158**	*e*P	**P**	**05 38 25.9**	**-3.0**
NGP				*e*x	**S**	**05 41 01.9**	**-8.4**
BLSP	**Bilaspur**	**14.82**	**146**	*e*P	**P**	**05 38 33.2**	**+0.2**
BLSP				*e*x	**S**	**05 41 07.2**	**-11**
BLSP				*e*x	x	05 41 08.4	
BOK	**Bokaro**	**15.54**	**131**	*e*x	**P**	**05 38 38.0**	**-4.4**
BOK				*e*x	**S**	**05 41 19.9**	**-15**
LSA	**Lhasa**	**16.01**	**103**	*e*P	**P**	**05 38 47.6**	**-0.8**
	comp=Z,28nm,0.8s						
LSA	**Lhasa**	**16.01**	**103**	*e*P	**P**	**05 38 47.6**	**-0.8**
LSA				pmax	pmax		
	comp=Z,28nm,0.8s						
POO	**Poona**	**16.17**	**178**	*e*x	x	05 39 00.3	
POO				AMb	AMB	05 39 03.0	
	comp=Z,38nm,1.4s						
KURK	**Kurchatov**	**16.44**	**12**	⇓P	**P**	**05 38 51.1**	**-2.6**
	comp=Z,19nm,1.1s						
KURK				⇓S	**S**	**05 42 01.5**	**+6.0**
	comp=Z,23nm,1.4s						
KURK	**Kurchatov**	**16.44**	**12**	*e*P	**P**	**05 38 50.7**	**-3.1**
	comp=Z,25nm,0.8s						
KURK	**Kurchatov**	**16.44**	**12**	*e*P	**P**	**05 38 50.7**	**-3.0**
KURK				pmax	pmax		
	comp=Z,25nm,0.8s						
LATR	**Latur**	**16.54**	**169**	*e*P	**P**	**05 38 55.0**	**-0.2**
WBK	**Wadi Bani Khal**	**17.35**	**230**	P	**P**	**05 39 07.2**	**+1.8**
	SNR=15						
KAD	**Karad**	**17.39**	**177**	*e*P	**P**	**05 39 05.1**	**-0.8**
KAD				*e*x	**S**	**05 42 11.5**	**-6.1**
AB31	**Akbulak array**	**17.48**	**330**	⇑P	**P**	**05 39 04.8**	**-2.0**
	comp=Z,56nm,1.1s,baz=142,slow=13,SNR=265						
AB31				⇓S	**S**	**05 42 07.3**	**-12**
	comp=Z,19nm,0.8s,baz=156,slow=21,SNR=6.1						
ASHO	**Ashiyiah**	**17.92**	**241**	P	**P**	**05 39 16.6**	**+4.2**
	SNR=10						
HYB	**Hyderabad**	**17.92**	**163**	*i* P	**P**	**05 39 09.0**	**-3.4**
HYB				*e*S	**S**	**05 42 20.5**	**-9.0**
HYB	**Hyderabad**	**17.92**	**163**	*e*P	**P**	**05 39 09.0**	**-3.4**
	comp=Z,40nm,1.0s						
HYB				*e*S	**S**	**05 42 20.5**	**-9.0**
HYB	**Hyderabad**	**17.92**	**163**	*e*P	**P**	**05 39 09.0**	**-3.4**
HYB				pmax	pmax		
	comp=Z,40nm,1.0s						
CAL	**Calcutta**	**17.99**	**129**	*e*x	x	05 45 50.5	
VOSK	**Vostochnaya**	**18.04**	**356**	⇑P	**P**	**05 39 11.7**	**-2.0**
	comp=Z,19nm,0.8s						
VOSK				⇓S	**S**	**05 42 29.1**	**-3.0**
	comp=Z,37nm,1.8s						
JMDO	**Jabal Madar**	**18.07**	**231**	⇑P	**P**	**05 39 17.0**	**+2.6**
	SNR=11						
BVA0	**Borovoye Array**	**18.38**	**355**	⇑P	**P**	**05 39 19.0**	**+1.0**
	comp=Z,8.0nm,1.1s,baz=165,slow=11,SNR=7.9						
BVA0				⇑S	**S**	**05 42 40.5**	**+0.8**
	comp=Z,4.0nm,1.1s,baz=174,slow=22,SNR=5.8						
BVAR	**Borovoye Array**	**18.38**	**355**	P	**P**	**05 39 17.0**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=146,slow=11,SNR=67						
BVAR				S	**S**	**05 42 42.5**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=160,slow=21,SNR=2.9						
BSY	**Bisya**	**18.39**	**234**	P	**P**	**05 39 22.9**	**+4.5**
	SNR=10.0						
BRVK	**Borovoye**	**18.42**	**354**	*e*P	**P**	**05 39 18.7**	**+0.2**
	comp=Z,48nm,0.8s						
BRVK	**Borovoye**	**18.42**	**354**	*e*P	**P**	**05 39 18.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,48nm,0.8s						
ARQ	**Araqi**	**18.45**	**236**	P	**P**	**05 39 23.8**	**+4.7**
	SNR=14						
SHL	**Shillong**	**18.56**	**115**	*e*P	**P**	**05 39 17.0**	**-3.4**
SHL				*e*x	x	05 42 30.0	
CHKZ	**Chkalovo**	**19.01**	**355**	⇑P	**P**	**05 39 24.1**	**-1.5**
	comp=Z,20nm,0.8s						
CHKZ				⇓S	**S**	**05 42 50.4**	**-3.7**
	comp=Z,26nm,1.6s						
CHKZ	**Chkalovo**	**19.01**	**355**	*e*P	**P**	**05 39 24.3**	**-1.3**
	comp=Z,3µm,0.1s						
CHKZ	**Chkalovo**	**19.01**	**355**	*e*P	**P**	**05 39 24.3**	**-1.3**
CHKZ				pmax	pmax		
	comp=Z,3µm,0.1s						
AKTK	**Aktyubinsk**	**19.18**	**329**	P	**P**	**05 39 27.8**	**+0.1**
AKTK				S	**S**	**05 42 54.0**	**-4.1**
AKTO	**Aktyubinsk**	**19.18**	**329**	⇑P	**P**	**05 39 27.2**	**-0.6**
	comp=Z,30nm,0.8s						
AKTO				⇑S	**S**	**05 42 47.7**	**-10**
	comp=Z,10nm,1.2s						
AKTO	**Aktyubinsk**	**19.18**	**329**	P	**P**	**05 39 27.8**	**+0.1**
	comp=Z,6.8nm,0.3s,baz=132,slow=11,SNR=107						
AKTO				S	**S**	**05 42 54.0**	**-4.1**
	comp=Z,0.3nm,0.3s,baz=253,slow=19,SNR=4.1						
VIS	**Vishakhapatnam**	**19.22**	**149**	*e*P	**P**	**05 39 28.2**	**-0.2**
ZAL	**Zalesovo**	**20.85**	**20**	P	**P**	**05 39 45.5**	**-0.2**
	comp=Z,40nm,0.7s,baz=264,slow=8.1,SNR=22						
ZAL				S	**S**	**05 43 32.5**	**-0.5**
	comp=Z,8.3nm,0.9s,baz=180,slow=20,SNR=6.7						
NVS	**Novosibirsk**	**21.28**	**16**	*e*P	**P**	**05 39 49.2**	**-0.8**
NVS				*e*S	**S**	**05 43 39.7**	**-1.4**
NVS				pmax	pmax		
	comp=Z,114nm,1.4s,mb5.0						
NVS				pmax	pmax		
	comp=N,178nm,1.5s						
NVS				smax			
	comp=N,192nm,1.6s						
ORR	**Orenburg**	**21.46**	**327**	⇑*i*P	**P**	**05 39 51.3**	**-0.6**
ORR				*i*		05 43 46.3	
ORR				pmax	pmax		
	comp=Z,130nm,0.8s,mb5.3						
GTA	**Gaotai**	**21.72**	**70**	P	**P**	**05 39 56.4**	**+1.8**
GTA				AP		05 40 03.4	
GTA				XP		05 40 06.9	
GTA				S	**S**	**05 43 53.5**	**+4.0**
GTA				XS		05 44 04.1	
GTA				SS	SS	05 44 31.5	+5.1
GTA				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.3						
GTA				AMB	AMB		
	comp=Z,170nm,4.6s						
GTA				LR	LR		
	comp=N,340nm,10.6s,MS4.3						
GTA				LR	LR		
	comp=E,490nm,11.0s,MS4.3						
GTA				LR	LR		
	comp=Z,540nm,11.4s,MS4.2						
MNGI	**Mangalore**	**21.76**	**176**	*e*P	**P**	**05 39 56.8**	**+1.6**
MNGI				*e*S	**S**	**05 43 57.1**	**+6.6**
KBD	**Kabd**	**22.30**	**263**	*e*P	**P**	**05 40 01.3**	**+0.8**
KBD				AMb	AMB	05 40 05.9	
	comp=Z,754nm,1.3s						
MIB	**Mutribah**	**22.37**	**264**	*e*P	**P**	**05 40 02.3**	**+1.0**
MIB				AMb	AMB	05 40 06.6	
	comp=Z,368nm,1.1s,mb5.7						
HASS	**Wahat al Ahsa’**	**22.42**	**251**	P	**P**	**05 39 56.6**	**-5.2**
RDF	**Al-Radifah**	**22.51**	**262**	*e*P	**P**	**05 40 03.5**	**+0.9**
RDF				AMb	AMB	05 40 05.8	
	comp=Z,246nm,0.9s,mb5.6						
NAY	**Al-Naaiem**	**22.64**	**263**	*e*P	**P**	**05 40 04.9**	**+1.0**
NAY				AMb	AMB	05 40 10.9	
	comp=Z,144nm,1.4s,mb5.2						
DGRG	**David-gareji**	**22.82**	**295**	P	**P**	**05 40 07.1**	**+1.6**
GNI	**Garni**	**23.16**	**292**	P	**P**	**05 40 12.7**	**+3.8**
	comp=Z,44nm,0.8s,mb4.9,baz=351,slow=4.4,SNR=18						
GNI				LR	LR	05 50 19.2	
	comp=Z,166nm,21.7s,MS3.5,baz=211,slow=39						
GNI	**Garni**	**23.16**	**292**	*e*P	**P**	**05 40 12.0**	**+3.1**
	comp=Z,156nm,1.1s,mb5.3						
GNI	**Garni**	**23.16**	**292**	*e*P	**P**	**05 40 12.0**	**+3.1**
GNI				pmax	pmax		
	comp=Z,155nm,1.1s						
MTA	**Mtatsminda**	**23.29**	**296**	P	**P**	**05 40 12.7**	**+2.6**
TI2	**Plekhanov**	**23.33**	**296**	⇓*i*P	**P**	**05 40 12.4**	**+1.9**
TBLG	**Delisi**	**23.34**	**296**	P	**P**	**05 40 13.6**	**+3.0**
SVE	**Sverdlovsk**	**23.67**	**343**	*e*P	**P**	**05 40 16.0**	**+2.3**
SVE				MLR	MLR		
	comp=N,500nm,9.0s						
SVE				MLR	MLR		
	comp=E,400nm,9.0s						
SVE				MLR	MLR		
	comp=Z,650nm,9.0s						
ARU	**Arti**	**23.88**	**340**	*e*P	**P**	**05 40 15.1**	**-0.5**
	comp=Z,65nm,1.1s,mb5.0						
ARU	**Arti**	**23.88**	**340**	⇑*i*P	**P**	**05 40 17.0**	**+1.4**
ARU				*e*		05 40 47.2	
ARU				*e*S	**S**	**05 44 24.6**	**-3.4**
ARU				*e*SS	SS	05 45 10.3	-8.0
ARU				pmax	pmax		
	comp=Z,42nm,0.9s,mb4.9						
ARU				MLR	MLR		
	comp=Z,300nm,14.0s,MS3.9						
ARU				MLR	MLR		
	comp=N,200nm,13.0s,MS3.8						
ARU				MLR	MLR		
	comp=E,100nm,14.0s,MS3.8						
BHD	**Baghdad**	**23.89**	**275**	*e*x	x	05 40 16.0	
BHD				*e*x	x	05 44 36.0	
HAKT	**HAKKARI**	**23.92**	**285**	*i* P	**P**	**05 40 18.5**	**+2.3**
AKH	**Akhalkalaki**	**24.22**	**295**	P	**P**	**05 40 22.6**	**+3.5**
DIGO	**Kars**	**24.22**	**292**	*i* P	**P**	**05 40 21.1**	**+1.9**
ONI	**Oni**	**24.41**	**298**	P	**P**	**05 40 23.9**	**+2.9**
MSL	**Mosul**	**24.50**	**282**	*e*x	x	05 40 25.0	
MSL				*e*x	x	05 45 05.5	
MSL				*e*x	x	05 46 14.5	
ABTO	**Aybut**	**24.80**	**231**	P	**P**	**05 40 27.6**	**+2.6**
	SNR=14						
LZH	**Lanzhou**	**24.98**	**78**	*e*P	**P**	**05 40 30.0**	**+3.5**
LZH				AP		05 40 35.5	
LZH				XP		05 40 39.5	
LZH				PP	PP	05 41 07.0	+3.0
LZH				*e*S	**S**	**05 44 50.1**	**+3.1**
LZH				XS		05 44 57.1	
LZH				*e*SS	SS	05 45 48.1	+2.2
LZH				AMB	AMB		
	comp=Z,50nm,1.5s,mb4.8						
LZH				LR	LR		
	comp=N,360nm,13.5s						
LZH				LR	LR		
	comp=Z,630nm,14.6s,MS4.2						
LZH	**Lanzhou**	**24.98**	**78**	*e*P	**P**	**05 40 30.0**	**+3.5**
	comp=Z,50nm,1.5s,mb4.8						
LZH				pP		05 40 35.5	
LZH				sP		05 40 39.5	
LZH				PP	PP	05 41 07.0	+3.0
LZH				*e*S	**S**	**05 44 50.1**	**+3.1**
LZH				sS		05 44 57.1	
LZH				*e*SS	SS	05 45 48.1	+2.2
LZH				LR	LR		
	comp=Z,640nm,14.6s,MS4.3						
GOF	**Gofitskoye**	**25.18**	**303**	*e*P	**P**	**05 40 30.0**	**+1.6**
GOF				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.2						
KIV	**Kislovodsk**	**25.19**	**301**	*e*P	**P**	**05 40 29.5**	**+1.0**
	comp=Z,38nm,0.9s,mb4.9						
KIV				LR	LR		
	comp=Z,68nm,22.0s,MS3.1						
KIV	**Kislovodsk**	**25.19**	**301**	*e*P	**P**	**05 40 29.6**	**+1.1**
KIV				*e*S	**S**	**05 44 46.8**	**-3.7**
KIV				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,252nm,19.0s,MS3.8						
RYDS	**Riyadh**	**25.32**	**253**	P	**P**	**05 40 28.4**	**-1.4**
CD2	**Chengdu**	**25.93**	**90**	⇓*i*P	**P**	**05 40 37.4**	**+1.9**
CD2				S	**S**	**05 45 12.9**	**+10**
CD2				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.2						
CD2				LR	LR		
	comp=N,600nm,7.1s						
CD2				LR	LR		
	comp=Z,240nm,4.8s						
MOY	**Mondy**	**26.16**	**41**	*e*P	**P**	**05 40 44.8**	**+7.3**
MARD	**Mardin**	**26.26**	**285**	*i* P	**P**	**05 40 39.2**	**+0.7**
TRD	**Trivandrum**	**26.35**	**172**	*e*x	x	05 44 15.7	
TRD				*e*x	x	05 48 29.7	
MZLS	**Mizel**	**26.53**	**254**	P	**P**	**05 40 42.2**	**+1.0**
SOC	**Sochi**	**27.26**	**299**	*e*P	**P**	**05 40 47.8**	**+0.2**
SOC				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.7						
SOC				MLR	MLR		
	comp=Z,397nm,21.0s,MS4.0						
KMI	**Kunming**	**27.27**	**103**	P	**P**	**05 40 57.2**	**+9.3**
	comp=Z,14nm,1.1s,mb4.4						
KMI				pP	pP	05 41 00.0	+8.2
KMI				sP	sP	05 41 01.2	+7.7
KMI				PP	PP	05 41 42.9	+8.0
KMI				PPP	PPP	05 41 54.9	+8.0
KMI				S	**S**	**05 45 33.3**	**+8.4**
KMI				sS		05 45 38.0	
KMI				SS	SS	05 46 46.5	+5.5
KMI				SSS	SSS	05 47 04.6	+5.5
KMI				LR	LR		
	comp=Z,250nm,11.5s,MS4.0						
KMI	**Kunming**	**27.27**	**103**	P	**P**	**05 40 57.2**	**+9.3**
KMI				*SP	sP	05 41 01.2	+7.7
KMI						05 41 42.9	
KMI				PPP	PPP	05 41 54.9	+8.0
KMI				S	**S**	**05 45 33.3**	**+8.4**
KMI				SS	SS	05 46 46.5	+5.5
KMI				SSS	SSS	05 47 04.6	+5.5
KMI				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.4						
KMI				MLR	MLR		
	comp=Z,250nm,11.5s,MS4.0						
HILS	**Ha’il**	**27.79**	**263**	P	**P**	**05 40 53.9**	**+1.3**
SONM	**Songino Array**	**27.94**	**52**	P	**P**	**05 40 54.9**	**+1.1**
	comp=Z,5.2nm,0.8s,mb4.2,baz=248,slow=8.4,SNR=15						
SONM				LR	LR	05 53 52.1	
	comp=Z,869nm,18.4s,MS4.4,baz=225,slow=40						
PALK	**Pallekele**	**28.21**	**164**	*e*P	**P**	**05 40 57.9**	**+1.4**
ULN	**Ulaanbaatar**	**28.37**	**52**	P	**P**	**05 40 57.4**	**-0.2**
ULN				LR	LR		
	comp=Z,787nm,20.0s,MS4.3						
KAMS	**Al Khamasin**	**29.04**	**248**	P	**P**	**05 41 10.2**	**+6.4**
GYA	**Guiyang**	**29.87**	**97**	⇑*i*P	**P**	**05 41 11.1**	**-0.3**
GYA				AP	pP	05 41 15.8	+0.5
GYA				XP	sP	05 41 18.9	+1.9
GYA				PP	PP	05 42 08.3	-0.4
GYA				S	**S**	**05 46 06.0**	**-0.7**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GYA				AMB	AMB		
	comp=Z,140nm,3.0s						
GYA				LR	LR		
	comp=N,540nm,16.7s,MS4.5						
GYA				LR	LR		
	comp=E,680nm,16.8s,MS4.5						
GYA				LR	LR		
	comp=Z,710nm,17.0s,MS4.4						
KBRS	**Khaybar**	**30.51**	**262**	P	**P**	**05 41 19.0**	**+2.1**
HHC	**Hu-ho-hao-te**	**30.75**	**67**	*e*P	**P**	**05 41 18.3**	**-0.7**
HHC				AP	pP	05 41 22.8	-0.1
HHC				XP	sP	05 41 26.0	+1.4
HHC				PP	PP	05 42 16.5	-3.6
HHC				PCP	PcP	05 44 16.3	-0.3
HHC				S	**S**	**05 46 20.5**	**0.0**
HHC				SCP		05 47 57.3	
HHC				SS	SS	05 47 59.4	-3.4
HHC				SCS	ScS	05 51 52.3	-0.5
HHC				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
HHC				AMB	AMB		
	comp=Z,130nm,5.5s						
HHC				LR	LR		
	comp=N,360nm,13.2s,MS4.3						
HHC				LR	LR		
	comp=E,280nm,12.1s,MS4.3						
HHC				LR	LR		
	comp=Z,230nm,14.3s,MS4.0						
ENH	**Enshi**	**30.83**	**88**	*e*P	**P**	**05 41 20.4**	**+0.7**
	comp=Z,19nm,0.8s,mb5.0						
OBN	**Obninsk**	**32.42**	**320**	⇓*e*P	**P**	**05 41 32.5**	**-0.9**
OBN				*e*		05 42 41.2	
OBN				*e*S	**S**	**05 46 39.5**	**-6.8**
OBN				pmax	pmax		
	comp=Z,56nm,2.0s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,16.0s,MS3.9						
KLMR	**Klimovskoe**	**33.87**	**331**	*e*P	**P**	**05 41 45.8**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,130nm,1.6s,mb5.6						
WHN	**Wuhan**	**34.74**	**85**	*e*P	**P**	**05 41 55.0**	**+1.2**
AKASG	**Malin Array Be**	**35.43**	**310**	P	**P**	**05 41 58.5**	**-1.0**
	comp=Z,2.6nm,0.5s,mb4.4,baz=80,slow=7.8,SNR=28						
AKASG				PP	PP	05 43 18.6	-0.7
	comp=Z,2.8nm,0.7s,baz=82,slow=10.0,SNR=7.5						
AKASG				PcP	PcP	05 44 27.4	-2.1
	comp=Z,2.4nm,0.8s,baz=84,slow=3.5,SNR=4.6						
AKASG	**Malin Array Be**	**35.43**	**310**	P	**P**	**05 41 58.5**	**-1.0**
AKASG				PP	PP	05 43 18.6	-0.7
AKASG				PcP	PcP	05 44 27.4	-2.1
BOD	**Bodaibo**	**35.63**	**37**	*e*P	**P**	**05 41 58.3**	**-2.8**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.4						
MLR	**Muntele Rosu**	**37.20**	**301**	P	**P**	**05 42 16.3**	**+1.9**
	comp=Z,29nm,1.0s,mb5.0,baz=74,slow=5.7,SNR=15						
MLR				PP	PP	05 43 49.7	+8.2
	comp=Z,10nm,1.0s,baz=218,slow=3.9,SNR=4.0						
MLR				LR	LR	06 00 37.8	
	comp=Z,144nm,18.5s,MS3.8,baz=83,slow=41						
MLR	**Muntele Rosu**	**37.20**	**301**	⇑P	**P**	**05 42 15.6**	**+1.2**
MLR	**Muntele Rosu**	**37.20**	**301**	⇑P	**P**	**05 42 15.6**	**+1.2**
MLR	**Muntele Rosu**	**37.20**	**301**	P	**P**	**05 42 16.3**	**+1.9**
MLR				pmax	pmax		
	comp=Z,29nm,1.0s						
MLR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MLR				MLR	MLR		
	comp=Z,144nm,18.5s						
BURAR	**Bucovina Array**	**37.73**	**305**	⇑P	**P**	**05 42 19.5**	**+0.6**
BURAR	**Bucovina Array**	**37.73**	**305**	⇑P	**P**	**05 42 19.5**	**+0.6**
NJ2	**Nanjing**	**37.98**	**81**	*e*P	**P**	**05 42 17.1**	**-4.0**
NJ2				AP	pP	05 42 32.8	+7.7
NJ2				PP	PP	05 43 49.0	-2.1
NJ2				S	**S**	**05 48 04.0**	**-8.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,230nm,4.9s						
NJ2				LR	LR		
	comp=N,710nm,10.8s						
NJ2				LR	LR		
	comp=E,560nm,16.8s						
NJ2				LR	LR		
	comp=Z,350nm,12.6s,MS4.4						
JOF	**Joensuu**	**38.27**	**330**	*e*p	**P**	**05 42 23.0**	**-0.2**
KULM	**Kulim**	**38.78**	**133**	*e*P	**P**	**05 42 28.0**	**0.0**
DRGR		**39.43**	**303**	⇑P	**P**	**05 42 33.1**	**-0.1**
DRGR		**39.43**	**303**	⇑P	**P**	**05 42 33.1**	**-0.1**
KWP	**Kalwaria**	**39.48**	**308**	*e*P	PP	05 44 06.8	-1.4
SUW	**Suwalki**	**39.61**	**315**	*e*P	PP	05 44 05.1	-4.4
KOLS	**Kolonicke sedl**	**39.74**	**307**	*e*P	**P**	**05 42 35.7**	**0.0**
KOLS				*e*PP	PP	05 44 11.5	+0.6
FINES	**FINESS Array B**	**39.92**	**327**	P	**P**	**05 42 37.4**	**+0.4**
	comp=Z,15nm,0.7s,mb4.8,baz=120,slow=10,SNR=31						
FINES				PP	PP	05 44 06.7	-6.1
	comp=Z,7.8nm,0.8s,baz=124,slow=14,SNR=5.1						
FINES				LR	LR	06 02 39.0	
	comp=Z,97nm,20.7s,MS3.6,baz=132,slow=41						
FINES	**FINESS Array B**	**39.92**	**327**	P	**P**	**05 42 37.4**	**+0.4**
FINES				PP	PP	05 44 06.7	-6.1
FINES				LR	LR	06 02 39.0	
KAF	**Kangasniemi**	**40.05**	**328**	*e*p	**P**	**05 42 38.6**	**+0.5**
	comp=Z,8.7nm,0.8s,mb4.5,baz=113,slow=7.8						
KAF	**Kangasniemi**	**40.05**	**328**	*e*P	**P**	**05 42 38.6**	**+0.5**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
SSE	**Sheshan**	**40.16**	**81**	P	**P**	**05 42 42.1**	**+2.8**
SSE				PCP	PcP	05 44 46.5	+2.3
SSE				S	**S**	**05 48 40.3**	**-5.0**
SSE				SS	SS	05 51 41.6	+4.5
SSE				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
SSE				AMB	AMB		
	comp=Z,90nm,4.1s						
SSE				LR	LR		
	comp=N,160nm,24.2s,MS3.8						
SSE				LR	LR		
	comp=E,60nm,24.2s,MS3.8						
SSE				LR	LR		
	comp=Z,70nm,18.8s						
SSE	**Sheshan**	**40.16**	**81**	P	**P**	**05 42 42.1**	**+2.8**
	comp=Z,25nm,0.9s,mb4.9						
SSE				pP	pP	05 43 02.9	+20
SSE				sP	sP	05 43 13.9	+29
SSE				PcP	PcP	05 44 46.5	+2.3
SSE				S	**S**	**05 48 40.3**	**-5.0**
SSE				sS		05 49 18.1	
SSE				SS	SS	05 51 41.6	+4.5
SSE				LR	LR		
	comp=Z,80nm,18.8s,MS3.6						
CRVS	**Cervenica-Dubn**	**40.28**	**307**	*e*P	**P**	**05 42 44.8**	**+4.7**
CRVS				*e*PP	PP	05 44 18.5	+2.0
CRVS	**Cervenica-Dubn**	**40.28**	**307**	*e*PP	PP	05 44 18.5	+2.0
CRVS	**Cervenica-Dubn**	**40.28**	**307**	*e*	**P**	**05 42 44.8**	**+4.7**
STHS	**Stebnicka Huta**	**40.43**	**308**	*e*P	**P**	**05 42 41.0**	**-0.3**
STHS				*e*PP	PP	05 44 26.1	+8.1
CN2	**Changchun**	**40.87**	**61**	*e*P	**P**	**05 42 45.5**	**+0.5**
CN2				*e*AP	pP	05 42 56.1	+7.1
CN2				*e*S	**S**	**05 48 55.5**	**-0.1**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CN2				LR	LR		
	comp=N,400nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=E,600nm,15.0s,MS4.7						
CN2				LR	LR		
	comp=Z,470nm,15.0s,MS4.5						
KECS	**Kecovo**	**40.92**	**306**	*e*P	**P**	**05 42 45.0**	**-0.4**
KECS				*e*PP	PP	05 44 25.4	+2.4
PSZ	**Piszkesteto**	**41.33**	**305**	P	**P**	**05 42 47.6**	**-1.0**
	comp=Z,6.0nm,0.8s,mb4.3						
PSZ	**Piszkesteto**	**41.33**	**305**	P	**P**	**05 42 47.7**	**-1.0**
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
OJC	**Ojcow**	**41.38**	**309**	*e*P	**P**	**05 42 49.0**	**-0.1**
DIVS	**Divcibare**	**41.50**	**299**	⇑*i*P	**P**	**05 42 50.7**	**+0.6**

VYHS	Vyhne	42.02	306	eP	P	05 42 55.4	+1.1
VYHS				ePP	PP	05 44 36.8	+1.9
SRO	Srobarova	42.39	305	eP	P	05 42 58.4	+1.0
MORC	Moravsky Berou	42.84	308	eP	P	05 43 00.3	-0.7
	comp=Z,4.1nm,0.8s,mb4.2						
MORC	Moravsky Berou	42.84	308	eP	P	05 43 00.3	-0.7
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
KEV	Kevo	43.08	338	ep	P	05 43 03.5	+0.8
ARCES	ARCESS Array B	43.44	338	P	P	05 43 06.5	+0.9
	comp=Z,54nm,0.9s,mb5.3,baz=117,slow=8.1,SNR=61						
ARCES				LR	LR	06 02 40.9	
	comp=Z,166nm,18.3s,MS4.0,baz=9.8,slow=38						
ARE0	ARCESS Array S	43.44	338	eP	P	05 43 06.7	+1.1
VRAC	Vranov	43.47	307	P	P	05 43 06.9	+0.8
	comp=Z,7.4nm,0.9s,mb4.4,baz=86,slow=9.7,SNR=12						
VRAC				LR	LR	06 02 33.4	
	comp=Z,124nm,19.0s,MS3.8,baz=85,slow=38						
DPC	Dobruska-Polom	43.61	309	eP	P	05 43 07.6	+0.3
DPC				ePP	PP	05 44 55.1	+4.3
MDJ	Mudanjiang	43.74	59	P	P	05 43 07.1	-1.3
MDJ				PP	PP	05 44 49.8	-2.3
MDJ				SCP		05 48 45.9	
MDJ				S	S	05 49 32.4	-5.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.3						
MDJ				AMB	AMB		
	comp=Z,40nm,6.0s						
MDJ				LR	LR		
	comp=N,90nm,23.6s,MS3.8						
MDJ				LR	LR		
	comp=E,110nm,21.2s,MS3.8						
MDJ				LR	LR		
	comp=Z,210nm,20.3s,MS4.0						
UPC	Upice	43.80	309	eP	P	05 43 08.8	0.0
KTK1	Kautokeino	43.93	337	eP	P	05 43 09.8	+0.2
KTK1				epP	pP	05 43 12.7	-0.9
KTK1				AMb	AMB	05 43 15.8	
	comp=Z,65nm,1.7s,mb5.1						
KTK1	Kautokeino	43.93	337	eP	P	05 43 09.8	+0.2
	comp=Z,65nm,1.7s,mb5.1						
TREC	Trest	44.19	307	eP	P	05 43 12.0	0.0
YAK	Yakutsk	44.38	34	eP	P	05 43 13.6	+0.2
	comp=Z,40nm,0.8s,mb5.2						
YAK	Yakutsk	44.38	34	eP	P	05 43 14.0	+0.6
YAK				eS	S	05 49 44.1	-2.8
YAK				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				smax			
	comp=N,8.0nm,1.0s						
YAK				smax			
	comp=E,3.0nm,0.8s						
PERS	Pernice	44.66	304	eP	P	05 43 16.0	+0.1
BOJS	Bojanci	44.70	302	eP	P	05 43 16.6	+0.5
BOJS				e		05 44 58.9	
PVCC	Panska Ves	44.72	309	eP	P	05 43 15.9	-0.4
KLR	Kul’dur	44.77	53	eP	P	05 43 17.0	+0.3
KLR				MLR	MLR		
	comp=E,900nm,12.0s						
KLR				MLR	MLR		
	comp=Z,1μm,12.0s,MS5.1						
PRU	Pruhonice	44.77	308	eP	P	05 43 17.0	+0.3
VISS	Visnje	44.95	303	eP	P	05 43 19.1	+1.0
VISS				e		05 44 59.7	
BRG	Berggiesshubel	45.10	310	eP	P	05 43 19.4	+0.1
	comp=Z,10nm,1.0s,mb4.6						
BRG	Berggiesshubel	45.10	310	eP	P	05 43 19.4	+0.1
BRG				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.6						
MOA	Molln	45.11	305	⇑iP	P	05 43 19.5	+0.1
	comp=Z,12nm,1.1s,mb4.7						
LJU	Ljubljana	45.13	303	eP	P	05 43 20.2	+0.6
GERES	GERESS Array B	45.40	307	P	P	05 43 21.6	0.0
	comp=Z,1.6nm,0.8s,mb3.9,baz=90,slow=6.7,SNR=9.7						
GERES				PcP	PcP	05 45 00.2	-1.3
	comp=Z,1.9nm,0.8s,baz=90,slow=2.7,SNR=5.7						
GERES				PP	PP	05 45 11.0	+2.3
	comp=Z,2.2nm,0.9s,baz=72,slow=8.4,SNR=5.2						
GERES				LR	LR	06 03 54.5	
	comp=Z,123nm,20.1s,MS3.8,baz=125,slow=38						
KHC	Kasperske Hory	45.45	307	eP	P	05 43 22.6	+0.5
KHC				PP	PP	05 45 08.0	-1.2
KHC	Kasperske Hory	45.45	307	eP	P	05 43 22.6	+0.5
KHC				e		05 45 08.0	
HFS	Hagfors	45.54	323	P	P	05 43 22.8	+0.2
	comp=Z,14nm,0.6s,mb5.1,baz=100,slow=9.0,SNR=52						
HFS				LR	LR	06 04 27.0	
	comp=Z,144nm,19.7s,MS3.9,baz=94,slow=39						
TRO	Tromso	45.58	337	eP	P	05 43 22.4	-0.4
CLL	Collm	45.67	310	P	P	05 43 23.4	-0.4
	comp=Z,logA/T=0.8,mb4.5						
CLL				i *SP	sP	05 43 29.0	-0.5
CLL				i PCP	PcP	05 45 01.3	-1.1
CLL	Collm	45.67	310	i P	P	05 43 23.4	-0.4
	comp=Z,7.0nm,1.2s,mb4.5						
CLL				i pP	pP	05 43 29.0	+1.1
CLL				i PcP	PcP	05 45 01.3	-1.1
CLL	Collm	45.67	310	i P	P	05 43 23.4	-0.4
CLL				i *PP	pP	05 43 29.0	+1.1
CLL				i		05 45 01.3	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
ROBS	Robic	45.81	303	eP	P	05 43 24.6	-0.3
NKC	Novy Kostel	46.10	309	eP	P	05 43 27.3	+0.1
MOR8	Moi Rana	46.21	331	eP	P	05 43 27.4	-0.5
MOR8				epP	pP	05 43 30.4	-1.5
MOR8				AMb	AMB	05 43 31.5	
	comp=Z,69nm,0.7s,mb5.7						
MOR8	Moi Rana	46.21	331	eP	P	05 43 27.4	-0.5
	comp=Z,69nm,0.7s,mb5.7						
NB2	NORSAR Subarra	46.84	324	P	P	05 43 32.4	-0.5
	comp=Z,7.4nm,0.6s,mb4.8,baz=94,slow=7.4						
NB2	NORSAR Subarra	46.84	324	P	P	05 43 32.4	-0.5
	baz=94,slow=7.9						
NOA	NORSAR Array B	46.84	324	P	P	05 43 32.7	-0.2
	comp=Z,7.6nm,0.7s,mb4.7,baz=96,slow=7.7,SNR=26						
NOA				PP	PP	05 45 22.1	-0.8
	comp=Z,3.9nm,0.9s,baz=93,slow=10,SNR=3.7						
NOA	NORSAR Array B	46.84	324	P	P	05 43 32.7	-0.2
NOA				PP	PP	05 45 22.1	-0.8
GRA1	Grafenberg Arr	46.93	308	eP	P	05 43 34.8	+1.0
	comp=Z,25nm,1.4s,mb5.0						
GRA1				ePcP	PcP	05 45 07.9	+1.1
GRF	Grafenberg Arr	46.93	308	eP	P	05 43 34.8	+1.0
	comp=Z,25nm,1.4s,mb5.0						
GRF				ePcP	PcP	05 45 07.9	+1.1
GRF	Grafenberg Arr	46.93	308	eP	P	05 43 34.8	+1.0
GRF				e		05 45 07.9	
GRF				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
GRF	Grafenberg Arr	46.93	308	eP	P	05 43 34.8	+1.0
GRF				e		05 45 07.9	
GRF				pmax	pmax		
	comp=Z,25nm,1.4s,mb5.0						
WTTA	Wattenberg	46.95	305	⇓iP	P	05 43 33.7	-0.3
	comp=Z,12nm,1.1s,mb4.7						
WTTA	Wattenberg	46.95	305	⇓P	P	05 43 33.7	-0.3
	comp=Z,12nm,1.1s,mb4.7						
WTTA	Wattenberg	46.95	305	⇓P	P	05 43 33.7	-0.3
WTTA				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.7						
NAO01	NORSAR Array S	46.99	324	P	P	05 43 32.5	-1.6
NAO	NORSAR Subarra	47.01	324	P	P	05 43 32.4	-1.9
	comp=Z,7.4nm,0.6s,mb4.8						
NAO	NORSAR Subarra	47.01	324	P	P	05 43 32.4	-1.9
NAO				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
MOTA	Moosalm	47.30	305	⇑iP	P	05 43 35.7	-1.0
	comp=Z,9.3nm,0.9s,mb4.7						
MOTA	Moosalm	47.30	305	⇑P	P	05 43 35.7	-1.0
MOTA				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
DAVA	Damuels	48.13	305	⇑iP	P	05 43 42.7	-0.5
	comp=Z,22nm,0.8s,mb5.2						
DAVA	Damuels	48.13	305	⇑P	P	05 43 42.7	-0.5
	comp=Z,22nm,0.8s,mb5.2						
DAVOX	Davos	48.21	305	P	P	05 43 43.1	-0.7
	comp=Z,7.6nm,0.9s,mb4.7,baz=82,slow=7.6,SNR=7.5						
DAVOX				PcP	PcP	05 45 11.1	-0.4
	comp=Z,4.4nm,0.6s,baz=121,slow=5.9,SNR=6.7						
DAVOX				LR	LR	06 05 58.1	
	comp=Z,155nm,18.9s,MS4.0,baz=198,slow=38						
DAVOS	Davos	48.26	305	P	P	05 43 43.1	-1.1
KKM	Kota Kinabalu	48.86	116	eP	P	05 43 48.8	-0.5
KMBO	Kilima Mbogo	49.04	231	P	P	05 43 52.8	+2.0
	comp=Z,7.3nm,0.9s,mb4.7,baz=34,slow=12,SNR=17						
KMBO				LR	LR	06 05 52.4	
	comp=Z,78nm,18.3s,MS3.7,baz=282,slow=37						
PGF	Pioggiola	49.66	299	eP	P	05 43 54.4	-0.7
	comp=Z,81nm,1.4s,mb5.2						
PGF	Pioggiola	49.66	299	eP	P	05 43 54.4	-0.7
PGF				pmax	pmax		
	comp=Z,41nm,1.4s,mb5.3						
CDF	Champ du Feu	49.68	307	eP	P	05 43 54.1	-1.1
HINF	Hinteralfeld	50.06	306	eP	P	05 43 57.1	-1.0
	comp=Z,22nm,1.1s,mb4.8						
HINF	Hinteralfeld	50.06	306	eP	P	05 43 57.1	-1.0
HINF				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.8						
HAU	Haudompre	50.36	307	eP	P	05 43 59.3	-1.1
HAU				eR			
	comp=Z,65nm,18.5s						
SBF	Sospel	50.47	301	eP	P	05 44 00.4	-0.9
LPG	La Plagne	50.59	303	eP	P	05 44 01.9	-0.2
	comp=Z,29nm,1.0s,mb4.9						
LPG	La Plagne	50.59	303	eP	P	05 44 01.9	-0.2
LPG				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
LPL	La Plagne	50.59	303	eP	P	05 44 01.9	-0.3
	comp=Z,28nm,0.9s,mb4.9						
LPL	La Plagne	50.59	303	eP	P	05 44 01.9	-0.3
LPL				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
BNI	Bardonecchia	50.73	303	eP	P	05 44 02.4	-0.8
	comp=Z,22nm,1.3s,mb4.9						
BNI	Bardonecchia	50.73	303	eP	P	05 44 02.4	-0.9
BNI				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.9						
MBDF	Montbardon	50.74	302	eP	P	05 44 02.7	-0.6
	comp=Z,29nm,0.9s,mb4.9						
MBDF	Montbardon	50.74	302	eP	P	05 44 02.7	-0.6
MBDF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
CABF	La Chapelle	50.80	305	eP	P	05 44 02.8	-1.0
	comp=Z,37nm,1.1s,mb4.9						
CABF	La Chapelle	50.80	305	eP	P	05 44 02.8	-1.0
CABF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
FRF	La Foret Royal	51.10	301	eP	P	05 44 05.0	-1.1
	comp=Z,63nm,1.5s,mb5.0						
FRF	La Foret Royal	51.10	301	eP	P	05 44 05.0	-1.1
FRF				pmax	pmax		
	comp=Z,32nm,1.5s,mb5.0						
MEZF	Maizieres J’vi	51.12	308	eP	P	05 44 05.5	-0.6
	comp=Z,14nm,0.9s,mb4.6						
BAIF	Baives	51.37	310	eP	P	05 44 07.2	-0.9
	comp=Z,23nm,1.0s,mb4.8						
BAIF	Baives	51.37	310	eP	P	05 44 07.2	-0.9
BAIF				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
SMRF	Simiane la Rot	51.75	302	eP	P	05 44 10.2	-0.8
	comp=Z,51nm,1.5s,mb4.9						
MAJO	Matsushiro	51.95	68	eP	P	05 44 12.6	0.0
	comp=Z,10nm,0.7s,mb4.9						
MAJO	Matsushiro	51.95	68	eP	P	05 44 12.6	0.0
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
MAT	Matsushiro	51.95	68	P	P	05 44 12.9	+0.3
MAT	Matsushiro	51.95	68	eP	P	05 44 13.0	+0.4
	comp=Z,19nm,0.9s,mb5.0						
MAT	Matsushiro	51.95	68	eP	P	05 44 13.0	+0.4
MAT				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
MJAR	Matsushiro Arr	51.95	68	P	P	05 44 13.4	+0.8
	comp=Z,13nm,0.8s,mb4.9,baz=290,slow=10,SNR=36						
LOR	Lormes	52.16	306	eP	P	05 44 12.5	-1.5
	comp=Z,18nm,1.2s,mb4.6						
LOR				eR			
	comp=Z,101nm,18.8s						
LOR	Lormes	52.16	306	eP	P	05 44 12.5	-1.5
LOR				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
LOR				MLR	MLR		
	comp=Z,100nm,18.8s,MS3.9						
VIVF	Saint-Julien-l	52.16	303	eP	P	05 44 13.3	-0.8
	comp=Z,20nm,1.0s,mb4.7						
VIVF	Saint-Julien-l	52.16	303	eP	P	05 44 13.3	-0.8
VIVF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
SMF	Signal de Mont	52.31	305	eP	P	05 44 14.2	-1.0
	comp=Z,21nm,0.8s,mb4.8						
SMF	Signal de Mont	52.31	305	eP	P	05 44 14.2	-1.0
SMF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
YSS	Yuzh-Sakhalins	52.39	54	P	P	05 44 16.0	+0.2
SSF	Saint Saulge	52.44	306	eP	P	05 44 14.3	-1.9
	comp=Z,15nm,1.3s,mb4.8						
SSF	Saint Saulge	52.44	306	eP	P	05 44 14.3	-1.9
SSF				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
AVF	Avril sur Loir	52.60	306	eP	P	05 44 15.6	-1.8
	comp=Z,24nm,0.9s,mb4.8						
AVF	Avril sur Loir	52.60	306	eP	P	05 44 15.6	-1.8
AVF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
LASF	Ste Croix	52.92	302	eP	P	05 44 18.8	-1.0
	comp=Z,53nm,1.2s,mb5.0						
ASAJ	Asahikawa	52.98	58	LR	LR	06 09 20.9	
	comp=Z,150nm,19.9s,MS4.0,baz=160,slow=39						
BGF	Bois d’Agland	53.00	306	eP	P	05 44 19.3	-1.0
TCF	Toulx Ste Croi	53.49	305	eP	P	05 44 22.9	-1.0
	comp=Z,58nm,1.4s,mb5.0						
TCF	Toulx Ste Croi	53.49	305	eP	P	05 44 22.9	-1.0
TCF				pmax	pmax		
	comp=Z,29nm,1.4s,mb5.0						
RJF	Les Rejaudoux	54.21	304	eP	P	05 44 28.1	-1.1
	comp=Z,60nm,1.5s,mb5.0						
RJF				eR			
	comp=Z,104nm,21.8s						
RJF	Les Rejaudoux	54.21	304	eP	P	05 44 28.1	-1.1
RJF				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
RJF				MLR	MLR		
	comp=Z,100nm,21.8s,MS3.8						
MTLF	Montolieu	54.27	302	eP	P	05 44 28.2	-1.5
	comp=Z,19nm,1.0s,mb4.7						
MTLF	Montolieu	54.27	302	eP	P	05 44 28.2	-1.5
MTLF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
LDF	La Druitiere	54.45	309	eP	P	05 44 30.1	-0.9
FLN	La Foliniere	54.64	309	eP	P	05 44 31.3	-1.1
	comp=Z,58nm,1.2s,mb5.2						
FLN				eR			
	comp=Z,134nm,20.0s						
FLN	La Foliniere	54.64	309	eP	P	05 44 31.3	-1.1
FLN				pmax	pmax		
	comp=Z,29nm,1.2s,mb5.2						
FLN				MLR	MLR		
	comp=Z,130nm,20.0s,MS4.0						
LFF	La Frestale	54.84	304	eP	P	05 44 32.4	-1.5
GRR	Gorron	54.98	309	eP	P	05 44 34.0	-0.9
	comp=Z,92nm,1.4s,mb5.3						
GRR	Gorron	54.98	309	eP	P	05 44 34.0	-0.9
GRR				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.3						
MFF	Saint Martin d	54.98	306	eP	P	05 44 33.4	-1.5
EPF	Esparros	55.67	302	eP	P	05 44 39.0	-1.0
ETSF	Etsaut	56.34	302	eP	P	05 44 43.9	-0.9
	comp=Z,33nm,1.1s,mb5.0						
ETSF	Etsaut	56.34	302	eP	P	05 44 43.9	-0.9
ETSF				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
SJPF	Ste Jean	56.74	302	eP	P	05 44 46.6	-1.0
DAG	Danmarks Havn	56.90	344	⇓iP	P	05 44 48.0	-0.4
	comp=Z,17nm,0.8s,mb5.1						
DAG	Danmarks Havn	56.90	344	⇓iP	P	05 44 48.0	-0.4
DAG				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
ETOB	Tobarra	58.49	298	P	P	05 44 56.6	-3.4
	comp=Z,7.8nm,0.9s,mb4.7						
BILL	Bilibino	59.40	26	eP	P	05 45 05.7	-0.2
BILL				e		05 45 54.1	
BILL				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
BILL				MLR	MLR		
	comp=Z,10μm,21.0s						
GUD	Guadarrama	59.63	301	P	P	05 45 07.5	-0.4
	comp=Z,9.2nm,1.0s,mb4.8						
GUD	Guadarrama	59.63	301	P	P	05 45 07.5	-0.4
GUD				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
ESDC	Sonseca Array	59.86	300	P	P	05 45 08.5	-0.9
	comp=Z,4.5nm,0.8s,mb4.6,baz=63,slow=7.0,SNR=17						
ESDC	Sonseca Array	59.86	300	P	P	05 45 08.6	-0.8
	comp=Z,6.7nm,0.8s,mb4.7						
ESLA	Sonseca Array	59.86	300	eP	P	05 45 08.4	-1.0
	comp=Z,8.4nm,1.4s,mb4.6						
EQES	Quesada	59.91	297	P	P	05 45 07.7	-2.1
	comp=Z,10nm,0.9s,mb4.9						
EADA	Adamuz	60.87	298	P	P	05 45 15.0	-1.4
	comp=Z,8.1nm,0.9s,mb4.8						
ELUQ	Luque	60.88	297	P	P	05 45 14.9	-1.6
	comp=Z,4.8nm,0.6s,mb4.8						
ELUQ	Luque	60.88	297	P	P	05 45 14.9	-1.6
ELUQ				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.8						
MTE	Manteigas	62.12	301	eP	P	05 45 25.0	+0.2
	comp=Z,48nm,1.9s,mb5.3						
PVIS	Viseu	62.24	302	eP	P	05 45 25.9	+0.3
	comp=Z,53nm,1.9s,mb5.3						
EBAD	Badajoz	62.40	300	P	P	05 45 25.9	-0.8
	comp=Z,13nm,0.9s,mb5.0						
PTOM	Tomar	63.04	301	eP	P	05 45 30.6	-0.3
	comp=Z,45nm,1.1s,mb5.5						
EGRO	El Granado	63.23	299	P	P	05 45 29.8	-2.3
	comp=Z,23nm,1.2s,mb5.2						
SUMG	Summit	63.28	342	eP	P	05 45 32.7	+0.6
	comp=Z,59nm,1.1s,mb5.6						
LSZ	Lusaka	65.58	229	eP	P	05 45 48.1	+0.4
	comp=Z,13nm,1.2s,mb4.8						
LSZ	Lusaka	65.58	229	eP	P	05 45 48.1	+0.3
LSZ				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
FITZ	Fitzroy Crossi	72.42	128	eP	P	05 46 30.3	+0.3
	comp=Z,16nm,1.2s,mb4.8						
IMA2	Indian Mountai	73.24	18	eP	P	05 46 34.1	+0.2
LBTB	Lobatse	74.61	224	eP	P	05 46 43.6	+0.9
	comp=Z,50nm,1.4s,mb5.2						
LBTB	Lobatse	74.61	224	eP	P	05 46 43.6	+0.9
LBTB				pmax	pmax		
	comp=Z,50nm,1.4s,mb5.2						
TSUM	Tsumeb	75.28	234	eP	P	05 46 47.2	+0.6
	comp=Z,11nm,1.3s,mb4.6						
INK	Inuvik	75.33	10	eP	P	05 46 46.8	+0.9
	comp=Z,41nm,1.2s,mb5.2						
INK	Inuvik	75.33	10	eP	P	05 46 46.8	+0.8
INK				pmax	pmax		
	comp=Z,41nm,1.2s						
COLA	College	75.65	17	eP	P	05 46 47.9	+0.1
	comp=Z,13nm,0.8s,mb4.9						
COLA	College	75.65	17	eP	P	05 46 47.9	+0.1
COLA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
ILAR	Eielson Array	75.96	17	P	P	05 46 49.6	0.0
	comp=Z,5.0nm,1.0s,mb4.4,baz=312,slow=4.9,SNR=32						
ILAR				PP	PP	05 49 44.5	+2.5
	comp=Z,1.4nm,1.1s,baz=338,slow=4.9,SNR=4.7						
DBIC	Dimbokro	76.41	269	P	P	05 46 53.3	+0.1
	comp=Z,33nm,0.9s,mb5.3,baz=35,slow=7.1,SNR=36						
DBIC				LR	LR	06 23 14.9	
	comp=Z,162nm,19.7s,MS4.3,baz=39,slow=38						
DBIC	Dimbokro	76.41	269	eP	P	05 46 53.1	0.0
	comp=Z,47nm,0.9s,mb5.4						
DBIC	Dimbokro	76.41	269	P	P	05 46 53.3	+0.1
DBIC				pmax	pmax		
	comp=Z,33nm,0.9s						
DBIC				MLR	MLR		
	comp=Z,162nm,19.7s						
LIC	Lamto	76.80	268	eP	P	05 46 53.7	-1.6
	comp=Z,99nm,1.0s,mb5.4						
LIC				eR			
	comp=Z,234nm,21.5s						
THY	Trims Highway	77.38	17	eP	P	05 46 58.3	+0.8
BOSA	Boshof	77.59	222	P	P	05 47 00.1	+0.6
	comp=Z,15nm,0.8s,mb5.0,baz=35,slow=6.3,SNR=26						
BOSA	Boshof	77.59	222	eP	P	05 46 59.6	+0.2
	comp=Z,28nm,1.1s,mb5.1						
BOSA	Boshof	77.59	222	P	P	05 47 00.1	+0.6
BOSA				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
PMR	Palmer	78.05	19	eP	P	05 47 01.1	-0.2
	comp=Z,12nm,0.9s,mb4.8						
PMR	Palmer	78.05	19	eP	P	05 47 01.1	-0.1
PMR				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
DAWY	Dawson	78.20	14	eP	P	05 47 02.3	+0.2
WRA	Warramunga Arr	79.55	123	P	P	05 47 11.0	+0.7
	comp=Z,5.2nm,0.6s,mb4.6,baz=323,slow=5.3,SNR=41						
WRA				PKKPbc		06 06 02.6	
	comp=Z,0.2nm,0.5s,baz=120,slow=2.1,SNR=5.2						
WRAB	Tennant Creek	79.55	123	eP	P	05 47 11.0	+0.6
	comp=Z,24nm,1.1s,mb5.0						
WRAB	Tennant Creek	79.55	123	eP	P	05 47 11.0	+0.7
WRAB				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0						
WB2	Warramunga Arr	79.56	123	⇑iP	P	05 47 11.0	+0.6
ASPA	Alice Springs	81.79	126	eP	P	05 47 23.0	+0.9
YKA	Yellowknife Ar	82.89	4	P	P	05 47 27.8	+0.8
	comp=Z,12nm,0.9s,mb4.9,baz=348,slow=5.3,SNR=18						
SCHQ	Schefferville	84.39	338	P	P	05 47 34.6	-0.1
	comp=Z,13nm,0.9s,mb5.0,baz=59,slow=8.6,SNR=5.8						
SCHQ	Schefferville	84.39	338	eP	P	05 47 34.9	+0.2
	comp=Z,18nm,1.0s,mb5.2						
CTA	Charters Tower	88.19	116	eP	P	05 47 54.7	+0.6
	comp=Z,3.6nm,0.9s,mb4.6						
CTA	Charters Tower	88.19	116	eP	P	05 47 54.7	+0.6
CTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
EDM	Edmonton	92.21	4	eP	P	05 48 13.5	+1.4
STKA	Stephens Creek	92.32	128	P	P	05 48 14.3	+1.2
	comp=Z,1.0nm,0.7s,mb4.3,baz=298,slow=4.4,SNR=4.1						
NVAR	Mina Array Bea	106.42	9	PKiKP		05 53 27.1	
	comp=Z,0.5nm,0.8s,baz=36,slow=2.8,SNR=3.7						
TXAR	Lajitas Array	116.19	357	PKP	PKPdf	05 53 47.4	-1.1
	comp=Z,0.3nm,0.8s,baz=342,slow=2.9,SNR=3.7						
TXAR				PKKPbc		06 04 16.5	
	comp=Z,0.5nm,0.9s,baz=162,slow=4.0,SNR=3.7						
TXAR	Lajitas Array	116.19	357	PKP	PKPdf	05 53 47.4	-1.1
TXAR				PKKPbc		06 04 16.5	
SNAA	Sanae	118.38	200	⇑iP	PKPdf	05 53 50.5	-1.3
VNA2	Neumayer--Watz	119.44	202	⇑iPKPdf	PKPdf	05 53 51.5	-2.3
VNA2				e		05 54 16.3	
VNA1	Neumayer--Stat	119.61	202	PKPdf	PKPdf	05 53 52.6	-1.5
VNA1				e		05 54 17.3	
VNA3	Neumayer Olymp	120.25	202	PKPdf	PKPdf	05 53 52.8	-2.6
VNA3				e		05 54 17.5	
NNA	Nana	144.59	302	ePKP	PKPdf	05 54 38.6	-3.5
PLCA	Paso Flores	150.85	247	PKPbc	PKPdf	05 54 55.0	+3.4
	comp=Z,6.2nm,1.0s,baz=91,slow=5.5,SNR=7.7						

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*NEIC **20** 05:41:41.6, 15.78N×96.17W, h41^{km}, MD3.5(MEX), After MEX.*

MEX 20 05:41:41.6±0.7**, 15.78N×96.17W, h41**^{km}±8^{km}**, MD3.5, 1D, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.06	100	⇓iP	P	05 41 46.8	-1.3
HUIG				i S	S	05 41 50.9	-1.8
VHO	Vista Hermosa	1.40	337	i P	P	05 42 02.9	-2.1
VHO				i S	S	05 42 19.3	-3.1
OXX	Oaxaca	1.40	338	i P	P	05 42 03.5	-1.6
OXX				i S	S	05 42 20.2	-2.4
CMIG	Matias Romero	1.80	43	eP	P	05 42 07.9	-2.8
CMIG				i S	S	05 42 29.9	-2.6

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*IDC **20** 05:50:26.8±0.8, 22.11N×145.07E, mb4.2/12, mb1 4.4/14, mb1mx4.3/21, mbtmp4.2/14, ML4.4/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/24, Error ellipse: s-maj=26.4km s-min=21.1km az=62.0*

*BJI **20** 05:50:28.0, 22.10N×145.00E, h10^{km}, mB5.1, mb4.7, Ms4.5, Msz4.3*

*NEIC **20** 05:50:28.2±0.3, 22.10N×145.03E, h10^{km}, mb4.6/6, Error ellipse: s-maj=12.1km s-min=8.1km az=83.0*

*MOS **20** 05:50:30.6±1.1, 22.14N×144.95E, h36^{km}, mb4.6/4, Error ellipse: s-maj=21.5km s-min=10.1km az=105.7*

ISC 20 05:50:27.2±5.2**, 22.07N**±0.07×**145.0E**±0.1**, h12**^{km}±31^{km}**, n53, σ0^{s}94**/46**, mb4.3**/21**, MS3.6**/2**, 3C, Volcano Islands region**

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

CBIJ	Chichi jima	5.61	334	Pn	Pn	05 51 52.3	-0.2
	36nm,0.3s,baz=149,slow=14,SNR=17						
CBIJ				Sn	Sn	05 52 54.0	-3.6
	50nm,0.3s,baz=130,slow=22,SNR=12						
MJAR	Matsushiro Arr	15.57	339	Pn	P	05 54 07.8	-0.4
	0.6nm,0.3s,baz=134,slow=14,SNR=7.7						
MAJO	Matsushiro	15.57	339	P	P	05 54 07.3	-0.9
MDJ	Mudanjiang	25.81	334	P	P	05 56 00.0	+0.2
MDJ				PCP	PcP	05 59 27.8	-2.2
MDJ				LR	LR		
	comp=N,90nm,22.0s,MS3.5						
MDJ				LR	LR		
	comp=E,110nm,20.7s,MS3.5						
MDJ				LR	LR		
	comp=Z,210nm,20.0s,MS3.7						
CN2	Changchun	27.04	328	eP	P	05 56 13.5	+2.4
HHC	Hu-ho-hao-te	33.82	311	eP	P	05 57 11.5	+0.2
HHC				AP	pP	05 57 18.8	+3.8
HHC				XP	sP	05 57 24.9	+8.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
HHC				AMB	AMB		
	comp=Z,110nm,3.5s						
LZH	Lanzhou	38.28	301	eP	P	05 57 59.5	+10
LZH				pP	pP	05 58 05.0	+12
LZH				sP	sP	05 58 10.0	+16
LZH	Lanzhou	38.28	301	eP	P	05 57 59.5	+10
LZH				*SP	sP	05 58 10.0	+16
SONM	Songino Array	40.13	319	P	P	05 58 05.0	+0.6
	comp=Z,0.6nm,0.5s,mb3.5,baz=125,slow=6.1,SNR=4.2						
SONM				LR	LR	06 14 51.3	
	comp=Z,79nm,19.1s,MS3.6,baz=224,slow=36						
WRAB	Tennant Creek	43.02	195	eP	P	05 58 28.2	-0.4
	comp=Z,40nm,1.5s,mb4.9						
WRAB	Tennant Creek	43.02	195	eP	P	05 58 28.2	-0.3
WRAB				pmax	pmax		
	comp=Z,40nm,1.5s,mb4.9						
WB2	Warramunga Arr	43.03	195	eP	P	05 58 28.3	-0.3
WRA	Warramunga Arr	43.03	195	P	P	05 58 28.3	-0.3
	comp=Z,2.3nm,0.4s,mb4.3,baz=18,slow=8.7,SNR=51						
ZAK	Zakamensk	43.08	321	eP	P	05 58 29.9	+1.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
FITZ	Fitzroy Crossi	44.19	207	eP	P	05 58 37.4	-0.6
	comp=Z,5.3nm,0.6s,mb4.5						
WMQ	Urumqi	51.64	309	eP	P	05 59 36.8	+1.1
WMQ				AMB	AMB		
	comp=Z,110nm,4.5s						
MKAR	Makanchi Array	55.68	312	P	P	06 00 06.1	+0.6
	comp=Z,1.5nm,0.8s,mb4.1,baz=92,slow=9.5,SNR=6.8						
MKAR				PcP	PcP	06 01 04.2	-0.7
	comp=Z,1.4nm,0.7s,baz=59,slow=1.9,SNR=3.6						
NVS	Novosibirsk	56.03	322	eP	P	06 00 18.7	+11
ILAR	Eielson Array	60.94	27	P	P	06 00 40.1	-1.9
	comp=Z,2.6nm,0.7s,mb4.5,baz=256,slow=5.3,SNR=31						
CHKZ	Chkalovo	63.32	320	eP	P	06 00 58.4	+0.3
BVAR	Borovoye Array	63.47	319	P	P	06 00 59.7	+0.6
	comp=Z,1.9nm,0.6s,mb4.4,baz=90,slow=8.6,SNR=9.4						
BRVK	Borovoye	63.54	319	eP	P	06 01 00.1	+0.6
INK	Inuvik	66.56	24	eP	P	06 01 17.6	-1.2
ARCES	ARCESS Array B	79.09	342	P	P	06 02 33.9	+1.3
	comp=Z,2.4nm,0.8s,mb4.2,baz=68,slow=9.7,SNR=5.0						
CMB	Columbia Colle	80.20	53	eP	P	06 02 39.3	+0.2
	comp=Z,4.2nm,1.3s,mb4.2						
CMB	Columbia Colle	80.20	53	eP	P	06 02 39.3	+0.2
CMB				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.2						
JOF	Joensuu	80.69	335	ep	P	06 02 40.3	-0.9
	comp=Z,1.8nm,0.4s,mb4.3						
NVAR	Mina Array Bea	81.60	52	P	P	06 02 47.5	+1.1
	comp=Z,2.4nm,0.8s,mb4.2,baz=272,slow=3.5,SNR=26						
ELK	Elko	82.92	49	eP	P	06 02 53.6	+0.4
	comp=Z,4.5nm,1.0s,mb4.5						
ELK	Elko	82.92	49	eP	P	06 02 53.6	+0.3
ELK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KAF	Kangasniemi	83.08	335	ep	P	06 02 52.3	-1.3
	baz=56,slow=4.8						
FINES	FINESS Array B	83.56	335	P	P	06 02 55.4	-0.7
	comp=Z,2.3nm,0.5s,mb4.5,baz=58,slow=5.1,SNR=23						
DAU	Daniels Canyon	85.83	48	eP	P	06 03 08.5	+0.6
PDAR	Pinedale Array	85.94	45	P	P	06 03 08.7	+0.2
	comp=Z,0.8nm,0.7s,mb4.0,baz=288,slow=4.7,SNR=5.6						
SRU	San Rafael	86.90	49	eP	P	06 03 13.9	+0.7
	comp=Z,4.3nm,0.8s,mb4.7						
SRU	San Rafael	86.90	49	eP	P	06 03 13.9	+0.7
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.7						
PV10	Paradox Valley	88.26	49	eP	P	06 03 20.2	+0.4
PV01	Paradox Valley	88.70	49	eP	P	06 03 22.3	+0.4
HFS	Hagfors	89.02	338	P	P	06 03 21.6	-1.3
	comp=Z,1.3nm,0.6s,mb4.4,baz=108,slow=4.6,SNR=9.7						
NB2	NORSAR Subarra	89.19	339	P	P	06 03 22.7	-1.0
	comp=Z,0.5nm,0.5s,mb4.1,baz=45,slow=4.3						
NOA	NORSAR Array B	89.19	339	P	P	06 03 23.4	-0.3
	comp=Z,0.7nm,0.6s,mb4.2,baz=45,slow=5.0,SNR=4.2						
NAO	NORSAR Subarra	89.48	339	P	P	06 03 22.7	-2.3
	comp=Z,0.5nm,0.5s,mb4.1						
NAO	NORSAR Subarra	89.48	339	P	P	06 03 22.7	-2.3
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.4						
TXAR	Lajitas Array	96.47	55	P	P	06 03 58.7	+0.7
	comp=Z,0.4nm,0.8s,mb3.9,baz=18,slow=4.0,SNR=3.7						
TXAR	Lajitas Array	96.47	55	P	P	06 03 58.7	+0.7
SNAA	Sanae	127.07	192	⇑i	PKPdf	06 09 32.0	-2.0
VNA2	Neumayer--Watz	128.54	191	⇑i	PKPdf	06 09 35.4	-1.6
VNA3	Neumayer Olymp	128.66	190	⇑i	PKPdf	06 09 35.2	-2.0
VNA1	Neumayer--Stat	128.93	191		PKPdf	06 09 36.4	-1.3
PLCA	Paso Flores	144.74	130	PKP	PKPdf	06 10 05.2	-2.1
	comp=Z,5.6nm,0.8s,baz=240,slow=3.8,SNR=12						
LPAZ	La Paz	148.24	85	PKPbc	PKPdf	06 10 17.0	+3.2
	comp=Z,4.9nm,0.6s,baz=288,slow=1.6,SNR=25						
LPAZ	La Paz	148.24	85	ePKPbc	PKPdf	06 10 16.6	+2.7
SAML	Samuel	149.96	69	ePKPbc	PKPdf	06 10 19.2	+2.5

JMA 20 06:43:53.0±0.3,**22.89N**×**122.18E**,**h77**^{km},**M3.7**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	1.74	26	P	P	06 44 21.9	0.0
HATJ	Hateruma jima	1.89	52	P	P	06 44 23.9	0.0
HATJ				eS	S	06 44 46.9	+0.2
IRIF	Iriomote-Funau	2.02	44	P	P	06 44 25.9	+0.2
IRIF				eS	S	06 44 50.1	+0.3
JKRS	Kuro-shima	2.15	51	P	P	06 44 27.7	+0.2
JKRS				S	S	06 44 53.8	+0.8
JIJ	Ishigaki jima	2.32	50	P	P	06 44 29.5	-0.4
JIJ				S	S	06 44 57.0	-0.4
JTJ	Tarama	2.89	52	P	P	06 44 37.8	-0.2
JTJ				eS	S	06 45 11.5	-0.2
JMJ	Miyako jima 2	3.43	55	P	P	06 44 45.3	-0.2
JMJ				eS	S	06 45 24.8	-0.4

IDC 20 06:56:19.8±5.3,**7.98S**×**119.49E**,**mb4.1**/2,**mb1 3.9**/3,**mb1mx3.6**/14,**mbtmp3.8**/3,**ML3.5**/1,**Error ellipse: s-maj=429.0km s-min=34.0km az=50.0**,**Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.71	150	eP	P	06 59 11.2	-0.1
	7.6nm,0.9s						
FITZ				eS	S	07 01 09.8	-14
WRA	Warramunga Arr	18.67	131	P	P	07 00 39.6	-1.9
	0.2nm,0.3s,baz=306,slow=12,SNR=8.2						
WRA				S	S	07 03 56.8	-11
	0.2nm,0.3s,baz=294,slow=23,SNR=6.3						
MKAR	Makanchi Array	63.77	332	P	P	07 06 54.0	-2.0
	1.2nm,0.6s,baz=143,slow=7.6,SNR=7.1						
ZAL	Zalesovo	68.26	339	P	P	07 07 21.9	-2.6
	0.7nm,0.4s,baz=214,slow=3.6,SNR=3.2						

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*BJI **20** 07:03:56.5, 19.90S×177.80W, h377^{km}, mB4.5, mb4.6*

*NEIC **20** 07:03:56.5±1.0, 19.93S×177.77W, h377^{km}±10^{km}, mb4.5/32, Error ellipse: s-maj=10.6km s-min=5.4km az=139.0*

*IDC **20** 07:03:56.6±2.2, 20.00S×177.73W, h380^{km}±22^{km}, mb4.0/7, mb1 4.3/9, mb1mx4.1/14, mbtmp4.8/9, Error ellipse: s-maj=19.9km s-min=11.0km az=121.0*

ISC 20 07:03:54.9±0.8,**19.88S**±0.05×**177.85W**±0.06,**h367**^{km}±9^{km},**n148**,σ**0^{s}96**/81,**mb4.5**/41,**20C-7D**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.31	45	P	P	07 05 53.1	-0.6
	9.2nm,0.3s,baz=34,slow=5.9,SNR=9.4						
AFI				S	S	07 07 28.6	+1.2
	baz=248,slow=21,SNR=2.1						
AFI	Afiamalu	8.31	45	eP	P	07 05 53.1	-0.6
	83nm,0.3s						
RAO	Raoul Island	9.33	180	S	S	07 07 48.8	-0.4
	140nm,0.3s,baz=83,slow=23,SNR=7.1						
DZM	Mont Dzumac	14.83	259	P	P	07 07 13.7	+4.3
	4.0nm,0.3s,baz=79,slow=16,SNR=98						
NOUC	Port Laguerre	14.96	259	eP	P	07 07 14.7	+3.9
URZ	Urewera	18.83	192	P	P	07 07 50.5	+0.3
	8.6nm,0.3s,baz=289,slow=2.0,SNR=31						
URZ				S	S	07 11 01.6	+1.2
	1.5nm,0.3s,baz=90,slow=21,SNR=9.0						
SNZO	South Karori	22.28	195	eP	P	07 08 21.9	-1.6
HNR	Honiara	23.83	293	eP	P	07 08 35.4	-2.5
	33nm,0.6s,mb4.7						
RPZ	Rata Peaks	25.52	199	P	P	07 08 56.1	+3.1
	16nm,0.6s,mb4.5,baz=75,slow=3.5,SNR=4.4						
ARMA	Armidale	29.47	243	⇓iP	P	07 09 29.6	+1.4
CNB	Canberra Magne	32.69	235	eP	P	07 09 56.0	+0.2
	20nm,0.8s,mb4.4						
CTA	Charters Tower	33.69	263	⇑iP	P	07 10 05.7	+1.2
	12nm,0.3s,mb4.6						
CTAO	Charters Tower	33.69	263	eP	P	07 10 05.7	+1.2
TOO	Toolangi	36.38	233	eP	P	07 10 27.3	+0.4
	4.3nm,0.5s,mb3.9						
STKA	Stephens Creek	38.18	243	⇑iP	P	07 10 42.7	+0.8
	12nm,0.6s,mb4.3						
STKA	Stephens Creek	38.18	243	P	P	07 10 42.8	+0.9
	15nm,0.5s,mb4.5,baz=91,slow=10.0,SNR=36						
ASPA	Alice Springs	44.80	256	⇑iP	P	07 11 35.3	-0.1
WB2	Warramunga Arr	44.81	261	eP	P	07 11 34.8	-0.8
WB2				eS	S	07 17 39.4	-5.2
WRAB	Tennant Creek	44.82	261	eP	P	07 11 35.2	-0.3
	6.7nm,0.4s,mb4.1						
WRA	Warramunga Arr	44.83	261	P	P	07 11 35.3	-0.4
	3.6nm,0.3s,mb4.0,baz=96,slow=7.2,SNR=175						
WRA				S	S	07 17 40.2	-4.6
	1.0nm,0.8s,baz=97,slow=14,SNR=4.9						
KAKA	Kakadu	48.10	271	⇑iP	P	07 12 19.7	+19
	6.4nm,0.3s,mb4.3						
FORT	Forrest	49.67	246	⇑iP	P	07 12 11.6	-1.1
	23nm,0.5s,mb4.7						
FITZ	Fitzroy Crossi	53.25	262	eP	P	07 12 38.9	-0.3
	3.5nm,0.4s,mb4.0						
KLBR	Kellerberrin	58.44	245	eP	P	07 13 14.0	-1.5
	15nm,1.0s,mb4.3						
SBA	Scott Base	58.50	184	eP	P	07 13 15.6	+0.4
VNDA	Vanda	58.54	185	eP	P	07 13 14.9	-0.6
	2.6nm,0.7s,mb3.8						
MJAR	Matsushiro Arr	69.79	323	P	P	07 14 27.6	-0.4
	8.6nm,0.6s,mb4.7,baz=156,slow=6.1,SNR=28						
MAT	Matsushiro	69.80	323	P	P	07 14 27.8	-0.3
MAT	Matsushiro	69.80	323	eP	P	07 14 28.0	-0.1
	6.8nm,0.7s,mb4.5						
QSPA	South Pole Qui	70.19	180	eP	P	07 14 29.5	-0.3
	6.7nm,1.0s,mb4.3						
SAO	San Andreas Ge	77.48	43	eP	P	07 15 12.1	-0.1
	8.7nm,0.9s,mb4.5						
PTRM	Twissleman Ran	77.64	45	eP	P	07 15 13.0	-0.1
MWC	Mount Wilson	78.28	47	eP	P	07 15 16.4	-0.2
ISA	Isabella	78.80	46	eP	P	07 15 19.3	0.0
	5.1nm,0.8s,mb4.3						
CMB	Columbia Colle	78.92	43	eP	P	07 15 19.4	-0.4
	9.3nm,0.9s,mb4.5						
MTUM	Tungsten Hills	79.70	44	P	P	07 15 24.4	+0.4
YBH	Yreka Blue Hor	79.72	39	eP	P	07 15 24.4	+0.3
	6.9nm,0.8s,mb4.4						
MDJ	Mudanjiang	80.09	325	P	P	07 15 26.6	+0.7
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,60nm,3.8s						
HUMO	Hull Mountain	80.12	38	eP	P	07 15 26.5	+0.4
	comp=Z,6.3nm,1.0s,mb4.3						
NVAR	Mina Array Bea	80.48	43	P	P	07 15 28.4	+0.3
	comp=Z,3.4nm,0.8s,mb4.1,baz=219,slow=7.7,SNR=24						
MOD	Modoc	81.25	40	eP	P	07 15 32.1	+0.1
	comp=Z,8.4nm,0.7s,mb4.6						
CN2	Changchun	81.89	322	eP	P	07 15 37.8	+2.5
TUC	Tucson	82.49	52	eP	P	07 15 39.1	+0.5
	comp=Z,6.8nm,0.9s,mb4.5						
WVOR	Wild Horse Val	82.57	40	eP	P	07 15 37.8	-0.9
	comp=Z,11nm,1.0s,mb4.7						
OCWA	Octopus Mounta	82.72	33	eP	P	07 15 40.0	+0.7
	comp=Z,22nm,0.8s,mb5.0						
ELK	Elko	83.73	43	eP	P	07 15 44.5	-0.1
	comp=Z,6.5nm,1.0s,mb4.4						
PMR	Palmer	84.39	13	eP	P	07 15 46.2	-1.2
	comp=Z,16nm,0.6s,mb5.0						
MSU	Marysvale	84.58	46	eP	P	07 15 49.6	+0.7
TMUT	Trail Mountain	85.62	46	eP	P	07 15 54.6	+0.6
HLID	Hailey	85.77	41	eP	P	07 15 54.9	+0.3
SRU	San Rafael	85.99	46	eP	P	07 15 55.4	-0.4
MNTX	Cornudas Mount	86.28	55	eP	P	07 15 57.3	0.0
	comp=Z,4.0nm,0.9s,mb4.2						
TXAR	Lajitas Array	86.61	57	P	P	07 15 59.3	+0.4
	comp=Z,1.9nm,0.6s,mb4.1,baz=215,slow=6.9,SNR=18						
PV10	Paradox Valley	86.66	47	eP	P	07 15 58.1	-0.8
ANMO	Albuquerque	86.91	51	eP	P	07 15 59.6	-0.6
	comp=Z,2.0nm,0.8s,mb4.0						
GDL2	Guadalupe Moun	87.28	54	eP	P	07 16 02.3	+0.2
MCMT	McKenzie Canyo	87.39	40	eP	P	07 16 02.5	+0.2
COLA	College	87.57	12	eP	P	07 16 01.3	-1.3
	comp=Z,27nm,0.6s,mb5.2						
ILAR	Eielson Array	87.68	13	P	P	07 16 01.9	-1.3
	comp=Z,6.0nm,0.6s,mb4.6,baz=220,slow=4.9,SNR=68						
DLMT	Dillon	87.82	40	eP	P	07 16 04.1	-0.3
	comp=Z,21nm,1.3s,mb4.8						
REDW	Red Top Meadow	87.88	42	eP	P	07 16 06.0	+1.4
	comp=Z,11nm,1.3s,mb4.5						
QLMT	Earthquake Lak	88.26	41	eP	P	07 16 07.1	+0.7
BW06	Boulder Array	88.42	43	eP	P	07 16 05.7	-1.5
PDAR	Pinedale Array	88.42	43	P	P	07 16 06.8	-0.3
	comp=Z,3.2nm,0.8s,mb4.2,baz=197,slow=2.0,SNR=19						
YMR	Madison River	88.47	41	eP	P	07 16 07.7	+0.3
	comp=Z,8.5nm,1.0s,mb4.5						
VNA3	Neumayer Olymp	88.75	176	e	P	07 16 10.4	+2.3
VNA3	Neumayer Olymp	88.75	176	e	P	07 16 18.0	+10
VNA3	Neumayer Olymp	88.75	176	e	tx	07 16 29.8	
VNA3	Neumayer Olymp	88.75	176	⇑iP	P	07 16 06.7	-1.4
VNA3				e		07 16 10.4	
VNA3				e		07 16 18.0	
VNA3				e		07 16 29.8	
VNA3				e		07 17 46.1	
DAWY	Dawson	88.83	16	eP	P	07 16 08.2	-0.3
HHC	Hu-ho-hao-te	89.02	314	eP	P	07 16 11.5	+1.5
HHC				AP	pP	07 17 34.0	-2.0
HHC				SKS	SKS	07 26 07.1	+4.5
HHC				S	S	07 26 26.3	+1.7
HHC				XS		07 28 57.3	
HHC				SS	SS	07 32 35.5	+4.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
HHC				AMB	AMB		
	comp=Z,80nm,9.6s						
HHC				LR	LR		
	comp=N,180nm,12.0s						
HHC				LR	LR		
	comp=E,240nm,13.2s						
HHC				LR	LR		
	comp=Z,130nm,14.4s						
VNA2	Neumayer--Watz	89.19	177	e	P	07 16 12.8	+2.7
VNA2	Neumayer--Watz	89.19	177	e	P	07 16 19.3	+9.2
VNA2	Neumayer--Watz	89.19	177	e	tx	07 16 32.4	
VNA2	Neumayer--Watz	89.19	177	⇑iP	P	07 16 09.0	-1.1
VNA2				e		07 16 12.8	
VNA2				e		07 16 19.3	
VNA2				e		07 16 32.4	
VNA2				e		07 17 48.5	
VNA1	Neumayer--Stat	89.42	177	⇑i	P	07 16 08.2	-3.0
LZH	Lanzhou	92.50	307	eP	P	07 16 28.5	+2.2
LZH				AP	pP	07 17 51.0	-1.7
LZH				PP	PP	07 20 17.8	+2.5
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.9						
LZH	Lanzhou	92.50	307	eP	P	07 16 28.5	+2.2
	comp=Z,26nm,1.6s,mb5.0						
LZH				pP	pP	07 17 51.0	-1.7
LZH				sP	sP	07 18 26.5	-3.2
LZH				PP	PP	07 20 17.8	+2.5
INK	Inuvik	93.64	15	eP	P	07 16 29.5	-1.2
	comp=Z,7.0nm,1.0s,mb4.7						
MKAR	Makanchi Array	110.87	314	PKiKP		07 21 43.8	
	comp=Z,0.6nm,0.6s,baz=257,slow=0.1,SNR=5.6						
ARCES	ARCESS Array B	128.34	350	PKP	PKPdf	07 22 16.9	-0.8
	comp=Z,1.7nm,0.7s,baz=91,slow=2.1,SNR=11						
FINES	FINESS Array B	135.22	344	PKP	PKPdf	07 22 31.2	+0.4
	comp=Z,2.4nm,0.8s,baz=63,slow=4.3,SNR=9.8						
FINES	FINESS Array B	135.22	344	PKP	PKPdf	07 22 31.2	+0.4
NB2	NORSAR Subarra	138.38	353	PKPabc	PKPdf	07 22 26.3	-10
	comp=Z,2.5nm,1.0s,baz=17,slow=2.6						
NOA	NORSAR Array B	138.38	353	PKhKP		07 22 29.8	
	comp=Z,1.2nm,0.8s,baz=23,slow=3.9,SNR=3.4						
NOA				PKP	PKPdf	07 22 36.9	+0.3
	comp=Z,0.6nm,0.6s,baz=63,slow=1.9,SNR=3.8						
AKASG	Malin Array Be	142.54	332	PKhKP		07 22 40.2	
	comp=Z,2.4nm,0.4s,baz=43,slow=4.1,SNR=15						
BSEG	Bad Segeberg	145.43	351	ePKPbc	PKPbc	07 22 50.4	+0.4
DCN	Croghan	145.81	10	eP	PKPdf	07 22 51.0	+1.3
DLF	Lyons Farm	145.98	9	eP	PKPdf	07 22 51.5	+1.5
BURAR	Bucovina Array	146.59	331	⇑P	PKPdf	07 22 55.4	+4.2
BURAR	Bucovina Array	146.59	331	⇑P	PKPdf	07 22 55.4	+4.2
STHS	Stebnicka Huta	146.80	337	ePKP	PKPdf	07 22 51.5	0.0
STHS				e		07 22 55.8	
KOLS	Kolonicke sedl	146.81	336	ePKP	PKPdf	07 22 51.1	-0.4
KOLS				e		07 22 54.7	
KSP	Ksiaz	147.14	343	ePKP	PKPdf	07 22 55.8	+3.8
KSP				e		07 22 59.1	
CRVS	Cervenica-Dubn	147.15	336	ePKP	PKPdf	07 22 54.9	+2.8
CRVS				e		07 22 58.8	
CLZ	Clausthal	147.46	351	ePKPbc	PKPdf	07 22 56.3	+3.8
CLL	Collm	147.49	347	⇓iPKP1	PKPdf	07 22 56.3	+3.8
CLL				i PKP2	PKPab	07 22 59.4	-1.8
CLL	Collm	147.49	347	⇓iPKP	PKPdf	07 22 56.3	+3.8
CLL				⇑iPKP	PKPdf	07 22 59.4	+6.9
UPC	Upice	147.52	343	ePKPbc	PKPdf	07 22 56.7	+4.1
UPC				ePKPab	PKPab	07 23 01.2	-0.2
DPC	Dobruska-Polom	147.58	343	ePKPbc	PKPdf	07 22 57.2	+4.5
DPC				ePKPab	PKPab	07 23 01.6	0.0
BRG	Berggiesshubel	147.70	346	i P	PKPdf	07 22 56.9	+4.1
BRG				i		07 23 00.1	
MORC	Moravsky Berou	147.74	341	ePKPdf	PKPdf	07 22 53.9	+0.9
MLR	Muntele Rosu	147.78	328	⇑P	PKPdf	07 22 56.6	+3.4
MLR	Muntele Rosu	147.78	328	⇑P	PKPdf	07 22 56.6	+3.4
KECS	Kecovo	147.86	337	ePKP	PKPdf	07 22 57.5	+4.3
PVCC	Panska Ves	147.87	345	ePKPbc	PKPdf	07 22 57.6	+4.4
DRGR		148.33	333	⇓P	PKPdf	07 22 57.8	+3.8
DRGR		148.33	333	⇓P	PKPdf	07 22 57.8	+3.8
PRU	Pruhonice	148.38	345	ePKPbc	PKPdf	07 22 58.7	+4.7
MOX	Moxa	148.40	348	ePKP	PKPdf	07 22 58.8	+4.8
VYHS	Vyhne	148.44	339	i PKP	PKPdf	07 22 59.3	+5.2
NKC	Novy Kostel	148.62	347	ePKPbc	PKPdf	07 22 59.5	+5.1
NKC				ePKPab	PKPab	07 23 04.3	-1.5
TREC	Trest	148.76	343	ePKPbc	PKPdf	07 22 59.7	+5.1
SMOL	Smolenice	148.89	340	ePKP	PKPdf	07 23 01.0	+6.1
ZST	Bratislava	149.27	340	ePKP	PKPdf	07 23 01.4	+5.9
TNS	Taunus Mts	149.31	352	ePKPbc	PKPdf	07 23 01.2	+5.7
TNS				ePKPab	PKPab	07 23 07.2	-1.4
GRA1	Grafenberg Arr	149.38	348	ePKPbc	PKPdf	07 23 01.7	+6.1
GRA1				ePKPab	PKPab	07 23 08.0	-1.0
KHC	Kasperske Hory	149.41	345	ePKPbc	PKPdf	07 23 01.5	+5.8
KHC				ePKPab	PKPab	07 23 08.2	-0.9
GEC2	GERESS Array S	149.64	345	ePKPbc	PKPdf	07 23 01.9	+5.8
GERES	GERESS Array B	149.64	345	PKP	PKPdf	07 22 56.4	+0.3
	comp=Z,11nm,0.9s,slow=1.3,SNR=3.6						
GERES				PKPbc	PKPdf	07 23 02.0	+5.9
	comp=Z,9.5nm,0.8s,baz=45,slow=1.4,SNR=38						
GERES				PKPab	PKPab	07 23 09.0	-1.1
	comp=Z,1.1nm,0.8s,baz=34,slow=4.8,SNR=4.3						
GIVF	Givet	149.77	357	ePKIKP	PKPdf	07 23 01.8	+5.6
	comp=Z,68nm,1.0s						
BAIF	Baives	149.84	357	ePKIKP	PKPdf	07 23 02.2	+5.8
	comp=Z,48nm,0.9s						
WLF	Walferdange	150.11	355	ePKPbc	PKPdf	07 23 03.5	+6.7
MOA	Molln	150.42	343	⇑P	PKPdf	07 23 03.7	+6.4
	comp=Z,8.0nm,1.3s						
FUR	Furstenfeldbru	150.83	347	ePKPbc	PKPdf	07 23 04.4	+6.5
FUR				ePKPab	PKPab	07 23 13.9	-1.1
FLN	La Foliniere	151.11	4	ePKIKP	PKPdf	07 23 05.0	+6.7
	comp=Z,54nm,1.0s						
BFO	Black Forest	151.18	351	ePKPbc	PKPdf	07 23 05.5	+7.1
CDF	Champ du Feu	151.24	353	ePKIKP	PKPdf	07 23 05.3	+6.8
	comp=Z,14nm,0.7s						
ROSF	Rostrenen	151.28	8	ePKIKP	PKPdf	07 23 05.2	+6.6
	comp=Z,14nm,0.7s						
LDF	La Druitiere	151.30	3	ePKIKP	PKPdf	07 23 04.9	+6.3
	comp=Z,16nm,0.7s						
MEZF	Maizieres J’vi	151.35	356	ePKIKP	PKPdf	07 23 05.8	+7.1
	comp=Z,45nm,0.9s						
KBA	Koelnbreinsper	151.37	344	⇑eP	PKPdf	07 23 05.6	+6.8
	comp=Z,12nm,0.7s						
KBA	Koelnbreinsper	151.37	344	⇑eP	PKPdf	07 23 05.6	+6.8
SGMF	Saint Gilles	151.44	7	ePKIKP	PKPdf	07 23 05.3	+6.5
	comp=Z,22nm,0.7s						
GRR	Gorron	151.46	4	ePKIKP	PKPdf	07 23 05.1	+6.3
WATA	Walderalm	151.56	346	⇑eP	PKPdf	07 23 05.8	+6.8
	comp=Z,7.7nm,0.9s						
WTTA	Wattenberg	151.61	346	⇓iP	PKPdf	07 23 06.3	+7.2
	comp=Z,20nm,1.1s						
WTTA	Wattenberg	151.61	346	⇓P	PKPdf	07 23 06.3	+7.2
MOTA	Moosalm	151.65	347	⇑iP	PKPdf	07 23 06.4	+7.3
	comp=Z,11nm,1.0s						
QUIF	Quistinic	151.70	8	ePKIKP	PKPdf	07 23 05.7	+6.5
HAU	Haudompre	151.74	354	ePKIKP	PKPdf	07 23 06.2	+7.0
SQTA	Sankt Quirin	151.74	347	⇑iP	PKPdf	07 23 06.7	+7.4
	comp=Z,8.0nm,0.8s						
HINF	Hinteralfeld	151.87	353	ePKIKP	PKPdf	07 23 06.3	+6.8
	comp=Z,14nm,0.9s						
DAVA	Damuels	151.94	349	⇑iP	PKPdf	07 23 07.6	+8.0
	comp=Z,8.9nm,0.9s						
LOR	Lormes	152.65	357	ePKIKP	PKPdf	07 23 07.4	+6.8
	comp=Z,5.3nm,0.6s						
SSF	Saint Saulge	152.87	358	ePKIKP	PKPdf	07 23 07.4	+6.5
TCF	Toulx Ste Croi	153.66	360	ePKIKP	PKPdf	07 23 08.4	+6.4
ESDC	Sonseca Array	159.58	14	PKPab	PKPab	07 23 51.9	-0.7
	comp=Z,0.8nm,0.6s,slow=4.4,SNR=4.5						

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*NEIC **20** 07:44:38.7±1.7, 11.71S×166.74E, h232^{km}±15^{km}, mb3.7/2, Error ellipse: s-maj=20.3km s-min=11.1km az=67.0*

*IDC **20** 07:44:38.3±2.9, 11.73S×166.75E, h228^{km}±27^{km}, mb3.7/6, mb1 3.8/8, mb1mx3.6/16, mbtmp4.3/8, Error ellipse: s-maj=25.0km s-min=18.1km az=68.0*

ISC 20 07:44:38.6±2.1,**11.77S**±0.10×**166.7E**±0.2,**h245**^{km}±19^{km},**n15**,σ**0^{s}74**/14,**mb3.8**/8,**Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.02	289	P	P	07 46 20.2	0.0
	3.8nm,0.3s,baz=168,slow=19,SNR=3.2						
HNR	Honiara	7.02	289	P	P	07 46 20.2	0.0
DZM	Mont Dzumac	10.24	181	P	P	07 47 01.2	-0.1
	1.9nm,0.3s,baz=4.2,slow=14,SNR=23						
DZM				S	S	07 48 53.6	+0.4
	0.9nm,0.3s,baz=320,slow=23,SNR=6.4						
URZ	Urewera	27.97	162	P	P	07 50 08.1	-0.8
	5.1nm,0.3s,mb4.6,baz=317,slow=3.8,SNR=8.6						
SNZO	South Karori	30.25	168	eP	P	07 50 28.5	-0.5
STKA	Stephens Creek	30.57	225	P	P	07 50 33.3	+1.5
	1.1nm,0.6s,mb3.7,baz=34,slow=11,SNR=2.9						
WRA	Warramunga Arr	32.11	251	P	P	07 50 43.6	-1.7
	0.5nm,0.5s,mb3.3,baz=85,slow=9.1,SNR=8.1						
VNDA	Vanda	65.79	181	eP	P	07 54 58.8	-0.2
	0.7nm,0.7s,mb3.4						
SBA	Scott Base	66.07	180	P	P	07 55 01.1	+0.3
	2.6nm,0.9s,mb3.9						
ILAR	Eielson Array	83.91	18	P	P	07 56 41.8	-0.1
	3.2nm,0.6s,mb4.2,baz=238,slow=5.1,SNR=58						
NVAR	Mina Array Bea	85.79	50	P	P	07 56 52.2	+0.3
	0.3nm,0.8s,mb3.1,baz=223,slow=6.4,SNR=3.6						
NVAR	Mina Array Bea	85.79	50	P	P	07 56 52.2	+0.3
MKAR	Makanchi Array	94.68	317	P	P	07 57 33.8	+0.7
	1.8nm,0.7s,mb4.3,baz=84,slow=6.5,SNR=13						
ARCES	ARCESS Array B	117.27	346	PKP	PKPdf	08 02 55.5	+1.2
	0.6nm,0.5s,baz=77,slow=2.8,SNR=8.1						
FINES	FINESS Array B	122.78	339	PKP	PKPdf	08 03 06.5	+1.3
	5.5nm,1.2s,baz=117,slow=4.3,SNR=6.9						

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*IDC **20** 08:01:19.4±1.1, 4.75S×134.36E, mb4.0/4, mb1 4.1/6, mb1mx4.0/11, mbtmp4.0/6, ML3.6/2, Error ellipse: s-maj=60.4km s-min=22.6km az=60.0*

*NEIC **20** 08:01:24.0±0.6, 4.86S×134.30E, h35^{km}, mb4.4/6, Error ellipse: s-maj=24.3km s-min=11.5km az=56.0*

ISC 20 08:01:26.2±2.6**, 5.40S**±0.07×**133.7E**±0.1**, h84**^{km}±26^{km}**, n20, σ1^{s}17**/24**, mb4.0**/7**, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	7.38	190	*e*P	Px	08 03 33.0	
	34nm,0.4s						
KAKA				*e*S	Sx	08 05 00.2	
PMG	**Port Moresby**	13.89	107	Pn	P	08 04 33.6	-7.1
	0.4nm,0.3s,baz=303,slow=17,SNR=2.3						
PMG	**Port Moresby**	13.89	107	P	P	08 04 32.8	-7.9
WRAB	**Tennant Creek**	14.46	178	*e*P	P	08 04 49.2	+1.2
	65nm,1.1s						
WB2	**Warramunga Arr**	14.46	178	*e*P	P	08 04 47.8	-0.3
WB2				*e*		08 05 00.7	
WB2				*e*S	S	08 07 25.2	-1.6
WRA	**Warramunga Arr**	14.46	178	Pn	P	08 04 47.4	-0.7
	0.6nm,0.3s,baz=354,slow=13,SNR=24						
WRA				Sn	S	08 07 23.5	-3.3
	1.0nm,0.3s,baz=0.9,slow=23,SNR=5.1						
WRA				Lg		08 09 10.8	
	1.1nm,0.3s,baz=357,slow=28,SNR=6.7						
FITZ	**Fitzroy Crossi**	14.90	211	*e*P	P	08 04 53.6	-0.1
	15nm,0.3s						
FITZ				*e*S	S	08 07 34.0	-2.9
FITZ	**Fitzroy Crossi**	14.90	211	Pn	P	08 04 54.3	+0.6
	4.2nm,0.3s,baz=39,slow=9.2,SNR=25						
FITZ				Sn	S	08 07 36.3	-0.6
	6.1nm,0.3s,baz=181,slow=15,SNR=6.7						
ASPA	**Alice Springs**	18.16	180	*e*P	P	08 05 35.3	+1.0
ASPA				*e*S	S	08 08 52.5	+1.8
CTA	**Charters Tower**	19.01	141	*e*P	P	08 05 44.3	+0.3
	12nm,1.0s						
CTA	**Charters Tower**	19.01	141	P	P	08 05 44.0	-0.1
	0.4nm,0.3s,baz=317,slow=11,SNR=7.9						
CTAO	**Charters Tower**	19.01	141	*e*P	P	08 05 44.0	0.0
	38nm,1.3s						
FORT	**Forrest**	25.80	191	*e*P	P	08 06 55.8	+4.5
	30nm,0.6s,mb4.9						
STKA	**Stephens Creek**	27.35	165	*e*P	P	08 07 11.0	+5.4
	2.8nm,0.8s,mb3.8						
STKA	**Stephens Creek**	27.35	165	P	P	08 07 10.5	+4.9
	1.8nm,0.6s,mb3.8,baz=344,slow=12,SNR=6.0						
ULN	**Ulaanbaatar**	58.00	339	P	P	08 11 11.3	-1.3
	1.9nm,0.7s,mb4.2						
MKAR	**Makanchi Array**	69.00	325	P	P	08 12 26.6	+1.8
	1.7nm,0.8s,mb3.9,baz=110,slow=8.4,SNR=8.2						
ZAL	**Zalesovo**	71.86	332	P	P	08 12 41.5	-0.5
	0.7nm,0.4s,mb3.9,baz=15,slow=5.8,SNR=3.5						
BRVK	**Borovoye**	78.81	327	*e*P	P	08 13 22.1	+0.7
	0.9nm,0.8s,mb3.6						
ILAR	**Eielson Array**	90.33	25	P	P	08 14 17.8	-1.1
	0.4nm,0.8s,mb3.6,baz=268,slow=4.4,SNR=4.4						

*MOS **20** 08:05:36.0±1.9, 57.29N×120.51E, h8^{km}, mb4.4/1, Error ellipse: s-maj=22.5km s-min=14.5km az=145.0*

BYKL 20 08:05:33.8±0.5**, 57.38N×120.67E, 2D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	1.40	251	⇓*i*Pg	Pg	08 05 59.8	-1.8
CRS				Pmax		08 06 02.1	
	238nm,0.7s						
CRS				*e*Sg	Sg	08 06 17.4	-2.8
CRS				Smax		08 06 18.6	
	746nm,0.4s						
CRS	**Chara**	1.40	251	*e*P	Pb	08 05 59.9	-0.5
CRS				*e*		08 06 17.4	
CRS				pmax	pmax		
	comp=Z,232nm,0.6s						
CRS				smax			
	comp=E,741nm,0.3s						
NRGR	**Nerungri**	2.33	106	*e*P	Pn	08 06 15.4	+1.4
NRGR				S	Sn	08 06 45.0	+1.3
CLNS	**Chul’man**	2.37	102	*e*Pg	Pg	08 06 15.8	-5.3
CLNS				*e*		08 06 17.1	
CLNS				max		08 06 18.1	
	comp=E,111nm,0.2s						
CLNS				*e*Sg	Sg	08 06 46.9	-5.7
CLNS				Smax		08 06 51.6	
	comp=E,6μm,0.8s						
CLNS	**Chul’man**	2.37	102	*e*P	Pn	08 06 17.7	+3.2
CLNS				*e*S	Sn	08 06 44.4	-0.2
CLNS				pmax	pmax		
	comp=Z,34nm,0.3s						
CLNS				pmax	pmax		
	comp=N,14nm,0.1s						
CLNS				pmax	pmax		
	comp=E,16nm,0.3s						
CLNS				smax			
	comp=N,21nm,0.3s						
CLNS				smax			
	comp=Z,7.0nm,0.2s						
CLNS				smax			
	comp=E,10.0nm,0.3s						
CLNS				smax			
	comp=N,353nm,0.4s						
CLNS				smax			
	comp=Z,246nm,0.5s						
CLNS				smax			
	comp=E,618nm,0.8s						
CLNS				MLR	MLR		
	comp=Z,90nm,14.0s						
ALDR	**Aldan**	2.81	62	*e*	Pn	08 06 24.0	+3.2
ALDR				*e*		08 06 55.2	
ALDR				*e*Sg	Sg	08 07 00.2	-7.1
ALDR				Smax		08 07 01.0	
	comp=Z,908nm,0.2s						
NLYR	**Nelyaty**	2.86	254	*e*	Pn	08 06 22.5	+0.9
NLYR				*e*Pg	Pg	08 06 25.6	-5.4
NLYR				Pmax		08 06 26.6	
	comp=Z,213nm,1.0s						
NLYR				*e*Sg	Sg	08 07 01.8	-7.4
NLYR				Smax		08 07 05.8	
	comp=Z,1μm,1.6s						
NLYR	**Nelyaty**	2.86	254	*e*P	Pn	08 06 22.4	+0.8
NLYR				*e*		08 07 01.0	
NLYR				pmax	pmax		
	comp=Z,221nm,0.7s						
NLYR				smax			
	comp=N,1μm,1.6s						
TUP	**Tupik**	2.99	188	*e*Pn	Pn	08 06 22.1	-1.3
TUP				*e*Pg	Pg	08 06 27.3	-6.2
TUP				Pmax		08 06 28.2	
	comp=N,175nm,1.1s						
TUP				*e*Sg	Sg	08 07 05.1	-8.2
TUP				Smax		08 07 07.9	
	comp=N,796nm,0.8s						
TUP	**Tupik**	2.99	188	*e*P	Pn	08 06 22.1	-1.3
TUP				*e*S	Sn	08 06 56.4	-4.0
TUP				pmax	pmax		
	comp=Z,117nm,0.5s						
TUP				smax			
	comp=N,641nm,1.6s						
TNDR	**Tynda**	3.18	133	⇓*i*	Pn	08 06 25.8	-0.3
TNDR				*e*		08 07 03.5	
TNDR				*e*Sg	Sg	08 07 11.9	-7.8
TNDR				Smax		08 07 14.0	
	comp=N,3μm,0.9s						
BOD	**Bodaibo**	3.62	280	*e*Pn	Pn	08 06 31.6	-0.6
BOD				*e*Pg	Pg	08 06 38.5	-7.5
BOD				Pmax		08 06 40.8	
	comp=N,51nm,1.2s						
BOD				*e*		08 07 14.0	
BOD				*e*Sg	Sg	08 07 24.2	-10
BOD				Smax		08 07 30.9	
	comp=N,389nm,1.5s						
BOD	**Bodaibo**	3.62	280	*e*P	Pn	08 06 31.6	-0.6
BOD				*e*		08 07 24.5	
BOD				pmax	pmax		
	comp=Z,52nm,0.7s						
BOD				smax			
	comp=N,385nm,0.8s						
SVKR	**Severomuysk**	4.12	255	*e*	Pn	08 06 39.3	0.0
SVKR				*e*Pg	Pg	08 06 47.8	-8.1
SVKR				Pmax		08 06 53.0	
	comp=N,51nm,0.3s						
SVKR				*e*Sg	Sg	08 07 40.6	-10
SVKR				Smax		08 07 47.6	
	comp=N,593nm,1.7s						
UKT	**Uakit**	4.34	247	*e*Pg	Pg	08 06 52.1	-8.4
UKT				Pmax		08 06 57.6	
	comp=N,27nm,1.7s						
UKT				*e*Sg	Sg	08 07 47.6	-11
UKT				Smax		08 07 56.0	
	comp=N,199nm,2.1s						
UKT	**Uakit**	4.34	247	*e*P	Pn	08 06 52.0	+9.4
UKT				pmax	pmax		
	comp=Z,19nm,0.5s						
YOA	**Uoyan**	5.08	260	*e*	Pg	08 07 11.1	-4.1
YOA				*e*Sg	Sg	08 08 11.6	-11
YOA				Smax		08 08 20.8	
	comp=Z,1μm,1.9s						
YOA	**Uoyan**	5.08	260	*e*P	Pn	08 07 06.7	+14
YOA				pmax	pmax		
	comp=Z,69nm,0.4s						
ZEA	**Zeya**	5.22	132	*e*	Pn	08 06 57.5	+2.5
ZEA				*e*Sg	Sg	08 08 14.5	-13
KMO	**Kumora**	5.44	258	*e*	Pn	08 06 58.2	+0.1
KMO				*e*Pg	Pg	08 07 10.9	-11
KMO				Pmax		08 07 18.3	
	comp=Z,16nm,0.8s						
KMO				*e*Sg	Sg	08 08 19.8	-15
KMO				Smax		08 08 34.3	
	comp=Z,244nm,1.2s						
KMO	**Kumora**	5.44	258	*e*P	Pn	08 06 56.4	-1.7
KMO				*e*S	Sn	08 07 56.7	-5.6
KMO				pmax	pmax		
	comp=Z,14nm,0.4s						
KMO				smax			
	comp=N,245nm,1.2s						
YLYR	**Ulyunkhan**	5.88	249	*e*	Pn	08 07 06.6	+2.3
YLYR				*e*Pg	Pg	08 07 20.2	-11
YLYR				Pmax		08 07 27.0	
	comp=N,8.0nm,0.6s						
YLYR				*e*Sg	Sg	08 08 35.8	-14
YLYR				Smax		08 08 40.6	
	comp=N,222nm,1.6s						
YLYR	**Ulyunkhan**	5.88	249	*e*P	Pn	08 07 18.9	+15
YLYR				pmax	pmax		
	comp=Z,12nm,0.5s						
NIZ	**Nizh Angarsk**	6.36	260	*e*	Sn	08 08 20.8	-4.5
NIZ				*e*Sg	Sg	08 08 49.7	-16
NIZ				Smax		08 08 59.4	
	comp=Z,80nm,1.1s						
NIZ	**Nizh Angarsk**	6.36	260	*e*P	Pn	08 07 08.7	-2.4
NIZ				pmax	pmax		
	comp=Z,17nm,0.8s						
YAK	**Yakutsk**	6.52	41	*e*P	Pn	08 07 12.3	-1.0
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,35nm,6.0s						
CIT	**Chita**	6.77	221	*e*Pg	Pg	08 07 35.8	-13
CIT				Pmax		08 07 37.6	
	comp=Z,8.0nm,0.9s						
CIT				*e*Sg	Sg	08 09 02.3	-17
CIT				Smax		08 09 13.6	
	comp=Z,198nm,1.9s						
OGRR	**Ongureny**	8.31	249	*e*Sg	Sg	08 09 53.1	-17
OGRR				Smax		08 10 02.2	
	comp=Z,38nm,0.7s						
KPC	**Khapcheranga**	9.13	216	*e*Pg	P	08 08 17.5	+28
KPC				Pmax		08 08 21.1	
	comp=Z,1.0nm,0.8s						
KPC				*e*Sg	Sg	08 10 14.3	-23
KPC				Smax		08 10 24.7	
	comp=Z,75nm,1.3s						
TRG	**Tyrgan**	9.42	247	*e*	rx	08 09 08.9	
TRG				*e*Sg	Sg	08 10 23.4	-24
TRG				Smax		08 10 38.7	
	comp=Z,74nm,2.1s						
ARS	**Arshan**	11.88	250	*e*Sg	S	08 11 43.1	+61
ARS				Smax		08 12 05.5	
	comp=Z,67nm,1.5s						
ORL	**Orlik**	12.91	257	*e*	rx	08 11 41.4	
ORL				*e*Sg	S	08 12 14.2	+67
ORL				Smax		08 12 32.3	
	comp=Z,25nm,1.9s						

IGQ 20 08:06:22.5, 1.76S×77.57W, h243^{km}±7^{km}, mb4.0, 11D, Error ellipse: s-maj=5.6km s-min=4.5km az=34.7, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUN5	**Runtun**	0.92	292	P	P	08 06 56.7	+0.2
JUIV	**Juive**	0.95	291	P	P	08 06 57.8	+1.1
PISA	**Pisayambo**	1.07	311	P	P	08 06 58.4	+1.0
TAMB	**Tambo**	1.32	323	P	P	08 06 59.8	+0.6
VC1	**Cotopaxi 1**	1.39	323	⇓P	P	08 07 00.4	+0.8
CAMI	**Rancho Maria**	1.42	319	P	P	08 07 01.1	+1.2
ANTI	**Antisana**	1.43	336	⇓P	P	08 07 00.9	+0.9
QIL1	**Quilotoa**	1.64	304	P	P	08 07 03.3	+1.8
QIL1				S	S	08 07 31.2	-0.5
LAV3	**Lava3-Reventad**	1.65	358	⇓P	P	08 07 02.4	+0.7
CONE	**Cono NE Rev Vo**	1.68	358	P	P	08 07 02.8	+0.9
CAYR	**Refugio Cayamb**	1.82	346	⇓P	P	08 07 04.7	+1.6
ANGU	**Angureal**	1.85	346	⇓P	P	08 07 04.9	+1.6
JUA2	**San Juan 2**	1.85	326	⇓P	P	08 07 04.3	+1.0
CAYA	**Cayambe**	1.87	347	⇓P	P	08 07 05.1	+1.7
GGP	**Refugio Guagua**	1.88	327	⇓P	P	08 07 04.7	+1.1
TERV	**Terraza Guagua**	1.88	327	P	P	08 07 04.9	+1.3
PINO	**Pino**	1.90	327	⇓P	P	08 07 05.0	+1.2
YANA	**Yana**	1.91	329	⇓P	P	08 07 04.9	+1.0
COTA	**Cotacachi**	2.22	340	⇓P	P	08 07 08.5	+1.7

*LDG **20** 08:19:11.3±0.2, 48.97N×7.88E, h10^{km}, Md2.5/1, Ml2.3/8, Error ellipse: s-maj=3.9km s-min=3.4km az=98.0*
*STR **20** 08:19:12.1±0.3, 48.99N×7.74E, h5^{km}±1^{km}, Ml1.9, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*BGR **20** 08:19:12.1±0.4, 48.94N×7.86E, h10^{km}, ML1.6/2, Error ellipse: s-maj=4.4km s-min=3.3km az=51.0*
*LEDBW **20** 08:19:12.7±1.7, 48.90N×7.87E, h5^{km}, ML2.0, Error ellipse: s-maj=32.0km s-min=24.0km az=177.0*

ISC 20 08:19:10.7±0.4**, 48.96N**±0.03×**7.78E**±0.03**, h12**^{km}±3^{km}**, n28, σ0^{s}87**/44**, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LANF	**Langenberg**	0.03	41	Pg	Pg	08 19 13.7	+0.7
LANF				Sg	Sg	08 19 14.8	+0.2
CDF	**Champ du Feu**	0.64	211	*e*Pg	Pg	08 19 24.0	+0.3
CDF	**Champ du Feu**	0.64	211	*e*Pn	Pn	08 19 26.1	+0.8
CDF				*e*Sg	Sg	08 19 34.0	+1.6
	29nm,0.3s						
BFO	**Black Forest**	0.73	150	*e*Pg	Pg	08 19 25.7	+0.3
	SNR=6.0						
BFO				*e*Sg	Sg	08 19 33.7	-1.6
LBG	**Lerchenberg**	0.73	113	⇑*e*P	Pb	08 19 24.9	0.0
LBG				S	Sb	08 19 33.7	-0.8
ECH	**Echery**	0.85	209	Pg	Pg	08 19 29.0	+1.1
ECH				Sg	Sg	08 19 40.3	+1.0
STU	**Stuttgart**	0.95	101	*e*Sg	Sg	08 19 40.6	-2.1
KIZ	**Kirchzarten**	1.01	175	P	Pb	08 19 30.2	+0.6
KIZ				S	Sb	08 19 42.9	+0.3
BUCH	**Bad Urach**	1.16	116	⇑*e*P	Pb	08 19 33.1	+0.9
BUCH				S	Sb	08 19 48.2	+1.2
MOF	**Molkenrain**	1.19	201	Pg	Pg	08 19 34.9	+0.3
GUT	**Gutenstein**	1.26	135	P	Pb	08 19 35.0	+1.1
GUT				S	Sb	08 19 50.5	+0.7
WLF	**Walferdange**	1.28	304	*e*Pg	Pg	08 19 37.2	+0.9
	SNR=1.3						
WLF				*e*Sg	Sg	08 19 54.1	+0.7
HINF	**Hinteralfeld**	1.30	209	*e*Pn	Pn	08 19 34.1	-0.6
HINF	**Hinteralfeld**	1.30	209	*e*Pg	Pg	08 19 36.2	-0.6
HINF				*e*Sn	Sn	08 19 51.0	-1.0
HINF				*e*Sg	Sg	08 19 53.6	-0.6
	8.4nm,0.3s						
TNS	**Taunus Mts**	1.34	19	*e*Sg	Sg	08 19 54.9	-0.5
HAU	**Haudompre**	1.35	225	*e*Pn	Pn	08 19 35.6	+0.2
HAU	**Haudompre**	1.35	225	*e*Pg	Pg	08 19 37.3	-0.4
HAU				*e*Sg	Sg	08 19 55.8	0.0
	6.0nm,0.2s						
THEF	**They Montfort**	1.40	239	Pn	Pn	08 19 36.5	+0.4
THEF	**They Montfort**	1.40	239	Pg	Pg	08 19 38.5	-0.2
THEF				Sg	Sg	08 19 57.3	-0.1
RFYF	**Reffroy**	1.56	259	*e*Pn	Pn	08 19 38.5	+0.1
	baz=73						
RFYF	**Reffroy**	1.56	259	*e*Pg	Pg	08 19 41.9	0.0
RFYF				*e*Sg	Sg	08 20 03.1	+0.3
	5.9nm,0.3s						
MEZF	**Maizieres J’vi**	1.86	257	*e*Sg	Sg	08 20 12.4	-0.4
	2.6nm,0.3s						
SFTF	**Sexfontaines**	1.97	248	*e*Pn	Pn	08 19 43.9	-0.4
SFTF	**Sexfontaines**	1.97	248	*e*Pg	Pg	08 19 49.1	-1.0
	baz=61						
SFTF				*e*Sg	Sg	08 20 15.9	-0.5
	2.2nm,0.2s						
GRF	**Grafenberg Arr**	2.37	71	*e*Sg	Sg	08 20 25.4	-4.3
LOR	**Lormes**	3.12	239	*e*Pn	Pn	08 19 59.7	-1.1
	baz=58						
LOR	**Lormes**	3.12	239	*e*Pg	Pg	08 20 10.4	-2.7
	baz=63						
LOR				*e*Sg	Sg	08 20 51.1	-3.7
	1.4nm,0.2s						
SMF	**Signal de Mont**	3.52	230	*e*Sg	Sg	08 21 03.7	-4.3
	1.8nm,0.3s						

*NEIC **20** 08:45:36.4±0.3, 36.19N×113.85W, h5^{km}, ML3.2, Error ellipse: s-maj=4.4km s-min=3.6km az=163.0*
*IDC **20** 08:45:39.4±1.1, 36.42N×113.91W, mb1 3.3/5, mb1mx3.2/23, mbtmp3.0/5, ML3.1/4, Error ellipse: s-maj=17.7km s-min=9.7km az=39.0*

ISC 20 08:45:35.5±0.3**, 36.17N**±0.03×**113.79W**±0.04**, h10**^{km}**, n42, σ0^{s}90**/52**, Western Arizona**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEN	**Nelson**	1.00	239	*e*P	Pb	08 45 55.7	+1.2
NEN				*e*S	Sb	08 46 08.7	+1.3
LDFC	**Landfair**	1.53	225	*e*P	Pn	08 46 03.7	+0.6
ARUT	**Antelope Range**	1.64	10	*e*P	Pn	08 46 05.6	+1.1
ARUT				*e*S	Sn	08 46 25.7	-0.1
WUAZ	**Wupatki**	2.07	108	*e*Pn	Pn	08 46 11.8	+1.0
TPNV	**Topopah Spring**	2.12	292	*e*Pn	Pn	08 46 12.6	+1.1
MSU	**Marysvale**	2.67	28	*e*Pn	Pn	08 46 21.9	+2.6
PFO	**Pinyon Flat Ob**	3.37	221	*e*Pn	Pn	08 46 28.9	-0.4
TMUT	**Trail Mountain**	3.73	33	*e*Pn	Pn	08 46 34.5	+0.1
SRU	**San Rafael**	3.92	41	*e*Pn	Pn	08 46 37.7	+0.6
MWC	**Mount Wilson**	4.00	242	*e*Pn	Pn	08 46 37.6	-0.6
MTUM	**Tungsten Hills**	4.01	288	*e*Pn	Pn	08 46 38.0	-0.3
DUG	**Dugway**	4.09	11	*e*Pn	Pn	08 46 39.7	+0.1
MNV	**Mina**	4.14	304	*e*Pn	Pn	08 46 40.0	-0.3
MPU	**Maple Canyon**	4.20	23	Pn	Pn	08 46 41.2	+0.1
BAR	**Barrett**	4.22	215	*e*Pn	Pn	08 46 41.1	-0.3
NVAR	**Mina Array Bea**	4.24	303	Pn	Pn	08 46 42.1	+0.4
	2.2nm,0.3s,baz=124,slow=15,SNR=63						
NVAR				Pg	Pg	08 46 55.5	-4.6
	3.6nm,0.3s,baz=127,slow=16,SNR=18						
NVAR				Lg		08 47 47.2	
	2.3nm,0.3s,baz=182,slow=39,SNR=4.8						
PV10	**Paradox Valley**	4.38	58	*e*Pn	Pn	08 46 44.5	+0.8
TUC	**Tucson**	4.59	146	*e*Pn	Pn	08 46 46.6	-0.1
PV01	**Paradox Valley**	4.61	63	*e*Pn	Pn	08 46 47.6	+0.7
DAU	**Daniels Canyon**	4.68	24	*e*Pn	Pn	08 46 48.1	+0.1
ELK	**Elko**	4.70	346	Pn	Pn	08 46 47.4	-0.8
	0.2nm,0.3s,baz=181,slow=14,SNR=3.3						
ELK				Pg	Pg	08 47 03.5	-5.9
	1.3nm,0.3s,baz=173,slow=15,SNR=17						
ELK				Lg		08 48 02.2	
	2.7nm,0.3s,baz=230,slow=18,SNR=8.2						
ELK	**Elko**	4.70	346	*e*Pn	Pn	08 46 47.0	-1.3
ELK				Pn	Pn	08 46 47.4	-0.8
ELK				Pg	Pg	08 47 03.5	-5.9
ELK				Lg		08 48 02.2	
PTRM	**Twissleman Ran**	5.23	266	Pn	Pn	08 46 54.8	-1.0
SPUT	**South Promonto**	5.23	11	*e*Pn	Pn	08 46 55.8	0.0
TCUT	**Toone Canyon**	5.28	20	Pn	Pn	08 46 56.2	-0.2
CMB	**Columbia Colle**	5.59	291	*e*Pn	Pn	08 46 59.4	-1.3
HVU	**Hansel Valley**	5.65	8	*e*Pn	Pn	08 47 00.9	-0.8
HWUT	**Hardware Ranch**	5.70	17	*e*Pn	Pn	08 47 01.9	-0.4
LENM	**Lemitar**	5.93	108	Pn	Pn	08 47 05.4	-0.3
ANMO	**Albuquerque**	6.10	99	Pn	Pn	08 47 12.2	+4.2
	baz=278,slow=12,SNR=6.3						
ANMO				Pg	Pg	08 47 28.9	-8.4
	baz=282,slow=13,SNR=20						
ANMO				Lg		08 48 44.2	
	baz=53,slow=20,SNR=8.2						
ANMO	**Albuquerque**	6.10	99	Pn	Pn	08 47 12.2	+4.2
ANMO				Pg	Pg	08 47 28.9	-8.4
ANMO				Lg		08 48 44.2	
LPM	**Los Pinos Moun**	6.15	106	*e*Pn	Pn	08 47 07.8	-0.9
SMCO	**Snowmass**	6.18	59	*e*Pn	Pn	08 47 09.5	+0.3
BNM	**Barren Site**	6.21	107	*e*Pn	Pn	08 47 08.8	-0.6
SDCO	**Great Sand Dun**	6.82	74	*e*Pn	Pn	08 47 17.6	-0.5
WVOR	**Wild Horse Val**	7.29	330	Pn	Pn	08 47 22.5	-2.2
PDAR	**Pinedale Array**	7.35	25	Pn	Pn	08 47 27.8	+2.2
	0.1nm,0.3s,baz=190,slow=9.0,SNR=5.8						
PDAR				Pg	Pg	08 47 50.0	-12
	0.1nm,0.3s,baz=204,slow=16,SNR=5.4						
PDAR				Lg		08 49 31.3	
	0.1nm,0.3s,baz=204,slow=25,SNR=2.7						
PDAR	**Pinedale Array**	7.35	25	Pn	Pn	08 47 27.8	+2.2
PDAR				Pg	Pg	08 47 50.0	-12
PDAR				Lg		08 49 31.3	
ISCO	**Idaho Springs**	7.40	58	Pn	Pn	08 47 25.1	-1.2
GDL2	**Guadalupe Moun**	8.76	114	Pn	P	08 47 45.4	+0.2
CPRX	**Cap Rock**	8.76	108	Pn	P	08 47 44.0	-1.3
TXAR	**Lajitas Array**	10.91	126	Pn	P	08 48 24.0	+9.2
	0.0nm,0.3s,baz=305,slow=14,SNR=2.4						
TXAR				Lg		08 51 18.2	
	0.1nm,0.3s,baz=315,slow=26,SNR=5.2						

*IDC **20** 08:49:47.8±0.8, 6.80N×72.98W, h161^{km}±12^{km}, mb3.3/5, mb1 3.7/7, mb1mx3.4/20, mbtmp3.8/7, MS2.7/1, Ms1 2.7/1, ms1mx2.2/16, Error ellipse: s-maj=35.5km s-min=7.5km az=132.0*
*NEIC **20** 08:49:48.3±1.1, 6.65N×72.75W, h182^{km}±11^{km}, Error ellipse: s-maj=28.4km s-min=16.0km az=140.0*
*FUNV **20** 08:49:48.2, 6.85N×73.17W, h166^{km}, MW3.1*

ISC 20 08:49:47.2±0.6**, 6.79N**±0.07×**72.89W**±0.06**, h176**^{km}±7^{km}**, n27, σ1^{s}10**/30**, mb3.5**/5**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	1.21	28	⇓*i*P	P	08 50 16.8	+0.3
ROSC	**El Rosal**	2.40	217	P	P	08 50 29.2	+0.2
	36nm,0.3s,baz=320,slow=2.2,SNR=217						
ROSC				S	S	08 50 59.5	-1.6
	128nm,0.3s,baz=91,slow=18,SNR=16						
SOCV	**Socops**	2.50	54	*e*P	P	08 50 31.7	+1.5
SDV	**Santo Domingo**	3.05	47	P	P	08 50 38.3	+1.4
	42nm,0.3s,baz=228,slow=7.8,SNR=198						
SDV				S	S	08 51 15.7	+0.5
	26nm,0.3s,baz=268,slow=23,SNR=19						
SDV	**Santo Domingo**	3.05	47	*e*P	P	08 50 38.3	+1.4
SDV				*e*S	S	08 51 12.8	-2.4
ELOV	**Elorza**	3.39	86	*e*P	P	08 50 43.2	+2.1
VIRV	**Villa del Rosa**	3.72	7	*e*P	P	08 50 43.6	-1.7
VIRV				*e*S	S	08 51 24.4	-5.7
QARV	**Quebrada Arrib**	4.12	34	*e*P	P	08 50 51.3	+0.9
QARV				*e*S	S	08 51 37.3	-2.0
SANV	**Sanarito**	4.27	51	*e*P	P	08 50 53.2	+0.8
CURV	**Curarigua**	4.32	42	*e*P	P	08 50 53.6	+0.6
DABV	**Dabajuro**	4.67	28	*e*P	P	08 50 57.9	+0.4
TEPV	**Terepaima**	4.83	49	*e*P	P	08 51 00.6	+1.0
SIQV	**Siquisique**	4.89	38	*e*P	P	08 51 00.7	+0.2
BAUV	**El Baul**	5.26	66	*e*S	S	08 52 04.3	-1.3
CAOV	**Caicara del Or**	6.54	85	*e*S	S	08 52 34.2	-1.7
BIRV	**Birongo**	7.50	60	*e*P	P	08 51 34.6	-0.1
JTS	**JuntasAbangare**	12.43	287	P	P	08 52 43.1	+4.1
TXAR	**Lajitas Array**	36.65	312	P	P	08 56 38.9	+0.3
	0.4nm,0.4s,mb3.4,baz=123,slow=9.2,SNR=9.9						
TXAR	**Lajitas Array**	36.65	312	P	P	08 56 38.9	+0.3
CFAA	**Coronel Fontan**	38.44	174	LR	LR	09 13 41.7	
	comp=Z,10nm,19.8s,baz=118,slow=37						
MNTX	**Cornudas Mount**	39.16	314	*e*P	P	08 56 59.7	+0.3
ULM	**Lac du Bonnet**	47.39	340	P	P	08 58 04.9	-0.4
	1.3nm,0.4s,mb3.9,baz=290,slow=18,SNR=6.7						
PDAR	**Pinedale Array**	48.24	324	P	P	08 58 10.8	-1.2
	0.5nm,0.5s,mb3.4,baz=129,slow=9.7,SNR=6.4						
NVAR	**Mina Array Bea**	51.67	315	P	P	08 58 38.7	+0.5
	0.3nm,0.5s,mb3.2,baz=117,slow=8.1,SNR=3.6						
YKA	**Yellowknife Ar**	63.37	340	P	P	08 59 59.5	-0.2
	1.0nm,0.6s,mb3.9,baz=133,slow=6.5,SNR=9.7						
YKA	**Yellowknife Ar**	63.37	340	P	P	08 59 59.5	-0.2
WRA	**Warramunga Arr**	150.53	241	PKPbc	PKPdf	09 09 21.0	+7.8
	0.5nm,0.4s,baz=109,slow=2.3,SNR=11						

*IDC **20** 08:58:36.5±6.7,21.45S×170.26E,h105^{km}±43^{km},mb3.8/4, mb1 3.9/5,mb1mx3.7/14,mbtmp4.1/5,Error ellipse: s-maj=88.9km s-min=47.6km az=156.0*

NEIC 20 08:58:34.8±4.2**,21.53S**×**170.45E,h102**^{km}±23^{km}**,mb3.9**/2**, Error ellipse: s-maj=63.9km s-min=38.8km az=150.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.76	261	P	P	08 59 30.8	-1.1
	18nm,0.3s,baz=122,slow=14,SNR=389						
DZM				S	S	09 00 12.6	-2.7
	55nm,0.3s,baz=41,slow=23,SNR=18						
CTA	Charters Tower	22.66	269	P	P	09 03 28.2	+0.1
	2.0nm,0.5s,baz=84,slow=12,SNR=5.9						
CTA	Charters Tower	22.66	269	P	P	09 03 28.2	+0.1
CTAO	Charters Tower	22.66	269	eP	P	09 03 27.9	-0.1
	1.7nm,0.5s						
STKA	Stephens Creek	27.68	242	P	P	09 04 13.6	-1.7
	0.9nm,0.6s,baz=100,slow=14,SNR=3.4						
STKA	Stephens Creek	27.68	242	eP	P	09 04 13.4	-1.9
WRAB	Tennant Creek	33.75	266	eP	P	09 05 06.1	-2.6
	2.0nm,0.5s						
WRA	Warramunga Arr	33.76	266	P	P	09 05 06.1	-2.7
	0.9nm,0.4s,baz=97,slow=8.4,SNR=34						
FITZ	Fitzroy Crossi	42.19	266	P	P	09 06 18.5	-0.7
	8.8nm,0.7s,baz=129,slow=7.9,SNR=7.9						
GERES	GERESS Array B	147.04	331	PKPbc	PKPdf	09 18 05.7	+2.5
	1.0nm,0.7s,baz=27,slow=3.0,SNR=6.6						

*CSEM **20** 09:04:40.5±0.7,42.86N×47.04E,h2^{km},mb3.5,Error ellipse: s-maj=21.4km s-min=12.4km az=72.0,After OBN*

MOS 20 09:04:40.5±1.2**,42.86N**×**47.04E,h2**^{km}**,mb3.5**/1**,2D, Error ellipse: s-maj=17.9km s-min=14.6km az=61.7, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUJR	Buynaksk	0.06	125	i PG	Pg	09 04 44.0	+2.2
BUJR				pmax	pmax		
	comp=Z,908nm,0.2s						
BUJR	Buynaksk	0.06	125	i Pg	Pg	09 04 44.0	+2.2
	comp=Z,908nm,0.2s						
KRNR	Karanay	0.10	251	⇓iPG	Pg	09 04 43.5	+0.9
KRNR				pmax	pmax		
	comp=Z,105nm,0.1s						
KRNR	Karanay	0.10	251	i Pg	Pg	09 04 43.5	+0.9
	comp=Z,105nm,0.1s						
DBC	Dubki	0.22	316	i PG	Pg	09 04 47.2	+2.2
DBC				eS	Sg	09 04 51.2	+3.3
UNCR	Uncukul	0.23	231	⇓iPG	Pg	09 04 47.0	+1.8
UNCR				i S	Sg	09 04 51.0	+2.7
UNCR				pmax	pmax		
	comp=Z,143nm,0.2s						
UNCR	Uncukul	0.23	231	i Pg	Pg	09 04 47.0	+1.8
	comp=Z,143nm,0.2s						
UNCR				i Sg	Sg	09 04 51.0	+2.7
ARKR	Arakani	0.26	187	ePG	Pg	09 04 47.5	+1.8
ARKR				eS	Sg	09 04 52.0	+2.8
ARKR				pmax	pmax		
	comp=Z,43nm,0.2s						
ARKR	Arakani	0.26	187	ePg	Pg	09 04 47.5	+1.8
	comp=Z,43nm,0.2s						
ARKR				eSg	Sg	09 04 52.0	+2.8
MAK	Makhachkala	0.36	73	ePg	Pg	09 04 57.0	+9.4
XNZR	Khunzakh	0.40	218	ePG	Pg	09 04 52.0	+3.5
XNZR				eS	Sg	09 04 58.8	+4.9
XNZR				pmax	pmax		
	comp=Z,36nm,0.2s						
XNZR	Khunzakh	0.40	218	ePg	Pg	09 04 52.0	+3.5
	comp=Z,36nm,0.2s						
XNZR				eSg	Sg	09 04 58.8	+4.9
SOC	Sochi	5.40	280	ePn	Pn	09 05 55.2	-8.8

IDC 20 09:06:19.8±6.7**,4.41N**×**122.79E,h586**^{km}±103^{km}**,mb3.0**/5**, mb1 3.2**/5**,mb1mx2.9**/17**,mbtmp4.0**/5**,1C,Error ellipse: s-maj=128.1km s-min=21.7km az=66.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.73	155	P	P	09 11 13.4	-2.3
	1.4nm,0.3s,baz=332,slow=10,SNR=24						
WB2	Warramunga Arr	26.74	155	⇑iP	P	09 11 13.3	-2.5
STKA	Stephens Creek	40.29	155	P	P	09 13 08.2	-0.5
	1.1nm,0.4s,baz=329,slow=9.5,SNR=4.3						
SONM	Songino Array	45.49	345	P	P	09 13 47.1	-2.1
	0.5nm,0.6s,baz=154,slow=9.6,SNR=4.3						
MKAR	Makanchi Array	54.80	327	P	P	09 14 55.9	-1.4
	0.6nm,0.4s,baz=124,slow=7.6,SNR=12						
FINES	FINESS Array B	89.37	331	P	P	09 18 13.6	-1.9
	3.4nm,1.1s,baz=76,slow=5.7,SNR=4.8						

IDC 20 09:26:42.4±8.7**,21.92S**×**179.93W,h642**^{km}±116^{km}**, mb2.8**/4**,mb1 3.2**/4**,mb1mx3.0**/12**,mbtmp3.9**/4**,Error ellipse: s-maj=131.2km s-min=43.0km az=163.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.56	246	P	P	09 32 48.5	-1.3
	0.8nm,0.4s,baz=98,slow=15,SNR=4.2						
WRA	Warramunga Arr	42.64	264	P	P	09 33 45.2	-1.5
	0.7nm,0.3s,baz=94,slow=8.0,SNR=38						
NVAR	Mina Array Bea	83.29	44	P	P	09 38 03.8	-0.9
	0.2nm,0.6s,baz=216,slow=5.3,SNR=4.2						
TXAR	Lajitas Array	89.33	58	P	P	09 38 32.7	-1.0
	0.7nm,0.9s,baz=217,slow=6.3,SNR=7.2						
ARCES	ARCESS Array B	129.97	349	PKP	PKPdf	09 44 39.8	-0.4
	4.5nm,1.1s,baz=56,slow=3.3,SNR=4.0						
AKASG	Malin Array Be	143.34	329	PKP	PKPdf	09 45 04.4	-0.4
	0.5nm,0.3s,baz=43,slow=3.9,SNR=6.3						

*ROM **20** 10:48:58.8±0.1,45.40N×8.96E,h34^{km}±2^{km},Md3.3/7, Ml3.4/25,Error ellipse: s-maj=2.5km s-min=2.0km az=34.0*
*NEIC **20** 10:48:58.8,45.40N×8.96E,h34^{km},ML4.0(LDG), ML3.8(SZGRF),ML3.7(STR),ML3.4(ROM),After ROM.*
*LDG **20** 10:48:59.8±0.1,45.43N×8.99E,h10^{km},Ml4.0/39,Error ellipse: s-maj=1.7km s-min=1.6km az=20.0*
*STR **20** 10:48:59.1±0.2,45.40N×9.11E,h10^{km}±1^{km},Ml3.7,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*ZUR **20** 10:48:59.3,45.46N×8.99E,h20^{km},ML3.5/34*
*CSEM **20** 10:49:00.1±0.0,45.38N×9.08E,h43^{km},ML4.1/32,Error ellipse: s-maj=1.0km s-min=0.8km az=119.0*
*PRU **20** 10:49:01.6,45.71N×9.32E*

ISC 20 10:48:59.4±0.1**,45.40N**±0.01×**8.98E**±0.01**,h34**^{km}**,n294,** σ**1§24**/398**,55C-19D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAI	Varese	0.49	342	⇓iPg	P	10 49 11.0	+1.3
MUGIO	Muggio	0.52	5	⇓iPg	P	10 49 11.3	+1.1
MUGIO				Sg	S	10 49 19.3	+1.3
MUGIO	Muggio	0.52	5	⇑iPg	P	10 49 11.3	+1.1
MUGIO				eSg	S	10 49 19.3	+1.3
MDI	Monti di Nese	0.63	54	⇑ePg	P	10 49 12.1	+0.3
	2μm,0.3s						
BOB	Bobbio (Coli)	0.72	152	⇑iPg	P	10 49 14.1	+1.1
BOB				Sg	S	10 49 25.3	+2.4
	3μm,0.3s						
ORO	Oropa	0.74	288	⇑iPg	P	10 49 13.8	+0.5
ORX	Oropa	0.74	288	P	P	10 49 13.7	+0.3
ORX				S	S	10 49 23.1	-0.4
ORX	Oropa	0.74	288	P	P	10 49 13.7	+0.4
ORX				S	S	10 49 23.1	-0.4
MONC	Moncucco Torin	0.81	247	⇑ePg	P	10 49 16.6	+2.2
	2μm,0.3s						
TRAV		0.88	278	P	P	10 49 15.0	-0.3
TRAV				S	S	10 49 26.2	-0.8
TRAV		0.88	278	P	P	10 49 15.0	-0.2
TRAV				S	S	10 49 26.2	-0.8
MCGN	Macugnaga	0.89	309	Pg	P	10 49 15.8	+0.3
	1μm,0.2s						
PCP	Pian Castagno	0.92	200	P	P	10 49 16.5	+0.7
PCP				S	S	10 49 28.8	+0.8
PCP	Pian Castagno	0.92	200	P	P	10 49 16.5	+0.7
PCP				S	S	10 49 28.8	+0.8
MMK	Mattmark	0.96	313	⇑iPg	P	10 49 16.3	-0.2
GENL	Genova Univers	1.00	181	P	P	10 49 17.6	+0.6
GENL				S	S	10 49 29.4	-0.7
GENL	Genova Univers	1.00	181	P	P	10 49 17.6	+0.6
GENL				S	S	10 49 29.4	-0.7
TUE	Stuetta	1.10	13	⇑ePg	P	10 49 20.2	+1.7
	875nm,0.2s						
SAL	Salo	1.10	79	⇑ePg	P	10 49 19.2	+0.7
	671nm,0.4s						
SALO	Salr	1.10	78	⇑ePg	P	10 49 19.1	+0.6
	1μm,0.4s						
VDL	Val di Lei	1.14	17	⇑iPg	P	10 49 20.6	+1.6
QLNO	Quiliano	1.17	203	Pg	P	10 49 20.9	+1.5
RSP	Reno Superiore	1.24	259	P	P	10 49 19.2	-1.3
RSP				S	S	10 49 33.7	-2.7
RSP	Reno Superiore	1.24	259	P	P	10 49 19.2	-1.3
BERNI	Berninapass	1.25	35	ePg	P	10 49 21.9	+1.4
MABI	Malga Bissina	1.25	58	Pg	P	10 49 21.1	+0.5
	427nm,0.3s						
LSD	Ceresole Reale	1.29	273	P	P	10 49 20.8	-0.3
LSD				S	S	10 49 37.2	-0.3
LSD	Ceresole Reale	1.29	273	P	P	10 49 20.8	-0.3
LSD				S	S	10 49 37.2	-0.3
DIX	Grande Dixence	1.29	302	ePn	P	10 49 21.4	+0.2
DIX	Grande Dixence	1.29	302	Pg	P	10 49 22.0	+0.8
FIN	Finale Ligure	1.31	205	P	P	10 49 22.7	+1.1
FIN	Finale Ligure	1.31	205	P	P	10 49 22.7	+1.1
BHB	Bricherasio	1.34	246	P	P	10 49 21.0	-1.0
BHB				S	S	10 49 37.2	-1.6
BHB	Bricherasio	1.34	246	P	P	10 49 21.0	-0.9
BHB				S	S	10 49 37.2	-1.6
ROB	Roburent	1.36	216	P	P	10 49 23.7	+1.5
ROB	Roburent	1.36	216	P	P	10 49 23.7	+1.5
LKBD	Leukerbad	1.37	317	⇑iPn	P	10 49 23.2	+0.9
VALM		1.39	139	P	P	10 49 23.1	+0.6
VALM		1.39	139	P	P	10 49 23.1	+0.5
MRGE	Morge	1.40	286	Pg	P	10 49 23.0	+0.2
	776nm,0.6s						
FENE	Fenestrelle	1.41	255	P	P	10 49 21.7	-1.2
FENE	Fenestrelle	1.41	255	P	P	10 49 21.7	-1.2
SBPO	S.Benedetto Po	1.41	104	Pg	P	10 49 23.6	+0.6
	836nm,0.3s						
ERBM	Eremo	1.41	134	Pg	P	10 49 24.9	+1.9
	408nm,0.8s						
LLS	Linth-Limmern	1.45	1	⇑iPn	P	10 49 24.6	+1.1
BRMO	Bormio	1.45	42	Pg	P	10 49 24.7	+1.2
	68nm,0.3s						
HASLI	Hasliberg	1.47	337	⇑iPn	P	10 49 24.9	+1.1
FUORN	Ofenpass	1.51	36	⇑ePg	P	10 49 26.2	+1.8
FUORN	Ofenpass	1.51	36	⇑iPn	P	10 49 26.2	+1.8
DAVOX	Davos	1.51	24	⇑ePg	P	10 49 26.4	+2.0
DAVOX	Davos	1.51	24	ePn	P	10 49 26.3	+1.9
BNALP	Bannalp	1.52	345	⇑iPn	P	10 49 25.4	+0.9
SENIN	Lac Senin	1.52	310	ePn	P	10 49 26.0	+1.5
DOI	San Damiano	1.52	235	Pg	P	10 49 23.9	-0.7
	553nm,0.3s						
GSCL	Gusciola	1.55	132	Pg	P	10 49 26.9	+1.9
	129nm,0.5s						
GRYON	Gryon	1.56	304	ePn	P	10 49 26.8	+1.7
LPG	La Plagne	1.57	274	ePn	P	10 49 25.5	+0.2
LPG				eSn	S	10 49 45.7	+1.0
	393nm,0.3s						
WIMIS	Wimmis	1.58	324	⇑iPn	P	10 49 27.1	+1.8
MUO	Muotathal	1.58	351	ePn	P	10 49 27.3	+1.9
MONE	Monesi	1.59	214	P	P	10 49 26.3	+0.8
MONE	Monesi	1.59	214	P	P	10 49 26.3	+0.9
LPL	La Plagne	1.59	275	ePn	P	10 49 26.1	+0.6
LPL				eSn	S	10 49 45.2	+0.2
	430nm,0.4s						
SALAN	Lac Salanfe	1.59	299	ePn	P	10 49 27.4	+1.9
VLC	Villacollemand	1.59	141	Pg	P	10 49 26.9	+1.3
	278nm,0.7s						
EMV	Vieux Emosson	1.60	295	Pg	P	10 49 27.5	+1.8
EMV	Vieux Emosson	1.60	295	ePn	P	10 49 27.2	+1.5
PZZ	Prazzo	1.61	237	P	P	10 49 25.0	-0.7
PZZ	Prazzo	1.61	237	P	P	10 49 25.0	-0.8
ENR	Entracque	1.62	224	P	P	10 49 25.0	-0.9
RRL	Cesana Torines	1.63	254	P	P	10 49 25.3	-0.8
RRL	Cesana Torines	1.63	254	P	P	10 49 25.3	-0.7
STV2	Anna di Valdie	1.65	226	P	P	10 49 25.8	-0.6
STV2	Anna di Valdie	1.65	226	P	P	10 49 25.8	-0.6
STV	Sta Anna Valdi	1.65	226	P	P	10 49 25.9	-0.5
BNI	Bardonecchia	1.67	259	Pg	P	10 49 26.3	-0.3
	124nm,0.7s						
PLONS	Plons	1.67	9	⇑iPn	P	10 49 28.3	+1.7
IMI	Imperia	1.68	208	Pg	P	10 49 27.6	+0.8
	145nm,0.3s						
AIGLE	Aigle	1.70	304	ePn	P	10 49 29.3	+2.2
MBDF	Montbardon	1.71	247	ePn	P	10 49 26.7	-0.5
MBDF				eSn	S	10 49 48.4	+0.4
	131nm,0.2s						
SAOF	Saorge	1.74	216	Pn	P	10 49 28.9	+1.2
ZCCA	Zocca	1.77	126	Pg	P	10 49 30.1	+2.1
	132nm,0.3s						
AUTN	L'Aution	1.79	219	Pn	P	10 49 29.5	+1.1
SURF	Saint Ours	1.80	240	Pn	P	10 49 28.5	+0.1
NEGI	Negi	1.80	211	P	P	10 49 29.4	+0.9
NEGI	Negi	1.80	211	P	P	10 49 29.4	+0.9
PZZT	Monte Pizzetto	1.85	133	Pg	P	10 49 30.6	+1.4
	380nm,0.3s						
TOUF	Mont Tournerai	1.86	222	Pn	P	10 49 29.8	+0.5
TEOL	Teolo	1.89	90	⇑ePg	P	10 49 29.0	-0.9
SBF	Sospel	1.90	216	ePn	P	10 49 30.7	+0.8
SBF				eSn	S	10 49 52.7	-0.1
	425nm,0.2s						
APPI	Appiano	1.90	55	Pg	P	10 49 31.3	+1.4
	245nm,0.3s						
LIENZ	Alp Oberkamor	1.93	10	⇑iPn	P	10 49 32.0	+1.7
FIU	Minerbio Fiu	1.94	112	Pg	P	10 49 32.0	+1.6
FNVD	Fontana Vidola	1.96	128	Pg	P	10 49 32.1	+1.3
	322nm,0.7s						
TORNY	Torny	1.97	315	⇑iPn	P	10 49 32.8	+1.9
CTI	Castel Tesino	1.98	70	Pg	P	10 49 31.1	+0.1
	218nm,0.2s						
DAVA	Damuels	1.98	18	⇑ePn	P	10 49 33.1	+2.0
	comp=Z,7.8nm,0.1s,SNR=57						
DAVA	Damuels	1.98	18	⇑iSn	S	10 49 57.9	+2.9
	comp=N,120nm,0.2s						
DAVA	Damuels	1.98	18	⇑ePn	P	10 49 33.1	+2.0
DAVA				Sn	S	10 49 57.9	+2.9
DAVA	Damuels	1.98	18	Pn	P	10 49 33.1	+2.0
	57nm,4.0s						
DAVA				Sn	S	10 49 57.9	+2.9
ZUR	Zurich	1.99	352	⇑iPn	P	10 49 32.5	+1.3
MVIF	Mont Vial	1.99	222	Pn	P	10 49 31.9	+0.6
PII	Pisa	2.01	146	Pg	P	10 49 31.9	+0.4
	198nm,0.2s						
WILA	Wila	2.01	359	ePn	P	10 49 33.0	+1.4
REVF	Revere	2.02	215	Pn	P	10 49 32.8	+1.1
REVF				Sn	S	10 49 57.7	+1.7
CGRP	Cima Grappa	2.03	75	⇑ePg	P	10 49 31.4	-0.4
GDM	Grand'Maison	2.03	265	Pn	P	10 49 34.3	+2.5
GROG	Isola di Gorgo	2.08	161	Pg	P	10 49 32.3	-0.2
	172nm,0.3s						
WEIN	Weingarten	2.13	0	⇑iPn	P	10 49 34.1	+0.9
BALST	Balsthal	2.13	336	⇑iPn	P	10 49 34.3	+1.1
SEI	Scarperia	2.16	128	Pg	P	10 49 35.6	+1.9
	178nm,0.2s						
FLACH	Flaach	2.19	353	⇑iP	P	10 49 35.0	+0.9
GIMEL	Gimel	2.21	302	⇑iPn	P	10 49 35.9	+1.6
SULZ	Sulz-Cheisache	2.21	345	⇑iPn	P	10 49 35.2	+0.9
CALN	Calern	2.23	223	Pn	P	10 49 35.9	+1.3
FAU	Forcella Aurin	2.25	67	⇓iPg	P	10 49 35.5	+0.5
TRULL	Truellikon	2.26	355	⇑iPn	P	10 49 35.7	+0.7
TRULL	Truellikon	2.26	355	⇑iP	P	10 49 35.6	+0.6
STEIN	Stein am Rhein	2.27	358	⇑iPn	P	10 49 35.9	+0.7
GRN	Grenoble	2.29	267	Pn	P	10 49 37.3	+1.8
BBS	Basel-Blauen	2.30	334	Pn	P	10 49 36.4	+0.7
OG25	Le Caire	2.31	245	Pn	P	10 49 37.3	+1.5
BRES	Bressanone	2.31	55	Pg	P	10 49 36.3	+0.5
	125nm,0.5s						
BRANT	Les Verrieres	2.32	312	⇑iPn	P	10 49 37.4	+1.4
VMG	Vicchio	2.33	127	Pg	P	10 49 36.7	+0.7
	60nm,0.2s						
BOURR	Bourrignon	2.33	329	⇑iPn	P	10 49 37.1	+1.0
BOURR	Bourrignon	2.33	329	⇑iP	P	10 49 37.0	+0.9
CABF	La Chapelle	2.35	302	ePn	P	10 49 37.9	+1.5
CABF				eSn	S	10 50 04.3	-0.1
	155nm,0.3s						
SQTA	Sankt Quirin	2.38	40	⇑ePn	P	10 49 39.4	+2.5
	comp=Z,1.1nm,0.1s,SNR=56						
SQTA	Sankt Quirin	2.38	40	⇑iSn	S	10 50 09.9	+4.7
	comp=Z,49nm,0.2s						
SQTA	Sankt Quirin	2.38	40	⇑ePn	P	10 49 39.4	+2.5
SQTA				Sn	S	10 50 09.8	+4.7
SQTA	Sankt Quirin	2.38	40	Pn	P	10 49 39.4	+2.5
	56nm,3.0s						
SQTA				Sn	S	10 50 09.9	+4.7
SLE	Schleitheim	2.39	352	⇑iPn	P	10 49 37.1	+0.2
MOTA	Moosalm	2.44	36	⇑iPn	P	10 49 39.6	+2.0
	comp=Z,3.1nm,0.1s,SNR=32						
MOTA	Moosalm	2.44	36	⇓iSn	S	10 50 09.0	+2.5
	comp=Z,38nm,0.2s						
MOTA	Moosalm	2.44	36	⇑iPn	P	10 49 39.6	+2.0
MOTA				Sn	S	10 50 09.0	+2.5
MOTA	Moosalm	2.44	36	Pn	P	10 49 39.6	+2.0
	32nm,3.0s						
MOTA				Sn	S	10 50 09.0	+2.5
LOMF	Lomont	2.46	323	Pn	P	10 49 38.9	+1.0
FRF	La Foret Royal	2.49	223	ePn	P	10 49 38.6	+0.3
FRF				eSn	S	10 50 07.2	-0.6
	180nm,0.2s						
CSO	Casso	2.49	68	⇓iPg	P	10 49 38.6	+0.2
CSO				i Sg	S	10 50 06.1	-1.8
SCE	Schlegeis	2.50	48	ePn	P	10 49 39.6	+1.0
IESO	Jesolo	2.51	86	ePg	P	10 49 38.0	-0.7
SFI	Santa Sofia	2.53	125	Pg	P	10 49 39.7	+0.7
	140nm,1.0s						
CSNT	Castellina Chi	2.54	139	Pg	P	10 49 38.9	-0.2
	76nm,0.3s						
FELD	Feldberg	2.56	345	Pn	P	10 49 39.4	0.0
WTTA	Wattenberg	2.62	44	⇑iPn	P	10 49 42.4	+2.2
	comp=Z,2.8nm,0.1s,SNR=29						
WTTA	Wattenberg	2.62	44	⇓iSn	S	10 50 15.4	+4.3
	comp=N,39nm,0.2s						
WTTA	Wattenberg	2.62	44	⇑iPn	P	10 49 42.4	+2.2
WTTA				Sn	S	10 50 15.4	+4.3
WTTA	Wattenberg	2.62	44	Pn	P	10 49 42.4	+2.2
	28nm,8.0s						
WTTA				Sn	S	10 50 15.4	+4.3
SEST	Monte Rota	2.62	58	Pg	P	10 49 41.7	+1.4
WATA	Walderalm	2.64	42	⇓ePn	P	10 49 42.4	+1.9
	comp=Z,6.0nm,0.1s,SNR=25						
WATA	Walderalm	2.64	42	⇑iSn	S	10 50 13.7	+2.0
	comp=Z,15nm,0.2s						
WATA	Walderalm	2.64	42	⇓ePn	P	10 49 42.4	+1.9
WATA				Sn	S	10 50 13.7	+2.0
WATA	Walderalm	2.64	42	Pn	P	10 49 42.4	+1.9
	25nm,2.0s						
WATA				Sn	S	10 50 13.7	+2.0
MLNI	Malnisio	2.65	72	⇑ePg	P	10 49 40.4	-0.2
MLNI				eSg	S	10 50 10.2	-1.6
MLNI	Malnisio	2.65	72	ePg	P	10 49 40.4	-0.2
MLNI				eSg	S	10 50 10.2	-1.6
LMR	La Mourre	2.73	221	ePg	P	10 49 50.3	+8.6
LMR				eSn	S	10 50 11.8	-2.0
	102nm,0.3s						
LMR	La Mourre	2.73	221	ePn	P	10 49 41.7	0.0
LMR				ePg	P	10 49 50.3	+8.6
LMR				eSn	S	10 50 11.8	-2.0
LMR	La Mourre	2.73	221	ePn	P	10 49 41.7	0.0
LMR				eSn	S	10 50 11.8	-2.0
	51nm,0.3s						
OG26	St.-Nazaire-De	2.74	254	Pn	P	10 49 43.1	+1.2
OCF	Saint Nazaire	2.74	254	Pn	P	10 49 43.1	+1.2
TAVF	Tavernes	2.75	231	Pn	P	10 49 42.4	+0.3
MOF	Molkenrain	2.76	333	Pn	P	10 49 42.4	+0.1
CRE	Caprese Michel	2.77	129	Pg	P	10 49 42.3	-0.1
	144nm,0.3s						
VILF	Villemus	2.80	238	Pn	P	10 49 43.7	+0.9
SMRF	Simiane la Rot	2.82	241	ePn	P	10 49 43.7	+0.6
SMRF				eSn	S	10 50 14.4	-1.8
	78nm,0.3s						
HINF	Hinteralfeld	2.83	329	ePn	P	10 49 43.3	+0.1
HINF				eSn	S	10 50 14.1	-2.3
	298nm,0.3s						
PGF	Pioggiola	2.85	180	ePn	P	10 49 42.7	-0.9
PGF				eSn	S	10 50 16.1	-1.0
	27nm,0.2s						
FVI	Forni Avoltri	2.90	64	Pg	P	10 49 45.1	+0.8
	51nm,0.2s						
LIBD	Limburg	2.91	341	Pn	P	10 49 44.3	0.0
TLI	Talmassons	2.94	78	ePg	P	10 49 44.0	-0.7
TLI				eSg	S	10 50 15.7	-3.5
BFO	Black Forest	2.96	352	ePn	P	10 49 44.7	-0.4
BFO				eSn	S	10 50 17.7	-2.2
PUYF	Puyloubier	3.00	233	Pn	P	10 49 45.7	0.0
BADI	Badiali	3.01	128	Pg	P	10 49 44.9	-0.8
BUA	Buia	3.01	73	⇓ePg	P	10 49 45.3	-0.5
BUA				eSg	S	10 50 18.2	-2.9
ECH	Echery	3.08	337	Pn	P	10 49 46.8	0.0
BAD	Bernadia	3.09	73	⇓iPg	P	10 49 46.2	-0.8
BAD				i Sg	S	10 50 20.3	-3.0
GMNA	Gemona	3.10	72	Pg	P	10 49 45.6	-1.5
	90nm,0.2s						
CORF	Corte	3.11	178	Pn	P	10 49 46.7	-0.5
PESA	Pesaro	3.12	117	Pg	P	10 49 46.4	-0.9
ARCI	Arcidosso	3.12	144	Pg	P	10 49 46.8	-0.5
	129nm,2.1s						
PLRO	Paularo	3.12	67	⇓ePg	P	10 49 47.6	+0.2
BERF	Bertagne	3.15	230	Pn	P	10 49 47.7	-0.1
PIEI	Pieia	3.15	125	Pg	P	10 49 47.7	-0.1
	28nm,0.4s						
PRAF	Pradon	3.16	241	Pn	P	10 49 48.7	+0.8
COLI	Coloredo	3.16	75	⇑iPg	P	10 49 47.1	-0.8
COLI				i Sg	S	10 50 22.0	-2.9
HAU	Haudompre	3.17	326	ePn	P	10 49 48.2	+0.1
HAU				eSn	S	10 50 22.2	-3.0
	543nm,0.3s						
FUR	Furstenfeldbru	3.18	29	ePn	P	10 49 47.9	-0.3
FSSB	Fossombrone	3.21	121	Pg	P	10 49 48.0	-0.6
	45nm,0.2s						
PTCC	Patocco-Chiusa	3.21	70	Pg	P	10 49 48.0	-0.7
	36nm,0.4s						
CDF	Champ du Feu	3.23	339	ePn	P	10 49 48.7	-0.2
CDF				eSn	S	10 50 24.1	-2.6
	91nm,0.2s						
GELF	Grande-Etoile	3.25	233	Pn	P	10 49 49.0	-0.2
DRE	Drenchia	3.35	75	⇓iPg	P	10 49 49.6	-1.0
DRE				i Sg	S	10 50 26.2	-3.6
TRI	Trieste	3.37	83	Pg	P	10 49 49.5	-1.4
	68nm,0.2s						
STU	Stuttgart	3.37	2	P	P	10 49 48.8	-2.2
STU	Stuttgart	3.37	2	P	P	10 49 48.8	-2.2
ARV	Arcevia	3.41	122	Pg	P	10 49 51.1	-0.4
ARVD	Arcevia	3.42	122	Pg	P	10 49 50.9	-0.6
CADS	Cadrg	3.42	74	i Pn	P	10 49 50.6	-1.1
CADS				eSn	S	10 50 27.3	-4.3
KBA	Koelnbreinsper	3.46	59	⇑iPn	P	10 49 52.5	+0.3
	comp=Z,4.3nm,0.2s						
KBA	Koelnbreinsper	3.46	59	⇑iSn	S	10 50 30.9	-1.6
	comp=N,10nm,0.2s						
KBA	Koelnbreinsper	3.46	59	⇑iPn	P	10 49 52.5	+0.3
KBA				Sn	S	10 50 30.9	-1.6
KBA	Koelnbreinsper	3.46	59	Pn	P	10 49 52.5	+0.3
KBA				Sn	S	10 50 31.0	-1.5
THEF	They Montfort	3.50	325	Pn	P	10 49 53.0	+0.3
VOY	Vojsko	3.50	78	ePn	P	10 49 51.5	-1.2
VOY				eSn	S	10 50 29.3	-4.2
SNTG	Esanatoglia	3.56	126	Pg	P	10 49 53.4	-0.2
	48nm,0.3s						
CING	Cingoli	3.64	122	Pg	P	10 49 53.9	-0.8
LANF	Langenberg	3.67	348	Pn	P	10 49 54.4	-0.7
COLF	Collangettes	3.72	274	Pn	P	10 49 55.3	-0.6
AOI	Ancona	3.79	118	Pg	P	10 49 55.7	-1.2
SMF	Signal de Mont	3.79	291	ePn	P	10 49 57.2	+0.3
SMF				eSn	S	10 50 37.6	-3.3
	60nm,0.2s						
LASF	Ste Croix	3.89	252	ePn	P	10 49 57.5	-0.7
LASF				eSn	S	10 50 39.4	-3.9
	48nm,0.3s						
SFTF	Sexfontaines	3.90	317	ePn	P	10 49 58.8	+0.4
SFTF				eSn	S	10 50 40.4	-3.2
	148nm,0.3s						
NRCA	Norcia	3.93	129	Pg	P	10 49 57.6	-1.2
	23nm,0.2s						
LOR	Lormes	4.01	300	ePn	P	10 50 00.0	0.0
LOR				eSn	S	10 50 43.3	-3.2
	264nm,0.4s						
RFYF	Reffroy	4.02	325	ePn	P	10 50 00.5	+0.3
RFYF				eSn	S	10 50 43.4	-3.4
	151nm,0.2s						
OBKA	Obir	4.04	72	⇓iPn	P	10 49 59.5	-0.8
	comp=Z,1.4nm,0.1s						
OBKA	Obir	4.04	72	⇑iSn	S	10 50 45.1	-2.1
	comp=E,16nm,0.3s						
OBKA	Obir	4.04	72	⇓iPn	P	10 49 59.5	-0.8
OBKA				Sn	S	10 50 45.1	-2.1

OBKA	**Obir**	4.04	72	Pn	P	10 49 59.5	-0.9
OBKA				Sn	S	10 50 45.1	-2.0
LNSS	**Leonessa**	4.05	132	Pg	P	10 49 59.5	-1.1
	83nm,0.4s						
LBL	**Lubilhac**	4.05	270	Pn	P	10 49 59.9	-0.7
MEZF	**Maizieres J’vi**	4.11	320	*e*Pn	P	10 50 01.8	+0.4
MEZF				*e*Sn	S	10 50 45.0	-3.9
	58nm,0.3s						
SSF	**Saint Saulge**	4.15	296	*e*Pn	P	10 50 01.8	-0.1
SSF				*e*Sn	S	10 50 45.8	-4.1
	45nm,0.2s						
AGO	**Saint Agoulin**	4.15	281	Pn	P	10 50 01.9	-0.1
AVF	**Avril sur Loir**	4.16	292	*e*Pn	P	10 50 01.8	-0.3
AVF				*e*Sn	S	10 50 46.5	-3.6
	28nm,0.4s						
TOD	**Tromm**	4.21	358	Pn	P	10 50 01.3	-1.5
NVLJ	**Novalja**	4.26	99	*i* Pn	P	10 50 01.7	-1.8
NVLJ				*i* Sn	S	10 50 47.2	-5.6
NVLJ	**Novalja**	4.26	99	*i* Pn	P	10 50 01.7	-1.9
NVLJ				*i* Sn	S	10 50 47.1	-5.7
MOA	**Molln**	4.39	54	⇓*i*Pn	P	10 50 04.8	-0.6
	comp=Z,0.1nm,0.1s						
MOA	**Molln**	4.39	54	⇑*i*Sn	S	10 50 53.5	-2.4
	comp=N,8.7nm,0.2s						
MOA	**Molln**	4.39	54	⇓*i*Pn	P	10 50 04.8	-0.6
MOA				Sn	S	10 50 53.5	-2.4
MOA	**Molln**	4.39	54	Pn	P	10 50 04.8	-0.5
MOA				Sn	S	10 50 53.5	-2.5
BOJS	**Bojanci**	4.41	86	*i* Pn	P	10 50 04.6	-1.1
BOJS				*i* Sn	S	10 50 51.6	-5.1
BGF	**Bois d’Agland**	4.43	287	*e*Pn	P	10 50 05.7	-0.3
BGF				*e*Sn	S	10 50 53.6	-3.5
	298nm,0.4s						
VERF	**Verneugheol**	4.58	277	Pn	P	10 50 07.4	-0.7
ABH	**Alteburg**	4.59	348	Pn	P	10 50 07.1	-1.1
WET	**Wettzell**	4.59	34	*e*Pn	P	10 50 06.7	-1.5
WET				*e*Sn	S	10 50 55.8	-5.2
WLF	**Walferdange**	4.67	337	*e*P	P	10 50 08.6	-0.9
WLF	**Walferdange**	4.67	337	*e*P	P	10 50 08.6	-0.8
GCIS	**Gornji Cirnik**	4.68	82	*i* Pn	P	10 50 08.2	-1.4
GCIS				*e*Sn	S	10 50 59.4	-4.0
HYF	**Humbligny**	4.77	295	*e*Pn	P	10 50 10.8	0.0
HYF				*e*Sn	S	10 51 01.4	-4.3
TCF	**Toulx Ste Croi**	4.81	283	*e*Pn	P	10 50 11.4	0.0
TCF				*e*Sn	S	10 51 02.6	-4.2
	78nm,0.2s						
TNS	**Taunus Mts**	4.84	356	*e*Pn	P	10 50 10.3	-1.4
TNS				*e*Sn	S	10 51 03.6	-3.7
KHC	**Kasperske Hory**	4.87	38	*e*PN	P	10 50 11.6	-0.6
KHC				*e*x	x	10 50 21.5	
KHC				*e*SN	S	10 51 02.3	-5.8
KHC	**Kasperske Hory**	4.87	38	*e*Pn	P	10 50 11.6	-0.6
KHC				*e*Sn	S	10 51 02.3	-5.8
ARSA	**Arzberg**	4.89	65	⇓*i*Pn	P	10 50 11.2	-1.4
	comp=Z,1.9nm,0.2s						
ARSA	**Arzberg**	4.89	65	⇑*i*Sn	S	10 51 03.4	-5.3
	comp=N,2.5nm,0.4s						
ARSA	**Arzberg**	4.89	65	⇓*i*Pn	P	10 50 11.2	-1.4
ARSA				Sn	S	10 51 03.4	-5.3
ARSA	**Arzberg**	4.89	65	⇓*i*Pn	P	10 50 11.1	-1.4
ARSA				Sn	S	10 51 03.4	-5.3
CAF	**Calviac**	4.92	267	*e*Pn	P	10 50 12.2	-0.7
CAF				*e*Sn	S	10 51 05.0	-4.3
RJF	**Les Rejaudoux**	5.26	272	*e*Pn	P	10 50 17.7	0.0
RJF				*e*Sn	S	10 51 13.6	-4.5
	12nm,0.3s						
MTLF	**Montolieu**	5.27	249	*e*Pn	P	10 50 16.9	-0.9
MTLF				*e*Sn	S	10 51 13.6	-4.6
	12nm,0.3s						
EJON	**La Jonquera**	5.30	238	P	P	10 50 16.9	-1.3
EJON				S	S	10 51 13.9	-5.0
EJON	**La Jonquera**	5.30	238	P	P	10 50 16.9	-1.3
	2.8nm,0.1s,SNR=6.9						
NKC	**Novy Kostel**	5.37	25	*e*SN	S	10 51 13.2	-7.4
GIVF	**Givet**	5.47	331	*e*Pn	P	10 50 19.9	-0.8
GIVF				*e*Sn	S	10 51 17.8	-5.6
	30nm,0.4s						
MOX	**Moxa**	5.54	18	*i* P	P	10 50 17.1	-4.4
MOX				S	S	10 51 18.0	-6.9
MOX	**Moxa**	5.54	18	*e*Pn	P	10 50 17.1	-4.4
MOX				*e*Sn	S	10 51 18.7	-6.2
BAIF	**Baives**	5.66	327	*e*Pn	P	10 50 22.9	-0.4
BAIF				*e*Sn	S	10 51 22.7	-5.4
	18nm,0.4s						
HGN	**Heimansgroeve**	5.74	340	*e*Pn	P	10 50 24.2	-0.2
	1.8nm,0.1s						
HGN				*e*Sn	S	10 51 24.0	-6.1
LFF	**La Frestale**	5.85	268	*e*Pn	P	10 50 25.4	-0.5
LFF				*e*Sn	S	10 51 27.1	-5.6
	22nm,0.6s						
TREC	**Trest**	5.89	46	*e*SN	S	10 51 27.0	-6.7
PRU	**Pruhonice**	5.93	37	*e*SN	S	10 51 27.5	-7.2
KRUC	**Moravsky**	6.23	51	*e*Pn	P	10 50 29.1	-2.2
KRUC				*e*Sn	S	10 51 34.6	-7.7
EMIR	**Miracle**	6.43	240	P	P	10 50 33.3	-0.9
EMIR				S	S	10 51 41.8	-5.5
EMIR	**Miracle**	6.43	240	P	P	10 50 33.3	-0.9
	1.8nm,0.3s,SNR=7.9						
MFF	**Saint Martin d**	6.47	284	*e*Pn	P	10 50 33.8	-0.9
MFF				*e*Sn	S	10 51 42.4	-5.8
	38nm,0.4s						
VRAC	**Vranov**	6.48	50	*e*Pn	P	10 50 32.3	-2.5
VRAC				*e*Sn	S	10 51 39.9	-8.5
EPF	**Esparros**	6.65	252	*e*Pn	P	10 50 35.9	-1.3
EPF				*e*Sg	S	10 52 28.1	+35
	4.5nm,0.4s						
STON	**Ston**	6.76	109	*i* Pn	P	10 50 35.7	-3.1
STON				*i* Sn	S	10 51 46.5	-9.0
EBIE	**Bielsa**	6.92	250	P	P	10 50 40.7	-0.3
EBIE				S	S	10 51 53.8	-5.7
EBIE	**Bielsa**	6.92	250	P	P	10 50 40.7	-0.4
	8.0nm,0.4s,SNR=15						
UPC	**Upice**	6.95	40	*e*SN	S	10 51 52.0	-8.2
DPC	**Dobruska-Polom**	6.99	42	*e*SN	S	10 51 51.8	-9.3
LDF	**La Druitiere**	7.00	300	*e*Pn	P	10 50 41.0	-1.1
LDF				*e*Sn	S	10 51 54.6	-6.7
	10nm,0.3s						
EPOB	**Poblet**	7.04	238	P	P	10 50 41.9	-0.8
EPOB	**Poblet**	7.04	238	P	P	10 50 41.9	-0.7
EGRA	**Graus**	7.04	246	P	P	10 50 44.8	+2.1
EGRA	**Graus**	7.04	246	P	P	10 50 44.2	+1.5
	2.5nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	7.24	221	P	P	10 50 43.9	-1.5
ETOS	**Mallorca**	7.24	221	P	P	10 50 43.9	-1.5
	2.0nm,0.3s,SNR=7.9						
FLN	**La Foliniere**	7.28	301	*e*Pn	P	10 50 44.9	-1.1
FLN				*e*Sn	S	10 52 01.9	-6.5
	18nm,0.4s						
ETSF	**Etsaut**	7.30	253	*e*Pn	P	10 50 43.9	-2.5
ETSF				*e*Sn	S	10 52 02.2	-6.8
	7.0nm,0.4s						
GRR	**Gorron**	7.37	297	*e*Pn	P	10 50 45.4	-1.9
GRR				*e*Sn	S	10 52 03.3	-7.4
	28nm,0.4s						
SJPF	**Ste Jean**	7.68	256	*e*Pn	P	10 50 48.9	-2.6
ERTA	**Horta de San J**	7.72	238	P	P	10 50 51.6	-0.6
ERTA	**Horta de San J**	7.72	238	P	P	10 50 51.6	-0.6
	1.8nm,0.3s,SNR=8.5						
SGMF	**Saint Gilles**	8.41	294	*e*Pn	P	10 51 00.1	-1.6
SGMF				*e*Sn	S	10 52 28.5	-8.1
	32nm,0.3s						
EMOS	**Mosqueruela**	8.57	237	P	P	10 51 03.8	-0.2
EMOS	**Mosqueruela**	8.57	237	P	P	10 51 03.8	-0.2
	0.5nm,0.2s,SNR=7.9						
QUIF	**Quistinic**	8.73	291	*e*Pn	P	10 51 04.5	-1.6
QUIF				*e*Sn	S	10 52 35.8	-8.6
	6.3nm,0.2s						
ROSF	**Rostrenen**	8.89	294	*e*Pn	P	10 51 05.6	-2.9
ROSF				*e*Sn	S	10 52 39.7	-8.9
	8.1nm,0.3s						
EARI	**Arriondas**	10.38	263	P	P	10 51 27.5	-1.4
	0.4nm,0.1s						
EARI				S	S	10 53 16.9	-8.3
EARI	**Arriondas**	10.38	263	P	P	10 51 28.0	-0.9
	0.8nm,0.2s,SNR=7.9						

*NEIC **20** 10:52:06.5,28.65S×70.46W,h87^{km},MD3.5(GUC),After GUC.*

GUC 20 10:52:06.5±1.0,**28.65S×70.46W,h87**^{km}±16^{km}**,MD3.5, ML3.4,2C-2D,Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	**Copiapo**	1.29	4	⇓*i*P	P	10 52 29.9	+0.1
CPCH				*i* S	S	10 52 47.8	+0.5
LSCH	**La Serena**	1.43	208	⇑*i*P	P	10 52 31.7	0.0
LSCH				*i* S	S	10 52 50.8	+0.4
LSCH				AMP		10 52 51.9	
	comp=N,549nm,0.4s						
TLL	**Tololo Astrono**	1.54	191	*e*P	P	10 52 33.5	+0.3
TLL				*i* S	S	10 52 53.8	+1.0
TLL				AMP		10 52 55.5	
	comp=N,705nm,0.3s						
CDCH	**Caldera**	1.60	348	⇓*i*P	P	10 52 34.0	+0.1
CDCH				*i* S	S	10 52 53.8	-0.3
CRCH	**Chaqaral**	2.30	356	⇑*i*P	P	10 52 43.0	-0.2
CRCH				*i* S	S	10 53 10.2	-0.4
CRCH				AMP		10 53 11.0	
	comp=N,293nm,0.3s						

MAN 20 11:19:22.4,14.69N×123.28E,h16^{km},mb4.3,ML3.2, MS2.9,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	**Guinayangan**	1.13	226	⇓*e*P	Pb	11 19 42.2	-0.8
GQP				*e*S	Sb	11 19 59.4	+2.1
POLP	**Polilio Island**	1.30	272	*e*P	Pb	11 19 45.1	-0.9
POLP				*e*S	Sb	11 20 03.4	+1.1
PVCP	**Virac**	1.38	142	*e*P	Pn	11 19 46.2	-0.9
PVCP				*e*S	Sb	11 20 05.5	+0.9
CUYO	**Cuyo Island**	4.41	210	*e*P	Pn	11 20 43.1	+13

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*IDC **20** 12:02:11.4±1.8,6.74S×130.01E,mb3.8/2,mb1 3.9/3, mb1mx3.6/11,mbtmp3.8/3,ML3.8/1,Error ellipse: s-maj=144.4km s-min=28.0km az=65.0*

ISC 20 12:02:25.7±3.1,**7.4S**±0.2×**129.5E**±0.3,**h139**^{km}±32^{km}**,n7, σ1$^{\text{s}}$61**/8**,mb3.6**/2**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	6.05	151	*e*P	Px	12 04 14.9	
	7.4nm,0.2s						
KAKA				*e*S	Sx	12 05 19.8	
FITZ	**Fitzroy Crossi**	11.28	199	*e*P	P	12 05 03.9	+0.2
	6.5nm,1.1s						
FITZ				*e*S	Sx	12 07 01.7	
WRA	**Warramunga Arr**	13.35	160	Pn	P	12 05 30.0	-0.7
	0.5nm,0.3s,baz=345,slow=13,SNR=24						
WRA				Sn	S	12 07 51.7	-4.4
	1.5nm,0.3s,baz=340,slow=21,SNR=13						
WB2	**Warramunga Arr**	13.36	160	*e*P	P	12 05 29.9	-0.8
WB2				*e*S	Sx	12 07 50.8	
ASPA	**Alice Springs**	16.74	166	*e*P	P	12 06 15.9	+2.5
ASPA				*e*S	S	12 09 12.9	-0.7
STKA	**Stephens Creek**	26.87	157	P	P	12 07 56.8	+1.4
	2.3nm,1.2s,mb3.7,baz=329,slow=12,SNR=4.5						
MKAR	**Makanchi Array**	68.25	327	P	P	12 13 12.7	-0.8
	0.4nm,0.5s,mb3.4,baz=115,slow=7.4,SNR=8.2						

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*CASC **20** 12:04:45.6±2.9,12.77N×88.72W,h22^{km}±18^{km},MD4.3, ML4.1,mb3.9(NEIC)*

*NEIC **20** 12:04:45.6±0.5,13.20N×88.27W,mb3.9/13,Error ellipse: s-maj=23.4km s-min=6.6km az=48.0*

*IDC **20** 12:04:48.1±2.5,13.22N×88.19W,h79^{km}±25^{km},mb3.6/10, mb1 3.8/11,mb1mx3.7/20,mbtmp3.9/11,MS3.0/2, Ms1 3.0/2,ms1mx2.7/18,Error ellipse: s-maj=39.9km s-min=12.7km az=52.0*

ISC 20 12:04:47.1±1.0,**13.05N**±0.10×**88.5W**±0.1,**h89**^{km}±9^{km}**,n60, σ1$^{\text{s}}$04**/61**,mb3.9**/20**,13C-13D,El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VSM	**San Miguel**	0.44	31	⇑*e*P	Px	12 05 08.4	
VSM				*e*S	Sx	12 05 21.5	
BLLM	**Bellamira**	0.47	34	⇑*e*P	Px	12 05 08.7	
BLLM				*e*S	Sx	12 05 22.2	
SNVI	**San Vicente**	0.65	330	⇑*e*P	Px	12 05 07.7	
SNVI				*e*S	Sx	12 05 20.2	
CNCH	**Conchagua**	0.69	71	⇑*e*P	Px	12 05 11.4	
CNCH				*e*S	Sx	12 05 27.7	
LCBS	**La Ceiba**	0.76	322	⇓*e*P	Px	12 05 08.2	
LCBS				*e*S	Sx	12 05 21.5	
CAHU	**Cacacuatique**	0.77	22	⇑*e*P	Px	12 05 13.0	
CAHU				*e*S	Sx	12 05 30.1	
LFRS	**El Faro**	0.79	316	⇓*e*P	Px	12 05 08.0	
LFRS				*e*S	Sx	12 05 21.4	
LBRS	**Las Brisas**	0.86	322	⇑*e*P	Px	12 05 10.1	
LBRS				*e*S	Sx	12 05 25.1	
BOQS	**Boqueron**	1.02	312	⇓*e*P	Px	12 05 10.7	
BOQS				*e*S	Sx	12 05 27.0	
SBLS	**San Blas**	1.34	306	⇓*e*P	Px	12 05 14.3	
SBLS				*e*S	Sx	12 05 33.9	
RTR	**El Retiro**	1.39	307	⇓*e*P	Px	12 05 15.3	
RTR				*e*S	Sx	12 05 33.1	
CRIN	**San Cristobal**	1.46	104	⇑*e*P	P	12 05 13.3	+0.6
CRIN				*e*S	S	12 05 36.4	+4.7
TEL3	**Telica 3**	1.69	106	⇑*e*P	P	12 05 15.3	-0.4
TELN	**Telica**	1.69	105	⇓*e*P	P	12 05 15.8	0.0
TELN				*e*S	S	12 05 40.1	+3.3
LEON	**Leon**	1.69	112	⇑*e*P	P	12 05 14.7	-1.1
LEON				*e*S	S	12 05 36.6	-0.3
CNGN	**Cerro Negro**	1.84	107	⇓*e*P	P	12 05 17.4	-0.3
MIRN	**Miramar**	1.85	109	⇓*e*P	P	12 05 17.6	-0.2
MOMJ	**Momotombo**	2.02	108	⇓*e*P	P	12 05 19.7	-0.4
COPN	**Copaltepe**	2.06	115	⇓*e*P	P	12 05 19.4	-1.2
COPN				*e*S	S	12 05 45.5	+0.2
	comp=Z,2µm,0.6s						
XAVN	**Gruta Xavier**	2.31	113	⇑*e*P	P	12 05 23.4	-0.6
MGAN	**Managua**	2.38	112	⇑*e*P	P	12 05 24.9	-0.1
MGAN				*e*S	S	12 05 54.1	+0.7
	comp=N,870nm,0.4s						
TICN	**Ticuantepe**	2.44	114	⇓*e*P	P	12 05 25.4	-0.5
TICN				*e*S	S	12 05 56.0	+1.2
	comp=Z,3µm,0.4s						
APON	**Apoyo**	2.63	115	⇓*e*P	P	12 05 27.6	-1.0
JTS	**JuntasAbangare**	4.43	128	P	P	12 05 51.9	-1.5
	comp=Z,5.6nm,0.3s,baz=308,slow=20,SNR=45						
JTS				S	S	12 06 40.5	-3.6
	comp=Z,8.6nm,0.3s,baz=271,slow=12,SNR=3.5						
JTS				Lg		12 06 59.7	
	comp=Z,7.0nm,0.3s,baz=235,slow=20,SNR=4.2						
JTS				LR	LR	12 07 57.1	
	comp=Z,114nm,19.1s,baz=98,slow=44						
JTS	**JuntasAbangare**	4.43	128	*e*P	P	12 05 51.9	-1.6
JTS				*e*S	S	12 06 40.8	-3.4
CGA2	**Cerro Gallo 2**	4.98	127	⇓*e*P	P	12 06 01.3	+0.4
CGA2				*e*S	S	12 06 58.3	+0.7
PRS1	**Puriscal**	5.12	126	*e*P	P	12 06 02.9	0.0
PRS1				*e*S	S	12 07 03.0	+1.9
LAJ	**Bijagual**	5.34	126	*e*P	P	12 06 02.0	-3.8
LCR2	**La Lucha 2**	5.50	126	*e*P	P	12 06 08.4	+0.3
LCR2				*e*S	S	12 07 12.9	+2.2
BUS	**Buena Vista**	5.81	126	⇑*e*P	P	12 06 13.2	+0.9
BUS				*e*S	S	12 07 19.8	+1.6
ACR	**Cerro Adams**	6.82	129	⇑*e*P	P	12 06 26.2	-0.2
ACR				*e*S	S	12 07 41.4	-1.8
SDV	**Santo Domingo**	18.02	101	P	P	12 08 50.0	-3.4
	comp=Z,2.5nm,0.5s						
JCT	**Junction City**	20.24	331	*e*P	P	12 09 16.4	-1.1
	comp=Z,7.4nm,0.6s						
LTX	**Lajitas**	21.46	321	*e*P	P	12 09 30.3	+0.5
	comp=Z,2.6nm,0.7s,mb3.7						
TXAR	**Lajitas Array**	21.46	321	P	P	12 09 30.1	+0.2
	comp=Z,1.8nm,0.5s,mb3.6,baz=139,slow=9.4,SNR=30						
WMOK	**Wichita Mounta**	23.51	338	*e*P	P	12 09 50.4	+0.6
	comp=Z,7.0nm,1.2s,mb3.9						
MNTX	**Cornudas Mount**	24.19	323	*e*P	P	12 09 56.3	-0.1
	comp=Z,0.9nm,0.6s,mb3.3						
CCM	**Cathedral Cave**	25.02	355	*e*P	P	12 10 04.8	+0.4
	comp=Z,5.5nm,0.6s,mb4.2						
ANMO	**Albuquerque**	27.19	326	P	P	12 10 25.3	+0.8
	comp=Z,0.5nm,0.5s,mb3.3						
SDCO	**Great Sand Dun**	28.89	331	*e*P	P	12 10 40.3	+0.6
	comp=Z,0.9nm,0.6s,mb3.6						
PV10	**Paradox Valley**	31.13	328	*e*P	P	12 10 59.1	-0.4
SAML	**Samuel**	33.32	130	*e*P	P	12 11 17.3	-1.4
RSSD	**Black Hills**	33.71	340	*e*P	P	12 11 22.9	+1.1
	comp=Z,3.3nm,0.7s,mb4.3						
PDAR	**Pinedale Array**	34.76	332	P	P	12 11 31.6	+0.8
	comp=Z,0.5nm,0.6s,mb3.5,baz=124,slow=9.9,SNR=7.4						
PDAR				PcP	PcP	12 14 02.2	-0.6
	comp=Z,0.3nm,0.5s,baz=135,slow=6.3,SNR=3.6						
LPAZ	**La Paz**	35.43	145	P	P	12 11 37.0	+0.2
	comp=Z,1.3nm,0.8s,mb3.8,baz=334,slow=7.8,SNR=5.4						
LPAZ	**La Paz**	35.43	145	*e*P	P	12 11 36.8	0.0
	comp=Z,1.2nm,0.7s,mb3.8						
REDW	**Red Top Meadow**	35.82	332	*e*P	P	12 11 40.4	+0.6
	comp=Z,4.6nm,0.6s,mb4.6						
REDW				*e*pP	pP	12 11 54.5	-6.3
SNOW	**Snow King Moun**	35.85	332	*e*P	P	12 11 40.6	+0.5
	comp=Z,5.3nm,0.6s,mb4.7						
SNOW				*e*pP	pP	12 11 53.9	-7.2
NVAR	**Mina Array Bea**	36.58	319	P	P	12 11 47.4	+1.1
	comp=Z,0.5nm,0.6s,mb3.6,baz=121,slow=8.9,SNR=6.2						
NVAR				PcP	PcP	12 14 09.4	+1.3
	comp=Z,0.3nm,0.7s,baz=107,slow=4.1,SNR=4.2						
ULM	**Lac du Bonnet**	37.58	352	P	P	12 11 52.5	-1.9
	comp=Z,3.1nm,0.7s,mb4.2,baz=128,slow=4.0,SNR=4.7						
ULM				LR	LR	12 28 06.8	
	comp=Z,38nm,19.4s,baz=15,slow=37						
HLID	**Hailey**	37.69	329	*e*P	P	12 11 56.3	+0.8
	comp=Z,0.6nm,0.6s,mb3.6						
MCMT	**McKenzie Canyo**	37.87	331	*e*P	P	12 11 59.2	+2.2
SIV	**San Ignacio**	39.61	136	P	P	12 12 11.9	+0.3
	comp=Z,1.7nm,0.6s,mb4.0,baz=308,slow=10.0,SNR=12						
EDM	**Edmonton**	44.68	339	*e*P	P	12 12 51.9	-0.9
SCHQ	**Schefferville**	45.01	18	P	P	12 12 54.9	-0.4
	comp=Z,3.0nm,0.9s,mb4.0,baz=236,slow=11,SNR=3.4						
YKA	**Yellowknife Ar**	52.77	345	P	P	12 13 54.0	-1.0
	comp=Z,1.5nm,0.4s,mb4.4,baz=131,slow=8.4,SNR=18						
YKA	**Yellowknife Ar**	52.77	345	P	P	12 13 54.0	-1.0
ILAR	**Eielson Array**	65.06	336	P	P	12 15 19.2	-0.8
	comp=Z,0.4nm,0.6s,mb3.4,baz=161,slow=4.9,SNR=14						
DBIC	**Dimbokro**	82.36	85	P	P	12 16 59.2	-2.0
	comp=Z,1.1nm,0.5s,mb3.9,baz=220,slow=7.9,SNR=3.3						
WRA	**Warramunga Arr**	138.44	255	PKP	PKPdf	12 24 06.7	+3.5
	comp=Z,0.4nm,0.5s,baz=21,slow=0.9,SNR=7.9						

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*NIED **20** 12:10:00,38.20N×144.80E,h8^{km},Mw4.1 Best double couple: M$_0$1.61×10^{15} NP1:φ$_s$219°,δ68°,λ-85°. NP2:φ$_s$27°, δ23°,λ-102°.*

*IDC **20** 12:10:03.3±0.8,38.08N×145.00E,mb3.9/13,mb1 4.2/15, mb1mx4.1/23,mbtmp3.9/15,ML4.0/2,MS3.3/5,Ms1 3.3/5, ms1mx3.2/18,Error ellipse: s-maj=23.5km s-min=17.4km az=158.0*

*NEIC **20** 12:10:05.2±0.5,38.21N×145.02E,h10^{km},mb4.1/3,Error ellipse: s-maj=14.8km s-min=8.6km az=150.0*

*MOS **20** 12:10:06.4±1.1,38.15N×144.97E,h33^{km},mb4.4/2,Error ellipse: s-maj=15.1km s-min=13.7km az=75.2*

*JMA **20** 12:10:08.3±0.1,38.17N×144.77E,h57^{km},M4.2*

ISC 20 12:10:07.6±0.5**,38.31N**±0.04×**144.84E**±0.04**,h33**^{km}**,n62, σ1$^{\text{s}}$07**/60**,mb3.9**/18**,MS3.4**/3**,9C,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.60	288	P	P	12 10 49.0	+0.8
OFUJ				*e*S	S	12 11 19.6	+0.7
MIYJ	**Miyakonagasawa**	2.67	299	P	P	12 10 50.2	+0.9
MIYJ				S	S	12 11 21.7	+0.9
JIO	**Ouri**	2.75	274	P	P	12 10 50.6	+0.3
JIO				*e*S	S	12 11 22.2	-0.5
JMK	**Ichinoseki**	2.91	284	P	P	12 10 53.4	+0.8
JMK				*e*S	S	12 11 27.3	+0.6
JOT	**Ohata**	4.23	318	*e*S	S	12 11 59.4	-1.1
JCH	**Churui**	4.45	346	*e*S	S	12 12 04.5	-1.3
JKB	**Kayabe**	4.61	322	P	P	12 11 17.9	+1.0
JKB				*e*S	S	12 12 09.8	-0.2
NEM2	**Nemuro 2**	5.10	7	P	P	12 11 21.1	-2.6
NEM2				*e*S	S	12 12 15.8	-6.4
JRY	**Ryogami san**	5.26	246	P	P	12 11 23.9	-2.1
JRY				*e*S	S	12 12 20.1	-6.3
JOD2	**Odawara 2**	5.53	238	*e*S	S	12 12 27.6	-5.4
MJAR	**Matsushiro Arr**	5.56	254	Pn	Pn	12 11 30.0	-0.4
	3.1nm,0.3s,baz=81,slow=15,SNR=27						
MJAR				Sn	Sn	12 12 31.4	-2.5
	1.0nm,0.3s,baz=95,slow=28,SNR=3.2						
MAJO	**Matsushiro**	5.56	254	*e*P	P	12 11 30.3	+0.1
	28nm,0.6s						
MAJO	**Matsushiro**	5.56	254	*e*P	P	12 11 30.3	+0.1
MAJO				pmax	pmax		
	comp=Z,27nm,0.6s						
MAT	**Matsushiro**	5.56	254	P	P	12 11 30.3	+0.1
MAT				*e*S	S	12 12 33.2	-0.7
MAT	**Matsushiro**	5.56	254	*e*P	P	12 11 30.0	-0.2
	comp=Z,22nm,0.8s						
MAT				S	S	12 12 33.0	-0.9
MAT	**Matsushiro**	5.56	254	*e*P	P	12 11 30.0	-0.2
MAT				S	S	12 12 33.0	-0.9
MAT				pmax	pmax		
	comp=Z,22nm,0.8s						
JOSM	**Okushiri--Mats**	5.57	314	P	P	12 11 31.5	+1.1
JTKR	**Abashiri--Toko**	5.70	353	P	P	12 11 31.3	-0.8
JTKR				*e*S	S	12 12 34.7	-2.6
YUK	**Yuzh-Kuril’sk**	5.77	7	*e*P	P	12 11 29.0	-4.1
	comp=Z,340nm,0.4s						
YUK	**Yuzh-Kuril’sk**	5.77	7	*e*P	P	12 11 29.0	-4.1
YUK				pmax	pmax		
	comp=Z,340nm,0.4s						
YUK				pmax	pmax		
	comp=N,170nm,0.5s						
YUK				pmax	pmax		
	comp=E,110nm,0.5s						
JHR	**Hokuryu**	5.92	338	P	P	12 11 37.1	+1.9
JHR				*e*S	S	12 12 43.4	+0.6
ASAJ	**Asahikawa**	6.04	344	Pn	Pn	12 11 37.4	+0.2
	comp=E,3.3nm,0.3s,baz=209,slow=7.6,SNR=25						
ASAJ				Sn	Sn	12 12 45.4	-0.5
	comp=E,2.4nm,0.3s,baz=145,slow=27,SNR=6.5						
ASAJ				LR	LR	12 14 41.1	
	comp=E,177nm,18.2s,baz=152,slow=44						
ASAJ	**Asahikawa**	6.04	344	P	Pn	12 11 37.4	+0.2
ASAJ						12 12 45.4	
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,177nm,18.2s						
JNU	**Nakatsue**	12.47	250	LR	LR	12 18 05.4	
	comp=Z,68nm,18.2s,baz=234,slow=38						
KLR	**Kul’dur**	14.42	323	*e*P	P	12 13 40.3	+9.2
SONM	**Songino Array**	29.39	301	P	P	12 16 11.9	+2.2
	comp=Z,0.3nm,0.6s,mb3.2,baz=96,slow=13,SNR=3.2						
SONM				LR	LR	12 28 20.8	
	comp=Z,55nm,18.4s,MS3.2,baz=32,slow=37						
TIXI	**Tiksi**	34.40	351	*e*P	P	12 16 52.1	-1.3
	comp=Z,2.0nm,0.8s,mb4.1						
TIXI	**Tiksi**	34.40	351	*e*P	P	12 16 52.1	-1.3
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
ZAL	**Zalesovo**	43.10	311	LR	LR	12 37 19.6	
	comp=Z,61nm,19.5s,MS3.5,baz=69,slow=38						
KDAK	**Kodiak Island**	44.33	43	P	P	12 18 14.9	-1.0
	comp=Z,4.6nm,0.8s,mb4.2,baz=176,slow=14,SNR=5.0						
MKAR	**Makanchi Array**	45.76	302	P	P	12 18 28.2	+0.7
	comp=Z,0.5nm,0.6s,mb3.6,baz=108,slow=3.8,SNR=4.2						
MKAR				LR	LR	12 37 31.4	
	comp=Z,48nm,18.2s,MS3.5,baz=201,slow=36						
ILAR	**Eielson Array**	46.96	33	P	P	12 18 36.6	0.0
	comp=Z,1.8nm,0.7s,mb4.1,baz=259,slow=6.7,SNR=19						
KURK	**Kurchatov**	47.30	308	*e*P	P	12 18 40.9	+1.4
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
KAKA	**Kakadu**	52.06	195	*e*P	P	12 19 33.0	+16
	comp=Z,9.8nm,0.8s,mb4.8						
WB2	**Warramunga Arr**	58.77	192	*e*P	P	12 20 01.4	-3.6
WRA	**Warramunga Arr**	58.77	192	P	P	12 20 01.6	-3.4
	comp=Z,2.8nm,0.7s,mb4.4,baz=12,slow=7.2,SNR=20						
YKA	**Yellowknife Ar**	61.33	31	P	P	12 20 21.4	-0.5
	comp=Z,1.1nm,0.7s,mb4.1,baz=299,slow=7.7,SNR=4.0						
FINES	**FINESS Array B**	68.93	333	P	P	12 21 10.4	-0.4
	comp=Z,1.6nm,0.8s,mb4.0,baz=72,slow=6.0,SNR=5.5						
NVAR	**Mina Array Bea**	72.04	55	P	P	12 21 30.4	+0.4
	comp=Z,0.4nm,0.6s,mb3.5,baz=295,slow=5.7,SNR=7.1						
NOA	**NORSAR Array B**	74.03	339	P	P	12 21 42.0	+0.8
	comp=Z,0.9nm,0.8s,mb3.8,baz=38,slow=5.8,SNR=3.7						
BW06	**Boulder Array**	74.82	47	*e*P	P	12 21 46.3	+0.1
	comp=Z,0.8nm,0.6s,mb3.8						
PDAR	**Pinedale Array**	74.82	47	P	P	12 21 45.8	-0.4
	comp=Z,0.9nm,0.7s,mb3.8,baz=289,slow=2.1,SNR=7.9						
PV10	**Paradox Valley**	77.88	51	*e*P	P	12 22 04.8	+1.2
PV01	**Paradox Valley**	78.32	51	*e*P	P	12 22 06.7	+0.7
ANMO	**Albuquerque**	81.67	52	P	P	12 22 24.4	+0.4
	comp=Z,1.3nm,1.0s,mb3.8,baz=299,slow=3.2,SNR=4.9						

GERES	**GERESS Array B**	**83.02**	**330**	P	**P**	**12 22 30.3**	**-0.2**
	comp=Z,0.2nm,0.6s,mb3.3,baz=37,slow=4.9,SNR=2.9						
MNTX	**Cornudas Mount**	**84.50**	**54**	*e*P	**P**	**12 22 38.6**	**+0.2**
	comp=Z,1.5nm,0.7s,mb4.2						
TXAR	**Lajitas Array**	**87.18**	**54**	P	**P**	**12 22 52.1**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.8,baz=306,slow=3.2,SNR=8.7						
SNAA	**Sanae**	**142.75**	**196**		PKPdf	12 29 37.4	+1.1
SNAA	**Sanae**	**142.75**	**196**		PKPdf	12 29 48.6	+12
SNAA	**Sanae**	**142.75**	**196**	P	PKPdf	12 29 33.5	-2.8
SNAA				P		12 29 37.4	
VNA2	**Neumayer--Watz**	**144.28**	**195**		PKPbc	12 29 38.4	0.0
VNA2	**Neumayer--Watz**	**144.28**	**195**	⇑*i*	PKPbc	12 29 47.5	+9.1
VNA2	**Neumayer--Watz**	**144.28**	**195**		PKPbc	12 29 53.4	+15
VNA2	**Neumayer--Watz**	**144.28**	**195**	⇑*i*P	PKPbc	12 29 47.5	+9.1
VNA3	**Neumayer Olymp**	**144.47**	**194**	⇑*i*	PKPbc	12 29 38.9	-0.1
VNA3	**Neumayer Olymp**	**144.47**	**194**	⇑*i*	PKPbc	12 29 47.4	+8.4
VNA3	**Neumayer Olymp**	**144.47**	**194**	⇑*i*	PKPbc	12 29 54.9	+16
VNA1	**Neumayer--Stat**	**144.68**	**195**	⇑*i*	PKPbc	12 29 40.1	+0.5
VNA1	**Neumayer--Stat**	**144.68**	**195**	⇑*i*	PKPbc	12 29 49.3	+10
VNA1	**Neumayer--Stat**	**144.68**	**195**	⇑*i*	PKPbc	12 29 53.1	+14
VNA1	**Neumayer--Stat**	**144.68**	**195**	⇑*i*P	PKPbc	12 29 49.3	+10

JMA ***20*** *12:26:25.8±0.3, 31.57N×140.44E, h99^{km}±3^{km}, M3.2*

ISC 20 12:26:30.2±2.9**, 32.1N**±0.2×**140.6E**±0.3**, h136**^{km}±13^{km}**, n12,** σ1^{s}**18**/15**, mb3.4**/2**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	**Mitsune**	**1.20**	**328**	P	**P**	**12 26 54.4**	**-1.4**
JHJ2				*e*S	**S**	**12 27 15.2**	**-0.3**
JIM2	**Oshima 3**	**2.79**	**340**	P	**P**	**12 27 15.4**	**+0.4**
JOD2	**Odawara 2**	**3.40**	**339**	P	**P**	**12 27 24.1**	**+1.1**
JYN	**Shimob**	**3.79**	**334**	P	**P**	**12 27 30.1**	**+1.9**
JHU	**Hanno**	**3.90**	**344**	P	**P**	**12 27 30.4**	**+0.7**
JNY	**Yasuok**	**3.96**	**326**	P	**P**	**12 27 32.1**	**+1.6**
JIE	**Ise**	**3.97**	**306**	P	**P**	**12 27 28.8**	**-1.7**
JRY	**Ryogami san**	**4.15**	**341**	P	**P**	**12 27 34.0**	**+1.0**
JHO	**Hitachi**	**4.51**	**0**	P	**P**	**12 27 38.0**	**+0.2**
JHO				*e*S	**S**	**12 28 29.7**	**-0.1**
JFK	**Kawauchi**	**5.27**	**3**	P	**P**	**12 27 46.8**	**-1.1**
JFK				*e*S	**S**	**12 28 46.8**	**-1.2**
MKAR	**Makanchi Array**	**46.31**	**306**	P	**P**	**12 34 41.7**	**-2.0**
	0.4nm,0.6s,mb3.2,baz=85,slow=9.9,SNR=4.2						
FINES	**FINESS Array B**	**72.87**	**333**	P	**P**	**12 37 46.2**	**+0.8**
	0.5nm,0.4s,mb3.6,baz=76,slow=5.7,SNR=14						

MOS ***20*** *12:53:01.9±1.1, 53.88N×164.12W, h33^{km}, mb6.0/121, MS5.8/82, Error ellipse: s-maj=6.8km s-min=3.2km az=90.1*

NEIC ***20*** *12:53:03.0±0.1, 53.84N×164.09W, h30^{km}, mb5.7/230, ME5.7, MS5.8/149, MW6.0, ML5.8(AEIC), Error ellipse: s-maj=3.4km s-min=2.2km az=188.0 Broadband fault plane solution: P waves. NP1:ϕ_s60°, δ75°, λ90°. NP2: ϕ_s240°, δ15°, λ90°. Principal axes: T Plg60°, Azm330°; N Plg0°, Azm0°; P Plg30°, Azm150°; Moment Tensor Solution. s70 Moment tensor: Scale 10^{18} Nm; M$_{rr}$0.00; M$_{\theta\theta}$0.00; M$_{\phi\phi}$0.00; M$_{r\theta}$0.00; M$_{\theta\phi}$0.00; M$_{\phi r}$0.00; Best double couple: M$_0$1.3×10^{18} NP1:ϕ_s235°, δ26°, λ96°. NP2: ϕ_s48°, δ64°, λ87°. Principal axes: T 1.27, Plg71°, Azm313°; N .01, Plg2°, Azm50°; P -1.28, Plg19°, Azm140°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [V] at False Pass, [IV] at Unalaska and [III] at Akutan and Dutch Harbor.

IDC ***20*** *12:53:02.1±1.6, 53.96N×164.15W, h25^{km}±9^{km}, mb5.0/23, mb1 5.1/27, mb1mx5.1/28, mbtmp5.1/27, ML4.8/4, MS5.7/47, Ms1 5.7/47, ms1mx5.7/48 Error ellipse: s-maj=14.2km s-min=8.5km az=178.0*

BJI ***20*** *12:53:03.2, 54.32N×164.72W, h30^{km}, mB6.2, mb5.8, Ms6.2, Msz5.9*

HRVD ***20*** *12:53:03.0±0.1, 53.75N×163.93W, h32^{km}, MW6.2/92, Centroid moment Tensor Solution. LP body waves: s87, c225; Mantle waves: s92, c377; Half duration: 2^{s}9 Moment tensor: Scale 10^{18}Nm; M$_{rr}$1.32±.01; M$_{\theta\theta}$-1.14±.01; M$_{\phi\phi}$-0.17±.01; M$_{r\theta}$1.36±.02; M$_{\theta\phi}$-0.76±.01; M$_{\phi r}$0.83±.02; Best double couple: M$_0$2.146×10^{18} NP1: ϕ_s244°, δ21°, λ94°. NP2:ϕ_s59°, δ69°, λ88°. Principal axes: T 2.028, Plg66°, Azm326°; N .239, Plg2°, Azm60°; P -2.264, Plg24°, Azm150°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

BGS ***20*** *12:53:06.5, 54.11N×162.21W, h33^{km}, mb5.5*

SKO ***20*** *12:53:08.8, 56.52N×164.80W*

ISC 20 12:53:03.0±0.3**, 53.86N**±0.02×**164.04W**±0.02**, h41**^{km}±2^{km}**, h38**^{km}±2.8^{km}**:pP-P, n1210,** σ1^{s}**14**/1140**, mb5.7**/330**, MS5.8**/213**, 119C-44D, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESN	**West Dahl Nort**	**0.78**	**336**	P	**P**	**12 53 18.8**	**+1.3**
WFAR	**Faris Peak**	**0.81**	**328**	P	**P**	**12 53 18.8**	**+0.8**
WPOG	**Pogromni**	**0.85**	**331**	P	**P**	**12 53 19.4**	**+0.9**
AKUT	**Akutan**	**1.06**	**286**	P	**P**	**12 53 22.4**	**+0.8**
AKUT				S	**S**	**12 53 36.9**	**+1.5**
AHB	**Akutan Harbor**	**1.08**	**284**	P	**P**	**12 53 22.7**	**+0.9**
LVA	**Lava Point**	**1.22**	**285**	P	**P**	**12 53 24.8**	**+1.0**
UNV	**Unalaska Valle**	**1.46**	**270**	P	**P**	**12 53 27.2**	**-0.2**
UNV				S	**S**	**12 53 46.1**	**+0.6**
BALA	**Baldy Mountain**	**1.52**	**28**	P	**P**	**12 53 29.4**	**+1.3**
MTBL	**Makushin Table**	**1.57**	**275**	P	**P**	**12 53 29.7**	**+0.8**
MNAT	**Makushin Natee**	**1.57**	**272**	P	**P**	**12 53 29.3**	**+0.5**
DTNA	**Dutton South F**	**1.66**	**38**	P	**P**	**12 53 29.7**	**-0.4**
MCIR	**Makushin Cirqu**	**1.69**	**274**	P	**P**	**12 53 31.8**	**+1.2**
DOL	**Dolgoi Island**	**1.81**	**44**	P	**P**	**12 53 31.6**	**-0.6**
HAG	**Hague Volcano**	**1.92**	**39**	P	**P**	**12 53 34.0**	**+0.2**
PVV	**Pavlof Volcano**	**2.00**	**40**	P	**P**	**12 53 35.8**	**+0.8**
OKCD	**Okmok Cone D**	**2.46**	**262**	P	**P**	**12 53 43.4**	**+1.8**
OKCE	**Okmok Cone E**	**2.50**	**262**	P	**P**	**12 53 44.4**	**+2.3**
OKCE				S	**S**	**12 54 14.9**	**+3.4**
SDPT	**Sand Point**	**2.55**	**53**	P	**P**	**12 53 42.5**	**-0.3**
SDPT				S	**S**	**12 54 14.5**	**+1.6**
NIKO	**Nikolski**	**3.02**	**255**	P	**P**	**12 53 50.1**	**+0.6**
NIKO				S	**S**	**12 54 24.4**	**-0.3**
ANPK	**Aniakchak Peak**	**4.50**	**46**	P	**P**	**12 54 10.2**	**-0.3**
KJL	**Kejulik**	**6.34**	**45**	P	**P**	**12 54 36.6**	**+0.3**
ATKA	**Atka Island**	**6.35**	**259**	P	**P**	**12 54 37.7**	**+1.3**
CAHL	**Cahill**	**6.46**	**46**	P	**P**	**12 54 37.8**	**-0.1**
MGLS	**Mageik LS**	**6.54**	**45**	P	**P**	**12 54 39.3**	**+0.2**
KABR	**Katmai Barrier**	**6.64**	**46**	P	**P**	**12 54 39.7**	**-0.9**
GSMY	**Great Sitkin M**	**7.49**	**261**	P	**P**	**12 54 54.1**	**+1.7**
KDAK	**Kodiak Island**	**7.55**	**54**	Pn	**P**	**12 54 50.4**	**-2.8**
	47nm,0.3s,baz=243,slow=6.6,SNR=115						
KDAK				Sn	**S**	**12 56 11.1**	**-7.4**
	baz=180,slow=20,SNR=2.0						
KDAK				Lg		12 56 37.2	
	14nm,0.3s,baz=219,slow=23,SNR=9.3						
KDAK	**Kodiak Island**	**7.55**	**54**	P	**P**	**12 54 50.5**	**-2.8**
GSCK	**Great Sitkin C**	**7.56**	**261**	P	**P**	**12 54 53.5**	**+0.1**
AGU	**Augustine-Summ**	**8.03**	**42**	P	**P**	**12 55 00.3**	**+0.4**
KIKV	**Kanaga Island**	**8.19**	**261**	P	**P**	**12 55 03.9**	**+1.7**
KIMD	**Kanaga Island**	**8.27**	**261**	P	**P**	**12 55 04.6**	**+1.4**
SVW2	**Sparrevohn**	**8.56**	**29**	P	**P**	**12 55 06.1**	**-1.1**
ILW	**Iliamna West**	**8.60**	**39**	P	**P**	**12 55 07.6**	**-0.1**
INE	**Iliamna NE**	**8.63**	**40**	P	**P**	**12 55 08.1**	**-0.1**
RSO	**Redoubt South**	**9.01**	**38**	P	**P**	**12 55 13.6**	**+0.2**
CNPM	**China Poot**	**9.04**	**46**	P	**P**	**12 55 12.1**	**-1.7**
RDT	**Redoubt**	**9.21**	**38**	P	**P**	**12 55 16.3**	**+0.1**
CKL	**Chakachamna La**	**9.66**	**36**	P	**P**	**12 55 22.9**	**+0.6**
SPU	**Mount Spurr**	**9.75**	**36**	P	**P**	**12 55 23.0**	**-0.5**
TT01	**Tatalina**	**9.99**	**22**	P	**P**	**12 55 26.2**	**-0.6**
SLKM	**Skilak Lake**	**10.01**	**43**	*e*Pn	**P**	**12 55 26.0**	**-1.1**
STLK	**Strandline Lak**	**10.05**	**36**	P	**P**	**12 55 27.0**	**-0.6**
PMR	**Palmer**	**11.09**	**40**	*e*P	**P**	**12 55 41.1**	**-0.7**
	30nm,0.7s						
PMR	**Palmer**	**11.09**	**40**	*e*P	**P**	**12 55 41.1**	**-0.7**
PMR				pmax	pmax		
	comp=Z,30nm,0.7s						
SML	**Sawmill**	**11.52**	**40**	*e*Pn	**P**	**12 55 44.8**	**-2.8**
TNA	**Tin City**	**11.90**	**352**	Pn	**P**	**12 55 50.3**	**-2.3**
	comp=Z,130nm,0.8s						
DIV	**Divide**	**12.19**	**46**	*e*P	**P**	**12 55 53.0**	**-3.7**
	comp=Z,572nm,0.6s						
SMY	**Shemya**	**13.12**	**274**	⇑*e*Pn	**P**	**12 56 08.0**	**-1.1**
	comp=Z,1μm,1.3s						
SMY	**Shemya**	**13.12**	**274**	⇑*e*P	**P**	**12 56 08.0**	**-1.1**
SMY				pmax	pmax		
	comp=Z,1μm,1.3s						
IMA2	**Indian Mountai**	**13.27**	**19**	*e*P	**P**	**12 56 12.7**	**+1.8**
THY	**Trims Highway**	**13.45**	**37**	*e*P	**P**	**12 56 10.7**	**-2.6**
FX1	**Attu Island--F**	**13.64**	**275**	Pn	**P**	**12 56 15.9**	**+0.2**
	comp=Z,22nm,0.3s,baz=244,slow=8.2,SNR=45						
FX1				Sn	**S**	**12 58 42.3**	**-4.4**
	comp=Z,7.4nm,0.3s,baz=315,slow=20,SNR=2.6						
FX1				LR	LR	13 01 13.6	
	comp=Z,2μm,18.1s,baz=119,slow=36						
FX1	**Attu Island--F**	**13.64**	**275**	*e*P	**P**	**12 56 15.5**	**-0.2**
COLA	**College**	**13.72**	**30**	⇓*i*P	**P**	**12 56 14.6**	**-2.1**
COLA	**College**	**13.72**	**30**	P	**P**	**12 56 13.8**	**-2.9**
COLA				pmax	pmax		
	comp=Z,530nm,1.3s						
ILAR	**Eielson Array**	**13.95**	**32**	Pn	**P**	**12 56 16.0**	**-3.6**
	comp=Z,1.0nm,0.3s,baz=229,slow=12,SNR=30						
ILAR				ScP		13 05 10.0	
	comp=Z,0.1nm,0.3s,baz=290,slow=2.9,SNR=4.3						
DAWY	**Dawson**	**16.19**	**41**	*e*P	**P**	**12 56 46.4**	**-2.2**
SIT	**Sitka**	**16.53**	**67**	*e*P	**P**	**12 56 53.4**	**+0.3**
	comp=Z,216nm,0.9s						
SIT	**Sitka**	**16.53**	**67**	*e*P	**P**	**12 56 53.4**	**+0.4**
SIT				pmax	pmax		
	comp=Z,216nm,0.9s						
DLBC	**Dease Lake**	**19.35**	**63**	P	**P**	**12 57 27.0**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=264,slow=11,SNR=42						
DLBC				LR	LR	13 04 08.9	
	comp=Z,21μm,22.0s,baz=268,slow=34						
DLBC	**Dease Lake**	**19.35**	**63**	*e*P	**P**	**12 57 26.6**	**-0.8**
BILL	**Bilibino**	**19.94**	**327**	⇑*e*P	**P**	**12 57 31.5**	**-2.2**
	comp=Z,306nm,1.0s						
BILL	**Bilibino**	**19.94**	**327**	*c i*P	**P**	**12 57 32.2**	**-1.6**
BILL				*e*S	**S**	**13 01 12.6**	**+1.8**
BILL				pmax	pmax		
	comp=Z,422nm,1.4s						
BILL				MLR	MLR		
	comp=Z,70μm,16.0s						
INK	**Inuvik**	**20.34**	**33**	P	**P**	**12 57 33.6**	**-4.4**
	comp=Z,29nm,0.6s,baz=235,slow=12,SNR=64						
INK				ScP		13 05 22.4	
	comp=Z,15nm,0.8s,baz=176,slow=14,SNR=7.3						
INK				LR	LR	13 06 15.0	
	comp=Z,64μm,19.8s,MS6.0,baz=233,slow=39						
INK	**Inuvik**	**20.34**	**33**	*e*P	**P**	**12 57 33.4**	**-4.6**
	comp=Z,0.5nm,0.9s						
BBB	**Bella Bella**	**21.53**	**80**	P	**P**	**12 57 49.6**	**-0.6**
	comp=Z,35nm,1.1s,mb4.7,baz=274,slow=11,SNR=3.0						
BBB				LR	LR	13 04 13.5	
	comp=Z,24μm,21.3s,MS5.6,baz=290,slow=31						
PET	**Petropavlovsk**	**22.08**	**283**	⇑*e*P	**P**	**12 57 54.0**	**-1.7**
	comp=Z,463nm,1.3s,mb5.8						
PET				LR	LR		
	comp=Z,51μm,21.0s,MS5.9						
PET	**Petropavlovsk**	**22.08**	**283**	*ce*P	**P**	**12 57 54.9**	**-0.8**
PET				*e*		12 58 28.3	
PET				*e*SS	SS	13 02 50.9	+19
PET				pmax	pmax		
	comp=Z,6μm,6.4s						
PET				pmax	pmax		
	comp=E,4μm,6.6s						
PET				pmax	pmax		
	comp=N,1μm,6.8s						
PET				pmax	pmax		
	comp=Z,7μm,22.3s						
PET				pmax	pmax		
	comp=E,5μm,21.0s						
PET				pmax	pmax		
	comp=Z,287nm,1.1s,mb5.6						
PET				pmax	pmax		
	comp=N,2μm,25.4s						
PET				MLR	MLR		
	comp=Z,39μm,20.0s,MS5.8						
PET				MLR	MLR		
	comp=Z,32μm,19.0s						
SEY	**Seymchan**	**24.11**	**309**	⇓*i*P	**P**	**12 58 15.3**	**0.0**
SEY	**Seymchan**	**24.11**	**309**	*i* P	**P**	**12 58 14.8**	**-0.5**
SEY				*e*		12 58 53.3	
SEY				*e*PPP	PPP	12 59 05.1	+4.2
SEY				*e*		13 01 57.8	
SEY				*e*S	**S**	**13 02 27.5**	**+0.1**
SEY				*e*SS	SS	13 03 18.3	-2.6
SEY				*e*SSS	SSS	13 03 37.2	-0.6
SEY				pmax	pmax		
	comp=N,20nm,0.9s						
SEY				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.1						
SEY				smax			
	comp=E,9μm,12.9s						
SEY				MLR	MLR		
	comp=E,74μm,19.0s,MS6.2						
SEY				MLR	MLR		
	comp=Z,100μm,19.0s,MS6.3						
SEY				MLR	MLR		
	comp=N,27μm,16.0s,MS6.2						
MA2	**Magadan**	**25.05**	**301**	⇑*e*P	**P**	**12 58 22.6**	**-1.8**
	comp=N,163nm,1.1s,mb5.5						
MA2				LR	LR		
	comp=Z,20μm,20.0s,MS5.6						
MA2	**Magadan**	**25.05**	**301**	*c i*P	**P**	**12 58 23.7**	**-0.7**
MA2				*e*		12 59 03.7	
MA2				*e*S	**S**	**13 02 41.7**	**-1.5**
MA2				*e*SS	SS	13 03 54.8	+11
MA2				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.0						
MA2				MLR	MLR		
	comp=Z,32μm,21.0s,MS5.8						
OCWA	**Octopus Mounta**	**25.66**	**87**	⇑*e*P	**P**	**12 58 31.7**	**+1.4**
	comp=Z,413nm,1.4s,mb5.8						
OCWA				LR	LR		
	comp=Z,28μm,20.0s,MS5.8						
PGC	**Sidney**	**25.66**	**85**	⇑*e*P	**P**	**12 58 31.5**	**+1.2**
	comp=Z,193nm,1.2s,mb5.5						
YKW3	**Yellowknife Ar**	**26.81**	**51**	*e*P	**P**	**12 58 39.5**	**-1.3**
YKA	**Yellowknife Ar**	**26.82**	**51**	P	**P**	**12 58 39.1**	**-1.8**
	comp=Z,6.3nm,0.4s,baz=84,slow=10.0,SNR=54						
YKA				ScP		13 05 40.3	
	comp=Z,6.0nm,0.9s,baz=281,slow=3.1,SNR=3.1						
YKA				LR	LR	13 10 15.6	
	comp=Z,24μm,20.6s,MS5.8,baz=260,slow=38						
YKA	**Yellowknife Ar**	**26.82**	**51**	P	**P**	**12 58 39.1**	**-1.8**
YKA				ScP		13 05 40.3	
YKA				LR	LR	13 10 15.6	
MIDW	**Midway**	**27.43**	**206**	PFAKE		12 59 00.0	+13
MIDW				LR	LR		
	comp=Z,21μm,22.0s,MS5.7						
MPOR	**Mary's Peak**	**27.73**	**93**	P	**P**	**12 58 51.3**	**+2.0**
COR	**Corvallis**	**27.82**	**93**	*e*P	**P**	**12 58 51.0**	**+0.8**
	comp=Z,126nm,1.1s,mb5.5						
COR				LR	LR		
	comp=Z,34μm,22.0s,MS5.9						
COR	**Corvallis**	**27.82**	**93**	*e*P	**P**	**12 58 51.0**	**+0.8**
COR				pmax	pmax		
	comp=Z,126nm,1.1s,mb5.5						
COR				MLR	MLR		
	comp=Z,34μm,22.0s,MS5.9						
EBG	**Ellensburg**	**28.20**	**86**	P	**P**	**12 58 55.1**	**+1.5**
KEBM	**Edson Butte**	**28.21**	**97**	P	**P**	**12 58 53.8**	**+0.1**
BROR	**Big Rock Looko**	**28.51**	**93**	P	**P**	**12 58 57.3**	**+1.0**
VFP	**Flag Point**	**28.51**	**90**	P	**P**	**12 58 56.8**	**+0.5**
KBO	**Bosley Butte**	**28.67**	**98**	*e*P	**P**	**12 58 56.2**	**-1.7**
HBO	**Huckleberry Mo**	**28.83**	**93**	P	**P**	**12 59 01.0**	**+1.8**
OD2	**Odessa Site #2**	**29.06**	**84**	P	**P**	**12 59 01.9**	**+0.7**
BBOR	**Butler Butte**	**29.18**	**95**	P	**P**	**12 59 04.7**	**+2.4**
HUMO	**Hull Mountain**	**29.18**	**96**	*e*P	**P**	**12 59 01.5**	**-0.9**
	comp=Z,149nm,1.8s,mb5.4						
HUMO				LR	LR		
	comp=Z,35μm,21.0s,MS6.0						
KTRM	**Thompson Ridge**	**29.36**	**97**	P	**P**	**12 59 05.6**	**+1.7**
NEW	**Newport**	**29.57**	**82**	P	**P**	**12 59 04.7**	**-1.0**
	comp=Z,23nm,1.0s,mb4.9,baz=300,slow=5.5,SNR=20						
NEW				ScP		13 05 48.2	
	comp=Z,4.9nm,0.8s,baz=290,slow=6.2,SNR=4.4						
NEW				LR	LR	13 08 39.0	
	comp=Z,20μm,21.9s,MS5.7,baz=290,slow=32						
NEW	**Newport**	**29.57**	**82**	*e*P	**P**	**12 59 04.4**	**-1.3**
	comp=Z,52nm,1.0s,mb5.2						
NEW				LR	LR		
	comp=Z,18μm,21.0s,MS5.7						
NEW	**Newport**	**29.57**	**82**	*e*P	**P**	**12 59 04.4**	**-1.3**
NEW				pmax	pmax		
	comp=Z,51nm,1.0s						
NEW				MLR	MLR		
	comp=Z,18μm,21.0s						
EDM	**Edmonton**	**29.61**	**70**	*e*P	**P**	**12 59 05.0**	**-1.0**
KHMM	**Horse Mountain**	**29.80**	**99**	*e*P	**P**	**12 59 08.1**	**+0.2**
YBH	**Yreka Blue Hor**	**29.86**	**97**	PFAKE		12 59 20.0	+12
YBH				LR	LR		
	comp=Z,31μm,21.0s,MS5.9						
YBH	**Yreka Blue Hor**	**29.86**	**97**	P	**P**	**12 59 10.1**	**+1.7**
YBH				pmax	pmax		
	comp=Z,28nm,0.8s						
KIPM	**Iron Peak**	**30.63**	**101**	*e*P	**P**	**12 59 16.0**	**+0.7**
KCPM	**Cahto Peak**	**30.65**	**101**	*e*P	**P**	**12 59 17.2**	**+1.7**
WDC	**Whiskeytown Da**	**30.68**	**99**	*e*P	**P**	**12 59 16.6**	**+0.9**
	comp=Z,70nm,1.3s,mb5.3						
WDC				LR	LR		
	comp=Z,22μm,21.0s,MS5.8						
WDC	**Whiskeytown Da**	**30.68**	**99**	*e*P	**P**	**12 59 16.6**	**+0.9**
WDC				pmax	pmax		
	comp=Z,70nm,1.3s,mb5.3						
WDC				MLR	MLR		
	comp=Z,22μm,21.0s,MS5.8						
MOD	**Modoc**	**31.17**	**94**	*e*P	**P**	**12 59 20.4**	**+0.4**
	comp=Z,184nm,1.4s,mb5.7						
MOD				LR	LR		
	comp=Z,31μm,20.0s,MS6.0						
BMO	**Blue Mountains**	**31.23**	**87**	*e*P	**P**	**12 59 19.9**	**-0.6**
	comp=Z,114nm,1.5s,mb5.5						
BMO				LR	LR		
	comp=Z,20μm,21.0s,MS5.8						
HOPS	**Hopland**	**31.41**	**101**	*e*P	**P**	**12 59 23.0**	**+0.9**
	comp=Z,144nm,1.3s,mb5.6						
HOPS				LR	LR		
	comp=Z,26μm,21.0s,MS5.9						
WVOR	**Wild Horse Val**	**31.84**	**92**	*e*P	**P**	**12 59 25.9**	**0.0**
	comp=Z,57nm,0.9s,mb5.4						
WVOR				LR	LR		
	comp=Z,31μm,20.0s,MS6.0						
WVOR	**Wild Horse Val**	**31.84**	**92**	*e*P	**P**	**12 59 25.9**	**0.0**
WVOR				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.4						
WVOR				MLR	MLR		
	comp=Z,31μm,20.0s,MS6.0						
MSO	**Missoula**	**32.15**	**82**	*e*P	**P**	**12 59 27.9**	**-0.6**
	comp=Z,44nm,1.4s,mb5.1						
MSO				LR	LR		
	comp=Z,6μm,20.0s,MS5.2						
CHMT	**Chamberlain Mo**	**32.51**	**81**	*e*P	**P**	**12 59 30.6**	**-1.1**
KIP	**Kipapa**	**32.71**	**170**	*e*P	**P**	**12 59 33.8**	**+0.1**
	comp=Z,256nm,1.4s,mb6.0						
KIP				LR	LR		
	comp=Z,23μm,20.0s,MS5.9						
KIP	**Kipapa**	**32.71**	**170**	*e*P	**P**	**12 59 33.8**	**+0.1**
KIP				pmax	pmax		
	comp=Z,256nm,1.4s,mb6.0						
KIP				MLR	MLR		
	comp=Z,23μm,20.0s,MS5.9						
PAHR	**Pah Rah Range**	**33.10**	**97**	*e*P	**P**	**12 59 37.4**	**+0.5**
	comp=Z,38nm,1.2s,mb5.2						
TIXI	**Tiksi**	**33.15**	**328**	PFAKE		12 59 50.0	+13
TIXI				LR	LR		
	comp=Z,42μm,20.0s,MS6.2						
TIXI	**Tiksi**	**33.15**	**328**	⇓*i*P	**P**	**12 59 34.1**	**-2.9**
TIXI				*e*		13 00 48.3	
TIXI				pmax	pmax		
	comp=Z,85nm,0.9s,mb5.7						
TIXI				MLR	MLR		
	comp=E,17μm,15.0s,MS6.0						
TIXI				MLR	MLR		
	comp=Z,25μm,15.0s,MS6.0						
TIXI				MLR	MLR		
	comp=N,13μm,16.0s,MS6.0						
HRY	**Holter Researc**	**33.45**	**81**	*e*P	**P**	**12 59 38.7**	**-1.1**
CMB	**Columbia Colle**	**33.61**	**100**	*e*P	**P**	**12 59 41.9**	**+0.5**
	comp=N,165nm,1.6s,mb5.7						
CMB				LR	LR		
	comp=Z,30μm,21.0s,MS6.0						
CMB	**Columbia Colle**	**33.61**	**100**	*e*P	**P**	**12 59 41.9**	**+0.6**
CMB				pmax	pmax		
	comp=Z,165nm,1.6s,mb5.7						
CMB				MLR	MLR		
	comp=Z,30μm,21.0s,MS6.0						
HLID	**Hailey**	**33.67**	**87**	*e*P	**P**	**12 59 41.2**	**-0.5**
	comp=Z,182nm,1.9s,mb5.7						
YUK	**Yuzh-Kuril'sk**	**33.69**	**274**	P	**P**	**12 59 36.7**	**-5.2**
YUK				*e*		13 01 01.8	
YUK				*e*		13 01 10.6	
YUK				S	Sx	13 07 04.8	
YUK				pmax	pmax		
	comp=N,4μm,3.0s						
YUK				pmax	pmax		
	comp=Z,3μm,3.0s						
YUK				pmax	pmax		
	comp=E,2μm,2.0s						
YUK				smax			
	comp=E,3μm,2.0s						
YUK				smax			
	comp=N,3μm,3.0s						
DLMT	**Dillon**	**33.73**	**83**	*e*P	**P**	**12 59 42.2**	**0.0**
	comp=N,74nm,1.4s,mb5.4						
SAO	**San Andreas Ge**	**33.87**	**103**	P	**P**	**12 59 43.5**	**0.0**
	comp=N,38nm,1.0s,mb5.3						
SAO				LR	LR		
	comp=Z,26μm,20.0s,MS6.0						
SAO	**San Andreas Ge**	**33.87**	**103**	P	**P**	**12 59 43.6**	**+0.1**
SAO				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.3						
SAO				MLR	MLR		
	comp=Z,26μm,20.0s,MS6.0						
MCMT	**McKenzie Canyo**	**33.87**	**84**	*e*P	**P**	**12 59 43.3**	**-0.2**
YSS	**Yuzh-Sakhalins**	**33.91**	**280**	⇑*i*P	**P**	**12 59 42.0**	**-1.7**
YSS				*e*P		12 59 42.5	
YSS				LR	LR		
	comp=Z,19μm,22.0s,MS5.8						
YSS	**Yuzh-Sakhalins**	**33.91**	**280**	⇑*i*P	**P**	**12 59 42.0**	**-1.7**
YSS				MLR	MLR		
	comp=Z,19μm,22.0s,MS5.8						
BOZ	**Bozeman (W)**	**34.14**	**82**	*e*P	**P**	**12 59 45.5**	**-0.3**
	comp=Z,109nm,1.6s,mb5.5						
BOZ				LR	LR		
	comp=Z,9μm,20.0s,MS5.5						
BOZ	**Bozeman (W)**	**34.14**	**82**	*e*P	**P**	**12 59 45.5**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,109nm,1.6s,mb5.5						
BOZ				MLR	MLR		
	comp=Z,9μm,20.0s,MS5.5						
LRV	**Little Rabbit**	**34.35**	**103**	P	**P**	**12 59 48.3**	**+0.6**
NVAR	**Mina Array Bea**	**34.57**	**98**	P	**P**	**12 59 50.3**	**+0.8**
	comp=Z,5.6nm,0.7s,mb4.6,baz=306,slow=7.0,SNR=49						
NVAR				PcP	PcP	13 02 23.2	-0.6
	comp=Z,3.3nm,0.6s,baz=297,slow=4.0,SNR=5.1						
NVAR				ScP		13 06 06.6	
	comp=Z,2.7nm,0.8s,baz=311,slow=2.3,SNR=4.5						
NVAR				LR	LR	13 11 22.1	
	comp=Z,19μm,21.0s,MS5.8,baz=305,slow=32						
NVAR				PKPPKP		13 32 52.5	
	comp=Z,0.7nm,0.8s,baz=151,slow=3.3,SNR=4.5						
NVAR	**Mina Array Bea**	**34.57**	**98**	P	**P**	**12 59 50.3**	**+0.8**
NVAR				PcP	PcP	13 02 23.2	-0.6
NVAR				ScP		13 06 06.6	
NVAR				LR	LR	13 11 22.1	
YAK	**Yakutsk**	**34.63**	**311**	⇑*i*P	**P**	**12 59 47.8**	**-2.0**
YAK				LR	LR		
	comp=Z,40μm,19.0s,MS6.2						
YAK	**Yakutsk**	**34.63**	**311**	*c i*P	**P**	**12 59 48.1**	**-1.7**
YAK				*e**PP	pP	12 59 57.8	-3.3
YAK				*e*		13 01 01.2	
YAK				*e*		13 02 26.3	
YAK				*e*S	**S**	**13 05 10.9**	**-4.6**
YAK				*e*SSS	SSS	13 07 35.4	-21
YAK				*i*		13 10 06.7	
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.6						
YAK				pmax	pmax		
	comp=E,60nm,1.2s						
YAK				pmax	pmax		
	comp=N,16nm,1.0s						
YAK				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
YAK				pmax	pmax		
	comp=E,59nm,1.3s						
YAK				smax			
	comp=E,35nm,1.4s						
YAK				smax			
	comp=N,33nm,1.5s						
YAK				MLR	MLR		
	comp=Z,40μm,18.0s,MS6.2						
YAK				MLR	MLR		
	comp=N,22μm,17.0s,MS6.2						

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YAK                              MLR     MLR
      comp=E,30µm,17.0s,MS6.2
MNV   Mina             34.66  97 eP      P        12 59 51.4 +1.1
      comp=E,65nm,1.3s,mb5.4
MNV                              LR      LR
      comp=Z,22µm,21.0s,MS5.9
MNV   Mina             34.66  97 eP      P        12 59 51.4 +1.1
MNV                              pmax    pmax
      comp=Z,65nm,1.3s,mb5.4
MNV                              MLR     MLR
      comp=Z,22µm,21.0s,MS5.9
POHA  Pohakuloa        34.66 166 PFAKE            13 00 00.0 +9.5
POHA                             LR      LR
      comp=Z,19µm,19.0s,MS5.8
QLMT  Earthquake Lak   34.71  83 eP      P        12 59 50.9 +0.2
ELK   Elko             34.88  92 LR      LR       13 11 51.2
      comp=Z,26µm,20.8s,MS6.0,baz=319,slow=32
ELK   Elko             34.88  92 eP      P        12 59 52.1 -0.1
      comp=Z,68nm,0.9s,mb5.6
ELK                              LR      LR
      comp=Z,29µm,21.0s,MS6.0
ELK   Elko             34.88  92 eP      P        12 59 52.1 -0.1
ELK                              pmax    pmax
      comp=Z,68nm,0.9s
ELK                              MLR     MLR
      comp=Z,29µm,21.0s
YMR   Madison River    35.07  83 eP      P        12 59 54.1 +0.3
      comp=Z,99nm,1.1s,mb5.7
YMR                              LR      LR
      comp=Z,9µm,22.0s,MS5.5
MTUM  Tungsten Hills   35.14  99 eP      P        12 59 55.9 +1.4
GCMT  Greycliff        35.21  81 P       P        12 59 53.3 -1.6
YFT   Old Faithful     35.27  83 eP      P        12 59 57.0 +1.6
PTRM  Twissleman Ran   35.35 103 P       P        12 59 56.5 +0.2
LKWY  Lake             35.46  83 eP      P        12 59 57.7 +0.6
      comp=Z,68nm,1.1s,mb5.5
LKWY                             LR      LR
      comp=Z,8µm,21.0s,MS5.5
LKWY  Lake             35.46  83 eP      P        12 59 57.7 +0.6
LKWY                             pmax    pmax
      comp=Z,68nm,1.1s,mb5.5
LKWY                             MLR     MLR
      comp=Z,8µm,21.0s,MS5.5
IMW   Indian Meadow    35.53  84 eP      P        12 59 58.1 +0.4
      comp=Z,54nm,1.1s,mb5.4
HVU   Hansel Valley    35.70  88 eP      P        12 59 59.1 -0.1
      comp=Z,52nm,1.1s,mb5.4
HVU   Hansel Valley    35.70  88 eP      P        12 59 59.1 -0.1
HVU                              pmax    pmax
      comp=Z,52nm,1.1s,mb5.4
MOOW  Moose Ponds      35.73  84 eP      P        12 59 59.9 +0.5
      comp=Z,31nm,1.3s,mb5.1
TPAW  Teton Pass       35.76  85 eP      P        13 00 00.1 +0.4
      comp=Z,148nm,1.6s,mb5.7
SNOW  Snow King Moun   35.89  85 eP      P        13 00 01.7 +1.0
      comp=Z,40nm,1.2s,mb5.2
LOHW  Long Hollow      35.89  84 eP      P        13 00 00.6 -0.2
      comp=Z,155nm,1.9s,mb5.6
REDW  Red Top Meadow   35.89  85 eP      P        13 00 00.1 -0.6
      comp=Z,68nm,1.3s,mb5.4
AHID  Auburn Hatcher   36.10  86 eP      P        13 00 03.3 +0.7
      comp=Z,39nm,1.1s,mb5.2
AHID                             LR      LR
      comp=Z,17µm,20.0s,MS5.8
SPUT  South Promonto   36.19  89 eP      P        13 00 03.0 -0.3
ISA   Isabella         36.35 101 eP      P        13 00 04.5 -0.2
      comp=Z,12nm,0.9s,mb4.8
ISA                              LR      LR
      comp=Z,6µm,20.0s,MS5.4
ISA   Isabella         36.35 101 eP      P        13 00 04.5 -0.3
ISA                              pmax    pmax
      comp=Z,12nm,0.9s,mb4.8
ISA                              MLR     MLR
      comp=Z,6µm,20.0s,MS5.4
HWUT  Hardware Ranch   36.53  88 eP      P        13 00 06.2 +0.1
      comp=Z,172nm,1.9s,mb5.6
HWUT                             LR      LR
      comp=Z,14µm,22.0s,MS5.7
DUG   Dugway           36.67  91 eP      P        13 00 07.1 -0.2
      comp=Z,99nm,1.2s,mb5.5
DUG                              LR      LR
      comp=Z,15µm,20.0s,MS5.8
DUG   Dugway           36.67  91 eP      P        13 00 07.1 -0.2
DUG                              pmax    pmax
      comp=Z,99nm,1.2s,mb5.5
DUG                              MLR     MLR
      comp=Z,15µm,20.0s,MS5.8
LAO   LASA Array       36.72  77 eP      P        13 00 07.2 -0.4
      comp=Z,272nm,1.5s,mb5.9
LAO                              LR      LR
      comp=Z,14µm,20.0s,MS5.7
TPNV  Topopah Spring   36.77  98 eP      P        13 00 09.2 +0.9
      comp=Z,89nm,0.9s,mb5.6
TPNV                             LR      LR
      comp=Z,33µm,20.0s,MS6.1
TPNV  Topopah Spring   36.77  98 eP      P        13 00 09.2 +1.0
TPNV                             pmax    pmax
      comp=Z,89nm,0.9s,mb5.6
TPNV                             MLR     MLR
      comp=Z,33µm,20.0s,MS6.1
NOQ   North Oquirrh    36.79  89 eP      P        13 00 07.6 -0.8
      comp=Z,46nm,1.0s,mb5.3
TCUT  Toone Canyon     36.92  88 eP      P        13 00 09.9 +0.4
DGMT  Dagmar           36.92  73 eP      P        13 00 08.9 -0.5
      comp=Z,173nm,1.3s,mb5.7
DGMT                             LR      LR
      comp=Z,16µm,21.0s,MS5.8
BW06  Boulder Array    37.01  85 PFAKE            13 00 20.0  +10
BW06                             LR      LR
      comp=Z,9µm,20.0s,MS5.5
PDAR  Pinedale Array   37.01  85 P       P        13 00 09.8 -0.3
      comp=Z,2.8nm,0.8s,baz=307,slow=7.4,SNR=23
PDAR                             LR      LR       13 13 06.6
      comp=Z,8µm,20.8s,MS5.5,baz=318,slow=32
NLU   North Lily Min   37.26  90 eP      P        13 00 12.8 +0.5
DAU   Daniels Canyon   37.45  89 eP      P        13 00 14.7 +0.7
SNCC  San Nicolas Is   37.48 105 PFAKE            13 00 30.0  +16
SNCC                             LR      LR
      comp=Z,23µm,22.0s,MS5.9
MPU   Maple Canyon     37.48  90 eP      P        13 00 14.6 +0.4
      comp=Z,82nm,1.4s,mb5.4
MPU                              LR      LR
      comp=Z,12µm,22.0s,MS5.7
FCC   Fort Churchill   37.49  54 eP      P        13 00 12.8 -1.2
      comp=Z,97nm,0.8s,mb5.7
FCC   Fort Churchill   37.49  54 eP      P        13 00 12.8 -1.2
FCC                              pmax    pmax
      comp=Z,97nm,0.8s,mb5.7
MWC   Mount Wilson     37.61 103 eP      P        13 00 16.5 +1.1
ARUT  Antelope Range   37.86  94 eP      P        13 00 17.9 +0.5
MSU   Marysvale        38.13  92 eP      P        13 00 19.9 +0.3
TMUT  Trail Mountain   38.19  90 eP      P        13 00 20.8 +0.7
NEN   Nelson           38.48  98 eP      P        13 00 23.5 +0.9
SRU   San Rafael       38.72  90 eP      P        13 00 24.4 -0.1
      comp=Z,32nm,0.5s,mb5.3
SRU   San Rafael       38.72  90 eP      P        13 00 24.4 -0.1
SRU                              pmax    pmax
      comp=Z,32nm,0.5s,mb5.3
LDFC  Landfair         38.73  99 eP      P        13 00 25.1 +0.5
CLNS  Chul’man         38.86 304 eP      P        13 00 22.9 -2.5
CLNS                             e                13 02 28.0
CLNS                             eS      S        13 06 14.7 -5.7
CLNS                             pmax    pmax
      comp=Z,45nm,0.7s,mb5.3
CLNS                             pmax    pmax
      comp=N,14nm,0.6s
CLNS                             pmax    pmax
      comp=E,35nm,0.8s
CLNS                             smax
      comp=E,4µm,16.4s
CLNS                             smax
      comp=Z,566nm,12.5s
CLNS                             smax
      comp=N,260nm,11.6s
CLNS                             MLR     MLR
      comp=Z,35µm,17.0s,MS6.2
CLNS                             MLR     MLR
      comp=N,1µm,13.0s,MS6.2
CLNS                             MLR     MLR
      comp=E,27µm,16.0s,MS6.2
PFO   Pinyon Flat Ob   38.98 102 eP      P        13 00 27.2 +0.5
      comp=E,37nm,1.0s,mb5.1
PFO                              LR      LR
      comp=Z,8µm,20.0s,MS5.5
PFO   Pinyon Flat Ob   38.98 102 eP      P        13 00 27.2 +0.5
PFO                              pmax    pmax
      comp=Z,37nm,1.0s,mb5.1
PFO                              MLR     MLR
      comp=Z,8µm,20.0s,MS5.5
KLR   Kul’dur          38.98 290 ⇓iP     P        13 00 24.0 -2.6
KLR                              ePPP    PPP      13 02 02.5  -21
KLR                              e                13 09 41.0
KLR                              MLR     MLR
      comp=N,13µm,15.0s,MS6.0
KLR                              MLR     MLR
      comp=Z,19µm,15.0s,MS6.0
KLR                              MLR     MLR
      comp=E,7µm,13.0s,MS6.0
NRGR  Nerungri         39.02 304 eP      P        13 00 24.4 -2.4
NRGR                             S       PcP      13 02 34.8 -2.2
RWWY  Rawlins          39.05  84 eP      P        13 00 27.1 -0.1
      comp=E,81nm,1.1s,mb5.4
RSSD  Black Hills      39.44  79 eP      P        13 00 29.2 -1.3
      comp=E,60nm,0.8s,mb5.4
RSSD                             LR      LR
      comp=Z,11µm,20.0s,MS5.7
RSSD  Black Hills      39.44  79 eP      P        13 00 29.2 -1.2
RSSD                             pmax    pmax
      comp=Z,60nm,0.8s,mb5.4
RSSD                             MLR     MLR
      comp=Z,11µm,20.0s,MS5.7
BAR   Barrett          39.53 103 eP      P        13 00 32.1 +0.9
PV10  Paradox Valley   40.08  90 eP      P        13 00 36.3 +0.6
PHWY  Pilot Hill       40.32  84 eP      P        13 00 37.8 +0.1
PV01  Paradox Valley   40.51  90 eP      P        13 00 39.0 -0.4
ULM   Lac du Bonnet    40.61  66 P       P        13 00 38.8 -1.3
      comp=Z,20nm,0.9s,mb4.8,baz=296,slow=8.8,SNR=19
ULM                              LR      LR       13 18 53.7
      comp=Z,8µm,18.5s,MS5.6,baz=81,slow=38
WUAZ  Wupatki          40.62  95 eP      P        13 00 40.3  0.0
      comp=Z,64nm,0.8s,mb5.3
WUAZ                             LR      LR
      comp=Z,35µm,20.0s,MS6.2
SMCO  Snowmass         40.78  87 eP      P        13 00 41.0 -0.5
      comp=Z,34nm,1.0s,mb4.9
ISCO  Idaho Springs    41.18  85 eP      P        13 00 44.8 -0.1
      comp=Z,34nm,1.2s,mb4.8
ISCO                             LR      LR
      comp=Z,18µm,21.0s,MS5.9
ISCO  Idaho Springs    41.18  85 eP      P        13 00 44.8 -0.1
ISCO                             pmax    pmax
      comp=Z,34nm,1.2s,mb4.8
ISCO                             MLR     MLR
      comp=Z,18µm,21.0s,MS5.9
WAKE  Wake Island      41.20 225 PFAKE            13 01 00.0  +15
WAKE                             LR      LR
      comp=Z,8µm,20.0s,MS5.6
SDCO  Great Sand Dun   42.59  88 eP      P        13 00 56.4  0.0
      comp=Z,210nm,1.7s,mb5.6
SDCO                             LR      LR
      comp=Z,13µm,21.0s,MS5.8
MDJ   Mudanjiang       42.82 286 P       P        13 00 56.5 -1.7
MDJ                              AP      pP       13 01 07.6 -2.0
MDJ                              XP      sP       13 01 12.9 -1.7
MDJ                              PP      PP       13 02 38.4 -1.8
MDJ                              PCP     PcP      13 02 48.0 -1.4
MDJ                              SCP              13 06 31.4
MDJ                              PCS              13 06 40.4
MDJ                              AMB     AMB
      comp=Z,20nm,1.1s,mb4.8
MDJ                              AMB     AMB
      comp=Z,1µm,10.9s
MDJ                              LR      LR
      comp=N,5µm,20.9s,MS5.9
MDJ                              LR      LR
      comp=E,15µm,20.9s,MS5.9
MDJ                              LR      LR
      comp=Z,17µm,20.9s,MS5.9
MDJ   Mudanjiang       42.82 286 eP      P        13 00 55.7 -2.5
      comp=Z,20nm,1.0s,mb4.8
MDJ                              LR      LR
      comp=Z,17µm,20.0s,MS5.9
MAJO  Matsushiro       42.94 270 eP      P        13 00 58.2 -1.0
      comp=Z,128nm,1.0s,mb5.6
MAJO                             LR      LR
      comp=Z,13µm,22.0s,MS5.8
MAJO  Matsushiro       42.94 270 eP      P        13 00 58.2 -1.0
MAJO                             pmax    pmax
      comp=Z,128nm,1.0s,mb5.6
MAJO                             MLR     MLR
      comp=Z,13µm,22.0s,MS5.8
MAT   Matsushiro       42.94 270 P       P        13 00 58.1 -1.1
MAT                              S       S        13 07 18.0 -3.0
MAT   Matsushiro       42.94 270 eP      P        13 00 58.0 -1.2
      comp=Z,152nm,1.0s,mb5.7
MAT                              eS      S        13 06 59.0  -22
MAT                              LR      LR
      comp=Z,14µm,22.0s,MS5.8
MAT   Matsushiro       42.94 270 eP      P        13 00 58.0 -1.2
MAT                              pmax    pmax
      comp=Z,152nm,1.0s,mb5.7
MAT                              MLR     MLR
      comp=Z,14µm,22.0s,MS5.8
MJAR  Matsushiro Arr   42.94 270 P       P        13 00 58.1 -1.1
      comp=Z,22nm,0.8s,mb4.9,baz=38,slow=6.7,SNR=50
MJAR                             ScP              13 06 38.0
      comp=Z,10nm,1.0s,baz=52,slow=2.9,SNR=8.6
MJAR                             LR      LR       13 17 02.2
      comp=Z,5µm,21.1s,MS5.4,baz=65,slow=34
MJAR  Matsushiro Arr   42.94 270 P       P        13 00 58.1 -1.1
MJAR                             ScP              13 06 38.0
MJAR                             LR      LR       13 17 02.2
TUC   Tucson           43.23  98 eP      P        13 01 01.5 -0.2
      comp=Z,28nm,0.9s,mb5.0
TUC                              LR      LR
      comp=Z,7µm,21.0s,MS5.5
TUC   Tucson           43.23  98 eP      P        13 01 01.5 -0.1
TUC                              pmax    pmax
      comp=Z,27nm,0.9s,mb5.0
TUC                              MLR     MLR
      comp=Z,7µm,21.0s,MS5.5
BOD   Bodaibo          43.54 310 eP      P        13 01 01.1 -2.7
BOD                              pmax    pmax
      comp=Z,59nm,1.0s,mb5.3
ANMO  Albuquerque      43.91  91 LR      LR       13 18 04.6
      comp=Z,16µm,19.6s,MS5.9,baz=2.6,slow=34
ANMO  Albuquerque      43.91  91 eP      P        13 01 07.0 -0.2
      comp=Z,93nm,1.5s,mb5.3
ANMO                             LR      LR
      comp=Z,15µm,20.0s,MS5.9
ANMO  Albuquerque      43.91  91 eP      P        13 01 07.0 -0.2
ANMO                             pmax    pmax
      comp=Z,93nm,1.5s
ANMO                             MLR     MLR
      comp=Z,15µm,20.0s
EYMN  Ely              44.28  67 eP      P        13 01 08.3 -1.7
      comp=Z,108nm,1.2s,mb5.5
EYMN                             LR      LR
      comp=Z,7µm,21.0s,MS5.5
JHJ   Hachijo jima 2   44.37 266 LR      LR       13 17 25.3
      comp=Z,6µm,20.6s,MS5.5,baz=77,slow=33
CBKS  Cedar Bluff      45.28  82 eP      P        13 01 17.6 -0.4
      comp=Z,145nm,1.1s,mb5.7
CBKS                             LR      LR
      comp=Z,4µm,20.0s,MS5.4
CBKS  Cedar Bluff      45.28  82 eP      P        13 01 17.6 -0.5
CBKS                             pmax    pmax
      comp=Z,145nm,1.1s,mb5.7
CBKS                             MLR     MLR
      comp=Z,4µm,20.0s,MS5.4
HIA   Hailar           45.48 297 eP      P        13 01 17.4 -2.1
      comp=Z,91nm,1.5s,mb5.4
HIA                              LR      LR
      comp=Z,19µm,20.0s,MS6.0
HIA   Hailar           45.48 297 eP      P        13 01 17.4 -2.1
HIA                              pmax    pmax
      comp=Z,91nm,1.5s
HIA                              MLR     MLR
      comp=Z,19µm,20.0s
CN2   Changchun        45.67 287 eP      P        13 01 19.8 -1.3
CN2                              PP      PP       13 03 07.0 -1.7
CN2                              eS      S        13 07 55.8 -4.7
CN2                              AMB     AMB
      comp=Z,130nm,0.9s,mb5.9
CN2                              AMB     AMB
      comp=Z,12µm,9.0s
CN2                              LR      LR
      comp=N,16µm,19.0s,MS6.1
CN2                              LR      LR
      comp=E,16µm,19.0s,MS6.1
CN2                              LR      LR
      comp=Z,22µm,21.0s,MS6.1
AMTX  Amarillo         46.79  88 eP      P        13 01 29.2 -0.8
      comp=Z,110nm,1.4s,mb5.6
AMTX                             LR      LR
      comp=Z,10µm,21.0s,MS5.8
MNTX  Cornudas Mount   46.85  94 eP      P        13 01 30.1 -0.4
      comp=Z,86nm,1.1s,mb5.6
MNTX                             LR      LR
      comp=Z,26µm,21.0s,MS6.2
KSU1  Kansas State U   46.92  80 eP      P        13 01 29.1 -2.0
CIT   Chita            47.02 303 eP      P        13 01 31.6  0.0
CIT                              pmax    pmax
      comp=Z,242nm,3.4s
CBIJ  Chichi jima      47.39 258 LR      LR       13 18 54.7
      comp=Z,5µm,19.9s,MS5.5,baz=355,slow=33
KBS   Kingsbay         47.45   1 ⇑iP     P        13 01 35.3 +0.6
KBS                              LR      LR
      comp=Z,12µm,21.0s,MS5.8
KBS   Kingsbay         47.45   1 P       P        13 01 34.9 +0.2
KBS                              pmax    pmax
      comp=Z,120nm,0.9s,mb5.8
DAG   Danmarks Havn    47.80  10 ⇓iP     P        13 01 35.5 -1.9
      comp=Z,202nm,0.9s,mb6.2
      comp=Z,16µm,18.0s
DAG   Danmarks Havn    47.80  10 ⇓eP     P        13 01 35.5 -1.9
      comp=Z,202nm,0.9s,mb6.2
DAG                              LR      LR
      comp=Z,16µm,18.0s,MS6.0
DAG   Danmarks Havn    47.80  10 ⇓eP     P        13 01 35.5 -1.9
DAG                              pmax    pmax
      comp=Z,203nm,0.9s,mb6.2
DAG                              MLR     MLR
      comp=Z,16µm,18.0s,MS6.0
SNY   Shenyang         47.99 287 ⇑P      P        13 01 38.0 -1.4
SNY                              PP      PP       13 03 27.8 -3.0
SNY                              S       S        13 08 27.6 -5.8
SNY                              XS               13 08 45.4
SNY                              AMB     AMB
      comp=Z,150nm,1.8s,mb5.7
SNY                              AMB     AMB
      comp=Z,2µm,6.6s
SNY                              LR      LR
      comp=N,13µm,18.6s,MS6.0
SNY                              LR      LR
      comp=E,10µm,20.4s,MS6.0
SNY                              LR      LR
      comp=Z,17µm,19.8s,MS6.0
SUMG  Summit           48.36  19 eP      P        13 01 41.0 -0.9
      comp=Z,446nm,1.0s,mb6.5
KS15  Wonju Array Si   48.41 279 eP      P        13 01 41.9 -0.8
WMOK  Wichita Mounta   48.61  86 eP      P        13 01 42.4 -1.8
      comp=Z,44nm,0.6s,mb5.7
WMOK                             LR      LR
      comp=Z,9µm,20.0s,MS5.8
WMOK  Wichita Mounta   48.61  86 eP      P        13 01 42.4 -1.9
WMOK                             pmax    pmax
      comp=Z,44nm,0.6s,mb5.7
WMOK                             MLR     MLR
      comp=Z,9µm,20.0s,MS5.8
INCN  Inchon           49.12 280 eP      P        13 01 47.3 -0.9
      comp=Z,90nm,1.1s,mb5.7
INCN                             LR      LR
      comp=Z,7µm,19.0s,MS5.6
LTX   Lajitas          49.58  94 eP      P        13 01 51.1 -0.7
      comp=Z,81nm,1.0s,mb5.7
LTX                              LR      LR
      comp=Z,11µm,20.0s,MS5.8
LTX   Lajitas          49.58  94 eP      P        13 01 51.1 -0.7
LTX                              pmax    pmax
      comp=Z,81nm,1.0s,mb5.7
LTX                              MLR     MLR
      comp=Z,11µm,20.0s,MS5.8
TXAR  Lajitas Array    49.58  94 P       P        13 01 51.2 -0.6
      comp=Z,9.1nm,0.7s,mb4.9,baz=300,slow=4.9,SNR=54
TXAR                             ScP              13 07 06.2
      comp=Z,4.9nm,0.8s,baz=268,slow=3.0,SNR=5.6
TXAR                             LR      LR       13 21 32.9
      comp=Z,10µm,19.5s,MS5.8,baz=305,slow=34
TXAR                             PKPPKP           13 32 46.8
      comp=Z,0.5nm,0.9s,baz=157,slow=6.9,SNR=3.4
SFJD  Kangerlussuaq    49.58  28 i P     P        13 01 49.9 -1.4
      comp=Z,159nm,1.0s,mb6.0
SFJD                             i S     S        13 08 55.5 +0.2
SFJD                             e                13 09 15.8
      comp=Z,12µm,22.0s
SFJD  Kangerlussuaq    49.58  28 i P     P        13 01 49.9 -1.4
SFJD                             i S     S        13 08 55.5 +0.2
SFJD                             e                13 09 15.8
SFJD                             pmax    pmax
      comp=Z,159nm,1.0s,mb6.0
SFJD                             MLR     MLR
      comp=Z,12µm,22.0s,MS5.9
JNU   Nakatsue         49.64 273 LR      LR       13 20 44.8
      comp=Z,8µm,21.9s,MS5.7,baz=58,slow=34
KWAJ  Kwajalein Atol   50.38 218 P       P        13 01 57.6 -0.5
KWAJ                             LR      LR
      comp=Z,2µm,21.0s,MS5.1
CCM   Cathedral Cave   50.73  77 eP      P        13 01 57.0 -3.5
      comp=Z,45nm,0.9s,mb5.4
CCM                              LR      LR
      comp=Z,10µm,20.0s,MS5.8
CCM   Cathedral Cave   50.73  77 eP      P        13 01 57.0 -3.5
CCM                              pmax    pmax
      comp=Z,45nm,0.9s,mb5.4
CCM                              MLR     MLR
      comp=Z,10µm,20.0s,MS5.8
JCT   Junction City    51.03  90 eP      P        13 02 01.3 -1.6
      comp=Z,154nm,1.2s,mb5.8
JCT                              LR      LR
      comp=Z,8µm,21.0s,MS5.7
JCT   Junction City    51.03  90 eP      P        13 02 01.3 -1.6
JCT                              pmax    pmax
      comp=Z,154nm,1.2s,mb5.8
JCT                              MLR     MLR
      comp=Z,8µm,21.0s,MS5.7
DL2   Dalian           51.05 285 ⇑iP     P        13 02 01.5 -1.4
DL2                              AP      pP       13 02 12.6 -1.8
DL2                              PCP     PcP      13 03 18.3 -0.3
DL2                              PP      PP       13 04 00.1 -0.2
DL2                              SCP              13 07 11.1
DL2                              S       S        13 09 13.8 -2.1
DL2                              XS               13 09 31.6
DL2                              SCS     ScS      13 11 51.1 +4.3
DL2                              SS      SS       13 12 47.4 -1.6
DL2                              AMB     AMB
      comp=Z,30nm,0.5s,mb5.5
DL2                              AMB     AMB
      comp=Z,770nm,6.6s
DL2                              LR      LR
      comp=N,5µm,22.5s,MS5.7
DL2                              LR      LR
      comp=E,7µm,21.0s,MS5.7
DL2                              LR      LR
      comp=Z,9µm,22.3s,MS5.7
IRK   Irkutsk          51.35 308 eP      P        13 02 02.4 -2.5
IRK                              pmax    pmax
      comp=Z,271nm,1.4s,mb6.0
MIAR  Mount Ida        51.81  82 eP      P        13 02 06.7 -1.9
      comp=Z,66nm,1.1s,mb5.5
MIAR                             LR      LR
      comp=Z,4µm,20.0s,MS5.4
MIAR  Mount Ida        51.81  82 eP      P        13 02 06.7 -1.9
MIAR                             pmax    pmax
      comp=Z,66nm,1.1s,mb5.5
MIAR                             MLR     MLR
      comp=Z,4µm,20.0s,MS5.4
SCHQ  Schefferville    52.11  47 P       P        13 02 09.2 -1.4
      comp=Z,71nm,1.0s,mb5.5,baz=321,slow=7.5,SNR=27
SCHQ                             LR      LR       13 27 30.2
      comp=Z,7µm,18.0s,MS5.7,baz=317,slow=40
SCHQ  Schefferville    52.11  47 eP      P        13 02 09.1 -1.5
      comp=Z,123nm,1.0s,mb5.8
SCHQ                             LR      LR
      comp=Z,9µm,20.0s,MS5.8
AAM   Ann Arbor        52.14  68 P       P        13 02 11.0 -0.1
PARMO Parma            52.55  77 eP      P        13 02 10.9 -3.3
ULN   Ulaanbaatar      52.90 302 ⇑iP     P        13 02 15.0 -1.6
ULN                              LR      LR
      comp=Z,18µm,19.0s,MS6.2
SADO  Sadowa           52.91  63 LR      LR       13 25 43.9
      comp=Z,9µm,20.7s,MS5.8,baz=328,slow=37
SCO   Scoresbysund     53.00  15 i P     P        13 02 16.2 -0.9
      comp=Z,47nm,0.9s,mb5.4
SCO   Scoresbysund     53.00  15 i P     P        13 02 16.2 -0.9
SCO                              pmax    pmax
      comp=Z,47nm,0.9s,mb5.4
ZAK   Zakamensk        53.05 307 eP      P        13 02 16.7 -1.0
ZAK                              pmax    pmax
      comp=Z,20nm,1.1s,mb5.0
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GLAT  Glass              53.10  77  eP     P        13 02 17.2 -1.1
NATX  Nacogdoches        53.15  85  eP     P        13 02 16.6 -2.1
      comp=Z,132nm,1.1s,mb5.8
NATX                                LR     LR
      comp=Z,6µm,20.0s,MS5.7
MOY   Mondy              53.25 309  eP     P        13 02 17.9 -1.3
MOY                                 pmax   pmax
      comp=Z,249nm,4.1s
SONM  Songino Array      53.25 303  P      P        13 02 18.2 -1.0
      comp=Z,39nm,1.1s,mb5.3,baz=40,slow=5.6,SNR=104
SONM                                PcP    PcP      13 03 25.8 -0.8
      comp=Z,25nm,0.8s,baz=42,slow=1.6,SNR=5.0
SONM                                ScP             13 07 23.2
      comp=Z,2.0nm,0.9s,baz=18,slow=4.6,SNR=2.8
SONM                                S      S        13 09 46.5 +0.6
      comp=Z,1.3nm,1.0s,baz=56,slow=10,SNR=3.0
SONM                                LR     LR       13 28 10.1
      comp=Z,28µm,18.2s,MS6.3,baz=44,slow=40
SONM                                P4KPbc          13 39 41.3
      comp=Z,1.1nm,0.8s,baz=66,slow=3.0,SNR=9.5
SONM  Songino Array      53.25 303  P      P        13 02 18.2 -1.0
SONM                                                13 03 25.8
SONM                                S      S        13 09 46.5 +0.6
HALT  Halls              53.32  78  eP     P        13 02 18.1 -1.9
WCI   Wyandotte Cave     53.45  73  eP     P        13 02 18.3 -2.6
      comp=Z,29nm,0.8s,mb5.3
WCI                                 LR     LR
      comp=Z,9µm,20.0s,MS5.8
WCI   Wyandotte Cave     53.45  73  eP     P        13 02 18.3 -2.6
WCI                                 pmax   pmax
      comp=Z,29nm,0.8s,mb5.3
WCI                                 MLR    MLR
      comp=Z,9µm,20.0s,MS5.8
ACSO  Alum Creek Sta     53.92  69  eP     P        13 02 21.5 -2.9
      comp=Z,20nm,1.0s,mb5.0
ACSO                                LR     LR
      comp=Z,6µm,20.0s,MS5.6
WVT   Waverly            54.03  76  eP     P        13 02 22.3 -2.9
      comp=Z,122nm,1.1s,mb5.8
WVT                                 LR     LR
      comp=Z,8µm,20.0s,MS5.8
WVT   Waverly            54.03  76  eP     P        13 02 22.3 -2.9
WVT                                 pmax   pmax
      comp=Z,122nm,1.1s,mb5.7
WVT                                 MLR    MLR
      comp=Z,8µm,20.0s,MS5.8
JMIC  Jan Mayen          54.23  10  LR     LR       13 27 20.0
      comp=Z,7µm,21.0s,MS5.7,baz=339,slow=38
OXF   Oxford             54.26  79  eP     P        13 02 24.0 -2.9
      comp=Z,295nm,1.0s,mb6.2
OXF                                 LR     LR
      comp=Z,10µm,21.0s,MS5.9
OXF   Oxford             54.26  79  eP     P        13 02 24.0 -2.9
OXF                                 pmax   pmax
      comp=Z,295nm,1.0s,mb6.2
OXF                                 MLR    MLR
      comp=Z,10µm,21.0s,MS5.9
ERPA  Erie               54.26  66  PFAKE           13 02 40.0 +13
ERPA                                LR     LR
      comp=Z,9µm,20.0s,MS5.8
ALLY  Alegheny Colle     54.50  66  eP     P        13 02 26.4 -2.1
HHC   Hu-ho-hao-te       55.34 293⇑iP     P        13 02 33.3 -1.3
HHC                                 AP     pP       13 02 46.9 +0.5
HHC                                 XP     sP       13 02 51.8 +0.7
HHC                                 PCP    PcP      13 03 32.5 -2.2
HHC                                 PP     PP       13 04 38.4 -1.5
HHC                                 SCP             13 07 26.3
HHC                                 PCS             13 07 32.3
HHC                                 S      S        13 10 12.9 -1.2
HHC                                 SCS    ScS      13 12 13.9 -2.9
HHC                                 SS     SS       13 13 57.0 -1.6
HHC                                 AMB    AMB
      comp=Z,130nm,1.3s,mb5.8
HHC                                 AMB    AMB
      comp=Z,2µm,7.2s
HHC                                 LR     LR
      comp=N,11µm,18.0s,MS6.1
HHC                                 LR     LR
      comp=E,12µm,19.2s,MS6.1
HHC                                 LR     LR
      comp=Z,16µm,18.0s,MS6.1
LOZ   Lake Ozonia        55.39  60  eP     P        13 02 31.8 -3.2
TIA   Tai'an             55.49 286  eP     P        13 02 32.0 -3.8
TIA                                 S      S        13 10 14.6 -1.6
TIA                                 AMB    AMB
      comp=Z,90nm,1.1s,mb5.7
TIA                                 AMB    AMB
      comp=Z,2µm,5.0s
TIA                                 LR     LR
      comp=N,12µm,20.0s,MS6.0
TIA                                 LR     LR
      comp=E,6µm,20.0s,MS6.0
FRNY  Flat Rock          55.75  59  eP     P        13 02 34.2 -3.3
JOW   Kunigami           55.76 269  LR     LR       13 24 50.3
      comp=E,3µm,20.2s,MS5.3,baz=218,slow=34
SWET  Sewanee            55.77  76  eP     P        13 02 33.4 -4.4
NCB   Newcomb            56.02  61  eP     P        13 02 36.6 -2.9
      comp=E,42nm,0.8s,mb5.5
NCB                                 LR     LR
      comp=Z,6µm,19.0s,MS5.7
MCWV  Mont Chateau       56.05  68  eP     P        13 02 37.2 -2.6
      comp=Z,68nm,1.1s,mb5.6
MCWV                                LR     LR
      comp=Z,8µm,21.0s,MS5.8
TZTN  Tazewell           56.19  73  eP     P        13 02 38.2 -2.6
MIV   Mineville/With     56.31  60  eP     P        13 02 38.3 -3.2
BTO   Baotou             56.34 294  eP     P        13 02 40.4 -1.4
BTO                                 AMB    AMB
      comp=Z,290nm,0.9s,mb6.3
CPCT  Cooper Cave        56.41  75  eP     P        13 02 39.4 -3.1
KEV   Kevo               56.43 355  eP     P        13 02 39.4 -2.7
      comp=Z,31nm,0.5s,mb5.6
KEV                                 LR     LR
      comp=Z,11µm,20.0s,MS6.0
KEV   Kevo               56.43 355  eP     P        13 02 39.4 -2.7
KEV                                 pmax   pmax
      comp=Z,31nm,0.5s,mb5.6
KEV                                 MLR    MLR
      comp=Z,11µm,20.0s,MS6.0
GUMO  Guam               56.65 245  LR     LR       13 22 30.2
      comp=Z,3µm,21.8s,MS5.4,baz=46,slow=31
GUMO  Guam               56.65 245  PFAKE           13 03 00.0 +16
GUMO                                LR     LR
      comp=Z,3µm,20.0s,MS5.4
SFJM  Santa Fe           56.66 101  eP     P        13 02 45.3 +0.9
ARCES ARCESS Array B     56.72 356  P      P        13 02 41.5 -2.7
      comp=Z,27nm,0.7s,mb5.4,baz=12,slow=8.0,SNR=140
ARCES                               PcP    PcP      13 03 38.7 -1.0
      comp=Z,28nm,0.7s,slow=3.6,SNR=6.5
ARCES                               LR     LR       13 29 43.8
      comp=Z,10µm,19.3s,MS5.9,baz=4.0,slow=39
ARCES ARCESS Array B     56.72 356  P      P        13 02 41.5 -2.7
ARCES                               PcP    PcP      13 03 38.7 -1.0
ARCES                               LR     LR       13 29 43.8
ARE0  ARCESS Array S     56.72 356  eP     P        13 02 41.4 -2.7
ACCN  Adirondack Com     56.72  61  eP     P        13 02 42.6 -2.0
TRO   Tromso             56.80 359  eP     P        13 02 41.8 -3.0
TRO                                 AMb    AMB      13 02 44.9
      comp=Z,139nm,1.5s,mb5.8
TRO   Tromso             56.80 359  eP     P        13 02 41.8 -3.0
      comp=Z,139nm,1.5s,mb5.8
SSE   Sheshan            56.81 278  P      P        13 02 44.1 -1.2
SSE                                 PP     PP       13 04 50.4 -2.9
SSE                                 S      S        13 10 29.4 -4.4
SSE                                 SS     SS       13 14 17.8 -5.3
SSE                                 AMB    AMB
      comp=Z,200nm,1.3s,mb6.0
SSE                                 AMB    AMB
      comp=Z,2µm,7.0s
SSE                                 LR     LR
      comp=N,4µm,29.2s,MS5.5
SSE                                 LR     LR
      comp=E,4µm,29.2s,MS5.5
SSE                                 LR     LR
      comp=Z,8µm,30.0s,MS5.7
SSE   Sheshan            56.81 278  P      P        13 02 44.1 -1.2
      comp=Z,208nm,1.3s,mb6.0
SSE                                 sP     sP       13 03 07.0 +5.1
SSE                                 PP     PP       13 04 50.4 -2.9
SSE                                 S      S        13 10 29.4 -4.4
SSE                                 sS              13 10 57.6
SSE                                 SS     SS       13 14 17.8 -5.3
SSE                                 LR     LR
      comp=Z,8µm,30.0s,MS5.7
FWV   Forest Hill        56.99  70  eP     P        13 02 43.4 -3.1
LBNH  Lisbon             57.01  59  eP     P        13 02 45.3 -1.3
      comp=Z,35nm,1.0s,mb5.3
LBNH                                LR     LR
      comp=Z,8µm,19.0s,MS5.9
LBNH  Lisbon             57.01  59  eP     P        13 02 45.3 -1.3
LBNH                                pmax   pmax
      comp=Z,35nm,1.0s,mb5.3
LBNH                                MLR    MLR
      comp=Z,8µm,19.0s,MS5.9
TIY   Taiyuan            57.06 290 ⇑P     P        13 02 43.0 -4.1
TIY                                 S      S        13 10 39.0 +1.9
TIY                                 LR     LR
      comp=N,17µm,21.0s
ELN   Prospectdale       57.27  70  eP     P        13 02 45.2 -3.3
KTK1  Kautokeino         57.32 357  eP     P        13 02 47.0 -1.4
KTK1                                AMb    AMB      13 02 49.1
      comp=Z,114nm,1.3s,mb5.7
KTK1  Kautokeino         57.32 357  eP     P        13 02 47.0 -1.4
      comp=Z,114nm,1.3s,mb5.7
BLA   Blacksburg         57.47  70  eP     P        13 02 47.5 -2.4
      comp=Z,58nm,0.9s,mb5.6
BLA                                 LR     LR
      comp=Z,9µm,20.0s,MS5.9
BLA   Blacksburg         57.47  70  eP     P        13 02 47.5 -2.4
BLA                                 pmax   pmax
      comp=Z,58nm,0.9s,mb5.6
BLA                                 MLR    MLR
      comp=Z,9µm,20.0s,MS5.9
NJ2   Nanjing            57.47 281  eP     P        13 02 48.9 -1.1
NJ2                                 PP     PP       13 04 59.0 -0.3
NJ2                                 S      S        13 10 42.0 -0.5
NJ2                                 AMB    AMB
      comp=Z,40nm,0.6s,mb5.6
NJ2                                 AMB    AMB
      comp=Z,660nm,10.0s
NJ2                                 LR     LR
      comp=N,15µm,23.6s,MS6.2
NJ2                                 LR     LR
      comp=E,14µm,21.2s,MS6.2
NJ2                                 LR     LR
      comp=Z,8µm,25.8s,MS5.7
MVL   Millersville       57.71  65  eP     P        13 02 48.6 -3.0
LVZ   Lovozero           57.76 352  i P    P        13 02 50.6 -1.0
LVZ                                 i S    S        13 11 02.5 +17
LVZ                                 i SS   SS       13 14 42.8 +4.7
LVZ                                 pmax   pmax
      comp=N,92nm,0.9s
LVZ                                 pmax   pmax
      comp=E,34nm,0.9s
LVZ                                 pmax   pmax
      comp=Z,241nm,0.9s,mb6.2
LVZ                                 pmax   pmax
      comp=N,78nm,0.9s
LVZ                                 pmax   pmax
      comp=E,44nm,0.9s
LVZ                                 pmax   pmax
      comp=Z,233nm,0.9s,mb6.2
LVZ                                 MLR    MLR
      comp=Z,10µm,17.0s,MS6.0
LVZ                                 MLR    MLR
      comp=N,7µm,18.0s,MS6.0
LVZ                                 MLR    MLR
      comp=E,8µm,19.0s,MS6.0
APA   Apatity            58.19 352⇓iP     P        13 02 53.5 -1.0
APA                                 i               13 03 45.4
APA                                 e               13 05 04.0
APA                                 ePPP   PPP      13 06 24.0 -4.5
APA                                 i S    S        13 10 48.0 -3.4
APA                                 pmax   pmax
      comp=Z,65nm,1.2s,mb5.5
APA                                 pmax   pmax
      comp=Z,2µm,8.0s
APA                                 MLR    MLR
      comp=Z,8µm,17.0s,MS5.9
BORG  Borgarnes          58.29  18  LR     LR       13 30 32.8
      comp=Z,9µm,19.1s,MS5.9,baz=337,slow=39
BORG  Borgarnes          58.29  18  P      P        13 02 53.6 -1.7
BORG                                LR     LR
      comp=Z,3µm,20.0s,MS5.3
LOF   Lofoten            58.31   1  eP     P        13 02 55.9 +0.5
LOF                                 AMb    AMB      13 03 00.3
      comp=Z,115nm,1.3s,mb5.8
LOF   Lofoten            58.31   1  eP     P        13 02 55.9 +0.5
      comp=Z,115nm,1.3s,mb5.8
NVS   Novosibirsk        58.34 321  i P    P        13 02 54.0 -1.8
NVS                                 e               13 03 45.7
NVS                                 e               13 05 13.6
NVS                                 eS     S        13 10 50.4 -3.2
NVS                                 e               13 12 39.3
NVS                                 pmax   pmax
      comp=Z,167nm,2.2s,mb5.7
NVS                                 pmax   pmax
      comp=N,118nm,2.1s
NVS                                 pmax   pmax
      comp=E,90nm,1.9s
NVS                                 pmax   pmax
      comp=N,72nm,1.9s
NVS                                 pmax   pmax
      comp=Z,57nm,1.9s,mb5.3
NVS                                 pmax   pmax
      comp=E,71nm,2.4s
NVS                                 smax
      comp=N,46nm,1.8s
NVS                                 smax
      comp=E,32nm,1.8s
MOIG  Morelia            58.37 100  i P    P        13 02 56.9 +0.4
CPNY  Central Park       58.42  63  eP     P        13 02 54.7 -1.8
HRV   Harvard--Oak R     58.44  60  eP     P        13 02 55.1 -1.5
      comp=E,12nm,0.9s,mb4.9
HRV                                 LR     LR
      comp=Z,5µm,20.0s,MS5.6
HRV   Harvard--Oak R     58.44  60  eP     P        13 02 55.1 -1.5
HRV                                 pmax   pmax
      comp=Z,12nm,0.9s,mb4.9
HRV                                 MLR    MLR
      comp=Z,5µm,20.0s,MS5.6
CBN   Corbin             58.44  67  eP     P        13 02 55.2 -1.5
CBN                                 LR     LR
      comp=Z,13µm,20.0s,MS6.0
ZAL   Zalesovo           58.45 320  P      P        13 02 54.6 -1.9
      comp=Z,9.2nm,0.6s,mb5.0,baz=71,slow=7.8,SNR=57
ZAL                                 PcP    PcP      13 03 47.0 +0.3
      comp=Z,13nm,0.7s,baz=46,slow=5.9,SNR=8.6
ZAL                                 LR     LR       13 31 33.1
      comp=Z,24µm,18.8s,MS6.3,baz=66,slow=40
GOGA  Godfrey            58.48  75  eP     P        13 02 54.0 -3.1
      comp=Z,62nm,1.2s,mb5.5
GOGA                                LR     LR
      comp=Z,10µm,21.0s,MS5.9
GOGA  Godfrey            58.48  75  eP     P        13 02 54.0 -3.0
GOGA                                pmax   pmax
      comp=Z,62nm,1.2s,mb5.5
GOGA                                MLR    MLR
      comp=Z,10µm,21.0s,MS5.9
WES   Weston             58.64  60  eP     P        13 02 55.8 -2.3
      comp=Z,100nm,0.9s,mb5.8
WES                                 LR     LR
      comp=Z,7µm,20.0s,MS5.8
WES   Weston             58.64  60  eP     P        13 02 55.8 -2.2
WES                                 pmax   pmax
      comp=Z,100nm,0.9s,mb5.8
WES                                 MLR    MLR
      comp=Z,7µm,20.0s,MS5.8
JSC   Jenkinsville       59.11  73  eP     P        13 02 58.5 -2.9
JSC   Jenkinsville       59.11  73  P      P        13 03 00.3 -1.1
MELSS Ber_school_2       59.59   1  eP     P        13 03 03.1 -1.1
STOK  Stokkvaagen        60.11   1  eP     P        13 03 06.6 -1.2
STOK                                AMb    AMB      13 03 08.9
      comp=Z,140nm,1.1s,mb5.9
STOK  Stokkvaagen        60.11   1  eP     P        13 03 06.6 -1.2
      comp=Z,140nm,1.1s,mb5.9
MOR8  Moi Rana           60.29   1  eP     P        13 03 06.5 -2.6
MOR8                                AMb    AMB      13 03 08.9
      comp=Z,72nm,0.9s,mb5.7
MOR8  Moi Rana           60.29   1  eP     P        13 03 06.5 -2.6
      comp=Z,72nm,0.9s,mb5.7
PPM   Popocatepetl       60.35  98  eP     P        13 03 09.9 -0.1
PLIG  Platanillo         60.36  99  i P    P        13 03 08.3 -1.9
NHSC  New Hope           60.58  73  PFAKE           13 03 20.0 +8.5
NHSC                                LR     LR
      comp=Z,13µm,20.0s,MS6.1
CAIG  El Cayaco          60.97 101  i P    P        13 03 12.6 -1.8
CAIG                                i P             13 03 12.8
TATO  Taipei             61.17 273  PFAKE           13 03 30.0 +14
TATO                                LR     LR
      comp=Z,7µm,22.0s,MS5.8
WHN   Wuhan              61.19 283  P      P        13 03 14.3 -1.4
WHN                                 S      S        13 11 30.8 +0.2
WHN                                 AMB    AMB
      comp=Z,4µm,12.8s
WHN                                 LR     LR
      comp=N,8µm,18.4s,MS6.2
WHN                                 LR     LR
      comp=E,14µm,19.6s,MS6.2
WHN                                 LR     LR
      comp=Z,15µm,27.3s
XAN   Xi'an              61.69 290  P      P        13 03 17.6 -1.4
XAN                                 AP     pP       13 03 30.9 +0.1
XAN                                 PP     PP       13 05 30.9 -6.3
XAN                                 S      S        13 11 31.5 -5.4
XAN                                 AMB    AMB
      comp=Z,150nm,1.5s,mb5.9
XAN                                 LR     LR
      comp=N,2µm,21.3s,MS5.9
XAN                                 LR     LR
      comp=E,8µm,20.9s,MS5.9
XAN                                 LR     LR
      comp=Z,12µm,20.1s,MS6.0
NSS   Namsos             61.90   2  eP     P        13 03 17.1 -2.8
NSS                                 AMb    AMB      13 03 19.8
      comp=Z,171nm,1.0s,mb6.2
NSS   Namsos             61.90   2  eP     P        13 03 17.1 -2.8
      comp=Z,171nm,1.0s,mb6.1
SOKR  Solikamsk          62.27 338c iP     P        13 03 19.6 -2.9
SOKR                                S      S        13 11 37.3 -6.6
SOKR                                pmax   pmax
      comp=Z,340nm,1.0s,mb6.4
SOKR                                MLR    MLR
      comp=Z,21µm,24.0s,MS6.2
GTA   Gaotai             62.59 300 ⇑P     P        13 03 22.9 -2.1
GTA                                 AP     pP       13 03 38.0 +1.1
GTA                                 PCP    PcP      13 04 03.1 -0.3
GTA                                 PP     PP       13 05 43.9 -0.8
GTA                                 S      S        13 11 43.0 -5.3
GTA                                 XS              13 12 04.8
GTA                                 SCS    ScS      13 13 12.3 +2.2
GTA                                 SS     SS       13 15 47.4 -7.4
GTA                                 AMB    AMB
      comp=Z,130nm,0.9s,mb6.1
GTA                                 AMB    AMB
      comp=Z,2µm,12.9s
GTA                                 LR     LR
      comp=N,10µm,21.4s,MS6.1
GTA                                 LR     LR
      comp=E,10µm,20.2s,MS6.1
GTA                                 LR     LR
      comp=Z,13µm,24.5s,MS6.0
QZH   Quanzhou           62.91 276⇑iP     P        13 03 26.0 -1.2
QZH                                 PP     PP       13 05 42.5 -4.9
QZH                                 eS     S        13 11 49.0 -3.4
QZH                                 AMB    AMB
      comp=Z,410nm,1.2s,mb6.4
QZH                                 AMB    AMB
      comp=Z,4µm,8.1s
QZH                                 LR     LR
      comp=N,2µm,13.5s,MS5.8
QZH                                 LR     LR
      comp=E,5µm,14.0s,MS5.8
QZH                                 LR     LR
      comp=Z,11µm,25.8s
JOF   Joensuu            62.94 352  ep     P        13 03 24.2 -2.8
      comp=Z,16nm,0.5s,mb5.4
LZH   Lanzhou            62.95 295  eP     P        13 03 26.8 -0.6
LZH                                 AP     pP       13 03 39.1 -0.2
LZH                                 PP     PP       13 05 49.0 +1.4
LZH                                 eS     S        13 11 54.0 +1.2
LZH                                 AMB    AMB
      comp=Z,300nm,1.1s,mb6.3
LZH                                 AMB    AMB
      comp=Z,3µm,4.6s
LZH                                 LR     LR
      comp=E,31µm,17.2s
LZH                                 LR     LR
      comp=Z,39µm,17.5s,MS6.6
LZH   Lanzhou            62.95 295  eP     P        13 03 26.7 -0.7
      comp=Z,300nm,1.1s,mb6.3
LZH                                 pP     pP       13 03 39.1 -0.2
LZH                                 sP     sP       13 03 48.6 +4.6
LZH                                 PP     PP       13 05 49.0 +1.4
LZH                                 eS     S        13 11 54.0 +1.2
LZH                                 sS              13 12 22.0
LZH                                 eSS    SS       13 16 05.0 +4.4
LZH                                 LR     LR
      comp=Z,39µm,17.5s,MS6.6
LZH   Lanzhou            62.95 295  eP     P        13 03 26.7 -0.7
LZH                                 *PP    pP       13 03 39.1 -0.2
LZH                                                 13 05 49.0
LZH                                 eS     S        13 11 54.0 +1.2
LZH                                 *SS             13 12 22.0
LZH                                 eSS    SS       13 16 05.0 +4.4
LZH                                 pmax   pmax
      comp=Z,300nm,1.1s,mb6.3
LZH                                 MLR    MLR
      comp=Z,39µm,17.5s,MS6.6
VHO   Vista Hermosa      63.02  98  eP     P        13 03 26.4 -1.6
VHO                                 eP              13 03 26.9
KURK  Kurchatov          63.32 321  eP     P        13 03 27.6 -2.0
      comp=Z,240nm,1.3s,mb6.2
KURK                                LR     LR
      comp=Z,7µm,21.0s,MS5.8
KURK  Kurchatov          63.32 321  eP     P        13 03 27.6 -2.0
KURK                                pmax   pmax
      comp=Z,240nm,1.3s,mb6.2
KURK                                MLR    MLR
      comp=Z,7µm,21.0s,MS5.8
DWPF  Disney             63.58  78  PFAKE           13 03 40.0 +8.4
DWPF                                LR     LR
      comp=Z,5µm,20.0s,MS5.7
CHKZ  Chkalovo           63.66 327  eP     P        13 03 29.1 -2.5
      comp=Z,132nm,1.0s,mb5.9
CHKZ  Chkalovo           63.66 327  eP     P        13 03 29.1 -2.5
CHKZ                                pmax   pmax
      comp=Z,132nm,1.0s,mb5.9
MOL   Molde              63.72   4  eP     P        13 03 31.5 -0.4
MOL                                 AMb    AMB      13 03 35.0
      comp=Z,111nm,1.9s,mb5.6
MOL   Molde              63.72   4  eP     P        13 03 31.5 -0.4
      comp=Z,111nm,1.9s,mb5.6
SVE   Sverdlovsk         63.80 334α iP     P        13 03 31.0 -1.5
SVE                                 e               13 04 09.0
SVE                                 e               13 07 27.0
SVE                                 eS     S        13 12 16.0 +13
SVE                                 pmax   pmax
      comp=Z,536nm,1.8s,mb6.3
SVE                                 MLR    MLR
      comp=N,10µm,16.0s,MS6.1
SVE                                 MLR    MLR
      comp=E,4µm,16.0s,MS6.1
SVE                                 MLR    MLR
      comp=Z,15µm,16.0s,MS6.3
KAF   Kangasniemi        64.08 355  ep     P        13 03 31.1 -3.1
      comp=Z,27nm,0.4s,mb5.6,baz=356,slow=6.1
KAF   Kangasniemi        64.08 355  eP     P        13 03 31.1 -3.1
KAF                                 pmax   pmax
      comp=Z,27nm,0.4s,mb5.6
CMIG  Matias Romero      64.09  96  i P    P        13 03 33.1 -1.9
KLMR  Klimovskoe         64.11 347c iP     P        13 03 32.8 -1.6
KLMR                                e               13 05 53.7
KLMR                                eS     S        13 12 00.3 -6.3
KLMR                                pmax   pmax
      comp=Z,280nm,1.5s,mb6.1
KLMR                                pmax   pmax
      comp=Z,820nm,8.4s
KLMR                                smax
      comp=E,820nm,4.9s
ENH   Enshi              64.18 286  eP     P        13 03 33.3 -2.1
      comp=E,205nm,0.9s,mb6.2
ENH                                 LR     LR
      comp=Z,14µm,22.0s,MS6.1
BVAR  Borovoye Array     64.28 327  PKPPKP          13 32 19.8
      comp=Z,0.8nm,0.8s,baz=117,slow=3.3,SNR=4.1
BVAR                                P4KPbc          13 40 30.4
      comp=Z,0.4nm,0.8s,baz=135,slow=2.0,SNR=3.5
BRVK  Borovoye           64.29 327⇑iP     P        13 03 34.8 -0.9
BRVK                                LR     LR
      comp=Z,2µm,20.0s,MS5.3
DOMB  Dombas             64.31   4  eP     P        13 03 34.0 -1.7
DOMB                                AMb    AMB      13 03 36.0
      comp=Z,128nm,0.6s,mb6.2
DOMB  Dombas             64.31   4  eP     P        13 03 34.0 -1.7
      comp=Z,128nm,0.6s,mb6.1
FOO   Floro              64.56   6  eP     P        13 03 36.1 -1.3
```

FOO				AMb	AMB	13 03 37.5	
	comp=Z,87nm,0.9s,mb5.8						
FOO				epP	pP	13 03 45.1	-4.3
FOO	**Floro**	**64.56**	**6**	eP	**P**	**13 03 36.1**	**-1.3**
	comp=Z,87nm,0.9s,mb5.8						
ARU	**Arti**	**64.68**	**335**	⇑iP	**P**	**13 03 37.2**	**-1.0**
ARU				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
ARU	**Arti**	**64.68**	**335**	⇓iP	**P**	**13 03 37.0**	**-1.2**
ARU				e		13 04 05.3	
ARU				e		13 05 57.4	
ARU				ePPP	PPP	13 07 32.9	-3.1
ARU				eS	**S**	**13 12 16.1**	**+2.3**
ARU				e		13 13 28.6	
ARU				pmax	pmax		
	comp=Z,223nm,0.9s,mb6.2						
ARU				MLR	MLR		
	comp=N,11µm,18.0s,MS6.1						
ARU				MLR	MLR		
	comp=Z,14µm,18.0s,MS6.2						
ARU				MLR	MLR		
	comp=E,4µm,16.0s,MS6.1						
FINES	**FINESS Array B**	**64.76**	**355**	P	**P**	**13 03 36.7**	**-2.0**
	comp=E,46nm,0.7s,mb5.7,baz=20,slow=7.2,SNR=217						
FINES				PP	PP	13 05 56.6	-6.7
	comp=E,10nm,0.5s,baz=22,slow=7.6,SNR=8.5						
FINES				PKPPKP		13 32 31.6	
	comp=E,1.4nm,0.9s,baz=207,slow=3.1,SNR=3.3						
FINES				LR	LR	13 34 15.7	
	comp=E,7µm,19.0s,MS5.9,baz=184,slow=38						
FINES	**FINESS Array B**	**64.76**	**355**	P	**P**	**13 03 36.7**	**-2.0**
FINES				PP	PP	13 05 56.6	-6.7
FINES				P’P’		13 32 31.6	
FINES				LR	LR	13 34 15.7	
MKAR	**Makanchi Array**	**65.04**	**316**	P	**P**	**13 03 38.9**	**-1.8**
	comp=E,34nm,0.9s,mb5.3,baz=41,slow=6.3,SNR=79						
MKAR				LR	LR	13 33 53.2	
	comp=E,18µm,20.0s,MS6.3,baz=58,slow=38						
HYA	**Hoyanger**	**65.06**	**5**	eP	**P**	**13 03 42.2**	**+1.6**
HYA				AMb	AMB	13 04 03.5	
	comp=Z,126nm,2.2s,mb5.6						
HYA	**Hoyanger**	**65.06**	**5**	eP	**P**	**13 03 42.2**	**+1.6**
	comp=Z,126nm,2.2s,mb5.6						
WMQ	**Urumqi**	**65.07**	**311**	⇑iP	**P**	**13 03 39.3**	**-1.7**
WMQ				XP	sP	13 03 55.5	-2.0
WMQ				PCP	PcP	13 04 12.5	-0.9
WMQ				PP	PP	13 06 05.0	-1.4
WMQ				PCS		13 08 15.0	
WMQ				S	S	13 12 15.0	-3.8
WMQ				SCS	ScS	13 13 26.0	-2.8
WMQ				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,940nm,5.2s						
WMQ				LR	LR		
	comp=N,9µm,17.7s,MS6.1						
WMQ				LR	LR		
	comp=E,7µm,19.6s,MS6.1						
WMQ				LR	LR		
	comp=Z,8µm,19.0s,MS5.9						
SUE	**Sulen**	**65.08**	**6**	eP	**P**	**13 03 40.5**	**-0.2**
WAL1	**Walls**	**65.37**	**10**	eP	**P**	**13 03 42.1**	**-0.5**
NB2	**NORSAR Subarra**	**65.39**	**3**	P	**P**	**13 03 40.7**	**-2.0**
	comp=Z,108nm,0.8s,mb5.9,baz=358,slow=6.5						
NB2	**NORSAR Subarra**	**65.39**	**3**	P	**P**	**13 03 40.7**	**-2.0**
	baz=358,slow=6.9						
NOA	**NORSAR Array B**	**65.39**	**3**	P	**P**	**13 03 41.0**	**-1.7**
	comp=Z,74nm,0.8s,mb5.8,baz=358,slow=6.6,SNR=175						
NOA				PKPPKP		13 32 24.1	
	comp=Z,2.0nm,1.0s,baz=148,slow=2.9,SNR=3.5						
NOA				LR	LR	13 33 42.2	
	comp=Z,4µm,20.6s,MS5.6,baz=355,slow=37						
NOA	**NORSAR Array B**	**65.39**	**3**	P	**P**	**13 03 41.0**	**-1.7**
NOA				P’P’		13 32 24.1	
NOA				LR	LR	13 33 42.2	
LRW	**Lerwick**	**65.53**	**9**	eP	**P**	**13 03 42.6**	**-1.0**
NAO01	**NORSAR Array S**	**65.57**	**3**	eP	**P**	**13 03 42.1**	**-1.8**
	comp=Z,58nm,1.0s,mb5.6						
NAO01				LR	LR		
	comp=Z,5µm,19.0s,MS5.7						
NAO	**NORSAR Subarra**	**65.59**	**3**	P	**P**	**13 03 40.7**	**-3.3**
	comp=Z,108nm,0.8s,mb5.9						
NAO	**NORSAR Subarra**	**65.59**	**3**	P	**P**	**13 03 40.7**	**-3.3**
NAO				pmax	pmax		
	comp=Z,108nm,0.8s,mb5.9						
TAOE	**Nuku Hiva Isla**	**65.67**	**154**	eS	S	13 12 16.9	-10
TAOE				eSS	SS	13 16 33.5	-9.1
TAOE				eLQ		13 20 08.6	
TAOE				eLR	LR	13 23 14.9	
	comp=Z,48µm,23.6s						
ASK	**Askoy**	**65.68**	**6**	eP	**P**	**13 03 43.5**	**-1.0**
BER	**Bergen**	**65.79**	**6**	eP	**P**	**13 03 44.8**	**-0.5**
EGD	**Espegrend**	**65.89**	**6**	eP	**P**	**13 03 44.9**	**-1.1**
PUL	**Pulkovo**	**66.14**	**352**	⇑iP	**P**	**13 03 47.2**	**-0.3**
PUL	**Pulkovo**	**66.14**	**352**	i P	**P**	**13 03 46.8**	**-0.7**
PUL				i S	S	13 13 05.5	+34
PUL				pmax	pmax		
	comp=Z,160nm,0.8s,mb6.1						
PUL				pmax	pmax		
	comp=N,47nm,0.6s						
PUL				MLR	MLR		
	comp=Z,12µm,21.0s,MS6.1						
PUL				MLR	MLR		
	comp=N,10µm,22.0s,MS6.0						
PUL				MLR	MLR		
	comp=E,2µm,20.0s,MS6.0						
ODD1	**Odda**	**66.33**	**5**	eP	**P**	**13 03 47.5**	**-1.2**
ODD1				AMb	AMB	13 03 49.6	
	comp=Z,180nm,1.1s,mb6.0						
ODD1	**Odda**	**66.33**	**5**	eP	**P**	**13 03 47.5**	**-1.2**
	comp=Z,180nm,1.1s,mb6.0						
HFS	**Hagfors**	**66.34**	**1**	LR	LR	13 31 51.6	
	comp=Z,5µm,21.6s,MS5.7,baz=356,slow=35						
RTO	**Tolsta**	**66.69**	**13**	eP	**P**	**13 03 50.8**	**-0.2**
KONO	**Kongsberg**	**66.73**	**4**	eP	**P**	**13 03 49.3**	**-1.9**
KONO				⇑iP		13 03 50.3	
KONO				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
KONO	**Kongsberg**	**66.73**	**4**	eP	**P**	**13 03 49.3**	**-1.9**
KONO				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.6						
APYP	**Conner**	**66.78**	**269**	eP	**P**	**13 03 48.7**	**-3.5**
APYP				eS	pP	13 04 00.7	-3.6
BLS5	**Blasjo**	**66.81**	**5**	eP	**P**	**13 03 51.5**	**-0.2**
BLS5				AMb	AMB	13 03 54.6	
	comp=Z,72nm,1.1s,mb5.6						
BLS5	**Blasjo**	**66.81**	**5**	eP	**P**	**13 03 51.5**	**-0.2**
	comp=Z,72nm,1.1s,mb5.6						
RSC	**Scourie**	**66.84**	**12**	eP	**P**	**13 03 51.9**	**0.0**
CD2	**Chengdu**	**66.91**	**291**	P	**P**	**13 03 52.3**	**-0.6**
CD2				AP	pP	13 04 05.8	+0.9
CD2				PP	PP	13 06 21.3	-0.9
CD2				S	S	13 12 36.4	-5.0
CD2				AMB	AMB		
	comp=Z,320nm,0.9s,mb6.3						
CD2				AMB	AMB		
	comp=Z,2µm,8.4s						
CD2				LR	LR		
	comp=N,5µm,22.8s						
CD2				LR	LR		
	comp=Z,6µm,19.2s,MS5.8						
REB	**Eisghbrachaidh**	**67.06**	**12**	eP	**P**	**13 03 52.4**	**-0.9**
RRR	**Rubha Reidh**	**67.24**	**12**	eP	**P**	**13 03 54.2**	**-0.3**
GZH	**Guangzhou**	**67.41**	**278**	P	**P**	**13 03 52.3**	**-3.8**
GZH				S	S	13 12 43.3	-4.2
GZH				LR	LR		
	comp=N,3µm,21.1s,MS5.5						
GZH				LR	LR		
	comp=E,2µm,23.6s,MS5.5						
GZH				LR	LR		
	comp=Z,5µm,26.5s,MS5.6						
HKC	**Hong Kong**	**67.52**	**277**	⇑iP	**P**	**13 03 54.0**	**-2.9**
KAC	**Achnashellach**	**67.66**	**12**	eP	**P**	**13 03 55.5**	**-1.6**
VSU	**Vasula**	**67.69**	**354**	⇑iP	**P**	**13 03 56.5**	**-0.8**
KPL	**Plockton**	**67.77**	**12**	eP	**P**	**13 03 56.6**	**-1.2**
PECR	**Pechory**	**67.79**	**344**	d iP	**P**	**13 03 56.0**	**-2.0**
PECR				e		13 06 22.6	
PECR				eS	S	13 12 47.4	-4.2
PECR				ePPS	PPS	13 13 33.0	+0.5
PECR				pmax	pmax		
	comp=N,1µm,4.0s						
PECR				pmax	pmax		
	comp=Z,2µm,8.0s						
PECR				smax			
	comp=N,1µm,5.0s						
MCD	**Coleburn Disti**	**67.82**	**11**	eP	**P**	**13 03 57.4**	**-0.7**
AFI	**Afiamalu**	**67.82**	**188**	LR	LR	13 29 04.0	
	comp=N,8µm,18.9s,MS6.0,baz=2.6,slow=32						
AFI	**Afiamalu**	**67.82**	**188**	PFAKE		13 04 10.0	+11
AFI				LR	LR		
	comp=Z,10µm,21.0s,MS6.0						
MDO	**Dochfour**	**67.83**	**12**	eP	**P**	**13 03 57.4**	**-0.8**
SNART	**Snartemo**	**67.93**	**5**	eP	**P**	**13 03 58.2**	**-0.6**
KAR1	**Arisaig**	**68.16**	**13**	eP	**P**	**13 03 59.2**	**-1.0**
GYA	**Guiyang**	**68.68**	**286**	⇑iP	**P**	**13 04 03.4**	**-0.6**
GYA				PP	PP	13 06 37.6	-0.6
GYA				S	S	13 13 04.6	+1.9
GYA				SS	SS	13 17 24.8	-4.6
GYA				AMB	AMB		
	comp=Z,300nm,1.3s,mb6.1						
GYA				AMB	AMB		
	comp=Z,2µm,8.4s						
GYA				LR	LR		
	comp=N,5µm,21.6s,MS5.8						
GYA				LR	LR		
	comp=E,5µm,24.0s,MS5.8						
GYA				LR	LR		
	comp=Z,6µm,23.9s,MS5.8						
EAB	**Aberfoyle**	**69.06**	**12**	eP	**P**	**13 04 05.1**	**-0.7**
EAB				AMb	AMB	13 04 07.6	
	comp=Z,133nm,0.9s,mb5.9						
EDI	**Edinburgh**	**69.45**	**11**	eP	**P**	**13 04 07.7**	**-0.5**
EDI				AMb	AMB	13 04 10.4	
	comp=Z,63nm,2.9s,mb5.0						
EAU	**Auchinoon**	**69.50**	**12**	eP	**P**	**13 04 08.2**	**-0.4**
EAU				AMb	AMB	13 04 10.6	
	comp=Z,240nm,1.5s,mb5.9						
EBL	**Broad Law**	**69.62**	**11**	eP	**P**	**13 04 08.4**	**-0.9**
EBL				AMb	AMB	13 04 13.0	
	comp=Z,96nm,1.7s,mb5.5						
BBSR	**BB Station**	**69.64**	**63**	PFAKE		13 04 20.0	+10
BBSR				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
MUD	**Monsted U’grnd**	**69.91**	**4**	⇑iP	**P**	**13 04 11.4**	**+0.4**
	comp=Z,37nm,0.6s,mb5.5						
MUD				i S	S	13 13 14.5	-2.1
	comp=Z,4µm,22.0s						
TGY	**Tagaytay City**	**69.91**	**266**	LR	LR	13 33 34.3	
	comp=Z,7.1nm,19.7s,baz=138,slow=35						
HNR	**Honiara**	**70.03**	**218**	LR	LR	13 31 54.0	
	comp=Z,3µm,19.4s,MS5.6,baz=19,slow=33						
HNR	**Honiara**	**70.03**	**218**	PFAKE		13 04 20.0	+7.5
HNR				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
EKA	**Eskdalemuir Ar**	**70.04**	**11**	PKPPKP		13 32 09.8	
	comp=Z,5.0nm,1.0s,baz=198,slow=2.6,SNR=6.7						
ESK	**Eskdalemuir**	**70.05**	**12**	eP	**P**	**13 04 10.6**	**-1.3**
	comp=Z,83nm,0.8s,mb5.7						
ESK				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
OBN	**Obninsk**	**70.07**	**348**	⇑iP	**P**	**13 04 10.5**	**-1.5**
OBN				LR	LR		
	comp=Z,9µm,17.0s,MS6.1						
OBN	**Obninsk**	**70.07**	**348**	ceP	**P**	**13 04 10.4**	**-1.6**
OBN				e		13 06 45.6	
OBN				eS	S	13 13 23.0	+4.5
OBN				eSS	SS	13 17 50.1	+0.1
OBN				pmax	pmax		
	comp=Z,202nm,0.8s,mb6.1						
OBN				MLR	MLR		
	comp=Z,9µm,17.0s,MS6.1						
ECK	**Cauldkaine Hil**	**70.19**	**12**	eP	**P**	**13 04 12.0**	**-0.8**
ECK				AMb	AMB	13 04 14.4	
	comp=Z,88nm,1.5s,mb5.5						
AKTO	**Aktyubinsk**	**70.24**	**333**	PKPPKP		13 32 17.6	
	comp=Z,0.9nm,0.8s,baz=207,slow=2.9,SNR=3.6						
AKTO				LR	LR	13 40 31.1	
	comp=Z,6µm,18.5s,MS5.9,baz=2.6,slow=41						
PGP	**Puerto Galera**	**70.37**	**266**	eP	**P**	**13 04 16.2**	**+1.7**
IZAR	**Zarasai**	**70.43**	**354**	eP	**P**	**13 04 13.3**	**-0.9**
IZAR				AMb	AMB	13 04 15.9	
	comp=Z,51nm,1.0s,mb5.4						
IZAR				epP	pP	13 04 23.5	-2.8
ISAL	**Salakas**	**70.61**	**354**	eP	**P**	**13 04 14.4**	**-0.9**
ISAL				AMb	AMB	13 04 17.1	
	comp=Z,44nm,0.9s,mb5.4						
ISAL				epP	pP	13 04 24.6	-2.8
COP	**Copenhagen**	**70.78**	**2**	⇑iP	**P**	**13 04 15.3**	**-1.0**
COP				eS	S	13 13 28.3	+1.5
COP				i		13 18 52.2	
COP				e		13 21 28.7	
	comp=Z,3µm,22.0s						
COP	**Copenhagen**	**70.78**	**2**	⇑iP	**P**	**13 04 15.3**	**-1.0**
COP				eS	S	13 13 28.3	+1.5
COP				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.5						
IDID	**Didziasalis**	**70.83**	**354**	eP	**P**	**13 04 15.8**	**-0.8**
IDID				AMb	AMB	13 04 18.4	
	comp=Z,39nm,1.1s,mb5.2						
IDID				epP	pP	13 04 25.8	-2.9
TKM2	**Tokmak 2**	**70.93**	**318**	P	**P**	**13 04 17.0**	**-0.5**
	SNR=64						
USP	**Ospenovka**	**71.07**	**319**	P	**P**	**13 04 17.8**	**-0.5**
	SNR=126						
CHMS	**Chumysh**	**71.20**	**318**	P	**P**	**13 04 18.6**	**-0.5**
	SNR=80						
ULHL	**Ulahol**	**71.24**	**317**	P	**P**	**13 04 18.8**	**-0.5**
	SNR=69						
FRU	**Bishkek**	**71.39**	**318**	⇑iP	**P**	**13 04 20.0**	**-0.2**
FRU				e		13 08 40.0	
FRU				eS	ScS	13 14 24.0	+6.0
FRU				pmax	pmax		
	comp=Z,840nm,2.0s,mb6.3						
FRU				pmax	pmax		
	comp=Z,4µm,4.0s						
FRU				MLR	MLR		
	comp=N,15µm,18.0s						
FRU				MLR	MLR		
	comp=Z,20µm,18.0s,MS6.4						
KBK	**Karagaybulak**	**71.41**	**318**	P	**P**	**13 04 19.9**	**-0.5**
	SNR=118						
DCN	**Croghan**	**71.43**	**14**	⇑iP	**P**	**13 04 19.0**	**-1.3**
MNK	**Minsk**	**71.56**	**353**	eP	**P**	**13 04 18.0**	**-3.0**
MNK				pmax	pmax		
	comp=Z,710nm,1.0s,mb6.5						
MNK				pmax	pmax		
	comp=N,600nm,1.8s						
DLF	**Lyons Farm**	**71.59**	**14**	⇑iP	**P**	**13 04 20.0**	**-1.2**
AAK	**Ala-Archa**	**71.61**	**318**	P	**P**	**13 04 21.2**	**-0.4**
	SNR=187						
AAK	**Ala-Archa**	**71.61**	**318**	⇑iP	**P**	**13 04 20.3**	**-1.2**
AAK				LR	LR		
	comp=Z,4µm,19.0s,MS5.7						
DSB	**Dublin**	**71.66**	**14**	eP	**P**	**13 04 20.2**	**-1.4**
	comp=Z,46nm,1.2s,mb5.3						
GUIM	**Jordan**	**71.69**	**263**	eP	**P**	**13 04 22.6**	**+0.1**
KZA	**Kyzart**	**71.78**	**318**	P	**P**	**13 04 22.6**	**+0.1**
	SNR=83						
EKS2	**Erkin-Say**	**71.87**	**319**	P	**P**	**13 04 22.8**	**-0.3**
	SNR=228						
KMI	**Kunming**	**71.94**	**288**	P	**P**	**13 04 23.8**	**0.0**
KMI				AP	pP	13 04 38.1	+2.2
KMI				PCP	PcP	13 04 43.5	+0.9
KMI				PP	PP	13 07 05.8	+0.2
KMI				S	S	13 13 37.9	-2.9
KMI				SKS	SKS	13 14 18.6	-1.3
KMI				SCS	ScS	13 14 22.4	-0.3
KMI				SS	SS	13 18 16.0	-3.6
KMI				AMB	AMB		
	comp=Z,120nm,1.7s,mb5.5						
KMI				AMB	AMB		
	comp=Z,2µm,5.3s						
KMI				LR	LR		
	comp=N,10µm,21.0s,MS6.2						
KMI				LR	LR		
	comp=E,11µm,21.0s,MS6.2						
KMI				LR	LR		
	comp=Z,12µm,25.3s,MS6.1						
KMI	**Kunming**	**71.94**	**288**	P	**P**	**13 04 23.7**	**-0.1**
	comp=Z,124nm,1.7s,mb5.6						
KMI				pP	pP	13 04 38.1	+2.2
KMI				PcP	PcP	13 04 43.5	+0.9
KMI				sP	sP	13 04 44.4	+4.0
KMI				PP	PP	13 07 05.7	+0.1
KMI				PPP	PPP	13 08 48.2	+0.7
KMI				S	S	13 13 37.9	-2.9
KMI				sS		13 14 05.0	
KMI				PS	PS	13 14 14.8	-1.8
KMI				SKS	SKS	13 14 18.6	-1.3
KMI				ScS	ScS	13 14 22.4	-0.3
KMI				SS	SS	13 18 16.0	-3.6
KMI				SSS	SSS	13 21 25.1	-3.4
KMI				LR	LR		
	comp=Z,12µm,25.3s,MS6.1						
KMI	**Kunming**	**71.94**	**288**	P	**P**	**13 04 23.7**	**-0.1**
KMI				*PP	pP	13 04 38.1	+2.2
KMI						13 04 43.5	
KMI						13 07 05.7	
KMI				PPP	PPP	13 08 48.2	+0.7
KMI				S	S	13 13 37.9	-2.9
KMI				*SS		13 14 05.0	
KMI				PS	PS	13 14 14.8	-1.8
KMI						13 14 18.6	
KMI						13 14 22.4	
KMI				SS	SS	13 18 16.0	-3.6
KMI				SSS	SSS	13 21 25.1	-3.4
KMI				pmax	pmax		
	comp=Z,124nm,1.7s,mb5.6						
KMI				MLR	MLR		
	comp=Z,12µm,25.3s,MS6.1						
LHO	**Holmfirth**	**71.94**	**11**	eP	**P**	**13 04 22.9**	**-0.4**
UCH	**Uchtor**	**71.95**	**318**	P	**P**	**13 04 23.4**	**-0.2**
	SNR=60						
PPT	**Papeete**	**72.21**	**166**	eS	S	13 13 34.3	-10
PPT				eSS	SS	13 18 29.8	+5.9
PPT				eLQ		13 22 42.3	
PPT				eLR	LR	13 26 12.0	
	comp=Z,24µm,23.2s,baz=349						
PPT	**Papeete**	**72.21**	**166**	LR	LR	13 30 59.8	
	comp=Z,10µm,18.9s,MS6.1,baz=331,slow=32						
KBI1	**Birley Grange**	**72.27**	**11**	eP	**P**	**13 04 24.8**	**-0.4**
VAL	**Valentia**	**72.32**	**17**	eP	**P**	**13 04 23.5**	**-2.0**
SUW	**Suwalki**	**72.33**	**356**	eP	**P**	**13 04 23.2**	**-2.3**
SUW				eS	S	13 13 43.3	-1.4
SUW				MLR	MLR	13 33 59.4	
	comp=Z,10µm,25.3s,MS6.0						
SUW	**Suwalki**	**72.33**	**356**	eP	**P**	**13 04 23.2**	**-2.4**
SUW				eS	S	13 13 43.3	-1.4
AML	**Almayashu**	**72.35**	**319**	P	**P**	**13 04 26.3**	**+0.4**
	SNR=212						
SBD1	**Bryn Du**	**72.41**	**12**	eP	**P**	**13 04 25.7**	**-0.3**
BUKP	**Musuan**	**72.44**	**259**	eP	**P**	**13 04 27.7**	**+0.7**
KWE	**Weaver Farm**	**72.47**	**11**	eP	**P**	**13 04 26.2**	**-0.2**
BSEG	**Bad Segeberg**	**72.47**	**3**	eP	**P**	**13 04 26.0**	**-0.4**
QIZ	**Qiongzhong**	**72.60**	**278**	P	**P**	**13 04 27.3**	**-0.5**
QIZ				S	S	13 13 48.1	-0.3
QIZ				AMB	AMB		
	comp=Z,90nm,1.6s,mb5.5						
QIZ				AMB	AMB		
	comp=Z,2µm,9.9s						
QIZ				LR	LR		
	comp=E,3µm,25.3s						
QIZ				LR	LR		
	comp=Z,5µm,29.9s,MS5.6						
QIZ	**Qiongzhong**	**72.60**	**278**	eP	**P**	**13 04 27.6**	**-0.1**
	comp=Z,298nm,1.8s,mb5.9						
QIZ				LR	LR		
	comp=Z,4µm,22.0s,MS5.6						
PINC	**Pinares de May**	**72.70**	**79**	eP	pP	13 04 38.8	-1.7
DAV	**Davao City (W)**	**72.79**	**258**	eP	**P**	**13 04 30.0**	**+1.0**
DAV	**Davao City (W)**	**72.79**	**258**	eP	**P**	**13 04 28.2**	**-0.8**
DAV				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
HLM1	**Long Mynd**	**72.83**	**12**	eP	**P**	**13 04 28.3**	**-0.2**
HLM1				AMb	AMB	13 04 32.5	
	comp=Z,129nm,2.0s,mb5.5						
SSP1	**Stoney Pound**	**72.90**	**12**	⇑eP	**P**	**13 04 28.7**	**-0.2**
SSP1				AMb	AMB	13 04 31.2	
	comp=Z,123nm,1.3s,mb5.7						
VOR	**Voronezh**	**73.00**	**345**	eP	**P**	**13 04 28.5**	**-1.0**
VOR				pmax	pmax		
	comp=N,200nm,1.5s						
VOR				pmax	pmax		
	comp=Z,300nm,1.5s,mb6.0						
MOAC	**Moa**	**73.05**	**78**	eP	**P**	**13 04 30.3**	**-0.1**
SABC	**Sabc**	**73.14**	**79**	eP	pP	13 04 41.9	-1.1
MCH1	**Michaelchurch**	**73.33**	**12**	eP	**P**	**13 04 31.0**	**-0.4**
HAE	**Alders End**	**73.34**	**12**	eP	**P**	**13 04 31.4**	**-0.1**
HAE				AMb	AMB	13 04 34.6	
	comp=Z,260nm,1.6s,mb5.9						
HSA	**Swansea**	**73.42**	**13**	eP	**P**	**13 04 31.8**	**-0.2**
SSW	**Stow on the Wo**	**73.50**	**11**	eP	**P**	**13 04 32.8**	**+0.4**
KSH	**Kashi**	**73.65**	**316**	⇑iP	**P**	**13 04 33.8**	**+0.3**
KSH				eAP	pP	13 04 46.6	+0.9
KSH				ePCP	PcP	13 04 50.5	+1.0
KSH				eXP	sP	13 04 51.8	+1.7
KSH				ePP	PP	13 07 19.1	-0.8
KSH				eS	S	13 13 56.0	-3.7
KSH				XS		13 14 18.8	
KSH				eSKS	SKS	13 14 31.3	-0.8
KSH				eSCS	ScS	13 14 34.6	-1.4
KSH				eSS	SS	13 18 41.6	-4.2
KSH				AMB	AMB		
	comp=Z,4µm,4.3s						
KSH				LR	LR		
	comp=N,23µm,17.3s,MS6.7						
KSH				LR	LR		
	comp=E,31µm,17.7s,MS6.7						
HGH	**Gray Hill**	**73.70**	**12**	eP	**P**	**13 04 33.5**	**-0.2**
HGH				AMb	AMB	13 04 36.5	
	comp=Z,199nm,1.3s,mb5.9						
SWN1	**Swindon**	**73.95**	**11**	eP	**P**	**13 04 35.7**	**+0.7**
RUE	**Ruedersdorf**	**74.02**	**1**	eP	**P**	**13 04 35.0**	**-0.3**
	comp=Z,34nm,0.7s,mb5.4						
HEX	**Exmoor**	**74.14**	**13**	eP	**P**	**13 04 36.0**	**-0.2**
SWK	**Warminster**	**74.25**	**12**	eP	**P**	**13 04 36.8**	**0.0**
WTSB	**Winterswijk**	**74.27**	**6**	⇑eP	**P**	**13 04 37.3**	**+0.4**
	comp=Z,130nm,1.3s,mb5.7						
CLZ	**Clausthal**	**74.57**	**4**	eP	**P**	**13 04 38.6**	**0.0**
	comp=Z,366nm,1.9s,mb6.0						
CLZ	**Clausthal**	**74.57**	**4**	eP	**P**	**13 04 38.6**	**0.0**
CLZ				pmax	pmax		
	comp=Z,366nm,1.9s,mb6.0						
LSA	**Lhasa**	**74.61**	**299**	P	**P**	**13 04 39.4**	**+0.1**
LSA				AP	pP	13 04 48.8	-2.7
LSA				XP	sP	13 04 52.6	-3.3
LSA				S	S	13 14 12.6	+1.9
LSA				AMB	AMB		
	comp=Z,60nm,0.8s,mb5.6						
LSA				LR	LR		
	comp=N,3µm,3.4s						
LSA				LR	LR		
	comp=E,6µm,4.0s						
LSA				LR	LR		
	comp=Z,5µm,4.1s						
LSA	**Lhasa**	**74.61**	**299**	eP	**P**	**13 04 39.6**	**+0.3**
	comp=Z,271nm,0.8s,mb6.2						
LSA				LR	LR		
	comp=Z,12µm,19.0s,MS6.2						
LSA	**Lhasa**	**74.61**	**299**	eP	**P**	**13 04 39.6**	**+0.3**
LSA				pmax	pmax		
	comp=Z,271nm,0.8s,mb6.2						
LSA				MLR	MLR		
	comp=Z,12µm,19.0s,MS6.2						
RAR	**Rarotonga**	**74.85**	**176**	LR	LR	13 31 19.1	
	comp=Z,6µm,20.1s,MS5.9,baz=5.0,slow=31						
CLL	**Collm**	**75.17**	**2**	⇓P	**P**	**13 04 42.8**	**+0.7**
	comp=Z,logA/T=2.2,mb5.9						
CLL				i		13 05 23.4	
CLL				i		13 05 36.0	
CLL				ePP	PP	13 07 24.0	-8.8
CLL				ePPP	PPP	13 09 18.0	-0.2
CLL				eS	S	13 14 15.0	-1.5
CLL				e*SS		13 14 36.0	
CLL				eSS	SS	13 19 30.0	+21
CLL	**Collm**	**75.17**	**2**	⇓iP	**P**	**13 04 42.8**	**+0.7**
	comp=Z,345nm,2.2s,mb5.9						
CLL				i		13 05 23.4	
CLL				eS	S	13 14 15.0	-1.5
CLL				e		13 14 36.0	
CLL				LR	LR		
	comp=Z,5µm,19.6s,MS5.8						
CLL	**Collm**	**75.17**	**2**	⇓iP	**P**	**13 04 42.8**	**+0.7**
CLL				eS	S	13 14 15.0	-1.5
CLL				pmax	pmax		
	comp=Z,345nm,2.2s,mb5.9						
CLL				MLR	MLR		
	comp=Z,5µm,19.6s,MS5.8						
AKASG	**Malin Array Be**	**75.22**	**351**	P	**P**	**13 04 40.5**	**-1.9**
	comp=Z,91nm,0.6s,mb5.9,baz=7.2,slow=5.6,SNR=189						
PMG	**Port Moresby**	**75.28**	**230**	LR	LR	13 35 23.9	
	comp=Z,3µm,20.8s,MS5.6,baz=214,slow=34						
PMG	**Port Moresby**	**75.28**	**230**	eP	**P**	**13 04 42.0**	**-1.5**
	comp=Z,88nm,0.9s,mb5.7						

PMG				LR	LR		
	comp=Z,3µm,22.0s,MS5.6						
PMG	**Port Moresby**	**75.28**	**230**	eP	**P**	**13 04 42.0**	**-1.4**
PMG				pmax	pmax		
	comp=Z,89nm,0.9s						
PMG				MLR	MLR		
	comp=Z,3µm,22.0s						
MENF	**Mencas**	**75.31**	**9**	eP	**P**	**13 04 42.9**	**0.0**
JTS	**JuntasAbangare**	**75.32**	**93**	LR	LR	13 35 40.0	
	comp=Z,4µm,21.9s,MS5.7,baz=315,slow=34						
JTS	**JuntasAbangare**	**75.32**	**93**	PFAKE		13 05 00.0	+16
JTS				LR	LR		
	comp=Z,1µm,22.0s,MS5.2						
HGN	**Heimansgroeve**	**75.41**	**7⇑**	iP	**P**	**13 04 43.3**	**-0.1**
	comp=Z,163nm,1.9s,mb5.6						
HGN				ePP	PP	13 07 53.0	+18
HGN				ePPP	PPP	13 08 57.1	-23
HGN				iS	S	13 14 22.6	+3.5
BRG	**Berggiesshubel**	**75.63**	**1**	eP	**P**	**13 04 44.4**	**-0.3**
	comp=Z,48nm,1.0s,mb5.4						
BRG				PP	PP	13 07 33.0	-3.4
BRG				S	S	13 14 20.0	-1.5
BRG				SS	SS	13 19 22.0	+6.2
BRG				LR	LR		
	comp=Z,5µm,26.4s,MS5.7						
KSP	**Ksiaz**	**75.67**	**360**	eP	**P**	**13 04 43.4**	**-1.6**
KSP				ePcP	PcP	13 04 55.4	-2.5
KSP				eS	S	13 14 22.5	+0.5
KSP				MLR	MLR	13 34 17.8	
	comp=Z,13µm,25.4s,MS6.1						
KSP	**Ksiaz**	**75.67**	**360⇑**	eP	**P**	**13 04 44.0**	**-0.9**
KSP				i		13 04 45.8	
KSP				ePP	PP	13 07 41.0	+4.2
KSP				ePPP	PPP	13 09 21.0	-2.2
KSP				eS	S	13 14 18.0	-4.0
KSP				eSS	SS	13 18 54.0	-23
KSP				LR	LR		
	comp=Z,15µm,25.4s,MS6.2						
KSP	**Ksiaz**	**75.67**	**360⇑**	eP	**P**	**13 04 44.0**	**-0.9**
KSP				e		13 07 41.0	
KSP				ePPP	PPP	13 09 21.0	-2.2
KSP				eS	S	13 14 18.0	-4.0
MOX	**Moxa**	**75.80**	**3**	iP	**P**	**13 04 44.8**	**-0.9**
	comp=Z,logA/T=2.0,mb5.7						
MOX				S	S	13 14 25.0	+1.5
MOX				L		13 48 03.0	
MOX	**Moxa**	**75.80**	**3⇑**	eP	**P**	**13 04 44.8**	**-0.9**
	comp=Z,147nm,1.5s,mb5.7						
MOX				eS	S	13 14 25.0	+1.5
MOX				LR	LR		
	comp=Z,3µm,21.0s,MS5.5						
MOX	**Moxa**	**75.80**	**3⇑**	eP	**P**	**13 04 44.8**	**-0.9**
MOX				eS	S	13 14 25.0	+1.5
MOX				pmax	pmax		
	comp=Z,147nm,1.5s,mb5.7						
MOX				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.5						
PVCC	**Panska Ves**	**75.98**	**1⇑**	eP	**P**	**13 04 46.5**	**-0.2**
PVCC				ex	x	13 05 07.8	
PVCC				AMS	AMS	13 46 00.0	
	comp=Z,7µm,19.5s						
BAIF	**Baives**	**75.98**	**8**	eP	**P**	**13 04 46.5**	**-0.2**
	comp=Z,569nm,1.6s,mb6.0						
BAIF	**Baives**	**75.98**	**8**	eP	**P**	**13 04 46.5**	**-0.2**
BAIF				pmax	pmax		
	comp=Z,285nm,1.6s,mb6.0						
GIVF	**Givet**	**75.99**	**7**	eP	**P**	**13 04 46.3**	**-0.5**
UPC	**Upice**	**76.01**	**360⇑**	eP	**P**	**13 04 46.0**	**-0.9**
TNS	**Taunus Mts**	**76.10**	**5**	eP	**P**	**13 04 47.2**	**-0.2**
	comp=Z,614nm,2.7s,mb6.1						
TNS	**Taunus Mts**	**76.10**	**5**	eP	**P**	**13 04 47.2**	**-0.2**
TNS				pmax	pmax		
	comp=Z,614nm,2.7s,mb6.1						
DPC	**Dobruska-Polom**	**76.16**	**360⇑**	eP	**P**	**13 04 47.7**	**-0.1**
DPC				ex	x	13 14 39.0	
NKC	**Novy Kostel**	**76.24**	**2⇑**	eP	**P**	**13 04 47.0**	**-1.2**
NKC				ex	x	13 05 08.8	
NKC				eS	S	13 14 27.2	-1.0
NKC				AMS	AMS	13 39 50.0	
	comp=Z,5µm,21.8s						
NKC	**Novy Kostel**	**76.24**	**2⇑**	eP	**P**	**13 04 47.0**	**-1.2**
NKC				e		13 14 27.2	
OJC	**Ojcow**	**76.24**	**357⇑**	iP	**P**	**13 04 47.8**	**-0.4**
OJC				eS	S	13 14 39.3	+11
OJC				eSS	SS	13 20 07.1	+42
OJC				MLR	MLR	13 36 20.4	
	comp=Z,10µm,23.3s,MS6.0						
OJC	**Ojcow**	**76.24**	**357⇑**	iP	**P**	**13 04 47.8**	**-0.4**
OJC				MLR	MLR		
	comp=Z,10µm,23.3s,MS6.0						
ABH	**Alteburg**	**76.39**	**6⇑**	eP	**P**	**13 04 50.1**	**+1.0**
ABH	**Alteburg**	**76.39**	**6**	eP	**P**	**13 04 49.0**	**-0.1**
RAC	**Raciborz**	**76.41**	**359**	eP	**P**	**13 04 49.6**	**+0.4**
RAC				LME		13 28 22.2	
RAC				LMN		13 34 28.8	
RAC				MLR	MLR	13 42 08.3	
	comp=Z,8µm,20.9s,MS6.0						
RAC	**Raciborz**	**76.41**	**359**	eP	**P**	**13 04 49.6**	**+0.4**
RAC				LR	LR		
	comp=Z,11µm,26.5s,MS6.0						
PRA	**Prague**	**76.44**	**1**	⇑P	**P**	**13 04 50.0**	**+0.7**
LVV	**L'vov**	**76.47**	**355**	iP	**P**	**13 04 50.0**	**+0.5**
LVV				eS	S	13 14 31.0	+0.2
WLF	**Walferdange**	**76.52**	**7**	eP	**P**	**13 04 49.2**	**-0.6**
	comp=Z,104nm,1.1s,mb5.7						
WLF	**Walferdange**	**76.52**	**7**	eP	**P**	**13 04 49.2**	**-0.6**
WLF				pmax	pmax		
	comp=Z,104nm,1.1s,mb5.7						
PRU	**Pruhonice**	**76.52**	**1⇑**	eP	**P**	**13 04 48.8**	**-1.0**
PRU				epP	pP	13 05 07.8	+5.9
PRU				AMS	AMS	13 46 20.0	
	comp=Z,6µm,19.5s						
OKC	**Ostrava-Krasne**	**76.66**	**359⇑**	eP	**P**	**13 04 50.4**	**-0.2**
OKC				AMS	AMS	13 34 50.0	
	comp=Z,7µm,24.6s						
KWP	**Kalwaria**	**76.73**	**356**	eP	**P**	**13 04 49.1**	**-1.8**
KWP				ePcP	PcP	13 04 59.4	-3.1
KWP				eS	S	13 14 32.7	-0.9
KWP				MLR	MLR	13 36 24.7	
	comp=Z,14µm,24.7s,MS6.2						
KWP	**Kalwaria**	**76.73**	**356**	eP	**P**	**13 04 49.1**	**-1.9**
KWP				ePcP	PcP	13 04 59.4	-3.1
KWP				eS	S	13 14 32.7	-0.9
MORC	**Moravsky Berou**	**76.73**	**359**	eP	**P**	**13 04 50.2**	**-0.8**
	comp=Z,92nm,1.4s,mb5.5						
MORC	**Moravsky Berou**	**76.73**	**359**	eP	**P**	**13 04 50.2**	**-0.8**
MORC				pmax	pmax		
	comp=Z,92nm,1.4s,mb5.5						
TOD	**Tromm**	**76.73**	**5**	eP	**P**	**13 04 52.0**	**+1.0**
TOD	**Tromm**	**76.73**	**5**	eP	**P**	**13 04 50.8**	**-0.2**
GRA1	**Grafenberg Arr**	**76.75**	**3**	eP	**P**	**13 04 51.2**	**+0.1**
	comp=Z,367nm,1.8s,mb6.0						
GRA1				ePP	PP	13 07 39.7	-5.7
GRA1				eS	S	13 14 16.2	-18
GRF	**Grafenberg Arr**	**76.75**	**3**	eP	**P**	**13 04 51.2**	**+0.1**
	comp=Z,367nm,1.8s,mb6.0						
GRF				ePP	PP	13 07 39.7	-5.7
GRF				eS	S	13 14 16.2	-18
GRF				LR	LR		
	comp=Z,4µm,22.0s,MS5.7						
GRF	**Grafenberg Arr**	**76.75**	**3**	eP	**P**	**13 04 51.2**	**+0.1**
GRF				e		13 07 39.7	
GRF				pmax	pmax		
	comp=Z,367nm,1.8s,mb6.0						
GRF				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.7						
GRF	**Grafenberg Arr**	**76.75**	**3**	eP	**P**	**13 04 51.2**	**+0.1**
GRF				e		13 07 39.7	
GRF				pmax	pmax		
	comp=Z,367nm,1.8s,mb6.0						
FLN	**La Foliniere**	**76.81**	**11**	eP	**P**	**13 04 51.0**	**-0.5**
	comp=Z,287nm,1.1s,mb5.8						
FLN				eR			
	comp=Z,8µm,21.2s						
FLN	**La Foliniere**	**76.81**	**11**	eP	**P**	**13 04 51.0**	**-0.5**
FLN				pmax	pmax		
	comp=Z,143nm,1.1s,mb5.8						
FLN				MLR	MLR		
	comp=Z,8µm,21.3s,MS6.0						
ROSF	**Rostrenen**	**76.88**	**13**	eP	**P**	**13 04 51.5**	**-0.4**
KTD	**Kalmit**	**76.98**	**5**	eP	**P**	**13 04 53.4**	**+1.0**
STHS	**Stebnicka Huta**	**77.00**	**356**	eP	**P**	**13 04 53.2**	**+0.7**
STHS				e		13 04 54.5	
LDF	**La Druitiere**	**77.02**	**11**	eP	**P**	**13 04 52.3**	**-0.4**
	comp=Z,246nm,1.0s,mb5.8						
LDF	**La Druitiere**	**77.02**	**11**	eP	**P**	**13 04 52.3**	**-0.4**
LDF				pmax	pmax		
	comp=Z,123nm,1.0s,mb5.8						
SIND	**Sindeldorf**	**77.03**	**4**	eP	**P**	**13 04 53.2**	**+0.5**
NIE	**Niedzica**	**77.03**	**357**	eP	**P**	**13 04 54.3**	**+1.6**
SGMF	**Saint Gilles**	**77.06**	**13**	eP	**P**	**13 04 52.8**	**-0.1**
	comp=Z,112nm,0.6s,mb5.7						
SGMF	**Saint Gilles**	**77.06**	**13**	eP	**P**	**13 04 52.8**	**-0.1**
SGMF				pmax	pmax		
	comp=Z,56nm,0.6s,mb5.7						
IMP	**Imphal**	**77.08**	**294**	eP	**P**	**13 04 52.0**	**-1.5**
GRR	**Gorron**	**77.14**	**11**	eP	**P**	**13 04 52.8**	**-0.5**
	comp=Z,204nm,1.1s,mb5.7						
GRR	**Gorron**	**77.14**	**11**	eP	**P**	**13 04 52.8**	**-0.5**
GRR				pmax	pmax		
	comp=Z,102nm,1.1s,mb5.7						
VRAC	**Vranov**	**77.20**	**360**	LR	LR	13 38 40.9	
	comp=Z,4µm,20.7s,MS5.7,baz=1.5,slow=36						
VRAC	**Vranov**	**77.20**	**360**	P	**P**	**13 04 54.7**	**+1.0**
TREC	**Trest**	**77.22**	**0⇑**	eP	**P**	**13 04 52.6**	**-1.2**
TREC				ex	x	13 05 14.0	
LANF	**Langenberg**	**77.30**	**6**	eP	**P**	**13 04 54.2**	**0.0**
QUIF	**Quistinic**	**77.31**	**13**	eP	**P**	**13 04 53.9**	**-0.4**
WET	**Wettzell**	**77.34**	**2**	eP	**P**	**13 04 54.5**	**+0.1**
	comp=Z,141nm,1.8s,mb5.6						
WET	**Wettzell**	**77.34**	**2**	eP	**P**	**13 04 54.5**	**+0.1**
WET				pmax	pmax		
	comp=Z,141nm,1.8s,mb5.6						
KHC	**Kasperske Hory**	**77.36**	**2⇑**	eP	**P**	**13 04 54.1**	**-0.5**
KHC				ex	x	13 05 16.2	
KHC				eS	S	13 14 41.2	+0.7
KHC				AMS	AMS	13 45 20.0	
	comp=Z,5µm,18.5s						
KHC	**Kasperske Hory**	**77.36**	**2⇑**	eP	**P**	**13 04 54.1**	**-0.5**
KHC				e		13 14 41.2	
KHC				MLR	MLR		
	comp=Z,5µm,18.5s,MS5.9						
LIKS	**Likavka**	**77.43**	**358**	eP	**P**	**13 04 56.6**	**+1.7**
KOLS	**Kolonicke sedl**	**77.44**	**356**	eP	**P**	**13 04 55.1**	**+0.1**
KOLS				e		13 04 56.1	
CRVS	**Cervenica-Dubn**	**77.51**	**356**	eP	**P**	**13 04 55.3**	**-0.1**
CRVS				eS	S	13 14 40.4	-1.6
SHL	**Shillong**	**77.55**	**296**	eP	**P**	**13 04 54.5**	**-1.6**
SHL				ex	x	13 14 40.0	
STU	**Stuttgart**	**77.58**	**5**	eP	**P**	**13 04 54.6**	**-1.1**
	comp=Z,72nm,1.2s,mb5.5						
STU	**Stuttgart**	**77.58**	**5**	eP	**P**	**13 04 54.7**	**-1.1**
STU				pmax	pmax		
	comp=Z,72nm,1.2s,mb5.5						
MEZF	**Maizieres J'vi**	**77.60**	**7**	eP	**P**	**13 04 55.5**	**-0.4**
	comp=Z,382nm,1.5s,mb5.8						
GEC2	**GERESS Array S**	**77.65**	**2**	eP	**P**	**13 04 56.0**	**-0.2**
	comp=Z,594nm,3.0s						
GEC2	**GERESS Array S**	**77.65**	**2**	eP	**P**	**13 04 56.0**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,594nm,3.0s						
GERES	**GERESS Array B**	**77.65**	**2**	P	**P**	**13 04 55.8**	**-0.4**
	comp=Z,12nm,0.6s,mb5.0,baz=7.9,slow=4.1,SNR=64						
GERES				LR	LR	13 41 45.4	
	comp=Z,4µm,21.2s,MS5.8,baz=0.4,slow=38						
LBG	**Lerchenberg**	**77.67**	**5**	eP	**P**	**13 04 56.9**	**+0.7**
CHRT	**Chiangrai**	**77.75**	**287**	⇑P	**P**	**13 04 56.5**	**-0.8**
	comp=Z,513nm,1.5s,mb6.2						
HDH	**Heidenheim**	**77.81**	**4**	eP	**P**	**13 04 57.8**	**+0.8**
CDF	**Champ du Feu**	**77.84**	**6**	eP	**P**	**13 04 56.8**	**-0.4**
	comp=Z,83nm,1.0s,mb5.3						
CDF	**Champ du Feu**	**77.84**	**6**	eP	**P**	**13 04 56.8**	**-0.4**
CDF				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
BUCH	**Bad Urach**	**77.91**	**4**	eP	**P**	**13 04 58.8**	**+1.2**
TBI	**Tubuai**	**77.91**	**166**	eS	S	13 14 37.2	-10
TBI				eSS	SS	13 19 52.3	+1.2
TBI				eLQ		13 24 46.4	
TBI				eLR	LR	13 28 41.3	
	comp=Z,20µm,29.5s,baz=350						
THEF	**They Montfort**	**77.94**	**7**	eP	**P**	**13 04 57.9**	**+0.2**
KECS	**Kecovo**	**77.96**	**357**	eP	**P**	**13 04 57.4**	**-0.4**
KECS				e		13 04 59.1	
BFO	**Black Forest**	**77.98**	**5**	eP	**P**	**13 04 57.7**	**-0.2**
	comp=Z,161nm,1.7s,mb5.7						
BFO	**Black Forest**	**77.98**	**5**	eP	**P**	**13 04 57.7**	**-0.2**
BFO				pmax	pmax		
	comp=Z,161nm,1.7s,mb5.7						
VYHS	**Vyhne**	**77.99**	**358**	eP	**P**	**13 04 58.8**	**+0.8**
VYHS				e		13 15 01.9	
SMOL	**Smolenice**	**77.99**	**359**	eP	**P**	**13 04 58.9**	**+0.9**
SMOL				e		13 04 59.8	
ECH	**Echery**	**78.03**	**6**	eP	**P**	**13 04 58.3**	**+0.1**
LIBD	**Limburg**	**78.12**	**6**	eP	**P**	**13 04 59.7**	**+1.0**
LIBD	**Limburg**	**78.12**	**6**	eP	**P**	**13 04 58.8**	**+0.1**
HAU	**Haudompre**	**78.18**	**7**	eP	**P**	**13 04 58.8**	**-0.3**
	comp=Z,200nm,1.1s,mb5.6						
HAU				eR			
	comp=Z,7µm,20.0s						
HAU	**Haudompre**	**78.18**	**7**	eP	**P**	**13 04 58.8**	**-0.3**
HAU				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
HAU				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.0						
SPAK	**Spaichingen**	**78.23**	**5**	eP	**P**	**13 05 00.4**	**+1.1**
FUR	**Furstenfeldbru**	**78.27**	**3**	eP	**P**	**13 04 59.6**	**0.0**
	comp=Z,317nm,1.6s,mb6.0						
FUR	**Furstenfeldbru**	**78.27**	**3**	eP	**P**	**13 04 59.6**	**0.0**
FUR				pmax	pmax		
	comp=Z,317nm,1.6s,mb6.0						
GUT	**Gutenstein**	**78.28**	**5**	eP	**P**	**13 05 00.6**	**+1.0**
ZST	**Bratislava**	**78.31**	**359**	eP	**P**	**13 05 00.0**	**+0.2**
ZST				e		13 05 01.7	
ZST				e		13 15 06.1	
ZST				eL		13 50 20.5	
ZST	**Bratislava**	**78.31**	**359**	eP	**P**	**13 05 00.0**	**+0.2**
ZST				eS	S	13 15 06.1	+15
KIZ	**Kirchzarten**	**78.33**	**6**	eP	**P**	**13 05 00.3**	**+0.4**
MOF	**Molkenrain**	**78.39**	**6**	eP	**P**	**13 05 00.1**	**-0.1**
HINF	**Hinteralfeld**	**78.41**	**6**	eP	**P**	**13 05 00.2**	**-0.1**
	comp=Z,78nm,0.8s,mb5.4						
HINF	**Hinteralfeld**	**78.41**	**6**	eP	**P**	**13 05 00.2**	**-0.1**
HINF				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.4						
FELD	**Feldberg**	**78.42**	**5**	eP	**P**	**13 05 01.1**	**+0.7**
PSZ	**Piszkesteto**	**78.54**	**357⇓**	eP	**P**	**13 05 02.4**	**+1.3**
SLE	**Schleitheim**	**78.55**	**5⇑**	iP	**P**	**13 05 00.9**	**-0.2**
BURAR	**Bucovina Array**	**78.60**	**354**	⇑P	**P**	**13 05 01.3**	**-0.1**
HYF	**Humbligny**	**78.61**	**9**	eP	**P**	**13 05 01.6**	**+0.1**
MOA	**Molln**	**78.66**	**1**	eP	**P**	**13 05 02.6**	**+0.9**
	comp=Z,29nm,1.0s,mb5.2,SNR=14						
MOA	**Molln**	**78.66**	**1**	eP	**P**	**13 05 02.5**	**+0.9**
	comp=Z,29nm,1.0s,mb5.2						
TRULL	**Truellikon**	**78.68**	**5⇑**	iP	**P**	**13 05 01.6**	**-0.2**
SRO	**Srobarova**	**78.68**	**358**	eP	**P**	**13 05 03.7**	**+1.9**
UBR	**Uberruh**	**78.71**	**4**	eP	**P**	**13 05 02.9**	**+0.9**
LOR	**Lormes**	**78.72**	**8**	eP	**P**	**13 05 01.8**	**-0.3**
	comp=Z,171nm,1.0s,mb5.6						
LOR				eR			
	comp=Z,6µm,22.2s						
LOR				eR			
	comp=Z,7µm,20.8s						
SRO1	**Iza**	**78.73**	**358**	eP	**P**	**13 05 04.1**	**+2.0**
GUN	**Gumba**	**78.75**	**302**	eP	**P**	**13 05 02.2**	**-0.4**
	comp=Z,777nm,1.0s,mb6.6						
SULZ	**Sulz-Cheisache**	**78.77**	**5⇑**	iP	**P**	**13 05 02.2**	**-0.1**
GOF	**Gofitskoye**	**78.78**	**341⇓**	iP	**P**	**13 05 02.1**	**-0.3**
GOF				pmax	pmax		
	comp=Z,980nm,0.8s						
BBS	**Basel-Blauen**	**78.80**	**6**	eP	**P**	**13 05 03.3**	**+0.8**
BBS	**Basel-Blauen**	**78.80**	**6**	eP	**P**	**13 05 02.2**	**-0.3**
KKTK	**Khon Kaen**	**78.81**	**282**	PG	**P**	**13 05 02.0**	**-1.1**
SOP	**Sopron**	**78.83**	**360⇓**	eP	**P**	**13 05 04.5**	**+1.9**
LRYF	**La Roche-sur-Y**	**78.83**	**12**	eP	**P**	**13 05 03.9**	**+1.2**
LCHF	**La Chataignera**	**78.84**	**12**	eP	**P**	**13 05 03.1**	**+0.4**
BOURR	**Bourrignon**	**78.85**	**6⇑**	iP	**P**	**13 05 03.0**	**+0.2**
LOMF	**Lomont**	**78.87**	**6**	eP	**P**	**13 05 02.9**	**0.0**
SSF	**Saint Saulge**	**78.90**	**9**	eP	**P**	**13 05 02.7**	**-0.3**
	comp=Z,38nm,0.4s,mb5.7						
SSF	**Saint Saulge**	**78.90**	**9**	eP	**P**	**13 05 02.7**	**-0.3**
SSF				pmax	pmax		
	comp=Z,38nm,0.4s,mb5.7						
WILA	**Wila**	**78.92**	**5⇑**	iP	**P**	**13 05 03.4**	**+0.2**
KIS	**Kishinev**	**78.93**	**351c**	iP	**P**	**13 05 02.0**	**-1.2**
KIS				pmax	pmax		
	comp=Z,3µm,12.0s						
BALST	**Balsthal**	**78.94**	**6⇑**	iP	**P**	**13 05 03.4**	**+0.2**
ZUR	**Zurich**	**78.95**	**5⇑**	iP	**P**	**13 05 03.5**	**+0.2**
ZUR	**Zurich**	**78.95**	**5⇑**	iP	**P**	**13 05 03.4**	**+0.1**
MFF	**Saint Martin d**	**78.98**	**11**	eP	**P**	**13 05 03.5**	**0.0**
	comp=Z,441nm,1.1s,mb6.0						
MFF	**Saint Martin d**	**78.98**	**11**	eP	**P**	**13 05 03.5**	**0.0**
MFF				pmax	pmax		
	comp=Z,221nm,1.1s,mb6.0						
BUD	**Budapest**	**79.00**	**358**	eP	**P**	**13 05 04.5**	**+0.9**
CHG	**Chiang Mai**	**79.07**	**287**	⇑P	**P**	**13 05 04.0**	**-0.5**
	comp=Z,107nm,1.1s,mb5.7						
MOTA	**Moosalm**	**79.09**	**3⇑**	iP	**P**	**13 05 04.4**	**+0.4**
	comp=Z,81nm,1.2s,mb5.5,SNR=38						
MOTA	**Moosalm**	**79.09**	**3⇑**	iP	**P**	**13 05 04.4**	**+0.4**
	comp=Z,81nm,1.2s,mb5.5						
MOTA	**Moosalm**	**79.09**	**3⇑**	iP	**P**	**13 05 04.4**	**+0.3**
MOTA				pmax	pmax		
	comp=Z,81nm,1.2s,mb5.5						
DAVA	**Damuels**	**79.10**	**4⇓**	iP	**P**	**13 05 04.9**	**+0.8**
	comp=Z,23nm,0.7s,mb5.2,SNR=19						
DAVA	**Damuels**	**79.10**	**4⇓**	iP	**P**	**13 05 04.9**	**+0.8**
	comp=Z,23nm,0.6s,mb5.3						
KKM	**Kota Kinabalu**	**79.10**	**265**	eP	**P**	**13 05 03.8**	**-1.0**
KKM	**Kota Kinabalu**	**79.10**	**265**	P	**P**	**13 05 05.0**	**+0.2**
WATA	**Walderalm**	**79.11**	**3⇑**	iP	**P**	**13 05 04.5**	**+0.3**
	comp=Z,14nm,0.5s,mb5.2,SNR=13						
WATA	**Walderalm**	**79.11**	**3⇑**	iP	**P**	**13 05 04.5**	**+0.3**
	comp=Z,14nm,0.5s,mb5.2						
WATA	**Walderalm**	**79.11**	**3⇑**	iP	**P**	**13 05 04.5**	**+0.3**
WATA				pmax	pmax		
	comp=Z,14nm,0.5s,mb5.2						
KKN	**Kakani**	**79.15**	**302**	eP	**P**	**13 05 04.4**	**-0.4**
	comp=Z,782nm,1.3s,mb6.5						
AVF	**Avril sur Loir**	**79.15**	**9**	eP	**P**	**13 05 03.8**	**-0.6**
WTTA	**Wattenberg**	**79.19**	**3⇓**	iP	**P**	**13 05 05.0**	**+0.4**
	comp=Z,88nm,1.0s,mb5.7,SNR=33						
SQTA	**Sankt Quirin**	**79.21**	**3**	iP	**P**	**13 05 05.2**	**+0.4**
	comp=Z,47nm,0.7s,mb5.5,SNR=34						
SQTA	**Sankt Quirin**	**79.21**	**3**	iP	**P**	**13 05 05.2**	**+0.4**
SQTA				pmax	pmax		
	comp=Z,47nm,0.7s,mb5.5						
BRANT	**Les Verrieres**	**79.25**	**7⇑**	iP	**P**	**13 05 05.4**	**+0.4**
PKI	**Pulchoki**	**79.26**	**302**	eP	**P**	**13 05 05.4**	**0.0**
	comp=Z,674nm,1.2s,mb6.5						
ARSA	**Arzberg**	**79.27**	**0⇓**	eP	**P**	**13 05 05.6**	**+0.6**
	comp=Z,54nm,1.1s,mb5.4,SNR=26						
GKN	**Gorkha**	**79.29**	**303**	eP	**P**	**13 05 04.3**	**-1.3**
	comp=Z,1µm,1.1s,mb6.7						
PLONS	**Plons**	**79.31**	**5⇑**	iP	**P**	**13 05 05.5**	**+0.2**
BGF	**Bois d'Agland**	**79.34**	**9**	eP	**P**	**13 05 05.3**	**-0.1**
	comp=Z,198nm,1.1s,mb5.7						
BGF	**Bois d'Agland**	**79.34**	**9**	eP	**P**	**13 05 05.3**	**-0.1**
BGF				pmax	pmax		
	comp=Z,99nm,1.1s,mb5.7						
SMF	**Signal de Mont**	**79.34**	**8**	eP	**P**	**13 05 04.9**	**-0.6**
	comp=Z,352nm,1.1s,mb5.9						
SMF	**Signal de Mont**	**79.34**	**8**	eP	**P**	**13 05 04.9**	**-0.6**
SMF				pmax	pmax		
	comp=Z,176nm,1.1s,mb5.9						
MUO	**Muotathal**	**79.36**	**5⇑**	iP	**P**	**13 05 06.1**	**+0.6**
DMN	**Daman**	**79.38**	**302**	eP	**P**	**13 05 05.9**	**-0.2**
	comp=Z,1µm,1.4s,mb6.6						
KBA	**Koelnbreinsper**	**79.41**	**2**	eP	**P**	**13 05 07.5**	**+1.7**
	comp=Z,123nm,1.0s,mb5.8,SNR=23						
KBA	**Koelnbreinsper**	**79.41**	**2**	eP	**P**	**13 05 07.6**	**+1.8**
KBA				pmax	pmax		
	comp=Z,123nm,1.0s,mb5.8						
BNALP	**Bannalp**	**79.44**	**5⇑**	iP	**P**	**13 05 06.6**	**+0.6**
TORNY	**Torny**	**79.45**	**6⇑**	iP	**P**	**13 05 06.6**	**+0.6**
TORNY	**Torny**	**79.45**	**6⇑**	iP	**P**	**13 05 06.5**	**+0.5**
LLS	**Linth-Limmern**	**79.49**	**5⇑**	iP	**P**	**13 05 06.8**	**+0.5**
TSM	**Tawau**	**79.53**	**263**	P	**P**	**13 05 06.9**	**-0.2**
HASLI	**Hasliberg**	**79.54**	**5⇑**	iP	**P**	**13 05 07.0**	**+0.5**
TCF	**Toulx Ste Croi**	**79.54**	**10**	eP	**P**	**13 05 06.2**	**-0.4**
	comp=Z,148nm,1.0s,mb5.5						
TCF	**Toulx Ste Croi**	**79.54**	**10**	eP	**P**	**13 05 06.2**	**-0.4**
TCF				pmax	pmax		
	comp=Z,74nm,1.0s,mb5.6						
CABF	**La Chapelle**	**79.55**	**7**	eP	**P**	**13 05 06.8**	**+0.2**
	comp=Z,314nm,1.1s,mb5.8						
CABF	**La Chapelle**	**79.55**	**7**	eP	**P**	**13 05 06.8**	**+0.2**
CABF				pmax	pmax		
	comp=Z,157nm,1.1s,mb5.8						
DRGR		**79.56**	**355**	⇑P	**P**	**13 05 06.1**	**-0.5**
DRGR		**79.56**	**355**	⇑P	**P**	**13 05 06.1**	**-0.5**
DLH	**Dalhousie**	**79.56**	**312**	ex	x	13 05 07.0	
DAVOX	**Davos**	**79.60**	**4**	LR	LR	13 38 43.6	
	comp=Z,3µm,21.4s,MS5.5,baz=351,slow=34						
DAVOX	**Davos**	**79.60**	**4⇑**	iP	**P**	**13 05 07.6**	**+0.7**
DAVOX	**Davos**	**79.60**	**4**	P	**P**	**13 05 08.0**	**+1.1**
PKS8	**Sarbogard**	**79.61**	**358⇓**	eP	**P**	**13 05 08.1**	**+1.2**
GIMEL	**Gimel**	**79.64**	**7⇑**	iP	**P**	**13 05 07.8**	**+0.7**
SEST	**Monte Rota**	**79.72**	**3**	P	**P**	**13 05 09.3**	**+1.8**
BRES	**Bressanone**	**79.75**	**3**	P	**P**	**13 05 08.3**	**+0.6**
THN	**Thein Dam**	**79.77**	**312**	eP	**P**	**13 05 07.0**	**-1.1**
FUORN	**Ofenpass**	**79.78**	**4⇑**	iP	**P**	**13 05 08.9**	**+1.1**
FUORN	**Ofenpass**	**79.78**	**4**	P	**P**	**13 05 08.7**	**+0.9**
DZM	**Mont Dzumac**	**79.80**	**208**	P	**P**	**13 05 09.1**	**+0.7**
	comp=Z,12nm,1.1s,mb4.7,baz=67,slow=12,SNR=6.3						
DZM				LR	LR	13 33 10.0	
	comp=Z,10µm,22.0s,MS6.1,baz=21,slow=30						
MAK	**Makhachkala**	**79.83**	**337d**	iP	**P**	**13 05 06.0**	**-2.2**
MAK				i	pP	13 05 19.0	-1.4
MAK				e		13 08 08.0	
MAK				eS	S	13 15 06.0	-0.9
MAK				i		13 15 21.0	
MAK				iPS	PS	13 15 53.0	-3.9
MAK				eSS	SS	13 20 26.0	+6.5
MAK				pmax	pmax		
	comp=Z,858nm,1.2s,mb6.5						
MAK				pmax	pmax		
	comp=E,900nm,2.0s						
MAK				pmax	pmax		
	comp=Z,5µm,7.0s						
MAK				pmax	pmax		
	comp=N,500nm,8.0s						
MAK				pmax	pmax		
	comp=Z,2µm,8.0s						
MAK				smax			
	comp=N,2µm,8.0s						
MAK				smax			
	comp=E,600nm,8.0s						
MAK				smax			
	comp=Z,1µm,8.0s						
AGO	**Saint Agoulin**	**79.86**	**9**	eP	**P**	**13 05 09.0**	**+0.7**
VDL	**Val di Lei**	**79.88**	**5⇑**	iP	**P**	**13 05 09.3**	**+1.0**
PERS	**Pernice**	**79.88**	**1**	eP	**P**	**13 05 08.1**	**-0.3**
PERS				e		13 05 30.0	
AIGLE	**Aigle**	**79.88**	**6⇑**	iP	**P**	**13 05 08.6**	**+0.2**
SENIN	**Lac Senin**	**79.88**	**6⇑**	iP	**P**	**13 05 09.1**	**+0.7**
FVI	**Forni Avoltri**	**79.88**	**2**	P	**P**	**13 05 08.3**	**-0.1**
KIV	**Kislovodsk**	**79.91**	**341⇑**	iP	**P**	**13 05 09.3**	**+0.7**
KIV				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
KIV	**Kislovodsk**	**79.91**	**341c**	iP	**P**	**13 05 09.2**	**+0.6**
KIV				e		13 08 09.0	
KIV				eS	S	13 15 09.5	+1.9
KIV				eSS	SS	13 20 14.2	-6.4
KIV				eSSS	SSS	13 23 47.2	+5.7
KIV				pmax	pmax		
	comp=Z,353nm,1.1s,mb6.2						
KIV				pmax	pmax		
	comp=Z,2µm,4.5s						
KIV				MLR	MLR		
	comp=Z,12µm,22.0s,MS6.2						
BRMO	**Bormio**	**79.93**	**4**	P	**P**	**13 05 09.0**	**+0.4**
APPI	**Appiano**	**79.96**	**3**	P	**P**	**13 05 09.3**	**+0.5**
BERNI	**Berninapass**	**79.97**	**4⇑**	iP	**P**	**13 05 09.8**	**+0.9**
PLDF	**La Plantade**	**79.99**	**9**	eP	**P**	**13 05 09.5**	**+0.5**
KOLN	**Koldanda**	**80.00**	**304**	eP	**P**	**13 05 08.1**	**-1.3**
	comp=Z,2µm,1.6s						
OBKA	**Obir**	**80.00**	**1⇓**	iP	**P**	**13 05 09.3**	**+0.3**
	comp=Z,131nm,0.8s,mb5.9,SNR=33						
OBKA	**Obir**	**80.00**	**1⇓**	iP	**P**	**13 05 09.3**	**+0.3**
	comp=Z,131nm,0.8s,mb5.9						
ANN	**Anapa**	**80.02**	**345**	eP	**P**	**13 05 04.8**	**-4.3**
ANN				e		13 08 05.9	
ANN				ePPP	PPP	13 09 59.8	-4.0
ANN				eS	S	13 15 04.7	-4.0
ANN				pmax	pmax		
	comp=Z,123nm,1.4s,mb5.6						
ANN				pmax	pmax		
	comp=Z,1µm,6.7s						
ANN				MLR	MLR		
	comp=Z,6µm,22.0s,MS5.9						
KOGS	**Kog**	**80.07**	**360**	eP	**P**	**13 05 09.5**	**+0.1**
OG05	**Jujurieux**	**80.07**	**7**	eP	**P**	**13 05 09.9**	**+0.5**

VERF	Verneugheol	80.10	10	eP	P	13 05 09.4	-0.2
SJG	San Juan	80.12	73	eP	P	13 05 10.0	-0.1
	comp=Z,41nm,0.9s,mb5.4						
SJG				LR	LR		
	comp=Z,6µm,22.0s,MS5.9						
SJG	San Juan	80.12	73	eP	P	13 05 10.0	-0.2
SJG				pmax	pmax		
	comp=Z,41nm,0.9s						
SJG				MLR	MLR		
	comp=Z,6µm,22.0s						
PTH	Pithoragarh	80.15	307	eP	P	13 05 10.0	-0.2
PYM	Petit Puy Mans	80.15	9	eP	P	13 05 10.2	+0.4
EMV	Vieux Emosson	80.15	6	⇑iP	P	13 05 10.5	+0.7
EMV	Vieux Emosson	80.15	6	P	P	13 05 11.2	+1.4
DIX	Grande Dixence	80.17	6	P	P	13 05 11.1	+1.2
GMNA	Gemona	80.21	2	P	P	13 05 10.8	+0.6
VRI	Vrincioaia	80.23	352	⇑P	P	13 05 11.4	+1.2
VRI	Vrincioaia	80.23	352	⇑P	P	13 05 11.4	+1.2
VRI	Vrincioaia	80.23	352	P	P	13 05 11.3	+1.1
PKSM	Moragy	80.28	358	⇓iP	P	13 05 11.6	+1.1
CPD	Cerro la Pandu	80.31	73	eP	P	13 05 10.6	-0.6
MABI	Malga Bissina	80.35	4	P	P	13 05 11.1	+0.2
SIM	Simferopol’	80.35	347	ceP	P	13 05 10.5	-0.4
SIM				e		13 08 14.0	
SIM				ePS	PS	13 16 21.0	+18
SIM				pmax	pmax		
	comp=Z,63nm,0.9s,mb5.5						
CTI	Castel Tesino	80.40	3	P	P	13 05 11.4	+0.3
RHK1	Bakonya	80.41	359	eP	P	13 05 11.9	+0.7
MUGIO	Muggio	80.42	5	⇑iP	P	13 05 11.4	+0.1
MUGIO	Muggio	80.42	5	P	P	13 05 13.3	+2.0
RJF	Les Rejaudoux	80.44	10	eP	P	13 05 11.0	-0.4
	comp=Z,261nm,1.2s,mb5.7						
RJF				eR			
	comp=Z,7µm,20.5s						
RJF	Les Rejaudoux	80.44	10	eP	P	13 05 11.0	-0.4
RJF				pmax	pmax		
	comp=Z,131nm,1.2s,mb5.7						
RJF				MLR	MLR		
	comp=Z,7µm,20.5s,MS6.0						
COLF	Collangettes	80.45	9	eP	P	13 05 11.8	+0.4
VAI	Varese	80.46	5	P	P	13 05 11.7	+0.2
	comp=Z,62nm,0.5s,mb5.8						
VAI	Varese	80.46	5	P	P	13 05 11.7	+0.2
VAI				pmax	pmax		
	comp=Z,62nm,0.5s,mb5.8						
LJU	Ljubljana	80.47	1	eP	P	13 05 11.3	-0.2
LJU				e	pP	13 05 23.4	-0.4
LJU				e		13 05 33.3	
MTP	Monte Pirata	80.47	73	eP	P	13 05 10.9	-1.2
VOY	Vojsko	80.47	1	eP	P	13 05 11.8	+0.3
VOY				e		13 05 49.0	
FRNF	Fournols	80.47	10	eP	P	13 05 12.6	+1.1
ORX	Oropa	80.65	6	P	P	13 05 12.5	0.0
MLR	Muntele Rosu	80.66	353	LR	LR	13 41 15.1	
	comp=Z,8µm,22.0s,MS6.0,baz=181,slow=36						
MLR	Muntele Rosu	80.66	353	⇓P	P	13 05 14.1	+1.6
MLR	Muntele Rosu	80.66	353	⇓P	P	13 05 14.1	+1.5
RKT	Rikitea	80.67	153	eS	S	13 15 06.0	-10
RKT				eSS	SS	13 20 32.7	+0.3
RKT				eLR	LR	13 29 52.9	
	comp=Z,20µm,31.0s,baz=345						
LPL	La Plagne	80.69	7	eP	P	13 05 12.6	-0.1
LBL	Lubilhac	80.69	9	eP	P	13 05 13.0	+0.3
LPG	La Plagne	80.71	7	eP	P	13 05 12.9	+0.1
	comp=Z,72nm,0.8s,mb5.3						
LPG	La Plagne	80.71	7	eP	P	13 05 12.9	+0.1
LPG				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.3						
LFF	La Frestale	80.72	11	eP	P	13 05 12.9	0.0
TRAV		80.76	6	P	P	13 05 13.1	0.0
LSD	Ceresole Reale	80.77	6	P	P	13 05 14.8	+1.7
VOIR		80.78	354	⇓P	P	13 05 14.4	+1.2
VOIR		80.78	354	⇓P	P	13 05 14.4	+1.3
CFR	Carcaliu	80.79	351	⇓P	P	13 05 12.8	-0.4
CFR	Carcaliu	80.79	351	⇓P	P	13 05 12.8	-0.4
SAL	Salo	80.80	4	P	P	13 05 13.5	+0.2
	comp=Z,351nm,1.3s,mb6.1						
SAL	Salo	80.80	4	P	P	13 05 13.5	+0.2
SAL				pmax	pmax		
	comp=Z,351nm,1.3s,mb6.1						
SOC	Sochi	80.82	343	c iP	P	13 05 13.8	+0.4
SOC				eS	S	13 15 17.0	-0.1
SOC				e		13 15 58.4	
SOC				eSS	SS	13 20 36.8	+2.5
SOC				eSSS	SSS	13 23 54.7	-1.5
SOC				pmax	pmax		
	comp=Z,311nm,0.9s,mb6.2						
SOC				pmax	pmax		
	comp=Z,2µm,3.4s						
CAF	Calviac	80.88	10	eP	P	13 05 13.6	-0.1
	comp=Z,300nm,1.2s,mb5.8						
CAF	Calviac	80.88	10	eP	P	13 05 13.6	-0.1
CAF				pmax	pmax		
	comp=Z,150nm,1.2s,mb5.8						
GRN	Grenoble	80.89	7	eP	P	13 05 14.7	+0.9
NST	Nakhon Sawan	80.89	284	P	P	13 05 14.0	-0.3
	comp=Z,72nm,0.9s,mb5.6						
GDM	Grand’Maison	80.95	7	eP	P	13 05 15.2	+1.1
MTUR	Matau	80.98	354	P	P	13 05 15.0	+0.8
PAYG	Puerto Ayora	81.00	104	PFAKE		13 05 30.0	+15
PAYG				LR	LR		
	comp=Z,6µm,22.0s,MS5.9						
BOJS	Bojanci	81.01	1	eP	P	13 05 13.3	-1.1
BOJS				e		13 05 35.7	
BOJS				eS	S	13 15 18.2	-0.8
BOJS				eSS	SS	13 19 58.8	-38
ONI	Oni	81.08	340	P	P	13 05 15.5	+0.6
RSP	Reno Superiore	81.08	6	P	P	13 05 15.7	+0.9
BNI	Bardonecchia	81.14	7	P	P	13 05 15.9	+0.8
EPON	Pontenova	81.18	17	P	P	13 05 17.2	+1.8
	comp=Z,105nm,1.0s,mb5.7						
VIVF	Saint-Julien-l	81.19	8	eP	P	13 05 15.4	+0.1
	comp=Z,190nm,0.9s,mb5.7						
VIVF	Saint-Julien-l	81.19	8	eP	P	13 05 15.4	+0.1
VIVF				pmax	pmax		
	comp=Z,95nm,0.9s,mb5.7						
FENE	Fenestrelle	81.19	6	P	P	13 05 15.1	-0.3
EMAZ	Mazaricos	81.22	18	P	P	13 05 17.4	+1.8
	comp=Z,41nm,0.7s,mb5.5						
RRL	Cesana Torines	81.28	7	P	P	13 05 17.5	+1.7
STS	Santiago	81.36	18	P	P	13 05 17.6	+1.3
	comp=Z,35nm,0.9s,mb5.3						
STS	Santiago	81.36	18	P	P	13 05 17.6	+1.3
STS				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.3						
BHB	Bricherasio	81.39	6	P	P	13 05 16.1	-0.4
MBDF	Montbardon	81.48	7	eP	P	13 05 16.6	-0.2
	comp=Z,270nm,0.8s,mb6.0						
MBDF	Montbardon	81.48	7	eP	P	13 05 16.6	-0.2
MBDF				pmax	pmax		
	comp=Z,135nm,0.8s,mb5.9						
TIRR	Tirgusor	81.48	351	eP	P	13 05 16.0	-0.9
TIRR	Tirgusor	81.48	351	P	P	13 05 16.8	-0.1
EARI	Arriondas	81.53	15	P	P	13 05 18.8	+1.6
	comp=Z,62nm,0.8s,mb5.6						
BOB	Bobbio (Coli)	81.59	5	P	P	13 05 18.0	+0.6
TI2	Plekhanov	81.62	339	⇑iP	P	13 05 16.8	-0.8
TI2				iS	S	13 15 29.4	+4.0
TI2				iS	S	13 15 31.0	+5.6
TI2				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.7						
TI2				pmax	pmax		
	comp=Z,6µm,4.4s						
TBLG	Delisi	81.62	339	P	P	13 05 18.7	+1.0
PZZ	Prazzo	81.72	6	P	P	13 05 19.0	+0.9
SURF	Saint Ours	81.72	7	eP	P	13 05 20.1	+2.0
DOI	San Damiano	81.73	6	P	P	13 05 17.9	-0.2
DGRG	David-gareji	81.75	338	P	P	13 05 17.5	-0.8
PCP	Pian Castagno	81.77	5	P	P	13 05 17.4	-1.0
OG25	Le Caire	81.78	7	eP	P	13 05 19.4	+1.0
BUC1	Bucharest	81.79	353	P	P	13 05 19.0	+0.5
ELAN	Lanestosa	81.86	14	P	P	13 05 19.1	+0.2
	comp=Z,188nm,0.8s,mb6.1						
CAL	Calcutta	81.89	297	ex	x	13 05 17.6	
LASF	Ste Croix	81.89	9	eP	P	13 05 19.0	0.0
	comp=Z,127nm,1.0s,mb5.5						
GRAM		81.89	4	P	P	13 05 18.3	-0.7
NVLJ	Novalja	81.95	1	iP	P	13 05 19.1	-0.2
CRAR	CRAIOVA	81.96	354	P	P	13 05 20.8	+1.4
ROB	Roburent	81.98	6	P	P	13 05 18.9	-0.6
STV2	Anna di Valdie	81.99	6	P	P	13 05 18.0	-1.5
STV	Sta Anna Valdi	81.99	6	P	P	13 05 19.0	-0.5
ENR	Entracque	82.02	6	P	P	13 05 18.8	-0.9
EZAM	Zamans	82.05	18	P	P	13 05 22.0	+2.1
	comp=Z,33nm,0.7s,mb5.4						
EZAM	Zamans	82.05	18	P	P	13 05 22.0	+2.1
EZAM				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.4						
GSCL	Gusciola	82.06	4	P	P	13 05 22.1	+2.2
FIN	Finale Ligure	82.08	6	P	P	13 05 19.4	-0.6
ERUA	La Rua	82.09	17	P	P	13 05 22.0	+2.0
	comp=Z,70nm,0.9s,mb5.6						
ERUA	La Rua	82.09	17	P	P	13 05 22.0	+1.9
ERUA				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.6						
BACM		82.11	4	P	P	13 05 19.2	-0.9
BOK	Bokaro	82.13	300	eP	P	13 05 19.7	-1.0
BOK				AMb	AMB	13 05 24.6	
	comp=Z,305nm,1.4s,mb6.0						
SMRF	Simiane la Rot	82.14	8	eP	P	13 05 20.3	0.0
	comp=Z,266nm,1.0s,mb5.8						
OSSF	Osses	82.14	13	eP	P	13 05 20.9	+0.6
EALK	Alkurruntz	82.14	13	P	P	13 05 22.0	+1.7
	comp=Z,35nm,0.7s,mb5.4						
MONE	Monesi	82.18	6	P	P	13 05 18.7	-1.8
AKH	Akhalkalaki	82.20	339	P	P	13 05 21.7	+1.1
SARO	Sassorosso	82.22	4	P	P	13 05 19.8	-0.9
TOUF	Mont Tournerai	82.22	6	eP	P	13 05 21.8	+1.1
VLC	Villacollemand	82.24	4	P	P	13 05 21.3	+0.5
AUTN	L’Aution	82.25	6	eP	P	13 05 21.8	+1.0
VINC	Vinca	82.25	4	P	P	13 05 19.0	-1.8
SAOF	Saorge	82.26	6	eP	P	13 05 20.5	-0.4
NDI	New Delhi	82.28	309	eP	P	13 05 19.0	-2.3
SJPF	Ste Jean	82.28	13	eP	P	13 05 21.0	0.0
MVIF	Mont Vial	82.33	6	eP	P	13 05 22.3	+1.1
BDI	Bagni Di Lucca	82.35	4	P	P	13 05 21.6	+0.3
DIVS	Divcibare	82.36	357	⇓iP	P	13 05 18.2	-3.2
IMI	Imperia	82.36	6	P	P	13 05 22.9	+1.5
SBF	Sospel	82.38	6	eP	P	13 05 21.8	+0.3
	comp=Z,348nm,0.9s,mb6.0						
SEI	Scarperia	82.38	3	P	P	13 05 23.8	+2.3
LARF	Larrau	82.39	12	eP	P	13 05 22.3	+0.7
NEGI	Negi	82.41	6	P	P	13 05 19.9	-1.7
ELOB	Lobios	82.44	18	P	P	13 05 22.6	+0.7
	comp=Z,48nm,1.0s,mb5.4						
CALN	Calern	82.45	7	eP	P	13 05 22.8	+0.9
MTLF	Montolieu	82.46	10	eP	P	13 05 22.2	+0.3
	comp=Z,227nm,0.9s,mb5.8						
MTLF	Montolieu	82.46	10	eP	P	13 05 22.2	+0.3
MTLF				pmax	pmax		
	comp=Z,114nm,0.9s,mb5.8						
MAIM		82.49	4	P	P	13 05 19.9	-2.1
REVF	Revere	82.50	6	eP	P	13 05 22.9	+0.8
SFI	Santa Sofia	82.55	3	P	P	13 05 24.1	+1.7
	comp=Z,77nm,0.7s,mb5.8						
SFI	Santa Sofia	82.55	3	P	P	13 05 24.1	+1.7
SFI				pmax	pmax		
	comp=Z,77nm,0.7s,mb5.8						
BOLS	Boljevac	82.55	356	⇑iP	P	13 05 22.5	+0.1
EPF	Esparros	82.56	11	eP	P	13 05 22.1	-0.3
PGD	Poggio Sodo	82.57	3	P	P	13 05 24.5	+2.0
	comp=Z,430nm,1.2s,mb6.3						
PGD	Poggio Sodo	82.57	3	P	P	13 05 24.5	+2.0
PGD				pmax	pmax		
	comp=Z,430nm,1.2s,mb6.3						
ETSF	Etsaut	82.58	12	eP	P	13 05 22.7	+0.1
PCAB	Cabril	82.60	18	eP	P	13 05 24.7	+2.0
	comp=Z,97nm,1.0s,mb5.8						
ECAL	Calabor	82.60	17	P	P	13 05 25.1	+2.4
	comp=Z,68nm,1.0s,mb5.6						
ECRI	Cripan	82.61	14	P	P	13 05 23.0	+0.3
	comp=Z,207nm,1.3s,mb6.0						
ECRI	Cripan	82.61	14	P	P	13 05 23.0	+0.3
ECRI				pmax	pmax		
	comp=Z,207nm,1.3s,mb6.0						
FRF	La Foret Royal	82.63	7	eP	P	13 05 22.0	-0.8
	comp=Z,262nm,1.0s,mb5.9						
FRF	La Foret Royal	82.63	7	eP	P	13 05 22.0	-0.8
FRF				pmax	pmax		
	comp=Z,131nm,1.0s,mb5.9						
FDAF	Les Forges d’A	82.66	12	eP	P	13 05 24.1	+1.1
VIEF	Viey	82.67	12	eP	P	13 05 24.1	+1.1
PII	Pisa	82.68	4	P	P	13 05 23.0	-0.1
	comp=Z,246nm,1.2s,mb6.1						
PII	Pisa	82.68	4	P	P	13 05 23.0	-0.1
PII				pmax	pmax		
	comp=Z,246nm,1.2s,mb6.1						
MLS	Moulis	82.72	11	eP	P	13 05 23.5	+0.2
PBRG	Braganca	82.73	17	eP	P	13 05 24.3	+0.9
	comp=Z,99nm,1.1s,mb5.8						
MELF	Melles	82.76	11	eP	P	13 05 24.2	+0.7
RESF	Ens	82.78	12	eP	P	13 05 24.9	+1.3
FSSB	Fossombrone	82.79	2	P	P	13 05 24.6	+1.0
LPEF	Le Peyrat	82.82	10	eP	P	13 05 24.4	+0.6
PRD	Provadia	82.82	352	eP	P	13 05 24.0	+0.2
CRE	Caprese Michel	82.84	3	P	P	13 05 25.1	+1.3
	comp=Z,1µm,2.8s,mb6.4						
CRE	Caprese Michel	82.84	3	P	P	13 05 25.1	+1.3
CRE				pmax	pmax		
	comp=Z,1µm,2.8s,mb6.4						
LMR	La Mourre	82.84	7	eP	P	13 05 24.3	+0.4
	comp=Z,194nm,1.0s,mb5.8						
LMR	La Mourre	82.84	7	eP	P	13 05 24.3	+0.4
LMR				pmax	pmax		
	comp=Z,97nm,1.0s,mb5.8						
SZH	Strazhica	82.87	353	eP	P	13 05 24.0	0.0
EBIE	Bielsa	82.88	12	P	P	13 05 25.2	+1.2
	comp=Z,70nm,0.7s,mb5.8						
SALF	Salau	82.92	11	eP	P	13 05 24.4	+0.1
ALBI	Allahabad	82.93	304	ex	x	13 05 21.5	
PIEI	Pieia	82.94	3	P	P	13 05 25.5	+1.2
NVSS	Nova Varos 2	82.96	357	⇑iP	P	13 05 26.3	+1.8
CSNT	Castellina Chi	82.96	3	P	P	13 05 24.7	+0.2
PVL	Pavlikeni	82.97	353	eP	P	13 05 26.0	+1.5
ARV	Arcevia	82.98	2	P	P	13 05 26.8	+2.2
KARS	Kars	83.05	340	eP	P	13 05 26.9	+1.9
PVRL	Vila Real	83.07	18	eP	P	13 05 26.1	+1.0
	comp=Z,174nm,0.9s,mb6.1						
CING	Cingoli	83.11	2	P	P	13 05 26.4	+1.2
GNI	Garni	83.14	338	eP	P	13 05 25.5	+0.1
GNI	Garni	83.14	338	LR	LR	13 47 59.9	
	comp=Z,11µm,20.7s,MS6.2,baz=7.0,slow=40						
GNI	Garni	83.14	338	⇑iP	P	13 05 26.5	+1.1
GNI				LR	LR		
	comp=Z,11µm,20.0s,MS6.2						
PLE	Pljevlja	83.14	357	⇓iP	P	13 05 26.2	+0.9
DIGO	Kars	83.18	339	iP	P	13 05 25.4	-0.2
SNTG	Esanatoglia	83.23	2	P	P	13 05 26.9	+1.1
FILF	Fillols	83.27	10	eP	P	13 05 26.5	+0.4
GRFL	Gerfalco	83.27	4	P	P	13 05 26.7	+0.6
	comp=Z,102nm,1.0s,mb5.8						
UPM	Unac-Piva	83.28	358	⇓iP	P	13 05 26.7	+0.6
VALF	Valcebollere	83.37	10	eP	P	13 05 28.5	+1.9
MACK	Trabzon	83.37	342	iP	P	13 05 26.8	+0.2
SJAF	Saint Jean de	83.38	10	eP	P	13 05 26.8	+0.2
EGRA	Graus	83.38	12	P	P	13 05 28.9	+2.3
	comp=Z,65nm,0.8s,mb5.7						
EJON	La Jonquera	83.41	10	P	P	13 05 28.6	+1.8
	comp=Z,45nm,1.0s,mb5.5						
BARS	Barje	83.56	356	⇓iP	P	13 05 27.6	+0.1
PVIS	Viseu	83.58	18	eP	P	13 05 29.0	+1.4
	comp=Z,99nm,0.9s,mb5.9						
IVA	Berane	83.58	357	⇓iP	P	13 05 29.3	+1.7
NNT	Nongplab	83.59	282	P	P	13 05 25.0	-3.2
BRY	Bratogost	83.59	358	⇓iP	P	13 05 28.1	+0.6
STON	Ston	83.63	359	iP	P	13 05 25.9	-1.9
RAO	Raoul Island	83.64	192	PFAKE		13 05 40.0	+12
RAO				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
GRSN	GIRESUNGRSN	83.66	343	iP	P	13 05 27.5	-0.5
NKY	Niksic	83.67	358	⇓iP	P	13 05 28.6	+0.6
BYBT	Boyabat	83.68	346	eP	P	13 05 29.2	+1.2
BOYT	Boyabat	83.71	346	iP	P	13 05 27.5	-0.7
PGB	Panagyurishte	83.71	354	eP	P	13 05 28.0	-0.2
VTS	Vitosha	83.72	355	iP	P	13 05 28.0	-0.3
ESAC	San Caprasio	83.75	12	P	P	13 05 29.9	+1.5
	comp=Z,164nm,0.8s,mb6.2						
PGF	Pioggiola	83.78	5	eP	P	13 05 29.2	+0.6
EMIR	Miracle	83.80	11	P	P	13 05 31.0	+2.4
	comp=Z,55nm,0.8s,mb5.7						
BALT	Daday	83.81	347	iP	P	13 05 28.8	+0.1
PVY	Plav	83.86	357	⇓iP	P	13 05 29.2	+0.2
KVT	Kavak	83.87	345	eP	P	13 05 28.6	-0.4
TERO	Teramo	83.87	2	P	P	13 05 30.4	+1.4
GUMT	Gumushane	83.89	342	eP	P	13 05 30.3	+1.1
MTE	Manteigas	83.95	18	eP	P	13 05 30.6	+1.1
	comp=Z,115nm,0.9s,mb6.0						
MTE	Manteigas	83.95	18	eS	S	13 15 53.5	+4.6
MTE				eSS	SS	13 21 27.0	+6.7
MTE				eLQ		13 27 31.4	
MTE				eLR	LR	13 33 20.4	
	comp=Z,7µm,22.0s						
MTE	Manteigas	83.95	18	eP	P	13 05 29.9	+0.4
	comp=Z,78nm,0.8s,mb5.9						
MAON	Monte Argentar	84.00	4	P	P	13 05 30.4	+0.7
HCY	Herceg Novi	84.04	358	⇓iP	P	13 05 30.2	+0.3
TTG	Podgorica	84.04	358	⇓iP	P	13 05 29.2	-0.7
ERZM	Erzurum	84.08	341	iP	P	13 05 31.8	+1.6
EZM	Erzurum	84.08	341	eP	P	13 05 31.1	+1.0
MNS	Montasola	84.09	2	P	P	13 05 29.9	-0.2
DIM	Dimitrovgrad	84.11	353	eP	P	13 05 30.0	-0.3
AQU	L’Aquila	84.14	2	eP	P	13 05 30.8	+0.4
	comp=Z,118nm,1.1s,mb5.9						
AQU	L’Aquila	84.14	2	eP	P	13 05 30.8	+0.4
AQU				pmax	pmax		
	comp=Z,118nm,1.1s,mb5.9						
BUM	Brajici-Budva	84.18	358	⇓iP	P	13 05 31.2	+0.6
TOS	Tosya	84.21	346	eP	P	13 05 32.4	+1.7
KELT	Kelkit	84.24	342	iP	P	13 05 34.1	+3.1
CLDR	Caldiran	84.28	339	eP	P	13 05 31.6	+0.4
GUD	Guadarrama	84.29	15	P	P	13 05 32.1	+0.9
	comp=Z,67nm,0.6s,mb6.0						
GUD	Guadarrama	84.29	15	P	P	13 05 32.1	+0.9
GUD				pmax	pmax		
	comp=Z,67nm,0.6s,mb6.0						
EPOB	Poblet	84.30	11	P	P	13 05 31.9	+0.6
	comp=Z,119nm,0.8s,mb6.1						
TOLF	Tolfa	84.39	3	P	P	13 05 32.3	+0.6
DEG	La Desirade	84.42	70	eP	P	13 05 32.6	+0.2
SKO	Skopje	84.43	356	eP	P	13 05 25.9	-5.9
SKO				epP	pP	13 05 32.0	-12
	comp=Z,2µm,2.6s						
SKO	Skopje	84.43	356	iP	P	13 05 25.9	-5.9
	comp=Z,210nm,0.9s,mb6.3						
SKO				epP	pP	13 05 32.0	-12
SKO	Skopje	84.43	356	iP	P	13 05 25.9	-5.9
SKO				e*PP	pP	13 05 32.0	-12
SKO				pmax	pmax		
	comp=Z,210nm,0.9s,mb6.3						
PTQR	Pietraquaria	84.47	2	P	P	13 05 33.4	+1.4
INTR	Introdacqua	84.49	2	P	P	13 05 33.2	+1.1
CTKT	Corum	84.50	346	iP	P	13 05 32.4	+0.2
PCBR	Castelo Branco	84.51	18	eP	P	13 05 33.5	+1.2
	comp=Z,100nm,1.8s,mb5.6						
ULC	Ulcinj	84.51	358	⇓iP	P	13 05 33.0	+0.7
KDZ	Kurdzhali	84.52	353	iP	P	13 05 32.0	-0.3
RZN	Rozhen	84.53	353	iP	P	13 05 32.5	+0.1
PTOM	Tomar	84.55	19	eP	P	13 05 33.8	+1.3
	comp=Z,130nm,1.0s,mb6.0						
ERTA	Horta de San J	84.60	12	P	P	13 05 34.5	+1.7
	comp=Z,21nm,0.8s,mb5.3						
CANT	Cankiri	84.69	347	eP	P	13 05 34.4	+1.2
MMB	Musomiste	84.69	354	iP	P	13 05 34.0	+0.8
GUAR	Guarcino	84.69	2	P	P	13 05 35.2	+2.0
EBR	Ebro Roquetas	84.76	12	eP	P	13 05 34.5	+1.0
ELBA	Catalca	84.76	351	iP	P	13 05 33.2	-0.3
CII	Carovilli	84.78	1	P	P	13 05 35.4	+1.8
RNI2	Rionero Sannit	84.80	1	P	P	13 05 35.3	+1.6
HENT	Hendek	84.82	349	iP	P	13 05 34.5	+0.7
ELDT	Eldivan	84.83	347	iP	P	13 05 34.2	+0.3
RGNG	Rignano Grg	84.84	0	P	P	13 05 35.9	+2.0
MIDA	Miranda	84.86	1	P	P	13 05 35.3	+1.3
SDV	Santo Domingo	84.90	82	eP	P	13 05 33.8	-1.0
	comp=Z,19nm,0.8s,mb5.3						
SDV				LR	LR		
	comp=Z,3µm,21.0s,MS5.6						
VANB	Van	84.92	339	eP	P	13 05 34.9	+0.5
CORM	Corum	84.96	346	eP	P	13 05 33.3	-1.2
TVAN	Van	84.98	339	iP	P	13 05 36.2	+1.5
VAY	Valandovo	85.02	355	eP	P	13 05 27.7	-7.1
	comp=Z,3µm,4.0s						
VAY				epP	pP	13 05 35.2	-12
VAY	Valandovo	85.02	355	eP	P	13 05 27.7	-7.1
VAY				epP	pP	13 05 35.2	-12
BNGL	BINGOL	85.04	341	iP	P	13 05 34.6	-0.3
EMOS	Mosqueruela	85.09	13	P	P	13 05 37.6	+2.4
	comp=Z,74nm,0.8s,mb5.9						
PLOU	Loures	85.12	19	eP	P	13 05 37.0	+1.6
	comp=Z,137nm,0.8s,mb6.1						
SGG	Gregorio Mates	85.12	1	P	P	13 05 35.3	0.0
CTA	Charters Tower	85.13	226	eP	P	13 05 35.7	-0.1
	comp=Z,11nm,0.8s,mb5.0						
CTA	Charters Tower	85.13	226	LR	LR	13 42 43.3	
	comp=Z,2µm,19.1s,MS5.6,baz=27,slow=35						
CTA	Charters Tower	85.13	226	eP	P	13 05 35.7	-0.1
CTA				pmax	pmax		
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	85.13	226	eP	P	13 05 34.0	-1.8
	comp=Z,42nm,1.2s,mb5.5						
CTAO				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
CTAO	Charters Tower	85.13	226	eP	P	13 05 34.0	-1.8
CTAO				pmax	pmax		
	comp=Z,42nm,1.2s,mb5.4						
CTAO				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
MDU	Mudurnu	85.13	348	eP	P	13 05 35.7	+0.3
KNT	Kendrikon	85.17	355	eP	P	13 05 36.3	+0.8
RFI	Roccamonfina	85.20	1	P	P	13 05 37.9	+2.2
	comp=Z,20nm,0.9s,mb5.2						
ALN	Alexandroupoli	85.22	352	eP	P	13 05 37.1	+1.3
ESDC	Sonseca Array	85.27	15	P	P	13 05 37.1	+1.0
	comp=Z,46nm,0.7s,mb5.8,baz=342,slow=4.6,SNR=108						
ESDC	Sonseca Array	85.27	15	P	P	13 05 37.0	+1.0
	comp=Z,43nm,0.6s,mb5.8						
ESLA	Sonseca Array	85.27	15	eP	P	13 05 36.0	-0.1
	comp=Z,21nm,0.9s,mb5.3						
ESLA				LR	LR		
	comp=Z,23µm,20.0s,MS6.6						
PSB1	Pescosannita	85.29	1	P	P	13 05 37.0	+0.9
OHR	Ohrid	85.31	356	eP	P	13 05 30.1	-6.1
	comp=Z,623nm,1.4s,mb6.5						
OHR				epP	pP	13 05 35.9	-13
OHR	Ohrid	85.31	356	eP	P	13 05 30.1	-6.2
OHR				epP	pP	13 05 35.8	-13
KAKA	Kakadu	85.32	241	eP	P	13 05 55.8	+19
	comp=Z,85nm,0.9s,mb5.9						
SART	Tekirdag	85.33	351	iP	P	13 05 35.7	-0.7
AJM	Ajmer	85.34	310	eP	P	13 05 36.4	-0.3
AJM				AMb	AMB	13 05 39.9	
	comp=Z,257nm,1.6s,mb6.1						
FG4	Candela	85.38	0	P	P	13 05 38.9	+2.3
	comp=Z,119nm,0.7s,mb6.1						
FG4	Candela	85.38	0	P	P	13 05 38.9	+2.3
FG4				pmax	pmax		
	comp=Z,119nm,0.7s,mb6.1						
BIA	Bitola	85.38	356	eP	P	13 05 30.4	-6.2
BIA				epP	pP	13 05 37.0	-12
BIA	Bitola	85.38	356	eP	P	13 05 30.4	-6.2
BIA				epP	pP	13 05 37.0	-12
GRG	Griva	85.39	355	eP	P	13 05 37.7	+1.0
BLSP	Bilaspur	85.42	302	eP	P	13 05 35.7	-1.5
BLSP				AMb	AMB	13 05 38.4	
	comp=Z,210nm,1.2s,mb6.1						
SOH	Sokhos	85.48	354	eP	P	13 05 37.5	+0.4
LOD	Lodumlu	85.51	347	eP	P	13 05 38.5	+1.2
ANTO	Ankara	85.52	347	eP	P	13 05 37.2	-0.1
ANTO	Ankara	85.52	347	eP	P	13 05 37.4	+0.1
	comp=Z,249nm,0.9s,mb6.4						
ANTO				LR	LR		
	comp=Z,9µm,20.0s,MS6.2						
ANTO	Ankara	85.52	347	eP	P	13 05 37.4	+0.1
ANTO				pmax	pmax		
	comp=Z,249nm,0.9s,mb6.4						
ANTO				MLR	MLR		
	comp=Z,9µm,20.0s,MS6.2						
CDAG	Cicekdag	85.55	346	iP	P	13 05 34.6	-2.9
FNA	Florina	85.61	356	eP	P	13 05 38.0	+0.2
EBAD	Badajoz	85.65	18	P	P	13 05 40.3	+2.4
	comp=Z,13nm,0.6s,mb5.3						
CSSN	Cassano Irpino	85.65	1	P	P	13 05 38.5	+0.6
EVO	Evora	85.68	19	eP	P	13 05 38.3	+0.2
	comp=Z,31nm,0.7s,mb5.3						
EVO				eR			
	comp=Z,10µm,21.0s						
ULDT	Uludag	85.69	350	iP	P	13 05 37.9	-0.2
THE	Thessaloniki	85.69	355	eP	P	13 05 38.6	+0.5
ECHE	Chera	85.78	13	P	P	13 05 41.5	+2.9
	comp=Z,17nm,0.7s,mb5.4						

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ECHE  Chera            85.78  13  P       P        13 05 41.5 +2.9
ECHE                              pmax    pmax
      comp=Z,17nm,0.7s,mb5.4
BORA  Eskisehir        85.80 349 i P      P        13 05 36.9 -1.8
HAKT  HAKKARI          85.85 338 i P      P        13 05 38.1 -0.9
KAMT  Kaman            85.89 346 eP       P        13 05 38.6 -0.5
ELZG  Elazig           85.89 342 i P      P        13 05 39.6 +0.5
OUR   Ouranopolis      85.92 354 eP       P        13 05 39.7 +0.5
ROSC  El Rosal         85.94  87  P       P        13 05 40.8 +0.8
      comp=Z,4.9nm,0.6s,mb4.9,baz=104,slow=20,SNR=6.6
ROSC                              LR      LR       13 46 32.1
      comp=Z,964nm,19.5s,MS5.2,baz=97,slow=37
SGO   Sicignano        85.95   1  P       P        13 05 40.8 +1.4
      comp=Z,213nm,1.8s,mb6.1
SGO   Sicignano        85.95   1  P       P        13 05 40.8 +1.4
SGO                               pmax    pmax
      comp=Z,213nm,1.8s,mb6.1
BEST  Besiri           86.04 340 i P      P        13 05 41.6 +1.7
ETOS  Mallorca         86.06  10  P       P        13 05 42.3 +2.4
      comp=Z,80nm,0.8s,mb6.0
ESKT  Eskisehir        86.11 349 eP       P        13 05 40.6 +0.4
ESKT  Eskisehir        86.11 349 i P      P        13 05 39.1 -1.1
SLCN  Sala Consilina   86.12   0  P       P        13 05 40.7 +0.5
MYA   Malataya         86.16 342 eP       P        13 05 42.1 +1.7
SIRT  Sirnak           86.18 339 eP       P        13 05 41.0 +0.4
PBEJ  Beja             86.20  19 eP       P        13 05 41.6 +0.9
      comp=Z,32nm,1.6s,mb5.3
LIT   Litokhoron       86.24 355 eP       P        13 05 41.6 +0.7
KSM   Kuching          86.25 267 eP       P        13 05 41.5  0.0
LOS   Limnos           86.25 353 eP       P        13 05 41.4 +0.6
AVNT  Avonos           86.30 345 i P      P        13 05 43.2 +2.0
BALB  Balikesir        86.31 351 eP       P        13 05 39.5 -1.7
PAIG  Paliouri         86.35 354 eP       P        13 05 42.3 +1.0
ORI   Oriolo Calabro   86.45 360  P       P        13 05 43.6 +1.8
      comp=Z,250nm,0.8s,mb6.5
ORI   Oriolo Calabro   86.45 360  P       P        13 05 43.6 +1.8
ORI                               pmax    pmax
      comp=Z,250nm,0.8s,mb6.5
PTEO  Sao Teotonio     86.50  19 eP       P        13 05 43.8 +1.7
      comp=Z,69nm,0.8s,mb5.9
EVIA  Vianos           86.50  14  P       P        13 05 44.6 +2.4
      comp=Z,46nm,0.7s,mb5.8
EVIA  Vianos           86.50  14  P       P        13 05 44.6 +2.5
EVIA                              pmax    pmax
      comp=Z,46nm,0.7s,mb5.8
CUC   Castrocucco      86.52   0  P       P        13 05 42.3 +0.1
ECAB  El Cabril        86.59  17  P       P        13 05 45.7 +3.1
      comp=Z,12nm,0.8s,mb5.2
KIZT  Kizilcal         86.61 348 eP       P        13 05 42.7  0.0
MEV   Metsovon         86.62 356 eP       P        13 05 43.8 +1.1
EIBI  Ibiza            86.63  11  P       P        13 05 44.6 +1.8
      comp=Z,753nm,2.5s,mb6.5
ETOB  Tobarra          86.63  14  P       P        13 05 44.9 +2.1
      comp=Z,17nm,0.6s,mb5.5
EADA  Adamuz           86.64  16  P       P        13 05 44.9 +2.1
      comp=Z,21nm,0.7s,mb5.5
EMIN  Mina Concepcio   86.67  18  P       P        13 05 44.8 +1.8
      comp=Z,30nm,0.7s,mb5.6
GDZ   Gediz            86.69 350 i P      P        13 05 41.0 -2.1
MARD  Mardin           86.70 340 i P      P        13 05 42.9 -0.2
KEK   Kerkira          86.74 357 eP       P        13 05 43.5 +0.2
EGRO  El Granado       86.75  18  P       P        13 05 44.9 +1.6
      comp=Z,32nm,0.9s,mb5.6
EBEN  Beniarda         86.75  13  P       P        13 05 46.0 +2.6
      comp=Z,31nm,0.8s,mb5.6
JAN   Janina           86.76 356 eP       P        13 05 44.0 +0.6
EBAN  Banos Encina     86.77  15  P       P        13 05 44.7 +1.2
      comp=Z,19nm,0.8s,mb5.4
EBAN  Banos Encina     86.77  15  P       P        13 05 44.7 +1.2
EBAN                              pmax    pmax
      comp=Z,19nm,0.8s,mb5.4
BHPL  Bhopal           86.80 306 eP       P        13 05 42.9 -1.0
BHPL                              AMb     AMB      13 05 45.7
      comp=Z,323nm,1.1s,mb6.5
PRK   Paraskevi        86.84 352 eP       P        13 05 46.0 +2.2
VSL   Villasalto       86.84   5 eP       P        13 05 43.8  0.0
      comp=Z,376nm,1.5s,mb6.4
TDS   Terranova Siba   86.85 360  P       P        13 05 45.7 +1.9
      comp=Z,244nm,0.9s,mb6.4
TDS   Terranova Siba   86.85 360  P       P        13 05 45.7 +1.9
TDS                               pmax    pmax
      comp=Z,244nm,0.9s,mb6.4
IGT   Igoumenitsa      86.90 357 eP       P        13 05 44.3 +0.2
XOR   Xorichti         86.94 354 eP       P        13 05 44.0 -0.2
KDHN  Kadinhani        86.94 347 i P      P        13 05 41.6 -2.7
URFA  Urfa             86.95 342 eP       P        13 05 44.7 +0.3
AOS   Alonnisos        87.09 354 eP       P        13 05 44.2 -0.8
KAHT  Ahir Dag         87.10 344 i P      P        13 05 46.2 +1.1
MSL   Mosul            87.20 338 ex       x        13 05 44.0
MSL                              ex       x        13 05 57.5
MSL   Mosul            87.20 338 ex       x        13 16 05.0
MSL                              ex       x        13 16 19.5
EQES  Quesada          87.24  15  P       P        13 05 47.0 +1.3
      comp=Z,13nm,0.8s,mb5.2
GZT   Gaziantep        87.25 343 i P      P        13 05 46.2 +0.4
ELUQ  Luque            87.28  16  P       P        13 05 47.8 +1.8
      comp=Z,15nm,0.8s,mb5.3
ELUQ  Luque            87.28  16  P       P        13 05 47.8 +1.8
ELUQ                              pmax    pmax
      comp=Z,15nm,0.8s,mb5.3
AGG   Agios Georgios   87.33 355 eP       P        13 05 45.5 -0.6
TIP   Timpagrande      87.33 359  P       P        13 05 48.1 +1.9
SNG   Songkhla         87.41 279  P       P        13 05 50.0 +2.9
      comp=Z,240nm,0.9s,mb6.4
KOZT  Kozan            87.42 344 eP       P        13 05 46.2 -0.5
EVR   Evrytania        87.46 355 eP       P        13 05 47.5 +0.7
EMUR  La Murta         87.47  14  P       P        13 05 48.3 +1.4
      comp=Z,22nm,0.8s,mb5.4
KONT  Konya--Tatoy     87.47 347 eP       P        13 05 48.6 +1.8
KDAG  Bornova          87.59 351 i P      P        13 05 46.4 -1.0
IZM   Izmir            87.60 351 eP       P        13 05 47.0 -0.5
TKTP  Tekketepe        87.63 349 i P      P        13 05 47.0 -0.7
ECOG  Cogollos-Vega    87.67  15  P       P        13 05 49.9 +2.0
      comp=Z,31nm,0.8s,mb5.6
ECOG  Cogollos-Vega    87.67  15  P       P        13 05 49.9 +2.0
ECOG                              pmax    pmax
      comp=Z,31nm,0.8s,mb5.6
ESPR  Espera           87.69  17  P       P        13 05 48.3 +0.3
      comp=Z,68nm,1.1s,mb5.8
GRI   Girifalco        87.69 360  P       P        13 05 48.5 +0.6
ELOJ  Sierra Loja      87.71  16  P       P        13 05 50.2 +2.2
      comp=Z,23nm,0.8s,mb5.5
ELOJ  Sierra Loja      87.71  16  P       P        13 05 50.2 +2.2
ELOJ                              pmax    pmax
      comp=Z,23nm,0.8s,mb5.5
KARA  Karaisali        87.76 345 eP       P        13 05 47.1 -1.2
ISP   Isparta          87.81 349 eP       P        13 05 46.9 -1.6
ISP   Isparta          87.81 349  P       P        13 05 50.4 +1.9
ERON  Agron            87.89  16  P       P        13 05 49.9 +1.0
      comp=Z,18nm,0.8s,mb5.3
CEYT  Ceyhan           87.89 344 eP       P        13 05 48.4 -0.6
DENT  Denizli          88.06 350 eP       P        13 05 49.5 -0.2
MPAR  Parnis Oros      88.11 354 eP       P        13 05 49.5 -0.4
DNZL  Cakiroluk        88.12 350 i P      P        13 05 50.4 +0.4
VLS   Valsamata        88.25 356 eP       P        13 05 49.0 -1.6
COBT  Iskenderun       88.29 344 i P      P        13 05 51.1 +0.2
VIS   Vishakhapatnam   88.48 298 eP       P        13 05 52.0 -0.2
VIS                               AMb     AMB      13 05 56.3
      comp=Z,184nm,2.2s,mb5.9
MLSB  Milas            88.64 351 eP       P        13 05 49.0 -3.5
KULM  Kulim            88.90 277 eP       P        13 05 53.9 -0.4
ITM   Ithomi           89.18 355 eP       P        13 05 56.5 +1.4
DFRA  Djebel Bou Aff   89.54   8  P       P        13 06 04.0 +7.2
CMAH  Djebel Manchou   89.58   7  P       P        13 05 57.0  0.0
VLI   Veliai           89.59 354 eP       P        13 05 57.0  0.0
CGMA  Guelma           89.75   7  P       P        13 05 58.0 +0.2
BHD   Baghdad          89.80 337 i x      x        13 05 59.0
BHD   Baghdad          89.80 337 i x      x        13 16 27.0
BHD                              i x      x        13 16 47.0
SET   Setif            89.84   9  P       P        13 06 00.0 +1.8
CASM  Ain Smara        89.87   8  P       P        13 05 59.0 +0.7
CKHR  Kef el Ahmar     90.03   8  P       P        13 06 01.0 +1.9
CSS   Prodhromos       90.27 346 eP       P        13 05 59.9 -0.3
      comp=Z,61nm,1.0s,mb5.9
BHJ   Bhuj             90.36 312 eP       P        13 05 59.6 -1.3
BHJ                               AMb     AMB      13 06 04.4
      comp=Z,104nm,2.1s,mb5.8
WRAB  Tennant Creek    90.47 236 eP       P        13 06 00.3 -1.2
      comp=Z,109nm,1.4s,mb6.0
WRAB                              LR      LR
      comp=Z,744nm,22.0s,MS5.1
WRAB  Tennant Creek    90.47 236 eP       P        13 06 00.3 -1.2
WRAB                              pmax    pmax
      comp=Z,109nm,1.4s,mb6.0
WRAB                              MLR     MLR
      comp=Z,744nm,22.0s,MS5.1
WB2   Warramunga Arr   90.47 236 eP       P        13 06 00.9 -0.6
WB2                              eS       S        13 16 51.3 +0.2
WRA   Warramunga Arr   90.48 236  P       P        13 06 00.6 -0.9
      comp=Z,16nm,1.1s,mb5.3,baz=38,slow=5.3,SNR=41
WRA                               PKiKP            13 10 55.9
      comp=Z,1.2nm,0.9s,baz=357,slow=1.8,SNR=5.5
WRA                               S                13 16 28.5
      comp=Z,1.8nm,1.2s,baz=18,slow=6.0,SNR=6.9
VAM   Vamos            90.81 353 eP       P        13 06 03.0 +0.2
BHL   Bhannes          90.95 344 eP       P        13 06 03.4 -0.1
HYB   Hyderabad        91.19 302⇑i P      P        13 06 04.5 -0.4
      comp=Z,220nm,1.0s,mb6.4
HYB                              ePP      PP       13 09 44.0 -0.5
HYB                              eS       S        13 16 58.0 +0.6
HYB                               LR      LR       13 50 58.0
      comp=Z,17nm,20.0s
HYB   Hyderabad        91.19 302⇑eP       P        13 06 04.5 -0.4
      comp=Z,220nm,1.0s,mb6.4
HYB                              eS       S        13 16 56.0 -1.4
HYB                              eLR      LR       13 50 58.0
HYB   Hyderabad        91.19 302⇑eP       P        13 06 04.5 -0.4
HYB                              eS       S        13 16 56.0 -1.4
HYB                               pmax    pmax
      comp=Z,220nm,1.0s,mb6.4
LATR  Latur            91.33 304 eP       P        13 06 06.5 +1.0
ARMA  Armidale         92.29 217 eP       P        13 06 11.1 +1.4
MIB   Mutribah         92.36 333 eP       P        13 06 09.8 -0.2
MIB                               AMb     AMB      13 06 13.2
      comp=Z,230nm,0.9s,mb6.5
POO   Poona            92.54 306 ex       x        13 06 22.1
POO                               AMb     AMB      13 06 25.5
      comp=Z,101nm,2.6s,mb5.8
BOM   Bombay           92.71 307 eP       P        13 06 08.1 -3.8
BOM                              ex       x        13 16 29.2
KBD   Kabd             92.86 333 eP       P        13 06 12.3  0.0
KBD                               AMb     AMB      13 06 15.5
      comp=Z,240nm,0.8s,mb6.7
NAY   Al-Naaiem        92.91 333 eP       P        13 06 12.7 +0.1
NAY                               AMb     AMB      13 06 15.8
      comp=Z,61nm,1.0s,mb6.0
RDF   Al-Radifah       93.13 333 eP       P        13 06 13.6  0.0
RDF                               AMb     AMB      13 06 16.9
      comp=Z,144nm,0.9s,mb6.4
FITZ  Fitzroy Crossi   93.39 244  LR      LR       13 43 33.9
      comp=Z,4µm,22.0s,MS5.8,baz=22,slow=32
FITZ  Fitzroy Crossi   93.39 244 eP       P        13 06 14.8 -0.2
      comp=Z,45nm,0.9s,mb5.9
FITZ                             eS       S        13 17 19.7 +2.9
KAD   Karad            93.43 306 eP       P        13 06 14.9 -0.2
KAD                               AMb     AMB      13 06 18.6
      comp=Z,80nm,1.8s,mb5.8
RPN   Rapa Nui         93.46 133  PFAKE            13 06 30.0  +15
RPN                               LR      LR
      comp=Z,1µm,21.0s,MS5.4
ASPA  Alice Springs    93.85 234 eP       P        13 06 16.7 -0.2
MDRS  Chennai          93.98 298 eP       P        13 06 16.0 -1.7
MDRS                              AMb     AMB      13 06 21.3
      comp=Z,97nm,1.9s,mb5.9
ASHO  Ashiyiah         94.45 324  P       P        13 06 19.8 +0.1
      SNR=16
WBK   Wadi Bani Khal   95.30 321  P       P        13 06 24.9 +1.3
      SNR=11
ARQ   Araqi            95.53 323  P       P        13 06 24.3 -0.3
      SNR=19
ALWS  Ilw as Safayha   95.54 343  P       P        13 06 25.7 +1.2
JMOS  Jabal al Moall   95.67 343  P       P        13 06 25.4 +0.2
HAQS  Haql             95.81 343  P       P        13 06 27.0 +1.3
BSY   Bisya            95.83 322  P       P        13 06 25.4 -0.6
      SNR=17
JMDO  Jabal Madar      95.84 321  P       P        13 06 26.4 +0.4
      SNR=7.2
TBKS  Tabuk            96.33 342  P       P        13 06 30.6 +2.4
BDAS  Al Bad‘          96.39 343  P       P        13 06 30.2 +1.8
SNZO  South Karori     96.54 196  PFAKE            13 06 40.0  +11
SNZO                              LR      LR
      comp=Z,5µm,20.0s,MS6.0
AYUS  ‘Aynunah         96.60 343  P       P        13 06 31.5 +2.1
MNGI  Mangalore        96.86 303 eP       P        13 06 29.2 -1.6
MNGI                             eS                13 17 04.4
STKA  Stephens Creek   97.46 224  P       P        13 06 32.6 -0.6
      comp=Z,4.0nm,0.9s,mb4.8,baz=329,slow=4.1,SNR=6.8
STKA                              LR      LR       13 46 51.9
      comp=Z,3µm,20.3s,MS5.7,baz=22,slow=33
STKA  Stephens Creek   97.46 224 eP       P        13 06 33.5 +0.3
      comp=Z,6.6nm,1.5s,mb4.8
STKA                             eS                13 17 04.5
STKA                             i                 13 17 58.3
NNA   Nana             97.92  99  PFAKE            13 06 50.0  +14
NNA                               LR      LR
      comp=Z,708nm,22.0s,MS5.1
KBRS  Khaybar          98.16 339  P       P        13 06 38.3 +1.8
MZLS  Mizel            98.42 333  P       P        13 06 38.5 +0.8
PALK  Pallekele        98.60 295  PFAKE            13 06 50.0  +11
PALK                              LR      LR
      comp=Z,1µm,21.0s,MS5.3
AFFS  ‘Afif            99.08 335  P       P        13 06 42.8 +2.1
UMJS  Umm Lajj         99.10 340  P       P        13 06 43.0 +2.3
TRD   Trivandrum       99.54 299 eP       P        13 06 40.6 -2.4
TRD                               AMb     AMB      13 06 46.9
      comp=Z,30nm,1.7s,mb5.4
YNBS  Yanbu‘ al Bahr   99.83 340  P       P        13 06 46.3 +2.1
KAMS  Al Khamasin     102.13 333  P       Pdif     13 06 56.1 +1.5
TATS  Tathlith        103.16 333  P       Pdif     13 07 01.0 +1.9
BLJS  Baljurashi      103.31 335  P       Pdif     13 07 02.0 +2.3
SAML  Samuel          103.57  87  PFAKE            13 07 10.0 +9.0
SAML                              LR      LR
      comp=Z,2µm,20.0s,MS5.7
TAU   Tasmania Unive  105.01 215  PFAKE            13 07 20.0  +13
TAU                               LR      LR
      comp=Z,515nm,21.0s,MS5.0
COCO  West Island     105.13 270  PFAKE            13 11 30.0
COCO                              LR      LR
      comp=Z,493nm,20.0s,MS5.0
LPAZ  La Paz          106.44  95  PFAKE            13 11 40.0
LPAZ                              LR      LR
      comp=Z,2µm,22.0s,MS5.7
NWAO  Narrogin (SRO)  109.79 241  PFAKE            13 11 40.0
NWAO                              LR      LR
      comp=Z,2µm,20.0s,MS5.8
DGAR  Diego Garcia    115.31 294  PFAKE            13 11 50.0  +10
DGAR                              LR      LR
      comp=Z,1µm,21.0s,MS5.5
RCBR  Riachuelo       116.43  61  PFAKE            13 12 00.0  +18
RCBR                              LR      LR
      comp=Z,3µm,20.0s,MS5.9
DBIC  Dimbokro        117.19  23  PKP     PKPdf    13 11 44.5 +0.7
      comp=Z,3.6nm,0.7s,baz=360,slow=9.1,SNR=6.9
DBIC  Dimbokro        117.19  23  PKP     PKPdf    13 11 44.5 +0.7
DBIC                              LR      LR
      comp=Z,9µm,20.0s,MS6.4
LIC   Lamto           117.58  24 ePKIKP   PKPdf    13 11 44.7 +0.1
      comp=Z,8.8nm,0.6s
LIC                              eR
      comp=Z,7µm,23.0s
BDFB  Brasilia        117.79  78  PKP     PKPdf    13 11 45.5 +0.6
      comp=Z,1.9nm,0.6s,baz=178,slow=3.0,SNR=3.2
CPUP  Villa Florida   120.55  94  PFAKE            13 12 00.0  +10
CPUP                              LR      LR
      comp=Z,372nm,20.0s,MS5.0
MSEY  Mahe Island     121.38 312  PFAKE            13 12 00.0 +8.0
MSEY                              LR      LR
      comp=Z,849nm,20.0s,MS5.4
PLCA  Paso Flores     123.44 115  PKP     PKPdf    13 11 55.6 +0.3
      comp=Z,9.1nm,0.9s,baz=300,slow=1.8,SNR=13
PLCA  Paso Flores     123.44 115  PKP     PKPdf    13 11 55.6 +0.3
PLCA                              LR      LR
      comp=Z,3µm,20.0s,MS6.0
KMBO  Kilima Mbogo    124.58 334  PKP     PKPdf    13 11 59.7 +1.5
      comp=Z,7.3nm,0.8s,baz=10,slow=3.6,SNR=31
KMBO  Kilima Mbogo    124.58 334  PKP     PKPdf    13 11 59.7 +1.5
KMBO                              LR      LR
      comp=Z,2µm,20.0s,MS5.7
TRQA  Tornquist       126.32 107  PFAKE            13 12 10.0 +9.1
TRQA                              LR      LR
      comp=Z,3µm,22.0s,MS5.9
DRV   Dumont d'Urvil  127.37 205  PP      PP       13 14 13.0 +6.7
SBA   Scott Base      132.68 188  PFAKE            13 12 20.0 +7.9
SBA                               LR      LR
      comp=Z,3µm,22.0s,MS6.0
VNDA  Vanda           132.82 190  PFAKE            13 12 20.0 +7.7
VNDA                              LR      LR
      comp=Z,5µm,20.0s,MS6.2
CASY  Casey           135.87 215  PFAKE            13 12 30.0  +12
CASY                              LR      LR
      comp=Z,4µm,22.0s,MS6.1
EFI   East Falkland   137.05 119  PFAKE            13 12 30.0 +9.3
EFI                               LR      LR
      comp=Z,2µm,20.0s,MS5.8
LSZ   Lusaka          140.32 341 ePKP     PKPdf    13 12 21.5 -6.0
LSZ                               LR      LR
      comp=Z,3µm,20.0s,MS6.0
PMSA  Palmer Station  140.53 138  PFAKE            13 12 40.0  +13
PMSA                              LR      LR
      comp=Z,8µm,20.0s,MS6.5
QSPA  South Pole Qui  143.63 180⇓i P      PKPbc    13 12 31.5 +1.3
TSUM  Tsumeb          145.38 357 ePKP     PKPdf    13 12 36.2  0.0
TSUM                              LR      LR
      comp=Z,4µm,21.0s,MS6.1
LBTB  Lobatse         150.30 342 ePKPdf   PKPdf    13 12 46.0 +1.9
LBTB                              LR      LR
      comp=Z,4µm,21.0s,MS6.2
BOSA  Boshof          153.87 341  PKP     PKPdf    13 12 51.3 +2.1
      comp=Z,5.0nm,0.7s,baz=41,slow=2.8,SNR=7.8
BOSA                              PKPbc   PKPdf    13 12 58.4 +9.2
      comp=Z,19nm,0.8s,baz=54,slow=2.1,SNR=20
BOSA  Boshof          153.87 341 ePKP     PKPdf    13 12 50.8 +1.6
BOSA                              LR      LR
      comp=Z,8µm,21.0s,MS6.5
MAW   Mawson          154.06 220 eP       PKPdf    13 12 50.4 +2.2
      comp=Z,10nm,0.8s
MAW   Mawson          154.06 220  PKP     PKPdf    13 12 50.2 +1.9
      comp=Z,4.0nm,0.9s,baz=130,slow=3.5,SNR=5.9
TRIS  Tristan da Cun  154.26  61  PFAKE            13 13 00.0  +11
TRIS                              LR      LR
      comp=Z,3µm,19.0s,MS6.1
SUR   Sutherland      158.25 349  PFAKE            13 13 10.0  +15
SUR                               LR      LR
      comp=Z,2µm,20.0s,MS5.8
VNA3  Neumayer Olymp  159.25 157⇑i P      PKPdf    13 12 54.9 +0.1
VNA1  Neumayer--Stat  160.00 156⇑i P      PKPdf    13 12 56.0 +0.3
VNA2  Neumayer--Watz  160.00 158⇑i        PKPdf    13 13 10.9  +15
VNA2  Neumayer--Watz  160.00 158          PKPab    13 13 38.4 +0.7
VNA2  Neumayer--Watz  160.00 158⇑i PKPdf  PKPdf    13 12 55.0 -0.7
VNA2                            ⇑i P               13 13 10.9
SNAA  Sanae           160.34 162⇑i P      PKPdf    13 12 54.7 -1.3
SNAA  Sanae           160.34 162  PKP     PKPdf    13 12 55.5 -0.5
      comp=Z,1.9nm,1.0s,baz=139,slow=2.5,SNR=8.0
SYO   Syowa Base      161.28 207 ⇑P       PKPdf    13 12 56.8 -0.2
SYO   Syowa Base      161.28 207⇑eP       PKPdf    13 12 56.8 -0.2
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NEIC 20 12:55:23.8, 53.83N×163.96W, h21^{km}, ML4.5(AEIC), **After AEIC., Unimak Island region**

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Code  Station Name      Δ°   AZ°   Phase ID        Time       Res
                                   Op     ISC      h  m  s    ISC
WESN  West Dahl Nort    0.83 334   P      Pb       12 55 38.9 -0.4
WFAR  Faris Peak        0.86 326   P      Pb       12 55 38.5 -1.3
SSLS  Shishaldin Sou    0.88 358   P      Pb       12 55 39.3 -1.0
AKUT  Akutan            1.11 287   P      Pb       12 55 42.5 -1.8
AKUT                               S      Sb       12 55 56.7 -1.7
UNV   Unalaska Valle    1.51 272   P      Pn       12 55 47.4 -2.6
UNV                                S      Sn       12 56 06.4 -2.7
MNAT  Makushin Natee    1.62 273   P      Pn       12 55 49.4 -2.1
MTBL  Makushin Table    1.62 276   P      Pn       12 55 49.7 -1.8
MSW   Makushin Switc    1.68 274   P      Pn       12 55 50.2 -2.1
MSOM  Makushin Julie    1.77 271   P      Pn       12 55 51.3 -2.4
BLHA  Black Hill        2.17  30   P      Pn       12 55 59.6 +0.1
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*NNC **20** 12:55:52.0±65.0, 35.41N×73.46E, mpv4.0, Error ellipse: s-maj=1458.3km s-min=632.8km az=74.0*

ISC 20 12:55:51.0±5.4, **35.4N**±0.1×**74.6E**±0.3, **h26**^{km}±46^{km}, **n4,** σ**1**^{s}**08**/7, **2C, Northwestern Kashmir**

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Code  Station Name      Δ°   AZ°   Phase ID        Time       Res
                                   Op     ISC      h  m  s    ISC
DLH   Dalhousie         3.07 158  eS      Sn       12 57 14.0 -1.2
THN   Thein Dam         3.10 162  eP      Pn       12 56 34.4 -5.0
THN                               eS      Sn       12 57 17.0 +1.0
KLP   Kalpa             4.91 141  eP      Pn       12 57 05.9 +0.7
KLP                               eS      Sn       12 58 01.8 -0.1
KLP                                AML    AML      12 58 34.1
      comp=E,56nm,0.7s
KLP                                AML    AML      12 58 34.3
      comp=N,58nm,0.5s
KK31  Karatay Array     8.32 339  ⇑Pn     P        12 57 52.3 -0.7
      comp=N,2.3nm,0.2s,baz=153,slow=11,SNR=43
KK31                              ⇑Sn     Sn       12 59 27.5 +0.4
      comp=N,1.0nm,0.2s,baz=165,slow=22,SNR=8.5
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*IDC **20** 13:05:54.5±7.2, 31.83S×179.91W, h311^{km}±75^{km}, mb3.3/2, mb1 3.5/4, mb1mx3.3/13, mbtmp4.1/4, Error ellipse: s-maj=77.9km s-min=31.5km az=4.0*

*NEIC **20** 13:06:03.1±1.3, 32.43S×179.93E, h404^{km}±13^{km}, mb4.0/1, Error ellipse: s-maj=24.2km s-min=17.5km az=114.0*

ISC 20 13:06:00.8±1.2, **32.4S**±0.1×**180.0W**±0.3, **h407**^{km}±17^{km}, **n47,** σ**0**^{s}**94**/50, **mb3.6**/3, **South of Kermadec Islands**

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Code  Station Name      Δ°   AZ°   Phase ID        Time       Res
                                   Op     ISC      h  m  s    ISC
MXZ   Matakaoa Point    5.33 195   PN     P        13 07 27.2  0.0
MXZ                                SN     S        13 08 34.5 -0.5
MXZ   Matakaoa Point    5.33 195   P      P        13 07 27.4 +0.2
MXZ                                S      S        13 08 34.5 -0.4
PUZ   Puketiti          5.83 194   PN     P        13 07 33.5 +1.0
PUZ                                SN     S        13 08 43.8 -0.6
PUZ   Puketiti          5.83 194  eP      P        13 07 33.6 +1.2
MWZ   Matawai           6.25 199  ePN     P        13 07 38.6 +1.5
MWZ                               eSN     S        13 08 52.8 -0.1
MWZ   Matawai           6.25 199   P      P        13 07 39.4 +2.3
URZ   Urewera           6.31 202   P      P        13 07 35.6 -2.1
      5.2nm,0.3s,baz=311,slow=19,SNR=51
URZ                                S      S        13 08 53.6 -0.3
      9.0nm,0.3s,baz=60,slow=22,SNR=24
URZ   Urewera           6.31 202  ePN     P        13 07 36.6 -1.1
URZ                               eSN     S        13 08 54.1 +0.2
URZ   Urewera           6.31 202   P      P        13 07 38.0 +0.3
KNZ   Kokohu            6.87 196  ePN     P        13 07 46.0 +2.0
KNZ   Kokohu            6.87 196  eP      P        13 07 45.5 +1.6
BKZ   Black Stump Fm    7.33 202  ePN     P        13 07 50.0 +0.8
BKZ                               eSN     S        13 09 15.4 +0.8
BKZ   Black Stump Fm    7.33 202  eP      P        13 07 50.1 +0.9
PXZ   Pawanui           8.03 198  eSN     S        13 09 28.1 -0.6
TSZ   Takapari Road     8.31 202   PN     P        13 07 59.1 -1.2
TSZ   Takapari Road     8.31 202   P      P        13 08 00.8 +0.5
BFZ   Birch Farm        8.80 199  ePN     P        13 08 06.7 +0.8
BFZ                               eSN     S        13 09 45.3 +0.6
BFZ   Birch Farm        8.80 199  eP      P        13 08 06.7 +0.8
MRZ   Mangatainoka R    8.98 202  ePN     P        13 08 07.6 -0.4
MRZ                                SN     S        13 09 48.4 -0.1
MRZ   Mangatainoka R    8.98 202   P      P        13 08 07.6 -0.4
CAW   Cannon Point      9.55 203  ePN     P        13 08 13.9 -0.6
CAW   Cannon Point      9.55 203   P      P        13 08 14.4 -0.2
TCW   Tory Channel      9.92 206  ePN     P        13 08 18.1 -0.8
TCW   Tory Channel      9.92 206   P      P        13 08 18.3 -0.6
TUWZ  Tuamarina        10.24 207  ePN     P        13 08 21.3 -1.3
NNZ   Nelson           10.28 209  ePN     P        13 08 22.0 -1.1
NNZ                               eSN     S        13 10 16.5 +0.8
NNZ   Nelson           10.28 209  eP      P        13 08 22.2 -0.9
QRZ   Quartz Range     10.34 214  ePN     P        13 08 23.6 -0.2
QRZ   Quartz Range     10.34 214  eP      P        13 08 23.0 -0.8
THZ   Tophouse         10.93 209  ePN     P        13 08 29.2 -1.5
THZ   Tophouse         10.93 209  eP      P        13 08 29.3 -1.4
KHZ   Kahutara         11.24 206  ePN     P        13 08 32.7 -1.5
LTZ   Lake Taylor      12.04 209  ePN     P        13 08 42.5 -0.7
LTZ   Lake Taylor      12.04 209  eP      P        13 08 42.9 -0.3
MQZ   McQueen's Vall   12.68 205  eSN     S        13 11 06.3 +0.6
RPZ   Rata Peaks       13.31 210   P      P        13 08 58.3 +1.0
      0.8nm,0.3s,baz=182,slow=5.0,SNR=7.5
RPZ                                S      S        13 11 18.2 -0.1
      1.4nm,0.3s,baz=236,slow=23,SNR=12
STKA  Stephens Creek   32.45 260   P      P        13 11 58.8 +2.2
      1.2nm,0.5s,mb3.5,baz=114,slow=11,SNR=8.2
WRAB  Tennant Creek    42.56 275  eP      P        13 13 19.9 -0.3
      8.4nm,1.1s,mb4.0
WRA   Warramunga Arr   42.57 275   P      P        13 13 19.8 -0.5
      0.6nm,0.4s,mb3.3,baz=111,slow=8.1,SNR=20
ARCES ARCESS Array B  140.18 346   PKhKP           13 24 36.8
      4.5nm,1.0s,baz=27,slow=2.7,SNR=5.6
ARCES                              PKP    PKPdf    13 24 45.0 +4.1
      1.2nm,0.8s,baz=90,slow=2.7,SNR=4.5
KAF   Kangasniemi     145.84 338  epkp    PKPdf    13 24 54.5 +3.8
      baz=50,slow=3.2
FINES FINESS Array B  146.42 338   PKPbc  PKPbc    13 24 56.4 +3.0
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	1.5nm,0.7s,baz=67,slow=5.0,SNR=12						
FINES	FINESS Array B	146.42	338	PKPbc	PKPbc	13 24 56.4	+3.0
NB2	NORSAR Subarra	150.45	349	PKPabc	PKPdf	13 25 06.9	+8.8
	1.1nm,0.5s,baz=19,slow=4.0						
NOA	NORSAR Array B	150.45	349	PKPbc	PKPdf	13 25 06.9	+8.7
	0.9nm,0.5s,baz=16,slow=4.2,SNR=4.9						
NAO	NORSAR Subarra	150.72	349	PKPab	PKPab	13 25 06.9	-8.7
HFS	Hagfors	150.84	346	PKPbc	PKPdf	13 25 07.4	+8.6
	1.5nm,0.7s,baz=135,slow=4.2,SNR=6.0						

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*NEIC **20** 13:08:14.1, 31.48S×69.51W, h145^{km}, MD3.4(GUC), After GUC.*

GUC 20 13:08:14.1±0.8**, 31.48S×69.51W, h145^{km}±11^{km}, MD3.4, ML3.6, 3C-4D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	1.32	283	⇓iP	P	13 08 41.8	+0.1
CMCH				i S	S	13 09 03.2	+0.3
CMCH				AMP		13 09 05.6	
	comp=N,3µm,0.6s						
MDZ	Mendoza	1.50	158	eP	P	13 08 40.8	-2.8
MDZ				e		13 08 59.6	
MDZ				eS	S	13 09 00.2	-6.1
JACH	Jahuel	1.51	217	⇑iP	P	13 08 44.0	+0.2
TLL	Tololo Astrono	1.72	319	⇑iP	P	13 08 46.6	+0.5
TLL				i S	S	13 09 11.0	+0.4
TLL				AMP		13 09 13.8	
	comp=N,524nm,0.7s						
CHNG	Los Chungos	1.75	256	i P	P	13 08 46.7	+0.4
CHNG				i S	S	13 09 10.2	-0.8
CHNG				AMP		13 09 16.3	
	comp=E,187nm,0.3s						
PEL	Peldehue	1.93	211	⇑iP	P	13 08 48.4	0.0
PEL				i S	S	13 09 14.6	-0.2
PEL				AMP		13 09 16.2	
	comp=N,508nm,0.3s						
FCH	Farellones	1.96	200	eP	P	13 08 49.5	+0.8
FCH				i S	S	13 09 16.4	+1.1
FCH				AMP		13 09 22.0	
	comp=E,183nm,0.5s						
ROCH	El Roble	1.96	220	⇓iP	P	13 08 49.2	+0.5
ROCH				i S	S	13 09 16.0	+0.7
RCDM	Rinconada Maip	2.28	208	eP	P	13 08 52.6	-0.2
RCDM				i S	S	13 09 22.4	0.0
RCDM				AMP		13 09 22.8	
	comp=E,269nm,0.5s						
PCH	Pirque	2.29	202	i P	P	13 08 53.7	+0.7
TACH	Talagante	2.48	209	⇓iP	P	13 08 54.7	-0.6
TACH				i S	S	13 09 26.6	-0.2
CHCH	Chadas Angostu	2.63	201	i P	P	13 08 57.1	-0.1
CHCH				i S	S	13 09 30.0	-0.1
LCCH	Las Cruces	2.64	221	⇓iP	P	13 08 57.1	-0.2
CACH	El Canelo	2.78	199	eP	P	13 08 59.4	+0.2
CICH	Cipreses	2.93	195	i P	P	13 09 01.6	+0.5

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*IDC **20** 13:26:30.9±2.2, 1.82N×96.52E, mb3.9/6, mb1 4.0/6, mb1mx3.8/17, mbtmp3.9/6, Error ellipse: s-maj=89.4km s-min=27.7km az=53.0*

*NEIC **20** 13:26:35.9±1.0, 1.92N×96.68E, h30^{km}, Error ellipse: s-maj=22.6km s-min=16.7km az=212.0*

ISC 20 13:26:34.0±1.4**, 1.9N**±0.2×**96.7E**±0.2**, h30^{km}, n7, σ0^{s}39**/7**, mb3.9**/6**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.17	50	eP	Pn	13 27 51.4	-0.1
WRA	Warramunga Arr	42.87	122	P	P	13 34 31.9	+0.1
	1.0nm,0.8s,mb3.6,baz=301,slow=9.0,SNR=5.4						
MKAR	Makanchi Array	46.40	346	P	P	13 35 00.3	+0.7
	2.7nm,0.8s,mb4.2,baz=160,slow=8.9,SNR=13						
SONM	Songino Array	46.48	9	P	P	13 35 00.6	+0.2
	1.2nm,0.7s,mb3.9,baz=193,slow=8.0,SNR=8.8						
ZAL	Zalesovo	52.74	351	P	P	13 35 48.4	+0.1
	1.4nm,0.5s,mb4.2,baz=286,slow=9.4,SNR=7.3						
BVAR	Borovoye Array	55.38	341	P	P	13 36 07.0	-0.7
	0.9nm,0.7s,mb3.9,baz=143,slow=7.4,SNR=5.2						
FINES	FINESS Array B	79.10	333	P	P	13 38 36.9	-0.2
	0.5nm,0.6s,mb3.6,baz=90,slow=8.3,SNR=2.7						

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*NDI **20** 13:42:18.4±4.4, 34.40N×72.87E, h10^{km}, MD3.4, ML3.0*

*NNC **20** 13:42:29.3±53.0, 35.30N×72.33E, mpv3.2, Error ellipse: s-maj=2428.2km s-min=627.0km az=80.0*

ISC 20 13:42:11.6±1.8**, 34.23N**±0.09×**72.3E**±0.2**, h33^{km}, n5, σ0^{s}69**/8**, 1C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	3.42	121	eP	P	13 43 08.7	+4.9
THN				eSB	Sb	13 43 51.7	-1.1
DLH	Dalhousie	3.54	117	eS	S	13 43 48.0	+1.1
KLP	Kalpa	5.72	116	eP	P	13 43 36.5	+0.1
KLP				eS	S	13 44 36.3	-5.6
KLP				AML	AML	13 45 02.4	
	comp=N,73nm,0.6s						
KLP				AML	AML	13 45 02.9	
	comp=E,57nm,0.6s						
KHET	Khetri	6.86	153	eS	S	13 45 10.1	0.0
KHET				AML	AML	13 45 45.4	
	comp=E,4.1nm,0.1s						
KHET				AML	AML	13 45 45.7	
	comp=N,5.4nm,0.2s						
KK31	Karatay Array	8.96	352	⇑Pn	P	13 44 28.4	+6.7
	comp=N,0.5nm,0.3s,baz=153,slow=11,SNR=12						
KK31				⇓Sn	Sn	13 46 02.5	-0.1
	comp=N,0.5nm,0.3s,baz=173,slow=23,SNR=7.2						

NEIC 20 13:48:55.9, 53.82N×163.94W, h19^{km}, ML3.1(AEIC)**, After AEIC., Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	West Dahl East	0.76	330	P	Pb	13 49 09.4	-0.9
WESE				S	Sb	13 49 19.8	-0.3
WESN	West Dahl Nort	0.84	334	P	Pb	13 49 10.9	-0.8
WFAR	Faris Peak	0.88	326	P	Pb	13 49 10.9	-1.3
WPOG	Pogromni	0.92	329	P	Pb	13 49 11.6	-1.3
AKUT	Akutan	1.13	287	P	Pb	13 49 14.7	-1.9
AKUT				S	Sb	13 49 29.7	-1.1
AHB	Akutan Harbor	1.15	286	P	Pb	13 49 15.0	-1.9
UNV	Unalaska Valle	1.52	272	P	Pn	13 49 19.4	-3.0
UNV				S	Sn	13 49 39.5	-2.3
BALA	Baldy Mountain	1.54	25	P	Pn	13 49 21.9	-0.7
MNAT	Makushin Natee	1.63	274	P	Pn	13 49 21.5	-2.4
MTBL	Makushin Table	1.63	277	P	Pn	13 49 21.9	-2.0
DTNA	Dutton South F	1.66	36	P	Pn	13 49 22.1	-2.3
MCIR	Makushin Cirqu	1.75	276	P	Pn	13 49 23.8	-2.0
DOL	Dolgoi Island	1.80	41	P	Pn	13 49 23.9	-2.5
HAG	Hague Volcano	1.92	37	P	Pn	13 49 26.3	-1.8
SDPT	Sand Point	2.53	51	P	Pn	13 49 35.3	-1.6
INK	Inuvik	20.35	33	eP	P	13 53 31.2	-2.3
	6.2nm,0.5s						

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*IDC **20** 13:54:56.6±1.3, 38.59N×75.37E, mb3.7/8, mb1 3.9/12, mb1mx3.8/22, mbtmp3.7/12, ML3.3/4, Error ellipse: s-maj=26.6km s-min=21.4km az=17.0*

*MOS **20** 13:55:00.2±1.5, 38.68N×75.32E, h33^{km}, mb3.9/1, Error ellipse: s-maj=25.0km s-min=10.4km az=96.4*

*NEIC **20** 13:55:02.2±1.1, 38.71N×75.37E, h35^{km}, Error ellipse: s-maj=17.7km s-min=15.9km az=198.0*

*NNC **20** 13:55:07.1±5.4, 38.95N×74.63E, h18^{km}±22^{km}, mpv3.7, Error ellipse: s-maj=41.6km s-min=35.7km az=43.0*

*BJI **20** 13:55:10.8, 38.94N×76.21E, h33^{km}, ML4.0*

ISC 20 13:55:02.4±2.0**, 38.7N**±0.1×**75.4E**±0.1**, h56^{km}**±14^{km}**, n31, σ1^{s}17**/35**, mb3.6**/8**, 7C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	Kashi	0.94	27	⇓iPG	P	13 55 19.3	-0.4
KSH				SG	S	13 55 32.1	-0.5
KSH				Smax			
	comp=N,8µm,0.6s						
KSH				Smax			
	comp=E,4µm,0.5s						
KZA	Kyzart	3.40	358	P	P	13 55 55.0	+0.8
	SNR=31						
UCH	Uchtor	3.61	349	P	P	13 55 58.2	+1.0
	SNR=33						
ULHL	Ulahol	3.62	10	P	P	13 56 04.0	+6.6
	SNR=14						
AML	Almayashu	3.69	340	P	P	13 55 59.0	+0.6
	SNR=6.4						
KBK	Karagaybulak	3.99	355	P	P	13 56 03.6	+1.0
	SNR=15						
AAK	Ala-Archa	4.01	350	P	P	13 56 03.9	+1.0
	SNR=17						
AAK	Ala-Archa	4.01	350	⇑Pn	P	13 56 03.8	+0.9
	comp=E,8.3nm,0.7s						
AAK				⇓Pg	P	13 56 14.0	+11
	comp=E,23nm,0.5s						
AAK				⇑Sn	S	13 56 49.7	+0.6
	comp=E,69nm,0.7s						
AAK				⇑Lg		13 57 03.7	
	comp=E,126nm,0.8s						
AAK	Ala-Archa	4.01	350	ePn	P	13 56 02.7	-0.2
AAK				ePg	P	13 56 13.5	+11
EKS2	Erkin-Say	4.17	343	P		13 56 19.8	
	SNR=6.0						
TKM2	Tokmak 2	4.24	2	P	P	13 56 07.8	+1.7
	SNR=15						
CHMS	Chumysh	4.35	354	P	P	13 56 08.4	+0.8
	SNR=6.2						
USP	Ospenovka	4.64	352	P	P	13 56 11.8	+0.2
	SNR=11						
KK31	Karatay Array	5.78	322	⇑Pn	P	13 56 26.4	-1.1
	comp=E,3.3nm,0.3s,baz=125,slow=13,SNR=192						
KK31				⇑Sn	S	13 57 28.4	-4.9
	comp=E,10nm,0.5s,baz=180,slow=28,SNR=6.2						
KK31				⇑Lg		13 57 55.1	
	comp=E,13nm,0.6s,baz=132,slow=27						
MK31	Makanchi Array	9.56	30	⇑Pn	P	13 57 17.7	-2.1
	comp=E,11nm,1.4s,baz=193,slow=38,SNR=7.5						
MKAR	Makanchi Array	9.56	30	Pn	P	13 57 17.2	-2.6
	comp=E,0.1nm,0.3s,baz=216,slow=14,SNR=7.5						
BVAR	Borovoye Array	14.77	348	Pn	P	13 58 25.3	-3.8
	comp=E,0.1nm,0.3s,baz=162,slow=20,SNR=3.1						
BVAR				Lg		14 02 39.8	
	baz=163,slow=24,SNR=2.7						
BRVK	Borovoye	14.81	348	eP	P	13 58 30.1	+0.4
	comp=E,1.6nm,0.7s						
BRVK	Borovoye	14.81	348	eP	P	13 58 30.2	+0.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAL	Zalesovo	16.56	20	Pn	P	13 58 50.1	-1.8
	comp=Z,0.3nm,0.3s,baz=248,slow=11,SNR=5.9						
AKTK	Aktyubinsk	17.04	319	P	P	13 58 56.1	-1.9
AKTO	Aktyubinsk	17.04	319	P	P	13 58 56.1	-1.9
	comp=Z,0.4nm,0.3s,baz=123,slow=18,SNR=14						
SONM	Songino Array	24.21	58	P	P	14 00 17.0	+2.4
	comp=Z,0.2nm,0.5s,mb2.8,baz=267,slow=11,SNR=2.9						
FINES	FINESS Array B	37.73	323	P	P	14 02 13.9	0.0
	comp=Z,0.9nm,0.6s,mb3.7,baz=101,slow=7.1,SNR=6.8						
ARCES	ARCESS Array B	40.55	336	P	P	14 02 37.5	+0.3
	comp=Z,1.2nm,0.5s,mb3.8,baz=106,slow=8.8,SNR=12						
GERES	GERESS Array B	44.58	304	P	P	14 03 11.7	+1.4
	comp=Z,0.5nm,0.6s,mb3.5,baz=63,slow=9.0,SNR=5.2						
NB2	NORSAR Subarra	44.81	322	P	P	14 03 11.9	-0.1
	comp=Z,1.9nm,0.7s,mb4.0,baz=90,slow=7.9						
NOA	NORSAR Array B	44.81	322	P	P	14 03 12.2	+0.2
	comp=Z,2.7nm,0.7s,mb4.2,baz=91,slow=7.9,SNR=8.3						
ESDC	Sonseca Array	59.53	298	P	P	14 05 01.4	-0.7
	comp=Z,0.5nm,0.4s,mb3.9,baz=55,slow=7.4,SNR=5.8						
YKA	Yellowknife Ar	78.85	5	P	P	14 07 00.6	+0.2
	comp=Z,0.7nm,0.6s,mb3.8,baz=346,slow=5.6,SNR=5.1						
WRA	Warramunga Arr	80.27	125	P	P	14 07 09.1	+0.3
	comp=Z,0.2nm,0.6s,mb3.2,baz=322,slow=4.3,SNR=5.2						

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*SOF **20** 14:00:20.7, 40.40N×26.58E, h5^{km}, MD2.5*

*ISK **20** 14:00:24.9, 40.44N×26.36E, h20^{km}, MD3.0*

*CSEM **20** 14:00:24.9±0.1, 40.47N×26.40E, h15^{km}, MD3.0, Error ellipse: s-maj=2.1km s-min=1.4km az=11.0*

*ATH **20** 14:00:25.3, 40.47N×26.39E, h29^{km}±5^{km}, MD3.0/4*

*NEIC **20** 14:00:25.3, 40.47N×26.39E, h29^{km}, MD3.0(ATH), MD3.0(ISK), After ATH.*

ISC 20 14:00:24.3±0.6**, 40.50N**±0.03×**26.34E**±0.04**, h5^{km}**±5^{km}**, n28, σ0^{s}92**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPK	Lapseki	0.35	111	i PG	Pg	14 00 32.3	+1.1
RKY	Sarkoy-Tekirda	0.67	73	ePG	Pg	14 00 38.5	+0.8
RKY				eSG	Sg	14 00 47.8	+1.2
SART	Tekirdag	0.67	73	i P	Pg	14 00 37.1	-0.6
EZN	Ezine	0.67	181	i PG	Pg	14 00 37.7	-0.1
EZN				i SG	Sg	14 00 46.2	-0.6
RDO	Rodhopi	0.89	317	ePN	Pn	14 00 43.2	-0.1
RDO				eSN	Sn	14 00 57.3	+0.7
TKR	Tekirdag	1.03	61	ePG	Pg	14 00 44.5	-0.4
LIA	Limnos Island	1.07	236	ePN	Pn	14 00 45.7	-0.2
EDC	Edincik	1.17	97	PN	Pn	14 00 46.5	-0.9
EDC				SN	Sn	14 01 02.4	-1.6
BNT	Bandirma	1.22	96	ePN	Pn	14 00 46.3	-1.7
AYVA	Ayvalik	1.22	167	i P	Pb	14 00 47.7	+0.2
AYVA				i S	Sb	14 01 03.7	+0.2
PRK	Paraskevi	1.25	182	ePN	Pn	14 00 48.5	0.0
PRK				eSN	Sn	14 01 05.4	-0.5
KDZ	Kurdzhali	1.34	329	i P	Pb	14 00 50.5	+0.9
EDRB	Edirne	1.38	13	PN	Pn	14 00 50.4	+0.1
BALB	Balikesir	1.46	125	ePN	Pn	14 00 50.9	-0.6
BTOK	Tokmak	1.49	119	i P	Pn	14 00 51.6	-0.3
BTOK				i S	Sb	14 01 10.7	-0.6
KCT	Karacabey	1.56	98	ePN	Pn	14 00 52.3	-0.5
DIM	Dimitrovgrad	1.66	339	i Pg	Pg	14 00 57.0	-0.5
RZN	Rozhen	1.71	315	i P	Pn	14 00 55.5	+0.5
CTT	Catalca	1.71	67	ePN	Pn	14 00 54.3	-0.8
NVR	Nevrokopi	2.06	295	ePN	Pn	14 01 00.2	+0.2
ISK	Istanbul-Kandi	2.14	74	ePN	Pn	14 01 00.8	-0.4
ULDT	Uludag	2.17	99	i P	Pn	14 01 05.0	+3.4
ULDT				i S	Sn	14 01 31.5	+2.3
KDAG	Bornova	2.21	161	i P	Pn	14 01 04.5	+2.2
KDAG				i S	Sn	14 01 34.6	+4.3
MMB	Musomiste	2.25	300	eP	Pn	14 01 03.0	+0.2
YLV	Yalova	2.31	87	ePN	Pn	14 01 03.2	-0.5
HRT	Hereke	2.55	82	ePN	Pn	14 01 06.7	-0.4
MANT	Manisa	2.64	139	i P	Pn	14 01 08.0	-0.3
MANT				i S	Sn	14 01 43.7	+2.5
KKB	Krupnik	2.81	300	i P	Pn	14 01 10.0	-0.8

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*NEIC **20** 14:11:39.9±1.0, 32.86S×178.93W, h40^{km}±9^{km}, mb4.9/4, Error ellipse: s-maj=12.3km s-min=8.7km az=105.0*

*IDC **20** 14:11:39.7±2.4, 32.91S×178.91W, h40^{km}±21^{km}, mb4.3/9, mb1 4.3/11, mb1mx4.2/17, mbtmp4.5/11, ML4.2/3, MS4.0/2, Ms1 4.0/2, ms1mx3.4/22, Error ellipse: s-maj=21.0km s-min=14.1km az=121.0*

ISC 20 14:11:33.2±1.7**, 33.00S**±0.04×**178.89W**±0.10**, h6^{km}**±12^{km}**, n83, σ1^{s}50**/89**, mb4.7**/10**, 10C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	3.83	13	P	Pn	14 12 35.5	+1.6
	134nm,0.3s,baz=260,slow=22,SNR=3.5						
RAO				S	Sn	14 13 14.4	-5.5
	214nm,0.3s,baz=233,slow=23,SNR=3.6						
MXZ	Matakaoa Point	5.10	206	ePN	Pn	14 12 53.9	+2.0
MXZ				eSN	Sn	14 13 56.6	+4.7
MXZ	Matakaoa Point	5.10	206	eP	Pn	14 12 54.8	+2.9
PUZ	Puketiti	5.57	204	PN	Pn	14 13 00.1	+1.5
PUZ				eSN	Sn	14 14 04.3	+0.6
PUZ	Puketiti	5.57	204	P	Pn	14 13 01.1	+2.5
PUZ				S	Sn	14 14 04.7	+1.0
KUZ	Kuaotunu	5.79	228	ePN	Pn	14 13 07.2	+5.4
KUZ	Kuaotunu	5.79	228	eP	Pn	14 13 07.4	+5.6
MWZ	Matawai	6.07	208	PN	Pn	14 13 07.2	+1.6
MWZ				eSN	Sn	14 14 17.1	+0.9
MWZ	Matawai	6.07	208	eP	Pn	14 13 07.7	+2.1
URZ	Urewera	6.17	211	P	Pn	14 13 08.2	+1.1
	12nm,0.3s,baz=28,slow=3.8,SNR=56						
URZ				S	Sn	14 14 19.8	+0.9
	10nm,0.3s,baz=149,slow=20,SNR=3.7						
URZ	Urewera	6.17	211	ePN	Pn	14 13 08.2	+1.0
URZ				eSN	Sn	14 14 19.7	+0.8
URZ	Urewera	6.17	211	eP	Pn	14 13 08.6	+1.5
WCZ	Waipu Caves	6.31	240	PN	Pn	14 13 15.0	+6.0
WCZ	Waipu Caves	6.31	240	eP	Pn	14 13 15.3	+6.3
OUZ	Omahuta	6.61	248	PN	Pn	14 13 18.6	+5.3
OUZ				eSN	Sn	14 14 33.3	+3.5
OUZ	Omahuta	6.61	248	eP	Pn	14 13 18.8	+5.5
KNZ	Kokohu	6.62	204	ePN	Pn	14 13 14.2	+0.8
KNZ				SN	Sn	14 14 28.2	-1.9
KNZ	Kokohu	6.62	204	eP	Pn	14 13 14.2	+0.8
BKZ	Black Stump Fm	7.20	210	PN	Pn	14 13 21.4	-0.2
BKZ				eSN	Sn	14 14 42.0	-2.5
BKZ	Black Stump Fm	7.20	210	eP	Pn	14 13 21.8	+0.3
CNZ	Chateau	7.65	214	PN	Pn	14 13 30.3	+2.4
CNZ	Chateau	7.65	214	P	Pn	14 13 30.4	+2.6
MOVZ	Moawhango	7.72	213	ePN	Pn	14 13 29.1	+0.3
MOVZ	Moawhango	7.72	213	P	Pn	14 13 29.1	+0.3
PXZ	Pawanui	7.80	205	eSN	Sn	14 14 54.6	-5.1
TSZ	Takapari Road	8.17	209	ePN	P	14 13 33.8	-1.3
TSZ				eSN	Sn	14 15 04.4	-4.4
TSZ	Takapari Road	8.17	209	eP	P	14 13 34.2	-0.9
BFZ	Birch Farm	8.60	206	ePN	P	14 13 40.1	-1.0
BFZ				eSN	Sn	14 15 13.7	-5.8
BFZ	Birch Farm	8.60	206	eP	P	14 13 38.9	-2.2
MRZ	Mangatainoka R	8.84	208	ePN	P	14 13 40.8	-3.6
MRZ				SN	Sn	14 15 18.4	-7.0
MRZ	Mangatainoka R	8.84	208	P	P	14 13 43.6	-0.8
MRZ				S	Sn	14 15 18.4	-6.9
MTW	Mount Morrison	9.29	207	ePN	P	14 13 48.5	-2.1
MTW	Mount Morrison	9.29	207	P	P	14 13 48.7	-2.0
CAW	Cannon Point	9.42	209	ePN	P	14 13 49.4	-3.0
CAW	Cannon Point	9.42	209	P	P	14 13 50.8	-1.6
TCW	Tory Channel	9.84	212	ePN	P	14 13 56.2	-2.0
TCW	Tory Channel	9.84	212	P	P	14 13 56.3	-2.0
TUWZ	Tuamarina	10.17	212	ePN	P	14 14 00.5	-2.2
KHZ	Kahutara	11.14	210	PN	P	14 14 12.4	-3.7
KHZ	Kahutara	11.14	210	eP	P	14 14 13.2	-2.9
LTZ	Lake Taylor	12.00	213	ePN	P	14 14 22.6	-5.0
MQZ	McQueen's Vall	12.57	209	eSN	S	14 16 42.1	-15
RPZ	Rata Peaks	13.28	213	P	P	14 14 39.9	-4.9
	1.1nm,0.3s,baz=162,slow=22,SNR=6.2						
RPZ				S	S	14 17 00.3	-14
	1.0nm,0.3s,baz=18,slow=23,SNR=7.5						
RPZ				LR	LR	14 20 30.6	
	comp=Z,592nm,18.0s,baz=245,slow=40						
DZM	Mont Dzumac	16.94	306	P	P	14 15 32.7	+0.3
	0.1nm,0.3s,baz=156,slow=20,SNR=1.8						
DZM				LR	LR	14 20 36.7	
	comp=Z,570nm,21.1s,baz=326,slow=32						
AFI	Afiamalu	20.08	21	P	P	14 16 08.4	-1.8
	5.7nm,0.6s,baz=343,slow=19,SNR=1.7						
RAR	Rarotonga	20.64	60	P	P	14 16 15.2	-0.8
	6.8nm,0.4s,baz=214,slow=2.0,SNR=3.6						
HNR	Honiara	30.52	315	P	P	14 17 47.1	-2.4
	29nm,0.7s,mb5.2,baz=191,slow=7.4,SNR=5.0						
HNR	Honiara	30.52	315	P	P	14 17 47.1	-2.4
STKA	Stephens Creek	33.23	261	P	P	14 18 14.0	+0.9
	1.1nm,0.6s,mb4.0,baz=358,slow=13,SNR=4.3						
STKA	Stephens Creek	33.23	261	eP	P	14 18 14.4	+1.3
CTA	Charters Tower	33.57	284	eP	P	14 18 17.9	+1.8
	9.1nm,0.6s,mb4.9						
CTA	Charters Tower	33.57	284	P	P	14 18 17.2	+1.1
	11nm,0.6s,mb5.0,baz=109,slow=10,SNR=51						
CTAO	Charters Tower	33.57	284	eP	P	14 18 17.4	+1.3
	9.3nm,0.6s,mb4.9						
PMG	Port Moresby	39.12	299	P	P	14 19 02.5	-0.7
	15nm,0.8s,mb4.8,baz=98,slow=3.5,SNR=7.1						
ASPA	Alice Springs	42.28	270	⇑iP	P	14 19 29.5	+0.3
WB2	Warramunga Arr	43.50	275	eP	P	14 19 39.0	-0.2
WRAB	Tennant Creek	43.50	275	eP	P	14 19 39.0	-0.2
	15nm,0.7s,mb4.8						
WRA	Warramunga Arr	43.51	275	P	P	14 19 39.0	-0.3
	10.0nm,0.6s,mb4.7,baz=114,slow=8.1,SNR=134						
KAKA	Kakadu	48.70	283	eP	P	14 20 38.9	+18
	11nm,0.7s,mb5.0						
FITZ	Fitzroy Crossi	51.65	272	eP	P	14 20 41.6	-1.4
	7.0nm,0.8s,mb4.6						
QSPA	South Pole Qui	57.12	180	eP	P	14 21 25.7	+3.4
MAW	Mawson	69.61	201	P	P	14 22 44.4	-0.3
	1.8nm,0.5s,mb4.2,baz=112,slow=6.2,SNR=9.6						
SNAA	Sanae	75.58	179		P	14 23 21.6	+1.8
SNAA	Sanae	75.58	179		P	14 23 25.8	+6.0
VNA3	Neumayer Olymp	75.77	176	⇑i	P	14 23 23.2	+2.3
VNA3	Neumayer Olymp	75.77	176	⇑i	P	14 23 28.5	+7.6
VNA3	Neumayer Olymp	75.77	176	⇑i	P	14 23 36.2	+15
VNA2	Neumayer--Watz	76.19	177	⇑i	P	14 23 25.9	+2.6
VNA2	Neumayer--Watz	76.19	177	⇑i	P	14 23 31.1	+7.8
VNA2	Neumayer--Watz	76.19	177	⇑i	P	14 23 38.1	+15
VNA1	Neumayer--Stat	76.43	177	⇑i	P	14 23 23.6	-1.0
VNA1	Neumayer--Stat	76.43	177	⇑i	P	14 23 27.6	+3.0
VNA1	Neumayer--Stat	76.43	177	⇑i	P	14 23 32.7	+8.1
NVAR	Mina Array Bea	90.65	43	P	P	14 24 39.3	+1.4
	1.6nm,0.9s,mb4.4,baz=204,slow=6.5,SNR=10						
MKAR	Makanchi Array	118.84	309	PKP	PKPdf	14 30 21.9	-3.1
	0.9nm,0.7s,baz=190,slow=1.0,SNR=6.4						
ARCES	ARCESS Array B	140.95	347	PKhKP		14 30 58.1	
	2.2nm,0.8s,baz=58,slow=2.1,SNR=8.1						
JOF	Joensuu	144.52	337	epkp	PKPdf	14 31 08.2	-4.0
KAF	Kangasniemi	146.71	339	epkp	PKPdf	14 31 14.9	-1.1
	baz=31,slow=2.3						
FINES	FINESS Array B	147.29	338	PKPbc	PKPdf	14 31 17.1	+0.2
	3.6nm,0.5s,baz=41,slow=4.6,SNR=67						
NB2	NORSAR Subarra	151.19	350	PKPabc	PKPdf	14 31 27.2	+4.1
	8.5nm,0.8s,baz=19,slow=2.5						
NOA	NORSAR Array B	151.19	350	PKPbc	PKPdf	14 31 26.5	+3.4
	1.8nm,1.0s,baz=319,slow=5.2,SNR=20						
AKASG	Malin Array Be	152.83	319	PKPbc	PKPdf	14 31 31.0	+5.2
	1.6nm,0.6s,baz=59,slow=2.9,SNR=10						
DBIC	Dimbokro	153.22	167	PKPbc	PKPdf	14 31 34.8	+7.3
	1.7nm,0.5s,baz=91,slow=3.4,SNR=3.6						

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*ISK **20** 14:15:52.6, 38.22N×26.65E, h22^{km}, MD3.2*

*ATH **20** 14:15:52.4, 38.15N×26.66E, h39^{km}±29^{km}, MD3.0/3*

*CSEM **20** 14:15:52.9±0.2, 38.23N×26.69E, h22^{km}±1^{km}, MD3.2, Error ellipse: s-maj=4.0km s-min=1.9km az=96.0*

ISC 20 14:15:52.0±0.8**, 38.19N**±0.03×**26.58E**±0.05**, h8^{km}**±5^{km}**, n25, σ1^{s}14**/38**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.17	5	i P	Pg	14 15 56.1	+0.4
URLA				i S	Sg	14 15 59.4	+1.3
SMG	Samos	0.53	157	ePB	Pb	14 16 03.0	-0.1
SMG				eSB	Sb	14 16 10.7	+0.2
IZM	Izmir	0.58	69	i PG	Pg	14 16 03.6	-0.1
IZM				i SG	Sg	14 16 11.6	+0.2
KDAG	Bornova	0.58	69	i P	Pg	14 16 02.7	-1.0
KDAG				i S	Sg	14 16 10.1	-1.5
PRK	Paraskevi	1.08	347	ePN	Pn	14 16 13.5	+0.1
PRK				eSN	Sn	14 16 28.6	0.0
AYVA	Ayvalik	1.12	5	i P	Pb	14 16 14.6	+1.4
AYVA				i S	Sb	14 16 31.2	+3.4
AYDN	Tasoluk	1.16	117	i P	Pb	14 16 15.4	+1.5
AYDN				i S	Sb	14 16 29.0	+0.1
AKS	Akhisar	1.19	54	PN	Pn	14 16 14.1	-0.8
BODT	Bodrum	1.27	152	PN	Pn	14 16 15.2	-0.9
MLSB	Milas	1.31	133	ePN	Pn	14 16 16.2	-0.4
BDRM	Kayabasi	1.32	148	i P	Pb	14 16 17.6	+0.9
BDRM				i S	Sb	14 16 34.8	+1.3
APE	Apeiranthos	1.40	217	ePN	Pn	14 16 17.3	-0.6
MANT	Manisa	1.59	79	i P	Pn	14 16 22.0	+1.4
MANT				i S	Sb	14 16 42.4	+1.1
DAT	Datca	1.66	151	ePN	Pn	14 16 21.8	+0.1
YER	Yerkesik	1.72	127	ePN	Pn	14 16 21.4	-1.1
BALB	Balikesir	1.77	35	ePN	Pn	14 16 21.1	-2.1
BTOK	Tokmak	1.93	35	i P	Pn	14 16 28.0	+2.4
BTOK				i S	Sn	14 16 49.5	-0.8
DENT	Denizli	1.99	102	ePN	Pn	14 16 25.4	-1.0
DNZL	Cakiroluk	2.02	104	i P	Pn	14 16 28.2	+1.4
DNZL				i S	Sn	14 16 56.4	+4.0
DST	Dursunbey	2.13	48	ePN	Pn	14 16 27.1	-1.4
DALT	Dalyan (Mudla)	2.17	130	ePN	Pn	14 16 28.1	-0.9
LPK	Lapseki	2.18	4	ePN	Pn	14 16 28.4	-0.8
KCT	Karacabey	2.49	33	ePN	Pn	14 16 31.7	-1.9
ULDT	Uludag	2.78	45	i P	Pn	14 16 44.5	+6.7
ULDT				i S	Sn	14 17 20.9	+9.0
TKTP	Tekketepe	2.96	92	i P	Pn	14 16 46.2	+6.0
TKTP				i S	Sn	14 17 32.0	+16

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*MOS **20** 14:34:58.4±0.8, 43.34N×45.89E, h8^{km}, mb4.1/1, Error ellipse: s-maj=12.0km s-min=6.0km az=29.8*

*TIF **20** 14:34:59.2, 43.29N×45.89E, h22^{km}±3^{km}*

*CSEM **20** 14:35:00.6±0.2, 43.43N×46.06E, h40^{km}, mb4.1, Error ellipse: s-maj=8.3km s-min=3.1km az=31.0*

ISC 20 14:34:59.5±0.7**, 43.45N**±0.06×**45.97E**±0.07**, h28^{km}**±10^{km}**, n28, σ0^{s}91**/33**, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLMR	Dylym	0.61	128	ePG	Pb	14 35 11.8	+0.3
DBC	Dubki	0.76	124	i PG	Pb	14 35 12.5	-1.5
KRNR	Karanay	0.92	132	ePG	Pb	14 35 16.3	-0.5
TRKR	Terskaya	0.94	288	i PG	Pb	14 35 18.3	+1.2
UNCR	Uncukul	0.95	140	ePg	Pb	14 35 15.8	-1.4
VLKR	Vladikavkaz	1.03	248	i PG	Pb	14 35 17.5	-1.1
BUJR	Buynaksk	1.04	126	ePg	Pb	14 35 18.7	0.0
XNZR	Khunzakh	1.05	149	ePG	Pb	14 35 20.6	+1.7
XNZR				i S	Sb	14 35 34.2	+1.9
XNZR				pmax	pmax		
	comp=Z,73nm,0.2s						
XNZR	Khunzakh	1.05	149	ePg	Pb	14 35 20.6	+1.7
	comp=Z,73nm,0.2s						
XNZR				i Sg	Sb	14 35 34.2	+1.9
ARKR	Arakani	1.13	138	ePg	Pn	14 35 19.5	-0.1
ARNR	Ardon	1.26	259	i PG	Pn	14 35 21.2	-0.4
PRTR	Priterechnaya	1.27	285	ePG	Pn	14 35 22.6	+1.0
LACR	Lac	1.38	244	i PG	Pn	14 35 21.8	-1.4
KORR	Kora	1.44	256	i PG	Pn	14 35 23.5	-0.6
KMKR	Kumukh	1.55	147	ePG	Pn	14 35 25.5	-0.2
SGKR	Sergokala	1.58	128	ePg	Pn	14 35 35.0	+8.9
LSNR	Lesken	1.58	265	i PG	Pn	14 35 26.1	0.0
DIGR	Digorskoe uzhe	1.83	253	i PN	Pn	14 35 28.8	-0.9
KUBR	Kubataba	1.90	282	i Pn	Pn	14 35 32.6	+2.0
TI2	Plekhanov	1.94	208	i P	Pn	14 35 30.0	-1.2
	comp=Z,20nm,0.2s						
TI2				i S	Sn	14 35 55.4	+0.6
TBLG	Delisi	1.94	208	P	Pn	14 35 31.2	0.0
TBLG				S	Sn	14 35 55.6	+0.6
MTA	Mtatsminda	1.96	207	P	Pn	14 35 31.5	0.0
DGRG	David-gareji	2.04	193	P	Pn	14 35 33.5	+0.7
ONI	Oni	2.04	246	P	Pn	14 35 32.3	-0.4
ONI				S	Sn	14 35 57.1	-0.5
BEYR	Belyy Ugol+	2.36	285	ePn	Pn	14 35 38.1	+0.9
SHAR	Shatzhatmas	2.42	278	i PN	Pn	14 35 37.8	-0.3
KIV0	Kislovodsk Arr	2.43	283	i Pn	Pn	14 35 38.4	+0.1
KIV	Kislovodsk	2.44	283	i PN	Pn	14 35 38.4	0.0

SKHL 20 14:44:28.6±0.6**, 52.46N**×**131.48E, h10**^{km}±2^{km}**, mb4.4**/6**, 1C-1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKMR	Ekimchan	1.08	55	⇓iPg	Pg	14 44 47.5	-2.8
EKMR				AMB	AMB	14 44 48.7	
	350nm,0.2s						
EKMR				AMB	AMB	14 44 48.7	
	310nm,0.2s						
EKMR				AMB	AMB	14 44 48.7	
	440nm,0.2s						
EKMR				pPg		14 44 50.9	
EKMR				eSg	Sg	14 45 01.9	-2.9
EKMR				A		14 45 03.6	
	570nm,0.3s						
EKMR				A		14 45 03.6	
	660nm,0.3s						
YASR	Yasnyy	2.28	293	ePn	Pn	14 45 05.8	-1.1
YASR				ePg	Pg	14 45 09.1	-5.0
YASR				AMB	AMB	14 45 12.1	
	42nm,0.5s						
YASR				sPg		14 45 14.9	
YASR				eSn	Sn	14 45 33.0	-2.2
YASR				i Sg	Sg	14 45 37.8	-6.7
YASR				A		14 45 38.3	
	410nm,0.3s						
BMKR	Bomnak	2.75	326	⇑ePn	Pn	14 45 15.5	+1.9
BMKR				ePg	Pg	14 45 20.4	-3.1
BMKR				AMB	AMB	14 45 22.9	
	46nm,0.4s						
BMKR				AMB	AMB	14 45 22.9	
	17nm,0.4s						
BMKR				AMB	AMB	14 45 22.9	
	55nm,0.4s						
BMKR				sPg		14 45 26.5	
BMKR				eSg	Sg	14 45 55.8	-4.4
BMKR				A		14 45 58.4	
	88nm,0.5s						
BMKR				A		14 45 58.4	
	264nm,0.5s						
BMKR				A		14 45 58.4	
	210nm,0.5s						
ZEA	Zeya	2.85	298	ePn	Pn	14 45 15.2	+0.1
ZEA				ePg	Pg	14 45 19.7	-5.9
ZEA				AMB	AMB	14 45 21.9	
	20nm,0.3s						
ZEA				AMB	AMB	14 45 21.9	
	45nm,0.3s						
ZEA				pPg		14 45 23.1	
ZEA				sPg		14 45 26.9	
ZEA				eSn	Sn	14 45 49.9	+0.1
ZEA				i Sg	Sg	14 45 56.5	-7.1
ZEA				A		14 45 58.8	
	250nm,0.8s						
ZEA				A		14 45 58.8	
	470nm,0.8s						
KLR	Kul'dur	3.24	177	ePn	Pn	14 45 22.5	+1.9
KLR				ePg	Pg	14 45 30.0	-3.3
KLR				eSg	Sg	14 46 10.8	-5.7
KROS	Kirovskiy	3.34	308	ePn	Pn	14 45 24.4	+2.4
KROS				ePg	Pg	14 45 31.1	-4.3
KROS				AMB	AMB	14 45 33.5	
	16nm,0.5s						
KROS				AMB	AMB	14 45 33.5	
	27nm,0.5s						
KROS				AMB	AMB	14 45 33.5	
	28nm,0.5s						
KROS				sPg		14 45 34.9	
KROS				eSn	Sn	14 46 00.5	-1.7
KROS				i Sg	Sg	14 46 14.6	-5.3
KROS				A		14 46 17.0	
	270nm,0.5s						
KROS				A		14 46 17.0	
	220nm,0.5s						
KROS				A		14 46 17.0	
	88nm,0.5s						
GRNR	Gornyy	3.52	117	erx	rx	14 45 29.9	
GRNR				ePg	Pg	14 45 32.8	-6.0
GRNR				AMB	AMB	14 45 34.0	
	15nm,0.2s						
GRNR				sPg		14 45 36.2	
GRNR				eSg	Sg	14 46 19.0	-6.7
GRNR				A		14 46 21.4	
	437nm,0.5s						
GRNR				A		14 46 21.4	
	323nm,0.5s						
NKL	Nikolayevsk	5.62	79	ePg	Pg	14 46 11.0	-10
NKL				sPg		14 46 16.0	
NKL				eSg	Sg	14 47 23.2	-13
NKL				A		14 47 30.5	
	56nm,0.6s						
TYV	Tymovskoe	7.13	99	eSg	Sg	14 48 11.0	-15
TYV				A		14 48 17.0	
	22nm,0.8s						
TYV				A		14 48 17.0	
	27nm,1.0s						

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*IDC **20** 14:46:49.3±7.2, 7.91S×118.30E, h124^{km}±75^{km}, mb3.3/2, mb1 3.3/3, mb1mx3.1/14, mbtmp3.6/3, Error ellipse: s-maj=142.7km s-min=15.2km az=47.0*

ISC 20 14:46:39.9±5.7**, 8.1S**±0.7×**117.9E**±0.7**, h57**^{km}±61^{km}**, n5,** σ**1**^{s}**25**/6**, mb3.8**/2**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.82	128	P	P	14 51 08.5	-0.1
	0.3nm,0.3s,baz=301,slow=12,SNR=26						
WRA				S	S	14 54 43.8	+0.1
	0.1nm,0.3s,baz=309,slow=24,SNR=3.7						
WB2	Warramunga Arr	19.83	128	eP	P	14 51 08.3	-0.4
ASPA	Alice Springs	21.82	137	eP	P	14 51 30.4	+1.4
STKA	Stephens Creek	32.36	140	P	P	14 53 05.3	-1.0
	0.7nm,0.6s,mb3.6,baz=333,slow=14,SNR=3.3						
MKAR	Makanchi Array	63.13	333	P	P	14 57 04.2	+0.1
	1.0nm,1.0s,mb3.9,baz=157,slow=6.6,SNR=3.6						

WEL 20 14:55:46.7±0.6**, 35.67S**×**178.22E, h184**^{km}±11^{km}**, ML3.6**/8**, Error ellipse: s-maj=13.6km s-min=9.8km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.89	178	PN	P	14 56 23.5	+0.2
MXZ				SN	S	14 56 50.1	-1.3
PUZ	Puketiti	2.40	179	PN	P	14 56 28.1	-0.8
PUZ				SN	S	14 57 00.3	-1.1
MWZ	Matawai	2.71	191	ePN	P	14 56 32.5	-0.2
MWZ				SN	S	14 57 08.0	-0.1
URZ	Urewera	2.73	199	PN	P	14 56 32.6	-0.3
URZ				eSN	S	14 57 08.9	+0.5
KNZ	Kokohu	3.37	187	ePN	P	14 56 39.9	-0.8
BKZ	Black Stump Fm	3.75	201	ePN	P	14 56 44.5	-1.0
BKZ				SN	S	14 57 26.7	-4.0
PXZ	Pawanui	4.48	193	PN	P	14 56 51.9	-2.9
TSZ	Takapari Road	4.73	201	ePN	P	14 56 55.2	-2.8
TSZ				SN	S	14 57 44.2	-8.9
TCW	Tory Channel	6.34	208	PN	P	14 57 14.6	-4.4
THZ	Tophouse	7.36	213	ePN	P	14 57 28.3	-4.1
THZ				eSN	S	14 58 52.0	-2.9

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*IDC **20** 15:00:41.8±1.4, 34.79N×72.81E, mb3.8/6, mb1 3.9/9, mb1mx3.6/22, mbtmp3.8/9, ML3.4/3, Error ellipse: s-maj=34.6km s-min=23.6km az=47.0*

*NDI **20** 15:00:42.3±2.9, 34.72N×72.96E, h10^{km}, ML3.2*

*NEIC **20** 15:00:42.9±1.3, 34.71N×72.77E, h10^{km}, mb3.0/1, Error ellipse: s-maj=21.3km s-min=18.0km az=144.0*

*NNC **20** 15:00:51.2±6.8, 35.38N×72.31E, mpv3.6, Error ellipse: s-maj=70.5km s-min=53.8km az=105.0*

ISC 20 15:00:43.1±0.5**, 34.69N**±0.05×**73.02E**±0.09**, h33**^{km}**, n24,** σ**1**^{s}**21**/32**, mb3.7**/5**, 2C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.18	134	eP	P	15 01 34.1	+2.1
THN				eSB	Sb	15 02 19.6	+2.1
SDNR	Sundarnagar	4.59	133	eP	P	15 01 53.4	+1.4
SDNR				eS	S	15 02 45.4	+0.4
KLP	Kalpa	5.40	124	eP	P	15 02 02.8	-0.6
KLP				eS	S	15 03 02.9	-2.3
KLP				AML	AML	15 03 35.1	
	comp=N,120nm,0.7s						
KLP				AML	AML	15 03 37.0	
	comp=E,112nm,0.4s						
KHET	Khetri	7.01	159	eP	P	15 02 23.5	-2.5
KHET				eS	S	15 03 40.0	-5.5
KHET				AML	AML	15 03 44.5	
	comp=E,11nm,0.5s						
KHET				AML	AML	15 03 45.2	
	comp=N,6.5nm,0.3s						
KUDL	Kundal	7.17	155	eP	P	15 02 27.4	-0.8
KUDL				eS	S	15 03 44.4	-5.0
SONA	Sohna	7.30	151	eS	S	15 03 47.7	-4.8
SONA				AML	AML	15 03 52.9	
	comp=E,21nm,0.4s						
SONA				AML	AML	15 03 53.7	
	comp=N,8.9nm,0.2s						
AAK	Ala-Archa	8.01	8	Pn	P	15 02 39.9	0.0
AAK				⇓Sn	Sn	15 04 09.1	-1.5
	comp=N,4.7nm,0.8s						
AAK	Ala-Archa	8.01	8	eP	P	15 02 42.0	+2.1
KK31	Karatay Array	8.62	348	Pn	P	15 02 49.3	+0.8
	comp=N,1.1nm,0.3s,baz=155,slow=11,SNR=45						
KK31				⇓Sn	Sn	15 04 22.1	-3.7
	comp=N,0.8nm,0.3s,baz=172,slow=24,SNR=6.9						
MKAR	Makanchi Array	13.97	27	Pn	P	15 04 00.8	+0.1
	comp=N,0.0nm,0.3s,baz=207,slow=16,SNR=2.6						
MKAR	Makanchi Array	13.97	27	Pn	P	15 04 00.8	+0.1
AB31	Akbulak array	17.46	330	⇑P	P	15 04 45.7	+0.2
	comp=N,0.6nm,0.5s						
AB31				⇑S	S	15 07 49.5	-7.3
	comp=N,0.4nm,0.5s						
BVAR	Borovoye Array	18.42	355	P	P	15 04 58.5	+1.0
	comp=N,0.2nm,0.3s,baz=163,slow=9.8,SNR=6.6						
BRVK	Borovoye	18.46	355	P	P	15 04 57.8	-0.3
	comp=N,0.6nm,0.6s						
AKTK	Aktyubinsk	19.17	330	P	P	15 05 06.0	-0.3
AKTO	Aktyubinsk	19.17	330	⇓P	P	15 05 06.2	-0.1
	comp=N,0.6nm,0.8s						
AKTO	Aktyubinsk	19.17	330	P	P	15 05 06.0	-0.3
	comp=N,0.4nm,0.3s,baz=141,slow=8.8,SNR=11						
ZAL	Zalesovo	20.95	20	P	P	15 05 24.7	-0.7
	comp=N,1.4nm,0.3s,baz=242,slow=7.4,SNR=4.2						
ZAL	Zalesovo	20.95	20	P	P	15 05 24.7	-0.7
GNI	Garni	23.06	292	P	P	15 05 45.9	-0.4
	comp=N,3.2nm,0.4s,mb4.1,baz=324,slow=23,SNR=3.7						
FINES	FINESS Array B	39.90	327	P	P	15 08 15.0	-0.1
	comp=N,0.4nm,0.5s,mb3.5,baz=125,slow=9.3,SNR=5.2						
ARCES	ARCESS Array B	43.44	338	P	P	15 08 45.5	+1.4
	comp=N,0.8nm,0.4s,mb3.9,baz=117,slow=8.4,SNR=26						
NOA	NORSAR Array B	46.81	324	P	P	15 09 10.9	-0.1
	comp=N,1.0nm,0.8s,mb3.8,baz=80,slow=8.1,SNR=3.3						
WRA	Warramunga Arr	79.63	123	P	P	15 12 52.6	+3.6
	comp=N,0.4nm,0.9s,mb3.3,baz=322,slow=4.9,SNR=11						

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*IDC **20** 15:09:46.9±2.1, 47.78N×147.03E, h431^{km}±36^{km}, mb2.8/5, mb1 3.0/7, mb1mx2.8/22, mbtmp3.6/7, Error ellipse: s-maj=44.8km s-min=19.1km az=167.0*

*NEIC **20** 15:09:47.3±1.0, 47.77N×146.98E, h441^{km}±14^{km}, mb3.5/2, Error ellipse: s-maj=21.7km s-min=15.4km az=141.0*

*JMA **20** 15:09:47.3±0.5, 47.24N×147.33E, h449^{km}, M3.2*

ISC 20 15:09:46.4±0.7**, 47.31N**±0.09×**147.1E**±0.2**, h460**^{km}±9^{km}**, n28,** σ**1**^{s}**21**/34**, mb3.3**/6**, 1C, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	2.97	265	⇑iP	P	15 10 53.6	-0.9
JSE	Soyaes	3.91	235	P	P	15 11 02.7	+0.8
JTKR	Abashiri--Toko	4.01	215	P	P	15 11 03.8	+1.0
NEM2	Nemuro 2	4.06	194	P	P	15 11 02.6	-0.7
NEM2				eS	S	15 12 03.2	-0.8
JNK	Nakash	4.08	205	P	P	15 11 03.9	+0.5
JWK2	Keihoku	4.10	243	P	P	15 11 05.1	+1.4
ASAJ	Asahikawa	4.47	226	P	P	15 11 08.4	+1.4
	0.3nm,0.3s,baz=58,slow=19,SNR=4.2						
JAK	Akkeshi	4.63	202	P	P	15 11 08.2	-0.3
JAK				eS	S	15 12 12.4	-0.9
JAR	Ashorobuto	4.64	211	P	P	15 11 09.5	+0.9
JFR	Furan	5.21	219	P	P	15 11 15.6	+1.5
JCH	Churui	5.38	211	P	P	15 11 15.5	-0.3
JCH				eS	S	15 12 24.8	-1.5
JNBK	Urakawa-nobuka	5.89	213	P	P	15 11 20.8	-0.1
JNBK				eS	S	15 12 34.8	-0.7
JEW	Eniwo	5.99	224	P	P	15 11 23.3	+1.5
JKB	Kayabe	6.92	221	P	P	15 11 32.0	+0.4
JKB				eS	S	15 12 52.9	-2.0
JOT	Ohata	7.33	218	P	P	15 11 36.6	+0.7
JOT				eS	S	15 13 01.0	-1.7
JANG	Nango	8.01	212	eS	S	15 13 16.7	+0.7
JOM	Ohasama	8.89	210	eS	S	15 13 33.2	-0.1
MAJO	Matsushiro	12.61	215	P	P	15 12 36.8	+3.5
MJAR	Matsushiro Arr	12.61	215	P	P	15 12 36.4	+3.2
	0.3nm,0.3s,baz=16,slow=12,SNR=5.2						
SONM	Songino Array	27.23	286	P	P	15 14 53.8	+0.8
	0.3nm,0.4s,mb3.0,baz=76,slow=8.8,SNR=4.1						
ILAR	Eielson Array	38.70	39	P	P	15 16 28.3	-1.6
	0.6nm,1.0s,mb3.0,baz=258,slow=5.5,SNR=5.8						
MKAR	Makanchi Array	42.97	294	P	P	15 17 03.7	-0.8
	0.8nm,0.6s,mb3.3,baz=74,slow=6.8,SNR=8.1						
MKAR	Makanchi Array	42.97	294	P	P	15 17 03.7	-0.8
INK	Inuvik	43.39	32	P	P	15 17 05.8	-1.6
	0.6nm,0.3s,mb3.5,baz=266,slow=8.1,SNR=9.3						
INK	Inuvik	43.39	32	eP	P	15 17 05.8	-1.6
	0.6nm,0.3s,mb3.5						
KURK	Kurchatov	43.57	301	eP	P	15 17 06.8	-2.3
	0.9nm,0.4s,mb3.5						
TXAR	Lajitas Array	80.73	57	P	P	15 21 13.0	+1.6
	0.4nm,0.5s,mb3.2,baz=302,slow=4.5,SNR=9.0						
TXAR	Lajitas Array	80.73	57	P	P	15 21 13.0	+1.6

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*NEIC **20** 15:14:55.4±1.4, 6.28S×147.67E, h74^{km}±13^{km}, mb4.3/3, Error ellipse: s-maj=14.2km s-min=9.5km az=136.0*

*IDC **20** 15:14:55.2±3.5, 6.23S×147.78E, h75^{km}±35^{km}, mb3.9/5, mb1 4.1/9, mb1mx3.9/15, mbtmp4.2/9, ML3.9/4, MS4.0/2, Ms1 4.0/2, ms1mx3.3/21, Error ellipse: s-maj=35.7km s-min=21.0km az=126.0*

ISC 20 15:14:54.0±2.2**, 6.2S**±0.1×**147.7E**±0.1**, h80**^{km}±21^{km}**, n24,** σ**1**^{s}**02**/23**, mb3.9**/5**, 2C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.19	189	P	P	15 15 42.0	-1.1
	20nm,0.3s,baz=13,slow=5.9,SNR=130						
PMG				S	S	15 16 21.9	+1.8
	58nm,0.3s,baz=224,slow=21,SNR=5.9						
HNR	Honiara	12.57	105	P	P	15 17 50.2	-1.0
	1.2nm,0.3s,baz=292,slow=19,SNR=1.9						
HNR	Honiara	12.57	105	P	P	15 17 51.3	+0.2
	18nm,0.8s						
CTA	Charters Tower	13.84	186	eP	P	15 18 08.4	+0.5
	3.2nm,0.8s						
CTA	Charters Tower	13.84	186	P	P	15 18 08.6	+0.7
	0.3nm,0.3s,baz=13,slow=14,SNR=8.4						
CTAO	Charters Tower	13.84	186	eP	P	15 18 08.2	+0.4
	3.5nm,0.8s						
KAKA	Kakadu	16.34	246	eP	P	15 19 00.2	+20
	6.7nm,0.6s						
WRAB	Tennant Creek	18.79	222	eP	P	15 19 08.2	-1.4
	9.0nm,0.7s						
WB2	Warramunga Arr	18.79	222	⇑iP	P	15 19 08.4	-1.3
WRA	Warramunga Arr	18.80	222	P	P	15 19 08.5	-1.2
	0.8nm,0.3s,baz=49,slow=11,SNR=80						
WRA				S	S	15 22 28.3	-4.8
	0.1nm,0.3s,baz=38,slow=22,SNR=3.4						
ASPA	Alice Springs	21.82	216	⇑iP	P	15 19 41.7	+0.7
DZM	Mont Dzumac	24.02	133	LR	LR	15 27 24.8	
	comp=Z,382nm,18.0s,baz=199,slow=31						
ARMA	Armidale	24.34	172	eP	P	15 20 06.6	+1.0
FITZ	Fitzroy Crossi	24.52	239	eP	P	15 20 08.4	+1.0
	14nm,1.0s,mb4.4						
FITZ	Fitzroy Crossi	24.52	239	P	P	15 20 08.6	+1.2
	17nm,0.7s,mb4.5,baz=54,slow=9.4,SNR=29						
STKA	Stephens Creek	26.14	192	eP	P	15 20 22.7	+0.2
	6.4nm,0.6s,mb4.2						
STKA	Stephens Creek	26.14	192	P	P	15 20 22.2	-0.2
	8.2nm,0.7s,mb4.3,baz=346,slow=8.2,SNR=38						
STKA				LR	LR	15 30 59.5	
	comp=Z,318nm,19.5s,baz=202,slow=37						
ULN	Ulaanbaatar	64.64	331	eP	P	15 25 26.0	+0.6
SONM	Songino Array	64.93	331	P	P	15 25 28.0	+0.7
	1.0nm,0.9s,mb3.6,baz=143,slow=7.4,SNR=5.9						
VNDA	Vanda	71.64	177	P	P	15 26 06.8	-1.6
MKAR	Makanchi Array	78.10	320	P	P	15 26 46.5	+0.7
	1.5nm,1.0s,mb3.7,baz=89,slow=6.5,SNR=3.2						
ILAR	Eielson Array	85.43	23	P	P	15 27 23.4	-0.1
	0.3nm,0.6s,mb3.4,baz=246,slow=5.2,SNR=6.6						
SAML	Samuel	145.74	116	ePKP	PKPdf	15 34 26.9	+2.6
DBIC	Dimbokro	152.70	272	PKPbc	PKPdf	15 34 45.5	+10
	3.5nm,0.8s,baz=166,slow=4.0,SNR=4.5						

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*MOS **20** 15:31:26.3±0.9, 8.17S×111.73E, h94^{km}, mb4.4/8, Error ellipse: s-maj=21.8km s-min=9.4km az=113.8*

*BJI **20** 15:31:34.6, 8.20S×111.80E, h153^{km}, mB4.9, mb4.8*

*NEIC **20** 15:31:34.6±1.6, 8.21S×111.78E, h153^{km}±15^{km}, mb4.6/13, Error ellipse: s-maj=12.7km s-min=6.2km az=55.0*

*IDC **20** 15:31:34.0±3.3, 8.22S×111.80E, h144^{km}±29^{km}, mb4.1/12, mb1 4.2/13, mb1mx4.1/16, mbtmp4.5/13, Error ellipse: s-maj=19.1km s-min=12.9km az=64.0*

ISC 20 15:31:33.4±1.5**, 8.25S**±0.06×**111.75E**±0.08**, h158**^{km}±14^{km}**, n76,** σ**1**^{s}**03**/77**, mb4.5**/36**, 3C-2D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSM	Kuching	9.76	351	P	P	15 33 50.7	-0.3
KKM	Kota Kinabalu	14.88	18	P	P	15 34 57.3	+0.2
FITZ	Fitzroy Crossi	16.68	127	eP	P	15 35 19.5	0.0
	7.7nm,0.3s						
FITZ				eS	S	15 38 10.0	-8.5
FITZ	Fitzroy Crossi	16.68	127	P	P	15 35 19.7	+0.3
	3.6nm,0.3s,baz=303,slow=8.5,SNR=36						
KULM	Kulim	17.42	320	eP	P	15 35 27.0	-1.3
KAKA	Kakadu	20.82	104	eP	P	15 36 22.9	+19
	10nm,0.8s						
WRA	Warramunga Arr	24.76	120	P	P	15 36 42.1	-0.1
	5.6nm,0.6s,mb4.2,baz=293,slow=11,SNR=61						
WRA				ScP		15 43 41.1	
	1.4nm,0.9s,baz=299,slow=2.2,SNR=5.8						
WRAB	Tennant Creek	24.77	120	eP	P	15 36 41.9	-0.3
	13nm,0.8s,mb4.5						
WRAB	Tennant Creek	24.77	120	eP	P	15 36 41.9	-0.3
WRAB				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.5						
WB2	Warramunga Arr	24.77	120	⇑iP	P	15 36 42.1	-0.1
WB2				eS	S	15 41 22.3	+32
ASPA	Alice Springs	26.18	128	eP	P	15 36 54.9	-0.3
ASPA				eS	S	15 41 52.5	+39
GYA	Guiyang	34.85	352	⇓iP	P	15 38 13.8	+2.4
GYA				AP	pP	15 38 48.3	+2.8
GYA				XP	sP	15 39 06.9	+3.2
GYA				PP	PP	15 39 39.5	+5.1
GYA				S	S	15 43 34.4	+4.5
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
STKA	Stephens Creek	36.36	134	eP	P	15 38 24.4	+0.3
	comp=Z,4.4nm,0.5s,mb4.3						
STKA	Stephens Creek	36.36	134	P	P	15 38 24.5	+0.4
	comp=Z,5.5nm,0.5s,mb4.5,baz=306,slow=8.4,SNR=29						
STKA				PcP	PcP	15 40 45.6	+0.1
	comp=Z,1.4nm,0.4s,baz=268,slow=2.1,SNR=3.9						
ENH	Enshi	38.36	357	eP	P	15 38 42.2	+1.3
	comp=Z,12nm,0.5s,mb4.8						
SHL	Shillong	38.77	331	ex	x	15 38 45.5	
CD2	Chengdu	39.68	349	P	P	15 38 53.6	+1.8
CD2				AMB	AMB		
	comp=Z,20nm,0.5s,mb5.0						
SSE	Sheshan	40.15	13	P	P	15 39 00.1	+4.5
SSE				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.6						
SSE				AMB	AMB		
	comp=Z,150nm,6.5s						
SSE	Sheshan	40.15	13	P	P	15 39 00.1	+4.5
	comp=Z,14nm,0.6s,mb4.8						
NJ2	Nanjing	40.64	9	eP	P	15 39 05.6	+6.0
NJ2				XS		15 46 00.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,150nm,5.9s						
NJ2				LR	LR		
	comp=N,960nm,34.4s						
NJ2				LR	LR		
	comp=E,550nm,29.7s						
NJ2				LR	LR		
	comp=Z,340nm,28.0s						
LSA	Lhasa	42.62	333	P	P	15 39 18.0	+2.1
LSA	Lhasa	42.62	333	eP	P	15 39 17.6	+1.7
	comp=Z,26nm,0.6s,mb5.0						
LSA	Lhasa	42.62	333	eP	P	15 39 17.6	+1.7
LSA				pmax	pmax		
	comp=Z,26nm,0.6s,mb5.0						
GUN	Gumba	43.80	326	eP	P	15 39 25.5	+0.1
	comp=Z,33nm,0.5s,mb5.3						
PKI	Pulchoki	43.80	325	eP	P	15 39 24.8	-0.6
DMN	Daman	44.00	325	eP	P	15 39 26.8	-0.2
	comp=Z,35nm,0.6s,mb5.2						
KKN	Kakani	44.04	325	eP	P	15 39 26.8	-0.5
	comp=Z,38nm,1.0s,mb5.0						
GKN	Gorkha	44.56	325	eP	P	15 39 31.3	-0.2
	comp=Z,41nm,0.3s,mb5.5						
LZH	Lanzhou	44.72	351	eP	P	15 39 34.5	+1.8
LZH				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.0						
LZH	Lanzhou	44.72	351	eP	P	15 39 34.5	+1.8
	comp=Z,40nm,1.0s,mb5.0						
LZH				pP	pP	15 39 52.0	-16
LZH				sP	sP	15 40 02.5	-23
LZH	Lanzhou	44.72	351	eP	P	15 39 34.5	+1.8
LZH				*PP	pP	15 39 52.0	-16
LZH				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.0						
KOLN	Koldanda	44.99	324	eP	P	15 39 34.4	-0.5
	comp=Z,24nm,0.4s,mb5.2						
POO	Poona	45.89	306	ex	x	15 39 40.0	
BTO	Baotou	48.63	358	eP	P	15 40 03.5	+0.3
GTA	Gaotai	48.69	348	P	P	15 40 05.3	+1.6
GTA				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
HHC	Hu-ho-hao-te	48.85	360	eP	P	15 40 06.0	+1.1
HHC				AP	pP	15 40 41.1	+0.5
HHC				XP	sP	15 40 57.9	-0.2
HHC				PCP	PcP	15 41 27.9	+0.6
HHC				PP	PP	15 42 01.4	+1.8
HHC				SCP		15 45 06.0	

HHC				PCS		15 45 24.0	
HHC				S	S	15 46 55.1	+0.3
HHC				XS		15 47 59.8	
HHC				SCS	ScS	15 49 39.3	+1.6
HHC				SS	SS	15 50 23.8	-0.3
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
HHC				AMB	AMB		
	comp=Z,120nm,8.4s						
HHC				LR	LR		
	comp=N,230nm,15.6s						
HHC				LR	LR		
	comp=E,210nm,18.0s						
HHC				LR	LR		
	comp=Z,260nm,16.8s						
MAT	Matsushiro	51.01	27	P	P	15 40 20.3	-1.1
MAT	Matsushiro	51.01	27	eP	P	15 40 20.0	-1.4
MJAR	Matsushiro Arr	51.01	27	P	P	15 40 20.4	-1.0
	comp=Z,5.2nm,0.6s,mb4.3,baz=204,slow=8.3,SNR=20						
THN	Thein Dam	53.07	322	eP	P	15 40 34.1	-2.7
CN2	Changchun	53.27	12	eP	P	15 40 41.0	+2.9
SONM	Songino Array	56.04	356	P	P	15 40 58.3	+0.2
	comp=Z,5.4nm,0.5s,mb4.6,baz=176,slow=8.4,SNR=44						
SONM				PcP	PcP	15 41 54.6	+0.5
	comp=Z,1.0nm,0.5s,baz=169,slow=4.4,SNR=3.8						
WMQ	Urumqi	56.23	339	P	P	15 41 00.0	+0.5
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,240nm,5.9s						
ZAK	Zakamensk	58.85	354	eP	P	15 41 17.2	-0.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
KZA	Kyzart	60.19	329	P	P	15 41 26.9	0.0
	SNR=15						
TKM2	Tokmak 2	60.63	330	P	P	15 41 29.9	-0.2
	SNR=20						
UCH	Uchtor	60.67	329	P	P	15 41 30.7	+0.4
	SNR=6.3						
MKAR	Makanchi Array	60.75	337	P	P	15 41 30.4	-0.4
	comp=Z,8.8nm,0.4s,mb5.0,baz=151,slow=7.2,SNR=198						
KBK	Karagaybulak	60.76	330	P	P	15 41 31.1	+0.2
	SNR=32						
AAK	Ala-Archa	60.97	329	P	P	15 41 32.6	+0.3
	SNR=9.8						
AAK	Ala-Archa	60.97	329	eP	P	15 41 31.1	-1.2
	comp=Z,12nm,1.0s,mb4.7						
AAK	Ala-Archa	60.97	329	eP	P	15 41 31.1	-1.2
AAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.7						
AML	Almayashu	61.02	328	P	P	15 41 32.7	0.0
	SNR=24						
EKS2	Erkin-Say	61.36	329	P	P	15 41 35.0	0.0
	SNR=27						
USP	Ospenovka	61.43	330	P	P	15 41 34.8	-0.6
	SNR=9.4						
OPO	Ambohidratompo	63.36	253	P	P	15 41 49.0	+0.5
	comp=Z,2.5nm,0.8s,mb4.1,baz=315,slow=3.3,SNR=3.6						
KURK	Kurchatov	65.36	338	eP	P	15 41 58.3	-2.7
	comp=Z,6.8nm,0.9s,mb4.5						
KURK	Kurchatov	65.36	338	eP	P	15 41 58.3	-2.7
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
ZAL	Zalesovo	66.00	343	P	P	15 42 04.6	-0.4
	comp=Z,3.7nm,0.5s,mb4.5,baz=336,slow=4.9,SNR=15						
NVS	Novosibirsk	67.24	343	eP	P	15 42 10.9	-1.9
MAW	Mawson	67.60	198	P	P	15 42 14.5	-0.3
	comp=Z,1.7nm,0.5s,mb4.1,baz=44,slow=7.4,SNR=8.4						
MAW	Mawson	67.60	198	eP	P	15 42 14.4	-0.4
	comp=Z,2.2nm,0.5s,mb4.1						
MAW	Mawson	67.60	198	eP	P	15 42 14.4	-0.5
MAW				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	70.49	335	eP	P	15 42 31.5	-1.2
	comp=Z,1.7nm,0.7s,mb3.9						
BRVK	Borovoye	70.49	335	eP	P	15 42 31.5	-1.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
CHKZ	Chkalovo	70.79	336	eP	P	15 42 34.0	-0.5
	comp=Z,2.3nm,0.3s,mb4.4						
CHKZ	Chkalovo	70.79	336	eP	P	15 42 34.0	-0.5
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.3						
ATD	Arta Tunnel	71.29	285	P	P	15 42 39.5	+1.4
	comp=Z,4.8nm,0.7s,mb4.4,baz=249,slow=20,SNR=2.3						
SYO	Syowa Base	75.98	201	⇑P	P	15 43 04.9	+0.6
SYO	Syowa Base	75.98	201	⇑eP	P	15 43 04.9	+0.6
TIXI	Tiksi	80.53	5	eP	P	15 43 27.7	-1.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
BOSA	Boshof	83.05	242	P	P	15 43 44.0	+1.1
	comp=Z,1.1nm,0.5s,mb3.9,baz=0.9,slow=16,SNR=6.3						
BILL	Bilibino	85.18	18	eP	P	15 43 49.5	-3.2
BILL				e		15 47 14.6	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.6s,mb4.1						
OBN	Obninsk	88.35	326	⇓eP	P	15 44 08.6	+0.3
OBN				e		15 47 41.3	
OBN				ePS	PS	15 55 43.0	-23
OBN				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.8						
AKASG	Malin Array Be	91.61	321	P	P	15 44 23.1	-0.5
	comp=Z,0.6nm,0.4s,mb4.0,baz=84,slow=5.2,SNR=7.9						
FINES	FINESS Array B	95.11	331	P	P	15 44 39.6	+0.3
	comp=Z,0.5nm,0.5s,mb4.0,baz=135,slow=5.4,SNR=6.1						

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*NEIC **20** 15:31:49.8, 18.00N×68.29W, h120^{km}, MD3.7(RSPR), After RSPR.*

RSPR 20 15:31:49.8, 18.00N×68.29W, h120^{km}±2^{km}, MD3.7/11, **MD3.7**/11, **9C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	Cabo Rojo, PR	1.13	90	⇑eP	P	15 32 12.4	-1.1
CRPR				eS	S	15 32 30.9	-0.3
MGP	Maguayo	1.15	90	⇓iP	P	15 32 12.8	-0.9
MGP				eS	S	15 32 31.5	0.0
AOPR	Arecibo Observ	1.51	77	⇑eP	P	15 32 17.0	-0.8
AOPR				eS	S	15 32 38.4	-0.6
CELP	Cerrillos	1.63	87	⇑eP	P	15 32 19.0	-0.3
CELP				eS	S	15 32 41.2	-0.3
ICM	Isla Caja Muer	1.69	93	⇓iP	P	15 32 19.2	-0.7
ICM				eS	S	15 32 42.1	-0.6
SJG	San Juan	2.04	87	⇑eP	P	15 32 23.7	-0.5
SJG				eS	S	15 32 49.6	-0.7
SJG	San Juan	2.04	87	⇑eP	P	15 32 23.9	-0.3
SJG	San Juan	2.04	87	⇑eP	P	15 32 23.9	-0.3
SJG				eS	S	15 32 49.9	-0.4
CPD	Cerro la Pandu	2.26	89	⇑eP	P	15 32 26.9	-0.3
CPD				eS	S	15 32 54.5	-0.9
HUMP	Col San Antoni	2.33	86	⇑eP	P	15 32 28.1	0.0
HUMP				eS	S	15 32 56.5	-0.5
CBYP	Canovanas	2.33	83	⇑eP	P	15 32 26.9	-1.2
CBYP				eS	S	15 32 56.3	-0.8
MTP	Monte Pirata	2.60	88	⇓eP	P	15 32 31.5	-0.3
MTP				eS	S	15 33 03.5	0.0

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*IDC **20** 15:32:36.0±0.4, 14.03S×73.30W, h91^{km}±3^{km}, mb4.3/21, mb1 4.5/23, mb1mx4.4/26, mbtmp4.6/23, MS3.9/3, Ms1 3.9/3, ms1mx3.4/25, Error ellipse: s-maj=14.9km s-min=9.0km az=58.0*

*BJI **20** 15:32:36.0, 14.00S×73.20W, h89^{km}, mB5.5, Ms5.7, Msz5.4*

*NEIC **20** 15:32:36.0±0.2, 14.03S×73.21W, mb4.8/55, Error ellipse: s-maj=6.3km s-min=3.7km az=58.0*

NEIC Felt [II] at Andahuaylas.

ISC 20 15:32:34.3±0.2, **14.05S**±0.04×**73.37W**±0.05, **h89^{km}, h89^{km}**±.7^{km}**:pP-P, n165,** σ**0^{s}90**/133, **mb4.7**/72, **9C-3D, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	Arequipa	3.00	143	⇑iP	P	15 33 21.0	0.0
NNA	Nana	3.96	301	⇑ePn	P	15 33 32.2	-1.9
NNA				eS	S	15 34 16.8	-2.9
LPAZ	La Paz	5.52	114	P	P	15 33 57.3	+1.7
	baz=303,slow=13						
LPAZ				Sx	Sx	15 34 38.5	
	3.7nm,0.3s,baz=314,slow=18,SNR=1.5						
LPAZ				S	S	15 34 58.3	0.0
	4.5nm,0.3s,baz=198,slow=24,SNR=4.3						
LPAZ				LR	LR	15 36 07.8	
	comp=Z,413nm,18.8s,baz=280,slow=39						
LPAZ	La Paz	5.52	114	⇑eP	P	15 33 57.2	+1.6
	0.7nm,0.5s						
SAML	Samuel	11.19	64	ePn	P	15 35 09.3	-3.5
	34nm,0.8s						
SIV	San Ignacio	12.03	101	P	P	15 35 20.6	-3.5
	7.5nm,0.3s,baz=282,slow=13,SNR=99						
SIV				S	S	15 37 25.7	-11
	baz=237,slow=14,SNR=3.7						
TLL	Tololo Astrono	16.21	172	i P	P	15 36 17.2	-0.8
CFAA	Coronel Fontan	18.10	166	P	P	15 36 40.2	-1.1
	0.5nm,0.3s,baz=341,slow=10,SNR=111						
CFAA				S	S	15 39 49.6	-7.2
	0.0nm,0.3s,baz=341,slow=5.2,SNR=1.6						
ROSC	El Rosal	18.81	357	P	P	15 36 51.2	+1.7
	2.7nm,0.3s,baz=106,slow=8.0,SNR=15						
MDZ	Mendoza	19.20	168	eP	P	15 36 52.8	-0.8
CPUP	Villa Florida	19.36	132	eP	P	15 36 52.7	-2.8
	148nm,0.8s						
FCH	Farellones	19.39	172	⇑iP	P	15 36 55.5	-0.3
SDV	Santo Domingo	22.95	7	P	P	15 37 32.3	+0.6
	12nm,0.9s,mb4.3,baz=247,slow=16,SNR=8.8						
SDV				LR	LR	15 46 33.0	
	comp=Z,272nm,20.5s,baz=125,slow=36						
SDV	Santo Domingo	22.95	7	eP	P	15 37 31.9	+0.2
	20nm,0.9s,mb4.4						
BDFB	Brasilia	24.55	97	P	P	15 37 47.0	-0.3
	5.5nm,0.9s,mb4.0,baz=275,slow=12,SNR=4.5						
BAO	Brasilia Array	24.57	97	P	P	15 37 52.5	+5.0
TRQA	Tornquist	25.96	159	eP	P	15 37 58.9	-1.4
PLCA	Paso Flores	26.70	175	P	P	15 38 05.2	-1.9
	6.4nm,0.8s,mb4.2,baz=352,slow=8.2,SNR=10						
PLCA				PcP	PcP	15 41 30.2	+1.4
	4.3nm,1.1s,baz=331,slow=5.3,SNR=3.4						
PLCA	Paso Flores	26.70	175	eP	P	15 38 06.0	-1.1
	14nm,0.9s,mb4.5						
JTS	JuntasAbangare	26.77	334	P	P	15 38 11.6	+3.6
	6.3nm,0.9s,mb4.2,baz=167,slow=22,SNR=5.3						
JTS	JuntasAbangare	26.77	334	P	P	15 38 09.1	+1.1
	14nm,1.0s,mb4.5						
RPN	Rapa Nui	35.96	243	P	P	15 39 28.8	+0.4
	106nm,0.7s,baz=88,slow=2.6,SNR=15						
USHA	Ushuaia	40.87	176	P	P	15 40 09.0	+0.1
	19nm,0.8s,mb5.0,baz=90,slow=0.1,SNR=4.9						
SWET	Sewanee	50.42	347	eP	P	15 41 22.4	-2.5
ELN	Prospectdale	51.47	352	eP	P	15 41 32.9	0.0
LTX	Lajitas	52.12	326	eP	P	15 41 37.5	-0.2
	18nm,1.3s,mb4.9						
TXAR	Lajitas Array	52.12	326	P	P	15 41 37.6	-0.2
	4.6nm,0.7s,mb4.6,baz=149,slow=8.5,SNR=53						
TXAR				pP	pP	15 41 60.0	+0.2
	2.8nm,0.8s,baz=154,slow=8.7,SNR=4.0						
TXAR	Lajitas Array	52.12	326	P	P	15 41 37.6	-0.2
TXAR				pP	pP	15 41 60.0	+0.2
WCI	Wyandotte Cave	53.40	347	eP	P	15 41 44.8	-2.4
	23nm,1.1s,mb5.1						
WMOK	Wichita Mounta	54.19	334	eP	P	15 41 51.8	-1.3
	9.0nm,1.5s,mb4.6						
WMOK				ePcP	PcP	15 42 56.3	0.0
CCM	Cathedral Cave	54.48	343	eP	P	15 41 53.3	-1.7
	2.2nm,0.7s,mb4.3						
ACSO	Alum Creek Sta	54.74	351	eP	P	15 41 55.2	-1.7
	4.9nm,0.9s,mb4.5						
MNTX	Cornudas Mount	54.88	326	eP	P	15 41 57.0	-1.1
	5.8nm,1.1s,mb4.5						
ANMO	Albuquerque	57.97	328	P	P	15 42 19.2	-0.8
	2.6nm,0.7s,mb4.4,baz=149,slow=9.3,SNR=6.6						
ANMO	Albuquerque	57.97	328	eP	P	15 42 19.3	-0.8
	2.5nm,0.8s,mb4.3						
SADO	Sadowa	58.77	355	P	P	15 42 23.9	-1.5
	7.3nm,0.7s,mb4.8,baz=199,slow=14,SNR=4.2						
SADO				pP	pP	15 42 46.9	-1.0
	4.5nm,0.6s,baz=146,slow=6.9,SNR=2.1						
WUAZ	Wupatki	61.03	325	eP	P	15 42 41.6	+0.5
	28nm,1.0s,mb5.2						
ISCO	Idaho Springs	61.41	332	eP	P	15 42 43.1	-0.5
	8.5nm,1.1s,mb4.7						
PV01	Paradox Valley	61.51	329	eP	P	15 42 44.4	+0.2
PV01				epP	pP	15 43 06.9	0.0
SMCO	Snowmass	61.55	331	eP	P	15 42 45.2	+0.7
	12nm,0.9s,mb4.9						
PV10	Paradox Valley	61.93	329	eP	P	15 42 46.5	-0.6
BAR	Barrett	62.23	319	eP	P	15 42 49.7	+0.6
PFO	Pinyon Flat Ob	62.70	320	eP	P	15 42 52.9	+0.6
	13nm,1.1s,mb4.8						
NEN	Nelson	63.11	323	eP	P	15 42 55.0	0.0
SRU	San Rafael	63.24	328	eP	P	15 42 55.7	-0.1
	13nm,1.0s,mb4.8						
MSU	Marysvale	63.66	327	eP	P	15 42 59.3	+0.7
MSU				epP	pP	15 43 22.8	+1.5
MSU				ePcP	PcP	15 43 33.6	-0.2
TMUT	Trail Mountain	63.73	328	eP	P	15 42 59.5	+0.5
ARUT	Antelope Range	63.82	325	eP	P	15 43 00.7	+1.1
RSSD	Black Hills	64.29	336	eP	P	15 43 02.6	+0.1
	7.8nm,1.1s,mb4.5						
RSSD				pP	pP	15 43 24.5	-0.8
DAU	Daniels Canyon	64.59	329	eP	P	15 43 05.2	+0.6
TPNV	Topopah Spring	64.83	323	eP	P	15 43 07.0	+0.9
	13nm,1.0s,mb4.7						
TCUT	Toone Canyon	65.20	329	eP	P	15 43 08.8	+0.3
DUG	Dugway	65.23	328	eP	P	15 43 09.3	+0.6
	18nm,1.0s,mb4.9						
PDAR	Pinedale Array	65.57	331	P	P	15 43 10.2	-0.6
	1.9nm,0.8s,mb4.0,baz=122,slow=7.5,SNR=13						
PDAR				pP	pP	15 43 33.2	-0.5
	2.6nm,1.0s,baz=135,slow=10,SNR=4.9						
PDAR				LR	LR	16 13 36.8	
	comp=Z,230nm,18.9s,baz=305,slow=38						
HWUT	Hardware Ranch	65.65	329	eP	P	15 43 11.0	-0.4
	7.1nm,0.7s,mb4.6						
SPUT	South Promonto	65.86	329	eP	P	15 43 11.9	-0.8
HVU	Hansel Valley	66.38	329	eP	P	15 43 15.3	-0.7
	12nm,0.8s,mb4.8						
MTUM	Tungsten Hills	66.47	322	eP	P	15 43 17.5	+0.8
REDW	Red Top Meadow	66.63	331	eP	P	15 43 17.0	-0.6
	11nm,1.0s,mb4.7						
LOHW	Long Hollow	66.71	331	eP	P	15 43 18.0	0.0
	5.0nm,0.7s,mb4.5						
MOOW	Moose Ponds	66.88	331	eP	P	15 43 19.0	-0.1
	7.6nm,1.1s,mb4.4						
ELK	Elko	66.91	327	P	P	15 43 19.1	-0.3
	2.9nm,0.8s,mb4.1,baz=123,slow=3.2,SNR=13						
ELK				pP	pP	15 43 42.1	-0.2
	3.4nm,0.9s,baz=109,slow=3.7,SNR=6.0						
ELK	Elko	66.91	327	eP	P	15 43 19.5	+0.1
	6.2nm,1.0s,mb4.4						
ULM	Lac du Bonnet	67.01	345	P	P	15 43 18.6	-1.1
	7.4nm,0.7s,mb4.6,baz=155,slow=5.1,SNR=10						
ULM				pP	pP	15 43 40.4	-2.4
	5.2nm,0.8s,baz=149,slow=7.4,SNR=3.7						
NVAR	Mina Array Bea	67.03	323	P	P	15 43 20.6	+0.5
	3.0nm,0.9s,mb4.1,baz=144,slow=7.3,SNR=19						
NVAR				pP	pP	15 43 44.3	+1.2
	2.5nm,0.8s,baz=147,slow=7.7,SNR=6.2						
IMW	Indian Meadow	67.08	331	eP	P	15 43 20.6	+0.2
	15nm,1.1s,mb4.7						
LKWY	Lake	67.35	332	eP	P	15 43 23.7	+1.7
	13nm,0.9s,mb4.8						
LRV	Little Rabbit	67.38	320	eP	P	15 43 23.5	+1.2
DGMT	Dagmar	68.00	338	eP	P	15 43 26.6	+0.6
	19nm,0.8s,mb5.0						
CMB	Columbia Colle	68.01	321	eP	P	15 43 26.5	+0.3
	6.0nm,1.3s,mb4.3						
VNA3	Neumayer Olymp	68.45	162	⇑iP	P	15 43 29.0	+0.6
HLID	Hailey	68.51	329	eP	P	15 43 29.8	+0.6
	6.7nm,1.0s,mb4.4						
VNA1	Neumayer--Stat	68.68	161	⇑iP	P	15 43 30.7	+0.9
MCMT	McKenzie Canyo	68.68	331	eP	P	15 43 31.2	+0.9
SCHQ	Schefferville	68.83	4	P	P	15 43 29.8	-1.3
	3.8nm,0.9s,mb4.2,baz=324,slow=18,SNR=2.7						
SCHQ				pP	pP	15 43 53.5	-0.7
	5.0nm,0.7s,baz=97,slow=3.4,SNR=3.1						
VNA2	Neumayer--Watz	69.04	161	⇑iP	P	15 43 33.2	+1.1
OHCM	Honcut	69.50	322	eP	P	15 43 36.2	+0.7
WVOR	Wild Horse Val	69.91	326	eP	P	15 43 37.6	-0.2
	3.8nm,1.0s,mb4.2						
MOD	Modoc	70.48	325	eP	P	15 43 42.0	+0.7
	18nm,1.0s,mb4.8						
SNAA	Sanae	70.66	162	⇑iP	P	15 43 41.7	-0.2
SNAA	Sanae	70.66	162	P	P	15 43 42.0	+0.1
	7.1nm,0.8s,mb4.5,baz=281,slow=5.8,SNR=106						
SNAA				pP	pP	15 44 05.0	-0.2
	2.3nm,0.8s,baz=281,slow=7.6,SNR=3.6						
MSO	Missoula	70.69	332	eP	P	15 43 43.3	+0.9
	16nm,1.7s,mb4.6						
LIC	Lamto	70.72	78	eP	P	15 43 41.1	-2.1
	20nm,1.0s,mb4.6						
LIC				eR			
	107nm,21.4s						
BMO	Blue Mountains	70.88	329	eP	P	15 43 43.8	+0.1
	2.0nm,0.8s,mb4.0						
DBIC	Dimbokro	71.02	78	P	P	15 43 43.6	-1.4
	5.0nm,0.8s,mb4.4,baz=222,slow=7.5,SNR=6.7						
EDM	Edmonton	75.26	336	eP	P	15 44 08.8	-0.3
QSPA	South Pole Qui	76.10	180	⇓iP	P	15 44 14.5	+1.1
	14nm,0.9s,mb4.7						
EVO	Evora	80.34	46	eP	P	15 44 36.5	-1.0
	42nm,1.2s,mb4.8						
YKA	Yellowknife Ar	82.81	342	P	P	15 44 48.9	-0.9
	7.1nm,1.0s,mb4.5,baz=137,slow=5.2,SNR=16						
YKA				pP	pP	15 45 12.6	-0.9
	3.5nm,0.9s,baz=135,slow=4.9,SNR=3.3						
VNDA	Vanda	83.40	190	eP	P	15 44 54.3	+1.8
	69nm,2.3s,mb5.1						
ESDC	Sonseca Array	83.68	47	P	P	15 44 55.7	+1.0
	11nm,0.8s,mb4.7,baz=252,slow=5.3,SNR=33						
ESLA	Sonseca Array	83.68	47	eP	P	15 44 56.0	+1.3
SYO	Syowa Base	84.92	161	⇓P	P	15 45 00.9	+0.8
SYO	Syowa Base	84.92	161	⇓eP	P	15 45 00.9	+0.8
DLBC	Dease Lake	85.68	334	P	P	15 45 05.0	+0.9
	5.0nm,0.9s,mb4.5,baz=117,slow=7.2,SNR=6.8						
DLBC				pP	pP	15 45 29.8	+1.7
	2.9nm,0.9s,baz=150,slow=15,SNR=2.1						
DLBC	Dease Lake	85.68	334	P	P	15 45 05.0	+0.9
DLBC				pP	pP	15 45 29.8	+1.7
TSUM	Tsumeb	86.35	109	eP	P	15 45 09.4	+1.1
	5.7nm,0.8s,mb4.5						
SJPF	Ste Jean	86.92	44	eP	P	15 45 11.4	+0.8
	34nm,1.2s,mb4.8						
ETSF	Etsaut	87.30	45	eP	P	15 45 13.0	+0.6
ROSF	Rostrenen	87.66	39	eP	P	15 45 14.6	+0.6
	52nm,1.1s,mb5.2						
EPF	Esparros	87.96	45	eP	P	15 45 16.0	+0.4
LFF	La Frestale	88.91	43	eP	P	15 45 19.9	-0.1
	43nm,1.0s,mb5.1						
MFF	Saint Martin d	88.94	41	eP	P	15 45 20.0	-0.1
	41nm,1.2s,mb5.0						
SUMG	Summit	89.44	10	eP	P	15 45 22.9	+1.1
	39nm,1.1s,mb5.3						
SUMG				epP	pP	15 45 47.1	+1.0
FLN	La Foliniere	89.53	39	eP	P	15 45 23.0	+0.2
	23nm,1.0s,mb5.0						
RJF	Les Rejaudoux	89.56	43	eP	P	15 45 22.8	-0.2
LDF	La Druitiere	89.69	39	eP	P	15 45 23.7	+0.1
CAF	Calviac	89.79	43	eP	P	15 45 23.9	-0.2
	15nm,0.8s,mb4.9						
TCF	Toulx Ste Croi	90.35	42	eP	P	15 45 26.5	-0.3
	17nm,1.0s,mb4.8						
LASF	Ste Croix	90.72	45	eP	P	15 45 28.7	+0.2
	36nm,1.3s,mb5.0						
AVF	Avril sur Loir	91.26	42	eP	P	15 45 31.0	0.0
SSF	Saint Saulge	91.45	42	eP	P	15 45 32.0	+0.1
VIVF	Saint-Julien-l	91.52	44	eP	P	15 45 32.9	+0.7
	36nm,1.2s,mb5.2						
SMF	Signal de Mont	91.53	42	eP	P	15 45 31.8	-0.5
	31nm,1.1s,mb5.1						
LOR	Lormes	91.75	42	eP	P	15 45 33.4	+0.2
SMRF	Simiane la Rot	91.86	45	eP	P	15 45 33.6	-0.2
LMR	La Mourre	92.32	46	eP	P	15 45 35.8	-0.1
	29nm,1.1s,mb5.1						
FRF	La Foret Royal	92.48	46	eP	P	15 45 36.4	-0.3
	65nm,1.6s,mb5.3						
INK	Inuvik	92.54	341	P	P	15 45 36.2	-0.1
	6.9nm,1.0s,mb4.9,baz=118,slow=3.4,SNR=12						
INK				pP	pP	15 45 59.7	-1.0
	6.5nm,1.0s,baz=117,slow=5.7,SNR=6.4						
MAW	Mawson	92.62	165	eP	P	15 45 37.7	+0.9
	7.0nm,1.2s,mb4.9						
MAW	Mawson	92.62	165	P	P	15 45 37.3	+0.5
	8.7nm,1.0s,mb5.0,baz=206,slow=7.1,SNR=12						
MBDF	Montbardon	92.91	45	eP	P	15 45 39.1	+0.5
	40nm,1.5s,mb5.2						
CABF	La Chapelle	93.00	43	eP	P	15 45 39.2	+0.2
	25nm,1.3s,mb5.1						
LPL	La Plagne	93.11	44	eP	P	15 45 39.9	+0.4
	19nm,1.1s,mb5.1						
LPG	La Plagne	93.11	44	eP	P	15 45 39.9	+0.4
	12nm,0.8s,mb5.0						
GIVF	Givet	93.25	39	eP	P	15 45 40.4	+0.4
HAU	Haudompre	93.58	41	eP	P	15 45 40.9	-0.7
ILAR	Eielson Array	95.74	336	P	P	15 45 50.5	-0.5
	1.1nm,0.8s,mb4.3,baz=146,slow=3.0,SNR=11						
ILAR				pP	pP	15 46 14.4	-0.9
	1.0nm,1.0s,baz=187,slow=3.4,SNR=3.7						
GERES	GERESS Array B	98.53	42	P	P	15 46 04.0	-0.1
	1.3nm,0.7s,mb4.6,baz=243,slow=3.0,SNR=9.0						
STKA	Stephens Creek	123.36	216	eP	PKPdf	15 51 22.7	+1.2
	3.0nm,0.8s						
STKA	Stephens Creek	123.36	216	PKP	PKPdf	15 51 23.0	+1.5
	3.5nm,0.8s,baz=57,slow=0.8,SNR=10						
CHKZ	Chkalovo	131.37	28	eP	PKPdf	15 51 38.3	+2.0
ASPA	Alice Springs	134.00	216	⇑iP	PKPdf	15 51 43.4	+1.3
WB2	Warramunga Arr	136.59	220	eP	PKPdf	15 51 48.7	+1.8
WRA	Warramunga Arr	136.60	220	PKP	PKPdf	15 51 47.9	+1.0
	6.7nm,0.9s,baz=148,slow=1.5,SNR=26						
WRA				pPKP		15 52 13.1	
	3.8nm,1.0s,baz=154,slow=1.3,SNR=4.8						
ZAL	Zalesovo	136.65	19	PKP	PKPdf	15 51 48.4	+2.2
	7.1nm,0.8s,baz=173,slow=2.4,SNR=39						
ZAL				pPKP		15 52 13.1	
	2.9nm,0.8s,baz=154,slow=2.7,SNR=4.0						
KURK	Kurchatov	136.96	26	ePKPdf	PKPdf	15 51 49.2	+2.5
AAK	Ala-Archa	140.28	38	PKPdf	PKPdf	15 51 55.8	+2.7
MKAR	Makanchi Array	141.51	27	PKP	PKPdf	15 51 56.1	+1.0
	1.8nm,0.7s,slow=2.4,SNR=7.5						
FITZ	Fitzroy Crossi	142.96	211	eP	PKPdf	15 51 55.6	-2.8
	23nm,0.9s						
MJAR	Matsushiro Arr	143.98	314	PKhKP		15 51 57.8	
	1.7nm,0.5s,baz=78,slow=2.7,SNR=10						
MAT	Matsushiro	143.99	314	PKP	PKPdf	15 51 58.7	-1.0
MAT	Matsushiro	143.99	314	eP	PKPbc	15 51 59.0	0.0
WMQ	Urumqi	146.19	25	PKP	PKPdf	15 52 05.3	+2.0
WMQ				APKP		15 52 29.5	
WMQ				XPKP		15 52 41.0	
WMQ				ePP	PP	15 55 28.5	-2.1
WMQ				PKS	PKS	15 55 40.0	+2.3
WMQ				PP	PP		
	comp=Z,230nm,5.5s						
CN2	Changchun	146.25	335	ePKP	PKPdf	15 52 04.0	+0.6
CN2				PP	PP	15 55 31.3	+0.3
ULN	Ulaanbaatar	146.28	359	ePKPdf	PKPdf	15 52 06.0	+2.7
ULN				ePKPbc	PKPbc	15 52 07.5	+2.9
SONM	Songino Array	146.32	0	PKPbc	PKPbc	15 52 06.2	+1.6
	comp=Z,17nm,0.8s,baz=347,slow=1.2,SNR=119						
SONM				pPKPbc		15 52 31.5	
	comp=Z,18nm,0.8s,baz=327,slow=2.5,SNR=14						
THN	Thein Dam	146.39	52	eP	PKPdf	15 52 06.1	+2.1
KHET	Khetri	148.14	59	eP	PKPdf	15 52 12.0	+5.0
POO	Poona	148.25	77	eP	PKPdf	15 52 09.0	+1.6
KUDL	Kundal	148.68	59	ex	x	15 52 13.7	
KLP	Kalpa	148.72	51	ex	x	15 52 14.6	
AYAN	Aya Nagar	149.09	58	ex	x	15 52 14.4	
SONA	Sohna	149.13	58	ex	x	15 52 14.5	
KS15	Wonju Array Si	149.99	325	ePKPbc	PKPdf	15 52 16.7	+7.1
HYB	Hyderabad	152.78	79	i P	PKPdf	15 52 24.0	+10
HYB	Hyderabad	152.78	79	eP	PKPdf	15 52 24.0	+10
GTA	Gaotai	154.03	12	PKP	PKPdf	15 52 18.4	+3.0
KOLN	Koldanda	154.58	54	eP	PKPdf	15 52 27.0	+11
GKN	Gorkha	155.27	52	eP	PKPdf	15 52 28.6	+11
	comp=Z,22nm,1.2s						
DMN	Daman	155.83	53	eP	PKPdf	15 52 30.2	+12
KKN	Kakani	155.87	52	eP	PKPdf	15 52 30.8	+13
GUN	Gumba	156.27	51	eP	PKPdf	15 52 32.9	+14
LZH	Lanzhou	157.91	6	ePKP	PKPdf	15 52 20.6	0.0
LZH				APKP		15 52 47.4	
LZH				XPKP		15 52 58.1	
LSA	Lhasa	158.85	40	ePKPdf	PKPdf	15 52 25.9	+3.9
LSA				ePKPab	PKPab	15 53 01.9	+1.1

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*IDC **20** 15:56:24.3±1.5, 34.60N×73.39E, mb3.9/4, mb1 4.0/7, mb1mx3.6/21, mbtmp3.8/7, ML3.6/3, Error ellipse: s-maj=45.4km s-min=23.7km az=59.0*

*NEIC **20** 15:56:25.9±1.1, 34.55N×73.20E, h10^{km}, mb4.2/1, Error ellipse: s-maj=26.1km s-min=16.1km az=71.0*

*NDI **20** 15:56:25.5±2.9, 34.62N×72.84E, h10^{km}, MD3.6, ML3.6, mb4.2(NEIC)*

*NNC **20** 15:56:36.8±16.0, 34.93N×72.23E, h46^{km}±201^{km}, mpv3.9, Error ellipse: s-maj=131.9km s-min=118.4km az=48.0*

ISC 20 15:56:27.9±0.4, **34.71N**±0.03×**73.18E**±0.06, **h33^{km}, n28,**

σ1^{s}18/38, mb3.9/4, 2C-1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.05	176	P	P	15 56 45.2	-1.1
CEP	Cherat	1.37	230	P	P	15 56 50.5	-0.4
THW	Thamme Wali	2.25	213	P	P	15 57 05.1	+1.6
THN	Thein Dam	3.10	136	eP	P	15 57 18.6	+3.0
THN				eSB	Sb	15 58 02.3	+2.3
SBDP	Sheikh Budin	3.11	220	P	P	15 57 17.0	+1.2
DLH	Dalhousie	3.17	132	ePG	P	15 57 28.0	+11
DLH				eSB	Sb	15 58 08.0	+6.0
SDNR	Sundarnagar	4.51	134	eP	P	15 57 36.2	+0.5
SDNR				eS	S	15 58 27.2	-0.5
SMLA	Simla	4.90	136	eP	P	15 57 39.8	-1.4
SMLA				eS	S	15 58 37.9	+0.5
KLP	Kalpa	5.30	125	eP	P	15 57 46.7	-0.1
KLP				eS	S	15 58 47.3	-0.3
KLP				AML	AML	15 59 15.1	
	comp=E,96nm,0.6s						
KLP				AML	AML	15 59 15.5	
	comp=N,98nm,0.7s						
KHET	Khetri	6.98	161	eP	P	15 58 07.2	-3.2
KHET				eS	S	15 59 21.6	-7.9
KUDL	Kundal	7.13	156	eP	P	15 58 09.8	-2.6
KUDL				eS	S	15 59 26.9	-6.2
AAK	Ala-Archa	7.98	7	⇑P	P	15 58 28.6	+4.2
	comp=N,1.7nm,0.7s						
AAK				S	S	15 59 55.5	+1.0
	comp=N,3.7nm,1.0s						
AAK	Ala-Archa	7.98	7	eP	P	15 58 27.0	+2.7
	comp=N,1.2nm,0.5s						
KK31	Karatay Array	8.64	347	⇑P	P	15 58 34.5	+1.1
	comp=N,4.4nm,0.2s,baz=154,slow=11,SNR=143						
KK31				⇓S	S	16 00 10.2	-0.6
	comp=N,1.6nm,0.4s,baz=178,slow=23,SNR=4.5						
MKAR	Makanchi Array	13.90	27	Pn	P	15 59 44.0	-0.6
	comp=N,0.1nm,0.3s,baz=216,slow=15,SNR=3.6						
AB31	Akbulak array	17.52	330	P	P	16 00 29.6	-1.4
	comp=N,0.3nm,0.3s						
AB31				S	S	16 03 36.2	-6.7
	comp=N,0.3nm,0.5s						
BVA0	Borovoye Array	18.42	355	P	P	16 00 42.9	+0.6
	comp=N,0.2nm,0.5s,baz=165,slow=11,SNR=9.5						
BVAR	Borovoye Array	18.42	355	P	P	16 00 41.1	-1.2
	comp=N,0.3nm,0.3s,baz=162,slow=10,SNR=13						
BRVK	Borovoye	18.46	354	eP	P	16 00 43.3	+0.5
CHKZ	Chkalovo	19.05	355	eP	P	16 00 49.6	-0.2
AKTK	Aktyubinsk	19.22	329	P	P	16 00 51.0	-0.8
AKTO	Aktyubinsk	19.22	329	P	P	16 00 51.9	+0.1
	comp=N,0.4nm,0.7s						
AKTO	Aktyubinsk	19.22	329	P	P	16 00 51.0	-0.8
	comp=N,0.4nm,0.3s,baz=133,slow=10,SNR=9.7						
ZAL	Zalesovo	20.89	20	P	P	16 01 08.9	-0.7
	comp=N,3.2nm,0.5s,baz=253,slow=8.7,SNR=16						
FINES	FINESS Array B	39.96	327	P	P	16 04 02.0	+1.5
	comp=N,1.2nm,0.9s,mb3.6,baz=124,slow=10.0,SNR=3.3						
ARCES	ARCESS Array B	43.48	338	P	P	16 04 30.2	+1.0
	comp=N,3.4nm,1.0s,mb4.0,baz=108,slow=7.5,SNR=6.6						
WRA	Warramunga Arr	79.53	123	P	P	16 08 32.1	-1.2
	comp=N,0.5nm,0.5s,mb3.7,baz=322,slow=4.9,SNR=14						
WRAB	Tennant Creek	79.53	123	eP	P	16 08 33.4	+0.1
	comp=N,1.1nm,0.4s,mb4.1						

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*NEIC **20** 15:57:42.4, 58.36N×133.61W, h5^{km}, ML2.7(AEIC), After AEIC.*

PGC 20 15:57:41.8, 58.32N×133.51W, h1^{km}, ML3.3/4, ML2.7/3(AEIC), Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESE	Bessie Mountai	0.75	291	Trac			
BESE	Bessie Mountai	0.75	291	P	Pg	15 57 55.1	-1.7
BESE				S	Sg	15 58 04.6	-2.3
SKAG	Skagway	1.48	321	Trac			
SIT	Sitka	1.60	218	P	Pn	15 58 09.9	-1.5
SIT				S	Sb	15 58 32.3	-0.3
SIT				Trac			
SIT	Sitka	1.60	218	P	Pn	15 58 09.9	-1.5
SIT				S	Sb	15 58 32.3	-0.3
DLBC	Dease Lake	1.84	85	Pn	Pn	15 58 13.2	-1.5
DLBC				Pg	Pg	15 58 14.7	-3.8
DLBC				Sn	Sn	15 58 38.2	-0.8
DLBC				Sg	Sg	15 58 39.8	-3.1
DLBC				Trac		15 58 45.0	
	comp=Z,208nm,0.7s						
DLBC	Dease Lake	1.84	85	P	Pn	15 58 13.2	-1.6
DLBC				S	Sn	15 58 38.2	-0.8
PLBC	Pleasant Camp	1.87	309	Pg	Pg	15 58 14.9	-4.2
PLBC				Sn	Sn	15 58 39.3	-0.5
PLBC				Sg	Sg	15 58 40.2	-3.8
WHY	Whitehorse	2.45	344	Pn	Pn	15 58 21.3	-2.2
WHY				Pg	Pg	15 58 26.2	-4.5
WHY				Sg	Sg	15 58 54.5	-8.8
WHY				Trac		15 59 06.2	
	comp=Z,67nm,0.7s						
WHY	Whitehorse	2.45	344	P	Pn	15 58 21.4	-2.1
HYT	Haines Junctio	3.23	323	Pn	Pn	15 58 33.8	-0.9
HYT				Pg	Pg	15 58 39.8	-6.5
HYT				Sg	Sg	15 59 22.2	-7.1
HYT				Trac		15 59 35.4	
	comp=Z,26nm,0.6s						
RUBB	Prince Rupert	4.40	154	Trac		16 00 05.5	
	comp=Z,59nm,0.8s						
RUBB	Prince Rupert	4.40	154	Sg	Sg	16 00 01.0	-7.2
FNBB	Fort Nelson	5.52	80	Trac		16 00 47.4	
	comp=Z,14nm,0.8s						
FNBB	Fort Nelson	5.52	80	Sg	Sg	16 00 33.6	-12
FSB	Fort Saint Jam	6.39	123	Sg	Sg	16 01 00.4	-14
FSB				Trac		16 01 19.5	
	comp=Z,5.0nm,0.8s						
DAWY	Dawson	6.42	336	Pn	Pn	15 59 16.1	-3.8
DAWY				Pg	Pg	15 59 38.6	-11
DAWY				Sg	Sg	16 01 01.7	-14
DAWY				Trac		16 01 05.5	
	comp=Z,18nm,0.8s						
INK	Inuvik	10.02	360	Pn	P	16 00 07.3	-2.5

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*THR **20** 16:11:06.9±0.8, 30.82N×56.88E, h14^{km}±8^{km}, ML3.7*

*CSEM **20** 16:11:06.5±0.1, 30.81N×56.80E, h14^{km}, ML3.7, Error ellipse: s-maj=2.6km s-min=2.1km az=41.0*

*IDC **20** 16:11:08.1±5.5, 31.07N×56.79E, mb3.7/5, mb1 3.8/6, mb1mx3.6/21, mbtmp3.7/6, ML3.3/1, MS3.4/1, Ms1 3.4/1, ms1mx2.8/21, Error ellipse: s-maj=107.4km s-min=29.6km az=174.0*

*TEH **20** 16:11:09.2, 30.86N×56.74E, h10^{km}, Mn4.1*

*NEIC **20** 16:11:09.2, 30.86N×56.74E, h10^{km}, mb3.7/3, ML4.1(TEH), After TEH.*

ISC 20 16:11:05.5±1.2**, 30.85N**±0.03×**56.81E**±0.04**, h3^{km}**±10^{km}**, n60, σ1^{s}11**/64**, mb3.7**/7**, 3C-2D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.87	183	ePG	Pg	16 11 22.6	-0.2
IBAF	Bafgh	1.30	305	Pg	Pg	16 11 30.2	-1.2
IMEH	Mehriz	1.96	286	Pn	Pn	16 11 41.5	+1.5
ICHK	Chekchek	2.48	305	Pn	Pn	16 11 48.5	+1.1
BNDS	Bandar-Abbas	3.49	189	ePN	Pn	16 12 03.1	+1.4
BNDS				AML	AML	16 12 55.1	
	comp=N,129nm,0.6s						
ZHSF	Zahedan	3.65	109	ePN	Pn	16 12 04.2	+0.2
NASN	Na'in	3.92	301	ePN	Pn	16 12 09.9	+2.0
NASN				eSG	Sg	16 13 11.4	-4.7
NASN	Na'in	3.92	301	ePn	Pn	16 12 09.9	+1.9
	SNR=52						
NASN				eSg	Sg	16 13 11.4	-4.7
	SNR=90						
IGAR	Garneh	4.18	291	Pn	Pn	16 12 13.8	+2.2
GHIR	Ghir-Karzin	4.20	233	ePN	Pn	16 12 12.9	+1.0
GHIR				AML	AML	16 13 41.9	
	comp=N,93nm,0.8s						
IZEF	Zefreh	4.32	299	Pn	Pn	16 12 13.8	+0.1
BANOM	Banah	4.93	185	⇑P	Pn	16 12 23.1	+0.8
	SNR=8.8						
IKLH	Kalahroud	5.08	300	Pn	Pn	16 12 24.2	-0.1
ISFB	Sefidab	5.21	313	Pn	Pn	16 12 27.4	+1.2
IPIR	Pirpir	5.36	291	Pn	Pn	16 12 27.6	-0.8
IPAY	Payeh	5.87	17	Pn	Pn	16 12 35.0	-0.6
MHI	Mashhad	5.88	21	Pn	Pn	16 12 36.4	+0.8
IVRN	Varamin	5.95	315	Pn	Pn	16 12 36.5	-0.1
IVRN				Lg		16 14 13.0	
IKRD	Kardeh	6.07	13	Pn	Pn	16 12 41.5	+3.1
IMYA	Miamay	6.12	26	Pn	Pn	16 12 38.1	-1.0
ASHO	Ashiyiah	6.18	186	⇓P	Pn	16 12 40.6	+0.7
	SNR=13						
IDMV	Damavand	6.18	321	Pn	Pn	16 12 39.6	-0.4
ISFR	Esferayen	6.25	9	Pn	Pn	16 12 39.4	-1.5
DAMV	Damavand	6.26	321	ePn	Pn	16 12 41.6	+0.6
IQOM	Qom	6.26	311	Pn	Pn	16 12 40.5	-0.5
IQOM				Lg		16 14 18.9	
IAFJ	Afjeh	6.56	321	Pn	Pn	16 12 45.9	+0.6
ASAO	Ashtian	6.80	305	ePN	Pn	16 12 50.1	+1.4
THKV	Tehran--Karaj	7.08	317	ePn	Pn	16 12 53.5	+1.0
HOQ	Hoqain	7.25	176	P	Pn	16 12 53.5	-1.6
	SNR=7.4						
ARQ	Araqi	7.49	182	⇑P	Pn	16 12 58.9	+0.6
UMR	Umm Al-Rimmam	7.98	263	eP	Pn	16 13 03.4	-1.8
UMR				AML	AML	16 14 25.4	
	comp=Z,7.1nm,0.3s						
UMR	Umm Al-Rimmam	7.98	263	eP	Pn	16 13 03.3	-1.9
BSY	Bisya	8.08	177	P	P	16 13 07.1	+0.5
	SNR=9.7						
BSYO	Bisya	8.10	177	P	P	16 13 07.1	+0.3
	SNR=9.7						
MIB	Mutribah	8.26	265	eP	P	16 13 08.0	-1.0
RDF	Al-Radifah	8.27	259	eP	P	16 13 08.2	-1.0
RDF				AML	AML	16 14 40.4	
	comp=Z,5.6nm,0.5s						
RDF				eS	Sn	16 14 40.6	-3.6
RDF	Al-Radifah	8.27	259	eP	P	16 13 08.2	-1.0
RDF				eS	Sn	16 14 40.6	-3.6
WBK	Wadi Bani Khal	8.43	166	⇓P	P	16 13 09.4	-2.0
NAY	Al-Naaiem	8.45	262	eP	P	16 13 10.4	-1.2
NAY				AML	AML	16 14 43.2	
	comp=Z,1.7nm,0.4s						
NAY	Al-Naaiem	8.45	262	eP	P	16 13 10.4	-1.3
WHFO	Wadi Hawf	13.17	193	P	P	16 14 11.7	-4.4
	SNR=9.9						
ABTO	Aybut	13.81	194	P	P	16 14 20.1	-4.6
	SNR=14						
AAK	Ala-Archa	18.37	45	eP	P	16 15 23.9	+0.9
	comp=Z,1.3nm,0.8s						
AAK	Ala-Archa	18.37	45	eP	P	16 15 23.9	+0.9
	comp=Z,1.3nm,0.8s						
AKTK	Aktyubinsk	19.58	2	P	P	16 15 35.5	-1.8
AKTK				LR	LR	16 24 28.0	
AKTK	Aktyubinsk	19.58	2	P	P	16 15 35.5	-1.9
AKTO	Aktyubinsk	19.58	2	P	P	16 15 35.5	-1.8
	comp=Z,0.1nm,0.3s,baz=188,slow=13,SNR=4.8						
AKTO				LR	LR	16 24 28.0	
	comp=Z,128nm,21.3s,slow=41						
BRVK	Borovoye	24.27	20	eP	P	16 16 24.2	-0.4
BVAR	Borovoye Array	24.27	20	P	P	16 16 24.4	-0.2
	comp=Z,1.0nm,0.5s,mb3.5,baz=201,slow=9.0,SNR=10						
MKAR	Makanchi Array	25.29	44	P	P	16 16 34.5	0.0
	comp=Z,0.9nm,0.5s,mb3.6,baz=234,slow=11,SNR=11						
MKAR	Makanchi Array	25.29	44	P	P	16 16 34.5	0.0
KURK	Kurchatov	25.64	33	eP	P	16 16 38.0	+0.2
AKASG	Malin Array Be	28.54	322	P	P	16 17 03.0	-1.2
	comp=Z,0.1nm,0.2s,mb3.1,baz=117,slow=8.5,SNR=4.6						
AKASG	Malin Array Be	28.54	322	P	P	16 17 03.0	-1.2
ZAL	Zalesovo	30.62	33	P	P	16 17 22.9	+0.1
	comp=Z,1.1nm,0.5s,mb4.0,baz=237,slow=5.4,SNR=6.2						
GERES	GERESS Array B	37.08	312	P	P	16 18 18.9	+0.3
	comp=Z,0.5nm,0.6s,mb3.5,baz=111,slow=8.4,SNR=3.4						
LZH	Lanzhou	39.28	69	eP	P	16 18 46.1	+8.9
	comp=Z,22nm,1.6s,mb4.6						
LZH				pP	pP	16 18 53.1	+15
LZH				sP	sP	16 18 55.2	+17
ULN	Ulaanbaatar	41.62	51	eP	P	16 18 57.3	+1.0
	comp=Z,0.9nm,0.7s,mb3.5						
WB2	Warramunga Arr	89.91	113	eP	P	16 24 19.9	+12
ASPA	Alice Springs	91.58	117	⇑iP	P	16 24 23.8	+8.5

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*CSEM **20** 16:36:19.7±0.1, 32.22N×55.58E, h2^{km}, ML3.7, Error ellipse: s-maj=3.7km s-min=2.8km az=117.0*

*TEH **20** 16:36:22.0, 32.17N×55.53E, h8^{km}, Mn3.7*

*THR **20** 16:36:22.0±0.4, 32.25N×55.56E, h15^{km}±7^{km}, ML3.5*

ISC 20 16:36:20.2±0.5**, 32.21N**±0.04×**55.57E**±0.05**, h2^{km}, n28, σ1^{s}13**/29**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBAF	Bafgh	0.62	180	Pg	Pg	16 36 32.5	-0.1
ICHK	Chekchek	0.98	272	Pg	Pg	16 36 39.1	-0.7
IMEH	Mehriz	1.15	225	Pg	Pg	16 36 42.8	-0.4
ISAD	Sadrabad	1.62	260	Pn	Pn	16 36 50.8	+0.8
NASN	Na'in	2.40	285	ePN	Pn	16 37 02.9	+1.8
KRBR	Kerman	2.45	155	ePN	Pn	16 37 04.3	+2.6
KRBR				eSg	Sg	16 37 40.2	-1.4
KRBR				AML	AML	16 37 49.6	
	comp=N,299nm,0.6s						
KRBR	Kerman	2.45	155	ePn	Pn	16 37 04.3	+2.5
	SNR=52						
KRBR				eSg	Sg	16 37 40.2	-1.5
	SNR=90						
IZEF	Zefreh	2.82	285	Pn	Pn	16 37 06.2	-0.8
IGAR	Garneh	2.86	272	Pn	Pn	16 37 08.7	+1.1
IKLH	Kalahroud	3.54	289	Pn	Pn	16 37 16.1	-1.1
IPIR	Pirpir	3.98	278	Pn	Pn	16 37 22.3	-1.2
IFIR	Firoozkooh	4.14	326	Pn	Pn	16 37 25.0	-0.9
IVRN	Varamin	4.24	312	Pn	Pn	16 37 26.8	-0.4
IDMV	Damavand	4.46	320	Pn	Pn	16 37 29.9	-0.5
IDMV	Damavand	4.46	320	Lg		16 38 40.1	
GHIR	Ghir-Karzin	4.51	210	ePN	Pn	16 37 32.3	+1.3
DAMV	Damavand	4.53	320	ePN	Pn	16 37 32.1	+0.7
DAMV				AML	AML	16 39 00.9	
	comp=N,52nm,0.6s						
IQOM	Qom	4.58	306	Pn	Pn	16 37 30.9	-1.2
IPAY	Payeh	5.09	33	Pn	Pn	16 37 38.7	-0.6
IKRD	Kardeh	5.16	27	Pn	Pn	16 37 44.4	+4.1
ASAO	Ashtian	5.19	298	ePN	Pn	16 37 41.4	+0.8
ASAO				AML	AML	16 39 17.5	
	comp=N,18nm,0.6s						
MHI	Mashhad	5.21	37	Pn	Pn	16 37 40.5	-0.5
CHTH	Charan	5.21	316	ePn	Pn	16 37 41.1	+0.1
ISFR	Esferayen	5.22	22	Pn	Pn	16 37 43.3	+2.2
IMHD	Mahdasht	5.34	312	Pn	Pn	16 37 42.6	-0.3
THKV	Tehran--Karaj	5.36	315	ePN	Pn	16 37 43.4	+0.3
IMYA	Miamay	5.57	41	Pn	Pn	16 37 43.7	-2.4
IEMG	Emamqoli	5.77	25	Pn	Pn	16 37 50.4	+1.5

JMA 20 16:56:06.6±0.3**, 24.22N×125.18E, M3.5, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	0.58	21	P	Pg	16 56 18.4	+0.3
JOGS				S	Sg	16 56 26.6	+0.8
JMJ	Miyako jima 2	0.60	10	P	Pg	16 56 18.7	+0.1
JMJ				S	Sg	16 56 27.4	+0.8
JTJ	Tarama	0.60	314	P	Pg	16 56 18.7	0.0
JTJ				S	Sg	16 56 27.6	+0.9
JIJ	Ishigaki jima	0.96	279	P	Pg	16 56 25.6	-0.1
JIJ				eS	Sg	16 56 39.2	+0.7
JKRS	Kuro-shima	1.07	271	P	Pb	16 56 27.5	-0.2
JKRS				eS	Sb	16 56 41.9	-0.1
HATJ	Hateruma jima	1.27	263	P	Pb	16 56 30.3	-0.7
HATJ				eS	Sb	16 56 46.7	-1.1
IRIF	Iriomote-Funau	1.33	275	P	Pb	16 56 31.9	-0.2

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*NIED **20** 17:04:00, 33.70N×140.60E, h53^{km}, Mw3.7 Best double couple: M$_0$4.54×10^{14} NP1:φ$_s$186°, δ88°, λ-127°. NP2: φ$_s$93°, δ37°, λ-4°.*

*JMA **20** 17:04:17.6±0.1, 33.73N×140.62E, h51^{km}±4^{km}, M3.5*

ISC 20 17:04:18.5±1.3**, 33.75N**±0.05×**140.56E**±0.07**, h45^{km}**±28^{km}**, n14, σ0^{s}82**/26**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.89	224	P	P	17 04 34.3	-0.5
JHJ2				S	S	17 04 46.6	-0.1
JMY	Miyakejima3	0.92	290	P	P	17 04 35.5	+0.3
JMY				eS	S	17 04 47.9	+0.3
BSO1	Boso 1	0.96	21	P	P	17 04 34.8	-1.0
BSO1				S	S	17 04 48.0	-0.6
BSO2	Boso 2	1.01	9	S	S	17 04 50.7	+1.0
BSO3	Boso 3	1.05	358	P	P	17 04 36.8	-0.2
BSO3				eS	S	17 04 52.0	+1.3
NJJJ	Nii jima 2	1.24	302	P	P	17 04 40.0	+0.3
BSO4	Boso 4	1.25	352	P	P	17 04 39.9	+0.1
BSO4				eS	S	17 04 55.7	-0.1
JKO	Kozu shima	1.26	291	P	P	17 04 40.2	+0.2
JKO				eS	S	17 04 56.2	+0.2
JIM2	Oshima 3	1.34	316	P	P	17 04 41.0	-0.3
JIM2				eS	S	17 04 56.8	-1.3
JIZS	Izushimoda	1.69	305	P	P	17 04 46.5	+0.3
JIZS				eS	S	17 05 06.7	0.0
KTJJ	Kamata 2	1.70	314	P	P	17 04 46.1	-0.2
KTJJ				eS	S	17 05 05.1	-1.9
JOD2	Odawara 2	1.93	322	P	P	17 04 49.4	-0.2
JOD2				eS	S	17 05 11.7	-1.1
SHZ3	Shizuoka 3	2.34	305	P	P	17 04 56.5	+1.1
SHZ3				eS	S	17 05 25.8	+2.7
MAT	Matsushiro	3.38	326	P	P	17 05 11.2	+1.0
MAT				S	S	17 05 49.2	-0.4

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*IDC **20** 17:16:26.8±2.5, 2.30N×97.01E, mb4.1/5, mb1 4.2/5, mb1mx3.8/17, mbtmp4.1/5, Error ellipse: s-maj=97.9km s-min=27.2km az=54.0*

*NEIC **20** 17:16:30.0±1.1, 2.12N×96.74E, h30^{km}, mb4.2/4, Error ellipse: s-maj=23.1km s-min=14.1km az=210.0*

ISC 20 17:16:28.2±1.3**, 2.1N**±0.2×**96.8E**±0.1**, h30^{km}, n15, σ0^{s}88**/15**, mb4.2**/12**, 1C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.00	51	⇑eP	Pn	17 17 43.8	+0.5
GUN	Gumba	27.66	339	eP	P	17 22 16.7	+1.0
	11nm,0.6s,mb4.6						
DMN	Daman	27.68	337	eP	P	17 22 19.1	+3.2
	3.6nm,0.5s,mb4.3						
LSA	Lhasa	27.93	350	eP	P	17 22 18.4	+0.3
GKN	Gorkha	28.21	337	eP	P	17 22 19.4	-1.3
	5.5nm,0.7s,mb4.3						
KOLN	Koldanda	28.43	335	eP	P	17 22 22.8	+0.2
	6.9nm,0.7s,mb4.4						
WRA	Warramunga Arr	42.91	123	P	P	17 24 26.3	0.0
	1.4nm,1.0s,mb3.6,baz=302,slow=9.5,SNR=5.8						
MKAR	Makanchi Array	46.24	346	P	P	17 24 52.1	-0.5
	4.2nm,0.8s,mb4.5,baz=159,slow=8.0,SNR=20						
SONM	Songino Array	46.29	9	P	P	17 24 53.1	+0.1
	2.2nm,0.8s,mb4.2,baz=186,slow=8.7,SNR=18						
ULN	Ulaanbaatar	46.42	10	P	P	17 24 53.1	-1.0
	1.6nm,0.8s,mb4.0						
KURK	Kurchatov	50.78	345	eP	P	17 25 27.2	-0.6
	2.6nm,0.8s,mb4.2						
ZAL	Zalesovo	52.57	351	P	P	17 25 40.8	-0.5
	2.5nm,0.7s,mb4.3,baz=303,slow=7.6,SNR=16						
CHKZ	Chkalovo	55.71	342	eP	P	17 26 03.1	-1.1
	1.4nm,0.6s,mb4.2						
AKTK	Aktyubinsk	58.20	332	P	P	17 26 23.0	+1.0
AKTO	Aktyubinsk	58.20	332	P	P	17 26 23.0	+1.0
	0.7nm,0.6s,mb3.9,baz=112,slow=10,SNR=4.5						

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*IDC **20** 17:30:59.7±0.7, 53.82N×164.25W, mb4.0/18, mb1 4.2/22, mb1mx4.1/28, mbtmp4.0/22, ML3.8/3, MS3.6/18, Ms1 3.6/18, ms1mx3.5/36, Error ellipse: s-maj=19.5km s-min=10.9km az=167.0*

*BJI **20** 17:31:04.8, 54.22N×163.53W, h60^{km}, mB5.0, mb4.7, Ms4.6, Msz4.2*

*MOS **20** 17:31:04.8±0.9, 54.23N×164.10W, h33^{km}, mb4.7/13, Error ellipse: s-maj=19.4km s-min=9.4km az=97.2*

*NEIC **20** 17:31:07.2±0.5, 53.95N×164.10W, h50^{km}±4^{km}, mb4.5/15, ML4.2(AEIC), Error ellipse: s-maj=8.9km s-min=3.9km az=164.0*

ISC 20 17:31:06.8±0.5**, 53.96N**±0.06×**164.11W**±0.05**, h58^{km}**±3^{km}**, n108, σ1^{s}15**/110**, mb4.4**/38**, MS3.6**/17**, 3D, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	0.58	332	P	P	17 31 19.9	+0.4
WESN	West Dahl Nort	0.67	336	P	P	17 31 21.6	+1.0
WFAR	Faris Peak	0.70	326	P	P	17 31 21.6	+0.7
WPOG	Pogromni	0.74	330	P	P	17 31 22.2	+0.8
AKUT	Akutan	0.99	281	P	P	17 31 24.9	+0.1
AKUT				S	S	17 31 39.2	+0.9
AHB	Akutan Harbor	1.02	279	P	P	17 31 25.3	+0.1
LVA	Lava Point	1.15	281	P	P	17 31 27.4	+0.4
UNV	Unalaska Valle	1.42	266	eP	P	17 31 29.4	-1.5
UNV				P		17 31 29.7	
BALA	Baldy Mountain	1.46	31	P	P	17 31 32.3	+0.9
MTBL	Makushin Table	1.52	271	P	P	17 31 32.0	-0.2
MNAT	Makushin Natee	1.52	268	P	P	17 31 31.6	-0.7
DTNA	Dutton South F	1.61	42	P	P	17 31 32.6	-0.9
MCIR	Makushin Cirqu	1.64	271	P	P	17 31 34.0	+0.1
DOL	Dolgoi Island	1.77	47	P	P	17 31 34.6	-1.1
HAG	Hague Volcano	1.87	42	P	P	17 31 37.0	-0.1
PVV	Pavlof Volcano	1.95	43	P	P	17 31 38.3	0.0
PVV				S	S	17 32 05.4	+3.9
OKCD	Okmok Cone D	2.44	259	P	P	17 31 45.1	0.0
OKCE	Okmok Cone E	2.47	259	P	P	17 31 45.5	0.0
SDPT	Sand Point	2.53	55	P	P	17 31 45.1	-1.3
SDPT				S	S	17 32 16.0	-0.1
NIKO	Nikolski	3.00	253	eP	P	17 31 52.0	-1.1
NIKO				P		17 31 52.5	
ANPB	Aniakchak Plen	4.38	47	P	P	17 32 11.7	-0.7
KDAK	Kodiak Island	7.53	55	Pn	P	17 32 51.9	-4.5
	1.9nm,0.3s,baz=244,slow=7.0,SNR=18						
KDAK				Sn	S	17 34 12.9	-8.2
	1.6nm,0.3s,baz=0.3,slow=17,SNR=3.3						
IMA2	Indian Mountai	13.19	19	P	P	17 34 14.8	+2.0
FX1	Attu Island--F	13.59	275	Pn	P	17 34 17.4	-0.5
	1.9nm,0.3s,baz=115,slow=23,SNR=13						
FX1				LR	LR	17 38 43.4	
	comp=Z,16nm,18.9s,baz=116,slow=34						
ILAR	Eielson Array	13.88	32	Pn	P	17 34 18.3	-3.4
	0.1nm,0.3s,baz=225,slow=12,SNR=8.5						
ILAR				Sn	S	17 36 50.6	-4.3
	baz=182,slow=6.9,SNR=2.2						
ILAR				LR	LR	17 40 07.6	
	comp=Z,334nm,20.3s,baz=204,slow=39						
DAWY	Dawson	16.14	41	eP	P	17 34 52.9	+2.0
DLBC	Dease Lake	19.34	63	P	P	17 35 29.9	+0.1
	baz=283,slow=18,SNR=2.3						
DLBC				LR	LR	17 42 28.1	
	comp=Z,239nm,18.1s,baz=267,slow=35						
BILL	Bilibino	19.83	327	eP	P	17 35 35.0	+0.1
	17nm,1.3s						
BILL	Bilibino	19.83	327	⇓iP	P	17 35 33.6	-1.3
BILL				eS	S	17 39 14.8	+4.9
BILL				pmax	pmax		
	comp=Z,14nm,1.4s						
BILL				MLR	MLR		
	comp=Z,300nm,17.0s						
INK	Inuvik	20.28	33	P	P	17 35 36.8	-2.9
	comp=Z,2.1nm,0.9s,baz=235,slow=12,SNR=12						
INK				LR	LR	17 44 12.1	
	comp=Z,355nm,19.0s,MS3.7,baz=71,slow=39						
INK	Inuvik	20.28	33	eP	P	17 35 37.0	-2.7
	comp=Z,3.5nm,0.6s						
INK	Inuvik	20.28	33	eP	P	17 35 37.0	-2.7
INK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BBB	Bella Bella	21.56	80	LR	LR	17 42 26.0	
	comp=Z,284nm,20.0s,MS3.7,baz=253,slow=32						
YKA	Yellowknife Ar	26.79	52	P	P	17 36 42.6	-0.1
	comp=Z,0.4nm,0.4s,mb3.3,baz=85,slow=11,SNR=4.8						
YKA				LR	LR	17 47 52.6	
	comp=Z,167nm,20.9s,MS3.6,baz=260,slow=38						
NEW	Newport	29.59	82	P	P	17 37 08.3	+0.2
	comp=Z,1.4nm,0.8s,mb3.7,baz=348,slow=3.9,SNR=3.9						
NEW				LR	LR	17 46 40.8	
	comp=Z,219nm,20.6s,MS3.8,baz=275,slow=32						
EDM	Edmonton	29.62	70	P	P	17 37 11.1	+2.9
MOD	Modoc	31.23	95	eP	P	17 37 23.8	+1.1
	comp=Z,4.5nm,1.0s,mb4.2						
TIXI	Tiksi	33.04	328	eP	P	17 37 36.2	-2.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.1						
TIXI				MLR	MLR		
	comp=Z,99nm,13.0s,MS3.7						
NVAR	Mina Array Bea	34.63	98	P	P	17 37 52.4	+0.3
	comp=Z,0.5nm,0.7s,mb3.5,baz=309,slow=6.0,SNR=5.8						
ELK	Elko	34.93	92	eP	P	17 37 55.0	+0.3
	comp=Z,3.1nm,0.8s,mb4.3						
ELK	Elko	34.93	92	eP	P	17 37 55.0	+0.3
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ASAJ	Asahikawa	35.51	276	P	P	17 37 58.2	-1.4

	comp=Z,10nm,1.0s,mb4.7,baz=72,slow=6.4,SNR=3.0						
ASAJ				LR	LR	17 50 32.2	
	comp=Z,102nm,20.4s,MS3.6,baz=196,slow=33						
TPNV	**Topopah Spring**	**36.83**	**98**	*e*P	**P**	**17 38 11.1**	**+0.3**
	comp=Z,7.5nm,1.1s,mb4.4						
TPNV	**Topopah Spring**	**36.83**	**98**	*e*P	**P**	**17 38 11.1**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
PDAR	**Pinedale Array**	**37.05**	**85**	P	**P**	**17 38 12.8**	**+0.3**
	comp=Z,0.2nm,0.6s,mb3.1,baz=288,slow=9.4,SNR=3.1						
PDAR				LR	LR	17 51 17.6	
	comp=Z,53nm,20.8s,MS3.3,baz=332,slow=33						
PV01	**Paradox Valley**	**40.56**	**90**	*e*P	**P**	**17 38 42.3**	**+0.6**
ULM	**Lac du Bonnet**	**40.61**	**66**	LR	LR	17 54 57.5	
	comp=Z,129nm,18.0s,MS3.8,baz=344,slow=35						
SDCO	**Great Sand Dun**	**42.63**	**88**	P	**P**	**17 39 01.7**	**+3.0**
MDJ	**Mudanjiang**	**42.75**	**286**	P	**P**	**17 39 01.9**	**+2.3**
MDJ				AMB	AMB		
	comp=Z,130nm,5.8s						
MJAR	**Matsushiro Arr**	**42.89**	**270**	P	**P**	**17 38 57.9**	**-2.9**
	comp=Z,1.4nm,0.7s,mb3.8,baz=38,slow=7.1,SNR=5.2						
BOD	**Bodaibo**	**43.44**	**310**	*e*P	**P**	**17 39 02.0**	**-3.0**
CBKS	**Cedar Bluff**	**45.31**	**82**	P	**P**	**17 39 22.9**	**+2.6**
	comp=Z,28nm,0.7s,mb5.2						
CBKS	**Cedar Bluff**	**45.31**	**82**	P	**P**	**17 39 22.9**	**+2.6**
CBKS				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.2						
CN2	**Changchun**	**45.60**	**287**	*e*P	**P**	**17 39 27.0**	**+4.5**
CN2				*e*S	**S**	**17 46 08.0**	**+8.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
CN2				LR	LR		
	comp=Z,180nm,18.0s,MS4.0						
WMOK	**Wichita Mounta**	**48.65**	**86**	*e*P	**P**	**17 39 45.0**	**-1.5**
	comp=Z,4.0nm,0.8s,mb4.5						
WMOK	**Wichita Mounta**	**48.65**	**86**	*e*P	**P**	**17 39 45.0**	**-1.5**
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
TXAR	**Lajitas Array**	**49.63**	**94**	P	**P**	**17 39 51.6**	**-2.6**
	comp=Z,1.1nm,0.8s,mb3.9,baz=301,slow=4.6,SNR=10						
TXAR				LR	LR	18 01 38.0	
	comp=Z,10nm,18.8s,MS2.9,baz=320,slow=37						
SCHQ	**Schefferville**	**52.07**	**47**	LR	LR	18 01 00.4	
	comp=Z,93nm,20.9s,MS3.8,baz=313,slow=34						
SONM	**Songino Array**	**53.15**	**303**	P	**P**	**17 40 20.4**	**-0.1**
	comp=Z,1.0nm,0.4s,mb4.1,baz=35,slow=8.2,SNR=12						
SONM				PcP	PcP	17 41 27.2	-0.7
	comp=Z,0.7nm,0.6s,baz=80,slow=2.3,SNR=4.2						
KEV	**Kevo**	**56.33**	**355**	*e*p	**P**	**17 40 42.0**	**-1.3**
ARCES	**ARCESS Array B**	**56.61**	**356**	P	**P**	**17 40 44.1**	**-1.2**
	comp=Z,5.3nm,1.0s,mb4.5,baz=13,slow=8.5,SNR=11						
ARCES				LR	LR	18 07 19.9	
	comp=Z,55nm,18.0s,MS3.7,baz=244,slow=38						
SSE	**Sheshan**	**56.75**	**278**	P	**P**	**17 40 46.5**	**-0.3**
SSE				AMB	AMB		
	comp=Z,20nm,0.9s,mb5.2						
SSE				AMB	AMB		
	comp=Z,110nm,5.8s						
SSE	**Sheshan**	**56.75**	**278**	P	**P**	**17 40 46.5**	**-0.3**
	comp=Z,22nm,0.9s,mb5.2						
NJ2	**Nanjing**	**57.41**	**281**	*e*P	**P**	**17 40 53.1**	**+1.6**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
GTA	**Gaotai**	**62.51**	**300**	P	**P**	**17 41 25.9**	**-0.4**
JOF	**Joensuu**	**62.84**	**352**	*e*p	**P**	**17 41 26.2**	**-1.9**
	comp=Z,1.8nm,0.6s,mb4.4						
CHKZ	**Chkalovo**	**63.55**	**327**	*e*P	**P**	**17 41 32.2**	**-0.6**
	comp=Z,3.8nm,1.2s,mb4.3						
CHKZ	**Chkalovo**	**63.55**	**327**	*e*P	**P**	**17 41 32.2**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
SVE	**Sverdlovsk**	**63.69**	**334**	*e*P	**P**	**17 41 34.1**	**+0.4**
KAF	**Kangasniemi**	**63.98**	**355**	*e*p	**P**	**17 41 34.3**	**-1.1**
	comp=Z,2.9nm,0.5s,mb4.6,baz=356,slow=6.2						
KAF	**Kangasniemi**	**63.98**	**355**	*e*P	**P**	**17 41 34.3**	**-1.1**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.6						
BVAR	**Borovoye Array**	**64.17**	**327**	P	**P**	**17 41 36.4**	**-0.5**
	comp=Z,2.4nm,0.6s,mb4.4,baz=45,slow=6.7,SNR=21						
BRVK	**Borovoye**	**64.18**	**327**	*e*P	**P**	**17 41 36.8**	**-0.1**
	comp=Z,8.8nm,1.4s,mb4.6						
BRVK	**Borovoye**	**64.18**	**327**	*e*P	**P**	**17 41 36.8**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
ARU	**Arti**	**64.57**	**335**	⇓*i*P	**P**	**17 41 38.4**	**-1.0**
ARU				*e*		17 43 57.2	
ARU				*e*PPP	PPP	17 45 28.6	-8.6
ARU				*e*S	**S**	**17 50 17.0**	**+4.2**
ARU				*e*SS	SS	17 54 26.5	+0.7
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
FINES	**FINESS Array B**	**64.66**	**355**	P	**P**	**17 41 38.6**	**-1.2**
	comp=Z,1.7nm,0.5s,mb4.4,baz=23,slow=8.1,SNR=40						
FINES				LR	LR	18 10 55.0	
	comp=Z,35nm,19.4s,MS3.6,baz=342,slow=37						
MKAR	**Makanchi Array**	**64.94**	**316**	P	**P**	**17 41 41.1**	**-0.8**
	comp=Z,0.3nm,0.3s,mb3.8,baz=44,slow=6.7,SNR=12						
MKAR				LR	LR	18 10 19.4	
	comp=Z,91nm,20.4s,MS4.0,baz=37,slow=36						
NB2	**NORSAR Subarra**	**65.29**	**3**	P	**P**	**17 41 43.3**	**-0.6**
	comp=Z,3.0nm,0.8s,mb4.4,baz=359,slow=6.5						
NOA	**NORSAR Array B**	**65.29**	**3**	P	**P**	**17 41 43.0**	**-0.9**
	comp=Z,2.2nm,0.9s,mb4.2,baz=359,slow=6.9,SNR=4.3						
NOA				LR	LR	18 11 18.0	
	comp=Z,25nm,18.1s,MS3.5,baz=355,slow=37						
NAO	**NORSAR Subarra**	**65.49**	**3**	P	**P**	**17 41 43.3**	**-2.0**
	comp=Z,3.0nm,0.8s,mb4.4						
NAO	**NORSAR Subarra**	**65.49**	**3**	P	**P**	**17 41 43.3**	**-2.0**
NAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
HFS	**Hagfors**	**66.24**	**1**	LR	LR	18 11 14.9	
	comp=Z,39nm,18.7s,MS3.6,baz=77,slow=36						
CD2	**Chengdu**	**66.83**	**291**	P	**P**	**17 41 55.0**	**+0.7**
OBN	**Obninsk**	**69.96**	**348**	⇓*e*P	**P**	**17 42 12.9**	**-0.3**
OBN				*e*		17 44 44.3	
OBN				*e*S	S	17 51 17.5	-0.1
OBN				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.5						
USP	**Ospenovka**	**70.97**	**319**	P	**P**	**17 42 20.6**	**+1.1**
	SNR=7.8						
KBK	**Karagaybulak**	**71.31**	**318**	P	**P**	**17 42 22.9**	**+1.3**
	SNR=5.0						
AAK	**Ala-Archa**	**71.50**	**318**	P	**P**	**17 42 24.1**	**+1.3**
	SNR=7.1						
AAK	**Ala-Archa**	**71.50**	**318**	*e*P	**P**	**17 42 22.5**	**-0.3**
	comp=Z,18nm,1.4s,mb4.8						
AAK	**Ala-Archa**	**71.50**	**318**	*e*P	**P**	**17 42 22.5**	**-0.3**
AAK				pmax	pmax		
	comp=Z,18nm,1.4s,mb4.8						
EKS2	**Erkin-Say**	**71.76**	**319**	P	**P**	**17 42 25.7**	**+1.4**
	SNR=7.2						
AML	**Almayashu**	**72.24**	**319**	P	**P**	**17 42 29.1**	**+2.0**
	SNR=6.3						
LSA	**Lhasa**	**74.52**	**299**	P	**P**	**17 42 42.8**	**+2.2**
LSA	**Lhasa**	**74.52**	**299**	*e*P	**P**	**17 42 41.9**	**+1.3**
	comp=Z,11nm,1.0s,mb4.7						
LSA	**Lhasa**	**74.52**	**299**	*e*P	**P**	**17 42 41.9**	**+1.3**
LSA				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
AKASG	**Malin Array Be**	**75.11**	**351**	P	**P**	**17 42 43.0**	**-0.5**
	comp=Z,1.3nm,0.3s,mb4.3,baz=11,slow=5.7,SNR=13						
GERES	**GERESS Array B**	**77.55**	**1**	P	**P**	**17 42 57.1**	**-0.3**
	comp=Z,0.2nm,0.5s,mb3.3,baz=34,slow=3.5,SNR=3.1						
GUN	**Gumba**	**78.66**	**302**	*e*P	**P**	**17 43 04.8**	**+0.9**
GOF	**Gofitskoye**	**78.67**	**341**	*e*P	**P**	**17 43 04.3**	**+0.7**
KKN	**Kakani**	**79.06**	**302**	*e*P	**P**	**17 43 06.7**	**+0.6**
	comp=Z,23nm,1.1s,mb5.0						
KKN	**Kakani**	**79.06**	**302**	*e*P	**P**	**17 43 06.7**	**+0.6**
KKN				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
PKI	**Pulchoki**	**79.17**	**302**	*e*P	**P**	**17 43 07.4**	**+0.7**
GKN	**Gorkha**	**79.20**	**303**	*e*P	**P**	**17 43 07.5**	**+0.6**
	comp=Z,39nm,1.1s,mb5.2						
DMN	**Daman**	**79.29**	**302**	*e*P	**P**	**17 43 08.5**	**+1.1**
KOLN	**Koldanda**	**79.90**	**304**	*e*P	**P**	**17 43 11.5**	**+0.8**
	comp=Z,31nm,1.2s,mb5.1						
GNI	**Garni**	**83.03**	**338**	LR	LR	18 26 08.6	
	comp=Z,54nm,20.9s,MS3.9,baz=263,slow=40						
ESDC	**Sonseca Array**	**85.18**	**15**	P	**P**	**17 43 38.8**	**+1.4**
	comp=Z,1.3nm,0.6s,mb4.2,baz=344,slow=4.5,SNR=6.4						
WRA	**Warramunga Arr**	**90.50**	**236**	P	**P**	**17 44 01.9**	**-1.4**
	comp=Z,2.3nm,1.1s,mb4.4,baz=39,slow=5.6,SNR=9.6						
QSPA	**South Pole Qui**	**143.73**	**180**	PKP	PKPdf	17 50 31.8	-1.5

NEIC ***20*** *17:35:49.9±1.1, 51.53N×178.31W, h57^{km}±7^{km}, ML3.9(AEIC), Error ellipse: s-maj=30.4km s-min=8.2km az=175.0*

IDC ***20*** *17:35:49.4±3.7, 51.56N×178.40W, h54^{km}±29^{km}, mb3.3/7, mb1 3.6/9, mb1mx3.4/25, mbtmp3.7/9, ML3.3/2, MS3.7/1, Ms1 3.7/1, ms1mx2.7/19, Error ellipse: s-maj=45.0km s-min=15.1km az=1.0*

ISC 20 17:35:48.8±0.8**, 51.7N**±0.2×**178.44W**±0.07**, h56**^{km}±7^{km}**, n26, σ0^{s}88**/28**, mb4.1**/9**, MS3.8**/1**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIMD	**Kanaga Island**	**0.75**	**84**	P	**P**	**17 36 02.8**	**-0.7**
KIMD				S	**S**	**17 36 14.1**	**-0.3**
KIKV	**Kanaga Island**	**0.81**	**76**	P	**P**	**17 36 04.4**	**+0.1**
ADAG	**Mount Adagdak**	**1.18**	**75**	P	**P**	**17 36 10.0**	**+0.8**
GSSP	**Great Sitkin S**	**1.46**	**73**	P	**P**	**17 36 14.0**	**+0.6**
GSMY	**Great Sitkin M**	**1.52**	**75**	P	**P**	**17 36 14.2**	**+0.1**
GSTR	**Great Sitkin T**	**1.53**	**73**	P	**P**	**17 36 15.2**	**+0.9**
ATKA	**Atka Island**	**2.67**	**77**	P	**P**	**17 36 29.1**	**-1.3**
FX1	**Attu Island--F**	**5.29**	**286**	P	**P**	**17 37 08.4**	**+1.2**
	1.6nm,0.3s,baz=0.6,slow=21,SNR=7.9						
FX1				S	**S**	**17 38 06.2**	**-1.4**
	2.4nm,0.3s,baz=226,slow=15,SNR=2.4						
FX1	**Attu Island--F**	**5.29**	**286**	P	**P**	**17 37 08.6**	**+1.3**
NIKO	**Nikolski**	**6.01**	**74**	P	**P**	**17 37 17.6**	**+0.4**
KDAK	**Kodiak Island**	**16.07**	**58**	P	**P**	**17 39 30.5**	**-1.6**
	0.8nm,0.3s,baz=290,slow=12,SNR=14						
KDAK				S	**S**	**17 42 29.4**	**+1.2**
	0.1nm,0.3s,baz=70,slow=22,SNR=2.6						
ILAR	**Eielson Array**	**20.86**	**39**	P	**P**	**17 40 28.6**	**+0.7**
	0.4nm,0.9s,baz=236,slow=8.7,SNR=7.1						
ILAR				PcP	PcP	17 44 32.0	-2.8
	0.3nm,0.5s,baz=286,slow=4.0,SNR=4.7						
INK	**Inuvik**	**27.08**	**35**	P	**P**	**17 41 27.2**	**-0.4**
	0.4nm,0.4s,mb3.4,baz=246,slow=5.1,SNR=2.9						
INK	**Inuvik**	**27.08**	**35**	P	**P**	**17 41 27.2**	**-0.4**
PDAR	**Pinedale Array**	**46.00**	**73**	P	**P**	**17 44 07.0**	**-1.0**
	0.5nm,0.3s,mb3.9,baz=335,slow=3.3,SNR=12						
ZAL	**Zalesovo**	**54.00**	**313**	LR	LR	18 09 31.6	
	comp=Z,68nm,18.3s,MS3.8,baz=75,slow=37						
ARCES	**ARCESS Array B**	**57.83**	**350**	P	**P**	**17 45 34.8**	**-1.4**
	2.3nm,0.8s,mb4.2,baz=20,slow=7.6,SNR=7.3						
TXAR	**Lajitas Array**	**58.38**	**82**	P	**P**	**17 45 39.2**	**-1.4**
	0.2nm,0.5s,mb3.4,baz=300,slow=7.3,SNR=2.6						
MKAR	**Makanchi Array**	**60.02**	**308**	P	**P**	**17 45 50.9**	**-0.8**
	0.3nm,0.4s,mb3.7,baz=52,slow=6.3,SNR=6.0						
BVAR	**Borovoye Array**	**60.80**	**320**	P	**P**	**17 45 56.8**	**-0.1**
	0.5nm,0.3s,mb4.1,baz=53,slow=7.2,SNR=8.2						
GUN	**Gumba**	**71.95**	**292**	*e*P	**P**	**17 47 08.8**	**+0.8**
	35nm,0.4s						
KKN	**Kakani**	**72.39**	**292**	*e*P	**P**	**17 47 11.2**	**+0.7**
PKI	**Pulchoki**	**72.48**	**292**	*e*P	**P**	**17 47 11.6**	**+0.5**
GKN	**Gorkha**	**72.60**	**293**	*e*P	**P**	**17 47 12.2**	**+0.5**
	13nm,0.6s,mb5.0						
DMN	**Daman**	**72.63**	**292**	*e*P	**P**	**17 47 12.8**	**+0.9**
	5.3nm,0.5s,mb4.8						
KOLN	**Koldanda**	**73.37**	**294**	*e*P	**P**	**17 47 16.8**	**+0.6**
	8.3nm,0.9s,mb4.7						

NEIC 20 17:36:53.1, 53.83N×**163.93W, h24**^{km}**, ML2.7**(AEIC)**, After AEIC., Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	**West Dahl East**	**0.75**	**329**	P	Pb	17 37 06.2	-1.1
WESE				S	Sb	17 37 16.5	-0.6
WESN	**West Dahl Nort**	**0.83**	**333**	P	Pb	17 37 07.8	-0.9
WFAR	**Faris Peak**	**0.86**	**325**	P	Pb	17 37 07.8	-1.5
WFAR				S	Sb	17 37 18.9	-1.5
WPOG	**Pogromni**	**0.90**	**328**	P	Pb	17 37 08.5	-1.5
AKUT	**Akutan**	**1.13**	**286**	P	Pn	17 37 11.6	-1.9
AHB	**Akutan Harbor**	**1.15**	**285**	P	Pn	17 37 12.0	-1.8
UNV	**Unalaska Valle**	**1.52**	**272**	P	Pn	17 37 16.5	-2.7
UNV				S	Sn	17 37 34.9	-3.5
MTBL	**Makushin Table**	**1.63**	**276**	P	Pn	17 37 18.7	-2.1
DTNA	**Dutton South F**	**1.64**	**36**	P	Pn	17 37 19.1	-1.8
DOL	**Dolgoi Island**	**1.79**	**42**	P	Pn	17 37 21.1	-1.8
HAG	**Hague Volcano**	**1.90**	**38**	P	Pn	17 37 23.2	-1.3

HLW ***20*** *17:56:37.0, 38.90N×21.99E, h33^{km}, Mb3.7*

IDC ***20*** *17:56:39.6±1.4, 38.43N×21.62E, mb3.9/10, mb1 4.0/15, mb1mx3.9/27, mbtmp3.8/15, ML3.9/5, MS3.0/3, Ms1 3.0/3, ms1mx2.6/37, Error ellipse: s-maj=26.6km s-min=15.7km az=47.0*

ATH ***20*** *17:56:41.7, 38.42N×21.87E, h17^{km}±1^{km}, MD3.8/18, ML3.8*

THE ***20*** *17:56:41.5, 38.38N×21.92E, h2^{km}, ML3.8*

CSEM ***20*** *17:56:41.8±0.1, 38.42N×21.88E, h2^{km}, ML3.8, Error ellipse: s-maj=1.6km s-min=1.2km az=31.0*

NEIC ***20*** *17:56:41.5, 38.38N×21.92E, h2^{km}, mb4.0/2, ML3.9(THE), ML3.8(ATH), After THE.*

MOS ***20*** *17:56:41.1±1.2, 38.47N×21.85E, h10^{km}, mb3.5/1, Error ellipse: s-maj=6.6km s-min=3.8km az=95.3*

SKO ***20*** *17:56:43.9, 38.46N×22.13E, h14^{km}, ML3.4*

ISC 20 17:56:40.9±0.5**, 38.42N**±0.02×**21.84E**±0.02**, h10**^{km}±3^{km}**, n140, σ1^{s}38**/172**, mb3.9**/11**, MS3.2**/1**, 20C-8D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.47**	**219**	⇑*i*PB	**Pb**	**17 56 51.0**	**+0.3**
RLS				*e*SB	**Sb**	**17 56 58.6**	**+1.3**
EVR	**Evrytania**	**0.50**	**357**	⇑*i*PN	**Pn**	**17 56 51.0**	**-2.6**
EVR				*e*SN	**Sn**	**17 56 59.3**	**-2.9**
AGG	**Agios Georgios**	**0.71**	**32**	*e*Pg	**Pg**	**17 56 54.7**	**-0.6**
AGG				*e*Sg	**Sg**	**17 57 05.8**	**+1.0**
LKR	**Lokris**	**0.94**	**75**	*e*PN	**Pn**	**17 56 59.3**	**-0.6**
LKD	**Levkas**	**0.97**	**287**	*e*Pg	**Pg**	**17 57 00.0**	**-0.4**
LKD				*e*Sg	**Sg**	**17 57 16.2**	**+2.7**
VLS	**Valsamata**	**1.01**	**256**	*e*PB	**Pb**	**17 57 00.1**	**+0.1**
VLS				*e*SN	**Sn**	**17 57 16.2**	**+0.9**
MGER	**Gerania Oros**	**1.20**	**111**	*e*PN	**Pn**	**17 57 05.0**	**+1.3**
ITM	**Ithomi**	**1.24**	**177**	*e*PN	**Pn**	**17 57 05.1**	**+0.8**
NEO	**Neokhori**	**1.40**	**50**	⇓*i*PN	**Pn**	**17 57 07.4**	**+0.9**
XOR	**Xorichti**	**1.42**	**48**	*e*Pg	**Pg**	**17 57 07.8**	**-1.4**
XOR				*e*Sg	**Sg**	**17 57 27.7**	**-0.5**
MEV	**Metsovon**	**1.44**	**341**	*e*Pg	**Pg**	**17 57 08.3**	**-1.5**
MEV				*e*Sg	**Sg**	**17 57 29.0**	**0.0**
JAN	**Janina**	**1.45**	**328**	*e*PN	**Pn**	**17 57 10.1**	**+2.8**
NAIG	**Nisos Aigina**	**1.46**	**116**	*e*PN	**Pn**	**17 57 08.5**	**+1.1**
MPAR	**Parnis Oros**	**1.52**	**100**	*e*PN	**Pn**	**17 57 09.5**	**+1.3**
ATH	**Athens Observa**	**1.55**	**106**	*e*PN	**Pn**	**17 57 10.0**	**+1.4**
ATH				*e*SN	**Sn**	**17 57 30.6**	**+1.8**
IGT	**Igoumenitsa**	**1.62**	**314**	*e*Pb	**Pb**	**17 57 12.1**	**+1.7**
IGT				*e*Sb	**Sb**	**17 57 35.1**	**+4.4**
PTL	**Penteli**	**1.64**	**102**	*e*PN	**Pn**	**17 57 11.5**	**+1.6**
LIT	**Litokhoron**	**1.75**	**17**	*e*Pb	**Pb**	**17 57 12.5**	**-0.2**
LIT				*e*Sb	**Sb**	**17 57 36.8**	**+2.2**
AOS	**Alonnisos**	**1.76**	**64**	*e*Pb	**Pb**	**17 57 12.0**	**-0.8**
AOS				*e*Sb	**Sb**	**17 57 34.6**	**-0.3**
KZN	**Kozani**	**1.88**	**358**	*e*PN	**Pn**	**17 57 15.7**	**+2.2**
VLI	**Veliai**	**1.91**	**152**	*e*PN	**Pn**	**17 57 15.5**	**+1.7**
KEK	**Kerkira**	**2.05**	**310**	*e*PN	**Pn**	**17 57 18.1**	**+2.3**
PAIG	**Paliouri**	**2.08**	**43**	*e*Pn	**Pn**	**17 57 16.3**	**+0.1**
PAIG				*e*Sn	**Sn**	**17 57 43.2**	**+0.9**
PLG	**Polygyros**	**2.31**	**32**	*e*PB	**Pb**	**17 57 20.9**	**-1.4**
KYTH	**Kithira**	**2.34**	**156**	*e*PN	**Pn**	**17 57 23.0**	**+3.0**
KBN	**Korca**	**2.34**	**340**	*i* Pg	**Pg**	**17 57 20.8**	**-6.9**
THE	**Thessaloniki**	**2.37**	**21**	*e*Pn	**Pn**	**17 57 20.7**	**+0.2**
THE				*e*Sn	**Sn**	**17 57 51.1**	**+1.2**
FNA	**Florina**	**2.39**	**352**	*e*Pn	**Pn**	**17 57 22.8**	**+2.1**
FNA				*e*Sn	**Sn**	**17 57 53.3**	**+3.0**
OUR	**Ouranopolis**	**2.53**	**40**	*e*Pn	**Pn**	**17 57 23.0**	**+0.3**
GRG	**Griva**	**2.57**	**10**	*e*Pn	**Pn**	**17 57 23.9**	**+0.6**
GRG				*e*Sn	**Sn**	**17 57 57.4**	**+2.6**
BIA	**Bitola**	**2.63**	**351**	*e*Pn	**Pn**	**17 57 26.0**	**+1.9**
BIA				*e*Sn	**Sn**	**17 57 57.3**	**+1.0**
SOH	**Sokhos**	**2.67**	**26**	*e*Pn	**Pn**	**17 57 25.4**	**+0.7**
OHR	**Ohrid**	**2.80**	**344**	*e*Pn	**Pn**	**17 57 29.4**	**+2.7**
OHR				*e*Sn	**Sn**	**17 58 03.0**	**+2.2**
KNT	**Kendrikon**	**2.86**	**16**	*e*Pn	**Pn**	**17 57 28.3**	**+0.9**
KNT				*e*Sn	**Sn**	**17 58 03.7**	**+1.6**
LOS	**Limnos**	**2.94**	**58**	*e*Pn	**Pn**	**17 57 28.3**	**-0.2**
VAY	**Valandovo**	**2.95**	**11**	*e*Pn	**Pn**	**17 57 29.3**	**+0.6**
VAY				*e*Sn	**Sn**	**17 58 03.9**	**-0.7**
APE	**Apeiranthos**	**3.22**	**114**	*e*PN	**Pn**	**17 57 33.5**	**+0.9**
NVR	**Nevrokopi**	**3.31**	**27**	*e*PN	**Pn**	**17 57 34.8**	**+0.9**
LCI	**Lecce**	**3.46**	**305**	Pn	**Pn**	**17 57 36.9**	**+0.9**
VAM	**Vamos**	**3.55**	**147**	*e*PN	**Pn**	**17 57 39.5**	**+2.2**
PRK	**Paraskevi**	**3.56**	**75**	*e*PN	**Pn**	**17 57 37.5**	**+0.2**
SKO	**Skopje**	**3.56**	**355**	*e*Pn	**Pn**	**17 57 38.9**	**+1.5**
SKO				*e*Sn	**Sn**	**17 58 20.2**	**+0.3**
IDI	**Anoyia**	**3.97**	**141**	Pn	**Pn**	**17 57 43.8**	**+0.6**
	2.9nm,0.3s,baz=312,slow=17,SNR=15						
IDI				Sn	**Sn**	**17 58 28.9**	**-1.4**
	3.8nm,0.3s,baz=323,slow=21,SNR=3.5						
TIP	**Timpagrande**	**4.04**	**282**	Pn	**Pn**	**17 57 44.8**	**+0.6**
ALN	**Alexandroupoli**	**4.08**	**51**	*e*Pn	**Pn**	**17 57 44.0**	**-0.8**
ALN				*e*Sn	**Sn**	**17 58 32.7**	**-0.5**
BRT	**Bari-Castellan**	**4.34**	**306**	Pn	**Pn**	**17 57 49.0**	**+0.6**
TDS	**Terranova Siba**	**4.46**	**288**	Pn	**Pn**	**17 57 53.5**	**+3.4**
CUC	**Castrocucco**	**4.94**	**290**	Pn	**Pn**	**17 57 59.1**	**+2.2**
	57nm,0.6s						
SLCN	**Sala Consilina**	**5.19**	**294**	Pn	**Pn**	**17 58 01.9**	**+1.4**
STON	**Ston**	**5.45**	**326**	*i* Pn	**Pn**	**17 58 02.5**	**-1.6**
STON				*i* Sn	**Sn**	**17 59 03.0**	**-4.6**
STON	**Ston**	**5.45**	**326**	*i* Pn	**Pn**	**17 58 02.5**	**-1.6**
STON				*i* Sn	**Sn**	**17 59 02.9**	**-4.7**
SGO	**Sicignano**	**5.49**	**295**	P	**Pn**	**17 58 05.4**	**+0.8**
SGO				pmax	pmax		
	comp=Z,15nm,0.2s						
SGO	**Sicignano**	**5.49**	**295**	Pn	**Pn**	**17 58 05.4**	**+0.8**
	comp=Z,15nm,0.2s						
FGMS	**Monte Sant'Ang**	**5.58**	**308**	Pn	**Pn**	**17 58 05.5**	**-0.5**
	comp=Z,48nm,0.3s						
RGNG	**Rignano Grg**	**5.79**	**306**	Pn	**Pn**	**17 58 08.5**	**-0.5**
CSSN	**Cassano Irpino**	**5.80**	**297**	Pn	**Pn**	**17 58 10.0**	**+1.0**
DIVS	**Divcibare**	**5.84**	**347**	*i* Pn	**Pn**	**17 58 09.8**	**+0.1**
FG2	**Serracapriola**	**6.13**	**306**	Pn	**Pn**	**17 58 13.4**	**-0.4**
	comp=Z,78nm,0.4s						
SGG	**Gregorio Mates**	**6.46**	**300**	Pn	**Pn**	**17 58 19.1**	**+0.8**
MIDA	**Miranda**	**6.65**	**301**	Pn	**Pn**	**17 58 21.9**	**+0.8**
	comp=Z,79nm,0.8s						
CII	**Carovilli**	**6.65**	**302**	Pn	**Pn**	**17 58 22.2**	**+1.1**
RNI2	**Rionero Sannit**	**6.75**	**301**	Pn	**Pn**	**17 58 23.5**	**+1.1**
INTR	**Introdacqua**	**7.05**	**303**	Pn	**Pn**	**17 58 27.3**	**+0.6**
	comp=Z,71nm,0.7s						
VOIR		**7.41**	**18**	⇑P	**Pn**	**17 58 31.8**	**+0.1**
VOIR		**7.41**	**18**	⇑P	**Pn**	**17 58 31.8**	**+0.1**
TERO	**Teramo**	**7.55**	**306**	Pn	**Pn**	**17 58 33.2**	**-0.4**
	comp=Z,37nm,1.0s						
MLR	**Muntele Rosu**	**7.70**	**22**	Pn	**Pn**	**17 58 35.6**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=276,slow=9.2,SNR=2.6						
MLR				LR	LR	18 01 41.5	
	comp=Z,82nm,18.9s,baz=303,slow=39						
NRCA	**Norcia**	**7.96**	**306**	Pn	**Pn**	**17 58 39.4**	**-0.1**
MNS	**Montasola**	**8.03**	**302**	P	**P**	**17 58 41.5**	**+1.1**
MNS				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MNS	**Montasola**	**8.03**	**302**	Pn	**P**	**17 58 41.5**	**+1.1**
	comp=Z,5.7nm,0.3s						
NVLJ	**Novalja**	**8.06**	**322**	*i* Pn	**P**	**17 58 38.6**	**-2.2**
NVLJ				*i* Sn	**Sn**	**18 00 08.6**	**-4.4**
VRI	**Vrincioaia**	**8.28**	**24**	⇑P	**P**	**17 58 45.4**	**+1.6**
VRI	**Vrincioaia**	**8.28**	**24**	⇑P	**P**	**17 58 45.4**	**+1.5**
SNTG	**Esanatoglia**	**8.29**	**308**	Pn	**P**	**17 58 43.3**	**-0.8**
ARV	**Arcevia**	**8.43**	**310**	Pn	**P**	**17 58 44.3**	**-1.6**
HMAT	**Matruh**	**8.49**	**148**	P	**P**	**17 58 43.4**	**-3.4**
FSSB	**Fossombrone**	**8.63**	**310**	Pn	**P**	**17 58 47.6**	**-1.2**
PIEI	**Pieia**	**8.69**	**309**	Pn	**P**	**17 58 48.4**	**-1.2**
SFI	**Santa Sofia**	**9.31**	**309**	P	**P**	**17 58 59.1**	**+0.9**
SFI				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SFI	**Santa Sofia**	**9.31**	**309**	Pn	**P**	**17 58 59.1**	**+0.9**
	comp=Z,3.8nm,0.3s						
PGD	**Poggio Sodo**	**9.37**	**309**	Pn	**P**	**17 59 00.0**	**+1.0**
BURAR	**Bucovina Array**	**9.52**	**14**	⇓P	**P**	**17 58 54.1**	**-6.8**
BURAR	**Bucovina Array**	**9.52**	**14**	⇓P	**P**	**17 58 54.1**	**-6.8**
PSZ	**Piszkesteto**	**9.60**	**352**	*e*P	**P**	**17 59 01.4**	**-0.7**
	comp=Z,11nm,0.7s						
PSZ	**Piszkesteto**	**9.60**	**352**	*e*P	**P**	**17 59 01.4**	**-0.7**
PSZ				pmax	pmax		
	comp=Z,11nm,0.7s						
PSZ	**Piszkesteto**	**9.60**	**352**	*e*P	**P**	**17 59 01.4**	**-0.7**
	comp=Z,11nm,0.7s						
VOY	**Vojsko**	**9.62**	**325**	*e*Pn	**P**	**17 59 00.2**	**-2.1**
VOY				*e*Sn	**Sn**	**18 00 46.2**	**-5.3**
SWA2		**9.63**	**161**	P	**P**	**17 58 59.8**	**-2.8**
SWA1		**9.68**	**159**	P	**P**	**17 59 01.1**	**-2.2**
SWA1				S	**Sn**	**18 00 45.8**	**-7.4**
OBKA	**Obir**	**9.71**	**329**	⇓*e*Pn	**P**	**17 59 02.0**	**-1.6**
	comp=Z,1.8nm,0.3s						
ARSA	**Arzberg**	**9.96**	**334**	⇓*e*Pn	**P**	**17 59 05.7**	**-1.5**
	comp=Z,3.8nm,0.5s						
KECS	**Kecovo**	**10.11**	**355**	*e*PN	**P**	**17 59 10.8**	**+1.7**
PTCC	**Patocco-Chiusa**	**10.14**	**325**	Pn	**P**	**17 59 06.9**	**-2.7**
VYHS	**Vyhne**	**10.30**	**349**	*e*SG	**S**	**18 01 08.2**	**-0.1**
CTI	**Castel Tesino**	**10.72**	**319**	Pn	**P**	**17 59 15.1**	**-2.4**
MOA	**Molln**	**10.92**	**332**	⇑*i*Sn	**S**	**18 01 18.0**	**-5.5**
	comp=Z,0.9nm,0.4s						
MOA	**Molln**	**10.92**	**332**	⇑*i*Pn	**P**	**17 59 20.6**	**+0.4**
	comp=Z,3.4nm,0.9s						
MOA				Sn	**S**	**18 01 18.0**	**-5.5**
VRAC	**Vranov**	**11.52**	**343**	Pn	**P**	**17 59 25.4**	**-3.0**
	comp=Z,0.3nm,0.3s,baz=145,slow=16,SNR=2.7						
WTTA	**Wattenberg**	**11.57**	**323**	⇑*i*Pn	**P**	**17 59 27.4**	**-1.7**
	comp=Z,2.1nm,0.3s						
WTTA	**Wattenberg**	**11.57**	**323**	⇓*i*Sn	**S**	**18 01 34.5**	**-4.9**
	comp=Z,5.5nm,0.6s						
WTTA	**Wattenberg**	**11.57**	**323**	⇑Pn	**P**	**17 59 27.4**	**-1.7**
	comp=Z,2.1nm,0.3s						
WTTA				Sn	**S**	**18 01 34.5**	**-4.9**
WTTA	**Wattenberg**	**11.57**	**323**	⇑P	**P**	**17 59 27.4**	**-1.7**
WTTA						18 01 34.5	
WTTA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
WATA	**Walderalm**	**11.65**	**323**	⇑*i*Pn	**P**	**17 59 28.7**	**-1.5**
	comp=Z,4.2nm,0.4s						
WATA	**Walderalm**	**11.65**	**323**	⇑*i*P	**P**	**17 59 28.7**	**-1.5**
WATA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
AWBH		**11.67**	**148**	P	**P**	**17 59 27.7**	**-2.8**
SQTA	**Sankt Quirin**	**11.75**	**322**	⇑*i*Pn	**P**	**17 59 30.0**	**-1.5**
	comp=Z,6.8nm,0.4s						
SQTA	**Sankt Quirin**	**11.75**	**322**	⇑*i*Pn	**P**	**17 59 30.0**	**-1.5**
	comp=Z,6.8nm,0.4s						
SQTA	**Sankt Quirin**	**11.75**	**322**	⇑*i*P	**P**	**17 59 30.0**	**-1.5**
SQTA				pmax	pmax		
	comp=Z,7.0nm,0.4s						
MOTA	**Moosalm**	**11.89**	**322**	⇓*i*Sn	**S**	**18 01 41.9**	**-5.2**
	comp=Z,2.9nm,0.6s						
MOTA	**Moosalm**	**11.89**	**322**	⇑*i*Pn	**P**	**17 59 31.4**	**-2.0**
	comp=Z,8.7nm,0.6s						
MOTA				Sn	**S**	**18 01 41.9**	**-5.2**
MOTA	**Moosalm**	**11.89**	**322**	⇑*i*P	**P**	**17 59 31.4**	**-1.9**
MOTA						18 01 41.9	
MOTA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GERES	**GERESS Array B**	**11.96**	**333**	Pn	**P**	**17 59 30.6**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=157,slow=16,SNR=5.8						
GERES				Sn	**S**	**18 01 44.7**	**-4.2**
	comp=Z,0.2nm,0.3s,baz=151,slow=24,SNR=2.8						
DAVOX	**Davos**	**12.13**	**317**	Pn	**P**	**17 59 35.1**	**-1.5**
DAVOX				Sn	**S**	**18 01 47.6**	**-5.4**
	comp=Z,0.2nm,0.3s,baz=322,slow=23,SNR=2.7						
DAVOX				LR	LR	18 04 38.2	
	comp=Z,40nm,20.0s,baz=110,slow=40						
KHC	**Kasperske Hory**	**12.25**	**334**	*e*P	**P**	**17 59 38.0**	**-0.2**
KHC				*e*x	x	17 59 53.0	
DAVA	**Damuels**	**12.46**	**319**	⇑*i*Pn	**P**	**17 59 41.2**	**+0.2**
	comp=Z,2.3nm,0.4s						
DAVA	**Damuels**	**12.46**	**319**	⇓*i*Sn	**S**	**18 01 56.5**	**-4.4**
	comp=Z,6.3nm,0.7s						
DAVA	**Damuels**	**12.46**	**319**	⇑Pn	**P**	**17 59 41.2**	**+0.2**
	comp=Z,2.3nm,0.4s						
DAVA				Sn	**S**	**18 01 56.5**	**-4.4**
HFRF	**Wahat Farafira**	**12.48**	**152**	P	**P**	**17 59 38.6**	**-2.8**
AKASG	**Malin Array Be**	**13.35**	**21**	Pn	**P**	**17 59 51.5**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=209,slow=12,SNR=2.5						
CLL	**Collm**	**14.31**	**337**	*e*PP	PP	18 00 14.0	-2.9
SUW	**Suwalki**	**15.62**	**3**	*e*P	**P**	**18 00 25.3**	**+2.7**
	comp=Z,14nm,0.5s						
SUW	**Suwalki**	**15.62**	**3**	*e*P	**P**	**18 00 25.3**	**+2.7**
SUW				pmax	pmax		
	comp=Z,14nm,0.5s						
ESDC	**Sonseca Array**	**20.06**	**282**	P	**P**	**18 01 16.1**	**-0.9**
	comp=Z,0.3nm,0.3s,baz=79,slow=11,SNR=5.8						
HFS	**Hagfors**	**22.34**	**349**	P	**P**	**18 01 38.1**	**-2.0**
	comp=Z,2.1nm,0.4s,mb4.0,baz=163,slow=10.0,SNR=22						
FINES	**FINESS Array B**	**23.20**	**5**	P	**P**	**18 01 46.2**	**-2.2**
	comp=Z,0.6nm,0.4s,mb3.4,baz=172,slow=8.3,SNR=9.7						
FINES				PcP	PcP	18 05 35.7	-2.4
	comp=Z,2.2nm,1.0s,baz=117,slow=4.3,SNR=3.8						
FINES	**FINESS Array B**	**23.20**	**5**	P	**P**	**18 01 46.2**	**-2.2**
FINES				PcP	PcP	18 05 35.7	-2.4

NOA	NORSAR Array B	23.60	347	P	P	18 01 50.6	-1.7
	comp=Z,2.6nm,0.7s,mb3.8,baz=153,slow=9.6,SNR=8.2						
EKA	Eskdalemuir Ar	23.84	323	P	P	18 01 53.6	-1.1
	comp=Z,3.0nm,0.7s,mb3.8,baz=127,slow=10,SNR=12						
KAF	Kangasniemi	23.88	5	ep	P	18 01 54.4	-0.6
	comp=Z,0.5nm,0.4s,mb3.3						
KAF	Kangasniemi	23.88	5	eP	P	18 01 54.4	-0.6
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.6						
JOF	Joensuu	25.20	10	ep	P	18 02 06.4	-1.3
ARCES	ARCESS Array B	31.24	2	P	P	18 03 00.4	-1.9
	comp=Z,2.3nm,0.9s,mb4.0,baz=199,slow=8.9,SNR=24						
ARCES				LR	LR	18 15 56.3	
	comp=Z,48nm,18.1s,MS3.2,baz=275,slow=37						
ARCES	ARCESS Array B	31.24	2	P	P	18 03 00.4	-1.9
ARCES				LR	LR	18 15 56.3	
KEV	Kevo	31.52	3	ep	P	18 03 03.0	-1.8
NVS	Novosibirsk	43.75	47	eP	P	18 04 46.3	-1.4
MKAR	Makanchi Array	44.29	59	P	P	18 04 51.8	-0.4
	comp=Z,6.7nm,0.5s,mb4.7,baz=277,slow=7.5,SNR=102						
ZAL	Zalesovo	44.75	48	P	P	18 04 55.5	-0.4
	comp=Z,3.1nm,0.4s,mb4.5,baz=211,slow=6.7,SNR=14						
SONM	Songino Array	59.50	51	P	P	18 06 44.7	-1.5
	comp=Z,1.2nm,1.0s,mb3.9,baz=283,slow=8.5,SNR=7.1						
ILAR	Eielson Array	76.76	355	P	P	18 08 33.1	-0.3
	comp=Z,0.4nm,0.7s,mb3.5,baz=355,slow=2.5,SNR=5.9						
PDAR	Pinedale Array	87.93	326	P	P	18 09 31.6	-0.2
	comp=Z,0.4nm,0.7s,mb3.8,baz=90,slow=5.9,SNR=4.4						

IDC 20 17:59:07.8±4.1,**2.53N**×**96.57E,mb3.6**/4,**mb1 3.8**/4, **mb1mx3.5**/16,**mbtmp3.6**/4,**Error ellipse: s-maj=158.4km s-min=28.0km az=58.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.27	123	P	P	18 07 11.4	-1.8
	0.2nm,0.6s,baz=301,slow=9.1,SNR=4.2						
MKAR	Makanchi Array	45.81	346	P	P	18 07 31.0	-2.3
	0.6nm,0.4s,baz=156,slow=8.8,SNR=6.7						
SONM	Songino Array	45.93	9	P	P	18 07 32.5	-1.6
	0.7nm,0.6s,baz=195,slow=8.4,SNR=6.1						
ZAL	Zalesovo	52.15	351	P	P	18 08 20.2	-2.0
	0.9nm,0.5s,baz=281,slow=5.5,SNR=3.3						

IDC ***20*** *18:06:56.9±0.8, 10.07S×160.78E, mb4.2/9, mb1 4.3/11, mb1mx4.2/17, mbtmp4.2/11, ML3.9/2, MS3.7/9, Ms1 3.8/9, ms1mx3.6/26, Error ellipse: s-maj=21.0km s-min=16.6km az=36.0*

NEIC ***20*** *18:07:01.9±2.9, 10.11S×160.73E, h34^{km}±21^{km}, mb4.4/9, Error ellipse: s-maj=10.2km s-min=9.3km az=47.0*

ISC 20 18:07:00.8±1.5,**10.21S**±0.07×**160.72E**±0.09,**h39**^{km}±13^{km}, **n34**,σ**0^{s}88**/28,**mb4.3**/15,**MS3.8**/7,**1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.08	315	Pn	P	18 07 19.6	0.0
	664nm,0.3s,baz=153,slow=5.2,SNR=418						
HNR				Sn	S	18 07 34.9	+1.3
	3µm,0.3s,baz=214,slow=14,SNR=23						
HNR	Honiara	1.08	315	⇓iP	P	18 07 19.5	-0.1
HNR				eS	S	18 07 32.8	-0.9
DZM	Mont Dzumac	13.02	156	Pn	P	18 10 05.2	-0.6
	0.2nm,0.3s,baz=342,slow=20,SNR=6.2						
DZM				Sn	S	18 12 24.7	-5.4
	0.1nm,0.3s,baz=118,slow=23,SNR=2.4						
DZM				LR	LR	18 14 15.0	
	comp=Z,249nm,21.4s,baz=57,slow=33						
PMG	Port Moresby	13.38	272	LR	LR	18 15 03.6	
	comp=Z,534nm,19.8s,baz=96,slow=36						
CTA	Charters Tower	17.06	233	eP	P	18 10 59.1	+1.1
	5.8nm,0.7s						
CTA	Charters Tower	17.06	233	P	P	18 10 59.0	+1.0
	0.6nm,0.3s,baz=69,slow=13,SNR=13						
CTAO	Charters Tower	17.06	233	eP	P	18 10 59.3	+1.3
	20nm,1.1s						
AFI	Afiamalu	27.14	101	P	P	18 12 43.1	+0.5
	4.9nm,0.3s,mb4.5,baz=1.3,slow=19,SNR=2.0						
AFI				LR	LR	18 20 34.8	
	comp=Z,382nm,21.2s,MS3.9,baz=270,slow=30						
AFI	Afiamalu	27.14	101	P	P	18 12 43.1	+0.5
AFI				LR	LR	18 20 34.8	
WRAB	Tennant Creek	27.20	246	eP	P	18 12 42.9	-0.2
	46nm,1.5s,mb4.8						
WB2	Warramunga Arr	27.20	246	eP	P	18 12 42.9	-0.2
WRA	Warramunga Arr	27.21	246	P	P	18 12 43.1	-0.1
	3.2nm,0.5s,mb4.1,baz=73,slow=10,SNR=29						
STKA	Stephens Creek	27.90	217	eP	P	18 12 50.3	+0.9
	1.3nm,0.4s,mb3.9						
STKA	Stephens Creek	27.90	217	P	P	18 12 50.1	+0.7
	1.5nm,0.5s,mb3.9,baz=44,slow=12,SNR=9.3						
ASPA	Alice Springs	28.86	239	eP	P	18 12 57.0	-1.1
FITZ	Fitzroy Crossi	34.86	253	eP	P	18 13 49.0	-1.6
	6.3nm,0.7s,mb4.7						
TGY	Tagaytay City	46.26	301	LR	LR	18 33 13.6	
	comp=Z,5.3nm,20.1s,MS2.5,baz=73,slow=34						
PPT	Papeete	48.70	104	eLR	LR	18 29 32.4	
	182nm,22.2s						
PPT	Papeete	48.70	104	LR	LR	18 32 22.8	
	comp=Z,202nm,19.4s,MS4.1,baz=57,slow=31						
TBI	Tubuai	49.23	112	eLR	LR	18 29 48.2	
	163nm,24.8s						
RKT	Rikitea	62.51	111	eLR	LR	18 35 57.3	
	218nm,33.5s						
VNDA	Vanda	67.30	180	eP	P	18 17 52.5	-0.7
	1.7nm,1.1s,mb4.0						
SONM	Songino Array	75.12	326	P	P	18 18 40.8	+0.1
	1.3nm,0.8s,mb3.9,baz=137,slow=5.2,SNR=12						
SONM				LR	LR	18 52 29.1	
	comp=Z,53nm,19.0s,MS3.9,baz=54,slow=36						
YAK	Yakutsk	75.97	345	eP	P	18 18 44.2	-1.0
	14nm,0.8s,mb4.9						
QSPA	South Pole Qui	79.79	180	eP	P	18 19 06.2	+0.1
	2.6nm,0.8s,mb4.2						
MAW	Mawson	83.62	202	P	P	18 19 27.6	+1.5
	2.8nm,0.9s,mb4.4,baz=83,slow=9.2,SNR=5.1						
ILAR	Eielson Array	84.35	20	P	P	18 19 28.7	-1.1
	1.1nm,0.7s,mb4.1,baz=258,slow=5.1,SNR=5.4						
NVAR	Mina Array Bea	89.30	51	P	P	18 19 54.3	-0.2
	0.7nm,0.9s,mb4.0,baz=218,slow=5.4,SNR=5.6						
MKAR	Makanchi Array	89.55	318	P	P	18 19 57.3	+1.8
	0.4nm,0.6s,mb3.9,baz=98,slow=5.7,SNR=4.7						
HLID	Hailey	93.26	46	eP	P	18 20 13.7	+0.9
	3.6nm,1.2s,mb4.7						
YKA	Yellowknife Ar	96.52	28	LR	LR	19 05 04.0	
	comp=Z,50nm,18.4s,MS4.0,baz=35,slow=36						
PDAR	Pinedale Array	96.64	48	LR	LR	18 57 24.3	
	comp=Z,48nm,19.1s,MS4.0,baz=70,slow=31						
BVAR	Borovoye Array	98.26	322	P	P	18 20 35.1	-0.1
	0.4nm,0.8s,mb4.0,baz=146,slow=5.2,SNR=2.7						
TXAR	Lajitas Array	99.78	62	LR	LR	18 57 36.7	
	comp=Z,77nm,21.5s,MS4.2,baz=185,slow=30						

IDC ***20*** *18:14:08.9±1.1, 54.83N×164.36W, mb4.0/11, mb1 4.2/15, mb1mx4.0/28, mbtmp4.0/15, ML3.6/4, MS3.4/4, Ms1 3.5/4, ms1mx3.0/27, Error ellipse: s-maj=30.5km s-min=13.8km az=179.0*

NEIC ***20*** *18:14:10.4±0.6, 53.90N×164.17W, h48^{km}±3^{km}, mb4.3/3, ML3.7(AEIC), Error ellipse: s-maj=10.9km s-min=3.5km az=156.0*

ISC 20 18:14:09.4±0.9,**53.9N**±0.1×**164.12W**±0.08,**h57**^{km}±4^{km}, **n53**,σ**0^{s}89**/55,**mb4.2**/14,**MS3.4**/3,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	0.65	335	P	P	18 14 23.0	0.0
WESN	West Dahl Nort	0.74	339	P	P	18 14 24.8	+0.8
WFAR	Faris Peak	0.76	330	P	P	18 14 24.5	+0.1
WPOG	Pogromni	0.81	333	P	P	18 14 25.2	+0.3
AKUT	Akutan	1.01	285	P	P	18 14 27.3	-0.4
AKUT				S	S	18 14 41.6	+0.4
AHB	Akutan Harbor	1.03	284	P	P	18 14 27.7	-0.3
LVA	Lava Point	1.16	285	P	P	18 14 29.9	+0.1
UNV	Unalaska Valle	1.41	270	P	P	18 14 31.9	-1.5
UNV				S	S	18 14 50.9	-0.2
MTBL	Makushin Table	1.52	274	P	P	18 14 34.5	-0.3
MNAT	Makushin Natee	1.52	271	P	P	18 14 33.8	-1.1
BALA	Baldy Mountain	1.53	30	P	P	18 14 36.0	+1.0
MCIR	Makushin Cirqu	1.64	274	P	P	18 14 36.5	-0.1
DTNA	Dutton South F	1.67	40	P	P	18 14 36.6	-0.3
DOL	Dolgoi Island	1.83	45	P	P	18 14 38.6	-0.5
HAG	Hague Volcano	1.93	41	P	P	18 14 40.8	+0.3
PVV	Pavlof Volcano	2.02	41	P	P	18 14 42.2	+0.4
OKCD	Okmok Cone D	2.42	261	P	P	18 14 47.5	0.0
OKCE	Okmok Cone E	2.45	261	P	P	18 14 48.7	+0.7
SDPT	Sand Point	2.58	54	P	P	18 14 49.5	-0.3
SDPT				S	S	18 15 20.5	+0.5
NIKO	Nikolski	2.98	254	P	P	18 14 55.0	-0.4
KDAK	Kodiak Island	7.58	54	Pn	P	18 15 55.9	-3.8
	0.7nm,0.3s,baz=290,slow=16,SNR=9.2						
KDAK				Sn	S	18 17 17.6	-7.4
	0.2nm,0.3s,baz=36,slow=3.0,SNR=2.0						
IMA2	Indian Mountai	13.26	19	P	P	18 17 16.5	0.0
FX1	Attu Island--F	13.59	275	Pn	P	18 17 22.6	+1.9
	0.6nm,0.3s,baz=293,slow=16,SNR=3.8						
ILAR	Eielson Array	13.95	32	Pn	P	18 17 17.9	-7.5
	0.1nm,0.3s,baz=229,slow=12,SNR=9.3						
ILAR				LR	LR	18 23 16.2	
	comp=Z,119nm,19.1s,baz=355,slow=41						
DAWY	Dawson	16.20	41	eP	P	18 17 55.5	+1.2
DLBC	Dease Lake	19.39	63	P	P	18 18 33.6	+0.7
	0.1nm,0.3s,baz=323,slow=12,SNR=3.5						
BILL	Bilibino	19.89	327	eP	P	18 18 37.9	-0.5
	11nm,1.5s						
INK	Inuvik	20.35	33	P	P	18 18 40.0	-3.2
	1.1nm,0.3s,baz=252,slow=11,SNR=16						
INK				LR	LR	18 27 10.4	
	comp=Z,118nm,18.3s,MS3.3,baz=337,slow=40						
YKA	Yellowknife Ar	26.84	51	P	P	18 19 45.1	-0.9
	1.3nm,0.8s,mb3.5,baz=275,slow=9.5,SNR=5.2						
NEW	Newport	29.61	81	LR	LR	18 30 23.4	
	comp=Z,72nm,20.2s,MS3.3,baz=346,slow=33						
NVAR	Mina Array Bea	34.62	98	P	P	18 21 02.6	+7.8
	0.3nm,0.6s,mb3.4,baz=297,slow=8.1,SNR=2.6						
TXAR	Lajitas Array	49.63	94	P	P	18 23 03.6	+6.7
	1.2nm,0.7s,mb4.0,baz=306,slow=6.2,SNR=14						
SONM	Songino Array	53.19	303	P	P	18 23 23.9	+0.3
	0.3nm,0.4s,mb3.6,baz=37,slow=8.5,SNR=7.4						
KEV	Kevo	56.41	355	ep	P	18 23 44.9	-1.7
JOF	Joensuu	62.91	352	ep	P	18 24 30.4	-1.0
KAF	Kangasniemi	64.06	355	ep	P	18 24 37.5	-1.2
	1.7nm,0.5s,mb4.3,baz=356,slow=6.2						
BVAR	Borovoye Array	64.24	327	P	P	18 24 40.2	+0.2
	2.4nm,0.8s,mb4.3,baz=45,slow=6.3,SNR=16						
FINES	FINESS Array B	64.74	355	P	P	18 24 42.0	-1.1
	1.7nm,0.6s,mb4.2,baz=27,slow=8.5,SNR=14						
MKAR	Makanchi Array	64.99	316	LR	LR	18 57 50.9	
	comp=Z,38nm,18.1s,MS3.6,baz=211,slow=41						
NB2	NORSAR Subarra	65.37	2	P	P	18 24 46.5	-0.7
	1.6nm,0.7s,mb4.2,baz=359,slow=6.5						
NOA	NORSAR Array B	65.37	2	P	P	18 24 46.6	-0.6
	1.4nm,0.9s,mb4.0,baz=360,slow=6.6,SNR=5.4						
NAO	NORSAR Subarra	65.57	3	P	P	18 24 46.5	-2.0
HFS	Hagfors	66.32	1	P	P	18 24 51.8	-1.5
	4.0nm,0.7s,mb4.6,baz=56,slow=5.3,SNR=13						
EKA	Eskdalemuir Ar	70.03	11	P	P	18 25 16.4	+0.1
	0.9nm,0.6s,mb3.9,baz=342,slow=4.8,SNR=8.0						
AKTK	Aktyubinsk	70.20	333	P	P	18 25 18.1	+0.7
AKTO	Aktyubinsk	70.20	333	P	P	18 25 18.1	+0.7
	4.9nm,0.8s,mb4.5,baz=41,slow=6.9,SNR=21						
GUN	Gumba	78.69	302	eP	P	18 26 08.1	+1.2
KKN	Kakani	79.09	302	eP	P	18 26 10.3	+1.2
PKI	Pulchoki	79.21	302	eP	P	18 26 10.5	+0.8
GKN	Gorkha	79.24	303	eP	P	18 26 10.4	+0.6
	18nm,0.9s,mb5.0						
DMN	Daman	79.33	302	eP	P	18 26 11.2	+0.9
KOLN	Koldanda	79.94	304	eP	P	18 26 14.4	+0.7
	10nm,0.9s,mb4.8						
ESDC	Sonseca Array	85.26	15	P	P	18 26 41.8	+1.3
	1.9nm,0.8s,mb4.3,baz=340,slow=4.6,SNR=7.2						

NEIC ***20*** *18:18:28.5, 16.92N×94.87W, h126^{km}, MD3.9(MEX), After MEX.*

MEX 20 18:18:28.5±0.7,**16.92N**×**94.87W,h126**^{km}±7^{km},**MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.17	356	i P	P	18 18 44.7	-1.2
CMIG				i S	S	18 18 56.8	-2.3
HUIG	Huatulco	1.65	226	i P	P	18 18 56.3	-2.2
HUIG				i S	S	18 19 19.2	-2.1
OXX	Oaxaca	1.78	275	i P	P	18 18 59.0	-1.0
OXX				eS	S	18 19 22.0	-1.9
VHO	Vista Hermosa	1.79	275	i P	P	18 18 58.9	-1.2
VHO				i S	S	18 19 21.9	-2.3

NEIC ***20*** *18:50:40.7±2.3, 17.65N×73.72E, h10^{km}, mb4.2/3, ML3.8(MERI), Error ellipse: s-maj=32.5km s-min=22.6km az=87.0*

NEIC Felt at Alore, Chandoli, Chiplun, Dhebewadi, Karad, Khed, Koynanagar, Patan, Pophali, Sakharpa, Sangli and Satara. Also felt in the Konkan area and by people in high-rise buildings at Pune.

NDI ***20*** *18:50:41.3±5.8, 17.29N×73.80E, h2^{km}±17^{km}, ML4.1*

ISC 20 18:50:42.4±0.6,**17.31N**±0.04×**74.03E**±0.05,**h33**^{km},**n25**, σ**1^{s}47**/41,**mb4.2**/2,**Southern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAD	Karad	0.15	92	eP	P	18 50 48.9	+0.3
KAD				eS	S	18 50 54.6	+1.8
KAD				AML	AML	18 50 54.9	
	comp=E,4µm,0.1s						
KAD				AML	AML	18 50 55.0	
	comp=N,11µm,0.2s						
POO	Poona	1.22	352	i x	x	18 51 02.0	
POO				i PG	P	18 51 03.5	+0.3
POO				eP		18 51 15.6	
POO				eS	S	18 51 31.7	+13
POO				AML	AML	18 51 34.2	
	comp=N,2µm,0.5s						
POO				AML	AML	18 51 35.1	
	comp=E,5µm,0.2s						
POO				AML	AML	18 51 35.1	
	comp=N,3µm,0.2s						
BOM	Bombay	1.95	324	eP	P	18 51 14.6	+0.9
BOM				eP		18 51 15.2	
BOM				eS	S	18 51 37.6	+0.3
BOM				eS	S	18 51 38.1	+0.8
BOM				AML	AML	18 51 40.5	
	comp=N,3µm,0.2s						
BOM				AML	AML	18 51 40.9	
	comp=E,2µm,0.2s						
LATR	Latur	2.65	65	eP	P	18 51 27.5	+3.8
LATR				eSB	Sb	18 52 08.7	+7.3
HYB	Hyderabad	4.32	88	i Pn	Pn	18 51 52.5	+4.9
HYB				ePg	P	18 52 03.5	+16
HYB				eSn	Sn	18 52 40.5	+3.0
HYB				eSg	S	18 53 00.5	+23
HYB	Hyderabad	4.32	88	ePn	Pn	18 51 52.5	+4.9
HYB				eSn	Sn	18 52 40.5	+3.0
HYB				eSg	S	18 53 00.5	+23
MNGI	Mangalore	4.41	170	eP	P	18 51 49.8	+1.0
MNGI				ePB	Pb	18 51 58.7	-0.4
MNGI				eS	S	18 52 38.9	-0.9
MNGI				ex	x	18 52 52.4	
MNGI				AML	AML	18 52 56.8	
	comp=N,1µm,0.3s						
MNGI				AML	AML	18 52 56.8	
	comp=E,1µm,0.2s						
NGP	Nagpur	6.09	50	eP	P	18 52 14.9	+2.6
NGP				eP		18 52 15.3	
NGP				eS	S	18 53 22.0	+0.2
NGP				eS	S	18 53 22.9	+1.1
NGP				AML	AML	18 53 58.6	
	comp=E,242nm,0.5s						
NGP				AML	AML	18 53 59.5	
	comp=N,326nm,0.6s						
BHPL	Bhopal	6.70	28	eP	P	18 52 22.7	+1.7
BHPL				eS	S	18 53 37.8	+0.7
BHPL				AML	AML	18 54 17.4	
	comp=N,121nm,0.3s						
BHPL				AML	AML	18 54 19.1	
	comp=E,161nm,0.5s						
SALM	Salem	6.93	144	ex	x	18 53 31.0	
VIS	Vishakhapatnam	8.88	86	eP	P	18 52 56.2	+4.8
VIS				eS	S	18 54 28.9	-2.5
BLSP	Bilaspur	9.01	57	eP	P	18 52 52.6	-0.5
BLSP				eS	S	18 54 30.3	-4.2
AJM	Ajmer	9.14	3	AML	AML	18 55 43.8	
	comp=N,62nm,0.4s						
AJM				AML	AML	18 55 44.0	
	comp=E,57nm,0.9s						
PALK	Pallekele	11.92	146	eP	P	18 53 28.3	-4.7
KOLN	Koldanda	13.65	39	ePn	P	18 53 53.8	-2.2
KOLN				eSn	S	18 56 21.4	-6.1
	comp=E,19nm,0.4s						
SMLA	Simla	14.05	11	eS	S	18 56 30.1	-6.8
SMLA				AML	AML	18 56 45.2	
	comp=E,44nm,0.9s						
SMLA				AML	AML	18 56 48.8	
	comp=N,24nm,0.6s						
GKN	Gorkha	14.45	41	ePn	P	18 54 04.7	-1.8
GKN				eSn	S	18 56 41.3	-5.2
	comp=N,42nm,0.6s						
DMN	Daman	14.47	43	ePn	P	18 54 05.8	-1.1
DMN				eSn	S	18 56 43.5	-3.6
PKI	Pulchoki	14.65	44	ePn	P	18 54 08.3	-0.9
KKN	Kakani	14.71	43	ePn	P	18 54 08.3	-1.7
KKN				eSn	S	18 56 48.3	-4.4
	comp=N,32nm,0.6s						
GUN	Gumba	15.19	44	ePn	P	18 54 13.0	-3.2
SHL	Shillong	18.52	61	ex	x	18 58 22.0	
SHL				ex	x	18 59 02.0	
LSA	Lhasa	19.93	49	eP	P	18 55 18.9	+4.6
	comp=N,6.9nm,0.7s						
KURK	Kurchatov	33.52	5	P	P	18 57 19.4	-1.6
	comp=N,3.3nm,1.0s,mb4.2						
WRAB	Tennant Creek	69.83	119	eP	P	19 01 53.1	+1.0
	comp=N,1.7nm,0.5s,mb4.2						

NDI ***20*** *19:06:40.1±4.7, 34.54N×72.49E, h10^{km}, MD3.6, ML3.2*

NNC ***20*** *19:06:46.3±78.0, 35.42N×73.26E, mpv3.8, Error ellipse: s-maj=1915.2km s-min=682.0km az=75.0*

ISC 20 19:06:40.7±1.1,**34.75N**±0.09×**72.9E**±0.2,**h33**^{km},**n8**, σ**1^{s}37**/13,**1C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.30	134	eP	P	19 07 33.4	+2.1
THN				eS	S	19 08 15.6	+5.8
DLH	Dalhousie	3.38	130	eS	S	19 08 17.0	+5.2
SDNR	Sundarnagar	4.71	132	eP	P	19 07 52.8	+1.5
SDNR				eS	S	19 08 44.8	-0.7
KLP	Kalpa	5.52	124	eP	P	19 08 03.6	+1.0
KLP				eS	S	19 09 03.7	-2.2
KLP				AML	AML	19 09 10.7	
	comp=E,49nm,0.7s						
KLP				AML	AML	19 09 12.0	
	comp=N,47nm,0.9s						
KHET	Khetri	7.10	159	eP	P	19 08 23.3	-1.6
KHET				eS	S	19 09 35.9	-10
KHET				AML	AML	19 09 44.6	
	comp=E,12nm,0.5s						
KHET				AML	AML	19 09 46.8	
	comp=N,8.1nm,0.5s						
KUDL	Kundal	7.26	154	eP	P	19 08 26.7	-0.5
SONA	Sohna	7.40	150	eS	S	19 09 46.6	-6.2
SONA				AML	AML	19 09 51.4	
	comp=E,24nm,0.5s						
SONA				AML	AML	19 09 51.5	
	comp=N,11nm,0.4s						
KK31	Karatay Array	8.55	348	⇑Pn	P	19 08 45.8	+0.8
	comp=N,1.9nm,0.4s,baz=152,slow=12,SNR=42						
KK31				⇓Sn	Sn	19 10 20.4	-1.1
	comp=N,1.8nm,0.5s,baz=167,slow=22,SNR=7.2						

NEIC ***20*** *19:33:08.3, 26.77S×69.89W, h97^{km}, MG4.2(GUC), After GUC.*

GUC 20 19:33:08.3±1.0,**26.77S**×**69.89W,h97**^{km}±12^{km},**ML4.2, 5C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	Copiapo	0.71	215	⇑iP	P	19 33 25.7	-0.1
CPCH				i S	S	19 33 39.0	+0.3
CPCH				AMP		19 33 40.9	
	comp=E,40µm,0.1s						
CRCH	Chaqaral	0.78	303	⇑iP	P	19 33 27.4	+0.9
CRCH				i S	S	19 33 40.5	+0.7
CRCH				AMP		19 33 41.7	
	comp=E,9µm,0.3s						
CDCH	Caldera	0.89	250	⇑iP	P	19 33 28.0	+0.5
CDCH				i S	S	19 33 41.6	-0.2
CPN1	Cerro Paranal	2.18	348	⇑iP	P	19 33 44.1	+0.4
CPN1				AMP		19 34 17.0	
	comp=N,967nm,0.2s						
ANCH	Antofagasta	3.11	351	⇑iP	P	19 33 59.0	+2.5
ANCH				i S	S	19 34 35.5	+2.7
CEN1	Los Morros	3.38	355	⇓iP	P	19 33 56.4	-3.8
CEN1				AMP		19 34 58.8	
	comp=E,167nm,0.2s						
TLL	Tololo Astrono	3.48	193	eP	P	19 34 01.6	0.0
TLL				i S	S	19 34 42.1	+0.3
TLL				AMP		19 35 08.6	
	comp=N,259nm,0.4s						

JMA ***20*** *19:34:03.6±0.1, 38.24N×144.67E, h57^{km}, M3.5*

ISC 20 19:34:01.8±1.4,**38.46N**±0.07×**144.87E**±0.10,**h57**^{km},**n9**, σ**1^{s}08**/16,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.58	285	P	P	19 34 42.9	+0.8
MIYJ	Miyakonagasawa	2.62	296	P	P	19 34 44.0	+1.2
MIYJ				S	S	19 35 14.1	+0.6
JIO	Ouri	2.76	271	P	P	19 34 44.8	+0.1
JIO				S	S	19 35 15.5	-1.5
JMK	Ichinoseki	2.90	281	P	P	19 34 47.3	+0.7
JMK				eS	S	19 35 20.3	-0.1
JCH	Churui	4.31	345	P	P	19 35 07.8	+1.3
JCH				eS	S	19 35 55.7	-0.2
NEM2	Nemuro 2	4.95	7	P	P	19 35 14.9	-0.5
NEM2				eS	S	19 36 09.4	-2.5
JRY	Ryogami san	5.35	245	P	P	19 35 18.9	-2.1
JRY				eS	S	19 36 15.7	-6.3
JTKR	Abashiri--Toko	5.55	353	P	P	19 35 25.1	+1.3
JTKR				eS	S	19 36 26.5	-0.6
MAT	Matsushiro	5.63	252	P	P	19 35 25.1	+0.2

IDC ***20*** *19:34:40.4±0.5, 7.76S×123.68E, mb4.6/16, mb1 4.5/16, mb1mx4.5/19, mbtmp4.6/16, MS4.3/13, Ms1 4.3/13, ms1mx4.1/19, Error ellipse: s-maj=21.1km s-min=13.0km az=60.0*

MOS ***20*** *19:34:44.1±1.1, 7.73S×123.73E, h33^{km}, mb5.2/18, MS4.3/4, Error ellipse: s-maj=14.4km s-min=8.0km az=116.0*

BJI ***20*** *19:34:45.5, 7.91S×123.54E, h38^{km}, mB5.0, mb4.8, Ms4.8, Msz4.4*

HRVD ***20*** *19:34:46.0±0.3, 7.84S×123.70E, h12^{km}, MW5.1/74, Centroid moment Tensor Solution. LP body waves: s36,c53;Mantle waves: s74,c132; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.80±.17; M$_{\theta\theta}$-2.41±.14; M$_{\phi\phi}$1.61±.18; M$_{r\theta}$-0.13±.37; M$_{\theta\phi}$-4.20±.13; M$_{\phi r}$-2.69±.45; Best double couple: M$_{0}$5.423×10^{16} NP1: φ$_{s}$101°,δ60°,λ171°. NP2:φ$_{s}$195°,δ82°,λ30°. Principal axes: T 5.375, Plg27°, Azm62°; N .097, Plg59°, Azm208°; P -5.471, Plg15°, Azm324°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***20*** *19:34:46.0±0.3, 7.81S×123.69E, mb5.0/22, MS4.3/1 Error ellipse: s-maj=11.7km s-min=6.9km az=58.0*

ISC 20 19:34:44.0±0.3,**7.84S**±0.05×**123.82E**±0.07,**h37**^{km}, **h37**^{km}±2.3^{km}**:pP-P,n132,**σ**1^{s}30**/136,**mb4.8**/50,**MS4.3**/26, **8C-3D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	9.76	120	⇓iP	P	19 37 22.2	+17
	61nm,0.6s						
FITZ	Fitzroy Crossi	10.35	170	eP	P	19 37 07.8	-5.4
	64nm,0.6s						
FITZ				eS	S	19 38 57.2	-12
FITZ	Fitzroy Crossi	10.35	170	Pn	P	19 37 08.0	-5.3
	5.2nm,0.3s,baz=3.7,slow=8.5,SNR=55						
FITZ				Sn	S	19 38 57.7	-11
	9.9nm,0.3s,baz=157,slow=11,SNR=7.7						
FITZ				LR	LR	19 42 03.8	
	comp=Z,7µm,18.4s,baz=81,slow=42						
KKM	Kota Kinabalu	15.74	331	P	P	19 38 27.4	+2.5

WRA	**Warramunga Arr**	**15.77**	**141**	Pn	**P**	**19 38 21.2**	**-4.0**
	1.4nm,0.3s,baz=319,slow=13,SNR=48						
WRA				Sn	**S**	**19 41 13.2**	**-5.5**
	0.9nm,0.3s,baz=327,slow=22,SNR=5.1						
WRAB	**Tennant Creek**	**15.77**	**141**	*e*P	**P**	**19 38 21.2**	**-4.0**
	65nm,0.8s						
WRAB	**Tennant Creek**	**15.77**	**141**	*e*P	**P**	**19 38 21.2**	**-4.0**
WRAB				pmax	pmax		
	comp=Z,65nm,0.8s						
WB2	**Warramunga Arr**	**15.78**	**141**	*e*P	**P**	**19 38 20.4**	**-4.9**
WB2				*e*S	**S**	**19 41 07.4**	**-12**
KSM	**Kuching**	**16.35**	**304**	*e*P	**P**	**19 38 30.2**	**-2.3**
TGY	**Tagaytay City**	**21.99**	**353**	P	**P**	**19 39 35.9**	**-0.8**
	comp=Z,130nm,0.3s,mb5.8,baz=163,slow=11,SNR=2.7						
PMG	**Port Moresby**	**23.13**	**96**	P	**P**	**19 39 49.0**	**+0.9**
	comp=Z,18nm,0.8s,mb4.5,baz=297,slow=6.8,SNR=6.4						
PMG	**Port Moresby**	**23.13**	**96**	*e*P	**P**	**19 39 50.1**	**+2.0**
	comp=Z,45nm,1.0s,mb4.8						
PMG	**Port Moresby**	**23.13**	**96**	*e*P	**P**	**19 39 50.1**	**+2.0**
PMG				pmax	pmax		
	comp=Z,45nm,1.0s						
FORT	**Forrest**	**23.16**	**171**	*e*P	**P**	**19 39 46.5**	**-1.8**
	comp=Z,29nm,0.6s,mb4.9						
KLBR	**Kellerberrin**	**24.30**	**193**	*e*P	**P**	**19 39 57.7**	**-1.6**
	comp=Z,103nm,1.4s,mb5.1						
CTA	**Charters Tower**	**24.90**	**122**	*e*P	**P**	**19 40 07.9**	**+2.6**
	comp=Z,36nm,0.9s,mb4.9						
CTA				*e*S	**S**	**19 44 37.0**	**+14**
CTA	**Charters Tower**	**24.90**	**122**	P	**P**	**19 40 07.4**	**+2.1**
	comp=Z,52nm,1.0s,mb5.0,baz=297,slow=12,SNR=40						
CTA				LR	LR	19 50 29.8	
	comp=Z,107nm,18.1s,MS3.4,baz=300,slow=38						
CTA	**Charters Tower**	**24.90**	**122**	*e*P	**P**	**19 40 07.9**	**+2.6**
CTA				pmax	pmax		
	comp=Z,36nm,0.9s						
CTAO	**Charters Tower**	**24.90**	**122**	*e*P	**P**	**19 40 07.8**	**+2.5**
	comp=Z,81nm,1.1s,mb5.2						
CTAO	**Charters Tower**	**24.90**	**122**	*e*P	**P**	**19 40 07.8**	**+2.5**
CTAO				pmax	pmax		
	comp=Z,81nm,1.1s,mb5.2						
MUN	**Mundaring**	**25.04**	**195**	*e*P	**P**	**19 40 07.4**	**+0.9**
NWAO	**Narrogin (SRO)**	**25.70**	**193**	P	**P**	**19 40 11.1**	**-1.6**
	comp=Z,43nm,1.1s,mb4.9,baz=5.7,slow=9.2,SNR=6.5						
NWAO				LR	LR	19 52 18.2	
	comp=Z,715nm,19.4s,MS4.2,baz=1.1,slow=41						
NWAO	**Narrogin (SRO)**	**25.70**	**193**	*e*P	**P**	**19 40 11.6**	**-1.1**
KULM	**Kulim**	**26.54**	**299**	P	**P**	**19 40 21.0**	**+0.4**
STKA	**Stephens Creek**	**29.08**	**148**	P	**P**	**19 40 43.2**	**-0.3**
	comp=Z,5.2nm,0.9s,mb4.2,baz=313,slow=9.9,SNR=9.8						
STKA				LR	LR	19 54 31.8	
	comp=Z,511nm,20.5s,MS4.1,baz=133,slow=41						
STKA	**Stephens Creek**	**29.08**	**148**	*e*P	**P**	**19 40 42.8**	**-0.7**
GUMO	**Guam**	**29.83**	**45**	LR	LR	19 52 10.6	
	comp=Z,443nm,19.1s,MS4.1,baz=236,slow=35						
QIZ	**Qiongzhong**	**30.05**	**333**	P	**P**	**19 40 50.4**	**-1.7**
QIZ				S	**S**	**19 45 44.1**	**-2.5**
QIZ				LR	LR		
	comp=Z,690nm,24.2s,MS4.2						
HNR	**Honiara**	**35.74**	**95**	P	**P**	**19 41 41.8**	**+0.2**
	comp=Z,10nm,0.3s,mb5.2,baz=353,slow=17,SNR=3.9						
HNR	**Honiara**	**35.74**	**95**	P	**P**	**19 41 41.8**	**+0.2**
GYA	**Guiyang**	**37.94**	**335**	⇑*i*P	**P**	**19 42 00.8**	**+0.7**
GYA				AP	pP	19 42 12.9	+2.3
GYA				XP	sP	19 42 18.3	+3.1
GYA				S	**S**	**19 47 49.4**	**+0.4**
GYA				XS		19 48 09.8	
GYA				SS	SS	19 50 28.0	+1.4
GYA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.1						
GYA				AMB	AMB		
	comp=Z,180nm,3.4s						
GYA				LR	LR		
	comp=N,640nm,17.0s,MS4.7						
GYA				LR	LR		
	comp=E,690nm,16.8s,MS4.7						
GYA				LR	LR		
	comp=Z,710nm,17.5s,MS4.5						
KMI	**Kunming**	**38.66**	**329**	P	**P**	**19 42 07.8**	**+1.8**
KMI				AP	pP	19 42 16.6	0.0
KMI				XP	sP	19 42 20.5	-0.7
KMI				PP	PP	19 43 35.5	-3.1
KMI				PCP	PcP	19 44 21.5	+3.3
KMI				S	**S**	**19 48 00.0**	**0.0**
KMI				XS		19 48 14.3	
KMI				SS	SS	19 50 46.4	+3.9
KMI				SCS	ScS	19 52 14.3	+3.0
KMI				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
KMI				AMB	AMB		
	comp=Z,120nm,4.5s						
KMI				LR	LR		
	comp=N,440nm,11.5s,MS4.7						
KMI				LR	LR		
	comp=E,450nm,12.9s,MS4.7						
KMI				LR	LR		
	comp=Z,420nm,20.7s						
KMI	**Kunming**	**38.66**	**329**	P	**P**	**19 42 07.8**	**+1.8**
	comp=Z,21nm,0.9s,mb4.9						
KMI				pP	pP	19 42 16.6	0.0
KMI				sP	sP	19 42 20.5	-0.7
KMI				PP	PP	19 43 35.5	-3.1
KMI				PcP	PcP	19 44 21.5	+3.3
KMI				S	**S**	**19 48 00.0**	**0.0**
KMI				sS		19 48 14.2	
KMI				SS	SS	19 50 46.4	+3.9
KMI				ScS	ScS	19 52 14.3	+3.0
KMI				LR	LR		
	comp=Z,430nm,20.7s,MS4.2						
KMI	**Kunming**	**38.66**	**329**	P	**P**	**19 42 07.8**	**+1.8**
KMI				*PP	pP	19 42 16.6	0.0
KMI				*SP	sP	19 42 20.5	-0.7
KMI						19 43 35.5	
KMI						19 44 21.5	
KMI				S	**S**	**19 48 00.0**	**0.0**
KMI				*SS		19 48 14.2	
KMI				SS	SS	19 50 46.4	+3.9
KMI						19 52 14.3	
KMI				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.9						
KMI				MLR	MLR		
	comp=Z,430nm,20.7s,MS4.2						
SSE	**Sheshan**	**38.80**	**356**	P	**P**	**19 42 06.5**	**-0.6**
SSE				AP	pP	19 42 15.3	-2.3
SSE				PCP	PcP	19 44 18.8	+0.2
SSE				S	**S**	**19 47 59.6**	**-2.3**
SSE				SS	SS	19 50 48.8	+3.5
SSE				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
SSE				AMB	AMB		
	comp=Z,160nm,5.2s						
SSE				LR	LR		
	comp=N,30nm,21.7s,MS4.1						
SSE				LR	LR		
	comp=E,300nm,21.5s,MS4.1						
SSE				LR	LR		
	comp=Z,210nm,24.2s,MS3.9						
SSE	**Sheshan**	**38.80**	**356**	P	**P**	**19 42 06.5**	**-0.6**
	comp=Z,19nm,1.0s,mb4.8						
SSE				pP	pP	19 42 15.3	-2.3
SSE				PP	PP	19 43 34.0	-6.1
SSE				PcP	PcP	19 44 18.8	+0.2
SSE				S	**S**	**19 47 59.6**	**-2.3**
SSE				sS		19 48 14.7	
SSE				SS	SS	19 50 48.8	+3.5
SSE				LR	LR		
	comp=Z,220nm,24.2s,MS3.9						
WHN	**Wuhan**	**39.23**	**347**	⇑P	**P**	**19 42 16.9**	**+6.2**
NJ2	**Nanjing**	**39.95**	**353**	*e*P	**P**	**19 42 14.5**	**-2.1**
NJ2				AP	pP	19 42 25.6	-1.6
NJ2				XP	sP	19 42 29.4	-2.4
NJ2				PP	PP	19 43 52.4	0.0
NJ2				S	**S**	**19 48 14.0**	**-5.2**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,170nm,6.8s						
NJ2				LR	LR		
	comp=N,660nm,14.5s						
NJ2				LR	LR		
	comp=E,530nm,21.9s						
NJ2				LR	LR		
	comp=Z,350nm,12.4s,MS4.4						
ENH	**Enshi**	**40.32**	**341**	*e*P	**P**	**19 42 21.6**	**+1.9**
	comp=Z,27nm,1.1s,mb4.9						
CD2	**Chengdu**	**43.06**	**334**	P	**P**	**19 42 42.5**	**+0.1**
CD2				PP	PP	19 44 29.8	+5.1
CD2				S	**S**	**19 49 11.3**	**+6.1**
CD2				XS		19 49 23.4	
CD2				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb4.3						
CD2				LR	LR		
	comp=N,370nm,13.8s						
CD2				LR	LR		
	comp=Z,300nm,13.2s,MS4.4						
DZM	**Mont Dzumac**	**43.38**	**114**	P	**P**	**19 42 46.6**	**+1.6**
	comp=Z,12nm,1.1s,mb4.5,baz=344,slow=20,SNR=3.8						
XAN	**Xi'an**	**43.98**	**342**	P	**P**	**19 42 49.6**	**-0.2**
XAN				AP	pP	19 42 57.3	-3.1
SHL	**Shillong**	**45.47**	**318**	*e*P	**P**	**19 43 10.0**	**+8.2**
MJAR	**Matsushiro Arr**	**46.17**	**16**	P	**P**	**19 43 05.8**	**-1.4**
	comp=Z,3.4nm,0.9s,mb4.2,baz=201,slow=7.8,SNR=5.1						
MJAR	**Matsushiro Arr**	**46.17**	**16**	P	**P**	**19 43 05.8**	**-1.4**
LZH	**Lanzhou**	**47.56**	**338**	*e*P	**P**	**19 43 21.4**	**+3.2**
LZH				AP	pP	19 43 33.1	+4.3
LZH				XP	sP	19 43 39.4	+6.1
LZH				PP	PP	19 45 15.0	+6.0
LZH				*e*S	**S**	**19 50 18.0**	**+8.2**
LZH				AMB	AMB		
	comp=Z,100nm,1.5s,mb5.6						
LZH				AMB	AMB		
	comp=Z,250nm,4.0s						
LZH				LR	LR		
	comp=E,730nm,14.4s						
LZH				LR	LR		
	comp=Z,530nm,16.0s,MS4.6						
LZH	**Lanzhou**	**47.56**	**338**	*e*P	**P**	**19 43 21.4**	**+3.2**
	comp=Z,100nm,1.5s,mb5.6						
LZH				pP	pP	19 43 33.1	+4.3
LZH				sP	sP	19 43 39.4	+6.1
LZH				PP	PP	19 45 15.0	+6.0
LZH				*e*S	**S**	**19 50 18.0**	**+8.2**
LZH				sS		19 50 40.0	
LZH				*e*SS	SS	19 53 45.0	+13
LZH				LR	LR		
	comp=Z,530nm,16.0s,MS4.6						
LSA	**Lhasa**	**48.79**	**321**	*e*P	**P**	**19 43 27.6**	**-0.1**
	comp=Z,14nm,0.9s,mb5.0						
LSA	**Lhasa**	**48.79**	**321**	*e*P	**P**	**19 43 27.6**	**-0.1**
LSA				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
HHC	**Hu-ho-hao-te**	**49.74**	**348**	*e*P	**P**	**19 43 37.9**	**+2.9**
HHC				AP	pP	19 43 49.9	+4.2
HHC				XP	sP	19 43 55.9	+5.8
HHC				PCP	PcP	19 44 55.9	+0.1
HHC				PP	PP	19 45 35.4	+5.1
HHC				SCP		19 48 44.8	
HHC				PCS		19 48 52.0	
HHC				S	**S**	**19 50 48.3**	**+8.0**
HHC				SCS	ScS	19 53 23.0	+2.6
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
HHC				AMB	AMB		
	comp=Z,130nm,7.2s						
HHC				LR	LR		
	comp=N,130nm,13.2s,MS4.3						
HHC				LR	LR		
	comp=E,210nm,15.6s,MS4.3						
HHC				LR	LR		
	comp=Z,160nm,14.4s,MS4.2						
GUN	**Gumba**	**51.07**	**316**	*e*P	**P**	**19 43 45.4**	**+0.2**
	comp=Z,78nm,0.9s,mb5.7						
PKI	**Pulchoki**	**51.19**	**315**	*e*P	**P**	**19 43 46.8**	**+0.7**
HYB	**Hyderabad**	**51.29**	**300**	*i* P	**P**	**19 43 46.0**	**-1.0**
HYB	**Hyderabad**	**51.29**	**300**	*e*P	**P**	**19 43 46.0**	**-1.0**
KKN	**Kakani**	**51.41**	**315**	*e*P	**P**	**19 43 47.9**	**+0.1**
	comp=Z,99nm,1.5s,mb5.5						
CN2	**Changchun**	**51.42**	**2**	*e*P	**P**	**19 43 51.5**	**+3.9**
CN2				*e*S	**S**	**19 51 08.0**	**+4.7**
CN2				LR	LR		
	comp=Z,260nm,16.0s,MS4.3						
DMN	**Daman**	**51.42**	**315**	*e*P	**P**	**19 43 47.7**	**-0.2**
GKN	**Gorkha**	**51.99**	**315**	*e*P	**P**	**19 43 51.3**	**-0.8**
	comp=Z,41nm,1.0s,mb5.3						
GTA	**Gaotai**	**52.01**	**336**	P	**P**	**19 43 51.5**	**-0.6**
GTA				AP	pP	19 44 02.4	-0.5
GTA				XP	sP	19 44 07.3	0.0
GTA				SCS	ScS	19 53 33.8	-2.1
GTA				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.5						
GTA				AMB	AMB		
	comp=Z,80nm,11.4s						
GTA				LR	LR		
	comp=N,180nm,19.4s,MS4.5						
GTA				LR	LR		
	comp=E,310nm,14.8s,MS4.5						
GTA				LR	LR		
	comp=Z,300nm,18.3s,MS4.4						
MDJ	**Mudanjiang**	**52.47**	**5**	P	**P**	**19 43 58.0**	**+2.5**
MDJ				AP	pP	19 44 09.1	+2.8
MDJ				XP	sP	19 44 14.6	+3.9
MDJ				S	**S**	**19 51 22.6**	**+4.8**
MDJ				XS		19 51 44.1	
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
MDJ				AMB	AMB		
	comp=Z,60nm,3.6s						
MDJ				LR	LR		
	comp=N,60nm,25.6s,MS3.7						
MDJ				LR	LR		
	comp=E,80nm,29.1s,MS3.7						
MDJ				LR	LR		
	comp=Z,100nm,26.3s,MS3.7						
KOLN	**Koldanda**	**52.59**	**314**	*e*P	**P**	**19 43 55.2**	**-1.4**
	comp=Z,141nm,1.6s,mb5.6						
ULN	**Ulaanbaatar**	**57.41**	**347**	*e*P	**P**	**19 44 32.3**	**+0.9**
SONM	**Songino Array**	**57.54**	**346**	P	**P**	**19 44 31.1**	**-1.2**
	comp=Z,2.0nm,0.7s,mb4.2,baz=163,slow=7.2,SNR=15						
ZAK	**Zakamensk**	**60.67**	**345**	*e*P	**P**	**19 44 54.3**	**+0.4**
ZAK				*e*		19 45 34.5	
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.2						
WMQ	**Urumqi**	**60.94**	**331**	⇓*i*P	**P**	**19 44 56.3**	**+0.5**
WMQ				AP	pP	19 45 09.0	+2.2
WMQ				XP	sP	19 45 14.0	+2.9
WMQ				PCP	PcP	19 45 42.0	+3.2
WMQ				PP	PP	19 47 13.0	+0.8
WMQ				S	**S**	**19 53 09.0**	**-0.6**
WMQ				SCS	ScS	19 54 39.0	-1.1
WMQ				AMB	AMB		
	comp=Z,20nm,1.8s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,140nm,5.2s						
WMQ				LR	LR		
	comp=N,420nm,29.0s,MS4.6						
WMQ				LR	LR		
	comp=E,370nm,26.4s,MS4.6						
WMQ				LR	LR		
	comp=Z,340nm,25.0s,MS4.4						
KSH	**Kashi**	**64.63**	**321**	*e*P	**P**	**19 45 22.1**	**+1.7**
KSH				*e*AP	pP	19 45 32.3	+0.8
KSH				*e*XP	sP	19 45 36.1	+0.5
KSH				AMB	AMB		
	comp=Z,340nm,3.0s						
MKAR	**Makanchi Array**	**65.72**	**330**	P	**P**	**19 45 26.7**	**-0.5**
	comp=Z,23nm,0.8s,mb5.2,baz=132,slow=7.6,SNR=27						
BOD	**Bodaibo**	**65.92**	**354**	*e*P	**P**	**19 45 27.6**	**-0.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.7s,mb4.6						
KZA	**Kyzart**	**66.57**	**323**	P	**P**	**19 45 34.4**	**+1.6**
	SNR=11						
TKM2	**Tokmak 2**	**66.86**	**323**	P	**P**	**19 45 35.9**	**+1.3**
	SNR=5.5						
KBK	**Karagaybulak**	**67.09**	**323**	P	**P**	**19 45 33.9**	**-2.1**
	SNR=11						
AAK	**Ala-Archa**	**67.35**	**323**	P	**P**	**19 45 37.6**	**0.0**
	SNR=6.0						
AAK	**Ala-Archa**	**67.35**	**323**	*e*P	**P**	**19 45 36.3**	**-1.3**
	comp=Z,50nm,1.5s,mb5.3						
AAK	**Ala-Archa**	**67.35**	**323**	*e*P	**P**	**19 45 36.3**	**-1.3**
AAK				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.3						
FRU	**Bishkek**	**67.39**	**323**	*e*P	**P**	**19 45 38.0**	**+0.1**
FRU				*e*	pP	19 45 51.0	+1.9
FRU				*e*		19 46 12.0	
AML	**Almayashu**	**67.55**	**322**	P	**P**	**19 45 39.0**	**+0.1**
	SNR=7.2						
USP	**Ospenovka**	**67.72**	**323**	P	**P**	**19 45 39.1**	**-0.8**
	SNR=18						
EKS2	**Erkin-Say**	**67.80**	**322**	P	**P**	**19 45 42.0**	**+1.6**
	SNR=10						
ZAL	**Zalesovo**	**69.77**	**337**	P	**P**	**19 45 50.9**	**-1.5**
	comp=Z,5.8nm,1.1s,mb4.4,baz=336,slow=5.9,SNR=9.2						
ZAL				LR	LR	20 20 19.0	
	comp=Z,138nm,18.2s,MS4.2,baz=309,slow=39						
ZAL	**Zalesovo**	**69.77**	**337**	P	**P**	**19 45 50.9**	**-1.5**
ZAL				LR	LR	20 20 19.0	
YAK	**Yakutsk**	**69.81**	**3**	*e*P	**P**	**19 45 52.8**	**+0.3**
	comp=Z,15nm,0.8s,mb5.0						
YAK	**Yakutsk**	**69.81**	**3**	*e*P	**P**	**19 45 52.8**	**+0.3**
YAK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
KURK	**Kurchatov**	**70.17**	**331**	*e*P	**P**	**19 45 54.0**	**-0.9**
	comp=Z,26nm,0.9s,mb5.2						
KURK	**Kurchatov**	**70.17**	**331**	*e*P	**P**	**19 45 54.0**	**-0.9**
KURK				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
MAW	**Mawson**	**71.97**	**201**	P	**P**	**19 46 06.1**	**+0.7**
	comp=Z,2.1nm,0.8s,mb4.1,baz=57,slow=11,SNR=4.5						
MAW				LR	LR	20 15 22.7	
	comp=Z,263nm,19.1s,MS4.5,baz=58,slow=34						
MAW	**Mawson**	**71.97**	**201**	P	**P**	**19 46 05.9**	**+0.5**
	comp=Z,58nm,1.9s,mb5.2						
MAW	**Mawson**	**71.97**	**201**	P	**P**	**19 46 05.9**	**+0.5**
MAW				pmax	pmax		
	comp=Z,58nm,1.9s						
VNDA	**Vanda**	**72.42**	**172**	*e*P	**P**	**19 46 07.9**	**-0.1**
	comp=Z,18nm,1.5s,mb4.8						
VNDA	**Vanda**	**72.42**	**172**	*e*P	**P**	**19 46 07.9**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,18nm,1.5s						
BVAR	**Borovoye Array**	**75.61**	**330**	P	**P**	**19 46 25.6**	**-1.3**
	comp=Z,8.6nm,1.0s,mb4.7,baz=158,slow=8.0,SNR=22						
BRVK	**Borovoye**	**75.68**	**330**	*e*P	**P**	**19 46 25.5**	**-1.8**
	comp=Z,13nm,1.1s,mb4.8						
BRVK	**Borovoye**	**75.68**	**330**	*e*P	**P**	**19 46 25.5**	**-1.8**
BRVK				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
CHKZ	**Chkalovo**	**75.87**	**331**	*e*P	**P**	**19 46 27.4**	**-1.0**
	comp=Z,15nm,1.0s,mb4.9						
CHKZ	**Chkalovo**	**75.87**	**331**	*e*P	**P**	**19 46 27.4**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
TIXI	**Tiksi**	**79.39**	**2**	*e*P	**P**	**19 46 45.7**	**-1.9**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,87nm,15.0s,MS4.2						
SYO	**Syowa Base**	**80.66**	**201**	⇑P	**P**	**19 46 57.0**	**+2.6**
SYO	**Syowa Base**	**80.66**	**201**	⇑pP	pP	19 47 09.1	+3.4
SYO	**Syowa Base**	**80.66**	**201**	⇑*e*P	**P**	**19 46 57.0**	**+2.6**
SYO				⇑*e*pP	pP	19 47 09.1	+3.4
AKTK	**Aktyubinsk**	**81.05**	**324**	P	**P**	**19 46 55.7**	**-1.2**
AKTK				LR	LR	20 23 39.6	
AKTO	**Aktyubinsk**	**81.05**	**324**	P	**P**	**19 46 55.7**	**-1.2**
	comp=Z,9.7nm,0.9s,mb4.7,baz=107,slow=8.1,SNR=11						
AKTO				LR	LR	20 23 39.6	
	comp=Z,106nm,20.6s,MS4.2,slow=36						
BILL	**Bilibino**	**81.41**	**15**	*e*P	**P**	**19 46 57.7**	**-0.6**
BILL				*e*		19 47 04.0	
BILL				*e*S	S	19 57 02.9	-2.5
BILL				pmax	pmax		
	comp=Z,2.0nm,1.4s,mb3.9						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.3						
QSPA	**South Pole Qui**	**82.14**	**180**	*e*P	**P**	**19 47 04.3**	**+2.3**
	comp=Z,9.3nm,0.9s,mb4.7						
SVE	**Sverdlovsk**	**82.38**	**330**	*e*P	**P**	**19 47 03.5**	**-0.1**
SVE				*e*	pP	19 47 12.4	-2.5
ATD	**Arta Tunnel**	**82.79**	**283**	LR	LR	20 20 20.8	
	comp=Z,105nm,18.8s,MS4.2,baz=75,slow=33						
MZLS	**Mizel**	**82.88**	**295**	P	**P**	**19 47 07.6**	**+0.8**
DJNS	**Zahran al Janu**	**83.19**	**289**	P	**P**	**19 47 09.1**	**+0.6**
ARU	**Arti**	**83.24**	**329**	*e*P	**P**	**19 47 07.1**	**-0.9**
	comp=Z,13nm,1.0s,mb4.9						
ARU	**Arti**	**83.24**	**329**	⇑*i*P	**P**	**19 47 08.3**	**+0.3**
ARU				*e*		19 50 18.8	
ARU				*e*S	S	19 57 25.4	+1.2
ARU				*e*SS	SS	20 02 49.5	-3.1
ARU				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.9						
ORR	**Orenburg**	**83.41**	**324**	⇓*i*P	**P**	**19 47 09.2**	**+0.3**
ORR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.1						
TATS	**Tathlith**	**83.59**	**291**	P	**P**	**19 47 11.4**	**+0.8**
TBI	**Tubuai**	**83.94**	**113**	*e*LR	LR	20 13 32.5	
	comp=Z,262nm,26.5s						
PPT	**Papeete**	**84.45**	**107**	*e*LR	LR	20 13 47.0	
	comp=Z,186nm,21.5s						
PPT	**Papeete**	**84.45**	**107**	LR	LR	20 21 15.7	
	comp=Z,277nm,19.7s,MS4.7,baz=253,slow=33						
AFFS	**'Afif**	**84.84**	**295**	P	**P**	**19 47 18.2**	**+1.4**
BLJS	**Baljurashi**	**85.39**	**291**	P	**P**	**19 47 20.5**	**+0.9**
BHD	**Baghdad**	**85.52**	**304**	*e*x	x	19 47 20.5	
KMBO	**Kilima Mbogo**	**86.45**	**269**	P	**P**	**19 47 26.2**	**+1.3**
	comp=Z,3.1nm,1.2s,mb4.4,baz=92,slow=11,SNR=4.3						
KMBO				LR	LR	20 21 03.6	
	comp=Z,185nm,21.5s,MS4.5,baz=96,slow=32						
HILS	**Ha'il**	**86.55**	**298**	P	**P**	**19 47 25.7**	**+0.6**
MSL	**Mosul**	**87.19**	**307**	*e*x	x	19 47 27.5	
LSZ	**Lusaka**	**93.34**	**254**	LR	LR	20 23 38.9	
	comp=Z,120nm,20.2s,MS4.3,baz=334,slow=32						
LSZ	**Lusaka**	**93.34**	**254**	P	**P**	**19 47 56.5**	**-0.8**
	comp=Z,4.6nm,0.9s,mb4.9						
LSZ	**Lusaka**	**93.34**	**254**	P	**P**	**19 47 56.5**	**-0.8**
LSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
SNAA	**Sanae**	**93.36**	**195**	P	**P**	**19 47 58.3**	**+2.1**
	comp=Z,0.5nm,0.9s,mb3.9,baz=90,slow=3.0,SNR=4.9						
BOSA	**Boshof**	**93.74**	**241**	LR	LR	20 22 32.3	
	comp=Z,183nm,18.7s,MS4.6,baz=140,slow=31						
OBN	**Obninsk**	**94.80**	**325**	⇑*e*P	**P**	**19 48 04.0**	**+1.0**
OBN				*e*		19 51 52.5	
OBN				pmax	pmax		
	comp=Z,27nm,1.9s,mb5.3						
AKASG	**Malin Array Be**	**98.92**	**320**	P	**P**	**19 48 21.6**	**-0.2**
	comp=Z,0.7nm,0.7s,mb4.3,baz=79,slow=4.8,SNR=3.5						
PDAR	**Pinedale Array**	**121.80**	**44**	PKP	PKPdf	19 53 39.0	+4.4
	comp=Z,0.4nm,0.8s,baz=301,slow=5.3,SNR=4.0						
TXAR	**Lajitas Array**	**130.59**	**58**	PKP	PKPdf	19 53 56.2	+4.3
	comp=Z,0.4nm,0.9s,baz=180,slow=1.3,SNR=3.8						
CPUP	**Villa Florida**	**146.02**	**178**	*e*PKPdf	PKPdf	19 54 22.5	+2.5
LPAZ	**La Paz**	**153.27**	**154**	PKPbc	PKPdf	19 54 42.3	+11
	comp=Z,1.9nm,1.0s,baz=108,slow=4.6,SNR=5.6						
LPAZ	**La Paz**	**153.27**	**154**	*e*PKPbc	PKPdf	19 54 43.5	+12
SIV	**San Ignacio**	**155.83**	**168**	PKPbc	PKPdf	19 54 48.0	+13
	comp=Z,1.3nm,1.2s,baz=187,slow=9.3,SNR=2.5						
SIV				PKPab	PKPab	19 55 04.2	0.0
	comp=Z,1.5nm,0.6s,baz=167,slow=3.6,SNR=9.2						

NEIC 20 19:37:59.0,53.75N×163.95W,h25^{km},ML4.0(AEIC), After AEIC.,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	**West Dahl East**	**0.82**	**333**	P	Pb	19 38 13.1	-1.4
WESS	**West Dahl Sout**	**0.86**	**328**	P	Pb	19 38 13.6	-1.7
WESS				S	Sb	19 38 25.0	-1.5
WESN	**West Dahl Nort**	**0.91**	**336**	P	Pb	19 38 14.8	-1.2
WFAR	**Faris Peak**	**0.93**	**329**	P	Pb	19 38 14.8	-1.6
WPOG	**Pogromni**	**0.97**	**332**	P	Pb	19 38 15.4	-1.7
AKUT	**Akutan**	**1.15**	**291**	P	Pn	19 38 17.7	-2.0
AHB	**Akutan Harbor**	**1.17**	**289**	P	Pn	19 38 18.2	-1.8
AKLV	**Akutan Long Va**	**1.26**	**290**	P	Pn	19 38 19.4	-1.9
UNV	**Unalaska Valle**	**1.52**	**275**	P	Pn	19 38 22.6	-2.4
MNAT	**Makushin Natee**	**1.63**	**276**	P	Pn	19 38 24.8	-1.8
MTBL	**Makushin Table**	**1.63**	**279**	P	Pn	19 38 25.3	-1.4
DTNA	**Dutton South F**	**1.72**	**34**	P	Pn	19 38 26.1	-1.8
MGOD	**Makushin Gods**	**1.74**	**273**	P	Pn	19 38 26.2	-2.0
DOL	**Dolgoi Island**	**1.86**	**40**	P	Pn	19 38 28.0	-1.9
HAG	**Hague Volcano**	**1.97**	**36**	P	Pn	19 38 30.2	-1.4

IDC ***20*** *19:38:10.2±0.8,53.87N×164.14W,mb4.3/19,mb1 4.4/23, mb1mx4.3/30,mbtmp4.3/23,ML3.8/4,MS3.5/7,Ms1 3.5/7, ms1mx3.1/33,Error ellipse: s-maj=20.5km s-min=11.5km az=167.0*

BJI ***20*** *19:38:14.5,53.90N×164.10W,h48*^{km}*,mB5.1,mb4.8, Ms5.0,Msz4.6*

MOS ***20*** *19:38:14.5±0.9,54.05N×164.23W,h33*^{km}*,mb5.0/20, Error ellipse: s-maj=18.6km s-min=6.7km az=86.5*

NEIC ***20*** *19:38:17.1±0.4,53.88N×164.13W,h48*^{km}*±2*^{km}*,mb4.7/24,* *ML4.2(AEIC), Error ellipse: s-maj=6.8km s-min=2.8km az=164.0*

ISC 20 19:38:16.3±0.6**, 53.92N**±0.07×**164.03W**±0.05**, h53**^{km}±3^{km}**, n141, σ0**^{s}**93**/143**, mb4.6**/48**, MS3.6**/5**, 1C-1D, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	0.64	330	P	P	19 38 30.1	+0.6
WESS	West Dahl Sout	0.69	324	P	P	19 38 30.6	+0.5
WPOG	Pogromni	0.80	329	P	P	19 38 32.2	+0.7
AKUT	Akutan	1.05	282	P	P	19 38 34.3	-0.7
AKUT				S	S	19 38 49.5	+0.6
AKLV	Akutan Long Va	1.16	283	P	P	19 38 36.2	-0.3
AKLV				S	S	19 38 52.2	+0.7
LVA	Lava Point	1.20	282	P	P	19 38 37.1	0.0
UNV	Unalaska Valle	1.46	268	P	P	19 38 39.6	-1.4
BALA	Baldy Mountain	1.47	29	P	P	19 38 42.7	+1.7
MNAT	Makushin Natee	1.57	270	P	P	19 38 41.5	-0.9
MCIR	Makushin Cirqu	1.69	272	P	P	19 38 44.0	0.0
DOL	Dolgoi Island	1.76	45	P	P	19 38 44.8	-0.3
PVV	Pavlof Volcano	1.95	41	P	P	19 38 48.5	+0.7
OKCD	Okmok Cone D	2.48	260	P	P	19 38 55.7	+0.5
OKCE	Okmok Cone E	2.51	260	P	P	19 38 56.8	+1.2
SDPT	Sand Point	2.51	54	P	P	19 38 55.6	-0.1
NIKO	Nikolski	3.04	254	P	P	19 39 02.1	-1.0
ANPK	Aniakchak Peak	4.46	47	P	P	19 39 23.3	+0.1
ATKA	Atka Island	6.36	258	P	P	19 39 49.8	0.0
MGLS	Mageik LS	6.50	45	P	P	19 39 51.8	+0.2
KABR	Katmai Barrier	6.60	47	P	P	19 39 51.8	-1.3
KDAK	Kodiak Island	7.51	54	Pn	P	19 40 02.1	-3.7
	2.5nm,0.3s,baz=249,slow=8.3,SNR=21						
KDAK				Sn	S	19 41 22.7	-7.8
	baz=333,slow=23,SNR=3.6						
KDAK	Kodiak Island	7.51	54	P	P	19 40 02.3	-3.5
SVW2	Sparrevohn	8.51	29	eP	P	19 40 20.3	+0.8
SLKM	Skilak Lake	9.97	43	P	P	19 40 37.6	-1.8
PMR	Palmer	11.04	40	eP	P	19 40 54.6	+0.6
	2.2nm,0.3s						
PMR	Palmer	11.04	40	eP	P	19 40 54.6	+0.6
PMR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
DIV	Divide	12.15	46	eP	P	19 41 09.0	+0.1
IMA2	Indian Mountai	13.21	19	eP	P	19 41 24.0	+1.1
THY	Trims Highway	13.40	38	eP	P	19 41 24.9	-0.4
FX1	Attu Island--F	13.63	275	Pn	P	19 41 29.1	+0.8
	comp=Z,1.7nm,0.3s,baz=267,slow=20,SNR=4.2						
COLA	College	13.67	30	P	P	19 41 27.5	-1.3
ILAR	Eielson Array	13.89	32	Pn	P	19 41 28.9	-2.8
	comp=Z,0.2nm,0.3s,baz=227,slow=11,SNR=14						
ILAR				Sn	S	19 43 58.0	-7.1
	baz=214,slow=9.0,SNR=2.2						
ILAR				LR	LR	19 46 36.2	
	comp=Z,88nm,21.8s,baz=175,slow=36						
DAWY	Dawson	16.14	41	eP	P	19 42 01.3	+0.6
DLBC	Dease Lake	19.32	63	P	P	19 42 39.2	-0.3
	comp=Z,0.1nm,0.3s,baz=275,slow=14,SNR=2.9						
BILL	Bilibino	19.89	327	P	P	19 42 45.7	+0.1
	comp=Z,31nm,1.3s						
BILL	Bilibino	19.89	327	eP	P	19 42 47.7	+2.2
BILL				pmax	pmax		
	comp=Z,22nm,1.2s						
BILL				MLR	MLR		
	comp=Z,200nm,19.0s						
INK	Inuvik	20.29	33	P	P	19 42 46.6	-3.1
	comp=Z,2.4nm,0.4s,baz=239,slow=14,SNR=18						
INK				LR	LR	19 50 53.0	
	comp=Z,122nm,20.3s,baz=212,slow=38						
INK	Inuvik	20.29	33	eP	P	19 42 45.8	-4.0
	comp=Z,7.6nm,0.6s						
INK	Inuvik	20.29	33	eP	P	19 42 45.8	-3.9
INK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BBB	Bella Bella	21.52	80	LR	LR	19 48 47.8	
	comp=Z,170nm,19.7s,MS3.5,baz=258,slow=30						
YKA	Yellowknife Ar	26.78	52	P	P	19 43 51.8	-0.8
	comp=Z,0.8nm,0.4s,mb3.6,baz=274,slow=8.0,SNR=9.3						
YKA				LR	LR	19 55 24.9	
	comp=Z,98nm,19.5s,baz=255,slow=38						
NEW	Newport	29.55	82	LR	LR	19 53 37.3	
	comp=Z,88nm,21.2s,MS3.4,baz=26,slow=31						
TIXI	Tiksi	33.10	328	eP	P	19 44 46.3	-2.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,67nm,12.0s,MS3.6						
NVAR	Mina Array Bea	34.58	98	P	P	19 45 01.0	-0.7
	comp=Z,0.6nm,0.7s,mb3.6,baz=290,slow=8.8,SNR=6.6						
TPNV	Topopah Spring	36.78	98	eP	P	19 45 21.2	+0.8
	comp=Z,2.2nm,0.7s,mb4.1						
TPNV	Topopah Spring	36.78	98	eP	P	19 45 21.2	+0.8
TPNV				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
PDAR	Pinedale Array	37.00	85	P	P	19 45 22.3	+0.1
	comp=Z,0.2nm,0.5s,baz=64,slow=29,SNR=2.9						
WUAZ	Wupatki	40.62	95	P	P	19 45 53.2	+0.8
SDCO	Great Sand Dun	42.59	88	P	P	19 46 09.6	+1.2
MAJO	Matsushiro	42.94	270	eP	P	19 46 10.6	-0.7
	comp=Z,9.8nm,0.9s,mb4.5						
MAJO	Matsushiro	42.94	270	eP	P	19 46 10.6	-0.7
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
MJAR	Matsushiro Arr	42.94	270	P	P	19 46 09.8	-1.5
	comp=Z,1.7nm,0.7s,mb3.9,baz=40,slow=6.2,SNR=5.0						
SUMG	Summit	48.30	19	eP	P	19 46 53.5	0.0
	comp=Z,12nm,1.0s,mb4.9						
SFJD	Kangerlussuaq	49.53	28	P	P	19 47 01.8	-1.2
	comp=Z,9.8nm,0.9s,mb4.8,baz=285,slow=7.8,SNR=2.2						
SFJD				LR	LR	20 11 12.1	
	comp=Z,119nm,20.6s,MS3.9,baz=82,slow=40						
TXAR	Lajitas Array	49.58	95	P	P	19 47 03.5	-0.5
	comp=Z,0.5nm,0.6s,mb3.7,baz=309,slow=5.0,SNR=8.3						
TXAR				LR	LR	20 06 02.1	
	comp=Z,66nm,19.7s,MS3.6,baz=225,slow=34						
SONM	Songino Array	53.22	303	P	P	19 47 30.5	-0.5
	comp=Z,1.2nm,0.5s,mb4.1,baz=42,slow=7.4,SNR=10						
KEV	Kevo	56.37	355	ep	P	19 47 51.6	-2.1
ARCES	ARCESS Array B	56.66	356	P	P	19 47 54.0	-1.7
	comp=Z,3.6nm,0.8s,mb4.5,baz=12,slow=8.4,SNR=7.4						
SSE	Sheshan	56.80	278	P	P	19 47 52.1	-5.2
	comp=Z,22nm,0.7s,mb5.3						
XAN	Xi’an	61.67	290	P	P	19 48 28.9	-1.9
XAN				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.8						
JOF	Joensuu	62.88	352	ep	P	19 48 36.8	-1.8
KAF	Kangasniemi	64.02	355	ep	P	19 48 44.2	-1.6
	comp=Z,6.9nm,0.5s,mb4.9,baz=356,slow=6.1						
KAF	Kangasniemi	64.02	355	eP	P	19 48 44.2	-1.6
KAF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
BVAR	Borovoye Array	64.23	327	P	P	19 48 46.5	-0.8
	comp=Z,5.9nm,0.7s,mb4.8,baz=44,slow=6.3,SNR=21						
ARU	Arti	64.62	335	⇓iP	P	19 48 49.4	-0.4
ARU				e		19 51 13.2	
ARU				eS	S	19 57 33.2	+9.2
ARU				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.9						
FINES	FINESS Array B	64.70	355	P	P	19 48 48.9	-1.4
	comp=Z,3.9nm,0.5s,mb4.7,baz=22,slow=8.1,SNR=70						
MKAR	Makanchi Array	65.00	316	P	P	19 48 50.8	-1.6
	comp=Z,1.0nm,0.5s,mb4.1,baz=43,slow=7.1,SNR=6.9						
NB2	NORSAR Subarra	65.32	3	P	P	19 48 53.3	-1.0
	comp=Z,2.4nm,0.7s,mb4.3,baz=359,slow=6.5						
NOA	NORSAR Array B	65.32	3	P	P	19 48 53.6	-0.7
	comp=Z,3.7nm,0.7s,mb4.5,baz=359,slow=6.6,SNR=11						
NAO	NORSAR Subarra	65.53	3	P	P	19 48 53.3	-2.3
	comp=Z,2.4nm,0.7s,mb4.3						
NAO	NORSAR Subarra	65.53	3	P	P	19 48 53.3	-2.3
NAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
NAO	NORSAR Subarra	65.53	3	P	P	19 48 53.3	-2.3
NAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
HFS	Hagfors	66.28	1	P	P	19 48 59.1	-1.3
	comp=Z,7.1nm,0.5s,mb4.9,baz=27,slow=3.3,SNR=36						
TGY	Tagaytay City	69.91	266	P	P	19 49 22.8	-0.9
	comp=Z,59nm,0.3s,baz=70,slow=1.0,SNR=3.8						
EKA	Eskdalemuir Ar	69.98	11	P	P	19 49 23.6	+0.2
	comp=Z,2.2nm,0.6s,mb4.3,baz=342,slow=4.7,SNR=16						
OBN	Obninsk	70.01	348	⇑eP	P	19 49 21.8	-1.8
OBN				e		19 52 01.0	
OBN				eS	S	19 58 35.8	+7.0
OBN				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
AKTK	Aktyubinsk	70.18	333	P	P	19 49 24.7	-0.1
AKTO	Aktyubinsk	70.18	333	P	P	19 49 24.7	-0.1
	comp=Z,14nm,0.7s,mb5.0,baz=38,slow=6.1,SNR=29						
USP	Ospenovka	71.03	319	P	P	19 49 30.6	+0.6
	SNR=12						
CHMS	Chumysh	71.16	318	P	P	19 49 31.2	+0.4
	SNR=5.7						
KBK	Karagaybulak	71.37	318	P	P	19 49 32.8	+0.7
	SNR=8.8						
AAK	Ala-Archa	71.56	318	P	P	19 49 33.8	+0.6
	SNR=13						
AAK	Ala-Archa	71.56	318	eP	P	19 49 32.3	-0.9
EKS2	Erkin-Say	71.82	319	P	P	19 49 35.6	+0.9
	SNR=9.2						
AML	Almayashu	72.30	319	P	P	19 49 39.1	+1.5
	SNR=8.3						
LSA	Lhasa	74.58	299	eP	P	19 49 52.1	+0.9
	comp=Z,18nm,1.0s,mb5.0						
LSA	Lhasa	74.58	299	eP	P	19 49 52.1	+1.0
LSA				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
AKASG	Malin Array Be	75.16	351	P	P	19 49 53.2	-0.7
	comp=Z,3.2nm,0.4s,mb4.6,baz=11,slow=5.7,SNR=40						
AKASG	Malin Array Be	75.16	351	P	P	19 49 53.2	-0.7
BAIF	Baives	75.92	8	eP	P	19 49 58.6	+0.3
	comp=Z,39nm,1.4s,mb4.8						
BAIF	Baives	75.92	8	eP	P	19 49 58.6	+0.3
BAIF				pmax	pmax		
	comp=Z,19nm,1.4s,mb4.8						
FLN	La Foliniere	76.75	11	eP	P	19 50 03.6	+0.5
	comp=Z,33nm,1.2s,mb4.8						
FLN	La Foliniere	76.75	11	eP	P	19 50 03.6	+0.5
FLN				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.8						
LDF	La Druitiere	76.96	11	eP	P	19 50 04.9	+0.7
GRR	Gorron	77.08	11	eP	P	19 50 05.3	+0.4
QUIF	Quistinic	77.25	13	eP	P	19 50 06.4	+0.5
GERES	GERESS Array B	77.59	2	P	P	19 50 08.3	+0.6
	comp=Z,0.5nm,0.5s,mb3.7,slow=6.7,SNR=5.6						
CDF	Champ du Feu	77.78	6	eP	P	19 50 09.5	+0.7
HAU	Haudompre	78.12	7	eP	P	19 50 11.2	+0.5
LOR	Lormes	78.66	8	eP	P	19 50 14.0	+0.3
	comp=Z,14nm,1.0s,mb4.5						
LOR	Lormes	78.66	8	eP	P	19 50 14.0	+0.3
LOR				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
GUN	Gumba	78.72	302	eP	P	19 50 15.1	+0.7
	comp=Z,48nm,0.9s,mb5.4						
GOF	Gofitskoye	78.73	341	eP	P	19 50 14.3	+0.2
GOF				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.6						
SSF	Saint Saulge	78.84	9	eP	P	19 50 15.0	+0.4
	comp=Z,4.6nm,0.7s,mb4.5						
SSF	Saint Saulge	78.84	9	eP	P	19 50 15.0	+0.4
SSF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
MFF	Saint Martin d	78.92	11	eP	P	19 50 15.7	+0.6
	comp=Z,26nm,1.1s,mb4.8						
MFF	Saint Martin d	78.92	11	eP	P	19 50 15.7	+0.6
MFF				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.8						
AVF	Avril sur Loir	79.09	9	eP	P	19 50 16.2	+0.2
	comp=Z,15nm,1.0s,mb4.6						
AVF	Avril sur Loir	79.09	9	eP	P	19 50 16.2	+0.2
AVF				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
KKN	Kakani	79.11	302	eP	P	19 50 16.9	+0.3
PKI	Pulchoki	79.23	302	eP	P	19 50 17.3	+0.1
GKN	Gorkha	79.26	303	eP	P	19 50 17.4	+0.1
	comp=Z,38nm,1.0s,mb5.3						
BGF	Bois d’Agland	79.28	9	eP	P	19 50 17.3	+0.3
SMF	Signal de Mont	79.28	8	eP	P	19 50 17.3	+0.2
	comp=Z,19nm,1.0s,mb4.7						
SMF	Signal de Mont	79.28	8	eP	P	19 50 17.3	+0.2
SMF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
DMN	Daman	79.35	302	eP	P	19 50 18.3	+0.5
	comp=Z,38nm,1.2s,mb5.2						
TCF	Toulx Ste Croi	79.48	10	eP	P	19 50 18.0	-0.2
CABF	La Chapelle	79.49	7	eP	P	19 50 18.5	+0.3
	comp=Z,30nm,1.3s,mb4.8						
CABF	La Chapelle	79.49	7	eP	P	19 50 18.5	+0.3
CABF				pmax	pmax		
	comp=Z,15nm,1.3s,mb4.8						
DAVOX	Davos	79.54	4	P	P	19 50 19.8	+1.4
	comp=Z,2.6nm,0.8s,mb4.2,baz=360,slow=15						
KOLN	Koldanda	79.96	304	eP	P	19 50 21.1	0.0
	comp=Z,30nm,1.0s,mb5.2						
LPL	La Plagne	80.63	7	eP	P	19 50 25.3	+1.0
LPG	La Plagne	80.65	7	eP	P	19 50 25.4	+1.0
LFF	La Frestale	80.66	11	eP	P	19 50 25.1	+0.6
	comp=Z,30nm,1.0s,mb4.9						
LFF	La Frestale	80.66	11	eP	P	19 50 25.1	+0.6
LFF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.9						
CAF	Calviac	80.82	10	eP	P	19 50 25.7	+0.4
	comp=Z,28nm,1.2s,mb4.8						
CAF	Calviac	80.82	10	eP	P	19 50 25.7	+0.4
CAF				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
VIVF	Saint-Julien-l	81.13	8	eP	P	19 50 27.7	+0.8
ORIF	Oris-en-Rattie	81.16	7	eP	P	19 50 27.8	+0.7
	comp=Z,6.2nm,0.7s,mb4.3						
ORIF	Oris-en-Rattie	81.16	7	eP	P	19 50 27.8	+0.7
ORIF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
MBDF	Montbardon	81.41	7	eP	P	19 50 29.1	+0.7
	comp=Z,11nm,0.7s,mb4.6						
MBDF	Montbardon	81.41	7	eP	P	19 50 29.1	+0.7
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
TI2	Plekhanov	81.56	339	i P	P	19 50 30.6	+1.3
MTLF	Montolieu	82.40	10	eP	P	19 50 34.2	+0.6
FRF	La Foret Royal	82.57	7	eP	P	19 50 34.8	+0.4
LMR	La Mourre	82.78	7	eP	P	19 50 36.2	+0.7
	comp=Z,24nm,1.2s,mb4.8						
LMR	La Mourre	82.78	7	eP	P	19 50 36.2	+0.7
LMR				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.8						
PGF	Pioggiola	83.72	5	eP	P	19 50 40.5	+0.3
	comp=Z,26nm,1.0s,mb5.0						
PGF	Pioggiola	83.72	5	eP	P	19 50 40.5	+0.3
PGF				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.0						
ESDC	Sonseca Array	85.21	15	P	P	19 50 48.9	+1.2
	comp=Z,2.5nm,0.7s,mb4.5,baz=342,slow=4.7,SNR=12						
TSUM	Tsumeb	145.32	357	PKP	PKPdf	19 57 49.0	+1.0
	comp=Z,2.1nm,0.6s,baz=85,slow=2.6,SNR=19						

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*IDC **20** 20:09:01.6±0.8, 2.38N×97.03E, mb4.0/13, mb1 4.1/13, mb1mx4.0/20, mbtmp4.0/13, Error ellipse: s-maj=44.7km s-min=15.1km az=52.0*

*NEIC **20** 20:09:06.0±0.3, 2.34N×96.98E, h30^{km}, mb4.3/6, Error ellipse: s-maj=12.8km s-min=5.8km az=51.0*

ISC 20 20:09:04.7±0.6**, 2.4N**±0.1×**97.0E**±0.1**, h33**^{km}**, n33, σ0**^{s}**81**/30**, mb4.2**/21**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	4.66	51	eP	P	20 10 15.8	+1.2
GUN	Gumba	27.54	338	eP	P	20 14 49.9	-0.8
	8.8nm,0.4s,mb4.8						
DMN	Daman	27.56	337	eP	P	20 14 51.6	+0.7
	21nm,1.0s,mb4.7						
KKN	Kakani	27.66	337	eP	P	20 14 51.2	-0.6
	13nm,0.8s,mb4.6						
GKN	Gorkha	28.10	336	eP	P	20 14 54.8	-1.0
KOLN	Koldanda	28.33	334	eP	P	20 14 58.3	+0.5
	11nm,0.8s,mb4.6						
FITZ	Fitzroy Crossi	34.77	127	P	P	20 15 52.9	-1.5
	2.4nm,0.7s,mb4.3,baz=184,slow=15,SNR=3.9						
WRA	Warramunga Arr	42.82	123	P	P	20 17 01.5	-0.1
	1.1nm,0.5s,mb3.9,baz=302,slow=9.1,SNR=9.3						
WRAB	Tennant Creek	42.83	123	eP	P	20 17 01.1	-0.6
	3.2nm,0.5s,mb4.3						
WB2	Warramunga Arr	42.83	123	eP	P	20 17 01.9	+0.2
AAK	Ala-Archa	44.86	336	eP	P	20 17 17.1	-0.6
	2.3nm,0.8s,mb4.1						
SONM	Songino Array	46.02	9	P	P	20 17 26.5	-0.4
	0.8nm,0.4s,mb4.0,baz=190,slow=9.2,SNR=19						
SONM				PcP	PcP	20 19 03.3	-0.3
	0.3nm,0.7s,baz=200,slow=3.4,SNR=5.3						
MKAR	Makanchi Array	46.07	346	P	P	20 17 27.4	0.0
	3.4nm,0.7s,mb4.4,baz=163,slow=8.6,SNR=17						
ULN	Ulaanbaatar	46.15	9	eP	P	20 17 27.1	-0.9
ZAL	Zalesovo	52.38	351	P	P	20 18 15.5	-0.2
	2.8nm,0.3s,mb4.6,baz=284,slow=5.5,SNR=10						
ZAL	Zalesovo	52.38	351	P	P	20 18 15.5	-0.2
CTA	Charters Tower	53.20	117	P	P	20 18 22.0	-0.4
	1.2nm,0.7s,mb3.9,baz=325,slow=9.4,SNR=4.4						
CTAO	Charters Tower	53.20	117	eP	P	20 18 22.3	0.0
	1.8nm,0.8s,mb4.0						
STKA	Stephens Creek	54.28	133	P	P	20 18 31.0	+0.8
	0.9nm,0.7s,mb3.8,baz=307,slow=5.1,SNR=3.0						
CHKZ	Chkalovo	55.57	341	eP	P	20 18 38.5	-0.7
	5.0nm,0.8s,mb4.6						
AKTK	Aktyubinsk	58.12	332	P	P	20 18 56.4	-0.9
AKTO	Aktyubinsk	58.12	332	P	P	20 18 56.4	-0.9
	0.9nm,0.4s,mb4.2,baz=140,slow=2.0,SNR=5.7						
AKASG	Malin Array Be	74.22	322	P	P	20 20 39.9	-0.1
	0.4nm,0.4s,mb3.7,baz=87,slow=5.8,SNR=2.9						
AKASG	Malin Array Be	74.22	322	P	P	20 20 39.9	-0.1
JOF	Joensuu	77.02	335	ep	P	20 20 56.9	+1.1
FINES	FINESS Array B	78.88	332	P	P	20 21 07.0	+0.9
	0.5nm,0.4s,mb3.8,baz=102,slow=5.8,SNR=15						
KAF	Kangasniemi	78.96	333	ep	P	20 21 07.4	+0.9
	0.6nm,0.4s,mb3.9,baz=114,slow=5.1						
ARCES	ARCESS Array B	81.38	340	P	P	20 21 19.8	+0.5
	0.9nm,0.5s,mb4.0,baz=108,slow=3.8,SNR=8.4						
GERES	GERESS Array B	83.81	319	P	P	20 21 33.3	+1.1
	0.2nm,0.7s,mb3.4,baz=80,slow=8.1,SNR=4.8						
DAVOX	Davos	86.32	317	P	P	20 21 46.2	+1.6
	1.0nm,0.5s,mb4.3,baz=183,slow=16						
TXAR	Lajitas Array	142.78	31	PKP	PKPdf	20 28 37.1	+1.6
	0.1nm,0.4s,baz=193,slow=1.4,SNR=3.8						
CPUP	Villa Florida	145.72	224	PKPdf	PKPdf	20 28 42.5	+1.9
CFAA	Coronel Fontan	147.75	204	PKPbc	PKPdf	20 28 48.3	+4.5
	0.2nm,0.6s,baz=38,slow=3.5,SNR=4.2						

MEX 20 20:21:15.8±0.6**, 16.44N**×**100.46W, h24**^{km}±31^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.63	17	i P	Pb	20 21 25.6	-2.6
CAIG				i S	Sb	20 21 34.5	-2.1
ACX	Acapulco	0.67	50	i P	Pb	20 21 26.5	-2.2
ACX				i S	Sb	20 21 35.5	-2.1

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*NEIC **20** 20:24:37.3±2.2, 7.93N×74.82W, h93^{km}±15^{km}, mb3.8/1, Error ellipse: s-maj=31.7km s-min=15.7km az=118.0*

*IDC **20** 20:24:38.3±3.7, 7.89N×74.73W, h101^{km}±26^{km}, mb3.1/3, mb1 3.2/5, mb1mx3.1/20, mbtmp3.5/5, Error ellipse: s-maj=49.7km s-min=21.8km az=108.0*

ISC 20 20:24:36.0±4.8**, 8.0N**±0.2×**74.8W**±0.4**, h104**^{km}±22^{km}**, n9, σ0**^{s}**40**/9**, mb3.1**/3**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	El Rosal	3.15	171	P	P	20 25 24.6	-0.3
	20nm,0.3s,baz=90,slow=7.1,SNR=18						
ROSC				S	S	20 26 02.0	+0.2
	18nm,0.3s,baz=265,slow=23,SNR=6.5						
SDV	Santo Domingo	4.25	78	P	P	20 25 40.0	+0.1
	1.7nm,0.3s,baz=193,slow=9.1,SNR=11						
SAML	Samuel	20.45	145	P	P	20 29 06.8	-0.5
	5.2nm,1.0s						
LPAZ	La Paz	25.02	165	P	P	20 29 51.6	-0.4
	0.8nm,0.8s,mb3.2,baz=343,slow=14,SNR=3.5						
LPAZ	La Paz	25.02	165	eP	P	20 29 53.2	+1.2
SIV	San Ignacio	27.45	150	P	P	20 30 14.5	+0.1
	0.3nm,0.4s,mb3.2,baz=311,slow=11,SNR=2.5						
CFAA	Coronel Fontan	39.87	171	P	P	20 32 01.2	0.0
	0.1nm,0.5s,mb3.0,baz=336,slow=10.0,SNR=5.3						
CFAA	Coronel Fontan	39.87	171	P	P	20 32 01.2	0.0
WRA	Warramunga Arr	149.36	244	PKPbc	PKPdf	20 44 16.5	+7.4
	1.6nm,0.9s,baz=106,slow=2.7,SNR=12						

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*NNC **20** 20:25:17.1±8.0, 36.84N×70.66E, h117^{km}±182^{km}, mpv3.7, Error ellipse: s-maj=67.6km s-min=60.4km az=39.0*

ISC 20 20:25:05.1±1.6**, 36.36N**±0.07×**70.5E**±0.2**, h100**^{km}**, n6, σ1**^{s}**52**/8**, 2C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	5.80	131	eP	P	20 26 30.4	+0.4
THN				eSB	Sx	20 27 30.3	
KK31	Karatay Array	6.74	360	⇓P	P	20 26 47.8	+4.8
	2.9nm,0.3s,baz=175,slow=12,SNR=283						
KK31				⇑S	S	20 27 58.6	-0.1
	2.5nm,0.4s,baz=191,slow=24,SNR=8.7						
AAK	Ala-Archa	6.97	25	⇑P	P	20 26 49.3	+3.1
	1.3nm,0.3s						
AAK				⇓S	S	20 28 03.7	-0.8
	7.5nm,1.2s						
KLP	Kalpa	8.01	125	eP	P	20 26 59.2	-1.1
KLP				eS	Sx	20 28 06.3	
KLP				AML	AML	20 28 26.4	
	comp=E,28nm,0.4s						
KLP				AML	AML	20 28 26.9	
	comp=N,34nm,0.7s						
KHET	Khetri	9.38	150	eS	Sx	20 28 51.3	
KHET				AML	AML	20 28 56.1	
	comp=N,4.0nm,0.4s						
KHET				AML	AML	20 28 56.3	
	comp=E,5.3nm,0.3s						
AB31	Akbulak array	15.03	332	P	P	20 28 40.2	+7.1
	comp=E,0.2nm,0.2s,baz=151,slow=12,SNR=16						
AB31				⇓S	S	20 31 16.3	-0.9
	comp=E,0.6nm,0.6s,baz=161,slow=22,SNR=6.5						

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*MOS **20** 20:30:20.3±1.1, 57.30N×120.60E, h7^{km}, mb4.4/1, Error ellipse: s-maj=31.0km s-min=21.7km az=47.6*

BYKL 20 20:30:19.3±0.5**, 57.42N**×**120.70E, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	Chara	1.42	250	ePg	Pg	20 30 45.3	-2.4
CRS				eSg	Sg	20 31 02.9	-3.8
CRS				Pmax			
	83nm,0.7s						
CRS				Smax			
	199nm,1.5s						
NRGR	Nerungri	2.33	107	eP	Pn	20 31 00.4	+1.0
NRGR				S	Sn	20 31 30.9	+1.8
CLNS	Chul’man	2.36	103	e	Pn	20 31 00.8	+0.9
CLNS				ePg	Pg	20 31 02.3	-4.1
CLNS				eSg	Sg	20 31 33.3	-4.6
CLNS				Pmax			
	248nm,0.3s						
CLNS				Smax			
	564nm,0.3s						
CLNS	Chul’man	2.36	103	eP	Pn	20 31 00.5	+0.6
CLNS				eS	Sn	20 31 31.3	+1.4
CLNS				pmax	pmax		
	comp=Z,22nm,0.4s						
CLNS				pmax	pmax		
	comp=N,1.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.4s						
CLNS				pmax	pmax		
	comp=Z,21nm,0.3s						
CLNS				pmax	pmax		
	comp=N,4.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.2s						
CLNS				smax			
	comp=N,10.0nm,0.3s						
CLNS				smax			
	comp=E,23nm,0.3s						
CLNS				smax			
	comp=Z,10.0nm,0.3s						
CLNS				smax			
	comp=E,109nm,0.3s						
CLNS				smax			
	comp=Z,38nm,0.3s						
CLNS				smax			
	comp=N,112nm,0.5s						
ALDR	Aldan	2.78	63	ePg	Pg	20 31 08.6	-6.1
ALDR				e		20 31 39.7	
ALDR				eSg	Sg	20 31 45.2	-6.5
ALDR				Smax			
	comp=N,1µm,0.3s						
NLYR	Nelyaty	2.89	253	e	Pn	20 31 09.1	+1.7
NLYR				ePg	Pg	20 31 11.3	-5.7
NLYR				eSg	Sg	20 31 48.0	-7.5
NLYR				Pmax			
	comp=N,48nm,0.8s						

NLYR				Smax			
	comp=N,307nm,1.3s						
NLYR	**Nelyaty**	**2.89**	**253**	*e*P	Pn	20 31 07.6	+0.2
NLYR				*e*		20 31 48.9	
NLYR				pmax	pmax		
	comp=Z,49nm,0.5s						
NLYR				smax			
	comp=N,303nm,1.5s						
TUP	**Tupik**	**3.03**	**188**	*e*Pn	Pn	20 31 07.4	-2.0
TUP				*e*Pg	Pg	20 31 12.7	-7.1
TUP				*e*Sg	Sg	20 31 50.7	-10
TUP				Pmax			
	comp=N,68nm,0.9s						
TUP				Smax			
	comp=N,206nm,0.9s						
TUP	**Tupik**	**3.03**	**188**	*e*P	Pn	20 31 07.3	-2.1
TUP				*e*S	Sn	20 31 42.6	-4.4
TUP				pmax	pmax		
	comp=Z,38nm,0.3s						
TUP				smax			
	comp=N,169nm,0.7s						
TNDR	**Tynda**	**3.20**	**134**	*e*	Pn	20 31 10.7	-1.1
TNDR				*e*Sg	Sg	20 31 58.0	-7.7
TNDR				Smax			
	comp=N,555nm,0.4s						
BOD	**Bodaibo**	**3.62**	**279**	*e*Pn	Pn	20 31 16.8	-1.1
BOD				*e*Pg	Pg	20 31 24.3	-7.3
BOD				*e*Sg	Sg	20 32 10.0	-10
BOD				Pmax			
	comp=N,18nm,1.0s						
BOD				Smax			
	comp=N,113nm,1.1s						
SVKR	**Severomuysk**	**4.14**	**255**	*e*Pg	Pg	20 31 34.9	-7.1
SVKR				*e*Sg	Sg	20 32 28.3	-8.9
SVKR				Pmax			
	comp=N,26nm,0.3s						
SVKR				Smax			
	comp=N,116nm,1.8s						
UKT	**Uakit**	**4.38**	**247**	*e*Pg	Pg	20 31 37.5	-9.1
UKT				*e*Sg	Sg	20 32 33.2	-12
UKT				Pmax			
	comp=N,5.0nm,0.8s						
UKT				Smax			
	comp=N,40nm,1.8s						
KROS	**Kirovskiy**	**4.62**	**128**	*e*	Pn	20 31 30.5	-1.6
KROS				*e*		20 31 43.8	
KROS				*e*Sg	Sg	20 32 42.6	-11
YOA	**Uoyan**	**5.10**	**259**	*e*	rx	20 32 25.2	
YOA				*e*Sg	Sg	20 32 57.9	-11
YOA				Smax			
	comp=N,380nm,2.3s						
YOA	**Uoyan**	**5.10**	**259**	*e*P	Pn	20 31 51.8	+13
YOA				pmax	pmax		
	comp=Z,51nm,1.6s						
ZEA	**Zeya**	**5.24**	**132**	*e*Pg	Pg	20 31 53.4	-10
ZEA				*e*Sg	Sg	20 33 00.5	-13
KMO	**Kumora**	**5.46**	**258**	*e*	Pn	20 31 50.8	+6.9
KMO				*e*Pg	Pg	20 31 57.4	-11
KMO				*e*Sg	Sg	20 33 06.9	-14
KMO				Pmax			
	comp=Z,5.0nm,0.5s						
KMO				Smax			
	comp=Z,69nm,1.5s						
KMO	**Kumora**	**5.46**	**258**	*e*P	Pn	20 31 41.1	-2.8
KMO				*e*S	Sn	20 32 41.3	-7.1
KMO				smax			
	comp=E,65nm,1.4s						
YLYR	**Ulyunkhan**	**5.91**	**248**	*e*	Pg	20 32 09.2	-8.1
YLYR				*e*Sg	Sg	20 33 21.9	-14
YLYR				Smax			
	comp=E,47nm,2.2s						
YLYR	**Ulyunkhan**	**5.91**	**248**	*e*P	Pn	20 31 47.7	-2.5
YLYR				pmax	pmax		
	comp=Z,26nm,2.1s						
YAK	**Yakutsk**	**6.48**	**41**	*e*P	Pn	20 32 14.5	+16
YAK				*e*S	Sn	20 33 07.8	-6.1
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YAK				smax			
	comp=E,3.0nm,0.8s						
YAK				smax			
	comp=N,4.0nm,0.9s						
YAK				smax			
	comp=Z,2.0nm,0.9s						
YAK				smax			
	comp=E,21nm,0.8s						
YAK				smax			
	comp=Z,17nm,1.0s						
YAK				smax			
	comp=N,22nm,0.9s						
YAK				MLR	MLR		
	comp=Z,69nm,14.0s						
CIT	**Chita**	**6.81**	**220**	*e*Pg	Pg	20 32 21.3	-14
CIT				*e*Sg	Sg	20 33 48.3	-18
CIT				Pmax			
	comp=Z,18nm,2.5s						
CIT				Smax			
	comp=Z,63nm,1.8s						
SYVR	**Suvo**	**7.14**	**243**	*e*	rx	20 32 50.0	
SYVR				*e*Sg	Sg	20 34 02.2	-15
SYVR				Smax			
	comp=Z,64nm,1.3s						
TRG	**Tyrgan**	**9.45**	**247**	*e*	rx	20 34 48.4	
TRG				*e*Sg	Sg	20 35 12.6	-21
TRG				Smax			
	comp=Z,102nm,1.5s						

NNC ***20*** *20:52:36.9±9.9,38.40N×76.29E,mpv3.4,Error ellipse: s-maj=101.7km s-min=63.4km az=34.0*

BJI ***20*** *20:52:43.5,39.35N×77.11E,h14^{km},ML3.8*

ISC 20 20:52:38.1±2.4**,38.5N**±0.1×**76.2E**±0.4**,h10**^{km}**,n9,** σ**1**^{s}**03**/11**,6C,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.06**	**352**	⇑*i*PG	**Pg**	**20 52 59.8**	**+0.5**
KSH				SG	**Sg**	**20 53 13.3**	**-0.2**
KSH				Smax			
	comp=N,2µm,0.7s						
KSH				Smax			
	comp=E,2µm,0.9s						
KZA	**Kyzart**	**3.67**	**349**	P	**Pn**	**20 53 38.2**	**+2.0**
	SNR=21						
ULHL	**Ulahol**	**3.77**	**1**	P	**Pn**	**20 53 36.5**	**-1.2**
	SNR=7.5						
UCH	**Uchtor**	**3.96**	**342**	P	**Pn**	**20 53 45.5**	**+5.2**
	SNR=9.4						
AML	**Almayashu**	**4.12**	**334**	P	**Pn**	**20 53 48.8**	**+6.2**
	SNR=12						
KBK	**Karagaybulak**	**4.29**	**348**	P	**Pn**	**20 53 49.1**	**+4.2**
	SNR=7.0						
AAK	**Ala-Archa**	**4.35**	**344**	⇑Pn	**Pn**	**20 53 45.1**	**-0.8**
	comp=E,10nm,0.8s						
AAK				⇑Sn	**Sn**	**20 54 41.8**	**+4.6**
	comp=E,154nm,1.1s						
KK31	**Karatay Array**	**6.31**	**319**	⇑Pn	**Pn**	**20 54 13.2**	**-0.3**
	comp=E,0.3nm,0.3s,baz=134,slow=13,SNR=6.8						
KK31				⇑Pg	**Pg**	**20 54 34.2**	**-10**
	comp=E,3.8nm,0.8s,baz=120,slow=17						
KK31				⇑Lg		20 55 56.7	
	comp=E,9.2nm,0.7s,baz=128,slow=28						
WMQ	**Urumqi**	**10.21**	**55**	*e*P	Px	20 54 54.6	

BJI ***20*** *21:20:54.1,35.20N×26.35E,h48^{km},mB5.0,mb4.7,Ms4.8, Msz4.7*

HLW ***20*** *21:20:55.7,35.24N×27.52E,h19^{km},Mb3.9*

CSEM ***20*** *21:20:55.1±0.0,35.08N×27.19E,h40^{km},mb4.2/17,Ms3.2, Mw3.7,Error ellipse: s-maj=1.5km s-min=1.1km az=32.0*

MOS ***20*** *21:20:56.0±1.5,35.08N×27.17E,h33^{km},mb4.3/17,Error ellipse: s-maj=12.1km s-min=5.6km az=97.4*

ATH ***20*** *21:20:58.4,35.24N×27.09E,h19^{km}±4^{km},MD4.1/16, ML4.3*

NIC ***20*** *21:20:58.2±0.4,34.82N×27.25E,h25^{km},mb4.4,ML3.9, MW3.7*

NEIC ***20*** *21:20:58.2,35.23N×27.09E,h18^{km},mb4.0/23, ML4.3(ATH),ML3.9(NIC),ML3.8(ISK),After ATH.*

ISK ***20*** *21:21:03.2,35.58N×27.50E,h33^{km},ML3.8*

IDC ***20*** *21:21:03.4±2.1,35.24N×27.00E,h84^{km}±20^{km},mb3.8/18, mb1 3.8/23,mb1mx3.8/30,mbtmp4.1/23,MS3.3/3, Ms1 3.3/3,ms1mx3.0/27,Error ellipse: s-maj=16.2km s-min=12.3km az=121.0*

ISC 20 21:20:56.5±0.3**,35.03N**±0.02×**27.27E**±0.02**,h50**^{km}±3^{km}**, n220,** σ**1**^{s}**29**/229**,mb4.2**/39**,MS3.2**/3**,3C-6D,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.52**	**350**	⇓*i*PB	**P**	**21 21 04.9**	**-3.1**
ARG	**Arkhangelos**	**1.37**	**30**	*e*PB	**P**	**21 21 21.5**	**+1.7**
ARG				*e*SN	**S**	**21 21 42.3**	**+5.3**
NPS	**Neapolis**	**1.38**	**280**	*e*PN	**P**	**21 21 21.6**	**+1.8**
DAT	**Datca**	**1.71**	**8**	PN	**P**	**21 21 23.6**	**-0.9**
IDI	**Anoyia**	**1.96**	**278**	P	**P**	**21 21 31.5**	**+3.5**
	68nm,0.3s,baz=104,slow=16,SNR=130						
SANT	**Santorini**	**1.99**	**313**	*e*P	**P**	**21 21 29.0**	**+0.6**
SANT	**Santorini**	**1.99**	**313**	*e*P	**P**	**21 21 29.0**	**+0.7**
BODT	**Bodrum**	**2.02**	**1**	PN	**P**	**21 21 27.4**	**-1.5**
BDRM	**Kayabasi**	**2.03**	**4**	*i* P	**P**	**21 21 30.0**	**+1.0**
BDRM				*i* S	**S**	**21 21 55.4**	**+2.2**
DALT	**Dalyan (Mudla)**	**2.06**	**32**	PN	**P**	**21 21 29.1**	**-0.3**
FETY	**Fethiye**	**2.17**	**42**	PN	**P**	**21 21 30.2**	**-0.8**
AKAS	**Kas**	**2.25**	**57**	*i* P	**P**	**21 21 31.1**	**-1.0**
AKAS				*i* S	S	21 22 20.8	+22
YER	**Yerkesik**	**2.25**	**21**	PN	**P**	**21 21 31.2**	**-0.9**
MLSB	**Milas**	**2.29**	**10**	PN	**P**	**21 21 32.4**	**-0.4**
APE	**Apeiranthos**	**2.47**	**326**	PN	**P**	**21 21 38.0**	**+2.8**
APE				SN	**S**	**21 22 04.0**	**-0.3**
APE	**Apeiranthos**	**2.47**	**326**	*e*PB	**P**	**21 21 36.0**	**+0.7**
VAM	**Vamos**	**2.54**	**279**	*e*PN	**P**	**21 21 39.6**	**+3.4**
GVD	**Gavdhos**	**2.62**	**267**	*e*P	**P**	**21 21 39.8**	**+2.4**
SMG	**Samos**	**2.69**	**353**	*e*PN	**P**	**21 21 38.8**	**+0.4**
ELL	**Elmali**	**2.74**	**51**	PN	**P**	**21 21 39.5**	**+0.3**
DNZL	**Cakiroluk**	**3.02**	**28**	*i* P	**P**	**21 21 44.4**	**+1.4**
DNZL				*i* S	**S**	**21 22 22.9**	**+4.8**
DENT	**Denizli**	**3.07**	**27**	PN	**P**	**21 21 43.2**	**-0.5**
IZM	**Izmir**	**3.36**	**360**	PN	**P**	**21 21 46.3**	**-1.5**
BCK	**Bucak**	**3.62**	**47**	PN	**P**	**21 21 51.8**	**+0.3**
KYTH	**Kithira**	**3.66**	**291**	*e*PN	**P**	**21 21 53.0**	**+0.9**
ISP	**Isparta**	**3.83**	**42**	PN	**P**	**21 21 53.7**	**-0.8**
ISP	**Isparta**	**3.83**	**42**	*e*P	**P**	**21 21 54.9**	**+0.4**
ISP	**Isparta**	**3.83**	**42**	*e*P	**P**	**21 21 54.9**	**+0.4**
AKS	**Akhisar**	**3.86**	**6**	PN	**P**	**21 21 54.2**	**-0.7**
VLI	**Veliai**	**3.90**	**297**	*e*PN	**P**	**21 21 56.6**	**+1.2**
HMAT	**Matruh**	**3.93**	**182**	⇓P	**P**	**21 21 57.9**	**+2.0**
HMAT				S	**S**	**21 22 42.3**	**+1.0**
NAIG	**Nisos Aigina**	**4.08**	**313**	*e*PN	**P**	**21 22 00.0**	**+1.9**
ATH	**Athens Observa**	**4.10**	**317**	*e*PN	**P**	**21 22 00.6**	**+2.4**
AKMC	**Akamas**	**4.15**	**89**	P	**P**	**21 21 58.9**	**-0.2**
PPCY	**Paphos**	**4.17**	**91**	P	**P**	**21 21 59.8**	**+0.5**
MPAR	**Parnis Oros**	**4.21**	**319**	*e*PN	**P**	**21 22 02.5**	**+2.6**
PRK	**Paraskevi**	**4.28**	**350**	*e*PN	**P**	**21 22 02.0**	**+1.2**
MGER	**Gerania Oros**	**4.37**	**314**	*e*PN	**P**	**21 22 05.0**	**+2.9**
ALFC	**Alevga**	**4.37**	**87**	P	**P**	**21 22 02.9**	**+0.8**
ALFC				S	**S**	**21 22 52.9**	**+0.5**
ALT	**Altintas**	**4.61**	**29**	*e*PN	**P**	**21 22 04.2**	**-1.4**
BALB	**Balikesir**	**4.62**	**6**	*e*PN	**P**	**21 22 05.0**	**-0.7**
SZAC	**Souni-Zanaja**	**4.62**	**92**	P	**P**	**21 22 05.5**	**-0.2**
SZAC				S	**S**	**21 22 59.4**	**+0.7**
DST	**Dursunbey**	**4.69**	**13**	*e*PN	**P**	**21 22 04.9**	**-1.7**
EZN	**Ezine**	**4.84**	**351**	*e*PN	**P**	**21 22 08.8**	**+0.1**
MAMC	**Mammari**	**4.88**	**87**	⇓P	**P**	**21 22 10.3**	**+1.0**
CSS	**Prodhromos**	**4.98**	**89**	P	**P**	**21 22 10.6**	**0.0**
	4.7nm,0.6s						
CSS				S	**S**	**21 23 07.8**	**+0.2**
KONT	**Konya--Tatoy**	**5.03**	**53**	*e*PN	**P**	**21 22 12.1**	**+0.7**
ESKT	**Eskisehir**	**5.31**	**31**	*e*PN	**P**	**21 22 14.7**	**-0.5**
KIZT	**Kizilcal**	**5.33**	**43**	*e*PN	**P**	**21 22 15.5**	**0.0**
EVR	**Evrytania**	**5.84**	**313**	*e*PN	**P**	**21 22 25.0**	**+2.4**
SWA1		**5.90**	**193**	⇓P	**P**	**21 22 25.1**	**+1.6**
SWA1				S	**S**	**21 23 30.7**	**0.0**
SWA2		**5.97**	**195**	⇓P	**P**	**21 22 25.9**	**+1.4**
VLS	**Valsamata**	**6.22**	**302**	*e*PN	**P**	**21 22 30.0**	**+2.0**
LOD	**Lodumlu**	**6.53**	**40**	*e*PN	**P**	**21 22 31.7**	**-0.6**
ANTO	**Ankara**	**6.53**	**41**	*e*P	**P**	**21 22 32.1**	**-0.2**
	14nm,0.6s						
ANTO	**Ankara**	**6.53**	**41**	*e*P	**P**	**21 22 32.1**	**-0.2**
	14nm,0.6s						
AMAG	**Maghara**	**6.64**	**130**	P	**P**	**21 22 32.3**	**-1.7**
BHL	**Bhannes**	**7.02**	**97**	*e*Pn	**P**	**21 22 32.5**	**-6.7**
SLTI	**Sal'it**	**7.05**	**111**	P	**P**	**21 22 39.5**	**-0.2**
HWQ	**Hawqa**	**7.19**	**94**	*e*Pn	**P**	**21 22 40.1**	**-1.4**
KSDI	**Kefar Szold**	**7.20**	**102**	P	**P**	**21 22 40.6**	**-1.1**
KZIT	**Kziot**	**7.27**	**123**	P	**P**	**21 22 41.4**	**-1.2**
ZAF		**7.27**	**141**	P	**P**	**21 22 41.1**	**-1.6**
RTMM	**Retamin**	**7.39**	**120**	P	**P**	**21 22 42.4**	**-1.9**
KEK	**Kerkira**	**7.56**	**310**	*e*PN	**P**	**21 22 48.0**	**+1.3**
MKRJ	**Makawir**	**7.82**	**114**	P	**P**	**21 22 49.7**	**-0.6**
HFRF	**Wahat Farafira**	**7.91**	**173**	⇑P	**P**	**21 22 51.4**	**-0.1**
PRNI	**Paran**	**8.02**	**123**	P	**P**	**21 22 50.9**	**-2.1**
MBH	**Mount Berech**	**8.31**	**127**	P	**P**	**21 22 56.9**	**-0.1**
EIL	**Elat**	**8.41**	**127**	P	**P**	**21 22 57.6**	**-0.9**
AQBJ	**Aqaba**	**8.44**	**127**	P	**P**	**21 22 57.9**	**-0.9**
ALWS	**Ilw as Safayha**	**8.73**	**129**	P	**P**	**21 23 01.5**	**-1.3**
ALWS				S	**S**	**21 24 35.8**	**-5.1**
HAQS	**Haql**	**8.82**	**130**	P	**P**	**21 23 02.9**	**-1.2**
JMOS	**Jabal al Moall**	**8.85**	**129**	P	**P**	**21 23 03.4**	**-1.1**
TIP	**Timpagrande**	**9.36**	**299**	*e*P	**P**	**21 23 08.7**	**-2.7**
TIP	**Timpagrande**	**9.36**	**299**	*e*P	**P**	**21 23 08.7**	**-2.7**
BDAS	**Al Bad'**	**9.37**	**132**	P	**P**	**21 23 10.4**	**-1.1**
TIRR	**Tirgusor**	**9.45**	**5**	*e*P	**P**	**21 23 13.0**	**+0.2**
TIRR	**Tirgusor**	**9.45**	**5**	*e*P	**P**	**21 23 13.0**	**+0.2**
HDK1	**Dakhla**	**9.64**	**168**	P	**P**	**21 23 15.4**	**+0.1**
HDK1	**Dakhla**	**9.64**	**168**	P	**P**	**21 23 15.4**	**+0.1**
AYUS	**'Aynunah**	**9.64**	**133**	P	**P**	**21 23 13.7**	**-1.7**
TBKS	**Tabuk**	**10.42**	**128**	P	**P**	**21 23 26.0**	**0.0**
MLR	**Muntele Rosu**	**10.49**	**355**	P	**P**	**21 23 29.3**	**+2.3**
	0.4nm,0.3s,baz=110,slow=24,SNR=4.1						
MLR				LR	LR	21 28 00.1	
	comp=Z,381nm,20.5s,baz=143,slow=41						
HDK2	**Wahat Dakhilah**	**10.78**	**172**	P	**P**	**21 23 31.3**	**+0.4**
UMJS	**Umm Lajj**	**13.06**	**136**	P	**P**	**21 24 01.5**	**0.0**
PSZ	**Piszkesteto**	**14.00**	**339**	P	**P**	**21 24 14.1**	**+0.5**
	4.8nm,0.8s						
PSZ				*e*		21 24 21.5	
KOLS	**Kolonicke sedl**	**14.37**	**347**	*e*P	**P**	**21 24 24.6**	**+6.1**
CRVS	**Cervenica-Dubn**	**14.51**	**345**	*e*pP		21 24 33.4	
ONI	**Oni**	**14.68**	**54**	P	**P**	**21 24 29.7**	**+7.1**
KIV	**Kislovodsk**	**14.85**	**49**	*e*P	**P**	**21 24 31.5**	**+6.7**
	35nm,1.2s						
KIV	**Kislovodsk**	**14.85**	**49**	*e*P	**P**	**21 24 31.7**	**+6.9**
KIV				pmax	pmax		
	comp=Z,29nm,1.2s						
KIV				MLR	MLR		
	comp=Z,118nm,16.0s						
STHS	**Stebnicka Huta**	**15.04**	**345**	*e*P	**P**	**21 24 32.2**	**+5.0**
GOF	**Gofitskoye**	**15.66**	**46**	⇑*i*P	**P**	**21 24 39.9**	**+4.7**
GOF				pmax	pmax		
	comp=Z,40nm,1.0s						
AKASG	**Malin Array Be**	**15.72**	**5**	P	**P**	**21 24 39.0**	**+3.0**
	comp=Z,1.4nm,0.3s,baz=194,slow=11,SNR=16						
AKASG	**Malin Array Be**	**15.72**	**5**	P	**P**	**21 24 39.0**	**+3.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PGF	**Pioggiola**	**16.08**	**303**	*e*P	**P**	**21 24 38.0**	**-2.6**
	comp=Z,13nm,0.7s						
VRAC	**Vranov**	**16.29**	**334**	P	**P**	**21 24 44.8**	**+1.7**
	comp=Z,0.3nm,0.3s,baz=156,slow=11,SNR=3.4						
GEC2	**GERESS Array S**	**17.06**	**328**	*e*Pn	**P**	**21 24 53.3**	**+0.5**
GERES	**GERESS Array B**	**17.06**	**328**	P	**P**	**21 24 53.3**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=139,slow=12,SNR=13						
DPC	**Dobruska-Polom**	**17.26**	**336**	*e*P	**P**	**21 24 55.6**	**+0.2**
KHC	**Kasperske Hory**	**17.33**	**329**	*e*P	**P**	**21 24 56.0**	**-0.2**
KHC				pP		21 25 03.0	
KHC	**Kasperske Hory**	**17.33**	**329**	*e*P	**P**	**21 24 56.0**	**-0.2**
KHC				*e*		21 25 03.0	
UPC	**Upice**	**17.50**	**336**	*e*P	**P**	**21 24 57.9**	**-0.4**
DAVOX	**Davos**	**17.57**	**317**	P	**P**	**21 24 59.7**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=151,slow=18,SNR=2.4						
PRU	**Pruhonice**	**17.61**	**332**	*e*P	**P**	**21 24 58.5**	**-1.2**
SBF	**Sospel**	**17.64**	**306**	*e*P	**P**	**21 24 57.9**	**-2.2**
	comp=Z,43nm,0.8s						
WET	**Wettzell**	**17.64**	**327**	*e*P	**P**	**21 24 59.9**	**-0.2**
KSP	**Ksiaz**	**17.69**	**337**	*e*P	**P**	**21 25 00.5**	**-0.3**
FRF	**La Foret Royal**	**18.06**	**304**	*e*P	**P**	**21 25 03.2**	**-2.1**
	comp=Z,54nm,1.5s						
LMR	**La Mourre**	**18.07**	**304**	*e*P	**P**	**21 25 03.0**	**-2.4**
	comp=Z,32nm,1.4s						
MBDF	**Montbardon**	**18.43**	**308**	*e*P	**P**	**21 25 07.6**	**-2.2**
	comp=Z,6.7nm,0.6s						
BNI	**Bardonecchia**	**18.62**	**309**	*e*P	**P**	**21 25 13.4**	**+1.2**
NKC	**Novy Kostel**	**18.64**	**329**	*e*P	**P**	**21 25 10.7**	**-1.7**
LPG	**La Plagne**	**18.77**	**310**	*e*P	**P**	**21 25 12.4**	**-1.6**
	comp=Z,17nm,0.8s						
GRA1	**Grafenberg Arr**	**18.79**	**326**	*e*Pn	**P**	**21 25 15.2**	**+1.1**
GRF	**Grafenberg Arr**	**18.79**	**326**	*e*Pn	**P**	**21 25 15.2**	**+1.1**
LPL	**La Plagne**	**18.79**	**310**	*e*P	**P**	**21 25 12.6**	**-1.6**
	comp=Z,6.8nm,0.6s						
ORIF	**Oris-en-Rattie**	**19.09**	**308**	*e*P	**P**	**21 25 15.6**	**-1.9**
	comp=Z,6.8nm,0.7s						
ORIF				*e*R			
	comp=Z,212nm,22.8s						
VRHR	**Novokhopersk**	**19.12**	**29**	*e*P	**P**	**21 25 17.7**	**-0.2**
VRHR				pmax	pmax		
	comp=Z,30nm,0.6s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,2.0nm,0.3s						
SUW	**Suwalki**	**19.19**	**353**	*e*P	**P**	**21 25 18.3**	**-0.3**
SUW	**Suwalki**	**19.19**	**353**	*e*P	**P**	**21 25 18.3**	**-0.3**
CLL	**Collm**	**19.25**	**332**	P	**P**	**21 25 18.0**	**-1.3**
	comp=E,logA/T=1.0						
CLL				*e**PP		21 25 28.0	
CLL				*i*		21 25 30.7	
CLL				*e**SP		21 25 35.0	
CLL				*e*PPP	PPP	21 25 40.0	-6.7
CLL	**Collm**	**19.25**	**332**	*e*P	**P**	**21 25 18.0**	**-1.3**
MOX	**Moxa**	**19.30**	**329**	*i* P	**P**	**21 25 20.2**	**+0.3**
MOX	**Moxa**	**19.30**	**329**	*e*P	**P**	**21 25 20.2**	**+0.3**
BFO	**Black Forest**	**19.34**	**319**	*e*Pn	**P**	**21 25 24.6**	**+4.3**
CABF	**La Chapelle**	**19.70**	**312**	*e*P	**P**	**21 25 22.6**	**-1.6**
	comp=E,12nm,0.6s						
HINF	**Hinteralfeld**	**19.86**	**316**	*e*P	**P**	**21 25 24.6**	**-1.4**
	comp=E,3.0nm,0.5s						
CDF	**Champ du Feu**	**19.96**	**318**	*e*P	**P**	**21 25 25.9**	**-1.1**
	comp=E,7.4nm,0.7s						
HAU	**Haudompre**	**20.25**	**316**	*e*P	**P**	**21 25 28.8**	**-1.2**
HAU				*e*R			
	comp=E,136nm,22.8s						
TNS	**Taunus Mts**	**20.46**	**324**	*e*Pn	**P**	**21 25 33.7**	**+1.5**
OBN	**Obninsk**	**21.09**	**15**	⇓*i*P	**P**	**21 25 38.1**	**-0.5**
OBN				*e*S	**S**	**21 29 25.8**	**+0.3**
OBN				pmax	pmax		
	comp=Z,47nm,1.5s,mb4.6						
OBN	**Obninsk**	**21.09**	**15**	*i* P	**P**	**21 25 38.1**	**-0.5**
	comp=Z,47nm,1.5s,mb4.6						
OBN				*e*S	**S**	**21 29 25.8**	**+0.3**
SMF	**Signal de Mont**	**21.10**	**310**	*e*P	**P**	**21 25 37.8**	**-1.0**
	comp=Z,5.3nm,0.4s,mb3.9						
MEZF	**Maizieres J'vi**	**21.25**	**316**	*e*P	**P**	**21 25 39.5**	**-0.8**
LOR	**Lormes**	**21.36**	**312**	*e*P	**P**	**21 25 40.1**	**-1.3**
LOR				*e*R			
	comp=Z,198nm,21.5s						
AVF	**Avril sur Loir**	**21.46**	**310**	*e*P	**P**	**21 25 40.7**	**-1.7**
	comp=Z,13nm,0.8s,mb4.0						
SSF	**Saint Saulge**	**21.48**	**311**	*e*P	**P**	**21 25 41.3**	**-1.3**
	comp=Z,9.6nm,0.8s,mb4.2						
CAF	**Calviac**	**21.62**	**305**	*e*P	**P**	**21 25 43.0**	**-1.0**
BGF	**Bois d'Agland**	**21.69**	**309**	*e*P	**P**	**21 25 43.7**	**-1.0**
	comp=Z,12nm,0.8s,mb4.1						
TCF	**Toulx Ste Croi**	**21.99**	**308**	*e*P	**P**	**21 25 46.8**	**-0.9**
	comp=Z,19nm,1.1s,mb4.1						
RJF	**Les Rejaudoux**	**22.11**	**305**	*e*P	**P**	**21 25 47.8**	**-1.0**
RJF				*e*R			
	comp=Z,125nm,17.2s						
EPF	**Esparros**	**22.32**	**299**	*e*P	**P**	**21 25 50.0**	**-1.0**
	comp=Z,9.9nm,0.9s,mb3.9						
BAIF	**Baives**	**22.54**	**319**	*e*P	**P**	**21 25 52.4**	**-0.6**
LDF	**La Druitiere**	**24.34**	**312**	*e*P	**P**	**21 26 10.0**	**-0.6**
	comp=Z,5.3nm,0.5s,mb3.9						
FLN	**La Foliniere**	**24.63**	**312**	*e*P	**P**	**21 26 12.5**	**-0.9**
	comp=Z,6.5nm,0.4s,mb4.2						
FLN				*e*R			
	comp=Z,153nm,18.2s						
GRR	**Gorron**	**24.71**	**311**	*e*P	**P**	**21 26 13.3**	**-0.9**
	comp=Z,12nm,0.7s,mb4.2						
ESDC	**Sonseca Array**	**25.18**	**290**	P	**P**	**21 26 19.6**	**+0.9**
	comp=Z,1.0nm,0.5s,mb3.6,baz=81,slow=9.6,SNR=9.8						
ESLA	**Sonseca Array**	**25.18**	**290**	*e*P	**P**	**21 26 19.5**	**+0.7**
ESLA	**Sonseca Array**	**25.18**	**290**	*e*P	**P**	**21 26 19.5**	**+0.8**
ORR	**Orenburg**	**25.75**	**41**	⇑*i*P	**P**	**21 26 25.2**	**+1.3**
ORR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.3						
FINES	**FINESS Array B**	**26.44**	**359**	P	**P**	**21 26 29.2**	**-1.0**
	comp=Z,3.2nm,0.8s,mb3.9,baz=171,slow=10,SNR=9.7						
FINES	**FINESS Array B**	**26.44**	**359**	P	**P**	**21 26 29.3**	**-0.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**26.44**	**359**	P	**P**	**21 26 29.2**	**-1.0**
HFS	**Hagfors**	**26.62**	**345**	P	**P**	**21 26 30.0**	**-1.9**
	comp=Z,2.6nm,0.7s,mb3.9,baz=152,slow=12,SNR=16						
HFS	**Hagfors**	**26.62**	**345**	P	**P**	**21 26 30.0**	**-1.9**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKTK	**Aktyubinsk**	**27.08**	**46**	P	**P**	**21 26 37.1**	**+0.9**
AKTK	**Aktyubinsk**	**27.08**	**46**	P	**P**	**21 26 37.1**	**+0.9**
AKTO	**Aktyubinsk**	**27.08**	**46**	P	**P**	**21 26 37.1**	**+0.9**
	comp=Z,4.2nm,0.8s,mb4.0,baz=250,slow=9.2,SNR=10						
AKTO	**Aktyubinsk**	**27.08**	**46**	P	**P**	**21 26 37.1**	**+0.9**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
ATD	**Arta Tunnel**	**27.35**	**145**	LR	LR	21 39 25.3	
	comp=Z,38nm,20.5s,MS3.0,baz=70,slow=40						
NAO	**NORSAR Subarra**	**27.89**	**343**	P	**P**	**21 26 42.2**	**-1.3**
	comp=Z,1.0nm,0.6s,mb3.6						
NB2	**NORSAR Subarra**	**27.99**	**343**	P	**P**	**21 26 42.2**	**-2.2**
	comp=Z,1.0nm,0.6s,mb3.6,baz=145,slow=9.3						
NOA	**NORSAR Array B**	**27.99**	**343**	P	**P**	**21 26 41.8**	**-2.5**
	comp=Z,1.7nm,0.8s,mb3.7,baz=150,slow=8.8,SNR=3.7						
NOA	**NORSAR Array B**	**27.99**	**343**	P	**P**	**21 26 41.8**	**-2.6**
NOA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**29.16**	**324**	P	**P**	**21 26 53.4**	**-1.4**
	comp=Z,0.8nm,0.6s,mb3.6,baz=127,slow=10.0,SNR=3.9						
EKA	**Eskdalemuir Ar**	**29.16**	**324**	P	**P**	**21 26 53.4**	**-1.4**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**29.16**	**324**	P	**P**	**21 26 53.3**	**-1.5**
SVE	**Sverdlovsk**	**31.34**	**36**	*e*P	**P**	**21 27 16.0**	**+1.9**
ARCES	**ARCESS Array B**	**34.57**	**359**	P	**P**	**21 27 41.1**	**-0.9**
	comp=Z,0.8nm,0.3s,mb4.1,baz=170,slow=8.0,SNR=7.9						
ARCES	**ARCESS Array B**	**34.57**	**359**	P	**P**	**21 27 41.2**	**-0.8**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**35.19**	**46**	P	**P**	**21 27 49.2**	**+1.7**
	comp=Z,1.7nm,0.9s,mb4.0,baz=214,slow=5.2,SNR=7.4						
BVAR	**Borovoye Array**	**35.19**	**46**	P	**P**	**21 27 49.2**	**+1.7**
BVAR	**Borovoye Array**	**35.19**	**46**	P	**P**	**21 27 49.2**	**+1.7**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	**Borovoye Array**	**35.19**	**46**	P	**P**	**21 27 49.2**	**+1.7**
CHKZ	**Chkalovo**	**35.48**	**45**	*e*P	**P**	**21 27 51.0**	**+1.1**
	comp=Z,11nm,1.2s,mb4.7						
CHKZ	**Chkalovo**	**35.48**	**45**	*e*P	**P**	**21 27 51.0**	**+1.1**
	comp=Z,11nm,1.2s,mb4.7						
KMBO	**Kilima Mbogo**	**37.17**	**163**	LR	LR	21 44 49.6	
	comp=Z,43nm,19.9s,MS3.2,baz=89,slow=38						
FRU	**Bishkek**	**37.24**	**63**	*e*P	**P**	**21 28 08.0**	**+3.1**
FRU				*e*		21 28 15.0	
KURK	**Kurchatov**	**39.92**	**51**	*e*P	**P**	**21 28 29.1**	**+2.0**
KURK	**Kurchatov**	**39.92**	**51**	*e*P	**P**	**21 28 29.1**	**+2.0**
DBIC	**Dimbokro**	**40.86**	**234**	P	**P**	**21 28 36.7**	**+1.4**
	comp=Z,1.1nm,0.6s,mb3.7,baz=81,slow=16,SNR=4.1						
DBIC	**Dimbokro**	**40.86**	**234**	P	**P**	**21 28 36.7**	**+1.4**
DBIC	**Dimbokro**	**40.86**	**234**	P	**P**	**21 28 36.7**	**+1.4**
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**42.40**	**57**	P	**P**	**21 28 50.0**	**+2.4**
	comp=Z,5.4nm,0.5s,mb4.4,baz=274,slow=7.3,SNR=57						
MKAR	**Makanchi Array**	**42.40**	**57**	P	**P**	**21 28 50.0**	**+2.4**
MKAR	**Makanchi Array**	**42.40**	**57**	P	**P**	**21 28 50.0**	**+2.5**
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
NVS	**Novosibirsk**	**42.96**	**45**	*i* P	**P**	**21 28 52.0**	**0.0**
NVS				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.6						
NVS				pmax	pmax		
	comp=E,10.0nm,1.3s						
NVS	**Novosibirsk**	**42.96**	**45**	*i* P	**P**	**21 28 52.0**	**0.0**
	comp=E,17nm,1.4s,mb4.6						
ZAL	**Zalesovo**	**43.83**	**46**	P	**P**	**21 29 01.2**	**+2.1**
	comp=E,2.9nm,0.5s,mb4.3,baz=193,slow=6.9,SNR=9.2						
ZAL	**Zalesovo**	**43.83**	**46**	P	**P**	**21 29 01.2**	**+2.1**
ZAL	**Zalesovo**	**43.83**	**46**	P	**P**	**21 29 01.2**	**+2.1**
ZAL				pmax	pmax		

	comp=Z,3.0nm,0.5s						
LSZ	Lusaka	50.04	179	P	P	21 29 50.0	+1.7
	comp=Z,1.3nm,0.8s,mb4.0,baz=16,slow=14,SNR=3.8						
LSZ	Lusaka	50.04	179	P	P	21 29 50.0	+1.7
LSZ				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
TSUM	Tsumeb	54.71	191	P	P	21 30 23.7	+0.5
	comp=Z,2.1nm,0.8s,mb4.2,baz=328,slow=3.4,SNR=3.6						
ZAK	Zakamensk	55.53	49	*e*P	P	21 30 28.9	+0.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb4.2						
ZAK	Zakamensk	55.53	49	*e*P	P	21 30 28.9	+0.2
	comp=Z,3.0nm,1.1s,mb4.2						
SONM	Songino Array	58.23	51	P	P	21 30 50.3	+2.5
	comp=Z,1.4nm,0.6s,mb4.2,baz=286,slow=7.7,SNR=15						
SONM	Songino Array	58.23	51	P	P	21 30 50.3	+2.5
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ULN	Ulaanbaatar	58.64	51	*e*P	P	21 30 53.0	+2.3
	comp=Z,1.4nm,0.8s,mb4.0						
BOD	Bodaibo	59.49	38	*e*P	P	21 30 56.6	+0.2
TIXI	Tiksi	60.67	21	*e*P	P	21 31 03.4	-1.0
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.4						
TIXI	Tiksi	60.67	21	*e*P	P	21 31 03.4	-1.0
	comp=Z,3.0nm,0.9s,mb4.4						
LZH	Lanzhou	60.70	65	*e*P	P	21 31 07.6	+2.6
LZH				AP	pP	21 31 18.1	-0.9
LZH				XP	sP	21 31 21.6	-3.2
LZH				PP	PP	21 33 23.4	+2.2
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb5.0						
LZH	Lanzhou	60.70	65	*e*P	P	21 31 07.6	+2.6
	comp=Z,23nm,1.6s,mb5.1						
LZH				pP	pP	21 31 18.1	-0.9
LZH				sP	sP	21 31 21.6	-3.2
LZH				PP	PP	21 33 23.4	+2.2
BOSA	Boshof	63.33	182	P	P	21 31 26.0	+3.2
	comp=Z,1.9nm,0.8s,mb4.2,baz=354,slow=7.1,SNR=5.9						
BOSA	Boshof	63.33	182	P	P	21 31 26.0	+3.2
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
SCHQ	Schefferville	64.40	320	P	P	21 31 29.4	+0.1
	comp=Z,4.5nm,0.8s,mb4.5,baz=42,slow=6.2,SNR=7.8						
CN2	Changchun	71.97	49	*e*P	P	21 32 18.0	+1.6
BILL	Bilibino	72.75	15	*e*P	P	21 32 21.5	+0.9
BILL				*e*		21 35 02.6	
BILL				*e*SS	SS	21 46 22.0	-1.8
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.9						
BILL	Bilibino	72.75	15	*e*P	P	21 32 21.5	+0.9
	comp=Z,2.0nm,1.2s,mb3.9						
NJ2	Nanjing	73.59	62	*e*P	P	21 32 27.6	+1.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
MDJ	Mudanjiang	74.04	47	P	P	21 32 29.6	+1.0
MDJ				AMB	AMB		
	comp=Z,120nm,4.7s						
MDJ				LR	LR		
	comp=N,20nm,26.6s,MS3.5						
MDJ				LR	LR		
	comp=E,30nm,25.3s,MS3.5						
SSE	Sheshan	75.78	62	P	P	21 32 39.8	+0.9
SSE				AMB	AMB		
	comp=Z,160nm,5.3s						
SSE	Sheshan	75.78	62	P	P	21 32 39.7	+0.8
	comp=Z,31nm,0.7s,mb5.3						
ULM	Lac du Bonnet	81.37	327	P	P	21 33 09.0	0.0
	comp=Z,2.1nm,0.7s,mb4.2,baz=16,slow=7.4,SNR=3.3						
ULM	Lac du Bonnet	81.37	327	P	P	21 33 09.0	0.0
MJAR	Matsushiro Arr	84.11	49	P	P	21 33 26.0	+2.7
	comp=Z,2.5nm,1.0s,mb4.3,baz=332,slow=5.0,SNR=4.4						
MJAR	Matsushiro Arr	84.11	49	P	P	21 33 26.0	+2.7
MJAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						

NAO ***20*** *21:21:16.8±3.8, 78.03N×14.23E, h3^{km}±47^{km}, ML3.0*
MOS ***20*** *21:21:16.4±2.0, 78.01N×14.66E, h10^{km}, mb4.5/6, Error ellipse: s-maj=48.6km s-min=6.6km az=93.0*
CSEM ***20*** *21:21:16.7±0.1, 78.05N×14.33E, h10^{km}, mb4.4/6, Error ellipse: s-maj=4.5km s-min=3.5km az=171.0*
IDC ***20*** *21:21:17.6±1.0, 78.07N×14.19E, mb3.8/5, mb1 4.0/9, mb1mx3.8/24, mbtmp3.8/9, ML3.5/4, Error ellipse: s-maj=27.5km s-min=12.9km az=67.0*
NEIC ***20*** *21:21:18.5±0.5, 78.03N×14.49E, h10^{km}, mb4.1/6, ML3.7(BER), Error ellipse: s-maj=9.6km s-min=7.2km az=59.0*
BER ***20*** *21:21:20.4±3.0, 78.13N×14.61E, h13^{km}, MD2.5, ML3.6, ML3.0(NAO)*
ISC 20 21:21:16.4±0.4**, 77.95N**±0.04×**14.3E**±0.2**, h10**^{km}**, n67, σ1**^{s}**31**/72**, mb4.0**/11**, 6C, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPA0	Spitsbergen Ar	0.49	62	Pg	Pg	21 21 25.2	-1.1
SPA0				Pg	Pg	21 21 25.2	-1.1
SPA0				Pg	Pg	21 21 25.2	-1.1
SPA0				Pg	Pg	21 21 25.2	-1.1
	baz=238,slow=14						
SPA0				Pg	Pg	21 21 25.2	-1.1
SPA0				Pg	Pg	21 21 25.3	-1.1
SPA0				Pg	Pg	21 21 25.3	-1.1
SPA0				Pg	Pg	21 21 25.3	-1.1
SPA0				Pg	Pg	21 21 25.3	-1.1
SPA0				Pg	Pg	21 21 25.3	-1.1
SPA0				Lg		21 21 32.4	
SPA0				Lg		21 21 32.5	
	baz=243,slow=37						
SPA0				Lg		21 21 32.6	
SPA0				Lg		21 21 32.6	
SPA0				Lg		21 21 32.6	
SPA0				Lg		21 21 32.6	
SPA0				Lg		21 21 32.6	
SPA0				Lg		21 21 32.7	
SPA0				Lg		21 21 32.7	
SPA0				Lg		21 21 32.8	
SPA0	Spitsbergen Ar	0.49	62	Pg	Pg	21 21 25.2	-1.1
SPA0				Lg		21 21 32.4	
SPA0				Lg		21 21 32.5	
SPA0				Lg		21 21 32.7	
SPA0	Spitsbergen Ar	0.49	62	Pg	Pg	21 21 25.3	-1.1
KBS	Kingsbay	1.08	335	Pg	Pg	21 21 36.0	-2.1
KBS				Lg		21 21 51.0	
KBS	Kingsbay	1.08	335	*e*P	Pb	21 21 36.2	-0.6
KBS				*e*S	Sb	21 21 50.8	-0.1
KBS				AML	AML	21 21 57.8	
	comp=Z,1μm,0.9s						
KBS	Kingsbay	1.08	335	*e*P	Pb	21 21 36.2	-0.6
	SNR=91						
KBS				*e*S	Sb	21 21 50.8	-0.1
	comp=Z,1μm,0.9s,SNR=91						
HOPEN	Hopen	2.79	116	*e*P	Pn	21 22 03.0	+1.1
HOPEN				*e*S	Sn	21 22 36.2	+0.2
BJO	Bjornoya	3.66	159	*e*S	Sn	21 22 58.4	+0.3
BJO				AML	AML	21 23 22.0	
	comp=Z,757nm,0.5s						
BJO	Bjornoya	3.66	159	*e*S	Sn	21 22 58.4	+0.3
	comp=Z,757nm,0.5s,SNR=53						
DAG	Danmarks Havn	7.25	277	⇑*i*P	Pn	21 23 06.0	+1.0
	comp=Z,5.1nm,0.4s						
DAG	Danmarks Havn	7.25	277	⇑*i*P	Pn	21 23 06.0	+1.0
DAG				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KEV	Kevo	8.93	150	*e*P	P	21 23 26.9	-1.6
KEV				*e*S	Sn	21 25 01.4	-8.9
ARA0	ARCESS Array S	9.00	154	Pn	P	21 23 27.9	-1.5
	baz=351,slow=12						
ARA0				Sn	Sn	21 25 03.8	-8.2
	baz=354,slow=22						
ARCES	ARCESS Array B	9.00	154	Pn	P	21 23 27.7	-1.7
	comp=Z,1.6nm,0.3s,baz=352,slow=12,SNR=64						
ARCES				Sn	Sn	21 25 07.9	-4.0
	comp=Z,1.1nm,0.3s,baz=349,slow=23,SNR=5.6						
ARE0	ARCESS Array S	9.00	154	*e*P	P	21 23 28.0	-1.4
KTK1	Kautokeino	9.32	160	*e*P	P	21 23 33.4	-0.6
APA	Apatity	11.77	142	⇑*i*P	P	21 24 03.6	-3.5
APA				*i*		21 26 29.0	
APA				pmax	pmax		
	comp=Z,18nm,0.8s						
SUMG	Summit	13.93	275	*e*P	P	21 24 35.1	-0.5
SUMG	Summit	13.93	275	*e*P	P	21 24 35.1	-0.6
JOF	Joensuu	16.01	151	*e*p	P	21 24 58.3	-4.6
KAF	Kangasniemi	16.37	160	*e*p	P	21 25 05.4	-2.0
	comp=Z,0.7nm,0.3s,baz=358,slow=12						
KAF	Kangasniemi	16.37	160	*e*P	P	21 25 05.4	-2.0
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
FIA0	FINESS Array S	17.02	160	P	P	21 25 15.6	0.0
	baz=354,slow=16						
FINES	FINESS Array B	17.02	160	Pn	P	21 25 15.0	-0.6
	comp=Z,0.2nm,0.3s,baz=1.7,slow=14,SNR=11						
FINES	FINESS Array B	17.02	160	Pn	P	21 25 15.0	-0.6
NB2	NORSAR Subarra	17.03	185	P	P	21 25 16.4	+0.7
NB2	NORSAR Subarra	17.03	185	P	P	21 25 21.9	+6.2
	comp=Z,4.7nm,1.0s,baz=2.0,slow=11						
NOA	NORSAR Array B	17.03	185	P	P	21 25 18.3	+2.6
	comp=Z,0.1nm,0.3s,baz=7.1,slow=12,SNR=4.0						
NAO	NORSAR Subarra	17.25	186	P	P	21 25 21.9	+3.3
NAO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NAO	NORSAR Subarra	17.25	186	P	P	21 25 21.9	+3.3
	comp=Z,4.7nm,1.0s						
HFS	Hagfors	17.91	181	P	P	21 25 30.6	+3.8
	comp=Z,0.0nm,0.3s,baz=22,slow=8.0,SNR=5.3						
TIXI	Tiksi	25.89	41	*e*P	P	21 26 45.3	-4.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.2						
ARU	Arti	26.30	119	*e*P	P	21 26 56.0	+2.7
ARU				*e*		21 27 49.7	
GRA1	Grafenberg Arr	28.40	184	*e*P	P	21 27 14.1	+1.7
GRF	Grafenberg Arr	28.40	184	*e*Pn	P	21 27 14.1	+1.7
BFO	Black Forest	29.82	188	*e*P	P	21 27 26.0	+0.7
LIBD	Limburg	30.03	189	P	P	21 27 31.2	+4.1
CHKZ	Chkalovo	31.23	107	*e*P	P	21 27 37.5	-0.1
	comp=Z,3.2nm,1.0s,mb4.1						
CHKZ	Chkalovo	31.23	107	*e*P	P	21 27 37.5	-0.1
CHKZ				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.1						
CHKZ	Chkalovo	31.23	107	*e*P	P	21 27 37.5	-0.1
	comp=Z,3.2nm,1.0s,mb4.1						
BRVK	Borovoye	31.75	108	*e*P	P	21 27 43.0	+0.8
	comp=Z,4.9nm,1.3s,mb4.2						
BVAR	Borovoye Array	31.80	108	P	P	21 27 44.1	+1.5
	comp=Z,1.9nm,0.9s,mb3.9,baz=333,slow=9.9,SNR=10						
BVAR	Borovoye Array	31.80	108	P	P	21 27 44.1	+1.5
BVAR	Borovoye Array	31.80	108	P	P	21 27 44.1	+1.5
INK	Inuvik	32.70	338	P	P	21 27 49.3	-1.1
	comp=Z,0.8nm,0.7s,mb3.8,baz=13,slow=11,SNR=4.9						
INK	Inuvik	32.70	338	*e*P	P	21 27 49.0	-1.3
ZAL	Zalesovo	33.91	92	P	P	21 28 01.8	+0.7
	comp=Z,0.8nm,0.4s,mb4.0,baz=170,slow=7.5,SNR=4.3						
KURK	Kurchatov	35.66	101	*e*P	P	21 28 16.6	+0.6
	comp=Z,16nm,1.3s,mb4.8						
KURK	Kurchatov	35.66	101	*e*P	P	21 28 16.6	+0.6
KURK				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
KURK	Kurchatov	35.66	101	*e*P	P	21 28 16.6	+0.6
	comp=Z,16nm,1.3s,mb4.8						
WMQ	Urumqi	44.11	95	P	P	21 29 24.6	-1.3
WMQ				AMB	AMB		
	comp=Z,70nm,3.9s						
SONM	Songino Array	44.17	75	P	P	21 29 27.7	+1.3
	comp=Z,0.6nm,0.7s,mb3.5,baz=325,slow=5.8,SNR=5.8						
ULN	Ulaanbaatar	44.28	74	*e*P	P	21 29 28.7	+1.5
	comp=Z,3.5nm,0.9s,mb4.1						
ULN	Ulaanbaatar	44.28	74	*e*P	P	21 29 28.7	+1.5
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
ULN	Ulaanbaatar	44.28	74	*e*P	P	21 29 28.7	+1.5
	comp=Z,3.5nm,0.9s,mb4.1						
IMW	Indian Meadow	53.99	313	*e*P	P	21 30 43.7	+1.6
	comp=Z,4.2nm,1.2s,mb4.2						
TXAR	Lajitas Array	67.01	303	P	P	21 32 11.5	+0.4
	comp=Z,0.2nm,0.6s,mb3.3,baz=32,slow=5.5,SNR=5.7						
VNA2	Neumayer--Watz	149.22	194	⇑*i*	PKPdf	21 41 06.3	+4.7
VNA2	Neumayer--Watz	149.22	194	⇑*i*	PKPdf	21 41 11.9	+10
VNA2	Neumayer--Watz	149.22	194		PKPdf	21 41 22.0	+20
VNA2	Neumayer--Watz	149.22	194		PKPdf	21 41 27.0	+25
VNA3	Neumayer Olymp	149.66	195	⇑*i*	PKPdf	21 41 07.4	+5.1
VNA3	Neumayer Olymp	149.66	195		PKPdf	21 41 12.5	+10
VNA3	Neumayer Olymp	149.66	195		PKPdf	21 41 23.3	+21
SNAA	Sanae	149.76	191		PKPdf	21 41 07.2	+4.7
SNAA	Sanae	149.76	191		PKPdf	21 41 13.0	+11
SNAA	Sanae	149.76	191		PKPdf	21 41 27.9	+25

NNC ***20*** *21:24:29.8±10.0, 37.15N×70.68E, mpv3.8, Error ellipse: s-maj=88.3km s-min=71.2km az=171.0*
ISC 20 21:24:22.9±2.0**, 36.39N**±0.09×**70.7E**±0.3**, h177**^{km}±26^{km}**, n20, σ0**^{s}**42**/24**, 1C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	Thein Dam	5.74	132	*e*x	x	21 25 49.0	
THN				*e*SB	S	21 26 53.1	+0.3
AML	Almayashu	6.19	21	P	P	21 25 53.3	+0.1
	SNR=69						
UCH	Uchtor	6.54	26	P	P	21 25 57.9	+0.1
	SNR=17						
KZA	Kyzart	6.70	31	P	P	21 25 59.3	-0.6
	SNR=7.7						
EKS2	Erkin-Say	6.70	20	P	P	21 26 00.5	+0.5
	SNR=16						
KK31	Karatay Array	6.70	359	P	P	21 26 00.3	+0.3
	1.1nm,0.3s,baz=177,slow=13,SNR=33						
KK31				S	S	21 27 09.8	-5.8
	9.4nm,0.4s,baz=182,slow=24,SNR=19						
AAK	Ala-Archa	6.90	24	P	P	21 26 02.7	+0.2
	SNR=16						
AAK	Ala-Archa	6.90	24	⇑P	P	21 26 02.1	-0.4
	8.2nm,0.3s						
AAK				⇓S	S	21 27 15.1	-5.1
	7.2nm,0.6s						
KBK	Karagaybulak	7.07	27	P	P	21 26 04.9	0.0
	SNR=15						
ULHL	Ulahol	7.26	35	P	P	21 26 06.8	-0.6
	SNR=9.1						
USP	Ospenovka	7.47	22	P	P	21 26 10.8	+0.6
	SNR=7.2						
TKM2	Tokmak 2	7.54	29	P	P	21 26 10.8	-0.3
	SNR=7.0						
KLP	Kalpa	7.94	125	*e*P	P	21 26 16.4	0.0
KLP				*e*S	S	21 27 28.5	-16
KLP				AML	AML	21 27 45.4	
	comp=N,32nm,0.5s						
KLP				AML	AML	21 27 45.8	
	comp=E,23nm,0.8s						
KHET	Khetri	9.36	151	*e*P	P	21 26 34.5	-0.5
KHET				*e*S	S	21 28 07.6	-11
KHET				AML	AML	21 28 16.3	
	comp=N,47nm,0.3s						
KHET				AML	AML	21 28 17.4	
	comp=E,63nm,0.3s						
KOLN	Koldanda	13.92	124	*e*P	P	21 27 33.7	+0.1
	comp=E,1.9nm,0.3s						
GKN	Gorkha	14.47	121	*e*P	P	21 27 40.1	-0.4
	comp=E,4.4nm,0.3s						
DMN	Daman	15.04	122	*e*P	P	21 27 47.5	-0.1
	comp=E,6.3nm,0.4s						
KKN	Kakani	15.05	121	*e*P	P	21 27 47.2	-0.5
PKI	Pulchoki	15.27	121	*e*P	P	21 27 51.1	+0.6
GUN	Gumba	15.39	119	*e*P	P	21 27 52.7	+0.7
	comp=E,5.9nm,0.3s						

ORF ***20*** *21:24:35.8, 42.19N×23.27E, h30^{km}, mb4.0, ML4.6*
LDG ***20*** *21:24:57.4±0.1, 43.34N×21.09E, h10^{km}, Ml4.0/11, ms2.9/6, Error ellipse: s-maj=3.5km s-min=2.5km az=29.0*
SKO ***20*** *21:24:58.0, 43.26N×21.16E, h3^{km}*
PDG ***20*** *21:24:58.0±0.3, 43.24N×21.06E, h11^{km}*
SOF ***20*** *21:24:58.7, 43.19N×21.21E, h8^{km}, MD3.8*
BEO ***20*** *21:24:58.1±0.3, 43.26N×21.12E, h14^{km}*
IDC ***20*** *21:24:58.2±1.0, 43.32N×20.99E, mb4.2/7, mb1 4.1/18, mb1mx4.0/29, mbtmp4.1/18, ML3.7/11, MS3.2/4, Ms1 3.2/4, ms1mx2.9/27, Error ellipse: s-maj=14.9km s-min=9.4km az=14.0*
NEIC ***20*** *21:24:58.0, 43.24N×21.06E, h11^{km}, mb4.0/3, ML3.9(PDG), ML3.7(SKO), ML3.6(BUC), After PDG.*
MOS ***20*** *21:24:58.5±0.8, 43.29N×21.01E, h21^{km}, mb4.4/8, Error ellipse: s-maj=6.7km s-min=3.7km az=107.8*
PRU ***20*** *21:25:00.9, 43.43N×20.75E, M4.0*
CSEM ***20*** *21:25:00.1±0.1, 43.37N×21.15E, h40^{km}, mb4.1/7, ML4.0/5, Error ellipse: s-maj=1.6km s-min=1.1km az=53.0*
THE ***20*** *21:25:04.7, 43.05N×21.34E, h20^{km}, ML4.2*
ISC 20 21:24:59.5±0.5**, 43.34N**±0.01×**21.06E**±0.02**, h31**^{km}±4^{km}**, n265, σ1**^{s}**22**/358**, mb4.0**/12**, MS3.1**/1**, 21C-22D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRUS	Gruza	0.60	336	*i* Pg	Pb	21 25 10.8	-0.7
GRUS				Sg	Sb	21 25 20.6	+0.8
BARS	Barje	0.76	132	⇓*i*Pg	Pn	21 25 11.5	-2.6
BARS				Sg	Sb	21 25 20.5	-3.8
BOLS	Boljevac	0.82	53	⇑*i*Pg	Pn	21 25 13.0	-2.0
BOLS				Sg	Sn	21 25 25.9	-0.1
IVA	Berane	0.97	242	⇑*i*Pg	Pn	21 25 15.1	-2.0
IVA				*e*Sg	Sn	21 25 29.4	-0.4
NVSS	Nova Varos 2	1.00	280	⇓*i*Pg	Pn	21 25 15.3	-2.2
NVSS				Sg	Sn	21 25 29.8	-0.9
DIVS	Divcibare	1.08	315	⇓*i*Pg	Pn	21 25 19.0	+0.3
DIVS				Sg	Sn	21 25 36.5	+3.7
PVY	Plav	1.09	227	⇓*i*Pg	Pn	21 25 16.9	-1.8
PVY				*e*Sg	Sn	21 25 33.0	+0.1
PLE	Pljevlja	1.21	270	⇑*i*Pg	Pn	21 25 20.6	0.0
PLE				*e*Sg	Sn	21 25 39.6	+3.5
PLE	Pljevlja	1.21	270	⇑*i*Pg	Pn	21 25 20.5	-0.1
PLE				*e*Sg	Sn	21 25 39.6	+3.5
BBLS	Bajina Basta -	1.31	294	*i* Pg	Pn	21 25 23.4	+1.5
BBLS				Sg	Sn	21 25 43.5	+5.0
SKO	Skopje	1.39	168	*e*Pn	Pn	21 25 22.5	-0.6
SKO				*e*Sn	Sn	21 25 41.3	+0.7
SKO	Skopje	1.39	168	*e*Pn	Pn	21 25 22.5	-0.6
SKO				*e*Sn	Sn	21 25 41.3	+0.7
SKO				Lg		21 25 49.0	
BEO	Belgrade	1.55	344	⇓*i*Pn	Pn	21 25 26.6	+1.3
BEO				Sn	Sn	21 25 48.8	+4.3
BEO	Belgrade	1.55	344	Pn	Pn	21 25 26.6	+1.3
PUK	Puka	1.55	214	*i* Pn	Pn	21 25 25.9	+0.5
PUK				*i* Sn	Sn	21 25 47.8	+3.1
PUK	Puka	1.55	214	*e*Pn	Pn	21 25 25.9	+0.5
PUK				*i* Sn	Sn	21 25 47.8	+3.1
UPM	Unac-Piva	1.57	266	⇑*i*Pg	Pn	21 25 27.2	+1.5
UPM				*e*Sg	Sn	21 25 49.6	+4.4
UPM	Unac-Piva	1.57	266	⇑*i*Pg	Pn	21 25 27.2	+1.5
UPM				*e*Sg	Sn	21 25 49.6	+4.4
NKY	Niksic	1.60	252	*e*Pg	Pn	21 25 26.9	+0.8
NKY				*e*Sg	Sn	21 25 49.1	+3.3
TTG	Podgorica	1.60	236	⇓*i*Pg	Pn	21 25 26.5	+0.4
TTG				*e*Sg	Sn	21 25 48.8	+2.8
DJES	Djerdap	1.67	39	*e*Pn	Pn	21 25 29.5	+2.3
DJES				Sn	Sn	21 25 51.0	+3.2
SDA	Shkodra	1.72	222	*i* Pn	Pn	21 25 29.1	+1.2
SDA				*i* Sn	Sn	21 25 52.7	+3.7
SDA	Shkodra	1.72	222	*e*Pn	Pn	21 25 29.1	+1.2
SDA				*i* Sn	Sn	21 25 52.7	+3.7
VTS	Vitosha	1.75	115	*i* P	Pn	21 25 28.5	+0.3
VTS	Vitosha	1.75	115	P	Pn	21 25 29.0	+0.8
BRY	Bratogost	1.89	258	⇑*i*Pn	Pn	21 25 31.4	+1.2
BRY				*e*Sn	Sn	21 25 56.7	+3.4
BUM	Brajici-Budva	1.90	238	⇓*i*Pn	Pn	21 25 31.0	+0.7
BUM				*e*Sn	Sn	21 25 56.3	+2.9
ULC	Ulcinj	1.91	225	⇑*i*Pn	Pn	21 25 31.5	+0.9
ULC				*e*Sn	Sn	21 25 56.5	+2.6
LACI	Lac	1.97	211	*i* Pn	Pn	21 25 32.8	+1.4
LACI				*i* Sn	Sn	21 25 58.5	+3.2
LACI	Lac	1.97	211	*e*Pn	Pn	21 25 32.8	+1.4
LACI				*i* Sn	Sn	21 25 58.5	+3.2
HCY	Herceg Novi	2.08	246	⇓*i*Pn	Pn	21 25 33.6	+0.7
HCY				*e*Sn	Sn	21 26 00.7	+2.6
HCY	Herceg Novi	2.08	246	⇓*i*Pn	Pn	21 25 33.6	+0.6
HCY				*e*Sn	Sn	21 26 00.6	+2.5
KKB	Krupnik	2.10	134	*i* P	Pn	21 25 33.5	+0.3
OHR	Ohrid	2.23	185	*e*Pn	Pn	21 25 34.3	-0.8
OHR				*e*Sn	Sn	21 26 01.9	-0.1
OHR	Ohrid	2.23	185	*e*Pn	Pn	21 25 34.3	-0.9
OHR				*e*Sn	Sn	21 26 01.9	-0.1
VAY	Valandovo	2.31	150	*e*Pn	Pn	21 25 34.9	-1.4
VAY				*e*Sn	Sn	21 26 03.0	-0.8
BIA	Bitola	2.33	175	*e*Pn	Pn	21 25 35.8	-0.7
BIA				*e*Sn	Sn	21 26 04.4	+0.1
PGB	Panagyurishte	2.42	108	P	Pn	21 25 39.0	+1.2
STON	Ston	2.50	260	*i* Pn	Pn	21 25 40.7	+1.6
STON				*i* Sn	Sn	21 26 12.8	+3.9
STON	Ston	2.50	260	*i* Pn	Pn	21 25 40.6	+1.6
FNA	Florina	2.56	175	*e*Pn	Pn	21 25 40.0	+0.1
FNA				*e*Sn	Sn	21 26 07.2	-3.2
KNT	Kendrikon	2.57	147	*e*Pn	Pn	21 25 39.4	-0.6
KNT				*e*Sn	Sn	21 26 06.2	-4.3
GRG	Griva	2.58	157	*e*Pn	Pn	21 25 40.0	-0.2
GRG				*e*Sn	Sn	21 26 06.5	-4.2
MMB	Musomiste	2.64	131	*i* P	Pn	21 25 41.5	+0.6
PLD	Plovdiv	2.96	113	*i* P	Pn	21 25 46.0	+0.5
SOH	Sokhos	3.04	145	*e*Pn	Pn	21 25 45.8	-0.8
THE	Thessaloniki	3.05	152	*e*Pn	Pn	21 25 45.9	-0.9
THE				*e*Sn	Sn	21 26 16.9	-5.8
THE	Thessaloniki	3.05	152	P	Pn	21 25 45.5	-1.3
KZN	Kozani	3.08	170	*e*P	Pn	21 25 46.8	-0.3
PVL	Pavlikeni	3.12	91	*i* P	Pn	21 25 47.0	-0.9
RZN	Rozhen	3.17	120	*i* P	Pn	21 25 48.5	0.0
LSK	Leskovik	3.20	186	*i* Pn	Pn	21 25 56.8	+7.8
PKSM	Moragy	3.35	330	⇑*e*P	Pn	21 25 51.8	+0.7
LIT	Litokhoron	3.41	161	*e*Pn	Pn	21 25 51.0	-0.9
PLG	Polygyros	3.46	148	*e*P	Pn	21 25 51.8	-0.8
RHK1	Bakonya	3.48	323	⇓*e*P	Pn	21 25 53.6	+0.7
DIM	Dimitrovgrad	3.54	110	*i* P	Pn	21 25 54.5	+0.7
SZH	Strazhica	3.56	89	*i* P	Pn	21 25 55.0	+1.0
KDZ	Kurdzhali	3.64	116	*i* P	Pn	21 25 54.0	-1.2
DRGR		3.65	18	P	Pn	21 25 54.8	-0.5
DRGR		3.65	18	P	Pn	21 25 54.8	-0.5
JAN	Janina	3.68	182	*e*P	Pn	21 25 57.0	+1.2
OUR	Ouranopolis	3.71	143	*e*Pn	Pn	21 25 55.2	-1.0
KEK	Kerkira	3.74	195	*e*P	Pn	21 25 58.0	+1.4
IGT	Igoumenitsa	3.84	188	*e*Pn	Pn	21 25 57.9	-0.2
IGT				*e*Sn	Sn	21 26 40.3	-2.3
IGT	Igoumenitsa	3.84	188	*e*Pn	Pn	21 25 57.8	-0.2
IGT				*e*Sn	Sn	21 26 40.3	-2.4
PKS8	Sarbogard	3.92	335	⇑*e*P	Pn	21 25 59.4	+0.2
PKS8				*e*S	Sn	21 26 47.6	+2.9
	4.5nm,0.3s						
PKS7	Kunszentmiklos	3.94	341	⇑*e*P	Pn	21 26 00.0	+0.5
RDO	Rodhopi	3.98	122	*e*P	Pn	21 26 00.0	0.0
MLR	Muntele Rosu	4.11	57	Pn	Pn	21 26 03.9	+2.0
	12nm,0.3s,baz=264,slow=2.2,SNR=22						
MLR				Sn	Sn	21 26 53.0	+3.5
	6.8nm,0.3s,baz=219,slow=9.7,SNR=3.0						
MLR	Muntele Rosu	4.11	57	P	Pn	21 26 03.9	+2.0
MLR						21 26 53.0	
MLR				pmax	pmax		
	comp=Z,12nm,0.3s						
JMB	Yambol	4.15	100	*i* P	Pn	21 26 02.0	-0.5
XOR	Xorichti	4.28	157	*e*Pn	Pn	21 26 02.7	-1.5
NEO	Neokhori	4.34	157	*e*P	Pn	21 26 04.2	-1.0
RGNG	Rignano Grg	4.37	250	Pn	Pn	21 26 05.7	+0.1
BUD	Budapest	4.39	342	⇑*e*P	Pn	21 26 06.1	+0.3
BUD				*e*S	Sn	21 26 58.2	+1.7
	comp=Z,5.7nm,0.5s						
AGG	Agios Georgios	4.42	167	*e*Pn	Pn	21 26 05.2	-1.0
AGG				*e*Sn	Sn	21 26 52.6	-4.7
ALN	Alexandroupoli	4.44	122	*e*Pn	Pn	21 26 06.3	-0.2
ALN				*e*Sn	Sn	21 26 53.5	-4.4
EVR	Evrytania	4.45	172	*e*P	Pn	21 26 05.5	-1.2
PKSG		4.47	336	⇓*i*P	Pn	21 26 07.6	+0.6
PKSG				*e*S	Sn	21 26 56.4	-2.2
	comp=Z,2.5nm,0.6s						
LOS	Limnos	4.54	137	*e*Pn	Pn	21 26 06.2	-1.9
NVLJ	Novalja	4.63	287	*i* P	Pn	21 26 10.0	+0.7
NVLJ	Novalja	4.63	287	*i* P	Pn	21 26 09.9	+0.6
PRD	Provadia	4.63	90	*i* P	Pn	21 26 09.5	+0.2
PSZ	Piszkesteto	4.65	350	⇓*e*Sn	Pn	21 26 10.1	+0.5
PSZ				*e*		21 27 00.8	
PSZ	Piszkesteto	4.65	350	⇓*e*P	Pn	21 26 10.1	+0.5
PSZ				*e*S	Sn	21 27 00.8	-2.5
PSZ	Piszkesteto	4.65	350	P	Pn	21 26 10.0	+0.4
PSZ				*e*S	Sn	21 27 00.8	-2.5
AOS	Alonnisos	4.67	152	*e*Pn	Pn	21 26 08.0	-1.9
CRES	Cresnjev	4.71	304	*e*Pn	Pn	21 26 10.7	+0.3
CRES				*e*Sn	Sn	21 27 03.5	-1.2
VRI	Vrincioaia	4.77	56	P	Pn	21 26 12.9	+1.6
VRI	Vrincioaia	4.77	56	P	Pn	21 26 12.9	+1.6
SRO	Srobarova	4.87	338	*e*Pn	Pn	21 26 13.2	+0.5
SRO				*e*S	Sn	21 27 10.2	+1.4
SLCN	Sala Consilina	5.01	236	Pn	Pn	21 26 15.3	+0.8
VISS	Visnje	5.08	301	*e*Pn	Pn	21 26 16.1	+0.5

VISS				iSn	Sn	21 27 14.7	+0.8
SGO	Sicignano	5.11	239	Pn	Pn	21 26 15.4	-0.5
CUC	Castrocucco	5.15	231	Pn	Pn	21 26 16.8	+0.2
	comp=Z,88nm,0.5s						
KECS	Kecovo	5.16	356	iPN	Pn	21 26 17.5	+0.8
KECS				eSN	Sn	21 27 14.0	-2.0
VLS	Valsamata	5.17	184	eP	Pn	21 26 15.0	-1.8
BURAR	Bucovina Array	5.18	33	P	Pn	21 26 18.7	+1.7
CII	Carovilli	5.24	254	Pn	Pn	21 26 18.5	+0.6
PERS	Pernice	5.35	310	iPn	Pn	21 26 19.1	-0.3
PERS				eSn	Sn	21 27 17.6	-3.1
SOP	Sopron	5.37	326	⇓iSn	Pn	21 26 19.6	-0.1
SOP				e	Sn	21 27 18.7	-2.6
LJU	Ljubljana	5.38	302	ePn	Pn	21 26 20.4	+0.5
LJU				eSn	Sn	21 27 24.5	+2.9
VYHS	Vyhne	5.38	344	iPN	Pn	21 26 20.6	+0.7
VYHS				eSN	Sn	21 27 21.1	-0.5
TIRR	Tirgusor	5.43	76	eP	Pn	21 26 19.6	-0.9
TIRR	Tirgusor	5.43	76	P	Pn	21 26 20.0	-0.6
TIRR	Tirgusor	5.43	76	eP	Pn	21 26 19.6	-1.0
INTR	Introdacqua	5.44	258	Pn	Pn	21 26 20.6	0.0
	comp=Z,130nm,0.7s						
TERO	Teramo	5.51	265	Pn	Pn	21 26 22.5	+0.8
	comp=Z,68nm,0.6s						
ARSA	Arzberg	5.53	317	iPn	Pn	21 26 21.7	-0.2
	comp=Z,78nm,0.4s,SNR=110						
ARSA	Arzberg	5.53	317	⇑iSn	Sn	21 27 22.6	-2.5
	comp=Z,48nm,0.4s						
ARSA	Arzberg	5.53	317	iPn	Pn	21 26 21.7	-0.2
	comp=Z,78nm,0.4s						
ARSA				Sn	Sn	21 27 22.6	-2.5
CRVS	Cervenica-Dubn	5.57	3	ePN	Pn	21 26 22.6	+0.1
CRVS				eSN	Sn	21 27 25.1	-1.2
ZST	Bratislava	5.59	332	ePN	Pn	21 26 21.7	-1.1
ZST				e		21 27 23.0	
OBKA	Obir	5.60	307	⇑iSn	Sn	21 27 25.8	-1.3
	comp=Z,46nm,0.4s						
OBKA	Obir	5.60	307	⇑iPn	Pn	21 26 23.3	+0.3
	comp=Z,15nm,0.3s						
OBKA				Sn	Sn	21 27 25.8	-1.3
KOLS	Kolonicke sedl	5.66	8	ePN	Pn	21 26 24.2	+0.4
KOLS				eSN	Sn	21 27 26.8	-1.7
PRK	Paraskevi	5.67	134	eP	Pn	21 26 23.0	-0.9
AQU	L'Aquila	5.71	263	eP	Pn	21 26 24.1	-0.4
	comp=Z,35nm,0.8s						
AQU				eS	Sn	21 27 31.3	+1.5
AQU	L'Aquila	5.71	263	eP	Pn	21 26 24.1	-0.4
	comp=Z,35nm,0.8s						
AQU				eS	Sn	21 27 31.3	+1.5
TRI	Trieste	5.73	297	Pn	Pn	21 26 24.7	0.0
CING	Cingoli	5.73	273	Pn	Pn	21 26 25.0	+0.2
	comp=Z,90nm,1.0s						
SMOL	Smolenice	5.76	335	ePN	Pn	21 26 25.2	0.0
SMOL				eSN	Sn	21 27 28.4	-2.6
VOY	Vojsko	5.77	300	ePn	Pn	21 26 25.3	-0.1
VOY				eSn	Sn	21 27 31.2	-0.1
PTQR	Pietraquaria	5.79	260	Pn	Pn	21 26 27.0	+1.3
ARV	Arcevia	5.91	274	Pn	Pn	21 26 27.1	-0.2
SNTG	Esanatoglia	5.92	272	Pn	Pn	21 26 27.0	-0.5
STHS	Stebnicka Huta	6.08	1	iPN	Pn	21 26 30.6	+0.9
STHS				eSN	Sn	21 27 38.3	-0.8
NIE	Niedzica	6.11	355	ePn	Pn	21 26 31.4	+1.3
NIE				e		21 26 40.2	
NIE				eSn	Sn	21 27 38.1	-1.5
ROBS	Robic	6.11	301	ePn	Pn	21 26 29.9	-0.2
ROBS				iSn	Sn	21 27 35.9	-3.7
PIEI	Pieia	6.21	275	Pn	Pn	21 26 31.1	-0.4
	comp=Z,22nm,0.8s						
MNS	Montasola	6.23	264	Pn	Pn	21 26 31.6	-0.2
	comp=Z,18nm,0.7s						
MOA	Molln	6.56	316	⇑iSn	Sn	21 27 49.7	-1.3
	comp=Z,89nm,0.6s						
MOA	Molln	6.56	316	iPn	Pn	21 26 36.5	+0.1
	comp=Z,14nm,0.4s						
MOA				Sn	Sn	21 27 49.7	-1.3
KRUC	Moravsky	6.58	332	ePn	Pn	21 26 35.4	-1.3
KIS	Kishinev	6.59	54	eP	Px	21 26 55.0	
KIS				e		21 27 55.0	
KBA	Koelnbreinsper	6.61	307	⇑iSn	Sn	21 27 51.2	-0.9
	comp=Z,23nm,0.4s						
KBA	Koelnbreinsper	6.61	307	⇓iPn	Pn	21 26 37.9	+0.8
	comp=Z,10nm,0.4s						
KBA				Sn	Sn	21 27 51.2	-0.9
VRAC	Vranov	6.72	334	Pn	Pn	21 26 39.3	+0.5
	comp=Z,1.5nm,0.3s,baz=157,slow=13,SNR=13						
VRAC				Sn	Sn	21 27 50.7	-4.3
	comp=Z,1.3nm,0.3s,baz=68,slow=7.1,SNR=2.1						
VRAC	Vranov	6.72	334	P	Pn	21 26 39.3	+0.6
VRAC	Vranov	6.72	334	P	Pn	21 26 39.3	+0.5
VRAC						21 27 50.7	
VRAC				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MORC	Moravsky Berou	6.88	341	eP	Pn	21 26 40.7	-0.3
	comp=Z,10nm,0.6s						
MORC	Moravsky Berou	6.88	341	P	Pn	21 26 41.1	+0.1
OJC	Ojcow	6.94	353	ePn	Pn	21 26 42.8	+1.0
GEC2	GERESS Array S	7.51	320	eP	Pn	21 26 50.9	+1.1
GERES	GERESS Array B	7.51	320	Pn	Pn	21 26 49.5	-0.3
	comp=Z,1.7nm,0.3s,baz=126,slow=15,SNR=29						
GERES				Sn	Sn	21 28 12.6	-2.3
	comp=Z,1.2nm,0.3s,baz=135,slow=24,SNR=3.2						
GERES				LR	LR	21 30 03.2	
	comp=Z,188nm,19.6s,baz=320,slow=41						
GERES	GERESS Array B	7.51	320	P	Pn	21 26 49.5	-0.3
GERES						21 28 12.6	
GERES				pmax	pmax		
	comp=Z,2.0nm,0.3s						
GERES				MLR	MLR		
	comp=Z,188nm,19.7s						
WTTA	Wattenberg	7.71	304	⇑iSn	Sn	21 28 19.9	0.0
	comp=Z,36nm,0.5s						
WTTA	Wattenberg	7.71	304	iPn	Pn	21 26 53.6	+1.0
	comp=Z,48nm,0.4s						
WTTA				Sn	Sn	21 28 19.9	0.0
DPC	Dobruska-Polom	7.73	337	ePN	Pn	21 26 54.0	+1.2
VLC	Villacollemand	7.77	280	eP	Pn	21 26 52.0	-1.4
VLC	Villacollemand	7.77	280	eP	Pn	21 26 52.0	-1.4
KHC	Kasperske Hory	7.77	321	ePN	Pn	21 26 52.8	-0.6
KHC				x	x	21 27 02.0	
KHC				eSN	Sn	21 28 17.7	-3.6
KHC				x	x	21 28 33.5	
KHC	Kasperske Hory	7.77	321	ePn	Pn	21 26 52.8	-0.6
KHC				e		21 27 02.0	
KHC				eSn	Sn	21 28 17.7	-3.6
KHC				e		21 28 33.5	
KHC	Kasperske Hory	7.77	321	eP	Pn	21 26 52.8	-0.6
KHC				e		21 28 17.7	
WATA	Walderalm	7.78	304	⇓iSn	Sn	21 28 21.1	-0.5
	comp=Z,13nm,0.7s						
WATA	Walderalm	7.78	304	⇓iPn	Pn	21 26 54.8	+1.2
	comp=Z,25nm,0.5s						
WATA				Sn	Sn	21 28 21.1	-0.5
SQTA	Sankt Quirin	7.96	303	iPn	Pn	21 26 57.4	+1.4
	comp=Z,62nm,0.3s,SNR=102						
SQTA	Sankt Quirin	7.96	303	⇑iSn	Sn	21 28 28.6	+2.7
	comp=Z,11nm,0.4s						
SQTA	Sankt Quirin	7.96	303	iPn	Pn	21 26 57.4	+1.4
	comp=Z,62nm,0.3s						
SQTA				Sn	Sn	21 28 28.6	+2.7
UPC	Upice	7.96	336	ePN	Pn	21 26 57.4	+1.4
PRU	Pruhonice	8.02	328	ePN	P	21 26 56.2	-0.7
MOTA	Moosalm	8.07	303	⇓iSn	Sn	21 28 28.6	-0.2
	comp=Z,18nm,0.7s						
MOTA	Moosalm	8.07	303	⇓iPn	P	21 26 58.5	+0.9
	comp=Z,25nm,0.3s						
MOTA				Sn	Sn	21 28 28.6	-0.2
WET	Wettzell	8.11	319	eP	P	21 26 56.9	-1.3
KSP	Ksiaz	8.18	338	ePn	P	21 27 00.3	+1.2
KSP				eSn	Sn	21 28 27.9	-3.6
IDI	Anoyia	8.57	158	Pn	P	21 27 03.4	-1.0
	comp=Z,1.2nm,0.3s,baz=347,slow=15,SNR=5.9						
IDI				LR	LR	21 30 35.5	
	comp=Z,151nm,19.4s,baz=257,slow=39						
DAVOX	Davos	8.63	297	Pn	P	21 27 05.9	+0.6
	comp=Z,3.8nm,0.3s,baz=115,slow=19,SNR=30						
DAVOX				Sn	Sn	21 28 41.0	-1.6
	baz=114,slow=19,SNR=1.7						
DAVA	Damuels	8.81	300	⇓iPn	P	21 27 08.8	+1.0
	comp=Z,22nm,0.3s,SNR=11						
DAVA	Damuels	8.81	300	⇑iSn	Sn	21 28 43.1	-4.0
	comp=Z,8.4nm,0.6s						
DAVA	Damuels	8.81	300	⇓iPn	P	21 27 08.8	+1.0
	comp=Z,22nm,0.3s						
DAVA				Sn	Sn	21 28 43.1	-4.0
PGF	Pioggiola	8.88	269	ePn	P	21 27 05.7	-3.1
PGF				eSn	Sn	21 28 38.3	-11
	comp=Z,38nm,1.2s						
NKC	Novy Kostel	9.08	322	ePN	P	21 27 10.2	-1.3
AKASG	Malin Array Be	9.23	34	Pn	P	21 27 12.3	-1.4
	comp=Z,1.0nm,0.3s,baz=221,slow=13,SNR=25						
AKASG	Malin Array Be	9.23	34	P	P	21 27 12.3	-1.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CLL	Collm	9.66	328	iPN	P	21 27 19.3	-0.2
	comp=Z,logA/T=1.1						
CLL				eSN	Sn	21 28 53.0	-15
CLL				e		21 29 28.0	
CLL				eSG	Sb	21 30 29.0	+48
CLL	Collm	9.66	328	iPn	P	21 27 19.3	-0.2
	comp=Z,9.0nm,0.8s						
CLL				eSn	Sn	21 28 53.0	-15
CLL				e		21 29 28.0	
CLL				eSg	Sb	21 30 29.0	+48
CLL	Collm	9.66	328	iP	P	21 27 19.3	-0.2
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MOX	Moxa	9.74	322	iP	P	21 27 22.0	+1.4
MOX	Moxa	9.74	322	eP	P	21 27 22.0	+1.4
STU	Stuttgart	9.87	308	eP	P	21 27 20.9	-1.5
	comp=Z,26nm,0.6s						
SBF	Sospel	9.90	278	ePn	P	21 27 17.1	-5.7
FELD	Feldberg	10.21	301	P	P	21 27 25.9	-1.1
BBS	Basel-Blauen	10.38	298	P	P	21 27 29.6	+0.2
MBDF	Montbardon	10.38	283	ePn	P	21 27 24.6	-4.8
MBDF				eSn	S	21 29 12.8	-13
	comp=Z,7.1nm,0.7s						
LPG	La Plagne	10.46	287	ePn	P	21 27 27.3	-3.2
LPG				eSn	S	21 29 16.2	-11
	comp=Z,20nm,0.9s						
LPL	La Plagne	10.48	287	ePn	P	21 27 28.2	-2.5
LPL				eSn	S	21 29 16.1	-12
	comp=Z,11nm,0.8s						
FRF	La Foret Royal	10.48	276	ePn	P	21 27 27.4	-3.4
FRF				eSn	S	21 29 16.2	-12
	comp=Z,11nm,1.0s						
LMR	La Mourre	10.60	275	ePn	P	21 27 28.7	-3.7
LMR				eSn	S	21 29 19.2	-12
	comp=Z,4.0nm,0.7s						
MOF	Molkenrain	10.75	300	P	P	21 27 33.4	-1.0
LANF	Langenberg	10.78	306	P	P	21 27 35.1	+0.3
ECH	Echery	10.86	302	P	P	21 27 34.8	-1.1
CDF	Champ du Feu	10.86	303	ePn	P	21 27 29.9	-6.0
CDF	Champ du Feu	10.86	303	eP	P	21 27 34.8	-1.1
CDF				eSn	S	21 29 25.5	-12
	comp=Z,12nm,0.9s						
CDF	Champ du Feu	10.86	303	eP	P	21 27 34.8	-1.1
CDF				eSn	S	21 29 25.5	-12
	comp=Z,5.9nm,0.9s						
HINF	Hinteralfeld	10.91	299	ePn	P	21 27 30.7	-6.0
HINF				eSn	S	21 29 26.7	-12
	comp=Z,7.8nm,0.5s						
ORIF	Oris-en-Rattie	11.03	283	ePn	P	21 27 34.1	-4.1
ORIF				eR			
	comp=Z,212nm,22.8s						
TNS	Taunus Mts	11.04	313	ePn	P	21 27 37.5	-0.9
TNS				eSn	S	21 29 34.2	-7.7
CABF	La Chapelle	11.10	292	ePn	P	21 27 32.5	-6.7
CABF	La Chapelle	11.10	292	eP	P	21 27 38.5	-0.7
CABF	La Chapelle	11.10	292	eP	P	21 27 38.5	-0.7
SMRF	Simiane la Rot	11.24	279	ePn	P	21 27 36.8	-4.3
HAU	Haudompre	11.30	299	ePn	P	21 27 36.3	-5.6
HAU				eSn	S	21 29 35.8	-12
	comp=Z,8.1nm,0.6s						
HAU				eR			
	comp=Z,136nm,22.8s						
ABH	Alteburg	11.36	310	P	P	21 27 42.4	-0.3
THEF	They Montfort	11.60	300	P	P	21 27 46.2	+0.2
RFYF	Reffroy	12.06	301	ePn	P	21 27 46.3	-5.8
RFYF	Reffroy	12.06	301	eP	P	21 27 52.6	+0.5
	baz=117						
RFYF	Reffroy	12.06	301	eP	P	21 27 52.6	+0.5
RFYF	Reffroy	12.06	301	eP	P	21 27 52.6	+0.5
	baz=117						
SFTF	Sexfontaines	12.19	299	ePn	P	21 27 48.4	-5.6
SFTF	Sexfontaines	12.19	299	eP	P	21 27 54.3	+0.3
	baz=117						
SFTF	Sexfontaines	12.19	299	eP	P	21 27 54.3	+0.3
SFTF	Sexfontaines	12.19	299	eP	P	21 27 54.3	+0.3
	baz=117						
MEZF	Maizieres J'vi	12.28	300	ePn	P	21 27 49.7	-5.4
MEZF				eSn	S	21 29 59.1	-13
	comp=Z,3.0nm,0.5s						
SMF	Signal de Mont	12.63	291	ePn	P	21 27 56.1	-3.7
LOR	Lormes	12.73	294	ePn	P	21 27 55.9	-5.2
	baz=112						
LOR				eR			
	comp=Z,198nm,21.5s						
AVF	Avril sur Loir	12.98	292	ePn	P	21 27 59.3	-5.2
AVF	Avril sur Loir	12.98	292	eP	P	21 28 02.8	-1.7
AVF	Avril sur Loir	12.98	292	eP	P	21 28 02.8	-1.7
AVF	Avril sur Loir	12.98	292	eP	P	21 28 02.8	-1.7
BAIF	Baives	13.36	306	ePn	P	21 28 04.3	-5.2
BAIF	Baives	13.36	306	eP	P	21 28 10.5	+1.0
BAIF	Baives	13.36	306	eP	P	21 28 10.5	+1.0
BAIF	Baives	13.36	306	eP	P	21 28 10.5	+1.0
MFF	Saint Martin d	15.35	290	ePn	P	21 28 30.7	-4.8
EBR	Ebro Roquetas	15.47	268	eRs		21 28 47.0	
OBN	Obninsk	15.50	35	⇑eP	P	21 28 36.8	-0.5
OBN				pmax	pmax		
	comp=Z,21nm,1.0s						
OBN	Obninsk	15.50	35	eP	P	21 28 36.8	-0.5
	comp=Z,21nm,1.0s						
HFS	Hagfors	17.41	348	P	P	21 29 03.3	+1.9
	comp=Z,0.0nm,0.3s,baz=139,slow=13,SNR=2.9						
GNI	Garni	17.95	92	P	P	21 29 09.3	+1.1
	comp=Z,0.1nm,0.3s,baz=210,slow=20,SNR=1.9						
FINES	FINESS Array B	18.38	8	P	P	21 29 14.0	+0.4
	comp=Z,0.3nm,0.3s,baz=176,slow=12,SNR=8.3						
FINES	FINESS Array B	18.38	8	P	P	21 29 14.0	+0.4
NOA	NORSAR Array B	18.69	345	P	P	21 29 18.0	+0.7
	comp=Z,0.1nm,0.3s,baz=157,slow=10,SNR=2.6						
NOA				LR	LR	21 36 12.5	
	comp=Z,40nm,19.9s,baz=150,slow=36						
EKA	Eskdalemuir Ar	19.71	316	P	P	21 29 28.6	-0.4
	comp=Z,0.1nm,0.3s,baz=115,slow=10,SNR=3.8						
AKTO	Aktyubinsk	26.03	61	LR	LR	21 42 16.3	
	comp=Z,60nm,18.9s,MS3.1,slow=40						
ARCES	ARCESS Array B	26.36	4	P	P	21 30 34.9	+0.6
	comp=Z,1.6nm,0.6s,mb3.8,baz=187,slow=9.8,SNR=7.0						
ARCES	ARCESS Array B	26.36	4	P	P	21 30 34.9	+0.6
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARU	Arti	27.11	48	⇓iP	P	21 30 41.4	+0.2
ARU				ePPP	PPP	21 31 32.9	-6.9
ARU				eS	S	21 35 16.2	+0.6
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.0						
ARU	Arti	27.11	48	iP	P	21 30 41.4	+0.2
	comp=Z,5.0nm,1.0s,mb4.0						
ARU				eS	S	21 35 16.2	+0.6
BRVK	Borovoye	33.61	56	eP	P	21 31 40.2	+1.3
	comp=Z,2.9nm,0.6s,mb4.4						
BRVK	Borovoye	33.61	56	eP	P	21 31 40.2	+1.3
	comp=Z,2.9nm,0.6s,mb4.4						
BVAR	Borovoye Array	33.67	56	P	P	21 31 40.9	+1.4
	comp=Z,3.2nm,0.8s,mb4.3,baz=270,slow=7.4,SNR=15						
BVAR	Borovoye Array	33.67	56	P	P	21 31 40.9	+1.4
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	Ala-Archa	38.53	72	eP	P	21 32 22.2	+1.4
	comp=Z,2.4nm,0.8s,mb4.0						
AAK	Ala-Archa	38.53	72	eP	P	21 32 22.2	+1.4
	comp=Z,2.4nm,0.8s,mb4.0						
KURK	Kurchatov	39.05	58	eP	P	21 32 25.6	+0.7
	comp=Z,0.7nm,0.4s,mb3.7						
KURK	Kurchatov	39.05	58	eP	P	21 32 25.6	+0.7
	comp=Z,0.7nm,0.4s,mb3.7						
NVS	Novosibirsk	40.99	51	iP	P	21 32 42.4	+1.5
NVS				pmax	pmax		
	comp=Z,14nm,1.8s,mb4.3						
NVS				pmax	pmax		
	comp=N,8.0nm,2.1s						
NVS	Novosibirsk	40.99	51	iP	P	21 32 42.4	+1.5
	comp=N,8.0nm,2.1s,mb4.0						
ZAL	Zalesovo	42.07	52	P	P	21 32 51.5	+1.8
	comp=N,3.9nm,0.7s,mb4.2,baz=186,slow=8.4,SNR=18						
ZAL	Zalesovo	42.07	52	P	P	21 32 51.5	+1.8
ZAL				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	42.43	63	P	P	21 32 54.2	+1.4
	comp=Z,2.5nm,0.7s,mb4.0,baz=273,slow=8.1,SNR=18						
MKAR	Makanchi Array	42.43	63	P	P	21 32 54.2	+1.4
MKAR	Makanchi Array	42.43	63	P	P	21 32 54.2	+1.5
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	43.05	219	P	P	21 32 59.5	+1.3
	comp=Z,2.5nm,0.7s,mb4.1,baz=9.3,slow=11,SNR=7.2						
DBIC	Dimbokro	43.05	219	P	P	21 32 59.6	+1.4
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KOLN	Koldanda	52.05	86	eP	P	21 34 08.9	+0.5
GKN	Gorkha	52.67	85	eP	P	21 34 13.4	+0.3
DMN	Daman	53.23	85	eP	P	21 34 17.2	-0.1
KKN	Kakani	53.26	85	eP	P	21 34 17.2	-0.2
BOD	Bodaibo	56.11	40	eP	P	21 34 34.9	-2.9
SONM	Songino Array	56.96	53	P	P	21 34 45.3	+1.3
	comp=Z,2.5nm,0.7s,mb4.3,baz=296,slow=8.2,SNR=20						
SONM	Songino Array	56.96	53	P	P	21 34 45.3	+1.2
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	71.82	355	P	P	21 36 22.8	+2.3
	comp=Z,0.6nm,0.6s,mb3.7,baz=351,slow=5.0,SNR=4.2						
ILAR	Eielson Array	71.82	355	P	P	21 36 22.8	+2.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

CASC 20 21:37:47.4±2.8, 13.55N×90.73W, h26km±7km, MD4.1, 7C-11D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.67	23	⇓eP	Pb	21 38 00.8	+0.4
IXG				eS	Sb	21 38 10.9	+1.5
PCG	Pacaya	0.84	8	eP	Pb	21 38 03.8	+0.5
PCG				⇓eS	Sb	21 38 15.7	+1.4
NBG	Las Nubes	1.09	20	⇑eP	Pn	21 38 07.8	+0.6
NBG				eS	Sb	21 38 23.5	+2.1
RTR	El Retiro	1.11	72	⇑eP	Pn	21 38 18.7	+11
RTR				eS	Sb	21 38 35.4	+14
SBLS	San Blas	1.11	75	⇑eP	Pn	21 38 18.5	+11
SBLS				eS	Sb	21 38 34.3	+12
SNJE	San Jose	1.14	74	⇑eP	Pn	21 38 18.9	+11
SNJE				eS	Sb	21 38 32.8	+10
RBDL	Robledal	1.16	61	⇑eP	Pn	21 38 25.1	+17
RBDL				eS	Sb	21 38 41.5	+18
TP2	Tecpan 2	1.25	347	⇓eP	Pn	21 38 09.7	+0.2
TP2				eS	Sn	21 38 27.2	+1.5
BOQS	Boqueron	1.42	83	⇓eP	Pn	21 38 23.1	+11
BOQS				eS	Sn	21 38 41.7	+12
MTO2	Montecristo 2	1.57	57	⇑eP	Pn	21 38 25.1	+11
MTO2				eS	Sn	21 38 45.5	+12
LFU	La Fuente	1.58	83	eP	Pn	21 38 25.2	+11
LFU				eS	Sn	21 38 46.0	+12
LFRS	El Faro	1.62	87	⇓eP	Pn	21 38 25.8	+11
LFRS				eS	Sn	21 38 48.0	+13
LBRS	Las Brisas	1.65	83	⇓eP	Pn	21 38 26.2	+11
LBRS				eS	Sn	21 38 48.5	+13
LCBS	La Ceiba	1.71	86	⇓eP	Pn	21 38 26.9	+11
LCBS				eS	Sn	21 38 49.0	+12
MRL	Marmol	1.81	34	⇑iP	Pn	21 38 17.4	-0.1
MRL				eS	Sn	21 38 43.3	+3.4
SNVI	San Vicente	1.84	88	⇓eP	Pn	21 38 29.0	+11
SNVI				eS	Sn	21 38 53.1	+12
VSM	San Miguel	2.39	93	⇓eP	Pn	21 38 37.0	+11
VSM				eS	Sn	21 39 05.6	+11
CNCH	Conchagua	2.83	95	⇓eP	Pn	21 38 42.0	+10
CNCH				eS	Sn	21 39 18.1	+12
LEON	Leon	3.91	106	eP	Pn	21 38 46.6	-0.8
TEL3	Telica 3	3.91	104	eP	Pn	21 38 45.9	-1.5
TEL3				eS	Sn	21 39 30.9	-2.1
MIRN	Miramar	4.07	105	eP	Pn	21 38 48.7	-1.0
MIRN				eS	Sn	21 39 34.6	-2.6
MOMJ	Momotombo	4.24	105	eP	Pn	21 38 51.3	-0.8
COPN	Copaltepe	4.26	108	⇓eP	Pn	21 38 51.6	-0.8
XAVN	Gruta Xavier	4.52	108	eP	Pn	21 38 55.0	-1.1
TICN	Ticuantepe	4.64	108	eP	Pn	21 38 57.9	+0.1

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*NEIC **20** 21:43:42.3±1.5, 52.08N×7.34E, h10km, ML2.9(LDG), Error ellipse: s-maj=17.7km s-min=6.8km az=192.0*

*BUG **20** 21:43:49.4, 51.54N×6.82E, h1km, ML1.8*

*LDG **20** 21:43:50.6±0.1, 51.59N×6.85E, h1km, Ml2.9/17, Error ellipse: s-maj=2.7km s-min=1.9km az=42.0, Suspected Mining induced.*

*CSEM **20** 21:43:50.9±0.1, 51.58N×6.85E, h2km, ML2.9/15, Error ellipse: s-maj=1.7km s-min=1.3km az=96.0*

*BGR **20** 21:43:50.8±0.4, 51.52N×6.90E, h1km, ML2.3/6, Error ellipse: s-maj=6.7km s-min=3.3km az=125.0*

*BNS **20** 21:43:51.2±1.4, 51.56N×6.87E, h1km, ML2.2*

ISC 20 21:43:47.9±0.3, 51.49N±0.02×6.66E±0.04, n54, σ1^{s}57/123, 4D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	Hlnxe	0.19	45	Pg	Pg	21 43 50.8	-0.9
BZER				Sg	Sg	21 43 52.3	-1.9
LAUG	Laupendahl	0.23	127	ePg	Pg	21 43 54.8	+2.4
LAUG				eSg	Sg	21 43 59.6	+4.2
	277nm,0.9s						
BUG	Bochum--Univer	0.39	97	⇓iPg	Pg	21 43 56.0	+0.4
BUG				Sg	Sg	21 44 00.9	+0.1
RODG	Roetgen-Dahlhe	0.46	221	eSg	Sg	21 44 10.9	+7.9
WTSB	Winterswijk	0.49	10	⇓iPg	Pg	21 43 58.0	+0.3
	54nm,0.3s,baz=170						
WTSB				eSg	Sg	21 44 04.8	+0.7
BNS	Bensberg	0.62	148	ePg	Pg	21 44 03.4	+3.2
BNS				eSg	Sg	21 44 12.2	+3.8
	152nm,0.5s						
HOBG	Hohbusch	0.66	140	ePg	Pg	21 44 03.5	+2.4
HOBG				eSg	Sg	21 44 12.1	+2.2
	126nm,0.5s						
HGN	Heimansgroeve	0.86	212	ePn	Pn	21 44 09.1	+2.2
	2.1nm,0.2s,baz=30						
HGN				⇓iPg	Pg	21 44 09.7	+4.7
	36nm,0.1s						
HGN				eSn	Sn	21 44 23.1	+2.8
HGN				eSg	Sg	21 44 24.0	+7.6
HGN	Heimansgroeve	0.86	212	⇓iPg	Pg	21 44 09.7	+4.7
	36nm,0.1s						
HGN				eSn	Sn	21 44 23.1	+2.8
HGN				eSg	Sg	21 44 24.0	+7.6
KLL	Kalltalsperre	0.87	195	ePg	Pg	21 44 09.6	+4.4
KLL				eSg	Sg	21 44 23.4	+6.6
	128nm,0.4s						
STB	Steinbach	0.90	173	ePg	Pg	21 44 09.6	+3.7
STB				eSg	Sg	21 44 22.8	+4.8
	69nm,0.1s						
IBBN	Ibbenburen	1.07	39	ePg	Pg	21 44 07.3	-1.9
	SNR=5.4						
IBBN				eSg	Sg	21 44 22.7	-0.8
HILG	Hillesheim	1.20	179	ePg	Pg	21 44 15.2	+3.4
HILG				eSg	Sg	21 44 32.3	+4.5
	95nm,0.7s						
BGG	Burgeitz	1.35	161	ePg	Pg	21 44 16.0	+1.1
BGG				eSg	Sg	21 44 35.3	+2.3
	63nm,0.2s						
TNS	Taunus Mts	1.70	137	ePg	Pg	21 44 20.5	-1.3
	SNR=4.9						
TNS				eSg	Sg	21 44 42.6	-1.9
GIVF	Givet	1.81	221	ePn	Pn	21 44 23.3	+2.7
GIVF				eSn	Sn	21 44 47.4	+2.8
	32nm,0.3s						
WLF	Walferdange	1.85	190	ePn	Pn	21 44 25.1	+3.9
	SNR=1.0						
WLF				ePg	Pg	21 44 27.2	+2.3
	SNR=4.1						
WLF				eSn	Sn	21 44 46.4	+0.7
WLF				eSg	Sg	21 44 50.8	+1.2
WLF	Walferdange	1.85	190	eP	Pn	21 44 25.2	+4.0
WLF	Walferdange	1.85	190	eP	Pn	21 44 25.2	+4.0
BAIF	Baives	2.11	228	ePn	Pn	21 44 27.9	+3.0
BAIF				eSn	Sn	21 44 55.5	+3.3
	8.9nm,0.2s						
CLZ	Clausthal	2.34	80	ePn	Pn	21 44 26.1	-2.1
	SNR=1.7						
CLZ				ePg	Pg	21 44 30.6	-4.1
	SNR=3.2						
CLZ				eSg	Sg	21 44 59.6	-6.3
RFYF	Reffroy	2.96	195	ePg	Pg	21 44 47.8	+0.8
	baz=25						

RFYF				*e*Sg	**Sg**	**21 45 27.4**	**+0.9**
	9.4nm,0.3s						
RFYF	**Reffroy**	**2.96**	**195**	*e*Pn	**Pn**	**21 44 38.9**	**+1.9**
RFYF				*e*Pg	**Pg**	**21 44 47.8**	**+0.8**
RFYF				*e*Sg	**Sg**	**21 45 27.4**	**+0.9**
RFYF	**Reffroy**	**2.96**	**195**	*e*Pg	**Pg**	**21 44 47.8**	**+0.8**
RFYF				*e*Sg	**Sg**	**21 45 27.4**	**+0.9**
	4.7nm,0.3s						
CDF	**Champ du Feu**	**3.10**	**172**	*e*Pn	**Pn**	**21 44 40.3**	**+1.2**
CDF				*e*Sg	**Sg**	**21 45 30.5**	**-0.8**
	6.4nm,0.4s						
MEZF	**Maizieres J'vi**	**3.16**	**200**	*e*Pn	**Pn**	**21 44 41.7**	**+1.8**
	baz=20						
MEZF				*e*Sg	**Sg**	**21 45 33.9**	**+0.7**
	11nm,0.5s						
MOX	**Moxa**	**3.24**	**103**	*e*Pn	**Pn**	**21 44 40.3**	**-0.8**
	SNR=2.1						
MOX				*e*Sg	**Sg**	**21 45 31.2**	**-4.6**
MOX	**Moxa**	**3.24**	**103**	*e*Pg	**Pn**	**21 44 40.1**	**-0.9**
MOX				*e*Sg	**Sg**	**21 45 31.2**	**-4.6**
BFO	**Black Forest**	**3.34**	**160**	*e*Pn	**Pn**	**21 44 43.2**	**+0.8**
	SNR=2.1						
BFO				*e*Sn	**Sn**	**21 45 20.1**	**-3.3**
SFTF	**Sexfontaines**	**3.45**	**198**	*e*Pg	**Pg**	**21 44 57.0**	**+0.3**
SFTF				*e*Sg	**Sg**	**21 45 42.6**	**-0.1**
	6.3nm,0.3s						
SFTF	**Sexfontaines**	**3.45**	**198**	*e*Pn	**Pn**	**21 44 45.4**	**+1.4**
SFTF				*e*Pg	**Pg**	**21 44 57.0**	**+0.3**
SFTF				*e*Sg	**Sg**	**21 45 42.6**	**-0.1**
HAU	**Haudompre**	**3.49**	**183**	*e*Pg	**Pg**	**21 44 57.8**	**+0.2**
HAU				*e*Sg	**Sg**	**21 45 43.3**	**-0.8**
	4.4nm,0.3s						
HAU	**Haudompre**	**3.49**	**183**	*e*Pn	**Pn**	**21 44 45.7**	**+1.1**
HAU				*e*Pg	**Pg**	**21 44 57.8**	**+0.2**
HAU				*e*Sg	**Sg**	**21 45 43.3**	**-0.8**
HINF	**Hinteralfeld**	**3.68**	**178**	*e*Pn	**Pn**	**21 44 48.2**	**+1.0**
HINF				*e*Sn	**Sn**	**21 45 30.2**	**-1.7**
HINF				*e*Sg	**Sg**	**21 45 48.1**	**-2.2**
	5.1nm,0.5s						
WERD	**Werda**	**3.72**	**104**	*e*Pn	**Pn**	**21 44 46.6**	**-1.2**
	SNR=3.0						
WERD				*e*Sn	**Sn**	**21 45 26.8**	**-6.3**
LOR	**Lormes**	**4.60**	**204**	*e*Pn	**Pn**	**21 45 00.9**	**+0.6**
	baz=31						
LOR	**Lormes**	**4.60**	**204**	*e*Pg	**Pg**	**21 45 18.2**	**-1.6**
	baz=33						
LOR				*e*Sn	**Sn**	**21 45 53.6**	**-1.7**
LOR				*e*Sg	**Sg**	**21 46 18.8**	**-2.3**
	5.4nm,0.5s						
LOR	**Lormes**	**4.60**	**204**	*e*Pn	**Pn**	**21 45 00.9**	**+0.6**
LOR				*e*Pg	**Pg**	**21 45 18.2**	**-1.6**
LOR				*e*Sn	**Sn**	**21 45 53.6**	**-1.7**
LOR				*e*Sg	**Sg**	**21 46 18.8**	**-2.3**
SSF	**Saint Saulge**	**4.89**	**206**	*e*Pn	**Pn**	**21 45 05.0**	**+0.6**
SSF				*e*Sn	**Sn**	**21 46 00.4**	**-2.1**
SSF				*e*Sg	**Sg**	**21 46 28.4**	**-2.2**
	2.5nm,0.5s						
CABF	**La Chapelle**	**4.89**	**185**	*e*Pn	**Pn**	**21 45 05.1**	**+0.6**
CABF				*e*Sg	**Sg**	**21 46 28.9**	**-2.0**
	4.4nm,0.8s						
KHC	**Kasperske Hory**	**5.02**	**115**	*e*P	**Sg**	**21 46 30.5**	**-4.7**
AVF	**Avril sur Loir**	**5.18**	**206**	*e*Pg	**Pg**	**21 45 30.1**	**-1.1**
AVF				*e*Sn	**Sn**	**21 46 07.7**	**-2.1**
AVF				*e*Sg	**Sg**	**21 46 37.9**	**-2.3**
	1.7nm,0.4s						
AVF	**Avril sur Loir**	**5.18**	**206**	*e*Pn	**Pn**	**21 45 08.8**	**+0.3**
AVF				*e*Pg	**Pg**	**21 45 30.1**	**-1.1**
AVF				*e*Sn	**Sn**	**21 46 07.7**	**-2.1**
AVF				*e*Sg	**Sg**	**21 46 37.9**	**-2.3**
SMF	**Signal de Mont**	**5.19**	**202**	*e*Pg	**Pg**	**21 45 29.7**	**-1.8**
SMF				*e*Sn	**Sn**	**21 46 07.3**	**-2.8**
SMF				*e*Sg	**Sg**	**21 46 37.7**	**-2.9**
	3.7nm,0.4s						
SMF	**Signal de Mont**	**5.19**	**202**	*e*Pn	**Pn**	**21 45 08.5**	**-0.1**
SMF				*e*Pg	**Pg**	**21 45 29.7**	**-1.8**
SMF				*e*Sn	**Sn**	**21 46 07.3**	**-2.8**
SMF				*e*Sg	**Sg**	**21 46 37.7**	**-2.9**
LDF	**La Druitiere**	**5.24**	**239**	*e*Pn	**Pn**	**21 45 10.3**	**+0.9**
LDF				*e*Sn	**Sn**	**21 46 08.7**	**-2.7**
FLN	**La Foliniere**	**5.34**	**242**	*e*Pn	**Pn**	**21 45 11.6**	**+0.8**
	baz=50						
FLN				*e*Sn	**Sn**	**21 46 11.1**	**-2.8**
BGF	**Bois d'Agland**	**5.53**	**208**	*e*Pn	**Pn**	**21 45 14.0**	**+0.5**
BGF				*e*Sg	**Sg**	**21 46 48.5**	**-3.6**
	12nm,0.5s						
GRR	**Gorron**	**5.76**	**240**	*e*Pn	**Pn**	**21 45 17.3**	**+0.6**
GRR				*e*Sn	**Sn**	**21 46 20.3**	**-4.1**
TCF	**Toulx Ste Croi**	**5.97**	**211**	*e*Pn	**Pn**	**21 45 19.7**	**0.0**
TCF				*e*Sn	**Sn**	**21 46 26.2**	**-3.6**
TCF				*e*Sg	**Sg**	**21 47 01.1**	**-5.6**
	2.2nm,0.3s						
MFF	**Saint Martin d**	**6.62**	**225**	*e*Pn	**Pn**	**21 45 29.0**	**+0.1**
MFF				*e*Sn	**Sn**	**21 46 42.2**	**-3.9**
SGMF	**Saint Gilles**	**6.78**	**245**	*e*Pn	**Pn**	**21 45 30.3**	**-0.8**
ROSF	**Rostrenen**	**7.14**	**248**	*e*Pn	**Pn**	**21 45 36.0**	**-0.2**
ROSF				*e*Sn	**Sn**	**21 46 54.7**	**-4.4**
QUIF	**Quistinic**	**7.30**	**245**	*e*Pn	**Pn**	**21 45 37.2**	**-1.2**
QUIF				*e*Sn	**Sn**	**21 46 58.3**	**-4.8**

GUC 20 21:44:33.3±0.8**,24.38S×67.35W,h220$^{\text{km}}$,ML4.0,1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	**2.79**	**290**	⇓*e*P	P	21 45 24.4	+2.3
CEN1				*i* S	S	21 46 02.5	+2.6
CEN1				AMP		21 46 04.5	
	comp=N,107nm,0.7s						
CPN1	**Cerro Paranal**	**2.80**	**264**	*e*P	P	21 45 24.0	+1.9
CPN1				*i* S	S	21 46 02.9	+2.9
CPN1				AMP		21 46 04.0	
	comp=E,294nm,0.5s						
ANCH	**Antofagasta**	**2.89**	**283**	*e*P	P	21 45 24.8	+1.7
ANCH				*i* S	S	21 46 03.0	+1.2
ANCH				AMP		21 46 05.9	
	comp=N,327nm,0.1s						
CRCH	**Chaqaral**	**3.55**	**236**	*e*P	P	21 45 32.3	+1.4
CDCH	**Caldera**	**4.13**	**229**	*i* P	P	21 45 38.6	+0.6
CDCH				*i* S	S	21 46 29.8	+1.7

WEL 20 22:06:28.6±0.3**,37.15S×176.73E,h222$^{\text{km}}$±3$^{\text{km}}$,ML3.7**/10**, Error ellipse: s-maj=5.5km s-min=3.4km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.15**	**165**	PN	P	22 07 01.7	-0.1
URZ				SN	S	22 07 27.1	-0.5
MXZ	**Matakaoa Point**	**1.32**	**109**	PN	P	22 07 03.0	-0.2
MXZ				SN	S	22 07 29.5	-0.3
MWZ	**Matawai**	**1.34**	**152**	PN	P	22 07 03.4	0.0
MWZ				SN	S	22 07 29.9	-0.3
PUZ	**Puketiti**	**1.52**	**128**	PN	P	22 07 04.6	-0.2
PUZ				SN	S	22 07 31.6	-1.1
KNZ	**Kokohu**	**2.01**	**159**	PN	P	22 07 08.8	-0.4
KNZ				SN	S	22 07 39.3	-1.2
BKZ	**Black Stump Fm**	**2.03**	**185**	PN	P	22 07 08.9	-0.4
BKZ				SN	S	22 07 40.5	-0.3
PXZ	**Pawanui**	**2.88**	**178**	PN	P	22 07 17.6	-0.9
PXZ				SN	S	22 07 54.6	-2.5
TSZ	**Takapari Road**	**2.97**	**191**	PN	P	22 07 18.4	-1.1
TSZ				SN	S	22 07 57.4	-1.6
MRZ	**Mangatainoka R**	**3.62**	**194**	*e*PN	P	22 07 24.8	-2.4
KIW	**Kapiti Island**	**3.97**	**200**	PN	P	22 07 29.3	-2.1
MTW	**Mount Morrison**	**4.12**	**193**	PN	P	22 07 30.9	-2.3
TCW	**Tory Channel**	**4.49**	**204**	PN	P	22 07 35.1	-2.6
NNZ	**Nelson**	**4.83**	**212**	*e*SN	S	22 08 34.6	-4.5
THZ	**Tophouse**	**5.48**	**212**	PN	P	22 07 46.8	-3.4
THZ				*e*SN	S	22 08 50.3	-3.5
KHZ	**Kahutara**	**5.81**	**204**	PN	P	22 07 51.3	-3.2

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*IDC **20** 22:17:49.2±1.2,34.82N×6.84E,mb3.7/7,mb1 3.8/10, mb1mx3.6/26,mbtmp3.7/10,ML3.8/2,MS3.2/5,Ms1 3.2/5, ms1mx2.8/40,Error ellipse: s-maj=27.1km s-min=21.6km az=103.0*

*NEIC **20** 22:17:51.3±0.8,34.92N×6.80E,h10$^{\text{km}}$,ML4.1(ALG), Error ellipse: s-maj=9.3km s-min=6.5km az=167.0*

*CSEM **20** 22:17:51.6±0.2,34.67N×6.71E,h40$^{\text{km}}$,ML3.8/4,Error ellipse: s-maj=4.9km s-min=3.1km az=158.0*

*LDG **20** 22:17:53.6±0.5,34.90N×6.93E,h10$^{\text{km}}$,Ml3.6/10,Error ellipse: s-maj=8.9km s-min=8.5km az=168.0*

*CRAAG **20** 22:17:56.6,35.31N×6.45E,Ml4.1*

ISC 20 22:17:56.7±0.7**,35.49N**±0.04×**6.58E**±0.04**,h10$^{\text{km}}$,n82, σ1^{s}30**/116**,mb3.9**/6**,MS3.2**/3**,Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMER	**Merouana**	**0.57**	**284**	P	**Pg**	**22 18 08.0**	**-0.2**
CTEI	**Djebel Teioual**	**0.59**	**346**	P	**Pb**	**22 18 12.0**	**+3.3**
CASM	**Ain Smara**	**0.77**	**355**	P	**Pb**	**22 18 15.0**	**+3.2**
CKFL	**Kef-Lekhel**	**0.92**	**7**	P	**Pb**	**22 18 18.0**	**+3.7**
CKHR	**Kef el Ahmar**	**1.01**	**302**	P	**Pb**	**22 18 18.0**	**+2.1**
ABSA	**Djebel Ababsia**	**1.07**	**43**	P	**Pb**	**22 18 20.0**	**+3.1**
SET	**Setif**	**1.19**	**307**	P	**Pb**	**22 18 21.0**	**+2.0**
DFRA	**Djebel Bou Aff**	**1.20**	**332**	P	**Pb**	**22 18 22.0**	**+2.9**
CAEH	**'Ain El Ouahch**	**1.31**	**10**	P	**Pb**	**22 18 24.0**	**+3.1**
CMAH	**Djebel Manchou**	**1.32**	**31**	P	**Pb**	**22 18 22.0**	**+0.8**
EMHD	**Djebel Mahouad**	**3.03**	**285**	P	**Pn**	**22 18 45.0**	**-0.7**
ETOS	**Mallorca**	**5.21**	**326**	Pn	**Pn**	**22 19 17.3**	**+0.6**
ETOS				Sn	**Sn**	**22 20 20.9**	**+3.3**
ETOS	**Mallorca**	**5.21**	**326**	Pn	**Pn**	**22 19 17.3**	**+0.6**
	9.1nm,0.3s,SNR=21						
ETOS				Sn	**Sn**	**22 20 20.9**	**+3.3**
EIBI	**Ibiza**	**5.47**	**312**	Pn	**Pn**	**22 19 20.3**	**0.0**
EIBI				Sn	**Sn**	**22 20 23.3**	**-0.7**
EIBI	**Ibiza**	**5.47**	**312**	Pn	**Pn**	**22 19 20.3**	**0.0**
	14nm,0.3s,SNR=24						
EIBI				Sn	**Sn**	**22 20 23.3**	**-0.7**
	16nm,0.5s,SNR=5.0						
EBEN	**Beniarda**	**6.31**	**303**	Pn	**Pn**	**22 19 31.8**	**-0.4**
EBEN				Sn	**Sn**	**22 20 44.7**	**-0.4**
EBEN	**Beniarda**	**6.31**	**303**	Pn	**Pn**	**22 19 31.8**	**-0.4**
	10nm,0.6s,SNR=7.1						
EBEN				Sn	**Sn**	**22 20 44.7**	**-0.5**
	126nm,1.6s,SNR=5.0						
EMUR	**La Murta**	**6.71**	**293**	Pn	**Pn**	**22 19 33.0**	**-4.8**
EMUR				Sn	**Sn**	**22 20 51.5**	**-3.6**
EMUR	**La Murta**	**6.71**	**293**	Pn	**Pn**	**22 19 33.0**	**-4.8**
EMUR				Sn	**Sn**	**22 20 51.5**	**-3.5**
	1.9nm,0.4s,SNR=6.7						
ETOB	**Tobarra**	**7.22**	**298**	Pn	**Pn**	**22 19 42.1**	**-2.8**
ETOB				Sn	**Sn**	**22 21 07.5**	**-0.3**
ETOB	**Tobarra**	**7.22**	**298**	Pn	**Pn**	**22 19 42.1**	**-2.8**
ETOB				Sn	**Sn**	**22 21 07.5**	**-0.3**
	0.9nm,0.3s,SNR=4.0						
ECHE	**Chera**	**7.26**	**307**	Pn	**Pn**	**22 19 46.4**	**+0.9**
ECHE				Sn	**Sn**	**22 21 08.2**	**-0.6**
ECHE	**Chera**	**7.26**	**307**	Pn	**Pn**	**22 19 46.4**	**+0.9**
	2.6nm,0.3s,SNR=4.6						
ECHE				Sn	**Sn**	**22 21 08.2**	**-0.6**
	0.4nm,0.1s,SNR=4.0						
EPOB	**Poblet**	**7.27**	**325**	Pn	**Pn**	**22 19 45.4**	**-0.3**
EPOB				Sn	**Sn**	**22 21 07.1**	**-2.1**
EPOB	**Poblet**	**7.27**	**325**	Pn	**Pn**	**22 19 45.4**	**-0.3**
	7.8nm,0.3s,SNR=12						
EPOB				Sn	**Sn**	**22 21 07.1**	**-2.1**
	2.6nm,0.4s,SNR=5.0						
PGF	**Pioggiola**	**7.30**	**14**	*e*Pn	**Pn**	**22 19 45.4**	**-0.6**
PGF				*e*Sn	**Sn**	**22 21 09.7**	**-0.1**
	6.5nm,0.5s						
ERTA	**Horta de San J**	**7.34**	**320**	Pn	**Pn**	**22 19 47.5**	**+0.8**
ERTA	**Horta de San J**	**7.34**	**320**	Pn	**Pn**	**22 19 47.5**	**+0.8**
	0.4nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**7.40**	**313**	Pn	**Pn**	**22 19 47.0**	**-0.4**
EMOS				Sn	**Sn**	**22 21 11.8**	**-0.4**
EMOS	**Mosqueruela**	**7.40**	**313**	Pn	**Pn**	**22 19 47.0**	**-0.4**
	4.1nm,0.3s,SNR=11						
EMOS				Sn	**Sn**	**22 21 11.8**	**-0.5**
	51nm,1.3s,SNR=5.0						
EJON	**La Jonquera**	**7.52**	**339**	Pn	**Pn**	**22 19 48.6**	**-0.6**
EJON				Sn	**Sn**	**22 21 14.5**	**-0.8**
EJON	**La Jonquera**	**7.52**	**339**	Pn	**Pn**	**22 19 48.6**	**-0.6**
	0.6nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**7.53**	**330**	Pn	**Pn**	**22 19 51.0**	**+1.6**
EMIR				Sn	**Sn**	**22 21 17.0**	**+1.3**
EMIR	**Miracle**	**7.53**	**330**	Pn	**Pn**	**22 19 51.0**	**+1.7**
	9.7nm,0.4s,SNR=11						
FILF	**Fillols**	**7.72**	**337**	*e*P	**Pn**	**22 19 52.4**	**+0.4**
VALF	**Valcebollere**	**7.76**	**334**	*e*P	**Pn**	**22 19 53.1**	**+0.6**
EBER	**Berja**	**7.78**	**283**	Pn	**Pn**	**22 19 48.6**	**-4.2**
LMR	**La Mourre**	**7.84**	**360**	*e*Pn	**Pn**	**22 19 53.0**	**-0.6**
LMR				*e*Sn	**Sn**	**22 21 22.7**	**-0.5**
	3.0nm,0.3s						
CARF	**Carcanieres**	**8.01**	**336**	*e*P	**P**	**22 19 56.5**	**+0.5**
FRF	**La Foret Royal**	**8.06**	**0**	*e*Pn	**P**	**22 19 56.2**	**-0.5**
FRF				*e*Sn	**Sn**	**22 21 27.6**	**-1.3**
	4.6nm,0.4s						
EQES	**Quesada**	**8.09**	**289**	Pn	**P**	**22 19 53.1**	**-4.0**
EQES				Sn	**Sn**	**22 21 25.8**	**-3.9**
EQES	**Quesada**	**8.09**	**289**	Pn	**P**	**22 19 53.1**	**-4.0**
EQES				Sn	**Sn**	**22 21 25.8**	**-3.8**
	SNR=7.9						
EGRA	**Graus**	**8.29**	**326**	Pn	**P**	**22 20 01.2**	**+1.4**
EGRA				Sn	**Sn**	**22 21 36.3**	**+1.8**
EGRA	**Graus**	**8.29**	**326**	Pn	**P**	**22 20 01.2**	**+1.3**
	7.0nm,0.5s,SNR=7.3						
ESAC	**San Caprasio**	**8.31**	**321**	Pn	**P**	**22 20 00.1**	**-0.1**
ESAC				Sn	**Sn**	**22 21 35.0**	**-0.2**
ESAC	**San Caprasio**	**8.31**	**321**	Pn	**P**	**22 20 00.1**	**-0.1**
	29nm,0.4s,SNR=15						
ESAC				Sn	**Sn**	**22 21 35.0**	**-0.2**
ECOG	**Cogollos-Vega**	**8.37**	**285**	Pn	**P**	**22 20 00.8**	**-0.3**
	0.8nm,0.2s,SNR=4.0						
SALF	**Salau**	**8.38**	**332**	*e*P	**P**	**22 20 04.1**	**+3.0**
SMRF	**Simiane la Rot**	**8.51**	**355**	*e*Pn	**P**	**22 20 02.0**	**-1.0**
SMRF				*e*Sn	**Sn**	**22 21 40.7**	**+0.6**
	2.9nm,0.5s						
MTLF	**Montolieu**	**8.54**	**338**	*e*Pn	**P**	**22 20 02.0**	**-1.3**
MTLF				*e*Sn	**Sn**	**22 21 40.2**	**-0.5**
	2.2nm,0.4s						
MELF	**Melles**	**8.64**	**330**	*e*P	**P**	**22 20 07.6**	**+2.8**
EBIE	**Bielsa**	**8.75**	**327**	Pn	**P**	**22 20 09.0**	**+2.7**
EBIE				Sn	**Sn**	**22 21 47.6**	**+1.5**
EBIE	**Bielsa**	**8.75**	**327**	Pn	**P**	**22 20 09.0**	**+2.7**
EBIE				Sn	**Sn**	**22 21 47.6**	**+1.5**
LASF	**Ste Croix**	**8.83**	**347**	*e*Pn	**P**	**22 20 06.8**	**-0.6**
LASF				*e*Sn	**Sn**	**22 21 47.2**	**-0.8**
	3.1nm,0.4s						
EPF	**Esparros**	**8.95**	**329**	*e*Pn	**P**	**22 20 09.8**	**+0.8**
EPF				*e*Sn	**Sn**	**22 21 51.1**	**+0.2**
	4.7nm,0.5s						
ETSF	**Etsaut**	**9.24**	**325**	*e*Pn	**P**	**22 20 13.0**	**-0.1**
ETSF				*e*Sn	**Sn**	**22 21 58.1**	**-0.1**
	5.6nm,0.6s						
ESDC	**Sonseca Array**	**9.35**	**300**	Pn	**P**	**22 20 13.5**	**-1.1**
	0.6nm,0.3s,baz=112,slow=14,SNR=11						
ESDC	**Sonseca Array**	**9.35**	**300**	Pn	**P**	**22 20 13.8**	**-0.8**
ESDC				Sn	**Sn**	**22 21 57.4**	**-3.5**
ESDC	**Sonseca Array**	**9.35**	**300**	Pn	**P**	**22 20 13.8**	**-0.8**
ESDC				Sn	**Sn**	**22 21 57.4**	**-3.5**
VIVF	**Saint-Julien-l**	**9.47**	**352**	*e*Pn	**P**	**22 20 13.9**	**-2.3**
VIVF				*e*Sn	**Sn**	**22 22 02.8**	**-1.0**
	1.5nm,0.3s						
MDT	**Midelt**	**9.65**	**257**	Pn	**P**	**22 20 11.4**	**-7.4**
	0.2nm,0.3s,baz=72,slow=19,SNR=7.0						
MDT				LR	LR	22 24 35.4	
	comp=Z,76nm,18.7s,baz=356,slow=42						
SJPF	**Ste Jean**	**9.72**	**324**	*e*Pn	**P**	**22 20 20.3**	**+0.7**
SJPF				*e*Sn	**Sn**	**22 22 09.1**	**-0.8**
	7.6nm,0.6s						
GUD	**Guadarrama**	**9.90**	**305**	Pn	**P**	**22 20 22.6**	**+0.4**
	1.2nm,0.5s						
GUD	**Guadarrama**	**9.90**	**305**	Pn	**P**	**22 20 22.6**	**+0.4**
	1.2nm,0.5s						
LPL	**La Plagne**	**10.02**	**1**	*e*Pn	**P**	**22 20 23.1**	**-0.7**
CAF	**Calviac**	**10.04**	**341**	*e*Pn	**P**	**22 20 24.0**	**0.0**
ELAN	**Lanestosa**	**10.94**	**318**	Pn	**P**	**22 20 37.6**	**+1.2**
	3.5nm,0.6s						
ELAN	**Lanestosa**	**10.94**	**318**	Pn	**P**	**22 20 37.6**	**+1.2**
	3.5nm,0.6s						
DAVOX	**Davos**	**11.55**	**11**	LR	LR	22 24 47.8	
	comp=Z,58nm,18.9s,baz=260,slow=34						
EARI	**Arriondas**	**11.99**	**314**	Pn	**P**	**22 20 51.8**	**+1.1**
	3.3nm,0.6s						
ECAL	**Calabor**	**12.23**	**306**	Pn	**P**	**22 20 56.2**	**+2.3**
	3.9nm,0.5s						
GERES	**GERESS Array B**	**14.35**	**19**	Pn	**P**	**22 21 21.8**	**0.0**
	0.1nm,0.3s,baz=225,slow=11,SNR=2.7						
EKA	**Eskdalemuir Ar**	**20.95**	**344**	P	**P**	**22 22 40.2**	**-1.8**
	0.7nm,0.6s,baz=142,slow=9.5,SNR=4.2						
AKASG	**Malin Array Be**	**22.34**	**40**	P	**P**	**22 22 50.9**	**-5.1**
	0.5nm,0.4s,mb3.3,baz=238,slow=8.4,SNR=3.4						
AKASG	**Malin Array Be**	**22.34**	**40**	P	**P**	**22 22 50.9**	**-5.1**
HFS	**Hagfors**	**25.09**	**8**	P	**P**	**22 23 20.0**	**-2.6**
	3.8nm,1.2s,mb3.8,baz=236,slow=5.3,SNR=4.0						
HFS				LR	LR	22 34 54.4	
	comp=Z,45nm,18.5s,MS3.0,baz=84,slow=40						
NOA	**NORSAR Array B**	**25.74**	**5**	LR	LR	22 33 45.7	
	comp=Z,17nm,19.1s,MS2.6,baz=85,slow=36						
FINES	**FINESS Array B**	**28.78**	**19**	P	**P**	**22 23 52.5**	**-3.9**
	2.5nm,0.9s,mb3.9,baz=186,slow=13,SNR=3.7						
ZAL	**Zalesovo**	**55.63**	**45**	P	**P**	**22 27 30.6**	**-4.2**
	0.8nm,0.4s,mb4.1,baz=152,slow=14,SNR=1.8						
MKAR	**Makanchi Array**	**56.06**	**53**	P	**P**	**22 27 32.0**	**-6.0**
	0.7nm,0.6s,mb3.9,baz=286,slow=6.5,SNR=8.6						
BOSA	**Boshof**	**66.15**	**162**	P	**P**	**22 28 33.6**	**-13**
	2.3nm,0.9s,mb4.2,baz=144,slow=19,SNR=3.3						
NEW	**Newport**	**82.68**	**326**	LR	LR	23 05 55.5	
	comp=Z,72nm,19.3s,MS4.1,baz=347,slow=35						

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*BJI **20** 22:31:45.3,20.70S×178.50W,h592$^{\text{km}}$,mB4.5,mb4.4*

*NEIC **20** 22:31:47.4±2.6,20.71S×178.51W,h593$^{\text{km}}$±30$^{\text{km}}$,mb4.3/7, Error ellipse: s-maj=16.5km s-min=15.5km az=195.0*

*IDC **20** 22:31:48.9±3.3,20.87S×178.44W,h612$^{\text{km}}$±39$^{\text{km}}$,mb3.4/8, mb1 3.7/9,mb1mx3.6/14,mbtmp4.4/9,Error ellipse: s-maj=29.3km s-min=19.8km az=166.0*

ISC 20 22:31:44.8±3.9**,20.7S**±0.1×**178.5W**±0.1**,h571$^{\text{km}}$**±50$^{\text{km}}$**, n52,σ0^{s}82**/28**,mb4.1**/15**,3C-1D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**17.94**	**191**	P	**P**	**22 35 19.8**	**-1.8**
	3.4nm,0.3s,baz=348,slow=4.0,SNR=14						
CTA	**Charters Tower**	**32.99**	**265**	*e*P	**P**	**22 37 36.1**	**+1.2**
	3.0nm,0.4s,mb4.2						
CTA	**Charters Tower**	**32.99**	**265**	P	**P**	**22 37 36.4**	**+1.5**
	3.6nm,0.4s,mb4.2,baz=90,slow=10.0,SNR=10						
CTAO	**Charters Tower**	**32.99**	**265**	*e*P	**P**	**22 37 34.9**	**+0.1**
STKA	**Stephens Creek**	**37.28**	**244**	P	**P**	**22 38 11.8**	**+1.6**
	3.0nm,0.7s,mb3.9,baz=82,slow=7.5,SNR=9.2						
STKA				PcP	PcP	22 40 13.7	-1.2
	1.1nm,0.6s,baz=45,slow=5.7,SNR=3.3						
STKA	**Stephens Creek**	**37.28**	**244**	*e*P	**P**	**22 38 11.5**	**+1.3**
ASPA	**Alice Springs**	**44.02**	**257**	*e*P	**P**	**22 39 04.7**	**+0.6**
WRAB	**Tennant Creek**	**44.09**	**262**	*e*P	**P**	**22 39 04.6**	**-0.1**
	5.5nm,0.3s,mb4.6						
WRA	**Warramunga Arr**	**44.10**	**262**	P	**P**	**22 39 04.9**	**+0.1**
	4.5nm,0.3s,mb4.5,baz=97,slow=7.6,SNR=114						
KAKA	**Kakadu**	**47.50**	**272**	*e*P	**P**	**22 39 50.1**	**+19**
	5.3nm,0.6s,mb4.2						
FITZ	**Fitzroy Crossi**	**52.53**	**263**	*e*P	**P**	**22 40 07.8**	**+0.1**
	4.5nm,0.4s,mb4.2						
VNDA	**Vanda**	**57.71**	**185**	*e*P	**P**	**22 40 42.8**	**-0.1**
MJAR	**Matsushiro Arr**	**70.05**	**324**	P	**P**	**22 42 00.9**	**-0.6**
	0.7nm,0.5s,mb3.5,baz=160,slow=4.3,SNR=5.0						
MDJ	**Mudanjiang**	**80.37**	**325**	P	**P**	**22 42 58.1**	**-0.2**
MDJ				AMB	AMB		
	comp=Z,70nm,5.0s						
NVAR	**Mina Array Bea**	**81.47**	**44**	P	**P**	**22 43 05.1**	**+1.1**
	comp=Z,1.8nm,0.8s,mb3.6,baz=209,slow=7.1,SNR=12						
MNTX	**Cornudas Mount**	**87.24**	**55**	*e*P	**P**	**22 43 32.6**	**+0.2**
	comp=Z,3.0nm,1.0s,mb3.9						
TXAR	**Lajitas Array**	**87.55**	**58**	P	**P**	**22 43 35.1**	**+1.3**
	comp=Z,1.6nm,0.8s,mb3.8,baz=221,slow=6.0,SNR=18						
SNAA	**Sanae**	**87.86**	**179**		**P**	**22 43 43.8**	**+9.4**
VNA3	**Neumayer Olymp**	**88.01**	**176**		**P**	**22 43 35.1**	**0.0**
MCMT	**McKenzie Canyo**	**88.39**	**40**	*e*P	**P**	**22 43 38.2**	**+0.8**
VNA2	**Neumayer--Watz**	**88.45**	**177**		**P**	**22 43 37.2**	**+0.1**
COLA	**College**	**88.47**	**13**	*e*P	**P**	**22 43 36.4**	**-0.9**
	comp=Z,4.1nm,0.7s,mb4.3						
ILAR	**Eielson Array**	**88.58**	**13**	P	**P**	**22 43 37.0**	**-0.9**
	comp=Z,1.0nm,0.4s,mb4.0,baz=221,slow=5.5,SNR=19						
HHC	**Hu-ho-hao-te**	**89.12**	**315**	*e*P	**P**	**22 43 40.4**	**-0.6**
HHC				XS		22 57 29.9	
HHC				AMB	AMB		
	comp=Z,130nm,9.6s						
BW06	**Boulder Array**	**89.41**	**43**	*e*P	**P**	**22 43 42.1**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.0						
PDAR	**Pinedale Array**	**89.41**	**43**	P	**P**	**22 43 42.3**	**0.0**
	comp=Z,1.9nm,0.6s,mb4.1,baz=222,slow=2.9,SNR=16						
LZH	**Lanzhou**	**92.48**	**308**	*e*P	**P**	**22 43 54.9**	**-1.6**
LZH				PP	PP	22 47 51.8	+2.3
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.9						
LZH	**Lanzhou**	**92.48**	**308**	*e*P	**P**	**22 43 54.9**	**-1.6**
	comp=Z,21nm,1.6s,mb4.9						
LZH				pP	pP	22 46 24.0	+22
LZH				sP	sP	22 47 20.4	+22
LZH				PP	PP	22 47 51.7	+2.2
ZAL	**Zalesovo**	**110.33**	**321**	PKiKP		22 49 11.9	
	comp=Z,0.7nm,0.5s,baz=350,slow=1.6,SNR=3.9						
MKAR	**Makanchi Array**	**110.96**	**313**	PKiKP		22 49 13.2	
	comp=Z,0.4nm,0.4s,baz=172,slow=0.6,SNR=10						
BVAR	**Borovoye Array**	**118.89**	**320**	PKP	PKPdf	22 49 28.6	+0.1
	comp=Z,1.8nm,0.3s,baz=122,slow=2.4,SNR=23						
SFJD	**Kangerlussuaq**	**123.27**	**22**	PKP	PKPdf	22 49 35.8	-0.8
	comp=Z,3.6nm,0.7s,baz=180,slow=17,SNR=2.4						
AKTK	**Aktyubinsk**	**126.86**	**318**	PKP	PKPdf	22 49 45.4	+1.5
AKTO	**Aktyubinsk**	**126.86**	**318**	PKP	PKPdf	22 49 45.4	+1.5
	comp=Z,1.0nm,0.6s,baz=84,slow=3.1,SNR=5.1						
ARCES	**ARCESS Array B**	**128.99**	**349**	PKP	PKPdf	22 49 47.5	0.0
	comp=Z,1.2nm,0.4s,baz=77,slow=1.4,SNR=12						
FINES	**FINESS Array B**	**135.79**	**343**	PKP	PKPdf	22 50 02.4	+2.0
	comp=Z,1.8nm,1.0s,baz=45,slow=2.7,SNR=5.8						
HFS	**Hagfors**	**139.62**	**351**	PKhKP		22 50 01.5	
	comp=Z,1.2nm,0.3s,baz=27,slow=3.3,SNR=16						
AKASG	**Malin Array Be**	**142.92**	**331**	PKP	PKPdf	22 50 11.5	-1.9
	comp=Z,6.8nm,0.4s,baz=44,slow=4.3,SNR=66						
EKA	**Eskdalemuir Ar**	**145.20**	**5**	PKPbc	PKPbc	22 50 19.1	+0.9
	comp=Z,2.0nm,0.7s,baz=346,slow=2.5,SNR=8.0						
KOLS	**Kolonicke sedl**	**147.25**	**334**	*e*PKP	PKPdf	22 50 23.8	+3.0
KOLS				*e*		22 50 29.5	
STHS	**Stebnicka Huta**	**147.27**	**336**	*e*PKP	PKPdf	22 50 24.1	+3.3
STHS				*e*		22 50 30.8	
CRVS	**Cervenica-Dubn**	**147.60**	**335**	*e*PKP	PKPdf	22 50 23.4	+2.1
KSP	**Ksiaz**	**147.70**	**342**	*e*PKP	PKPdf	22 50 26.7	+5.3
CLL	**Collm**	**148.11**	**346**	⇓*i*PKP1	PKPdf	22 50 27.4	+5.4
CLL				*i* PKP2	PKPab	22 50 32.6	-1.0
KECS	**Kecovo**	**148.32**	**336**	*e*PKP	PKPdf	22 50 28.5	+6.0
KECS				*e*		22 50 33.8	
KHC	**Kasperske Hory**	**149.99**	**344**	*e*PKPbc	PKPdf	22 50 32.0	+6.9
KHC				PKPab	PKPab	22 50 41.0	-0.4
KHC				*e*PP	PP	22 54 16.0	+2.8
KHC	**Kasperske Hory**	**149.99**	**344**	*e*P	PKPdf	22 50 32.0	+6.9
KHC				*e*		22 50 41.0	
GERES	**GERESS Array B**	**150.22**	**344**	PKPbc	PKPdf	22 50 32.5	+7.1
	comp=Z,1.5nm,0.6s,baz=40,slow=1.5,SNR=17						
WATA	**Walderalm**	**152.16**	**345**	⇑*i*P	PKPdf	22 50 38.3	+10
	comp=Z,2.1nm,0.4s						
SQTA	**Sankt Quirin**	**152.35**	**346**	⇑*e*P	PKPdf	22 50 37.3	+8.7
	comp=Z,2.0nm,0.6s						
SQTA	**Sankt Quirin**	**152.35**	**346**	⇑*e*P	PKPdf	22 50 37.3	+8.7
DAVOX	**Davos**	**153.06**	**347**	PKPbc	PKPdf	22 50 39.1	+10
	comp=Z,3.1nm,0.5s,baz=270,slow=8.1,SNR=13						

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*CSEM **20** 22:41:12.5±0.2,42.48N×10.79W,h10$^{\text{km}}$,ML2.6,Error ellipse: s-maj=5.1km s-min=2.8km az=119.0*

*NEIC **20** 22:41:13.7,42.56N×10.84W,MN2.7(MDD),After MDD.*

*INMG **20** 22:41:15.5±0.9,42.72N×11.25W,h10$^{\text{km}}$,ML2.6,Error ellipse: s-maj=5.2km s-min=2.9km az=106.0*

MDD 20 22:41:13.7±1.4**,42.56N×10.84W,mbLg2.7**/12**,2C,Error ellipse: s-maj=12.8km s-min=7.7km az=114.0,PRXIMO, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMAZ	**Mazaricos**	**1.42**	**74**	⇑P	Pb	22 41 38.8	-2.0
	4.4nm,0.1s,SNR=18						
EMAZ				S	Sb	22 41 56.7	-2.7
	37nm,0.1s,SNR=5.0						
EMAZ	**Mazaricos**	**1.42**	**74**	P	Pb	22 41 38.9	-2.0
EMAZ				S	Sb	22 41 57.0	-2.4
EMAZ	**Mazaricos**	**1.42**	**74**	P	Pb	22 41 38.8	-2.0
	4.4nm,0.1s,SNR=18						
EMAZ				S	Sb	22 41 57.0	-2.4
EZAM	**Zamans**	**1.64**	**104**	⇑P	Pn	22 41 42.8	-1.2
	3.1nm,0.1s,SNR=18						
EZAM				S	Sb	22 42 03.9	-1.8
	11nm,0.1s,SNR=16						
EZAM	**Zamans**	**1.64**	**104**	P	Pn	22 41 42.8	-1.2
EZAM				S	Sb	22 42 04.0	-1.7
STS	**Santiago**	**1.71**	**78**	P	Pn	22 41 43.3	-1.7
	15nm,0.1s,SNR=8.4						
STS				S	Sb	22 42 04.6	-3.3
	11nm,0.1s,SNR=8.5						

STS	**Santiago**	**1.71**	**78**	P	Pn	22 41 43.3	-1.7
STS				S	Sb	22 42 04.8	-3.1
STS	**Santiago**	**1.71**	**78**	P	Pn	22 41 43.3	-1.7
	15nm,0.1s,SNR=8.4						
STS				S	Sb	22 42 04.8	-3.1
ELOB	**Lobios**	**2.18**	**108**	P	Pn	22 41 50.4	-1.3
	2.4nm,0.1s,SNR=17						
ELOB				S	Sn	22 42 17.8	-1.8
	5.1nm,0.1s,SNR=17						
ELOB	**Lobios**	**2.18**	**108**	P	Pn	22 41 50.9	-0.8
ELOB				S	Sn	22 42 17.9	-1.8
ELOB	**Lobios**	**2.18**	**108**	P	Pn	22 41 50.4	-1.2
	2.4nm,0.1s,SNR=17						
ELOB				S	Sn	22 42 17.8	-1.9
	5.1nm,0.1s,SNR=17						
PVRL	**Vila Real**	**2.66**	**118**	*e*Pn	Pn	22 41 57.0	-1.6
PVRL				*e*Sn	Sn	22 42 28.8	-3.2
	39nm,0.2s						
ERUA	**La Rua**	**2.74**	**92**	P	Pn	22 41 58.0	-1.7
	2.6nm,0.3s,SNR=7.9						
ERUA				S	Sn	22 42 29.8	-4.2
	8.0nm,0.2s,SNR=12						
EPON	**Pontenova**	**2.81**	**73**	P	Pn	22 41 58.1	-2.6
	0.4nm,0.1s,SNR=20						
EPON				S	Sn	22 42 30.1	-5.7
	12nm,0.1s,SNR=10						
EPON	**Pontenova**	**2.81**	**73**	P	Pn	22 41 58.1	-2.6
EPON				S	Sn	22 42 31.2	-4.7
EPON	**Pontenova**	**2.81**	**73**	P	Pn	22 41 58.2	-2.6
EPON				S	Sn	22 42 31.2	-4.7
PVIS	**Viseu**	**2.88**	**129**	*e*Pn	Pn	22 42 00.1	-1.6
PVIS				*e*Sn	Sn	22 42 33.3	-4.2
	25nm,0.1s						
PVIS	**Viseu**	**2.88**	**129**	P	Pn	22 42 00.0	-1.7
PVIS				S	Sn	22 42 33.2	-4.3
ECAL	**Calabor**	**3.11**	**100**	P	Pn	22 42 03.5	-1.5
	2.5nm,0.1s,SNR=8.6						
ECAL				S	Sn	22 42 39.8	-3.5
	28nm,0.3s,SNR=5.0						
ECAL	**Calabor**	**3.11**	**100**	P	Pn	22 42 03.5	-1.4
ECAL				S	Sn	22 42 39.8	-3.5
ECAL	**Calabor**	**3.11**	**100**	P	Pn	22 42 03.5	-1.4
	2.5nm,0.1s,SNR=8.6						
ECAL				S	Sn	22 42 39.8	-3.5
	28nm,0.3s,SNR=5.0						
PBRG	**Braganca**	**3.14**	**103**	*e*Pn	Pn	22 42 04.1	-1.3
PBRG				*e*Sn	Sn	22 42 40.7	-3.4
	6.4nm,0.2s						
PBRG	**Braganca**	**3.14**	**103**	P	Pn	22 42 03.9	-1.5
PBRG				S	Sn	22 42 40.6	-3.5
MTE	**Manteigas**	**3.29**	**130**	*e*Sn	Sn	22 42 43.2	-4.6
	11nm,0.2s						
MTE	**Manteigas**	**3.29**	**130**	S	Sn	22 42 43.1	-4.7
PTOM	**Tomar**	**3.47**	**147**	*e*Pn	Pn	22 42 07.7	-2.4
PTOM				*e*Sn	Sn	22 42 46.8	-5.6
	15nm,0.2s						
PCBR	**Castelo Branco**	**3.72**	**136**	*e*Pn	Pn	22 42 11.6	-2.0
PCBR				*e*Sn	Sn	22 42 53.4	-5.4
	6.3nm,0.2s						
PLOU	**Loures**	**3.89**	**160**	*e*Pn	Pn	22 42 12.9	-3.2
EARI	**Arriondas**	**4.20**	**78**	P	Pn	22 42 18.0	-2.4
	0.6nm,0.1s,SNR=20						
EARI				S	Sn	22 43 04.7	-6.2
	0.9nm,0.1s,SNR=5.0						
EARI	**Arriondas**	**4.20**	**78**	P	Pn	22 42 18.3	-2.1
EARI				S	Sn	22 43 04.7	-6.2
EARI	**Arriondas**	**4.20**	**78**	P	Pn	22 42 18.0	-2.4
	0.6nm,0.1s,SNR=20						
EARI				S	Sn	22 43 04.7	-6.2
	0.9nm,0.1s,SNR=5.0						
EBAD	**Badajoz**	**4.79**	**141**	P	Pn	22 42 25.6	-3.2
	0.6nm,0.1s,SNR=15						
EBAD				S	Sn	22 43 17.0	-8.8
	3.3nm,0.1s,SNR=5.6						
EBAD	**Badajoz**	**4.79**	**141**	P	Pn	22 42 25.6	-3.2
EBAD				S	Sn	22 43 17.7	-8.2
EBAD	**Badajoz**	**4.79**	**141**	P	Pn	22 42 25.6	-3.2
	0.6nm,0.1s,SNR=15						
EBAD				S	Sn	22 43 17.7	-8.2
PBEJ	**Beja**	**5.07**	**152**	*e*Pn	Pn	22 42 29.0	-3.8
PBEJ				*e*Sn	Sn	22 43 24.0	-9.0
	1.9nm,0.1s						
PTEO	**Sao Teotonio**	**5.27**	**161**	*e*Pn	Pn	22 42 31.9	-3.7
PTEO				*e*Sn	Sn	22 43 29.8	-8.1
PTEO	**Sao Teotonio**	**5.27**	**161**	P	Pn	22 42 31.7	-3.9
GUD	**Guadarrama**	**5.36**	**109**	P	Pn	22 42 35.0	-2.0
	0.9nm,0.2s,SNR=7.9						
GUD				S	Sn	22 43 33.7	-6.7
	1.4nm,0.2s,SNR=6.1						
GUD	**Guadarrama**	**5.36**	**109**	P	Pn	22 42 34.6	-2.4
GUD				S	Sn	22 43 33.7	-6.7
GUD	**Guadarrama**	**5.36**	**109**	P	Pn	22 42 34.6	-2.4
GUD				S	Sn	22 43 33.7	-6.7
	1.4nm,0.2s,SNR=6.1						
ELAN	**Lanestosa**	**5.48**	**80**	P	Pn	22 42 36.4	-2.2
	0.9nm,0.2s,SNR=7.9						
ELAN				S	Sn	22 43 35.5	-7.8
	0.6nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	**5.48**	**80**	P	Pn	22 42 35.2	-3.4
ELAN				S	Sn	22 43 36.6	-6.7
ELAN	**Lanestosa**	**5.48**	**80**	P	Pn	22 42 35.2	-3.4
ELAN				S	Sn	22 43 36.6	-6.7
EGRO	**El Granado**	**5.64**	**152**	P	Pn	22 42 37.6	-3.3
	0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	22 43 37.2	-10
	1.4nm,0.3s,SNR=7.9						
EGRO	**El Granado**	**5.64**	**152**	P	Pn	22 42 38.5	-2.4
EGRO				S	Sn	22 43 37.2	-10
EGRO	**El Granado**	**5.64**	**152**	P	Pn	22 42 38.5	-2.4
EMIN	**Mina Concepcio**	**5.75**	**145**	P	Pn	22 42 38.7	-3.7
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	22 43 41.1	-9.1
	1.1nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.75**	**145**	P	Pn	22 42 39.5	-3.0
EMIN				S	Sn	22 43 41.1	-9.1
EMIN	**Mina Concepcio**	**5.75**	**145**	P	Pn	22 42 39.5	-3.0
ESDC	**Sonseca Array**	**5.94**	**117**	P	Pn	22 42 41.9	-3.2
	1.0nm,0.1s,baz=303,slow=12,SNR=8.0						
ESDC				S	Sn	22 43 46.9	-7.9
	0.1nm,0.3s,baz=300,slow=22,SNR=11						
ESDC	**Sonseca Array**	**5.94**	**117**	P	Pn	22 42 42.5	-2.6
ESDC				S	Sn	22 43 47.8	-7.0
ESDC	**Sonseca Array**	**5.94**	**117**	P	Pn	22 42 41.9	-3.2
	1.0nm,0.1s,SNR=8.0						
ESDC				S	Sn	22 43 47.8	-7.0
EADA	**Adamuz**	**6.49**	**131**	P	Pn	22 42 49.7	-3.1
	0.2nm,0.1s,SNR=7.9						
EADA				S	Sn	22 43 59.5	-9.1
	1.3nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.49**	**131**	P	Pn	22 42 49.5	-3.4
EADA				S	Sn	22 43 59.5	-9.1
EADA	**Adamuz**	**6.49**	**131**	P	Pn	22 42 49.7	-3.1
	0.2nm,0.1s,SNR=7.9						
EQES	**Quesada**	**7.61**	**126**	S	Sn	22 44 27.1	-9.4
	SNR=4.0						
ETOB	**Tobarra**	**8.08**	**116**	S	Sn	22 44 39.1	-9.1
	SNR=4.0						
EMOS	**Mosqueruela**	**8.09**	**102**	P	P	22 43 12.4	-2.9
	0.1nm,0.1s,SNR=4.0						
EMOS				S	Sn	22 44 38.3	-10
	0.3nm,0.2s,SNR=4.0						
EMOS	**Mosqueruela**	**8.09**	**102**	P	P	22 43 12.4	-2.9
	0.1nm,0.1s,SNR=4.0						
EBIE	**Bielsa**	**8.10**	**85**	P	P	22 43 11.8	-3.6
	0.1nm,0.1s,SNR=7.9						
EBIE				S	Sn	22 44 37.7	-11
	0.2nm,0.1s,SNR=4.0						
EBIE	**Bielsa**	**8.10**	**85**	P	P	22 43 11.8	-3.6
	0.1nm,0.1s,SNR=7.9						

JMA 20 22:44:44.0±0.2**, 38.21N**×**144.63E, h57^{km}, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.48**	**291**	P	P	22 45 23.1	+0.2
MIYJ	**Miyakonagasawa**	**2.58**	**303**	P	P	22 45 24.4	0.0
MIYJ				S	S	22 45 54.5	-0.2
JIO	**Ouri**	**2.59**	**276**	P	P	22 45 24.7	+0.2
JIO				S	S	22 45 55.1	+0.2
JMK	**Ichinoseki**	**2.77**	**287**	P	P	22 45 27.5	+0.4
JOT	**Ohata**	**4.20**	**320**	*e*S	S	22 46 33.1	-2.4
JCH	**Churui**	**4.50**	**348**	P	P	22 45 49.7	-1.7
JCH				S	S	22 46 38.8	-4.3
JRY	**Ryogami san**	**5.07**	**246**	P	P	22 45 58.5	-0.9
JRY				S	S	22 46 53.9	-3.5
JTKR	**Abashiri--Toko**	**5.78**	**355**	P	P	22 46 06.7	-2.5
JTKR				*e*S	S	22 47 08.8	-6.2

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*IDC **20** 23:02:44.8±3.3, 47.36N×154.23E, mb3.8/6, mb1 4.0/6, mb1mx3.6/21, mbtmp3.8/6, MS2.8/1, Ms1 2.8/1, ms1mx2.3/38, Error ellipse: s-maj=91.2km s-min=29.3km az=179.0*

*NEIC **20** 23:02:48.9±2.5, 48.17N×154.21E, h10^{km}, mb3.9/3, Error ellipse: s-maj=76.8km s-min=18.5km az=178.0*

ISC 20 23:02:48.7±1.5**, 47.5N**±0.3×**154.0E**±0.2**, h33^{km}, n19, σ0^{s}83**/18**, mb4.3**/12**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**16.03**	**233**	LR	LR	23 12 48.2	
	comp=Z,40nm,21.2s,baz=60,slow=38						
INK	**Inuvik**	**40.68**	**33**	P	**P**	**23 10 25.2**	**-1.9**
	0.7nm,0.6s,mb3.5,baz=280,slow=12,SNR=7.4						
INK	**Inuvik**	**40.68**	**33**	*e*P	**P**	**23 10 23.4**	**-3.7**
	0.7nm,0.5s,mb3.5						
MKAR	**Makanchi Array**	**47.14**	**297**	P	**P**	**23 11 18.9**	**-0.3**
	0.5nm,0.5s,mb3.7,baz=70,slow=7.1,SNR=8.5						
KURK	**Kurchatov**	**47.46**	**303**	*e*P	**P**	**23 11 21.0**	**-0.7**
CHKZ	**Chkalovo**	**50.41**	**310**	*e*P	**P**	**23 11 43.5**	**-1.1**
	3.1nm,0.7s,mb4.5						
BVAR	**Borovoye Array**	**50.85**	**309**	P	**P**	**23 11 48.0**	**+0.2**
	0.6nm,0.4s,mb3.9,baz=55,slow=7.9,SNR=9.8						
BRVK	**Borovoye**	**50.89**	**309**	*e*P	**P**	**23 11 48.0**	**-0.2**
	0.6nm,0.5s,mb3.8						
GUN	**Gumba**	**55.55**	**275**	*e*P	**P**	**23 12 22.4**	**-0.6**
	5.8nm,0.5s,mb4.9						
KKN	**Kakani**	**56.03**	**275**	*e*P	**P**	**23 12 26.5**	**+0.1**
DMN	**Daman**	**56.27**	**275**	*e*P	**P**	**23 12 28.6**	**+0.5**
	12nm,0.6s,mb5.1						
GKN	**Gorkha**	**56.33**	**276**	*e*P	**P**	**23 12 28.6**	**0.0**
	13nm,0.6s,mb5.2						
KOLN	**Koldanda**	**57.18**	**277**	*e*P	**P**	**23 12 35.0**	**+0.3**
	3.2nm,0.2s,mb4.9						
FINES	**FINESS Array B**	**63.61**	**335**	P	**P**	**23 13 19.2**	**+1.3**
	1.6nm,0.6s,mb4.2,baz=31,slow=8.1,SNR=13						
NB2	**NORSAR Subarra**	**67.70**	**341**	P	**P**	**23 13 45.7**	**+1.6**
	3.2nm,1.1s,mb4.3,baz=27,slow=6.5						
NOA	**NORSAR Array B**	**67.70**	**341**	P	**P**	**23 13 45.7**	**+1.7**
	0.7nm,0.6s,mb3.9,baz=28,slow=6.6,SNR=3.9						
NOA	**NORSAR Array B**	**67.70**	**341**	P	**P**	**23 13 45.7**	**+1.7**
TXAR	**Lajitas Array**	**76.58**	**61**	P	**P**	**23 14 37.5**	**+0.1**
	0.3nm,0.6s,mb3.4,baz=315,slow=5.1,SNR=4.6						
TXAR	**Lajitas Array**	**76.58**	**61**	P	**P**	**23 14 37.5**	**+0.1**

SKHL 20 23:03:45.3±0.2**, 53.05N**×**135.12E, h9^{km}**±1^{km}**, mb3.7**/3**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKMR	**Ekimchan**	**1.31**	**272**	*e*Pg	Pg	23 04 08.3	-3.2
EKMR				AMB	AMB	23 04 10.3	
	25nm,0.5s						
EKMR				sPg		23 04 13.1	
EKMR				*e*Sg	Sg	23 04 25.2	-3.8
EKMR				A		23 04 29.0	
	320nm,0.4s						
GRNR	**Gornyy**	**2.42**	**160**	*e*Pg	Pg	23 04 29.0	-4.7
GRNR				AMB	AMB	23 04 30.1	
	38nm,0.4s						
GRNR				*e*Sg	Sg	23 05 00.5	-5.5
GRNR				A		23 05 01.5	
	137nm,0.5s						
NKL	**Nikolayevsk**	**3.35**	**86**	*e*Sg	Sg	23 05 30.0	-7.0
NKL				A		23 05 32.6	
	44nm,0.5s						
BMKR	**Bomnak**	**4.07**	**297**	*e*Pg	Pg	23 05 00.0	-6.6
BMKR				AMB	AMB	23 05 03.7	
	5.0nm,0.7s						
BMKR				sPg		23 05 05.4	
BMKR				*e*Sg	Sg	23 05 52.0	-8.8
BMKR				A		23 05 58.9	
	11nm,0.5s						
YASR	**Yasnyy**	**4.30**	**276**	*e*Pg	Pg	23 05 03.5	-7.7
YASR				pPg		23 05 06.8	
YASR				*e*Sg	Sg	23 06 00.5	-8.1
YASR				A		23 06 09.7	
	25nm,0.5s						
KLR	**Kul'dur**	**4.37**	**210**	*e*Sg	Sg	23 06 05.0	-5.9
ZEA	**Zeya**	**4.76**	**281**	*e*Sg	Sg	23 06 14.0	-10
ZEA				A		23 06 18.7	
	29nm,0.7s						
KROS	**Kirovskiy**	**5.03**	**289**	*e*rx	rx	23 05 20.5	
KROS				*e*Sg	Sg	23 06 23.5	-9.3
KROS				A		23 06 33.1	
	13nm,0.5s						

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*NEIC **20** 23:16:36.3±0.7, 25.50N×124.17E, h143^{km}±7^{km}, mb4.2/6, Error ellipse: s-maj=10.0km s-min=8.5km az=49.0*

*IDC **20** 23:16:36.5±0.8, 25.49N×124.32E, h147^{km}±7^{km}, mb3.6/11, mb1 3.8/12, mb1mx3.7/22, mbtmp4.1/12, Error ellipse: s-maj=15.5km s-min=12.3km az=7.0*

*JMA **20** 23:16:36.3±0.2, 25.35N×124.12E, h138^{km}±4^{km}, M4.2*

ISC 20 23:16:34.6±0.3**, 25.43N**±0.06×**124.15E**±0.05**, h143^{km}**±5^{km}**, h147^{km}**±4.5^{km}**:pP-P, n38, σ0^{s}89**/54**, mb3.9**/16**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	**Tarama**	**0.93**	**147**	P	**P**	**23 16 59.1**	**+0.8**
JTJ				S	**S**	**23 17 16.3**	**-0.2**
JIJ	**Ishigaki jima**	**1.06**	**180**	P	**P**	**23 16 59.5**	**+0.1**
JIJ				S	**S**	**23 17 17.3**	**-1.2**
IRIF	**Iriomote-Funau**	**1.15**	**199**	P	**P**	**23 17 00.5**	**+0.2**
IRIF				S	**S**	**23 17 19.7**	**-0.4**
JKRS	**Kuro-shima**	**1.19**	**186**	P	**P**	**23 17 01.1**	**+0.4**
JKRS				S	**S**	**23 17 20.3**	**-0.5**
JMJ	**Miyako jima 2**	**1.20**	**120**	P	**P**	**23 17 01.9**	**+1.1**
JMJ				S	**S**	**23 17 21.1**	**+0.1**
JOGS	**Gusukube**	**1.32**	**120**	P	**P**	**23 17 03.5**	**+1.5**
JOGS				S	**S**	**23 17 23.4**	**+0.3**
HATJ	**Hateruma jima**	**1.40**	**193**	P	**P**	**23 17 03.1**	**+0.2**
HATJ				S	**S**	**23 17 23.4**	**-1.2**
YOJ	**Yonaguni jima**	**1.41**	**227**	P	**P**	**23 17 03.8**	**+0.8**
YOJ				S	**S**	**23 17 23.6**	**-1.3**
TATO	**Taipei**	**2.45**	**260**	*e*P	**P**	**23 17 16.9**	**+1.6**
JKE	**Kume jima 2**	**2.54**	**69**	P	**P**	**23 17 17.4**	**+1.0**
JKE				S	**S**	**23 17 49.7**	**+1.3**
JAGN	**Aguni-jima**	**3.01**	**67**	P	**P**	**23 17 23.8**	**+1.2**
JAGN				*e*S	**S**	**23 17 59.6**	**+0.4**
NAH1	**Naha**	**3.28**	**76**	P	**P**	**23 17 27.3**	**+1.2**
NAH1				*e*S	**S**	**23 18 04.3**	**-1.2**
JJT2	**Tamagusuku 2**	**3.32**	**77**	P	**P**	**23 17 27.6**	**+1.0**
JJT2				S	**S**	**23 18 06.0**	**-0.4**
JIH	**Iheya**	**3.78**	**64**	P	**P**	**23 17 33.0**	**+0.3**
JIH				*e*S	**S**	**23 18 13.6**	**-3.7**
JOW	**Kunigami**	**3.96**	**68**	P	**P**	**23 17 35.0**	**-0.1**
	40nm,0.3s,baz=213,slow=8.7,SNR=64						
JOW				S	**S**	**23 18 18.3**	**-3.2**
	30nm,0.3s,baz=121,slow=25,SNR=7.0						
JOW	**Kunigami**	**3.96**	**68**	P	**P**	**23 17 34.8**	**-0.2**
JOW				S	**S**	**23 18 18.5**	**-3.0**
JTK	**Tokunoshima**	**4.90**	**60**	P	**P**	**23 17 46.9**	**-0.5**
JAM	**Amami Oshima**	**5.71**	**57**	P	**P**	**23 17 56.8**	**-1.4**
JMZ	**Minamidaito 2**	**6.39**	**85**	P	**P**	**23 18 05.3**	**-2.2**
JMZ				S	**S**	**23 19 12.9**	**-6.8**
LZH	**Lanzhou**	**20.39**	**306**	*e*P	**P**	**23 21 10.1**	**+8.2**
	22nm,1.6s						
LZH				pP		23 21 18.0	
LZH				sP		23 21 21.0	
ULN	**Ulaanbaatar**	**26.15**	**333**	*e*P	**P**	**23 21 57.6**	**+0.5**
	0.8nm,0.5s,mb3.6						
SONM	**Songino Array**	**26.39**	**332**	P	**P**	**23 21 59.7**	**+0.4**
	0.8nm,0.6s,mb3.5,baz=153,slow=11,SNR=12						
SONM				pP	pP	23 22 32.0	+3.0
	1.1nm,0.8s,baz=150,slow=8.9,SNR=4.9						
MKAR	**Makanchi Array**	**39.38**	**314**	P	**P**	**23 23 51.8**	**+0.2**
	1.9nm,0.4s,mb4.0,baz=98,slow=9.1,SNR=40						
MKAR				pP	pP	23 24 24.4	+1.0
	1.9nm,0.7s,baz=106,slow=12,SNR=4.7						
KURK	**Kurchatov**	**42.92**	**318**	*e*P	**P**	**23 24 20.4**	**-0.1**
	3.2nm,0.8s,mb4.0						
WRAB	**Tennant Creek**	**46.17**	**167**	*e*P	**P**	**23 24 47.6**	**+0.8**
	5.7nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**46.17**	**167**	P	**P**	**23 24 47.6**	**+0.8**
	3.5nm,0.6s,mb4.1,baz=348,slow=8.6,SNR=31						
WRA				pP	pP	23 25 18.1	-1.1
	0.5nm,0.5s,baz=346,slow=8.7,SNR=2.3						
WB2	**Warramunga Arr**	**46.17**	**167**	*e*P	**P**	**23 24 47.5**	**+0.6**
BVAR	**Borovoye Array**	**48.45**	**319**	P	**P**	**23 25 04.3**	**+0.1**
	1.4nm,0.4s,mb3.9,baz=104,slow=8.0,SNR=29						
BVAR				pP	pP	23 25 38.5	+1.6
	0.4nm,0.5s,baz=79,slow=7.6,SNR=1.6						
BVAR				PcP	PcP	23 26 28.5	0.0
	1.5nm,0.5s,baz=106,slow=3.0,SNR=12						
BRVK	**Borovoye**	**48.52**	**319**	*e*P	**P**	**23 25 04.5**	**-0.3**
	2.4nm,0.8s,mb3.9						
ARU	**Arti**	**55.76**	**322**	*e*P	**P**	**23 25 57.6**	**-1.0**
	7.0nm,0.6s,mb4.7						
ILAR	**Eielson Array**	**66.87**	**28**	P	**P**	**23 27 12.7**	**-0.3**
	0.2nm,0.4s,mb3.3,baz=273,slow=4.3,SNR=6.1						
ARCES	**ARCESS Array B**	**69.39**	**338**	P	**P**	**23 27 28.5**	**+0.1**
	4.7nm,1.0s,mb4.2,baz=72,slow=7.7,SNR=5.0						
INK	**Inuvik**	**71.06**	**23**	P	**P**	**23 27 38.1**	**-0.4**
	0.7nm,0.7s,mb3.5,baz=254,slow=2.1,SNR=4.5						
FINES	**FINESS Array B**	**71.73**	**330**	P	**P**	**23 27 42.4**	**-0.2**
	0.6nm,0.3s,mb3.7,baz=49,slow=6.0,SNR=14						
ATD	**Arta Tunnel**	**77.36**	**277**	P	**P**	**23 28 15.5**	**-0.2**
	4.1nm,0.5s,mb4.3,baz=323,slow=5.1						
NB2	**NORSAR Subarra**	**78.37**	**333**	P	**P**	**23 28 20.2**	**-0.1**
	1.4nm,0.8s,mb3.6,baz=52,slow=5.6						
NOA	**NORSAR Array B**	**78.37**	**333**	P	**P**	**23 28 19.4**	**-0.9**
	0.9nm,0.7s,mb3.5,baz=54,slow=5.6,SNR=3.9						
GERES	**GERESS Array B**	**83.58**	**321**	P	**P**	**23 28 46.7**	**-1.1**
	0.5nm,0.7s,mb3.4,baz=63,slow=3.0,SNR=4.9						

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*NEIC **20** 23:16:52.9, 31.44S×68.30W, h150^{km}, MD3.4(GUC), After GUC.*

GUC 20 23:16:52.9±0.6**, 31.44S**×**68.30W, h150^{km}, MD3.4, ML3.6, 2C-2D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JACH	**Jahuel**	**2.31**	**237**	*e*P	P	23 17 32.9	+0.7
CMCH	**Combarbala**	**2.33**	**276**	⇓*i*P	P	23 17 32.4	-0.1
CMCH				*i* S	S	23 18 02.4	-0.3
CMCH				AMP		23 18 03.9	
	comp=N,783nm,0.5s						
TLL	**Tololo Astrono**	**2.50**	**300**	⇓*i*P	P	23 17 35.2	+0.6
TLL				*i* S	S	23 18 07.4	+0.9
TLL				AMP		23 18 12.7	
	comp=N,198nm,0.5s						
FCH	**Farellones**	**2.52**	**221**	*e*P	P	23 17 35.6	+0.7
FCH				*i* S	S	23 18 09.5	+2.4
FCH				AMP		23 18 18.0	
	comp=N,62nm,0.3s						
ROCH	**El Roble**	**2.76**	**236**	⇑*i*P	P	23 17 37.8	0.0
RCDM	**Rinconada Maip**	**2.94**	**225**	*i* P	P	23 17 40.3	+0.1
RCDM				*i* S	S	23 18 16.6	+0.2
CHCH	**Chadas Angostu**	**3.18**	**218**	⇑*i*P	P	23 17 43.3	0.0

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*NEIC **20** 23:38:00.4, 32.57S×71.71W, h27^{km}, ML2.6(GUC), After GUC.*

GUC 20 23:38:00.4±0.9**, 32.57S**×**71.71W, h27^{km}**±6^{km}**, MD3.5, ML2.6, 5C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.46**	**173**	*e*P	Pb	23 38 10.0	0.0
IHA				*i* S	Sb	23 38 16.7	+0.1
CHNG	**Los Chungos**	**0.70**	**14**	⇑*i*P	Pb	23 38 13.4	-0.6
CHNG				*i* S	Sb	23 38 23.1	-0.3
CHNG				AMP		23 38 23.5	
	comp=E,170nm,0.3s						
ROCH	**El Roble**	**0.71**	**125**	*i* P	Pb	23 38 14.0	-0.1
LCCH	**Las Cruces**	**0.91**	**173**	*e*P	Pb	23 38 16.9	-0.7
LCCH				*i* S	Sb	23 38 28.7	-0.6
JACH	**Jahuel**	**0.95**	**97**	⇑*i*P	Pn	23 38 17.5	-0.5
JACH				*i* S	Sb	23 38 30.4	+0.2
PEL	**Peldehue**	**1.03**	**124**	⇑*i*P	Pn	23 38 19.1	-0.1
PEL				*i* S	Sb	23 38 32.8	0.0
RCDM	**Rinconada Maip**	**1.19**	**141**	*e*P	Pn	23 38 21.6	+0.1
RCDM				*i* S	Sn	23 38 37.5	+0.6
RCDM				AMP		23 38 40.2	
	comp=E,207nm,0.1s						
TACH	**Talagante**	**1.26**	**149**	⇑*i*P	Pn	23 38 22.9	+0.4
TACH				*i* S	Sn	23 38 38.6	0.0
LNV	**Longovilo**	**1.41**	**170**	⇑*i*P	Pn	23 38 24.2	-0.4
LNV				*i* S	Sn	23 38 42.8	+0.4
FCH	**Farellones**	**1.41**	**123**	*e*P	Pn	23 38 24.9	+0.2
FCH				*i* S	Sn	23 38 44.0	+1.5
FCH				AMP		23 38 46.4	
	comp=N,122nm,0.5s						
PCH	**Pirque**	**1.45**	**137**	⇓*i*P	Pn	23 38 26.0	+0.8
CMCH	**Combarbala**	**1.51**	**24**	*i* P	Pn	23 38 26.5	+0.3
CMCH				*i* S	Sn	23 38 46.5	+1.4
CMCH				AMP		23 38 51.4	
	comp=N,628nm,0.7s						
CHCH	**Chadas Angostu**	**1.62**	**147**	⇓*i*P	Pn	23 38 28.6	+0.9
CICH	**Cipreses**	**2.05**	**149**	⇓*i*P	Pn	23 38 34.4	+0.6
SFDO	**San Fernando**	**2.12**	**164**	*e*P	Pn	23 38 35.5	+0.6

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*CSEM **20** 23:51:58.3±0.1, 44.42N×43.69E, h2^{km}, mb4.1/1, Error ellipse: s-maj=2.8km s-min=1.8km az=128.0*

*MOS **20** 23:51:59.1±0.8, 44.44N×43.51E, h16^{km}, mb4.3/1, Error ellipse: s-maj=10.4km s-min=5.3km az=91.3*

MOS Felt (III-IV) at Georgiyevsk.

*NEIC **20** 23:52:00.8±1.0, 44.30N×43.56E, h12^{km}±9^{km}, mb4.1/1, Error ellipse: s-maj=9.4km s-min=7.8km az=79.0*

NEIC Felt [IV] at Georgiyevsk.

*IDC **20** 23:52:00.2±0.8, 44.22N×43.50E, mb3.4/3, mb1 3.6/8, mb1mx3.4/23, mbtmp3.6/8, ML3.0/4, MS2.9/4, Ms1 2.9/4, ms1mx2.6/20, Error ellipse: s-maj=13.7km s-min=10.0km az=84.0*

*TIF **20** 23:52:01.3, 44.25N×43.49E, h12^{km}±2^{km}*

*NNC **20** 23:52:09.8±11.0, 44.65N×44.19E, h46^{km}±87^{km}, Error ellipse: s-maj=115.4km s-min=89.1km az=126.0*

ISC 20 23:51:58.1±0.6**, 44.42N**±0.03×**43.61E**±0.05**, h3^{km}**±5^{km}**, n54, σ1^{s}02**/66**, mb3.6**/3**, MS2.7**/2**, 3C-4D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUBR	**Kubataba**	**0.64**	**193**	*i* Pg	**Pg**	**23 52 10.6**	**-0.3**
BEYR	**Belyy Ugol+**	**0.70**	**234**	*i* Pg	**Pg**	**23 52 12.5**	**+0.4**
GOF	**Gofitskoye**	**0.76**	**328**	*i* PG	**Pg**	**23 52 18.4**	**+5.2**
GOF				pmax	pmax		
	comp=Z,540nm,1.0s						
GOF	**Gofitskoye**	**0.76**	**328**	*i* Pg	**Pg**	**23 52 18.4**	**+5.2**
	comp=Z,540nm,1.0s						
KIV0	**Kislovodsk Arr**	**0.80**	**235**	*i* Pg	**Pg**	**23 52 14.7**	**+0.5**
KIV	**Kislovodsk**	**0.81**	**235**	⇓*e*PG	**Pg**	**23 52 14.7**	**+0.4**
KIV				*e*S	**Sg**	**23 52 25.0**	**-0.1**
KIV	**Kislovodsk**	**0.81**	**235**	⇓*e*Pg	**Pg**	**23 52 14.6**	**+0.3**
KIV				*e*Sg	**Sg**	**23 52 25.0**	**-0.1**
PRTR	**Priterechnaya**	**0.83**	**144**	*i* PG	**Pg**	**23 52 16.1**	**+1.4**
SHAR	**Shatzhatmas**	**0.96**	**225**	*i* PG	**Pg**	**23 52 17.1**	**-0.2**
TRKR	**Terskaya**	**1.07**	**130**	*i* PG	**Pg**	**23 52 21.3**	**+1.8**
LSNR	**Lesken**	**1.16**	**172**	*i* PG	**Pg**	**23 52 20.9**	**-0.4**
KMSR	**Komsomolskaya**	**1.16**	**154**	*i* PG	**Pg**	**23 52 21.9**	**+0.6**
ARNR	**Ardon**	**1.33**	**158**	*i* PG	**Pg**	**23 52 24.8**	**+0.2**
KORR	**Kora**	**1.38**	**166**	*i* PG	**Pg**	**23 52 24.9**	**-0.7**
DIGR	**Digorskoe uzhe**	**1.52**	**181**	*i* PG	**Pg**	**23 52 26.2**	**-2.3**
LACR	**Lac**	**1.67**	**162**	*i* PN	**Pn**	**23 52 28.6**	**+0.1**
ONI	**Oni**	**1.85**	**184**	P	**Pn**	**23 52 31.8**	**+0.8**
ONI				S	**Sn**	**23 52 54.4**	**-0.6**
TBLG	**Delisi**	**2.82**	**162**	*e*Pn	**Pn**	**23 52 45.4**	**+0.6**
TBLG	**Delisi**	**2.82**	**162**	P	**Pn**	**23 52 45.3**	**+0.5**
TBLG				S	**Sn**	**23 53 18.9**	**-0.7**
TI2	**Plekhanov**	**2.82**	**162**	*e*PN	**Pn**	**23 52 45.4**	**+0.6**
TI2	**Plekhanov**	**2.82**	**162**	⇓*i*P	**Pn**	**23 52 45.4**	**+0.6**
	comp=Z,10.0nm,0.2s						
MTA	**Mtatsminda**	**2.86**	**162**	P	**Pn**	**23 52 46.0**	**+0.5**
MTA				S	**Sn**	**23 53 15.0**	**-5.9**
SOC	**Sochi**	**2.93**	**255**	*e*Pn	**Pn**	**23 52 51.3**	**+4.9**
MAK	**Makhachkala**	**3.18**	**116**	*e*Pn	**Pg**	**23 53 01.0**	**-0.7**
DGRG	**David-gareji**	**3.24**	**156**	P	**Pn**	**23 52 51.1**	**+0.3**
DGRG				S	**Sn**	**23 53 23.6**	**-6.8**
GNI	**Garni**	**4.35**	**168**	Pn	**Pn**	**23 53 07.5**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=354,slow=10,SNR=5.5						
GNI				Pg	**Pg**	**23 53 17.1**	**-8.0**
	comp=Z,1.6nm,0.3s,baz=7.6,slow=6.2,SNR=13						
GNI				Lg		23 54 12.8	

	comp=Z,2.7nm,0.3s,baz=142,slow=17,SNR=3.5						
GNI				LR	LR	23 55 04.8	
	comp=Z,110nm,18.4s,baz=291,slow=44						
GNI	**Garni**	**4.35**	**168**	*e*PN	**Pn**	**23 53 07.4**	**+0.7**
GNI						23 53 17.1	
GNI						23 54 12.8	
GNI	**Garni**	**4.35**	**168**	Pg	**Pg**	**23 53 17.1**	**-7.9**
ORR	**Orenburg**	**10.36**	**42**	*i* P	**P**	**23 54 29.9**	**-0.7**
ORR				*i*		23 56 21.3	
ORR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKTK	**Aktyubinsk**	**11.46**	**53**	Pn	**P**	**23 54 44.5**	**-1.1**
AKTK				Sn	**S**	**23 56 48.9**	**-6.3**
AKTK	**Aktyubinsk**	**11.46**	**53**	P	**P**	**23 54 44.5**	**-1.1**
AKTK				S	**S**	**23 56 48.9**	**-6.3**
AKTO	**Aktyubinsk**	**11.46**	**53**	⇑P	**P**	**23 54 44.0**	**-1.5**
	comp=Z,0.5nm,0.4s						
AKTO				⇓S	**S**	**23 56 44.1**	**-11**
	comp=Z,1.1nm,0.7s						
AKTO	**Aktyubinsk**	**11.46**	**53**	Pn	**P**	**23 54 44.5**	**-1.1**
	comp=Z,1.3nm,0.3s,baz=240,slow=8.4,SNR=23						
AKTO				Sn	**S**	**23 56 48.9**	**-6.3**
	comp=Z,0.6nm,0.3s,baz=56,slow=22,SNR=6.4						
AKASG	**Malin Array Be**	**11.56**	**308**	Pn	**P**	**23 54 44.2**	**-2.7**
	comp=Z,0.5nm,0.3s,baz=114,slow=11,SNR=7.7						
OBN	**Obninsk**	**11.62**	**340**	*e*P	**P**	**23 54 49.0**	**+1.2**
OBN				*e*S	**S**	**23 57 00.6**	**+1.4**
OBN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,100nm,13.0s						
OBN	**Obninsk**	**11.62**	**340**	*e*P	**P**	**23 54 49.0**	**+1.2**
	comp=Z,3.0nm,1.2s						
OBN				*e*S	**S**	**23 57 00.6**	**+1.4**
	comp=Z,100nm,13.0s						
AB31	**Akbulak array**	**12.18**	**61**	P	**P**	**23 54 54.1**	**-1.3**
	comp=Z,1.0nm,0.5s,baz=250,slow=11,SNR=26						
AB31				⇑S	**S**	**23 57 06.4**	**-6.5**
	comp=Z,1.4nm,0.4s,baz=252,slow=20,SNR=9.8						
ARU	**Arti**	**15.29**	**33**	*e*P	**P**	**23 55 36.2**	**-0.1**
ARU				*e*S	**S**	**23 58 28.9**	**+1.8**
KLMR	**Klimovskoe**	**16.64**	**353**	*e*P	**P**	**23 55 53.5**	**-0.1**
KLMR				*e*		23 58 50.8	
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.8s						
VRAC	**Vranov**	**19.06**	**294**	LR	LR	00 04 42.2	
	comp=Z,46nm,18.1s,baz=51,slow=40						
KK31	**Karatay Array**	**19.45**	**84**	P	**P**	**23 56 27.9**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=299,slow=11,SNR=26						
BVA0	**Borovoye Array**	**19.56**	**54**	⇑P	**P**	**23 56 21.3**	**-8.2**
	comp=Z,0.7nm,0.9s,baz=273,slow=37,SNR=9.3						
BVAR	**Borovoye Array**	**19.56**	**54**	Pn	**P**	**23 56 29.5**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=257,slow=12,SNR=9.9						
VOSK	**Vostochnaya**	**19.83**	**56**	P	**P**	**23 56 31.9**	**-0.6**
CHKZ	**Chkalovo**	**19.87**	**53**	P	**P**	**23 56 32.7**	**-0.3**
CHKZ	**Chkalovo**	**19.87**	**53**	*e*P	**P**	**23 56 33.4**	**+0.4**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES	**FINESS Array B**	**19.94**	**335**	Pn	**P**	**23 56 31.7**	**-2.0**
	comp=Z,0.7nm,0.6s,baz=153,slow=13,SNR=4.7						
GERES	**GERESS Array B**	**20.93**	**293**	P	**P**	**23 56 43.3**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=90,slow=11,SNR=4.1						
AAK	**Ala-Archa**	**22.41**	**84**	*e*P	**P**	**23 56 59.4**	**+0.4**
AAK				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.1						
AAK	**Ala-Archa**	**22.41**	**84**	*e*P	**P**	**23 56 59.4**	**+0.4**
	comp=Z,11nm,1.4s,mb4.1						
HFS	**Hagfors**	**23.83**	**322**	P	**P**	**23 57 15.5**	**+2.8**
	comp=Z,1.9nm,0.8s,mb3.6,baz=135,slow=14,SNR=3.0						
NOA	**NORSAR Array B**	**25.33**	**322**	LR	LR	00 08 03.7	
	comp=Z,20nm,20.8s,MS2.6,baz=335,slow=38						
ARCES	**ARCESS Array B**	**26.81**	**346**	LR	LR	00 10 10.7	
	comp=Z,27nm,18.9s,MS2.8,baz=210,slow=40						
MKAR	**Makanchi Array**	**26.98**	**71**	P	**P**	**23 57 46.1**	**+3.4**
	comp=Z,0.7nm,0.8s,mb3.2,baz=297,slow=6.4,SNR=2.7						

MOS ***21*** *00:19:37.6±0.9, 6.87S×129.15E, h96^{km}, mb4.9/17, Error ellipse: s-maj=13.2km s-min=6.9km az=114.0*

BJI ***21*** *00:19:41.9, 7.00S×129.20E, h127^{km}, mB5.1, mb4.8*

HRVD ***21*** *00:19:41.9±0.2, 7.05S×129.18E, h160^{km}±1^{km}, MW5.5/77, Centroid moment Tensor Solution. LP body waves: s76,c118;Mantle waves: s77,c156; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}0.11±.04; $M_{\theta\theta}$-2.03±.04; $M_{\phi\phi}$1.92±.04; $M_{r\theta}$0.61±.03; $M_{\theta\phi}$-0.01±.04; $M_{\phi r}$0.66±.04; Best double couple: $M_0$2.17×10^{17} NP1: ϕ_s314°,δ66°,λ178°. NP2:ϕ_s45°,δ88°,λ24°. Principal axes: T 2.142, Plg19°, Azm273°; N .054, Plg65°, Azm50°; P -2.199, Plg15°, Azm177°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***21*** *00:19:41.9±0.8, 6.96S×129.22E, h126^{km}±7^{km}, mb5.2/35 Error ellipse: s-maj=6.4km s-min=4.0km az=61.0*

NEIC Felt at Darwin, Australia.

IDC ***21*** *00:19:46.1±0.5, 6.84S×129.31E, h162^{km}±4^{km}, mb4.6/17, mb1 4.7/18, mb1mx4.7/20, mbtmp5.1/18, MS4.3/13, Ms1 4.3/13, ms1mx4.1/23, Error ellipse: s-maj=12.9km s-min=7.2km az=53.0*

ISC 21 00:19:43.3±0.2**, 7.01S**±0.03×**129.28E**±0.05**, h153**^{km}**, h153**^{km}±2.7^{km}**:pP-P, n215,** σ1^s**15**/185**, mb5.0**/62**, 13C-25D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**6.46**	**151**	⇓*i*P	Px	00 21 37.0	
	435nm,0.1s						
KAKA				*e*S	Sx	00 22 30.0	
KNA	**Kununurra**	**8.70**	**183**	⇓*i*P	**P**	**00 21 45.7**	**-1.2**
	2μm,0.9s						
KNA				*e*S	**S**	**00 23 15.6**	**-7.9**
FITZ	**Fitzroy Crossi**	**11.58**	**197**	⇓*i*P	**P**	**00 22 22.4**	**-2.5**
	401nm,0.5s						
FITZ				*e*S	**S**	**00 24 23.5**	**-8.1**
FITZ	**Fitzroy Crossi**	**11.58**	**197**	P	**P**	**00 22 22.9**	**-1.9**
	56nm,0.3s,baz=29,slow=12,SNR=365						
FITZ				S	**S**	**00 24 24.8**	**-6.8**
	192nm,0.3s,baz=258,slow=22,SNR=6.1						
FITZ				LR	LR	00 27 38.8	
	comp=Z,3μm,18.5s,baz=16,slow=40						
WRAB	**Tennant Creek**	**13.76**	**160**	*e*Pn	**P**	**00 22 50.6**	**-2.4**
	4μm,1.1s						
WRAB				*e*Sn	**S**	**00 25 15.4**	**-7.0**
WRAB	**Tennant Creek**	**13.76**	**160**	*e*P	**P**	**00 22 50.7**	**-2.3**
WRAB				*e*		00 25 15.4	
WRAB				pmax	pmax		
	comp=Z,4μm,1.1s						
WRA	**Warramunga Arr**	**13.76**	**160**	P	**P**	**00 22 50.6**	**-2.5**
	comp=Z,4.7nm,0.3s,baz=336,slow=14,SNR=314						
WRA				S	**S**	**00 25 17.1**	**-5.4**
	comp=Z,195nm,0.3s,baz=333,slow=23,SNR=17						
WB2	**Warramunga Arr**	**13.76**	**160**	⇓*i*P	**P**	**00 22 50.5**	**-2.6**
WB2				*e*S	**S**	**00 25 13.8**	**-8.8**
DAV	**Davao City (W)**	**14.47**	**345**	*e*P	**P**	**00 23 02.0**	**-0.1**
COEN	**Coen**	**15.30**	**118**	⇑*i*P	**P**	**00 23 11.6**	**-1.0**
	comp=Z,139nm,0.3s						
COEN				*e*S	**S**	**00 25 53.0**	**-4.8**
TSM	**Tawau**	**15.99**	**314**	P	**P**	**00 23 24.4**	**+3.3**
ASPA	**Alice Springs**	**17.14**	**165**	*e*P	**P**	**00 23 34.8**	**-0.4**
ASPA				*e*S	**S**	**00 26 38.7**	**-0.4**
TBP	**Tagbilaran**	**17.45**	**342**	*e*P	**P**	**00 23 40.2**	**+1.3**
PMG	**Port Moresby**	**17.86**	**99**	P	**P**	**00 23 43.2**	**-0.4**
	comp=Z,9.4nm,0.3s,baz=290,slow=6.1,SNR=114						
PMG				S	**S**	**00 26 58.4**	**+3.5**
	comp=Z,3.6nm,0.3s,baz=164,slow=21,SNR=6.0						
PMG				LR	LR	00 31 02.2	
	comp=Z,1μm,20.6s,baz=14,slow=38						
PMG	**Port Moresby**	**17.86**	**99**	*e*Pn	**P**	**00 23 43.1**	**-0.4**
	comp=Z,575nm,1.0s						
PMG				*e*Sn	**S**	**00 26 55.6**	**+0.7**
PMG	**Port Moresby**	**17.86**	**99**	*e*P	**P**	**00 23 43.2**	**-0.4**
PMG				*e*		00 26 55.6	
PMG				pmax	pmax		
	comp=Z,575nm,1.0s						
MTSU	**Mount Surprise**	**18.37**	**128**	⇓*i*P	**P**	**00 23 49.5**	**+0.4**
	comp=Z,114nm,0.3s						
KKM	**Kota Kinabalu**	**18.39**	**315**	*e*Pn	**P**	**00 23 49.6**	**+0.3**
KKM	**Kota Kinabalu**	**18.39**	**315**	P	**P**	**00 23 51.1**	**+1.8**
KSM	**Kuching**	**20.72**	**293**	*e*P	**P**	**00 24 12.3**	**-1.0**
CTA	**Charters Tower**	**20.98**	**130**	⇓*i*P	**P**	**00 24 17.9**	**+2.1**
CTA				*i* S	**S**	**00 28 02.8**	**+7.3**
CTA	**Charters Tower**	**20.98**	**130**	P	**P**	**00 24 17.9**	**+2.1**
	comp=Z,117nm,0.8s,baz=310,slow=11,SNR=122						
CTA				S	**S**	**00 28 02.3**	**+6.8**
	comp=Z,25nm,0.8s,baz=324,slow=16,SNR=3.7						
CTA				LR	LR	00 32 27.1	
	comp=Z,673nm,19.5s,baz=310,slow=36						
CTAO	**Charters Tower**	**20.98**	**130**	*e*P	**P**	**00 24 17.9**	**+2.0**
	comp=Z,132nm,0.8s						
CTAO				*e*S	**S**	**00 28 06.6**	**+11**
CTAO	**Charters Tower**	**20.98**	**130**	*e*P	**P**	**00 24 17.9**	**+2.1**
CTAO				*e*S	**S**	**00 28 06.6**	**+11**
CTAO				pmax	pmax		
	comp=Z,132nm,0.8s						
MEEK	**Meekatharra**	**22.00**	**206**	*e*P	**P**	**00 24 26.1**	**+0.3**
MEEK				*e*S	**S**	**00 28 29.9**	**+16**
	comp=Z,989nm,1.6s						
MEEK	**Meekatharra**	**22.00**	**206**	*e*P	**P**	**00 24 26.1**	**+0.3**
	comp=Z,989nm,1.6s,mb6.0						
MEEK				*e*S	**S**	**00 28 29.9**	**+16**
TGY	**Tagaytay City**	**22.55**	**338**	P	**P**	**00 24 33.2**	**+1.8**
	comp=Z,416nm,0.7s,mb6.0,baz=238,slow=2.9,SNR=9.5						
FORT	**Forrest**	**23.67**	**183**	⇓*i*P	**P**	**00 24 43.0**	**+1.0**
FORT				*e*S	S	00 29 08.4	+26
	comp=Z,252nm,1.0s						
FORT	**Forrest**	**23.67**	**183**	⇓*i*P	**P**	**00 24 43.0**	**+1.0**
	comp=Z,252nm,1.0s,mb5.7						
FORT				*e*S	S	00 29 08.4	+26
KMBL	**Kambalda**	**25.20**	**195**	*e*P	**P**	**00 24 56.5**	**+0.1**
KMBL				*e*S	S	00 29 42.2	+34
	comp=Z,196nm,0.5s						
KMBL	**Kambalda**	**25.20**	**195**	*e*P	**P**	**00 24 56.5**	**+0.1**
	comp=Z,196nm,0.5s,mb5.9						
KMBL				*e*S	S	00 29 42.2	+34
MORW	**Morawa**	**25.24**	**208**	*e*P	**P**	**00 24 57.0**	**+0.1**
	comp=Z,71nm,0.7s,mb5.3						
MORW				*e*S	S	00 29 42.2	+33
GUMO	**Guam**	**25.66**	**37**	LR	LR	00 33 52.7	
	comp=Z,562nm,19.1s,baz=228,slow=33						
BBOO	**Buckleboo**	**26.43**	**167**	⇓*i*P	**P**	**00 25 07.6**	**-0.2**
	comp=Z,67nm,0.7s,mb5.4						
BBOO				*e*S		00 30 14.3	
KLBR	**Kellerberrin**	**26.72**	**202**	⇓*i*P	**P**	**00 25 10.0**	**-0.4**
	comp=Z,112nm,0.9s,mb5.5						
KLBR				*e*S		00 30 13.8	
RMQ	**Roma**	**26.81**	**139**	⇓*i*P	**P**	**00 25 11.9**	**+0.5**
	comp=Z,96nm,1.0s,mb5.4						
STKA	**Stephens Creek**	**27.28**	**157**	P	**P**	**00 25 15.7**	**+0.1**
	comp=Z,53nm,0.8s,mb5.2,baz=326,slow=8.7,SNR=136						
STKA	**Stephens Creek**	**27.28**	**157**	*e*P	**P**	**00 25 15.4**	**-0.1**
KGM	**Kluang**	**27.41**	**288**	P	**P**	**00 25 19.2**	**+2.2**
MUN	**Mundaring**	**27.67**	**204**	*e*P	**P**	**00 25 18.6**	**-0.5**
MUN				*e*S		00 30 37.6	
EIDS	**Eidsvold**	**27.70**	**134**	⇓*i*P	**P**	**00 25 18.8**	**-0.6**
	comp=Z,8.2nm,0.8s,mb4.5						
EIDS				*e*S		00 31 57.6	
NWAO	**Narrogin (SRO)**	**28.11**	**202**	P	**P**	**00 25 23.3**	**+0.2**
	comp=Z,37nm,0.8s,mb5.2,baz=21,slow=9.8,SNR=15						
NWAO				LR	LR	00 37 41.0	
	comp=Z,1μm,18.0s,baz=148,slow=38						
NWAO	**Narrogin (SRO)**	**28.11**	**202**	*e*P	**P**	**00 25 23.0**	**-0.1**
	comp=Z,101nm,0.9s,mb5.5						
NWAO	**Narrogin (SRO)**	**28.11**	**202**	*e*P	**P**	**00 25 23.0**	**-0.1**
NWAO				pmax	pmax		
	comp=Z,101nm,0.9s						
CMSA	**Cobar Meteorol**	**28.82**	**150**	*e*P	**P**	**00 25 29.6**	**+0.2**
	comp=Z,52nm,1.0s,mb5.2						
CMSA				*e*S		00 31 05.7	
ADE	**Adelaide**	**29.14**	**164**	⇓*i*P	**P**	**00 25 33.1**	**+0.8**
HNR	**Honiara**	**30.45**	**97**	P	**P**	**00 25 43.6**	**-0.4**
	comp=Z,49nm,0.3s,mb5.7,baz=190,slow=7.5,SNR=3.5						
ARMA	**Armidale**	**31.34**	**141**	*e*P	**P**	**00 25 52.7**	**+1.0**
ARPS	**Mount Arapiles**	**31.76**	**161**	⇓*i*P	**P**	**00 25 56.0**	**+0.7**
QIZ	**Qiongzhong**	**32.20**	**324**	P	**P**	**00 26 00.4**	**+1.2**
QIZ				XP	sP	00 26 39.1	-10
QIZ				S	**S**	**00 30 56.1**	**-3.5**
QIZ				AMB	AMB		
	comp=Z,680nm,4.8s						
YNG	**Young**	**32.39**	**150**	⇓*i*P	**P**	**00 26 01.6**	**+0.9**
	comp=Z,70nm,1.1s,mb5.3						
CNB	**Canberra Magne**	**33.67**	**150**	⇓*i*P	**P**	**00 26 12.8**	**+1.1**
TOO	**Toolangi**	**33.80**	**156**	⇓*i*P	**P**	**00 26 14.7**	**+1.9**
SSE	**Sheshan**	**38.67**	**349**	P	**P**	**00 26 55.9**	**+2.0**
SSE				XP	sP	00 27 36.3	-9.2
SSE				PP	PP	00 28 27.0	-0.9
SSE				S	**S**	**00 32 44.3**	**+5.6**
SSE				XS		00 33 31.0	
SSE				SCS	ScS	00 36 53.3	+8.1
SSE				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
SSE				AMB	AMB		
	comp=Z,180nm,5.6s						
SSE				LR	LR		
	comp=N,100nm,22.7s						
SSE				LR	LR		
	comp=E,240nm,22.5s						
SSE				LR	LR		
	comp=Z,140nm,21.2s						
DZM	**Mont Dzumac**	**38.83**	**117**	P	**P**	**00 26 56.7**	**+1.5**
	comp=Z,10nm,0.6s,mb4.6,baz=270,slow=11,SNR=15						
DZM				LR	LR	00 41 08.4	
	comp=Z,584nm,21.6s,baz=22,slow=33						
TAU	**Tasmania Unive**	**39.13**	**159**	*e*P	**P**	**00 26 55.2**	**-2.3**
	comp=Z,98nm,1.6s,mb5.2						
TAU	**Tasmania Unive**	**39.13**	**159**	*e*P	**P**	**00 26 55.2**	**-2.3**
TAU				pmax	pmax		
	comp=Z,98nm,1.6s,mb5.2						
GYA	**Guiyang**	**39.85**	**327**	⇑*i*P	**P**	**00 27 04.3**	**+0.7**
GYA				AP	pP	00 27 35.3	-2.0
GYA				XP	sP	00 27 51.6	-3.8
GYA				PP	PP	00 28 41.3	+0.6
GYA				PCP	PcP	00 29 12.3	+5.3
GYA				S	**S**	**00 32 51.4**	**-5.0**
GYA				XS		00 33 46.6	
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
GYA				AMB	AMB		
	comp=Z,180nm,5.1s						
GYA				LR	LR		
	comp=N,1μm,16.4s						
GYA				LR	LR		
	comp=E,970nm,15.8s						
GYA				LR	LR		
	comp=Z,1μm,16.2s						
WHN	**Wuhan**	**39.99**	**340**	*e*P	**P**	**00 27 05.3**	**+0.6**
KMI	**Kunming**	**41.08**	**322**	P	**P**	**00 27 15.4**	**+1.7**
KMI				AP	pP	00 27 47.8	+0.3
KMI				PP	PP	00 28 56.4	+3.2
KMI				PPP	PPP	00 29 32.0	+5.0
KMI				SCP		00 32 45.8	
KMI				PCS		00 33 00.8	
KMI				S	**S**	**00 33 20.3**	**+5.8**
KMI				SS	SS	00 36 23.8	+5.9
KMI				SSS	SSS	00 37 14.6	+8.1
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
KMI				AMB	AMB		
	comp=Z,240nm,5.2s						
KMI				LR	LR		
	comp=N,510nm,11.3s						
KMI				LR	LR		
	comp=E,440nm,17.2s						
KMI				LR	LR		
	comp=Z,560nm,19.9s						
ENH	**Enshi**	**41.65**	**334**	*e*P	**P**	**00 27 19.3**	**+0.9**
	comp=Z,6.4nm,0.5s,mb4.5						
MAJO	**Matsushiro**	**44.13**	**10**	*e*P	**P**	**00 27 36.7**	**-1.6**
	comp=Z,8.6nm,0.6s,mb4.6						
MAJO	**Matsushiro**	**44.13**	**10**	*e*P	**P**	**00 27 36.7**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
MAT	**Matsushiro**	**44.13**	**10**	P	**P**	**00 27 36.8**	**-1.5**
MAT				S	**S**	**00 33 54.0**	**-4.9**
MAT	**Matsushiro**	**44.13**	**10**	*e*P	**P**	**00 27 37.0**	**-1.3**
	comp=Z,13nm,0.9s,mb4.6						
MAT				*e*S	**S**	**00 33 51.0**	**-7.9**
MAT	**Matsushiro**	**44.13**	**10**	*e*P	**P**	**00 27 37.0**	**-1.3**
MAT				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.6						
MJAR	**Matsushiro Arr**	**44.13**	**10**	P	**P**	**00 27 36.8**	**-1.5**
	comp=Z,7.5nm,0.7s,mb4.5,baz=188,slow=9.7,SNR=16						
MJAR				pP	pP	00 28 12.0	-0.4
	comp=Z,20nm,1.1s,baz=190,slow=8.5,SNR=5.0						
SHL	**Shillong**	**48.68**	**313**	*e*P	**P**	**00 28 14.0**	**-0.2**
SHL				*e*S	**S**	**00 35 10.0**	**+6.5**
LZH	**Lanzhou**	**49.08**	**333**	*e*P	**P**	**00 28 20.1**	**+3.0**
LZH				AP	pP	00 28 52.3	+0.4
LZH				XP	sP	00 29 04.5	-4.3
LZH				PP	PP	00 30 15.0	+2.7
LZH				*e*S	**S**	**00 35 08.3**	**-0.6**
LZH				XS		00 36 02.0	
LZH				*e*SS	SS	00 38 35.0	-3.6
LZH				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.8						
LZH				AMB	AMB		
	comp=Z,140nm,4.2s						
LZH				LR	LR		
	comp=N,910nm,14.4s						
LZH				LR	LR		
	comp=Z,2μm,16.2s						
CN2	**Changchun**	**50.69**	**356**	*e*P	**P**	**00 28 33.3**	**+4.0**
CN2				*e*AP	pP	00 29 03.8	-0.4
CN2				*e*S	**S**	**00 35 38.4**	**+7.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CN2				LR	LR		
	comp=N,350nm,19.0s						
CN2				LR	LR		
	comp=E,330nm,19.0s						
CN2				LR	LR		
	comp=Z,340nm,21.0s						
MDJ	**Mudanjiang**	**51.39**	**0**	P	**P**	**00 28 35.0**	**+0.5**
MDJ				XP	sP	00 29 15.9	-10
MDJ				PCP	PcP	00 29 48.8	+1.7
MDJ				SCP		00 33 33.3	
MDJ				S	**S**	**00 35 40.1**	**-0.5**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb4.1						
MDJ				AMB	AMB		
	comp=Z,40nm,4.1s						
MDJ				LR	LR		
	comp=E,180nm,25.5s						
MDJ				LR	LR		
	comp=Z,160nm,21.8s						
RPZ	**Rata Peaks**	**51.66**	**142**	P	**P**	**00 28 36.9**	**+0.3**
	comp=Z,150nm,0.9s,mb5.6,baz=268,slow=2.1,SNR=24						
RPZ				LR	LR	00 50 15.2	
	comp=Z,482nm,19.2s,baz=301,slow=35						
RPZ	**Rata Peaks**	**51.66**	**142**	P	**P**	**00 28 37.0**	**+0.3**
RPZ				LR	LR	00 50 15.2	
LSA	**Lhasa**	**51.71**	**317**	P	**P**	**00 28 37.4**	**+0.2**
LSA				S	**S**	**00 35 41.5**	**-3.7**
LSA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
LSA				AMB	AMB		
	comp=Z,130nm,4.6s						
LSA				LR	LR		
	comp=N,260nm,16.0s						
LSA				LR	LR		
	comp=E,410nm,19.1s						
LSA				LR	LR		
	comp=Z,200nm,7.0s						
LSA	**Lhasa**	**51.71**	**317**	*e*P	**P**	**00 28 37.6**	**+0.4**
	comp=Z,18nm,0.8s,mb4.8						
LSA	**Lhasa**	**51.71**	**317**	*e*P	**P**	**00 28 37.6**	**+0.4**
LSA				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
URZ	**Urewera**	**53.18**	**133**	P	**P**	**00 28 47.8**	**-0.1**
	comp=Z,13nm,0.6s,mb4.9,baz=248,slow=8.2,SNR=6.5						
URZ				LR	LR	00 49 43.2	
	comp=Z,465nm,18.7s,baz=174,slow=34						
GTA	**Gaotai**	**53.64**	**332**	*e*P	**P**	**00 28 50.8**	**-0.5**
GTA				AP	pP	00 29 20.4	-6.1
GTA				XP	sP	00 29 34.0	-9.3
GTA				PCP	PcP	00 29 53.9	-1.7
GTA				PP	PP	00 30 54.9	-0.1
GTA				PPP	PPP	00 32 07.9	+0.4
GTA				SCP		00 33 39.3	
GTA				PCS		00 33 52.4	
GTA				S	**S**	**00 36 15.4**	**+4.3**
GTA				XS		00 37 07.8	
GTA				SCS	ScS	00 38 23.9	+2.4
GTA				SS	SS	00 39 58.5	+4.9
GTA				AMB	AMB		
	comp=Z,160nm,6.5s						
GTA				LR	LR		
	comp=N,410nm,20.5s						
GTA				LR	LR		
	comp=E,360nm,19.4s						
GTA				LR	LR		
	comp=Z,210nm,14.1s						
GUN	**Gumba**	**54.42**	**312**	⇑*i*P	**P**	**00 28 56.6**	**-0.5**
	comp=Z,196nm,0.9s,mb5.8						
PKI	**Pulchoki**	**54.59**	**311**	*e*P	**P**	**00 28 56.8**	**-1.6**
	comp=Z,31nm,0.4s,mb5.4						
KKN	**Kakani**	**54.80**	**311**	*e*P	**P**	**00 28 58.6**	**-1.3**
	comp=Z,148nm,1.2s,mb5.6						
DMN	**Daman**	**54.84**	**311**	*e*P	**P**	**00 28 59.3**	**-0.9**
	comp=Z,224nm,1.3s,mb5.7						
GKN	**Gorkha**	**55.40**	**311**	*e*P	**P**	**00 29 03.0**	**-1.2**
	comp=Z,95nm,0.3s,mb5.9						
HYB	**Hyderabad**	**55.68**	**297**	*i* P	**P**	**00 29 06.0**	**-0.3**
	comp=Z,50nm,1.0s,mb5.3						
HYB				*e*sP	sP	00 29 49.0	-10
HYB				*e*S	**S**	**00 36 32.0**	**-6.6**
HYB				*e*		00 37 36.0	
HYB	**Hyderabad**	**55.68**	**297**	*e*P	**P**	**00 29 06.0**	**-0.3**
	comp=Z,50nm,1.0s,mb5.3						
HYB	**Hyderabad**	**55.68**	**297**	*e*P	**P**	**00 29 06.0**	**-0.3**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.3						
KLR	**Kul'dur**	**56.05**	**2**	*e*P	**P**	**00 29 07.2**	**-1.4**
KLR				*e*	pP	00 29 42.8	-1.3
KLR				*e*		00 37 20.0	
KOLN	**Koldanda**	**56.06**	**310**	*e*P	**P**	**00 29 07.9**	**-1.1**
	comp=Z,124nm,0.9s,mb5.8						
ULN	**Ulaanbaatar**	**58.06**	**343**	*e*P	**P**	**00 29 22.4**	**-0.3**
	comp=Z,31nm,1.0s,mb5.1						
ULN	**Ulaanbaatar**	**58.06**	**343**	*e*P	**P**	**00 29 22.4**	**-0.3**
ULN				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.1						
SONM	**Songino Array**	**58.23**	**342**	P	**P**	**00 29 23.2**	**-0.7**
	comp=Z,3.1nm,0.5s,mb4.4,baz=156,slow=6.2,SNR=32						
SONM				pP	pP	00 29 59.8	0.0
	comp=Z,11nm,0.9s,baz=157,slow=7.9,SNR=7.1						
SONM				PKP2bc		00 59 13.5	
	comp=Z,1.1nm,1.0s,baz=299,slow=1.6,SNR=5.3						
SONM	**Songino Array**	**58.23**	**342**	P	**P**	**00 29 23.2**	**-0.7**
SONM				pP	pP	00 29 59.8	0.0
SONM				⇑*e*		00 59 13.5	
POO	**Poona**	**60.26**	**296**	*e*x	x	00 29 37.0	
NDI	**New Delhi**	**61.42**	**308**	*e*P	**P**	**00 29 43.0**	**-3.0**
WMQ	**Urumqi**	**63.02**	**327**	P	**P**	**00 29 56.6**	**+0.2**
WMQ				AP	pP	00 30 27.0	-5.7
WMQ				XP	sP	00 30 39.0	-10
WMQ				PPP	PPP	00 33 50.0	0.0
WMQ				SCP		00 34 22.0	
WMQ				*e*S	**S**	**00 38 12.0**	**-0.6**
WMQ				XS		00 39 08.0	
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,170nm,4.3s						
WMQ				LR	LR		
	comp=N,1μm,24.0s						
WMQ				LR	LR		
	comp=E,900nm,21.4s						
WMQ				LR	LR		
	comp=Z,540nm,23.2s						
THN	**Thein Dam**	**64.29**	**311**	*e*P	**P**	**00 30 03.3**	**-1.6**
KSH	**Kashi**	**67.54**	**318**	*e*P	**P**	**00 30 25.0**	**-0.5**
KSH				*e*PCP	PcP	00 30 51.0	-0.4
KSH				*e*AP	pP	00 30 55.0	-7.3
KSH				*e*XP	sP	00 31 09.0	-10
KSH				*e*PP	PP	00 32 56.0	-1.5
KSH				*e*PPP	PPP	00 34 35.1	-0.3
KSH				*e*SCP		00 34 41.3	
KSH				*e*PCS		00 34 54.0	
KSH				*e*S	S	00 39 05.8	-2.1
KSH				*e*PS	PS	00 39 51.0	-4.1
KSH				*e*XS		00 40 02.0	
KSH				*e*SCS	ScS	00 40 07.0	+1.9
KSH				*e*SS	SS	00 43 33.1	+0.1
KSH				AMB	AMB		
	comp=Z,320nm,3.1s						
KSH				LR	LR		
	comp=N,440nm,4.3s						
KSH				LR	LR		
	comp=E,420nm,5.4s						
MKAR	**Makanchi Array**	**67.84**	**327**	P	**P**	**00 30 26.6**	**-0.6**
	comp=E,5.6nm,0.3s,mb4.8,baz=114,slow=8.7,SNR=89						
MKAR				pP	pP	00 31 04.2	+0.2
	comp=E,8.9nm,0.8s,baz=129,slow=7.7,SNR=2.3						
YAK	**Yakutsk**	**68.84**	**0**	*e*P	**P**	**00 30 32.1**	**-0.9**
	comp=E,26nm,0.6s,mb5.2						

YAK	Yakutsk	68.84	0	eP	P	00 30 31.3	-1.7
YAK				e	pP	00 31 07.6	-2.3
YAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
YAK				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
YAK				pmax	pmax		
	comp=N,8.0nm,1.0s						
TKM2	Tokmak 2	69.54	321	P	P	00 30 38.0	+0.4
	SNR=6.0						
UCH	Uchtor	69.87	320	P	P	00 30 44.8	+5.2
	SNR=8.8						
AAK	Ala-Archa	70.09	320	P	P	00 30 43.5	+2.5
	SNR=8.9						
AAK	Ala-Archa	70.09	320	eP	P	00 30 40.3	-0.7
	comp=N,12nm,1.0s,mb4.6						
AAK	Ala-Archa	70.09	320	eP	P	00 30 40.3	-0.6
AAK				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.6						
FRU	Bishkek	70.11	320	eP	P	00 30 41.0	-0.1
FRU				e	pP	00 31 20.0	+1.9
AML	Almayashu	70.35	319	P	P	00 30 43.1	+0.6
	SNR=11						
USP	Ospenovka	70.41	321	P	P	00 30 42.5	-0.4
	SNR=14						
EKS2	Erkin-Say	70.56	320	P	P	00 30 46.3	+2.5
	SNR=11						
ZAL	Zalesovo	71.28	334	P	P	00 30 47.0	-0.9
	comp=Z,5.3nm,0.6s,mb4.5,baz=340,slow=6.1,SNR=25						
ZAL				pP	pP	00 31 25.0	0.0
	comp=Z,5.5nm,0.8s,baz=337,slow=4.1,SNR=3.7						
ZAL				S	S	00 39 46.8	-4.5
	comp=Z,0.7nm,0.4s,baz=90,slow=24,SNR=9.0						
ZAL				LR	LR	01 00 33.7	
	comp=Z,166nm,21.6s,baz=72,slow=34						
ZAL	Zalesovo	71.28	334	P	P	00 30 47.0	-0.9
ZAL				pP	pP	00 31 25.0	0.0
ZAL				S	S	00 39 46.8	-4.5
ZAL				LR	LR	01 00 33.7	
KURK	Kurchatov	72.16	329	eP	P	00 30 51.6	-1.5
	comp=Z,30nm,1.0s,mb5.0						
KURK	Kurchatov	72.16	329	eP	P	00 30 51.6	-1.5
KURK				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.0						
VNDA	Vanda	72.52	173	eP	P	00 30 54.8	0.0
	comp=Z,19nm,1.0s,mb4.8						
VNDA	Vanda	72.52	173	eP	P	00 30 54.8	0.0
VNDA				pmax	pmax		
	comp=Z,19nm,1.0s						
NVS	Novosibirsk	72.56	334	i P	P	00 30 53.4	-2.0
NVS				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.6						
NVS				pmax	pmax		
	comp=N,15nm,1.6s						
NVS				pmax	pmax		
	comp=E,14nm,1.7s						
SBA	Scott Base	73.42	172	eP	P	00 31 01.0	+0.9
	comp=E,16nm,0.9s,mb4.8						
SBA	Scott Base	73.42	172	eP	P	00 31 01.0	+0.9
SBA				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
MAW	Mawson	74.67	201	⇓iP	P	00 31 08.2	+0.8
	comp=Z,19nm,0.9s,mb4.7						
MAW	Mawson	74.67	201	P	P	00 31 08.1	+0.6
	comp=Z,20nm,0.7s,mb4.8,baz=70,slow=6.8,SNR=51						
MAW				pP	pP	00 31 47.3	+2.3
	comp=Z,10nm,0.9s,baz=57,slow=1.3,SNR=2.7						
MAW				LR	LR	00 58 56.5	
	comp=Z,294nm,21.4s,baz=66,slow=31						
MAW	Mawson	74.67	201	⇓iP	P	00 31 08.2	+0.8
MAW				pmax	pmax		
	comp=Z,19nm,0.9s						
BVAR	Borovoye Array	77.69	328	P	P	00 31 23.9	-0.7
	comp=Z,3.3nm,0.7s,mb4.1,baz=133,slow=10.0,SNR=15						
BVAR				pP	pP	00 32 03.6	+1.2
	comp=Z,4.9nm,0.8s,baz=135,slow=4.2,SNR=3.3						
BVAR				S	S	00 40 59.7	-2.6
	comp=Z,0.7nm,0.8s,baz=117,slow=16,SNR=2.2						
BRVK	Borovoye	77.76	328	eP	P	00 31 24.5	-0.4
	comp=Z,11nm,1.0s,mb4.4						
BRVK	Borovoye	77.76	328	eP	P	00 31 24.5	-0.5
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.4						
CHKZ	Chkalovo	77.90	329	eP	P	00 31 24.8	-0.9
	comp=Z,19nm,1.1s,mb4.6						
CHKZ	Chkalovo	77.90	329	eP	P	00 31 24.8	-0.9
CHKZ				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.6						
TIXI	Tiksi	78.50	360	eP	P	00 31 25.7	-2.9
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.3						
TIXI				MLR	MLR		
	comp=Z,222nm,18.0s						
TBI	Tubuai	79.26	112	eLR	LR	00 56 34.5	
	comp=Z,319nm,33.5s						
PPT	Papeete	79.51	107	eLR	LR	00 56 43.2	
	comp=Z,231nm,24.5s						
PPT	Papeete	79.51	107	LR	LR	01 03 11.9	
	comp=Z,83nm,18.2s,baz=200,slow=33						
OPO	Ambohidratompo	80.33	252	P	P	00 31 40.7	+1.2
	comp=Z,2.9nm,0.7s,mb4.0,baz=249,slow=0.7,SNR=6.3						
QSPA	South Pole Qui	82.96	180	eP	P	00 31 52.4	+0.4
	comp=Z,33nm,0.8s,mb5.1						
SYO	Syowa Base	83.39	201	⇓P	P	00 31 54.5	+0.2
SYO	Syowa Base	83.39	201	⇓pP	pP	00 32 23.2	-9.4
SYO	Syowa Base	83.39	201	⇓eP	P	00 31 54.5	+0.2
SYO				⇓epP	pP	00 32 23.2	-9.4
HASS	Wahat al Ahsa’	83.61	296	P	P	00 31 56.4	0.0
SVE	Sverdlovsk	84.41	329	eP	P	00 32 00.0	+0.4
SVE				e	pP	00 32 40.0	+2.0
SDPT	Sand Point	84.72	33	eP	P	00 32 01.0	-0.2
	comp=Z,36nm,0.9s,mb5.1						
ARU	Arti	85.34	328	eP	P	00 32 04.0	-0.2
	comp=Z,14nm,1.0s,mb4.7						
ARU	Arti	85.34	328	eP	P	00 32 04.0	-0.2
ARU				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.7						
QRN	Al-Qurain	85.82	299	eP	P	00 32 08.0	+0.7
QRN				AMb	AMB	00 32 10.0	
	comp=Z,50nm,0.6s,mb5.5						
NAY	Al-Naaiem	86.49	300	eP	P	00 32 10.2	-0.3
NAY				AMb	AMB	00 32 13.8	
	comp=Z,33nm,0.7s,mb5.2						
MIB	Mutribah	86.50	300	eP	P	00 32 10.5	-0.1
MIB				AMb	AMB	00 32 13.3	
	comp=Z,50nm,0.7s,mb5.5						
MZLS	Mizel	87.44	294	P	P	00 32 16.3	+1.1
KAMS	Al Khamasin	87.46	291	P	P	00 32 16.1	+0.8
DJNS	Zahran al Janu	88.07	288	P	P	00 32 22.3	+4.0
TATS	Tathlith	88.38	290	P	P	00 32 21.2	+1.4
AFFS	‘Afif	89.42	294	P	P	00 32 23.2	-1.3
TAOE	Nuku Hiva Isla	89.50	99	eP	P	00 32 27.7	+2.5
	comp=Z,1μm,1.4s						
BLJS	Baljurashi	90.18	290	P	P	00 32 28.8	+0.6
GNI	Garni	90.31	310	LR	LR	01 19 08.2	
	comp=Z,73nm,21.0s,baz=292,slow=40						
KMBO	Kilima Mbogo	91.87	269	P	P	00 32 37.8	+1.6
	comp=Z,3.1nm,1.0s,mb4.3,baz=56,slow=13,SNR=7.7						
KMBO				LR	LR	01 14 07.0	
	comp=Z,122nm,19.9s,baz=95,slow=36						
PMR	Palmer	92.13	28	eP	P	00 32 37.4	+1.1
	comp=Z,3.2nm,0.4s,mb4.7						
PMR	Palmer	92.13	28	eP	P	00 32 37.4	+1.1
PMR				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
RKT	Rikitea	92.53	114	eLR	LR	01 02 43.6	
	comp=Z,274nm,35.2s						
ILAR	Eielson Array	93.67	25	P	P	00 32 41.6	-1.6
	comp=Z,1.6nm,0.7s,mb4.2,baz=261,slow=4.4,SNR=19						
ILAR				PKKPbc		00 49 47.5	
	comp=Z,0.5nm,0.8s,baz=32,slow=2.5,SNR=4.1						
SNAA	Sanae	95.48	194	⇑iP	P	00 32 52.1	+0.7
SNAA	Sanae	95.48	194	e	P	00 32 52.8	+1.4
SNAA	Sanae	95.48	194	e	P	00 33 10.2	+19
VNA2	Neumayer--Watz	97.06	193	⇑iP	P	00 33 00.1	+1.6
VNA2	Neumayer--Watz	97.06	193	e	P	00 33 00.9	+2.4
VNA3	Neumayer Olymp	97.32	192	P	P	00 33 00.3	+0.6
VNA1	Neumayer--Stat	97.45	193	⇑iP	P	00 32 59.5	-0.8
VNA1	Neumayer--Stat	97.45	193	e	P	00 33 00.3	0.0
ARCES	ARCESS Array B	101.34	340	P	P	00 33 16.7	-1.2
	comp=Z,2.3nm,0.6s,baz=85,slow=6.6,SNR=14						
ARCES				PKiKP		00 37 41.8	
	comp=Z,4.2nm,0.9s,baz=64,slow=1.6,SNR=10.0						
FINES	FINESS Array B	102.43	331	P	Pdif	00 33 21.6	-1.3
	comp=Z,2.0nm,1.0s,baz=108,slow=6.0,SNR=3.4						
FINES				PKiKP		00 37 44.2	
	comp=Z,3.9nm,1.1s,baz=135,slow=2.7,SNR=3.7						
NVAR	Mina Array Bea	111.87	51	PKKPbc		00 49 05.6	
	comp=Z,0.4nm,0.8s,baz=118,slow=3.8,SNR=4.0						
GERES	GERESS Array B	111.97	320	PKiKP		00 38 01.9	
	comp=Z,1.0nm,0.6s,baz=64,slow=1.7,SNR=12						
GERES				PKKPab		00 49 05.1	
	comp=Z,0.7nm,0.9s,baz=252,slow=3.1,SNR=6.1						
WTTA	Wattenberg	113.73	319	⇑iP	PKPdf	00 38 05.3	+1.6
	comp=Z,3.7nm,0.4s						
WTTA	Wattenberg	113.73	319	⇑iP	PKPdf	00 38 05.3	+1.6
WATA	Walderalm	113.75	319	⇑iP	PKPdf	00 38 05.2	+1.4
	comp=Z,1.9nm,0.4s						
WATA	Walderalm	113.75	319	⇑iP	PKPdf	00 38 05.2	+1.4
MOTA	Moosalm	114.06	319	⇑iP	PKPdf	00 38 05.5	+1.1
	comp=Z,0.8nm,0.3s						
MOTA	Moosalm	114.06	319	⇑iP	PKPdf	00 38 05.5	+1.1
DAVA	Damuels	114.87	319	⇓iP	PKPdf	00 38 07.5	+1.5
	comp=Z,2.0nm,0.4s						
DAVA	Damuels	114.87	319	⇓iP	PKPdf	00 38 07.5	+1.5
DAVOX	Davos	115.02	319	PKP	PKPdf	00 38 07.9	+1.6
	comp=Z,1.0nm,0.4s,baz=270,slow=4.0						
HINF	Hinteralfeld	116.64	320	ePKIKP	PKPdf	00 38 10.2	+0.8
	comp=Z,5.7nm,0.7s						
PGF	Pioggiola	116.84	314	ePKIKP	PKPdf	00 38 11.5	+1.6
	comp=Z,6.2nm,0.7s						
PDAR	Pinedale Array	117.41	45	PKP	PKPdf	00 38 13.1	+2.1
	comp=Z,0.6nm,0.6s,baz=270,slow=1.5,SNR=4.8						
PDAR				PKKPbc		00 48 37.0	
	comp=Z,1.1nm,0.9s,baz=117,slow=6.6,SNR=4.5						
LPG	La Plagne	117.49	318	ePKIKP	PKPdf	00 38 13.0	+2.0
	comp=Z,5.5nm,0.8s						
LPL	La Plagne	117.50	318	ePKIKP	PKPdf	00 38 12.7	+1.7
	comp=Z,3.9nm,0.6s						
CABF	La Chapelle	117.55	319	ePKIKP	PKPdf	00 38 12.8	+1.7
	comp=Z,9.5nm,0.7s						
MBDF	Montbardon	117.73	317	ePKIKP	PKPdf	00 38 12.9	+1.4
	comp=Z,7.2nm,0.9s						
ORIF	Oris-en-Rattie	118.26	318	ePKIKP	PKPdf	00 38 13.9	+1.3
ORIF				eR			
	comp=Z,137nm,19.5s						
BORG	Borgarnes	118.72	346	ePKPdf	PKPdf	00 38 14.0	+1.0
LOR	Lormes	118.72	321	ePKIKP	PKPdf	00 38 14.6	+1.2
LOR				eR			
	comp=Z,89nm,21.9s						
SMRF	Simiane la Rot	118.79	317	ePKIKP	PKPdf	00 38 15.0	+1.4
	comp=Z,6.7nm,0.8s						
EKA	Eskdalemuir Ar	118.83	331	PKP	PKPdf	00 38 14.4	+1.0
	comp=Z,1.0nm,0.6s,baz=26,slow=3.4,SNR=6.5						
SSF	Saint Saulge	119.03	321	ePKIKP	PKPdf	00 38 15.4	+1.4
	comp=Z,7.4nm,0.8s						
AVF	Avril sur Loir	119.23	320	eP	PKPdf	00 38 15.5	+1.1
BGF	Bois d’Agland	119.64	320	ePKIKP	PKPdf	00 38 16.5	+1.3
	comp=Z,16nm,0.8s						
TCF	Toulx Ste Croi	120.15	320	ePKIKP	PKPdf	00 38 17.5	+1.3
RSSD	Black Hills	120.75	42	ePKPdf	PKPdf	00 38 19.0	+1.5
MTLF	Montolieu	121.29	317	ePKIKP	PKPdf	00 38 19.6	+1.1
MFF	Saint Martin d	121.50	321	ePKIKP	PKPdf	00 38 20.1	+1.3
	comp=Z,10nm,0.7s						
ANMO	Albuquerque	121.89	53	PKP	PKPdf	00 38 22.4	+2.5
	comp=Z,1.1nm,0.8s,baz=133,slow=3.2,SNR=4.6						
ETSF	Etsaut	123.33	318	ePKIKP	PKPdf	00 38 24.0	+1.5
MNTX	Cornudas Mount	123.56	57	ePKPdf	PKPdf	00 38 25.4	+2.2
TXAR	Lajitas Array	125.55	59	PKP	PKPdf	00 38 29.1	+1.9
	comp=Z,0.6nm,0.7s,baz=209,slow=1.3,SNR=8.0						
TXAR				pPKP		00 39 10.0	
	comp=Z,0.4nm,0.8s,baz=27,slow=5.6,SNR=1.9						
JCT	Junction City	128.50	56	ePKPdf	PKPdf	00 38 35.6	+2.7
PLCA	Paso Flores	129.11	161	PKP	PKPdf	00 38 36.3	+2.6
	comp=Z,2.4nm,0.7s,baz=145,slow=7.4,SNR=4.3						
MDT	Midelt	130.16	307	PKP	PKPdf	00 38 38.6	+2.7
	comp=Z,2.2nm,0.8s,baz=225,slow=2.9,SNR=2.8						
MDT				SKPbc		00 41 43.7	
	comp=Z,3.4nm,0.8s,baz=94,slow=7.2,SNR=4.3						
DBIC	Dimbokro	134.47	272	PKP	PKPdf	00 38 46.7	+2.2
	comp=Z,3.8nm,0.7s,baz=74,slow=3.0,SNR=6.9						
DBIC				SKPbc		00 41 58.7	
	comp=Z,6.3nm,0.6s,baz=69,slow=3.7,SNR=12						
DBIC	Dimbokro	134.47	272	PKP	PKPdf	00 38 46.7	+2.2
DBIC				SKPbc		00 41 58.7	
JTS	JuntasAbangare	146.02	82	PKPbc	PKPbc	00 39 08.9	+2.7
	comp=Z,11nm,0.5s,baz=338,slow=4.2,SNR=9.7						
JTS	JuntasAbangare	146.02	82	ePKPdf	PKPdf	00 39 08.6	+3.5
CPUP	Villa Florida	146.24	169	ePKPdf	PKPdf	00 39 07.5	+2.3
NNA	Nana	147.89	126	ePKPdf	PKPdf	00 39 14.0	+5.8
ARE	Arequipa	148.91	139	eP	PKPdf	00 39 17.0	+7.2
CAM4	Nova Friburgo	149.74	195	(P)	PKPdf	00 39 17.5	+6.6
CAM4				i		00 39 19.4	
CAM4				i		00 39 22.6	
LPAZ	La Paz	151.14	143	PKP	PKPdf	00 39 17.2	+4.1
	comp=Z,3.7nm,0.9s,baz=336,slow=1.7,SNR=11						
LPAZ				PKPbc	PKPdf	00 39 22.6	+10
	comp=Z,4.6nm,0.3s,baz=21,slow=2.3,SNR=28						
LPAZ				PKPab	PKPab	00 39 31.7	+1.8
	comp=Z,22nm,0.8s,baz=188,slow=5.7,SNR=26						
LPAZ	La Paz	151.14	143	ePKPdf	PKPdf	00 39 17.2	+4.1
SIV	San Ignacio	154.95	156	PKP	PKPdf	00 39 21.0	+2.6
	comp=Z,1.5nm,0.8s,baz=235,slow=3.1,SNR=8.3						
SIV				PKPab	PKPab	00 39 46.2	+0.3
	comp=Z,16nm,0.7s,baz=207,slow=5.0,SNR=4.1						
SAML	Samuel	159.86	142	ePKPdf	PKPdf	00 39 27.6	+2.8

JMA 21 00:34:44.5±0.2**, 39.90N**×**143.36E, h26**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.15	272	P	Pn	00 35 04.8	-0.3
MIYJ	Miyakonagasawa	1.23	255	P	Pn	00 35 06.3	0.0
MIYJ				S	Sn	00 35 22.0	-0.2
JANG	Nango	1.49	289	P	Pn	00 35 10.1	+0.1
JOM	Ohasama	1.65	256	P	Pn	00 35 12.9	+0.6
JOM				S	Sn	00 35 34.4	+1.6
JMK	Ichinoseki	1.91	241	P	Pn	00 35 15.9	-0.1
JMK				S	Sn	00 35 38.9	-0.5
JTM	Tenmabayashi	1.96	298	P	Pn	00 35 17.7	+1.0
JTM				eS	Sn	00 35 42.5	+1.8
JOT	Ohata	2.30	311	P	Pn	00 35 22.4	+0.8
JNBK	Urakawa-nobuka	2.42	349	P	Pn	00 35 24.4	+1.1
JKB	Kayabe	2.66	319	P	Pn	00 35 28.0	+1.3
JCH	Churui	2.71	0	P	Pn	00 35 27.3	-0.2
JCH				S	Sn	00 35 58.5	-1.3
JMM	Marumori	2.85	225	P	Pn	00 35 28.0	-1.5
JMM				eS	Sn	00 35 59.9	-3.4

IDC ***21*** *00:40:31.8±0.8, 18.05S×173.46W, mb4.1/9, mb1 4.4/9, mb1mx4.2/16, mbtmp4.1/9, MS3.0/2, Ms1 3.0/2, ms1mx2.9/22, Error ellipse: s-maj=38.4km s-min=19.1km az=142.0*

NEIC ***21*** *00:40:37.4±0.5, 18.18S×173.47W, h35*^{km}*, mb4.3/5, Error ellipse: s-maj=17.4km s-min=12.7km az=135.0*

ISC 21 00:40:35.6±0.5**, 18.10S**±0.10×**173.5W**±0.1**, h33**^{km}**, n33, σ0**^{s}**.89**/29**, mb4.3**/14**, 2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.49	22	Pn	Pn	00 41 37.3	-5.9
	5.1nm,0.3s,baz=37,slow=10,SNR=7.0						
AFI				Sn	Sn	00 42 23.9	-11
	39nm,0.3s,baz=64,slow=23,SNR=7.4						
AFI				LR	LR	00 42 28.3	
	comp=Z,238nm,20.1s,baz=59,slow=26						
AFI	Afiamalu	4.49	22	ePn	Pn	00 41 33.0	-10
AFI				eSn	Sn	00 42 21.6	-13
RAR	Rarotonga	13.32	106	LR	LR	00 46 54.6	
	comp=Z,47nm,19.7s,baz=149,slow=29						
URZ	Urewera	21.70	200	P	P	00 45 25.1	-0.4
	9.2nm,0.3s,mb4.7,baz=316,slow=2.9,SNR=15						
URZ				S	S	00 49 19.3	+0.6
	3.8nm,0.5s,baz=129,slow=19,SNR=3.1						
CTA	Charters Tower	38.00	260	P	P	00 47 52.6	+0.1
	3.1nm,0.7s,mb4.2,baz=85,slow=8.4,SNR=5.9						
CTAO	Charters Tower	38.00	260	eP	P	00 47 50.1	-2.4
	3.1nm,0.8s,mb4.1						
TAU	Tasmania Unive	41.30	225	P	P	00 48 20.6	+1.0
STKA	Stephens Creek	42.64	242	P	P	00 48 29.8	-1.0
	0.8nm,0.5s,mb3.7,baz=91,slow=13,SNR=4.1						
STKA	Stephens Creek	42.64	242	eP	P	00 48 30.7	-0.1
WB2	Warramunga Arr	49.15	259	eP	P	00 49 21.9	-0.7
WRAB	Tennant Creek	49.15	259	eP	P	00 49 22.6	0.0
	2.8nm,0.6s,mb4.5						
WRA	Warramunga Arr	49.16	259	P	P	00 49 22.5	-0.2
	1.3nm,0.4s,mb4.3,baz=97,slow=6.8,SNR=20						
GUMO	Guam	51.72	305	eP	P	00 49 44.2	+2.0
	66nm,0.8s,mb5.6						
SBA	Scott Base	60.57	185	eP	P	00 50 40.9	-4.0
	1.5nm,0.6s,mb4.3						
VNDA	Vanda	60.70	186	eP	P	00 50 44.9	-0.9
	1.9nm,1.2s,mb4.1						
NVAR	Mina Array Bea	76.41	42	P	P	00 52 23.2	-0.5
	0.9nm,0.8s,mb3.8,baz=214,slow=8.2,SNR=7.1						
TXAR	Lajitas Array	82.21	56	P	P	00 52 55.0	-0.3
	0.6nm,0.9s,mb3.5,baz=198,slow=7.9,SNR=5.7						
PDAR	Pinedale Array	84.34	42	P	P	00 53 05.5	-0.4
	0.7nm,0.8s,mb3.8,baz=243,slow=3.3,SNR=5.9						
COLA	College	85.02	11	eP	P	00 53 08.9	+0.3
	6.9nm,0.8s,mb4.8						
ILAR	Eielson Array	85.10	11	P	P	00 53 08.9	-0.1
	1.8nm,1.0s,mb4.2,baz=226,slow=5.9,SNR=8.1						
PLCA	Paso Flores	87.80	132	P	P	00 53 23.2	+0.4
	2.9nm,1.0s,mb4.5,baz=50,slow=3.1,SNR=3.3						
VNA3	Neumayer Olymp	90.20	175	⇓i	P	00 53 33.8	+0.3
VNA3	Neumayer Olymp	90.20	175	e	P	00 53 35.6	+2.1
VNA3	Neumayer Olymp	90.20	175	e	P	00 53 45.6	+12
VNA2	Neumayer--Watz	90.69	175	⇓i	P	00 53 36.4	+0.6
VNA2	Neumayer--Watz	90.69	175	e	P	00 53 38.4	+2.6
VNA2	Neumayer--Watz	90.69	175	e	P	00 53 47.5	+12
BVAR	Borovoye Array	119.91	321	PKP	PKPdf	00 59 24.1	+1.3
	0.9nm,0.8s,baz=333,slow=3.3,SNR=5.8						
AKASG	Malin Array Be	142.75	336	PKP	PKPdf	01 00 08.4	+3.0
	0.4nm,0.5s,baz=30,slow=3.9,SNR=5.2						
KMBO	Kilima Mbogo	144.19	241	PKP	PKPdf	01 00 11.5	+2.4
	1.2nm,0.8s,baz=37,slow=12,SNR=4.8						
CLL	Collm	146.46	353	P	PKPdf	01 00 16.1	+4.2
	logA/T=0.8						
CLL	Collm	146.46	353	i P	PKPdf	01 00 16.1	+4.2
GERES	GERESS Array B	148.77	351	PKPbc	PKPdf	01 00 20.3	+4.6
	0.6nm,0.6s,slow=2.7,SNR=6.9						

NEIC ***21*** *01:18:23.2, 22.69S×68.68W, h126*^{km}*, mb3.9/2, After GUC.*

GUC 21 01:18:23.2±1.1**, 22.69S**×**68.68W, h126**^{km}±13^{km}**, ML3.9, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	San Pedro de A	0.49	116	⇑iP	P	01 18 39.6	-2.3
SPCH				i S	S	01 18 54.5	-1.6
SPCH				AMP		01 18 55.2	
	comp=N,7μm,0.4s						
CEN1	Los Morros	1.56	243	eP	P	01 18 54.2	+2.1
CEN1				i S	S	01 19 19.1	+4.9
CEN1				AMP		01 19 28.8	
	comp=N,575nm,0.7s						
ANCH	Antofagasta	1.87	238	⇓iP	P	01 18 56.5	+0.7
ANCH				i S	S	01 19 20.8	+0.2
CPN1	Cerro Paranal	2.49	219	eP	P	01 19 05.0	+1.1
CPN1				i S	S	01 19 36.5	+1.8
CPN1				AMP		01 19 49.3	
	comp=E,510nm,0.4s						
LPAZ	La Paz	6.39	5	ePn	P	01 19 50.8	-5.2
	comp=E,6.2nm,0.9s						
ARE	Arequipa	6.74	336	P	P	01 20 04.0	+3.2
CPUP	Villa Florida	10.95	112	Pn	P	01 20 57.6	+0.3
SAML	Samuel	14.64	22	ePn	P	01 21 41.9	-3.5
TRQA	Tornquist	16.36	161	ePn	P	01 22 07.7	+1.0
	comp=E,11nm,1.4s						
PAYG	Puerto Ayora	30.34	313	ePn	P	01 24 25.2	-0.2
	comp=E,27nm,0.9s						

BJI ***21*** *01:25:17.9, 16.10N×97.40W, h15*^{km}*, mB4.8, Ms4.6, Msz4.3*

MEX ***21*** *01:25:17.9±0.8, 16.08N×97.43W, h13*^{km}*±8*^{km}*, MD4.6*

NEIC ***21*** *01:25:17.9, 16.08N×97.43W, h13*^{km}*, MD4.6(MEX), After MEX.*

IDC ***21*** *01:25:22.4±7.1, 16.23N×97.28W, h64*^{km}*±63*^{km}*, mb3.7/8, mb1 3.9/9, mb1mx3.7/21, mbtmp3.9/9, ML3.3/1, MS3.7/6, Ms1 3.6/6, ms1mx3.3/27, Error ellipse: s-maj=52.6km s-min=16.6km az=49.0*

ISC 21 01:25:16.4±1.0**, 16.13N**±0.04×**97.41W**±0.02**, h32**^{km}±8^{km}**, n47, σ1**^{s}**.12**/57**, mb4.0**/7**, MS3.5**/5**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.74	291	i P	Pn	01 25 29.7	-0.9
PNIG				i S	Sb	01 25 39.5	-1.2
VHO	Vista Hermosa	1.14	35	i P	Pn	01 25 36.3	-0.1
VHO				i S	Sn	01 25 50.5	-0.5
OXX	Oaxaca	1.15	35	i P	Pn	01 25 37.5	+0.9
OXX				i S	Sn	01 25 51.0	-0.3
HUIG	Huatulco	1.30	106	eP	Pn	01 25 38.4	-0.2
HUIG				eS	Sn	01 25 55.0	-0.1
ACX	Acapulco	2.52	287	i P	Pn	01 25 54.5	-1.5
ACX				i S	Sn	01 26 26.5	+0.6
ACX	Acapulco	2.52	287	i P	Pn	01 25 54.5	-1.5
ACX				eP		01 26 02.3	
ACX				i S	Sn	01 26 26.5	+0.6
CMIG	Matias Romero	2.60	68	eP	Pn	01 25 56.5	-0.8
CMIG				eS	Sn	01 26 28.3	+0.2
CAIG	El Cayaco	2.89	289	eP	Pn	01 26 00.1	-1.2
CAIG				i S	Sn	01 26 34.5	-0.8
PLIG	Platanillo	3.01	319	eP	Pn	01 26 04.0	+0.9
PLIG				eS	Sn	01 26 38.9	+0.5
PPM	Popocatepetl	3.15	339	eP	Pn	01 26 06.5	+1.5
PPM				i P		01 26 06.5	
PPM				i P		01 26 07.6	
PPM				eS	Sn	01 26 42.1	+0.3
PPM	Popocatepetl	3.15	339	eP	Pn	01 26 06.5	+1.5
PPM				i P		01 26 07.6	
PPM				eS	Sn	01 26 42.1	+0.3
YAIG	Yautepec	3.15	330	eP	Pn	01 26 05.6	+0.6
YAIG				i S	Sn	01 26 40.9	-1.0
YAIG	Yautepec	3.15	330	eP	Pn	01 26 08.8	+3.8
YAIG				i S	Sn	01 26 40.9	-1.0
TUIG	Tuzandepetl	3.43	56	eP	Pn	01 26 08.0	-1.1
TUIG				eS	Sn	01 26 47.8	-1.2
IIZ	Mezontepec	3.51	330	i P	Pn	01 26 08.5	-1.7
UNM	Universidad Na	3.60	332	i P	Pn	01 26 13.6	+2.2
UNM				i S	Sn	01 26 53.6	+0.2
UNM	Universidad Na	3.60	332	i P	Pn	01 26 13.6	+2.2
UNM				eP		01 26 17.5	
UNM				i S	Sn	01 26 53.6	+0.2
PTVM	Pico Tres Padr	3.81	335	eP	Pn	01 26 16.9	+2.5
MDVM	Presa Madin	3.82	333	i P	Pn	01 26 18.4	+3.9
ZIIG	Zihuatanejo	4.15	291	i S	Sn	01 27 06.7	-0.7
SCX	San Cristobal	4.62	82	eP	Pn	01 26 28.5	+2.5
MOIG	Morelia	5.04	315	i P	Pn	01 26 31.7	-0.2
MOIG				i S	Sn	01 27 29.1	-0.7
MOIG	Morelia	5.04	315	eP	Pn	01 26 35.2	+3.4
MOIG				i S	Sn	01 27 29.1	-0.7
CCIG	Comitan	5.07	88	eP	Pn	01 26 34.0	+1.8
CCIG				eS	Sn	01 27 28.4	-2.0
SFJM	Santa Fe	6.88	310	eP	Pn	01 26 59.0	+1.2
ZAIG	Zacatecas	8.20	324	i P	P	01 27 16.5	+0.2
ZAIG				i S	Sn	01 28 44.2	-4.6
JTS	JuntasAbangare	13.44	114	ePn	P	01 28 27.6	+0.1
TXAR	Lajitas Array	14.35	337	P	P	01 28 40.4	+0.9
	0.0nm,0.3s,baz=145,slow=11,SNR=4.2						
TXAR				LR	LR	01 34 40.7	
	comp=Z,485nm,19.2s,baz=135,slow=39						
HBAR	Harrisburg	20.27	16	P	P	01 29 49.6	-2.5
ANMO	Albuquerque	20.42	338	P	P	01 29 53.5	-0.3
	3.0nm,1.1s,baz=152,slow=15,SNR=6.8						
ANMO				LR	LR	01 37 52.2	
	comp=Z,121nm,18.6s,MS3.3,baz=333,slow=37						
SDV	Santo Domingo	27.09	102	P	P	01 30 59.1	+0.6
	5.2nm,0.7s,mb4.2,baz=312,slow=4.7,SNR=6.7						
PDAR	Pinedale Array	28.51	341	P	P	01 31 12.2	+1.1
	0.7nm,0.6s,mb3.6,baz=156,slow=11,SNR=5.4						
NVAR	Mina Array Bea	28.82	324	P	P	01 31 15.7	+1.7
	0.5nm,0.7s,mb3.4,baz=134,slow=9.5,SNR=7.0						
ELK	Elko	28.99	331	LR	LR	01 44 10.9	
	comp=Z,311nm,18.2s,MS4.0,baz=139,slow=39						
ULM	Lac du Bonnet	34.06	2	LR	LR	01 47 49.3	
	comp=Z,40nm,18.8s,MS3.2,baz=315,slow=40						
YKA	Yellowknife Ar	47.87	349	P	P	01 33 52.1	-1.1
	0.7nm,0.6s,mb3.8,baz=154,slow=7.2,SNR=4.0						
YKA				LR	LR	01 58 15.0	
	comp=Z,38nm,18.2s,MS3.4,baz=90,slow=41						
DLBC	Dease Lake	48.65	338	LR	LR	01 56 42.6	
	comp=Z,96nm,18.4s,MS3.8,baz=305,slow=39						
BDFB	Brasilia	58.08	120	P	P	01 35 08.8	-0.6
	5.0nm,0.8s,mb4.6,baz=294,slow=10.0,SNR=7.9						
ILAR	Eielson Array	58.86	338	P	P	01 35 14.3	+0.1
	0.6nm,0.8s,mb3.7,baz=144,slow=6.3,SNR=6.8						

PLCA	Paso Flores	61.83	157	P	P	01 35 35.2	+0.4
	5.3nm,0.9s,mb4.7,baz=308,slow=8.3,SNR=6.1						
WMQ	Urumqi	120.16	356	ePKP	PKPdf	01 44 10.0	+0.3
SSE	Sheshan	120.17	322	PKP	PKPdf	01 44 10.1	+0.1
LZH	Lanzhou	124.31	339	ePKP	PKPdf	01 44 17.5	-0.4
STKA	Stephens Creek	124.48	242	PKP	PKPdf	01 44 14.3	-4.1
	1.5nm,0.6s,baz=110,slow=4.9,SNR=6.0						
STKA	Stephens Creek	124.48	242	PKP	PKPdf	01 44 14.3	-4.1
MAW	Mawson	126.99	171	PKP	PKPdf	01 44 18.5	-3.7
	1.1nm,0.6s,baz=318,slow=7.0,SNR=3.8						
WRA	Warramunga Arr	130.80	257	PKP	PKPdf	01 44 26.8	-4.0
	1.4nm,0.8s,baz=86,slow=2.6,SNR=15						

ATH 21 01:35:43.9,41.78N×24.10E,h4^{km},MD3.1/3

SOF 21 01:35:43.5,41.74N×24.14E,h13^{km},MD2.7

SKO 21 01:35:43.9,41.77N×24.09E,h5^{km}

CSEM 21 01:35:43.9±0.1,41.81N×24.06E,h2^{km},MD2.7,Error ellipse: s-maj=2.7km s-min=1.6km az=124.0

NEIC 21 01:35:43.9,41.78N×24.10E,h4^{km},MD3.1(ATH),After ATH.

THE 21 01:35:49.1,41.50N×24.00E,h20^{km},ML3.2

ISC 21 01:35:44.0±0.5,41.76N±0.04×24.08E±0.04,h10^{km},n16,σ1^{s}15/22,1C,Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMB	Musomiste	0.31	238	iPg	Pg	01 35 51.0	+0.6
NVR	Nevrokopi	0.44	202	⇑iPG	Pg	01 35 53.0	+0.1
NVR				eSG	Sg	01 35 59.2	+0.4
RZN	Rozhen	0.48	98	iPg	Pg	01 35 53.0	-0.8
PLD	Plovdiv	0.58	53	iPg	Pg	01 35 56.0	+0.2
KKB	Krupnik	0.75	279	iPg	Pg	01 35 59.0	-0.1
PGB	Panagyurishte	0.80	5	iPg	Pg	01 35 59.0	-1.0
KDZ	Kurdzhali	1.01	96	iP	Pb	01 36 01.5	-1.6
VTS	Vitosha	1.06	323	iP	Pb	01 36 05.0	+1.1
SOH	Sokhos	1.08	211	ePg	Pg	01 36 05.0	-0.7
SOH				eSg	Sg	01 36 19.2	-0.9
VAY	Valandovo	1.21	250	ePn	Pn	01 36 08.4	+1.4
VAY				eSn	Sn	01 36 24.3	+0.8
VAY	Valandovo	1.21	250	ePn	Pn	01 36 08.4	+1.4
VAY				eSn	Sn	01 36 24.3	+0.7
RDO	Rodhopi	1.25	119	ePG	Pg	01 36 07.1	-2.0
RDO				eSB	Sb	01 36 24.8	+1.5
OUR	Ouranopolis	1.42	183	ePg	Pg	01 36 10.0	-2.4
PLG	Polygyros	1.46	199	ePN	Pn	01 36 11.9	+1.4
GRG	Griva	1.49	238	ePg	Pg	01 36 12.5	-1.3
ALN	Alexandroupoli	1.71	119	ePb	Pb	01 36 16.3	+1.2
ALN				eSb	Sb	01 36 38.0	+1.3

NEIC 21 02:10:21.0,37.00N×21.69E,h41^{km},MD3.5(ATH),After ATH.

CSEM 21 02:10:21.7±0.8,37.06N×21.69E,h28^{km}±1^{km},MD3.5,Error ellipse: s-maj=20.1km s-min=6.8km az=82.0

ATH 21 02:10:21.0,36.99N×21.68E,h41^{km}±5^{km},MD3.5/8,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.27	46	eP	P	02 10 29.3	+0.2
VLI	Veliai	1.04	105	eP	P	02 10 41.0	+1.7
VLI				eS	S	02 10 54.5	+1.5
KYTH	Kithira	1.30	123	eP	P	02 10 44.5	+1.4
VLS	Valsamata	1.47	324	eP	P	02 10 46.5	+1.0
MGER	Gerania Oros	1.60	51	eP	P	02 10 48.0	+0.6
EVR	Evrytania	1.93	3	eP	P	02 10 54.5	+2.6
MPAR	Parnis Oros	2.00	54	eP	P	02 10 53.5	+0.5
JAN	Janina	2.74	346	eP	P	02 11 03.0	-0.6
LSK	Leskovik	3.27	345	iPn	P	02 11 10.0	-1.1

NEIC 21 02:47:02.2±3.3,5.02S×153.33E,h97^{km}±22^{km},mb3.9/3,Error ellipse: s-maj=30.3km s-min=17.6km az=65.0

IDC 21 02:47:02.1±7.7,5.03S×153.37E,h99^{km}±57^{km},mb3.7/4,mb1 3.7/6,mb1mx3.6/15,mbtmp4.0/6,MS3.0/1,Ms1 3.0/1,ms1mx2.7/20,Error ellipse: s-maj=59.3km s-min=38.7km az=87.0

ISC 21 02:46:59.2±4.7,5.0S±0.2×153.4E±0.2,h87^{km}±35^{km},n15,σ0^{s}59/15,mb3.9/9,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.61	234	P	P	02 48 49.0	-0.2
	1.1nm,0.3s,baz=354,slow=9.9,SNR=4.8						
PMG				S	S	02 50 14.5	0.0
	3.7nm,0.3s,baz=76,slow=16,SNR=13						
CTA	Charters Tower	16.55	204	P	P	02 50 47.8	+0.5
	0.2nm,0.3s,baz=24,slow=13,SNR=6.4						
CTA				LR	LR	02 56 35.7	
	comp=Z,48nm,18.3s,baz=230,slow=35						
KAKA	Kakadu	22.09	248	eP	P	02 52 07.7	+19
	2.7nm,0.3s,mb4.0						
WRAB	Tennant Creek	23.78	230	eP	P	02 52 04.6	-0.2
	3.9nm,0.6s,mb3.9						
WB2	Warramunga Arr	23.78	230	eP	P	02 52 05.8	+1.0
WRA	Warramunga Arr	23.79	230	P	P	02 52 05.2	+0.4
	2.5nm,0.7s,mb3.6,baz=53,slow=9.6,SNR=39						
STKA	Stephens Creek	28.95	201	P	P	02 52 51.5	-1.2
	0.9nm,0.6s,mb3.6,baz=13,slow=14,SNR=4.1						
STKA	Stephens Creek	28.95	201	eP	P	02 52 51.8	-0.8
FITZ	Fitzroy Crossi	30.12	242	P	P	02 53 02.1	-1.0
	2.9nm,0.5s,mb4.2,baz=72,slow=9.6,SNR=8.5						
TAU	Tasmania Unive	38.15	187	eP	P	02 54 11.6	+0.1
	27nm,1.1s,mb5.0						
VNDA	Vanda	72.62	178	eP	P	02 58 18.2	-0.4
	0.4nm,0.5s,mb3.5						
MKAR	Makanchi Array	80.88	319	P	P	02 59 05.5	+0.2
	0.3nm,0.6s,mb3.3,baz=93,slow=7.5,SNR=4.1						
MKAR	Makanchi Array	80.88	319	P	P	02 59 05.5	+0.2
MAW	Mawson	85.63	203	eP	P	02 59 29.6	+0.6
	1.1nm,0.6s,mb4.0						
SNAA	Sanae	101.92	187	ePdif	P	03 00 44.3	+0.3

BJI 21 03:17:16.5,37.53S×176.23E,h166^{km},mB5.6,mb5.3

NEIC 21 03:17:16.0,38.09S×176.23E,h179^{km},mb4.4/2,After WEL.

WEL 21 03:17:15.9±0.2,38.06S×176.19E,h177^{km}±2^{km},ML4.2/12,8C-1D,Error ellipse: s-maj=2.5km s-min=1.9km az=0.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	0.75	106	P	P	03 17 41.5	-0.3
URZ	Urewera	0.75	106	PN	P	03 17 41.5	-0.4
URZ				SN	S	03 18 01.1	-0.8
MWZ	Matawai	1.09	105	P	P	03 17 44.1	0.0
MWZ				S	S	03 18 05.5	-0.5
MWZ	Matawai	1.09	105	PN	P	03 17 44.1	-0.1
MWZ				SN	S	03 18 05.5	-0.5
KRVZ	Karewarewa	1.12	202	PN	P	03 17 44.5	0.0
BKZ	Black Stump Fm	1.13	168	P	P	03 17 44.5	0.0
BKZ				S	S	03 18 06.1	-0.6
BKZ	Black Stump Fm	1.13	168	PN	P	03 17 44.5	0.0
BKZ				SN	S	03 18 06.1	-0.5
WTVZ	West Tongariro	1.16	204	P	P	03 17 44.8	+0.1
WTVZ	West Tongariro	1.16	204	PN	P	03 17 44.8	0.0
TWVZ	Taurewa	1.17	210	P	P	03 17 45.0	+0.1
TWVZ	Taurewa	1.17	210	PN	P	03 17 45.0	+0.1
CNZ	Chateau	1.25	204	PN	P	03 17 45.6	+0.1
FWVZ	Far West T-bar	1.30	202	P	P	03 17 45.9	-0.1
FWVZ	Far West T-bar	1.30	202	PN	P	03 17 45.9	-0.1
WNVZ	Wahianoa	1.35	200	P	P	03 17 46.2	-0.3
WNVZ	Wahianoa	1.35	200	PN	P	03 17 46.3	-0.1
MOVZ	Moawhango	1.39	194	P	P	03 17 46.3	-0.6
MOVZ	Moawhango	1.39	194	⇑PN	P	03 17 46.2	-0.6
MOVZ				SN	S	03 18 09.5	-1.3
PKVZ	Pokaka	1.40	208	⇑PN	P	03 17 46.6	-0.3
MTVZ	Mangateitei	1.44	203	PN	P	03 17 47.1	-0.2
KNZ	Kokohu	1.51	130	⇑PN	P	03 17 47.9	-0.1
KNZ				SN	S	03 18 11.7	-1.1
VRZ	Vera Road	1.55	226	⇑PN	P	03 17 48.3	-0.1
PUZ	Puketiti	1.63	91	P	P	03 17 48.5	-0.7
PUZ	Puketiti	1.63	91	PN	P	03 17 48.5	-0.7
PUZ				SN	S	03 18 14.0	-1.0
MXZ	Matakaoa Point	1.75	74	P	P	03 17 49.9	-0.5
MXZ	Matakaoa Point	1.75	74	PN	P	03 17 49.9	-0.5
MXZ				SN	S	03 18 16.6	-0.4
RAEZ	Rainy Point	1.87	228	P	P	03 17 52.1	+0.5
WAZ	Wanganui	1.94	209	P	P	03 17 51.6	-0.8
WAZ	Wanganui	1.94	209	PN	P	03 17 51.5	-0.9
TSZ	Takapari Road	2.01	185	P	P	03 17 52.2	-0.9
TSZ	Takapari Road	2.01	185	⇑PN	P	03 17 52.2	-0.9
NEZ	North Egmont	2.04	233	PN	P	03 17 53.7	+0.3
PXZ	Pawanui	2.04	165	PN	P	03 17 52.9	-0.6
PXZ				SN	S	03 18 21.1	-1.4
PKE	Pukeiti	2.06	236	P	P	03 17 53.4	-0.4
PKE	Pukeiti	2.06	236	PN	P	03 17 53.4	-0.4
BFZ	Birch Farm	2.62	179	ePN	P	03 17 58.6	-1.8
BFZ				SN	S	03 18 32.1	-2.4
MRZ	Mangatainoka R	2.64	190	P	P	03 17 58.3	-2.3
MRZ	Mangatainoka R	2.64	190	⇑PN	P	03 17 58.3	-2.3
MRZ				SN	S	03 18 32.7	-2.4
KIW	Kapiti Island	2.97	199	P	P	03 18 01.6	-3.0
KIW	Kapiti Island	2.97	199	PN	P	03 18 01.5	-3.0
MTW	Mount Morrison	3.14	189	P	P	03 18 03.5	-3.2
MTW	Mount Morrison	3.14	189	PN	P	03 18 03.5	-3.3
CAW	Cannon Point	3.17	196	P	P	03 18 04.0	-3.0
CAW	Cannon Point	3.17	196	⇓PN	P	03 18 04.1	-3.0
DUWZ	D'Urville Isla	3.26	212	PN	P	03 18 04.8	-3.4
TRWZ	Traveller	3.36	186	PN	P	03 18 06.2	-3.3
MRW	Makara Radio	3.37	199	P	P	03 18 06.1	-3.5
MRW	Makara Radio	3.37	199	PN	P	03 18 06.0	-3.6
PAWZ	Paruwai Farm	3.37	190	P	P	03 18 06.1	-3.5
PAWZ	Paruwai Farm	3.37	190	PN	P	03 18 06.0	-3.6
MSWZ	Moikau Station	3.43	192	P	P	03 18 06.7	-3.6
MSWZ	Moikau Station	3.43	192	⇑PN	P	03 18 06.7	-3.7
SNZO	South Karori	3.44	199	P	P	03 18 04.9	-5.6
SNZO	South Karori	3.44	199	PN	P	03 18 06.9	-3.6
TCW	Tory Channel	3.48	205	P	P	03 18 07.3	-3.7
TCW	Tory Channel	3.48	205	PN	P	03 18 07.3	-3.7
BHW	Baring Head	3.50	196	⇑PN	P	03 18 07.4	-3.8
TUWZ	Tuamarina	3.79	206	PN	P	03 18 11.2	-3.7
NNZ	Nelson	3.83	214	eP	P	03 18 11.3	-4.1
QRZ	Quartz Range	3.96	225	eP	P	03 18 12.4	-4.7
THZ	Tophouse	4.48	213	eP	P	03 18 19.5	-4.3
KHZ	Kahutara	4.80	204	P	P	03 18 23.6	-4.4
DSZ	Denniston Nort	4.99	221	eP	P	03 18 26.4	-4.0
LTZ	Lake Taylor	5.59	211	eP	P	03 18 32.9	-5.3
MQZ	McQueen's Vall	6.25	204	eP	P	03 18 40.5	-6.4
LBZ	Lake Benmore	7.77	214	eP	P	03 18 59.0	-8.0
ODZ	Otahua Downs	8.12	209	eP	P	03 19 05.9	-5.8
JCZ	Jackson Bay	8.22	221	eP	P	03 19 07.1	-5.8
TAU	Tasmania Unive	22.43	248	eP	P	03 21 58.8	-1.4
	62nm,1.5s						
STKA	Stephens Creek	28.90	272	eP	P	03 22 55.5	-4.7
SBA	Scott Base	40.10	183	eP	P	03 24 33.9	-1.3
	1.5nm,0.4s						
WRAB	Tennant Creek	40.41	285	P	P	03 24 38.2	0.0
MDJ	Mudanjiang	92.42	329	P	P	03 30 09.0	+1.7
MDJ				AMB	AMB		
	comp=Z,100nm,4.9s						
LZH	Lanzhou	99.56	308	eP	P	03 30 41.5	+1.5
LZH				AP	pP	03 31 25.5	+1.1
LZH				XP	sP	03 31 44.3	+1.0
LZH				PP	PP	03 34 51.1	+3.4
LZH				AMB	AMB		
	comp=Z,20nm,1.6s						
WMQ	Urumqi	114.11	308	ePKP	PKPdf	03 35 36.5	+2.8

IDC 21 03:26:33.5±6.6,52.84N×164.09W,mb3.8/4,mb1 3.8/6,mb1mx3.6/23,mbtmp3.8/6,ML3.5/2,MS3.1/1,Ms1 3.1/1,ms1mx2.6/25,Error ellipse: s-maj=163.8km s-min=37.3km az=151.0

NEIC 21 03:26:47.1±0.6,53.85N×164.04W,h52^{km}±6^{km},ML3.5(AEIC),ML3.4(PMR),Error ellipse: s-maj=11.8km s-min=3.3km az=154.0

ISC 21 03:26:45.6±1.0,53.8N±0.1×163.96W±0.09,h57^{km}±9^{km},n33,σ0^{s}75/38,mb4.0/3,MS3.0/1,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	0.79	332	P	P	03 27 00.6	-0.3
WESN	West Dahl Nort	0.88	336	P	P	03 27 02.4	+0.3
WFAR	Faris Peak	0.90	328	P	P	03 27 02.3	-0.1
WPOG	Pogromni	0.94	331	P	P	03 27 02.9	-0.1
SSLW	Shishaldin Wes	1.00	355	P	P	03 27 03.5	-0.3
AKA	Akutan	1.13	289	P	P	03 27 05.3	-0.2
AKUT	Akutan	1.13	289	P	P	03 27 05.4	-0.2
AKUT				S	S	03 27 19.7	-0.7
AHB	Akutan Harbor	1.15	288	P	P	03 27 05.7	0.0
AHB				S	S	03 27 21.6	+0.8
LVA	Lava Point	1.28	288	P	P	03 27 07.8	+0.1
UNV	Unalaska Valle	1.51	274	P	P	03 27 10.0	-0.9
UNV				S	S	03 27 29.3	-0.3
BALA	Baldy Mountain	1.58	25	P	P	03 27 12.5	+0.7
MNAT	Makushin Natee	1.62	275	P	P	03 27 12.5	+0.1
MTBL	Makushin Table	1.62	278	P	P	03 27 12.8	+0.4
MSW	Makushin Switc	1.68	276	P	P	03 27 13.0	-0.2
DTNA	Dutton South F	1.70	35	P	P	03 27 13.6	+0.1
MCIR	Makushin Cirqu	1.75	277	P	P	03 27 14.8	+0.7
MSOM	Makushin Julie	1.77	273	P	P	03 27 14.2	-0.3
MSOM				S	S	03 27 36.2	+0.3
DOL	Dolgoi Island	1.84	41	P	P	03 27 15.4	-0.1
HAG	Hague Volcano	1.96	37	P	P	03 27 17.8	+0.8
OKCE	Okmok Cone E	2.53	264	P	P	03 27 26.3	+1.1
SDPT	Sand Point	2.57	51	P	P	03 27 26.3	+0.5
NIKO	Nikolski	3.04	257	P	P	03 27 32.1	-0.4
KDAK	Kodiak Island	7.57	53	Pn	P	03 28 33.5	-2.2
	0.5nm,0.3s,baz=280,slow=17,SNR=15						
KDAK				Sn	S	03 29 52.1	-8.7
	0.3nm,0.3s,baz=121,slow=18,SNR=4.5						
KDAK	Kodiak Island	7.57	53	Pn	P	03 28 33.5	-2.2
KDAK				Sn	S	03 29 52.1	-8.7
SVW2	Sparrevohn	8.62	28	eP	P	03 28 48.5	-1.6
ILAR	Eielson Array	14.00	31	Pn	P	03 30 03.1	+1.0
	0.1nm,0.3s,baz=218,slow=10.0,SNR=9.4						
INK	Inuvik	20.39	33	P	P	03 31 22.2	+2.6
	1.3nm,0.8s,baz=249,slow=13,SNR=3.1						
YKA	Yellowknife Ar	26.84	51	LR	LR	03 44 16.9	
	comp=Z,37nm,19.4s,MS3.0,baz=180,slow=39						
FINES	FINESS Array B	64.85	355	P	P	03 37 18.9	-1.1
	1.5nm,1.0s,mb4.0,baz=27,slow=6.2,SNR=5.1						
FINES	FINESS Array B	64.85	355	P	P	03 37 18.9	-1.1
NOA	NORSAR Array B	65.47	3	P	P	03 37 24.0	0.0
	1.0nm,0.8s,mb3.9,baz=0.3,slow=6.3,SNR=3.5						
NOA	NORSAR Array B	65.47	3	P	P	03 37 24.0	0.0
AKASG	Malin Array Be	75.31	351	P	P	03 38 23.6	0.0
	1.1nm,0.6s,mb3.9,baz=9.7,slow=5.5,SNR=5.8						

NEIC 21 03:43:36.7±2.9,10.62S×165.91E,h184^{km}±26^{km},mb4.1/5,Error ellipse: s-maj=18.4km s-min=13.6km az=187.0

IDC 21 03:43:36.8±6.5,10.70S×165.97E,h185^{km}±64^{km},mb3.6/7,mb1 3.7/8,mb1mx3.6/16,mbtmp4.1/8,Error ellipse: s-maj=35.8km s-min=22.3km az=171.0

ISC 21 03:43:37.8±3.6,10.7S±0.1×165.9E±0.1,h206^{km}±33^{km},n18,σ0^{s}69/19,mb3.9/12,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.28	177	P	P	03 46 14.6	+0.4
	0.8nm,0.3s,baz=126,slow=20,SNR=7.8						
DZM				S	S	03 48 16.6	-0.5
	0.9nm,0.3s,baz=321,slow=23,SNR=9.2						
CTA	Charters Tower	21.07	241	P	P	03 48 07.6	+0.7
	4.5nm,0.8s,mb4.1,baz=73,slow=11,SNR=9.5						
CTA	Charters Tower	21.07	241	P	P	03 48 07.6	+0.7
CTAO	Charters Tower	21.07	241	eP	P	03 48 06.4	-0.5
	4.7nm,0.8s,mb4.1						
STKA	Stephens Creek	30.76	223	P	P	03 49 36.4	+0.3
	0.7nm,0.5s,mb3.5,baz=22,slow=11,SNR=3.1						
STKA	Stephens Creek	30.76	223	eP	P	03 49 36.6	+0.5
WRAB	Tennant Creek	31.71	249	eP	P	03 49 44.3	-0.2
	1.4nm,0.5s,mb3.8						
WB2	Warramunga Arr	31.71	249	eP	P	03 49 43.6	-0.9
WRA	Warramunga Arr	31.73	249	P	P	03 49 43.9	-0.7
	0.9nm,0.5s,mb3.6,baz=83,slow=9.0,SNR=17						
KAKA	Kakadu	32.80	263	eP	P	03 50 12.3	+18
	8.1nm,0.6s,mb4.4						
RPZ	Rata Peaks	33.16	173	P	P	03 49 55.9	-0.7
	15nm,1.0s,mb4.5,baz=151,slow=4.5,SNR=4.2						
TAU	Tasmania Unive	35.90	204	eP	P	03 50 21.8	+1.8
FITZ	Fitzroy Crossi	39.60	255	eP	P	03 50 51.2	+0.2
	5.7nm,0.8s,mb4.0						
VNDA	Vanda	66.80	181	eP	P	03 54 08.7	0.0
	5.6nm,1.7s,mb3.9						
ILAR	Eielson Array	83.18	18	P	P	03 55 40.9	-0.9
	0.6nm,0.5s,mb3.5,baz=237,slow=4.9,SNR=19						
NVAR	Mina Array Bea	85.72	50	P	P	03 55 55.4	+0.4
	1.0nm,1.1s,mb3.5,baz=236,slow=6.5,SNR=3.9						
MKAR	Makanchi Array	93.40	317	P	P	03 56 31.3	+0.5
	0.5nm,0.6s,mb3.8,baz=89,slow=8.4,SNR=3.0						
SNAA	Sanae	97.43	184	eP	P	03 56 48.5	0.0
	1.5nm,1.1s,mb4.1						

CASC 21 04:09:30.1±1.2,13.61N×90.17W,h71^{km}±7^{km},MD3.4,ML3.7,2C-8D,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.58	66	⇑eP	P	04 09 44.2	+0.2
SBLS				eS	S	04 09 55.9	+1.8
RTR	El Retiro	0.58	60	⇓eP	P	04 09 44.4	+0.3
RTR				eS	S	04 09 55.2	+1.0
SNJE	San Jose	0.60	65	⇓eP	P	04 09 44.5	+0.2
SNJE				eS	S	04 09 55.8	+1.2
IXG	Ixpaco	0.63	334	⇓eP	P	04 09 44.4	-0.1
IXG				eS	S	04 09 55.6	+0.5
IXG				AML	AML	04 10 00.5	
	comp=E,6μm,0.4s						
BOQS	Boqueron	0.87	82	⇓eP	P	04 09 47.3	+0.1
BOQS				eS	S	04 10 02.6	+2.6
LFU	La Fuente	1.03	82	eP	P	04 09 49.3	-0.1
LFU				eS	S	04 10 04.2	+0.6
LFRS	El Faro	1.07	89	⇑eP	P	04 09 49.7	-0.1
LFRS				eS	S	04 10 05.0	+0.5
LBRS	Las Brisas	1.10	83	⇓eP	P	04 09 50.1	-0.1
LBRS				eS	S	04 10 05.8	+0.7
MTO2	Montecristo 2	1.11	45	⇓eP	P	04 09 50.4	0.0
MTO2				eS	S	04 10 05.9	+0.6
LCBS	La Ceiba	1.16	88	⇓eP	P	04 09 50.9	0.0
LCBS				eS	S	04 10 07.0	+0.5
SNVI	San Vicente	1.29	90	eP	P	04 09 52.4	-0.4
SNVI				eS	S	04 10 10.0	+0.4
TP2	Tecpan 2	1.43	325	eP	P	04 09 55.4	+0.6
TP2				eS	S	04 10 15.3	+2.3
TP2				AML	AML	04 10 18.5	
	comp=N,654nm,0.4s						
MRL	Marmol	1.52	18	⇓eP	P	04 09 56.0	+0.1
BLLM	Bellamira	1.88	95	eP	P	04 10 00.9	+0.1
BLLM				eS	S	04 10 24.6	+1.2
CNCH	Conchagua	2.29	98	eP	P	04 10 06.1	-0.4
CNCH				eS	S	04 10 33.4	-0.2

BJI 21 05:20:17.8,2.51N×126.67E,h24^{km},mB5.2,mb4.7,Ms4.1,Msz3.8

MOS 21 05:20:17.6±1.0,2.42N×126.83E,h33^{km},mb4.7/11,Error ellipse: s-maj=24.1km s-min=9.3km az=106.7

NEIC 21 05:20:19.6±0.3,2.37N×126.81E,h35^{km},mb4.6/12,Error ellipse: s-maj=13.2km s-min=5.0km az=68.0

IDC 21 05:20:20.8±3.3,2.38N×126.96E,h46^{km}±31^{km},mb4.2/14,mb1 4.3/14,mb1mx4.2/17,mbtmp4.4/14,MS3.5/3,Ms1 3.5/3,ms1mx3.1/16,Error ellipse: s-maj=35.3km s-min=10.8km az=72.0

ISC 21 05:20:12.7±2.7,2.39N±0.05×126.8E±0.1,h0^{km}±16^{km},n59,σ0^{s}69/61,mb4.7/27,MS3.7/5,1C-2D,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	Kota Kinabalu	11.14	289	ePn	P	05 23 02.7	+6.2
KAKA	Kakadu	16.02	160	eP	Px	05 24 23.7	
	22nm,0.4s						
FITZ	Fitzroy Crossi	20.39	183	eP	P	05 24 54.4	+0.4
	8.9nm,0.3s						
FITZ	Fitzroy Crossi	20.39	183	P	P	05 24 53.2	-0.8
	13nm,0.3s,baz=22,slow=11,SNR=34						
GUMO	Guam	21.07	57	LR	LR	05 31 59.1	
	comp=Z,140nm,19.5s,MS3.4,baz=261,slow=33						
WRAB	Tennant Creek	23.39	162	eP	P	05 25 24.5	+0.3
	41nm,0.6s,mb5.1						
WRAB				eS	S	05 29 34.0	-0.3
WRAB	Tennant Creek	23.39	162	eP	P	05 25 24.5	+0.3
WRAB				eS	S	05 29 34.0	-0.3
WRAB				pmax	pmax		
	comp=Z,41nm,0.6s,mb5.1						
WRA	Warramunga Arr	23.40	162	P	P	05 25 24.1	-0.1
	comp=Z,5.2nm,0.5s,mb4.3,baz=334,slow=11,SNR=83						
WRA				S	S	05 29 34.7	+0.3
	comp=Z,3.1nm,1.0s,baz=326,slow=21,SNR=5.9						
WB2	Warramunga Arr	23.40	162	⇑iP	P	05 25 24.5	+0.2
WB2				eS	S	05 29 34.4	-0.1
ASPA	Alice Springs	26.81	165	eP	P	05 25 56.1	-0.5
SSE	Sheshan	29.04	350	P	P	05 26 18.0	+1.2
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.2						
SSE				AMB	AMB		
	comp=Z,80nm,4.4s						
CTA	Charters Tower	29.39	140	eP	P	05 26 20.4	+0.3
	comp=Z,1.8nm,0.6s,mb4.1						
CTA	Charters Tower	29.39	140	P	P	05 26 20.1	0.0
	comp=Z,2.4nm,0.5s,mb4.3,baz=315,slow=9.9,SNR=5.9						
CTA	Charters Tower	29.39	140	eP	P	05 26 20.4	+0.3
CTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CTAO	Charters Tower	29.39	140	eP	P	05 26 18.4	-1.7
	comp=Z,3.8nm,0.8s,mb4.3						
CTAO	Charters Tower	29.39	140	eP	P	05 26 18.4	-1.7
CTAO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
NJ2	Nanjing	30.44	347	eP	P	05 26 28.5	-0.8
NJ2				AP	pP	05 26 37.4	+8.1
NJ2				XP	sP	05 26 42.0	+13
NJ2				PP	PP	05 27 28.8	+0.2
NJ2				PPP	PPP	05 27 43.3	+0.3
NJ2				S	S	05 31 25.0	-5.0
NJ2				XS		05 31 43.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,430nm,4.2s						
NJ2				LR	LR		
	comp=N,560nm,10.0s,MS4.6						
NJ2				LR	LR		
	comp=E,540nm,10.6s,MS4.6						
NJ2				LR	LR		
	comp=Z,190nm,6.0s						
FORT	Forrest	33.00	178	eP	P	05 26 51.2	-0.5
	comp=Z,43nm,0.7s,mb5.5						
MAT	Matsushiro	35.59	16	P	P	05 27 15.2	+1.2
MAT	Matsushiro	35.59	16	eP	P	05 27 15.0	+1.0
	comp=Z,6.8nm,0.7s,mb4.6						
MAT	Matsushiro	35.59	16	eP	P	05 27 15.0	+1.0
MAT				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.6						
MJAR	Matsushiro Arr	35.59	16	P	P	05 27 12.9	-1.1
	comp=Z,4.6nm,0.6s,mb4.5,baz=188,slow=9.1,SNR=9.0						
MJAR				LR	LR	05 42 16.2	
	comp=Z,71nm,18.4s,MS3.5,baz=200,slow=37						
MUN	Mundaring	35.62	196	eP	P	05 27 14.6	+0.3
STKA	Stephens Creek	36.87	159	P	P	05 27 24.6	-0.2
	comp=Z,16nm,0.6s,mb4.9,baz=336,slow=8.2,SNR=47						
STKA				PcP	PcP	05 29 46.0	-1.0
	comp=Z,3.3nm,0.6s,baz=342,slow=4.9,SNR=3.4						
STKA	Stephens Creek	36.87	159	eP	P	05 27 24.4	-0.4
STKA				ePP	PP	05 28 46.8	-3.4
STKA				ePcP	PcP	05 29 45.9	-1.1
ARMA	Armidale	40.33	146	⇓iP	P	05 27 54.7	+1.0
MDJ	Mudanjiang	42.13	3	P	P	05 28 09.3	+0.9
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,160nm,4.5s						
MDJ				LR	LR		
	comp=N,70nm,30.6s						
MDJ				LR	LR		
	comp=Z,60nm,29.6s,MS3.3						
JIRN	Jiri	46.20	307	eP	P	05 28 41.9	+0.4
	comp=Z,6.8nm,0.4s,mb5.0						
GUN	Gumba	46.56	307	eP	P	05 28 43.9	-0.4
	comp=Z,18nm,0.6s,mb5.4						
KLR	Kul'dur	46.86	4	eP	P	05 28 47.0	+0.6
KKN	Kakani	46.99	307	eP	P	05 28 47.4	-0.2
DMN	Daman	47.05	306	eP	P	05 28 48.3	+0.1
GKN	Gorkha	47.59	307	eP	P	05 28 52.6	+0.2
KOLN	Koldanda	48.33	306	eP	P	05 28 57.7	-0.5
	comp=Z,18nm,0.7s,mb5.3						
ULN	Ulaanbaatar	48.40	342	P	P	05 28 58.1	-0.4
	comp=Z,3.5nm,0.8s,mb4.5						
ULN	Ulaanbaatar	48.40	342	P	P	05 28 58.1	-0.4
ULN				pmax	pmax		

	comp=Z,3.0nm,0.8s,mb4.5						
SONM	**Songino Array**	**48.58**	**342**	P	**P**	**05 29 00.2**	**+0.3**
	comp=Z,1.8nm,0.7s,mb4.2,baz=155,slow=6.9,SNR=8.7						
SONM				LR	LR	05 49 47.4	
	comp=Z,63nm,21.0s,MS3.6,baz=162,slow=36						
MKAR	**Makanchi Array**	**58.68**	**326**	P	**P**	**05 30 13.7**	**-0.7**
	comp=Z,2.2nm,0.5s,mb4.5,baz=119,slow=7.7,SNR=29						
YAK	**Yakutsk**	**59.54**	**2**	eP	**P**	**05 30 19.5**	**-0.6**
ZAL	**Zalesovo**	**61.80**	**333**	P	**P**	**05 30 35.8**	**+0.1**
	comp=Z,1.1nm,0.4s,mb4.5,baz=4.8,slow=7.7,SNR=4.0						
KURK	**Kurchatov**	**62.89**	**328**	eP	**P**	**05 30 41.8**	**-1.2**
	comp=Z,8.7nm,0.6s,mb5.1						
KURK	**Kurchatov**	**62.89**	**328**	eP	**P**	**05 30 41.8**	**-1.1**
KURK				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.1						
BVAR	**Borovoye Array**	**68.47**	**327**	P	**P**	**05 31 18.4**	**-0.3**
	comp=Z,2.3nm,0.8s,mb4.5,baz=135,slow=4.2,SNR=12						
BRVK	**Borovoye**	**68.54**	**327**	eP	**P**	**05 31 19.0**	**-0.2**
	comp=Z,1.8nm,0.8s,mb4.3						
BRVK				e		05 31 27.6	
BRVK	**Borovoye**	**68.54**	**327**	eP	**P**	**05 31 19.0**	**-0.1**
BRVK				e		05 31 27.6	
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.4						
TIXI	**Tiksi**	**69.18**	**1**	eP	**P**	**05 31 20.4**	**-2.4**
AKTK	**Aktyubinsk**	**74.74**	**322**	P	**P**	**05 31 57.0**	**+0.7**
AKTO	**Aktyubinsk**	**74.74**	**322**	P	**P**	**05 31 57.0**	**+0.7**
	comp=Z,2.9nm,0.6s,mb4.5,baz=96,slow=6.7,SNR=12						
ARU	**Arti**	**76.09**	**328**	eP	**P**	**05 32 04.3**	**+0.4**
	comp=Z,10nm,0.7s,mb5.1						
ARU	**Arti**	**76.09**	**328**	⇓iP	**P**	**05 32 03.4**	**-0.4**
ARU				e		05 34 54.9	
ARU				eS	S	05 41 46.7	-0.5
ARU				eSS	SS	05 46 39.2	-3.8
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
VNDA	**Vanda**	**82.09**	**173**	eP	**P**	**05 32 36.2**	**+0.2**
	comp=Z,2.4nm,0.6s,mb4.5						
VNDA	**Vanda**	**82.09**	**173**	eP	**P**	**05 32 36.2**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAW	**Mawson**	**82.52**	**200**	eP	**P**	**05 32 39.0**	**+0.7**
	comp=Z,2.3nm,0.6s,mb4.6						
MAW	**Mawson**	**82.52**	**200**	P	**P**	**05 32 39.3**	**+1.0**
	comp=Z,2.8nm,0.7s,mb4.6,baz=82,slow=7.2,SNR=13						
MAW	**Mawson**	**82.52**	**200**	eP	**P**	**05 32 39.0**	**+0.7**
MAW				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	**86.29**	**25**	P	**P**	**05 32 57.1**	**-0.3**
	comp=Z,0.5nm,0.7s,mb3.7,baz=244,slow=6.0,SNR=6.5						
ARCES	**ARCESS Array B**	**91.72**	**340**	P	**P**	**05 33 23.6**	**+0.7**
	comp=Z,3.4nm,0.8s,mb4.7,baz=68,slow=4.9,SNR=3.8						
FINES	**FINESS Array B**	**93.03**	**332**	P	**P**	**05 33 29.7**	**+0.6**
	comp=Z,1.8nm,1.1s,mb4.4,baz=102,slow=13,SNR=3.3						
PLCA	**Paso Flores**	**138.74**	**160**	PKP	PKPdf	05 39 43.4	+0.3
	comp=Z,1.3nm,0.6s,baz=270,slow=2.0,SNR=3.7						

JMA 21 05:37:06.9±0.1**,38.02N**×**144.54E,h55^{km},M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.49**	**296**	P	P	05 37 46.0	+0.1
OFUJ				eS	S	05 38 15.8	+0.7
JIO	**Ouri**	**2.55**	**281**	P	P	05 37 46.8	0.0
JIO				S	S	05 38 16.5	-0.2
MIYJ	**Miyakonagasawa**	**2.63**	**307**	P	P	05 37 47.8	-0.2
MIYJ				eS	S	05 38 18.2	-0.6
JMK	**Ichinoseki**	**2.77**	**291**	P	P	05 37 50.2	+0.3
JCH	**Churui**	**4.68**	**349**	P	P	05 38 14.7	-2.1
JCH				eS	S	05 39 05.2	-5.1
JKB	**Kayabe**	**4.71**	**326**	eS	S	05 39 09.2	-2.0
JRY	**Ryogami san**	**4.94**	**248**	P	P	05 38 19.6	-0.8
JRY				eS	S	05 39 13.3	-3.5
JOD2	**Odawara 2**	**5.17**	**240**	eS	S	05 39 18.3	-4.5
NEM2	**Nemuro 2**	**5.42**	**9**	eS	S	05 39 20.3	-8.6
JTKR	**Abashiri--Toko**	**5.96**	**356**	P	P	05 38 31.8	-2.9
JTKR				eS	S	05 39 35.9	-6.6

MAN 21 06:13:02.8,8.90N×**126.08E,h43^{km},mb4.3,ML3.2,MS2.9, 1C,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.46**	**279**	eP	P	06 13 14.8	+1.7
BUTP				eS	S	06 13 41.3	+21
BIPH	**Bislig**	**0.76**	**158**	⇑eP	P	06 13 17.5	+0.2
BIPH				i S	S	06 13 33.5	+5.7
SCPH	**Surigao**	**1.05**	**327**	eP	P	06 13 21.8	+0.4
SCPH				i S	S	06 13 44.0	+9.0
BUKP	**Musuan**	**1.43**	**225**	eP	P	06 13 36.7	+10
BUKP				eS	S	06 14 09.6	+25
MSLP	**Maasin**	**1.72**	**316**	eP	P	06 13 27.4	-3.4
MSLP				eS	S	06 14 03.5	+12
GUIM	**Jordan**	**3.84**	**297**	eP	P	06 14 01.1	0.0

NNC 21 06:28:26.8±14.0**,36.71N**×**70.02E,h54^{km}**±471^{km}**,mpv3.3, 4C-1D,Error ellipse: s-maj=119.7km s-min=90.4km az=159.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.39**	**3**	⇑P	P	06 30 00.1	-0.6
	0.7nm,0.3s,baz=186,slow=14,SNR=31						
KK31				⇑S	S	06 31 12.5	-0.6
	0.4nm,0.3s,baz=189,slow=27,SNR=4.7						
AAK	**Ala-Archa**	**6.85**	**29**	⇑P	P	06 30 03.1	-3.9
	1.1nm,0.5s						
AAK				⇑S	S	06 31 19.3	-5.0
	3.2nm,0.8s						
AB31	**Akbulak array**	**14.52**	**333**	P	P	06 31 50.4	-0.2
	0.8nm,0.6s,baz=147,slow=14,SNR=15						
AB31				⇓S	S	06 34 28.7	-1.9
	0.3nm,0.5s						

IDC ***21*** *06:39:37.9±1.7,2.91N×127.25E,mb3.7/4,mb1 3.9/4, mb1mx3.7/15,mbtmp3.8/4,Error ellipse: s-maj=96.9km s-min=23.5km az=69.0*

NEIC ***21*** *06:39:40.0±0.7,2.90N×127.33E,h15^{km},mb4.3/3,Error ellipse: s-maj=20.5km s-min=12.3km az=95.0*

ISC 21 06:39:40.4±1.0**,3.0N**±0.1×**127.3E**±0.2**,h33^{km},n10,** σ**0^{s}51**/10**,mb4.0**/7**,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**20.28**	**58**	eP	**P**	**06 44 15.7**	**-0.4**
FITZ	**Fitzroy Crossi**	**21.01**	**185**	P	**P**	**06 44 22.5**	**-1.2**
	3.2nm,0.8s,mb3.7,baz=22,slow=11,SNR=3.0						
WRAB	**Tennant Creek**	**23.78**	**163**	eP	**P**	**06 44 51.5**	**+0.3**
	2.3nm,0.4s,mb4.0						
WRA	**Warramunga Arr**	**23.79**	**163**	P	**P**	**06 44 51.5**	**+0.2**
	1.8nm,0.6s,mb3.7,baz=343,slow=11,SNR=22						
WB2	**Warramunga Arr**	**23.79**	**163**	eP	**P**	**06 44 51.1**	**-0.2**
CTAO	**Charters Tower**	**29.50**	**142**	eP	**P**	**06 45 44.5**	**+0.4**
	5.4nm,1.4s,mb4.1						
STKA	**Stephens Creek**	**37.21**	**160**	P	**P**	**06 46 51.4**	**+0.7**
	0.7nm,0.4s,mb3.8,baz=341,slow=8.1,SNR=4.2						
STKA	**Stephens Creek**	**37.21**	**160**	eP	**P**	**06 46 50.5**	**-0.2**
MKAR	**Makanchi Array**	**58.52**	**325**	P	**P**	**06 49 36.2**	**+0.2**
	0.3nm,0.4s,mb3.6,baz=118,slow=8.2,SNR=3.7						
CASY	**Casey**	**70.14**	**187**	eP	**P**	**06 50 51.7**	**+0.4**
	10nm,0.9s,mb4.8						

IDC ***21*** *06:43:42.5±0.7,8.67S×112.17E,mb4.2/9,mb1 4.3/10, mb1mx4.2/17,mbtmp4.2/10,ML4.3/1,MS3.2/2,Ms1 3.2/2, ms1mx2.6/19,Error ellipse: s-maj=31.2km s-min=13.2km az=46.0*

NEIC ***21*** *06:43:47.5±0.4,8.71S×112.28E,h35^{km},mb4.1/2,Error ellipse: s-maj=17.7km s-min=9.4km az=49.0*

ISC 21 06:43:45.3±0.5**,8.7S**±0.1×**112.3E**±0.1**,h33^{km},n21,** σ**0^{s}79**/21**,mb4.2**/10**,MS3.1**/1**,2C,Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**16.04**	**127**	eP	**P**	**06 47 29.0**	**-1.1**
	7.2nm,1.1s						
FITZ	**Fitzroy Crossi**	**16.04**	**127**	Pn	**P**	**06 47 29.3**	**-0.8**
	0.8nm,0.3s,baz=312,slow=11,SNR=30						
FITZ				Sn	**S**	**06 50 11.2**	**-16**
	1.2nm,0.3s,baz=239,slow=21,SNR=7.5						
FITZ				LR	LR	06 52 53.9	
	comp=Z,87nm,20.9s,baz=156,slow=34						
KAKA	**Kakadu**	**20.24**	**103**	eP	**P**	**06 48 37.8**	**+17**
	7.7nm,0.6s						
WRA	**Warramunga Arr**	**24.13**	**120**	P	**P**	**06 48 59.6**	**+0.3**
	7.4nm,0.6s,mb4.3,baz=296,slow=12,SNR=97						
WRA				PcP	PcP	06 52 41.1	-0.4
	0.4nm,0.5s,baz=320,slow=1.9,SNR=4.8						
WRA				S	**S**	**06 53 22.8**	**+11**
	0.6nm,0.9s,baz=283,slow=24,SNR=3.8						
WRAB	**Tennant Creek**	**24.13**	**120**	eP	**P**	**06 48 59.6**	**+0.2**
	8.7nm,0.7s,mb4.3						
WRAB				ePcP	PcP	06 52 41.4	0.0
WB2	**Warramunga Arr**	**24.14**	**120**	eP	**P**	**06 48 59.7**	**+0.2**
NWAO	**Narrogin (SRO)**	**24.58**	**170**	LR	LR	06 58 54.8	
	comp=Z,63nm,18.4s,MS3.1,baz=244,slow=37						
STKA	**Stephens Creek**	**35.72**	**134**	P	**P**	**06 50 43.6**	**+0.7**
	6.1nm,0.5s,mb4.8,baz=310,slow=8.8,SNR=35						
STKA				PcP	PcP	06 53 11.2	+0.3
	2.4nm,0.5s,baz=325,slow=5.0,SNR=7.0						
MJAR	**Matsushiro Arr**	**51.16**	**27**	P	**P**	**06 52 45.8**	**-1.7**
	1.3nm,0.3s,mb4.3,baz=201,slow=6.6,SNR=4.9						
SONM	**Songino Array**	**56.49**	**355**	P	**P**	**06 53 27.0**	**+0.5**
	1.3nm,0.7s,mb4.1,baz=177,slow=8.2,SNR=12						
SONM				PcP	PcP	06 54 23.3	+0.4
	0.5nm,0.8s,baz=142,slow=3.2,SNR=3.5						
MKAR	**Makanchi Array**	**61.33**	**337**	P	**P**	**06 54 00.4**	**+0.3**
	1.6nm,0.5s,mb4.4,baz=147,slow=7.6,SNR=14						
AAK	**Ala-Archa**	**61.58**	**329**	eP	**P**	**06 54 00.9**	**-1.0**
OPO	**Ambohidratompo**	**63.71**	**254**	P	**P**	**06 54 14.7**	**-1.7**
	1.3nm,0.8s,mb4.0,baz=26,slow=4.1,SNR=3.0						
ZAL	**Zalesovo**	**66.54**	**343**	P	**P**	**06 54 34.0**	**0.0**
	0.8nm,0.3s,mb4.2,baz=308,slow=3.9,SNR=4.0						
BVAR	**Borovoye Array**	**71.00**	**335**	P	**P**	**06 55 01.8**	**+0.2**
	0.7nm,0.7s,mb3.7,baz=170,slow=9.0,SNR=4.5						
AKTK	**Aktyubinsk**	**75.25**	**328**	P	**P**	**06 55 27.6**	**+0.9**
AKTO	**Aktyubinsk**	**75.25**	**328**	P	**P**	**06 55 27.6**	**+0.9**
	1.4nm,0.7s,mb4.0,baz=124,slow=3.5,SNR=6.2						
SNAA	**Sanae**	**89.46**	**197**	⇑iP	**P**	**06 56 39.7**	**-0.1**
SNAA				e		06 57 03.0	
VNA2	**Neumayer--Watz**	**91.11**	**197**	P	**P**	**06 56 47.9**	**+0.4**
VNA2				e		06 57 11.3	
VNA3	**Neumayer Olymp**	**91.57**	**196**	⇑iP	**P**	**06 56 50.0**	**+0.4**
VNA3				e		06 57 13.0	
BDFB	**Brasilia**	**148.93**	**219**	PKPbc	PKPdf	07 03 34.3	+7.6
	1.6nm,0.5s,baz=196,slow=18,SNR=4.6						

NDI ***21*** *07:04:54.0±3.9,34.78N×72.82E,h10^{km},MD3.7,ML3.4*

NNC ***21*** *07:05:04.3±12.0,35.18N×72.50E,mpv3.6,Error ellipse: s-maj=108.1km s-min=94.6km az=114.0*

ISC 21 07:04:54.1±1.9**,34.64N**±0.10×**72.7E**±0.2**,h10^{km},n7,** σ**1^{s}31**/12**,3C,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.33**	**131**	eP	**Pn**	**07 05 47.7**	**+0.4**
THN				eSB	**Sb**	**07 06 35.0**	**+1.4**
BHK	**Bhakra**	**4.46**	**135**	eSB	**Sb**	**07 07 13.5**	**+6.9**
SDNR	**Sundarnagar**	**4.74**	**130**	eP	**Pn**	**07 06 06.5**	**-0.9**
SDNR				eS	**Sn**	**07 06 58.8**	**-4.3**
KLP	**Kalpa**	**5.58**	**122**	eP	**Pn**	**07 06 17.1**	**-2.1**
KLP				eS	**Sn**	**07 07 16.9**	**-7.2**
KLP				AML	AML	07 07 50.4	
	comp=E,101nm,0.7s						
KLP				AML	AML	07 07 52.0	
	comp=N,102nm,0.9s						
KHET	**Khetri**	**7.05**	**157**	eS	**Sn**	**07 07 53.3**	**-7.8**
KHET				AML	AML	07 08 02.0	
	comp=E,12nm,0.1s						
KHET				AML	AML	07 08 02.2	
	comp=N,18nm,0.2s						
AAK	**Ala-Archa**	**8.10**	**9**	⇑P	**P**	**07 06 56.7**	**+2.1**
	comp=N,2.3nm,0.8s						
AAK				⇑S	**Sn**	**07 08 26.4**	**-0.8**
	comp=N,3.1nm,0.8s						
KK31	**Karatay Array**	**8.62**	**349**	P	**P**	**07 07 02.4**	**+0.4**
	comp=N,1.3nm,0.3s,baz=162,slow=12,SNR=36						
KK31				⇑S	**Sn**	**07 08 34.5**	**-5.8**
	comp=N,1.4nm,0.3s,baz=167,slow=23,SNR=9.7						

BJI ***21*** *07:12:35.8,1.83S×137.91E,h34^{km},mB5.3,mb4.8,Ms4.5, Msz4.3*

IDC ***21*** *07:12:39.5±0.6,1.13S×137.29E,mb4.8/11,mb1 4.9/12, mb1mx4.8/16,mbtmp4.9/12,ML4.1/1,MS4.3/10,Ms1 4.2/10, ms1mx3.9/19,Error ellipse: s-maj=22.7km s-min=13.5km az=65.0*

MOS ***21*** *07:12:42.2±1.2,1.27S×137.17E,h33^{km},mb5.2/17,Error ellipse: s-maj=15.1km s-min=7.7km az=114.1*

HRVD ***21*** *07:12:44.4±0.2,1.07S×137.26E,h30^{km}±1^{km},MW5.2/76, Centroid moment Tensor Solution. LP body waves: s54,c81;Mantle waves: s76,c126; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.12±.18; $M_{\theta\theta}$3.17±.16; $M_{\phi\phi}$-3.30±.18; $M_{r\theta}$-1.56±.25; $M_{\theta\phi}$5.09±.14; $M_{\phi r}$-2.30±.31; Best double couple: $M_0$6.626×10^{16} NP1:ϕ_s288°,δ67°,λ6°. NP2:ϕ_s195°,δ84°,λ157°. Principal axes: T 6.888, Plg20°, Azm149°; N -.53, Plg66°, Azm2°; P -6.363, Plg12°, Azm244°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***21*** *07:12:44.4±0.3,1.20S×137.20E,mb5.0/19 Error ellipse: s-maj=10.6km s-min=5.6km az=60.0*

ISC 21 07:12:42.3±0.3**,1.23S**±0.04×**137.25E**±0.06**,h33^{km}, h33^{km}**±1.7^{km}**:pP-P,n124,** σ**1^{s}11**/113**,mb5.0**/41**,MS4.3**/16**, 5C-4D,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**12.37**	**202**	eP	Px	07 15 55.8	
	106nm,0.9s						
KAKA				eS	Sx	07 18 05.6	
PMG	**Port Moresby**	**12.77**	**130**	Pn	**P**	**07 15 43.9**	**-0.6**
	4.4nm,0.3s,baz=347,slow=6.1,SNR=28						
PMG	**Port Moresby**	**12.77**	**130**	ePn	**P**	**07 15 44.5**	**0.0**
	114nm,0.9s						
PMG	**Port Moresby**	**12.77**	**130**	eP	**P**	**07 15 44.5**	**0.0**
PMG				pmax	pmax		
	comp=Z,114nm,0.9s						
DAV	**Davao City (W)**	**14.27**	**305**	ePn	**P**	**07 16 07.0**	**+2.7**
PAGZ	**Pagadian**	**16.51**	**303**	eP	**P**	**07 16 36.3**	**+3.0**
MSLP	**Maasin**	**16.72**	**313**	eP	**P**	**07 16 34.6**	**-1.3**
WRAB	**Tennant Creek**	**18.80**	**189**	ePn	**P**	**07 16 59.4**	**-2.3**
	comp=Z,99nm,0.8s						
WRAB				eSn	**S**	**07 20 18.0**	**-8.7**
WRAB	**Tennant Creek**	**18.80**	**189**	eP	**P**	**07 16 59.4**	**-2.3**
WRAB				e		07 20 18.0	
WRAB				pmax	pmax		
	comp=Z,99nm,0.8s						
WB2	**Warramunga Arr**	**18.81**	**188**	eP	**P**	**07 16 58.8**	**-3.0**
WB2				eS	**S**	**07 20 17.3**	**-10**
WRA	**Warramunga Arr**	**18.82**	**189**	P	**P**	**07 16 59.2**	**-2.6**
	comp=Z,3.7nm,0.3s,baz=9.9,slow=11,SNR=86						
WRA				S	**S**	**07 20 17.6**	**-9.3**
	comp=Z,0.8nm,0.3s,baz=9.4,slow=23,SNR=6.8						
PVCP	**Virac**	**19.64**	**319**	eP	**P**	**07 17 10.8**	**-0.5**
CUYO	**Cuyo Island**	**20.12**	**307**	eP	**P**	**07 17 15.3**	**-1.2**
TSM	**Tawau**	**20.13**	**286**	P	**P**	**07 17 17.1**	**+0.5**
OTRP	**Odiongan**	**20.27**	**312**	eP	**P**	**07 17 17.9**	**-0.1**
FITZ	**Fitzroy Crossi**	**20.28**	**214**	⇓iP	**P**	**07 17 18.1**	**0.0**
	comp=Z,40nm,0.6s						
FITZ				eS	**S**	**07 20 53.2**	**-5.4**
FITZ	**Fitzroy Crossi**	**20.28**	**214**	P	**P**	**07 17 18.1**	**0.0**
	comp=Z,48nm,0.9s,baz=36,slow=11,SNR=28						
FITZ				S	**S**	**07 20 52.9**	**-5.7**
	comp=Z,72nm,0.8s,baz=213,slow=17,SNR=5.4						
CTA	**Charters Tower**	**20.71**	**155**	eP	**P**	**07 17 23.4**	**+0.9**
	comp=Z,112nm,0.6s						
CTA	**Charters Tower**	**20.71**	**155**	P	**P**	**07 17 23.0**	**+0.5**
	comp=Z,141nm,0.7s,baz=324,slow=12,SNR=6.0						
CTA				LR	LR	07 26 27.2	
	comp=Z,1µm,18.2s,MS4.3,baz=352,slow=40						
CTA	**Charters Tower**	**20.71**	**155**	eP	**P**	**07 17 23.4**	**+0.9**
CTA				pmax	pmax		
	comp=Z,112nm,0.6s						
BOAC	**Boac**	**21.13**	**314**	eP	**P**	**07 17 27.3**	**+0.5**
PPR	**Puerto Princes**	**21.44**	**301**	eP	**P**	**07 17 32.4**	**+2.4**
BATP	**Bataraza**	**21.79**	**298**	eP	**P**	**07 17 34.9**	**+1.4**
POLP	**Polilio Island**	**21.93**	**317**	eP	**P**	**07 17 34.2**	**-0.7**
TGY	**Tagaytay City**	**22.21**	**314**	P	**P**	**07 17 38.8**	**+1.1**
	comp=Z,170nm,0.3s,mb6.0,baz=220,slow=20,SNR=8.4						
KKM	**Kota Kinabalu**	**22.21**	**289**	eP	**P**	**07 17 37.9**	**+0.2**
KKM				epP		07 17 45.6	
KKM	**Kota Kinabalu**	**22.21**	**289**	P	**P**	**07 17 38.8**	**+1.1**
LUBP	**Lubang**	**22.48**	**312**	eP	**P**	**07 17 40.6**	**+0.3**
ASPA	**Alice Springs**	**22.54**	**188**	⇓iP	**P**	**07 17 42.6**	**+1.6**
ASPA				eS	**S**	**07 21 46.2**	**+5.0**
BALP	**Baler**	**22.90**	**318**	eP	**P**	**07 17 38.2**	**-6.4**
HNR	**Honiara**	**24.00**	**111**	P	**P**	**07 17 55.0**	**-0.3**
	comp=Z,209nm,0.7s,mb5.7,baz=230,slow=1.7,SNR=19						
HNR	**Honiara**	**24.00**	**111**	eP	**P**	**07 17 54.7**	**-0.6**
	comp=Z,177nm,0.8s,mb5.5						
HNR				epP		07 18 06.1	
HNR	**Honiara**	**24.00**	**111**	eP	**P**	**07 17 54.7**	**-0.6**
HNR				e*PP		07 18 06.1	
HNR				pmax	pmax		
	comp=Z,177nm,0.8s,mb5.5						
KSM	**Kuching**	**27.08**	**276**	eP	**P**	**07 18 14.1**	**-10**
CBIJ	**Chichi jima**	**28.56**	**9**	LR	LR	07 28 14.3	
	comp=Z,253nm,20.0s,MS3.8,baz=82,slow=33						
JOW	**Kunigami**	**29.21**	**343**	LR	LR	07 29 45.5	
	comp=Z,668nm,18.5s,MS4.3,baz=308,slow=35						
FORT	**Forrest**	**30.65**	**196**	eP	**P**	**07 18 56.0**	**-0.1**
	comp=Z,25nm,0.6s,mb5.2						
STKA	**Stephens Creek**	**30.76**	**173**	P	**P**	**07 18 56.8**	**-0.2**
	comp=Z,25nm,0.6s,mb5.2,baz=345,slow=8.0,SNR=94						
STKA				LR	LR	07 34 01.4	
	comp=Z,869nm,18.0s,MS4.5,baz=347,slow=42						
STKA	**Stephens Creek**	**30.76**	**173**	eP	**P**	**07 18 56.6**	**-0.4**
ARMA	**Armidale**	**32.08**	**156**	eP	**P**	**07 19 09.1**	**+0.5**
JHJ	**Hachijo jima 2**	**34.25**	**4**	LR	LR	07 30 00.8	
	comp=Z,430nm,20.2s,MS4.2,baz=162,slow=30						
JNU	**Nakatsue**	**34.69**	**351**	P	**P**	**07 19 30.1**	**-1.1**
	comp=Z,10nm,0.9s,mb4.8,baz=135,slow=4.3,SNR=4.1						
DZM	**Mont Dzumac**	**35.16**	**128**	P	**P**	**07 19 35.2**	**-0.1**
	comp=Z,19nm,1.1s,mb4.9,baz=352,slow=9.9,SNR=5.3						
SSE	**Sheshan**	**35.59**	**336**	P	**P**	**07 19 38.4**	**-0.5**
SSE				AP	pP	07 19 47.0	-1.7
SSE				XP	sP	07 19 50.6	-2.3
SSE				S	**S**	**07 25 12.1**	**+0.2**
SSE				SS	SS	07 27 47.0	+15
SSE				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.5						
SSE				AMB	AMB		
	comp=Z,120nm,4.2s						
SSE				LR	LR		
	comp=N,150nm,23.7s,MS3.8						
SSE				LR	LR		
	comp=E,150nm,23.7s,MS3.8						
SSE				LR	LR		
	comp=Z,320nm,22.2s,MS4.0						
CNB	**Canberra Magne**	**35.74**	**163**	⇑iP	**P**	**07 19 41.4**	**+1.3**
	comp=Z,57nm,0.9s,mb5.5						
NWAO	**Narrogin (SRO)**	**36.72**	**209**	P	**P**	**07 19 49.0**	**+0.6**
	comp=Z,10nm,0.7s,mb4.8,baz=49,slow=9.3,SNR=1.5						
TOO	**Toolangi**	**36.95**	**169**	eP	**P**	**07 19 51.7**	**+1.4**
	comp=Z,22nm,1.4s,mb4.8						
TOO	**Toolangi**	**36.95**	**169**	eP	**P**	**07 19 51.7**	**+1.4**
TOO				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.8						
NJ2	**Nanjing**	**37.41**	**334**	eP	**P**	**07 19 58.3**	**+4.1**
NJ2				AP	pP	07 20 07.3	+3.3
NJ2				XP	sP	07 20 11.9	+3.7
NJ2				PP	PP	07 21 27.0	+4.6
NJ2				S	**S**	**07 25 45.0**	**+5.2**
NJ2				XS		07 26 02.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,340nm,4.7s						
NJ2				LR	LR		
	comp=N,740nm,15.3s						
NJ2				LR	LR		
	comp=E,1µm,24.5s						
NJ2				LR	LR		
	comp=Z,470nm,16.2s,MS4.4						
ENH	**Enshi**	**41.01**	**322**	eP	**P**	**07 20 27.7**	**+3.6**
	comp=Z,9.3nm,0.7s,mb4.5						
KMI	**Kunming**	**42.46**	**310**	P	**P**	**07 20 36.8**	**+0.6**
KMI				AP	pP	07 20 43.3	-2.8
KMI				XP	sP	07 20 45.9	-4.3
KMI				PP	PP	07 22 20.4	+3.1
KMI				PPP	PPP	07 22 56.8	+6.2
KMI				S	**S**	**07 27 04.9**	**+9.4**
KMI				XS		07 27 15.8	
KMI				SS	SS	07 30 12.8	+13
KMI				SSS	SSS	07 31 04.4	+19
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
KMI				LR	LR		
	comp=N,280nm,15.3s,MS4.4						
KMI				LR	LR		
	comp=E,280nm,18.5s,MS4.4						
KMI				LR	LR		
	comp=Z,420nm,24.2s						
TAU	**Tasmania Unive**	**42.47**	**169**	eP	**P**	**07 20 37.6**	**+1.6**
	comp=Z,77nm,1.2s,mb5.2						
TAU				epP	pP	07 20 46.5	+0.6
TAU	**Tasmania Unive**	**42.47**	**169**	eP	**P**	**07 20 37.6**	**+1.6**
TAU				e*PP	pP	07 20 46.5	+0.6
TAU				pmax	pmax		
	comp=Z,77nm,1.2s,mb5.2						
XAN	**Xi’an**	**44.04**	**325**	P	**P**	**07 20 49.1**	**+0.2**
CD2	**Chengdu**	**45.11**	**318**	P	**P**	**07 20 57.8**	**+0.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
LZH	**Lanzhou**	**48.43**	**323**	eP	**P**	**07 21 24.3**	**+0.7**
LZH				AP	pP	07 21 39.5	+5.9
LZH				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.1						
LZH				AMB	AMB		
	comp=Z,170nm,4.0s						
LZH				LR	LR		
	comp=E,530nm,14.0s						
LZH				LR	LR		
	comp=Z,610nm,16.3s,MS4.7						
GTA	**Gaotai**	**53.02**	**324**	eP	**P**	**07 21 58.6**	**+0.1**
GTA				AP	pP	07 22 08.5	-0.1
GTA				XP	sP	07 22 12.5	0.0
GTA				AMB	AMB		
	comp=Z,100nm,8.4s						
GTA				LR	LR		
	comp=N,110nm,15.6s						
GTA				LR	LR		
	comp=E,180nm,23.6s						
GTA				LR	LR		
	comp=Z,170nm,22.4s						
LSA	**Lhasa**	**53.66**	**309**	eP	**P**	**07 22 03.6**	**+0.4**
LSA	**Lhasa**	**53.66**	**309**	eP	**P**	**07 22 02.2**	**-1.0**
	comp=Z,20nm,0.9s,mb5.0						
LSA				esP	sP	07 22 16.2	-1.0
LSA	**Lhasa**	**53.66**	**309**	eP	**P**	**07 22 02.2**	**-1.0**
LSA				e*SP	sP	07 22 16.2	-1.0
LSA				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
ULN	**Ulaanbaatar**	**55.52**	**336**	eP	**P**	**07 22 12.0**	**-4.6**
	comp=Z,4.1nm,0.8s,mb4.5						
ULN				esP	sP	07 22 29.1	-1.5
ULN	**Ulaanbaatar**	**55.52**	**336**	eP	**P**	**07 22 12.0**	**-4.6**
ULN				e*SP	sP	07 22 29.1	-1.5
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.5						
SONM	**Songino Array**	**55.77**	**335**	P	**P**	**07 22 17.9**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=148,slow=7.7,SNR=6.5						
SONM				LR	LR	07 45 19.3	
	comp=Z,445nm,19.9s,MS4.5,baz=150,slow=35						
JIRN	**Jiri**	**56.81**	**304**	eP	**P**	**07 22 25.8**	**-0.3**
	comp=Z,19nm,0.8s,mb5.2						
GUN	**Gumba**	**57.15**	**305**	eP	**P**	**07 22 28.2**	**-0.4**
	comp=Z,95nm,1.3s,mb5.7						
PKI	**Pulchoki**	**57.42**	**304**	eP	**P**	**07 22 29.9**	**-0.6**
KKN	**Kakani**	**57.60**	**304**	eP	**P**	**07 22 31.2**	**-0.6**
	comp=Z,52nm,0.9s,mb5.5						
DMN	**Daman**	**57.68**	**304**	eP	**P**	**07 22 31.9**	**-0.4**
	comp=Z,44nm,0.9s,mb5.5						
GKN	**Gorkha**	**58.21**	**304**	eP	**P**	**07 22 35.4**	**-0.6**
	comp=Z,85nm,0.9s,mb5.8						
KOLN	**Koldanda**	**58.99**	**304**	eP	**P**	**07 22 41.1**	**-0.3**
	comp=Z,47nm,1.0s,mb5.5						
ZAK	**Zakamensk**	**59.04**	**335**	eP	**P**	**07 22 40.2**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
HYB	**Hyderabad**	**60.69**	**291**	i P	**P**	**07 22 52.0**	**-1.2**
HYB	**Hyderabad**	**60.69**	**291**	eP	**P**	**07 22 52.0**	**-1.2**
MOY	**Mondy**	**60.96**	**335**	eP	**P**	**07 22 55.8**	**+1.2**
BOD	**Bodaibo**	**61.73**	**346**	eP	**P**	**07 22 58.8**	**-0.9**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.7						

WMQ	Urumqi	62.95	322	P	P	07 23 07.9	-0.1
WMQ				AP	pP	07 23 19.0	+0.7
WMQ				XP	sP	07 23 26.0	+4.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,130nm,6.6s						
WMQ				LR	LR		
	comp=N,200nm,23.4s,MS4.3						
WMQ				LR	LR		
	comp=E,170nm,26.2s,MS4.3						
WMQ				LR	LR		
	comp=Z,160nm,27.8s,MS4.0						
YAK	Yakutsk	63.36	356	*e*P	P	07 23 09.5	-0.9
YAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.2						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
DGAR	Diego Garcia	64.86	262	P	P	07 23 19.8	-1.2
SEY	Seymchan	65.00	8	⇓*i*P	P	07 23 21.4	+0.3
POO	Poona	65.30	291	*e*P	P	07 23 21.0	-2.8
MKAR	Makanchi Array	67.74	323	P	P	07 23 38.2	-0.6
	comp=N,2.4nm,0.6s,mb4.4,baz=107,slow=8.7,SNR=22						
MKAR				LR	LR	07 52 52.3	
	comp=N,115nm,20.4s,MS4.1,baz=200,slow=36						
ZAL	Zalesovo	69.94	330	P	P	07 23 51.5	-0.7
	comp=N,1.1nm,0.7s,baz=354,slow=3.0,SNR=5.4						
AAK	Ala-Archa	71.14	316	⇓*i*P	P	07 23 59.7	-0.1
AAK				pmax	pmax		
	comp=Z,5µm,1.7s						
NVS	Novosibirsk	71.19	330	*e*P	P	07 24 01.9	+2.0
NVS				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.8						
NVS				pmax	pmax		
	comp=N,19nm,1.6s						
NVS				pmax	pmax		
	comp=E,12nm,1.4s						
KURK	Kurchatov	71.68	325	*e*P	P	07 24 01.6	-1.3
	comp=E,26nm,1.4s,mb5.0						
KURK				*e*pP	pP	07 24 12.0	-1.2
KURK	Kurchatov	71.68	325	*e*P	P	07 24 01.6	-1.2
KURK				*e**PP	pP	07 24 12.0	-1.2
KURK				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.0						
TIXI	Tiksi	72.96	357	*e*P	P	07 24 06.0	-4.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,95nm,15.0s,MS4.2						
PPT	Papeete	73.59	108	*e*S	S	07 33 44.7	+3.5
PPT				*e*LR	LR	07 46 57.8	
	comp=Z,158nm,23.2s						
TBI	Tubuai	74.18	114	*e*LR	LR	07 47 15.0	
	comp=Z,283nm,31.2s						
BRVK	Borovoye	77.34	325	*e*P	P	07 24 35.0	-0.4
	comp=Z,11nm,0.9s,mb4.8						
BRVK				*e*pP	pP	07 24 44.3	-1.5
BRVK	Borovoye	77.34	325	*e*P	P	07 24 35.1	-0.3
BRVK				*e**PP	pP	07 24 44.3	-1.5
BRVK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
CHKZ	Chkalovo	77.36	326	*e*P	P	07 24 34.9	-0.7
	comp=Z,21nm,1.2s,mb5.0						
CHKZ				*e*pP	pP	07 24 46.3	+0.3
CHKZ	Chkalovo	77.36	326	*e*P	P	07 24 34.9	-0.6
CHKZ				*e**PP	pP	07 24 46.3	+0.4
CHKZ				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.9						
VNDA	Vanda	77.38	175	*e*P	P	07 24 35.6	+0.5
	comp=Z,11nm,0.9s,mb4.8						
VNDA	Vanda	77.38	175	*e*P	P	07 24 35.6	+0.4
VNDA				pmax	pmax		
	comp=Z,11nm,0.9s						
SBA	Scott Base	78.16	174	*e*P	P	07 24 36.7	-2.8
	comp=Z,5.6nm,1.1s,mb4.4						
SBA				*e*pP	pP	07 24 50.3	+0.3
SBA	Scott Base	78.16	174	*e*P	P	07 24 36.7	-2.8
SBA				*e**PP	pP	07 24 50.3	+0.4
SBA				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
IMA2	Indian Mountai	82.74	23	*e*P	P	07 25 00.1	-3.9
IMA2				*e*PcP	PcP	07 25 10.0	+0.8
IMA2				*e*pP	pP	07 25 12.8	-1.7
MAW	Mawson	82.94	202	*e*P	P	07 25 06.0	+1.0
	comp=Z,3.6nm,0.9s,mb4.4						
MAW	Mawson	82.94	202	P	P	07 25 06.3	+1.3
	comp=Z,3.8nm,0.8s,mb4.5,baz=76,slow=6.0,SNR=13						
MAW				LR	LR	07 59 12.6	
	comp=Z,128nm,20.4s,MS4.3,baz=70,slow=34						
MAW	Mawson	82.94	202	*e*P	P	07 25 06.3	+1.3
	comp=Z,16nm,1.1s,mb5.0						
MAW				*e*pP	pP	07 25 16.9	+1.3
MAW	Mawson	82.94	202	*e*P	P	07 25 06.3	+1.3
MAW				*e**PP	pP	07 25 16.9	+1.3
MAW				pmax	pmax		
	comp=Z,16nm,1.1s						
ARU	Arti	84.77	327	⇑*i*P	P	07 25 14.5	+0.1
ARU				*e*		07 28 31.1	
ARU				*e*S	S	07 35 35.4	-3.1
ARU				*e*SS	SS	07 41 14.3	+0.6
ARU				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.0						
ILAR	Eielson Array	85.10	25	P	P	07 25 16.3	+0.4
	comp=Z,2.4nm,0.8s,mb4.4,baz=262,slow=4.7,SNR=10						
RKT	Rikitea	87.47	113	*e*LR	LR	07 53 25.1	
	comp=Z,344nm,37.0s						
DAWY	Dawson	88.18	26	*e*P	P	07 25 32.3	+1.3
DAWY				*e*pP	pP	07 25 42.0	+0.5
QSPA	South Pole Qui	88.71	180	*e*P	P	07 25 34.3	+1.2
	comp=Z,29nm,1.0s,mb5.6						
QSPA				*e*pP	pP	07 25 44.7	+0.9
QSPA				*e*sP	sP	07 25 48.1	+0.9
KIV	Kislovodsk	94.14	314	*e*P	P	07 26 00.0	+0.9
KIV				*e*		07 29 46.6	
KIV				*e*SS	SS	07 43 31.2	+1.7
KIV				pmax	pmax		
	comp=Z,14nm,1.2s,mb5.3						
SOC	Sochi	96.31	314	*e*P	P	07 26 12.3	+3.2
OBN	Obninsk	97.12	325	*e*P	P	07 26 12.9	+0.5
OBN				pmax	pmax		
	comp=Z,8µm,0.6s						
ANN	Anapa	97.84	315	*e*P	P	07 26 24.9	+9.0
ANN				pmax	pmax		
	comp=Z,74nm,1.0s						
ARCES	ARCESS Array B	98.64	341	LR	LR	08 11 15.6	
	comp=Z,94nm,19.6s,MS4.3,baz=22,slow=36						
YKA	Yellowknife Ar	99.41	27	LR	LR	08 06 21.9	
	comp=Z,96nm,21.9s,MS4.3,baz=100,slow=32						
SNAA	Sanae	102.85	192	⇑*i*P	Pdif	07 26 38.3	+0.6
VNA2	Neumayer--Watz	104.36	191	⇑*i*P	Pdif	07 26 46.3	+1.9
VNA3	Neumayer Olymp	104.53	191	⇑*i*P	Pdif	07 26 51.2	+6.1
KWP	Kalwaria	106.63	322	*e*Pdif	Pdif	07 26 55.3	+0.4
	comp=Z,28nm,0.4s						
KWP	Kalwaria	106.63	322	*e*P	Pdif	07 26 55.3	+0.4
KWP				pmax	pmax		
	comp=Z,28nm,0.4s						
PLCA	Paso Flores	131.16	152	PKP	PKPdf	07 31 55.0	-1.9
	comp=Z,2.0nm,0.8s,baz=58,slow=3.1,SNR=3.8						
ARE	Arequipa	146.62	123	*e*P	PKPbc	07 32 25.0	+3.7
ROSC	El Rosal	148.26	83	PKPbc	PKPdf	07 32 28.6	+0.5
	comp=Z,9.7nm,0.6s,baz=92,slow=20,SNR=8.5						
LPAZ	La Paz	149.49	126	PKP	PKPdf	07 32 28.7	-1.3
	comp=Z,7.3nm,0.9s,baz=61,slow=4.4,SNR=5.4						
LPAZ				PKPbc	PKPdf	07 32 32.8	+2.8
	comp=Z,8.8nm,1.0s,baz=225,slow=2.9,SNR=27						
LPAZ				PKPab	PKPab	07 32 39.2	+3.0
	comp=Z,23nm,0.8s,baz=205,slow=2.6,SNR=43						
LPAZ	La Paz	149.49	126	PKP	PKPdf	07 32 28.7	-1.3
LPAZ				PKPbc	PKPdf	07 32 32.8	+2.8
LPAZ				PKPab	PKPab	07 32 39.2	+3.0
SDV	Santo Domingo	151.22	74	*e*PKPdf	PKPdf	07 32 29.1	-3.7

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*IDC **21** 07:18:34.8±0.9, 53.93N×164.25W, mb4.1/14, mb1 4.3/18, mb1mx4.2/26, mbtmp4.1/18, ML3.7/4, MS3.4/4, Ms1 3.4/4, ms1mx2.9/27, Error ellipse: s-maj=23.8km s-min=13.2km az=179.0*

*NEIC **21** 07:18:41.2±0.4, 53.88N×164.15W, h49^{km}±3^{km}, mb4.3/5, ML3.9(AEIC), Error ellipse: s-maj=7.6km s-min=3.0km az=161.0*

NEIC Felt at False Pass.

ISC 21 07:18:40.1±0.6, **53.87N**±0.07×**164.09W**±0.05, **h56**^{km}±4^{km}, **n70**, σ**0**^{s}**.92**/74, **mb4.2**/20, **MS3.4**/3, **Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	0.67	334	P	P	07 18 54.0	+0.1
WESN	West Dahl Nort	0.76	338	P	P	07 18 55.9	+0.9
WFAR	Faris Peak	0.78	329	P	P	07 18 55.5	+0.2
WPOG	Pogromni	0.82	332	P	P	07 18 56.2	+0.4
WTUG	Tugumak	0.99	350	P	P	07 18 58.8	+0.6
AKA	Akutan	1.03	286	P	P	07 18 58.4	-0.3
AKA				S	S	07 19 12.4	0.0
AKUT	Akutan	1.03	286	P	P	07 18 58.4	-0.3
AKUT				S	S	07 19 12.8	+0.4
AHB	Akutan Harbor	1.05	284	P	P	07 18 58.8	-0.2
LVA	Lava Point	1.19	285	P	P	07 19 00.8	0.0
UNV	Unalaska Valle	1.43	270	P	P	07 19 03.0	-1.4
BALA	Baldy Mountain	1.53	29	P	P	07 19 07.3	+1.6
DRIA	Deer Island	1.53	43	P	P	07 19 05.1	-0.6
MTBL	Makushin Table	1.54	275	P	P	07 19 05.5	-0.3
MNAT	Makushin Natee	1.54	272	P	P	07 19 05.0	-0.8
MNAT				S	S	07 19 26.0	+1.2
MSW	Makushin Switc	1.60	273	P	P	07 19 05.8	-0.8
DT1	Dutton Round H	1.63	40	P	P	07 19 06.7	-0.4
MGOD	Makushin Gods	1.65	269	P	P	07 19 06.7	-0.7
DTNA	Dutton South F	1.67	39	P	P	07 19 07.5	-0.1
DOL	Dolgoi Island	1.82	44	P	P	07 19 09.4	-0.3
HAG	Hague Volcano	1.93	40	P	P	07 19 11.9	+0.7
PVV	Pavlof Volcano	2.01	41	P	P	07 19 12.9	+0.5
OKCD	Okmok Cone D	2.44	261	P	P	07 19 18.3	-0.1
OKCE	Okmok Cone E	2.47	261	P	P	07 19 19.7	+0.8
SDPT	Sand Point	2.57	53	P	P	07 19 20.1	-0.2
SDPT				S	S	07 19 51.5	+1.0
NIKO	Nikolski	2.99	254	P	P	07 19 26.0	-0.3
ANPB	Aniakchak Plen	4.43	46	P	P	07 19 46.4	-0.1
MGLS	Mageik LS	6.56	45	P	P	07 20 16.9	+0.6
KABR	Katmai Barrier	6.66	46	P	P	07 20 17.2	-0.4
KDAK	Kodiak Island	7.57	54	Pn	P	07 20 26.9	-3.4
	1.0nm,0.3s,baz=197,slow=16,SNR=26						
KDAK				Sn	S	07 21 47.0	-8.5
	baz=172,slow=14,SNR=3.0						
SLKM	Skilak Lake	10.03	43	*e*P	P	07 21 02.5	-1.4
TNA	Tin City	11.88	352	*e*P	P	07 21 29.0	0.0
IMA2	Indian Mountai	13.27	19	*e*P	P	07 21 49.6	+2.2
THY	Trims Highway	13.46	37	*e*P	P	07 21 48.7	-1.1
FX1	Attu Island--F	13.61	275	Pn	P	07 21 51.7	0.0
	1.5nm,0.3s,baz=144,slow=22,SNR=8.3						
FX1	Attu Island--F	13.61	275	P	P	07 21 52.6	+1.0
ILAR	Eielson Array	13.95	32	Pn	P	07 21 52.7	-3.4
	0.1nm,0.3s,baz=228,slow=12,SNR=13						
DAWY	Dawson	16.20	41	*e*P	P	07 22 24.9	-0.1
DLBC	Dease Lake	19.37	63	P	P	07 23 02.4	-1.2
	0.1nm,0.3s,baz=226,slow=12,SNR=3.9						
DLBC				LR	LR	07 29 46.6	
	comp=Z,46nm,19.4s,baz=277,slow=35						
INK	Inuvik	20.35	33	P	P	07 23 11.6	-2.3
	2.9nm,0.4s,baz=234,slow=13,SNR=28						
INK				LR	LR	07 31 40.0	
	comp=Z,162nm,18.6s,MS3.4,baz=190,slow=39						
YKA	Yellowknife Ar	26.84	51	P	P	07 24 17.0	+0.3
	1.5nm,0.5s,mb3.8,baz=271,slow=9.2,SNR=17						
YKA				LR	LR	07 35 17.6	
	comp=Z,26nm,19.4s,MS2.8,baz=250,slow=37						
NEW	Newport	29.59	81	P	P	07 24 42.9	+1.3
	0.4nm,0.4s,mb3.5,baz=284,slow=16,SNR=3.6						
EDM	Edmonton	29.63	70	P	P	07 24 42.0	+0.1
NVAR	Mina Array Bea	34.60	98	P	P	07 25 26.7	+1.3
	0.4nm,0.7s,mb3.4,baz=311,slow=9.6,SNR=3.4						
NVAR				PcP	PcP	07 28 00.0	+0.9
	0.4nm,0.4s,baz=287,slow=3.4,SNR=4.8						
ELK	Elko	34.92	92	*e*P	P	07 25 27.0	-1.1
	1.5nm,0.8s,mb4.0						
TPNV	Topopah Spring	36.80	98	P	P	07 25 45.0	+0.9
	2.2nm,0.7s,mb4.1						
MJAR	Matsushiro Arr	42.90	270	LR	LR	07 41 47.7	
	comp=Z,205nm,20.5s,MS4.0,baz=190,slow=32						
SUMG	Summit	48.36	19	*e*P	P	07 27 17.6	+0.2
	5.9nm,0.4s,mb5.0						
TXAR	Lajitas Array	49.61	94	P	P	07 27 28.1	+0.5
	0.5nm,0.6s,mb3.8,baz=299,slow=5.4,SNR=8.8						
TXAR				pP	pP	07 27 39.0	-3.4
	1.0nm,0.5s,baz=306,slow=5.9,SNR=17						
TXAR				PcP	PcP	07 28 49.1	+0.4
	0.4nm,0.4s,baz=243,slow=1.4,SNR=6.0						
SCHQ	Schefferville	52.12	47	P	P	07 27 46.3	+0.1
	2.3nm,0.5s,mb4.4,baz=272,slow=5.3,SNR=7.8						
SONM	Songino Array	53.22	303	P	P	07 27 54.6	+0.1
	0.7nm,0.3s,mb4.0,baz=41,slow=7.1,SNR=11						
SONM				PcP	PcP	07 29 02.7	+0.9
	1.5nm,0.8s,baz=93,slow=1.4,SNR=6.7						
ARCES	ARCESS Array B	56.71	356	P	P	07 28 19.0	-0.6
	2.2nm,0.7s,mb4.3,baz=15,slow=7.9,SNR=14						
JOF	Joensuu	62.93	352	*e*p	P	07 29 00.8	-1.5
CHKZ	Chkalovo	63.64	327	*e*P	P	07 29 05.9	-1.0
KAF	Kangasniemi	64.07	355	*e*p	P	07 29 08.2	-1.4
	3.2nm,0.5s,mb4.6,baz=356,slow=6.2						
BRVK	Borovoye	64.27	327	*e*P	P	07 29 10.6	-0.4
FINES	FINESS Array B	64.75	355	P	P	07 29 13.2	-0.8
	1.9nm,0.5s,mb4.4,baz=23,slow=8.3,SNR=23						
MKAR	Makanchi Array	65.01	316	P	P	07 29 15.3	-0.7
	0.5nm,0.4s,mb3.9,baz=42,slow=7.0,SNR=7.9						
MKAR	Makanchi Array	65.01	316	P	P	07 29 15.3	-0.7
NB2	NORSAR Subarra	65.38	3	P	P	07 29 17.6	-0.5
	0.4nm,0.7s,mb3.6,baz=1.0,slow=6.5						
NOA	NORSAR Array B	65.38	3	P	P	07 29 17.9	-0.2
	2.7nm,0.7s,mb4.4,baz=359,slow=6.6,SNR=7.8						
NAO	NORSAR Subarra	65.58	3	P	P	07 29 17.6	-1.8
	0.4nm,0.7s,mb3.6						
AKASG	Malin Array Be	75.20	351	P	P	07 30 17.6	-0.1
	3.2nm,0.6s,mb4.5,baz=9.3,slow=5.8,SNR=13						
GERES	GERESS Array B	77.64	1	P	P	07 30 32.7	+1.3
	0.4nm,0.6s,mb3.5,baz=18,slow=4.2,SNR=3.6						
GUN	Gumba	78.72	302	*e*P	P	07 30 38.9	+1.1
JIRN	Jiri	78.77	302	*e*P	P	07 30 39.4	+1.3
	48nm,0.7s						
KKN	Kakani	79.12	302	*e*P	P	07 30 40.0	0.0
GKN	Gorkha	79.26	303	*e*P	P	07 30 41.6	+0.8
DMN	Daman	79.35	302	*e*P	P	07 30 42.2	+0.9
	18nm,0.9s,mb5.0						
KOLN	Koldanda	79.97	304	*e*P	P	07 30 45.5	+0.9
	18nm,0.9s,mb5.0						
ESDC	Sonseca Array	85.27	15	P	P	07 31 13.4	+2.0
	2.6nm,0.7s,mb4.5,baz=344,slow=5.0,SNR=308						

MAN 21 07:40:26.6, 13.15N×120.75E, h37^{km}, mb4.2, ML3.1, MS2.8, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.40	29	⇑*i*P	P	07 40 37.1	+1.2
PGP				*i* S	S	07 40 42.0	-0.4
LUBP	Lubang	0.76	320	*e*P	P	07 40 42.1	+1.2
LUBP				*e*S	S	07 40 53.1	+1.7
SJMP	San Jose	0.77	152	*e*P	P	07 40 42.5	+1.5
SJMP				*e*S	S	07 40 54.1	+2.5
BOAC	Boac	1.11	74	*e*P	P	07 40 46.5	+0.7
BOAC				*e*S	S	07 41 02.1	+2.0
BUSP	Coron	1.26	205	*e*P	P	07 40 48.1	+0.1
BUSP				*e*S	S	07 41 03.2	-0.8
OTRP	Odiongan	1.46	122	*e*P	P	07 40 51.3	+0.3
OTRP				*e*S	S	07 41 08.5	-0.7
GQP	Guinayangan	1.81	65	⇑*e*P	P	07 40 56.8	+0.9
GQP				*e*S	S	07 41 17.1	-0.7
AUQP	San Andres	1.88	84	*e*P	P	07 41 05.3	+8.4
POLP	Polilio Island	1.95	36	*e*P	P	07 40 47.5	-10
CUYO	Cuyo Island	2.30	173	*e*P	P	07 41 02.3	-0.6
CUYO				*e*S	S	07 41 28.5	-1.7
ENPP	El Nido	2.33	214	*e*P	P	07 41 02.9	-0.4
ENPP				*e*S	S	07 41 28.6	-2.3
BALP	Baler	2.70	17	*e*P	P	07 41 08.9	+0.3
BALP				*e*S	S	07 41 37.8	-2.6
GUIM	Jordan	3.08	144	*e*P	P	07 41 14.4	+0.3
GUIM				*e*S	S	07 41 51.2	+1.1
PVCP	Virac	3.34	82	*e*P	P	07 41 18.0	+0.3

JMA 21 08:02:37.7±0.1, **38.03N×144.57E, h55^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.50	296	P	P	08 03 17.1	+0.1
OFUJ				*e*S	S	08 03 46.5	+0.1
JIO	Ouri	2.57	280	P	P	08 03 18.2	+0.3
JIO				S	S	08 03 47.8	-0.3
MIYJ	Miyakonagasawa	2.65	307	P	P	08 03 18.8	-0.2
MIYJ				*e*S	S	08 03 49.9	-0.1
JMK	Ichinoseki	2.79	290	P	P	08 03 21.4	+0.4
JMK				*e*S	S	08 03 53.6	+0.1
JRY	Ryogami san	4.96	248	P	P	08 03 50.9	-0.6
JRY				*e*S	S	08 04 44.8	-3.5
NEM2	Nemuro 2	5.40	9	P	P	08 03 53.4	-4.3
NEM2				*e*S	S	08 04 50.8	-8.5
JTKR	Abashiri--Toko	5.96	355	P	P	08 04 03.1	-2.2
JTKR				*e*S	S	08 05 06.5	-6.6

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*IDC **21** 08:14:02.6±17.0, 5.35S×154.23E, h110^{km}±158^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.7/13, mbtmp4.2/5, Error ellipse: s-maj=69.4km s-min=36.3km az=105.0*

*NEIC **21** 08:14:13.2±2.6, 5.50S×154.30E, h211^{km}±23^{km}, mb4.3/5, Error ellipse: s-maj=25.2km s-min=16.4km az=173.0*

ISC 21 08:14:13.0±2.8, **5.6S**±0.2×**154.3E**±0.1, **h223**^{km}±25^{km}, **n16**, σ**1**^{s}**.08**/16, **mb4.1**/7, **1C-1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	8.03	241	*e*Pn	P	08 16 08.3	+0.9
	21nm,0.8s						
CTA	Charters Tower	16.41	208	⇑*i*P	P	08 17 52.8	+0.3
	4.1nm,0.8s						
CTAO	Charters Tower	16.41	208	*e*Pn	P	08 17 52.8	+0.3
	5.7nm,0.8s						
DZM	Mont Dzumac	20.17	146	*e*P	P	08 18 31.4	-0.5
KAKA	Kakadu	22.70	250	*e*P	P	08 19 14.6	+18
	6.5nm,0.4s,mb4.5						
WRAB	Tennant Creek	24.08	232	*e*P	P	08 19 09.2	-0.6
	9.1nm,0.6s,mb4.6						
WB2	Warramunga Arr	24.09	232	⇓*i*P	P	08 19 09.5	-0.3
WRA	Warramunga Arr	24.09	232	P	P	08 19 09.6	-0.3
	7.4nm,0.5s,mb4.6,baz=55,slow=9.6,SNR=46						
STKA	Stephens Creek	28.74	203	P	P	08 19 51.0	-1.1
	0.8nm,0.4s,mb3.7,baz=40,slow=12,SNR=7.4						
STKA	Stephens Creek	28.74	203	*e*P	P	08 19 51.5	-0.6
FITZ	Fitzroy Crossi	30.62	244	*e*P	P	08 20 06.4	-2.4
	9.2nm,0.9s,mb4.4						
FITZ	Fitzroy Crossi	30.62	244	P	P	08 20 06.7	-2.1
	9.6nm,0.5s,mb4.7,baz=72,slow=8.4,SNR=15						
AFI	Afiamalu	34.41	106	*e*P	P	08 20 40.8	-0.5
CASY	Casey	67.72	198	*e*P	P	08 24 50.0	+1.9
ILAR	Eielson Array	82.32	22	P	P	08 26 10.8	+0.1
	0.3nm,0.6s,mb3.1,baz=242,slow=5.0,SNR=5.1						
MAW	Mawson	85.43	203	P	P	08 26 28.4	+2.1
	1.2nm,0.6s,mb3.8,baz=132,slow=3.7,SNR=4.6						

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*CASC **21** 08:17:00.9±2.9, 14.75N×91.76W, h126^{km}±18^{km}, MD4.2, ML4.6, mb4.4(NEIC)*

*IDC **21** 08:17:06.3±0.8, 14.95N×91.08W, h129^{km}±7^{km}, mb3.7/10, mb1 3.9/13, mb1mx3.8/24, mbtmp4.1/13, MS3.2/2, Ms1 3.2/2, ms1mx2.9/22, Error ellipse: s-maj=27.0km s-min=9.2km az=51.0*

*MEX **21** 08:17:07.1±0.9, 14.90N×91.68W, h162^{km}±15^{km}, MD4.6*

*NEIC **21** 08:17:07.1, 14.90N×91.68W, h162^{km}, mb4.4/12, MD4.6(MEX), After MEX.*

*BJI **21** 08:17:08.1, 14.90N×91.70W, h162^{km}, mB4.7*

ISC 21 08:17:03.7±0.3, **14.65N**±0.04×**91.54W**±0.04, **h127**^{km}±3^{km}, **h126**^{km}±2.1^{km}**:pP-P, n93**, σ**1**^{s}**.15**/80, **mb4.2**/19, **10C-14D, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUG	Fuego 3	0.71	106	*e*P	P	08 17 23.3	-0.6
IXG	Ixpaco	1.15	114	*e*P	P	08 17 28.1	0.0
IXG				*e*S	S	08 17 46.2	-0.4
IXG				AML	AML	08 17 51.1	
	comp=N,55µm,0.5s						
CCIG	Comitan	1.72	341	⇓*i*P	P	08 17 35.6	+1.0
CCIG				*i* S	S	08 17 59.0	+0.9
MRL	Marmol	1.84	77	⇑*e*P	P	08 17 36.5	+0.5
MRL				*e*S	S	08 18 01.4	+1.0
MRL				AML	AML	08 18 02.8	
	comp=E,694nm,0.6s						
RBDL	Robledal	1.88	106	⇓*e*P	Px	08 17 42.0	
RBDL				*e*S	Sx	08 18 08.7	
RTR	El Retiro	1.98	112	⇓*e*P	Px	08 17 40.2	
RTR				*e*S	Sx	08 18 09.7	
SBLS	San Blas	2.03	113	⇑*e*P	Px	08 17 40.8	
SBLS				*e*S	Sx	08 18 12.2	
MTO2	Montecristo 2	2.13	96	⇓*e*P	Px	08 17 42.0	
MTO2				*e*S	Sx	08 18 08.1	
SCX	San Cristobal	2.33	333	*i* P	P	08 17 42.7	+0.5
SCX				*i* S	S	08 18 09.6	-1.8
BOQS	Boqueron	2.38	112	⇓*e*P	Px	08 17 45.2	
BOQS				*e*S	Sx	08 18 18.2	
LFU	La Fuente	2.52	110	⇑*e*P	Px	08 17 47.0	
LBRS	Las Brisas	2.59	110	⇓*e*P	Px	08 17 47.9	
LFRS	El Faro	2.61	113	⇓*e*P	Px	08 17 48.0	
LCBS	La Ceiba	2.68	111	⇓*e*P	Px	08 17 48.9	
LCBS				*e*S	Sx	08 18 25.8	
SNVI	San Vicente	2.82	111	⇓*e*P	Px	08 17 51.1	
SNVI				*e*S	Sx	08 18 29.8	
CAHU	Cacacuatique	3.35	105	*e*P	Px	08 17 58.0	
VSM	San Miguel	3.40	110	⇓*e*P	Px	08 17 58.9	
BLLM	Bellamira	3.42	110	⇑*e*P	Px	08 17 58.6	
BLLM				*e*S	Sx	08 18 43.6	
CNCH	Conchagua	3.85	110	⇓*e*P	Px	08 18 04.7	
CNCH				*e*S	Sx	08 18 54.4	
CMIG	Matias Romero	4.03	308	*e*P	P	08 18 03.7	-1.1
CMIG				*i* S	S	08 18 47.2	-4.4
SCIG		4.31	5	*i* P	P	08 18 07.8	-0.8
SCIG				*i* S	S	08 18 54.3	-4.0
HUIG	Huatulco	4.55	285	*i* P	P	08 18 09.6	-2.2
HUIG				*i* S	S	08 18 58.3	-5.7
OXX	Oaxaca	5.54	297	*e*P	P	08 18 25.5	+0.4
VHO	Vista Hermosa	5.55	296	⇓*i*P	P	08 18 25.6	+0.5
VHO				*i* S	S	08 19 25.0	-3.3
VCR	Vista de Mar	7.32	127	⇓*i*P	P	08 18 50.1	+0.9
JTS	JuntasAbangare	7.76	123	P	P	08 18 55.3	+0.1
	comp=E,30nm,0.3s,baz=304,slow=6.3,SNR=170						
JTS				S	S	08 20 20.5	-1.3
	comp=E,1.8nm,0.3s,baz=290,slow=19,SNR=2.4						
JTS	JuntasAbangare	7.76	123	*e*Pn	P	08 18 55.2	+0.1
	comp=E,107nm,0.6s						
JTS				*e*Sn	S	08 20 20.6	-1.3
FORC	Fortuna	7.89	121	⇓*e*P	P	08 18 57.6	+0.7
PPM	Popocatepetl	8.08	304	*e*P	P	08 18 59.1	-0.4
PPM				*i* P		08 19 01.5	
PPM				*i* S	S	08 20 24.9	-4.8
CGA2	Cerro Gallo 2	8.30	123	*e*P	P	08 19 02.7	+0.2
YAIG	Yautepec	8.34	301	*e*P	P	08 19 04.0	+1.1
YAIG				*e*S	S	08 20 30.1	-5.8
ACX	Acapulco	8.36	286	*i* P	P	08 19 02.0	-1.2
PRS1	Puriscal	8.45	122	⇑*e*P	P	08 19 05.4	+1.0
PLIG	Platanillo	8.49	297	*e*P	P	08 19 03.5	-1.5
UNM	Universidad Na	8.66	304	*i* P	P	08 19 07.9	+0.6
LAJ	Bijagual	8.67	122	⇑*e*P	P	08 19 04.8	-2.6
SJS	Escuela Geolog	8.69	122	⇑*e*P	P	08 19 08.1	+0.5
CAIG	El Cayaco	8.73	287	*i* P	P	08 19 08.2	+0.1
LCR2	La Lucha 2	8.84	123	⇑*e*P	P	08 19 10.2	+0.7
BUS	Buena Vista	9.14	123	⇑*e*P	P	08 19 15.2	+1.6
ZIIG	Zihuatanejo	9.98	288	*i* P	P	08 19 25.6	+0.7
ACR	Cerro Adams	10.13	125	⇑*e*P	P	08 19 26.6	-0.3
MOIG	Morelia	10.49	300	*e*P	P	08 19 32.1	+0.5
ZAIG	Zacatecas	13.20	309	*i* P	P	08 20 07.9	+0.7
JCT	Junction City	17.50	336	*e*Pn	P	08 21 02.6	+1.4
	comp=E,4.3nm,0.4s						
TXAR	Lajitas Array	18.42	325	P	P	08 21 13.2	+1.5
	comp=E,0.8nm,0.3s,baz=151,slow=12,SNR=37						
TXAR				PcP	PcP	08 25 36.4	-0.5
	comp=E,0.1nm,0.3s,baz=153,slow=2.8,SNR=5.8						
TXAR				ScP		08 29 02.2	
	comp=E,0.0nm,0.3s,baz=135,slow=5.3,SNR=4.4						
TXAR	Lajitas Array	18.42	325	P	P	08 21 13.2	+1.5
TXAR				PcP	PcP	08 25 36.4	-0.5
TXAR				ScP		08 29 02.2	
ROSC	El Rosal	19.54	118	P	P	08 21 22.8	-0.9
	comp=E,0.4nm,0.3s,baz=250,slow=8.5,SNR=4.4						
ROSC				LR	LR	08 29 57.1	
	comp=E,65nm,18.8s,baz=130,slow=40						
MIAR	Mount Ida	19.90	355	*e*P	P	08 21 26.2	-1.2
	comp=E,12nm,0.8s						
HBAR	Harrisburg	20.84	2	*e*P	P	08 21 36.6	-0.3
GDL2	Guadalupe Moun	21.03	328	*e*P	P	08 21 40.3	+1.4
GDL2				*e*pP		08 22 06.5	
WMOK	Wichita Mounta	21.04	343	*e*P	P	08 21 37.6	-1.4

	comp=E,5.0nm,0.8s,mb3.9						
WMOK				epP		08 22 02.6	
SWET	Sewanee	21.10	13	eP	P	08 21 38.2	-1.3
SWET				epP		08 22 04.0	
MNTX	Cornudas Mount	21.17	326	eP	P	08 21 40.6	+0.4
	comp=E,5.4nm,0.9s,mb3.9						
MNTX				epP		08 22 06.6	
SDV	Santo Domingo	21.25	103	P	P	08 21 38.6	-2.5
	comp=E,5.4nm,0.6s,mb4.1,baz=314,slow=8.7,SNR=11						
SDV				LR	LR	08 30 01.8	
	comp=E,74nm,19.8s,baz=190,slow=37						
SDV	Santo Domingo	21.25	103	eP	P	08 21 38.1	-3.0
	comp=E,5.7nm,0.6s,mb4.1						
SDV				epP		08 21 58.7	
WVT	Waverly	21.65	8	eP	P	08 21 44.0	-1.0
	comp=E,6.1nm,0.6s,mb4.1						
CPCT	Cooper Cave	21.66	16	eP	P	08 21 45.6	+0.6
CPCT				epP		08 22 04.6	
PARMO	Parma	21.98	4	eP	P	08 21 48.4	+0.2
AMTX	Amarillo	22.12	337	eP	P	08 21 49.9	+0.3
	comp=E,11nm,0.7s,mb4.3						
AMTX				epP		08 22 14.0	
TZTN	Tazewell	22.95	17	eP	P	08 21 58.6	+1.0
TZTN				epP		08 22 22.0	
CCM	Cathedral Cave	23.32	1	eP	P	08 22 00.6	-0.6
	comp=E,33nm,0.8s,mb4.7						
BNM	Barren Site	23.73	328	eP	P	08 22 07.3	+2.1
BNM				epP		08 22 32.5	
WCI	Wyandotte Cave	23.95	10	eP	P	08 22 06.3	-0.9
	comp=E,25nm,0.7s,mb4.7						
WCI				epP		08 22 34.7	
ANMO	Albuquerque	24.27	329	P	P	08 22 11.2	+0.9
	comp=E,0.6nm,0.7s,mb3.1,baz=133,slow=9.8,SNR=3.7						
ANMO				pP		08 22 38.1	
	comp=E,1.3nm,0.7s,baz=147,slow=13,SNR=4.3						
ELN	Prospectdale	24.46	21	eP	P	08 22 12.5	+0.4
NEN	Nelson	29.56	319	eP	P	08 23 00.2	+1.4
ARUT	Antelope Range	30.14	324	eP	P	08 23 05.7	+1.9
ARUT				epP	pP	08 23 32.8	+1.5
SADO	Sadowa	31.82	17	P	P	08 23 14.3	-4.1
	comp=E,8.9nm,0.8s,mb4.5,baz=220,slow=6.5,SNR=4.2						
PDAR	Pinedale Array	32.02	335	P	P	08 23 19.6	-0.7
	comp=E,0.3nm,0.7s,mb3.1,baz=132,slow=11,SNR=2.5						
PDAR				PcP	PcP	08 26 06.0	-1.1
	comp=E,0.5nm,0.5s,baz=140,slow=4.9,SNR=5.8						
REDW	Red Top Meadow	33.06	334	eP	P	08 23 29.1	-0.1
	comp=E,11nm,1.3s,mb4.5						
REDW				epP	pP	08 23 57.0	-0.1
SNOW	Snow King Moun	33.10	334	eP	P	08 23 29.4	-0.1
	comp=E,4.5nm,0.6s,mb4.5						
SNOW				epP	pP	08 23 57.3	-0.2
MNV	Mina	33.37	320	eP	P	08 23 34.1	+2.2
	comp=E,9.2nm,1.2s,mb4.5						
NVAR	Mina Array Bea	33.46	320	P	P	08 23 35.3	+2.6
	comp=E,5.1nm,0.6s,mb4.5,baz=127,slow=9.0,SNR=66						
NVAR				pP	pP	08 24 01.8	+1.1
	comp=E,1.0nm,0.8s,baz=128,slow=10,SNR=1.9						
NVAR				PcP	PcP	08 26 11.8	+0.7
	comp=E,1.1nm,0.5s,baz=135,slow=3.8,SNR=9.0						
NVAR	Mina Array Bea	33.46	320	P	P	08 23 35.3	+2.6
NVAR				pP	pP	08 24 01.8	+1.1
NVAR				PcP	PcP	08 26 11.8	+0.7
LPAZ	La Paz	38.46	142	P	P	08 24 14.8	-0.3
	comp=E,0.8nm,0.9s,mb3.6,baz=286,slow=7.4,SNR=5.3						
LPAZ				PcP	PcP	08 26 27.1	+0.8
	comp=E,0.5nm,0.6s,baz=267,slow=2.0,SNR=4.7						
LPAZ	La Paz	38.46	142	P	P	08 24 14.8	-0.3
LPAZ				PcP	PcP	08 26 27.1	+0.8
SIV	San Ignacio	42.81	134	P	P	08 24 50.3	-0.7
	comp=E,2.1nm,0.5s,mb4.1,baz=303,slow=8.6,SNR=30						
SIV				pP	pP	08 25 19.9	+0.1
	comp=E,3.6nm,0.9s,baz=306,slow=9.3,SNR=8.9						
SIV				PcP	PcP	08 26 40.4	-0.1
	comp=E,1.6nm,0.7s,baz=271,slow=3.1,SNR=8.5						
SCHQ	Schefferville	44.47	20	P	P	08 25 01.2	-2.5
	comp=E,9.5nm,0.8s,mb4.6,baz=214,slow=6.7,SNR=13						
YKA	Yellowknife Ar	50.50	346	P	P	08 25 49.0	-1.6
	comp=E,2.6nm,0.7s,mb4.4,baz=146,slow=7.5,SNR=17						
YKA				pP	pP	08 26 19.0	-1.2
	comp=E,1.0nm,0.7s,baz=152,slow=7.4,SNR=3.9						
YKA	Yellowknife Ar	50.50	346	P	P	08 25 49.0	-1.6
YKA				pP	pP	08 26 19.0	-1.2
ILAR	Eielson Array	62.42	337	P	P	08 27 13.8	-1.6
	comp=E,0.8nm,0.5s,mb4.0,baz=98,slow=5.8,SNR=24						
HNTI	Hanita	110.45	46	P	PKPdf	08 35 25.7	+4.6
MMLI	Mount Malkishu	110.98	46	P	PKPdf	08 35 27.4	+5.2
PRNI	Paran	111.83	48	P	PKPdf	08 35 30.1	+6.2
MBH	Mount Berech	112.07	49	P	PKPdf	08 35 31.7	+7.3
EIL	Elat	112.17	49	P	PKPdf	08 35 31.4	+6.9
AQBJ	Aqaba	112.21	49	P	PKPdf	08 35 33.0	+8.4
WMQ	Urumqi	121.82	1	ePKP	PKPdf	08 35 45.0	+2.0
SSE	Sheshan	124.71	326	PKP	PKPdf	08 35 45.3	-3.7
LZH	Lanzhou	127.49	344	ePKP	PKPdf	08 35 51.4	-2.8
STKA	Stephens Creek	128.76	241	PKP	PKPdf	08 35 59.5	+2.8
	comp=E,1.8nm,1.0s,baz=270,slow=1.0,SNR=3.0						
WRA	Warramunga Arr	135.98	256	PKP	PKPdf	08 36 14.0	+3.4
	comp=E,0.9nm,0.6s,baz=82,slow=2.1,SNR=12						

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*NEIC **21** 08:21:30.7,45.41S×167.25E,h14^{km},ML4.0(WEL),After WEL.*

WEL 21 08:21:31.2±0.1**,45.38S×167.27E,h5**^{km}**,ML3.9**/9**,3C, Error ellipse: s-maj=1.7km s-min=1.0km az=90.0,South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.12	220	P	Pg	08 21 33.8	0.0
DCZ				S	Sg	08 21 35.6	0.0
DCZ	Deep Cove	0.12	220	PG	Pg	08 21 33.8	-0.1
DCZ				SG	Sg	08 21 35.6	0.0
MLZ	Mavora Lakes	0.64	87	P	Pg	08 21 43.2	-0.8
MLZ	Mavora Lakes	0.64	87	P*	Pb	08 21 43.2	-1.3
MLZ				SG	Sg	08 21 51.9	-0.6
WHZ	Wether Hill Ro	0.70	137	P	Pg	08 21 43.6	-1.6
WHZ	Wether Hill Ro	0.70	137	P*	Pb	08 21 43.6	-1.9
WHZ				S*	Sb	08 21 54.0	-1.2
MSZ	Milford Sound	0.85	34	eP	Pb	08 21 46.9	-1.1
MSZ	Milford Sound	0.85	34	P*	Pb	08 21 46.9	-1.1
MSZ				S*	Sb	08 21 59.3	-0.2
WKZ	Wanaka	1.36	67	⇑PN	Pn	08 21 56.7	-0.1
WKZ				S*	Sb	08 22 15.2	+1.0
JCZ	Jackson Bay	1.68	40	⇑PN	Pn	08 22 01.6	+0.1
JCZ				SN	Sn	08 22 22.8	-0.8
TUZ	Tuapeka	1.75	110	⇑PN	Pn	08 22 01.5	-1.0
TUZ				SN	Sn	08 22 23.7	-1.7
ODZ	Otahua Downs	2.41	83	PN	Pn	08 22 10.1	-1.8
FOZ	Fox Glacier	2.51	44	ePN	Pn	08 22 14.6	+1.3

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*MOS **21** 08:26:11.9±1.1,34.78N×73.05E,h15^{km},mb5.4/86, MS4.6/17,Error ellipse: s-maj=6.0km s-min=3.4km az=124.3*

*HRVD **21** 08:26:11.9±0.3,34.67N×73.19E,h12^{km},MW5.2/58, Centroid moment Tensor Solution. LP body waves: s38,c56;Mantle waves: s58,c102; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.72±.23; $M_{\theta\theta}$-5.26±.17; $M_{\phi\phi}$1.53±.27; $M_{r\theta}$2.88±.56; $M_{\theta\phi}$5.77±.17; $M_{\phi r}$-0.06±.68; Best double couple: $M_0$7.488×10^{16} NP1: ϕ_s341°,δ55°,λ159°. NP2:ϕ_s83°,δ73°,λ37°. Principal axes: T 5.91, Plg38°, Azm308°; N 3.146, Plg50°, Azm105°; P -9.066, Plg11°, Azm209°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **21** 08:26:11.9±0.1,34.65N×73.13E,h10^{km},mb5.3/131, MS4.4/7,MW5.1 Error ellipse: s-maj=5.0km s-min=2.7km az=205.0,Moment Tensor Solution. s5 Moment tensor: Scale 10^{16}Nm; M_{rr}4.60; $M_{\theta\theta}$-4.35; $M_{\phi\phi}$-0.25; $M_{r\theta}$-2.65; $M_{\theta\phi}$2.03; $M_{\phi r}$-0.54; Best double couple: $M_0$5.6×10^{16} NP1: ϕ_s129°,δ35°,λ118°. NP2:ϕ_s276°,δ59°,λ72°. Principal axes: T 5.53, Plg70°, Azm147°; N .16, Plg16°, Azm286°; P -5.69, Plg13°, Azm19°;*

NEIC Felt [IV] at Islamabad. Felt at Abbottabad, Peshawar and Risalpur. Also felt at Muzaffarabad, Kashmir.

*BJI **21** 08:26:14.7,34.90N×73.65E,h10^{km},mB5.4,mb5.1,ML5.2, Ms5.1,Msz4.7*

*CRAAG **21** 08:26:15.1,34.87N×73.05E,Mb5.3*

*NDI **21** 08:26:17.6±5.4,34.40N×73.16E,h10^{km},mb5.5, mb5.3(NEIC)*

*IDC **21** 08:26:20.2±3.2,34.94N×73.15E,h66^{km}±28^{km},mb4.8/24, mb1 5.0/27,mb1mx5.0/27,mbtmp5.2/27,ML5.5/3,MS4.5/21, Ms1 4.5/21,ms1mx4.3/27,Error ellipse: s-maj=12.1km s-min=10.2km az=122.0*

*NNC **21** 08:26:25.7±6.0,35.21N×72.98E,h149^{km}±44^{km},mpv5.6, Error ellipse: s-maj=68.0km s-min=38.0km az=57.0*

ISC 21 08:26:13.7±0.7**,34.76N**±0.02×**73.10E**±0.02**,h29**^{km}±5^{km}**, h23**^{km}±2.6^{km}**:pP-P,n584,**$\sigma 1\overset{s}{.}$**14**/606**,mb5.2**/179**,MS4.6**/52**, 47C-21D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.11	173	⇓P	Pn	08 26 33.6	+0.1
CEP	Cherat	1.36	227	⇓P	Pn	08 26 44.0	+6.9
SRNI	Srinagar	1.59	114	eP	Pn	08 26 40.8	+0.4
SRNI				ex	Sn	08 27 07.4	+7.2
THW	Thamme Wali	2.27	210	⇑P	Pn	08 26 52.2	+2.2
JMU	Jammu	2.53	143	eP	Pn	08 26 57.0	+3.1
JMU				ex	Sn	08 27 30.5	+6.4
SARP	Sargodha	2.86	187	P	Pn	08 26 59.7	+1.2
THN	Thein Dam	3.19	136	eP	Pn	08 27 05.4	+2.2
THN				ex	Sn	08 27 47.1	+6.4
DLH	Dalhousie	3.26	132	eP	Pn	08 27 07.0	+2.8
DLH				ex	Sn	08 27 48.0	+5.5
DRP	Derazinda	3.87	220	⇓P	Pn	08 27 14.6	+1.8
BHK	Bhakra	4.35	139	ex	Pn	08 27 25.0	+5.4
BHK				ex	Sn	08 28 13.8	+3.8
SDNR	Sundarnagar	4.60	134	eP	Pn	08 27 24.0	+0.8
SDNR				ex	Sn	08 28 15.8	-0.5
SMLA	Simla	4.98	136	eP	Pn	08 27 29.2	+0.5
SMLA				ex	Sn	08 28 26.3	+0.3
KLP	Kalpa	5.39	125	eP	Pn	08 27 35.4	+1.0
KKR	Kurukshetra	5.73	146	eP	Pn	08 27 35.4	-3.8
DDI	Dehra Dun	6.09	135	eP	Pn	08 27 44.3	0.0
DDI				ex	Sn	08 28 55.0	+1.2
NDI	New Delhi	7.00	149	eP	Pn	08 27 54.5	-2.6
NDI				ex	Sn	08 29 15.0	-1.6
KHET	Khetri	7.06	160	eP	Pn	08 27 56.1	-1.8
KHET				ex	Sn	08 29 14.5	-3.4
KALG	Kalgarh	7.10	136	eP	Pn	08 27 56.4	-2.2
AYAN	Aya Nagar	7.14	150	eP	Pn	08 27 57.9	-1.1
TAS	Tashkent	7.20	337	eP	Pn	08 27 58.5	-1.4
KUDL	Kundal	7.21	155	eP	Pn	08 27 58.6	-1.4
SONA	Sohna	7.33	151	eP	Pn	08 28 00.3	-1.4
AML	Almayashu	7.37	3	P	Pn	08 28 03.5	+1.2
	SNR=54						
KZA	Kyzart	7.50	12	P	Pn	08 28 04.8	+0.8
	SNR=148						
UCH	Uchtor	7.54	8	P	Pn	08 28 05.8	+1.2
	SNR=777						
ULHL	Ulahol	7.87	17	P	Pn	08 28 09.9	+0.7
	SNR=99						
EKS2	Erkin-Say	7.90	4	P	Pn	08 28 11.0	+1.3
	SNR=99						
AAK	Ala-Archa	7.93	7	P	Pn	08 28 11.2	+1.1
	SNR=191						
AAK	Ala-Archa	7.93	7	⇑P	Pn	08 28 11.0	+0.9
	128nm,0.7s						
AAK				⇑S	Sn	08 29 39.3	-0.5
	931nm,1.0s						
AAK	Ala-Archa	7.93	7	ePn	Pn	08 28 09.8	-0.2
	245nm,0.6s						
AAK	Ala-Archa	7.93	7	eP	Pn	08 28 09.9	-0.2
AAK				pmax	pmax		
	comp=Z,245nm,0.6s						
PTH	Pithoragarh	7.96	129	eP	Pn	08 28 09.7	-0.8
PTH				ex	Sn	08 29 40.4	-0.1
KBK	Karagaybulak	8.01	10	P	P	08 28 12.3	+1.1
	SNR=137						
FRU	Bishkek	8.14	8	⇓eP	P	08 28 14.0	+1.0
FRU				i S	Sn	08 29 49.8	+4.7
FRU				pmax	pmax		
	comp=Z,680nm,2.0s						
FRU				smax			
	comp=N,2μm,1.7s						
CHMS	Chumysh	8.32	8	P	P	08 28 16.1	+0.5
	SNR=50						
AJM	Ajmer	8.36	170	eP	P	08 28 14.1	-2.0
AJM				AMb	AMB	08 28 15.4	
	comp=Z,131nm,0.5s						
TKM2	Tokmak 2	8.38	13	P	P	08 28 17.0	+0.7
	SNR=152						
USP	Ospenovka	8.56	7	P	P	08 28 19.8	+1.0
	SNR=23						
KK31	Karatay Array	8.57	347	⇓P	P	08 28 18.4	-0.5
	comp=Z,252nm,0.5s,baz=170,slow=11,SNR=3435						
KK31				⇑S	Sn	08 29 52.8	-2.8
	comp=Z,605nm,0.6s,baz=176,slow=25,SNR=12						
AGRA	Agra	8.58	150	eP	P	08 28 17.3	-1.8
AGRA				ex	Sn	08 29 48.3	-7.6
AAA	Alma-Ata	9.01	18	i P	P	08 28 24.8	-0.2
AAA				eS	Sn	08 29 58.6	-7.9
KOLN	Koldanda	11.37	125	ePn	P	08 28 52.9	-4.5
KOLN				eSn	S	08 30 57.8	-6.6
	comp=Z,839nm,0.7s						
BHJ	Bhuj	11.86	196	eP	P	08 29 01.0	-2.9
BHJ				ex	S	08 31 07.4	-8.9
GKN	Gorkha	11.94	121	ePn	P	08 29 00.0	-5.1
GKN				eSn	S	08 31 09.3	-8.9
	comp=Z,796nm,0.5s						
ALBI	Allahabad	12.06	139	eP	P	08 29 00.0	-6.8
BHPL	Bhopal	12.09	161	eP	P	08 29 03.3	-3.8
BHPL				ex	S	08 31 11.0	-11
VAN	Vannovskaya	12.49	289	eP	P	08 29 09.8	-2.7
VAN				eS	S	08 31 25.1	-6.6
DMN	Daman	12.51	121	ePn	P	08 29 07.7	-5.0
DMN				eSn	S	08 31 22.7	-9.3
	comp=Z,812nm,0.7s						
KKN	Kakani	12.52	120	ePn	P	08 29 07.6	-5.3
KKN				eSn	S	08 31 22.7	-10
	comp=Z,798nm,0.7s						
PKI	Pulchoki	12.74	121	ePn	P	08 29 10.7	-5.1
PKI				eSn	S	08 31 28.8	-8.9
	comp=Z,2μm,1.1s						
GUN	Gumba	12.88	119	ePn	P	08 29 12.5	-5.1
JIRN	Jiri	13.25	119	ePn	P	08 29 17.4	-5.1
JIRN				eSn	S	08 31 40.9	-8.8
	comp=Z,756nm,0.6s						
MK31	Makanchi Array	13.88	27	⇑P	P	08 29 28.5	-2.2
	comp=Z,81nm,0.8s,baz=214,slow=12,SNR=226						
MKAR	Makanchi Array	13.88	27	P	P	08 29 30.3	-0.4
	comp=Z,3.9nm,0.3s,baz=197,slow=13,SNR=104						
MKAR				LR	LR	08 35 26.7	
	comp=Z,4μm,20.4s,baz=215,slow=40						
MKAR	Makanchi Array	13.88	27	P	P	08 29 30.3	-0.4
MKAR				LR	LR	08 35 26.6	
BLSP	Bilaspur	14.87	145	ex	P	08 29 34.8	-9.1
BLSP				i x	S	08 32 11.5	-17
BOK	Bokaro	15.60	131	ex	P	08 29 46.8	-6.6
BOK				AMb	AMB	08 29 49.9	
	comp=Z,51nm,0.7s						
BOK				ex	S	08 32 29.3	-16
BOM	Bombay	15.81	181	eP	P	08 29 55.2	-0.9
BOM				ex	S	08 32 43.7	-6.6
LSA	Lhasa	16.08	103	P	P	08 29 55.4	-4.1
LSA				AP		08 30 04.3	
LSA				AMB	AMB		
	comp=Z,220nm,5.8s						
LSA				LR	LR		
	comp=N,1μm,8.4s						
LSA				LR	LR		
	comp=E,2μm,10.0s						
LSA				LR	LR		
	comp=Z,4μm,10.0s						
LSA	Lhasa	16.08	103	ePn	P	08 29 56.0	-3.5
	comp=Z,80nm,0.6s						
LSA	Lhasa	16.08	103	eP	P	08 29 56.0	-3.5
LSA				pmax	pmax		
	comp=Z,80nm,0.6s						
POO	Poona	16.18	177	ex	x	08 30 08.7	
KURK	Kurchatov	16.44	12	P	P	08 30 00.3	-3.6
KURK	Kurchatov	16.44	12	ePn	P	08 30 00.3	-3.5
	comp=Z,177nm,1.0s						
KURK	Kurchatov	16.44	12	eP	P	08 30 00.4	-3.5
KURK				pmax	pmax		
	comp=Z,177nm,1.0s						
LATR	Latur	16.57	168	ex	P	08 30 01.0	-4.7
LATR				ex	x	08 32 42.5	
BANOM	Banah	16.95	243	P	P	08 30 12.1	+1.6
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM	Banah	16.95	243	P	P	08 30 12.1	+1.6
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM	Banah	16.95	243	P	P	08 30 12.1	+1.6
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
BANOM				P		08 30 12.1	
	SNR=44						
WBK	Wadi Bani Khal	17.30	229	P	P	08 30 15.3	+0.4
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK	Wadi Bani Khal	17.30	229	P	P	08 30 15.3	+0.4
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK	Wadi Bani Khal	17.30	229	P	P	08 30 15.3	+0.4
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
WBK				P		08 30 15.3	
	SNR=64						
KAD	Karad	17.41	177	eP	P	08 30 15.2	-1.1
KAD				AMb	AMB	08 30 20.0	
	comp=Z,122nm,0.8s						
KAD				eS	S	08 33 25.5	-1.7
AB31	Akbulak array	17.43	330	⇑P	P	08 30 13.7	-2.6
	comp=Z,55nm,0.6s,baz=141,slow=12,SNR=1101						
AB31				S	S	08 33 20.1	-7.3
	comp=Z,74nm,0.7s,baz=151,slow=22,SNR=2.7						
SMDO	Samad	17.57	232	P	P	08 30 18.3	+0.1
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO	Samad	17.57	232	P	P	08 30 18.3	+0.1
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
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SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO	Samad	17.57	232	P	P	08 30 18.3	+0.1
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
SMDO				P		08 30 18.3	
	SNR=31						
ASHO	Ashiyiah	17.86	240	P	P	08 30 23.1	+1.3
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO	Ashiyiah	17.86	240	P	P	08 30 23.1	+1.3
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
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ASHO				P		08 30 23.1	
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ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	

	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO	**Ashiyiah**	**17.86**	**240**	P	**P**	**08 30 23.1**	**+1.3**
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
ASHO				P		08 30 23.1	
	SNR=27						
HYB	**Hyderabad**	**17.95**	**163**	*i* P	**P**	**08 30 18.0**	**-5.0**
	comp=Z,190nm,1.0s						
HYB				*e*S	**S**	**08 33 24.0**	**-15**
HYB				LR	LR	08 37 00.0	
	comp=Z,14nm,12.0s						
HYB	**Hyderabad**	**17.95**	**163**	*e*P	**P**	**08 30 18.0**	**-5.0**
	comp=Z,190nm,1.0s						
HYB				*e*S	**S**	**08 33 24.0**	**-15**
HYB	**Hyderabad**	**17.95**	**163**	*e*P	**P**	**08 30 18.0**	**-5.0**
HYB				pmax	pmax		
	comp=Z,190nm,1.0s						
VOSK	**Vostochnaya**	**18.02**	**356**	⇓P	**P**	**08 30 19.8**	**-3.9**
	comp=Z,38nm,0.6s						
JMDO	**Jabal Madar**	**18.03**	**231**	P	**P**	**08 30 25.2**	**+1.3**
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO	**Jabal Madar**	**18.03**	**231**	P	**P**	**08 30 25.2**	**+1.3**
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO	**Jabal Madar**	**18.03**	**231**	P	**P**	**08 30 25.2**	**+1.3**
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
JMDO				P		08 30 25.2	
	SNR=24						
CAL	**Calcutta**	**18.06**	**128**	*e*x	x	08 30 19.8	
CAL				*e*x	x	08 34 04.1	
BSY	**Bisya**	**18.35**	**233**	P	**P**	**08 30 29.4**	**+1.5**
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY	**Bisya**	**18.35**	**233**	P	**P**	**08 30 29.4**	**+1.5**
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY	**Bisya**	**18.35**	**233**	P	**P**	**08 30 29.4**	**+1.5**
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BSY				P		08 30 29.4	
	SNR=77						
BVA0	**Borovoye Array**	**18.36**	**355**	⇓P	**P**	**08 30 24.8**	**-3.1**
	comp=Z,7.6nm,0.5s,baz=161,slow=12,SNR=563						
BVAR	**Borovoye Array**	**18.36**	**355**	P	**P**	**08 30 26.3**	**-1.6**
	comp=Z,28nm,0.3s,baz=159,slow=10,SNR=177						
BVAR				S	**S**	**08 33 50.9**	**+2.5**
	comp=Z,1.0nm,0.3s,baz=155,slow=21,SNR=3.6						
BRVK	**Borovoye**	**18.40**	**355**	*e*P	**P**	**08 30 26.0**	**-2.4**
	comp=Z,78nm,0.8s						
BRVK	**Borovoye**	**18.40**	**355**	*e*P	**P**	**08 30 26.0**	**-2.3**
BRVK				pmax	pmax		
	comp=Z,78nm,0.8s						
ARQ	**Araqi**	**18.40**	**236**	P	**P**	**08 30 31.8**	**+3.2**
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ	**Araqi**	**18.40**	**236**	P	**P**	**08 30 31.8**	**+3.2**
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ	**Araqi**	**18.40**	**236**	P	**P**	**08 30 31.8**	**+3.2**
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
ARQ				P		08 30 31.8	
	SNR=36						
SHL	**Shillong**	**18.63**	**114**	*e*x	x	08 30 25.0	
SHL				*e*x	x	08 33 45.0	
CHKZ	**Chkalovo**	**18.99**	**355**	⇑P	**P**	**08 30 32.2**	**-3.2**
	comp=Z,44nm,0.7s						
CHKZ	**Chkalovo**	**18.99**	**355**	*e*P	**P**	**08 30 33.3**	**-2.1**
	comp=Z,88nm,0.3s						
CHKZ				*e*S	**S**	**08 34 16.9**	**+14**
CHKZ	**Chkalovo**	**18.99**	**355**	*e*P	**P**	**08 30 33.3**	**-2.1**
CHKZ				pmax	pmax		
	comp=Z,88nm,0.3s						
AKTK	**Aktyubinsk**	**19.14**	**329**	P	**P**	**08 30 36.4**	**-0.8**
AKTK				S	**S**	**08 34 03.0**	**-3.1**
AKTK				LR	LR	08 37 35.3	
AKTO	**Aktyubinsk**	**19.14**	**329**	⇑P	**P**	**08 30 36.7**	**-0.5**
	comp=Z,32nm,0.7s						
AKTO				⇑S	**S**	**08 33 57.9**	**-8.2**
	comp=Z,56nm,2.1s						
AKTO	**Aktyubinsk**	**19.14**	**329**	P	**P**	**08 30 36.4**	**-0.8**
	comp=Z,52nm,0.3s,baz=136,slow=9.9,SNR=426						
AKTO				S	**S**	**08 34 03.0**	**-3.1**
	comp=Z,2.2nm,0.3s,baz=177,slow=22,SNR=5.3						
AKTO				LR	LR	08 37 35.3	
	comp=Z,1µm,18.8s,slow=36						
VIS	**Vishakhapatnam**	**19.27**	**149**	*e*P	**P**	**08 30 38.8**	**-0.2**
VIS				AMb	AMB	08 30 40.8	
	comp=Z,69nm,0.5s						
ZAL	**Zalesovo**	**20.86**	**20**	P	**P**	**08 30 54.7**	**-1.0**
	comp=Z,156nm,0.6s,baz=258,slow=6.8,SNR=206						
ZAL				S	**S**	**08 34 41.9**	**0.0**
	comp=Z,14nm,0.9s,baz=184,slow=22,SNR=5.1						
ZAL				LR	LR	08 39 44.8	
	comp=Z,1µm,19.9s,MS4.3,baz=259,slow=39						
ZAL	**Zalesovo**	**20.86**	**20**	P	**P**	**08 30 54.7**	**-1.0**
ZAL				S	**S**	**08 34 41.9**	**0.0**
ZAL				LR	LR	08 39 44.9	
NVS	**Novosibirsk**	**21.28**	**16**	*i* P	**P**	**08 30 58.1**	**-1.8**
NVS				*e*		08 31 30.7	
NVS				*i* S	**S**	**08 34 50.1**	**+0.3**
NVS				*e*SS	SS	08 35 29.3	+5.0
NVS				*i* SSS	SSS	08 35 40.5	+1.4
NVS				pmax	pmax		
	comp=Z,306nm,1.5s,mb5.4						
NVS				pmax	pmax		
	comp=N,417nm,1.6s						
NVS				pmax	pmax		
	comp=E,46nm,1.6s						
NVS				smax			
	comp=N,307nm,1.8s						
NVS				smax			
	comp=E,176nm,2.0s						
GTA	**Gaotai**	**21.78**	**70**	P	**P**	**08 31 05.1**	**+0.1**
GTA				PP	PP	08 31 30.8	+0.5
GTA				S	**S**	**08 35 03.8**	**+4.6**
GTA				XS		08 35 10.3	
GTA				SCP		08 38 40.0	
GTA				SCS	ScS	08 42 21.8	-0.3
GTA				AMB	AMB		
	comp=Z,30nm,1.8s,mb4.4						
GTA				AMB	AMB		
	comp=Z,860nm,4.9s						
GTA				LR	LR		
	comp=N,3µm,18.3s						
GTA				LR	LR		
	comp=E,2µm,12.9s						
GTA				LR	LR		
	comp=Z,2µm,13.7s,MS4.7						
MNGI	**Mangalore**	**21.78**	**175**	*e*P	**P**	**08 31 06.4**	**+1.2**
MNGI				*e*x	x	08 35 09.6	
QRN	**Al-Qurain**	**22.21**	**261**	*e*P	**P**	**08 31 10.2**	**+0.8**
QRN				AMb	AMB	08 31 18.2	
	comp=Z,492nm,0.8s,mb6.0						
KBD	**Kabd**	**22.23**	**263**	*e*P	**P**	**08 31 10.2**	**+0.6**
KBD				AMb	AMB	08 31 17.6	
	comp=Z,2µm,1.4s						
MIB	**Mutribah**	**22.31**	**264**	*e*P	**P**	**08 31 11.1**	**+0.8**
MIB				AMb	AMB	08 31 14.5	
	comp=Z,1µm,0.9s,mb6.2						
RDF	**Al-Radifah**	**22.44**	**262**	*e*P	**P**	**08 31 12.9**	**+1.2**
RDF				AMb	AMB	08 31 15.8	
	comp=Z,741nm,0.8s,mb6.2						
NAY	**Al-Naaiem**	**22.58**	**263**	*e*P	**P**	**08 31 13.9**	**+0.8**
NAY				AMb	AMB	08 31 20.1	
	comp=Z,352nm,0.9s,mb5.8						
DGRG	**David-gareji**	**22.76**	**295**	P	**P**	**08 31 16.3**	**+1.7**
GNI	**Garni**	**23.09**	**292**	P	**P**	**08 31 21.9**	**+4.0**
	comp=Z,87nm,0.7s,mb5.3,baz=341,slow=3.1,SNR=21						
GNI				LR	LR	08 42 36.4	
	comp=Z,773nm,18.8s,MS4.2,baz=115,slow=42						
GNI	**Garni**	**23.09**	**292**	*e*P	**P**	**08 31 21.8**	**+3.8**
	comp=Z,303nm,1.0s,mb5.7						
GNI	**Garni**	**23.09**	**292**	*e*P	**P**	**08 31 21.8**	**+3.9**
GNI				pmax	pmax		
	comp=Z,303nm,1.0s						
SAMG	**Sameba**	**23.20**	**296**	P	**P**	**08 31 28.0**	**+8.9**
MTA	**Mtatsminda**	**23.22**	**296**	P	**P**	**08 31 21.8**	**+2.6**
MTA				S	**S**	**08 35 36.6**	**+11**
TI2	**Plekhanov**	**23.26**	**296***j*	*i*P	**P**	**08 31 21.6**	**+2.1**
TI2				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.0						
TBLG	**Delisi**	**23.27**	**296**	P	**P**	**08 31 22.8**	**+3.1**
SVE	**Sverdlovsk**	**23.64**	**343**	*e*P	**P**	**08 31 24.1**	**+1.0**
SVE				*e*S	**S**	**08 35 39.0**	**+6.7**
SVE				*e*SS	SS	08 36 24.0	+2.5
SVE				pmax	pmax		
	comp=N,500nm,3.0s						
SVE				pmax	pmax		
	comp=Z,500nm,3.0s						
SVE				pmax	pmax		
	comp=Z,300nm,2.2s,mb5.3						
SVE				MLR	MLR		
	comp=N,2µm,9.0s						
SVE				MLR	MLR		
	comp=E,2µm,9.0s						
SVE				MLR	MLR		
	comp=Z,4µm,9.0s						
BHD	**Baghdad**	**23.82**	**275**	*e*x	x	08 31 26.0	
BHD				*e*x	x	08 35 31.0	
ARU	**Arti**	**23.84**	**340**	*e*P	**P**	**08 31 25.8**	**+0.8**
	comp=Z,81nm,0.7s,mb5.3						
ARU	**Arti**	**23.84**	**340**	⇑*i*P	**P**	**08 31 26.5**	**+1.5**
ARU				*e*PPP	PPP	08 32 02.1	-6.6
ARU				*e*S	**S**	**08 35 43.4**	**+7.6**
ARU				*e*SS	SS	08 36 25.4	-0.9
ARU				*e*SSS	SSS	08 36 37.6	-5.1
ARU				pmax	pmax		
	comp=Z,115nm,1.1s,mb5.2						
ARU				MLR	MLR		
	comp=Z,2µm,17.0s,MS4.6						
ARU				MLR	MLR		
	comp=N,1µm,18.5s,MS4.5						
ARU				MLR	MLR		
	comp=E,700nm,15.0s,MS4.5						
WHFO	**Wadi Hawf**	**24.04**	**231**	P	**P**	**08 31 29.6**	**+2.2**
	SNR=20						
WHFO				P		08 31 29.6	
	SNR=20						
WHFO				P		08 31 29.6	
	SNR=20						
WHFO				P		08 31 29.6	
	SNR=20						
WHFO				P		08 31 29.6	
	SNR=20						
WHFO				P		08 31 29.6	
	SNR=20						
WHFO				P		08 31 29.6	
	SNR=20						
WHFO				P		08 31 29.6	
	SNR=20						
WHFO				P		08 31 29.6	
	SNR=20						
RBK	**Rabkut**	**24.08**	**229**	P	**P**	**08 31 30.1**	**+2.4**
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK	**Rabkut**	**24.08**	**229**	P	**P**	**08 31 30.1**	**+2.4**
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
RBK				P		08 31 30.1	
	SNR=14						
AKH	**Akhalkalaki**	**24.15**	**295**	P	**P**	**08 31 31.0**	**+2.8**
BKR	**Bakuriani**	**24.18**	**296**	P	**P**	**08 31 29.3**	**+0.7**
ONI	**Oni**	**24.34**	**298**	P	**P**	**08 31 32.9**	**+2.8**
MSL	**Mosul**	**24.43**	**282**	*e*x	x	08 31 31.0	
MSL				*e*x	x	08 35 50.5	
MSL				*e*x	x	08 36 05.0	
MSL				*e*x	x	08 40 19.0	
ABTO	**Aybut**	**24.76**	**231**	P	**P**	**08 31 36.1**	**+1.7**
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO	**Aybut**	**24.76**	**231**	P	**P**	**08 31 36.1**	**+1.7**
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
ABTO				P		08 31 36.1	
	SNR=28						
GOF	**Gofitskoye**	**25.12**	**303**	*e*P	**P**	**08 31 39.4**	**+1.9**
GOF				*i*		08 32 20.3	
GOF				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.6						
KIV	**Kislovodsk**	**25.12**	**301**	*e*P	**P**	**08 31 38.6**	**+1.1**
	comp=Z,85nm,0.8s,mb5.3						
KIV	**Kislovodsk**	**25.12**	**301**	*e*P	**P**	**08 31 39.5**	**+1.9**
KIV				*e*		08 32 12.5	
KIV				*e*S	**S**	**08 36 05.6**	**+7.9**
KIV				pmax	pmax		
	comp=Z,69nm,1.0s,mb5.1						
KIV				MLR	MLR		
	comp=Z,950nm,14.0s,MS4.5						
RYDS	**Riyadh**	**25.26**	**252**	P	**P**	**08 31 37.4**	**-1.6**
CD2	**Chengdu**	**26.00**	**90**	P	**P**	**08 31 46.8**	**+0.9**
CD2				PP	PP	08 32 28.6	+1.4
CD2				PPP	PPP	08 32 40.0	+0.8
CD2				S	**S**	**08 36 18.5**	**+6.2**
CD2				XS		08 36 24.8	
CD2				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.3						
CD2				LR	LR		
	comp=N,2µm,10.6s						
CD2				LR	LR		
	comp=Z,860nm,12.3s,MS4.5						
MOY	**Mondy**	**26.20**	**41**	*e*P	**P**	**08 31 49.6**	**+2.1**
MOY				pmax	pmax		
	comp=Z,100nm,2.1s,mb5.0						
MZLS	**Mizel**	**26.47**	**254**	P	**P**	**08 31 50.9**	**+0.6**
ZAK	**Zakamensk**	**26.92**	**45**	*e*P	**P**	**08 31 54.7**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.6						
SOKR	**Solikamsk**	**27.03**	**342***d*	*i*P	**P**	**08 31 56.6**	**+1.6**
SOKR				S	**S**	**08 36 31.1**	**+2.1**
SOKR				pmax	pmax		
	comp=Z,100nm,1.2s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,1µm,15.0s,MS4.7						
KMI	**Kunming**	**27.34**	**103**	P	**P**	**08 31 57.5**	**-0.7**
KMI				AP	pP	08 31 59.9	-6.9
KMI				XS		08 36 47.1	
KMI				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
KMI				AMB	AMB		
	comp=Z,330nm,4.7s						
KMI				LR	LR		
	comp=N,910nm,9.0s						
KMI				LR	LR		
	comp=E,1µm,15.2s						
KMI				LR	LR		
	comp=Z,2µm,14.5s,MS4.7						
HILS	**Ha'il**	**27.73**	**263**	P	**P**	**08 32 02.5**	**+0.7**
SONM	**Songino Array**	**27.98**	**52**	P	**P**	**08 32 04.2**	**+0.4**
	comp=Z,3.6nm,0.4s,mb4.3,baz=254,slow=8.7,SNR=34						
SONM				LR	LR	08 44 36.6	
	comp=Z,3µm,20.2s,MS4.9,baz=335,slow=39						
AFFS	**'Afif**	**28.27**	**256**	P	**P**	**08 32 06.8**	**+0.2**
ULN	**Ulaanbaatar**	**28.42**	**52**	*e*P	**P**	**08 32 07.6**	**-0.1**
	comp=Z,36nm,1.3s,mb4.8						
ULN	**Ulaanbaatar**	**28.42**	**52**	*e*P	**P**	**08 32 07.6**	**-0.1**
ULN				pmax	pmax		
	comp=Z,36nm,1.3s,mb4.8						
PECR	**Pechory**	**29.25**	**326**	*e*P	**P**	**08 32 14.0**	**-1.2**
PECR				pmax	pmax		
	comp=Z,200nm,2.0s,mb5.5						
VRSR	**Storozhevoye**	**29.42**	**314**	*e*P	**P**	**08 32 15.7**	**-1.0**
VRSR				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
VRSR				pmax	pmax		
	comp=N,4.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,5.0nm,0.8s						
XAN	**Xi'an**	**29.47**	**81**	P	**P**	**08 32 16.3**	**-1.1**
XAN				AP	pP	08 32 26.8	+0.8
XAN				AMB	AMB		
	comp=Z,20nm,1.5s,mb4.6						
XAN				LR	LR		
	comp=N,6µm,11.9s,MS5.4						
XAN				LR	LR		
	comp=E,930nm,11.9s,MS5.4						
XAN				LR	LR		
	comp=Z,1µm,12.6s,MS4.7						
BTO	**Baotou**	**29.64**	**68**	*e*P	**P**	**08 32 19.0**	**+0.1**
BTO				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
GYA	**Guiyang**	**29.94**	**97**	⇓*i*P	**P**	**08 32 20.5**	**-1.2**
GYA				AP	pP	08 32 24.8	-5.5
GYA				XP	sP	08 32 27.6	-6.5
GYA				PP	PP	08 33 17.6	-2.0
GYA				PPP	PPP	08 33 31.4	-2.1
GYA				PCP	PcP	08 35 24.0	+0.1
GYA				S	**S**	**08 37 14.9**	**-1.1**
GYA				SCP		08 39 04.3	
GYA				AMB	AMB		

	comp=Z,40nm,0.8s,mb5.2						
GYA				AMB	AMB		
	comp=Z,160nm,4.8s						
GYA				LR	LR		
	comp=N,970nm,11.2s,MS4.8						
GYA				LR	LR		
	comp=E,1µm,11.1s,MS4.8						
GYA				LR	LR		
	comp=Z,1µm,11.4s,MS4.7						
QURS	**Qurayyt al Mil**	**30.07**	**274**	P	**P**	**08 32 24.6**	**+1.9**
TATS	**Tathlith**	**30.26**	**248**	P	**P**	**08 32 25.6**	**+1.1**
KBRS	**Khaybar**	**30.44**	**262**	P	**P**	**08 32 27.8**	**+1.7**
HHC	**Hu-ho-hao-te**	**30.81**	**67**	⇑P	**P**	**08 32 29.8**	**+0.6**
HHC				AP	pP	08 32 34.1	-3.7
HHC				XP	sP	08 32 36.5	-5.1
HHC				PP	PP	08 33 31.6	+0.9
HHC				PCP	PcP	08 35 25.5	-0.5
HHC				S	**S**	**08 37 30.4**	**+0.8**
HHC				XS		08 37 38.6	
HHC				SCP		08 39 07.3	
HHC				SS	SS	08 39 10.9	-2.2
HHC				SCS	ScS	08 43 03.5	+3.0
HHC				AMB	AMB		
	comp=Z,20nm,1.7s,mb4.7						
HHC				AMB	AMB		
	comp=Z,340nm,4.8s						
HHC				LR	LR		
	comp=N,2µm,17.8s,MS4.8						
HHC				LR	LR		
	comp=E,960nm,18.0s,MS4.8						
HHC				LR	LR		
	comp=Z,1µm,20.4s,MS4.5						
ENH	**Enshi**	**30.90**	**88**	*e*P	**P**	**08 32 29.8**	**-0.3**
	comp=Z,47nm,0.6s,mb5.5						
ENH				*e*PcP	PcP	08 35 23.1	-3.3
BLJS	**Baljurashi**	**31.51**	**250**	P	**P**	**08 32 37.7**	**+2.1**
YNBS	**Yanbu‘ al Bahr**	**32.11**	**261**	P	**P**	**08 32 42.1**	**+1.3**
UMJS	**Umm Lajj**	**32.27**	**263**	P	**P**	**08 32 44.3**	**+2.2**
OBN	**Obninsk**	**32.36**	**320**	*e*P	**P**	**08 32 42.4**	**-0.2**
	comp=Z,112nm,1.0s,mb5.7						
OBN	**Obninsk**	**32.36**	**320**	⇓*i*P	**P**	**08 32 42.4**	**-0.2**
OBN				*i*	pP	08 32 50.4	-0.9
OBN						08 33 53.0	
OBN				*e*		08 34 00.8	
OBN				pmax	pmax		
	comp=Z,114nm,1.2s,mb5.6						
HAQS	**Haql**	**32.76**	**271**	P	**P**	**08 32 48.0**	**+1.7**
AYUS	**‘Aynunah**	**32.78**	**269**	P	**P**	**08 32 48.1**	**+1.6**
KLMR	**Klimovskoe**	**33.83**	**331**	*e*P	**P**	**08 32 54.7**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
WHN	**Wuhan**	**34.81**	**85**	⇓P	**P**	**08 33 04.5**	**+0.4**
WHN				S	**S**	**08 38 22.0**	**-10**
WHN				AMB	AMB		
	comp=Z,410nm,1.7s,mb6.1						
WHN				LR	LR		
	comp=N,4µm,23.8s						
WHN				LR	LR		
	comp=E,3µm,29.6s						
WHN				LR	LR		
	comp=Z,3µm,14.4s						
KIS	**Kishinev**	**35.19**	**304**	*e*P	**P**	**08 33 05.0**	**-2.1**
KIS				*e*		08 35 42.0	
AKASG	**Malin Array Be**	**35.37**	**310**	P	**P**	**08 33 07.5**	**-1.1**
	comp=Z,6.2nm,0.4s,mb4.9,baz=82,slow=8.0,SNR=30						
AKASG				PcP	PcP	08 35 37.5	-1.1
	comp=Z,4.1nm,0.7s,baz=80,slow=4.1,SNR=4.7						
CFR	**Carcaliu**	**35.58**	**301**	⇓P	**P**	**08 33 10.4**	**-0.1**
TIA	**Tai’an**	**35.65**	**75**	*e*P	**P**	**08 33 12.0**	**+0.8**
TIA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
BOD	**Bodaibo**	**35.66**	**37**	*e*P	**P**	**08 33 10.7**	**-0.3**
BOD				*e*		08 35 38.8	
BOD				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
QIZ	**Qiongzhong**	**36.09**	**106**	P	**P**	**08 33 15.1**	**0.0**
VRI	**Vrincioaia**	**36.58**	**302**	⇑P	**P**	**08 33 21.7**	**+2.8**
MLR	**Muntele Rosu**	**37.13**	**301**	P	**P**	**08 33 25.0**	**+1.5**
	comp=Z,60nm,0.9s,mb5.4,baz=76,slow=5.3,SNR=39						
MLR				LR	LR	08 52 46.0	
	comp=Z,688nm,19.2s,MS4.5,baz=296,slow=43						
JOF	**Joensuu**	**38.22**	**330**	*e*p	**P**	**08 33 32.1**	**-0.4**
PGB	**Panagyurishte**	**38.55**	**297**	*e*P	**P**	**08 33 37.0**	**+1.6**
VSU	**Vasula**	**38.60**	**322**	⇑*i*P	**P**	**08 33 36.1**	**+0.4**
DL2	**Dalian**	**38.70**	**69**	P	**P**	**08 33 38.4**	**+1.6**
DL2				S	**S**	**08 39 36.1**	**+4.7**
DL2				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.1						
DL2				AMB	AMB		
	comp=Z,220nm,3.3s						
DL2				LR	LR		
	comp=N,620nm,15.7s,MS4.5						
DL2				LR	LR		
	comp=E,320nm,19.0s,MS4.5						
DL2				LR	LR		
	comp=Z,560nm,18.2s,MS4.4						
MMB	**Musomiste**	**38.97**	**295**	*i* P	**P**	**08 33 40.0**	**+1.0**
VTS	**Vitosha**	**39.25**	**297**	*i* P	**P**	**08 33 42.0**	**+0.7**
DRGR		**39.37**	**303**	⇓P	**P**	**08 33 42.3**	**+0.1**
KKB	**Krupnik**	**39.42**	**296**	*i* P	**P**	**08 33 43.0**	**+0.3**
KWP	**Kalwaria**	**39.42**	**308**	*e*P	**P**	**08 33 43.4**	**+0.8**
KWP				*e*		08 33 47.0	
KWP				MLR	MLR	08 50 25.4	
	comp=Z,400nm,26.1s,MS4.1						
KWP	**Kalwaria**	**39.42**	**308**	*e*P	**P**	**08 33 43.4**	**+0.8**
KWP				*e*		08 33 47.0	
SUW	**Suwalki**	**39.55**	**315**	*e*P	**P**	**08 33 46.0**	**+2.3**
SUW				*e*		08 33 49.0	
SUW				MLR	MLR	08 52 52.1	
	comp=Z,1µm,16.1s,MS4.8						
SUW	**Suwalki**	**39.55**	**315**	*e*P	**P**	**08 33 46.0**	**+2.3**
SUW				*e*		08 33 49.0	
IPM	**Ipoh**	**39.63**	**133**	P	**P**	**08 33 45.4**	**+0.6**
KOLS	**Kolonicke sedl**	**39.68**	**307**	*e*P	**P**	**08 33 45.3**	**+0.5**
KOLS				*e*	pP	08 33 53.3	-0.3
KOLS				*e*PP	PP	08 35 17.6	-2.1
SNY	**Shenyang**	**39.77**	**64**	⇑P	**P**	**08 33 45.9**	**+0.3**
SNY				S	**S**	**08 39 48.8**	**+1.4**
SNY				SS	SS	08 42 32.0	-5.2
SNY				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.2						
SNY				AMB	AMB		
	comp=Z,140nm,5.5s						
SNY				LR	LR		
	comp=E,1µm,12.3s						
SNY				LR	LR		
	comp=Z,1µm,13.3s,MS4.9						
FINES	**FINESS Array B**	**39.87**	**327**	P	**P**	**08 33 46.6**	**+0.4**
	comp=Z,13nm,0.4s,mb5.0,baz=120,slow=9.5,SNR=93						
FINES				LR	LR	08 53 53.8	
	comp=Z,287nm,18.1s,MS4.2,baz=281,slow=42						
APA	**Apatity**	**39.89**	**338**	⇑*i*P	**P**	**08 33 47.0**	**+0.6**
APA				*i*		08 33 58.0	
APA				*e*		08 42 46.0	
APA				pmax	pmax		
	comp=Z,73nm,1.3s,mb5.2						
APA				MLR	MLR		
	comp=Z,4µm,11.0s,MS5.5						
KAF	**Kangasniemi**	**40.01**	**328**	*e*p	**P**	**08 33 46.7**	**-0.6**
	comp=Z,25nm,0.7s,mb5.0,baz=113,slow=7.7						
KAF	**Kangasniemi**	**40.01**	**328**	*e*P	**P**	**08 33 46.7**	**-0.6**
KAF				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.0						
BOLS	**Boljevac**	**40.04**	**299**	⇑*i*P	**P**	**08 33 48.6**	**+0.7**
CRVS	**Cervenica-Dubn**	**40.21**	**307**	*e*	**P**	**08 33 45.0**	**-4.2**
CRVS				*e*pP	pP	08 33 52.0	-6.0
CRVS				*e*PP	PP	08 35 27.7	+2.4
BARS	**Barje**	**40.24**	**297**	⇓*i*P	**P**	**08 33 50.0**	**+0.5**
STHS	**Stebnicka Huta**	**40.36**	**308**	*e*P	**P**	**08 33 49.5**	**-0.9**
STHS				*e*sP	sP	08 33 55.7	-7.2
STHS				*e*sP	sP	08 34 02.4	-0.5
STHS				*e*PP	PP	08 35 39.1	+12
KECS	**Kecovo**	**40.86**	**306**	*e*P	**P**	**08 33 56.4**	**+1.9**
KECS				*e*PP	PP	08 35 31.5	-0.2
CN2	**Changchun**	**40.92**	**61**	*e*P	**P**	**08 33 55.0**	**0.0**
CN2				*e*XP	sP	08 34 02.3	-5.2
CN2				*e*S	**S**	**08 40 06.5**	**+1.9**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
CN2				AMB	AMB		
	comp=Z,380nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,12.0s,MS5.1						
CN2				LR	LR		
	comp=E,1µm,12.0s,MS5.1						
CN2				LR	LR		
	comp=Z,1µm,15.0s,MS4.9						
CLNS	**Chul’man**	**41.06**	**41**	*e*P	**P**	**08 33 56.1**	**+0.1**
CLNS				*e**PP	pP	08 34 03.7	-1.1
CLNS				*e*		08 35 55.5	
CLNS				*e*S	**S**	**08 40 01.7**	**-4.8**
CLNS				*e*		08 43 58.2	
CLNS				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.1						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.6s						
CLNS				pmax	pmax		
	comp=E,27nm,0.9s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.6						
CLNS				smax			
	comp=N,258nm,14.0s						
CLNS				smax			
	comp=E,118nm,13.0s						
CLNS				smax			
	comp=Z,87nm,13.0s						
CLNS				pmax	pmax		
	comp=Z,200nm,11.6s						
CLNS				MLR	MLR		
	comp=Z,1µm,13.0s,MS4.9						
CLNS				MLR	MLR		
	comp=N,500nm,14.0s,MS4.9						
CLNS				MLR	MLR		
	comp=E,800nm,10.0s,MS4.9						
PSZ	**Piszkesteto**	**41.26**	**305**	*e*P	**P**	**08 33 58.8**	**+1.0**
	comp=E,10nm,0.9s,mb4.5						
PSZ				*e*PP	PP	08 35 36.7	+0.7
PSZ	**Piszkesteto**	**41.26**	**305**	*e*P	**P**	**08 33 58.8**	**+1.0**
PSZ				*e*		08 35 36.7	
PSZ				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
OJC	**Ojcow**	**41.32**	**309**	*e*P	**P**	**08 33 55.0**	**-3.2**
DIVS	**Divcibare**	**41.43**	**299**	⇓*i*P	**P**	**08 33 58.5**	**-0.8**
NVSS	**Nova Varos 2**	**41.71**	**299**	⇑*i*P	**P**	**08 34 02.1**	**+0.7**
VYHS	**Vyhne**	**41.95**	**306**	*e*P	**P**	**08 34 04.1**	**+0.7**
VYHS				*e*PP	PP	08 35 40.7	-2.9
PKSM	**Moragy**	**42.20**	**303**	⇓*i*P	**P**	**08 34 06.2**	**+0.7**
SRO	**Srobarova**	**42.33**	**305**	*e*P	**P**	**08 34 08.8**	**+2.3**
OKC	**Ostrava-Krasne**	**42.38**	**308**	*e*P	**P**	**08 34 07.0**	**+0.1**
MORC	**Moravsky Berou**	**42.77**	**308**	*e*P	**P**	**08 34 10.4**	**+0.3**
	comp=Z,13nm,0.9s,mb4.7						
MORC				*e*		08 35 56.4	
MORC	**Moravsky Berou**	**42.77**	**308**	*e*P	**P**	**08 34 10.4**	**+0.3**
MORC				*e*		08 35 56.4	
MORC				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
KEV	**Kevo**	**43.04**	**338**	*e*p	**P**	**08 34 11.5**	**-0.6**
KEV	**Kevo**	**43.04**	**338**	P	**P**	**08 34 13.0**	**+0.9**
KEV				pmax	pmax		
	comp=Z,71nm,1.0s,mb5.3						
KGM	**Kluang**	**43.05**	**133**	P	**P**	**08 34 13.5**	**+0.6**
ARCES	**ARCESS Array B**	**43.40**	**338**	P	**P**	**08 34 15.6**	**+0.7**
	comp=Z,28nm,0.4s,mb5.3,baz=114,slow=7.7,SNR=138						
ARCES				LR	LR	08 53 37.3	
	comp=Z,1µm,19.0s,MS4.8,baz=134,slow=38						
ARCES	**ARCESS Array B**	**43.40**	**338**	P	**P**	**08 34 15.6**	**+0.6**
ARCES				LR	LR	08 53 37.3	
ARE0	**ARCESS Array S**	**43.40**	**338**	*e*P	**P**	**08 34 16.0**	**+1.1**
VRAC	**Vranov**	**43.41**	**307**	LR	LR	08 54 58.7	
	comp=Z,428nm,18.4s,MS4.4,baz=333,slow=40						
DPC	**Dobruska-Polom**	**43.55**	**309**	*e*P	**P**	**08 34 17.0**	**+0.6**
DPC				*e*PP	PP	08 36 02.4	+2.8
KSP	**Ksiaz**	**43.55**	**310**	*e*P	**P**	**08 34 16.6**	**+0.2**
KSP				MLR	MLR	08 55 47.1	
	comp=Z,1µm,17.6s,MS4.9						
KSP	**Ksiaz**	**43.55**	**310**	*e*P	**P**	**08 34 16.2**	**-0.2**
KSP				*e*PP	PP	08 35 58.5	-1.1
KSP				LR	LR		
	comp=Z,2µm,17.6s,MS5.0						
UPC	**Upice**	**43.74**	**309**	*e*P	**P**	**08 34 18.3**	**+0.3**
UPC				*e*PP	PP	08 36 04.4	+2.9
MDJ	**Mudanjiang**	**43.79**	**59**	P	**P**	**08 34 19.8**	**+1.4**
MDJ				AP	pP	08 34 27.8	+0.6
MDJ				PP	PP	08 36 03.6	+1.5
MDJ				S	**S**	**08 40 51.9**	**+5.2**
MDJ				XS		08 40 58.6	
MDJ				AMB	AMB		
	comp=Z,40nm,1.6s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,130nm,3.3s						
MDJ				LR	LR		
	comp=N,1µm,13.6s,MS5.0						
MDJ				LR	LR		
	comp=E,420nm,12.3s,MS5.0						
MDJ				LR	LR		
	comp=Z,1µm,20.0s						
MDJ	**Mudanjiang**	**43.79**	**59**	*e*P	**P**	**08 34 20.1**	**+1.6**
	comp=Z,128nm,1.4s,mb5.5						
KS15	**Wonju Array Si**	**43.82**	**70**	*e*P	**P**	**08 34 19.6**	**+0.7**
KTK1	**Kautokeino**	**43.89**	**337**	*e*P	**P**	**08 34 20.4**	**+1.5**
KTK1				AMb	AMB	08 34 23.0	
	comp=Z,72nm,0.5s,mb5.7						
KTK1	**Kautokeino**	**43.89**	**337**	*e*P	**P**	**08 34 20.4**	**+1.5**
	comp=Z,72nm,0.5s,mb5.7						
TREC	**Trest**	**44.13**	**307**	*e*P	**P**	**08 34 21.8**	**+0.7**
ARSA	**Arzberg**	**44.25**	**305**	⇑*i*P	**P**	**08 34 22.5**	**+0.3**
	comp=Z,12nm,1.2s,mb4.5						
GROS	**Grobnik**	**44.35**	**303**	*e*P	**P**	**08 34 23.0**	**0.0**
YAK	**Yakutsk**	**44.41**	**34**	*e*P	**P**	**08 34 24.0**	**+0.7**
	comp=Z,139nm,1.0s,mb5.6						
YAK	**Yakutsk**	**44.41**	**34**	*e*P	**P**	**08 34 24.0**	**+0.7**
YAK				pmax	pmax		
	comp=Z,139nm,1.0s,mb5.6						
TIP	**Timpagrande**	**44.62**	**293**	*e*P	**P**	**08 34 24.0**	**-1.2**
BOJS	**Bojanci**	**44.63**	**302**	*e*P	**P**	**08 34 25.7**	**+0.5**
BOJS				*e*PcP	PcP	08 36 08.3	+0.2
PVCC	**Panska Ves**	**44.66**	**309**	*e*P	**P**	**08 34 27.1**	**+1.7**
PRU	**Pruhonice**	**44.70**	**308**	*e*P	**P**	**08 34 26.2**	**+0.4**
PRU				*e*PP	PP	08 36 07.8	-3.3
PRU				AMS	AMS	08 56 10.0	
	comp=Z,500nm,14.6s						
KLR	**Kul’dur**	**44.81**	**53**	*e*P	**P**	**08 34 27.5**	**+0.8**
KLR				*e*S	**S**	**08 41 04.5**	**+3.1**
KLR				*e*SS	SS	08 44 26.0	+12
KLR				MLR	MLR		
	comp=E,600nm,12.0s						
KLR				MLR	MLR		
	comp=Z,3µm,12.0s,MS5.4						
TDS	**Terranova Siba**	**44.83**	**294**	P	**P**	**08 34 28.4**	**+1.4**
	comp=Z,57nm,0.8s,mb5.5						
TDS	**Terranova Siba**	**44.83**	**294**	P	**P**	**08 34 28.4**	**+1.4**
TDS				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.5						
OBKA	**Obir**	**44.99**	**304**	⇑*i*P	**P**	**08 34 28.8**	**+0.7**
	comp=Z,25nm,1.2s,mb4.9						
MOA	**Molln**	**45.05**	**305**	⇑*i*P	**P**	**08 34 28.5**	**0.0**
	comp=Z,18nm,0.8s,mb4.9						
MOA	**Molln**	**45.05**	**305**	⇑*i*P	**P**	**08 34 28.5**	**0.0**
	comp=Z,18nm,0.8s,mb5.0						
LJU	**Ljubljana**	**45.07**	**303**	*e*P	**P**	**08 34 29.7**	**+1.0**
LJU				*e*PcP	PcP	08 36 09.4	-0.3
MRLC	**Muro Lucano**	**45.24**	**295**	P	**P**	**08 34 31.2**	**+1.0**
MGR	**Morigerati**	**45.32**	**295**	P	**P**	**08 34 31.5**	**+0.7**
	comp=Z,20nm,0.7s,mb5.0						
GEC2	**GERESS Array S**	**45.33**	**307**	*e*P	**P**	**08 34 30.7**	**-0.1**
	comp=Z,15nm,1.2s,mb4.7						
GEC2				*e*PcP	PcP	08 36 10.5	0.0
GEC2				*e*PP	PP	08 36 20.0	+2.6
GEC2	**GERESS Array S**	**45.33**	**307**	*e*P	**P**	**08 34 30.7**	**-0.1**
GEC2				*e*		08 36 10.5	
GEC2				*e*		08 36 20.0	
GEC2				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.7						
GERES	**GERESS Array B**	**45.33**	**307**	P	**P**	**08 34 30.1**	**-0.7**
	comp=Z,3.7nm,0.8s,mb4.3,baz=76,slow=5.5,SNR=20						
GERES				PcP	PcP	08 36 10.3	-0.2
	comp=Z,5.1nm,0.9s,baz=45,slow=1.9,SNR=6.5						
GERES				ScP		08 39 59.9	
	comp=Z,0.2nm,0.2s,baz=153,slow=3.0,SNR=3.5						
GERES				LR	LR	08 56 08.3	
	comp=Z,356nm,18.9s,MS4.3,baz=293,slow=40						
KHC	**Kasperske Hory**	**45.39**	**307**	*e*P	**P**	**08 34 31.5**	**+0.3**
KHC				*e*PP	PP	08 36 10.0	-8.0
TRO	**Tromso**	**45.54**	**337**	*e*P	**P**	**08 34 32.0**	**-0.1**
TRO				AMb	AMB	08 34 45.4	
	comp=Z,114nm,1.6s,mb5.6						
TRO				AMS	AMS	08 54 26.5	
	comp=Z,631nm,16.6s,MS4.6						
TRO	**Tromso**	**45.54**	**337**	*e*P	**P**	**08 34 31.9**	**-0.3**
	comp=Z,114nm,1.6s,mb5.5						
TRO				LR	LR		
	comp=Z,631µm,16.6s						
TRO	**Tromso**	**45.54**	**337**	*e*P	**P**	**08 34 31.9**	**-0.3**
TRO				pmax	pmax		
	comp=Z,114nm,1.6s,mb5.5						
TRO				MLR	MLR		
	comp=Z,631µm,16.6s						
CLL	**Collm**	**45.61**	**310**	P	**P**	**08 34 34.0**	**+1.0**
	comp=Z,logA/T=1.1,mb4.8						
CLL				*e**SP	sP	08 34 39.0	-6.4
CLL				*e*PP	PP	08 36 20.0	-0.2
CLL				*e**SPP		08 36 34.0	
CLL				*e*		08 36 51.0	
CLL				*e**SSS		08 44 48.0	
CLL	**Collm**	**45.61**	**310**	*e*P	**P**	**08 34 34.0**	**+1.0**
	comp=Z,14nm,1.1s,mb4.8						
CLL				*e*pP	sP	08 34 39.0	-6.4
CLL	**Collm**	**45.61**	**310**	*e*P	**P**	**08 34 34.0**	**+1.0**
CLL				*e**PP	sP	08 34 39.0	-6.4
CLL				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
ROBS	**Robic**	**45.74**	**303**	*e*P	**P**	**08 34 33.7**	**-0.4**
KBA	**Koelnbreinsper**	**45.75**	**304**	⇑*e*P	**P**	**08 34 35.0**	**+0.9**
	comp=Z,14nm,0.7s,mb5.0						
KBA	**Koelnbreinsper**	**45.75**	**304**	⇑*e*P	**P**	**08 34 35.0**	**+0.9**
	comp=Z,14nm,0.6s,mb5.1						
KBA	**Koelnbreinsper**	**45.75**	**304**	⇑*e*P	**P**	**08 34 35.0**	**+0.9**
KBA				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
PTCC	**Patocco-Chiusa**	**45.83**	**304**	P	**P**	**08 34 35.1**	**+0.4**
GMNA	**Gemona**	**45.93**	**303**	P	**P**	**08 34 36.7**	**+1.2**
NKC	**Novy Kostel**	**46.03**	**309**	*e*P	**P**	**08 34 36.5**	**+0.2**
MOR8	**Moi Rana**	**46.16**	**331**	*e*P	**P**	**08 34 36.5**	**-0.6**
MOR8				AMb	AMB	08 34 42.0	
	comp=Z,177nm,1.2s,mb5.9						
MOR8	**Moi Rana**	**46.16**	**331**	*e*P	**P**	**08 34 36.5**	**-0.6**
	comp=Z,177nm,1.2s,mb5.9						
CING	**Cingoli**	**46.41**	**299**	P	**P**	**08 34 40.2**	**+0.8**
PTQR	**Pietraquaria**	**46.52**	**298**	P	**P**	**08 34 41.6**	**+1.3**
MOX	**Moxa**	**46.53**	**310**	*i* P	**P**	**08 34 40.5**	**+0.3**
	comp=Z,logA/T=1.3,mb5.0						
MOX				PP	PP	08 36 31.0	+1.6
MOX				L		08 57 59.0	
MOX	**Moxa**	**46.53**	**310**	*e*P	**P**	**08 34 40.5**	**+0.3**
	comp=Z,32nm,1.6s,mb5.0						
MOX				*e*PP	PP	08 36 30.6	+1.2
MOX				LR	LR		
	comp=Z,600nm,17.0s,MS4.6						
MOX	**Moxa**	**46.53**	**310**	*e*P	**P**	**08 34 40.5**	**+0.3**
MOX				*e*		08 36 30.6	
MOX				pmax	pmax		
	comp=Z,32nm,1.6s,mb5.0						
MOX				MLR	MLR		
	comp=Z,600nm,17.0s,MS4.6						
ARV	**Arcevia**	**46.57**	**300**	P	**P**	**08 34 41.5**	**+0.9**
MELSS	**Ber_school_2**	**46.60**	**332**	*e*P	**P**	**08 34 41.1**	**+0.6**
MELSS				AMb	AMB	08 34 46.2	
	comp=Z,563nm,1.0s						
SNTG	**Esanatoglia**	**46.62**	**299**	P	**P**	**08 34 41.3**	**+0.3**
STOK	**Stokkvaagen**	**46.76**	**331**	*e*P	**P**	**08 34 41.7**	**-0.1**
STOK				AMb	AMB	08 34 49.1	
	comp=Z,177nm,1.4s,mb5.8						
STOK	**Stokkvaagen**	**46.76**	**331**	*e*P	**P**	**08 34 41.7**	**-0.1**
	comp=Z,177nm,1.4s,mb5.8						
TIXI	**Tiksi**	**46.76**	**21**	⇑*i*P	**P**	**08 34 41.6**	**-0.2**
TIXI	**Tiksi**	**46.76**	**21**	*e*P	**P**	**08 34 36.0**	**-5.8**
TIXI				*e*S	**S**	**08 41 24.2**	**-4.8**
TIXI				*e*SS	SS	08 44 55.4	+7.3
TIXI				pmax	pmax		
	comp=Z,22nm,0.8s,mb5.1						
TIXI				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.0						
NB2	**NORSAR Subarra**	**46.79**	**324**	P	**P**	**08 34 41.1**	**-1.0**
	comp=Z,25nm,0.7s,mb5.2,baz=96,slow=7.4						
NB2	**NORSAR Subarra**	**46.79**	**324**	P	**P**	**08 34 41.1**	**-1.0**
	baz=96,slow=7.9						
NOA	**NORSAR Array B**	**46.79**	**324**	P	**P**	**08 34 41.4**	**-0.7**
	comp=Z,16nm,0.6s,mb5.1,baz=96,slow=7.6,SNR=68						
NOA				LR	LR	08 56 30.3	
	comp=Z,197nm,19.0s,MS4.1,baz=95,slow=39						
NSS	**Namsos**	**46.87**	**329**	*e*P	**P**	**08 34 42.1**	**-0.6**
NSS				AMb	AMB	08 34 51.3	
	comp=Z,84nm,1.6s,mb5.4						
NSS				AMS	AMS	08 55 29.1	
	comp=Z,728nm,16.9s,MS4.7						
NSS	**Namsos**	**46.87**	**329**	*e*P	**P**	**08 34 41.9**	**-0.8**
	comp=Z,84nm,1.6s,mb5.4						
GRA1	**Grafenberg Arr**	**46.87**	**308**	*e*P	**P**	**08 34 43.6**	**+0.7**
	comp=Z,26nm,0.8s,mb5.2						
GRF	**Grafenberg Arr**	**46.87**	**308**	*e*P	**P**	**08 34 43.6**	**+0.7**
	comp=Z,26nm,0.8s,mb5.2						
GRF				LR	LR		
	comp=Z,600nm,18.1s,MS4.6						
GRF	**Grafenberg Arr**	**46.87**	**308**	*e*P	**P**	**08 34 43.6**	**+0.7**
GRF				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
GRF				MLR	MLR		
	comp=Z,600nm,18.1s,MS4.6						
WTTA	**Wattenberg**	**46.88**	**305**	⇑*i*P	**P**	**08 34 42.7**	**-0.3**
	comp=Z,23nm,1.2s,mb5.0						
WTTA	**Wattenberg**	**46.88**	**305**	⇑*i*P	**P**	**08 34 42.7**	**-0.3**
	comp=Z,23nm,1.2s,mb5.0						
WTTA	**Wattenberg**	**46.88**	**305**	⇑*i*P	**P**	**08 34 42.7**	**-0.4**
WTTA				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.0						
WATA	**Walderalm**	**46.91**	**305**	⇑*e*P	**P**	**08 34 43.3**	**0.0**
	comp=Z,19nm,0.9s,mb5.0						
WATA	**Walderalm**	**46.91**	**305**	⇑*e*P	**P**	**08 34 43.3**	**0.0**
WATA				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.0						
LOF	**Lofoten**	**46.96**	**334**	*e*	**P**	**08 34 35.3**	**-8.1**
LOF				AMb	AMB	08 34 44.5	
	comp=Z,209nm,1.4s,mb5.9						
LOF	**Lofoten**	**46.96**	**334**	*e*P	**P**	**08 34 35.3**	**-8.1**
	comp=Z,209nm,1.4s,mb5.9						
NAO	**NORSAR Subarra**	**46.96**	**324**	P	**P**	**08 34 41.1**	**-2.4**
	comp=Z,25nm,0.7s,mb5.2						
NAO	**NORSAR Subarra**	**46.96**	**324**	P	**P**	**08 34 41.1**	**-2.4**
NAO				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.2						
MNS	**Montasola**	**46.97**	**298**	P	**P**	**08 34 43.9**	**+0.1**
FUR	**Furstenfeldbru**	**47.01**	**306**	*e*P	**P**	**08 34 44.3**	**+0.3**
	comp=Z,26nm,0.9s,mb5.2						
FUR	**Furstenfeldbru**	**47.01**	**306**	*e*P	**P**	**08 34 44.3**	**+0.3**
FUR				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
CTI	**Castel Tesino**	**47.05**	**303**	P	**P**	**08 34 44.7**	**+0.3**
	comp=Z,16nm,0.7s,mb5.0						
CTI	**Castel Tesino**	**47.05**	**303**	P	**P**	**08 34 44.7**	**+0.3**
CTI				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
BADI	**Badiali**	**47.07**	**300**	P	**P**	**08 34 46.3**	**+1.7**
BSEG	**Bad Segeberg**	**47.12**	**314**	*e*P	**P**	**08 34 45.1**	**+0.2**
SQTA	**Sankt Quirin**	**47.18**	**305**	⇑*i*P	**P**	**08 34 44.8**	**-0.6**
	comp=Z,6.4nm,0.5s,mb4.8						
SQTA	**Sankt Quirin**	**47.18**	**305**	⇑*i*P	**P**	**08 34 44.8**	**-0.6**
	comp=Z,6.4nm,0.5s,mb4.8						
SQTA	**Sankt Quirin**	**47.18**	**305**	⇑*i*P	**P**	**08 34 44.8**	**-0.6**
SQTA				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
CLZ	**Clausthal**	**47.22**	**311**	*e*P	**P**	**08 34 45.6**	**0.0**
	comp=Z,36nm,1.2s,mb5.2						
CLZ				*e*PcP	PcP	08 36 17.0	-0.1
CLZ	**Clausthal**	**47.22**	**311**	*e*P	**P**	**08 34 45.6**	**0.0**
CLZ				*e*		08 36 17.0	
CLZ				pmax	pmax		
	comp=Z,36nm,1.2s,mb5.2						
MOTA	**Moosalm**	**47.23**	**305**	⇑*i*P	**P**	**08 34 45.4**	**-0.4**
	comp=Z,22nm,0.9s,mb5.1						
MOTA	**Moosalm**	**47.23**	**305**	⇑*i*P	**P**	**08 34 45.4**	**-0.5**
	comp=Z,22nm,0.9s,mb5.1						
SFI	**Santa Sofia**	**47.28**	**300**	P	**P**	**08 34 47.5**	**+1.3**
BJO	**Bjornoya**	**47.38**	**343**	AMS	AMS	08 57 27.7	
	comp=Z,588nm,16.2s,MS4.6						
JNU	**Nakatsue**	**47.39**	**75**	LR	LR	08 56 21.1	
	comp=Z,367nm,19.9s,MS4.3,baz=300,slow=38						
VMG	**Vicchio**	**47.48**	**301**	P	**P**	**08 34 49.3**	**+1.4**
KONO	**Kongsberg**	**47.51**	**322**	*e*P	**P**	**08 34 47.8**	**-0.1**
KONO	**Kongsberg**	**47.51**	**322**	*e*P	**P**	**08 34 47.1**	**-0.7**
	comp=Z,25nm,0.8s,mb5.3						
KONO	**Kongsberg**	**47.51**	**322**	*e*P	**P**	**08 34 47.1**	**-0.7**

KONO				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
JOW	**Kunigami**	47.55	84	LR	LR	08 57 23.0	
	comp=Z,933nm,18.7s,MS4.8,baz=78,slow=39						
FNVD	**Fontana Vidola**	47.74	301	P	P	08 34 51.5	+1.6
CSNT	**Castellina Chi**	47.76	300	P	P	08 34 50.1	+0.1
DOMB	**Dombas**	47.90	325	eP	P	08 34 50.9	0.0
DOMB				AMb	AMB	08 34 56.0	
	comp=Z,56nm,1.7s,mb5.3						
DOMB	**Dombas**	47.90	325	eP	P	08 34 50.9	0.0
	comp=Z,56nm,1.7s,mb5.3						
KSM	**Kuching**	47.93	125	eP	P	08 34 51.8	0.0
DAVA	**Damuels**	48.06	305⇑	iP	P	08 34 51.1	-1.2
	comp=Z,83nm,1.2s,mb5.7,SNR=17						
DAVOX	**Davos**	48.14	305	LR	LR	08 57 05.1	
	comp=Z,309nm,19.9s,MS4.3,baz=62,slow=38						
TOD	**Tromm**	48.44	308	eP	P	08 34 54.7	-0.5
MOL	**Molde**	48.63	326	eP	P	08 34 59.9	+3.4
MOL				AMb	AMB	08 35 04.9	
	comp=Z,58nm,1.8s,mb5.3						
MOL	**Molde**	48.63	326	eP	P	08 34 59.9	+3.4
	comp=Z,58nm,1.8s,mb5.3						
BOB	**Bobbio (Coli)**	48.80	302	P	P	08 34 59.2	+1.1
	comp=Z,30nm,1.1s,mb5.2						
BOB	**Bobbio (Coli)**	48.80	302	P	P	08 34 59.2	+1.1
BOB				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.2						
KKM	**Kota Kinabalu**	48.92	116	eP	P	08 34 59.8	+0.3
KKM	**Kota Kinabalu**	48.92	116	P	P	08 35 01.4	+2.0
BFO	**Black Forest**	48.93	307	eP	P	08 35 00.0	+1.0
	comp=Z,16nm,1.1s,mb5.0						
BFO	**Black Forest**	48.93	307	eP	P	08 35 00.0	+1.0
BFO				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
KMBO	**Kilima Mbogo**	48.99	231	P	P	08 35 02.0	+2.1
	comp=Z,30nm,1.0s,mb5.3,baz=29,slow=9.4,SNR=50						
KMBO				LR	LR	08 59 45.0	
	comp=Z,262nm,18.1s,MS4.3,baz=276,slow=41						
LANF	**Langenberg**	49.18	308	eP	P	08 35 01.0	+0.1
PGF	**Pioggiola**	49.60	299	eP	P	08 35 03.2	-1.0
	comp=Z,66nm,1.1s,mb5.3						
PGF	**Pioggiola**	49.60	299	eP	P	08 35 03.2	-1.0
PGF				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.3						
CDF	**Champ du Feu**	49.61	307	eP	P	08 35 02.9	-1.4
	comp=Z,7.1nm,0.5s,mb4.6						
CDF	**Champ du Feu**	49.61	307	eP	P	08 35 02.9	-1.4
CDF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.7						
BER	**Bergen**	49.66	323	AMS	AMS	09 01 04.2	
	comp=Z,660nm,17.3s,MS4.7						
ECH	**Echery**	49.73	307	eP	P	08 35 06.9	+1.8
MOF	**Molkenrain**	49.80	306	eP	P	08 35 05.0	-0.7
HINF	**Hinteralfeld**	50.00	306	eP	P	08 35 06.0	-1.2
LOMF	**Lomont**	50.10	306	eP	P	08 35 06.9	-1.1
SAOF	**Saorge**	50.29	301	eP	P	08 35 09.2	-0.3
HAU	**Haudompre**	50.30	307	eP	P	08 35 08.4	-1.1
	comp=Z,30nm,0.9s,mb5.0						
HAU				eR			
	comp=Z,226nm,21.0s						
HAU	**Haudompre**	50.30	307	eP	P	08 35 08.4	-1.1
HAU				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.0						
HAU				MLR	MLR		
	comp=Z,230nm,21.0s,MS4.2						
AUTN	**L'Aution**	50.38	301	eP	P	08 35 11.3	+1.1
SBF	**Sospel**	50.41	301	eP	P	08 35 09.5	-0.9
	comp=Z,77nm,1.0s,mb5.4						
SBF	**Sospel**	50.41	301	eP	P	08 35 09.5	-0.9
SBF				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.4						
THEF	**They Montfort**	50.49	307	eP	P	08 35 10.4	-0.6
TOUF	**Mont Tournerai**	50.50	301	eP	P	08 35 11.2	+0.1
LPG	**La Plagne**	50.52	303	eP	P	08 35 10.9	-0.3
	comp=Z,42nm,0.8s,mb5.1						
LPG	**La Plagne**	50.52	303	eP	P	08 35 10.9	-0.3
LPG				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
LPL	**La Plagne**	50.53	303	eP	P	08 35 11.2	-0.1
	comp=Z,89nm,1.0s,mb5.3						
LPL	**La Plagne**	50.53	303	eP	P	08 35 11.2	-0.1
LPL				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.3						
MVIF	**Mont Vial**	50.60	301	eP	P	08 35 11.0	-0.8
BNI	**Bardonecchia**	50.67	303	eP	P	08 35 10.1	-2.3
	comp=Z,48nm,1.3s,mb5.3						
BNI	**Bardonecchia**	50.67	303	eP	P	08 35 10.1	-2.2
BNI				pmax	pmax		
	comp=Z,48nm,1.3s,mb5.3						
MBDF	**Montbardon**	50.67	302	eP	P	08 35 11.0	-1.4
	comp=Z,43nm,0.8s,mb5.1						
MBDF	**Montbardon**	50.67	302	eP	P	08 35 11.0	-1.4
MBDF				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
KBS	**Kingsbay**	50.68	347	eP	P	08 35 13.3	+1.3
KBS				AMS	AMS	08 56 45.5	
	comp=Z,364nm,18.1s,MS4.4						
SURF	**Saint Ours**	50.70	302	eP	P	08 35 12.3	-0.3
CABF	**La Chapelle**	50.74	305	eP	P	08 35 11.7	-1.2
	comp=Z,89nm,1.1s,mb5.3						
CABF	**La Chapelle**	50.74	305	eP	P	08 35 11.7	-1.2
CABF				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.3						
GDM	**Grand'Maison**	51.02	303	eP	P	08 35 14.3	-0.7
FRF	**La Foret Royal**	51.03	301	eP	P	08 35 14.1	-1.0
LMR	**La Mourre**	51.19	301	eP	P	08 35 15.4	-0.9
ORIF	**Oris-en-Rattie**	51.25	303	eP	P	08 35 15.6	-1.2
	comp=Z,41nm,1.1s,mb5.0						
ORIF				eR			
	comp=Z,460nm,21.5s						
GRN	**Grenoble**	51.27	303	eP	P	08 35 16.2	-0.7
OG05	**Jujurieux**	51.29	304	eP	P	08 35 16.1	-0.9
BAIF	**Baives**	51.31	310	eP	P	08 35 16.0	-1.2
	comp=Z,91nm,1.2s,mb5.3						
BAIF	**Baives**	51.31	310	eP	P	08 35 16.0	-1.2
BAIF				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.3						
TSM	**Tawau**	51.31	116	P	P	08 35 18.2	+0.5
STOF	**St-Etienne Org**	51.45	302	eP	P	08 35 18.4	+0.1
SMRF	**Simiane la Rot**	51.69	302	eP	P	08 35 19.1	-1.0
	comp=Z,107nm,1.5s,mb5.3						
PUYF	**Puyloubier**	51.71	301	eP	P	08 35 19.6	-0.7
GELF	**Grande-Etoile**	51.94	301	eP	P	08 35 21.3	-0.7
MAJO	**Matsushiro**	52.01	68	eP	P	08 35 21.5	-1.1
	comp=Z,88nm,0.7s,mb5.8						
MAJO	**Matsushiro**	52.01	68	eP	P	08 35 21.5	-1.1
MAJO				pmax	pmax		
	comp=Z,88nm,0.7s,mb5.8						
MAT	**Matsushiro**	52.01	68	P	P	08 35 21.7	-0.9
MAT				S	S	08 42 44.0	+1.4
MAT	**Matsushiro**	52.01	68	eP	P	08 35 22.0	-0.7
	comp=Z,90nm,0.8s,mb5.8						
MAT				eS	S	08 42 45.0	+2.4
MAT	**Matsushiro**	52.01	68	eP	P	08 35 22.0	-0.7
MAT				eS	S	08 42 45.0	+2.4
MAT				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.8						
MJAR	**Matsushiro Arr**	52.01	68	P	P	08 35 22.4	-0.3
	comp=Z,56nm,0.7s,mb5.6,baz=290,slow=10.0,SNR=99						
MJAR				LR	LR	08 59 12.6	
	comp=Z,202nm,19.0s,MS4.2,baz=295,slow=38						
PRAF	**Pradon**	52.01	302	eP	P	08 35 22.0	-0.6
LOR	**Lormes**	52.09	306	eP	P	08 35 21.4	-1.7
LOR				eR			
	comp=Z,300nm,20.8s						
VIVF	**Saint-Julien-l**	52.10	303	eP	P	08 35 21.6	-1.6
	comp=Z,28nm,0.9s,mb4.9						
VIVF	**Saint-Julien-l**	52.10	303	eP	P	08 35 21.6	-1.6
VIVF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
SMF	**Signal de Mont**	52.24	305	eP	P	08 35 23.2	-1.1
	comp=Z,33nm,0.7s,mb5.1						
SMF	**Signal de Mont**	52.24	305	eP	P	08 35 23.2	-1.1
SMF				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
SSF	**Saint Saulge**	52.37	306	eP	P	08 35 23.7	-1.5
	comp=Z,28nm,1.3s,mb5.0						
SSF	**Saint Saulge**	52.37	306	eP	P	08 35 23.7	-1.5
SSF				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.0						
CMAH	**Djebel Manchou**	52.41	292	P	P	08 35 25.5	-0.2
YSS	**Yuzh-Sakhalins**	52.44	54	eP	P	08 35 24.9	-0.9
	comp=Z,69nm,1.0s,mb5.5						
YSS	**Yuzh-Sakhalins**	52.44	54κ	eP	P	08 35 25.9	+0.1
YSS				eS	S	08 42 53.0	+4.6
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.7						
YSS				MLR	MLR		
	comp=N,500nm,13.0s,MS4.9						
YSS				MLR	MLR		
	comp=E,500nm,15.0s,MS4.9						
ABSA	**Djebel Ababsia**	52.48	292	P	P	08 35 24.0	-2.2
AVF	**Avril sur Loir**	52.54	306	eP	P	08 35 25.1	-1.4
	comp=E,29nm,0.7s,mb5.0						
AVF	**Avril sur Loir**	52.54	306	eP	P	08 35 25.1	-1.4
AVF				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
PLDF	**La Plantade**	52.55	305	eP	P	08 35 26.7	+0.1
LASF	**Ste Croix**	52.86	302	eP	P	08 35 28.3	-0.6
	comp=Z,117nm,1.2s,mb5.4						
BGF	**Bois d'Agland**	52.93	306	eP	P	08 35 28.2	-1.2
LBL	**Lubilhac**	52.98	304	eP	P	08 35 29.7	-0.1
PYM	**Petit Puy Mans**	53.02	304	eP	P	08 35 27.1	-3.0
CASM	**Ain Smara**	53.24	292	P	P	08 35 30.0	-1.9
CTEI	**Djebel Teioual**	53.37	292	P	P	08 35 30.0	-2.8
TCF	**Toulx Ste Croi**	53.42	305	eP	P	08 35 32.0	-1.0
	comp=Z,100nm,1.3s,mb5.3						
TCF	**Toulx Ste Croi**	53.42	305	eP	P	08 35 32.0	-1.0
TCF				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.3						
CAF	**Calviac**	53.87	304	eP	P	08 35 35.3	-1.0
	comp=Z,34nm,1.0s,mb5.0						
CAF	**Calviac**	53.87	304	eP	P	08 35 35.3	-1.0
CAF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
CKHR	**Kef el Ahmar**	54.07	292	P	P	08 35 31.0	-6.9
SET	**Setif**	54.09	292	P	P	08 35 37.0	-1.1
RJF	**Les Rejaudoux**	54.15	304	eP	P	08 35 37.3	-1.0
RJF				eR			
	comp=Z,196nm,21.5s						
MTLF	**Montolieu**	54.20	302	eP	P	08 35 37.4	-1.4
	comp=Z,51nm,1.2s,mb5.0						
MTLF	**Montolieu**	54.20	302	eP	P	08 35 37.4	-1.4
MTLF				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
LDF	**La Druitiere**	54.39	309	eP	P	08 35 38.7	-1.4
FLN	**La Foliniere**	54.58	309	eP	P	08 35 40.1	-1.4
	comp=Z,28nm,0.8s,mb5.0						
FLN				eR			
	comp=Z,397nm,20.0s						
FLN	**La Foliniere**	54.58	309	eP	P	08 35 40.1	-1.4
FLN				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
FLN				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.5						
LFF	**La Frestale**	54.77	304	eP	P	08 35 41.8	-1.2
MFF	**Saint Martin d**	54.92	306	eP	P	08 35 42.8	-1.2
	comp=Z,15nm,0.7s,mb4.8						
MFF	**Saint Martin d**	54.92	306	eP	P	08 35 42.8	-1.2
MFF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
SEY	**Seymchan**	54.92	33⇑	eP	P	08 35 43.4	-0.4
EMIR	**Miracle**	55.11	300	P	P	08 35 44.4	-1.1
	comp=Z,68nm,1.6s,mb5.4						
EPOB	**Poblet**	55.60	300	P	P	08 35 48.5	-0.6
	comp=Z,62nm,1.4s,mb5.4						
EPF	**Esparros**	55.61	302	eP	P	08 35 47.8	-1.2
EBIE	**Bielsa**	55.85	302	P	P	08 35 50.1	-0.6
	comp=Z,38nm,1.3s,mb5.3						
EGRA	**Graus**	55.88	301	P	P	08 35 50.8	-0.2
	comp=Z,24nm,1.3s,mb5.1						
SGMF	**Saint Gilles**	56.05	309	eP	P	08 35 50.9	-1.2
	comp=Z,81nm,1.1s,mb5.3						
SGMF	**Saint Gilles**	56.05	309	eP	P	08 35 50.9	-1.2
SGMF				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.4						
ERTA	**Horta de San J**	56.26	300	P	P	08 35 53.3	-0.5
	comp=Z,104nm,2.0s,mb5.5						
ETSF	**Etsaut**	56.27	302	eP	P	08 35 52.6	-1.2
	comp=Z,30nm,0.7s,mb5.2						
ETSF	**Etsaut**	56.27	302	eP	P	08 35 52.6	-1.2
ETSF				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.1						
ROSF	**Rostrenen**	56.48	309	eP	P	08 35 53.6	-1.6
QUIF	**Quistinic**	56.53	308	eP	P	08 35 54.5	-1.1
ESAC	**San Caprasio**	56.59	301	P	P	08 35 54.7	-1.4
	comp=Z,90nm,1.5s,mb5.6						
SJPF	**Ste Jean**	56.67	302	eP	P	08 35 55.1	-1.6
EALK	**Alkurruntz**	56.83	303	P	P	08 35 56.5	-1.4
	comp=Z,32nm,1.1s,mb5.3						
DAG	**Danmarks Havn**	56.87	344⇑	iP	P	08 35 57.6	-0.1
	comp=Z,52nm,0.9s,mb5.6						
DAG	**Danmarks Havn**	56.87	344⇑	iP	P	08 35 57.6	-0.1
DAG				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.6						
EMOS	**Mosqueruela**	57.04	299	P	P	08 35 59.6	+0.2
	comp=Z,39nm,1.4s,mb5.2						
ECHE	**Chera**	57.66	298	P	P	08 36 03.5	-0.2
	comp=Z,25nm,1.3s,mb5.1						
ECHE	**Chera**	57.66	298	P	P	08 36 03.5	-0.2
ECHE				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.1						
ECRI	**Cripan**	57.73	302	P	P	08 36 03.9	-0.2
	comp=Z,24nm,1.0s,mb5.2						
ECRI	**Cripan**	57.73	302	P	P	08 36 03.9	-0.3
ECRI				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.2						
ELAN	**Lanestosa**	58.16	303	P	P	08 36 07.0	-0.2
	comp=Z,95nm,1.4s,mb5.6						
ETOB	**Tobarra**	58.42	298	P	P	08 36 08.5	-0.5
	comp=Z,32nm,1.4s,mb5.2						
EMUR	**La Murta**	58.49	297	P	P	08 36 08.8	-0.7
	comp=Z,52nm,1.5s,mb5.3						
EVIA	**Vianos**	59.12	298	P	P	08 36 13.4	-0.4
	comp=Z,9.4nm,0.6s,mb5.0						
EVIA	**Vianos**	59.12	298	P	P	08 36 13.5	-0.4
EVIA				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
EARI	**Arriondas**	59.36	304	P	P	08 36 14.2	-1.2
	comp=Z,107nm,1.4s,mb5.7						
BILL	**Bilibino**	59.42	26	eP	P	08 36 14.7	-0.9
	comp=Z,60nm,1.1s,mb5.5						
BILL	**Bilibino**	59.42	26c	iP	P	08 36 15.4	-0.2
BILL				e		08 36 20.3	
BILL				e		08 37 03.7	
BILL				e		08 38 29.5	
BILL				ePPP	PPP	08 39 47.7	-6.0
BILL				pmax	pmax		
	comp=Z,61nm,1.2s,mb5.5						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.0						
EHUE	**Huescar**	59.49	297	P	P	08 36 16.3	-0.1
	comp=Z,5.3nm,0.6s,mb4.8						
EHUE	**Huescar**	59.49	297	P	P	08 36 16.3	-0.2
EHUE				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.7						
GUD	**Guadarrama**	59.57	301	P	P	08 36 16.6	-0.4
	comp=Z,7.3nm,0.6s,mb4.9						
GUD	**Guadarrama**	59.57	301	P	P	08 36 16.6	-0.4
GUD				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
ESDC	**Sonseca Array**	59.79	299	P	P	08 36 17.7	-0.8
	comp=Z,6.6nm,0.7s,mb4.8,baz=59,slow=7.2,SNR=24						
ESDC	**Sonseca Array**	59.79	299	P	P	08 36 17.9	-0.6
	comp=Z,10.0nm,0.9s,mb4.8						
ESLA	**Sonseca Array**	59.79	299	eP	P	08 36 17.6	-1.0
	comp=Z,15nm,1.4s,mb4.8						
EQES	**Quesada**	59.84	297	P	P	08 36 17.9	-1.0
	comp=Z,24nm,0.9s,mb5.2						
EBER	**Berja**	60.06	296	P	P	08 36 19.7	-0.7
	comp=Z,102nm,1.7s,mb5.6						
EBAN	**Banos Encina**	60.23	298	P	P	08 36 20.8	-0.7
	comp=Z,13nm,0.6s,mb5.2						
EBAN	**Banos Encina**	60.23	298	P	P	08 36 20.8	-0.7
EBAN				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.1						
PET	**Petropavlovsk**	60.60	44	i P	P	08 36 22.5	-1.4
PET	**Petropavlovsk**	60.60	44	eP	P	08 36 22.1	-1.8
PET				eS	S	08 44 35.6	-0.7
PET				eSS	SS	08 48 35.6	-0.4
PET				eSSS	SSS	08 51 13.6	+2.1
PET				pmax	pmax		
	comp=Z,25nm,1.5s,mb5.1						
PET				pmax	pmax		
	comp=Z,100nm,14.5s						
PET				smax			
	comp=N,100nm,25.8s						
PET				smax			
	comp=E,100nm,15.9s						
PET				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.8						
EPON	**Pontenova**	60.67	304	P	P	08 36 24.0	-0.5
	comp=Z,9.7nm,0.5s,mb5.2						
ERON	**Agron**	60.69	297	P	P	08 36 23.3	-1.4
	comp=Z,9.0nm,0.6s,mb5.1						
EADA	**Adamuz**	60.80	298	P	P	08 36 24.2	-1.2
	comp=Z,41nm,1.9s,mb5.2						
ECAL	**Calabor**	60.90	303	P	P	08 36 25.5	-0.5
	comp=Z,27nm,1.0s,mb5.3						
ERUA	**La Rua**	61.01	303	P	P	08 36 26.3	-0.5
	comp=Z,7.6nm,0.4s,mb5.2						
ERUA	**La Rua**	61.01	303	P	P	08 36 26.3	-0.5
ERUA				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb5.2						
ECAB	**El Cabril**	61.45	298	P	P	08 36 28.8	-1.0
	comp=Z,57nm,1.9s,mb5.4						
EMIJ	**Mijas**	61.58	296	P	P	08 36 29.4	-1.4
	comp=Z,65nm,1.4s,mb5.6						
PVRL	**Vila Real**	61.83	302	eP	P	08 36 31.8	-0.6
	comp=Z,29nm,1.3s,mb5.2						
ELOB	**Lobios**	61.84	303	P	P	08 36 31.0	-1.5
	comp=Z,81nm,1.6s,mb5.6						
EMAZ	**Mazaricos**	62.05	305	P	P	08 36 33.0	-0.8
	comp=Z,202nm,1.9s,mb5.9						
MTE	**Manteigas**	62.05	301	eP	P	08 36 33.8	-0.1
	comp=Z,66nm,1.4s,mb5.6						
MTE				eS	S	08 44 22.9	-32
MTE				eSS	SS	08 49 42.5	+43
EJIF	**Jimena Fronter**	62.14	297	P	P	08 36 33.6	-0.9
	comp=Z,102nm,2.2s,mb5.6						
EJIF	**Jimena Fronter**	62.14	297	P	P	08 36 33.7	-0.8
EJIF				pmax	pmax		
	comp=Z,102nm,2.2s,mb5.6						
PVIS	**Viseu**	62.17	302	eP	P	08 36 34.4	-0.3
	comp=Z,58nm,1.3s,mb5.5						
ESPR	**Espera**	62.25	297	P	P	08 36 34.4	-0.9
	comp=Z,53nm,2.3s,mb5.3						
EBAD	**Badajoz**	62.33	300	P	P	08 36 34.8	-1.0
	comp=Z,84nm,1.5s,mb5.7						
EMIN	**Mina Concepcio**	62.48	298	P	P	08 36 36.2	-0.5
	comp=Z,45nm,1.8s,mb5.3						
PTOM	**Tomar**	62.97	301	eP	P	08 36 39.7	-0.3
	comp=Z,56nm,1.0s,mb5.7						
MDT	**Midelt**	63.02	293	P	P	08 36 39.5	-0.9
	comp=Z,5.5nm,0.7s,mb4.8,baz=71,slow=6.4,SNR=9.7						
EVO	**Evora**	63.13	300	eP	P	08 36 40.2	-0.8
	comp=Z,95nm,1.3s,mb5.5						
EVO				eR			
	comp=Z,219nm,21.2s						
EGRO	**El Granado**	63.16	298	P	P	08 36 39.2	-2.0
	comp=Z,29nm,1.4s,mb5.2						
SUMG	**Summit**	63.25	342	eP	P	08 36 42.1	+0.8
	comp=Z,95nm,0.8s,mb6.0						
LSZ	**Lusaka**	65.54	228	eP	P	08 36 57.3	+0.3
	comp=Z,46nm,1.1s,mb5.4						
LSZ	**Lusaka**	65.54	228	eP	P	08 36 57.3	+0.3
LSZ				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.4						
FX1	**Attu Island--F**	68.64	40	eP	P	08 37 16.2	+0.2
SFJD	**Kangerlussuaq**	69.98	340	P	P	08 37 22.8	-1.2
	comp=Z,31nm,0.7s,mb5.3,baz=42,slow=6.7,SNR=18						
SFJD	**Kangerlussuaq**	69.98	340	i P	P	08 37 23.8	-0.2
	comp=Z,46nm,0.9s,mb5.4						
SFJD	**Kangerlussuaq**	69.98	340	eP	P	08 37 23.9	-0.1
FITZ	**Fitzroy Crossi**	72.48	128	eP	P	08 37 34.2	-5.7
	comp=Z,3.5nm,0.4s,mb4.6						
FITZ				i		08 37 40.3	
IMA2	**Indian Mountai**	73.25	18	eP	P	08 37 43.6	+0.2
KAKA	**Kakadu**	73.41	119⇑	iP	P	08 38 04.4	+19
	comp=Z,49nm,0.8s,mb5.5						
LBTB	**Lobatse**	74.58	224	eP	P	08 37 52.5	+0.5
	comp=Z,89nm,1.2s,mb5.6						
LBTB	**Lobatse**	74.58	224	eP	P	08 37 52.5	+0.5
LBTB				pmax	pmax		
	comp=Z,89nm,1.2s,mb5.6						
TSUM	**Tsumeb**	75.23	234	eP	P	08 37 56.5	+0.7
	comp=Z,35nm,1.1s,mb5.2						
INK	**Inuvik**	75.33	10	eP	P	08 37 56.0	+0.6
	comp=Z,144nm,1.2s,mb5.8						
INK	**Inuvik**	75.33	10	eP	P	08 37 56.0	+0.6
INK				pmax	pmax		
	comp=Z,144nm,1.2s						
COLA	**College**	75.66	17	eP	P	08 37 57.9	+0.5
	comp=Z,46nm,0.9s,mb5.4						
COLA				ePcP	PcP	08 38 10.2	-0.2
COLA	**College**	75.66	17	eP	P	08 37 57.9	+0.6
COLA				e		08 38 10.2	
COLA				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.4						
ILAR	**Eielson Array**	75.97	16	P	P	08 37 59.1	0.0
	comp=Z,4.3nm,0.5s,mb4.7,baz=303,slow=4.4,SNR=92						
ILAR				LR	LR	09 15 55.7	
	comp=Z,198nm,19.4s,MS4.4,baz=345,slow=39						
ILAR	**Eielson Array**	75.97	16	P	P	08 37 59.1	0.0
ILAR				LR	LR	09 15 55.7	
DBIC	**Dimbokro**	76.34	269	P	P	08 38 02.4	+0.1
	comp=Z,84nm,0.9s,mb5.7,baz=36,slow=7.0,SNR=77						
DBIC				LR	LR	09 15 09.6	
	comp=Z,462nm,19.2s,MS4.8,baz=41,slow=38						
DBIC	**Dimbokro**	76.34	269	eP	P	08 38 02.3	+0.1
	comp=Z,121nm,1.0s,mb5.8						
DBIC	**Dimbokro**	76.34	269	P	P	08 38 02.5	+0.3
DBIC				pmax	pmax		
	comp=Z,120nm,1.0s						
SVW2	**Sparrevohn**	76.58	22	eP	P	08 38 04.3	+1.7
LIC	**Lamto**	76.73	268	eP	P	08 38 03.4	-1.0
	comp=Z,191nm,0.9s,mb5.8						
LIC				eR			
	comp=Z,565nm,21.2s						
THY	**Trims Highway**	77.38	17	eP	P	08 38 07.6	+0.6
THY				ePcP	PcP	08 38 17.3	-0.5
BOSA	**Boshof**	77.56	222	P	P	08 38 09.7	+0.9
	comp=Z,49nm,0.8s,mb5.5,baz=36,slow=5.0,SNR=73						
BOSA	**Boshof**	77.56	222	eP	P	08 38 09.2	+0.5
	comp=Z,96nm,1.3s,mb5.6						
BOSA	**Boshof**	77.56	222	P	P	08 38 09.7	+1.0
BOSA				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.5						
MUN	**Mundaring**	77.78	144	eP	P	08 38 09.2	-0.7
PMR	**Palmer**	78.06	19	eP	P	08 38 11.5	+0.8
	comp=Z,54nm,1.2s,mb5.4						
PMR				LR	LR		
	comp=Z,400nm,18.0s,MS4.8						
PMR	**Palmer**	78.06	19	eP	P	08 38 11.5	+0.8
PMR				pmax	pmax		
	comp=Z,54nm,1.2s,mb5.3						
PMR				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.8						
SML	**Sawmill**	78.09	19	eP	P	08 38 08.3	-2.6
SML	**Sawmill**	78.09	19	P	P	08 38 12.5	+1.6
DAWY	**Dawson**	78.21	14	eP	P	08 38 12.4	+0.8
KLBR	**Kellerberrin**	78.24	142	eP	P	08 38 11.6	-0.8
	comp=Z,52nm,1.1s,mb5.4						
SLKM	**Skilak Lake**	78.65	20	eP	P	08 38 14.4	+0.4
SLKM	**Skilak Lake**	78.65	20	P	P	08 38 14.6	+0.6
DIV	**Divide**	79.33	18	eP	P	08 38 19.4	+1.7
	comp=Z,326nm,1.6s,mb6.0						
WRA	**Warramunga Arr**	79.62	123	P	P	08 38 20.2	+0.1
	comp=Z,19nm,0.7s,mb5.1,baz=325,slow=5.4,SNR=127						
WRA				PKKPbc		08 57 08.6	
	comp=Z,1.0nm,0.6s,baz=119,slow=2.1,SNR=21						
WRAB	**Tennant Creek**	79.62	123	eP	P	08 38 20.1	0.0
	comp=Z,47nm,0.8s,mb5.5						
WRAB	**Tennant Creek**	79.62	123	P	P	08 38 20.3	+0.2
WRAB				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.5						
WB2	**Warramunga Arr**	79.63	123⇑	iP	P	08 38 20.3	+0.1
ASPA	**Alice Springs**	81.86	126	eP	P	08 38 32.0	+0.2
PMG	**Port Moresby**	82.48	107	P	P	08 38 36.6	+1.4
	comp=Z,29nm,0.9s,mb5.2,baz=328,slow=4.4,SNR=8.6						
PMG	**Port Moresby**	82.48	107	eP	P	08 38 36.6	+1.4
	comp=Z,26nm,1.1s,mb5.1						
PMG	**Port Moresby**	82.48	107	eP	P	08 38 36.6	+1.4
PMG				pmax	pmax		
	comp=Z,26nm,1.1s						
YKW3	**Yellowknife Ar**	82.82	4	eP	P	08 38 36.9	+0.9
YKA	**Yellowknife Ar**	82.88	4	P	P	08 38 36.9	+0.6
	comp=Z,7.7nm,0.5s,mb5.0,baz=348,slow=5.4,SNR=83						
YKA				LR	LR	09 16 36.0	
	comp=Z,196nm,19.1s,MS4.5,baz=355,slow=36						
YKA	**Yellowknife Ar**	82.88	4	P	P	08 38 36.9	+0.6
YKA				LR	LR	09 16 36.0	
FORT	**Forrest**	83.23	135	eP	P	08 38 38.5	-0.4
	comp=Z,24nm,0.7s,mb5.3						
SCHQ	**Schefferville**	84.35	338	P	P	08 38 44.8	+0.9

	comp=Z,33nm,0.9s,mb5.5,baz=33,slow=5.4,SNR=26						
SCHQ				LR	LR	09 14 30.2	
	comp=Z,205nm,21.8s,MS4.5,baz=32,slow=34						
SCHQ	Schefferville	84.35	338	*e*P	P	08 38 44.7	+0.8
	comp=Z,49nm,0.9s,mb5.6						
DLBC	Dease Lake	85.16	12	*e*P	P	08 38 49.8	+1.9
CTA	Charters Tower	88.26	116	⇓*i*P	P	08 39 04.6	+0.7
	comp=Z,10nm,0.8s,mb5.1						
CTA	Charters Tower	88.26	116	P	P	08 39 04.6	+0.7
	comp=Z,15nm,0.9s,mb5.2,baz=295,slow=6.3,SNR=18						
CTA	Charters Tower	88.26	116	⇓*i*P	P	08 39 04.6	+0.7
CTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CTAO	Charters Tower	88.26	116	*e*P	P	08 39 03.8	-0.1
	comp=Z,25nm,1.0s,mb5.4						
CTAO	Charters Tower	88.26	116	P	P	08 39 03.9	0.0
CTAO				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.4						
FFC	Flin Flon	90.77	357	*e*P	P	08 39 16.2	+1.3
	comp=Z,26nm,1.2s,mb5.4						
FFC	Flin Flon	90.77	357	*e*P	P	08 39 16.2	+1.3
FFC				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.4						
EDM	Edmonton	92.20	4	*e*P	P	08 39 23.0	+1.5
STKA	Stephens Creek	92.38	128	P	P	08 39 23.1	+0.2
	comp=Z,1.9nm,0.6s,mb4.6,baz=318,slow=9.0,SNR=6.1						
STKA	Stephens Creek	92.38	128	*e*P	P	08 39 23.0	+0.1
ULM	Lac du Bonnet	94.80	353	P	P	08 39 32.4	-1.1
	comp=Z,6.5nm,0.9s,mb5.0,baz=14,slow=7.7,SNR=3.4						
ULM				LR	LR	09 24 11.9	
	comp=Z,254nm,20.4s,MS4.7,baz=338,slow=37						
CHMT	Chamberlain Mo	98.50	4	*e*P	P	08 39 51.1	+0.8
BOZ	Bozeman (W)	99.85	3	P	P	08 40 02.9	+6.3
BOZ				pmax	pmax		
	comp=Z,9.0nm,1.6s,mb5.0						
MAW	Mawson	102.34	184	P	Pdif	08 40 07.6	+0.5
	comp=Z,3.5nm,0.9s,baz=340,slow=5.5,SNR=6.2						
PDAR	Pinedale Array	102.81	2	PKiKP		08 44 30.6	
	comp=Z,1.0nm,0.7s,baz=60,slow=2.5,SNR=5.6						
PDAR				PKKPbc		08 56 07.0	
	comp=Z,0.5nm,0.9s,baz=180,slow=1.5,SNR=3.7						
NVAR	Mina Array Bea	106.41	9	Pdiff	Pdif	08 40 28.2	+2.4
	comp=Z,0.4nm,0.8s,baz=18,slow=5.0,SNR=4.8						
NVAR				PKiKP		08 44 38.8	
	comp=Z,0.6nm,0.6s,baz=259,slow=3.5,SNR=5.6						
NVAR				PKKPbc		08 55 57.4	
	comp=Z,0.7nm,0.9s,baz=174,slow=4.1,SNR=5.1						
NVAR	Mina Array Bea	106.41	9	Pdif	Pdif	08 40 28.2	+2.4
NVAR				PKPdf		08 44 38.8	
NVAR				PKKPbc		08 55 57.4	
JCT	Junction City	114.76	353	*e*PKiKP		08 44 54.0	
TXAR	Lajitas Array	116.17	357	PKP	PKPdf	08 44 56.2	-3.3
	comp=Z,0.5nm,0.6s,baz=177,slow=1.0,SNR=6.9						
TXAR				PKKPbc		08 55 26.2	
	comp=Z,1.8nm,0.8s,baz=178,slow=7.7,SNR=20						
TXAR	Lajitas Array	116.17	357	PKP	PKPdf	08 44 56.2	-3.3
TXAR				PKKPbc		08 55 26.2	
SNAA	Sanae	118.37	200	*e*	PKPdf	08 44 58.8	-3.9
VNA2	Neumayer--Watz	119.43	202	P	Pdif	08 41 39.8	+18
VNA2	Neumayer--Watz	119.43	202	P	Pdif	08 41 39.8	+18
VNA2	Neumayer--Watz	119.43	202	*e*	PKPdf	08 45 00.6	-4.1
VNA1	Neumayer--Stat	119.60	202	⇑*i*P	Pdif	08 41 38.3	+15
VNA1	Neumayer--Stat	119.60	202	⇑*i*P	Pdif	08 41 38.3	+15
VNA1	Neumayer--Stat	119.60	202	*e*	PKPdf	08 45 01.6	-3.5
VNA3	Neumayer Olymp	120.23	202	*e*	PKPdf	08 45 01.8	-4.5
VNDA	Vanda	123.38	165	*e*PKPdf	PKPdf	08 45 07.9	-4.4
VNDA	Vanda	123.38	165	PKIKP	PKPdf	08 45 08.7	-3.6
QSPA	South Pole Qui	124.56	180	*e*PKPdf	PKPdf	08 45 10.6	-3.8
QSPA				*e*PP	PP	08 46 56.7	-3.8
ROSC	El Rosal	130.06	315	PKP	PKPdf	08 45 24.9	-1.8
	comp=Z,7.1nm,0.9s,baz=122,slow=5.1,SNR=5.4						
CPUP	Villa Florida	136.85	267	PKIKP	PKPdf	08 45 37.0	-1.9
LPAZ	La Paz	140.77	288	PKhKP		08 45 36.9	
	comp=Z,1.6nm,0.9s,baz=49,slow=4.5,SNR=5.1						
LPAZ				PKP	PKPdf	08 45 44.1	-2.3
	comp=Z,3.3nm,1.0s,baz=69,slow=0.5,SNR=10						
LPAZ				PP	PP	08 48 45.3	-0.1
	comp=Z,2.8nm,1.2s,baz=84,slow=5.8,SNR=4.0						
LPAZ	La Paz	140.77	288	PKP	PKPdf	08 45 44.1	-2.3
LPAZ				PP	PP	08 48 45.3	-0.1
LPAZ	La Paz	140.77	288	PKHKP		08 45 36.9	
LPAZ						08 45 44.1	
LPAZ						08 48 45.3	
LPAZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LPAZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LPAZ				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TRQA	Tornquist	143.96	251	*e*PKPdf	PKPdf	08 45 46.2	-5.0
NNA	Nana	144.53	302	*e*PKPdf	PKPdf	08 45 48.2	-4.7
TLL	Tololo Astrono	149.31	268	⇑*i*P	PKPdf	08 46 02.6	+2.1
FCH	Farellones	149.73	262	⇑*i*P	PKPdf	08 46 05.2	+4.2
PLCA	Paso Flores	150.79	247	PKPbc	PKPdf	08 46 05.6	+3.2
	comp=Z,17nm,1.1s,baz=150,slow=3.2,SNR=13						
PLCA	Paso Flores	150.79	247	*e*PKIKP	PKPdf	08 46 05.0	+2.6

NEIC ***21*** *08:40:01.1±3.0, 6.20S×149.32E, h53^{km}±22^{km}, mb4.3/3, Error ellipse: s-maj=25.5km s-min=16.5km az=182.0*

IDC ***21*** *08:40:03.1±2.8, 6.30S×149.20E, h70^{km}±22^{km}, mb4.1/5, mb1 4.2/8, mb1mx3.9/16, mbtmp4.4/8, MS3.5/5, Ms1 3.5/5, ms1mx3.3/17, Error ellipse: s-maj=29.0km s-min=14.7km az=144.0*

ISC 21 08:39:58.6±2.3**, 6.2S**±0.1×**149.3E**±0.1**, h43**^{km}±17^{km}**, n19, σ0^{s}97**/18**, mb4.2**/7**, MS3.5**/3**, 1C, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.83	213	P	P	08 40 57.8	+1.2
	40nm,0.3s,baz=34,slow=15,SNR=104						
PMG				S	S	08 41 40.2	-0.8
	69nm,0.3s,baz=37,slow=18,SNR=18						
PMG				LR	LR	08 42 41.6	
	comp=Z,388nm,21.8s,baz=9.1,slow=43						
CTA	Charters Tower	14.14	192	P	P	08 43 18.5	+0.2
	0.1nm,0.3s,baz=20,slow=12,SNR=2.5						
CTA				LR	LR	08 48 48.9	
	comp=Z,80nm,19.0s,baz=47,slow=38						
CTA	Charters Tower	14.14	192	P	P	08 43 18.5	+0.2
CTA				LR	LR	08 48 48.9	
CTAO	Charters Tower	14.14	192	*e*Pn	P	08 43 18.8	+0.5
	2.8nm,0.7s						
KAKA	Kakadu	17.81	247	*e*P	Px	08 44 25.6	
	5.2nm,0.5s						
WRAB	Tennant Creek	19.92	225	*e*P	P	08 44 28.9	-0.7
WRAB				*e*pP		08 44 39.7	
WB2	Warramunga Arr	19.93	225	*e*P	P	08 44 29.0	-0.7
WRA	Warramunga Arr	19.94	225	P	P	08 44 29.2	-0.6
	1.1nm,0.3s,baz=50,slow=11,SNR=39						
WRA				S	S	08 48 07.4	+0.7
	baz=48,slow=23,SNR=5.7						
GUMO	Guam	20.10	348	LR	LR	08 50 35.8	
	comp=Z,161nm,18.4s,MS3.4,baz=76,slow=31						
DZM	Mont Dzumac	22.94	135	P	P	08 45 01.0	+0.9
	4.0nm,0.5s,mb4.1,baz=233,slow=10,SNR=10						
DZM				LR	LR	08 52 45.3	
	comp=Z,199nm,19.3s,MS3.6,baz=200,slow=33						
FITZ	Fitzroy Crossi	25.91	241	⇑*i*P	P	08 45 29.1	+0.4
	33nm,1.1s,mb4.8						
FITZ	Fitzroy Crossi	25.91	241	P	P	08 45 29.2	+0.5
	24nm,0.9s,mb4.8,baz=76,slow=8.7,SNR=18						
STKA	Stephens Creek	26.56	195	P	P	08 45 35.4	+0.7
	1.7nm,0.5s,mb3.8,baz=26,slow=11,SNR=6.6						
STKA				LR	LR	08 56 38.9	
	comp=Z,143nm,18.8s,MS3.5,baz=25,slow=38						
STKA	Stephens Creek	26.56	195	*e*P	P	08 45 31.8	-2.8
STKA				LR	LR	08 56 38.9	
RPZ	Rata Peaks	42.03	156	P	P	08 47 45.9	-1.7
	50nm,1.2s,mb5.0,baz=264,slow=9.2,SNR=3.1						
VNDA	Vanda	71.63	177	*e*P	P	08 51 17.2	+0.1
	1.2nm,0.7s,mb3.9						
MAW	Mawson	82.96	203	*e*P	P	08 52 21.9	+1.7
	3.7nm,1.1s,mb4.3						
ILAR	Eielson Array	84.76	23	P	P	08 52 28.7	-0.5
	0.5nm,0.7s,mb3.8,baz=248,slow=5.2,SNR=7.5						
BDFB	Brasilia	152.40	142	PKPbc	PKPdf	08 59 52.6	+8.6
	4.2nm,0.5s,baz=225,slow=3.3,SNR=7.2						

IDC ***21*** *09:05:07.4±0.7, 6.47N×60.45E, mb3.9/11, mb1 4.0/11, mb1mx3.9/19, mbtmp3.9/11, MS4.0/11, Ms1 3.9/11, ms1mx3.7/25, Error ellipse: s-maj=25.2km s-min=16.6km az=120.0*

NEIC ***21*** *09:05:09.4±0.3, 6.45N×60.46E, h10^{km}, mb4.6/5, Error ellipse: s-maj=10.9km s-min=8.3km az=132.0*

ISC 21 09:05:07.8±0.4**, 6.41N**±0.07×**60.52E**±0.09**, h10**^{km}**, (h6**^{km}±.4^{km}**:pP-P), n38, σ1^{s}12**/29**, mb4.0**/14**, MS4.0**/10**, 3C, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSEY	Mahe Island	12.11	205	*e*P	P	09 07 56.3	-7.2
	18nm,0.7s						
BSY	Bisya	16.55	349	P	P	09 09 04.7	+2.9
	SNR=18						
BSY				P		09 09 04.7	
	SNR=18						
BSY				P		09 09 04.7	
	SNR=18						
ARQ	Araqi	17.26	348	P	P	09 09 11.8	+1.1
	SNR=14						
ARQ				P		09 09 11.8	
	SNR=14						
ARQ				P		09 09 11.8	
	SNR=14						
ATD	Arta Tunnel	18.18	287	LR	LR	09 15 04.5	
	comp=Z,256nm,20.4s,baz=30,slow=33						
ASHO	Ashiyiah	18.66	347	P	P	09 09 27.8	-0.4
	SNR=20						
ASHO				P		09 09 27.8	
	SNR=20						
ASHO				P		09 09 27.8	
	SNR=20						
PALK	Pallekele	20.05	86	*e*P	P	09 09 43.0	-1.2
	25nm,1.3s						
KMBO	Kilima Mbogo	24.41	253	P	P	09 10 27.9	+0.1
	2.7nm,0.7s,mb3.8,baz=57,slow=14,SNR=8.8						
KMBO				LR	LR	09 18 38.4	
	comp=Z,432nm,21.4s,MS3.9,baz=274,slow=33						
LSA	Lhasa	36.99	47	*e*P	P	09 12 21.6	+2.2
	5.2nm,0.3s,mb4.8						
LSZ	Lusaka	38.61	236	P	P	09 12 33.2	0.0
	0.8nm,0.4s,mb3.9,baz=76,slow=8.1,SNR=2.7						
AKTK	Aktyubinsk	43.92	358	P	P	09 13 15.9	-0.5
AKTO	Aktyubinsk	43.92	358	P	P	09 13 15.9	-0.5
	0.7nm,0.6s,mb3.5,baz=185,slow=12,SNR=3.2						
MKAR	Makanchi Array	44.38	21	P	P	09 13 20.5	+0.3
	0.7nm,0.8s,mb3.4,baz=209,slow=7.9,SNR=3.0						
MKAR				LR	LR	09 33 13.7	
	comp=Z,102nm,18.9s,MS3.8,baz=198,slow=38						
BVAR	Borovoye Array	47.16	8	P	P	09 13 41.9	-0.4
	0.2nm,0.5s,mb3.3,baz=180,slow=5.8,SNR=2.4						
BOSA	Boshof	48.66	223	P	P	09 13 53.4	-0.9
	0.8nm,0.5s,mb4.0,baz=25,slow=21,SNR=4.5						
BOSA				LR	LR	09 32 23.7	
	comp=Z,228nm,18.2s,MS4.2,baz=51,slow=34						
AKASG	Malin Array Be	51.27	335	P	P	09 14 11.8	-2.2
	0.2nm,0.2s,mb3.6,baz=136,slow=6.7,SNR=8.0						
ZAL	Zalesovo	51.31	18	LR	LR	09 36 40.0	
	comp=Z,140nm,18.6s,MS4.0,baz=260,slow=37						
SONM	Songino Array	56.76	35	P	P	09 14 53.3	-1.0
	1.0nm,0.9s,mb3.8,baz=180,slow=10,SNR=4.7						
SONM				LR	LR	09 39 27.1	
	comp=Z,115nm,22.0s,MS3.9,baz=184,slow=36						
DBIC	Dimbokro	64.91	274	P	P	09 15 49.3	-1.0
	2.8nm,1.0s,mb4.2,baz=68,slow=7.0,SNR=3.4						
DBIC				LR	LR	09 44 41.6	
	comp=Z,145nm,18.4s,MS4.2,baz=70,slow=37						
NWAO	Narrogin (SRO)	66.50	130	*e*P	P	09 16 00.1	0.0
	43nm,1.4s,mb5.3						
ARCES	ARCESS Array B	67.04	347	LR	LR	09 48 53.2	
	comp=Z,37nm,19.6s,MS3.6,baz=159,slow=39						
MAW	Mawson	73.86	179	*e*P	P	09 16 44.9	+0.6
	2.1nm,0.7s,mb4.2						
MAW	Mawson	73.86	179	P	P	09 16 44.8	+0.5
	2.8nm,0.8s,mb4.3,baz=354,slow=7.3,SNR=8.1						
MAW	Mawson	73.86	179	*e*P	P	09 16 44.3	+0.1
	5.4nm,1.0s,mb4.4						
MJAR	Matsushiro Arr	76.32	54	LR	LR	09 54 05.0	
	comp=Z,108nm,18.9s,MS4.2,baz=275,slow=38						
WRA	Warramunga Arr	77.12	112	P	P	09 17 03.9	+0.1
	1.6nm,0.9s,mb4.0,baz=293,slow=4.8,SNR=12						
WRAB	Tennant Creek	77.12	112	*e*P	P	09 17 03.8	0.0
	5.9nm,1.0s,mb4.5						
ASAJ	Asahikawa	79.88	46	LR	LR	09 54 10.6	
	comp=Z,108nm,18.5s,MS4.2,baz=205,slow=37						
GUMO	Guam	83.04	77	LR	LR	09 50 08.6	
	comp=Z,68nm,19.4s,MS4.0,baz=99,slow=32						
VNA2	Neumayer--Watz	88.97	198	*e*	P	09 18 06.5	+2.9
VNA2	Neumayer--Watz	88.97	198	⇑*i*P	P	09 18 04.9	+1.3
VNA2				*e*	pP	09 18 06.5	-0.3
VNA1	Neumayer--Stat	89.13	198	*e*	P	09 18 07.7	+3.3
VNA1	Neumayer--Stat	89.13	198	⇑*i*P	P	09 18 05.7	+1.3
VNA1				*e*	pP	09 18 07.7	+0.1
VNA3	Neumayer Olymp	89.77	198	*e*	P	09 18 10.5	+3.1
VNA3	Neumayer Olymp	89.77	198	⇑*i*P	P	09 18 08.4	+1.0
VNA3				*e*	pP	09 18 10.5	-0.1
SBA	Scott Base	99.63	168	*e*P	P	09 18 51.4	-1.0
CFAA	Coronel Fontan	126.07	235	PKP	PKPdf	09 24 12.7	-1.5
	0.2nm,0.7s,baz=282,slow=9.2,SNR=4.0						
NVAR	Mina Array Bea	135.37	359	PKP	PKPdf	09 24 30.7	-0.9
	0.6nm,0.8s,baz=32,slow=1.3,SNR=4.7						
TXAR	Lajitas Array	141.34	338	PKP	PKPdf	09 24 41.4	-1.4
	0.3nm,0.8s,baz=63,slow=4.0,SNR=3.3						

IDC ***21*** *09:13:26.9±0.7, 55.58S×124.69W, mb4.2/6, mb1 4.4/6, mb1mx4.3/11, mbtmp4.2/6, MS4.4/12, Ms1 4.4/12, ms1mx4.2/19, Error ellipse: s-maj=39.7km s-min=19.4km az=160.0*

NEIC ***21*** *09:13:28.2±0.3, 55.47S×124.92W, h10^{km}, mb4.6/6, Error ellipse: s-maj=13.2km s-min=11.8km az=152.0*

ISC 21 09:13:29.5±0.6**, 55.77S**±0.09×**124.0W**±0.2**, h10**^{km}**, n60, σ1^{s}45**/35**, mb4.3**/13**, MS4.4**/12**, 4C-2D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USHA	Ushuaia	30.95	112	LR	LR	09 29 22.8	
	comp=Z,427nm,21.9s,MS4.1,baz=231,slow=30						
RKT	Rikitea	33.60	342	*e*S	S	09 25 34.7	+1.5
RKT				*e*LR	LR	09 28 48.7	
	2µm,28.0s,baz=177						
TBI	Tubuai	37.42	319	*e*LR	LR	09 30 22.9	
	1µm,26.5s,baz=155						
PLCA	Paso Flores	37.64	89	P	P	09 20 45.0	-1.1
	5.6nm,1.1s,mb4.2,baz=262,slow=5.8,SNR=4.5						
PPT	Papeete	42.78	323	*e*S	S	09 27 51.0	-1.4
PPT				*e*LQ		09 31 00.4	
PPT				*e*LR	LR	09 32 54.4	
	1µm,25.8s,baz=162						
PPT	Papeete	42.78	323	LR	LR	09 34 22.6	
	comp=Z,440nm,20.9s,MS4.3,baz=121,slow=30						
VNA3	Neumayer Olymp	45.16	155	*e*	P	09 21 55.9	+8.6
VNA3	Neumayer Olymp	45.16	155	*e*	P	09 22 06.0	+19
VNA3	Neumayer Olymp	45.16	155	*e*	tx	09 22 20.3	
VNA3	Neumayer Olymp	45.16	155	⇑*i*P	P	09 21 48.1	+0.8
VNA3				*e*		09 21 55.9	
VNA3				*e*		09 22 06.0	
VNA3				*e*		09 22 20.3	
CFAA	Coronel Fontan	45.47	82	P	P	09 21 50.6	+0.3
	0.4nm,0.8s,mb3.3,baz=218,slow=9.1,SNR=4.6						
VNA1	Neumayer--Stat	45.90	155	⇑*i*P	P	09 21 54.5	+1.3
VNA1				*e*		09 22 04.0	
VNA1				*e*		09 22 12.7	
VNA1				*e*		09 22 26.9	
VNA2	Neumayer--Watz	45.91	156	*e*	P	09 22 03.6	+10
VNA2	Neumayer--Watz	45.91	156	*e*	P	09 22 11.6	+18
VNA2	Neumayer--Watz	45.91	156	*e*	tx	09 22 26.4	
VNA2	Neumayer--Watz	45.91	156	⇑*i*P	P	09 21 54.3	+1.0
VNA2				*e*		09 22 03.6	
VNA2				*e*		09 22 11.6	
VNA2				*e*		09 22 26.4	
SNAA	Sanae	46.37	158	*e*	P	09 22 06.9	+10
SNAA	Sanae	46.37	158	*e*	P	09 22 15.4	+18
SNAA	Sanae	46.37	158	*e*	tx	09 22 31.4	
SNAA	Sanae	46.37	158	⇑*i*P	P	09 21 57.3	+0.4
SNAA				*e*		09 22 06.9	
SNAA				*e*		09 22 15.4	
SNAA				*e*		09 22 31.4	
TAOE	Nuku Hiva Isla	48.49	339	*e*LR	LR	09 35 42.3	
	3µm,27.7s						
SYO	Syowa Base	54.96	173	⇓P	P	09 23 02.2	-0.1
SYO	Syowa Base	54.96	173	⇓*e*P	P	09 23 02.2	-0.1
AFI	Afiamalu	55.52	299	LR	LR	09 39 14.0	
	comp=Z,218nm,21.8s,MS4.2,baz=159,slow=28						
CPUP	Villa Florida	55.63	87	*e*P	P	09 23 07.9	+0.2
	19nm,1.0s,mb5.1						
MAW	Mawson	56.84	183	*e*P	P	09 23 15.2	-0.6
	5.1nm,1.2s,mb4.4						
MAW	Mawson	56.84	183	P	P	09 23 14.4	-1.4
	2.9nm,0.9s,mb4.3,baz=203,slow=13,SNR=6.3						
MAW				LR	LR	09 45 22.2	
	comp=Z,494nm,20.8s,MS4.6,baz=174,slow=34						
LPAZ	La Paz	57.71	70	P	P	09 23 22.8	+0.2
	2.4nm,1.1s,mb4.2,baz=171,slow=3.8,SNR=7.3						
LPAZ				LR	LR	09 42 38.5	
	comp=Z,233nm,19.5s,MS4.3,baz=127,slow=30						
LPAZ	La Paz	57.71	70	P	P	09 23 22.8	+0.2
LPAZ				LR	LR	09 42 38.5	
SAML	Samuel	66.45	70	*e*P	P	09 24 19.5	-1.6
	4.5nm,1.4s,mb4.3						
STKA	Stephens Creek	66.62	248	P	P	09 24 17.8	-4.1
	1.7nm,0.5s,mb4.3,baz=130,slow=5.4,SNR=5.0						
STKA				LR	LR	09 48 39.7	
	comp=Z,331nm,18.6s,MS4.6,baz=204,slow=32						
STKA	Stephens Creek	66.62	248	*e*P	P	09 24 17.8	-4.2
STKA				LR	LR	09 48 39.7	
BDFB	Brasilia	69.35	88	LR	LR	09 52 32.9	
	comp=Z,547nm,18.6s,MS4.8,baz=208,slow=34						
ROSC	El Rosal	72.85	53	LR	LR	09 52 16.2	
	comp=Z,123nm,19.2s,MS4.2,baz=187,slow=32						
HNR	Honiara	74.39	276	LR	LR	09 50 33.7	
	comp=Z,103nm,18.5s,MS4.2,baz=158,slow=30						
WB2	Warramunga Arr	80.06	249	*e*P	P	09 25 35.7	-5.0
WRA	Warramunga Arr	80.07	249	P	P	09 25 36.1	-4.6
	4.3nm,0.9s,mb4.4,baz=144,slow=4.9,SNR=33						
WRAB	Tennant Creek	80.07	249	*e*P	P	09 25 36.5	-4.2
	7.6nm,0.8s,mb4.7						
TXAR	Lajitas Array	86.53	18	P	P	09 26 12.1	-1.5
	0.6nm,0.9s,mb3.8,baz=190,slow=7.6,SNR=6.0						
TXAR	Lajitas Array	86.53	18	P	P	09 26 12.1	-1.5
TUC	Tucson	88.45	11	*e*P	P	09 26 21.4	-1.3
	5.4nm,1.3s,mb4.6						
CPRX	Cap Rock	90.11	17	*e*P	P	09 26 37.3	+6.7
ANMO	Albuquerque	91.59	14	*e*P	P	09 26 44.4	+7.0
BOSA	Boshof	91.96	153	LR	LR	10 06 22.2	
	comp=Z,235nm,18.5s,MS4.7,baz=178,slow=34						
TPNV	Topopah Spring	92.59	6	*e*P	P	09 26 44.1	+2.2
	2.4nm,1.0s,mb4.6						
NVAR	Mina Array Bea	93.95	5	P	P	09 26 51.3	+3.2
	0.6nm,0.8s,mb4.1,baz=188,slow=6.1,SNR=4.7						
NVAR				LR	LR	10 01 26.4	
	comp=Z,158nm,18.9s,MS4.5,baz=180,slow=31						
NVAR	Mina Array Bea	93.95	5	P	P	09 26 51.3	+3.2
NVAR				LR	LR	10 01 26.4	
PDAR	Pinedale Array	98.92	11	LR	LR	10 03 37.8	
	comp=Z,161nm,19.1s,MS4.5,baz=212,slow=30						
ILAR	Eielson Array	121.48	349	PKP	PKPdf	09 32 18.9	-6.3
	0.4nm,0.8s,baz=193,slow=4.4,SNR=4.5						
JIRN	Jiri	144.50	230	*e*P	PKPbc	09 33 02.9	-2.5
	14nm,0.8s						
PKI	Pulchoki	144.76	229	*e*P	PKPbc	09 33 04.3	-1.8
GUN	Gumba	144.85	230	*e*P	PKPbc	09 33 04.1	-2.2
	25nm,0.7s						
DMN	Daman	144.92	229	*e*P	PKPbc	09 33 04.4	-2.1
	46nm,0.9s						
KKN	Kakani	145.01	229	*e*P	PKPbc	09 33 04.3	-2.5
	30nm,0.8s						
GKN	Gorkha	145.47	228	*e*P	PKPbc	09 33 05.6	-2.3
	44nm,1.1s						
KOLN	Koldanda	145.69	227	*e*P	PKPbc	09 33 06.1	-2.4
	83nm,1.4s						
EKA	Eskdalemuir Ar	147.43	66	PKPbc	PKPdf	09 33 12.0	-0.8
	2.7nm,0.8s,baz=315,slow=2.4,SNR=5.3						
SONM	Songino Array	148.45	277	PKPbc	PKPdf	09 33 12.9	-1.7
	0.7nm,0.9s,baz=108,slow=4.7,SNR=4.0						
GERES	GERESS Array B	153.59	87	PKPbc	PKPdf	09 33 25.9	+3.6
	0.3nm,0.4s,baz=270,slow=1.3,SNR=3.8						
GERES				PKPab	PKPab	09 33 40.2	-1.9
	0.7nm,0.8s,baz=207,slow=3.0,SNR=3.9						
MKAR	Makanchi Array	161.35	252	PKPab	PKPab	09 34 11.1	-4.3
	1.0nm,0.8s,baz=104,slow=5.0,SNR=3.6						

WEL 21 09:27:22.5±0.5**, 36.72S**×**178.00E, h128**^{km}±4^{km}**, ML3.5**/7**, Error ellipse: s-maj=5.9km s-min=4.5km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	0.88	164	PN	P	09 27 44.2	-0.2
MXZ				SN	S	09 28 00.8	-0.2
PUZ	Puketiti	1.37	172	*e*PN	P	09 27 49.1	-0.5
PUZ				SN	S	09 28 09.3	-0.8
MWZ	Matawai	1.66	193	PN	P	09 27 52.9	+0.1
MWZ				SN	S	09 28 14.9	-0.9
URZ	Urewera	1.70	204	*e*PN	P	09 27 52.9	-0.3
KNZ	Kokohu	2.32	186	*e*PN	P	09 28 00.1	-0.9
BKZ	Black Stump Fm	2.72	206	PN	P	09 28 06.1	-0.2
PXZ	Pawanui	3.43	195	PN	P	09 28 14.0	-1.7
MRZ	Mangatainoka R	4.37	205	PN	P	09 28 25.0	-3.3

BJI ***21*** *09:33:08.2, 38.10N×118.90W, h13^{km}, mB4.7, mb4.5, Ms4.3, Msz4.1*

IDC ***21*** *09:33:10.3±2.4, 38.13N×119.02W, mb1 3.4/2, mb1mx3.2/21, mbtmp2.9/2, ML3.4/1, Error ellipse: s-maj=26.3km s-min=12.4km az=141.0*

NEIC ***21*** *09:33:11.3, 38.06N×118.90W, h13^{km}, ML3.8(REN), After REN.*

NEIC Felt [III] at Lee Vining.

ISC 21 09:33:10.7±0.8**, 38.08N**±0.03×**118.87W**±0.04**, h23**^{km}±9^{km}**, n41, σ0^{s}83**/42**, mb4.4**/1**, California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVAR	Mina Array Bea	0.56	52	Pg	Pb	09 33 22.1	+0.2
	223nm,0.3s,baz=235,slow=21,SNR=5364						
NVAR				Lg		09 33 30.4	
	561nm,0.3s,baz=204,slow=36,SNR=66						
MTUM	Tungsten Hills	0.76	162	*e*P	Pb	09 33 25.5	+0.3
CMB	Columbia Colle	1.20	268	*e*P	Pn	09 33 32.5	+0.1
CMB				*e*S	Sb	09 33 47.0	-0.7
PAHR	Pah Rah Range	1.67	346	*e*P	Pn	09 33 40.3	+1.1
DAC	Darwin (Calif)	2.07	150	*e*Pn	Pn	09 33 45.8	+1.0
TPNV	Topopah Spring	2.37	118	*e*Pn	Pn	09 33 50.5	+1.5
LRV	Little Rabbit	2.38	227	*e*Pn	Pn	09 33 49.7	+0.4
ISA	Isabella	2.43	172	*e*Pn	Pn	09 33 50.5	+0.6
SAO	San Andreas Ge	2.44	238	*e*Pn	Pn	09 33 50.1	+0.1
PTRM	Twissleman Ran	2.65	204	*e*Pn	Pn	09 33 54.3	+1.2
SAC	San Andreas	2.85	261	Pn	Pn	09 33 56.2	+0.2
NSHM	Saint Helena R	2.98	280	*e*Pn	Pn	09 33 57.7	0.0
HOPS	Hopland	3.42	287	*e*Pn	Pn	09 34 03.7	-0.3
WDC	Whiskeytown Da	3.79	312	*e*Pn	Pn	09 34 09.6	+0.3
MWC	Mount Wilson	3.90	170	*e*Pn	Pn	09 34 08.9	-1.9
MOD	Modoc	3.98	344	Pn	Pn	09 34 12.3	+0.4
KIPM	Iron Peak	3.99	297	Pn	Pn	09 34 12.2	+0.1
KCPM	Cahto Peak	4.01	295	Pn	Pn	09 34 11.6	-0.9
NEN	Nelson	4.04	126	Pn	Pn	09 34 13.6	+0.8
LDFC	Landfair	4.26	134	Pn	Pn	09 34 16.0	+0.1
WVOR	Wild Horse Val	4.35	2	*e*Pn	Pn	09 34 17.3	0.0
KHMM	Horse Mountain	4.69	308	*e*Pn	Pn	09 34 22.1	+0.1
YBH	Yreka Blue Hor	4.70	322	Pn	Pn	09 34 22.1	0.0
PFO	Pinyon Flat Ob	4.87	156	*e*Pn	Pn	09 34 24.4	-0.2
DUG	Dugway	5.16	64	*e*Pn	Pn	09 34 28.9	+0.2
MVU	Marysvale	5.25	83	Pn	Pn	09 34 29.6	-0.4
MSU	Marysvale	5.28	83	Pn	Pn	09 34 30.9	+0.5
HUMO	Hull Mountain	5.50	327	Pn	Pn	09 34 33.6	+0.2
BAR	Barrett	5.68	161	*e*Pn	Pn	09 34 34.3	-1.7
SPUT	South Promonto	5.91	55	*e*Pn	Pn	09 34 39.3	+0.1
MPU	Maple Canyon	5.95	69	Pn	Pn	09 34 41.1	+1.2
HVU	Hansel Valley	5.96	50	Pn	Pn	09 34 40.2	+0.2
HLID	Hailey	6.43	30	Pn	Pn	09 34 45.7	-0.9
TCUT	Toone Canyon	6.51	60	*e*Pn	Pn	09 34 46.0	-1.7
WUAZ	Wupatki	6.53	111	Pn	Pn	09 34 46.8	-1.3
SRU	San Rafael	6.62	78	*e*Pn	Pn	09 34 47.9	-1.4
HWUT	Hardware Ranch	6.63	56	Pn	Pn	09 34 48.6	-0.8
PDAR	Pinedale Array	8.50	54	Pn	P	09 35 18.8	+3.2
	baz=239,slow=16,SNR=3.5						
PDAR				Lg		09 37 37.7	
	0.2nm,0.3s,baz=219,slow=24,SNR=4.3						
TXAR	Lajitas Array	15.35	120	Pn	P	09 36 53.8	+6.1
	0.0nm,0.3s,baz=305,slow=12,SNR=4.2						
MDJ	Mudanjiang	77.12	317	P	P	09 45 03.3	-0.5
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.8s,mb4.4						
MDJ				AMB	AMB		
	comp=Z,110nm,4.1s						
CN2	Changchun	79.87	318	*e*P	P	09 45 19.3	+0.4

*NEIC **21** 09:37:19.0±1.6, 20.59S×169.87E, h135^{km}±14^{km}, mb4.1/7, Error ellipse: s-maj=16.2km s-min=11.3km az=162.0*
*IDC **21** 09:37:18.2±2.5, 20.56S×169.79E, h124^{km}±26^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.9/15, mbtmp4.2/9, MS3.0/1, Ms1 3.0/1, ms1mx2.7/19, Error ellipse: s-maj=63.6km s-min=17.7km az=163.0*
ISC 21 09:37:17.2±1.7, **20.6S**±0.1×**169.8E**±0.1, **h131**^{km}±14^{km}, **n27, σ1^{s}11**/28, **mb4.1**/12, **3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.47	244	eP	P	09 38 11.9	+1.0
DZM				eS	S	09 38 51.4	-0.4
DZM	Mont Dzumac	3.47	244	P	P	09 38 11.9	+1.0
	12nm,0.3s,baz=61,slow=18,SNR=275						
DZM				S	S	09 38 51.2	-0.6
	18nm,0.3s,baz=94,slow=21,SNR=11						
DZM				LR	LR	09 39 01.3	
	comp=Z,243nm,21.1s,baz=48,slow=30						
DZM	Mont Dzumac	3.47	244	eP	P	09 38 11.9	+1.0
DZM				eS	S	09 38 51.4	-0.4
AFI	Afiamalu	18.79	72	P	P	09 41 27.1	-1.9
	0.9nm,0.3s,baz=216,slow=18,SNR=3.1						
AFI	Afiamalu	18.79	72	eP	P	09 41 27.1	-1.9
	15nm,0.9s						
ARMA	Armidale	19.08	236	⇑iP	P	09 41 33.9	+1.9
CTA	Charters Tower	22.09	267	eP	P	09 42 05.3	+2.8
	4.1nm,0.6s,mb4.0						
CTA	Charters Tower	22.09	267	P	P	09 42 04.7	+2.2
	5.5nm,0.7s,mb4.1,baz=83,slow=10.0,SNR=11						
CTAO	Charters Tower	22.09	267	eP	P	09 42 05.1	+2.6
	4.0nm,0.5s,mb4.1						
STKA	Stephens Creek	27.61	240	P	P	09 42 54.1	-0.3
	2.0nm,0.7s,mb4.0,baz=83,slow=11,SNR=9.6						
STKA	Stephens Creek	27.61	240	eP	P	09 42 54.4	0.0
WB2	Warramunga Arr	33.23	265	eP	P	09 43 42.4	-1.6
WRAB	Tennant Creek	33.24	265	eP	P	09 43 42.8	-1.2
	2.0nm,0.5s,mb4.1						
WRA	Warramunga Arr	33.24	265	P	P	09 43 42.9	-1.2
	1.5nm,0.6s,mb3.9,baz=97,slow=8.4,SNR=17						
ASPA	Alice Springs	33.35	258	⇑iP	P	09 43 44.2	-0.8
FITZ	Fitzroy Crossi	41.66	266	eP	P	09 44 55.1	+0.6
	8.8nm,0.7s,mb4.5						
GUMO	Guam	41.90	322	eP	P	09 44 55.9	-0.6
	88nm,0.9s,mb5.4						
VNDA	Vanda	57.10	182	eP	P	09 46 51.3	-0.4
	0.9nm,0.9s,mb3.6						
MAW	Mawson	77.39	202	eP	P	09 48 59.5	+0.7
SNAA	Sanae	87.84	182	eP	P	09 49 51.5	-0.7
	1.2nm,0.5s,mb4.0						
SONM	Songino Array	88.62	323	P	P	09 49 56.8	+0.3
	0.6nm,0.8s,mb3.6,baz=165,slow=4.8,SNR=4.9						
VNA2	Neumayer--Watz	88.70	181	⇑iP	P	09 49 55.9	-0.4
VNA2				e		09 50 06.0	
NVAR	Mina Array Bea	89.29	48	P	P	09 50 01.1	+1.2
	1.2nm,0.8s,mb3.9,baz=213,slow=6.4,SNR=11						
TXAR	Lajitas Array	96.94	61	P	P	09 50 36.8	+1.5
	0.2nm,0.8s,mb3.5,baz=127,slow=4.5,SNR=2.8						
INK	Inuvik	97.66	18	P	P	09 50 38.1	+0.6
	1.3nm,0.8s,mb4.4,baz=252,slow=3.2,SNR=4.3						
GERES	GERESS Array B	145.94	331	PKPbc	PKPbc	09 56 42.3	+0.9
	1.5nm,0.6s,baz=27,slow=3.0,SNR=11						
DAVOX	Davos	149.18	333	PKPbc	PKPdf	09 56 51.2	+5.5
	2.2nm,0.4s,baz=132,slow=4.5,SNR=3.4						

*IDC **21** 10:09:07.5±0.8, 16.35S×73.63W, h51^{km}±7^{km}, mb3.4/4, mb1 3.9/6, mb1mx3.6/17, mbtmp3.8/6, MS2.8/1, Ms1 2.9/1, ms1mx2.5/15, Error ellipse: s-maj=21.9km s-min=15.0km az=29.0*
*NEIC **21** 10:09:10.4±1.1, 16.35S×73.44W, h78^{km}±10^{km}, mb3.8/2, Error ellipse: s-maj=17.8km s-min=7.9km az=63.0*
ISC 21 10:09:10.1±1.3, **16.38S**±0.08×**73.46W**±0.08, **h89**^{km}±14^{km}, **n26, σ1^{s}19**/26, **mb3.5**/5, **4C, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	5.12	90	P	P	10 10 24.7	-1.2
	5.2nm,0.3s,baz=276,slow=10,SNR=89						
LPAZ				S	S	10 11 25.2	+0.9
	2.6nm,0.3s,baz=178,slow=25,SNR=7.8						
LPAZ				LR	LR	10 12 40.6	
	comp=Z,105nm,22.0s,baz=100,slow=40						
NNA	Nana	5.46	323	ePn	P	10 10 28.9	-1.5
	115nm,0.7s						
NNA				eSn	S	10 11 34.9	+2.2
SIV	San Ignacio	11.91	90	P	P	10 11 53.1	-5.2
	2.1nm,0.3s,baz=271,slow=12,SNR=28						
SIV				S	S	10 14 02.5	-7.1
	0.2nm,0.3s,baz=239,slow=2.4,SNR=3.5						
CFAA	Coronel Fontan	15.88	164	P	P	10 12 49.6	-0.1
	0.1nm,0.3s,baz=341,slow=11,SNR=18						
PLCA	Paso Flores	24.40	175	P	P	10 14 20.7	-0.7
	4.6nm,0.9s,mb3.8,baz=340,slow=10,SNR=7.1						
PLCA				pP		10 14 35.1	
	2.0nm,0.7s,baz=346,slow=13,SNR=1.5						
PLCA	Paso Flores	24.40	175	eP	P	10 14 21.8	+0.5
	6.1nm,1.0s,mb3.9						
PLCA				pP		10 14 35.1	
SDV	Santo Domingo	25.26	7	eP	P	10 14 29.4	-0.4
	1.5nm,0.5s,mb3.7						
JTS	JuntasAbangare	28.84	336	P	P	10 15 03.8	+1.3
TXAR	Lajitas Array	54.00	327	P	P	10 18 25.6	-2.0
	0.3nm,0.7s,mb3.4,baz=140,slow=9.8,SNR=4.8						
TXAR				pP	pP	10 18 40.3	-9.2
	1.0nm,0.9s,baz=145,slow=9.9,SNR=7.5						
VNA3	Neumayer Olymp	66.28	162	e	P	10 19 52.4	+1.7
VNA3	Neumayer Olymp	66.28	162	e	P	10 20 01.7	+11
VNA3	Neumayer Olymp	66.28	162	⇑iP	P	10 19 50.6	-0.1
VNA3				e		10 20 01.7	
VNA1	Neumayer--Stat	66.52	161	e	P	10 19 54.3	+2.1
VNA1	Neumayer--Stat	66.52	161	e	P	10 20 03.5	+11
VNA1	Neumayer--Stat	66.52	161	⇑iP	P	10 19 52.4	+0.2
VNA1				e		10 20 03.5	
VNA2	Neumayer--Watz	66.88	161	e	P	10 19 56.4	+1.9
VNA2	Neumayer--Watz	66.88	161	e	P	10 20 03.5	+9.0
VNA2	Neumayer--Watz	66.88	161	⇑iP	P	10 19 54.3	-0.2
VNA2				e		10 20 03.5	
SNAA	Sanae	68.49	161	e	P	10 20 05.9	+1.4
SNAA	Sanae	68.49	161	e	P	10 20 14.4	+10
SNAA	Sanae	68.49	161	⇑iP	P	10 20 04.1	-0.4
SNAA				e		10 20 14.4	
NVAR	Mina Array Bea	68.83	324	P	P	10 20 07.1	0.0
	0.1nm,0.4s,mb3.0,baz=139,slow=9.6,SNR=2.5						
YKA	Yellowknife Ar	84.98	342	P	P	10 21 35.6	-0.9
	0.3nm,0.6s,mb3.4,baz=134,slow=5.5,SNR=6.6						
YKA				pP	pP	10 21 50.5	-10
	0.8nm,0.8s,baz=141,slow=5.5,SNR=3.4						
WRA	Warramunga Arr	134.73	218	PKP	PKPdf	10 28 20.9	+1.5
	1.3nm,0.8s,baz=146,slow=1.8,SNR=12						
MJAR	Matsushiro Arr	145.50	312	PKPbc	PKPbc	10 28 39.7	+0.8
	1.0nm,0.7s,baz=54,slow=4.3,SNR=4.2						
SONM	Songino Array	148.63	0	PKPbc	PKPdf	10 28 48.5	+5.5
	1.6nm,0.8s,baz=324,slow=1.3,SNR=13						

*NIED **21** 10:32:00, 36.10N×140.00E, h59^{km}, Mw3.7 Best double couple: M$_0$3.39×10^{14} NP1:φ$_s$51°, δ79°, λ89°. NP2:φ$_s$236°, δ11°, λ95°.*
*JMA **21** 10:32:06.4±0.1, 36.05N×139.94E, h45^{km}±1^{km}, M3.3 Broadband fault plane solution: P waves. NP1:φ$_s$262°, δ17°, λ132°. NP2:φ$_s$38°, δ78°, λ79°. Principal axes: T Plg56°, Azm294°; N Plg11°, Azm41°; P Plg32°, Azm138°;*
JMA Felt II J1.
ISC 21 10:32:06.6±0.9, **36.04N**±0.04×**139.93E**±0.06, **h42**^{km}±14^{km}, **n11, σ0^{s}51**/20, **2C-5D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.29	48	⇑P	P	10 32 14.9	0.0
JYT				S	S	10 32 20.8	+0.1
TOK	Tokyo	0.38	202	⇑P	P	10 32 16.9	+1.0
JAG	Ashikaga	0.55	315	⇓P	P	10 32 18.0	0.0
JAG				S	S	10 32 26.1	-0.1
JHU	Hanno	0.56	251	⇓P	P	10 32 17.8	-0.4
JHU				S	S	10 32 26.1	-0.4
JRY	Ryogami san	0.83	269	⇓P	P	10 32 21.7	-0.3
JRY				S	S	10 32 32.5	-0.8
JKT	Katashina	0.91	323	⇓P	P	10 32 22.8	-0.3
JKT				S	S	10 32 35.3	0.0
JOD2	Odawara 2	1.03	222	P	P	10 32 25.3	+0.5
JOD2				S	S	10 32 38.2	-0.1
JYN	Shimob	1.25	245	P	P	10 32 28.8	+0.9
BSO3	Boso 3	1.32	159	P	P	10 32 28.0	-1.0
BSO3				S	S	10 32 45.7	+0.1
JFY	Yanaizu	1.38	353	⇓P	P	10 32 29.8	-0.1
JFY				S	S	10 32 47.3	+0.2
MAT	Matsushiro	1.48	290	P	P	10 32 31.0	-0.3
MAT				S	S	10 32 50.5	+0.9

*NDI **21** 10:48:41.6±1.2, 34.28N×73.60E, h10^{km}, MD3.5, ML3.2*
*NNC **21** 10:48:48.4±16.0, 34.71N×72.79E, mpv3.4, Error ellipse: s-maj=145.8km s-min=101.9km az=130.0*
ISC 21 10:48:36.9±1.5, **34.11N**±0.07×**73.4E**±0.2, **h10**^{km}, **n8, σ1^{s}56**/11, **2C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.57	130	eP	Pn	10 49 23.6	+4.3
THN				eSB	Sb	10 49 59.9	+5.5
SDNR	Sundarnagar	3.98	130	eP	Pn	10 49 42.0	+2.6
SDNR				eS	Sn	10 50 27.2	+0.5
KLP	Kalpa	4.83	121	eP	Pn	10 49 53.5	+2.1
KLP				eS	Sn	10 50 47.0	-1.2
KLP				AML	AML	10 51 12.3	
	comp=N,98nm,0.6s						
KLP				AML	AML	10 51 12.8	
	comp=E,176nm,0.6s						
KHET	Khetri	6.37	160	AML	AML	10 51 28.8	
	comp=E,13nm,0.2s						
KHET				AML	AML	10 51 29.3	
	comp=N,10nm,0.1s						
KUDL	Kundal	6.51	155	eS	Sn	10 51 29.1	-1.2
SONA	Sohna	6.64	151	eS	Sn	10 51 31.0	-2.6
SONA				AML	AML	10 52 18.9	
	comp=E,18nm,0.4s						
SONA				AML	AML	10 52 19.4	
	comp=N,15nm,0.3s						
AAK	Ala-Archa	8.55	5	⇓S	Sn	10 52 20.1	-1.2
	comp=N,4.9nm,0.9s						
KK31	Karatay Array	9.26	347	⇑P	P	10 50 53.7	+0.2
	comp=N,0.4nm,0.2s,baz=158,slow=12,SNR=25						
KK31				⇑S	Sn	10 52 31.7	-7.1
	comp=N,2.2nm,0.6s,baz=166,slow=24,SNR=4.1						

*IDC **21** 10:57:40.0±1.1, 37.79N×13.88E, h47^{km}±19^{km}, mb3.5/6, mb1 3.6/10, mb1mx3.5/26, mbtmp3.7/10, ML4.3/3, MS3.2/1, Ms1 3.2/1, ms1mx2.4/24, Error ellipse: s-maj=33.1km s-min=21.0km az=29.0*
*CSEM **21** 10:57:39.8±0.1, 37.57N×14.09E, h60^{km}, ML5.4/6, Error ellipse: s-maj=1.9km s-min=1.3km az=22.0*
*ROM **21** 10:57:40.2±0.1, 37.60N×14.11E, h63^{km}±3^{km}, Md3.4/9, Ml4.7/9, Error ellipse: s-maj=2.0km s-min=1.7km az=176.0*
*NEIC **21** 10:57:41.0, 37.60N×14.10E, h39^{km}, MD3.4(ROM), After ROM.*
*LDG **21** 10:57:42.1±0.2, 37.55N×14.09E, h30^{km}, Ml3.8/11, Error ellipse: s-maj=6.0km s-min=4.0km az=8.0*
ISC 21 10:57:40.0±0.3, **37.59N**±0.03×**14.08E**±0.03, **h76**^{km}±3^{km}, **n84, σ0^{s}80**/107, **mb3.7**/6, **20C-9D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAE	Valguarnera	0.29	112	P	P	10 57 51.6	-0.3
	1μm,0.3s,baz=112,slow=2.9,SNR=260						
VAE				S	S	10 58 01.2	+0.5
	2μm,0.3s,baz=187,slow=12,SNR=16						
CSLB	Castelbuono	0.35	358	⇑iPg	P	10 57 51.6	-0.6
GIB	Gibilmanna	0.40	355	⇑iPg	P	10 57 52.2	-0.4
GIB				Sg	S	10 58 01.8	-0.3
	72μm,0.4s						
PLLN	Pollina	0.41	8	⇑iPg	P	10 57 52.2	-0.4
FAVR	Favara	0.46	225	⇑iPg	P	10 57 54.2	+1.2
HVZN	Vizzini	0.65	129	⇓iPg	P	10 57 54.9	-0.1
HVZN				Sg	S	10 58 05.5	-0.7
	34μm,0.4s						
CLTB	Caltabellotta	0.68	269	⇑iPg	P	10 57 55.9	+0.6
ESLN	Serra La Nave	0.72	81	⇑iPg	P	10 57 56.2	+0.4
ESLN				Sg	S	10 58 07.6	+0.1
	11μm,0.3s						
HMDC	Modica	0.84	138	⇓iPg	P	10 57 57.3	+0.1
HMDC				Sg	S	10 58 09.6	-0.4
	12μm,0.4s						
MMGO	Monte Magaggia	0.88	275	⇑iPg	P	10 57 57.5	0.0
CRJA	Costa Raja	0.88	284	⇑ePg	P	10 57 58.2	+0.7
SSY	Sortino	0.91	118	⇓iPg	P	10 57 57.9	+0.1
SSY				Sg	S	10 58 10.5	-0.7
	35μm,0.8s						
MFNL	Monte Finestre	0.94	283	⇑iPg	P	10 57 58.9	+0.7
AGST	Augusta-Monte	0.97	110	Pg	P	10 57 58.5	-0.2
AGST				Sg	S	10 58 11.9	-0.9
	7μm,0.3s						
MMME	Mongiuffi-Meli	1.00	69	⇑iPg	P	10 57 59.2	+0.2
HAVL	Avola	1.05	127	⇓ePg	P	10 57 59.5	-0.1
HAVL				Sg	S	10 58 13.5	-0.8
	5μm,0.3s						
IFIL	Filicudi I Eol	1.05	22	Pg	P	10 57 58.8	-0.8
CAVT	Castelvetrano	1.05	275	⇓iPg	P	10 58 00.6	+0.9
VPL	Vulcano Piano	1.07	42	⇑ePg	P	10 57 59.3	-0.6
VPL				Sg	S	10 58 13.5	-1.2
	11μm,0.6s						
MTGR	Montagna Grand	1.09	287	⇓iPg	P	10 58 00.5	+0.4
LLI	Lipari	1.10	39	⇑ePg	P	10 58 00.1	-0.2
LLI				Sg	S	10 58 14.9	-0.5
	47μm,0.5s						
SLNA	Salina	1.14	31	⇑iPg	P	10 58 00.0	-0.8
ERC	Erice	1.26	291	Pg	P	10 58 02.7	+0.3
MSRU	Castanea	1.32	59	⇑ePg	P	10 58 03.3	0.0
MSI	Messina ING	1.32	62	Pg	P	10 58 04.0	+0.7
	1μm,0.4s						
USI	Ustica	1.32	328	⇓iPg	P	10 58 02.5	-0.8
MTTG	Motta San Giov	1.35	72	⇑ePg	P	10 58 04.3	+0.6
	1μm,0.6s						
SCLL	Scilla	1.46	62	Pn	P	10 58 05.1	0.0
STR5	Stromboli 5	1.49	36	Pn	P	10 58 05.7	+0.1
SOI	Samo	1.64	72	⇑ePn	P	10 58 08.3	+0.8
SOI				Sn	S	10 58 29.1	+1.3
WDD	Wield Dalam	1.76	168	Pn	P	10 58 09.7	+0.7
WDD				Sn	S	10 58 31.3	+0.8
PTS	Pantelleria	1.83	246	Pn	P	10 58 10.3	+0.2
PLAC	Placanica	2.05	65	Pn	P	10 58 14.3	+1.2
GRI	Girifalco	2.22	56	Pn	P	10 58 15.1	-0.3
SERS	Sersale	2.51	54	Pn	P	10 58 19.7	+0.1
TIP	Timpagrande	2.64	52	⇑ePn	P	10 58 21.4	+0.1
TDS	Terranova Siba	2.72	40	⇓iPn	P	10 58 22.0	-0.5
	156nm,0.4s						
CUC	Castrocucco	2.76	29	⇑ePn	P	10 58 22.8	-0.2
MGR	Morigerati	2.79	24	Pn	P	10 58 23.0	-0.5
CMPR	Campora	2.89	19	⇑ePn	P	10 58 24.7	-0.1
ISOR	Termini	3.00	4	Pn	P	10 58 26.4	+0.1
SLCN	Sala Consilina	3.05	23	Pn	P	10 58 27.6	+0.5
	64nm,0.3s						
CDRU	Civita di Ruta	3.05	18	Pn	P	10 58 27.2	+0.1
ORI	Oriolo Calabro	3.09	36	Pn	P	10 58 29.3	+1.7
SGO	Sicignano	3.12	18	Pn	P	10 58 28.4	+0.4
	58nm,0.3s						
MCRV	Calabrutti - M	3.30	15	Pn	P	10 58 31.1	+0.5
MRLC	Muro Lucano	3.35	19	Pn	P	10 58 32.8	+1.6
SNAL	S. Angelo Dei	3.45	14	Pn	P	10 58 34.3	+1.7
RFI	Roccamonfina	3.71	359	Pn	P	10 58 37.7	+1.5
	32nm,1.3s						
AMUR	Altamura	3.85	30	Pn	P	10 58 38.3	+0.1
GIUL	Giuliano Di Ro	4.01	351	Pn	P	10 58 41.1	+0.6
BRT	Bari-Castellan	4.08	36	Pn	P	10 58 40.5	-1.0
	39nm,0.6s						
VSL	Villasalto	4.15	299	Pn	P	10 58 41.4	-0.9
RGNG	Rignano Grg	4.24	15	⇑iPn	P	10 58 45.2	+1.5
DGI	Dorgali Grotta	4.42	309	⇓iPn	P	10 58 45.1	-1.1
EVR	Evrytania	6.23	75	eP	P	10 59 11.0	-0.1
ITM	Ithomi	6.26	91	eP	P	10 59 10.0	-1.6
PGF	Pioggiola	6.30	323	ePn	P	10 59 12.9	+0.8
PGF				eSn	S	11 00 18.5	-4.9
	18nm,0.3s						
VLI	Veliai	7.13	94	eP	P	10 59 23.5	-0.2
PLG	Polygyros	7.81	66	eP	P	10 59 28.0	-5.0
SBF	Sospel	8.04	323	ePn	P	10 59 35.0	-1.1
SBF				eSn	S	11 00 58.7	-7.6
	15nm,0.4s						
LMR	La Mourre	8.13	317	ePn	P	10 59 36.1	-1.3
LMR				eSn	S	11 01 01.1	-7.5
	8.2nm,0.2s						
FRF	La Foret Royal	8.22	319	ePn	P	10 59 37.4	-1.1
FRF				eSn	S	11 01 03.3	-7.3
	4.7nm,0.2s						
MBDF	Montbardon	9.01	325	ePn	P	10 59 48.6	-0.7
MBDF				eSn	S	11 01 24.5	-5.5
	4.7nm,0.6s						
IDI	Anoyia	9.01	102	P	P	10 59 49.5	+0.2
	0.5nm,0.3s,baz=59,slow=7.8,SNR=2.7						
IDI				S	S	11 01 23.7	-6.5
	2.7nm,0.3s,baz=56,slow=19,SNR=9.3						
SMRF	Simiane la Rot	9.07	317	ePn	P	10 59 51.2	+1.1
SMRF				eSn	S	11 01 24.4	-7.1
	2.0nm,0.2s						
ORIF	Oris-en-Rattie	9.57	322	ePn	P	10 59 57.8	+0.9
ORIF				eSn	S	11 01 36.8	-6.9
	3.1nm,0.3s						
LPG	La Plagne	9.62	328	eP	P	11 00 02.5	+4.9
LPG				eSn	S	11 01 38.5	-6.3
	4.1nm,0.3s						
LPG	La Plagne	9.62	328	ePn	P	10 59 56.4	-1.2
LPG				eP		11 00 02.5	
LPG				eSn	S	11 01 38.5	-6.3
LPL	La Plagne	9.64	328	eP	P	11 00 02.7	+4.8
DAVOX	Davos	9.70	343	P	P	11 00 00.0	+1.4
	0.6nm,0.3s,baz=171,slow=20,SNR=9.7						
LASF	Ste Croix	10.09	313	ePn	P	11 00 03.3	-0.7
LASF				eSn	S	11 01 48.3	-8.0
	5.2nm,0.3s						
VIVF	Saint-Julien-l	10.14	319	ePn	P	11 00 03.6	-1.0
VIVF				eSn	S	11 01 49.0	-8.4
	1.9nm,0.2s						
MTLF	Montolieu	10.70	306	eSn	S	11 02 03.5	-7.5
	5.9nm,0.6s						
GERES	GERESS Array B	11.26	359	P	P	11 00 15.2	-4.4
	baz=190,slow=16,SNR=2.2						
ESDC	Sonseca Array	14.26	284	P	P	11 00 55.7	-3.5
	0.6nm,0.3s,baz=148,slow=14,SNR=2.9						
MDT	Midelt	16.00	258	LR	LR	11 07 58.6	
	comp=Z,81nm,19.8s,baz=339,slow=39						
AKASG	Malin Array Be	16.98	35	P	P	11 01 33.1	-0.6
	1.3nm,0.3s,baz=227,slow=10,SNR=12						
EKA	Eskdalemuir Ar	21.25	332	P	P	11 02 19.6	-1.7
	1.9nm,0.6s,mb3.6,baz=145,slow=11,SNR=12						
HFS	Hagfors	22.57	360	P	P	11 02 33.8	-0.4
	2.1nm,0.7s,mb3.6,baz=174,slow=13,SNR=3.2						
NOA	NORSAR Array B	23.54	357	P	P	11 02 44.4	+0.8
	1.3nm,0.6s,mb3.4,baz=175,slow=9.8,SNR=3.8						
FINES	FINESS Array B	25.03	14	P	P	11 02 57.7	-0.4
	1.1nm,0.5s,mb3.5,baz=185,slow=8.9,SNR=7.9						
MKAR	Makanchi Array	49.92	56	P	P	11 06 28.7	+1.1
	0.7nm,0.4s,mb4.0,baz=285,slow=7.2,SNR=9.6						
SCHQ	Schefferville	55.39	316	P	P	11 07 07.5	-0.7
	1.0nm,0.3s,mb4.3,baz=68,slow=8.9,SNR=10						

*NEIC **21** 11:17:04.3, 17.02N×98.03W, h25^{km}, MD3.6(MEX), After MEX.*
MEX 21 11:17:04.2±0.7, **17.01N**×**98.02W**, **h31**^{km}±20^{km}, **MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.62	189	i P	Pb	11 17 14.6	-2.0
PNIG				i S	Sb	11 17 22.9	-2.2
VHO	Vista Hermosa	1.24	87	i P	Pn	11 17 23.4	-2.2
VHO				i S	Sn	11 17 38.1	-3.3
VHO	Vista Hermosa	1.24	87	i P	Pn	11 17 23.5	-2.1
VHO				i S	Sn	11 17 38.1	-3.3
OXX	Oaxaca	1.25	86	i P	Pn	11 17 23.5	-2.3
OXX				i S	Sn	11 17 39.0	-2.6
CMIG	Matias Romero	3.00	88	i P	Pn	11 17 49.1	-1.8
CMIG				i S	Sn	11 18 21.8	-4.4
CMIG	Matias Romero	3.00	88	i P	Pn	11 17 49.1	-1.8
CMIG				i S	Sn	11 18 21.3	-4.9

*NEIC **21** 11:41:46.8±0.9, 25.44S×179.78E, h512^{km}±11^{km}, mb4.0/6, Error ellipse: s-maj=16.6km s-min=13.0km az=153.0*
*IDC **21** 11:41:47.2±1.4, 25.38S×179.68E, h511^{km}±17^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.3/14, mbtmp4.2/7, Error ellipse: s-maj=26.9km s-min=17.6km az=4.0*
ISC 21 11:41:47.0±0.8, **25.38S**±0.09×**179.7E**±0.1, **h519**^{km}±11^{km}, **n21, σ1^{s}16**/20, **mb4.0**/8, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	4.42	151	P	P	11 43 07.8	-2.9
	165nm,0.3s,baz=74,slow=21,SNR=3.8						
RAO				S	S	11 44 18.0	+1.0
	118nm,0.3s,baz=287,slow=24,SNR=4.4						
DZM	Mont Dzumac	12.54	283	P	P	11 44 32.7	+0.9
	0.8nm,0.3s,baz=92,slow=16,SNR=12						
URZ	Urewera	13.02	189	P	P	11 44 35.1	-1.5
	1.9nm,0.3s,baz=330,slow=8.1,SNR=9.9						
URZ				S	S	11 46 54.8	+1.6
	1.6nm,0.3s,baz=322,slow=19,SNR=8.7						
AFI	Afiamalu	13.97	37	S	S	11 47 03.1	-8.1
	2.6nm,0.3s,baz=200,slow=18,SNR=3.9						
AFI	Afiamalu	13.97	37	P	P	11 44 46.6	0.0
CTA	Charters Tower	31.20	273	eP	P	11 47 25.3	+0.4
	2.2nm,0.6s,mb3.9						
CTA	Charters Tower	31.20	273	P	P	11 47 25.3	+0.5
	2.9nm,0.6s,mb4.0,baz=103,slow=9.4,SNR=7.3						
CTAO	Charters Tower	31.20	273	eP	P	11 47 25.4	+0.5
	2.1nm,0.5s,mb3.9						
TAU	Tasmania Unive	31.71	228	eP	P	11 47 27.9	-1.1
	26nm,1.3s,mb4.6						
STKA	Stephens Creek	33.90	250	eP	P	11 47 49.5	+2.0
WRAB	Tennant Creek	42.01	268	eP	P	11 48 53.0	-0.9
	3.2nm,0.8s,mb3.9						
WRA	Warramunga Arr	42.02	268	P	P	11 48 53.2	-0.7
	1.6nm,0.6s,mb3.7,baz=104,slow=8.1,SNR=17						
VNDA	Vanda	52.88	185	eP	P	11 50 13.8	-1.6
NWAO	Narrogin (SRO)	54.35	247	eP	P	11 50 25.8	-0.5
	100nm,1.9s,mb4.8						
MAW	Mawson	76.26	201	P	P	11 52 43.1	+0.6
	0.9nm,0.6s,mb3.4,baz=117,slow=6.8,SNR=3.2						
MAW	Mawson	76.26	201	eP	P	11 52 43.4	+0.9
	2.9nm,1.0s,mb3.7						
NVAR	Mina Array Bea	86.03	44	P	P	11 53 33.6	+0.5
	1.2nm,0.9s,mb3.5,baz=214,slow=6.3,SNR=10						
TXAR	Lajitas Array	91.48	58	P	P	11 53 59.5	+0.8
	0.9nm,0.8s,mb3.8,baz=225,slow=5.3,SNR=9.9						
FINES	FINESS Array B	139.74	341	PKP	PKPdf	12 00 13.8	-1.0
	0.5nm,0.6s,baz=21,slow=16,SNR=3.6						
NB2	NORSAR Subarra	143.49	351	PKPabc	PKPdf	12 00 20.4	-0.8
	0.2nm,0.7s,baz=26,slow=3.8						
NOA	NORSAR Array B	143.49	351	PKP	PKPdf	12 00 20.4	-0.7
	2.2nm,0.8s,baz=22,slow=3.8,SNR=5.1						

*NEIC **21** 11:42:48.6±0.7, 23.89S×66.73W, h194^{km}±8^{km}, mb4.4/2, Error ellipse: s-maj=11.0km s-min=7.9km az=92.0*
*IDC **21** 11:42:49.0±1.5, 23.84S×66.75W, h196^{km}±13^{km}, mb3.6/8, mb1 3.8/12, mb1mx3.7/18, mbtmp4.1/12, Error ellipse: s-maj=19.9km s-min=11.7km az=83.0*
*GUC **21** 11:42:50.5±0.7, 24.19S×67.06W, h200^{km}, ML4.4*
ISC 21 11:42:47.6±0.6, **23.96S**±0.04×**66.77W**±0.06, **h201**^{km}±7^{km}, **n32, σ1^{s}17**/34, **mb3.7**/9, **2C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEN1	Los Morros	3.20	280	⇓iP	P	11 43 42.8	+2.6
CEN1				i S	S	11 44 22.0	+1.2
CEN1				AMP		11 44 24.6	
	comp=E,336nm,0.6s						
ANCH	Antofagasta	3.35	274	⇑iP	P	11 43 43.3	+1.3
ANCH				i S	S	11 44 23.1	-0.9
CPN1	Cerro Paranal	3.39	258	⇑iP	P	11 43 43.6	+1.2
CPN1				i S	S	11 44 24.1	-0.7
CPN1				AMP		11 44 26.6	
	comp=E,704nm,0.6s						
CRCH	Chaqaral	4.23	235	⇓iP	P	11 43 52.8	-0.1
CRCH				i S	S	11 44 40.9	-2.5
CDCH	Caldera	4.80	229	i S	S	11 44 53.4	-3.2
CFAA	Coronel Fontan	7.73	189	P	P	11 44 38.6	+0.5
	comp=E,0.1nm,0.3s,baz=8.1,slow=8.0,SNR=6.9						
CFAA				S	S	11 45 58.8	-5.7
	comp=E,0.5nm,0.3s,baz=135,slow=21,SNR=17						
LPAZ	La Paz	7.74	350	P	P	11 44 39.0	+0.7
	comp=E,1.6nm,0.3s,baz=168,slow=6.0,SNR=27						
LPAZ				S	S	11 46 04.4	-0.3
	comp=E,0.2nm,0.3s,baz=292,slow=19,SNR=2.5						
CPUP	Villa Florida	8.87	107	ePn	P	11 44 52.5	-0.5
	comp=E,24nm,0.7s						
SIV	San Ignacio	9.56	35	P	P	11 45 01.6	-0.5
	comp=E,0.4nm,0.3s,baz=218,slow=12,SNR=13						

TRQA	Tornquist	14.64	165	*e*Pn	P	11 46 05.6	-0.7
SAML	Samuel	15.31	14	*e*Pn	P	11 46 15.1	+0.1
PLCA	Paso Flores	17.02	190	P	P	11 46 35.8	+0.5
	comp=E,0.1nm,0.3s,slow=10,SNR=2.3						
BDFB	Brasilia	19.47	68	P	P	11 47 00.8	-0.3
	comp=E,2.3nm,0.3s,baz=249,slow=10,SNR=25						
USHA	Ushuaia	30.86	182	P	P	11 48 47.4	+0.5
	comp=E,18nm,1.1s,mb4.6,baz=342,slow=9.6,SNR=2.8						
USHA	Ushuaia	30.86	182	P	P	11 48 47.4	+0.5
SDV	Santo Domingo	32.86	353	P	P	11 49 03.0	-1.7
JTS	JuntasAbangare	38.40	330	*e*P	P	11 49 50.9	-0.5
	comp=E,3.0nm,0.6s,mb4.0						
VNA3	Neumayer Olymp	57.12	161		P	11 52 21.4	+6.5
VNA1	Neumayer--Stat	57.31	160		P	11 52 21.5	+5.2
VNA2	Neumayer--Watz	57.68	160		P	11 52 21.3	+2.5
SNAA	Sanae	59.32	161		P	11 52 35.0	+4.9
SNAA	Sanae	59.32	161	P	P	11 52 32.0	+1.8
	comp=E,0.2nm,0.6s,mb3.0,baz=320,slow=11,SNR=7.2						
TXAR	Lajitas Array	63.77	324	P	P	11 52 59.4	-1.0
	comp=E,0.4nm,0.6s,mb3.2,baz=144,slow=7.5,SNR=10						
DBIC	Dimbokro	67.58	71	P	P	11 53 23.6	-1.4
	comp=E,6.7nm,1.2s,mb4.2,baz=150,slow=11,SNR=4.2						
PDAR	Pinedale Array	77.22	329	P	P	11 54 21.1	+0.2
	comp=E,0.5nm,0.5s,mb3.4,baz=132,slow=8.3,SNR=5.4						
ULM	Lac du Bonnet	78.26	341	P	P	11 54 25.2	-1.3
	comp=E,3.3nm,0.7s,mb4.1,baz=167,slow=7.8,SNR=6.0						
NVAR	Mina Array Bea	78.64	321	P	P	11 54 30.3	+1.5
	comp=E,0.1nm,0.3s,mb2.9,baz=139,slow=6.3,SNR=3.7						
YKA	Yellowknife Ar	94.16	340	P	P	11 55 44.8	+0.8
	comp=E,0.8nm,0.5s,mb4.0,baz=137,slow=4.6,SNR=9.2						
WRA	Warramunga Arr	131.76	207	PKhKP		12 01 34.8	
	comp=E,0.4nm,0.3s,baz=156,slow=1.8,SNR=4.8						
WRA				PKP	PKPdf	12 01 39.3	+1.8
	comp=E,0.4nm,0.3s,baz=154,slow=1.9,SNR=22						
WRA				SKPbc		12 04 45.8	
	comp=E,0.2nm,0.5s,baz=159,slow=3.6,SNR=5.2						
ZAL	Zalesovo	143.26	28	PKP	PKPdf	12 01 57.0	-0.3
	comp=E,0.9nm,0.3s,baz=246,slow=5.4,SNR=4.6						
MKAR	Makanchi Array	146.36	40	PKPbc	PKPbc	12 02 05.8	+1.4
	comp=E,1.8nm,0.6s,baz=309,slow=3.0,SNR=18						
SONM	Songino Array	155.56	11	PKPab	PKPab	12 02 45.5	-0.6
	comp=E,0.4nm,0.7s,baz=310,slow=3.8,SNR=4.2						

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*NEIC **21** 11:44:31.6,56.39N×155.06W,h23^{km},ML3.1(AEIC),After AEIC.*

*IDC **21** 11:44:37.0±10.0,57.09N×155.45W,h66^{km}±88^{km},mb3.2/2, mb1 3.4/4,mb1mx3.2/22,mbtmp3.4/4,ML3.5/2,MS2.9/1, Ms1 3.0/1,ms1mx2.6/9,Error ellipse: s-maj=76.4km s-min=41.2km az=6.0*

ISC 21 11:44:32.0±2.2,56.6N±0.2×155.1W±0.2,h63^{km}±16^{km},n15, σ0^{s}86/17,mb3.4/2,Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANPK	Aniakchak Peak	1.69	280	P	P	11 44 59.1	-0.8
ANPK				S	S	11 45 21.2	+0.8
KDAK	Kodiak Island	1.83	48	P	P	11 45 01.9	+0.1
SYI	Shuyak Island	2.51	34	P	P	11 45 11.9	+0.5
CNPM	China Poot	3.60	33	P	P	11 45 26.8	+0.1
ILW	Iliamna West	3.64	16	P	P	11 45 28.1	+0.7
CKL	Chakachamna La	4.85	16	P	P	11 45 44.4	+0.2
SPU	Mount Spurr	4.88	18	P	P	11 45 44.5	-0.2
STLK	Strandline Lak	5.22	18	P	P	11 45 49.3	0.0
RC01	Rabbit Creek A	5.31	29	P	P	11 45 50.0	-0.7
KLU	Klutina	6.83	40	P	P	11 46 10.4	-1.4
ILAR	Eielson Array	9.15	23	P	P	11 46 40.3	-3.4
	0.2nm,0.3s,baz=215,slow=13,SNR=13						
ILAR				S	S	11 48 18.4	-7.6
	0.2nm,0.3s,baz=211,slow=21,SNR=5.7						
ILAR				LR	LR	11 50 37.7	
	comp=Z,66nm,19.0s,baz=177,slow=41						
INK	Inuvik	15.30	31	P	P	11 48 06.2	+1.0
	0.2nm,0.3s,baz=247,slow=15,SNR=8.3						
INK	Inuvik	15.30	31	P	P	11 48 06.2	+1.0
YKA	Yellowknife Ar	21.08	57	P	P	11 49 13.9	+1.2
	0.4nm,0.6s,mb2.9,baz=274,slow=9.5,SNR=4.0						
SONM	Songino Array	55.92	306	P	P	11 54 04.6	-0.8
	0.7nm,0.6s,mb3.9,baz=44,slow=7.1,SNR=6.9						

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*IDC **21** 12:02:36.8±20.0,24.26S×179.77E,h263^{km}±204^{km}, mb3.2/4,mb1 3.6/4,mb1mx3.4/11,mbtmp3.8/4,Error ellipse: s-maj=128.5km s-min=44.1km az=172.0*

ISC 21 12:02:09.7±1.7,24.8S±0.8×179.7W±0.3,h33^{km},n8, σ0^{s}99/7,mb3.9/5,1C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	31.79	272	*e*P	P	12 08 36.2	+2.8
	3.0nm,0.4s,mb4.5						
STKA	Stephens Creek	34.69	249	P	P	12 08 59.2	+0.8
	0.7nm,0.5s,mb3.9,baz=96,slow=11,SNR=3.8						
ASPA	Alice Springs	42.20	261	*e*P	P	12 10 00.8	-0.5
WB2	Warramunga Arr	42.64	267⇑	*i*P	P	12 10 04.1	-0.9
WRA	Warramunga Arr	42.65	267	P	P	12 10 04.2	-0.8
	1.8nm,0.4s,mb4.2,baz=103,slow=7.7,SNR=38						
NVAR	Mina Array Bea	85.16	44	P	P	12 14 44.5	+0.5
	0.2nm,0.4s,mb3.6,baz=223,slow=7.9,SNR=3.4						
TXAR	Lajitas Array	90.63	58	P	P	12 15 10.0	-0.4
	0.2nm,0.6s,mb3.6,baz=214,slow=6.5,SNR=3.1						
AKASG	Malin Array Be	145.85	327	PKPbc	PKPbc	12 21 41.9	-3.7
	0.5nm,0.4s,baz=48,slow=4.8,SNR=4.2						

IDC 21 12:05:08.2±1.9,2.31N×126.66E,mb3.6/3,mb1 3.8/3, mb1mx3.6/14,mbtmp3.7/3,Error ellipse: s-maj=179.0km s-min=25.8km az=64.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.36	162	P	P	12 10 19.3	-0.1
	0.9nm,0.4s,baz=340,slow=11,SNR=16						
STKA	Stephens Creek	36.84	159	P	P	12 12 17.6	-2.4
	1.2nm,0.6s,baz=340,slow=6.2,SNR=5.0						
MKAR	Makanchi Array	58.68	326	P	P	12 15 07.3	-2.5
	0.2nm,0.3s,baz=119,slow=7.5,SNR=5.5						

MEX 21 12:18:57.4±0.4,16.97N×100.10W,h27^{km}±6^{km},MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.18	297	*i* P	Pb	12 19 01.9	-1.1
CAIG				*i* S	Sb	12 19 05.4	-1.5
ACX	Acapulco	0.20	120	*i* P	Pb	12 19 02.0	-1.3
ACX				*i* S	Sb	12 19 06.0	-1.4

JMA 21 12:24:40.9±0.2,38.30N×144.73E,h55^{km},M3.6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.52	289	P	P	12 25 20.6	+0.2
MIYJ	Miyakonagasawa	2.60	300	P	P	12 25 21.5	-0.1
MIYJ				S	S	12 25 51.6	-0.5
JIO	Ouri	2.66	274	P	P	12 25 22.5	+0.1
JIO				S	S	12 25 53.5	-0.1
JMK	Ichinoseki	2.83	284	P	P	12 25 25.0	+0.3
JMK				*e*S	S	12 25 58.0	+0.3
MAT	Matsushiro	5.48	253	P	P	12 26 03.0	+1.1
MAT				*e*S	S	12 27 04.0	-0.5

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*LDG **21** 12:26:27.2±0.8,19.94S×175.22E,h10^{km},Mb4.5/2, Ms4.3/9,Error ellipse: s-maj=101.3km s-min=7.1km az=154.0*

*NEIC **21** 12:26:39.4±1.4,19.39S×174.72E,h89^{km}±12^{km},mb4.8/15, Error ellipse: s-maj=13.4km s-min=8.9km az=157.0*

*IDC **21** 12:26:40.3±3.4,19.38S×174.74E,h96^{km}±30^{km},mb4.2/11, mb1 4.3/15,mb1mx4.3/18,mbtmp4.5/15,MS4.3/24, Ms1 4.3/24,ms1mx4.3/26,Error ellipse: s-maj=22.3km s-min=17.2km az=159.0*

ISC 21 12:26:39.0±1.6,19.41S±0.09×174.69E±0.07,h96^{km}±15^{km}, n84,σ0^{s}87/46,mb4.5/23,4C,Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.15	250	*e*P	P	12 28 32.8	-3.4
DZM	Mont Dzumac	8.15	250	P	P	12 28 35.1	-1.1
	0.3nm,0.3s,baz=93,slow=17,SNR=16						
DZM				LR	LR	12 31 08.8	
	comp=Z,2µm,20.9s,baz=61,slow=33						
NOUC	Port Laguerre	8.29	250	*e*P	P	12 28 36.8	-1.2
RAO	Raoul Island	11.89	147	LR	LR	12 32 45.2	
	comp=Z,1µm,21.7s,baz=341,slow=31						
AFI	Afiamalu	14.07	69	P	P	12 29 56.7	+1.6
	1.6nm,0.3s,baz=32,slow=23,SNR=3.6						
HNR	Honiara	17.37	303	P	P	12 30 36.8	+0.1
	3.6nm,0.3s,baz=242,slow=4.9,SNR=5.3						
HNR				LR	LR	12 36 23.0	
	comp=Z,532nm,19.3s,baz=132,slow=34						
HNR	Honiara	17.37	303	*e*P	P	12 30 36.5	-0.1
	89nm,1.0s						
URZ	Urewera	18.90	174	P	P	12 30 54.7	+0.2
	0.7nm,0.3s,baz=166,slow=5.2,SNR=5.3						
URZ				LR	LR	12 36 08.9	
	comp=Z,1µm,21.7s,baz=8.7,slow=30						
ARMA	Armidale	23.57	238	*e*P	P	12 31 43.9	+2.4
RAR	Rarotonga	24.02	99	LR	LR	12 39 04.2	
	comp=Z,434nm,19.8s,baz=292,slow=31						
RPZ	Rata Peaks	24.43	186	LR	LR	12 40 46.0	
	comp=Z,1µm,18.1s,baz=296,slow=35						
CTA	Charters Tower	26.76	264	*e*P	P	12 32 12.9	+1.2
	6.4nm,0.8s,mb4.2						
CTA	Charters Tower	26.76	264	P	P	12 32 12.2	+0.5
	14nm,1.0s,mb4.4,baz=84,slow=11,SNR=9.8						
CTA				LR	LR	12 41 36.8	
	comp=Z,623nm,21.6s,baz=65,slow=33						
CTAO	Charters Tower	26.76	264	*e*P	P	12 32 12.9	+1.2
	20nm,1.1s,mb4.6						
PMG	Port Moresby	28.41	287	P	P	12 32 26.5	-0.2
	48nm,1.0s,mb5.0,baz=117,slow=4.7,SNR=12						
PMG				LR	LR	12 42 46.4	
	comp=Z,697nm,18.5s,baz=98,slow=34						
STKA	Stephens Creek	32.18	241	P	P	12 33 00.3	+0.5
	18nm,0.9s,mb4.8,baz=79,slow=9.0,SNR=26						
STKA				LR	LR	12 45 38.4	
	comp=Z,330nm,18.3s,baz=70,slow=35						
STKA	Stephens Creek	32.18	241	P	P	12 33 00.3	+0.5
STKA				LR	LR	12 45 38.4	
TBI	Tubuai	33.56	103	*e*LR	LR	12 41 44.6	
PPT	Papeete	33.91	93	*e*S	S	12 38 23.7	-7.6
PPT				*e*LR	LR	12 41 52.3	
	2µm,28.2s,baz=263						
PPT	Papeete	33.91	93	LR	LR	12 43 02.5	
	comp=Z,568nm,19.7s,baz=250,slow=29						
WB2	Warramunga Arr	37.92	262⇑	*i*P	P	12 33 48.4	-0.3
WRAB	Tennant Creek	37.92	262	*e*P	P	12 33 48.5	-0.2
	23nm,1.2s,mb4.9						
WRA	Warramunga Arr	37.93	262	P	P	12 33 48.6	-0.2
	10nm,0.9s,mb4.7,baz=93,slow=9.0,SNR=53						
WRA				PP	PP	12 35 19.6	+0.1
	2.5nm,0.9s,baz=93,slow=11,SNR=4.7						
ASPA	Alice Springs	38.08	256	*e*P	P	12 33 50.3	+0.3
KAKA	Kakadu	41.06	273	*e*P	P	12 34 34.7	+20
	20nm,0.9s,mb5.0						
FORT	Forrest	43.44	245	*e*P	P	12 34 34.7	+0.6
	23nm,0.7s,mb5.0						
TAOE	Nuku Hiva Isla	44.91	83	*e*LR	LR	12 46 56.1	
	1µm,24.0s						
FITZ	Fitzroy Crossi	46.34	263	*e*P	P	12 34 58.4	+1.1
	17nm,0.9s,mb4.8						
RKT	Rikitea	46.88	104	*e*LR	LR	12 47 52.5	
	870nm,29.8s						
KLBR	Kellerberrin	52.29	245	*e*P	P	12 35 42.7	-0.2
	39nm,1.0s,mb5.4						
SBA	Scott Base	58.61	182	*e*P	P	12 36 28.3	+0.5
	11nm,1.0s,mb4.8						
MJAR	Matsushiro Arr	65.45	328	P	P	12 37 13.7	-0.3
	7.3nm,1.1s,mb4.4,baz=161,slow=6.4,SNR=7.6						
MJAR				LR	LR	13 01 07.2	
	comp=Z,164nm,20.0s,baz=30,slow=32						
QSPA	South Pole Qui	70.65	180	*e*P	P	12 37 44.3	-1.2
	20nm,1.0s,mb4.9						
MAW	Mawson	80.17	201	*e*P	P	12 38 39.7	0.0
	2.9nm,0.9s,mb4.1						
MAW	Mawson	80.17	201	P	P	12 38 39.4	-0.3
	3.5nm,0.9s,mb4.2,baz=111,slow=5.1,SNR=7.4						
MAW				LR	LR	13 13 20.1	
	comp=Z,178nm,18.0s,baz=81,slow=35						
CMB	Columbia Colle	83.50	46	*e*P	P	12 38 57.6	0.0
	4.4nm,1.0s,mb4.2						
NVAR	Mina Array Bea	85.12	47	P	P	12 39 05.3	-0.3
	1.3nm,0.9s,mb3.9,baz=209,slow=6.4,SNR=8.2						
NVAR				LR	LR	13 08 46.4	
	comp=Z,171nm,19.7s,baz=180,slow=30						
TPNV	Topopah Spring	85.84	49	*e*P	P	12 39 09.3	+0.1
	7.2nm,1.0s,mb4.6						
BBB	Bella Bella	86.87	31	LR	LR	13 10 19.1	
	comp=Z,280nm,19.3s,baz=99,slow=30						
ELK	Elko	88.30	46	LR	LR	13 12 06.4	
	comp=Z,248nm,18.8s,baz=254,slow=31						
ILAR	Eielson Array	88.94	15	P	P	12 39 22.5	-0.9
	0.7nm,0.8s,mb3.8,baz=232,slow=5.1,SNR=7.7						
ILAR				LR	LR	13 10 28.9	
	comp=Z,238nm,21.1s,baz=179,slow=30						
MSU	Marysvale	89.43	49	*e*P	P	12 39 28.3	+2.0
VNA3	Neumayer Olymp	89.54	179⇑	*i*	P	12 39 23.9	-2.2
VNA3	Neumayer Olymp	89.54	179		P	12 39 38.0	+12
DLBC	Dease Lake	89.90	26	LR	LR	13 11 43.6	
	comp=Z,145nm,20.0s,baz=266,slow=30						
VNA2	Neumayer--Watz	89.90	179⇑	*i*	P	12 39 27.5	-0.3
VNA2	Neumayer--Watz	89.90	179⇑	*i*	P	12 39 39.8	+12
SONM	Songino Array	90.51	321	P	P	12 39 32.2	+1.0
	0.7nm,0.8s,mb3.9,baz=166,slow=4.1,SNR=4.5						
SONM				LR	LR	13 22 02.8	
	comp=Z,54nm,18.1s,baz=145,slow=37						
NEW	Newport	90.66	38	LR	LR	13 14 16.5	
	comp=Z,144nm,18.6s,baz=239,slow=32						
SRU	San Rafael	90.85	49	*e*P	P	12 39 31.9	-1.1
	6.5nm,0.9s,mb4.8						
DAU	Daniels Canyon	90.88	47	*e*P	P	12 39 31.8	-1.3
PV10	Paradox Valley	91.62	50	*e*P	P	12 39 36.3	-0.2
MNTX	Cornudas Mount	91.84	57	*e*P	P	12 39 37.3	-0.4
	4.2nm,1.1s,mb4.6						
ANMO	Albuquerque	92.20	54	LR	LR	13 14 06.4	
	comp=Z,75nm,18.2s,baz=245,slow=31						
ANMO	Albuquerque	92.20	54	*e*P	P	12 39 38.9	-0.4
	2.1nm,0.9s,mb4.4						
TXAR	Lajitas Array	92.36	60	P	P	12 39 40.2	0.0
	1.2nm,0.8s,mb4.2,baz=221,slow=4.8,SNR=14						
TXAR				LR	LR	13 12 55.4	
	comp=Z,106nm,18.3s,baz=185,slow=30						
TXAR	Lajitas Array	92.36	60	P	P	12 39 40.2	0.0
TXAR				LR	LR	13 12 55.4	
PDAR	Pinedale Array	93.01	46	P	P	12 39 42.7	-0.1
	0.5nm,0.9s,mb3.8,baz=243,slow=2.0,SNR=3.1						
PDAR				LR	LR	13 15 46.4	
	comp=Z,127nm,18.2s,baz=252,slow=32						
PLCA	Paso Flores	94.92	136	LR	LR	13 12 44.9	
	comp=Z,103nm,19.1s,baz=4.5,slow=29						
YKA	Yellowknife Ar	98.50	26	LR	LR	13 21 50.6	
	comp=Z,89nm,18.8s,baz=255,slow=34						
ARCES	ARCESS Array B	126.46	347	PKP	PKPdf	12 45 31.0	+0.8
	8.8nm,1.1s,baz=63,slow=4.0,SNR=3.2						
KECS	Kecovo	144.29	330	*e*PKP	PKPdf	12 46 03.9	+0.4
UPC	Upice	144.65	336	*e*PKP	PKPdf	12 46 04.3	+0.2
DPC	Dobruska-Polom	144.66	336	*e*PKP	PKPdf	12 46 05.4	+1.3
VYHS	Vyhne	145.04	332	*e*PKP	PKPdf	12 46 06.7	+1.9
CLL	Collm	145.04	340	P	PKPdf	12 46 06.1	+1.4
	logA/T=1.2						
CLL				*i*		12 46 15.0	
CLL				*i*		12 46 19.3	
CLL				*e*		12 46 37.0	
PVCC	Panska Ves	145.16	338	*e*PKP	PKPdf	12 46 07.2	+2.2
PRU	Pruhonice	145.62	337	*e*PKP	PKPdf	12 46 08.0	+2.2
KHC	Kasperske Hory	146.68	337	*e*PKP	PKPdf	12 46 10.2	+2.6
KHC				pPKP		12 46 27.0	
GERES	GERESS Array B	146.87	337	PKPbc	PKPbc	12 46 11.5	+1.9
	2.7nm,0.8s,baz=27,slow=3.0,SNR=17						
GRA1	Grafenberg Arr	147.01	340	*e*PKP	PKPdf	12 46 12.3	+4.2
CDF	Champ du Feu	149.32	343	*e*PKP1	PKPdf	12 46 17.7	+5.8
HAU	Haudompre	149.94	344	*e*PKP1	PKPdf	12 46 19.2	+6.3
HAU				*e*R			
	166nm,22.8s						
HINF	Hinteralfeld	149.98	344	*e*PKP1	PKPdf	12 46 19.0	+6.1
FLN	La Foliniere	150.46	354	*e*PKP1	PKPdf	12 46 19.0	+5.4
	52nm,1.1s						
FLN				*e*R			
	50nm,17.1s						
GRR	Gorron	150.87	354	*e*PKP1	PKPdf	12 46 20.1	+5.8
LOR	Lormes	151.22	347	*e*PKP1	PKPdf	12 46 22.3	+7.5
	17nm,1.0s						
LOR				*e*R			
	122nm,22.8s						
CABF	La Chapelle	151.30	344	*e*PKP1	PKPdf	12 46 22.8	+7.8
SSF	Saint Saulge	151.49	347	*e*PKP1	PKPdf	12 46 23.1	+7.9
	23nm,0.9s						
LPL	La Plagne	152.12	342	*e*PKP1	PKPdf	12 46 25.0	+8.8
	7.4nm,0.8s						
TCF	Toulx Ste Croi	152.48	349	*e*PKP1	PKPdf	12 46 25.1	+8.4
MFF	Saint Martin d	152.55	352	*e*PKP1	PKPdf	12 46 25.0	+8.2
MBDF	Montbardon	152.82	341	*e*PKP1	PKPdf	12 46 27.2	+10
ORIF	Oris-en-Rattie	152.91	342	*e*PKP1	PKPdf	12 46 26.3	+9.0
	8.4nm,0.8s						
ORIF				*e*R			
	108nm,21.6s						

MAN 21 13:06:21.7,18.44N×120.78E,h16^{km},mb3.5,ML2.2, MS1.6,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.19	234⇓	*i*P	Pb	13 06 27.9	+1.5
PIP				*e*S	Sb	13 06 35.9	+6.3
APYP	Conner	0.72	142	*e*P	Pb	13 06 35.0	-0.4
APYP				*e*S	Sb	13 06 48.9	+4.1
ABRA	Dolores	0.79	185	*e*P	Pb	13 06 36.3	-0.2
ABRA				*e*S	Sb	13 06 52.6	+5.9

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*NIED **21** 13:34:00,33.40N×141.70E,h11^{km},Mw3.8 Best double couple: M$_0$6.17×10^{14} NP1:φ$_s$26°,δ69°,λ108°. NP2:φ$_s$165°, δ27°,λ52°.*

*IDC **21** 13:34:42.0±1.6,33.33N×141.74E,mb3.9/4,mb1 4.0/5, mb1mx3.7/20,mbtmp3.8/5,ML3.4/1,Error ellipse: s-maj=31.4km s-min=23.8km az=60.0*

*NEIC **21** 13:34:43.5,33.37N×141.73E,h16^{km},MG3.5(JMA),After JMA.*

*JMA **21** 13:34:43.4±0.4,33.37N×141.73E,h16^{km},M3.6*

ISC 21 13:34:43.2±1.7,33.36N±0.05×141.81E±0.08,h21^{km}±15^{km}, n25,σ0^{s}85/36,mb3.8/4,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.47	332	P	Pn	13 35 09.3	+0.6
BSO1				*e*S	Sn	13 35 28.9	+1.5
BSO2	Boso 2	1.65	328	S	Sn	13 35 31.6	-0.4
JHJ2	Mitsune	1.69	262	P	Pn	13 35 12.1	+0.2
JHJ	Hachijo jima 2	1.72	263	Pn	Pn	13 35 11.9	-0.3
	61nm,0.3s,baz=177,slow=5.5,SNR=22						
JHJ				Sn	Sn	13 35 35.1	+1.4
	80nm,0.3s,baz=70,slow=22,SNR=7.5						
BSO3	Boso 3	1.80	324	P	Pn	13 35 13.7	+0.2
BSO3				*e*S	Sn	13 35 37.2	+1.3
BSO4	Boso 4	2.04	324	P	Pn	13 35 17.8	+0.9
BSO4				*e*S	Sn	13 35 43.5	+1.6
KTR	Katsuura	2.17	326	*e*S	Sn	13 35 45.2	-0.2
JIM2	Oshima 3	2.40	305	P	Pn	13 35 20.8	-1.3
JIZS	Izushimoda	2.79	300	P	Pn	13 35 27.1	-0.5
JIZS				*e*S	Sn	13 36 00.7	-0.3
JOD2	Odawara 2	2.95	311	P	Pn	13 35 28.9	-1.0
JYT	Yasato	3.16	336	*e*S	Sn	13 36 11.0	+0.6
JHU	Hanno	3.25	321	P	Pn	13 35 34.2	+0.1
JHO	Hitachi	3.40	343	P	Pn	13 35 36.0	-0.4
JYN	Shimob	3.44	309	P	Pn	13 35 37.8	+0.9
JRY	Ryogami san	3.58	319	P	Pn	13 35 38.3	-0.5
JRY				S	Sn	13 36 20.5	-0.4
JAG	Ashikaga	3.62	328	P	Pn	13 35 39.5	0.0
JAG				S	Sn	13 36 21.3	-0.8
JNY	Yasuok	3.83	303	P	Pn	13 35 43.6	+1.2
MJAR	Matsushiro Arr	4.34	318	Pn	Pn	13 35 49.9	+0.2
	2.1nm,0.3s,baz=149,slow=13,SNR=17						
MJAR				Sn	Sn	13 36 40.0	-0.3
	1.9nm,0.3s,baz=210,slow=20,SNR=6.1						
MAJO	Matsushiro	4.34	318	*e*Pn	Pn	13 35 49.2	-0.5
MAJO				*e*Sn	Sn	13 36 38.2	-2.2
MAT	Matsushiro	4.34	318	P	Pn	13 35 49.8	+0.1
MAT				S	Sn	13 36 39.3	-1.1
MAT	Matsushiro	4.34	318	*e*P	Pn	13 35 50.0	+0.3
MAT				*e*S	Sn	13 36 39.0	-1.4
SONM	Songino Array	30.24	309	P	P	13 40 54.3	-0.2
	0.8nm,0.7s,mb3.6,baz=103,slow=8.4,SNR=5.6						
MKAR	Makanchi Array	46.42	305	P	P	13 43 09.0	-1.0
	0.5nm,0.6s,mb3.7,baz=85,slow=9.3,SNR=5.0						
WRA	Warramunga Arr	53.48	189	P	P	13 44 03.9	-0.5
	2.0nm,0.5s,mb4.3,baz=4.8,slow=7.6,SNR=12						
NOA	NORSAR Array B	77.70	338	P	P	13 46 40.5	+1.1
	1.0nm,0.8s,mb3.8,baz=40,slow=5.6,SNR=3.9						

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*IDC **21** 13:38:09.9±17.0,29.43N×83.33E,mb3.4/2,mb1 3.5/3, mb1mx3.4/20,mbtmp3.4/3,ML3.3/1,Error ellipse: s-maj=291.9km s-min=84.6km az=31.0*

*NDI **21** 13:38:21.8±5.1,29.75N×83.65E,h10^{km},ML3.4, mb3.7(NEIC)*

*NEIC **21** 13:38:23.9±4.2,30.36N×83.52E,h35^{km},mb3.7/1,Error ellipse: s-maj=78.7km s-min=15.6km az=214.0*

ISC 21 13:38:22.0±0.8,30.33N±0.10×83.56E±0.09,h33^{km},n14, σ1^{s}16/14,mb3.3/2,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	Pithoragarh	3.00	256	*e*P	P	13 39 08.0	-0.4
PTH				*e*SG	S	13 40 00.0	+16
KLP	Kalpa	4.72	286	*e*P	P	13 39 36.0	+3.2
KLP				AML	AML	13 39 57.3	
	comp=E,80nm,0.6s						
KLP				AML	AML	13 39 58.4	
	comp=N,44nm,0.8s						
KLP				*e*x	x	13 40 16.5	
ALBI	Allahabad	5.24	198	*e*PG	P	13 39 52.0	+12
AGRA	Agra	5.82	239	AML	AML	13 41 32.5	
	comp=E,78nm,0.2s						
AGRA				AML	AML	13 41 32.8	
	comp=N,67nm,0.4s						
SONA	Sohna	6.02	251	*e*P	P	13 39 51.6	+0.6
SONA				*e*x	x	13 41 08.7	
KUDL	Kundal	6.55	252	*e*P	P	13 39 58.5	0.0
LSA	Lhasa	6.61	94	*e*Pn	Pn	13 40 00.1	+0.5
	comp=N,12nm,0.8s						
KHET	Khetri	7.14	254	*e*P	P	13 40 05.7	-1.0
AAK	Ala-Archa	14.27	332	*e*Pn	P	13 41 42.6	-1.0
MKAR	Makanchi Array	16.47	357	P	P	13 42 13.6	+1.6
	comp=N,0.1nm,0.3s,baz=175,slow=12,SNR=6.4						
KURK	Kurchatov	20.70	351	*e*P	P	13 42 59.5	-2.2
	comp=N,2.8nm,0.8s						
ZAL	Zalesovo	23.61	2	P	P	13 43 30.9	+0.3
	comp=N,0.9nm,0.7s,mb3.3,baz=286,slow=9.3,SNR=4.9						
SONM	Songino Array	24.75	39	P	P	13 43 40.7	-1.0
	comp=N,0.6nm,0.8s,mb3.2,baz=244,slow=11,SNR=3.5						
CHKZ	Chkalovo	25.15	342	P	P	13 43 46.2	+0.7

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*JMA **21** 13:49:45.1±0.2,23.16N×124.01E,h38^{km},M3.3*

*IDC **21** 13:49:47.9±5.8,23.86N×123.93E,mb3.6/4,mb1 3.9/6, mb1mx3.7/20,mbtmp3.8/6,ML3.8/2,Error ellipse: s-maj=117.9km s-min=27.4km az=172.0*

*NEIC **21** 13:49:49.8±1.2,23.50N×123.91E,h35^{km},mb4.3/1,Error ellipse: s-maj=24.6km s-min=11.6km az=181.0*

ISC 21 13:49:45.2±1.6,23.18N±0.06×123.94E±0.04,h30^{km}±10^{km}, n19,σ0^{s}96/30,mb3.6/5,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.88	352	P	Pn	13 50 01.6	0.0
HATJ				S	Sb	13 50 13.9	+0.6
JKRS	Kuro-shima	1.05	3	P	Pn	13 50 04.2	+0.1
JKRS				*e*S	Sn	13 50 18.2	+0.3
IRIF	Iriomote-Funau	1.17	350	P	Pn	13 50 06.1	+0.4
IRIF				S	Sn	13 50 20.9	+0.2
JIJ	Ishigaki jima	1.19	9	P	Pn	13 50 05.8	-0.3
JIJ				S	Sn	13 50 20.4	-1.0
YOJ	Yonaguni jima	1.54	326	P	Pn	13 50 11.5	+0.5
YOJ				S	Sn	13 50 30.6	+0.5
JTJ	Tarama	1.61	25	P	Pn	13 50 11.8	-0.3
JTJ				S	Sn	13 50 32.2	+0.2
JMJ	Miyako jima 2	2.04	37	P	Pn	13 50 18.1	-0.2
JMJ				*e*S	Sn	13 50 43.2	+0.2
JOGS	Gusukube	2.07	40	S	Sn	13 50 45.3	+1.7
NACB	Ninganchiao	2.37	295	*e*Pn	Pn	13 50 22.0	-0.9
NACB				*e*Sn	Sn	13 50 48.7	-2.6
YHNB	Yeheng	2.78	303	*e*Pn	Pn	13 50 28.9	+0.2
YHNB				*e*Sn	Sn	13 51 01.2	-0.4
TATO	Taipei	2.87	309	*e*Pn	Pn	13 50 31.0	+1.0
TATO				*e*Sn	Sn	13 50 57.6	-6.3

JKE	**Kume jima 2**	**4.06**	**39**	*e*S	**Sn**	**13 51 31.5**	**-2.6**
JOW	**Kunigami**	**5.35**	**46**	Pn	**Pn**	**13 51 02.8**	**-2.4**
	8.1nm,0.3s,baz=238,slow=15,SNR=6.9						
JOW				Sn	**Sn**	**13 52 00.9**	**-5.7**
	7.3nm,0.3s,baz=114,slow=29,SNR=5.0						
MJAR	**Matsushiro Arr**	**18.15**	**40**	P	**P**	**13 53 56.2**	**-0.7**
	0.3nm,0.3s,baz=225,slow=9.3,SNR=5.6						
SONM	**Songino Array**	**28.31**	**335**	P	**P**	**13 55 38.1**	**-0.2**
	0.6nm,0.6s,mb3.4,baz=152,slow=9.2,SNR=6.9						
MKAR	**Makanchi Array**	**40.82**	**316**	P	**P**	**13 57 26.7**	**+1.1**
	0.4nm,0.4s,mb3.4,baz=103,slow=9.3,SNR=10						
ZAL	**Zalesovo**	**42.47**	**326**	P	**P**	**13 57 39.8**	**+0.7**
	0.9nm,0.5s,mb3.7,baz=340,slow=9.6,SNR=4.8						
CHKZ	**Chkalovo**	**50.09**	**322**	*e*P	**P**	**13 58 39.2**	**-0.1**
	2.6nm,0.8s,mb4.3						
ILAR	**Eielson Array**	**68.94**	**27**	P	**P**	**14 00 51.0**	**+1.8**
	0.4nm,1.0s,mb3.3,baz=272,slow=5.3,SNR=4.3						

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*STR **21** 13:53:51.1±0.2,48.34N×6.67E,h10^{km}±1^{km},Ml2.4,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*NEIC **21** 13:53:51.5,48.34N×6.67E,h1^{km},ML2.8(LDG),ML2.4(STR),After STR.*

*CSEM **21** 13:53:51.3±0.0,48.33N×6.66E,h12^{km},ML2.8/13,Error ellipse: s-maj=0.9km s-min=0.6km az=174.0*

*BGR **21** 13:53:52.9±0.9,48.32N×6.83E,h10^{km},ML2.2/3,Error ellipse: s-maj=7.8km s-min=3.3km az=98.0*

LDG 21 13:53:51.5±0.0**,48.33N×6.65E,h11**^{km}**,Md2.7**/4**,Ml2.8**/14**, Error ellipse: s-maj=0.9km s-min=0.6km az=165.0, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ECH	**Echery**	**0.36**	**109**	Pg	Pg	13 53 58.4	-0.6
ECH				Sg	Sg	13 54 02.9	-1.1
HAU	**Haudompre**	**0.38**	**211**	*e*Pg	Pg	13 53 59.1	-0.3
HAU				*e*Sg	Sg	13 54 04.3	-0.4
	49nm,0.2s						
CDF	**Champ du Feu**	**0.43**	**79**	*e*Pg	Pg	13 53 59.6	-0.7
CDF				*e*Sg	Sg	13 54 05.1	-1.0
	242nm,0.3s						
THEF	**They Montfort**	**0.45**	**257**	Pg	Pg	13 54 00.3	-0.4
THEF				Sg	Sg	13 54 06.6	-0.3
WLS	**Welschbruch**	**0.48**	**80**	Pg	Pg	13 54 00.4	-0.9
WLS				Sg	Sg	13 54 06.8	-1.0
HINF	**Hinteralfeld**	**0.53**	**165**	*e*Pg	Pg	13 54 01.6	-0.8
HINF				*e*Sg	Sg	13 54 08.4	-1.2
	50nm,0.2s						
HINF				*e*Sn	Sn	13 54 11.4	-2.2
MOF	**Molkenrain**	**0.58**	**146**	Pg	Pg	13 54 03.6	+0.3
LIBD	**Limburg**	**0.67**	**106**	Pg	Pg	13 54 03.6	-1.3
RFYF	**Reffroy**	**0.83**	**291**	*e*Pg	Pg	13 54 07.4	-0.9
	baz=114						
RFYF				*e*Sg	Sg	13 54 18.4	-1.1
RFYF				*e*Sn	Sn	13 54 19.2	-2.0
	46nm,0.2s						
LOMF	**Lomont**	**0.99**	**173**	Pg	Pg	13 54 10.2	-1.2
LOMF				Sg	Sg	13 54 23.6	-1.0
LANF	**Langenberg**	**1.01**	**49**	Pg	Pg	13 54 09.6	-2.1
LANF				Sg	Sg	13 54 24.1	-1.1
BOURR	**Bourrignon**	**1.02**	**157**	*e*Pg	Pg	13 54 11.1	-0.8
	SNR=2.3						
BOURR				*e*Sg	Sg	13 54 23.7	-1.9
	SNR=9.3						
MEZF	**Maizieres J'vi**	**1.07**	**280**	*e*Pg	Pg	13 54 11.8	-1.2
MEZF				*e*Sg	Sg	13 54 25.9	-1.5
	27nm,0.3s						
SFTF	**Sexfontaines**	**1.08**	**264**	*e*Pg	Pg	13 54 11.8	-1.4
	baz=86						
SFTF				*e*Sg	Sg	13 54 26.1	-1.5
	32nm,0.2s						
BFO	**Black Forest**	**1.12**	**89**	*e*Pg	Pg	13 54 11.8	-2.3
	SNR=10						
BFO				*e*Sg	Sg	13 54 24.9	-4.2
	SNR=6.0						
SULZ	**Sulz-Cheisache**	**1.27**	**129**	*e*Sg	Sg	13 54 30.0	-4.0
	SNR=3.7						
SLE	**Schleitheim**	**1.36**	**114**	*e*Pg	Pg	13 54 16.8	-2.0
	SNR=5.1						
ZUR	**Zurich**	**1.62**	**126**	*e*Sg	Sg	13 54 40.8	-4.7
	SNR=1.5						
STU	**Stuttgart**	**1.75**	**74**	*e*Sg	Sg	13 54 45.3	-4.6
	SNR=1.5						
CABF	**La Chapelle**	**1.76**	**193**	*e*Pg	Pg	13 54 24.5	-2.3
CABF				*e*Sg	Sg	13 54 46.9	-3.4
	10nm,0.2s						
CABF	**La Chapelle**	**1.76**	**193**	*e*Pn	Pn	13 54 20.7	-1.6
CABF				*e*Pg	Pg	13 54 24.5	-2.3
CABF				*e*Sg	Sg	13 54 46.9	-3.4
CABF	**La Chapelle**	**1.76**	**193**	*e*Pg	Pg	13 54 24.5	-2.3
CABF				*e*Sg	Sg	13 54 46.9	-3.4
	5.1nm,0.2s						
WILA	**Wila**	**1.78**	**120**	*e*Sg	Sg	13 54 45.7	-5.1
	SNR=2.0						
GIVF	**Givet**	**2.14**	**327**	*e*Pg	Pg	13 54 31.4	-2.8
LOR	**Lormes**	**2.16**	**241**	*e*Pn	Pn	13 54 25.9	-2.0
	baz=59						
LOR	**Lormes**	**2.16**	**241**	*e*Pg	Pg	13 54 31.9	-2.7
	baz=63						
LOR				*e*Sn	Sn	13 54 50.8	-4.1
LOR				*e*Sg	Sg	13 54 58.0	-5.5
	10.0nm,0.2s						
LOR	**Lormes**	**2.16**	**241**	*e*Pn	Pn	13 54 25.9	-2.0
LOR				*e*Pg	Pg	13 54 31.9	-2.7
LOR				*e*Sn	Sn	13 54 50.8	-4.1
LOR				*e*Sg	Sg	13 54 58.0	-5.5
LOR	**Lormes**	**2.16**	**241**	*e*Pg	Pg	13 54 31.9	-2.7
LOR				*e*Sn	Sn	13 54 50.8	-4.1
LOR				*e*Sg	Sg	13 54 58.0	-5.5
	5.0nm,0.2s						
TNS	**Taunus Mts**	**2.23**	**31**	*e*Sg	Sg	13 55 02.0	-3.8
	SNR=2.8						
BAIF	**Baives**	**2.35**	**318**	*e*Pn	Pn	13 54 28.1	-2.6
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pg	Pg	13 54 37.6	-3.3
SSF				*e*Sn	Sn	13 54 58.1	-4.8
SSF				*e*Sg	Sg	13 55 09.1	-4.8
	4.7nm,0.2s						
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pn	Pn	13 54 30.0	-2.4
SSF				*e*Pg	Pg	13 54 37.6	-3.3
SSF				*e*Sn	Sn	13 54 58.1	-4.8
SSF				*e*Sg	Sg	13 55 09.1	-4.8
SSF	**Saint Saulge**	**2.47**	**240**	*e*Pg	Pg	13 54 37.6	-3.3
SSF				*e*Sn	Sn	13 54 58.1	-4.8
SSF				*e*Sg	Sg	13 55 09.1	-4.8
	2.3nm,0.2s						
SMF	**Signal de Mont**	**2.54**	**229**	*e*Pg	Pg	13 54 38.4	-3.9
SMF				*e*Sg	Sg	13 55 11.1	-5.1
	17nm,0.3s						
SMF	**Signal de Mont**	**2.54**	**229**	*e*Pn	Pn	13 54 30.9	-2.5
SMF				*e*Pg	Pg	13 54 38.4	-3.9
SMF				*e*Sg	Sg	13 55 11.1	-5.1
SMF	**Signal de Mont**	**2.54**	**229**	*e*Pg	Pg	13 54 38.4	-3.9
SMF				*e*Sg	Sg	13 55 11.1	-5.1
	8.4nm,0.3s						
AVF	**Avril sur Loir**	**2.71**	**237**	*e*Pg	Pg	13 54 42.0	-3.7
AVF				*e*Sg	Sg	13 55 16.6	-5.2
	5.0nm,0.3s						
AVF	**Avril sur Loir**	**2.71**	**237**	*e*Pn	Pn	13 54 33.1	-2.7
AVF				*e*Pg	Pg	13 54 42.0	-3.7
AVF				*e*Sg	Sg	13 55 16.6	-5.2
AVF	**Avril sur Loir**	**2.71**	**237**	*e*Pg	Pg	13 54 42.0	-3.7
AVF				*e*Sg	Sg	13 55 16.6	-5.2
	2.5nm,0.3s						
LPL	**La Plagne**	**2.82**	**179**	*e*Pg	Pg	13 54 44.0	-3.8
LPL				*e*Sg	Sg	13 55 20.5	-4.9
	3.6nm,0.4s						
HYF	**Humbligny**	**2.90**	**250**	*e*Pn	Pn	13 54 35.7	-2.9
HYF				*e*Sg	Sg	13 55 22.5	-5.7
BGF	**Bois d'Agland**	**3.13**	**237**	*e*Pg	Pg	13 54 49.4	-4.6
BGF				*e*Sg	Sg	13 55 29.7	-6.1
	11nm,0.3s						
BGF	**Bois d'Agland**	**3.13**	**237**	*e*Pn	Pn	13 54 38.8	-3.0
BGF				*e*Pg	Pg	13 54 49.4	-4.6
BGF				*e*Sg	Sg	13 55 29.7	-6.1
ORIF	**Oris-en-Rattie**	**3.46**	**189**	*e*Pg	Pg	13 54 54.9	-5.6
ORIF				*e*Sg	Sg	13 55 40.0	-6.6
	2.0nm,0.2s						
TCF	**Toulx Ste Croi**	**3.65**	**238**	*e*Pn	Pn	13 54 45.8	-3.3
TCF				*e*Sg	Sg	13 55 45.3	-7.6
	4.3nm,0.4s						
VIVF	**Saint-Julien-l**	**3.73**	**202**	*e*Sg	Sg	13 55 48.7	-7.1
	2.8nm,0.3s						
LASF	**Ste Croix**	**4.68**	**205**	*e*Pn	Pn	13 55 00.0	-3.8

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*BJI **21** 13:56:53.0,18.00S×178.50W,h574^{km},mB4.6,mb4.3*

*NEIC **21** 13:56:53.5±0.7,17.96S×178.50W,h575^{km}±8^{km},mb4.5/33, Error ellipse: s-maj=12.9km s-min=5.6km az=153.0*

*IDC **21** 13:56:54.2±1.3,18.04S×178.42W,h586^{km}±16^{km}, mb3.9/12,mb1 4.1/15,mb1mx4.0/18,mbtmp4.8/15,Error ellipse: s-maj=22.1km s-min=10.2km az=157.0*

ISC 21 13:56:53.2±0.7**,17.93S**±0.09×**178.55W**±0.06**, h582**^{km}±9^{km}**,h563**^{km}±7.6^{km}**:pP-P,n152,**σ0^{s}**86**/87**, mb4.4**/46**,11C-9D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.64**	**59**	P	**P**	**13 58 48.5**	**-0.6**
	7.5nm,0.3s,baz=265,slow=2.3,SNR=30						
AFI				S	**S**	**14 00 21.5**	**0.0**
	1.8nm,0.3s,baz=125,slow=22,SNR=3.2						
AFI	**Afiamalu**	**7.64**	**59**	*e*P	**P**	**13 58 48.5**	**-0.6**
	169nm,0.9s						
AFI				*e*S	**S**	**14 00 19.8**	**-1.8**
DZM	**Mont Dzumac**	**14.70**	**251**	*e*P	**P**	**13 59 59.5**	**+0.8**
DZM	**Mont Dzumac**	**14.70**	**251**	P	**P**	**14 00 00.6**	**+1.8**
	1.5nm,0.3s,baz=80,slow=18,SNR=23						
NOUC	**Port Laguerre**	**14.83**	**251**	*e*P	**P**	**14 00 01.9**	**+1.9**
RAR	**Rarotonga**	**17.99**	**104**	P	**P**	**14 00 29.3**	**-0.9**
	0.5nm,0.3s,baz=142,slow=8.8,SNR=3.2						
ARMA	**Armidale**	**29.82**	**240**	⇓*i*P	**P**	**14 02 16.4**	**+0.6**
CNB	**Canberra Magne**	**33.31**	**232**	*e*P	**P**	**14 02 45.7**	**+0.5**
	31nm,0.5s,mb5.2						
CTA	**Charters Tower**	**33.31**	**261**	⇓*i*P	**P**	**14 02 45.6**	**+0.2**
	18nm,0.7s,mb4.8						
CTAO	**Charters Tower**	**33.31**	**261**	*e*P	**P**	**14 02 45.7**	**+0.4**
	15nm,0.6s,mb4.8						
CTAO				pP		14 04 22.8	
PMG	**Port Moresby**	**34.33**	**280**	P	**P**	**14 02 55.7**	**+1.8**
	67nm,0.8s,mb5.3,baz=88,slow=6.2,SNR=32						
PMG	**Port Moresby**	**34.33**	**280**	*e*P	**P**	**14 02 55.7**	**+1.8**
	70nm,0.8s,mb5.3						
PMG				*e*pP		14 04 34.3	
TOO	**Toolangi**	**37.05**	**231**	⇓*i*P	**P**	**14 03 16.3**	**+0.2**
	15nm,0.6s,mb4.7						
STKA	**Stephens Creek**	**38.50**	**241**	P	**P**	**14 03 28.6**	**+0.6**
	28nm,0.9s,mb4.8,baz=89,slow=8.9,SNR=56						
STKA	**Stephens Creek**	**38.50**	**241**	*e*P	**P**	**14 03 28.4**	**+0.4**
STKA				*e*pP		14 05 12.4	
WB2	**Warramunga Arr**	**44.49**	**260**	⇓*i*P	**P**	**14 04 14.5**	**-1.1**
WB2				*e*S	**S**	**14 10 06.5**	**-3.1**
WRAB	**Tennant Creek**	**44.49**	**260**	*e*P	**P**	**14 04 14.6**	**-1.0**
	12nm,0.4s,mb4.8						
WRA	**Warramunga Arr**	**44.50**	**260**	P	**P**	**14 04 14.6**	**-1.0**
	14nm,0.7s,mb4.6,baz=96,slow=7.2,SNR=90						
WRA				S	**S**	**14 10 08.1**	**-1.7**
	1.0nm,0.8s,baz=96,slow=12,SNR=4.6						
ASPA	**Alice Springs**	**44.66**	**254**	⇓*i*P	**P**	**14 04 16.4**	**-0.5**
ASPA				*e*S	**S**	**14 10 08.3**	**-3.6**
KAKA	**Kakadu**	**47.45**	**269**	⇓*i*P	**P**	**14 04 56.6**	**+18**
	23nm,0.4s,mb5.1						
FORT	**Forrest**	**49.88**	**245**	*e*P	**P**	**14 04 54.5**	**-1.6**
	30nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	**52.89**	**261**	*e*P	**P**	**14 05 17.1**	**-0.9**
	3.6nm,0.4s,mb4.0						
MJAR	**Matsushiro Arr**	**67.84**	**323**	P	**P**	**14 06 55.5**	**-0.4**
	3.4nm,0.5s,mb4.0,baz=25,slow=2.4,SNR=12						
FX1	**Attu Island--F**	**70.88**	**355**	*e*P	**P**	**14 07 12.1**	**-1.4**
ASAJ	**Asahikawa**	**71.23**	**331**	P	**P**	**14 07 17.3**	**+1.5**
	5.9nm,0.6s,mb4.3,baz=150,slow=19,SNR=7.0						
LRV	**Little Rabbit**	**76.62**	**44**	*e*P	**P**	**14 07 46.5**	**+0.3**
LRV				*e*PcP	PcP	14 07 55.0	-0.3
MWC	**Mount Wilson**	**77.45**	**48**	*e*P	**P**	**14 07 50.7**	**0.0**
CMB	**Columbia Colle**	**77.94**	**43**	*e*P	**P**	**14 07 53.2**	**0.0**
	12nm,1.0s,mb4.3						
MDJ	**Mudanjiang**	**78.13**	**325**	P	**P**	**14 07 54.8**	**+0.8**
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.2						
MDJ				AMB	AMB		
	comp=Z,50nm,4.4s						
MDJ	**Mudanjiang**	**78.13**	**325**	*e*P	**P**	**14 07 54.9**	**+0.9**
	comp=Z,14nm,1.0s,mb4.3						
MTUM	**Tungsten Hills**	**78.78**	**45**	*e*P	**P**	**14 07 58.2**	**+0.5**
MTUM				*e*PcP	PcP	14 08 04.2	-0.4
HUMO	**Hull Mountain**	**79.00**	**38**	*e*P	**P**	**14 07 58.9**	**+0.1**
	comp=Z,12nm,1.0s,mb4.2						
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**14 08 01.9**	**+0.3**
	comp=Z,5.9nm,0.7s,mb4.0,baz=215,slow=7.4,SNR=54						
MNV	**Mina**	**79.63**	**44**	*e*P	**P**	**14 08 02.2**	**+0.1**
	comp=Z,40nm,1.7s,mb4.5						
CN2	**Changchun**	**79.96**	**322**	*e*P	**P**	**14 08 04.1**	**+0.4**
CN2				*e*AP	pP	14 10 03.5	-4.0
CN2				*e*S	S	14 17 22.0	+1.8
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
TPNV	**Topopah Spring**	**80.13**	**46**	*e*P	**P**	**14 08 05.0**	**+0.3**
	comp=Z,3.5nm,0.8s,mb3.7						
MOD	**Modoc**	**80.19**	**40**	*e*P	**P**	**14 08 05.2**	**+0.3**
	comp=Z,15nm,0.7s,mb4.4						
NEN	**Nelson**	**80.45**	**48**	*e*P	**P**	**14 08 06.9**	**+0.5**
WVOR	**Wild Horse Val**	**81.51**	**40**	*e*P	**P**	**14 08 11.9**	**+0.3**
	comp=Z,16nm,0.9s,mb4.5						
TUC	**Tucson**	**81.82**	**52**	*e*P	**P**	**14 08 13.8**	**+0.3**
	comp=Z,8.7nm,1.0s,mb4.2						
ARUT	**Antelope Range**	**82.48**	**46**	*e*P	**P**	**14 08 17.4**	**+0.8**
PMR	**Palmer**	**82.65**	**14**	*e*P	**P**	**14 08 16.0**	**-1.0**
	comp=Z,8.3nm,0.6s,mb4.4						
ELK	**Elko**	**82.76**	**43**	*e*P	**P**	**14 08 17.9**	**-0.1**
	comp=Z,7.2nm,1.0s,mb4.2						
WUAZ	**Wupatki**	**82.86**	**49**	*e*P	**P**	**14 08 18.9**	**+0.3**
	comp=Z,12nm,1.0s,mb4.4						
MVU	**Marysvale**	**83.68**	**46**	*e*P	**P**	**14 08 23.3**	**+0.7**
	comp=Z,7.0nm,1.2s,mb4.1						
MSU	**Marysvale**	**83.71**	**46**	*e*P	**P**	**14 08 23.4**	**+0.6**
MAW	**Mawson**	**83.80**	**200**	P	**P**	**14 08 21.9**	**-0.6**
	comp=Z,1.1nm,0.8s,mb3.5,baz=78,slow=6.4,SNR=6.3						
HLID	**Hailey**	**84.73**	**41**	*e*P	**P**	**14 08 27.9**	**+0.3**
	comp=Z,6.7nm,0.8s,mb4.3						
THY	**Trims Highway**	**85.02**	**14**	*e*P	**P**	**14 08 28.3**	**-0.3**
HWUT	**Hardware Ranch**	**85.60**	**44**	*e*P	**P**	**14 08 31.7**	**-0.2**
	comp=Z,2.0nm,0.6s,mb3.9						
BNM	**Barren Site**	**85.75**	**52**	*e*P	**P**	**14 08 32.5**	**-0.4**
COLA	**College**	**85.82**	**13**	*e*P	**P**	**14 08 30.7**	**-1.7**
	comp=Z,6.7nm,0.6s,mb4.5						
ILAR	**Eielson Array**	**85.94**	**13**	P	**P**	**14 08 31.6**	**-1.4**
	comp=Z,5.0nm,0.5s,mb4.4,baz=220,slow=4.8,SNR=110						
PV01	**Paradox Valley**	**86.05**	**48**	*e*P	**P**	**14 08 34.2**	**+0.1**
LTX	**Lajitas**	**86.12**	**58**	*e*P	**P**	**14 08 35.5**	**+0.8**
	comp=Z,20nm,1.1s,mb4.7						
TXAR	**Lajitas Array**	**86.12**	**58**	P	**P**	**14 08 35.5**	**+0.8**
	comp=Z,8.9nm,0.7s,mb4.5,baz=221,slow=5.9,SNR=86						
ANMO	**Albuquerque**	**86.21**	**52**	*e*P	**P**	**14 08 34.8**	**-0.2**
	comp=Z,5.6nm,1.0s,mb4.2						
MCMT	**McKenzie Canyo**	**86.34**	**41**	*e*P	**P**	**14 08 35.8**	**+0.5**
GDL2	**Guadalupe Moun**	**86.69**	**55**	*e*P	**P**	**14 08 37.5**	**+0.1**
DLMT	**Dillon**	**86.76**	**40**	*e*P	**P**	**14 08 37.5**	**+0.2**
	comp=Z,14nm,1.1s,mb4.6						
TPAW	**Teton Pass**	**86.89**	**42**	*e*P	**P**	**14 08 38.3**	**+0.3**
	comp=Z,8.2nm,1.0s,mb4.4						
REDW	**Red Top Meadow**	**86.89**	**43**	*e*P	**P**	**14 08 38.2**	**+0.2**
	comp=Z,16nm,1.0s,mb4.7						
SNOW	**Snow King Moun**	**87.00**	**42**	*e*P	**P**	**14 08 39.3**	**+0.8**
	comp=Z,17nm,0.9s,mb4.8						
IMW	**Indian Meadow**	**87.09**	**42**	*e*P	**P**	**14 08 39.4**	**+0.5**
	comp=Z,17nm,1.0s,mb4.7						
CHMT	**Chamberlain Mo**	**87.13**	**39**	*e*P	**P**	**14 08 37.8**	**-1.2**
MOOW	**Moose Ponds**	**87.14**	**42**	*e*P	**P**	**14 08 39.5**	**+0.3**
	comp=Z,4.3nm,0.9s,mb4.2						
LOHW	**Long Hollow**	**87.17**	**42**	*e*P	**P**	**14 08 39.7**	**+0.4**
	comp=Z,3.2nm,0.6s,mb4.2						
HHC	**Hu-ho-hao-te**	**87.19**	**315**	*e*P	**P**	**14 08 37.1**	**-2.4**
HHC				AP	pP	14 10 43.3	-2.4
HHC				XP	sP	14 11 42.0	-1.2
HHC				XS		14 22 14.9	
HHC				AMB	AMB		
	comp=Z,140nm,4.8s						
QLMT	**Earthquake Lak**	**87.22**	**41**	*e*P	**P**	**14 08 40.6**	**+1.1**
CPRX	**Cap Rock**	**87.40**	**54**	*e*P	**P**	**14 08 40.5**	**-0.1**
PDAR	**Pinedale Array**	**87.46**	**43**	P	**P**	**14 08 40.4**	**-0.2**
	comp=Z,5.9nm,0.6s,mb4.5,baz=224,slow=3.1,SNR=54						
SMCO	**Snowmass**	**87.63**	**48**	*e*P	**P**	**14 08 41.1**	**-0.4**
HRY	**Holter Researc**	**87.88**	**39**	*e*P	**P**	**14 08 42.6**	**0.0**
SYO	**Syowa Base**	**89.11**	**193**	⇓P	**P**	**14 08 49.5**	**+1.7**
SNAA	**Sanae**	**90.58**	**179**	P	**P**	**14 08 52.9**	**-1.6**
VNA3	**Neumayer Olymp**	**90.73**	**176**	P	**P**	**14 08 54.7**	**-0.5**
LZH	**Lanzhou**	**90.80**	**308**	*e*P	**P**	**14 08 57.0**	**+0.6**
LZH				AP	pP	14 11 02.0	-1.5
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.8						
VNA2	**Neumayer--Watz**	**91.16**	**177**	⇑*i*P	**P**	**14 08 57.5**	**+0.3**
INK	**Inuvik**	**91.94**	**15**	*e*P	**P**	**14 08 59.5**	**-1.2**
	comp=Z,13nm,1.1s,mb4.9						
SONM	**Songino Array**	**93.48**	**319**	P	**P**	**14 09 09.4**	**+1.2**
	comp=Z,0.6nm,0.6s,mb3.8,baz=135,slow=5.3,SNR=5.7						
YKA	**Yellowknife Ar**	**94.41**	**25**	P	**P**	**14 09 11.2**	**-0.9**
	comp=Z,1.4nm,0.5s,mb4.3,baz=237,slow=4.7,SNR=12						
GTA	**Gaotai**	**94.95**	**310**	P	**P**	**14 09 19.8**	**+4.7**
GTA				AP	pP	14 11 20.8	-1.9
GTA				XP	sP	14 12 12.9	-6.7
GTA				PP	PP	14 13 20.3	+4.8
GTA				PPP	PPP	14 15 30.9	+5.9
GTA				S	S	14 19 47.5	+10
GTA				SS	SS	14 26 31.5	+6.8
GTA				AMB	AMB		
	comp=Z,110nm,6.9s						
MKAR	**Makanchi Array**	**109.06**	**314**	PKiKP		14 14 16.5	
	comp=Z,0.7nm,0.5s,baz=200,slow=1.9,SNR=4.9						
KEV	**Kevo**	**125.86**	**349**	*e*p	PKPdf	14 14 47.5	-1.4
ARCES	**ARCESS Array B**	**126.31**	**350**	PKP	PKPdf	14 14 49.8	0.0
	comp=Z,4.8nm,0.8s,baz=53,slow=1.6,SNR=13						
JOF	**Joensuu**	**130.54**	**343**	*e*p	PKPdf	14 14 57.3	-0.7
KAF	**Kangasniemi**	**132.55**	**344**	*e*p	PKPdf	14 15 00.3	-1.5
FINES	**FINESS Array B**	**133.17**	**344**	PKP	PKPdf	14 15 03.8	+0.9
	comp=Z,1.8nm,0.6s,baz=90,slow=1.9,SNR=8.3						
NB2	**NORSAR Subarra**	**136.38**	**353**	PKPabc	PKPdf	14 15 00.6	-8.3
	comp=Z,1.5nm,0.8s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**136.38**	**353**	PKP	PKPdf	14 15 09.4	+0.5
	comp=Z,1.4nm,0.6s,baz=14,slow=4.0,SNR=4.5						
BSEG	**Bad Segeberg**	**143.41**	**351**	*e*PKPbc	PKPbc	14 15 21.0	+0.4
DCN	**Croghan**	**144.01**	**9**	*e*P	PKPbc	14 15 22.0	-0.4
DLF	**Lyons Farm**	**144.16**	**8**	*e*P	PKPbc	14 15 23.0	+0.2
BURAR	**Bucovina Array**	**144.57**	**332**	⇓P	PKPdf	14 15 26.0	+2.3
OJC	**Ojcow**	**144.59**	**340**	*e*PKP	PKPdf	14 15 25.0	+1.4
BR131	**Keskin Array S**	**144.70**	**315**	*e*PKPdf	PKPdf	14 15 25.7	+1.6
BRTR	**Keskin Array B**	**144.70**	**315**	PKP	PKPdf	14 15 25.8	+1.6
	comp=Z,4.7nm,0.8s,baz=86,slow=1.9,SNR=16						
STHS	**Stebnicka Huta**	**144.76**	**337**	*e*PKP	PKPdf	14 15 26.0	+2.0
KOLS	**Kolonicke sedl**	**144.77**	**336**	*e*PKP	PKPdf	14 15 26.1	+2.1
KSP	**Ksiaz**	**145.09**	**344**	*e*PKP	PKPdf	14 15 26.9	+2.4
KSP	**Ksiaz**	**145.09**	**344**	*e*PKP	PKPdf	14 15 26.8	+2.3
CRVS	**Cervenica-Dubn**	**145.10**	**337**	*e*PKP	PKPdf	14 15 26.5	+1.9
VRI	**Vrincioaia**	**145.13**	**329**	⇓P	PKPdf	14 15 27.1	+2.4
CLZ	**Clausthal**	**145.44**	**350**	*e*PKPbc	PKPbc	14 15 27.7	+1.4
OKC	**Ostrava-Krasne**	**145.45**	**341**	⇑*e*PKPB	PKPbc	14 15 27.1	+0.7
CLL	**Collm**	**145.46**	**347**	⇑*i*PKP1	PKPbc	14 15 27.4	+1.1
UPC	**Upice**	**145.47**	**344**	⇑*e*PKPB	PKPbc	14 15 27.8	+1.4
UPC				*e*PKPAB	PKPab	14 15 29.8	-1.1
DPC	**Dobruska-Polom**	**145.53**	**343**	⇑*e*PKPB		14 15 28.1	
BRG	**Berggiesshubel**	**145.66**	**346**	*e*P	PKPdf	14 15 28.2	+2.8
BRG				*e*		14 15 34.7	
MORC	**Moravsky Berou**	**145.69**	**341**	*e*PKPdf	PKPdf	14 15 28.1	+2.6
KECS	**Kecovo**	**145.81**	**337**	*i* PKP	PKPdf	14 15 28.8	+3.0
PVCC	**Panska Ves**	**145.83**	**345**	⇑*e*PKPB	PKPbc	14 15 28.7	+1.4
VOIR		**146.26**	**330**	⇑P	PKPdf	14 15 30.3	+3.7
PRU	**Pruhonice**	**146.33**	**345**	⇑*e*PKPB	PKPbc	14 15 30.0	+1.5
PRU				*e*PKPAB	PKPab	14 15 32.6	-1.6
VYHS	**Vyhne**	**146.39**	**339**	*i* PKP	PKPdf	14 15 30.5	+3.7
TREC	**Trest**	**146.72**	**343**	⇑*e*PKPB	PKPbc	14 15 31.0	+1.6
SMOL	**Smolenice**	**146.84**	**340**	*e*PKP	PKPdf	14 15 32.7	+5.2
TNS	**Taunus Mts**	**147.30**	**352**	*e*PKPbc	PKPdf	14 15 32.7	+4.5
GRA1	**Grafenberg Arr**	**147.35**	**348**	*e*PKPbc	PKPdf	14 15 32.8	+4.5
KHC	**Kasperske Hory**	**147.36**	**345**	⇑*e*PKPB	PKPdf	14 15 32.9	+4.5
KHC				*e*PKPAB	PKPab	14 15 37.3	-1.0
WET	**Wettzell**	**147.52**	**346**	*e*PKPbc	PKPdf	14 15 33.1	+4.5
GEC2	**GERESS Array S**	**147.60**	**345**	*e*PKPbc	PKPdf	14 15 33.4	+4.7
GERES	**GERESS Array B**	**147.60**	**345**	PKPbc	PKPdf	14 15 33.4	+4.6
	comp=Z,9.4nm,0.7s,baz=21,slow=3.0,SNR=54						
GIVF	**Givet**	**147.79**	**356**	*e*PKP1	PKPdf	14 15 33.2	+4.2
BAIF	**Baives**	**147.87**	**357**	*e*PKP1	PKPdf	14 15 33.5	+4.4
	comp=Z,28nm,0.7s						
FUR	**Furstenfeldbru**	**148.79**	**347**	*e*PKPbc	PKPdf	14 15 36.5	+5.9
BFO	**Black Forest**	**149.16**	**351**	*e*PKPbc	PKPdf	14 15 37.1	+5.9
FLN	**La Foliniere**	**149.21**	**2**	*e*PKP1	PKPdf	14 15 36.4	+5.2
	comp=Z,45nm,0.9s						
CDF	**Champ du Feu**	**149.23**	**352**	*e*PKP1	PKPdf	14 15 36.8	+5.5
LDF	**La Druitiere**	**149.39**	**2**	*e*PKP1	PKPdf	14 15 36.7	+5.2
	comp=Z,13nm,0.6s						
ROSF	**Rostrenen**	**149.43**	**6**	*e*PKP1	PKPdf	14 15 37.0	+5.4
GRR	**Gorron**	**149.56**	**3**	*e*PKP1	PKPdf	14 15 37.2	+5.4
	comp=Z,19nm,0.6s						
SGMF	**Saint Gilles**	**149.58**	**5**	*e*PKP1	PKPdf	14 15 36.9	+5.1
DIVS	**Divcibare**	**149.60**	**333**	⇑*i*PKP	PKPdf	14 15 37.9	+5.9
HAU	**Haudompre**	**149.74**	**353**	*e*PKP1	PKPdf	14 15 37.8	+5.7
CRES	**Cresnjev**	**149.84**	**340**	*i* PKPbc	PKPdf	14 15 38.7	+6.3
QUIF	**Quistinic**	**149.85**	**6**	*e*PKP1	PKPdf	14 15 38.0	+5.7
HINF	**Hinteralfeld**	**149.87**	**353**	*e*PKP1	PKPdf	14 15 38.4	+6.1
LJU	**Ljubljana**	**149.94**	**342**	*i* PKPbc	PKPdf	14 15 38.8	+6.3
BOJS	**Bojanci**	**150.20**	**340**	*e*PKPbc	PKPdf	14 15 39.7	+6.8
LOR	**Lormes**	**150.67**	**357**	*e*PKP1	PKPdf	14 15 40.1	+6.5
	comp=Z,22nm,0.6s						
SSF	**Saint Saulge**	**150.90**	**357**	*e*PKP1	PKPdf	14 15 40.6	+6.7
	comp=Z,18nm,0.7s						
CABF	**La Chapelle**	**151.14**	**353**	*e*PKP1	PKPdf	14 15 41.6	+7.3
	comp=Z,17nm,0.7s						
MFF	**Saint Martin d**	**151.38**	**2**	*e*PKP1	PKPdf	14 15 41.8	+7.2
	comp=Z,41nm,1.0s						
BGF	**Bois d'Agland**	**151.43**	**358**	*e*PKP1	PKPdf	14 15 41.9	+7.2
TCF	**Toulx Ste Croi**	**151.72**	**359**	*e*PKP1	PKPdf	14 15 42.3	+7.2
LPL	**La Plagne**	**152.14**	**352**	*e*PKP1	PKPdf	14 15 44.1	+8.4
LPG	**La Plagne**	**152.16**	**352**	*e*PKP1	PKPdf	14 15 44.1	+8.4
ORIF	**Oris-en-Rattie**	**152.84**	**353**	*e*PKP1	PKPdf	14 15 45.5	+8.8
MBDF	**Montbardon**	**152.91**	**352**	*e*PKP1	PKPdf	14 15 45.8	+9.0
	comp=Z,16nm,0.8s						
VIVF	**Saint-Julien-l**	**153.02**	**355**	*e*PKP1	PKPdf	14 15 45.8	+8.8
LASF	**Ste Croix**	**153.85**	**356**	*e*PKP1	PKPdf	14 15 47.7	+10
	comp=Z,44nm,1.3s						

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*JMA **21** 14:23:43.2±0.2,23.15N×123.98E,h43^{km},M3.3*

*IDC **21** 14:23:47.5±5.6,24.01N×123.88E,mb3.6/4,mb1 3.9/6, mb1mx3.7/20,mbtmp3.7/6,ML3.8/2,Error ellipse: s-maj=116.5km s-min=26.8km az=173.0*

ISC 21 14:23:43.3±1.7**,23.18N**±0.07×**123.96E**±0.06**,h27**^{km}±9^{km}**, n14,**σ0^{s}**79**/22**,mb3.4**/4**,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATJ	**Hateruma jima**	**0.89**	**351**	P	**Pb**	**14 23 59.9**	**-0.1**
HATJ				S	**Sb**	**14 24 12.0**	**+0.6**
JKRS	**Kuro-shima**	**1.05**	**2**	P	**Pn**	**14 24 02.4**	**-0.1**
JKRS				*e*S	**Sb**	**14 24 16.7**	**+0.4**
IRIF	**Iriomote-Funau**	**1.17**	**350**	P	**Pn**	**14 24 04.3**	**+0.1**
IRIF				*e*S	**Sn**	**14 24 19.3**	**0.0**
JIJ	**Ishigaki jima**	**1.19**	**8**	P	**Pn**	**14 24 04.0**	**-0.4**
JIJ				*e*S	**Sn**	**14 24 18.9**	**-0.9**
YOJ	**Yonaguni jima**	**1.55**	**326**	P	**Pn**	**14 24 09.4**	**-0.1**
YOJ				*e*S	**Sn**	**14 24 28.3**	**-0.6**
JTJ	**Tarama**	**1.60**	**25**	P	**Pn**	**14 24 10.1**	**-0.3**
JTJ				*e*S	**Sn**	**14 24 30.9**	**+0.5**
JMJ	**Miyako jima 2**	**2.03**	**37**	*e*S	**Sn**	**14 24 41.2**	**-0.1**
JOGS	**Gusukube**	**2.06**	**40**	P	**Pn**	**14 24 16.5**	**-0.3**
JOGS				*e*S	**Sn**	**14 24 42.8**	**+1.0**
JOW	**Kunigami**	**5.34**	**46**	Pn	**Pn**	**14 25 00.9**	**-2.6**
	9.0nm,0.3s,baz=190,slow=14,SNR=9.2						
JOW				Sn	**Sn**	**14 25 59.2**	**-5.7**
	2.5nm,0.3s,baz=307,slow=30,SNR=2.7						
MJAR	**Matsushiro Arr**	**18.14**	**40**	P	**P**	**14 27 54.8**	**-0.3**
	0.3nm,0.3s,baz=218,slow=9.3,SNR=5.0						
SONM	**Songino Array**	**28.32**	**335**	P	**P**	**14 29 36.4**	**-0.4**
	0.4nm,0.5s,mb3.3,baz=157,slow=7.9,SNR=4.2						
MKAR	**Makanchi Array**	**40.83**	**316**	P	**P**	**14 31 24.8**	**+0.5**
	0.3nm,0.4s,mb3.3,baz=102,slow=9.2,SNR=7.7						
ZAL	**Zalesovo**	**42.48**	**326**	P	**P**	**14 31 38.2**	**+0.5**
	0.9nm,0.3s,mb3.9,baz=342,slow=12,SNR=2.1						
ILAR	**Eielson Array**	**68.93**	**27**	P	**P**	**14 34 50.0**	**+2.3**
	0.2nm,0.6s,mb3.3,baz=277,slow=7.3,SNR=3.6						

KRSC 21 14:26:05.2±0.6**,52.86N×159.14E,h93**^{km}±2^{km}**,ML3.8,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLC	**Nalytchevo**	**0.34**	**22**	*e*P	P	14 26 19.9	+0.7
NLC				*e*S	S	14 26 30.4	+0.6
PET	**Petropavlovsk**	**0.34**	**299**	*i* P	P	14 26 19.7	+0.5
PET				*e*S	S	14 26 29.7	-0.2
UGLR	**Uglovaya**	**0.40**	**331**	*i* P	P	14 26 20.4	+0.8
UGLR				*e*S	S	14 26 31.5	+1.0
SMAR	**Somma**	**0.45**	**333**	*e*P	P	14 26 20.6	+0.6
SMAR				*e*S	S	14 26 32.0	+0.8
AVH	**Avacha**	**0.47**	**329**	*i* P	P	14 26 21.0	+0.8

AVH				eS	S	14 26 32.8	+1.4
KOK	Koryaka	0.53	325	eP	P	14 26 21.3	+0.6
RUS	Russkaya	0.57	222	i P	P	14 26 21.7	+0.7
RUS				eS	S	14 26 33.5	+0.7
SPN	Mys Shipunski	0.58	66	i P	P	14 26 21.8	+0.7
SPN				eS	S	14 26 33.4	+0.4
KRMR	Karymshinskiy	0.61	268	eP	P	14 26 20.6	-0.8
KRMR				eS	S	14 26 32.3	-1.1
GRL	Gorelyy	0.72	245	i P	P	14 26 23.7	+1.3
GRL				eS	S	14 26 37.2	+2.1
GNL	Ganaly	1.10	320	i P	P	14 26 26.7	+0.1
KII	Karymskiy	1.19	9	eP	P	14 26 28.1	+0.3
KII				eS	S	14 26 44.8	+0.3
APC	Apacha	1.20	274	i P	P	14 26 28.5	+0.6
APC				eS	S	14 26 45.5	+0.7
APC				Smax			
	100nm,1.0s						
MIPR	Malaya Ipel'ka	1.57	249	i P	P	14 26 33.7	+1.3
MIPR				i S	S	14 26 55.0	+2.5
PAU	Pauzhetka	2.00	227	eP	P	14 26 39.8	+1.8
PAU				eS	S	14 27 04.1	+1.9
PAU				Smax			
	70nm,0.9s						
MKZ	Mys Kozlova	2.29	41	eP	P	14 26 42.5	+0.4
MKZ				eS	S	14 27 10.0	+0.6
TUMR	Tumrok	2.50	13	eP	P	14 26 46.3	+1.4
SKR	Severo-Kuril's	2.88	222	eS	S	14 27 21.7	-2.2
KMNR	Kamenistaya	2.97	12	eP	P	14 26 52.5	+1.0
KMNR				eS	S	14 27 27.0	+0.8
ALID	Alaid	2.99	230	eP	P	14 26 52.8	+1.1
ESO	Esso	3.08	355	i P	P	14 26 53.1	+0.1
KPT	Kopyto	3.18	11	eP	P	14 26 55.3	+1.0
KPT				eS	S	14 27 31.5	+0.3
KOZ	Kozyrevsk	3.23	7	eP	P	14 26 54.9	-0.2
KOZ				eS	S	14 27 30.9	-1.7
ZLN	Zelenaya	3.31	16	eP	P	14 26 58.0	+1.9
LGNR	Loginova	3.35	15	eS	S	14 27 37.7	+2.1
KRSR	Krestovskiy	3.46	13	P	P	14 27 00.1	+1.9
SRDR	Sredinnyy	3.48	5	eP	P	14 27 00.3	+1.9
SRDR				eS	S	14 27 39.4	+0.7
KBTR	Krutoberegovo	3.98	31	eP	P	14 27 05.3	0.0
BKI	Bering	4.66	57	eS	S	14 28 02.3	-5.7

*NEIC **21** 14:39:16.1, 32.54S×71.33W, h42^{km}, MD3.7(GUC), After GUC.*

GUC 21 14:39:16.1±1.0**, 32.54S×71.33W, h42^{km}±3^{km}, MD3.7, ML2.6, 4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.50	148	⇓iP	P	14 39 28.1	+1.2
ROCH				i S	S	14 39 36.7	+2.1
JACH	Jahuel	0.63	103	⇓iP	P	14 39 29.1	+0.4
JACH				i S	S	14 39 38.7	+0.9
CHNG	Los Chungos	0.68	347	⇓iP	P	14 39 29.4	+0.1
CHNG				i S	S	14 39 39.0	+0.1
CHNG				AMP		14 39 40.2	
	comp=N,367nm,0.3s						
PEL	Peldehue	0.81	138	eP	P	14 39 31.7	+0.6
PEL				i S	S	14 39 43.1	+1.1
PEL				AMP		14 39 44.1	
	comp=E,308nm,0.3s						
RCDM	Rinconada Maip	1.04	155	eP	P	14 39 35.1	+0.8
RCDM				i S	S	14 39 49.2	+1.2
RCDM				AMP		14 39 51.5	
	comp=E,411nm,0.1s						
TACH	Talagante	1.15	164	eP	P	14 39 36.5	+0.5
TACH				i S	S	14 39 52.0	+1.1
FCH	Farellones	1.17	132	⇓iP	P	14 39 37.3	+1.0
FCH				i S	S	14 39 52.9	+1.6
PCH	Pirque	1.27	148	i S	S	14 39 55.9	+2.0
CHCH	Chadas Angostu	1.50	158	eP	P	14 39 41.3	+0.3
TLL	Tololo Astrono	2.41	11	eP	P	14 39 55.2	+1.3
TLL				i S	S	14 40 23.9	+1.5
TLL				AMP		14 40 35.7	
	comp=N,55nm,0.4s						

*NEIC **21** 14:50:43.6, 17.93N×100.30W, h62^{km}, MD4.2(MEX), After MEX.*

MEX 21 14:50:43.6±1.4**, 17.93N×100.30W, h62^{km}±13^{km}, MD4.2, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.87	178	i P	P	14 50 58.4	-1.8
CAIG				i S	S	14 51 10.5	-2.1
PLIG	Platanillo	0.89	58	i P	P	14 50 59.2	-1.2
PLIG				i S	S	14 51 11.6	-1.3
ACX	Acapulco	1.11	161	i P	P	14 51 01.7	-1.8
ACX				i S	S	14 51 16.0	-2.3
ZIIG	Zihuatanejo	1.16	254	i P	P	14 51 01.8	-2.3
ZIIG				i S	S	14 51 17.2	-2.2
YAIG	Yautepec	1.49	51	i P	P	14 51 07.1	-1.7
YAIG				i S	S	14 51 25.6	-1.8
IIZ	Mezontepec	1.60	38	i P	P	14 51 14.3	+4.0
UNM	Universidad Na	1.75	37	i P	P	14 51 11.0	-1.4
UNM				i P		14 51 15.5	
UNM				i S	S	14 51 29.9	-3.6
UNM				i S	S	14 51 31.5	-2.1
MOIG	Morelia	1.94	334	i P	P	14 51 10.9	-4.0
MOIG				i S	S	14 51 37.3	-0.7
PPM	Popocatepetl	1.95	54	i P	P	14 51 14.0	-1.0
PPM				i P		14 51 14.1	
PPM				i P		14 51 18.3	
PPM				i S	S	14 51 35.0	-3.3
PPM				i S	S	14 51 35.5	-2.8
PTVM	Pico Tres Padr	2.00	34	eP	P	14 51 19.2	+3.4
RFVM	Rio Frio	2.02	46	i P	P	14 51 19.8	+3.8
VHO	Vista Hermosa	3.50	103	i P	P	14 51 36.6	-0.3
VHO				i S	S	14 52 13.8	-3.7
OXX	Oaxaca	3.51	103	i P	P	14 51 35.5	-1.6
CMIG	Matias Romero	5.23	98	i P	P	14 51 59.4	-1.7
CMIG				i S	S	14 52 56.2	-4.5

CASC 21 14:56:02.6±2.9**, 11.88N×87.14W, h34^{km}±65^{km}, MD3.8, ML3.8, 9C-10D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEON	Leon	0.59	24	⇓eP	P	14 56 15.0	+0.6
COPN	Copaltepe	0.62	61	eP	P	14 56 15.0	+0.2
MIRN	Miramar	0.70	37	⇑eP	P	14 56 16.4	+0.4
TEL3	Telica 3	0.75	23	⇑eP	P	14 56 17.2	+0.5
CNGN	Cerro Negro	0.76	35	⇑eP	P	14 56 17.1	+0.3
TELN	Telica	0.79	23	⇓eP	P	14 56 18.2	+1.0
MOMJ	Momotombo	0.79	48	⇑eP	P	14 56 17.4	+0.1
CRIN	San Cristobal	0.82	6	⇑eP	P	14 56 18.5	+0.7
XAVN	Gruta Xavier	0.84	71	⇑eP	P	14 56 17.9	-0.1
TICN	Ticuantepe	0.90	80	eP	P	14 56 18.7	-0.2
MGAN	Managua	0.92	73	⇑eP	P	14 56 18.9	-0.2
MGAN				eS	S	14 56 31.0	-0.3
MGAN				i		14 56 33.4	
	comp=E,3µm,0.5s						
MASN	Masaya	0.98	83	eP	P	14 56 19.8	-0.1
WILN	Americas 2	0.98	73	eP	P	14 56 20.3	+0.4
WILN				eS	S	14 56 34.0	+1.3
APON	Apoyo	1.05	88	⇓eP	P	14 56 20.6	-0.4
APON				eS	S	14 56 34.8	+0.1
PYTN	Playitas	1.25	58	⇓eP	P	14 56 24.4	+0.6
SSNN	San Juan del S	1.40	115	⇓eP	P	14 56 23.9	-2.0
CONN	Concepcion	1.52	102	⇓eP	P	14 56 26.2	-1.5
CNCH	Conchagua	1.55	334	⇑eP	P	14 56 32.1	+3.9
CNCH				eS	S	14 56 52.2	+5.0
MADN	Villa Maderas	1.64	106	⇓eP	P	14 56 27.9	-1.6
BLLM	Bellamira	1.89	326	⇓eP	P	14 56 37.6	+4.6
BLLM				eS	S	14 56 59.4	+3.5
VSM	San Miguel	1.90	325	⇓eP	P	14 56 38.0	+4.9
VSM				eS	S	14 57 01.0	+4.9
LCBS	La Ceiba	2.52	315	⇓eP	P	14 56 45.5	+3.5
LCBS				eS	S	14 57 13.9	+2.1
LFRS	El Faro	2.55	313	⇑eP	P	14 56 46.0	+3.5
LFRS				eS	S	14 57 15.5	+2.7
LBRS	Las Brisas	2.62	315	eP	P	14 56 46.3	+2.8
LBRS				eS	S	14 57 17.2	+2.7

*BER **21** 14:57:54.2±4.8, 61.89N×30.60E, ML2.3(NAO)*
*NAO **21** 14:57:55.2±2.4, 62.08N×30.31E, ML2.3*
*IDC **21** 14:57:57.6±2.2, 62.02N×30.07E, mb1 3.3/3, mb1mx3.1/21, mbtmp3.3/3, ML2.9/3, Error ellipse: s-maj=22.1km s-min=8.7km az=135.0*

HEL 21 14:57:51.6±0.6**, 61.77N×30.89E, ML2.1, ML2.3**(NAO)**, Explosion, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOF	Joensuu	1.17	9	eP	Pb	14 58 13.6	-0.9
JOF				eS	Sb	14 58 28.8	-1.2
VJF	Virojoki	2.03	234	eP	Pn	14 58 26.9	-0.6
VJF				eS	Sn	14 58 51.8	-2.2
FIA0	FINESS Array S	2.32	264	eP	Pn	14 58 31.4	-0.2
FIA0				eS	Sn	14 58 59.1	-2.2
FIA0				MSG		14 59 03.9	
	comp=Z,9.0nm,0.2s						
FIA0	FINESS Array S	2.32	264	Pn	Pn	14 58 31.5	-0.1
	baz=91,slow=16						
FIA0				Lg		14 59 00.9	
	baz=71,slow=22						
FIA0				Rg		14 59 11.3	
	baz=82,slow=37						
FINES	FINESS Array B	2.32	264	Pg	Pg	14 58 31.5	-6.5
	comp=Z,7.5nm,0.3s,baz=80,slow=16,SNR=282						
FINES				Lg		14 59 00.6	
	comp=Z,4.1nm,0.3s,baz=73,slow=26,SNR=21						
FINES				Rg		14 59 12.6	
	comp=Z,18nm,1.0s,baz=71,slow=34,SNR=8.5						
SUF	Sumiainen	2.42	295	MSG		14 59 06.3	
	comp=Z,11nm,0.2s						
KEF	Keuruu	2.87	281	MSG		14 59 16.6	
	comp=Z,4.7nm,0.2s						
APA0	Apatity Array	5.93	8	Pn	Pn	14 59 19.1	-3.8
	baz=197,slow=11						
APA0				Sn	Sn	15 00 24.6	-7.9
	baz=194,slow=28						
APA0				Lg		15 00 53.1	
APA0	Apatity Array	5.93	8	eP	Pn	14 59 19.1	-3.8
APA0				eS	Sn	15 00 24.6	-7.9
APA0				eSG	Sg	15 00 53.1	-16
ARA0	ARCESS Array S	8.11	346	Pn	P	14 59 49.1	-4.2
	baz=158,slow=14						
ARA0				Sn	Sn	15 01 16.2	-11
	baz=171,slow=28						
ARA0				Lg		15 01 58.0	
	baz=156,slow=37						
ARA0	ARCESS Array S	8.11	346	eP	P	14 59 49.1	-4.2
ARA0				eS	Sn	15 01 16.2	-11
ARA0				eSG		15 01 58.0	
ARCES	ARCESS Array B	8.11	346	Pn	P	14 59 49.2	-4.1
	comp=Z,0.1nm,0.3s,baz=156,slow=14,SNR=5.0						
ARCES				Sn	Sn	15 01 14.9	-12
	comp=Z,0.1nm,0.3s,baz=161,slow=22,SNR=3.4						
ARCES				Lg		15 01 58.2	
	comp=Z,0.5nm,0.3s,baz=163,slow=32,SNR=7.2						
HFS	Hagfors	8.53	267	Pn	P	14 59 54.9	-4.4
	baz=82,slow=11						
HFS				Sn	Sn	15 01 28.1	-9.2
	baz=77,slow=28						
HFS				Lg		15 02 15.8	
	baz=84,slow=22						
HFS	Hagfors	8.53	267	eP	P	14 59 54.9	-4.4
HFS				eS	Sn	15 01 28.1	-9.2
HFS				eSG		15 02 15.8	
HFS	Hagfors	8.53	267	Pn	P	14 59 55.0	-4.2
	comp=Z,0.1nm,0.3s,baz=84,slow=13,SNR=8.3						
HFS				Sn	Sn	15 01 24.0	-13
	comp=Z,0.1nm,0.3s,baz=77,slow=26,SNR=5.3						
HFS				Lg		15 02 11.3	
	comp=Z,0.0nm,0.3s,baz=90,slow=27,SNR=2.3						
NB2	NORSAR Subarra	9.46	274	eP	P	15 00 07.6	-4.5
NB2				eSG		15 02 42.6	
NB2	NORSAR Subarra	9.46	274	Pn	P	15 00 07.6	-4.5
	baz=80,slow=12						
NB2				Lg		15 02 42.6	
NOA	NORSAR Array B	9.46	274	Pn	P	15 00 07.6	-4.5
	comp=Z,0.2nm,0.3s,baz=79,slow=12,SNR=2.8						
NOA				Sn	Sn	15 01 44.9	-16
	comp=Z,0.1nm,0.3s,baz=313,slow=21,SNR=2.6						
NOA				Lg		15 02 38.0	
	comp=Z,0.2nm,0.3s,baz=99,slow=11,SNR=3.1						

IDC 21 15:04:08.0±1.2**, 22.58N×143.35E, mb3.8**/4**, mb1 3.9**/4**, mb1mx3.6**/20**, mbtmp3.8**/4**, Error ellipse: s-maj=58.6km s-min=24.8km az=72.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.17	192	P	P	15 12 10.2	-2.2
	0.5nm,0.5s,baz=6.4,slow=7.8,SNR=5.9						
STKA	Stephens Creek	54.17	182	P	P	15 13 35.4	-2.1
	0.9nm,0.3s,baz=356,slow=9.0,SNR=12						
MKAR	Makanchi Array	54.22	312	P	P	15 13 35.9	-1.7
	0.2nm,0.4s,baz=90,slow=8.9,SNR=4.2						
BVAR	Borovoye Array	62.11	319	P	P	15 14 30.6	-2.3
	0.9nm,0.3s,baz=98,slow=8.9,SNR=8.5						
LPAZ	La Paz	149.70	84	PKPbc	PKPdf	15 24 00.5	+3.0
	4.1nm,0.3s,baz=247,slow=3.1,SNR=26						

*NDI **21** 15:18:19.5±4.0, 34.86N×72.62E, h10^{km}, ML4.4, mb4.5(NEIC)*
*IDC **21** 15:18:20.8±0.7, 34.77N×73.18E, mb4.4/15, mb1 4.5/18, mb1mx4.4/23, mbtmp4.4/18, ML4.6/3, MS3.5/1, Ms1 3.4/1, ms1mx2.9/23, Error ellipse: s-maj=18.5km s-min=16.3km az=154.0*
*MOS **21** 15:18:21.3±1.5, 34.74N×73.27E, h20^{km}, mb4.6/8, Error ellipse: s-maj=10.5km s-min=6.1km az=91.3*
*NEIC **21** 15:18:22.0±0.4, 34.74N×73.23E, h10^{km}, mb4.5/11, Error ellipse: s-maj=9.1km s-min=5.1km az=46.0*
*BJI **21** 15:18:28.0, 34.89N×74.08E, h10^{km}, mB5.1, mb4.9, ML4.2, Ms4.3*
*NNC **21** 15:18:30.6±7.0, 35.05N×72.62E, h69^{km}±62^{km}, mpv4.6, Error ellipse: s-maj=54.9km s-min=42.9km az=43.0*

ISC 21 15:18:20.3±0.2**, 34.71N**±0.02×**73.15E**±0.04**, h10^{km}, n121, σ1^{s}55**/149**, mb4.4**/28**, 7C-7D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.05	175	⇓P	Pb	15 18 41.9	+1.8
CEP	Cherat	1.36	230	⇓P	Pb	15 18 44.5	-0.8
SRNI	Srinagar	1.53	113	eP	Pn	15 18 53.0	+5.2
SRNI				ex	Sg	15 19 18.0	+6.7
THW	Thamme Wali	2.24	212	⇑P	Pn	15 19 00.3	+2.3
JMU	Jammu	2.46	143	eP	Pn	15 19 08.0	+6.8
JMU				ex	Sg	15 19 41.0	-1.3
SARP	Sargodha	2.81	188	⇓P	Pn	15 19 07.9	+1.8
SARP				S	Sn	15 19 48.0	+7.6
SBDP	Sheikh Budin	3.10	220	⇓P	Pn	15 19 12.0	+1.7
THN	Thein Dam	3.12	136	eP	Pn	15 19 15.0	+4.5
THN				ex	Sg	15 19 57.5	-6.7
DLH	Dalhousie	3.19	132	ex	Pg	15 19 20.0	-4.0
DLH				ex	Sg	15 20 06.0	-0.6
DRP	Derazinda	3.85	221	⇓P	Pn	15 19 22.5	+1.5
BHK	Bhakra	4.28	139	ex	Pg	15 19 44.4	-1.3
BHK				ex	Sn	15 20 26.8	+9.3
SDNR	Sundarnagar	4.53	134	eP	Pn	15 19 33.4	+2.8
SDNR				eS	Sn	15 20 25.8	+1.9
SMLA	Simla	4.91	135	eP	Pn	15 19 38.3	+2.2
SMLA				eS	Sn	15 20 37.5	+3.9
KLP	Kalpa	5.32	125	eP	Pn	15 19 45.1	+3.4
DDI	Dehra Dun	6.02	135	ex	Pn	15 19 57.0	+5.3
DDI				eS	Sn	15 21 05.0	+3.5
BHGR	Bahadurgarh	6.81	151	eP	Pn	15 20 04.0	+1.2
NDI	New Delhi	6.93	149	eP	Pn	15 20 03.5	-1.0
NDI				ex	Sn	15 21 22.0	-2.2
KHET	Khetri	6.99	160	eP	Pn	15 20 04.6	-0.7
KHET				eS	Sn	15 21 23.1	-2.6
AYAN	Aya Nagar	7.07	150	eP	Pn	15 20 08.1	+1.7
AYAN				ex	Sn	15 21 25.9	-1.8
KUDL	Kundal	7.14	156	eP	Pn	15 20 08.1	+0.7
KUDL				eS	Sn	15 21 26.8	-2.5
SONA	Sohna	7.26	151	eP	Pn	15 20 09.9	+0.8
SONA				ex	Sn	15 21 30.6	-1.8
SONA				AML	AML	15 21 33.7	
	comp=E,477nm,0.6s						
AML	Almayashu	7.42	3	P	Pn	15 20 12.9	+1.5
	SNR=45						
KZA	Kyzart	7.54	12	P	Pn	15 20 14.9	+1.9
	SNR=7.6						
UCH	Uchtor	7.58	8	P	Pn	15 20 15.1	+1.5
	SNR=70						
PTH	Pithoragarh	7.89	129	eP	Pn	15 20 20.0	+2.1
PTH				ex	Sn	15 21 49.0	+0.7
ULHL	Ulahol	7.91	17	P	Pn	15 20 21.5	+3.4
	SNR=8.2						
EKS2	Erkin-Say	7.96	3	P	Pn	15 20 20.2	+1.4
	SNR=44						
AAK	Ala-Archa	7.98	7	P	Pn	15 20 20.8	+1.6
	SNR=15						
AAK	Ala-Archa	7.98	7	⇑P	Pn	15 20 20.0	+0.9
	comp=E,11nm,0.7s						
AAK				⇑S	Sn	15 21 47.0	-3.4
	comp=E,26nm,0.7s						
AAK	Ala-Archa	7.98	7	ePn	Pn	15 20 19.9	+0.7
	comp=E,13nm,0.6s						
AAK				eSn	Sn	15 21 49.2	-1.3
AAK	Ala-Archa	7.98	7	eP	Pn	15 20 19.9	+0.7
AAK				e		15 21 49.2	
AAK				pmax	pmax		
	comp=Z,13nm,0.6s						
JASL	Jaisalmer	8.00	195	eP	P	15 20 17.9	-1.5
KBK	Karagaybulak	8.06	9	P	P	15 20 21.7	+1.4
	SNR=15						
FRU	Bishkek	8.19	8	eP	P	15 20 24.5	+2.4
FRU				eS	Sn	15 21 57.0	+1.3
FRU				pmax	pmax		
	comp=Z,50nm,2.0s						
FRU				smax			
	comp=N,90nm,1.9s						
FRU				pmax	pmax		
	comp=E,190nm,2.0s						
AJM	Ajmer	8.30	171	eP	P	15 20 21.5	-2.1
AJM				eS	Sn	15 21 52.3	-6.1
CHMS	Chumysh	8.37	8	P	P	15 20 25.4	+0.8
	SNR=6.6						
TKM2	Tokmak 2	8.42	12	P	P	15 20 27.6	+2.3
	SNR=16						
AGRA	Agra	8.51	150	eP	P	15 20 26.6	0.0
AGRA				ex	x	15 21 59.0	
AGRA				AML	AML	15 22 02.5	
	comp=N,182nm,0.4s						
AGRA				AML	AML	15 22 04.2	
	comp=E,200nm,0.4s						
USP	Ospenovka	8.61	7	P	P	15 20 28.6	+0.7
	SNR=7.6						
KK31	Karatay Array	8.63	347	P	P	15 20 27.6	-0.6
	comp=E,34nm,0.6s,baz=168,slow=12,SNR=387						
KK31				S	Sn	15 22 01.7	-4.9
	comp=E,37nm,0.7s,baz=170,slow=22,SNR=8.7						
KOLN	Koldanda	11.30	125	ePn	P	15 21 03.6	-1.3
KOLN				eSn	S	15 23 06.1	-6.2
	comp=E,81nm,0.6s						
BHJ	Bhuj	11.81	196	eP	P	15 21 06.6	-5.3
GKN	Gorkha	11.87	121	ePn	P	15 21 10.8	-1.9
GKN				eSn	S	15 23 18.1	-8.1
	comp=E,178nm,0.6s						
ALBI	Allahabad	11.99	139	ex	S	15 23 23.0	-6.2
BHPL	Bhopal	12.02	161	eP	P	15 21 11.7	-3.0
DMN	Daman	12.44	121	ePn	P	15 21 18.2	-2.1
DMN				eSn	S	15 23 32.3	-7.7
KKN	Kakani	12.45	120	ePn	P	15 21 18.0	-2.5
KKN				eSn	S	15 23 32.5	-7.8
	comp=E,100nm,0.7s						
PKI	Pulchoki	12.68	121	ePn	P	15 21 21.8	-1.7
PKI				eSn	S	15 23 37.3	-8.4
	comp=E,90nm,0.6s						
GUN	Gumba	12.81	118	ePn	P	15 21 23.3	-2.0
GUN				eSn	S	15 23 39.5	-10
	comp=E,82nm,0.7s						
MK31	Makanchi Array	13.90	27	P	P	15 21 39.6	0.0
	comp=E,3.3nm,0.6s,baz=200,slow=13,SNR=40						
MKAR	Makanchi Array	13.90	27	Pn	P	15 21 39.4	-0.2
	comp=E,0.3nm,0.3s,baz=208,slow=16,SNR=15						
BLSP	Bilaspur	14.80	145	eP	P	15 21 55.2	+3.7
LSA	Lhasa	16.03	103	P	P	15 22 05.4	-2.0
LSA	Lhasa	16.03	103	ePn	P	15 22 05.5	-1.9
	comp=E,9.8nm,0.7s						
LSA				eSn	S	15 25 05.9	+0.7
LSA	Lhasa	16.03	103	eP	P	15 22 05.5	-1.9
LSA				e		15 25 05.9	
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
POO	Poona	16.13	178	ex	x	15 22 13.0	
POO				ex	x	15 25 14.0	
KURK	Kurchatov	16.49	12	ePn	P	15 22 11.2	-1.9
	comp=Z,11nm,1.0s						
KURK	Kurchatov	16.49	12	eP	P	15 22 11.2	-1.9
KURK				pmax	pmax		
	comp=Z,11nm,1.0s						
AB31	Akbulak array	17.50	330	P	P	15 22 23.1	-2.8
	comp=Z,8.2nm,0.8s,baz=147,slow=12,SNR=100						
AB31				⇑S	S	15 25 27.4	-12
	comp=Z,3.0nm,0.6s						
VOSK	Vostochnaya	18.08	356	⇓P	P	15 22 32.3	-0.8
	comp=Z,6.4nm,0.6s						
BVA0	Borovoye Array	18.42	355	⇓P	P	15 22 35.4	-1.9
	comp=Z,3.7nm,1.1s,baz=160,slow=10,SNR=99						
BVAR	Borovoye Array	18.42	355	P	P	15 22 35.3	-2.0
	comp=Z,4.7nm,0.3s,baz=163,slow=10,SNR=106						
BRVK	Borovoye	18.46	355	ePn	P	15 22 37.2	-0.6
	comp=Z,14nm,0.8s						
BRVK	Borovoye	18.46	355	eP	P	15 22 37.2	-0.6
BRVK				pmax	pmax		
	comp=Z,14nm,0.8s						
CHKZ	Chkalovo	19.05	355	⇑P	P	15 22 43.2	-1.7
	comp=Z,6.6nm,0.7s						
CHKZ	Chkalovo	19.05	355	eP	P	15 22 43.4	-1.5
	comp=Z,8.0nm,0.7s						
CHKZ	Chkalovo	19.05	355	eP	P	15 22 43.4	-1.5
CHKZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
AKTK	Aktyubinsk	19.21	329	P	P	15 22 45.6	-1.2
AKTO	Aktyubinsk	19.21	329	⇑P	P	15 22 45.4	-1.4
	comp=Z,6.0nm,0.8s						
AKTO	Aktyubinsk	19.21	329	P	P	15 22 45.6	-1.2
	comp=Z,6.3nm,0.3s,baz=134,slow=10,SNR=134						
ZAL	Zalesovo	20.90	20	P	P	15 23 03.8	-1.3
	comp=Z,20nm,0.5s,baz=254,slow=7.6,SNR=37						
ZAL				LR	LR	15 32 28.9	
	comp=Z,123nm,20.7s,baz=92,slow=41						
NVS	Novosibirsk	21.32	16	eP	P	15 23 06.9	-2.5
NVS				eS	S	15 26 57.2	-4.0
NVS				pmax	pmax		
	comp=Z,36nm,1.7s,mb4.4						
NVS				pmax	pmax		
	comp=N,69nm,1.8s						
NVS				smax			
	comp=N,24nm,2.0s						
NVS				smax			
	comp=E,7.0nm,1.6s						
GTA	Gaotai	21.75	70	eP	P	15 23 14.5	+0.7
GTA				AP		15 23 18.9	
GTA				XP		15 23 22.3	
GNI	Garni	23.15	292	P	P	15 23 30.7	+3.0
	comp=E,14nm,0.8s,mb4.5,baz=326,slow=4.6,SNR=8.2						
GNI	Garni	23.15	292	P	P	15 23 30.7	+3.0
ARU	Arti	23.91	340	eP	P	15 23 35.3	+0.6
	comp=E,21nm,0.8s,mb4.6						
ARU	Arti	23.91	340	⇑iP	P	15 23 35.4	+0.6
ARU				ePPP	PPP	15 24 12.3	-6.2
ARU				eS	S	15 27 50.7	+2.9
ARU				eSS	SS	15 28 32.3	-5.7
ARU				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.6						
LZH	Lanzhou	25.01	78	eP	P	15 23 48.5	+2.8
LZH				AMB	AMB		
	comp=Z,40nm,1.6s,mb4.7						
LZH				AMB	AMB		
	comp=Z,130nm,4.5s						
ZAK	Zakamensk	26.92	45	eP	P	15 23 59.5	-3.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.6						
SONM	Songino Array	27.98	52	P	P	15 24 14.2	+1.2
	comp=Z,1.0nm,0.6s,mb3.6,baz=252,slow=8.9,SNR=14						
ULN	Ulaanbaatar	28.42	52	eP	P	15 24 20.3	+3.4
ENH	Enshi	30.86	88	eP	P	15 24 39.4	+0.5
	comp=Z,7.9nm,0.8s,mb4.6						
BRTR	Keskin Array B	31.68	291	P	P	15 24 47.2	+1.2
	comp=Z,0.9nm,0.8s,mb3.7,baz=90,slow=8.6,SNR=3.8						
BOD	Bodaibo	35.68	37	eP	P	15 25 19.0	-1.4
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
NJ2	Nanjing	38.01	81	eP	P	15 25 42.1	+1.8
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						

JOF	**Joensuu**	38.29	330	ep	P	15 25 41.6	-0.7
FINES	**FINESS Array B**	39.94	327	P	P	15 25 55.6	-0.5
	comp=Z,2.0nm,0.6s,mb4.0,baz=116,slow=9.5,SNR=18						
KAF	**Kangasniemi**	40.08	328	ep	P	15 25 55.9	-1.3
	comp=Z,2.2nm,0.7s,mb4.0						
KAF	**Kangasniemi**	40.08	328	eP	P	15 25 55.9	-1.3
KAF				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.0						
SSE	**Sheshan**	40.19	81	P	P	15 26 00.4	+1.9
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,90nm,3.3s						
KEV	**Kevo**	43.11	338	ep	P	15 26 20.8	-1.1
ARCES	**ARCESS Array B**	43.46	338	P	P	15 26 24.8	0.0
	comp=Z,7.6nm,0.4s,mb4.7,baz=115,slow=8.1,SNR=56						
ARCES	**ARCESS Array B**	43.46	338	P	P	15 26 24.8	0.0
ARE0	**ARCESS Array S**	43.46	338	eP	P	15 26 24.9	+0.1
YAK	**Yakutsk**	44.43	34	eP	P	15 26 31.4	-1.3
	comp=Z,16nm,0.6s,mb4.9						
YAK	**Yakutsk**	44.43	34	eP	P	15 26 32.1	-0.6
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
TIXI	**Tiksi**	46.79	21	eP	P	15 26 47.7	-3.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NB2	**NORSAR Subarra**	46.86	324	P	P	15 26 50.5	-1.5
	comp=Z,3.9nm,0.6s,mb4.5,baz=94,slow=7.4						
NOA	**NORSAR Array B**	46.86	324	P	P	15 26 51.1	-0.8
	comp=Z,4.2nm,0.7s,mb4.5,baz=96,slow=7.6,SNR=19						
NAO	**NORSAR Subarra**	47.03	324	P	P	15 26 50.5	-2.8
	comp=Z,3.9nm,0.6s,mb4.5						
NAO	**NORSAR Subarra**	47.03	324	P	P	15 26 50.5	-2.8
NAO				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
KMBO	**Kilima Mbogo**	48.99	231	P	P	15 27 11.2	+1.9
	comp=Z,1.2nm,0.9s,mb3.9,baz=40,slow=12,SNR=3.9						
MAT	**Matsushiro**	51.99	68	P	P	15 27 31.6	-0.2
MAT	**Matsushiro**	51.99	68	eP	P	15 27 32.0	+0.2
MJAR	**Matsushiro Arr**	51.99	68	P	P	15 27 32.1	+0.3
	comp=Z,9.8nm,0.7s,mb4.8,baz=290,slow=10.0,SNR=15						
YSS	**Yuzh-Sakhalins**	52.44	54	eP	P	15 27 32.0	-3.1
SEY	**Seymchan**	54.94	33	eP	P	15 27 54.7	+1.4
BILL	**Bilibino**	59.45	26	eP	P	15 28 25.6	+0.5
	comp=Z,3.3nm,0.4s,mb4.7						
BILL	**Bilibino**	59.45	26	eP	P	15 28 25.6	+0.4
BILL				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb4.7						
INK	**Inuvik**	75.38	10	eP	P	15 30 05.4	+0.2
	comp=Z,11nm,0.6s,mb5.0						
INK	**Inuvik**	75.38	10	eP	P	15 30 05.4	+0.3
INK				pmax	pmax		
	comp=Z,11nm,0.6s						
ILAR	**Eielson Array**	76.01	17	P	P	15 30 08.9	+0.1
	comp=Z,1.0nm,0.5s,mb4.0,baz=305,slow=5.1,SNR=22						
DBIC	**Dimbokro**	76.38	269	P	P	15 30 11.2	-0.7
	comp=Z,3.4nm,0.8s,mb4.3,baz=358,slow=6.5,SNR=4.6						
BOSA	**Boshof**	77.55	222	P	P	15 30 18.6	+0.4
	comp=Z,2.3nm,0.5s,mb4.4,baz=5.9,slow=7.1,SNR=9.5						
WRA	**Warramunga Arr**	79.55	123	P	P	15 30 29.5	+0.2
	comp=Z,1.3nm,0.4s,mb4.2,baz=323,slow=4.9,SNR=8.7						
WB2	**Warramunga Arr**	79.56	123	eP	P	15 30 29.5	+0.2
ASPA	**Alice Springs**	81.79	126	eP	P	15 30 41.1	+0.1
YKA	**Yellowknife Ar**	82.94	4	P	P	15 30 46.0	-0.1
	comp=Z,1.7nm,0.4s,mb4.4,baz=346,slow=5.5,SNR=29						
YKA	**Yellowknife Ar**	82.94	4	P	P	15 30 46.0	-0.1
SCHQ	**Schefferville**	84.42	338	P	P	15 30 55.4	+1.6
	comp=Z,4.2nm,0.9s,mb4.5,baz=121,slow=5.0,SNR=4.2						
SDMD	**Soldier’s Deli**	101.20	337	ePdif	P	15 32 14.9	+2.6

NIED ***21*** *15:24:00, 38.20N×144.80E, h8^{km}, Mw3.6 Best double couple: $M_0 2.55\times10^{14}$ NP1: ϕ_s193°, δ69°, λ-93°. NP2: ϕ_s21°, δ21°, λ-83°.*

JMA ***21*** *15:24:21.7±0.2, 38.17N×144.77E, h57^{km}, M3.8*

ISC 21 15:24:22.1±2.3**, 38.3N**±0.1×**144.8E**±0.2**, h57**^{km}**, n5, σ0^{s}19**/10**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	2.58	290	P	P	15 25 02.6	+0.1
OFUJ				S	S	15 25 32.9	+0.2
MIYJ	**Miyakonagasawa**	2.67	301	P	P	15 25 03.5	-0.2
MIYJ				S	S	15 25 34.8	-0.1
JIO	**Ouri**	2.71	275	P	P	15 25 04.1	-0.2
JIO				S	S	15 25 35.8	-0.2
JMK	**Ichinoseki**	2.88	285	P	P	15 25 06.9	+0.1
JMK				eS	S	15 25 40.6	+0.2
MAT	**Matsushiro**	5.51	254	P	P	15 25 43.7	+0.2
MAT				S	S	15 26 46.3	-0.1

NIED ***21*** *15:36:00, 30.90N×130.30E, h150^{km}, Mw6.2 Best double couple: $M_0 2.28\times10^{18}$ NP1: ϕ_s3°, δ81°, λ82°. NP2: ϕ_s227°, δ12°, λ134°.*

SKO ***21*** *15:36:04.7, 29.09N×131.90E*

DHMR ***21*** *15:36:15.8±2.6, 31.16N×130.02E, h10^{km}, mb6.3*

CRAAG ***21*** *15:36:25.2, 31.07N×130.08E, Mb6.1*

BJI ***21*** *15:36:25.6, 30.65N×130.61E, h145^{km}, mB6.3, mb6.0*

BGS ***21*** *15:36:27.4, 30.14N×129.42E, h145^{km}, mb6.0*

MOS ***21*** *15:36:27.6±0.9, 30.97N×130.01E, h126^{km}, mb6.0/111, Error ellipse: s-maj=6.1km s-min=3.3km az=113.4*

NEIC ***21*** *15:36:31.0±0.1, 31.02N×130.00E, mb5.9/173, MW6.1, MW6.2(NIED), Error ellipse: s-maj=3.2km s-min=2.8km az=165.0, Moment Tensor Solution. s38 Moment tensor: Scale 10^{18}Nm; M_{rr}0.63; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-0.57; $M_{r\theta}$0.01; $M_{\theta\phi}$-0.61; $M_{\phi r}$1.70; Best double couple: $M_0 1.9\times10^{18}$ NP1: ϕ_s244°, δ20°, λ149°. NP2: ϕ_s4°, δ80°, λ72°. Principal axes: T 1.9, Plg52°, Azm253°; N .01, Plg18°, Azm7°; P -1.9, Plg32°, Azm108°;*

NEIC Felt in wide areas of Kyushu. Also felt on Shikoku. Recorded [3 JMA] in Kagoshima, Miyazaki and Oita, [2 JMA] in Kumamoto and [1 JMA] in Fukuoka Prefectures. Also recorded [3 JMA] in Kochi and [2 JMA] in Ehime Prefectures, Shikoku. Recorded [2 JMA] in Hiroshima and Yamaguchi and [1 JMA] in Shimane Prefectures, Honshu. Also recorded [3 JMA] on Tanega-shima and Yaku-shima; [1 JMA] on Kuchinoerabu-jima.

IDC ***21*** *15:36:30.7±0.5, 30.96N×130.12E, h146^{km}±3^{km}, mb5.6/20, mb1 5.7/27, mb1mx5.7/29, mbtmp6.1/27, MS5.2/18, Ms1 5.2/18, ms1mx4.9/38 Error ellipse: s-maj=8.8km s-min=6.0km az=82.0*

HRVD ***21*** *15:36:31.0±0.1, 30.97N×130.31E, h155^{km}, MW6.2/91, Centroid moment Tensor Solution. LP body waves: s87,c217;Mantle waves: s91,c364; Half duration: 2^{s}9 Moment tensor: Scale 10^{18}Nm; M_{rr}0.52±.01; $M_{\theta\theta}$-0.28±.01; $M_{\phi\phi}$-0.23±.02; $M_{r\theta}$-0.01±.01; $M_{\theta\phi}$-0.56±.01; $M_{\phi r}$2.02±.01; Best double couple: $M_0 2.134\times10^{18}$ NP1: ϕ_s253°, δ17°, λ159°. NP2: ϕ_s4°, δ84°, λ75°. Principal axes: T 2.249, Plg49°, Azm257°; N -.23, Plg15°, Azm5°; P -2.019, Plg37°, Azm107°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

JMA ***21*** *15:36:31.8±0.1, 30.95N×130.34E, h146^{km}±1^{km}, M6.0 Broadband fault plane solution: P waves. NP1: ϕ_s248°, δ44°, λ156°. NP2: ϕ_s355°, δ74°, λ48°. Principal axes: T Plg45°, Azm224°; N Plg39°, Azm9°; P Plg18°, Azm115°;*

JMA Felt III J1.

ISC 21 15:36:29.7±0.1**, 30.98N**±0.01×**130.12E**±0.02**, h146**^{km}**, h146**^{km}±.7^{km}**:pP-P, n1260, σ1^{s}04**/1259**, mb5.9**/271**, 265C-52D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKC	**Kuchinoerabu**	0.52	173	P	P	15 36 53.0	+1.8
JKC				S	S	15 37 08.5	+0.8
JSU	**Suzuyama**	0.59	29	⇑P	P	15 36 53.1	+1.5
JSU				S	S	15 37 09.5	+1.1
JTSR	**Tashiro 2**	0.71	75	⇑P	P	15 36 52.7	+0.4
JTSR				S	S	15 37 08.7	-0.8
JSJ	**Shimokoshiki**	0.78	333	⇓P	P	15 36 55.2	+2.5
JSJ				S	S	15 37 13.5	+3.2
JTN	**Tanegashima 3**	0.81	114	⇑P	P	15 36 53.4	+0.5
JTN				S	S	15 37 10.4	-0.2
JNAR	**Kushima--Naru**	1.12	61	⇑P	P	15 36 56.4	+0.9
JNAR				S	S	15 37 15.9	+0.6
JNN	**Nakanoshima**	1.16	191	⇓P	P	15 36 57.6	+1.8
JNN				S	S	15 37 18.1	+2.2
JZO	**Okuchi**	1.22	19	⇑P	P	15 36 58.3	+1.8
JZO				S	S	15 37 18.8	+1.8
JTZ	**Takazaki**	1.23	42	⇑P	P	15 36 57.7	+1.1
JTZ				S	S	15 37 17.4	+0.2
JHD	**Hondo**	1.48	0	⇑P	P	15 37 01.6	+2.5
JIU2	**Izumi 2**	1.67	21	⇑P	P	15 37 03.1	+2.0
JIU2				S	S	15 37 27.0	+1.7
JTSN	**Tsuno**	1.73	43	⇑P	P	15 37 02.1	+0.3
JKIT	**Kitakata**	1.99	34	⇑P	P	15 37 05.5	+0.7
JFU	**Fukue jima 2**	2.04	325	⇓P	P	15 37 08.4	+3.0
JUR	**Ureshino**	2.11	356	S	S	15 37 38.7	+4.3
JNU	**Nakatsue**	2.23	17	P	P	15 37 09.4	+1.6
	2µm,0.3s,baz=186,slow=16,SNR=7154						
JNU				S	S	15 37 37.1	+0.2
	780nm,0.3s,baz=176,slow=25,SNR=3.9						
JNU				LR	LR	15 38 03.3	
	comp=Z,74µm,21.8s,baz=191,slow=41						
JFI	**Itaya**	2.45	5	⇑P	P	15 37 12.8	+2.2
JUS	**Usuki**	2.50	33	⇑P	P	15 37 10.9	-0.3
OIT2	**Oita 2**	2.55	26	P	P	15 37 12.5	+0.6
JAM	**Amami Oshima**	2.60	190	⇑P	P	15 37 13.2	+0.6
JFA	**Akaike**	2.78	12	⇑P	P	15 37 16.3	+1.5
JII	**Iki**	2.82	353	⇓P	P	15 37 17.8	+2.4
JTO	**Tosashimizu**	2.95	50	⇑P	P	15 37 15.3	-1.7
UWA2	**Uwa jima 2**	3.08	43	⇑P	P	15 37 16.6	-2.1
JKD	**Kudamatsu**	3.40	25	P	P	15 37 22.0	-0.9
JKU	**Kubokawa**	3.41	46	P	P	15 37 21.4	-1.6
JHIK	**Hikimi**	3.85	23	⇑P	P	15 37 28.2	-0.6
MRT2	**Murotomisaki 2**	4.17	54	⇑P	P	15 37 31.6	-1.4
JOW	**Kunigami**	4.44	202	P	P	15 37 36.8	+0.2
	1µm,0.3s,baz=84,slow=12,SNR=675						
JOW				S	S	15 38 24.6	-3.5
	565nm,0.3s,baz=120,slow=8.7,SNR=6.0						
JAI	**Aioi**	4.61	51	⇑P	P	15 37 37.7	-1.1
JJS	**Sakaide**	4.66	43	⇑P	P	15 37 38.3	-1.2
JAD	**Aida**	5.21	40	⇑P	P	15 37 45.3	-1.5
JWM	**Minabe**	5.27	56	⇑P	P	15 37 45.9	-1.6
JAJ2	**Tsuna**	5.28	48	⇑P	P	15 37 46.4	-1.3
JWZ	**Kozaga**	5.38	60	⇑P	P	15 37 47.0	-2.0
JHE	**Heguri**	5.94	51	⇑P	P	15 37 55.1	-1.4
JKSM	**Kasumi**	5.96	38	⇑P	P	15 37 56.0	-0.8
JKN2	**Miekihoku**	6.12	56	⇑P	P	15 37 57.3	-1.7
JWT	**Wachi**	6.16	45	⇑P	P	15 37 58.6	-0.9
JKY	**Yasaka**	6.23	41	P	P	15 37 59.7	-0.8
TSUJ	**Tsu 2**	6.47	53	⇑P	P	15 38 02.3	-1.4
JIE	**Ise**	6.51	57	⇑P	P	15 38 03.1	-1.1
JFM	**Mihama**	6.68	46	⇑P	P	15 38 06.0	-0.5
JFM				S	S	15 39 18.6	-3.1
KS15	**Wonju Array Si**	6.70	345	Pn	P	15 38 09.9	+3.1
INCN	**Inchon**	7.10	337	Pn	P	15 38 15.1	+2.9
INCN				eSn	S	15 39 30.5	-1.2
JGM	**Miyama**	7.25	48	P	P	15 38 14.2	0.0
JGM				S	S	15 39 33.4	-2.0
JAO	**Obara**	7.35	53	P	P	15 38 14.2	-1.4
TK04	**Tokai 4**	7.36	61	⇓P	P	15 38 15.5	-0.2
JKG	**Kaga**	7.39	43	P	P	15 38 16.0	-0.1
HMMJ	**Hamamatsu 2**	7.46	57	P	P	15 38 15.6	-1.5
JGF	**Kuroka**	7.61	51	P	P	15 38 18.8	-0.2
SSE	**Sheshan**	7.67	273	P	P	15 38 21.5	+1.7
SSE				XP		15 38 54.9	
SSE				S	S	15 39 45.5	0.0
SSE				AMB	AMB		
	comp=Z,430nm,0.9s						
SSE				AMB	AMB		
	comp=Z,3µm,8.8s						
SSE				LR	LR		
	comp=N,8µm,26.6s						
SSE				LR	LR		
	comp=E,15µm,26.5s						
SSE				LR	LR		
	comp=Z,17µm,20.3s						
JSG	**Sagara**	7.72	59	⇑P	P	15 38 19.8	-0.7
JNY	**Yasuok**	7.82	54	⇑P	P	15 38 20.5	-1.3
SHZ3	**Shizuoka 3**	7.92	57	P	P	15 38 21.8	-1.3
JGN	**Niukaw**	7.96	47	P	P	15 38 23.2	-0.4
JTT	**Ttatey**	8.21	45	P	P	15 38 27.7	+0.7
JKO	**Kozu shima**	8.25	65	⇓P	P	15 38 27.7	+0.2
JIZS	**Izushimoda**	8.25	61	P	P	15 38 26.4	-1.2
JNT	**Takato**	8.29	52	⇑P	P	15 38 28.3	+0.3
JHJ	**Hachijo jima 2**	8.47	73	P	P	15 38 31.8	+1.3
	comp=Z,268nm,0.3s,baz=246,slow=7.3,SNR=76						
JHJ				S	S	15 40 05.4	+0.7
	comp=Z,181nm,0.3s,baz=81,slow=21,SNR=4.4						
JNG	**Nsakai**	8.57	49	P	P	15 38 31.7	0.0
JOD2	**Odawara 2**	8.65	58	P	P	15 38 32.4	-0.4
JIM2	**Oshima 3**	8.67	62	P	P	15 38 33.0	-0.1
MAJO	**Matsushiro**	8.72	48	Pn	P	15 38 34.0	+0.2
MAJO				eSn	S	15 40 05.3	-5.3
MAT	**Matsushiro**	8.72	48	P	P	15 38 32.6	-1.1
MAT				S	S	15 40 08.0	-2.6
MAT	**Matsushiro**	8.72	48	P	P	15 38 33.9	+0.2
MAT				S	S	15 40 06.9	-3.7
MAT	**Matsushiro**	8.72	48	eP	P	15 38 33.0	-0.7
	comp=Z,226nm,0.7s						
MAT				eS	S	15 40 08.0	-2.6
MAT	**Matsushiro**	8.72	48	eP	P	15 38 33.0	-0.7
MAT				eS	S	15 40 08.0	-2.6
MAT				pmax	pmax		
	comp=Z,226nm,0.7s						
MJAR	**Matsushiro Arr**	8.72	48	P	P	15 38 33.3	-0.5
	comp=Z,46nm,0.3s,baz=239,slow=13,SNR=241						
MJAR				S	S	15 40 05.9	-4.7
	comp=Z,135nm,0.3s,baz=338,slow=23,SNR=8.2						
JSZ	**Suzu**	8.80	41	P	P	15 38 35.9	+1.0
JSZ				S	S	15 40 12.4	-0.2
JGK	**Kuni**	9.01	50	P	P	15 38 38.4	+0.8
JJN	**Nakama**	9.04	45	P	P	15 38 39.2	+1.2
JAG	**Ashikaga**	9.48	53	P	P	15 38 44.3	+0.5
JAG				S	S	15 40 43.6	+15
JKT	**Katashina**	9.53	50	P	P	15 38 45.9	+1.5
JIZZ	**Izumozaki**	9.65	45	P	P	15 38 47.7	+1.7
JHK	**Hiroka**	9.66	47	P	P	15 38 47.3	+1.1
NJ2	**Nanjing**	9.68	279	eP	P	15 38 49.0	+2.6
NJ2				XP		15 39 24.5	
NJ2				S	S	15 40 36.0	+2.6
NJ2				AMB	AMB		
	comp=Z,210nm,0.8s						
NJ2				AMB	AMB		
	comp=Z,4µm,8.0s						
NJ2				LR	LR		
	comp=N,34µm,11.1s						
NJ2				LR	LR		
	comp=E,47µm,15.0s						
NJ2				LR	LR		
	comp=Z,26µm,16.3s						
TATO	**Taipei**	9.70	234	Pn	P	15 38 49.4	+2.7
JSD	**Sado**	9.72	41	P	P	15 38 47.3	+0.3
YHNB	**Yeheng**	9.97	233	ePn	P	15 38 51.4	+1.1
NACB	**Ninganchiao**	10.16	230	ePn	P	15 38 50.3	-2.4
NACB				eSn	S	15 40 43.3	-1.4
JHO	**Hitachi**	10.34	54	P	P	15 38 55.2	0.0
DL2	**Dalian**	10.53	321	i PR		15 39 00.8	
DL2				XP		15 39 36.4	
DL2				S	S	15 40 57.3	+3.7
DL2				SCP		15 48 06.8	
DL2				SCS	ScS	15 51 39.3	-1.6
DL2				AMB	AMB		
	comp=Z,240nm,0.9s						
DL2				AMB	AMB		
	comp=Z,3µm,4.9s						
CBIJ	**Chichi jima**	11.24	107	P	P	15 39 08.0	+1.0
	comp=Z,118nm,0.3s,baz=308,slow=2.3,SNR=88						
CBIJ				S	S	15 41 16.0	+5.6
	comp=Z,30nm,0.3s,baz=100,slow=23,SNR=3.7						
JHHJ	**Haha-jima-NKT**	11.43	109	⇓P	P	15 39 10.6	+1.2
QZH	**Quanzhou**	11.83	242	⇑iP	P	15 39 16.9	+2.2
QZH				S	S	15 41 27.5	+3.3
QZH				LR	LR		
	comp=N,40µm,5.7s						
QZH				LR	LR		
	comp=E,21µm,6.1s						
QZH				LR	LR		
	comp=Z,25µm,9.5s						
SNY	**Shenyang**	12.03	336	⇓P	P	15 39 21.3	+4.0
SNY				S	S	15 41 37.3	+8.4
SNY				AMB	AMB		
	comp=Z,170nm,1.0s						
SNY				AMB	AMB		
	comp=Z,2µm,4.9s						
SNY				LR	LR		
	comp=E,27µm,7.5s						
SNY				LR	LR		
	comp=Z,10µm,8.5s						
BBP	**Basco**	12.81	217	eP	P	15 39 24.0	-3.5
CN2	**Changchun**	13.32	345	⇑P	P	15 39 38.3	+4.4
CN2				XP		15 40 13.8	
CN2				eS	S	15 42 07.1	+8.2
CN2				SCP		15 48 10.4	
CN2				SCS	ScS	15 51 45.1	-1.6
CN2				AMB	AMB		
	comp=Z,1µm,1.3s						
CN2				AMB	AMB		
	comp=Z,2µm,6.0s						
CN2				LR	LR		
	comp=N,21µm,10.0s						
CN2				LR	LR		
	comp=E,32µm,10.0s						
CN2				LR	LR		
	comp=Z,18µm,12.0s						
WHN	**Wuhan**	13.57	272	⇑P	P	15 39 39.0	+1.8
WHN				S	S	15 42 17.1	+12
WHN				AMB	AMB		
	comp=Z,18µm,12.8s						
WHN				LR	LR		
	comp=Z,24µm,11.6s						
MDJ	**Mudanjiang**	13.62	358	P	P	15 39 41.4	+3.7
MDJ				XP		15 40 20.8	
MDJ				S	S	15 42 18.8	+13
MDJ				SCP		15 48 10.8	
MDJ				PCS		15 48 25.0	
MDJ				SCS	ScS	15 51 46.6	-0.8
MDJ				AMB	AMB		
	comp=Z,100nm,1.6s						
MDJ				AMB	AMB		
	comp=Z,2µm,7.6s						
MDJ				LR	LR		
	comp=N,8µm,11.4s						
MDJ				LR	LR		
	comp=Z,8µm,12.0s						
MDJ	**Mudanjiang**	13.62	358	eP	P	15 39 41.4	+3.7
	comp=Z,170nm,1.1s						
MDJ				eScP		15 48 11.0	
SGCP	**Mt. Cagua**	14.65	212	eP	P	15 39 50.3	-0.6
CVP	**Callao Caves**	15.22	212	eP	P	15 40 03.0	+4.8
PIP	**Pasuquin**	15.27	217	⇓eP	P	15 39 59.8	+1.1
APYP	**Conner**	15.35	214	eP	P	15 39 59.3	-0.5
ABRA	**Dolores**	15.79	215	eP	P	15 40 04.3	-1.0
CAUP	**Cauayan**	15.89	210	eP	P	15 40 07.9	+1.4
TIY	**Taiyuan**	16.07	299	⇑P	P	15 40 10.0	+1.4
TIY				S	S	15 43 10.0	+8.3
ASAJ	**Asahikawa**	16.40	33	P	P	15 40 10.7	-1.9
	comp=Z,18nm,0.3s,baz=233,slow=14,SNR=124						
ASAJ				S	S	15 43 08.4	-0.7
	baz=128,slow=26,SNR=6.7						
ASAJ	**Asahikawa**	16.40	33	P	P	15 40 10.7	-1.9
ASAJ				S	S	15 43 08.5	-0.6
ASAJ				pmax	pmax		
	comp=Z,18nm,0.3s						
HKC	**Hong Kong**	16.66	243	⇑iP	P	15 40 18.0	+2.0
HKC				i S	S	15 43 22.0	+6.8
GZH	**Guangzhou**	16.88	246	P	P	15 40 14.1	-4.5
GZH				AMB	AMB		
	comp=Z,1µm,2.2s						
GZH				LR	LR		
	comp=N,12µm,21.1s						
GZH				LR	LR		
	comp=E,11µm,17.1s						
GZH				LR	LR		
	comp=Z,16µm,12.4s						
BCPH	**Baguio City Da**	16.94	213	⇑eP	P	15 40 19.3	-0.2
BALP	**Baler**	17.07	209	eP	P	15 40 21.2	+0.3
BOLP	**Bolinao**	17.27	215	eP	P	15 40 22.7	-0.7
PCPH	**Palayan**	17.43	210	⇑eP	P	15 40 25.1	-0.3
ENH	**Enshi**	17.78	273	ePn	P	15 40 30.9	+1.6
	comp=Z,3µm,0.8s						
ENH				eScP		15 48 19.8	
SCZP	**Santa Cruz**	17.79	214	eP	P	15 40 28.6	-0.9
POLP	**Polilio Island**	17.84	207	eP	P	15 40 30.6	+0.5
HHC	**Hu-ho-hao-te**	17.94	308	eP	P	15 40 32.6	+1.5
HHC				S	S	15 43 47.0	+3.6
HHC				PCS		15 48 34.8	
HHC				SCS	ScS	15 51 59.8	+0.7
HHC				AMB	AMB		
	comp=Z,940nm,1.7s						
HHC				LR	LR		
	comp=N,28µm,16.8s						
HHC				LR	LR		
	comp=E,33µm,16.8s						
HHC				LR	LR		
	comp=Z,27µm,16.8s						
YUK	**Yuzh-Kuril’sk**	18.00	39	⇓iP	P	15 40 28.0	-3.8
YUK				i S	S	15 43 42.0	-2.8
YUK				pmax	pmax		
	comp=N,16µm,2.0s						
YUK				pmax	pmax		
	comp=Z,22µm,2.0s						
YUK				pmax	pmax		
	comp=E,12µm,3.0s						
YUK				pmax	pmax		
	comp=Z,2µm,1.0s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				smax			
	comp=N,38µm,3.0s						
YUK				smax			
	comp=E,43µm,3.0s						
YUK				MLR	MLR		
	comp=Z,6µm,17.0s						
YUK				MLR	MLR		
	comp=N,5µm,16.0s						
YUK				MLR	MLR		
	comp=E,5µm,14.0s						
XAN	**Xi’an**	18.14	285	P	P	15 40 33.8	+0.5
XAN				S	S	15 43 56.3	+8.6
XAN				AMB	AMB		
	comp=Z,12µm,10.0s						
XAN				LR	LR		
	comp=N,3µm,10.0s						
XAN				LR	LR		
	comp=E,13µm,11.8s						
XAN				LR	LR		
	comp=Z,18µm,13.2s						
PVCP	**Virac**	18.16	199	eP	P	15 40 34.2	+0.6
KLR	**Kul’dur**	18.27	3	d iP	P	15 40 33.0	-1.6
KLR				eS	S	15 43 52.0	+1.6
KLR				pmax	pmax		
	comp=N,2µm,11.0s						
KLR				pmax	pmax		
	comp=Z,3µm,11.0s						
KLR				smax			
	comp=N,9µm,6.0s						
KLR				smax			
	comp=E,6µm,6.0s						
KLR				MLR	MLR		
	comp=Z,18µm,12.0s						
GQP	**Guinayangan**	18.41	204	⇓eP	P	15 40 36.7	+0.5
YSS	**Yuzh-Sakhalins**	18.69	28	P	P	15 40 37.0	-2.1
YSS	**Yuzh-Sakhalins**	18.69	28	⇓eP	P	15 40 35.0	-4.1
YSS				eS	S	15 43 53.0	-6.2
YSS				pmax	pmax		
	comp=N,120nm,0.9s						
YSS				pmax	pmax		
	comp=Z,190nm,0.9s						
YSS				pmax	pmax		
	comp=Z,2µm,5.0s						
YSS				smax			
	comp=N,3µm,4.0s						
YSS				smax			
	comp=E,2µm,3.0s						
YSS				smax			
	comp=N,2µm,1.8s						
YSS				smax			
	comp=E,1µm,1.9s						
YSS				MLR	MLR		
	comp=N,3µm,15.0s						
YSS				MLR	MLR		
	comp=E,5µm,15.0s						
YSS				MLR	MLR		
	comp=Z,5µm,15.0s						
TGY	**Tagaytay City**	18.80	209	P	P	15 40 40.5	0.0
	comp=Z,62nm,0.3s,baz=328,slow=0.9,SNR=109						
TGY	**Tagaytay City**	18.80	209	eP	P	15 40 41.5	+1.0
AUQP	**San Andres**	18.87	203	eP	P	15 40 41.9	+0.7
BTO	**Baotou**	18.89	306	eP	P	15 40 42.4	+1.2
BTO				AMB	AMB		
	comp=Z,2µm,1.6s						
BOAC	**Boac**	19.03	205	eP	P	15 40 42.9	0.0

CNP	Catarman	19.06	197	eP	P	15 40 44.0	+0.8
PGP	Puerto Galera	19.34	208	eP	P	15 40 49.6	+3.4
LUBP	Lubang	19.42	210	eP	P	15 40 45.2	-1.8
BESP	Borongan	19.77	194	eP	P	15 40 50.3	-0.2
HIA	Hailar	19.88	340	eP	P	15 40 50.1	-1.3
	comp=Z,401nm,1.1s						
HIA				eScP		15 48 23.8	
HIA	Hailar	19.88	340	eP	P	15 40 50.1	-1.4
HIA				pmax	pmax		
	comp=Z,401nm,1.1s						
OTRP	Odiongan	19.98	204	eP	P	15 40 53.2	+0.5
UGL	Uglegorsk	20.21	23	eP	P	15 40 54.0	-0.8
UGL				i		15 41 19.6	
UGL				i S	S	15 44 31.0	+2.7
UGL				e		15 45 02.0	
UGL				pmax	pmax		
	comp=Z,220nm,1.0s						
UGL				pmax	pmax		
	comp=N,800nm,4.0s						
UGL				pmax	pmax		
	comp=E,1µm,4.0s						
UGL				pmax	pmax		
	comp=Z,2µm,4.0s						
UGL				smax			
	comp=N,21µm,10.0s						
UGL				smax			
	comp=E,4µm,4.0s						
UGL				MLR	MLR		
	comp=N,5µm,15.0s						
UGL				MLR	MLR		
	comp=E,8µm,15.0s						
UGL				MLR	MLR		
	comp=Z,6µm,15.0s						
SJMP	San Jose	20.22	206	eP	P	15 40 53.2	-1.9
PLP	Palo	20.29	195	i P	P	15 40 56.5	+0.7
KALP	Kalibo	20.52	202	⇑eP	P	15 41 00.4	+2.2
BUSP	Coron	21.00	208	eP	P	15 41 01.9	-1.1
GYA	Guiyang	21.05	264	⇑iP	P	15 41 04.1	+0.7
GYA				AP		15 41 36.1	
GYA				XP		15 41 49.0	
GYA				S	S	15 44 48.8	+4.8
GYA				XS		15 45 33.9	
GYA				SCP		15 48 24.5	
GYA				PCS		15 48 38.9	
GYA				SCS	ScS	15 52 07.5	-1.9
GYA				AMB	AMB		
	comp=Z,670nm,0.8s,mb6.0						
GYA				AMB	AMB		
	comp=Z,11µm,6.9s						
GYA				LR	LR		
	comp=N,25µm,11.4s						
GYA				LR	LR		
	comp=E,13µm,12.0s						
GYA				LR	LR		
	comp=Z,11µm,11.4s						
MSLP	Maasin	21.31	194	eP	P	15 41 06.2	+0.1
LLP	Lapu-Lapu	21.34	197	eP	P	15 41 06.3	-0.1
GUIM	Jordan	21.43	201	eP	P	15 41 07.6	+0.4
SCPH	Surigao	21.53	193	eP	P	15 41 07.6	-0.6
CUYO	Cuyo Island	21.74	205	eP	P	15 41 10.8	+0.6
QIZ	Qiongzhong	21.85	242	⇑iP	P	15 41 12.8	+1.5
QIZ				S	S	15 44 59.6	+1.1
QIZ				SS	SS	15 45 54.3	+4.7
QIZ				AMB	AMB		
	comp=Z,230nm,1.0s,mb5.6						
QIZ				AMB	AMB		
	comp=Z,6µm,9.1s						
QIZ	Qiongzhong	21.85	242	eP	P	15 41 13.5	+2.2
	comp=Z,233nm,0.9s,mb5.6						
QIZ				eS	S	15 45 05.0	+6.5
TBP	Tagbilaran	21.97	197	eP	P	15 41 12.9	+0.4
GUMO	Guam	22.00	139	P	P	15 41 11.6	-1.1
	comp=Z,786nm,0.7s,mb6.3,baz=339,slow=14,SNR=41						
GUMO				S	S	15 45 03.5	+2.4
	comp=Z,49nm,0.7s,baz=359,slow=22,SNR=2.0						
GUMO	Guam	22.00	139	P	P	15 41 12.2	-0.6
GUMO	Guam	22.00	139	P	P	15 41 11.6	-1.2
GUMO				S	S	15 45 03.5	+2.4
GUMO				pmax	pmax		
	comp=Z,786nm,0.7s,mb6.2						
ENPP	El Nido	22.04	209	eP	P	15 41 13.5	+0.3
BUTP	Butuan	22.30	192	eP	P	15 41 15.1	-0.7
LZH	Lanzhou	22.46	290	⇑P	P	15 41 18.8	+1.7
LZH				AP		15 41 47.3	
LZH				PP	PP	15 41 54.0	+4.2
LZH				XP		15 42 06.3	
LZH				PCP	PcP	15 45 08.0	0.0
LZH				S	S	15 45 16.0	+7.1
LZH				XS		15 46 08.1	
LZH				SCP		15 48 31.5	
LZH				PCS		15 48 47.0	
LZH				SCS	ScS	15 52 15.6	+1.1
LZH				AMB	AMB		
	comp=Z,4µm,1.2s,mb6.7						
LZH				AMB	AMB		
	comp=Z,20µm,4.5s						
LZH				LR	LR		
	comp=E,17µm,11.1s						
LZH				LR	LR		
	comp=Z,20µm,12.4s						
CD2	Chengdu	22.60	277	⇑iP	P	15 41 19.4	+0.9
CD2				AP		15 41 49.8	
CD2				XP		15 42 03.8	
CD2				S	S	15 45 12.9	+1.5
CD2				AMB	AMB		
	comp=Z,2µm,1.2s,mb6.3						
CD2				AMB	AMB		
	comp=Z,11µm,6.0s						
CD2				LR	LR		
	comp=N,13µm,6.0s						
CD2				LR	LR		
	comp=Z,10µm,8.7s						
BIPH	Bislig	22.95	190	⇑iP	P	15 41 19.8	-2.4
CGP	Cagayan de Oro	22.98	194	⇓iP	P	15 41 21.4	-0.9
	comp=Z,162µm,1.0s						
DCPH	Dipolog City	23.16	197	⇑eP	P	15 41 23.3	-0.8
BUKP	Musuan	23.47	193	eP	P	15 41 26.2	-0.9
PPR	Puerto Princes	23.61	209	⇑eP	P	15 41 29.6	+1.1
PAGZ	Pagadian	23.86	197	eP	P	15 41 29.8	-1.1
IPIL	Ipil	24.13	199	eP	P	15 41 30.4	-3.0
DAV	Davao City (W)	24.17	191	eP	P	15 41 33.0	-0.8
DAV	Davao City (W)	24.17	191	eP	P	15 41 33.6	-0.1
MATI	Mati	24.18	189	eP	P	15 41 31.1	-2.9
CIT	Chita	24.30	335	eP	P	15 41 35.4	+0.7
CIT				e		15 42 01.5	
CIT				e		15 45 44.6	
CIT				e		15 46 48.1	
CIT				pmax	pmax		
	comp=Z,763nm,2.4s,mb5.8						
ULN	Ulaanbaatar	24.39	320	P	P	15 41 37.0	+1.5
	comp=Z,459nm,0.9s,mb6.0						
ULN				eScP		15 48 34.9	
ULN	Ulaanbaatar	24.39	320	P	P	15 41 37.1	+1.6
ULN				pmax	pmax		
	comp=Z,459nm,0.9s,mb6.0						
SONM	Songino Array	24.73	320	P	P	15 41 39.4	+0.6
	comp=Z,379nm,1.0s,mb5.9,baz=138,slow=10,SNR=710						
SONM				ScP		15 48 35.3	
	comp=Z,15nm,0.8s,baz=136,slow=2.6,SNR=8.6						
SONM				P3KPbc		16 14 38.0	
	comp=Z,0.4nm,0.9s,baz=342,slow=4.7,SNR=4.3						
SONM				P3KP		16 15 29.0	
	comp=Z,2.7nm,1.2s,baz=290,slow=2.9,SNR=5.1						
SONM	Songino Array	24.73	320	P	P	15 41 39.4	+0.6
SONM				ScP		15 48 35.3	
SONM				e		16 14 38.0	
KMI	Kunming	24.83	263	⇑P	P	15 41 40.3	+0.4
KMI				AP		15 42 11.5	
KMI				PP	PP	15 42 24.3	+2.0
KMI				XP		15 42 29.4	
KMI				PPP	PPP	15 42 38.3	+3.0
KMI				PCP	PcP	15 45 13.6	+0.5
KMI				S	S	15 45 49.3	+0.1
KMI				XS		15 46 43.5	
KMI				SS	SS	15 47 00.3	-0.4
KMI				SSS	SSS	15 47 22.9	-0.7
KMI				SCP		15 48 36.8	
KMI				PCS		15 48 52.4	
KMI				AMB	AMB		
	comp=Z,210nm,0.7s,mb5.8						
KMI				AMB	AMB		
	comp=Z,7µm,8.1s						
KMI				LR	LR		
	comp=N,9µm,11.6s						
KMI				LR	LR		
	comp=E,8µm,16.0s						
KMI				LR	LR		
	comp=Z,10µm,17.3s						
BATP	Bataraza	24.89	210	eP	P	15 41 41.8	+1.2
NRGR	Nerungri	25.94	353	eP	P	15 41 46.1	-3.9
GTA	Gaotai	26.06	297	P	P	15 41 51.3	0.0
GTA				AP	pP	15 42 20.3	-1.2
GTA				XP	sP	15 42 35.9	-2.5
GTA				S	S	15 46 07.4	-2.1
GTA				SCP		15 48 40.8	
GTA				PCS		15 48 56.3	
GTA				SCS	ScS	15 52 28.8	-0.1
GTA				AMB	AMB		
	comp=Z,590nm,0.8s,mb6.3						
GTA				AMB	AMB		
	comp=Z,7µm,11.8s						
GTA				LR	LR		
	comp=N,7µm,13.8s						
GTA				LR	LR		
	comp=E,8µm,13.4s						
GTA				LR	LR		
	comp=Z,8µm,12.2s						
CLNS	Chul'man	26.10	353	eP	P	15 41 48.0	-3.5
CLNS				ePPP	PPP	15 42 30.6	-22
CLNS				e		15 45 15.5	
CLNS				eS	S	15 46 14.5	+4.5
CLNS				pmax	pmax		
	comp=Z,151nm,1.2s,mb5.5						
CLNS				pmax	pmax		
	comp=N,142nm,1.3s						
CLNS				pmax	pmax		
	comp=E,31nm,1.0s						
CLNS				smax			
	comp=N,1µm,11.5s						
CLNS				smax			
	comp=Z,1µm,12.2s						
CLNS				smax			
	comp=E,9µm,14.5s						
CLNS				MLR	MLR		
	comp=N,1µm,12.0s						
CLNS				MLR	MLR		
	comp=Z,2µm,12.0s						
CLNS				MLR	MLR		
	comp=E,5µm,11.0s						
UBT	Ubonrachathani	27.80	241	P	P	15 42 06.0	-1.4
ZAK	Zakamensk	27.86	322	⇓iP	P	15 42 06.9	-0.6
ZAK				pmax	pmax		
	comp=Z,45nm,1.1s,mb5.1						
KKM	Kota Kinabalu	28.03	211	eP	P	15 42 09.3	-0.2
KKM	Kota Kinabalu	28.03	211	P	P	15 42 09.3	-0.1
IRK	Irkutsk	28.45	326	⇑iP	P	15 42 12.2	-0.6
IRK				pmax	pmax		
	comp=Z,574nm,2.3s,mb5.9						
KKTK	Khon Kaen	28.84	246	⇓P	P	15 42 15.6	-1.0
	comp=Z,1µm,0.5s,mb6.8						
TSM	Tawau	28.95	206	P	P	15 42 17.2	-0.5
BOD	Bodaibo	29.04	342	eP	P	15 42 16.8	-1.2
BOD				e		15 45 20.7	
BOD				pmax	pmax		
	comp=Z,26nm,1.0s,mb4.9						
CHRT	Chiangrai	29.46	255	⇑P	P	15 42 20.0	-2.1
	comp=Z,1µm,0.6s,mb6.8						
MOY	Mondy	29.77	322	eP	P	15 42 24.1	-0.5
MOY				pmax	pmax		
	comp=Z,698nm,2.8s,mb5.9						
PET	Petropavlovsk	30.23	35	P	P	15 42 28.2	-0.4
PET				pP	pP	15 43 00.0	+0.4
PET	Petropavlovsk	30.23	35	κ iP	P	15 42 27.6	-1.0
PET				i *PP	pP	15 42 59.3	-0.3
PET				e		15 43 29.3	
PET				i S	S	15 47 11.5	-4.4
PET				e		15 52 46.2	
PET				pmax	pmax		
	comp=Z,3µm,2.6s,mb6.5						
PET				pmax	pmax		
	comp=Z,379nm,1.4s,mb5.9						
PET				pmax	pmax		
	comp=Z,900nm,6.3s						
PET				smax			
	comp=N,6µm,3.6s						
PET				smax			
	comp=N,285nm,2.3s						
PET				smax			
	comp=E,237nm,2.0s						
PET				smax			
	comp=N,6µm,15.2s						
PET				MLR	MLR		
	comp=Z,4µm,20.0s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s						
YAK	Yakutsk	31.06	360	P	P	15 42 33.7	-2.2
	comp=Z,51nm,0.4s,mb5.6						
YAK	Yakutsk	31.06	360	eP	P	15 42 32.0	-3.8
YAK				e*PP	pP	15 43 04.2	-2.8
YAK				e		15 45 23.7	
YAK				eS	S	15 47 25.8	-3.1
YAK				e*SS		15 48 18.8	
YAK				i		15 52 46.9	
YAK				pmax	pmax		
	comp=N,81nm,1.1s						
YAK				pmax	pmax		
	comp=E,27nm,1.1s						
YAK				pmax	pmax		
	comp=Z,72nm,1.1s,mb5.3						
YAK				smax			
	comp=N,316nm,1.2s						
YAK				smax			
	comp=E,373nm,1.1s						
YAK				smax			
	comp=Z,150nm,1.1s						
NST	Nakhon Sawan	31.34	248	P	P	15 42 38.0	-0.7
	comp=Z,208nm,0.6s,mb6.0						
MA2	Magadan	31.79	20	eP	P	15 42 41.1	-1.1
	comp=Z,129nm,0.8s,mb5.7						
MA2				epP	pP	15 43 07.8	-5.8
MA2	Magadan	31.79	20	c iP	P	15 42 41.3	-0.9
MA2				e		15 45 23.3	
MA2				i S	S	15 47 37.6	-2.7
MA2				pmax	pmax		
	comp=Z,80nm,0.8s,mb5.5						
MA2				pmax	pmax		
	comp=N,40nm,0.9s						
LSA	Lhasa	33.55	278	P	P	15 42 58.3	+0.7
LSA				AMB	AMB		
	comp=Z,3µm,7.5s						
LSA				LR	LR		
	comp=N,6µm,9.6s						
LSA				LR	LR		
	comp=E,2µm,15.8s						
LSA				LR	LR		
	comp=Z,5µm,15.1s						
LSA	Lhasa	33.55	278	eP	P	15 42 57.4	-0.2
	comp=Z,67nm,0.7s,mb5.5						
LSA				epP	pP	15 43 28.1	-1.2
LSA				ePP	PP	15 44 17.2	+2.2
LSA	Lhasa	33.55	278	eP	P	15 42 57.4	-0.2
LSA				e*PP	pP	15 43 28.1	-1.1
LSA				e		15 44 17.3	
LSA				pmax	pmax		
	comp=Z,67nm,0.7s,mb5.5						
SHL	Shillong	33.99	271	eP	P	15 43 01.0	-0.4
SHL				ex	x	15 53 07.0	
KSM	Kuching	34.83	216	eP	P	15 43 09.2	+0.5
SEY	Seymchan	35.01	18	eP	P	15 43 10.0	+0.3
WMQ	Urumqi	35.68	303	⇑iP	P	15 43 15.5	0.0
WMQ				AP	pP	15 43 47.6	+0.1
WMQ				XP	sP	15 44 04.0	-0.5
WMQ				PP	PP	15 44 42.0	+1.2
WMQ				PPP	PPP	15 45 04.0	+2.4
WMQ				PCP	PcP	15 45 41.0	0.0
WMQ				S	S	15 48 41.0	+0.4
WMQ				SCP		15 49 11.0	
WMQ				XS		15 49 40.0	
WMQ				SS	SS	15 51 12.0	+1.4
WMQ				AMB	AMB		
	comp=Z,470nm,0.9s,mb6.1						
WMQ				AMB	AMB		
	comp=Z,3µm,4.2s						
WMQ				LR	LR		
	comp=N,6µm,9.2s						
WMQ				LR	LR		
	comp=E,3µm,8.9s						
WMQ				LR	LR		
	comp=Z,7µm,13.6s						
KULM	Kulim	37.68	233	eP	P	15 43 33.9	+1.3
IPM	Ipoh	37.93	232	P	P	15 43 36.2	+1.4
FX1	Attu Island--F	38.02	42	P	P	15 43 36.1	+1.1
FX1				pP	pP	15 44 09.4	+2.2
CAL	Calcutta	38.07	268	ex	x	15 43 29.1	
CAL				ex	x	15 49 10.4	
KGM	Kluang	38.37	227	P	P	15 43 39.7	+1.2
GUN	Gumba	38.46	277	eP	P	15 43 38.1	-0.9
SMY	Shemya	38.51	43	P	P	15 43 40.6	+1.4
	comp=Z,577nm,1.6s,mb6.0						
SMY	Shemya	38.51	43	P	P	15 43 40.6	+1.4
SMY				pmax	pmax		
	comp=Z,577nm,1.6s,mb6.0						
PKI	Pulchoki	38.96	277	eP	P	15 43 41.9	-1.2
	comp=Z,500nm,0.8s,mb6.2						
PKI	Pulchoki	38.96	277	eP	P	15 43 41.9	-1.2
PKI				pmax	pmax		
	comp=Z,250nm,0.8s,mb5.9						
KKN	Kakani	39.01	277	eP	P	15 43 41.9	-1.6
	comp=Z,773nm,0.7s,mb6.4						
DMN	Daman	39.20	277	eP	P	15 43 44.3	-0.9
	comp=Z,154nm,0.4s,mb5.9						
GKN	Gorkha	39.50	278	eP	P	15 43 46.1	-1.5
	comp=Z,259nm,0.5s,mb6.2						
BOK	Bokaro	39.72	271	eP	P	15 43 47.5	-2.0
BOK				AMb	AMB	15 43 51.8	
	comp=Z,150nm,0.9s,mb5.6						
MKAR	Makanchi Array	39.80	307	P	P	15 43 50.5	+0.6
	comp=Z,151nm,0.8s,mb5.7,baz=95,slow=9.3,SNR=291						
MKAR				PcP	PcP	15 45 52.2	-1.5
	comp=Z,39nm,0.8s,baz=80,slow=4.1,SNR=6.8						
MKAR				ScP		15 49 26.7	
	comp=Z,34nm,0.8s,baz=83,slow=5.0,SNR=16						
MKAR				ScS	ScS	15 53 40.1	+0.8
	comp=Z,1.8nm,0.7s,baz=108,slow=3.8,SNR=3.7						
MKAR	Makanchi Array	39.80	307	P	P	15 43 50.5	+0.6
MKAR				PcP	PcP	15 45 52.2	-1.5
MKAR				ScP		15 49 26.7	
MKAR				ScS	ScS	15 53 40.1	+0.8
MKAR	Makanchi Array	39.80	307	P	P	15 43 50.5	+0.7
MKAR						15 45 52.2	
MKAR						15 53 40.1	
KOLN	Koldanda	40.44	278	eP	P	15 43 54.6	-0.7
	comp=Z,339nm,0.7s,mb6.1						
TIXI	Tiksi	40.73	359	⇑iP	P	15 43 55.7	-1.5
TIXI	Tiksi	40.73	359	eP	P	15 43 50.6	-6.6
TIXI				ePPP	PPP	15 45 59.6	-8.7
TIXI				eSS	SS	15 53 00.6	+3.1
TIXI				pmax	pmax		
	comp=Z,204nm,0.9s,mb5.8						
TIXI				MLR	MLR		
	comp=Z,3µm,14.0s						
NVS	Novosibirsk	40.77	320	⇑iP	P	15 43 56.7	-1.0
NVS				i		15 45 35.4	
NVS				pmax	pmax		
	comp=Z,1µm,2.6s,mb6.1						
NVS				pmax	pmax		
	comp=N,208nm,2.2s						
NVS				pmax	pmax		
	comp=E,577nm,2.3s						
NVS				pmax	pmax		
	comp=Z,529nm,2.2s,mb5.8						
NVS				pmax	pmax		
	comp=N,239nm,2.1s						
NVS				pmax	pmax		
	comp=E,382nm,2.1s						
KWAJ	Kwajalein Atol	41.29	114	eP	P	15 44 02.4	0.0
	comp=E,187nm,0.8s,mb5.8						
BILL	Bilibino	42.65	19	eP	P	15 44 13.1	+0.2
	comp=E,248nm,1.2s,mb5.7						
BILL				epP	pP	15 44 46.3	+0.8
BILL				eScP		15 49 36.3	
BILL				eS	S	15 50 24.6	+0.2
BILL	Bilibino	42.65	19	α iP	P	15 44 12.6	-0.3
BILL				i *PP	pP	15 44 45.8	+0.3
BILL				ePPP	PPP	15 46 03.1	-30
BILL				i S	S	15 50 23.8	-0.6
BILL				e		15 53 40.3	
BILL				pmax	pmax		
	comp=Z,287nm,1.2s,mb5.8						
BILL				MLR	MLR		
	comp=Z,2µm,16.0s						
KURK	Kurchatov	42.67	313	P	P	15 44 13.1	-0.2
ALBI	Allahabad	42.71	275	ex	x	15 49 11.0	
PTH	Pithoragarh	42.84	281	eP	P	15 44 12.0	-2.9
PTH				ex	x	15 46 00.0	
PMG	Port Moresby	43.36	155	LR	LR	15 59 40.0	
	comp=Z,3µm,19.6s,baz=258,slow=32						
PMG	Port Moresby	43.36	155	P	P	15 44 18.7	-0.6
AAA	Alma-Ata	43.46	302	P	P	15 44 20.9	+1.1
AAA				pmax	pmax		
	comp=Z,5µm,1.8s,mb6.8						
KAKA	Kakadu	43.50	177	⇓iP	P	15 44 38.4	+18
	comp=Z,54nm,0.9s,mb5.2						
BLSP	Bilaspur	43.55	270	eP	P	15 44 18.7	-2.0
BLSP				AMb	AMB	15 44 22.2	
	comp=Z,171nm,1.1s,mb5.6						
KLP	Kalpa	44.00	285	i P	P	15 44 24.5	+0.3
KLP				ex	x	15 46 05.2	
ULHL	Ulahol	44.03	300	P	P	15 44 25.9	+1.6
	SNR=21						
VIS	Vishakhapatnam	44.32	264	eP	P	15 44 24.7	-2.3
VIS				AMb	AMB	15 44 28.9	
	comp=Z,136nm,1.0s,mb5.5						
KSH	Kashi	44.46	296	⇑iP	P	15 44 30.0	+2.2
KSH				eAP	pP	15 45 01.1	+0.5
KSH				eXP	sP	15 45 17.1	-0.4
KSH				ePCP	PcP	15 46 11.3	+2.0
KSH				ePP	PP	15 46 16.3	+1.6
KSH				ePPP	PPP	15 46 59.3	+1.9
KSH				eSCP		15 49 49.3	
KSH				ePCS		15 50 04.1	
KSH				eS	S	15 50 53.0	+2.0
KSH				eXS		15 51 48.4	
KSH				eSS	SS	15 54 08.3	+2.0
KSH				eSCS	ScS	15 54 10.6	+2.8
KSH				AMB	AMB		
	comp=Z,7µm,3.2s						
KSH				LR	LR		
	comp=N,5µm,10.2s						
KSH				LR	LR		
	comp=E,7µm,9.6s						
TKM2	Tokmak 2	44.46	301	P	P	15 44 28.9	+1.1
	SNR=197						
KZA	Kyzart	44.77	300	P	P	15 44 32.0	+1.7
	SNR=136						
KBK	Karagaybulak	44.96	301	P	P	15 44 32.7	+0.9
	SNR=88						
SMLA	Simla	44.99	285	eP	P	15 44 32.5	+0.3
SMLA				ex	x	15 46 22.2	
SDNR	Sundarnagar	45.07	285	eP	P	15 44 34.6	+1.8
SDNR				ex	x	15 46 11.3	
CHMS	Chumysh	45.08	302	P	P	15 44 33.2	+0.5
	SNR=50						
FRU	Bishkek	45.19	301	α iP	P	15 44 34.2	+0.6
FRU				i *PP	pP	15 45 08.0	+1.6
FRU				i		15 46 25.0	
FRU				eS	S	15 51 03.0	+1.7
FRU				eSS	SS	15 54 13.0	-6.7
FRU				pmax	pmax		
	comp=Z,2µm,2.6s,mb6.2						
FRU				pmax	pmax		
	comp=Z,4µm,6.0s						
USP	Ospenovka	45.25	302	P	P	15 44 34.4	+0.4
	SNR=65						
AAK	Ala-Archa	45.29	301	P	P	15 44 35.2	+0.8
	SNR=66						
AAK	Ala-Archa	45.29	301	P	P	15 44 33.4	-1.0
UCH	Uchtor	45.31	300	P	P	15 44 36.1	+1.6
	SNR=129						
BHK	Bhakra	45.55	285	ex	x	15 44 40.8	
KKR	Kurukshetra	45.58	283	eP	P	15 44 34.0	-2.9
KKR				AMb	AMB	15 44 37.9	
	comp=Z,439nm,0.7s,mb6.2						
NDI	New Delhi	45.59	281	eP	P	15 44 35.0	-2.0
NDI				ex	x	15 51 11.0	
DLH	Dalhousie	45.65	287	eP	P	15 44 39.0	+1.6
DLH				ex	x	15 44 44.0	
AYAN	Aya Nagar	45.73	281	eP	P	15 44 38.2	+0.1
AYAN				AMb	AMB	15 44 43.1	
	comp=Z,190nm,1.2s,mb5.6						
EKS2	Erkin-Say	45.82	301	P	P	15 44 39.3	+0.7
	SNR=30						
SONA	Sohna	45.83	281	eP	P	15 44 38.9	0.0

SONA AMb AMB 15 44 44.5
comp=Z,206nm,0.8s,mb5.8
THN Thein Dam 45.88 287 eP **P 15 44 37.5 -1.7**
THN ex x 15 54 18.3
AML Almayashu 45.92 300 P **P 15 44 40.8 +1.4**
SNR=100
KUDL Kundal 46.36 281 eP **P 15 44 42.7 -0.4**
KUDL AMb AMB 15 44 48.5
comp=Z,234nm,1.1s,mb5.7
KHET Khetri 46.96 281 eP **P 15 44 47.4 -0.3**
KHET AMb AMB 15 44 52.9
comp=Z,272nm,0.9s,mb5.9
BHPL Bhopal 47.18 274 eP **P 15 44 46.5 -3.0**
BHPL AMb AMB 15 44 50.2
comp=Z,80nm,0.5s,mb5.6
CHKZ Chkalovo 47.86 316 P **P 15 44 53.5 -0.8**
BRVK Borovoye 48.02 315 P **P 15 44 55.3 -0.3**
AJM Ajmer 48.44 279 eP **P 15 44 56.6 -2.7**
HYB Hyderabad 48.54 266⇑iP **P 15 44 59.0 -1.1**
comp=Z,110nm,1.0s,mb5.4
HYB epP pP 15 45 35.0 +1.6
HYB ePcP PcP 15 46 22.0 -2.0
HYB ePP PP 15 46 55.0 +0.9
HYB ePcS 15 50 17.0
HYB eS **S 15 51 52.0 +3.0**
HYB e 15 52 36.0
HYB eScS ScS 15 54 32.0 -2.5
HYB Hyderabad 48.54 266⇑eP **P 15 44 59.0 -1.1**
comp=Z,110nm,1.0s,mb5.4
HYB e 15 45 01.0
HYB e pP 15 45 35.0 +1.6
HYB eS 15 52 40.0
HYB Hyderabad 48.54 266⇑eP **P 15 44 59.0 -1.1**
HYB pmax pmax
comp=Z,110nm,1.0s,mb5.4
GAMB Gambell 48.69 30 P **P 15 45 02.3 +1.7**
NIKO Nikolski 48.73 45 P **P 15 44 53.9 -7.3**
FITZ Fitzroy Crossi 48.99 186⇑iP **P 15 45 02.5 -1.1**
comp=Z,264nm,0.9s,mb5.9
FITZ eS **S 15 51 54.0 -1.3**
FITZ i sS 15 52 49.1
FITZ i SCS ScS 15 54 37.6 +0.1
TAS Tashkent 49.29 300 eP **P 15 45 06.1 +0.6**
HNR Honiara 49.33 140 eP **P 15 45 05.9 -0.3**
comp=Z,185nm,1.0s,mb5.7
HNR Honiara 49.33 140 eP **P 15 45 05.9 -0.3**
HNR pmax pmax
comp=Z,185nm,1.0s,mb5.7
LATR Latur 49.82 269 eP **P 15 45 10.7 +0.8**
UNV Unalaska Valle 50.16 44 P **P 15 45 10.0 -2.0**
comp=Z,124nm,0.9s,mb5.5
TNA Tin City 50.67 28 P **P 15 45 16.5 +0.8**
comp=Z,181nm,1.2s,mb5.6
TNA pP pP 15 45 49.0 -0.2
WRAB Tennant Creek 50.78 175 P **P 15 45 16.2 -1.0**
comp=Z,329nm,1.1s,mb5.9
WRAB Tennant Creek 50.78 175 P **P 15 45 16.2 -1.0**
WRAB pmax pmax
comp=Z,329nm,1.1s,mb5.9
WRA Warramunga Arr 50.79 175 P **P 15 45 15.6 -1.6**
comp=Z,54nm,0.4s,mb5.5,baz=354,slow=7.8,SNR=250
WRA ScP 15 50 12.8
comp=Z,5.7nm,0.8s,baz=355,slow=4.1,SNR=8.6
WRA S **S 15 52 18.3 -1.8**
comp=Z,7.1nm,1.1s,baz=354,slow=13,SNR=7.0
WRA PKPPKP 16 15 57.0
comp=Z,0.9nm,0.7s,baz=136,slow=2.5,SNR=4.9
WRA Warramunga Arr 50.79 175 P **P 15 45 15.6 -1.7**
WRA S **S 15 52 18.3 -1.9**
WB2 Warramunga Arr 50.79 175⇑iP **P 15 45 15.6 -1.7**
WB2 eS **S 15 52 18.4 -1.8**
WB2 eSCS ScS 15 54 51.7 +2.0
PALK Pallekele 51.78 254 P **P 15 45 25.7 +0.9**
POO Poona 52.10 270 ex x 15 45 31.5
KAD Karad 52.34 269 eP **P 15 45 27.7 -1.2**
KAD AMb AMB 15 45 31.4
comp=Z,232nm,0.7s,mb5.9
CTA Charters Tower 53.09 161⇓iP **P 15 45 33.4 -1.0**
comp=Z,82nm,0.8s,mb5.5
CTA i S **S 15 52 53.1 +1.7**
CTA i sS 15 53 51.4
CTA i SCS ScS 15 55 08.8 +3.2
CTA Charters Tower 53.09 161⇓iP **P 15 45 33.4 -1.0**
CTA i S **S 15 52 53.1 +1.7**
CTA i 15 55 08.8
CTA pmax pmax
comp=Z,82nm,0.8s
CTAO Charters Tower 53.09 161 P **P 15 45 33.6 -0.8**
comp=Z,115nm,0.8s,mb5.7
CTAO Charters Tower 53.09 161 P **P 15 45 33.6 -0.8**
CTAO pmax pmax
comp=Z,115nm,0.8s,mb5.7
COCO West Island 53.52 222 P **P 15 45 37.4 -0.3**
SVE Sverdlovsk 53.60 320c iP **P 15 45 38.0 +0.3**
SVE e 15 47 40.0
SVE i S **S 15 52 56.0 -1.9**
SVE e 15 53 50.0
SVE e 15 55 06.0
SVE pmax pmax
comp=N,500nm,4.0s
SVE pmax pmax
comp=E,3µm,4.0s
SVE pmax pmax
comp=Z,4µm,4.0s
SVE smax
comp=N,4µm,11.0s
SVE smax
comp=E,2µm,11.0s
SVE MLR MLR
comp=N,600nm,13.0s
SVE MLR MLR
comp=E,3µm,13.0s
SVE MLR MLR
comp=Z,3µm,13.0s
SDPT Sand Point 53.63 42 eP **P 15 45 34.6 -3.3**
comp=Z,107nm,0.4s,mb5.9
SDPT LR LR
comp=Z,1µm,17.0s
MNGI Mangalore 53.80 263 eP **P 15 45 38.8 -0.9**
MNGI ex x 15 53 58.7
BHJ Bhuj 53.81 277 eP **P 15 45 36.6 -3.1**
BHJ AMb AMB 15 45 43.7
comp=Z,173nm,0.6s,mb6.0
TRD Trivandrum 54.23 257 ex x 15 45 36.7
TRD ex x 15 49 04.7
ASPA Alice Springs 54.46 176 eP **P 15 45 42.8 -1.6**
ASPA eS **S 15 53 09.6 -0.2**
ASPA eSCS ScS 15 55 16.8 +1.6
ARU Arti 54.77 320 P **P 15 45 45.4 -0.8**
ARU Arti 54.77 320⇑iP **P 15 45 45.1 -1.1**
ARU e pP 15 46 15.5 -4.7
ARU e 15 46 43.2
ARU e 15 47 47.0
ARU i S **S 15 53 15.1 +1.6**
ARU i 15 55 14.0
ARU eSS SS 15 57 00.0 +1.3
ARU pmax pmax
comp=Z,361nm,1.5s,mb5.9
ARU MLR MLR
comp=Z,3µm,16.0s
ARU MLR MLR
comp=N,1µm,17.0s
ARU MLR MLR
comp=E,3µm,15.0s
SOKR Solikamsk 55.51 324d iP **P 15 45 50.6 -0.9**
SOKR *PP pP 15 46 24.8 -0.8
SOKR S **S 15 53 22.5 -0.8**
SOKR e 15 55 18.5
SOKR pmax pmax
comp=Z,410nm,1.0s,mb6.2
SOKR MLR MLR
comp=Z,3µm,15.0s
AKTO Aktyubinsk 55.77 313 LR LR 16 12 07.6
comp=Z,3µm,18.7s,slow=38
SVW2 Sparrevohn 55.90 34 eP **P 15 45 54.2 -0.1**
IMA2 Indian Mountai 56.54 28 eP **P 15 45 58.2 -0.6**
FIB Fire Island 58.50 34 P **P 15 46 12.2 -0.4**
SLKM Skilak Lake 58.57 35 P **P 15 46 11.2 -1.9**
SLKM pP pP 15 46 47.9 +0.4
PMR Palmer 58.94 33 eP **P 15 46 14.3 -1.3**
comp=Z,321nm,1.4s,mb6.0
PMR LR LR
comp=Z,1µm,20.0s
PMR Palmer 58.94 33 eP **P 15 46 14.3 -1.3**
PMR pmax pmax
comp=Z,321nm,1.4s,mb6.0
PMR MLR MLR
comp=Z,1µm,20.0s
COLA College 59.07 30 eP **P 15 46 15.6 -0.8**
comp=Z,65nm,0.9s,mb5.5
COLA epP pP 15 46 51.6 +0.6
COLA College 59.07 30 eP **P 15 46 15.6 -0.8**
COLA pmax pmax
comp=Z,65nm,0.9s,mb5.5
SML Sawmill 59.29 33 eP **P 15 46 16.9 -1.1**
SML eScP 15 50 48.2
ILAR Eielson Array 59.49 30 P **P 15 46 17.1 -2.2**
comp=Z,37nm,0.8s,mb5.3,baz=279,slow=4.8,SNR=101
ILAR S **S 15 54 19.0 +3.7**
comp=Z,1.3nm,1.1s,baz=282,slow=13,SNR=4.6
ILAR ScS ScS 15 55 55.2 +4.1
comp=Z,3.9nm,1.1s,baz=265,slow=16,SNR=6.3
ILAR PKPPKP 16 15 39.6
comp=Z,0.7nm,1.1s,baz=135,slow=2.0,SNR=4.3
THY Trims Highway 60.20 31 P **P 15 46 23.2 -0.9**
DIV Divide 60.62 34 P **P 15 46 26.8 -0.2**
DIV pP pP 15 47 04.0 +2.2
MENT Mentasta 61.20 31 eP **P 15 46 30.4 -0.5**
FORT Forrest 61.45 182 eP **P 15 46 31.4 -1.7**
comp=Z,194nm,0.7s,mb6.0
FORT i S **S 15 54 40.9 +0.2**
PECR Pechory 62.72 321d iP **P 15 46 39.4 -1.7**
PECR e 15 47 08.0
PECR e pP 15 47 17.0 +0.9
PECR e 15 48 57.6
PECR ePPP PPP 15 50 31.0 -2.7
PECR i S **S 15 54 53.0 -3.2**
PECR eSS 15 55 41.0
PECR pmax pmax
comp=Z,310nm,2.0s,mb5.8
PECR pmax pmax
comp=E,2µm,5.0s
PECR pmax pmax
comp=Z,4µm,5.0s
PECR smax
comp=N,3µm,7.0s
PECR smax
comp=E,4µm,8.0s
PECR MLR MLR
comp=Z,3µm,14.0s
DAWY Dawson 62.82 30 P **P 15 46 41.0 -0.7**
WBK Wadi Bani Khal 63.12 281 P **P 15 46 45.9 +1.6**
SNR=15
WBK P 15 46 45.9
SNR=15
WBK P 15 46 45.9
SNR=15
NOUC Port Laguerre 63.17 142 eP **P 15 46 44.1 -0.5**
NOUC Port Laguerre 63.17 142 eP **P 15 46 44.1 -0.5**
DZM Mont Dzumac 63.22 142 eP **P 15 46 44.4 -0.6**
DZM Mont Dzumac 63.22 142 eP **P 15 46 44.4 -0.6**
KLBR Kellerberrin 63.33 192 eP **P 15 46 43.9 -1.6**
comp=Z,109nm,0.8s,mb5.7
STKA Stephens Creek 63.45 169 P **P 15 46 45.5 -0.9**
comp=Z,51nm,0.4s,mb5.7,baz=350,slow=6.5,SNR=312
STKA S **S 15 55 05.4 -0.3**
comp=Z,3.6nm,1.0s,baz=232,slow=20,SNR=2.4
STKA PKP2bc 16 15 48.0
comp=Z,3.3nm,1.1s,baz=153,slow=2.4,SNR=4.5
STKA Stephens Creek 63.45 169 P **P 15 46 45.5 -0.9**
STKA pP pP 15 47 23.8 +2.5
KLMR Klimovskoe 63.75 327c iP **P 15 46 46.2 -1.6**
KLMR i 15 49 08.7
KLMR i S **S 15 55 02.2 -6.8**
KLMR pmax pmax
comp=Z,890nm,1.6s,mb6.3
KLMR pmax pmax
comp=Z,620nm,6.3s
KLMR smax
comp=E,1µm,3.2s
KLMR MLR MLR
comp=Z,2µm,16.0s
INK Inuvik 63.89 24 P **P 15 46 47.4 -1.1**
comp=Z,106nm,1.0s,mb5.6
INK pP pP 15 47 23.0 -0.6
INK Inuvik 63.89 24 P **P 15 46 47.4 -1.1**
INK *PP pP 15 47 23.0 -0.5
INK pmax pmax
comp=Z,106nm,1.0s
MUN Mundaring 63.99 193 eP **P 15 46 47.9 -1.9**
MUN i S **S 15 55 14.0 +1.6**
MUN esS 15 56 18.1
KIP Kipapa 64.21 80 eP **P 15 46 49.4 -2.0**
APA Apatity 64.25 335⇓iP **P 15 46 49.0 -1.9**
APA i pP 15 47 22.4 -3.5
APA i S **S 15 55 12.0 -3.0**
APA pmax pmax
comp=Z,560nm,1.0s,mb6.3
APA MLR MLR
comp=Z,4µm,13.0s
ARMA Armidale 64.39 159 eP **P 15 46 51.9 -0.6**
ARMA i S **S 15 55 18.5 +1.1**
MAK Makhachkala 64.61 306d iP **P 15 46 54.0 +0.4**
MAK e 15 47 24.0
MAK i *PP pP 15 47 34.0 +5.3
MAK e 15 49 23.0
MAK ePPP PPP 15 50 49.5 -3.7
MAK i S **S 15 55 20.0 +0.2**
MAK i SP SP 15 55 40.0 -0.1
MAK e 15 55 52.0
MAK pmax pmax
comp=Z,1µm,2.0s,mb6.4
MAK pmax pmax
comp=N,1µm,4.0s
MAK pmax pmax
comp=E,2µm,4.0s
MAK pmax pmax
comp=Z,5µm,4.0s
MAK smax
comp=N,4µm,8.0s
MAK smax
comp=E,5µm,8.0s
MAK MLR MLR
comp=Z,3µm,13.0s
NWAO Narrogin (SRO) 64.72 192 P **P 15 46 52.8 -1.8**
comp=Z,141nm,0.9s,mb5.8
NWAO Narrogin (SRO) 64.72 192 P **P 15 46 52.8 -1.8**
NWAO pmax pmax
comp=Z,141nm,0.9s
KBS Kingsbay 64.90 349 eP **P 15 46 52.0 -3.1**
KBS AMb AMB 15 46 55.9
comp=Z,287nm,0.8s,mb6.1
KBS eS **S 15 55 24.6 +1.6**
KBS AMS AMS 16 17 03.6
comp=Z,576nm,20.6s
KBS Kingsbay 64.90 349 eP **P 15 46 52.0 -3.1**
comp=Z,287nm,0.8s,mb6.2
KBS LR LR
comp=Z,576µm,20.6s
KEV Kevo 65.65 338 ep **P 15 46 58.1 -1.8**
comp=Z,266nm,0.8s,mb6.1
KEV Kevo 65.65 338 eP **P 15 46 58.1 -1.8**
KEV pmax pmax
comp=Z,267nm,0.8s,mb6.1
VRHR Novokhopersk 65.69 316 eP **P 15 46 59.0 -1.5**
VRHR eS S 15 55 31.7 -1.2
VRHR pmax pmax
comp=N,110nm,0.9s
VRHR pmax pmax
comp=Z,410nm,0.9s,mb6.3
VRHR pmax pmax
comp=E,70nm,0.6s
VRHR smax
comp=E,2µm,3.8s
VRHR smax
comp=Z,560nm,2.3s
VRHR smax
comp=N,1µm,4.7s
ADE Adelaide 66.09 172 eP **P 15 47 03.1 -0.3**
ARCES ARCESS Array B 66.22 338 P **P 15 47 02.4 -1.2**
comp=N,164nm,0.8s,mb5.9,baz=60,slow=5.0,SNR=105
ARCES LR LR 16 20 40.0
comp=N,2µm,19.2s,baz=62,slow=40
ARE0 ARCESS Array S 66.22 338 P **P 15 47 02.5 -1.1**
DGRG David-gareji 66.62 305 P **P 15 47 05.7 -0.9**
DGRG S S 15 55 47.2 +2.9
JOF Joensuu 66.72 331 ep **P 15 47 05.4 -1.4**
VOR Voronezh 66.89 317⇑iP **P 15 47 06.5 -1.5**
VOR 15 49 31.0
VOR S S 15 55 45.0 -2.4
VOR pmax pmax
comp=N,220nm,1.4s
VOR pmax pmax
comp=Z,800nm,1.4s,mb6.4
VOR smax
comp=N,220nm,1.4s
VOR smax
comp=Z,60nm,1.7s
GOF Gofitskoye 66.90 310⇓iP **P 15 47 08.5 +0.2**
GOF i S S 15 55 46.2 -1.5
GOF pmax pmax
comp=Z,920nm,0.7s,mb6.7
GOF smax
comp=N,80nm,1.4s
SAMG Sameba 66.92 306 P **P 15 47 10.7 +2.3**
MTA Mtatsminda 66.93 306 P **P 15 47 08.4 -0.1**
MTA S S 15 55 48.0 -0.1
SIT Sitka 66.94 36 P **P 15 47 08.7 +0.4**
comp=N,186nm,1.0s,mb5.9
SIT pP pP 15 47 47.3 +3.8
SIT Sitka 66.94 36 P **P 15 47 08.7 +0.4**
SIT pmax pmax
comp=Z,186nm,1.0s,mb5.9
TI2 Plekhanov 66.95 306α iP **P 15 47 08.0 -0.6**
TI2 i S S 15 55 51.6 +3.3
TI2 i 15 56 50.0
TI2 pmax pmax
comp=N,20nm,0.8s
TI2 pmax pmax
comp=E,20nm,0.8s
TI2 pmax pmax
comp=Z,180nm,0.8s,mb6.0
TI2 MLR MLR
comp=E,2µm,12.0s
TI2 MLR MLR
comp=Z,2µm,12.0s
TBLG Delisi 66.96 306 P **P 15 47 09.3 +0.6**
DGAR Diego Garcia 67.05 246 P **P 15 47 08.8 -0.9**
VRSR Storozhevoye 67.08 317 eP **P 15 47 07.5 -1.8**
VRSR e 15 47 34.9
VRSR e 15 49 33.4
VRSR eS S 15 55 43.9 -5.8
VRSR e 15 56 46.2
VRSR eSS SS 16 00 10.2 -3.0
VRSR pmax pmax
comp=Z,330nm,3.1s
VRSR pmax pmax
comp=N,70nm,2.3s
VRSR pmax pmax
comp=E,140nm,2.7s
VRSR smax
comp=N,210nm,4.8s
VRSR smax
comp=Z,60nm,3.7s
VRSR smax
comp=E,200nm,4.4s
OBN Obninsk 67.13 322 P **P 15 47 08.9 -0.6**
OBN Obninsk 67.13 322α iP **P 15 47 08.3 -1.2**
OBN i 15 47 48.9
OBN 15 49 33.0
OBN i PPP PPP 15 51 20.1 +1.9
OBN eS S 15 55 47.6 -2.6
OBN i 15 56 47.8
OBN pmax pmax
comp=Z,1µm,1.7s,mb6.5
OBN MLR MLR
comp=Z,2µm,14.0s
KTK1 Kautokeino 67.17 338 eP **P 15 47 09.2 -0.3**
KTK1 AMb AMB 15 47 11.6
comp=Z,725nm,1.0s,mb6.5
KTK1 Kautokeino 67.17 338 eP **P 15 47 09.2 -0.3**
comp=Z,725nm,1.0s,mb6.5
ONI Oni 67.53 307 P **P 15 47 12.8 +0.6**
ONI S S 15 55 55.5 +0.3
KIV Kislovodsk 67.54 309 P **P 15 47 12.6 +0.4**
KIV Kislovodsk 67.54 309c iP **P 15 47 12.3 +0.1**
KIV e 15 47 36.4
KIV e 15 49 40.1
KIV ePPP PPP 15 51 22.1 0.0
KIV i S S 15 55 56.8 +1.5
KIV eSS SS 16 00 14.3 -5.9
KIV pmax pmax
comp=Z,832nm,0.9s,mb6.5
KIV pmax pmax
comp=Z,960nm,5.6s
KIV MLR MLR
comp=Z,1µm,18.0s
GNI Garni 67.54 304 P **P 15 47 12.3 -0.1**
GNI Garni 67.54 304 P **P 15 47 12.7 +0.4**
BKR Bakuriani 67.81 306 P **P 15 47 15.2 +1.2**
AKH Akhalkalaki 67.94 306 P **P 15 47 15.2 +0.4**
TRO Tromso 68.22 339 eP **P 15 47 13.7 -2.3**
TRO AMb AMB 15 47 15.3
comp=Z,230nm,1.1s,mb5.8
TRO AMS AMS 16 23 17.9
comp=Z,1µm,19.2s
TRO Tromso 68.22 339 eP **P 15 47 13.7 -2.3**
comp=Z,230nm,1.1s,mb5.8
TRO LR LR
comp=Z,1235µm,19.2s
CNB Canberra Magne 68.39 163 eP **P 15 47 17.5 -0.1**
comp=Z,53nm,1.2s,mb5.2
PUL Pulkovo 68.42 328⇑iP **P 15 47 16.6 -0.8**
PUL Pulkovo 68.42 328 i P **P 15 47 16.4 -1.0**
PUL i *PP pP 15 47 52.3 -0.5
PUL i *SS 15 56 44.8
PUL pmax pmax
comp=Z,776nm,0.9s,mb6.4
PUL pmax pmax
comp=Z,1µm,1.5s,mb6.5
PUL MLR MLR
comp=Z,2µm,15.0s
PUL MLR MLR
comp=N,1µm,12.0s
PUL MLR MLR
comp=E,3µm,16.0s
CLDR Caldiran 68.52 304 P **P 15 47 18.2 -0.1**
KARS Kars 68.53 305 eP **P 15 47 20.1 +1.7**
DLBC Dease Lake 69.00 34 P **P 15 47 21.4 +0.4**
VANB Van 69.11 303 P **P 15 47 22.6 +0.7**
KAF Kangasniemi 69.17 331 ep **P 15 47 20.2 -1.7**
comp=E,428nm,0.8s,mb6.2
KAF Kangasniemi 69.17 331 eP **P 15 47 20.2 -1.7**
KAF pmax pmax
comp=Z,428nm,0.8s,mb6.2
VANT Van 69.17 303 eP **P 15 47 25.1 +2.8**
HKR Hakkari 69.26 302 P **P 15 47 23.4 +0.5**
UMR Umm Al-Rimmam 69.50 293 eP **P 15 47 24.3 -0.2**
UMR AMb AMB 15 47 25.8
comp=Z,711nm,0.5s,mb6.7
WHFO Wadi Hawf 69.54 279 P **P 15 47 24.9 0.0**
SNR=46
WHFO P 15 47 24.9
SNR=46
WHFO P 15 47 24.9
SNR=46
FINES FINESS Array B 69.57 330 P **P 15 47 23.3 -1.0**
comp=Z,206nm,0.4s,mb6.2,baz=69,slow=6.0,SNR=2153
FINES S S 15 56 17.2 -1.7
comp=Z,45nm,1.3s,baz=68,slow=10,SNR=9.1
FINES ScS ScS 15 57 05.9 -2.2
comp=Z,13nm,1.2s,baz=27,slow=4.3,SNR=2.7
FINES LR LR 16 21 06.5
comp=Z,2µm,19.7s,baz=255,slow=38
FINES FINESS Array B 69.57 330 P **P 15 47 23.3 -1.0**
FINES S S 15 56 17.2 -1.7
FINES ScS ScS 15 57 05.9 -2.2
FINES LR LR 16 21 06.5
SOC Sochi 69.67 309c iP **P 15 47 24.9 -0.4**
SOC e 15 47 45.9
SOC ePPP PPP 15 51 42.4 -0.3
SOC eS S 15 56 20.6 +0.2
SOC e 15 57 06.2
SOC e 15 57 17.8
SOC pmax pmax
comp=Z,563nm,0.7s,mb6.4
SOC pmax pmax
comp=Z,4µm,2.7s,mb6.7
SOC MLR MLR
comp=Z,1µm,16.0s
KBD Kabd 69.67 292 eP **P 15 47 25.2 -0.3**
KBD AMb AMB 15 47 26.9
comp=Z,2µm,0.6s
QRN Al-Qurain 69.67 292 eP **P 15 47 25.1 -0.5**

QRN				AMb	AMB	15 47 26.7	
	comp=Z,764nm,0.6s,mb6.6						
MIB	**Mutribah**	**69.69**	**293**	*e*P	**P**	**15 47 24.9**	**-0.8**
MIB				AMb	AMB	15 47 27.0	
	comp=Z,829nm,0.6s,mb6.7						
TOO	**Toolangi**	**69.69**	**167**	*e*P	**P**	**15 47 25.2**	**-0.4**
	comp=Z,30nm,0.6s,mb5.2						
TOO				*e*PP	pP	15 48 04.3	+3.2
TOO				*i* S	S	15 56 25.3	+4.5
TOO	**Toolangi**	**69.69**	**167**	*e*P	**P**	**15 47 25.2**	**-0.4**
TOO				*i* S	S	15 56 25.3	+4.5
TOO				pmax	pmax		
	comp=Z,30nm,0.6s,mb5.2						
RDF	**Al-Radifah**	**69.89**	**292**	*e*P	**P**	**15 47 26.4**	**-0.5**
RDF				AMb	AMB	15 47 28.2	
	comp=Z,1µm,0.4s						
NAY	**Al-Naaiem**	**70.00**	**293**	*e*P	**P**	**15 47 27.1**	**-0.5**
NAY				AMb	AMB	15 47 30.3	
	comp=Z,676nm,0.8s,mb6.4						
EZM	**Erzurum**	**70.03**	**305**	*e*P	**P**	**15 47 29.0**	**+1.5**
ABTO	**Aybut**	**70.20**	**279**	P	**P**	**15 47 29.0**	**+0.1**
	SNR=78						
ABTO				P		15 47 29.0	
	SNR=78						
ABTO				P		15 47 29.0	
	SNR=78						
MSL	**Mosul**	**70.26**	**301**	*i* x	x	15 47 27.5	
MSL				*e*x	x	15 47 37.5	
MSL				*e*x	x	15 48 19.0	
MSL				*e*x	x	15 50 12.5	
MSL				*e*x	x	15 56 24.0	
MSL				*e*x	x	15 57 11.0	
MSL				*e*x	x	15 58 08.0	
BHD	**Baghdad**	**70.54**	**298**	*i* x	x	15 47 31.0	
BHD				*e*x	x	15 47 51.0	
BHD				*e*x	x	15 50 04.0	
BHD				*e*x	x	15 56 32.0	
BHD				*e*x	x	15 57 18.0	
BTMT	**Batman**	**70.64**	**303**	P	**P**	**15 47 32.4**	**+1.1**
VSU	**Vasula**	**70.66**	**327**	⇑*i*P	**P**	**15 47 30.1**	**-0.9**
ANN	**Anapa**	**70.67**	**311**	*d i*P	**P**	**15 47 29.0**	**-2.3**
ANN				*e**PP	pP	15 48 05.5	-1.4
ANN				*e*PPP	PPP	15 51 49.9	-2.8
ANN				*i* S	S	15 56 29.0	-3.0
ANN				*i*		15 57 17.1	
ANN				*e*SS	SS	16 01 02.5	-6.2
ANN				pmax	pmax		
	comp=Z,2µm,1.6s,mb6.6						
ANN				pmax	pmax		
	comp=Z,1µm,6.3s						
DAG	**Danmarks Havn**	**70.77**	**353**	⇓*i*P	**P**	**15 47 30.3**	**-1.1**
	comp=Z,400nm,1.0s,mb6.1						
DAG	**Danmarks Havn**	**70.77**	**353**	⇓*i*P	**P**	**15 47 30.3**	**-1.1**
DAG				pmax	pmax		
	comp=Z,400nm,1.0s,mb6.1						
GUMT	**Gumushane**	**71.11**	**306**	P	**P**	**15 47 35.5**	**+1.4**
EZC	**Erzincan**	**71.17**	**305**	P	**P**	**15 47 37.5**	**+3.1**
MELSS	**Ber_school_2**	**71.36**	**338**	*e*P	**P**	**15 47 33.5**	**-1.6**
MOR8	**Moi Rana**	**71.53**	**337**	*e*P	**P**	**15 47 33.5**	**-2.5**
MOR8				AMb	AMB	15 47 36.0	
	comp=Z,639nm,1.2s,mb6.2						
MOR8	**Moi Rana**	**71.53**	**337**	*e*P	**P**	**15 47 33.5**	**-2.5**
	comp=Z,639nm,1.2s,mb6.2						
DIY	**Diyarbakir**	**71.67**	**304**	P	**P**	**15 47 39.0**	**+1.6**
STOK	**Stokkvaagen**	**71.90**	**338**	*e*P	**P**	**15 47 36.6**	**-1.7**
STOK				AMb	AMB	15 47 39.1	
	comp=Z,463nm,1.4s,mb6.0						
STOK	**Stokkvaagen**	**71.90**	**338**	*e*P	**P**	**15 47 36.6**	**-1.7**
	comp=Z,463nm,1.4s,mb6.0						
MNK	**Minsk**	**71.97**	**323**	⇑*e*P	**P**	**15 47 35.0**	**-3.9**
IDID	**Didziasalis**	**72.14**	**324**	*i* P	**P**	**15 47 40.2**	**+0.3**
IDID				AMb	AMB	15 47 42.8	
	comp=Z,247nm,1.1s,mb5.8						
IZAR	**Zarasai**	**72.18**	**325**	*i* P	**P**	**15 47 40.2**	**+0.1**
IZAR				AMb	AMB	15 47 43.0	
	comp=Z,265nm,1.1s,mb5.9						
ISAL	**Salakas**	**72.33**	**325**	*i* P	**P**	**15 47 41.2**	**+0.2**
ISAL				AMb	AMB	15 47 43.9	
	comp=Z,241nm,1.2s,mb5.8						
SIM	**Simferopol’**	**72.73**	**312**	⇑*e*P	**P**	**15 47 43.4**	**-0.1**
SIM						15 50 31.1	
SIM				PPP	PPP	15 52 15.2	+2.9
SIM				*e*S	S	15 56 52.7	-2.7
SIM				pmax	pmax		
	comp=Z,469nm,0.8s,mb6.3						
SIM				MLR	MLR		
	comp=Z,2µm,18.0s						
MYA	**Malataya**	**72.76**	**305**	P	**P**	**15 47 45.8**	**+2.0**
URFA	**Urfa**	**72.87**	**304**	P	**P**	**15 47 43.9**	**-0.5**
AKASG	**Malin Array Be**	**73.02**	**319**	P	**P**	**15 47 44.0**	**-1.1**
	comp=Z,182nm,0.4s,mb6.1,baz=58,slow=6.5,SNR=134						
AKASG				S	S	15 56 57.1	-1.4
	comp=Z,1.3nm,0.7s,baz=57,slow=11,SNR=7.1						
AKASG				ScS	ScS	15 57 35.2	-0.4
	comp=Z,0.1nm,0.2s,baz=63,slow=6.4,SNR=5.9						
AKASG	**Malin Array Be**	**73.02**	**319**	P	**P**	**15 47 44.0**	**-1.1**
AKASG				S	S	15 56 57.1	-1.4
AKASG				ScS	ScS	15 57 35.2	-0.4
TOKT	**Tokat**	**73.19**	**307**	P	**P**	**15 47 46.5**	**+0.2**
NSS	**Namsos**	**73.34**	**337**	*e*P	**P**	**15 47 44.3**	**-2.4**
NSS				AMb	AMB	15 47 46.0	
	comp=Z,293nm,0.9s,mb6.0						
NSS				*e*S	S	15 57 01.2	-0.7
NSS				AMS	AMS	16 25 11.6	
	comp=Z,1µm,18.2s						
NSS	**Namsos**	**73.34**	**337**	*e*P	**P**	**15 47 44.3**	**-2.4**
	comp=Z,293nm,0.9s,mb6.0						
YKW3	**Yellowknife Ar**	**73.49**	**26**	P	**P**	**15 47 47.3**	**-0.3**
YKA	**Yellowknife Ar**	**73.54**	**26**	P	**P**	**15 47 47.3**	**-0.5**
	comp=Z,45nm,0.9s,mb5.2,baz=302,slow=6.2,SNR=72						
YKA				pP	pP	15 48 23.5	-0.2
	comp=Z,24nm,0.8s,baz=303,slow=5.5,SNR=4.2						
YKA				LR	LR	16 21 26.0	
	comp=Z,526nm,20.7s,baz=305,slow=37						
YKA	**Yellowknife Ar**	**73.54**	**26**	P	**P**	**15 47 47.3**	**-0.5**
YKA				*PP	pP	15 48 23.5	-0.3
YKA				pmax	pmax		
	comp=Z,45nm,0.9s						
YKA				MLR	MLR		
	comp=Z,526nm,20.7s						
BYBT	**Boyabat**	**73.88**	**309**	P	**P**	**15 47 51.0**	**+0.8**
GAZ	**Gaziantep**	**74.14**	**304**	P	**P**	**15 47 53.1**	**+1.3**
BNN	**Bunyan**	**74.33**	**306**	P	**P**	**15 47 53.5**	**+0.6**
CORM	**Corum**	**74.56**	**308**	P	**P**	**15 47 53.5**	**-0.7**
TOS	**Tosya**	**74.58**	**309**	P	**P**	**15 47 55.5**	**+1.3**
SUW	**Suwalki**	**74.59**	**324**	*e*P	**P**	**15 47 53.7**	**-0.4**
	comp=Z,3µm,2.1s,mb6.5						
SUW				*e*PcP	PcP	15 48 07.0	-0.9
SUW				*e*PP	PP	15 50 43.0	-1.1
SUW				*e*S	S	15 57 14.8	-1.1
SUW				*e*SKS	SKS	15 57 48.7	+5.3
SUW	**Suwalki**	**74.59**	**324**	*e*P	**P**	**15 47 53.7**	**-0.3**
SUW				*e*PcP	PcP	15 48 07.0	-0.9
SUW				*e*PP	PP	15 50 43.1	-1.0
SUW				*e*S	S	15 57 14.9	-1.0
SUW				*e*SKS	SKS	15 57 48.7	+5.3
KOZT	**Kozan**	**74.98**	**305**	*e*P	**P**	**15 47 56.4**	**-0.2**
KIS	**Kishinev**	**75.04**	**316**	α *i*P	**P**	**15 47 55.0**	**-1.7**
KIS				*e**PP	pP	15 48 38.0	+5.1
KIS				*e*		15 50 50.0	
KIS				*i* S	S	15 57 14.0	-7.0
KIS				*i*		15 57 53.0	
KIS				pmax	pmax		
	comp=Z,600nm,1.0s,mb6.2						
KIS				pmax	pmax		
	comp=N,200nm,2.0s						
KIS				pmax	pmax		
	comp=E,300nm,1.0s						
KIS				pmax	pmax		
	comp=Z,2µm,4.0s						
KIS				pmax	pmax		
	comp=N,1µm,3.0s						
KIS				pmax	pmax		
	comp=E,1µm,3.0s						
KIS				MLR	MLR		
	comp=Z,2µm,20.0s						
KIS				MLR	MLR		
	comp=N,2µm,19.0s						
KIS				MLR	MLR		
	comp=Z,2µm,18.0s						
CANT	**Cankiri**	**75.05**	**308**	*e*P	**P**	**15 47 57.8**	**+0.9**
MUKL	**Al Mukalla**	**75.16**	**278**	⇑*e*P	**P**	**15 47 58.0**	**0.0**
TAU	**Tasmania Unive**	**75.21**	**167**	P	**P**	**15 47 59.1**	**+1.3**
CEYT	**Ceyhan**	**75.25**	**304**	*e*P	**P**	**15 47 58.8**	**+0.6**
SAFT	**Safranbolu**	**75.37**	**309**	*e*P	**P**	**15 47 59.6**	**+0.9**
HTY	**Hatay**	**75.39**	**303**	*e*P	**P**	**15 47 59.9**	**+0.9**
HFS	**Hagfors**	**75.40**	**332**	S	S	15 57 22.4	-2.3
	comp=Z,22nm,1.2s,baz=56,slow=16,SNR=6.9						
HFS				LR	LR	16 26 53.9	
	comp=Z,2µm,19.6s,baz=53,slow=40						
BR131	**Keskin Array S**	**75.45**	**308**	P	**P**	**15 47 59.5**	**+0.3**
BRTR	**Keskin Array B**	**75.45**	**308**	P	**P**	**15 47 59.3**	**+0.1**
	comp=Z,483nm,0.8s,mb6.2,baz=100,slow=4.6,SNR=677						
NIG	**Nigde**	**75.54**	**306**	*e*P	**P**	**15 48 01.3**	**+1.5**
KAMT	**Kaman**	**75.56**	**307**	*e*P	**P**	**15 47 59.1**	**-0.8**
KARA	**Karaisali**	**75.62**	**305**	*e*P	**P**	**15 48 00.4**	**+0.1**
IAS	**Iasi**	**75.69**	**317**	P	**P**	**15 47 60.0**	**-0.4**
NB2	**NORSAR Subarra**	**75.79**	**334**	P	**P**	**15 47 59.3**	**-1.4**
	comp=Z,265nm,0.8s,mb5.9,baz=47,slow=5.8						
NB2	**NORSAR Subarra**	**75.79**	**334**	P	**P**	**15 47 59.3**	**-1.4**
	baz=47,slow=5.9						
NOA	**NORSAR Array B**	**75.79**	**334**	P	**P**	**15 47 59.4**	**-1.3**
	comp=Z,188nm,0.7s,mb5.8,baz=49,slow=5.7,SNR=458						
NOA				S	S	15 57 26.8	-2.3
	comp=Z,4.2nm,1.0s,baz=52,slow=11,SNR=3.2						
NOA				LR	LR	16 24 31.6	
	comp=Z,1µm,18.5s,baz=45,slow=38						
DOMB	**Dombas**	**75.94**	**335**	⇑*i*P	**P**	**15 48 00.9**	**-0.6**
DOMB				AMb	AMB	15 48 03.1	
	comp=Z,461nm,1.9s,mb5.8						
DOMB	**Dombas**	**75.94**	**335**	⇑*i*P	**P**	**15 48 00.9**	**-0.6**
	comp=Z,461nm,1.9s,mb5.8						
ANTO	**Ankara**	**75.95**	**308**	*e*P	**P**	**15 48 02.1**	**0.0**
ANTO	**Ankara**	**75.95**	**308**	*e*P	**P**	**15 48 02.4**	**+0.3**
	comp=Z,434nm,0.9s,mb6.1						
ANTO				*e*PcP	PcP	15 48 15.8	+1.7
ANTO	**Ankara**	**75.95**	**308**	*e*P	**P**	**15 48 02.4**	**+0.4**
ANTO				*e*		15 48 15.8	
ANTO				pmax	pmax		
	comp=Z,434nm,0.9s,mb6.1						
LOD	**Lodumlu**	**75.96**	**308**	*e*P	**P**	**15 48 02.9**	**+0.8**
NAO01	**NORSAR Array S**	**76.04**	**334**	P	**P**	**15 48 00.9**	**-1.2**
	comp=Z,114nm,0.8s,mb5.5						
FKH	**Fakeheh**	**76.07**	**302**	*e*P	**P**	**15 48 03.2**	**+0.3**
NAO	**NORSAR Subarra**	**76.08**	**334**	P	**P**	**15 47 59.3**	**-3.0**
	comp=Z,265nm,0.8s,mb5.9						
NAO	**NORSAR Subarra**	**76.08**	**334**	P	**P**	**15 47 59.3**	**-3.0**
NAO				pmax	pmax		
	comp=Z,265nm,0.8s,mb5.9						
MOL	**Molde**	**76.12**	**336**	⇑*i*P	**P**	**15 48 05.4**	**+2.9**
MOL				AMb	AMB	15 48 07.7	
	comp=Z,589nm,1.9s,mb5.9						
MOL	**Molde**	**76.12**	**336**	⇑*i*P	**P**	**15 48 05.4**	**+2.9**
	comp=Z,589nm,1.9s,mb5.9						
MERS	**Mersin**	**76.19**	**305**	*e*P	**P**	**15 48 03.4**	**0.0**
LVV	**L’vov**	**76.35**	**320**	*e*P	**P**	**15 48 03.0**	**-1.0**
LVV				*e*S	S	15 57 33.0	-2.3
LVV				MLR	MLR		
	comp=Z,980nm,16.0s						
CFR	**Carcaliu**	**76.35**	**315**	⇑P	**P**	**15 48 03.5**	**-0.7**
SUMG	**Summit**	**76.42**	**356**	P	**P**	**15 48 04.9**	**+0.9**
TIRR	**Tirgusor**	**76.54**	**314**	⇓P	**P**	**15 48 05.9**	**+0.7**
TIRR	**Tirgusor**	**76.54**	**314**	*e*P	**P**	**15 48 05.4**	**+0.2**
TIRR				*e*PcP	PcP	15 48 15.0	-1.5
TIRR				*e*pP	pP	15 48 40.8	-0.7
OSL	**Oslo**	**76.69**	**333**	*e*P	**P**	**15 48 04.5**	**-1.2**
OSL				AMb	AMB	15 48 07.1	
	comp=Z,397nm,0.8s,mb6.1						
OSL	**Oslo**	**76.69**	**333**	*e*P	**P**	**15 48 04.5**	**-1.2**
	comp=Z,397nm,0.8s,mb6.1						
MDU	**Mudurnu**	**76.72**	**309**	*e*P	**P**	**15 48 07.1**	**+0.7**
HARR	**Harsova**	**76.72**	**314**	⇑P	**P**	**15 48 06.0**	**-0.3**
BHL	**Bhannes**	**76.78**	**302**	*e*P	**P**	**15 48 06.5**	**-0.2**
BURAR	**Bucovina Array**	**76.84**	**318**	⇓P	**P**	**15 48 07.9**	**+1.1**
VRI	**Vrincioaia**	**76.86**	**316**	⇑P	**P**	**15 48 08.6**	**+1.6**
VRI	**Vrincioaia**	**76.86**	**316**	P	**P**	**15 48 07.2**	**+0.3**
SCO	**Scoresbysund**	**76.86**	**351**	*i* P	**P**	**15 48 07.1**	**+0.6**
	comp=Z,68nm,0.8s,mb5.3						
SCO				*i* S	S	15 57 42.8	+2.4
SCO	**Scoresbysund**	**76.86**	**351**	*i* P	**P**	**15 48 07.1**	**+0.6**
SCO				*i* S	S	15 57 42.8	+2.4
SCO				pmax	pmax		
	comp=Z,69nm,0.8s,mb5.3						
KIZT	**Kizilcal**	**77.05**	**308**	*e*P	**P**	**15 48 07.5**	**-0.7**
IKL	**Isikli**	**77.08**	**304**	*e*P	**P**	**15 48 08.4**	**0.0**
PGC	**Sidney**	**77.16**	**41**	P	**P**	**15 48 09.1**	**+0.5**
	comp=Z,118nm,1.1s,mb5.4						
PGC				pP	pP	15 48 45.2	+0.3
KWP	**Kalwaria**	**77.17**	**320**	⇑*i*P	**P**	**15 48 09.7**	**+1.0**
	comp=Z,5µm,2.0s,mb6.8						
KWP				*e*pP	pP	15 48 47.7	+2.8
KWP				*e*PP	PP	15 51 09.5	+4.0
KWP				*e*S	S	15 57 46.1	+1.8
KWP				*e*SKS	SKS	15 58 11.4	+9.0
KWP	**Kalwaria**	**77.17**	**320**	⇑*i*P	**P**	**15 48 09.7**	**+1.1**
KWP				*e*pP	pP	15 48 47.7	+2.8
KWP				*e*PP	PP	15 51 09.5	+4.0
KWP				*e*S	S	15 57 46.1	+1.9
KWP				*e*SKS	SKS	15 58 11.4	+9.0
KWP	**Kalwaria**	**77.17**	**320**	⇑*i*P	**P**	**15 48 09.7**	**+1.1**
KWP				*e*		15 51 09.5	
KWP				*e*S	S	15 57 46.1	+1.9
KWP				*e*		15 58 11.4	
KONT	**Konya--Tatoy**	**77.18**	**307**	*e*P	**P**	**15 48 09.0**	**+0.1**
OCWA	**Octopus Mounta**	**77.22**	**42**	P	**P**	**15 48 10.0**	**+1.0**
	comp=Z,120nm,1.3s,mb5.4						
OCWA				pP	pP	15 48 46.4	+1.1
KONO	**Kongsberg**	**77.31**	**333**	*e*P	**P**	**15 48 07.0**	**-2.2**
KONO				*e*PP	PP	15 51 04.1	-2.4
KONO				*e*S	S	15 57 45.3	-0.1
KONO				*e*SS	SS	16 02 48.1	-1.5
KONO	**Kongsberg**	**77.31**	**333**	P	**P**	**15 48 08.4**	**-0.8**
KONO				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.4						
ISR	**Istrita**	**77.35**	**315**	⇓P	**P**	**15 48 10.3**	**+0.6**
GPA	**Golpazari**	**77.41**	**309**	*e*P	**P**	**15 48 10.7**	**+0.5**
PHNC	**Paralimni**	**77.43**	**303**	P	**P**	**15 48 08.5**	**-1.9**
ESKT	**Eskisehir**	**77.43**	**309**	*e*P	**P**	**15 48 10.2**	**-0.1**
MLR	**Muntele Rosu**	**77.52**	**316**	P	**P**	**15 48 10.6**	**0.0**
	comp=Z,70nm,0.4s,mb5.6,baz=353,slow=3.8,SNR=194						
MLR				S	S	15 57 50.4	+2.4
	comp=Z,4.4nm,1.0s,baz=241,slow=21,SNR=6.3						
MLR				ScS	ScS	15 58 12.4	+0.4
	comp=Z,3.1nm,0.9s,baz=190,slow=19,SNR=5.7						
MLR				LR	LR	16 27 06.7	
	comp=Z,2µm,18.4s,baz=63,slow=39						
MLR	**Muntele Rosu**	**77.52**	**316**	⇑P	**P**	**15 48 10.6**	**0.0**
HNTI	**Hanita**	**77.52**	**301**	P	**P**	**15 48 11.5**	**+0.6**
HYA	**Hoyanger**	**77.55**	**336**	⇓*i*P	**P**	**15 48 10.8**	**+0.3**
HYA				AMb	AMB	15 48 14.1	
	comp=Z,449nm,1.6s,mb5.8						
HYA	**Hoyanger**	**77.55**	**336**	⇓*i*P	**P**	**15 48 10.8**	**+0.3**
	comp=Z,449nm,1.6s,mb5.8						
HRT	**Hereke**	**77.57**	**310**	*e*P	**P**	**15 48 10.8**	**-0.2**
MMLI	**Mount Malkishu**	**77.65**	**300**	P	**P**	**15 48 12.5**	**+0.9**
FOO	**Floro**	**77.65**	**336**	*e*P	**P**	**15 48 10.6**	**-0.5**
FOO				AMb	AMB	15 48 12.8	
	comp=Z,244nm,1.7s,mb5.5						
FOO	**Floro**	**77.65**	**336**	*e*P	**P**	**15 48 10.6**	**-0.5**
	comp=Z,244nm,1.7s,mb5.6						
RAO	**Raoul Island**	**77.67**	**135**	LR	LR	16 17 01.2	
	comp=Z,600nm,21.7s,baz=195,slow=31						
KOLS	**Kolonicke sedl**	**77.79**	**320**	*i* P	**P**	**15 48 12.7**	**+0.6**
KOLS				*e*S	S	15 57 52.4	+1.5
ISK	**Istanbul-Kandi**	**77.84**	**311**	*e*P	**P**	**15 48 11.6**	**-1.0**
SNX	**Sinaia**	**77.85**	**316**	⇓P	**P**	**15 48 12.7**	**+0.2**
OFRI	**‘Ofer**	**77.88**	**301**	P	**P**	**15 48 13.3**	**+0.4**
YLV	**Yalova**	**77.89**	**310**	*e*P	**P**	**15 48 11.9**	**-0.9**
MKRJ	**Makawir**	**77.91**	**299**	P	**P**	**15 48 14.0**	**+0.9**
BADT	**Buyukada**	**77.91**	**310**	*e*P	**P**	**15 48 13.3**	**+0.4**
MAMC	**Mammari**	**77.93**	**304**	P	**P**	**15 48 13.4**	**+0.3**
BSD	**Bornholm Skovb**	**77.93**	**328**	⇑*i*P	**P**	**15 48 12.5**	**-0.2**
	comp=Z,1µm,0.7s,mb6.7						
BSD	**Bornholm Skovb**	**77.93**	**328**	⇑*i*P	**P**	**15 48 12.5**	**-0.2**
BSD				pmax	pmax		
	comp=Z,1µm,0.7s,mb6.7						
UZH	**Uzhgorod**	**77.95**	**320**	*e*P	**P**	**15 48 12.0**	**-0.9**
UZH				*e*S	S	15 57 58.0	+5.5
UZH				MLR	MLR		
	comp=Z,1µm,16.0s						
CSS	**Prodhromos**	**77.95**	**303**	P	**P**	**15 48 13.3**	**+0.1**
SLTI	**Sal’it**	**78.03**	**300**	P	**P**	**15 48 14.4**	**+0.7**
BUC1	**Bucharest**	**78.07**	**315**	P	**P**	**15 48 14.2**	**+0.5**
DRGI	**Dragot**	**78.08**	**300**	P	**P**	**15 48 14.4**	**+0.4**
VOIR		**78.08**	**316**	⇓P	**P**	**15 48 14.3**	**+0.6**
STHS	**Stebnicka Huta**	**78.09**	**321**	*i* P	**P**	**15 48 14.7**	**+1.0**
STHS				*e*S	S	15 57 56.8	+2.8
GNW	**Green Mountain**	**78.09**	**41**	P	**P**	**15 48 14.7**	**+1.0**
GNW				pP	pP	15 48 50.8	+0.7
DSI	**Dead Sea**	**78.10**	**300**	P	**P**	**15 48 14.6**	**+0.5**
ALT	**Altintas**	**78.16**	**308**	*e*P	**P**	**15 48 14.7**	**+0.4**
MTUR	**Matau**	**78.19**	**316**	⇓P	**P**	**15 48 13.9**	**-0.4**
MTUR	**Matau**	**78.19**	**316**	P	**P**	**15 48 13.9**	**-0.4**
CTT	**Catalca**	**78.21**	**311**	*e*P	**P**	**15 48 14.7**	**+0.2**
MZDA	**Masada**	**78.24**	**299**	P	**P**	**15 48 15.5**	**+0.6**
CRVS	**Cervenica-Dubn**	**78.25**	**320**	*i* P	**P**	**15 48 15.3**	**+0.7**
CRVS				*e*S	S	15 57 54.4	-1.4
BDHA	**Al Bayda’**	**78.34**	**279**	⇑*e*P	**P**	**15 48 16.6**	**+0.9**
RUND	**Rundenannen**	**78.36**	**335**	*e*P	**P**	**15 48 14.7**	**-0.2**
RUND				AMb	AMB	15 48 18.0	
	comp=Z,268nm,2.0s,mb5.5						
SZAC	**Souni-Zanaja**	**78.37**	**303**	P	**P**	**15 48 15.7**	**+0.2**
ASK	**Askoy**	**78.38**	**336**	*e*P	**P**	**15 48 14.9**	**-0.1**
ASK				AMb	AMB	15 48 17.5	
	comp=Z,744nm,1.8s,mb6.0						
ASK	**Askoy**	**78.38**	**336**	*e*P	**P**	**15 48 14.9**	**-0.1**
	comp=Z,744nm,1.8s,mb6.0						
ALFC	**Alevga**	**78.38**	**304**	P	**P**	**15 48 15.3**	**-0.3**
	comp=Z,5.2nm,0.7s						
BER	**Bergen**	**78.39**	**335**	*e*P	**P**	**15 48 15.1**	**0.0**
BER				AMb	AMB	15 48 19.1	
	comp=Z,396nm,1.9s,mb5.7						
BER				AMS	AMS	16 26 29.0	
	comp=Z,1µm,19.2s						
BER	**Bergen**	**78.39**	**335**	*e*P	**P**	**15 48 15.1**	**0.0**
	comp=Z,396nm,1.9s,mb5.7						
BER				LR	LR		
	comp=Z,1211µm,19.2s						
OJC	**Ojcow**	**78.41**	**322**	⇑*i*P	**P**	**15 48 15.8**	**+0.4**
OJC				*i* PP	PP	15 51 12.6	-3.5
OJC				*i* S	S	15 57 56.4	-1.0
OJC				MLR	MLR	16 26 22.0	
	comp=Z,2µm,17.6s						
ORLT	**Orhaneli**	**78.47**	**310**	*e*P	**P**	**15 48 16.5**	**+0.6**
ISP	**Isparta**	**78.50**	**307**	*e*P	**P**	**15 48 15.7**	**-0.4**
ISP	**Isparta**	**78.50**	**307**	P	**P**	**15 48 16.5**	**+0.3**
EGD	**Espegrend**	**78.51**	**335**	*e*P	**P**	**15 48 14.7**	**-1.1**
EGD				AMb	AMB	15 48 18.3	
	comp=Z,488nm,1.7s,mb5.9						
EGD	**Espegrend**	**78.51**	**335**	*e*P	**P**	**15 48 14.7**	**-1.1**
	comp=Z,488nm,1.7s,mb5.9						
NIE	**Niedzica**	**78.59**	**321**	⇑*i*P	**P**	**15 48 17.4**	**+1.0**
BCK	**Bucak**	**78.64**	**307**	*e*P	**P**	**15 48 16.9**	**0.0**
BLS5	**Blasjo**	**78.65**	**334**	*e*P	**P**	**15 48 16.7**	**+0.2**
BLS5				AMb	AMB	15 48 19.2	
	comp=Z,231nm,1.4s,mb5.6						
BLS5	**Blasjo**	**78.65**	**334**	*e*P	**P**	**15 48 16.7**	**+0.2**
	comp=Z,231nm,1.4s,mb5.6						
LBOS		**78.66**	**279**	⇑*e*P	**P**	**15 48 18.2**	**+0.7**
LBOS				AMb	AMB	15 48 19.8	
	comp=Z,499nm,1.1s,mb6.0						
TTW	**Tolt Reservoir**	**78.67**	**41**	P	**P**	**15 48 17.7**	**+0.9**
TTW				pP	pP	15 48 53.9	+0.7
COP	**Copenhagen**	**78.69**	**329**	⇑*i*P	**P**	**15 48 17.0**	**+0.2**
	comp=Z,493nm,0.8s,mb6.2						
COP				*i*		15 48 59.2	
COP				*i* S	S	15 57 57.2	-3.1
COP				*i*		15 58 13.6	
	comp=Z,570nm,18.0s						
COP	**Copenhagen**	**78.69**	**329**	⇑*i*P	**P**	**15 48 17.0**	**+0.2**
COP				*i*		15 48 59.2	
COP				*i* S	S	15 57 57.2	-3.1
COP				*i*		15 58 13.6	
COP				pmax	pmax		
	comp=Z,493nm,0.8s,mb6.2						
COP				MLR	MLR		
	comp=Z,580nm,18.0s						
PPCY	**Paphos**	**78.69**	**304**	P	**P**	**15 48 17.2**	**-0.1**
DRGR		**78.72**	**318**	⇑P	**P**	**15 48 17.3**	**+0.1**
DRGR		**78.72**	**318**	P	**P**	**15 48 16.8**	**-0.4**
ZFRI	**Zfri**	**78.74**	**299**	P	**P**	**15 48 18.3**	**+0.7**
MASH	**Mash‘abbe Sade**	**78.82**	**299**	P	**P**	**15 48 18.4**	**+0.4**
ZIMR		**78.84**	**314**	⇓P	**P**	**15 48 18.9**	**+1.0**
RTMM	**Retamin**	**78.87**	**299**	P	**P**	**15 48 18.6**	**+0.3**
DST	**Dursunbey**	**78.87**	**310**	*e*P	**P**	**15 48 18.4**	**+0.3**
EDRB	**Edirne**	**78.93**	**312**	*e*P	**P**	**15 48 18.7**	**+0.3**
BNT	**Bandirma**	**78.95**	**310**	*e*P	**P**	**15 48 19.0**	**+0.5**
PRNI	**Paran**	**78.97**	**299**	P	**P**	**15 48 19.6**	**+0.7**
EDC	**Edincik**	**78.99**	**310**	*e*P	**P**	**15 48 19.1**	**+0.3**
RGN	**Rugen**	**79.01**	**328**	P	**P**	**15 48 19.1**	**+0.6**
KECS	**Kecovo**	**79.03**	**320**	*i* P	**P**	**15 48 19.3**	**+0.5**
KECS				*e*PP	PP	15 51 21.0	-0.1
KECS				*e*S	S	15 58 05.1	+1.1
MRMT	**Marmara Adasi**	**79.03**	**311**	*e*P	**P**	**15 48 18.1**	**-0.9**
RMNI	**Mount Ramon**	**79.03**	**299**	P	**P**	**15 48 19.9**	**+0.7**
DHBB	**Dhamar BB**	**79.05**	**280**	⇑*e*P	**P**	**15 48 21.4**	**+1.8**
PVL	**Pavlikeni**	**79.09**	**314**	*i* P	**P**	**15 48 21.0**	**+1.8**
SNART	**Snartemo**	**79.10**	**333**	⇑*i*P	**P**	**15 48 18.6**	**-0.4**
SNART				AMb	AMB	15 48 20.9	
	comp=Z,348nm,1.2s,mb5.8						
SNART	**Snartemo**	**79.10**	**333**	⇑*i*P	**P**	**15 48 18.6**	**-0.4**
	comp=Z,348nm,1.2s,mb5.9						
LON	**Longmire**	**79.12**	**42**	P	**P**	**15 48 19.7**	**+0.4**
MFT	**Murefte**	**79.14**	**311**	*e*P	**P**	**15 48 18.8**	**-0.8**
KZIT	**Kziot**	**79.16**	**299**	P	**P**	**15 48 20.1**	**+0.3**
HAJJ	**Hajjah**	**79.17**	**282**	⇑*e*P	**P**	**15 48 20.5**	**+0.3**
HAJJ				AMb	AMB	15 48 21.7	
	comp=Z,463nm,1.5s,mb5.9						
AQBJ	**Aqaba**	**79.24**	**298**	P	**P**	**15 48 20.8**	**+0.5**
KMTI	**Karmit**	**79.30**	**299**	P	**P**	**15 48 21.0**	**+0.3**
MBH	**Mount Berech**	**79.31**	**298**	P	**P**	**15 48 21.3**	**+0.6**
MSEY	**Mahe Island**	**79.32**	**258**	P	**P**	**15 48 21.7**	**+0.6**
RAC	**Raciborz**	**79.33**	**323**	*e*P	**P**	**15 48 21.2**	**+0.8**
RAC				*e*pP	pP	15 48 57.3	+0.5
RAC				*e*S	S	15 58 04.7	-2.5
RAC				LME		16 22 05.3	
RAC				LMN		16 24 29.5	
RAC				MLR	MLR	16 28 31.6	
	comp=Z,3µm,15.8s						
RAC	**Raciborz**	**79.33**	**323**	*e*P	**P**	**15 48 21.2**	**+0.8**
RAC				*e*pP	pP	15 48 57.3	+0.5
RAC				*e*S	S	15 58 04.7	-2.5
RAC				LR	LR		
	comp=Z,3µm,15.8s						
EIL	**Elat**	**79.34**	**298**	P	**P**	**15 48 21.3**	**+0.4**
BALB	**Balikesir**	**79.35**	**310**	*e*P	**P**	**15 48 20.6**	**-0.1**
CRAR	**CRAIOVA**	**79.43**	**316**	P	**P**	**15 48 21.9**	**+0.9**
COR	**Corvallis**	**79.44**	**44**	P	**P**	**15 48 23.2**	**+2.1**
	comp=Z,181nm,1.1s,mb5.6						
COR				pP	pP	15 48 59.0	+1.4
COR	**Corvallis**	**79.44**	**44**	P	**P**	**15 48 23.2**	**+2.1**
COR				*PP	pP	15 48 59.0	+1.5
COR				pmax	pmax		
	comp=Z,181nm,1.1s,mb5.6						
LIKS	**Likavka**	**79.45**	**321**	*e*P	**P**	**15 48 22.0**	**+1.0**
LIKS				*e*		15 48 31.0	
ELL	**Elmali**	**79.47**	**306**	*e*P	**P**	**15 48 22.1**	**+0.6**
OKC	**Ostrava-Krasne**	**79.50**	**322**	⇑*i*P	**P**	**15 48 21.6**	**+0.3**
OKC				*e*PP	PP	15 51 19.6	-5.2
OKC				*e*S	S	15 58 07.8	-1.1
OKC				*e*XS		15 59 14.6	
OKC				AMS	AMS	16 28 30.0	
	comp=Z,2µm,13.2s						
DENT	**Denizli**	**79.55**	**308**	*e*P	**P**	**15 48 22.6**	**+0.8**
MUD	**Monsted U’grnd**	**79.58**	**331**	⇑*i*P	**P**	**15 48 21.2**	**-0.4**
	comp=Z,258nm,0.7s,mb6.0						
MUD				*i* S	S	15 58 08.1	-1.6
	comp=Z,2µm,18.0s						
PSZ	**Piszkesteto**	**79.67**	**320**	⇑*i*P	**P**	**15 48 23.0**	**+0.7**
PSZ	**Piszkesteto**	**79.67**	**320**	P	**P**	**15 48 22.9**	**+0.6**
LPK	**Lapseki**	**79.70**	**311**	*e*P	**P**	**15 48 23.4**	**+0.8**
EDM	**Edmonton**	**79.71**	**33**	P	**P**	**15 48 22.8**	**+0.4**
EDM				pP	pP	15 48 58.7	-0.1
KEBM	**Edson Butte**	**79.75**	**46**	P	**P**	**15 48 24.2**	**+1.5**
KEBM				pP	pP	15 49 00.5	+1.3
AKS	**Akhisar**	**79.79**	**309**	*e*P	**P**	**15 48 23.3**	**+0.2**
MORC	**Moravsky Berou**	**79.85**	**323**	P	**P**	**15 48 23.2**	**0.0**
	comp=Z,325nm,0.9s,mb6.0						
MORC	**Moravsky Berou**	**79.85**	**323**	P	**P**	**15 48 23.2**	**0.0**
MORC				pmax	pmax		
	comp=Z,325nm,0.9s,mb6.0						
KSP	**Ksiaz**	**79.86**	**324**	⇑*i*P	**P**	**15 48 24.2**	**+1.0**
	comp=Z,3µm,2.0s,mb6.6						
KSP				*e*S	S	15 58 12.7	0.0
KSP				*e*SKS	SKS	15 58 17.0	-4.4
KSP	**Ksiaz**	**79.86**	**324**	⇑*e*P	**P**	**15 48 23.7**	**+0.5**
KSP				*e*pP	pP	15 49 01.1	+1.4
KSP				*e*PP	PP	15 51 25.0	-2.7
KSP				*e*S	S	15 58 11.5	-1.2
KSP				*e*SS	SS	16 03 28.0	+0.2

KSP	**Ksiaz**	79.86	324⇑	*e*P	P	15 48 23.7	+0.5
KSP				*e*		15 51 25.0	
KSP				*e*S	S	15 58 11.5	-1.2
KSP				*e*SS	SS	16 03 28.0	+0.2
ALN	**Alexandroupoli**	79.88	312	*e*P	P	15 48 23.8	+0.3
VYHS	**Vyhne**	79.92	321	*i* P	P	15 48 24.6	+1.0
VYHS				*e*S	S	15 58 13.5	+0.1
TRBA	**At Turbah**	79.94	279⇑	*e*P	P	15 48 24.8	+0.5
HOOD	**Mount Hood Mea**	80.01	43	P	P	15 48 25.2	+1.0
HOOD				pP	pP	15 49 00.9	+0.3
PENC	**Penc**	80.08	320⇓	*e*P	P	15 48 26.0	+1.5
RUE	**Ruedersdorf**	80.09	326	P	P	15 48 25.5	+1.1
FETY	**Fethiye**	80.09	307	*e*P	P	15 48 23.1	-1.7
DPC	**Dobruska-Polom**	80.14	323⇑	*i*P	P	15 48 25.2	+0.5
DPC				*e*PP	PP	15 51 25.6	-4.5
DPC				*e*S	S	15 58 15.0	-0.6
DPC				*e*XS		15 59 19.6	
DPC				AMS	AMS	16 28 40.0	
	comp=Z,2µm,19.5s						
KBO	**Bosley Butte**	80.17	47	P	P	15 48 26.4	+1.3
KBO				pP	pP	15 49 02.2	+0.7
PGB	**Panagyurishte**	80.17	314	*i* P	P	15 48 26.0	+0.9
UPC	**Upice**	80.20	324⇑	*i*P	P	15 48 25.4	+0.3
UPC				*e*S	S	15 58 15.7	-0.6
EZN	**Ezine**	80.27	311	*e*P	P	15 48 22.0	-3.6
RZN	**Rozhen**	80.30	313	*i* P	P	15 48 26.0	+0.2
DALT	**Dalyan (Mudla)**	80.33	307	*e*P	P	15 48 24.8	-1.3
YER	**Yerkesik**	80.38	308	*e*P	P	15 48 27.2	+0.8
BUD	**Budapest**	80.40	320⇑	*e*P	P	15 48 26.8	+0.6
IZM	**Izmir**	80.41	309	*e*P	P	15 48 27.1	+0.7
BLCB	**Balcova**	80.56	309	*e*P	P	15 48 27.6	+0.3
SRO2	**Moca**	80.59	321	*e*P	P	15 48 28.3	+1.1
SRO	**Srobarova**	80.60	321	*e*P	P	15 48 28.3	+1.1
VRAC	**Vranov**	80.63	323	LR	LR	16 28 16.9	
	comp=Z,2µm,18.1s,baz=316,slow=38						
VRAC	**Vranov**	80.63	323	P	P	15 48 28.3	+0.9
MLSB	**Milas**	80.64	308	*e*P	P	15 48 27.4	-0.3
SMOL	**Smolenice**	80.66	322	*i* P	P	15 48 29.1	+1.5
SRO1	**Iza**	80.67	321	*e*P	P	15 48 28.6	+1.0
HUMO	**Hull Mountain**	80.74	46	P	P	15 48 28.8	+0.7
HUMO				pP	pP	15 49 05.3	+0.7
VTS	**Vitosha**	80.74	314	*i* P	P	15 48 29.0	+0.9
VTS	**Vitosha**	80.74	314	P	P	15 48 28.9	+0.8
BSEG	**Bad Segeberg**	80.75	329	*e*P	P	15 48 27.8	-0.1
BSEG				*e*SS	SS	16 03 44.5	+3.3
LRW	**Lerwick**	80.81	338⇑	*e*P	P	15 48 27.2	-0.8
PKSG		80.81	320⇑	*e*P	P	15 48 29.1	+0.8
BOLS	**Boljevac**	80.81	316⇓	*i*P	P	15 48 27.0	-1.4
NEW	**Newport**	80.84	39	P	P	15 48 28.9	+0.4
NEW				pP	pP	15 49 05.5	+0.4
WAL1	**Walls**	80.86	338	*e*P	P	15 48 28.3	-0.1
PVCC	**Panska Ves**	80.92	324⇑	*i*P	P	15 48 29.4	+0.6
PVCC				*e*S	S	15 58 23.0	-0.6
PVCC				AMS	AMS	16 27 50.0	
	comp=Z,2µm,15.1s						
PKS8	**Sarbogard**	80.95	320⇑	*e*P	P	15 48 29.5	+0.4
MMB	**Musomiste**	80.97	313	*i* P	P	15 48 30.0	+0.6
SVIS	**Svilajnac**	80.98	317⇓	*i*P	P	15 48 28.6	-0.7
BRG	**Berggiesshubel**	81.01	325⇑	*i*P	P	15 48 29.6	+0.3
	comp=Z,234nm,0.9s,mb5.8						
BRG				*i*		15 48 42.2	
BRG				PP	PP	15 51 25.0	-13
BRG				S	S	15 58 24.0	-0.6
BRG				SS	SS	16 03 25.0	-20
BRG				LR	LR		
	comp=Z,2µm,16.3s						
BRG	**Berggiesshubel**	81.01	325⇑	*i*P	P	15 48 29.6	+0.3
BRG				S	S	15 58 24.0	-0.6
BRG				pmax	pmax		
	comp=Z,234nm,0.9s,mb5.8						
BRG				MLR	MLR		
	comp=Z,2µm,16.3s						
ZST	**Bratislava**	81.03	321	*e*P	P	15 48 31.1	+1.6
SMG	**Samos**	81.06	309	*e*P	P	15 48 30.5	+0.6
DAT	**Datca**	81.08	307	*e*P	P	15 48 28.4	-1.6
BODT	**Bodrum**	81.08	308	*e*P	P	15 48 28.8	-1.2
BEO	**Belgrade**	81.13	317⇑	*i*P	P	15 48 29.9	-0.2
CLL	**Collm**	81.20	326	⇑P	P	15 48 31.0	+0.7
	comp=Z,logA/T=3.0,mb6.4						
CLL				*i* *PP	pP	15 49 08.7	+1.8
CLL				*e**SP	sP	15 49 23.0	+0.1
CLL				*e*		15 50 02.0	
CLL				*e*PP	PP	15 51 38.0	-1.4
CLL				*e**PPP		15 52 11.0	
CLL				*e**SPP		15 52 26.0	
CLL				*e*		15 54 30.0	
CLL				*e*		15 55 30.0	
CLL				*e*S	S	15 58 25.0	-1.5
CLL				*e*		15 59 14.0	
CLL				*e*PS	PS	15 59 32.0	-3.5
CLL				*e*PPS	PPS	15 59 44.0	-14
CLL				*e*SS	SS	16 03 45.0	-2.9
CLL				*e**SSS		16 04 43.0	
CLL				*e*		16 08 12.0	
CLL				*e*		16 09 48.0	
CLL				*e*		16 18 21.0	
CLL	**Collm**	81.20	326⇑	*i*P	P	15 48 31.0	+0.7
	comp=Z,860nm,0.8s,mb6.4						
CLL				*i* pP	pP	15 49 08.7	+1.8
CLL				*e*sP	sP	15 49 23.0	+0.1
CLL				*e*S	S	15 58 25.0	-1.5
CLL				*e*SKPP’		16 18 21.0	
CLL				LR	LR		
	comp=Z,3µm,17.3s						
CLL	**Collm**	81.20	326⇑	*i*P	P	15 48 31.0	+0.7
CLL				*e*S	S	15 58 25.0	-1.5
CLL				pmax	pmax		
	comp=Z,860nm,0.8s,mb6.4						
CLL				MLR	MLR		
	comp=Z,3µm,17.3s						
TREC	**Trest**	81.21	323⇑	*i*P	P	15 48 30.8	+0.4
TREC				*e*SKS	SKS	15 58 27.2	-3.8
KHMM	**Horse Mountain**	81.21	47	P	P	15 48 32.0	+1.4
KHMM				pP	pP	15 49 07.9	+0.7
KKB	**Krupnik**	81.22	314	*i* P	P	15 48 31.2	+0.6
PRU	**Pruhonice**	81.27	324⇑	*i*P	P	15 48 31.0	+0.3
PRU				*e*PP	PP	15 51 39.8	-0.2
PRU				*e*S	S	15 58 27.1	-0.1
PRU				*e*XS		15 59 33.7	
PRU				AMS	AMS	16 28 00.0	
	comp=Z,2µm,15.2s						
PRA	**Prague**	81.27	324	⇑P	P	15 48 32.0	+1.3
PKSM	**Moragy**	81.36	319⇑	*i*P	P	15 48 31.7	+0.4
YBH	**Yreka Blue Hor**	81.38	46	P	P	15 48 32.2	+0.8
YBH				*e*pP	pP	15 49 08.3	+0.3
BARS	**Barje**	81.46	315⇑	*i*P	P	15 48 31.7	-0.1
OUR	**Ouranopolis**	81.50	312	*e*P	P	15 48 32.5	+0.4
SOH	**Sokhos**	81.63	313	*e*P	P	15 48 31.9	-0.9
KNT	**Kendrikon**	81.73	313	*e*P	P	15 48 33.5	+0.2
RHK1	**Bakonya**	81.75	319⇓	*e*P	P	15 48 34.0	+0.7
DIVS	**Divcibare**	81.82	317⇓	*i*P	P	15 48 33.1	-0.6
PLG	**Polygyros**	81.82	312	*e*P	P	15 48 34.0	+0.2
VAY	**Valandovo**	81.85	313	*e*P	P	15 48 32.4	-1.5
VAY	**Valandovo**	81.85	313	*e*P	P	15 48 32.4	-1.5
PAIG	**Paliouri**	81.92	312	*e*P	P	15 48 34.0	-0.3
KIPM	**Iron Peak**	81.96	48	*e*P	P	15 48 34.9	+0.4
KCPM	**Cahto Peak**	81.96	48	*e*P	P	15 48 35.0	+0.4
KCPM				*e*pP	pP	15 49 11.6	+0.4
THE	**Thessaloniki**	81.98	313	*e*P	P	15 48 34.0	-0.7
KARP	**Karpathos**	81.99	307	*e*P	P	15 48 35.0	+0.2
BORG	**Borgarnes**	82.00	348	LR	LR	16 31 02.6	
	comp=Z,707nm,18.6s,baz=1.4,slow=40						
CLZ	**Clausthal**	82.11	327	*e*P	P	15 48 35.5	+0.5
	comp=Z,733nm,1.0s,mb6.3						
CLZ				*e*S	S	15 58 35.4	-0.4
CLZ				*e*SS	SS	16 04 05.8	+4.3
CLZ	**Clausthal**	82.11	327	*e*P	P	15 48 35.5	+0.5
CLZ				*e*S	S	15 58 35.4	-0.4
CLZ				*e*SS	SS	16 04 05.8	+4.3
CLZ				pmax	pmax		
	comp=Z,733nm,1.0s,mb6.3						
WDC	**Whiskeytown Da**	82.13	47	P	P	15 48 35.6	+0.2
	comp=Z,124nm,1.5s,mb5.3						
WDC	**Whiskeytown Da**	82.13	47	P	P	15 48 35.6	+0.2
WDC				pmax	pmax		
	comp=Z,124nm,1.5s,mb5.3						
GRG	**Griva**	82.16	313	*e*P	P	15 48 35.1	-0.4
NKC	**Novy Kostel**	82.16	325⇑	*i*P	P	15 48 35.6	+0.3
NKC				*e*PP	PP	15 51 45.5	-1.6
NKC				*e*S	S	15 58 35.4	-0.9
NKC				AMS	AMS	16 30 20.0	
	comp=Z,3µm,15.4s						
SKO	**Skopje**	82.18	315	*e*P	P	15 48 34.2	-1.4
SKO	**Skopje**	82.18	315	*e*P	P	15 48 34.2	-1.4
APE	**Apeiranthos**	82.28	309	*e*P	P	15 48 34.2	-2.0
APE	**Apeiranthos**	82.28	309	*e*P	P	15 48 34.0	-2.2
APE	**Apeiranthos**	82.28	309	P	P	15 48 35.3	-1.0
KHC	**Kasperske Hory**	82.29	324⇑	*i*P	P	15 48 36.3	+0.3
KHC				*e*PCP	PcP	15 48 45.0	+3.8
KHC				pP	pP	15 49 16.0	+3.3
KHC				*e*S	S	15 58 37.7	0.0
KHC				AMS	AMS	16 30 10.0	
	comp=Z,2µm,13.9s						
KHC	**Kasperske Hory**	82.29	324⇑	*i*P	P	15 48 36.3	+0.3
KHC				*e*		15 48 45.0	
KHC				*e*	pP	15 49 16.0	+3.3
KHC				*e*SKS	SKS	15 58 37.7	-0.8
KHC				LR	LR		
	comp=Z,2µm,13.9s						
KHC	**Kasperske Hory**	82.29	324⇑	*i*P	P	15 48 36.3	+0.3
KHC				*e*		15 58 37.7	
KHC				MLR	MLR		
	comp=Z,2µm,13.9s						
BBLS	**Bajina Basta -**	82.30	317	*i* P	P	15 48 36.6	+0.4
MOX	**Moxa**	82.30	326⇑	*i*P	P	15 48 36.6	+0.6
	comp=Z,logA/T=2.6,mb6.0						
MOX				pP	pP	15 49 14.0	+1.3
MOX				sP	sP	15 49 29.0	+0.3
MOX				PP	PP	15 51 46.0	-2.2
MOX				S	S	15 58 39.0	+1.3
MOX				SS	SS	16 04 06.0	+1.6
MOX				sSS		16 06 08.0	
MOX				*e*		16 18 18.0	
MOX				QM		16 23 52.0	
MOX				RM		16 28 42.0	
MOX	**Moxa**	82.30	326⇑	*e*P	P	15 48 36.6	+0.6
	comp=Z,717nm,1.6s,mb6.0						
MOX				*e*pP	pP	15 49 14.4	+1.7
MOX				*e*sP	sP	15 49 29.4	+0.7
MOX				*e*PP	PP	15 51 46.0	-2.2
MOX				*e*S	S	15 58 39.0	+1.3
MOX				*e*SS	SS	16 04 06.0	+1.6
MOX				*e*P’PKS		16 18 18.0	
MOX				LR	LR		
	comp=Z,2µm,20.0s						
MOX	**Moxa**	82.30	326⇑	*e*P	P	15 48 36.6	+0.6
MOX				*e*		15 51 46.0	
MOX				*e*S	S	15 58 39.0	+1.3
MOX				*e*SS	SS	16 04 06.0	+1.6
MOX				pmax	pmax		
	comp=Z,717nm,1.6s,mb6.0						
MOX				MLR	MLR		
	comp=Z,2µm,20.0s						
SFJD	**Kangerlussuaq**	82.33	0	*i* S	S	15 58 37.9	+0.2
SFJD				*e*		15 59 15.9	
SFJD				*e*		16 03 58.5	
	comp=Z,640nm,18.0s						
SFJD	**Kangerlussuaq**	82.33	0⇑	*i*P	P	15 48 35.7	-0.2
	comp=Z,140nm,1.1s,mb5.5						
SFJD				*i* S	S	15 58 37.9	+0.2
SFJD				*e*		15 59 15.9	
SFJD				*e*		16 03 58.5	
SFJD				LR	LR		
	comp=Z,650nm,18.0s						
SFJD	**Kangerlussuaq**	82.33	0⇑	*i*P	P	15 48 35.7	-0.2
SFJD				*i* S	S	15 58 37.9	+0.2
SFJD				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.5						
SFJD				MLR	MLR		
	comp=Z,650nm,18.0s						
NVSS	**Nova Varos 2**	82.34	317⇓	*i*P	P	15 48 39.8	+3.4
BSMT	**Bassoo Peak**	82.34	38	P	P	15 48 37.4	+1.1
BSMT				pP	pP	15 49 13.9	+0.9
GEC2	**GERESS Array S**	82.41	323	*e*P	P	15 48 36.8	+0.2
	comp=Z,246nm,1.0s,mb5.8						
GEC2				*e*S	S	15 58 40.2	+1.3
GEC2				*e*SS	SS	16 04 09.4	+3.3
GEC2	**GERESS Array S**	82.41	323	*e*P	P	15 48 36.8	+0.2
GEC2				*e*S	S	15 58 40.2	+1.3
GEC2				*e*SS	SS	16 04 09.4	+3.3
GEC2				pmax	pmax		
	comp=Z,246nm,1.0s,mb5.8						
GERES	**GERESS Array B**	82.41	323	P	P	15 48 36.8	+0.2
	comp=Z,107nm,0.8s,mb5.5,baz=46,slow=4.4,SNR=393						
GERES				PKKPbc		16 07 02.4	
	comp=Z,2.1nm,0.8s,baz=225,slow=1.9,SNR=11						
GERES				LR	LR	16 31 08.5	
	comp=Z,1µm,20.3s,baz=304,slow=40						
ARSA	**Arzberg**	82.45	321⇑	*i*P	P	15 48 37.5	+0.6
	comp=Z,200nm,0.8s,mb5.8,SNR=79						
XOR	**Xorichti**	82.55	312	*e*P	P	15 48 36.8	-0.8
NEO	**Neokhori**	82.56	312	*e*P	P	15 48 37.0	-0.6
LIT	**Litokhoron**	82.58	313	*e*P	P	15 48 37.6	-0.1
IVA	**Berane**	82.59	316⇑	*i*P	P	15 48 38.4	+0.7
PLE	**Pljevlja**	82.62	317⇑	*i*P	P	15 48 38.9	+1.1
WET	**Wettzell**	82.64	324	*e*P	P	15 48 38.3	+0.5
	comp=Z,269nm,1.1s,mb5.9						
WET				*e*PP	PP	15 51 52.6	+1.6
WET				*e*S	S	15 58 42.1	+0.9
WET				*e*SS	SS	16 04 11.0	+1.5
WET	**Wettzell**	82.64	324	*e*P	P	15 48 38.3	+0.5
WET				*e*		15 51 52.6	
WET				*e*S	S	15 58 42.1	+0.9
WET				*e*SS	SS	16 04 11.0	+1.5
WET				pmax	pmax		
	comp=Z,269nm,1.1s,mb5.9						
HOPS	**Hopland**	82.68	49	P	P	15 48 38.8	+0.6
	comp=Z,259nm,1.9s,mb5.6						
PVY	**Plav**	82.71	316⇑	*i*P	P	15 48 39.0	+0.7
SANT	**Santorini**	82.71	308	P	P	15 48 37.5	-1.0
MOA	**Molln**	82.74	322	*i* P	P	15 48 38.9	+0.6
	comp=Z,284nm,0.8s,mb6.0,SNR=179						
MOA	**Molln**	82.74	322	*i* P	P	15 48 38.9	+0.5
	comp=Z,284nm,0.8s,mb6.0						
MOD	**Modoc**	82.76	45	P	P	15 48 39.4	+0.9
	comp=Z,95nm,1.1s,mb5.4						
MOD				pP	pP	15 49 15.7	+0.4
BMO	**Blue Mountains**	82.79	41	P	P	15 48 39.1	+0.4
	comp=Z,94nm,1.3s,mb5.4						
BMO				pP	pP	15 49 15.4	0.0
BIA	**Bitola**	82.79	314	*e*P	P	15 48 37.0	-1.7
BIA	**Bitola**	82.79	314	*e*P	P	15 48 37.0	-1.8
MPAR	**Parnis Oros**	82.87	310	*e*P	P	15 48 38.5	-0.7
FNA	**Florina**	82.89	314	*e*P	P	15 48 39.0	-0.2
KZN	**Kozani**	82.92	313	*e*P	P	15 48 39.0	-0.4
UPM	**Unac-Piva**	82.98	317⇑	*i*P	P	15 48 39.1	-0.6
ATH	**Athens Observa**	82.98	310	*e*P	P	15 48 39.0	-0.8
PERS	**Pernice**	83.05	321⇑	*e*P	P	15 48 40.3	+0.4
PERS				*e*PP	PP	15 51 54.2	-0.1
PERS				*e*		15 52 44.2	
PERS				*e*S	S	15 58 43.4	-1.9
PERS				*e*		16 18 15.8	
OHR	**Ohrid**	83.06	314	*e*P	P	15 48 38.5	-1.6
OHR	**Ohrid**	83.06	314	*e*P	P	15 48 38.5	-1.6
GRA1	**Grafenberg Arr**	83.11	325	*e*P	P	15 48 41.0	+0.8
	comp=Z,1µm,0.9s,mb6.7						
GRA1				*e*sPP		15 52 43.3	
GRA1				*e*S	S	15 58 46.7	+0.8
GRA1				*e*SS		15 59 52.1	
GRA1				*e*SS	SS	16 04 21.5	+5.0
GRA1				*e*sSS		16 05 23.9	
GRA1				*e*P’PKS		16 18 12.0	
GRF	**Grafenberg Arr**	83.11	325	*e*P	P	15 48 41.0	+0.8
	comp=Z,1µm,0.9s,mb6.7						
GRF				*e*sPP		15 52 43.3	
GRF				*e*S	S	15 58 46.7	+0.8
GRF				*e*sS		15 59 52.1	
GRF				*e*SS	SS	16 04 21.5	+5.0
GRF				*e*sSS		16 05 23.9	
GRF	**Grafenberg Arr**	83.11	325	*e*P	P	15 48 41.0	+0.8
GRF				*e*S	S	15 58 46.7	+0.8
GRF				*e*SS		15 59 52.1	
GRF				*e*SS	SS	16 04 21.5	+5.0
GRF				pmax	pmax		
	comp=Z,1µm,0.9s,mb6.7						
GRF	**Grafenberg Arr**	83.11	325	*e*P	P	15 48 41.0	+0.8
GRF				*e*S	S	15 58 46.7	+0.8
GRF				*e**SS		15 59 52.1	
GRF				*e*SS	SS	16 04 21.5	+5.0
GRF				pmax	pmax		
	comp=Z,1µm,0.9s,mb6.7						
NKY	**Niksic**	83.16	316⇑	*i*P	P	15 48 40.2	-0.4
NPS	**Neapolis**	83.21	307	*e*P	P	15 48 40.5	-0.5
TTG	**Podgorica**	83.23	316⇑	*i*P	P	15 48 40.9	0.0
NAIG	**Nisos Aigina**	83.25	310	*e*P	P	15 48 40.0	-1.1
MGER	**Gerania Oros**	83.28	310	*e*P	P	15 48 39.5	-1.8
AGG	**Agios Georgios**	83.29	312	*e*P	P	15 48 40.3	-1.0
FCC	**Fort Churchill**	83.32	21	P	P	15 48 41.7	+0.7
	comp=Z,207nm,1.1s,mb5.8						
FCC	**Fort Churchill**	83.32	21	P	P	15 48 41.7	+0.7
FCC				pmax	pmax		
	comp=Z,207nm,1.1s,mb5.8						
XRY	**Khrisi**	83.36	307	*e*P	P	15 48 41.5	-0.3
BRY	**Bratogost**	83.38	317⇑	*i*P	P	15 48 40.9	-0.7
MSO	**Missoula**	83.43	38	P	P	15 48 42.3	+0.5
MSO				pP	pP	15 49 18.6	0.0
OBKA	**Obir**	83.43	321⇑	*i*P	P	15 48 42.2	+0.3
	comp=Z,526nm,0.8s,mb6.3,SNR=184						
OBKA	**Obir**	83.43	321⇑	*i*P	P	15 48 42.2	+0.3
	comp=Z,526nm,0.8s,mb6.3						
WVOR	**Wild Horse Val**	83.45	44	*e*P	P	15 48 42.8	+0.7
	comp=Z,114nm,1.4s,mb5.4						
WVOR				*e*pP	pP	15 49 19.2	+0.4
WVOR				*e*PP	PP	15 51 54.2	-3.4
WVOR	**Wild Horse Val**	83.45	44	*e*P	P	15 48 42.8	+0.7
WVOR				*e**PP	pP	15 49 19.2	+0.4
WVOR				*e*		15 51 54.2	
WVOR				pmax	pmax		
	comp=Z,114nm,1.4s,mb5.4						
MCD	**Coleburn Disti**	83.46	337⇑	*e*P	P	15 48 41.5	-0.3
RSC	**Scourie**	83.49	338⇑	*e*P	P	15 48 41.5	-0.4
OHCM	**Honcut**	83.50	48	P	P	15 48 42.2	-0.1
MVH1	**Achvaich**	83.50	337⇑	*e*P	P	15 48 41.5	-0.4
ULC	**Ulcinj**	83.51	315⇑	*i*P	P	15 48 42.5	+0.1
BUM	**Brajici-Budva**	83.52	316⇑	*i*P	P	15 48 42.8	+0.4
MME1	**Meikle Cairn**	83.57	336⇑	*e*P	P	15 48 41.4	-0.9
FFC	**Flin Flon**	83.62	27	*e*P	P	15 48 42.9	+0.3
	comp=Z,114nm,1.0s,mb5.6						
FFC				*e*pP	pP	15 49 19.0	-0.3
FFC	**Flin Flon**	83.62	27	*e*P	P	15 48 42.9	+0.4
FFC				*e**PP	pP	15 49 19.0	-0.3
FFC				pmax	pmax		
	comp=Z,114nm,1.0s,mb5.6						
WTSB	**Winterswijk**	83.66	329⇑	*i*P	P	15 48 42.7	-0.1
	comp=Z,604nm,1.9s,mb6.0						
HCY	**Herceg Novi**	83.67	316⇑	*i*P	P	15 48 43.5	+0.3
BOJS	**Bojanci**	83.68	320⇑	*e*P	P	15 48 43.5	+0.4
	comp=Z,2µm,2.1s,mb6.4						
IDI	**Anoyia**	83.69	307	LR	LR	16 33 05.4	
	comp=Z,510nm,21.9s,baz=53,slow=41						
EVR	**Evrytania**	83.69	312	*e*P	P	15 48 43.0	-0.3
REB	**Eisghbrachaidh**	83.71	338⇑	*e*P	P	15 48 42.5	-0.4
KBA	**Koelnbreinsper**	83.72	322⇑	*i*P	P	15 48 44.0	+0.8
	comp=Z,422nm,0.8s,mb6.2,SNR=60						
KBA	**Koelnbreinsper**	83.72	322⇑	*i*P	P	15 48 44.0	+0.8
	comp=Z,422nm,0.8s,mb6.2						
KBA	**Koelnbreinsper**	83.72	322⇑	*i*P	P	15 48 44.0	+0.8
KBA				pmax	pmax		
	comp=Z,422nm,0.8s,mb6.2						
LJU	**Ljubljana**	83.74	321⇑	*e*P	P	15 48 43.5	+0.2
LJU				*e*PP	PP	15 51 59.6	-0.2
LJU				*e*S	S	15 58 47.7	-4.5
LJU				*e*		15 59 44.2	
LJU				*e*		16 18 13.8	
CHMT	**Chamberlain Mo**	83.74	38	P	P	15 48 44.0	+0.7
CHMT				pP	pP	15 49 19.9	-0.2
RTO	**Tolsta**	83.80	339⇑	*e*P	P	15 48 43.2	-0.1
JAN	**Janina**	83.87	313	*e*P	P	15 48 44.0	-0.2
STON	**Ston**	83.89	317⇑	*i*P	P	15 48 42.7	-1.5
MDO	**Dochfour**	83.95	337⇑	*e*P	P	15 48 43.3	-0.8
FUR	**Furstenfeldbru**	84.08	324	*e*P	P	15 48 45.7	+0.7
	comp=Z,1µm,0.9s,mb6.5						
FUR				*e*PP	PP	15 52 05.0	+2.5
FUR	**Furstenfeldbru**	84.08	324	*e*P	P	15 48 45.7	+0.7
FUR				*e*		15 52 05.0	
FUR				pmax	pmax		
	comp=Z,1µm,0.9s,mb6.5						
JAVS	**Javornik**	84.08	321⇑	*i*P	P	15 48 45.1	0.0
JAVS				*e*PP	PP	15 52 01.2	-1.4
JAVS				*e*		15 52 51.8	
VOY	**Vojsko**	84.09	321⇓	*e*P	P	15 48 45.3	+0.2
VOY				*e*		15 48 57.0	
VOY				*e*(S)	S	15 58 53.0	-2.6
RRR	**Rubha Reidh**	84.09	338⇑	*e*P	P	15 48 44.6	-0.2
VAM	**Vamos**	84.09	308	*e*P	P	15 48 44.5	-0.9
TNS	**Taunus Mts**	84.09	327	*e*P	P	15 48 45.4	+0.4
	comp=Z,562nm,0.9s,mb6.3						
TNS				*e*PP	PP	15 52 04.5	+2.0
TNS				*e*S	S	15 58 56.5	+0.9
TNS				*e*SS	SS	16 04 34.2	+3.9
TNS				*e*sSS		16 05 35.7	
TNS	**Taunus Mts**	84.09	327	*e*P	P	15 48 45.4	+0.4
TNS				*e*		15 52 04.5	
TNS				*e*S	S	15 58 56.5	+0.9
TNS				*e*SS	SS	16 04 34.2	+3.9
TNS				pmax	pmax		
	comp=Z,562nm,0.9s,mb6.3						
SIND	**Sindeldorf**	84.13	326	*e*P	P	15 48 45.7	+0.5
PTCC	**Patocco-Chiusa**	84.14	322⇑	*i*P	P	15 48 44.9	-0.5
VLI	**Veliai**	84.20	310	*e*P	P	15 48 44.0	-1.9
KAC	**Achnashellach**	84.21	338⇑	*e*P	P	15 48 45.3	-0.1
IGT	**Igoumenitsa**	84.27	313	*e*P	P	15 48 46.0	-0.2
GMNA	**Gemona**	84.28	322	P	P	15 48 46.2	+0.1
RRH	**Rhenigidale**	84.32	338⇑	*e*P	P	15 48 45.7	-0.3
FVI	**Forni Avoltri**	84.32	322⇑	*i*P	P	15 48 45.8	-0.5
HDH	**Heidenheim**	84.34	325	*e*P	P	15 48 46.4	+0.1
TOD	**Tromm**	84.34	326	*e*P	P	15 48 47.2	+0.9
TOD	**Tromm**	84.34	326	*e*P	P	15 48 47.1	+0.8
TRI	**Trieste**	84.36	321⇑	*i*P	P	15 48 46.1	-0.4
	comp=Z,1µm,1.0s,mb6.7						
TRI	**Trieste**	84.36	321⇑	*i*P	P	15 48 46.1	-0.4
TRI				pmax	pmax		
	comp=Z,1µm,1.0s,mb6.7						
KYTH	**Kithira**	84.38	309	*e*P	P	15 48 46.0	-0.8
KPL	**Plockton**	84.45	338⇑	*e*P	P	15 48 45.4	-1.3
WATA	**Walderalm**	84.47	323⇓	*i*P	P	15 48 47.9	+0.9
	comp=Z,123nm,0.8s,mb5.7,SNR=31						
WATA	**Walderalm**	84.47	323⇓	*i*P	P	15 48 47.9	+0.9
	comp=Z,123nm,0.8s,mb5.7						
WATA	**Walderalm**	84.47	323⇓	*i*P	P	15 48 47.9	+0.9
WATA				pmax	pmax		
	comp=Z,123nm,0.8s,mb5.7						
NVLJ	**Novalja**	84.47	319	*i* P	P	15 48 46.4	-0.7
GVD	**Gavdhos**	84.48	307	*e*P	P	15 48 47.5	+0.1
GVD	**Gavdhos**	84.48	307	*e*P	P	15 48 47.5	+0.2
	comp=Z,790nm,0.8s,mb6.5						
KSB	**Sheil Bridge**	84.48	337⇑	*e*P	P	15 48 46.2	-0.6
WTTA	**Wattenberg**	84.49	323	*e*P	P	15 48 47.4	+0.4
	comp=Z,202nm,0.8s,mb5.9,SNR=86						
WTTA	**Wattenberg**	84.49	323	*e*P	P	15 48 47.4	+0.3
WTTA				pmax	pmax		
	comp=Z,203nm,0.8s,mb5.9						
KEK	**Kerkira**	84.50	313	*e*P	P	15 48 47.0	-0.3
ITM	**Ithomi**	84.61	310	*e*P	P	15 48 47.5	-0.4
PAHR	**Pah Rah Range**	84.61	47	P	P	15 48 49.1	+1.2
HRY	**Holter Researc**	84.62	38	P	P	15 48 48.7	+0.9
HRY				pP	pP	15 49 25.3	+0.7
KSK	**Scoval**	84.69	338⇑	*e*P	P	15 48 47.6	-0.2
MOTA	**Moosalm**	84.71	323⇑	*i*P	P	15 48 48.4	+0.3
	comp=Z,143nm,0.8s,mb5.7,SNR=85						
MOTA	**Moosalm**	84.71	323⇑	*i*P	P	15 48 48.4	+0.3
	comp=Z,143nm,0.8s,mb5.8						
MOTA	**Moosalm**	84.71	323⇑	*i*P	P	15 48 48.4	+0.2
MOTA				pmax	pmax		
	comp=Z,143nm,0.8s,mb5.8						
STU	**Stuttgart**	84.72	325	P	P	15 48 48.4	+0.3
EDI	**Edinburgh**	84.73	336⇑	*e*P	P	15 48 47.4	-0.7
EDI				AMb	AMB	15 48 51.2	
	comp=Z,294nm,1.4s,mb5.8						
SQTA	**Sankt Quirin**	84.74	323⇑	*i*P	P	15 48 48.6	+0.3
	comp=Z,122nm,0.7s,mb5.7,SNR=54						
SQTA	**Sankt Quirin**	84.74	323⇑	*i*P	P	15 48 48.6	+0.3
	comp=Z,122nm,0.7s,mb5.7						
SQTA	**Sankt Quirin**	84.74	323⇑	*i*P	P	15 48 48.6	+0.3
SQTA				pmax	pmax		
	comp=Z,122nm,0.7s,mb5.7						
ABH	**Alteburg**	84.75	327	*e*P	P	15 48 49.1	+0.8
ABH	**Alteburg**	84.75	327	*e*P	P	15 48 48.9	+0.6
EBL	**Broad Law**	84.80	336⇑	*e*P	P	15 48 47.6	-0.8
EBL				AMb	AMB	15 48 50.7	
	comp=Z,1µm,1.2s,mb6.4						
KAR1	**Arisaig**	84.85	337⇑	*e*P	P	15 48 48.4	-0.3
BUCH	**Bad Urach**	84.86	325	*e*P	P	15 48 49.3	+0.4
LRM	**Limekiln Ridge**	84.86	39	P	P	15 48 50.0	+1.0
LRM				pP	pP	15 49 26.4	+0.5
KTD	**Kalmit**	84.88	326	*e*P	P	15 48 49.5	+0.5
KTD	**Kalmit**	84.88	326	*e*P	P	15 48 50.0	+1.0

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HGN   Heimansgroeve    84.88 328⇑iP    P      15 48 48.6 -0.4
      comp=Z,412nm,1.8s,mb5.8
HGN                          ePP       PP     15 52 02.7 -6.1
HGN                          ex        x      15 53 05.6
HGN                          ex        x      15 56 11.8
HGN                          eSKS      SKS    15 58 55.3 -0.6
HGN                          eSdif            15 59 55.7
HGN                          ex        x      16 04 41.0
HGN                          ex        x      16 12 05.9
HGN                          ex        x      16 15 54.9
EAU   Auchinoon        84.89 336⇑eP    P      15 48 48.7 -0.1
EAU                           AMb      AMB    15 48 51.0
      comp=Z,753nm,1.8s,mb6.1
VLS   Valsamata        84.89 312 eP    P      15 48 49.0 -0.3
EAB   Aberfoyle        84.93 336⇑eP    P      15 48 48.3 -0.8
EAB                           AMb      AMB    15 48 51.2
      comp=Z,528nm,1.2s,mb6.2
CMB   Columbia Colle   84.95  48  P    P      15 48 50.2 +0.6
      comp=Z,140nm,1.2s,mb5.6
CMB                           pP       pP     15 49 27.0 +0.5
CMB   Columbia Colle   84.95  48  P    P      15 48 50.2 +0.6
CMB                           *PP      pP     15 49 27.0 +0.4
CMB                           pmax     pmax
      comp=Z,140nm,1.2s,mb5.6
LBG   Lerchenberg      84.98 325 eP    P      15 48 50.1 +0.6
UBR   Uberruh          84.99 324 eP    P      15 48 49.6  0.0
SAO   San Andreas Ge   85.00  50  P    P      15 48 50.4 +0.5
DLMT  Dillon           85.08  39 eP    P      15 48 51.4 +1.3
      comp=Z,145nm,1.1s,mb5.6
DLMT                         epP       pP     15 49 27.6 +0.6
RUP   Ruppelstein      85.10 327 eP    P      15 48 51.0 +0.9
LCI   Lecce            85.17 315⇓iP    P      15 48 51.3 +0.6
      comp=Z,496nm,1.5s,mb6.0
LCI   Lecce            85.17 315⇓iP    P      15 48 51.3 +0.6
LCI                           pmax     pmax
      comp=Z,496nm,1.5s,mb6.0
APPI  Appiano          85.21 323  P    P      15 48 49.7 -1.0
      comp=Z,445nm,2.3s,mb5.8
ESK   Eskdalemuir      85.22 335  P    P      15 48 50.5  0.0
HLID  Hailey           85.22  41  P    P      15 48 52.2 +1.4
HLID                          PP       PP     15 52 18.0 +6.2
GUT   Gutenstein       85.23 325 eP    P      15 48 50.6 -0.1
CTI   Castel Tesino    85.27 322  P    P      15 48 50.5 -0.5
      comp=Z,312nm,1.0s,mb6.0
CTI   Castel Tesino    85.27 322  P    P      15 48 50.5 -0.5
CTI                           pmax     pmax
      comp=Z,312nm,1.0s,mb6.0
WAKR  Walker           85.28  48  P    P      15 48 52.0 +0.7
MCMT  McKenzie Canyo   85.29  39 eP    P      15 48 52.0 +0.9
MCMT                         epP       pP     15 49 28.2 +0.2
ECK   Cauldkaine Hil   85.29 335⇑eP    P      15 48 50.6 -0.2
ECK                           AMb      AMB    15 48 53.0
      comp=Z,768nm,1.0s,mb6.4
SPAK  Spaichingen      85.37 325 eP    P      15 48 51.3 -0.1
DAVA  Damuels          85.37 324 eP    P      15 48 51.7 +0.2
      comp=Z,299nm,1.4s,mb5.8,SNR=64
BRT   Bari-Castellan   85.39 316  P    P      15 48 52.1 +0.4
      comp=Z,2µm,2.2s,mb6.4
BRT   Bari-Castellan   85.39 316  P    P      15 48 52.1 +0.4
BRT                           pmax     pmax
      comp=Z,2µm,2.2s,mb6.4
BOZ   Bozeman (W)      85.42  38  P    P      15 48 52.7 +0.9
BOZ                          epP       pP     15 49 29.5 +0.8
BFO   Black Forest     85.44 325 eP    P      15 48 51.8  0.0
      comp=Z,976nm,1.8s,mb6.2
BFO                          ePP       PP     15 52 15.0 +1.7
BFO                          eS        S      15 59 10.2 +1.4
BFO   Black Forest     85.44 325 eP    P      15 48 51.8  0.0
BFO                          e                15 52 15.0
BFO                          eS        S      15 59 10.2 +1.4
BFO                           pmax     pmax
      comp=Z,976nm,1.8s,mb6.2
LRV   Little Rabbit    85.48  50 eP    P      15 48 53.1 +0.9
LRV                          epP       pP     15 49 30.1 +0.9
STR   Strasbourg       85.54 326 eP    P      15 48 53.5 +1.2
WLF   Walferdange      85.55 327  P    P      15 48 52.6 +0.3
LIENZ Alp Oberkamor    85.56 324⇑iP    P      15 48 52.6 +0.2
FUORN Ofenpass         85.62 323⇑iP    P      15 48 53.4 +0.7
STEIN Stein am Rhein   85.62 325⇑iP    P      15 48 52.4 -0.3
FGMS  Monte Sant'Ang   85.63 317  P    P      15 48 53.4 +0.5
      comp=Z,412nm,0.9s,mb6.2
BRMO  Bormio           85.66 323  P    P      15 48 53.5 +0.6
WEIN  Weingarten       85.66 324⇑iP    P      15 48 52.7 -0.2
DAVOX Davos            85.71 323  LR   LR     16 28 22.8
      comp=Z,1µm,20.8s,baz=298,slow=36
DAVOX Davos            85.71 323⇑iP    P      15 48 53.7 +0.6
TRULL Truellikon       85.73 325⇑iP    P      15 48 52.9 -0.3
SLE   Schleitheim      85.74 325⇑iP    P      15 48 52.9 -0.4
CKE   Keswick          85.75 335⇑eP    P      15 48 52.8 -0.3
WILA  Wila             85.77 324⇑iP    P      15 48 53.3 -0.1
PLONS Plons            85.78 324⇑iP    P      15 48 53.6 +0.1
FLACH Flaach           85.84 325⇑iP    P      15 48 53.4 -0.3
GIVF  Givet            85.85 328 eP    P      15 48 53.1 -0.7
      comp=Z,328nm,1.0s,mb5.7
GIVF  Givet            85.85 328 eP    P      15 48 53.1 -0.7
GIVF                          pmax     pmax
      comp=Z,164nm,1.0s,mb5.7
WLS   Welschbruch      85.86 326 eP    P      15 48 54.1 +0.3
MABI  Malga Bissina    85.86 323⇑iP    P      15 48 53.4 -0.5
      comp=Z,171nm,1.9s,mb5.5
RGNG  Rignano Grg      85.86 317  P    P      15 48 54.6 +0.6
BERNI Berninapass      85.88 323⇑iP    P      15 48 54.6 +0.6
CDF   Champ du Feu     85.89 326 eP    P      15 48 53.8 -0.2
      comp=Z,2µm,1.6s,mb6.3
CDF   Champ du Feu     85.89 326 eP    P      15 48 53.8 -0.2
CDF                           pmax     pmax
      comp=Z,932nm,1.6s,mb6.3
KIZ   Kirchzarten      85.89 325 eP    P      15 48 53.9 -0.1
FELD  Feldberg         85.91 325 eP    P      15 48 53.8 -0.3
LIBD  Limburg          85.92 326 eP    P      15 48 54.4 +0.3
LIBD  Limburg          85.92 326 eP    P      15 48 54.2 +0.1
XDE   Dent Fell        85.95 335⇑eP    P      15 48 53.9 -0.2
XDE                           AMb      AMB    15 48 56.3
      comp=Z,673nm,1.2s,mb6.3
ZUR   Zurich           85.97 324⇑iP    P      15 48 54.1 -0.3
GMK   Mull of Kintyr   86.03 336⇑eP    P      15 48 53.3 -1.1
NVAR  Mina Array Bea   86.04  47  P    P      15 48 56.1 +1.1
      comp=Z,36nm,0.9s,mb5.1,baz=300,slow=3.4,SNR=156
NVAR                          pP       pP     15 49 32.5 +0.6
      comp=Z,26nm,0.8s,baz=311,slow=3.8,SNR=6.6
QLMT  Earthquake Lak   86.06  39  P    P      15 48 56.6 +1.8
QLMT                          pP       pP     15 49 33.3 +1.4
ECH   Echery           86.09 326 eP    P      15 48 55.1 +0.2
LHO   Holmfirth        86.09 334⇑eP    P      15 48 53.6 -1.2
SULZ  Sulz-Cheisache   86.09 325⇑iP    P      15 48 54.6 -0.4
GAL1  Galloway         86.11 336⇑eP    P      15 48 54.4 -0.5
LLS   Linth-Limmern    86.11 324⇑iP    P      15 48 55.2 +0.1
VDL   Val di Lei       86.12 323⇑iP    P      15 48 55.6 +0.5
MNV   Mina             86.14  47  P    P      15 48 56.4 +1.0
MNV                          epP       pP     15 49 32.2 -0.2
SAL   Salo             86.16 322  P    P      15 48 55.5 +0.2
      comp=Z,299nm,0.8s,mb6.1
SAL   Salo             86.16 322  P    P      15 48 55.5 +0.2
SAL                           pmax     pmax
      comp=Z,299nm,0.8s,mb6.1
BAIF  Baives           86.16 328 eP    P      15 48 54.7 -0.5
      comp=Z,299nm,1.2s,mb5.6
BAIF  Baives           86.16 328 eP    P      15 48 54.7 -0.5
BAIF                          pmax     pmax
      comp=Z,150nm,1.2s,mb5.6
CING  Cingoli          86.16 319⇑iP    P      15 48 56.2 +0.8
      comp=Z,238nm,1.5s,mb5.7
KBI1  Birley Grange    86.19 333⇑eP    P      15 48 54.3 -1.0
TUE   Stuetta          86.19 323⇑iP    P      15 48 55.7 +0.2
      comp=Z,595nm,2.5s,mb5.9
MUO   Muotathal        86.21 324⇑iP    P      15 48 55.6  0.0
FG4   Candela          86.24 317  P    P      15 48 57.0 +1.1
      comp=Z,823nm,0.9s,mb6.5
FG4   Candela          86.24 317  P    P      15 48 57.0 +1.1
FG4                           pmax     pmax
      comp=Z,823nm,0.9s,mb6.5
MOF   Molkenrain       86.35 326 eP    P      15 48 56.1 -0.1
GCMT  Greycliff        86.36  37  P    P      15 48 54.9 -1.4
GCMT                         epP       pP     15 49 32.2 -1.1
BNALP Bannalp          86.39 324⇑iP    P      15 48 56.4  0.0
RAVA  Ravarino         86.40 321  P    P      15 48 59.1 +2.5
YMR   Madison River    86.41  39 eP    P      15 48 58.6 +2.1
      comp=Z,122nm,0.8s,mb5.7
YMR                          epP       pP     15 49 35.2 +1.5
PIEI  Pieia            86.43 320⇑iP    P      15 48 57.4 +0.7
      comp=Z,57nm,0.8s,mb5.3
BALST Balsthal         86.43 325⇑iP    P      15 48 56.2 -0.4
GCL   Cushendall       86.43 337⇑eP    P      15 48 55.5 -0.9
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BBS   Basel-Blauen     86.43 325 eP    P      15 48 56.4 -0.2
BBS   Basel-Blauen     86.43 325 eP    P      15 48 56.3 -0.3
PTRM  Twissleman Ran   86.45  50 eP    P      15 48 58.0 +1.0
PTRM                         epP       pP     15 49 34.6 +0.5
GIM   North Isle of    86.47 335⇑eP    P      15 48 56.0 -0.6
KWE   Weaver Farm      86.49 333⇑eP    P      15 48 55.6 -1.2
ELK   Elko             86.50  44  P    P      15 48 58.6 +1.5
      comp=Z,113nm,1.6s,mb5.5
ELK   Elko             86.50  44  P    P      15 48 58.6 +1.5
ELK                           pmax     pmax
      comp=Z,113nm,1.6s
HINF  Hinteralfeld     86.51 326 eP    P      15 48 56.1 -0.9
      comp=Z,232nm,0.9s,mb5.7
HINF  Hinteralfeld     86.51 326 eP    P      15 48 56.1 -0.9
HINF                          pmax     pmax
      comp=Z,116nm,0.9s,mb5.7
MTUM  Tungsten Hills   86.52  48  P    P      15 48 58.2 +0.9
MTUM                          pP       pP     15 49 35.1 +0.8
CII   Carovilli        86.58 318  P    P      15 48 58.6 +1.1
HASLI Hasliberg        86.60 324⇑iP    P      15 48 57.2 -0.2
MURB  Monte Urbino     86.61 320  P    P      15 48 58.7 +1.1
      comp=Z,807nm,1.4s,mb6.4
BOURR Bourrignon       86.62 325⇑iP    P      15 48 57.3 -0.2
HAU   Haudompre        86.62 326 eP    P      15 48 57.0 -0.5
      comp=Z,323nm,1.0s,mb5.8
HAU                          eR
      comp=Z,871nm,17.0s
HAU   Haudompre        86.62 326 eP    P      15 48 57.0 -0.5
HAU                           pmax     pmax
      comp=Z,161nm,1.0s,mb5.8
HAU                           MLR      MLR
      comp=Z,870nm,17.0s
YFT   Old Faithful     86.62  39  P    P      15 49 01.2 +3.5
INTR  Introdacqua      86.63 318⇑iP    P      15 48 57.8 +0.1
      comp=Z,1µm,2.2s,mb6.4
THEF  They Montfort    86.64 326 eP    P      15 48 57.5 -0.1
MIDA  Miranda          86.66 318⇑iP    P      15 48 58.3 +0.4
      comp=Z,1µm,2.6s,mb6.3
WIM   Isle of Man      86.66 335⇑eP    P      15 48 57.1 -0.5
WIM                           AMb      AMB    15 48 59.6
      comp=Z,425nm,1.2s,mb6.1
VMG   Vicchio          86.69 321⇑iP    P      15 49 00.1 +2.1
AQU   L'Aquila         86.70 318  P    P      15 48 59.5 +1.5
TIP   Timpagrande      86.70 314⇑iP    P      15 48 58.8 +0.7
      comp=Z,298nm,1.6s,mb5.9
MUGIO Muggio           86.72 323⇑iP    P      15 48 57.0 -1.0
CUC   Castrocucco      86.77 315  P    P      15 48 57.9 -0.5
      comp=Z,437nm,1.7s,mb6.0
LKWY  Lake             86.78  39  P    P      15 49 01.1 +2.7
      comp=Z,131nm,1.0s,mb5.7
LKWY  Lake             86.78  39  P    P      15 49 01.1 +2.7
LKWY                          pmax     pmax
      comp=Z,131nm,1.0s,mb5.7
FNVD  Fontana Vidola   86.79 321⇑iP    P      15 48 59.8 +1.4
      comp=Z,745nm,1.4s,mb6.3
LOMF  Lomont           86.85 325 eP    P      15 48 58.7 +0.1
MEZF  Maizieres J'vi   86.89 327 eP    P      15 48 58.7 -0.1
WIMIS Wimmis           86.93 324⇑iP    P      15 48 58.7 -0.3
IMW   Indian Meadow    86.93  39  P    P      15 49 01.1 +2.0
TPH   Tonopah          86.94  47  P    P      15 49 00.3 +1.1
      comp=Z,129nm,1.1s,mb5.7
TPH   Tonopah          86.94  47  P    P      15 49 00.4 +1.1
TPH                           pmax     pmax
      comp=Z,129nm,1.1s,mb5.7
GMM   Mts of Mourne    87.04 336⇑eP    P      15 48 58.8 -0.6
SBD1  Bryn Du          87.12 334⇑eP    P      15 48 59.3 -0.5
WME   Myndd Eilian     87.12 335 eP    P      15 48 59.0 -0.8
WME                           AMb      AMB    15 49 01.9
      comp=Z,266nm,1.3s,mb5.9
GRI   Girifalco        87.13 314  P    P      15 48 58.4 -1.8
MOOW  Moose Ponds      87.14  39  P    P      15 49 01.7 +1.6
MOOW                         epP       pP     15 49 38.5 +1.3
BDI   Bagni Di Lucca   87.14 321  P    P      15 49 00.0 -0.1
      comp=Z,136nm,1.1s,mb5.7
BDI   Bagni Di Lucca   87.14 321  P    P      15 49 00.0 -0.1
BDI                           pmax     pmax
      comp=Z,136nm,1.1s,mb5.7
CSNT  Castellina Chi   87.15 320⇑iP    P      15 48 59.8 -0.4
MMK   Mattmark         87.18 324⇑iP    P      15 49 00.6 +0.4
TORNY Torny            87.18 325⇑iP    P      15 48 59.9 -0.3
DGMT  Dagmar           87.20  33  P    P      15 49 01.4 +1.2
TPAW  Teton Pass       87.20  40  P    P      15 49 02.3 +1.9
CERT  Cerreto          87.20 318⇑iP    P      15 49 00.2 -0.2
      comp=Z,281nm,1.8s,mb5.8
WCB1  Church Bay       87.23 335⇑eP    P      15 48 59.4 -0.8
WCB1                          AMb      AMB    15 49 02.2
      comp=Z,272nm,1.3s,mb5.9
WLF1  Llynfaes         87.24 335⇑eP    P      15 48 59.5 -0.8
WLF1                          AMb      AMB    15 49 02.5
      comp=Z,274nm,1.1s,mb6.0
HLM1  Long Mynd        87.28 333⇑eP    P      15 48 59.8 -0.7
HLM1                          AMb      AMB    15 49 02.6
      comp=Z,171nm,1.3s,mb5.7
BOB   Bobbio (Coli)    87.28 322  P    P      15 49 01.2 +0.4
      comp=Z,133nm,0.8s,mb5.8
BOB   Bobbio (Coli)    87.28 322  P    P      15 49 01.2 +0.4
BOB                           pmax     pmax
      comp=Z,133nm,0.8s,mb5.8
HVU   Hansel Valley    87.29  42  P    P      15 49 01.9 +1.0
MTCE  Montecelio       87.29 319  P    P      15 49 00.7 -0.2
      comp=Z,104nm,0.6s,mb5.8
SENIN Lac Senin        87.30 324⇑iP    P      15 49 00.6 -0.2
LOHW  Long Hollow      87.31  39  P    P      15 49 02.5 +1.6
BRANT Les Verrieres    87.31 325⇑iP    P      15 49 00.7 -0.1
SNOW  Snow King Moun   87.32  40  P    P      15 49 03.0 +2.0
SNOW                          pP       pP     15 49 39.8 +1.7
REDW  Red Top Meadow   87.33  40  P    P      15 49 02.7 +1.6
YRC   Rhoscolyn        87.34 335⇑eP    P      15 49 00.1 -0.7
YRC                           AMb      AMB    15 49 02.8
      comp=Z,221nm,1.3s,mb5.8
DIX   Grande Dixence   87.44 324⇑iP    P      15 49 01.6 +0.1
SSP1  Stoney Pound     87.44 333⇑eP    P      15 49 00.5 -0.8
ORX   Oropa            87.46 324  P    P      15 49 00.8 -0.8
GRYON Gryon            87.47 324⇑iP    P      15 49 01.2 -0.4
AIGLE Aigle            87.49 325⇑iP    P      15 49 01.1 -0.6
LAO   LASA Array       87.49  35  P    P      15 49 03.1 +1.4
      comp=Z,154nm,1.1s,mb5.8
LAO                           pP       pP     15 49 38.7 -0.1
YRE   Yr Eifl          87.50 334⇑eP    P      15 49 00.8 -0.8
YRE                           AMb      AMB    15 49 05.5
      comp=Z,235nm,2.3s,mb5.6
HAE   Alders End       87.52 333⇑eP    P      15 49 01.2 -0.6
HAE                           AMb      AMB    15 49 03.6
      comp=Z,326nm,1.6s,mb5.9
GRFL  Gerfalco         87.54 320  P    P      15 49 02.0 -0.1
      comp=Z,91nm,0.8s,mb5.7
ISA   Isabella         87.59  49  P    P      15 49 02.6 +0.1
AHID  Auburn Hatcher   87.59  40  P    P      15 49 03.9 +1.6
      comp=Z,74nm,1.1s,mb5.4
AHID                          pP       pP     15 49 40.5 +1.1
SALAN Lac Salanfe      87.61 324⇑iP    P      15 49 01.9 -0.4
TRAV                   87.66 324  P    P      15 49 01.4 -1.1
TOLF  Tolfa            87.68 319  P    P      15 49 02.7 -0.1
      comp=Z,149nm,1.6s,mb5.6
GIMEL Gimel            87.69 325⇑iP    P      15 49 02.5 -0.2
EMV   Vieux Emosson    87.71 324⇑iP    P      15 49 02.4 -0.4
CABF  La Chapelle      87.73 325 eP    P      15 49 02.2 -0.7
      comp=Z,181nm,0.8s,mb5.6
CABF  La Chapelle      87.73 325 eP    P      15 49 02.2 -0.7
CABF                          pmax     pmax
      comp=Z,90nm,0.8s,mb5.7
MCH1  Michaelchurch    87.73 333⇑eP    P      15 49 02.2 -0.5
SPUT  South Promonto   87.78  42  P    P      15 49 05.0 +1.7
DAC   Darwin (Calif)   87.79  48  P    P      15 49 04.2 +0.8
DAC                          epP       pP     15 49 42.2 +1.6
PCP   Pian Castagno    87.91 322  P    P      15 49 01.6 -2.2
HGH   Gray Hill        87.93 333 eP    P      15 49 03.1 -0.7
DSB   Dublin           87.99 336 eP    P      15 49 02.8 -1.1
      comp=Z,60nm,0.8s,mb5.5
LSD   Ceresole Reale   88.00 324  P    P      15 49 04.1 -0.1
DLF   Lyons Farm       88.01 336⇑iP    P      15 49 03.3 -0.7
HWUT  Hardware Ranch   88.09  41  P    P      15 49 06.3 +1.6
      comp=Z,151nm,1.1s,mb5.7
RSP   Reno Superiore   88.16 324  P    P      15 49 03.6 -1.4
LPL   La Plagne        88.17 324 eP    P      15 49 04.7 -0.3
      comp=Z,164nm,0.9s,mb5.6
LPL   La Plagne        88.17 324 eP    P      15 49 04.7 -0.3
LPL                           pmax     pmax
      comp=Z,82nm,0.9s,mb5.6
LPG   La Plagne        88.17 324 eP    P      15 49 04.8 -0.2
      comp=Z,236nm,0.8s,mb5.8
LPG   La Plagne        88.17 324 eP    P      15 49 04.8 -0.2
LPG                           pmax     pmax
      comp=Z,118nm,0.8s,mb5.8
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DCN   Croghan          88.23 336⇑iP    P      15 49 04.6 -0.5
TPNV  Topopah Spring   88.23  47  P    P      15 49 06.3 +0.8
DUG   Dugway           88.28  43  P    P      15 49 07.1 +1.4
      comp=Z,98nm,1.2s,mb5.5
DUG                          epP       pP     15 49 42.5 -0.4
DUG   Dugway           88.28  43  P    P      15 49 07.1 +1.4
DUG                          e*PP      pP     15 49 42.5 -0.4
DUG                           pmax     pmax
      comp=Z,98nm,1.2s,mb5.5
FIN   Finale Ligure    88.31 322  P    P      15 49 03.9 -1.8
SNCC  San Nicolas Is   88.33  52  P    P      15 49 09.3 +3.2
      comp=Z,84nm,1.3s,mb5.4
LOR   Lormes           88.33 327 eP    P      15 49 04.7 -1.0
      comp=Z,166nm,0.8s,mb5.6
LOR                          eR
      comp=Z,1µm,19.2s
LOR   Lormes           88.33 327 eP    P      15 49 04.7 -1.0
LOR                           pmax     pmax
      comp=Z,83nm,0.8s,mb5.6
LOR                           MLR      MLR
      comp=Z,1µm,19.3s
FENE  Fenestrelle      88.34 324  P    P      15 49 04.7 -1.2
BHB   Bricherasio      88.37 323  P    P      15 49 04.0 -1.9
HSA   Swansea          88.37 334 eP    P      15 49 04.7 -1.1
NOQ   North Oquirrh    88.39  42  P    P      15 49 07.5 +1.3
ROB   Roburent         88.43 323  P    P      15 49 04.5 -1.8
BW06  Boulder Array    88.44  39  P    P      15 49 07.1 +0.7
      comp=Z,120nm,1.4s,mb5.5
OG05  Jujurieux        88.44 325 eP    P      15 49 06.1 -0.2
PDAR  Pinedale Array   88.44  39  P    P      15 49 07.0 +0.7
      comp=Z,35nm,0.9s,mb5.2,baz=307,slow=1.0,SNR=132
PDAR                          pP       pP     15 49 43.5  0.0
      comp=Z,25nm,0.9s,baz=306,slow=1.3,SNR=6.4
PDAR                          PKKPbc          16 06 48.0
      comp=Z,1.2nm,0.5s,baz=123,slow=5.2,SNR=9.5
PDAR                          PKPPKP          16 14 56.0
      comp=Z,0.6nm,1.0s,baz=135,slow=2.1,SNR=3.9
TCUT  Toone Canyon     88.50  42  P    P      15 49 08.6 +2.0
BNI   Bardonecchia     88.52 324⇑iP    P      15 49 06.5 -0.2
      comp=Z,130nm,2.0s,mb5.5
BNI   Bardonecchia     88.52 324⇑iP    P      15 49 06.5 -0.2
BNI                           pmax     pmax
      comp=Z,130nm,2.0s,mb5.5
RRL   Cesana Torines   88.56 324  P    P      15 49 06.1 -0.8
DOI   San Damiano      88.61 323  P    P      15 49 06.0 -1.1
      comp=Z,15nm,0.6s,mb5.1
DOI   San Damiano      88.61 323  P    P      15 49 06.0 -1.1
DOI                           pmax     pmax
      comp=Z,15nm,0.6s,mb5.1
MONE  Monesi           88.64 322  P    P      15 49 05.5 -1.7
SSF   Saint Saulge     88.65 327 eP    P      15 49 06.3 -0.9
      comp=Z,76nm,0.9s,mb5.6
SSF   Saint Saulge     88.65 327 eP    P      15 49 06.3 -0.9
SSF                           pmax     pmax
      comp=Z,76nm,0.9s,mb5.6
IMI   Imperia          88.69 322  P    P      15 49 06.3 -1.2
PZZ   Prazzo           88.69 323  P    P      15 49 05.9 -1.6
GDM   Grand'Maison     88.70 324 eP    P      15 49 07.4 -0.1
MBDF  Montbardon       88.70 323 eP    P      15 49 06.3 -1.2
      comp=Z,150nm,0.8s,mb5.7
MBDF  Montbardon       88.70 323 eP    P      15 49 06.3 -1.2
MBDF                          pmax     pmax
      comp=Z,75nm,0.8s,mb5.7
ENR   Entracque        88.71 323  P    P      15 49 06.2 -1.4
MWC   Mount Wilson     88.72  50  P    P      15 49 08.2 +0.3
STV2  Anna di Valdie   88.75 323  P    P      15 49 05.8 -2.0
STV   Sta Anna Valdi   88.75 323  P    P      15 49 06.2 -1.6
HEX   Exmoor           88.77 333⇑eP    P      15 49 07.0 -0.7
SMF   Signal de Mont   88.79 326 eP    P      15 49 07.2 -0.7
      comp=Z,329nm,0.9s,mb6.0
SMF   Signal de Mont   88.79 326 eP    P      15 49 07.2 -0.7
SMF                           pmax     pmax
      comp=Z,164nm,0.9s,mb6.0
SAOF  Saorge           88.81 323 eP    P      15 49 07.3 -0.8
NEGI  Negi             88.83 322  P    P      15 49 06.2 -1.9
SURF  Saint Ours       88.85 323 eP    P      15 49 07.8 -0.4
GRN   Grenoble         88.86 324 eP    P      15 49 08.5 +0.2
NLU   North Lily Min   88.87  43  P    P      15 49 10.5 +2.1
NLU                           pP       pP     15 49 47.1 +1.4
GSC   Goldstone        88.89  49  P    P      15 49 09.7 +1.0
HYF   Humbligny        88.90 327 eP    P      15 49 07.8 -0.6
      comp=Z,2µm,0.8s,mb6.9
AVF   Avril sur Loir   88.92 327 eP    P      15 49 07.7 -0.8
      comp=Z,300nm,0.9s,mb5.9
AVF   Avril sur Loir   88.92 327 eP    P      15 49 07.7 -0.8
AVF                           pmax     pmax
      comp=Z,150nm,0.9s,mb5.9
TOUF  Mont Tournerai   88.95 323 eP    P      15 49 08.3 -0.4
SBF   Sospel           88.96 322 eP    P      15 49 08.2 -0.5
      comp=Z,277nm,0.7s,mb6.0
SBF   Sospel           88.96 322 eP    P      15 49 08.2 -0.5
SBF                           pmax     pmax
      comp=Z,138nm,0.7s,mb6.0
ORIF  Oris-en-Rattie   89.02 324 eP    P      15 49 08.1 -0.9
      comp=Z,113nm,0.8s,mb5.6
ORIF                         eR
      comp=Z,3µm,18.5s
PGF   Pioggiola        89.02 321 eP    P      15 49 08.4 -0.7
      comp=Z,211nm,1.0s,mb5.7
PGF   Pioggiola        89.02 321 eP    P      15 49 08.4 -0.7
PGF                           pmax     pmax
      comp=Z,106nm,1.0s,mb5.7
DAU   Daniels Canyon   89.05  42  P    P      15 49 10.9 +1.7
REVF  Revere           89.08 322 eP    P      15 49 08.7 -0.6
MVIF  Mont Vial        89.08 323 eP    P      15 49 08.6 -0.7
MPU   Maple Canyon     89.09  43  P    P      15 49 11.3 +1.9
MPU                           pP       pP     15 49 48.0 +1.3
LDF   La Druitiere     89.16 330 eP    P      15 49 08.8 -0.8
      comp=Z,241nm,1.0s,mb5.8
LDF   La Druitiere     89.16 330 eP    P      15 49 08.8 -0.8
LDF                           pmax     pmax
      comp=Z,121nm,1.0s,mb5.8
USI   Ustica           89.17 316⇑iP    P      15 49 09.7 -0.2
      comp=Z,260nm,0.9s,mb6.2
FLN   La Foliniere     89.19 330 eP    P      15 49 08.8 -0.9
FLN                          eR
      comp=Z,2µm,19.8s
SHPR  Sheep Range      89.20  47  P    P      15 49 11.4 +1.3
VAE   Valguarnera      89.20 314  LR   LR     16 35 33.2
      comp=Z,1µm,18.1s,baz=31,slow=40
CALN  Calern           89.32 323 eP    P      15 49 10.0 -0.4
BGF   Bois d'Agland    89.33 327 eP    P      15 49 09.6 -0.8
      comp=Z,108nm,0.7s,mb5.6
BGF   Bois d'Agland    89.33 327 eP    P      15 49 09.6 -0.8
BGF                           pmax     pmax
      comp=Z,54nm,0.7s,mb5.6
PLDF  La Plantade      89.38 326 eP    P      15 49 10.7  0.0
ULM   Lac du Bonnet    89.44  28  P    P      15 49 11.2 +0.4
      comp=Z,202nm,0.9s,mb6.1,baz=322,slow=5.2,SNR=97
ULM                           pP       pP     15 49 47.0 -1.1
      comp=Z,19nm,0.8s,baz=338,slow=4.2,SNR=1.2
ARUT  Antelope Range   89.45  45 eP    P      15 49 12.6 +1.4
ARUT                         epP       pP     15 49 49.4 +0.9
FRF   La Foret Royal   89.58 323 eP    P      15 49 11.1 -0.6
      comp=Z,63nm,0.8s,mb5.3
FRF   La Foret Royal   89.58 323 eP    P      15 49 11.1 -0.6
FRF                           pmax     pmax
      comp=Z,31nm,0.8s,mb5.3
GRR   Gorron           89.63 330 eP    P      15 49 10.9 -0.9
      comp=Z,290nm,0.9s,mb5.9
GRR   Gorron           89.63 330 eP    P      15 49 10.9 -0.9
GRR                           pmax     pmax
      comp=Z,145nm,0.9s,mb5.9
STOF  St-Etienne Org   89.65 323 eP    P      15 49 13.8 +1.8
VIVF  Saint-Julien-l   89.67 325 eP    P      15 49 10.9 -1.2
      comp=Z,123nm,1.0s,mb5.5
VIVF  Saint-Julien-l   89.67 325 eP    P      15 49 10.9 -1.2
VIVF                          pmax     pmax
      comp=Z,61nm,1.0s,mb5.5
COLF  Collangettes     89.67 326 eP    P      15 49 12.5 +0.4
MVU   Marysvale        89.73  44  P    P      15 49 14.6 +2.1
      comp=Z,100nm,1.4s,mb5.5
MSU   Marysvale        89.75  44 eP    P      15 49 14.5 +1.9
MSU                          epP       pP     15 49 51.3 +1.4
TMUT  Trail Mountain   89.81  43  P    P      15 49 14.9 +2.0
LMR   La Mourre        89.81 323 eP    P      15 49 11.6 -1.2
      comp=Z,138nm,0.8s,mb5.7
LMR   La Mourre        89.81 323 eP    P      15 49 11.6 -1.2
LMR                           pmax     pmax
      comp=Z,69nm,0.8s,mb5.6
TCF   Toulx Ste Croi   89.82 327 eP    P      15 49 12.1 -0.6
      comp=Z,296nm,1.1s,mb5.8
TCF   Toulx Ste Croi   89.82 327 eP    P      15 49 12.1 -0.6
TCF                           pmax     pmax
      comp=Z,148nm,1.1s,mb5.8
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PYM	Petit Puy Mans	89.84	326	eP	P	15 49 13.3	+0.5
SMRF	Simiane la Rot	89.84	324	eP	P	15 49 12.0	-0.9
	comp=Z,79nm,1.0s,mb5.3						
TAVF	Tavernes	89.84	323	eP	P	15 49 12.8	-0.1
VILF	Villemus	89.86	323	eP	P	15 49 14.2	+1.2
NEN	Nelson	89.93	48	eP	P	15 49 14.4	+0.9
NEN				epP	pP	15 49 49.7	-1.1
PUYF	Puyloubier	90.09	323	eP	P	15 49 13.4	-0.7
LBL	Lubilhac	90.10	326	eP	P	15 49 13.9	-0.2
PFO	Pinyon Flat Ob	90.16	50	P	P	15 49 15.5	+0.9
PRAF	Pradon	90.17	324	eP	P	15 49 14.2	-0.2
BERF	Bertagne	90.25	323	eP	P	15 49 14.7	-0.1
FRNF	Fournols	90.32	326	eP	P	15 49 15.8	+0.7
SRU	San Rafael	90.33	43	P	P	15 49 16.7	+1.4
GELF	Grande-Etoile	90.33	323	eP	P	15 49 14.4	-0.8
RSSD	Black Hills	90.39	36	P	P	15 49 15.7	+0.2
	comp=Z,159nm,1.2s,mb5.8						
RSSD	Black Hills	90.39	36	P	P	15 49 15.7	+0.2
RSSD				pmax	pmax		
	comp=Z,159nm,1.2s,mb5.8						
RWWY	Rawlins	90.45	39	P	P	15 49 17.1	+1.3
SGMF	Saint Gilles	90.46	331	eP	P	15 49 14.9	-0.8
	comp=Z,309nm,1.0s,mb5.9						
SGMF	Saint Gilles	90.46	331	eP	P	15 49 14.9	-0.8
SGMF				pmax	pmax		
	comp=Z,155nm,1.0s,mb5.9						
BAR	Barrett	90.58	51	P	P	15 49 17.0	+0.3
LASF	Ste Croix	90.64	324	eP	P	15 49 15.8	-0.8
	comp=Z,74nm,0.8s,mb5.5						
MFF	Saint Martin d	90.67	328	eP	P	15 49 16.2	-0.5
	comp=Z,708nm,1.0s,mb6.3						
MFF	Saint Martin d	90.67	328	eP	P	15 49 16.2	-0.5
MFF				pmax	pmax		
	comp=Z,354nm,1.0s,mb6.3						
ROSF	Rostrenen	90.70	331	eP	P	15 49 16.1	-0.7
	comp=Z,367nm,1.0s,mb6.1						
ROSF	Rostrenen	90.70	331	eP	P	15 49 16.1	-0.7
ROSF				pmax	pmax		
	comp=Z,184nm,1.0s,mb6.1						
VSL	Villasalto	90.87	318	P	P	15 49 17.7	-0.1
RJF	Les Rejaudoux	90.88	327	eP	P	15 49 17.3	-0.4
	comp=Z,313nm,1.0s,mb6.0						
RJF				eR			
	comp=Z,2μm,18.8s						
RJF	Les Rejaudoux	90.88	327	eP	P	15 49 17.3	-0.4
RJF				pmax	pmax		
	comp=Z,157nm,1.0s,mb6.0						
RJF				MLR	MLR		
	comp=Z,2μm,18.8s						
LCHF	La Chataignera	90.89	329	eP	P	15 49 18.2	+0.4
CAF	Calviac	90.89	326	eP	P	15 49 17.6	-0.2
	comp=Z,222nm,0.9s,mb5.9						
CAF	Calviac	90.89	326	eP	P	15 49 17.6	-0.2
CAF				pmax	pmax		
	comp=Z,111nm,0.9s,mb5.9						
PPT	Papeete	90.90	110	LR	LR	16 21 56.8	
	comp=Z,2μm,21.2s,baz=295,slow=30						
QUIF	Quistinic	90.98	331	eP	P	15 49 17.0	-1.2
	comp=Z,226nm,1.1s,mb5.8						
QUIF	Quistinic	90.98	331	eP	P	15 49 17.0	-1.2
QUIF				pmax	pmax		
	comp=Z,113nm,1.1s,mb5.8						
LRYF	La Roche-sur-Y	91.32	329	eP	P	15 49 20.3	+0.5
LFF	La Frestale	91.52	327	eP	P	15 49 20.2	-0.5
	comp=Z,277nm,0.9s,mb6.0						
LFF	La Frestale	91.52	327	eP	P	15 49 20.2	-0.5
LFF				pmax	pmax		
	comp=Z,139nm,0.9s,mb6.0						
GLA	Glamis	91.57	50	P	P	15 49 22.6	+1.3
GLA				pP	pP	15 49 59.3	+0.7
PHWY	Pilot Hill	91.66	38	P	P	15 49 22.8	+1.3
PHWY				pP	pP	15 50 02.1	+3.2
PV10	Paradox Valley	91.68	42	eP	P	15 49 23.7	+2.0
PV10				epP	pP	15 49 59.5	+0.5
MTLF	Montolieu	91.98	325	eP	P	15 49 22.0	-0.9
PV01	Paradox Valley	92.12	42	P	P	15 49 25.2	+1.5
WUAZ	Wupatki	92.19	46	P	P	15 49 25.8	+1.8
	comp=Z,114nm,1.1s,mb5.8						
EJON	La Jonquera	92.30	324	Pdif	P	15 49 24.5	+0.1
FILF	Fillols	92.39	324	eP	P	15 49 24.3	-0.5
RW3	Ridgway	92.55	42	eP	P	15 49 28.4	+2.8
RW3				epP	pP	15 50 06.2	+3.2
ISCO	Idaho Springs	92.63	40	P	P	15 49 27.8	+1.9
	comp=Z,42nm,1.0s,mb5.5						
ISCO	Idaho Springs	92.63	40	P	P	15 49 27.8	+1.8
ISCO				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.5						
VALF	Valcebollere	92.78	324	eP	P	15 49 26.6	0.0
EYMN	Ely	93.01	27	P	P	15 49 28.3	+0.8
	comp=Z,96nm,0.9s,mb5.9						
KMBO	Kilima Mbogo	93.04	271	P	P	15 49 29.3	+0.8
	comp=Z,48nm,0.8s,mb5.7,baz=44,slow=7.0,SNR=146						
KMBO				S	S	15 59 51.6	-27
	comp=Z,0.4nm,0.4s,baz=60,slow=23,SNR=7.7						
KMBO	Kilima Mbogo	93.04	271	P	P	15 49 29.3	+0.8
KMBO				S	S	15 59 51.6	-27
EPF	Esparros	93.14	326	eP	P	15 49 26.8	-1.4
SCHQ	Schefferville	93.30	10	P	P	15 49 29.1	+0.5
	comp=Z,44nm,1.0s,mb5.5,baz=355,slow=5.9,SNR=23						
SCHQ				LR	LR	16 34 25.3	
	comp=Z,712nm,18.2s,baz=168,slow=37						
SCHQ	Schefferville	93.30	10	eP	P	15 49 29.3	+0.7
	comp=Z,68nm,1.1s,mb5.7						
SCHQ				epP	pP	15 50 05.8	-0.3
RESF	Ens	93.30	325	eP	P	15 49 29.4	+0.5
EMIR	Miracle	93.38	324	Pdif	P	15 49 28.8	-0.5
EBIE	Bielsa	93.49	326	Pdif	P	15 49 29.0	-0.8
ETSF	Etsaut	93.67	326	eP	P	15 49 29.9	-0.7
	comp=Z,59nm,0.8s,mb5.4						
ETSF	Etsaut	93.67	326	eP	P	15 49 29.9	-0.7
ETSF				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.5						
LARF	Larrau	93.77	326	eP	P	15 49 31.6	+0.6
EGRA	Graus	93.77	325	Pdif	P	15 49 30.7	-0.4
SJPF	Ste Jean	93.82	327	eP	P	15 49 30.3	-1.0
	comp=Z,49nm,0.9s,mb5.3						
SJPF	Ste Jean	93.82	327	eP	P	15 49 30.3	-1.0
SJPF				pmax	pmax		
	comp=Z,25nm,0.9s,mb5.3						
EALK	Alkurruntz	93.87	327	Pdif	P	15 49 31.3	-0.2
CMAH	Djebel Manchou	93.96	317	P	P	15 49 31.0	-1.0
EPOB	Poblet	94.02	324	Pdif	P	15 49 30.8	-1.4
SDCO	Great Sand Dun	94.14	41	P	P	15 49 34.5	+1.7
SDCO				PP	PP	15 53 19.9	-3.8
ABSA	Djebel Ababsia	94.17	317	P	P	15 49 32.0	-1.0
ETOS	Mallorca	94.29	322	Pdif	P	15 49 32.7	-0.8
ESAC	San Caprasio	94.52	325	Pdif	P	15 49 33.6	-0.8
TUC	Tucson	94.66	48	P	P	15 49 36.5	+1.2
	comp=Z,40nm,1.3s,mb5.5						
TUC				pP	pP	15 50 13.7	+0.9
TUC	Tucson	94.66	48	P	P	15 49 36.5	+1.2
TUC				*PP	pP	15 50 13.7	+0.9
TUC				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.5						
ERTA	Horta de San J	94.69	324	Pdif	P	15 49 34.2	-1.1
EBR	Ebro Roquetas	94.71	324	ePDIFF		15 49 36.0	
CASM	Ain Smara	94.75	318	P	P	15 49 35.0	-0.7
ELAN	Lanestosa	94.76	328	Pdif	P	15 49 34.0	-1.6
ECRI	Cripan	94.81	327	Pdif	P	15 49 35.7	-0.1
DFRA	Djebel Bou Aff	94.91	318	P	P	15 49 37.0	+0.6
CTEI	Djebel Teioual	94.94	317	P	P	15 49 34.0	-2.6
SET	Setif	95.42	318	P	P	15 49 39.0	+0.2
CKHR	Kef el Ahmar	95.49	318	P	P	15 49 39.0	0.0
EARI	Arriondas	95.50	329	Pdif	P	15 49 37.4	-1.6
ANMO	Albuquerque	95.53	44	P	P	15 49 41.3	+2.0
	comp=Z,46nm,1.7s,mb5.5						
ANMO	Albuquerque	95.53	44	P	P	15 49 41.3	+2.0
ANMO				pmax	pmax		
	comp=Z,46nm,1.7s						
CMER	Merouana	95.54	317	P	P	15 49 38.0	-1.3
EMOS	Mosqueruela	95.54	324	Pdif	P	15 49 38.5	-0.6
LPM	Los Pinos Moun	95.87	44	P	P	15 49 42.3	+1.5
LPM				pP	pP	15 50 20.8	+2.6
BNM	Barren Site	95.99	44	P	P	15 49 42.9	+1.6
EPON	Pontenova	96.33	330	Pdif	P	15 49 41.4	-1.2
ECHE	Chera	96.38	324	Pdif	P	15 49 42.8	-0.2
EMHD	Djebel Mahouad	96.81	320	P	P	15 49 45.0	0.0
GUD	Guadarrama	97.12	327	Pdif	P	15 49 46.0	-0.4
ECAL	Calabor	97.27	329	Pdif	P	15 49 45.8	-1.2
PBRG	Braganca	97.38	329	eP	P	15 49 47.5	0.0
ETOB	Tobarra	97.39	324	Pdif	P	15 49 47.6	0.0
EMAZ	Mazaricos	97.41	331	Pdif	P	15 49 46.0	-1.6
EBNR	Beni Rached	97.53	320	P	P	15 49 49.0	+0.7
DRV	Dumont d'Urvil	97.63	176	P	P	15 49 52.0	+4.0
ECHA	Ech Chlef	97.72	320	P	P	15 49 50.0	+0.8
ECHF	Ech Chlef	97.73	320	P	P	15 49 50.0	+0.8
ESDC	Sonseca Array	97.78	326	P	P	15 49 48.9	-0.5
	comp=Z,17nm,0.8s,mb5.5,baz=26,slow=4.4,SNR=35						
ESDC				PP	PP	15 53 49.4	-2.3
	comp=Z,6.5nm,0.9s,baz=41,slow=7.8,SNR=8.1						
ESDC	Sonseca Array	97.78	326	Pdif	P	15 49 48.6	-0.8
ESLA	Sonseca Array	97.78	326	P	P	15 49 48.3	-1.1
ESLA				PP	PP	15 53 53.5	+1.7
KSU1	Kansas State U	97.83	35	P	P	15 49 50.6	+0.9
EMUR	La Murta	97.84	323	Pdif	P	15 49 48.1	-1.6
EVIA	Vianos	97.87	324	Pdif	P	15 49 49.2	-0.6
EANR	'Ain N'Sour	98.01	320	P	P	15 49 51.0	+0.5
PVRL	Vila Real	98.23	329	eP	P	15 49 51.6	+0.2
ETRT	Tiaret	98.31	320	P	P	15 49 53.0	+1.1
AMTX	Amarillo	98.34	41	P	P	15 49 53.1	+1.1
	comp=Z,29nm,1.3s,mb5.5						
CPRX	Cap Rock	98.41	43	eP	P	15 49 53.1	+0.7
CPRX				epP	pP	15 50 32.0	+2.2
MNTX	Cornudas Mount	98.44	45	P	P	15 49 55.2	+2.7
MNTX				PP	PP	15 53 54.0	-2.7
EHUE	Huescar	98.55	324	Pdif	P	15 49 51.6	-1.3
GDL2	Guadalupe Moun	98.70	44	eP	P	15 49 54.5	+0.8
PVIS	Viseu	98.77	329	eP	P	15 49 54.0	+0.1
EQES	Quesada	98.80	324	Pdif	P	15 49 53.5	-0.5
MTE	Manteigas	98.87	329	eP	P	15 49 54.2	-0.1
MTE	Manteigas	98.87	329	ePP	PP	15 53 56.5	-2.9
MTE				eSKS	SKS	16 00 20.5	+3.3
MTE	Manteigas	98.87	329	P	P	15 49 54.2	-0.1
	comp=Z,44nm,0.8s,mb6.0						
EBAN	Banos Encina	98.88	325	Pdif	P	15 49 53.8	-0.6
EADA	Adamuz	99.26	325	Pdif	P	15 49 55.0	-1.1
PCBR	Castelo Branco	99.29	328	eP	P	15 49 56.3	0.0
ELUQ	Luque	99.58	325	Pdif	P	15 49 56.7	-1.0
ECAB	El Cabril	99.74	326	Pdif	P	15 49 56.8	-1.6
ERON	Agron	99.78	324	Pdif	P	15 49 56.8	-1.7
ELOJ	Sierra Loja	99.85	325	Pdif	P	15 49 57.2	-1.7
WMOK	Wichita Mounta	100.04	39	Pdif	P	15 50 01.6	+1.8
EMIN	Mina Concepcio	100.59	326	Pdif	P	15 49 59.8	-2.3
EVO	Evora	100.59	328	eP	P	15 50 01.6	-0.6
	comp=Z,49nm,0.9s						
EVO				eR			
	comp=Z,2μm,20.8s						
EMIJ	Mijas	100.61	325	Pdif	P	15 50 00.8	-1.5
PLOU	Loures	100.82	329	eP	P	15 50 03.5	+0.3
ESPR	Espera	100.91	325	Pdif	P	15 50 03.2	-0.4
PBEJ	Beja	100.94	327	eP	P	15 50 04.0	+0.3
EJIF	Jimena Fronter	101.05	325	Pdif	P	15 50 04.1	-0.2
LTX	Lajitas	101.15	46	Pdif	P	15 50 06.8	+1.9
LTX				PP	PP	15 54 16.4	-1.2
TXAR	Lajitas Array	101.15	46	P	P	15 50 05.0	+0.1
	comp=Z,6.8nm,1.0s,baz=288,slow=4.0,SNR=14						
TXAR				PP	PP	15 54 15.8	-1.7
	comp=Z,5.5nm,1.0s,baz=307,slow=6.3,SNR=7.1						
TXAR				PKKPbc		16 06 16.1	
	comp=Z,1.1nm,0.5s,baz=146,slow=4.5,SNR=4.7						
EGRO	El Granado	101.16	327	Pdif	P	15 50 04.0	-0.7
CCM	Cathedral Cave	101.21	32	Pdif	P	15 50 05.7	+0.7
JCT	Junction City	102.64	43	PP	PP	15 54 28.7	0.0
MIAR	Mount Ida	102.91	36	PP	PP	15 54 29.1	-1.7
OXF	Oxford	104.96	33	PP	PP	15 54 44.2	-1.9
RKT	Rikitea	105.52	108	ePP	PP	15 54 46.2	-4.1
RKT	Rikitea	105.52	108	eSKSac		16 00 51.1	
RKT				eLR	LR	16 23 59.8	
	comp=Z,2μm,38.8s						
LSZ	Lusaka	107.79	263	Pdif	Pdif	15 50 34.9	+0.5
VNDA	Vanda	109.94	173	PP	PP	15 55 16.8	-5.2
MAW	Mawson	110.23	202	eP	PKPdf	15 54 45.0	+1.8
	comp=Z,3.5nm,1.0s						
MAW	Mawson	110.23	202	PKiKP		15 54 45.0	
	comp=Z,2.8nm,0.8s,baz=360,slow=1.1,SNR=4.9						
MAW				PKKPbc		16 05 46.6	
	comp=Z,3.8nm,0.6s,baz=254,slow=4.3,SNR=9.8						
MAW				PKKPab		16 05 56.9	
	comp=Z,11nm,1.1s,baz=264,slow=6.7,SNR=9.6						
SBA	Scott Base	110.77	172	PP	PP	15 55 34.6	+6.8
LBTB	Lobatse	114.26	254	ePKiKP		15 54 53.8	
LBTB				ePP	PP	15 55 51.0	-3.4
BOSA	Boshof	115.96	251	PKP	PKPdf	15 54 56.8	+1.3
	comp=Z,6.3nm,0.5s,baz=71,slow=1.9,SNR=31						
BOSA				PKKPab		16 05 33.8	
	comp=Z,2.2nm,0.9s,baz=353,slow=5.7,SNR=3.1						
BOSA	Boshof	115.96	251	ePKPdf	PKPdf	15 54 56.8	+1.4
BOSA				epPKPdf		15 55 36.1	
TSUM	Tsumeb	118.59	264	PKPdf	PKPdf	15 55 02.4	+1.8
QSPA	South Pole Qui	120.74	180	PKPdf	PKPdf	15 55 04.7	+1.2
DBIC	Dimbokro	122.95	303	PKP	PKPdf	15 55 10.0	+0.8
	comp=Z,29nm,0.7s,baz=38,slow=1.5,SNR=48						
DBIC				PP	PP	15 56 52.1	-2.4
	comp=Z,22nm,1.1s,baz=20,slow=8.4,SNR=11						
DBIC				SKP		15 58 32.9	
	comp=Z,11nm,0.8s,baz=35,slow=3.4,SNR=5.0						
DBIC				PKKPab		16 05 04.5	
	comp=Z,1.3nm,0.5s,baz=191,slow=7.3,SNR=5.3						
DBIC	Dimbokro	122.95	303	PKPdf	PKPdf	15 55 10.2	+0.9
DBIC	Dimbokro	122.95	303	PKIKP	PKPdf	15 55 10.0	+0.8
DBIC						15 56 52.2	
DBIC				pmax	pmax		
	comp=Z,29nm,0.7s						
DBIC				pmax	pmax		
	comp=Z,22nm,1.1s						
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.5s						
LIC	Lamto	123.38	303	ePKIKP	PKPdf	15 55 08.3	-1.8
	comp=Z,76nm,0.7s						
LIC				eR			
	comp=Z,979nm,22.5s						
NVL	N'lazarevskaya	128.18	202	⇓iPKIKP	PKPdf	15 55 20.8	+2.8
NVL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SNAA	Sanae	132.15	198	⇑i	PKPdf	15 55 26.2	+0.7
SNAA	Sanae	132.15	198		PKPdf	15 55 29.1	+3.6
SNAA	Sanae	132.15	198	PKhKP		15 55 10.3	
	comp=Z,0.5nm,0.5s,baz=172,slow=6.1,SNR=13						
SNAA				PKP	PKPdf	15 55 26.8	+1.3
	comp=Z,1.8nm,0.8s,baz=206,slow=3.4,SNR=12						
SNAA				SKPbc		15 58 40.1	
	comp=Z,6.8nm,0.8s,baz=159,slow=4.0,SNR=15						
SNAA	Sanae	132.15	198	PKHKP		15 55 10.3	
SNAA						15 55 26.8	
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SNAA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SNAA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VNA2	Neumayer--Watz	133.79	198	⇑i	PKPdf	15 55 30.6	+2.1
VNA2	Neumayer--Watz	133.79	198	⇑i	PKPdf	15 55 32.2	+3.7
VNA3	Neumayer Olymp	134.18	197	⇑i	PKPdf	15 55 31.2	+2.0
VNA3	Neumayer Olymp	134.18	197	⇑i	PKPdf	15 55 32.8	+3.6
VNA1	Neumayer--Stat	134.18	198	P	PKPdf	15 55 20.1	-9.2
VNA1	Neumayer--Stat	134.18	198	⇑i	PKPdf	15 55 31.5	+2.2
VNA1	Neumayer--Stat	134.18	198	⇑i	PKPdf	15 55 33.2	+3.9
SDV	Santo Domingo	135.64	30	ePKPdf	PKPdf	15 55 35.8	+2.4
ROSC	El Rosal	137.39	38	PKhKP		15 55 29.3	
	comp=Z,6.4nm,0.4s,baz=100,slow=20,SNR=5.7						
ROSC				PKP	PKPdf	15 55 39.9	+3.2
	comp=Z,26nm,0.8s,baz=104,slow=22,SNR=9.6						
PMSA	Palmer Station	145.05	169	ePKPbc	PKPbc	15 55 50.1	+1.0
PMSA				epPKPdf		15 56 32.6	
NNA	Nana	148.73	59	ePKPdf	PKPdf	15 55 58.9	+2.6
NNA				epPKPdf		15 56 39.7	
RCBR	Riachuelo	151.74	329	ePKPbc	PKPdf	15 56 08.9	+7.9
RCBR				ePP	PP	15 59 45.6	-6.2
USHA	Ushuaia	152.73	156	PKPbc	PKPdf	15 56 11.7	+11
	comp=Z,41nm,0.8s,baz=246,slow=1.5,SNR=9.6						
SAML	Samuel	154.81	32	PKPdf	PKPdf	15 56 07.2	+2.1
ARE	Arequipa	155.56	59	eP	PKPdf	15 56 20.0	+14
LPAZ	La Paz	157.83	53	PKP	PKPdf	15 56 12.2	+3.2
	comp=Z,9.4nm,1.1s,baz=6.6,slow=3.3,SNR=30						
LPAZ				PKPab	PKPab	15 56 44.6	-0.4
	comp=Z,22nm,1.0s,baz=358,slow=10.0,SNR=12						
LPAZ	La Paz	157.83	53	ePKPdf	PKPdf	15 56 12.2	+3.1
PLCA	Paso Flores	160.66	126	PKP	PKPdf	15 56 13.8	+2.2
	comp=Z,6.0nm,1.1s,baz=240,slow=1.0,SNR=4.3						
PLCA				PKPab	PKPab	15 56 55.9	-0.6
	comp=Z,7.0nm,0.8s,baz=246,slow=4.5,SNR=8.3						
PLCA	Paso Flores	160.66	126	ePKPdf	PKPdf	15 56 13.3	+1.7
PLCA	Paso Flores	160.66	126	PKIKP	PKPdf	15 56 13.8	+2.2
PLCA						15 56 55.9	
PLCA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PLCA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SIV	San Ignacio	161.91	37	PKP	PKPdf	15 56 15.6	+2.1
	comp=Z,46nm,1.0s,baz=115,slow=0.3,SNR=136						
SIV				pPKP		15 56 53.3	
	comp=Z,7.2nm,0.8s,baz=357,slow=4.2,SNR=2.0						
SIV				PKPab	PKPab	15 57 01.8	-0.8
	comp=Z,26nm,0.8s,baz=344,slow=4.6,SNR=15						
SIV				PP	PP	16 00 44.9	-2.6
	comp=Z,12nm,1.0s,baz=360,slow=4.5,SNR=6.2						
CFAA	Coronel Fontan	164.29	97	PKP	PKPdf	15 56 17.1	+1.6
	comp=Z,1.1nm,1.1s,baz=242,slow=1.3,SNR=8.1						
CFAA				PKPab	PKPab	15 57 12.6	0.0
	comp=Z,2.6nm,0.8s,baz=262,slow=4.5,SNR=11						
CFAA	Coronel Fontan	164.29	97	PKP	PKPdf	15 56 17.1	+1.6
CFAA				PKPab	PKPab	15 57 12.6	0.0
BAO	Brasilia Array	164.62	353	PKPdf	PKPdf	15 56 18.0	+1.8
BDFB	Brasilia	164.63	353	PKP	PKPdf	15 56 17.2	+0.9
	comp=Z,20nm,0.9s,baz=46,slow=1.4,SNR=14						
BDFB				PKPab	PKPab	15 57 13.2	-1.3
	comp=Z,16nm,0.6s,baz=351,slow=4.2,SNR=10						
BDFB				PP	PP	16 01 00.7	-1.4
	comp=Z,6.9nm,0.9s,baz=16,slow=6.6,SNR=4.4						
CPUP	Villa Florida	171.98	57	ePKPdf	PKPdf	15 56 23.3	+2.4
LPA	La Plata	172.18	122	dePKP	PKPdf	15 56 22.0	+1.3
LPA				epPKP		15 57 02.0	
LPA				esPKP		15 57 16.0	

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*BJI **21** 16:18:56.8, 10.63N×125.45E, h95^{km}, mB5.0, mb4.9*

*MOS **21** 16:19:01.7±1.1, 11.11N×125.15E, h106^{km}, mb5.0/16, Error ellipse: s-maj=13.9km s-min=6.8km az=114.9*

*IDC **21** 16:19:01.8±0.4, 11.14N×125.21E, h96^{km}±3^{km}, mb4.6/25, mb1 4.6/25, mb1mx4.6/26, mbtmp4.9/25, Error ellipse: s-maj=17.2km s-min=8.8km az=74.0*

*MAN **21** 16:19:02.6, 11.18N×125.33E, h94^{km}, mb5.5, ML4.5, MS4.8*

MAN INTENSITY IV - MARABUT SAMAR INTENSITY III - BASEY SAMAR INTENSITY II - TACLOBAN CITY PALO LEYTE.

*NEIC **21** 16:19:02.1±0.2, 11.17N×125.27E, mb5.1/21, Error ellipse: s-maj=9.3km s-min=5.3km az=68.0*

ISC 21 16:19:00.7±0.2**, 11.20N**±0.02×**125.45E**±0.03**, h96^{km}, h96^{km}±.8^{km}:pP-P, n196, σ1^{s}23**/196**, mb4.9**/68**, 16C-18D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.40	358	eP	P	16 19 19.6	+4.1
BESP				eS	S	16 19 30.9	+4.2
PLP	Palo	0.46	266	eP	P	16 19 17.8	+1.8
PLP						16 19 28.1	
MSLP	Maasin	1.21	209	eP	P	16 19 25.4	+1.7
MSLP				eS	S	16 19 42.2	+1.5
SCPH	Surigao	1.41	178	eP	P	16 19 28.2	+2.1
SCPH				eS	S	16 19 45.8	+0.9
CNP	Catarman	1.51	329	eP	P	16 19 30.3	+2.9
CNP				eS	S	16 19 50.2	+3.1
LLP	Lapu-Lapu	1.70	239	⇑iP	P	16 19 30.1	+0.3
LLP				i S	S	16 19 48.6	-2.6
MMPH	Masbate	2.13	303	⇑eP	P	16 19 36.8	+1.4
TBP	Tagbilaran	2.17	226	eP	P	16 19 37.0	+1.1
TBP						16 20 01.8	
BUTP	Butuan	2.22	176	eP	P	16 19 39.6	+2.9
BUTP				eS	S	16 20 10.4	+7.0
RCP	Roxas	2.68	278	⇑eP	P	16 19 43.4	+0.5
PVCP	Virac	2.70	332	eP	P	16 19 45.3	+2.0
PVCP				eS	S	16 20 18.6	+3.5
CGP	Cagayan de Oro	2.83	195	⇓iP	P	16 19 46.0	+0.9
CGP				i S	S	16 20 18.1	-0.1
SNPH	Sibulan	2.85	230	⇓iP	P	16 19 46.5	+1.1
GUIM	Jordan	2.87	259	eP	P	16 19 45.1	-0.5
KALP	Kalibo	3.09	279	⇑eP	P	16 19 49.7	+1.1
BIPH	Bislig	3.13	163	⇑iP	P	16 19 49.1	-0.1
BIPH				i S	S	16 20 25.6	0.0
DCPH	Dipolog City	3.32	219	⇑iP	P	16 19 51.8	0.0
DCPH				eS	S	16 20 28.1	-2.3
BUKP	Musuan	3.32	187	eP	P	16 19 54.1	+2.2
AUQP	San Andres	3.44	308	eP	P	16 19 55.2	+1.8
OTRP	Odiongan	3.55	289	eP	P	16 19 55.6	+0.7
PAGZ	Pagadian	3.91	212	eP	P	16 20 00.6	+0.7
GQP	Guinayangan	3.98	313	⇓eP	P	16 20 01.9	+1.0
DAV	Davao City (W)	4.11	178	ePn	P	16 20 05.2	+2.6
BOAC	Boac	4.18	303	eP	P	16 20 04.2	+0.7
MATI	Mati	4.30	169	eP	P	16 20 05.9	+0.7
MATI				eS	S	16 20 54.2	-0.4
CUYO	Cuyo Island	4.37	266	eP	P	16 20 05.8	-0.3
SJMP	San Jose	4.42	287	eP	P	16 20 07.7	+0.8
POLP	Polilio Island	4.90	316	eP	P	16 20 14.2	+0.8
POLP				eS	S	16 21 08.0	-1.4
BUSP	Coron	5.21	279	eP	P	16 20 17.5	-0.1
TGY	Tagaytay City	5.26	304	P	P	16 20 20.7	+2.3
	32nm,0.3s,baz=227,slow=1.9,SNR=29						
BALP	Baler	5.88	321	eP	P	16 20 28.2	+1.4
BALP				eS	S	16 21 26.9	-6.6
ENPP	El Nido	5.91	271	eP	P	16 20 26.6	-0.6
CAUP	Cauayan	6.71	329	eP	P	16 20 38.1	-0.2
CAUP				eS	S	16 21 48.9	-4.8
PPR	Puerto Princes	6.76	259	eP	P	16 20 40.0	+1.0
SCZP	Santa Cruz	7.05	311	eP	P	16 20 47.3	+4.3
APYP	Conner	7.77	329	eP	P	16 20 52.5	-0.3
APYP				eS	S	16 22 13.5	-6.4
ABRA	Dolores	7.88	325	eP	P	16 20 53.1	-1.2
ABRA				eS	S	16 22 16.1	-6.5
BATP	Bataraza	7.90	253	eP	P	16 20 56.1	+1.5
TSM	Tawau	10.17	228	P	P	16 21 27.7	+2.4
KKM	Kota Kinabalu	10.47	241	P	P	16 21 30.9	+1.6
QIZ	Qiongzhong	16.95	299	ePn	P	16 22 54.6	+1.3
KSM	Kuching	17.87	238	ePn	P	16 23 03.9	-0.8
GUMO	Guam	19.11	81	P	P	16 23 23.0	+4.3
	4.9nm,0.3s,baz=84,slow=2.5,SNR=5.5						
GUMO	Guam	19.11	81	P	P	16 23 23.0	+4.3
SSE	Sheshan	20.19	349	P	P	16 23 33.3	+3.4
SSE				AMB	AMB		
	comp=Z,30nm,0.7s						
SSE				AMB	AMB		
	comp=Z,130nm,9.3s						
NJ2	Nanjing	21.63	345	eP	P	16 23 48.1	+3.7
NJ2				S	S	16 27 42.0	+9.1
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,230nm,10.8s						
NJ2				LR	LR		
	comp=N,610nm,27.1s						
NJ2				LR	LR		
	comp=E,1μm,36.5s						
NJ2				LR	LR		
	comp=Z,500nm,24.6s						
WHN	Wuhan	21.83	333	⇑P	P	16 23 48.5	+2.0
CBIJ	Chichi jima	22.32	43	P	P	16 23 53.8	+2.6
	comp=Z,125nm,0.5s,mb5.5,baz=255,slow=4.1,SNR=16						
JNU	Nakatsue	22.38	12	P	P	16 23 54.0	+2.3
	comp=Z,6.3nm,0.8s,mb4.0,baz=111,slow=7.2,SNR=4.0						
GYA	Guiyang	23.33	313	⇑iP	P	16 24 02.8	+1.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.3						
KGM	Kluang	23.78	249	P	P	16 24 06.4	+0.9
ENH	Enshi	24.09	324	eP	P	16 24 08.6	+0.2
	comp=Z,29nm,0.8s,mb4.7						
KAKA	Kakadu	24.75	164	eP	P	16 24 33.2	+18
	comp=Z,62nm,0.5s,mb5.3						
IPM	Ipoh	25.06	257	P	P	16 24 17.2	-0.7
KULM	Kulim	25.23	259	eP	P	16 24 18.7	-0.7
KMI	Kunming	25.58	306	P	P	16 24 22.6	0.0
KMI				AP	pP	16 24 45.8	+2.0
KMI				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.0						
XAN	Xi'an	27.30	329	P	P	16 24 37.5	-0.9
XAN				AP	pP	16 24 59.4	-0.4
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
MJAR	Matsushiro Arr	27.74	22	P	P	16 24 41.9	-0.5
	comp=Z,3.1nm,0.7s,mb4.0,baz=207,slow=8.5,SNR=6.2						
CD2	Chengdu	28.08	318	⇓iP	P	16 24 45.0	-0.5
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
FITZ	Fitzroy Crossi	29.11	180	⇓iP	P	16 24 53.0	-1.8
	comp=Z,30nm,0.6s,mb5.1						
FITZ	Fitzroy Crossi	29.11	180	P	P	16 24 53.1	-1.8
	comp=Z,48nm,0.7s,mb5.3,baz=14,slow=8.6,SNR=64						
LZH	Lanzhou	31.56	325	eP	P	16 25 16.0	-0.2

LZH				AP	pP	16 25 38.5	+0.3
LZH				XP	sP	16 25 50.5	+0.9
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,110nm,4.5s						
WRA	**Warramunga Arr**	**32.16**	**164**	P	**P**	**16 25 19.5**	**-2.1**
	comp=Z,4.2nm,0.6s,mb4.4,baz=342,slow=9.2,SNR=22						
WRA				pP	pP	16 25 41.3	-2.4
	comp=Z,4.6nm,1.0s,baz=349,slow=8.8,SNR=5.3						
WRA				PcP	PcP	16 28 07.3	-1.1
	comp=Z,4.8nm,0.5s,baz=339,slow=3.1,SNR=12						
WB2	**Warramunga Arr**	**32.16**	**164**	⇓*i*P	**P**	**16 25 19.5**	**-2.1**
WB2				*e*PCP	PcP	16 28 07.7	-0.7
WB2				*e*S	**S**	**16 30 18.8**	**-7.3**
SHL	**Shillong**	**34.79**	**299**	*e*P	**P**	**16 25 43.0**	**-1.1**
ASPA	**Alice Springs**	**35.62**	**167**	⇓*i*P	**P**	**16 25 50.3**	**-1.0**
ASPA				*e*PCP	PcP	16 28 17.1	-1.1
ASPA				*e*S	**S**	**16 31 17.6**	**-2.0**
GTA	**Gaotai**	**36.16**	**325**	P	**P**	**16 25 56.4**	**+0.7**
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
LSA	**Lhasa**	**36.83**	**305**	P	**P**	**16 26 02.3**	**+0.9**
LSA				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
LSA	**Lhasa**	**36.83**	**305**	*e*P	**P**	**16 26 01.2**	**-0.1**
	comp=Z,28nm,0.6s,mb5.4						
LSA	**Lhasa**	**36.83**	**305**	*e*P	**P**	**16 26 01.3**	**-0.1**
LSA				pmax	pmax		
	comp=Z,28nm,0.6s,mb5.4						
CTA	**Charters Tower**	**37.23**	**147**	⇓*i*P	**P**	**16 26 04.9**	**+0.1**
	comp=Z,4.5nm,0.6s,mb4.6						
CTA				*e*PCP	PcP	16 28 24.1	+1.0
CTA	**Charters Tower**	**37.23**	**147**	⇓*i*P	**P**	**16 26 04.9**	**+0.1**
CTA				*e*		16 28 24.1	
CTA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ULN	**Ulaanbaatar**	**39.68**	**341**	*e*P	**P**	**16 26 26.1**	**+1.3**
	comp=Z,7.5nm,0.5s,mb4.8						
ULN				*e*pP	pP	16 26 49.1	+1.6
ULN				*e*PcP	PcP	16 28 28.7	-1.8
ULN				*e*ScP		16 32 08.7	
ULN	**Ulaanbaatar**	**39.68**	**341**	*e*P	**P**	**16 26 26.1**	**+1.2**
ULN				*e**PP	pP	16 26 49.1	+1.6
ULN				*e*		16 28 28.7	
ULN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
SONM	**Songino Array**	**39.87**	**340**	P	**P**	**16 26 27.6**	**+1.2**
	comp=Z,3.3nm,0.5s,mb4.4,baz=154,slow=9.6,SNR=31						
SONM				pP	pP	16 26 47.8	-1.3
	comp=Z,3.9nm,0.9s,baz=150,slow=12,SNR=4.2						
SONM				PcP	PcP	16 28 30.2	-0.9
	comp=Z,3.5nm,0.7s,baz=166,slow=4.1,SNR=7.0						
SONM				ScP		16 32 07.7	
	comp=Z,2.6nm,0.8s,baz=158,slow=3.8,SNR=15						
HNR	**Honiara**	**39.96**	**120**	P	**P**	**16 26 30.2**	**+2.7**
	comp=Z,14nm,0.4s,mb5.1,baz=262,slow=7.1,SNR=3.6						
HNR	**Honiara**	**39.96**	**120**	P	**P**	**16 26 30.2**	**+2.7**
GUN	**Gumba**	**40.60**	**300**	*e*P	**P**	**16 26 32.5**	**-0.2**
	comp=Z,142nm,0.7s,mb5.9						
PKI	**Pulchoki**	**40.91**	**299**	*e*P	**P**	**16 26 34.3**	**-0.9**
	comp=Z,34nm,0.5s,mb5.5						
KKN	**Kakani**	**41.08**	**300**	*e*P	**P**	**16 26 35.7**	**-0.9**
	comp=Z,17nm,0.4s,mb5.2						
DMN	**Daman**	**41.18**	**299**	*e*P	**P**	**16 26 36.4**	**-1.0**
	comp=Z,27nm,0.4s,mb5.4						
GKN	**Gorkha**	**41.69**	**300**	*e*P	**P**	**16 26 40.3**	**-1.3**
	comp=Z,38nm,0.4s,mb5.5						
FORT	**Forrest**	**41.81**	**177**	*e*P	**P**	**16 26 42.3**	**-0.3**
	comp=Z,187nm,0.5s						
KOLN	**Koldanda**	**42.52**	**299**	*e*P	**P**	**16 26 47.5**	**-0.9**
	comp=Z,27nm,0.6s,mb5.2						
ZAK	**Zakamensk**	**43.12**	**339**	*e*P	**P**	**16 26 51.9**	**-1.1**
ZAK				*e*	pP	16 27 16.3	+0.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
KLBR	**Kellerberrin**	**43.18**	**190**	*e*P	**P**	**16 26 52.3**	**-1.5**
	comp=Z,5.7nm,0.4s,mb4.7						
NWAO	**Narrogin (SRO)**	**44.57**	**190**	P	**P**	**16 27 03.0**	**-2.0**
	comp=Z,9.2nm,0.7s,mb4.6,baz=348,slow=5.0,SNR=9.8						
STKA	**Stephens Creek**	**45.54**	**161**	P	**P**	**16 27 12.8**	**+0.1**
	comp=Z,18nm,0.8s,mb4.9,baz=334,slow=8.1,SNR=50						
STKA				pP	pP	16 27 36.0	+0.4
	comp=Z,14nm,0.8s,baz=335,slow=6.6,SNR=6.5						
STKA				sP	sP	16 27 46.3	-0.4
	comp=Z,7.8nm,0.7s,baz=325,slow=9.6,SNR=3.2						
STKA				PcP	PcP	16 28 49.0	-1.2
	comp=Z,3.6nm,0.4s,baz=352,slow=4.9,SNR=2.9						
STKA	**Stephens Creek**	**45.54**	**161**	P	**P**	**16 27 12.8**	**+0.1**
STKA				pP	pP	16 27 36.0	+0.4
STKA				sP	sP	16 27 46.3	-0.4
STKA				PcP	PcP	16 28 49.0	-1.2
WMQ	**Urumqi**	**46.00**	**322**	*e*P	**P**	**16 27 16.3**	**+0.1**
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
BOD	**Bodaibo**	**47.34**	**352**	*e*P	**P**	**16 27 27.4**	**+0.9**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.4						
ARMA	**Armidale**	**48.44**	**149**	*e*P	**P**	**16 27 37.3**	**+1.9**
MKAR	**Makanchi Array**	**50.80**	**323**	P	**P**	**16 27 52.6**	**-0.7**
	comp=Z,29nm,0.5s,mb5.6,baz=125,slow=7.9,SNR=218						
MKAR				pP	pP	16 28 15.1	-1.6
	comp=Z,7.6nm,0.8s,baz=117,slow=8.1,SNR=2.5						
MKAR				sP	sP	16 28 26.4	-1.0
	comp=Z,5.9nm,0.7s,baz=119,slow=8.2,SNR=2.3						
MKAR				PcP	PcP	16 29 07.9	-1.1
	comp=Z,11nm,0.9s,baz=103,slow=4.5,SNR=4.3						
MKAR				ScP		16 32 52.4	
	comp=Z,3.4nm,0.8s,baz=98,slow=5.7,SNR=8.6						
YAK	**Yakutsk**	**50.84**	**3**	*e*P	**P**	**16 27 54.4**	**+1.0**
	comp=Z,24nm,0.8s,mb5.3						
YAK				*e*pP	pP	16 28 18.5	+1.7
YAK	**Yakutsk**	**50.84**	**3**	*e*P	**P**	**16 27 54.4**	**+1.0**
YAK				*e**PP	pP	16 28 18.5	+1.8
YAK				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.3						
CNB	**Canberra Magne**	**51.50**	**155**	*e*P	**P**	**16 27 58.9**	**+0.1**
	comp=Z,18nm,0.8s,mb5.1						
TOO	**Toolangi**	**52.03**	**160**	*e*P	**P**	**16 28 03.2**	**+0.5**
	comp=Z,10.0nm,0.8s,mb4.9						
TOO	**Toolangi**	**52.03**	**160**	*e*P	**P**	**16 28 03.2**	**+0.5**
TOO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
ULHL	**Ulahol**	**52.75**	**315**	P	**P**	**16 28 08.1**	**+0.1**
	SNR=9.2						
KZA	**Kyzart**	**53.38**	**315**	P	**P**	**16 28 13.5**	**+0.7**
	SNR=37						
ZAL	**Zalesovo**	**53.43**	**331**	P	**P**	**16 28 12.0**	**-0.9**
	comp=Z,8.1nm,0.4s,mb5.1,baz=351,slow=5.4,SNR=23						
ZAL				pP	pP	16 28 34.6	-1.8
	comp=Z,3.0nm,0.5s,baz=359,slow=14,SNR=3.5						
TKM2	**Tokmak 2**	**53.44**	**316**	P	**P**	**16 28 13.0**	**-0.1**
	SNR=24						
KBK	**Karagaybulak**	**53.80**	**315**	P	**P**	**16 28 15.8**	**+0.1**
	SNR=45						
UCH	**Uchtor**	**53.95**	**314**	P	**P**	**16 28 17.6**	**+0.8**
	SNR=72						
CHMS	**Chumysh**	**54.05**	**315**	P	**P**	**16 28 16.9**	**-0.6**
	SNR=18						
FRU	**Bishkek**	**54.08**	**315**	*e*P	**P**	**16 28 17.2**	**-0.6**
AAK	**Ala-Archa**	**54.10**	**315**	P	**P**	**16 28 17.8**	**-0.2**
	SNR=14						
USP	**Ospenovka**	**54.31**	**316**	P	**P**	**16 28 18.9**	**-0.5**
	SNR=44						
AML	**Almayashu**	**54.49**	**314**	P	**P**	**16 28 21.1**	**+0.3**
	SNR=61						
EKS2	**Erkin-Say**	**54.61**	**315**	P	**P**	**16 28 21.6**	**0.0**
	SNR=55						
NVS	**Novosibirsk**	**54.71**	**332**	⇓*i*P	**P**	**16 28 20.5**	**-1.7**
NVS				*i*	pP	16 28 44.5	-1.3
NVS				pmax	pmax		
	comp=N,12nm,1.4s						
NVS				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.1						
NVS				pmax	pmax		
	comp=E,20nm,1.2s						
KURK	**Kurchatov**	**54.85**	**325**	*e*P	**P**	**16 28 23.0**	**-0.3**
	comp=E,127nm,0.9s,mb6.0						
KURK				*e*pP	pP	16 28 46.2	-0.7
KURK	**Kurchatov**	**54.85**	**325**	*e*P	**P**	**16 28 23.0**	**-0.3**
KURK				*e**PP	pP	16 28 46.2	-0.7
KURK				pmax	pmax		
	comp=Z,127nm,0.9s,mb6.0						
TIXI	**Tiksi**	**60.44**	**1**	*e*P	**P**	**16 28 58.6**	**-3.6**
TIXI				*e*	pP	16 29 26.6	+0.2
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
BRVK	**Borovoye**	**60.52**	**325**	*e*P	**P**	**16 29 02.1**	**-0.9**
	comp=Z,48nm,0.8s,mb5.6						
BRVK	**Borovoye**	**60.52**	**325**	*e*P	**P**	**16 29 02.1**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.6						
CHKZ	**Chkalovo**	**60.57**	**326**	*e*P	**P**	**16 29 02.2**	**-1.2**
	comp=Z,21nm,0.8s,mb5.2						
CHKZ	**Chkalovo**	**60.57**	**326**	*e*P	**P**	**16 29 02.2**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
BILL	**Bilibino**	**62.73**	**16**	⇑P	**P**	**16 29 20.0**	**+2.3**
BILL				*e*	pP	16 29 43.2	+1.3
BILL				*e*		16 29 53.4	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.6s,mb4.5						
ARU	**Arti**	**68.01**	**327**	*e*P	**P**	**16 29 50.3**	**-1.3**
	comp=Z,75nm,0.6s,mb5.7						
ARU	**Arti**	**68.01**	**327**	⇓*i*P	**P**	**16 29 50.1**	**-1.4**
ARU				*e*	pP	16 30 14.5	-1.7
ARU				*e*PPP	PPP	16 33 56.3	-5.7
ARU				*e*S	S	16 38 42.8	+1.2
ARU				*e*		16 39 39.9	
ARU				*e*SS	SS	16 43 06.8	0.0
ARU				pmax	pmax		
	comp=Z,64nm,0.7s,mb5.6						
UNV	**Unalaska Valle**	**68.11**	**36**	*e*P	**P**	**16 29 52.6**	**+0.4**
RDF	**Al-Radifah**	**74.15**	**297**	*e*P	**P**	**16 30 27.2**	**-1.7**
MIB	**Mutribah**	**74.27**	**298**	*e*P	**P**	**16 30 27.1**	**-2.5**
MIB				AMb	AMB	16 30 29.4	
	comp=Z,34nm,0.5s,mb5.3						
NAY	**Al-Naaiem**	**74.39**	**297**	*e*P	**P**	**16 30 27.8**	**-2.5**
GNI	**Garni**	**75.80**	**309**	P	**P**	**16 30 38.8**	**+0.7**
	comp=Z,6.5nm,0.6s,mb4.5,baz=53,slow=8.4,SNR=3.0						
GNI	**Garni**	**75.80**	**309**	P	**P**	**16 30 38.8**	**+0.7**
IMA2	**Indian Mountai**	**76.13**	**25**	*e*P	**P**	**16 30 41.8**	**+2.4**
IMA2				*e*pP	pP	16 31 05.6	+1.0
KIV	**Kislovodsk**	**77.13**	**313**	*e*P	**P**	**16 30 45.2**	**-0.3**
	comp=Z,25nm,0.6s,mb5.1						
KIV				*e*pP	pP	16 31 10.3	-0.3
KIV	**Kislovodsk**	**77.13**	**313**	*e*P	**P**	**16 30 45.2**	**-0.3**
KIV				*e**PP	pP	16 31 10.3	-0.3
KIV				pmax	pmax		
	comp=Z,25nm,0.6s,mb5.1						
KLMR	**Klimovskoe**	**78.33**	**330**	*d i*P	**P**	**16 30 50.7**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.0						
ILAR	**Eielson Array**	**78.96**	**26**	P	**P**	**16 30 55.2**	**+0.2**
	comp=Z,1.6nm,0.8s,mb3.9,baz=250,slow=4.2,SNR=16						
ILAR				pP	pP	16 31 19.8	-0.5
	comp=Z,2.4nm,0.8s,baz=254,slow=9.3,SNR=9.8						
OBN	**Obninsk**	**80.27**	**324**	⇓*i*P	**P**	**16 31 01.1**	**-1.2**
OBN				*e*	pP	16 31 26.6	-1.0
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.9						
APA	**Apatity**	**80.52**	**337**	⇑*i*P	**P**	**16 31 03.0**	**-0.4**
APA				*i*	pP	16 31 27.7	-1.0
APA				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.0						
ANN	**Anapa**	**80.81**	**314**	*e*P	**P**	**16 30 55.6**	**-10**
MIR	**Mirnyy**	**81.11**	**193**	*d i*P	**P**	**16 31 04.8**	**-1.7**
MIR				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.0						
JOF	**Joensuu**	**82.00**	**333**	*e*p	**P**	**16 31 10.3**	**-0.9**
ARCES	**ARCESS Array B**	**83.05**	**340**	P	**P**	**16 31 16.3**	**-0.1**
	comp=Z,7.7nm,0.5s,mb4.8,baz=82,slow=6.2,SNR=57						
ARCES				pP	pP	16 31 41.3	-0.6
	comp=Z,27nm,0.9s,baz=80,slow=7.4,SNR=8.1						
INK	**Inuvik**	**83.72**	**22**	*e*P	**P**	**16 31 21.7**	**+1.9**
	comp=Z,11nm,1.2s,mb4.6						
INK	**Inuvik**	**83.72**	**22**	*e*P	**P**	**16 31 21.7**	**+1.9**
INK				pmax	pmax		
	comp=Z,11nm,1.2s						
BR131	**Keskin Array S**	**84.32**	**309**	*e*P	**P**	**16 31 21.5**	**-2.0**
	comp=Z,4.4nm,0.6s,mb4.5						
BRTR	**Keskin Array B**	**84.32**	**309**	P	**P**	**16 31 22.4**	**-1.0**
	comp=Z,5.8nm,0.7s,mb4.5,baz=112,slow=4.2,SNR=27						
BRTR				pP	pP	16 31 48.6	-0.4
	comp=Z,2.6nm,0.7s,baz=106,slow=5.7,SNR=4.4						
KAF	**Kangasniemi**	**84.43**	**332**	*e*p	**P**	**16 31 21.6**	**-1.9**
	comp=Z,15nm,0.6s,mb5.0						
KAF	**Kangasniemi**	**84.43**	**332**	*e*P	**P**	**16 31 21.6**	**-1.9**
KAF				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.0						
FINES	**FINESS Array B**	**84.69**	**332**	P	**P**	**16 31 24.6**	**-0.2**
	comp=Z,6.1nm,0.4s,mb4.8,baz=64,slow=4.9,SNR=93						
FINES				pP	pP	16 31 49.1	-1.2
	comp=Z,7.5nm,0.7s,baz=90,slow=3.8,SNR=6.9						
FINES				PKKPbc		16 49 33.7	
	comp=Z,1.0nm,0.8s,baz=198,slow=6.0,SNR=3.6						
FINES	**FINESS Array B**	**84.69**	**332**	P	**P**	**16 31 24.6**	**-0.2**
FINES				pP	pP	16 31 49.1	-1.2
FINES				PKKPbc		16 49 33.7	
AKASG	**Malin Array Be**	**85.34**	**321**	P	**P**	**16 31 27.2**	**-1.1**
	comp=Z,18nm,0.5s,mb5.3,baz=63,slow=5.1,SNR=60						
AKASG				pP	pP	16 31 53.0	-0.9
	comp=Z,12nm,0.6s,baz=67,slow=4.7,SNR=10						
AKASG	**Malin Array Be**	**85.34**	**321**	P	**P**	**16 31 27.2**	**-1.1**
AKASG				pP	pP	16 31 53.0	-0.9
CFR	**Carcaliu**	**87.24**	**315**	⇓P	**P**	**16 31 37.6**	**-0.1**
HARR	**Harsova**	**87.50**	**315**	⇓P	**P**	**16 31 37.2**	**-1.7**
VRI	**Vrincioaia**	**88.05**	**316**	⇓P	**P**	**16 31 42.1**	**+0.6**
SUW	**Suwalki**	**88.12**	**325**	*e*P	**P**	**16 31 40.8**	**-0.9**
SUW				*e*	pP	16 32 06.9	-0.6
KMBO	**Kilima Mbogo**	**88.45**	**269**	P	**P**	**16 31 44.2**	**0.0**
	comp=Z,8.8nm,0.9s,mb4.8,baz=51,slow=7.6,SNR=29						
BURAR	**Bucovina Array**	**88.61**	**318**	⇓P	**P**	**16 31 43.8**	**-0.4**
MLR	**Muntele Rosu**	**88.67**	**316**	P	**P**	**16 31 43.3**	**-1.2**
	comp=Z,3.4nm,0.5s,mb4.6,baz=314,slow=2.1,SNR=6.2						
MLR				pP	pP	16 32 10.5	+0.2
	comp=Z,3.1nm,0.6s,baz=273,slow=20,SNR=2.2						
KWP	**Kalwaria**	**89.66**	**321**	*e*P	**P**	**16 31 48.8**	**-0.2**
KWP				*e*	pP	16 32 14.8	-0.1
KWP	**Kalwaria**	**89.66**	**321**	*e*P	**P**	**16 31 48.7**	**-0.4**
	comp=Z,18nm,1.0s,mb5.2						
KWP				*e*	pP	16 32 14.8	-0.1
KOLS	**Kolonicke sedl**	**90.14**	**320**	*e*P	**P**	**16 31 50.2**	**-1.1**
MAW	**Mawson**	**90.29**	**200**	P	**P**	**16 31 50.0**	**-1.6**
	comp=Z,1.0nm,0.4s,mb4.3,baz=80,slow=4.1,SNR=6.1						
STHS	**Stebnicka Huta**	**90.64**	**321**	*e*P	**P**	**16 31 53.5**	**-0.1**
CRVS	**Cervenica-Dubn**	**90.66**	**320**	*e*P	**P**	**16 31 53.7**	**0.0**
CRVS				*e*pP	pP	16 32 19.9	+0.3
HFS	**Hagfors**	**90.86**	**332**	P	**P**	**16 31 53.4**	**-1.0**
	comp=Z,6.3nm,0.8s,mb4.8,baz=116,slow=3.8,SNR=22						
HFS				pP	pP	16 32 18.7	-1.6
	comp=Z,4.6nm,0.8s,baz=31,slow=8.6,SNR=3.8						
VNDA	**Vanda**	**90.95**	**173**	*e*P	**P**	**16 31 54.8**	**+0.3**
	comp=Z,3.9nm,1.0s,mb4.5						
VNDA				*e*pP	pP	16 32 20.2	-0.2
VNDA	**Vanda**	**90.95**	**173**	*e*P	**P**	**16 31 54.8**	**+0.3**
VNDA				*e**PP	pP	16 32 20.2	-0.2
VNDA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OJC	**Ojcow**	**91.27**	**322**	*e*P	**P**	**16 31 56.2**	**-0.4**
KECS	**Kecovo**	**91.40**	**320**	*e*P	**P**	**16 31 56.2**	**-1.0**
KECS				*e*pP	pP	16 32 22.1	-1.1
NB2	**NORSAR Subarra**	**91.57**	**334**	P	**P**	**16 31 56.0**	**-1.7**
	comp=Z,3.7nm,0.7s,mb4.7,baz=68,slow=4.6						
NOA	**NORSAR Array B**	**91.57**	**334**	P	**P**	**16 31 56.0**	**-1.7**
	comp=Z,3.3nm,0.7s,mb4.7,baz=66,slow=4.6,SNR=14						
NOA				pP	pP	16 32 21.6	-2.0
	comp=Z,3.3nm,0.8s,baz=65,slow=4.6,SNR=5.7						
NAO	**NORSAR Subarra**	**91.84**	**334**	P	**P**	**16 31 56.0**	**-2.9**
	comp=Z,3.7nm,0.7s,mb4.7						
NAO	**NORSAR Subarra**	**91.84**	**334**	P	**P**	**16 31 56.0**	**-2.9**
NAO				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
VYHS	**Vyhne**	**92.44**	**320**	*e*pP	pP	16 32 26.2	-1.7
KSP	**Ksiaz**	**93.15**	**323**	*e*P	**P**	**16 32 04.4**	**-0.8**
YKA	**Yellowknife Ar**	**93.24**	**24**	P	**P**	**16 32 06.3**	**+1.1**
	comp=Z,1.3nm,0.6s,mb4.5,baz=304,slow=4.5,SNR=8.8						
YKA				pP	pP	16 32 31.7	+0.5
	comp=Z,1.9nm,0.8s,baz=304,slow=5.1,SNR=4.2						
YKA	**Yellowknife Ar**	**93.24**	**24**	P	**P**	**16 32 06.3**	**+1.0**
YKA				pP	pP	16 32 31.8	+0.5
VRAC	**Vranov**	**93.53**	**322**	P	**P**	**16 32 05.4**	**-1.6**
	comp=Z,4.5nm,0.6s,mb5.0,baz=103,slow=5.0,SNR=5.6						
VRAC				pP	pP	16 32 31.7	-1.2
	comp=Z,2.0nm,0.4s,baz=162,slow=1.7,SNR=3.6						
GERES	**GERESS Array B**	**95.47**	**322**	P	**P**	**16 32 14.9**	**-0.9**
	comp=Z,3.0nm,0.6s,mb4.9,baz=76,slow=4.5,SNR=28						
GERES				pP	pP	16 32 41.3	-0.4
	comp=Z,1.8nm,0.7s,baz=72,slow=4.2,SNR=7.0						
GRA1	**Grafenberg Arr**	**96.59**	**323**	*e*PKP	**P**	**16 32 20.5**	**-0.3**
GRF	**Grafenberg Arr**	**96.59**	**323**	*e*PKP	**P**	**16 32 20.5**	**-0.3**
NVAR	**Mina Array Bea**	**102.79**	**46**	PKKPbc		16 48 45.4	
	comp=Z,0.1nm,0.4s,baz=93,slow=3.8,SNR=5.0						
SNAA	**Sanae**	**112.05**	**196**		PKPdf	16 37 30.0	+5.9
SNAA	**Sanae**	**112.05**	**196**		PKPdf	16 37 41.8	+18
SNAA	**Sanae**	**112.05**	**196**		PKPdf	16 37 52.3	+28
VNA2	**Neumayer--Watz**	**113.68**	**195**	⇑*i*	PKPdf	16 37 28.8	+1.4
VNA2	**Neumayer--Watz**	**113.68**	**195**	⇑*i*	PKPdf	16 37 33.3	+5.9
VNA2	**Neumayer--Watz**	**113.68**	**195**		PKPdf	16 37 39.9	+12
VNA2	**Neumayer--Watz**	**113.68**	**195**	⇑*i*	PKPdf	16 37 56.6	+29
VNA3	**Neumayer Olymp**	**114.05**	**194**	⇑*i*	PKPdf	16 37 29.0	+0.9
VNA3	**Neumayer Olymp**	**114.05**	**194**	⇑*i*	PKPdf	16 37 32.1	+4.0
VNA3	**Neumayer Olymp**	**114.05**	**194**	⇑*i*	PKPdf	16 37 56.8	+29
TXAR	**Lajitas Array**	**117.82**	**48**	PKP	PKPdf	16 37 39.1	+2.7
	comp=Z,0.9nm,0.5s,baz=180,slow=2.5,SNR=5.3						
SADO	**Sadowa**	**120.01**	**20**	PKP	PKPdf	16 37 41.3	+1.0
	comp=Z,5.7nm,0.6s,baz=113,slow=7.7,SNR=3.2						
DBIC	**Dimbokro**	**127.46**	**287**	PKP	PKPdf	16 37 56.0	+0.5
	comp=Z,3.8nm,0.6s,baz=350,slow=2.2,SNR=9.5						
PLCA	**Paso Flores**	**147.37**	**157**	PKPbc	PKPdf	16 38 35.5	+4.5
	comp=Z,14nm,0.7s,baz=212,slow=4.4,SNR=34						
PLCA	**Paso Flores**	**147.37**	**157**	PKPbc	PKPdf	16 38 35.5	+4.5
SDV	**Santo Domingo**	**154.43**	**39**	*e*PKPdf	PKPdf	16 38 45.3	+3.1
LPAZ	**La Paz**	**165.87**	**112**	PKP	PKPdf	16 38 57.8	+2.9
	comp=Z,3.3nm,0.8s,slow=3.0,SNR=15						

NEIC ***21*** *16:58:48.6±1.0, 18.01S×175.18W, h254^{km}±10^{km}, mb4.0/3, Error ellipse: s-maj=13.3km s-min=8.7km az=142.0*

IDC ***21*** *16:58:48.6±2.1, 17.98S×175.24W, h253^{km}±22^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.5/16, mbtmp4.1/8, Error ellipse: s-maj=33.1km s-min=14.3km az=135.0*

ISC 21 16:58:47.7±1.6**, 18.0S**±0.1×**175.3W**±0.1**, h255**^{km}±16^{km}**, n19, σ0^{s}.47**/19**, mb3.7**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.26**	**40**	P	**P**	**17 00 07.2**	**-0.2**
	35nm,0.3s,baz=171,slow=2.2,SNR=51						
AFI				S	**S**	**17 01 03.8**	**-5.8**
	34nm,0.3s,baz=52,slow=20,SNR=11						
DZM	**Mont Dzumac**	**17.64**	**254**	P	**P**	**17 02 38.9**	**+0.3**
	0.2nm,0.3s,baz=104,slow=15,SNR=3.7						
URZ	**Urewera**	**21.28**	**197**	P	**P**	**17 03 15.7**	**+0.7**
	6.9nm,0.3s,mb4.6,baz=35,slow=3.9,SNR=10						
CTAO	**Charters Tower**	**36.37**	**260**	*e*P	**P**	**17 05 29.9**	**+0.3**
	16nm,1.4s,mb4.4						
STKA	**Stephens Creek**	**41.22**	**242**	P	**P**	**17 06 08.9**	**-0.6**
	0.7nm,0.5s,mb3.4,baz=89,slow=10,SNR=5.2						
STKA	**Stephens Creek**	**41.22**	**242**	*e*P	**P**	**17 06 09.9**	**+0.4**
WB2	**Warramunga Arr**	**47.53**	**259**	*e*P	**P**	**17 06 59.1**	**-0.6**
WRA	**Warramunga Arr**	**47.54**	**259**	P	**P**	**17 06 59.3**	**-0.5**
	1.5nm,0.5s,mb3.6,baz=98,slow=6.7,SNR=13						
ASPA	**Alice Springs**	**47.64**	**254**	*e*P	**P**	**17 07 00.0**	**-0.5**
GUMO	**Guam**	**50.28**	**306**	P	**P**	**17 07 21.5**	**+0.9**
QSPA	**South Pole Qui**	**72.09**	**180**	*e*P	**P**	**17 09 45.2**	**-0.2**
	1.1nm,0.6s,mb3.7						
NVAR	**Mina Array Bea**	**77.43**	**42**	P	**P**	**17 10 16.4**	**-0.1**
	0.8nm,0.8s,mb3.4,baz=213,slow=7.8,SNR=6.2						
MAW	**Mawson**	**84.79**	**199**	*e*P	**P**	**17 10 53.5**	**-0.6**
	2.7nm,1.0s,mb3.9						
ILAR	**Eielson Array**	**85.31**	**12**	P	**P**	**17 10 56.8**	**0.0**
	0.3nm,0.5s,mb3.3,baz=233,slow=5.2,SNR=6.0						
PDAR	**Pinedale Array**	**85.37**	**42**	P	**P**	**17 10 58.0**	**+0.3**
	0.4nm,0.7s,mb3.2,baz=214,slow=5.3,SNR=3.5						
SNAA	**Sanae**	**90.44**	**178**	*e*P	**P**	**17 11 20.5**	**-0.5**
VNA3	**Neumayer Olymp**	**90.47**	**175**		**P**	**17 11 21.4**	**+0.3**
VNA2	**Neumayer--Watz**	**90.94**	**176**		**P**	**17 11 23.8**	**+0.5**
GERES	**GERESS Array B**	**148.35**	**349**	PKPbc	PKPdf	17 18 04.3	+4.3
	0.2nm,0.6s,slow=2.7,SNR=4.3						

IDC ***21*** *17:09:14.9±6.5, 35.59N×71.67E, mb4.1/4, mb1 4.2/7, mb1mx3.8/22, mbtmp4.0/7, ML3.6/3, MS3.9/1, Ms1 3.9/1, ms1mx2.8/31, Error ellipse: s-maj=107.6km s-min=37.9km az=157.0*

MOS ***21*** *17:09:24.7±1.0, 36.40N×71.44E, h33^{km}, mb4.3/3, Error ellipse: s-maj=23.0km s-min=11.7km az=102.7*

NEIC ***21*** *17:09:26.8±0.7, 36.37N×71.43E, h35^{km}, mb3.4/4, Error ellipse: s-maj=16.8km s-min=5.2km az=53.0*

NNC ***21*** *17:09:39.6±5.2, 36.99N×70.97E, h152^{km}±78^{km}, mpv4.1, Error ellipse: s-maj=49.2km s-min=33.3km az=44.0*

ISC 21 17:09:32.4±0.4**, 36.34N**±0.03×**71.77E**±0.06**, h147**^{km}±8^{km}**, n56, σ1^{s}.40**/70**, mb3.8**/4**, 7C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.52**	**177**	⇓P	**P**	**17 10 14.2**	**0.0**
CEP				S	**S**	**17 10 45.0**	**-1.1**
CHCP	**Chirah Chowk**	**2.95**	**155**	P	**P**	**17 10 21.6**	**+1.9**
THW	**Thamme Wali**	**3.54**	**180**	⇑P	**P**	**17 10 27.1**	**-0.3**
SBDP	**Sheikh Budin**	**4.11**	**191**	P	**P**	**17 10 33.8**	**-1.1**
SARP	**Sargodha**	**4.47**	**170**	P	**P**	**17 10 39.2**	**-0.5**
THN	**Thein Dam**	**5.09**	**139**	*e*P	**P**	**17 10 49.8**	**+2.0**
THN				*e*x	x	17 11 49.1	
DLH	**Dalhousie**	**5.14**	**136**	*e*P	**P**	**17 10 52.0**	**+3.5**
DLH				*e*x	x	17 11 53.0	
AML	**Almayashu**	**5.97**	**14**	P	**P**	**17 10 59.5**	**-0.1**
	SNR=61						
UCH	**Uchtor**	**6.25**	**19**	P	**P**	**17 11 03.9**	**+0.5**
	SNR=9.3						
KZA	**Kyzart**	**6.33**	**24**	P	**P**	**17 11 05.2**	**+0.7**
	SNR=6.4						
SDNR	**Sundarnagar**	**6.48**	**137**	*e*P	**P**	**17 11 08.0**	**+1.5**
SDNR				*e*S	**S**	**17 12 19.2**	**-0.4**
EKS2	**Erkin-Say**	**6.50**	**13**	P	**P**	**17 11 06.5**	**-0.2**
	SNR=16						
AAK	**Ala-Archa**	**6.62**	**18**	P	**P**	**17 11 09.0**	**+0.5**
	SNR=17						
AAK	**Ala-Archa**	**6.62**	**18**	⇑P	**P**	**17 11 08.9**	**+0.4**
	4.0nm,0.3s						
AAK				⇑S	**S**	**17 12 20.9**	**-2.2**
	11nm,0.7s						
KBK	**Karagaybulak**	**6.77**	**20**	P	**P**	**17 11 11.8**	**+1.4**
	SNR=6.7						
KK31	**Karatay Array**	**6.82**	**352**	⇓P	**P**	**17 11 08.2**	**-2.8**
	12nm,0.4s,baz=183,slow=14,SNR=130						
KK31				⇑S	**S**	**17 12 18.2**	**-9.5**
	4.8nm,0.3s,baz=188,slow=25,SNR=7.3						
SMLA	**Simla**	**6.88**	**138**	*e*P	**P**	**17 11 12.7**	**+0.9**
SMLA				*e*S	**S**	**17 12 26.5**	**-2.6**
CHMS	**Chumysh**	**7.03**	**18**	P	**P**	**17 11 13.9**	**0.0**
	SNR=7.8						
TKM2	**Tokmak 2**	**7.20**	**23**	P	**P**	**17 11 16.7**	**+0.5**
	SNR=13						
KLP	**Kalpa**	**7.21**	**130**	*e*P	**P**	**17 11 17.9**	**+1.6**
KLP				AML	AML	17 12 43.5	
	comp=E,187nm,0.4s						
KLP				AML	AML	17 12 44.8	
	comp=N,220nm,0.7s						
NDI	**New Delhi**	**8.92**	**147**	*e*x	x	17 13 12.5	
KHET	**Khetri**	**8.93**	**156**	*e*P	**P**	**17 11 38.0**	**-1.1**
KHET				*e*S	**S**	**17 13 12.6**	**-5.6**
KHET				AML	AML	17 13 17.0	
	comp=N,17nm,0.6s						
KHET				AML	AML	17 13 17.4	
	comp=E,28nm,0.3s						
KUDL	**Kundal**	**9.10**	**153**	*e*P	**P**	**17 11 40.4**	**-1.0**
KUDL				*e*S	**S**	**17 13 16.4**	**-5.9**
KUDL				AML	AML	17 13 25.4	
	comp=Z,16nm,0.5s						
SONA	**Sohna**	**9.24**	**149**	*e*P	**P**	**17 11 44.6**	**+1.4**
SONA				*e*S	**S**	**17 13 20.0**	**-5.6**
SONA				AML	AML	17 13 26.5	
	comp=N,16nm,0.5s						
SONA				AML	AML	17 13 27.1	
	comp=E,16nm,0.4s						
MKAR	**Makanchi Array**	**13.07**	**34**	Pn	**P**	**17 12 30.0**	**-3.3**
	comp=E,0.1nm,0.3s,baz=194,slow=36,SNR=2.8						
KOLN	**Koldanda**	**13.17**	**127**	*e*Pn	**P**	**17 12 35.6**	**+0.9**
KOLN				*e*Sn	**S**	**17 14 57.4**	**-0.8**
	comp=E,28nm,0.8s						
GKN	**Gorkha**	**13.70**	**124**	*e*Pn	**P**	**17 12 42.0**	**+0.5**
GKN				*e*Sn	**S**	**17 15 09.0**	**-1.4**
	comp=E,49nm,0.7s						
DMN	**Daman**	**14.27**	**124**	*e*Pn	**P**	**17 12 49.0**	**+0.3**
DMN				*e*Sn	**S**	**17 15 22.7**	**-0.8**
	comp=E,66nm,1.1s						
KKN	**Kakani**	**14.27**	**123**	*e*Pn	**P**	**17 12 49.8**	**+1.1**
KKN				*e*Sn	**S**	**17 15 22.5**	**-1.1**
	comp=E,34nm,0.8s						

PKI	Pulchoki	14.50	123	*e*Pn	P	17 12 53.1	+1.5
PKI				*e*Sn	S	17 15 27.7	-1.1
	comp=E,21nm,0.7s						
GUN	Gumba	14.61	121	*e*Pn	P	17 12 54.9	+1.9
GUN				*e*Sn	S	17 15 30.0	-1.2
	comp=E,17nm,0.6s						
KURK	Kurchatov	15.19	17	*e*Pn	P	17 13 04.3	+4.2
	comp=E,3.0nm,1.0s						
AB31	Akbulak array	15.52	330	P	P	17 13 00.2	-4.1
	comp=E,1.7nm,0.4s,baz=140,slow=12,SNR=86						
AB31				⇑S	S	17 15 38.5	-13
	comp=E,1.5nm,0.6s,baz=156,slow=22,SNR=3.6						
BVAR	Borovoye Array	16.71	357	Pn	P	17 13 17.3	-1.6
	comp=E,0.2nm,0.3s,baz=146,slow=10,SNR=3.5						
BRVK	Borovoye	16.75	357	*e*Pn	P	17 13 19.1	-0.3
	comp=E,1.3nm,0.5s						
AKTK	Aktyubinsk	17.23	329	P	P	17 13 22.8	-2.5
AKTO	Aktyubinsk	17.23	329	⇑P	P	17 13 21.6	-3.6
	comp=E,1.7nm,1.0s						
AKTO				⇑S	S	17 16 22.5	-7.7
	comp=E,1.1nm,1.6s						
AKTO	Aktyubinsk	17.23	329	P	P	17 13 22.8	-2.5
	comp=E,1.4nm,0.3s,baz=133,slow=14,SNR=26						
AKTO	Aktyubinsk	17.23	329	P	P	17 13 22.8	-2.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CHKZ	Chkalovo	17.35	358	*e*Pn	P	17 13 26.0	-0.7
	comp=Z,1.0nm,0.4s						
LSA	Lhasa	17.54	107	*e*Pn	P	17 13 22.2	-6.9
ZAL	Zalesovo	19.79	23	P	P	17 13 55.6	+2.5
	comp=Z,8.2nm,0.4s,baz=264,slow=6.5,SNR=32						
ZAL	Zalesovo	19.79	23	P	P	17 13 55.6	+2.5
ZAL				pmax	pmax		
	comp=Z,8.0nm,0.4s						
NVS	Novosibirsk	20.11	20	*e*P	P	17 13 57.3	+0.9
ARU	Arti	21.98	340	*e*P	P	17 14 16.4	+1.5
	comp=Z,5.5nm,1.0s,mb3.9						
ARU	Arti	21.98	340	*e*P	P	17 14 17.3	+2.4
FINES	FINESS Array B	37.96	326	P	P	17 16 39.0	+2.0
	comp=Z,1.1nm,0.7s,mb3.6,baz=117,slow=8.5,SNR=4.7						
FINES	FINESS Array B	37.96	326	P	P	17 16 39.0	+2.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARCES	ARCESS Array B	41.52	337	P	P	17 17 08.5	+2.3
	comp=Z,2.1nm,0.7s,mb3.9,baz=108,slow=7.7,SNR=4.7						
ARCES	ARCESS Array B	41.52	337	P	P	17 17 08.5	+2.3
ARCES	ARCESS Array B	41.52	337	P	P	17 17 08.5	+2.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	NORSAR Array B	44.88	323	P	P	17 17 35.2	+1.9
	comp=Z,1.4nm,0.5s,mb3.9,baz=96,slow=7.7,SNR=9.9						
NOA	NORSAR Array B	44.88	323	P	P	17 17 35.2	+1.9
NOA	NORSAR Array B	44.88	323	P	P	17 17 35.2	+1.9
NOA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
JNU	Nakatsue	48.03	76	LR	LR	17 43 16.8	
	comp=Z,116nm,18.5s,baz=266,slow=42						
WRAB	Tennant Creek	81.39	122	*e*P	P	17 21 26.8	-7.6

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*NEIC **21** 17:30:16.3, 15.92N×97.66W, h26^{km}, mb4.6/1, MD4.0(MEX), After MEX.*

MEX 21 17:30:16.5±0.7**, 15.93N×97.66W, h26**^{km}±16^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.64	315	*i* P	Pb	17 30 27.2	-1.8
PNIG				*i* S	Sb	17 30 35.2	-2.5
VHO	Vista Hermosa	1.44	38	*i* P	Pn	17 30 38.7	-2.6
VHO				*i* S	Sn	17 30 55.4	-4.1
OXX	Oaxaca	1.45	38	*i* P	Pn	17 30 38.8	-2.6
OXX				*i* S	Sn	17 30 56.2	-3.6
HUIG	Huatulco	1.50	96	*i* P	Pn	17 30 40.0	-2.2
HUIG				*i* S	Sn	17 30 56.6	-4.4
ACX	Acapulco	2.36	294	*i* P	Pn	17 30 49.7	-4.7
CAIG	El Cayaco	2.74	294	*i* P	Pn	17 30 56.6	-3.2
CAIG				*i* S	Sn	17 31 26.7	-5.8
CMIG	Matias Romero	2.90	66	*i* P	Pn	17 30 59.0	-3.1
CMIG				*i* S	Sn	17 31 33.6	-2.9
PLIG	Platanillo	3.02	324	*i* P	Pn	17 31 00.1	-3.6
PLIG				*i* S	Sn	17 31 35.6	-3.9
PPM	Popocatepetl	3.25	344	*e*P	Pn	17 31 03.0	-4.1
PPM				*i* P		17 31 03.4	
PPM				*i* S	Sn	17 31 41.0	-4.4
FVM	French Village	22.88	15	*e*P	P	17 35 17.2	-2.0
	24nm,1.1s						

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*LDG **21** 17:34:08.7±0.1, 48.93N×7.86E, h10^{km}, Md2.4/2, Ml2.5/6, Error ellipse: s-maj=3.8km s-min=2.1km az=117.0*

*STR **21** 17:34:08.5±0.2, 48.95N×7.82E, h5^{km}±1^{km}, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*BGR **21** 17:34:08.8±0.4, 48.92N×7.82E, h10^{km}, ML1.8/3, Error ellipse: s-maj=5.6km s-min=3.3km az=68.0*

*NEIC **21** 17:34:08.7, 48.93N×7.86E, h10^{km}, ML2.5(LDG), ML2.1(STR), After LDG.*

*CSEM **21** 17:34:08.5±0.1, 48.94N×7.85E, h10^{km}, ML2.6/5, Error ellipse: s-maj=2.3km s-min=1.7km az=119.0*

ISC 21 17:34:07.2±0.4**, 48.94N**±0.02×**7.82E**±0.03**, h15**^{km}±3^{km}**, n26, σ0**^{s}**.83**/53**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LANF	Langenberg	0.04	345	Pg	Pg	17 34 10.4	+0.4
LANF				Sg	Sg	17 34 11.2	-0.6
WLS	Welschbruch	0.61	211	Pg	Pg	17 34 20.3	+0.6
WLS				Sg	Sg	17 34 29.5	+1.4
CDF	Champ du Feu	0.64	214	*e*Pn	Pn	17 34 22.9	+1.5
CDF				*e*Sg	Sg	17 34 30.9	+1.9
	43nm,0.3s						
CDF	Champ du Feu	0.64	214	*e*Pg	Pg	17 34 20.6	+0.4
CDF				*e*Pn	Pn	17 34 22.9	+1.5
CDF				*e*Sg	Sg	17 34 30.9	+1.9
CDF	Champ du Feu	0.64	214	*e*Pn	Pn	17 34 22.9	+1.5
CDF				*e*Sg	Sg	17 34 30.9	+1.9
	22nm,0.3s						
BFO	Black Forest	0.70	151	*e*Pg	Pg	17 34 22.4	+1.0
	SNR=6.4						
BFO				*e*Sg	Sg	17 34 30.6	-0.3
	SNR=11						
ECH	Echery	0.85	211	Pg	Pg	17 34 25.6	+1.3
ECH				Sg	Sg	17 34 36.6	+0.8
RUP	Ruppelstein	0.91	327	Pg	Pg	17 34 25.9	+0.4
STU	Stuttgart	0.92	100	*e*Sg	Sg	17 34 38.2	0.0
	SNR=3.3						
TOD	Tromm	0.93	44	Pg	Pg	17 34 26.4	+0.6
TOD				Sg	Sg	17 34 38.1	-0.2
MOF	Molkenrain	1.18	203	Pg	Pg	17 34 30.5	-0.4
SLE	Schleitheim	1.26	159	*e*Pn	Pn	17 34 30.9	+0.6
	SNR=2.2						
SLE				*e*Sn	Sn	17 34 46.5	-0.4
	SNR=2.7						
SLE				*e*Sg	Sg	17 34 47.9	-1.5
	SNR=2.7						
HINF	Hinteralfeld	1.30	210	*e*Pg	Pg	17 34 33.0	-0.2
HINF				*e*Sn	Sn	17 34 47.6	-0.3
HINF				*e*Sg	Sg	17 34 50.3	-0.3
	11nm,0.2s						
HINF	Hinteralfeld	1.30	210	*e*Pn	Pn	17 34 30.8	0.0
HINF				*e*Pg	Pg	17 34 33.0	-0.2
HINF				*e*Sn	Sn	17 34 47.6	-0.3
HINF				*e*Sg	Sg	17 34 50.3	-0.3
HINF	Hinteralfeld	1.30	210	*e*Pg	Pg	17 34 33.0	-0.2
HINF				*e*Sn	Sn	17 34 47.6	-0.3
HINF				*e*Sg	Sg	17 34 50.3	-0.3
	5.6nm,0.2s						
WLF	Walferdange	1.31	304	*e*Sg	Sg	17 34 51.0	0.0
	SNR=4.4						
TNS	Taunus Mts	1.34	17	*e*Sg	Sg	17 34 52.1	-0.1
	SNR=2.7						
HAU	Haudompre	1.36	227	*e*Pg	Pg	17 34 34.0	-0.4
HAU				*e*Sg	Sg	17 34 52.5	0.0
	10nm,0.2s						
HAU	Haudompre	1.36	227	*e*Pn	Pn	17 34 32.2	+0.5
HAU				*e*Pg	Pg	17 34 34.0	-0.4
HAU				*e*Sg	Sg	17 34 52.5	0.0
HAU	Haudompre	1.36	227	*e*Pg	Pg	17 34 34.0	-0.4
HAU				*e*Sg	Sg	17 34 52.5	0.0
	5.2nm,0.2s						
THEF	They Montfort	1.41	240	Pg	Pg	17 34 34.5	-1.0
THEF				Sg	Sg	17 34 54.0	-0.4
SULZ	Sulz-Cheisache	1.43	172	*e*Sg	Sg	17 34 53.7	-1.3
	SNR=1.8						
RFYF	Reffroy	1.58	259	*e*Pg	Pg	17 34 38.6	-0.3
	baz=85						
RFYF				*e*Sg	Sg	17 34 59.8	-0.3
	9.3nm,0.2s						
MEZF	Maizieres J'vi	1.89	258	*e*Sg	Sg	17 35 09.1	-1.0
	3.2nm,0.2s						
LOR	Lormes	3.14	239	*e*Pg	Pg	17 35 06.9	-3.0
LOR				*e*Sg	Sg	17 35 47.6	-4.2
	2.7nm,0.3s						
LOR	Lormes	3.14	239	*e*Pn	Pn	17 34 56.4	-0.7
LOR				*e*Pg	Pg	17 35 06.9	-3.0
LOR				*e*Sg	Sg	17 35 47.6	-4.2

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*MAN **21** 17:35:43.5, 4.83N×125.54E, h6^{km}, mb4.4, ML3.2, MS3.0*

ISC 21 17:35:42.2±0.9**, 4.9N**±0.1×**125.8E**±0.2**, h200**^{km}**, n7, σ0**^{s}**.98**/8**, mb4.7**/1**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	2.06	12	*e*P	P	17 36 20.7	-1.0
BUKP	Musuan	3.04	345	*e*P	P	17 36 34.4	+1.5
IPIL	Ipil	4.31	311	*e*P	P	17 36 49.0	+0.4
IPIL				*e*S	S	17 37 39.2	-0.7
KAKA	Kakadu	18.71	160	*e*P	P	17 40 06.9	+19
	21nm,1.4s						
FITZ	Fitzroy Crossi	22.88	180	*e*P	P	17 40 30.0	+0.5
	9.2nm,0.4s,mb4.7						
WB2	Warramunga Arr	26.09	162	*e*P	P	17 40 58.1	-1.4
ASPA	Alice Springs	29.48	165	*e*P	P	17 41 30.7	+0.7

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*IDC **21** 17:37:19.4±2.2, 34.43N×45.66E, mb3.9/6, mb1 4.0/8, mb1mx3.7/23, mbtmp3.9/8, ML3.7/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/31, Error ellipse: s-maj=35.3km s-min=24.7km az=46.0*

*THR **21** 17:37:19.7±0.6, 34.37N×45.49E, h14^{km}±8^{km}, ML3.4*

*CSEM **21** 17:37:19.7±0.1, 34.35N×45.54E, h15^{km}, mb3.8/4, Error ellipse: s-maj=3.5km s-min=2.4km az=94.0*

*MOS **21** 17:37:21.4±1.3, 34.29N×45.59E, h33^{km}, mb4.1/6, Error ellipse: s-maj=28.0km s-min=13.0km az=75.9*

*KISR **21** 17:37:23.6±1.0, 33.86N×45.01E, h33^{km}, ML4.0*

*NEIC **21** 17:37:24.3±0.5, 34.34N×45.68E, h35^{km}, mb3.9/2, MN3.6(TEH), Error ellipse: s-maj=8.8km s-min=6.1km az=208.0*

*TEH **21** 17:37:25.8, 34.13N×45.92E, h17^{km}, Mn3.6*

ISC 21 17:37:19.3±0.5**, 34.28N**±0.03×**45.62E**±0.05**, h14**^{km}**, n68, σ1**^{s}**.40**/70**, mb3.8**/9**, MS3.1**/2**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	0.76	56	Pg	Pg	17 37 34.3	-0.4
IGHG	Ghaleghazi	0.79	86	Pg	Pg	17 37 36.5	+1.2
BHD	Baghdad	1.44	226	P	x	17 37 50.0	
BHD				S	x	17 38 11.0	
BHD	Baghdad	1.44	226	*e*Pn	x	17 37 49.0	
BHD				*e*Sn	x	17 38 10.5	
IKOM	Komasi	1.58	93	Pn	Pn	17 37 50.0	+3.0
SNGE	Sanandaj	1.64	60	*e*Pg	Pg	17 37 50.6	-1.5
SNGE				*e*Sg	Sg	17 38 13.5	-0.6
SNGE	Sanandaj	1.64	60	*e*Pg	Pg	17 37 50.0	-2.2
SNGE				*e*Sg	Sg	17 38 13.0	-1.1
MSL	Mosul	2.88	315	P	x	17 38 12.0	
MSL				S	x	17 38 42.5	
MSL	Mosul	2.88	315	*e*x	x	17 38 11.0	
MSL				*i* x	x	17 38 40.0	
SHGR	Shooshtar-Gavs	3.44	128	*e*Pn	Pn	17 38 16.8	+3.2
SHGR	Shooshtar-Gavs	3.44	128	*e*Pn	Pn	17 38 16.0	+2.4
ASAO	Ashtian	3.66	85	*e*Pn	Pn	17 38 19.7	+3.0
ASAO				AML	AML	17 39 06.7	
	comp=N,52nm,0.7s						
ASAO	Ashtian	3.66	85	*e*Pn	Pn	17 38 19.0	+2.3
IRAZ	Razeghan	3.72	71	Pn	Pg	17 38 29.3	-4.3
IMHD	Mahdasht	4.38	70	Pn	Pn	17 38 28.4	+1.4
IQOM	Qom	4.54	81	Pn	Pn	17 38 30.2	+1.0
IQOM				Sn	Sn	17 39 17.9	-4.4
THKV	Tehran--Karaj	4.61	68	*e*Pn	Pn	17 38 31.7	+1.4
THKV	Tehran--Karaj	4.61	68	*e*Pn	Pn	17 38 31.0	+0.7
IPIR	Pirpir	4.69	108	Pn	Pn	17 38 31.4	+0.1
CHTH	Charan	4.80	69	*e*Pn	Pn	17 38 34.8	+1.9
CHTH	Charan	4.80	69	*e*Pn	Pn	17 38 34.0	+1.1
GRMI	Germi	4.88	21	*e*Pn	Pn	17 38 34.4	+0.3
GRMI	Germi	4.88	21	*e*Pn	Pn	17 38 34.0	-0.1
UMR	Umm Al-Rimmam	5.04	159	*e*P	Pn	17 38 38.2	+1.9
UMR				*e*S	Sn	17 39 35.3	+0.3
UMR				AML	AML	17 39 38.0	
	comp=Z,126nm,0.3s						
IKLH	Kalahroud	5.06	99	Pn	Pn	17 38 36.3	-0.2
NAY	Al-Naaiem	5.20	164	*e*P	Pn	17 38 40.4	+1.9
NAY				*e*S	Sn	17 39 37.7	-1.3
NAY				AML	AML	17 39 41.6	
	comp=Z,40nm,0.4s						
IAFJ	Afjeh	5.24	71	Pn	Pn	17 38 40.3	+1.1
IDMV	Damavand	5.43	74	Pn	Pn	17 38 42.4	+0.6
ISFB	Sefidab	5.48	87	Pn	Pn	17 38 42.5	0.0
ISFB				Sn	Sn	17 39 39.8	-6.2
RDF	Al-Radifah	5.58	162	*e*P	Pn	17 38 45.9	+1.9
RDF				*e*S	Sn	17 39 46.8	-1.8
RDF				AML	AML	17 39 50.2	
	comp=Z,120nm,0.3s						
IZEF	Zefreh	5.77	102	Pn	Pn	17 38 46.3	-0.3
IGAR	Garneh	5.88	108	Pn	Pn	17 38 45.3	-2.8
GNI	Garni	5.90	353	Pn	Pn	17 38 49.3	+0.9
	comp=Z,0.2nm,0.3s,baz=152,slow=17,SNR=2.6						
GNI				Pg	Px	17 39 03.1	
	comp=Z,0.5nm,0.3s,baz=96,slow=18,SNR=2.7						
GNI				Sn	Sn	17 39 57.3	+0.7
	comp=Z,0.2nm,0.3s,baz=204,slow=20,SNR=1.9						
GNI				Lg		17 40 20.5	
	comp=Z,0.3nm,0.3s,baz=325,slow=19,SNR=2.1						
GNI	Garni	5.90	353	P	Pn	17 38 49.3	+0.8
	comp=Z,1.0nm,0.3s						
GNI				*e*		17 39 57.3	
GNI	Garni	5.90	353	P	Pn	17 38 49.3	+0.8
GNI						17 39 57.3	
GNI				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GNI	Garni	5.90	353	Pg	Px	17 39 03.1	
IFIR	Firoozkooh	6.02	75	Pn	Pn	17 38 50.8	+0.7
IFIR				Sn	Sn	17 39 53.4	-6.1
NASN	Na'in	6.18	102	*e*Pn	Pn	17 38 54.5	+2.1
NASN				AML	AML	17 40 09.6	
	comp=N,9.6nm,0.5s						
NASN	Na'in	6.18	102	*e*Pn	Pn	17 38 54.5	+2.0
	SNR=52						
IPAR	Pars	7.70	123	Pn	Pn	17 39 11.9	-1.9
ISRV	Sarvestan	8.03	125	Pn	P	17 39 14.8	-3.6
BANOM	Banah	12.44	129	P	P	17 40 17.1	-1.7
	SNR=16						
BANOM				P		17 40 17.1	
	SNR=16						
BANOM				P		17 40 17.1	
	SNR=16						
ASHO	Ashiyiah	13.19	134	P	P	17 40 26.9	-1.9
	SNR=13						
ASHO				P		17 40 26.9	
	SNR=13						
ASHO				P		17 40 26.9	
	SNR=13						
SMDO	Samad	15.61	133	P	P	17 40 60.0	-0.5
	SNR=6.3						
SMDO				P		17 40 60.0	
	SNR=6.3						
SMDO				P		17 40 60.0	
	SNR=6.3						
AKTK	Aktyubinsk	18.52	26	P	P	17 41 35.0	-2.0
AKTO	Aktyubinsk	18.52	26	P	P	17 41 35.0	-2.0
	comp=N,0.2nm,0.3s,baz=222,slow=8.7,SNR=12						
BVAR	Borovoye Array	25.72	36	P	P	17 42 50.0	-0.5
	comp=N,2.5nm,0.7s,mb3.8,baz=239,slow=10.0,SNR=10						
BVAR	Borovoye Array	25.72	36	P	P	17 42 50.0	-0.5
	comp=N,3.0nm,0.7s,mb3.9						
BVAR	Borovoye Array	25.72	36	P	P	17 42 50.0	-0.5
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MORC	Moravsky Berou	25.77	315	P	P	17 42 53.5	+2.4
MORC	Moravsky Berou	25.77	315	P	P	17 42 53.5	+2.4
CHKZ	Chkalovo	26.22	35	*e*P	P	17 42 54.3	-0.9
	comp=Z,1.3nm,0.6s,mb3.6						
KURK	Kurchatov	29.05	45	*e*P	P	17 43 20.7	-0.2
	comp=Z,1.0nm,0.6s,mb3.7						
DAVOX	Davos	29.64	306	LR	LR	17 56 21.1	
	comp=Z,106nm,20.9s,MS3.5,baz=88,slow=39						
FINES	FINESS Array B	29.93	341	P	P	17 43 26.6	-2.1
	comp=Z,4.6nm,1.1s,mb4.1,baz=141,slow=12,SNR=3.8						
FINES	FINESS Array B	29.93	341	P	P	17 43 26.6	-2.1
FINES				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MKAR	Makanchi Array	30.27	54	P	P	17 43 30.6	-1.2
	comp=Z,0.9nm,0.8s,mb3.5,baz=243,slow=9.7,SNR=3.5						
MKAR	Makanchi Array	30.27	54	P	P	17 43 30.7	-1.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HFS	Hagfors	33.16	331	P	P	17 43 55.3	-1.7
	comp=Z,1.8nm,0.5s,mb4.2,baz=141,slow=9.5,SNR=8.9						
HFS	Hagfors	33.16	331	P	P	17 43 55.3	-1.8
HFS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZAL	Zalesovo	33.73	42	P	P	17 44 01.4	-0.7
	comp=Z,0.6nm,0.3s,mb3.9,baz=197,slow=7.9,SNR=3.6						
ZAL	Zalesovo	33.73	42	P	P	17 44 01.4	-0.7
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.4s						
NOA	NORSAR Array B	34.69	331	P	P	17 44 10.9	+0.7
	comp=Z,0.6nm,0.8s,mb3.6,baz=133,slow=9.1,SNR=2.7						
NOA	NORSAR Array B	34.69	331	P	P	17 44 10.9	+0.6
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ULN	Ulaanbaatar	47.07	54	*e*P	P	17 45 52.8	+0.6
	comp=Z,0.4nm,0.4s,mb3.7						
ULN	Ulaanbaatar	47.07	54	*e*P	P	17 45 52.8	+0.6
	comp=Z,0.4nm,0.4s,mb3.7						
FX1	Attu Island--F	81.95	29	LR	LR	18 31 38.2	
	comp=Z,4.1nm,18.4s,MS2.8,baz=129,slow=40						
FWV	Forest Hill	92.88	320	*e*P	P	17 50 33.1	+0.3

MAN 21 17:37:52.4, 14.79N×123.35E, h33^{km}**, mb4.3, ML3.2, MS2.9, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	1.24	225	⇓*e*P	P	17 38 14.0	+0.5
GQP				*e*S	S	17 38 28.8	-0.6
POLP	Polilio Island	1.36	268	*e*P	P	17 38 14.9	-0.4
POLP				*e*S	S	17 38 32.6	+0.2
PVCP	Virac	1.42	147	*e*P	P	17 38 15.8	-0.4
PVCP				*e*S	S	17 38 34.6	+0.8
AUQP	San Andres	1.60	204	*e*P	P	17 38 21.0	+2.3
AUQP				*e*S	S	17 38 43.8	+5.4
BALP	Baler	1.95	299	*e*P	P	17 38 23.0	-0.8
BALP				*e*S	S	17 38 48.7	+1.4
BOAC	Boac	1.97	228	*e*P	P	17 38 24.9	+0.9
BOAC				*e*S	S	17 38 51.8	+4.0
CAUP	Cauayan	2.59	326	*e*P	P	17 38 33.6	+0.6
APYP	Conner	3.66	327	*e*P	P	17 38 47.9	-0.3
APYP				*e*S	S	17 39 31.8	+1.0

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*NEIC **21** 17:51:11.6, 17.34N×94.59W, h161^{km}, MD3.9(MEX), After MEX.*

MEX 21 17:51:11.6±1.1**, 17.34N×94.59W, h161**^{km}±10^{km}**, MD3.9, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.37	229	*i* P	P	17 51 33.0	-1.0
CMIG				*i* S	S	17 51 47.7	-3.6
OXX	Oaxaca	2.05	263	*i* P	P	17 51 46.7	-1.6
OXX				*i* S	S	17 52 13.5	-3.1
VHO	Vista Hermosa	2.06	263	*e*P	P	17 51 46.9	-1.5
VHO				*i* S	S	17 52 13.2	-3.6
HUIG	Huatulco	2.13	223	*i* P	P	17 51 47.4	-1.9
HUIG				*i* S	S	17 52 16.2	-2.1
CCIG	Comitan	2.57	114	*i* P	P	17 51 51.4	-3.3
CCIG				*i* S	S	17 52 26.0	-1.8
PV01	Paradox Valley	24.07	332	*e*P	P	17 56 09.1	-4.3

NEIC 21 17:52:32.3±0.3**, 44.84N×111.51W, h5**^{km}**, ML3.3, MW3.5**(SLM)**, Error ellipse: s-maj=4.3km s-min=3.4km az=59.0, Hebgen Lake region, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
QLMT	Earthquake Lak	0.06	94	*e*Pg	Pg	17 52 35.1	+1.4
YMR	Madison River	0.42	113	*e*Pg	Pg	17 52 40.8	+0.1
YFT	Old Faithful	0.61	128	*e*Pg	Pg	17 52 44.2	-0.4
BOZ	Bozeman (W)	0.82	354	*e*Pg	Pg	17 52 47.4	-1.2
BOZ				*e*Sg	Sg	17 52 57.6	-1.9
LKWY	Lake	0.84	108	*e*Pg	Pg	17 52 49.1	+0.1
DLMT	Dillon	0.93	305	*e*Pg	Pg	17 52 50.4	-0.5
DLMT				*e*Sg	Sg	17 53 02.4	-1.0
MCMT	McKenzie Canyo	0.95	270	*e*Pg	Pg	17 52 49.9	-1.4
IMW	Indian Meadow	1.02	156	*e*Pg	Pg	17 52 50.5	-2.2
IMW				*e*Sg	Sg	17 53 03.9	-2.4
LOHW	Long Hollow	1.39	152	*e*Pn	Pn	17 52 57.0	-1.3
LOHW				*e*Sn	Sn	17 53 14.8	-2.3
TPAW	Teton Pass	1.40	163	*e*Pn	Pn	17 52 57.0	-1.6
TPAW				*e*Sn	Sn	17 53 13.8	-3.8
SNOW	Snow King Moun	1.48	158	*e*Pn	Pn	17 52 58.8	-0.8
REDW	Red Top Meadow	1.55	162	*e*Pn	Pn	17 52 59.7	-0.9
GCMT	Greycliff	1.61	53	*e*Pn	Pn	17 53 01.6	+0.1
GCMT				*e*Sn	Sn	17 53 22.8	-0.2
HRY	Holter Researc	1.89	353	*e*Pn	Pn	17 53 05.5	-0.1
AHID	Auburn Hatcher	2.09	172	*e*Pn	Pn	17 53 08.4	0.0
AHID				*e*Sn	Sn	17 53 34.3	-0.8
CHMT	Chamberlain Mo	2.41	330	*e*Pn	Pn	17 53 12.9	-0.1
HLID	Hailey	2.45	240	*e*Pn	Pn	17 53 13.1	-0.4
HLID				*e*Sn	Sn	17 53 44.9	+0.7
MSO	Missoula	2.62	320	*e*Pn	Pn	17 53 15.5	-0.5
MSO				*e*Pg	Pg	17 53 21.2	-3.4
HVU	Hansel Valley	3.19	197	*e*Pn	Pn	17 53 23.7	-0.4
HWUT	Hardware Ranch	3.23	181	*e*Pn	Pn	17 53 25.4	+0.8
SPUT	South Promonto	3.59	191	*e*Pn	Pn	17 53 28.6	-1.1
TCUT	Toone Canyon	3.72	179	*e*Pn	Pn	17 53 33.9	+2.4
BMO	Blue Mountains	4.12	272	*e*Pn	Pn	17 53 35.7	-1.6
BMO				*e*Pg	Pg	17 53 48.1	-6.5
LAO	LASA Array	4.14	62	*e*Pn	Pn	17 53 35.8	-1.8
NOQ	North Oquirrh	4.20	186	Pn	Pn	17 53 38.2	-0.3
DAU	Daniels Canyon	4.42	177	*e*Pn	Pn	17 53 42.6	+0.9
DUG	Dugway	4.74	192	*e*Pn	Pn	17 53 45.3	-0.8
MPU	Maple Canyon	4.82	181	*e*Pn	Pn	17 53 41.5	-5.7
MPU				*e*Pg	Pg	17 54 02.2	-6.2
NLU	North Lily Min	4.89	185	*e*Pn	Pn	17 53 46.2	-2.1
ELK	Elko	4.92	215	*e*Pn	Pn	17 53 46.8	-1.9
NEW	Newport	5.17	314	*e*Pn	Pn	17 53 50.5	-1.8
RSSD	Black Hills	5.39	95	*e*Pn	Pn	17 54 05.5	+10
TMUT	Trail Mountain	5.54	178	*e*Pn	Pn	17 53 56.5	-0.9
WVOR	Wild Horse Val	5.70	248	*e*Pn	Pn	17 54 02.5	+2.9
SRU	San Rafael	5.77	172	Pn	Pn	17 53 59.7	-0.9
DGMT	Dagmar	6.21	52	Pn	Pn	17 54 03.8	-3.0
MSU	Marysvale	6.34	185	Pn	Pn	17 54 03.8	-4.9
MVU	Marysvale	6.35	185	Pn	Pn	17 54 10.4	+1.6
SMCO	Snowmass	6.58	148	Pn	Pn	17 54 14.7	+2.6
MOD	Modoc	7.05	248	Pn	Pn	17 54 13.5	-5.1
MNV	Mina	8.10	220	Pn	P	17 54 40.4	+7.0

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*IDC **21** 17:54:48.7±0.6, 15.51S×172.74W, mb4.4/9, mb1 4.6/10, mb1mx4.4/18, mbtmp4.4/10, ML4.5/1, MS3.6/3, Ms1 3.6/3, ms1mx3.2/25, Error ellipse: s-maj=32.4km s-min=15.0km az=128.0*

*NEIC **21** 17:54:54.3±0.3, 15.53S×172.67W, h35^{km}, mb4.4/9, Error ellipse: s-maj=12.7km s-min=8.7km az=132.0*

ISC 21 17:54:50.0±4.4**, 15.44S**±0.09×**172.8W**±0.1**, h18**^{km}±31^{km}**, n49, σ0**^{s}**.79**/36**, mb4.5**/18**, MS3.8**/2**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.84	34	Pn	Pn	17 55 22.1	+0.9
	803nm,0.3s,baz=55,slow=1.1,SNR=735						
AFI				Sn	Sn	17 55 43.0	-1.3
	858nm,0.3s,baz=54,slow=22,SNR=11						
RAR	Rarotonga	13.67	117	Pn	P	17 58 01.4	-4.3
	2.3nm,0.3s,baz=270,slow=8.1,SNR=3.1						
RAR				LR	LR	18 02 10.5	
	comp=Z,200nm,20.3s,baz=291,slow=33						
RAR	Rarotonga	13.67	117	Pn	P	17 58 01.4	-4.3
RAR				LR	LR	18 02 10.5	
DZM	Mont Dzumac	20.68	248	P	P	17 59 37.2	+5.3
	7.6nm,0.8s,baz=99,slow=14,SNR=8.4						
URZ	Urewera	24.40	199	P	P	18 00 08.5	-0.2
	19nm,0.5s,mb4.8,baz=289,slow=0.7,SNR=19						

RPZ	Rata Peaks	31.35	203	P	P	18 01 11.6	-0.3
	21nm,1.0s,mb4.9,baz=29,slow=13,SNR=2.7						
CTAO	Charters Tower	39.16	257	*e*P	P	18 02 22.9	+4.1
	7.0nm,1.3s,mb4.2						
TAU	Tasmania Unive	43.65	223	*e*P	P	18 02 56.9	+1.4
	47nm,1.4s,mb5.0						
STKA	Stephens Creek	44.48	240	P	P	18 03 01.4	-1.0
	2.6nm,0.8s,mb4.0,baz=118,slow=6.9,SNR=5.5						
STKA	Stephens Creek	44.48	240	*e*P	P	18 03 01.5	-0.9
WRAB	Tennant Creek	50.35	257	*e*P	P	18 03 49.0	+0.6
	3.1nm,0.9s,mb4.3						
WRA	Warramunga Arr	50.36	257	P	P	18 03 48.1	-0.4
	0.7nm,0.4s,mb4.0,baz=92,slow=7.1,SNR=9.5						
ASPA	Alice Springs	50.61	252	*e*P	P	18 03 50.2	-0.2
GUMO	Guam	50.81	302	*e*P	P	18 03 51.0	-0.9
	125nm,1.0s,mb5.8						
SBA	Scott Base	63.25	185	*e*P	P	18 05 19.7	+0.2
	3.6nm,0.9s,mb4.5						
VNDA	Vanda	63.39	186	*e*P	P	18 05 19.2	-1.2
	2.0nm,1.2s,mb4.1						
NWAO	Narrogin (SRO)	65.07	241	*e*P	P	18 05 31.9	-0.1
NVAR	Mina Array Bea	74.00	42	P	P	18 06 26.2	-0.4
	2.4nm,0.8s,mb4.2,baz=220,slow=8.4,SNR=22						
NVAR				LR	LR	18 32 13.5	
	comp=Z,43nm,20.8s,MS3.7,baz=295,slow=30						
QSPA	South Pole Qui	74.60	180	*e*P	P	18 06 29.0	-0.4
	4.7nm,1.1s,mb4.3						
MSU	Marysvale	78.08	44	*e*P	P	18 06 51.1	+1.4
MNTX	Cornudas Mount	79.82	53	*e*P	P	18 06 59.5	+0.1
	4.9nm,1.3s,mb4.3						
LTX	Lajitas	80.19	56	*e*P	P	18 07 02.4	+1.1
	8.9nm,1.2s,mb4.6						
TXAR	Lajitas Array	80.19	56	P	P	18 07 01.1	-0.3
	3.8nm,1.0s,mb4.3,baz=217,slow=6.3,SNR=20						
CPRX	Cap Rock	81.54	52	*e*P	P	18 07 08.7	+0.3
PDAR	Pinedale Array	81.94	42	P	P	18 07 10.7	+0.4
	1.8nm,1.0s,mb4.0,baz=243,slow=3.3,SNR=11						
ILAR	Eielson Array	82.38	11	P	P	18 07 12.2	+0.2
	2.4nm,0.6s,mb4.3,baz=226,slow=6.0,SNR=38						
MAW	Mawson	87.92	198	P	P	18 07 39.9	+0.3
	2.7nm,1.0s,mb4.5,baz=150,slow=8.4,SNR=6.5						
MAW	Mawson	87.92	198	*e*P	P	18 07 39.8	+0.2
	1.7nm,0.6s,mb4.5						
VNA3	Neumayer Olymp	92.77	175		P	18 08 02.4	+0.3
VNA3	Neumayer Olymp	92.77	175		P	18 08 08.3	+6.2
VNA3	Neumayer Olymp	92.77	175		P	18 08 14.5	+12
SNAA	Sanae	92.84	177	*e*P	P	18 08 02.0	-0.4
VNA2	Neumayer--Watz	93.27	175		P	18 08 05.2	+0.8
VNA2	Neumayer--Watz	93.27	175		P	18 08 11.6	+7.2
VNA2	Neumayer--Watz	93.27	175		P	18 08 18.0	+14
ULM	Lac du Bonnet	93.63	39	LR	LR	18 42 53.9	
	comp=Z,43nm,20.7s,MS3.9,baz=354,slow=31						
BVAR	Borovoye Array	118.24	322	PKP	PKPdf	18 13 37.9	-2.3
	0.3nm,0.5s,baz=18,slow=4.7,SNR=3.3						
ARU	Arti	123.66	329	*e*PKPdf	PKPdf	18 13 44.8	-5.9
STHS	Stebnicka Huta	144.22	344	*e*PKP	PKPdf	18 14 25.8	-3.0
UPC	Upice	144.30	350	*e*PKP	PKPdf	18 14 25.3	-3.6
DPC	Dobruska-Polom	144.40	350	*e*PKP	PKPdf	18 14 25.9	-3.2
PRU	Pruhonice	145.03	352	*e*PKP	PKPdf	18 14 27.7	-2.5
KECS	Kecovo	145.27	344	*e*PKP	PKPdf	18 14 27.2	-3.5
KHC	Kasperske Hory	145.99	352	*e*PKP	PKPdf	18 14 30.9	-1.0
KHC				x	x	18 14 51.0	
KMBO	Kilima Mbogo	146.00	244	PKPbc	PKPbc	18 14 31.2	+1.1
	1.3nm,0.8s,baz=45,slow=23,SNR=5.8						
GERES	GERESS Array B	146.26	352	PKPbc	PKPbc	18 14 31.1	+1.4
	0.7nm,0.6s,slow=4.0,SNR=7.1						
BR131	Keskin Array S	146.53	321	*e*PKPdf	PKPdf	18 14 33.4	+0.2
BRTR	Keskin Array B	146.53	321	PKPbc	PKPbc	18 14 32.8	+2.2
	2.7nm,0.8s,baz=103,slow=2.8,SNR=10						
DAVOX	Davos	148.67	356	PKPbc	PKPdf	18 14 38.0	+1.6
	1.1nm,0.5s,baz=318,slow=3.4,SNR=3.8						

NIED ***21*** *18:06:00,30.00N×139.40E,h400^{km},Mw4.6 Best double couple: $M_0$1.05×10^{16} NP1:ϕ_s134°,δ89°,λ32°. NP2:ϕ_s44°, δ58°,λ179°.*

JMA ***21*** *18:06:16.8±0.2,30.02N×139.38E,h443^{km},M4.9*

BJI ***21*** *18:06:17.0,29.97N×138.97E,h421^{km},mB4.7,mb4.9*

MOS ***21*** *18:06:17.0±0.9,29.99N×138.89E,h418^{km},mb4.3/37, Error ellipse: s-maj=11.2km s-min=5.8km az=96.9*

NEIC ***21*** *18:06:18.6±0.6,30.00N×138.99E,h422^{km}±6^{km},mb4.5/26, MW4.6(NIED),Error ellipse: s-maj=6.2km s-min=5.1km az=114.0*

IDC ***21*** *18:06:20.0±1.0,29.96N×138.92E,h440^{km}±10^{km}, mb3.9/28,mb1 4.0/32,mb1mx4.0/35,mbtmp4.8/32,Error ellipse: s-maj=10.0km s-min=6.9km az=72.0*

ISC 21 18:06:16.9±0.3**,29.98N**±0.03×**139.07E**±0.04**,h420**^{km}±2^{km}**, h414**^{km}±1.9^{km}**:pP-P,n240,**σ**1**$\overset{s}{.}$**07**/259**,mb4.5**/79**,15C-16D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	3.19	11	P	P	18 07 25.7	+2.1
JHJ2				S	S	18 08 16.5	+0.4
JHJ	Hachijo jima 2	3.19	11	P	P	18 07 24.5	+0.9
	137nm,0.3s,baz=248,slow=21,SNR=52						
JHJ				S	S	18 08 15.8	-0.3
	202nm,0.3s,baz=71,slow=23,SNR=6.2						
CBIJ	Chichi jima	3.97	136	P	P	18 07 29.8	-0.7
	100nm,0.3s,baz=61,slow=2.3,SNR=113						
CBIJ				S	S	18 08 26.4	-2.0
	522nm,0.3s,baz=300,slow=22,SNR=37						
TK01	Tokai 1	3.98	342	P	P	18 07 32.7	+2.2
JHHJ	Haha-jima-NKT	4.32	140	P	P	18 07 34.1	+0.3
JHHJ				S	S	18 08 32.7	-1.5
JWZ	Kozaga	4.55	322	P	P	18 07 38.7	+2.7
JWZ				S	S	18 08 42.3	+4.2
JIM2	Oshima 3	4.74	4	P	P	18 07 37.6	-0.3
JIE	Ise	4.83	336	P	P	18 07 41.3	+2.5
JIE				S	S	18 08 47.0	+3.9
BSO1	Boso 1	4.93	19	P	P	18 07 39.0	-0.8
BSO1				S	S	18 08 44.6	-0.3
JOD2	Odawara 2	5.27	0	P	P	18 07 42.7	-0.5
JOD2				S	S	18 08 49.8	-1.2
JRY	Ryogami san	6.02	359	P	P	18 07 51.0	-0.1
JRY				S	S	18 09 03.7	-1.6
JTO	Tosashimizu	6.08	300	P	P	18 07 54.2	+2.5
MJAR	Matsushiro Arr	6.58	354	P	P	18 07 56.5	-0.8
	31nm,0.3s,baz=170,slow=9.6,SNR=188						
MJAR				S	S	18 09 15.0	-1.4
	3.8nm,0.3s,baz=143,slow=12,SNR=3.1						
MJAR	Matsushiro Arr	6.58	354	P	P	18 07 56.5	-0.8
MJAR				S	S	18 09 15.0	-1.4
MJAR	Matsushiro Arr	6.58	354	P	P	18 07 56.5	-0.8
MJAR				S	S	18 09 15.0	-1.4
MJAR				pmax	pmax		
	comp=Z,31nm,0.3s						
MJAR				smax			
	comp=E,4.0nm,0.3s						
MAJO	Matsushiro	6.58	354	*e*P	P	18 07 56.9	-0.4
	comp=E,239nm,0.6s						
MAJO				*e*S	S	18 09 14.4	-2.1
MAJO	Matsushiro	6.58	354	*e*P	P	18 07 56.9	-0.4
MAJO				*e*S	S	18 09 14.4	-2.0
MAJO				pmax	pmax		
	comp=Z,239nm,0.6s						
MAT	Matsushiro	6.58	354	P	P	18 07 56.6	-0.7
MAT				S	S	18 09 16.5	+0.1
MAT	Matsushiro	6.58	354	*e*P	P	18 07 57.0	-0.3
	comp=Z,280nm,1.0s						
MAT				*e*S	S	18 09 17.0	+0.6
MAT	Matsushiro	6.58	354	*e*P	P	18 07 57.0	-0.3
MAT				*e*S	S	18 09 17.0	+0.6
MAT				pmax	pmax		
	comp=Z,280nm,1.0s						
JHS	Saijyo	7.09	316	P	P	18 08 05.0	+2.1
JHS				S	S	18 09 29.8	+3.2
JNU	Nakatsue	7.66	296	P	P	18 08 10.6	+1.3
	comp=Z,3.3nm,0.3s,baz=85,slow=14,SNR=24						
JNU				S	S	18 09 42.3	+4.4
	baz=189,slow=29,SNR=2.4						
JSJ	Shimokoshiki	8.22	284	P	P	18 08 17.5	+1.9
JAM	Amami Oshima	8.42	262	P	P	18 08 19.6	+1.8
JMK	Ichinoseki	9.12	11	P	P	18 08 25.5	-0.4
JMK				S	S	18 10 05.4	-2.5
JOW	Kunigami	10.01	254	P	P	18 08 37.4	+1.4
	comp=Z,18nm,0.3s,baz=96,slow=7.5,SNR=30						
JKE	Kume jima 2	11.43	254	P	P	18 08 52.8	+0.6
JOT	Ohata	11.49	8	P	P	18 08 52.7	-0.1
KS15	Wonju Array Si	11.91	312	*e*P	P	18 08 57.4	-0.1
JKB	Kayabe	11.99	7	P	P	18 08 57.4	-1.0
JOSM	Okushiri--Mats	12.08	1	P	P	18 08 57.4	-2.0
ASAJ	Asahikawa	14.39	10	P	P	18 09 24.0	-0.2
	comp=Z,10.0nm,0.3s,baz=216,slow=12,SNR=52						
ASAJ	Asahikawa	14.39	10	P	P	18 09 24.0	-0.2
ASAJ				pmax	pmax		
	comp=Z,10.0nm,0.3s						
JTKR	Abashiri--Toko	14.49	14	P	P	18 09 24.9	-0.4
YUK	Yuzh-Kuril'sk	15.03	19	⇓*i*P	P	18 09 30.6	-0.3
YUK				pmax	pmax		
	comp=Z,550nm,0.5s						
YUK				pmax	pmax		
	comp=N,390nm,0.5s						
SSE	Sheshan	15.45	279	P	P	18 09 35.3	+0.1
SSE				AMB	AMB		
	comp=Z,20nm,0.7s						
SSE				AMB	AMB		
	comp=Z,50nm,4.9s						
MDJ	Mudanjiang	16.42	335	P	P	18 09 45.4	+0.5
MDJ				XP		18 11 26.1	
MDJ				S	S	18 12 38.6	+5.4
MDJ				SCS	ScS	18 20 41.9	-2.6
MDJ				AMB	AMB		
	comp=Z,20nm,0.9s						
MDJ				AMB	AMB		
	comp=Z,80nm,4.4s						
MDJ	Mudanjiang	16.42	335	*e*P	P	18 09 45.4	+0.5
	comp=Z,26nm,0.8s						
NACB	Ninganchiao	16.59	254	*e*P	P	18 09 44.9	-1.9
DL2	Dalian	16.90	306	P	P	18 09 49.0	-0.8
DL2				AMB	AMB		
	comp=Z,20nm,0.7s						
GUMO	Guam	17.17	161	P	P	18 09 53.9	+1.2
	comp=Z,13nm,0.3s,baz=186,slow=9.9,SNR=6.0						
GUMO	Guam	17.17	161	P	P	18 09 53.9	+1.2
GUMO				pmax	pmax		
	comp=Z,13nm,0.3s						
YSS	Yuzh-Sakhalins	17.19	9	*e*P	P	18 09 53.4	+0.8
	comp=Z,138nm,0.9s						
YSS	Yuzh-Sakhalins	17.19	9	*e*P	P	18 09 53.4	+0.7
YSS				pmax	pmax		
	comp=Z,138nm,0.9s						
CN2	Changchun	17.54	326	*e*P	P	18 09 57.8	+1.5
CN2				*e*XP		18 11 42.4	
CN2				*e*S	S	18 12 56.3	+2.5
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s						
KLR	Kul'dur	20.02	346	*e*P	P	18 10 21.3	+0.9
WHN	Wuhan	21.35	278	⇑P	P	18 10 33.8	+0.5
TGY	Tagaytay City	23.01	231	P	P	18 10 49.0	+0.2
	comp=Z,67nm,0.5s,mb5.3,baz=260,slow=2.4,SNR=4.7						
TGY	Tagaytay City	23.01	231	P	P	18 10 49.0	+0.2
TGY				pmax	pmax		
	comp=Z,67nm,0.5s						
HHC	Hu-ho-hao-te	24.80	303	⇓P	P	18 11 04.5	-0.3
HHC				XP		18 13 04.6	
HHC				PCP	PcP	18 14 23.8	-4.7
HHC				S	S	18 15 00.9	+4.7
HHC				SCP		18 17 23.6	
HHC				PCS		18 18 05.5	
HHC				SCS	ScS	18 21 11.3	-2.6
HHC				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.6						
HHC				AMB	AMB		
	comp=Z,150nm,7.2s						
ENH	Enshi	25.56	278	*e*P	P	18 11 10.8	-0.9
	comp=Z,34nm,0.4s,mb5.1						
XAN	Xi'an	25.83	287	P	P	18 11 13.5	-0.7
XAN				AMB	AMB		
	comp=Z,80nm,0.9s,mb5.2						
PET	Petropavlovsk	27.13	26	*e*P	P	18 11 25.9	+0.4
PET				pmax	pmax		
	comp=Z,16nm,0.5s,mb4.7						
GYA	Guiyang	28.71	271	⇑*i*P	P	18 11 38.8	-0.8
GYA				AP		18 12 52.8	
GYA				XP	sP	18 13 40.8	-2.8
GYA				PCP	PcP	18 14 38.6	+0.6
GYA				S	S	18 15 55.6	-2.6
GYA				PCS		18 18 20.9	
GYA				SCS	ScS	18 21 30.8	-0.5
GYA				AMB	AMB		
	comp=Z,100nm,0.7s,mb5.2						
GYA				AMB	AMB		
	comp=Z,90nm,2.8s,mb4.6						
LZH	Lanzhou	30.04	291	*e*P	P	18 11 50.8	-0.3
LZH				AP	pP	18 13 07.0	-0.3
LZH				XP	sP	18 13 53.5	-2.1
LZH				*e*S	S	18 16 17.8	-0.9
LZH				XS		18 18 32.3	
LZH				*e*SS	SS	18 18 45.1	-0.5
LZH				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.0						
LZH				AMB	AMB		
	comp=Z,310nm,4.6s						
ULN	Ulaanbaatar	30.35	315	*e*P	P	18 11 54.0	+0.3
	comp=Z,4.0nm,0.7s,mb3.9						
ULN	Ulaanbaatar	30.35	315	*e*P	P	18 11 54.0	+0.4
ULN				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb3.9						
CD2	Chengdu	30.38	281	⇓*i*P	P	18 11 53.8	-0.2
CD2				AMB	AMB		
	comp=Z,120nm,0.5s,mb5.5						
MA2	Magadan	30.64	12	*ce*P	P	18 11 56.2	+0.2
MA2				pmax	pmax		
	comp=Z,30nm,0.6s,mb4.8						
MA2				pmax	pmax		
	comp=N,10.0nm,0.5s						
MA2				pmax	pmax		
	comp=E,20nm,0.8s						
SONM	Songino Array	30.74	315	P	P	18 11 57.0	0.0
	comp=E,4.3nm,0.7s,mb3.9,baz=124,slow=8.1,SNR=30						
SONM				PcP	PcP	18 14 42.7	-0.4
	comp=E,1.4nm,0.7s,baz=134,slow=3.9,SNR=4.2						
SONM				ScP		18 17 43.6	
	comp=E,1.2nm,0.8s,baz=143,slow=3.6,SNR=5.4						
SONM	Songino Array	30.74	315	P	P	18 11 57.0	0.0
SONM						18 14 42.7	
SONM				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM				pmax	pmax		
	comp=E,1.0nm,0.8s						
KMI	Kunming	32.48	270	P	P	18 12 12.1	0.0
KMI				PP	PP	18 13 41.1	+4.1
KMI				XP	sP	18 14 22.3	+5.1
KMI				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.6						
YAK	Yakutsk	32.65	352	*i* P	P	18 12 12.4	-0.7
YAK				pmax	pmax		
	comp=Z,10µm,0.9s						
GTA	Gaotai	33.40	297	⇓*i*P	P	18 12 19.6	-0.1
GTA				AP	pP	18 13 36.6	-1.1
GTA				PP	PP	18 13 49.9	+3.3
GTA				XP	sP	18 14 22.8	-2.2
GTA				PCP	PcP	18 14 50.9	+0.5
GTA				S	S	18 17 10.8	+0.3
GTA				SCP		18 17 54.0	
GTA				PCS		18 18 36.3	
GTA				XS		18 19 27.4	
GTA				SS	SS	18 19 52.6	-0.9
GTA				SCS	ScS	18 21 54.3	-0.4
GTA				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.6						
GTA				AMB	AMB		
	comp=Z,150nm,8.0s						
ZAK	Zakamensk	33.64	317	*e*P	P	18 12 21.3	-0.4
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb3.9						
FX1	Attu Island--F	33.81	38	*e*P	P	18 12 25.6	+2.5
SEY	Seymchan	34.07	11	⇓*i*P	P	18 12 26.4	+1.2
KKTK	Khon Kaen	35.82	256	⇑P	P	18 12 40.0	-0.3
	comp=Z,679nm,0.6s						
CHRT	Chiangrai	36.86	263	⇓P	P	18 12 48.0	-1.0
	comp=Z,290nm,0.8s						
CHG	Chiang Mai	38.02	262	⇓P	P	18 12 58.8	+0.3
	comp=Z,77nm,0.8s,mb5.1						
NST	Nakhon Sawan	38.41	257	⇓P	P	18 13 02.0	+0.3
	comp=Z,75nm,0.9s,mb5.0						
KSM	Kuching	39.37	229	*e*P	P	18 13 11.5	+1.9
PMG	Port Moresby	39.92	168	P	P	18 13 14.2	0.0
	comp=Z,2.8nm,0.4s,mb4.0,baz=99,slow=7.6,SNR=7.9						
PMG	Port Moresby	39.92	168	P	P	18 13 14.2	+0.1
PMG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
LSA	Lhasa	41.32	282	P	P	18 13 26.8	+1.5
LSA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.1						
BILL	Bilibino	41.33	15	*e*P	P	18 13 25.4	+0.4
	comp=Z,42nm,0.9s,mb4.8						
BILL	Bilibino	41.33	15	α*i*P	P	18 13 25.6	+0.6
BILL				pmax	pmax		
	comp=Z,45nm,1.0s,mb4.8						
SHL	Shillong	41.75	276	⇓*i*P	P	18 13 29.0	+0.1
TIXI	Tiksi	42.09	355	*e*P	P	18 13 27.7	-3.3
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.2						
WMQ	Urumqi	42.69	303	⇓*i*P	P	18 13 36.4	+0.3
WMQ				AP	pP	18 14 56.5	-0.8
WMQ				PCP	PcP	18 15 20.0	+0.5
WMQ				SCP		18 18 30.0	
WMQ				*e*S	S	18 19 29.0	+0.8
WMQ				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.3						
WMQ				AMB	AMB		
	comp=Z,210nm,4.5s						
KAKA	Kakadu	42.92	190	*e*P	P	18 13 57.9	+20
	comp=Z,8.3nm,0.6s,mb4.2						
NIKO	Nikolski	44.08	43	*e*P	P	18 13 46.9	-0.1
ZAL	Zalesovo	45.53	318	P	P	18 13 58.1	-0.2
	comp=Z,4.9nm,0.7s,mb4.0,baz=21,slow=8.1,SNR=29						
ZAL				PcP	PcP	18 15 28.4	-0.7
	comp=Z,2.1nm,0.4s,baz=346,slow=4.6,SNR=6.3						
ZAL				ScP		18 18 38.5	
	comp=Z,1.2nm,0.7s,baz=333,slow=6.6,SNR=5.1						
ZAL	Zalesovo	45.53	318	P	P	18 13 58.1	-0.2
ZAL						18 15 28.5	
ZAL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZAL				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZAL				pmax	pmax		
	comp=E,1.0nm,0.7s						
GUN	Gumba	46.24	281	*e*P	P	18 14 04.8	+0.6
	comp=E,195nm,0.8s,mb5.5						
MKAR	Makanchi Array	46.54	308	P	P	18 14 05.8	-0.5
	comp=E,8.3nm,0.7s,mb4.2,baz=84,slow=9.9,SNR=64						
MKAR				PcP	PcP	18 15 30.9	-2.0
	comp=E,2.7nm,0.5s,baz=78,slow=12,SNR=10.0						
MKAR				ScP		18 18 43.0	
	comp=E,3.0nm,0.7s,baz=84,slow=4.9,SNR=9.4						
MKAR	Makanchi Array	46.54	308	P	P	18 14 05.8	-0.5
MKAR					PcP	18 15 30.9	-2.0
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MKAR				pmax	pmax		
	comp=E,3.0nm,0.7s						
NVS	Novosibirsk	46.57	319	*i* P	P	18 14 04.8	-1.6
PKI	Pulchoki	46.74	281	*e*P	P	18 14 07.9	-0.2
	comp=E,84nm,1.0s,mb5.0						
KKN	Kakani	46.79	281	*e*P	P	18 14 08.3	-0.1
	comp=E,131nm,0.9s,mb5.3						
DMN	Daman	46.98	281	*e*P	P	18 14 09.9	-0.1
	comp=E,69nm,0.8s,mb5.0						
GKN	Gorkha	47.27	282	*e*P	P	18 14 11.9	-0.2
	comp=E,123nm,1.0s,mb5.2						
BOK	Bokaro	47.49	276	*e*P	P	18 14 14.3	+0.4
BOK				AMb	AMB	18 14 15.7	
	comp=Z,55nm,1.1s,mb4.8						
KOLN	Koldanda	48.22	282	*e*P	P	18 14 19.5	+0.2
	comp=Z,146nm,0.9s,mb5.3						
KURK	Kurchatov	49.02	313	*e*P	P	18 14 24.0	-1.0
	comp=Z,17nm,0.8s,mb4.4						
KURK	Kurchatov	49.02	313	*e*P	P	18 14 24.0	-1.1
KURK				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.4						
FITZ	Fitzroy Crossi	49.52	197	⇓*i*P	P	18 14 29.4	+0.1
	comp=Z,6.5nm,0.3s,mb4.4						
WRAB	Tennant Creek	49.83	186	*e*P	P	18 14 30.8	-0.7
	comp=Z,8.4nm,0.5s,mb4.3						
WRAB	Tennant Creek	49.83	186	*e*P	P	18 14 30.8	-0.8
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.3						
WB2	Warramunga Arr	49.84	186	*e*P	P	18 14 31.0	-0.6
WRA	Warramunga Arr	49.84	186	P	P	18 14 30.4	-1.3
	comp=Z,5.2nm,0.3s,mb4.3,baz=4.5,slow=7.9,SNR=123						
WRA				PcP	PcP	18 15 44.7	-0.5
	comp=Z,1.5nm,0.3s,baz=359,slow=4.0,SNR=5.2						
WRA				S	S	18 21 04.8	-3.6
	comp=Z,0.9nm,0.6s,baz=8.7,slow=14,SNR=6.6						
WRA	Warramunga Arr	49.84	186	P	P	18 14 30.4	-1.2
WRA						18 15 44.7	
WRA				S	S	18 21 04.8	-3.5
WRA				pmax	pmax		
	comp=Z,5.0nm,0.4s						
WRA				pmax	pmax		
	comp=Z,2.0nm,0.3s						
WRA				smax			
	comp=E,1.0nm,0.6s						
CTA	Charters Tower	50.26	171	P	P	18 14 33.3	-1.4
	comp=E,3.7nm,0.9s,mb3.7,baz=16,slow=13,SNR=4.5						
CTA	Charters Tower	50.26	171	P	P	18 14 33.3	-1.4
CTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BLSP	Bilaspur	51.31	275	*e*P	P	18 14 39.7	-2.8
TKM2	Tokmak 2	51.54	303	P	P	18 14 44.2	+0.3
	SNR=15						
KSH	Kashi	51.77	299	*e*P	P	18 14 47.0	+1.3
KSH				AMB	AMB		
	comp=Z,230nm,5.8s						
KZA	Kyzart	51.91	302	P	P	18 14 47.6	+1.0
	SNR=12						
KBK	Karagaybulak	52.05	303	P	P	18 14 47.7	0.0
	SNR=24						
FRU	Bishkek	52.26	303	*e*P	P	18 14 49.0	-0.2
USP	Ospenovka	52.29	303	P	P	18 14 48.9	-0.6
	SNR=9.5						
AAK	Ala-Archa	52.38	303	P	P	18 14 49.7	-0.5
	SNR=15						
UCH	Uchtor	52.43	302	P	P	18 14 51.1	+0.7
	SNR=14						
EKS2	Erkin-Say	52.90	303	P	P	18 14 53.5	-0.4
	SNR=13						
AML	Almayashu	53.04	302	P	P	18 14 55.6	+0.6
	SNR=26						
NDI	New Delhi	53.34	285	*e*P	P	18 14 55.0	-2.3
THN	Thein Dam	53.52	290	*e*P	P	18 14 56.4	-2.2
ASPA	Alice Springs	53.57	186	*e*P	P	18 14 58.3	-0.7
CHKZ	Chkalovo	53.90	317	*e*P	P	18 14 59.4	-1.5
	comp=Z,14nm,0.8s,mb4.2						
CHKZ	Chkalovo	53.90	317	*e*P	P	18 14 59.4	-1.5
CHKZ				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.2						
BVAR	Borovoye Array	54.07	316	P	P	18 15 01.3	-0.9
	comp=Z,18nm,0.5s,mb4.6,baz=96,slow=7.4,SNR=172						
BVAR				PcP	PcP	18 16 00.3	-0.4
	comp=Z,5.8nm,0.6s,baz=90,slow=5.9,SNR=8.7						
BVAR				ScP		18 19 16.5	
	comp=Z,2.4nm,0.6s,baz=97,slow=4.4,SNR=9.3						
BVAR				S	S	18 22 00.8	-4.0
	comp=Z,1.7nm,0.8s,baz=79,slow=7.6,SNR=6.9						
BVAR	Borovoye Array	54.07	316	P	P	18 15 01.3	-0.9
BVAR						18 16 00.3	
BVAR				S	S	18 22 00.8	-4.0
BVAR				pmax	pmax		
	comp=Z,19nm,0.5s						
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BVAR				pmax	pmax		
	comp=E,2.0nm,0.6s						
BVAR				smax			
	comp=E,2.0nm,0.8s						
BRVK	Borovoye	54.13	316	*e*P	P	18 15 01.7	-0.9
	comp=E,8.9nm,0.8s,mb4.0						
BRVK				*e*PcP	PcP	18 16 00.5	-0.5
BRVK	Borovoye	54.13	316	*e*P	P	18 15 01.7	-0.9
BRVK				*e*		18 16 00.5	
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.0						
BHPL	Bhopal	54.96	279	*e*P	P	18 15 06.7	-2.2
BHPL				AMb	AMB	18 15 08.2	
	comp=Z,34nm,0.7s,mb4.7						
PMR	Palmer	55.51	33	*e*P	P	18 15 11.4	-0.8
	comp=Z,19nm,1.0s,mb4.4						
PMR	Palmer	55.51	33	*e*P	P	18 15 11.4	-0.9
PMR				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.4						
SML	Sawmill	55.89	33	*e*P	P	18 15 15.1	+0.2
COLA	College	56.13	29	*e*P	P	18 15 16.8	+0.3
	comp=Z,9.3nm,0.8s,mb4.2						
COLA	College	56.13	29	*e*P	P	18 15 16.8	+0.3
COLA				pmax	pmax		

	comp=Z,9.0nm,0.8s,mb4.2						
AJM	**Ajmer**	56.21	283	*e*P	P	18 15 15.3	-2.3
ILAR	**Eielson Array**	56.54	30	P	P	18 15 18.4	-1.0
	comp=Z,5.4nm,0.7s,mb4.0,baz=260,slow=4.7,SNR=87						
ILAR	**Eielson Array**	56.54	30	P	P	18 15 18.4	-0.9
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
THY	**Trims Highway**	57.05	31	*e*P	P	18 15 21.8	-1.1
DZM	**Mont Dzumac**	58.06	150	P	P	18 15 31.6	+1.2
	comp=Z,4.2nm,0.7s,mb3.9,baz=51,slow=7.7,SNR=8.7						
POO	**Poona**	59.86	275	*e*x	x	18 15 50.8	
POO				AMb	AMB	18 15 52.9	
	comp=Z,43nm,0.8s,mb5.0						
KAD	**Karad**	60.08	274	*e*P	P	18 15 41.7	-2.1
ARU	**Arti**	60.47	321	*e*P	P	18 15 40.9	-5.0
	comp=Z,19nm,0.6s,mb4.7						
ARU	**Arti**	60.47	321	⇓*i*P	P	18 15 45.0	-0.9
ARU				*e*		18 16 20.1	
ARU				*e*		18 17 59.8	
ARU				*e*S	S	18 23 28.3	+1.0
ARU				*e*SS	SS	18 27 33.6	-1.7
ARU				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.5						
FORT	**Forrest**	61.32	191	*e*P	P	18 15 52.0	+0.1
	comp=Z,30nm,0.5s,mb5.0						
STKA	**Stephens Creek**	61.56	178	P	P	18 15 53.5	0.0
	comp=Z,5.0nm,0.6s,mb4.3,baz=360,slow=6.9,SNR=22						
INK	**Inuvik**	61.57	25	P	P	18 15 53.0	0.0
	comp=Z,6.2nm,0.3s,mb4.5,baz=298,slow=6.2,SNR=67						
INK	**Inuvik**	61.57	25	*e*P	P	18 15 53.0	0.0
	comp=Z,15nm,0.9s,mb4.5						
INK	**Inuvik**	61.57	25	P	P	18 15 53.0	0.0
INK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AKTK	**Aktyubinsk**	62.06	314	P	P	18 15 55.5	-1.0
AKTO	**Aktyubinsk**	62.06	314	P	P	18 15 55.5	-1.0
	comp=Z,13nm,0.6s,mb4.6,baz=88,slow=7.9,SNR=49						
AKTO	**Aktyubinsk**	62.06	314	P	P	18 15 55.5	-1.0
AKTO				pmax	pmax		
	comp=Z,13nm,0.6s,mb4.6						
BBB	**Bella Bella**	68.56	41	P	P	18 16 37.7	+0.4
	comp=Z,14nm,1.1s,mb4.5,baz=315,slow=2.9,SNR=2.9						
ARCES	**ARCESS Array B**	69.92	340	P	P	18 16 44.5	-0.7
	comp=Z,3.5nm,0.4s,mb4.2,baz=80,slow=8.2,SNR=36						
ARCES	**ARCESS Array B**	69.92	340	P	P	18 16 44.6	-0.6
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
YKA	**Yellowknife Ar**	70.91	28	P	P	18 16 51.3	+0.2
	comp=Z,3.1nm,0.4s,mb4.2,baz=298,slow=6.1,SNR=20						
JOF	**Joensuu**	71.28	333	*e*p	P	18 16 52.2	-1.2
JMDO	**Jabal Madar**	71.68	286	P	P	18 16 56.4	-0.1
	SNR=5.9						
JMDO				P		18 16 56.4	
	SNR=5.9						
JMDO				P		18 16 56.4	
	SNR=5.9						
JMDO				P		18 16 56.4	
	SNR=5.9						
JMDO				P		18 16 56.4	
	SNR=5.9						
JMDO				P		18 16 56.4	
	SNR=5.9						
HOQ	**Hoqain**	71.83	287	P	P	18 16 57.5	+0.2
	SNR=7.0						
HOQ				P		18 16 57.5	
	SNR=7.0						
HOQ				P		18 16 57.5	
	SNR=7.0						
HOQ				P		18 16 57.5	
	SNR=7.0						
HOQ				P		18 16 57.5	
	SNR=7.0						
HOQ				P		18 16 57.5	
	SNR=7.0						
BSY	**Bisya**	72.28	286	P	P	18 16 60.0	+0.1
	SNR=19						
BSY				P		18 16 60.0	
	SNR=19						
BSY				P		18 16 60.0	
	SNR=19						
BSY				P		18 16 60.0	
	SNR=19						
BSY				P		18 16 60.0	
	SNR=19						
BSY				P		18 16 60.0	
	SNR=19						
ASHO	**Ashiyiah**	72.39	289	P	P	18 17 00.6	+0.1
	SNR=11						
ASHO				P		18 17 00.6	
	SNR=11						
ASHO				P		18 17 00.6	
	SNR=11						
ASHO				P		18 17 00.6	
	SNR=11						
ASHO				P		18 17 00.6	
	SNR=11						
ASHO				P		18 17 00.6	
	SNR=11						
ARQ	**Araqi**	72.58	287	P	P	18 17 02.1	+0.3
	SNR=22						
ARQ				P		18 17 02.1	
	SNR=22						
ARQ				P		18 17 02.1	
	SNR=22						
ARQ				P		18 17 02.1	
	SNR=22						
ARQ				P		18 17 02.1	
	SNR=22						
ARQ				P		18 17 02.1	
	SNR=22						
OBN	**Obninsk**	72.60	324	κ*e*P	P	18 17 00.9	-0.3
OBN				*e*		18 17 18.3	
OBN				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.5						
VRSR	**Storozhevoye**	72.97	320	*e*P	P	18 17 02.9	-0.5
VRSR				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.0						
VRSR				pmax	pmax		
	comp=N,3.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,5.0nm,1.0s						
KAF	**Kangasniemi**	73.68	333	*e*p	P	18 17 06.3	-0.9
	comp=E,4.8nm,0.6s,mb4.3						
KAF	**Kangasniemi**	73.68	333	*e*P	P	18 17 06.3	-0.9
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.3						
KIV	**Kislovodsk**	74.08	312	*e*P	P	18 17 10.3	+0.4
	comp=Z,16nm,0.8s,mb4.7						
KIV	**Kislovodsk**	74.08	312	*e*P	P	18 17 09.0	-0.9
KIV				*e*		18 20 01.0	
KIV				*e*S	S	18 26 06.3	-1.2
KIV				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.8						
FINES	**FINESS Array B**	74.15	333	P	P	18 17 09.2	-0.7
	comp=Z,3.5nm,0.4s,mb4.4,baz=69,slow=5.5,SNR=43						
FINES	**FINESS Array B**	74.15	333	P	P	18 17 09.2	-0.7
FINES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
GNI	**Garni**	74.39	307	P	P	18 17 12.1	+0.4
	comp=Z,2.8nm,0.5s,mb4.2,baz=204,slow=23,SNR=3.0						
GNI	**Garni**	74.39	307	P	P	18 17 12.1	+0.4
GNI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
EDM	**Edmonton**	76.14	36	*e*P	P	18 17 22.2	+1.0
NEW	**Newport**	76.62	42	P	P	18 17 24.9	+1.0
	comp=Z,5.0nm,0.7s,mb4.3,baz=298,slow=4.7,SNR=5.8						
NEW	**Newport**	76.62	42	P	P	18 17 24.9	+1.0
NEW				pmax	pmax		
	comp=Z,5.0nm,0.7s						
UMR	**Umm Al-Rimmam**	76.93	297	*e*P	P	18 17 25.5	-0.5
UMR				AMb	AMB	18 17 26.1	
	comp=Z,50nm,0.5s,mb5.4						
ANN	**Anapa**	77.02	314	*e*P	P	18 17 35.3	+9.1
ANN				*e**PP	PP	18 20 22.1	-4.7
ANN				*e*S	S	18 26 57.8	+19
ANN				pmax	pmax		
	comp=Z,68nm,1.2s,mb5.2						
MIB	**Mutribah**	77.11	297	*e*P	P	18 17 26.6	-0.4
MIB				AMb	AMB	18 17 27.2	
	comp=Z,81nm,0.6s,mb5.5						
KBD	**Kabd**	77.12	296	*e*P	P	18 17 26.9	-0.2
WHFO	**Wadi Hawf**	77.30	283	P	P	18 17 27.6	-0.6
	SNR=9.4						
WHFO				P		18 17 27.6	
	SNR=9.4						
WHFO				P		18 17 27.6	
	SNR=9.4						
WHFO				P		18 17 27.6	
	SNR=9.4						
WHFO				P		18 17 27.6	
	SNR=9.4						
WHFO				P		18 17 27.6	
	SNR=9.4						
RDF	**Al-Radifah**	77.34	296	*e*P	P	18 17 27.9	-0.4
RDF				AMb	AMB	18 17 28.6	
	comp=Z,72nm,0.6s,mb5.5						
NAY	**Al-Naaiem**	77.44	297	*e*P	P	18 17 28.4	-0.4
NAY				AMb	AMB	18 17 29.0	
	comp=Z,33nm,0.7s,mb5.1						
WVOR	**Wild Horse Val**	78.61	48	*e*P	P	18 17 35.7	+0.8
	comp=Z,2.7nm,0.7s,mb4.0						
WVOR	**Wild Horse Val**	78.61	48	*e*P	P	18 17 35.7	+0.9
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
AKASG	**Malin Array Be**	78.67	322	P	P	18 17 34.6	-0.3
	comp=Z,3.3nm,0.4s,mb4.4,baz=50,slow=5.3,SNR=31						
AKASG	**Malin Array Be**	78.67	322	P	P	18 17 34.7	-0.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SUW	**Suwalki**	79.76	327	*e*P	P	18 17 40.7	+0.1
SUW	**Suwalki**	79.76	327	*e*P	P	18 17 40.7	+0.1
NB2	**NORSAR Subarra**	79.91	337	P	P	18 17 40.9	-0.4
	comp=Z,7.4nm,0.8s,mb4.4,baz=44,slow=5.0						
NOA	**NORSAR Array B**	79.91	337	P	P	18 17 40.7	-0.5
	comp=Z,4.7nm,0.7s,mb4.2,baz=44,slow=5.3,SNR=17						
NOA	**NORSAR Array B**	79.91	337	P	P	18 17 40.7	-0.5
NOA	**NORSAR Array B**	79.91	337	P	P	18 17 40.7	-0.6
NOA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NAO	**NORSAR Subarra**	80.20	337	P	P	18 17 40.9	-1.9
	comp=Z,7.4nm,0.8s,mb4.4						
NAO	**NORSAR Subarra**	80.20	337	P	P	18 17 40.9	-1.9
NAO				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
NVAR	**Mina Array Bea**	80.87	51	P	P	18 17 48.7	+2.0
	comp=Z,4.1nm,0.8s,mb4.2,baz=296,slow=3.8,SNR=29						
MZLS	**Mizel**	81.50	293	P	P	18 17 50.8	+0.6
ELK	**Elko**	81.67	48	P	P	18 17 52.3	+1.5
	comp=Z,1.7nm,0.6s,mb4.0,baz=284,slow=5.5,SNR=12						
ELK	**Elko**	81.67	48	*e*P	P	18 17 52.8	+2.0
	comp=Z,2.8nm,0.9s,mb4.0						
ELK	**Elko**	81.67	48	*e*P	P	18 17 52.8	+2.0
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BR131	**Keskin Array S**	82.04	311	*e*P	P	18 17 53.4	+0.7
	comp=Z,10nm,0.8s,mb4.6						
BRTR	**Keskin Array B**	82.04	311	P	P	18 17 53.2	+0.5
	comp=Z,13nm,0.9s,mb4.7,baz=94,slow=3.9,SNR=37						
BRTR	**Keskin Array B**	82.04	311	P	P	18 17 53.3	+0.6
BRTR				pmax	pmax		
	comp=Z,13nm,0.9s						
CFR	**Carcaliu**	82.40	318	⇑P	P	18 17 54.2	-0.2
HILS	**Ha'il**	82.55	297	P	P	18 17 56.2	+0.7
BURAR	**Bucovina Array**	82.60	321	⇑P	P	18 17 56.6	+1.2
TIRR	**Tirgusor**	82.66	317	⇑P	P	18 17 52.6	-3.1
KWP	**Kalwaria**	82.69	324	*e*P	P	18 17 56.3	+0.5
HARR	**Harsova**	82.80	318	⇓P	P	18 17 56.3	-0.2
VRI	**Vrincioaia**	82.81	319	⇑P	P	18 17 58.3	+1.8
TPNV	**Topopah Spring**	83.03	51	*e*P	P	18 17 59.6	+1.8
	comp=Z,11nm,0.8s,mb4.6						
TPNV	**Topopah Spring**	83.03	51	*e*P	P	18 17 59.6	+1.8
TPNV				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
AFFS	**'Afif**	83.30	294	P	P	18 17 59.7	+0.3
HWUT	**Hardware Ranch**	83.51	45	*e*P	P	18 18 01.7	+1.6
	comp=Z,8.9nm,0.9s,mb4.5						
DUG	**Dugway**	83.52	47	*e*P	P	18 18 02.1	+1.9
	comp=Z,6.2nm,0.9s,mb4.3						
DUG	**Dugway**	83.52	47	*e*P	P	18 18 02.1	+1.9
DUG				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
KAMS	**Al Khamasin**	83.81	290	P	P	18 18 02.0	-0.1
VOIR		84.01	320	⇓P	P	18 18 01.8	-0.7
PDAR	**Pinedale Array**	84.06	44	P	P	18 18 03.4	+0.6
	comp=Z,1.0nm,0.6s,mb3.7,slow=1.5,SNR=7.8						
DAU	**Daniels Canyon**	84.38	46	*e*P	P	18 18 07.0	+2.6
DRGR		84.46	322	⇑P	P	18 18 05.4	+0.7
NEN	**Nelson**	84.69	52	*e*P	P	18 18 08.1	+2.1
MSU	**Marysvale**	84.87	48	*e*P	P	18 18 08.9	+2.0
KSP	**Ksiaz**	85.03	328	*e*P	P	18 18 07.4	+0.1
TATS	**Tathlith**	85.09	290	P	P	18 18 08.1	-0.2
DJNS	**Zahran al Janu**	85.95	288	P	P	18 18 13.6	+1.1
BLJS	**Baljurashi**	86.45	291	P	P	18 18 15.1	+0.2
KHC	**Kasperske Hory**	87.48	328	*e*P	P	18 18 19.0	-0.1
KHC	**Kasperske Hory**	87.48	328	*e*P	P	18 18 14.4	-4.7
GERES	**GERESS Array B**	87.62	327	P	P	18 18 18.9	-0.9
	comp=Z,1.4nm,0.5s,mb3.9,baz=38,slow=5.9,SNR=14						
GERES	**GERESS Array B**	87.62	327	P	P	18 18 18.9	-0.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DAVOX	**Davos**	90.89	328	P	P	18 18 34.8	-0.2
	comp=Z,3.5nm,0.6s,mb4.4,baz=54,slow=5.2,SNR=4.3						
TXAR	**Lajitas Array**	96.02	51	P	P	18 18 59.9	+0.9
	comp=Z,0.9nm,0.7s,mb4.0,baz=312,slow=4.8,SNR=7.7						
TXAR	**Lajitas Array**	96.02	51	P	P	18 18 59.9	+0.9
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LSZ	**Lusaka**	115.38	266	PKP	PKPdf	18 24 12.0	+2.0
	baz=119,slow=1.5						
MATP	**Matopo**	117.28	261	PKP	PKPdf	18 24 14.1	+0.5
	comp=Z,0.8nm,0.4s,baz=93,slow=15,SNR=6.5						
BOSA	**Boshof**	123.01	254	PKP	PKPdf	18 24 26.0	+1.5
	comp=Z,0.6nm,0.6s,baz=131,slow=4.8,SNR=3.6						
BOSA	**Boshof**	123.01	254	PKIKP	PKPdf	18 24 26.0	+1.5
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DBIC	**Dimbokro**	129.73	310	PKP	PKPdf	18 24 39.1	+1.2
	comp=Z,1.3nm,0.5s,baz=58,slow=2.4,SNR=4.3						
DBIC	**Dimbokro**	129.73	310	PKIKP	PKPdf	18 24 39.1	+1.2
DBIC				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VNA2	**Neumayer--Watz**	135.01	195	⇑*i*	PKPdf	18 24 48.8	+2.6
VNA2	**Neumayer--Watz**	135.01	195	⇑*i*	PKPdf	18 24 50.9	+4.7
VNA3	**Neumayer Olymp**	135.26	194	⇑*i*	PKPdf	18 24 49.1	+2.4
VNA3	**Neumayer Olymp**	135.26	194	⇑*i*	PKPdf	18 24 50.9	+4.2
LPAZ	**La Paz**	151.61	67	PKPbc	PKPdf	18 25 26.9	+11
	comp=Z,0.9nm,0.7s,baz=2.6,slow=4.6,SNR=4.6						
LPAZ	**La Paz**	151.61	67	PKIKP	PKPdf	18 25 26.9	+11
LPAZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						

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*IDC **21** 18:06:50.8±1.8, 17.81S×178.38W, h460^{km}±23^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.3/16, mbtmp4.1/7, Error ellipse: s-maj=71.4km s-min=13.1km az=151.0*

ISC 21 18:06:50.3±1.3**, 17.7S**±0.6×**178.5W**±0.3**, h464**^{km}±20^{km}**, n11, σ0^{s}.69**/10**, mb3.6**/5**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	7.46	61	P	P	18 08 42.4	+1.1
	3.3nm,0.3s,baz=280,slow=0.7,SNR=5.0						
AFI				S	S	18 10 08.3	-0.9
	3.9nm,0.3s,baz=39,slow=22,SNR=5.0						
DZM	**Mont Dzumac**	14.85	250	P	P	18 10 00.8	+0.3
	0.2nm,0.3s,baz=62,slow=17,SNR=3.3						
CTA	**Charters Tower**	33.43	260	⇓*i*P	P	18 12 51.5	+1.0
	4.9nm,0.8s,mb4.0						
CTA	**Charters Tower**	33.43	260	P	P	18 12 51.2	+0.7
	2.5nm,0.3s,mb4.0,baz=95,slow=9.3,SNR=14						
STKA	**Stephens Creek**	38.69	241	P	P	18 13 33.7	-0.4
	1.9nm,0.5s,mb3.8,baz=74,slow=9.1,SNR=12						
WRA	**Warramunga Arr**	44.62	259	P	P	18 14 21.0	-0.8
	0.8nm,0.3s,mb3.6,baz=97,slow=7.7,SNR=43						
ASPA	**Alice Springs**	44.80	254	*e*P	P	18 14 22.6	-0.5
ILAR	**Eielson Array**	85.69	13	P	P	18 18 39.5	0.0
	0.4nm,0.4s,mb3.4,baz=226,slow=4.9,SNR=8.2						
TXAR	**Lajitas Array**	85.93	58	P	P	18 18 41.9	+0.4
	0.6nm,0.6s,mb3.4,baz=225,slow=7.1,SNR=7.5						
GERES	**GERESS Array B**	147.39	345	PKPbc	PKPdf	18 25 41.4	+4.0
	0.5nm,0.6s,baz=27,slow=3.0,SNR=4.9						
ESDC	**Sonseca Array**	157.58	11	PKPab	PKPab	18 26 29.9	+0.5
	0.5nm,0.4s,baz=358,slow=12,SNR=4.1						

CASC 21 18:16:22.2±2.7**, 10.54N**×**86.95W, h17**^{km}±11^{km}**, MD3.7, ML3.5, 7C-1D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSNN	**San Juan del S**	1.31	56	⇑*e*P	Pn	18 16 46.2	+0.3
SSNN				*e*S	Sb	18 17 05.8	+3.5
APON	**Apoyo**	1.62	32	*e*P	Pn	18 16 49.6	-0.7
MADN	**Villa Maderas**	1.64	58	⇑*e*P	Pn	18 16 51.2	+0.6
TICN	**Ticuantepe**	1.64	25	*e*P	Pn	18 16 49.9	-0.8
TICN				*e*S	Sn	18 17 12.4	+1.0
CONN	**Concepcion**	1.65	52	⇑*e*P	Pn	18 16 51.1	+0.3
COPN	**Copaltepe**	1.66	12	⇓*e*P	Pn	18 16 50.3	-0.7
COPN				*e*S	Sn	18 17 11.3	-0.7
LIM1	**Limonal**	1.68	85	*i* P	Pn	18 16 50.2	-0.9
LIM1				*i* S	Sn	18 17 12.8	+0.4
XAVN	**Gruta Xavier**	1.71	21	*e*P	Pn	18 16 51.0	-0.6
MGAN	**Managua**	1.74	23	*e*S	Sn	18 17 14.0	+0.1
MGAN				*i*		18 17 14.8	
	comp=E,637nm,0.4s						
WILN	**Americas 2**	1.77	25	*e*S	Sn	18 17 15.0	+0.2
LEON	**Leon**	1.86	2	⇑*e*P	Pn	18 16 52.9	-0.9
LEON				*e*S	Sn	18 17 16.2	-0.9
MOMJ	**Momotombo**	1.90	12	*e*P	Pn	18 16 53.1	-1.2
MIRN	**Miramar**	1.90	7	*e*P	Pn	18 16 53.3	-1.0
MIRN				*e*S	Sn	18 17 18.3	+0.3
CNGN	**Cerro Negro**	1.96	7	*e*P	Pn	18 16 53.1	-2.1
TEL3	**Telica 3**	2.02	3	⇑*e*P	Pn	18 16 55.0	-1.1
TELN	**Telica**	2.05	3	*e*P	Pn	18 16 56.4	-0.1
CGA2	**Cerro Gallo 2**	2.50	102	*e*P	Pn	18 17 02.9	-0.1
CGA2				*e*S	Sn	18 17 32.9	-0.5
PRS1	**Puriscal**	2.66	102	*e*P	Pn	18 17 05.3	+0.1
PRS1				*e*S	Sn	18 17 35.1	-2.2
CNCH	**Conchagua**	2.85	342	⇑*e*P	Pn	18 17 11.3	+3.4
CNCH				*e*S	Sn	18 17 48.9	+6.7
LCR2	**La Lucha 2**	3.01	105	*e*P	Pn	18 17 10.3	+0.1
LCR2				*e*S	Sn	18 17 44.5	-1.8
ICR	**Volcan Irazu**	3.12	100	*e*P	Pn	18 17 13.4	+1.6
ICR				*e*S	Sn	18 17 50.7	+1.6
BLLM	**Bellamira**	3.14	337	⇑*e*P	Pn	18 17 14.7	+2.6
BLLM				*e*S	Sn	18 17 51.2	+1.6
URSC	**Urasca**	3.20	102	*e*P	Pn	18 17 13.4	+0.5
BUS	**Buena Vista**	3.30	107	*e*P	Pn	18 17 14.0	-0.2
SNVI	**San Vicente**	3.56	329	*e*P	Pn	18 17 20.3	+2.3
SNVI				*e*S	Sn	18 18 02.5	+2.2
LCBS	**La Ceiba**	3.67	328	*e*P	Pn	18 17 22.1	+2.5
LCBS				*e*S	Sn	18 18 06.3	+3.3
LFRS	**El Faro**	3.69	326	*e*P	Pn	18 17 21.4	+1.5

MAN 21 18:41:33.1, 9.19N×**125.58E, h5**^{km}**, mb4.7, ML3.6, MS3.6, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	0.22	168	*e*P	Pg	18 41 38.2	+0.6
BUTP				*e*S	Sg	18 41 43.3	+2.7
SCPH	**Surigao**	0.60	352	*e*P	Pg	18 41 44.9	-0.2
SCPH				*e*S	Sg	18 41 55.0	+2.0
CGP	**Cagayan de Oro**	1.13	230	⇓*e*P	Pb	18 41 53.9	-0.9
CGP				*i* S	Sb	18 42 09.8	+0.2
MSLP	**Maasin**	1.18	323	*e*P	Pb	18 41 54.2	-1.3
MSLP				*e*S	Sb	18 42 10.7	-0.3
BIPH	**Bislig**	1.26	142	⇑*i*P	Pb	18 41 54.1	-2.9
BIPH				*i* S	Sb	18 42 11.3	-2.1
BUKP	**Musuan**	1.39	201	*e*P	Pb	18 41 59.1	-0.2
BUKP				*e*S	Sb	18 42 19.8	+2.6
TBP	**Tagbilaran**	1.76	287	*e*P	Pn	18 42 03.7	-0.8
TBP				*e*S	Sn	18 42 28.2	+0.6
LLP	**Lapu-Lapu**	1.94	305	⇑*e*P	Pn	18 42 05.7	-1.4
LLP				*e*S	Sn	18 42 30.3	-1.9
PLP	**Palo**	2.05	343	*e*P	Pn	18 42 08.9	+0.2
PLP				*i* S	Sn	18 42 36.6	+1.7
KCP	**Kidapawan**	2.22	193	⇓*e*P	Pn	18 42 13.8	+2.8
KCP				*e*S	Sn	18 42 43.9	+4.8
DCPH	**Dipolog City**	2.28	255	⇑*e*P	Pn	18 42 10.5	-1.4
DCPH				*e*S	Sn	18 42 35.3	-5.4
SNPH	**Sibulan**	2.31	274	*e*P	Pn	18 42 12.5	+0.1
MATI	**Mati**	2.33	163	*e*P	Pn	18 42 12.0	-0.6
MATI				*e*S	Sn	18 42 45.4	+3.4
BESP	**Borongan**	2.40	357	*e*P	Pn	18 42 14.1	+0.4
BESP				*e*S	Sn	18 42 46.9	+3.0
PAGZ	**Pagadian**	2.54	239	*e*P	Pn	18 42 15.6	-0.1
PAGZ				*e*S	Sn	18 42 48.2	+0.7
GUIM	**Jordan**	3.27	296	*e*P	Pn	18 42 23.1	-2.9
IPIL	**Ipil**	3.28	245	*e*P	Pn	18 42 25.5	-0.7
IPIL				*e*S	Sn	18 43 04.8	-1.3
CNP	**Catarman**	3.42	345	*e*P	Pn	18 42 27.6	-0.7
CNP				*e*S	Sn	18 43 15.5	+5.8
PVCP	**Virac**	4.60	342	*e*P	Pn	18 42 44.8	-0.2
PVCP				*e*S	Sn	18 43 43.9	+4.4
CUYO	**Cuyo Island**	4.78	291	*e*P	Pn	18 42 47.9	+0.4
ENPP	**El Nido**	6.38	289	*e*P	Pn	18 43 07.6	-2.5

WEL 21 19:07:02.2±0.3**, 35.83S**×**178.21E, h239**^{km}±4^{km}**, ML3.9**/9**, Error ellipse: s-maj=8.4km s-min=6.2km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	1.73	177	PN	P	19 07 41.6	-0.1
MXZ				SN	S	19 08 11.4	-0.8
PUZ	**Puketiti**	2.24	179	PN	P	19 07 45.8	-0.5
PUZ				SN	S	19 08 19.9	-0.7
MWZ	**Matawai**	2.56	192	PN	P	19 07 49.7	0.0
MWZ				SN	S	19 08 25.9	-0.5
URZ	**Urewera**	2.58	200	PN	P	19 07 49.5	-0.4
URZ				SN	S	19 08 26.7	-0.1
KNZ	**Kokohu**	3.21	187	PN	P	19 07 56.3	-0.5
BKZ	**Black Stump Fm**	3.60	202	PN	P	19 08 00.8	-0.4
WNVZ	**Wahianoa**	4.06	210	PN	P	19 08 06.3	-0.4
PXZ	**Pawanui**	4.33	194	PN	P	19 08 09.1	-0.9
TSZ	**Takapari Road**	4.58	202	PN	P	19 08 11.5	-1.5
MRZ	**Mangatainoka R**	5.25	202	PN	P	19 08 19.2	-2.0
VNA3	**Neumayer Olymp**	73.08	177		P	19 18 31.2	+24
VNA2	**Neumayer--Watz**	73.47	178		P	19 18 33.9	+24
VNA1	**Neumayer--Stat**	73.72	178		P	19 18 32.3	+21

NNC 21 19:08:34.0±7.5**, 36.60N**×**69.86E, h115**^{km}±177^{km}**, mpv3.2, 4C-2D, Error ellipse: s-maj=63.3km s-min=55.5km az=52.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	6.52	4	⇑P	P	19 10 08.1	-0.6
	0.7nm,0.3s,baz=181,slow=13,SNR=28						
KK31				⇓S	S	19 11 21.5	-0.5
	2.5nm,0.6s,baz=185,slow=20,SNR=10						
AAK	**Ala-Archa**	7.01	29	⇑P	P	19 10 12.8	-2.6
	1.1nm,0.5s						
AAK				⇓S	S	19 11 32.7	-1.3
	3.5nm,0.8s						
AB31	**Akbulak array**	14.57	333	⇑P	P	19 11 56.1	+0.8
	0.7nm,0.5s,baz=150,slow=13,SNR=27						
AB31				⇑S	S	19 14 31.2	-2.9
	0.8nm,0.8s						

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*IDC **21** 19:28:37.3±1.7, 43.41N×105.24W, mb4.4/1, mb1 3.9/5, mb1mx3.6/23, mbtmp3.7/5, ML3.5/3, Error ellipse: s-maj=38.5km s-min=7.1km az=151.0*

*NEIC **21** 19:28:39.5±0.3, 43.75N×105.24W, ML3.3, Error ellipse: s-maj=4.8km s-min=3.6km az=121.0, Suspected Mining explosion.*

NEIC 65 km [40 miles] SSE of Gillette.

ISC 21 19:28:37.8±0.5**, 43.75N**±0.04×**105.25W**±0.06**, n41, σ0^{s}.84**/44**, mb4.6**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	0.95	66	*e*P	Pg	19 28 58.2	+1.4
PHWY	**Pilot Hill**	2.45	184	*e*P	Pn	19 29 19.9	+0.2
RWWY	**Rawlins**	2.51	216	*e*P	Pn	19 29 21.8	+1.3
LAO	**LASA Array**	3.02	347	*e*P	Pn	19 29 28.5	+0.7
BW06	**Boulder Array**	3.30	254	*e*P	Pn	19 29 32.2	+0.4
PDAR	**Pinedale Array**	3.30	254	Pn	Pn	19 29 32.5	+0.8
	3.7nm,0.3s,baz=71,slow=15,SNR=105						
PDAR				Pg	Pg	19 29 39.0	-4.7
	9.8nm,0.3s,baz=79,slow=18,SNR=55						
PDAR				Lg		19 30 18.1	
	15nm,0.3s,baz=78,slow=34,SNR=9.8						
LKWY	**Lake**	3.80	284	*e*P	Pn	19 29 39.1	+0.3
LOHW	**Long Hollow**	3.89	270	*e*P	Pn	19 29 40.7	+0.6
ISCO	**Idaho Springs**	3.95	184	*e*P	Pn	19 29 41.2	+0.1
MOOW	**Moose Ponds**	3.98	272	*e*P	Pn	19 29 42.1	+0.7
SNOW	**Snow King Moun**	4.01	268	*e*P	Pn	19 29 42.0	+0.2
YFT	**Old Faithful**	4.08	282	P	Pn	19 29 43.8	+0.8

REDW	Red Top Meadow	4.09	267	*e*P	Pn	19 29 43.7	+0.7
IMW	Indian Meadow	4.12	274	*e*P	Pn	19 29 44.3	+0.9
TPAW	Teton Pass	4.15	268	*e*P	Pn	19 29 44.5	+0.7
YMR	Madison River	4.21	285	P	Pn	19 29 44.7	-0.1
QLMT	Earthquake Lak	4.57	286	*e*P	Pn	19 29 49.4	-0.4
DGMT	Dagmar	4.78	8	*e*P	Pn	19 29 52.3	-0.5
BOZ	Bozeman (W)	4.93	295	*e*P	Pn	19 29 54.3	-0.7
HWUT	Hardware Ranch	5.12	247	*e*P	Pn	19 29 56.6	-1.0
TCUT	Toone Canyon	5.26	242	*e*P	Pn	19 29 58.8	-0.8
HRY	Holter Researc	5.51	305	*e*P	Pn	19 30 03.0	-0.2
MCMT	McKenzie Canyo	5.56	284	P	Pn	19 30 03.7	-0.2
DAU	Daniels Canyon	5.57	235	*e*P	Pn	19 30 04.7	+0.6
RW3	Ridgway	5.79	199	P	Pn	19 30 07.8	+0.7
SPUT	South Promonto	5.85	248	*e*P	Pn	19 30 08.1	+0.2
HVU	Hansel Valley	5.88	253	*e*P	Pn	19 30 06.8	-1.5
MPU	Maple Canyon	6.05	234	P	Pn	19 30 10.8	+0.1
PV10	Paradox Valley	6.08	209	*e*P	Pn	19 30 11.6	+0.4
SRU	San Rafael	6.09	222	*e*P	Pn	19 30 10.2	-1.2
PV01	Paradox Valley	6.14	205	*e*P	Pn	19 30 12.2	+0.1
TMUT	Trail Mountain	6.30	227	*e*P	Pn	19 30 14.1	-0.3
CHMT	Chamberlain Mo	6.47	302	*e*P	Pn	19 30 16.5	-0.2
DUG	Dugway	6.66	240	*e*P	Pn	19 30 18.3	-1.1
MSU	Marysvale	7.39	227	*e*P	Pn	19 30 29.0	-0.6
MVU	Marysvale	7.42	227	P	Pn	19 30 29.9	-0.1
ULM	Lac du Bonnet	9.12	41	Pn	P	19 30 50.8	-3.0
	2.3nm,0.3s,baz=235,slow=11,SNR=12						
ULM				Pg	P	19 31 25.7	+32
	1.1nm,0.3s,baz=232,slow=14,SNR=5.0						
ULM				Sn	Sn	19 32 34.5	-4.0
	0.3nm,0.3s,baz=118,slow=7.0,SNR=3.1						
ULM				Lg		19 33 28.3	
	0.3nm,0.3s,baz=139,slow=21,SNR=2.9						
ULM	Lac du Bonnet	9.12	41	Pn	P	19 30 50.8	-3.0
ULM				Pg	P	19 31 25.7	+32
ULM				Sn	Sn	19 32 34.5	-4.0
ULM				Lg		19 33 28.3	
NVAR	Mina Array Bea	11.19	246	Pn	P	19 31 20.6	-1.4
	0.1nm,0.3s,baz=54,slow=12,SNR=3.4						
YKA	Yellowknife Ar	19.56	347	P	P	19 33 11.0	+1.3
	0.1nm,0.3s,baz=155,slow=8.6,SNR=4.2						
ARCES	ARCESS Array B	61.41	18	P	P	19 38 56.0	-1.5
	4.4nm,0.9s,mb4.6,baz=333,slow=5.4,SNR=6.8						

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*MDD **21** 19:50:25.4±0.7, 34.02N×4.88W, mb3.2/3, Error ellipse: s-maj=7.3km s-min=6.4km az=148.0, PRXIMO SOLUCIN POBRE*

*CNRM **21** 19:50:26.3, 34.18N×4.83W, h18^{km}, MD3.4*

*CSEM **21** 19:50:27.2±0.1, 34.13N×5.09W, h40^{km}, MD3.4, Error ellipse: s-maj=6.0km s-min=2.5km az=101.0*

*NEIC **21** 19:50:28.4, 34.23N×5.19W, MG3.2(MDD), After MDD.*

ISC 21 19:50:25.0±0.5**, 34.12N**±0.03×**4.99W**±0.07**, h10^{km}, n29, σ1^{s}55**/54**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TZK	Tazeka	0.67	92	P	Pb	19 50 37.0	-1.2
TZK				S	Sb	19 50 43.0	-4.3
MIF	Mishlifen	0.73	196	*i* P	Pb	19 50 42.0	+2.7
MIF				*i* S	Sb	19 50 53.0	+3.9
CZD	Col de Zad	1.08	182	*i* P	Pb	19 50 48.0	+2.7
CZD				*i* S	Sb	19 51 02.0	+2.8
ZFT	Errachidia	2.14	165	*e*P	Pn	19 51 00.0	-1.3
ZFT				*i* S	Sn	19 51 25.0	-3.2
TZC	Tazercounte	2.33	213	*e*P	Pn	19 51 02.5	-1.5
TZC				*i* S	Sn	19 51 32.0	-0.9
EMIJ	Mijas	2.45	4	P	Pn	19 51 06.1	+0.4
	0.9nm,0.2s,SNR=7.9						
EMIJ				S	Sn	19 51 35.7	-0.3
	SNR=7.9						
EMIJ	Mijas	2.45	4	P	Pn	19 51 06.1	+0.4
EMIJ				S	Sn	19 51 36.6	+0.6
EMIJ	Mijas	2.45	4	P	Pn	19 51 06.1	+0.4
EMIJ				S	Sn	19 51 36.6	+0.6
EBER	Berja	3.26	31	P	Pn	19 51 19.1	+1.9
	0.6nm,0.2s,SNR=7.9						
EBER				S	Sn	19 51 55.8	-0.7
	SNR=7.9						
EBER	Berja	3.26	31	P	Pn	19 51 17.6	+0.4
EBER				S	Sn	19 51 55.8	-0.7
EBER	Berja	3.26	31	P	Pn	19 51 17.6	+0.4
EBER				S	Sn	19 51 55.8	-0.7
EMIN	Mina Concepcio	3.89	340	P	Pn	19 51 26.6	+0.5
	0.2nm,0.2s,SNR=7.9						
EMIN				S	Sn	19 52 08.5	-3.9
	SNR=7.9						
EMIN	Mina Concepcio	3.89	340	P	Pn	19 51 25.6	-0.6
EMIN				S	Sn	19 52 10.4	-2.1
EMIN	Mina Concepcio	3.89	340	P	Pn	19 51 25.6	-0.6
EMIN				S	Sn	19 52 10.4	-2.1
EGRO	El Granado	3.97	330	P	Pn	19 51 26.7	-0.5
	1.0nm,0.2s,SNR=7.9						
EGRO				S	Sn	19 52 09.9	-4.5
	SNR=7.9						
EGRO	El Granado	3.97	330	P	Pn	19 51 26.1	-1.1
EGRO				S	Sn	19 52 09.3	-5.1
EGRO	El Granado	3.97	330	P	Pn	19 51 26.1	-1.2
EGRO				S	Sn	19 52 09.3	-5.1
EQES	Quesada	4.00	22	P	Pn	19 51 30.5	+2.9
	1.5nm,0.4s,SNR=5.6						
EQES				S	Sn	19 52 16.0	+0.9
	SNR=7.9						
EQES	Quesada	4.00	22	P	Pn	19 51 29.7	+2.1
EQES				S	Sn	19 52 15.3	+0.2
EQES	Quesada	4.00	22	P	Pn	19 51 29.7	+2.1
EQES				S	Sn	19 52 15.3	+0.2
EADA	Adamuz	4.06	5	P	Pn	19 51 29.9	+1.4
	0.4nm,0.2s,SNR=7.9						
EADA				S	Sn	19 52 17.1	+0.4
	SNR=7.9						
EADA	Adamuz	4.06	5	P	Pn	19 51 29.4	+0.9
EADA				S	Sn	19 52 15.3	-1.3
EADA	Adamuz	4.06	5	P	Pn	19 51 29.5	+1.0
EADA				S	Sn	19 52 15.3	-1.4
EHUE	Huescar	4.17	27	P	Pn	19 51 32.6	+2.4
	0.4nm,0.2s,SNR=5.8						
EHUE				S	Sn	19 52 20.4	+0.8
	SNR=7.9						
EHUE	Huescar	4.17	27	P	Pn	19 51 33.1	+2.9
EHUE				S	Sn	19 52 17.0	-2.6
EHUE	Huescar	4.17	27	S	Sn	19 52 17.0	-2.6
ETOB	Tobarra	5.30	31	P	Pn	19 51 47.6	+1.4
	0.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	5.30	31	P	Pn	19 51 46.7	+0.5
ETOB	Tobarra	5.30	31	P	Pn	19 51 46.7	+0.5

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*IDC **21** 20:02:49.6±1.4, 1.62N×96.23E, mb4.2/7, mb1 4.3/7, mb1mx3.9/18, mbtmp4.2/7, Error ellipse: s-maj=70.9km s-min=19.3km az=63.0*

*NEIC **21** 20:02:55.1±0.6, 1.85N×96.62E, h30^{km}, mb4.5/6, Error ellipse: s-maj=20.1km s-min=10.5km az=58.0*

ISC 21 20:02:53.1±0.6**, 1.78N**±0.08×**96.50E**±0.08**, h30^{km}, n20, σ1^{s}19**/21**, mb4.3**/15**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.41	50	*e*Pn	Pn	20 04 11.7	-2.3
KULM				*e*Sn	Sn	20 05 17.9	+1.8
GUN	Gumba	27.90	340	*e*P	P	20 08 43.6	+0.8
	14nm,0.6s,mb4.8						
DMN	Daman	27.91	338	*e*P	P	20 08 46.5	+3.6
KKN	Kakani	28.01	338	*e*P	P	20 08 44.0	+0.3
	4.9nm,0.6s,mb4.3						
LSA	Lhasa	28.23	350	*e*P	P	20 08 45.8	0.0
	2.3nm,0.6s,mb4.0						
GKN	Gorkha	28.44	338	*e*P	P	20 08 45.5	-2.1
KOLN	Koldanda	28.64	336	*e*P	P	20 08 50.4	+0.9
	11nm,0.8s,mb4.7						
NWAO	Narrogin (SRO)	39.69	152	P	P	20 10 22.9	-1.7
	5.5nm,0.9s,mb4.3,baz=142,slow=12,SNR=2.0						
WRA	Warramunga Arr	42.93	122	P	P	20 10 52.3	+0.9
	1.0nm,0.6s,mb3.8,baz=300,slow=9.3,SNR=12						
WRAB	Tennant Creek	42.94	122	*e*P	P	20 10 51.2	-0.3
	8.6nm,1.2s,mb4.4						
MKAR	Makanchi Array	46.52	347	P	P	20 11 19.9	+0.1
	3.4nm,0.7s,mb4.4,baz=158,slow=9.0,SNR=23						
SONM	Songino Array	46.67	9	P	P	20 11 20.7	-0.2
	1.5nm,0.8s,mb4.0,baz=187,slow=9.4,SNR=14						
PMG	Port Moresby	51.67	103	*e*P	P	20 12 00.1	+0.2
	6.4nm,0.7s,mb4.7						
ZAL	Zalesovo	52.87	351	P	P	20 12 08.1	-0.4
	1.9nm,0.8s,mb4.1,baz=298,slow=6.4,SNR=12						
CHKZ	Chkalovo	55.96	342	*e*P	P	20 12 30.7	-0.2
	3.1nm,0.9s,mb4.3						
YAK	Yakutsk	65.07	17	*e*P	P	20 13 29.3	-3.5
	6.9nm,0.8s,mb4.7						
FINES	FINESS Array B	79.17	333	P	P	20 14 56.0	-0.5
	1.6nm,0.8s,mb4.0,baz=104,slow=7.9,SNR=3.9						
ARCES	ARCESS Array B	81.76	340	P	P	20 15 10.8	+0.7
	7.5nm,1.2s,mb4.5,baz=45,slow=6.9,SNR=5.2						
ARCES	ARCESS Array B	81.76	340	P	P	20 15 10.8	+0.7
QSPA	South Pole Qui	91.72	180	P	P	20 16 00.6	+2.1

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*BJI **21** 20:17:48.8, 15.73S×172.94W, h10^{km}, mB5.2, mb4.9, Ms5.0, Msz4.9*

*IDC **21** 20:17:51.5±0.5, 15.46S×173.30W, mb4.6/18, mb1 4.7/18, mb1mx4.6/25, mbtmp4.6/18, MS4.4/18, Ms1 4.4/18, ms1mx4.4/20, Error ellipse: s-maj=28.0km s-min=12.6km az=139.0*

*HRVD **21** 20:17:53.2±0.3, 15.34S×172.84W, h33^{km}, MW5.2/73, Centroid moment Tensor Solution. LP body waves: s58,c83;Mantle waves: s73,c128; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.66±.03; M$_{\theta\theta}$0.07±.02; M$_{\phi\phi}$-0.73±.02; M$_{r\theta}$0.36±.03; M$_{\theta\phi}$-0.12±.02; M$_{\phi r}$0.36±.03; Best double couple: M$_0$.873×10^{17} NP1:φ$_s$168°,δ34°,λ55°. NP2:φ$_s$28°,δ63°,λ111°. Principal axes: T .879, Plg65°, Azm336°; N -.012, Plg18°, Azm199°; P -.868, Plg16°, Azm103°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **21** 20:17:53.2±0.2, 15.35S×173.42W, h10^{km}, mb4.8/35, MS4.9/3 Error ellipse: s-maj=10.5km s-min=5.6km az=137.0*

ISC 21 20:17:51.6±0.2**, 15.34S**±0.06×**173.50W**±0.06**, h10^{km}, (h13^{km}**±1.3^{km}**:pP-P), n197, σ0^{s}88**/108**, mb4.7**/52**, MS4.5**/20**, 23C-3D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.19	50	Pn	Pn	20 18 22.5	-6.1
	234nm,0.3s,baz=195,slow=1.0,SNR=150						
AFI				Sn	Sn	20 18 43.8	-12
	610nm,0.3s,baz=70,slow=13,SNR=15						
AFI				LR	LR	20 19 13.1	
	comp=Z,3µm,18.3s,baz=10,slow=38						
AFI	Afiamalu	2.19	50	*e*Pn	Pn	20 18 22.4	-6.2
FUNA	Funafuti	9.85	313	Pn	P	20 20 14.8	-1.6
FUNA				*e*Sn	Sn	20 22 04.3	-3.9
RAR	Rarotonga	14.28	116	Pn	P	20 21 06.4	-10
	6.8nm,0.3s,baz=262,slow=8.5,SNR=7.3						
RAR				Sn	S	20 23 35.8	-20
	2.4nm,0.3s,baz=105,slow=21,SNR=2.7						
RAR				LR	LR	20 25 33.2	
	comp=Z,2µm,20.3s,baz=345,slow=33						
DZM	Mont Dzumac	20.13	248	*e*P	P	20 22 28.9	+0.1
DZM	Mont Dzumac	20.13	248	P	P	20 22 30.1	+1.3
	25nm,0.7s,baz=73,slow=18,SNR=18						
DZM				LR	LR	20 28 37.4	
	comp=Z,1µm,20.5s,MS4.2,baz=208,slow=32						
DZM	Mont Dzumac	20.13	248	*e*P	P	20 22 28.9	+0.1
PPT	Papeete	23.04	99	*e*LQ		20 27 21.2	
PPT				*e*LR	LR	20 28 09.6	
	3µm,25.2s,baz=266						
PPT	Papeete	23.04	99	LR	LR	20 29 13.6	
	comp=Z,1µm,19.9s,MS4.3,baz=258,slow=30						
TBI	Tubuai	24.01	113	*e*S	S	20 27 15.2	-6.2
TBI				*e*LR	LR	20 28 42.1	
	3µm,25.5s,baz=287						
URZ	Urewera	24.29	198	P	P	20 23 09.6	-0.6
	28nm,0.8s,mb4.8,baz=3.3,slow=5.1,SNR=11						
HNR	Honiara	26.58	280	LR	LR	20 32 50.5	
	comp=Z,1µm,18.9s,MS4.5,baz=248,slow=34						
RPZ	Rata Peaks	31.20	202	P	P	20 24 11.6	-1.7
	20nm,0.7s,mb5.1,baz=0.8,slow=5.4,SNR=5.4						
TAOE	Nuku Hiva Isla	33.21	83	*e*LR	LR	20 32 45.2	
	4µm,28.3s						
ARMA	Armidale	35.29	239	*e*P	P	20 24 48.9	0.0
RKT	Rikitea	37.10	108	*e*S	S	20 30 43.0	-6.8
RKT				*e*LR	LR	20 34 42.5	
	2µm,26.0s						
CTA	Charters Tower	38.56	257	*e*P	P	20 25 16.1	-0.5
	3.5nm,0.6s,mb4.3						
CTA	Charters Tower	38.56	257	P	P	20 25 16.3	-0.2
	3.9nm,0.6s,mb4.3,baz=82,slow=12,SNR=8.5						
CTA				PcP	PcP	20 27 30.1	+0.4
	6.0nm,0.9s,baz=156,slow=3.2,SNR=5.0						
CTAO	Charters Tower	38.56	257	*e*P	P	20 25 16.0	-0.6
	4.4nm,0.6s,mb4.4						
CTAO				*e*PcP	PcP	20 27 30.0	+0.3
PMG	Port Moresby	38.84	274	P	P	20 25 19.8	+1.0
	8.6nm,0.8s,mb4.6,baz=63,slow=6.8,SNR=2.8						
STKA	Stephens Creek	43.98	240	P	P	20 26 01.4	+0.3
	16nm,0.8s,mb4.8,baz=86,slow=9.7,SNR=38						
STKA				LR	LR	20 43 05.3	
	comp=Z,348nm,19.1s,MS4.3,baz=63,slow=34						
STKA	Stephens Creek	43.98	240	*e*P	P	20 26 01.3	+0.3
WB2	Warramunga Arr	49.76	257	*e*P	P	20 26 36.7	-10
WRAB	Tennant Creek	49.76	257	P	P	20 26 39.0	-7.6
WRA	Warramunga Arr	49.77	257	P	P	20 26 47.0	+0.3
	11nm,0.5s,mb5.1,baz=91,slow=7.4,SNR=60						
WRA				PcP	PcP	20 28 08.2	+0.3
	5.8nm,0.7s,baz=87,slow=4.0,SNR=8.2						
ASPA	Alice Springs	50.04	252	*e*P	P	20 26 48.6	-0.2
KAKA	Kakadu	52.41	266	*e*P	P	20 27 26.6	+20
	12nm,0.6s,mb5.0						
FORT	Forrest	55.36	243	*e*P	P	20 27 26.9	-1.4
	19nm,0.6s,mb5.3						
SBA	Scott Base	63.30	185	*e*P	P	20 28 22.0	-0.6
	9.2nm,0.8s,mb5.0						
VNDA	Vanda	63.42	186	*e*P	P	20 28 23.7	+0.3
	7.7nm,1.1s,mb4.8						
KLBR	Kellerberrin	64.18	242	*e*P	P	20 28 28.6	-0.5
	26nm,0.6s,mb5.4						
MUN	Mundaring	65.48	242	*e*P	P	20 28 37.6	+0.2
MJAR	Matsushiro Arr	68.83	320	P	P	20 29 00.1	+1.5
	3.4nm,0.8s,mb4.3,baz=145,slow=6.6,SNR=3.8						
MJAR				LR	LR	20 53 23.7	
	comp=Z,563nm,22.0s,MS4.8,baz=145,slow=31						
GLA	Glamis	73.82	48	*e*P	P	20 29 27.1	-1.4
NVAR	Mina Array Bea	74.35	42	P	P	20 29 31.4	0.0
	1.2nm,0.7s,mb4.0,baz=229,slow=9.6,SNR=13						
NVAR				LR	LR	20 56 16.7	
	comp=Z,240nm,18.6s,MS4.5,baz=180,slow=31						
QSPA	South Pole Qui	74.70	180	*e*P	P	20 29 33.6	+0.8
	22nm,0.9s,mb5.1						
TPH	Tonopah	74.85	43	*e*P	P	20 29 31.9	-2.5
TPNV	Topopah Spring	74.88	44	*e*P	P	20 29 33.1	-1.5
	18nm,1.6s,mb4.7						
MOD	Modoc	75.13	38	*e*P	P	20 29 35.9	-0.1
	9.0nm,1.0s,mb4.7						
NEN	Nelson	75.15	46	*e*P	P	20 29 36.8	+0.6
TUC	Tucson	76.42	51	*e*P	P	20 29 43.9	+0.4
	4.7nm,0.9s,mb4.4						
WVOR	Wild Horse Val	76.44	39	*e*P	P	20 29 43.0	-0.3
	9.0nm,1.0s,mb4.7						
WUAZ	Wupatki	77.53	48	*e*P	P	20 29 50.3	+0.8
	18nm,1.4s,mb4.8						
ELK	Elko	77.60	41	P	P	20 29 49.7	-0.1
	4.9nm,1.1s,mb4.3,baz=243,slow=7.7,SNR=8.4						
ELK	Elko	77.60	41	*e*P	P	20 29 49.4	-0.4
	11nm,1.4s,mb4.6						
SSE	Sheshan	77.85	307	P	P	20 29 52.8	+1.4
SSE				AP	pP	20 29 56.0	+1.5
SSE				PCP	PcP	20 30 02.8	+1.0
SSE				S	S	20 39 44.6	+1.7
SSE				SCS	ScS	20 40 10.1	+2.8
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
SSE				AMB	AMB		
	comp=Z,120nm,4.6s						
SSE				LR	LR		
	comp=N,110nm,26.1s,MS4.3						
SSE				LR	LR		
	comp=E,150nm,26.0s,MS4.3						
SSE				LR	LR		
	comp=Z,240nm,27.2s,MS4.4						
HAWA	Hanford	78.28	35	*e*P	P	20 29 54.1	+0.7
	comp=Z,0.6nm,0.9s,mb3.5						
MVU	Marysvale	78.42	45	*e*P	P	20 29 55.1	+0.7
	comp=Z,7.5nm,0.9s,mb4.6						
MSU	Marysvale	78.45	45	*e*P	P	20 29 55.2	+0.7
DUG	Dugway	78.88	43	*e*P	P	20 29 56.5	-0.3
	comp=Z,6.8nm,1.1s,mb4.5						
MDJ	Mudanjiang	78.92	322	P	P	20 29 57.6	+0.6
MDJ				AMB	AMB		
	comp=Z,120nm,6.8s						
MDJ				LR	LR		
	comp=N,330nm,23.8s,MS4.8						
MDJ				LR	LR		
	comp=E,340nm,22.7s,MS4.8						
MDJ				LR	LR		
	comp=Z,600nm,22.2s,MS4.9						
TMUT	Trail Mountain	79.50	44	*e*P	P	20 30 02.0	+1.8
HLID	Hailey	79.64	39	*e*P	P	20 30 00.8	-0.1
	comp=Z,12nm,0.9s,mb4.8						
HVU	Hansel Valley	79.72	42	*e*P	P	20 30 02.4	+1.0
	comp=Z,4.9nm,0.9s,mb4.4						
TCUT	Toone Canyon	80.27	43	*e*P	P	20 30 04.7	+0.4
BNM	Barren Site	80.36	51	*e*P	P	20 30 02.4	-2.5
HWUT	Hardware Ranch	80.41	42	*e*P	P	20 30 04.4	-0.6
	comp=Z,5.9nm,1.1s,mb4.4						
LPM	Los Pinos Moun	80.43	51	*e*P	P	20 30 05.9	+0.6
PV10	Paradox Valley	80.54	46	*e*P	P	20 30 05.7	-0.1
TXAR	Lajitas Array	80.66	56	P	P	20 30 06.8	+0.1
	comp=Z,2.4nm,0.8s,mb4.2,baz=225,slow=5.3,SNR=18						
TXAR				LR	LR	20 58 00.8	
	comp=Z,161nm,19.6s,MS4.4,baz=185,slow=30						
NEW	Newport	80.71	34	P	P	20 30 04.9	-1.6
	comp=Z,1.7nm,0.4s,mb4.3,baz=280,slow=6.1,SNR=4.2						
PV01	Paradox Valley	80.75	46	*e*P	P	20 30 07.2	+0.2
ANMO	Albuquerque	80.83	50	P	P	20 30 07.7	+0.2
	comp=Z,5.0nm,0.9s,mb4.5,baz=189,slow=8.6,SNR=7.2						
ANMO	Albuquerque	80.83	50	*e*P	P	20 30 06.7	-0.8
	comp=Z,3.6nm,0.8s,mb4.3						
CN2	Changchun	80.98	320	*e*P	P	20 30 09.4	+1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
GDL2	Guadalupe Moun	81.26	53	*e*P	P	20 30 09.6	-0.1
MCMT	McKenzie Canyo	81.27	39	*e*P	P	20 30 09.7	+0.1
DLBC	Dease Lake	81.68	21	P	P	20 30 12.8	+1.4
	comp=Z,3.7nm,0.9s,mb4.3,baz=193,slow=14,SNR=2.2						
MSO	Missoula	81.69	37	*e*P	P	20 30 10.5	-1.1
	comp=Z,7.9nm,1.1s,mb4.6						
DLMT	Dillon	81.70	39	*e*P	P	20 30 11.6	-0.1
	comp=Z,9.8nm,0.8s,mb4.8						
REDW	Red Top Meadow	81.75	41	*e*P	P	20 30 11.9	-0.2
	comp=Z,19nm,1.4s,mb4.8						
TPAW	Teton Pass	81.75	41	*e*P	P	20 30 11.4	-0.7
	comp=Z,12nm,0.9s,mb4.8						
IMW	Indian Meadow	81.96	40	*e*P	P	20 30 13.2	+0.1
	comp=Z,8.6nm,0.9s,mb4.7						
CPRX	Cap Rock	81.98	53	*e*P	P	20 30 13.2	-0.3
MOOW	Moose Ponds	82.01	41	*e*P	P	20 30 14.2	+0.8
	comp=Z,5.2nm,1.2s,mb4.3						
QLMT	Earthquake Lak	82.13	39	*e*P	P	20 30 14.4	+0.4
CHMT	Chamberlain Mo	82.13	37	*e*P	P	20 30 13.0	-0.9
PDAR	Pinedale Array	82.28	42	P	P	20 30 14.6	-0.2
	comp=Z,4.5nm,1.0s,mb4.4,baz=225,slow=4.2,SNR=23						
PDAR				LR	LR	21 03 19.4	
	comp=Z,225nm,18.1s,MS4.6,baz=253,slow=33						
COLA	College	82.32	11	*e*P	P	20 30 14.4	-0.2
	comp=Z,12nm,0.8s,mb4.9						
YMR	Madison River	82.34	40	*e*P	P	20 30 16.4	+1.3
	comp=Z,21nm,1.3s,mb4.9						
SMCO	Snowmass	82.34	46	*e*P	P	20 30 15.4	+0.2
	comp=Z,30nm,1.4s,mb5.0						
ILAR	Eielson Array	82.41	11	P	P	20 30 14.4	-0.6
	comp=Z,2.0nm,0.9s,mb4.0,baz=234,slow=6.9,SNR=13						
ILAR				LR	LR	21 04 41.9	
	comp=Z,134nm,18.1s,MS4.3,baz=8.0,slow=34						
ILAR	Eielson Array	82.41	11	P	P	20 30 14.4	-0.6
ILAR				LR	LR	21 04 41.9	
BOZ	Bozeman (W)	82.43	39	*e*P	P	20 30 15.6	+0.1
	comp=Z,9.5nm,1.0s,mb4.7						
LKWY	Lake	82.63	40	*e*P	P	20 30 18.4	+1.8
	comp=Z,14nm,0.9s,mb5.0						
SDCO	Great Sand Dun	82.74	48	*e*P	P	20 30 17.1	-0.2
	comp=Z,6.1nm,1.0s,mb4.6						
HRY	Holter Researc	82.86	38	*e*P	P	20 30 17.1	-0.6
RWWY	Rawlins	83.31	44	*e*P	P	20 30 20.1	-0.1
	comp=Z,17nm,0.9s,mb5.1						
DAWY	Dawson	83.39	14	*e*P	P	20 30 20.0	-0.1
ISCO	Idaho Springs	83.56	46	*e*P	P	20 30 21.9	+0.4
	comp=Z,4.1nm,0.9s,mb4.6						
PHWY	Pilot Hill	84.32	45	*e*P	P	20 30 25.2	-0.1
EDM	Edmonton	85.48	32	*e*P	P	20 30 30.4	-0.4
RSSD	Black Hills	86.48	43	*e*P	P	20 30 35.6	-0.3
	comp=Z,2.5nm,0.6s,mb4.6						
MAW	Mawson	87.82	199	*e*P	P	20 30 42.5	+0.6
	comp=Z,4.2nm,0.7s,mb4.8						
MAW	Mawson	87.82	199	P	P	20 30 42.4	+0.5
	comp=Z,5.2nm,0.6s,mb4.9,baz=133,slow=7.8,SNR=11						
MAW				LR	LR	21 09 00.4	
	comp=Z,313nm,18.0s,MS4.8,baz=74,slow=35						
INK	Inuvik	88.23	14	P	P	20 30 43.6	-0.3
	comp=Z,2.5nm,0.8s,mb4.5,baz=219,slow=6.7,SNR=6.9						
HHC	Hu-ho-hao-te	88.92	313	*e*P	P	20 30 45.6	-2.2
HHC				AP	pP	20 30 50.1	-0.9
HHC				XP	sP	20 30 52.5	+0.4
HHC				SKS	SKS	20 41 12.3	-7.9
HHC				S	S	20 41 31.5	-2.0
HHC				PS	PS	20 42 38.6	-3.1
HHC				AMB	AMB		
	comp=Z,90nm,4.8s						
HHC				LR	LR		
	comp=N,120nm,12.0s,MS4.6						
HHC				LR	LR		
	comp=E,120nm,14.4s,MS4.6						
HHC				LR	LR		
	comp=Z,110nm,13.2s,MS4.5						
PLCA	Paso Flores	89.62	132	LR	LR	21 02 11.6	
	comp=Z,316nm,20.7s,MS4.7,baz=178,slow=30						
YKA	Yellowknife Ar	90.08	23	LR	LR	21 04 46.6	
	comp=Z,254nm,19.9s,MS4.7,baz=245,slow=31						
SYO	Syowa Base	92.64	191	⇑P	P	20 31 03.8	-0.6
SYO	Syowa Base	92.64	191	⇑*e*P	P	20 31 03.8	-0.6
VNA3	Neumayer Olymp	92.92	175	⇑*i*	P	20 31 06.5	+0.8
VNA3	Neumayer Olymp	92.92	175	⇑*i*	P	20 31 14.9	+9.2
SNAA	Sanae	92.97	177		P	20 31 06.6	+0.7
SNAA	Sanae	92.97	177		P	20 31 09.8	+3.9
SNAA	Sanae	92.97	177	⇑*i*	P	20 31 22.1	+16
LZH	Lanzhou	93.11	306	*e*P	P	20 31 08.1	+0.7
LZH				AP	pP	20 31 12.9	+2.3
LZH				XP	sP	20 31 18.5	+6.9
LZH				PP	PP	20 34 54.5	+1.1
LZH				*e*SKS	SKS	20 41 40.1	-4.7
LZH				*e*S	S	20 42 11.8	+0.7
LZH				*e*SS	SS	20 48 31.1	+0.9
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb5.3						
LZH				AMB	AMB		
	comp=Z,70nm,4.6s						
LZH				LR	LR		
	comp=N,550nm,17.6s						
LZH				LR	LR		
	comp=Z,760nm,18.9s,MS5.2						
VNA2	Neumayer--Watz	93.42	175	⇑*i*	P	20 31 09.3	+1.4
VNA2	Neumayer--Watz	93.42	175	⇑*i*	P	20 31 14.6	+6.7
VNA1	Neumayer--Stat	93.62	175		P	20 31 10.1	+1.2
VNA1	Neumayer--Stat	93.62	175		P	20 31 16.5	+7.6
ULM	Lac du Bonnet	93.94	39	LR	LR	21 11 32.2	
	comp=Z,222nm,18.6s,MS4.7,baz=271,slow=34						
SONM	Songino Array	94.74	318	LR	LR	21 08 29.0	
	comp=Z,266nm,21.7s,MS4.7,baz=291,slow=32						
LPAZ	La Paz	99.92	110	LR	LR	21 07 14.0	
	comp=Z,141nm,20.9s,MS4.5,baz=267,slow=30						
ROSC	El Rosal	100.09	88	LR	LR	21 06 45.0	
	comp=Z,118nm,21.1s,MS4.4,baz=273,slow=29						
ARCES	ARCESS Array B	124.54	352	PKP	PKPdf	20 36 51.6	-2.4
	comp=Z,4.0nm,0.8s,slow=1.2,SNR=7.6						
FINES	FINESS Array B	131.87	348	PKP	PKPdf	20 37 06.2	-2.0
	comp=Z,2.4nm,1.0s,baz=34,slow=6.9,SNR=4.2						
FINES	FINESS Array B	131.87	348	PKP	PKPdf	20 37 06.2	-2.0
AKASG	Malin Array Be	140.25	337	PKhKP		20 37 17.0	
	comp=Z,2.1nm,0.7s,baz=35,slow=3.3,SNR=5.2						
AKASG				PKP	PKPdf	20 37 22.9	-1.0
	comp=Z,2.8nm,0.8s,baz=33,slow=2.2,SNR=9.0						
AKASG	Malin Array Be	140.25	337	PKP	PKPdf	20 37 17.0	-6.9
AKASG				PKP	PKPdf	20 37 22.9	-1.0
OJC	Ojcow	143.58	346	*e*PKP	PKPdf	20 37 25.4	-4.2
CLL	Collm	143.75	353	*e*PKIKP	PKPdf	20 37 26.0	-3.9
	comp=Z,logA/T=0.7						
CLL	Collm	143.75	353	*e*P	PKPbc	20 37 26.0	+0.3
CLL				*i*		20 37 43.9	
STHS	Stebnicka Huta	143.95	344	*e*PKP	PKPdf	20 37 28.0	-2.3
UPC	Upice	144.09	350	*e*PKP	PKPdf	20 37 28.3	-2.2
UPC				*e*pPKP		20 37 36.3	
DPC	Dobruska-Polom	144.19	349	*e*PKP	PKPdf	20 37 28.2	-2.5
DPC				*e*pPKP		20 37 32.5	

BURAR	**Bucovina Array**	144.28	338	⇑P	PKPbc	20 37 28.4	+1.0
PVCC	**Panska Ves**	144.30	351	ePKP	PKPdf	20 37 28.2	-2.7
OKC	**Ostrava-Krasne**	144.31	347	ePKP	PKPdf	20 37 28.4	-2.5
OKC				epPKP		20 37 32.6	
CRVS	**Cervenica-Dubn**	144.35	343	ePKP	PKPdf	20 37 28.1	-2.9
MORC	**Moravsky Berou**	144.50	348	ePKPdf	PKPdf	20 37 29.1	-2.2
MOX	**Moxa**	144.55	354	i P	PKPbc	20 37 28.9	+0.9
	comp=Z,logA/T=0.9						
MOX	**Moxa**	144.55	354	ePKP	PKPdf	20 37 28.9	-2.4
PRU	**Pruhonice**	144.83	351	ePKP	PKPdf	20 37 29.3	-2.6
KECS	**Kecovo**	145.00	344	ePKP	PKPdf	20 37 30.9	-1.3
CFR	**Carcaliu**	145.11	333	⇓P	PKPbc	20 37 30.5	+0.7
VRI	**Vrincioaia**	145.15	335	⇓P	PKPbc	20 37 31.8	+1.9
TNS	**Taunus Mts**	145.18	358	ePKPbc	PKPbc	20 37 31.0	+1.2
GIVF	**Givet**	145.31	2	ePKP1	PKPbc	20 37 30.8	+0.7
BAIF	**Baives**	145.32	3	ePKP1	PKPbc	20 37 31.1	+1.0
	comp=Z,25nm,0.9s						
TREC	**Trest**	145.35	350	ePKP	PKPdf	20 37 28.8	-4.0
VYHS	**Vyhne**	145.42	346	ePKP	PKPdf	20 37 32.0	-0.9
KMBO	**Kilima Mbogo**	145.48	244	PKPbc	PKPbc	20 37 34.3	+2.7
	comp=Z,8.5nm,0.9s,baz=79,slow=3.4,SNR=21						
GRA1	**Grafenberg Arr**	145.53	355	ePKPbc	PKPbc	20 37 32.9	+2.2
TIRR	**Tirgusor**	145.54	332	⇑P	PKPbc	20 37 32.8	+1.9
HARR	**Harsova**	145.58	333	⇓P	PKPbc	20 37 32.3	+1.3
PSZ	**Piszkesteto**	145.68	344	⇑ePKP/p	PKPdf	20 37 34.7	+1.3
WLF	**Walferdange**	145.77	0	ePKPdf	PKPdf	20 37 30.7	-2.8
KHC	**Kasperske Hory**	145.81	352	ePKP	PKPdf	20 37 33.2	-0.4
KHC				epPKP		20 37 37.0	
DRGR		145.85	340	⇑P	PKPbc	20 37 32.2	+0.6
WET	**Wettzell**	145.89	353	ePKPbc	PKPbc	20 37 33.8	+2.2
BR131	**Keskin Array S**	146.05	321	ePKPdf	PKPdf	20 37 34.5	+0.2
BRTR	**Keskin Array B**	146.05	321	PKPbc	PKPbc	20 37 34.6	+2.3
	comp=Z,8.1nm,0.8s,baz=120,slow=2.0,SNR=29						
GEC2	**GERESS Array S**	146.07	351	ePKPbc	PKPbc	20 37 34.0	+2.0
GERES	**GERESS Array B**	146.07	351	PKPbc	PKPbc	20 37 33.5	+1.5
	comp=Z,0.7nm,0.7s,baz=14,slow=4.0,SNR=3.5						
ZST	**Bratislava**	146.09	347	ePKP	PKPdf	20 37 34.9	+0.8
ROSF	**Rostrenen**	146.12	12	ePKP1	PKPbc	20 37 32.7	+0.5
VOIR		146.18	336	⇑P	PKPbc	20 37 34.9	+2.5
FLN	**La Foliniere**	146.18	8	ePKP1	PKPbc	20 37 32.9	+0.6
FLN				eR			
	comp=Z,236nm,21.2s						
SGMF	**Saint Gilles**	146.34	11	ePKP1	PKPbc	20 37 32.8	+0.1
LDF	**La Druitiere**	146.40	8	ePKP1	PKPbc	20 37 34.1	+1.3
GRR	**Gorron**	146.49	9	ePKP1	PKPbc	20 37 34.1	+1.1
MOA	**Molln**	146.96	350	⇑iP	PKPbc	20 37 38.0	+3.9
	comp=Z,14nm,1.1s						
CDF	**Champ du Feu**	147.02	359	ePKP1	PKPdf	20 37 36.0	+0.4
	comp=Z,17nm,1.0s						
FUR	**Furstenfeldbru**	147.03	354	ePKPbc	PKPdf	20 37 37.5	+1.8
BFO	**Black Forest**	147.07	358	ePKPbc	PKPdf	20 37 36.0	+0.3
ARSA	**Arzberg**	147.31	349	⇑iP	PKPdf	20 37 37.1	+1.0
	comp=Z,13nm,1.4s						
ARSA	**Arzberg**	147.31	349	⇑iP	PKPdf	20 37 37.1	+1.0
HAU	**Haudompre**	147.43	0	ePKP1	PKPdf	20 37 37.3	+1.0
	comp=Z,15nm,0.9s						
HAU				eR			
	comp=Z,164nm,19.8s						
WATA	**Walderalm**	147.82	354	⇑iP	PKPdf	20 37 39.2	+2.3
	comp=Z,2.5nm,0.5s						
KBA	**Koelnbreinsper**	147.85	351	⇑eP	PKPdf	20 37 40.0	+2.9
	comp=Z,4.3nm,0.5s						
MOTA	**Moosalm**	147.86	354	⇑iP	PKPdf	20 37 36.2	-0.8
	comp=Z,9.9nm,0.9s						
WTTA	**Wattenberg**	147.89	353	⇑iP	PKPdf	20 37 32.3	-4.8
	comp=Z,17nm,1.2s						
SQTA	**Sankt Quirin**	147.97	354	⇑iP	PKPdf	20 37 39.8	+2.6
	comp=Z,6.8nm,0.8s						
SQTA	**Sankt Quirin**	147.97	354	⇑iP	PKPdf	20 37 39.8	+2.6
DAVA	**Damuels**	148.03	356	⇑iP	PKPdf	20 37 38.0	+0.7
	comp=Z,18nm,1.4s						
LOR	**Lormes**	148.09	3	ePKP1	PKPdf	20 37 39.0	+1.6
	comp=Z,34nm,1.3s						
LOR				eR			
	comp=Z,254nm,20.0s						
OBKA	**Obir**	148.21	349	⇑P	PKPdf	20 37 44.6	+7.0
	comp=Z,13nm,1.0s						
SSF	**Saint Saulge**	148.28	4	ePKP1	PKPdf	20 37 39.5	+1.8
	comp=Z,20nm,1.2s						
SMF	**Signal de Mont**	148.71	4	ePKP1	PKPdf	20 37 40.7	+2.3
	comp=Z,15nm,1.1s						
BGF	**Bois d'Agland**	148.73	5	ePKP1	PKPdf	20 37 40.7	+2.3
CABF	**La Chapelle**	148.82	1	ePKP1	PKPdf	20 37 40.9	+2.3
TCF	**Toulx Ste Croi**	148.94	6	ePKP1	PKPdf	20 37 41.2	+2.4
	comp=Z,20nm,1.1s						
LPL	**La Plagne**	149.92	360	ePKP1	PKPdf	20 37 44.1	+3.7
	comp=Z,35nm,1.3s						
LPG	**La Plagne**	149.94	360	ePKP1	PKPdf	20 37 44.1	+3.7
	comp=Z,20nm,1.2s						
LFF	**La Frestale**	150.10	8	ePKP1	PKPdf	20 37 44.0	+3.3
BNI	**Bardonecchia**	150.38	360	ePKPdf	PKPdf	20 37 42.2	+1.1
ORIF	**Oris-en-Rattie**	150.51	1	ePKP1	PKPdf	20 37 45.5	+4.2
	comp=Z,10nm,0.8s						
ORIF				eR			
	comp=Z,169nm,19.2s						
VIVF	**Saint-Julien-l**	150.54	3	ePKP1	PKPdf	20 37 45.5	+4.2
MBDF	**Montbardon**	150.71	360	ePKP1	PKPdf	20 37 46.1	+4.5
LASF	**Ste Croix**	151.27	4	ePKP1	PKPdf	20 37 47.2	+4.7
	comp=Z,84nm,1.6s						
SMRF	**Simiane la Rot**	151.45	1	ePKP1	PKPdf	20 37 47.4	+4.7
ETSF	**Etsaut**	151.88	11	ePKP1	PKPdf	20 37 48.0	+4.6
	comp=Z,21nm,1.0s						
EPF	**Esparros**	151.90	10	ePKP1	PKPdf	20 37 48.6	+5.2
LMR	**La Mourre**	152.10	360	ePKP1	PKPdf	20 37 49.0	+5.3
PGF	**Pioggiola**	152.80	356	ePKP1	PKPdf	20 37 50.8	+6.1
	comp=Z,54nm,1.3s						
ESDC	**Sonseca Array**	154.08	19	PKPbc	PKPdf	20 37 54.8	+8.2
	comp=Z,0.2nm,0.4s,baz=315,slow=1.8,SNR=3.2						
ESDC				PKPab	PKPab	20 38 07.4	-0.3
	comp=Z,2.4nm,1.0s,baz=318,slow=3.5,SNR=3.6						

*NEIC **21** 20:40:42.6, 17.78N×102.09W, h5^{km}, MD4.3(MEX), After MEX.*

MEX 21 20:40:42.6±0.6**, 17.78N×102.09W, h5**^{km}±16^{km}**, MD4.3, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	0.62	106	i P	Pg	20 40 53.7	-1.4
ZIIG				i S	Sg	20 41 02.6	-0.8
CAIG	**El Cayaco**	1.89	112	i P	Pn	20 41 12.6	-3.3
CAIG				i S	Sn	20 41 35.7	-4.6
MOIG	**Morelia**	2.07	24	i P	Pn	20 41 15.6	-2.8
MOIG				i S	Sn	20 41 40.1	-4.8
ACX	**Acapulco**	2.27	113	i P	Pn	20 41 19.0	-2.3
ACX				i S	Sn	20 41 45.0	-4.9
PLIG	**Platanillo**	2.54	76	i P	Pn	20 41 22.1	-3.0
PLIG				i S	Sn	20 41 52.6	-4.1
SFJM	**Santa Fe**	2.83	342	eP	Pn	20 41 26.0	-3.4
SFJM				i S	Sn	20 41 59.5	-4.8
YAIG	**Yautepec**	3.07	69	eP	Pn	20 41 28.4	-4.3
YAIG				i S	Sn	20 42 06.8	-3.4
UNM	**Universidad Na**	3.16	60	eP	Pn	20 41 35.5	+1.5
UNM				i S	Sn	20 42 06.4	-6.3
PPM	**Popocatepetl**	3.53	68	eP	Pn	20 41 35.5	-3.8
PPM				eP		20 41 35.5	
PPM				i S	Sn	20 42 18.5	-3.3
PPM	**Popocatepetl**	3.53	68	eP	Pn	20 41 35.5	-3.8
PPM				i S	Sn	20 42 18.5	-3.3
PNIG	**Pinotepa**	4.04	109	i P	Pn	20 41 40.0	-6.4
PNIG				i S	Sn	20 42 30.7	-4.0
VHO	**Vista Hermosa**	5.16	97	i S	Sn	20 42 58.9	-4.3
OXX	**Oaxaca**	5.17	97	eP	Pn	20 41 54.0	-8.5

MAN 21 20:54:52.7, 12.23N×123.90E, h18^{km}, mb4.2, ML3.0, MS2.8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	0.80	69	eP	Pb	20 55 07.7	-0.1
CNP				eS	Sb	20 55 21.1	+3.1
RCP	**Roxas**	1.31	240	⇑eP	Pn	20 55 15.4	-0.9
RCP				eS	Sb	20 55 33.2	+0.4
PVCP	**Virac**	1.38	10	eP	Pn	20 55 16.8	-0.5
PVCP				eS	Sb	20 55 35.4	+0.5
AUQP	**San Andres**	1.62	313	eP	Pn	20 55 19.7	-0.9
AUQP				eS	Sn	20 55 45.3	+4.2
GUIM	**Jordan**	2.04	219	eP	Pn	20 55 27.3	+0.5
GUIM				eS	Sn	20 55 54.5	+2.4
MSLP	**Maasin**	2.28	156	eP	Pn	20 55 29.9	-0.3
MSLP				eS	Sn	20 55 59.1	+1.0

WEL 21 21:12:37.2±0.3**, 45.30S×166.70E, h12^{km}, ML3.7**/8**, Error ellipse: s-maj=3.0km s-min=1.2km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DCZ	**Deep Cove**	0.37	120	P*	Pb	21 12 44.6	-0.4
DCZ				S*	Sb	21 12 49.5	-1.0
DCZ				S*	Sb	21 12 49.6	-0.8
MLZ	**Mavora Lakes**	1.04	93	P*	Pb	21 12 55.5	-1.0
MLZ				S*	Sb	21 13 08.9	-1.0
WHZ	**Wether Hill Ro**	1.06	125	eP*	Pb	21 12 55.9	-1.1
WHZ				S*	Sb	21 13 09.7	-0.9
MSZ	**Milford Sound**	1.07	55	P*	Pb	21 12 56.3	-0.8
MSZ				S*	Sb	21 13 10.9	0.0
WKZ	**Wanaka**	1.71	75	PN	Pn	21 13 06.0	-1.0
EAZ	**Earnscleugh**	1.84	89	ePN	Pn	21 13 07.7	-1.2
JCZ	**Jackson Bay**	1.91	51	ePN	Pn	21 13 09.8	-0.1
JCZ				eSN	Sn	21 13 33.4	-0.5
ODZ	**Otahua Downs**	2.80	86	PN	Pn	21 13 21.1	-1.6

*NDI **21** 21:27:44.0±3.5, 34.78N×73.07E, h10^{km}, MD3.5, ML3.3*
*NNC **21** 21:27:50.2±85.0, 34.90N×72.47E, mpv3.8, Error ellipse: s-maj=863.2km s-min=770.8km az=80.0*

ISC 21 21:27:40.0±1.5**, 34.5N**±0.1×**72.5E**±0.2**, h10^{km}, n7, $\sigma 1^{s}$54**/13**, 1C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	3.38	126	eP	Pn	21 28 35.7	+1.7
THN				eSB	Sb	21 29 20.5	-0.5
DLH	**Dalhousie**	3.48	123	ex	Sn	21 29 18.0	+0.8
DLH				eSB	Sb	21 29 25.0	+0.9
SDNR	**Sundarnagar**	4.79	127	eS	Sn	21 29 46.8	-3.5
SDNR	**Sundarnagar**	4.79	127	ex	Pn	21 28 57.8	+3.8
KLP	**Kalpa**	5.66	120	eP	Pn	21 29 04.8	-1.4
KLP				eS	Sn	21 30 02.6	-9.5
KLP				eS	Sn	21 30 04.4	-7.7
KLP				AML	AML	21 30 32.4	
	comp=N,42nm,0.3s						
KLP				AML	AML	21 30 38.8	
	comp=E,55nm,0.5s						
KUDL	**Kundal**	7.17	150	eP	Pn	21 29 27.9	+0.3
KUDL				eS	Sn	21 30 46.3	-3.7
KK31	**Karatay Array**	8.76	350	P	P	21 29 52.2	+2.6
	comp=E,1.7nm,0.3s,baz=163,slow=12,SNR=66						
KK31				⇑S	Sn	21 31 28.3	-1.1
	comp=E,1.2nm,0.5s,baz=170,slow=24,SNR=4.1						

*NNC **21** 21:44:29.5±0.9, 42.25N×73.06E, h7^{km}±4^{km}, mpv3.6, Error ellipse: s-maj=12.3km s-min=3.1km az=179.0*
*KNET **21** 21:44:30.3±0.7, 42.12N×73.22E, h11^{km}±2^{km}, ml2.8, Error ellipse: s-maj=3.7km s-min=2.5km az=74.0*

ISC 21 21:44:26.9±1.3**, 42.23N**±0.06×**72.87E**±0.06**, h6**^{km}±7^{km}**, n17, $\sigma 1^{s}$46**/29**, 14C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	0.62	99	P	Pg	21 44 37.7	-1.6
	146nm,0.1s,SNR=368						
AML				⇑S	Sg	21 44 44.1	-3.4
	389nm,0.2s						
EKS2	**Erkin-Say**	0.80	57	P	Pb	21 44 43.3	+0.6
	74nm,0.3s,SNR=187						
EKS2				⇓S	Sg	21 44 54.1	+0.6
	126nm,0.3s						
UCH	**Uchtor**	1.22	90	⇓P	Pb	21 44 49.0	-1.0
	29nm,0.2s,SNR=58						
UCH				⇑S	Sb	21 45 02.9	-2.9
	123nm,0.2s						
AAK	**Ala-Archa**	1.27	71	⇑P	Pb	21 44 50.8	0.0
	58nm,0.3s,SNR=91						
AAK				⇓S	Sb	21 45 06.8	-0.3
	211nm,0.3s						
AAK	**Ala-Archa**	1.27	71	⇑P	Pb	21 44 50.8	0.0
	16nm,0.3s						
AAK				⇓S	Sb	21 45 06.5	-0.7
	108nm,0.3s						
USP	**Ospenovka**	1.58	49	P	Pn	21 44 57.6	+2.0
	110nm,0.3s,SNR=202						
USP				⇑S	Sb	21 45 20.1	+3.7
	112nm,0.2s						
CHMS	**Chumysh**	1.58	60	⇑P	Pn	21 44 57.2	+1.5
	9.6nm,0.1s,SNR=51						
CHMS				⇑S	Sb	21 45 17.3	+0.9
	54nm,0.2s						
KBK	**Karagaybulak**	1.59	74	⇑P	Pn	21 44 56.6	+0.8
	60nm,0.1s,SNR=50						
KBK				⇑S	Sb	21 45 16.9	+0.2
	135nm,0.2s						
KZA	**Kyzart**	1.77	94	⇓P	Pn	21 44 58.9	+0.5
	52nm,0.1s,SNR=90						
KZA				⇑S	Sn	21 45 21.0	-0.5
	189nm,0.2s						
KK31	**Karatay Array**	1.95	297	Pn	Pn	21 45 07.2	+6.3
	36nm,0.6s,baz=121,slow=14,SNR=312						
KK31				⇓Lg		21 45 35.5	
	67nm,0.5s,baz=121,slow=28,SNR=14						
TKM2	**Tokmak 2**	2.13	70	⇓P	Pn	21 45 06.1	+2.7
	95nm,0.3s,SNR=144						
TKM2				⇑S	Sn	21 45 33.7	+3.3
	199nm,0.4s						
MK31	**Makanchi Array**	8.13	53	Pn	P	21 46 29.8	+1.5
	6.0nm,1.1s,baz=229,slow=12,SNR=17						
MK31				⇑Lg		21 48 40.1	
	16nm,1.5s,baz=233,slow=28,SNR=3.6						
KURK	**Kurchatov**	9.37	23	⇓Lg		21 49 24.8	
	4.8nm,1.0s						
VOSK	**Vostochnaya**	10.58	354	⇓Pn	P	21 47 01.9	-0.1
	1.2nm,0.7s						
VOSK				⇑Sn	S	21 49 01.0	-0.9
	0.8nm,0.8s						
BVA0	**Borovoye Array**	10.93	352	⇓Pn	P	21 47 04.8	-2.0
	0.1nm,0.6s,baz=159,slow=13,SNR=7.8						
BVA0				⇑Sn	S	21 49 08.5	-2.1
	0.6nm,1.4s,baz=157,slow=26,SNR=3.7						
AB31	**Akbulak array**	11.44	312	⇓P	P	21 47 15.4	+1.6
	1.8nm,0.6s,baz=121,slow=14,SNR=18						
CHKZ	**Chkalovo**	11.55	353	⇓Pn	P	21 47 14.9	-0.5
	2.0nm,1.1s						
CHKZ				⇓Sn	S	21 49 23.9	-1.9
	1.2nm,1.0s						

*NEIC **21** 21:50:32.0, 22.63S×68.63W, h129^{km}, mb3.9/2, After GUC.*

GUC 21 21:50:32.0±0.8**, 22.63S×68.63W, h129**^{km}±7^{km}**, ML3.7, 1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	0.48	125	eP	P	21 50 51.4	+0.4
SPCH				i S	S	21 51 07.1	+1.6
SPCH				AMP		21 51 07.8	
	comp=E,5µm,0.2s						
CEN1	**Los Morros**	1.63	242	⇓iP	P	21 51 04.7	+2.8
CEN1				i S	S	21 51 29.1	+4.3
ANCH	**Antofagasta**	1.94	237	eP	P	21 51 06.1	+0.5
ANCH				i S	S	21 51 31.9	+0.6
CPN1	**Cerro Paranal**	2.57	219	eP	P	21 51 14.9	+1.1
CPN1				i S	S	21 51 47.2	+1.8
CPN1				AMP		21 52 17.8	
	comp=E,171nm,0.3s						
CDCH	**Caldera**	4.85	204	eP	P	21 51 42.2	-2.0
LPAZ	**La Paz**	6.33	4	ePn	P	21 51 58.5	-5.5
	comp=E,5.4nm,0.4s						
TRQA	**Tornquist**	16.40	161	Pn	P	21 54 15.2	-0.7
	comp=E,3.3nm,1.0s						

*NIED **21** 21:53:00, 20.30N×122.20E, h35^{km}, Mw4.2 Best double couple: M₀2.21×10^{15} NP1:ϕ_s278°, δ65°, λ-99°. NP2: ϕ_s120°, δ27°, λ-71°.*
*IDC **21** 21:53:35.6±1.4, 19.65N×122.23E, mb3.7/4, mb1 3.9/5, mb1mx3.7/19, mbtmp3.9/5, ML4.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.8/30, Error ellipse: s-maj=51.1km s-min=25.5km az=69.0*
*JMA **21** 21:53:41.9±0.4, 20.34N×122.25E, M4.3*
*NEIC **21** 21:53:42.3±1.1, 20.07N×122.64E, h35^{km}, mb4.8/2, Error ellipse: s-maj=36.5km s-min=13.8km az=61.0*
*MAN **21** 21:53:52.5, 19.26N×121.70E, h20^{km}, mb4.8, ML3.7, MS3.7*

ISC 21 21:53:41.1±0.5**, 20.06N**±0.03×**122.16E**±0.08**, h43**^{km}±10^{km}**, n27, $\sigma 1^{s}$25**/39**, mb3.9**/6**, MS3.0**/1**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	1.81	184	eP	P	21 54 11.3	+0.9
PIP	**Pasuquin**	2.26	220	⇓iP	P	21 54 15.9	-1.0
PIP				eS	S	21 54 35.5	-8.2
APYP	**Conner**	2.36	202	eP	P	21 54 17.5	-0.6
APYP				eS	S	21 54 44.3	-1.7
CVP	**Callao Caves**	2.37	188	eP	P	21 54 19.5	+1.1
ABRA	**Dolores**	2.77	210	eP	P	21 54 23.6	-0.4
ABRA				eS	S	21 54 56.4	-0.1
CAUP	**Cauayan**	3.12	186	eP	P	21 54 30.8	+1.7
CAUP				eS	S	21 55 10.7	+5.3
NACB	**Ninganchiao**	4.12	353	ePn	P	21 54 42.4	-0.9
NACB				eSn	S	21 55 29.0	-1.9
HATJ	**Hateruma jima**	4.26	21	P	P	21 54 46.0	+0.9
HATJ				S	S	21 55 33.2	-1.0
BALP	**Baler**	4.33	188	eP	P	21 54 46.8	+0.6
BALP				eS	S	21 55 32.5	-3.6
YOJ	**Yonaguni jima**	4.45	10	P	P	21 54 48.5	+0.7
YOJ				eS	S	21 55 38.9	-0.1
IRIF	**Iriomote-Funau**	4.49	19	P	P	21 54 49.1	+0.6
IRIF				S	S	21 55 39.1	-1.0
JKRS	**Kuro-shima**	4.49	22	P	P	21 54 49.7	+1.2
JKRS				S	S	21 55 39.1	-1.0
YHNB	**Yeheng**	4.64	351	ePn	P	21 54 51.4	+0.8
YHNB				eSn	S	21 55 42.5	-1.4
JIJ	**Ishigaki jima**	4.66	23	P	P	21 54 51.2	+0.4
JIJ				S	S	21 55 42.2	-2.0
SCZP	**Santa Cruz**	4.77	207	eP	P	21 54 49.1	-3.3
TATO	**Taipei**	4.93	353	ePn	P	21 54 57.1	+2.5
TATO				eSn	S	21 55 52.7	+1.6
JTJ	**Tarama**	5.13	27	P	P	21 54 58.3	+0.9
JTJ				S	S	21 55 56.0	0.0
JOW	**Kunigami**	8.77	39	Pn	P	21 55 47.9	-0.2
	5.3nm,0.3s,baz=239,slow=9.5,SNR=6.6						
JNU	**Nakatsue**	15.15	29	LR	LR	22 02 34.9	
	comp=Z,85nm,21.0s,baz=56,slow=35						
GUMO	**Guam**	22.65	103	LR	LR	22 04 55.2	
	comp=Z,55nm,21.6s,MS3.0,baz=71,slow=30						
GUMO	**Guam**	22.65	103	eP	P	21 58 35.4	-4.4
SONM	**Songino Array**	30.51	339	P	P	21 59 53.2	+0.9
	0.4nm,0.7s,mb3.4,baz=164,slow=9.8,SNR=2.9						
WRAB	**Tennant Creek**	41.50	163	eP	P	22 01 26.0	0.0
	5.3nm,0.9s,mb4.2						
WRA	**Warramunga Arr**	41.51	163	P	P	22 01 21.3	-4.7
	0.9nm,0.5s,mb3.6,baz=343,slow=9.3,SNR=4.6						
MKAR	**Makanchi Array**	41.97	319	P	P	22 01 30.9	+1.4
	0.7nm,0.6s,mb3.4,baz=113,slow=8.9,SNR=8.1						
ZAL	**Zalesovo**	44.21	329	P	P	22 01 50.6	+3.0
	0.5nm,0.4s,mb3.6,baz=295,slow=7.6,SNR=2.5						
CASY	**Casey**	86.52	185	P	P	22 06 18.1	-2.0
	21nm,0.9s,mb5.4						

*ISK **21** 22:43:45.4, 39.93N×40.74E, h5^{km}, MD3.8, ML3.9*
*MOS **21** 22:43:45.6±1.4, 39.83N×40.75E, h10^{km}, mb4.3/1, Error ellipse: s-maj=11.7km s-min=8.7km az=89.9*
*NEIC **21** 22:43:45.4, 39.90N×40.70E, h5^{km}, mb4.2/1, ML3.9(ISK), After ISK.*
*IDC **21** 22:43:48.5±3.3, 39.79N×40.80E, h22^{km}±23^{km}, mb3.5/6, mb1 3.7/10, mb1mx3.6/25, mbtmp3.7/10, ML3.8/2, MS3.4/7, Ms1 3.4/7, ms1mx3.0/25, Error ellipse: s-maj=25.8km s-min=9.3km az=3.0*
*CSEM **21** 22:43:49.3±0.1, 39.90N×40.75E, h40^{km}, MD3.8, Error ellipse: s-maj=2.2km s-min=1.5km az=22.0*

ISC 21 22:43:46.3±0.8**, 39.96N**±0.03×**40.78E**±0.03**, h6**^{km}±6^{km}**, n82, $\sigma 1^{s}$29**/91**, mb3.6**/7**, MS3.3**/6**, 4C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZM	**Erzurum**	0.45	96	i PG	Pg	22 43 55.0	-0.4
ERZM	**Erzurum**	0.45	96	i P	Pg	22 43 53.9	-1.5
ERZM				i S	Sg	22 44 07.0	+5.6
EZC	**Erzincan**	0.77	255	PN	Pn	22 44 06.8	+3.3
GUMT	**Gumushane**	1.12	297	PN	Pn	22 44 07.5	-0.9
GUMT				SN	Sn	22 44 24.2	-0.1
MACK	**Trabzon**	1.25	322	i P	Pb	22 44 10.1	+0.1
MACK				i S	Sb	22 44 30.7	+4.5
BTMT	**Batman**	1.85	162	PN	Pn	22 44 19.7	+0.8
KARS	**Kars**	1.89	69	PN	Pn	22 44 21.0	+1.5
ELZG	**Elazig**	2.02	224	i P	Pn	22 44 20.0	-1.3
ELZG				i S	Sn	22 44 46.0	-1.2
BEST	**Besiri**	2.10	169	i P	Pn	22 44 22.7	+0.3
BEST				i S	Sn	22 44 52.3	+3.1
DIY	**Diyarbakir**	2.10	192	PN	Pn	22 44 23.0	+0.5
GRSN	**GIRESUNGRSN**	2.15	298	i P	Pn	22 44 23.5	+0.3
GRSN				i S	Sn	22 44 47.5	-3.0
VANB	**Van**	2.44	123	ePN	Pn	22 44 28.2	+0.9
MYA	**Malataya**	2.45	229	PN	Pn	22 44 27.6	0.0
TVAN	**Van**	2.49	124	i P	Pn	22 44 26.2	-1.9
AKH	**Akhalkalaki**	2.52	54	P	Pg	22 44 34.7	-1.9
AKH				S	Sg	22 45 10.8	+0.6
VANT	**Van**	2.53	126	ePN	Pn	22 44 28.5	-0.1
CLDR	**Caldiran**	2.56	108	ePN	Pn	22 44 30.4	+1.3
MARD	**Mardin**	2.64	180	i P	Pn	22 44 28.4	-1.9
MARD				i S	Sn	22 44 54.8	-8.2
BKR	**Bakuriani**	2.72	48	P	Pn	22 44 34.6	+3.2
BKR				S	Sg	22 45 27.8	+11
SIRT	**Sirnak**	2.77	152	ePN	Pn	22 44 32.9	+0.7
URFA	**Urfa**	2.94	212	ePN	Pn	22 44 33.6	-0.9
SVST	**Sivas**	2.95	268	i P	Pn	22 44 36.7	+2.0
GNI	**Garni**	3.05	85	ePN	Pn	22 44 37.7	+1.7
GNI	**Garni**	3.05	85	Pn	Pn	22 44 38.0	+2.0
	0.6nm,0.3s,baz=357,slow=4.6,SNR=5.8						
GNI				Sn	Sn	22 45 13.6	+0.3
	9.1nm,0.3s,baz=287,slow=23,SNR=3.8						
GNI				Lg		22 45 24.6	
	baz=161,slow=9.5,SNR=4.1						
GNI				LR	LR	22 46 13.5	
	comp=Z,597nm,18.1s,baz=275,slow=48						
ONI	**Oni**	3.30	37	P	Pg	22 44 46.7	-5.6
ONI				S	Sg	22 45 31.5	-4.7
HKR	**Hakkari**	3.31	135	ePN	Pn	22 44 40.8	+0.9
TBLG	**Delisi**	3.48	58	P	Pn	22 44 42.1	-0.2
TBLG				S	Sg	22 45 35.2	-7.1
TI2	**Plekhanov**	3.49	58	i P	Pn	22 44 41.8	-0.6
TI2				pmax	pmax		
	comp=Z,100nm,0.6s						
TI2	**Plekhanov**	3.49	58	i P	Pn	22 44 41.8	-0.6
	comp=Z,100nm,0.6s						
MTA	**Mtatsminda**	3.50	59	P	Pn	22 44 46.3	+3.8
SAMG	**Sameba**	3.52	59	P	Pn	22 44 47.1	+4.3
GZT	**Gaziantep**	3.62	225	i P	Pn	22 44 41.5	-2.6
SOC	**Sochi**	3.71	348	eP	Pn	22 44 45.0	-0.5
SOC				e		22 45 26.5	
SOC				pmax	pmax		
	comp=Z,104nm,0.8s						
SOC				pmax	pmax		
	comp=N,233nm,0.9s						
SOC				pmax	pmax		
	comp=E,28nm,0.6s						
SOC				smax			
	comp=N,262nm,1.0s						
SOC				MLR	MLR		
	comp=Z,242nm,12.0s						
SOC	**Sochi**	3.71	348	eP	Pn	22 44 45.0	-0.5
	comp=Z,233nm,0.9s						
SOC				eS	Sn	22 45 26.5	-3.6
	comp=Z,242nm,12.0s						
KVT	**Kavak**	3.78	289	ePN	Pn	22 44 47.6	+1.1
DGRG	**David-gareji**	3.79	65	P	Pn	22 44 46.3	-0.3
GAZ	**Gaziantep**	3.94	226	ePN	Pn	22 44 47.9	-0.9
BNN	**Bunyan**	3.98	255	ePN	Pn	22 44 49.9	+0.6
MSL	**Mosul**	4.09	153	ex	x	22 44 55.5	
MSL				ex	x	22 45 05.5	
MSL				ex	x	22 45 58.5	
MSL				ex	x	22 46 15.0	
KIV	**Kislovodsk**	4.24	19	ePn	Pn	22 44 54.6	+1.6
KIV	**Kislovodsk**	4.24	19	eP	Pn	22 44 54.6	+1.6
KOZT	**Kozan**	4.60	239	ePN	Pn	22 44 58.5	+0.5
CTKT	**Corum**	4.63	280	i P	Pn	22 45 03.1	+4.6
BYBT	**Boyabat**	4.81	290	ePN	Pn	22 45 02.1	+1.0
CDAG	**Cicekdag**	4.95	268	i P	Pn	22 45 09.9	+6.9
TOS	**Tosya**	5.26	284	ePN	Pn	22 45 08.2	+0.8
KAMT	**Kaman**	5.49	266	ePN	Pn	22 45 11.4	+0.8

BR131	**Keskin Array S**	**5.50**	**270**	*e*Pn	**Pn**	**22 45 14.3**	**+3.5**
	comp=Z,13nm,0.8s						
BRTR	**Keskin Array B**	**5.50**	**270**	Pn	**Pn**	**22 45 10.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=90,slow=16,SNR=4.3						
BRTR				Lg		22 46 42.9	
	baz=125,slow=23,SNR=2.3						
ANTO	**Ankara**	**6.14**	**272**	*e*Pb	**Pb**	**22 45 35.4**	**+1.8**
	comp=Z,44nm,0.9s						
ANTO	**Ankara**	**6.14**	**272**	*e*P	**Pb**	**22 45 35.4**	**+1.7**
ANTO				pmax	pmax		
	comp=Z,44nm,0.9s						
BHD	**Baghdad**	**7.27**	**155**	*e*x	x	22 46 06.5	
BHD				*e*x	x	22 47 56.0	
TIRR	**Tirgusor**	**10.22**	**300**	⇑P	**P**	**22 46 15.9**	**-0.7**
TIRR	**Tirgusor**	**10.22**	**300**	*e*Pn	**P**	**22 46 15.1**	**-1.5**
TIRR				*e*Sn	**S**	**22 48 07.5**	**-5.2**
TIRR	**Tirgusor**	**10.22**	**300**	*e*Pn	**P**	**22 46 15.1**	**-1.5**
TIRR				*e*Sn	**S**	**22 48 07.5**	**-5.1**
HARR	**Harsova**	**10.62**	**301**	⇑P	**P**	**22 46 21.2**	**-0.9**
CFR	**Carcaliu**	**10.68**	**303**	⇑P	**P**	**22 46 22.7**	**-0.3**
VRI	**Vrincioaia**	**11.87**	**304**	⇓P	**P**	**22 46 40.8**	**+1.7**
MLR	**Muntele Rosu**	**12.23**	**302**	Pn	**P**	**22 46 44.9**	**+1.0**
	baz=86,slow=16						
VOIR		**12.80**	**300**	⇓P	**P**	**22 46 53.1**	**+1.5**
AKASG	**Malin Array Be**	**13.45**	**327**	Pn	**P**	**22 46 58.5**	**-1.7**
	comp=Z,1.4nm,0.3s,baz=136,slow=10.0,SNR=9.9						
BURAR	**Bucovina Array**	**13.59**	**309**	⇑P	**P**	**22 47 03.0**	**+1.0**
OBN	**Obninsk**	**15.42**	**351**	*e*P	**P**	**22 47 29.1**	**+3.1**
AKTK	**Aktyubinsk**	**16.00**	**43**	Pn	**P**	**22 47 31.8**	**-1.7**
AKTK	**Aktyubinsk**	**16.00**	**43**	Pn	**P**	**22 47 31.8**	**-1.7**
AKTO	**Aktyubinsk**	**16.00**	**43**	Pn	**P**	**22 47 31.8**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=241,slow=12,SNR=6.3						
ARU	**Arti**	**20.20**	**29**	*e*P	**P**	**22 48 25.6**	**+1.2**
GERES	**GERESS Array B**	**21.20**	**304**	P	**P**	**22 48 33.5**	**-1.3**
	comp=Z,0.5nm,0.6s,mb3.0,baz=90,slow=7.8,SNR=3.8						
FINES	**FINESS Array B**	**23.33**	**342**	P	**P**	**22 48 56.3**	**+0.5**
	comp=Z,1.4nm,0.5s,mb3.6,baz=140,slow=11,SNR=3.6						
FINES				LR	LR	22 58 37.9	
	comp=Z,79nm,18.8s,MS3.2,baz=78,slow=38						
JOF	**Joensuu**	**23.69**	**349**	*e*p	**P**	**22 48 59.0**	**-0.2**
KAF	**Kangasniemi**	**23.87**	**343**	*e*p	**P**	**22 48 55.6**	**-5.4**
BVAR	**Borovoye Array**	**24.01**	**47**	P	**P**	**22 49 01.3**	**-1.1**
	comp=Z,0.5nm,0.8s,mb3.0,baz=252,slow=9.1,SNR=3.3						
CHKZ	**Chkalovo**	**24.38**	**46**	*e*P	**P**	**22 49 06.4**	**+0.4**
	comp=Z,7.0nm,1.1s,mb4.0						
CHKZ	**Chkalovo**	**24.38**	**46**	*e*P	**P**	**22 49 06.4**	**+0.4**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.0						
HFS	**Hagfors**	**26.32**	**329**	P	**P**	**22 49 23.2**	**-1.1**
	comp=Z,3.7nm,1.1s,mb3.9,baz=135,slow=10,SNR=2.4						
HFS				LR	LR	23 00 52.4	
	comp=Z,49nm,20.9s,MS3.0,baz=291,slow=39						
NOA	**NORSAR Array B**	**27.85**	**329**	LR	LR	23 01 08.5	
	comp=Z,41nm,21.7s,MS3.0,baz=280,slow=37						
MKAR	**Makanchi Array**	**30.65**	**63**	P	**P**	**22 50 00.3**	**-3.2**
	comp=Z,0.6nm,0.8s,mb3.5,baz=276,slow=8.3,SNR=2.6						
MKAR	**Makanchi Array**	**30.65**	**63**	P	**P**	**22 50 00.3**	**-3.2**
ARCES	**ARCESS Array B**	**30.73**	**350**	LR	LR	23 02 45.3	
	comp=Z,69nm,19.9s,MS3.3,baz=16,slow=37						
SONM	**Songino Array**	**46.65**	**58**	LR	LR	23 14 11.7	
	comp=Z,64nm,18.9s,MS3.6,baz=194,slow=39						
DBIC	**Dimbokro**	**52.58**	**243**	P	**P**	**22 53 00.1**	**-3.1**
	comp=Z,1.9nm,0.7s,mb4.2,baz=23,slow=9.0,SNR=7.5						
MJAR	**Matsushiro Arr**	**72.59**	**57**	LR	LR	23 29 57.2	
	comp=Z,56nm,19.4s,MS3.9,baz=10.0,slow=38						

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*ISK **21** 23:03:04.2,38.46N×26.78E,h14^{km},MD2.9*

*ATH **21** 23:03:05.5,38.24N×26.74E,h4^{km},MD3.0/3*

*CSEM **21** 23:03:05.6±0.1,38.28N×26.91E,h12^{km},MD2.9,Error ellipse: s-maj=4.2km s-min=3.0km az=127.0*

ISC 21 23:03:04.8±0.6,**38.29N**±0.03×**26.82E**±0.06,**h10**^{km}**,n10,** σ**1**^{s}**09**/13,**1C-1D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.20**	**60**	PG	**Pg**	**23 03 09.3**	**+0.2**
IZM	**Izmir**	**0.36**	**72**	PG	**Pg**	**23 03 12.5**	**+0.3**
IZM				SG	**Sg**	**23 03 18.5**	**+1.3**
SMG	**Samos**	**0.58**	**179**	⇑*i*PG	**Pg**	**23 03 15.4**	**-1.1**
SMG				*e*SG	**Sg**	**23 03 23.5**	**-0.7**
AKS	**Akhisar**	**0.97**	**52**	PG	**Pg**	**23 03 22.1**	**-2.2**
PRK	**Paraskevi**	**1.05**	**336**	⇓*i*PG	**Pg**	**23 03 25.9**	**+0.1**
PRK				*e*SG	**Sg**	**23 03 40.1**	**+0.2**
MLSB	**Milas**	**1.25**	**142**	*e*PN	**Pn**	**23 03 29.9**	**+1.7**
APE	**Apeiranthos**	**1.59**	**221**	*e*PN	**Pn**	**23 03 34.4**	**+1.2**
APE	**Apeiranthos**	**1.59**	**221**	*e*Pb	**Pb**	**23 03 34.1**	**+0.3**
APE	**Apeiranthos**	**1.59**	**221**	*e*Pn	**Pn**	**23 03 34.4**	**+1.2**
DST	**Dursunbey**	**1.93**	**46**	*e*PN	**Pn**	**23 03 36.4**	**-1.6**

MAN 21 23:04:39.6,7.13N×125.45E,h16^{km}**,mb4.3,ML3.1,MS2.9, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**0.38**	**251**	*e*S	Sb	23 04 54.6	+1.8
MATI	**Mati**	**0.82**	**103**	*e*P	Pb	23 04 54.9	-0.1
MATI				*e*S	Sb	23 05 07.7	+2.1
BUKP	**Musuan**	**0.84**	**333**	*e*P	Pb	23 04 55.1	-0.2
BUKP				*e*S	Sb	23 05 06.4	+0.3
PAGZ	**Pagadian**	**2.17**	**289**	*e*P	Pn	23 05 15.4	-0.3
PAGZ				*e*S	Sn	23 05 43.3	+0.8

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*NEIC **21** 23:09:00.8,37.10N×27.50E,h3^{km},MD3.3(ISK), MD3.3(ATH),After ISK.*

*ISK **21** 23:09:01.0,37.13N×27.54E,h4^{km},MD3.3*

*ATH **21** 23:09:02.5,37.16N×27.68E,h25^{km}±1^{km},MD3.3/6*

*CSEM **21** 23:09:02.1±0.1,37.09N×27.60E,h8^{km},MD3.3,Error ellipse: s-maj=2.4km s-min=1.7km az=29.0*

ISC 21 23:09:02.7±0.4,**37.12N**±0.02×**27.57E**±0.03,**h9**^{km}±3^{km}**, n39,** σ**1**^{s}**00**/50,**2C-2D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDRM	**Kayabasi**	**0.11**	**240**	*i* P	**Pg**	**23 09 06.4**	**+0.9**
BDRM				*i* S	**Sg**	**23 09 08.9**	**+1.6**
BODT	**Bodrum**	**0.21**	**254**	PG	**Pg**	**23 09 06.2**	**-1.1**
DAT	**Datca**	**0.39**	**178**	PG	**Pg**	**23 09 09.1**	**-1.6**
DAT				SG	**Sg**	**23 09 15.8**	**-0.3**
YER	**Yerkesik**	**0.57**	**88**	PG	**Pg**	**23 09 13.2**	**-1.1**
AYDN	**Tasoluk**	**0.59**	**25**	*i* P	**Pg**	**23 09 14.3**	**-0.4**
AYDN				*i* S	**Sg**	**23 09 23.1**	**+0.4**
NISR	**Nisiros**	**0.62**	**215**	*e*PN	**Pg**	**23 09 16.5**	**+1.4**
SMG	**Samos**	**0.82**	**316**	⇑*i*PN	**Pn**	**23 09 19.2**	**-1.1**
SMG				*e*SN	**Sn**	**23 09 32.0**	**-0.6**
DALT	**Dalyan (Mudla)**	**0.93**	**112**	*e*PG	**Pg**	**23 09 19.8**	**-1.5**
ARG	**Arkhangelos**	**1.01**	**153**	*e*PN	**Pn**	**23 09 21.7**	**-1.2**
ARG				*e*SN	**Sn**	**23 09 36.6**	**-0.6**
IZM	**Izmir**	**1.30**	**349**	*e*PN	**Pn**	**23 09 25.7**	**-1.3**
KDAG	**Bornova**	**1.30**	**350**	*i* P	**Pb**	**23 09 25.9**	**-1.0**
DNZL	**Cakiroluk**	**1.31**	**64**	*i* P	**Pb**	**23 09 26.6**	**-0.4**
FETY	**Fethiye**	**1.31**	**111**	*e*PN	**Pn**	**23 09 26.8**	**-0.4**
BLCB	**Balcova**	**1.33**	**342**	*e*PN	**Pn**	**23 09 27.1**	**-0.4**
DENT	**Denizli**	**1.33**	**61**	*e*PN	**Pn**	**23 09 27.5**	**0.0**
URLA	**Izmir**	**1.46**	**328**	*i* P	**Pn**	**23 09 29.2**	**-0.1**
URLA				*i* S	**Sb**	**23 09 50.6**	**+2.5**
MANT	**Manisa**	**1.58**	**30**	*i* P	**Pn**	**23 09 30.9**	**-0.1**
GOLH	**Golhisar**	**1.60**	**85**	*i* P	**Pn**	**23 09 33.3**	**+1.9**
GOLH				*i* S	**Sb**	**23 09 55.4**	**+3.2**
KARP	**Karpathos**	**1.60**	**192**	*e*PB	**Pb**	**23 09 31.7**	**-0.4**
KARP				*e*SN	**Sn**	**23 09 54.1**	**+1.8**
APE	**Apeiranthos**	**1.63**	**269**	*e*PN	**Pn**	**23 09 31.1**	**-0.6**
APE	**Apeiranthos**	**1.63**	**269**	⇓*i*PB	**Pb**	**23 09 32.3**	**-0.2**
APE	**Apeiranthos**	**1.63**	**269**	⇓*i*Pb	**Pb**	**23 09 32.3**	**-0.2**
AKS	**Akhisar**	**1.77**	**6**	*e*PN	**Pn**	**23 09 32.6**	**-1.1**
AKAS	**Kas**	**1.86**	**118**	*i* P	**Pn**	**23 09 36.2**	**+1.1**
AKAS				*i* S	**Sn**	**23 10 03.7**	**+4.8**
ELL	**Elmali**	**1.91**	**100**	*e*PN	**Pn**	**23 09 35.9**	**0.0**
PRK	**Paraskevi**	**2.35**	**335**	*e*PN	**Pn**	**23 09 42.1**	**-0.1**
TKTP	**Tekketepe**	**2.37**	**66**	*i* P	**Pn**	**23 09 43.7**	**+1.2**
TKTP				*i* S	**Sg**	**23 10 21.5**	**-0.3**
BCK	**Bucak**	**2.44**	**81**	*e*PN	**Pn**	**23 09 43.6**	**+0.3**
ISP	**Isparta**	**2.45**	**72**	*e*PN	**Pn**	**23 09 44.1**	**+0.6**
GDZ	**Gediz**	**2.48**	**37**	*i* P	**Pg**	**23 09 53.2**	**+1.0**
GDZ				*i* S	**Sg**	**23 10 29.4**	**+4.1**
DST	**Dursunbey**	**2.62**	**18**	*e*PN	**Pn**	**23 09 45.4**	**-0.5**
BTOK	**Tokmak**	**2.66**	**8**	*i* P	**Pb**	**23 09 53.8**	**+3.6**
ALT	**Altintas**	**2.79**	**45**	*e*PN	**Pn**	**23 09 47.9**	**-0.4**
BNT	**Bandirma**	**3.24**	**5**	*e*PN	**Pn**	**23 09 54.2**	**-0.6**
ULDT	**Uludag**	**3.26**	**22**	*i* P	**Pb**	**23 10 02.0**	**+1.6**
LIA	**Limnos Island**	**3.34**	**327**	⇑*i*PN	**Pn**	**23 09 56.4**	**+0.2**
VLI	**Veliai**	**3.73**	**265**	*e*PN	**Pn**	**23 10 02.2**	**+0.5**
KIZT	**Kizilcal**	**3.83**	**61**	*e*PN	**Pn**	**23 10 03.4**	**+0.1**
RDO	**Rodhopi**	**4.32**	**339**	*e*PN	**Pn**	**23 10 09.8**	**-0.3**

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*NIED **21** 23:54:00,46.80N×153.90E,h14^{km},Mw5.1 Best double couple: M$_0$4.72×10^{16} NP1:ϕ_s152°,δ69°,λ45°. NP2:ϕ_s42°, δ49°,λ152°.*

*IDC **21** 23:54:50.7±0.6,46.45N×153.68E,mb4.6/18,mb1 4.9/20, mb1mx4.8/22,mbtmp4.6/20,ML4.0/2,MS4.5/20,Ms1 4.5/20, ms1mx4.4/25,Error ellipse: s-maj=18.3km s-min=13.8km az=164.0*

*SKHL **21** 23:54:54.1±2.5,46.66N×153.87E,h45^{km}±15^{km},mb5.9/7, mbh6.0/4,Ms5.1/5,msh5.8/3*

*BJI **21** 23:54:56.4,46.81N×153.53E,h39^{km},mB5.1,mb5.0, Ms5.0,Msz4.8*

*HRVD **21** 23:54:56.5±0.2,46.60N×154.05E,h12^{km},MW5.1/82, Centroid moment Tensor Solution. LP body waves: s57,c103;Mantle waves: s82,c162; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.55±.14; M$_{\theta\theta}$-0.97±.13; M$_{\phi\phi}$-4.58±.12; M$_{r\theta}$0.43±.44; M$_{\theta\phi}$-2.74±.11; M$_{\phi r}$2.36±.38; Best double couple: M$_0$6.284×10^{16} NP1: ϕ_s216°,δ35°,λ103°. NP2:ϕ_s21°,δ56°,λ81°. Principal axes: T 6.078, Plg77°, Azm263°; N .415, Plg7°, Azm26°; P -6.491, Plg11°, Azm117°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **21** 23:54:56.5±1.2,46.46N×153.72E,h35^{km}±11^{km},mb5.1/85, MS4.9/6 Error ellipse: s-maj=8.7km s-min=5.1km az=176.0*

*BGS **21** 23:54:57.1±3.4,46.46N×153.72E,h33^{km},mb5.1*

*MOS **21** 23:54:58.3±1.4,46.43N×153.47E,h66^{km},mb5.2/31, MS5.0/25,Error ellipse: s-maj=10.4km s-min=6.2km az=111.5*

ISC 21 23:54:55.9±0.2,**46.56N**±0.05×**153.68E**±0.04,**h37**^{km}**, h37**^{km}±.9^{km}**:pP-P,n363,**σ**1**^{s}**02**/367,**mb5.0**/140,**MS4.8**/51, **46C-12D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.27**	**254**	*i* P	**P**	**23 55 58.2**	**-2.0**
KUR				AMB	AMB	23 55 59.0	
	180nm,0.5s						
KUR				AMB	AMB	23 55 59.0	
	140nm,0.5s						
KUR				AMB	AMB	23 55 59.0	
	760nm,0.5s						
KUR				AMB	AMB	23 56 12.0	
	2µm,4.0s						
KUR				AMB	AMB	23 56 12.0	
	6µm,4.0s						
KUR				AMB	AMB	23 56 12.0	
	4µm,4.0s						
KUR				*i* S	**S**	**23 56 44.4**	**-5.2**
KUR				A		23 57 06.2	
	2µm,0.8s						
KUR				A		23 57 06.2	
	1µm,0.8s						
KUR				A		23 57 14.8	
	12µm,5.0s						
KUR				A		23 57 14.8	
	14µm,5.0s						
KUR				AMS	AMS	23 57 32.0	
	6µm,10.0s						
KUR				AMS	AMS	23 57 32.0	
	6µm,10.0s						
KUR				AMS	AMS	23 57 32.0	
	8µm,10.0s						
SKR	**Severo-Kuril's**	**4.43**	**20**	*e*P	**P**	**23 55 55.4**	**-7.0**
SKR				AMB	AMB	23 55 59.8	
	160nm,0.9s						
SKR				AMB	AMB	23 55 59.8	
	330nm,0.9s						
SKR				*e*S	**S**	**23 56 43.3**	**-10**
SKR				A		23 56 58.0	
	3µm,8.0s						
SKR				A		23 56 58.0	
	11µm,8.0s						
SKR				A		23 56 58.0	
	11µm,8.0s						
SKR				A		23 56 58.0	
	3µm,8.0s						
SKR				A		23 56 58.0	
	10µm,8.0s						
SKR				A		23 56 58.0	
	8µm,8.0s						
SKR				A		23 57 06.2	
	820nm,0.9s						
SKR				A		23 57 06.2	
	490nm,0.9s						
SKR				A		23 57 06.2	
	460nm,0.9s						
YUK	**Yuzh-Kuril'sk**	**6.07**	**248**	*e*P	**P**	**23 56 26.0**	**+0.5**
YUK				AMB	AMB	23 56 26.3	
	210nm,0.4s						
YUK				AMB	AMB	23 56 26.3	
	190nm,0.4s						
YUK				AMB	AMB	23 56 26.3	
	180nm,0.4s						
YUK				AMB	AMB	23 56 31.5	
	2µm,2.0s						
YUK				AMB	AMB	23 56 31.5	
	7µm,2.0s						
YUK				AMB	AMB	23 56 31.5	
	3µm,2.0s						
YUK				*e*S	**S**	**23 57 32.0**	**-2.6**
YUK				A		23 57 41.0	
	1µm,0.5s						
YUK				A		23 57 41.0	
	460nm,0.5s						
YUK				A		23 57 46.1	
	10µm,2.0s						
YUK				A		23 57 46.1	
	5µm,2.0s						
YUK				AMS	AMS	23 59 36.2	
	13µm,13.0s						
YUK				AMS	AMS	23 59 36.2	
	8µm,13.0s						
YUK				AMS	AMS	23 59 36.2	
	11µm,13.0s						
YUK	**Yuzh-Kuril'sk**	**6.07**	**248**	PN	**P**	**23 56 26.0**	**+0.5**
YUK				S	**S**	**23 57 32.0**	**-2.6**
YUK				pmax	pmax		
	comp=Z,180nm,0.4s						
YUK				pmax	pmax		
	comp=N,210nm,0.5s						
YUK				pmax	pmax		
	comp=E,190nm,0.5s						
YUK				pmax	pmax		
	comp=N,2µm,2.0s						
YUK				pmax	pmax		
	comp=Z,3µm,2.0s						
YUK				pmax	pmax		
	comp=E,7µm,3.0s						
YUK				smax			
	comp=N,1µm,0.5s						
YUK				smax			
	comp=E,460nm,0.6s						
YUK				smax			
	comp=N,10µm,2.0s						
YUK				smax			
	comp=E,5µm,1.0s						
YUK				MLR	MLR		
	comp=Z,11µm,14.0s						
YUK				MLR	MLR		
	comp=N,13µm,11.0s						
YUK				MLR	MLR		
	comp=E,8µm,13.0s						
PET	**Petropavlovsk**	**7.22**	**25**	*e*Pn	**P**	**23 56 48.9**	**+7.3**
	comp=E,77nm,0.9s						
PET				*e*Sn	**S**	**23 58 08.2**	**+4.9**
PET	**Petropavlovsk**	**7.22**	**25**	*e*PN	**P**	**23 56 40.6**	**-1.0**
PET				pmax	pmax		
	comp=Z,111µm,1.6s						
YSS	**Yuzh-Sakhalins**	**7.52**	**277**	⇑*e*P	**P**	**23 56 42.8**	**-3.0**
YSS				AMB	AMB	23 56 47.0	
	comp=Z,140nm,1.2s						
YSS				*e*S	**S**	**23 58 09.0**	**-1.7**
YSS				AMS	AMS	23 59 48.0	
	comp=Z,6µm,16.0s						
YSS				AMS	AMS	23 59 48.0	
	comp=Z,6µm,16.0s						
YSS	**Yuzh-Sakhalins**	**7.52**	**277**	*e*Pn	**P**	**23 56 46.2**	**+0.4**
	comp=Z,100nm,0.8s						
YSS	**Yuzh-Sakhalins**	**7.52**	**277**	*e*PN	**P**	**23 56 47.0**	**+1.2**
YSS				S	**S**	**23 58 09.0**	**-1.7**
YSS				pmax	pmax		
	comp=Z,140nm,1.2s						
YSS				MLR	MLR		
	comp=E,6µm,16.0s						
YSS				MLR	MLR		
	comp=Z,6µm,16.0s						
ASAJ	**Asahikawa**	**8.19**	**257**	Pn	**P**	**23 56 54.5**	**-0.5**
	comp=Z,3.4nm,0.3s,baz=88,slow=14,SNR=15						
ASAJ				LR	LR	00 00 49.9	
	comp=Z,3µm,18.2s,baz=129,slow=44						
ASAJ	**Asahikawa**	**8.19**	**257**	PN	**P**	**23 56 54.5**	**-0.5**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,3µm,18.3s						
UGL	**Uglegorsk**	**8.21**	**292**	*e*PN	**P**	**23 56 56.0**	**+0.6**
UGL				pmax	pmax		
	comp=Z,180nm,0.8s						
UGL				pmax	pmax		
	comp=Z,3µm,8.0s						
UGL				MLR	MLR		
	comp=N,8µm,15.0s						
UGL				MLR	MLR		
	comp=E,13µm,15.0s						
UGL				MLR	MLR		
	comp=Z,11µm,15.0s						
TYV	**Tymovskoe**	**8.46**	**305**	*e*P	**P**	**23 56 54.8**	**-4.1**
TYV				AMB	AMB	23 57 01.5	
	comp=Z,1µm,5.0s						
TYV				AMB	AMB	23 57 05.5	
	comp=Z,46nm,0.9s						
TYV				AMB	AMB	23 57 05.5	
	comp=Z,62nm,0.9s						
TYV				AMB	AMB	23 57 05.5	
	comp=Z,76nm,0.9s						
TYV				*e*S	**S**	**23 58 33.5**	**-0.8**
TYV				A		23 58 35.0	
	comp=Z,51nm,1.0s						
OKH	**Okha**	**9.83**	**319**	*e*P	**P**	**23 57 12.0**	**-5.6**
OKH				AMB	AMB	23 57 20.0	
	comp=Z,3µm,8.0s						
NKL	**Nikolayevsk**	**10.66**	**313**	*i* P	**P**	**23 57 26.0**	**-3.1**
NKL				AMB	AMB	23 57 35.0	
	comp=Z,2µm,9.0s						
NKL				AMB	AMB	23 57 35.0	
	comp=Z,1µm,9.0s						
NKL				AMB	AMB	23 57 39.5	
	comp=Z,730nm,2.0s						
NKL				*e*rx	rx	23 59 34.0	
NKL				AMS	AMS	00 02 27.0	
	comp=Z,3µm,16.0s						
NKL				AMS	AMS	00 02 27.0	
	comp=Z,5µm,16.0s						
NKL				AMS	AMS	00 02 27.0	
	comp=Z,8µm,16.0s						
FX1	**Attu Island--F**	**14.07**	**56**	Pn	**P**	**23 58 09.6**	**-4.9**
	comp=Z,3.0nm,0.3s,baz=89,slow=22,SNR=10.0						
FX1				Sn	**S**	**00 00 37.8**	**-13**
	comp=Z,3.7nm,0.3s,baz=55,slow=23,SNR=7.1						
FX1				LR	LR	00 03 40.7	
	comp=Z,44nm,18.2s,baz=268,slow=38						
FX1	**Attu Island--F**	**14.07**	**56**	*e*Pn	**P**	**23 58 10.5**	**-4.0**
KLR	**Kul'dur**	**14.95**	**288**	*e*P	**P**	**23 58 28.5**	**+2.6**
KLR				pmax	pmax		
	comp=E,1µm,11.0s						
KLR				pmax	pmax		
	comp=Z,3µm,11.0s						
KLR				MLR	MLR		
	comp=Z,18µm,13.0s						
MAJO	**Matsushiro**	**15.29**	**235**	*e*Pn	**P**	**23 58 26.8**	**-3.7**
	comp=Z,109nm,1.1s						
MAJO	**Matsushiro**	**15.29**	**235**	*e*P	**P**	**23 58 26.8**	**-3.7**
MAJO				pmax	pmax		
	comp=Z,109nm,1.1s						
MAT	**Matsushiro**	**15.29**	**235**	P	**P**	**23 58 26.7**	**-3.8**
MAT				S	**S**	**00 01 14.0**	**-5.0**
MAT	**Matsushiro**	**15.29**	**235**	*e*P	**P**	**23 58 27.0**	**-3.5**
	comp=Z,28nm,1.0s						
MAT				*e*S	**S**	**00 01 14.0**	**-5.0**
MAT	**Matsushiro**	**15.29**	**235**	*e*P	**P**	**23 58 27.0**	**-3.5**
MAT				*e*S	**S**	**00 01 14.0**	**-5.0**
MAT				pmax	pmax		
	comp=Z,28nm,1.0s						
MJAR	**Matsushiro Arr**	**15.29**	**235**	Pn	**P**	**23 58 26.6**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=30,slow=12,SNR=25						
SEY	**Seymchan**	**16.42**	**358**	*e*P	**P**	**23 58 47.7**	**+3.0**
MDJ	**Mudanjiang**	**16.96**	**272**	P	**P**	**23 58 51.3**	**-0.4**
MDJ				AMB	AMB		
	comp=Z,50nm,1.5s						
MDJ				AMB	AMB		
	comp=Z,430nm,9.4s						
MDJ	**Mudanjiang**	**16.96**	**272**	*e*Pn	**P**	**23 58 51.5**	**-0.1**
	comp=Z,84nm,1.2s						
ZEA	**Zeya**	**18.32**	**303**	*e*P	**P**	**23 59 05.0**	**-3.7**
ZEA				AMB	AMB	23 59 12.0	
	comp=Z,500nm,7.0s						
ZEA				AMB	AMB	23 59 12.0	
	comp=Z,1µm,8.0s						
ZEA				AMB	AMB	23 59 12.0	
	comp=Z,1µm,7.0s						
CN2	**Changchun**	**20.05**	**272**	*e*P	**P**	**23 59 25.0**	**-3.4**
CN2				AMB	AMB		
	comp=Z,50nm,1.0s						
CN2				AMB	AMB		
	comp=Z,430nm,9.0s						
CN2				LR	LR		
	comp=N,2µm,15.0s,MS4.8						
CN2				LR	LR		
	comp=E,3µm,15.0s,MS4.8						
CN2				LR	LR		
	comp=Z,3µm,16.0s,MS4.7						
CLNS	**Chul'man**	**20.44**	**311**	*e*P	**P**	**23 59 30.2**	**-2.2**
CLNS				pmax	pmax		
	comp=Z,32nm,0.8s						
CLNS				pmax	pmax		
	comp=N,10.0nm,1.2s						
CLNS				pmax	pmax		
	comp=E,20nm,1.1s						
CLNS				MLR	MLR		
	comp=E,5µm,14.0s,MS5.0						
CLNS				MLR	MLR		
	comp=Z,5µm,14.0s,MS5.1						
CLNS				MLR	MLR		
	comp=N,700nm,13.0s,MS5.0						
YAK	**Yakutsk**	**20.69**	**327**	*e*P	**P**	**23 59 33.3**	**-1.6**
YAK				*e*		23 59 56.4	
YAK				*e*PPP	PPP	00 00 08.9	+2.7
YAK				*e*S	**S**	**00 03 35.9**	**+17**
YAK				*e*SS	SS	00 03 59.3	+8.3
YAK				*e*SSS	SSS	00 04 14.3	+8.6
YAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK				pmax	pmax		
	comp=N,13nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				MLR	MLR		
	comp=N,901nm,16.0s,MS4.3						
YAK				MLR	MLR		
	comp=Z,830nm,16.0s,MS4.2						
YAK				MLR	MLR		
	comp=E,720nm,17.0s,MS4.3						
KS15	**Wonju Array Si**	**21.15**	**254**	*e*Pn	**P**	**23 59 40.3**	**+0.4**
CBIJ	**Chichi jima**	**21.46**	**209**	LR	LR	00 09 09.3	
	comp=E,601nm,18.0s,MS4.0,baz=321,slow=40						
INCN	**Inchon**	**21.96**	**255**	*e*P	**P**	**23 59 48.6**	**+0.7**
	comp=E,26nm,0.6s,mb4.8						
JNU	**Nakatsue**	**21.97**	**240**	LR	LR	00 09 15.7	
	comp=E,477nm,18.1s,MS4.0,baz=34,slow=40						
SNY	**Shenyang**	**22.02**	**269**	⇑P	**P**	**23 59 47.8**	**-0.7**
SNY				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.0						
SNY				AMB	AMB		
	comp=Z,680nm,9.8s						
SNY				LR	LR		
	comp=E,2µm,16.1s						
SNY				LR	LR		
	comp=Z,3µm,15.7s,MS4.8						
BILL	**Bilibino**	**22.49**	**12**	⇑*e*P	**P**	**23 59 51.3**	**-1.6**
BILL				*e*		00 00 04.2	
BILL				*i*		00 00 36.9	
BILL				*e*		00 05 00.2	
BILL				pmax	pmax		
	comp=Z,31nm,1.2s,mb4.6						

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BILL                            MLR    MLR
      comp=Z,1µm,18.0s,MS4.4
DL2   Dalian          24.63 264⇑iP     P      00 00 15.1 +1.1
DL2                              S     S      00 04 33.8 +3.7
DL2                              AMB   AMB
      comp=Z,30nm,1.3s,mb4.7
DL2                              AMB   AMB
      comp=Z,620nm,5.9s
DL2                              LR    LR
      comp=N,570nm,14.2s,MS4.2
DL2                              LR    LR
      comp=E,260nm,14.5s,MS4.2
DL2                              LR    LR
      comp=Z,470nm,18.2s,MS4.0
BOD   Bodaibo         26.41 310  eP    P      00 00 28.0 -2.5
BOD                              pmax  pmax
      comp=Z,24nm,1.2s,mb4.6
TIXI  Tiksi           27.76 343  eP    P      00 00 36.4 -6.3
TIXI                             e            00 01 29.2
TIXI                             eS    S      00 05 27.9 +6.8
TIXI                             eSS   SS     00 06 47.7 +5.4
TIXI                             pmax  pmax
      comp=Z,6.0nm,0.7s,mb4.3
TIXI                             MLR   MLR
      comp=Z,3µm,15.0s,MS5.0
TIA   Tai'an          29.08 262  eP    P      00 00 54.5 -0.3
SSE   Sheshan         29.40 250  P     P      00 00 56.6 -1.2
SSE                              S     S      00 05 42.1 -5.7
SSE                              AMB   AMB
      comp=Z,30nm,0.9s,mb5.0
SSE                              AMB   AMB
      comp=Z,220nm,7.2s
SSE                              LR    LR
      comp=N,540nm,20.0s,MS4.2
SSE                              LR    LR
      comp=E,190nm,20.0s,MS4.2
SSE                              LR    LR
      comp=Z,590nm,18.6s,MS4.2
NJ2   Nanjing         30.32 254  eP    P      00 01 06.8 +0.9
NJ2                              PP    PP     00 02 08.0 +2.3
NJ2                              S     S      00 06 04.0 +1.7
NJ2                              AMB   AMB
      comp=Z,20nm,0.8s,mb4.9
NJ2                              AMB   AMB
      comp=Z,80nm,4.8s
NJ2                              LR    LR
      comp=N,4µm,20.1s,MS5.2
NJ2                              LR    LR
      comp=E,3µm,15.9s,MS5.2
NJ2                              LR    LR
      comp=Z,1µm,15.4s,MS4.6
HHC   Hu-ho-hao-te    30.70 275 ⇑P     P      00 01 09.3 +0.1
HHC                              PP    PP     00 02 14.1 +3.5
HHC                              PCP   PcP    00 04 01.9 -4.7
HHC                              S     S      00 06 09.0 +0.9
HHC                              PCS          00 07 46.1
HHC                              AMB   AMB
      comp=Z,40nm,1.6s,mb5.0
HHC                              AMB   AMB
      comp=Z,390nm,7.2s
HHC                              LR    LR
      comp=N,2µm,16.8s,MS4.9
HHC                              LR    LR
      comp=E,1µm,16.8s,MS4.9
HHC                              LR    LR
      comp=Z,2µm,15.6s,MS4.8
ULN   Ulaanbaatar     31.33 290  eP    P      00 01 13.9 -0.8
SONM  Songino Array   31.77 290  P     P      00 01 16.7 -1.8
      comp=Z,2.1nm,0.7s,mb4.0,baz=72,slow=8.7,SNR=16
SONM                             PcP   PcP    00 04 07.7 -1.7
      comp=Z,1.8nm,0.9s,baz=76,slow=2.9,SNR=3.9
SONM                             ScP          00 07 51.4
      comp=Z,1.3nm,1.1s,baz=45,slow=6.3,SNR=5.6
SONM                             LR    LR     00 15 08.1
      comp=Z,2µm,18.0s,MS4.9,baz=62,slow=38
GUMO  Guam            33.70 196  LR    LR     00 14 23.3
      comp=Z,283nm,18.6s,MS4.0,baz=52,slow=35
IMA2  Indian Mountai  33.73  36  eP    P      00 01 29.3 -6.0
WHN   Wuhan           34.27 256  eP    P      00 01 40.0 -0.4
XAN   Xi'an           35.89 266  P     P      00 01 53.9 -0.3
XAN                              AP    pP     00 02 05.1 +0.3
XAN                              AMB   AMB
      comp=Z,30nm,1.6s,mb5.0
XAN                              LR    LR
      comp=N,590nm,15.1s,MS4.7
XAN                              LR    LR
      comp=E,790nm,15.4s,MS4.7
XAN                              LR    LR
      comp=Z,1µm,15.6s,MS4.9
ILAR  Eielson Array   36.45  38  P     P      00 01 57.2 -1.4
      comp=Z,1.9nm,0.8s,mb4.1,baz=254,slow=7.2,SNR=21
ILAR                             LR    LR     00 17 19.1
      comp=Z,382nm,20.7s,MS4.2,baz=182,slow=37
ILAR  Eielson Array   36.45  38  P     P      00 01 57.2 -1.4
ILAR                             pmax  pmax
      comp=Z,2.0nm,0.8s
ILAR                             MLR   MLR
      comp=Z,382nm,20.7s
ENH   Enshi           37.72 260  eP    P      00 02 09.3 -0.3
      comp=Z,44nm,1.3s,mb5.0
LZH   Lanzhou         38.29 272 ⇑P     P      00 02 15.8 +1.5
LZH                              eS    S      00 08 11.0 +5.4
LZH                              AMB   AMB
      comp=Z,90nm,1.2s,mb5.4
LZH                              AMB   AMB
      comp=Z,710nm,5.1s
LZH                              LR    LR
      comp=N,2µm,14.1s
LZH                              LR    LR
      comp=Z,2µm,18.4s,MS5.1
GTA   Gaotai          39.39 280  eP    P      00 02 24.3 +0.9
GTA                              AP    pP     00 02 37.0 +3.0
GTA                              XP    sP     00 02 42.0 +3.3
GTA                              PP    PP     00 03 59.8 +1.9
GTA                              PPP   PPP    00 04 23.8 +1.3
GTA                              PCP   PcP    00 04 32.1 +0.3
GTA                              SCP          00 08 15.3
GTA                              PCS          00 08 20.8
GTA                              S     S      00 08 22.8 +0.6
GTA                              XS           00 08 42.5
GTA                              SS    SS     00 11 10.3 +0.6
GTA                              SCS   ScS    00 12 27.6 +0.9
GTA                              AMB   AMB
      comp=Z,20nm,1.4s,mb4.7
GTA                              AMB   AMB
      comp=Z,390nm,7.3s
GTA                              LR    LR
      comp=N,880nm,16.1s,MS5.0
GTA                              LR    LR
      comp=E,1µm,13.0s,MS5.0
GTA                              LR    LR
      comp=Z,2µm,14.5s,MS5.0
DAWY  Dawson          39.73  39  eP    P      00 02 25.9 -0.1
CD2   Chengdu         41.26 266  P     P      00 02 40.0 +1.1
CD2                              PP    PP     00 04 18.3 +1.0
CD2                              PPP   PPP    00 04 44.6 -3.3
CD2                              S     S      00 08 50.4 +0.3
CD2                              SS    SS     00 11 45.5 -4.1
CD2                              AMB   AMB
      comp=Z,20nm,0.8s,mb4.8
CD2                              AMB   AMB
      comp=Z,250nm,8.4s
CD2                              LR    LR
      comp=N,590nm,12.6s
CD2                              LR    LR
      comp=Z,610nm,15.9s,MS4.6
INK   Inuvik          41.60  32  eP    P      00 02 41.4 +0.2
      comp=Z,11nm,1.0s,mb4.4
GYA   Guiyang         42.06 258⇑iP     P      00 02 46.3 +0.7
GYA                              PP    PP     00 04 27.3 +1.2
GYA                              SCP          00 08 23.1
GYA                              S     S      00 08 59.3 -2.7
GYA                              SS    SS     00 12 02.8 -1.7
GYA                              AMB   AMB
      comp=Z,100nm,1.0s,mb5.4
GYA                              AMB   AMB
      comp=Z,120nm,2.9s,mb5.0
GYA                              LR    LR
      comp=N,540nm,17.8s,MS4.7
GYA                              LR    LR
      comp=E,620nm,17.4s,MS4.7
GYA                              LR    LR
      comp=Z,600nm,17.0s,MS4.5
ZAL   Zalesovo        43.05 306  P     P      00 02 51.5 -1.8
      comp=Z,2.7nm,0.5s,mb4.2,baz=50,slow=7.2,SNR=15
ZAL                              LR    LR     00 22 48.8
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      comp=Z,3µm,18.3s,MS5.2,baz=40,slow=39
ZAL   Zalesovo        43.05 306  P     P      00 02 51.5 -1.8
ZAL                              pmax  pmax
      comp=Z,3.0nm,0.5s
ZAL                              MLR   MLR
      comp=Z,3µm,18.3s
NVS   Novosibirsk     43.62 308⇑iP     P      00 02 55.3 -2.6
NVS                             e             00 04 42.3
NVS                              pmax  pmax
      comp=Z,27nm,1.8s,mb4.7
NVS                              pmax  pmax
      comp=N,15nm,2.0s
NVS                              pmax  pmax
      comp=E,26nm,1.9s
WMQ   Urumqi          45.36 292  P     P      00 03 11.8 -0.2
WMQ                              PP    PP     00 05 00.5 +1.7
WMQ                              PPP   PPP    00 05 45.0 +4.0
WMQ                              S     S      00 09 48.0 -1.7
WMQ                              AMB   AMB
      comp=Z,20nm,0.9s,mb5.0
WMQ                              AMB   AMB
      comp=Z,300nm,5.2s
WMQ                              LR    LR
      comp=N,2µm,12.8s,MS5.4
WMQ                              LR    LR
      comp=E,2µm,14.9s,MS5.4
WMQ                              LR    LR
      comp=Z,2µm,16.4s,MS5.1
KMI   Kunming         45.60 260  P     P      00 03 14.5 +0.3
KMI                              PCP   PcP    00 04 53.8 +1.2
KMI                              PP    PP     00 05 01.8 +0.3
KMI                              PPP   PPP    00 05 45.3 +1.0
KMI                              SCP          00 08 37.8
KMI                              PCS          00 08 46.4
KMI                              S     S      00 09 47.8 -5.5
KMI                              SCS   ScS    00 13 00.6 -4.1
KMI                              SS    SS     00 13 03.1 -5.8
KMI                              SSS   SSS    00 14 07.5 -4.7
KMI                              AMB   AMB
      comp=Z,30nm,1.1s,mb5.1
KMI                              AMB   AMB
      comp=Z,380nm,5.1s
KMI                              LR    LR
      comp=N,560nm,14.4s,MS4.8
KMI                              LR    LR
      comp=E,700nm,14.0s,MS4.8
KMI                              LR    LR
      comp=Z,530nm,16.0s,MS4.6
MKAR  Makanchi Array  47.38 298  P     P      00 03 26.7 -1.2
      comp=Z,12nm,0.8s,mb4.9,baz=70,slow=7.8,SNR=62
MKAR                             LR    LR     00 25 23.9
      comp=Z,2µm,19.1s,MS5.1,baz=88,slow=39
MKAR  Makanchi Array  47.38 298  P     P      00 03 26.7 -1.2
MKAR                             LR    LR     00 25 23.9
MKAR  Makanchi Array  47.38 298  P     P      00 03 26.7 -1.2
MKAR                             pmax  pmax
      comp=Z,12nm,0.8s
MKAR                             MLR   MLR
      comp=Z,2µm,19.1s
LSA   Lhasa           50.68 274  P     P      00 03 55.8 +2.2
LSA                              PP    PP     00 05 53.6 +3.1
LSA                              S     S      00 11 08.6 +4.0
LSA                              AMB   AMB
      comp=Z,20nm,0.9s,mb5.0
LSA                              AMB   AMB
      comp=Z,300nm,7.1s
LSA                              LR    LR
      comp=N,420nm,14.5s,MS4.7
LSA                              LR    LR
      comp=E,420nm,16.9s,MS4.7
LSA                              LR    LR
      comp=Z,850nm,17.7s,MS4.8
YKA   Yellowknife Ar  50.84  37  P     P      00 03 53.8 -0.6
      comp=Z,6.9nm,0.8s,mb4.6,baz=295,slow=7.1,SNR=6.9
YKA                              LR    LR     00 28 33.5
      comp=Z,252nm,18.9s,MS4.3,baz=300,slow=40
YKA   Yellowknife Ar  50.84  37  P     P      00 03 53.8 -0.6
YKA                              LR    LR     00 28 33.5
YKA   Yellowknife Ar  50.84  37  P     P      00 03 53.8 -0.5
YKA                              pmax  pmax
      comp=Z,7.0nm,0.8s
YKA                              MLR   MLR
      comp=Z,252nm,18.9s
SHL   Shillong        52.76 269  eP    P      00 04 11.0 +1.7
ULHL  Ulahol          53.40 295  P     P      00 04 13.3 -0.5
      SNR=7.3
TKM2  Tokmak 2        53.43 297  P     P      00 04 13.6 -0.5
      SNR=9.5
CHMS  Chumysh         53.91 297  P     P      00 04 17.2 -0.4
      SNR=6.0
USP   Ospenovka       53.92 297  P     P      00 04 16.9 -0.8
      SNR=28
KBK   Karagaybulak    53.98 297  P     P      00 04 17.2 -0.8
      SNR=6.0
FRU   Bishkek         54.09 297  eP    P      00 04 18.1 -0.8
FRU                              pmax  pmax
      comp=Z,35nm,1.6s,mb5.0
KZA   Kyzart          54.11 296  P     P      00 04 19.5 +0.5
      SNR=11
AAK   Ala-Archa       54.27 297  P     P      00 04 19.5 -0.8
      SNR=15
EKS2  Erkin-Say       54.70 297  P     P      00 04 22.6 -0.7
      SNR=21
AML   Almayashu       55.04 297  P     P      00 04 26.0 +0.2
      SNR=7.7
GUN   Gumba           55.41 276  eP    P      00 04 29.4 +0.7
      comp=Z,24nm,0.5s,mb5.5
ARU   Arti            55.41 318⇑iP     P      00 04 26.2 -2.1
ARU                             e             00 04 54.0
ARU                             e             00 05 26.4
ARU                             ePPP   PPP    00 07 42.1 -6.0
ARU                             eS     S      00 12 00.4 -8.2
ARU                              pmax  pmax
      comp=Z,17nm,0.7s,mb5.2
ARU                              MLR   MLR
      comp=Z,1µm,16.5s,MS5.0
ARU                              MLR   MLR
      comp=N,400nm,16.0s,MS4.8
ARU                              MLR   MLR
      comp=E,500nm,16.0s,MS4.8
KKN   Kakani          55.90 276  eP    P      00 04 32.9 +0.7
      comp=E,74nm,0.6s,mb5.9
PKI   Pulchoki        55.95 276  eP    P      00 04 33.0 +0.4
      comp=E,50nm,0.8s,mb5.6
HNR   Honiara         56.02 173  LR    LR     00 28 26.9
      comp=E,412nm,18.2s,MS4.6,baz=79,slow=36
DMN   Daman           56.13 276  eP    P      00 04 34.8 +0.9
GKN   Gorkha          56.20 276  eP    P      00 04 35.1 +0.7
      comp=E,92nm,0.8s,mb5.9
DAG   Danmarks Havn   56.85 358⇓iP     P      00 04 36.9 -1.5
      comp=E,11nm,0.6s,mb5.0
DAG   Danmarks Havn   56.85 358⇓iP     P      00 04 36.9 -1.5
DAG                              pmax  pmax
      comp=Z,11nm,0.6s,mb5.1
KOLN  Koldanda        57.06 277  eP    P      00 04 41.3 +0.7
      comp=Z,46nm,0.7s,mb5.6
KEV   Kevo            57.65 341  ep    P      00 04 41.8 -2.3
      comp=Z,11nm,0.7s,mb5.0
KEV   Kevo            57.65 341  eP    P      00 04 41.8 -2.3
KEV                              pmax  pmax
      comp=Z,11nm,0.7s,mb5.0
BOK   Bokaro          58.05 272  eP    P      00 04 45.0 -2.6
BOK                              AMb   AMB    00 05 08.7
      comp=Z,30nm,1.9s,mb5.0
ARCES ARCESS Array B  58.16 341  P     P      00 04 45.8 -1.9
      comp=Z,6.1nm,0.6s,mb4.8,baz=21,slow=8.9,SNR=16
ARCES                            LR    LR     00 36 26.0
      comp=Z,543nm,18.8s,MS4.7,baz=28,slow=43
BMO   Blue Mountains  58.85  56  eP    P      00 04 52.3 -0.6
      comp=Z,14nm,1.4s,mb4.8
THN   Thein Dam       59.47 286  eP    P      00 04 55.6 -1.7
OHCM  Honcut          59.66  64  eP    P      00 04 57.4 -1.2
CHMT  Chamberlain Mo  59.89  52  eP    P      00 04 58.5 -1.5
KLMR  Klimovskoe      60.47 329  eP    P      00 05 00.0 -3.8
KLMR                             pmax  pmax
      comp=Z,40nm,2.3s,mb5.0
KLMR                             MLR   MLR
      comp=Z,820nm,18.0s,MS4.9
HRY   Holter Researc  60.79  52  eP    P      00 05 06.5 +0.3
NDI   New Delhi       60.83 282  eP    P      00 05 06.0 -0.6
NDI                              eP           00 05 06.0
HLID  Hailey          61.29  56  eP    P      00 05 09.2 -0.4
      comp=Z,5.5nm,1.1s,mb4.6
MCMT  McKenzie Canyo  61.39  54  eP    P      00 05 09.2 -1.1
JOF   Joensuu         61.67 334  ep    P      00 05 09.6 -2.3
      comp=Z,7.7nm,0.7s,mb4.9
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JOF   Joensuu         61.67 334  eP    P      00 05 09.6 -2.3
JOF                              pmax  pmax
      comp=Z,8.0nm,0.7s,mb5.0
BLSP  Bilaspur        61.74 273  eP    P      00 05 12.2 -0.7
BLSP                             AMb   AMB    00 05 13.5
      comp=Z,20nm,1.4s,mb5.0
NVAR  Mina Array Bea  62.17  63  P     P      00 05 15.1 -0.4
      comp=Z,3.5nm,0.8s,mb4.6,baz=297,slow=4.8,SNR=16
NVAR                             LR    LR     00 31 02.9
      comp=Z,142nm,18.3s,MS4.2,baz=300,slow=35
QLMT  Earthquake Lak  62.18  53  eP    P      00 05 15.0 -0.5
GCMT  Greycliff       62.53  52  eP    P      00 05 18.1 +0.2
ELK   Elko            62.56  59  eP    P      00 05 17.7 -0.4
      comp=Z,2.8nm,1.0s,mb4.3
LKWY  Lake            62.91  53  eP    P      00 05 22.6 +2.2
      comp=Z,3.4nm,0.7s,mb4.6
MOOW  Moose Ponds     63.24  54  eP    P      00 05 22.8 +0.2
      comp=Z,7.5nm,1.2s,mb4.7
TPAW  Teton Pass      63.29  54  eP    P      00 05 23.4 +0.4
      comp=Z,14nm,0.9s,mb5.1
LOHW  Long Hollow     63.41  54  eP    P      00 05 23.8 +0.1
      comp=Z,9.5nm,1.1s,mb4.8
REDW  Red Top Meadow  63.43  54  eP    P      00 05 24.2 +0.3
      comp=Z,16nm,1.0s,mb5.1
KAF   Kangasniemi     63.78 335  ep    P      00 05 23.2 -2.5
      comp=Z,12nm,0.7s,mb5.0,baz=25,slow=5.3
KAF   Kangasniemi     63.78 335  eP    P      00 05 23.2 -2.5
KAF                              pmax  pmax
      comp=Z,12nm,0.7s,mb5.0
BHPL  Bhopal          64.23 277  eP    P      00 05 27.9 -1.4
BHPL                             AMb   AMB    00 05 41.3
      comp=Z,39nm,1.1s,mb5.4
FINES FINESS Array B  64.38 335  P     P      00 05 28.4 -1.1
      comp=Z,24nm,0.8s,mb5.3,baz=34,slow=7.6,SNR=97
FINES                            LR    LR     00 36 20.8
      comp=Z,673nm,18.9s,MS4.8,baz=12,slow=39
FINES FINESS Array B  64.38 335  P     P      00 05 28.4 -1.2
FINES                            LR    LR     00 36 20.8
FINES FINESS Array B  64.38 335  P     P      00 05 28.4 -1.2
FINES                            pmax  pmax
      comp=Z,25nm,0.8s
FINES                            MLR   MLR
      comp=Z,673nm,19.0s
PDAR  Pinedale Array  64.54  54  P     P      00 05 30.6 -0.4
      comp=Z,4.1nm,0.8s,mb4.5,baz=300,slow=2.1,SNR=23
GSC   Goldstone       65.09  64  eP    P      00 05 34.2 -0.5
GSC                              epP   pP     00 05 45.6 -0.3
OBN   Obninsk         65.69 326  i P   P      00 05 36.7 -1.4
NEN   Nelson          66.08  63  eP    P      00 05 39.1 -1.9
SRU   San Rafael      66.39  58  eP    P      00 05 42.6 -0.3
      comp=Z,8.9nm,0.8s,mb4.8
ULM   Lac du Bonnet   66.41  41  P     P      00 05 41.7 -1.1
      comp=Z,4.0nm,0.8s,mb4.5,baz=293,slow=14,SNR=4.5
ULM                              LR    LR     00 37 58.6
      comp=Z,266nm,18.3s,MS4.5,baz=331,slow=39
ULM   Lac du Bonnet   66.41  41  P     P      00 05 41.7 -1.1
ULM                              LR    LR     00 37 58.6
HYB   Hyderabad       67.40 272  eP    P      00 05 50.0 +0.5
PV10  Paradox Valley  67.74  57  eP    P      00 05 51.5 +0.1
SMCO  Snowmass        68.39  56  eP    P      00 05 51.5 -4.0
      comp=Z,7.7nm,0.9s,mb4.7
WB2   Warramunga Arr  68.46 200  eP    P      00 05 54.5 -1.7
WRA   Warramunga Arr  68.47 200  P     P      00 05 54.6 -1.6
      comp=Z,5.1nm,0.9s,mb4.6,baz=17,slow=6.6,SNR=17
WRA   Warramunga Arr  68.47 200  P     P      00 05 54.6 -1.6
WRA                              pmax  pmax
      comp=Z,5.0nm,0.9s
NB2   NORSAR Subarra  68.53 341  P     P      00 05 55.3 -0.6
      comp=Z,24nm,0.7s,mb5.2,baz=27,slow=6.2
NB2   NORSAR Subarra  68.53 341  P     P      00 05 55.3 -0.6
      baz=27,slow=6.5
NOA   NORSAR Array B  68.53 341  P     P      00 05 55.3 -0.6
      comp=Z,20nm,0.6s,mb5.2,baz=27,slow=6.3,SNR=104
NOA                              LR    LR     00 40 52.5
      comp=Z,444nm,18.0s,MS4.7,baz=25,slow=40
NOA   NORSAR Array B  68.53 341  P     P      00 05 55.3 -0.6
NOA                              pmax  pmax
      comp=Z,20nm,0.6s
NOA                              MLR   MLR
      comp=Z,444nm,18.0s
ISCO  Idaho Springs   68.73  54  eP    P      00 05 57.8 +0.3
      comp=Z,6.9nm,0.9s,mb4.6
NAO01 NORSAR Array S  68.78 341  eP    P      00 05 56.3 -1.2
      comp=Z,11nm,0.7s,mb4.9
NAO   NORSAR Subarra  68.81 341  P     P      00 05 55.3 -2.4
      comp=Z,24nm,0.7s,mb5.2
FITZ  Fitzroy Crossi  69.17 209  eP    P      00 05 59.8 -0.8
      comp=Z,12nm,0.6s,mb5.0
POO   Poona           69.87 276  ex    x      00 05 49.0
GOF   Gofitskoye      70.24 315⇑iP     P      00 06 06.8 +0.1
GOF                              pmax  pmax
      comp=Z,80nm,1.0s,mb5.6
KAD   Karad           70.48 275  eP    P      00 06 08.8 +0.2
KAD                              ex    x      00 06 08.8
KAD                              AMb   AMB    00 06 23.0
      comp=Z,32nm,1.7s,mb5.0
KIV   Kislovodsk      71.21 315  eP    P      00 06 13.2 +0.6
KIV                              e            00 06 33.4
KIV                              eS    S      00 15 19.7 -6.0
KIV                              pmax  pmax
      comp=Z,34nm,1.0s,mb5.2
KIV                              MLR   MLR
      comp=Z,1µm,16.0s,MS5.3
SUW   Suwalki         71.35 332  eP    P      00 06 12.7 -0.6
SUW                              ePcP  PcP    00 06 23.5  -10
SUW                              MLR   MLR    00 44 35.0
      comp=Z,700nm,17.4s,MS5.0
SUW   Suwalki         71.35 332  eP    P      00 06 12.5 -0.7
      comp=Z,54nm,1.0s,mb5.4
SUW                              epP   pP     00 06 23.2 -1.3
SUW                              ePcP  PcP    00 06 23.5  -10
SUW   Suwalki         71.35 332  eP    P      00 06 12.6 -0.6
ANMO  Albuquerque     71.59  59  eP    P      00 06 14.7 -0.3
      comp=Z,2.0nm,0.7s,mb4.2
TI2   Plekhanov       71.79 312  i P   P      00 06 15.0 -1.1
TI2                              pmax  pmax
      comp=Z,50nm,0.8s,mb5.5
TI2                              MLR   MLR
      comp=E,2µm,10.0s
TI2                              MLR   MLR
      comp=Z,1µm,10.0s,MS5.4
MTA   Mtatsminda      71.80 312  P     P      00 06 16.6 +0.5
TBLG  Delisi          71.80 312  P     P      00 06 17.1 +1.0
AKASG Malin Array Be  71.92 327  P     P      00 06 15.8 -0.9
      comp=Z,19nm,0.8s,mb5.1,baz=34,slow=6.1,SNR=90
AKASG Malin Array Be  71.92 327  P     P      00 06 15.8 -0.9
AKASG Malin Array Be  71.92 327  P     P      00 06 15.8 -0.8
AKASG                            pmax  pmax
      comp=Z,19nm,0.8s
SOC   Sochi           72.93 316  eP    P      00 06 22.9 +0.2
SOC                              e*PP  pP     00 06 49.2  +15
SOC                              eS    S      00 15 33.6  -12
SOC                              e            00 16 18.8
SOC                              pmax  pmax
      comp=Z,37nm,0.7s,mb5.4
SOC                              MLR   MLR
      comp=Z,782nm,15.0s,MS5.1
GNI   Garni           72.95 311  i P   P      00 06 24.9 +2.0
ANN   Anapa           73.08 318  eP    P      00 06 22.9 -0.7
ANN                              eS    S      00 15 42.0 -5.1
ANN                              pmax  pmax
      comp=Z,243nm,7.9s
MUD   Monsted U'grnd  73.14 340⇓iP     P      00 06 25.2 +1.5
      comp=Z,14nm,0.7s,mb5.0
      comp=Z,440nm,18.0s
MUD   Monsted U'grnd  73.14 340⇓iP     P      00 06 25.2 +1.5
MUD                              pmax  pmax
      comp=Z,14nm,0.7s,mb5.0
MUD                              MLR   MLR
      comp=Z,440nm,18.0s,MS4.8
SCHQ  Schefferville   73.33  23  P     P      00 06 24.2 -0.6
      comp=Z,5.0nm,1.0s,mb4.4,slow=14,SNR=2.4
SCHQ                             LR    LR     00 39 10.5
      comp=Z,191nm,19.2s,MS4.4,baz=7.5,slow=36
WAR   Warsaw          73.54 332  eP    P      00 06 27.8 +1.7
WAR                              e*PP  PP     00 09 12.3 +0.1
MNTX  Cornudas Mount  74.52  60  eP    P      00 06 31.8 -0.4
      comp=Z,5.6nm,1.1s,mb4.4
KAC   Achnashellach   74.84 348⇑eP     P      00 06 34.9 +1.4
KAC                              AMb   AMB    00 06 40.9
      comp=Z,48nm,1.9s,mb5.1
TVAN  Van             74.84 310  i P   P      00 06 34.7 +0.7
KPL   Plockton        75.04 349  eP    P      00 06 35.9 +1.2
KPL                              AMb   AMB    00 06 37.9
      comp=Z,38nm,1.1s,mb5.2
KIS   Kishinev        75.07 324  eP    P      00 06 29.0 -6.1
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KIS				e		00 06 46.0	
KIS				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.8						
KIS				MLR	MLR		
	comp=Z,500nm,18.0s						
KSB	Sheil Bridge	75.14	348	⇑eP	P	00 06 34.8	-0.5
KSB				AMb	AMB	00 06 38.7	
	comp=Z,52nm,1.3s,mb5.3						
BSEG	Bad Segeberg	75.15	339	eP	P	00 06 35.5	+0.1
BSEG				e*PP	pP	00 06 46.4	-0.2
BSEG				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
KWP	Kalwaria	75.19	329	eP	P	00 06 36.3	+0.6
KWP				ePcP	PcP	00 06 47.6	-1.8
KWP				MLR	MLR	00 44 26.7	
	comp=Z,1µm,16.6s,MS5.3						
KWP	Kalwaria	75.19	329	eP	P	00 06 36.0	+0.3
	comp=Z,27nm,1.8s,mb4.9						
KWP				ePcP	PcP	00 06 47.6	-1.8
KAR1	Arisaig	75.47	349	⇑eP	P	00 06 37.6	+0.4
KAR1				AMb	AMB	00 06 46.2	
	comp=Z,76nm,2.0s,mb5.3						
OJC	Ojcow	75.67	331	eP	P	00 06 38.3	-0.2
OJC				e	pP	00 06 51.2	+1.5
OJC	Ojcow	75.67	331	eP	P	00 06 38.3	-0.2
OJC				i	pP	00 06 51.2	+1.5
BURAR	Bucovina Array	75.96	327	⇑P	P	00 06 40.5	+0.4
WMOK	Wichita Mounta	76.15	54	eP	P	00 06 39.5	-2.0
	comp=Z,11nm,1.3s,mb4.6						
KSP	Ksiaz	76.24	334	eP	P	00 06 41.8	+0.1
KSP				ePcP	PcP	00 06 53.4	-0.5
KSP				MLR	MLR	00 45 18.7	
	comp=Z,2µm,17.2s,MS5.4						
KSP	Ksiaz	76.24	334	⇑eP	P	00 06 41.7	0.0
KSP				ePcP	PcP	00 06 53.2	-0.7
KSP				LR	LR		
	comp=Z,2µm,17.2s,MS5.4						
BANOM	Banah	76.42	293	P	P	00 06 43.9	+0.7
	SNR=15						
BANOM				P		00 06 43.9	
	SNR=15						
BANOM				P		00 06 43.9	
	SNR=15						
BANOM				P		00 06 43.9	
	SNR=15						
BANOM				P		00 06 43.9	
	SNR=15						
BANOM				P		00 06 43.9	
	SNR=15						
BEST	Besiri	76.44	311	i P	P	00 06 43.8	+0.7
OKC	Ostrava-Krasne	76.54	332	⇑eP	P	00 06 42.7	-0.7
OKC				epP	pP	00 06 54.4	-0.3
OKC				AMS	AMS	00 44 20.0	
	comp=Z,700nm,21.1s						
UPC	Upice	76.62	334	⇑eP	P	00 06 44.0	+0.1
UPC				epP	pP	00 06 55.4	+0.2
DPC	Dobruska-Polom	76.67	334	⇑iP	P	00 06 44.6	+0.5
DPC				epP	pP	00 06 54.4	-1.0
DPC				AMS	AMS	00 45 00.0	
	comp=Z,1µm,18.4s						
MSL	Mosul	76.68	309	ex	x	00 06 43.5	
MSL				e		00 06 54.0	
CLL	Collm	76.80	336	⇑P	P	00 06 44.4	-0.4
	comp=Z,logA/T=1.9,mb5.6						
CLL				i PCP	PcP	00 06 55.8	-0.5
CLL				i *SP	sP	00 07 08.3	+8.1
CLL	Collm	76.80	336	⇑iP	P	00 06 44.4	-0.4
	comp=Z,53nm,0.7s,mb5.6						
CLL				i pP	pP	00 06 55.8	-0.3
CLL				i sP	sP	00 07 08.3	+8.1
CLL				LR	LR		
	comp=Z,800nm,17.0s,MS5.1						
CLL	Collm	76.80	336	⇑iP	P	00 06 44.4	-0.4
CLL				i *PP	pP	00 06 55.8	-0.3
CLL				i *SP	sP	00 07 08.3	+8.1
CLL				pmax	pmax		
	comp=Z,53nm,0.7s,mb5.6						
CLL				MLR	MLR		
	comp=Z,800nm,17.0s,MS5.1						
VRI	Vrincioaia	76.82	325	⇑P	P	00 06 46.0	+0.9
BOYT	Boyabat	76.87	317	i P	P	00 06 46.0	+0.6
BRG	Berggiesshubel	76.92	335	eP	P	00 06 45.4	-0.1
	comp=Z,16nm,1.3s,mb4.8						
BRG				e	pP	00 06 57.0	+0.2
BRG				LR	LR		
	comp=Z,860nm,14.3s,MS5.2						
BRG	Berggiesshubel	76.92	335	eP	P	00 06 45.4	-0.1
BRG				e	pP	00 06 57.0	+0.2
BRG				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
BRG				MLR	MLR		
	comp=Z,860nm,14.3s,MS5.2						
BRG				MLR	MLR		
	comp=N,540nm,15.4s,MS5.1						
BRG				MLR	MLR		
	comp=E,390nm,13.4s,MS5.1						
CLZ	Clausthal	77.03	338	eP	P	00 06 46.4	+0.3
	comp=E,36nm,0.8s,mb5.3						
CLZ	Clausthal	77.03	338	eP	P	00 06 46.4	+0.3
CLZ				pmax	pmax		
	comp=Z,36nm,0.8s,mb5.3						
PVCC	Panska Ves	77.04	335	⇑eP	P	00 06 46.2	0.0
PVCC				epP	pP	00 06 56.3	-1.2
MARD	Mardin	77.13	311	i P	P	00 06 46.5	-0.5
SVST	Sivas	77.17	315	i P	P	00 06 48.4	+1.2
LTX	Lajitas	77.24	61	eP	P	00 06 47.8	0.0
	comp=Z,9.8nm,0.8s,mb4.8						
TXAR	Lajitas Array	77.24	61	P	P	00 06 47.4	-0.4
	comp=Z,8.1nm,0.8s,mb4.7,baz=297,slow=3.8,SNR=71						
TXAR				LR	LR	00 39 37.1	
	comp=Z,122nm,21.0s,MS4.2,baz=235,slow=35						
TIRR	Tirgusor	77.30	323	⇑P	P	00 06 48.2	+0.4
HARR	Harsova	77.31	324	⇓P	P	00 06 47.5	-0.3
HOQ	Hoqain	77.43	291	P	P	00 06 51.4	+2.5
	SNR=9.6						
HOQ				P		00 06 51.4	
	SNR=9.6						
HOQ				P		00 06 51.4	
	SNR=9.6						
HOQ				P		00 06 51.4	
	SNR=9.6						
HOQ				P		00 06 51.4	
	SNR=9.6						
HOQ				P		00 06 51.4	
	SNR=9.6						
MLR	Muntele Rosu	77.44	325	⇓P	P	00 06 48.4	-0.2
ASHO	Ashiyiah	77.45	293	P	P	00 06 49.6	+0.6
	SNR=15						
ASHO				P		00 06 49.6	
	SNR=15						
ASHO				P		00 06 49.6	
	SNR=15						
ASHO				P		00 06 49.6	
	SNR=15						
ASHO				P		00 06 49.6	
	SNR=15						
ASHO				P		00 06 49.6	
	SNR=15						
BALT	Daday	77.48	318	i P	P	00 06 48.9	0.0
PRU	Pruhonice	77.53	334	⇑iP	P	00 06 48.9	0.0
PRU				epP	pP	00 06 58.9	-1.3
PRU				AMS	AMS	00 44 40.0	
	comp=Z,900nm,17.3s						
CTKT	Corum	77.55	317	i P	P	00 06 48.8	-0.5
DRGR		77.58	328	⇑P	P	00 06 48.6	-0.7
PSZ	Piszkesteto	77.62	330	⇑eP	P	00 06 50.0	+0.5
SNX	Sinaia	77.72	325	⇓P	P	00 06 50.6	+0.5
MOX	Moxa	77.78	336	i P	P	00 06 50.3	0.0
	comp=Z,logA/T=1.3,mb5.0						
MOX				pP	pP	00 07 02.0	+0.4
MOX				L		00 43 41.0	
MOX	Moxa	77.78	336	eP	P	00 06 50.3	0.0
	comp=Z,20nm,1.1s,mb5.0						
MOX				epP	pP	00 07 01.5	-0.1
MOX				LR	LR		
	comp=Z,300nm,19.0s,MS4.6						
MOX	Moxa	77.78	336	eP	P	00 06 50.3	0.0
MOX				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
MOX				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.6						
WTSB	Winterswijk	77.81	340	⇑eP	P	00 06 50.2	-0.2
VOIR		77.84	326	⇑P	P	00 06 51.7	+1.0
TREC	Trest	77.85	333	⇑eP	P	00 06 50.8	+0.1
TREC				epP	pP	00 07 02.1	0.0
NKC	Novy Kostel	77.92	336	⇑eP	P	00 06 51.0	-0.1
NKC				epP	pP	00 07 02.3	-0.1
MTUR	Matau	78.01	326	⇓P	P	00 06 53.2	+1.5
BHD	Baghdad	78.22	306	ex	x	00 06 54.0	
ELDT	Eldivan	78.29	318	i P	P	00 06 53.4	+0.1
KHC	Kasperske Hory	78.58	335	⇑iP	P	00 06 55.0	+0.3
KHC				epP	pP	00 07 06.0	0.0
KHC				AMS	AMS	00 45 20.0	
	comp=Z,900nm,15.1s						
PKSG		78.59	331	⇑eP	P	00 06 55.6	+0.8
JCT	Junction City	78.70	58	eP	P	00 06 54.3	-1.4
	comp=Z,3.8nm,0.6s,mb4.5						
GRA1	Grafenberg Arr	78.75	336	eP	P	00 06 56.2	+0.6
	comp=Z,50nm,0.7s,mb5.5						
GRF	Grafenberg Arr	78.75	336	eP	P	00 06 56.2	+0.6
	comp=Z,50nm,0.7s,mb5.5						
GRF				LR	LR		
	comp=Z,400nm,18.5s,MS4.8						
WET	Wettzell	78.77	335	eP	P	00 06 56.2	+0.4
	comp=Z,20nm,0.9s,mb5.0						
WET				epP	pP	00 07 07.5	+0.4
WET	Wettzell	78.77	335	eP	P	00 06 56.2	+0.4
WET				e*PP	pP	00 07 07.5	+0.4
WET				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
BR131	Keskin Array S	78.80	317	eP	P	00 06 56.9	+0.8
	comp=Z,8.2nm,0.8s,mb4.7						
BRTR	Keskin Array B	78.80	317	P	P	00 06 57.3	+1.2
	comp=Z,9.0nm,0.8s,mb4.8,baz=71,slow=4.2,SNR=34						
BRTR	Keskin Array B	78.80	317	P	P	00 06 57.3	+1.2
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GEC2	GERESS Array S	78.80	334	eP	P	00 06 55.8	-0.1
	comp=Z,8.0nm,0.7s,mb4.8						
GEC2	GERESS Array S	78.80	334	eP	P	00 06 55.8	-0.1
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
GERES	GERESS Array B	78.80	334	P	P	00 06 56.0	+0.1
	comp=Z,7.3nm,0.7s,mb4.7,baz=35,slow=5.0,SNR=40						
GERES				LR	LR	00 46 15.5	
	comp=Z,1µm,18.0s,MS5.2,baz=179,slow=39						
GERES	GERESS Array B	78.80	334	P	P	00 06 56.0	+0.1
GERES				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GERES				MLR	MLR		
	comp=Z,1µm,18.0s						
STKA	Stephens Creek	78.84	190	LR	LR	00 42 12.1	
	comp=Z,336nm,19.5s,MS4.7,baz=24,slow=36						
AVNT	Avonos	78.96	316	i P	P	00 06 58.1	+1.0
TNS	Taunus Mts	79.01	338	eP	P	00 06 57.3	+0.2
	comp=Z,19nm,0.7s,mb5.1						
TNS				epP	pP	00 07 09.0	+0.6
TNS	Taunus Mts	79.01	338	eP	P	00 06 57.3	+0.2
TNS				e*PP	pP	00 07 09.0	+0.6
TNS				pmax	pmax		
	comp=Z,19nm,0.7s,mb5.1						
UMR	Umm Al-Rimmam	79.06	301	eP	P	00 06 59.1	+1.3
UMR				AMb	AMB	00 07 00.3	
	comp=Z,69nm,0.7s,mb5.7						
MIB	Mutribah	79.10	302	eP	P	00 06 58.9	+0.9
MIB				AMb	AMB	00 07 00.5	
	comp=Z,95nm,0.7s,mb5.8						
HGN	Heimansgroeve	79.13	340	⇑eP	P	00 06 57.5	-0.3
	comp=Z,21nm,1.1s,mb5.0						
ZIMR		79.20	325	⇑P	P	00 06 58.5	+0.3
MOA	Molln	79.51	334	⇑iP	P	00 07 00.3	+0.4
	comp=Z,9.7nm,0.8s,mb4.8						
MOA	Molln	79.51	334	⇑iP	P	00 07 00.3	+0.4
	comp=Z,9.7nm,0.8s,mb4.8						
PKSM	Moragy	79.53	330	⇑iP	P	00 06 59.3	-0.6
NAY	Al-Naaiem	79.56	302	eP	P	00 07 00.7	+0.2
NAY				AMb	AMB	00 07 04.1	
	comp=Z,35nm,1.2s,mb5.2						
ARSA	Arzberg	79.65	332	⇓iP	P	00 07 00.7	+0.2
	comp=Z,13nm,1.1s,mb4.8						
ARSA	Arzberg	79.65	332	⇓iP	P	00 07 00.7	+0.2
	comp=Z,13nm,1.1s,mb4.8						
RHK1	Bakonya	79.82	330	⇑eP	P	00 07 01.4	-0.1
GIVF	Givet	80.01	340	eP	P	00 07 02.3	-0.2
FUR	Furstenfeldbru	80.12	336	eP	P	00 07 03.5	+0.4
	comp=Z,99nm,1.6s,mb5.5						
FUR				epP	pP	00 07 14.8	+0.4
FUR	Furstenfeldbru	80.12	336	eP	P	00 07 03.5	+0.4
FUR				pmax	pmax		
	comp=Z,99nm,1.6s,mb5.5						
BAIF	Baives	80.19	341	eP	P	00 07 03.3	-0.1
	comp=Z,20nm,0.9s,mb4.8						
ESKT	Eskisehir	80.25	319	i P	P	00 07 02.4	-1.6
LANF	Langenberg	80.32	338	eP	P	00 07 04.3	+0.2
GROS	Grobnik	80.36	332	i P	P	00 07 04.4	+0.1
KBA	Koelnbreinsper	80.48	334	⇑eP	P	00 07 05.8	+0.8
	comp=Z,49nm,0.7s,mb5.5,SNR=31						
ULDT	Uludag	80.51	320	i P	P	00 07 03.9	-1.5
BFO	Black Forest	80.78	337	eP	P	00 07 06.9	+0.3
	comp=Z,23nm,0.9s,mb5.1						
BFO	Black Forest	80.78	337	eP	P	00 07 06.9	+0.3
BFO				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.1						
WATA	Walderalm	80.78	335	i P	P	00 07 07.5	+0.9
	comp=Z,19nm,0.6s,mb5.2,SNR=14						
WATA	Walderalm	80.78	335	i P	P	00 07 07.5	+0.9
	comp=Z,19nm,0.6s,mb5.2						
WTTA	Wattenberg	80.83	335	i P	P	00 07 07.9	+1.0
	comp=Z,31nm,0.7s,mb5.4,SNR=29						
MOTA	Moosalm	80.91	335	⇑iP	P	00 07 08.1	+0.8
	comp=Z,20nm,0.7s,mb5.1,SNR=23						
MOTA	Moosalm	80.91	335	⇑iP	P	00 07 08.1	+0.8
	comp=Z,20nm,0.7s,mb5.2						
VTS	Vitosha	80.95	325	i P	P	00 07 08.0	+0.4
CDF	Champ du Feu	80.98	338	eP	P	00 07 07.4	-0.2
	comp=Z,64nm,1.0s,mb5.2						
SQTA	Sankt Quirin	80.99	335	⇑iP	P	00 07 08.6	+0.9
	comp=Z,16nm,0.9s,mb5.0,SNR=10						
SQTA	Sankt Quirin	80.99	335	⇑iP	P	00 07 08.6	+0.9
	comp=Z,16nm,0.9s,mb5.0						
HASS	Wahat al Ahsa’	81.07	297	P	P	00 07 09.9	+1.3
PTCC	Patocco-Chiusa	81.08	333	P	P	00 07 08.0	-0.2
FVI	Forni Avoltri	81.09	334	P	P	00 07 10.7	+2.5
	comp=Z,6.4nm,0.5s,mb4.8						
RZN	Rozhen	81.11	324	eP	P	00 07 09.7	+1.2
ECH	Echery	81.19	338	eP	P	00 07 08.8	+0.1
BTOK	Tokmak	81.31	321	i P	P	00 07 08.9	-0.7
DAVA	Damuels	81.31	336	⇓eP	P	00 07 07.5	-1.8
	comp=Z,16nm,0.8s,mb5.0						
DAVA	Damuels	81.31	336	⇓eP	P	00 07 07.5	-1.8
	comp=Z,16nm,0.8s,mb5.0						
MEZF	Maizieres J’vi	81.45	340	eP	P	00 07 10.2	+0.1
	comp=Z,43nm,0.7s,mb5.2						
THEF	They Montfort	81.48	339	eP	P	00 07 10.4	+0.2
MOF	Molkenrain	81.53	338	eP	P	00 07 10.9	+0.4
MMB	Musomiste	81.59	324	i P	P	00 07 12.0	+1.0
HAU	Haudompre	81.59	339	eP	P	00 07 10.6	-0.2
	comp=Z,21nm,0.7s,mb4.9						
HAU				eR			
	comp=Z,527nm,18.8s						
KKB	Krupnik	81.61	325	eP	P	00 07 12.0	+0.9
HINF	Hinteralfeld	81.64	338	eP	P	00 07 11.0	-0.1
	comp=Z,16nm,0.8s,mb4.7						
TKTP	Tekketepe	81.69	318	i P	P	00 07 11.2	-0.4
PPT	Papeete	81.73	126	eS	S	00 17 19.7	-1.1
PPT				eLR	LR	00 32 06.1	
	comp=Z,650nm,24.5s,baz=330						
PPT	Papeete	81.73	126	LR	LR	00 37 50.5	
	comp=Z,445nm,18.7s,MS4.8,baz=313,slow=32						
DAVOX	Davos	81.77	336	P	P	00 07 14.5	+2.7
BRMO	Bormio	81.91	335	P	P	00 07 14.3	+1.8
LOMF	Lomont	82.07	338	eP	P	00 07 13.7	+0.4
MANT	Manisa	82.12	320	i P	P	00 07 13.9	+0.1
SKO	Skopje	82.16	326	eP	P	00 07 14.2	+0.2
SKO	Skopje	82.16	326	eP	P	00 07 14.2	+0.3
VAY	Valandovo	82.28	325	eP	P	00 07 14.1	-0.4
VAY	Valandovo	82.28	325	eP	P	00 07 14.1	-0.4
FLN	La Foliniere	82.43	343	eP	P	00 07 15.3	+0.2
FLN				eR			
	comp=Z,431nm,17.5s						
LDF	La Druitiere	82.52	343	eP	P	00 07 15.7	+0.1
	comp=Z,30nm,1.1s,mb4.9						
MUGIO	Muggio	82.79	336	P	P	00 07 18.0	+1.0
GRR	Gorron	82.86	343	eP	P	00 07 17.3	0.0
	comp=Z,27nm,0.9s,mb5.0						
LOR	Lormes	82.89	340	eP	P	00 07 17.4	-0.1
	comp=Z,38nm,0.7s,mb5.2						
LOR				eR			
	comp=Z,470nm,18.0s						
VAI	Varese	82.92	336	P	P	00 07 18.3	+0.6
	comp=Z,12nm,0.6s,mb5.1						
CABF	La Chapelle	82.95	338	eP	P	00 07 18.2	+0.4
	comp=Z,18nm,0.7s,mb4.9						
BIA	Bitola	83.02	326	eP	P	00 07 18.2	-0.1
BIA	Bitola	83.02	326	eP	P	00 07 18.2	-0.1
MCGN	Macugnaga	83.05	337	P	P	00 07 19.7	+1.3
OHR	Ohrid	83.15	326	eP	P	00 07 20.1	+1.1
OHR	Ohrid	83.15	326	eP	P	00 07 20.1	+1.1
SSF	Saint Saulge	83.17	340	eP	P	00 07 19.0	+0.1
	comp=Z,27nm,0.8s,mb5.0						
SGMF	Saint Gilles	83.32	344	eP	P	00 07 19.5	-0.2
	comp=Z,39nm,0.9s,mb5.1						
ROSF	Rostrenen	83.37	345	eP	P	00 07 19.8	-0.1
	comp=Z,41nm,1.0s,mb5.1						
AVF	Avril sur Loir	83.46	340	eP	P	00 07 20.5	+0.1
	comp=Z,30nm,0.7s,mb5.1						
SMF	Signal de Mont	83.48	340	eP	P	00 07 20.7	+0.2
	comp=Z,152nm,1.3s,mb5.6						
QUIF	Quistinic	83.75	345	eP	P	00 07 21.4	-0.4
GSCL	Gusciola	83.78	334	P	P	00 07 24.0	+2.0
BGF	Bois d’Agland	83.80	340	eP	P	00 07 22.3	+0.3
	comp=Z,14nm,0.7s,mb4.9						
LPL	La Plagne	83.80	337	eP	P	00 07 22.3	+0.2
	comp=Z,35nm,0.9s,mb5.2						
LPG	La Plagne	83.81	337	eP	P	00 07 22.6	+0.5
	comp=Z,26nm,0.7s,mb5.1						
VMG	Vicchio	83.84	334	P	P	00 07 24.6	+2.3
SNTG	Esanatoglia	84.04	332	P	P	00 07 26.3	+2.9
TCF	Toulx Ste Croi	84.20	341	eP	P	00 07 24.4	+0.3
	comp=Z,14nm,0.7s,mb4.9						
MFF	Saint Martin d	84.42	342	eP	P	00 07 25.2	0.0
MBDF	Montbardon	84.52	337	eP	P	00 07 26.1	+0.4
	comp=Z,23nm,0.7s,mb5.1						
ORIF	Oris-en-Rattie	84.58	338	eP	P	00 07 26.1	+0.1
	comp=Z,41nm,0.7s,mb5.4						
ORIF				eR			
	comp=Z,412nm,22.5s						
MZLS	Mizel	84.66	299	P	P	00 07 28.3	+1.3
VIVF	Saint-Julien-l	84.95	338	eP	P	00 07 28.1	+0.2
	comp=Z,33nm,1.0s,mb5.1						
SBF	Sospel	85.13	336	eP	P	00 07 28.3	-0.5
	comp=Z,41nm,0.7s,mb5.3						
RJF	Les Rejaudoux	85.28	341	eP	P	00 07 29.7	+0.2
	comp=Z,33nm,1.1s,mb5.1						
RJF				eR			
	comp=Z,477nm,20.5s						
CAF	Calviac	85.52	340	eP	P	00 07 31.2	+0.5
SMRF	Simiane la Rot	85.53	338	eP	P	00 07 30.6	-0.2
	comp=Z,15nm,0.8s,mb5.0						
FRF	La Foret Royal	85.63	337	eP	P	00 07 31.0	-0.3
	comp=Z,30nm,1.1s,mb5.2						
LFF	La Frestale	85.81	341	eP	P	00 07 32.0	-0.1
	comp=Z,30nm,0.9s,mb5.2						
LMR	La Mourre	85.88	337	eP	P	00 07 32.4	-0.1
	comp=Z,57nm,1.1s,mb5.4						
LASF	Ste Croix	85.88	339	eP	P	00 07 32.3	-0.2
	comp=Z,42nm,1.4s,mb5.2						
PGF	Pioggiola	85.89	335	eP	P	00 07 32.5	-0.1
	comp=Z,63nm,1.1s,mb5.5						
AFFS	‘Afif	86.05	301	P	P	00 07 37.2	+3.4
ALWS	Ilw as Safayha	86.34	310	P	P	00 07 38.8	+3.8
TBKS	Tabuk	86.40	308	P	P	00 07 39.0	+3.6
JMOS	Jabal al Moall	86.43	310	P	P	00 07 38.0	+2.5
HAQS	Haql	86.61	310	P	P	00 07 39.9	+3.5
KBRS	Khaybar	86.79	305	P	P	00 07 41.2	+3.9
MTLF	Montolieu	86.98	340	eP	P	00 07 38.1	+0.2
	comp=Z,46nm,1.4s,mb5.2						
AYUS	‘Aynunah	87.12	309	P	P	00 07 42.5	+3.5
EPF	Esparros	87.71	341	eP	P	00 07 41.8	+0.4
	comp=Z,70nm,1.7s,mb5.3						
KAMS	Al Khamasin	87.83	297	P	P	00 07 43.4	+0.9
SJPF	Ste Jean	87.98	342	eP	P	00 07 42.8	+0.1
	comp=Z,42nm,1.2s,mb5.2						
ETSF	Etsaut	88.04	341	eP	P	00 07 43.3	+0.3
BLJS	Baljurashi	89.97	299	P	P	00 07 52.6	-0.1
DJNS	Zahran al Janu	90.44	296	P	P	00 07 56.8	+1.9
ESDC	Sonseca Array	91.85	343	P	P	00 08 00.9	-0.1
	comp=Z,0.7nm,0.7s,mb4.1,baz=187,slow=34,SNR=3.7						
BDFB	Brasilia	144.25	38	PKP	PKPdf	00 14 26.2	-1.7
	comp=Z,2.9nm,0.7s,baz=275,slow=4.3,SNR=4.6						
BDFB	Brasilia	144.25	38	PKIKP	PKPdf	00 14 26.2	-1.7
BDFB				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CFAA	Coronel Fontan	144.64	80	PKP	PKPdf	00 14 27.1	-1.1
	comp=Z,0.5nm,0.7s,baz=291,slow=2.1,SNR=10.0						
PLCA	Paso Flores	147.80	96	PKPbc	PKPdf	00 14 35.5	+2.2
	comp=Z,3.1nm,0.9s,baz=327,slow=3.7,SNR=4.1						
PLCA	Paso Flores	147.80	96	PKP2	PKPab	00 14 35.5	-5.2
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CPUP	Villa Florida	148.21	61	ePKPdf	PKPdf	00 14 38.4	+4.0
SNAA	Sanae	152.48	196	PKPbc	PKPdf	00 14 46.7	+7.2
	comp=Z,0.7nm,0.6s,baz=191,slow=6.1,SNR=24						
SNAA				PKPab	PKPab	00 14 55.9	-3.3
	comp=Z,0.9nm,0.7s,baz=185,slow=3.2,SNR=8.4						
SNAA	Sanae	152.48	196	⇑iP	PKPdf	00 14 47.9	+8.3
SNAA				e		00 14 57.8	
SNAA				e		00 15 08.4	
SNAA				e		00 15 21.5	
SNAA	Sanae	152.48	196	PKIKP	PKPdf	00 14 46.7	+7.1
SNAA						00 14 55.9	
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SNAA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VNA2	Neumayer--Watz	153.92	194	⇑iP	PKPdf	00 14 50.6	+9.0
VNA2				e		00 15 01.6	
VNA2				e		00 15 12.9	
VNA2				e		00 15 16.2	
VNA2				e		00 15 27.6	
VNA3	Neumayer Olymp	154.00	192	⇑iP	PKPdf	00 14 52.1	+10
VNA3				e		00 15 02.3	
VNA3				e		00 15 14.0	
VNA3				e		00 15 18.7	
VNA3				e		00 15 30.8	
VNA1	Neumayer--Stat	154.30	194	P	PKPdf	00 14 55.0	+13
VNA1				e		00 15 05.5	
VNA1				e		00 15 17.6	
VNA1				e		00 15 21.1	
VNA1				e		00 15 32.6	

JMA ***22*** *00:09:51.9±0.2, 32.76N×141.17E, h53^{km}, M3.5*
IDC ***22*** *00:09:54.1±2.6, 32.57N×140.88E, h55^{km}±19^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.5/21, mbtmp3.9/5, ML3.7/2, Error ellipse: s-maj=38.8km s-min=15.7km az=65.0*
ISC 22 00:09:51.3±1.0**, 32.70N**±0.06×**141.1E**±0.1**, h56**^{km}±12^{km}**,**
n12, σ0^{s}89/15**, mb3.8**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.17	291	P	P	00 10 12.8	+1.1
JHJ	Hachijo jima 2	1.20	291	P	P	00 10 12.8	+0.7
	113nm,0.3s,baz=61,slow=21,SNR=42						
JHJ				S	S	00 10 26.6	-1.0
	166nm,0.3s,baz=264,slow=22,SNR=8.9						
BSO1	Boso 1	1.96	357	P	P	00 10 22.7	-0.1
BSO1				eS	S	00 10 46.2	+0.1
BSO3	Boso 3	2.16	347	P	P	00 10 26.0	+0.3
JIM2	Oshima 3	2.46	326	P	P	00 10 30.7	+0.8
JHU	Hanno	3.50	335	S	S	00 11 22.9	-2.1
JHO	Hitachi	3.93	354	P	P	00 10 50.4	-0.3
MJAR	Matsushiro Arr	4.52	329	P	P	00 11 00.3	+1.2
	1.3nm,0.3s,baz=159,slow=13,SNR=4.9						
MJAR				S	S	00 11 50.4	-0.5
	1.7nm,0.3s,baz=153,slow=22,SNR=5.4						
CBIJ	Chichi jima	5.66	170	P	P	00 11 13.9	-0.9
	8.2nm,0.3s,baz=322,slow=19,SNR=5.9						
SONM	Songino Array	30.21	310	P	P	00 15 59.4	+0.9
	0.6nm,0.7s,mb3.5,baz=109,slow=9.0,SNR=4.7						
MKAR	Makanchi Array	46.33	306	P	P	00 18 13.9	+0.5
	1.4nm,0.7s,mb4.0,baz=86,slow=8.7,SNR=15						
WRA	Warramunga Arr	52.74	188	P	P	00 19 01.9	-1.0
	1.0nm,0.4s,mb4.1,baz=5.0,slow=7.6,SNR=4.8						

CRAAG ***22*** *01:21:17.3, 36.68N×4.28E, Ml3.2*
MDD ***22*** *01:21:20.8±0.8, 36.62N×4.30E, mb3.7/7, Error ellipse: s-maj=11.9km s-min=8.3km az=25.0, PRXIMO*
NEIC ***22*** *01:21:21.1±0.6, 36.61N×4.29E, h10^{km}, ML3.2(ALG), Error ellipse: s-maj=8.4km s-min=6.0km az=193.0*
CSEM ***22*** *01:21:22.8±0.1, 36.55N×4.32E, h35^{km}, ML3.2, Error ellipse: s-maj=3.7km s-min=2.7km az=43.0*

ISC 22 01:21:20.7±0.8, 36.77N±0.05×4.28E±0.08, h10^{km}, n26, σ0^{s}.82/34, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.65	269	P	Pb	01 21 32.6	-1.0
ABA	Alger-Bouzarea	1.00	272	P	Pb	01 21 41.5	+1.8
SET	Setif	1.06	122	P	Pb	01 21 40.0	-0.7
EMHD	Djebel Mahouad	1.21	243	P	Pb	01 21 43.0	-0.2
ETOS	Mallorca	3.21	339	Pn	Pn	01 22 13.6	+1.3
	0.6nm,0.1s,SNR=5.6						
ETOS				Sn	Sn	01 22 50.6	-0.4
	0.6nm,0.2s,SNR=7.9						
ETOS	Mallorca	3.21	339	Pn	Pn	01 22 13.6	+1.3
ETOS				Sn	Sn	01 22 50.6	-0.4
EIBI	Ibiza	3.24	315	Pn	Pn	01 22 13.3	+0.7
	1.9nm,0.1s,SNR=7.9						
EIBI				Sn	Sn	01 22 51.2	-0.5
	1.5nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.24	315	Pn	Pn	01 22 13.3	+0.6
EIBI				Sn	Sn	01 22 51.2	-0.5
EBEN	Beniarda	4.06	300	Pn	Pn	01 22 24.6	+0.2
	0.1nm,0.1s,SNR=4.0						
EBEN	Beniarda	4.06	300	Pn	Pn	01 22 24.6	+0.3
ETOB	Tobarra	4.99	294	Pn	Pn	01 22 37.2	-0.3
	0.7nm,0.3s,SNR=7.9						
ETOB				Sn	Sn	01 23 31.2	-4.7
	SNR=4.0						
ETOB	Tobarra	4.99	294	Pn	Pn	01 22 37.2	-0.3
ECHE	Chera	5.01	306	Pn	Pn	01 22 37.4	-0.4
	1.2nm,0.3s,SNR=4.0						
ECHE	Chera	5.01	306	Pn	Pn	01 22 37.4	-0.4
ECHE	Chera	5.01	306	Pn	Pn	01 22 37.3	-0.4
EMOS	Mosqueruela	5.18	315	Pn	Pn	01 22 40.3	+0.2
	0.2nm,0.2s,SNR=4.0						
EMOS	Mosqueruela	5.18	315	Pn	Pn	01 22 40.3	+0.2
EPOB	Poblet	5.22	332	Pn	Pn	01 22 41.0	+0.4
	0.9nm,0.2s,SNR=7.9						
EPOB	Poblet	5.22	332	Pn	Pn	01 22 41.0	+0.3
EMIR	Miracle	5.57	338	Pn	Pn	01 22 46.3	+0.7
	0.9nm,0.1s,SNR=5.7						
EMIR				Sn	Sn	01 23 48.0	-2.4
	SNR=4.0						
EMIR	Miracle	5.57	338	Pn	Pn	01 22 46.3	+0.7
EMIR				Sn	Sn	01 23 49.4	-1.1
EMIR	Miracle	5.57	338	Pn	Pn	01 22 46.3	+0.7
EMIR				Sn	Sn	01 23 49.4	-1.1
EJON	La Jonquera	5.78	350	Pn	Pn	01 22 49.1	+0.5
	0.5nm,0.1s,SNR=7.9						
EJON	La Jonquera	5.78	350	Pn	Pn	01 22 49.0	+0.4
EQES	Quesada	5.96	282	Pn	Pn	01 22 49.8	-1.3
	SNR=4.0						
EQES	Quesada	5.96	282	Pn	Pn	01 22 50.9	-0.2

*IDC **22** 01:58:45.4±0.6, 8.75S×111.41E, mb4.5/12, mb1 4.6/13, mb1mx4.5/16, mbtmp4.5/13, ML4.2/1, MS3.9/9, Ms1 3.8/9, ms1mx3.7/14, Error ellipse: s-maj=23.3km s-min=18.0km az=51.0*

*BJI **22** 01:58:49.9, 8.70S×111.40E, h28^{km}, mB5.2, mb4.8*

*MOS **22** 01:58:49.0±1.0, 8.61S×111.40E, h33^{km}, mb5.0/8, Error ellipse: s-maj=21.9km s-min=10.7km az=115.2*

*NEIC **22** 01:58:49.9±0.3, 8.75S×111.42E, h30^{km}, mb4.6/10, Error ellipse: s-maj=12.3km s-min=7.2km az=53.0*

ISC 22 01:58:50.2±5.3, 8.68S±0.09×111.5E±0.1, h47^{km}±48^{km}, h17^{km}±9.1^{km}:pP-P, n65, σ0^{s}.87/53, mb4.6/29, MS3.9/8, 3C, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.64	126	eP	P	02 02 37.5	-4.3
	11nm,0.9s						
FITZ	Fitzroy Crossi	16.64	126	Pn	P	02 02 39.3	-2.4
	0.7nm,0.3s,baz=295,slow=7.6,SNR=9.2						
FITZ				LR	LR	02 09 05.3	
	comp=Z,546nm,21.0s,baz=299,slow=37						
KAKA	Kakadu	20.98	103	eP	P	02 03 51.3	+19
	10nm,0.6s						
NWAO	Narrogin (SRO)	24.71	168	LR	LR	02 12 56.3	
	comp=Z,320nm,19.6s,MS3.8,baz=199,slow=34						
WRA	Warramunga Arr	24.78	119	P	P	02 04 08.9	-0.4
	2.7nm,0.6s,mb3.9,baz=290,slow=12,SNR=5.9						
WRA				PcP	PcP	02 07 45.6	-0.3
	1.3nm,0.7s,baz=300,slow=1.8,SNR=6.4						
WRAB	Tennant Creek	24.79	119	eP	P	02 04 11.1	+1.8
	16nm,1.0s,mb4.5						
WRAB				epP		02 04 22.8	
WRAB	Tennant Creek	24.79	119	eP	P	02 04 11.1	+1.8
WRAB				e*PP		02 04 22.8	
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.5						
STKA	Stephens Creek	36.25	134	P	P	02 05 50.7	-0.2
	comp=Z,3.6nm,0.6s,mb4.5,baz=316,slow=9.6,SNR=5.6						
STKA				LR	LR	02 20 30.6	
	comp=Z,224nm,21.9s,MS3.9,baz=114,slow=36						
STKA	Stephens Creek	36.25	134	eP	P	02 05 50.4	-0.5
LSA	Lhasa	42.88	334	eP	P	02 06 47.4	+1.4
	comp=Z,8.0nm,0.6s,mb4.6						
LSA				epP	pP	02 07 00.9	+2.1
LSA	Lhasa	42.88	334	eP	P	02 06 47.4	+1.4
LSA				e*PP	pP	02 07 00.9	+2.1
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
JIRN	Jiri	43.64	327	eP	P	02 06 52.9	+0.7
	comp=Z,9.9nm,0.6s,mb4.7						
GUN	Gumba	44.01	327	eP	P	02 06 55.9	+0.8
DMN	Daman	44.20	326	eP	P	02 06 57.4	+0.8
GKN	Gorkha	44.77	325	eP	P	02 07 01.1	-0.1
	comp=Z,4.7nm,0.3s,mb4.8						
LZH	Lanzhou	45.10	351	eP	P	02 07 07.6	+3.8
LZH				AP	pP	02 07 10.8	-5.9
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
LZH				AMB	AMB		
	comp=Z,110nm,5.5s						
KOLN	Koldanda	45.18	324	eP	P	02 07 04.4	-0.1
	comp=Z,11nm,0.5s,mb5.0						
GTA	Gaotai	49.06	348	eP	P	02 07 37.0	+2.3
GTA				AP	pP	02 07 42.5	-5.2
GTA				XP	sP	02 07 46.1	-7.1
MJAR	Matsushiro Arr	51.52	28	P	P	02 07 53.9	+0.4
	comp=Z,8.2nm,0.8s,mb4.7,baz=196,slow=7.6,SNR=14						
ULN	Ulaanbaatar	56.43	356	eP	P	02 08 29.6	+0.2
	comp=Z,3.7nm,0.6s,mb4.6						
ULN	Ulaanbaatar	56.43	356	eP	P	02 08 29.6	+0.2
ULN				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
SONM	Songino Array	56.45	356	P	P	02 08 29.8	+0.3
	comp=Z,3.6nm,0.5s,mb4.6,baz=177,slow=8.4,SNR=44						
SONM				PcP	PcP	02 09 26.2	+0.4
	comp=Z,2.5nm,0.6s,baz=182,slow=4.4,SNR=8.5						
SONM				LR	LR	02 35 27.6	
	comp=Z,76nm,18.0s,MS3.8,baz=224,slow=39						
MKAR	Makanchi Array	61.05	337	P	P	02 09 01.3	-0.2
	comp=Z,11nm,0.7s,mb5.1,baz=150,slow=7.1,SNR=64						
OPO	Ambohidratompo	62.98	254	P	P	02 09 14.5	-0.3
	comp=Z,1.5nm,0.4s,mb4.4,baz=115,slow=3.8,SNR=3.9						
KKAR	Karatay Array	63.60	328	i P	P	02 09 17.3	-1.3
KURK	Kurchatov	65.66	338	eP	P	02 09 31.4	-0.4
	comp=Z,8.0nm,0.7s,mb4.9						
KURK	Kurchatov	65.66	338	eP	P	02 09 31.4	-0.4
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.9						
BOD	Bodaibo	66.30	1	eP	P	02 09 35.3	-0.4
BOD				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
ZAL	Zalesovo	66.33	343	P	P	02 09 36.1	+0.1
	comp=Z,4.2nm,0.4s,mb4.9,baz=327,slow=4.9,SNR=23						
ZAL				LR	LR	02 40 57.2	
	comp=Z,80nm,19.8s,MS3.9,baz=307,slow=38						
MAW	Mawson	67.11	198	LR	LR	02 31 51.5	
	comp=Z,92nm,21.9s,MS4.0,baz=248,slow=30						
NVS	Novosibirsk	67.57	343	eP	P	02 09 41.7	-2.1
VOSK	Vostochnaya	70.23	335	P	P	02 09 59.5	-0.7
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
BVA0	Borovoye Array	70.69	335	i P	P	02 10 02.6	-0.4
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BRVK	Borovoye	70.76	335	eP	P	02 10 03.2	-0.2
	comp=Z,1.9nm,0.7s,mb4.1						
BRVK	Borovoye	70.76	335	eP	P	02 10 03.2	-0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.2						
CHKZ	Chkalovo	71.08	336	eP	P	02 10 05.1	-0.2
	comp=Z,11nm,0.6s,mb5.0						
CHKZ	Chkalovo	71.08	336	eP	P	02 10 05.1	-0.2
CHKZ				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.0						
UMR	Umm Al-Rimmam	72.11	305	eP	P	02 10 11.4	-0.5
NAY	Al-Naaiem	72.38	304	eP	P	02 10 12.6	-0.9
MIB	Mutribah	72.50	305	eP	P	02 10 13.4	-0.9
MIB				AMb	AMB	02 10 14.3	
	comp=Z,22nm,0.6s,mb5.3						
AB31	Akbulak array	73.16	328	i P	P	02 10 17.7	-0.1
AB31				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
KMBO	Kilima Mbogo	74.24	271	P	P	02 10 25.4	+0.6
	comp=Z,2.8nm,0.9s,mb4.2,baz=54,slow=9.9,SNR=11						
KMBO				LR	LR	02 37 23.7	
	comp=Z,48nm,18.7s,MS3.8,baz=93,slow=31						
KMBO	Kilima Mbogo	74.24	271	P	P	02 10 25.4	+0.6
KMBO				LR	LR	02 37 23.7	
ARU	Arti	78.08	333	eP	P	02 10 45.7	+0.1
	comp=Z,8.4nm,1.0s,mb4.6						
ARU				ePcP	PcP	02 10 54.5	-0.9
ARU	Arti	78.08	333	eP	P	02 10 45.7	+0.1
ARU				e	pP	02 10 54.5	-4.9
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
TIXI	Tiksi	80.99	5	eP	P	02 11 00.0	-1.0
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
BOSA	Boshof	82.61	242	P	P	02 11 10.5	+0.3
	comp=Z,2.0nm,0.7s,mb4.3,baz=298,slow=9.9,SNR=4.5						
BOSA				LR	LR	02 41 33.4	
	comp=Z,53nm,18.9s,MS3.9,baz=325,slow=31						
BOSA	Boshof	82.61	242	P	P	02 11 10.5	+0.3
BOSA				LR	LR	02 41 33.4	
BR131	Keskin Array S	86.27	311	eP	P	02 11 28.8	+0.4
	comp=Z,2.5nm,0.8s,mb4.5						
BRTR	Keskin Array B	86.27	311	P	P	02 11 28.8	+0.5
	comp=Z,4.0nm,0.8s,mb4.7,baz=124,slow=5.8,SNR=12						
SNAA	Sanae	89.23	197	⇑iP	P	02 11 41.6	-0.3
VNA2	Neumayer--Watz	90.88	197	⇑iP	P	02 11 51.1	+1.5
VNA3	Neumayer Olymp	91.35	196	⇑iP	P	02 11 55.8	+4.0
AKASG	Malin Array Be	91.78	321	P	P	02 11 53.6	-0.6
	comp=Z,1.4nm,0.6s,mb4.5,baz=86,slow=4.8,SNR=9.0						
FINES	FINESS Array B	95.36	331	P	P	02 12 10.7	+0.4
	comp=Z,1.7nm,0.8s,mb4.5,baz=90,slow=8.3,SNR=3.2						
ARCES	ARCESS Array B	96.66	339	LR	LR	03 00 58.4	
	comp=Z,57nm,21.9s,MS4.0,baz=13,slow=39						
NVAR	Mina Array Bea	126.45	48	PKP	PKPdf	02 17 52.4	+3.8
	comp=Z,0.7nm,0.8s,baz=249,slow=2.6,SNR=7.0						
TXAR	Lajitas Array	141.17	53	PKhKP		02 18 12.7	
	comp=Z,0.3nm,0.6s,baz=275,slow=2.6,SNR=4.9						
TXAR				PKP	PKPdf	02 18 19.4	+3.1
	comp=Z,0.3nm,0.6s,baz=187,slow=0.9,SNR=4.4						
CCM	Cathedral Cave	144.29	31	ePKPdf	PKPdf	02 18 21.9	+0.5
NCB	Newcomb	144.50	7	ePKPdf	PKPdf	02 18 22.7	+1.1
MIAR	Mount Ida	145.48	38	ePKPdf	PKPdf	02 18 26.5	+2.9
WCI	Wyandotte Cave	146.50	26	ePKPdf	PKPdf	02 18 28.3	+3.1
WVT	Waverly	147.50	30	ePKPbc	PKPdf	02 18 31.6	+4.7
BDFB	Brasilia	148.43	220	PKPbc	PKPdf	02 18 34.7	+5.8
	comp=Z,2.0nm,0.6s,baz=170,slow=4.8,SNR=6.9						
BDFB	Brasilia	148.43	220	PKP2	PKPab	02 18 34.7	-3.4
BDFB				pmax	pmax		
	comp=Z,2.0nm,0.6s						

MAN 22 02:36:57.6, 14.65N×123.27E, h118^{km}, mb4.0, ML2.8, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GQP	Guinayangan	1.09	227	⇓eP	P	02 37 20.7	-0.1
GQP				eS	S	02 37 37.1	-0.9
POLP	Polilio Island	1.29	273	eP	P	02 37 23.2	+0.3
POLP				eS	S	02 37 40.9	-1.0
PVCP	Virac	1.36	141	eP	P	02 37 24.3	+0.6
PVCP				eS	S	02 37 43.0	-0.5
BOAC	Boac	1.82	230	eP	P	02 37 33.4	+4.1
BOAC				eS	S	02 37 56.6	+3.5
BALP	Baler	1.96	304	eP	P	02 37 31.4	+0.5
BALP				eS	S	02 37 55.3	-0.7

*HLW **22** 02:54:31.1, 35.33N×22.78E, h33^{km}, Mb3.5*

*ATH **22** 02:54:36.4, 35.09N×23.21E, h19^{km}±1^{km}, MD3.2/6*

*NEIC **22** 02:54:36.4, 35.09N×23.21E, h19^{km}, MD3.2(ATH), After ATH.*

*CSEM **22** 02:54:37.3±0.1, 34.90N×23.29E, h40^{km}, MD3.2, Error ellipse: s-maj=6.3km s-min=2.6km az=76.0*

ISC 22 02:54:36.8±0.9, 34.92N±0.09×23.2E±0.2, h51^{km}±44^{km}, n11, σ0^{s}.79/15, 1C-3D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.72	96	ePN	P	02 54 51.5	+0.7
VAM	Vamos	0.94	58	⇑iPN	P	02 54 53.2	-0.6
VAM				eSN	S	02 55 05.7	-0.8
KYTH	Kithira	1.37	354	ePN	P	02 54 59.0	-1.0
VLI	Veliai	1.81	353	ePN	P	02 55 06.2	+0.1
VLI				eSN	S	02 55 28.5	+0.5
NPS	Neapolis	1.99	79	ePB	P	02 55 10.6	+2.0
ITM	Ithomi	2.49	335	ePN	P	02 55 16.1	+0.3
HMAT	Matruh	5.01	138	⇓P	P	02 55 51.8	+0.4
SWA2		5.97	161	⇓P	P	02 56 05.0	+0.4
SWA2				S	S	02 57 12.5	-0.1
SWA1		6.02	159	P	P	02 56 05.2	-0.1
SWA1				S	S	02 57 14.4	+0.5
AWBH		8.17	142	P	P	02 56 33.9	-1.4
HFRF	Wahat Farafira	8.89	149	⇓P	P	02 56 44.5	-0.8

JMA 22 02:56:25.7±0.2, 43.16N×147.33E, h49^{km}, M3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	1.18	281	P	P	02 56 46.2	+0.2
NEM2				eS	S	02 57 01.6	+0.4
JRA	Rausu	1.78	297	P	P	02 56 54.6	-0.1
JRA				eS	S	02 57 16.5	+0.3
JAK	Akkeshi	1.94	266	P	P	02 56 56.9	+0.1
JAK				eS	S	02 57 19.7	-0.3
JNK	Nakash	1.95	283	P	P	02 56 56.8	-0.2
JNK				eS	S	02 57 20.3	0.0
JOB	Onbets	2.58	265	P	P	02 57 06.0	+0.1
JOB				eS	S	02 57 34.6	-1.6
JAR	Ashorobuto	2.61	274	P	P	02 57 06.5	+0.1
JAR				eS	S	02 57 36.0	-1.0
JTKR	Abashiri--Toko	2.62	289	P	P	02 57 07.1	+0.6
JCH	Churui	2.97	261	P	P	02 57 11.4	-0.1
JCH				eS	S	02 57 45.0	-1.1
JEM	Erimo	3.29	251	P	P	02 57 16.8	+0.8
JFR	Furan	3.46	272	P	P	02 57 19.0	+0.5
JFR				eS	S	02 57 58.4	-0.3
JNBK	Urakawa-nobuka	3.49	257	P	P	02 57 18.4	-0.4

*NIED **22** 03:02:00, 38.20N×144.70E, h5^{km}, Mw3.8 Best double couple: M$_0$6.58×10^{14} NP1:φ$_s$226°, δ66°, λ-90°. NP2:φ$_s$46°, δ24°, λ-90°.*

*IDC **22** 03:02:52.2±1.2, 38.15N×144.95E, mb3.7/3, mb1 4.0/5, mb1mx3.7/22, mbtmp3.7/5, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.0/33, Error ellipse: s-maj=42.0km s-min=24.3km az=117.0*

*JMA **22** 03:02:56.8±0.2, 38.25N×144.65E, h54^{km}, M3.8*

ISC 22 03:02:56.1±1.3, 38.38N±0.05×144.73E±0.08, h42^{km}±16^{km}, n18, σ1^{s}.19/29, mb3.7/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.49	287	P	P	03 03 35.9	+0.8
OFUJ				eS	S	03 04 05.5	+1.0
MIYJ	Miyakonagasawa	2.56	299	P	P	03 03 36.8	+0.7
MIYJ				S	S	03 04 06.9	+0.6
JIO	Ouri	2.66	273	P	P	03 03 38.0	+0.5
JIO				eS	S	03 04 08.1	-0.6
JMK	Ichinoseki	2.80	283	P	P	03 03 40.3	+0.7
JMK				eS	S	03 04 12.3	-0.1
JOT	Ohata	4.12	318	eS	S	03 04 45.0	-0.8
JCH	Churui	4.35	347	P	P	03 04 01.2	-0.3
JCH				eS	S	03 04 49.4	-2.3
JKB	Kayabe	4.50	322	P	P	03 04 05.0	+1.4
JKB				eS	S	03 04 52.8	-2.6
NEM2	Nemuro 2	5.04	8	P	P	03 04 08.7	-2.5
NEM2				eS	S	03 05 02.7	-6.1
JRY	Ryogami san	5.22	245	P	P	03 04 11.9	-1.7
JRY				eS	S	03 05 07.7	-5.6
JOD2	Odawara 2	5.49	237	eS	S	03 05 13.9	-6.4
MJAR	Matsushiro Arr	5.50	252	Pn	P	03 04 17.1	-0.5
	1.6nm,0.3s,baz=77,slow=15,SNR=17						
MAT	Matsushiro	5.50	253	P	P	03 04 17.6	0.0
MAT				eS	S	03 05 20.4	-0.1
JTKR	Abashiri--Toko	5.62	354	P	P	03 04 19.0	-0.2
JTKR				eS	S	03 05 19.9	-3.5
JHR	Hokuryu	5.82	338	P	P	03 04 23.9	+1.9
JHR				eS	S	03 05 29.4	+1.0
ASAJ	Asahikawa	5.95	345	Pn	P	03 04 24.6	+0.7
	2.1nm,0.3s,baz=271,slow=24,SNR=9.3						
ASAJ				LR	LR	03 07 28.1	
	comp=Z,79nm,19.7s,baz=344,slow=44						
ILAR	Eielson Array	46.94	33	P	P	03 11 25.0	+1.0
	0.5nm,0.8s,mb3.5,baz=259,slow=6.6,SNR=5.3						
WRA	Warramunga Arr	58.83	191	P	P	03 12 51.0	-1.8
	1.4nm,0.7s,mb4.1,baz=11,slow=7.5,SNR=12						
PDAR	Pinedale Array	74.84	47	P	P	03 14 35.1	+1.5
	0.4nm,0.8s,mb3.4,baz=342,slow=4.7,SNR=4.3						

*JMA **22** 03:17:08.4±0.6, 32.64N×139.30E, h243^{km}±4^{km}, M3.2*

*IDC **22** 03:17:09.2±1.1, 32.66N×139.06E, h197^{km}±16^{km}, mb3.3/2, mb1 3.4/5, mb1mx3.1/22, mbtmp4.0/5, Error ellipse: s-maj=66.2km s-min=10.7km az=73.0*

ISC 22 03:17:09.3±0.6, 32.65N±0.05×139.29E±0.09, h224^{km}±7^{km}, n18, σ0^{s}.80/25, mb3.4/2, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	0.62	41	P	P	03 17 38.1	-1.8
	3.5nm,0.3s,baz=255,slow=19,SNR=1.7						
JHJ				S	S	03 18 06.5	+2.7
	16nm,0.3s,baz=83,slow=23,SNR=6.4						
TK01	Tokai 1	1.81	308	P	P	03 17 48.5	+0.3
JIM2	Oshima 3	2.06	3	P	P	03 17 51.5	+0.8
BSO3	Boso 3	2.37	25	P	P	03 17 54.1	+0.3
BSO1	Boso 1	2.44	35	P	P	03 17 54.9	+0.3
BSO1				eS	S	03 18 29.4	-0.2
JOD2	Odawara 2	2.61	356	P	P	03 17 57.0	+0.6
JOD2				eS	S	03 18 32.4	-0.4
JYN	Shimob	2.91	348	P	P	03 18 00.5	+0.9
JNY	Yasuok	2.95	337	P	P	03 18 00.7	+0.6
JNY				eS	S	03 18 39.1	-0.4
JWZ	Kozaga	3.13	287	P	P	03 18 02.0	-0.2
JHU	Hanno	3.19	360	P	P	03 18 02.5	-0.4
JRY	Ryogami san	3.37	355	P	P	03 18 05.3	+0.2
MJAR	Matsushiro Arr	3.98	347	P	P	03 18 11.2	-1.2
	1.5nm,0.3s,baz=175,slow=13,SNR=12						
MJAR				S	S	03 18 56.5	-4.7
	0.2nm,0.3s,baz=324,slow=24,SNR=2.8						
MAT	Matsushiro	3.98	347	P	P	03 18 11.8	-0.6
MAT				eS	S	03 18 57.0	-4.2
JAI	Aioi	4.21	287	P	P	03 18 15.0	-0.2
CBIJ	Chichi jima	6.08	155	P	P	03 18 38.5	-0.2
	8.9nm,0.3s,baz=343,slow=20,SNR=10						
CBIJ				S	S	03 19 47.6	-0.7
	7.6nm,0.3s,baz=288,slow=20,SNR=4.7						
ASAJ	Asahikawa	11.73	12	P	P	03 19 50.5	-0.5
	1.0nm,0.3s,baz=234,slow=12,SNR=6.3						
WRA	Warramunga Arr	52.51	186	P	P	03 26 02.4	+0.9
	0.2nm,0.3s,mb3.0,baz=1.6,slow=7.9,SNR=7.7						
FINES	FINESS Array B	71.87	332	P	P	03 28 09.6	+0.4
	3.1nm,1.1s,mb3.9,baz=45,slow=5.4,SNR=4.3						

IDC 22 03:33:59.6±3.2, 2.12N×96.63E, mb3.8/5, mb1 4.0/5, mb1mx3.7/18, mbtmp3.8/5, Error ellipse: s-maj=126.1km s-min=28.0km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	43.00	122	P	P	03 42 01.1	-1.7
	0.6nm,0.6s,baz=300,slow=9.2,SNR=5.2						
MKAR	Makanchi Array	46.22	346	P	P	03 42 26.2	-2.1
	1.6nm,0.7s,baz=158,slow=9.3,SNR=14						
SONM	Songino Array	46.31	9	P	P	03 42 27.2	-1.9
	1.7nm,1.0s,baz=188,slow=7.3,SNR=8.4						
ZAL	Zalesovo	52.56	351	P	P	03 43 15.2	-1.8
	1.2nm,0.6s,baz=318,slow=6.8,SNR=6.4						
BVAR	Borovoye Array	55.20	341	P	P	03 43 33.9	-2.7
	0.6nm,0.5s,baz=135,slow=8.2,SNR=4.3						

*SKO **22** 04:09:14.7, 41.46N×20.93E, h20^{km}, M2.5, ML2.5*

*TIR **22** 04:09:15.3, 41.46N×21.00E, h6^{km}*

*CSEM **22** 04:09:15.3±0.1, 41.48N×20.91E, h12^{km}, ML2.7, Error ellipse: s-maj=3.3km s-min=1.8km az=114.0*

*THE **22** 04:09:16.3, 40.03N×21.17E, h22^{km}, ML2.8*

*NEIC **22** 04:09:16.3, 41.50N×21.00E, h4^{km}, ML2.7(SKO), After SKO.*

NEIC Felt [III] at Kicevo.

ISC 22 04:09:15.5±0.7, 41.46N±0.03×20.98E±0.05, h10^{km}, n14, σ0^{s}.95/26, 1D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.38	201	i Pg	Pg	04 09 22.7	-0.5
OHR				i Sg	Sg	04 09 28.9	+0.5
OHR				eLg		04 09 29.2	
	comp=E,754nm,0.3s						
BIA	Bitola	0.51	149	i Pg	Pg	04 09 25.6	-0.4
BIA				i Sg	Sg	04 09 32.9	0.0
SKO	Skopje	0.62	34	ePg	Pg	04 09 27.6	-0.4
SKO				i Sg	Sg	04 09 36.0	-0.2
SKO				eLg		04 09 36.9	
	comp=N,424nm,0.3s						
SKO				eLg		04 09 37.6	
	comp=E,196nm,0.2s						
SKO	Skopje	0.62	34	i Pg	Pg	04 09 27.6	-0.4
SKO				i Sg	Sg	04 09 36.0	-0.3
	comp=E,196nm,0.2s						
FNA	Florina	0.74	156	ePg	Pg	04 09 30.1	-0.3
FNA				eSg	Sg	04 09 41.6	+1.2
KBN	Korca	0.85	190	i pg?	Pg	04 09 38.1	+5.5
KBN				i Sg	Sg	04 09 46.0	+2.0
KBN	Korca	0.85	190	i Sg	Sg	04 09 46.0	+2.0
GRG	Griva	1.19	115	ePg	Pg	04 09 38.7	-0.6
GRG				eSg	Sg	04 09 55.3	+0.2
VAY	Valandovo	1.21	96	i Pn	Pn	04 09 38.7	+0.2
VAY				eSn	Sn	04 09 54.6	-0.3
VAY				eLg		04 09 55.4	
	comp=E,88nm,0.4s						
VAY				eLg		04 09 57.3	
	comp=N,85nm,0.4s						
VAY	Valandovo	1.21	96	i Pg	Pg	04 09 38.7	-1.0
VAY				eSg	Sg	04 09 54.6	-1.2
VAY				Lg		04 09 55.4	
VAY				Lg		04 09 57.3	
LSK	Leskovik	1.34	193	i Pg	Pg	04 09 41.8	-0.6
KNT	Kendrikon	1.48	101	ePb	Pb	04 09 43.6	+0.9
KNT				eSb	Sb	04 10 05.0	+3.6
BARS	Barje	1.50	25	⇓iPn	Pn	04 09 43.4	+0.8
BARS				Sn	Sn	04 10 04.0	+1.7
SRN	Sarande	1.75	206	i Pg	Pg	04 09 48.3	-2.1
SRN				i Sg	Sg	04 10 13.3	-0.5

IDC 22 04:16:19.7±3.1, 0.13N×97.50E, mb3.9/6, mb1 4.1/6, mb1mx3.8/18, mbtmp3.9/6, Error ellipse: s-maj=130.6km s-min=20.8km az=55.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	33.07	125	P	P	04 22 57.2	-2.3
	5.3nm,0.9s,baz=246,slow=10.0,SNR=3.7						
WRA	Warramunga Arr	41.22	121	P	P	04 24 06.7	-1.5
	0.8nm,0.7s,baz=301,slow=9.0,SNR=7.0						
SONM	Songino Array	48.15	8	P	P	04 25 01.9	-1.7
	1.2nm,0.7s,baz=195,slow=8.1,SNR=7.6						
MKAR	Makanchi Array	48.35	346	P	P	04 25 03.5	-1.6
	1.1nm,0.7s,baz=153,slow=8.1,SNR=6.0						
ZAL	Zalesovo	54.65	351	P	P	04 25 50.2	-2.3
	1.6nm,0.6s,baz=278,slow=6.2,SNR=7.7						
BVAR	Borovoye Array	57.36	341	P	P	04 26 08.9	-3.2
	0.6nm,0.5s,baz=117,slow=3.2,SNR=4.8						

GUC 22 04:36:39.5±0.9, 22.76S×68.76W, h117^{km}±9^{km}, MD3.8, ML3.2, 1C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPCH	**San Pedro de A**	**0.54**	**106**	⇑*i*P	P	04 36 57.9	+0.4
SPCH				*i* S	S	04 37 12.7	+1.5
SPCH				AMP		04 37 13.6	
	comp=E,991nm,0.8s						
CEN1	**Los Morros**	**1.47**	**244**	⇓*i*P	P	04 37 09.3	+2.5
CEN1				*i* S	S	04 37 31.5	+4.1
CEN1				AMP		04 37 35.8	
	comp=E,156nm,0.5s						
ANCH	**Antofagasta**	**1.77**	**238**	*e*P	P	04 37 11.0	+0.5
ANCH				*i* S	S	04 37 34.5	+0.7
ANCH				AMP		04 37 38.7	
	comp=N,490nm,0.7s						
CPN1	**Cerro Paranal**	**2.39**	**219**	*e*P	P	04 37 19.4	+0.8
CPN1				*i* S	S	04 37 49.8	+1.8
CPN1				AMP		04 38 00.3	
	comp=E,158nm,0.6s						

JMA 22 05:05:38.0±0.2, 43.38N×146.75E, h36^{km}±2^{km}, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.73**	**269**	P	P	05 05 51.9	0.0
NEM2				*e*S	S	05 06 01.7	-0.3
JNK	**Nakash**	**1.49**	**279**	P	P	05 06 02.9	+0.1
JNK				*e*S	S	05 06 21.5	+0.2
JAK	**Akkeshi**	**1.55**	**256**	P	P	05 06 03.6	0.0
JTKR	**Abashiri--Toko**	**2.15**	**287**	P	P	05 06 13.0	+0.9
JAR	**Ashorobuto**	**2.18**	**269**	P	P	05 06 13.0	+0.5
JOB	**Onbets**	**2.19**	**258**	P	P	05 06 13.6	+0.9
JOB				*e*S	S	05 06 39.3	+0.5
JCH	**Churui**	**2.60**	**254**	P	P	05 06 19.1	+0.5
JCH				*e*S	S	05 06 49.2	-0.1

NNC 22 05:35:06.7±22.0, 36.20N×69.15E, h93^{km}±588^{km}, mpv3.5, 3C-1D, Error ellipse: s-maj=236.0km s-min=184.3km az=121.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.97**	**8**	⇑P	P	05 36 46.7	-1.2
	1.4nm,0.6s,baz=198,slow=14,SNR=13						
KK31				⇑S	S	05 38 05.3	-0.9
	0.2nm,0.2s,baz=193,slow=25,SNR=3.7						
AAK	**Ala-Archa**	**7.64**	**31**	⇑P	P	05 36 54.7	-2.3
	1.3nm,0.3s						
AAK				⇓S	S	05 38 19.7	-2.9
	2.2nm,0.7s						
AB31	**Akbulak array**	**14.68**	**336**	P	P	05 38 29.7	-0.8
	0.2nm,0.3s,baz=153,slow=13,SNR=11						

PGC 22 06:31:23.0, 71.29N×136.34W, h35^{km}, MLSn3.3/3, Beaufort Sea., Beaufort Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
INK	**Inuvik**	**3.15**	**161**	Pn	P	06 32 09.0	-2.4
INK				Sn	S	06 32 43.4	-4.8
INK				Trac		06 32 46.5	
	comp=Z,9.0nm,0.2s						
DAWY	**Dawson**	**7.34**	**191**	Pn	P	06 33 06.0	-4.5
DAWY				Sn	S	06 34 23.1	-10
DAWY				Trac		06 34 27.6	
	comp=Z,6.0nm,0.1s						
YKW3	**Yellowknife Ar**	**12.12**	**125**	Pn	P	06 34 10.5	-5.4
YKW3				Sn	S	06 36 15.2	-16
YKW3				Trac		06 36 18.2	
	comp=Z,2.0nm,0.2s						

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*BJI **22** 06:43:53.7, 39.52N×77.03E, h15^{km}, ML3.2*

*NNC **22** 06:44:07.0±3.4, 39.81N×76.18E, mpv3.0, Error ellipse: s-maj=39.2km s-min=28.9km az=60.0*

ISC 22 06:43:47.2±6.2, 38.5N±0.5×77.2E±0.2, h33^{km}, n9, σ1^{s}36/10, 1C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.37**	**318**	PG	**P**	**06 44 08.8**	**-1.4**
KSH				SG	**S**	**06 44 21.0**	**-6.4**
KSH				Smax			
	comp=N,380nm,0.3s						
KSH				Smax			
	comp=E,820nm,0.4s						
ULHL	**Ulahol**	**3.80**	**350**	P	**P**	**06 44 42.8**	**-2.1**
	SNR=18						
KZA	**Kyzart**	**3.86**	**338**	P	**P**	**06 44 44.0**	**-1.6**
	SNR=20						
UCH	**Uchtor**	**4.23**	**332**	P	**P**	**06 44 52.3**	**+1.3**
	SNR=5.5						
TKM2	**Tokmak 2**	**4.57**	**345**	P	**P**	**06 44 56.3**	**+0.5**
	SNR=5.4						
AAK	**Ala-Archa**	**4.60**	**335**	P	**P**	**06 44 58.0**	**+1.8**
	SNR=5.1						
AAK	**Ala-Archa**	**4.60**	**335**	⇑Pn	**Pn**	**06 44 57.3**	**+1.0**
	comp=E,8.6nm,0.7s						
AAK				⇓Lg		06 45 45.3	
	comp=E,17nm,0.7s						
KK31	**Karatay Array**	**6.82**	**314**	⇓Pg	**P**	**06 45 44.4**	**+17**
	comp=E,0.5nm,0.5s,baz=126,slow=17,SNR=3.7						
KK31				Lg		06 46 59.1	
	comp=E,2.7nm,0.7s,baz=128,slow=29,SNR=5.9						
WMQ	**Urumqi**	**9.55**	**53**	*e*P	**P**	**06 46 05.5**	**+0.1**

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*NIED **22** 06:46:00, 29.60N×130.20E, h8^{km}, Mw3.6 Best double couple: M$_0$2.49×10^{14} NP1:ϕ_s261°, δ55°, λ-120°. NP2: ϕ_s125°, δ45°, λ-55°.*

JMA 22 06:46:53.0±0.1, 29.57N×130.15E, h21^{km}±3^{km}, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.36**	**319**	P	Pb	06 47 00.6	-0.1
JNN				S	Sb	06 47 06.0	+0.1
JKC	**Kuchinoerabu**	**0.89**	**3**	P	Pb	06 47 09.6	0.0
JAM	**Amami Oshima**	**1.25**	**203**	P	Pn	06 47 14.9	-0.6
JAM				*e*S	Sb	06 47 30.9	-0.5
JTN	**Tanegashima 3**	**1.30**	**33**	P	Pn	06 47 16.1	-0.1
JTSR	**Tashiro 2**	**1.73**	**23**	P	Pn	06 47 22.1	-0.2
JTSR				*e*S	Sn	06 47 44.7	+0.9
JTK	**Tokunoshima**	**2.07**	**211**	P	Pn	06 47 26.6	-0.6
JTK				*e*S	Sn	06 47 50.8	-1.7

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*NEIC **22** 07:05:46.9±0.9, 10.73S×77.97W, mb4.1/1, Error ellipse: s-maj=27.0km s-min=12.0km az=43.0*

NEIC Felt [III] at Huacho and Puerto Supe.

*IDC **22** 07:05:47.2±1.5, 10.75S×78.10W, h55^{km}±7^{km}, mb3.6/5, mb1 3.8/7, mb1mx3.7/19, mbtmp3.8/7, MS3.3/5, Ms1 3.2/5, ms1mx3.0/19, Error ellipse: s-maj=46.3km s-min=23.0km az=37.0*

ISC 22 07:05:45.4±3.2, 10.8S±0.3×78.1W±0.2, h57^{km}±41^{km}, h54^{km}±1.1^{km}:pP-P, n16, σ0^{s}51/12, mb3.9/4, MS3.4/4, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**1.74**	**134**	*e*Pn	**P**	**07 06 13.6**	**-0.3**
LPAZ	**La Paz**	**11.15**	**121**	P	**P**	**07 08 25.9**	**+1.2**
	0.2nm,0.3s,baz=320,slow=14,SNR=9.6						
LPAZ				LR	LR	07 12 45.6	
	comp=Z,37nm,21.8s,baz=178,slow=38						
LPAZ	**La Paz**	**11.15**	**121**	*e*Pn	**P**	**07 08 24.6**	**-0.1**
	1.3nm,0.6s						
SAML	**Samuel**	**14.82**	**84**	*e*Pn	**P**	**07 09 08.8**	**-4.5**
	12nm,0.9s						
ROSC	**El Rosal**	**15.97**	**14**	P	**P**	**07 09 34.3**	**+6.3**
	0.5nm,0.3s,baz=102,slow=22,SNR=3.2						
SIV	**San Ignacio**	**17.37**	**109**	P	**P**	**07 09 45.3**	**-0.3**
	0.2nm,0.3s,baz=290,slow=12,SNR=20						
SDV	**Santo Domingo**	**20.90**	**21**	P	**P**	**07 10 25.3**	**-0.1**
	5.6nm,0.4s,baz=172,slow=4.5,SNR=20						
SDV				LR	LR	07 19 44.6	
	comp=Z,73nm,21.7s,MS3.0,baz=209,slow=40						
SDV	**Santo Domingo**	**20.90**	**21**	*e*P	**P**	**07 10 25.6**	**+0.3**
	5.9nm,0.6s						
BDFB	**Brasilia**	**29.69**	**103**	LR	LR	07 24 41.2	
	comp=Z,83nm,21.2s,MS3.3,baz=39,slow=38						
TXAR	**Lajitas Array**	**46.87**	**329**	P	**P**	**07 14 12.8**	**+0.8**
	0.4nm,0.7s,mb3.4,baz=152,slow=9.0,SNR=9.0						
TXAR				pP	pP	07 14 27.0	0.0
	1.1nm,0.8s,baz=148,slow=9.2,SNR=8.4						
PDAR	**Pinedale Array**	**60.54**	**334**	P	**P**	**07 15 51.8**	**-0.5**
	0.3nm,0.5s,mb3.6,baz=153,slow=10,SNR=3.2						
PDAR				pP	pP	07 16 06.8	-1.0
	0.5nm,0.8s,baz=108,slow=9.4,SNR=3.2						
NVAR	**Mina Array Bea**	**61.66**	**325**	P	**P**	**07 15 59.8**	**0.0**
	0.8nm,0.6s,mb4.0,baz=141,slow=8.3,SNR=10						
NVAR				pP	pP	07 16 15.2	-0.2
	0.8nm,0.7s,baz=131,slow=6.5,SNR=5.9						
ELK	**Elko**	**61.67**	**329**	LR	LR	07 43 51.4	
	comp=Z,42nm,18.4s,MS3.6,baz=354,slow=37						
ULM	**Lac du Bonnet**	**62.71**	**347**	P	**P**	**07 16 06.3**	**-0.4**
	1.9nm,0.7s,mb4.3,baz=95,slow=4.2,SNR=3.7						
ULM				pP	pP	07 16 20.5	-1.8
	5.7nm,0.8s,baz=173,slow=6.6,SNR=5.5						
SFJD	**Kangerlussuaq**	**80.10**	**11**	LR	LR	07 51 22.2	
	comp=Z,22nm,20.1s,MS3.5,baz=343,slow=34						
WRA	**Warramunga Arr**	**135.81**	**226**	PKP	PKPdf	07 25 01.6	+1.0
	1.0nm,0.5s,baz=124,slow=2.0,SNR=11						

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*NEIC **22** 07:35:29.2±0.6, 57.62N×150.04W, h10^{km}, ML3.8(PMR), ML3.2(AEIC), Error ellipse: s-maj=8.4km s-min=3.9km az=164.0*

*IDC **22** 07:35:36.6±6.5, 57.95N×150.01W, h50^{km}±47^{km}, mb3.6/5, mb1 3.6/8, mb1mx3.4/24, mbtmp3.7/8, ML3.2/3, Error ellipse: s-maj=54.1km s-min=39.8km az=180.0*

ISC 22 07:35:28.5±1.9, 57.61N±0.07×149.92W±0.07, h20^{km}±16^{km}, n40, σ0^{s}71/44, mb3.9/5, Gulf of Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDAK	**Kodiak Island**	**1.44**	**278**	P	**Pn**	**07 35 53.6**	**-0.1**
SYI	**Shuyak Island**	**1.65**	**309**	P	**Pn**	**07 35 57.5**	**+0.8**
CNPM	**China Poot**	**2.04**	**341**	P	**Pn**	**07 36 03.1**	**+0.7**
CNPM				S	**Sn**	**07 36 28.0**	**+0.4**
XLV	**Seldovia**	**2.08**	**334**	P	**Pn**	**07 36 03.7**	**+0.8**
HOM	**Homer**	**2.25**	**337**	P	**Pn**	**07 36 06.7**	**+1.4**
AUI	**Augustine Isla**	**2.53**	**315**	P	**Pn**	**07 36 10.0**	**+0.7**
AUP	**Augustine Pinn**	**2.54**	**315**	P	**Pn**	**07 36 10.5**	**+0.9**
KAPH	**Katmai Pasha**	**2.55**	**295**	P	**Pn**	**07 36 10.0**	**+0.4**
KAPH				S	**Sn**	**07 36 39.5**	**-0.9**
KABR	**Katmai Barrier**	**2.75**	**283**	P	**Pn**	**07 36 12.4**	**0.0**
MPA	**Moose Pass**	**2.91**	**6**	P	**Pn**	**07 36 14.8**	**+0.1**
CAHL	**Cahill**	**2.91**	**281**	P	**Pn**	**07 36 14.9**	**+0.1**
SLKM	**Skilak Lake**	**2.92**	**357**	P	**Pn**	**07 36 14.7**	**-0.1**
MGLS	**Mageik LS**	**2.95**	**284**	P	**Pn**	**07 36 14.1**	**-1.2**
MGLS				S	**Sn**	**07 36 46.0**	**-4.4**
INE	**Iliamna NE**	**2.95**	**328**	P	**Pn**	**07 36 15.3**	**-0.1**
ILW	**Iliamna West**	**2.97**	**327**	P	**Pn**	**07 36 16.2**	**+0.5**
GLI	**Glacier Island**	**3.59**	**23**	P	**Pn**	**07 36 24.4**	**-0.1**
EYAK	**Cordova Ski Ar**	**3.66**	**34**	P	**Pn**	**07 36 25.2**	**-0.2**
VLZ	**Valdez**	**3.98**	**26**	P	**Pn**	**07 36 30.2**	**+0.1**
PMR	**Palmer**	**4.02**	**5**	P	**Pn**	**07 36 30.4**	**-0.1**
DIV	**Divide**	**4.12**	**29**	*e*P	**Pn**	**07 36 31.5**	**-0.5**
SML	**Sawmill**	**4.29**	**10**	P	**Pn**	**07 36 34.3**	**-0.1**
KLU	**Klutina**	**4.40**	**26**	P	**Pn**	**07 36 35.6**	**-0.3**
SVW2	**Sparrevohn**	**4.54**	**323**	P	**Pn**	**07 36 36.6**	**-1.3**
TRF	**Thorofare Moun**	**5.87**	**358**	P	**Pn**	**07 36 56.0**	**-0.7**
MCK	**McKinley**	**6.17**	**4**	*e*P	**Pn**	**07 37 01.4**	**+0.5**
MENT	**Mentasta**	**6.17**	**27**	*e*P	**Pn**	**07 37 01.2**	**+0.2**
CCB	**Clear Creek Bu**	**7.14**	**7**	P	**Pn**	**07 37 13.2**	**-1.4**
ILAR	**Eielson Array**	**7.34**	**10**	P	**Pn**	**07 37 16.3**	**-1.0**
	0.2nm,0.3s,baz=200,slow=14,SNR=17						
ILAR				S	**Sn**	**07 38 35.1**	**-5.7**
	1.2nm,0.3s,baz=205,slow=16,SNR=7.0						
COLA	**College**	**7.36**	**7**	*e*P	**Pn**	**07 37 16.4**	**-1.2**
DLBC	**Dease Lake**	**10.58**	**77**	P	**P**	**07 38 01.6**	**-0.4**
	0.1nm,0.3s,baz=147,slow=25,SNR=4.5						
INK	**Inuvik**	**13.01**	**28**	P	**P**	**07 38 35.4**	**+0.6**
	0.0nm,0.3s,baz=218,slow=18,SNR=3.0						
INK	**Inuvik**	**13.01**	**28**	P	**P**	**07 38 35.4**	**+0.6**
YKA	**Yellowknife Ar**	**18.13**	**60**	P	**P**	**07 39 42.0**	**+1.4**
	0.1nm,0.3s,baz=268,slow=10,SNR=3.7						
SONM	**Songino Array**	**57.52**	**309**	P	**P**	**07 45 19.4**	**+1.0**
	0.8nm,0.6s,mb4.0,baz=41,slow=6.6,SNR=6.6						
NOA	**NORSAR Array B**	**60.77**	**10**	P	**P**	**07 45 40.7**	**+0.1**
	0.5nm,0.7s,mb3.8,baz=4.0,slow=7.6,SNR=3.0						
NOA	**NORSAR Array B**	**60.77**	**10**	P	**P**	**07 45 40.7**	**+0.1**
FINES	**FINESS Array B**	**61.25**	**2**	P	**P**	**07 45 43.8**	**-0.1**
	0.9nm,0.5s,mb4.2,slow=7.6,SNR=8.4						
BVAR	**Borovoye Array**	**64.93**	**334**	P	**P**	**07 46 08.1**	**-0.1**
	1.1nm,0.7s,mb4.0,baz=34,slow=5.3,SNR=6.1						
MKAR	**Makanchi Array**	**67.31**	**324**	P	**P**	**07 46 22.8**	**-0.7**
	0.7nm,0.9s,mb3.7,baz=26,slow=6.3,SNR=4.8						
MKAR	**Makanchi Array**	**67.31**	**324**	P	**P**	**07 46 22.8**	**-0.7**

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*CSEM **22** 07:40:19.2±0.1, 35.27N×3.94W, h11^{km}, MD2.9, Error ellipse: s-maj=3.7km s-min=2.8km az=26.0, After CNRM*

*CNRM **22** 07:40:19.2, 35.27N×3.94W, h11^{km}, MD2.9*

MDD 22 07:40:17.5±0.5, 35.29N×4.12W, mbLg1.9/10, Error ellipse: s-maj=5.4km s-min=3.1km az=52.0, PRXIMO, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPAL	**Palemas**	**0.16**	**114**	*i* P	Pg	07 40 20.5	-0.2
MPAL				*i* S	Sg	07 40 23.5	+0.7
TOU	**Touzarine**	**0.44**	**137**	*i* P	Pg	07 40 25.0	-1.3
TOU				*i* S	Sg	07 40 31.0	-1.2
EMEL	**Melilla**	**0.95**	**89**	P	Pg	07 40 34.1	-2.4
	75nm,0.1s,SNR=7.9						
EMEL				S	Sg	07 40 48.4	-0.7
	181nm,0.2s,SNR=7.9						
ZAI	**Zaio**	**1.17**	**105**	*i* P	Pb	07 40 38.0	-2.3
ZAI				*i* S	Sb	07 40 52.0	-3.8
TZK	**Tazeka**	**1.20**	**183**	*i* P	Pb	07 40 41.0	+0.2
TZK				*i* S	Sb	07 40 56.0	-0.7
EMIJ	**Mijas**	**1.38**	**338**	P	Pb	07 40 42.4	-1.5
	3.2nm,0.2s,SNR=7.9						
EMIJ				S	Sb	07 41 00.7	-1.2
	8.7nm,0.5s,SNR=7.9						
EBER	**Berja**	**1.89**	**31**	P	Pn	07 40 49.4	-1.8
	4.4nm,0.3s,SNR=7.9						
EBER				S	Sn	07 41 13.5	-2.7
	7.7nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**1.99**	**16**	P	Pn	07 40 52.7	0.0
	0.9nm,0.2s,SNR=7.9						
EQUE				S	Sn	07 41 16.7	-2.0
	2.9nm,0.4s,SNR=4.0						
CZD	**Col de Zad**	**2.38**	**199**	*e*P	Pn	07 40 58.0	-0.3
CZD				*i* S	Sn	07 41 25.0	-3.6
EQES	**Quesada**	**2.65**	**18**	P	Pn	07 41 01.8	-0.3
	0.8nm,0.1s,SNR=7.9						
EQES				S	Sn	07 41 33.6	-1.8
	2.2nm,0.4s,SNR=7.9						
EHUE	**Huescar**	**2.80**	**26**	S	Sn	07 41 37.7	-1.7
	1.3nm,0.4s,SNR=4.0						
EADA	**Adamuz**	**2.90**	**353**	P	Pn	07 41 03.7	-2.0
	0.5nm,0.1s,SNR=7.9						
EADA				S	Sn	07 41 39.2	-2.5
	2.0nm,0.4s,SNR=4.0						
ECAB	**El Cabril**	**2.97**	**340**	P	Pn	07 41 03.0	-3.8
	0.3nm,0.1s,SNR=4.0						
ECAB				S	Sn	07 41 38.9	-4.7
	8.1nm,0.8s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.22**	**321**	P	Pn	07 41 07.8	-2.5
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	07 41 44.2	-5.6
	2.2nm,0.5s,SNR=7.9						
EGRO	**El Granado**	**3.52**	**311**	P	Pn	07 41 11.0	-3.5
	1.5nm,0.2s,SNR=7.9						
EGRO				S	Sn	07 41 51.7	-5.7
	6.0nm,0.5s,SNR=7.9						
EBAD	**Badajoz**	**4.16**	**327**	P	Pn	07 41 19.8	-3.9
	0.7nm,0.1s,SNR=7.9						
EBAD				S	Sn	07 42 07.2	-6.6
	4.1nm,0.2s,SNR=7.9						

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*MOS **22** 07:57:18.3±1.6, 56.45N×114.25E, h14^{km}, mb4.2/1, Error ellipse: s-maj=18.3km s-min=10.1km az=72.5*

MOS Felt (II) at Bodaibo.

*NEIC **22** 07:57:18.3, 56.45N×114.25E, h14^{km}, After MOS.*

NEIC Felt [II] at Bodaybo.

BYKL 22 07:57:18.8±0.3, 56.44N×114.25E, h25^{km}±11^{km}, 4C-2D, FELT I=III MSK at Mamakan, II-III at Taksimo, East of Lake Baykal

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	**0.50**	**230**	⇑*i*Pg	Pb	07 57 27.7	-1.3
SVKR				*e*Sg	Sb	07 57 34.6	-1.4
SVKR				Pmax			
	625nm,0.1s						
SVKR				Smax			
	7µm,0.7s						
SVKR	**Severomuysk**	**0.50**	**230**	*e*PG	Pb	07 57 27.7	-1.3
SVKR				*e*		07 57 34.5	
SVKR				pmax	pmax		
	comp=Z,715nm,0.1s						
SVKR				smax			
	comp=N,7µm,0.9s						
NLYR	**Nelyaty**	**0.81**	**86**	⇑*i*Pg	Pb	07 57 33.6	-0.5
NLYR				*i* Sg	Sb	07 57 44.5	-0.1
NLYR				Pmax			
	comp=N,365nm,0.3s						
NLYR				Smax			
	comp=N,2µm,0.8s						
NLYR	**Nelyaty**	**0.81**	**86**	*e*PG	Pb	07 57 33.4	-0.7
NLYR				*e*		07 57 44.4	
NLYR				pmax	pmax		
	comp=Z,370nm,0.2s						
NLYR				smax			
	comp=N,2µm,0.8s						
UKT	**Uakit**	**1.02**	**200**	⇑*i*Pg	Pn	07 57 36.7	-0.9
UKT				*e*Sg	Sb	07 57 50.5	0.0
UKT				Pmax			
	comp=N,109nm,0.3s						
UKT				Smax			
	comp=N,2µm,0.8s						
UKT	**Uakit**	**1.02**	**200**	*e*PG	Pn	07 57 36.7	-0.9
UKT				*e*		07 57 50.7	
UKT				pmax	pmax		
	comp=Z,102nm,0.4s						
UKT				smax			
	comp=N,910nm,0.2s						
BOD	**Bodaibo**	**1.39**	**355**	⇑*i*Pg	Pn	07 57 43.2	+0.3
BOD				*e*Sg	Sn	07 58 01.6	+1.0
BOD				Pmax			
	comp=N,862nm,0.1s						
BOD				Smax			
	comp=N,2µm,0.3s						
BOD	**Bodaibo**	**1.39**	**355**	*e*PG	Pn	07 57 42.6	-0.3
BOD				*e*		07 58 00.8	
BOD				pmax	pmax		
	comp=Z,851nm,0.2s						
BOD				smax			
	comp=E,1µm,0.2s						
YOA	**Uoyan**	**1.44**	**259**	*e*Pg	Pn	07 57 45.0	+1.3
YOA				*e*Sg	Sn	07 58 04.2	+2.3
YOA				Pmax			
	comp=E,346nm,0.3s						
YOA				Smax			
	comp=E,3µm,0.4s						
YOA	**Uoyan**	**1.44**	**259**	*e*PG	Pn	07 57 44.9	+1.2
YOA				*e*		07 58 04.7	
YOA				pmax	pmax		
	comp=Z,236nm,0.4s						
YOA				smax			
	comp=N,2µm,0.4s						
KMO	**Kumora**	**1.79**	**253**	*e*Pn	Pn	07 57 49.2	+0.5
KMO				*e*Pg	Pn	07 57 50.9	+2.2
KMO				*e*		07 58 12.1	
KMO				*e*Sg	Sn	07 58 14.5	+3.6
KMO				*e*		07 58 21.7	
KMO				Pmax			
	comp=N,186nm,0.4s						
KMO				max			
	comp=N,1µm,1.2s						
KMO	**Kumora**	**1.79**	**253**	*e*PN	Pn	07 57 49.1	+0.4
KMO				*e*		07 58 14.7	
KMO				pmax	pmax		
	comp=Z,115nm,0.3s						
KMO				smax			
	comp=N,1µm,1.2s						
CRS	**Chara**	**2.27**	**77**	*e*Pn	Pn	07 57 55.7	+0.2
CRS				*e*Pg	Pn	07 57 59.2	+3.7
CRS				*e*Sg	Sn	07 58 28.5	+5.6
CRS				Pmax			
	comp=N,118nm,1.0s						
CRS				Smax			
	comp=N,250nm,1.8s						
CRS	**Chara**	**2.27**	**77**	*e*PN	Pn	07 57 59.7	+4.2
CRS				*e*		07 58 29.0	
CRS				pmax	pmax		
	comp=Z,101nm,0.5s						
CRS				smax			
	comp=E,256nm,0.5s						
YLYR	**Ulyunkhan**	**2.35**	**229**	⇓*i*Pn	Pn	07 57 56.6	-0.1
YLYR				*e*Pg	Pn	07 58 00.6	+3.9
YLYR				*e*Sg	Sn	07 58 30.7	+5.7
YLYR				Pmax			
	comp=E,67nm,0.6s						
YLYR				Smax			
	comp=E,324nm,0.2s						
YLYR	**Ulyunkhan**	**2.35**	**229**	*e*PN	Pn	07 57 59.8	+3.1
YLYR				*e*		07 58 31.3	
YLYR				pmax	pmax		
	comp=Z,44nm,0.3s						
YLYR				smax			
	comp=E,317nm,0.2s						
NIZ	**Nizh Angarsk**	**2.72**	**258**	*e*Pn	Pn	07 58 02.1	+0.1
NIZ				*e*Pg	Pn	07 58 06.7	+4.7
NIZ				*e*Sn	Sn	07 58 35.2	+0.8
NIZ				*e*Sg	Sn	07 58 41.8	+7.4
NIZ				Pmax			
	comp=E,32nm,0.4s						
NIZ				Smax			
	comp=E,289nm,0.2s						
NIZ	**Nizh Angarsk**	**2.72**	**258**	*e*PN	Pn	07 58 02.1	+0.1
NIZ				*e*		07 58 06.3	
NIZ				*e*S	Sn	07 58 35.2	+0.8
NIZ				*e*		07 58 43.4	
NIZ				pmax	pmax		
	comp=Z,29nm,0.4s						
NIZ				smax			
	comp=N,256nm,0.3s						
SYVR	**Suvo**	**3.71**	**223**	*e*Pn	Pn	07 58 14.5	-1.5
SYVR				*e*Pg	Pn	07 58 23.8	+7.8
SYVR				*e*Sg	Sn	07 59 12.2	+13
SYVR				Pmax			
	comp=N,41nm,0.4s						
SYVR				Smax			
	comp=N,203nm,1.5s						
TUP	**Tupik**	**3.83**	**119**	⇓*i*Pn	Pn	07 58 16.2	-1.5
TUP				*e*Pg	Pn	07 58 27.1	+9.4
TUP				*e*Sg	Sn	07 59 16.5	+14
TUP				Pmax			
	comp=N,38nm,0.3s						
TUP				Smax			
	comp=N,447nm,0.9s						
TUP	**Tupik**	**3.83**	**119**	*e*PN	Pn	07 58 25.8	+8.1
TUP				*e*		07 59 16.5	
TUP				pmax	pmax		
	comp=Z,30nm,0.3s						
TUP				smax			
	comp=N,293nm,0.8s						
CIT	**Chita**	**4.45**	**186**	*e*Pn	Pn	07 58 24.9	-1.6
CIT				*e*Pg	Pn	07 58 37.7	+11
CIT				*e*Sg	Sn	07 59 35.6	+17
CIT				Pmax			
	comp=N,17nm,1.0s						
CIT				Smax			
	comp=N,398nm,0.5s						
CIT	**Chita**	**4.45**	**186**	*e*PN	Pn	07 58 37.8	+11
CIT				*e*		07 59 36.4	
CIT				pmax	pmax		
	comp=Z,29nm,0.8s						
CIT				smax			
	comp=E,398nm,0.8s						
MXMB	**Maximikha**	**4.50**	**227**	*e*Sg	Sn	07 59 38.3	+19
MXMB				Smax			
	comp=E,203nm,0.8s						
OGRR	**Ongureny**	**4.74**	**237**	*e*Pn	Pn	07 58 30.3	-0.4
OGRR				*e*Pg	Pn	07 58 43.6	+13
OGRR				*e*Sg	Sn	07 59 45.4	+20
OGRR				Pmax			
	comp=E,8.0nm,0.3s						
OGRR				Smax			
	comp=E,34nm,0.2s						

TRG	Tyrgan	5.89	235	*e*	Pn	07 59 07.0	+20
TRG				*e*Sg	Sn	08 00 20.0	+26
TRG				Smax			
	comp=E,58nm,1.7s						
HRMR	Khuramsha	6.46	225	*e*Pg	Pn	07 59 15.8	+21
HRMR				*e*Sg	Sn	08 00 40.7	+32
HRMR				Pmax			
	comp=E,29nm,2.1s						
HRMR				Smax			
	comp=E,170nm,0.9s						
KPC	Khapcheranga	6.84	190	*e*Pn	Pn	07 58 58.2	-2.1
KPC				*e*Pg	Pn	07 59 22.0	+22
KPC				*e*Sg	Sn	08 00 51.8	+34
KPC				Pmax			
	comp=E,3.0nm,0.4s						
KPC				Smax			
	comp=E,101nm,0.2s						
KPC	Khapcheranga	6.84	190	*e*Pg	Pn	07 59 19.9	+20
	comp=E,5.0nm,0.4s						
KPC				*e*		08 00 51.5	
KPC	Khapcheranga	6.84	190	*e*PG	Pn	07 59 19.9	+20
KPC				*e*		08 00 51.5	
KPC				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KPC				smax			
	comp=E,81nm,0.9s						
ARS	Arshan	8.28	242	*e*		08 01 16.0	
ARS				*e*Sg	Sn	08 01 36.4	+42
ARS				Smax			
	comp=E,59nm,0.7s						
ORL	Orlik	9.26	251	Smax		07 59 37.0	
ORL				*e*		08 01 34.2	
ORL				*e*Sg	Sn	08 02 04.2	+46
ORL				Smax			
	comp=E,22nm,1.4s						
TIXI	Tiksi	16.46	16	*e*P	P	08 01 01.9	-7.5
	comp=E,2.0nm,0.9s						
TIXI	Tiksi	16.46	16	*e*P	P	08 01 01.9	-7.5
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRVK	Borovoye	25.27	281	*i* P	P	08 02 47.8	+3.6

CASC 22 08:05:23.9±1.8**, 11.58N×86.32W, h120^{km}**±6^{km}**, MD3.6, ML3.5, 12C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APON	Apoyo	0.42	36⇑	*e*P	P	08 05 41.3	-0.2
TICN	Ticuantepe	0.46	10⇑	*e*P	P	08 05 41.8	0.0
SSNN	San Juan del S	0.54	122⇑	*e*P	P	08 05 42.5	+0.3
SSNN				*e*S	S	08 05 57.8	+1.7
XAVN	Gruta Xavier	0.57	359⇑	*e*P	P	08 05 42.2	-0.1
XAVN				*e*S	S	08 05 58.4	+1.9
MGAN	Managua	0.57	7⇑	*e*P	P	08 05 42.2	-0.2
MGAN				*e*S	S	08 05 57.0	+0.6
	comp=E,968nm,0.5s						
WILN	Americas 2	0.59	12	*e*P	P	08 05 42.5	-0.1
WILN				*e*S	S	08 05 57.1	+0.3
	comp=N,3µm,0.5s						
COPN	Copaltepe	0.66	336⇓	*e*P	P	08 05 42.7	-0.3
CONN	Concepcion	0.68	91⇑	*e*P	P	08 05 43.1	-0.1
MADN	Villa Maderas	0.79	102⇓	*e*P	P	08 05 44.2	+0.1
MOMJ	Momotombo	0.85	345⇑	*e*P	P	08 05 44.2	-0.6
MOMJ				*e*S	S	08 06 00.8	+0.3
MIRN	Miramar	0.94	336⇓	*e*P	P	08 05 45.4	-0.3
MIRN				*e*S	S	08 06 02.1	+0.2
CNGN	Cerro Negro	0.99	338⇑	*e*P	P	08 05 45.4	-0.7
LEON	Leon	1.01	326⇑	*e*P	P	08 05 45.9	-0.4
LEON				*e*S	S	08 06 01.0	-2.0
	comp=Z,364nm,0.4s						
TEL3	Telica 3	1.11	332⇑	*e*P	P	08 05 47.1	-0.3
TEL3				*e*S	S	08 06 05.5	+0.5
	comp=Z,438nm,0.4s						
CRIN	San Cristobal	1.33	327⇓	*e*P	P	08 05 49.5	-0.2
LIM1	Limonal	1.36	130⇑	*e*P	P	08 05 50.3	+0.1
LIM1				*i* S	S	08 06 10.6	+0.6
VCR	Vista de Mar	1.59	155⇑	*i*P	P	08 05 53.6	+0.7
VCR				*e*S	S	08 06 14.3	-0.5
CGA2	Cerro Gallo 2	2.39	130	*e*P	P	08 06 04.0	+1.0
CGA2				*e*S	S	08 06 32.4	0.0
PRS1	Puriscal	2.53	129	*e*P	P	08 06 06.0	+1.2
PRS1				*e*S	S	08 06 36.8	+1.1
LAJ	Bijagual	2.75	128⇓	*e*P	P	08 06 05.4	-2.3
LAJ				*e*S	S	08 06 35.7	-5.2
LCR2	La Lucha 2	2.92	129	*e*P	P	08 06 09.7	-0.3
LCR2				*e*S	S	08 06 44.8	0.0
BUS	Buena Vista	3.22	128	*e*P	P	08 06 14.9	+0.9
ACR	Cerro Adams	4.25	133	*e*P	P	08 06 27.8	-0.1

IDC ***22*** *08:34:40.4±1.6, 1.35N×98.86E, mb4.2/8, mb1 4.4/8, mb1mx4.0/19, mbtmp4.2/8, Error ellipse: s-maj=89.3km s-min=17.1km az=57.0*

NEIC ***22*** *08:34:43.1±0.8, 0.78N×98.17E, h30^{km}, mb4.8/1, Error ellipse: s-maj=26.6km s-min=11.4km az=61.0*

ISC 22 08:34:41.6±1.0**, 0.8N**±0.1×**98.2E**±0.2**, h33^{km}, n13, σ0^{s}94**/11**, mb4.3**/9**, 2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.10	29⇓	*i*P	**P**	**08 35 58.3**	**+0.6**
KULM				*e*		08 38 10.3	
FITZ	Fitzroy Crossi	32.92	126	P	**P**	**08 41 16.1**	**+0.8**
	6.4nm,0.9s,mb4.6,baz=115,slow=9.9,SNR=5.3						
WRA	Warramunga Arr	41.01	122	P	**P**	**08 42 23.2**	**-0.3**
	9.5nm,0.6s,mb4.6,baz=302,slow=9.2,SNR=61						
WRA				PcP	PcP	08 44 23.4	-0.4
	0.9nm,0.6s,baz=313,slow=2.5,SNR=8.3						
WRAB	Tennant Creek	41.01	122	*e*P	**P**	**08 42 23.2**	**-0.4**
	12nm,0.6s,mb4.7						
WRAB				*e*PcP	PcP	08 44 24.0	+0.1
WB2	Warramunga Arr	41.02	122⇓	*i*P	**P**	**08 42 23.1**	**-0.5**
SONM	Songino Array	47.38	8	P	**P**	**08 43 10.9**	**-3.7**
	0.9nm,0.4s,mb4.0,baz=187,slow=9.7,SNR=9.1						
SONM				PcP	PcP	08 44 43.3	-2.0
	1.5nm,0.5s,baz=188,slow=4.0,SNR=11						
MKAR	Makanchi Array	47.86	345	P	**P**	**08 43 18.3**	**0.0**
	1.8nm,0.5s,mb4.4,baz=159,slow=8.4,SNR=29						
STKA	Stephens Creek	52.38	132	P	**P**	**08 43 53.3**	**+0.3**
	1.8nm,0.7s,mb4.1,baz=342,slow=14,SNR=4.5						
ZAL	Zalesovo	54.09	350	P	**P**	**08 44 03.8**	**-1.6**
	3.1nm,0.4s,mb4.5,baz=300,slow=5.3,SNR=8.0						
BVAR	Borovoye Array	56.94	340	P	**P**	**08 44 26.0**	**0.0**
	0.6nm,0.5s,mb3.9,baz=137,slow=11,SNR=4.9						
FINES	FINESS Array B	80.79	332	P	**P**	**08 46 55.1**	**+1.9**
	0.4nm,0.4s,mb3.8,baz=104,slow=7.9,SNR=3.4						
NVAR	Mina Array Bea	128.53	37	PKP	PKPdf	08 53 47.4	+1.4
	0.4nm,0.8s,baz=292,slow=4.9,SNR=3.6						
TXAR	Lajitas Array	143.48	33	PKhKP		08 54 09.8	
	0.2nm,0.5s,baz=7.8,slow=0.9,SNR=5.1						
TXAR				PKP	PKPdf	08 54 17.4	+3.8
	0.3nm,0.5s,baz=180,slow=0.9,SNR=5.5						

ISK ***22*** *08:58:14.2, 40.86N×28.33E, h17^{km}, MD3.0*

CSEM ***22*** *08:58:14.2, 40.86N×28.33E, h17^{km}, MD3.0, After ISK*

SOF ***22*** *08:58:22.7, 41.93N×28.04E, h10^{km}, MD2.7*

ISC 22 08:58:14.0±0.5**, 40.86N**±0.04×**28.29E**±0.03**, h4^{km}**±5^{km}**, n32, σ1^{s}04**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTT	Catalca	0.30	20	*i* PG	**Pg**	**08 58 21.5**	**+1.4**
ELBA	Catalca	0.30	21	*i* P	**Pg**	**08 58 21.5**	**+1.3**
ARMT	Armutlu	0.53	124	PG	**Pg**	**08 58 25.1**	**+0.5**
ARMT				SG	**Sg**	**08 58 32.1**	**+0.5**
BNT	Bandirma	0.58	209	PG	**Pg**	**08 58 25.8**	**+0.2**
MRMT	Marmara Adasi	0.59	244	PG	**Pg**	**08 58 26.0**	**+0.3**
KCT	Karacabey	0.60	175	PG	**Pg**	**08 58 26.2**	**+0.2**
EDC	Edincik	0.61	212	PG	**Pg**	**08 58 26.7**	**+0.5**
ISK	Istanbul-Kandi	0.62	71	PG	**Pg**	**08 58 25.4**	**-1.0**
ISK				SG	**Sg**	**08 58 34.4**	**-0.2**
BADT	Buyukada	0.63	91	PG	**Pg**	**08 58 26.8**	**+0.2**
MFT	Murefte	0.77	265	PG	**Pg**	**08 58 29.9**	**+0.5**
SART	Tekirdag	0.86	259	*i* P	**Pb**	**08 58 30.6**	**-0.5**
YLV	Yalova	0.88	109	PG	**Pg**	**08 58 31.0**	**-0.5**
ORLT	Orhaneli	0.94	150	PG	**Pg**	**08 58 32.4**	**-0.3**
ULDT	Uludag	0.97	138	*i* P	**Pb**	**08 58 31.8**	**-1.2**
ULDT				*i* S	**Sb**	**08 58 43.7**	**-2.1**
HRT	Hereke	1.05	92	PG	**Pg**	**08 58 34.0**	**-0.9**
LPK	Lapseki	1.26	248	*e*PN	**Pn**	**08 58 38.1**	**-0.3**
DST	Dursunbey	1.28	168	PN	**Pn**	**08 58 37.8**	**-0.9**
EDRB	Edirne	1.52	311	*e*PN	**Pn**	**08 58 41.8**	**-0.3**
GPA	Golpazari	1.64	110	*e*PN	**Pn**	**08 58 42.9**	**-0.9**
EZN	Ezine	1.82	236	*e*PN	**Pn**	**08 58 46.1**	**-0.3**
BORA	Eskisehir	1.92	120	*i* P	**Pn**	**08 58 49.6**	**+1.8**
BORA				*i* S	**Sn**	**08 59 14.2**	**+1.4**
HENT	Hendek	1.98	90	*i* P	**Pn**	**08 58 48.0**	**-0.7**
GDZ	Gediz	1.99	152	*i* P	**Pn**	**08 58 51.3**	**+2.4**
GDZ				*i* S	**Sn**	**08 59 16.6**	**+2.1**
AKS	Akhisar	2.01	191	*e*PN	**Pn**	**08 58 48.6**	**-0.5**
MDU	Mudurnu	2.26	99	*e*PN	**Pn**	**08 58 51.7**	**-1.0**
ALT	Altintas	2.28	142	*e*PN	**Pn**	**08 58 51.9**	**-1.1**
KDZ	Kurdzhali	2.30	291	P	**Pn**	**08 58 58.4**	**+5.1**
ESKT	Eskisehir	2.38	124	*i* P	**Pn**	**08 58 53.0**	**-1.4**
ESKT				*i* S	**Sn**	**08 59 26.0**	**+1.8**
ESKT	Eskisehir	2.38	124	*e*Pn	**Pn**	**08 58 53.2**	**-1.1**
RZN	Rozhen	2.82	288	P	**Pg**	**08 59 05.0**	**-5.2**
MMB	Musomiste	3.52	283	*e*P	**Pg**	**08 59 20.0**	**-4.2**
KKB	Krupnik	4.04	286	P	**Pg**	**08 59 29.5**	**-5.2**

WEL 22 09:10:58.6±0.4**, 38.53S×175.67E, h171^{km}**±3^{km}**, ML3.5**/15**, 2C, Error ellipse: s-maj=3.1km s-min=2.5km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNZ	Chateau	0.68	188	PN	P	09 11 23.4	-0.1
TUVZ	Tukino	0.74	181	PN	P	09 11 23.9	0.0
WNVZ	Wahianoa	0.80	184	PN	P	09 11 24.4	+0.2
PKVZ	Pokaka	0.81	198	PN	P	09 11 23.8	-0.4
MOVZ	Moawhango	0.88	176	PN	P	09 11 24.4	-0.3
MOVZ				SN	S	09 11 43.8	-1.0
BKZ	Black Stump Fm	0.91	135	⇑PN	P	09 11 24.8	0.0
BKZ				SN	S	09 11 45.2	+0.1
URZ	Urewera	1.16	77	PN	P	09 11 26.4	-0.5
URZ				SN	S	09 11 48.0	-0.8
WAZ	Wanganui	1.34	203	PN	P	09 11 28.1	-0.5
MWZ	Matawai	1.47	83	PN	P	09 11 30.0	+0.1
TSZ	Takapari Road	1.55	172	⇑PN	P	09 11 30.1	-0.5
TSZ				SN	S	09 11 53.5	-1.9
PXZ	Pawanui	1.77	149	PN	P	09 11 32.6	-0.2
MRZ	Mangatainoka R	2.13	182	PN	P	09 11 35.2	-1.7
MRZ				SN	S	09 12 03.0	-3.4
BFZ	Birch Farm	2.20	169	PN	P	09 11 36.4	-1.3
KIW	Kapiti Island	2.41	194	PN	P	09 11 37.7	-2.5
CAW	Cannon Point	2.62	190	PN	P	09 11 40.4	-2.4
MTW	Mount Morrison	2.63	183	PN	P	09 11 40.3	-2.6
DUWZ	D’Urville Isla	2.65	210	PN	P	09 11 40.0	-3.1
MRW	Makara Radio	2.80	195	PN	P	09 11 42.2	-2.8
WEL	Wellington	2.84	194	PN	P	09 11 42.7	-2.8
PAWZ	Paruwai Farm	2.86	184	PN	P	09 11 42.8	-2.8
TRWZ	Traveller	2.87	180	PN	P	09 11 43.2	-2.6
SNZO	South Karori	2.88	195	PN	P	09 11 42.8	-3.1
TCW	Tory Channel	2.89	201	PN	P	09 11 43.0	-3.1
MSWZ	Moikau Station	2.90	186	PN	P	09 11 43.3	-2.9
TUWZ	Tuamarina	3.19	204	PN	P	09 11 46.3	-3.5
NNZ	Nelson	3.22	213	PN	P	09 11 46.0	-4.2
KHZ	Kahutara	4.21	202	PN	P	09 11 58.8	-4.1
DSZ	Denniston Nort	4.37	221	PN	P	09 11 59.4	-5.6
LTZ	Lake Taylor	4.98	210	PN	P	09 12 06.8	-6.0
MQZ	McQueen’s Vall	5.66	203	*e*SN	S	09 13 13.5	-13

IDC ***22*** *09:11:42.0±2.1, 1.80N×97.80E, mb4.0/6, mb1 4.1/6, mb1mx3.8/18, mbtmp4.0/6, Error ellipse: s-maj=91.4km s-min=26.8km az=53.0*

NEIC ***22*** *09:11:45.2±0.7, 1.64N×97.60E, h30^{km}, mb4.2/2, Error ellipse: s-maj=18.0km s-min=13.1km az=45.0*

ISC 22 09:11:44.2±1.1**, 1.7N**±0.1×**97.7E**±0.2**, h30^{km}, n9, σ0^{s}29**/9**, mb4.0**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	4.61	40	*e*Pn	**Pn**	**09 12 53.9**	**+0.1**
WRA	Warramunga Arr	41.90	123	P	**P**	**09 19 34.1**	**+0.1**
	0.7nm,0.5s,mb3.6,baz=303,slow=9.1,SNR=6.2						
WRAB	Tennant Creek	41.90	123	*e*P	**P**	**09 19 33.8**	**-0.2**
	2.3nm,0.6s,mb4.0						
WRAB				*e*		09 21 11.8	
SONM	Songino Array	46.54	8	P	**P**	**09 20 10.7**	**-0.3**
	0.9nm,0.8s,mb3.8,baz=190,slow=8.9,SNR=6.7						
MKAR	Makanchi Array	46.86	346	P	**P**	**09 20 13.8**	**+0.3**
	2.5nm,0.6s,mb4.3,baz=156,slow=8.8,SNR=30						
KURK	Kurchatov	51.42	345	*e*P	**P**	**09 20 48.5**	**0.0**
	2.0nm,0.6s,mb4.2						
ZAL	Zalesovo	53.12	351	P	**P**	**09 21 01.2**	**-0.1**
	3.3nm,0.5s,mb4.6,baz=326,slow=6.4,SNR=5.1						
BVAR	Borovoye Array	55.92	340	P	**P**	**09 21 21.2**	**-0.5**
	0.9nm,0.4s,mb4.2,baz=135,slow=10,SNR=6.4						
FINES	FINESS Array B	79.77	332	P	**P**	**09 23 51.3**	**+0.5**
	0.5nm,0.5s,mb3.7,baz=90,slow=5.6,SNR=5.8						

NEIC ***22*** *09:46:09.3, 31.90S×70.16W, h112^{km}, MD3.6(GUC), After GUC.*

GUC 22 09:46:09.3±0.8**, 31.90S×70.16W, h112^{km}**±12^{km}**, MD3.6, ML3.3, 2C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	1.02	315⇓	*i*P	P	09 46 31.5	+0.3
CMCH				*i* S	S	09 46 48.2	+0.6
CMCH				AMP		09 46 48.8	
	comp=N,5µm,0.4s						
CHNG	Los Chungos	1.14	271⇓	*i*P	P	09 46 32.6	+0.1
CHNG				*i* S	S	09 46 49.5	-0.4
CHNG				AMP		09 46 55.0	
	comp=E,457nm,0.5s						
PEL	Peldehue	1.32	200	*i* S	S	09 46 53.7	+0.1
MDZ	Mendoza	1.48	132⇑	*i*P	P	09 46 36.6	+0.2
MDZ				S	S	09 46 57.7	+0.9
RCDM	Rinconada Maip	1.68	199	*e*P	P	09 46 38.6	-0.2
RCDM				*i* S	S	09 47 01.2	+0.3
RCDM				AMP		09 47 03.0	
	comp=E,229nm,0.2s						
TLL	Tololo Astrono	1.82	342⇑	*i*P	P	09 46 41.2	+0.7
TLL				*i* S	S	09 47 04.7	+0.8
TLL				AMP		09 47 10.0	
	comp=N,204nm,0.7s						
CHCH	Chadas Angostu	2.07	192	*i* P	P	09 46 45.2	+1.4
CHCH				*i* S	S	09 47 11.5	+1.9

BJI ***22*** *09:48:43.1, 14.75S×66.23E, h16^{km}, mB5.6, mb5.0, Ms5.6, Msz5.3*

MOS ***22*** *09:48:44.0±1.0, 14.75S×66.81E, h10^{km}, mb5.6/62, MS4.8/15, Error ellipse: s-maj=9.0km s-min=4.4km az=112.7*

IDC ***22*** *09:48:44.1±0.5, 14.78S×66.82E, mb4.7/23, mb1 4.7/24, mb1mx4.7/24, mbtmp4.7/24, MS5.2/14, Ms1 5.2/14, ms1mx5.0/22, Error ellipse: s-maj=15.7km s-min=14.0km az=33.0*

NEIC ***22*** *09:48:46.0±0.2, 14.81S×66.72E, h10^{km}, mb5.4/74, MS4.7/7, Error ellipse: s-maj=6.0km s-min=5.0km az=217.0*

HRVD ***22*** *09:48:46.0±0.2, 14.94S×66.83E, h12^{km}, MW5.6/86, Centroid moment Tensor Solution. LP body waves: s80,c151;Mantle waves: s86,c194; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.96±.05; $M_{\theta\theta}$1.41±.05; $M_{\phi\phi}$1.55±.05; $M_{r\theta}$-0.30±.14; $M_{\theta\phi}$-1.55±.04; $M_{\phi r}$0.79±.14; Best double couple: $M_0$3.112×10^{17} NP1: ϕ_s310°, δ38°, λ-100°. NP2: ϕ_s142°, δ53°, λ-82°. Principal axes: T 3.131, Plg7°, Azm227°; N -.037, Plg6°, Azm318°; P -3.093, Plg81°, Azm87°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

SKO ***22*** *09:48:56.8, 13.70S×65.59E*

ISC 22 09:48:43.7±0.2**, 14.87S**±0.04×**66.78E**±0.03**, h10^{km}, (h21^{km}**±1.8^{km}**:pP-P), n451, σ0^{s}97**/363**, mb5.3**/132**, MS5.2**/46**, 18C-33D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGAR	Diego Garcia	9.27	37	*e*Pn	**P**	**09 50 57.2**	**-3.1**
	316nm,1.4s						
DGAR				*e*Sn	**Sn**	**09 52 54.9**	**+9.2**
DGAR	Diego Garcia	9.27	37	*e*P	**P**	**09 50 57.3**	**-3.1**
DGAR				pmax	pmax		
	comp=Z,316nm,1.4s						
MSEY	Mahe Island	15.05	311	*e*Pn	**P**	**09 52 20.9**	**+2.5**
	comp=Z,58nm,1.2s						
MSEY				*e*Sn	S	09 55 31.1	+25
OPO	Ambohidratompo	19.12	256	P	**P**	**09 53 10.6**	**+1.0**
	comp=Z,0.4nm,0.3s,baz=64,slow=9.8,SNR=8.4						
TRD	Trivandrum	25.32	24	*e*P	**P**	**09 54 13.6**	**+1.2**
TRD				*e*x	**S**	**09 58 48.1**	**+12**
PALK	Pallekele	25.97	33	*e*P	**P**	**09 54 19.6**	**+1.1**
	comp=Z,277nm,2.1s,mb5.4						
MNGI	Mangalore	28.76	16	*e*P	**P**	**09 54 40.7**	**-3.1**
MNGI				*e*x	**S**	**09 59 41.7**	**+10**
KMBO	Kilima Mbogo	32.21	292	P	**P**	**09 55 15.2**	**+0.8**
	comp=Z,9.0nm,0.9s,mb4.6,baz=69,slow=7.4,SNR=19						
KMBO				LR	LR	10 05 24.3	
	comp=Z,3µm,21.6s,MS5.0,baz=100,slow=31						
POO	Poona	33.91	12	*e*x	pP	09 55 34.2	+2.0
POO				*e*x	x	10 04 59.1	
HYB	Hyderabad	34.12	20	*i* P	**P**	**09 55 31.0**	**0.0**
HYB				*e*PP	PP	09 56 50.0	+4.7
HYB				*e*S	**S**	**10 01 00.0**	**+4.1**
HYB				LR	LR	10 08 00.0	
	comp=Z,10nm,16.0s						
HYB	Hyderabad	34.12	20	*e*P	**P**	**09 55 31.0**	**0.0**
HYB				*e*		09 56 50.0	
HYB				*e*S	**S**	**10 01 00.0**	**+4.1**
ATD	Arta Tunnel	35.36	317	P	**P**	**09 55 41.1**	**-0.5**
	comp=Z,18nm,0.8s,mb5.0,baz=197,slow=13,SNR=8.4						
VIS	Vishakhapatnam	36.26	27	*e*P	**P**	**09 55 46.3**	**-3.0**
VIS				*e*x	x	10 05 52.5	
PBA	Port Blair	36.82	46	*e*x	SS	10 04 48.5	+43
PBA				*e*x	ScS	10 06 00.0	-7.7
MATP	Matopo	36.84	256	P	**P**	**09 55 54.5**	**+0.4**
	comp=Z,15nm,1.1s,mb4.7,baz=100,slow=5.4,SNR=9.1						
LSZ	Lusaka	37.24	264	*e*P	**P**	**09 55 58.3**	**+0.8**
	comp=Z,94nm,1.5s,mb5.4						
LSZ	Lusaka	37.24	264	*e*P	**P**	**09 55 58.3**	**+0.8**
LSZ				pmax	pmax		
	comp=Z,93nm,1.5s,mb5.4						
BHJ	Bhuj	37.99	4	*e*P	**P**	**09 56 06.7**	**+2.9**
KULM	Kulim	39.09	62	*e*P	**P**	**09 56 14.6**	**+1.5**
BHPL	Bhopal	39.28	16	*e*P	**P**	**09 56 16.2**	**+1.7**
BHPL				*e*x	SS	10 05 00.4	+0.1
BLSP	Bilaspur	39.73	23	*e*P	**P**	**09 56 17.3**	**-1.0**
BOSA	Boshof	40.72	243	P	**P**	**09 56 27.6**	**+1.2**
	comp=Z,5.7nm,0.8s,mb4.2,baz=97,slow=7.0,SNR=8.3						
BOSA				LR	LR	10 10 58.2	
	comp=Z,5µm,18.1s,MS5.4,baz=89,slow=33						
BOSA	Boshof	40.72	243	*e*P	**P**	**09 56 26.3**	**-0.1**
	comp=Z,237nm,2.1s,mb5.5						
BOSA	Boshof	40.72	243	*e*P	**P**	**09 56 26.3**	**0.0**
BOSA				pmax	pmax		
	comp=Z,237nm,2.1s,mb5.5						
AJM	Ajmer	41.80	11	*e*P	**P**	**09 56 38.0**	**+2.6**
AJM				AMb	AMB	09 56 45.5	
	comp=Z,73nm,1.3s,mb5.2						
BOK	Bokaro	42.72	26	*e*x	**S**	**10 03 14.6**	**+8.4**
CAL	Calcutta	42.75	30	*e*x	**P**	**09 56 38.2**	**-5.0**
CAL				*e*x	PP	09 58 27.8	+2.7
KHET	Khetri	43.57	12	*e*P	**P**	**09 56 50.8**	**+1.0**
KHET				AMb	AMB	09 56 55.3	
	comp=Z,23nm,1.3s,mb4.7						
KUDL	Kundal	43.78	12	*e*P	**P**	**09 56 52.1**	**+0.6**
KUDL				AMb	AMB	09 56 57.8	
	comp=Z,28nm,1.3s,mb4.8						
SONA	Sohna	44.01	13	*e*P	**P**	**09 56 53.8**	**+0.4**
SONA				AMb	AMB	09 57 02.6	
	comp=Z,59nm,1.5s,mb5.1						
AYAN	Aya Nagar	44.24	13	*e*P	**P**	**09 56 55.0**	**-0.2**
AYAN				AMb	AMB	09 57 01.0	
	comp=Z,30nm,0.8s,mb5.1						
BHGR	Bahadurgarh	44.40	13	*e*P	**P**	**09 56 55.5**	**-1.1**
NDI	New Delhi	44.46	13	*e*P	**P**	**09 56 57.0**	**0.0**
SUR	Sutherland	45.21	239	LR	LR	10 13 04.8	
	comp=Z,4µm,19.1s,MS5.4,baz=88,slow=32						
KOLN	Koldanda	45.41	21	*e*P	**P**	**09 57 05.6**	**+1.0**
	comp=Z,337nm,1.4s,mb6.0						
KALG	Kalgarh	45.60	15	*e*P	**P**	**09 57 04.3**	**-1.7**
KALG				AMb	AMB	09 57 12.5	
	comp=Z,93nm,1.1s,mb5.6						
KKR	Kurukshetra	45.61	12	*e*x	**P**	**09 57 02.2**	**-3.9**
DMN	Daman	45.81	23	*e*P	**P**	**09 57 08.8**	**+1.0**
	comp=Z,217nm,1.3s,mb5.9						
PKI	Pulchoki	45.89	23	*e*P	**P**	**09 57 08.9**	**+0.5**
	comp=Z,200nm,1.5s,mb5.8						
GKN	Gorkha	45.99	22	*e*P	**P**	**09 57 10.0**	**+0.8**
	comp=Z,316nm,1.3s,mb6.1						
KSM	Kuching	46.02	73	P	**P**	**09 57 08.6**	**-1.0**
KKN	Kakani	46.04	23	*e*P	**P**	**09 57 10.7**	**+1.1**
	comp=Z,304nm,1.5s,mb6.0						
JIRN	Jiri	46.28	24	*e*P	**P**	**09 57 12.4**	**+1.0**
	comp=Z,310nm,1.6s,mb6.0						
GUN	Gumba	46.38	24	*e*P	**P**	**09 57 13.2**	**+1.0**
	comp=Z,538nm,1.7s,mb6.2						
BHK	Bhakra	46.94	11	*e*x	x	09 57 27.8	
SHL	Shillong	47.05	32	*e*P	**P**	**09 57 18.5**	**+1.0**
TSUM	Tsumeb	47.12	257	*e*P	**P**	**09 57 20.1**	**+1.9**
	comp=Z,15nm,1.2s,mb4.8						
KLP	Kalpa	47.43	13	*e*P	**P**	**09 57 18.0**	**-2.5**
KLP				AMb	AMB	09 57 30.6	
	comp=Z,153nm,1.5s,mb5.7						
THN	Thein Dam	47.80	10	*e*P	**P**	**09 57 22.2**	**-1.3**
NWAO	Narrogin (SRO)	49.02	121	P	**P**	**09 57 33.7**	**+0.9**
	comp=Z,8.0nm,0.9s,mb4.8,baz=267,slow=15,SNR=2.5						
NWAO				LR	LR	10 13 25.7	
	comp=Z,2µm,21.2s,MS5.1,baz=277,slow=30						
NWAO	Narrogin (SRO)	49.02	121	*e*P	**P**	**09 57 32.9**	**+0.1**
	comp=Z,24nm,1.2s,mb5.1						
NWAO	Narrogin (SRO)	49.02	121	*e*P	**P**	**09 57 32.9**	**+0.1**
NWAO				pmax	pmax		
	comp=Z,24nm,1.2s						
KLBR	Kellerberrin	49.27	119	*e*P	**P**	**09 57 34.7**	**0.0**
	comp=Z,67nm,1.3s,mb5.5						
LSA	Lhasa	50.16	28	P	**P**	**09 57 43.4**	**+1.8**
LSA				AP	pP	09 57 51.9	+7.2
LSA				PCP	PcP	09 59 00.8	-0.5
LSA				PP	PP	09 59 39.1	+1.2
LSA				S	**S**	**10 04 50.0**	**-2.1**
LSA				AMB	AMB		
	comp=Z,370nm,5.4s						
LSA				LR	LR		
	comp=N,2µm,20.2s,MS5.3						
LSA				LR	LR		
	comp=E,2µm,20.2s,MS5.3						
LSA				LR	LR		
	comp=Z,5µm,21.2s,MS5.5						
LSA	Lhasa	50.16	28	*e*P	**P**	**09 57 43.4**	**+1.8**
	comp=Z,114nm,1.7s,mb5.6						
LSA	Lhasa	50.16	28	*e*P	**P**	**09 57 43.6**	**+2.0**
LSA				*e**PP	pP	09 57 50.5	+5.8
LSA				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.6						
MBWA	Marble Bar	50.55	105	*e*P	**P**	**09 57 45.4**	**+0.7**
	comp=Z,66nm,1.3s,mb5.4						
BHD	Baghdad	52.43	336	*e*x	x	09 57 55.0	
MAW	Mawson	52.76	182	*e*P	**P**	**09 57 59.4**	**-1.4**
	comp=Z,9.9nm,1.5s,mb4.5						
MAW	Mawson	52.76	182	P	**P**	**09 58 01.3**	**+0.6**
	comp=Z,14nm,1.2s,mb4.8,baz=33,slow=12,SNR=6.7						
MAW				LR	LR	10 14 49.5	
	comp=Z,4µm,21.9s,MS5.4,baz=360,slow=30						
MAW	Mawson	52.76	182	*e*P	**P**	**09 57 59.4**	**-1.4**
MAW				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KMI	Kunming	53.00	42	P	**P**	**09 58 05.3**	**+2.2**
KMI				AP	pP	09 58 10.8	+4.6
KMI				XP	sP	09 58 12.4	+5.0
KMI				PCP	PcP	09 59 12.9	+1.1
KMI				PP	PP	10 00 06.8	+2.3
KMI				PPP	PPP	10 01 13.6	+3.8
KMI				SCP		10 03 08.3	
KMI				PCS		10 03 10.3	
KMI				S	**S**	**10 05 34.4**	**+3.3**
KMI				XS		10 05 43.0	
KMI				SCS	ScS	10 07 50.8	+1.1
KMI				SS	SS	10 09 13.3	+3.7
KMI				SSS	SSS	10 11 02.6	+6.4
KMI				AMB	AMB		
	comp=Z,20nm,1.8s,mb4.8						
KMI				AMB	AMB		
	comp=Z,300nm,3.3s						
KMI				LR	LR		
	comp=N,2µm,17.7s,MS5.3						
KMI				LR	LR		
	comp=E,1µm,17.4s,MS5.3						
KMI				LR	LR		
	comp=Z,2µm,18.3s,MS5.2						

Code	Station	Delta	Az	Phase	ISC phase	Time	Res
KKM	**Kota Kinabalu**	**53.22**	**71**	P	**P**	**09 58 04.8**	**-0.1**
QIZ	**Qiongzhong**	**54.15**	**53**	*e*P	**P**	**09 58 16.3**	**+4.7**
QIZ				S	**S**	**10 05 52.6**	**+5.9**
QIZ				LR	LR		
	comp=N,2µm,18.6s,MS5.4						
QIZ				LR	LR		
	comp=E,3µm,19.3s,MS5.4						
QIZ				LR	LR		
	comp=Z,4µm,20.1s,MS5.5						
MSL	**Mosul**	**55.59**	**337**	*e*x	x	09 58 21.5	
MSL				*e*x	x	09 06 05.0	
MSL				*e*		09 58 28.5	
FITZ	**Fitzroy Crossi**	**56.33**	**102**	*e*P	**P**	**09 58 26.9**	**-0.6**
	comp=Z,57nm,1.3s,mb5.4						
FITZ	**Fitzroy Crossi**	**56.33**	**102**	LR	LR	10 18 36.6	
	comp=Z,9µm,21.7s,MS5.8,baz=275,slow=32						
GYA	**Guiyang**	**56.48**	**44**	⇑*i*P	**P**	**09 58 28.5**	**0.0**
GYA				AP	pP	09 58 35.6	+4.0
GYA				XP	sP	09 58 38.4	+5.6
GYA				PP	PP	10 00 36.3	+0.4
GYA				SCP		10 03 17.8	
GYA				S	**S**	**10 06 18.0**	**+0.1**
GYA				XS		10 06 37.3	
GYA				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.7						
GYA				AMB	AMB		
	comp=Z,260nm,4.8s						
GYA				LR	LR		
	comp=N,2µm,18.4s,MS5.4						
GYA				LR	LR		
	comp=E,2µm,17.0s,MS5.4						
GYA				LR	LR		
	comp=Z,2µm,18.8s,MS5.3						
SYO	**Syowa Base**	**56.78**	**191**	⇓P	**P**	**09 58 28.0**	**-2.1**
SYO	**Syowa Base**	**56.78**	**191**	⇑pP	pP	09 58 34.4	+1.2
SYO	**Syowa Base**	**56.78**	**191**	⇓*e*P	**P**	**09 58 28.0**	**-2.1**
SYO				⇑*e*pP	pP	09 58 34.4	+1.2
CD2	**Chengdu**	**57.75**	**38**	P	**P**	**09 58 37.1**	**-0.3**
CD2				XP	sP	09 58 47.9	+6.2
CD2				PP	PP	10 00 42.6	-4.6
CD2				PPP	PPP	10 02 08.5	-0.3
CD2				S	**S**	**10 06 30.0**	**-4.5**
CD2				AMB	AMB		
	comp=Z,50nm,1.5s,mb5.3						
CD2				AMB	AMB		
	comp=Z,230nm,14.8s						
CD2				LR	LR		
	comp=E,940nm,16.2s						
CD2				LR	LR		
	comp=Z,1µm,18.6s,MS5.1						
FRU	**Bishkek**	**57.87**	**7**	*e*P	**P**	**09 58 38.0**	**-0.1**
FRU				*i*		09 58 44.5	
FRU				pmax	pmax		
	comp=Z,130nm,2.5s,mb5.5						
FORT	**Forrest**	**58.01**	**117**	*e*P	**P**	**09 58 39.0**	**-0.2**
	comp=Z,22nm,0.7s,mb5.3						
GNI	**Garni**	**58.45**	**340**	P	**P**	**09 58 42.8**	**+0.6**
	comp=Z,25nm,0.7s,mb5.3,baz=308,slow=3.0,SNR=9.6						
GNI				LR	LR	10 22 16.1	
	comp=Z,914nm,20.9s,MS4.9,baz=344,slow=34						
GNI	**Garni**	**58.45**	**340**	*e*P	**P**	**09 58 43.2**	**+1.0**
	comp=Z,216nm,1.4s,mb6.0						
GNI	**Garni**	**58.45**	**340**	*d i*P	**P**	**09 58 42.7**	**+0.5**
GNI				pmax	pmax		
	comp=Z,119nm,1.6s						
GNI				MLR	MLR		
	comp=Z,500nm,17.0s						
CASY	**Casey**	**58.95**	**161**	*e*P	**P**	**09 58 44.4**	**-1.0**
	comp=Z,196nm,1.7s,mb5.9						
TI2	**Plekhanov**	**59.88**	**341**	*e*P	**P**	**09 58 52.0**	**-0.1**
TI2				*e*		09 59 39.0	
TI2				*e*		10 01 00.0	
TI2				*e*		10 07 09.0	
TI2				pmax	pmax		
	comp=Z,1µm,15.0s						
ENH	**Enshi**	**60.87**	**42**	*e*P	**P**	**09 58 58.4**	**-0.5**
	comp=Z,108nm,1.4s,mb5.8						
WMQ	**Urumqi**	**61.45**	**17**	⇓*i*P	**P**	**09 59 02.6**	**-0.2**
WMQ				AP	pP	09 59 09.5	+3.6
WMQ				XP	sP	09 59 12.5	+5.5
WMQ				PCP	PcP	09 59 44.5	-0.1
WMQ				PP	PP	10 01 20.0	-0.4
WMQ				SCP		10 03 43.0	
WMQ				S	**S**	**10 07 21.5**	**-0.7**
WMQ				PS	PS	10 07 40.0	+0.8
WMQ				AMB	AMB		
	comp=Z,60nm,1.6s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,710nm,3.9s						
WMQ				LR	LR		
	comp=N,2µm,16.3s,MS5.5						
WMQ				LR	LR		
	comp=E,2µm,16.3s,MS5.5						
WMQ				LR	LR		
	comp=Z,2µm,19.5s,MS5.2						
LZH	**Lanzhou**	**61.61**	**34**	*e*P	**P**	**09 59 04.3**	**+0.4**
LZH				AP	pP	09 59 10.1	+3.0
LZH				XP	sP	09 59 13.1	+4.9
LZH				PP	PP	10 01 20.0	-1.9
LZH				*e*S	**S**	**10 07 15.6**	**-8.7**
LZH				AMB	AMB		
	comp=Z,50nm,1.8s,mb5.3						
LZH				AMB	AMB		
	comp=Z,180nm,5.9s						
LZH				LR	LR		
	comp=E,3µm,17.5s						
LZH				LR	LR		
	comp=Z,3µm,19.6s,MS5.5						
GTA	**Gaotai**	**62.17**	**29**	P	**P**	**09 59 07.3**	**-0.4**
GTA				AP	pP	09 59 12.0	+1.2
GTA				XP	sP	09 59 14.3	+2.3
GTA				PCP	PcP	09 59 46.5	-1.1
GTA				PP	PP	10 01 27.0	+0.3
GTA				PPP	PPP	10 02 55.8	-0.3
GTA				SCP		10 03 47.1	
GTA				S	**S**	**10 07 31.5**	**+0.1**
GTA				XS		10 07 39.5	
GTA				SCS	ScS	10 08 55.3	-0.8
GTA				SS	SS	10 11 37.3	+1.1
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.9						
GTA				AMB	AMB		
	comp=Z,410nm,5.7s						
GTA				LR	LR		
	comp=N,2µm,23.3s,MS5.4						
GTA				LR	LR		
	comp=E,2µm,22.9s,MS5.4						
GTA				LR	LR		
	comp=Z,3µm,26.4s,MS5.4						
BR131	**Keskin Array S**	**62.48**	**332**	*e*P	**P**	**09 59 09.5**	**-0.2**
	comp=Z,5.8nm,0.8s,mb4.8						
BRTR	**Keskin Array B**	**62.48**	**332**	P	**P**	**09 59 09.1**	**-0.7**
	comp=Z,5.2nm,0.7s,mb4.8,baz=162,slow=8.2,SNR=20						
KIV	**Kislovodsk**	**62.54**	**341**	*e*P	**P**	**09 59 10.6**	**+0.5**
KIV				*e*S	**S**	**10 07 39.2**	**+3.2**
KIV				*e*SS	SS	10 11 38.8	-3.2
KIV				pmax	pmax		
	comp=Z,873nm,18.1s						
MKAR	**Makanchi Array**	**62.94**	**12**	P	**P**	**09 59 11.4**	**-1.2**
	comp=Z,6.4nm,0.6s,mb4.9,baz=210,slow=8.2,SNR=33						
MKAR				LR	LR	10 25 53.2	
	comp=Z,2µm,21.5s,MS5.3,baz=195,slow=36						
MKAR	**Makanchi Array**	**62.94**	**12**	*i* P	**P**	**09 59 11.5**	**-1.2**
MKAR				pmax	pmax		
	comp=Z,154nm,1.7s						
XAN	**Xi’an**	**63.04**	**39**	P	**P**	**09 59 12.5**	**-1.0**
XAN				AP	pP	09 59 26.8	+10
XAN				S	**S**	**10 07 40.3**	**-2.1**
XAN				AMB	AMB		
	comp=Z,20nm,2.0s,mb4.9						
XAN				LR	LR		
	comp=N,510nm,19.1s,MS5.2						
XAN				LR	LR		
	comp=E,1µm,18.1s,MS5.2						
XAN				LR	LR		
	comp=Z,2µm,19.1s,MS5.3						
SOC	**Sochi**	**63.22**	**338**	*e*P	**P**	**09 59 12.3**	**-2.3**
SOC				*e**PP	pP	09 59 20.6	+2.9
SOC				*e*		09 59 58.9	
SOC				*e*		10 01 33.0	
SOC				*i* S	**S**	**10 07 41.5**	**-3.0**
SOC				*e*SS	SS	10 11 50.0	-2.7
SOC				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.6						
GOF	**Gofitskoye**	**63.42**	**341**	⇑*i*P	**P**	**09 59 14.0**	**-1.8**
GOF				pmax	pmax		
	comp=Z,110nm,2.5s,mb5.5						
ASPA	**Alice Springs**	**63.48**	**109**	*e*P	**P**	**09 59 15.5**	**-1.0**
KAKA	**Kakadu**	**63.59**	**97**	*e*P	**P**	**09 59 36.7**	**+19**
	comp=Z,121nm,1.2s,mb5.8						
AB31	**Akbulak array**	**64.13**	**355**	*i* P	**P**	**09 59 19.3**	**-1.1**
AB31				pmax	pmax		
	comp=Z,83nm,1.5s,mb5.5						
SANT	**Santorini**	**64.18**	**324**	P	**P**	**09 59 21.7**	**+0.6**
	comp=Z,32nm,0.8s,mb5.4						
WHN	**Wuhan**	**64.28**	**45**	*e*P	**P**	**09 59 22.0**	**+0.2**
WRA	**Warramunga Arr**	**64.29**	**105**	P	**P**	**09 59 21.6**	**-0.4**
	comp=Z,32nm,1.0s,mb5.3,baz=269,slow=6.3,SNR=91						
WB2	**Warramunga Arr**	**64.30**	**105**	*e*P	**P**	**09 59 21.6**	**-0.5**
WRAB	**Tennant Creek**	**64.30**	**105**	*e*P	**P**	**09 59 21.7**	**-0.4**
	comp=Z,190nm,1.2s,mb6.0						
WRAB	**Tennant Creek**	**64.30**	**105**	*e*P	**P**	**09 59 21.7**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,190nm,1.2s,mb6.0						
APE	**Apeiranthos**	**64.63**	**324**	*d i*P	**P**	**09 59 22.9**	**-1.1**
NVL	**N’lazarevskaya**	**64.87**	**197**	*e*P	**P**	**09 59 23.9**	**-1.0**
NVL				*e**PP	pP	09 59 31.4	+3.3
NVL				*e*		10 00 00.7	
MAIT	**Maitri**	**64.91**	**197**	*e*P	**P**	**09 59 24.9**	**-0.2**
ANN	**Anapa**	**65.11**	**337**	*e*P	**P**	**09 59 27.1**	**+0.2**
ANN				*e*S	S	10 08 10.5	+2.7
ANN				pmax	pmax		
	comp=Z,108nm,1.7s,mb5.6						
ANN				MLR	MLR		
	comp=Z,545nm,16.0s,MS4.8						
AKTK	**Aktyubinsk**	**65.48**	**354**	P	**P**	**09 59 28.1**	**-1.0**
AKTO	**Aktyubinsk**	**65.48**	**354**	P	**P**	**09 59 28.1**	**-1.0**
	comp=Z,14nm,1.1s,mb4.9,baz=167,slow=6.5,SNR=18						
NACB	**Ninganchiao**	**66.10**	**55**	P	**P**	**09 59 36.3**	**+2.7**
KURK	**Kurchatov**	**66.12**	**8**	*e*P	**P**	**09 59 32.4**	**-0.9**
	comp=Z,42nm,1.1s,mb5.4						
KURK	**Kurchatov**	**66.12**	**8**	⇑*e*P	**P**	**09 59 32.7**	**-0.5**
SIM	**Simferopol’**	**66.52**	**335**	*e*P	**P**	**09 59 33.3**	**-2.6**
SIM				*e*S	S	10 08 21.9	-3.2
SIM				pmax	pmax		
	comp=Z,70nm,6.9s						
SIM				MLR	MLR		
	comp=Z,600nm,22.2s,MS4.8						
VOSK	**Vostochnaya**	**67.41**	**3**	P	**P**	**09 59 39.7**	**-1.7**
VOSK				pmax	pmax		
	comp=Z,123nm,2.2s,mb5.5						
TIY	**Taiyuan**	**67.62**	**38**	*e*P	**P**	**09 59 44.0**	**+1.0**
TIY				S	S	10 08 40.0	+1.5
TIY				LR	LR		
	comp=N,1µm,16.0s						
BVA0	**Borovoye Array**	**67.69**	**2**	*i* P	**P**	**09 59 42.0**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,20nm,2.0s,mb4.8						
BVAR	**Borovoye Array**	**67.69**	**2**	P	**P**	**09 59 42.1**	**-1.0**
	comp=Z,8.7nm,0.7s,mb4.9,baz=167,slow=8.0,SNR=27						
BRVK	**Borovoye**	**67.71**	**2**	*e*P	**P**	**09 59 42.4**	**-1.0**
	comp=Z,42nm,1.4s,mb5.3						
BRVK	**Borovoye**	**67.71**	**2**	*e*P	**P**	**09 59 42.4**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.3						
KDZ	**Kurdzhali**	**67.97**	**328**	*e*P	**P**	**09 59 46.0**	**+0.8**
BTO	**Baotou**	**68.22**	**34**	*e*P	**P**	**09 59 46.6**	**-0.1**
NJ2	**Nanjing**	**68.28**	**46**	*e*P	**P**	**09 59 51.6**	**+4.3**
NJ2				AP	pP	09 59 59.4	+9.0
NJ2				XP	sP	10 00 02.6	+11
NJ2				PP	PP	10 02 24.5	+4.5
NJ2				S	S	10 08 51.0	+4.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,440nm,6.3s						
NJ2				LR	LR		
	comp=N,3µm,27.0s,MS5.6						
NJ2				LR	LR		
	comp=E,4µm,26.0s,MS5.6						
NJ2				LR	LR		
	comp=Z,1µm,24.2s,MS5.1						
CHKZ	**Chkalovo**	**68.34**	**2**	*e*P	**P**	**09 59 46.4**	**-0.8**
	comp=Z,36nm,1.0s,mb5.3						
CHKZ	**Chkalovo**	**68.34**	**2**	*e*P	**P**	**09 59 46.4**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,35nm,1.0s,mb5.3						
TIRR	**Tirgusor**	**68.60**	**331**	⇑*i*P	**P**	**09 59 48.6**	**-0.4**
TIRR	**Tirgusor**	**68.60**	**331**	*e*P	**P**	**09 59 48.6**	**-0.4**
MMB	**Musomiste**	**68.82**	**327**	*e*P	**P**	**09 59 51.0**	**+0.6**
HHC	**Hu-ho-hao-te**	**69.24**	**35**	*e*P	**P**	**09 59 53.8**	**+0.8**
HHC				AP	pP	10 00 01.8	+5.7
HHC				XP	sP	10 00 05.3	+8.1
HHC				PCP	PcP	10 00 18.5	+1.7
HHC				PP	PP	10 02 29.3	+1.1
HHC				SCP		10 04 19.5	
HHC				S	S	10 08 57.6	-0.1
HHC				XS		10 09 10.8	
HHC				PS	PS	10 09 27.5	+2.8
HHC				SCS	ScS	10 09 49.1	-1.3
HHC				SS	SS	10 13 24.9	-1.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
HHC				AMB	AMB		
	comp=Z,390nm,7.2s						
HHC				LR	LR		
	comp=N,1µm,18.0s,MS5.3						
HHC				LR	LR		
	comp=E,1µm,16.8s,MS5.3						
HHC				LR	LR		
	comp=Z,1µm,27.6s						
VAY	**Valandovo**	**69.25**	**326**	*e*P	**P**	**09 59 52.5**	**-0.5**
VAY	**Valandovo**	**69.25**	**326**	*e*P	**P**	**09 59 52.5**	**-0.6**
KKB	**Krupnik**	**69.36**	**327**	*e*P	**P**	**09 59 54.0**	**+0.3**
SSE	**Sheshan**	**69.40**	**48**	P	**P**	**09 59 54.6**	**+0.4**
SSE				AP	pP	10 00 04.4	+7.1
SSE				XP	sP	10 00 07.0	+8.6
SSE				PP	PP	10 02 26.4	-3.4
SSE				S	S	10 08 59.8	0.0
SSE				XS		10 09 16.1	
SSE				SS	SS	10 13 26.9	-1.8
SSE				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4						
SSE				AMB	AMB		
	comp=Z,200nm,5.7s						
SSE				LR	LR		
	comp=N,2µm,19.3s,MS5.3						
SSE				LR	LR		
	comp=E,1µm,19.2s,MS5.3						
SSE				LR	LR		
	comp=Z,2µm,17.5s,MS5.5						
STKA	**Stephens Creek**	**69.54**	**119**	P	**P**	**09 59 55.0**	**0.0**
	comp=Z,7.0nm,0.9s,mb4.6,baz=290,slow=8.0,SNR=7.6						
STKA				LR	LR	10 25 32.7	
	comp=Z,2µm,21.9s,MS5.4,baz=253,slow=32						
STKA	**Stephens Creek**	**69.54**	**119**	*e*P	**P**	**09 59 54.8**	**-0.3**
TIA	**Tai’an**	**69.57**	**42**	*e*P	**P**	**09 59 54.5**	**-0.6**
SNAA	**Sanae**	**69.61**	**198**	⇓*i*P	**P**	**09 59 54.2**	**-0.6**
SNAA				*e*		10 00 00.7	
SNAA				*e*		10 00 13.1	
BIA	**Bitola**	**69.73**	**325**	*e*P	**P**	**09 59 54.7**	**-1.3**
BIA	**Bitola**	**69.73**	**325**	*e*P	**P**	**09 59 54.7**	**-1.3**
VTS	**Vitosha**	**69.80**	**327**	*e*P	**P**	**09 59 56.0**	**-0.4**
OHR	**Ohrid**	**70.08**	**325**	*e*P	**P**	**09 59 57.9**	**-0.2**
OHR	**Ohrid**	**70.08**	**325**	*e*P	**P**	**09 59 57.9**	**-0.2**
ZAL	**Zalesovo**	**70.24**	**11**	P	**P**	**09 59 58.1**	**-0.7**
	comp=Z,5.2nm,0.7s,mb4.6,baz=258,slow=5.1,SNR=21						
ZAL				LR	LR	10 29 31.5	
	comp=Z,2µm,21.6s,MS5.3,baz=268,slow=35						
SKO	**Skopje**	**70.31**	**326**	*e*P	**P**	**09 59 58.8**	**-0.8**
SKO	**Skopje**	**70.31**	**326**	*e*P	**P**	**09 59 58.8**	**-0.7**
KIS	**Kishinev**	**70.38**	**333**	*e*P	**P**	**10 00 04.0**	**+4.2**
KIS				*e*		10 02 42.0	
KIS				*e*S	S	10 09 16.0	+5.1
KIS				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.8						
VRI	**Vrincioaia**	**70.44**	**331**	⇓P	**P**	**10 00 00.8**	**+0.5**
VOR	**Voronezh**	**70.53**	**342**	P	**P**	**10 00 02.0**	**+1.3**
VOR				pmax	pmax		
	comp=Z,90nm,1.6s,mb5.5						
NVS	**Novosibirsk**	**70.83**	**10**	⇓*i*P	**P**	**10 00 00.7**	**-1.7**
NVS				pmax	pmax		
	comp=N,90nm,1.6s						
NVS				pmax	pmax		
	comp=Z,104nm,1.6s,mb5.5						
NVS				pmax	pmax		
	comp=E,40nm,1.8s						
VNA2	**Neumayer--Watz**	**70.88**	**200**	⇓*i*P	**P**	**10 00 02.6**	**+0.1**
VNA2				*e*		10 00 08.5	
VNA2				*e*		10 00 11.2	
VNA2				*e*		10 00 21.7	
VOIR		**70.92**	**330**	⇑P	**P**	**10 00 01.1**	**-2.0**
VNA1	**Neumayer--Stat**	**71.12**	**200**	⇓*i*P	**P**	**10 00 05.5**	**+1.5**
VNA1				*e*		10 00 11.6	
VNA1				*e*		10 00 14.0	
VNA1				*e*		10 00 24.2	
TIP	**Timpagrande**	**71.19**	**321**	*e*P	**P**	**10 00 05.3**	**+0.4**
BOLS	**Boljevac**	**71.32**	**327**	⇓*i*P	**P**	**10 00 04.9**	**-0.7**
ARU	**Arti**	**71.36**	**355**	*e*P	**P**	**10 00 05.2**	**-0.5**
	comp=E,103nm,1.6s,mb5.5						
SVE	**Sverdlovsk**	**71.61**	**356**	*e*P	**P**	**10 00 06.6**	**-0.5**
SVE				*e*		10 00 14.0	
SVE				*e*S	S	10 09 27.0	+1.9
SVE				*e*PS	PS	10 10 12.0	+16
SVE				*e*SSS	SSS	10 17 16.0	+5.9
SVE				pmax	pmax		
	comp=Z,175nm,2.7s,mb5.5						
SVE				MLR	MLR		
	comp=N,1µm,17.0s,MS5.2						
SVE				MLR	MLR		
	comp=E,500nm,17.0s,MS5.2						
SVE				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.5						
VNA3	**Neumayer Olymp**	**71.67**	**199**	⇓*i*P	**P**	**10 00 07.2**	**0.0**
VNA3				*e*		10 00 13.2	
VNA3				*e*		10 00 16.0	
VNA3				*e*		10 00 25.6	
SONM	**Songino Array**	**71.73**	**27**	P	**P**	**10 00 08.6**	**+0.6**
	comp=Z,3.5nm,0.7s,mb4.4,baz=216,slow=6.4,SNR=25						
SONM				LR	LR	10 30 32.0	
	comp=Z,4µm,20.8s,MS5.6,baz=215,slow=35						
SONM	**Songino Array**	**71.73**	**27**	P	**P**	**10 00 08.6**	**+0.6**
SONM				LR	LR	10 30 32.0	
ULN	**Ulaanbaatar**	**72.05**	**27**	*e*P	**P**	**10 00 10.1**	**+0.3**
	comp=Z,31nm,1.5s,mb5.0						
ULN	**Ulaanbaatar**	**72.05**	**27**	⇑*e*P	**P**	**10 00 10.3**	**+0.4**
ZAK	**Zakamensk**	**72.44**	**24**	*e*P	**P**	**10 00 11.7**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.1						
BURAR	**Bucovina Array**	**72.44**	**332**	⇓P	**P**	**10 00 13.6**	**+1.4**
DIVS	**Divcibare**	**72.53**	**327**	⇓*i*P	**P**	**10 00 12.3**	**-0.6**
DRGR		**73.02**	**330**	⇓P	**P**	**10 00 15.1**	**-0.6**
AKASG	**Malin Array Be**	**73.11**	**336**	P	**P**	**10 00 14.8**	**-1.3**
	comp=Z,7.4nm,0.8s,mb4.7,baz=138,slow=5.4,SNR=34						
AKASG	**Malin Array Be**	**73.11**	**336**	P	**P**	**10 00 14.8**	**-1.3**
DL2	**Dalian**	**74.04**	**42**	P	**P**	**10 00 25.0**	**+3.2**
DL2				AP	pP	10 00 29.5	+4.6
DL2				S	S	10 10 00.3	+7.3
DL2				SKS	SKS	10 10 26.6	-2.7
DL2				PS	PS	10 10 32.0	+3.7
DL2				AMB	AMB		
	comp=Z,210nm,3.5s						
DL2				LR	LR		
	comp=N,610nm,17.1s,MS5.1						
DL2				LR	LR		
	comp=E,650nm,17.6s,MS5.1						
DL2				LR	LR		
	comp=Z,1µm,17.7s,MS5.2						
DBIC	**Dimbokro**	**74.15**	**281**	P	**P**	**10 00 22.8**	**-0.1**
	comp=Z,5.3nm,0.8s,mb4.5,baz=95,slow=10,SNR=4.7						
DBIC				LR	LR	10 31 35.0	
	comp=Z,1µm,20.2s,MS5.2,baz=96,slow=35						
DBIC	**Dimbokro**	**74.15**	**281**	*e*P	**P**	**10 00 24.5**	**+1.6**
	comp=Z,47nm,1.5s,mb5.2						
DBIC	**Dimbokro**	**74.15**	**281**	*e*P	**P**	**10 00 24.5**	**+1.6**
DBIC				pmax	pmax		
	comp=Z,47nm,1.5s						
LIC	**Lamto**	**74.18**	**281**	*e*P	**P**	**10 00 21.7**	**-1.4**
	comp=Z,32nm,0.9s,mb5.0						
LIC				*e*R			
	comp=Z,2µm,21.0s						
OBN	**Obninsk**	**74.26**	**343**	*e*P	**P**	**10 00 22.2**	**-0.4**
	comp=Z,99nm,1.7s,mb5.5						
OBN	**Obninsk**	**74.26**	**343**	⇑*e*P	**P**	**10 00 22.7**	**+0.1**
OBN				*e*		10 03 14.7	
OBN				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
OBN				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
IRK	**Irkutsk**	**74.30**	**23**	*e*P	**P**	**10 00 23.4**	**+0.5**
IRK				pmax	pmax		
	comp=Z,69nm,2.0s,mb5.2						
SOKR	**Solikamsk**	**74.62**	**355**	*c i*P	**P**	**10 00 24.5**	**-0.2**
SOKR				S	S	10 10 04.4	+5.4
SOKR				SS	SS	10 14 42.9	-5.5
SOKR				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.2						
SOKR				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.2						
PKSM	**Moragy**	**74.66**	**328**	⇓*i*P	**P**	**10 00 25.1**	**-0.1**
KOLS	**Kolonicke sedl**	**74.75**	**331**	*e*P	**P**	**10 00 25.3**	**-0.3**
KWP	**Kalwaria**	**75.05**	**332**	*e*P	**P**	**10 00 27.3**	**-0.1**
KWP				*e*pP	pP	10 00 29.5	-1.0
KWP				*e*PcP	PcP	10 00 39.2	-2.2
KWP	**Kalwaria**	**75.05**	**332**	*e*P	**P**	**10 00 27.3**	**-0.1**
KWP				*e*PP	pP	10 00 29.5	-1.0
KWP				*e*PcP	PcP	10 00 39.2	-2.2
CRVS	**Cervenica-Dubn**	**75.11**	**331**	*e*P	**P**	**10 00 27.3**	**-0.4**
PSZ	**Piszkesteto**	**75.18**	**329**	*e*P	**P**	**10 00 30.0**	**+1.9**
KECS	**Kecovo**	**75.28**	**330**	*e*P	**P**	**10 00 28.4**	**-0.3**
CTA	**Charters Tower**	**75.33**	**107**	*e*P	**P**	**10 00 30.3**	**+0.7**
	comp=Z,29nm,1.3s,mb5.0						
CTA	**Charters Tower**	**75.33**	**107**	*e*P	**P**	**10 00 30.3**	**+0.7**
CTA				pmax	pmax		
	comp=Z,29nm,1.3s						
CTAO	**Charters Tower**	**75.33**	**107**	*e*P	**P**	**10 00 30.4**	**+0.8**
	comp=Z,65nm,1.3s,mb5.4						
CTAO	**Charters Tower**	**75.33**	**107**	*e*P	**P**	**10 00 30.4**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,65nm,1.3s,mb5.4						
STHS	**Stebnicka Huta**	**75.57**	**331**	*e*P	**P**	**10 00 31.5**	**+1.2**
STHS				*e*PP	PP	10 03 19.9	-1.9
BOJS	**Bojanci**	**76.01**	**325**	*e*P	**P**	**10 00 34.4**	**+1.4**
VYHS	**Vyhne**	**76.09**	**329**	*e*P	**P**	**10 00 32.9**	**-0.4**
VISS	**Visnje**	**76.42**	**325**	*e*P	**P**	**10 00 35.1**	**-0.1**
VNDA	**Vanda**	**76.68**	**167**	*e*P	**P**	**10 00 35.9**	**-0.2**
	comp=Z,31nm,1.5s,mb5.0						
VNDA	**Vanda**	**76.68**	**167**	*e*P	**P**	**10 00 35.9**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,31nm,1.5s						
ZST	**Bratislava**	**76.76**	**328**	*e*P	**P**	**10 00 35.9**	**-1.1**
PERS	**Pernice**	**76.80**	**326**	*e*P	**P**	**10 00 37.8**	**+0.5**
OJC	**Ojcow**	**76.80**	**331**	*e*P	**P**	**10 00 37.1**	**-0.2**
SNY	**Shenyang**	**76.92**	**40**	⇑P	**P**	**10 00 38.5**	**+0.4**
SNY				S	S	10 10 26.4	+1.7
SNY				LR	LR		
	comp=E,2µm,19.2s						
SNY				LR	LR		
	comp=Z,3µm,18.0s,MS5.6						
ARSA	**Arzberg**	**76.97**	**327**	⇑*i*P	**P**	**10 00 38.7**	**+0.4**
	comp=Z,24nm,1.0s,mb5.1,SNR=8.9						
ARSA	**Arzberg**	**76.97**	**327**	⇑*i*P	**P**	**10 00 38.6**	**+0.4**
	comp=Z,24nm,1.0s,mb5.1						
OBKA	**Obir**	**77.02**	**326**	⇓*e*P	**P**	**10 00 39.0**	**+0.5**
	comp=Z,45nm,1.5s,mb5.2						
OBKA	**Obir**	**77.02**	**326**	⇓*e*P	**P**	**10 00 39.0**	**+0.5**
	comp=Z,45nm,1.5s,mb5.2						
OKC	**Ostrava-Krasne**	**77.33**	**330**	*e*P	**P**	**10 00 40.1**	**-0.1**
ROBS	**Robic**	**77.43**	**325**	*e*P	**P**	**10 00 40.8**	**0.0**
KS15	**Wonju Array Si**	**77.43**	**46**	*e*P	**P**	**10 00 43.8**	**+2.8**
MORC	**Moravsky Berou**	**77.58**	**330**	*e*P	**P**	**10 00 41.6**	**0.0**
	comp=Z,48nm,1.5s,mb5.2						
MORC	**Moravsky Berou**	**77.58**	**330**	*e*P	**P**	**10 00 41.6**	**0.0**
MORC				pmax	pmax		
	comp=Z,48nm,1.5s,mb5.2						
SBA	**Scott Base**	**77.66**	**168**	*e*P	**P**	**10 00 42.5**	**+1.0**
	comp=Z,180nm,2.0s,mb5.7						
SBA	**Scott Base**	**77.66**	**168**	*e*P	**P**	**10 00 42.5**	**+1.0**
SBA				pmax	pmax		
	comp=Z,180nm,2.0s,mb5.7						
PGF	**Pioggiola**	**77.93**	**320**	*e*P	**P**	**10 00 43.4**	**-0.2**
	comp=Z,145nm,1.4s,mb5.4						
PGF	**Pioggiola**	**77.93**	**320**	*e*P	**P**	**10 00 43.4**	**-0.2**
PGF				pmax	pmax		
	comp=Z,72nm,1.4s,mb5.4						
CIT	**Chita**	**77.95**	**27**	*e*P	**P**	**10 00 42.3**	**-1.2**
CIT				pmax	pmax		
	comp=Z,78nm,2.7s,mb5.2						
MOA	**Molln**	**78.00**	**327**	⇓*i*P	**P**	**10 00 44.3**	**+0.4**
	comp=Z,80nm,1.5s,mb5.4,SNR=10						
MOA	**Molln**	**78.00**	**327**	⇓*i*P	**P**	**10 00 44.3**	**+0.4**
	comp=Z,80nm,1.5s,mb5.4						
SUW	**Suwalki**	**78.03**	**335**	*e*P	**P**	**10 00 44.6**	**+0.7**

SUW				*e*PcP	PcP	10 00 55.9	+1.8
SUW				*e*PP	PP	10 03 43.1	+0.8
SUW	**Suwalki**	**78.03**	**335**	*e*P	**P**	**10 00 44.6**	**+0.7**
SUW				*e*PcP	PcP	10 00 55.9	+1.8
SUW				*e*PP	PP	10 03 43.1	+0.8
ARMA	**Armidale**	**78.26**	**119**	*e*P	**P**	**10 00 46.8**	**+1.1**
TREC	**Trest**	**78.28**	**329**	*e*P	**P**	**10 00 45.7**	**+0.3**
PMG	**Port Moresby**	**78.41**	**97**	*e*P	**P**	**10 00 47.5**	**+0.7**
	comp=Z,74nm,1.4s,mb5.4						
PMG	**Port Moresby**	**78.41**	**97**	*d i*P	**P**	**10 00 47.6**	**+0.8**
DPC	**Dobruska-Polom**	**78.55**	**330**	*e*P	**P**	**10 00 47.3**	**+0.4**
KLMR	**Klimovskoe**	**78.56**	**347**	*d i*P	**P**	**10 00 46.4**	**-0.3**
KLMR				*e*		10 03 40.3	
KLMR				*e*S	S	10 10 40.5	-1.4
KLMR				pmax	pmax		
	comp=Z,180nm,1.8s,mb5.7						
KLMR				pmax	pmax		
	comp=Z,220nm,8.3s						
KLMR				smax			
	comp=E,390nm,3.7s						
KLMR				MLR	MLR		
	comp=Z,1µm,23.0s,MS5.2						
UPC	**Upice**	**78.80**	**330**	*e*P	**P**	**10 00 48.6**	**+0.3**
KSP	**Ksiaz**	**78.88**	**330**	*e*P	**P**	**10 00 49.5**	**+0.9**
KSP				*e*PcP	PcP	10 00 57.2	-0.7
KSP				*e*PP	PP	10 03 48.1	-1.2
KSP	**Ksiaz**	**78.88**	**330**	⇓*e*P	**P**	**10 00 49.4**	**+0.7**
KSP				*e*pP	pP	10 01 01.1	+9.2
GEC2	**GERESS Array S**	**78.92**	**327**	*e*P	**P**	**10 00 49.0**	**+0.1**
	comp=Z,30nm,1.5s,mb5.0						
GEC2	**GERESS Array S**	**78.92**	**327**	*e*P	**P**	**10 00 49.0**	**+0.1**
GEC2				pmax	pmax		
	comp=Z,30nm,1.5s,mb5.0						
GERES	**GERESS Array B**	**78.92**	**327**	P	**P**	**10 00 48.8**	**-0.1**
	comp=Z,1.5nm,0.6s,mb4.1,baz=141,slow=8.5,SNR=14						
WTTA	**Wattenberg**	**79.07**	**325**	⇓*e*P	**P**	**10 00 49.8**	**0.0**
	comp=Z,40nm,1.3s,mb5.2						
WTTA	**Wattenberg**	**79.07**	**325**	⇓*e*P	**P**	**10 00 49.8**	**0.0**
	comp=Z,40nm,1.3s,mb5.2						
WTTA	**Wattenberg**	**79.07**	**325**	⇓*e*P	**P**	**10 00 49.8**	**0.0**
WTTA				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
HIA	**Hailar**	**79.11**	**32**	*e*P	**P**	**10 00 50.6**	**+0.6**
	comp=Z,66nm,1.6s,mb5.3						
HIA	**Hailar**	**79.11**	**32**	*e*P	**P**	**10 00 50.6**	**+0.6**
HIA				pmax	pmax		
	comp=Z,66nm,1.6s						
WATA	**Walderalm**	**79.14**	**325**	⇑*i*P	**P**	**10 00 50.7**	**+0.5**
	comp=Z,23nm,1.0s,mb5.0						
WATA	**Walderalm**	**79.14**	**325**	⇑*i*P	**P**	**10 00 50.7**	**+0.5**
WATA				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
CN2	**Changchun**	**79.15**	**39**	*e*P	**P**	**10 00 55.9**	**+5.6**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
CN2				AMB	AMB		
	comp=Z,400nm,7.0s						
CN2				LR	LR		
	comp=N,900nm,20.0s,MS5.4						
CN2				LR	LR		
	comp=E,2µm,20.0s,MS5.4						
CN2				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
KHC	**Kasperske Hory**	**79.16**	**328**	*e*P	**P**	**10 00 50.0**	**-0.2**
KHC				x	x	10 01 18.5	
KHC	**Kasperske Hory**	**79.16**	**328**	*e*P	**P**	**10 00 50.0**	**-0.2**
KHC				*e*		10 01 18.5	
PRU	**Pruhonice**	**79.20**	**329**	*e*P	**P**	**10 00 51.0**	**+0.6**
SQTA	**Sankt Quirin**	**79.28**	**325**	⇓*e*P	**P**	**10 00 51.0**	**+0.1**
	comp=Z,7.0nm,0.6s,mb4.8						
SQTA	**Sankt Quirin**	**79.28**	**325**	⇓*e*P	**P**	**10 00 51.0**	**+0.1**
SQTA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
MOTA	**Moosalm**	**79.41**	**325**	⇓*i*P	**P**	**10 00 51.3**	**-0.4**
	comp=Z,23nm,1.1s,mb5.0						
MOTA	**Moosalm**	**79.41**	**325**	⇓*i*P	**P**	**10 00 51.3**	**-0.3**
MOTA				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
PVCC	**Panska Ves**	**79.53**	**329**	*e*P	**P**	**10 00 52.9**	**+0.7**
WET	**Wettzell**	**79.53**	**327**	*e*P	**P**	**10 00 52.1**	**-0.1**
	comp=Z,95nm,2.1s,mb5.4						
WET	**Wettzell**	**79.53**	**327**	*e*P	**P**	**10 00 52.1**	**-0.1**
WET				pmax	pmax		
	comp=Z,95nm,2.1s,mb5.4						
SBF	**Sospel**	**79.60**	**321**	*e*P	**P**	**10 00 52.5**	**-0.3**
	comp=Z,96nm,0.9s,mb5.4						
SBF	**Sospel**	**79.60**	**321**	*e*P	**P**	**10 00 52.5**	**-0.3**
SBF				pmax	pmax		
	comp=Z,48nm,0.9s,mb5.4						
FUR	**Furstenfeldbru**	**79.80**	**326**	*e*P	**P**	**10 00 54.3**	**+0.6**
	comp=Z,330nm,1.9s,mb5.9						
FUR	**Furstenfeldbru**	**79.80**	**326**	*e*P	**P**	**10 00 54.3**	**+0.6**
FUR				pmax	pmax		
	comp=Z,330nm,1.9s,mb5.9						
LMR	**La Mourre**	**79.89**	**320**	*e*P	**P**	**10 00 53.8**	**-0.5**
FRF	**La Foret Royal**	**79.93**	**320**	*e*P	**P**	**10 00 54.2**	**-0.3**
	comp=Z,191nm,1.5s,mb5.5						
FRF	**La Foret Royal**	**79.93**	**320**	*e*P	**P**	**10 00 54.2**	**-0.3**
FRF				pmax	pmax		
	comp=Z,96nm,1.5s,mb5.5						
BRG	**Berggiesshubel**	**80.05**	**329**	*e*P	**P**	**10 00 56.3**	**+1.3**
	comp=Z,58nm,1.6s,mb5.3						
BRG				*e*		10 09 19.6	
BRG				S	S	10 11 04.0	+6.1
BRG				SS	SS	10 16 10.0	-1.0
BRG	**Berggiesshubel**	**80.05**	**329**	*e*P	**P**	**10 00 56.3**	**+1.3**
BRG				S	S	10 11 04.0	+6.1
BRG				SS	SS	10 16 10.0	-1.0
BRG				pmax	pmax		
	comp=Z,58nm,1.6s,mb5.3						
DAVA	**Damuels**	**80.06**	**325**	⇓*i*P	**P**	**10 00 55.4**	**+0.3**
	comp=Z,30nm,1.2s,mb5.1						
DAVA	**Damuels**	**80.06**	**325**	⇓*i*P	**P**	**10 00 55.4**	**+0.3**
	comp=Z,30nm,1.2s,mb5.1						
VSU	**Vasula**	**80.09**	**340**	⇓*e*P	**P**	**10 00 56.8**	**+1.7**
SURF	**Saint Ours**	**80.31**	**321**	*e*P	**P**	**10 00 56.0**	**-0.5**
NKC	**Novy Kostel**	**80.41**	**328**	*e*P	**P**	**10 00 57.8**	**+0.9**
MBDF	**Montbardon**	**80.47**	**321**	*e*P	**P**	**10 00 57.3**	**0.0**
	comp=Z,146nm,1.5s,mb5.4						
MBDF	**Montbardon**	**80.47**	**321**	*e*P	**P**	**10 00 57.3**	**0.0**
MBDF				pmax	pmax		
	comp=Z,73nm,1.5s,mb5.4						
GRA1	**Grafenberg Arr**	**80.72**	**327**	*e*P	**P**	**10 00 58.8**	**+0.2**
	comp=Z,155nm,1.8s,mb5.6						
GRF	**Grafenberg Arr**	**80.72**	**327**	*e*P	**P**	**10 00 58.8**	**+0.2**
	comp=Z,155nm,1.8s,mb5.6						
GRF				LR	LR		
	comp=Z,300nm,20.0s,MS4.6						
GRF	**Grafenberg Arr**	**80.72**	**327**	*e*P	**P**	**10 00 58.8**	**+0.2**
GRF				pmax	pmax		
	comp=Z,155nm,1.8s,mb5.6						
GRF				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.6						
CLL	**Collm**	**80.79**	**329**	⇑P	**P**	**10 01 00.2**	**+1.3**
	comp=Z,logA/T=1.7,mb5.4						
CLL				*i* PCP	PcP	10 01 06.6	+0.6
CLL				*i*		10 01 14.5	
CLL				*e*S	S	10 11 11.0	+5.5
CLL				*e*		10 11 41.0	
CLL				*e*SS	SS	10 16 27.0	+5.0
CLL	**Collm**	**80.79**	**329**	⇑*i*P	**P**	**10 01 00.2**	**+1.3**
	comp=Z,80nm,1.6s,mb5.4						
CLL				*i* pP	pP	10 01 06.6	+4.5
CLL				*i* sP	sP	10 01 14.5	+11
CLL				*e*S	S	10 11 11.0	+5.5
CLL	**Collm**	**80.79**	**329**	⇑*i*P	**P**	**10 01 00.2**	**+1.3**
CLL				*i* *PP	pP	10 01 06.6	+4.5
CLL				*e*S	S	10 11 11.0	+5.5
CLL				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.4						
LPG	**La Plagne**	**80.89**	**322**	*e*P	**P**	**10 00 59.2**	**-0.3**
	comp=Z,27nm,1.0s,mb4.8						
LPG	**La Plagne**	**80.89**	**322**	*e*P	**P**	**10 00 59.2**	**-0.3**
LPG				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
LPL	**La Plagne**	**80.91**	**322**	*e*P	**P**	**10 00 59.6**	**-0.1**
MOX	**Moxa**	**81.08**	**328**	*i* P	**P**	**10 01 01.4**	**+0.9**
	comp=Z,logA/T=1.8,mb5.5						
MOX				S	S	10 11 16.0	+7.4
MOX				L		10 49 04.0	
MOX	**Moxa**	**81.08**	**328**	*e*P	**P**	**10 01 01.4**	**+0.9**
	comp=Z,141nm,2.3s,mb5.5						
MOX				*e*S	S	10 11 16.0	+7.4
MOX				LR	LR		
	comp=Z,300nm,19.0s,MS4.7						
MOX	**Moxa**	**81.08**	**328**	*e*P	**P**	**10 01 01.4**	**+0.9**
MOX				*e*S	S	10 11 16.0	+7.4
MOX				pmax	pmax		
	comp=Z,141nm,2.3s,mb5.5						
MOX				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.7						
ORIF	**Oris-en-Rattie**	**81.11**	**321**	*e*P	**P**	**10 01 00.7**	**0.0**
	comp=Z,114nm,1.3s,mb5.3						
ORIF				*e*R			
	comp=Z,334nm,21.5s						
GDM	**Grand'Maison**	**81.11**	**321**	*e*P	**P**	**10 01 00.4**	**-0.3**
RUE	**Ruedersdorf**	**81.13**	**330**	*e*P	**P**	**10 01 01.8**	**+1.1**
	comp=Z,107nm,1.7s,mb5.5						
GRN	**Grenoble**	**81.36**	**321**	*e*P	**P**	**10 01 01.4**	**-0.6**
BBS	**Basel-Blauen**	**81.50**	**324**	*e*P	**P**	**10 01 03.6**	**+0.9**
BFO	**Black Forest**	**81.51**	**325**	*e*P	**P**	**10 01 03.5**	**+0.8**
	comp=Z,70nm,1.8s,mb5.3						
BFO	**Black Forest**	**81.51**	**325**	*e*P	**P**	**10 01 03.5**	**+0.8**
BFO				pmax	pmax		
	comp=Z,70nm,1.8s,mb5.3						
VIVF	**Saint-Julien-l**	**81.81**	**321**	*e*P	**P**	**10 01 03.9**	**-0.5**
LIBD	**Limburg**	**81.82**	**324**	*e*P	**P**	**10 01 05.2**	**+0.9**
LOMF	**Lomont**	**81.83**	**324**	*e*P	**P**	**10 01 04.5**	**+0.1**
CABF	**La Chapelle**	**81.86**	**323**	*e*P	**P**	**10 01 04.4**	**-0.2**
	comp=Z,121nm,1.4s,mb5.3						
CABF	**La Chapelle**	**81.86**	**323**	*e*P	**P**	**10 01 04.4**	**-0.2**
CABF				pmax	pmax		
	comp=Z,61nm,1.4s,mb5.3						
MOF	**Molkenrain**	**81.92**	**324**	*e*P	**P**	**10 01 05.7**	**+0.8**
LASF	**Ste Croix**	**81.93**	**320**	*e*P	**P**	**10 01 04.6**	**-0.4**
	comp=Z,178nm,1.7s,mb5.4						
HINF	**Hinteralfeld**	**82.06**	**324**	*e*P	**P**	**10 01 05.0**	**-0.6**
WLS	**Welschbruch**	**82.10**	**325**	*e*P	**P**	**10 01 06.7**	**+0.9**
ECH	**Echery**	**82.10**	**324**	*e*P	**P**	**10 01 06.7**	**+0.9**
MDJ	**Mudanjiang**	**82.12**	**40**	P	**P**	**10 01 07.4**	**+1.4**
MDJ				AP	pP	10 01 10.8	+1.6
MDJ				PP	PP	10 04 16.3	0.0
MDJ				S	S	10 11 23.0	+3.6
MDJ				SS	SS	10 16 49.1	+6.9
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,190nm,6.1s						
MDJ				LR	LR		
	comp=N,1µm,21.6s,MS5.3						
MDJ				LR	LR		
	comp=E,1µm,26.3s,MS5.3						
MDJ				LR	LR		
	comp=Z,2µm,22.8s,MS5.3						
MDJ	**Mudanjiang**	**82.12**	**40**	*e*P	**P**	**10 01 06.4**	**+0.4**
	comp=Z,46nm,1.4s,mb5.2						
CDF	**Champ du Feu**	**82.14**	**325**	*e*P	**P**	**10 01 05.6**	**-0.4**
LANF	**Langenberg**	**82.16**	**325**	*e*P	**P**	**10 01 07.1**	**+1.0**
BOD	**Bodaibo**	**82.18**	**23**	*e*P	**P**	**10 01 03.4**	**-2.6**
BOD				pmax	pmax		
	comp=Z,15nm,1.9s,mb4.6						
CLZ	**Clausthal**	**82.42**	**329**	*e*P	**P**	**10 01 08.6**	**+1.2**
	comp=Z,56nm,1.4s,mb5.3						
CLZ	**Clausthal**	**82.42**	**329**	*e*P	**P**	**10 01 08.6**	**+1.2**
CLZ				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.3						
HAU	**Haudompre**	**82.45**	**324**	*e*P	**P**	**10 01 07.1**	**-0.5**
HAU				*e*R			
	comp=Z,265nm,18.8s						
TNS	**Taunus Mts**	**82.50**	**327**	*e*P	**P**	**10 01 08.1**	**+0.3**
	comp=Z,28nm,1.4s,mb5.0						
TNS	**Taunus Mts**	**82.50**	**327**	*e*P	**P**	**10 01 08.1**	**+0.3**
TNS				pmax	pmax		
	comp=Z,28nm,1.4s,mb5.0						
FINES	**FINESS Array B**	**82.61**	**342**	P	**P**	**10 01 09.1**	**+0.9**
	comp=Z,5.1nm,1.0s,mb4.5,baz=108,slow=6.0,SNR=4.1						
FINES				PP	PP	10 04 17.9	-2.0
	comp=Z,0.6nm,0.3s,baz=144,slow=12,SNR=3.0						
MTLF	**Montolieu**	**82.61**	**318**	*e*P	**P**	**10 01 07.9**	**-0.7**
THEF	**They Montfort**	**82.77**	**324**	*e*P	**P**	**10 01 09.0**	**-0.3**
LBL	**Lubilhac**	**82.88**	**320**	*e*P	**P**	**10 01 10.2**	**+0.3**
PLDF	**La Plantade**	**83.01**	**321**	*e*P	**P**	**10 01 10.5**	**-0.1**
SMF	**Signal de Mont**	**83.21**	**322**	*e*P	**P**	**10 01 11.2**	**-0.4**
WLF	**Walferdange**	**83.44**	**325**	*e*P	**P**	**10 01 13.1**	**+0.4**
	comp=Z,23nm,1.0s,mb5.2						
WLF	**Walferdange**	**83.44**	**325**	*e*P	**P**	**10 01 13.1**	**+0.4**
WLF				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
MEZF	**Maizieres J'vi**	**83.45**	**324**	*e*P	**P**	**10 01 12.1**	**-0.7**
CAF	**Calviac**	**83.46**	**320**	*e*P	**P**	**10 01 12.4**	**-0.5**
	comp=Z,20nm,0.9s,mb4.9						
CAF	**Calviac**	**83.46**	**320**	*e*P	**P**	**10 01 12.4**	**-0.5**
CAF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
LOR	**Lormes**	**83.51**	**322**	*e*P	**P**	**10 01 12.0**	**-1.1**
	comp=Z,131nm,1.7s,mb5.5						
LOR				*e*R			
	comp=Z,404nm,22.8s						
LOR	**Lormes**	**83.51**	**322**	*e*P	**P**	**10 01 12.0**	**-1.1**
LOR				pmax	pmax		
	comp=Z,66nm,1.7s,mb5.5						
LOR				MLR	MLR		
	comp=Z,400nm,22.8s,MS4.7						
AVF	**Avril sur Loir**	**83.58**	**322**	*e*P	**P**	**10 01 12.8**	**-0.7**
SSF	**Saint Saulge**	**83.62**	**322**	*e*P	**P**	**10 01 13.2**	**-0.5**
	comp=Z,61nm,1.5s,mb5.5						
SSF	**Saint Saulge**	**83.62**	**322**	*e*P	**P**	**10 01 13.2**	**-0.5**
SSF				pmax	pmax		
	comp=Z,61nm,1.5s,mb5.5						
BSEG	**Bad Segeberg**	**83.67**	**330**	*e*P	**P**	**10 01 15.1**	**+1.3**
EPF	**Esparros**	**83.69**	**317**	*e*P	**P**	**10 01 13.5**	**-0.6**
COP	**Copenhagen**	**83.74**	**332**	*i* P	**P**	**10 01 07.7**	**-6.4**
COP	**Copenhagen**	**83.74**	**332**	*e*P	**P**	**10 01 07.7**	**-6.4**
COP				*i* S	S	10 11 43.6	+8.0
COP				MLR	MLR		
	comp=Z,250nm,19.0s,MS4.6						
BGF	**Bois d'Agland**	**83.77**	**321**	*e*P	**P**	**10 01 13.6**	**-0.9**
RJF	**Les Rejaudoux**	**83.98**	**320**	*e*P	**P**	**10 01 14.9**	**-0.7**
	comp=Z,184nm,1.7s,mb5.6						
RJF				*e*R			
	comp=Z,364nm,18.8s						
RJF	**Les Rejaudoux**	**83.98**	**320**	*e*P	**P**	**10 01 14.9**	**-0.7**
RJF				pmax	pmax		
	comp=Z,92nm,1.7s,mb5.6						
RJF				MLR	MLR		
	comp=Z,360nm,18.8s,MS4.8						
TCF	**Toulx Ste Croi**	**84.02**	**321**	*e*P	**P**	**10 01 15.1**	**-0.7**
ETSF	**Etsaut**	**84.22**	**317**	*e*P	**P**	**10 01 16.2**	**-0.6**
LFF	**La Frestale**	**84.30**	**319**	*e*P	**P**	**10 01 16.3**	**-0.9**
	comp=Z,218nm,1.7s,mb5.7						
LFF	**La Frestale**	**84.30**	**319**	*e*P	**P**	**10 01 16.3**	**-0.9**
LFF				pmax	pmax		
	comp=Z,109nm,1.7s,mb5.7						
GIVF	**Givet**	**84.40**	**325**	*e*P	**P**	**10 01 17.5**	**-0.1**
MAJO	**Matsushiro**	**84.44**	**50**	*e*P	**P**	**10 01 25.6**	**+7.5**
MAT	**Matsushiro**	**84.44**	**50**	P	**P**	**10 01 18.3**	**+0.2**
MAT				S	S	10 11 46.0	+3.1
MAT	**Matsushiro**	**84.44**	**50**	*e*P	**P**	**10 01 18.0**	**-0.1**
	comp=Z,278nm,2.5s,mb6.0						
MAT				*e*S	S	10 11 47.0	+4.1
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
MAT	**Matsushiro**	**84.44**	**50**	*e*P	**P**	**10 01 18.0**	**-0.1**
MAT				*e*S	S	10 11 47.0	+4.1
MAT				pmax	pmax		
	comp=Z,278nm,2.5s,mb6.0						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.2						
MJAR	**Matsushiro Arr**	**84.44**	**50**	P	**P**	**10 01 18.6**	**+0.5**
	comp=Z,15nm,1.0s,mb5.1,baz=244,slow=5.0,SNR=16						
MJAR				LR	LR	10 38 54.8	
	comp=Z,818nm,19.2s,MS5.1,baz=235,slow=36						
BAIF	**Baives**	**84.72**	**325**	*e*P	**P**	**10 01 19.0**	**-0.1**
SJPF	**Ste Jean**	**84.75**	**317**	*e*P	**P**	**10 01 18.6**	**-0.9**
	comp=Z,105nm,1.3s,mb5.5						
SJPF	**Ste Jean**	**84.75**	**317**	*e*P	**P**	**10 01 18.6**	**-0.9**
SJPF				pmax	pmax		
	comp=Z,52nm,1.3s,mb5.5						
ESDC	**Sonseca Array**	**85.19**	**313**	P	**P**	**10 01 22.5**	**+0.7**
	comp=Z,5.2nm,0.8s,mb4.7,baz=102,slow=4.1,SNR=12						
ESLA	**Sonseca Array**	**85.19**	**313**	*e*P	**P**	**10 01 22.5**	**+0.7**
	comp=Z,18nm,1.4s,mb5.0						
MFF	**Saint Martin d**	**85.61**	**320**	*e*P	**P**	**10 01 22.9**	**-0.8**
	comp=Z,99nm,1.4s,mb5.5						
MFF	**Saint Martin d**	**85.61**	**320**	*e*P	**P**	**10 01 22.9**	**-0.8**
MFF				pmax	pmax		
	comp=Z,49nm,1.4s,mb5.5						
KLR	**Kul'dur**	**85.66**	**37**	*e*P	**P**	**10 01 29.7**	**+5.8**
KLR				*e*S	S	10 11 49.5	-5.1
KLR				*e*SS	SS	10 17 37.5	+3.3
KLR				MLR	MLR		
	comp=N,3µm,20.0s,MS5.8						
KLR				MLR	MLR		
	comp=E,1µm,20.0s,MS5.8						
MUD	**Monsted U'grnd**	**85.67**	**332**	*e*P	**P**	**10 01 25.5**	**+1.8**
	comp=E,22nm,1.3s,mb5.2						
MUD				*i*		10 25 26.7	
MUD	**Monsted U'grnd**	**85.67**	**332**	*e*P	**P**	**10 01 25.5**	**+1.8**
MUD				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.2						
LVZ	**Lovozero**	**85.77**	**348**	*e*P	**P**	**10 01 16.3**	**-7.7**
LVZ				*e*S	S	10 11 48.0	-7.2
LVZ				smax			
	comp=N,545nm,4.1s						
CLNS	**Chul'man**	**86.12**	**28**	*e*P	**P**	**10 01 22.1**	**-3.9**
CLNS				*e*PPP	PPP	10 06 47.4	+2.3
CLNS				*e*		10 12 07.8	
CLNS				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.1						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,3.0nm,0.7s						
CLNS				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.8						
CLNS				pmax	pmax		
	comp=N,9.0nm,1.4s						
CLNS				MLR	MLR		
	comp=N,500nm,18.0s,MS5.6						
CLNS				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.6						
CLNS				MLR	MLR		
	comp=E,2µm,17.0s,MS5.6						
LDF	**La Druitiere**	**86.50**	**322**	*e*P	**P**	**10 01 27.5**	**-0.5**
FLN	**La Foliniere**	**86.79**	**322**	*e*P	**P**	**10 01 28.9**	**-0.5**
FLN				*e*R			
	comp=E,328nm,21.5s						
GRR	**Gorron**	**86.84**	**322**	*e*P	**P**	**10 01 28.9**	**-0.8**
KONO	**Kongsberg**	**87.34**	**335**	*e*P	**P**	**10 01 33.5**	**+1.7**
	comp=E,19nm,1.0s,mb5.3						
KONO	**Kongsberg**	**87.34**	**335**	*e*P	**P**	**10 01 33.5**	**+1.7**
KONO				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.3						
NB2	**NORSAR Subarra**	**87.52**	**336**	P	**P**	**10 01 31.5**	**-1.2**
	comp=Z,96nm,2.5s,mb5.6,baz=127,slow=4.8						
NB2	**NORSAR Subarra**	**87.52**	**336**	P	**P**	**10 01 31.5**	**-1.2**
	baz=127,slow=5.1						
NOA	**NORSAR Array B**	**87.52**	**336**	P	**P**	**10 01 32.4**	**-0.3**
	comp=Z,3.0nm,0.8s,mb4.6,baz=115,slow=4.6,SNR=5.7						
NAO	**NORSAR Subarra**	**87.54**	**336**	P	**P**	**10 01 31.5**	**-1.3**
	comp=Z,96nm,2.5s,mb5.6						
NAO	**NORSAR Subarra**	**87.54**	**336**	P	**P**	**10 01 31.5**	**-1.3**
NAO				pmax	pmax		
	comp=Z,96nm,2.5s,mb5.6						
SGMF	**Saint Gilles**	**87.81**	**321**	*e*P	**P**	**10 01 32.4**	**-2.0**
ROSF	**Rostrenen**	**88.27**	**321**	*e*P	**P**	**10 01 36.2**	**-0.4**
ARCES	**ARCESS Array B**	**89.03**	**347**	P	**P**	**10 01 41.3**	**+1.5**
	comp=Z,4.9nm,0.7s,mb4.9,baz=45,slow=6.9,SNR=12						
ARCES				LR	LR	10 43 48.3	
	comp=Z,576nm,19.3s,MS5.0,baz=126,slow=37						
TIXI	**Tiksi**	**95.65**	**16**	*e*P	**P**	**10 02 08.2**	**-2.1**
TIXI				*e*		10 02 14.5	
TIXI				*e*PPP	PPP	10 08 01.5	-7.4
TIXI				*e*		10 13 19.8	
TIXI				*e*SP	SP	10 14 47.8	+0.1
TIXI				*e*SS	SS	10 20 01.1	+4.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.7						
COLA	**College**	**124.77**	**17**	PKPdf	PKPdf	10 07 43.6	-2.9
INK	**Inuvik**	**125.02**	**9**	*e*PKPdf	PKPdf	10 07 44.9	-2.1
ILAR	**Eielson Array**	**125.12**	**17**	PKP	PKPdf	10 07 44.5	-2.8
	comp=Z,2.1nm,0.7s,baz=283,slow=2.7,SNR=22						
ILAR				PP	PP	10 09 33.6	-4.0
	comp=Z,0.5nm,0.8s,baz=315,slow=3.8,SNR=2.9						
MCK	**McKinley**	**125.29**	**19**	*e*PKPdf	PKPdf	10 07 48.3	+0.7
LPAZ	**La Paz**	**125.77**	**237**	PKP	PKPdf	10 07 49.3	-0.5
	comp=Z,4.9nm,0.9s,baz=62,slow=8.8,SNR=14						
LPAZ	**La Paz**	**125.77**	**237**	*e*PKIKP	PKPdf	10 07 49.0	-0.8
THY	**Trims Highway**	**126.48**	**18**	*e*PKPdf	PKPdf	10 07 49.8	+0.1
DAWY	**Dawson**	**127.64**	**14**	*e*PKPdf	PKPdf	10 07 50.7	-1.4
TBI	**Tubuai**	**128.04**	**136**	*e*LR	LR	10 47 41.2	
	comp=Z,431nm,28.2s						
PPT	**Papeete**	**131.78**	**131**	*e*LQ		10 44 12.4	
PPT				*e*LR	LR	10 49 28.8	
	comp=Z,727nm,25.2s						
YKA	**Yellowknife Ar**	**132.43**	**1**	PKhKP		10 07 53.7	
	comp=Z,1.0nm,0.8s,baz=340,slow=2.1,SNR=2.5						
YKA				PKP	PKPdf	10 08 00.2	-1.1
	comp=Z,1.9nm,0.7s,baz=340,slow=2.2,SNR=7.8						
YKA	**Yellowknife Ar**	**132.43**	**1**	PKP	PKPdf	10 08 00.2	-1.1
SJG	**San Juan**	**134.85**	**281**	PKPdf	PKPdf	10 08 05.8	-1.2
RKT	**Rikitea**	**136.65**	**150**	*e*LR	LR	10 51 42.7	
	comp=Z,1µm,24.0s						
SDV	**Santo Domingo**	**137.96**	**267**	*e*PKPdf	PKPdf	10 08 14.5	+1.7
ROSC	**El Rosal**	**140.48**	**259**	PKP	PKPdf	10 08 14.6	-2.8
	comp=Z,2.2nm,0.3s,baz=107,slow=20,SNR=3.1						
EDM	**Edmonton**	**141.74**	**0**	*e*PKPdf	PKPdf	10 08 14.0	-4.5
ULM	**Lac du Bonnet**	**142.01**	**342**	PKhKP		10 08 12.7	
	comp=Z,1.6nm,0.7s,baz=337,slow=5.0,SNR=2.8						
PGC	**Sidney**	**145.28**	**12**	*e*PKPdf	PKPdf	10 08 23.5	-1.2
JSC	**Jenkinsville**	**145.32**	**310**	*e*PKPdf	PKPdf	10 08 23.9	-1.4
MCW	**Mount Constitu**	**145.37**	**11**	P	PKPbc	10 08 23.9	+1.6
OTR	**Olympics--Tyee**	**145.63**	**13**	P	PKPbc	10 08 25.7	+2.7
DGMT	**Dagmar**	**145.68**	**349**	*e*PKPdf	PKPdf	10 08 25.2	-0.2
RPW	**Rockport**	**145.82**	**10**	P	PKPbc	10 08 24.9	+1.4
TZTN	**Tazewell**	**145.87**	**315**	*e*PKPdf	PKPdf	10 08 26.2	0.0
OCWA	**Octopus Mounta**	**145.98**	**13**	*e*PKPdf	PKPdf	10 08 26.7	+0.8
NEW	**Newport**	**146.55**	**5**	*e*PKPdf	PKPdf	10 08 27.7	+0.8
WCI	**Wyandotte Cave**	**146.74**	**319**	*e*PKPdf	PKPdf	10 08 27.0	-0.6
CPCT	**Cooper Cave**	**147.12**	**314**	*e*PKPdf	PKPdf	10 08 29.1	+0.8
TBM	**Table Mountain**	**147.22**	**9**	P	PKPdf	10 08 29.3	+1.3
OD2	**Odessa Site #2**	**147.25**	**7**	P	PKPdf	10 08 29.6	+1.5
EBG	**Ellensburg**	**147.47**	**9**	P	PKPdf	10 08 30.1	+1.7
LAO	**LASA Array**	**147.74**	**351**	*e*PKPdf	PKPdf	10 08 29.2	+0.3
LAO				*e*		10 12 04.9	
CHMT	**Chamberlain Mo**	**148.05**	**0**	*e*PKPdf	PKPdf	10 08 31.7	+2.3
HAWA	**Hanford**	**148.13**	**8**	*e*PKPdf	PKPdf	10 08 30.9	+1.4
MSO	**Missoula**	**148.13**	**1**	*e*PKPdf	PKPdf	10 08 30.1	+0.6
HRY	**Holter Researc**	**148.24**	**358**	*e*PKPdf	PKPdf	10 08 32.1	+2.4
SLM	**Saint Louis**	**148.84**	**324**	*e*PKPdf	PKPdf	10 08 33.2	+2.3
GCMT	**Greycliff**	**149.03**	**355**	*e*PKPdf	PKPdf	10 08 34.4	+3.3
BOZ	**Bozeman (W)**	**149.29**	**358**	*e*PKPdf	PKPdf	10 08 32.4	+0.9
FVM	**French Village**	**149.40**	**323**	*e*PKPdf	PKPdf	10 08 33.5	+1.6
DLMT	**Dillon**	**149.60**	**359**	*e*PKPdf	PKPdf	10 08 32.2	+0.3
DLMT				*e*		10 12 14.3	
RSSD	**Black Hills**	**149.81**	**347**	*e*PKPdf	PKPdf	10 08 30.8	-1.6
CCM	**Cathedral Cave**	**149.82**	**324**	*e*PKPdf	PKPdf	10 08 33.7	+1.2
BMO	**Blue Mountains**	**149.91**	**6**	*e*PKPdf	PKPdf	10 08 34.1	+1.6
BMO	**Blue Mountains**	**149.91**	**6**	*e*PKIKP	PKPdf	10 08 35.6	+3.1
PVMO	**Portageville**	**149.99**	**320**	*e*PKPdf	PKPdf	10 08 34.9	+2.0
QLMT	**Earthquake Lak**	**150.10**	**357**	*e*PKPdf	PKPdf	10 08 33.4	+0.6
MCMT	**McKenzie Canyo**	**150.14**	**359**	*e*PKPdf	PKPdf	10 08 37.7	+4.8
YMR	**Madison River**	**150.24**	**357**	*e*PKPdf	PKPdf	10 08 34.1	+1.2
LKWY	**Lake**	**150.31**	**356**	*e*PKPdf	PKPdf	10 08 34.0	+0.9
YFT	**Old Faithful**	**150.45**	**357**	*e*PKPdf	PKPdf	10 08 38.9	+5.6
KEBM	**Edson Butte**	**150.50**	**17**	*e*PKPdf	PKPdf	10 08 35.5	+2.0
OXF	**Oxford**	**150.97**	**317**	*e*PKPdf	PKPdf	10 08 34.9	+0.5
IMW	**Indian Meadow**	**151.00**	**357**	*e*PKPdf	PKPdf	10 08 33.5	-0.7
HUMO	**Hull Mountain**	**151.12**	**15**	*e*PKPdf	PKPdf	10 08 34.3	0.0
HBAR	**Harrisburg**	**151.13**	**320**	*e*PKPdf	PKPdf	10 08 37.3	+2.7
MOOW	**Moose Ponds**	**151.14**	**356**	*e*PKPdf	PKPdf	10 08 34.4	0.0
LOHW	**Long Hollow**	**151.27**	**356**	*e*PKPdf	PKPdf	10 08 34.4	-0.2
HLID	**Hailey**	**151.39**	**2**	*e*PKPdf	PKPdf	10 08 36.5	+1.8
TPAW	**Teton Pass**	**151.41**	**357**	*e*PKPdf	PKPdf	10 08 34.8	0.0
SNOW	**Snow King Moun**	**151.43**	**356**	*e*PKPdf	PKPdf	10 08 36.9	+2.2
REDW	**Red Top Meadow**	**151.53**	**356**	*e*PKPdf	PKPdf	10 08 35.5	+0.5
KSU1	**Kansas State U**	**151.79**	**332**	*e*PKPdf	PKPdf	10 08 34.6	-0.9
YBH	**Yreka Blue Hor**	**152.00**	**15**	*e*PKPdf	PKPdf	10 08 39.0	+3.3
BW06	**Boulder Array**	**152.02**	**354**	*e*PKPdf	PKPdf	10 08 34.7	-1.0
PDAR	**Pinedale Array**	**152.02**	**354**	PKP	PKPdf	10 08 34.5	-1.2
	comp=Z,5.8nm,0.7s,baz=90,slow=1.5,SNR=9.1						
PDAR				PKPbc	PKPdf	10 08 41.1	+5.5
	comp=Z,10nm,0.7s,baz=72,slow=2.9,SNR=47						
WVOR	**Wild Horse Val**	**152.14**	**9**	*e*PKPdf	PKPdf	10 08 35.6	-0.3
MOD	**Modoc**	**152.38**	**11**	*e*PKPdf	PKPdf	10 08 36.1	-0.1
KHMM	**Horse Mountain**	**152.52**	**17**	*e*PKPdf	PKPdf	10 08 32.3	-4.2
UALR	**University of**	**152.69**	**320**	*e*PKPdf	PKPdf	10 08 37.7	+0.8
PHWY	**Pilot Hill**	**152.82**	**347**	*e*PKPdf	PKPdf	10 08 36.2	-0.7
WDC	**Whiskeytown Da**	**153.12**	**16**	*e*PKPdf	PKPdf	10 08 37.7	+0.4
HWUT	**Hardware Ranch**	**153.32**	**357**	*e*PKPdf	PKPdf	10 08 37.0	-0.5
CBKS	**Cedar Bluff**	**153.35**	**336**	*e*PKPdf	PKPdf	10 08 36.4	-1.2

MIAR	Mount Ida	153.59	321	ePKPdf	PKPdf	10 08 38.9	+0.7
SPUT	South Promonto	153.65	359	ePKPdf	PKPdf	10 08 39.5	+1.4
TCUT	Toone Canyon	153.80	357	ePKPdf	PKPdf	10 08 38.5	+0.3
ELK	Elko	154.16	4	ePKPdf	PKPdf	10 08 39.7	+1.0
DAU	Daniels Canyon	154.50	357	ePKPdf	PKPdf	10 08 39.2	0.0
SMCO	Snowmass	155.17	348	ePKPdf	PKPdf	10 08 41.5	+1.3
SRU	San Rafael	155.74	355	ePKPdf	PKPdf	10 08 40.8	0.0
NVAR	Mina Array Bea	156.11	10	PKP	PKPdf	10 08 41.5	+0.1
	comp=Z,1.5nm,1.0s,baz=58,slow=1.0,SNR=6.0						
NVAR				PKPab	PKPab	10 09 08.3	-0.1
	comp=Z,4.3nm,0.9s,baz=24,slow=3.3,SNR=10						
NVAR				PP	PP	10 12 44.5	-2.6
	comp=Z,0.3nm,0.8s,baz=34,slow=3.3,SNR=2.5						
NVAR	Mina Array Bea	156.11	10	PKP	PKPdf	10 08 41.5	+0.1
NVAR				PKPab	PKPab	10 09 08.3	-0.1
NVAR				PP	PP	10 12 44.5	-2.6
MNV	Mina	156.13	10	ePKPdf	PKPdf	10 08 41.9	+0.5
SDCO	Great Sand Dun	156.21	345	ePKPdf	PKPdf	10 08 42.1	+0.6
PV10	Paradox Valley	156.30	352	ePKPdf	PKPdf	10 08 42.1	+0.5
WMOK	Wichita Mounta	156.33	329	ePKPdf	PKPdf	10 08 42.9	+1.1
MSU	Marysvale	156.43	358	ePKPdf	PKPdf	10 08 42.2	+0.4
PV01	Paradox Valley	156.47	351	ePKPab	PKPab	10 09 10.8	+0.8
ANMO	Albuquerque	159.10	344	ePKPdf	PKPdf	10 08 45.5	+0.1
NEN	Nelson	159.26	4	ePKPdf	PKPdf	10 08 45.7	+0.3
MNTX	Cornudas Mount	161.78	338	ePKPdf	PKPdf	10 08 48.1	-0.1
BAR	Barrett	161.99	9	ePKPdf	PKPdf	10 08 48.9	+0.5
LTX	Lajitas	163.12	330	ePKPdf	PKPdf	10 08 49.6	0.0
LTX				ePKPab	PKPab	10 09 38.3	-0.7
TXAR	Lajitas Array	163.12	330	PKP	PKPdf	10 08 48.8	-0.8
	comp=Z,1.5nm,0.8s,baz=119,slow=0.9,SNR=14						
TXAR				PKPab	PKPab	10 09 38.6	-0.4
	comp=Z,2.9nm,0.7s,baz=61,slow=3.9,SNR=14						
TXAR				PP	PP	10 13 24.6	0.0
	comp=Z,0.8nm,1.1s,baz=63,slow=2.8,SNR=3.6						

ISK ***22*** *09:53:05.3, 38.14N×26.55E, h14^{km}, MD3.3*

ATH ***22*** *09:53:06.2, 38.13N×26.48E, h22^{km}±1^{km}, MD3.5/3*

NEIC ***22*** *09:53:06.2, 38.13N×26.48E, h22^{km}, MD3.5(ATH), MD3.3(ISK), After ATH.*

CSEM ***22*** *09:53:07.3±0.1, 38.17N×26.70E, h25^{km}, MD3.3, Error ellipse: s-maj=3.5km s-min=2.1km az=76.0*

ISC 22 09:53:05.2±0.8**, 38.14N**±0.02×**26.55E**±0.04**, h6**^{km}±5^{km}**, n30, σ0^{s}92**/43**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.23	10	i P	Pg	09 53 09.9	+0.1
URLA				i S	Sg	09 53 13.3	+0.4
BLCB	Balcova	0.46	57	i PG	Pg	09 53 14.7	+0.2
BLCB				i SG	Sg	09 53 20.9	+0.2
SMG	Samos	0.49	152	ePN	Pn	09 53 16.5	-1.8
SMG				eSN	Sn	09 53 24.2	-2.9
IZM	Izmir	0.62	65	i PG	Pg	09 53 18.0	+0.4
IZM				i SG	Sg	09 53 27.2	+1.3
KDAG	Bornova	0.63	65	i P	Pg	09 53 16.9	-0.8
KDAG				i S	Sg	09 53 25.5	-0.6
PRK	Paraskevi	1.13	349	ePN	Pn	09 53 27.7	+0.2
PRK				eSN	Sn	09 53 43.3	-0.1
AYDN	Tasoluk	1.16	114	i P	Pb	09 53 28.3	+1.0
AYDN				i S	Sb	09 53 43.3	+1.0
AYVA	Ayvalik	1.18	5	i P	Pb	09 53 28.2	+0.7
AYVA				i S	Sb	09 53 44.6	+1.7
BODT	Bodrum	1.23	150	PN	Pn	09 53 28.9	-0.1
AKS	Akhisar	1.24	53	PN	Pn	09 53 29.0	-0.1
BDRM	Kayabasi	1.29	146	i P	Pg	09 53 32.3	+1.4
BDRM				i S	Sg	09 53 49.0	+0.9
MLSB	Milas	1.29	130	ePN	Pn	09 53 30.3	+0.6
APE	Apeiranthos	1.34	217	PN	Pn	09 53 30.1	-0.4
APE	Apeiranthos	1.34	217	ePn	Pn	09 53 30.9	+0.4
MANT	Manisa	1.62	77	i P	Pn	09 53 35.7	+1.2
MANT				i S	Sb	09 53 56.6	+0.8
DAT	Datca	1.63	149	ePN	Pn	09 53 33.9	-0.7
EZN	Ezine	1.69	354	ePN	Pn	09 53 35.7	+0.1
YER	Yerkesik	1.70	125	ePN	Pn	09 53 35.1	-0.6
BTOK	Tokmak	1.99	35	i P	Pg	09 53 43.0	-2.0
BTOK				i S	Sg	09 54 10.8	-0.8
DNZL	Cakiroluk	2.03	102	i P	Pn	09 53 40.2	-0.1
DNZL				i S	Sg	09 54 12.8	+0.1
LIA	Limnos Island	2.05	329	ePN	Pn	09 53 41.4	+0.7
DALT	Dalyan (Mudla)	2.15	129	ePN	Pn	09 53 42.3	+0.2
DST	Dursunbey	2.19	47	ePN	Pn	09 53 41.7	-0.9
LPK	Lapseki	2.24	4	ePN	Pn	09 53 43.2	-0.1
GDZ	Gediz	2.49	67	i P	Pg	09 53 51.2	-3.6
GDZ				i S	Sg	09 54 25.1	-3.0
FETY	Fethiye	2.52	126	ePN	Pn	09 53 47.2	-0.1
KCT	Karacabey	2.55	33	ePN	Pn	09 53 47.3	-0.5
ORLT	Orhaneli	2.64	43	ePN	Pn	09 53 48.4	-0.7
MFT	Murefte	2.71	12	ePN	Pn	09 53 49.4	-0.6
RDO	Rodhopi	3.10	346	ePN	Pn	09 53 56.0	+0.3

BJI ***22*** *09:57:06.9, 14.72S×66.29E, h11^{km}, mB5.4, mb5.0, Ms5.5, Msz5.3*

MOS ***22*** *09:57:06.9±1.1, 14.88S×66.70E, h10^{km}, mb5.6/46, MS5.4/20, Error ellipse: s-maj=10.0km s-min=4.8km az=114.7*

IDC ***22*** *09:57:07.1±0.5, 14.86S×66.86E, mb4.6/23, mb1 4.7/24, mb1mx4.7/24, mbtmp4.6/24, MS4.7/1, Ms1 4.7/1, ms1mx4.2/21, Error ellipse: s-maj=15.2km s-min=13.9km az=3.0*

SKO ***22*** *09:57:08.5, 14.60S×67.75E*

HRVD ***22*** *09:57:08.6±0.2, 14.97S×66.83E, h12^{km}, MW5.4/81, Centroid moment Tensor Solution. LP body waves: s43,c60;Mantle waves: s81,c162; Half duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.46±.03; $M_{\theta\theta}$0.65±.03; $M_{\phi\phi}$0.81±.03; $M_{r\theta}$0.12±.10; $M_{\theta\phi}$-0.73±.03; $M_{\phi r}$0.74±.10; Best double couple: $M_0$1.635×10^{17} NP1: ϕ_s301°,δ39°,λ-119°. NP2:ϕ_s157°,δ57°,λ-69°. Principal axes: T 1.543, Plg10°, Azm232°; N .186, Plg18°, Azm325°; P -1.727, Plg70°, Azm115°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *09:57:08.6±0.2, 14.90S×66.71E, h10^{km}, mb5.4/64, MS5.4/112 Error ellipse: s-maj=6.7km s-min=5.6km az=225.0*

ISC 22 09:57:06.7±0.2**, 14.96S**±0.04×**66.77E**±0.04**, h10**^{km}**, (h18**^{km}±.7^{km}**:pP-P), n431, σ1^{s}05**/288**, mb5.2**/104**, MS5.3**/125**, 28C-14D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSEY	Mahe Island	15.10	311	ePn	P	10 00 42.3	+0.4
	395nm,1.9s						
OPO	Ambohidratompo	19.09	256	P	P	10 01 33.9	+1.7
	0.5nm,0.3s,baz=77,slow=12,SNR=9.0						
PALK	Pallekele	26.05	33	PFAKE		10 02 50.0	+7.8
PALK				LR	LR		
	comp=Z,1µm,21.0s,MS4.5						
KMBO	Kilima Mbogo	32.23	293	P	P	10 03 39.4	+1.7
	comp=Z,11nm,0.9s,mb4.7,baz=64,slow=7.2,SNR=26						
KMBO				LR	LR	10 13 57.5	
	comp=Z,1µm,19.5s,MS4.6,baz=98,slow=31						
HYB	Hyderabad	34.20	20	i P	P	10 03 56.0	+1.2
HYB	Hyderabad	34.20	20	eP	P	10 03 56.0	+1.2
ATD	Arta Tunnel	35.41	317	P	P	10 04 06.7	+1.5
	comp=Z,25nm,0.8s,mb5.2,baz=122,slow=1.5,SNR=8.0						
MATP	Matopo	36.80	256	P	P	10 04 18.2	+1.4
	comp=Z,12nm,1.1s,mb4.6,baz=95,slow=9.3,SNR=7.9						
LSZ	Lusaka	37.22	264	eP	P	10 04 21.9	+1.5
	comp=Z,75nm,1.2s,mb5.4						
LSZ				LR	LR		
	comp=Z,7µm,19.0s,MS5.5						
LSZ	Lusaka	37.22	264	eP	P	10 04 21.9	+1.6
LSZ				pmax	pmax		
	comp=Z,75nm,1.2s,mb5.4						
LSZ				MLR	MLR		
	comp=Z,7µm,19.0s,MS5.5						
MBAR	Mbarara	38.35	289	PFAKE		10 04 40.0	+10
MBAR				LR	LR		
	comp=Z,1.0nm,22.0s						
DJNS	Zahran al Janu	39.72	324	P	P	10 04 43.5	+2.2
BOSA	Boshof	40.67	243	P	P	10 04 49.5	+0.5
	comp=Z,8.6nm,0.9s,mb4.4,baz=52,slow=6.5,SNR=6.5						
BOSA	Boshof	40.67	243	P	P	10 04 49.5	+0.6
BOSA				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
TATS	Tathlith	41.24	326	P	P	10 04 55.3	+1.6
BLJS	Baljurashi	42.56	324	P	P	10 05 07.8	+3.1
HASS	Wahat al Ahsa’	43.23	337	P	P	10 05 10.6	+0.5
AFFS	‘Afif	45.09	329	P	P	10 05 26.1	+1.0
SUR	Sutherland	45.15	239	P	P	10 05 26.6	+1.1
	comp=Z,8.4nm,0.8s,mb4.6,baz=135,slow=4.3,SNR=2.6						
SUR	Sutherland	45.15	239	P	P	10 05 26.6	+1.1
SUR				LR	LR		
	comp=Z,894nm,19.0s,MS4.7						
KOLN	Koldanda	45.50	21	eP	P	10 05 29.2	+0.9
	comp=Z,313nm,1.7s,mb5.9						
DMN	Daman	45.90	23	eP	P	10 05 33.6	+2.1
	comp=Z,232nm,1.6s,mb5.9						
PKI	Pulchoki	45.98	23	eP	P	10 05 34.0	+1.9
	comp=Z,410nm,2.2s,mb6.0						
GKN	Gorkha	46.08	22	eP	P	10 05 33.7	+0.8
	comp=Z,145nm,1.2s,mb5.8						
KKN	Kakani	46.12	23	eP	P	10 05 35.2	+1.9
	comp=Z,247nm,1.4s,mb6.0						
JIRN	Jiri	46.36	24	eP	P	10 05 36.9	+1.8
	comp=Z,236nm,1.7s,mb5.8						
GUN	Gumba	46.46	24	eP	P	10 05 37.1	+1.2
	comp=Z,382nm,1.7s,mb6.0						
TSUM	Tsumeb	47.09	258	PFAKE		10 05 50.0	+9.0
TSUM				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
YNBS	Yanbu‘ al Bahr	48.11	324	P	P	10 05 49.2	+0.3
KBRS	Khaybar	48.55	326	P	P	10 05 53.9	+1.5
HILS	Ha’il	48.57	330	P	P	10 05 52.9	+0.5
NWAO	Narrogin (SRO)	48.99	121	PFAKE		10 06 10.0	+14
NWAO				LR	LR		
	comp=Z,964nm,21.0s,MS4.8						
LSA	Lhasa	50.24	28	P	P	10 06 07.5	+2.2
MBWA	Marble Bar	50.55	105	eP	P	10 06 08.1	+0.4
	comp=Z,44nm,1.1s,mb5.3						
MBWA				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
DBAS	Duba	51.48	324	P	P	10 06 15.7	+1.0
BHD	Baghdad	52.51	336	ex	x	10 06 21.0	
AYUS	‘Aynunah	52.63	325	P	P	10 06 24.6	+1.2
MAW	Mawson	52.67	182	eP	P	10 06 23.0	-0.2
	comp=Z,6.3nm,1.1s,mb4.5						
MAW	Mawson	52.67	182	P	P	10 06 23.7	+0.6
	comp=Z,4.3nm,0.8s,mb4.4,baz=15,slow=11,SNR=6.1						
MAW	Mawson	52.67	182	eP	P	10 06 23.0	-0.2
MAW				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BDAS	Al Bad‘	52.91	325	P	P	10 06 26.1	+0.6
JMOS	Jabal al Moall	53.48	325	P	P	10 06 30.8	+1.2
HAQS	Haql	53.49	325	P	P	10 06 30.2	+0.5
KSH	Kashi	54.86	9	eP	P	10 06 40.0	+0.3
KSH				eAP	pP	10 06 44.0	+1.2
KSH				eXP	sP	10 06 47.5	+3.6
KSH				ePCP	PcP	10 07 42.0	+0.2
KSH				ePP	PP	10 08 44.3	+0.2
KSH				ePPP	PPP	10 09 56.3	+0.3
KSH				eSCP		10 11 38.0	
KSH				ePCS		10 11 40.8	
KSH				eS	S	10 14 17.5	-1.6
KSH				eXS		10 14 26.3	
KSH				ePS	PS	10 14 31.0	-0.1
KSH				eSCS	ScS	10 16 25.4	-0.3
KSH				eSS	SS	10 18 01.5	-0.8
KSH				AMB	AMB		
	comp=Z,880nm,3.3s						
KSH				LR	LR		
	comp=N,4µm,13.3s,MS5.8						
KSH				LR	LR		
	comp=E,4µm,13.8s,MS5.8						
MSL	Mosul	55.66	337	ex	x	10 06 44.5	
MSL				e		10 07 46.0	
MSL				ex	x	10 14 32.0	
FITZ	Fitzroy Crossi	56.33	102	eP	P	10 06 50.3	-0.2
	comp=E,8.3nm,0.6s,mb4.9						
FITZ				i pP	pP	10 06 56.6	+3.0
FITZ				i		10 07 01.1	
FITZ	Fitzroy Crossi	56.33	102	P	P	10 06 50.7	+0.2
	comp=E,28nm,1.1s,mb5.2,baz=248,slow=8.2,SNR=17						
GYA	Guiyang	56.55	44	⇑iP	P	10 06 51.6	-0.5
GYA				AP	pP	10 06 55.8	+0.7
GYA				XP	sP	10 06 58.8	+2.5
GYA				PP	PP	10 08 59.4	-0.1
GYA				SCP		10 11 45.8	
GYA				S	S	10 14 40.1	-1.8
GYA				XS		10 14 50.3	
GYA				SS	SS	10 18 27.0	-3.1
GYA				AMB	AMB		
	comp=Z,40nm,1.0s,mb5.4						
GYA				AMB	AMB		
	comp=Z,240nm,4.0s						
GYA				LR	LR		
	comp=N,2µm,18.9s,MS5.3						
GYA				LR	LR		
	comp=E,2µm,17.7s,MS5.3						
GYA				LR	LR		
	comp=Z,1µm,16.2s,MS5.2						
SYO	Syowa Base	56.70	191	⇓P	P	10 06 51.7	-0.8
SYO	Syowa Base	56.70	191	⇑pP	pP	10 06 57.8	+2.2
SYO	Syowa Base	56.70	191	⇓eP	P	10 06 51.7	-0.8
SYO				⇑epP	pP	10 06 57.8	+2.2
FRU	Bishkek	57.95	7	eP	P	10 07 02.0	+0.3
FRU				i	pP	10 07 06.5	+1.7
FRU				pmax	pmax		
	comp=Z,160nm,2.2s,mb5.7						
GNI	Garni	58.53	340	eP	P	10 07 06.1	+0.3
	comp=Z,242nm,1.4s,mb6.0						
GNI				LR	LR		
	comp=Z,861nm,19.0s,MS4.9						
GNI	Garni	58.53	340	d iP	P	10 07 05.9	+0.1
GNI				pmax	pmax		
	comp=Z,170nm,2.3s						
CASY	Casey	58.87	161	PFAKE		10 07 20.0	+12
CASY				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
GZH	Guangzhou	59.21	51	P	P	10 07 15.6	+4.8
GZH				LR	LR		
	comp=N,1µm,16.8s,MS5.2						
GZH				LR	LR		
	comp=E,1µm,17.4s,MS5.2						
GZH				LR	LR		
	comp=Z,2µm,17.1s,MS5.3						
LZH	Lanzhou	61.69	34	eP	P	10 07 28.5	+1.0
LZH				AP	pP	10 07 34.5	+3.9
LZH				XP	sP	10 07 37.5	+5.7
LZH				PP	PP	10 09 43.4	-2.2
LZH				eS	S	10 15 40.0	-8.3
LZH				AMB	AMB		
	comp=Z,50nm,1.8s,mb5.3						
LZH				AMB	AMB		
	comp=Z,210nm,6.0s						
LZH				LR	LR		
	comp=E,2µm,15.3s						
LZH				LR	LR		
	comp=Z,2µm,17.0s,MS5.4						
DAV	Davao City (W)	62.26	74	PFAKE		10 07 40.0	+8.4
DAV				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
BR131	Keskin Array S	62.55	332	eP	P	10 07 32.1	-1.1
	comp=Z,52nm,1.5s,mb5.4						
BR131				LR	LR		
	comp=Z,710nm,21.0s,MS4.8						
BRTR	Keskin Array B	62.55	332	P	P	10 07 32.8	-0.4
	comp=Z,6.4nm,0.9s,mb4.8,baz=156,slow=6.1,SNR=20						
KIV	Kislovodsk	62.62	341	eP	P	10 07 33.4	-0.2
KIV				LR	LR		
	comp=Z,269nm,22.0s,MS4.4						
KIV	Kislovodsk	62.62	341	eP	P	10 07 33.5	-0.1
KIV				pmax	pmax		
	comp=Z,40nm,1.2s,mb5.4						
MKAR	Makanchi Array	63.03	12	P	P	10 07 35.2	-1.0
	comp=Z,2.5nm,0.6s,mb4.6,baz=215,slow=7.4,SNR=19						
MKAR	Makanchi Array	63.03	12	P	P	10 07 35.2	-1.0
ANTO	Ankara	63.05	331	PFAKE		10 07 50.0	+13
ANTO				LR	LR		
	comp=Z,703nm,21.0s,MS4.8						
SOC	Sochi	63.30	338	eP	P	10 07 35.8	-2.3
SOC				eS	S	10 16 11.1	+2.6
SOC				pmax	pmax		
	comp=Z,41nm,1.0s,mb5.5						
ASPA	Alice Springs	63.46	109	eP	P	10 07 38.4	-1.0
ASPA				i pP	pP	10 07 44.8	+2.2
KAKA	Kakadu	63.60	97	eP	P	10 07 59.4	+19
	comp=Z,54nm,1.3s,mb5.4						
KAKA				i pP	pP	10 08 06.2	+23
WRA	Warramunga Arr	64.28	105	P	P	10 07 44.3	-0.7
	comp=Z,26nm,1.1s,mb5.2,baz=269,slow=6.0,SNR=56						
WRA				PKKP	PKKP	10 28 14.9	+5.4
	comp=Z,1.4nm,1.1s,baz=94,slow=3.4,SNR=5.3						
WRA				PKP2bc		10 36 41.2	
	comp=Z,1.7nm,1.0s,baz=76,slow=2.8,SNR=6.6						
WRA	Warramunga Arr	64.28	105	P	P	10 07 44.3	-0.7
WRA				PKKP	PKKP	10 28 14.9	+5.4
WRA				⇑e		10 36 41.2	
WB2	Warramunga Arr	64.30	105	⇑iP	P	10 07 44.6	-0.5
WB2				i pP	pP	10 07 50.9	+2.7
WB2				i		10 07 55.6	
WRAB	Tennant Creek	64.30	105	eP	P	10 07 44.6	-0.5
	comp=Z,178nm,1.1s,mb6.0						
WRAB				LR	LR		
	comp=Z,466nm,19.0s,MS4.7						
WRAB	Tennant Creek	64.30	105	eP	P	10 07 44.6	-0.5
WRAB				pmax	pmax		
	comp=Z,178nm,1.1s,mb6.0						
WRAB				MLR	MLR		
	comp=Z,466nm,19.0s,MS4.7						
WHN	Wuhan	64.35	45	eP	P	10 07 47.0	+1.7
WHN				LR	LR		
	comp=Z,6µm,21.5s,MS5.8						
NVL	N’lazarevskaya	64.79	197	eP	P	10 07 46.9	-0.5
NVL				e		10 08 16.9	
NVL				ePPP	PPP	10 11 43.9	-1.6
NVL				eS	S	10 16 33.6	+7.1
NVL				e		10 17 46.7	
NVL				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
NVL				MLR	MLR		
	comp=Z,62nm,18.7s						
ANN	Anapa	65.18	337	eP	P	10 07 55.9	+5.5
ANN				pmax	pmax		
	comp=Z,177nm,2.0s,mb5.8						
AKTK	Aktyubinsk	65.56	354	P	P	10 07 51.7	-1.0
AKTO	Aktyubinsk	65.56	354	P	P	10 07 51.7	-1.0
	comp=Z,11nm,1.2s,mb4.8,baz=171,slow=8.0,SNR=14						
KURK	Kurchatov	66.21	8	eP	P	10 07 56.5	-0.3
	comp=Z,91nm,1.5s,mb5.6						
KURK				LR	LR		
	comp=Z,667nm,21.0s,MS4.8						
KURK	Kurchatov	66.21	8	eP	P	10 07 56.5	-0.3
KURK				pmax	pmax		
	comp=Z,91nm,1.5s,mb5.6						
KURK				MLR	MLR		
	comp=Z,667nm,21.0s,MS4.8						
TATO	Taipei	66.48	54	PFAKE		10 08 10.0	+11
TATO				LR	LR		
	comp=Z,3µm,19.0s,MS5.6						
BVAR	Borovoye Array	67.77	2	P	P	10 08 05.4	-1.3
	comp=Z,5.3nm,0.7s,mb4.7,baz=164,slow=7.4,SNR=20						
BRVK	Borovoye	67.80	2	eP	P	10 08 04.6	-2.3
	comp=Z,37nm,1.4s,mb5.2						
BRVK				LR	LR		
	comp=Z,357nm,22.0s,MS4.5						
BRVK	Borovoye	67.80	2	eP	P	10 08 04.6	-2.3
BRVK				pmax	pmax		
	comp=Z,37nm,1.4s,mb5.2						
BRVK				MLR	MLR		
	comp=Z,357nm,22.0s,MS4.5						
KDZ	Kurdzhali	68.04	328	eP	P	10 08 09.0	+0.4
CHKZ	Chkalovo	68.43	2	eP	P	10 08 09.9	-0.9
	comp=Z,61nm,1.3s,mb5.5						
CHKZ	Chkalovo	68.43	2	eP	P	10 08 10.0	-0.8
RZN	Rozhen	68.43	327	P	P	10 08 11.5	+0.5
TIRR	Tirgusor	68.67	332	⇑P	P	10 08 12.1	-0.4
VAY	Valandovo	69.31	326	eP	P	10 08 15.9	-0.6
VAY	Valandovo	69.31	326	eP	P	10 08 15.9	-0.6
KKB	Krupnik	69.42	327	P	P	10 08 17.0	-0.1
STKA	Stephens Creek	69.51	119	P	P	10 08 17.6	-0.3
	comp=Z,8.9nm,1.0s,mb4.6,baz=292,slow=7.4,SNR=6.5						
STKA	Stephens Creek	69.51	119	eP	P	10 08 17.1	-0.8
SNAA	Sanae	69.52	198	⇓iP	P	10 08 17.1	-0.2
SNAA				e		10 08 23.4	
SNAA				e		10 08 34.4	
TIA	Tai’an	69.64	42	eP	P	10 08 18.4	-0.2
BIA	Bitola	69.79	325	eP	P	10 08 18.8	-0.6
BIA	Bitola	69.79	325	eP	P	10 08 18.8	-0.6
VTS	Vitosha	69.86	327	P	P	10 08 20.0	+0.2
OHR	Ohrid	70.15	325	eP	P	10 08 21.1	-0.4
OHR	Ohrid	70.15	325	eP	P	10 08 21.1	-0.5
ZAL	Zalesovo	70.33	11	P	P	10 08 21.0	-1.4
	comp=Z,3.1nm,0.8s,mb4.3,baz=263,slow=5.8,SNR=12						
ZAL	Zalesovo	70.33	11	P	P	10 08 21.0	-1.4
SKO	Skopje	70.38	326	eP	P	10 08 22.3	-0.6
SKO	Skopje	70.38	326	eP	P	10 08 22.3	-0.7
KIS	Kishinev	70.44	333	eP	P	10 08 22.0	-1.3
KIS				e		10 08 28.0	
KIS				e		10 08 50.0	
VRI	Vrincioaia	70.51	332	⇓P	P	10 08 24.2	+0.5
VOR	Voronezh	70.61	342	P	P	10 08 24.5	+0.3
VOR				e	pP	10 08 29.0	+1.7
VOR				pmax	pmax		
	comp=Z,100nm,1.7s,mb5.5						
VNA2	Neumayer--Watz	70.80	200	⇓iP	P	10 08 25.4	+0.4
VNA2				e		10 08 31.3	
VNA2				e		10 08 42.5	
NVS	Novosibirsk	70.91	10	⇑iP	P	10 08 24.2	-1.8
NVS				pmax	pmax		
	comp=Z,138nm,2.0s,mb5.5						
NVS				pmax	pmax		
	comp=N,115nm,1.8s						
NVS				pmax	pmax		
	comp=E,54nm,1.9s						
VOIR		70.98	330	⇑P	P	10 08 26.2	-0.4
VNA1	Neumayer--Stat	71.03	200	⇓iP	P	10 08 26.6	+0.1
VNA1				e	pP	10 08 28.7	-0.9
VNA1				e		10 08 33.3	
VNA1				e		10 08 45.4	
BOLS	Boljevac	71.38	327	⇑iP	P	10 08 27.8	-1.3
ARU	Arti	71.44	355	eP	P	10 08 27.1	-2.0
	comp=E,76nm,1.3s,mb5.5						
ARU				LR	LR		
	comp=Z,278nm,22.0s,MS4.5						
ARU	Arti	71.44	355	⇑eP	P	10 08 27.9	-1.3
ARU				pmax	pmax		
	comp=Z,61nm,2.6s,mb5.1						
VNA3	Neumayer Olymp	71.58	199	⇓iP	P	10 08 29.9	+0.1
VNA3				e		10 08 35.8	
VNA3				e		10 08 47.2	
SVE	Sverdlovsk	71.69	356	⇑eP	P	10 08 29.5	-1.2
SVE				e		10 08 44.5	
SVE				pmax	pmax		
	comp=Z,150nm,2.5s,mb5.5						
SONM	Songino Array	71.81	27	P	P	10 08 31.8	+0.2
	comp=Z,2.9nm,0.9s,mb4.2,baz=223,slow=4.7,SNR=8.9						
SONM				PKPPKP		10 36 17.9	
	comp=Z,0.5nm,1.0s,baz=90,slow=1.5,SNR=3.7						
SVIS	Svilajnac	72.09	327	⇑iP	P	10 08 33.0	-0.2
ULN	Ulaanbaatar	72.13	27	⇑eP	P	10 08 33.2	-0.2
ULN				LR	LR		
	comp=Z,3µm,21.0s,MS5.5						
TOO	Toolangi	72.19	125	eP	P	10 08 34.6	+0.7
	comp=Z,14nm,1.0s,mb4.8						
TOO	Toolangi	72.19	125	eP	P	10 08 34.6	+0.7
TOO				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
BURAR	Bucovina Array	72.51	332	⇑P	P	10 08 37.3	+1.6
DIVS	Divcibare	72.60	327	⇓iP	P	10 08 35.4	-0.9
TAU	Tasmania Unive	73.11	131	PFAKE		10 08 50.0	+11
TAU				LR	LR		
	comp=Z,205nm,21.0s,MS4.4						
AKASG	Malin Array Be	73.18	336	P	P	10 08 38.7	-0.8
	comp=Z,6.1nm,0.8s,mb4.6,baz=137,slow=5.4,SNR=28						
PECR	Pechory	73.50	347	eP	P	10 08 41.4	+0.1
PECR				pmax	pmax		
	comp=Z,500nm,5.0s						
DBIC	Dimbokro	74.16	282	P	P	10 08 46.1	+0.2
	comp=Z,4.0nm,0.8s,mb4.4,baz=81,slow=13,SNR=4.5						
DBIC	Dimbokro	74.16	282	P	P	10 08 46.1	+0.2
DBIC				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
LIC	Lamto	74.18	281	eP	P	10 08 45.3	-0.8
	comp=Z,70nm,1.1s,mb5.2						
OBN	Obninsk	74.33	343	⇑eP	P	10 08 46.2	+0.1
OBN				LR	LR		
	comp=Z,273nm,20.0s,MS4.5						
OBN	Obninsk	74.33	343	⇑eP	P	10 08 46.2	+0.1
OBN				i		10 08 52.0	
OBN				e		10 08 57.6	
OBN				pmax	pmax		
	comp=Z,81nm,2.4s,mb5.2						
SOKR	Solikamsk	74.70	355	c iP	P	10 08 53.0	+4.8
SOKR				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.3						
PKSM	Moragy	74.72	328	⇑iP	P	10 08 48.7	+0.1

KOLS	**Kolonicke sedl**	74.82	331	*e*P	P	10 08 49.4	+0.3
KOLS				*e*sP	sP	10 08 55.9	+2.6
KWP	**Kalwaria**	75.12	332	*e*P	P	10 08 50.3	-0.5
KWP				*e*pP	pP	10 08 57.3	+3.3
KWP				*e*PP	PP	10 11 50.9	+10
KWP				MLR	MLR	10 29 02.2	
	comp=Z,800nm,28.3s,MS4.9						
CRVS	**Cervenica-Dubn**	75.18	331	*e*P	P	10 08 51.3	+0.2
CTA	**Charters Tower**	75.32	107	*e*P	P	10 08 52.7	+0.1
	comp=Z,9.5nm,1.1s,mb4.6						
CTA				*i* pP	pP	10 08 58.5	+2.8
CTA				*i*		10 09 03.9	
CTA	**Charters Tower**	75.32	107	*e*P	P	10 08 52.7	+0.1
CTA				*i* *PP	pP	10 08 58.5	+2.8
CTA				*i*		10 09 03.9	
CTA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CTAO	**Charters Tower**	75.32	107	*e*P	P	10 08 52.4	-0.1
	comp=Z,54nm,1.1s,mb5.4						
CTAO				LR	LR		
	comp=Z,3µm,22.0s,MS5.5						
CTAO	**Charters Tower**	75.32	107	*e*P	P	10 08 52.4	-0.2
CTAO				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.4						
CTAO				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.5						
KECS	**Kecovo**	75.35	330	*e*P	P	10 08 52.0	-0.1
KECS				*e*sP	sP	10 08 58.1	+1.7
STHS	**Stebnicka Huta**	75.64	331	*e*P	P	10 08 53.8	0.0
STHS				*e*sP	sP	10 09 00.1	+2.1
BOJS	**Bojanci**	76.08	325	*i* P	P	10 08 57.3	+1.0
BOJS				*e*		10 09 03.1	
VYHS	**Vyhne**	76.16	329	*i* P	P	10 08 56.5	-0.2
VYHS				*e*sP	sP	10 09 02.8	+1.8
VISS	**Visnje**	76.49	326	*i* P	P	10 09 00.1	+1.5
VISS				*i*	pP	10 09 05.2	+3.4
VNDA	**Vanda**	76.60	167	*e*P	P	10 08 59.0	+0.3
	comp=Z,33nm,1.5s,mb5.0						
VNDA				LR	LR		
	comp=Z,834nm,19.0s,MS5.1						
VNDA	**Vanda**	76.60	167	P	P	10 08 59.1	+0.4
VNDA				pmax	pmax		
	comp=Z,33nm,1.4s						
INCN	**Inchon**	76.66	45	PFAKE		10 09 10.0	+10
INCN				LR	LR		
	comp=Z,2µm,22.0s,MS5.4						
ZST	**Bratislava**	76.82	328	*e*P	P	10 09 00.2	-0.3
ARSA	**Arzberg**	77.03	327	⇑*i*P	P	10 09 01.8	+0.2
	comp=Z,52nm,1.4s,mb5.3,SNR=12						
OKC	**Ostrava-Krasne**	77.39	330	*e*P	P	10 09 03.9	+0.3
OKC				*e*pP	pP	10 09 09.9	+3.2
ROBS	**Robic**	77.49	325	*e*P	P	10 09 04.1	-0.1
ROBS				*e*		10 09 10.0	
SBA	**Scott Base**	77.58	168	*e*P	P	10 09 05.5	+1.4
	comp=Z,58nm,1.5s,mb5.3						
SBA				LR	LR		
	comp=Z,803nm,19.0s,MS5.1						
SBA	**Scott Base**	77.58	168	P	P	10 09 05.7	+1.6
SBA				pmax	pmax		
	comp=Z,58nm,1.5s,mb5.3						
MORC	**Moravsky Berou**	77.64	330	*e*P	P	10 09 04.7	-0.3
	comp=Z,9.9nm,0.6s,mb4.9						
MORC	**Moravsky Berou**	77.64	330	P	P	10 09 04.9	-0.1
MORC				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
WAR	**Warsaw**	77.73	333	*e*P	P	10 09 12.3	+7.0
WAR				*e*pP	pP	10 09 15.6	+7.1
WAR				*e*S	S	10 19 02.5	+6.3
WAR	**Warsaw**	77.73	333	*e*P	pP	10 09 15.6	+7.1
WAR				*e*S	S	10 19 02.5	+6.3
PGF	**Pioggiola**	77.99	320	*e*P	P	10 09 05.3	-1.7
CIT	**Chita**	78.03	27	*e*P	P	10 09 07.8	+0.8
CIT				pmax	pmax		
	comp=Z,78nm,3.7s						
MOA	**Molln**	78.07	327	⇓*i*P	P	10 09 07.5	+0.1
	comp=Z,90nm,1.6s,mb5.5,SNR=7.3						
MOA	**Molln**	78.07	327	⇓*i*P	P	10 09 07.5	+0.1
	comp=Z,90nm,1.6s,mb5.5						
SUW	**Suwalki**	78.10	335	*e*P	P	10 09 07.5	+0.2
SUW				*e*pP	pP	10 09 13.9	+3.4
SUW				*e*PcP	PcP	10 09 19.2	+1.7
SUW				*e*PP	PP	10 12 03.6	-2.3
SUW				MLR	MLR	10 32 25.4	
	comp=Z,700nm,28.6s,MS4.8						
TREC	**Trest**	78.35	329	*e*P	P	10 09 08.8	0.0
TREC				*e*pP	pP	10 09 15.3	+3.3
PMG	**Port Moresby**	78.41	97	*e*P	P	10 09 11.3	+1.4
	comp=Z,99nm,1.6s,mb5.5						
PMG				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
PMG	**Port Moresby**	78.41	97	P	P	10 09 11.4	+1.5
PMG				pmax	pmax		
	comp=Z,99nm,1.6s						
DPC	**Dobruska-Polom**	78.62	330	*e*P	P	10 09 10.5	+0.2
DPC				*e*pP	pP	10 09 17.0	+3.6
KLMR	**Klimovskoe**	78.64	347	*e*P	P	10 09 10.0	-0.2
KLMR				pmax	pmax		
	comp=Z,220nm,1.8s,mb5.8						
UPC	**Upice**	78.87	330	*e*P	P	10 09 11.9	+0.2
UPC				*e*pP	pP	10 09 18.5	+3.7
KSP	**Ksiaz**	78.95	330	*e*P	P	10 09 13.4	+1.3
KSP				*e*pP	pP	10 09 19.6	+4.3
KSP				*e*PcP	PcP	10 09 24.6	+3.4
KSP				*e*PP	PP	10 12 12.2	-0.6
KSP				MLR	MLR	10 29 29.1	
	comp=Z,900nm,30.4s,MS4.9						
KSP	**Ksiaz**	78.95	330	⇓*e*P	P	10 09 12.4	+0.3
KSP				*e*pP	pP	10 09 18.4	+3.1
KSP				*e*PP	PP	10 12 11.0	-1.8
GERES	**GERESS Array B**	78.98	327	P	P	10 09 12.1	-0.3
	comp=Z,0.8nm,0.5s,baz=124,slow=4.8,SNR=7.5						
WTTA	**Wattenberg**	79.13	325	⇑*i*P	P	10 09 13.0	-0.2
	comp=Z,55nm,1.1s,mb5.4						
WTTA	**Wattenberg**	79.13	325	⇑P	P	10 09 13.0	-0.2
WTTA				pmax	pmax		
	comp=Z,55nm,1.1s,mb5.4						
KHC	**Kasperske Hory**	79.22	328	*e*P	P	10 09 13.1	-0.5
KHC				*e*pP	pP	10 09 19.4	+2.6
CN2	**Changchun**	79.23	39	*e*P	P	10 09 17.0	+3.2
CN2				*e*XP	sP	10 09 23.0	+5.0
CN2				*e*S	S	10 19 11.0	-1.4
CN2				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,1µm,19.0s,MS5.4						
CN2				LR	LR		
	comp=E,1µm,19.0s,MS5.4						
CN2				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
PRU	**Pruhonice**	79.26	329	*e*P	P	10 09 14.4	+0.6
PRU				*e*pP	pP	10 09 20.4	+3.4
MOTA	**Moosalm**	79.47	325	⇑*i*P	P	10 09 15.1	0.0
	comp=Z,18nm,0.9s,mb5.0						
MOTA	**Moosalm**	79.47	325	⇑P	P	10 09 15.1	+0.1
MOTA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.0						
PVCC	**Panska Ves**	79.59	329	*e*P	P	10 09 16.4	+0.8
PVCC				*e*pP	pP	10 09 22.9	+4.1
SBF	**Sospel**	79.66	321	*e*P	P	10 09 14.8	-1.3
	comp=Z,269nm,1.3s,mb5.7						
SBF	**Sospel**	79.66	321	*e*P	P	10 09 14.8	-1.3
SBF				pmax	pmax		
	comp=Z,135nm,1.3s,mb5.7						
AUTN	**L’Aution**	79.73	321	*e*P	P	10 09 17.8	+1.3
MVIF	**Mont Vial**	79.85	321	*e*P	P	10 09 18.1	+1.0
TOUF	**Mont Tournerai**	79.85	321	*e*P	P	10 09 18.6	+1.5
LMR	**La Mourre**	79.95	320	*e*P	P	10 09 16.1	-1.6
	comp=Z,99nm,1.2s,mb5.3						
LMR	**La Mourre**	79.95	320	*e*P	P	10 09 16.1	-1.6
LMR				pmax	pmax		
	comp=Z,49nm,1.2s,mb5.3						
FRF	**La Foret Royal**	79.98	320	*e*P	P	10 09 16.5	-1.4
DAVA	**Damuels**	80.12	325	⇓*i*P	P	10 09 18.4	-0.1
	comp=Z,35nm,1.4s,mb5.1						
DAVA	**Damuels**	80.12	325	⇓P	P	10 09 18.4	-0.1
	comp=Z,35nm,1.4s,mb5.1						
VSU	**Vasula**	80.17	340	⇑*e*P	P	10 09 18.5	0.0
SURF	**Saint Ours**	80.37	321	*e*P	P	10 09 21.7	+1.8
NKC	**Novy Kostel**	80.48	328	*e*P	P	10 09 20.3	0.0
NKC				*e*pP	pP	10 09 27.4	+3.9
MBDF	**Montbardon**	80.52	321	*e*P	P	10 09 19.5	-1.2
	comp=Z,93nm,1.2s,mb5.3						
MBDF	**Montbardon**	80.52	321	*e*P	P	10 09 19.5	-1.2
MBDF				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.3						
GRA1	**Grafenberg Arr**	80.79	327	*e*P	P	10 09 22.0	0.0
	comp=Z,51nm,1.4s,mb5.3						
GRF	**Grafenberg Arr**	80.79	327	*e*P	P	10 09 22.0	0.0
	comp=Z,51nm,1.4s,mb5.3						
GRF	**Grafenberg Arr**	80.79	327	*e*P	P	10 09 22.0	0.0
GRF				pmax	pmax		
	comp=Z,51nm,1.4s,mb5.3						
GRF	**Grafenberg Arr**	80.79	327	*e*P	P	10 09 22.0	0.0
GRF				pmax	pmax		
	comp=Z,51nm,1.4s,mb5.3						
CLL	**Collm**	80.85	329	⇑P	P	10 09 22.9	+0.6
	comp=Z,logA/T=1.9,mb5.6						
CLL				*i* PCP	PcP	10 09 28.6	-0.8
CLL				*i*		10 09 34.3	
CLL				*e*		10 09 56.0	
CLL				*e*SS	SS	10 25 00.0	+14
CLL	**Collm**	80.85	329	⇑*i*P	P	10 09 22.9	+0.6
	comp=Z,168nm,2.3s,mb5.6						
CLL				*i* pP	pP	10 09 28.6	+3.1
CLL				*i* sP	sP	10 09 34.3	+7.8
CLL	**Collm**	80.85	329	⇑*i*P	P	10 09 22.9	+0.6
CLL				*i* *PP	pP	10 09 28.6	+3.1
CLL				pmax	pmax		
	comp=Z,168nm,2.3s,mb5.6						
SMRF	**Simiane la Rot**	80.86	320	*e*P	P	10 09 21.4	-1.1
LPG	**La Plagne**	80.94	322	*e*P	P	10 09 21.8	-1.1
LPL	**La Plagne**	80.96	322	*e*P	P	10 09 21.8	-1.2
	comp=Z,52nm,1.2s,mb5.0						
LPL	**La Plagne**	80.96	322	*e*P	P	10 09 21.8	-1.2
LPL				pmax	pmax		
	comp=Z,26nm,1.2s,mb5.0						
MOX	**Moxa**	81.15	328	*i* P	P	10 09 24.3	+0.4
	comp=Z,logA/T=1.6,mb5.3						
MOX	**Moxa**	81.15	328	*e*P	P	10 09 24.3	+0.4
	comp=Z,69nm,1.8s,mb5.3						
MOX	**Moxa**	81.15	328	*e*P	P	10 09 24.3	+0.4
MOX				pmax	pmax		
	comp=Z,69nm,1.8s,mb5.3						
ORIF	**Oris-en-Rattie**	81.16	321	*e*P	P	10 09 23.2	-0.9
	comp=Z,244nm,1.7s,mb5.5						
ORIF	**Oris-en-Rattie**	81.16	321	*e*P	P	10 09 23.2	-0.9
ORIF				pmax	pmax		
	comp=Z,122nm,1.7s,mb5.6						
GDM	**Grand’Maison**	81.17	321	*e*P	P	10 09 25.8	+1.7
GRN	**Grenoble**	81.41	321	*e*P	P	10 09 26.7	+1.3
VIVF	**Saint-Julien-l**	81.87	321	*e*P	P	10 09 26.5	-1.2
	comp=Z,370nm,2.2s,mb5.6						
VIVF	**Saint-Julien-l**	81.87	321	*e*P	P	10 09 26.5	-1.2
VIVF				pmax	pmax		
	comp=Z,185nm,2.2s,mb5.6						
LOMF	**Lomont**	81.89	324	*e*P	P	10 09 28.6	+0.8
CABF	**La Chapelle**	81.92	323	*e*P	P	10 09 27.0	-1.0
	comp=Z,69nm,1.3s,mb5.1						
CABF	**La Chapelle**	81.92	323	*e*P	P	10 09 27.0	-1.0
CABF				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.1						
MOF	**Molkenrain**	81.98	324	*e*P	P	10 09 27.4	-0.8
LASF	**Ste Croix**	81.98	320	*e*P	P	10 09 27.0	-1.3
HINF	**Hinteralfeld**	82.12	324	*e*P	P	10 09 27.9	-1.1
WLS	**Welschbruch**	82.16	325	*e*P	P	10 09 29.7	+0.5
CDF	**Champ du Feu**	82.20	325	*e*P	P	10 09 28.4	-1.0
BOD	**Bodaibo**	82.26	23	*e*P	P	10 09 29.5	0.0
BOD				pmax	pmax		
	comp=Z,14nm,1.9s,mb4.6						
EPOB	**Poblet**	82.49	316	P	P	10 09 30.1	-0.9
	comp=Z,130nm,2.6s,mb5.4						
HAU	**Haudompre**	82.51	324	*e*P	P	10 09 29.8	-1.2
EMUR	**La Murta**	82.54	312	P	P	10 09 32.4	+1.1
	comp=Z,32nm,1.1s,mb5.3						
EBR	**Ebro Roquetas**	82.64	316	*e*P	P	10 09 33.3	+1.5
MTLF	**Montolieu**	82.67	318	*e*P	P	10 09 30.9	-1.0
	comp=Z,132nm,1.5s,mb5.5						
MTLF	**Montolieu**	82.67	318	*e*P	P	10 09 30.9	-1.0
MTLF				pmax	pmax		
	comp=Z,66nm,1.5s,mb5.4						
FINES	**FINESS Array B**	82.69	342	P	P	10 09 32.3	+0.7
	comp=Z,8.8nm,1.1s,mb4.7,baz=135,slow=5.4,SNR=5.4						
FINES				PP	PP	10 12 41.8	-1.7
	comp=Z,1.1nm,0.8s,baz=142,slow=16,SNR=3.2						
THEF	**They Montfort**	82.83	324	*e*P	P	10 09 32.3	-0.4
LBL	**Lubilhac**	82.93	320	*e*P	P	10 09 35.1	+1.9
PLDF	**La Plantade**	83.07	321	*e*P	P	10 09 34.7	+0.8
ECHE	**Chera**	83.10	314	P	P	10 09 36.3	+2.1
	comp=Z,24nm,1.2s,mb5.1						
ECHE	**Chera**	83.10	314	P	P	10 09 36.3	+2.1
ECHE				pmax	pmax		
	comp=Z,24nm,1.2s,mb5.1						
SMF	**Signal de Mont**	83.27	322	*e*P	P	10 09 34.0	-1.0
EHUE	**Huescar**	83.50	312	P	P	10 09 36.8	+0.4
	comp=Z,65nm,1.9s,mb5.3						
EHUE	**Huescar**	83.50	312	P	P	10 09 36.8	+0.5
EHUE				pmax	pmax		
	comp=Z,65nm,1.9s,mb5.3						
CAF	**Calviac**	83.52	320	*e*P	P	10 09 35.2	-1.1
	comp=Z,88nm,1.5s,mb5.4						
CAF	**Calviac**	83.52	320	*e*P	P	10 09 35.2	-1.1
CAF				pmax	pmax		
	comp=Z,44nm,1.5s,mb5.4						
LOR	**Lormes**	83.57	322	*e*P	P	10 09 35.4	-1.1
	comp=Z,105nm,1.5s,mb5.5						
LOR	**Lormes**	83.57	322	*e*P	P	10 09 35.4	-1.1
LOR				pmax	pmax		
	comp=Z,52nm,1.5s,mb5.4						
AVF	**Avril sur Loir**	83.64	322	*e*P	P	10 09 35.7	-1.1
SSF	**Saint Saulge**	83.68	322	*e*P	P	10 09 36.0	-1.0
	comp=Z,60nm,1.4s,mb5.5						
SSF	**Saint Saulge**	83.68	322	*e*P	P	10 09 36.0	-1.0
SSF				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.5						
EBIE	**Bielsa**	83.71	317	P	P	10 09 36.5	-0.8
	comp=Z,68nm,2.2s,mb5.4						
EVIA	**Vianos**	83.78	313	P	P	10 09 38.4	+0.7
	comp=Z,70nm,1.6s,mb5.5						
EVIA	**Vianos**	83.78	313	P	P	10 09 38.4	+0.7
EVIA				pmax	pmax		
	comp=Z,70nm,1.6s,mb5.5						
BGF	**Bois d’Agland**	83.82	321	*e*P	P	10 09 36.4	-1.4
	comp=Z,222nm,1.5s,mb5.8						
BGF	**Bois d’Agland**	83.82	321	*e*P	P	10 09 36.4	-1.4
BGF				pmax	pmax		
	comp=Z,111nm,1.5s,mb5.8						
EQES	**Quesada**	83.84	312	P	P	10 09 36.7	-1.4
	comp=Z,54nm,2.1s,mb5.3						
ECOG	**Cogollos-Vega**	83.99	311	P	P	10 09 38.7	-0.1
	comp=Z,3.8nm,0.6s,mb4.7						
ECOG	**Cogollos-Vega**	83.99	311	P	P	10 09 38.7	-0.1
ECOG				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.7						
RJF	**Les Rejaudoux**	84.04	320	*e*P	P	10 09 37.8	-1.1
TCF	**Toulx Ste Croi**	84.08	321	*e*P	P	10 09 37.9	-1.2
ETSF	**Etsaut**	84.27	317	*e*P	P	10 09 39.0	-1.1
	comp=Z,60nm,1.2s,mb5.3						
ETSF	**Etsaut**	84.27	317	*e*P	P	10 09 39.0	-1.1
ETSF				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.3						
LFF	**La Frestale**	84.36	319	*e*P	P	10 09 39.2	-1.3
GIVF	**Givet**	84.46	325	*e*P	P	10 09 39.7	-1.2
MAJO	**Matsushiro**	84.50	50	*e*P	P	10 09 42.6	+1.1
	comp=Z,100nm,1.5s,mb5.7						
MAJO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
MAJO	**Matsushiro**	84.50	50	P	P	10 09 44.1	+2.6
MAJO				pmax	pmax		
	comp=Z,100nm,1.5s,mb5.7						
MAT	**Matsushiro**	84.50	50	P	P	10 09 41.4	-0.1
MAT				S	S	10 20 13.0	+6.4
MAT	**Matsushiro**	84.50	50	*e*P	P	10 09 42.0	+0.5
MAT				*e*S	S	10 20 14.0	+7.4
MJAR	**Matsushiro Arr**	84.50	50	P	P	10 09 42.0	+0.6
	comp=Z,9.0nm,1.1s,mb4.8,baz=256,slow=4.9,SNR=9.7						
EMIJ	**Mijas**	84.59	310	P	P	10 09 39.5	-2.4
	comp=Z,17nm,0.8s,mb5.2						
BAIF	**Baives**	84.78	325	*e*P	P	10 09 41.5	-1.0
SJPF	**Ste Jean**	84.80	317	*e*P	P	10 09 41.0	-1.8
	comp=Z,110nm,1.4s,mb5.5						
SJPF	**Ste Jean**	84.80	317	*e*P	P	10 09 41.0	-1.8
SJPF				pmax	pmax		
	comp=Z,55nm,1.4s,mb5.5						
EJIF	**Jimena Fronter**	85.06	310	P	P	10 09 43.4	-0.9
	comp=Z,34nm,1.3s,mb5.3						
EJIF	**Jimena Fronter**	85.06	310	P	P	10 09 43.4	-0.9
EJIF				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.3						
EADA	**Adamuz**	85.08	311	P	P	10 09 43.3	-1.0
	comp=Z,41nm,1.6s,mb5.3						
ESDC	**Sonseca Array**	85.23	313	P	P	10 09 46.0	+0.9
	comp=Z,4.2nm,0.6s,mb4.8,baz=104,slow=4.0,SNR=16						
ESDC	**Sonseca Array**	85.23	313	P	P	10 09 45.3	+0.3
	comp=Z,12nm,0.9s,mb5.0						
ESLA	**Sonseca Array**	85.23	313	*e*P	P	10 09 46.0	+1.0
	comp=Z,26nm,1.7s,mb5.1						
ESLA				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
ESPR	**Espera**	85.51	310	P	P	10 09 45.7	-0.8
	comp=Z,12nm,0.8s,mb5.2						
ECAB	**El Cabril**	85.65	311	P	P	10 09 50.0	+2.9
	comp=Z,131nm,2.6s,mb5.7						
MFF	**Saint Martin d**	85.67	320	*e*P	P	10 09 45.5	-1.5
	comp=Z,74nm,1.3s,mb5.5						
MFF	**Saint Martin d**	85.67	320	*e*P	P	10 09 45.5	-1.5
MFF				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.5						
CLNS	**Chul’man**	86.20	28	*e*P	P	10 09 48.2	-1.2
CLNS				pmax	pmax		
	comp=Z,13nm,1.3s,mb5.0						
CLNS				pmax	pmax		
	comp=N,9.0nm,1.7s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.9s						
LDF	**La Druitiere**	86.56	322	*e*P	P	10 09 50.2	-1.2
	comp=E,125nm,1.5s,mb5.6						
LDF	**La Druitiere**	86.56	322	*e*P	P	10 09 50.2	-1.2
LDF				pmax	pmax		
	comp=Z,62nm,1.5s,mb5.6						
FLN	**La Foliniere**	86.85	322	*e*P	P	10 09 51.6	-1.2
GRR	**Gorron**	86.90	322	*e*P	P	10 09 52.1	-0.9
KONO	**Kongsberg**	87.41	335	⇑*e*P	P	10 09 54.7	-0.5
KONO				LR	LR		
	comp=Z,848nm,19.0s,MS5.2						
NB2	**NORSAR Subarra**	87.59	336	P	P	10 09 54.7	-1.4
	comp=Z,43nm,1.7s,mb5.4,baz=127,slow=4.8						
NB2	**NORSAR Subarra**	87.59	336	P	P	10 09 54.7	-1.4
	baz=127,slow=5.1						
NOA	**NORSAR Array B**	87.59	336	P	P	10 09 56.0	0.0
	comp=Z,2.4nm,0.9s,mb4.4,baz=108,slow=5.2,SNR=3.8						
NAO	**NORSAR Subarra**	87.61	336	P	P	10 09 54.7	-1.5
	comp=Z,43nm,1.7s,mb5.4						
NAO	**NORSAR Subarra**	87.61	336	P	P	10 09 54.7	-1.5
NAO				pmax	pmax		
	comp=Z,43nm,1.7s,mb5.4						
PBRG	**Braganca**	88.01	314	*e*P	P	10 09 59.9	+1.4
	comp=Z,40nm,1.6s,mb5.4						
ELOB	**Lobios**	88.95	314	P	P	10 10 05.5	+2.4
	comp=Z,33nm,1.1s,mb5.6						
KEV	**Kevo**	88.96	347	PFAKE		10 10 10.0	+7.6
KEV				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
ARCES	**ARCESS Array B**	89.11	347	P	P	10 10 02.2	-1.0
	comp=Z,5.0nm,0.9s,mb4.9,baz=135,slow=3.4,SNR=9.1						
ARCES	**ARCESS Array B**	89.11	347	P	P	10 10 02.2	-1.0
HNR	**Honiara**	90.64	100	PFAKE		10 10 20.0	+8.4
HNR				LR	LR		
	comp=Z,971nm,19.0s,MS5.3						
YAK	**Yakutsk**	91.07	25	*e*P	P	10 10 13.0	+0.6
YAK				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
YSS	**Yuzh-Sakhalins**	91.52	42	PFAKE		10 10 30.0	+15
YSS				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
PMSA	**Palmer Station**	92.24	199	PFAKE		10 10 30.0	+12
PMSA				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
SNZO	**South Karori**	93.19	134	PFAKE		10 10 30.0	+7.3
SNZO				LR	LR		
	comp=Z,509nm,20.0s,MS5.0						
TIXI	**Tiksi**	95.74	16	PFAKE		10 10 50.0	+16
TIXI				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
TIXI	**Tiksi**	95.74	16	*e*P	P	10 10 35.6	+1.9
TIXI				*e*		10 14 28.1	
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.8						
EFI	**East Falkland**	98.23	211	PFAKE		10 11 00.0	+15
EFI				LR	LR		
	comp=Z,578nm,19.0s,MS5.1						
KBS	**Kingsbay**	98.28	351	PFAKE		10 11 00.0	+15
KBS				LR	LR		
	comp=Z,790nm,20.0s,MS5.2						
RCBR	**Riachuelo**	100.67	261	PFAKE		10 11 10.0	+13
RCBR				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
PET	**Petropavlovsk**	102.92	38	PFAKE		10 11 20.0	+14
PET				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
RAO	**Raoul Island**	103.68	126	PFAKE		10 11 20.0	+10
RAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
BILL	**Bilibino**	107.31	23	PFAKE		10 15 50.0	
BILL				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
TRQA	**Tornquist**	108.67	221	PFAKE		10 15 50.0	
TRQA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
CPUP	**Villa Florida**	111.91	233	PFAKE		10 16 00.0	+15
CPUP				LR	LR		
	comp=Z,263nm,20.0s,MS4.8						
PLCA	**Paso Flores**	111.92	214	PFAKE		10 16 00.0	+15
PLCA				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
SMY	**Shemya**	112.25	39	PFAKE		10 16 00.0	+14
SMY				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
TNA	**Tin City**	117.75	23	PFAKE		10 16 10.0	+14
TNA				LR	LR		
	comp=Z,907nm,20.0s,MS5.4						
RAR	**Rarotonga**	121.87	127	PFAKE		10 16 20.0	+15
RAR				LR	LR		
	comp=Z,1.0nm,19.0s						
UNV	**Unalaska Valle**	123.30	35	PFAKE		10 16 20.0	+13
UNV				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
COLA	**College**	124.86	17	PFAKE		10 16 20.0	+10
COLA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
INK	**Inuvik**	125.11	9	*e*PKPdf	PKPdf	10 16 08.3	-1.8
INK				*e*PP	PP	10 18 00.2	-0.3
ILAR	**Eielson Array**	125.21	17	PKP	PKPdf	10 16 07.3	-3.2
	comp=Z,1.7nm,1.0s,baz=336,slow=3.3,SNR=10						
MCK	**McKinley**	125.37	19	PFAKE		10 16 20.0	+9.2
MCK				LR	LR		
	comp=Z,419nm,19.0s,MS5.1						
LPAZ	**La Paz**	125.72	237	PKP	PKPdf	10 16 11.7	-1.0
	comp=Z,2.8nm,0.9s,baz=90,slow=4.1,SNR=11						
LPAZ	**La Paz**	125.72	237	PKP	PKPdf	10 16 11.7	-1.0
LPAZ				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
SCHQ	**Schefferville**	126.50	329	PFAKE		10 16 20.0	+6.9
SCHQ				LR	LR		
	comp=Z,662nm,21.0s,MS5.3						
PMR	**Palmer**	126.84	21	PFAKE		10 16 20.0	+6.5
PMR				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
DIV	**Divide**	128.29	19	PFAKE		10 16 30.0	+13
DIV				LR	LR		
	comp=Z,3µm,19.0s,MS5.9						
YKA	**Yellowknife Ar**	132.51	1	PKP	PKPdf	10 16 23.2	-1.3
	comp=Z,1.9nm,0.9s,baz=340,slow=1.9,SNR=4.0						
BBSR	**BB Station**	132.71	300	PFAKE		10 16 40.0	+14
BBSR				LR	LR		
	comp=Z,723nm,19.0s,MS5.4						
LBNH	**Lisbon**	134.44	318	PFAKE		10 16 40.0	+11
LBNH				LR	LR		
	comp=Z,745nm,21.0s,MS5.4						
WES	**Weston**	134.84	316	PFAKE		10 16 40.0	+11
WES				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
SJG	**San Juan**	134.85	281	PFAKE		10 16 40.0	+10
SJG				LR	LR		
	comp=Z,829nm,20.0s,MS5.5						
HRV	**Harvard--Oak R**	134.95	316	PFAKE		10 16 40.0	+10
HRV				LR	LR		
	comp=Z,813nm,20.0s,MS5.5						
NNA	**Nana**	135.11	235	PFAKE		10 16 40.0	+9.4
NNA				LR	LR		
	comp=Z,261nm,22.0s,MS4.9						
NCB	**Newcomb**	136.03	319	PFAKE		10 16 40.0	+8.5
NCB				LR	LR		
	comp=Z,861nm,22.0s,MS5.4						

PTCN	Pitcairn Islan	136.95	157	PFAKE		10 16 40.0	+6.4
PTCN				LR	LR		
	comp=Z,3.0nm,21.0s						
SDV	Santo Domingo	137.94	267	PFAKE		10 16 50.0	+14
SDV				LR	LR		
	comp=Z,749nm,20.0s,MS5.4						
FFC	Flin Flon	139.36	350	PFAKE		10 16 50.0	+13
FFC				LR	LR		
	comp=Z,220nm,21.0s,MS4.9						
ROSC	El Rosal	140.46	259	PKP	PKPdf	10 16 39.7	-0.7
	comp=Z,2.8nm,0.4s,baz=80,slow=19,SNR=3.0						
ERPA	Erie	140.61	320	PFAKE		10 16 50.0	+10
ERPA				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
CBN	Corbin	140.82	313	PFAKE		10 16 50.0	+10
CBN				LR	LR		
	comp=Z,2µm,22.0s,MS5.7						
EDM	Edmonton	141.82	0	PKPdf	PKPdf	10 16 42.1	+0.5
EYMN	Ely	142.51	336	PFAKE		10 16 50.0	+7.0
EYMN				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
AAM	Ann Arbor	142.71	323	PFAKE		10 16 50.0	+6.5
AAM				LR	LR		
	comp=Z,987nm,19.0s,MS5.6						
ACSO	Alum Creek Sta	143.53	320	PFAKE		10 17 00.0	+19
ACSO				LR	LR		
	comp=Z,439nm,19.0s,MS5.2						
ELN	Prospectdale	143.64	314	*e*PKPdf	PKPdf	10 16 43.9	-1.4
JSC	Jenkinsville	145.36	310	*e*PKPdf	PKPdf	10 16 47.2	-1.1
JSC	Jenkinsville	145.36	310	PKIKP	PKPdf	10 16 47.2	-1.2
PGC	Sidney	145.36	12	*e*PKPbc	PKPbc	10 16 45.6	+0.3
DGMT	Dagmar	145.76	349	*e*PKPdf	PKPdf	10 16 48.4	-0.2
DGMT				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
TZTN	Tazewell	145.92	315	*e*PKPbc	PKPbc	10 16 49.7	+2.5
OCWA	Octopus Mounta	146.06	13	*e*PKPbc	PKPbc	10 16 50.0	+2.8
OCWA				LR	LR		
	comp=Z,815nm,20.0s,MS5.5						
NEW	Newport	146.63	5	*e*PKPbc	PKPbc	10 16 50.3	+1.9
NEW				LR	LR		
	comp=Z,889nm,20.0s,MS5.5						
NEW	Newport	146.63	5	PKP2	PKPab	10 16 50.5	-1.4
WCI	Wyandotte Cave	146.79	319	*e*PKPbc	PKPbc	10 16 52.8	+3.6
WCI				LR	LR		
	comp=Z,151nm,19.0s,MS4.8						
MYNC	Murphy	147.08	313	*e*PKPdf	PKPdf	10 16 49.9	-1.4
CPCT	Cooper Cave	147.16	314	*e*PKPbc	PKPdf	10 16 52.2	+0.8
GOGA	Godfrey	147.39	310	PFAKE		10 17 00.0	+8.2
GOGA				LR	LR		
	comp=Z,455nm,20.0s,MS5.3						
LAO	LASA Array	147.82	351	*e*PKPbc	PKPdf	10 16 54.7	+2.6
LAO				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
CHMT	Chamberlain Mo	148.14	0	*e*PKPbc	PKPdf	10 16 54.7	+2.1
CHMT				*e*SKPdf		10 20 27.8	
HAWA	Hanford	148.22	8	PFAKE		10 17 00.0	+7.3
HAWA				LR	LR		
	comp=Z,43nm,19.0s,MS4.3						
MSO	Missoula	148.22	1	*e*PKPbc	PKPdf	10 16 54.6	+1.9
MSO				LR	LR		
	comp=Z,675nm,20.0s,MS5.4						
HRY	Holter Researc	148.32	358	*e*PKPbc	PKPdf	10 16 55.4	+2.5
WVT	Waverly	149.03	318	*e*PKPbc	PKPdf	10 16 56.4	+2.1
WVT				LR	LR		
	comp=Z,791nm,20.0s,MS5.5						
GCMT	Greycliff	149.12	355	*e*PKPbc	PKPdf	10 16 58.1	+3.9
COR	Corvallis	149.25	14	PFAKE		10 17 00.0	+5.5
COR				LR	LR		
	comp=Z,151nm,20.0s,MS4.8						
BOZ	Bozeman (W)	149.38	358	*e*PKPdf	PKPdf	10 16 54.9	+0.3
BOZ				*e*PKPbc	PKPdf	10 16 58.4	+3.8
BOZ				*e*SKPdf		10 20 35.8	
BOZ				LR	LR		
	comp=Z,878nm,19.0s,MS5.6						
FVM	French Village	149.46	323	*e*PKPdf	PKPdf	10 16 55.2	+0.2
DLMT	Dillon	149.69	359	*e*PKPdf	PKPdf	10 16 54.6	-0.5
DLMT				*e*PKPbc	PKPdf	10 16 59.0	+3.9
CCM	Cathedral Cave	149.88	324	*e*PKPbc	PKPdf	10 16 59.0	+3.3
CCM				LR	LR		
	comp=Z,248nm,20.0s,MS5.0						
CCM	Cathedral Cave	149.88	324	PKP2	PKPab	10 16 59.2	-6.0
RSSD	Black Hills	149.90	347	*e*PKPbc	PKPdf	10 16 59.5	+4.0
RSSD	Black Hills	149.90	347	PKP2	PKPab	10 16 59.7	-5.4
BMO	Blue Mountains	150.00	6	*e*PKPbc	PKPdf	10 16 58.6	+3.0
BMO				LR	LR		
	comp=Z,665nm,20.0s,MS5.4						
LRAL	Lakeview Retre	150.16	312	*e*PKPbc	PKPdf	10 16 60.0	+3.7
QLMT	Earthquake Lak	150.18	357	*e*PKPbc	PKPdf	10 17 01.0	+5.1
MCMT	McKenzie Canyo	150.22	359	*e*PKPbc	PKPdf	10 17 00.8	+4.8
YMR	Madison River	150.32	357	*e*PKPdf	PKPdf	10 16 55.4	-0.7
YMR				*e*PKPbc	PKPdf	10 17 01.1	+5.0
YMR				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
LKWY	Lake	150.39	356	*e*PKPdf	PKPdf	10 16 57.8	+1.6
LKWY				*e*PKPbc	PKPdf	10 17 02.9	+6.6
LKWY				LR	LR		
	comp=Z,1µm,21.0s,MS5.8						
YFT	Old Faithful	150.53	357	*e*PKPbc	PKPdf	10 17 03.6	+7.1
OXF	Oxford	151.02	316	*e*PKPbc	PKPdf	10 17 01.1	+3.6
OXF				LR	LR		
	comp=Z,743nm,19.0s,MS5.5						
IMW	Indian Meadow	151.09	357	*e*PKPbc	PKPdf	10 17 02.6	+5.3
IMW				*e*PP	PP	10 20 46.5	+4.6
HUMO	Hull Mountain	151.20	15	*e*PKPdf	PKPdf	10 16 58.4	+0.9
HUMO				LR	LR		
	comp=Z,579nm,22.0s,MS5.3						
MOOW	Moose Ponds	151.23	356	*e*PKPdf	PKPdf	10 16 58.0	+0.5
MOOW				*e*PKPbc	PKPdf	10 17 03.8	+6.3
LOHW	Long Hollow	151.35	356	*e*PKPbc	PKPdf	10 17 03.4	+5.7
LOHW				*e*PP	PP	10 20 46.8	+3.5
HLID	Hailey	151.47	2	*e*PKPbc	PKPdf	10 17 03.0	+5.1
HLID				LR	LR		
	comp=Z,578nm,22.0s,MS5.3						
TPAW	Teton Pass	151.50	357	*e*PKPbc	PKPdf	10 17 04.1	+6.1
REDW	Red Top Meadow	151.62	356	*e*PKPbc	PKPdf	10 17 04.1	+6.0
REDW				*e*PP	PP	10 20 48.2	+3.7
KSU1	Kansas State U	151.85	332	*e*PKPbc	PKPdf	10 17 03.3	+4.7
JTS	JuntasAbangare	152.03	264	PFAKE		10 17 10.0	+10
JTS				LR	LR		
	comp=Z,519nm,20.0s,MS5.3						
YBH	Yreka Blue Hor	152.09	15	*e*PKPbc	PKPdf	10 17 04.2	+5.4
YBH				LR	LR		
	comp=Z,528nm,21.0s,MS5.3						
BW06	Boulder Array	152.11	354	PFAKE		10 17 10.0	+11
BW06				LR	LR		
	comp=Z,765nm,20.0s,MS5.5						
PDAR	Pinedale Array	152.11	354	PKP	PKPdf	10 16 59.7	+0.8
	comp=Z,5.0nm,1.0s,slow=0.9,SNR=5.4						
PDAR				PKPbc	PKPdf	10 17 04.1	+5.2
	comp=Z,6.6nm,0.7s,baz=45,slow=2.1,SNR=26						
WVOR	Wild Horse Val	152.22	9	*e*PKPbc	PKPdf	10 17 05.4	+6.3
WVOR				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
WVOR	Wild Horse Val	152.22	9	PKIKP	PKPdf	10 17 05.5	+6.5
AHID	Auburn Hatcher	152.23	357	PFAKE		10 17 10.0	+11
AHID				LR	LR		
	comp=Z,844nm,21.0s,MS5.5						
MOD	Modoc	152.46	11	*e*PKPdf	PKPdf	10 16 59.7	+0.3
MOD				*e*PKPbc	PKPdf	10 17 05.6	+6.2
MOD				*e*PP	PP	10 20 54.8	+5.5
MOD				LR	LR		
	comp=Z,591nm,20.0s,MS5.4						
PAYG	Puerto Ayora	152.50	238	PFAKE		10 17 10.0	+10
PAYG				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
UALR	University of	152.75	320	PKPdf	PKPdf	10 17 00.3	+0.3
UALR				*e*PKPbc	PKPdf	10 17 05.6	+5.6
WDC	Whiskeytown Da	153.21	16	*e*PKPbc	PKPdf	10 17 05.8	+5.4
WDC				LR	LR		
	comp=Z,650nm,20.0s,MS5.4						
HWUT	Hardware Ranch	153.41	357	*e*PKPdf	PKPdf	10 17 01.4	+0.7
HWUT				*e*PKPbc	PKPdf	10 17 07.7	+7.0
HWUT				LR	LR		
	comp=Z,942nm,21.0s,MS5.6						
CBKS	Cedar Bluff	153.43	336	*e*PKPbc	PKPdf	10 17 06.2	+5.3
CBKS				LR	LR		
	comp=Z,857nm,21.0s,MS5.5						
MIAR	Mount Ida	153.65	321	*e*PKPbc	PKPdf	10 17 06.4	+5.1
MIAR				LR	LR		
	comp=Z,724nm,22.0s,MS5.5						
ELK	Elko	154.25	4	*e*PKPdf	PKPdf	10 17 01.5	-0.4
ELK				*e*PP	PP	10 20 56.6	-3.2
ELK				LR	LR		
	comp=Z,789nm,21.0s,MS5.5						
ISCO	Idaho Springs	154.37	346	PFAKE		10 17 10.0	+7.9
ISCO				LR	LR		
	comp=Z,1µm,21.0s,MS5.8						
HOPS	Hopland	154.53	18	PFAKE		10 17 10.0	+7.7
HOPS				LR	LR		
	comp=Z,793nm,20.0s,MS5.5						
DAU	Daniels Canyon	154.58	356	*e*PKPdf	PKPdf	10 17 03.5	+1.2
DUG	Dugway	154.85	359	PFAKE		10 17 10.0	+7.3
DUG				LR	LR		
	comp=Z,582nm,20.0s,MS5.4						
DUG	Dugway	154.85	359	*e*PKIKP	PKPdf	10 17 02.4	-0.3
MPU	Maple Canyon	155.00	357	PFAKE		10 17 10.0	+7.1
MPU				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
CMB	Columbia Colle	156.16	14	PFAKE		10 17 10.0	+5.5
CMB				LR	LR		
	comp=Z,728nm,22.0s,MS5.5						
NATX	Nacogdoches	156.18	318	PFAKE		10 17 10.0	+5.3
NATX				LR	LR		
	comp=Z,972nm,20.0s,MS5.6						
NVAR	Mina Array Bea	156.19	10	PKP	PKPdf	10 17 04.8	+0.3
	comp=Z,3.4nm,1.1s,baz=25,slow=3.0,SNR=5.8						
NVAR				PKPab	PKPab	10 17 32.2	+0.3
	comp=Z,1.2nm,0.8s,baz=45,slow=2.6,SNR=3.7						
NVAR	Mina Array Bea	156.19	10	PKP	PKPdf	10 17 04.8	+0.3
NVAR				PKPab	PKPab	10 17 32.2	+0.3
MNV	Mina	156.21	10	PFAKE		10 17 20.0	+15
MNV				LR	LR		
	comp=Z,653nm,20.0s,MS5.5						
SDCO	Great Sand Dun	156.29	345	PFAKE		10 17 20.0	+15
SDCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
PV10	Paradox Valley	156.38	352	PKPdf	PKPdf	10 17 07.9	+3.2
PV10				*e*PKPab	PKPab	10 17 34.3	+1.7
PV10				*e*PP	PP	10 21 11.1	-0.4
WMOK	Wichita Mounta	156.39	329	*e*PKPdf	PKPdf	10 17 02.5	-2.4
WMOK				LR	LR		
	comp=Z,884nm,19.0s,MS5.6						
MVU	Marysvale	156.53	358	*e*PKPdf	PKPdf	10 17 06.4	+1.5
MVU				LR	LR		
	comp=Z,809nm,21.0s,MS5.5						
TPH	Tonopah	156.70	8	PFAKE		10 17 20.0	+15
TPH				LR	LR		
	comp=Z,602nm,20.0s,MS5.4						
SAO	San Andreas Ge	157.08	17	PFAKE		10 17 20.0	+14
SAO				LR	LR		
	comp=Z,753nm,21.0s,MS5.5						
AMTX	Amarillo	157.60	334	PFAKE		10 17 20.0	+13
AMTX				LR	LR		
	comp=Z,969nm,21.0s,MS5.6						
DAC	Darwin (Calif)	158.41	10	PFAKE		10 17 20.0	+13
DAC				LR	LR		
	comp=Z,872nm,22.0s,MS5.5						
ISA	Isabella	158.85	12	PFAKE		10 17 20.0	+12
ISA				LR	LR		
	comp=Z,180nm,20.0s,MS4.9						
ANMO	Albuquerque	159.18	344	PKP	PKPdf	10 17 08.5	+0.1
	comp=Z,0.5nm,0.7s,baz=40,slow=5.9						
ANMO				PKPab	PKPab	10 17 45.7	+0.9
	comp=Z,4.5nm,1.0s,baz=55,slow=4.3,SNR=3.8						
ANMO				PP	PP	10 21 26.2	-0.4
	comp=Z,0.4nm,0.4s,baz=14,slow=4.4,SNR=3.8						
ANMO	Albuquerque	159.18	344	*e*PKPdf	PKPdf	10 17 08.2	-0.3
ANMO				*e*PP	PP	10 21 26.1	-0.6
ANMO				LR	LR		
	comp=Z,748nm,21.0s,MS5.5						
NEN	Nelson	159.34	4	*e*PKPdf	PKPdf	10 17 08.3	-0.2
SNCC	San Nicolas Is	160.91	16	PFAKE		10 17 20.0	+10
SNCC				LR	LR		
	comp=Z,1µm,19.0s						
PFO	Pinyon Flat Ob	161.20	8	PFAKE		10 17 20.0	+9.4
PFO				LR	LR		
	comp=Z,296nm,21.0s						
MNTX	Cornudas Mount	161.86	338	*e*PKPdf	PKPdf	10 17 11.0	-0.3
MNTX				LR	LR		
	comp=Z,767nm,19.0s						
TUC	Tucson	162.58	353	PFAKE		10 17 20.0	+8.0
TUC				LR	LR		
	comp=Z,691nm,20.0s						
LTX	Lajitas	163.19	330	PFAKE		10 17 20.0	+7.3
LTX				LR	LR		
	comp=Z,838nm,21.0s						
TXAR	Lajitas Array	163.19	330	PKP	PKPdf	10 17 12.5	-0.2
	comp=Z,2.1nm,1.0s,baz=118,slow=1.2,SNR=8.8						
TXAR				PKPab	PKPab	10 18 01.8	-0.5
	comp=Z,2.3nm,0.7s,baz=54,slow=2.7,SNR=14						
TXAR				PP	PP	10 21 53.6	+5.6
	comp=Z,0.6nm,1.0s,baz=104,slow=5.2,SNR=3.6						

CSEM ***22*** *10:23:00.2±0.1, 59.03N×18.26E, h2^{km}, ML1.9, Error ellipse: s-maj=2.4km s-min=1.6km az=136.0, Mining explosion.*

UPP ***22*** *10:23:00.8, 58.99N×18.21E, h1^{km}, ML2.9, Mining explosion.*

HEL ***22*** *10:23:01.6±0.1, 59.01N×18.18E, ML1.9, ML2.7(UPP), ML2.0(NAO), Explosion*

BER ***22*** *10:23:02.9±3.8, 59.08N×18.12E, ML2.0(NAO), Suspected explosion*

NAO ***22*** *10:23:03.2±2.5, 59.21N×18.10E, ML2.0*

IDC ***22*** *10:23:04.0±2.9, 59.17N×18.24E, mb1 3.2/3, mb1mx3.1/21, mbtmp3.1/3, ML2.8/3, Error ellipse: s-maj=35.9km s-min=9.6km az=177.0*

ISC 22 10:22:59.9±0.4**, 59.02N**±0.03×**18.28E**±0.05**, n41,** σ0^{s}**75**/65**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NYNU	Nynaeshamn	0.14	263	*i* P	Pg	10 23 03.0	+0.3
NYNU				*i* S	Sg	10 23 04.3	-0.3
NRTU	Norrtaelje	0.68	15	*i* P	Pg	10 23 14.1	+0.7
ESKU	Eskilstuna	0.99	283	*e*P	Pb	10 23 18.5	-1.1
BACU	Backbrunna	1.03	325	*e*P	Pb	10 23 19.8	-0.4
FLYU	Flymyra	1.13	350	*e*P	Pb	10 23 22.1	+0.2
GRAU	Graesoe	1.32	6	*e*P	Pb	10 23 25.9	+0.6
GRAU	Graesoe	1.32	6	P	Pb	10 23 25.8	+0.5
OSTU	Oestervaala	1.34	335	*e*P	Pb	10 23 25.7	+0.1
OSTU				*e*S	Sb	10 23 43.8	+0.6
GOTU	Gotland	1.35	173	*e*P	Pb	10 23 25.2	-0.6
AAL	Aland	1.45	36	*e*P	Pn	10 23 28.2	+0.8
VSTU	Vaestervik	1.65	215	*e*P	Pn	10 23 30.3	+0.1
VSTU				*e*S	Sb	10 23 51.3	-0.8
LNKU	Linkoeping	1.66	242	*e*P	Pn	10 23 30.4	0.0
LNKU	Linkoeping	1.66	242	P	Pn	10 23 30.3	-0.1
NRAU	Nora	1.75	290	*e*P	Pn	10 23 32.2	+0.6
NRAU				*e*S	Sn	10 23 55.0	0.0
NRAU	Nora	1.75	290	P	Pn	10 23 32.2	+0.5
NRAU				S	Sn	10 23 54.9	-0.1
ASPU	Aespoe	1.84	210	*e*P	Pn	10 23 33.0	+0.1
BYXU	Byxelkrok	1.86	202	*e*S	Sn	10 23 58.6	+0.8
BYXU	Byxelkrok	1.86	202	S	Sn	10 23 58.6	+0.7
HFS	Hagfors	2.58	297	*e*P	Pn	10 23 44.9	+1.2
HFS				*e*SB	Sb	10 24 19.0	-0.3
HFS	Hagfors	2.58	297	Pn	Pn	10 23 44.9	+1.2
	baz=119,slow=16						
HFS				Lg		10 24 19.0	
	baz=128,slow=37						
HFS	Hagfors	2.58	297	P	Pn	10 23 44.8	+1.2
HFS				Sb	Sb	10 24 18.9	-0.4
ARNU	Arnoeviken	2.71	351	*e*P	Pn	10 23 46.3	+0.8
ARNU	Arnoeviken	2.71	351	P	Pn	10 23 46.2	+0.7
HASU	Hassela	3.25	346	*e*P	Pn	10 23 53.2	+0.1
NB2	NORSAR Subarra	4.08	303	*e*P	Pn	10 24 03.5	-1.4
NB2				*e*PG	Pg	10 24 13.4	-7.9
NB2				*e*SG	Sg	10 25 06.2	-9.5
NB2	NORSAR Subarra	4.08	303	Pn	Pn	10 24 03.5	-1.4
	baz=123,slow=14						
NB2				Pg	Pg	10 24 13.4	-7.9
NB2				Lg		10 25 06.2	
	baz=118,slow=37						
NOA	NORSAR Array B	4.08	303	Pn	Pn	10 24 05.1	+0.2
	0.2nm,0.3s,baz=313,slow=14,SNR=2.4						
NOA				Lg		10 25 07.5	
	1.0nm,0.3s,baz=87,slow=19,SNR=4.7						
PVF	Pernaja	4.13	65	*e*S	Sn	10 24 55.6	+0.3
PVF	Pernaja	4.13	65	S	Sn	10 24 55.5	+0.2
KEF	Keuruu	4.53	43	*e*P	Pn	10 24 11.5	+0.2
KEF				*e*S	Sn	10 25 05.2	-0.3
KEF				*e*SG	Sg	10 25 20.8	-10
KEF				MSG		10 25 23.8	
	comp=Z,1.5nm,0.3s						
KEF	Keuruu	4.53	43	P	Pn	10 24 11.5	+0.2
KEF				S	Sn	10 25 05.1	-0.4
VAF	Ylistaro	4.56	26	*e*S	Sn	10 25 04.4	-1.9
VAF				*e*SG	Sg	10 25 25.0	-6.8
FIA0	FINESS Array S	4.58	55	*e*P	Pn	10 24 13.1	+1.0
FIA0				*e*PG	Pg	10 24 23.8	-7.6
FIA0				*e*S	Sn	10 25 07.1	+0.3
FIA0				*e*SG	Sg	10 25 23.9	-8.5
FIA0	FINESS Array S	4.58	55	Pn	Pn	10 24 13.1	+1.0
	baz=242,slow=12						
FIA0				Pg	Pg	10 24 23.8	-7.6
FIA0				Sn	Sn	10 25 07.1	+0.3
	baz=239,slow=22						
FIA0				Lg		10 25 23.9	
	baz=232,slow=28						
FINES	FINESS Array B	4.58	55	Pn	Pn	10 24 12.3	+0.3
	comp=Z,0.3nm,0.3s,baz=243,slow=12,SNR=6.5						
FINES				Sn	Sn	10 25 06.8	0.0
	comp=Z,0.9nm,0.3s,baz=244,slow=20,SNR=9.0						
FINES				Lg		10 25 24.0	
	comp=Z,1.1nm,0.3s,baz=246,slow=22,SNR=7.3						
VJF	Virojoki	4.93	68	*e*SG	Sg	10 25 36.5	-7.5
SUF	Sumiainen	5.34	43	*e*P	Pn	10 24 23.0	+0.3
SUF				*e*S	Sn	10 25 24.2	-1.7
SUF				MSG		10 25 52.1	
	comp=Z,1.1nm,0.2s						
SUF	Sumiainen	5.34	43	P	Pn	10 24 23.0	+0.2
SUF				S	Sn	10 25 24.2	-1.7
	comp=Z,1.1nm,0.2s						
ARA0	ARCESS Array S	11.00	13	Pn	P	10 25 37.4	-4.0
	baz=193,slow=14						
ARA0				Sn	S	10 27 34.4	-12
	baz=197,slow=28						
ARA0	ARCESS Array S	11.00	13	*e*P	P	10 25 37.4	-4.0
ARA0				*e*S	S	10 27 34.4	-12
ARCES	ARCESS Array B	11.00	13	Pn	P	10 25 37.3	-4.0
	comp=Z,0.2nm,0.3s,baz=194,slow=13,SNR=14						

CRAAG ***22*** *10:38:47.1, 36.65N×4.33E, Ml3.6*

NEIC ***22*** *10:38:50.7±0.4, 36.60N×4.30E, h10^{km}, ML3.6(ALG), Error ellipse: s-maj=6.7km s-min=4.9km az=204.0*

MDD ***22*** *10:38:51.2±0.5, 36.65N×4.25E, mb4.3/8, Error ellipse: s-maj=6.1km s-min=4.7km az=23.0, PRXIMO DATOS INTENSIDAD: CRAAG*

MDD EMS: IV YENNI AGGOUACHA.

CSEM ***22*** *10:38:51.0±0.1, 36.75N×4.25E, h20^{km}, ML3.6, Error ellipse: s-maj=3.0km s-min=2.2km az=31.0*

ISC 22 10:38:50.4±0.4**, 36.80N**±0.04×**4.22E**±0.04**, h10**^{km}**, n47,** σ1^{s}**22**/68**, 3C, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABMS	Boumerdes	0.60	266	P	Pg	10 39 02.2	-0.3
AKET	Djebel Ketaf	0.80	200	P	Pb	10 39 02.3	-3.6
ADJB	Djebel Djouab	0.90	225	P	Pb	10 39 06.5	-1.1
ATAF	Djebel Tarf	0.92	177	P	Pb	10 39 02.7	-5.4
ABA	Alger-Bouzarea	0.95	271	P	Pb	10 39 09.4	+0.8
SET	Setif	1.12	122	P	Pb	10 39 07.0	-4.4
EMHD	Djebel Mahouad	1.18	240	P	Pb	10 39 12.5	0.0
CKHR	Kef el Ahmar	1.30	126	P	Pb	10 39 13.5	-1.0
CMER	Merouana	1.79	130	P	Pn	10 39 21.0	-0.8
CASM	Ain Smara	1.90	106	P	Pn	10 39 24.0	+0.7
CKFL	Kef-Lekhel	2.05	100	P	Pn	10 39 30.0	+4.6
CAEH	’Ain El Ouahch	2.11	90	P	Pn	10 39 26.0	-0.3
EBNR	Beni Rached	2.23	258	P	Pn	10 39 31.0	+3.1
ECHA	Ech Chlef	2.39	255	P	Pn	10 39 32.5	+2.2
ECHF	Ech Chlef	2.41	255	P	Pn	10 39 32.5	+1.9
CMAH	Djebel Manchou	2.58	93	P	Pn	10 39 31.0	-1.9
EANR	’Ain N’Sour	2.66	252	P	Pn	10 39 34.0	-0.1
ETRT	Tiaret	2.75	240	P	Pn	10 39 35.2	-0.3
ETOS	Mallorca	3.17	340	⇑P	Pn	10 39 43.0	+1.7
	26nm,0.4s,SNR=18						
ETOS				S	Sn	10 40 20.3	+0.8
	8.0nm,0.4s,SNR=7.9						
ETOS	Mallorca	3.17	340	⇑P	Pn	10 39 43.0	+1.7
ETOS				S	Sn	10 40 19.2	-0.4
ETOS	Mallorca	3.17	340	⇑P	Pn	10 39 43.0	+1.7
ETOS				S	Sn	10 40 19.2	-0.4
EIBI	Ibiza	3.18	315	P	Pn	10 39 42.5	+0.9
	7.4nm,0.3s,SNR=10						
EIBI				S	Sn	10 40 20.9	+0.9
	12nm,0.4s,SNR=7.9						
EIBI	Ibiza	3.18	315	P	Pn	10 39 42.5	+0.9
EIBI				S	Sn	10 40 20.9	+0.9
EBEN	Beniarda	4.01	300	P	Pn	10 39 54.0	+0.7
	8.3nm,0.7s,SNR=7.4						
EBEN				S	Sn	10 40 39.8	-1.1
	8.3nm,0.5s,SNR=7.9						
EBEN	Beniarda	4.01	300	P	Pn	10 39 54.0	+0.7
EBEN				S	Sn	10 40 40.0	-0.8
EBEN	Beniarda	4.01	300	P	Pn	10 39 54.0	+0.7
EBEN				S	Sn	10 40 40.0	-0.8
ETOB	Tobarra	4.93	294	P	Pn	10 40 06.8	+0.4
	6.1nm,0.3s,SNR=9.0						
ETOB				S	Sn	10 41 02.5	-1.8
	9.0nm,0.5s,SNR=7.9						
ETOB	Tobarra	4.93	294	P	Pn	10 40 06.8	+0.4
ETOB				S	Sn	10 41 02.5	-1.8
ECHE	Chera	4.95	306	P	Pn	10 40 07.8	+1.1
	3.9nm,0.3s,SNR=10						
ECHE				S	Sn	10 41 03.4	-1.3
	1.0nm,0.2s,SNR=4.0						
EPOB	Poblet	5.17	333	P	Pn	10 40 09.8	+0.1
	1.7nm,0.1s,SNR=9.2						
EPOB				S	Sn	10 41 07.1	-3.0
	3.3nm,0.3s,SNR=7.9						
EPOB	Poblet	5.17	333	P	Pn	10 40 09.8	+0.1
EPOB				S	Sn	10 41 07.1	-3.0
EMIR	Miracle	5.52	339	P	Pn	10 40 15.5	+0.8
	2.3nm,0.1s,SNR=12						
EMIR				S	Sn	10 41 14.8	-4.2
	12nm,0.4s,SNR=5.0						
EMIR	Miracle	5.52	339	P	Pn	10 40 15.5	+0.8
EVIA	Vianos	5.64	291	P	Pn	10 40 17.4	+1.0
	0.7nm,0.1s,SNR=7.9						
EVIA				S	Sn	10 41 19.3	-2.7
	1.0nm,0.3s,SNR=7.9						
EJON	La Jonquera	5.74	350	P	Pn	10 40 17.9	+0.2
	1.5nm,0.1s,SNR=7.9						
EJON				S	Sn	10 41 20.7	-3.8
	4.8nm,0.3s,SNR=7.9						
EJON	La Jonquera	5.74	350	P	Pn	10 40 18.0	+0.2
EQES	Quesada	5.90	282	P	Pn	10 40 19.7	-0.3
	0.5nm,0.1s,SNR=7.9						
EQES	Quesada	5.90	282	P	Pn	10 40 20.7	+0.6
EQES				S	Sn	10 41 26.3	-2.2
EQES	Quesada	5.90	282	P	Pn	10 40 20.7	+0.6
EQES				S	Sn	10 41 26.3	-2.3
EBIE	Bielsa	6.67	333	P	Pn	10 40 31.8	+0.9
	0.5nm,0.2s,SNR=7.9						
EBIE				S	Sn	10 41 44.4	-3.4
	10nm,1.3s,SNR=4.0						
EBIE	Bielsa	6.67	333	P	Pn	10 40 31.2	+0.3
EBIE				S	Sn	10 41 42.4	-5.3
EBIE	Bielsa	6.67	333	P	Pn	10 40 31.2	+0.3
ESDC	Sonseca Array	7.05	297	P	Pn	10 40 37.3	+0.9
	baz=109,slow=13,SNR=7.9						
ESDC	Sonseca Array	7.05	297	P	Pn	10 40 37.3	+1.0
EALK	Alkurruntz	7.78	327	P	Pn	10 40 46.9	+0.4
	0.8nm,0.1s,SNR=7.9						
EALK				S	Sn	10 42 09.7	-5.7
	1.3nm,0.2s,SNR=7.9						
EALK	Alkurruntz	7.78	327	P	Pn	10 40 46.8	+0.4
ECAL	Calabor	9.92	305	P	P	10 41 15.8	-0.3
	6.0nm,0.3s,SNR=7.9						

IDC ***22*** *10:39:01.0±1.7, 19.95S×177.50W, h492^{km}±20^{km}, mb3.4/9, mb1 3.7/12, mb1mx3.6/18, mbtmp4.4/12, Error ellipse: s-maj=26.8km s-min=11.6km az=146.0*

NEIC ***22*** *10:39:02.1±1.2, 19.93S×177.54W, h509^{km}±15^{km}, mb4.3/7, Error ellipse: s-maj=18.2km s-min=11.2km az=143.0*

ISC 22 10:39:00.3±1.0**, 19.9S**±0.1×**177.56W**±0.10**, h495**^{km}±13^{km}**, n31,** σ1^{s}**08**/31**, mb4.0**/13**, 3C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.14	44	P	P	10 40 59.6	+0.4
	8.2nm,0.3s,baz=28,slow=2.7,SNR=17						
AFI				S	S	10 42 32.7	-0.9
	4.5nm,0.3s,baz=45,slow=18,SNR=4.4						
AFI	Afiamalu	8.14	44	P	P	10 40 59.6	+0.4
AFI				S	S	10 42 32.7	-0.9

DZM	**Mont Dzumac**	15.09	259	P	P	10 42 14.5	+2.6
	1.3nm,0.3s,baz=85,slow=20,SNR=13						
URZ	**Urewera**	18.85	193	P	P	10 42 48.2	-0.6
	2.8nm,0.3s,baz=317,slow=6.0,SNR=18						
ARMA	**Armidale**	29.70	243	*e*P	P	10 44 27.7	+1.0
CTA	**Charters Tower**	33.96	263	*e*P	P	10 45 03.6	+0.6
	5.7nm,0.8s,mb4.0						
CTA	**Charters Tower**	33.96	263	P	P	10 45 03.5	+0.5
	4.1nm,0.3s,mb4.3,baz=101,slow=10,SNR=8.6						
CTAO	**Charters Tower**	33.96	263	*e*P	P	10 45 03.7	+0.7
	7.1nm,0.6s,mb4.3						
TAU	**Tasmania Unive**	37.33	224	*e*P	P	10 45 30.0	-0.6
	28nm,1.1s,mb4.6						
STKA	**Stephens Creek**	38.41	244	P	P	10 45 40.8	+1.1
	7.8nm,1.0s,mb4.1,baz=112,slow=8.4,SNR=9.1						
ASPA	**Alice Springs**	45.06	256	*e*P	P	10 46 32.5	-0.3
WB2	**Warramunga Arr**	45.08	261	⇓*i*P	P	10 46 32.2	-0.8
WRAB	**Tennant Creek**	45.09	261	*e*P	P	10 46 32.5	-0.6
	10nm,0.3s,mb4.7						
WRA	**Warramunga Arr**	45.09	261	P	P	10 46 32.5	-0.6
	4.4nm,0.3s,mb4.4,baz=96,slow=7.6,SNR=334						
FITZ	**Fitzroy Crossi**	53.52	262	P	P	10 47 35.4	-0.5
	3.1nm,0.4s,mb4.0,baz=117,slow=4.0,SNR=9.0						
VNDA	**Vanda**	58.52	185	P	P	10 48 10.3	+0.5
	3.7nm,1.4s,mb3.5						
MAJO	**Matsushiro**	69.99	323	P	P	10 49 19.7	-3.2
NVAR	**Mina Array Bea**	80.32	43	P	P	10 50 21.4	+1.2
	0.9nm,0.8s,mb3.4,baz=218,slow=8.7,SNR=5.8						
NVAR	**Mina Array Bea**	80.32	43	P	P	10 50 21.4	+1.2
MAW	**Mawson**	82.25	200	P	P	10 50 29.3	-0.2
	0.5nm,0.5s,mb3.3,baz=162,slow=9.6,SNR=4.3						
MAW	**Mawson**	82.25	200	P	P	10 50 28.7	-0.8
	0.8nm,0.6s,mb3.4						
TXAR	**Lajitas Array**	86.39	57	P	P	10 50 52.4	+1.6
	0.8nm,0.7s,mb3.5,baz=219,slow=6.6,SNR=14						
MCMT	**McKenzie Canyo**	87.24	40	*e*P	P	10 50 55.9	+1.5
COLA	**College**	87.56	12	*e*P	P	10 50 54.3	-1.0
	4.5nm,0.7s,mb4.3						
ILAR	**Eielson Array**	87.66	13	P	P	10 50 54.9	-1.0
	0.8nm,0.5s,mb3.7,baz=215,slow=5.9,SNR=17						
PDAR	**Pinedale Array**	88.26	43	P	P	10 51 00.0	+0.8
	0.8nm,0.6s,mb3.6,baz=213,slow=3.7,SNR=7.5						
VNA3	**Neumayer Olymp**	88.69	176	⇑*i*P	P	10 51 00.6	+0.1
VNA3				*e*		10 51 14.8	
VNA2	**Neumayer--Watz**	89.14	177	⇑*i*P	P	10 51 02.8	+0.2
VNA2				*e*		10 51 17.2	
VNA1	**Neumayer--Stat**	89.36	176	⇑*i*P	P	10 51 01.2	-2.5
VNA1				*e*		10 51 14.4	
EKA	**Eskdalemuir Ar**	144.39	5	PKP	PKPdf	10 57 39.6	+0.8
	0.8nm,0.6s,baz=320,slow=2.1,SNR=3.9						
GERES	**GERESS Array B**	149.75	345	PKPbc	PKPdf	10 57 53.7	+5.8
	1.2nm,0.8s,baz=270,slow=1.3,SNR=4.9						

MEX 22 10:46:01.7±0.7**,17.38N×101.28W,h10^{km}±22^{km},MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	0.29	321	*i* P	Pg	10 46 07.0	-0.8
ZIIG				*i* S	Sg	10 46 11.5	-0.2
CAIG	**El Cayaco**	1.02	109	*e*P	Pb	10 46 18.0	-3.0
CAIG				*i* S	Sb	10 46 31.1	-3.1
ACX	**Acapulco**	1.40	111	*e*P	Pn	10 46 25.5	-1.9
ACX				*i* S	Sb	10 46 44.5	-0.7

*IDC **22** 10:48:25.2±1.3,0.76S×121.71E,mb3.8/5,mb1 4.0/5, mb1mx3.8/15,mbtmp3.8/5,Error ellipse: s-maj=155.6km s-min=20.7km az=63.0*

NEIC 22 10:48:30.0±0.9**,0.97S×121.40E,h35^{km},mb4.2**/1**,Error ellipse: s-maj=135.0km s-min=10.3km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	22.71	147	*e*P	P	10 53 29.0	-1.1
	5.9nm,0.6s						
WRA	**Warramunga Arr**	22.71	147	P	P	10 53 28.7	-1.4
	2.0nm,0.6s,baz=326,slow=10,SNR=33						
WB2	**Warramunga Arr**	22.72	147	*e*P	P	10 53 28.7	-1.5
STKA	**Stephens Creek**	36.18	150	P	P	10 55 29.8	-1.5
	1.9nm,0.7s,baz=336,slow=11,SNR=3.9						
SONM	**Songino Array**	50.34	347	P	P	10 57 23.9	-1.6
	1.0nm,1.0s,baz=165,slow=8.0,SNR=4.9						
MKAR	**Makanchi Array**	58.61	329	P	P	10 58 23.9	-2.1
	0.6nm,0.7s,baz=141,slow=7.8,SNR=4.3						
ZAL	**Zalesovo**	62.55	337	P	P	10 58 49.5	-3.2
	0.6nm,0.5s,baz=0.4,slow=5.9,SNR=3.9						
ZAL	**Zalesovo**	62.55	337	P	P	10 58 49.5	-3.2

*NAO **22** 10:48:32.5±1.5,59.32N×27.06E,ML2.4*
*BER **22** 10:48:32.5±3.9,59.33N×27.17E,ML2.4(NAO), Suspected explosion*
*IDC **22** 10:48:32.9±2.0,59.33N×27.19E,mb1 3.3/4, mb1mx3.1/22,mbtmp3.3/4,ML2.8/4,Error ellipse: s-maj=18.2km s-min=10.4km az=123.0*
HEL 22 10:48:32.6±0.2**,59.31N×27.13E,ML2.4**(UPP)**, ML2.4**(NAO)**,Explosion,Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSU	**Vasula**	0.87	194	*i* P	Pg	10 48 48.0	-2.0
VSU				*i* S	Sg	10 48 59.7	-1.9
FIA0	**FINESS Array S**	2.21	347	*e*P	Pn	10 49 10.1	-0.9
FIA0				*e*SG	Sg	10 49 40.1	-6.0
FIA0				*e*RG		10 49 57.5	
FIA0	**FINESS Array S**	2.21	347	Pn	Pn	10 49 10.2	-0.8
	baz=169,slow=18						
FIA0				Lg		10 49 40.8	
	baz=170,slow=37						
FIA0				Rg		10 49 51.9	
	baz=167,slow=37						
FINES	**FINESS Array B**	2.21	347	Pn	Pn	10 49 10.2	-0.8
	2.2nm,0.3s,baz=164,slow=16,SNR=44						
FINES				Lg		10 49 41.5	
	4.6nm,0.3s,baz=166,slow=27,SNR=26						
FINES				Rg		10 49 54.1	
	3.0nm,0.4s,baz=162,slow=26,SNR=4.2						
UMAU	**Umeaa**	5.53	329	*e*P	Pn	10 49 56.1	-2.0
UMAU				*e*S	Sn	10 50 58.2	-5.1
BURU	**Burvik**	5.95	335	*e*P	Pn	10 50 01.3	-2.7
BREU	**Bredtraesk**	6.14	322	*e*P	Pn	10 50 04.8	-2.0
SJUU	**Sjulsmark**	6.73	340	*e*P	Pn	10 50 12.8	-2.3
HFS	**Hagfors**	6.85	283	Pn	Pn	10 50 13.0	-3.8
	baz=120,slow=14						
HFS				Sn	Sn	10 51 28.8	-7.6
	baz=93,slow=28						
HFS				Lg		10 52 02.6	
	baz=87,slow=28						
HFS	**Hagfors**	6.85	283	*e*P	Pn	10 50 13.0	-3.8
HFS				*e*S	Sn	10 51 28.8	-7.6
HFS				*e*SG	Sg	10 52 02.6	-18
HFS	**Hagfors**	6.85	283	Pn	Pn	10 50 12.4	-4.4
	0.0nm,0.3s,baz=99,slow=19,SNR=3.0						
HFS				Sn	Sn	10 51 27.5	-8.9
	0.1nm,0.3s,baz=103,slow=26,SNR=6.5						
HFS				Lg		10 52 03.9	
	0.3nm,0.3s,baz=93,slow=31,SNR=8.9						
LILU	**Lilltraesk**	6.89	334	*e*P	Pn	10 50 14.2	-3.1
NB2	**NORSAR Subarra**	8.12	289	Pn	P	10 50 30.6	-4.0
	baz=91,slow=14						
NB2	**NORSAR Subarra**	8.12	289	*e*P	P	10 50 30.6	-4.0
NOA	**NORSAR Array B**	8.12	289	Pn	P	10 50 28.3	-6.3
	0.1nm,0.3s,baz=175,slow=19,SNR=2.5						
NOA				Sn	Sn	10 51 58.7	-10
	0.2nm,0.3s,baz=102,slow=16,SNR=2.3						
NOA				Lg		10 52 43.6	
	0.5nm,0.3s,baz=144,slow=18,SNR=3.7						
APA0	**Apatity Array**	8.73	15	Pn	P	10 50 37.7	-5.3
	baz=187,slow=14						
APA0	**Apatity Array**	8.73	15	*e*P	P	10 50 37.7	-5.3
ARA0	**ARCESS Array S**	10.29	357	Pn	P	10 50 58.9	-5.5
	baz=173,slow=16						
ARA0				Sn	S	10 52 48.2	-14
	baz=173,slow=28						
ARA0	**ARCESS Array S**	10.29	357	*e*P	P	10 50 58.9	-5.5
ARA0				*e*S	S	10 52 48.2	-14
ARCES	**ARCESS Array B**	10.29	357	Pn	P	10 50 58.6	-5.8
	0.1nm,0.3s,baz=174,slow=14,SNR=11						
ARCES				Sn	S	10 52 49.2	-13
	0.2nm,0.3s,baz=172,slow=25,SNR=3.7						
ARCES				Lg		10 53 46.4	
	0.2nm,0.3s,baz=185,slow=21,SNR=2.8						

*ISK **22** 11:09:25.5,36.15N×40.98E,h23^{km},MD3.8*
*CSEM **22** 11:09:30.2±0.4,36.57N×41.10E,h15^{km},MD3.8,Error ellipse: s-maj=12.5km s-min=7.6km az=161.0*
ISC 22 11:09:27.5±0.7**,36.37N**±0.04×**40.97E**±0.05**,h10^{km},n26, σ1^{s}18**/37**,2D,Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARD	**Mardin**	0.95	351	*i* P	**Pb**	**11 09 43.0**	**-2.6**
MARD				*i* S	**Sb**	**11 09 57.9**	**-0.2**
BEST	**Besiri**	1.54	9	*i* P	**Pn**	**11 09 55.3**	**+0.2**
BEST				*i* S	**Sb**	**11 10 16.6**	**+1.6**
SIRT	**Sirnak**	1.63	46	PN	**Pn**	**11 09 55.7**	**-0.7**
SIRT				SN	**Sn**	**11 10 17.7**	**+0.1**
DIY	**Diyarbakir**	1.64	339	PN	**Pn**	**11 09 56.1**	**-0.4**
DIY				SN	**Sn**	**11 10 19.6**	**+1.9**
MSL	**Mosul**	1.71	92	*e*x	x	11 09 57.5	
MSL				*i* x	x	11 10 22.5	
MSL				*i* x	x	11 10 24.5	
MSL				*i* x	x	11 10 26.8	
BTMT	**Batman**	1.86	13	PN	**Pn**	**11 09 58.6**	**-1.2**
URFA	**Urfa**	2.03	302	PN	**Pn**	**11 10 01.0**	**-1.1**
JHLN	**Al Jahlan**	2.17	252	⇑*i*P	**Pn**	**11 10 04.9**	**+0.8**
HAKT	**HAKKARI**	2.49	61	*i* P	**Pn**	**11 10 08.4**	**-0.3**
HAKT				*i* S	**Sn**	**11 10 40.6**	**+1.2**
HKR	**Hakkari**	2.52	61	*e*PN	**Pn**	**11 10 08.6**	**-0.6**
BNGL	**BINGOL**	2.58	3	*i* P	**Pg**	**11 10 15.0**	**-4.0**
BNGL				*i* S	**Sg**	**11 10 52.5**	**-0.9**
ELZG	**Elazig**	2.65	324	*e*P	**Pn**	**11 10 12.9**	**+1.9**
ELZG				*i* S	**Sn**	**11 10 49.3**	**+5.8**
PTK	**Pertek**	2.81	334	*e*PN	**Pn**	**11 10 13.2**	**-0.1**
MYA	**Malataya**	2.82	315	*e*PN	**Pn**	**11 10 13.2**	**-0.2**
GZT	**Gaziantep**	2.91	291	*i* P	**Pn**	**11 10 11.3**	**-3.3**
GZT				*i* S	**Sn**	**11 10 56.3**	**+6.3**
VANB	**Van**	2.94	40	*e*PN	**Pn**	**11 10 15.3**	**+0.2**
GAZ	**Gaziantep**	3.12	286	*e*PN	**Pn**	**11 10 15.6**	**-2.2**
DRWC	**Darouich**	3.48	275	⇑*i*P	**Pn**	**11 10 28.9**	**+6.1**
DRWC				⇑*i*S	**Sn**	**11 10 56.1**	**-8.4**
EZM	**Erzurum**	3.54	5	*e*PN	**Pn**	**11 10 24.2**	**+0.5**
BTCH	**Batrach**	3.67	266	⇑*i*P	**Pn**	**11 10 30.3**	**+4.8**
BTCH				⇑*i*S	**Sn**	**11 10 57.4**	**-12**
WRDH	**Warideh**	3.80	258	⇓*i*P	**Pn**	**11 10 31.5**	**+4.1**
WRDH				⇑*i*S	**Sn**	**11 11 00.6**	**-12**
COBT	**Iskenderun**	3.81	274	*e*P	**Pn**	**11 10 32.3**	**+4.8**
SLNF	**Slenfeh**	3.93	260	⇑*i*P	**Pn**	**11 10 34.2**	**+5.0**
SLNF				⇓*i*S	**Sn**	**11 11 04.6**	**-11**
BHD	**Baghdad**	4.17	137	*e*x	x	11 10 43.0	
BHD				*e*x	x	11 11 40.0	
BHD				*e*x	x	11 11 54.0	
HWQ	**Hawqa**	4.61	245	*e*Pn	**Pn**	**11 10 39.8**	**+0.9**
HWQ				Sn	**Sn**	**11 11 45.0**	**+12**
BHL	**Bhannes**	5.01	242	Sn	**Sn**	**11 11 58.0**	**+15**

*NDI **22** 11:21:16.1±3.2,34.74N×72.00E,h10^{km},ML3.3*
*NNC **22** 11:21:31.9±14.0,35.01N×72.59E,mpv3.8,Error ellipse: s-maj=197.8km s-min=90.8km az=114.0*
ISC 22 11:21:17.7±1.2**,34.33N**±0.07×**72.1E**±0.1**,h10^{km},n13, σ1^{s}36**/21**,2C-2D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	3.56	121	*e*P	**Pn**	**11 22 16.3**	**+2.1**
THN				*e*S	**Sn**	**11 22 57.2**	**+0.4**
DLH	**Dalhousie**	3.69	118	*e*P	**Pn**	**11 22 18.0**	**+2.0**
DLH				*e*S	**Sn**	**11 23 03.0**	**+3.0**
BHK	**Bhakra**	4.64	128	*e*x	**Sb**	**11 23 41.3**	**+5.9**
SDNR	**Sundarnagar**	4.97	123	*e*P	**Pn**	**11 22 34.5**	**+0.3**
SDNR				*e*x	**Sn**	**11 23 25.2**	**-7.2**
SMLA	**Simla**	5.32	125	*e*P	**Pn**	**11 22 39.0**	**-0.2**
SMLA				*e*x	**Sn**	**11 23 34.1**	**-7.3**
KLP	**Kalpa**	5.87	117	*e*P	**Pn**	**11 22 45.9**	**-1.0**
KLP				*e*S	**Sn**	**11 23 53.1**	**-1.8**
KLP				AML	AML	11 24 15.2	
	comp=N,81nm,0.4s						
KLP				AML	AML	11 24 15.9	
	comp=E,91nm,0.9s						
KHET	**Khetri**	6.99	152	*e*S	**Sn**	**11 24 21.3**	**-1.8**
KHET				AML	AML	11 25 00.4	
	comp=N,11nm,0.2s						
KHET				AML	AML	11 25 00.4	
	comp=E,6.5nm,0.1s						
KUDL	**Kundal**	7.21	148	*e*P	**Pn**	**11 23 07.4**	**+1.6**
KUDL				*e*S	**Sn**	**11 24 26.2**	**-2.5**
AYAN	**Aya Nagar**	7.23	142	*e*P	**Pn**	**11 23 06.6**	**+0.5**
SONA	**Sohna**	7.40	144	*e*P	**Pn**	**11 23 08.5**	**+0.1**
SONA				*e*S	**Sn**	**11 24 33.5**	**+0.1**
AAK	**Ala-Archa**	8.50	12	⇓S	**Sn**	**11 24 54.8**	**-6.0**
	comp=E,7.9nm,1.1s						
KK31	**Karatay Array**	8.85	352	⇓P	**P**	**11 23 33.9**	**+5.2**
	comp=E,1.5nm,0.3s,baz=172,slow=13,SNR=38						
KK31				⇑S	**Sn**	**11 25 08.4**	**-1.1**
	comp=E,2.0nm,0.4s,baz=162,slow=21						
AKTO	**Aktyubinsk**	19.11	332	⇑P	**P**	**11 25 51.0**	**+7.8**
	comp=E,0.5nm,0.9s						

*NEIC **22** 11:32:22.6,28.58N×16.71W,h39^{km},MG4.1(MDD),After MDD.*
MDD 22 11:32:22.1±0.6**,28.56N×16.69W,h43^{km}±6^{km},mb4.0**/11**, 5C-1D,Error ellipse: s-maj=8.2km s-min=3.4km az=157.0,PRXIMO TT-MODEL: CANARY,Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CICO	**Icod de los Vi**	0.21	188	⇑P	P	11 32 29.4	-0.3
	SNR=18						
CRAJ	**Montana Rajada**	0.30	165	P	P	11 32 30.7	+0.1
	517nm,0.2s,SNR=5.0						
CRAJ				S	S	11 32 36.4	-0.2
	1µm,0.2s,SNR=14						
EBAJ	**Bajamar**	0.30	94	⇓P	P	11 32 30.2	-0.4
	148nm,0.1s,SNR=18						
EBAJ				S	S	11 32 35.3	-1.4
	196nm,0.2s,SNR=9.6						
CHIO	**Chio**	0.34	199	⇑P	P	11 32 30.9	-0.1
	227nm,0.2s,SNR=18						
CCAN	**Las Canadas**	0.34	168	⇑P	P	11 32 31.1	0.0
	92nm,0.2s,SNR=18						
CCAN				S	S	11 32 36.8	-0.5
	181nm,0.2s,SNR=7.9						
EGOM	**La Gomera**	0.61	229	⇑P	P	11 32 33.4	-0.9
	32nm,0.1s,SNR=18						
EGOM				S	S	11 32 41.0	-2.2
	168nm,0.1s						
EHIG	**Higuera**	0.98	270	P	P	11 32 38.7	-0.8
	51nm,0.2s,SNR=4.0						
EHIG				S	S	11 32 49.8	-2.7
	82nm,0.1s,SNR=7.9						
EOSO	**Osorio**	1.11	116	P	P	11 32 41.1	-0.3
	4.4nm,0.1s,SNR=5.0						
EOSO				S	S	11 32 54.1	-1.7
	14nm,0.1s,SNR=7.9						
CHIE	**El Hierro**	1.40	234	P	P	11 32 44.8	-0.7
	6.4nm,0.2s,SNR=7.9						
CHIE				S	S	11 32 59.5	-3.5
	14nm,0.1s,SNR=7.9						
CFTV	**Fuerteventura**	2.30	93	⇑P	P	11 32 56.9	-1.4
	2.7nm,0.1s,SNR=18						
CFTV				S	S	11 33 21.1	-4.5
	13nm,0.1s,SNR=7.9						
CFUE	**Fuerteventura**	2.42	87	P	P	11 32 58.2	-1.9
	4.3nm,0.1s,SNR=4.0						
CFUE				S	S	11 33 23.5	-5.2
	26nm,0.1s,SNR=7.9						
EFAM	**Famara**	2.83	78	P	P	11 33 01.0	-4.9
	10nm,0.2s,SNR=4.0						
EFAM				S	S	11 33 34.1	-5.0
	23nm,0.1s,SNR=7.4						

*IDC **22** 11:51:09.6±2.0,52.03N×31.23W,mb3.6/7,mb1 3.8/7, mb1mx3.6/27,mbtmp3.6/7,MS3.5/2,Ms1 3.5/2, ms1mx3.0/33,Error ellipse: s-maj=63.2km s-min=22.1km az=175.0*
*NEIC **22** 11:51:10.6±1.3,51.79N×31.33W,h10^{km},mb4.1/3,Error ellipse: s-maj=37.4km s-min=12.8km az=175.0*
ISC 22 11:51:08.8±1.3**,51.8N**±0.3×**31.4W**±0.1**,h10^{km},n15, σ1^{s}22**/12**,mb3.8**/9**,MS3.5**/2**,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESK	**Eskdalemuir**	17.03	67	*e*P	**P**	**11 55 09.4**	**+1.1**
	16nm,1.0s						
EKA	**Eskdalemuir Ar**	17.06	67	Pn	**P**	**11 55 10.3**	**+1.7**
	0.5nm,0.3s,baz=270,slow=9.9,SNR=28						
SUMG	**Summit**	21.07	354	P	**P**	**11 55 56.1**	**+1.0**
	8.6nm,1.1s,mb4.0						
AKASG	**Malin Array Be**	36.97	67	P	**P**	**11 58 17.4**	**-2.2**
	0.3nm,0.3s,mb3.7,baz=299,slow=8.4,SNR=5.3						
YKA	**Yellowknife Ar**	43.26	318	LR	LR	12 14 40.8	
	comp=Z,56nm,18.1s,MS3.5,baz=135,slow=33						
INK	**Inuvik**	47.23	330	P	**P**	**11 59 41.2**	**-1.8**
	0.7nm,0.7s,mb3.7,baz=14,slow=8.1,SNR=3.1						
PDAR	**Pinedale Array**	51.40	293	P	**P**	**12 00 15.8**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=46,slow=7.1,SNR=3.5						
GNI	**Garni**	51.84	71	LR	LR	12 23 22.3	
	comp=Z,54nm,21.8s,MS3.5,baz=105,slow=37						
HWUT	**Hardware Ranch**	53.29	293	*e*P	**P**	**12 00 29.2**	**-0.5**
	3.5nm,0.8s,mb4.3						
ILAR	**Eielson Array**	53.59	331	P	**P**	**12 00 31.6**	**0.0**
	0.4nm,0.8s,mb3.4,baz=35,slow=6.2,SNR=5.8						
PV10	**Paradox Valley**	53.93	288	*e*P	**P**	**12 00 36.3**	**+1.9**
BVAR	**Borovoye Array**	56.74	45	P	**P**	**12 00 54.0**	**-0.7**
	1.4nm,0.6s,mb4.2,baz=315,slow=5.7,SNR=7.6						
TXAR	**Lajitas Array**	56.85	276	P	**P**	**12 00 56.0**	**+0.2**
	0.1nm,0.6s,mb3.0,baz=67,slow=6.9,SNR=2.8						
MKAR	**Makanchi Array**	66.52	43	P	**P**	**12 01 59.1**	**-1.2**
	1.3nm,1.1s,mb3.9,baz=333,slow=3.2,SNR=2.9						
WRA	**Warramunga Arr**	146.28	25	PKPbc	PKPbc	12 10 52.3	+2.8
	0.9nm,0.8s,baz=346,slow=3.6,SNR=8.0						

*ISK **22** 12:12:21.8,38.23N×26.64E,h26^{km},MD2.7*
*ATH **22** 12:12:21.6,38.17N×26.90E,h31^{km}±1^{km},MD3.3/3*
*CSEM **22** 12:12:22.9±0.2,38.18N×26.77E,h25^{km},MD2.7,Error ellipse: s-maj=5.2km s-min=2.8km az=98.0*
ISC 22 12:12:22.1±0.8**,38.17N**±0.03×**26.64E**±0.05**,h11^{km}**±5^{km}**, n14,σ0^{s}89**/22**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	0.20	349	*i* P	**Pg**	**12 12 26.2**	**-0.3**
URLA				*i* S	**Sg**	**12 12 30.0**	**+0.6**
SMG	**Samos**	0.48	161	*e*PB	**Pb**	**12 12 31.9**	**-0.2**
SMG				*e*SB	**Sb**	**12 12 39.2**	**+0.3**
IZM	**Izmir**	0.54	64	PG	**Pg**	**12 12 33.2**	**+0.1**
IZM				SG	**Sg**	**12 12 41.1**	**+0.7**
KDAG	**Bornova**	0.55	64	*i* P	**Pb**	**12 12 32.0**	**-1.2**
KDAG				*i* S	**Sg**	**12 12 40.3**	**-0.2**
AYDN	**Tasoluk**	1.10	117	*i* P	**Pb**	**12 12 42.6**	**-0.1**
AYDN				*i* S	**Sb**	**12 12 57.8**	**+0.9**
PRK	**Paraskevi**	1.12	345	*e*PN	**Pn**	**12 12 43.6**	**-0.1**
PRK				*e*SN	**Sn**	**12 12 59.8**	**+0.7**
AYVA	**Ayvalik**	1.14	2	*i* P	**Pb**	**12 12 42.1**	**-1.3**
AYVA				*i* S	**Sb**	**12 12 59.6**	**+1.6**
AKS	**Akhisar**	1.16	52	PN	**Pn**	**12 12 42.4**	**-1.9**
BODT	**Bodrum**	1.22	154	PN	**Pn**	**12 12 44.9**	**-0.3**
BDRM	**Kayabasi**	1.27	150	*i* P	**Pb**	**12 12 46.8**	**+1.2**
BDRM				*i* S	**Sb**	**12 13 02.7**	**+0.9**
APE	**Apeiranthos**	1.41	219	PN	**Pn**	**12 12 46.8**	**-1.0**
APE	**Apeiranthos**	1.41	219	*e*PN	**Pn**	**12 12 49.2**	**+1.4**
DAT	**Datca**	1.62	152	PN	**Pn**	**12 12 50.1**	**-0.7**
DALT	**Dalyan (Mudla)**	2.11	131	PN	**Pn**	**12 12 56.8**	**-1.1**

*NIED **22** 12:17:00,24.90N×122.80E,h130^{km},Mw4.6 Best double couple: $M_0$9.33×10^{15} NP1:ϕ_s263°,δ84°,λ167°. NP2: ϕ_s355°,δ78°,λ6°.*
*BJI **22** 12:17:34.9,24.79N×122.67E,h119^{km},mB4.6,mb4.5*
*NEIC **22** 12:17:35.4±0.3,24.92N×122.76E,mb4.6/5,Error ellipse: s-maj=8.7km s-min=6.5km az=96.0*
*IDC **22** 12:17:35.6±0.7,24.91N×122.85E,h134^{km}±6^{km},mb4.0/12, mb1 4.1/14,mb1mx4.0/22,mbtmp4.5/14,Error ellipse: s-maj=20.1km s-min=10.0km az=72.0*
*JMA **22** 12:17:35.6±0.2,24.87N×122.83E,h114^{km}±2^{km},M4.3*
*MAN **22** 12:18:43.5,19.62N×121.62E,h1^{km},mb4.9,ML3.8,MS3.8*
ISC 22 12:17:33.7±0.2**,24.89N**±0.03×**122.82E**±0.02**,h126^{km}**±2^{km}**, h131^{km}**±3.7^{km}**:pP-P,n67,σ1^{s}13**/94**,mb4.2**/16**,1C-4D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	0.46	158	P	**P**	**12 17 52.6**	**+0.3**
YOJ				*e*S	**S**	**12 18 05.7**	**-0.7**
IRIF	**Iriomote-Funau**	1.00	124	P	**P**	**12 17 56.9**	**+0.4**
IRIF				*e*S	**S**	**12 18 13.2**	**-0.5**
TATO	**Taipei**	1.21	274	⇓*i*Pn	**P**	**12 17 59.3**	**+0.6**
TATO				*e*Sn	**S**	**12 18 16.5**	**-1.1**
HATJ	**Hateruma jima**	1.23	133	P	**P**	**12 17 59.5**	**+0.6**
HATJ				*e*S	**S**	**12 18 18.0**	**+0.1**
JKRS	**Kuro-shima**	1.27	121	P	**P**	**12 18 00.2**	**+0.9**
JKRS				*e*S	**S**	**12 18 18.1**	**-0.6**
JIJ	**Ishigaki jima**	1.31	113	P	**P**	**12 18 00.3**	**+0.4**
JIJ				*e*S	**S**	**12 18 18.3**	**-1.6**
NACB	**Ninganchiao**	1.32	238	*e*Pn	**P**	**12 17 59.3**	**-0.7**
NACB				*e*Sn	**S**	**12 18 17.5**	**-2.6**
YHNB	**Yeheng**	1.33	261	*e*Pn	**P**	**12 18 00.7**	**+0.6**
YHNB				*e*Sn	**S**	**12 18 19.6**	**-0.6**
JTJ	**Tarama**	1.73	98	P	**P**	**12 18 05.8**	**+1.2**
JTJ				*e*S	**S**	**12 18 28.7**	**+0.6**
JMJ	**Miyako jima 2**	2.25	91	P	**P**	**12 18 12.7**	**+1.6**
JMJ				*e*S	**S**	**12 18 39.7**	**+0.2**
JOGS	**Gusukube**	2.35	93	P	**P**	**12 18 14.0**	**+1.5**
JOGS				*e*S	**S**	**12 18 42.8**	**+0.8**
QZH	**Quanzhou**	3.84	272	⇓*i*P	**P**	**12 18 32.0**	**-0.2**
QZH				S	**S**	**12 19 13.3**	**-3.7**
QZH				Smax			
	comp=N,1µm,0.7s						
QZH				Smax			
	comp=E,650nm,0.8s						
JKE	**Kume jima 2**	3.85	67	P	**P**	**12 18 33.5**	**+1.0**
JKE				*e*S	**S**	**12 19 18.4**	**+1.0**
JAGN	**Aguni-jima**	4.33	66	P	**P**	**12 18 39.6**	**+0.8**
JAGN				*e*S	**S**	**12 19 28.2**	**-0.6**
NAH1	**Naha**	4.59	72	P	**P**	**12 18 43.3**	**+1.0**
NAH1				*e*S	**S**	**12 19 34.2**	**-0.8**
JJT2	**Tamagusuku 2**	4.62	73	P	**P**	**12 18 43.3**	**+0.5**
JIH	**Iheya**	5.10	64	P	**P**	**12 18 49.3**	**+0.1**
JIH				*e*S	**S**	**12 19 46.5**	**-0.9**
JOW	**Kunigami**	5.28	67	P	**P**	**12 18 51.2**	**-0.3**
	comp=E,42nm,0.3s,baz=237,slow=8.6,SNR=206						
JOW				S	**S**	**12 19 49.0**	**-2.8**
	comp=E,19nm,0.3s,baz=107,slow=23,SNR=3.7						
JOW	**Kunigami**	5.28	67	P	**P**	**12 18 51.1**	**-0.5**
JOW				*e*S	**S**	**12 19 49.4**	**-2.4**
JTK	**Tokunoshima**	6.21	61	P	**P**	**12 19 03.4**	**-0.7**
JTK				*e*S	**S**	**12 20 11.0**	**-3.3**
SGCP	**Mt. Cagua**	6.66	186	*e*P	**P**	**12 19 09.7**	**-0.5**
SGCP				*e*S	**S**	**12 20 22.8**	**-2.3**
JAM	**Amami Oshima**	7.01	59	P	**P**	**12 19 13.6**	**-1.4**
APYP	**Conner**	7.15	192	*e*P	**P**	**12 19 17.8**	**+0.9**
APYP				*e*S	**S**	**12 20 34.5**	**-2.6**
CVP	**Callao Caves**	7.21	188	*e*P	**P**	**12 19 19.0**	**+1.2**
JZK	**Kikaishima**	7.25	60	P	**P**	**12 19 17.3**	**-1.0**
ABRA	**Dolores**	7.47	196	*e*P	**P**	**12 19 21.0**	**-0.2**
ABRA				*e*S	**S**	**12 20 46.5**	**+1.6**
JMZ	**Minamidaito 2**	7.66	81	P	**P**	**12 19 20.8**	**-3.0**
JMZ				*e*S	**S**	**12 20 40.7**	**-8.7**
CAUP	**Cauayan**	7.96	187	*e*P	**P**	**12 19 31.2**	**+3.3**
CAUP				*e*S	**S**	**12 20 58.4**	**+1.6**
BALP	**Baler**	9.18	188	*e*P	**P**	**12 19 45.0**	**+0.9**
BALP				*e*S	**S**	**12 21 25.9**	**-0.2**
WHN	**Wuhan**	9.38	309	⇓P	**P**	**12 19 47.0**	**+0.2**
SCZP	**Santa Cruz**	9.47	197	*e*P	**P**	**12 19 48.4**	**+0.4**
POLP	**Polilio Island**	10.15	185	*e*P	**P**	**12 20 01.8**	**+4.7**
POLP				*e*S	**S**	**12 21 47.1**	**-2.1**
JNU	**Nakatsue**	10.81	39	P	**P**	**12 20 07.3**	**+1.5**
	baz=213,slow=7.2						
TGY	**Tagaytay City**	10.88	190	P	**P**	**12 20 08.9**	**+2.1**
	comp=E,32nm,0.3s,baz=126,slow=9.2,SNR=2.2						
PVCP	**Virac**	11.31	173	*e*P	**P**	**12 20 20.3**	**+7.8**
PVCP				*e*S	**S**	**12 22 11.0**	**-5.8**
ENH	**Enshi**	12.98	297	*e*Pn	**P**	**12 20 35.9**	**+1.6**
	comp=E,22nm,0.9s						
ENH				*e*S	**S**	**12 23 14.1**	**+18**
KS15	**Wonju Array Si**	13.24	18	*e*Pn	**P**	**12 20 40.1**	**+2.5**
XAN	**Xi’an**	15.14	310	P	**P**	**12 21 05.9**	**+4.0**
XAN				AMB	AMB		
	comp=Z,40nm,0.9s						

CD2	Chengdu	17.87	294	⇓iP	P	12 21 36.0	+0.4
CD2				AMB	AMB		
	comp=Z,10.0nm,1.1s						
LZH	Lanzhou	19.76	309	eP	P	12 21 57.9	+2.0
LZH				PP	PP	12 22 16.5	-1.5
LZH				eS	S	12 25 34.0	+7.6
LZH				SS	SS	12 26 01.1	-2.3
LZH				AMB	AMB		
	comp=Z,50nm,1.5s						
LZH				AMB	AMB		
	comp=Z,120nm,4.0s						
LZH				LR	LR		
	comp=E,320nm,12.0s						
LZH				LR	LR		
	comp=Z,450nm,13.3s						
KKM	Kota Kinabalu	19.78	200	eP	P	12 21 56.8	+0.6
GTA	Gaotai	24.17	312	eP	P	12 22 40.8	+1.5
GTA				AMB	AMB		
	comp=Z,140nm,5.0s						
GTA				LR	LR		
	comp=N,330nm,18.6s						
GTA				LR	LR		
	comp=E,310nm,26.6s						
GTA				LR	LR		
	comp=Z,430nm,18.3s						
KSM	Kuching	26.23	209	eP	P	12 22 58.9	0.0
SONM	Songino Array	26.33	335	P	P	12 22 59.3	-0.1
	comp=Z,3.3nm,0.9s,mb3.8,baz=146,slow=8.4,SNR=17						
SONM				pP	pP	12 23 29.4	+3.2
	comp=Z,3.8nm,0.8s,baz=149,slow=8.9,SNR=6.8						
MKAR	Makanchi Array	38.88	315	P	P	12 24 47.9	-0.3
	comp=Z,1.2nm,0.5s,mb4.0,baz=101,slow=8.5,SNR=14						
MKAR				pP	pP	12 25 17.7	+1.0
	comp=Z,4.3nm,0.9s,baz=102,slow=11,SNR=5.9						
MKAR	Makanchi Array	38.88	315	P	P	12 24 47.9	-0.3
MKAR				pP	pP	12 25 17.7	+1.0
ZAL	Zalesovo	40.48	326	P	P	12 25 00.9	-0.4
	comp=Z,2.0nm,0.5s,mb4.2,baz=356,slow=8.2,SNR=11						
ZAL				pP	pP	12 25 31.4	+1.4
	comp=Z,1.1nm,0.5s,baz=356,slow=7.4,SNR=2.5						
FITZ	Fitzroy Crossi	42.82	176	eP	P	12 25 20.5	-0.4
	comp=Z,12nm,0.5s,mb4.9						
FITZ	Fitzroy Crossi	42.82	176	P	P	12 25 20.3	-0.6
	comp=Z,26nm,0.7s,mb5.0,baz=13,slow=8.5,SNR=18						
WRAB	Tennant Creek	45.95	165	eP	P	12 25 46.2	+0.4
	comp=Z,19nm,1.0s,mb4.8						
WRA	Warramunga Arr	45.95	165	P	P	12 25 45.9	+0.1
	comp=Z,7.2nm,0.6s,mb4.6,baz=348,slow=8.8,SNR=83						
WRA				pP	pP	12 26 14.1	-0.9
	comp=Z,3.9nm,0.7s,baz=347,slow=8.6,SNR=4.5						
WB2	Warramunga Arr	45.96	165	⇑iP	P	12 25 46.2	+0.3
BVAR	Borovoye Array	48.08	320	P	P	12 26 01.7	-0.3
	comp=Z,2.6nm,0.5s,mb4.3,baz=103,slow=8.0,SNR=21						
BVAR				pP	pP	12 26 30.8	-0.6
	comp=Z,1.4nm,0.7s,baz=117,slow=13,SNR=3.4						
CHKZ	Chkalovo	48.12	321	eP	P	12 26 01.1	-1.2
	comp=Z,3.0nm,0.6s,mb4.3						
NWAO	Narrogin (SRO)	57.74	186	P	P	12 27 12.1	-1.6
	comp=Z,16nm,1.0s,mb5.0,baz=35,slow=6.3,SNR=5.3						
NWAO	Narrogin (SRO)	57.74	186	P	P	12 27 12.1	-1.7
STKA	Stephens Creek	59.23	161	P	P	12 27 23.6	-0.5
	comp=Z,1.8nm,0.4s,mb4.5,baz=327,slow=11,SNR=3.6						
ILAR	Eielson Array	67.90	28	P	P	12 28 19.4	-0.9
	comp=Z,0.1nm,0.5s,mb2.9,baz=282,slow=5.6,SNR=5.7						
FINES	FINESS Array B	71.59	330	P	P	12 28 42.0	-0.6
	comp=Z,1.3nm,0.4s,mb4.1,baz=60,slow=5.8,SNR=16						
BRTR	Keskin Array B	73.95	307	pP	pP	12 29 29.9	+1.2
	comp=Z,2.2nm,0.9s,baz=112,slow=6.7,SNR=5.0						
NB2	NORSAR Subarra	78.29	332	P	P	12 29 20.1	-0.7
	comp=Z,1.2nm,0.5s,mb3.9,baz=54,slow=5.3						
NOA	NORSAR Array B	78.29	332	P	P	12 29 20.0	-0.8
	comp=Z,1.2nm,0.5s,mb3.9,baz=54,slow=5.5,SNR=8.5						
NOA	NORSAR Array B	78.29	332	P	P	12 29 20.0	-0.8
NAO	NORSAR Subarra	78.56	332	P	P	12 29 20.1	-2.2
	comp=Z,1.2nm,0.5s,mb4.0						
GERES	GERESS Array B	83.24	321	P	P	12 29 46.3	-0.8
	comp=Z,0.5nm,0.3s,mb3.8,baz=43,slow=17,SNR=5.4						
OPO	Ambohidratompo	85.34	247	P	P	12 29 58.8	+0.5
	comp=Z,2.6nm,0.7s,mb4.3,baz=85,slow=7.5,SNR=4.4						
NVAR	Mina Array Bea	94.90	44	pP	pP	12 31 17.0	+1.4
	comp=Z,0.9nm,1.0s,baz=315,slow=2.7,SNR=3.8						

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*IDC **22** 12:19:56.8±0.6, 14.29N×93.71E, mb4.1/17, mb1 4.3/17, mb1mx4.2/20, mbtmp4.1/17, MS4.1/9, Ms1 4.1/9, ms1mx3.9/15, Error ellipse: s-maj=24.3km s-min=14.9km az=60.0*

*BJI **22** 12:19:58.9, 14.02N×92.87E, h33^{km}, mB5.0, mb4.6, Ms4.2, Msz4.0*

*MOS **22** 12:19:58.4±1.4, 14.00N×93.43E, h33^{km}, mb5.0/13, Error ellipse: s-maj=12.7km s-min=8.2km az=104.4*

*NEIC **22** 12:20:00.1±0.4, 14.02N×93.42E, h30^{km}, mb4.7/14, Error ellipse: s-maj=11.3km s-min=8.5km az=54.0*

ISC 22 12:19:58.4±0.4**, 14.11N**±0.04×**93.10E**±0.05**, h33**^{km}**, n91,** σ**1**^{s}**55**/101**, mb4.4**/32**, MS4.1**/13**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	2.46	188	eP	P	12 20 39.4	+2.3
PBA				eS	S	12 21 04.9	-1.4
VIS	Vishakhapatnam	10.06	292	eP	P	12 22 20.5	-3.3
VIS				AMb	AMB	12 22 21.6	
	comp=Z,51nm,0.4s						
VIS				ex	S	12 24 03.0	-14
SHL	Shillong	11.46	354	ex	P	12 22 38.5	-4.3
SHL				eS	S	12 24 42.5	-8.1
KULM	Kulim	11.49	139	ePn	P	12 22 39.1	-4.2
BOK	Bokaro	11.80	326	eP	P	12 22 45.6	-1.8
BOK				AMb	AMB	12 22 46.2	
	comp=Z,14nm,0.7s						
BOK				eS	S	12 24 47.2	-12
MDRS	Chennai	12.54	267	ex	P	12 22 46.6	-11
BLSP	Bilaspur	13.12	309	ex	P	12 22 54.5	-11
BLSP				AMb	AMB	12 22 55.7	
	comp=Z,61nm,0.8s						
BLSP				eS	S	12 25 16.4	-14
PALK	Pallekele	13.94	242	ePn	P	12 23 19.1	+3.1
	comp=Z,44nm,1.2s						
PALK				eSn	S	12 25 51.0	+0.4
HYB	Hyderabad	14.38	285	iP	P	12 23 26.0	+4.2
HYB				eS	S	12 26 00.0	-1.0
HYB	Hyderabad	14.38	285	eP	P	12 23 26.0	+4.2
HYB				e		12 25 47.0	
HYB				eS	S	12 26 00.0	-1.0
HYB	Hyderabad	14.38	285	eP	P	12 23 26.0	+4.2
HYB				eS	S	12 26 00.0	-1.0
PKI	Pulchoki	15.19	333	ePn	P	12 23 30.8	-1.5
GUN	Gumba	15.29	335	ePn	P	12 23 31.4	-2.1
DMN	Daman	15.36	332	ePn	P	12 23 33.0	-1.5
ALBI	Allahabad	15.39	318	ex	S	12 26 28.0	+3.5
KKN	Kakani	15.44	333	ePn	P	12 23 34.4	-1.1
KKN				eSn	S	12 26 15.2	-11
	comp=Z,46nm,0.8s						
LSA	Lhasa	15.62	354	P	P	12 23 43.0	+5.2
LSA				S	S	12 26 30.9	+1.0
LSA				AMB	AMB		
	comp=Z,30nm,0.8s						
LSA				LR	LR		
	comp=N,370nm,16.1s						
LSA				LR	LR		
	comp=E,750nm,16.1s						
LSA				LR	LR		
	comp=Z,380nm,15.2s						
LSA	Lhasa	15.62	354	eP	P	12 23 39.8	+2.0
	comp=Z,19nm,0.6s						
LSA	Lhasa	15.62	354	eP	P	12 23 39.8	+2.0
LSA				pmax	pmax		
	comp=Z,19nm,0.6s						
GKN	Gorkha	15.91	332	ePn	P	12 23 38.5	-3.0
GKN				eSn	S	12 26 29.0	-7.7
KOLN	Koldanda	16.22	328	ePn	P	12 23 44.5	-0.9
KOLN				eSn	S	12 26 38.5	-5.4
	comp=Z,29nm,0.5s						
LATR	Latur	16.44	287	eP	P	12 23 45.0	-3.4
TRD	Trivandrum	16.77	252	ex	x	12 28 07.6	
BHPL	Bhopal	17.39	304	eP	P	12 24 00.4	+0.1
BHPL				AMb	AMB	12 24 08.7	
	comp=Z,13nm,0.8s						
BHPL				ex	x	12 27 13.0	
POO	Poona	18.99	286	ex	P	12 24 24.0	+4.0
POO				ex	S	12 27 40.0	-6.8
NDI	New Delhi	20.68	317	eP	P	12 24 42.0	+3.8
NDI				ex	x	12 26 36.5	
NDI				ex	S	12 28 15.0	-7.4
XAN	Xi'an	24.48	33	P	P	12 25 14.9	-0.9
XAN				AP		12 25 25.9	
XAN				S	S	12 29 40.6	+9.5
XAN				LR	LR		
	comp=N,300nm,13.9s,MS4.1						
XAN				LR	LR		
	comp=E,310nm,14.5s,MS4.1						
XAN				LR	LR		
	comp=Z,340nm,12.7s,MS4.0						
GTA	Gaotai	25.89	12	eP	P	12 25 31.0	+1.9
GTA				AP	pP	12 25 35.9	-2.6
GTA				AMB	AMB		
	comp=Z,100nm,3.8s						
GTA				LR	LR		
	comp=N,180nm,16.4s,MS3.9						
GTA				LR	LR		
	comp=E,270nm,16.3s,MS3.9						
GTA				LR	LR		
	comp=Z,280nm,16.0s,MS3.9						
WMQ	Urumqi	29.97	352	eP	P	12 26 06.6	+0.7
MKAR	Makanchi Array	33.82	347	P	P	12 26 39.2	-0.4
	comp=Z,4.9nm,0.8s,mb4.5,baz=157,slow=8.7,SNR=12						
MKAR				LR	LR	12 43 59.9	
	comp=Z,297nm,19.8s,MS4.0,baz=152,slow=43						
SONM	Songino Array	35.40	16	P	P	12 26 52.7	-0.4
	comp=Z,3.6nm,1.0s,mb4.2,baz=198,slow=8.9,SNR=13						
SONM				LR	LR	12 42 37.0	
	comp=Z,118nm,21.2s,MS3.6,baz=14,slow=39						
ULN	Ulaanbaatar	35.60	16	eP	P	12 26 55.1	+0.2
	comp=Z,11nm,1.2s,mb4.7						
ULN	Ulaanbaatar	35.60	16	eP	P	12 26 55.1	+0.2
ULN				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.7						
ZAK	Zakamensk	37.11	11	eP	P	12 27 08.2	+0.6
ZAK				e		12 29 32.9	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.5						
KURK	Kurchatov	38.35	345	eP	P	12 27 18.5	+0.6
	comp=Z,10.0nm,0.9s,mb4.5						
KURK	Kurchatov	38.35	345	eP	P	12 27 18.5	+0.5
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
ZAL	Zalesovo	40.27	352	P	P	12 27 33.9	0.0
	comp=Z,1.9nm,0.7s,mb3.9,baz=303,slow=9.5,SNR=7.4						
ZAL				LR	LR	12 48 35.0	
	comp=Z,393nm,19.4s,MS4.3,baz=285,slow=43						
CN2	Changchun	40.49	37	eP	P	12 27 40.3	+4.5
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
CN2				LR	LR		
	comp=N,700nm,20.0s,MS4.6						
CN2				LR	LR		
	comp=E,400nm,20.0s,MS4.6						
CN2				LR	LR		
	comp=Z,400nm,18.0s,MS4.3						
HIA	Hailar	41.31	26	eP	P	12 27 44.1	+1.5
	comp=Z,2.6nm,0.4s,mb4.2						
HIA	Hailar	41.31	26	eP	P	12 27 44.1	+1.6
HIA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
NVS	Novosibirsk	41.36	351	iP	P	12 27 47.7	+4.8
BVAR	Borovoye Array	42.80	340	P	P	12 27 55.8	+1.1
	comp=Z,1.5nm,0.8s,mb3.8,baz=173,slow=12,SNR=2.7						
CHKZ	Chkalovo	43.28	341	eP	P	12 27 58.7	+0.1
	comp=Z,7.4nm,0.6s,mb4.6						
CHKZ	Chkalovo	43.28	341	eP	P	12 27 58.7	+0.2
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
FITZ	Fitzroy Crossi	45.32	134	eP	P	12 28 11.7	-3.8
	comp=Z,2.9nm,0.4s,mb4.5						
MAJO	Matsushiro	45.97	53	eP	P	12 28 20.2	-0.2
MJAR	Matsushiro Arr	45.97	53	P	P	12 28 18.2	-2.2
	comp=Z,1.4nm,0.9s,mb3.9,baz=316,slow=9.1,SNR=4.0						
MJAR				LR	LR	12 49 31.3	
	comp=Z,253nm,20.6s,MS4.2,baz=170,slow=39						
AKTK	Aktyubinsk	46.05	329	P	P	12 28 23.5	+2.6
AKTO	Aktyubinsk	46.05	329	P	P	12 28 23.5	+2.6
	comp=Z,1.5nm,0.6s,mb4.1,baz=146,slow=13,SNR=4.3						
BOD	Bodaibo	46.40	15	eP	P	12 28 22.8	-0.6
BOD				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
GNI	Garni	49.48	311	eP	P	12 28 51.1	+3.5
GUMO	Guam	50.18	84	eP	P	12 28 51.6	-1.7
	comp=Z,185nm,1.1s						
GUMO	Guam	50.18	84	eP	P	12 28 51.6	-1.8
GUMO				pmax	pmax		
	comp=Z,185nm,1.1s						
KIV	Kislovodsk	52.12	315	P	P	12 29 07.7	+0.1
KIV	Kislovodsk	52.12	315	P	P	12 29 07.7	+0.1
NWAO	Narrogin (SRO)	52.15	154	eP	P	12 29 04.5	-3.5
	comp=Z,23nm,1.3s,mb5.0						
NWAO	Narrogin (SRO)	52.15	154	eP	P	12 29 04.5	-3.5
NWAO				pmax	pmax		
	comp=Z,23nm,1.3s						
WRA	Warramunga Arr	52.83	129	P	P	12 29 09.9	-3.4
	comp=Z,1.2nm,0.7s,mb4.0,baz=301,slow=9.8,SNR=11						
WRA				PcP	PcP	12 30 22.3	0.0
	comp=Z,0.5nm,0.4s,baz=321,slow=3.2,SNR=6.7						
WRAB	Tennant Creek	52.83	129	eP	P	12 29 10.3	-2.9
	comp=Z,8.5nm,0.6s,mb4.8						
WRAB	Tennant Creek	52.83	129	eP	P	12 29 10.4	-2.9
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
WB2	Warramunga Arr	52.84	129	eP	P	12 29 11.0	-2.3
YAK	Yakutsk	54.48	20	eP	P	12 29 24.6	-0.3
	comp=Z,30nm,1.1s,mb5.1						
YAK	Yakutsk	54.48	20	eP	P	12 29 24.7	-0.2
YAK				pmax	pmax		
	comp=Z,29nm,1.1s,mb5.1						
KMBO	Kilima Mbogo	57.33	259	LR	LR	12 52 43.7	
	comp=Z,110nm,18.7s,MS4.0,baz=93,slow=34						
BRTR	Keskin Array B	57.70	308	P	P	12 29 52.1	+3.9
	comp=Z,2.4nm,0.8s,mb4.3,baz=121,slow=8.8,SNR=5.8						
TIXI	Tiksi	61.37	12	eP	P	12 30 08.5	-4.7
TIXI				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
TIXI				MLR	MLR		
	comp=Z,206nm,17.0s,MS4.3						
AKASG	Malin Array Be	62.70	320	P	P	12 30 25.2	+2.9
	comp=Z,0.3nm,0.3s,mb4.0,baz=89,slow=4.7,SNR=6.1						
STKA	Stephens Creek	65.19	135	P	P	12 30 38.4	-0.4
	comp=Z,1.4nm,0.6s,mb4.2,baz=308,slow=19,SNR=2.1						
STKA	Stephens Creek	65.19	135	P	P	12 30 38.4	-0.4
FINES	FINESS Array B	66.77	331	P	P	12 30 50.4	+2.0
	comp=Z,1.5nm,0.7s,mb4.2,baz=45,slow=2.7,SNR=3.6						
FINES				LR	LR	13 05 29.5	
	comp=Z,127nm,18.1s,MS4.2,baz=3.1,slow=41						
ARCES	ARCESS Array B	69.09	340	P	P	12 31 03.0	+0.1
	comp=Z,1.3nm,0.5s,mb4.1,baz=51,slow=7.8,SNR=3.5						
ARCES				LR	LR	13 04 10.8	
	comp=Z,173nm,21.4s,MS4.3,baz=297,slow=38						
LSZ	Lusaka	70.51	248	P	P	12 31 13.0	+0.7
	comp=Z,12nm,1.2s,mb4.7						
LSZ	Lusaka	70.51	248	P	P	12 31 13.0	+0.7
LSZ				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.7						
BILL	Bilibino	70.72	22	P	P	12 31 15.3	+2.5
	comp=Z,12nm,1.3s,mb4.7						
BILL	Bilibino	70.72	22	P	P	12 31 15.3	+2.5
BILL				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.7						
GERES	GERESS Array B	72.56	317	P	P	12 31 28.6	+4.6
	comp=Z,2.6nm,0.6s,mb4.3,baz=76,slow=5.5,SNR=12						
NB2	NORSAR Subarra	73.84	330	P	P	12 31 34.1	+2.8
	comp=Z,1.4nm,0.5s,mb4.2,baz=90,slow=5.8						
NOA	NORSAR Array B	73.84	330	P	P	12 31 34.5	+3.2
	comp=Z,1.2nm,0.5s,mb4.1,baz=90,slow=5.7,SNR=6.5						
NOA				LR	LR	13 09 58.8	
	comp=Z,122nm,20.5s,MS4.2,baz=75,slow=41						
NAO	NORSAR Subarra	74.03	330	P	P	12 31 34.1	+1.7
	comp=Z,1.4nm,0.5s,mb4.2						
NAO	NORSAR Subarra	74.03	330	P	P	12 31 34.1	+1.7
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
BOSA	Boshof	78.09	236	P	P	12 32 00.7	+4.6
	comp=Z,5.7nm,0.7s,mb4.6,baz=76,slow=6.9,SNR=7.5						
BOSA	Boshof	78.09	236	P	P	12 31 57.5	+1.4
	comp=Z,6.9nm,0.8s,mb4.6						
BOSA	Boshof	78.09	236	P	P	12 31 57.6	+1.5
BOSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
MAW	Mawson	84.41	191	P	P	12 32 33.9	+5.5
	comp=Z,1.1nm,0.5s,mb4.2,baz=52,slow=10,SNR=3.7						
MAW	Mawson	84.41	191	eP	P	12 32 30.3	+1.9
	comp=Z,12nm,1.4s,mb4.8						
MAW	Mawson	84.41	191	eP	P	12 32 30.3	+1.9
MAW				pmax	pmax		
	comp=Z,12nm,1.4s						
ILAR	Eielson Array	89.38	22	P	P	12 32 52.2	-0.3
	comp=Z,0.7nm,0.7s,mb4.1,baz=294,slow=3.8,SNR=8.7						
DBIC	Dimbokro	96.05	278	LR	LR	13 15 26.0	
	comp=Z,56nm,18.7s,MS4.1,baz=152,slow=34						
PDAR	Pinedale Array	119.70	19	PKP	PKPdf	12 38 48.8	+3.3
	comp=Z,0.2nm,0.5s,baz=83,slow=31,SNR=2.6						
NVAR	Mina Array Bea	120.03	28	PKP	PKPdf	12 38 50.6	+4.4
	comp=Z,0.4nm,0.5s,SNR=2.8						
TXAR	Lajitas Array	133.88	20	PKP	PKPdf	12 39 17.1	+4.1
	comp=Z,0.2nm,0.5s,baz=198,slow=1.0,SNR=8.7						

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*NEIC **22** 12:41:03.3, 17.16N×94.32W, h150^{km}, MD3.8(MEX), After MEX.*

MEX 22 12:41:03.3±1.3**, 17.16N×94.32W, h150**^{km}±11^{km}**, MD3.8, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.54	263	iP	P	12 41 23.8	-1.6
CMIG				iS	S	12 41 39.1	-3.1
TUIG	Tuzandepetl	0.88	354	iP	P	12 41 25.5	-1.8
TUIG				iS	S	12 41 42.9	-3.0
HUIG	Huatulco	2.20	231	iP	P	12 41 37.9	-3.3
HUIG				iS	S	12 42 07.7	-2.7
CCIG	Comitan	2.27	112	iP	P	12 41 42.2	+0.1
CCIG				iS	S	12 42 10.5	-1.3
OXX	Oaxaca	2.30	269	iP	P	12 41 41.0	-1.5
OXX				iS	S	12 42 11.0	-1.5
VHO	Vista Hermosa	2.31	268	eP	P	12 41 41.4	-1.2
VHO				iS	S	12 42 11.2	-1.5
PPM	Popocatepetl	4.51	296	iP	P	12 42 10.9	-0.3
PPM				iS	S	12 43 01.4	-2.1

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*ATH **22** 12:52:21.8, 38.13N×26.54E, h29^{km}±5^{km}, MD3.2/3*

*NEIC **22** 12:52:21.8, 38.13N×26.54E, h29^{km}, MD3.2(ATH), MD2.8(ISK), After ATH.*

*ISK **22** 12:52:22.5, 38.20N×26.70E, h24^{km}, MD2.8*

*CSEM **22** 12:52:23.0±0.1, 38.19N×26.75E, h25^{km}, MD3.2, Error ellipse: s-maj=2.7km s-min=1.8km az=84.0*

ISC 22 12:52:21.5±0.8**, 38.17N**±0.03×**26.60E**±0.05**, h7**^{km}±5^{km}**, n18,** σ**1**^{s}**02**/28**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.19	358	iP	Pg	12 52 25.4	0.0
URLA				iS	Sg	12 52 28.7	+0.7
SMG	Samos	0.50	158	ePB	Pb	12 52 32.2	0.0
SMG				eSB	Sb	12 52 39.9	+0.5
IZM	Izmir	0.57	66	PG	Pg	12 52 33.0	+0.1
IZM				SG	Sg	12 52 40.6	+0.2
KDAG	Bornova	0.57	66	iP	Pg	12 52 31.9	-1.0
KDAG				iS	Sg	12 52 39.3	-1.3
PRK	Paraskevi	1.10	347	ePN	Pn	12 52 43.3	0.0
PRK				eSN	Sn	12 52 58.7	-0.2
AYDN	Tasoluk	1.13	116	iP	Pb	12 52 43.5	+0.5
AYDN				iS	Sb	12 52 58.1	+0.4
AYVA	Ayvalik	1.14	3	iP	Pb	12 52 43.9	+0.8
AYVA				iS	Sb	12 53 00.7	+2.8
AKS	Akhisar	1.18	53	PN	Pn	12 52 43.0	-1.4
BODT	Bodrum	1.24	153	PN	Pn	12 52 44.8	-0.5
BODT				SN	Sn	12 53 01.1	-1.4
MLSB	Milas	1.28	133	ePN	Pn	12 52 44.9	-0.9
BDRM	Kayabasi	1.29	149	iP	Pb	12 52 48.4	+2.6
BDRM				iS	Sb	12 53 04.5	+2.1
APE	Apeiranthos	1.39	218	ePN	Pn	12 52 47.9	+0.4
APE	Apeiranthos	1.39	218	ePN	Pn	12 52 46.4	-1.1
MANT	Manisa	1.57	78	iP	Pn	12 52 51.1	+1.1
MANT				iS	Sb	12 53 11.5	+1.0
DAT	Datca	1.64	151	ePN	Pn	12 52 50.6	-0.4
YER	Yerkesik	1.69	127	ePN	Pn	12 52 50.6	-1.1
DALT	Dalyan (Mudla)	2.14	130	ePN	Pn	12 52 57.2	-1.0
RDO	Rodhopi	3.08	345	ePN	Pn	12 53 11.1	-0.5

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*NIED **22** 13:02:00, 37.20N×134.80E, h380^{km}, Mw4.3 Best double couple: $M_0$3.16×10^{15} NP1:ϕ_s168°, δ81°, λ91°. NP2:ϕ_s344°, δ9°, λ87°.*

*BJI **22** 13:02:10.0, 37.26N×134.84E, h406^{km}, mB4.6, mb4.7*

*MOS **22** 13:02:10.5±0.7, 37.60N×134.58E, h365^{km}, mb4.0/13, Error ellipse: s-maj=13.4km s-min=10.6km az=124.1*

*IDC **22** 13:02:10.6±0.6, 37.23N×134.66E, h373^{km}±7^{km}, mb3.6/12, mb1 3.9/16, mb1mx3.7/25, mbtmp4.4/16, Error ellipse: s-maj=12.4km s-min=10.3km az=165.0*

*JMA **22** 13:02:10.7±0.1, 37.24N×134.83E, h393^{km}±1^{km}, M4.1*

*NEIC **22** 13:02:11.4±0.4, 37.21N×134.70E, h380^{km}±5^{km}, mb4.1/10, Error ellipse: s-maj=10.3km s-min=6.2km az=153.0*

ISC 22 13:02:10.7±0.2**, 37.24N**±0.05×**134.75E**±0.05**, h389**^{km}±3^{km}**, n87,** σ**0**^{s}**76**/107**, mb4.2**/35**, 1C-3D, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAI	Saigo	1.54	228	P	P	13 03 03.9	+0.6
JKG	Kaga	1.59	127	P	P	13 03 03.6	0.0
JKG				S	S	13 03 44.9	-0.2
JKY	Yasaka	1.63	170	P	P	13 03 04.1	+0.3
JKY				eS	S	13 03 45.5	0.0
JKSM	Kasumi	1.65	183	P	P	13 03 04.0	+0.1
JKSM				eS	S	13 03 45.9	+0.3
JJH	Hakui	1.65	100	P	P	13 03 03.9	-0.1
JJH				eS	S	13 03 46.5	+0.8
JHG	Hegura jima	1.83	70	P	P	13 03 05.1	+0.1
JHG				eS	S	13 03 48.0	+0.5
JWT	Wachi	2.02	165	P	P	13 03 06.6	+0.5
JWT				eS	S	13 03 49.8	+0.2
JSZ	Suzu	2.09	83	P	P	13 03 06.7	+0.1
JTT	Ttatey	2.16	106	P	P	13 03 06.9	-0.2
JTT				eS	S	13 03 51.6	+0.3
JGM	Miyama	2.21	134	P	P	13 03 07.2	-0.2
JGM				eS	S	13 03 51.2	-0.7
JHS	Saijyo	2.60	211	P	P	13 03 10.6	+0.4
JNG	Nsakai	2.81	106	P	P	13 03 11.8	-0.1
JNG				eS	S	13 04 01.0	+1.0
MAJO	Matsushiro	2.85	103	⇓iP	P	13 03 12.0	-0.2
MAT	Matsushiro	2.85	103	P	P	13 03 11.9	-0.3
MAT				S	S	13 04 00.1	-0.5
MAT	Matsushiro	2.85	103	eP	P	13 03 12.0	-0.2
MAT				eS	S	13 04 00.0	-0.6
MJAR	Matsushiro Arr	2.86	103	P	P	13 03 12.2	0.0
	23nm,0.3s,baz=282,slow=10.0,SNR=329						
MJAR				S	S	13 04 00.1	-0.5
	baz=129,slow=9.4,SNR=1.8						
JSD	Sado	2.90	73	P	P	13 03 12.2	-0.3
JIE	Ise	3.25	150	P	P	13 03 16.2	+0.6
JIE				eS	S	13 04 06.2	-0.5
JHK	Hiroka	3.40	89	P	P	13 03 16.3	-0.6
JRY	Ryogami san	3.55	109	P	P	13 03 18.5	+0.2
JAW	Awa shima	3.76	70	P	P	13 03 19.7	-0.6
JWZ	Kozaga	3.78	168	P	P	13 03 20.7	+0.2
JWZ				eS	S	13 04 15.3	0.0
JOD2	Odawara 2	4.02	118	P	P	13 03 22.3	-0.4
JOD2				eS	S	13 04 20.0	+0.7
JFT	Otama	4.46	85	P	P	13 03 26.1	-1.0
JFT				eS	S	13 04 26.6	-0.5
JTO	Tosashimizu	4.65	201	P	P	13 03 30.0	+0.9
JNU	Nakatsue	5.19	219	P	P	13 03 34.6	-0.1
	11nm,0.3s,baz=51,slow=8.9,SNR=98						
JNU				S	S	13 04 39.2	-1.4
	baz=139,slow=7.5,SNR=1.7						
JHJ	Hachijo jima 2	5.82	133	P	P	13 03 41.8	+0.3
	17nm,0.3s,baz=81,slow=19,SNR=3.8						
JHJ				S	S	13 04 56.8	+4.0
	1.2nm,0.3s,baz=243,slow=23,SNR=5.1						
ASAJ	Asahikawa	9.09	38	P	P	13 04 16.6	-2.4
	16nm,0.3s,baz=232,slow=11,SNR=102						
ASAJ				S	S	13 05 55.3	-5.1
	4.5nm,0.3s,baz=321,slow=31,SNR=14						
ASAJ	Asahikawa	9.09	38	P	P	13 04 16.7	-2.3
ASAJ				S	S	13 05 55.3	-5.1
ASAJ				pmax	pmax		
	comp=Z,16nm,0.3s						
CN2	Changchun	9.65	316	eP	P	13 04 25.8	+0.3
CN2				AMB	AMB		
	comp=Z,20nm,0.9s						
SNY	Shenyang	9.77	301	⇓P	P	13 04 28.0	+1.0
CBIJ	Chichi jima	11.91	146	S	S	13 06 50.1	-10

	comp=Z,13nm,0.3s,baz=124,slow=22,SNR=4.2						
XAN	**Xi’an**	**21.21**	**269**	P	**P**	**13 06 27.0**	**-0.7**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.3						
ENH	**Enshi**	**22.09**	**259**	⇓*e*P	**P**	**13 06 35.4**	**-0.6**
	comp=Z,32nm,0.7s,mb4.9						
SONM	**Songino Array**	**23.30**	**306**	P	**P**	**13 06 46.3**	**-0.6**
	comp=Z,5.0nm,0.7s,mb4.1,baz=110,slow=8.7,SNR=41						
LZH	**Lanzhou**	**24.77**	**277**	*e*P	**P**	**13 07 00.6**	**+0.2**
LZH				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.7						
LZH				AMB	AMB		
	comp=Z,160nm,4.5s						
GYA	**Guiyang**	**26.08**	**254**	⇑*i*P	**P**	**13 07 11.9**	**-0.4**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.4						
GTA	**Gaotai**	**27.40**	**285**	*e*P	**P**	**13 07 23.3**	**-0.6**
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
TIXI	**Tiksi**	**34.62**	**357**	*e*P	**P**	**13 08 23.0**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
BILL	**Bilibino**	**35.49**	**20**	*e*P	**P**	**13 08 33.6**	**+0.5**
	comp=Z,14nm,0.8s,mb4.3						
BILL	**Bilibino**	**35.49**	**20**	*e*P	**P**	**13 08 33.6**	**+0.4**
BILL				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.3						
LSA	**Lhasa**	**36.88**	**271**	*e*P	**P**	**13 08 47.6**	**+2.5**
	comp=Z,4.0nm,0.5s,mb4.0						
LSA	**Lhasa**	**36.88**	**271**	*e*P	**P**	**13 08 47.7**	**+2.5**
LSA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.0						
ZAL	**Zalesovo**	**37.86**	**312**	P	**P**	**13 08 52.5**	**-0.5**
	comp=Z,1.0nm,0.4s,mb3.5,baz=28,slow=7.6,SNR=5.1						
MKAR	**Makanchi Array**	**39.48**	**301**	P	**P**	**13 09 06.3**	**0.0**
	comp=Z,6.6nm,0.6s,mb4.2,baz=84,slow=10,SNR=59						
MKAR				ScP		13 14 15.8	
	comp=Z,1.2nm,0.8s,baz=80,slow=6.6,SNR=5.5						
MKAR	**Makanchi Array**	**39.48**	**301**	P	**P**	**13 09 06.3**	**0.0**
MKAR				ScP		13 14 15.8	
KURK	**Kurchatov**	**41.60**	**307**	*e*P	**P**	**13 09 22.8**	**-0.5**
	comp=Z,18nm,0.8s,mb4.5						
KURK	**Kurchatov**	**41.60**	**307**	*e*P	**P**	**13 09 22.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.5						
GUN	**Gumba**	**41.83**	**272**	*e*P	**P**	**13 09 25.0**	**-0.6**
	comp=Z,29nm,0.4s,mb5.0						
PKI	**Pulchoki**	**42.35**	**272**	*e*P	**P**	**13 09 30.3**	**+0.5**
	comp=Z,17nm,0.6s,mb4.6						
KKN	**Kakani**	**42.36**	**272**	*e*P	**P**	**13 09 30.1**	**+0.3**
	comp=Z,24nm,0.5s,mb4.8						
DMN	**Daman**	**42.58**	**272**	*e*P	**P**	**13 09 31.4**	**-0.2**
	comp=Z,16nm,0.5s,mb4.6						
GKN	**Gorkha**	**42.78**	**273**	*e*P	**P**	**13 09 33.3**	**+0.1**
	comp=Z,67nm,0.7s,mb5.0						
KOLN	**Koldanda**	**43.71**	**273**	*e*P	**P**	**13 09 40.7**	**+0.1**
	comp=Z,20nm,0.6s,mb4.6						
TKM2	**Tokmak 2**	**44.81**	**297**	P	**P**	**13 09 50.2**	**+1.1**
	SNR=8.3						
KZA	**Kyzart**	**45.27**	**295**	P	**P**	**13 09 54.6**	**+1.9**
	SNR=8.0						
KBK	**Karagaybulak**	**45.34**	**296**	P	**P**	**13 09 53.8**	**+0.6**
	SNR=10						
USP	**Ospenovka**	**45.51**	**297**	P	**P**	**13 09 54.8**	**+0.2**
	SNR=6.7						
VOSK	**Vostochnaya**	**46.15**	**311**	P	**P**	**13 09 58.6**	**-0.8**
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.9						
CHKZ	**Chkalovo**	**46.26**	**312**	*e*P	**P**	**13 09 59.1**	**-1.1**
	comp=Z,6.9nm,0.7s,mb4.1						
CHKZ	**Chkalovo**	**46.26**	**312**	P	**P**	**13 09 59.2**	**-1.0**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.8						
AML	**Almayashu**	**46.37**	**296**	P	**P**	**13 10 02.5**	**+1.2**
	SNR=25						
BVA0	**Borovoye Array**	**46.47**	**311**	*i* P	**P**	**13 10 01.8**	**0.0**
KKAR	**Karatay Array**	**48.37**	**298**	*i* P	**P**	**13 10 16.3**	**-0.2**
MCK	**McKinley**	**51.42**	**34**	*e*P	**P**	**13 10 39.6**	**+0.6**
	comp=Z,3.5nm,0.5s,mb3.9						
MCK	**McKinley**	**51.42**	**34**	*e*P	**P**	**13 10 39.7**	**+0.7**
MCK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.8						
PMR	**Palmer**	**51.63**	**36**	*e*P	**P**	**13 10 40.5**	**-0.1**
	comp=Z,8.2nm,0.9s,mb4.0						
PMR	**Palmer**	**51.63**	**36**	*e*P	**P**	**13 10 40.5**	**-0.1**
PMR				pmax	pmax		
	comp=Z,8.0nm,0.9s,mb4.0						
COLA	**College**	**51.74**	**32**	*e*P	**P**	**13 10 42.0**	**+0.7**
	comp=Z,3.2nm,0.4s,mb3.9						
COLA	**College**	**51.74**	**32**	*e*P	**P**	**13 10 42.1**	**+0.7**
COLA				pmax	pmax		
	comp=Z,3.0nm,0.4s,mb3.9						
ILAR	**Eielson Array**	**52.16**	**32**	P	**P**	**13 10 44.3**	**-0.2**
	comp=Z,5.4nm,0.6s,mb4.0,baz=265,slow=5.7,SNR=134						
ARU	**Arti**	**52.64**	**317**	*e*P	**P**	**13 10 47.3**	**-0.8**
	comp=Z,9.9nm,0.8s,mb4.1						
ARU	**Arti**	**52.64**	**317**	*e*P	**P**	**13 10 47.3**	**-0.8**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.1						
AB31	**Akbulak array**	**53.69**	**308**	*i* P	**P**	**13 10 54.7**	**-1.1**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.4						
INK	**Inuvik**	**56.61**	**26**	*e*P	**P**	**13 11 16.1**	**0.0**
	comp=Z,2.7nm,0.5s,mb3.8						
INK	**Inuvik**	**56.61**	**26**	*e*P	**P**	**13 11 16.1**	**0.0**
INK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
WB2	**Warramunga Arr**	**56.87**	**180**	*e*P	**P**	**13 11 17.5**	**-1.1**
WRA	**Warramunga Arr**	**56.87**	**180**	P	**P**	**13 11 17.2**	**-1.4**
	comp=Z,1.8nm,0.5s,mb3.7,baz=358,slow=7.5,SNR=51						
WRA				ScP		13 15 31.6	
	comp=Z,0.4nm,0.7s,baz=355,slow=4.9,SNR=5.6						
FINES	**FINESS Array B**	**66.07**	**330**	P	**P**	**13 12 18.1**	**-0.2**
	comp=Z,1.2nm,0.5s,mb3.8,baz=104,slow=7.9,SNR=6.2						
YKA	**Yellowknife Ar**	**66.23**	**28**	P	**P**	**13 12 19.7**	**+0.4**
	comp=Z,0.7nm,0.3s,mb3.7,baz=306,slow=6.5,SNR=11						
AKASG	**Malin Array Be**	**70.78**	**320**	P	**P**	**13 12 46.2**	**-1.0**
	comp=Z,2.2nm,0.5s,mb4.0,baz=50,slow=6.2,SNR=8.3						
AKASG	**Malin Array Be**	**70.78**	**320**	P	**P**	**13 12 46.2**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NVAR	**Mina Array Bea**	**79.03**	**50**	P	**P**	**13 13 35.7**	**+2.0**
	comp=Z,2.5nm,0.8s,mb3.9,baz=298,slow=3.9,SNR=19						
PDAR	**Pinedale Array**	**81.21**	**42**	P	**P**	**13 13 45.6**	**+0.6**
	comp=Z,1.8nm,0.8s,mb3.9,baz=335,slow=2.0,SNR=14						
ULM	**Lac du Bonnet**	**82.13**	**30**	P	**P**	**13 13 50.3**	**+0.7**
	comp=Z,3.3nm,0.6s,mb4.2,baz=333,slow=2.1,SNR=7.2						
TXAR	**Lajitas Array**	**94.09**	**48**	P	**P**	**13 14 48.6**	**+1.7**
	comp=Z,1.3nm,0.7s,mb4.1,baz=297,slow=2.8,SNR=12						
TXAR	**Lajitas Array**	**94.09**	**48**	P	**P**	**13 14 48.6**	**+1.7**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						

IDC ***22*** *13:21:20.8±0.5,60.72S×25.52W,mb5.3/14,mb1 5.2/14, mb1mx5.2/15,mbtmp5.2/14,MS4.9/13,Ms1 4.9/13, ms1mx4.9/15,Error ellipse: s-maj=20.2km s-min=14.5km az=12.0*

MOS ***22*** *13:21:21.8±1.3,60.57S×25.43W,h10*^{km}*,mb5.7/16,Error ellipse: s-maj=24.0km s-min=12.3km az=105.9*

BJI ***22*** *13:21:22.3,60.70S×25.30W,h13*^{km}*,mB5.6,Ms5.5, Msz5.2*

HRVD ***22*** *13:21:23.3±0.1,61.00S×24.98W,h12*^{km}*,MW5.5/83, Centroid moment Tensor Solution. LP body waves: s77,c152;Mantle waves: s83,c177; Half duration: 1*$\overset{s}{.}$*4 Moment tensor: Scale 10*^{17}*Nm; M*$_{rr}$*-1.79±.03; M*$_{\theta\theta}$*0.46±.03; M*$_{\phi\phi}$*1.33±.03; M*$_{r\theta}$*0.41±.07; M*$_{\theta\phi}$*1.06±.03; M*$_{\phi r}$*0.43±.07; Best double couple: M*$_0$*2.004×10*^{17} *NP1: φ*$_s$*30°,δ37°,λ-96°. NP2:φ*$_s$*217°,δ54°,λ-86°. Principal axes: T 2.127, Plg8°, Azm304°; N -.245, Plg3°, Azm35°; P -1.882, Plg81°, Azm146°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *13:21:23.3±0.2,60.73S×25.32W,mb5.5/21,MS5.0/1, MW5.4 Error ellipse: s-maj=9.6km s-min=6.4km az=47.0, Moment Tensor Solution. s8 Moment tensor: Scale 10*^{17} *Nm; M*$_{rr}$*-1.47; M*$_{\theta\theta}$*0.52; M*$_{\phi\phi}$*0.95; M*$_{r\theta}$*0.23; M*$_{\theta\phi}$*0.77; M*$_{\phi r}$*0.97; Best double couple: M*$_0$*1.8×10*^{17} *NP1:φ*$_s$*50°,δ31°, λ-68°. NP2:φ*$_s$*204°,δ62°,λ-103°. Principal axes: T 1.79, Plg16°, Azm304°; N .02, Plg11°, Azm210°; P -1.81, Plg70°, Azm87°;*

CSEM ***22*** *13:21:25.1,60.69S×25.09W,h33*^{km}*,mb5.5*

ISC 22 13:21:21.4±0.3,**60.54S**±0.06×**25.4W**±0.1,**h10**^{km}, **(h12**^{km}±.3^{km}**:pP-P),n214,**σ**1**$\overset{s}{.}$**05**/71,**mb5.4**/29,**MS5.1**/24, **6C-8D,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	**Neumayer--Stat**	**12.31**	**153**	Pn	**P**	**13 24 13.5**	**-6.0**
VNA3	**Neumayer Olymp**	**12.46**	**156**	Pn	**P**	**13 24 15.2**	**-6.3**
VNA2	**Neumayer--Watz**	**12.71**	**152**	⇑*i*Pn	**P**	**13 24 18.3**	**-6.5**
SNAA	**Sanae**	**14.30**	**151**	Pn	**P**	**13 24 39.6**	**-5.9**
	18nm,0.3s,baz=314,slow=14,SNR=851						
SNAA				Sn	**S**	**13 27 06.2**	**-19**
	3.9nm,0.3s,baz=232,slow=23,SNR=5.6						
SNAA				LR	LR	13 28 47.7	
	comp=Z,3μm,20.8s,baz=319,slow=32						
SNAA	**Sanae**	**14.30**	**151**	Pn	**P**	**13 24 40.1**	**-5.4**
PMSA	**Palmer Station**	**18.02**	**240**	*e*P	**P**	**13 25 35.0**	**+1.9**
	360nm,1.6s						
MAIT	**Maitri**	**18.07**	**140**	*e*P	**P**	**13 25 28.6**	**-5.2**
MAIT				*e*S	**S**	**13 29 06.4**	**+14**
NVL	**N’lazarevskaya**	**18.10**	**140**	⇑*e*P	**P**	**13 25 28.7**	**-5.4**
NVL				pmax	pmax		
	comp=Z,34nm,1.2s						
NVL				MLR	MLR		
	comp=Z,78nm,17.0s						
NVL				pmax	pmax		
	comp=Z,4.0nm,1.6s						
EFI	**East Falkland**	**20.04**	**282**	*e*P	**P**	**13 25 56.5**	**-0.6**
	comp=Z,321nm,1.0s						
EFI				pP		13 26 02.4	
EFI	**East Falkland**	**20.04**	**282**	*e*P	**P**	**13 25 56.5**	**-0.6**
EFI				*PP		13 26 02.4	
EFI				pmax	pmax		
	comp=Z,321nm,1.0s						
USHA	**Ushuaia**	**23.34**	**265**	P	**P**	**13 26 31.3**	**+1.3**
	comp=Z,201nm,1.0s,mb5.5,baz=98,slow=10,SNR=15						
USHA				LR	LR	13 33 33.5	
	comp=Z,2μm,19.2s,MS4.7,baz=93,slow=32						
SYO	**Syowa Base**	**27.62**	**135**	⇓P	**P**	**13 27 10.0**	**-0.3**
SYO	**Syowa Base**	**27.62**	**135**	⇓PnPn		13 27 49.9	
SYO	**Syowa Base**	**27.62**	**135**	⇓*e*P	**P**	**13 27 10.0**	**-0.3**
SYO				⇓*e*PnPn		13 27 49.9	
QSPA	**South Pole Qui**	**29.70**	**180**	*e*P	**P**	**13 27 28.7**	**-0.2**
	comp=Z,113nm,0.9s,mb5.6						
TRQA	**Tornquist**	**32.10**	**298**	*e*P	**P**	**13 27 49.5**	**-1.0**
	comp=Z,61nm,0.7s,mb5.5						
TRQA				*e*pP	pP	13 27 53.1	-0.4
PLCA	**Paso Flores**	**33.89**	**285**	P	**P**	**13 28 04.8**	**-1.2**
	comp=Z,38nm,0.8s,mb5.4,baz=144,slow=8.4,SNR=35						
PLCA				LR	LR	13 41 01.1	
	comp=Z,2μm,19.3s,MS4.9,baz=135,slow=35						
PLCA	**Paso Flores**	**33.89**	**285**	*e*P	**P**	**13 28 06.1**	**+0.1**
	comp=Z,56nm,0.9s,mb5.5						
PLCA	**Paso Flores**	**33.89**	**285**	*e*P	**P**	**13 28 06.1**	**+0.1**
PLCA				pmax	pmax		
	comp=Z,56nm,0.9s						
MAW	**Mawson**	**36.05**	**139**	*e*P	**P**	**13 28 22.9**	**-1.3**
	comp=Z,20nm,0.7s,mb5.1						
MAW	**Mawson**	**36.05**	**139**	P	**P**	**13 28 22.9**	**-1.4**
	comp=Z,24nm,0.7s,mb5.2,baz=240,slow=8.5,SNR=31						
MAW				LR	LR	13 41 40.7	
	comp=Z,2μm,19.5s,MS4.9,baz=239,slow=34						
MAW	**Mawson**	**36.05**	**139**	*e*P	**P**	**13 28 22.9**	**-1.3**
MAW				pmax	pmax		
	comp=Z,20nm,0.7s						
FCH	**Farellones**	**39.76**	**293**	*e*P	**P**	**13 28 55.6**	**0.0**
PEL	**Peldehue**	**40.09**	**292**	*e*P	**P**	**13 28 57.1**	**-1.3**
CPUP	**Villa Florida**	**40.52**	**313**	*e*P	**P**	**13 29 01.1**	**-0.9**
	comp=Z,134nm,0.7s,mb5.7						
CPUP	**Villa Florida**	**40.52**	**313**	*e*P	**P**	**13 29 01.1**	**-0.9**
CPUP				pmax	pmax		
	comp=Z,134nm,0.7s						
SUR	**Sutherland**	**41.19**	**68**	P	**P**	**13 29 08.9**	**+1.4**
	comp=Z,25nm,0.7s,mb4.9,baz=198,slow=9.8,SNR=14						
SUR	**Sutherland**	**41.19**	**68**	*e*P	**P**	**13 29 09.0**	**+1.5**
	comp=Z,90nm,1.4s,mb5.2						
SUR				*e*pP	pP	13 29 12.5	+2.1
SBA	**Scott Base**	**41.65**	**184**	*e*P	**P**	**13 29 11.6**	**+1.0**
	comp=Z,134nm,1.5s,mb5.3						
SBA	**Scott Base**	**41.65**	**184**	*e*P	**P**	**13 29 11.6**	**+1.0**
SBA				pmax	pmax		
	comp=Z,134nm,1.5s,mb5.3						
VNDA	**Vanda**	**42.11**	**182**	*e*P	**P**	**13 29 14.9**	**+0.5**
	comp=Z,68nm,1.2s,mb5.2						
VNDA	**Vanda**	**42.11**	**182**	*e*P	**P**	**13 29 14.9**	**+0.5**
VNDA				pmax	pmax		
	comp=Z,68nm,1.2s						
TLL	**Tololo Astrono**	**42.66**	**295**	*e*P	**P**	**13 29 19.9**	**+0.4**
MIR	**Mirnyy**	**45.38**	**150**	*e*P	**P**	**13 29 41.0**	**+0.1**
MIR				*e*		13 31 26.0	
MIR				*e*		13 31 26.0	
MIR				*e*S	**S**	**13 36 22.0**	**+0.8**
MIR				pmax	pmax		
	comp=Z,900nm,6.8s						
MIR				smax			
	comp=N,1μm,14.0s						
MIR				smax			
	comp=E,1μm,12.0s						
MIR				MLR	MLR		
	comp=N,890nm,16.0s,MS4.9						
MIR				MLR	MLR		
	comp=E,690nm,16.0s,MS4.9						
MIR				MLR	MLR		
	comp=Z,2μm,16.0s,MS5.1						
BOSA	**Boshof**	**46.41**	**70**	P	**P**	**13 29 49.4**	**-0.3**
	comp=Z,44nm,0.8s,mb5.4,baz=214,slow=8.3,SNR=12						
BOSA				LR	LR	13 45 23.1	
	comp=Z,2μm,18.3s,MS5.0,baz=106,slow=31						
BOSA	**Boshof**	**46.41**	**70**	*e*P	**P**	**13 29 49.7**	**+0.1**
	comp=Z,86nm,1.1s,mb5.6						
BOSA				*e*pP	pP	13 29 53.3	+0.7
BOSA	**Boshof**	**46.41**	**70**	*e*P	**P**	**13 29 49.7**	**+0.1**
BOSA				*e**PP	pP	13 29 53.3	+0.7
BOSA				pmax	pmax		
	comp=Z,86nm,1.1s,mb5.6						
BAO	**Brasilia Array**	**47.73**	**330**	P	**P**	**13 30 02.5**	**+2.4**
BDFB	**Brasilia**	**47.73**	**330**	P	**P**	**13 29 59.2**	**-0.9**
	comp=Z,35nm,0.7s,mb5.5,baz=164,slow=5.0,SNR=41						
BDFB				LR	LR	13 46 54.3	
	comp=Z,1μm,20.6s,MS4.9,baz=163,slow=32						
LBTB	**Lobatse**	**49.64**	**68**	*e*P	**P**	**13 30 14.8**	**-0.1**
	comp=Z,93nm,1.1s,mb5.7						
LBTB				*e*pP	pP	13 30 18.6	+0.7
LBTB	**Lobatse**	**49.64**	**68**	*e*P	**P**	**13 30 14.8**	**0.0**
LBTB				*e**PP	pP	13 30 18.6	+0.7
LBTB				pmax	pmax		
	comp=Z,93nm,1.1s,mb5.7						
TSUM	**Tsumeb**	**51.27**	**56**	*e*P	**P**	**13 30 27.5**	**+0.3**
	comp=Z,54nm,1.2s,mb5.3						
TSUM				*e*pP	pP	13 30 31.4	+1.0
LPAZ	**La Paz**	**53.76**	**306**	P	**P**	**13 30 45.8**	**-0.1**
	comp=Z,25nm,0.7s,mb5.3,baz=154,slow=5.7,SNR=52						
LPAZ	**La Paz**	**53.76**	**306**	*e*P	**P**	**13 30 46.1**	**+0.2**
	comp=Z,43nm,0.8s,mb5.4						
LPAZ	**La Paz**	**53.76**	**306**	*e*P	**P**	**13 30 46.1**	**+0.2**
LPAZ				pmax	pmax		
	comp=Z,43nm,0.8s						
ARE	**Arequipa**	**54.97**	**302**	*e*P	**P**	**13 30 54.0**	**-0.8**
RCBR	**Riachuelo**	**55.16**	**347**	*e*P	**P**	**13 30 56.7**	**+0.4**
	comp=Z,15nm,0.8s,mb5.1						
RCBR				*e*PcP	PcP	13 31 59.9	+2.6
SAML	**Samuel**	**58.63**	**315**	*e*P	**P**	**13 31 18.8**	**-2.1**
	comp=Z,48nm,0.8s,mb5.6						
SAML				*e*pP	pP	13 31 22.4	-1.6
LSZ	**Lusaka**	**59.30**	**65**	P	**P**	**13 31 24.3**	**-1.3**
	comp=Z,26nm,0.8s,mb5.3,baz=200,slow=8.2,SNR=14						
LSZ	**Lusaka**	**59.30**	**65**	*e*P	**P**	**13 31 24.8**	**-0.7**
	comp=Z,46nm,1.0s,mb5.5						
LSZ				*e*pP	pP	13 31 29.0	+0.4
LSZ	**Lusaka**	**59.30**	**65**	*e*P	**P**	**13 31 24.8**	**-0.7**
LSZ				*e**PP	pP	13 31 29.0	+0.4
LSZ				pmax	pmax		
	comp=Z,46nm,1.0s,mb5.5						
NNA	**Nana**	**61.24**	**299**	*e*P	**P**	**13 31 38.2**	**-0.6**
	comp=Z,110nm,1.4s,mb5.8						
DBIC	**Dimbokro**	**68.94**	**22**	P	**P**	**13 32 28.6**	**0.0**
	comp=Z,78nm,0.8s,mb5.7,baz=170,slow=7.2,SNR=53						
DBIC				LR	LR	13 55 16.8	
	comp=Z,516nm,21.2s,MS4.7,baz=184,slow=30						
DBIC	**Dimbokro**	**68.94**	**22**	*e*P	**P**	**13 32 28.9**	**+0.3**
	comp=Z,112nm,1.0s,mb5.8						
DBIC				*e*pP	pP	13 32 33.0	+1.3
DBIC	**Dimbokro**	**68.94**	**22**	*e*P	**P**	**13 32 28.9**	**+0.3**
DBIC				*e**PP	pP	13 32 33.0	+1.3
DBIC				pmax	pmax		
	comp=Z,112nm,1.0s						
ROSC	**El Rosal**	**75.48**	**309**	P	**P**	**13 33 09.1**	**+1.7**
	comp=Z,8.5nm,0.7s,mb4.8,baz=257,slow=17,SNR=6.9						
ROSC				LR	LR	14 06 18.7	
	comp=Z,894nm,20.7s,MS5.0,baz=186,slow=36						
KMBO	**Kilima Mbogo**	**75.89**	**66**	P	**P**	**13 33 11.7**	**+2.0**
	comp=Z,3.6nm,0.8s,mb4.3,baz=222,slow=10,SNR=5.2						
KMBO				LR	LR	14 02 46.4	
	comp=Z,849nm,19.3s,MS5.1,baz=279,slow=33						
SDV	**Santo Domingo**	**77.83**	**314**	*e*P	**P**	**13 33 20.2**	**-0.2**
	comp=Z,27nm,0.8s,mb5.2						
SDV				*e*pP	pP	13 33 24.2	+0.6
RKT	**Rikitea**	**79.21**	**242**	*e*LR	LR	13 58 09.6	
	comp=Z,678nm,25.2s						
MUN	**Mundaring**	**82.61**	**148**	*e*P	**P**	**13 33 44.7**	**-0.9**
TBI	**Tubuai**	**84.93**	**230**	*e*S	S	13 44 23.0	-1.7
TBI				*e*LQ		13 56 52.7	
TBI				*e*LR	LR	14 00 34.5	
	comp=Z,272nm,28.2s						
FORT	**Forrest**	**86.45**	**157**	*e*P	**P**	**13 34 04.5**	**-0.4**
	comp=Z,42nm,1.0s,mb5.6						
STKA	**Stephens Creek**	**87.31**	**169**	P	**P**	**13 34 08.6**	**-0.5**
	comp=Z,22nm,1.1s,mb5.3,baz=166,slow=6.6,SNR=16						
STKA				LR	LR	14 13 12.9	
	comp=Z,1μm,18.0s,MS5.3,baz=191,slow=36						
STKA	**Stephens Creek**	**87.31**	**169**	*e*P	**P**	**13 34 08.7**	**-0.3**
ARMA	**Armidale**	**89.34**	**177**	*e*P	**P**	**13 34 18.8**	**0.0**
ATD	**Arta Tunnel**	**89.62**	**66**	LR	LR	14 11 19.9	
	comp=Z,860nm,19.8s,MS5.2,baz=78,slow=33						
PPT	**Papeete**	**90.22**	**232**	*e*S	S	13 45 13.1	-1.6
PPT				*e*LR	LR	14 03 06.7	
	comp=Z,284nm,19.8s,baz=161						
PPT	**Papeete**	**90.22**	**232**	LR	LR	14 09 39.4	
	comp=Z,605nm,19.2s,MS5.0,baz=120,slow=32						
VAH	**Vaihoa**	**91.56**	**235**	*e*P	**P**	**13 34 30.7**	**+1.4**
	comp=Z,122nm,1.3s,mb6.1						
PMOR	**Pomariorio Ree**	**91.88**	**235**	*e*P	**P**	**13 34 32.3**	**+1.5**
	comp=Z,79nm,1.3s,mb5.9						
TAOE	**Nuku Hiva Isla**	**94.08**	**244**	*e*LR	LR	14 04 53.2	
	comp=Z,869nm,22.6s						
ASPA	**Alice Springs**	**94.42**	**161**	⇓*i*P	**P**	**13 34 41.3**	**-1.1**
MDT	**Midelt**	**94.58**	**17**	P	**P**	**13 34 44.1**	**+1.2**
	comp=Z,4.2nm,1.1s,mb4.8,baz=343,slow=1.9,SNR=3.4						
DZM	**Mont Dzumac**	**97.12**	**191**	P	**P**	**13 34 53.3**	**-1.4**
	comp=Z,3.3nm,0.7s,mb4.8,baz=106,slow=6.4,SNR=3.8						
WRA	**Warramunga Arr**	**98.14**	**161**	P	**P**	**13 34 57.7**	**-1.6**
	comp=Z,6.0nm,1.1s,mb5.0,baz=194,slow=3.7,SNR=18						
WRA				PKKPbc		13 51 32.9	
	comp=Z,1.0nm,0.6s,baz=356,slow=2.9,SNR=11						
FITZ	**Fitzroy Crossi**	**98.22**	**152**	LR	LR	14 15 02.5	
	comp=Z,958nm,20.4s,MS5.3,baz=266,slow=33						
ESDC	**Sonseca Array**	**101.41**	**17**	P	P	13 35 17.4	+3.7
	comp=Z,1.6nm,0.9s,baz=166,slow=5.3,SNR=4.0						
TXAR	**Lajitas Array**	**109.61**	**295**	PKKPbc		13 50 56.0	
	comp=Z,0.2nm,0.3s,baz=270,slow=1.3,SNR=5.3						
BRTR	**Keskin Array B**	**110.94**	**45**	PP	PP	13 40 26.2	-10
	comp=Z,0.5nm,0.6s,baz=180,slow=6.2,SNR=2.9						
GERES	**GERESS Array B**	**113.54**	**27**	PP	PP	13 40 50.2	-5.4
	comp=Z,4.8nm,0.9s,baz=207,slow=6.0,SNR=9.3						
KHC	**Kasperske Hory**	**113.78**	**27**	*e*PP	PP	13 40 57.0	-0.3
NKC	**Novy Kostel**	**114.57**	**26**	*e*PP	PP	13 41 02.1	-0.7
PRU	**Pruhonice**	**114.80**	**27**	*e*PP	PP	13 41 03.4	-1.0
DPC	**Dobruska-Polom**	**115.55**	**28**	*e*PP	PP	13 40 58.3	-11
WUAZ	**Wupatki**	**118.30**	**292**	*e*PKPdf	PKPdf	13 40 10.3	-1.1
AKASG	**Malin Array Be**	**119.28**	**36**	PKP	PKPdf	13 40 09.2	-3.8
	comp=Z,0.9nm,0.5s,baz=233,slow=1.9,SNR=9.4						
AKASG				PP	PP	13 41 28.8	-6.7
	comp=Z,0.2nm,0.3s,baz=200,slow=7.0,SNR=5.0						
PV10	**Paradox Valley**	**119.61**	**296**	*e*PKPdf	PKPdf	13 40 12.9	-0.9
SCHQ	**Schefferville**	**119.64**	**334**	PKP	PKPdf	13 40 09.3	-4.2
	comp=Z,6.0nm,0.8s,baz=171,slow=4.2,SNR=6.9						
SCHQ	**Schefferville**	**119.64**	**334**	PKP	PKPdf	13 40 09.3	-4.2
NEN	**Nelson**	**120.01**	**290**	*e*PKPdf	PKPdf	13 40 13.4	-1.3
SRU	**San Rafael**	**120.88**	**295**	*e*PKPdf	PKPdf	13 40 14.4	-2.0
ARUT	**Antelope Range**	**121.11**	**292**	*e*PKPdf	PKPdf	13 40 16.6	-0.3
MSU	**Marysvale**	**121.13**	**294**	*e*PKPdf	PKPdf	13 40 16.0	-1.0
MVU	**Marysvale**	**121.14**	**294**	*e*PKPdf	PKPdf	13 40 16.4	-0.6
TMUT	**Trail Mountain**	**121.33**	**295**	*e*PKPdf	PKPdf	13 40 16.5	-0.8
TPNV	**Topopah Spring**	**121.73**	**290**	*e*PKPdf	PKPdf	13 40 17.2	-0.8
RSSD	**Black Hills**	**122.19**	**303**	*e*PKPdf	PKPdf	13 40 16.7	-2.1
DAU	**Daniels Canyon**	**122.26**	**296**	*e*PKPdf	PKPdf	13 40 18.1	-0.9
DUG	**Dugway**	**122.78**	**294**	*e*PKPdf	PKPdf	13 40 18.6	-1.4
TCUT	**Toone Canyon**	**122.90**	**296**	*e*PKPdf	PKPdf	13 40 19.5	-0.6
KONO	**Kongsberg**	**122.91**	**20**	⇑*i*PKIKP	PKPdf	13 40 22.5	+2.8
KOLN	**Koldanda**	**123.08**	**92**	*e*P	PKPdf	13 40 17.6	-3.2
	comp=Z,51nm,1.3s						
HWUT	**Hardware Ranch**	**123.37**	**296**	*e*PKPdf	PKPdf	13 40 19.6	-1.5
PDAR	**Pinedale Array**	**123.42**	**299**	PKP	PKPdf	13 40 17.4	-3.8
	comp=Z,2.1nm,0.8s,baz=153,slow=3.3,SNR=11						
SPUT	**South Promonto**	**123.52**	**296**	*e*PKPdf	PKPdf	13 40 20.4	-1.0
DMN	**Daman**	**123.69**	**93**	*e*P	PKPdf	13 40 19.4	-2.7
GKN	**Gorkha**	**123.78**	**92**	*e*P	PKPdf	13 40 18.9	-3.4
	comp=Z,56nm,1.3s						
PKI	**Pulchoki**	**123.81**	**93**	*e*P	PKPdf	13 40 19.1	-3.2
	comp=Z,59nm,1.4s						
MNV	**Mina**	**123.81**	**289**	*e*PKPdf	PKPdf	13 40 21.3	-0.8
NVAR	**Mina Array Bea**	**123.88**	**289**	PKP	PKPdf	13 40 20.6	-1.6
	comp=Z,2.7nm,0.8s,baz=137,slow=3.9,SNR=18						
KKN	**Kakani**	**123.92**	**93**	*e*P	PKPdf	13 40 19.3	-3.3
	comp=Z,22nm,0.8s						
ULM	**Lac du Bonnet**	**124.07**	**313**	PKP	PKPdf	13 40 18.5	-3.8
	comp=Z,6.1nm,0.8s,baz=24,slow=0.5,SNR=4.1						
HFS	**Hagfors**	**124.10**	**22**	PKP	PKPdf	13 40 20.3	-1.8
	comp=Z,2.7nm,0.8s,baz=146,slow=5.3,SNR=3.7						
HFS				PP	PP	13 42 01.8	-6.4
	comp=Z,4.9nm,1.0s,baz=225,slow=4.1,SNR=3.1						
NAO	**NORSAR Subarra**	**124.23**	**21**	PKPdf	PKPdf	13 40 21.8	-0.5
GUN	**Gumba**	**124.32**	**93**	*e*P	PKPdf	13 40 20.6	-2.7
	comp=Z,94nm,1.5s						
ELK	**Elko**	**124.32**	**293**	*e*PKPdf	PKPdf	13 40 22.1	-0.9
REDW	**Red Top Meadow**	**124.46**	**298**	*e*PKPdf	PKPdf	13 40 20.9	-2.3
NB2	**NORSAR Subarra**	**124.50**	**21**	PKPdf	PKPdf	13 40 21.8	-1.0
	comp=Z,6.3nm,1.0s,baz=202,slow=1.9						
NB2	**NORSAR Subarra**	**124.50**	**21**	PKPd		13 40 21.8	
	baz=202,slow=1.9						
NB2	**NORSAR Subarra**	**124.50**	**21**	⇓PKP	PKPdf	13 40 21.8	-1.0
NOA	**NORSAR Array B**	**124.50**	**21**	PKP	PKPdf	13 40 20.7	-2.1
	comp=Z,3.2nm,0.8s,baz=199,slow=1.7,SNR=8.5						
CMB	**Columbia Colle**	**124.54**	**287**	*e*PKPdf	PKPdf	13 40 22.6	-0.8
LOHW	**Long Hollow**	**124.56**	**299**	*e*PKPdf	PKPdf	13 40 21.8	-1.5
TPAW	**Teton Pass**	**124.61**	**298**	*e*PKPdf	PKPdf	13 40 22.4	-0.9
MOOW	**Moose Ponds**	**124.73**	**299**	*e*PKPdf	PKPdf	13 40 22.3	-1.3
IMW	**Indian Meadow**	**124.93**	**298**	*e*PKPdf	PKPdf	13 40 23.1	-0.9
LAO	**LASA Array**	**125.17**	**304**	*e*PKPdf	PKPdf	13 40 22.5	-1.9
SHL	**Shillong**	**125.31**	**100**	*e*P	PKPdf	13 40 23.0	-2.2
OBN	**Obninsk**	**125.32**	**38**	⇓*i*PKIKP	PKPdf	13 40 22.2	-2.2
OBN				pmax	pmax		
	comp=Z,46nm,2.1s						
YFT	**Old Faithful**	**125.33**	**299**	*e*PKPdf	PKPdf	13 40 25.0	+0.3
YMR	**Madison River**	**125.56**	**299**	*e*PKPdf	PKPdf	13 40 24.6	-0.5
QLMT	**Earthquake Lak**	**125.89**	**299**	*e*PKPdf	PKPdf	13 40 25.9	+0.2
HLID	**Hailey**	**126.19**	**296**	*e*PKPdf	PKPdf	13 40 25.6	-0.7
MCMT	**McKenzie Canyo**	**126.50**	**298**	*e*PKPdf	PKPdf	13 40 26.9	0.0
DLMT	**Dillon**	**126.81**	**298**	*e*PKPdf	PKPdf	13 40 26.6	-0.8
WVOR	**Wild Horse Val**	**127.21**	**292**	*e*PKPdf	PKPdf	13 40 28.1	-0.2
HRY	**Holter Researc**	**127.54**	**300**	*e*PKPdf	PKPdf	13 40 28.2	-0.7
MOD	**Modoc**	**127.57**	**290**	*e*PKPdf	PKPdf	13 40 28.6	-0.5
WDC	**Whiskeytown Da**	**127.58**	**288**	*e*PKPdf	PKPdf	13 40 27.5	-1.6
FINES	**FINESS Array B**	**127.92**	**28**	PKP	PKPdf	13 40 26.4	-2.8
	comp=Z,6.1nm,0.7s,baz=135,slow=2.7,SNR=13						
CHMT	**Chamberlain Mo**	**128.31**	**299**	*e*PKPdf	PKPdf	13 40 29.2	-1.2
BMO	**Blue Mountains**	**128.50**	**295**	*e*PKPdf	PKPdf	13 40 28.8	-2.0
MSO	**Missoula**	**128.54**	**299**	*e*PKPdf	PKPdf	13 40 29.8	-1.1
KAF	**Kangasniemi**	**128.56**	**28**	*e*p	PKPdf	13 40 27.4	-3.0
	comp=Z,19nm,0.9s						
SFJD	**Kangerlussuaq**	**128.57**	**348**	*i* P	PKPdf	13 40 28.4	-2.0
	comp=Z,23nm,1.3s						
	comp=Z,310nm,22.0s						
SFJD	**Kangerlussuaq**	**128.57**	**348**	*e*P	PKPdf	13 40 28.4	-2.0
SFJD				LR	LR		
	comp=Z,320nm,22.0s,MS5.0						
KSH	**Kashi**	**128.80**	**77**	*e*PKP	PKPdf	13 40 33.0	+1.4
KSH				*e*PP	PP	13 42 43.8	+4.2
KSH				*e*PKS	PKS	13 44 08.1	+4.3
KSH				*e*PPP	PPP	13 45 24.0	-1.4
KSH				*e*SKS	SKS	13 47 39.1	-0.3
KSH				*e*SKKS		13 49 27.3	
KSH				PP	PP		
	comp=Z,170nm,4.1s						
KSH				LR	LR		
	comp=N,310nm,4.8s						
KSH				LR	LR		
	comp=E,590nm,6.2s						
KKAR	**Karatay Array**	**129.01**	**70**	*i* PKIKP	PKPdf	13 40 29.1	-2.7
AB31	**Akbulak array**	**129.10**	**57**	*i* PKIKP	PKPdf	13 40 28.7	-3.1
AB31				pmax	pmax		
	comp=Z,3.0nm,0.6s						

AKTO	**Aktyubinsk**	**129.22**	**55**	PKIKP	PKPdf	13 40 29.6	-2.4
AKTO				pmax	pmax		
	comp=Z,51nm,2.6s						
HUMO	**Hull Mountain**	**129.35**	**289**	*e*PKPdf	PKPdf	13 40 31.6	-1.0
KMI	**Kunming**	**130.09**	**111**	PKP	PKPdf	13 40 31.3	-3.1
KMI				XPKP		13 40 35.8	
KMI				PP	PP	13 42 49.9	+1.9
KMI				PKS	PKS	13 44 06.3	-0.3
KMI				PPP	PPP	13 45 39.3	+3.2
KMI				SKS	SKS	13 47 40.1	-3.0
KMI				SKKS		13 49 40.3	
KMI				SS	SS	14 00 15.5	+4.9
KMI				LR	LR		
	comp=N,800nm,11.3s,MS5.7						
KMI				LR	LR		
	comp=E,290nm,11.3s,MS5.7						
KMI				LR	LR		
	comp=Z,690nm,11.8s,MS5.6						
JOF	**Joensuu**	**130.46**	**30**	*e*p	PKPdf	13 40 32.0	-2.0
	comp=Z,11nm,1.0s						
GYA	**Guiyang**	**133.03**	**115⇑**	*i*PKP	PKPdf	13 40 38.9	-1.0
GYA				PP	PP	13 43 04.1	-2.4
GYA				PKS	PKS	13 44 13.8	+1.8
GYA				SKKS		13 49 55.1	
GYA				PP	PP		
	comp=Z,160nm,8.9s						
GYA				LR	LR		
	comp=N,370nm,20.8s,MS5.2						
GYA				LR	LR		
	comp=E,410nm,21.0s,MS5.2						
GYA				LR	LR		
	comp=Z,510nm,21.2s,MS5.2						
EDM	**Edmonton**	**133.14**	**305**	*e*PKPdf	PKPdf	13 40 37.2	-2.1
SUMG	**Summit**	**133.14**	**355**	*e*PKPdf	PKPdf	13 40 37.4	-1.5
ARCES	**ARCESS Array B**	**134.77**	**23**	PKP	PKPdf	13 40 38.7	-3.3
	comp=Z,6.5nm,1.0s,baz=280,slow=0.5,SNR=8.0						
ARCES	**ARCESS Array B**	**134.77**	**23**	PKP	PKPdf	13 40 38.7	-3.3
SVE	**Sverdlovsk**	**135.04**	**51**	*e*PKIKP	PKPdf	13 40 40.5	-2.3
SVE				*e*		13 43 17.6	
SVE				pmax	pmax		
	comp=Z,65nm,2.7s						
KEV	**Kevo**	**135.24**	**23**	*e*p	PKPdf	13 40 48.8	+5.9
	comp=Z,26nm,1.1s						
KEV	**Kevo**	**135.24**	**23**	*e*PKIKP	PKPdf	13 40 48.8	+5.9
KEV				pmax	pmax		
	comp=Z,26nm,1.1s						
CD2	**Chengdu**	**135.47**	**108**	*e*PKP	PKPdf	13 40 40.1	-4.2
CD2				PP	PP	13 43 21.6	-0.4
CD2				PPP	PPP	13 46 19.8	-0.2
CD2				SKKS		13 50 08.5	
CD2				SS	SS	14 01 13.8	-2.0
CD2				LR	LR		
	comp=E,340nm,16.8s						
CD2				LR	LR		
	comp=Z,130nm,16.8s,MS4.7						
BRVK	**Borovoye**	**136.29**	**60**	*e*PKPdf	PKPdf	13 40 45.1	0.0
BVA0	**Borovoye Array**	**136.31**	**60**	*i* PKIKP	PKPdf	13 40 48.2	+3.1
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MKAR	**Makanchi Array**	**137.31**	**75**	PKhKP		13 40 36.6	
	comp=Z,3.0nm,0.9s,baz=243,slow=2.7,SNR=3.5						
ENH	**Enshi**	**137.56**	**115**	*e*PKPdf	PKPdf	13 40 46.8	-1.3
WMQ	**Urumqi**	**137.76**	**82**	*e*PKP	PKPdf	13 40 48.0	-0.2
WMQ				*e*PP	PP	13 43 39.0	+2.8
WMQ				PKS	PKS	13 44 23.0	+2.9
WMQ				SKS	SKS	13 47 55.0	-3.0
WMQ				SKKS		13 50 26.0	
WMQ				SS	SS	14 01 46.0	+3.1
WMQ				PP	PP		
	comp=Z,140nm,4.4s						
WMQ				LR	LR		
	comp=N,410nm,24.5s,MS5.2						
WMQ				LR	LR		
	comp=E,320nm,26.3s,MS5.2						
WMQ				LR	LR		
	comp=Z,470nm,24.5s,MS5.1						
KURK	**Kurchatov**	**138.36**	**68**	*e*PKPdf	PKPdf	13 40 49.8	+0.7
KURK	**Kurchatov**	**138.36**	**68⇑**	*i*PKIKP	PKPdf	13 40 43.9	-5.2
LZH	**Lanzhou**	**139.75**	**104**	*e*PKP	PKPdf	13 40 46.1	-5.9
LZH				XPKP		13 40 50.5	
LZH				PP	PP		
	comp=Z,280nm,7.6s						
LZH				LR	LR		
	comp=E,290nm,19.6s						
LZH				LR	LR		
	comp=Z,440nm,21.0s,MS5.2						
YKA	**Yellowknife Ar**	**140.05**	**314**	PKhKP		13 40 40.2	
	comp=Z,1.0nm,0.7s,baz=252,slow=28,SNR=3.5						
YKA				PKP	PKPdf	13 40 49.4	-2.3
	comp=Z,3.2nm,0.8s,baz=119,slow=3.1,SNR=4.4						
YKA				PP	PP	13 43 43.4	-6.2
	comp=Z,2.4nm,0.9s,baz=225,slow=49,SNR=3.0						
YKA	**Yellowknife Ar**	**140.05**	**314**	PKP	PKPdf	13 40 49.4	-2.3
YKA				PP	PP	13 43 43.4	-6.2
YKW3	**Yellowknife Ar**	**140.09**	**314**	*e*PKPdf	PKPdf	13 40 49.7	-2.1
GTA	**Gaotai**	**140.42**	**97**	PKP	PKPdf	13 40 45.8	-7.3
GTA				PKS	PKS	13 44 20.8	-3.9
GTA				PPP	PPP	13 46 51.4	-6.9
GTA				SKS	SKS	13 47 54.1	-8.3
GTA				SKKS		13 50 36.8	
GTA				PP	PP		
	comp=Z,70nm,7.3s						
GTA				LR	LR		
	comp=N,220nm,21.4s						
GTA				LR	LR		
	comp=E,160nm,16.0s						
GTA				LR	LR		
	comp=Z,280nm,22.2s,MS5.0						
NJ2	**Nanjing**	**143.12**	**124**	*e*PKP	PKPdf	13 40 54.1	-3.8
NJ2				PKP2	PKPab	13 40 55.5	+2.5
NJ2				APKP		13 41 04.8	
NJ2				PP	PP	13 44 08.0	-0.9
NJ2				PKS	PKS	13 44 28.0	-1.3
NJ2				PP	PP		
	comp=Z,160nm,5.0s						
NJ2				LR	LR		
	comp=N,370nm,16.6s,MS5.5						
NJ2				LR	LR		
	comp=E,520nm,14.7s,MS5.5						
NJ2				LR	LR		
	comp=Z,120nm,14.5s,MS4.8						
NVS	**Novosibirsk**	**143.19**	**66**	*i* PKHKP		13 40 51.3	
NVS				*i*		13 40 56.1	
NVS				*e*S	PP	13 44 10.8	+2.3
NVS				pmax	pmax		
	comp=Z,39nm,1.5s						
NVS				pmax	pmax		
	comp=N,34nm,1.9s						
NVS				pmax	pmax		
	comp=E,16nm,1.3s						
SSE	**Sheshan**	**143.21**	**128**	PKP	PKPdf	13 40 59.3	+1.2
SSE				PP	PP	13 44 13.8	+4.4
SSE				PP	PP		
	comp=Z,90nm,5.6s						
SSE				LR	LR		
	comp=N,140nm,18.5s,MS4.8						
SSE				LR	LR		
	comp=E,100nm,18.5s,MS4.8						
SSE				LR	LR		
	comp=Z,150nm,25.7s						
ZAL	**Zalesovo**	**143.34**	**68**	PKhKP		13 40 51.0	
	comp=Z,1.5nm,0.3s,baz=231,slow=4.3,SNR=5.4						
ZAL				PKP	PKPdf	13 40 56.5	-1.0
	comp=Z,2.4nm,0.9s,baz=207,slow=2.3,SNR=10.0						
DLBC	**Dease Lake**	**143.59**	**301**	*e*PKPdf	PKPdf	13 40 55.8	-2.1
TIA	**Tai'an**	**145.97**	**119**	PKP	PKPdf	13 41 00.8	-1.9
BTO	**Baotou**	**146.29**	**106**	*e*PKP	PKPdf	13 41 01.4	-1.7
HHC	**Hu-ho-hao-te**	**147.21**	**107⇓**	*i*PKP	PKPdf	13 41 05.1	+0.5
HHC				PP	PP	13 44 36.9	+3.8
HHC				SKS	SKS	13 48 12.8	+0.4
HHC				SKKS		13 51 25.8	
HHC				PP	PP		
	comp=Z,140nm,9.6s						
HHC				LR	LR		
	comp=N,530nm,13.2s,MS5.6						
HHC				LR	LR		
	comp=E,420nm,14.4s,MS5.6						
HHC				LR	LR		
	comp=Z,520nm,12.0s,MS5.5						
MOY	**Mondy**	**149.65**	**83**	*e*PKP2	PKPab	13 41 11.8	-5.4
MOY				pmax	pmax		
	comp=Z,132nm,2.5s						
INK	**Inuvik**	**149.77**	**315**	PKPbc	PKPdf	13 41 11.2	+3.3
	comp=Z,36nm,0.9s,baz=115,slow=2.5,SNR=74						
INK	**Inuvik**	**149.77**	**315**	*e*PKPdf	PKPdf	13 41 07.3	-0.6
SONM	**Songino Array**	**149.83**	**93**	PKP	PKPdf	13 41 06.0	-2.6
	comp=Z,2.0nm,1.1s,baz=214,slow=2.9,SNR=9.4						
SONM				PKPbc	PKPdf	13 41 11.4	+2.8
	comp=Z,23nm,1.1s,baz=200,slow=0.7,SNR=46						
ZAK	**Zakamensk**	**149.97**	**86**	*e*PKIKP	PKPdf	13 41 06.2	-2.5
ZAK				*e*		13 41 11.4	
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ZAK				pmax	pmax		
	comp=Z,18nm,1.0s						
ULN	**Ulaanbaatar**	**150.17**	**93**	PKPdf	PKPdf	13 41 07.0	-2.1
ULN	**Ulaanbaatar**	**150.17**	**93⇑**	*i*PKIKP	PKPdf	13 41 07.1	-2.0
DAWY	**Dawson**	**150.34**	**306**	*e*PKPbc	PKPdf	13 41 12.6	+3.8
INCN	**Inchon**	**150.95**	**130**	*e*PKPbc	PKPdf	13 41 14.7	+4.1
KS15	**Wonju Array Si**	**151.38**	**132**	*e*PKPbc	PKPdf	13 41 16.2	+5.0
IRK	**Irkutsk**	**151.61**	**84**	*e*PKIKP	PKPdf	13 41 08.7	-2.4
IRK				pmax	pmax		
	comp=Z,65nm,1.9s						
DIV	**Divide**	**151.79**	**298**	*e*PKPbc	PKPdf	13 41 16.9	+5.8
SML	**Sawmill**	**153.19**	**298**	*e*PKPbc	PKPdf	13 41 19.4	+6.3
SML	**Sawmill**	**153.19**	**298**	*e*PKIKP	PKPdf	13 41 16.3	+3.2
PMR	**Palmer**	**153.45**	**297**	*e*PKPbc	PKPdf	13 41 19.6	+6.1
PMR	**Palmer**	**153.45**	**297**	*e*PKIKP	PKPdf	13 41 18.7	+5.3
SLKM	**Skilak Lake**	**153.50**	**294**	*e*PKPbc	PKPdf	13 41 20.2	+6.6
SLKM	**Skilak Lake**	**153.50**	**294**	*e*PKIKP	PKPdf	13 41 20.0	+6.5
ILAR	**Eielson Array**	**153.63**	**305**	PKP	PKPdf	13 41 08.0	-5.6
	comp=Z,1.3nm,0.9s,baz=322,slow=3.2,SNR=9.8						
ILAR				PKPbc	PKPdf	13 41 19.9	+6.4
	comp=Z,7.0nm,1.1s,baz=333,slow=1.7,SNR=9.6						
MAT	**Matsushiro**	**153.81**	**149**	PKP	PKPdf	13 41 10.9	-3.8
MAT	**Matsushiro**	**153.81**	**149**	*e*PKP	PKPdf	13 41 11.0	-3.7
MJAR	**Matsushiro Arr**	**153.81**	**149**	PKP	PKPdf	13 41 08.4	-6.3
	comp=Z,1.9nm,1.0s,baz=207,slow=2.8,SNR=4.5						
MJAR				PKPbc	PKPdf	13 41 20.0	+5.2
	comp=Z,11nm,1.2s,baz=212,slow=3.0,SNR=13						
COLA	**College**	**154.05**	**305**	*e*PKPbc	PKPdf	13 41 21.8	+7.6
COLA	**College**	**154.05**	**305**	*e*PKIKP	PKPdf	13 41 20.4	+6.2
MCK	**McKinley**	**154.14**	**302**	*e*PKPdf	PKPdf	13 41 10.1	-4.3
CN2	**Changchun**	**155.82**	**121**	*e*PKP	PKPdf	13 41 13.3	-3.9
CN2				LR	LR		
	comp=Z,400nm,21.0s,MS5.2						
MDJ	**Mudanjiang**	**158.20**	**126**	PKP	PKPdf	13 41 18.3	-2.0
MDJ				XPKP		13 41 23.5	
MDJ				PP	PP	13 45 32.3	-2.4
MDJ				SS	SS	14 05 35.3	+3.6
MDJ				PP	PP		
	comp=Z,240nm,6.0s						
BOD	**Bodaibo**	**159.28**	**80**	*e*PKIKP	PKPdf	13 41 10.7	-10
BOD				pmax	pmax		
	comp=Z,9.0nm,2.4s						
KLR	**Kul'dur**	**162.78**	**121**	*e*PKIKP	PKPdf	13 41 22.4	-2.6
KLR				*e*		13 42 11.6	
TIXI	**Tiksi**	**164.93**	**32**	*e*PKIKP	PKPdf	13 41 16.3	-10
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BILL	**Bilibino**	**170.94**	**331**	*i* PKIKP	PKPdf	13 41 25.4	-5.2
PET	**Petropavlovsk**	**172.14**	**198**	*i* PKIKP	PKPdf	13 41 28.6	-3.1
PET				*e*		13 46 47.6	
PET				pmax	pmax		
	comp=Z,200nm,17.2s						
PET				pmax	pmax		
	comp=Z,200nm,15.0s						

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*ISK **22** 13:32:43.0, 38.16N×26.65E, h14^{km}, MD2.9*
*ATH **22** 13:32:43.5, 38.15N×26.62E, h37^{km}±6^{km}, MD3.3/3*
*CSEM **22** 13:32:43.2±0.1, 38.18N×26.67E, h15^{km}, MD2.9, Error ellipse: s-maj=2.8km s-min=2.1km az=105.0*
ISC 22 13:32:42.5±0.8**, 38.20N**±0.03×**26.56E**±0.05**, h5**^{km}±5^{km}**, n19, σ0**^{s}**98**/28**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.16**	**9**	*i* P	**Pg**	**13 32 45.4**	**-0.5**
URLA				*i* S	**Sg**	**13 32 48.2**	**+0.1**
BLCB	**Balcova**	**0.42**	**64**	PG	**Pg**	**13 32 51.1**	**+0.1**
SMG	**Samos**	**0.54**	**156**	*e*PB	**Pg**	**13 32 54.1**	**+0.9**
SMG				*e*SB	**Sg**	**13 33 02.2**	**+1.8**
IZM	**Izmir**	**0.59**	**70**	PG	**Pg**	**13 32 53.9**	**-0.3**
IZM				SG	**Sg**	**13 33 02.3**	**+0.2**
KDAG	**Bornova**	**0.59**	**70**	*i* P	**Pg**	**13 32 53.0**	**-1.3**
KDAG				*i* S	**Sg**	**13 33 01.2**	**-1.0**
PRK	**Paraskevi**	**1.07**	**348**	*e*PN	**Pn**	**13 33 04.3**	**+0.2**
PRK				*e*SN	**Sn**	**13 33 20.0**	**+0.5**
AYDN	**Tasoluk**	**1.17**	**117**	*i* P	**Pb**	**13 33 05.5**	**+0.6**
AYDN				*i* S	**Sb**	**13 33 21.0**	**+0.7**
AKS	**Akhisar**	**1.19**	**55**	PN	**Pn**	**13 33 04.8**	**-1.0**
BODT	**Bodrum**	**1.28**	**152**	PN	**Pn**	**13 33 06.1**	**-1.0**
BODT				SN	**Sn**	**13 33 23.5**	**-1.3**
MLSB	**Milas**	**1.32**	**133**	*e*PN	**Pn**	**13 33 06.8**	**-0.8**
BDRM	**Kayabasi**	**1.33**	**148**	*i* P	**Pb**	**13 33 09.2**	**+1.6**
BDRM				*i* S	**Sb**	**13 33 25.4**	**+0.5**
APE	**Apeiranthos**	**1.39**	**216**	*e*PN	**Pn**	**13 33 08.7**	**0.0**
APE	**Apeiranthos**	**1.39**	**216**	*e*PN	**Pn**	**13 33 08.3**	**-0.4**
MANT	**Manisa**	**1.60**	**79**	*i* P	**Pn**	**13 33 12.4**	**+0.8**
MANT				*i* S	**Sb**	**13 33 33.9**	**+1.4**
EZN	**Ezine**	**1.64**	**354**	*e*PN	**Pn**	**13 33 13.7**	**+1.5**
DAT	**Datca**	**1.68**	**151**	*e*PN	**Pn**	**13 33 11.1**	**-1.6**
YER	**Yerkesik**	**1.73**	**127**	*e*PN	**Pn**	**13 33 11.8**	**-1.7**
DALT	**Dalyan (Mudla)**	**2.18**	**130**	*e*PN	**Pn**	**13 33 19.3**	**-0.7**
BNT	**Bandirma**	**2.40**	**26**	*e*PN	**Pn**	**13 33 23.7**	**+0.6**

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*IDC **22** 14:04:34.9±0.7, 0.80N×96.87E, mb4.4/17, mb1 4.5/17, mb1mx4.4/21, mbtmp4.4/17, Error ellipse: s-maj=26.1km s-min=14.0km az=44.0*
*BJI **22** 14:04:35.4, 0.50N×97.12E, h27^{km}, mB4.9, mb4.8, Ms4.7, Msz4.2*
*MOS **22** 14:04:38.2±1.0, 0.83N×96.90E, h33^{km}, mb5.0/15, Error ellipse: s-maj=15.9km s-min=7.8km az=104.1*
*HRVD **22** 14:04:39.3±1.2, 0.46N×97.19E, h29^{km}±4^{km}, MW5.0/25, Centroid moment Tensor Solution. LP body waves: s13,c15;Mantle waves: s25,c30; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.07±.49; $M_{\theta\theta}$-3.34±.35; $M_{\phi\phi}$1.27±.33; $M_{r\theta}$-2.51±.78; $M_{\theta\phi}$0.09±.27; $M_{\phi r}$1.25±.63; Best double couple: $M_0$3.994×10^{16} NP1:ϕ_s61°,δ30°,λ41°. NP2:ϕ_s294°,δ71°,λ113°. Principal axes: T 3.609, Plg58°, Azm236°; N .77, Plg22°, Azm106°; P -4.379, Plg22°, Azm6°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **22** 14:04:39.3±0.4, 0.73N×96.95E, mb4.9/9 Error ellipse: s-maj=12.6km s-min=7.6km az=46.0*
ISC 22 14:04:37.0±0.4**, 0.76N**±0.06×**96.95E**±0.06**, h25**^{km}**, h25**^{km}±2.3^{km}**:pP-P, n87, σ1**^{s}**08**/87**, mb4.7**/48**, MS4.5**/8**, 9C-3D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.57**	**47**	P	**Pn**	**14 06 00.3**	**-0.2**
KULM	**Kulim**	**5.83**	**39⇑**	*i*Pn	**Pn**	**14 06 03.3**	**-0.9**
KULM				*e*pPn		14 06 10.9	
KGM	**Kluang**	**6.49**	**79**	P	**Pn**	**14 06 13.9**	**+0.4**
KKM	**Kota Kinabalu**	**19.93**	**74**	*e*P	**P**	**14 09 10.4**	**+0.2**
KKM	**Kota Kinabalu**	**19.93**	**74**	P	**P**	**14 09 03.9**	**-6.3**
TSM	**Tawau**	**21.19**	**80**	P	**P**	**14 09 22.7**	**-0.6**
KMI	**Kunming**	**24.86**	**13**	P	**P**	**14 10 01.8**	**+2.5**
KMI				AP		14 10 09.9	
KMI				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.8						
KMI				LR	LR		
	comp=N,800nm,11.3s,MS4.5						
KMI				LR	LR		
	comp=E,290nm,11.3s,MS4.5						
KMI				LR	LR		
	comp=Z,690nm,11.8s,MS4.4						
SHL	**Shillong**	**25.14**	**349⇑**	*i*P	**P**	**14 10 02.8**	**+0.8**
SHL				*e*S	**S**	**14 14 32.2**	**+10**
PKI	**Pulchoki**	**28.87**	**338**	*e*P	**P**	**14 10 39.3**	**+3.2**
	comp=Z,75nm,1.1s,mb5.3						
GUN	**Gumba**	**29.01**	**339**	*e*P	**P**	**14 10 38.3**	**+1.0**
	comp=Z,97nm,0.9s,mb5.5						
DMN	**Daman**	**29.02**	**338**	*e*P	**P**	**14 10 40.2**	**+2.8**
	comp=Z,57nm,1.0s,mb5.3						
KKN	**Kakani**	**29.11**	**338**	*e*P	**P**	**14 10 39.1**	**+0.8**
	comp=Z,66nm,0.9s,mb5.4						
LSA	**Lhasa**	**29.31**	**350**	P	**P**	**14 10 41.3**	**+1.3**
LSA				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
LSA	**Lhasa**	**29.31**	**350⇑**	*e*P	**P**	**14 10 41.3**	**+1.3**
	comp=Z,18nm,0.8s,mb4.8						
LSA				*e*pP	pP	14 10 48.6	+1.3
LSA	**Lhasa**	**29.31**	**350⇑**	*e*P	**P**	**14 10 41.3**	**+1.3**
LSA				*e**PP	pP	14 10 48.6	+1.3
LSA				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
GKN	**Gorkha**	**29.55**	**338**	*e*P	**P**	**14 10 42.8**	**+0.6**
	comp=Z,55nm,1.0s,mb5.2						
KOLN	**Koldanda**	**29.75**	**336**	*e*P	**P**	**14 10 44.6**	**+0.6**
	comp=Z,25nm,0.8s,mb5.0						
CD2	**Chengdu**	**30.68**	**12**	*e*P	**P**	**14 10 51.4**	**-0.7**
ENH	**Enshi**	**31.68**	**21**	*e*P	**P**	**14 10 59.6**	**-1.4**
	comp=Z,19nm,0.8s,mb5.0						
ENH				*e*pP	pP	14 11 07.6	-0.7
FITZ	**Fitzroy Crossi**	**33.88**	**125**	P	**P**	**14 11 19.6**	**-0.6**
	comp=Z,11nm,0.7s,mb4.9,baz=334,slow=3.1,SNR=12						
XAN	**Xi'an**	**34.96**	**17**	P	**P**	**14 11 28.3**	**-1.1**
XAN				AP	pP	14 11 34.5	-2.2
XAN				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.1						
LZH	**Lanzhou**	**35.73**	**10**	⇑P	**P**	**14 11 35.8**	**-0.1**
LZH				AP	pP	14 11 40.0	-3.3
LZH				XS		14 17 31.0	
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,120nm,4.1s						
LZH				LR	LR		
	comp=E,910nm,15.8s						
LZH				LR	LR		
	comp=Z,1μm,17.2s,MS4.8						
NJ2	**Nanjing**	**37.37**	**31**	*e*P	**P**	**14 11 51.4**	**+1.7**
NJ2				AP	pP	14 12 01.3	+4.2
NJ2				XP	sP	14 12 05.1	+4.8
NJ2				PP	PP	14 13 20.8	+3.1
NJ2				S	**S**	**14 17 41.0**	**+5.2**
NJ2				XS		14 17 56.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,40nm,5.7s						
NJ2				LR	LR		
	comp=N,830nm,16.0s,MS4.8						
NJ2				LR	LR		
	comp=E,1μm,14.8s,MS4.8						
NJ2				LR	LR		
	comp=Z,720nm,25.6s						
GTA	**Gaotai**	**38.56**	**4**	P	**P**	**14 12 00.3**	**+0.6**
GTA				AP	pP	14 12 04.9	-2.2
GTA				XP	sP	14 12 07.6	-2.6
GTA				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.4						
GTA				AMB	AMB		
	comp=Z,90nm,4.9s						
GTA				LR	LR		
	comp=N,260nm,17.5s,MS4.3						
GTA				LR	LR		
	comp=E,250nm,12.6s,MS4.3						
GTA				LR	LR		
	comp=Z,320nm,19.8s						
WRA	**Warramunga Arr**	**42.02**	**121**	P	**P**	**14 12 28.8**	**+0.4**
	comp=Z,7.3nm,0.7s,mb4.4,baz=300,slow=9.1,SNR=58						
WRAB	**Tennant Creek**	**42.02**	**121⇑**	*e*P	**P**	**14 12 28.9**	**+0.3**
	comp=Z,20nm,1.0s,mb4.7						
WRAB				*e*pP	pP	14 12 36.4	+0.4
WRAB	**Tennant Creek**	**42.02**	**121⇑**	*e*P	**P**	**14 12 28.9**	**+0.4**
WRAB				*e**PP	pP	14 12 36.4	+0.4
WRAB				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
WB2	**Warramunga Arr**	**42.03**	**121**	*e*P	**P**	**14 12 28.8**	**+0.2**
ASPA	**Alice Springs**	**43.33**	**127**	*e*P	**P**	**14 12 40.0**	**+0.8**
WMQ	**Urumqi**	**43.66**	**350**	*e*P	**P**	**14 12 42.4**	**+0.8**
JNU	**Nakatsue**	**45.30**	**41**	P	**P**	**14 12 55.1**	**+0.2**
	comp=Z,9.3nm,0.8s,mb4.7,baz=228,slow=11,SNR=4.4						
UCH	**Uchtor**	**45.95**	**337**	P	**P**	**14 13 01.6**	**+1.6**
	SNR=6.8						
TKM2	**Tokmak 2**	**46.13**	**338**	P	**P**	**14 13 02.8**	**+1.5**
	SNR=5.5						
KBK	**Karagaybulak**	**46.15**	**337**	P	**P**	**14 13 03.6**	**+2.1**
	SNR=6.5						
AML	**Almayashu**	**46.20**	**336**	P	**P**	**14 13 03.5**	**+1.6**
	SNR=5.2						
KS15	**Wonju Array Si**	**46.32**	**34**	*e*P	**P**	**14 13 02.8**	**-0.1**
KS15				*e*pP	pP	14 13 12.5	+2.1
EKS2	**Erkin-Say**	**46.61**	**336**	P	**P**	**14 13 06.6**	**+1.5**
	SNR=7.3						
USP	**Ospenovka**	**46.84**	**338**	P	**P**	**14 13 07.9**	**+0.9**
	SNR=14						
SONM	**Songino Array**	**47.60**	**9**	P	**P**	**14 13 12.6**	**-0.3**
	comp=Z,3.9nm,0.7s,mb4.5,baz=188,slow=8.3,SNR=35						
SONM				PcP	PcP	14 14 42.6	-0.2
	comp=Z,1.9nm,0.8s,baz=189,slow=4.0,SNR=5.6						
MKAR	**Makanchi Array**	**47.61**	**346**	P	**P**	**14 13 13.3**	**+0.4**
	comp=Z,7.1nm,0.6s,mb4.9,baz=162,slow=9.0,SNR=74						
ULN	**Ulaanbaatar**	**47.73**	**9**	*e*P	**P**	**14 13 14.2**	**+0.3**
	comp=Z,2.7nm,0.8s,mb4.3						
ULN	**Ulaanbaatar**	**47.73**	**9⇓**	*e*P	**P**	**14 13 14.6**	**+0.7**
KKAR	**Karatay Array**	**48.34**	**334**	*i* P	**P**	**14 13 18.7**	**0.0**
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.8						
ZAK	**Zakamensk**	**49.73**	**5**	*e*P	**P**	**14 13 29.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
CN2	**Changchun**	**49.81**	**27**	*e*P	**P**	**14 13 29.5**	**-0.5**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.9						
CN2				LR	LR		
	comp=N,400nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=E,400nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=Z,300nm,22.0s,MS4.2						
PMG	**Port Moresby**	**51.00**	**103**	P	**P**	**14 13 40.0**	**+0.6**
	comp=Z,22nm,0.8s,mb5.2,baz=278,slow=6.3,SNR=8.2						
HIA	**Hailar**	**52.14**	**19**	*e*P	**P**	**14 13 47.7**	**+0.1**
	comp=Z,14nm,0.8s,mb4.9						
HIA	**Hailar**	**52.14**	**19**	*e*P	**P**	**14 13 47.7**	**+0.1**
HIA				pmax	pmax		
	comp=Z,14nm,0.8s						
KURK	**Kurchatov**	**52.15**	**345**	*e*P	**P**	**14 13 47.5**	**-0.2**
	comp=Z,13nm,0.9s,mb4.9						
KURK	**Kurchatov**	**52.15**	**345**	*e*P	**P**	**14 13 47.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
MJAR	**Matsushiro Arr**	**52.19**	**42**	P	**P**	**14 13 46.4**	**-1.7**
	comp=Z,2.2nm,0.6s,mb4.3,baz=213,slow=6.9,SNR=8.3						
STKA	**Stephens Creek**	**53.25**	**132**	P	**P**	**14 13 57.4**	**+1.2**
	comp=Z,3.4nm,0.7s,mb4.4,baz=312,slow=6.2,SNR=8.4						
ZAL	**Zalesovo**	**53.95**	**351**	P	**P**	**14 14 00.7**	**-0.2**
	comp=Z,9.3nm,0.5s,mb5.0,baz=313,slow=5.2,SNR=44						
NVS	**Novosibirsk**	**55.07**	**350**	*i* P	**P**	**14 14 07.4**	**-1.8**
NVS				pmax	pmax		
	comp=N,10.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,18nm,1.3s,mb4.9						
NVS				pmax	pmax		
	comp=E,8.0nm,1.0s						
VOSK	**Vostochnaya**	**56.14**	**341**	P	**P**	**14 14 15.4**	**-1.5**
VOSK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BVA0	**Borovoye Array**	**56.58**	**341**	*i* P	**P**	**14 14 18.6**	**-1.5**
BVA0				pmax	pmax		
	comp=Z,10.0nm,1.9s,mb4.5						
BVAR	**Borovoye Array**	**56.58**	**341**	P	**P**	**14 14 19.0**	**-1.1**
	comp=Z,3.5nm,0.7s,mb4.5,baz=139,slow=9.1,SNR=29						
BRVK	**Borovoye**	**56.65**	**341**	*e*P	**P**	**14 14 19.4**	**-1.2**
	comp=Z,6.3nm,1.0s,mb4.6						
BRVK	**Borovoye**	**56.65**	**341**	*e*P	**P**	**14 14 19.4**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
KLR	**Kul'dur**	**56.76**	**27**	*e*P	**P**	**14 14 21.6**	**+0.2**
CHKZ	**Chkalovo**	**57.06**	**342**	*e*P	**P**	**14 14 22.6**	**-0.9**
	comp=Z,14nm,0.8s,mb5.1						
CHKZ				*e*pP	pP	14 14 31.4	+0.3
CHKZ	**Chkalovo**	**57.06**	**342**	*e*P	**P**	**14 14 22.6**	**-0.9**
CHKZ				*e**PP	pP	14 14 31.4	+0.2
CHKZ				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.1						
AB31	**Akbulak array**	**57.78**	**332**	*i* P	**P**	**14 14 27.0**	**-1.6**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.6						
BOD	**Bodaibo**	**58.49**	**11**	*e*P	**P**	**14 14 30.5**	**-2.9**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
AKTK	**Aktyubinsk**	**59.50**	**332**	P	**P**	**14 14 38.9**	**-1.7**
AKTO	**Aktyubinsk**	**59.50**	**332**	P	**P**	**14 14 38.9**	**-1.7**
	comp=Z,2.2nm,0.9s,mb4.2,baz=129,slow=13,SNR=7.1						

KMBO	Kilima Mbogo	59.72	268	P	P	14 14 42.2	-0.3
	comp=Z,0.8nm,0.8s,mb3.8,baz=61,slow=19,SNR=3.2						
SVE	Sverdlovsk	63.01	339	eP	P	14 15 02.9	-1.2
SVE				e		14 15 16.4	
SVE				e		14 17 20.0	
SVE				MLR	MLR		
	comp=N,300nm,15.0s,MS4.7						
SVE				MLR	MLR		
	comp=E,200nm,15.0s,MS4.7						
SVE				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.8						
ARU	Arti	63.49	337	⇓iP	P	14 15 06.1	-1.2
ARU				ePPP	PPP	14 18 52.8	-7.3
ARU				eS	S	14 23 38.8	+1.5
ARU				eSS	SS	14 27 43.3	-3.0
ARU				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.8						
YAK	Yakutsk	65.91	16	i P	P	14 15 22.4	-0.5
YAK				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
YAK				MLR	MLR		
	comp=Z,100nm,13.0s,MS4.2						
MBAR	Mbarara	66.22	269	⇑eP	P	14 15 17.6	-8.1
BRTR	Keskin Array B	69.22	313	P	P	14 15 42.7	-1.4
	comp=Z,0.4nm,0.3s,mb3.8,baz=135,slow=5.2,SNR=3.7						
OBN	Obninsk	72.86	328	eP	P	14 16 12.6	+6.9
OBN				pmax	pmax		
	comp=Z,32nm,2.1s,mb4.9						
TIXI	Tiksi	73.66	10	⇓eP	P	14 16 09.6	-0.5
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
TIXI				MLR	MLR		
	comp=Z,300nm,23.0s,MS4.5						
SEY	Seymchan	74.27	23	⇑eP	P	14 16 14.7	+1.0
AKASG	Malin Array Be	75.45	323	P	P	14 16 19.2	-1.6
	comp=Z,0.7nm,0.5s,mb3.9,baz=90,slow=5.4,SNR=4.7						
AKASG	Malin Array Be	75.45	323	P	P	14 16 19.2	-1.6
FINES	FINESS Array B	80.27	333	P	P	14 16 46.6	-0.5
	comp=Z,1.5nm,0.8s,mb4.0,baz=90,slow=7.6,SNR=5.8						
BILL	Bilibino	81.67	21	i P	P	14 16 54.9	+0.6
ARCES	ARCESS Array B	82.86	340	P	P	14 17 00.8	+0.3
	comp=Z,2.0nm,0.7s,mb4.2,baz=108,slow=3.8,SNR=11						
ARCES	ARCESS Array B	82.86	340	P	P	14 17 00.8	+0.3
GERES	GERESS Array B	84.98	319	P	P	14 17 12.0	+0.3
	comp=Z,0.3nm,0.2s,mb4.0,baz=112,slow=7.2,SNR=4.4						
RAO	Raoul Island	86.11	119	eP	P	14 17 17.9	+0.1
	comp=Z,605nm,0.3s						
RAO	Raoul Island	86.11	119	eP	P	14 17 17.9	+0.1
RAO				pmax	pmax		
	comp=Z,605nm,0.3s						
NVAR	Mina Array Bea	129.29	36	PKP	PKPdf	14 23 45.2	-3.4
	comp=Z,0.4nm,0.7s,baz=281,slow=4.6,SNR=3.6						
TXAR	Lajitas Array	144.18	32	PKP	PKPdf	14 24 12.2	-3.9
	comp=Z,0.8nm,0.6s,baz=175,slow=0.6,SNR=9.4						
CPUP	Villa Florida	144.51	222	ePKPdf	PKPdf	14 24 14.2	-2.6
CPUP				epPKPdf		14 24 21.1	

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*NNC **22** 14:29:47.8±16.0, 37.76N×71.14E, mpv3.7, Error ellipse: s-maj=136.4km s-min=120.9km az=172.0*

ISC 22 14:29:41.5±1.9**, 37.08N**±0.07×**71.5E**±0.3**, h33^{km}, n15, σ1^{s}11**/21**, 2C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	5.33	18	P	P	14 31 01.2	+0.3
	SNR=37						
UCH	Uchtor	5.65	24	P	P	14 31 06.1	+0.8
	SNR=8.8						
KZA	Kyzart	5.78	29	P	P	14 31 07.4	+0.2
	SNR=11						
THN	Thein Dam	5.80	142	eP	P	14 31 07.7	+0.2
THN				eS	S	14 32 14.6	+0.8
DLH	Dalhousie	5.84	139	eP	P	14 31 10.0	+2.0
DLH				eS	S	14 32 13.0	-1.8
EKS2	Erkin-Say	5.85	17	P	P	14 31 08.4	+0.3
	SNR=39						
AAK	Ala-Archa	6.01	22	P	P	14 31 11.0	+0.5
	SNR=12						
AAK	Ala-Archa	6.01	22	⇑P	P	14 31 10.9	+0.4
	7.1nm,0.4s						
AAK				⇓S	S	14 32 15.7	-3.4
	5.6nm,0.5s						
KK31	Karatay Array	6.06	353	⇑P	P	14 31 09.5	-1.6
	2.1nm,0.3s,baz=182,slow=13,SNR=38						
KK31				⇓S	S	14 32 13.0	-7.3
	4.8nm,0.3s,baz=161,slow=23						
KBK	Karagaybulak	6.18	25	P	P	14 31 14.4	+1.6
	SNR=7.3						
ULHL	Ulahol	6.34	34	P	P	14 31 15.6	+0.6
	SNR=11						
CHMS	Chumysh	6.42	22	P	P	14 31 16.0	-0.2
	SNR=15						
USP	Ospenovka	6.60	20	P	P	14 31 17.8	-1.0
	SNR=8.8						
TKM2	Tokmak 2	6.64	27	P	P	14 31 19.0	-0.2
	SNR=16						
KLP	Kalpa	7.87	133	eP	P	14 31 35.0	-1.5
KLP				eS	S	14 32 50.5	-15
KLP				eS	S	14 32 56.0	-9.4
KLP				AML	AML	14 33 02.4	
	comp=N,59nm,0.1s						
KLP				AML	AML	14 33 07.4	
	comp=E,82nm,0.3s						

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*NEIC **22** 14:31:45.4±0.8, 3.29S×79.98W, h10^{km}, mb4.4/2, Error ellipse: s-maj=32.4km s-min=13.5km az=57.0*

*IDC **22** 14:31:45.5±1.8, 2.05S×78.32W, mb3.7/4, mb1 4.1/5, mb1mx3.9/17, mbtmp3.8/5, ML4.2/1, Error ellipse: s-maj=210.6km s-min=36.9km az=57.0*

*IGQ **22** 14:31:52.7, 2.51S×79.63W, h12^{km}±4^{km}, mb4.4, Error ellipse: s-maj=5.0km s-min=3.1km az=101.2*

ISC 22 14:31:53.3±1.4**, 2.83S**±0.07×**79.5W**±0.1**, h79^{km}**±13^{km}**, n26, σ1^{s}02**/31**, mb3.9**/5**, 4C-2D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QIL1	Quilotoa	2.04	15	P	P	14 32 26.7	+0.3
PISA	Pisayambo	2.07	32	P	P	14 32 27.9	+1.1
CAMI	Rancho Maria	2.35	24	P	P	14 32 31.4	+0.8
TAMB	Tambo	2.39	28	P	P	14 32 32.5	+1.2
TAMB				S	S	14 33 00.1	+0.6
VC1	Cotopaxi 1	2.42	26	P	P	14 32 32.6	+0.9
ANTI	Antisana	2.71	29	P	P	14 32 35.9	+0.3
JUA2	San Juan 2	2.74	19	⇓P	P	14 32 36.2	0.0
JUA2				S	S	14 33 06.5	-1.7
MAG1	Magdalena	2.76	354	P	P	14 32 34.1	-2.2
TERV	Terraza Guagua	2.78	18	⇑P	P	14 32 37.0	+0.3
TERV				S	S	14 33 09.1	-0.1
GGP	Refugio Guagua	2.78	19	⇑P	P	14 32 36.9	+0.1
PINO	Pino	2.79	18	⇓P	P	14 32 36.9	0.0
PINO				S	S	14 33 08.1	-1.5
YANA	Yana	2.84	19	⇑P	P	14 32 37.3	-0.3
YANA				S	S	14 33 09.6	-1.1
CAYR	Refugio Cayamb	3.19	28	P	P	14 32 42.3	0.0
ANGU	Angureal	3.21	27	P	P	14 32 42.7	-0.1
CAYA	Cayambe	3.24	27	P	P	14 32 43.0	-0.2
COTA	Cotacachi	3.34	20	⇑P	P	14 32 45.7	+1.1
COTA				S	S	14 33 23.7	+0.5
NNA	Nana	9.46	164	Pn	P	14 33 58.2	-11
	31nm,1.6s						
SAML	Samuel	17.30	111	ePn	P	14 35 51.2	-0.2
	3.2nm,0.7s						
LPAZ	La Paz	17.42	141	P	P	14 35 50.0	-2.8
	0.4nm,0.3s,baz=214,slow=1.3,SNR=6.2						
CSU	Charleston Sou	35.63	359	P	P	14 38 47.8	+2.2
TXAR	Lajitas Array	39.50	326	PcP	PcP	14 41 25.7	+0.8
	0.4nm,0.7s,baz=146,slow=4.5,SNR=4.0						
PDAR	Pinedale Array	52.90	332	P	P	14 41 02.4	-1.2
	0.5nm,0.7s,mb3.7,baz=129,slow=9.5,SNR=3.9						
NVAR	Mina Array Bea	54.49	323	P	P	14 41 16.1	+0.8
	0.4nm,0.6s,mb3.6,baz=135,slow=8.4,SNR=3.9						
INK	Inuvik	80.07	342	P	P	14 43 54.8	-0.9
	1.0nm,0.7s,mb3.8,baz=96,slow=14,SNR=6.2						
DSB	Dublin	82.22	35	P	P	14 44 10.9	+3.6
	20nm,0.9s,mb4.9						
ILAR	Eielson Array	83.10	337	P	P	14 44 11.8	+0.3
	0.5nm,0.8s,mb3.4,baz=60,slow=4.7,SNR=6.9						

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*NAO **22** 14:33:28.8±1.2, 59.73N×23.95E, ML2.8*

*HEL **22** 14:33:28.8±0.2, 59.74N×24.01E, ML2.0, ML2.3(UPP), ML2.8(NAO), Explosion*

*CSEM **22** 14:33:29.0±0.1, 59.78N×23.87E, h2^{km}, ML2.0, Error ellipse: s-maj=2.6km s-min=2.2km az=149.0, Mining explosion.*

*BER **22** 14:33:30.2±3.9, 59.74N×23.97E, ML2.8(NAO), Suspected explosion*

*UPP **22** 14:33:33.8, 59.92N×23.31E, h0^{km}, ML2.3, Mining explosion.*

ISC 22 14:33:27.9±0.7**, 59.74N**±0.05×**23.94E**±0.08**, n38, σ1^{s}16**/44**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PVF	Pernaja	1.26	49	eP	Pb	14 33 50.1	-2.1
VSU	Vasula	1.93	130	Pn	Pn	14 34 02.8	+0.5
VSU				Lg		14 34 29.4	
VSU	Vasula	1.93	130	eP	Pn	14 34 03.0	+0.7
VSU	Vasula	1.93	130	P	Pn	14 34 02.9	+0.7
VJF	Virojoki	1.98	64	eP	Pn	14 34 02.0	-0.9
FIA0	FINESS Array S	2.01	31	Pn	Pn	14 34 03.6	+0.2
	baz=207,slow=16						
FIA0				Sn	Sn	14 34 29.9	+0.2
	baz=205,slow=28						
FIA0	FINESS Array S	2.01	31	eP	Pn	14 34 03.4	0.0
FIA0				eSG	Sb	14 34 30.2	-0.5
FIA0	FINESS Array S	2.01	31	eSG	Sg	14 34 36.8	+2.0
FIA0	FINESS Array S	2.01	31	P	Pn	14 34 03.3	-0.1
FIA0				Sg	Sg	14 34 30.1	-4.7
AAL	Aland	2.03	284	eP	Pn	14 34 04.8	+1.1
KEF	Keuruu	2.48	10	eP	Pn	14 34 10.2	+0.1
KEF				eSG	Sb	14 34 45.6	+1.4
KEF				MSG		14 34 46.0	
	comp=Z,5.9nm,0.1s						
KEF	Keuruu	2.48	10	eSB	Sg	14 34 49.2	-1.3
KEF				MSG		14 34 49.6	
	comp=Z,12nm,0.2s						
KEF	Keuruu	2.48	10	P	Pn	14 34 10.2	0.0
NRTU	Norrtaelje	2.69	271	eP	Pn	14 34 13.6	+0.5
GRAU	Graesoe	2.77	285	eP	Pn	14 34 14.1	-0.3
FLYU	Flymyra	3.07	280	eP	Pn	14 34 19.3	+0.7
FLYU	Flymyra	3.07	280	P	Pn	14 34 19.2	+0.6
NYNU	Nynaeshamn	3.12	259	eP	Pn	14 34 20.8	+1.4
NYNU	Nynaeshamn	3.12	259	P	Pn	14 34 20.7	+1.3
SUF	Sumiainen	3.18	19	eP	Pn	14 34 21.5	+1.4
SUF	Sumiainen	3.18	19	eP	Pn	14 34 27.8	+7.7
SUF	Sumiainen	3.18	19	P	Pn	14 34 21.4	+1.3
VAF	Ylistaro	3.37	350	eP	Pb	14 34 29.7	+1.4
BACU	Backbrunna	3.46	275	eP	Pn	14 34 24.6	+0.6
OSTU	Oestervaala	3.46	281	eP	Pn	14 34 24.4	+0.4
IGGU	Iggoen	3.49	292	eP	Pn	14 34 24.4	-0.1
KJN	Kajaani	4.71	21	eP	Pn	14 34 42.7	+0.7
KJN	Kajaani	4.71	21	P	Pn	14 34 42.6	+0.7
JOF	Joensuu	4.77	45	eP	Pn	14 34 40.6	-2.2
JOF	Joensuu	4.77	45	eP	Pn	14 34 46.6	+3.8
HFS	Hagfors	5.17	279	Pn	Pn	14 34 47.1	-1.2
	baz=104,slow=14						
HFS				Sn	Sn	14 35 47.7	-1.9
	baz=77,slow=18						
HFS				Lg		14 36 08.0	
	baz=92,slow=28						
HFS	Hagfors	5.17	279	eP	Pn	14 34 47.1	-1.2
HFS				eS	Sn	14 35 47.7	-1.9
HFS				eSG		14 36 08.0	
NB2	NORSAR Subarra	6.44	287	Pn	Pn	14 35 03.8	-2.6
	baz=92,slow=14						
NB2	NORSAR Subarra	6.44	287	eP	Pn	14 35 03.8	-2.6
APA0	Apatity Array	8.85	23	Pn	P	14 35 35.9	-4.1
	baz=208,slow=10						
APA0	Apatity Array	8.85	23	eP	P	14 35 35.9	-4.1
ARA0	ARCESS Array S	9.86	3	Pn	P	14 35 49.7	-4.1
	baz=181,slow=14						
ARA0	ARCESS Array S	9.86	3	eP	P	14 35 49.7	-4.1

MAN 22 14:38:22.4, 6.99N×126.63E, h114^{km}, mb4.4, ML3.2, MS3.0, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.37	263	eP	P	14 38 40.7	+1.6
MATI				eS	S	14 38 54.2	+2.5
BIPH	Bislig	1.21	347	⇑iP	P	14 38 46.9	+0.3
BIPH				i S	S	14 39 04.0	-0.7
KCP	Kidapawan	1.53	271	⇑eP	P	14 38 54.6	+4.4
KCP				i S	S	14 39 14.7	+3.5
BUKP	Musuan	1.79	300	eP	P	14 38 54.1	+0.7
BUKP				eS	S	14 39 17.6	+0.9
BUTP	Butuan	2.20	333	eP	P	14 39 01.4	+2.6
CGP	Cagayan de Oro	2.40	307	⇓eP	P	14 39 01.6	+0.1
CGP				eS	S	14 39 32.0	+1.1
SCPH	Surigao	2.99	338	eP	P	14 39 10.2	+0.8
SCPH				eS	S	14 39 45.1	+0.3
PAGZ	Pagadian	3.33	285	eP	P	14 39 13.7	-0.2
MSLP	Maasin	3.58	331	eS	S	14 39 58.0	-1.0
IPIL	Ipil	4.10	281	eP	P	14 39 24.4	0.0
PVCP	Virac	7.00	340	eP	P	14 39 58.2	-5.6

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*CSEM **22** 15:09:19.5, 53.92N×164.14W, h10^{km}, mb5.5*

*MOS **22** 15:09:22.8±1.0, 53.92N×164.11W, h33^{km}, mb5.6/107, MS5.2/54, Error ellipse: s-maj=7.0km s-min=3.4km az=89.8*

*BJI **22** 15:09:24.3, 54.44N×164.63W, h29^{km}, mB5.4, mb5.4, Ms5.7, Msz5.5*

*SKO **22** 15:09:24.7, 54.22N×164.52W, Mb5.9*

*HRVD **22** 15:09:25.2±0.3, 53.76N×163.91W, h36^{km}, MW5.7/76, Centroid moment Tensor Solution. LP body waves: s57,c107;Mantle waves: s76,c153; Half duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}2.85±.13; $M_{\theta\theta}$-2.71±.10; $M_{\phi\phi}$-0.13±.10; $M_{r\theta}$2.26±.11; $M_{\theta\phi}$-1.72±.06; $M_{\phi r}$1.50±.11; Best double couple: $M_0$4.206×10^{17} NP1: ϕ_s251°, δ25°, λ102°. NP2:ϕ_s58°, δ65°, λ85°. Principal axes: T 3.86, Plg69°, Azm317°; N .701, Plg5°, Azm60°; P -4.552, Plg20°, Azm152°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **22** 15:09:25.2±0.1, 53.93N×164.06W, mb5.4/162, MS5.1/130, MW5.6 Error ellipse: s-maj=3.7km s-min=2.0km az=194.0, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17} Nm; M_{rr}1.65; $M_{\theta\theta}$-1.51; $M_{\phi\phi}$-0.15; $M_{r\theta}$1.57; $M_{\theta\phi}$-0.52; $M_{\phi r}$1.40; Best double couple: $M_0$2.7×10^{17} NP1:ϕ_s266°, δ22°, λ120°. NP2:ϕ_s54°, δ71°, λ79°. Principal axes: T 2.75, Plg62°, Azm306°; N -.14, Plg11°, Azm58°; P -2.62, Plg26°, Azm153°;*

NEIC Felt at Akutan, Dutch Harbor and False Pass.

*IDC **22** 15:09:25.1±1.5, 54.00N×164.09W, h37^{km}±11^{km}, mb5.0/22, mb1 5.1/25, mb1mx5.1/29, mbtmp5.2/25, ML4.6/3, MS5.1/15, Ms1 5.1/15, ms1mx4.8/32 Error ellipse: s-maj=14.4km s-min=9.1km az=168.0*

ISC 22 15:09:24.1±0.1**, 53.90N**±0.03×**164.04W**±0.03**, h42^{km}, h42^{km}**±2.0^{km}**:pP-P, n793, σ1^{s}05**/725**, mb5.4**/247**, MS5.2**/166**, 53C-16D, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESN	West Dahl Nort	0.74	335	P	P	15 09 40.2	+2.0
WFAR	Faris Peak	0.77	326	P	P	15 09 40.1	+1.5
WPOG	Pogromni	0.81	330	P	P	15 09 40.8	+1.6
AKUT	Akutan	1.05	284	P	P	15 09 43.8	+1.3
AKUT				S	S	15 09 58.9	+2.7
AHB	Akutan Harbor	1.07	283	P	P	15 09 44.2	+1.4
LVA	Lava Point	1.20	284	P	P	15 09 46.2	+1.5
UNV	Unalaska Valle	1.46	269	P	P	15 09 48.8	+0.4
UNV				S	S	15 10 08.6	+2.1
BALA	Baldy Mountain	1.49	29	P	P	15 09 50.4	+1.5
MTBL	Makushin Table	1.56	274	P	P	15 09 50.9	+1.1
MNAT	Makushin Natee	1.56	271	P	P	15 09 50.6	+0.7
DTNA	Dutton South F	1.63	39	P	P	15 09 51.1	+0.2
MCIR	Makushin Cirqu	1.69	273	P	P	15 09 52.9	+1.3
DOL	Dolgoi Island	1.79	44	P	P	15 09 53.0	0.0
HAG	Hague Volcano	1.89	40	P	P	15 09 55.3	+0.8
PVV	Pavlof Volcano	1.98	41	P	P	15 09 55.6	-0.2
OKCD	Okmok Cone D	2.47	261	P	P	15 10 03.8	+1.0
SDPT	Sand Point	2.53	53	P	P	15 10 03.9	+0.2
NIKO	Nikolski	3.02	254	P	P	15 10 10.8	+0.2
ANPK	Aniakchak Peak	4.48	46	P	P	15 10 31.3	-0.1
SVW2	Sparrevohn	8.53	29	eP	P	15 11 27.2	-0.7
SLKM	Skilak Lake	9.99	43	eP	P	15 11 46.6	-1.3
PMR	Palmer	11.06	40	ePn	P	15 11 59.3	-3.2
	133nm,0.9s						
PMR				eP		15 12 02.8	
PMR				eP		15 12 04.1	
PMR	Palmer	11.06	40	eP	P	15 11 59.3	-3.2
PMR				pmax	pmax		
	comp=Z,133nm,0.9s						
SML	Sawmill	11.50	40	ePn	P	15 12 02.2	-6.2
TNA	Tin City	11.86	352	P	P	15 12 11.3	-1.9
	comp=Z,84nm,0.8s						
DIV	Divide	12.17	46	eP	P	15 12 14.4	-3.1
	comp=Z,858nm,1.0s						
MCK	McKinley	12.55	32	eP	P	15 12 21.2	-1.3
SMY	Shemya	13.12	274	P	P	15 12 29.9	-0.1
IMA2	Indian Mountai	13.24	19	eP	P	15 12 31.3	-0.3
IMA2				eP		15 12 33.2	
THY	Trims Highway	13.42	37	eP	P	15 12 33.0	-1.0
FX1	Attu Island--F	13.63	275	Pn	P	15 12 37.4	+0.8
	comp=Z,12nm,0.3s,baz=232,slow=11,SNR=38						
FX1				Sn	S	15 15 02.5	-5.0
	baz=237,slow=23,SNR=1.7						
FX1				LR	LR	15 17 35.1	
	comp=Z,381nm,18.3s,baz=116,slow=36						
FX1	Attu Island--F	13.63	275	eP	P	15 12 36.4	-0.2
COLA	College	13.70	30	i P	P	15 12 36.8	-0.6
COLA	College	13.70	30	d iP	P	15 12 36.7	-0.7
MENT	Mentasta	13.92	41	eP	P	15 12 38.0	-2.3
ILAR	Eielson Array	13.92	32	Pn	P	15 12 37.6	-2.6
	comp=Z,0.7nm,0.3s,baz=228,slow=12,SNR=53						
ILAR				LR	LR	15 18 21.3	
	comp=Z,10µm,20.0s,baz=248,slow=39						
ILAR				ScP		15 21 29.7	
	comp=Z,0.1nm,0.3s,baz=260,slow=4.6,SNR=4.7						
DAWY	Dawson	16.16	41	eP	P	15 13 08.9	-0.4
SIT	Sitka	16.52	67	ePn	P	15 13 14.7	+0.8
	comp=Z,268nm,1.3s						
SIT	Sitka	16.52	67	eP	P	15 13 14.7	+0.8
SIT				pmax	pmax		
	comp=Z,268nm,1.3s						
DLBC	Dease Lake	19.34	63	P	P	15 13 48.1	-0.2
	comp=Z,1.1nm,0.3s,baz=260,slow=12,SNR=34						
DLBC				LR	LR	15 20 28.6	
	comp=Z,4µm,21.9s,baz=270,slow=34						
DLBC	Dease Lake	19.34	63	eP	P	15 13 48.6	+0.3
BILL	Bilibino	19.90	327	eP	P	15 13 52.9	-1.5
	comp=Z,344nm,1.3s						
BILL	Bilibino	19.90	327	i P	P	15 13 53.3	-1.1
BILL				pmax	pmax		
	comp=Z,429nm,1.7s						
BILL				MLR	MLR		
	comp=Z,19µm,21.0s						
INK	Inuvik	20.31	33	P	P	15 13 55.6	-3.0
	comp=Z,45nm,0.8s,baz=250,slow=12,SNR=61						
INK				S	S	15 17 40.0	+1.0
	comp=Z,5.5nm,0.9s,baz=331,slow=27,SNR=2.2						
INK				ScP		15 21 42.1	
	comp=Z,9.1nm,1.0s,baz=270,slow=2.9,SNR=5.6						
INK				LR	LR	15 22 34.5	
	comp=Z,11µm,19.5s,MS5.2,baz=234,slow=39						
INK	Inuvik	20.31	33	eP	P	15 13 54.5	-4.2
	comp=Z,96nm,0.6s						
INK	Inuvik	20.31	33	eP	P	15 13 54.5	-4.2
INK				pmax	pmax		
	comp=Z,96nm,0.6s						
BBB	Bella Bella	21.53	80	P	P	15 14 10.2	-1.0
	comp=Z,16nm,1.0s,mb4.4,baz=288,slow=13,SNR=2.7						
BBB				LR	LR	15 20 43.9	
	comp=Z,3µm,19.6s,MS4.7,baz=288,slow=32						
PET	Petropavlovsk	22.07	283	P	P	15 14 16.5	-0.1
PET				LR	LR		
	comp=Z,12µm,21.0s,MS5.3						
PET	Petropavlovsk	22.07	283	c iP	P	15 14 14.8	-1.7
PET				e*SP		15 14 32.0	
PET				e		15 14 41.6	
PET				eS	S	15 18 12.9	+0.7
PET				pmax	pmax		
	comp=Z,1µm,7.3s						
PET				pmax	pmax		
	comp=Z,23nm,0.5s,mb4.9						
PET				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.0						
PET				pmax	pmax		
	comp=Z,44nm,0.8s,mb4.9						
PET				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.0						
SEY	Seymchan	24.09	309	⇓eP	P	15 14 35.9	-0.1
MA2	Magadan	25.02	301	eP	P	15 14 44.2	-0.9
MA2				LR	LR		
	comp=Z,4µm,19.0s,MS5.0						
OCWA	Octopus Mounta	25.66	87	eP	P	15 14 52.3	+1.1
	comp=Z,190nm,1.3s,mb5.5						
OCWA				LR	LR		
	comp=Z,5µm,21.0s,MS5.0						
OOW	Octopus West	25.66	87	P	P	15 14 53.1	+1.9
PGC	Sidney	25.66	85	eP	P	15 14 51.8	+0.5
	comp=Z,118nm,1.2s,mb5.3						
OSD	Olympics--Snow	25.91	87	P	P	15 14 55.2	+1.7
YKW3	Yellowknife Ar	26.79	51	eP	P	15 15 01.4	-0.2
YKA	Yellowknife Ar	26.80	51	P	P	15 15 01.0	-0.6
	comp=Z,18nm,0.6s,mb4.8,baz=273,slow=7.8,SNR=45						
YKA				LR	LR	15 26 35.3	
	comp=Z,4µm,20.8s,MS5.0,baz=265,slow=38						
MIDW	Midway	27.46	206	PFAKE		15 15 20.0	+12
MIDW				LR	LR		
	comp=Z,5µm,19.0s,MS5.1						
COR	Corvallis	27.83	93	PFAKE		15 15 20.0	+8.7
COR				LR	LR		
	comp=Z,4µm,20.0s,MS5.0						
SSOR	Sweet Springs	28.18	92	P	P	15 15 15.6	+1.2
KEBM	Edson Butte	28.22	97	eP	P	15 15 14.9	+0.1
VLL	Laurance Lake	28.31	90	P	P	15 15 16.5	+1.0
BROR	Big Rock Looko	28.52	93	P	P	15 15 18.3	+1.0
HBO	Huckleberry Mo	28.84	93	P	P	15 15 21.3	+1.1
BKCOR	Black Crater	28.94	92	P	P	15 15 22.3	+1.1
OD2	Odessa Site #2	29.06	84	P	P	15 15 22.1	-0.1
HAWA	Hanford	29.09	87	eP	P	15 15 22.1	-0.3
	comp=Z,2.0nm,0.9s						
HAWA				LR	LR		
	comp=Z,250nm,22.0s						
HUMO	Hull Mountain	29.19	96	eP	P	15 15 23.7	+0.3
	comp=Z,48nm,1.5s,mb5.0						
HUMO				LR	LR		
	comp=Z,6µm,21.0s,MS5.2						
NEW	Newport	29.57	82	eP	P	15 15 25.9	-0.7
	comp=Z,22nm,0.9s,mb4.9						
NEW				LR	LR		
	comp=Z,3µm,20.0s,MS4.9						
NEW	Newport	29.57	82	eP	P	15 15 25.9	-0.8
NEW				pmax	pmax		
	comp=Z,22nm,0.9s						
NEW				MLR	MLR		
	comp=Z,3µm,20.0s						
EDM	Edmonton	29.60	70	eP	P	15 15 26.4	-0.6
KHMM	Horse Mountain	29.81	99	eP	P	15 15 29.4	+0.4
YBH	Yreka Blue Hor	29.87	97	eP	P	15 15 29.9	+0.5
	comp=Z,30nm,1.1s,mb4.9						
YBH				LR	LR		
	comp=Z,5µm,20.0s,MS5.1						
YBH	Yreka Blue Hor	29.87	97	eP	P	15 15 29.9	+0.5
YBH				pmax	pmax		
	comp=Z,29nm,1.1s						
YBH				MLR	MLR		
	comp=Z,5µm,20.0s						
KIPM	Iron Peak	30.64	101	eP	P	15 15 36.6	+0.2
WDC	Whiskeytown Da	30.69	99	eP	P	15 15 36.6	-0.2
	comp=Z,30nm,1.1s,mb5.0						
WDC				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
WDC	Whiskeytown Da	30.69	99	eP	P	15 15 36.6	-0.2
WDC				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.0						
WDC				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.0						
MOD	Modoc	31.18	95	eP	P	15 15 41.4	+0.3
	comp=Z,91nm,1.3s,mb5.4						
MOD				LR	LR		
	comp=Z,6µm,22.0s,MS5.2						
LBCM	Butte Creek Ri	31.23	97	P	P	15 15 42.4	+0.8
BMO	Blue Mountains	31.23	87	eP	P	15 15 40.5	-0.9
	comp=Z,19nm,1.2s,mb4.8						
BMO				LR	LR		
	comp=Z,3µm,22.0s,MS5.0						
HOPS	Hopland	31.42	101	eP	P	15 15 43.1	-0.1
	comp=Z,62nm,1.1s,mb5.3						
HOPS				LR	LR		
	comp=Z,4µm,21.0s,MS5.1						
WVOR	Wild Horse Val	31.84	92	eP	P	15 15 46.8	-0.1
	comp=Z,706nm,0.6s						

WVOR				LR	LR		
	comp=Z,5µm,21.0s,MS5.2						
WVOR	**Wild Horse Val**	**31.84**	**92**	*e*P	**P**	**15 15 46.8**	**-0.1**
WVOR				pmax	pmax		
	comp=Z,706nm,0.6s						
WVOR				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.2						
MSO	**Missoula**	**32.15**	**82**	*e*P	**P**	**15 15 49.2**	**-0.3**
	comp=Z,3.6nm,0.6s,mb4.4						
MSO				LR	LR		
	comp=Z,888nm,20.0s,MS4.5						
CHMT	**Chamberlain Mo**	**32.51**	**81**	*e*P	**P**	**15 15 51.6**	**-1.0**
PAHR	**Pah Rah Range**	**33.11**	**97**	P	**P**	**15 15 58.1**	**+0.2**
TIXI	**Tiksi**	**33.12**	**328**	⇑*i*P	**P**	**15 15 56.2**	**-1.5**
TIXI				LR	LR		
	comp=Z,8µm,20.0s,MS5.4						
TIXI	**Tiksi**	**33.12**	**328**	*e*P	**P**	**15 15 51.4**	**-6.3**
TIXI				*e*PPP	PPP	15 17 12.9	-13
TIXI				*e*S	**S**	**15 21 02.9**	**-10**
TIXI				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.3						
TIXI				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.3						
HRY	**Holter Researc**	**33.45**	**81**	*e*P	**P**	**15 16 00.3**	**-0.5**
CMB	**Columbia Colle**	**33.62**	**100**	*e*P	**P**	**15 16 02.5**	**+0.1**
	comp=Z,18nm,1.0s,mb5.0						
CMB				LR	LR		
	comp=Z,5µm,22.0s,MS5.2						
CMB	**Columbia Colle**	**33.62**	**100**	*e*P	**P**	**15 16 02.5**	**+0.1**
CMB				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
CMB				MLR	MLR		
	comp=Z,5µm,22.0s,MS5.2						
HLID	**Hailey**	**33.68**	**87**	*e*P	**P**	**15 16 02.4**	**-0.3**
	comp=Z,8.8nm,0.9s,mb4.7						
HLID				LR	LR		
	comp=Z,409nm,20.0s,MS4.2						
DLMT	**Dillon**	**33.73**	**83**	*e*P	**P**	**15 16 03.1**	**-0.1**
	comp=Z,24nm,1.2s,mb5.0						
MCMT	**McKenzie Canyo**	**33.88**	**84**	*e*P	**P**	**15 16 03.8**	**-0.6**
SAO	**San Andreas Ge**	**33.88**	**103**	*e*P	**P**	**15 16 04.6**	**0.0**
	comp=Z,24nm,1.0s,mb5.1						
SAO				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
SAO	**San Andreas Ge**	**33.88**	**103**	*e*P	**P**	**15 16 04.6**	**0.0**
SAO				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
SAO				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**33.89**	**280**	PFAKE		15 16 20.0	+15
YSS				LR	LR		
	comp=Z,4µm,22.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**33.89**	**280**	⇑*i*P	**P**	**15 16 07.0**	**+2.4**
YSS				S	**S**	**15 21 27.0**	**+1.9**
YSS				*e*SS	SS	15 23 32.0	-1.4
YSS				MLR	MLR		
	comp=E,3µm,18.0s						
YSS				MLR	MLR		
	comp=Z,3µm,18.0s,MS5.0						
BOZ	**Bozeman (W)**	**34.14**	**82**	*e*P	**P**	**15 16 05.8**	**-0.9**
	comp=Z,8.5nm,0.8s,mb4.7						
BOZ				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
BOZ	**Bozeman (W)**	**34.14**	**82**	*e*P	**P**	**15 16 05.8**	**-0.9**
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.7						
BOZ				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.7						
LRV	**Little Rabbit**	**34.36**	**103**	*e*P	**P**	**15 16 09.6**	**+0.8**
NVAR	**Mina Array Bea**	**34.58**	**98**	P	**P**	**15 16 10.9**	**+0.3**
	comp=Z,11nm,0.9s,mb4.8,baz=307,slow=8.1,SNR=46						
NVAR				PcP	PcP	15 18 44.2	-0.5
	comp=Z,6.6nm,1.0s,baz=285,slow=2.3,SNR=4.2						
NVAR				ScP		15 22 25.6	
	comp=Z,1.3nm,0.8s,baz=315,slow=2.6,SNR=5.7						
NVAR				LR	LR	15 27 42.8	
	comp=Z,3µm,21.1s,MS5.0,baz=310,slow=32						
YAK	**Yakutsk**	**34.60**	**311**	*i* P	**P**	**15 16 07.6**	**-2.9**
YAK				LR	LR		
	comp=Z,8µm,19.0s,MS5.5						
YAK	**Yakutsk**	**34.60**	**311**	*e*P	**P**	**15 16 04.6**	**-5.9**
YAK				*e*		15 18 40.1	
YAK				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.2						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,24nm,1.1s						
YAK				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.2						
MNV	**Mina**	**34.66**	**98**	*e*P	**P**	**15 16 11.6**	**+0.3**
	comp=Z,29nm,1.0s,mb5.2						
MNV				LR	LR		
	comp=Z,4µm,22.0s,MS5.1						
MNV	**Mina**	**34.66**	**98**	*e*P	**P**	**15 16 11.6**	**+0.3**
MNV				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2						
MNV				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.1						
POHA	**Pohakuloa**	**34.70**	**166**	PFAKE		15 16 20.0	+8.2
POHA				LR	LR		
	comp=Z,4µm,19.0s,MS5.2						
QLMT	**Earthquake Lak**	**34.71**	**83**	*e*P	**P**	**15 16 11.2**	**-0.4**
ELK	**Elko**	**34.89**	**92**	*e*P	**P**	**15 16 13.4**	**+0.2**
	comp=Z,46nm,0.9s,mb5.4						
ELK				*e*pP	pP	15 16 23.7	-1.1
ELK				LR	LR		
	comp=Z,4µm,20.0s,MS5.2						
ELK	**Elko**	**34.89**	**92**	*e*P	**P**	**15 16 13.4**	**+0.2**
ELK				*e**PP	pP	15 16 23.7	-1.1
ELK				pmax	pmax		
	comp=Z,46nm,0.9s						
ELK				MLR	MLR		
	comp=Z,4µm,20.0s						
YMR	**Madison River**	**35.07**	**83**	*e*P	**P**	**15 16 14.6**	**-0.1**
	comp=Z,36nm,1.0s,mb5.3						
YMR				LR	LR		
	comp=Z,2µm,21.0s,MS4.8						
MTUM	**Tungsten Hills**	**35.15**	**99**	*e*P	**P**	**15 16 16.3**	**+0.8**
FFC	**Flin Flon**	**35.17**	**63**	*e*P	**P**	**15 16 15.1**	**-0.4**
	comp=Z,14nm,0.9s,mb4.9						
FFC				LR	LR		
	comp=Z,663nm,22.0s,MS4.3						
FFC	**Flin Flon**	**35.17**	**63**	*e*P	**P**	**15 16 15.1**	**-0.4**
FFC				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
FFC				MLR	MLR		
	comp=Z,663nm,22.0s,MS4.3						
GCMT	**Greycliff**	**35.21**	**81**	*e*P	**P**	**15 16 16.5**	**+0.7**
YFT	**Old Faithful**	**35.27**	**83**	*e*P	**P**	**15 16 17.5**	**+1.0**
PTRM	**Twissleman Ran**	**35.37**	**103**	*e*P	**P**	**15 16 16.4**	**-1.0**
TPH	**Tonopah**	**35.45**	**97**	*e*P	**P**	**15 16 18.6**	**+0.6**
	comp=Z,68nm,1.1s,mb5.5						
TPH				LR	LR		
	comp=Z,4µm,21.0s,MS5.2						
TPH	**Tonopah**	**35.45**	**97**	*e*P	**P**	**15 16 18.6**	**+0.6**
TPH				pmax	pmax		
	comp=Z,68nm,1.1s,mb5.5						
TPH				MLR	MLR		
	comp=Z,4µm,21.0s,MS5.2						
LKWY	**Lake**	**35.46**	**83**	*e*P	**P**	**15 16 18.9**	**+0.9**
	comp=Z,19nm,1.1s,mb4.9						
LKWY				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
LKWY	**Lake**	**35.46**	**83**	*e*P	**P**	**15 16 19.0**	**+0.9**
LKWY				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
LKWY				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.9						
IMW	**Indian Meadow**	**35.53**	**84**	*e*P	**P**	**15 16 18.7**	**0.0**
	comp=Z,14nm,0.9s,mb4.9						
ASAJ	**Asahikawa**	**35.55**	**276**	P	**P**	**15 16 17.0**	**-1.9**
	comp=Z,39nm,1.0s,mb5.3,baz=30,slow=5.9,SNR=9.0						
HVU	**Hansel Valley**	**35.71**	**88**	*e*P	**P**	**15 16 19.4**	**-0.7**
	comp=Z,20nm,1.2s,mb4.9						
HVU	**Hansel Valley**	**35.71**	**88**	*e*P	**P**	**15 16 19.5**	**-0.7**
HVU				pmax	pmax		
	comp=Z,20nm,1.2s,mb4.9						
MOOW	**Moose Ponds**	**35.73**	**84**	*e*P	**P**	**15 16 20.4**	**0.0**
	comp=Z,20nm,1.6s,mb4.8						
TPAW	**Teton Pass**	**35.76**	**85**	*e*P	**P**	**15 16 19.9**	**-0.7**
	comp=Z,9.7nm,0.8s,mb4.8						
LOHW	**Long Hollow**	**35.90**	**84**	*e*P	**P**	**15 16 21.8**	**+0.1**
	comp=Z,10nm,0.9s,mb4.8						
REDW	**Red Top Meadow**	**35.90**	**85**	*e*P	**P**	**15 16 21.7**	**-0.1**
	comp=Z,15nm,1.1s,mb4.8						

AHID	**Auburn Hatcher**	**36.10**	**86**	PFAKE		15 16 40.0	+16
AHID				LR	LR		
	comp=Z,3µm,21.0s,MS5.0						
SPUT	**South Promonto**	**36.19**	**89**	*e*P	**P**	**15 16 24.4**	**+0.1**
ISA	**Isabella**	**36.37**	**101**	*e*P	**P**	**15 16 25.1**	**-0.7**
	comp=Z,4.8nm,0.8s,mb4.5						
ISA				LR	LR		
	comp=Z,976nm,21.0s,MS4.6						
ISA	**Isabella**	**36.37**	**101**	*e*P	**P**	**15 16 25.1**	**-0.7**
ISA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
ISA				MLR	MLR		
	comp=Z,976nm,21.0s,MS4.6						
DAC	**Darwin (Calif)**	**36.45**	**100**	*e*P	**P**	**15 16 26.9**	**+0.4**
	comp=Z,14nm,0.6s,mb5.1						
DAC				LR	LR		
	comp=Z,4µm,22.0s,MS5.1						
DAC	**Darwin (Calif)**	**36.45**	**100**	*e*P	**P**	**15 16 26.9**	**+0.4**
DAC				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
DAC				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.1						
HWUT	**Hardware Ranch**	**36.53**	**88**	*e*P	**P**	**15 16 26.8**	**-0.3**
	comp=Z,13nm,1.0s,mb4.7						
HWUT				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
DUG	**Dugway**	**36.67**	**91**	*e*P	**P**	**15 16 27.9**	**-0.4**
	comp=Z,59nm,1.2s,mb5.3						
DUG				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
DUG	**Dugway**	**36.67**	**91**	*e*P	**P**	**15 16 27.9**	**-0.4**
DUG				pmax	pmax		
	comp=Z,59nm,1.2s,mb5.3						
DUG				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.9						
LAO	**LASA Array**	**36.71**	**77**	*e*P	**P**	**15 16 29.1**	**+0.5**
	comp=Z,57nm,1.1s,mb5.3						
LAO				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
TPNV	**Topopah Spring**	**36.78**	**98**	*e*P	**P**	**15 16 29.1**	**-0.1**
	comp=Z,87nm,0.9s,mb5.6						
TPNV	**Topopah Spring**	**36.78**	**98**	*e*P	**P**	**15 16 29.1**	**-0.2**
TPNV				pmax	pmax		
	comp=Z,87nm,0.9s,mb5.6						
NOQ	**North Oquirrh**	**36.80**	**89**	*e*P	**P**	**15 16 29.6**	**+0.3**
DGMT	**Dagmar**	**36.92**	**73**	*e*P	**P**	**15 16 29.6**	**-0.7**
	comp=Z,72nm,1.0s,mb5.5						
DGMT				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
CTU	**Camp Tracy**	**36.99**	**89**	*e*P	**P**	**15 16 31.4**	**+0.4**
BW06	**Boulder Array**	**37.01**	**85**	PFAKE		15 16 40.0	+8.9
BW06				LR	LR		
	comp=Z,1µm,19.0s,MS4.8						
PDAR	**Pinedale Array**	**37.01**	**85**	P	**P**	**15 16 30.8**	**-0.4**
	comp=Z,3.6nm,0.8s,baz=304,slow=5.3,SNR=17						
PDAR				ScP		15 22 33.6	
	comp=Z,1.7nm,1.0s,baz=270,slow=1.5,SNR=5.2						
PDAR				LR	LR	15 29 27.1	
	comp=Z,1µm,21.0s,MS4.7,baz=94,slow=32						
DAU	**Daniels Canyon**	**37.46**	**89**	*e*P	**P**	**15 16 34.4**	**-0.5**
FCC	**Fort Churchill**	**37.47**	**54**	*e*P	**P**	**15 16 35.1**	**+0.2**
	comp=Z,196nm,1.1s,mb5.8						
FCC	**Fort Churchill**	**37.47**	**54**	*e*P	**P**	**15 16 35.1**	**+0.3**
FCC				pmax	pmax		
	comp=Z,196nm,1.1s,mb5.8						
MPU	**Maple Canyon**	**37.49**	**90**	PFAKE		15 16 50.0	+15
MPU				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
SNCC	**San Nicolas Is**	**37.49**	**105**	PFAKE		15 16 50.0	+15
SNCC				LR	LR		
	comp=Z,3µm,20.0s,MS5.1						
MWC	**Mount Wilson**	**37.63**	**103**	*e*P	**P**	**15 16 36.6**	**+0.2**
ARUT	**Antelope Range**	**37.87**	**94**	*e*P	**P**	**15 16 38.1**	**-0.3**
MVU	**Marysvale**	**38.12**	**92**	*e*P	**P**	**15 16 41.0**	**+0.6**
	comp=Z,17nm,0.9s,mb4.8						
MVU				LR	LR		
	comp=Z,4µm,22.0s,MS5.2						
MSU	**Marysvale**	**38.14**	**92**	*e*P	**P**	**15 16 40.9**	**+0.3**
TMUT	**Trail Mountain**	**38.20**	**90**	*e*P	**P**	**15 16 41.5**	**+0.5**
NEN	**Nelson**	**38.49**	**98**	*e*P	**P**	**15 16 43.4**	**-0.2**
SRU	**San Rafael**	**38.72**	**90**	*e*P	**P**	**15 16 45.9**	**+0.4**
	comp=Z,99nm,1.4s,mb5.3						
SRU	**San Rafael**	**38.72**	**90**	*e*P	**P**	**15 16 45.9**	**+0.4**
SRU				pmax	pmax		
	comp=Z,99nm,1.4s,mb5.3						
LDFC	**Landfair**	**38.74**	**99**	*e*P	**P**	**15 16 45.9**	**+0.2**
KLR	**Kul'dur**	**38.97**	**290**	*e*P	**P**	**15 16 45.4**	**-2.0**
PFO	**Pinyon Flat Ob**	**38.99**	**102**	PFAKE		15 17 00.0	+12
PFO				LR	LR		
	comp=Z,1µm,20.0s,MS4.7						
RWWY	**Rawlins**	**39.05**	**84**	*e*P	**P**	**15 16 46.9**	**-1.2**
	comp=Z,51nm,1.0s,mb5.2						
RSSD	**Black Hills**	**39.44**	**79**	*e*P	**P**	**15 16 51.3**	**-0.1**
	comp=Z,130nm,0.9s,mb5.7						
RSSD				LR	LR		
	comp=Z,3µm,22.0s,MS5.1						
RSSD	**Black Hills**	**39.44**	**79**	*e*P	**P**	**15 16 51.3**	**-0.1**
RSSD				pmax	pmax		
	comp=Z,130nm,0.9s,mb5.7						
RSSD				MLR	MLR		
	comp=Z,3µm,22.0s,MS5.1						
BAR	**Barrett**	**39.54**	**103**	*e*P	**P**	**15 16 50.8**	**-1.5**
PV10	**Paradox Valley**	**40.08**	**90**	*e*P	**P**	**15 16 57.3**	**+0.6**
PV01	**Paradox Valley**	**40.52**	**90**	*e*P	**P**	**15 16 59.9**	**-0.5**
PV01				*e*pP	pP	15 17 11.2	-0.9
ULM	**Lac du Bonnet**	**40.60**	**66**	P	**P**	**15 16 59.7**	**-1.2**
	comp=Z,27nm,0.9s,mb4.9,baz=298,slow=8.5,SNR=25						
ULM				LR	LR	15 35 03.6	
	comp=Z,1µm,18.7s,MS4.9,baz=76,slow=38						
ULM	**Lac du Bonnet**	**40.60**	**66**	P	**P**	**15 16 59.7**	**-1.2**
ULM				LR	LR	15 35 03.6	
WUAZ	**Wupatki**	**40.63**	**95**	*e*P	**P**	**15 17 01.6**	**+0.3**
	comp=Z,66nm,0.9s,mb5.3						
WUAZ				*e*pP	pP	15 17 12.6	-0.4
WUAZ				LR	LR		
	comp=Z,5µm,20.0s,MS5.4						
SMCO	**Snowmass**	**40.78**	**87**	*e*P	**P**	**15 17 02.6**	**0.0**
	comp=Z,18nm,1.1s,mb4.6						
ISCO	**Idaho Springs**	**41.18**	**85**	*e*P	**P**	**15 17 04.9**	**-0.9**
	comp=Z,12nm,1.2s,mb4.4						
ISCO				LR	LR		
	comp=Z,3µm,20.0s,MS5.2						
ISCO	**Idaho Springs**	**41.18**	**85**	*e*P	**P**	**15 17 04.9**	**-0.9**
ISCO				pmax	pmax		
	comp=Z,12nm,1.2s,mb4.4						
ISCO				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.2						
WAKE	**Wake Island**	**41.23**	**225**	PFAKE		15 17 20.0	+14
WAKE				LR	LR		
	comp=Z,9µm,22.0s,MS5.6						
SDCO	**Great Sand Dun**	**42.59**	**88**	*e*P	**P**	**15 17 17.3**	**-0.1**
	comp=Z,37nm,1.3s,mb5.0						
SDCO				LR	LR		
	comp=Z,2µm,21.0s,MS5.0						
MDJ	**Mudanjiang**	**42.81**	**286**	P	**P**	**15 17 18.8**	**-0.2**
MDJ				AP	pP	15 17 28.9	-1.9
MDJ				PCP	PcP	15 19 11.1	+0.8
MDJ				S	**S**	**15 23 39.8**	**0.0**
MDJ				AMB	AMB		
	comp=Z,10.0nm,2.1s						
MDJ				AMB	AMB		
	comp=Z,290nm,5.2s						
MDJ				LR	LR		
	comp=E,3µm,22.2s						
MDJ				LR	LR		
	comp=Z,4µm,23.2s,MS5.2						
MDJ	**Mudanjiang**	**42.81**	**286**	PFAKE		15 17 30.0	+11
MDJ				LR	LR		
	comp=Z,4µm,20.0s,MS5.3						
MJAR	**Matsushiro Arr**	**42.93**	**270**	P	**P**	**15 17 19.5**	**-0.6**
	comp=Z,14nm,0.6s,mb4.9,baz=38,slow=6.0,SNR=38						
MAJO	**Matsushiro**	**42.93**	**270**	*e*P	**P**	**15 17 18.7**	**-1.5**
	comp=Z,31nm,0.7s,mb5.1						
MAJO				LR	LR		
	comp=Z,3µm,19.0s,MS5.2						
MAJO	**Matsushiro**	**42.93**	**270**	*e*P	**P**	**15 17 18.7**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.2						
MAJO				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.2						
MAT	**Matsushiro**	**42.93**	**270**	P	**P**	**15 17 19.3**	**-0.8**
MAT	**Matsushiro**	**42.93**	**270**	*e*P	**P**	**15 17 19.0**	**-1.1**
	comp=Z,22nm,0.8s,mb5.0						
MAT	**Matsushiro**	**42.93**	**270**	*e*P	**P**	**15 17 19.0**	**-1.1**
MAT				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						

TUC	**Tucson**	**43.23**	**98**	*e*P	**P**	**15 17 22.1**	**-0.6**
	comp=Z,23nm,1.0s,mb4.8						
TUC				LR	LR		
	comp=Z,1µm,21.0s,MS4.7						
TUC	**Tucson**	**43.23**	**98**	*e*P	**P**	**15 17 22.1**	**-0.6**
TUC				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.9						
TUC				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.7						
BOD	**Bodaibo**	**43.51**	**310**	*e*P	**P**	**15 17 22.3**	**-2.2**
BOD				*e*		15 19 11.0	
BOD				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.0						
BOD				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
BOD				pmax	pmax		
	comp=Z,20nm,1.3s,mb4.7						
LAZ	**Ladron**	**43.90**	**93**	*e*P	**P**	**15 17 28.4**	**+0.4**
ANMO	**Albuquerque**	**43.92**	**91**	*e*P	**P**	**15 17 28.3**	**+0.1**
	comp=Z,25nm,1.3s,mb4.8						
ANMO				*e*pP	pP	15 17 39.1	-0.9
ANMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
ANMO	**Albuquerque**	**43.92**	**91**	*e*P	**P**	**15 17 28.3**	**+0.1**
ANMO				*e**PP	pP	15 17 39.1	-0.9
ANMO				pmax	pmax		
	comp=Z,25nm,1.3s						
ANMO				MLR	MLR		
	comp=Z,2µm,20.0s						
LENM	**Lemitar**	**44.16**	**93**	*e*P	**P**	**15 17 30.4**	**+0.2**
LPM	**Los Pinos Moun**	**44.26**	**92**	*e*P	**P**	**15 17 30.8**	**-0.1**
EYMN	**Ely**	**44.27**	**67**	*e*P	**P**	**15 17 29.9**	**-0.9**
	comp=Z,66nm,1.1s,mb5.3						
EYMN				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
BNM	**Barren Site**	**44.38**	**92**	*e*P	**P**	**15 17 32.1**	**+0.3**
CBKS	**Cedar Bluff**	**45.28**	**82**	*e*P	**P**	**15 17 38.6**	**-0.5**
	comp=Z,76nm,1.0s,mb5.5						
CBKS				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
CBKS	**Cedar Bluff**	**45.28**	**82**	*e*P	**P**	**15 17 38.6**	**-0.4**
CBKS				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.5						
CBKS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
HIA	**Hailar**	**45.46**	**297**	*e*P	**P**	**15 17 38.5**	**-1.9**
	comp=Z,10.0nm,0.6s,mb4.8						
HIA				LR	LR		
	comp=Z,4µm,21.0s,MS5.3						
HIA	**Hailar**	**45.46**	**297**	*e*P	**P**	**15 17 38.5**	**-1.8**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HIA				MLR	MLR		
	comp=Z,4µm,21.0s						
CN2	**Changchun**	**45.66**	**287**	*e*P	**P**	**15 17 40.4**	**-1.6**
CN2				*e*AP	pP	15 17 55.5	+1.7
CN2				*e*PCP	PcP	15 19 19.0	-1.0
CN2				*e*S	**S**	**15 24 17.6**	**-3.4**
CN2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.4						
CN2				AMB	AMB		
	comp=Z,500nm,8.0s						
CN2				LR	LR		
	comp=N,6µm,20.0s,MS5.7						
CN2				LR	LR		
	comp=E,7µm,20.0s,MS5.7						
CN2				LR	LR		
	comp=Z,4µm,22.0s,MS5.4						
AMTX	**Amarillo**	**46.80**	**88**	*e*P	**P**	**15 17 50.3**	**-0.8**
	comp=Z,41nm,1.0s,mb5.3						
AMTX				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
CPRX	**Cap Rock**	**46.80**	**91**	*e*P	**P**	**15 17 50.5**	**-0.6**
MNTX	**Cornudas Mount**	**46.85**	**94**	*e*P	**P**	**15 17 51.0**	**-0.5**
	comp=Z,36nm,1.0s,mb5.2						
MNTX				*e*pP	pP	15 18 01.3	-2.1
MNTX				LR	LR		
	comp=Z,4µm,21.0s,MS5.4						
CIT	**Chita**	**46.99**	**303**	*e*P	**P**	**15 17 51.0**	**-1.3**
CIT				pmax	pmax		
	comp=Z,329nm,1.2s,mb6.1						
GDL2	**Guadalupe Moun**	**47.10**	**92**	*e*P	**P**	**15 17 52.7**	**-0.7**
CLNB	**Carlsbad**	**47.34**	**92**	P	**P**	**15 17 55.0**	**-0.3**
KBS	**Kingsbay**	**47.41**	**1**	*e*P	**P**	**15 17 56.0**	**+0.6**
KBS				AMS	AMS	15 36 30.2	
	comp=Z,2µm,22.8s,MS4.9						
DAG	**Danmarks Havn**	**47.76**	**10**	⇓*i*P	**P**	**15 17 56.9**	**-1.2**
	comp=Z,87nm,1.0s,mb5.7						
	comp=Z,4µm,17.0s						
DAG	**Danmarks Havn**	**47.76**	**10**	⇓*i*P	**P**	**15 17 56.9**	**-1.2**
DAG				pmax	pmax		
	comp=Z,87nm,1.0s,mb5.7						
DAG				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.4						
SNY	**Shenyang**	**47.98**	**286**	⇑P	**P**	**15 17 59.4**	**-0.8**
SNY				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.3						
SUMG	**Summit**	**48.33**	**19**	*e*P	**P**	**15 18 02.1**	**-0.4**
	comp=Z,108nm,0.8s,mb5.9						
KS15	**Wonju Array Si**	**48.40**	**279**	*e*P	**P**	**15 18 02.3**	**-1.3**
WMOK	**Wichita Mounta**	**48.61**	**86**	*e*P	**P**	**15 18 04.1**	**-1.1**
	comp=Z,43nm,0.9s,mb5.5						
WMOK				*e*pP	pP	15 18 15.1	-1.9
WMOK				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
WMOK	**Wichita Mounta**	**48.61**	**86**	*e*P	**P**	**15 18 04.1**	**-1.1**
WMOK				*e**PP	pP	15 18 15.1	-2.0
WMOK				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.5						
WMOK				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.0						
INCN	**Inchon**	**49.11**	**280**	*e*P	**P**	**15 18 08.5**	**-0.5**
	comp=Z,84nm,1.1s,mb5.7						
INCN				LR	LR		
	comp=Z,5µm,19.0s,MS5.5						
SFJD	**Kangerlussuaq**	**49.55**	**28**	LR	LR	15 40 12.2	
	comp=Z,2µm,21.9s,MS5.2,baz=56,slow=37						
SFJD	**Kangerlussuaq**	**49.55**	**28**	*i* P	**P**	**15 18 12.3**	**+0.2**
	comp=Z,75nm,1.0s,mb5.7						
SFJD				*i* S	**S**	**15 25 16.1**	**+0.4**
	comp=Z,2µm,19.0s						
SFJD	**Kangerlussuaq**	**49.55**	**28**	*i* P	**P**	**15 18 12.3**	**+0.2**
SFJD				*i* S	**S**	**15 25 16.1**	**+0.4**
SFJD				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.7						
SFJD				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.2						
LTX	**Lajitas**	**49.59**	**94**	*e*P	**P**	**15 18 12.0**	**-0.8**
	comp=Z,51nm,1.0s,mb5.5						
LTX				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
LTX	**Lajitas**	**49.59**	**94**	*e*P	**P**	**15 18 12.0**	**-0.8**
LTX				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.5						
LTX				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
TXAR	**Lajitas Array**	**49.59**	**94**	P	**P**	**15 18 12.8**	**-0.1**
	comp=Z,8.6nm,0.8s,mb4.8,baz=300,slow=5.4,SNR=75						
TXAR				ScP		15 23 25.5	
	comp=Z,2.5nm,0.8s,baz=276,slow=2.8,SNR=9.0						
TXAR				LR	LR	15 37 33.5	
	comp=Z,2µm,19.9s,MS5.0,baz=15,slow=34						
KWAJ	**Kwajalein Atol**	**50.40**	**218**	PFAKE		15 18 30.0	+11
KWAJ				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
CCM	**Cathedral Cave**	**50.73**	**77**	*e*P	**P**	**15 18 18.4**	**-3.0**
	comp=Z,45nm,1.2s,mb5.3						
CCM				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
CCM	**Cathedral Cave**	**50.73**	**77**	*e*P	**P**	**15 18 18.4**	**-3.0**
CCM				pmax	pmax		
	comp=Z,45nm,1.2s,mb5.3						
CCM				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.0						
SLM	**Saint Louis**	**50.92**	**76**	*e*P	**P**	**15 18 21.4**	**-1.4**
	comp=Z,74nm,0.8s,mb5.7						
SLM	**Saint Louis**	**50.92**	**76**	*e*P	**P**	**15 18 21.4**	**-1.4**
SLM				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.7						
DL2	**Dalian**	**51.03**	**285**	P	**P**	**15 18 22.9**	**-0.8**
DL2				XP	sP	15 18 40.0	-0.6
DL2				*e*S	**S**	**15 25 32.3**	**-4.2**
DL2				XS		15 25 54.4	
DL2				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.4						
DL2				AMB	AMB		

	comp=Z,270nm,6.0s						
DL2				LR	LR		
	comp=N,650nm,15.2s,MS5.1						
DL2				LR	LR		
	comp=E,1µm,16.7s,MS5.1						
DL2				LR	LR		
	comp=Z,1µm,15.3s,MS5.1						
FVM	**French Village**	**51.25**	**76**	*e*P	**P**	**15 18 23.2**	**-2.1**
	comp=Z,48nm,1.0s,mb5.4						
FVM	**French Village**	**51.25**	**76**	*e*P	**P**	**15 18 23.2**	**-2.2**
FVM				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.4						
MIAR	**Mount Ida**	**51.81**	**82**	*e*P	**P**	**15 18 27.4**	**-2.2**
	comp=Z,24nm,1.0s,mb5.1						
MIAR				LR	LR		
	comp=Z,584nm,21.0s,MS4.6						
MIAR	**Mount Ida**	**51.81**	**82**	*e*P	**P**	**15 18 27.4**	**-2.2**
MIAR				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.1						
MIAR				MLR	MLR		
	comp=Z,584nm,21.0s,MS4.6						
BJO	**Bjornoya**	**51.86**	**359**	AMS	AMS	15 40 31.3	
	comp=Z,2µm,22.8s,MS5.1						
SCHQ	**Schefferville**	**52.09**	**47**	P	**P**	**15 18 30.1**	**-1.3**
	comp=Z,80nm,1.0s,mb5.6,baz=314,slow=7.6,SNR=26						
SCHQ				LR	LR	15 43 40.6	
	comp=Z,1µm,19.1s,MS5.0,baz=220,slow=40						
SCHQ	**Schefferville**	**52.09**	**47**	*e*P	**P**	**15 18 30.2**	**-1.2**
	comp=Z,131nm,1.1s,mb5.8						
SCHQ				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
AAM	**Ann Arbor**	**52.13**	**68**	PFAKE		15 18 40.0	+8.1
AAM				LR	LR		
	comp=Z,1µm,22.0s,MS4.9						
PARMO	**Parma**	**52.55**	**77**	*e*P	**P**	**15 18 33.3**	**-1.8**
ULN	**Ulaanbaatar**	**52.88**	**302**	⇑*i*P	**P**	**15 18 36.3**	**-1.1**
ULN				LR	LR		
	comp=Z,5µm,21.0s,MS5.6						
ZAK	**Zakamensk**	**53.02**	**307**	*e*P	**P**	**15 18 37.2**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.6						
NATX	**Nacogdoches**	**53.15**	**85**	P	**P**	**15 18 38.5**	**-1.1**
NATX				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
MOY	**Mondy**	**53.22**	**309**	*e*P	**P**	**15 18 38.7**	**-1.2**
MOY				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.3						
SONM	**Songino Array**	**53.22**	**303**	P	**P**	**15 18 39.3**	**-0.7**
	comp=Z,53nm,1.2s,mb5.3,baz=43,slow=5.9,SNR=67						
SONM				PcP	PcP	15 19 48.0	+0.6
	comp=Z,21nm,0.7s,baz=61,slow=1.9,SNR=12						
WCI	**Wyandotte Cave**	**53.44**	**73**	PFAKE		15 18 50.0	+8.2
WCI				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
KRAR	**Krasnoyarsk**	**53.72**	**317**	⇑*e*P	**P**	**15 18 42.3**	**-1.3**
ACSO	**Alum Creek Sta**	**53.92**	**69**	PFAKE		15 19 00.0	+15
ACSO				LR	LR		
	comp=Z,1µm,21.0s,MS4.9						
WVT	**Waverly**	**54.03**	**76**	*e*P	**P**	**15 18 43.8**	**-2.3**
	comp=Z,50nm,0.8s,mb5.5						
WVT				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
WVT	**Waverly**	**54.03**	**76**	*e*P	**P**	**15 18 43.8**	**-2.3**
WVT				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5						
WVT				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.1						
ERPA	**Erie**	**54.25**	**66**	PFAKE		15 19 00.0	+12
ERPA				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
OXF	**Oxford**	**54.26**	**79**	*e*P	**P**	**15 18 45.5**	**-2.4**
	comp=Z,188nm,1.0s,mb6.0						
OXF				LR	LR		
	comp=Z,2µm,21.0s,MS5.1						
OXF	**Oxford**	**54.26**	**79**	*e*P	**P**	**15 18 45.5**	**-2.3**
OXF				pmax	pmax		
	comp=Z,188nm,1.0s,mb6.0						
OXF				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.1						
ALLY	**Alegheny Colle**	**54.49**	**66**	*e*P	**P**	**15 18 47.3**	**-2.1**
HHC	**Hu-ho-hao-te**	**55.32**	**293**	⇑*i*P	**P**	**15 18 54.8**	**-0.6**
HHC				AP	pP	15 19 07.8	+0.3
HHC				XP	sP	15 19 12.5	+0.1
HHC				PP	PP	15 20 59.3	-1.4
HHC				PCS		15 23 55.4	
HHC				S	**S**	**15 26 32.5**	**-2.1**
HHC				PS	PS	15 26 50.5	-1.5
HHC				SCS	ScS	15 28 36.0	-1.4
HHC				SS	SS	15 30 15.5	-3.7
HHC				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.4						
HHC				AMB	AMB		
	comp=Z,450nm,7.2s						
HHC				LR	LR		
	comp=N,2µm,16.8s,MS5.5						
HHC				LR	LR		
	comp=E,3µm,19.2s,MS5.5						
HHC				LR	LR		
	comp=Z,6µm,22.8s,MS5.6						
LOZ	**Lake Ozonia**	**55.37**	**60**	*e*P	**P**	**15 18 55.0**	**-0.8**
TIA	**Tai’an**	**55.47**	**286**	P	**P**	**15 18 55.0**	**-1.6**
TIA				AMB	AMB		
	comp=Z,80nm,1.3s,mb5.6						
NCB	**Newcomb**	**56.01**	**61**	PFAKE		15 19 10.0	+10
NCB				LR	LR		
	comp=Z,2µm,22.0s,MS5.1						
MCWV	**Mont Chateau**	**56.04**	**68**	PFAKE		15 19 10.0	+9.3
MCWV				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
TZTN	**Tazewell**	**56.18**	**73**	*e*P	**P**	**15 19 01.4**	**-0.2**
BTO	**Baotou**	**56.32**	**294**	*e*P	**P**	**15 19 01.8**	**-0.8**
BTO				AMB	AMB		
	comp=Z,90nm,1.3s,mb5.6						
KEV	**Kevo**	**56.40**	**355**	*e*P	**P**	**15 19 00.1**	**-2.7**
	comp=Z,29nm,0.7s,mb5.4						
KEV				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						
KEV	**Kevo**	**56.40**	**355**	*e*P	**P**	**15 19 00.1**	**-2.7**
KEV				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.4						
KEV				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.3						
GUMO	**Guam**	**56.66**	**245**	PFAKE		15 19 20.0	+15
GUMO				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
ARCES	**ARCESS Array B**	**56.68**	**356**	P	**P**	**15 19 02.7**	**-2.2**
	comp=Z,11nm,0.5s,mb5.2,baz=12,slow=7.6,SNR=65						
ARCES				PcP	PcP	15 20 00.8	+0.4
	comp=Z,24nm,0.7s,baz=18,slow=3.8,SNR=11						
ARCES				LR	LR	15 46 02.9	
	comp=Z,2µm,19.1s,MS5.3,baz=358,slow=39						
ARCES	**ARCESS Array B**	**56.68**	**356**	P	**P**	**15 19 02.7**	**-2.2**
ARCES				PcP	PcP	15 20 00.8	+0.4
ARCES				LR	LR	15 46 02.9	
ARE0	**ARCESS Array S**	**56.68**	**356**	*e*P	**P**	**15 19 02.5**	**-2.3**
ACCN	**Adirondack Com**	**56.71**	**61**	*e*P	**P**	**15 19 04.3**	**-1.1**
TRO	**Tromso**	**56.76**	**359**	*e*P	**P**	**15 19 02.8**	**-2.7**
TRO				AMS	AMS	15 42 19.3	
	comp=Z,815nm,21.2s,MS4.8						
SSE	**Sheshan**	**56.80**	**278**	P	**P**	**15 19 05.4**	**-0.8**
SSE				AP	pP	15 19 19.1	+0.8
SSE				PP	PP	15 21 10.6	-3.5
SSE				S	**S**	**15 26 52.4**	**-2.1**
SSE				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.7						
SSE				AMB	AMB		
	comp=Z,350nm,10.1s						
SSE				LR	LR		
	comp=N,7µm,25.4s,MS5.8						
SSE				LR	LR		
	comp=E,6µm,25.5s,MS5.8						
SSE				LR	LR		
	comp=Z,11µm,24.4s,MS5.8						
LBNH	**Lisbon**	**57.00**	**59**	PFAKE		15 19 20.0	+13
LBNH				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
KTK1	**Kautokeino**	**57.29**	**357**	*e*P	**P**	**15 19 09.8**	**+0.6**
BLA	**Blacksburg**	**57.46**	**70**	PFAKE		15 19 20.0	+9.2
BLA				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
NJ2	**Nanjing**	**57.46**	**281**	*e*P	**P**	**15 19 09.3**	**-1.6**
NJ2				S	**S**	**15 27 01.0**	**-2.2**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,340nm,5.3s						
NJ2				LR	LR		
	comp=Z,15µm,22.7s,MS6.0						
LVZ	**Lovozero**	**57.73**	**352**	*e*P	**P**	**15 19 10.6**	**-1.6**
LVZ				*e*S	**S**	**15 27 06.0**	**-0.2**
LVZ				pmax	pmax		
	comp=N,50nm,1.1s						
LVZ				pmax	pmax		
	comp=Z,165nm,1.1s,mb6.0						
LVZ				pmax	pmax		
	comp=E,20nm,0.9s						
LVZ				smax			
	comp=N,559nm,4.9s						
LVZ				smax			
	comp=E,393nm,2.9s						
SDMD	**Soldier’s Deli**	**57.86**	**66**	*e*P	**P**	**15 19 04.5**	**-9.0**
APA	**Apatity**	**58.15**	**352**	⇑*e*P	**P**	**15 19 14.8**	**-0.4**
APA				*i* *PP	pP	15 19 26.5	-0.9
APA				*e*S	**S**	**15 27 13.0**	**+1.3**
APA				pmax	pmax		
	comp=Z,100nm,1.7s,mb5.6						
APA				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.2						
NVS	**Novosibirsk**	**58.31**	**321**	*i* P	**P**	**15 19 14.0**	**-2.5**
NVS				pmax	pmax		
	comp=N,28nm,1.6s						
NVS				pmax	pmax		
	comp=Z,56nm,1.6s,mb5.3						
NVS				pmax	pmax		
	comp=E,25nm,1.2s						
ZAL	**Zalesovo**	**58.42**	**320**	P	**P**	**15 19 15.1**	**-2.1**
	comp=E,6.1nm,0.4s,mb5.0,baz=76,slow=6.1,SNR=19						
ZAL				PcP	PcP	15 20 07.3	-0.1
	comp=E,8.7nm,0.6s,baz=42,slow=2.6,SNR=8.9						
HRV	**Harvard--Oak R**	**58.42**	**60**	PFAKE		15 19 30.0	+13
HRV				LR	LR		
	comp=Z,1µm,21.0s,MS5.0						
CBN	**Corbin**	**58.43**	**67**	PFAKE		15 19 30.0	+12
CBN				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
GOGA	**Godfrey**	**58.48**	**75**	PFAKE		15 19 30.0	+12
GOGA				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
WES	**Weston**	**58.63**	**60**	PFAKE		15 19 30.0	+11
WES				LR	LR		
	comp=Z,9µm,19.0s,MS5.9						
MOR8	**Moi Rana**	**60.25**	**1**	*e*P	**P**	**15 19 27.1**	**-2.7**
NHSC	**New Hope**	**60.58**	**73**	PFAKE		15 19 40.0	+7.6
NHSC				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
TATO	**Taipei**	**61.16**	**273**	PFAKE		15 19 50.0	+13
TATO				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
WHN	**Wuhan**	**61.18**	**283**	⇑P	**P**	**15 19 35.0**	**-1.5**
XAN	**Xi’an**	**61.67**	**290**	P	**P**	**15 19 38.5**	**-1.3**
XAN				AMB	AMB		
	comp=Z,70nm,1.2s,mb5.7						
XAN				LR	LR		
	comp=N,2µm,20.0s,MS5.5						
XAN				LR	LR		
	comp=E,2µm,19.0s,MS5.5						
XAN				LR	LR		
	comp=Z,5µm,25.5s						
NSS	**Namsos**	**61.87**	**2**	*e*	**P**	**15 19 37.9**	**-2.8**
NSS				*e*P		15 19 38.2	
NSS				AMS	AMS	15 44 11.5	
	comp=Z,1µm,20.5s,MS5.1						
SOKR	**Solikamsk**	**62.23**	**338**	*c* *i*P	**P**	**15 19 41.5**	**-1.7**
SOKR				S	**S**	**15 28 08.3**	**+4.1**
SOKR				pmax	pmax		
	comp=Z,150nm,0.8s,mb6.2						
SOKR				MLR	MLR		
	comp=Z,4µm,23.0s,MS5.5						
GTA	**Gaotai**	**62.57**	**300**	P	**P**	**15 19 44.1**	**-1.6**
GTA				AP	pP	15 19 56.9	-1.1
GTA				XP	sP	15 20 02.4	-0.5
GTA				PCP	PcP	15 20 23.8	-0.5
GTA				PP	PP	15 22 02.3	-3.1
GTA				PPP	PPP	15 23 33.1	-2.6
GTA				SCP		15 24 20.9	
GTA				PCS		15 24 27.3	
GTA				S	**S**	**15 28 05.3**	**-3.5**
GTA				XS		15 28 27.8	
GTA				SCS	ScS	15 29 27.1	-3.6
GTA				SS	SS	15 32 11.8	-3.5
GTA				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
GTA				AMB	AMB		
	comp=Z,300nm,6.1s						
GTA				LR	LR		
	comp=N,2µm,21.0s,MS5.5						
GTA				LR	LR		
	comp=E,2µm,21.0s,MS5.5						
GTA				LR	LR		
	comp=Z,4µm,22.9s,MS5.5						
JOF	**Joensuu**	**62.91**	**352**	*e*p	**P**	**15 19 45.4**	**-2.2**
	comp=Z,17nm,0.5s,mb5.4						
LZH	**Lanzhou**	**62.93**	**295**	⇑P	**P**	**15 19 47.5**	**-0.7**
LZH				AP	pP	15 20 01.0	+0.5
LZH				PCP	PcP	15 20 26.5	+0.7
LZH				*e*PP	PP	15 22 07.5	-0.9
LZH				SCP		15 24 23.0	
LZH				PCS		15 24 26.5	
LZH				*e*S	**S**	**15 28 10.0**	**-3.3**
LZH				SS	SS	15 32 17.8	-3.3
LZH				AMB	AMB		
	comp=Z,140nm,1.3s,mb5.9						
LZH				AMB	AMB		
	comp=Z,510nm,4.9s						
LZH				LR	LR		
	comp=E,5µm,18.9s						
LZH				LR	LR		
	comp=Z,10µm,20.0s,MS6.0						
KURK	**Kurchatov**	**63.29**	**321**	*e*P	**P**	**15 19 48.6**	**-1.7**
	comp=Z,185nm,1.4s,mb6.0						
KURK				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
KURK	**Kurchatov**	**63.29**	**321**	*e*P	**P**	**15 19 48.6**	**-1.8**
KURK				pmax	pmax		
	comp=Z,185nm,1.4s,mb6.0						
KURK				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
DWPF	**Disney**	**63.57**	**78**	PFAKE		15 20 00.0	+7.5
DWPF				LR	LR		
	comp=Z,998nm,20.0s,MS5.0						
CHKZ	**Chkalovo**	**63.63**	**327**	*e*P	**P**	**15 19 50.4**	**-2.0**
	comp=Z,688nm,0.8s						
CHKZ	**Chkalovo**	**63.63**	**327**	*e*P	**P**	**15 19 50.4**	**-2.0**
CHKZ				pmax	pmax		
	comp=Z,688nm,0.8s						
MOL	**Molde**	**63.69**	**4**	*e*P	**P**	**15 19 55.2**	**+2.6**
SVE	**Sverdlovsk**	**63.77**	**334**	⇑*i*P	**P**	**15 19 52.7**	**-0.5**
SVE				*e*		15 20 27.2	
SVE				*e*		15 35 22.0	
SVE				pmax	pmax		
	comp=Z,160nm,1.7s,mb5.8						
SVE				MLR	MLR		
	comp=N,1µm,24.0s,MS5.2						
SVE				MLR	MLR		
	comp=E,1µm,24.0s,MS5.2						
SVE				MLR	MLR		
	comp=Z,2µm,24.0s,MS5.3						
KAF	**Kangasniemi**	**64.05**	**355**	*e*p	**P**	**15 19 52.7**	**-2.2**
	comp=Z,28nm,0.5s,mb5.5						
KAF	**Kangasniemi**	**64.05**	**355**	*e*P	**P**	**15 19 52.7**	**-2.2**
KAF				pmax	pmax		
	comp=Z,28nm,0.5s,mb5.5						
KLMR	**Klimovskoe**	**64.07**	**347**	*d* *i*P	**P**	**15 19 53.7**	**-1.4**
KLMR				*e*S	**S**	**15 28 29.3**	**+2.3**
KLMR				pmax	pmax		
	comp=Z,150nm,1.4s,mb5.8						
KLMR				pmax	pmax		
	comp=Z,180nm,5.1s						
KLMR				smax			
	comp=E,770nm,5.9s						
ENH	**Enshi**	**64.16**	**286**	*e*P	**P**	**15 19 54.7**	**-1.5**
	comp=E,230nm,1.2s,mb6.1						
ENH				LR	LR		
	comp=Z,5µm,20.0s,MS5.7						
BVA0	**Borovoye Array**	**64.25**	**327**	*i* P	**P**	**15 19 54.5**	**-1.9**
BVA0				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
BVAR	**Borovoye Array**	**64.25**	**327**	P	**P**	**15 19 55.5**	**-0.9**
	comp=Z,53nm,0.7s,mb5.7,baz=44,slow=6.7,SNR=112						
BVAR				PcP	PcP	15 20 30.5	-0.3
	comp=Z,27nm,0.6s,baz=57,slow=2.1,SNR=8.4						
BRVK	**Borovoye**	**64.26**	**327**	⇑*i*P	**P**	**15 19 55.7**	**-0.7**
BRVK				LR	LR		
	comp=Z,600nm,21.0s,MS4.8						
DOMB	**Dombas**	**64.28**	**4**	*e*P	**P**	**15 19 54.7**	**-1.8**
VOSK	**Vostochnaya**	**64.31**	**326**	P	**P**	**15 19 55.4**	**-1.4**
VOSK				pmax	pmax		
	comp=Z,74nm,1.3s,mb5.6						
ARU	**Arti**	**64.64**	**335**	⇑*i*P	**P**	**15 19 57.8**	**-1.1**
ARU				LR	LR		
	comp=Z,809nm,19.0s,MS4.9						
ARU	**Arti**	**64.64**	**335**	*c* *i*P	**P**	**15 19 57.7**	**-1.2**
ARU				pmax	pmax		
	comp=Z,155nm,0.9s,mb6.0						
ARU				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.5						
FINES	**FINESS Array B**	**64.73**	**355**	P	**P**	**15 19 57.5**	**-1.8**
	comp=Z,26nm,0.7s,mb5.4,baz=21,slow=8.4,SNR=144						
MKAR	**Makanchi Array**	**65.01**	**316**	P	**P**	**15 19 59.5**	**-2.0**
	comp=Z,7.6nm,0.5s,mb5.0,baz=45,slow=6.2,SNR=74						
MKAR				LR	LR	15 50 14.5	
	comp=Z,4µm,21.8s,MS5.6,baz=78,slow=38						
MKAR	**Makanchi Array**	**65.01**	**316**	P	**P**	**15 20 00.0**	**-1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WMQ	**Urumqi**	**65.04**	**311**	⇑*i*P	**P**	**15 20 01.1**	**-0.6**
WMQ				AP	pP	15 20 14.0	-0.1
WMQ				XP	sP	15 20 19.0	+0.2
WMQ				PCP	PcP	15 20 34.5	+0.3
WMQ				PCS		15 24 35.0	
WMQ				S	S	15 28 38.0	-1.3
WMQ				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,460nm,6.4s						
WMQ				LR	LR		
	comp=N,2µm,22.4s,MS5.4						
WMQ				LR	LR		
	comp=E,2µm,25.0s,MS5.4						
WMQ				LR	LR		
	comp=Z,2µm,27.8s,MS5.1						
NB2	**NORSAR Subarra**	**65.35**	**3**	P	**P**	**15 20 02.0**	**-1.4**
	comp=Z,38nm,0.8s,mb5.5,baz=358,slow=6.5						
NB2	**NORSAR Subarra**	**65.35**	**3**	P	**P**	**15 20 02.0**	**-1.4**
	baz=358,slow=6.9						
NOA	**NORSAR Array B**	**65.35**	**3**	P	**P**	**15 20 02.2**	**-1.1**
	comp=Z,26nm,0.8s,mb5.3,baz=358,slow=6.6,SNR=53						
NOA				PcP	PcP	15 20 35.7	+0.5
	comp=Z,5.2nm,0.6s,baz=359,slow=4.8,SNR=6.6						
NOA				LR	LR	15 50 01.2	
	comp=Z,905nm,19.5s,MS5.0,baz=10.0,slow=37						
NAO01	**NORSAR Array S**	**65.54**	**3**	*e*P	**P**	**15 20 03.5**	**-1.1**
	comp=Z,5.5nm,0.6s,mb4.8						
NAO	**NORSAR Subarra**	**65.56**	**3**	P	**P**	**15 20 02.0**	**-2.7**
	comp=Z,38nm,0.8s,mb5.5						
NAO	**NORSAR Subarra**	**65.56**	**3**	P	**P**	**15 20 02.0**	**-2.7**
NAO				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.5						
PUL	**Pulkovo**	**66.10**	**352**	*e*P	**P**	**15 20 09.0**	**+0.8**
PUL				*e*S	S	15 28 58.9	+7.0
PUL				pmax	pmax		
	comp=Z,116nm,0.6s,mb6.1						
KONO	**Kongsberg**	**66.69**	**4**	*e*P	**P**	**15 20 10.8**	**-1.1**
BLS5	**Blasjo**	**66.78**	**5**	*e*P	**P**	**15 20 12.2**	**-0.3**
BLS5				AMb	AMB	15 20 14.9	
	comp=Z,26nm,0.7s,mb5.4						
CD2	**Chengdu**	**66.89**	**291**	P	**P**	**15 20 13.4**	**-0.3**
CD2				AMB	AMB		
	comp=Z,140nm,0.9s,mb6.0						
VSU	**Vasula**	**67.66**	**354**	⇑*i*P	**P**	**15 20 16.9**	**-1.1**
VSU	**Vasula**	**67.66**	**354**	*c* *i*P	**P**	**15 20 16.8**	**-1.2**
PECR	**Pechory**	**67.76**	**344**	*i* P	**P**	**15 20 16.7**	**-2.0**
PECR				pmax	pmax		
	comp=Z,600nm,6.0s						
AFI	**Afiamalu**	**67.86**	**188**	PFAKE		15 20 30.0	+10
AFI				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
GYA	**Guiyang**	**68.67**	**286**	⇑*i*P	**P**	**15 20 26.0**	**+1.1**
GYA				AP	pP	15 20 39.3	+2.0
GYA				PP	PP	15 23 01.4	+2.4
GYA				SCP		15 24 48.8	
GYA				S	S	15 29 26.0	+2.7
GYA				PS	PS	15 29 57.8	+3.5
GYA				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.4						
GYA				AMB	AMB		
	comp=Z,130nm,3.8s						
GYA				LR	LR		
	comp=N,1µm,18.4s,MS5.4						
GYA				LR	LR		
	comp=E,1µm,18.8s,MS5.4						
GYA				LR	LR		
	comp=Z,1µm,18.0s,MS5.2						
BBSR	**BB Station**	**69.63**	**63**	PFAKE		15 20 40.0	+9.3
BBSR				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
MUD	**Monsted U’grnd**	**69.87**	**4**	*i* P	**P**	**15 20 31.7**	**0.0**
	comp=Z,36nm,1.1s,mb5.2						
MUD				*e*S	PS	15 30 08.5	-0.7
MUD				*i*		15 31 30.5	
	comp=Z,2µm,22.0s						
ESK	**Eskdalemuir**	**70.01**	**12**	*e*P	**P**	**15 20 30.8**	**-1.8**
	comp=Z,29nm,0.8s,mb5.3						
ESK				LR	LR		
	comp=Z,355nm,22.0s,MS4.6						
ESK	**Eskdalemuir**	**70.01**	**12**	*e*P	**P**	**15 20 30.8**	**-1.8**
ESK				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.3						
ESK				MLR	MLR		
	comp=Z,355nm,22.0s,MS4.6						
OBN	**Obninsk**	**70.03**	**348**	P	**P**	**15 20 31.1**	**-1.6**
OBN				⇓*e*P		15 20 31.6	
OBN				LR	LR		
	comp=Z,3µm,24.0s,MS5.4						
OBN	**Obninsk**	**70.03**	**348**	⇓*i*P	**P**	**15 20 31.6**	**-1.1**
OBN				*i*		15 20 56.8	
OBN				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.6						
OBN				MLR	MLR		
	comp=Z,3µm,24.0s,MS5.4						
HNR	**Honiara**	**70.05**	**218**	PFAKE		15 20 50.0	+16
HNR				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
AKTK	**Aktyubinsk**	**70.20**	**333**	P	**P**	**15 20 33.4**	**-0.5**
AKTO	**Aktyubinsk**	**70.20**	**333**	P	**P**	**15 20 33.4**	**-0.5**
	comp=Z,125nm,0.7s,mb6.0,baz=36,slow=6.3,SNR=100						
AKTO	**Aktyubinsk**	**70.20**	**333**	P	**P**	**15 20 33.2**	**-0.7**
AKTO				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.2						
AB31	**Akbulak array**	**70.74**	**331**	*i* P	**P**	**15 20 36.4**	**-0.7**
AB31				pmax	pmax		
	comp=Z,44nm,0.6s,mb5.6						
TKM2	**Tokmak 2**	**70.90**	**318**	P	**P**	**15 20 38.2**	**0.0**
	SNR=65						
DMUB	**Kingscourt**	**70.91**	**14**	⇓*i*P	**P**	**15 20 37.6**	**-0.5**
DMUB	**Kingscourt**	**70.91**	**14**	*e*P	**P**	**15 20 36.1**	**-2.0**
DMUB				⇓*i*P		15 20 37.6	
USP	**Ospenovka**	**71.04**	**319**	P	**P**	**15 20 39.2**	**+0.1**
	SNR=129						
CHMS	**Chumysh**	**71.17**	**318**	P	**P**	**15 20 39.9**	**+0.1**
	SNR=56						
ULHL	**Ulahol**	**71.21**	**317**	P	**P**	**15 20 40.1**	**0.0**
	SNR=23						
BSD	**Bornholm Skovb**	**71.35**	**1**	*i* P	**P**	**15 20 47.4**	**+6.7**
	comp=Z,22nm,0.9s,mb5.1						
BSD	**Bornholm Skovb**	**71.35**	**1**	*e*P	**P**	**15 20 47.4**	**+6.7**
BSD				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
FRU	**Bishkek**	**71.36**	**318**	⇑*i*P	**P**	**15 20 41.2**	**+0.2**
FRU				pmax	pmax		
	comp=Z,280nm,1.5s,mb6.0						
KBK	**Karagaybulak**	**71.38**	**318**	P	**P**	**15 20 41.1**	**0.0**
	SNR=95						
DCN	**Croghan**	**71.40**	**14**	⇓*i*P	**P**	**15 20 40.8**	**-0.2**
DCN	**Croghan**	**71.40**	**14**	*e*P	**P**	**15 20 39.2**	**-1.8**
DCN				⇓*i*P		15 20 40.8	
MNK	**Minsk**	**71.53**	**353**	*e*P	**P**	**15 20 38.0**	**-3.7**
AAK	**Ala-Archa**	**71.58**	**318**	P	**P**	**15 20 42.7**	**+0.4**
	SNR=8.4						
KZA	**Kyzart**	**71.75**	**318**	P	**P**	**15 20 44.0**	**+0.7**
	SNR=44						
EKS2	**Erkin-Say**	**71.84**	**319**	P	**P**	**15 20 44.4**	**+0.6**
	SNR=13						
UCH	**Uchtor**	**71.92**	**318**	P	**P**	**15 20 45.0**	**+0.8**
	SNR=36						
KMI	**Kunming**	**71.93**	**288**	P	**P**	**15 20 41.6**	**-3.0**
KMI				AP	pP	15 20 55.4	-1.7

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KMI                                    PPP      PPP       15 25 04.3  -4.1
KMI                                    S        S         15 29 55.3  -6.1
KMI                                    PS       PS        15 30 30.9  -6.5
KMI                                    SKS      SKS       15 30 36.3  -4.2
KMI                                    SS       SS        15 34 32.3  -7.9
KMI                                    AMB      AMB
       comp=Z,80nm,1.4s,mb5.5
KMI                                    LR       LR
       comp=N,2µm,18.6s,MS5.5
KMI                                    LR       LR
       comp=E,2µm,19.1s,MS5.5
KMI                                    LR       LR
       comp=Z,3µm,21.9s,MS5.5
SUW    Suwalki          72.29 356     eP       P         15 20 44.9  -1.4
SUW    Suwalki          72.29 356     eP       P         15 20 44.9  -1.4
AML    Almayashu        72.32 319      P       P         15 20 47.6  +1.0
       SNR=86
BSEG   Bad Segeberg     72.44   3     eP       P         15 20 46.8  -0.3
QIZ    Qiongzhong       72.59 278      PFAKE              15 21 00.0  +11
QIZ                                    LR       LR
       comp=Z,2µm,21.0s,MS5.3
KKAR   Karatay Array    72.70 321     i P      P         15 20 48.1  -0.7
KKAR                                   pmax     pmax
       comp=Z,53nm,0.7s,mb5.6
DAV    Davao City (W)   72.79 258      PFAKE              15 21 00.0  +10
DAV                                    LR       LR
       comp=Z,611nm,22.0s,MS4.8
VOR    Voronezh         72.96 345     eP       P         15 20 49.0  -1.2
VOR                                    pmax     pmax
       comp=N,80nm,1.3s
VOR                                    pmax     pmax
       comp=Z,120nm,1.3s,mb5.7
VRHR   Novokhopersk     73.19 343     eP       P         15 20 50.0  -1.5
VRHR                                   pmax     pmax
       comp=Z,70nm,0.9s,mb5.6
VRHR                                   pmax     pmax
       comp=N,110nm,1.7s
VRHR                                   pmax     pmax
       comp=E,50nm,1.5s
VRHR                                   MLR      MLR
       comp=N,2µm,17.0s
VRHR                                   MLR      MLR
       comp=Z,2µm,21.0s,MS5.4
VRHR                                   MLR      MLR
       comp=E,2µm,27.0s
VRSR   Storozhevoye     73.47 345c iP      P         15 20 51.9  -1.3
VRSR                                  eS       S         15 30 17.2  -1.0
VRSR                                   pmax     pmax
       comp=Z,10.0nm,1.0s,mb4.7
VRSR                                   pmax     pmax
       comp=N,6.0nm,0.6s
VRSR                                   pmax     pmax
       comp=E,1.0nm,0.5s
VRSR                                   smax
       comp=N,8.0nm,1.3s
VRSR                                   smax
       comp=Z,4.0nm,1.6s
VRSR                                   smax
       comp=E,10.0nm,1.5s
VRSR                                   MLR      MLR
       comp=Z,560nm,24.0s,MS4.8
VRSR                                   MLR      MLR
       comp=N,170nm,19.0s
VRSR                                   MLR      MLR
       comp=E,120nm,26.0s
KSH    Kashi            73.62 316⇑iP      P         15 20 55.0  +0.7
KSH                                   eAP      pP        15 21 09.0  +2.2
KSH                                   ePCP     PcP       15 21 12.3  +2.0
KSH                                   ePP      PP        15 23 42.1  +1.5
KSH                                   ePPP     PPP       15 25 26.1  +1.2
KSH                                   eS       S         15 30 17.8  -2.4
KSH                                   eSKS     SKS       15 30 54.0  +1.4
KSH                                   eSCS     ScS       15 30 57.5  +1.0
KSH                                   ePS      PS        15 31 00.0  +0.9
KSH                                    AMB      AMB
       comp=Z,740nm,4.6s
KSH                                    LR       LR
       comp=N,5µm,16.0s,MS6.1
KSH                                    LR       LR
       comp=E,6µm,17.5s,MS6.1
WTSB   Winterswijk      74.23   6⇓eP      P         15 20 57.8  +0.2
       comp=E,36nm,0.8s,mb5.4
CLZ    Clausthal        74.53   4     eP       P         15 20 59.5  +0.2
       comp=E,30nm,0.8s,mb5.3
CLZ    Clausthal        74.53   4     eP       P         15 20 59.5  +0.2
CLZ                                    pmax     pmax
       comp=Z,30nm,0.8s,mb5.3
LSA    Lhasa            74.59 299      P       P         15 21 01.3  +1.2
LSA                                    PP       PP        15 23 42.0  -7.1
LSA                                    AMB      AMB
       comp=Z,50nm,1.0s,mb5.4
LSA                                    AMB      AMB
       comp=Z,420nm,10.3s
LSA                                    LR       LR
       comp=N,2µm,24.5s,MS5.6
LSA                                    LR       LR
       comp=E,4µm,27.7s,MS5.6
LSA                                    LR       LR
       comp=Z,5µm,26.1s,MS5.7
LSA    Lhasa            74.59 299     eP       P         15 21 00.6  +0.5
       comp=Z,127nm,0.9s,mb5.8
LSA                                    LR       LR
       comp=Z,2µm,22.0s,MS5.4
LSA    Lhasa            74.59 299     eP       P         15 21 00.6  +0.5
LSA                                    pmax     pmax
       comp=Z,127nm,0.9s,mb5.8
LSA                                    MLR      MLR
       comp=Z,2µm,22.0s,MS5.4
CLL    Collm            75.14   2 ⇑P       P         15 21 02.1  -0.7
       comp=Z,logA/T=1.4,mb5.1
CLL                                   i *PP    pP        15 21 17.5  +2.2
CLL    Collm            75.14   2⇑iP      P         15 21 02.1  -0.7
       comp=Z,26nm,1.0s,mb5.1
CLL                                   i pP     pP        15 21 17.5  +2.2
CLL                                    LR       LR
       comp=Z,1µm,20.2s,MS5.2
CLL    Collm            75.14   2⇑iP      P         15 21 02.1  -0.7
CLL                                   i *PP    pP        15 21 17.5  +2.2
CLL                                    pmax     pmax
       comp=Z,26nm,1.0s,mb5.1
CLL                                    MLR      MLR
       comp=Z,1µm,20.2s,MS5.2
AKASG  Malin Array Be   75.18 351      P       P         15 21 01.8  -1.3
       comp=Z,34nm,0.5s,mb5.6,baz=6.1,slow=5.6,SNR=80
AKASG  Malin Array Be   75.18 351     i P      P         15 21 01.7  -1.4
AKASG                                  pmax     pmax
       comp=Z,34nm,0.5s
PMG    Port Moresby     75.30 230      PFAKE              15 21 20.0  +16
PMG                                    LR       LR
       comp=Z,3µm,19.0s,MS5.6
JTS    JuntasAbangare   75.33  93      PFAKE              15 21 20.0  +15
JTS                                    LR       LR
       comp=Z,268nm,21.0s,MS4.5
HGN    Heimansgroeve    75.37   7⇓eP      P         15 21 04.4  +0.2
       comp=Z,50nm,1.1s,mb5.4
HGN                                   eS       S         15 30 42.7  +3.2
HGN                                   eSS      SS        15 35 59.6  +27
BRG    Berggiesshubel   75.59   1     eP       P         15 21 05.0  -0.4
       comp=Z,3.9nm,0.4s,mb4.7
BRG    Berggiesshubel   75.59   1     eP       P         15 21 05.0  -0.4
BRG                                    pmax     pmax
       comp=Z,4.0nm,0.4s,mb4.7
BRG    Berggiesshubel   75.59   1      S       S         15 30 43.0  +1.1
KSP    Ksiaz            75.63 360     eP       P         15 21 05.4  -0.3
KSP    Ksiaz            75.63 360     eP       P         15 21 04.9  -0.8
MOX    Moxa             75.77   3     i P      P         15 21 06.6  +0.2
       comp=Z,logA/T=1.6,mb5.3
MOX    Moxa             75.77   3     eP       P         15 21 06.6  +0.2
       comp=Z,68nm,1.6s,mb5.3
MOX    Moxa             75.77   3     eP       P         15 21 06.6  +0.2
MOX                                    pmax     pmax
       comp=Z,68nm,1.6s,mb5.3
PVCC   Panska Ves       75.94   1     eP       P         15 21 07.3  -0.1
BAIF   Baives           75.95   8     eP       P         15 21 07.3  -0.2
       comp=Z,65nm,0.8s,mb5.3
BAIF   Baives           75.95   8     eP       P         15 21 07.3  -0.2
BAIF                                   pmax     pmax
       comp=Z,32nm,0.8s,mb5.3
GIVF   Givet            75.95   7     eP       P         15 21 07.2  -0.3
UPC    Upice            75.97 360     eP       P         15 21 07.2  -0.4
TNS    Taunus Mts       76.06   5     eP       P         15 21 08.0  -0.1
       comp=Z,27nm,0.8s,mb5.2
TNS    Taunus Mts       76.06   5     eP       P         15 21 08.0  -0.1
TNS                                    pmax     pmax
       comp=Z,27nm,0.8s,mb5.2
DPC    Dobruska-Polom   76.13 360     eP       P         15 21 08.4  -0.1
NKC    Novy Kostel      76.20   2     eP       P         15 21 09.0  +0.1
OJC    Ojcow            76.21 357     eP       P         15 21 08.6  -0.3
LVV    L'vov            76.44 355     eP       P         15 21 09.1  -1.1
LVV                                   eS       S         15 30 43.3  -7.9
PRU    Pruhonice        76.48   1     eP       P         15 21 09.8  -0.7
PRU                                    AMS      AMS       15 49 10.0
       comp=Z,1µm,24.9s
WLF    Walferdange      76.48   7     eP       P         15 21 10.4  -0.1
       comp=Z,38nm,0.8s,mb5.4
WLF    Walferdange      76.48   7     eP       P         15 21 10.4  -0.1
WLF                                    pmax     pmax
       comp=Z,38nm,0.8s,mb5.4
RUP    Ruppelstein      76.50   6     eP       P         15 21 10.9  +0.3
OKC    Ostrava-Krasne   76.62 359     eP       P         15 21 10.5  -0.8
OKC                                    AMS      AMS       15 51 10.0
       comp=Z,1µm,17.2s
KWP    Kalwaria         76.69 355     eP       P         15 21 11.9  +0.2
KWP    Kalwaria         76.69 355     eP       P         15 21 11.9  +0.2
MORC   Moravsky Berou   76.69 359     eP       P         15 21 10.7  -1.0
       comp=Z,16nm,0.9s,mb4.9
MORC   Moravsky Berou   76.69 359     eP       P         15 21 10.7  -1.0
MORC                                   pmax     pmax
       comp=Z,15nm,0.9s,mb4.9
TOD    Tromm            76.70   5     eP       P         15 21 11.8  +0.1
GRA1   Grafenberg Arr   76.71   3     eP       P         15 21 13.0  +1.2
       comp=Z,44nm,0.9s,mb5.4
GRF    Grafenberg Arr   76.71   3     eP       P         15 21 13.0  +1.2
       comp=Z,44nm,0.9s,mb5.4
GRF    Grafenberg Arr   76.71   3     eP       P         15 21 13.0  +1.2
GRF                                    pmax     pmax
       comp=Z,44nm,0.9s,mb5.4
GRF    Grafenberg Arr   76.71   3     eP       P         15 21 13.0  +1.2
GRF                                    pmax     pmax
       comp=Z,44nm,0.9s,mb5.4
FLN    La Foliniere     76.78  11     eP       P         15 21 11.7  -0.5
       comp=Z,145nm,1.2s,mb5.5
FLN    La Foliniere     76.78  11     eP       P         15 21 11.7  -0.5
FLN                                    pmax     pmax
       comp=Z,73nm,1.2s,mb5.5
STHS   Stebnicka Huta   76.97 356     i P      P         15 21 14.2  +0.9
LDF    La Druitiere     76.98  11     eP       P         15 21 12.8  -0.6
       comp=Z,110nm,1.0s,mb5.5
LDF    La Druitiere     76.98  11     eP       P         15 21 12.8  -0.6
LDF                                    pmax     pmax
       comp=Z,55nm,1.0s,mb5.4
NIE    Niedzica         76.99 357     eP       P         15 21 14.2  +0.8
SGMF   Saint Gilles     77.03  13     eP       P         15 21 13.4  -0.2
       comp=Z,40nm,0.6s,mb5.3
SGMF   Saint Gilles     77.03  13     eP       P         15 21 13.4  -0.2
SGMF                                   pmax     pmax
       comp=Z,20nm,0.6s,mb5.2
GRR    Gorron           77.10  11     eP       P         15 21 13.7  -0.4
       comp=Z,53nm,0.7s,mb5.3
GRR    Gorron           77.10  11     eP       P         15 21 13.7  -0.4
GRR                                    pmax     pmax
       comp=Z,27nm,0.7s,mb5.3
VRAC   Vranov           77.17 360      P       P         15 21 15.0  +0.6
TREC   Trest            77.18   0     eP       P         15 21 14.0  -0.5
LANF   Langenberg       77.27   5     eP       P         15 21 14.9  -0.1
QUIF   Quistinic        77.28  13     eP       P         15 21 14.7  -0.3
WET    Wettzell         77.30   2     eP       P         15 21 15.8  +0.7
       comp=Z,15nm,1.0s,mb4.9
WET    Wettzell         77.30   2     eP       P         15 21 15.8  +0.7
WET                                    pmax     pmax
       comp=Z,15nm,1.0s,mb4.9
KHC    Kasperske Hory   77.33   2     eP       P         15 21 15.3   0.0
KHC                                    x        x         15 21 40.5
KHC                                    AMS      AMS       15 49 50.0
       comp=Z,2µm,37.8s
KHC    Kasperske Hory   77.33   2     eP       P         15 21 15.3   0.0
KHC                                   e                   15 21 40.5
KHC                                    LR       LR
       comp=Z,2µm,37.8s,MS5.1
KHC    Kasperske Hory   77.33   2     eP       P         15 21 15.3   0.0
KHC                                    MLR      MLR
       comp=Z,2µm,37.8s,MS5.1
KOLS   Kolonicke sedl   77.41 356     eP       P         15 21 16.3  +0.6
KOLS                                  e                   15 40 47.3
CRVS   Cervenica-Dubn   77.47 356     i P      P         15 21 16.1   0.0
CRVS                                  e                   15 40 35.6
SHL    Shillong         77.53 296     eP       P         15 21 16.0  -0.9
SHL                                   ex       x         15 29 43.0
STU    Stuttgart        77.55   5     eP       P         15 21 16.3  -0.2
MEZF   Maizieres J'vi   77.56   7     eP       P         15 21 16.6   0.0
GEC2   GERESS Array S   77.62   2     eP       P         15 21 16.9   0.0
       comp=Z,19nm,0.9s,mb5.0
GEC2   GERESS Array S   77.62   2     eP       P         15 21 16.9   0.0
GEC2                                   pmax     pmax
       comp=Z,19nm,0.9s,mb5.0
GERES  GERESS Array B   77.62   2      P       P         15 21 17.1  +0.3
       comp=Z,8.1nm,0.7s,mb4.8,baz=3.7,slow=4.9,SNR=30
UZH    Uzhgorod         77.71 356deP      P         15 21 18.0  +0.6
UZH                                   eS       S         15 31 09.0  +4.0
CDF    Champ du Feu     77.80   6     eP       P         15 21 17.8  -0.1
WLS    Welschbruch      77.81   6     eP       P         15 21 18.0  +0.1
THEF   They Montfort    77.90   7     eP       P         15 21 18.4  -0.1
KECS   Kecovo           77.92 357     i P      P         15 21 18.9  +0.3
BFO    Black Forest     77.94   5     eP       P         15 21 18.4  -0.3
       comp=Z,26nm,0.9s,mb5.2
BFO    Black Forest     77.94   5     eP       P         15 21 18.4  -0.3
BFO                                    pmax     pmax
       comp=Z,26nm,0.9s,mb5.2
VYHS   Vyhne            77.96 358     i P      P         15 21 19.0  +0.3
SMOL   Smolenice        77.96 359     eP       P         15 21 19.5  +0.7
ECH    Echery           77.99   6     eP       P         15 21 18.7  -0.2
HAU    Haudompre        78.15   7     eP       P         15 21 19.7  -0.1
       comp=Z,57nm,0.8s,mb5.3
HAU    Haudompre        78.15   7     eP       P         15 21 19.7  -0.1
HAU                                    pmax     pmax
       comp=Z,28nm,0.8s,mb5.2
FUR    Furstenfeldbru   78.24   3     eP       P         15 21 21.1  +0.8
       comp=Z,34nm,0.8s,mb5.3
FUR                                   eSKKP               15 44 24.8
FUR    Furstenfeldbru   78.24   3     eP       P         15 21 21.1  +0.8
FUR                                    pmax     pmax
       comp=Z,34nm,0.8s,mb5.3
ZST    Bratislava       78.28 359     i P      P         15 21 22.3  +1.8
MOF    Molkenrain       78.35   6     eP       P         15 21 20.8  -0.1
HINF   Hinteralfeld     78.37   6     eP       P         15 21 20.7  -0.3
       comp=Z,37nm,0.7s,mb5.1
HINF   Hinteralfeld     78.37   6     eP       P         15 21 20.7  -0.3
HINF                                   pmax     pmax
       comp=Z,18nm,0.7s,mb5.1
PSZ    Piszkesteto      78.51 357     eP       P         15 21 22.7  +0.9
MOA    Molln            78.62   1⇓eP      P         15 21 21.7  -0.7
       comp=Z,14nm,0.8s,mb4.9
MOA    Molln            78.62   1⇓eP      P         15 21 21.7  -0.7
       comp=Z,14nm,0.8s,mb4.9
LOR    Lormes           78.69   8     eP       P         15 21 22.7  -0.1
       comp=Z,130nm,1.0s,mb5.5
LOR    Lormes           78.69   8     eP       P         15 21 22.7  -0.1
LOR                                    pmax     pmax
       comp=Z,65nm,1.0s,mb5.5
GUN    Gumba            78.72 302     eP       P         15 21 23.8  +0.4
       comp=Z,298nm,0.7s,mb6.4
BBS    Basel-Blauen     78.76   6     eP       P         15 21 22.8  -0.4
LOMF   Lomont           78.83   6     eP       P         15 21 23.8  +0.2
SSF    Saint Saulge     78.86   9     eP       P         15 21 23.7  -0.1
       comp=Z,47nm,0.7s,mb5.5
SSF    Saint Saulge     78.86   9     eP       P         15 21 23.7  -0.1
SSF                                    pmax     pmax
       comp=Z,47nm,0.7s,mb5.5
KIS    Kishinev         78.89 351     eP       P         15 21 22.0  -1.9
KIS                                   e        pP        15 21 34.0  -2.5
KIS                                   e                   15 24 28.0
KIS                                   eS       S         15 31 15.0  -2.6
KIS                                   e                   15 31 31.0
KIS                                    pmax     pmax
       comp=Z,145nm,1.3s,mb5.8
KIS                                    MLR      MLR
       comp=N,2µm,20.0s,MS5.4
KIS                                    MLR      MLR
       comp=E,1µm,20.0s,MS5.4
KIS                                    MLR      MLR
       comp=Z,2µm,20.0s,MS5.5
KIS                                    MLR      MLR
       comp=Z,2µm,20.0s
MFF    Saint Martin d   78.94  11     eP       P         15 21 24.3  +0.1
BUD    Budapest         78.96 358     eP       P         15 21 27.9  +3.6
MOTA   Moosalm          79.05   3⇑iP      P         15 21 25.7  +0.9
       comp=Z,28nm,0.7s,mb5.3,SNR=13
MOTA   Moosalm          79.05   3⇑iP      P         15 21 25.7  +0.9
       comp=Z,28nm,0.7s,mb5.3
MOTA   Moosalm          79.05   3⇑iP      P         15 21 25.7  +0.9
MOTA                                   pmax     pmax
       comp=Z,28nm,0.7s,mb5.3
DAVA   Damuels          79.06   4⇑iP      P         15 21 26.4  +1.5
       comp=Z,17nm,0.7s,mb5.1
PKSG                    79.07 358⇑eP      P         15 21 25.5  +0.6
WATA   Walderalm        79.08   3⇑iP      P         15 21 25.9  +1.0
       comp=Z,11nm,0.5s,mb5.0
WATA   Walderalm        79.08   3⇑iP      P         15 21 25.9  +1.0
       comp=Z,11nm,0.5s,mb5.0
WATA   Walderalm        79.08   3⇑iP      P         15 21 25.9  +1.0
WATA                                   pmax     pmax
       comp=Z,11nm,0.5s,mb5.0
KKM    Kota Kinabalu    79.10 265     eP       P         15 21 25.9  +0.2
AVF    Avril sur Loir   79.12   9     eP       P         15 21 24.9  -0.3
       comp=Z,87nm,0.7s,mb5.5
AVF    Avril sur Loir   79.12   9     eP       P         15 21 24.9  -0.3
AVF                                    pmax     pmax
       comp=Z,44nm,0.7s,mb5.5
KKN    Kakani           79.12 302     eP       P         15 21 25.7  +0.1
       comp=Z,192nm,0.8s,mb6.1
WTTA   Wattenberg       79.15   3⇑iP      P         15 21 26.0  +0.7
       comp=Z,44nm,0.8s,mb5.5,SNR=11
WTTA   Wattenberg       79.15   3⇑iP      P         15 21 26.0  +0.7
       comp=Z,44nm,0.8s,mb5.4
WTTA   Wattenberg       79.15   3⇑iP      P         15 21 26.0  +0.7
WTTA                                   pmax     pmax
       comp=Z,44nm,0.8s,mb5.4
SQTA   Sankt Quirin     79.18   3     i P      P         15 21 26.4  +0.9
       comp=Z,48nm,0.7s,mb5.5,SNR=15
SQTA   Sankt Quirin     79.18   3     i P      P         15 21 26.4  +0.9
SQTA                                   pmax     pmax
       comp=Z,48nm,0.7s,mb5.5
ARSA   Arzberg          79.23   0     i P      P         15 21 26.3  +0.6
       comp=Z,15nm,0.8s,mb5.0,SNR=11
ARSA   Arzberg          79.23   0     i P      P         15 21 26.3  +0.5
       comp=Z,15nm,0.8s,mb5.0
PKI    Pulchoki         79.24 302     eP       P         15 21 26.3  +0.1
       comp=Z,422nm,1.1s,mb6.3
GKN    Gorkha           79.27 303     eP       P         15 21 26.3  -0.1
       comp=Z,589nm,1.1s,mb6.4
BGF    Bois d'Agland    79.30   9     eP       P         15 21 26.0  -0.2
SMF    Signal de Mont   79.31   8     eP       P         15 21 26.0  -0.2
       comp=Z,122nm,0.9s,mb5.5
SMF    Signal de Mont   79.31   8     eP       P         15 21 26.0  -0.2
SMF                                    pmax     pmax
       comp=Z,61nm,0.9s,mb5.5
DMN    Daman            79.36 302     eP       P         15 21 27.1  +0.2
       comp=Z,272nm,0.9s,mb6.2
KBA    Koelnbreinsper   79.38   2⇑eP      P         15 21 26.5   0.0
       comp=Z,77nm,1.1s,mb5.6,SNR=8.7
KBA    Koelnbreinsper   79.38   2⇑eP      P         15 21 26.5   0.0
       comp=Z,77nm,1.0s,mb5.6
KBA    Koelnbreinsper   79.38   2⇑eP      P         15 21 26.5  -0.1
KBA                                    pmax     pmax
       comp=Z,77nm,1.0s,mb5.6
TCF    Toulx Ste Croi   79.51  10     eP       P         15 21 27.1  -0.2
CABF   La Chapelle      79.52   7     eP       P         15 21 27.8  +0.5
       comp=Z,111nm,0.9s,mb5.5
CABF   La Chapelle      79.52   7     eP       P         15 21 27.8  +0.5
CABF                                   pmax     pmax
       comp=Z,56nm,0.9s,mb5.5
DLH    Dalhousie        79.53 312     eP       P         15 21 28.0  +0.3
DLH                                   ex       x         15 23 12.0
PKS8   Sarbogard        79.58 358⇑eP      P         15 21 28.0  +0.4
MAK    Makhachkala      79.80 337     eP       P         15 21 27.0  -1.9
PERS   Pernice          79.84   1     eP       P         15 21 29.5  +0.4
KIV    Kislovodsk       79.88 341⇑iP      P         15 21 29.9  +0.6
KIV                                    LR       LR
       comp=Z,537nm,22.0s,MS4.8
KIV    Kislovodsk       79.88 341c iP      P         15 21 29.0  -0.3
KIV                                   e                   15 24 27.6
KIV                                   ePPP     PPP       15 26 19.3  -4.2
KIV                                   eS       S         15 31 30.9  +2.8
KIV                                   eSS      SS        15 36 38.3  -2.6
KIV                                    pmax     pmax
       comp=Z,154nm,1.1s,mb5.8
KIV                                    pmax     pmax
       comp=Z,148nm,6.0s
KIV                                    MLR      MLR
       comp=Z,2µm,23.0s,MS5.5
PLDF   La Plantade      79.96   9     eP       P         15 21 30.2  +0.5
OBKA   Obir             79.96   1⇑eP      P         15 21 30.3  +0.5
       comp=Z,72nm,0.7s,mb5.7,SNR=19
OBKA   Obir             79.96   1⇑eP      P         15 21 30.3  +0.5
       comp=Z,72nm,0.6s,mb5.8
KOLN   Koldanda         79.97 304     eP       P         15 21 30.2   0.0
       comp=Z,411nm,1.1s,mb6.3
OG05   Jujurieux        80.04   7     eP       P         15 21 32.2  +2.0
SJG    San Juan         80.11  73      P       P         15 21 31.9  +0.8
       comp=Z,39nm,1.1s,mb5.2
SJG                                    LR       LR
       comp=Z,1µm,21.0s,MS5.2
SJG    San Juan         80.11  73      P       P         15 21 31.9  +0.8
SJG                                    pmax     pmax
       comp=Z,39nm,1.1s
SJG                                    MLR      MLR
       comp=Z,1µm,21.0s
PYM    Petit Puy Mans   80.12   9     eP       P         15 21 30.9  +0.3
PTH    Pithoragarh      80.12 307     eP       P         15 21 30.4  -0.5
PTH                                   ex       x         15 22 44.0
VRI    Vrincioaia       80.19 352      P       P         15 21 31.8  +0.8
SMLA   Simla            80.20 310     eP       P         15 21 30.2  -1.2
SMLA                                  ex       x         15 23 13.0
ROBS   Robic            80.21   2     eP       P         15 21 31.1   0.0
PKSM   Moragy           80.24 358⇑iP      P         15 21 31.2   0.0
PKSM   Moragy           80.24 358      P       P         15 21 31.5  +0.3
BHK    Bhakra           80.29 311     ex       x         15 23 22.0
SIM    Simferopol'      80.32 347     eP       P         15 21 33.7  +2.0
SIM                                    pmax     pmax
       comp=Z,33nm,1.5s,mb5.0
RHK1   Bakonya          80.37 359⇑eP      P         15 21 32.4  +0.5
RJF    Les Rejaudoux    80.41  10     eP       P         15 21 32.2  +0.1
COLF   Collangettes     80.41   9     eP       P         15 21 32.5  +0.4
JAVS   Javornik         80.57   1     i P      P         15 21 33.2  +0.2
ORX    Oropa            80.61   6      P       P         15 21 34.6  +1.3
MLR    Muntele Rosu     80.62 353      P       P         15 21 34.6  +1.3
LPL    La Plagne        80.65   7     eP       P         15 21 33.8  +0.4
LBL    Lubilhac         80.65   9     eP       P         15 21 33.5  +0.1
LPG    La Plagne        80.67   7     eP       P         15 21 33.9  +0.4
       comp=Z,29nm,0.8s,mb5.0
LPG    La Plagne        80.67   7     eP       P         15 21 33.9  +0.4
LPG                                    pmax     pmax
       comp=Z,15nm,0.8s,mb5.0
LFF    La Frestale      80.69  11     eP       P         15 21 33.9  +0.3
       comp=Z,91nm,0.7s,mb5.5
LFF    La Frestale      80.69  11     eP       P         15 21 33.9  +0.3
LFF                                    pmax     pmax
       comp=Z,46nm,0.7s,mb5.5
TRAV                    80.72   6      P       P         15 21 34.4  +0.6
LSD    Ceresole Reale   80.74   6      P       P         15 21 34.7  +0.8
SOC    Sochi            80.79 343     eP       P         15 21 33.4  -0.8
SOC                                   e*PP     pP        15 21 42.2  -4.6
SOC                                   e                   15 24 47.2
SOC                                   ePPP     PPP       15 26 34.7  +3.0
SOC                                   eS       S         15 31 38.8  +1.2
SOC                                    pmax     pmax
       comp=Z,175nm,1.2s,mb5.9
SOC                                    MLR      MLR
       comp=Z,2µm,22.0s,MS5.3
CAF    Calviac          80.84  10     eP       P         15 21 34.7  +0.3
       comp=Z,253nm,1.5s,mb5.6
CAF    Calviac          80.84  10     eP       P         15 21 34.7  +0.3
CAF                                    pmax     pmax
       comp=Z,127nm,1.5s,mb5.6
GRN    Grenoble         80.85   7     eP       P         15 21 35.2  +0.7
GDM    Grand'Maison     80.92   7     eP       P         15 21 35.7  +0.9
BOJS   Bojanci          80.97   1     eP       P         15 21 35.8  +0.7
PAYG   Puerto Ayora     81.02 104      PFAKE              15 21 50.0  +14
PAYG                                   LR       LR
       comp=Z,1µm,21.0s,MS5.3
ONI    Oni              81.05 340      P       P         15 21 25.0   -11
RSP    Reno Superiore   81.05   6      P       P         15 21 35.6   0.0
BNI    Bardonecchia     81.11   7     eP       P         15 21 36.8  +1.0
       comp=Z,155nm,1.4s,mb5.8
BNI    Bardonecchia     81.11   7     eP       P         15 21 36.8  +1.0
BNI                                    pmax     pmax
       comp=Z,155nm,1.4s,mb5.7
EPON   Pontenova        81.15  17      P       P         15 21 37.6  +1.6
       comp=Z,36nm,0.6s,mb5.5
VIVF   Saint-Julien-l   81.15   8     eP       P         15 21 36.4  +0.3
FENE   Fenestrelle      81.16   6      P       P         15 21 36.7  +0.6
ORIF   Oris-en-Rattie   81.19   7     eP       P         15 21 37.0  +0.8
       comp=Z,26nm,0.5s,mb5.1
ORIF   Oris-en-Rattie   81.19   7     eP       P         15 21 37.0  +0.8
ORIF                                   pmax     pmax
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	comp=Z,13nm,0.5s,mb5.1						
EMAZ	Mazaricos	81.19	18	P	P	15 21 37.6	+1.3
	comp=Z,14nm,0.7s,mb5.0						
RRL	Cesana Torines	81.25	7	P	P	15 21 37.0	+0.5
STS	Santiago	81.33	18	P	P	15 21 37.6	+0.5
	comp=Z,230nm,2.4s,mb5.7						
STS	Santiago	81.33	18	P	P	15 21 37.6	+0.6
STS				pmax	pmax		
	comp=Z,230nm,2.4s,mb5.7						
BHB	Bricherasio	81.36	6	P	P	15 21 38.0	+0.9
MBDF	Montbardon	81.44	7	eP	P	15 21 37.9	+0.3
	comp=Z,120nm,0.8s,mb5.6						
MBDF	Montbardon	81.44	7	eP	P	15 21 37.9	+0.3
MBDF				pmax	pmax		
	comp=Z,60nm,0.8s,mb5.6						
TIRR	Tirgusor	81.44	351	eP	P	15 21 37.1	-0.5
EARI	Arriondas	81.49	15	P	P	15 21 41.1	+3.2
	comp=Z,20nm,0.6s,mb5.2						
TI2	Plekhanov	81.58	339α	iP	P	15 21 39.0	+0.6
TI2				pmax	pmax		
	comp=Z,220nm,0.8s,mb6.1						
TI2				pmax	pmax		
	comp=Z,2.0nm,18.0s						
TBLG	Delisi	81.59	339	P	P	15 21 39.7	+1.3
MTA	Mtatsminda	81.61	339	P	P	15 21 39.7	+1.1
PZZ	Prazzo	81.68	6	P	P	15 21 39.5	+0.7
SURF	Saint Ours	81.69	7	eP	P	15 21 40.6	+1.7
DGRG	David-gareji	81.72	338	P	P	15 21 39.4	+0.3
PCP	Pian Castagno	81.73	5	P	P	15 21 39.1	0.0
BUC1	Bucharest	81.75	353	P	P	15 21 38.3	-0.9
ELAN	Lanestosa	81.83	14	P	P	15 21 40.9	+1.3
	comp=Z,67nm,0.8s,mb5.6						
LASF	Ste Croix	81.86	9	eP	P	15 21 39.7	0.0
GRAM		81.86	4	P	P	15 21 39.2	-0.6
ROB	Roburent	81.94	6	P	P	15 21 39.4	-0.8
CODM		81.95	4	P	P	15 21 40.1	-0.1
STV	Sta Anna Valdi	81.96	6	P	P	15 21 40.8	+0.5
ENR	Entracque	81.98	6	P	P	15 21 40.2	-0.2
EZAM	Zamans	82.02	18	P	P	15 21 42.1	+1.5
	comp=Z,117nm,1.4s,mb5.6						
EZAM	Zamans	82.02	18	P	P	15 21 42.1	+1.5
EZAM				pmax	pmax		
	comp=Z,117nm,1.4s,mb5.6						
FIN	Finale Ligure	82.05	6	P	P	15 21 39.8	-0.9
ERUA	La Rua	82.06	17	P	P	15 21 42.0	+1.2
	comp=Z,96nm,1.2s,mb5.6						
ERUA	La Rua	82.06	17	P	P	15 21 42.0	+1.2
ERUA				pmax	pmax		
	comp=Z,96nm,1.2s,mb5.6						
BACM		82.07	4	P	P	15 21 40.7	-0.2
SMRF	Simiane la Rot	82.10	8	eP	P	15 21 41.2	+0.2
BOK	Bokaro	82.11	300	eP	P	15 21 41.7	+0.2
BOK				AMb	AMB	15 21 44.2	
	comp=Z,148nm,0.7s,mb6.0						
BOK				ix	x	15 22 02.0	
EALK	Alkurruntz	82.11	13	P	P	15 21 41.4	+0.3
	comp=Z,125nm,1.5s,mb5.6						
SARO	Sassorosso	82.18	4	P	P	15 21 40.8	-0.6
TOUF	Mont Tournerai	82.18	6	eP	P	15 21 42.5	+1.1
AUTN	L'Aution	82.21	6	eP	P	15 21 42.5	+0.9
VINC	Vinca	82.21	4	P	P	15 21 40.6	-1.0
SAOF	Saorge	82.23	6	eP	P	15 21 43.4	+1.7
SJPF	Ste Jean	82.25	13	eP	P	15 21 41.8	0.0
NDI	New Delhi	82.25	309	eP	P	15 21 40.0	-2.1
NDI				ex	x	15 22 18.0	
MVIF	Mont Vial	82.29	6	eP	P	15 21 44.2	+2.2
DIVS	Divcibare	82.32	357	iP	P	15 21 42.0	-0.1
IMI	Imperia	82.33	6	P	P	15 21 42.4	+0.2
SBF	Sospel	82.34	6	eP	P	15 21 42.2	-0.1
LARF	Larrau	82.36	12	eP	P	15 21 43.1	+0.8
ELOB	Lobios	82.41	18	P	P	15 21 44.4	+1.7
	comp=Z,24nm,0.8s,mb5.2						
MTLF	Montolieu	82.43	10	eP	P	15 21 43.1	+0.4
	comp=Z,143nm,1.1s,mb5.5						
MTLF	Montolieu	82.43	10	eP	P	15 21 43.1	+0.4
MTLF				pmax	pmax		
	comp=Z,71nm,1.1s,mb5.5						
MAIM		82.45	4	P	P	15 21 42.3	-0.6
REVF	Revere	82.46	6	eP	P	15 21 44.3	+1.4
EPF	Esparros	82.53	11	eP	P	15 21 43.0	-0.2
	comp=Z,14nm,0.5s,mb4.9						
EPF	Esparros	82.53	11	eP	P	15 21 43.0	-0.2
EPF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
ETSF	Etsaut	82.55	12	eP	P	15 21 43.7	+0.4
	comp=Z,166nm,1.2s,mb5.6						
ETSF	Etsaut	82.55	12	eP	P	15 21 43.7	+0.4
ETSF				pmax	pmax		
	comp=Z,83nm,1.2s,mb5.6						
PCAB	Cabril	82.56	18	eP	P	15 21 45.1	+1.7
	comp=Z,123nm,1.4s,mb5.7						
ECAL	Calabor	82.57	17	P	P	15 21 45.5	+2.1
	comp=Z,33nm,1.0s,mb5.3						
ECRI	Cripan	82.57	14	P	P	15 21 45.2	+1.8
	comp=Z,11nm,1.0s,mb4.8						
ECRI	Cripan	82.57	14	P	P	15 21 45.2	+1.7
ECRI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
FRF	La Foret Royal	82.59	7	eP	P	15 21 43.7	+0.2
FDAF	Les Forges d'A	82.62	12	eP	P	15 21 44.7	+1.0
VIEF	Viey	82.63	12	eP	P	15 21 45.6	+1.9
MLS	Moulis	82.68	11	eP	P	15 21 44.2	+0.2
PBRG	Braganca	82.70	17	eP	P	15 21 46.0	+1.9
	comp=Z,78nm,1.4s,mb5.5						
RESF	Ens	82.75	12	eP	P	15 21 46.0	+1.7
PRD	Provadia	82.78	352	eP	P	15 21 46.0	+1.5
LMR	La Mourre	82.81	7	eP	P	15 21 44.7	+0.1
	comp=Z,72nm,1.1s,mb5.3						
LMR	La Mourre	82.81	7	eP	P	15 21 44.7	+0.1
LMR				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.3						
EBIE	Bielsa	82.84	12	P	P	15 21 47.9	+3.1
	comp=Z,49nm,1.1s,mb5.5						
ALBI	Allahabad	82.90	304	eP	P	15 21 46.0	+0.5
PVL	Pavlikeni	82.93	353	eP	P	15 21 47.0	+1.7
PVRL	Vila Real	83.04	18	eP	P	15 21 47.2	+1.3
	comp=Z,148nm,1.6s,mb5.8						
GNI	Garni	83.10	338	P	P	15 21 47.6	+1.4
	comp=Z,33nm,0.6s,mb5.5,baz=311,slow=4.4,SNR=21						
GNI	Garni	83.10	338c	iP	P	15 21 47.9	+1.7
GNI				pmax	pmax		
	comp=Z,88nm,1.0s						
GNI				MLR	MLR		
	comp=Z,2µm,18.0s						
EGRA	Graus	83.35	12	P	P	15 21 49.4	+2.1
	comp=Z,32nm,0.7s,mb5.5						
PVIS	Viseu	83.55	18	eP	P	15 21 49.7	+1.3
	comp=Z,153nm,1.4s,mb5.9						
GRSN	GIRESUNGRSN	83.62	343	iP	P	15 21 47.9	-0.8
BOYT	Boyabat	83.67	346	iP	P	15 21 49.6	+0.6
PGB	Panagyurishte	83.67	354	eP	P	15 21 50.0	+1.1
VTS	Vitosha	83.69	355	eP	P	15 21 49.0	0.0
ESAC	San Caprasio	83.72	12	P	P	15 21 50.5	+1.4
	comp=Z,314nm,1.3s,mb6.3						
PGF	Pioggiola	83.75	5	eP	P	15 21 49.7	+0.4
	comp=Z,318nm,1.3s,mb6.0						
PGF	Pioggiola	83.75	5	eP	P	15 21 49.7	+0.4
PGF				pmax	pmax		
	comp=Z,159nm,1.3s,mb6.0						
EMIR	Miracle	83.76	11	P	P	15 21 51.7	+2.3
	comp=Z,25nm,0.7s,mb5.5						
BALT	Daday	83.77	347	iP	P	15 21 49.4	-0.1
GUMT	Gumushane	83.86	342	P	P	15 21 51.7	+1.8
MTE	Manteigas	83.92	18	eP	P	15 21 51.6	+1.3
	comp=Z,99nm,1.5s,mb5.7						
MTE	Manteigas	83.92	18	eS	S	15 32 13.3	+3.9
MTE	Manteigas	83.92	18	eP	P	15 21 51.3	+1.0
	comp=Z,62nm,0.9s,mb5.7						
ERZM	Erzurum	84.04	341	iP	P	15 21 52.1	+1.2
EZM	Erzurum	84.04	341	P	P	15 21 53.2	+2.3
DIM	Dimitrovgrad	84.08	353	eP	P	15 21 52.5	+1.5
PLD	Plovdiv	84.08	353	eP	P	15 21 51.8	+0.8
AQU	L'Aquila	84.10	2	P	P	15 21 51.1	0.0
	comp=Z,104nm,1.3s,mb5.8						
AQU	L'Aquila	84.10	2	P	P	15 21 51.2	+0.1
AQU				pmax	pmax		
	comp=Z,104nm,1.3s,mb5.8						
CLDR	Caldiran	84.25	339	P	P	15 21 52.6	+0.7
GUD	Guadarrama	84.26	15	P	P	15 21 52.7	+0.8
	comp=Z,29nm,0.6s,mb5.6						
GUD	Guadarrama	84.26	15	P	P	15 21 52.7	+0.8
GUD				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.6						
EPOB	Poblet	84.27	11	P	P	15 21 53.2	+1.2
	comp=Z,66nm,0.8s,mb5.8						
SKO	Skopje	84.39	356	eP	P	15 21 50.5	-2.1
	comp=Z,183nm,1.4s,mb6.0						
SKO	Skopje	84.39	356	eP	P	15 21 50.5	-2.1
KKB	Krupnik	84.42	355	eP	P	15 21 53.8	+1.1
CTKT	Corum	84.47	346	iP	P	15 21 53.5	+0.5
KDZ	Kurdzhali	84.48	353	eP	P	15 21 54.0	+0.9
RZN	Rozhen	84.49	353	eP	P	15 21 54.0	+0.9
TOKT	Tokat	84.50	344	eP	P	15 21 54.7	+1.5
PTOM	Tomar	84.52	19	eP	P	15 21 55.4	+2.1
	comp=Z,167nm,1.4s,mb6.0						
MMB	Musomiste	84.66	354	P	P	15 21 54.8	+0.9
ELBA	Catalca	84.72	351	iP	P	15 21 53.9	-0.3
HENT	Hendek	84.78	349	iP	P	15 21 54.1	-0.5
ELDT	Eldivan	84.79	347	iP	P	15 21 54.8	+0.2
VANB	Van	84.89	339	eP	P	15 21 56.4	+1.3
SDV	Santo Domingo	84.90	82	eP	P	15 21 56.6	+0.8
	comp=Z,9.4nm,0.8s,mb5.0						
SDV				LR	LR		
	comp=Z,799nm,22.0s,MS5.1						
TVAN	Van	84.95	339	iP	P	15 21 56.0	+0.6
VAY	Valandovo	84.99	355	eP	P	15 21 53.6	-2.0
	comp=Z,107nm,1.3s,mb5.8						
VAY	Valandovo	84.99	355	eP	P	15 21 53.6	-2.0
EMOS	Mosqueruela	85.05	13	P	P	15 21 57.5	+1.5
	comp=Z,45nm,0.9s,mb5.6						
KNT	Kendrikon	85.13	355	eP	P	15 21 57.2	+0.9
CTA	Charters Tower	85.15	226	LR	LR	15 52 19.4	
	comp=Z,672nm,19.9s,MS5.0,baz=40,slow=30						
CTAO	Charters Tower	85.15	226	PFAKE		15 22 10.0	+13
CTAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
ALN	Alexandroupoli	85.18	352	eP	P	15 21 57.3	+0.8
ESDC	Sonseca Array	85.23	15	P	P	15 21 58.0	+1.2
	comp=Z,21nm,0.7s,mb5.4,baz=345,slow=4.7,SNR=48						
ESDC	Sonseca Array	85.23	15	P	P	15 21 58.0	+1.2
	comp=Z,25nm,0.8s,mb5.4						
ESLA	Sonseca Array	85.23	15	eP	P	15 21 57.4	+0.6
	comp=Z,34nm,1.2s,mb5.3						
ESLA				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
OHR	Ohrid	85.28	356	eP	P	15 21 55.1	-1.9
	comp=Z,352nm,1.4s,mb6.3						
OHR	Ohrid	85.28	356	eP	P	15 21 55.1	-1.9
SART	Tekirdag	85.30	351	iP	P	15 21 56.2	-0.9
AJM	Ajmer	85.31	310	eP	P	15 21 55.8	-1.7
AJM				ix	x	15 21 57.2	
BIA	Bitola	85.35	356	eP	P	15 21 55.3	-2.0
	comp=Z,9.7nm,0.8s,mb5.0						
BIA	Bitola	85.35	356	eP	P	15 21 55.3	-2.1
GRG	Griva	85.36	355	eP	P	15 21 58.3	+0.9
PTK	Pertek	85.40	342	P	P	15 21 59.2	+1.5
BLSP	Bilaspur	85.40	302	eP	P	15 21 57.5	-0.5
BLSP				AMb	AMB	15 21 59.6	
	comp=Z,112nm,0.6s,mb6.1						
SOH	Sokhos	85.44	354	eP	P	15 21 58.8	+1.0
ANTO	Ankara	85.49	347	eP	P	15 21 58.9	+0.8
	comp=Z,137nm,0.9s,mb6.1						
ANTO				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
ANTO	Ankara	85.49	347	eP	P	15 21 58.9	+0.8
ANTO				pmax	pmax		
	comp=Z,137nm,0.9s,mb6.1						
ANTO				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
CDAG	Cicekdag	85.51	346	iP	P	15 21 57.2	-1.0
BR131	Keskin Array S	85.51	346	eP	P	15 21 58.6	+0.4
	comp=Z,44nm,0.7s,mb5.8						
BR131				LR	LR		
	comp=Z,795nm,19.0s,MS5.1						
BRTR	Keskin Array B	85.51	346	P	P	15 21 59.0	+0.8
	comp=Z,56nm,0.7s,mb5.9,baz=19,slow=2.5,SNR=91						
FNA	Florina	85.58	356	eP	P	15 21 59.0	+0.4
EVO	Evora	85.65	19	eP	P	15 21 59.0	+0.1
	comp=Z,62nm,1.2s,mb5.4						
ULDT	Uludag	85.65	350	iP	P	15 21 58.7	-0.2
BTMT	Batman	85.67	340	P	P	15 22 00.9	+1.9
ECHE	Chera	85.75	13	P	P	15 22 01.5	+2.2
	comp=Z,14nm,0.8s,mb5.2						
ECHE	Chera	85.75	13	P	P	15 22 01.5	+2.1
ECHE				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.2						
BORA	Eskisehir	85.77	349	iP	P	15 21 59.9	+0.5
HAKT	HAKKARI	85.81	338	iP	P	15 21 59.8	+0.1
ELZG	Elazig	85.85	342	iP	P	15 21 59.7	-0.2
OUR	Ouranopolis	85.89	354	eP	P	15 22 00.7	+0.7
BEST	Besiri	86.00	340	iP	P	15 22 02.2	+1.6
ESKT	Eskisehir	86.07	349	iP	P	15 22 00.7	-0.3
BTOK	Tokmak	86.14	351	iP	P	15 22 01.1	-0.1
PBEJ	Beja	86.16	19	eP	P	15 22 02.4	+1.0
	comp=Z,47nm,1.4s,mb5.5						
LIT	Litokhoron	86.21	355	eP	P	15 22 02.2	+0.6
AVNT	Avonos	86.27	345	iP	P	15 22 03.2	+1.3
PTEO	Sao Teotonio	86.46	19	eP	P	15 22 04.0	+1.1
	comp=Z,84nm,1.8s,mb5.7						
EVIA	Vianos	86.47	14	P	P	15 22 05.7	+2.8
	comp=Z,22nm,0.7s,mb5.5						
EVIA	Vianos	86.47	14	P	P	15 22 05.7	+2.8
EVIA				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.5						
EADA	Adamuz	86.61	16	P	P	15 22 05.4	+1.8
	comp=Z,18nm,0.8s,mb5.4						
EMIN	Mina Concepcio	86.64	18	P	P	15 22 06.3	+2.5
	comp=Z,18nm,0.7s,mb5.4						
GDZ	Gediz	86.66	349	iP	P	15 22 02.7	-1.1
MARD	Mardin	86.66	340	iP	P	15 22 04.6	+0.7
EBAN	Banos Encina	86.74	15	P	P	15 22 05.8	+1.5
	comp=Z,9.3nm,0.7s,mb5.1						
EBAN	Banos Encina	86.74	15	P	P	15 22 05.8	+1.6
EBAN				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb5.1						
BHPL	Bhopal	86.78	306	eP	P	15 22 04.2	-0.6
BHPL				ix	x	15 22 04.4	
IGT	Igoumenitsa	86.87	357	eP	P	15 22 05.3	+0.5
XOR	Xorichti	86.90	354	eP	P	15 22 05.4	+0.4
KDHN	Kadinhani	86.90	347	iP	P	15 22 04.7	-0.3
MSL	Mosul	87.17	338	ex	x	15 22 05.0	
GZT	Gaziantep	87.22	343	iP	P	15 22 07.3	+0.7
ELUQ	Luque	87.25	16	P	P	15 22 08.2	+1.5
	comp=Z,4.8nm,0.4s,mb5.1						
ELUQ	Luque	87.25	16	P	P	15 22 08.2	+1.4
ELUQ				pmax	pmax		
	comp=Z,5.0nm,0.4s,mb5.1						
EHUE	Huescar	87.26	15	P	P	15 22 08.0	+1.2
	comp=Z,2.3nm,0.6s,mb4.6						
EHUE	Huescar	87.26	15	P	P	15 22 08.0	+1.2
EHUE				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.5						
MANT	Manisa	87.34	350	iP	P	15 22 07.5	+0.3
KDAG	Bornova	87.56	351	iP	P	15 22 07.3	-0.9
TKTP	Tekketepe	87.60	349	iP	P	15 22 07.7	-0.7
ECOG	Cogollos-Vega	87.64	15	P	P	15 22 11.7	+3.1
	comp=Z,17nm,0.7s,mb5.4						
ECOG	Cogollos-Vega	87.64	15	P	P	15 22 11.7	+3.1
ECOG				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.4						
ESPR	Espera	87.66	17	P	P	15 22 11.8	+3.0
	comp=Z,62nm,1.2s,mb5.7						
URLA	Izmir	87.66	352	iP	P	15 22 07.5	-1.2
ELOJ	Sierra Loja	87.67	16	P	P	15 22 10.4	+1.6
	comp=Z,12nm,0.7s,mb5.2						
ELOJ	Sierra Loja	87.67	16	P	P	15 22 10.4	+1.6
ELOJ				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.2						
ERON	Agron	87.86	16	P	P	15 22 10.2	+0.6
	comp=Z,3.1nm,0.3s,mb5.0						
DNZL	Cakiroluk	88.08	350	iP	P	15 22 11.2	+0.5
EJIF	Jimena Fronter	88.13	17	P	P	15 22 11.8	+0.8
	comp=Z,31nm,1.7s,mb5.3						
EJIF	Jimena Fronter	88.13	17	P	P	15 22 11.8	+0.8
EJIF				pmax	pmax		
	comp=Z,31nm,1.7s,mb5.3						
EMIJ	Mijas	88.14	17	P	P	15 22 11.5	+0.5
	comp=Z,11nm,0.8s,mb5.1						
AYDN	Tasoluk	88.23	351	iP	P	15 22 11.4	-0.1
COBT	Iskenderun	88.26	344	iP	P	15 22 12.4	+0.8
VIS	Vishakhapatnam	88.46	298	eP	P	15 22 06.8	-6.1
VIS				AMb	AMB	15 22 08.4	
	comp=Z,67nm,1.1s,mb5.8						
AKL	Akola	89.13	305⇑	ix	x	15 21 59.5	
AKL				ix	x	15 31 09.8	
BHD	Baghdad	89.77	336	ex	x	15 22 20.5	
BHJ	Bhuj	90.33	312	ex	x	15 23 28.9	
WRAB	Tennant Creek	90.48	236	PFAKE		15 22 30.0	+7.5
WRAB				LR	LR		
	comp=Z,315nm,19.0s,MS4.8						
HYB	Hyderabad	91.16	302	iP	P	15 22 23.0	-2.7
	comp=Z,170nm,1.0s,mb6.3						
HYB				esP	sP	15 22 43.0	+0.1
HYB	Hyderabad	91.16	302	eP	P	15 22 23.0	-2.7
	comp=Z,170nm,1.0s,mb6.3						
HYB				e	pP	15 22 33.0	-5.6
LATR	Latur	91.30	304	eP	P	15 22 26.5	+0.2
POO	Poona	92.51	306	AMb	AMB	15 22 45.1	
	comp=Z,46nm,0.6s,mb6.1						
KAD	Karad	93.40	306	eP	P	15 22 35.6	-0.4
KAD				AMb	AMB	15 22 37.8	
	comp=Z,33nm,0.9s,mb5.8						
RPN	Rapa Nui	93.49	133	PFAKE		15 22 50.0	+14
RPN				LR	LR		
	comp=Z,213nm,19.0s,MS4.6						
SNZO	South Karori	96.58	196	PFAKE		15 23 00.0	+10
SNZO				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
MNGI	Mangalore	96.83	303	eP	P	15 22 50.5	-1.1
NNA	Nana	97.94	99	PFAKE		15 23 10.0	+13
NNA				LR	LR		
	comp=Z,288nm,22.0s,MS4.7						
PALK	Pallekele	98.58	295	PFAKE		15 23 10.0	+10
PALK				LR	LR		
	comp=Z,304nm,19.0s,MS4.8						
MBWA	Marble Bar	99.07	247	PFAKE		15 23 10.0	+8.4
MBWA				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
TRD	Trivandrum	99.52	299	ex	x	15 22 34.9	
SAML	Samuel	103.58	87	PFAKE		15 23 30.0	+8.0
SAML				LR	LR		
	comp=Z,2695µm,21.0s						
LPAZ	La Paz	106.45	95	PFAKE		15 28 00.0	
LPAZ				LR	LR		
	comp=Z,749nm,21.0s,MS5.2						
DGAR	Diego Garcia	115.30	294	PFAKE		15 28 10.0	+8.8
DGAR				LR	LR		
	comp=Z,369nm,19.0s,MS5.0						
RCBR	Riachuelo	116.42	61	PFAKE		15 28 20.0	+17
RCBR				LR	LR		
	comp=Z,677nm,22.0s,MS5.2						
DBIC	Dimbokro	117.16	23	PKP	PKPdf	15 28 06.2	+1.5
	comp=Z,2.5nm,0.8s,baz=65,slow=2.5,SNR=4.5						
DBIC	Dimbokro	117.16	23	PKP	PKPdf	15 28 06.2	+1.5
DBIC				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
CPUP	Villa Florida	120.55	94	PFAKE		15 28 20.0	+8.9
CPUP				LR	LR		
	comp=Z,220nm,19.0s,MS4.8						
MSEY	Mahe Island	121.35	312	PFAKE		15 28 30.0	+17
MSEY				LR	LR		
	comp=Z,327nm,22.0s,MS4.9						
PLCA	Paso Flores	123.46	115	PKP	PKPdf	15 28 15.7	-0.7
	comp=Z,7.8nm,0.9s,baz=266,slow=3.1,SNR=11						
PLCA	Paso Flores	123.46	115	ePKPdf	PKPdf	15 28 16.1	-0.2
PLCA				LR	LR		
	comp=Z,2µm,22.0s,MS5.6						
KMBO	Kilima Mbogo	124.55	334	PKP	PKPdf	15 28 20.6	+1.6
	comp=Z,6.7nm,1.0s,baz=5.4,slow=5.5,SNR=7.6						
KMBO	Kilima Mbogo	124.55	334	PKP	PKPdf	15 28 20.6	+1.6
KMBO				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
TRQA	Tornquist	126.33	107	ePKPdf	PKPdf	15 28 21.5	-0.4
SBA	Scott Base	132.71	188	PFAKE		15 28 50.0	+17
SBA				LR	LR		
	comp=Z,926nm,21.0s,MS5.5						
CASY	Casey	135.89	215	PFAKE		15 28 50.0	+11
CASY				LR	LR		
	comp=Z,649nm,19.0s,MS5.4						
EFI	East Falkland	137.07	118	PFAKE		15 28 50.0	+8.3
EFI				LR	LR		
	comp=Z,465nm,21.0s,MS5.2						
LSZ	Lusaka	140.29	341	PKhKP		15 28 42.2	
	comp=Z,4.5nm,0.5s,baz=33,slow=3.0,SNR=10						
LSZ				PKP	PKPdf	15 28 50.9	+2.4
	comp=Z,7.0nm,0.8s,baz=63,slow=2.9,SNR=6.0						
LSZ	Lusaka	140.29	341	PKP	PKPdf	15 28 42.2	-6.2
LSZ				PKP	PKPdf	15 28 50.9	+2.4
LSZ				LR	LR		
	comp=Z,2µm,21.0s,MS5.9						
PMSA	Palmer Station	140.56	138	PFAKE		15 29 00.0	+13
PMSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
MATP	Matopo	145.23	339	PKP	PKPdf	15 28 57.5	+0.7
	comp=Z,156nm,0.9s,baz=353,slow=2.2,SNR=104						
TSUM	Tsumeb	145.35	357	PKP	PKPdf	15 28 58.2	+1.1
	comp=Z,63nm,0.8s,baz=348,slow=5.0,SNR=78						
TSUM	Tsumeb	145.35	357	ePKP	PKPdf	15 28 57.9	+0.8
TSUM				LR	LR		
	comp=Z,3µm,20.0s,MS6.0						
LBTB	Lobatse	150.27	342	PKP	PKPdf	15 29 05.2	+0.3
	comp=Z,3.3nm,0.8s,baz=164,slow=9.6,SNR=3.0						
LBTB				PKPbc	PKPdf	15 29 11.8	+6.9
	comp=Z,23nm,0.5s,baz=9.5,slow=1.8,SNR=33						
LBTB	Lobatse	150.27	342	PKP	PKPdf	15 29 06.7	+1.7
LBTB				LR	LR		
	comp=Z,1µm,19.0s,MS5.8						
BOSA	Boshof	153.84	341	PFAKE		15 29 20.0	+10
BOSA				LR	LR		
	comp=Z,2µm,19.0s,MS5.9						
MAW	Mawson	154.09	220	PKP	PKPdf	15 29 10.4	+1.3
	comp=Z,7.0nm,0.9s,baz=140,slow=4.7,SNR=3.9						
MAW				PKPbc	PKPdf	15 29 19.2	+10
	comp=Z,9.6nm,0.9s,baz=32,slow=0.7,SNR=7.7						
MAW				PKPab	PKPab	15 29 32.2	-1.2
	comp=Z,20nm,1.0s,baz=100,slow=8.3,SNR=4.9						
MAW	Mawson	154.09	220	PKP	PKPdf	15 29 10.4	+1.3
MAW				PKPbc	PKPdf	15 29 19.2	+10
MAW				PKPab	PKPab	15 29 32.2	-1.2
MAW				LR	LR		
	comp=Z,1µm,22.0s,MS5.7						
TRIS	Tristan da Cun	154.25	61	PFAKE		15 29 20.0	+10
TRIS				LR	LR		
	comp=Z,2µm,20.0s,MS6.0						
SUR	Sutherland	158.21	349	PKPab	PKPab	15 29 52.1	0.0
	comp=Z,15nm,0.7s,baz=50,slow=5.2,SNR=10						
SUR	Sutherland	158.21	349	PFAKE		15 29 30.0	+14
SUR				LR	LR		
	comp=Z,489nm,21.0s,MS5.3						
VNA3	Neumayer Olymp	159.28	157⇑	iP	PKPdf	15 29 28.3	+13
VNA1	Neumayer--Stat	160.03	156⇑	iP	PKPdf	15 29 31.1	+14
VNA2	Neumayer--Watz	160.03	158⇑	iP	PKPdf	15 29 28.2	+12
VNA2				P		15 29 40.6	
SNAA	Sanae	160.38	162⇑	iP	PKPdf	15 29 15.8	-1.2

BJI **22** *15:11:26.7, 5.34S×145.80E, h71^{km}, mB6.0, mb5.6, Ms5.8, Msz5.6*

MOS **22** *15:11:28.6±1.1, 5.09S×145.21E, h53^{km}, mb6.1/40, MS5.6/18, Error ellipse: s-maj=8.8km s-min=5.2km az=93.7*

SKO **22** *15:11:31.0, 6.13S×144.02E, h80^{km}*

HRVD **22** *15:11:31.6±0.1, 5.20S×145.33E, h77^{km}±1^{km}, MW6.2/92, Centroid moment Tensor Solution. LP body waves: s92,c227;Mantle waves: s92,c239; Half duration: $2\overset{s}{.}9$ Moment tensor: Scale 10^{18}Nm; M_{rr}-0.32±.02; $M_{\theta\theta}$0.60±.02; $M_{\phi\phi}$-0.27±.02; $M_{r\theta}$-1.94±.01; $M_{\theta\phi}$-0.91±.02; $M_{\phi r}$0.09±.02; Best double couple: $M_0$2.184×10^{18} NP1: ϕ_s347°, δ25°, λ-14°. NP2: ϕ_s90°, δ84°, λ-114°. Principal axes: T 2.363, Plg35°, Azm200°; N -.356, Plg24°, Azm92°; P -2.006, Plg46°, Azm335°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC **22** *15:11:31.6±0.1, 5.15S×145.28E, h68^{km}, mb6.0/53, ME5.5, MW6.1 Error ellipse: s-maj=5.4km s-min=3.8km az=96.0 Broadband fault plane solution: P waves. NP1: ϕ_s95°, δ80°, λ-90°. NP2: ϕ_s275°, δ10°, λ-90°. Principal axes: T Plg35°, Azm185°; N Plg0°, Azm0°; P Plg55°, Azm5°; Moment Tensor Solution. s13 Moment tensor: Scale 10^{18} Nm; M_{rr}-0.58; $M_{\theta\theta}$0.16; $M_{\phi\phi}$0.42; $M_{r\theta}$-1.60; $M_{\theta\phi}$-1.18; $M_{\phi r}$-0.05; Best double couple: $M_0$2.1×10^{18} NP1: ϕ_s355°, δ37°, λ-17°. NP2: ϕ_s99°, δ80°, λ-126°. Principal axes: T 1.99, Plg26°, Azm216°; N .11, Plg35°, Azm106°; P -2.11, Plg44°, Azm334°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Goroka.

IDC **22** *15:11:33.2±2.2, 5.19S×145.39E, h83^{km}±19^{km}, mb5.4/20, mb1 5.5/25, mb1mx5.5/26, mbtmp5.7/25, MS5.6/11,* *Ms1 5.5/11,ms1mx5.4/15 Error ellipse: s-maj=12.9km s-min=9.1km az=81.0*

ISC 22 15:11:32.2±0.1**,5.16S**±0.02×**145.24E**±0.03**,h88**km**,**
h88km±1.5km**:pP-P,n423,**σ1**ˢ02**/308**,mb5.8**/92**,50C-22D,**
Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.63	156	P	P	15 12 38.5	-2.8
	1µm,0.3s,baz=357,slow=7.1,SNR=809						
PMG				S	S	15 13 28.2	-6.1
	1µm,0.3s,baz=150,slow=21,SNR=18						
PMG				LR	LR	15 13 59.2	
	comp=Z,124µm,18.9s,baz=10,slow=32						
PMG	Port Moresby	4.63	156	*e*Pn	P	15 12 38.6	-2.8
PMG				*e*Sn	S	15 13 30.0	-4.2
KAKA	Kakadu	14.70	238	⇑*i*P	P	15 15 15.5	+19
	2µm,0.6s						
CTA	Charters Tower	14.88	176	⇑*i*P	P	15 14 57.8	-1.4
	495nm,0.9s						
CTA				*i* S	S	15 17 45.3	+3.2
CTA	Charters Tower	14.88	176	P	P	15 14 58.3	-0.9
	2.3nm,0.3s,baz=348,slow=14,SNR=66						
CTA				S	S	15 17 39.5	-2.5
	6.4nm,0.3s,baz=257,slow=21,SNR=3.7						
CTA	Charters Tower	14.88	176	⇑*i*P	P	15 14 57.8	-1.4
CTA				*i* S	S	15 17 45.3	+3.2
CTA				pmax	pmax		
	comp=Z,495nm,0.9s						
CTAO	Charters Tower	14.88	176	*e*Pn	P	15 14 58.2	-1.0
	comp=Z,542nm,0.8s						
CTAO	Charters Tower	14.88	176	*e*P	P	15 14 58.2	-1.0
CTAO				pmax	pmax		
	comp=Z,542nm,0.8s						
HNR	Honiara	15.20	107	P	P	15 15 01.1	-2.2
	comp=Z,6.2nm,0.3s,baz=236,slow=1.4,SNR=43						
HNR				LR	LR	15 19 25.0	
	comp=Z,11µm,20.4s,baz=281,slow=31						
HNR	Honiara	15.20	107	*e*P	P	15 15 01.2	-2.1
	comp=Z,2µm,1.0s						
HNR				*e*S	S	15 17 52.8	+3.3
HNR	Honiara	15.20	107	*e*P	P	15 15 01.2	-2.1
HNR				*e*S	S	15 17 52.8	+3.4
HNR				pmax	pmax		
	comp=Z,2µm,1.0s						
WRAB	Tennant Creek	18.11	215	*e*P	P	15 15 38.3	-1.2
	comp=Z,826nm,0.8s						
WRAB	Tennant Creek	18.11	215	*e*P	P	15 15 38.3	-1.2
WRAB				pmax	pmax		
	comp=Z,826nm,0.8s						
WB2	Warramunga Arr	18.12	215	⇑*i*P	P	15 15 38.4	-1.2
WB2				*i* S	S	15 18 55.8	+0.4
WB2				*e*SCS	ScS	15 27 22.7	+7.5
WRA	Warramunga Arr	18.12	215	P	P	15 15 38.9	-0.8
	comp=Z,22nm,0.3s,baz=39,slow=12,SNR=288						
WRA	Warramunga Arr	18.12	215	*i* P	P	15 15 38.2	-1.5
WRA				pmax	pmax		
	comp=Z,262nm,0.6s						
GUMO	Guam	18.63	359	P	P	15 15 45.4	-0.1
	comp=Z,15nm,0.3s,baz=195,slow=8.3,SNR=16						
GUMO				LR	LR	15 21 52.9	
	comp=Z,12µm,18.3s,baz=180,slow=33						
GUMO	Guam	18.63	359	*e*P	P	15 15 45.8	+0.3
	comp=Z,3µm,1.4s						
GUMO	Guam	18.63	359	*e*P	P	15 15 45.8	+0.3
GUMO				pmax	pmax		
	comp=Z,3µm,1.4s						
ASPA	Alice Springs	21.40	210	*e*P	P	15 16 13.8	-0.7
ASPA				*e*SCS	ScS	15 27 31.5	+5.4
MATI	Mati	22.43	302	*e*P	P	15 16 23.6	-1.1
BIPH	Bislig	23.02	305	⇑*i*P	P	15 16 27.9	-2.6
DAV	Davao City (W)	23.07	302	⇓*e*P	P	15 16 36.0	+5.0
FITZ	Fitzroy Crossi	23.07	234	*e*P	P	15 16 31.0	+0.1
	comp=Z,1µm,0.6s,mb6.5						
FITZ				*e*pP		15 17 00.1	
FITZ				*e*S	S	15 20 34.2	+2.7
FITZ	Fitzroy Crossi	23.07	234	P	P	15 16 31.2	+0.2
	comp=Z,2µm,0.6s,mb6.5,baz=66,slow=9.1,SNR=327						
FITZ				S	S	15 20 35.1	+3.6
	comp=Z,121nm,0.9s,baz=4.9,slow=20,SNR=1.6						
FITZ				LR	LR	15 26 01.9	
	comp=Z,50µm,21.4s,baz=50,slow=38						
BUKP	Musuan	23.93	303	*e*P	P	15 16 41.4	+2.2
BUTP	Butuan	24.07	306	*e*P	P	15 16 41.2	+0.6
CGP	Cagayan de Oro	24.55	303	⇓*e*P	P	15 16 47.7	+2.5
SCPH	Surigao	24.64	307	*e*P	P	15 16 50.3	+4.1
PAGZ	Pagadian	25.34	300	*e*P	P	15 16 53.4	+0.6
MSLP	Maasin	25.35	307	*e*P	P	15 16 51.6	-1.3
BESP	Borongan	25.79	310	*e*P	P	15 16 57.3	+0.3
ARMA	Armidale	25.84	167	⇑*i*P	P	15 16 57.0	-0.3
IPIL	Ipil	26.01	299	*e*P	P	15 16 58.9	-0.2
DZM	Mont Dzumac	26.53	131	⇑*i*P	P	15 17 01.3	-2.5
DZM	Mont Dzumac	26.53	131	P	P	15 17 01.3	-2.5
	comp=Z,99nm,0.6s,mb5.5,baz=314,slow=6.9,SNR=76						
STKA	Stephens Creek	26.80	187	P	P	15 17 05.3	-0.8
	comp=Z,363nm,0.7s,mb6.0,baz=354,slow=8.5,SNR=250						
STKA				S	S	15 21 34.4	+0.5
	comp=Z,15nm,0.9s,baz=143,slow=12,SNR=1.4						
STKA				LR	LR	15 28 33.2	
	comp=Z,24µm,21.6s,baz=18,slow=38						
STKA	Stephens Creek	26.80	187	⇑*i*P	P	15 17 05.3	-0.9
CNP	Catarman	26.95	311	*e*P	P	15 17 07.8	+0.2
GUIM	Jordan	27.46	305	*e*P	P	15 17 06.0	-6.3
RCP	Roxas	27.86	307	⇑*e*P	P	15 17 15.7	-0.3
PVCP	Virac	28.02	312	*e*P	P	15 17 16.3	-1.1
CUYO	Cuyo Island	28.88	303	*e*P	P	15 17 23.1	-2.0
TSM	Tawau	28.90	288	P	P	15 17 25.4	+0.2
OTRP	Odiongan	28.90	307	*e*P	P	15 17 24.8	-0.5
AUQP	San Andres	28.96	310	*e*P	P	15 17 19.9	-5.9
RIV	Riverview	29.06	170	*e*P	P	15 17 26.2	-0.3
SJMP	San Jose	29.68	306	*e*P	P	15 17 32.6	+0.4
BOAC	Boac	29.69	309	*e*P	P	15 17 32.0	-0.2
FORT	Forrest	30.18	210	*e*P	P	15 17 35.7	-0.8
	comp=Z,248nm,0.6s,mb6.0						
FORT				*e*		15 24 16.5	
CNB	Canberra Magne	30.25	173	⇑*i*P	P	15 17 36.7	-0.4
	comp=Z,510nm,0.9s,mb6.2						
ADE	Adelaide	30.27	191	⇑*i*P	P	15 17 36.9	-0.4
ENPP	El Nido	30.40	302	*e*P	P	15 17 38.1	-0.4
BATP	Bataraza	30.66	297	*e*P	P	15 17 39.7	-1.2
TGY	Tagaytay City	30.78	309	LR	LR	15 29 09.9	
	comp=Z,24nm,19.9s,baz=314,slow=34						
KKM	Kota Kinabalu	31.04	291	⇓*i*P	P	15 17 43.5	-0.6
KKM	Kota Kinabalu	31.04	291	P	P	15 17 44.7	+0.5
BALP	Baler	31.30	312	*e*P	P	15 17 41.0	-5.4
CAUP	Cauayan	31.90	314	*e*P	P	15 18 02.1	+10
TOO	Toolangi	32.27	180	⇑*i*P	P	15 17 54.9	+0.2
	comp=Z,337nm,0.9s,mb6.1						
TOO				*e*		15 24 22.8	
TOO	Toolangi	32.27	180	⇑*i*P	P	15 17 54.9	+0.2
TOO				pmax	pmax		
	comp=Z,337nm,0.9s,mb6.1						
SCZP	Santa Cruz	32.58	310	*e*P	P	15 17 47.5	-10
APYP	Conner	32.92	315	*e*P	P	15 17 59.3	-1.2
KSM	Kuching	35.51	280	⇓*i*P	P	15 18 23.7	+1.0
KLBR	Kellerberrin	36.81	221	*e*P	P	15 18 33.0	-0.6
	comp=Z,566nm,1.2s,mb6.4						
KLBR				*e*pP	pP	15 19 01.9	+7.5
NACB	Ninganchiao	37.16	323	*e*P	P	15 18 36.5	0.0
TAU	Tasmania Unive	37.64	177	⇑*i*P	P	15 18 40.6	+0.3
	comp=Z,989nm,1.5s,mb6.4						
TAU	Tasmania Unive	37.64	177	⇑*i*P	P	15 18 40.6	+0.3
TAU				pmax	pmax		
	comp=Z,989nm,1.5s,mb6.4						
YHNB	Yeheng	37.66	323	⇓*e*P	P	15 18 41.4	+0.7
TATO	Taipei	37.82	323	*e*P	P	15 18 43.4	+1.4
	comp=Z,1µm,1.4s,mb6.6						
NWAO	Narrogin (SRO)	38.01	220	*e*P	P	15 18 44.3	+0.8
	comp=Z,653nm,1.5s,mb6.2						
NWAO	Narrogin (SRO)	38.01	220	*e*P	P	15 18 44.3	+0.8
NWAO				pmax	pmax		
	comp=Z,653nm,1.5s						
MUN	Mundaring	38.08	222	⇑*i*P	P	15 18 44.5	+0.4
MUN				*e*PP	PP	15 20 10.5	-4.7
MUN				*i* S	S	15 24 31.8	+1.9
QZH	Quanzhou	39.58	320	*i* PR		15 18 57.8	
QZH				S	S	15 24 55.6	+3.0
QZH				AMB	AMB		
	comp=Z,3µm,8.2s						
QZH				LR	LR		
	comp=N,4µm,9.4s						
QZH				LR	LR		
	comp=E,4µm,8.4s						
QZH				LR	LR		
	comp=Z,28µm,29.8s						
OUZ	Omahuta	39.75	143	PN	P	15 18 58.4	+0.5
HKC	Hong Kong	40.85	313	⇑*i*P	P	15 19 13.0	+5.9
HKC				*i* S	S	15 25 22.0	+11
GZH	Guangzhou	41.93	313	P	P	15 19 13.9	-2.2
GZH				S	S	15 25 26.4	-1.2
GZH				LR	LR		
	comp=N,2µm,18.7s						
GZH				LR	LR		
	comp=E,2µm,18.7s						
GZH				LR	LR		
	comp=Z,4µm,18.3s						
MJAR	Matsushiro Arr	42.00	352	P	P	15 19 15.3	-1.1
	comp=Z,33nm,0.6s,mb5.2,baz=169,slow=9.1,SNR=28						
MJAR				S	S	15 25 24.5	-3.9
	comp=Z,2.5nm,1.0s,baz=133,slow=6.9,SNR=2.7						
MJAR				LR	LR	15 36 50.9	
	comp=Z,2µm,18.8s,baz=165,slow=36						
MAJO	Matsushiro	42.00	352	*e*P	P	15 19 16.0	-0.5
MAT	Matsushiro	42.00	352	P	P	15 19 15.5	-0.9
MAT				S	S	15 25 26.0	-2.4
MAT	Matsushiro	42.00	352	*e*P	P	15 19 15.0	-1.4
	comp=Z,1µm,1.7s,mb6.3						
MAT				*e*S	S	15 25 26.0	-2.4
MAT				LR	LR		
	comp=Z,3µm,20.0s						
MAT	Matsushiro	42.00	352	*e*P	P	15 19 15.0	-1.4
MAT				*e*S	S	15 25 26.0	-2.4
MAT				pmax	pmax		
	comp=Z,1µm,1.7s,mb6.3						
MAT				MLR	MLR		
	comp=Z,3µm,20.0s						
RAO	Raoul Island	42.27	129	P	P	15 19 18.0	-0.8
	comp=Z,195nm,0.5s,mb6.1,baz=104,slow=21,SNR=2.7						
QIZ	Qiongzhong	42.34	306	⇑*i*P	P	15 19 20.3	+0.9
QIZ				XP	sP	15 19 42.6	-8.1
QIZ				PP	PP	15 21 02.3	+0.6
QIZ				S	S	15 25 31.5	-2.1
QIZ				SS	SS	15 28 42.5	+3.9
QIZ				LR	LR		
	comp=N,3µm,20.9s						
QIZ				LR	LR		
	comp=E,3µm,23.0s						
QIZ				LR	LR		
	comp=Z,10µm,28.6s						
QIZ	Qiongzhong	42.34	306	*e*P	P	15 19 20.6	+1.1
	comp=Z,222nm,1.3s,mb5.7						
QIZ				*e*pP	pP	15 19 33.1	-7.3
KGM	Kluang	42.48	279	P	P	15 19 22.3	+1.6
HIZ	Hauiti	42.73	145	PN	P	15 19 23.5	+1.1
AFI	Afiamalu	43.21	105	P	P	15 19 25.7	-0.9
	comp=Z,56nm,0.9s,mb5.3,baz=116,slow=8.3,SNR=7.4						
AFI	Afiamalu	43.21	105	*e*P	P	15 19 25.9	-0.7
	comp=Z,144nm,0.9s,mb5.7						
AFI	Afiamalu	43.21	105	P	P	15 19 26.1	-0.5
AFI				pmax	pmax		
	comp=Z,140nm,0.9s,mb5.7						
WATZ	Wairara	43.36	145	PN	P	15 19 28.7	+1.1
PKVZ	Pokaka	43.54	146	PN	P	15 19 30.2	+1.2
CNZ	Chateau	43.59	145	PN	P	15 19 30.6	+1.2
RITZ	Rihia Road	43.62	145	PN	P	15 19 31.7	+2.1
DRZ	Dome Shelter	43.65	145	PN	P	15 19 31.9	+2.0
HATZ	Hinemaiaia	43.69	145	PN	P	15 19 31.3	+1.0
NNZ	Nelson	43.85	149	PN	P	15 19 31.3	-0.2
URZ	Urewera	43.87	143	P	P	15 19 31.4	-0.3
	comp=Z,101nm,0.6s,mb5.8,baz=321,slow=3.8,SNR=34						
URZ	Urewera	43.87	143	PN	P	15 19 31.3	-0.4
JCZ	Jackson Bay	43.94	156	PN	P	15 19 32.4	+0.2
THZ	Tophouse	44.02	150	PN	P	15 19 32.1	-0.8
BKZ	Black Stump Fm	44.11	145	PN	P	15 19 33.4	-0.2
MWZ	Matawai	44.17	143	PN	P	15 19 34.0	-0.1
TUWZ	Tuamarina	44.30	149	PN	P	15 19 34.7	-0.4
TSZ	Takapari Road	44.41	146	PN	P	15 19 36.1	+0.1
BSWZ	Blackbirch Sta	44.47	149	PN	P	15 19 35.9	-0.5
LTZ	Lake Taylor	44.47	151	PN	P	15 19 35.9	-0.5
DCZ	Deep Cove	44.48	158	PN	P	15 19 36.4	0.0
SNZO	South Karori	44.60	148	*e*P	P	15 19 36.9	-0.7
	comp=Z,252nm,0.9s,mb6.0						
MRZ	Mangatainoka R	44.62	147	PN	P	15 19 37.2	-0.5
RPZ	Rata Peaks	44.64	153	PN	P	15 19 37.4	-0.4
UBT	Ubonrachathani	44.70	298	⇑P	P	15 19 38.5	-0.1
KNZ	Kokohu	44.70	144	PN	P	15 19 37.7	-0.6
MLZ	Mavora Lakes	44.76	157	PN	P	15 19 38.7	0.0
LBZ	Lake Benmore	44.79	155	PN	P	15 19 38.1	-0.8
MTW	Mount Morrison	44.92	147	PN	P	15 19 38.8	-1.3
BFZ	Birch Farm	44.99	146	PN	P	15 19 40.2	-0.5
WHZ	Wether Hill Ro	45.13	158	PN	P	15 19 41.3	-0.3
IPM	Ipoh	45.20	282	P	P	15 19 43.4	+0.8
KS15	Wonju Array Si	45.36	341	*e*P	P	15 19 43.9	+0.2
MQZ	McQueen’s Vall	45.36	152	PN	P	15 19 43.1	-0.4
KULM	Kulim	45.72	282	⇓*i*P	P	15 19 47.3	+0.5
INCN	Inchon	45.83	339	⇓*e*P	P	15 19 47.0	-0.2
	comp=Z,123nm,1.0s,mb5.6						
TUZ	Tuapeka	45.83	156	PN	P	15 19 46.5	-0.8
SNG	Songkhla	46.18	285	P	P	15 19 49.0	-1.4
	comp=Z,520nm,0.9s,mb6.3						
KKTK	Khon Kaen	47.07	298	P	P	15 19 57.0	-0.4
	comp=Z,1µm,0.7s,mb6.8						
COCO	West Island	48.30	258	*e*P	P	15 20 09.7	+2.7
	comp=Z,313nm,1.3s,mb6.0						
NNT	Nongplab	48.53	292	P	P	15 20 08.2	-0.5
PKT	Phuket	48.73	285	P	P	15 20 11.0	+0.7
TIA	Tai’an	48.85	330	P	P	15 20 09.8	-1.2
TIA				*e*S	S	15 27 04.0	-2.4
TIA				LR	LR		
	comp=N,1µm,14.0s						
TIA				LR	LR		
	comp=E,5µm,15.0s						
ASAJ	Asahikawa	49.10	357	P	P	15 20 12.1	-0.7
	comp=E,139nm,0.8s,mb5.9,baz=235,slow=12,SNR=31						
NST	Nakhon Sawan	49.21	296	⇑P	P	15 20 14.7	+0.7
	comp=E,182nm,1.0s,mb6.0						
MCQ	Macquarie Isla	50.44	170	*e*P	P	15 20 22.5	-0.4
MCQ				*i* S	S	15 27 36.2	+8.0
SNY	Shenyang	50.76	339	PR	P	15 20 25.4	-0.1
SNY				S	S	15 27 30.8	-2.0
SNY				LR	LR		
	comp=N,9µm,24.9s						
SNY				LR	LR		
	comp=Z,13µm,20.6s						
MDJ	Mudanjiang	51.50	346	*e*P	P	15 20 30.3	-0.7
	comp=Z,136nm,1.1s,mb5.9						
MDJ				*e*pP	pP	15 20 53.3	+0.7
YSS	Yuzh-Sakhalins	51.93	358	*e*P	P	15 20 33.4	-0.8
	comp=Z,142nm,0.8s,mb6.0						
YSS	Yuzh-Sakhalins	51.93	358	⇓*i*P	P	15 20 33.5	-0.7
YSS				*e*		15 20 43.5	
YSS				*e*	pP	15 20 55.9	+0.1
YSS				pmax	pmax		
	comp=Z,230nm,1.0s,mb6.2						
YSS				MLR	MLR		
	comp=E,2µm,16.0s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
TIY	Taiyuan	52.44	327	PR	P	15 20 35.0	-3.2
TIY				S	S	15 27 57.0	+1.1
TIY				LR	LR		
	comp=N,5µm,17.0s						
TIY				LR	LR		
	comp=Z,570nm,14.0s						
CD2	Chengdu	53.43	315	⇓*i*P	P	15 20 46.0	+0.3
CD2				AP	pP	15 21 02.8	-4.6
CD2				XP	sP	15 21 09.3	-7.9
CD2				PP	PP	15 22 47.6	-0.7
CD2				S	S	15 28 08.5	-1.0
CD2				AMB	AMB		
	comp=Z,1µm,12.6s						
CD2				LR	LR		
	comp=N,2µm,18.9s						
CD2				LR	LR		
	comp=Z,2µm,19.2s						
UGL	Uglegorsk	54.08	357	*e*P	P	15 20 50.0	-0.1
UGL				*e*	pP	15 21 10.0	-1.9
UGL				pmax	pmax		
	comp=N,56nm,0.7s						
UGL				pmax	pmax		
	comp=E,93nm,0.7s						
UGL				pmax	pmax		
	comp=Z,156nm,0.7s,mb6.2						
KLR	Kul’dur	55.42	349	*c i*P	P	15 20 58.5	-1.4
KLR				pmax	pmax		
	comp=N,2µm,12.0s						
KLR				pmax	pmax		
	comp=Z,4µm,12.0s						
HIA	Hailar	58.57	341	*e*P	P	15 21 21.3	-0.8
	comp=Z,352nm,1.4s,mb6.2						
HIA				*e*pP	pP	15 21 43.6	-0.6
HIA	Hailar	58.57	341	*e*P	P	15 21 21.3	-0.8
HIA				*e**PP	pP	15 21 43.6	-0.6
HIA				pmax	pmax		
	comp=Z,352nm,1.4s						
PET	Petropavlovsk	59.06	9	*e*P	P	15 21 24.4	-1.0
	comp=Z,144nm,1.1s,mb5.9						
PET	Petropavlovsk	59.06	9	*e*P	P	15 21 24.6	-0.8
PET				*e**PP	pP	15 21 45.2	-2.4
PET				*e*		15 22 11.3	
PET				*i* S	S	15 29 27.5	+3.9
PET				*e*SS	SS	15 33 26.5	+5.8
PET				pmax	pmax		
	comp=Z,60nm,0.6s,mb5.8						
PET				pmax	pmax		
	comp=Z,92nm,1.7s,mb5.5						
PET				MLR	MLR		
	comp=Z,2µm,17.5s						
DRV	Dumont d’Urvil	61.51	182	P	P	15 21 43.0	+1.1
DRV				SP	SP	15 30 09.0	-1.7
DRV				L		15 37 00.0	
DRV				R		15 41 00.0	
HON	Honolulu	61.53	63	*e*P	P	15 21 42.8	+0.2
KIP	Kipapa	61.55	62	*e*P	P	15 21 42.6	-0.2
	comp=Z,725nm,1.3s,mb6.5						
KIP	Kipapa	61.55	62	*e*P	P	15 21 42.6	-0.2
KIP				pmax	pmax		
	comp=Z,725nm,1.3s,mb6.5						
FX1	Attu Island--F	62.46	19	P	P	15 21 48.5	+0.1
	comp=Z,460nm,0.6s,mb6.7,baz=204,slow=2.0,SNR=66						
FX1	Attu Island--F	62.46	19	⇓*i*P	P	15 21 48.9	+0.4
ULN	Ulaanbaatar	62.54	332	*i* P	P	15 21 49.1	+0.1
SMY	Shemya	62.64	19	*e*P	P	15 21 49.9	+0.2
	comp=Z,456nm,1.2s,mb6.3						
SMY				LR	LR		
	comp=Z,6µm,22.0s						
SMY	Shemya	62.64	19	*e*P	P	15 21 49.9	+0.2
SMY				pmax	pmax		
	comp=Z,456nm,1.2s,mb6.3						
SMY				MLR	MLR		
	comp=Z,6µm,22.0s						
SONM	Songino Array	62.82	332	P	P	15 21 51.3	+0.3
	comp=Z,12nm,0.6s,mb5.0,baz=152,slow=8.0,SNR=17						
SONM				LR	LR	15 47 12.9	
	comp=Z,5µm,21.6s,baz=119,slow=34						
SONM				PKPPKP		15 50 47.0	
	comp=Z,2.1nm,1.0s,baz=260,slow=2.3,SNR=4.1						
HKL	Haleakala	62.89	64	*e*P	P	15 21 52.3	+0.5
HKL	Haleakala	62.89	64	P	P	15 21 52.4	+0.6
CIT	Chita	63.03	339	*e*P	P	15 21 52.3	0.0
CIT				*e*	pP	15 22 15.3	+0.6
CIT				pmax	pmax		
	comp=Z,449nm,1.7s,mb6.1						
CLNS	Chul’man	63.98	348	*e*P	P	15 21 58.3	-0.1
CLNS				*e*	pP	15 22 21.1	+0.3
CLNS				*e*		15 24 19.4	
CLNS				*e*		15 26 00.1	
CLNS				*e*S	S	15 30 26.8	+1.0
CLNS				*e*PS	PS	15 30 47.5	-11
CLNS				pmax	pmax		
	comp=Z,98nm,0.8s,mb5.7						
CLNS				pmax	pmax		
	comp=N,38nm,0.6s						
CLNS				pmax	pmax		
	comp=E,13nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,55nm,1.8s,mb5.1						
CLNS				pmax	pmax		
	comp=N,33nm,0.7s						
CLNS				pmax	pmax		
	comp=E,29nm,0.9s						
CLNS				smax			
	comp=N,7.0nm,0.9s						
CLNS				smax			
	comp=Z,9.0nm,1.5s						
CLNS				smax			
	comp=E,18nm,1.6s						
MA2	Magadan	64.68	3	*e*P	P	15 22 02.5	-0.4
	comp=E,932nm,1.8s,mb6.3						
MA2	Magadan	64.68	3	*e*P	P	15 22 02.4	-0.5
MA2				*e*		15 22 37.3	
MA2				*e*S	S	15 30 37.9	+3.6
MA2				*e*PS	PS	15 30 57.9	-9.4
MA2				*e*SS	SS	15 34 54.6	+6.1
MA2				pmax	pmax		
	comp=Z,200nm,1.5s,mb5.7						
MA2				MLR	MLR		
	comp=Z,4µm,20.0s						
PPT	Papeete	64.82	107	*e*P	P	15 22 03.9	-0.6
	comp=Z,106nm,1.5s,mb5.5						
PAE	Paea	64.82	107	*e*P	P	15 22 03.8	-0.7
	comp=Z,172nm,1.2s,mb5.8						
TVO	Taravao	65.14	107	*e*P	P	15 22 06.2	-0.4
	comp=Z,331nm,1.4s,mb6.0						
TBI	Tubuai	65.31	113	*e*P	P	15 22 06.8	-0.8
	comp=Z,490nm,1.3s,mb6.2						
TBI				*e*pP	pP	15 22 30.3	+0.1
	comp=Z,377nm,1.1s						
TBI	Tubuai	65.31	113	*e*LR	LR	15 41 42.1	
	comp=Z,8µm,33.8s						
PALK	Pallekele	65.57	280	*e*P	P	15 22 10.2	+0.8
	comp=Z,262nm,1.4s,mb5.9						
CASY	Casey	65.61	195	*e*P	P	15 22 08.4	-0.4
CASY				*e*S	S	15 30 46.0	+0.3
ZAK	Zakamensk	66.07	332	⇓*i*P	P	15 22 11.9	-0.1
ZAK				pmax	pmax		
	comp=Z,65nm,1.2s,mb5.3						
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.7						
PMOR	Pomariorio Ree	66.36	104	*e*P	P	15 22 13.5	-0.9
	comp=Z,216nm,1.2s,mb5.9						
PMOR	Pomariorio Ree	66.36	104	*e*pP	pP	15 22 36.2	-0.8
	comp=Z,227nm,1.1s						
VAH	Vaihoa	66.62	104	*e*P	P	15 22 14.9	-1.1
	comp=Z,116nm,1.2s,mb5.6						
VAH	Vaihoa	66.62	104	*e*pP	pP	15 22 37.6	-1.0
	comp=Z,127nm,1.1s						
IRK	Irkutsk	66.92	334	*e*P	P	15 22 17.0	-0.3
IRK				*e*		15 22 32.3	
IRK				pmax	pmax		
	comp=Z,207nm,1.5s,mb5.7						
BOD	Bodaibo	67.64	343	*e*P	P	15 22 19.6	-2.1
BOD				*e*	pP	15 22 42.6	-1.8
BOD				pmax	pmax		
	comp=Z,73nm,1.3s,mb5.3						
BOD				pmax	pmax		
	comp=Z,146nm,1.4s,mb5.6						
MOY	Mondy	68.00	332	*e*P	P	15 22 24.4	+0.4
MOY				pmax	pmax		
	comp=Z,208nm,2.0s,mb5.6						
YAK	Yakutsk	68.06	352	*e*P	P	15 22 23.6	-0.6
	comp=Z,179nm,0.7s,mb6.0						
YAK	Yakutsk	68.06	352	*e*P	P	15 22 25.4	+1.2
YAK				*e**PP	pP	15 22 39.0	-7.9
YAK				*e*S	S	15 31 18.7	+3.4
YAK				*e*		16 22 47.0	
YAK				*e**SS		16 31 36.8	
YAK				*e*		16 32 13.9	
YAK				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.1						
YAK				pmax	pmax		
	comp=N,20nm,1.2s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.8s						
YAK				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,24nm,1.1s						
YAK				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.1						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						
YAK				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.9						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				smax			
	comp=E,9.0nm,1.2s						
YAK				smax			
	comp=N,6.0nm,1.1s						
YAK				smax			
	comp=Z,2.0nm,1.1s						
YAK				pmax	pmax		

	comp=Z,34nm,1.2s,mb5.0						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,24nm,1.1s						
YAK				pmax	pmax		
	comp=Z,33nm,1.0s,mb5.1						
SEY	Seymchan	68.11	4⇓	eP	P	15 22 24.3	-0.2
HYB	Hyderabad	69.52	291	eS	S	15 31 36.0	+2.6
NIKO	Nikolski	69.63	28	eP	P	15 22 33.7	-0.3
MIR	Mirnyy	70.97	200c	iP	P	15 22 44.0	+2.1
MIR				i	pP	15 23 05.0	+0.1
MIR				eS	S	15 31 52.0	+2.7
MIR				eSS	SKS	15 32 32.0	+0.2
MIR				eSS	SKS	15 32 32.0	+0.2
MIR				pmax	pmax		
	comp=E,693nm,8.0s						
MIR				smax			
	comp=E,2µm,16.0s						
MIR				smax			
	comp=N,2µm,14.0s						
MIR				MLR	MLR		
	comp=N,1µm,18.0s						
MIR				MLR	MLR		
	comp=E,2µm,18.0s						
MIR				MLR	MLR		
	comp=Z,5µm,18.0s						
UNV	Unalaska Valle	71.28	28	eP	P	15 22 43.5	-0.4
	comp=Z,410nm,0.8s,mb6.3						
DGAR	Diego Garcia	72.31	264	eP	P	15 22 51.7	+0.9
	comp=Z,360nm,1.3s,mb6.0						
DGAR	Diego Garcia	72.31	264	P	P	15 22 51.9	+1.1
DGAR				pmax	pmax		
	comp=Z,360nm,1.2s,mb6.1						
SBA	Scott Base	73.53	175	eP	P	15 22 58.0	+1.1
	comp=Z,327nm,1.5s,mb5.8						
SBA	Scott Base	73.53	175	eP	P	15 22 58.0	+1.2
SBA				pmax	pmax		
	comp=Z,327nm,1.5s,mb5.8						
TAOE	Nuku Hiva Isla	74.05	98	eP	P	15 23 00.4	-0.7
	comp=Z,878nm,1.4s,mb6.3						
TAOE	Nuku Hiva Isla	74.05	98	eLR	LR	15 45 43.9	
	comp=Z,6µm,21.2s						
BILL	Bilibino	74.52	8	eP	P	15 23 02.7	0.0
	comp=Z,184nm,1.3s,mb5.7						
BILL	Bilibino	74.52	8	eP	P	15 23 02.7	0.0
BILL				pmax	pmax		
	comp=Z,184nm,1.3s,mb5.7						
SDPT	Sand Point	75.00	29	eP	P	15 23 05.7	0.0
	comp=Z,776nm,0.8s,mb6.5						
SDPT				LR	LR		
	comp=Z,2µm,19.0s						
MKAR	Makanchi Array	75.73	321	P	P	15 23 10.2	+0.2
	comp=Z,5.1nm,0.3s,mb4.7,baz=96,slow=8.5,SNR=41						
MKAR	Makanchi Array	75.73	321	eP	P	15 23 09.9	-0.2
MKAR				pmax	pmax		
	comp=Z,302nm,1.6s						
ZAL	Zalesovo	77.38	328	P	P	15 23 19.2	+0.1
	comp=Z,20nm,0.6s,mb5.0,baz=3.1,slow=5.7,SNR=31						
ZAL				PKKPbc		15 42 24.5	
	comp=Z,1.6nm,0.3s,baz=142,slow=2.2,SNR=4.0						
ZAL				LR	LR	15 58 26.7	
	comp=Z,2µm,21.2s,baz=17,slow=36						
ZAL	Zalesovo	77.38	328	P	P	15 23 19.2	+0.1
ZAL				PKKPbc		15 42 24.5	
ZAL				LR	LR	15 58 26.7	
TIXI	Tiksi	77.41	355⇑	eP	P	15 23 17.7	-1.2
TIXI	Tiksi	77.41	355	eP	P	15 23 16.1	-2.8
TIXI				eS	S	15 32 56.4	-4.4
TIXI				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.3						
AAA	Alma-Ata	77.99	316d	iP	P	15 23 23.0	+0.3
AAA				i S	S	15 33 10.0	+2.4
AAA				pmax	pmax		
	comp=Z,2µm,6.2s						
AAA				smax			
	comp=E,3µm,6.6s						
ULHL	Ulahol	78.15	315	P	P	15 23 25.1	+1.4
	SNR=9.1						
TNA	Tin City	78.33	18	eP	P	15 23 24.6	+0.5
	comp=E,84nm,1.1s,mb5.4						
NVS	Novosibirsk	78.60	329	i P	P	15 23 24.6	-1.2
NVS				i *PP	pP	15 23 48.4	-0.7
NVS				i S	S	15 33 14.2	+0.3
NVS				i *SS		15 33 36.6	
NVS				pmax	pmax		
	comp=Z,183nm,1.5s,mb5.7						
NVS				pmax	pmax		
	comp=N,134nm,1.8s						
NVS				pmax	pmax		
	comp=E,116nm,1.4s						
NVS				smax			
	comp=N,65nm,1.8s						
NVS				smax			
	comp=E,176nm,2.1s						
RKT	Rikitea	78.62	112	eP	P	15 23 25.7	-0.9
	comp=E,92nm,1.0s,mb5.6						
RKT	Rikitea	78.62	112	eLR	LR	15 47 51.7	
	comp=E,9µm,33.0s						
KZA	Kyzart	78.80	315	P	P	15 23 29.1	+1.9
	SNR=27						
TKM2	Tokmak 2	78.81	315	P	P	15 23 28.1	+0.8
	SNR=10						
UCH	Uchtor	79.37	314	P	P	15 23 31.9	+1.6
	SNR=16						
CHMS	Chumysh	79.43	315	P	P	15 23 30.7	+0.1
	SNR=14						
FRU	Bishkek	79.47	315	eP	P	15 23 31.5	+0.6
FRU				i		15 23 46.8	
FRU				e		15 33 27.0	
FRU				pmax	pmax		
	comp=Z,220nm,1.8s,mb5.7						
KURK	Kurchatov	79.49	324d	iP	P	15 23 30.4	-0.4
AAK	Ala-Archa	79.50	315	P	P	15 23 32.8	+1.7
	SNR=8.5						
USP	Ospenovka	79.68	316	P	P	15 23 32.5	+0.6
	SNR=20						
AML	Almayashu	79.93	314	P	P	15 23 36.2	+2.9
	SNR=16						
EKS2	Erkin-Say	80.02	315	P	P	15 23 36.1	+2.4
	SNR=14						
SVW2	Sparrevohn	80.22	25	eP	P	15 23 35.3	+0.8
SLKM	Skilak Lake	82.28	27	eP	P	15 23 44.6	-0.6
SLKM	Skilak Lake	82.28	27	P	P	15 23 45.1	-0.1
MAW	Mawson	82.35	203⇑	iP	P	15 23 45.9	+0.4
	comp=Z,53nm,0.6s,mb5.5						
MAW				e		15 26 53.2	
MAW				eS	S	15 33 49.0	-3.6
MAW	Mawson	82.35	203	P	P	15 23 46.0	+0.5
	comp=Z,57nm,0.6s,mb5.6,baz=77,slow=6.4,SNR=108						
MAW				PP	PP	15 26 53.7	-3.0
	comp=Z,78nm,1.2s,baz=82,slow=8.6,SNR=5.3						
MAW				LR	LR	16 01 06.4	
	comp=Z,2µm,18.2s,baz=75,slow=36						
MAW	Mawson	82.35	203⇑	iP	P	15 23 45.9	+0.4
MAW				e		15 26 53.2	
MAW				eS	S	15 33 49.0	-3.6
MAW				pmax	pmax		
	comp=Z,53nm,0.6s						
KKAR	Karatay Array	82.45	315	i P	P	15 23 46.2	-0.3
KKAR				pmax	pmax		
	comp=Z,374nm,1.6s,mb6.0						
PMR	Palmer	83.22	26	eP	P	15 23 49.0	-1.0
	comp=Z,384nm,1.9s,mb5.9						
PMR				ePP	PP	15 27 01.3	-2.4
PMR				LR	LR		
	comp=Z,3µm,21.0s						
PMR	Palmer	83.22	26	eP	P	15 23 49.0	-1.0
PMR				e		15 27 01.3	
PMR				pmax	pmax		
	comp=Z,384nm,1.9s,mb5.9						
PMR				MLR	MLR		
	comp=Z,3µm,21.0s						
IMA2	Indian Mountai	83.40	21	eP	P	15 23 51.1	+0.3
SML	Sawmill	83.65	26⇓	eP	P	15 23 51.9	-0.2
SML				ePP	PP	15 27 04.5	-2.7
DIV	Divide	84.53	27	eP	P	15 23 56.5	0.0
	comp=Z,676nm,1.0s,mb6.5						
VOSK	Vostochnaya	84.63	324	P	P	15 23 56.1	-1.1
VOSK				pmax	pmax		
	comp=Z,204nm,1.6s,mb5.8						
QSPA	South Pole Qui	84.81	180	eP	P	15 23 58.2	+0.7
	comp=Z,148nm,0.8s,mb6.0						
BVA0	Borovoye Array	85.06	324	i P	P	15 23 58.8	-0.6
BVA0				pmax	pmax		
	comp=Z,162nm,2.3s,mb5.5						
BVAR	Borovoye Array	85.06	324	P	P	15 23 59.6	+0.3
	comp=Z,30nm,0.6s,mb5.4,baz=109,slow=5.9,SNR=26						
BVAR				PKKPbc		15 42 09.5	
	comp=Z,1.4nm,0.8s,baz=297,slow=3.3,SNR=4.7						
COLA	College	85.06	23	eP	P	15 23 57.8	-1.3
BRVK	Borovoye	85.13	324	eP	P	15 23 59.8	+0.1
THY	Trims Highway	85.37	25	eP	P	15 24 01.1	+0.5
ILAR	Eielson Array	85.41	23	P	P	15 23 59.2	-1.6
	comp=Z,243nm,0.8s,mb6.2,baz=254,slow=4.9,SNR=492						
ILAR				PKKPbc		15 42 04.3	
	comp=Z,3.5nm,0.8s,baz=338,slow=1.2,SNR=14						
ILAR				PKPPKP		15 50 07.2	
	comp=Z,2.3nm,1.2s,baz=2.0,slow=2.3,SNR=5.2						
MENT	Mentasta	86.07	26	eP	P	15 24 04.5	+0.4
DAWY	Dawson	88.26	25	eP	P	15 24 15.3	+0.6
SYO	Syowa Base	90.78	200	⇑P	P	15 24 27.0	+0.6
SYO	Syowa Base	90.78	200	⇑PcP	PcP	15 24 28.8	+1.2
SYO	Syowa Base	90.78	200	⇑pP	pP	15 24 52.6	+2.3
SYO	Syowa Base	90.78	200	⇑sP	sP	15 24 59.8	+0.4
SYO	Syowa Base	90.78	200⇑	iP	P	15 24 27.0	+0.6
SYO			⇑	iPcP	PcP	15 24 28.8	+1.2
SYO			⇑	ipP	pP	15 24 52.6	+2.3
SYO			⇑	esP	sP	15 24 59.8	+0.4
SYO			⇑	ePP	PP	15 28 00.6	-4.5
SYO	Syowa Base	90.78	200⇑	iP	P	15 24 27.0	+0.6
SYO				i	pP	15 24 52.6	+2.3
SYO				e		15 28 00.6	
AB31	Akbulak array	90.80	319	i P	P	15 24 24.9	-2.0
AB31				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.5						
SVE	Sverdlovsk	91.32	327⇑	iP	P	15 24 28.2	-1.0
SVE				e	pP	15 24 52.4	-0.7
SVE				pmax	pmax		
	comp=Z,132nm,1.9s,mb5.7						
INK	Inuvik	91.52	22	P	P	15 24 29.6	-0.3
	comp=Z,60nm,1.1s,mb5.8,baz=261,slow=4.7,SNR=28						
INK	Inuvik	91.52	22	eP	P	15 24 29.2	-0.6
	comp=Z,91nm,1.1s,mb5.9						
INK	Inuvik	91.52	22	P	P	15 24 29.3	-0.5
INK				pmax	pmax		
	comp=Z,91nm,1.1s						
DLBC	Dease Lake	91.60	32	P	P	15 24 30.4	+0.1
	comp=Z,20nm,1.0s,mb5.3,baz=254,slow=4.3,SNR=11						
BBB	Bella Bella	91.98	38	P	P	15 24 31.9	-0.4
	comp=Z,29nm,0.8s,mb5.5,baz=275,slow=4.2,SNR=6.6						
AKTK	Aktyubinsk	92.16	320	P	P	15 24 32.8	-0.4
AKTK				PKKPbc		15 41 50.0	
AKTO	Aktyubinsk	92.16	320	P	P	15 24 32.8	-0.4
	comp=Z,8.1nm,0.9s,mb5.0,baz=85,slow=6.1,SNR=12						
AKTO				PKKPbc		15 41 50.0	
	comp=Z,0.7nm,0.4s,baz=271,slow=6.3,SNR=3.7						
AKTO	Aktyubinsk	92.16	320	P	P	15 24 31.0	-2.2
AKTO				pmax	pmax		
	comp=Z,50nm,1.8s,mb5.4						
ARU	Arti	92.41	326	eP	P	15 24 32.8	-1.4
ARU	Arti	92.41	326d	iP	P	15 24 32.4	-1.8
ARU				pmax	pmax		
	comp=Z,88nm,2.1s,mb5.6						
ARU				MLR	MLR		
	comp=Z,2µm,18.0s						
KCPM	Cahto Peak	94.16	51	eP	P	15 24 43.6	+1.1
OCWA	Octopus Mounta	94.17	43	eP	P	15 24 44.0	+1.6
	comp=Z,113nm,1.4s,mb6.0						
KIPM	Iron Peak	94.25	51	eP	P	15 24 44.6	+1.6
HOPS	Hopland	94.52	51	eP	P	15 24 44.9	+0.7
	comp=Z,71nm,1.4s,mb5.9						
HOPS				e	pP	15 25 09.5	+1.4
PGC	Sidney	94.70	42	eP	P	15 24 45.7	+0.9
	comp=Z,182nm,1.4s,mb6.3						
PGC				e	pP	15 25 10.2	+1.5
HDW	Hoodsport	94.92	43	P	P	15 24 47.0	+1.1
YBH	Yreka Blue Hor	94.93	49	eP	P	15 24 47.9	+1.9
	comp=Z,28nm,1.3s,mb5.5						
YBH	Yreka Blue Hor	94.93	49	eP	P	15 24 47.9	+1.9
YBH				pmax	pmax		
	comp=Z,28nm,1.3s						
WDC	Whiskeytown Da	95.01	50	eP	P	15 24 47.9	+1.5
	comp=Z,49nm,1.6s,mb5.7						
WDC	Whiskeytown Da	95.01	50	P	P	15 24 48.1	+1.7
WDC				pmax	pmax		
	comp=Z,45nm,1.4s,mb5.7						
MCW	Mount Constitu	95.11	42	P	P	15 24 47.4	+0.7
SAO	San Andreas Ge	95.71	54	eP	P	15 24 51.5	+1.8
	comp=Z,26nm,1.5s,mb5.4						
SAO				e	pP	15 25 14.8	+1.1
SAO	San Andreas Ge	95.71	54	eP	P	15 24 51.5	+1.8
SAO				e	pP	15 25 14.8	+1.1
SAO				pmax	pmax		
	comp=Z,26nm,1.5s,mb5.4						
RPW	Rockport	95.98	42	P	P	15 24 51.1	+0.5
TBM	Table Mountain	96.58	43	P	P	15 24 54.3	+0.9
CMB	Columbia Colle	96.59	52	eP	P	15 24 55.1	+1.4
	comp=Z,11nm,1.1s,mb5.2						
CMB				e	pP	15 25 18.2	+0.6
CMB	Columbia Colle	96.59	52	eP	P	15 24 55.1	+1.4
CMB				e	pP	15 25 18.2	+0.6
CMB				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.2						
HAWA	Hanford	97.31	44	eP	P	15 24 57.6	+0.8
	comp=Z,5.7nm,1.3s,mb4.8						
OD2	Odessa Site #2	97.87	43	P	P	15 24 59.7	+0.5
WVOR	Wild Horse Val	97.97	48	eP	P	15 25 00.4	+0.6
	comp=Z,16nm,1.0s,mb5.5						
WVOR	Wild Horse Val	97.97	48	eP	P	15 25 00.4	+0.6
WVOR				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.5						
MTUM	Tungsten Hills	98.03	53	eP	P	15 25 01.7	+1.5
ISA	Isabella	98.09	55	P	P	15 25 01.2	+0.7
	comp=Z,5.5nm,0.3s,mb5.6						
ISA	Isabella	98.09	55	P	P	15 25 01.2	+0.7
ISA				pmax	pmax		
	comp=Z,6.0nm,0.3s,mb5.6						
MAIT	Maitri	98.22	194	eP	P	15 25 01.1	+0.8
NVAR	Mina Array Bea	98.24	52	P	P	15 25 01.6	+0.5
	comp=Z,2.9nm,0.9s,mb4.8,baz=247,slow=5.2,SNR=12						
NVAR				PP	PP	15 28 58.3	-5.9
	comp=Z,2.0nm,1.1s,baz=248,slow=4.9,SNR=3.3						
NVAR				LR	LR	16 01 29.4	
	comp=Z,3µm,20.6s,baz=290,slow=30						
MWC	Mount Wilson	98.42	56	eP	P	15 25 03.5	+1.5
MWC	Mount Wilson	98.42	56	P	P	15 25 03.3	+1.2
DAC	Darwin (Calif)	98.80	54	eP	P	15 25 00.1	-3.7
DAC				pmax	pmax		
	comp=Z,37nm,1.1s,mb5.8						
BMO	Blue Mountains	98.90	46	eP	P	15 25 04.0	-0.1
	comp=Z,33nm,1.3s,mb5.7						
BMO	Blue Mountains	98.90	46	eP	P	15 25 04.0	0.0
BMO				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.7						
NEW	Newport	98.91	42	eP	P	15 25 04.0	0.0
	comp=Z,21nm,1.1s,mb5.6						
NEW	Newport	98.91	42	eP	P	15 25 04.0	0.0
NEW				pmax	pmax		
	comp=Z,21nm,1.1s						
YKA	Yellowknife Ar	99.24	28	P	P	15 25 04.8	-0.3
	comp=Z,12nm,1.0s,mb5.4,baz=273,slow=4.4,SNR=13						
YKA				PKKPbc		15 41 29.4	
	comp=Z,4.7nm,0.7s,baz=98,slow=2.8,SNR=18						
YKA				LR	LR	16 09 02.5	
	comp=Z,2µm,21.3s,baz=285,slow=35						
YKA	Yellowknife Ar	99.24	28	P	P	15 25 04.8	-0.3
YKA				PKKPbc		15 41 29.4	
YKA				LR	LR	16 09 02.5	
TPNV	Topopah Spring	99.88	54	eP	P	15 25 10.4	+1.8
	comp=Z,17nm,1.1s,mb5.6						
TPNV	Topopah Spring	99.88	54	eP	P	15 25 10.4	+1.8
TPNV				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.6						
SNAA	Sanae	100.53	190	P	P	15 25 10.6	-0.2
	comp=Z,5.2nm,0.9s,baz=104,slow=3.2,SNR=19						
SNAA				PP	PP	15 29 14.7	-6.4
	comp=Z,39nm,1.2s,baz=146,slow=7.5,SNR=24						
SNAA	Sanae	100.53	190⇑	iPdif	P	15 25 10.8	0.0
SNAA	Sanae	100.53	190	i P	P	15 25 10.7	-0.1
ELK	Elko	100.56	50	eP	P	15 25 12.9	+1.3
	comp=Z,10nm,1.2s						
ELK	Elko	100.56	50	eP	P	15 25 12.9	+1.3
ELK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
LDFC	Landfair	100.84	55	eP	P	15 25 15.0	+2.0
GNI	Garni	101.32	310	P	P	15 25 16.2	+1.1
	comp=Z,2.5nm,0.4s,baz=103,slow=14,SNR=2.1						
CHMT	Chamberlain Mo	101.61	43	eP	P	15 25 17.7	+1.6
BHD	Baghdad	101.88	303	ex	x	15 25 08.0	
VNA2	Neumayer--Watz	101.92	189⇑	iPdif	P	15 25 17.7	+0.8
VNA3	Neumayer Olymp	101.97	188⇑	iPdif	P	15 25 17.4	+0.3
MCMT	McKenzie Canyo	102.07	45	eP	Pdif	15 25 19.2	+1.0
ARUT	Antelope Range	102.09	53	ePdif	Pdif	15 25 19.8	+1.3
VNA1	Neumayer--Stat	102.30	189	Pdif	Pdif	15 25 20.1	+1.5
DUG	Dugway	102.44	50	eP	Pdif	15 25 21.4	+1.5
	comp=Z,5.8nm,1.1s						
DUG	Dugway	102.44	50	eP	Pdif	15 25 21.4	+1.4
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MSL	Mosul	102.82	306	ex	x	15 25 22.0	
MSL				ex	x	15 29 51.0	
MSL				ex	x	15 31 47.0	
MSL				ex	x	15 35 55.0	
BOZ	Bozeman (W)	102.85	44	eP	Pdif	15 25 22.2	+0.6
	comp=Z,8.3nm,0.9s						
BOZ	Bozeman (W)	102.85	44	P	Pdif	15 25 22.1	+0.5
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PDAR	Pinedale Array	104.64	47	Pdiff	Pdif	15 25 29.1	-0.5
	comp=Z,1.4nm,0.8s,baz=278,slow=2.8,SNR=7.5						
PDAR				PP	PP	15 29 45.5	-7.1
	comp=Z,1.3nm,0.9s,baz=292,slow=4.9,SNR=3.8						
PDAR				PKPPKP		15 49 33.0	
	comp=Z,0.9nm,1.0s,baz=108,slow=4.7,SNR=4.9						
OBN	Obninsk	104.85	326	eP	Pdif	15 25 31.2	+1.0
OBN				pmax	pmax		
	comp=Z,32nm,1.5s						
ARCES	ARCESS Array B	104.91	342	Pdiff	Pdif	15 25 28.6	-1.5
	comp=Z,7.5nm,0.8s,baz=90,slow=6.1,SNR=7.8						
ARCES				PKKPbc		15 41 12.4	
	comp=Z,6.6nm,0.6s,baz=238,slow=2.8,SNR=26						
RW3	Ridgway	106.58	52	eP	Pdif	15 25 44.7	+6.5
SMCO	Snowmass	107.02	51	P	Pdif	15 25 42.4	+2.2
	comp=Z,11nm,1.2s						
KMBO	Kilima Mbogo	107.80	267	Pdiff	Pdif	15 25 45.8	+1.6
	comp=Z,2.7nm,0.8s,baz=62,slow=7.0,SNR=12						
KMBO				PP	PP	15 30 11.7	-5.1
	comp=Z,5.1nm,1.1s,baz=65,slow=6.6,SNR=3.0						
FINES	FINESS Array B	108.15	334	Pdiff	Pdif	15 25 43.4	-1.2
	comp=Z,1.4nm,0.6s,baz=63,slow=4.3,SNR=4.8						
FINES				PP	PP	15 30 00.3	-18
	comp=Z,2.2nm,0.7s,baz=90,slow=5.7,SNR=4.6						
FINES				PKKPbc		15 41 02.9	
	comp=Z,3.4nm,0.6s,baz=225,slow=1.7,SNR=18						
FINES	FINESS Array B	108.15	334	Pdif	Pdif	15 25 43.4	-1.2
FINES				PP	PP	15 30 00.3	-18
FINES				PKKPbc		15 41 02.9	
MNTX	Cornudas Mount	109.17	58	ePKPdf		15 29 53.9	
BRTR	Keskin Array B	109.85	310	PKiKP		15 29 55.4	
	comp=Z,1.6nm,0.9s,baz=90,slow=2.5,SNR=4.4						
BRTR				PP	PP	15 30 22.6	-8.9
	comp=Z,1.1nm,0.7s,baz=143,slow=4.0,SNR=4.5						
BRTR				PKKPbc		15 40 59.0	
	comp=Z,1.7nm,1.0s,baz=153,slow=2.8,SNR=3.9						
AKASG	Malin Array Be	110.28	322	PKiKP		15 29 56.1	
	comp=Z,0.5nm,0.4s,baz=67,slow=3.7,SNR=4.4						
AKASG				PP	PP	15 30 26.6	-7.7
	comp=Z,0.8nm,0.5s,baz=57,slow=4.1,SNR=4.7						
AKASG				PKKPbc		15 40 56.0	
	comp=Z,1.4nm,0.5s,baz=265,slow=4.0,SNR=8.5						
CPRX	Cap Rock	110.30	57	ePKPdf	PKPdf	15 29 58.3	+4.1
TXAR	Lajitas Array	110.89	61	PP	PP	15 30 21.4	-18
	comp=Z,1.0nm,0.8s,baz=270,slow=1.3,SNR=4.3						
TXAR				PKKPbc		15 40 54.7	
	comp=Z,0.4nm,0.5s,baz=108,slow=4.0,SNR=3.5						
TXAR				PKPPKP		15 49 25.4	
	comp=Z,0.7nm,0.7s,baz=153,slow=2.8,SNR=5.0						
KIS	Kishinev	111.62	319	ePKIKP	PKPdf	15 30 07.0	+11
KIS				e		15 30 42.0	
KIS				ePS	PS	15 40 05.0	-6.8
KIS				MLR	MLR		
	comp=Z,2µm,23.0s						
KIS				MLR	MLR		
	comp=N,1µm,22.0s						
KIS				MLR	MLR		
	comp=E,1µm,22.0s						
KIS				MLR	MLR		
	comp=Z,2µm,24.0s						
ULM	Lac du Bonnet	112.17	37	PKKPbc		15 40 49.4	
	comp=Z,2.3nm,0.8s,baz=130,slow=2.9,SNR=4.1						
MATP	Matopo	112.91	245	PKiKP		15 30 02.4	
	comp=Z,26nm,0.7s,baz=150,slow=1.7,SNR=4.6						
LSZ	Lusaka	114.44	251	PKP	PKPdf	15 30 06.0	+3.3
	comp=Z,15nm,0.5s,baz=69,slow=2.6,SNR=17						
LSZ	Lusaka	114.44	251	ePKPdf	PKPdf	15 30 06.0	+3.3
NB2	NORSAR Subarra	114.51	337	PKPdf		15 30 21.8	
	comp=Z,5.7nm,1.2s,baz=45,slow=1.9						
NOA	NORSAR Array B	114.51	337	PKP	PKPdf	15 30 04.2	+2.4
	comp=Z,1.4nm,0.9s,baz=126,slow=20,SNR=3.2						
NOA				PKKPbc		15 40 42.8	
	comp=Z,5.2nm,0.8s,baz=55,slow=3.4,SNR=15						
SUR	Sutherland	115.39	231	PKP	PKPdf	15 30 06.8	+2.5
	comp=Z,20nm,0.8s,baz=157,slow=2.5,SNR=6.4						
SFJD	Kangerlussuaq	117.30	7	PKKPbc		15 40 35.3	
	comp=Z,8.1nm,0.7s,baz=173,slow=4.2,SNR=4.2						
IDI	Anoyia	117.58	307	PKKPbc		15 40 31.7	
	comp=Z,13nm,0.9s,baz=81,slow=2.6,SNR=3.8						
VAY	Valandovo	117.62	314	ePKP	PKPdf	15 30 07.1	-1.2
VAY	Valandovo	117.62	314	ePKP	PKPdf	15 30 07.1	-1.2
DPC	Dobruska-Polom	117.99	326	ePKPdf	PKPdf	15 30 11.3	+2.5
DPC				ex	x	15 31 50.5	
DPC				AMS	AMS	16 16 30.0	
	comp=Z,4µm,29.7s						
DPC	Dobruska-Polom	117.99	326	ePKIKP	PKPdf	15 30 11.3	+2.5
DPC				MLR	MLR		
	comp=Z,4µm,29.7s						
UPC	Upice	118.09	326	ePKPdf	PKPdf	15 30 14.0	+5.0
UPC				ePP	PP	15 31 50.5	+21
SKO	Skopje	118.20	315	ePKP	PKPdf	15 30 08.3	-1.1
SKO	Skopje	118.20	315	ePKP	PKPdf	15 30 08.3	-1.1
DIVS	Divcibare	118.42	318	i PKP	PKPdf	15 30 11.3	+1.5
BIA	Bitola	118.61	314	ePKP	PKPdf	15 30 09.1	-1.2
BIA	Bitola	118.61	314	ePKP	PKPdf	15 30 09.1	-1.2
PVCC	Panska Ves	118.88	326	ePKPdf	PKPdf	15 30 16.4	+5.8
PVCC				AMS	AMS	16 14 10.0	
	comp=Z,4µm,42.1s						
OHR	Ohrid	118.95	315	ePKP	PKPdf	15 30 09.7	-1.2
OHR	Ohrid	118.95	315	ePKP	PKPdf	15 30 09.7	-1.2
BRG	Berggiesshubel	119.05	327	eP	PKPdf	15 30 14.0	+3.1
BRG				e		15 30 37.7	
PRU	Pruhonice	119.17	326	ePKPdf	PKPdf	15 30 17.2	+6.1
PRU				ex	x	15 31 49.5	
PRU				AMS	AMS	16 14 50.0	
	comp=Z,3µm,29.5s						
PRU	Pruhonice	119.17	326	ePKIKP	PKPdf	15 30 17.2	+6.1
PRU				MLR	MLR		
	comp=Z,3µm,29.5s						
BSEG	Bad Segeberg	119.20	331	ePP	PP	15 31 38.5	+1.1
BSEG				eSP	SP	15 41 21.7	+10
CLL	Collm	119.32	328	ePKIKP	PKPdf	15 30 14.0	+2.6
	comp=Z,logA/T=0.9						
CLL				i		15 30 39.7	
CLL				ePP	PP	15 31 39.0	+0.8
CLL				e*PPP		15 31 56.0	
CLL				e		15 32 36.0	
CLL				ePPP	PPP	15 34 12.0	+1.3
CLL				e		15 38 29.0	
CLL				eSKSP		15 40 00.0	
CLL				i PKKP	PKKP	15 40 26.3	-17
CLL				e		15 40 52.0	
CLL				ePS	PS	15 41 24.0	+1.0
CLL				i SKKP		15 44 25.3	
CLL				eSS	SS	15 48 00.0	+11
CLL	Collm	119.32	328	ePKP	PKPdf	15 30 14.0	+2.6
CLL				i sPKP		15 30 39.7	
CLL				ePP	PP	15 31 39.0	+0.8
CLL				eSKKS		15 38 29.0	
CLL				i PKKP	PKKP	15 40 26.3	-17
CLL				i SKKP		15 44 25.3	
CLL				LR	LR		
	comp=Z,6µm,23.5s						
CLL	Collm	119.32	328	ePKIKP	PKPdf	15 30 14.0	+2.6
CLL				e		15 31 39.0	
CLL				MLR	MLR		
	comp=Z,6µm,23.5s						
ARSA	Arzberg	119.93	323⇑	eP	PKPdf	15 30 18.7	+6.1
	comp=Z,9.1nm,1.3s						
ARSA	Arzberg	119.93	323⇑	iP		15 30 35.0	
	comp=Z,10.0nm,1.2s						
ARSA	Arzberg	119.93	323⇑	eP	PKPdf	15 30 18.7	+6.1
KHC	Kasperske Hory	120.14	325	ePKPdf	PKPdf	15 30 14.9	+1.9
KHC				x	x	15 30 19.5	
KHC				pPKP		15 30 39.0	
KHC				ePP	PP	15 31 43.0	-0.3

KHC				*e*x	x	15 36 43.5	
KHC				*e*x	x	15 36 49.5	
KHC				*e*PKKP	PKKP	15 40 22.5	-19
KHC				SKKP		15 44 02.0	
KHC				AMS	AMS	16 16 20.0	
	comp=Z,4μm,36.4s						
KHC	**Kasperske Hory**	**120.14**	**325**	*e*PKP	PKPdf	15 30 14.9	+1.9
KHC				*e*		15 30 19.5	
KHC				*e*		15 30 39.0	
KHC				*e*PP	PP	15 31 43.0	-0.3
KHC				*e*		15 36 43.5	
KHC				*e*		15 36 49.5	
KHC				*e*PKKP	PKKP	15 40 22.5	-19
KHC				SKKP		15 44 02.0	
KHC				LR	LR		
	comp=Z,4μm,36.4s						
KHC	**Kasperske Hory**	**120.14**	**325**	*e*PKIKP	PKPdf	15 30 14.9	+1.9
KHC				*e*		15 30 39.0	
KHC				*e*		15 31 43.0	
KHC				MLR	MLR		
	comp=Z,4μm,36.4s						
GEC2	**GERESS Array S**	**120.22**	**325**	*e*PKPdf	PKPdf	15 30 16.0	+2.8
GERES	**GERESS Array B**	**120.22**	**325**	PKP	PKPdf	15 30 16.3	+3.1
	comp=Z,1.8nm,0.6s,baz=85,slow=1.9,SNR=9.6						
GERES				PKKPbc		15 40 20.3	
	comp=Z,4.0nm,0.7s,baz=225,slow=3.8,SNR=12						
MOA	**Molln**	**120.39**	**324**	⇑P	PKPdf	15 30 19.9	+6.3
	comp=Z,5.2nm,1.1s						
CLZ	**Clausthal**	**120.39**	**329**	*e*PKPdf	PKPdf	15 30 14.7	+1.2
CLZ				*e*PP	PP	15 31 44.5	-0.5
CLZ				*e*SP	SP	15 41 29.8	+7.2
CLZ				*e*SKKP		15 44 24.6	
MOX	**Moxa**	**120.42**	**328**	*i* P		15 30 39.0	
MOX				pPKP		15 31 27.0	
MOX				PP	PP	15 32 08.0	+23
MOX				PKKP	PKKP	15 40 22.0	-19
MOX				*e*		15 41 24.0	
MOX				L		16 23 16.0	
WET	**Wettzell**	**120.53**	**326**	*e*PKPdf	PKPdf	15 30 16.8	+3.0
WET				*e*PP	PP	15 31 47.2	+1.2
WET				*e*SP	SP	15 41 36.8	+13
WET				*e*SKKP		15 44 25.8	
GRA1	**Grafenberg Arr**	**121.15**	**327**	*e*PKPdf	PKPdf	15 30 15.1	+0.1
GRA1				*e*PP	PP	15 31 48.5	-1.9
GRA1				*e*SP	SP	15 41 38.9	+9.4
GRA1				*e*SKKP		15 44 24.6	
GRF	**Grafenberg Arr**	**121.15**	**327**	*e*PKP	PKPdf	15 30 15.1	+0.1
GRF				*e*PP	PP	15 31 48.5	-1.9
GRF				*e*SP	SP	15 41 38.9	+9.4
GRF				*e*SKKP		15 44 24.6	
GRF				LR	LR		
	comp=Z,2μm,21.6s						
GRF	**Grafenberg Arr**	**121.15**	**327**	*e*PKIKP	PKPdf	15 30 15.1	+0.1
GRF				*e*		15 31 48.5	
GRF				*e*SP	SP	15 41 38.9	+9.4
GRF				MLR	MLR		
	comp=Z,2μm,21.6s						
FUR	**Furstenfeldbru**	**121.95**	**325**	*e*SP	SP	15 41 46.0	+9.3
WTTA	**Wattenberg**	**122.22**	**324**	⇑*e*P	PKPdf	15 30 19.8	+2.7
	comp=Z,17nm,0.9s						
WTTA	**Wattenberg**	**122.22**	**324**	⇓*i*P		15 30 47.1	
	comp=Z,64nm,1.9s						
WTTA	**Wattenberg**	**122.22**	**324**	⇑*e*S		15 40 17.8	
	comp=Z,23nm,1.2s						
TNS	**Taunus Mts**	**122.32**	**329**	*e*PP	PP	15 31 55.2	-3.3
MOTA	**Moosalm**	**122.48**	**325**	⇓*i*P	PKPdf	15 30 20.6	+3.0
	comp=Z,5.9nm,0.6s						
MOTA	**Moosalm**	**122.48**	**325**	⇑*i*P		15 30 46.1	
	comp=Z,20nm,0.9s						
MOTA	**Moosalm**	**122.48**	**325**	⇑*e*S		15 40 14.6	
	comp=Z,14nm,0.8s						
MOTA	**Moosalm**	**122.48**	**325**	⇓P	PKPdf	15 30 20.6	+3.0
SQTA	**Sankt Quirin**	**122.49**	**324**	⇓*e*P	PKPdf	15 30 20.5	+2.9
	comp=Z,6.0nm,0.8s						
SQTA	**Sankt Quirin**	**122.49**	**324**	⇑*i*P		15 30 46.3	
	comp=Z,7.5nm,0.6s						
SQTA	**Sankt Quirin**	**122.49**	**324**	⇑*i*S		15 40 14.8	
	comp=Z,15nm,0.6s						
TSUM	**Tsumeb**	**123.08**	**243**	PKP	PKPdf	15 30 22.7	+3.3
	comp=Z,33nm,0.8s,baz=77,slow=2.1,SNR=8.2						
DAVA	**Damuels**	**123.22**	**325**	⇓*i*P	PKPdf	15 30 22.3	+3.2
	comp=Z,3.5nm,0.5s						
DAVA	**Damuels**	**123.22**	**325**	⇑*i*P		15 30 46.8	
	comp=Z,19nm,0.8s						
DAVA	**Damuels**	**123.22**	**325**	⇑*e*S		15 40 10.8	
	comp=Z,24nm,1.0s						
DAVA	**Damuels**	**123.22**	**325**	⇓P	PKPdf	15 30 22.3	+3.2
BFO	**Black Forest**	**123.49**	**327**	*e*SP	SP	15 42 00.4	+10
PLCA	**Paso Flores**	**123.78**	**148**	PKP	PKPdf	15 30 22.1	+1.8
	comp=Z,13nm,0.6s,baz=221,slow=2.3,SNR=37						
PLCA	**Paso Flores**	**123.78**	**148**	*e*PKPdf	PKPdf	15 30 22.1	+1.8
SCHQ	**Schefferville**	**124.13**	**22**	PKP	PKPdf	15 30 20.2	-0.4
	comp=Z,6.6nm,0.8s,baz=59,slow=2.7,SNR=5.0						
SCHQ				PKKPbc		15 40 08.0	
	comp=Z,5.2nm,0.7s,baz=175,slow=2.2,SNR=5.5						
GIVF	**Givet**	**124.23**	**330**	*e*PKIKP	PKPdf	15 30 21.5	+0.6
HINF	**Hinteralfeld**	**124.60**	**327**	*e*PKIKP	PKPdf	15 30 22.1	+0.4
	comp=Z,15nm,0.8s						
HAU	**Haudompre**	**124.76**	**327**	*e*PKIKP	PKPdf	15 30 22.4	+0.4
HAU				*e*R			
	comp=Z,1μm,17.2s						
CABF	**La Chapelle**	**125.73**	**326**	*e*PKIKP	PKPdf	15 30 24.3	+0.4
	comp=Z,30nm,0.8s						
LPG	**La Plagne**	**126.02**	**325**	*e*PKIKP	PKPdf	15 30 25.3	+0.8
	comp=Z,16nm,0.9s						
LPL	**La Plagne**	**126.02**	**325**	*e*PKIKP	PKPdf	15 30 25.0	+0.5
PGF	**Pioggiola**	**126.28**	**321**	*e*PKIKP	PKPdf	15 30 25.0	-0.1
	comp=Z,100nm,1.2s						
MBDF	**Montbardon**	**126.45**	**324**	*e*PKIKP	PKPdf	15 30 26.1	+0.8
	comp=Z,28nm,1.1s						
LOR	**Lormes**	**126.53**	**328**	*e*PKIKP	PKPdf	15 30 25.9	+0.5
LOR				*e*R			
	comp=Z,2μm,22.5s						
SBF	**Sospel**	**126.54**	**323**	*e*PKIKP	PKPdf	15 30 25.7	+0.2
	comp=Z,39nm,0.8s						
GOGA	**Godfrey**	**126.78**	**52**	*e*PKPdf	PKPdf	15 30 26.4	+0.1
GOGA	**Godfrey**	**126.78**	**52**	PKIKP	PKPdf	15 30 26.5	+0.2
SSF	**Saint Saulge**	**126.85**	**328**	*e*PKIKP	PKPdf	15 30 26.4	+0.4
	comp=Z,22nm,1.1s						
ORIF	**Oris-en-Rattie**	**126.85**	**325**	*e*PKIKP	PKPdf	15 30 26.7	+0.6
	comp=Z,12nm,0.8s						
ORIF				*e*R			
	comp=Z,1μm,20.5s						
SMRF	**Simiane la Rot**	**127.58**	**324**	*e*PKIKP	PKPdf	15 30 25.8	-1.8
	comp=Z,162nm,1.7s						
VIVF	**Saint-Julien-l**	**127.58**	**325**	*e*PKIKP	PKPdf	15 30 27.9	+0.3
FLN	**La Foliniere**	**127.70**	**332**	*e*PKIKP	PKPdf	15 30 28.2	+0.5
FLN				*e*R			
	comp=Z,4μm,20.5s						
TCF	**Toulx Ste Croi**	**128.03**	**328**	*e*PKIKP	PKPdf	15 30 28.6	+0.2
LASF	**Ste Croix**	**128.52**	**325**	*e*PKIKP	PKPdf	15 30 29.8	+0.4
	comp=Z,197nm,1.9s						
CAF	**Calviac**	**128.99**	**327**	*e*PKIKP	PKPdf	15 30 30.6	+0.3
ARE	**Arequipa**	**137.80**	**121**	P	PKPdf	15 30 47.0	-0.4
ROSC	**El Rosal**	**140.59**	**89**	PKhKP		15 30 50.9	
	comp=Z,5.8nm,0.5s,baz=273,slow=22,SNR=4.6						
LPAZ	**La Paz**	**140.71**	**123**	PKhKP		15 30 47.9	
	comp=Z,3.8nm,0.6s,baz=300,slow=3.3,SNR=16						
SAML	**Samuel**	**148.39**	**116**	*e*PKPdf	PKPdf	15 31 06.6	+0.7
SAML				*e*PKPbc	PKPdf	15 31 10.8	+4.9
DBIC	**Dimbokro**	**150.22**	**274**	PKP	PKPdf	15 31 11.9	+3.0
	comp=Z,42nm,0.8s,baz=94,slow=2.5,SNR=5.6						
DBIC				PKPbc	PKPdf	15 31 16.8	+7.9
	comp=Z,191nm,0.8s,baz=72,slow=2.3,SNR=3.7						
LIC	**Lamto**	**150.39**	**274**	*e*PKP1	PKPdf	15 31 14.5	+5.3
	comp=Z,477nm,0.7s						
LIC				*e*R			
	comp=Z,3μm,22.0s						
LZG	**Guadaloupe-1**	**151.34**	**66**	*e*P	PKPdf	15 31 16.2	+5.7
TBG	**Guadaloupe-3**	**151.55**	**66**	*e*P	PKPdf	15 31 16.6	+5.9
CAM4	**Nova Friburgo**	**151.61**	**165**	*e*P	PKPdf	15 31 14.4	+3.7
CAM4				*i*		15 31 20.3	
CAM4				*i*		15 31 22.6	
MGG	**Marie-Galante**	**151.83**	**66**	*e*P	PKPdf	15 31 17.7	+6.6
DEG	**La Desirade**	**151.93**	**65**	*e*P	PKPdf	15 31 18.2	+6.9
CAM3	**Guarapari**	**153.66**	**168**	*e*P	PKPdf	15 31 17.5	+3.9
CAM3				*i*		15 31 24.0	
CAM3				*i*		15 31 26.7	
BDFB	**Brasilia**	**155.52**	**148**	PKP	PKPdf	15 31 18.4	+2.1
	comp=Z,15nm,1.0s,baz=161,slow=2.4,SNR=12						
BDFB				PKPbc	PKPdf	15 31 28.0	+12
	comp=Z,23nm,0.5s,baz=194,slow=2.3,SNR=19						
BAO	**Brasilia Array**	**155.54**	**148**	PKPdf	PKPdf	15 31 19.0	+2.7

NEIC 22 15:12:30.9,53.83N×163.86W,h30^{km},ML3.5(AEIC),
After AEIC.,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	**West Dahl East**	**0.78**	**327**	P	Pb	15 12 44.4	-1.4
WESN	**West Dahl Nort**	**0.86**	**330**	P	Pn	15 12 46.0	-1.0
WFAR	**Faris Peak**	**0.90**	**323**	P	Pn	15 12 46.1	-1.5
SSLW	**Shishaldin Wes**	**0.96**	**351**	P	Pn	15 12 46.9	-1.6
AKA	**Akutan**	**1.17**	**286**	P	Pn	15 12 50.2	-1.3
AKA				S	Sn	15 13 05.1	-1.5
AKUT	**Akutan**	**1.17**	**286**	P	Pn	15 12 50.1	-1.4
AKUT				S	Sn	15 13 05.0	-1.6
DRIA	**Deer Island**	**1.47**	**39**	P	Pn	15 12 54.3	-1.5
DRIA				S	Sn	15 13 12.8	-1.5
UNV	**Unalaska Valle**	**1.57**	**272**	P	Pn	15 12 55.6	-1.6

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*IDC **22** 15:28:16.9±4.5,23.86N×94.44E,mb3.8/7,mb1 4.0/7,*
mb1mx3.8/20,mbtmp3.8/7,Error ellipse: s-maj=97.7km
s-min=45.3km az=170.0
*NEIC **22** 15:28:31.6±5.4,25.43N×94.29E,h10^{km},ML4.5(DMN),*
Error ellipse: s-maj=93.6km s-min=14.3km az=161.0
ISC 22 15:28:32.9±2.4,**24.5N**±0.3×**93.9E**±0.1,**h109**^{km}±23^{km},**n14,**
σ**0**^{s}**95**/19,**mb3.8**/7,**Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUN	**Gumba**	**8.00**	**297**	*e*Pn	**P**	**15 30 28.3**	**+0.5**
GUN				*e*Sn	**S**	**15 31 58.1**	**+0.9**
	82nm,0.5s						
PKI	**Pulchoki**	**8.26**	**294**	*e*Pn	**P**	**15 30 31.0**	**-0.3**
PKI				*e*Sn	**S**	**15 32 04.0**	**+0.4**
	22nm,0.3s						
KKN	**Kakani**	**8.44**	**295**	*e*Pn	**P**	**15 30 33.9**	**+0.1**
KKN				*e*Sn	**S**	**15 32 08.3**	**+0.3**
	32nm,0.4s						
GKN	**Gorkha**	**9.05**	**295**	*e*Pn	**P**	**15 30 41.8**	**-0.2**
GKN				*e*Sn	**S**	**15 32 21.5**	**-1.2**
	39nm,0.3s						
KOLN	**Koldanda**	**9.84**	**292**	*e*Pn	**P**	**15 30 52.9**	**+0.2**
KOLN				*e*Sn	**S**	**15 32 40.4**	**-1.4**
MKAR	**Makanchi Array**	**24.13**	**340**	P	**P**	**15 33 40.2**	**+0.7**
	0.7nm,0.4s,mb3.3,baz=144,slow=9.5,SNR=16						
MKAR	**Makanchi Array**	**24.13**	**340**	P	**P**	**15 33 40.2**	**+0.6**
SONM	**Songino Array**	**25.31**	**20**	P	**P**	**15 33 49.7**	**-1.1**
	3.0nm,1.1s,mb3.6,baz=201,slow=9.8,SNR=5.9						
AKASG	**Malin Array Be**	**55.55**	**316**	P	**P**	**15 37 58.1**	**-0.9**
	0.3nm,0.3s,mb3.9,baz=81,slow=7.3,SNR=6.5						
FINES	**FINESS Array B**	**58.23**	**328**	P	**P**	**15 38 19.1**	**+1.3**
	1.1nm,0.5s,mb4.1,baz=88,slow=6.4,SNR=8.4						
ARCES	**ARCESS Array B**	**59.75**	**338**	P	**P**	**15 38 29.4**	**+1.1**
	1.4nm,0.6s,mb4.1,baz=100,slow=7.4,SNR=6.5						
NB2	**NORSAR Subarra**	**65.40**	**328**	P	**P**	**15 39 07.0**	**+1.3**
	0.9nm,0.6s,mb3.8,baz=84,slow=6.2						
NOA	**NORSAR Array B**	**65.40**	**328**	P	**P**	**15 39 06.8**	**+1.0**
	1.5nm,0.7s,mb3.9,baz=84,slow=6.3,SNR=5.2						
ILAR	**Eielson Array**	**79.51**	**22**	P	**P**	**15 40 26.7**	**-1.9**
	0.5nm,0.8s,mb3.4,baz=302,slow=4.9,SNR=5.1						

CASC 22 15:54:33.3±2.2,**8.38N×82.82W,h10**^{km}±10^{km},**MD3.8,**
MW4.1,4C-1D,Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRU2	**Volcan**	**0.43**	**17**	⇓*i*P	Pg	15 54 42.4	+0.3
BRU2				*e*S	Sg	15 54 50.7	+2.8
ACR	**Cerro Adams**	**0.44**	**308**	⇑*e*P	Pg	15 54 41.8	-0.6
ACR				*e*S	Sg	15 54 49.3	+0.9
BUS	**Buena Vista**	**1.50**	**322**	⇑*e*P	Pn	15 54 59.2	-1.2
BUS				*e*S	Sb	15 55 20.6	+0.9
URSC	**Urasca**	**1.73**	**327**	⇑*e*P	Pn	15 55 02.6	-1.1
URSC				*e*S	Sn	15 55 26.0	-0.2
LAJ	**Bijagual**	**1.96**	**319**	*e*P	Pn	15 55 10.7	+3.6
LAJ				*e*S	Sn	15 55 38.4	+6.5
PRS1	**Puriscal**	**2.17**	**317**	⇑*e*P	Pn	15 55 10.1	-0.1
PRS1				*e*S	Sn	15 55 37.2	-0.2

PGC 22 16:26:48.2,50.02N×130.03W,h10^{km},**MLSn2.9**/1,**Mw3.6,**
2C-1D,West of Vancouver Island, British Columbia,
Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOLB	**Holberg**	**1.37**	**62**	⇑Pn	Pn	16 27 11.3	-2.2
HOLB				Sn	Sn	16 27 27.0	-4.7
	comp=Z,20nm,0.3s						
HOLB				Trac		16 27 37.0	
	comp=Z,20nm,0.3s						
BPBC	**Brooks Peninsu**	**1.46**	**84**	Pn	Pn	16 27 12.1	-2.7
BPBC				Sn	Sn	16 27 29.7	-4.5
	comp=Z,30nm,0.3s						
BPBC				Trac		16 27 41.4	
	comp=Z,30nm,0.3s						
PHC	**Port Hardy**	**1.80**	**67**	⇑Pn	Pn	16 27 17.6	-2.1
PHC				Sn	Sn	16 27 39.1	-3.6
PHC				Trac		16 27 44.1	
	comp=Z,9.0nm,0.1s						
MAYB	**Maynard**	**1.88**	**77**	Pn	Pn	16 27 18.4	-2.4
MAYB				Sn	Sn	16 27 39.2	-5.5
	comp=Z,7.0nm,0.2s						
MAYB				Trac		16 27 45.7	
	comp=Z,7.0nm,0.2s						
EDB	**Eliza Dome**	**1.89**	**93**	Pn	Pn	16 27 18.0	-2.9
EDB				Sn	Sn	16 27 40.4	-4.5
EDB				Trac		16 27 41.6	
	comp=Z,2.0nm,0.1s						
WOSB	**Woss**	**2.23**	**85**	Pn	Pn	16 27 24.1	-1.7
WOSB				Sn	Sn	16 27 49.4	-4.3
	comp=Z,2.0nm,0.2s						
WOSB				Trac		16 27 52.3	
	comp=Z,2.0nm,0.2s						
BBB	**Bella Bella**	**2.48**	**28**	⇓Pn	Pn	16 27 27.4	-2.0
BBB				Sn	Sn	16 27 55.1	-5.0
BBB				Trac		16 27 57.4	
	comp=Z,38nm,0.3s						
NCRB	**Newcastle Ridg**	**2.58**	**80**	Pn	Pn	16 27 29.1	-1.7
NCRB				Trac		16 28 00.1	
	comp=Z,2.0nm,0.2s						
BTB	**Buttle Lake**	**2.98**	**99**	Pn	Pn	16 27 36.5	0.0
BTB				Sn	Sn	16 28 08.8	-3.8
	comp=Z,7.0nm,0.5s						
BTB				Trac		16 28 13.6	
	comp=Z,7.0nm,0.5s						
CBB	**Campbell River**	**3.01**	**88**	Pn	Pn	16 27 35.3	-1.7
OZB	**Mount Ozzard**	**3.14**	**108**	Trac		16 28 15.6	
	comp=Z,2.0nm,0.1s						
OZB	**Mount Ozzard**	**3.14**	**108**	Sn	Sn	16 28 12.1	-4.7
TXB	**Texada**	**3.63**	**93**	Pn	Pn	16 27 44.8	-1.0
TXB				Sn	Sn	16 28 22.4	-6.9
	comp=Z,2.0nm,0.3s						
TXB				Trac		16 28 30.6	
	comp=Z,2.0nm,0.3s						
FSB	**Fort Saint Jam**	**5.67**	**36**	Pn	Pn	16 28 11.0	-3.7

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*NEIC **22** 16:40:05.7±1.2,14.86S×177.85W,h368^{km}±15^{km},mb4.3/3,*
Error ellipse: s-maj=37.2km s-min=11.2km az=158.0
*IDC **22** 16:40:06.0±2.2,14.90S×177.81W,h370^{km}±24^{km},mb3.3/8,*
mb1 3.6/9,mb1mx3.4/16,mbtmp4.0/9,Error ellipse:
s-maj=49.5km s-min=14.1km az=153.0
ISC 22 16:40:04.3±1.5,**14.8S**±0.3×**177.9W**±0.1,**h362**^{km}±19^{km},
n18,σ**0**^{s}**55**/14,**mb3.7**/10,**1D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.04**	**82**	P	**P**	**16 41 36.6**	**0.0**
	8.0nm,0.3s,baz=26,slow=2.5,SNR=18						
AFI	**Afiamalu**	**6.04**	**82**	*e*Pn	**P**	**16 41 36.5**	**-0.1**
CTA	**Charters Tower**	**34.51**	**256**	P	**P**	**16 46 22.6**	**+1.3**
	2.5nm,0.8s,mb3.5,baz=81,slow=11,SNR=4.8						
CTAO	**Charters Tower**	**34.51**	**256**	*e*P	**P**	**16 46 22.4**	**+1.1**
	14nm,1.4s,mb4.0						
CTAO				*e*PP	PP	16 47 49.5	+0.8
PMG	**Port Moresby**	**34.52**	**275**	*e*P	**P**	**16 46 20.6**	**-0.8**
	18nm,0.3s,mb4.8						
WRAB	**Tennant Creek**	**45.70**	**257**	P	**P**	**16 47 52.4**	**0.0**
	19nm,1.5s,mb4.0						
WRA	**Warramunga Arr**	**45.71**	**256**	P	**P**	**16 47 52.3**	**-0.2**
	0.5nm,0.5s,mb3.0,baz=94,slow=7.7,SNR=18						
WRA				PcP	PcP	16 49 23.1	-0.9
	0.6nm,0.7s,baz=89,slow=3.5,SNR=4.9						
ASPA	**Alice Springs**	**46.14**	**251**	⇓*i*P	**P**	**16 47 56.0**	**+0.2**
FITZ	**Fitzroy Crossi**	**54.04**	**258**	P	**P**	**16 48 54.9**	**0.0**
	3.7nm,0.8s,mb3.8,baz=73,slow=9.0,SNR=4.3						
NVAR	**Mina Array Bea**	**76.89**	**44**	P	**P**	**16 51 18.4**	**-0.6**
	0.3nm,0.6s,mb3.2,baz=225,slow=6.4,SNR=3.3						
ILAR	**Eielson Array**	**82.78**	**13**	P	**P**	**16 51 49.3**	**-0.1**
	1.4nm,0.5s,mb4.0,baz=222,slow=6.1,SNR=23						
TXAR	**Lajitas Array**	**83.97**	**58**	P	**P**	**16 51 57.1**	**+0.9**
	0.6nm,0.6s,mb3.6,baz=217,slow=6.3,SNR=5.9						
PDAR	**Pinedale Array**	**84.80**	**43**	P	**P**	**16 52 00.1**	**+0.1**
	0.5nm,0.6s,mb3.5,baz=217,slow=7.4,SNR=4.9						
MAW	**Mawson**	**86.91**	**200**	P	**P**	**16 52 08.9**	**-0.6**
	1.0nm,0.6s,mb3.8,baz=178,slow=11,SNR=3.6						
ARCES	**ARCESS Array B**	**123.36**	**350**	PKP	PKPdf	16 58 18.5	+0.3
	5.5nm,1.1s,baz=27,slow=2.7,SNR=5.0						
ARCES	**ARCESS Array B**	**123.36**	**350**	PKP	PKPdf	16 58 18.5	+0.3
BRTR	**Keskin Array B**	**142.86**	**318**	PKP	PKPdf	16 58 54.5	-0.7
	1.4nm,0.8s,baz=90,slow=1.2,SNR=7.2						
GERES	**GERESS Array B**	**144.73**	**347**	PKP	PKPdf	16 58 59.8	+1.6
	1.1nm,0.6s,baz=333,slow=3.0,SNR=5.2						

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*IDC **22** 16:55:01.2±10.0,36.31N×70.85E,h186^{km}±95^{km},mb3.2/6,*
mb1 3.4/9,mb1mx3.2/22,mbtmp3.9/9,Error ellipse:
s-maj=63.8km s-min=19.6km az=24.0
*NEIC **22** 16:55:02.8±5.2,36.37N×70.91E,h199^{km}±44^{km},mb3.6/3,*
Error ellipse: s-maj=38.2km s-min=13.2km az=203.0
*NNC **22** 16:55:11.3±7.8,37.08N×71.14E,h238^{km}±93^{km},mpv3.6,*
Error ellipse: s-maj=136.3km s-min=84.6km az=66.0
ISC 22 16:55:04.9±1.1,**36.56N**±0.07×**70.9E**±0.1,**h232**^{km}±11^{km},
n31,σ**0**^{s}**54**/31,**mb3.2**/5,**4C-1D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.71**	**135**	*e*P	**P**	**16 56 30.4**	**+0.8**
THN				*e*S	x	16 57 05.9	
DLH	**Dalhousie**	**5.78**	**132**	*e*S	**S**	**16 57 37.0**	**-0.2**
AML	**Almayashu**	**5.97**	**20**	P	**P**	**16 56 32.8**	**-0.1**
	SNR=120						
UCH	**Uchtor**	**6.31**	**25**	P	**P**	**16 56 37.5**	**+0.2**
	SNR=97						
KZA	**Kyzart**	**6.45**	**30**	P	**P**	**16 56 39.1**	**0.0**
	SNR=20						
EKS2	**Erkin-Say**	**6.48**	**19**	P	**P**	**16 56 39.6**	**+0.1**
	SNR=15						
KK31	**Karatay Array**	**6.55**	**357**	⇓P	**P**	**16 56 39.6**	**-0.7**
	3.0nm,0.5s,baz=175,slow=12,SNR=61						
KK31				⇑S	**S**	**16 57 50.6**	**-4.2**
	12nm,0.3s,baz=177,slow=22						
AAK	**Ala-Archa**	**6.67**	**23**	P	**P**	**16 56 42.1**	**+0.3**
	SNR=44						
KBK	**Karagaybulak**	**6.84**	**26**	P	**P**	**16 56 44.5**	**+0.6**
	SNR=25						
ULHL	**Ulahol**	**7.02**	**34**	P	**P**	**16 56 46.3**	**+0.1**
	SNR=12						
CHMS	**Chumysh**	**7.08**	**23**	P	**P**	**16 56 47.3**	**+0.3**
	SNR=9.1						
SDNR	**Sundarnagar**	**7.11**	**133**	*e*P	x	16 57 25.0	
SDNR				*e*S	**S**	**16 58 04.0**	**-3.8**
USP	**Ospenovka**	**7.24**	**21**	P	**P**	**16 56 49.0**	**-0.1**
	SNR=13						
TKM2	**Tokmak 2**	**7.30**	**28**	P	**P**	**16 56 49.9**	**0.0**
	SNR=9.1						
KLP	**Kalpa**	**7.88**	**127**	*e*x	x	16 56 58.2	
KLP				*e*S	**S**	**16 58 15.1**	**-10**
KLP				AML	AML	16 58 30.7	
	comp=E,95nm,0.4s						
KLP				AML	AML	16 58 35.5	
	comp=N,57nm,0.6s						
MKAR	**Makanchi Array**	**13.28**	**36**	P	**P**	**16 58 05.6**	**-0.1**
	comp=N,0.3nm,0.3s,baz=216,slow=14,SNR=12						
AB31	**Akbulak array**	**15.01**	**331**	⇑P	**P**	**16 58 27.6**	**+0.7**
	comp=N,0.4nm,0.3s,baz=139,slow=11,SNR=22						
KURK	**Kurchatov**	**15.20**	**19**	*e*P	**P**	**16 58 29.1**	**-0.2**
	comp=N,1.1nm,0.6s						
BVAR	**Borovoye Array**	**16.47**	**359**	P	**P**	**16 58 44.2**	**-0.1**
	comp=N,0.7nm,0.3s,baz=155,slow=9.7,SNR=12						
BRVK	**Borovoye**	**16.51**	**359**	*e*P	**P**	**16 58 44.1**	**-0.6**
	comp=N,1.4nm,0.5s						
AKTK	**Aktyubinsk**	**16.70**	**330**	P	**P**	**16 58 46.4**	**-0.5**
AKTO	**Aktyubinsk**	**16.70**	**330**	⇑P	**P**	**16 58 46.2**	**-0.7**
	comp=N,1.0nm,0.9s						
AKTO	**Aktyubinsk**	**16.70**	**330**	P	**P**	**16 58 46.4**	**-0.5**
	comp=N,1.3nm,0.3s,baz=142,slow=10,SNR=13						
CHKZ	**Chkalovo**	**17.12**	**359**	*e*P	**P**	**16 58 50.8**	**-0.7**
	comp=N,1.0nm,0.3s						
ZAL	**Zalesovo**	**19.87**	**25**	P	**P**	**16 59 19.5**	**-0.3**
	comp=N,3.0nm,0.3s,baz=238,slow=6.1,SNR=7.8						
SONM	**Songino Array**	**28.36**	**55**	P	**P**	**17 00 40.1**	**+0.8**
	comp=N,0.3nm,0.8s,mb3.0,baz=256,slow=12,SNR=3.2						
FINES	**FINESS Array B**	**37.40**	**326**	P	**P**	**17 01 57.0**	**+0.1**
	comp=N,1.1nm,0.7s,mb3.5,baz=112,slow=10,SNR=5.0						
ARCES	**ARCESS Array B**	**41.07**	**338**	P	**P**	**17 02 27.8**	**+0.8**
	comp=N,1.3nm,0.4s,mb3.7,baz=112,slow=8.0,SNR=16						
NOA	**NORSAR Array B**	**44.30**	**323**	P	**P**	**17 02 53.4**	**+0.4**
	comp=N,0.8nm,0.7s,mb3.1,baz=96,slow=7.7,SNR=2.9						
WRA	**Warramunga Arr**	**82.07**	**122**	P	**P**	**17 07 00.4**	**-0.3**
	comp=N,0.1nm,0.3s,mb2.9,baz=324,slow=5.0,SNR=5.6						
SYO	**Syowa Base**	**107.78**	**191**	⇑P	PP	17 13 33.1	+1.2

MAN 22 18:06:48.1,14.73N×123.25E,h10^{km},**mb4.1,ML2.9,**
MS2.6,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GQP	**Guinayangan**	**1.13**	**224**	⇑*e*P	Pb	18 07 08.9	-0.3
GQP				*e*S	Sb	18 07 25.6	+1.8
POLP	**Polilio Island**	**1.27**	**270**	*e*P	Pb	18 07 11.0	-0.6
POLP				*e*S	Sb	18 07 28.9	+1.1
PVCP	**Virac**	**1.43**	**142**	*e*P	Pn	18 07 13.2	-1.0
PVCP				*e*S	Sb	18 07 33.3	+0.8
AUQP	**San Andres**	**1.50**	**202**	*e*P	Pn	18 07 09.0	-6.2
AUQP				*e*S	Sb	18 07 41.5	+6.8
BOAC	**Boac**	**1.85**	**227**	*e*P	Pn	18 07 21.2	+0.8
BOAC				*e*S	Sn	18 07 48.1	+4.1
BALP	**Baler**	**1.90**	**302**	*e*P	Pn	18 07 19.6	-1.4
BALP				*e*S	Sn	18 07 42.6	-2.5
CAUP	**Cauayan**	**2.59**	**328**	*e*P	Pn	18 07 30.5	-0.4

IDC 22 18:26:29.4±0.8,**29.00S×178.49W,h273**^{km}±12^{km},
mb3.1/1,**mb1 3.4**/2,**mb1mx3.2**/12,**mbtmp4.0**/2,**Error**
ellipse: s-maj=90.9km s-min=33.1km az=175.0,
Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.56**	**117**	P	P	18 27 06.1	+0.8
	108nm,0.3s,baz=89,slow=10,SNR=22						
RAO				S	S	18 27 33.5	+0.2
	198nm,0.3s,baz=78,slow=22,SNR=5.7						
DZM	**Mont Dzumac**	**15.24**	**293**	P	P	18 29 52.2	-0.8
	0.3nm,0.3s,baz=119,slow=10,SNR=5.6						
WRA	**Warramunga Arr**	**43.64**	**271**	P	P	18 34 07.1	-1.9
	0.9nm,0.6s,baz=109,slow=7.9,SNR=14						
FINES	**FINESS Array B**	**143.69**	**340**	PKP	PKPdf	18 45 28.8	-2.1
	1.2nm,0.7s,baz=45,slow=2.0,SNR=6.7						
AKASG	**Malin Array Be**	**149.93**	**324**	PKPbc	PKPdf	18 45 47.5	+5.9
	0.9nm,0.4s,baz=50,slow=3.4,SNR=11						
AKASG				PKPab	PKPab	18 45 52.9	-2.9
	0.5nm,0.4s,baz=51,slow=4.4,SNR=5.5						

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*SOF **22** 18:46:59.9,43.04N×21.42E,h6^{km},MD2.8*
*CSEM **22** 18:47:00.6±0.1,43.10N×21.35E,h10^{km},MD2.8,Error*
ellipse: s-maj=3.0km s-min=1.4km az=63.0
*BEO **22** 18:47:01.1±0.3,43.12N×21.38E,h12^{km}*
*SKO **22** 18:47:02.5,42.99N×21.03E,h2^{km},ML2.6*
*THE **22** 18:47:27.8,41.37N×21.82E,h15^{km},ML2.1*
ISC 22 18:47:00.2±0.4,**43.15N**±0.02×**21.30E**±0.04,**h10**^{km},**n21,**
σ**1**^{s}**08**/30,**2C-3D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARS	**Barje**	**0.51**	**130**	⇓*i*Pg	**Pg**	**18 47 09.2**	**-1.3**
BARS				Sg	**Sg**	**18 47 14.9**	**-2.4**
BOLS	**Boljevac**	**0.83**	**35**	⇑*i*Pg	**Pg**	**18 47 17.5**	**+0.5**
BOLS				Sg	**Sg**	**18 47 28.2**	**+0.1**
SVIS	**Svilajnac**	**1.15**	**357**	⇓*i*Pg	**Pg**	**18 47 23.3**	**+0.1**
SVIS				Sg	**Sg**	**18 47 38.8**	**+0.2**
SKO	**Skopje**	**1.18**	**175**	*e*Pn	**Pn**	**18 47 23.7**	**+0.9**
SKO				*e*Sn	**Sn**	**18 47 38.0**	**-1.0**
NVSS	**Nova Varos 2**	**1.22**	**288**	⇑*i*Pg	**Pg**	**18 47 22.9**	**-1.8**
NVSS				Sg	**Sg**	**18 47 39.4**	**-1.5**

DIVS	**Divcibare**	1.34	315	⇓iPg	Pg	18 47 27.8	+0.7
DIVS				Sg	Sg	18 47 46.0	+1.0
VTS	**Vitosha**	1.51	111	P	Pn	18 47 27.0	-0.5
KKB	**Krupnik**	1.84	134	P	Pn	18 47 32.0	-0.2
VAY	**Valandovo**	2.06	152	i Pn	Pn	18 47 37.3	+2.0
VAY				eSn	Sn	18 48 03.6	+2.4
BIA	**Bitola**	2.13	180	ePn	Pn	18 47 37.2	+0.9
BIA				eSn	Sn	18 48 02.2	-0.8
BIA	**Bitola**	2.13	180	ePn	Pn	18 47 37.2	+0.9
BIA				eSn	Sn	18 48 03.5	+0.4
PGB	**Panagyurishte**	2.19	105	P	Pn	18 47 37.0	-0.3
KNT	**Kendrikon**	2.31	149	ePg	Pg	18 47 42.6	-3.9
GRG	**Griva**	2.34	159	ePg	Pn	18 47 39.2	-0.2
FNA	**Florina**	2.37	179	ePg	Pn	18 47 40.4	+0.7
MMB	**Musomiste**	2.38	130	P	Pn	18 47 40.0	0.0
SOH	**Sokhos**	2.79	146	ePg	Pb	18 47 51.2	+1.5
SOH	**Sokhos**	2.79	146	ePg	Pb	18 47 51.2	+1.5
RZN	**Rozhen**	2.92	119	P	Pn	18 47 48.0	+0.3
PVL	**Pavlikeni**	2.95	87	P	Pn	18 47 46.8	-1.3
KECS	**Kecovo**	5.37	354	e	Pn	18 48 22.0	-0.3

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*PRU **22** 18:51:23.4,50.27N×18.80E*

WAR 22 18:51:23.3,50.27N×18.89E,h0^{km},ML2.4,2C,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	0.59	94	ePG	Pg	18 51 35.0	0.0
OJC				eSG	Sg	18 51 43.0	+0.1
OKC	**Ostrava-Krasne**	0.64	228	ePG	Pg	18 51 35.7	-0.4
NIE	**Niedzica**	1.25	132	ePG	Pg	18 51 48.0	-0.3
NIE				eSG	Sg	18 52 05.0	-0.1
DPC	**Dobruska-Polom**	1.65	274	ePG	Pg	18 51 52.4	-3.8
DPC				eSG	Sg	18 52 13.3	-4.8
	8.4nm,0.2s						
KSP	**Ksiaz**	1.75	290	⇑iPG	Pg	18 51 55.9	-2.4
KSP				⇑eSG	Sg	18 52 18.9	-2.7
KSP	**Ksiaz**	1.75	290	ePg	Pg	18 51 56.0	-2.3
KSP				eSg	Sg	18 52 20.1	-1.5
VYHS	**Vyhne**	1.77	181	ePN	Pn	18 51 54.1	-1.3
VYHS				eSN	Sn	18 52 15.9	-3.1
UPC	**Upice**	1.85	279	eSG	Sg	18 52 21.0	-4.1
KECS	**Kecovo**	2.07	149	eSN	Sn	18 52 23.8	-2.6
KWP	**Kalwaria**	2.55	103	ePG	Pg	18 52 13.0	-1.2
PRU	**Pruhonice**	2.81	266	ePG	Pg	18 52 12.7	-6.7
PRU				eSG	Sg	18 52 49.5	-7.3
KHC	**Kasperske Hory**	3.63	254	ePG	Pg	18 52 28.5	-7.2
KHC				eSG	Sg	18 53 16.1	-8.0

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*IDC **22** 18:57:04.1±3.0,2.81N×96.24E,mb4.0/5,mb1 4.1/5, mb1mx3.8/18,mbtmp4.0/5,Error ellipse: s-maj=120.4km s-min=28.2km az=55.0*

*NEIC **22** 18:57:08.4±1.1,2.81N×96.28E,h30^{km},mb4.0/3,Error ellipse: s-maj=25.8km s-min=14.7km az=211.0*

ISC 22 18:57:06.4±1.5**,2.8N**±0.2×**96.3E**±0.2**,h30^{km},n9,**σ**0^{s}84**/9**,mb4.0**/8**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	5.02	61	ePn	Pn	18 58 21.3	-0.5
LSA	**Lhasa**	27.17	350	eP	P	19 02 51.2	+1.8
	2.3nm,0.8s,mb3.8						
WRA	**Warramunga Arr**	43.69	123	P	P	19 05 11.2	+0.3
	0.6nm,0.6s,mb3.5,baz=302,slow=9.2,SNR=4.7						
MKAR	**Makanchi Array**	45.45	347	P	P	19 05 25.0	+0.4
	1.7nm,0.4s,mb4.2,baz=158,slow=8.5,SNR=10						
SONM	**Songino Array**	45.69	10	P	P	19 05 26.8	+0.4
	0.4nm,0.5s,mb3.6,baz=191,slow=9.7,SNR=7.5						
ZAL	**Zalesovo**	51.81	351	P	P	19 06 14.2	+0.5
	3.2nm,0.5s,mb4.5,baz=319,slow=5.5,SNR=15						
BVAR	**Borovoye Array**	54.42	341	P	P	19 06 32.3	-0.7
	1.4nm,0.7s,mb4.0,baz=137,slow=8.5,SNR=10						
BRVK	**Borovoye**	54.48	341	eP	P	19 06 32.6	-0.9
	1.0nm,0.6s,mb3.9						
CHKZ	**Chkalovo**	54.90	342	eP	P	19 06 35.5	-1.1
	2.5nm,0.7s,mb4.3						

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*NEIC **22** 18:59:19.6±4.0,5.16S×145.37E,h83^{km}±38^{km},mb3.6/1, Error ellipse: s-maj=44.9km s-min=19.4km az=140.0*

*IDC **22** 18:59:31.8±12.0,5.32S×145.14E,h198^{km}±121^{km}, mb3.6/3,mb1 3.6/5,mb1mx3.3/13,mbtmp4.0/5,Error ellipse: s-maj=60.8km s-min=40.8km az=157.0*

ISC 22 18:59:19.7±4.4**,5.3S**±0.2×**145.4E**±0.2**,h96^{km}**±42^{km}**,n7,** σ**0^{s}32**/8**,mb3.9**/3**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	4.45	157	ePn	P	19 00 26.4	+0.1
PMG				eSn	S	19 01 17.2	0.0
CTA	**Charters Tower**	14.74	177	P	P	19 02 51.5	+6.9
	0.4nm,0.3s,baz=4.9,slow=16,SNR=5.4						
WRAB	**Tennant Creek**	18.11	216	eP	P	19 03 26.2	-0.3
	2.7nm,0.7s						
WRA	**Warramunga Arr**	18.12	216	P	P	19 03 26.4	-0.2
	0.3nm,0.3s,baz=38,slow=11,SNR=14						
FITZ	**Fitzroy Crossi**	23.14	235	P	P	19 04 18.8	+0.4
	9.6nm,0.7s,mb4.3,baz=59,slow=14,SNR=10						
STKA	**Stephens Creek**	26.70	187	P	P	19 04 52.0	+0.1
	1.4nm,0.7s,mb3.6,baz=16,slow=8.5,SNR=2.9						
ILAR	**Eielson Array**	85.45	23	P	P	19 11 47.5	-0.1
	0.8nm,0.8s,mb3.7,baz=249,slow=4.6,SNR=6.0						

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*NIED **22** 19:02:00,27.60N×128.60E,h53^{km},Mw3.7 Best double couple: M$_0$4.24×10^{14} NP1:ϕ$_s$154°,δ72°,λ58°. NP2:ϕ$_s$37°, δ36°,λ149°.*

JMA 22 19:02:29.3,27.63N×128.59E,h58^{km}±1^{km}**,M3.7,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	0.35	64	P	P	19 02 39.8	0.0
JTK				S	S	19 02 47.2	-0.2
JIH	**Iheya**	0.81	223	P	P	19 02 45.1	+0.2
JIH				S	S	19 02 56.4	-0.2
JOW	**Kunigami**	0.84	200	P	P	19 02 45.3	0.0
JOW				S	S	19 02 56.8	-0.5
JAM	**Amami Oshima**	1.19	49	P	P	19 02 49.9	-0.1
JAM				S	S	19 03 05.2	-0.3
JZK	**Kikaishima**	1.40	61	P	P	19 02 53.4	+0.3
JZK				eS	S	19 03 11.3	+0.5
JAGN	**Aguni-jima**	1.59	230	P	P	19 02 55.4	-0.3
JAGN				S	S	19 03 14.5	-0.7
NAH1	**Naha**	1.63	210	P	P	19 02 56.3	0.0
NAH1				S	S	19 03 16.4	+0.1
JJT2	**Tamagusuku 2**	1.67	207	P	P	19 02 56.5	-0.3
JKE	**Kume jima 2**	2.07	232	P	P	19 03 02.0	-0.4
JKE				S	S	19 03 26.8	-0.1
JNN	**Nakanoshima**	2.48	27	P	P	19 03 07.6	-0.6
JNN				S	S	19 03 36.0	-1.2
JKC	**Kuchinoerabu**	3.15	26	P	P	19 03 17.3	-0.4
JTN	**Tanegashima 3**	3.67	34	eS	S	19 04 05.3	-2.0

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*NIED **22** 19:19:00,36.70N×142.20E,h17^{km},Mw3.8 Best double couple: M$_0$6.67×10^{14} NP1:ϕ$_s$14°,δ69°,λ84°. NP2:ϕ$_s$211°, δ22°,λ106°.*

*IDC **22** 19:19:01.9±1.2,36.57N×142.37E,mb3.8/6,mb1 3.9/9, mb1mx3.8/23,mbtmp3.9/9,ML4.0/3,MS3.5/4,Ms1 3.5/4, ms1mx2.8/31,Error ellipse: s-maj=28.7km s-min=19.9km az=104.0*

*MOS **22** 19:19:04.6±1.1,36.70N×142.44E,h33^{km},mb4.1/3,Error ellipse: s-maj=16.0km s-min=13.3km az=126.5*

*NEIC **22** 19:19:05.7±3.7,36.62N×142.34E,h23^{km}±25^{km},mb4.2/3, Error ellipse: s-maj=18.7km s-min=10.4km az=137.0*

*JMA **22** 19:19:05.8±0.3,36.72N×142.23E,h42^{km},M3.8*

ISC 22 19:19:03.3±1.7**,36.69N**±0.04×**142.39E**±0.07**,h21^{km}**±14^{km}**, n38,**σ**0^{s}95**/46**,mb3.8**/10**,MS4.0**/2**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	1.34	288	P	Pn	19 19 26.5	-0.6
JFK	**Kawauchi**	1.39	300	P	Pn	19 19 27.0	-0.8
JHO	**Hitachi**	1.47	268	P	Pn	19 19 28.3	-0.6
JMM	**Marumori**	1.74	313	P	Pn	19 19 32.6	-0.1
JMM				eS	Sn	19 19 52.0	-2.4
JFT	**Otama**	1.84	297	P	Pn	19 19 34.7	+0.5
JFT				eS	Sn	19 19 56.7	-0.4
JIO	**Ouri**	1.95	335	P	Pn	19 19 36.2	+0.4
JIO				eS	Sn	19 19 58.9	-1.0
JOU	**Okura**	2.17	321	P	Pn	19 19 39.6	+0.7
JFY	**Yanaizu**	2.27	289	P	Pn	19 19 40.9	+0.6
BSO1	**Boso 1**	2.33	210	P	Pn	19 19 41.8	+0.5
BSO1				S	Sn	19 20 09.2	-0.4
JAG	**Ashikaga**	2.38	265	P	Pn	19 19 41.9	-0.1
JYS	**Shirataka**	2.40	310	P	Pn	19 19 43.1	+0.8
JMK	**Ichinoseki**	2.44	338	P	Pn	19 19 43.6	+0.7
JMK				eS	Sn	19 20 12.2	-0.3
JYK	**Kaneyama**	2.75	325	P	Pn	19 19 47.9	+0.7
JRY	**Ryogami san**	2.90	258	P	Pn	19 19 49.1	-0.2
MJAR	**Matsushiro Arr**	3.37	269	Pn	Pn	19 19 56.0	-0.1
	16nm,0.3s,baz=166,slow=4.2,SNR=153						
MJAR				Sn	Sn	19 20 42.2	+6.4
	5.5nm,0.3s,baz=92,slow=30,SNR=6.7						
MJAR				LR	LR	19 21 26.1	
	comp=Z,320nm,18.4s,baz=120,slow=43						
MJAR	**Matsushiro Arr**	3.37	269	Pn	Pn	19 19 56.0	-0.1
MJAR				Sn	Sn	19 20 42.2	+6.4
MJAR				LR	LR	19 21 26.1	
MAJO	**Matsushiro**	3.37	269	ePn	Pn	19 19 57.0	+1.0
MAT	**Matsushiro**	3.37	269	P	Pn	19 19 57.0	+1.0
MAT				S	Sn	19 20 37.9	+2.0
MAT	**Matsushiro**	3.37	269	eP	Pn	19 19 57.0	+1.0
MAT				eS	Sn	19 20 38.0	+2.1
JHJ	**Hachijo jima 2**	4.16	212	Pn	Pn	19 20 05.7	-1.6
	29nm,0.3s,baz=77,slow=23,SNR=13						
JHJ				Sn	Sn	19 20 51.6	-4.2
	42nm,0.3s,baz=87,slow=22,SNR=11						
ASAJ	**Asahikawa**	7.42	1	Pn	Pn	19 20 51.8	-1.5
	2.7nm,0.3s,baz=42,slow=4.9,SNR=7.7						
ASAJ				LR	LR	19 24 39.2	
	comp=Z,100nm,19.9s,baz=172,slow=45						
ASAJ	**Asahikawa**	7.42	1	P	Pn	19 20 51.8	-1.5
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,100nm,19.9s						
YSS	**Yuzh-Sakhalins**	10.26	1	ePn	P	19 21 31.4	-1.2
ENH	**Enshi**	28.09	266	eP	P	19 24 54.4	-1.2
	comp=Z,6.9nm,0.7s,mb4.4						
ULN	**Ulaanbaatar**	28.20	304	eP	P	19 24 56.8	+0.4
	comp=Z,0.9nm,0.4s,mb3.8						
ULN	**Ulaanbaatar**	28.20	304	eP	P	19 24 56.8	+0.4
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
SONM	**Songino Array**	28.63	304	P	P	19 25 00.9	+0.6
	comp=Z,2.0nm,0.7s,mb4.0,baz=103,slow=9.0,SNR=20						
ZAK	**Zakamensk**	31.10	309	eP	P	19 25 13.4	-8.9
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.6						
ZAL	**Zalesovo**	42.74	313	P	P	19 27 01.6	+1.1
	comp=Z,0.5nm,0.4s,mb3.6,baz=171,slow=1.3,SNR=3.8						
MKAR	**Makanchi Array**	44.97	303	P	P	19 27 18.6	0.0
	comp=Z,0.7nm,0.6s,mb3.7,baz=84,slow=9.7,SNR=11						
KURK	**Kurchatov**	46.76	308	eP	P	19 27 32.4	-0.3
	comp=Z,1.4nm,0.6s,mb4.1						
KURK	**Kurchatov**	46.76	308	eP	P	19 27 32.4	-0.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
ILAR	**Eielson Array**	49.37	32	P	P	19 27 54.0	+1.2
	comp=Z,0.6nm,0.7s,mb3.8,baz=266,slow=7.2,SNR=9.1						
DAWY	**Dawson**	52.67	33	eP	P	19 28 19.6	+1.7
WRA	**Warramunga Arr**	56.83	189	P	P	19 28 47.2	-1.7
	comp=Z,0.5nm,1.0s,mb3.5,baz=5.7,slow=7.2,SNR=8.5						
STKA	**Stephens Creek**	68.21	181	LR	LR	20 00 40.4	
	comp=Z,116nm,21.1s,MS4.1,baz=204,slow=37						
AKASG	**Malin Array Be**	75.05	323	P	P	19 30 45.2	+0.3
	comp=Z,0.7nm,0.5s,mb3.9,baz=49,slow=6.5,SNR=6.7						
TXAR	**Lajitas Array**	89.71	53	LR	LR	20 10 29.9	
	comp=Z,49nm,18.6s,MS4.0,baz=190,slow=34						

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*NEIC **22** 19:31:23.3,15.78N×98.68W,h20^{km},MD3.6(MEX),After MEX.*

MEX 22 19:31:23.3±0.5**,15.78N×98.68W,h20^{km}**±29^{km}**,MD3.6, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	0.80	41	i P	Pb	19 31 36.3	-2.2
PNIG				i S	Sb	19 31 46.0	-2.8
ACX	**Acapulco**	1.61	312	i P	Pn	19 31 46.8	-4.2
ACX				i S	Sn	19 32 07.5	-3.8
VHO	**Vista Hermosa**	2.26	55	i P	Pn	19 31 57.0	-3.3
VHO				i S	Sn	19 32 23.0	-4.9
OXX	**Oaxaca**	2.27	55	i P	Pn	19 32 04.5	+4.0
PLIG	**Platanillo**	2.71	343	i P	Pn	19 32 04.8	-2.0
PLIG				i S	Sn	19 32 35.0	-4.4

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*IDC **22** 19:52:33.9±1.5,17.67N×85.03W,mb3.9/5,mb1 4.2/5, mb1mx3.8/21,mbtmp3.9/5,MS3.3/4,Ms1 3.3/4, ms1mx3.0/26,Error ellipse: s-maj=94.0km s-min=28.4km az=66.0*

*NEIC **22** 19:52:39.7±0.6,17.37N×85.59W,mb4.0/7,Error ellipse: s-maj=19.5km s-min=8.8km az=61.0*

ISC 22 19:52:36.5±0.7**,17.5N**±0.1×**85.3W**±0.2**,h33^{km},n22,** σ**0^{s}73**/18**,mb4.0**/9**,MS3.3**/2**,North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	**JuntasAbangare**	7.14	177	LR	LR	19 56 44.7	
	comp=Z,187nm,20.7s,baz=333,slow=34						
JTS	**JuntasAbangare**	7.14	177	Pn	Pn	19 54 21.1	-0.4
OXX	**Oaxaca**	10.89	270	i P	P	19 55 08.5	-4.8
ROSC	**El Rosal**	16.52	138	LR	LR	20 01 55.3	
	comp=Z,81nm,18.1s,baz=21,slow=34						
SDV	**Santo Domingo**	16.65	119	eP	P	19 56 24.0	-5.0
	10nm,0.7s						
LTX	**Lajitas**	20.53	308	eP	P	19 57 13.8	-1.0
	3.5nm,0.6s						
LTX				epP		19 57 24.5	
TXAR	**Lajitas Array**	20.53	308	P	P	19 57 14.9	+0.1
	1.4nm,0.6s,baz=125,slow=11,SNR=12						
AMTX	**Amarillo**	22.67	323	eP	P	19 57 36.5	+0.2
	7.4nm,0.6s,mb4.3						
AMTX				epP		19 57 47.7	
CPRX	**Cap Rock**	22.78	316	P	P	19 57 38.0	+0.6
MNTX	**Cornudas Mount**	23.04	312	eP	P	19 57 39.9	-0.1
	2.1nm,0.9s,mb3.6						
SADO	**Sadowa**	27.71	10	LR	LR	20 10 22.1	
	comp=Z,104nm,18.8s,MS3.4,baz=296,slow=39						
PHWY	**Pilot Hill**	29.38	328	eP	P	19 58 38.0	-0.8
MOOW	**Moose Ponds**	33.87	326	eP	P	19 59 18.1	-0.1
	2.5nm,1.1s,mb4.1						
SAML	**Samuel**	34.17	138	eP	P	19 59 21.0	-0.1
	0.6nm,0.6s,mb3.7						
BOZ	**Bozeman (W)**	35.63	328	eP	P	19 59 33.7	+0.4
	5.1nm,1.0s,mb4.4						
MCMT	**McKenzie Canyo**	35.72	326	eP	P	19 59 35.2	+1.2
MCMT				epP	pP	19 59 45.2	+1.5
DLBC	**Dease Lake**	52.37	332	P	P	20 01 48.1	+0.7
	1.6nm,0.6s,mb4.1,baz=252,slow=19,SNR=2.3						
SFJD	**Kangerlussuaq**	54.36	16	LR	LR	20 25 11.8	
	comp=Z,19nm,20.1s,MS3.1,baz=234,slow=36						
INK	**Inuvik**	59.10	341	P	P	20 02 34.2	-1.7
	0.8nm,0.6s,mb3.9,baz=145,slow=10,SNR=2.8						
INK	**Inuvik**	59.10	341	P	P	20 02 34.2	-1.7
PLCA	**Paso Flores**	59.51	167	P	P	20 02 39.9	+0.9
	1.8nm,0.9s,mb4.1,baz=321,slow=6.5,SNR=3.4						
ILAR	**Eielson Array**	62.33	335	P	P	20 02 57.5	-0.2
	1.1nm,0.8s,mb4.1,baz=112,slow=5.4,SNR=12						

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*ATH **22** 20:21:41.8,38.19N×26.69E,h44^{km}±5^{km},MD3.2/3*

*CSEM **22** 20:21:41.1±0.1,38.24N×26.56E,h10^{km},MD3.0,Error ellipse: s-maj=3.4km s-min=2.7km az=98.0*

*ISK **22** 20:21:42.7,38.27N×26.66E,h21^{km},MD3.0*

ISC 22 20:21:41.9±0.8**,38.24N**±0.03×**26.57E**±0.05**,h7^{km}**±5^{km}**, n16,**σ**0^{s}87**/26**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	0.12	9	i P	Pg	20 21 44.8	+0.3
URLA				i S	Sg	20 21 47.2	+0.9
IZM	**Izmir**	0.56	74	i PG	Pg	20 21 53.2	0.0
IZM				i SG	Sg	20 22 01.0	+0.2
KDAG	**Bornova**	0.57	73	i P	Pg	20 21 52.0	-1.2
KDAG				i S	Sg	20 21 59.8	-1.1
SMG	**Samos**	0.57	159	eP	Pg	20 21 53.4	0.0
SMG				eS	Sg	20 22 01.7	+0.7
PRK	**Paraskevi**	1.03	347	eP	Pb	20 22 01.9	+0.2
PRK				eS	Sb	20 22 16.5	+1.3
AKS	**Akhisar**	1.16	56	PN	Pn	20 22 03.2	-1.4
AYDN	**Tasoluk**	1.19	119	i P	Pb	20 22 05.3	+1.0
AYDN				i S	Sb	20 22 19.7	-0.1
BODT	**Bodrum**	1.32	153	ePN	Pn	20 22 06.3	-0.5
MLSB	**Milas**	1.34	134	ePN	Pn	20 22 06.9	-0.3
BDRM	**Kayabasi**	1.36	149	i P	Pb	20 22 07.8	+0.5
BDRM				i S	Sb	20 22 26.1	+1.2
APE	**Apeiranthos**	1.43	216	eP	Pn	20 22 06.9	-1.6
MANT	**Manisa**	1.58	80	i P	Pn	20 22 11.4	+0.9
MANT				i S	Sb	20 22 32.0	+0.8
YER	**Yerkesik**	1.75	129	ePN	Pn	20 22 12.6	-0.4
BTOK	**Tokmak**	1.90	36	i P	Pn	20 22 13.6	-1.4
BTOK				i S	Sn	20 22 44.0	+4.6
DNZL	**Cakiroluk**	2.03	105	i P	Pn	20 22 21.9	+4.9
DNZL				i S	Sn	20 22 47.5	+4.5
DST	**Dursunbey**	2.10	49	ePN	Pn	20 22 17.5	-0.5

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*BUG **22** 20:31:29.5,51.54N×6.79E,h1^{km},ML1.7*

*BGR **22** 20:31:29.6±1.3,51.57N×6.99E,h1^{km},ML2.0/4,Error ellipse: s-maj=25.6km s-min=10.0km az=142.0*

*LDG **22** 20:31:30.9±0.2,51.56N×6.87E,h1^{km},Md3.3/1,Ml2.7/9, Error ellipse: s-maj=4.3km s-min=2.9km az=50.0, Suspected Mining induced.*

*CSEM **22** 20:31:30.7±0.1,51.58N×6.87E,h2^{km},ML2.7/8,Error ellipse: s-maj=2.8km s-min=1.8km az=102.0,Suspected Mining induced.*

*NEIC **22** 20:31:30.9,51.56N×6.87E,h1^{km},ML2.7(LDG),After LDG.*

*BNS **22** 20:31:30.8±1.2,51.59N×6.89E,h1^{km},ML2.0*

ISC 22 20:31:29.0±0.5**,51.52N**±0.02×**6.57E**±0.04**,n32,**σ**1^{s}44**/53**, 3D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAUG	**Laupendahl**	0.29	125	ePg	Pg	20 31 35.2	+0.5
LAUG				eSg	Sg	20 31 40.0	+1.5
BUG	**Bochum--Univer**	0.44	100	⇓ePg	Pg	20 31 36.5	-1.3
BUG				Sg	Sg	20 31 41.7	-2.1
BUG	**Bochum--Univer**	0.44	100	ePg	Pg	20 31 36.0	-1.8
WTSB	**Winterswijk**	0.47	18	⇓ePg	Pg	20 31 38.4	0.0
	29nm,0.3s						
WTSB				eSg	Sg	20 31 45.2	+0.5
BNS	**Bensberg**	0.67	145	ePg	Pg	20 31 43.2	+0.8
BNS				eSg	Sg	20 31 52.3	+0.9
HOBG	**Hohbusch**	0.72	138	ePg	Pg	20 31 43.7	+0.4
HOBG				eSg	Sg	20 31 52.6	-0.3
	70nm,0.6s						
HGN	**Heimansgroeve**	0.85	208	⇓ePg	Pg	20 31 50.1	+4.1
	17nm,0.1s						
HGN				eSg	Sg	20 32 04.1	+6.7
KLL	**Kalltalsperre**	0.89	191	ePg	Pg	20 31 49.6	+2.9
KLL				eSg	Sg	20 32 03.9	+5.4
	43nm,0.7s						
STB	**Steinbach**	0.94	169	ePg	Pg	20 31 49.8	+2.1
STB				eSg	Sg	20 32 03.2	+2.9
	41nm,0.4s						
HILG	**Hillesheim**	1.23	177	eSg	Sg	20 32 12.8	+2.9
BGG	**Burgeitz**	1.40	159	ePg	Pg	20 31 56.4	-0.5
BGG				eSg	Sg	20 32 15.7	+0.1
	34nm,0.3s						
TNS	**Taunus Mts**	1.76	137	ePg	Pg	20 32 01.3	-2.8
TNS				eSg	Sg	20 32 22.9	-4.7
GIVF	**Givet**	1.80	219	ePn	Pn	20 32 03.3	+1.8
GIVF				eSn	Sn	20 32 27.3	+2.0
	18nm,0.2s						
WLF	**Walferdange**	1.87	188	ePg	Pg	20 32 07.5	+1.2
WLF				eSg	Sg	20 32 31.3	-0.1
WLF	**Walferdange**	1.87	188	eP	Pn	20 32 07.4	+4.8
WLF	**Walferdange**	1.87	188	eP	Pn	20 32 07.4	+4.8
BAIF	**Baives**	2.09	227	ePn	Pn	20 32 07.7	+2.0
BAIF				eSn	Sn	20 32 34.7	+1.9
	5.7nm,0.2s						
CLZ	**Clausthal**	2.39	81	eSg	Sg	20 32 36.2	-12
RFYF	**Reffroy**	2.98	194	ePn	Pn	20 32 18.7	+0.4
CDF	**Champ du Feu**	3.14	171	ePn	Pn	20 32 20.9	+0.2
CDF				eSg	Sg	20 33 11.2	-2.4
	3.3nm,0.4s						
MEZF	**Maizieres J'vi**	3.17	199	eSg	Sg	20 33 13.6	-1.0
	3.9nm,0.3s						
SFTF	**Sexfontaines**	3.46	197	ePg	Pg	20 32 36.5	-1.5
	baz=13						
SFTF				eSg	Sg	20 33 22.4	-1.8
	2.6nm,0.2s						
LOR	**Lormes**	4.61	204	ePn	Pn	20 32 40.9	-0.6
	baz=25						
LOR				eSn	Sn	20 33 34.2	-2.3
LOR				eSg	Sg	20 33 58.8	-3.5
	1.8nm,0.3s						
SSF	**Saint Saulge**	4.89	205	ePn	Pn	20 32 45.5	0.0
SSF				eSg	Sg	20 34 08.8	-2.9
	1.0nm,0.3s						
AVF	**Avril sur Loir**	5.18	205	ePn	Pn	20 32 49.2	-0.4
SMF	**Signal de Mont**	5.20	201	ePn	Pn	20 32 48.6	-1.2
LDF	**La Druitiere**	5.21	238	ePn	Pn	20 32 50.7	+0.7
LDF				eSn	Sn	20 33 48.8	-2.9
FLN	**La Foliniere**	5.31	241	ePn	Pn	20 32 51.7	+0.3
FLN				eSn	Sn	20 33 51.0	-3.2
BGF	**Bois d'Agland**	5.53	208	ePn	Pn	20 32 54.1	-0.5
GRR	**Gorron**	5.73	240	ePn	Pn	20 32 57.4	+0.1
GRR				eSn	Sn	20 34 01.1	-3.6
	3.1nm,0.2s						
MFF	**Saint Martin d**	6.61	224	ePn	Pn	20 33 08.8	-0.9
SGMF	**Saint Gilles**	6.74	245	ePn	Pn	20 33 10.2	-1.4

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*NIED **22** 21:54:00,38.30N×140.10E,h5^{km},Mw3.6 Best double couple: M$_0$2.92×10^{14} NP1:ϕ$_s$210°,δ65°,λ105°. NP2: ϕ$_s$358°,δ28°,λ61°.*

*NEIC **22** 21:54:17.6,38.35N×140.06E,h10^{km},MW3.6(NIED), After JMA.*

*JMA **22** 21:54:17.6,38.35N×140.06E,h10^{km}±1^{km},M3.7 Broadband fault plane solution: P waves. NP1:ϕ$_s$156°, δ36°,λ43°. NP2:ϕ$_s$29°,δ66°,λ118°. Principal axes: T Plg59°, Azm339°; N Plg25°, Azm197°; P Plg17°, Azm99°;*

JMA Felt II J1.

*IDC **22** 21:54:23.1±3.6,38.57N×139.17E,h66^{km}±35^{km},mb3.3/2, mb1 3.7/3,mb1mx3.2/20,mbtmp3.5/3,ML3.3/1 Error ellipse: s-maj=85.1km s-min=29.0km az=110.0*

ISC 22 21:54:17.1±0.5**,38.37N**±0.03×**140.08E**±0.04**,h12^{km}**±4^{km}**, n17,**σ**1^{s}01**/29**,mb3.7**/2**,3C-5D,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYS	**Shirataka**	0.15	184	⇑P	Pg	21 54 20.6	-0.2
JYS				S	Sg	21 54 22.9	-0.4
JYA	**Atsumi**	0.36	308	⇓P	Pg	21 54 24.8	+0.2
JYA				S	Sg	21 54 30.0	+0.3
JOU	**Okura**	0.46	91	⇓P	Pg	21 54 26.7	+0.2
JOU				S	Sg	21 54 33.1	+0.3
JYK	**Kaneyama**	0.59	22	⇑P	Pb	21 54 29.5	+0.7
JYK				S	Sb	21 54 37.6	+0.9
JMM	**Marumori**	0.76	132	⇓P	Pb	21 54 31.6	-0.1
JMM				S	Sb	21 54 41.4	-0.3
JFT	**Otama**	0.88	167	⇓P	Pb	21 54 33.9	+0.2
JFT				S	Sb	21 54 45.4	+0.2
JIO	**Ouri**	1.00	85	⇓P	Pb	21 54 35.9	0.0
JFY	**Yanaizu**	1.01	197	⇑P	Pb	21 54 36.3	+0.3
JFY				S	Sb	21 54 48.9	-0.1
MJAR	**Matsushiro Arr**	2.36	220	P	Pn	21 54 57.1	+0.9
	9.3nm,0.3s,baz=24,slow=15,SNR=44						
MJAR				S	Sn	21 55 28.0	+2.7
	14nm,0.3s,baz=335,slow=44,SNR=13						
MAJO	**Matsushiro**	2.36	220	ePn	Pn	21 54 56.5	+0.3
MAJO				eSn	Sn	21 55 24.5	-0.8
MAT	**Matsushiro**	2.36	220	P	Pn	21 54 56.5	+0.3
MAT				S	Sn	21 55 28.2	+2.9
MAT	**Matsushiro**	2.36	220	eP	Pn	21 54 56.0	-0.2
MAT				eS	Sn	21 55 28.0	+2.7
KS15	**Wonju Array Si**	9.68	268	ePn	P	21 56 35.8	-3.5
KS15				epPn		21 56 39.5	
KS15				eSn	Sn	21 58 22.4	-6.6
MDJ	**Mudanjiang**	10.04	312	ePn	P	21 56 41.3	-2.8
NACB	**Ninganchiao**	21.16	233	P	P	21 58 59.9	-4.5
ILAR	**Eielson Array**	48.94	33	P	P	22 03 03.8	-0.8
	0.4nm,0.7s,mb3.5,baz=272,slow=6.2,SNR=4.6						
WRA	**Warramunga Arr**	58.25	186	P	P	22 04 11.6	-2.3
	0.6nm,0.5s,mb3.9,slow=6.7,SNR=16						

*NIED **22** 21:57:00, 36.70N×142.40E, h20^{km}, Mw3.5 Best double couple: $M_0$2.27×10^{14} NP1:ϕ_s11°, δ67°, λ82°. NP2:ϕ_s210°, δ24°, λ107°.*

JMA 22 21:57:50.3±0.3**, 36.70N×142.42E, h13^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	1.36	288	P	Pn	21 58 14.5	-0.6
JFK	Kawauchi	1.40	299	P	Pn	21 58 15.4	-0.3
JHO	Hitachi	1.49	267	P	Pn	21 58 16.8	-0.2
JHO				*e*S	Sb	21 58 36.5	+0.4
JMM	Marumori	1.74	312	P	Pn	21 58 20.6	0.0
JFT	Otama	1.85	297	P	Pn	21 58 22.7	+0.5
JFT				*e*S	Sn	21 58 45.9	+0.3
JIO	Ouri	1.95	334	P	Pn	21 58 24.2	+0.7
JIO				*e*S	Sn	21 58 46.6	-1.3
JOU	Okura	2.17	321	P	Pn	21 58 27.8	+1.1
JOU				*e*S	Sn	21 58 55.4	+1.8
JFY	Yanaizu	2.28	289	P	Pn	21 58 29.8	+1.5
BSO1	Boso 1	2.35	210	P	Pn	21 58 29.8	+0.5
BSO1				*e*S	Sn	21 58 58.3	0.0
JAG	Ashikaga	2.40	264	P	Pn	21 58 30.4	+0.4
JAG				*e*S	Sn	21 59 00.7	+1.1
JMK	Ichinoseki	2.44	337	P	Pn	21 58 31.6	+1.1
JMK				*e*S	Sn	21 59 00.7	+0.2
JYK	Kaneyama	2.75	324	P	Pn	21 58 36.0	+1.0
JOM	Ohasama	2.91	343	P	Pn	21 58 37.9	+0.7
JOM				*e*S	Sn	21 59 12.9	+0.6
JRY	Ryogami san	2.92	258	P	Pn	21 58 37.3	-0.1
JRY				*e*S	Sn	21 59 12.1	-0.6
MAT	Matsushiro	3.39	269	P	Pn	21 58 45.0	+0.9
MAT				S	Sn	21 59 26.3	+1.7

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*NEIC **22** 22:03:31.1±0.7, 17.36S×73.05W, h40^{km}, mb4.1/1, Error ellipse: s-maj=13.5km s-min=10.4km az=110.0*

*IDC **22** 22:03:33.4±5.3, 17.44S×72.93W, h56^{km}±43^{km}, mb3.9/4, mb1 3.9/7, mb1mx3.6/18, mbtmp4.0/7, ML3.4/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/18, Error ellipse: s-maj=49.8km s-min=27.7km az=119.0*

ISC 22 22:03:29.5±1.5**, 17.32S**±0.09×**73.1W**±0.1**, h43^{km}**±17^{km}**, n21, σ1^{s}00**/18**, mb4.0**/4**, MS2.7**/1**, 1C, Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	1.73	61	⇑*i*P	P	22 03 57.4	-0.3
ARE				*i* S	S	22 04 24.3	+5.7
LPAZ	La Paz	4.83	78	P	P	22 04 43.8	+2.1
	1.0nm,0.3s,baz=267,slow=9.5,SNR=42						
NNA	Nana	6.44	325	Pn	P	22 05 04.4	+0.1
	22nm,0.7s						
SIV	San Ignacio	11.56	85	P	P	22 06 14.4	-0.6
	0.6nm,0.3s,baz=272,slow=12,SNR=6.0						
SAML	Samuel	12.71	50	*e*Pn	P	22 06 29.1	-1.3
	4.8nm,0.6s						
CFAA	Coronel Fontan	14.88	164	P	P	22 06 57.9	-0.8
	0.0nm,0.3s,baz=342,slow=15,SNR=9.2						
CFAA	Coronel Fontan	14.88	164	P	P	22 06 57.9	-0.8
CPUP	Villa Florida	17.12	124	*e*P	P	22 07 28.2	+0.9
ROSC	El Rosal	22.07	357	LR	LR	22 18 44.8	
	comp=Z,27nm,19.1s,MS2.7,baz=216,slow=41						
TRQA	Tornquist	22.83	157	*e*P	P	22 08 28.4	-1.5
TRQA				*e*pP		22 08 41.5	
PLCA	Paso Flores	23.43	175	P	P	22 08 36.2	+0.6
	5.8nm,1.1s,mb3.9,baz=1.3,slow=4.7,SNR=4.3						
BDFB	Brasilia	24.07	90	P	P	22 08 41.7	-0.4
	4.3nm,0.9s,mb3.9,baz=274,slow=9.7,SNR=5.3						
CPD	Cerro la Pandu	35.84	12	*e*P	P	22 10 22.4	-4.9
VNA3	Neumayer Olymp	65.27	161	P	P	22 14 09.3	+0.6
VNA2	Neumayer--Watz	65.87	161	P	P	22 14 11.1	-1.4
SNAA	Sanae	67.48	161	P	P	22 14 23.0	+0.3
DBIC	Dimbokro	71.45	77	P	P	22 14 48.2	+0.3
	1.5nm,0.6s,mb4.1,baz=231,slow=10,SNR=3.9						
MAW	Mawson	89.41	165	P	P	22 16 24.1	+1.6
	0.6nm,0.4s,mb4.3,baz=222,slow=9.0,SNR=6.4						
WRA	Warramunga Arr	134.23	217	PKP	PKPdf	22 22 45.1	+1.5
	0.4nm,0.8s,baz=153,slow=1.5,SNR=5.1						
MJAR	Matsushiro Arr	146.40	311	PKPbc	PKPbc	22 23 07.6	+1.4
	3.0nm,0.8s,baz=132,slow=1.7,SNR=4.9						
SONM	Songino Array	149.57	1	PKPbc	PKPdf	22 23 16.9	+7.2
	0.5nm,0.6s,baz=321,slow=2.4,SNR=3.3						

CASC 22 22:40:17.4±2.7**, 12.50N×88.07W, h40^{km}**±321^{km}**, MD3.6, 6C-9D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	Conchagua	0.81	17	⇑*e*P	P	22 40 42.9	+10
CNCH				*e*S	S	22 40 54.8	+11
VSM	San Miguel	0.95	348	⇓*e*P	P	22 40 45.2	+11
VSM				*e*S	S	22 40 59.6	+13
BLLM	Bellamira	0.95	350	⇑*e*P	P	22 40 44.6	+10
BLLM				*e*S	S	22 40 58.9	+12
CRIN	San Cristobal	1.02	78	⇓*e*P	P	22 40 36.2	+0.8
CRIN				*e*S	S	22 40 51.1	+2.3
LEON	Leon	1.16	94	⇑*e*P	P	22 40 37.1	-0.2
LEON				*e*S	S	22 40 51.9	-0.3
TEL3	Telica 3	1.20	86	⇓*e*P	P	22 40 38.1	+0.1
TEL3				*e*S	S	22 40 52.3	-1.0
TELN	Telica	1.22	85	⇓*e*P	P	22 40 38.2	0.0
MIRN	Miramar	1.33	92	⇓*e*P	P	22 40 39.9	0.0
SNVI	San Vicente	1.34	326	⇓*e*P	P	22 40 50.2	+10
SNVI				*e*S	S	22 41 07.5	+11
CNGN	Cerro Negro	1.34	90	⇓*e*P	P	22 40 39.8	-0.3
LCBS	La Ceiba	1.45	323	⇑*e*P	P	22 40 51.9	+10
LCBS				*e*S	S	22 41 08.7	+9.0
LFRS	El Faro	1.48	319	⇓*e*P	P	22 40 52.1	+10
LFRS				*e*S	S	22 41 09.9	+10
COPN	Copaltepe	1.48	102	⇑*e*P	P	22 40 41.8	-0.2
MOMJ	Momotombo	1.50	93	⇑*e*P	P	22 40 42.2	-0.2
MOMJ				*e*S	S	22 41 00.5	-0.4
LBRS	Las Brisas	1.56	323	⇓*e*P	P	22 40 53.7	+11
LBRS				*e*S	S	22 41 12.1	+10
LFU	La Fuente	1.61	321	*e*P	P	22 40 55.0	+11
LFU				*e*S	S	22 41 14.1	+11
XAVN	Gruta Xavier	1.74	101	*e*P	P	22 40 45.6	-0.1
XAVN				*e*S	S	22 41 06.3	-0.6
MGAN	Managua	1.82	101	*e*P	P	22 40 46.5	-0.3
MGAN				*e*S	S	22 41 08.2	-0.6
TICN	Ticuantepe	1.86	104	*e*P	P	22 40 47.5	+0.1
WILN	Americas 2	1.87	100	*e*S	S	22 41 09.8	-0.4
SSNN	San Juan del S	2.48	119	*e*P	P	22 40 55.5	-0.9
SSNN				*e*S	S	22 41 23.3	-2.4
CONN	Concepcion	2.57	111	*e*P	P	22 40 57.6	+0.1

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*BJI **22** 23:22:45.3, 20.10S×177.60W, h522^{km}, mB4.8, mb4.8*

*NEIC **22** 23:22:46.3±0.8, 20.05S×177.59W, h523^{km}±9^{km}, mb4.5/13, Error ellipse: s-maj=11.1km s-min=7.7km az=119.0*

*IDC **22** 23:22:51.4±2.3, 20.09S×177.74W, h575^{km}±26^{km}, mb3.8/12, mb1 4.0/13, mb1mx3.9/16, mbtmp4.7/13, Error ellipse: s-maj=20.0km s-min=12.1km az=156.0*

ISC 22 23:22:44.5±1.0**, 20.14S**±0.05×**177.57W**±0.08**, h509^{km}**±11^{km}**, n87, σ1^{s}06**/55**, mb4.3**/26**, 4C-5D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.30	43	P	P	23 24 45.0	-0.3
	24nm,0.3s,baz=58,slow=2.0,SNR=20						
AFI				S	S	23 26 17.6	-3.8
	31nm,0.3s,baz=69,slow=21,SNR=9.9						
AFI	Afiamalu	8.30	43	*e*P	P	23 24 44.8	-0.5
	114nm,0.6s						
AFI				S	S	23 26 17.6	-3.8
RAO	Raoul Island	9.08	182	S	S	23 26 39.4	+3.4
	159nm,0.3s,baz=271,slow=20,SNR=6.0						
FUNA	Funafuti	11.96	344	*e*P	P	23 25 24.4	+0.9
DZM	Mont Dzumac	15.05	260	*e*P	P	23 25 56.6	+1.5
DZM				*e*S	S	23 28 28.9	-0.2
DZM	Mont Dzumac	15.05	260	P	P	23 25 58.0	+2.8
	2.1nm,0.3s,baz=75,slow=17,SNR=15						
DZM				S	S	23 28 33.6	+4.5
	0.1nm,0.3s,baz=274,slow=22,SNR=2.4						
MWZ	Matawai	18.63	192	PN	P	23 26 28.2	-2.0
URZ	Urewera	18.64	193	P	P	23 26 29.4	-1.0
	28nm,0.3s,baz=297,slow=3.4,SNR=90						
URZ				S	S	23 29 31.5	-1.0
	0.8nm,0.3s,baz=223,slow=22,SNR=7.0						
NNZ	Nelson	22.38	198	PN	P	23 27 02.6	-2.6
DSZ	Denniston Nort	23.35	200	PN	P	23 27 13.3	-0.8
RPZ	Rata Peaks	25.37	200	P	P	23 27 33.2	+1.2
	19nm,0.5s,mb5.0,baz=328,slow=1.7,SNR=7.4						
PMG	Port Moresby	35.66	282	P	P	23 29 01.5	+1.0
	63nm,0.9s,mb5.2,baz=84,slow=5.3,SNR=19						
STKA	Stephens Creek	38.31	244	P	P	23 29 23.2	+1.1
	9.5nm,0.6s,mb4.5,baz=88,slow=9.5,SNR=26						
STKA	Stephens Creek	38.31	244	P	P	23 29 23.2	+1.1
WRAB	Tennant Creek	45.05	262	⇓*e*P	P	23 30 15.3	-0.6
	87nm,0.9s,mb5.3						
WRA	Warramunga Arr	45.06	262	P	P	23 30 15.4	-0.6
	17nm,0.3s,mb5.0,baz=98,slow=7.0,SNR=546						
WRA				S	S	23 36 12.3	-5.3
	5.2nm,0.9s,baz=93,slow=13,SNR=15						
SBA	Scott Base	58.26	184	*e*P	P	23 31 52.5	+1.5
	6.4nm,0.8s,mb3.9						
VNDA	Vanda	58.31	185	*e*P	P	23 31 51.0	-0.3
	12nm,1.4s,mb3.9						
QSPA	South Pole Qui	69.93	180	*e*P	P	23 33 05.7	+0.8
	28nm,1.2s,mb4.7						
MJAR	Matsushiro Arr	70.16	323	P	P	23 33 05.7	-1.2
	14nm,0.7s,mb4.6,baz=157,slow=5.7,SNR=26						
MAJO	Matsushiro	70.16	323	*e*P	P	23 33 05.2	-1.8
	13nm,0.8s,mb4.5						
MAT	Matsushiro	70.16	323	P	P	23 33 05.9	-1.0
MAT	Matsushiro	70.16	323	*e*P	P	23 33 06.0	-0.9
	13nm,0.7s,mb4.6						
CMB	Columbia Colle	78.92	43	*e*P	P	23 33 56.1	+0.2
MDJ	Mudanjiang	80.46	325	P	P	23 34 04.3	+0.5
MDJ				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,60nm,4.7s						
MDJ	Mudanjiang	80.46	325	*e*P	P	23 34 04.6	+0.8
	comp=Z,18nm,1.0s,mb4.3						
NVAR	Mina Array Bea	80.48	43	P	P	23 34 05.1	+1.0
	comp=Z,1.4nm,0.6s,mb3.5,baz=222,slow=8.6,SNR=17						
NVAR	Mina Array Bea	80.48	43	P	P	23 34 05.1	+1.0
MAW	Mawson	82.04	200	P	P	23 34 11.7	+0.4
	comp=Z,0.8nm,0.6s,mb3.4,baz=130,slow=8.2,SNR=6.9						
TUC	Tucson	82.44	52	*e*P	P	23 34 15.6	+1.5
	comp=Z,5.0nm,1.1s,mb3.9						
ELK	Elko	83.74	43	P	P	23 34 20.8	+0.3
	comp=Z,0.9nm,0.6s,mb3.5,baz=264,slow=4.9,SNR=5.3						
ELK	Elko	83.74	43	P	P	23 34 20.8	+0.3
TXAR	Lajitas Array	86.52	57	P	P	23 34 35.3	+1.1
	comp=Z,1.9nm,0.8s,mb3.8,baz=215,slow=7.1,SNR=20						
MCK	McKinley	86.53	12	*e*P	P	23 34 32.5	-0.9
	comp=Z,11nm,1.0s,mb4.4						
PV10	Paradox Valley	86.63	47	*e*P	P	23 34 34.4	-0.1
GDL2	Guadalupe Moun	87.21	54	*e*P	P	23 34 37.6	+0.3
COLA	College	87.77	12	*e*P	P	23 34 38.3	-0.9
ILAR	Eielson Array	87.87	13	P	P	23 34 38.5	-1.1
	comp=Z,3.3nm,0.7s,mb4.2,baz=217,slow=5.5,SNR=44						
CPRX	Cap Rock	87.94	54	*e*P	P	23 34 36.3	-4.5
IMW	Indian Meadow	88.11	42	*e*P	P	23 34 41.6	+0.3
	comp=Z,6.4nm,1.1s,mb4.3						
XAN	Xi’an	88.24	307	P	P	23 34 42.8	+0.6
XAN				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
SNAA	Sanae	88.36	178	*e*P	P	23 34 41.5	-0.4
PDAR	Pinedale Array	88.42	43	P	P	23 34 42.8	0.0
	comp=Z,1.9nm,0.7s,mb3.9,baz=209,slow=2.6,SNR=12						
VNA3	Neumayer Olymp	88.48	176	⇑*i*P	P	23 34 42.7	+0.3
BOZ	Bozeman (W)	88.58	40	*e*P	P	23 34 44.2	+0.7
	comp=Z,7.6nm,1.4s,mb4.3						
VNA2	Neumayer--Watz	88.92	177	⇑*i*P	P	23 34 45.0	+0.5
KMI	Kunming	89.55	297	P	P	23 34 49.5	+1.0
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.6						
INK	Inuvik	93.82	15	*e*P	P	23 35 05.1	-2.0
	comp=Z,3.9nm,0.9s,mb4.5						
SONM	Songino Array	95.75	319	P	P	23 35 16.3	0.0
	comp=Z,0.6nm,0.9s,mb3.8,baz=146,slow=5.6,SNR=4.3						
SONM				PP	PP	23 39 13.6	-4.0
	comp=Z,0.7nm,1.0s,baz=127,slow=7.4,SNR=3.7						
GOGA	Godfrey	104.11	59	*e*pP		23 35 51.3	
	comp=Z,110nm,1.1s						
BRVK	Borovoye	119.12	320	*e*PKPdf	PKPdf	23 40 34.0	-0.8
ARU	Arti	125.13	326	*e*PKPdf	PKPdf	23 40 46.0	-0.2
ARCES	ARCESS Array B	128.64	350	PKP	PKPdf	23 40 52.2	-0.5
	comp=Z,5.2nm,0.7s,baz=335,slow=0.9,SNR=14						
ARCES	ARCESS Array B	128.64	350	PKP	PKPdf	23 40 52.2	-0.5
JOF	Joensuu	132.91	342	*e*p	PKPdf	23 41 00.6	-0.3
	comp=Z,4.3nm,0.6s						
KAF	Kangasniemi	134.91	344	*e*p	PKPdf	23 41 03.4	-1.2
	comp=Z,1.9nm,0.5s						
FINES	FINESS Array B	135.54	344	PKhKP		23 40 54.6	
	comp=Z,1.1nm,0.7s,baz=63,slow=4.3,SNR=4.1						
FINES				PKP	PKPdf	23 41 06.1	+0.3
	comp=Z,3.7nm,0.9s,slow=3.8,SNR=6.1						
FINES	FINESS Array B	135.54	344	PKP		23 40 54.6	
FINES				PKP	PKPdf	23 41 06.1	+0.3
AKASG	Malin Array Be	142.89	332	PKhKP		23 41 16.3	
	baz=40,slow=4.4,SNR=9.3						
MUD	Monsted U’grnd	143.39	354	*i* P	PKPbc	23 41 14.0	-4.8
	comp=Z,31nm,1.1s						
MUD				*i*		23 41 18.7	
COP	Copenhagen	143.72	350	*i* P	PKPbc	23 41 19.7	-0.1
	comp=Z,22nm,0.8s						
COP	Copenhagen	143.72	350	*e*P	PKPbc	23 41 19.7	-0.1
BSD	Bornholm Skovb	143.82	348	*i* P	PKPbc	23 41 19.5	-0.6
	comp=Z,40nm,0.8s						
BRTR	Keskin Array B	146.90	313	PKPbc	PKPbc	23 41 29.8	+1.3
	comp=Z,6.8nm,0.7s,baz=122,slow=2.9,SNR=37						
BURAR	Bucovina Array	146.94	331	⇓P	PKPdf	23 41 30.0	+3.9
STHS	Stebnicka Huta	147.14	337	*e*PKP	PKPdf	23 41 26.9	+0.5
STHS				*e*		23 41 30.7	
STHS				*e*		23 41 34.7	
STHS	Stebnicka Huta	147.14	337	*e*PKP	PKPdf	23 41 26.9	+0.5
STHS				*e*		23 41 30.7	
STHS				*i*		23 41 30.9	
STHS				*e*		23 41 34.7	
KOLS	Kolonicke sedl	147.15	336	*e*PKP	PKPdf	23 41 30.8	+4.4
KOLS				*e*		23 41 34.0	
CFR	Carcaliu	147.22	325	⇑P	PKPdf	23 41 29.7	+3.1
VRI	Vrincioaia	147.48	328	⇓P	PKPdf	23 41 31.1	+4.1
CRVS	Cervenica-Dubn	147.49	336	*e*PKP	PKPdf	23 41 31.1	+4.2
CRVS				*i*		23 41 31.2	
HARR	Harsova	147.65	325	⇓P	PKPdf	23 41 31.0	+3.6
CLL	Collm	147.80	348	*e*PKIKP	PKPdf	23 41 29.0	+1.6
CLL				*i* PKP1	PKPdf	23 41 32.0	+4.6
CLL				*i* PKP2	PKPab	23 41 35.8	-1.9
MLR	Muntele Rosu	148.14	328	PKPbc	PKPdf	23 41 33.0	+4.9
	comp=Z,6.2nm,0.6s,baz=149,slow=19,SNR=12						
MLR	Muntele Rosu	148.14	328	⇓P	PKPdf	23 41 31.4	+3.3
KECS	Kecovo	148.20	337	*e*PKP	PKPdf	23 41 33.2	+5.1
KECS				*e*		23 41 38.3	
DRGR		148.68	333	⇑P	PKPdf	23 41 31.1	+2.2
MOX	Moxa	148.70	349	*e*PKP	PKPdf	23 41 33.8	+5.0
VYHS	Vyhne	148.77	339	*e*PKP	PKPdf	23 41 34.7	+5.7
SMOL	Smolenice	149.22	340	*e*PKP	PKPdf	23 41 31.7	+1.9
SMOL				*e*		23 41 36.8	
TNS	Taunus Mts	149.60	352	*e*PKPbc	PKPdf	23 41 36.8	+6.5
ZST	Bratislava	149.60	340	*e*PKP	PKPdf	23 41 30.4	0.0
GRA1	Grafenberg Arr	149.69	349	*e*PKPbc	PKPdf	23 41 37.0	+6.5
GRF	Grafenberg Arr	149.69	349	*e*PKP	PKPdf	23 41 37.0	+6.5
WET	Wettzell	149.87	346	*e*PKPbc	PKPdf	23 41 37.4	+6.6
GERES	GERESS Array B	149.96	345	PKPbc	PKPdf	23 41 37.4	+6.4
	comp=Z,10nm,0.8s,baz=45,slow=1.9,SNR=23						
BFO	Black Forest	151.47	352	*e*PKPbc	PKPdf	23 41 40.4	+7.2

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*MOS **22** 23:27:34.9±0.9, 8.93S×74.35W, h152^{km}, mb5.2/93, Error ellipse: s-maj=7.3km s-min=4.8km az=98.2*

*BJI **22** 23:27:35.5, 9.00S×74.30W, h143^{km}, mB5.7*

*HRVD **22** 23:27:35.5±0.2, 9.01S×74.28W, h152^{km}±1^{km}, MW5.3/77, Centroid moment Tensor Solution. LP body waves: s55,c81;Mantle waves: s77,c142; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.42±.03; $M_{\theta\theta}$-0.02±.03; $M_{\phi\phi}$0.44±.03; $M_{r\theta}$0.29±.02; $M_{\theta\phi}$-0.17±.03; $M_{\phi r}$-0.95±.02; Best double couple: $M_0$1.097×10^{17} NP1: ϕ_s160°, δ12°, λ-93°. NP2:ϕ_s343°, δ78°, λ-89°. Principal axes: T 1.134, Plg33°, Azm73°; N -.073, Plg1°, Azm163°; P -1.06, Plg57°, Azm254°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **22** 23:27:35.5±0.1, 8.98S×74.27W, mb5.3/183 Error ellipse: s-maj=3.8km s-min=2.5km az=220.0*

NEIC Felt [III] at Puerto Inca.

*IDC **22** 23:27:35.8±0.4, 9.01S×74.26W, h147^{km}±3^{km}, mb4.8/25, mb1 4.9/28, mb1mx4.9/29, mbtmp5.2/28, MS4.1/7, Ms1 4.0/7, ms1mx3.6/26, Error ellipse: s-maj=13.5km s-min=7.4km az=67.0*

ISC 22 23:27:34.0±0.1**, 8.92S**±0.03×**74.31W**±0.03**, h144^{km}, h144^{km}**±.7^{km}**:pP-P, n561, σ0^{s}84**/482**, mb5.1**/216**, 28C-23D, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.94	219	*e*Pn	P	23 28 33.1	-1.1
NNA				*e*Sn	S	23 29 12.0	-8.3
ARE	Arequipa	7.98	160	*e*P	P	23 29 28.0	-0.2
LPAZ	La Paz	9.48	141	P	P	23 29 48.6	+0.5
	1.7nm,0.3s,baz=325,slow=13,SNR=60						
LPAZ	La Paz	9.48	141	⇑*e*Pn	P	23 29 48.4	+0.3
	3.9nm,0.8s						
LPAZ	La Paz	9.48	141	⇑*e*P	P	23 29 48.4	+0.3
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SAML	Samuel	10.99	91	⇑*i*Pn	P	23 30 06.8	-1.3
	comp=Z,2.0nm,1.1s						
SAML				*e*Sn	S	23 32 06.2	-2.6
ROSC	El Rosal	13.69	360	P	P	23 30 48.0	+4.8
	comp=Z,7.7nm,0.3s,baz=308,slow=1.9,SNR=20						
SIV	San Ignacio	14.71	120	P	P	23 30 54.9	-1.2
	comp=Z,4.7nm,0.3s,baz=294,slow=12,SNR=332						
SIV				S	S	23 33 32.7	-2.8
	comp=Z,5.8nm,0.3s,baz=24,slow=15,SNR=4.3						
PAYG	Puerto Ayora	17.89	296	*e*P	P	23 31 35.4	+0.2
	comp=Z,176nm,1.2s						
PAYG				*e*pP		23 32 01.5	
SDV	Santo Domingo	18.06	12	P	P	23 31 37.6	+0.6
	comp=Z,18nm,0.3s,baz=207,slow=8.1,SNR=115						
SDV				S	S	23 35 06.5	+16
	comp=Z,1.0nm,0.3s,baz=17,slow=16,SNR=3.9						
SDV	Santo Domingo	18.06	12	*e*P	P	23 31 36.9	-0.2
	comp=Z,93nm,0.7s						
JTS	JuntasAbangare	21.83	331	P	P	23 32 17.7	+2.1
	comp=Z,57nm,1.0s,mb5.0,baz=98,slow=2.5,SNR=13						
JTS	JuntasAbangare	21.83	331	*e*P	P	23 32 18.6	+3.0
	comp=Z,170nm,1.3s,mb5.3						
JTS				S	S	23 36 08.9	+6.2
JTS	JuntasAbangare	21.83	331	*e*P	P	23 32 18.6	+3.0
JTS				S	S	23 36 08.9	+6.3
JTS				pmax	pmax		
	comp=Z,170nm,1.3s						
CFAA	Coronel Fontan	23.27	167	P	P	23 32 29.7	+0.2
	comp=Z,2.1nm,0.5s,baz=343,slow=9.9,SNR=53						
CFAA				S	S	23 36 29.8	+2.4
	comp=Z,0.8nm,1.0s,baz=349,slow=9.8,SNR=5.6						
TRN	Trinidad (W)	23.30	34	*e*P	P	23 32 32.0	+2.1
CPUP	Villa Florida	23.65	139	*e*P	P	23 32 31.9	-1.4
	comp=Z,190nm,0.9s,mb5.6						
CPUP				*e*pP		23 33 01.0	
CPUP	Villa Florida	23.65	139	*e*P	P	23 32 31.9	-1.3
CPUP				*e**PP		23 33 01.0	
CPUP				pmax	pmax		
	comp=Z,190nm,0.9s						
TPR	Prospect	24.09	34	*e*P	P	23 32 39.9	+2.4
GRW	Mount Saint Ca	24.43	31	*e*P	P	23 32 41.1	+0.4
FCH	Farellones	24.57	172	*e*P	P	23 32 43.1	+1.1
BDFB	Brasilia	26.53	107	P	P	23 32 59.5	-0.8
	comp=Z,101nm,0.6s,mb5.7,baz=281,slow=11,SNR=46						
BDFB				LR	LR	23 43 06.0	
	comp=Z,353nm,19.5s,baz=286,slow=35						
BAO	Brasilia Array	26.55	107	P	P	23 32 58.0	-2.5
MVM	Montagne Vaucl	26.85	30	⇑*e*P	P	23 33 00.4	-2.8
FDF	Fort de France	26.88	29	⇑*e*P	P	23 33 00.6	-2.9
CRM	Caravelle	27.01	30	⇓*e*P	P	23 33 02.0	-2.7
CPD	Cerro la Pandu	28.04	17	*e*P	P	23 33 13.1	-0.9
SJG	San Juan	28.04	17	P	P	23 33 13.5	-0.5
	comp=Z,82nm,0.6s,mb5.7,baz=179,slow=4.7,SNR=29						
SJG				S	S	23 37 44.6	-1.7
	comp=Z,7.9nm,0.7s,baz=320,slow=22,SNR=6.9						
SJG	San Juan	28.04	17	*e*P	P	23 33 13.2	-0.8
	comp=Z,94nm,0.8s,mb5.6						
SJG	San Juan	28.04	17	*e*P	P	23 33 13.2	-0.8
SJG				pmax	pmax		
	comp=Z,94nm,0.8s						
MTP	Monte Pirata	28.20	18	*e*P	P	23 33 14.2	-1.2
TRQA	Tornquist	31.07	161	*e*P	P	23 33 38.2	-2.5
	comp=Z,39nm,1.1s,mb5.0						
TRQA				*e*pP	pP	23 34 08.8	-2.8
PLCA	Paso Flores	31.86	175	P	P	23 33 44.8	-2.7
	comp=Z,9.8nm,0.6s,mb4.7,baz=345,slow=11,SNR=23						
PLCA				PcP	PcP	23 36 34.6	-0.3
	comp=Z,12nm,0.7s,baz=342,slow=4.0,SNR=6.7						
PLCA				ScP		23 40 04.8	
	comp=Z,5.1nm,0.9s,baz=326,slow=5.9,SNR=4.3						
PLCA	Paso Flores	31.86	175	*e*P	P	23 33 45.9	-1.6
	comp=Z,13nm,0.8s,mb4.7						
PLCA				*e*pP	pP	23 34 16.3	-2.3
PLCA				*e*PcP	PcP	23 36 34.4	-0.5
PLCA	Paso Flores	31.86	175	*e*P	P	23 33 45.9	-1.6
PLCA				*e**PP	pP	23 34 16.3	-2.3
PLCA				*e*		23 36 34.4	
PLCA				pmax	pmax		
	comp=Z,13nm,0.8s						
CAM4	Nova Friburgo	33.27	117	⇑*i*P	P	23 33 57.9	-1.9
CAM4				*i*		23 34 01.1	
CAM4				*i*		23 34 10.1	
CAM4				*i*		23 44 50.4	
CAM3	Guarapari	34.63	114	⇑*i*P	P	23 34 10.0	-1.4
CAM3				*i*		23 34 13.2	
DWPF	Disney	37.45	350	*e*P	P	23 34 33.6	-1.5
RPN	Rapa Nui	37.72	237	P	P	23 34 37.0	-0.4
	comp=Z,58nm,0.9s,mb5.2,baz=79,slow=7.6,SNR=3.8						
RCBR	Riachuelo	38.20	88	*e*P	P	23 34 40.4	-1.2
	comp=Z,26nm,0.7s,mb5.0						
RCBR				*e*pP	pP	23 35 13.7	+0.2
BBSR	BB Station	42.07	12	P	P	23 35 11.1	-2.2
NHSC	New Hope	42.16	353	P	P	23 35 13.3	-0.7
GOGA	Godfrey	42.99	349	*e*P	P	23 35 21.2	+0.5
	comp=Z,62nm,1.1s,mb5.2						
GOGA	Godfrey	42.99	349	*e*P	P	23 35 21.2	+0.5
GOGA				pmax	pmax		
	comp=Z,61nm,1.1s,mb5.1						
JSC	Jenkinsville	43.47	352	*e*P	P	23 35 24.5	-0.1
EFI	East Falkland	44.66	166	*e*P	P	23 35 32.9	-1.0
	comp=Z,58nm,0.9s,mb5.2						
EFI	East Falkland	44.66	166	*e*P	P	23 35 32.9	-1.0
EFI				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.2						
MYNC	Murphy	44.73	349	*e*P	P	23 35 34.7	+0.1
	comp=Z,84nm,1.2s,mb5.2						
MYNC				*e*pP	pP	23 36 08.6	+1.5
MYNC	Murphy	44.73	349	*e*P	P	23 35 34.7	+0.1
MYNC				*e**PP	pP	23 36 08.6	+1.4
MYNC				pmax	pmax		
	comp=Z,84nm,1.2s,mb5.2						
NATX	Nacogdoches	44.89	335	*e*P	P	23 35 37.1	+1.1
	comp=Z,150nm,1.0s,mb5.6						
OXF	Oxford	45.50	342	*e*P	P	23 35 39.2	-1.5
	comp=Z,77nm,1.8s,mb5.0						
OXF	Oxford	45.50	342	*e*P	P	23 35 39.3	-1.5
OXF				pmax	pmax		
	comp=Z,77nm,1.8s,mb5.0						
USHA	Ushuaia	46.03	175	P	P	23 35 44.5	-0.1
	comp=Z,33nm,0.9s,mb5.0,baz=333,slow=4.5,SNR=12						
TZTN	Tazewell	46.05	350	*e*P	P	23 35 44.9	-0.1
WVT	Waverly	46.58	345	*e*P	P	23 35 47.6	-1.7
	comp=Z,14nm,0.6s,mb4.8						
WVT	Waverly	46.58	345	*e*P	P	23 35 47.6	-1.6
WVT				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.8						
UALR	University of	46.69	339	*e*P	P	23 35 49.5	-0.6
	comp=Z,34nm,1.1s,mb4.9						
UALR				*e*pP	pP	23 36 19.9	-3.0
MIAR	Mount Ida	46.92	338	*e*P	P	23 35 51.6	-0.3
	comp=Z,18nm,1.1s,mb4.6						
MIAR	Mount Ida	46.92	338	*e*P	P	23 35 51.6	-0.3
MIAR				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.6						
CBN	Corbin	46.97	357	*e*P	P	23 35 53.1	+0.9
	comp=Z,58nm,0.5s,mb5.5						
LTX	Lajitas	47.40	324	*e*P	P	23 35 56.3	+0.6
	comp=Z,50nm,0.8s,mb5.2						
LTX				*e*PcP	PcP	23 37 23.2	-1.2
LTX	Lajitas	47.40	324	*e*P	P	23 35 56.3	+0.6
LTX				*e*		23 37 23.2	
LTX				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.2						
TXAR	Lajitas Array	47.40	324	P	P	23 35 56.2	+0.5
	comp=Z,34nm,0.6s,mb5.1,baz=148,slow=9.0,SNR=337						
TXAR				PcP	PcP	23 37 24.2	-0.2
	comp=Z,9.9nm,0.8s,baz=153,slow=7.5,SNR=5.7						

TXAR	**Lajitas Array**	**47.40**	**324**	P	**P**	**23 35 56.2**	**+0.5**
TXAR				PcP	PcP	23 37 24.2	-0.2
WCI	**Wyandotte Cave**	**48.22**	**347**	eP	**P**	**23 36 00.9**	**-1.0**
	comp=Z,59nm,0.9s,mb5.2						
WCI	**Wyandotte Cave**	**48.22**	**347**	eP	**P**	**23 36 01.0**	**-1.0**
WCI				pmax	pmax		
	comp=Z,59nm,0.9s,mb5.2						
SIUC	**Southern Illin**	**48.44**	**344**	eP	**P**	**23 36 02.3**	**-1.4**
SIUC				epP	pP	23 36 34.2	-2.5
SIUC				ePcP	PcP	23 37 26.9	-1.1
MCWV	**Mont Chateau**	**48.60**	**354**	eP	**P**	**23 36 05.8**	**+0.8**
	comp=Z,84nm,1.0s,mb5.3						
FVM	**French Village**	**49.03**	**343**	eP	**P**	**23 36 07.2**	**-1.0**
	comp=Z,45nm,0.7s,mb5.2						
FVM	**French Village**	**49.03**	**343**	eP	**P**	**23 36 07.3**	**-0.9**
FVM				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.2						
WMOK	**Wichita Mounta**	**49.21**	**333**	eP	**P**	**23 36 09.3**	**-0.3**
	comp=Z,22nm,0.9s,mb4.8						
WMOK				ePcP	PcP	23 37 29.9	-0.9
WMOK	**Wichita Mounta**	**49.21**	**333**	eP	**P**	**23 36 09.3**	**-0.4**
WMOK				e		23 37 30.0	
WMOK				pmax	pmax		
	comp=Z,22nm,0.9s,mb4.8						
CCM	**Cathedral Cave**	**49.34**	**342**	eP	**P**	**23 36 09.2**	**-1.4**
	comp=Z,34nm,1.1s,mb4.9						
CCM				ePcP	PcP	23 37 30.6	-0.7
CCM	**Cathedral Cave**	**49.34**	**342**	eP	**P**	**23 36 09.2**	**-1.4**
CCM				e		23 37 30.6	
CCM				pmax	pmax		
	comp=Z,34nm,1.1s,mb4.9						
ACSO	**Alum Creek Sta**	**49.56**	**351**	eP	**P**	**23 36 11.8**	**-0.4**
	comp=Z,7.2nm,0.5s,mb4.6						
CLNB	**Carlsbad**	**49.74**	**327**	eP	**P**	**23 36 14.4**	**+0.7**
GDL2	**Guadalupe Moun**	**49.96**	**326**	eP	**P**	**23 36 15.8**	**+0.5**
MNTX	**Cornudas Mount**	**50.15**	**325**	eP	**P**	**23 36 16.1**	**-0.7**
	comp=Z,89nm,1.3s,mb5.2						
MNTX				epP	pP	23 36 46.0	-4.0
CPRX	**Cap Rock**	**50.33**	**327**	eP	**P**	**23 36 18.8**	**+0.7**
ALLY	**Alegheny Colle**	**50.60**	**354**	eP	**P**	**23 36 20.3**	**+0.2**
AMTX	**Amarillo**	**50.68**	**331**	eP	**P**	**23 36 19.7**	**-1.1**
	comp=Z,63nm,1.2s,mb5.1						
KSU1	**Kansas State U**	**52.08**	**338**	eP	**P**	**23 36 30.5**	**-0.8**
KSU1				epP	pP	23 37 02.2	-2.5
BNM	**Barren Site**	**52.67**	**326**	eP	**P**	**23 36 36.0**	**+0.3**
BNM				ePcP	PcP	23 37 43.4	-0.3
LPM	**Los Pinos Moun**	**52.79**	**326**	eP	**P**	**23 36 37.0**	**+0.4**
LENM	**Lemitar**	**52.87**	**326**	eP	**P**	**23 36 37.2**	**0.0**
LENM				ePcP	PcP	23 37 43.8	-0.6
LBNH	**Lisbon**	**52.95**	**2**	eP	**P**	**23 36 37.0**	**-0.7**
	comp=Z,376nm,1.4s,mb5.9						
LBNH	**Lisbon**	**52.95**	**2**	eP	**P**	**23 36 37.0**	**-0.7**
LBNH				pmax	pmax		
	comp=Z,376nm,1.4s,mb5.9						
CBKS	**Cedar Bluff**	**53.06**	**335**	eP	**P**	**23 36 38.7**	**+0.2**
	comp=Z,148nm,1.3s,mb5.6						
CBKS	**Cedar Bluff**	**53.06**	**335**	eP	**P**	**23 36 38.7**	**+0.1**
CBKS				pmax	pmax		
	comp=Z,148nm,1.3s,mb5.6						
LAZ	**Ladron**	**53.14**	**326**	eP	**P**	**23 36 40.0**	**+0.8**
ANMO	**Albuquerque**	**53.18**	**327**	P	**P**	**23 36 39.6**	**+0.1**
	comp=Z,24nm,1.1s,mb4.9,baz=144,slow=8.1,SNR=25						
ANMO				pP	pP	23 37 15.0	+2.0
	comp=Z,9.2nm,0.9s,baz=156,slow=8.8,SNR=3.3						
ANMO	**Albuquerque**	**53.18**	**327**	eP	**P**	**23 36 39.3**	**-0.1**
	comp=Z,34nm,1.1s,mb5.0						
ANMO	**Albuquerque**	**53.18**	**327**	eP	**P**	**23 36 39.3**	**-0.2**
ANMO				pmax	pmax		
	comp=Z,34nm,1.1s						
SADO	**Sadowa**	**53.62**	**356**	P	**P**	**23 36 41.6**	**-0.9**
	comp=Z,20nm,0.7s,mb5.0,baz=211,slow=5.2,SNR=11						
SADO				pP	pP	23 37 16.9	+0.8
	comp=Z,52nm,0.9s,baz=196,slow=5.4,SNR=6.3						
TUC	**Tucson**	**53.78**	**321**	eP	**P**	**23 36 43.6**	**-0.3**
	comp=Z,37nm,0.9s,mb5.1						
TUC	**Tucson**	**53.78**	**321**	eP	**P**	**23 36 43.7**	**-0.2**
TUC				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.1						
SDCO	**Great Sand Dun**	**54.82**	**330**	eP	**P**	**23 36 51.6**	**+0.1**
	comp=Z,109nm,1.2s,mb5.5						
SDCO				epP	pP	23 37 23.2	-1.9
SDCO				PcP	PcP	23 37 51.0	-0.7
PMSA	**Palmer Station**	**56.23**	**175**	eP	**P**	**23 36 56.2**	**-5.0**
	comp=Z,37nm,0.9s,mb5.2						
PMSA				epP	pP	23 37 30.8	-4.3
RW3	**Ridgway**	**56.31**	**329**	eP	**P**	**23 37 02.4**	**+0.2**
WUAZ	**Wupatki**	**56.35**	**324**	eP	**P**	**23 37 02.7**	**+0.3**
	comp=Z,120nm,1.0s,mb5.7						
ISCO	**Idaho Springs**	**56.48**	**331**	eP	**P**	**23 37 03.2**	**-0.1**
	comp=Z,39nm,1.0s,mb5.2						
ISCO				ePcP	PcP	23 37 58.6	+0.5
ISCO	**Idaho Springs**	**56.48**	**331**	eP	**P**	**23 37 03.2**	**-0.1**
ISCO				e		23 37 58.7	
ISCO				pmax	pmax		
	comp=Z,39nm,1.0s,mb5.2						
SMCO	**Snowmass**	**56.66**	**330**	eP	**P**	**23 37 04.8**	**+0.3**
	comp=Z,58nm,1.1s,mb5.3						
SMCO				epP	pP	23 37 39.7	+1.2
PV01	**Paradox Valley**	**56.69**	**328**	eP	**P**	**23 37 04.8**	**0.0**
PV01				epP	pP	23 37 40.0	+1.3
PV10	**Paradox Valley**	**57.11**	**328**	eP	**P**	**23 37 07.0**	**-0.7**
PHWY	**Pilot Hill**	**57.60**	**333**	eP	**P**	**23 37 11.1**	**0.0**
PHWY				epP	pP	23 37 47.5	+2.4
BAR	**Barrett**	**57.80**	**318**	eP	**P**	**23 37 12.1**	**-0.6**
PFO	**Pinyon Flat Ob**	**58.23**	**319**	eP	**P**	**23 37 15.7**	**0.0**
	comp=Z,56nm,1.1s,mb5.3						
PFO				epP	pP	23 37 49.3	-0.5
PFO				ePcP	PcP	23 38 03.5	-1.5
PFO	**Pinyon Flat Ob**	**58.23**	**319**	eP	**P**	**23 37 15.7**	**+0.1**
PFO				e*PP	pP	23 37 49.3	-0.4
PFO				e		23 38 03.6	
PFO				pmax	pmax		
	comp=Z,56nm,1.1s,mb5.3						
LDFC	**Landfair**	**58.31**	**321**	eP	**P**	**23 37 16.7**	**+0.5**
SRU	**San Rafael**	**58.44**	**327**	eP	**P**	**23 37 16.6**	**-0.4**
	comp=Z,20nm,0.8s,mb5.0						
SRU				epP	pP	23 37 51.7	+0.6
SRU				PP	PP	23 39 24.5	-5.1
SRU	**San Rafael**	**58.44**	**327**	eP	**P**	**23 37 16.6**	**-0.4**
SRU				e*PP	pP	23 37 51.7	+0.6
SRU						23 39 24.5	
SRU				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.0						
NEN	**Nelson**	**58.52**	**322**	eP	**P**	**23 37 17.4**	**-0.2**
EYMN	**Ely**	**58.63**	**347**	eP	**P**	**23 37 16.2**	**-2.0**
	comp=Z,33nm,0.9s,mb5.2						
RWWY	**Rawlins**	**58.72**	**332**	eP	**P**	**23 37 19.3**	**+0.4**
	comp=Z,220nm,1.4s,mb5.8						
RWWY				ePcP	PcP	23 38 05.7	-1.2
MSU	**Marysvale**	**58.91**	**326**	eP	**P**	**23 37 20.5**	**+0.2**
MSU				ePcP	PcP	23 38 07.9	+0.2
MVU	**Marysvale**	**58.92**	**326**	eP	**P**	**23 37 20.6**	**+0.2**
	comp=Z,24nm,0.9s,mb5.0						
MVU				ePcP	PcP	23 38 08.1	+0.3
TMUT	**Trail Mountain**	**58.94**	**327**	eP	**P**	**23 37 19.8**	**-0.7**
TMUT				epP	pP	23 37 53.4	-1.3
TMUT				ePcP	PcP	23 38 07.6	-0.2
ARUT	**Antelope Range**	**59.12**	**324**	eP	**P**	**23 37 22.0**	**+0.2**
ARUT				ePcP	PcP	23 38 05.1	-3.4
RSSD	**Black Hills**	**59.26**	**335**	eP	**P**	**23 37 22.5**	**-0.2**
	comp=Z,85nm,1.0s,mb5.5						
RSSD	**Black Hills**	**59.26**	**335**	eP	**P**	**23 37 22.5**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,85nm,1.0s,mb5.5						
GSC	**Goldstone**	**59.52**	**320**	eP	**P**	**23 37 24.6**	**+0.1**
GSC				epP	pP	23 37 58.6	-0.2
RKT	**Rikitea**	**59.62**	**248**	eP	**P**	**23 37 25.3**	**-0.1**
	comp=Z,195nm,1.0s,mb5.9						
RKT	**Rikitea**	**59.62**	**248**	eLR	LR	23 55 17.9	
	comp=Z,295nm,39.5s						
MWC	**Mount Wilson**	**59.66**	**318**	eP	**P**	**23 37 25.2**	**-0.3**
MWC				pP	pP	23 37 58.9	-0.9
MPU	**Maple Canyon**	**59.68**	**327**	eP	**P**	**23 37 25.6**	**0.0**
	comp=Z,36nm,1.0s,mb5.2						
DAU	**Daniels Canyon**	**59.77**	**328**	eP	**P**	**23 37 26.5**	**+0.3**
NLU	**North Lily Min**	**59.88**	**327**	eP	**P**	**23 37 26.9**	**-0.1**
TPNV	**Topopah Spring**	**60.23**	**322**	eP	**P**	**23 37 29.6**	**+0.3**
	comp=Z,54nm,0.9s,mb5.4						
TPNV				epP	pP	23 38 04.5	+0.8
TPNV	**Topopah Spring**	**60.23**	**322**	eP	**P**	**23 37 29.7**	**+0.4**
TPNV				e*PP	pP	23 38 04.5	+0.8
TPNV				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.4						
CTU	**Camp Tracy**	**60.23**	**328**	eP	**P**	**23 37 29.1**	**-0.2**
	comp=Z,21nm,0.9s,mb5.0						
TCUT	**Toone Canyon**	**60.36**	**328**	eP	**P**	**23 37 30.2**	**0.0**
TCUT				epP	pP	23 38 05.7	+1.1
NOQ	**North Oquirrh**	**60.40**	**328**	eP	**P**	**23 37 29.8**	**-0.7**
	comp=Z,24nm,0.6s,mb5.2						
DUG	**Dugway**	**60.45**	**327**	eP	**P**	**23 37 30.9**	**+0.1**
	comp=Z,86nm,1.0s,mb5.5						
DAC	**Darwin (Calif)**	**60.63**	**321**	eP	**P**	**23 37 31.2**	**-0.9**
	comp=Z,33nm,1.4s,mb5.0						
PDAR	**Pinedale Array**	**60.66**	**331**	P	**P**	**23 37 31.4**	**-0.7**
	comp=Z,13nm,0.6s,mb4.9,baz=143,slow=7.4,SNR=79						
PDAR				pP	pP	23 38 07.8	+1.2
	comp=Z,8.3nm,0.9s,baz=162,slow=9.4,SNR=3.1						
HWUT	**Hardware Ranch**	**60.80**	**329**	⇓eP	**P**	**23 37 32.6**	**-0.6**
	comp=Z,75nm,0.7s,mb5.6						
HWUT				epP	pP	23 38 08.1	+0.6
HWUT				ePcP	PcP	23 38 14.1	-1.1
ISA	**Isabella**	**60.81**	**319**	eP	**P**	**23 37 33.2**	**-0.1**
	comp=Z,20nm,0.8s,mb5.0						
SPUT	**South Promonto**	**61.04**	**328**	eP	**P**	**23 37 34.3**	**-0.5**
SPUT				epP	pP	23 38 06.8	-2.5
AHID	**Auburn Hatcher**	**61.41**	**330**	eP	**P**	**23 37 32.7**	**-4.6**
	comp=Z,43nm,0.8s,mb5.3						
TPH	**Tonopah**	**61.54**	**322**	eP	**P**	**23 37 37.8**	**-0.4**
	comp=Z,48nm,1.2s,mb5.2						
HVU	**Hansel Valley**	**61.55**	**328**	eP	**P**	**23 37 37.6**	**-0.6**
	comp=Z,47nm,1.0s,mb5.3						
REDW	**Red Top Meadow**	**61.73**	**330**	eP	**P**	**23 37 39.0**	**-0.4**
	comp=Z,58nm,1.3s,mb5.2						
SNOW	**Snow King Moun**	**61.76**	**331**	eP	**P**	**23 37 39.2**	**-0.4**
	comp=Z,30nm,0.8s,mb5.2						
LOHW	**Long Hollow**	**61.80**	**331**	eP	**P**	**23 37 39.3**	**-0.5**
	comp=Z,32nm,0.8s,mb5.2						
LOHW				ePcP	PcP	23 38 17.8	-1.4
ULM	**Lac du Bonnet**	**61.85**	**344**	P	**P**	**23 37 38.8**	**-1.3**
	comp=Z,27nm,0.9s,mb5.1,baz=159,slow=6.3,SNR=22						
ULM				LR	LR	00 02 41.8	
	comp=Z,102nm,21.5s,baz=357,slow=34						
TPAW	**Teton Pass**	**61.88**	**330**	eP	**P**	**23 37 40.0**	**-0.4**
	comp=Z,16nm,0.6s,mb5.0						
MTUM	**Tungsten Hills**	**61.91**	**321**	eP	**P**	**23 37 40.7**	**0.0**
MTUM				ePcP	PcP	23 38 17.2	-2.5
MOOW	**Moose Ponds**	**61.97**	**331**	eP	**P**	**23 37 40.4**	**-0.6**
	comp=Z,20nm,0.9s,mb5.0						
ELK	**Elko**	**62.16**	**326**	P	**P**	**23 37 42.2**	**-0.1**
	comp=Z,10nm,0.8s,mb4.7,baz=114,slow=4.4,SNR=45						
ELK				pP	pP	23 38 19.0	+2.1
	comp=Z,9.3nm,0.8s,baz=198,slow=1.2,SNR=3.9						
ELK	**Elko**	**62.16**	**326**	eP	**P**	**23 37 41.6**	**-0.7**
	comp=Z,32nm,1.2s,mb5.0						
ELK				epP	pP	23 38 16.2	-0.6
ELK				ePcP	PcP	23 38 20.2	-0.4
IMW	**Indian Meadow**	**62.17**	**331**	eP	**P**	**23 37 42.0**	**-0.4**
	comp=Z,65nm,1.0s,mb5.4						
IMW				ePcP	PcP	23 38 19.6	-1.1
LAO	**LASA Array**	**62.25**	**336**	eP	**P**	**23 37 42.1**	**-0.7**
	comp=Z,37nm,0.8s,mb5.3						
MNV	**Mina**	**62.33**	**322**	eP	**P**	**23 37 43.3**	**-0.2**
	comp=Z,38nm,1.2s,mb5.1						
LKWY	**Lake**	**62.42**	**332**	eP	**P**	**23 37 44.7**	**+0.7**
	comp=Z,44nm,0.8s,mb5.3						
LKWY				ePcP	PcP	23 38 20.7	-1.0
NVAR	**Mina Array Bea**	**62.42**	**322**	P	**P**	**23 37 44.2**	**+0.1**
	comp=Z,12nm,0.7s,mb4.8,baz=148,slow=6.6,SNR=101						
NVAR				pP	pP	23 38 20.0	+1.4
	comp=Z,11nm,1.0s,baz=140,slow=5.2,SNR=4.7						
NVAR				PKP2bc		00 06 56.5	
	comp=Z,0.4nm,0.7s,baz=268,slow=1.7,SNR=4.5						
NVAR	**Mina Array Bea**	**62.42**	**322**	P	**P**	**23 37 44.2**	**+0.1**
NVAR				pP	pP	23 38 20.0	+1.4
NVAR				⇑e		00 06 56.5	
YFT	**Old Faithful**	**62.54**	**331**	eP	**P**	**23 37 46.0**	**+1.2**
YMR	**Madison River**	**62.76**	**331**	eP	**P**	**23 37 46.8**	**+0.6**
	comp=Z,89nm,0.8s,mb5.7						
LRV	**Little Rabbit**	**62.91**	**319**	eP	**P**	**23 37 47.7**	**+0.4**
DGMT	**Dagmar**	**62.93**	**338**	eP	**P**	**23 37 47.0**	**-0.2**
	comp=Z,134nm,0.9s,mb5.8						
GCMT	**Greycliff**	**63.01**	**333**	eP	**P**	**23 37 47.0**	**-0.8**
QLMT	**Earthquake Lak**	**63.10**	**331**	eP	**P**	**23 37 49.2**	**+0.7**
SAO	**San Andreas Ge**	**63.39**	**319**	eP	**P**	**23 37 50.0**	**-0.5**
	comp=Z,17nm,1.0s,mb4.8						
CMB	**Columbia Colle**	**63.47**	**321**	eP	**P**	**23 37 50.3**	**-0.6**
	comp=Z,17nm,1.0s,mb4.8						
HLID	**Hailey**	**63.67**	**328**	eP	**P**	**23 37 52.0**	**-0.2**
	comp=Z,31nm,0.9s,mb5.1						
HLID				epP	pP	23 38 25.6	-1.3
MCMT	**McKenzie Canyo**	**63.79**	**330**	eP	**P**	**23 37 53.1**	**+0.2**
BOZ	**Bozeman (W)**	**63.81**	**332**	eP	**P**	**23 37 52.6**	**-0.5**
	comp=Z,116nm,1.3s,mb5.5						
SCHQ	**Schefferville**	**63.82**	**5**	P	**P**	**23 37 52.7**	**-0.3**
	comp=Z,4.7nm,0.5s,mb4.6,baz=255,slow=13,SNR=19						
SCHQ				pP	pP	23 38 27.5	-0.2
	comp=Z,30nm,0.9s,baz=179,slow=6.4,SNR=6.0						
SCHQ	**Schefferville**	**63.82**	**5**	eP	**P**	**23 37 52.4**	**-0.6**
	comp=Z,60nm,1.2s,mb5.3						
PAHR	**Pah Rah Range**	**63.88**	**323**	eP	**P**	**23 37 53.8**	**+0.1**
	comp=Z,71nm,1.3s,mb5.3						
DLMT	**Dillon**	**64.05**	**331**	eP	**P**	**23 37 54.3**	**-0.4**
	comp=Z,88nm,1.4s,mb5.4						
SAC	**San Andreas**	**64.49**	**319**	eP	**P**	**23 37 58.1**	**+0.4**
HRY	**Holter Researc**	**64.69**	**332**	eP	**P**	**23 37 58.6**	**-0.2**
HRY				epP	pP	23 38 34.6	+1.0
EGMT	**Eagleton**	**64.77**	**335**	eP	**P**	**23 37 58.7**	**-0.6**
	comp=Z,50nm,0.8s,mb5.4						
OHCM	**Honcut**	**64.94**	**321**	eP	**P**	**23 38 00.5**	**0.0**
WVOR	**Wild Horse Val**	**65.18**	**325**	eP	**P**	**23 38 01.1**	**-1.0**
	comp=Z,44nm,1.1s,mb5.2						
CHMT	**Chamberlain Mo**	**65.50**	**332**	eP	**P**	**23 38 03.8**	**-0.2**
CHIE	**El Hierro**	**65.54**	**54**	P	**P**	**23 38 03.5**	**-1.1**
	comp=Z,98nm,0.8s,mb5.7						
MSO	**Missoula**	**65.76**	**331**	eP	**P**	**23 38 05.8**	**+0.1**
	comp=Z,57nm,0.9s,mb5.4						
MOD	**Modoc**	**65.80**	**324**	eP	**P**	**23 38 05.8**	**-0.2**
	comp=Z,66nm,1.0s,mb5.4						
EHIG	**Higuera**	**66.02**	**53**	P	**P**	**23 38 06.6**	**-1.1**
	comp=Z,268nm,0.9s,mb6.1						
BMO	**Blue Mountains**	**66.06**	**328**	eP	**P**	**23 38 06.6**	**-1.1**
	comp=Z,18nm,1.2s,mb4.8						
EGOM	**La Gomera**	**66.32**	**54**	P	**P**	**23 38 08.0**	**-1.6**
	comp=Z,167nm,1.2s,mb5.7						
WDC	**Whiskeytown Da**	**66.33**	**322**	eP	**P**	**23 38 07.4**	**-2.0**
	comp=Z,24nm,0.8s,mb5.1						
KCPM	**Cahto Peak**	**66.45**	**320**	eP	**P**	**23 38 09.5**	**-0.7**
KIPM	**Iron Peak**	**66.46**	**321**	eP	**P**	**23 38 10.8**	**+0.5**
LHEM	**Herd Peak**	**66.76**	**323**	P	**P**	**23 38 11.9**	**-0.2**
CCAN	**Las Canadas**	**66.83**	**54**	P	**P**	**23 38 12.6**	**-0.2**
	comp=Z,32nm,0.7s,mb5.2						
VSP	**Spence Mountai**	**67.03**	**323**	P	**P**	**23 38 14.2**	**+0.4**
YBH	**Yreka Blue Hor**	**67.12**	**323**	eP	**P**	**23 38 12.9**	**-1.4**
	comp=Z,31nm,0.8s,mb5.2						
EBAJ	**Bajamar**	**67.18**	**54**	P	**P**	**23 38 14.5**	**-0.4**
	comp=Z,84nm,0.9s,mb5.6						
KHMM	**Horse Mountain**	**67.23**	**321**	eP	**P**	**23 38 15.4**	**+0.4**
EOSO	**Osorio**	**67.62**	**55**	P	**P**	**23 38 17.5**	**-0.2**
	comp=Z,76nm,1.2s,mb5.3						
KTRM	**Thompson Ridge**	**67.62**	**322**	P	**P**	**23 38 17.4**	**0.0**
KRMB	**Red Mountain**	**67.72**	**322**	eP	**P**	**23 38 17.6**	**-0.4**
KRMB				epP	pP	23 38 53.0	-0.1
HUMO	**Hull Mountain**	**67.79**	**323**	eP	**P**	**23 38 17.0**	**-1.5**
	comp=Z,11nm,0.8s,mb4.6						
HAWA	**Hanford**	**68.25**	**328**	eP	**P**	**23 38 21.0**	**-0.3**
	comp=Z,5.0nm,1.3s,mb4.1						
HAWA				ePcP	PcP	23 38 45.9	0.0
NEW	**Newport**	**68.30**	**331**	eP	**P**	**23 38 20.8**	**-0.7**
	comp=Z,24nm,1.0s,mb4.9						
NEW				epP	pP	23 38 56.5	-0.1
KBO	**Bosley Butte**	**68.31**	**322**	eP	**P**	**23 38 22.1**	**+0.4**
OD2	**Odessa Site #2**	**68.49**	**329**	P	**P**	**23 38 23.3**	**+0.6**
BROR	**Big Rock Looko**	**68.50**	**325**	P	**P**	**23 38 22.3**	**-0.5**
KEBM	**Edson Butte**	**68.76**	**323**	eP	**P**	**23 38 24.5**	**+0.1**
KEBM				ePcP	PcP	23 38 47.6	-0.4
KEBM				epP	pP	23 38 58.0	-1.6
CFTV	**Fuerteventura**	**68.94**	**55**	P	**P**	**23 38 25.5**	**-0.3**
	comp=Z,16nm,0.7s,mb4.8						
COR	**Corvallis**	**69.18**	**325**	eP	**P**	**23 38 27.2**	**+0.3**
	comp=Z,178nm,1.3s,mb5.6						
MPOR	**Mary's Peak**	**69.27**	**325**	P	**P**	**23 38 28.6**	**+1.1**
TBM	**Table Mountain**	**69.31**	**328**	P	**P**	**23 38 28.7**	**+1.0**
FCC	**Fort Churchill**	**69.32**	**349**	eP	**P**	**23 38 26.6**	**-1.0**
	comp=Z,53nm,1.2s,mb5.1						
FCC				e		23 38 37.0	
EDM	**Edmonton**	**70.22**	**336**	eP	**P**	**23 38 32.3**	**-0.9**
EDM				epP	pP	23 39 09.4	+1.0
LIC	**Lamto**	**70.67**	**80**	eP	**P**	**23 38 35.3**	**-1.2**
	comp=Z,152nm,0.9s,mb5.5						
LIC				eR			
	comp=Z,202nm,20.2s						
DBIC	**Dimbokro**	**70.93**	**80**	P	**P**	**23 38 37.2**	**-0.8**
	comp=Z,172nm,0.9s,mb5.8,baz=236,slow=5.9,SNR=235						
DBIC				pP	pP	23 39 13.2	-0.2
	comp=Z,112nm,0.9s,baz=244,slow=5.9,SNR=7.5						
DBIC	**Dimbokro**	**70.93**	**80**	⇑eP	**P**	**23 38 37.2**	**-0.8**
	comp=Z,189nm,0.9s,mb5.8						
DBIC				epP	pP	23 39 11.0	-2.4
OCWA	**Octopus Mounta**	**71.57**	**327**	eP	**P**	**23 38 42.5**	**+1.2**
	comp=Z,79nm,1.2s,mb5.3						
VAH	**Vaihoa**	**71.70**	**257**	eP	**P**	**23 38 42.8**	**+0.3**
	comp=Z,244nm,1.3s,mb5.8						
PGC	**Sidney**	**71.74**	**328**	eP	**P**	**23 38 42.8**	**+0.6**
	comp=Z,151nm,1.1s,mb5.6						
PGC				ePcP	PcP	23 39 00.5	-0.1
PGC				pP	pP	23 39 19.6	+1.9
PMOR	**Pomariorio Ree**	**71.97**	**257**	eP	**P**	**23 38 44.6**	**+0.4**
	comp=Z,244nm,1.1s,mb5.8						
PMOR				epP	pP	23 39 17.1	-2.5
	comp=Z,62nm,1.3s						
TBI	**Tubuai**	**72.94**	**248**	eP	**P**	**23 38 50.4**	**+0.6**
	comp=Z,357nm,1.3s,mb5.9						
TBI	**Tubuai**	**72.94**	**248**	eLR	LR	00 01 28.7	
	comp=Z,210nm,41.5s						
TVO	**Taravao**	**73.06**	**254**	eP	**P**	**23 38 50.7**	**0.0**
	comp=Z,180nm,1.2s,mb5.7						
PAE	**Paea**	**73.38**	**254**	eP	**P**	**23 38 53.0**	**+0.5**
	comp=Z,157nm,1.0s,mb5.7						
PPT	**Papeete**	**73.39**	**254**	eP	**P**	**23 38 52.8**	**+0.3**
	comp=Z,66nm,1.3s,mb5.2						
PPT	**Papeete**	**73.39**	**254**	eLR	LR	00 01 40.7	
	comp=Z,326nm,24.8s						
PPT	**Papeete**	**73.39**	**254**	LR	LR	00 03 54.5	
	comp=Z,239nm,19.2s,baz=98,slow=30						
VNA3	**Neumayer Olymp**	**73.58**	**162**	⇓iP	**P**	**23 38 53.0**	**+0.4**
VNA1	**Neumayer--Stat**	**73.80**	**162**	⇓iP	**P**	**23 38 54.8**	**+0.9**
VNA2	**Neumayer--Watz**	**74.17**	**162**	⇓iP	**P**	**23 38 56.5**	**+0.5**
SNAA	**Sanae**	**75.79**	**162**	⇓iP	**P**	**23 39 05.1**	**-0.1**
BBB	**Bella Bella**	**76.24**	**329**	P	**P**	**23 39 09.3**	**+1.3**
	comp=Z,42nm,0.8s,mb5.1,baz=138,slow=6.0,SNR=10.0						
PTEO	**Sao Teotonio**	**76.64**	**48**	eP	**P**	**23 39 11.8**	**+1.2**
	comp=Z,155nm,1.7s,mb5.4						
PBEJ	**Beja**	**77.45**	**48**	eP	**P**	**23 39 16.0**	**+0.9**
	comp=Z,51nm,1.5s,mb4.9						
PBEJ				epP	pP	23 39 52.2	+1.1
EVO	**Evora**	**77.53**	**47**	eP	**P**	**23 39 15.0**	**-0.6**
	comp=Z,59nm,0.8s,mb5.0						
EVO				epP	pP	23 39 51.0	-0.6
EGRO	**El Granado**	**77.55**	**48**	P	**P**	**23 39 16.6**	**+0.9**
	comp=Z,55nm,0.8s,mb5.2						
SFJD	**Kangerlussuaq**	**77.64**	**9**	i P	**P**	**23 39 21.6**	**+6.0**
	comp=Z,14nm,0.7s,mb4.7						
SFJD				i		23 39 51.9	
SFJD	**Kangerlussuaq**	**77.64**	**9**	eP	**P**	**23 39 21.6**	**+6.0**
	comp=Z,14nm,0.7s,mb4.7						
SFJD				i		23 39 51.9	
PTOM	**Tomar**	**77.65**	**46**	eP	**P**	**23 39 16.5**	**+0.3**
	comp=Z,59nm,1.3s,mb5.0						
PTOM				epP	pP	23 39 52.8	+0.6
YKA	**Yellowknife Ar**	**77.67**	**342**	P	**P**	**23 39 15.5**	**-0.3**
	comp=Z,20nm,0.8s,mb4.8,baz=141,slow=5.7,SNR=47						
YKA				pP	pP	23 39 52.6	+0.8
	comp=Z,3.4nm,0.4s,baz=140,slow=6.2,SNR=2.6						
YKA				LR	LR	00 13 08.8	
	comp=Z,69nm,19.9s,baz=50,slow=35						
YKW3	**Yellowknife Ar**	**77.73**	**342**	eP	**P**	**23 39 15.9**	**-0.2**
YKW3				ePcP	PcP	23 39 27.4	+1.5
MDT	**Midelt**	**78.13**	**54**	LR	LR	00 11 03.1	
	comp=Z,98nm,20.6s,baz=110,slow=33						
EMIN	**Mina Concepcio**	**78.23**	**48**	P	**P**	**23 39 20.1**	**+0.6**
	comp=Z,93nm,1.5s,mb5.2						
PCBR	**Castelo Branco**	**78.40**	**46**	eP	**P**	**23 39 20.6**	**+0.3**
	comp=Z,28nm,0.9s,mb4.9						
PCBR				epP	pP	23 39 56.7	+0.3
PVIS	**Viseu**	**78.44**	**45**	eP	**P**	**23 39 21.1**	**+0.6**
	comp=Z,61nm,1.4s,mb5.0						
PVIS				epP	pP	23 39 56.9	+0.4
ESPR	**Espera**	**78.52**	**50**	P	**P**	**23 39 22.2**	**+1.2**
	comp=Z,23nm,0.7s,mb4.9						
MTE	**Manteigas**	**78.57**	**46**	eP	**P**	**23 39 21.4**	**+0.2**
	comp=Z,21nm,0.9s,mb4.8						
MTE				epP	pP	23 39 57.7	+0.5
MTE	**Manteigas**	**78.57**	**46**	eP	**P**	**23 39 21.4**	**+0.2**
	comp=Z,28nm,0.8s,mb4.9						
EJIF	**Jimena Fronter**	**78.67**	**50**	P	**P**	**23 39 23.8**	**+1.9**
	comp=Z,13nm,0.8s,mb4.6						
ELOB	**Lobios**	**78.77**	**44**	P	**P**	**23 39 21.9**	**-0.3**
PVRL	**Vila Real**	**78.78**	**45**	eP	**P**	**23 39 22.6**	**+0.3**
	comp=Z,29nm,1.1s,mb4.8						
STS	**Santiago**	**78.83**	**43**	P	**P**	**23 39 22.3**	**-0.2**
	comp=Z,34nm,1.0s,mb4.9						
EMIJ	**Mijas**	**79.24**	**50**	P	**P**	**23 39 25.9**	**+1.0**
	comp=Z,37nm,0.7s,mb5.1						
PBRG	**Braganca**	**79.65**	**45**	eP	**P**	**23 39 27.6**	**+0.6**
	comp=Z,54nm,1.8s,mb4.9						
PBRG				epP	pP	23 40 03.6	+0.5
ECAL	**Calabor**	**79.71**	**44**	P	**P**	**23 39 27.8**	**+0.5**
ELOJ	**Sierra Loja**	**79.90**	**50**	P	**P**	**23 39 30.2**	**+1.7**
	comp=Z,60nm,1.2s,mb5.1						
EADA	**Adamuz**	**79.92**	**49**	P	**P**	**23 39 28.7**	**+0.1**
	comp=Z,185nm,1.7s,mb5.4						
EPON	**Pontenova**	**79.95**	**43**	P	**P**	**23 39 28.8**	**+0.2**
	comp=Z,182nm,1.3s,mb5.5						
ELUQ	**Luque**	**79.95**	**49**	P	**P**	**23 39 29.8**	**+1.1**
	comp=Z,17nm,0.7s,mb4.8						
ERON	**Agron**	**80.12**	**50**	P	**P**	**23 39 31.1**	**+1.4**
	comp=Z,19nm,0.6s,mb4.9						
ECOG	**Cogollos-Vega**	**80.39**	**50**	P	**P**	**23 39 32.3**	**+1.3**
	comp=Z,16nm,0.8s,mb4.7						
EBAN	**Banos Encina**	**80.51**	**49**	P	**P**	**23 39 32.4**	**+0.7**
	comp=Z,14nm,0.7s,mb4.7						
EBAN	**Banos Encina**	**80.51**	**49**	P	**P**	**23 39 32.4**	**+0.7**
EBAN				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.7						
EBAN	**Banos Encina**	**80.51**	**49**	P	**P**	**23 39 32.4**	**+0.7**
EBAN				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.7						
DLBC	**Dease Lake**	**80.69**	**334**	P	**P**	**23 39 33.4**	**+1.2**
	comp=Z,9.2nm,0.8s,mb4.4,baz=131,slow=4.4,SNR=9.2						
DLBC	**Dease Lake**	**80.69**	**334**	eP	**P**	**23 39 30.4**	**-1.8**
DLBC				epP	pP	23 40 07.6	-0.8
EBER	**Berja**	**80.78**	**50**	P	**P**	**23 39 34.0**	**+0.9**
	comp=Z,38nm,0.8s,mb5.1						
ESDC	**Sonseca Array**	**80.88**	**47**	P	**P**	**23 39 34.6**	**+1.0**
	comp=Z,13nm,0.8s,mb4.6,baz=256,slow=6.0,SNR=37						
ESDC				pP	pP	23 40 10.0	+0.2
	comp=Z,29nm,0.9s,baz=253,slow=5.9,SNR=12						
ESDC	**Sonseca Array**	**80.88**	**47**	P	**P**	**23 39 34.6**	**+0.9**
	comp=Z,8.3nm,0.7s,mb4.5						
ESLA	**Sonseca Array**	**80.88**	**47**	eP	**P**	**23 39 33.0**	**-0.6**
	comp=Z,3.6nm,0.9s,mb4.0						
ESLA				ePcP	PcP	23 39 38.6	-1.3
EQES	**Quesada**	**80.93**	**49**	P	**P**	**23 39 34.9**	**+1.0**
	comp=Z,32nm,0.8s,mb5.0						
GUD	**Guadarrama**	**81.07**	**46**	P	**P**	**23 39 35.8**	**+1.2**
	comp=Z,11nm,0.7s,mb4.6						
GUD	**Guadarrama**	**81.07**	**46**	P	**P**	**23 39 35.8**	**+1.2**
GUD				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.6						
GUD	**Guadarrama**	**81.07**	**46**	P	**P**	**23 39 35.8**	**+1.2**
GUD				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.6						
QSPA	**South Pole Qui**	**81.19**	**180**	eP	**P**	**23 39 35.2**	**+0.7**
	comp=Z,87nm,0.9s,mb5.4						
QSPA				epP	pP	23 40 11.9	+1.1
EARI	**Arriondas**	**81.25**	**44**	P	**P**	**23 39 35.9**	**+0.4**
	comp=Z,347nm,2.1s,mb5.6						
EVIA	**Vianos**	**81.62**	**49**	P	**P**	**23 39 39.3**	**+1.8**
	comp=Z,50nm,0.6s,mb5.3						
EVIA	**Vianos**	**81.62**	**49**	P	**P**	**23 39 39.3**	**+1.8**
EVIA				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.3						
EVIA	**Vianos**	**81.62**	**49**	P	**P**	**23 39 39.3**	**+1.8**
EVIA				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.3						
ETOB	**Tobarra**	**82.33**	**49**	P	**P**	**23 39 42.6**	**+1.4**
	comp=Z,41nm,0.9s,mb5.0						
ELAN	**Lanestosa**	**82.45**	**44**	P	**P**	**23 39 42.0**	**+0.3**
	comp=Z,72nm,1.3s,mb5.2						
ECHE	**Chera**	**83.05**	**48**	P	**P**	**23 39 46.6**	**+1.9**
	comp=Z,31nm,0.8s,mb5.1						
ECHE	**Chera**	**83.05**	**48**	P	**P**	**23 39 46.6**	**+1.8**
ECHE				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.1						
ECHE	**Chera**	**83.05**	**48**	P	**P**	**23 39 46.6**	**+1.8**
ECHE				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.1						

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EBEN  Beniarda         83.33  49   P     P      23 39 47.8 +1.5
      comp=Z,93nm,1.1s,mb5.4
EMOS  Mosqueruela      83.64  48   P     P      23 39 49.6 +1.8
      comp=Z,92nm,1.0s,mb5.5
EALK  Alkurruntz       83.77  45   P     P      23 39 49.7 +1.4
      comp=Z,55nm,1.5s,mb5.1
DCN   Croghan          83.81  34  eP     P      23 39 48.5 +0.2
SJPF  Ste Jean         83.94  45  eP     P      23 39 49.1  -0.1
      comp=Z,45nm,0.7s,mb5.0
SJPF  Ste Jean         83.94  45  eP     P      23 39 49.1  -0.1
SJPF                               pmax  pmax
      comp=Z,23nm,0.7s,mb5.0
SJPF  Ste Jean         83.94  45  eP     P      23 39 49.1  -0.1
SJPF                               pmax  pmax
      comp=Z,23nm,0.7s,mb5.0
ESAC  San Caprasio     84.05  46   P     P      23 39 51.3 +1.5
      comp=Z,59nm,0.7s,mb5.4
DMUB  Kingscourt       84.23  33  eP     P      23 39 50.6 +0.2
ETSF  Etsaut           84.34  45  eP     P      23 39 51.0  -0.2
ERTA  Horta de San J   84.40  47   P     P      23 39 52.7 +1.1
      comp=Z,53nm,0.7s,mb5.4
EBR   Ebro Roquetas    84.48  47  ePCP   PcP    23 39 58.5 +2.9
REYF  Montagne du Re   84.50  45  eP     pP     23 40 29.4 +0.8
SUMG  Summit           84.58  10  eP     P      23 39 53.1 +1.3
      comp=Z,319nm,1.1s,mb6.0
SUMG                              e             23 39 59.6
SUMG                              epP    pP     23 40 27.5  -0.8
SGMF  Saint Gilles     84.71  40  eP     P      23 39 52.7  -0.2
EGRA  Graus            84.75  46   P     P      23 39 54.8 +1.5
      comp=Z,13nm,0.6s,mb4.8
EBIE  Bielsa           84.77  46   P     P      23 39 55.0 +1.6
      comp=Z,34nm,0.7s,mb5.2
RESF  Ens              84.94  45  eP     pP     23 40 31.9 +1.1
EPF   Esparros         85.01  45  eP     P      23 39 54.7 +0.2
      comp=Z,114nm,1.2s,mb5.2
EPF                               epP    pP     23 40 31.5 +0.4
EPF   Esparros         85.01  45  eP     P      23 39 54.7 +0.2
EPF                               e*PP   pP     23 40 31.5 +0.4
EPF                                pmax  pmax
      comp=Z,57nm,1.2s,mb5.2
EPF   Esparros         85.01  45  eP     P      23 39 54.7 +0.2
EPF                               e*PP   pP     23 40 31.5 +0.4
EPF                                pmax  pmax
      comp=Z,57nm,1.2s,mb5.2
MELF  Melles           85.25  45  eP     pP     23 40 33.6 +1.2
EMIR  Miracle          85.53  47   P     P      23 39 58.0 +0.8
      comp=Z,221nm,2.0s,mb5.5
MFF   Saint Martin d   85.74  42  eP     P      23 39 57.8  -0.2
      comp=Z,67nm,0.8s,mb5.1
MFF                               epP    pP     23 40 34.6  -0.1
MFF   Saint Martin d   85.74  42  eP     P      23 39 57.8  -0.2
MFF                               e*PP   pP     23 40 34.6  -0.1
MFF                                pmax  pmax
      comp=Z,33nm,0.8s,mb5.1
MFF   Saint Martin d   85.74  42  eP     P      23 39 57.8  -0.2
MFF                               e*PP   pP     23 40 34.6  -0.1
MFF                                pmax  pmax
      comp=Z,33nm,0.8s,mb5.1
GRR   Gorron           85.83  40  eP     P      23 39 58.0  -0.4
      comp=Z,53nm,0.8s,mb5.0
GRR   Gorron           85.83  40  eP     P      23 39 58.0  -0.4
GRR                                pmax  pmax
      comp=Z,26nm,0.8s,mb5.0
GRR   Gorron           85.83  40  eP     P      23 39 58.0  -0.4
GRR                                pmax  pmax
      comp=Z,26nm,0.8s,mb5.0
LFF   La Frestale      85.84  43  eP     P      23 39 58.5  -0.1
      comp=Z,43nm,0.6s,mb5.1
LFF   La Frestale      85.84  43  eP     P      23 39 58.5  -0.1
LFF                                pmax  pmax
      comp=Z,22nm,0.6s,mb5.1
LFF   La Frestale      85.84  43  eP     P      23 39 58.5  -0.1
LFF                                pmax  pmax
      comp=Z,22nm,0.6s,mb5.1
FLN   La Foliniere     86.18  40  eP     P      23 40 00.0  -0.1
      comp=Z,111nm,1.1s,mb5.2
FLN   La Foliniere     86.18  40  eP     P      23 40 00.0  -0.1
FLN                                pmax  pmax
      comp=Z,56nm,1.1s,mb5.2
FLN   La Foliniere     86.18  40  eP     P      23 40 00.0  -0.1
FLN                                pmax  pmax
      comp=Z,56nm,1.1s,mb5.2
LDF   La Druitiere     86.36  40  eP     P      23 40 00.8  -0.2
      comp=Z,64nm,1.0s,mb5.0
LDF   La Druitiere     86.36  40  eP     P      23 40 00.8  -0.2
LDF                                pmax  pmax
      comp=Z,32nm,1.0s,mb5.0
LDF   La Druitiere     86.36  40  eP     P      23 40 00.8  -0.2
LDF                                pmax  pmax
      comp=Z,32nm,1.0s,mb5.0
MTLF  Montolieu        86.41  45  eP     P      23 40 01.3  -0.1
      comp=Z,27nm,0.9s,mb4.7
MTLF  Montolieu        86.41  45  eP     P      23 40 01.3  -0.1
MTLF                               pmax  pmax
      comp=Z,13nm,0.9s,mb4.7
MTLF  Montolieu        86.41  45  eP     P      23 40 01.3  -0.1
MTLF                               pmax  pmax
      comp=Z,13nm,0.9s,mb4.7
RJF   Les Rejaudoux    86.47  43  eP     P      23 40 01.0  -0.6
      comp=Z,57nm,1.0s,mb4.9
RJF   Les Rejaudoux    86.47  43  eP     P      23 40 01.0  -0.6
RJF                                pmax  pmax
      comp=Z,28nm,1.0s,mb5.0
RJF   Les Rejaudoux    86.47  43  eP     P      23 40 01.0  -0.6
RJF                                pmax  pmax
      comp=Z,28nm,1.0s,mb5.0
CAF   Calviac          86.74  44  eP     P      23 40 02.7  -0.2
      comp=Z,19nm,0.7s,mb4.7
CAF   Calviac          86.74  44  eP     P      23 40 02.7  -0.2
CAF                                pmax  pmax
      comp=Z,9.0nm,0.7s,mb4.7
CAF   Calviac          86.74  44  eP     P      23 40 02.7  -0.2
CAF                                pmax  pmax
      comp=Z,9.0nm,0.7s,mb4.7
ESK   Eskdalemuir      86.76  33   P     P      23 40 00.6  -2.2
      comp=Z,14nm,1.0s,mb4.8
ESK                               epP    pP     23 40 37.4  -2.2
ESK   Eskdalemuir      86.76  33   P     P      23 40 00.6  -2.2
ESK                               e*PP   pP     23 40 37.4  -2.1
ESK                                pmax  pmax
      comp=Z,14nm,1.0s,mb4.8
ESK   Eskdalemuir      86.76  33   P     P      23 40 00.6  -2.2
ESK                               e*PP   pP     23 40 37.4  -2.1
ESK                                pmax  pmax
      comp=Z,14nm,1.0s,mb4.8
SBA   Scott Base       87.17 191  eP     P      23 40 05.0 +0.6
      comp=Z,29nm,1.1s,mb5.0
SBA   Scott Base       87.17 191  eP     P      23 40 05.0 +0.7
SBA                                pmax  pmax
      comp=Z,29nm,1.1s,mb5.0
SBA   Scott Base       87.17 191  eP     P      23 40 05.0 +0.7
SBA                                pmax  pmax
      comp=Z,29nm,1.1s,mb5.0
TCF   Toulx Ste Croi   87.21  42  eP     P      23 40 04.9  -0.2
      comp=Z,20nm,0.8s,mb4.7
TCF   Toulx Ste Croi   87.21  42  eP     P      23 40 04.9  -0.2
TCF                                pmax  pmax
      comp=Z,10.0nm,0.8s,mb4.7
TCF   Toulx Ste Croi   87.21  42  eP     P      23 40 04.9  -0.2
TCF                                pmax  pmax
      comp=Z,10.0nm,0.8s,mb4.7
INK   Inuvik           87.42 341   P     P      23 40 06.1 +0.4
      comp=Z,35nm,0.9s,mb5.2,baz=118,slow=6.1,SNR=16
INK                                pP    pP     23 40 43.5 +1.0
      comp=Z,18nm,0.9s,baz=106,slow=7.5,SNR=3.7
INK   Inuvik           87.42 341  eP     P      23 40 06.0 +0.4
      comp=Z,47nm,1.0s,mb5.3
INK                               e             23 40 17.6
INK                               epP    pP     23 40 42.2  -0.2
INK   Inuvik           87.42 341  eP     P      23 40 06.0 +0.4
INK                               e*PP   pP     23 40 42.3  -0.1
INK                                pmax  pmax
      comp=Z,47nm,1.0s
INK   Inuvik           87.42 341  eP     P      23 40 06.0 +0.4
INK                               e*PP   pP     23 40 42.3  -0.1
INK                                pmax  pmax
      comp=Z,47nm,1.0s
DAWY  Dawson           87.44 336  eP     P      23 40 06.2 +0.3
BGF   Bois d’Agland    87.70  42  eP     P      23 40 07.4  -0.1
      comp=Z,52nm,0.8s,mb5.1
BGF   Bois d’Agland    87.70  42  eP     P      23 40 07.4  -0.1
BGF                                pmax  pmax
      comp=Z,26nm,0.8s,mb5.1
BGF   Bois d’Agland    87.70  42  eP     P      23 40 07.4  -0.1
BGF                                pmax  pmax
      comp=Z,26nm,0.8s,mb5.1
LASF  Ste Croix        87.75  45  eP     P      23 40 07.4  -0.4
      comp=Z,33nm,0.9s,mb4.9
AVF   Avril sur Loir   88.10  42  eP     P      23 40 09.2  -0.2
      comp=Z,30nm,0.8s,mb4.9
AVF                               epP    pP     23 40 45.9  -0.4
AVF   Avril sur Loir   88.10  42  eP     P      23 40 09.2  -0.2
AVF                               e*PP   pP     23 40 45.9  -0.4
AVF                                pmax  pmax
      comp=Z,15nm,0.8s,mb4.9
AVF   Avril sur Loir   88.10  42  eP     P      23 40 09.2  -0.2
AVF                               e*PP   pP     23 40 45.9  -0.4
AVF                                pmax  pmax
      comp=Z,15nm,0.8s,mb4.9
VNDA  Vanda            88.24 190  eP     P      23 40 10.3 +0.8
      comp=Z,24nm,0.8s,mb5.1
VNDA                               pP    pP     23 40 43.5  -2.8
VNDA  Vanda            88.24 190  eP     P      23 40 10.3 +0.8
VNDA                               pmax  pmax
      comp=Z,24nm,0.8s
VNDA  Vanda            88.24 190  eP     P      23 40 10.3 +0.8
VNDA                               pmax  pmax
      comp=Z,24nm,0.8s
SSF   Saint Saulge     88.27  42  eP     P      23 40 09.9  -0.3
      comp=Z,9.3nm,0.9s,mb4.6
SSF   Saint Saulge     88.27  42  eP     P      23 40 09.9  -0.3
SSF                                pmax  pmax
      comp=Z,9.0nm,0.9s,mb4.6
SSF   Saint Saulge     88.27  42  eP     P      23 40 09.9  -0.3
SSF                                pmax  pmax
      comp=Z,9.0nm,0.9s,mb4.6
SMF   Signal de Mont   88.39  42  eP     P      23 40 10.8   0.0
      comp=Z,55nm,0.8s,mb5.2
SMF   Signal de Mont   88.39  42  eP     P      23 40 10.8   0.0
SMF                                pmax  pmax
      comp=Z,27nm,0.8s,mb5.1
SMF   Signal de Mont   88.39  42  eP     P      23 40 10.8   0.0
SMF                                pmax  pmax
      comp=Z,27nm,0.8s,mb5.1
VIVF  Saint-Julien-l   88.51  44  eP     P      23 40 10.9  -0.5
      comp=Z,44nm,0.9s,mb5.1
VIVF  Saint-Julien-l   88.51  44  eP     P      23 40 10.9  -0.5
VIVF                               pmax  pmax
      comp=Z,22nm,0.9s,mb5.1
VIVF  Saint-Julien-l   88.51  44  eP     P      23 40 10.9  -0.5
VIVF                               pmax  pmax
      comp=Z,22nm,0.9s,mb5.1
LOR   Lormes           88.56  42  eP     P      23 40 11.1  -0.5
      comp=Z,32nm,0.8s,mb5.0
LOR                               epP    pP     23 40 47.4  -1.0
LOR   Lormes           88.56  42  eP     P      23 40 11.1  -0.5
LOR                               e*PP   pP     23 40 47.4  -1.0
LOR                                pmax  pmax
      comp=Z,16nm,0.8s,mb5.0
LOR   Lormes           88.56  42  eP     P      23 40 11.1  -0.5
LOR                               e*PP   pP     23 40 47.4  -1.0
LOR                                pmax  pmax
      comp=Z,16nm,0.8s,mb5.0
TSUM  Tsumeb           88.88 109  eP     P      23 40 13.5  -0.2
      comp=Z,37nm,1.1s,mb5.2
DIV   Divide           88.98 333  eP     P      23 40 12.9  -0.3
      comp=Z,156nm,0.9s,mb5.9
ORIF  Oris-en-Rattie   89.36  44  eP     P      23 40 15.9 +0.5
      comp=Z,77nm,0.9s,mb5.3
ORIF  Oris-en-Rattie   89.36  44  eP     P      23 40 15.9 +0.5
ORIF                               pmax  pmax
      comp=Z,38nm,0.9s,mb5.3
LMR   La Mourre        89.44  46  eP     P      23 40 15.7  -0.1
      comp=Z,46nm,0.8s,mb5.1
LMR                               epP    pP     23 40 52.8   0.0
LMR   La Mourre        89.44  46  eP     P      23 40 15.7  -0.1
LMR                               e*PP   pP     23 40 52.8   0.0
LMR                                pmax  pmax
      comp=Z,23nm,0.8s,mb5.2
BAIF  Baives           89.48  39  eP     P      23 40 15.9 +0.1
FRF   La Foret Royal   89.59  46  eP     P      23 40 16.5   0.0
      comp=Z,73nm,1.0s,mb5.3
FRF   La Foret Royal   89.59  46  eP     P      23 40 16.5   0.0
FRF                                pmax  pmax
      comp=Z,36nm,1.0s,mb5.3
MEZF  Maizieres J’vi   89.64  41  eP     P      23 40 16.4  -0.2
      comp=Z,22nm,0.6s,mb5.0
GIVF  Givet            89.88  39  eP     P      23 40 17.7   0.0
      comp=Z,74nm,0.9s,mb5.3
GIVF  Givet            89.88  39  eP     P      23 40 17.7   0.0
GIVF                               pmax  pmax
      comp=Z,37nm,0.9s,mb5.3
CABF  La Chapelle      89.88  43  eP     P      23 40 17.3  -0.5
      comp=Z,39nm,0.9s,mb5.0
CABF  La Chapelle      89.88  43  eP     P      23 40 17.3  -0.5
CABF                               pmax  pmax
      comp=Z,20nm,0.9s,mb5.0
MBDF  Montbardon       89.93  45  eP     P      23 40 17.7  -0.4
      comp=Z,16nm,0.9s,mb4.6
MBDF  Montbardon       89.93  45  eP     P      23 40 17.7  -0.4
MBDF                               pmax  pmax
      comp=Z,8.0nm,0.9s,mb4.7
RRL   Cesana Torines   89.98  45   P     P      23 40 18.5 +0.2
SYO   Syowa Base       90.03 161 ⇓P     P      23 40 18.2 +0.2
SYO   Syowa Base       90.03 161 ⇑P     pP     23 40 55.3 +0.3
SYO   Syowa Base       90.03 161⇓eP     P      23 40 18.2 +0.2
LPL   La Plagne        90.08  44  eP     P      23 40 18.8 +0.1
      comp=Z,77nm,0.9s,mb5.3
LPL                               epP    pP     23 40 56.3 +0.6
LPL   La Plagne        90.08  44  eP     P      23 40 18.8 +0.1
LPL                               e*PP   pP     23 40 56.3 +0.6
LPL                                pmax  pmax
      comp=Z,39nm,0.9s,mb5.3
LPG   La Plagne        90.09  44  eP     P      23 40 19.3 +0.5
      comp=Z,90nm,0.9s,mb5.4
LPG   La Plagne        90.09  44  eP     P      23 40 19.3 +0.5
LPG                                pmax  pmax
      comp=Z,45nm,0.9s,mb5.4
PZZ   Prazzo           90.12  45   P     P      23 40 18.2  -0.7
THEF  They Montfort    90.18  41  eP     pP     23 40 55.9  -0.2
FENE  Fenestrelle      90.20  45   P     P      23 40 19.0  -0.4
SBF   Sospel           90.22  46  eP     P      23 40 19.3  -0.1
STV   Sta Anna Valdi   90.22  45   P     P      23 40 19.0  -0.5
ENR   Entracque        90.28  45   P     P      23 40 19.6  -0.1
BHB   Bricherasio      90.30  45   P     P      23 40 19.3  -0.5
LSD   Ceresole Reale   90.36  44   P     P      23 40 20.2 +0.2
RSP   Reno Superiore   90.36  44   P     P      23 40 19.8  -0.2
SML   Sawmill          90.37 333  eP     P      23 40 19.7   0.0
HAU   Haudompre        90.37  42  eP     P      23 40 20.0   0.0
      comp=Z,21nm,0.8s,mb4.8
HAU   Haudompre        90.37  42  eP     P      23 40 20.0   0.0
HAU                                pmax  pmax
      comp=Z,10.0nm,0.8s,mb4.8
NEGI  Negi             90.40  46   P     P      23 40 20.4 +0.1
MONE  Monesi           90.49  46   P     P      23 40 20.2  -0.5
LOMF  Lomont           90.54  42  eP     pP     23 40 57.5  -0.4
IMI   Imperia          90.55  46   P     P      23 40 21.2 +0.2
ROB   Roburent         90.61  45   P     P      23 40 21.3   0.0
WLF   Walferdange      90.61  40  eP     P      23 40 20.7  -0.4
      comp=Z,30nm,0.9s,mb5.3
WLF   Walferdange      90.61  40  eP     P      23 40 20.7  -0.5
WLF                                pmax  pmax
      comp=Z,29nm,0.9s,mb5.3
HINF  Hinteralfeld     90.66  42  eP     P      23 40 21.2  -0.2
      comp=Z,30nm,1.0s,mb5.0
HINF  Hinteralfeld     90.66  42  eP     P      23 40 21.2  -0.2
HINF                               pmax  pmax
      comp=Z,15nm,1.0s,mb5.0
ILAR  Eielson Array    90.71 336   P     P      23 40 21.3 +0.1
      comp=Z,14nm,0.9s,mb5.0,baz=147,slow=3.2,SNR=98
ILAR                               pP    pP     23 40 59.8 +1.5
      comp=Z,10nm,0.9s,baz=129,slow=3.1,SNR=7.2
ILAR                               PP    PP     23 43 56.5  -4.3
      comp=Z,8.3nm,1.2s,baz=109,slow=5.8,SNR=5.9
HGN   Heimansgroeve    90.72  39⇑eP     P      23 40 21.7   0.0
      comp=Z,26nm,1.2s,mb5.1
HGN                               ex     x      23 40 27.2
HGN                               ex     x      23 40 55.5
      comp=Z,43nm,1.2s
TRAV                   90.78  44   P     P      23 40 22.1   0.0
FIN   Finale Ligure    90.83  45   P     P      23 40 22.8 +0.5
MOF   Molkenrain       90.85  42  eP     pP     23 40 58.7  -0.6
SLKM  Skilak Lake      90.85 331  eP     P      23 40 22.4 +0.4
SLKM                              epP    pP     23 40 59.1 +0.1
ECH   Echery           90.94  41  eP     pP     23 40 59.2  -0.6
ORX   Oropa            90.96  44   P     P      23 40 23.2 +0.3
CDF   Champ du Feu     91.06  41  eP     P      23 40 23.0  -0.3
      comp=Z,54nm,0.8s,mb5.3
CDF   Champ du Feu     91.06  41  eP     P      23 40 23.0  -0.3
CDF                                pmax  pmax
      comp=Z,27nm,0.8s,mb5.3
WLS   Welschbruch      91.11  41  eP     pP     23 41 00.4  -0.2
COLA  College          91.13 336  i P    P      23 40 23.8 +0.6
MCK   McKinley         91.23 335  eP     P      23 40 23.8 +0.1
      comp=Z,9µm,1.2s
MCK                               epP    pP     23 41 00.9 +0.2
MCK   McKinley         91.23 335  eP     P      23 40 23.8 +0.1
MCK                               e*PP   pP     23 41 00.9 +0.2
MCK                                pmax  pmax
      comp=Z,9µm,1.2s
DAG   Danmarks Havn    91.23  11⇑iP     P      23 40 24.1 +0.6
      comp=Z,2.7nm,0.7s,mb4.4
DAG                               i      pP     23 41 02.0 +1.5
DAG   Danmarks Havn    91.23  11⇑iP     P      23 40 24.1 +0.6
DAG                               i      pP     23 41 02.0 +1.5
DAG                                pmax  pmax
      comp=Z,3.0nm,0.7s,mb4.4
WTSB  Winterswijk      91.52  38  eP     P      23 40 25.4 +0.1
      comp=Z,32nm,1.5s,mb5.1
WTSB                              ex     x      23 41 01.8
      comp=Z,62nm,0.9s
WTSB                              ex     x      23 41 32.2
      comp=Z,32nm,1.3s
LANF  Langenberg       91.52  41  eP     pP     23 41 02.3  -0.1
BFO   Black Forest     91.73  41  eP     P      23 40 29.7 +3.3
      comp=Z,13nm,1.0s,mb4.9
BFO                               epP    pP     23 41 03.2  -0.2
BFO   Black Forest     91.73  41  eP     P      23 40 29.7 +3.3
BFO                                pmax  pmax
      comp=Z,13nm,1.0s,mb4.9
BACM                   92.16  46   P     P      23 40 29.3 +0.9
TNS   Taunus Mts       92.18  40  eP     P      23 40 28.9 +0.5
      comp=Z,34nm,1.2s,mb5.2
TNS                               epP    pP     23 41 05.6 +0.2
TNS   Taunus Mts       92.18  40  eP     P      23 40 28.9 +0.5
TNS                               e*PP   pP     23 41 05.6 +0.2
TNS                                pmax  pmax
      comp=Z,34nm,1.2s,mb5.2
VINC  Vinca            92.19  46   P     P      23 40 29.8 +1.2
SARO  Sassorosso       92.38  46   P     P      23 40 30.2 +0.7
MAIM                   92.39  46   P     P      23 40 30.6 +1.0
DAVA  Damuels          92.56  43⇑iP     P      23 40 30.1  -0.1
      comp=Z,14nm,1.4s,mb4.9
DAVA  Damuels          92.56  43⇓iP     P      23 40 36.9 +6.7
      comp=Z,20nm,0.8s,mb5.3
DAVA  Damuels          92.56  43⇓iP     pP     23 41 08.0 +0.7
      comp=Z,51nm,1.0s
DAVA  Damuels          92.56  43⇑iP     P      23 40 30.1  -0.1
      comp=Z,14nm,1.4s,mb4.9
MOTA  Moosalm          93.39  43⇓iP     P      23 40 34.8 +0.8
      comp=Z,3.9nm,0.5s,mb4.8
MOTA  Moosalm          93.39  43⇑iP     P      23 40 40.5 +6.5
      comp=Z,17nm,0.7s,mb5.3
MOTA  Moosalm          93.39  43⇑iP     pP     23 41 11.9 +0.8
      comp=Z,41nm,1.0s
MOTA  Moosalm          93.39  43 ⇓P     P      23 40 34.8 +0.8
MOTA                               pmax  pmax
      comp=Z,4.0nm,0.5s,mb4.8
SQTA  Sankt Quirin     93.44  43⇑iP     P      23 40 34.1  -0.2
      comp=Z,17nm,1.1s,mb5.1
SQTA  Sankt Quirin     93.44  43  i P    pP     23 41 12.0 +0.7
      comp=Z,32nm,0.9s
SQTA  Sankt Quirin     93.44  43⇑iP     P      23 40 34.1  -0.1
SQTA                               pmax  pmax
      comp=Z,17nm,1.1s,mb5.1
SVW2  Sparrevohn       93.54 331  eP     P      23 40 33.9  -0.4
CLZ   Clausthal        93.67  38  eP     P      23 40 35.8 +0.7
      comp=Z,29nm,1.2s,mb5.3
CLZ                               epP    pP     23 41 12.9 +0.7
CLZ   Clausthal        93.67  38  eP     P      23 40 35.8 +0.7
CLZ                               e*PP   pP     23 41 12.9 +0.7
CLZ                                pmax  pmax
      comp=Z,29nm,1.2s,mb5.3
WATA  Walderalm        93.71  43⇓eP     P      23 40 36.3 +0.8
      comp=Z,3.0nm,0.4s,mb4.8
WATA  Walderalm        93.71  43⇑iP     pP     23 41 13.4 +0.9
      comp=Z,23nm,0.9s
WATA  Walderalm        93.71  43⇓eP     P      23 40 36.3 +0.9
WATA                               pmax  pmax
      comp=Z,3.0nm,0.4s,mb4.8
WTTA  Wattenberg       93.74  43⇓eP     P      23 40 36.8 +1.3
      comp=Z,22nm,1.6s,mb5.0
WTTA  Wattenberg       93.74  43⇓iP     pP     23 41 13.6 +0.9
      comp=Z,62nm,1.1s
WTTA  Wattenberg       93.74  43⇓eP     P      23 40 36.8 +1.2
WTTA                               pmax  pmax
      comp=Z,22nm,1.6s,mb5.0
IMA2  Indian Mountai   93.80 336  eP     P      23 40 35.8 +0.4
GRA1  Grafenberg Arr   93.85  40  eP     P      23 40 36.4 +0.4
      comp=Z,24nm,1.2s,mb5.2
GRA1                              epP    pP     23 41 14.4 +1.3
GRF   Grafenberg Arr   93.85  40  eP     P      23 40 36.4 +0.4
      comp=Z,24nm,1.2s,mb5.2
GRF                               epP    pP     23 41 14.4 +1.3
GRF   Grafenberg Arr   93.85  40  eP     P      23 40 36.4 +0.4
GRF                               e*PP   pP     23 41 14.4 +1.3
GRF                                pmax  pmax
      comp=Z,24nm,1.2s,mb5.2
GRF   Grafenberg Arr   93.85  40  eP     P      23 40 36.4 +0.4
GRF                               e*PP   pP     23 41 14.4 +1.3
GRF                                pmax  pmax
      comp=Z,24nm,1.2s,mb5.2
BOSA  Boshof           94.07 120   P     P      23 40 37.6 +0.1
      comp=Z,3.0nm,0.6s,mb4.6,baz=282,slow=11,SNR=5.4
BOSA                               PKKP  PKKP   23 57 39.5  +21
      comp=Z,2.8nm,0.7s,baz=109,slow=11,SNR=5.7
MOX   Moxa             94.25  40  i P    pP     23 41 13.3  -1.6
NKC   Novy Kostel      94.71  40  epP    pP     23 41 17.6 +0.6
WET   Wettzell         94.84  41  eP     P      23 40 41.7 +1.2
      comp=Z,33nm,1.6s,mb5.3
WET                               epP    pP     23 41 18.1 +0.5
WET   Wettzell         94.84  41  eP     P      23 40 41.7 +1.2
WET                               e*PP   pP     23 41 18.1 +0.5
WET                                pmax  pmax
      comp=Z,33nm,1.6s,mb5.3
KBA   Koelnbreinsper   94.86  43 ⇓P     P      23 40 41.2 +0.5
      comp=Z,7.6nm,0.7s,mb5.0
KBA   Koelnbreinsper   94.86  43⇑eP     pP     23 41 17.3  -0.4
      comp=Z,39nm,1.5s
KBA   Koelnbreinsper   94.86  43 ⇓P     P      23 40 41.2 +0.5
      comp=Z,7.6nm,0.7s,mb5.0
KBA   Koelnbreinsper   94.86  43 ⇓P     P      23 40 41.2 +0.5
KBA                                pmax  pmax
      comp=Z,8.0nm,0.7s,mb5.1
LBTB  Lobatse          95.13 116  eP     P      23 40 42.2  -0.3
      comp=Z,7.3nm,0.7s,mb5.0
LBTB  Lobatse          95.13 116  eP     P      23 40 42.2  -0.3
LBTB                               pmax  pmax
      comp=Z,7.0nm,0.7s,mb5.0
CLL   Collm            95.21  39   P     P      23 40 49.0 +6.8
CLL                               i             23 41 20.1
KHC   Kasperske Hory   95.29  41  eP     P      23 40 45.4 +2.8
KHC                               epP    pP     23 41 20.2 +0.5
KHC                               esP    sP     23 41 35.6 +0.2
KHC                                x     x      23 41 44.5
GERES GERESS Array B   95.34  42   P     P      23 40 43.2 +0.4
      comp=Z,1.9nm,0.8s,mb4.3,baz=243,slow=3.0,SNR=12
GERES                              pP    pP     23 41 20.2 +0.3
      comp=Z,4.2nm,0.9s,baz=252,slow=4.2,SNR=5.1
GERES                              PKKP  PKKP   23 57 36.0  +20
      comp=Z,0.8nm,0.6s,baz=45,slow=1.9,SNR=7.0
NAO   NORSAR Subarra   95.35  29   P     P      23 40 44.7 +2.1
      comp=Z,11nm,0.9s,mb5.1
NAO   NORSAR Subarra   95.35  29   P     P      23 40 44.7 +2.1
NAO                                pmax  pmax
      comp=Z,11nm,0.9s,mb5.1
NB2   NORSAR Subarra   95.57  29   P     P      23 40 44.7 +1.1
      comp=Z,11nm,0.9s,mb5.2,baz=262,slow=4.5
NB2   NORSAR Subarra   95.57  29   P     P      23 40 44.7 +1.1
      baz=262,slow=4.6
NOA   NORSAR Array B   95.57  29   P     P      23 40 45.1 +1.6
      comp=Z,5.4nm,0.9s,mb4.9,baz=259,slow=4.5,SNR=14
NOA                                pP    pP     23 41 22.3 +1.7
      comp=Z,14nm,0.9s,baz=259,slow=4.6,SNR=10
NOA                                LR    LR     00 18 02.7
      comp=Z,54nm,18.6s,baz=280,slow=32
MOA   Molln            95.58  43⇑iP     P      23 40 44.5 +0.6
      comp=Z,14nm,0.9s,mb5.3
MOA   Molln            95.58  43⇓iP     pP     23 41 21.6 +0.6
      comp=Z,37nm,1.1s
OBKA  Obir             95.61  44⇑eP     P      23 40 43.7  -0.4
      comp=Z,27nm,1.7s,mb5.3
OBKA  Obir             95.61  44⇑iP     pP     23 41 22.5 +1.3
      comp=Z,29nm,1.5s
OBKA  Obir             95.61  44⇑eP     P      23 40 43.7  -0.4
      comp=Z,27nm,1.7s,mb5.3
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BRG	**Berggiesshubel**	**95.74**	**40**	*e*P	**P**	**23 40 45.0**	**+0.4**
	comp=Z,7.9nm,1.4s,mb4.8						
BRG				*e*	pP	23 41 22.8	+1.1
BRG				*i*		23 41 32.5	
BRG	**Berggiesshubel**	**95.74**	**40**	*e*P	**P**	**23 40 45.0**	**+0.4**
BRG				*e*	pP	23 41 22.8	+1.1
BRG				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.9						
PRU	**Pruhonice**	**96.02**	**40**	*e*P	**P**	**23 40 43.4**	**-2.4**
PRU				*e*		23 41 33.6	
PRU	**Pruhonice**	**96.02**	**40**	*e*P	**P**	**23 40 43.4**	**-2.4**
PVCC	**Panska Ves**	**96.10**	**40**	*e*pP	pP	23 41 23.9	+0.6
ARSA	**Arzberg**	**96.36**	**43**	⇓*e*P	**P**	**23 40 48.2**	**+0.8**
	comp=Z,4.8nm,0.7s,mb4.9						
ARSA				⇑*i*P		23 40 53.2	
	comp=Z,7.8nm,1.0s						
ARSA	**Arzberg**	**96.36**	**43**	⇑*i*P	pP	23 41 24.4	-0.2
	comp=Z,18nm,1.1s						
ARSA	**Arzberg**	**96.36**	**43**	⇓*e*P	**P**	**23 40 48.2**	**+0.8**
	comp=Z,4.8nm,0.7s,mb4.9						
TREC	**Trest**	**96.55**	**41**	*e*P	**P**	**23 40 48.9**	**+0.6**
TREC				*e*pP	pP	23 41 26.2	+0.8
UPC	**Upice**	**97.01**	**40**	*e*P	**P**	**23 40 51.3**	**+0.9**
UPC				*e*pP	pP	23 41 28.4	+0.9
DPC	**Dobruska-Polom**	**97.20**	**40**	*e*P	**P**	**23 40 52.2**	**+1.0**
DPC				*e*pP	pP	23 41 28.0	-0.3
SMOL	**Smolenice**	**97.76**	**42**	*e*	**P**	**23 41 00.1**	**+6.3**
SMOL	**Smolenice**	**97.76**	**42**	*i* P	**P**	**23 41 00.1**	**+6.3**
MAW	**Mawson**	**97.78**	**165**	P	**P**	**23 40 53.6**	**+0.1**
	comp=Z,1.4nm,0.5s,mb4.7,baz=211,slow=4.6,SNR=7.8						
MAW				pP	pP	23 41 30.6	0.0
	comp=Z,7.8nm,0.9s,baz=237,slow=8.4,SNR=7.8						
MAW				LR	LR	00 28 34.6	
	comp=Z,99nm,20.5s,baz=67,slow=38						
MORC	**Moravsky Berou**	**97.93**	**41**	P	**P**	**23 40 54.2**	**-0.3**
	comp=Z,5.2nm,1.0s,mb4.9						
MORC	**Moravsky Berou**	**97.93**	**41**	P	**P**	**23 40 54.2**	**-0.4**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.9						
VYHS	**Vyhne**	**98.69**	**42**	*e*	**P**	**23 41 04.5**	**+6.4**
VYHS	**Vyhne**	**98.69**	**42**	*i* P	**P**	**23 41 04.5**	**+6.4**
VYHS				*i*		23 41 34.3	
KECS	**Kecovo**	**99.78**	**42**	*e*	**P**	**23 41 12.4**	**+9.4**
ARCES	**ARCESS Array B**	**101.74**	**21**	PKKPbc		23 57 16.6	
	comp=Z,3.0nm,0.7s,baz=81,slow=3.6,SNR=12						
FINES	**FINESS Array B**	**102.75**	**29**	PKKPbc		23 57 13.2	
	comp=Z,1.3nm,0.7s,baz=153,slow=4.3,SNR=5.9						
AKASG	**Malin Array Be**	**105.42**	**40**	PKKPbc		23 57 06.4	
	comp=Z,1.5nm,0.6s,baz=81,slow=3.2,SNR=6.9						
AKASG				PKKPab		23 57 22.3	
	comp=Z,1.3nm,0.8s,baz=84,slow=4.3,SNR=6.6						
BRTR	**Keskin Array B**	**109.44**	**51**	PP	PP	23 46 23.4	-0.8
	comp=Z,2.1nm,1.0s,baz=295,slow=4.2,SNR=4.2						
BRTR				PKKPbc		23 56 55.0	
	comp=Z,0.6nm,0.8s,baz=135,slow=5.2,SNR=3.6						
BRTR				PKKPab		23 57 06.2	
	comp=Z,2.0nm,1.0s,baz=117,slow=5.5,SNR=5.7						
TIXI	**Tiksi**	**115.71**	**352**	*i* PKIKP	PKPdf	23 45 58.6	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	**Arti**	**120.10**	**28**	*e*P	PKPdf	23 46 09.0	+1.5
ARU	**Arti**	**120.10**	**28**	*e*PKIKP	PKPdf	23 46 09.0	+1.5
STKA	**Stephens Creek**	**126.87**	**219**	PKP	PKPdf	23 46 22.8	+1.6
	comp=Z,24nm,0.7s,baz=106,slow=2.2,SNR=39						
STKA	**Stephens Creek**	**126.87**	**219**	*e*PKPdf	PKPdf	23 46 22.3	+1.1
CHKZ	**Chkalovo**	**127.22**	**25**	*e*PKPdf	PKPdf	23 46 23.2	+1.8
CHKZ				*e*pPKPdf		23 47 00.5	
BRVK	**Borovoye**	**127.51**	**26**	*e*PKPdf	PKPdf	23 46 23.3	+1.3
BRVK				*e*pPKPdf		23 46 59.2	
BVAR	**Borovoye Array**	**127.58**	**26**	PKP	PKPdf	23 46 24.3	+2.3
	comp=Z,3.9nm,0.8s,baz=270,slow=1.5,SNR=23						
BVAR				pPKP		23 47 01.3	
	comp=Z,6.7nm,0.9s,baz=276,slow=1.8,SNR=9.4						
NVS	**Novosibirsk**	**130.83**	**17**	*i* PKIKP	PKPdf	23 46 28.9	+0.7
NVS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ZAL	**Zalesovo**	**132.07**	**17**	PKP	PKPdf	23 46 32.9	+2.3
	comp=Z,8.1nm,0.8s,baz=185,slow=2.1,SNR=37						
ZAL				pPKP		23 47 09.9	
	comp=Z,20nm,1.0s,baz=157,slow=1.8,SNR=10.0						
ZAL				SKPbc		23 49 45.7	
	comp=Z,3.5nm,1.0s,baz=134,slow=4.3,SNR=3.3						
ZAL	**Zalesovo**	**132.07**	**17**	PKP	PKPdf	23 46 32.9	+2.3
ZAL				pPKP		23 47 09.9	
ZAL				SKPbc		23 49 45.7	
KURK	**Kurchatov**	**132.71**	**23**	*e*PKPdf	PKPdf	23 46 32.4	+0.5
KURK				*e*pPKPdf		23 47 10.7	
KLR	**Kul'dur**	**134.28**	**336**	*e*PKIKP	PKPdf	23 46 36.0	+1.2
MKAR	**Makanchi Array**	**137.31**	**24**	PKP	PKPdf	23 46 42.1	+1.6
	comp=Z,6.1nm,0.9s,baz=319,slow=1.9,SNR=14						
MKAR				pPKP		23 47 20.1	
	comp=Z,17nm,0.8s,baz=315,slow=1.7,SNR=11						
MKAR				SKPbc		23 50 01.4	
	comp=Z,3.1nm,0.8s,baz=354,slow=4.5,SNR=4.4						
ZAK	**Zakamensk**	**138.62**	**2**	*e*PKIKP	PKPdf	23 46 45.1	+2.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MAJO	**Matsushiro**	**139.67**	**318**	*e*PKPdf	PKPdf	23 46 46.0	+1.0
MAT	**Matsushiro**	**139.67**	**318**	PKP	PKPdf	23 46 36.6	-8.5
MAT	**Matsushiro**	**139.67**	**318**	*e*PKP	PKPdf	23 46 37.0	-8.1
MJAR	**Matsushiro Arr**	**139.67**	**318**	PKhKP		23 46 40.3	
	comp=Z,7.5nm,0.8s,baz=85,slow=1.5,SNR=9.0						
MJAR				PKP	PKPdf	23 46 46.2	+1.2
	comp=Z,13nm,0.8s,baz=123,slow=1.1,SNR=13						
MJAR				pPKP		23 47 24.0	
	comp=Z,4.6nm,0.9s,baz=85,slow=0.8,SNR=2.3						
MJAR				SKPbc		23 50 08.5	
	comp=Z,13nm,1.1s,baz=301,slow=0.4,SNR=12						
MJAR	**Matsushiro Arr**	**139.67**	**318**	PKP	PKPdf	23 46 40.3	-4.8
MJAR				PKP	PKPdf	23 46 46.2	+1.2
MJAR				pPKP		23 47 24.0	
MJAR				SKPbc		23 50 08.5	
WRAB	**Tennant Creek**	**139.77**	**224**	PKPpre		23 46 37.8	
WRAB				*e*PKPdf	PKPdf	23 46 47.1	+1.4
WRAB				*e*pPKPdf		23 47 24.8	
WRA	**Warramunga Arr**	**139.78**	**224**	PKhKP		23 46 38.9	
	comp=Z,3.2nm,0.6s,baz=131,slow=1.7,SNR=48						
WRA				PKP	PKPdf	23 46 46.6	+1.0
	comp=Z,25nm,0.6s,baz=129,slow=2.1,SNR=50						
WRA				PP	PP	23 49 40.6	-5.6
	comp=Z,5.8nm,1.2s,baz=134,slow=5.6,SNR=9.9						
WRA				SKPbc		23 50 08.4	
	comp=Z,2.8nm,0.8s,baz=136,slow=2.6,SNR=5.0						
ULN	**Ulaanbaatar**	**141.17**	**359**	*e*PKPdf	PKPdf	23 46 43.2	-4.3
ULN				*e*pPKPdf		23 47 23.3	
SONM	**Songino Array**	**141.21**	**359**	PKhKP		23 46 44.1	
	comp=Z,2.4nm,0.6s,baz=333,slow=2.5,SNR=28						
SNY	**Shenyang**	**143.62**	**337**	⇑PKP	PKPdf	23 46 50.9	-0.9
THN	**Thein Dam**	**143.71**	**46**	*e*P	PKPbc	23 46 54.1	+2.9
KS15	**Wonju Array Si**	**145.23**	**328**	*e*PKPdf	PKPdf	23 46 56.1	+1.3
SMLA	**Simla**	**145.46**	**46**	*e*P	PKPdf	23 46 57.0	+1.6
SMLA				*e*x	x	23 47 39.0	
AJM	**Ajmer**	**145.80**	**55**	*e*pP		23 47 34.8	
JNU	**Nakatsue**	**146.52**	**320**	PKPbc	PKPbc	23 46 59.0	+0.4
	comp=Z,62nm,0.9s,baz=46,slow=12,SNR=24						
DL2	**Dalian**	**146.89**	**337**	PKP	PKPdf	23 46 59.9	+2.4
POO	**Poona**	**147.68**	**69**	*i* x	x	23 47 53.8	
BTO	**Baotou**	**148.21**	**354**	*e*PKP	PKPdf	23 47 04.3	+4.6
KAD	**Karad**	**148.24**	**72**	*e*P	PKPdf	23 47 01.7	+1.4
KAD				*i* pP		23 47 41.4	
PTH	**Pithoragarh**	**148.52**	**46**	*e*x	x	23 47 06.6	
PTH				*e*x	x	23 47 46.0	
PTH				*e*x	x	00 47 46.0	
GTA	**Gaotai**	**149.19**	**9**	PKP	PKPdf	23 47 03.8	+2.6
BHPL	**Bhopal**	**149.42**	**59**	*e*x	x	23 47 08.6	
BHPL				*e*x	x	23 47 13.9	
BHPL				*i* pP		23 47 45.4	
LATR	**Latur**	**150.20**	**68**	*e*x	x	23 47 44.0	
TIA	**Tai'an**	**150.91**	**341**	*e*PKP	PKPdf	23 47 05.6	+1.7
TRD	**Trivandrum**	**151.60**	**89**	*e*x	x	23 47 13.9	
TRD				*i* x	x	23 47 51.5	
TRD				*i* x	x	23 47 51.5	
KOLN	**Koldanda**	**151.97**	**45**	*e*P	PKPdf	23 47 07.9	+2.1
ALBI	**Allahabad**	**152.04**	**51**	*e*x	x	23 47 13.0	
JOW	**Kunigami**	**152.17**	**313**	PKPbc	PKPdf	23 47 15.2	+9.2
	comp=Z,44nm,0.9s,baz=77,slow=11,SNR=4.2						
HYB	**Hyderabad**	**152.29**	**69**	*i* PKP	PKPdf	23 47 08.0	+1.5
HYB				*e*		23 47 18.5	
HYB				*e*		23 47 43.0	
HYB				*e*sPKP		23 48 36.5	
HYB				*e*PP	PP	23 50 57.0	-2.5
HYB	**Hyderabad**	**152.29**	**69**	*e*P	PKPdf	23 47 08.0	+1.5
HYB				*e*		23 47 18.5	
HYB				*e*		23 47 43.0	
GKN	**Gorkha**	**152.54**	**44**	*e*P	PKPdf	23 47 08.7	+2.1
DMN	**Daman**	**153.11**	**44**	*e*P	PKPdf	23 47 09.8	+2.4
KKN	**Kakani**	**153.11**	**43**	*e*P	PKPdf	23 47 09.3	+1.9
PKI	**Pulchoki**	**153.34**	**43**	*e*P	PKPdf	23 47 09.4	+1.7
GUN	**Gumba**	**153.43**	**42**	*e*P	PKPdf	23 47 10.3	+2.5
BLSP	**Bilaspur**	**153.83**	**57**	*i* x	x	23 47 22.4	
BLSP				*i* x	x	23 47 58.6	
XAN	**Xi'an**	**154.82**	**354**	PKP	PKPdf	23 47 11.8	+2.3
LSA	**Lhasa**	**155.24**	**31**	*e*PKPdf	PKPdf	23 47 11.4	+1.2
LSA				*e*PKPbc	PKPdf	23 47 22.8	+13
LSA				*e*PKPab	PKPab	23 47 38.9	+0.4
ENH	**Enshi**	**158.46**	**351**	*e*PKPdf	PKPdf	23 47 15.1	+0.7
ENH				*e*PKPdif		23 47 26.2	
SHL	**Shillong**	**158.87**	**37**	*e*P	PKPdf	23 47 17.5	+2.5

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*MOS **23** 00:03:10.9±0.8, 16.97N×147.19E, h48^{km}, mb4.4/8, Error ellipse: s-maj=19.4km s-min=10.1km az=107.1*

*NEIC **23** 00:03:13.1±1.4, 16.92N×147.26E, h54^{km}±13^{km}, mb4.2/8, Error ellipse: s-maj=12.5km s-min=8.2km az=88.0*

*IDC **23** 00:03:14.6±3.7, 16.89N×147.17E, h66^{km}±35^{km}, mb3.8/11, mb1 4.0/12, mb1mx3.8/21, mbtmp4.1/12, ML4.2/1, MS3.6/3, Ms1 3.6/3, ms1mx2.9/32, Error ellipse: s-maj=28.2km s-min=18.4km az=85.0*

ISC 23 00:03:12.1±2.2, **16.94N**±0.08×**147.2E**±0.1, **h58**^{km}±20^{km}, **n40,** σ**0**^{s}**74**/38, **mb4.2**/21, **MS4.0**/2, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**4.01**	**214**	P	**P**	**00 04 13.1**	**+0.5**
	17nm,0.3s,baz=32,slow=15,SNR=3.6						
GUMO				S	**S**	**00 04 59.0**	**+0.2**
	26nm,0.3s,baz=197,slow=20,SNR=4.6						
GUMO				LR	LR	00 05 45.7	
	comp=Z,148nm,20.7s,baz=77,slow=38						
MJAR	**Matsushiro Arr**	**21.09**	**340**	P	**P**	**00 07 53.2**	**-0.5**
	6.0nm,0.7s,mb4.0,baz=168,slow=11,SNR=8.7						
MAJO	**Matsushiro**	**21.09**	**340**	*e*P	**P**	**00 07 52.6**	**-1.1**
	11nm,0.8s,mb4.2						
MAJO	**Matsushiro**	**21.09**	**340**	*e*P	**P**	**00 07 52.6**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.2						
MAT	**Matsushiro**	**21.09**	**340**	P	**P**	**00 07 53.4**	**-0.3**
MAT	**Matsushiro**	**21.09**	**340**	*e*P	**P**	**00 07 53.0**	**-0.7**
	comp=Z,16nm,1.2s,mb4.2						
MAT	**Matsushiro**	**21.09**	**340**	*e*P	**P**	**00 07 53.0**	**-0.7**
MAT				pmax	pmax		
	comp=Z,16nm,1.2s,mb4.2						
WB2	**Warramunga Arr**	**38.76**	**200**	*e*P	**P**	**00 10 31.1**	**-1.5**
WRA	**Warramunga Arr**	**38.76**	**200**	P	**P**	**00 10 31.5**	**-1.1**
	comp=Z,2.0nm,0.7s,mb4.0,baz=22,slow=9.1,SNR=29						
SONM	**Songino Array**	**45.40**	**322**	P	**P**	**00 11 27.3**	**+0.7**
	comp=Z,1.1nm,0.7s,mb3.8,baz=131,slow=5.8,SNR=12						
ZAK	**Zakamensk**	**48.40**	**324**	*e*P	**P**	**00 11 49.8**	**-0.3**
ZAK				*e*	pP	00 12 00.4	-5.0
ZAK				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.9						
ZAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
TIXI	**Tiksi**	**55.78**	**353**	*e*P	**P**	**00 12 46.1**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
GUN	**Gumba**	**57.22**	**293**	*e*P	**P**	**00 12 56.7**	**+0.8**
KKN	**Kakani**	**57.76**	**292**	*e*P	**P**	**00 13 00.1**	**+0.4**
DMN	**Daman**	**57.92**	**292**	*e*P	**P**	**00 13 01.1**	**+0.3**
GKN	**Gorkha**	**58.31**	**293**	*e*P	**P**	**00 13 03.9**	**+0.4**
	comp=Z,12nm,0.9s,mb5.0						
KOLN	**Koldanda**	**59.24**	**293**	*e*P	**P**	**00 13 10.6**	**+0.6**
	comp=Z,11nm,0.9s,mb4.9						
ZAL	**Zalesovo**	**60.28**	**323**	P	**P**	**00 13 15.9**	**-0.8**
	comp=Z,1.2nm,0.7s,mb4.0,baz=350,slow=6.9,SNR=8.8						
MKAR	**Makanchi Array**	**60.70**	**314**	P	**P**	**00 13 19.6**	**-0.1**
	comp=Z,1.3nm,0.7s,mb4.2,baz=92,slow=7.9,SNR=8.4						
MKAR				LR	LR	00 38 28.3	
	comp=Z,34nm,18.2s,MS3.5,baz=139,slow=35						
URZ	**Urewera**	**61.67**	**154**	LR	LR	00 36 53.4	
	comp=Z,259nm,19.1s,MS4.4,baz=341,slow=33						
KURK	**Kurchatov**	**63.53**	**319**	*e*P	**P**	**00 13 37.8**	**-0.8**
	comp=Z,7.0nm,1.0s,mb4.7						
KURK	**Kurchatov**	**63.53**	**319**	*e*P	**P**	**00 13 37.8**	**-0.8**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
ILAR	**Eielson Array**	**64.60**	**26**	P	**P**	**00 13 44.7**	**-0.6**
	comp=Z,0.9nm,1.1s,mb3.7,baz=269,slow=4.9,SNR=4.9						
CHKZ	**Chkalovo**	**68.60**	**322**	*e*P	**P**	**00 14 10.0**	**-0.7**
	comp=Z,0.9nm,0.7s,mb3.8						
CHKZ	**Chkalovo**	**68.60**	**322**	*e*P	**P**	**00 14 10.0**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BVAR	**Borovoye Array**	**68.73**	**321**	P	**P**	**00 14 11.4**	**-0.2**
	comp=Z,1.2nm,0.4s,mb4.2,baz=98,slow=8.0,SNR=16						
BRVK	**Borovoye**	**68.80**	**321**	*e*P	**P**	**00 14 11.8**	**-0.1**
	comp=Z,1.5nm,0.8s,mb4.0						
BRVK	**Borovoye**	**68.80**	**321**	*e*P	**P**	**00 14 11.8**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
INK	**Inuvik**	**70.43**	**23**	P	**P**	**00 14 21.7**	**0.0**
	comp=Z,0.7nm,0.7s,mb3.7,baz=218,slow=1.8,SNR=4.4						
INK	**Inuvik**	**70.43**	**23**	*e*P	**P**	**00 14 21.1**	**-0.6**
	comp=Z,2.4nm,1.0s,mb4.1						
INK	**Inuvik**	**70.43**	**23**	*e*P	**P**	**00 14 21.1**	**-0.6**
INK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NVAR	**Mina Array Bea**	**83.10**	**52**	P	**P**	**00 15 34.0**	**+1.0**
	comp=Z,1.0nm,0.9s,mb3.9,baz=262,slow=5.5,SNR=6.3						
ARCES	**ARCESS Array B**	**84.59**	**343**	P	**P**	**00 15 41.8**	**+1.9**
	comp=Z,2.1nm,0.7s,mb4.3,baz=56,slow=8.7,SNR=3.8						
ELK	**Elko**	**84.70**	**49**	*e*P	**P**	**00 15 41.7**	**+0.7**
	comp=Z,1.8nm,0.9s,mb4.2						
ELK	**Elko**	**84.70**	**49**	*e*P	**P**	**00 15 41.7**	**+0.7**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
JOF	**Joensuu**	**86.20**	**336**	*e*p	**P**	**00 15 47.9**	**0.0**
KAF	**Kangasniemi**	**88.60**	**336**	*e*p	**P**	**00 15 59.8**	**+0.3**
FINES	**FINESS Array B**	**89.07**	**336**	P	**P**	**00 16 01.7**	**0.0**
	comp=Z,1.9nm,0.8s,mb4.5,baz=37,slow=3.5,SNR=9.5						
LPAZ	**La Paz**	**146.17**	**94**	PKPbc	PKPbc	00 22 49.7	+2.9
	comp=Z,1.3nm,0.7s,baz=279,slow=5.6,SNR=5.7						
LPAZ	**La Paz**	**146.17**	**94**	PKPbc	PKPbc	00 22 49.7	+2.9

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*IDC **23** 00:13:02.6±1.7, 67.83N×156.81W, mb3.4/2, mb1 3.6/4, mb1mx3.4/20, mbtmp3.3/4, ML3.3/2, Error ellipse: s-maj=52.7km s-min=22.0km az=23.0*

*NEIC **23** 00:13:03.3±0.6, 67.75N×156.49W, h10^{km}, ML3.2(AEIC), Error ellipse: s-maj=13.7km s-min=8.1km az=11.0*

ISC 23 00:13:01.6±3.1, **67.82N**±0.10×**156.3W**±0.2, **h12**^{km}±21^{km}, **n12,** σ**0**^{s}**99**/14, **mb3.5**/3, **Northern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMA2	**Indian Mountai**	**2.03**	**149**	*e*P	**Pn**	**00 13 36.9**	**+0.8**
COLA	**College**	**4.50**	**127**	*e*P	**Pn**	**00 14 11.4**	**+0.2**
ILAR	**Eielson Array**	**4.87**	**125**	Pn	**Pn**	**00 14 16.6**	**+0.2**
	0.4nm,0.3s,baz=308,slow=13,SNR=22						
ILAR				Sn	**Sn**	**00 15 12.2**	**-1.2**
	1.9nm,0.3s,baz=318,slow=27,SNR=8.3						
ILAR				Lg		00 15 36.7	
	1.5nm,0.3s,baz=306,slow=30,SNR=5.0						
MCK	**McKinley**	**5.09**	**140**	*e*P	**Pn**	**00 14 20.1**	**+0.4**
TNA	**Tin City**	**5.15**	**249**	*e*P	**Pn**	**00 14 18.7**	**-1.8**
DAWY	**Dawson**	**7.84**	**111**	P	**Pn**	**00 14 56.3**	**-2.0**
INK	**Inuvik**	**8.51**	**76**	Pn	**P**	**00 15 07.3**	**-0.3**
	0.3nm,0.3s,baz=269,slow=8.3,SNR=26						
INK				Sn	**Sn**	**00 16 44.0**	**-0.6**
	0.5nm,0.3s,baz=110,slow=17,SNR=4.8						
FFC	**Flin Flon**	**28.10**	**90**	P	**P**	**00 18 54.9**	**+0.3**
HLID	**Hailey**	**32.77**	**116**	P	**P**	**00 19 37.5**	**+1.4**
	1.5nm,0.6s,mb4.1						
BW06	**Boulder Array**	**35.15**	**111**	P	**P**	**00 19 57.5**	**+0.8**
TXAR	**Lajitas Array**	**49.29**	**114**	P	**P**	**00 21 53.2**	**+1.4**
	0.2nm,0.8s,mb3.2,baz=323,slow=6.3,SNR=3.7						
SONM	**Songino Array**	**49.39**	**298**	P	**P**	**00 21 52.4**	**0.0**
	0.2nm,0.6s,mb3.3,baz=15,slow=6.6,SNR=3.7						

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*IDC **23** 00:21:16.9±3.2, 10.81S×165.69E, h46^{km}±29^{km}, mb4.1/8, mb1 4.3/10, mb1mx4.1/16, mbtmp4.4/10, ML4.5/2, MS3.8/6, Ms1 3.8/6, ms1mx3.4/26, Error ellipse: s-maj=25.5km s-min=18.2km az=58.0*

*NEIC **23** 00:21:17.2±1.4, 10.86S×165.68E, h50^{km}±12^{km}, mb4.6/5, Error ellipse: s-maj=13.1km s-min=10.2km az=57.0*

ISC 23 00:21:14.9±2.5, **10.90S**±0.10×**165.7E**±0.1, **h41**^{km}±20^{km}, **n27,** σ**0**^{s}**60**/25, **mb4.4**/12, **MS3.8**/4, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.80**	**284**	P	**P**	**00 22 41.2**	**+0.6**
	24nm,0.3s,baz=186,slow=6.8,SNR=9.2						
HNR				S	**S**	**00 23 46.6**	**-0.1**
	5.3nm,0.3s,slow=20,SNR=3.0						
HNR				LR	LR	00 24 51.8	
	comp=Z,780nm,21.4s,baz=138,slow=37						
HNR	**Honiara**	**5.80**	**284**	P	**P**	**00 22 41.2**	**+0.6**
HNR				S	**S**	**00 23 46.6**	**-0.1**
HNR				LR	LR	00 24 51.8	
DZM	**Mont Dzumac**	**11.13**	**176**	*e*P	**P**	**00 23 54.4**	**-0.2**
DZM				*e*S	**S**	**00 25 53.8**	**-5.0**
DZM	**Mont Dzumac**	**11.13**	**176**	P	**P**	**00 23 54.5**	**0.0**
	2.2nm,0.3s,baz=352,slow=14,SNR=18						
DZM				S	**S**	**00 25 54.4**	**-4.4**
	1.2nm,0.3s,baz=311,slow=21,SNR=5.1						
DZM				LR	LR	00 27 33.4	
	comp=Z,381nm,20.8s,baz=28,slow=34						
DZM	**Mont Dzumac**	**11.13**	**176**	*e*P	**P**	**00 23 54.4**	**-0.2**
DZM				*e*S	**S**	**00 25 53.8**	**-5.0**
AFI	**Afiamalu**	**22.25**	**100**	LR	LR	00 33 15.9	
	comp=Z,228nm,19.1s,MS3.6,baz=298,slow=32						
ARMA	**Armidale**	**23.39**	**212**	*e*P	**P**	**00 26 20.6**	**-0.4**
URZ	**Urewera**	**29.12**	**161**	P	**P**	**00 27 13.6**	**-0.5**
	11nm,1.0s,mb4.5,baz=349,slow=16,SNR=2.7						
STKA	**Stephens Creek**	**30.48**	**223**	*e*P	**P**	**00 27 26.8**	**+0.5**
	2.9nm,0.6s,mb4.2						
STKA	**Stephens Creek**	**30.48**	**223**	P	**P**	**00 27 26.8**	**+0.5**
	4.6nm,0.7s,mb4.3,baz=50,slow=15,SNR=8.0						
STKA				LR	LR	00 39 10.4	
	comp=Z,206nm,21.1s,MS3.8,baz=25,slow=35						
WRAB	**Tennant Creek**	**31.43**	**250**	*e*P	**P**	**00 27 34.5**	**-0.3**
	12nm,1.1s,mb4.6						
WB2	**Warramunga Arr**	**31.43**	**250**	*e*P	**P**	**00 27 34.1**	**-0.7**
WRA	**Warramunga Arr**	**31.44**	**250**	P	**P**	**00 27 34.0**	**-0.9**
	7.4nm,1.0s,mb4.5,baz=82,slow=9.0,SNR=41						
FITZ	**Fitzroy Crossi**	**39.33**	**255**	*e*P	**P**	**00 28 42.4**	**+0.4**
	10.0nm,0.8s,mb4.6						
PPT	**Papeete**	**43.83**	**104**	*e*LR	LR	00 42 10.2	
	96nm,22.2s						
PPT	**Papeete**	**43.83**	**104**	LR	LR	00 44 28.9	
	comp=Z,223nm,18.9s,MS4.1,baz=279,slow=32						
TBI	**Tubuai**	**44.48**	**112**	*e*LR	LR	00 42 28.0	
	142nm,25.0s						
NWAO	**Narrogin (SRO)**	**49.46**	**236**	*e*P	**P**	**00 30 03.6**	**+0.3**
	18nm,1.1s,mb5.0						
JNU	**Nakatsue**	**54.91**	**324**	LR	LR	00 49 38.8	
	comp=Z,47nm,19.3s,MS3.6,baz=58,slow=31						
RKT	**Rikitea**	**57.73**	**110**	*e*LR	LR	00 48 36.5	
	102nm,25.2s						
SONM	**Songino Array**	**78.49**	**324**	P	**P**	**00 33 13.3**	**-0.1**
	0.8nm,0.7s,mb3.7,baz=146,slow=5.9,SNR=7.6						
QSPA	**South Pole Qui**	**79.10**	**180**	*e*P	**P**	**00 33 16.9**	**+0.7**
	2.8nm,0.4s,mb4.5						
ILAR	**Eielson Array**	**83.41**	**19**	P	**P**	**00 33 38.4**	**-0.7**
	1.8nm,0.8s,mb4.2,baz=231,slow=6.3,SNR=16						
MAW	**Mawson**	**84.82**	**202**	P	**P**	**00 33 47.5**	**+1.5**
	2.6nm,0.8s,mb4.4,baz=100,slow=8.5,SNR=5.6						
NVAR	**Mina Array Bea**	**86.00**	**50**	P	**P**	**00 33 52.7**	**+0.1**
	0.6nm,0.9s,mb3.8,baz=231,slow=5.8,SNR=3.7						
MKAR	**Makanchi Array**	**93.35**	**317**	P	**P**	**00 34 27.0**	**0.0**
	1.0nm,0.7s,mb4.3,baz=112,slow=6.5,SNR=5.6						
ARCES	**ARCESS Array B**	**116.17**	**345**	PKP	PKPdf	00 39 53.5	+0.1
	3.5nm,0.9s,baz=64,slow=2.1,SNR=9.7						

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*ROM **23** 00:33:07.9±0.2, 44.42N×9.66E, h12^{km}±4^{km}, Md2.9/18, Ml2.6/11, Error ellipse: s-maj=2.8km s-min=2.1km az=27.0*

*NEIC **23** 00:33:08.8, 44.49N×9.74E, h8^{km}, ML3.1(LDG), ML2.8(GEN), ML2.6(ROM), After GEN.*

*CSEM **23** 00:33:08.1±0.1, 44.33N×9.72E, h10^{km}, ML3.1/13, Error ellipse: s-maj=2.2km s-min=1.1km az=1.0*

*GEN **23** 00:33:08.8, 44.49N×9.74E, h8^{km}, ML2.0*

*LDG **23** 00:33:11.4±0.1, 44.31N×9.68E, h10^{km}, Ml3.1/18, Error ellipse: s-maj=3.1km s-min=2.2km az=120.0*

ISC 23 00:33:08.4±0.2, **44.39N**±0.02×**9.65E**±0.02, **h12**^{km}±2^{km}, **n112,** σ**1**^{s}**09**/167, **8C-8D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SC2M	**Scurtabr**	**0.08**	**284**	P	**Pg**	**00 33 12.5**	**+1.4**
CODM		**0.15**	**87**	P	**Pg**	**00 33 11.8**	**-0.3**
CODM				S	**Sg**	**00 33 13.8**	**-0.7**
CODM		**0.15**	**87**	P	**Pg**	**00 33 11.8**	**-0.2**
GRAM		**0.32**	**70**	P	**Pg**	**00 33 13.5**	**-1.6**
GRAM				S	**Sg**	**00 33 16.8**	**-2.8**
GRAM		**0.32**	**70**	P	**Pg**	**00 33 13.5**	**-1.6**
BACM		**0.32**	**109**	P	**Pg**	**00 33 15.0**	**-0.2**
BACM				S	**Sg**	**00 33 19.4**	**-0.4**
BACM		**0.32**	**109**	P	**Pg**	**00 33 15.0**	**-0.2**
BOB	**Bobbio (Coli)**	**0.41**	**340**	⇓*i*Pg	**Pg**	**00 33 15.9**	**-0.9**
BOB				Sg	**Sg**	**00 33 21.6**	**-0.8**
	1µm,0.5s						
VALM		**0.43**	**94**	P	**Pg**	**00 33 16.3**	**-1.0**
VALM				S	**Sg**	**00 33 21.7**	**-1.6**
VALM		**0.43**	**94**	P	**Pg**	**00 33 16.3**	**-1.0**
VINC	**Vinca**	**0.44**	**124**	P	**Pg**	**00 33 17.6**	**+0.2**
VINC				S	**Sg**	**00 33 23.5**	**+0.1**
VINC	**Vinca**	**0.44**	**124**	P	**Pg**	**00 33 17.6**	**+0.2**
VINC	**Vinca**	**0.44**	**124**	P	**Pg**	**00 33 17.6**	**+0.2**
VINC				S	**Sg**	**00 33 23.5**	**+0.1**
GENL	**Genova Univers**	**0.48**	**273**	P	**Pg**	**00 33 19.5**	**+1.2**
GENL				S	**Sg**	**00 33 26.9**	**+2.0**
GENL	**Genova Univers**	**0.48**	**273**	P	**Pg**	**00 33 19.5**	**+1.2**
ERBM	**Eremo**	**0.55**	**86**	⇑*i*Pg	**Pg**	**00 33 18.9**	**-0.7**
ERBM				Sg	**Sg**	**00 33 27.5**	**+0.4**
	191nm,0.4s						
VLC	**Villacollemand**	**0.58**	**113**	Pg	**Pg**	**00 33 19.5**	**-0.6**
VLC				Sg	**Sg**	**00 33 28.3**	**+0.3**
	122nm,0.4s						
SARO	**Sassorosso**	**0.58**	**110**	P	**Pb**	**00 33 19.6**	**-0.4**
SARO				S	**Sb**	**00 33 26.7**	**-1.2**
SARO	**Sassorosso**	**0.58**	**110**	P	**Pb**	**00 33 19.6**	**-0.4**
SARO	**Sassorosso**	**0.58**	**110**	P	**Pb**	**00 33 19.6**	**-0.4**
SARO				S	**Sb**	**00 33 26.7**	**-1.2**
GSCL	**Gusciola**	**0.68**	**93**	⇓*i*Pg	**Pg**	**00 33 21.4**	**-0.7**
GSCL				Sg	**Sg**	**00 33 31.1**	**-0.1**
	70nm,0.3s						
BDI	**Bagni Di Lucca**	**0.76**	**115**	Pg	**Pg**	**00 33 22.6**	**-1.0**
	164nm,0.3s						
MAIM		**0.77**	**127**	P	**Pb**	**00 33 23.4**	**+0.1**
MAIM				S	**Sb**	**00 33 33.4**	**-0.1**
MAIM		**0.77**	**127**	P	**Pb**	**00 33 23.4**	**+0.1**
MAIM				S	**Sb**	**00 33 33.4**	**0.0**
PCP	**Pian Castagno**	**0.80**	**282**	P	**Pb**	**00 33 24.6**	**+0.7**
PCP				S	**Sb**	**00 33 35.4**	**+0.9**
PCP	**Pian Castagno**	**0.80**	**282**	P	**Pb**	**00 33 24.6**	**+0.8**
PII	**Pisa**	**0.92**	**136**	⇓*i*Pg	**Pg**	**00 33 26.3**	**-0.5**
	182nm,0.5s						
ZCCA	**Zocca**	**0.95**	**92**	Pg	**Pg**	**00 33 28.1**	**+0.5**
	16nm,0.4s						
FIN	**Finale Ligure**	**1.05**	**261**	Pg	**Pg**	**00 33 29.2**	**-0.2**
	107nm,0.3s						
FIN	**Finale Ligure**	**1.05**	**261**	P	**Pb**	**00 33 28.7**	**+0.7**
FIN	**Finale Ligure**	**1.05**	**261**	Pg	**Pg**	**00 33 29.2**	**-0.2**
	107nm,0.3s						
FNVD	**Fontana Vidola**	**1.08**	**101**	Pg	**Pg**	**00 33 30.3**	**+0.2**
FNVD				Sg	**Sg**	**00 33 45.8**	**+1.2**
	205nm,0.8s						
SEI	**Scarperia**	**1.27**	**104**	Pn	**Pn**	**00 33 33.2**	**+1.1**
	124nm,0.3s						
ROB	**Roburent**	**1.28**	**267**	P	**Pb**	**00 33 32.5**	**+0.6**
ROB				S	**Sb**	**00 33 48.9**	**+0.7**
ROB	**Roburent**	**1.28**	**267**	P	**Pb**	**00 33 32.5**	**+0.6**
ROB				S	**Sb**	**00 33 48.8**	**+0.6**
IMI	**Imperia**	**1.35**	**250**	Pn	**Pn**	**00 33 33.6**	**+0.4**
	63nm,0.4s						
IMI	**Imperia**	**1.35**	**250**	P	**Pn**	**00 33 33.2**	**0.0**
IMI	**Imperia**	**1.35**	**250**	Pn	**Pn**	**00 33 33.6**	**+0.4**
	63nm,0.4s						
SAL	**Salo**	**1.37**	**27**	Pn	**Pn**	**00 33 33.8**	**+0.3**
	248nm,0.8s						
SALO	**Salr**	**1.38**	**27**	⇓*i*Pn	**Pn**	**00 33 33.7**	**0.0**
	269nm,0.7s						
MDI	**Monti di Nese**	**1.39**	**2**	Pn	**Pn**	**00 33 34.2**	**+0.4**
	215nm,0.7s						
MONE	**Monesi**	**1.39**	**258**	P	**Pn**	**00 33 34.3**	**+0.5**

MONE				S	Sb	00 33 51.8	+0.3
MONC	Moncucco Torin	1.41	300	Pn	Pn	00 33 37.3	+3.3
VMG	Vicchio	1.43	107	Pn	Pn	00 33 36.8	+2.5
NEGI	Negi	1.50	250	P	Pn	00 33 35.2	-0.1
NEGI				S	Sb	00 33 53.1	-1.5
NEGI	Negi	1.50	250	P	Pn	00 33 35.2	-0.1
CSNT	Castellina Chi	1.50	127	⇑*i*Pn	Pn	00 33 35.8	+0.5
	32nm,0.3s						
MUGIO	Muggio	1.60	345	Pn	Pn	00 33 37.5	+0.8
ENR	Entracque	1.60	265	P	Pn	00 33 37.2	+0.4
ENR				S	Sn	00 33 56.7	-1.0
ENR	Entracque	1.60	265	P	Pn	00 33 37.2	+0.3
STV2	Anna di Valdie	1.67	266	P	Pn	00 33 38.2	+0.5
STV2	Anna di Valdie	1.67	266	P	Pn	00 33 38.2	+0.4
STV	Sta Anna Valdi	1.67	266	P	Pn	00 33 38.1	+0.3
STV	Sta Anna Valdi	1.67	266	P	Pn	00 33 38.1	+0.3
SBF	Sospel	1.68	253	*e*Pn	Pn	00 33 38.7	+0.9
SBF				*e*Sn	Sn	00 33 58.8	-0.6
SBF				*e*Sg	Sg	00 34 03.7	-0.6
	88nm,0.3s						
ORO	Oropa	1.71	317	Pn	Pn	00 33 39.4	+1.0
	39nm,0.3s						
ORX	Oropa	1.72	317	P	Pn	00 33 38.8	+0.4
ORX	Oropa	1.72	317	P	Pn	00 33 38.8	+0.3
DOI	San Damiano	1.72	275	Pn	Pn	00 33 39.5	+1.0
	40nm,0.2s						
TRAV		1.76	311	P	Pn	00 33 38.1	-1.0
TRAV				S	Sn	00 33 57.9	-3.6
TRAV		1.76	311	P	Pn	00 33 38.1	-0.9
BHB	Bricherasio	1.76	286	P	Pn	00 33 38.8	-0.3
BHB	Bricherasio	1.76	286	P	Pn	00 33 38.8	-0.3
MABI	Malga Bissina	1.78	20	Pn	Pn	00 33 39.1	-0.2
	40nm,0.6s						
PZZ	Prazzo	1.83	275	P	Pn	00 33 40.0	0.0
RSP	Reno Superiore	1.87	295	P	Pn	00 33 40.1	-0.5
RSP	Reno Superiore	1.87	295	P	Pn	00 33 40.1	-0.5
PGF	Pioggiola	1.90	195	*e*Pn	Pn	00 33 41.6	+0.6
PGF				*e*Sn	Sn	00 34 02.4	-2.6
	22nm,0.5s						
FENE	Fenestrelle	1.95	290	P	Pn	00 33 41.4	-0.4
FENE	Fenestrelle	1.95	290	P	Pn	00 33 41.4	-0.4
LSD	Ceresole Reale	2.07	302	P	Pn	00 33 43.8	+0.4
LSD	Ceresole Reale	2.07	302	P	Pn	00 33 43.8	+0.3
MBDF	Montbardon	2.08	280	*e*Pn	Pn	00 33 44.4	+0.7
MBDF				*e*Sn	Sn	00 34 09.8	0.0
MBDF				*e*Sg	Sg	00 34 17.8	0.0
	24nm,0.4s						
TUE	Stuetta	2.10	354	Pn	Pn	00 33 44.8	+0.9
	31nm,0.7s						
RRL	Cesana Torines	2.11	286	P	Pn	00 33 45.9	+1.8
RRL				S	Sn	00 34 10.5	0.0
RRL	Cesana Torines	2.11	286	P	Pn	00 33 45.9	+1.8
RRL				S	Sn	00 34 10.5	0.0
BRMO	Bormio	2.15	14	Pn	Pn	00 33 45.2	+0.5
	13nm,0.8s						
CTI	Castel Tesino	2.19	40	Pn	Pn	00 33 44.2	-1.0
	75nm,0.4s						
FRF	La Foret Royal	2.32	250	*e*Pn	Pn	00 33 47.5	+0.5
FRF				*e*Sn	Sn	00 34 14.7	-1.0
	60nm,0.4s						
LPG	La Plagne	2.34	299	*e*Pn	Pn	00 33 49.4	+2.1
LPG				*e*Sn	Sn	00 34 16.4	+0.2
LPG				*e*Sg	Sg	00 34 26.5	+0.2
	13nm,0.6s						
LPL	La Plagne	2.36	300	*e*Pn	Pn	00 33 49.9	+2.3
LPL				*e*Sn	Sn	00 34 16.7	0.0
LPL				*e*Sg	Sg	00 34 27.3	+0.3
	29nm,0.6s						
APPI	Appiano	2.37	27	Pn	Pn	00 33 48.6	+0.8
	46nm,0.5s						
LMR	La Mourre	2.50	246	*e*Pn	Pn	00 33 49.4	-0.3
LMR				*e*Sn	Sn	00 34 19.1	-1.3
	24nm,0.4s						
ORIF	Oris-en-Rattie	2.74	283	*e*Pn	Pn	00 33 55.5	+2.4
ORIF				*e*Sn	Sn	00 34 25.0	-1.4
ORIF				*e*Sg	Sg	00 34 38.6	-1.1
	38nm,0.8s						
DAVA	Damuels	2.91	3	⇑*e*Pn	Pn	00 33 56.8	+1.4
	comp=Z,1.2nm,0.1s						
DAVA	Damuels	2.91	3	⇑*e*Sn	Sn	00 34 32.4	+1.7
	comp=E,9.7nm,0.4s						
DAVA	Damuels	2.91	3	⇑*e*Pn	Pn	00 33 56.8	+1.4
DAVA				*e*Sn	Sn	00 34 32.4	+1.7
SMRF	Simiane la Rot	2.96	263	*e*Pn	Pn	00 33 57.2	+1.0
SMRF				*e*Sg	Sg	00 34 44.1	-2.8
	16nm,0.4s						
SQTA	Sankt Quirin	3.04	21	⇓*i*Pn	Pn	00 33 59.0	+1.6
	comp=Z,2.0nm,0.2s						
SQTA	Sankt Quirin	3.04	21	⇓*i*Pn	Pn	00 33 59.0	+1.6
SQTA				Sn	Sn	00 34 31.6	-2.5
SQTA	Sankt Quirin	3.04	21	Pn	Pn	00 33 59.0	+1.6
	2.0nm,0.2s						
SQTA				Sn	Sn	00 34 31.6	-2.5
	12nm,0.4s						
MOTA	Moosalm	3.13	18	⇓*i*Pn	Pn	00 33 59.7	+1.1
	comp=Z,1.7nm,0.2s						
MOTA	Moosalm	3.13	18	⇑*i*Sn	Sn	00 34 37.1	+0.8
	comp=Z,7.4nm,0.6s						
MOTA	Moosalm	3.13	18	⇓*i*Pn	Pn	00 33 59.7	+1.1
MOTA				Sn	Sn	00 34 37.1	+0.8
WTTA	Wattenberg	3.20	25	⇑*i*Pn	Pn	00 34 01.4	+1.8
	comp=Z,1.7nm,0.2s						
WTTA	Wattenberg	3.20	25	⇑*i*Pn	Pn	00 34 01.4	+1.8
WTTA				Sn	Sn	00 34 40.3	+2.2
WTTA	Wattenberg	3.20	25	Pn	Pn	00 34 01.4	+1.8
	1.7nm,0.2s						
WTTA				Sn	Sn	00 34 40.3	+2.2
	4.4nm,0.3s						
CABF	La Chapelle	3.35	313	*e*Pn	Pn	00 34 02.8	+1.1
CABF				*e*Sn	Sn	00 34 40.4	-1.5
CABF				*e*Sg	Sg	00 34 58.5	-1.5
	35nm,1.0s						
VIVF	Saint-Julien-l	3.58	279	*e*Pn	Pn	00 34 06.0	+1.0
VIVF				*e*Sn	Sn	00 34 45.7	-2.1
	4.2nm,0.4s						
HINF	Hinteralfeld	3.94	331	*e*Pn	Pn	00 34 10.0	-0.2
HINF				*e*Sn	Sn	00 34 54.7	-2.2
	7.9nm,0.4s						
LASF	Ste Croix	4.17	268	*e*Pn	Pn	00 34 12.9	-0.5
HAU	Haudompre	4.28	329	*e*Pn	Pn	00 34 15.0	0.0
HAU				*e*Sn	Sn	00 35 03.2	-2.4
	9.3nm,0.3s						
CDF	Champ du Feu	4.35	339	*e*Pn	Pn	00 34 15.5	-0.5
CDF				*e*Sn	Sn	00 35 04.5	-2.7
	4.8nm,0.4s						
SMF	Signal de Mont	4.66	301	*e*Pn	Pn	00 34 20.9	+0.5
SMF				*e*Sn	Sn	00 35 12.1	-3.1
	3.6nm,0.3s						
LOR	Lormes	4.97	308	*e*Pn	Pn	00 34 25.1	+0.4
	baz=125						
LOR				*e*Sn	Sn	00 35 20.1	-2.7
	7.5nm,0.4s						
AVF	Avril sur Loir	5.03	301	*e*Pn	Pn	00 34 26.0	+0.4
SSF	Saint Saulge	5.06	304	*e*Pn	Pn	00 34 26.6	+0.5
MEZF	Maizieres J'vi	5.20	324	*e*Pn	Pn	00 34 27.8	-0.2
BGF	Bois d'Agland	5.25	297	*e*Pn	Pn	00 34 29.3	+0.6
BGF				*e*Sn	Sn	00 35 26.0	-4.0
	9.1nm,0.5s						
CAF	Calviac	5.43	278	*e*Pn	Pn	00 34 31.1	-0.2
KHC	Kasperske Hory	5.46	28	*e*PN	Pn	00 34 29.5	-2.2
KHC				*e*SN	Sn	00 35 30.2	-5.0
KHC				*e*x	x	00 35 58.0	
MTLF	Montolieu	5.47	262	*e*Pn	Pn	00 34 31.1	-0.7

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*NIED **23** 00:46:00,44.60N×146.70E,h195^{km},Mw4.2 Best double couple: M$_0$2.01×10^{15} NP1:ϕ_s79°,δ79°,λ126°. NP2:ϕ_s184°, δ37°,λ18°.*
*MOS **23** 00:46:15.2±1.0,44.91N×146.49E,h179^{km},mb4.4/23, Error ellipse: s-maj=12.0km s-min=6.9km az=99.6*
*NEIC **23** 00:46:16.7±0.6,44.86N×146.46E,h183^{km}±5^{km},mb4.4/21, Error ellipse: s-maj=6.3km s-min=5.0km az=155.0*
*JMA **23** 00:46:16.8±0.3,44.64N×146.67E,h175^{km}±3^{km},M4.3*
*IDC **23** 00:46:17.7±1.8,44.94N×146.47E,h190^{km}±17^{km}, mb3.8/21,mb1 4.0/23,mb1mx4.0/26,mbtmp4.3/23,Error ellipse: s-maj=14.2km s-min=10.0km az=174.0*
ISC 23 00:46:15.1±0.4**,44.80N**±0.04×**146.58E**±0.06**,h183**^{km}±3^{km}**, n147,**σ1^s**04**/150**,mb4.2**/45**,7C-10D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.92	214	α*i*PN	P	00 46 41.5	-1.2
YUK				*i* S	S	00 47 02.0	-2.1
YUK				pmax	pmax		
	comp=Z,2µm,0.5s						
YUK				pmax	pmax		
	comp=N,420nm,0.6s						
YUK				pmax	pmax		
	comp=E,420nm,0.5s						
YUK				pmax	pmax		
	comp=Z,6µm,1.0s						
YUK				pmax	pmax		
	comp=N,2µm,0.8s						
YUK				pmax	pmax		
	comp=E,2µm,0.8s						
YUK				smax			
	comp=N,2µm,0.5s						
YUK				smax			
	comp=E,2µm,0.5s						
YUK				smax			
	comp=N,10µm,1.8s						
YUK				smax			
	comp=E,5µm,2.0s						
JRA	Rausu	1.35	231	P	P	00 46 46.7	+0.4
NEM2	Nemuro 2	1.55	203	P	P	00 46 47.5	-0.7
NEM2				*e*S	S	00 47 11.0	-2.7
JNK	Nakash	1.80	228	P	P	00 46 51.4	+0.7
JTKR	Abashiri--Toko	2.08	248	P	P	00 46 54.4	+0.7
JTKR				*e*S	S	00 47 23.9	+0.5
JAK	Akkeshi	2.26	218	P	P	00 46 55.6	-0.1
JAK				*e*S	S	00 47 25.0	-1.9
JMP	Maruseppu	2.44	252	P	P	00 46 58.7	+0.9
JMP				*e*S	S	00 47 31.7	+1.1
JAR	Ashorobuto	2.52	234	P	P	00 46 59.8	+1.1
JOB	Onbets	2.74	227	P	P	00 47 02.1	+0.7
JOB				*e*S	S	00 47 36.0	-1.0
JSE	Soyaes	2.84	275	P	P	00 47 03.8	+1.2
JKK2	Kamakawa 2	2.90	253	P	P	00 47 04.5	+1.3
JKK2				*e*S	S	00 47 41.6	+1.3
ASAJ	Asahikawa	2.93	258	P	P	00 47 05.3	+1.7
	comp=E,18nm,0.3s,baz=80,slow=13,SNR=78						
ASAJ	Asahikawa	2.93	258	PN	P	00 47 05.4	+1.8
ASAJ				pmax	pmax		
	comp=Z,18nm,0.3s						
JCH	Churui	3.19	228	P	P	00 47 07.0	+0.1
JCH				*e*S	S	00 47 44.2	-2.5
JFR	Furan	3.31	242	P	P	00 47 09.8	+1.5
JWK2	Keihoku	3.36	281	P	P	00 47 11.2	+2.3
YSS	Yuzh-Sakhalins	3.43	310	*e*P	P	00 47 10.3	+0.5
YSS	Yuzh-Sakhalins	3.43	310	⇓*i*PN	P	00 47 10.0	+0.2
YSS				*e*S	S	00 47 51.0	-1.0
YSS				pmax	pmax		
	comp=N,180nm,0.6s						
YSS				pmax	pmax		
	comp=E,230nm,0.6s						
YSS				pmax	pmax		
	comp=Z,250nm,0.6s						
YSS				smax			
	comp=E,90nm,1.0s						
JHR	Hokuryu	3.64	255	P	P	00 47 14.7	+2.2
JNBK	Urakawa-nobuka	3.75	229	P	P	00 47 13.1	-0.7
JNBK				*e*S	S	00 47 54.6	-4.5
MAT	Matsushiro	10.40	220	P	P	00 48 40.5	-0.1
MAT				*e*S	S	00 50 33.5	-1.2
MAT	Matsushiro	10.40	220	*e*P	P	00 48 41.0	+0.4
	comp=E,9.0nm,0.8s						
MAT	Matsushiro	10.40	220	*e*PN	P	00 48 41.0	+0.4
MAT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MJAR	Matsushiro Arr	10.40	220	P	P	00 48 40.4	-0.2
	comp=Z,1.0nm,0.3s,baz=28,slow=13,SNR=7.0						
PET	Petropavlovsk	11.43	40	*i* PN	P	00 48 47.2	-6.6
SEY	Seymchan	18.48	8	*i* P	P	00 50 16.6	-2.6
FX1	Attu Island--F	19.19	56	P	P	00 50 27.2	+0.5
	comp=Z,2.7nm,0.3s,baz=326,slow=3.6,SNR=8.5						
FX1	Attu Island--F	19.19	56	*e*P	P	00 50 27.7	+1.0
YAK	Yakutsk	19.87	336	⇓*e*P	P	00 50 31.6	-2.0
BOD	Bodaibo	23.90	315	*e*P	P	00 51 08.7	-4.1
BOD				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.5						
ULN	Ulaanbaatar	27.26	291	⇓*e*P	P	00 51 42.4	-1.6
SONM	Songino Array	27.70	291	P	P	00 51 47.9	-0.1
	comp=Z,0.7nm,0.4s,mb3.8,baz=85,slow=9.0,SNR=12						
TIXI	Tiksi	28.25	348	⇑*e*P	P	00 51 48.4	-4.3
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
IMA2	Indian Mountai	38.05	35	*e*P	P	00 53 16.0	-0.9
ZAL	Zalesovo	40.06	306	P	P	00 53 32.7	-0.9
	comp=Z,2.2nm,0.3s,mb4.2,baz=37,slow=5.2,SNR=8.6						
ZAL	Zalesovo	40.06	306	P	P	00 53 32.7	-0.9
MCK	McKinley	40.07	39	*e*P	P	00 53 33.5	0.0
	comp=Z,4.5nm,1.0s,mb4.0						
MCK	McKinley	40.07	39	*e*P	P	00 53 33.6	+0.1
MCK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.0						
COLA	College	40.48	37	*e*P	P	00 53 36.7	-0.2
COLA	College	40.48	37	*i* P	P	00 53 37.0	+0.1
ILAR	Eielson Array	40.89	37	P	P	00 53 39.6	-0.7
	comp=Z,5.6nm,0.7s,mb4.3,baz=276,slow=8.7,SNR=73						
DIV	Divide	41.81	42	*e*P	P	00 53 48.4	+0.7
MKAR	Makanchi Array	43.74	296	P	P	00 54 03.5	0.0
	comp=Z,2.4nm,0.6s,mb4.0,baz=74,slow=9.0,SNR=11						
KURK	Kurchatov	44.61	303	*e*P	P	00 54 09.9	-0.4
	comp=Z,12nm,1.1s,mb4.5						
KURK	Kurchatov	44.61	303	*e*P	P	00 54 09.9	-0.5
KURK				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.4						
INK	Inuvik	45.71	31	P	P	00 54 17.6	-1.2
	comp=Z,3.1nm,0.4s,mb4.3,baz=304,slow=7.1,SNR=61						
CHKZ	Chkalovo	48.15	309	*e*P	P	00 54 36.2	-1.9
	comp=Z,2.9nm,0.6s,mb4.1						
CHKZ	Chkalovo	48.15	309	*e*P	P	00 54 36.2	-1.8
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
BVAR	Borovoye Array	48.52	308	P	P	00 54 40.6	-0.3
	comp=Z,1.2nm,0.3s,mb4.0,baz=66,slow=8.0,SNR=19						
ARU	Arti	53.30	316	⇑*i*P	P	00 55 15.5	-1.3
ARU				*e*PPP	PPP	00 58 27.2	-5.7
ARU				*e*S	S	01 02 32.6	+0.3
ARU				*e*SS	SS	01 06 12.8	-1.7
ARU				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.1						
YKA	Yellowknife Ar	55.16	34	P	P	00 55 29.1	-1.0
	comp=Z,2.0nm,0.6s,mb4.0,baz=301,slow=7.1,SNR=7.5						
YKA	Yellowknife Ar	55.16	34	*i* P	P	00 55 29.7	-0.5
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTK	Aktyubinsk	56.55	310	P	P	00 55 39.6	-0.5
AKTO	Aktyubinsk	56.55	310	P	P	00 55 39.6	-0.5
	comp=Z,1.9nm,0.4s,mb4.3,baz=84,slow=9.7,SNR=12						
KEV	Kevo	57.59	339	*e*p	P	00 55 44.1	-3.2
ARCES	ARCESS Array B	58.12	339	P	P	00 55 48.6	-2.4
	comp=Z,2.2nm,0.7s,mb4.1,baz=47,slow=7.3,SNR=14						
KAKA	Kakadu	58.66	196	⇑*i*P	P	00 56 15.6	+20
	comp=Z,6.0nm,0.6s,mb4.6						
JOF	Joensuu	60.97	332	*e*p	P	00 56 07.8	-2.7
KAF	Kangasniemi	63.19	333	*e*p	P	00 56 22.5	-2.8
FINES	FINESS Array B	63.76	333	P	P	00 56 26.6	-2.2
	comp=Z,3.6nm,0.5s,mb4.5,baz=45,slow=7.8,SNR=60						
WB2	Warramunga Arr	65.38	193	⇓*i*P	P	00 56 39.8	-0.3
WRA	Warramunga Arr	65.39	193	P	P	00 56 39.9	-0.2
	comp=Z,2.9nm,0.4s,mb4.4,baz=8.9,slow=6.7,SNR=42						
HRY	Holter Researc	65.73	48	*e*P	P	00 56 42.3	+0.5
BOZ	Bozeman (W)	66.52	48	*e*P	P	00 56 47.8	+0.9
	comp=Z,6.1nm,0.6s,mb4.6						
BOZ	Bozeman (W)	66.52	48	*e*P	P	00 56 47.8	+0.9
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
NVAR	Mina Array Bea	67.37	58	P	P	00 56 53.6	+1.3
	comp=Z,1.4nm,0.8s,mb3.9,baz=307,slow=4.8,SNR=12						
ELK	Elko	67.69	54	P	P	00 56 54.3	0.0
	comp=Z,1.0nm,0.8s,mb3.6,baz=256,slow=4.2,SNR=5.5						
ELK	Elko	67.69	54	*e*P	P	00 56 53.5	-0.7
ELK				P		00 56 54.3	
NB2	NORSAR Subarra	68.48	338	P	P	00 56 56.9	-1.8
	comp=Z,2.5nm,0.4s,mb4.3,baz=32,slow=6.5						
NOA	NORSAR Array B	68.48	338	P	P	00 56 56.7	-2.0
	comp=Z,1.0nm,0.4s,mb3.9,baz=20,slow=4.4,SNR=10						
PDAR	Pinedale Array	69.55	50	P	P	00 57 06.3	+0.7
	comp=Z,3.9nm,0.5s,mb4.4,baz=288,slow=1.4,SNR=42						
BORG	Borgarnes	70.39	355	*e*P	P	00 57 08.3	-2.0
AKASG	Malin Array Be	70.49	323	P	P	00 57 10.2	-1.0
	comp=Z,2.0nm,0.4s,mb4.2,baz=38,slow=6.0,SNR=15						
AKASG	Malin Array Be	70.49	323	*i* P	P	00 57 10.6	-0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PV10	Paradox Valley	72.84	53	*e*P	P	00 57 26.9	+1.6
KWP	Kalwaria	74.01	326	*e*P	P	00 57 32.4	+0.5
	comp=Z,73nm,1.8s,mb5.1						
KWP	Kalwaria	74.01	326	*e*P	P	00 57 32.4	+0.6
KWP				pmax	pmax		
	comp=Z,73nm,1.8s,mb5.1						
BURAR	Bucovina Array	74.55	323	⇓P	P	00 57 35.0	0.0
CFR	Carcaliu	75.13	320	⇑P	P	00 57 37.5	-0.8
MLR	Muntele Rosu	75.88	321	⇓P	P	00 57 43.5	+1.0
DRGR		76.26	324	⇓P	P	00 57 43.7	-0.9
VOIR		76.32	322	⇑P	P	00 57 46.3	+1.4
STKA	Stephens Creek	76.44	184	P	P	00 57 46.2	+0.3
	comp=Z,1.1nm,0.7s,mb3.6,baz=330,slow=16,SNR=3.6						
BRTR	Keskin Array B	76.53	313	P	P	00 57 46.8	+0.6
	comp=Z,1.0nm,0.6s,mb3.6,baz=65,slow=5.2,SNR=7.1						
ANMO	Albuquerque	76.72	54	P	P	00 57 48.5	+1.1
	baz=333,slow=10.0						
ANMO	Albuquerque	76.72	54	*i* P	P	00 57 49.1	+1.7
SCHQ	Schefferville	76.77	19	P	P	00 57 47.2	-0.1
	comp=Z,6.0nm,0.9s,mb4.2,baz=263,slow=8.1,SNR=4.1						
SCHQ	Schefferville	76.77	19	P	P	00 57 47.2	-0.1
KHC	Kasperske Hory	77.85	331	*e*P	P	00 57 53.0	-0.3
GERES	GERESS Array B	78.05	330	P	P	00 57 54.5	+0.2
	comp=Z,1.0nm,0.5s,mb3.7,baz=37,slow=5.8,SNR=14						
GIVF	Givet	79.80	336	*e*P	P	00 58 04.1	+0.3
BAIF	Baives	80.01	336	*e*P	P	00 58 05.1	+0.2
CDF	Champ du Feu	80.56	334	*e*P	P	00 58 07.2	-0.7
MEZF	Maizieres J'vi	81.16	335	*e*P	P	00 58 11.2	+0.1
TXAR	Lajitas Array	82.41	56	P	P	00 58 19.4	+1.5
	comp=Z,0.7nm,0.5s,mb3.5,baz=281,slow=3.3,SNR=14						
FLN	La Foliniere	82.47	339	*e*P	P	00 58 17.8	0.0
	comp=Z,15nm,0.7s,mb4.5						
FLN	La Foliniere	82.47	339	*e*P	P	00 58 17.8	0.0
FLN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.5						
LDF	La Druitiere	82.53	338	*e*P	P	00 58 18.3	+0.2
LOR	Lormes	82.62	335	*e*P	P	00 58 19.0	+0.4
	comp=Z,6.5nm,0.8s,mb4.1						
LOR	Lormes	82.62	335	*e*P	P	00 58 19.0	+0.4
LOR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.1						
GRR	Gorron	82.91	339	*e*P	P	00 58 20.5	+0.5
	comp=Z,14nm,0.6s,mb4.5						
GRR	Gorron	82.91	339	*e*P	P	00 58 20.5	+0.5
GRR				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.6						
SSF	Saint Saulge	82.91	336	*e*P	P	00 58 20.4	+0.3
	comp=Z,1.5nm,0.6s,mb3.9						
SSF	Saint Saulge	82.91	336	*e*P	P	00 58 20.4	+0.3
SSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
SMF	Signal de Mont	83.19	335	*e*P	P	00 58 21.5	0.0
	comp=Z,9.9nm,0.7s,mb4.3						
SMF	Signal de Mont	83.19	335	*e*P	P	00 58 21.5	0.0
SMF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
AVF	Avril sur Loir	83.20	336	*e*P	P	00 58 22.1	+0.5
	comp=Z,6.5nm,0.6s,mb4.3						
AVF	Avril sur Loir	83.20	336	*e*P	P	00 58 22.1	+0.5
AVF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
LPL	La Plagne	83.30	333	*e*P	P	00 58 22.4	+0.3
	comp=Z,25nm,1.2s,mb4.5						
LPL	La Plagne	83.30	333	*e*P	P	00 58 22.4	+0.3
LPL				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.5						
LPG	La Plagne	83.31	333	*e*P	P	00 58 22.9	+0.8
	comp=Z,9.8nm,0.8s,mb4.3						
LPG	La Plagne	83.31	333	*e*P	P	00 58 22.9	+0.8
LPG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
SGMF	Saint Gilles	83.46	340	*e*P	P	00 58 23.2	+0.4
	comp=Z,13nm,0.5s,mb4.6						
SGMF	Saint Gilles	83.46	340	*e*P	P	00 58 23.2	+0.4
SGMF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.6						
QUIF	Quistinic	83.92	340	*e*P	P	00 58 25.5	+0.4
MBDF	Montbardon	83.98	332	*e*P	P	00 58 25.8	+0.3
	comp=Z,3.0nm,0.4s,mb4.1						
MBDF	Montbardon	83.98	332	*e*P	P	00 58 25.8	+0.3
MBDF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.2						
TCF	Toulx Ste Croi	83.99	336	*e*P	P	00 58 26.0	+0.5
	comp=Z,8.8nm,0.7s,mb4.3						
TCF	Toulx Ste Croi	83.99	336	*e*P	P	00 58 26.0	+0.5
TCF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
ORIF	Oris-en-Rattie	84.10	333	*e*P	P	00 58 26.4	+0.3
	comp=Z,12nm,0.8s,mb4.4						
ORIF	Oris-en-Rattie	84.10	333	*e*P	P	00 58 26.4	+0.3
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
MFF	Saint Martin d	84.36	338	*e*P	P	00 58 27.7	+0.4
	comp=Z,7.2nm,0.5s,mb4.3						
MFF	Saint Martin d	84.36	338	*e*P	P	00 58 27.7	+0.4
MFF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.4						
SBF	Sospel	84.53	332	*e*P	P	00 58 28.8	+0.6
VIVF	Saint-Julien-l	84.54	334	*e*P	P	00 58 28.5	+0.2
SMRF	Simiane la Rot	85.04	333	*e*P	P	00 58 31.2	+0.4
FRF	La Foret Royal	85.06	332	*e*P	P	00 58 31.5	+0.6
RJF	Les Rejaudoux	85.09	336	*e*P	P	00 58 31.2	+0.2
PGF	Pioggiola	85.14	330	*e*P	P	00 58 31.5	+0.2
CAF	Calviac	85.28	336	*e*P	P	00 58 32.5	+0.6
	comp=Z,6.2nm,0.6s,mb4.2						
CAF	Calviac	85.28	336	*e*P	P	00 58 32.5	+0.6
CAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
LMR	La Mourre	85.31	332	*e*P	P	00 58 32.6	+0.5
LASF	Ste Croix	85.50	334	*e*P	P	00 58 33.3	+0.3
LFF	La Frestale	85.65	336	*e*P	P	00 58 34.2	+0.5
	comp=Z,11nm,0.6s,mb4.5						
LFF	La Frestale	85.65	336	*e*P	P	00 58 34.2	+0.5
LFF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
MTLF	Montolieu	86.67	335	*e*P	P	00 58 39.2	+0.5
EPF	Esparros	87.51	336	*e*P	P	00 58 43.5	+0.8
ETSF	Etsaut	87.89	336	*e*P	P	00 58 45.2	+0.7
SNAA	Sanae	149.32	198	*e*	PKPdf	01 05 44.0	+8.0
SNAA	Sanae	149.32	198	*e*	PKPdf	01 05 48.8	+13
SNAA	Sanae	149.32	198	⇓*i*P	PKPdf	01 05 42.9	+6.9
SNAA				*e*		01 05 44.0	
SNAA				*e*		01 05 48.8	
VNA2	Neumayer--Watz	150.87	197	*e*	PKPdf	01 05 48.6	+10
VNA2	Neumayer--Watz	150.87	197	*e*	PKPdf	01 05 53.8	+15
VNA2	Neumayer--Watz	150.87	197	⇓*i*P	PKPdf	01 05 47.2	+8.8
VNA2				*e*		01 05 48.6	
VNA2				*e*		01 05 53.8	
VNA2				*e*		01 06 32.5	
VNA2				*e*		01 06 43.7	
VNA3	Neumayer Olymp	151.08	196	*e*	PKPdf	01 05 47.5	+8.8
VNA3	Neumayer Olymp	151.08	196	*e*	PKPdf	01 05 53.1	+14
VNA3	Neumayer Olymp	151.08	196	⇓*i*P	PKPdf	01 05 46.5	+7.8
VNA3				*e*		01 05 47.5	
VNA3				*e*		01 05 53.1	
VNA3				*e*		01 06 30.5	
VNA3				*e*		01 06 42.3	

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*SNSN **23** 00:48:56.8,27.69N×34.33E,h6^{km},Ml2.8*
*CSEM **23** 00:48:56.8±0.1,27.60N×34.31E,h20^{km},ML3.0,Error ellipse: s-maj=2.1km s-min=1.2km az=83.0*
*HLW **23** 00:48:57.5,27.59N×34.31E,h14^{km},Mb3.0*
ISC 23 00:48:57.0±0.5**,27.59N**±0.03×**34.32E**±0.04**,h20**^{km}±7^{km}**, n29,**σ0^s**58**/33**,4C-12D,Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHRM		0.34	331	⇑*i*P	Pb	00 49 04.7	+0.3
SHRM				S	Sb	00 49 08.9	-0.5
TR1		0.53	322	⇓*i*P	Pb	00 49 07.8	+0.3
ZEIT		0.74	292	⇓P	Pb	00 49 11.5	+0.3
HHRG	Al Ghardaqah	0.76	241	⇓*i*P	Pb	00 49 12.3	+0.8
TR2		0.95	327	⇑*e*P	Pb	00 49 14.9	+0.2
HKAT	Jabal Katrina	0.97	343	⇓P	Pb	00 49 15.4	+0.3
AYUS	'Aynunah	1.03	54	P	Pb	00 49 16.1	0.0
AYUS				S	Sb	00 49 28.5	-0.7
HSFG		1.07	199	⇓*i*P	Pb	00 49 17.1	+0.3
BDAS	Al Bad'	1.09	39	P	Pb	00 49 16.3	-0.7
HDHB	Dhahab	1.16	13	⇓*e*P	Pb	00 49 17.8	-0.5
HAQS	Haql	1.56	20	P	Pn	00 49 23.2	-0.8
HBST	Basata	1.66	13	P	Pn	00 49 25.6	+0.1
JMOS	Jabal al Moall	1.72	24	P	Pn	00 49 26.0	-0.4
HQSR		1.83	178	⇓*e*P	Pn	00 49 27.9	+0.1

ALWS	Ilw as Safayha	1.84	21	P	Pn	00 49 27.7	-0.3
TBKS	Tabuk	2.07	72	P	Pn	00 49 32.5	+1.1
TBKS				S	Sn	00 49 58.4	+1.5
HADB		2.25	173	⇓eP	Pn	00 49 34.0	+0.1
ZAF		2.30	318	P	Pn	00 49 34.5	-0.1
HNKL	Nakhl	2.35	353	⇑eP	Pn	00 49 35.8	+0.4
SUZ		2.60	330	P	Pn	00 49 39.2	+0.3
EMRS	Mersa Alam	2.61	170	⇓P	Pn	00 49 39.0	0.0
EMRS				S	Sn	00 50 08.8	-1.7
HEDF	Idfu	2.69	203	⇓eP	Pn	00 49 39.8	-0.4
GLL	Jalalah	3.03	311	⇓eP	Pn	00 49 44.4	-0.7
AMAG	Maghara	3.19	343	⇑P	Pn	00 49 47.0	-0.3
KOT	Kottamia	3.19	317	P	Pn	00 49 47.7	+0.4
HAGS	Hagol	3.25	169	⇓eP	Pn	00 49 48.4	+0.2
UMJS	Umm Lajj	3.56	130	P	Pn	00 49 52.7	0.0
HSHL	Bi'r Shalatayn	4.57	167	P	Pn	00 50 06.5	-0.4
YNBS	Yanbu' al Bahr	4.63	134	P	Pn	00 50 08.4	+0.7

KNET ***23*** *00:49:45.9±0.5, 42.19N×73.72E, h3^{km}±4^{km}, ml2.6, Error ellipse: s-maj=3.2km s-min=2.0km az=75.0*
NNC ***23*** *00:49:47.3±1.9, 42.45N×73.56E, mpv3.3, Error ellipse: s-maj=32.6km s-min=6.8km az=2.0*
ISC 23 00:49:44.2±0.9**, 42.17N**±0.05×**73.51E**±0.05**, h3^{km}, n15, σ1^{s}09**/26**, 17C-10D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	0.14	104	⇑P	Pg	00 49 47.5	+0.4
	2μm,0.1s						
AML				⇑S	Sg	00 49 48.9	-0.1
	25μm,0.1s						
EKS2	Erkin-Say	0.53	22	⇓P	Pg	00 49 55.6	+0.7
	44nm,0.1s,SNR=260						
EKS2				⇑S	Sg	00 50 02.8	+0.8
	306nm,0.2s						
UCH	Uchtor	0.75	85	P	Pg	00 49 58.5	-0.7
	46nm,0.1s,SNR=58						
UCH				⇓S	Sg	00 50 07.7	-1.4
	316nm,0.2s						
AAK	Ala-Archa	0.87	57	⇑P	Pg	00 50 00.9	-0.6
	25nm,0.2s,SNR=38						
AAK				⇑S	Sg	00 50 11.5	-1.6
	98nm,0.2s						
AAK	Ala-Archa	0.87	57	⇑P	Pg	00 50 00.9	-0.6
	14nm,0.4s						
AAK				⇑S	Sg	00 50 11.5	-1.6
	99nm,0.7s						
KBK	Karagaybulak	1.17	65	⇓P	Pb	00 50 06.4	-0.4
	32nm,0.1s,SNR=20						
CHMS	Chumysh	1.24	47	⇑P	Pb	00 50 07.9	0.0
	22nm,0.1s,SNR=27						
CHMS				⇓S	Sb	00 50 23.4	-0.8
	62nm,0.2s						
KZA	Kyzart	1.30	93	⇑P	Pb	00 50 08.5	-0.4
	32nm,0.1s,SNR=118						
KZA				⇑S	Sb	00 50 25.1	-0.7
	161nm,0.2s						
USP	Ospenovka	1.32	33	⇑P	Pb	00 50 09.6	+0.3
	32nm,0.1s,SNR=80						
USP				⇑S	Sb	00 50 26.6	+0.1
	75nm,0.1s						
TKM2	Tokmak 2	1.72	63	⇓P	Pn	00 50 15.9	+0.7
	22nm,0.1s,SNR=26						
TKM2				⇓S	Sn	00 50 38.9	+1.0
	76nm,0.1s						
ULHL	Ulahol	2.03	87	⇓P	Pn	00 50 21.2	+1.5
	21nm,0.2s,SNR=16						
ULHL				⇓S	Sn	00 50 48.0	+2.1
	54nm,0.2s						
KK31	Karatay Array	2.40	294	⇓Pn	Pn	00 50 29.0	+4.0
	11nm,0.5s,baz=113,slow=16,SNR=150						
KK31				⇑Lg		00 51 02.8	
	32nm,0.3s,baz=112,slow=28,SNR=15						
MK31	Makanchi Array	7.80	51	⇑Pn	Pn	00 51 43.4	+2.1
	4.1nm,1.1s,baz=235,slow=14,SNR=23						
MK31				⇑Lg		00 53 45.1	
	5.8nm,1.1s,baz=257,slow=27,SNR=7.6						
AB31	Akbulak array	11.83	311	⇓Pn	P	00 52 35.0	-1.8
	0.2nm,0.4s,baz=119,slow=14,SNR=10						
AB31				⇑Sn	S	00 54 43.3	-7.2
	0.8nm,0.8s						
AKTO	Aktyubinsk	13.51	313	⇑Pn	P	00 52 57.6	-1.5
	3.1nm,2.6s						

NDI ***23*** *01:05:18.3±4.3, 34.95N×72.77E, h10^{km}, MD3.7, ML4.1*
IDC ***23*** *01:05:19.5±1.6, 34.61N×73.11E, mb3.7/6, mb1 3.8/9, mb1mx3.7/23, mbtmp3.7/9, ML3.6/3, Error ellipse: s-maj=40.7km s-min=25.1km az=52.0*
NEIC ***23*** *01:05:20.9±1.2, 34.58N×73.03E, h10^{km}, mb3.2/1, Error ellipse: s-maj=22.8km s-min=18.0km az=223.0*
NNC ***23*** *01:05:30.3±2.9, 35.37N×72.38E, mpv3.7, Error ellipse: s-maj=32.6km s-min=25.4km az=114.0*
ISC 23 01:05:20.4±0.6**, 34.80N**±0.05×**73.2E**±0.1**, h10^{km}, n28, σ1^{s}26**/35**, mb3.6**/5**, 4C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.18	137	eP	Pn	01 06 13.6	+2.1
THN				eS	Sn	01 06 56.6	+6.7
DLH	Dalhousie	3.25	133	eP	Pn	01 06 15.0	+2.6
DLH				ex	x	01 07 03.0	
BHK	Bhakra	4.34	140	eS	Sn	01 07 22.2	+3.0
BHK				ex	x	01 07 43.6	
SDNR	Sundarnagar	4.58	135	eP	Pn	01 06 31.8	+0.3
SDNR				eS	Sn	01 07 24.2	-1.2
SMLA	Simla	4.97	136	eP	Pn	01 06 36.6	-0.3
SMLA				eS	Sn	01 07 32.6	-2.6
KLP	Kalpa	5.37	126	eP	Pn	01 06 42.7	+0.2
KLP				eS	Sn	01 07 45.2	0.0
KLP				AML	AML	01 08 16.0	
	comp=N,256nm,0.7s						
KLP				AML	AML	01 08 16.4	
	comp=E,179nm,0.6s						
NDI	New Delhi	7.00	149	ex	x	01 07 12.0	
NDI				ex	x	01 08 20.0	
KHET	Khetri	7.07	161	eS	Sn	01 08 22.4	-5.4
KHET				AML	AML	01 08 24.3	
	comp=N,177nm,0.1s						
KHET				AML	AML	01 08 24.7	
	comp=E,200nm,0.2s						
KALG	Kalgarh	7.09	137	ex	x	01 08 34.0	
AYAN	Aya Nagar	7.14	151	eP	Pn	01 07 07.7	+0.2
AYAN				eS	Sn	01 08 24.7	-5.0
KUDL	Kundal	7.21	156	eP	Pn	01 07 06.2	-2.4
KUDL				eS	Sn	01 08 25.5	-5.9
AAK	Ala-Archa	7.89	7	⇑Pn	Pn	01 07 17.2	-0.9
	comp=E,3.8nm,1.0s						
AAK				⇓Sn	Sn	01 08 47.8	-0.6
	comp=E,8.7nm,1.4s						
KK31	Karatay Array	8.55	347	⇑Pn	P	01 07 28.5	+1.4
	comp=E,1.6nm,0.3s,baz=164,slow=13,SNR=49						
KK31				⇓Sn	Sn	01 09 01.5	-3.1
	comp=E,2.2nm,0.6s,baz=168,slow=20,SNR=5.4						
AGRA	Agra	8.59	150	eS	Sn	01 09 00.1	-5.5
MKAR	Makanchi Array	13.82	27	Pn	P	01 08 41.9	+3.2
	comp=E,0.1nm,0.3s,baz=210,slow=15,SNR=3.5						
AB31	Akbulak array	17.43	330	⇑Pn	P	01 09 25.0	0.0
	comp=E,0.9nm,0.7s,baz=138,slow=13,SNR=11						
AB31				⇑Sn	S	01 12 29.9	-7.5
	comp=E,0.5nm,0.6s						
BVAR	Borovoye Array	18.33	355	P	P	01 09 37.5	+1.2
	comp=E,0.4nm,0.3s,baz=152,slow=9.8,SNR=8.5						
CHKZ	Chkalovo	18.96	355	P	P	01 09 44.0	+0.1
	comp=E,0.9nm,0.6s						
AKTK	Aktyubinsk	19.14	329	P	P	01 09 45.8	-0.3
AKTO	Aktyubinsk	19.14	329	P	P	01 09 45.8	-0.3
	comp=E,0.5nm,0.3s,baz=142,slow=9.3,SNR=7.9						
ZAL	Zalesovo	20.82	20	P	P	01 10 02.8	-1.5
	comp=E,1.4nm,0.4s,baz=260,slow=8.1,SNR=5.8						
SONM	Songino Array	27.92	52	P	P	01 11 13.3	+0.7
	comp=E,0.2nm,0.4s,mb3.1,baz=255,slow=7.7,SNR=3.2						
FINES	FINESS Array B	39.87	327	P	P	01 12 55.7	+0.1
	comp=E,1.1nm,0.7s,mb3.7,baz=127,slow=9.5,SNR=3.8						
FINES	FINESS Array B	39.87	327	P	P	01 12 55.7	+0.1
ARCES	ARCESS Array B	43.39	338	P	P	01 13 24.8	+0.6
	comp=E,2.2nm,0.8s,mb3.9,baz=120,slow=8.0,SNR=8.9						
ARCES	ARCESS Array B	43.39	338	P	P	01 13 24.8	+0.6
INK	Inuvik	75.29	10	P	P	01 17 04.5	-0.2
	comp=E,1.4nm,1.0s,mb3.8,baz=314,slow=0.5,SNR=6.1						
WRA	Warramunga Arr	79.59	123	P	P	01 17 28.6	-1.0
	comp=E,0.2nm,0.4s,mb3.4,baz=322,slow=4.9,SNR=7.6						

MAN 23 01:09:08.7, 18.32N×121.38E, h96^{km}, mb3.7, ML2.5, MS2.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.47	195	eP	P	01 09 25.4	+1.3
APYP				eS	S	01 09 37.4	+1.9
SGCP	Mt. Cagua	0.64	97	eP	P	01 09 27.0	+1.6
SGCP				eS	S	01 09 40.3	+2.4
CVP	Callao Caves	0.74	145	eP	P	01 09 27.0	+0.6
ABRA	Dolores	0.92	224	eP	P	01 09 28.7	+0.5
CAUP	Cauayan	1.43	163	eP	P	01 09 35.2	+0.9
CAUP				eS	S	01 09 59.0	+5.6

NEIC ***23*** *01:17:13.6, 59.97N×152.76W, h94^{km}, MG3.3(AEIC), After AEIC.*
IDC ***23*** *01:17:16.7±6.2, 60.29N×152.48W, h123^{km}±55^{km}, mb3.5/2, mb1 3.3/6, mb1mx3.1/23, mbtmp3.6/6, Error ellipse: s-maj=51.8km s-min=24.6km az=39.0*
ISC 23 01:17:11.3±0.3**, 59.97N**±0.02×**152.66W**±0.04**, h106^{km}**±3^{km}**, n81, σ0^{s}85**/110**, mb3.9**/2**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIM	Iliamna	0.19	307	P	P	01 17 26.5	+0.2
ILIM				S	S	01 17 37.2	-0.4
INE	Iliamna NE	0.22	295	P	P	01 17 26.6	+0.2
ILW	Iliamna West	0.26	292	P	P	01 17 26.6	+0.1
ILW				S	S	01 17 38.1	+0.1
OPT	Oil Point	0.43	223	P	P	01 17 27.6	+0.2
OPT				S	S	01 17 39.1	-0.4
RSO	Redoubt South	0.50	355	P	P	01 17 28.6	+0.7
RSO				S	S	01 17 38.8	-1.5
REF	Redoubt East F	0.53	358	P	P	01 17 28.7	+0.7
REF				S	S	01 17 40.5	-0.1
HOM	Homer	0.60	121	P	P	01 17 29.6	+1.0
HOM				S	S	01 17 42.4	+0.7
RDT	Redoubt	0.62	12	P	P	01 17 29.3	+0.5
NNL	Ninilchik	0.69	83	P	P	01 17 31.1	+1.8
XLV	Seldovia	0.70	137	P	P	01 17 29.9	+0.4
XLV				S	S	01 17 43.3	+0.2
AUL	Augustine Lava	0.71	214	P	P	01 17 29.7	+0.2
AUL				S	S	01 17 42.9	-0.3
AUE	Augustine Isla	0.71	211	P	P	01 17 29.6	+0.1
AUP	Augustine Pinn	0.72	213	P	P	01 17 29.8	+0.2
AGU	Augustine-Summ	0.72	213	P	P	01 17 29.9	+0.2
AUI	Augustine Isla	0.74	212	P	P	01 17 29.8	-0.1
AUI				S	S	01 17 43.0	-0.8
CNPM	China Poot	0.84	121	P	P	01 17 31.6	+0.7
CNPM				S	S	01 17 46.4	+0.9
NKA	Nikishka	1.05	42	P	P	01 17 35.7	+2.6
CKL	Chakachamna La	1.25	7	P	P	01 17 36.1	+0.8
SPU	Mount Spurr	1.26	13	P	P	01 17 36.2	+0.7
SLKM	Skilak Lake	1.33	65	eP	P	01 17 36.7	+0.4
SYI	Shuyak Island	1.37	174	P	P	01 17 37.2	+0.4
SYI				S	S	01 17 56.1	+0.3
STLK	Strandline Lak	1.59	14	P	P	01 17 40.4	+0.9
SEW	Seward	1.62	84	P	P	01 17 40.4	+0.6
SEW				S	S	01 18 01.3	+0.3
FIB	Fire Island	1.72	44	P	P	01 17 43.1	+2.1
RC01	Rabbit Creek A	1.83	51	P	P	01 17 43.2	+0.8
RC01				S	S	01 18 06.5	+0.9
SVW2	Sparrevohn	1.84	309	P	P	01 17 42.2	-0.4
SVW2				S	S	01 18 03.9	-1.9
KAWH	Katmai	1.93	216	P	P	01 17 44.0	+0.3
KDAK	Kodiak Island	2.19	179	P	P	01 17 47.0	-0.1
KDAK				S	S	01 18 11.7	-2.2
KABR	Katmai Barrier	2.19	214	P	P	01 17 47.3	+0.1
MGLS	Mageik LS	2.23	219	P	P	01 17 48.4	+0.6
ANCK	Angle Creek	2.30	221	P	P	01 17 48.7	0.0
ANCK				S	S	01 18 15.0	-1.6
CAHL	Cahill	2.36	217	P	P	01 17 50.0	+0.5
PMR	Palmer	2.38	45	P	P	01 17 49.8	+0.1
PMR				S	S	01 18 17.9	-0.6
CNTC	Contact Creek	2.38	226	P	P	01 17 49.6	-0.2
CNTC				S	S	01 18 16.8	-1.9
KJL	Kejulik	2.44	219	P	P	01 17 50.9	+0.3
KNK	Knik Glacier	2.53	53	P	P	01 17 51.9	+0.1
GHO	Glory Hole Cre	2.57	44	P	P	01 17 52.3	-0.1
CUT	Chulitna	2.71	24	P	P	01 17 55.1	+0.9
SML	Sawmill	2.81	47	P	P	01 17 55.6	0.0
GLI	Glacier Island	2.91	69	P	P	01 17 56.0	-0.9
GLI				S	S	01 18 30.1	-1.2
HIN	Hinchinbrook I	3.11	79	P	P	01 17 59.1	-0.5
SCM	Sheep Creek Mo	3.21	52	P	P	01 18 00.8	-0.2
MID	Middleton Isla	3.25	97	P	P	01 18 01.7	+0.1
VLZ	Valdez	3.34	67	P	P	01 18 02.5	-0.3
VLZ				S	S	01 18 40.0	-1.7
TT01	Tatalina	3.36	333	P	P	01 18 02.6	-0.5
EYAK	Cordova Ski Ar	3.49	77	P	P	01 18 05.4	+0.5
EYAK				S	S	01 18 44.0	-1.6
DIV	Divide	3.60	68	P	P	01 18 05.9	-0.4
DIV				S	S	01 18 46.6	-1.5
KLU	Klutina	3.65	62	P	P	01 18 06.4	-0.6
KLU				S	S	01 18 47.3	-2.0
TRF	Thorofare Moun	3.67	17	P	P	01 18 08.0	+0.6
TRF				S	S	01 18 50.8	+0.8
KTH	Kantishna Hill	3.69	12	P	P	01 18 07.1	-0.6
KTH				S	S	01 18 48.6	-1.9
RND	Reindeer	3.90	26	P	P	01 18 11.2	+0.8
RAGM	Ragged Mountai	4.01	81	P	P	01 18 11.9	-0.1
TZL	Tazlina	4.09	56	P	P	01 18 13.0	0.0
BMRM	Bremner River	4.11	72	P	P	01 18 12.4	-1.0
KAIM	Kayak Island	4.15	87	P	P	01 18 14.3	+0.5
MCK	McKinley	4.17	23	P	P	01 18 15.2	+1.1
SDG	Sourdough	4.29	50	P	P	01 18 15.5	-0.3
PAX	Paxson	4.58	46	P	P	01 18 20.4	+0.7
GLB	Gilahina Butte	4.59	67	P	P	01 18 19.6	-0.3
GLB				S	S	01 19 10.1	-2.3
THY	Trims Highway	4.77	41	P	P	01 18 23.0	+0.7
NEA	Nenana	4.92	18	P	P	01 18 24.0	-0.3
WRH	Wood River Hil	5.00	23	P	P	01 18 25.1	-0.3
MLY	Manley	5.16	9	P	P	01 18 28.3	+0.7
GCSA	Galena City Sc	5.18	340	P	P	01 18 27.2	-0.7
BALM	Baldy	5.21	74	P	P	01 18 27.8	-0.4
CCB	Clear Creek Bu	5.21	24	P	P	01 18 27.5	-0.8
COLA	College	5.41	22	P	P	01 18 31.4	+0.5
MDM	Murphy Dome	5.42	20	P	P	01 18 30.8	-0.2
YAH	Yahtse	5.46	81	P	P	01 18 32.6	+0.9
DOT	Dot Lake	5.50	44	P	P	01 18 32.3	+0.2
IL1	Eielson Array	5.52	27	P	P	01 18 32.4	-0.1
ILAR	Eielson Array	5.52	27	P	P	01 18 32.0	-0.3
	1.0nm,0.3s,baz=215,slow=13,SNR=7.4						
ILAR				S	S	01 19 30.9	-4.3
	1.6nm,0.3s,baz=208,slow=21,SNR=6.2						
IM3	Indian Mountai	6.06	356	P	P	01 18 39.7	-0.1
PNL	Peninsula	6.70	87	P	P	01 18 48.4	-0.2
BM3	Burnt Mountain	8.28	22	P	P	01 19 09.5	-0.7
DLBC	Dease Lake	11.69	88	P	P	01 19 58.5	+2.9
	0.5nm,0.3s,baz=305,slow=12,SNR=11						
DLBC				S	S	01 22 03.8	-0.4
	0.7nm,0.3s,baz=150,slow=23,SNR=8.8						
DLBC	Dease Lake	11.69	88	P	P	01 19 58.5	+2.9
DLBC				S	S	01 22 03.8	-0.4
INK	Inuvik	11.76	37	P	P	01 19 57.9	+1.4
	0.1nm,0.3s,baz=255,slow=13,SNR=5.3						
YKA	Yellowknife Ar	18.31	66	P	P	01 21 19.6	+0.5
	0.1nm,0.3s,baz=276,slow=9.8,SNR=3.1						
SONM	Songino Array	54.95	306	P	P	01 26 33.8	+0.8
	0.6nm,0.5s,mb3.9,baz=40,slow=7.2,SNR=6.0						
BVAR	Borovoye Array	62.18	332	P	P	01 27 22.2	-0.9
	0.9nm,0.6s,mb4.0,baz=35,slow=4.2,SNR=6.7						

GUC ***23*** *01:42:47.0±0.9, 36.76S×72.28W, h64^{km}±4^{km}, ML5.3*
NEIC ***23*** *01:42:47.9±0.3, 36.74S×72.15W, mb4.6/10, Error ellipse: s-maj=9.9km s-min=5.0km az=92.0*
NEIC Felt [V] at Chillan and Concepcion; [IV] at Cauquenes, Chanco, Linares, Los Angeles and Parral; [III] at Curico, San Javier, Talca and Temuco; [II] at Rancagua and Santiago.
IDC ***23*** *01:42:48.3±0.7, 36.66S×72.00W, h57^{km}±5^{km}, mb4.0/11, mb1 4.1/14, mb1mx4.1/19, mbtmp4.3/14, MS3.9/5, Ms1 3.8/5, ms1mx3.5/14, Error ellipse: s-maj=19.3km s-min=10.3km az=84.0*
ISC 23 01:42:47.4±0.4**, 36.72S**±0.03×**72.13W**±0.06**, h66^{km}**±3^{km}**, h56^{km}**±1.5^{km}**: pP-P, n79, σ1^{s}05**/84**, mb4.3**/17**, 6C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	0.12	19	⇓iP	P	01 42 57.6	+0.4
CCHI				i S	S	01 43 04.6	+0.1
CCHI				AMP		01 43 05.8	
	comp=N,214μm,0.2s						
COCH	Cobquecura	0.79	317	⇑iP	P	01 43 02.9	-0.4
COCH				i S	S	01 43 14.3	-0.7
LNCH	Linares	0.97	26	⇓iP	P	01 43 15.1	+10
LNCH				i S	S	01 43 29.7	+11
LNCH				AMP		01 43 33.1	
	comp=N,52μm,0.4s						
CNCO	Chanco	1.03	341	eP	P	01 43 06.5	0.0
CNCO				i S	S	01 43 20.5	-0.1
CNCO				AMP		01 43 22.9	
	comp=E,136μm,0.4s						
TALC	Talca	1.38	17	⇓iP	P	01 43 11.6	+0.4
TALC				i S	S	01 43 27.2	-1.5
TALC				AMP		01 43 37.2	
	comp=N,83μm,0.4s						
CTCH	Constitucion	1.40	350	eP	P	01 43 11.6	+0.1
CTCH				i S	S	01 43 29.2	-0.1
CTCH				AMP		01 43 37.3	
	comp=E,211μm,0.5s						
NICH	Los Niches	1.86	23	eP	P	01 43 18.2	+0.5
CICH	Cipreses	2.77	31	⇑iP	P	01 43 32.3	+1.8
LNV	Longovilo	2.82	12	eP	P	01 43 31.0	-0.2
CACH	El Canelo	2.88	26	⇓eP	P	01 43 32.7	+0.6
CHCH	Chadas Angostu	3.03	24	eP	P	01 43 34.4	+0.2
VLCH	Valdivia	3.21	196	eP	P	01 43 25.0	-12
TACH	Talagante	3.21	18	eP	P	01 43 36.3	-0.4
LMEL	Las Melosas	3.27	29	eP	P	01 43 39.2	+1.6
LMEL				i S	S	01 44 16.0	+0.6
ANTU	Antumapu	3.37	22	eP	P	01 43 39.2	+0.2
SJCH	San Jose de Ma	3.40	26	eP	P	01 43 38.7	-0.6
SJCH				i S	S	01 44 17.5	-1.1
RCDM	Rinconada Maip	3.40	19	eP	P	01 43 38.8	-0.6
RCDM				i S	S	01 44 18.7	+0.1
RCDM				AMP		01 44 39.7	
	comp=E,6μm,0.8s						
FSR	Penalolen	3.49	23	eP	P	01 43 40.6	0.0
CLCH	Cerro Calan	3.56	22	⇓iP	P	01 43 41.7	0.0
FCH	Farellones	3.70	25	eP	P	01 43 44.0	+0.4
FCH				i S	S	01 44 28.0	+1.7
PEL	Peldehue	3.76	19	⇑iP	P	01 43 44.0	-0.4
PLCA	Paso Flores	4.19	163	P	P	01 43 50.0	-0.5
	comp=E,13nm,0.3s,baz=328,slow=12,SNR=192						
PLCA				S	S	01 44 39.6	+1.0
	comp=E,12nm,0.3s,baz=43,slow=18,SNR=5.8						
PLCA	Paso Flores	4.19	163	eP	P	01 43 49.6	-0.9
PMCH	Puerto Montt	4.80	187	i P	P	01 43 54.2	-4.7
CFAA	Coronel Fontan	6.03	33	P	P	01 44 15.1	-0.9
	comp=E,2.8nm,0.3s,baz=213,slow=13,SNR=73						
CFAA				S	S	01 45 27.2	+2.7
	comp=E,2.6nm,0.3s,baz=267,slow=17,SNR=2.7						
CFAA				LR	LR	01 46 44.5	
	comp=E,70nm,21.9s,baz=296,slow=40						
CFAA	Coronel Fontan	6.03	33	P	P	01 44 15.1	-0.9
CFAA				S	S	01 45 27.2	+2.7
CFAA				LR	LR	01 46 44.5	
TRQA	Tornquist	8.19	102	eP	P	01 44 45.6	-0.3
	comp=E,66nm,1.0s						
CPUP	Villa Florida	16.30	55	eP	P	01 46 30.5	-2.9
	comp=E,19nm,0.6s						
EFI	East Falkland	17.98	151	eP	P	01 46 52.8	-1.4
	comp=E,20nm,0.8s						
USHA	Ushuaia	18.29	173	P	P	01 46 56.8	-1.2
	comp=E,0.4nm,0.3s,baz=343,slow=9.9,SNR=6.1						
USHA				LR	LR	01 55 16.4	
	comp=E,181nm,18.2s,baz=338,slow=41						
ARE	Arequipa	20.18	2	eP	P	01 47 20.0	+0.9
LPAZ	La Paz	20.66	11	P	P	01 47 25.0	+1.0
	comp=E,8.7nm,0.9s,baz=182,slow=9.5,SNR=12						
LPAZ	La Paz	20.66	11	eP	P	01 47 24.0	+0.1
	comp=E,22nm,0.9s						
SIV	San Ignacio	22.86	28	P	P	01 47 45.3	-0.6
	comp=E,5.9nm,0.5s,mb4.2,baz=212,slow=9.3,SNR=49						
NNA	Nana	24.99	349	eP	P	01 48 04.5	-1.9
PMSA	Palmer Station	28.50	173	eP	P	01 48 39.9	+1.6
SAML	Samuel	28.81	19	eP	P	01 48 39.7	-1.8
	comp=E,8.9nm,1.2s,mb4.3						
CAM4	Nova Friburgo	29.29	69	eP	P	01 48 45.2	-0.5
CAM4				i		01 48 55.7	
CAM4				i	pP	01 49 05.9	+4.2
BDFB	Brasilia	29.99	52	P	P	01 48 49.9	-2.1
	comp=E,1.9nm,0.5s,mb4.0,baz=230,slow=7.9,SNR=4.0						
BDFB				pP	pP	01 49 04.6	-3.5
	comp=E,9.0nm,0.9s,baz=233,slow=6.5,SNR=8.3						
BDFB				LR	LR	02 02 08.2	
	comp=E,327nm,19.8s,baz=226,slow=39						
SDV	Santo Domingo	45.38	2	P	P	01 51 00.4	-0.8
	comp=E,2.6nm,0.2s,mb4.6,baz=219,slow=3.8,SNR=3.5						
SDV	Santo Domingo	45.38	2	eP	P	01 51 00.1	-1.1
	comp=E,11nm,0.9s,mb4.6						
VNA3	Neumayer Olymp	46.88	157	⇑i	P	01 51 12.7	+0.4
VNA3	Neumayer Olymp	46.88	157	e	P	01 51 15.1	+2.8
VNA3	Neumayer Olymp	46.88	157	e	P	01 51 17.0	+4.7
VNA1	Neumayer--Stat	47.22	156		P	01 51 15.5	+0.5
VNA1	Neumayer--Stat	47.22	156	e	P	01 51 18.0	+3.0
VNA1	Neumayer--Stat	47.22	156	e	P	01 51 20.0	+5.0
VNA2	Neumayer--Watz	47.55	156	⇑i	P	01 51 17.3	-0.3
VNA2	Neumayer--Watz	47.55	156	e	P	01 51 20.5	+2.9
SNAA	Sanae	49.11	157	⇑i	P	01 51 29.3	-0.3
SNAA	Sanae	49.11	157	e	P	01 51 31.4	+1.8
SNAA	Sanae	49.11	157	e	P	01 51 34.0	+4.4
SNAA	Sanae	49.11	157	P	P	01 51 29.6	0.0
	comp=E,3.2nm,0.7s,mb4.4,baz=282,slow=7.9,SNR=27						
SNAA	Sanae	49.11	157	eP	P	01 51 28.6	-1.0
QSPA	South Pole Qui	53.52	180	eP	P	01 52 01.5	-1.4
	comp=E,6.3nm,0.6s,mb4.8						
RKT	Rikitea	55.25	266	eLR	LR	02 08 09.6	
	comp=E,308nm,30.0s						
TBI	Tubuai	66.64	258	eLR	LR	02 13 25.1	
	comp=E,244nm,30.2s						
PPT	Papeete	69.81	263	eS	S	02 03 08.1	+12
PPT				eLR	LR	02 14 53.8	
	comp=E,285nm,28.0s						
MAW	Mawson	70.60	163	P	P	01 53 57.3	+0.4
	comp=E,1.3nm,0.7s,mb3.9,baz=162,slow=9.6,SNR=3.3						
MAW				LR	LR	02 23 31.4	
	comp=E,109nm,19.9s,baz=62,slow=35						
TXAR	Lajitas Array	72.07	331	P	P	01 54 06.8	+0.4
	comp=E,0.9nm,0.9s,mb3.6,baz=142,slow=7.6,SNR=7.5						
LTX	Lajitas	72.07	331	P	P	01 54 06.5	+0.1
LTX				epP	pP	01 54 22.1	-2.4
GDL2	Guadalupe Moun	74.90	332	eP	P	01 54 22.7	-0.1
GDL2				epP	pP	01 54 39.6	-1.4
RAR	Rarotonga	75.82	254	P	P	01 54 30.3	+2.0
	comp=E,14nm,0.4s,mb5.0,baz=55,slow=8.6,SNR=3.7						
DBIC	Dimbokro	76.13	71	P	P	01 54 29.9	-0.4
	comp=E,6.7nm,0.6s,mb4.6,baz=202,slow=4.4,SNR=25						
DBIC				pP	pP	01 54 46.7	-1.7
	comp=E,3.5nm,0.5s,baz=182,slow=3.9,SNR=3.9						
DBIC				LR	LR	02 25 25.9	
	comp=E,48nm,19.0s,baz=201,slow=34						
CCM	Cathedral Cave	76.47	345	eP	P	01 54 30.0	-1.7
	comp=E,39nm,1.5s,mb4.9						
TUC	Tucson	77.60	327	eP	P	01 54 38.0	0.0
	comp=E,9.6nm,1.4s,mb4.3						
TUC				epP	pP	01 54 53.0	-3.3
BOSA	Boshof	78.88	117	P	P	01 54 45.5	+0.3
	comp=E,7.1nm,0.5s,mb4.7,baz=186,slow=4.2,SNR=13						
BOSA				LR	LR	02 24 26.9	
	comp=E,97nm,19.6s,baz=348,slow=32						
LBTB	Lobatse	81.24	115	eP	P	01 54 56.6	-1.2
	comp=E,8.6nm,0.6s,mb4.8						
TPNV	Topopah Spring	83.93	326	P	P	01 55 12.8	+1.5
DUG	Dugway	85.18	330	eP	P	01 55 20.6	+3.1
	comp=E,7.2nm,1.4s,mb4.4						
HWUT	Hardware Ranch	85.89	331	P	P	01 55 20.9	-0.1
HWUT				epP	pP	01 55 35.5	-4.0
NVAR	Mina Array Bea	86.07	325	P	P	01 55 23.1	+1.2
	comp=E,0.3nm,0.6s,mb3.4,baz=132,slow=5.0,SNR=4.9						
NVAR				pP	pP	01 55 39.2	-1.2
	comp=E,1.0nm,0.9s,baz=152,slow=6.7,SNR=6.4						
NVAR	Mina Array Bea	86.07	325	P	P	01 55 23.1	+1.2
NVAR				pP	pP	01 55 39.2	-1.2
PDAR	Pinedale Array	86.15	333	P	P	01 55 23.1	+0.9
	comp=E,0.8nm,1.1s,mb3.6,baz=146,slow=5.3,SNR=4.7						
PDAR				pP	pP	01 55 38.9	-1.8
	comp=E,0.9nm,0.9s,baz=135,slow=4.2,SNR=4.8						
ELK	Elko	86.64	329	epP	pP	01 55 39.0	-4.2
WRA	Warramunga Arr	118.35	208	PKP	PKPdf	02 01 28.6	+1.0

	comp=E,0.3nm,0.7s,baz=164,slow=1.7,SNR=5.5						
WRA				pPKP		02 01 44.7	
	comp=E,0.2nm,0.4s,baz=160,slow=1.8,SNR=2.6						
CHKZ	**Chkalovo**	**149.20**	**45**	*e*PKPbc	PKPdf	02 02 28.9	+5.7
MKAR	**Makanchi Array**	**158.51**	**54**	PKPab	PKPab	02 03 13.4	-0.6
	comp=E,0.7nm,0.7s,baz=261,slow=3.6,SNR=8.7						
SONM	**Songino Array**	**168.84**	**5**	pPKPab		02 04 16.9	
	comp=E,0.5nm,0.7s,baz=324,slow=4.6,SNR=3.9						

CASC 23 02:09:39.4±1.9**, 10.99N×86.91W, h37**^{km}±585^{km}**, MD3.9, ML3.2, 7C-4D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	**San Juan del S**	**1.08**	**74**	⇑*e*P	P	02 09 58.8	+0.5
SSNN				*e*S	S	02 10 12.6	+0.3
COPN	**Copaltepe**	**1.23**	**15**	⇓*e*P	P	02 10 00.2	-0.1
TICN	**Ticuantepe**	**1.23**	**32**	*e*P	P	02 10 00.4	0.0
APON	**Apoyo**	**1.24**	**42**	⇓*e*P	P	02 10 00.7	+0.3
MASN	**Masaya**	**1.24**	**37**	*e*P	P	02 10 01.4	+0.9
XAVN	**Gruta Xavier**	**1.29**	**26**	⇓*e*P	P	02 10 01.3	+0.1
MGAN	**Managua**	**1.32**	**29**	⇑*e*P	P	02 10 01.4	-0.3
MGAN				*e*S	S	02 10 17.4	-1.0
	comp=N,356nm,0.6s						
WILN	**Americas 2**	**1.36**	**31**	⇑*e*P	P	02 10 01.8	-0.5
CONN	**Concepcion**	**1.38**	**65**	*e*P	P	02 10 02.5	-0.2
MADN	**Villa Maderas**	**1.41**	**73**	*e*P	P	02 10 03.4	+0.4
LEON	**Leon**	**1.42**	**1**	⇑*e*P	P	02 10 02.7	-0.5
MIRN	**Miramar**	**1.46**	**8**	⇓*e*P	P	02 10 03.2	-0.4
MOMJ	**Momotombo**	**1.46**	**14**	⇑*e*P	P	02 10 03.0	-0.7
MOMJ				*e*S	S	02 10 21.0	-0.8
CNGN	**Cerro Negro**	**1.52**	**8**	⇑*e*P	P	02 10 03.8	-0.7
TEL3	**Telica 3**	**1.58**	**2**	⇑*e*P	P	02 10 04.9	-0.5
CRIN	**San Cristobal**	**1.71**	**355**	*e*P	P	02 10 06.9	-0.3
CRIN				*e*		02 10 06.9	

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*CASC **23** 02:28:21.8±2.5, 11.03N×86.87W, h20^{km}±9^{km}, MD4.4, ML4.5, mb4.6(NEIC)*

*IDC **23** 02:28:24.6±2.8, 11.53N×86.42W, h42^{km}±26^{km}, mb4.1/11, mb1 4.4/11, mb1mx4.1/20, mbtmp4.4/11, MS3.8/6, Ms1 3.8/6, ms1mx3.5/23, Error ellipse: s-maj=36.9km s-min=13.9km az=57.0*

*BJI **23** 02:28:25.9, 11.30N×86.70W, h50^{km}, mB5.1, Ms4.9, Msz4.5*

*NEIC **23** 02:28:25.9±0.8, 11.33N×86.68W, h60^{km}±8^{km}, mb4.6/24, MD4.4(CASC), Error ellipse: s-maj=13.2km s-min=6.1km az=53.0*

ISC 23 02:28:24.2±0.6**, 11.21N**±0.05×**86.77W**±0.06**, h65**^{km}±4^{km}**, n118, σ1.^{s}02**/116**, mb4.5**/35**, 18C-6D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	**San Juan del S**	**0.90**	**85**	⇑*e*P	**P**	**02 28 41.2**	**-0.2**
SSNN				*e*S	**S**	**02 28 56.3**	**+2.1**
TICN	**Ticuantepe**	**0.98**	**32**	⇑*e*P	**P**	**02 28 42.8**	**+0.4**
COPN	**Copaltepe**	**0.98**	**10**	⇓*e*P	**P**	**02 28 42.7**	**+0.2**
MASN	**Masaya**	**0.98**	**38**	⇑*e*P	**P**	**02 28 42.5**	**+0.1**
APON	**Apoyo**	**0.98**	**44**	⇑*e*P	**P**	**02 28 42.7**	**+0.2**
XAVN	**Gruta Xavier**	**1.03**	**25**	⇑*e*P	**P**	**02 28 43.4**	**+0.3**
MGAN	**Managua**	**1.06**	**28**	⇑*i*P	**P**	**02 28 42.8**	**-0.8**
MGAN				⇑*e*P		02 28 43.9	
MGAN				*e*S	**S**	**02 29 01.4**	**+3.5**
	comp=N,5µm,0.6s						
MGAN				*e*S	**S**	**02 29 03.3**	**+5.4**
	comp=E,8µm,0.5s						
MGAN	**Managua**	**1.06**	**28**	⇑*i*P	**P**	**02 28 42.8**	**-0.8**
MGAN				*e*S	**S**	**02 29 02.0**	**+4.1**
WILN	**Americas 2**	**1.11**	**31**	⇑*e*P	**P**	**02 28 44.5**	**+0.3**
CONN	**Concepcion**	**1.17**	**72**	⇑*e*P	**P**	**02 28 45.0**	**0.0**
LEON	**Leon**	**1.21**	**354**	⇑*i*P	**P**	**02 28 45.3**	**-0.2**
MOMJ	**Momotombo**	**1.22**	**10**	⇑*e*P	**P**	**02 28 45.6**	**0.0**
MADN	**Villa Maderas**	**1.23**	**80**	⇑*e*P	**P**	**02 28 45.7**	**-0.1**
MIRN	**Miramar**	**1.23**	**2**	⇓*e*P	**P**	**02 28 45.7**	**0.0**
CNGN	**Cerro Negro**	**1.29**	**3**	⇑*e*P	**P**	**02 28 46.5**	**-0.1**
CNGN				*e*S	**S**	**02 29 08.2**	**+5.0**
TEL3	**Telica 3**	**1.36**	**357**	⇑*e*P	**P**	**02 28 47.4**	**-0.3**
TELN	**Telica**	**1.39**	**357**	⇑*e*P	**P**	**02 28 47.8**	**-0.3**
CRIN	**San Cristobal**	**1.51**	**349**	⇑*e*P	**P**	**02 28 49.5**	**-0.2**
CRIN				*e*S	**S**	**02 29 12.8**	**+4.2**
VCR	**Vista de Mar**	**1.55**	**134**	*e*P	**P**	**02 28 47.8**	**-2.4**
VCR	**Vista de Mar**	**1.55**	**134**	*e*P	**P**	**02 28 51.4**	**+1.2**
LIM1	**Limonal**	**1.57**	**109**	*i* P	**P**	**02 28 48.2**	**-2.3**
JTS	**JuntasAbangare**	**2.00**	**117**	P	**P**	**02 28 54.7**	**-1.7**
	comp=E,19nm,0.3s,baz=313,slow=16,SNR=76						
JTS				S	**S**	**02 29 27.4**	**+7.3**
	comp=E,160nm,0.3s,baz=246,slow=21,SNR=10						
JTS	**JuntasAbangare**	**2.00**	**117**	*e*P	**P**	**02 28 54.5**	**-1.8**
FORC	**Fortuna**	**2.19**	**109**	*e*P	**P**	**02 28 57.9**	**-1.1**
CNCH	**Conchagua**	**2.31**	**333**	⇓*e*P	**P**	**02 29 11.4**	**+11**
CNCH				*e*S	**S**	**02 29 41.4**	**+13**
CGA2	**Cerro Gallo 2**	**2.55**	**117**	*e*P	**P**	**02 29 03.3**	**-0.9**
CGA2	**Cerro Gallo 2**	**2.55**	**117**	*e*P	**P**	**02 29 03.2**	**-1.0**
CGA2				*e*S	**S**	**02 29 42.4**	**+8.3**
BLLM	**Bellamira**	**2.65**	**327**	⇓*e*P	**P**	**02 29 16.3**	**+11**
BLLM				*e*S	**S**	**02 29 49.7**	**+13**
VSM	**San Miguel**	**2.66**	**326**	*e*P	**P**	**02 29 16.0**	**+10**
VSM				*e*S	**S**	**02 29 51.6**	**+15**
VPS2	**Volcan Poas 2**	**2.68**	**112**	*e*P	**P**	**02 29 05.8**	**-0.3**
VPS2	**Volcan Poas 2**	**2.68**	**112**	*e*P	**P**	**02 29 07.3**	**+1.2**
PRS1	**Puriscal**	**2.70**	**116**	*e*P	**P**	**02 29 05.0**	**-1.3**
PRS1	**Puriscal**	**2.70**	**116**	*e*P	**P**	**02 29 07.7**	**+1.4**
LAJ	**Bijagual**	**2.92**	**117**	*e*P	**P**	**02 29 04.8**	**-4.6**
LAJ	**Bijagual**	**2.92**	**117**	*e*P	**P**	**02 29 04.3**	**-5.1**
SJS	**Escuela Geolog**	**2.95**	**115**	*e*P	**P**	**02 29 11.5**	**+1.7**
LCR2	**La Lucha 2**	**3.08**	**118**	⇑*e*P	**P**	**02 29 11.9**	**+0.2**
LCR2	**La Lucha 2**	**3.08**	**118**	*e*P	**P**	**02 29 11.9**	**+0.2**
ICR	**Volcan Irazu**	**3.13**	**113**	*e*P	**P**	**02 29 14.2**	**+1.9**
ICR	**Volcan Irazu**	**3.13**	**113**	*e*P	**P**	**02 29 14.3**	**+2.0**
URSC	**Urasca**	**3.24**	**115**	*e*P	**P**	**02 29 13.9**	**+0.1**
URSC	**Urasca**	**3.24**	**115**	*e*P	**P**	**02 29 14.9**	**+1.1**
BUS	**Buena Vista**	**3.38**	**119**	*e*P	**P**	**02 29 14.9**	**-1.0**
BUS	**Buena Vista**	**3.38**	**119**	*e*P	**P**	**02 29 15.8**	**-0.1**
ACR	**Cerro Adams**	**4.36**	**125**	*e*P	**P**	**02 29 28.5**	**-1.0**
ACR	**Cerro Adams**	**4.36**	**125**	*e*P	**P**	**02 29 28.9**	**-0.6**
IXG	**Ixpaco**	**4.66**	**310**	⇓*e*P	**P**	**02 29 32.0**	**-1.6**
IXG				*e*S	**S**	**02 30 24.1**	**-2.8**
IXG				AML	AML	02 30 40.7	
	comp=E,3µm,0.5s						
TP2	**Tecpan 2**	**5.46**	**311**	⇓*e*P	**P**	**02 29 45.2**	**+0.4**
TP2				*e*S	**S**	**02 30 47.4**	**+0.3**
ROSC	**El Rosal**	**13.83**	**116**	LR	LR	02 36 55.8	
	comp=E,220nm,19.0s,baz=170,slow=37						
SDV	**Santo Domingo**	**16.05**	**97**	P	**P**	**02 32 08.8**	**+1.5**
	comp=E,0.4nm,0.3s,baz=265,slow=7.0,SNR=15						
SDV				PcP	PcP	02 37 02.9	+1.4
	comp=E,0.4nm,0.3s,baz=321,slow=3.3,SNR=4.9						
SDV	**Santo Domingo**	**16.05**	**97**	*e*P	**P**	**02 32 09.2**	**+1.9**
	comp=E,17nm,0.9s						
SJG	**San Juan**	**21.08**	**69**	P	**P**	**02 33 05.1**	**-0.2**
	comp=E,10nm,0.7s,mb4.2,baz=344,slow=4.9,SNR=5.4						
NATX	**Nacogdoches**	**21.72**	**342**	*e*P	**P**	**02 33 11.5**	**0.0**
	comp=E,30nm,0.6s,mb4.8						
OXF	**Oxford**	**23.32**	**354**	*e*P	**P**	**02 33 26.8**	**-0.5**
	comp=E,56nm,0.8s,mb5.0						
LTX	**Lajitas**	**23.96**	**321**	*e*P	**P**	**02 33 34.5**	**+1.1**
	comp=E,11nm,0.7s,mb4.3						
TXAR	**Lajitas Array**	**23.96**	**321**	P	**P**	**02 33 34.5**	**+1.1**
	comp=E,7.7nm,0.7s,mb4.2,baz=136,slow=10,SNR=113						
TXAR				PcP	PcP	02 37 17.1	+1.3
	comp=E,2.8nm,0.8s,baz=138,slow=4.6,SNR=12						
UALR	**University of**	**24.01**	**349**	*e*P	**P**	**02 33 33.3**	**-0.6**
	comp=E,11nm,0.7s,mb4.3						
MIAR	**Mount Ida**	**24.05**	**346**	*e*P	**P**	**02 33 34.1**	**-0.1**
	comp=E,14nm,0.7s,mb4.4						
CPCT	**Cooper Cave**	**24.22**	**4**	*e*P	**P**	**02 33 37.1**	**+1.2**
WVT	**Waverly**	**24.83**	**358**	*e*P	**P**	**02 33 40.8**	**-1.1**
	comp=E,6.9nm,0.8s,mb4.1						
WMOK	**Wichita Mounta**	**25.86**	**337**	*e*P	**P**	**02 33 52.4**	**+0.9**
	comp=E,44nm,1.1s,mb4.8						
GDL2	**Guadalupe Moun**	**26.45**	**325**	*e*P	**P**	**02 33 57.2**	**+0.2**
ELN	**Prospectdale**	**26.47**	**11**	*e*P	**P**	**02 33 57.7**	**+0.6**
MNTX	**Cornudas Mount**	**26.68**	**323**	*e*P	**P**	**02 33 59.1**	**-0.1**
	comp=E,3.4nm,0.6s,mb4.0						
CPRX	**Cap Rock**	**26.81**	**327**	*e*P	**P**	**02 34 00.1**	**-0.1**
CCM	**Cathedral Cave**	**27.04**	**352**	*e*P	**P**	**02 34 00.8**	**-1.6**
	comp=E,8.0nm,0.8s,mb4.3						
AMTX	**Amarillo**	**27.20**	**332**	*e*P	**P**	**02 34 02.2**	**-1.7**
	comp=E,18nm,0.8s,mb4.7						
KSU1	**Kansas State U**	**29.13**	**344**	*e*P	**P**	**02 34 19.6**	**-1.5**
LPM	**Los Pinos Moun**	**29.29**	**325**	P	**P**	**02 34 22.7**	**+0.1**
LENM	**Lemitar**	**29.38**	**324**	P	**P**	**02 34 24.6**	**+1.2**
ANMO	**Albuquerque**	**29.66**	**326**	P	**P**	**02 34 27.1**	**+1.1**
	comp=E,3.3nm,0.8s,mb4.0,baz=160,slow=6.0,SNR=16						
ANMO				PcP	PcP	02 37 29.9	+0.9
	comp=E,0.5nm,0.4s,baz=153,slow=6.9,SNR=3.9						
SAML	**Samuel**	**30.84**	**130**	*e*P	**P**	**02 34 35.6**	**-0.9**
	comp=E,16nm,0.8s,mb4.8						
SDCO	**Great Sand Dun**	**31.32**	**331**	*e*P	**P**	**02 34 40.6**	**0.0**
	comp=E,5.2nm,0.7s,mb4.4						
WUAZ	**Wupatki**	**32.92**	**321**	*e*P	**P**	**02 34 55.9**	**+1.3**
	comp=E,7.0nm,1.0s,mb4.5						
LPAZ	**La Paz**	**32.96**	**146**	LR	LR	02 48 45.2	
	comp=E,128nm,18.2s,baz=289,slow=37						
SMCO	**Snowmass**	**33.16**	**331**	*e*P	**P**	**02 34 56.6**	**+0.1**
PV01	**Paradox Valley**	**33.16**	**328**	*e*P	**P**	**02 34 57.4**	**+0.8**
PV10	**Paradox Valley**	**33.59**	**327**	*e*P	**P**	**02 35 00.3**	**+0.1**
SADO	**Sadowa**	**34.08**	**10**	P	**P**	**02 35 03.6**	**-0.8**
	comp=E,5.3nm,0.5s,mb4.6,baz=214,slow=9.0,SNR=5.6						
SRU	**San Rafael**	**34.92**	**327**	*e*P	**P**	**02 35 11.9**	**+0.2**
	comp=E,7.6nm,0.6s,mb4.7						
ARUT	**Antelope Range**	**35.66**	**322**	*e*P	**P**	**02 35 17.8**	**-0.2**
DAU	**Daniels Canyon**	**36.25**	**328**	*e*P	**P**	**02 35 23.7**	**+0.8**
TCUT	**Toone Canyon**	**36.84**	**328**	*e*P	**P**	**02 35 28.4**	**+0.4**
PDAR	**Pinedale Array**	**37.18**	**332**	P	**P**	**02 35 30.7**	**0.0**
	comp=E,2.4nm,0.6s,mb4.3,baz=126,slow=9.7,SNR=24						
PDAR				PcP	PcP	02 37 50.8	+0.8
	comp=E,1.1nm,0.8s,baz=149,slow=4.1,SNR=5.0						
HWUT	**Hardware Ranch**	**37.28**	**329**	*e*P	**P**	**02 35 29.8**	**-1.8**
	comp=E,8.2nm,0.7s,mb4.8						
HVU	**Hansel Valley**	**38.03**	**328**	*e*P	**P**	**02 35 38.7**	**+0.9**
	comp=E,4.5nm,0.8s,mb4.3						
REDW	**Red Top Meadow**	**38.24**	**331**	*e*P	**P**	**02 35 40.0**	**+0.4**
	comp=E,21nm,0.8s,mb5.0						
SNOW	**Snow King Moun**	**38.27**	**331**	*e*P	**P**	**02 35 40.5**	**+0.7**
	comp=E,18nm,0.8s,mb5.0						
LOHW	**Long Hollow**	**38.32**	**332**	*e*P	**P**	**02 35 40.2**	**+0.1**
	comp=E,4.0nm,0.6s,mb4.4						
TPAW	**Teton Pass**	**38.39**	**331**	*e*P	**P**	**02 35 41.5**	**+0.8**
	comp=E,6.6nm,0.7s,mb4.6						
ELK	**Elko**	**38.66**	**325**	*e*P	**P**	**02 35 44.0**	**+1.0**
	comp=E,5.3nm,1.0s,mb4.3						
IMW	**Indian Meadow**	**38.69**	**332**	*e*P	**P**	**02 35 43.3**	**0.0**
	comp=E,4.4nm,0.6s,mb4.5						
NVAR	**Mina Array Bea**	**39.08**	**319**	P	**P**	**02 35 48.3**	**+1.8**
	comp=E,1.7nm,0.8s,mb4.0,baz=130,slow=8.3,SNR=14						
NVAR				PcP	PcP	02 37 58.3	+2.4
	comp=E,5.6nm,0.8s,baz=120,slow=4.9,SNR=28						
ULM	**Lac du Bonnet**	**39.65**	**351**	P	**P**	**02 35 48.9**	**-2.3**
	comp=E,12nm,0.8s,mb4.8,baz=171,slow=8.8,SNR=14						
ULM				PcP	PcP	02 37 58.1	+0.4
	comp=E,2.0nm,0.6s,baz=129,slow=6.5,SNR=3.3						
MCMT	**McKenzie Canyo**	**40.29**	**331**	*e*P	**P**	**02 35 57.4**	**+0.9**
DLMT	**Dillon**	**40.58**	**332**	*e*P	**P**	**02 35 59.2**	**+0.3**
WVOR	**Wild Horse Val**	**41.70**	**324**	*e*P	**P**	**02 36 08.3**	**+0.2**
	comp=E,6.3nm,0.8s,mb4.4						
CHMT	**Chamberlain Mo**	**42.05**	**333**	P	**P**	**02 36 11.7**	**+0.8**
CFAA	**Coronel Fontan**	**46.12**	**158**	PcP	PcP	02 38 22.8	+3.1
	comp=E,0.1nm,0.4s,baz=326,slow=3.6,SNR=3.7						
SCHQ	**Schefferville**	**46.28**	**16**	P	**P**	**02 36 42.4**	**-2.5**
	comp=E,5.9nm,1.1s,mb4.2,baz=225,slow=14,SNR=5.7						
SCHQ				LR	LR	02 55 54.5	
	comp=E,189nm,20.3s,baz=239,slow=36						
BDFB	**Brasilia**	**46.73**	**124**	P	**P**	**02 36 49.0**	**+0.1**
	comp=E,6.5nm,0.7s,mb4.5,baz=288,slow=8.8,SNR=14						
BDFB				PcP	PcP	02 38 23.0	+1.1
	comp=E,2.3nm,0.7s,baz=145,slow=1.5,SNR=3.2						
BDFB				LR	LR	02 57 02.5	
	comp=E,184nm,19.8s,baz=304,slow=37						
EDM	**Edmonton**	**47.01**	**338**	*e*P	**P**	**02 36 49.0**	**-1.7**
PLCA	**Paso Flores**	**53.81**	**165**	P	**P**	**02 37 43.8**	**+1.2**
	comp=E,1.7nm,0.9s,mb4.1,baz=348,slow=9.3,SNR=2.5						
YKA	**Yellowknife Ar**	**54.98**	**345**	P	**P**	**02 37 48.6**	**-2.2**
	comp=E,3.7nm,0.8s,mb4.4,baz=139,slow=7.1,SNR=7.5						
YKA				PcP	PcP	02 38 51.0	-0.7
	comp=E,1.1nm,0.6s,baz=144,slow=3.8,SNR=6.2						
YKA	**Yellowknife Ar**	**54.98**	**345**	P	**P**	**02 37 48.6**	**-2.2**
YKA				PcP	PcP	02 38 51.0	-0.7
ILAR	**Eielson Array**	**67.42**	**336**	P	**P**	**02 39 13.2**	**-1.4**
	comp=E,2.5nm,0.9s,mb4.0,baz=100,slow=4.1,SNR=12						
DBIC	**Dimbokro**	**80.83**	**85**	LR	LR	03 11 41.0	
	comp=E,56nm,18.2s,baz=234,slow=32						
NOA	**NORSAR Array B**	**84.13**	**29**	LR	LR	03 17 54.2	
	comp=E,42nm,18.4s,slow=36						
CN2	**Changchun**	**117.90**	**334**	*e*PKP	PKPdf	02 47 06.8	+3.3
SONM	**Songino Array**	**120.07**	**350**	PKP	PKPdf	02 47 10.5	+2.8
	comp=E,1.1nm,0.7s,baz=351,slow=1.4,SNR=9.2						
WMQ	**Urumqi**	**125.01**	**5**	*e*PKP	PKPdf	02 47 20.0	+2.6
GTA	**Gaotai**	**129.28**	**353**	PKP	PKPdf	02 47 28.6	+2.9
SSE	**Sheshan**	**130.11**	**328**	*e*PKP	PKPdf	02 47 29.4	+1.9
NJ2	**Nanjing**	**130.49**	**331**	*e*PKP	PKPdf	02 47 31.3	+3.1
LZH	**Lanzhou**	**131.91**	**348**	*e*PKP	PKPdf	02 47 32.5	+1.7
ENH	**Enshi**	**135.90**	**340**	*e*PKPdf	PKPdf	02 47 41.7	+3.4
CD2	**Chengdu**	**136.93**	**347**	*e*PKP	PKPdf	02 47 41.9	+1.7
WRA	**Warramunga Arr**	**139.55**	**252**	PKP	PKPdf	02 47 48.5	+3.3
	comp=E,1.6nm,0.7s,baz=92,slow=2.0,SNR=12						

NNC 23 03:02:40.6±1.9**, 37.08N×70.01E, mpv3.4, 3C-3D, Error ellipse: s-maj=18.5km s-min=12.9km az=171.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.03**	**3**	⇑Pn	Pn	03 04 13.6	+0.3
	1.3nm,0.3s,baz=180,slow=12,SNR=32						
KK31				⇓Sn	Sn	03 05 28.2	+4.1
	1.7nm,0.5s,baz=191,slow=22,SNR=5.3						
AAK	**Ala-Archa**	**6.53**	**30**	⇑Pn	Pn	03 04 19.7	-0.7
	2.2nm,0.7s						
AAK				⇓Sn	Sn	03 05 34.8	-1.7
	3.4nm,0.7s						
AB31	**Akbulak array**	**14.20**	**332**	⇑Pn	P	03 06 03.3	-1.8
	0.4nm,0.4s,baz=163,slow=12,SNR=22						
AB31				⇓Sn	S	03 08 41.9	-2.6
	1.5nm,0.8s,baz=154,slow=24,SNR=6.5						

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*NEIC **23** 03:18:38.9±0.9, 5.94S×155.18E, h200^{km}, mb4.2/3, Error ellipse: s-maj=31.9km s-min=15.8km az=107.0*

*IDC **23** 03:18:44.7±8.3, 5.94S×155.02E, h251^{km}±75^{km}, mb3.5/7, mb1 3.6/7, mb1mx3.6/12, mbtmp4.1/7, Error ellipse: s-maj=45.8km s-min=17.0km az=94.0*

ISC 23 03:18:37.6±1.2**, 5.9S**±0.1×**155.1E**±0.3**, h200**^{km}**, n15, σ1.^{s}10**/14**, mb3.9**/10**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB	**Tennant Creek**	**24.54**	**233**	*e*P	**P**	**03 23 39.6**	**-0.9**
	1.9nm,0.4s,mb4.1						
WB2	**Warramunga Arr**	**24.54**	**233**	*e*P	**P**	**03 23 41.6**	**+1.0**
WRA	**Warramunga Arr**	**24.55**	**233**	P	**P**	**03 23 41.4**	**+0.7**
	0.9nm,0.4s,mb3.8,baz=60,slow=9.1,SNR=23						
WRA				PcP	PcP	03 27 11.4	-2.7
	0.3nm,0.3s,baz=56,slow=2.5,SNR=5.5						
STKA	**Stephens Creek**	**28.79**	**204**	P	**P**	**03 24 19.3**	**+0.1**
	1.4nm,0.4s,mb4.0,baz=13,slow=7.2,SNR=5.7						
MJAR	**Matsushiro Arr**	**45.06**	**341**	P	**P**	**03 26 34.0**	**-1.4**
	3.6nm,0.6s,mb3.9,baz=191,slow=9.3,SNR=10.0						
ENH	**Enshi**	**56.56**	**312**	P	**P**	**03 28 02.0**	**+0.3**
	3.9nm,0.4s,mb4.4						
HIA	**Hailar**	**62.95**	**335**	P	**P**	**03 28 43.9**	**-1.1**
SONM	**Songino Array**	**68.45**	**327**	P	**P**	**03 29 21.6**	**+1.7**
	0.4nm,0.7s,mb3.2,baz=137,slow=4.6,SNR=3.7						
ILAR	**Eielson Array**	**82.30**	**22**	P	**P**	**03 30 39.7**	**+1.9**
	0.7nm,0.8s,mb3.3,baz=249,slow=5.1,SNR=7.2						
MKAR	**Makanchi Array**	**82.63**	**319**	P	**P**	**03 30 40.7**	**+0.8**
	2.1nm,0.7s,mb4.0,baz=97,slow=8.3,SNR=16						
MKAR	**Makanchi Array**	**82.63**	**319**	P	**P**	**03 30 40.7**	**+0.8**
MAW	**Mawson**	**85.47**	**203**	P	**P**	**03 30 52.0**	**-1.6**
	1.8nm,0.6s,mb4.0,baz=108,slow=4.7,SNR=16						
KURK	**Kurchatov**	**86.02**	**322**	P	**P**	**03 30 56.1**	**-0.6**
CHKZ	**Chkalovo**	**91.42**	**324**	*e*P	**P**	**03 31 21.3**	**-0.8**
	0.7nm,0.4s,mb3.9						
BDFB	**Brasilia**	**148.68**	**133**	PKPbc	PKPdf	03 38 02.9	+4.9
	1.3nm,0.5s,baz=225,slow=1.4,SNR=3.9						

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*IDC **23** 04:33:41.1±0.8, 25.23S×70.07E, mb4.2/10, mb1 4.3/10, mb1mx4.2/19, mbtmp4.2/10, MS4.2/14, Ms1 4.2/14, ms1mx4.1/22, Error ellipse: s-maj=23.8km s-min=20.2km az=18.0*

*HRVD **23** 04:33:42.7±0.4, 25.01S×69.95E, h14^{km}±1^{km}, MW4.9/61, Centroid moment Tensor Solution. LP body waves: s21,c29;Mantle waves: s61,c87; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.72±.21; M$_{\theta\theta}$0.68±.13; M$_{\phi\phi}$2.03±.16; M$_{r\theta}$0.85±.29; M$_{\theta\phi}$-1.11±.09; M$_{\phi r}$0.77±.31; Best double couple: M$_0$2.896×10^{16} NP1:φ$_s$313°,δ45°,λ-118°. NP2:φ$_s$169°,δ51°,λ-65°. Principal axes: T 2.668, Plg3°, Azm242°; N .448, Plg19°, Azm333°; P -3.123, Plg71°, Azm143°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **23** 04:33:42.7±0.4, 25.21S×70.18E, h10^{km}, mb5.0/6 Error ellipse: s-maj=12.9km s-min=12.4km az=104.0*

ISC 23 04:33:41.0±0.4**, 25.27S**±0.09×**70.2E**±0.1**, h10**^{km}**, n43, σ0.^{s}93**/33**, mb4.4**/16**, MS4.2**/16**, 7C-1D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**22.36**	**283**	P	**P**	**04 38 40.8**	**0.0**
	1.9nm,0.8s,mb3.6,baz=96,slow=9.2,SNR=3.2						
KMBO	**Kilima Mbogo**	**39.84**	**302**	LR	LR	04 53 51.9	
	comp=Z,111nm,18.7s,MS3.7,baz=89,slow=30						
BOSA	**Boshof**	**40.04**	**255**	P	**P**	**04 41 16.9**	**-1.1**
	3.0nm,0.9s,mb4.0,baz=73,slow=14,SNR=3.8						
BOSA				LR	LR	04 55 46.2	
	comp=Z,586nm,19.1s,MS4.5,baz=105,slow=33						
MAW	**Mawson**	**42.58**	**184**	P	**P**	**04 41 38.3**	**-0.1**
	1.1nm,0.8s,mb3.6,baz=348,slow=9.3,SNR=2.9						
MAW				LR	LR	04 56 05.4	
	comp=Z,312nm,18.9s,MS4.2,baz=15,slow=32						
FITZ	**Fitzroy Crossi**	**51.70**	**94**	*e*P	**P**	**04 42 51.8**	**+1.2**
	22nm,1.2s,mb5.0						
FITZ	**Fitzroy Crossi**	**51.70**	**94**	P	**P**	**04 42 51.9**	**+1.3**
	25nm,1.0s,mb5.1,baz=252,slow=9.6,SNR=10						
SHL	**Shillong**	**54.71**	**24**	*e*P	**P**	**04 43 06.0**	**-6.9**
WRA	**Warramunga Arr**	**58.96**	**99**	P	**P**	**04 43 43.3**	**+0.1**
	9.1nm,1.2s,mb4.7,baz=254,slow=7.3,SNR=16						
WB2	**Warramunga Arr**	**58.97**	**99**	*e*P	**P**	**04 43 43.0**	**-0.3**
WRAB	**Tennant Creek**	**58.97**	**99**	*e*P	**P**	**04 43 40.9**	**-2.4**
	40nm,1.6s,mb5.2						
WRAB				LR	LR		
	comp=Z,84nm,20.0s,MS3.9						
KAKA	**Kakadu**	**59.70**	**90**	*e*P	**P**	**04 44 07.9**	**+20**
	comp=Z,7.3nm,0.6s,mb4.9						
SNAA	**Sanae**	**60.90**	**200**	*e*	**P**	**04 44 05.4**	**+10**
SNAA	**Sanae**	**60.90**	**200**	⇑*i*P	**P**	**04 44 00.6**	**+4.8**
SNAA				*e*	pP	04 44 05.4	+6.4
SNAA				*e*		04 44 24.7	
STKA	**Stephens Creek**	**62.03**	**114**	LR	LR	05 07 18.4	
	comp=Z,253nm,20.6s,MS4.4,baz=107,slow=32						
VNA2	**Neumayer--Watz**	**62.30**	**201**	*e*	**P**	**04 44 11.9**	**+6.6**
VNA2	**Neumayer--Watz**	**62.30**	**201**	⇑*i*P	**P**	**04 44 06.1**	**+0.8**
VNA2				*e*		04 44 11.9	
VNA2				*e*		04 44 28.6	
VNA1	**Neumayer--Stat**	**62.57**	**202**	*e*	**P**	**04 44 14.4**	**+7.3**
VNA1	**Neumayer--Stat**	**62.57**	**202**	⇑*i*P	**P**	**04 44 08.1**	**+1.0**
VNA1				*e*		04 44 14.4	
VNA1				*e*		04 44 32.3	
VNA3	**Neumayer Olymp**	**63.05**	**201**	*e*	**P**	**04 44 15.9**	**+5.7**
VNA3	**Neumayer Olymp**	**63.05**	**201**	⇑*i*P	**P**	**04 44 10.8**	**+0.6**
VNA3				*e*	pP	04 44 15.9	+2.6
VNA3				*e*		04 44 35.3	
QSPA	**South Pole Qui**	**64.86**	**180**	*e*P	**P**	**04 44 22.6**	**+0.8**
	comp=Z,16nm,1.1s,mb5.0						
VNDA	**Vanda**	**65.87**	**166**	*e*P	**P**	**04 44 27.4**	**-1.0**
	comp=Z,5.4nm,1.1s,mb4.5						
MKAR	**Makanchi Array**	**72.55**	**9**	P	**P**	**04 45 08.6**	**-1.5**
	comp=Z,1.1nm,0.5s,mb4.0,baz=200,slow=6.5,SNR=11						
MKAR				LR	LR	05 16 44.4	
	comp=Z,84nm,18.0s,MS4.1,baz=208,slow=36						
BRTR	**Keskin Array B**	**73.11**	**331**	P	**P**	**04 45 13.0**	**-0.5**
	comp=Z,2.0nm,0.8s,mb4.1,baz=153,slow=6.5,SNR=10						
PMG	**Port Moresby**	**74.29**	**93**	LR	LR	05 17 07.2	
	comp=Z,216nm,18.3s,MS4.5,baz=358,slow=35						
KURK	**Kurchatov**	**76.02**	**5**	*e*P	**P**	**04 45 29.9**	**-0.1**
	comp=Z,21nm,1.7s,mb4.8						
KURK				LR	LR		
	comp=Z,43nm,20.0s,MS3.8						
DBIC	**Dimbokro**	**79.47**	**283**	LR	LR	05 19 00.3	
	comp=Z,164nm,18.4s,MS4.4,baz=110,slow=34						
SONM	**Songino Array**	**79.71**	**24**	P	**P**	**04 45 51.8**	**+1.5**
	comp=Z,4.7nm,1.1s,mb4.3,baz=204,slow=4.1,SNR=14						
SONM				LR	LR	05 19 36.1	
	comp=Z,175nm,22.0s,MS4.4,baz=180,slow=35						
ZAL	**Zalesovo**	**79.88**	**9**	P	**P**	**04 45 51.2**	**+0.1**
	comp=Z,1.4nm,0.8s,mb4.0,baz=26,slow=1.5,SNR=6.3						
ZAL	**Zalesovo**	**79.88**	**9**	P	**P**	**04 45 51.2**	**0.0**
CFR	**Carcaliu**	**79.91**	**331**	⇑P	**P**	**04 45 56.6**	**+5.1**
VRI	**Vrincioaia**	**81.07**	**331**	⇓P	**P**	**04 45 57.6**	**0.0**
MLR	**Muntele Rosu**	**81.13**	**330**	⇑P	**P**	**04 45 58.9**	**+1.0**
JNU	**Nakatsue**	**81.88**	**48**	LR	LR	05 21 56.0	
	comp=Z,116nm,18.0s,MS4.3,baz=62,slow=35						
PMSA	**Palmer Station**	**83.52**	**198**	*e*P	**P**	**04 46 05.1**	**-4.8**
	comp=Z,10nm,1.0s,mb4.9						
DRGR		**83.58**	**329**	⇑P	**P**	**04 46 11.7**	**+1.1**
AKASG	**Malin Array Be**	**83.86**	**335**	P	**P**	**04 46 11.3**	**-0.6**
	comp=Z,1.2nm,0.7s,mb4.1,baz=138,slow=4.4,SNR=8.3						
AKASG	**Malin Array Be**	**83.86**	**335**	P	**P**	**04 46 11.3**	**-0.6**
DZM	**Mont Dzumac**	**86.13**	**112**	LR	LR	05 23 58.3	
	comp=Z,177nm,18.6s,MS4.5,baz=24,slow=35						
JHJ	**Hachijo jima 2**	**88.03**	**52**	LR	LR	05 18 21.8	
	comp=Z,51nm,21.5s,MS3.9,baz=156,slow=30						
MJAR	**Matsushiro Arr**	**88.77**	**48**	LR	LR	05 26 29.6	
	comp=Z,146nm,18.8s,MS4.4,baz=225,slow=36						
ASAJ	**Asahikawa**	**95.58**	**44**	LR	LR	05 28 18.5	
	comp=Z,123nm,18.5s,MS4.4,baz=6.9,slow=34						
ARCES	**ARCESS Array B**	**99.86**	**345**	LR	LR	05 30 58.9	
	comp=Z,156nm,20.5s,MS4.5,baz=176,slow=34						

IDC 23 05:11:28.9±1.9**, 16.75N×142.90E, h498**^{km}±99^{km}**, mb2.5**/3**, mb1 2.8**/4**, mb1mx2.7**/18**, mbtmp3.6**/4**, Error ellipse: s-maj=286.9km s-min=22.9km az=80.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.67**	**149**	P	P	05 12 44.5	-0.6
	7.1nm,0.3s,baz=152,slow=6.9,SNR=3.6						
GUMO				S	S	05 13 37.8	-7.8
	20nm,0.3s,baz=199,slow=19,SNR=5.2						
WRA	**Warramunga Arr**	**37.42**	**193**	P	P	05 17 59.1	-1.0
	0.4nm,0.9s,baz=15,slow=8.7,SNR=6.3						
SONM	**Songino Array**	**43.07**	**324**	P	P	05 18 44.9	-0.4
	0.2nm,0.3s,baz=115,slow=7.6,SNR=3.7						
MKAR	**Makanchi Array**	**57.91**	**315**	P	P	05 20 32.3	-2.1
	0.3nm,0.3s,baz=91,slow=8.1,SNR=10						

IDC 23 05:28:14.2±1.9**, 17.47S×177.52W, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.9**/13**, mbtmp3.8**/4**, Error ellipse: s-maj=112.6km s-min=28.9km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.58**	**241**	P	P	05 35 47.6	-1.4
	1.5nm,0.4s,baz=67,slow=7.7,SNR=4.9						
WRA	**Warramunga Arr**	**45.55**	**259**	P	P	05 36 35.8	-2.0
	0.8nm,0.4s,baz=98,slow=6.9,SNR=35						
TXAR	**Lajitas Array**	**85.05**	**57**	P	P	05 40 52.6	-0.8
	0.2nm,0.6s,baz=211,slow=5.3,SNR=3.8						
ILAR	**Eielson Array**	**85.27**	**13**	P	P	05 40 52.0	-1.7
	0.3nm,0.5s,baz=226,slow=4.0,SNR=4.5						

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*NIED **23** 05:33:00, 36.70N×142.40E, h17^{km}, Mw3.5 Best double couple: M$_0$2.33×10^{14} NP1:φ$_s$15°,δ69°,λ82°. NP2:φ$_s$215°,δ23°,λ109°.*

*NEIC **23** 05:33:59.2±0.9, 36.42N×142.48E, h10^{km}, mb4.3/1, Error ellipse: s-maj=19.1km s-min=15.3km az=196.0*

*JMA **23** 05:33:59.2±0.3, 36.70N×142.39E, h17^{km}, M3.5*

*IDC **23** 05:34:04.2±4.0, 36.47N×142.37E, h42^{km}±38^{km}, mb3.2/4, mb1 3.5/6, mb1mx3.4/22, mbtmp3.5/6, ML3.5/2, MS2.6/1, Ms1 2.6/1, ms1mx2.0/11, Error ellipse: s-maj=29.9km s-min=15.5km az=67.0*

ISC 23 05:33:59.6±1.9**, 36.65N**±0.04×**142.47E**±0.07**, h28**^{km}±17^{km}**, n21, σ0.^{s}95**/29**, mb3.6**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.41**	**289**	P	**Pn**	**05 34 22.8**	**-1.0**
JFK	**Kawauchi**	**1.46**	**300**	P	**Pn**	**05 34 23.7**	**-0.8**
JFK				*e*S	**Sn**	**05 34 41.6**	**-1.3**
JHO	**Hitachi**	**1.53**	**269**	P	**Pn**	**05 34 25.1**	**-0.3**
JMM	**Marumori**	**1.80**	**313**	P	**Pn**	**05 34 29.0**	**-0.4**
JFT	**Otama**	**1.91**	**298**	P	**Pn**	**05 34 31.1**	**+0.2**

JFT				eS	**Sn**	**05 34 54.2**	**-0.1**
JIO	**Ouri**	**2.01**	**334**	P	**Pn**	**05 34 32.5**	**+0.2**
JIO				eS	**Sn**	**05 34 56.7**	**-0.1**
JAG	**Ashikaga**	**2.44**	**266**	P	**Pn**	**05 34 38.6**	**+0.1**
JMK	**Ichinoseki**	**2.50**	**337**	P	**Pn**	**05 34 39.9**	**+0.5**
JYK	**Kaneyama**	**2.81**	**324**	P	**Pn**	**05 34 44.2**	**+0.4**
JRY	**Ryogami san**	**2.95**	**259**	P	**Pn**	**05 34 45.6**	**-0.1**
JRY				eS	**Sn**	**05 35 20.8**	**+0.2**
JOM	**Ohasama**	**2.97**	**342**	P	**Pn**	**05 34 46.4**	**+0.4**
JOM				eS	**Sn**	**05 35 20.8**	**-0.3**
MJAR	**Matsushiro Arr**	**3.43**	**269**	P	**Pn**	**05 34 53.0**	**+0.5**
	5.8nm,0.3s,baz=90,slow=13,SNR=20						
MJAR				S	**Sn**	**05 35 32.9**	**+0.1**
	1.3nm,0.3s,baz=82,slow=12,SNR=3.1						
MAJO	**Matsushiro**	**3.43**	**269**	eP	**Pn**	**05 34 53.4**	**+0.8**
MAT	**Matsushiro**	**3.43**	**269**	P	**Pn**	**05 34 53.7**	**+1.1**
MAT				eS	**Sn**	**05 35 36.5**	**+3.7**
JHJ	**Hachijo jima 2**	**4.16**	**213**	P	**Pn**	**05 35 03.0**	**+0.1**
	7.2nm,0.3s,baz=266,slow=11,SNR=14						
JHJ				S	**Sn**	**05 35 47.4**	**-3.8**
	15nm,0.3s,baz=72,slow=23,SNR=8.3						
ASAJ	**Asahikawa**	**7.46**	**1**	P	**Pn**	**05 35 47.5**	**-1.9**
	0.9nm,0.3s,baz=163,slow=24,SNR=3.8						
ASAJ				LR	LR	05 39 15.5	
	comp=Z,38nm,19.1s,baz=285,slow=41						
SONM	**Songino Array**	**28.70**	**304**	P	**P**	**05 39 57.4**	**+1.1**
	0.7nm,0.7s,mb3.5,baz=109,slow=9.5,SNR=6.2						
MKAR	**Makanchi Array**	**45.04**	**303**	P	**P**	**05 42 15.6**	**+1.1**
	0.4nm,0.6s,mb3.4,baz=83,slow=9.7,SNR=2.6						
ILAR	**Eielson Array**	**49.37**	**32**	P	**P**	**05 42 50.4**	**+2.2**
	0.4nm,0.9s,mb3.5,baz=259,slow=5.5,SNR=4.4						
WRAB	**Tennant Creek**	**56.80**	**189**	P	**P**	**05 43 41.0**	**-3.0**
	2.3nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**56.81**	**189**	P	**P**	**05 43 43.2**	**-0.8**
	0.3nm,0.8s,mb3.4,baz=5.1,slow=7.3,SNR=3.2						
WRA				pP	pP	05 43 53.9	+1.3
	0.3nm,0.6s,baz=0.9,slow=7.5,SNR=3.0						

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*IDC **23** 05:38:10.6±1.0,18.97N×145.67E,mb4.0/5,mb1 4.3/5, mb1mx3.9/18,mbtmp4.0/5,MS2.8/1,Ms1 2.8/1, ms1mx2.2/29,Error ellipse: s-maj=69.8km s-min=22.4km az=112.0*

*NEIC **23** 05:38:15.9±0.6,19.01N×145.50E,h35^{km},mb4.2/3,Error ellipse: s-maj=32.6km s-min=12.9km az=106.0*

ISC 23 05:38:14.0±0.8,19.0N±0.1×145.4E±0.3,h33^{km},n10, σ0^{s}.51/9,mb4.1/8,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**18.57**	**341**	LR	LR	05 47 46.5	
	comp=Z,30nm,20.8s,baz=125,slow=31						
WRAB	**Tennant Creek**	**40.22**	**196**	eP	**P**	**05 45 49.5**	**+0.2**
	2.0nm,0.8s,mb3.9						
WRA	**Warramunga Arr**	**40.23**	**196**	P	**P**	**05 45 49.0**	**-0.4**
	0.3nm,0.4s,mb3.4,baz=22,slow=8.4,SNR=9.7						
FITZ	**Fitzroy Crossi**	**41.71**	**209**	P	**P**	**05 46 01.8**	**0.0**
	1.4nm,0.2s,mb4.2						
AFI	**Afiamalu**	**53.36**	**125**	P	**P**	**05 47 26.2**	**-6.6**
NWAO	**Narrogin (SRO)**	**58.27**	**208**	eP	**P**	**05 48 13.5**	**+5.5**
	26nm,1.3s,mb5.1						
ILAR	**Eielson Array**	**63.46**	**26**	P	**P**	**05 48 41.9**	**-0.8**
	0.6nm,0.9s,mb3.7,baz=246,slow=5.6,SNR=5.2						
CHKZ	**Chkalovo**	**65.93**	**321**	P	**P**	**05 48 58.5**	**-0.3**
	1.3nm,0.7s,mb4.1						
ARCES	**ARCESS Array B**	**82.11**	**342**	P	**P**	**05 50 33.0**	**+0.8**
	4.3nm,0.8s,mb4.4,baz=78,slow=8.3,SNR=2.9						
NVAR	**Mina Array Bea**	**83.13**	**52**	P	**P**	**05 50 38.6**	**+0.5**
	0.7nm,0.7s,mb3.8,baz=272,slow=4.0,SNR=6.4						

CASC 23 05:40:10.0±2.8,13.08N×89.55W,h39^{km}±31^{km},MD3.8, ML3.9,6D,El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOQS	**Boqueron**	**0.71**	**22**	eP	P	05 40 37.1	+14
BOQS				eS	S	05 40 48.7	+15
LFRS	**El Faro**	**0.72**	**41**	⇓iP	P	05 40 37.1	+13
SBLS	**San Blas**	**0.76**	**355**	⇓iP	P	05 40 38.0	+14
SBLS				eS	S	05 40 50.3	+15
SNJE	**San Jose**	**0.79**	**356**	eP	P	05 40 38.4	+14
SNJE				eS	S	05 40 50.4	+15
LCBS	**La Ceiba**	**0.80**	**44**	⇓iP	P	05 40 38.1	+13
LBRS	**Las Brisas**	**0.82**	**37**	⇓iP	P	05 40 38.9	+14
LBRS				eS	S	05 40 49.6	+13
RTR	**El Retiro**	**0.82**	**353**	⇓iP	P	05 40 38.9	+14
SNVI	**San Vicente**	**0.87**	**52**	⇓eP	P	05 40 39.0	+13
SNVI				eS	S	05 40 52.2	+15
VSM	**San Miguel**	**1.29**	**74**	eP	P	05 40 44.8	+13
VSM				eS	S	05 41 02.2	+14
BLLM	**Bellamira**	**1.33**	**74**	eP	P	05 40 45.3	+13
BLLM				eS	S	05 41 02.5	+13
IXG	**Ixpaco**	**1.40**	**321**	eP	P	05 40 32.5	-1.0
IXG				eS	S	05 40 50.8	-0.3
IXG				AML	AML	05 41 03.2	
	comp=E,4µm,0.3s						
CNCH	**Conchagua**	**1.68**	**83**	eP	P	05 40 50.8	+13
CNCH				eS	S	05 41 11.3	+13
MRL	**Marmol**	**1.98**	**356**	eP	P	05 40 42.7	+0.9
TP2	**Tecpan 2**	**2.22**	**320**	eP	P	05 40 46.1	+0.9
TP2				eS	S	05 41 13.7	+2.1
TP2				AML	AML	05 41 19.2	
	comp=E,344nm,0.3s						

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*IDC **23** 05:51:24.4±4.0,2.13N×96.91E,mb4.0/4,mb1 4.2/4, mb1mx3.8/17,mbtmp4.0/4,Error ellipse: s-maj=155.9km s-min=26.7km az=57.0*

*NEIC **23** 05:51:30.5±0.8,2.35N×97.25E,h30^{km},mb4.4/5,Error ellipse: s-maj=29.7km s-min=13.8km az=62.0*

ISC 23 05:51:26.7±1.1,2.1N±0.2×96.9E±0.3,h30^{km},n11, σ0^{s}.24/11,mb4.4/10,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.80**	**123**	P	**P**	**05 59 24.0**	**+0.2**
	1.0nm,0.6s,mb3.7,baz=300,slow=9.3,SNR=11						
WRAB	**Tennant Creek**	**42.80**	**123**	eP	**P**	**05 59 24.0**	**+0.2**
	6.8nm,1.1s,mb4.3						
MKAR	**Makanchi Array**	**46.28**	**346**	P	**P**	**05 59 51.5**	**+0.1**
	1.3nm,0.6s,mb4.1,baz=159,slow=9.8,SNR=9.5						
SONM	**Songino Array**	**46.29**	**9**	P	**P**	**05 59 51.7**	**+0.3**
	1.1nm,0.9s,mb3.8,baz=189,slow=8.6,SNR=6.0						
GUMO	**Guam**	**48.80**	**74**	P	**P**	**06 00 11.2**	**-0.3**
	73nm,0.7s,mb5.8						
ZAL	**Zalesovo**	**52.60**	**351**	P	**P**	**06 00 39.7**	**-0.2**
	1.6nm,0.3s,mb4.5,baz=290,slow=7.5,SNR=5.1						
ZAL	**Zalesovo**	**52.60**	**351**	P	**P**	**06 00 39.7**	**-0.2**
CTAO	**Charters Tower**	**53.21**	**117**	eP	**P**	**06 00 44.7**	**-0.2**
	3.8nm,0.8s,mb4.4						
TAU	**Tasmania Unive**	**63.73**	**141**	P	**P**	**06 01 58.3**	**+0.3**
	17nm,1.0s,mb5.0						
VNDA	**Vanda**	**86.78**	**169**	P	**P**	**06 04 08.5**	**-0.3**
	1.5nm,0.9s,mb4.2						
SNAA	**Sanae**	**95.05**	**198**	eP	**P**	**06 04 53.0**	**+5.6**
	4.4nm,1.5s,mb4.7						

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*NEIC **23** 05:51:55.1,32.41S×69.49W,h124^{km},MD3.7(GUC),After GUC.*

GUC 23 05:51:55.1±0.9,32.41S×69.49W,h124^{km}±12^{km},MD3.7, ML3.8,7C-5D,Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCH	**Farellones**	**1.14**	**216**	⇓iP	P	05 52 19.8	+0.6
FCH				i S	S	05 52 38.8	+1.3
FCH				AMP		05 52 40.3	
	comp=E,938nm,0.2s						
PEL	**Peldehue**	**1.25**	**234**	⇑iP	P	05 52 20.4	-0.1
PEL				i S	S	05 52 39.4	-0.1
PEL				AMP		05 52 41.7	
	comp=E,3µm,0.3s						
CLCH	**Cerro Calan**	**1.33**	**222**	AMP		05 52 44.4	
	comp=N,2µm,0.4s						
FSR	**Penalolen**	**1.38**	**219**	⇓iP	P	05 52 22.1	+0.2
FSR				i S	S	05 52 43.2	+0.9
FSR				AMP		05 52 44.7	
	comp=E,1µm,0.3s						
SJCH	**San Jose de Ma**	**1.43**	**210**	⇓iP	P	05 52 22.0	-0.5
SJCH				eS	S	05 52 43.1	-0.1
SJCH				AMP		05 52 47.1	
	comp=E,264nm,0.2s						
ANTU	**Antumapu**	**1.51**	**219**	eP	P	05 52 23.1	-0.2
ANTU				i S	S	05 52 44.9	+0.1
ANTU				AMP		05 52 46.5	
	comp=E,955nm,0.2s						
RCDM	**Rinconada Maip**	**1.55**	**225**	⇑iP	P	05 52 23.6	-0.2
RCDM				i S	S	05 52 45.9	+0.2
RCDM				AMP		05 52 47.9	
	comp=E,3µm,0.1s						
LMEL	**Las Melosas**	**1.56**	**203**	eP	P	05 52 23.9	-0.1
LMEL				i S	S	05 52 49.8	+3.9
LMEL				AMP		05 53 00.8	
	comp=N,583nm,0.1s						
CMCH	**Combarbala**	**1.78**	**313**	⇓iP	P	05 52 26.7	+0.2
CMCH				i S	S	05 52 50.9	+0.5
CMCH				AMP		05 52 54.3	
	comp=E,2µm,0.4s						
CHNG	**Los Chungos**	**1.79**	**286**	⇑iP	P	05 52 26.4	-0.2
CHNG				i S	S	05 52 49.4	-1.1
CHNG				AMP		05 52 55.6	
	comp=N,444nm,0.2s						
CHCH	**Chadas Angostu**	**1.81**	**212**	⇑iP	P	05 52 26.8	-0.1
CHCH				eS	S	05 52 51.8	+0.7
CACH	**El Canelo**	**1.95**	**208**	⇓iP	P	05 52 29.0	+0.4
CACH				i S	S	05 52 55.2	+1.4
CICH	**Cipreses**	**2.06**	**202**	⇑iP	P	05 52 30.2	+0.2
LNV	**Longovilo**	**2.24**	**226**	eP	P	05 52 30.5	-1.8
LNV				i S	S	05 52 58.5	-2.0
TLL	**Tololo Astrono**	**2.50**	**333**	⇑iP	P	05 52 36.5	+0.8
TLL				i S	S	05 53 06.9	+0.3
TLL				AMP		05 53 09.6	
	comp=E,717nm,0.3s						
LSCH	**La Serena**	**2.91**	**328**	⇑iP	P	05 52 40.6	-0.6
LSCH				i S	S	05 53 15.3	-0.9
LSCH				AMP		05 53 15.5	
	comp=N,422nm,0.3s						

NEIC 23 06:01:14.7,53.85N×164.02W,h10^{km},ML3.5(AEIC), After AEIC.,Unimak Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	**West Dahl East**	**0.71**	**332**	P	Pb	06 01 28.1	-0.6
WESS	**West Dahl Sout**	**0.76**	**327**	P	Pb	06 01 28.8	-0.7
WESS				S	Sb	06 01 39.4	-0.2
WESN	**West Dahl Nort**	**0.80**	**336**	P	Pb	06 01 29.8	-0.4
WESN				S	Sb	06 01 41.1	+0.4
WFAR	**Faris Peak**	**0.82**	**328**	P	Pb	06 01 29.7	-0.9
WPOG	**Pogromni**	**0.87**	**331**	P	Pb	06 01 30.4	-1.0
SSLS	**Shishaldin Sou**	**0.87**	**1**	P	Pb	06 01 29.9	-1.4
SSLS				S	Sb	06 01 42.7	-0.1
SSLW	**Shishaldin Wes**	**0.93**	**356**	P	Pb	06 01 30.8	-1.6
SSLN	**Shishaldin Nor**	**0.97**	**1**	P	Pb	06 01 31.7	-1.4
WTUG	**Tugumak**	**1.03**	**348**	P	Pb	06 01 32.4	-1.7
AKA	**Akutan**	**1.08**	**286**	P	Pb	06 01 33.4	-1.5
AKA				S	Sb	06 01 48.5	-0.3
AKUT	**Akutan**	**1.08**	**286**	P	Pb	06 01 33.3	-1.6
AKUT				S	Sb	06 01 48.0	-0.8
AHB	**Akutan Harbor**	**1.10**	**285**	P	Pb	06 01 33.8	-1.5
LVA	**Lava Point**	**1.23**	**286**	P	Pb	06 01 35.8	-1.8
UNV	**Unalaska Valle**	**1.47**	**271**	P	Pn	06 01 38.4	-2.9
UNV				S	Sb	06 01 56.9	-3.5
BALA	**Baldy Mountain**	**1.53**	**27**	P	Pn	06 01 40.6	-1.6
MNAT	**Makushin Natee**	**1.58**	**272**	P	Pn	06 01 40.3	-2.6
MNAT				S	Sb	06 01 59.7	-3.7
MTBL	**Makushin Table**	**1.58**	**276**	P	Pn	06 01 40.8	-2.1
DT1	**Dutton Round H**	**1.62**	**38**	P	Pn	06 01 40.0	-3.4
MSW	**Makushin Switc**	**1.64**	**274**	P	Pn	06 01 41.3	-2.4
DTNA	**Dutton South F**	**1.66**	**37**	P	Pn	06 01 40.8	-3.3
MGOD	**Makushin Gods**	**1.69**	**269**	P	Pn	06 01 42.0	-2.5
MCIR	**Makushin Cirqu**	**1.71**	**275**	P	Pn	06 01 42.7	-2.0
DOL	**Dolgoi Island**	**1.81**	**43**	P	Pn	06 01 42.8	-3.4
HAG	**Hague Volcano**	**1.92**	**39**	P	Pn	06 01 45.0	-2.7
PN7A	**Pavlof North-7**	**1.98**	**36**	P	Pn	06 01 47.0	-1.6
PVV	**Pavlof Volcano**	**2.01**	**39**	P	Pn	06 01 46.2	-2.8
BLHA	**Black Hill**	**2.18**	**30**	P	Pn	06 01 48.9	-2.6
OKCD	**Okmok Cone D**	**2.47**	**262**	P	Pn	06 01 54.2	-1.5
SDPT	**Sand Point**	**2.55**	**52**	P	Pn	06 01 54.6	-2.2
SDPT				S	Sn	06 02 23.9	-4.3
NIKO	**Nikolski**	**3.02**	**255**	P	Pn	06 02 00.2	-3.3

IDC 23 06:02:46.0±9.2,9.65S×164.88E,h624^{km}±117^{km},mb2.8/3, mb1 3.0/3,mb1mx2.7/13,mbtmp3.9/3,Error ellipse: s-maj=92.3km s-min=52.1km az=122.0,Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**30.90**	**221**	eP	P	06 08 14.1	-1.5
	2.1nm,0.4s						
STKA	**Stephens Creek**	**30.90**	**221**	P	P	06 08 14.2	-1.5
	2.6nm,0.4s,baz=54,slow=6.6,SNR=7.8						
WRA	**Warramunga Arr**	**31.20**	**247**	P	P	06 08 16.8	-1.5
	0.3nm,0.3s,baz=84,slow=7.5,SNR=9.5						
ILAR	**Eielson Array**	**82.47**	**19**	P	P	06 14 04.3	-1.2
	0.4nm,0.4s,baz=240,slow=5.1,SNR=11						
ARCES	**ARCESS Array B**	**114.78**	**345**	PKP	PKPdf	06 20 16.3	-0.2
	3.1nm,0.9s,baz=62,slow=1.8,SNR=6.4						

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*NIED **23** 07:45:00,38.30N×140.10E,h5^{km},Mw3.7 Best double couple: $M_0$4.41×10^{14} NP1:ϕ_s28°,δ52°,λ125°. NP2:ϕ_s159°, δ50°,λ54°.*

*NEIC **23** 07:45:55.9±1.0,38.40N×140.14E,h10^{km},mb4.1/1,Error ellipse: s-maj=21.2km s-min=12.1km az=112.0*

NEIC Recorded [2 JMA] in Yamagata and [1 JMA] in Niigata Prefectures.

*JMA **23** 07:45:56.4,38.35N×140.06E,h10^{km}±1^{km},M4.0 Broadband fault plane solution: P waves. NP1:ϕ_s158°, δ45°,λ66°. NP2:ϕ_s10°,δ50°,λ112°. Principal axes: T Plg73°, Azm346°; N Plg17°, Azm176°; P Plg3°, Azm85°;*

JMA Felt II J1.

*IDC **23** 07:45:57.9±5.7,38.32N×139.87E,h19^{km}±37^{km},mb3.6/5, mb1 3.8/7,mb1mx3.7/22,mbtmp3.7/7,ML3.5/2 Error ellipse: s-maj=34.9km s-min=21.0km az=105.0*

ISC 23 07:45:55.9±0.6,38.43N±0.06×140.10E±0.05,h19^{km}±5^{km}, n16,σ1^{s}.08/21,mb3.7/6,1C-2D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYS	**Shirataka**	**0.21**	**188**	⇑P	**Pb**	**07 45 59.4**	**-1.7**
JYS				S	**Sb**	**07 46 01.7**	**-2.9**
JYA	**Atsumi**	**0.35**	**299**	⇓P	**Pb**	**07 46 03.6**	**+0.3**
JYA				S	**Sb**	**07 46 08.8**	**+0.5**
JOU	**Okura**	**0.45**	**98**	⇓P	**Pb**	**07 46 05.4**	**+0.5**
JOU				S	**Sb**	**07 46 11.8**	**+0.7**
MAJO	**Matsushiro**	**2.41**	**219**	eP	**Pn**	**07 46 35.3**	**+0.2**
MAT	**Matsushiro**	**2.41**	**219**	P	**Pn**	**07 46 35.3**	**+0.2**
MAT				S	**Sn**	**07 47 07.3**	**+2.9**
MAT	**Matsushiro**	**2.41**	**219**	eP	**Pn**	**07 46 35.0**	**-0.1**
MAT				eS	**Sn**	**07 47 07.0**	**+2.6**
MJAR	**Matsushiro Arr**	**2.41**	**219**	Pn	**Pn**	**07 46 35.6**	**+0.5**
	23nm,0.3s,baz=21,slow=17,SNR=64						
MJAR				Lg		07 47 07.5	
	28nm,0.3s,baz=350,slow=30,SNR=15						
ASAJ	**Asahikawa**	**5.99**	**17**	Pn	**Pn**	**07 47 29.4**	**+3.6**
	0.8nm,0.3s,baz=269,slow=32,SNR=4.3						
KS15	**Wonju Array Si**	**9.70**	**268**	eP	**P**	**07 48 18.0**	**+0.3**
SONM	**Songino Array**	**26.16**	**302**	P	**P**	**07 51 30.0**	**-0.6**
	0.3nm,0.8s,mb2.9,baz=101,slow=7.3,SNR=2.2						
SONM	**Songino Array**	**26.16**	**302**	P	**P**	**07 51 29.9**	**-0.6**
MKAR	**Makanchi Array**	**42.51**	**301**	P	**P**	**07 53 51.3**	**-0.2**
	0.8nm,0.8s,mb3.5,baz=90,slow=10,SNR=3.8						
KURK	**Kurchatov**	**44.26**	**307**	P	**P**	**07 54 04.2**	**-1.5**
	2.0nm,0.7s,mb4.0						
ILAR	**Eielson Array**	**48.89**	**33**	P	**P**	**07 54 43.1**	**+1.1**
	0.7nm,0.8s,mb3.7,baz=264,slow=5.2,SNR=7.2						
WRA	**Warramunga Arr**	**58.31**	**186**	P	**P**	**07 55 50.4**	**-1.6**
	0.9nm,0.5s,mb4.0,baz=4.6,slow=7.6,SNR=8.3						
NOA	**NORSAR Array B**	**72.50**	**337**	P	**P**	**07 57 22.4**	**-0.3**
	1.5nm,1.1s,mb3.9,baz=39,slow=6.2,SNR=3.4						

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*IDC **23** 07:50:54.6±6.0,5.15S×145.42E,h63^{km}±58^{km},mb3.9/3, mb1 4.1/5,mb1mx3.7/13,mbtmp4.2/5,ML3.6/2,Error ellipse: s-maj=39.3km s-min=29.8km az=149.0*

*NEIC **23** 07:50:55.4±3.1,5.11S×145.39E,h71^{km}±27^{km},mb4.3/2, Error ellipse: s-maj=32.0km s-min=18.2km az=145.0*

ISC 23 07:50:55.4±3.8,5.2S±0.2×145.4E±0.1,h82^{km}±33^{km},n11, σ0^{s}.63/12,mb3.9/4,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.47**	**158**	P	**P**	**07 52 02.9**	**+0.6**
	12nm,0.3s,baz=39,slow=5.1,SNR=28						
PMG				S	**S**	**07 52 52.7**	**-0.9**
	12nm,0.3s,baz=98,slow=23,SNR=18						
PMG	**Port Moresby**	**4.47**	**158**	ePn	**P**	**07 52 02.8**	**+0.4**
PMG				eSn	**S**	**07 52 54.0**	**+0.5**
KAKA	**Kakadu**	**14.83**	**239**	eP	**P**	**07 54 41.8**	**+20**
	6.5nm,0.8s						
WB2	**Warramunga Arr**	**18.17**	**215**	eP	**P**	**07 55 03.3**	**-0.5**
WRA	**Warramunga Arr**	**18.17**	**216**	P	**P**	**07 55 03.2**	**-0.7**
	0.3nm,0.3s,baz=33,slow=11,SNR=19						
FITZ	**Fitzroy Crossi**	**23.19**	**235**	eP	**P**	**07 55 56.9**	**+1.1**
	14nm,0.8s,mb4.3						
FITZ	**Fitzroy Crossi**	**23.19**	**235**	P	**P**	**07 55 56.9**	**+1.1**
	19nm,0.8s,mb4.5,baz=72,slow=7.9,SNR=17						
STKA	**Stephens Creek**	**26.74**	**187**	P	**P**	**07 56 29.2**	**-0.2**
	2.2nm,0.7s,mb3.8,baz=1.6,slow=9.7,SNR=4.5						
VNDA	**Vanda**	**72.76**	**176**	eP	**P**	**08 02 16.8**	**+0.6**
	3.8nm,1.6s,mb4.0						
POO	**Poona**	**74.35**	**291**	ex	x	08 03 16.0	
ILAR	**Eielson Array**	**85.40**	**23**	P	**P**	**08 03 24.1**	**-0.5**
	0.4nm,0.8s,mb3.4,baz=264,slow=4.5,SNR=4.8						
ILAR				pP	pP	08 03 45.3	-1.6
	0.7nm,0.7s,baz=260,slow=4.8,SNR=5.3						

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*CRAAG **23** 08:36:33.7,36.65N×4.33E,Ml4.1*

*IDC **23** 08:36:35.4±2.9,36.54N×4.47E,mb3.6/2,mb1 3.8/4, mb1mx3.5/24,mbtmp3.6/4,ML4.6/1,MS3.6/1,Ms1 3.6/1, ms1mx2.5/26,Error ellipse: s-maj=61.0km s-min=28.5km az=163.0*

*MDD **23** 08:36:38.2±0.3,36.60N×4.31E,mb4.5/25,Error ellipse: s-maj=4.5km s-min=3.5km az=29.0,PRXIMO*

*NEIC **23** 08:36:38.2±0.3,36.57N×4.32E,h10^{km},ML4.1(ALG), Error ellipse: s-maj=4.0km s-min=3.3km az=190.0*

*CSEM **23** 08:36:39.8±0.1,36.66N×4.24E,h40^{km},ML3.5/7,Error ellipse: s-maj=3.3km s-min=2.6km az=179.0*

*LDG **23** 08:36:42.9±0.3,36.66N×4.30E,h20^{km},Ml3.6/11,Error ellipse: s-maj=6.5km s-min=3.2km az=147.0*

ISC 23 08:36:37.6±0.3,36.75N±0.03×4.23E±0.03,h10^{km},n147, σ1^{s}.27/213,mb3.5/2,MS3.5/1,1C,Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	**Boumerdes**	**0.60**	**270**	P	**Pb**	**08 36 50.2**	**+0.4**
ADJB	**Djebel Djouab**	**0.87**	**228**	P	**Pb**	**08 36 53.4**	**-0.9**
ATAF	**Djebel Tarf**	**0.87**	**178**	P	**Pb**	**08 36 50.5**	**-3.9**
ABA	**Alger-Bouzarea**	**0.96**	**273**	P	**Pb**	**08 36 56.5**	**+0.6**
SET	**Setif**	**1.09**	**120**	P	**Pb**	**08 36 55.0**	**-3.1**
EMHD	**Djebel Mahouad**	**1.17**	**242**	P	**Pb**	**08 36 59.3**	**-0.1**
CKHR	**Kef el Ahmar**	**1.27**	**125**	P	**Pb**	**08 36 59.0**	**-2.1**
DFRA	**Djebel Bou Aff**	**1.34**	**98**	P	**Pb**	**08 37 02.0**	**-0.4**
CMER	**Merouana**	**1.76**	**129**	P	**Pn**	**08 37 08.0**	**-0.4**
CASM	**Ain Smara**	**1.88**	**104**	P	**Pn**	**08 37 08.0**	**-2.2**
CTEI	**Djebel Teioual**	**1.88**	**111**	P	**Pn**	**08 37 10.0**	**-0.2**
CKFL	**Kef-Lekhel**	**2.03**	**99**	P	**Pn**	**08 37 14.0**	**+1.6**
CAEH	**'Ain El Ouahch**	**2.10**	**88**	P	**Pn**	**08 37 15.0**	**+1.6**
EBNR	**Beni Rached**	**2.22**	**259**	P	**Pn**	**08 37 21.6**	**+6.5**
ECHA	**Ech Chlef**	**2.39**	**256**	P	**Pn**	**08 37 21.9**	**+4.5**
ECHF	**Ech Chlef**	**2.41**	**257**	P	**Pn**	**08 37 21.9**	**+4.2**
CMAH	**Djebel Manchou**	**2.57**	**92**	P	**Pn**	**08 37 19.0**	**-1.0**
EANR	**'Ain N'Sour**	**2.65**	**253**	P	**Pn**	**08 37 22.1**	**+0.9**
ETRT	**Tiaret**	**2.73**	**241**	P	**Pn**	**08 37 22.2**	**-0.2**
ETOS	**Mallorca**	**3.21**	**340**	⇑P	**Pn**	**08 37 30.7**	**+1.5**
	133nm,0.8s,SNR=18						
ETOS				S	**Sn**	**08 38 08.2**	**+0.3**
	28nm,0.3s,SNR=6.2						
ETOS	**Mallorca**	**3.21**	**340**	P	**Pn**	**08 37 31.0**	**+1.8**
ETOS				S	**Sn**	**08 38 07.3**	**-0.6**
ETOS	**Mallorca**	**3.21**	**340**	P	**Pn**	**08 37 31.0**	**+1.8**
ETOS				S	**Sn**	**08 38 07.3**	**-0.7**
EIBI	**Ibiza**	**3.22**	**316**	P	**Pn**	**08 37 30.7**	**+1.3**
	26nm,0.3s,SNR=12						
EIBI				S	**Sn**	**08 38 09.4**	**+1.3**
	26nm,0.3s,SNR=11						
EIBI	**Ibiza**	**3.22**	**316**	P	**Pn**	**08 37 31.9**	**+2.6**
EIBI				S	**Sn**	**08 38 07.5**	**-0.6**
EIBI	**Ibiza**	**3.22**	**316**	P	**Pn**	**08 37 31.9**	**+2.6**
EIBI				S	**Sn**	**08 38 07.6**	**-0.6**
EBEN	**Beniarda**	**4.04**	**300**	P	**Pn**	**08 37 41.6**	**+0.8**
	22nm,0.7s,SNR=23						
EBEN				S	**Sn**	**08 38 27.0**	**-1.7**
	12nm,0.3s,SNR=7.5						
EBEN	**Beniarda**	**4.04**	**300**	P	**Pn**	**08 37 41.7**	**+0.8**
EBEN				S	**Sn**	**08 38 25.3**	**-3.5**
EBEN	**Beniarda**	**4.04**	**300**	P	**Pn**	**08 37 41.7**	**+0.8**
EBEN				S	**Sn**	**08 38 25.3**	**-3.5**
EMUR	**La Murta**	**4.50**	**286**	P	**Pn**	**08 37 48.4**	**+1.0**
	7.8nm,0.3s,SNR=5.5						
EMUR				S	**Sn**	**08 38 38.5**	**-2.0**
	7.5nm,0.4s,SNR=7.9						
EMUR	**La Murta**	**4.50**	**286**	P	**Pn**	**08 37 49.5**	**+2.1**
EMUR				S	**Sn**	**08 38 38.5**	**-2.0**
EMUR	**La Murta**	**4.50**	**286**	P	**Pn**	**08 37 49.5**	**+2.1**
EMUR				S	**Sn**	**08 38 38.5**	**-2.0**
ETOB	**Tobarra**	**4.96**	**294**	P	**Pn**	**08 37 54.7**	**+0.7**
	24nm,0.4s,SNR=39						
ETOB				S	**Sn**	**08 38 49.5**	**-2.6**
	17nm,0.4s,SNR=7.2						
ETOB	**Tobarra**	**4.96**	**294**	P	**Pn**	**08 37 54.9**	**+0.9**
ETOB				S	**Sn**	**08 38 50.8**	**-1.2**
ETOB	**Tobarra**	**4.96**	**294**	P	**Pn**	**08 37 54.8**	**+0.8**
ETOB				S	**Sn**	**08 38 50.8**	**-1.3**
ECHE	**Chera**	**4.98**	**306**	P	**Pn**	**08 37 55.7**	**+1.4**
	23nm,0.4s,SNR=35						
ECHE				S	**Sn**	**08 38 50.0**	**-2.7**
	12nm,0.7s,SNR=7.9						
ECHE	**Chera**	**4.98**	**306**	P	**Pn**	**08 37 56.0**	**+1.7**
ECHE				S	**Sn**	**08 38 53.4**	**+0.7**
ECHE	**Chera**	**4.98**	**306**	P	**Pn**	**08 37 56.0**	**+1.7**
ECHE				S	**Sn**	**08 38 53.4**	**+0.7**
EMOS	**Mosqueruela**	**5.16**	**316**	P	**Pn**	**08 37 57.5**	**+0.8**
	11nm,0.4s,SNR=6.7						
EMOS				S	**Sn**	**08 38 55.2**	**-1.9**
	13nm,0.6s,SNR=7.9						
EMOS	**Mosqueruela**	**5.16**	**316**	P	**Pn**	**08 37 57.9**	**+1.2**
EMOS				S	**Sn**	**08 38 54.7**	**-2.5**
EMOS	**Mosqueruela**	**5.16**	**316**	P	**Pn**	**08 37 57.9**	**+1.1**
EMOS				S	**Sn**	**08 38 54.7**	**-2.4**
ERTA	**Horta de San J**	**5.19**	**325**	P	**Pn**	**08 37 57.6**	**+0.4**
	10nm,0.5s,SNR=7.0						
ERTA				S	**Sn**	**08 38 56.5**	**-1.4**
	7.5nm,0.5s,SNR=7.9						
ERTA	**Horta de San J**	**5.19**	**325**	P	**Pn**	**08 37 57.8**	**+0.6**
ERTA				S	**Sn**	**08 38 53.3**	**-4.5**
ERTA	**Horta de San J**	**5.19**	**325**	P	**Pn**	**08 37 57.8**	**+0.6**
EPOB	**Poblet**	**5.21**	**333**	P	**Pn**	**08 37 58.0**	**+0.5**
	13nm,0.4s,SNR=12						
EPOB				S	**Sn**	**08 38 56.0**	**-2.4**
	7.8nm,0.3s,SNR=5.9						
EPOB	**Poblet**	**5.21**	**333**	P	**Pn**	**08 37 58.6**	**+1.1**
EPOB				S	**Sn**	**08 38 54.6**	**-3.8**
EPOB	**Poblet**	**5.21**	**333**	P	**Pn**	**08 37 58.6**	**+1.1**
EHUE	**Huescar**	**5.54**	**283**	P	**Pn**	**08 38 03.0**	**+0.8**
	1.5nm,0.3s,SNR=7.9						
EHUE				S	**Sn**	**08 39 04.0**	**-2.8**
	3.3nm,1.0s,SNR=7.9						
EHUE	**Huescar**	**5.54**	**283**	P	**Pn**	**08 38 03.2**	**+1.0**
EHUE				S	**Sn**	**08 39 00.1**	**-6.7**
EMIR	**Miracle**	**5.57**	**339**	P	**Pn**	**08 38 04.2**	**+1.7**
	34nm,0.3s,SNR=14						
EMIR				S	**Sn**	**08 39 05.5**	**-1.9**
	28nm,0.3s,SNR=5.8						
EMIR	**Miracle**	**5.57**	**339**	P	**Pn**	**08 38 04.4**	**+1.8**
EMIR				S	**Sn**	**08 39 05.1**	**-2.3**
EMIR	**Miracle**	**5.57**	**339**	P	**Pn**	**08 38 04.4**	**+1.8**
EVIA	**Vianos**	**5.66**	**291**	P	**Pn**	**08 38 03.9**	**0.0**
	18nm,0.6s,SNR=6.0						
EVIA				S	**Sn**	**08 39 07.0**	**-2.8**
	13nm,0.6s,SNR=5.2						
EVIA	**Vianos**	**5.66**	**291**	P	**Pn**	**08 38 04.6**	**+0.7**
EVIA				S	**Sn**	**08 39 08.6**	**-1.2**
EVIA	**Vianos**	**5.66**	**291**	P	**Pn**	**08 38 04.6**	**+0.7**
EVIA				S	**Sn**	**08 39 08.6**	**-1.2**
EBER	**Berja**	**5.71**	**274**	P	**Pn**	**08 38 05.3**	**+0.7**
	4.5nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**08 39 08.8**	**-2.3**
	17nm,1.2s,SNR=7.9						
EBER	**Berja**	**5.71**	**274**	P	**Pn**	**08 38 05.5**	**+0.9**

EBER				S	Sn	08 39 10.5	-0.6
EBER	**Berja**	5.71	274	P	Pn	08 38 05.5	+0.9
EBER				S	Sn	08 39 10.5	-0.6
EJON	**La Jonquera**	5.79	350	P	Pn	08 38 06.4	+0.7
	11nm,0.3s,SNR=6.8						
EJON				S	Sn	08 39 12.0	-0.9
	11nm,0.3s,SNR=5.8						
EJON	**La Jonquera**	5.79	350	P	Pn	08 38 06.6	+0.9
EJON				S	Sn	08 39 11.6	-1.2
EJON	**La Jonquera**	5.79	350	P	Pn	08 38 06.6	+1.0
SJAF	**Saint Jean de**	5.82	350	P	Pn	08 38 07.0	+0.9
EQES	**Quesada**	5.92	282	P	Pn	08 38 08.0	+0.5
	8.5nm,0.5s,SNR=8.5						
EQES				S	Sn	08 39 13.8	-2.3
	12nm,0.6s,SNR=5.5						
EQES	**Quesada**	5.92	282	P	Pn	08 38 08.8	+1.3
EQES				S	Sn	08 39 14.3	-1.8
EQES	**Quesada**	5.92	282	P	Pn	08 38 08.8	+1.3
EQES				S	Sn	08 39 14.3	-1.9
FILF	**Fillols**	5.95	348	P	Pn	08 38 09.6	+1.7
EQUE	**Quentar**	6.16	277	P	Pn	08 38 10.9	0.0
	7.7nm,0.5s,SNR=7.9						
EQUE				S	Sn	08 39 19.1	-3.1
	3.2nm,0.4s,SNR=7.9						
ESAC	**San Caprasio**	6.16	325	P	Pn	08 38 11.6	+0.6
	14nm,0.4s,SNR=7.9						
ESAC				S	Sn	08 39 20.2	-2.0
	20nm,0.6s,SNR=7.9						
ESAC	**San Caprasio**	6.16	325	P	Pn	08 38 13.2	+2.3
ESAC				S	Sn	08 39 20.7	-1.6
ESAC	**San Caprasio**	6.16	325	P	Pn	08 38 13.2	+2.3
CARF	**Carcanieres**	6.18	345	P	Pn	08 38 13.0	+1.8
EGRA	**Graus**	6.22	332	P	Pn	08 38 12.9	+1.1
	15nm,0.5s,SNR=7.9						
EGRA				S	Sn	08 39 20.6	-3.3
	9.1nm,0.6s,SNR=7.9						
EGRA	**Graus**	6.22	332	P	Pn	08 38 12.2	+0.4
EGRA				S	Sn	08 39 23.5	-0.3
EGRA	**Graus**	6.22	332	P	Pn	08 38 12.2	+0.4
EGRA				S	Sn	08 39 23.5	-0.3
LPEF	**Le Peyrat**	6.44	345	P	Pn	08 38 17.1	+2.2
MLS	**Moulis**	6.65	340	P	Pn	08 38 20.1	+2.2
EBIE	**Bielsa**	6.71	333	P	Pn	08 38 19.8	+1.1
	6.8nm,0.5s,SNR=14						
EBIE				S	Sn	08 39 34.7	-1.3
	10nm,0.5s,SNR=7.2						
EBIE	**Bielsa**	6.71	333	P	Pn	08 38 20.0	+1.2
EBIE				S	Sn	08 39 32.0	-4.0
EBIE	**Bielsa**	6.71	333	P	Pn	08 38 20.0	+1.3
MTLF	**Montolieu**	6.76	347	*e*Pn	Pn	08 38 20.4	+1.0
MTLF				*e*Sn	Sn	08 39 33.4	-3.9
	14nm,0.4s						
LMR	**La Mourre**	6.80	14	*e*Pn	Pn	08 38 19.3	-0.7
LMR				*e*Sn	Sn	08 39 33.1	-5.2
	5.7nm,0.2s						
PGF	**Pioggiola**	6.86	31	*e*Pn	Pn	08 38 18.5	-2.3
PGF				*e*Sn	Sn	08 39 33.0	-6.7
	4.6nm,0.2s						
EPF	**Esparros**	6.95	336	*e*Pn	Pn	08 38 22.9	+0.9
EPF				*e*Sn	Sn	08 39 37.1	-4.9
	6.9nm,0.4s						
FRF	**La Foret Royal**	7.05	14	*e*Pn	Pn	08 38 22.0	-1.5
FRF				*e*Sn	Sn	08 39 39.4	-5.1
	6.9nm,0.2s						
ESDC	**Sonseca Array**	7.08	297	Pn	Pn	08 38 24.3	+0.4
	2.9nm,0.3s,baz=111,slow=14,SNR=20						
ESDC				Sn	Sn	08 39 46.6	+1.4
	1.5nm,0.3s,baz=115,slow=23,SNR=4.7						
ESDC	**Sonseca Array**	7.08	297	P	Pn	08 38 23.8	-0.1
	7.6nm,0.7s,baz=111,slow=13,SNR=8.7						
ESDC				S	Sn	08 39 40.3	-5.0
	0.6nm,0.3s,baz=111,slow=25,SNR=3.6						
ESDC	**Sonseca Array**	7.08	297	P	Pn	08 38 24.3	+0.4
ESDC				S	Sn	08 39 41.2	-4.0
EADA	**Adamuz**	7.15	284	P	Pn	08 38 25.4	+0.5
	1.7nm,0.4s,SNR=7.9						
EADA	**Adamuz**	7.15	284	P	Pn	08 38 24.2	-0.6
EADA				S	Sn	08 39 58.0	+11
EADA	**Adamuz**	7.15	284	P	Pn	08 38 24.2	-0.6
ETSF	**Etsaut**	7.16	331	*e*Pn	Pn	08 38 25.7	+0.7
ETSF				*e*Sn	Sn	08 39 42.7	-4.6
	3.1nm,0.3s						
EMIJ	**Mijas**	7.24	271	P	Pn	08 38 26.3	+0.2
	2.2nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	7.24	271	P	Pn	08 38 24.4	-1.7
EMIJ				S	Sn	08 40 04.1	+15
EMIJ	**Mijas**	7.24	271	P	Pn	08 38 24.4	-1.7
SMRF	**Simiane la Rot**	7.29	8	*e*Pn	Pn	08 38 26.5	-0.3
SMRF				*e*Sn	Sn	08 39 45.7	-4.8
	3.2nm,0.4s						
LASF	**Ste Croix**	7.33	358	*e*Pn	Pn	08 38 26.1	-1.2
LASF				*e*Sn	Sn	08 39 46.6	-4.7
	9.1nm,0.5s						
IPRE	**Itoiz**	7.42	326	P	Pn	08 38 28.5	-0.2
	2.9nm,0.4s,SNR=7.9						
SBF	**Sospel**	7.51	18	*e*Pn	Pn	08 38 28.0	-2.0
SBF				*e*Sn	Sn	08 39 49.6	-6.5
	7.8nm,0.3s						
SJPF	**Ste Jean**	7.61	328	*e*Pn	Pn	08 38 32.1	+0.8
SJPF				*e*Sn	Sn	08 39 53.4	-5.1
	2.6nm,0.3s						
GUD	**Guadarrama**	7.62	303	P	Pn	08 38 32.3	+0.9
	2.6nm,0.4s,SNR=7.9						
GUD	**Guadarrama**	7.62	303	P	Pn	08 38 30.4	-1.1
ECAB	**El Cabril**	7.79	283	P	Pn	08 38 32.4	-1.5
	1.7nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	7.79	283	P	Pn	08 38 31.8	-2.1
ECAB				S	Sn	08 40 07.9	+4.8
ECAB	**El Cabril**	7.79	283	P	Pn	08 38 31.8	-2.1
EALK	**Alkurruntz**	7.82	328	P	Pn	08 38 35.0	+0.7
	12nm,0.4s,SNR=8.5						
EALK				S	Sn	08 39 58.2	-5.5
	18nm,0.4s,SNR=7.9						
EALK	**Alkurruntz**	7.82	328	P	Pn	08 38 35.3	+1.1
EALK				S	Sn	08 39 59.2	-4.5
EALK	**Alkurruntz**	7.82	328	P	Pn	08 38 35.3	+1.1
VIVF	**Saint-Julien-l**	8.11	2	*e*Pn	P	08 38 36.6	-1.6
VIVF				*e*Sn	Sn	08 40 04.9	-6.0
	5.0nm,0.3s						
MBDF	**Montbardon**	8.20	13	*e*Pn	P	08 38 40.3	+0.8
ORIF	**Oris-en-Rattie**	8.26	8	*e*Pn	P	08 38 40.7	+0.4
MDT	**Midelt**	8.27	244	Pn	P	08 38 37.4	-3.0
	0.1nm,0.3s,baz=59,slow=16,SNR=3.5						
CAF	**Calviac**	8.33	349	*e*Pn	P	08 38 41.7	+0.3
LFF	**La Frestale**	8.60	343	*e*Pn	P	08 38 46.2	+1.1
ELAN	**Lanestosa**	8.74	320	P	P	08 38 46.4	-0.7
	3.6nm,0.5s,SNR=4.0						
ELAN	**Lanestosa**	8.74	320	P	P	08 38 46.4	-0.7
RJF	**Les Rejaudoux**	8.79	347	*e*Pn	P	08 38 47.9	+0.2
LPG	**La Plagne**	8.94	11	*e*Pn	P	08 38 49.8	-0.1
LPL	**La Plagne**	8.96	11	*e*Pn	P	08 38 50.6	+0.5
TCF	**Toulx Ste Croi**	9.65	352	*e*Pn	P	08 38 59.7	+0.1
EARI	**Arriondas**	9.76	315	P	P	08 39 01.9	+0.9
	10nm,0.6s,SNR=9.4						
EARI	**Arriondas**	9.76	315	P	P	08 39 02.5	+1.5
EARI	**Arriondas**	9.76	315	P	P	08 39 02.5	+1.5
BGF	**Bois d'Agland**	9.86	354	*e*Pn	P	08 39 02.4	0.0
SMF	**Signal de Mont**	9.89	358	*e*Pn	P	08 39 02.6	-0.3
ECAL	**Calabor**	9.95	305	P	P	08 39 03.4	-0.3
	14nm,0.3s,SNR=8.5						
ECAL	**Calabor**	9.95	305	P	P	08 39 04.3	+0.6
ECAL	**Calabor**	9.95	305	P	P	08 39 04.3	+0.6
CABF	**La Chapelle**	9.95	7	*e*Pn	P	08 39 04.2	+0.5
AVF	**Avril sur Loir**	10.05	357	*e*Pn	P	08 39 05.3	+0.2
MFF	**Saint Martin d**	10.37	343	*e*Pn	P	08 39 09.7	+0.2
ERUA	**La Rua**	10.43	306	P	P	08 39 10.3	0.0
	5.1nm,0.4s,SNR=7.9						
ERUA	**La Rua**	10.43	306	P	P	08 39 11.3	+1.0
ELOB	**Lobios**	10.80	302	P	P	08 39 15.2	-0.2
	4.1nm,0.7s,SNR=7.9						
ELOB	**Lobios**	10.80	302	P	P	08 39 15.4	-0.1
ELOB	**Lobios**	10.80	302	P	P	08 39 15.4	0.0
EPON	**Pontenova**	10.91	310	P	P	08 39 17.3	+0.3
	1.7nm,0.3s,SNR=7.9						
EPON	**Pontenova**	10.91	310	P	P	08 39 17.8	+0.9
EPON	**Pontenova**	10.91	310	P	P	08 39 17.8	+0.9
EZAM	**Zamans**	11.35	302	P	P	08 39 22.9	0.0
	3.3nm,0.3s,SNR=7.9						
EZAM	**Zamans**	11.35	302	P	P	08 39 25.3	+2.4
HAU	**Haudompre**	11.36	7	*e*Pn	P	08 39 21.2	-1.7
LDF	**La Druitiere**	12.26	346	*e*Pn	P	08 39 34.9	-0.2
QUIF	**Quistinic**	12.42	336	*e*Pn	P	08 39 37.7	+0.4
FLN	**La Foliniere**	12.49	345	*e*Pn	P	08 39 38.0	-0.3
	baz=162						
EKA	**Eskdalemuir Ar**	19.26	347	P	P	08 41 08.1	+3.4
	0.2nm,0.3s,baz=159,slow=14,SNR=3.5						
AKASG	**Malin Array Be**	22.68	44	P	P	08 41 37.8	-2.4
	0.4nm,0.4s,mb3.2,baz=243,slow=11,SNR=4.2						
HFS	**Hagfors**	24.18	12	LR	LR	08 50 49.3	
	comp=Z,131nm,18.2s,MS3.5,baz=82,slow=35						
YKA	**Yellowknife Ar**	69.65	334	P	P	08 47 48.3	-0.5
	0.9nm,0.7s,mb3.8,baz=50,slow=6.4,SNR=5.1						

THR ***23*** *09:27:43.7*±*1.0, 32.65N*×*49.60E, h14*^{km}±*6*^{km}*, ML3.3*
KISR ***23*** *09:27:44.3*±*1.1, 32.65N*×*49.57E, h33*^{km}*, ML3.3*
CSEM ***23*** *09:27:44.5*±*0.1, 32.66N*×*49.60E, h18*^{km}*, ML3.3, Error ellipse: s-maj=1.8km s-min=1.0km az=121.0*
TEH ***23*** *09:27:47.1, 32.73N*×*49.66E, h10*^{km}*, Mn3.6*
ISC 23 09:27:43.6±1.3**, 32.63N**±0.04×**49.58E**±0.05**, h5**^{km}±10^{km}**, n28,** $\sigma0\overset{s}{.}$**90**/35**, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	0.84	232	*e*Pg	Pg	09 27 60.0	-0.5
ASAO	**Ashtian**	1.94	11	*e*Pg	Pg	09 28 18.1	-4.4
ASAO				*e*Sg	Sg	09 28 45.0	-3.5
ASAO				AML	AML	09 28 56.1	
	comp=N,289nm,0.8s						
IKOM	**Komasi**	2.32	312	Pn	Pn	09 28 24.6	+1.6
IQOM	**Qom**	2.53	29	Lg		09 29 01.7	
IQOM	**Qom**	2.53	29	Pn	Pn	09 28 27.0	+1.0
NASN	**Na'in**	2.72	86	*e*Pn	Pn	09 28 29.4	+0.6
NASN				*e*Sg	Sg	09 29 08.6	-5.7
IRAZ	**Razeghan**	2.78	6	Pn	Pn	09 28 34.2	+4.6
IVRN	**Varamin**	2.96	37	Pn	Pn	09 28 30.4	-1.7
SNGE	**Sanandaj**	3.08	323	*e*Pn	Pn	09 28 34.2	+0.3
SNGE				AML	AML	09 29 29.1	
	comp=N,68nm,0.6s						
IDHR	**Dehrash**	3.37	309	Pn	Pn	09 28 38.9	+0.9
THKV	**Tehran--Karaj**	3.44	18	*e*Pn	Pn	09 28 38.7	-0.3
UMR	**Umm Al-Rimmam**	3.46	208	*e*P	Pn	09 28 39.7	+0.4
UMR				AML	AML	09 29 21.6	
	comp=Z,48nm,0.4s						
CHTH	**Charan**	3.51	21	*e*Pn	Pn	09 28 39.8	-0.1
ISAD	**Sadrabad**	3.55	101	Pn	Pn	09 28 41.0	+0.5
IDMV	**Damavand**	3.57	34	Pn	Pn	09 28 40.6	-0.2
DAMV	**Damavand**	3.58	33	*e*Pn	Pn	09 28 40.9	-0.2
IAFJ	**Afjeh**	3.67	28	Pn	Pn	09 28 42.2	0.0
KBD	**Kabd**	3.81	206	*e*P	Pn	09 28 44.5	+0.3
KBD				*e*S	Sn	09 29 28.7	-1.3
KBD				AML	AML	09 29 32.0	
	comp=Z,92nm,0.3s						
KBD	**Kabd**	3.81	206	*e*P	Pn	09 28 44.5	+0.2
KBD				*e*S	Sn	09 29 28.7	-1.3
NAY	**Al-Naaiem**	3.93	211	*e*P	Pn	09 28 46.1	+0.2
NAY				*e*S	Sn	09 29 32.6	-0.4
NAY				AML	AML	09 29 41.9	
	comp=Z,17nm,0.5s						
IFIR	**Firoozkooh**	3.99	40	Pn	Pn	09 28 46.5	-0.3
IFIR				Sn	Sn	09 29 30.1	-4.4
IPAR	**Pars**	4.07	132	Pn	Pn	09 28 49.7	+1.8
RDF	**Al-Radifah**	4.09	206	*e*P	Pn	09 28 48.5	+0.3
RDF				*e*S	Sn	09 29 36.6	-0.5
RDF				AML	AML	09 29 37.9	
	comp=Z,43nm,0.4s						
ICHK	**Chekchek**	4.10	94	Pn	Pn	09 28 48.1	-0.2
QRN	**Al-Qurain**	4.13	201	*e*P	Pn	09 28 48.5	-0.3
QRN				*e*S	Sn	09 29 38.1	-0.1
QRN				AML	AML	09 29 40.5	
	comp=Z,54nm,0.4s						
ISRV	**Sarvestan**	4.44	136	Pn	Pn	09 28 49.4	-3.8
IMOK	**Mook**	4.47	142	Pn	Pn	09 28 54.9	+1.2
IBAF	**Bafgh**	5.18	100	Pn	Pn	09 29 02.9	-0.8

NIED ***23*** *09:30:00, 38.30N*×*144.70E, h5*^{km}*, Mw3.8 Best double couple: M*$_0$*6.61*×*10*^{14} *NP1:*ϕ_s*193°,* δ*70°,* λ*-99°. NP2:*ϕ_s*38°,* δ*21°,* λ*-67°.*
NEIC ***23*** *09:30:15.2*±*0.6, 38.23N*×*145.05E, h10*^{km}*, mb4.3/2, MW3.8(NIED), Error ellipse: s-maj=18.3km s-min=9.6km az=155.0*
IDC ***23*** *09:30:18.7*±*0.8, 38.25N*×*144.88E, h33*^{km}±*6*^{km}*, mb3.5/7, mb1 3.9/10, mb1mx3.7/22, mbtmp3.8/10, ML3.9/3, Error ellipse: s-maj=23.0km s-min=17.2km az=129.0*
JMA ***23*** *09:30:18.7*±*0.1, 38.32N*×*144.74E, h57*^{km}*, M4.4*
ISC 23 09:30:17.1±1.1**, 38.35N**±0.05×**144.84E**±0.07**, h36**^{km}±11^{km}**, h34**^{km}±1.7^{km}**:pP-P, n34,** $\sigma1\overset{s}{.}$**21**/48**, mb3.9**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.58	287	P	P	09 30 58.4	+0.9
OFUJ				S	S	09 31 28.0	0.0
MIYJ	**Miyakonagasawa**	2.65	298	P	P	09 30 59.2	+0.8
MIYJ				S	S	09 31 29.3	-0.4
JIO	**Ouri**	2.74	273	P	P	09 31 00.4	+0.7
JIO				S	S	09 31 31.3	-0.7
JMK	**Ichinoseki**	2.90	283	P	P	09 31 02.9	+1.0
JMK				*e*S	S	09 31 36.0	+0.1
JOT	**Ohata**	4.21	317	P	P	09 31 21.9	+1.4
JCH	**Churui**	4.41	346	P	P	09 31 22.3	-1.1
JCH				S	S	09 32 09.6	-4.6
JKB	**Kayabe**	4.58	322	P	P	09 31 26.3	+0.4
JKB				S	S	09 32 15.6	-3.0
NEM2	**Nemuro 2**	5.06	8	P	P	09 31 29.3	-3.3
NEM2				S	S	09 32 22.5	-8.1
JRY	**Ryogami san**	5.28	246	P	P	09 31 35.0	-0.7
JRY				S	S	09 32 31.9	-4.2
JOD2	**Odawara 2**	5.54	238	P	P	09 31 38.0	-1.4
JOD2				S	S	09 32 37.5	-5.3
JOSM	**Okushiri--Mats**	5.55	314	P	P	09 31 40.4	+1.0
MJAR	**Matsushiro Arr**	5.57	253	Pn	P	09 31 40.3	+0.6
	6.0nm,0.3s,baz=80,slow=14,SNR=48						
MJAR				Sn	S	09 32 43.4	-0.1
	1.4nm,0.3s,baz=101,slow=19,SNR=4.2						
MAJO	**Matsushiro**	5.58	253	*e*P	P	09 31 40.5	+0.8
	38nm,0.5s						
MAT	**Matsushiro**	5.58	253	P	P	09 31 40.7	+0.9
MAT				S	S	09 32 44.1	+0.5
MAT	**Matsushiro**	5.58	253	*e*P	P	09 31 41.0	+1.2
	31nm,0.7s						
MAT				*e*S	S	09 32 44.0	+0.4
JTKR	**Abashiri--Toko**	5.66	353	P	P	09 31 39.6	-1.4
JTKR				S	S	09 32 39.7	-6.0
JHR	**Hokuryu**	5.88	337	P	P	09 31 45.2	+1.1
JHR				*e*S	S	09 32 49.6	-1.6
ASAJ	**Asahikawa**	6.00	344	Pn	P	09 31 46.0	+0.2
	2.6nm,0.3s,baz=339,slow=32,SNR=21						
ASAJ				Sn	S	09 32 48.5	-5.9
	2.4nm,0.3s,baz=330,slow=29,SNR=5.7						
JHJ2	**Mitsune**	6.63	220	*e*S	S	09 33 02.3	-7.6
JHJ	**Hachijo jima 2**	6.64	220	Pn	P	09 31 51.9	-2.9
	3.3nm,0.3s,baz=78,slow=20,SNR=3.9						
JHJ				Sn	S	09 33 02.5	-7.6
	14nm,0.3s,baz=60,slow=24,SNR=6.1						
ZAL	**Zalesovo**	43.08	311	sP	sP	09 38 29.2	-0.7
	1.9nm,0.5s,baz=19,slow=4.2,SNR=2.7						
MKAR	**Makanchi Array**	45.73	302	P	P	09 38 36.6	+0.2
	0.5nm,0.8s,mb3.5,baz=127,slow=7.2,SNR=3.2						
MKAR				pP	pP	09 38 47.5	+0.5
	0.4nm,0.4s,baz=83,slow=8.7,SNR=3.0						
MKAR	**Makanchi Array**	45.73	302	P	P	09 38 36.6	+0.2
MKAR				pP	pP	09 38 47.5	+0.5
ILAR	**Eielson Array**	46.92	33	P	P	09 38 45.5	-0.1
	0.8nm,0.8s,mb3.7,baz=270,slow=7.2,SNR=3.4						
KURK	**Kurchatov**	47.27	308	P	P	09 38 49.8	+1.3
CHKZ	**Chkalovo**	51.41	313	*e*P	P	09 39 17.1	-3.2
	5.6nm,1.8s,mb4.2						
WRAB	**Tennant Creek**	58.80	192	*e*P	P	09 40 11.5	-2.8
	2.7nm,0.7s,mb4.4						
WRA	**Warramunga Arr**	58.81	192	P	P	09 40 13.0	-1.4
	0.7nm,0.5s,mb4.0,baz=8.0,slow=6.9,SNR=10						
WRA				pP	pP	09 40 23.0	-2.2
	1.6nm,0.8s,baz=14,slow=7.3,SNR=8.6						
FINES	**FINESS Array B**	68.90	333	P	P	09 41 20.1	+0.4
	2.0nm,0.8s,mb4.1,baz=27,slow=6.2,SNR=3.9						
NVAR	**Mina Array Bea**	72.02	55	P	P	09 41 40.6	+1.6
	0.4nm,0.8s,mb3.4,baz=307,slow=9.0,SNR=3.6						
PDAR	**Pinedale Array**	74.80	47	P	P	09 41 56.0	+0.9
	0.8nm,0.6s,mb3.8,baz=316,slow=2.5,SNR=8.9						
PDAR				pP	pP	09 42 06.3	+0.2
	0.4nm,0.6s,baz=333,slow=4.0,SNR=2.9						
TXAR	**Lajitas Array**	87.16	54	P	P	09 43 01.9	+1.2
	0.3nm,0.7s,mb3.6,baz=304,slow=3.8,SNR=3.5						
TXAR	**Lajitas Array**	87.16	54	P	P	09 43 01.9	+1.2
SIV	**San Ignacio**	148.15	53	PKPbc	PKPdf	09 50 01.5	+5.3
	0.9nm,0.5s,baz=281,slow=5.2,SNR=5.7						

PGC 23 09:32:40.3, 58.33N×133.51W, h1^{km}**, ML3.1**/4**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLBC	**Dease Lake**	1.84	85	Pn	Pn	09 33 11.8	-1.5
DLBC				Pg	Pg	09 33 13.3	-3.7
DLBC				Sn	Sn	09 33 36.5	-1.1
DLBC				Sg	Sg	09 33 38.5	-3.0
DLBC				Trac		09 33 38.9	
	comp=Z,81nm,0.5s						
PLBC	**Pleasant Camp**	1.86	308	Pn	Pn	09 33 13.6	0.0
PLBC				Sg	Sg	09 33 38.7	-3.6
WHY	**Whitehorse**	2.44	344	Pn	Pn	09 33 20.6	-1.3
WHY				Pg	Pg	09 33 23.7	-5.3
WHY				Sg	Sg	09 33 54.2	-7.3
WHY				Trac		09 34 03.5	
	comp=Z,43nm,0.5s						
HYT	**Haines Junctio**	3.22	323	Pn	Pn	09 33 31.1	-1.9
HYT				Pg	Pg	09 33 38.5	-6.1
HYT				Sg	Sg	09 34 20.3	-7.3
HYT				Trac		09 34 30.5	
	comp=Z,22nm,0.5s						
RUBB	**Prince Rupert**	4.41	154	Sg	Sg	09 34 58.0	-9.1
FNBB	**Fort Nelson**	5.52	80	Sg	Sg	09 35 32.9	-11
FSB	**Fort Saint Jam**	6.39	123	Pg	Pg	09 34 34.6	-13
FSB				Sg	Sg	09 36 04.3	-8.9
FSB				Trac		09 36 08.5	
	comp=Z,7.0nm,0.8s						
DAWY	**Dawson**	6.41	336	Pn	Pn	09 34 15.4	-2.9
DAWY				Pg	Pg	09 34 36.8	-12
DAWY				Sn	Sn	09 35 24.3	-8.8
DAWY				Sg	Sg	09 36 00.2	-14
DAWY				Trac		09 36 04.6	
	comp=Z,28nm,0.8s						
BMBC	**Bull Mountain**	6.60	105	Sg	Sg	09 36 04.2	-16
INK	**Inuvik**	10.01	360	Pn	P	09 35 05.3	-2.9
INK				Trac		09 38 18.0	
	comp=Z,3.0nm,1.0s						

NEIC ***23*** *09:49:26.6*±*0.8, 17.21S*×*69.48W, h160*^{km}±*8*^{km}*, mb4.3/1, Error ellipse: s-maj=14.4km s-min=11.8km az=205.0*
IDC ***23*** *09:49:27.3*±*2.1, 17.24S*×*69.37W, h165*^{km}±*14*^{km}*, mb3.7/5, mb1 3.8/6, mb1mx3.4/17, mbtmp4.2/6, Error ellipse: s-maj=31.5km s-min=22.1km az=54.0*
ISC 23 09:49:26.1±0.8**, 17.20S**±0.08×**69.49W**±0.09**, h171**^{km}±7^{km}**, n14,** $\sigma0\overset{s}{.}$**91**/17**, mb4.0**/5**, 1C, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	**La Paz**	1.58	55	P	P	09 49 59.1	+0.7
	131nm,0.3s,baz=242,slow=8.1,SNR=3753						
LPAZ				S	S	09 50 23.2	-0.3
	3.1nm,0.3s,baz=162,slow=20,SNR=3.8						
LPAZ	**La Paz**	1.58	55	*e*Pn	P	09 49 59.2	+0.7
LPAZ				*e*Sn	S	09 50 23.5	+0.1
ARE	**Arequipa**	2.06	290	⇑*i*P	P	09 50 03.2	-0.3
SIV	**San Ignacio**	8.15	83	P	P	09 51 20.6	-1.8
	1.8nm,0.3s,baz=266,slow=11,SNR=26						
SIV				S	S	09 52 45.8	-7.4
	0.6nm,0.3s,baz=164,slow=22,SNR=11						
SAML	**Samuel**	10.24	38	*e*Pn	P	09 51 49.4	-0.3
SAML				*e*Sn	S	09 53 42.6	+0.3
CPUP	**Villa Florida**	14.49	131	P	P	09 52 45.9	+1.6
BDFB	**Brasilia**	20.66	89	P	P	09 53 54.7	+0.9
	4.3nm,0.4s,baz=261,slow=9.4,SNR=9.0						
TRQA	**Tornquist**	21.80	164	*e*P	P	09 54 04.8	-0.2
	19nm,1.5s,mb4.3						
SNAA	**Sanae**	66.51	162	P	P	09 59 58.3	-0.8
	0.2nm,0.5s,mb3.2,baz=285,slow=12,SNR=10						
DBIC	**Dimbokro**	68.10	75	P	P	10 00 08.8	-1.2
	6.4nm,0.6s,mb4.5,baz=232,slow=6.2,SNR=17						
ULM	**Lac du Bonnet**	71.07	342	P	P	10 00 27.3	-0.1
	2.4nm,0.5s,mb4.2,baz=166,slow=11,SNR=5.8						
ULM	**Lac du Bonnet**	71.07	342	P	P	10 00 27.3	-0.1
YKA	**Yellowknife Ar**	86.97	341	P	P	10 01 53.9	+1.3
	0.3nm,0.4s,mb3.5,baz=131,slow=4.8,SNR=4.8						
SONM	**Songino Array**	149.26	5	PKPbc	PKPdf	10 08 57.3	+7.5
	0.5nm,0.8s,baz=332,slow=2.6,SNR=3.6						

NNC ***23*** *09:53:14.0*±*3.0, 40.16N*×*75.99E, mpv3.9, Error ellipse: s-maj=24.4km s-min=22.7km az=170.0*
ISC 23 09:53:13.6±0.5**, 39.73N**±0.07×**76.2E**±0.2**, h33**^{km}**, n24,** $\sigma0\overset{s}{.}$**68**/23**, 7C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	**Kyzart**	2.44	344	P	P	09 53 51.6	-0.4
	SNR=76						
ULHL	**Ulahol**	2.52	2	P	P	09 53 53.2	+0.2
	SNR=80						
UCH	**Uchtor**	2.79	334	P	P	09 53 57.2	+0.4
	SNR=99						
AML	**Almayashu**	3.04	323	P	P	09 54 01.4	+1.0
	SNR=27						
KBK	**Karagaybulak**	3.06	343	P	P	09 54 01.2	+0.4
	SNR=162						
AAK	**Ala-Archa**	3.16	337	P	P	09 54 02.6	+0.5
	SNR=42						
AAK	**Ala-Archa**	3.16	337	⇓Pn	Pn	09 54 02.5	+0.1
	80nm,0.4s						
AAK				⇑Lg		09 54 42.7	
	338nm,0.5s						
TKM2	**Tokmak 2**	3.22	353	P	P	09 54 03.5	+0.5
	SNR=84						
CHMS	**Chumysh**	3.43	343	P	P	09 54 06.0	-0.1
	SNR=24						
EKS2	**Erkin-Say**	3.43	329	P	P	09 54 06.6	+0.5
	SNR=56						
USP	**Ospenovka**	3.75	341	P	P	09 54 10.5	-0.1
	SNR=24						
KK31	**Karatay Array**	5.41	310	⇓Pn	Pn	09 54 32.5	-1.8
	7.7nm,0.5s,baz=118,slow=12,SNR=28						
KK31				⇑Pg	P	09 54 45.7	+12
	5.2nm,0.3s,baz=130,slow=17,SNR=17						
KK31				⇓Lg		09 55 52.8	
	20nm,0.6s,baz=130,slow=28,SNR=4.9						
MK31	**Makanchi Array**	8.36	30	⇓Pn	P	09 55 14.2	-1.1
	2.1nm,0.7s,baz=204,slow=14,SNR=11						
MK31				⇑Lg		09 57 24.2	
	3.6nm,0.7s,baz=216,slow=29,SNR=3.7						
KURK	**Kurchatov**	11.12	8	⇓Lg		09 58 51.5	
	11nm,1.0s						
KOLN	**Koldanda**	13.43	150	*e*P	P	09 56 24.4	+0.1
VOSK	**Vostochnaya**	13.48	346	⇑Pn	P	09 56 19.2	-5.6
	4.1nm,1.6s						
VOSK				⇑Lg		10 00 05.5	
	6.8nm,0.9s						
GKN	**Gorkha**	13.65	146	*e*P	P	09 56 27.1	0.0
	10nm,0.3s						
BVA0	**Borovoye Array**	13.87	345	⇓Lg		10 00 16.6	
	1.8nm,1.1s,slow=0.1,SNR=5.2						
KKN	**Kakani**	14.11	145	*e*P	P	09 56 33.0	-0.2
DMN	**Daman**	14.19	146	*e*P	P	09 56 34.1	-0.2
GUN	**Gumba**	14.28	143	*e*P	P	09 56 36.1	+0.6
	9.0nm,0.5s						
JIRN	**Jiri**	14.64	142	*e*P	P	09 56 40.3	+0.1
	12nm,0.4s						
AB31	**Akbulak array**	14.95	315	⇑Pn	P	09 56 39.0	-5.0
	1.2nm,0.7s,baz=122,slow=12,SNR=7.5						
AKTO	**Aktyubinsk**	16.64	316	⇑Pn	P	09 57 02.3	-3.4
	1.4nm,1.6s						

PGC 23 09:59:26.9, 58.27N×133.57W, h1^{km}**, ML3.4**/4**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLBC	**Dease Lake**	1.87	83	Pn	Pn	09 59 59.0	-1.4
DLBC				Pg	Pg	10 00 00.5	-3.8
DLBC				Sn	Sn	10 00 24.3	-0.7
DLBC				Sg	Sg	10 00 25.8	-3.4
DLBC				Trac		10 00 30.8	
	comp=Z,261nm,0.7s						
PLBC	**Pleasant Camp**	1.88	310	Pn	Pn	10 00 00.3	-0.1
PLBC				Sg	Sg	10 00 26.0	-3.4

WHY	**Whitehorse**	**2.49**	**345**	Pn	Pn	10 00 06.6	-2.6
WHY				Pg	Pg	10 00 11.9	-4.6
WHY				Sn	Sn	10 00 39.3	-1.3
WHY				Sg	Sg	10 00 42.9	-6.8
WHY				Trac		10 00 52.0	
	comp=Z,97nm,0.7s						
HYT	**Haines Junctio**	**3.25**	**324**	Pn	Pn	10 00 20.6	+0.5
HYT				Pg	Pg	10 00 25.5	-6.3
HYT				Sg	Sg	10 01 07.7	-7.4
HYT				Trac		10 01 13.2	
	comp=Z,44nm,0.6s						
RUBB	**Prince Rupert**	**4.36**	**154**	Trac		10 01 51.3	
	comp=Z,89nm,0.8s						
RUBB	**Prince Rupert**	**4.36**	**154**	Sg	Sg	10 01 43.9	-8.2
FNBB	**Fort Nelson**	**5.56**	**79**	Pg	Pg	10 01 07.7	-10
FNBB				Sg	Sg	10 02 18.5	-13
FNBB				Trac		10 02 33.2	
	comp=Z,24nm,0.9s						
FSB	**Fort Saint Jam**	**6.39**	**123**	Sg	Sg	10 02 44.0	-16
FSB				Trac		10 02 59.4	
	comp=Z,7.0nm,0.8s						
DAWY	**Dawson**	**6.46**	**337**	Pn	Pn	10 01 02.1	-3.3
DAWY				Sg	Sg	10 02 48.0	-14
DAWY				Trac		10 02 51.7	
	comp=Z,39nm,0.8s						
BMBC	**Bull Mountain**	**6.61**	**105**	Sg	Sg	10 02 55.1	-12
INK	**Inuvik**	**10.08**	**0**	Pn	P	10 01 52.2	-3.4
INK				Sg	S	10 04 37.5	+47
INK				Trac		10 05 01.1	
	comp=Z,3.0nm,0.8s						

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*CSEM **23** 10:38:32.7±0.4, 59.29N×27.06E, h2^{km}, ML2.6, Error ellipse: s-maj=10.5km s-min=6.8km az=75.0, Mining explosion.*
*NAO **23** 10:38:33.0±1.4, 59.31N×26.90E, ML2.6*
*BER **23** 10:38:33.3±2.6, 59.32N×27.15E, ML2.6(NAO), Suspected explosion*
*IDC **23** 10:38:34.0±1.9, 59.38N×27.15E, mb1 3.4/4, mb1mx3.2/22, mbtmp3.4/4, ML3.0/3, Error ellipse: s-maj=17.3km s-min=10.1km az=123.0*
HEL 23 10:38:33.1±0.2**, 59.32N×27.16E, ML2.6**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSU	**Vasula**	**0.89**	**194**	*i* P	Pg	10 38 48.7	-2.0
VSU				*i* S	Sg	10 39 00.6	-1.9
FIA0	**FINESS Array S**	**2.20**	**346**	*e*P	Pn	10 39 10.6	-0.8
FIA0				*e*SG	Sg	10 39 40.7	-5.6
FIA0				*e*RG		10 39 53.4	
FIA0				*e*RG		10 39 56.9	
FIA0	**FINESS Array S**	**2.20**	**346**	Pn	Pn	10 39 10.7	-0.6
	baz=166,slow=18						
FIA0				Lg		10 39 41.0	
	baz=161,slow=28						
FIA0				Rg		10 39 54.0	
	baz=168,slow=37						
FINES	**FINESS Array B**	**2.20**	**346**	Pn	Pn	10 39 10.6	-0.8
	2.3nm,0.3s,baz=162,slow=15,SNR=55						
FINES				Pg	Pg	10 39 11.8	-5.2
	2.3nm,0.3s,baz=162,slow=16,SNR=54						
FINES				Sn	Sn	10 39 38.6	-1.1
	2.0nm,0.3s,baz=164,slow=26,SNR=4.7						
FINES				Lg		10 39 41.3	
	8.5nm,0.3s,baz=169,slow=26,SNR=35						
FINES				Rg		10 39 53.7	
	5.3nm,0.3s,baz=168,slow=27,SNR=5.8						
HFS	**Hagfors**	**6.86**	**283**	Pn	Pn	10 40 13.7	-3.7
	baz=108,slow=11						
HFS				Sn	Sn	10 41 29.3	-7.8
	baz=91,slow=28						
HFS				Lg		10 42 04.3	
	baz=88,slow=37						
HFS	**Hagfors**	**6.86**	**283**	*e*P	Pn	10 40 13.7	-3.7
HFS				*e*S	Sn	10 41 29.3	-7.8
HFS				*e*SG		10 42 04.3	
HFS	**Hagfors**	**6.86**	**283**	Pn	Pn	10 40 12.8	-4.6
	0.0nm,0.3s,baz=106,slow=16,SNR=6.2						
HFS				Sn	Sn	10 41 29.8	-7.3
	0.1nm,0.3s,baz=97,slow=25,SNR=4.3						
HFS				Lg		10 42 04.9	
	0.2nm,0.3s,baz=93,slow=30,SNR=5.3						
HFS	**Hagfors**	**6.86**	**283**	Pn	Pn	10 40 13.7	-3.7
	SNR=0.5						
HFS				Sg		10 42 04.3	
NB2	**NORSAR Subarra**	**8.13**	**289**	Pn	P	10 40 29.8	-5.5
	baz=87,slow=14						
NB2				Sn	Sn	10 41 57.4	-12
NB2				Lg		10 42 43.5	
NB2	**NORSAR Subarra**	**8.13**	**289**	*e*P	P	10 40 29.8	-5.5
NB2				*e*S	Sn	10 41 57.4	-12
NB2				*e*SG		10 42 43.5	
NOA	**NORSAR Array B**	**8.13**	**289**	Pn	P	10 40 29.4	-5.9
	0.2nm,0.3s,baz=90,slow=11,SNR=2.6						
NOA				Sn	Sn	10 41 57.3	-12
	0.2nm,0.3s,baz=289,slow=16,SNR=2.5						
NOA				Lg		10 42 43.4	
	0.6nm,0.3s,baz=270,slow=7.1,SNR=3.8						
APA0	**Apatity Array**	**8.72**	**15**	Pn	P	10 40 39.1	-4.2
	baz=193,slow=11						
APA0	**Apatity Array**	**8.72**	**15**	*e*P	P	10 40 39.1	-4.2
ARA0	**ARCESS Array S**	**10.29**	**357**	Pn	P	10 40 59.3	-5.5
	baz=173,slow=14						
ARA0				Sn	S	10 42 50.7	-11
	baz=175,slow=28						
ARA0	**ARCESS Array S**	**10.29**	**357**	*e*P	P	10 40 59.3	-5.5
ARA0				*e*S	S	10 42 50.7	-11
ARCES	**ARCESS Array B**	**10.29**	**357**	Pn	P	10 40 59.6	-5.2
	0.2nm,0.3s,baz=173,slow=14,SNR=11						
ARCES				Sn	S	10 42 50.8	-11
	0.3nm,0.3s,baz=173,slow=23,SNR=3.6						

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*PRU **23** 11:29:42.8, 50.25N×18.93E*
WAR 23 11:29:42.5, 50.23N×19.04E, h0^{km}, ML2.4, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.48**	**91**	*e*PG	Pg	11 29 52.0	-0.2
OJC				*e*SG	Sg	11 30 00.0	+1.3
NIE	**Niedzica**	**1.16**	**134**	*e*PG	Pg	11 30 05.0	-0.6
NIE				*e*SG	Sg	11 30 21.0	-0.1
NIE	**Niedzica**	**1.16**	**134**	*e*Pg	Pg	11 30 05.4	-0.2
NIE				*e*		11 30 20.8	
NIE				*e*Sg	Sg	11 30 21.9	+0.8
STHS	**Stebnicka Huta**	**1.64**	**119**	*e*PN	Pn	11 30 14.2	+1.5
STHS				*e*SN	Sn	11 30 36.9	+2.1
VYHS	**Vyhne**	**1.75**	**185**	*e*PN	Pn	11 30 13.5	-0.7
VYHS				*e*SN	Sn	11 30 35.8	-1.7
DPC	**Dobruska-Polom**	**1.75**	**275**	*e*PG	Pn	11 30 13.2	-1.1
DPC				*e*SG	Sn	11 30 36.5	-1.0
	18nm,0.4s						
KSP	**Ksiaz**	**1.86**	**290**	*e*PG	Pn	11 30 17.0	+1.2
KSP				*e*SG	Sn	11 30 41.0	+0.7
UPC	**Upice**	**1.96**	**279**	*e*SG	Sn	11 30 43.0	+0.1
KECS	**Kecovo**	**1.99**	**151**	*e*SN	Sn	11 30 41.7	-2.0
CRVS	**Cervenica-Dubn**	**2.06**	**129**	*e*PN	Pn	11 30 19.1	+0.4
KHC	**Kasperske Hory**	**3.72**	**255**	*e*SG	Sb	11 31 38.0	+3.3

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*IDC **23** 11:34:47.5±0.9, 28.95N×139.62E, h425^{km}±11^{km}, mb2.8/3, mb1 3.1/5, mb1mx2.8/21, mbtmp3.7/5, Error ellipse: s-maj=32.0km s-min=12.2km az=77.0*
*JMA **23** 11:34:48.3±0.2, 29.13N×140.13E, h439^{km}±4^{km}, M3.5*
ISC 23 11:34:47.2±0.7**, 29.03N**±0.07×**139.8E**±0.2**, h441**^{km}±9^{km}**, n14, σ0^{s}95**/19**, mb3.1**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**2.83**	**132**	P	**P**	**11 35 52.3**	**-0.5**
	14nm,0.3s,baz=238,slow=24,SNR=27						
CBIJ				S	**S**	**11 36 44.5**	**-0.1**
	52nm,0.3s,baz=285,slow=22,SNR=19						
CBIJ	**Chichi jima**	**2.83**	**132**	P	**P**	**11 35 52.6**	**-0.2**
CBIJ				S	**S**	**11 36 44.1**	**-0.5**
JHHJ	**Haha-jima-NKT**	**3.16**	**139**	P	**P**	**11 35 55.3**	**0.0**
JHHJ				S	**S**	**11 36 49.2**	**+0.1**
JHJ	**Hachijo jima 2**	**4.08**	**359**	P	**P**	**11 36 04.1**	**+1.0**
	3.0nm,0.3s,baz=253,slow=19,SNR=2.4						
JHJ				S	**S**	**11 37 03.4**	**+0.4**
	12nm,0.3s,baz=52,slow=19,SNR=4.4						
JHU	**Hanno**	**6.82**	**356**	S	**S**	**11 37 51.4**	**-1.2**
JRY	**Ryogami san**	**7.01**	**354**	P	**P**	**11 36 32.9**	**+0.1**
JYT	**Yasato**	**7.18**	**2**	P	**P**	**11 36 35.1**	**+0.4**
JWT	**Wachi**	**7.28**	**330**	P	**P**	**11 36 37.6**	**+1.8**
JAG	**Ashikaga**	**7.38**	**358**	P	**P**	**11 36 35.9**	**-1.0**
JAG				S	**S**	**11 38 01.6**	**-2.1**
JHK	**Hiroka**	**8.23**	**355**	P	**P**	**11 36 46.7**	**+0.5**
JMK	**Ichinoseki**	**9.96**	**6**	P	**P**	**11 37 07.1**	**+1.6**
MKAR	**Makanchi Array**	**47.65**	**308**	P	**P**	**11 42 42.4**	**-0.8**
	0.5nm,0.8s,mb2.9,baz=104,slow=5.9,SNR=5.3						
WRA	**Warramunga Arr**	**48.97**	**187**	P	**P**	**11 42 52.8**	**-0.8**
	1.2nm,0.4s,mb3.5,baz=2.0,slow=7.7,SNR=47						
ILAR	**Eielson Array**	**57.03**	**29**	P	**P**	**11 43 51.8**	**+0.7**
	0.4nm,1.0s,mb2.7,baz=258,slow=5.2,SNR=6.6						

MAN 23 11:39:54.1, 11.76N×124.23E, h9^{km}, mb4.1, ML2.9, MS2.6, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.80**	**152**	*e*P	Pb	11 40 09.4	-0.2
OCLP				*e*S	Sb	11 40 21.7	+1.5
CNP	**Catarman**	**0.85**	**29**	*e*P	Pb	11 40 10.5	-0.2
CNP				*e*S	Sb	11 40 24.6	+2.7
PLP	**Palo**	**0.94**	**129**	*e*P	Pb	11 40 12.3	+0.2
PLP				*i* S	Sb	11 40 27.2	+2.8
BESP	**Borongan**	**1.19**	**98**	*e*P	Pb	11 40 15.7	-0.7
BESP				*e*S	Sb	11 40 32.7	+1.0
LLP	**Lapu-Lapu**	**1.46**	**190**	⇓*i*P	Pn	11 40 20.0	-0.7
LLP				*i* S	Sb	11 40 38.7	-0.8
RCP	**Roxas**	**1.47**	**262**	⇑*e*P	Pn	11 40 20.1	-0.8
MSLP	**Maasin**	**1.73**	**159**	*e*P	Pn	11 40 26.2	+1.7
MSLP				*e*S	Sn	11 40 51.0	+4.1
PVCP	**Virac**	**1.83**	**358**	*e*P	Pn	11 40 25.8	-0.2
PVCP				*e*S	Sn	11 40 50.6	+1.2
GUIM	**Jordan**	**1.97**	**235**	*e*P	Pn	11 40 25.0	-3.0
GUIM				*e*S	Sn	11 40 53.8	+0.8
OTRP	**Odiongan**	**2.25**	**286**	*e*P	Pn	11 40 31.7	-0.3
OTRP				*e*S	Sn	11 40 58.0	-2.1

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*NEIC **23** 11:43:06.3±0.6, 12.98S×168.81E, h624^{km}±8^{km}, mb4.5/15, Error ellipse: s-maj=6.7km s-min=6.0km az=109.0*
*IDC **23** 11:43:07.2±1.2, 13.01S×168.76E, h637^{km}±17^{km}, mb3.9/20, mb1 3.9/23, mb1mx3.9/25, mbtmp4.8/23, Error ellipse: s-maj=10.8km s-min=10.6km az=61.0*
ISC 23 11:43:05.8±0.8**, 13.10S**±0.05×**168.79E**±0.06**, h636**^{km}±11^{km}**, n77, σ0^{s}90**/81**, mb4.5**/33**, 5C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.20**	**194**	P	**P**	**11 45 19.3**	**+1.6**
	5.0nm,0.3s,baz=57,slow=19,SNR=36						
DZM				S	**S**	**11 47 10.1**	**+6.8**
	baz=324,slow=17,SNR=9.6						
HNR	**Honiara**	**9.41**	**292**	P	**P**	**11 45 19.5**	**-0.2**
	27nm,0.3s,baz=163,slow=2.4,SNR=8.3						
HNR				S	**S**	**11 47 09.1**	**+2.3**
	9.6nm,0.3s,baz=131,slow=23,SNR=8.7						
AFI	**Afiamalu**	**18.91**	**95**	P	**P**	**11 46 48.7**	**-1.2**
	1.7nm,0.3s,baz=137,slow=2.5,SNR=4.4						
PMG	**Port Moresby**	**21.53**	**278**	P	**P**	**11 47 13.2**	**-0.4**
	13nm,0.7s,mb4.5,baz=90,slow=4.0,SNR=3.8						
CTA	**Charters Tower**	**22.68**	**249**	⇑*i*P	**P**	**11 47 23.8**	**-0.1**
	11nm,0.6s,mb4.5						
CTA	**Charters Tower**	**22.68**	**249**	P	**P**	**11 47 23.7**	**-0.2**
	19nm,0.8s,mb4.6,baz=81,slow=11,SNR=22						
CTAO	**Charters Tower**	**22.68**	**249**	*e*P	**P**	**11 47 23.8**	**-0.1**
	13nm,0.8s,mb4.4						
ARMA	**Armidale**	**23.43**	**220**	*e*P	**P**	**11 47 31.0**	**+0.5**
URZ	**Urewera**	**26.13**	**165**	P	**P**	**11 47 53.7**	**-0.4**
	12nm,0.3s,mb4.9,baz=297,slow=0.9,SNR=25						
URZ	**Urewera**	**26.13**	**165**	PN	**P**	**11 47 53.7**	**-0.4**
MWZ	**Matawai**	**26.31**	**164**	PN	**P**	**11 47 54.8**	**-0.9**
CNZ	**Chateau**	**26.68**	**168**	PN	**P**	**11 47 59.9**	**+1.0**
BKZ	**Black Stump Fm**	**26.85**	**167**	PN	**P**	**11 47 59.4**	**-0.9**
WAZ	**Wanganui**	**27.11**	**169**	PN	**P**	**11 48 04.1**	**+1.5**
TSZ	**Takapari Road**	**27.59**	**168**	PN	**P**	**11 48 06.2**	**-0.5**
PXZ	**Pawanui**	**27.76**	**167**	PN	**P**	**11 48 07.1**	**-1.0**
MRZ	**Mangatainoka R**	**28.10**	**169**	PN	**P**	**11 48 09.8**	**-1.2**
KIW	**Kapiti Island**	**28.18**	**170**	PN	**P**	**11 48 10.9**	**-0.8**
BFZ	**Birch Farm**	**28.25**	**168**	PN	**P**	**11 48 10.9**	**-1.3**
NNZ	**Nelson**	**28.30**	**173**	PN	**P**	**11 48 12.4**	**-0.4**
CAW	**Cannon Point**	**28.44**	**170**	PN	**P**	**11 48 13.1**	**-0.9**
MRW	**Makara Radio**	**28.50**	**171**	PN	**P**	**11 48 13.8**	**-0.6**
SNZO	**South Karori**	**28.58**	**171**	PN	**P**	**11 48 14.4**	**-0.7**
SNZO	**South Karori**	**28.58**	**171**	*e*P	**P**	**11 48 14.3**	**-0.8**
	414nm,1.1s						
THZ	**Tophouse**	**28.79**	**174**	PN	**P**	**11 48 17.1**	**+0.3**
THZ				*e*SN	**S**	**11 52 24.8**	**-0.7**
KHZ	**Kahutara**	**29.50**	**173**	PN	**P**	**11 48 22.0**	**-1.0**
LTZ	**Lake Taylor**	**29.73**	**175**	PN	**P**	**11 48 25.1**	**+0.2**
FOZ	**Fox Glacier**	**30.37**	**179**	PN	**P**	**11 48 30.5**	**+0.1**
RPZ	**Rata Peaks**	**30.58**	**177**	P	**P**	**11 48 32.8**	**+0.8**
	33nm,0.8s,mb4.9,baz=16,slow=2.9,SNR=14						
STKA	**Stephens Creek**	**31.17**	**229**	*e*P	**P**	**11 48 38.1**	**+0.9**
	12nm,0.6s,mb4.6						
STKA	**Stephens Creek**	**31.17**	**229**	P	**P**	**11 48 38.6**	**+1.4**
	14nm,0.5s,mb4.7,baz=50,slow=7.9,SNR=54						
WB2	**Warramunga Arr**	**33.67**	**254**	⇓*i*P	**P**	**11 48 57.8**	**-0.3**
WB2				*e*S	**S**	**11 53 36.3**	**-3.8**
WRAB	**Tennant Creek**	**33.67**	**254**	*e*P	**P**	**11 48 57.7**	**-0.5**
	42nm,0.8s,mb5.0						
WRA	**Warramunga Arr**	**33.68**	**254**	P	**P**	**11 48 57.9**	**-0.3**
	26nm,0.6s,mb5.0,baz=84,slow=8.7,SNR=295						
WRA				S	**S**	**11 53 36.5**	**-3.8**
	8.8nm,1.0s,baz=89,slow=13,SNR=12						
ASPA	**Alice Springs**	**34.65**	**247**	*e*P	**P**	**11 49 06.3**	**0.0**
ASPA				*e*S	**S**	**11 53 52.2**	**-2.6**
KAKA	**Kakadu**	**35.42**	**266**	⇓*i*P	**P**	**11 49 32.4**	**+20**
	24nm,0.4s,mb5.1						
GUMO	**Guam**	**35.56**	**317**	P	**P**	**11 49 13.4**	**-0.5**
	51nm,0.5s,mb5.3,baz=74,slow=2.9,SNR=2.9						
FORT	**Forrest**	**41.40**	**238**	*e*P	**P**	**11 50 01.2**	**+0.4**
	46nm,0.6s,mb5.1						
FITZ	**Fitzroy Crossi**	**41.79**	**257**	*e*P	**P**	**11 50 03.9**	**-0.2**
	5.0nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**41.79**	**257**	P	**P**	**11 50 04.3**	**+0.2**
	7.4nm,0.6s,mb4.3,baz=108,slow=4.6,SNR=20						
PMOR	**Pomariorio Ree**	**42.01**	**98**	*e*P	**P**	**11 50 06.6**	**+0.7**
	95nm,1.4s,mb5.0						
VAH	**Vaihoa**	**42.26**	**98**	*e*P	**P**	**11 50 08.2**	**+0.4**
	50nm,1.1s,mb4.9						
CBIJ	**Chichi jima**	**47.58**	**327**	P	**P**	**11 50 46.5**	**-1.8**
	38nm,0.4s,mb5.1,baz=107,slow=22,SNR=9.0						
KLBR	**Kellerberrin**	**50.19**	**240**	*e*P	**P**	**11 51 06.9**	**-0.6**
	31nm,1.1s,mb4.5						
NWAO	**Narrogin (SRO)**	**50.86**	**238**	P	**P**	**11 51 11.8**	**-0.5**
	14nm,0.8s,mb4.2,baz=98,slow=1.9,SNR=7.6						
MJAR	**Matsushiro Arr**	**57.18**	**331**	P	**P**	**11 51 55.4**	**-0.9**
	6.1nm,0.7s,mb3.8,baz=166,slow=8.1,SNR=15						
ASAJ	**Asahikawa**	**61.73**	**339**	P	**P**	**11 52 26.5**	**+0.3**
	16nm,0.9s,mb4.3,baz=87,slow=5.0,SNR=4.8						
VNDA	**Vanda**	**64.52**	**182**	*e*P	**P**	**11 52 44.2**	**+0.8**
	8.9nm,1.2s,mb4.0						
SBA	**Scott Base**	**64.77**	**180**	*e*P	**P**	**11 52 47.0**	**+2.0**
	24nm,1.3s,mb4.4						
FX1	**Attu Island--F**	**65.81**	**3**	*e*P	**P**	**11 52 51.4**	**-0.4**
QSPA	**South Pole Qui**	**76.92**	**180**	*e*P	**P**	**11 53 57.1**	**+1.8**
	18nm,1.1s,mb4.5						
PMR	**Palmer**	**81.48**	**19**	*e*P	**P**	**11 54 19.1**	**-0.3**
	4.9nm,0.6s,mb4.1						
SONM	**Songino Array**	**82.08**	**323**	P	**P**	**11 54 22.8**	**+0.2**
	1.6nm,0.6s,mb3.7,baz=138,slow=5.5,SNR=14						
MAW	**Mawson**	**83.94**	**202**	*e*P	**P**	**11 54 32.8**	**+1.3**
	7.4nm,1.2s,mb4.1						
MAW	**Mawson**	**83.94**	**202**	P	**P**	**11 54 32.9**	**+1.4**
	10.0nm,1.0s,mb4.3,baz=106,slow=6.8,SNR=19						
COLA	**College**	**84.32**	**17**	*e*P	**P**	**11 54 31.9**	**-1.4**
	33nm,1.2s,mb4.7						
MTUM	**Tungsten Hills**	**84.51**	**50**	*e*P	**P**	**11 54 36.1**	**+1.1**
ILAR	**Eielson Array**	**84.53**	**18**	P	**P**	**11 54 32.7**	**-1.7**
	6.4nm,0.7s,mb4.4,baz=241,slow=4.9,SNR=87						
NVAR	**Mina Array Bea**	**85.09**	**49**	P	**P**	**11 54 38.2**	**+0.5**
	1.4nm,0.7s,mb3.7,baz=225,slow=7.7,SNR=15						
NEN	**Nelson**	**86.76**	**52**	*e*P	**P**	**11 54 46.0**	**+0.3**
BMO	**Blue Mountains**	**88.06**	**43**	*e*P	**P**	**11 54 51.5**	**0.0**
	7.4nm,1.0s,mb4.3						
ELK	**Elko**	**88.10**	**48**	*e*P	**P**	**11 54 52.7**	**+0.9**
	5.7nm,1.1s,mb4.1						
ARUT	**Antelope Range**	**88.50**	**51**	*e*P	**P**	**11 54 55.0**	**+1.2**
PV01	**Paradox Valley**	**92.29**	**52**	*e*P	**P**	**11 55 11.5**	**+0.4**
PDAR	**Pinedale Array**	**92.76**	**47**	P	**P**	**11 55 13.7**	**+0.5**
	0.5nm,0.6s,mb3.7,baz=233,slow=3.8,SNR=4.2						
TXAR	**Lajitas Array**	**94.20**	**61**	P	**P**	**11 55 20.3**	**+0.2**
	0.5nm,0.7s,mb3.6,baz=221,slow=5.3,SNR=7.2						
TXAR	**Lajitas Array**	**94.20**	**61**	P	**P**	**11 55 20.3**	**+0.2**
SNAA	**Sanae**	**95.25**	**183**	⇑*i*	**P**	**11 55 24.2**	**+0.4**
YKA	**Yellowknife Ar**	**95.43**	**27**	P	**P**	**11 55 24.2**	**-0.6**
	2.4nm,0.7s,mb4.5,baz=257,slow=5.1,SNR=7.2						
YKA	**Yellowknife Ar**	**95.43**	**27**	P	**P**	**11 55 24.2**	**-0.6**
VNA3	**Neumayer Olymp**	**95.86**	**181**	⇑*i*	**P**	**11 55 27.2**	**+0.6**
VNA2	**Neumayer--Watz**	**96.14**	**181**	⇑*i*	**P**	**11 55 28.8**	**+0.9**
VNA1	**Neumayer--Stat**	**96.44**	**181**	⇑*i*	**P**	**11 55 29.4**	**+0.2**
MKAR	**Makanchi Array**	**97.05**	**316**	P	**P**	**11 55 32.7**	**+0.2**
	1.1nm,0.7s,mb4.2,baz=88,slow=6.2,SNR=11						
MKAR	**Makanchi Array**	**97.05**	**316**	P	**P**	**11 55 32.7**	**+0.2**
ARCES	**ARCESS Array B**	**119.04**	**346**	PKP	PKPdf	12 00 44.2	+0.8
	2.6nm,0.8s,baz=32,slow=1.5,SNR=7.4						
ARCES	**ARCESS Array B**	**119.04**	**346**	PKP	PKPdf	12 00 44.2	+0.8

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*IDC **23** 11:52:02.9±3.4, 12.90S×168.89E, h619^{km}±43^{km}, mb3.3/5, mb1 3.4/6, mb1mx3.1/15, mbtmp4.3/6, Error ellipse: s-maj=32.9km s-min=25.9km az=16.0*
ISC 23 11:52:02.9±2.8**, 13.0S**±0.3×**168.9E**±0.2**, h638**^{km}±35^{km}**, n10, σ0^{s}70**/10**, mb4.0**/6**, 2C, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.35**	**194**	P	**P**	**11 54 16.9**	**+0.6**
	1.2nm,0.3s,baz=125,slow=19,SNR=12						
URZ	**Urewera**	**26.24**	**165**	P	**P**	**11 56 50.9**	**-1.2**
	9.9nm,0.8s,mb4.4,baz=301,slow=5.9,SNR=6.2						
STKA	**Stephens Creek**	**31.32**	**229**	*e*P	**P**	**11 57 36.3**	**+0.8**
	4.4nm,1.6s,mb3.7						
STKA	**Stephens Creek**	**31.32**	**229**	P	**P**	**11 57 35.9**	**+0.4**
	0.9nm,0.3s,mb3.7,baz=41,slow=10,SNR=5.3						
WB2	**Warramunga Arr**	**33.78**	**254**	⇑*i*P	**P**	**11 57 55.5**	**-0.6**
WRA	**Warramunga Arr**	**33.79**	**254**	P	**P**	**11 57 55.7**	**-0.5**
	5.5nm,0.5s,mb4.3,baz=84,slow=8.7,SNR=73						
ASPA	**Alice Springs**	**34.78**	**247**	*e*P	**P**	**11 58 04.2**	**-0.1**
KAKA	**Kakadu**	**35.51**	**266**	⇑*i*P	**P**	**11 58 30.1**	**+20**
	7.2nm,0.5s,mb4.5						
MAW	**Mawson**	**84.09**	**202**	P	**P**	**12 03 30.1**	**+1.0**
	1.7nm,0.7s,mb3.7,baz=115,slow=10.0,SNR=7.6						
ILAR	**Eielson Array**	**84.38**	**17**	P	**P**	**12 03 30.8**	**+0.2**
	0.8nm,0.7s,mb3.4,baz=240,slow=4.9,SNR=11						

PGC 23 12:23:34.6, 58.23N×133.57W, h1^{km}, ML2.9/4**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLBC	**Dease Lake**	**1.88**	**82**	Pn	Pn	12 24 06.8	-1.4
DLBC				Pg	Pg	12 24 08.4	-3.8
DLBC				Sn	Sn	12 24 32.0	-1.0
DLBC				Sg	Sg	12 24 33.5	-3.8
DLBC				Trac		12 24 35.4	
	comp=Z,35nm,0.3s						
PLBC	**Pleasant Camp**	**1.91**	**312**	Pn	Pn	12 24 08.4	-0.2
PLBC				Sg	Sg	12 24 34.2	-3.9
WHY	**Whitehorse**	**2.53**	**345**	Pn	Pn	12 24 16.9	-0.7
WHY				Pg	Pg	12 24 20.6	-4.6
WHY				Sg	Sg	12 24 51.6	-7.3
WHY				Trac		12 24 58.8	
	comp=Z,36nm,0.7s						
RUBB	**Prince Rupert**	**4.32**	**153**	Sg	Sg	12 25 46.4	-12
DAWY	**Dawson**	**6.50**	**337**	Sg	Sg	12 26 57.1	-14
INK	**Inuvik**	**10.12**	**0**	Pn	P	12 25 59.5	-4.5

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*IDC **23** 12:29:17.4±0.7, 15.26S×173.13W, mb4.0/8, mb1 4.3/9, mb1mx4.2/17, mbtmp4.1/9, ML4.5/1, MS3.6/5, Ms1 3.6/5, ms1mx3.2/25, Error ellipse: s-maj=35.4km s-min=17.1km az=134.0*
*NEIC **23** 12:29:18.7±0.5, 15.30S×173.07W, h10^{km}, mb4.6/1, Error ellipse: s-maj=16.1km s-min=11.4km az=140.0*
ISC 23 12:29:20.5±0.6**, 15.3S**±0.1×**173.0W**±0.1**, h33**^{km}**, n24, σ1^{s}39**/14**, mb4.0**/9**, MS3.5**/5**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**1.77**	**41**	Pn	**Pn**	**12 29 50.1**	**+0.6**
	566nm,0.3s,baz=51,slow=2.0,SNR=699						
AFI				Sn	**Sn**	**12 30 09.1**	**-1.9**
	349nm,0.3s,baz=73,slow=20,SNR=5.5						
AFI				LR	LR	12 30 19.8	
	comp=Z,470nm,21.3s,baz=259,slow=33						
AFI	**Afiamalu**	**1.77**	**41**	Pn	**Pn**	**12 29 50.1**	**+0.6**
AFI				Sn	**Sn**	**12 30 09.1**	**-1.9**
AFI				LR	LR	12 30 19.8	
RAR	**Rarotonga**	**13.85**	**117**	Pn	**P**	**12 32 35.4**	**-1.5**
	2.3nm,0.3s,baz=193,slow=20,SNR=3.4						
RAR				T		12 46 38.5	
	8.1nm,0.3s,baz=128,slow=12,SNR=4.6						
DZM	**Mont Dzumac**	**20.64**	**248**	LR	LR	12 39 59.8	
	comp=Z,61nm,20.9s,MS2.9,baz=57,slow=31						
PPT	**Papeete**	**22.55**	**99**	*e*LR	LR	12 39 10.9	
	120nm,27.5s						
PAE	**Paea**	**22.55**	**99**	*e*T		12 57 37.0	
	17nm,0.3s						
TBI	**Tubuai**	**23.57**	**114**	*e*LR	LR	12 39 41.2	
	243nm,28.3s						
TBI	**Tubuai**	**23.57**	**114**	*e*T		12 58 35.2	
	7.0nm,0.4s						
URZ	**Urewera**	**24.52**	**199**	P	**P**	**12 34 38.8**	**+0.5**
	9.5nm,0.5s,mb4.6,baz=66,slow=1.8,SNR=12						
HNR	**Honiara**	**27.08**	**279**	LR	LR	12 43 15.3	
	comp=Z,62nm,19.6s,MS3.2,baz=210,slow=31						
TAOE	**Nuku Hiva Isla**	**32.69**	**83**	*e*T		13 10 23.5	
	65nm,0.3s						
RKT	**Rikitea**	**36.63**	**108**	*e*T		13 15 08.9	
	6.4nm,0.3s						
STKA	**Stephens Creek**	**44.47**	**240**	P	**P**	**12 37 27.6**	**-2.9**
	1.4nm,0.8s,mb3.8,baz=117,slow=9.0,SNR=2.5						
STKA				LR	LR	12 53 31.1	
	comp=Z,102nm,18.5s,MS3.8,baz=188,slow=33						
WRA	**Warramunga Arr**	**50.28**	**257**	P	**P**	**12 38 14.0**	**-2.2**
	0.2nm,0.5s,mb3.4,baz=90,slow=6.8,SNR=7.0						
FITZ	**Fitzroy Crossi**	**58.65**	**258**	LR	LR	13 02 19.2	
	comp=Z,159nm,18.9s,MS4.2,baz=89,slow=34						
NVAR	**Mina Array Bea**	**73.95**	**42**	P	**P**	**12 40 55.6**	**+1.1**
	1.4nm,0.9s,mb3.9,baz=232,slow=11,SNR=10						
NVAR				LR	LR	13 10 46.7	
	comp=Z,30nm,18.7s,MS3.6,baz=90,slow=34						
TXAR	**Lajitas Array**	**80.19**	**56**	P	**P**	**12 41 31.1**	**+1.5**
	1.7nm,1.0s,mb4.0,baz=218,slow=6.4,SNR=14						
PDAR	**Pinedale Array**	**81.89**	**42**	P	**P**	**12 41 39.0**	**+0.8**
	1.1nm,0.8s,mb3.8,baz=197,slow=2.7,SNR=8.4						
ILAR	**Eielson Array**	**82.23**	**11**	P	**P**	**12 41 40.1**	**+0.6**
	1.3nm,0.8s,mb3.9,baz=226,slow=5.8,SNR=13						
INK	**Inuvik**	**88.04**	**14**	*e*P	**P**	**12 42 08.3**	**+0.1**
	4.1nm,1.2s,mb4.5						
MAW	**Mawson**	**88.05**	**198**	P	**P**	**12 42 09.7**	**+1.4**
	1.5nm,1.0s,mb4.2,baz=118,slow=10.0,SNR=4.4						
GERES	**GERESS Array B**	**146.07**	**352**	PKPbc	PKPbc	12 49 00.1	+2.8
	0.3nm,0.2s,baz=45,slow=5.7,SNR=3.6						
BR131	**Keskin Array S**	**146.32**	**321**	*e*PKPbc	PKPbc	12 49 00.9	+2.8
BRTR	**Keskin Array B**	**146.32**	**321**	PKPbc	PKPbc	12 49 00.8	+2.6
	2.2nm,0.7s,baz=102,slow=3.2,SNR=11						

MAN 23 12:29:56.0, 11.75N×124.28E, h16^{km}, mb4.1, ML2.9, MS2.6, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.76**	**155**	*e*P	Pb	12 30 09.6	-0.8
OCLP				*e*S	Sb	12 30 23.0	+2.8
CNP	**Catarman**	**0.85**	**26**	*e*P	Pb	12 30 11.9	0.0
CNP				*e*S	Sb	12 30 25.4	+2.6
PLP	**Palo**	**0.90**	**130**	*e*P	Pb	12 30 13.0	+0.3
PLP				*i* S	Sb	12 30 26.8	+2.7
BESP	**Borongan**	**1.14**	**97**	*e*P	Pb	12 30 16.6	-0.3
MSLP	**Maasin**	**1.70**	**160**	*e*P	Pn	12 30 25.3	0.0
MSLP				*e*S	Sn	12 30 50.5	+3.7
PVCP	**Virac**	**1.84**	**356**	*e*P	Pn	12 30 26.7	-0.6
GUIM	**Jordan**	**2.00**	**236**	*e*P	Pn	12 30 29.9	+0.4
GUIM				*e*S	Sn	12 30 53.2	-1.1
OTRP	**Odiongan**	**2.29**	**286**	*e*P	Pn	12 30 33.2	-0.6

IDC 23 12:57:33.5±1.6**, 1.91N×127.90E, mb4.0**/3**, mb1 4.1**/3**,**

mb1mx3.8/14,**mbtmp4.1**/3,**MS3.6**/1,**Ms1 3.6**/1, **ms1mx2.8**/17,**Error ellipse: s-maj=123.4km s-min=25.4km az=70.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.61	164	P	P	13 02 35.7	-1.7
	0.9nm,0.5s,baz=344,slow=10,SNR=18						
JOW	Kunigami	24.79	1	LR	LR	13 11 39.4	
	comp=Z,130nm,19.5s,baz=170,slow=34						
SONM	Songino Array	49.39	341	P	P	13 06 24.9	-1.9
	1.3nm,0.6s,baz=150,slow=7.6,SNR=12						
MKAR	Makanchi Array	59.71	325	P	P	13 07 40.1	-2.2
	3.1nm,0.4s,baz=115,slow=8.2,SNR=79						

IGQ 23 13:10:06.3,3.33S×77.22W,h26^{km}±17^{km},mb4.5,2C, Error ellipse: s-maj=15.2km s-min=8.0km az=66.9, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUN5	Runtun	2.25	328	P	Pn	13 10 43.5	+0.9
CUSU	Cusua	2.26	326	P	Pn	13 10 44.6	+1.8
JUIV	Juive	2.26	327	P	Pn	13 10 44.6	+1.7
PISA	Pisayambo	2.54	333	⇑P	Pn	13 10 48.3	+1.5
TAMB	Tambo	2.86	336	⇑P	Pn	13 10 53.4	+2.1
VC1	Cotopaxi 1	2.92	336	P	Pn	13 10 54.2	+1.9
CAMI	Rancho Maria	2.93	334	P	Pn	13 10 55.5	+3.1
QIL1	Quilotoa	3.00	325	P	Pn	13 10 55.8	+2.4
ANTI	Antisana	3.01	342	P	Pn	13 10 54.9	+1.4
ANTI				S	Sn	13 11 30.5	+1.3
LAV3	Lava3-Reventad	3.23	353	P	Pn	13 10 57.8	+1.1
CONE	Cono NE Rev Vo	3.26	352	P	Pn	13 10 58.2	+1.1
JUA2	San Juan 2	3.39	336	P	Pn	13 10 59.9	+1.0
CAYR	Refugio Cayamb	3.41	347	P	Pn	13 11 02.9	+3.7
GGP	Refugio Guagua	3.42	336	P	Pn	13 11 02.3	+2.9
TERV	Terraza Guagua	3.42	336	P	Pn	13 11 05.7	+6.3
PINO	Pino	3.44	336	P	Pn	13 11 03.3	+3.7
ANGU	Angureal	3.44	347	P	Pn	13 11 02.2	+2.6
YANA	Yana	3.46	337	P	Pn	13 11 06.1	+6.2
CAYA	Cayambe	3.46	347	P	Pn	13 11 03.4	+3.4
MAG1	Magdalena	4.12	322	P	Pn	13 11 07.4	-1.9

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*NEIC **23** 13:21:03.5±1.5,37.26N×69.76E,h10^{km},mb4.2/4,Error ellipse: s-maj=30.5km s-min=9.2km az=62.0*
*MOS **23** 13:21:05.2±2.1,37.31N×69.62E,h33^{km},mb4.1/3,Error ellipse: s-maj=17.4km s-min=9.7km az=73.4*
*IDC **23** 13:21:06.0±3.9,37.78N×69.26E,mb3.6/3,mb1 3.9/5, mb1mx3.6/22,mbtmp3.7/5,ML3.5/2,MS3.3/1,Ms1 3.3/1, ms1mx2.4/22,Error ellipse: s-maj=96.4km s-min=43.9km az=158.0*
*NNC **23** 13:21:09.7±7.6,37.55N×69.48E,h21^{km}±37^{km},mpv3.9, Error ellipse: s-maj=51.2km s-min=38.7km az=144.0*
ISC 23 13:21:01.8±2.6**,37.18N**±0.04×**69.5E**±0.1**,h15**^{km}±20^{km}**, n42,**σ**1**^{s}**43**/45**,mb3.7**/6**,MS3.2**/1**,8C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	5.91	32	P	Pn	13 22 31.4	+0.4
	SNR=25						
KK31	Karatay Array	5.97	7	⇑Pn	Pn	13 22 32.1	+0.3
	1.5nm,0.5s,baz=193,slow=17,SNR=30						
KK31				⇑Pg	Pn	13 22 53.6	+22
	5.8nm,0.6s,baz=202,slow=15,SNR=5.1						
KK31				⇓Sn	Sn	13 23 40.7	0.0
	17nm,0.9s						
KK31				⇓Lg		13 24 07.7	
	24nm,0.8s,baz=189,slow=31,SNR=4.8						
UCH	Uchtor	6.36	36	P	Pn	13 22 38.1	+0.8
	SNR=54						
EKS2	Erkin-Say	6.39	30	P	Pn	13 22 39.2	+1.4
	SNR=13						
KZA	Kyzart	6.61	40	P	Pn	13 22 42.3	+1.5
	SNR=11						
AAK	Ala-Archa	6.67	34	P	Pn	13 22 42.5	+0.8
	SNR=64						
AAK	Ala-Archa	6.67	34	⇑Pn	Pn	13 22 42.1	+0.5
	28nm,0.5s						
AAK				⇓Sn	Sn	13 23 56.9	-1.2
	42nm,0.8s						
AAK				⇑Lg		13 24 32.2	
	37nm,0.9s						
AAK	Ala-Archa	6.67	34	*i* PN	Pn	13 22 41.1	-0.5
FRU	Bishkek	6.88	33	*e*PN	Pn	13 22 45.0	+0.3
KBK	Karagaybulak	6.89	36	P	Pn	13 22 46.3	+1.5
	SNR=20						
THN	Thein Dam	6.97	131	*e*P	Pn	13 22 47.8	+1.9
CHMS	Chumysh	7.07	33	P	Pn	13 22 47.5	+0.2
	SNR=36						
USP	Ospenovka	7.19	31	P	Pn	13 22 48.7	-0.3
	SNR=25						
ULHL	Ulahol	7.26	44	P	Pn	13 22 50.2	+0.3
	SNR=9.6						
TKM2	Tokmak 2	7.40	37	P	Pn	13 22 52.2	+0.3
	SNR=25						
NDI	New Delhi	10.66	140	*e*x	x	13 23 47.0	
MK31	Makanchi Array	13.51	41	⇑Pn	P	13 24 13.2	-2.0
	4.5nm,0.8s,baz=231,slow=16,SNR=8.8						
MKAR	Makanchi Array	13.51	41	Pn	P	13 24 13.4	-1.8
	0.1nm,0.3s,baz=228,slow=14,SNR=8.7						
MKAR	Makanchi Array	13.51	41	*i* P	P	13 24 13.3	-1.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AB31	Akbulak array	13.92	333	⇑Pn	P	13 24 17.4	-3.3
	comp=Z,1.8nm,0.6s,baz=149,slow=12,SNR=20						
KURK	Kurchatov	15.03	23	*i* P	P	13 24 31.1	-4.0
KOLN	Koldanda	15.14	124	*e*P	P	13 24 37.1	+0.3
VOSK	Vostochnaya	15.58	3	⇓Pn	P	13 24 38.8	-3.5
	comp=Z,10nm,2.6s						
AKTO	Aktyubinsk	15.60	332	⇑Pn	P	13 24 47.6	+4.9
	comp=Z,2.7nm,0.9s						
GKN	Gorkha	15.69	121	*e*P	P	13 24 42.2	-1.6
	comp=Z,20nm,0.5s						
BVA0	Borovoye Array	15.86	2	⇑Pn	P	13 24 48.8	+2.9
	comp=Z,0.9nm,1.1s,baz=163,slow=9.0,SNR=9.0						
BRVK	Borovoye	15.89	2	*e*P	P	13 24 43.8	-2.5
	comp=Z,3.9nm,1.1s						
BRVK	Borovoye	15.89	2	*e*P	P	13 24 43.8	-2.5
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DMN	Daman	16.26	121	*e*P	P	13 24 50.6	-0.5
	comp=Z,13nm,0.6s						
KKN	Kakani	16.26	121	*e*P	P	13 24 50.2	-1.0
	comp=Z,19nm,0.6s						
PKI	Pulchoki	16.49	121	*e*P	P	13 24 53.6	-0.5
	comp=Z,19nm,0.6s						
GUN	Gumba	16.60	119	*e*P	P	13 24 53.5	-2.0
	comp=Z,29nm,0.9s						
LSA	Lhasa	19.52	106	*e*P	P	13 25 32.8	+1.4
	comp=Z,6.9nm,0.6s						
LSA	Lhasa	19.52	106	*e*P	P	13 25 32.8	+1.4
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ZAL	Zalesovo	19.82	27	P	P	13 25 32.5	-2.0
	comp=Z,0.4nm,0.3s,baz=255,slow=14,SNR=6.6						
ARU	Arti	20.61	343	⇓*i*P	P	13 25 42.7	-0.1
ARU				*e*		13 26 01.4	
ARU				*e*S	S	13 29 16.0	-12
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAK	Zakamensk	27.48	51	*e*P	P	13 26 51.1	+2.1
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.4						
SONM	Songino Array	28.96	57	P	P	13 27 05.4	+2.9
	comp=Z,0.4nm,0.8s,mb3.2,baz=270,slow=8.6,SNR=3.1						
SONM				LR	LR	13 40 04.9	
	comp=Z,58nm,19.0s,MS3.2,baz=4.4,slow=40						
TIXI	Tiksi	45.61	22	*e*P	P	13 29 20.8	-1.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
SUMG	Summit	60.03	341	P	P	13 31 11.3	+1.6
	comp=Z,5.0nm,1.0s,mb4.5						
INK	Inuvik	73.43	9	P	P	13 32 35.3	+0.8
	comp=Z,0.7nm,0.6s,mb3.8,baz=6.3,slow=5.0,SNR=5.9						
ILAR	Eielson Array	74.45	15	P	P	13 32 43.8	+3.3
	comp=Z,0.3nm,0.9s,mb3.2,baz=315,slow=7.7,SNR=4.0						

IDC 23 13:23:00.6±2.9**,25.15N**×**141.88E,h46**^{km}±28^{km}**,mb3.6**/6**, mb1 3.8**/6**,mb1mx3.6**/20**,mbtmp3.9**/6**,Error ellipse: s-maj=45.6km s-min=20.7km az=90.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.96	8	P	P	13 23 32.7	+0.7
	46nm,0.3s,baz=314,slow=14,SNR=133						
CBIJ				S	S	13 23 55.0	-0.5
	59nm,0.3s,baz=290,slow=23,SNR=8.6						
WB2	Warramunga Arr	45.41	190	*e*P	P	13 31 14.2	-2.7
WRA	Warramunga Arr	45.42	190	P	P	13 31 14.4	-2.5
	1.9nm,0.4s,baz=8.7,slow=8.7,SNR=34						
MKAR	Makanchi Array	51.52	311	P	P	13 32 03.0	-0.7
	0.8nm,0.9s,baz=98,slow=8.7,SNR=4.3						
BVAR	Borovoye Array	59.30	318	P	P	13 32 57.4	-2.5
	0.7nm,0.4s,baz=87,slow=6.5,SNR=6.7						
ILAR	Eielson Array	59.55	28	P	P	13 32 59.6	-1.8
	0.3nm,0.8s,baz=273,slow=5.7,SNR=4.8						
FINES	FINESS Array B	79.57	334	P	P	13 35 02.1	-1.8
	0.7nm,0.3s,baz=64,slow=5.0,SNR=9.8						
FINES				pP	pP	13 35 15.6	-2.0
	0.7nm,0.4s,baz=45,slow=5.4,SNR=4.7						
AKASG	Malin Array Be	84.02	324	P	P	13 35 25.4	-1.9
	0.4nm,0.5s,baz=51,slow=4.9,SNR=4.6						

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*NIED **23** 13:24:00,33.80N×135.10E,h26^{km},Mw3.8 Best double couple: $M_0$6.03×10^{14} NP1:ϕ_s32°,δ70°,λ123°. NP2:ϕ_s150°, δ38°,λ34°.*
*JMA **23** 13:24:20.7,33.86N×135.13E,h28^{km}±1^{km},M4.0 Broadband fault plane solution: P waves. NP1:ϕ_s150°, δ43°,λ25°. NP2:ϕ_s41°,δ73°,λ130°. Principal axes: T Plg46°, Azm352°; N Plg38°, Azm207°; P Plg18°, Azm102°;*
JMA Felt III J1.
*NEIC **23** 13:24:21.6±2.9,33.79N×135.18E,h34^{km}±23^{km},mb4.1/3 Error ellipse: s-maj=16.0km s-min=9.3km az=154.0*
*IDC **23** 13:24:22.0±3.4,33.82N×135.17E,h36^{km}±32^{km},mb3.6/5, mb1 3.7/8,mb1mx3.5/26,mbtmp3.8/8,ML3.4/3,MS2.7/1, Ms1 2.7/1,ms1mx2.1/23,Error ellipse: s-maj=25.8km s-min=20.9km az=13.0*
ISC 23 13:24:20.0±0.4**,33.84N**±0.04×**135.15E**±0.03**,h34**^{km}±5^{km}**, n26,**σ**0**^{s}**49**/37**,mb3.9**/7**,4C-6D,Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	Minabe	0.17	88	⇑P	P	13 24 26.4	-0.1
JWM				S	S	13 24 30.4	-0.6
JWY	Kouya	0.53	44	⇓P	P	13 24 31.2	+0.3
JWY				S	S	13 24 38.4	-0.3
JWZ	Kozaga	0.56	123	⇓P	P	13 24 31.8	+0.3
JWZ				S	S	13 24 40.0	+0.2
JAI	Aioi	0.58	265	⇓P	P	13 24 31.6	-0.1
JAI				S	S	13 24 39.1	-1.1
JAJ2	Tsuna	0.62	339	⇑P	P	13 24 32.3	+0.1
JAJ2				S	S	13 24 40.4	-0.6
JHE	Heguri	0.92	29	⇑P	P	13 24 36.7	+0.1
JHE				S	S	13 24 48.8	0.0
JKN2	Miekihoku	1.01	67	⇓P	P	13 24 37.6	-0.3
JMN	Monobe	1.06	264	⇓P	P	13 24 39.1	+0.5
JMN				S	S	13 24 53.0	+0.6
JJS	Sakaide	1.14	298	⇓P	P	13 24 40.1	+0.4
JJS				S	S	13 24 54.7	+0.3
JKS	Kasai	1.17	348	⇑P	P	13 24 39.9	-0.1
JNU	Nakatsue	3.64	260	Pn	P	13 25 15.4	0.0
	2.9nm,0.3s,baz=76,slow=9.4,SNR=32						
MAJO	Matsushiro	3.68	42	*e*P	P	13 25 16.2	+0.3
MAT	Matsushiro	3.68	42	P	P	13 25 16.3	+0.3
MAT				S	S	13 25 58.6	-0.1
MAT	Matsushiro	3.68	42	*e*P	P	13 25 16.0	0.0
MAT				*e*S	S	13 25 59.0	+0.2
MJAR	Matsushiro Arr	3.68	42	Pn	P	13 25 16.8	+0.9
	3.8nm,0.3s,baz=249,slow=14,SNR=32						
JHJ	Hachijo jima 2	3.94	99	Pn	P	13 25 20.2	+0.6
	19nm,0.3s,baz=240,slow=22,SNR=11						
JHJ				Sn	S	13 26 05.0	-0.4
	baz=262,slow=20,SNR=2.2						
JHJ				LR	LR	13 26 10.0	
	comp=Z,102nm,19.0s,baz=253,slow=27						
HIA	Hailar	19.19	328	*e*P	P	13 28 44.0	+0.5
	7.6nm,1.0s						
SONM	Songino Array	25.68	312	P	P	13 29 48.3	-0.1
	1.1nm,0.8s,mb3.4,baz=124,slow=9.5,SNR=7.0						
KURK	Kurchatov	43.97	310	*e*P	P	13 32 25.6	+0.1
	2.8nm,0.8s,mb4.0						
CHKZ	Chkalovo	48.82	314	*e*P	P	13 33 02.8	-0.9
	3.3nm,0.7s,mb4.5						
BVAR	Borovoye Array	48.99	314	P	P	13 33 04.8	-0.3
	1.8nm,0.7s,mb4.2,baz=100,slow=8.8,SNR=9.1						
BVAR	Borovoye Array	48.99	314	P	P	13 33 04.8	-0.3
WRA	Warramunga Arr	53.49	181	P	P	13 33 38.6	-0.9
	1.2nm,0.9s,mb3.8,baz=356,slow=7.8,SNR=5.6						
WRA				pP	pP	13 33 46.5	-3.2
	1.7nm,0.8s,baz=358,slow=7.8,SNR=10						
ILAR	Eielson Array	54.89	31	P	P	13 33 48.1	-1.0
	0.4nm,1.0s,mb3.4,baz=252,slow=4.9,SNR=4.3						
AKTK	Aktyubinsk	57.00	312	P	P	13 34 05.1	+0.6
AKTO	Aktyubinsk	57.00	312	P	P	13 34 05.1	+0.6
	0.5nm,0.3s,mb4.0,baz=69,slow=12,SNR=4.6						

WEL 23 13:25:57.9±0.1**,40.09S**×**176.59E,h11**^{km}±1^{km}**,ML3.5**/17**, 2D,Error ellipse: s-maj=1.3km s-min=0.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PXZ	Pawanui	0.22	74	PG	Pg	13 26 03.5	+0.8
PXZ				SG	Sg	13 26 05.8	0.0
TSZ	Takapari Road	0.48	274	P*	Pb	13 26 07.5	-0.4
TSZ				S*	Sb	13 26 14.7	-0.1
BFZ	Birch Farm	0.65	204	P*	Pb	13 26 12.7	+2.0
BKZ	Black Stump Fm	0.93	355	⇓P*	Pb	13 26 14.8	-0.7
BKZ				S*	Sb	13 26 27.0	-0.6
MOVZ	Moawhango	0.94	316	P*	Pb	13 26 14.9	-0.9
MOVZ				S*	Sb	13 26 25.9	-2.1
MRZ	Mangatainoka R	0.96	233	P*	Pb	13 26 17.0	+0.9
WNVZ	Wahianoa	1.08	315	⇓P*	Pb	13 26 17.7	-0.4
TUVZ	Tukino	1.10	318	P*	Pb	13 26 18.0	-0.4
DRZ	Dome Shelter	1.14	315	P*	Pb	13 26 19.2	+0.1
FWVZ	Far West T-bar	1.16	316	P*	Pb	13 26 18.9	-0.5
OTVZ	Oturere	1.17	322	P*	Pb	13 26 19.2	-0.4
NGZ	Ngauruhoe	1.19	320	P*	Pb	13 26 19.6	-0.5
WPVZ	Whakapapa	1.20	317	P*	Pb	13 26 19.7	-0.4
CNZ	Chateau	1.20	318	P*	Pb	13 26 19.8	-0.4
KRVZ	Karewarewa	1.24	323	P*	Pb	13 26 20.2	-0.6
WTVZ	West Tongariro	1.24	321	P*	Pb	13 26 20.4	-0.5
RITZ	Rihia Road	1.25	333	P*	Pb	13 26 20.7	-0.3
HATZ	Hinemaiaia	1.26	342	P*	Pb	13 26 20.5	-0.7
WAZ	Wanganui	1.28	285	PN	Pn	13 26 22.1	+0.4
KATZ	Kakaramea	1.31	328	PN	Pn	13 26 21.7	-0.5
MTW	Mount Morrison	1.35	218	PN	Pn	13 26 21.7	-1.1
TWVZ	Taurewa	1.35	318	PN	Pn	13 26 22.1	-0.7
RATZ	Rangitukua	1.38	332	PN	Pn	13 26 23.0	-0.1
KIW	Kapiti Island	1.50	239	PN	Pn	13 26 24.3	-0.5
WATZ	Wairara	1.53	334	PN	Pn	13 26 25.3	-0.1
PAWZ	Paruwai Farm	1.56	214	PN	Pn	13 26 24.5	-1.3
MSWZ	Moikau Station	1.67	217	PN	Pn	13 26 25.6	-1.7
WEL	Wellington	1.83	229	PN	Pn	13 26 28.2	-1.3
SNZO	South Karori	1.88	229	PN	Pn	13 26 28.7	-1.6
TCW	Tory Channel	2.09	237	PN	Pn	13 26 31.7	-1.6
DUWZ	D’Urville Isla	2.16	250	PN	Pn	13 26 33.0	-1.3
TUWZ	Tuamarina	2.42	236	PN	Pn	13 26 35.5	-2.5
BSWZ	Blackbirch Sta	2.62	231	PN	Pn	13 26 38.3	-2.6
NNZ	Nelson	2.69	244	PN	Pn	13 26 39.8	-2.1
THZ	Tophouse	3.25	238	PN	Pn	13 26 47.0	-2.9
LTZ	Lake Taylor	4.22	229	PN	Pn	13 26 59.2	-4.4

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*IDC **23** 13:28:41.6±1.2,23.47N×122.02E,mb3.6/6,mb1 3.9/6, mb1mx3.7/20,mbtmp3.6/6,Error ellipse: s-maj=45.2km s-min=27.1km az=68.0*
*NEIC **23** 13:28:43.0±0.8,23.44N×122.04E,h10^{km},mb4.0/1,Error ellipse: s-maj=30.7km s-min=10.3km az=62.0*
*JMA **23** 13:28:47.7±0.2,23.57N×122.05E,h67^{km},M3.4*
ISC 23 13:28:46.3±1.3**,23.5N**±0.1×**121.99E**±0.05**,h44**^{km}±11^{km}**, n16,**σ**0**^{s}**73**/22**,mb3.5**/6**,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	0.75	331	*e*P	P	13 28 59.1	-1.6
YHNB	Yeheng	1.28	334	*e*P	P	13 29 08.2	0.0
YOJ	Yonaguni jima	1.33	44	P	P	13 29 09.5	+0.6
YOJ				*e*S	S	13 29 25.4	-0.3
TATO	Taipei	1.53	343	*e*P	P	13 29 12.5	+0.8
HATJ	Hateruma jima	1.75	72	P	P	13 29 15.2	+0.4
HATJ				S	S	13 29 36.2	+0.2
IRIF	Iriomote-Funau	1.79	62	P	P	13 29 16.0	+0.6
IRIF				*e*S	S	13 29 36.7	-0.3
JKRS	Kuro-shima	1.99	68	P	P	13 29 18.7	+0.6
JKRS				*e*S	S	13 29 42.4	+0.5
JIJ	Ishigaki jima	2.15	66	P	P	13 29 20.5	+0.1
JIJ				S	S	13 29 45.1	-0.8
JTJ	Tarama	2.72	65	P	P	13 29 28.6	-0.1
JTJ				*e*S	S	13 30 00.0	-0.6
SONM	Songino Array	27.27	337	P	P	13 34 27.3	-1.3
	0.4nm,0.8s,mb3.0,baz=156,slow=9.4,SNR=3.1						
MKAR	Makanchi Array	39.33	316	P	P	13 36 13.5	+0.7
	0.2nm,0.5s,mb3.1,baz=97,slow=11,SNR=4.2						
WRA	Warramunga Arr	44.84	163	P	P	13 36 57.0	-1.2
	0.3nm,0.6s,mb3.3,baz=344,slow=8.8,SNR=4.8						
ILAR	Eielson Array	69.47	27	P	P	13 39 51.4	-0.3
	0.3nm,0.5s,mb3.5,baz=272,slow=5.6,SNR=8.6						
INK	Inuvik	73.57	22	P	P	13 40 17.0	+0.9
	1.3nm,0.7s,mb4.0,baz=296,slow=6.1,SNR=10.0						
INK	Inuvik	73.57	22	*e*P	P	13 40 16.4	+0.3
	1.0nm,0.6s,mb3.9						
GERES	GERESS Array B	83.83	321	P	P	13 41 13.6	+1.2
	0.3nm,0.3s,mb3.9,baz=53,slow=4.9,SNR=4.1						

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*NIED **23** 13:41:00,38.20N×144.70E,h5^{km},Mw3.6 Best double couple: $M_0$3.03×10^{14} NP1:ϕ_s154°,δ67°,λ-85°. NP2: ϕ_s322°,δ23°,λ-101°.*
*JMA **23** 13:41:33.0±0.1,38.23N×144.74E,h55^{km},M3.8*
ISC 23 13:41:31.4±1.4**,38.33N**±0.06×**144.90E**±0.10**,h65**^{km}±48^{km}**, n11,**σ**1**^{s}**04**/21**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.63	287	P	P	13 42 13.1	+0.5
OFUJ				S	S	13 42 43.2	-0.2
MIYJ	Miyakonagasawa	2.70	298	P	P	13 42 14.2	+0.6
MIYJ				S	S	13 42 44.9	-0.3
JIO	Ouri	2.79	274	P	P	13 42 14.7	-0.1
JIO				S	S	13 42 46.2	-1.2
JMK	Ichinoseki	2.94	283	P	P	13 42 17.4	+0.4
JMK				S	S	13 42 50.9	-0.4
JOT	Ohata	4.25	317	*e*S	S	13 43 24.5	+0.5
JCH	Churui	4.43	345	P	P	13 42 38.4	+0.5
JCH				*e*S	S	13 43 26.5	-2.2
JKB	Kayabe	4.62	321	P	P	13 42 42.6	+2.1
JKB				*e*S	S	13 43 35.5	+2.1
NEM2	Nemuro 2	5.07	7	P	P	13 42 46.0	-0.7
NEM2				*e*S	S	13 43 39.0	-5.5
JRY	Ryogami san	5.32	246	P	P	13 42 48.8	-1.3
JRY				*e*S	S	13 43 45.0	-5.7
MAT	Matsushiro	5.62	254	P	P	13 42 54.6	+0.4
MAT				S	S	13 43 58.2	+0.1
JTKR	Abashiri--Toko	5.68	353	P	P	13 42 55.4	+0.3
JTKR				*e*S	S	13 43 56.4	-3.4

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*VIE **23** 14:05:55.4±0.9,44.20N×11.75E,h8^{km},mb2.6/2,ML3.2/4, Error ellipse: s-maj=8.1km s-min=3.5km az=146.0*
*LDG **23** 14:05:57.9±0.1,44.32N×11.54E,h10^{km},Ml3.2/14,Error ellipse: s-maj=2.3km s-min=2.0km az=121.0*
*ROM **23** 14:05:57.3±0.1,44.26N×11.51E,h14^{km}±2^{km},Md2.8/4, Ml2.5/9,Error ellipse: s-maj=2.1km s-min=1.2km az=152.0*
*NEIC **23** 14:05:57.3,44.26N×11.51E,h14^{km},ML3.2(LDG), ML2.5(ROM),After ROM.*
*CSEM **23** 14:05:57.4±0.1,44.23N×11.49E,h12^{km},ML3.2/14,Error ellipse: s-maj=1.9km s-min=1.0km az=34.0*
ISC 23 14:05:55.7±0.4**,44.40N**±0.02×**11.54E**±0.03**,h9**^{km}±3^{km}**, n72,**σ**1**^{s}**48**/117**,7C-9D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEI	Scarperia	0.37	202	Pg	Pg	14 06 03.0	-0.2
SEI				Sg	Sg	14 06 07.4	-0.8
	655nm,0.2s						
FNVD	Fontana Vidola	0.38	233	Pg	Pg	14 06 03.3	-0.1
FNVD				Sg	Sg	14 06 09.1	+0.5
	2µm,0.4s						
ZCCA	Zocca	0.41	264	Pg	Pg	14 06 05.7	+1.7
	22nm,0.5s						
VMG	Vicchio	0.43	180	⇑*e*Pg	Pg	14 06 04.0	-0.5
VMG				Sg	Sg	14 06 09.8	-0.6
	978nm,0.4s						
SFI	Santa Sofia	0.54	156	Pg	Pg	14 06 06.4	-0.1
SFI				Sg	Sg	14 06 14.5	+0.7
	1µm,0.6s						
GSCL	Gusciola	0.69	267	Pg	Pg	14 06 11.2	+1.7
	110nm,0.9s						
BDI	Bagni Di Lucca	0.76	244	Pg	Pg	14 06 11.1	+0.2
BDI				Sg	Sg	14 06 21.6	+0.5
	326nm,0.8s						
ERBM	Eremo	0.81	272	Pg	Pg	14 06 14.1	+2.1
	199nm,1.1s						
CRE	Caprese Michel	0.83	159	Pg	Pg	14 06 11.7	-0.6
	126nm,0.4s						
SARO	Sassorosso	0.85	256	P	Pb	14 06 13.4	+1.3
SARO				S	Sb	14 06 26.4	+3.1
SARO	Sassorosso	0.85	256	P	Pb	14 06 13.4	+1.3
SARO	Sassorosso	0.85	256	P	Pb	14 06 13.4	+1.3
SARO				S	Sb	14 06 26.5	+3.1
SARO				S	Sb	14 06 26.5	+3.1
VLC	Villacollemand	0.86	255	Pg	Pg	14 06 13.8	+0.8
	221nm,1.0s						
MAIM		0.90	238	P	Pb	14 06 12.9	-0.1
MAIM				S	Sb	14 06 25.5	+0.7
MAIM		0.90	238	P	Pb	14 06 12.9	-0.1
MAIM				S	Sb	14 06 25.5	+0.7
VALM		0.93	268	P	Pb	14 06 15.6	+2.0
VALM				S	Sb	14 06 30.2	+4.3
VALM		0.93	268	P	Pb	14 06 15.6	+2.0
VALM				S	Sb	14 06 30.2	+4.4
CSNT	Castellina Chi	0.94	191	Pg	Pg	14 06 13.6	-1.0
CSNT				Sg	Sg	14 06 25.7	-1.5
	170nm,0.4s						
TEOL	Teolo	0.97	5	⇓*e*Pg	Pg	14 06 16.6	+1.5
TEOL				*e*Sg	Sg	14 06 31.3	+3.2
PII	Pisa	1.00	228	Pg	Pg	14 06 14.6	-1.1
	101nm,0.2s						
BADI	Badiali	1.02	150	Pg	Pg	14 06 15.1	-1.0
BADI				Sg	Sg	14 06 30.6	+0.8
	348nm,0.9s						
VINC	Vinca	1.03	256	P	Pb	14 06 16.7	+1.4
VINC	Vinca	1.03	256	P	Pb	14 06 16.7	+1.4
VINC	Vinca	1.03	256	P	Pb	14 06 16.7	+1.4
GRAM		1.06	276	P	Pb	14 06 18.2	+2.3
GRAM				S	Sb	14 06 34.5	+4.8
GRAM		1.06	276	P	Pb	14 06 18.2	+2.4
GRAM				S	Sb	14 06 34.5	+4.9
PIEI	Pieia	1.12	140	Pn	Pn	14 06 17.5	0.0
	235nm,1.9s						
FSSB	Fossombrone	1.13	128	Pn	Pn	14 06 18.3	+0.6
	58nm,0.2s						
CODM		1.22	270	P	Pb	14 06 20.1	+1.6
CODM		1.22	270	P	Pb	14 06 20.1	+1.7
MURB	Monte Urbino	1.34	148	Pn	Pn	14 06 21.6	+1.0
ARV	Arcevia	1.35	131	Pn	Pn	14 06 22.1	+1.3
	48nm,0.4s						
SC2M	Scurtabr	1.44	271	P	Pn	14 06 23.3	+1.2
CGRP	Cima Grappa	1.50	7	⇓*i*Pg	Pg	14 06 24.3	-1.3
CGRP				*i* Sg	Sg	14 06 44.3	-1.3
SNTG	Esanatoglia	1.52	138	Pn	Pn	14 06 25.0	+1.7
	40nm,0.4s						
BOB	Bobbio (Coli)	1.54	285	Pn	Pn	14 06 27.3	+3.7
BOB				Sn	Sn	14 06 49.3	+5.4
	207nm,0.6s						
CAE	Caneva	1.73	21	⇓*e*Pg	Pg	14 06 27.6	-2.7
CAE				*e*Sg	Sg	14 06 49.8	-3.5
MLNI	Malnisio	1.91	23	⇓*i*Pg	Pg	14 06 29.7	-4.2
MLNI				*i* Sg	Sg	14 06 54.5	-4.8
MNS	Montasola	2.17	157	Pn	Pn	14 06 33.1	+0.5
	13nm,0.4s						
BAD	Bernadia	2.20	32	⇓*i*Pg	Pg	14 06 33.3	-6.3
BAD				*i* Sg	Sg	14 07 01.0	-7.9
DRE	Drenchia	2.31	39	⇓*i*Pg	Pg	14 06 35.0	-7.0
DRE				*i* Sg	Sg	14 07 04.0	-8.9
PGF	Pioggiola	2.62	226	*e*Pn	Pn	14 06 37.4	-1.5
PGF				*e*Sn	Sn	14 07 06.9	-4.2
	15nm,0.2s						
SQTA	Sankt Quirin	2.83	355	⇓*i*Pn	Pn	14 06 44.4	+2.4

	comp=Z,12nm,0.2s						
SQTA	**Sankt Quirin**	**2.83**	**355**	⇓Pn	**Pn**	**14 06 44.4**	**+2.4**
SQTA				Sn	**Sn**	**14 07 22.3**	**+5.7**
SQTA	**Sankt Quirin**	**2.83**	**355**	Pn	**Pn**	**14 06 44.4**	**+2.4**
	12nm,0.2s						
SQTA				Sn	**Sn**	**14 07 22.3**	**+5.6**
	19nm,0.3s						
WTTA	**Wattenberg**	**2.87**	**1**	⇑iPn	**Pn**	**14 06 45.8**	**+3.3**
WTTA	**Wattenberg**	**2.87**	**1**	⇑Pn	**Pn**	**14 06 45.8**	**+3.3**
WTTA				Sn	**Sn**	**14 07 21.2**	**+3.7**
WTTA	**Wattenberg**	**2.87**	**1**	Pn	**Pn**	**14 06 45.8**	**+3.3**
WTTA				Sn	**Sn**	**14 07 21.2**	**+3.7**
	50nm,0.6s						
MOTA	**Moosalm**	**2.97**	**354**	⇑iPn	**Pn**	**14 06 46.8**	**+2.9**
	comp=Z,2.6nm,0.1s						
MOTA	**Moosalm**	**2.97**	**354**	⇑Pn	**Pn**	**14 06 46.8**	**+2.9**
MOTA				Sn	**Sn**	**14 07 25.3**	**+5.3**
MOTA	**Moosalm**	**2.97**	**354**	Pn	**Pn**	**14 06 46.8**	**+2.9**
	2.6nm,0.1s						
MOTA				Sn	**Sn**	**14 07 25.3**	**+5.3**
	8.7nm,0.3s						
SBF	**Sospel**	**3.01**	**261**	ePn	**Pn**	**14 06 43.5**	**-1.0**
SBF				eSn	**Sn**	**14 07 16.8**	**-4.2**
	29nm,0.4s						
DAVA	**Damuels**	**3.12**	**339**	⇑iPn	**Pn**	**14 06 48.8**	**+2.7**
	comp=Z,4.4nm,0.2s						
DAVA	**Damuels**	**3.12**	**339**	⇓iSn	**Sn**	**14 07 26.0**	**+2.2**
	comp=E,14nm,0.4s						
DAVA	**Damuels**	**3.12**	**339**	⇑Pn	**Pn**	**14 06 48.8**	**+2.7**
DAVA				Sn	**Sn**	**14 07 25.9**	**+2.2**
DAVA	**Damuels**	**3.12**	**339**	Pn	**Pn**	**14 06 48.8**	**+2.8**
	4.4nm,0.2s						
DAVA				Sn	**Sn**	**14 07 26.0**	**+2.2**
	14nm,0.4s						
MBDF	**Montbardon**	**3.43**	**277**	ePn	**Pn**	**14 06 48.8**	**-1.6**
MBDF				eSn	**Sn**	**14 07 27.5**	**-4.2**
	6.5nm,0.4s						
LPG	**La Plagne**	**3.58**	**290**	eP	**Pn**	**14 06 55.4**	**+2.8**
LPL	**La Plagne**	**3.59**	**290**	eP	**Pn**	**14 06 55.6**	**+2.8**
LPL				eSn	**Sn**	**14 07 31.4**	**-4.5**
	7.4nm,0.3s						
FRF	**La Foret Royal**	**3.63**	**258**	ePn	**Pn**	**14 06 52.5**	**-0.9**
FRF				eSn	**Sn**	**14 07 32.4**	**-4.4**
	9.3nm,0.3s						
LMR	**La Mourre**	**3.79**	**256**	ePn	**Pn**	**14 06 54.4**	**-1.2**
LMR				eSn	**Sn**	**14 07 36.6**	**-4.3**
	7.1nm,0.3s						
ORIF	**Oris-en-Rattie**	**4.08**	**279**	ePn	**Pn**	**14 06 58.8**	**-0.9**
ORIF				eSn	**Sn**	**14 07 43.6**	**-4.5**
	8.5nm,0.4s						
CABF	**La Chapelle**	**4.43**	**302**	ePn	**Pn**	**14 07 04.1**	**-0.6**
CABF				eSn	**Sn**	**14 07 52.4**	**-4.6**
	2.2nm,0.2s						
HINF	**Hinteralfeld**	**4.73**	**318**	ePn	**Pn**	**14 07 07.9**	**-1.0**
HINF				eSn	**Sn**	**14 08 00.2**	**-4.4**
	9.1nm,0.3s						
VIVF	**Saint-Julien-l**	**4.93**	**278**	ePn	**Pn**	**14 07 10.0**	**-1.7**
CDF	**Champ du Feu**	**4.99**	**325**	ePn	**Pn**	**14 07 11.5**	**-1.1**
CDF				eSn	**Sn**	**14 08 06.5**	**-4.6**
	4.9nm,0.3s						
HAU	**Haudompre**	**5.10**	**317**	ePn	**Pn**	**14 07 12.8**	**-1.4**
HAU				eSn	**Sn**	**14 08 08.8**	**-5.2**
	9.0nm,0.3s						
SMF	**Signal de Mont**	**5.86**	**295**	ePn	**Pn**	**14 07 22.9**	**-2.0**
SMF				eSn	**Sn**	**14 08 26.2**	**-6.8**
	10.0nm,0.4s						
MEZF	**Maizieres J'vi**	**6.08**	**315**	ePn	**Pn**	**14 07 26.3**	**-1.7**
LOR	**Lormes**	**6.09**	**301**	ePn	**Pn**	**14 07 26.2**	**-1.9**
	baz=113						
LOR				eSn	**Sn**	**14 08 32.4**	**-6.3**
	24nm,0.4s						
AVF	**Avril sur Loir**	**6.23**	**295**	ePn	**Pn**	**14 07 28.3**	**-1.8**
BGF	**Bois d'Agland**	**6.49**	**293**	ePn	**Pn**	**14 07 31.5**	**-2.2**
BGF				eSn	**Sn**	**14 08 40.8**	**-7.9**
	5.7nm,0.3s						

*IDC **23** 14:21:27.6±1.2, 1.56N×126.68E, mb4.0/5, mb1 4.2/6, mb1mx3.9/16, mbtmp4.1/6, ML4.4/1, Error ellipse: s-maj=95.9km s-min=18.0km az=70.0*

*NEIC **23** 14:21:29.1±0.6, 1.53N×126.64E, h10^{km}, mb4.3/4, Error ellipse: s-maj=49.9km s-min=7.7km az=70.0*

ISC 23 14:21:30.7±0.8**, 1.4N**±0.2×**126.4E**±0.5**, h33^{km}, n14, σ0^{s}41**/13**, mb4.2**/7**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	**Kakadu**	**15.28**	**157**	eP	Px	14 25 29.6	
	9.8nm,0.5s						
FITZ	**Fitzroy Crossi**	**19.42**	**182**	eP	**P**	**14 25 57.0**	**-0.2**
	2.4nm,0.4s						
FITZ	**Fitzroy Crossi**	**19.42**	**182**	P	**P**	**14 25 57.4**	**+0.2**
	0.8nm,0.3s,baz=21,slow=10,SNR=11						
WRAB	**Tennant Creek**	**22.62**	**160**	eP	**P**	**14 26 30.2**	**0.0**
	19nm,0.6s,mb4.7						
WRA	**Warramunga Arr**	**22.63**	**160**	P	**P**	**14 26 30.4**	**+0.2**
	11nm,0.5s,mb4.5,baz=340,slow=11,SNR=107						
WB2	**Warramunga Arr**	**22.63**	**160**	eP	**P**	**14 26 30.3**	**0.0**
ASPA	**Alice Springs**	**26.00**	**164**	eP	**P**	**14 27 02.5**	**-0.1**
STKA	**Stephens Creek**	**36.13**	**158**	eP	**P**	**14 28 31.8**	**-0.1**
	1.3nm,0.5s,mb4.1						
STKA	**Stephens Creek**	**36.13**	**158**	P	**P**	**14 28 31.6**	**-0.2**
	2.0nm,0.6s,mb4.2,baz=323,slow=9.8,SNR=6.3						
SONM	**Songino Array**	**49.36**	**342**	P	**P**	**14 30 19.0**	**0.0**
	0.8nm,0.9s,mb3.8,baz=158,slow=6.9,SNR=5.3						
MKAR	**Makanchi Array**	**59.25**	**326**	P	**P**	**14 31 31.4**	**0.0**
	1.2nm,0.6s,mb4.1,baz=121,slow=7.4,SNR=16						
KURK	**Kurchatov**	**63.49**	**328**	eP	**P**	**14 31 58.9**	**-1.0**
	2.0nm,0.6s,mb4.4						
BVAR	**Borovoye Array**	**69.06**	**328**	P	**P**	**14 32 35.3**	**+0.1**
	0.8nm,0.7s,mb3.8,baz=117,slow=3.2,SNR=5.9						
BRVK	**Borovoye**	**69.13**	**328**	eP	**P**	**14 32 36.5**	**+0.9**

*NNC **23** 14:45:00.9±2.4, 35.39N×72.47E, mpv3.4, Error ellipse: s-maj=37.1km s-min=15.2km az=106.0*

ISC 23 14:44:52.1±0.7**, 34.63N**±0.06×**72.8E**±0.1**, h33^{km}, n18, σ1^{s}74**/26**, 4C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**3.30**	**131**	eP	**P**	**14 45 45.8**	**+3.1**
THN				eSB	**Sb**	**14 46 30.1**	**+0.1**
DLH	**Dalhousie**	**3.39**	**127**	eP	**P**	**14 45 48.0**	**+4.0**
DLH				eS	**S**	**14 46 30.0**	**+6.4**
SDNR	**Sundarnagar**	**4.72**	**130**	eP	**P**	**14 46 04.4**	**+1.6**
SDNR				eS	**S**	**14 46 58.4**	**+1.3**
KLP	**Kalpa**	**5.55**	**122**	eP	**P**	**14 46 16.1**	**+1.6**
KLP				eS	**S**	**14 47 20.4**	**+2.3**
KLP				AML	AML	14 47 50.0	
	comp=N,73nm,0.3s						
KLP				AML	AML	14 47 53.3	
	comp=E,114nm,0.8s						
KHET	**Khetri**	**7.04**	**157**	eP	**P**	**14 46 35.5**	**+0.1**
KHET				eS	**S**	**14 47 54.2**	**-0.9**
KHET				AML	AML	14 47 58.6	
	comp=N,13nm,0.2s						
AYAN	**Aya Nagar**	**7.17**	**147**	eS	**S**	**14 47 58.9**	**+0.4**
KUDL	**Kundal**	**7.21**	**153**	eP	**P**	**14 46 38.3**	**+0.5**
KUDL				eS	**S**	**14 47 58.9**	**-0.5**
SONA	**Sohna**	**7.35**	**149**	eP	**P**	**14 46 39.5**	**-0.3**
SONA				eS	**S**	**14 48 00.5**	**-2.5**
SONA				AML	AML	14 48 04.7	
	comp=E,32nm,0.4s						
SONA				AML	AML	14 48 07.0	
	comp=N,16nm,0.4s						
AAK	**Ala-Archa**	**8.11**	**9**	⇑Sn	**Sn**	**14 48 17.2**	**-4.9**
	comp=N,2.5nm,0.7s						
KK31	**Karatay Array**	**8.64**	**349**	Pn	**P**	**14 46 58.7**	**+0.9**
	comp=N,0.7nm,0.3s,baz=177,slow=13,SNR=18						
KK31				⇑Sn	**Sn**	**14 48 32.4**	**-2.9**
	comp=N,1.7nm,0.7s,baz=169,slow=24,SNR=7.2						
KOLN	**Koldanda**	**11.52**	**123**	eP	**P**	**14 47 34.3**	**-3.0**
	comp=N,4.9nm,0.4s						
GKN	**Gorkha**	**12.11**	**120**	eP	**P**	**14 47 41.3**	**-4.0**
	comp=N,12nm,0.4s						
DMN	**Daman**	**12.68**	**120**	eP	**P**	**14 47 49.6**	**-3.3**
	comp=N,5.4nm,0.4s						
KKN	**Kakani**	**12.70**	**119**	eP	**P**	**14 47 48.8**	**-4.3**
	comp=N,2.7nm,0.2s						
PKI	**Pulchoki**	**12.92**	**120**	eP	**P**	**14 47 52.8**	**-3.3**
GUN	**Gumba**	**13.06**	**117**	eP	**P**	**14 47 54.6**	**-3.4**
	comp=N,4.9nm,0.3s						
AB31	**Akbulak array**	**17.41**	**331**	⇑P	**P**	**14 48 54.9**	**+1.0**
	comp=N,0.3nm,0.5s,baz=162,slow=12,SNR=7.7						
AKTO	**Aktyubinsk**	**19.11**	**330**	⇑P	**P**	**14 49 16.9**	**+2.1**
	comp=N,2.1nm,2.2s						

*IDC **23** 14:49:58.1±0.9, 27.79N×139.86E, h476^{km}±14^{km}, mb2.7/4, mb1 2.9/5, mb1mx2.7/20, mbtmp3.6/5, Error ellipse: s-maj=36.7km s-min=20.8km az=91.0*

*JMA **23** 14:50:00.2±0.2, 28.00N×140.43E, h490^{km}, M3.9*

ISC 23 14:49:58.4±0.7**, 27.85N**±0.08×**140.2E**±0.2**, h497^{km}**±9^{km}**, n14, σ1^{s}09**/19**, mb3.0**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	**Chichi jima**	**1.95**	**112**	P	**P**	**14 51 03.7**	**+0.2**
	18nm,0.3s,baz=257,slow=19,SNR=64						
CBIJ				S	**S**	**14 51 53.9**	**-1.2**
	24nm,0.3s,baz=285,slow=22,SNR=8.5						
CBIJ	**Chichi jima**	**1.95**	**112**	P	**P**	**14 51 03.6**	**+0.1**
CBIJ				eS	**S**	**14 51 53.5**	**-1.5**
JHHJ	**Haha-jima-NKT**	**2.17**	**124**	P	**P**	**14 51 05.4**	**+0.7**
JHHJ				S	**S**	**14 51 57.4**	**+0.3**
JIE	**Ise**	**7.16**	**336**	P	**P**	**14 51 48.3**	**+1.1**
JKN2	**Miekihoku**	**7.19**	**333**	P	**P**	**14 51 49.0**	**+1.6**
JRY	**Ryogami san**	**8.21**	**353**	P	**P**	**14 51 58.0**	**-0.1**
JAG	**Ashikaga**	**8.57**	**356**	P	**P**	**14 52 00.9**	**-1.0**
JAG				S	**S**	**14 53 37.5**	**-2.5**
JHO	**Hitachi**	**8.74**	**2**	P	**P**	**14 52 04.3**	**+0.6**
JHO				eS	**S**	**14 53 42.3**	**-0.9**
JFK	**Kawauchi**	**9.51**	**3**	P	**P**	**14 52 13.1**	**+1.3**
JMK	**Ichinoseki**	**11.11**	**4**	P	**P**	**14 52 29.7**	**+1.1**
WRA	**Warramunga Arr**	**47.84**	**187**	P	**P**	**14 57 50.9**	**-1.2**
	0.1nm,0.3s,mb2.6,baz=2.3,slow=7.6,SNR=9.5						
MKAR	**Makanchi Array**	**48.61**	**309**	P	**P**	**14 57 55.9**	**-1.6**
	0.3nm,0.4s,mb3.0,baz=88,slow=10,SNR=6.2						
ILAR	**Eielson Array**	**57.92**	**29**	P	**P**	**14 59 04.5**	**+0.7**
	0.2nm,0.9s,mb2.5,baz=245,slow=5.7,SNR=5.4						
FINES	**FINESS Array B**	**76.47**	**333**	P	**P**	**15 00 57.5**	**+0.3**
	3.5nm,1.0s,mb3.8,baz=65,slow=5.3,SNR=7.1						

MAN 23 15:28:57.7, 12.48N×123.62E, h9^{km}, mb4.3, ML3.1, MS2.9, 4C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	**0.12**	**176**	⇑iP	Pg	15 29 01.6	+0.9
MMPH				i S	Sg	15 29 04.0	+1.3
CNP	**Catarman**	**1.02**	**88**	eP	Pb	15 29 16.8	-0.3
CNP				eS	Sb	15 29 31.0	+0.5
PVCP	**Virac**	**1.22**	**25**	eP	Pb	15 29 20.3	-0.2
PVCP				eS	Sb	15 29 36.5	+0.2
AUQP	**San Andres**	**1.24**	**312**	eP	Pb	15 29 22.4	+1.6
AUQP				eS	Sb	15 29 43.0	+6.3
RCP	**Roxas**	**1.25**	**223**	⇑eP	Pb	15 29 21.5	+0.4
RCP				eS	Sb	15 29 38.3	+1.1
KALP	**Kalibo**	**1.48**	**237**	⇑eP	Pn	15 29 44.7	+20
OTRP	**Odiongan**	**1.56**	**266**	eP	Pn	15 29 25.3	-0.6
OTRP				eS	Sb	15 29 45.1	-1.0
OCLP	**Ormoc**	**1.72**	**146**	eP	Pn	15 29 17.8	-10
OCLP				eS	Sn	15 29 52.4	+2.0
GQP	**Guinayangan**	**1.81**	**321**	eP	Pn	15 29 25.0	-4.4
PLP	**Palo**	**1.87**	**134**	eP	Pn	15 29 29.6	-0.6
PLP				i S	Sn	15 29 54.2	+0.1
BOAC	**Boac**	**1.98**	**299**	eP	Pn	15 29 30.9	-0.8
BOAC				eS	Sn	15 29 54.0	-2.9
BESP	**Borongan**	**1.99**	**116**	eP	Pn	15 29 31.7	-0.1
BESP				eS	Sn	15 29 54.8	-2.3
GUIM	**Jordan**	**2.10**	**209**	eP	Pn	15 29 33.9	+0.4
GUIM				eS	Sn	15 30 01.3	+1.3
LLP	**Lapu-Lapu**	**2.18**	**171**	⇑eP	Pn	15 29 34.0	-0.7
LLP				eS	Sn	15 30 00.3	-1.7
SJMP	**San Jose**	**2.44**	**270**	eP	Pn	15 29 38.7	+0.4
SJMP				eS	Sn	15 30 06.9	-1.7
MSLP	**Maasin**	**2.63**	**152**	eP	Pn	15 29 41.3	+0.1
MSLP				eS	Sn	15 30 17.3	+3.7
POLP	**Polilio Island**	**2.76**	**324**	eP	Pn	15 29 48.1	+5.1
CUYO	**Cuyo Island**	**3.02**	**238**	eP	Pn	15 29 45.1	-1.6
BUSP	**Coron**	**3.37**	**262**	eP	Pn	15 29 51.4	-0.3
BUSP				eS	Sn	15 30 29.6	-2.7
ENPP	**El Nido**	**4.29**	**253**	eP	Pn	15 30 03.7	-1.1
PAGZ	**Pagadian**	**4.61**	**183**	eP	Pn	15 30 07.4	-1.8
IPIL	**Ipil**	**4.78**	**193**	eP	Pn	15 30 11.4	-0.2
IPIL				eS	Sn	15 31 08.7	+0.9

IDC 23 15:44:04.9±3.1**, 6.18S**×**154.49E, h94^{km}**±26^{km}**, mb3.4**/3**, mb1 3.8**/6**, mb1mx3.6**/15**, mbtmp4.1**/6**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.3**/17**, Error ellipse: s-maj=34.5km s-min=19.4km az=173.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.30**	**121**	P	P	15 45 35.4	-1.4
	16nm,0.3s,baz=220,slow=4.5,SNR=9.2						
HNR				S	S	15 46 50.8	+2.9
	9.0nm,0.3s,baz=331,slow=21,SNR=8.0						
PMG	**Port Moresby**	**7.94**	**246**	P	P	15 45 56.9	-2.4
	3.6nm,0.3s,baz=48,slow=9.7,SNR=19						
PMG				S	S	15 47 27.4	-0.7
	1.5nm,0.3s,baz=61,slow=13,SNR=4.3						
PMG				LR	LR	15 48 41.6	
	comp=Z,80nm,19.0s,baz=23,slow=35						
DZM	**Mont Dzumac**	**19.57**	**145**	P	P	15 48 25.7	-2.2
	0.7nm,0.3s,baz=315,slow=12,SNR=11						
WRA	**Warramunga Arr**	**23.88**	**233**	P	P	15 49 10.0	-0.8
	0.3nm,0.3s,baz=59,slow=9.5,SNR=15						
WRA				PcP	PcP	15 52 50.1	-2.7
	0.2nm,0.3s,baz=59,slow=2.8,SNR=4.7						
ILAR	**Eielson Array**	**82.81**	**22**	P	P	15 56 18.6	-1.2
	0.3nm,0.6s,baz=249,slow=5.6,SNR=6.5						
MAW	**Mawson**	**84.95**	**203**	P	P	15 56 29.2	-1.2
	1.5nm,0.5s,baz=100,slow=8.1,SNR=12						

*CRAAG **23** 15:46:41.3, 36.95N×3.73E, Ml3.4*

*NEIC **23** 15:46:41.4±0.5, 37.00N×3.85E, h10^{km}, ML3.4(ALG), Error ellipse: s-maj=6.9km s-min=5.7km az=76.0*

*CSEM **23** 15:46:41.1±0.1, 36.99N×3.75E, h15^{km}, ML3.4, Error ellipse: s-maj=3.5km s-min=2.3km az=69.0*

*MDD **23** 15:46:42.0±0.6, 37.03N×3.79E, mb3.9/9, Error ellipse: s-maj=7.1km s-min=5.1km az=80.0, PRXIMO*

ISC 23 15:46:40.8±0.5**, 37.12N**±0.03×**3.71E**±0.05**, h10^{km}, n38, σ1^{s}41**/58**, 3D, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABMS	**Boumerdes**	**0.42**	**207**	P	**Pg**	**15 46 48.2**	**-1.2**
ABA	**Alger-Bouzarea**	**0.63**	**240**	P	**Pb**	**15 46 55.0**	**+1.5**
ADJB	**Djebel Djouab**	**0.99**	**193**	P	**Pb**	**15 46 58.6**	**-1.0**
AKET	**Djebel Ketaf**	**1.08**	**173**	P	**Pb**	**15 47 00.0**	**-1.2**
EMHD	**Djebel Mahouad**	**1.10**	**214**	P	**Pb**	**15 47 01.0**	**-0.6**
SET	**Setif**	**1.64**	**124**	P	**Pn**	**15 47 10.0**	**0.0**
DFRA	**Djebel Bou Aff**	**1.83**	**108**	P	**Pn**	**15 47 12.0**	**-0.7**
EBNR	**Beni Rached**	**1.94**	**245**	P	**Pn**	**15 47 19.0**	**+4.7**
ECHA	**Ech Chlef**	**2.12**	**243**	P	**Pn**	**15 47 22.0**	**+5.1**
ECHF	**Ech Chlef**	**2.14**	**244**	P	**Pn**	**15 47 22.0**	**+4.9**
CASM	**Ain Smara**	**2.39**	**110**	P	**Pn**	**15 47 14.5**	**-6.2**
EANR	**'Ain N'Sour**	**2.41**	**242**	P	**Pn**	**15 47 32.0**	**+11**
ETRT	**Tiaret**	**2.61**	**229**	P	**Pn**	**15 47 32.5**	**+8.7**
EIBI	**Ibiza**	**2.67**	**316**	P	**Pn**	**15 47 27.0**	**+2.3**
	4.3nm,0.2s,SNR=7.9						
EIBI				S	**Sn**	**15 47 58.5**	**+1.2**
	20nm,0.5s,SNR=6.6						
EIBI				T		15 49 32.0	
EIBI	**Ibiza**	**2.67**	**316**	P	**Pn**	**15 47 27.0**	**+2.3**
EIBI				S	**Sn**	**15 47 57.6**	**+0.3**
EIBI	**Ibiza**	**2.67**	**316**	P	**Pn**	**15 47 27.0**	**+2.4**
EIBI				S	**Sn**	**15 47 57.6**	**+0.3**
ETOS	**Mallorca**	**2.73**	**345**	⇓P	**Pn**	**15 47 27.3**	**+1.7**
	6.8nm,0.1s,SNR=18						
ETOS				S	**Sn**	**15 47 58.6**	**-0.5**
	6.9nm,0.3s,SNR=4.7						
ETOS				T		15 49 35.3	
	SNR=7.9						
ETOS	**Mallorca**	**2.73**	**345**	⇓P	**Pn**	**15 47 27.3**	**+1.7**
ETOS				S	**Sn**	**15 47 58.0**	**-1.1**
ETOS	**Mallorca**	**2.73**	**345**	⇓P	**Pn**	**15 47 27.3**	**+1.7**
ETOS				S	**Sn**	**15 47 58.0**	**-1.0**
CMAH	**Djebel Manchou**	**3.01**	**98**	P	**Pn**	**15 47 25.0**	**-4.6**
EBEN	**Beniarda**	**3.49**	**298**	P	**Pn**	**15 47 37.7**	**+1.3**
	0.4nm,0.1s,SNR=7.9						
EBEN				S	**Sn**	**15 48 18.0**	**-0.2**
	14nm,0.6s,SNR=7.9						
EBEN	**Beniarda**	**3.49**	**298**	P	**Pn**	**15 47 37.7**	**+1.3**
EBEN				S	**Sn**	**15 48 16.4**	**-1.8**
EBEN	**Beniarda**	**3.49**	**298**	P	**Pn**	**15 47 37.7**	**+1.3**
EBEN				S	**Sn**	**15 48 16.4**	**-1.8**
ECHE	**Chera**	**4.43**	**305**	P	**Pn**	**15 47 51.8**	**+2.1**
	2.6nm,0.3s,SNR=9.5						
ETOB	**Tobarra**	**4.43**	**292**	P	**Pn**	**15 47 51.2**	**+1.5**
	2.5nm,0.2s,SNR=9.0						
ETOB				S	**Sn**	**15 48 40.9**	**-1.1**
	3.8nm,0.6s,SNR=5.9						
ETOB	**Tobarra**	**4.43**	**292**	P	**Pn**	**15 47 51.2**	**+1.5**
ETOB				S	**Sn**	**15 48 40.9**	**-1.1**
EMOS	**Mosqueruela**	**4.60**	**316**	P	**Pn**	**15 47 53.4**	**+1.3**
	0.5nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**15 48 44.2**	**-2.1**
	1.6nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.60**	**316**	P	**Pn**	**15 47 53.4**	**+1.2**
EMOS				S	**Sn**	**15 48 44.2**	**-2.1**
EPOB	**Poblet**	**4.69**	**335**	P	**Pn**	**15 47 52.5**	**-0.9**
	1.6nm,0.1s,SNR=8.4						
EPOB				S	**Sn**	**15 48 46.5**	**-2.1**
	SNR=7.9						
EPOB	**Poblet**	**4.69**	**335**	P	**Pn**	**15 47 52.5**	**-0.9**
EPOB				S	**Sn**	**15 48 45.4**	**-3.2**
EPOB	**Poblet**	**4.69**	**335**	P	**Pn**	**15 47 52.5**	**-0.9**
EMIR	**Miracle**	**5.07**	**341**	P	**Pn**	**15 48 00.5**	**+1.7**
	7.3nm,0.1s,SNR=9.6						
EMIR				S	**Sn**	**15 48 55.3**	**-3.0**
	1.6nm,0.2s,SNR=7.9						
EMIR	**Miracle**	**5.07**	**341**	P	**Pn**	**15 48 00.5**	**+1.7**
EMIR				S	**Sn**	**15 48 55.3**	**-3.0**
EJON	**La Jonquera**	**5.36**	**353**	P	**Pn**	**15 48 03.5**	**+0.7**
	5.1nm,0.2s,SNR=4.7						
EJON	**La Jonquera**	**5.36**	**353**	P	**Pn**	**15 48 03.5**	**+0.7**
EQES	**Quesada**	**5.44**	**279**	P	**Pn**	**15 48 05.6**	**+1.6**
	1.6nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**15 49 06.7**	**-0.7**
	1.1nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**6.20**	**335**	P	**Pn**	**15 48 14.9**	**+0.2**
	0.5nm,0.2s,SNR=6.3						
EBIE				S	**Sn**	**15 49 24.4**	**-1.9**
	1.0nm,0.3s,SNR=7.9						
EBIE	**Bielsa**	**6.20**	**335**	P	**Pn**	**15 48 14.9**	**+0.2**
EBIE				S	**Sn**	**15 49 21.7**	**-4.7**

*SOF **23** 15:53:40.2, 40.09N×24.69E, h10^{km}, MD2.7*

*ATH **23** 15:53:42.7, 40.18N×24.64E, h10^{km}, MD3.2/3*

*CSEM **23** 15:53:42.9±0.1, 40.11N×24.61E, h20^{km}, ML2.9, Error ellipse: s-maj=2.9km s-min=2.0km az=168.0*

*THE **23** 15:53:42.7, 40.07N×24.58E, h12^{km}, ML2.9*

ISC 23 15:53:41.5±0.5**, 40.12N**±0.03×**24.59E**±0.03**, h9^{km}**±5^{km}**, n24, σ1^{s}04**/33**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOS	**Limnos**	**0.42**	**115**	ePg	**Pg**	**15 53 51.1**	**+1.1**
LOS				eSg	**Sg**	**15 53 56.7**	**+1.0**
OUR	**Ouranopolis**	**0.51**	**295**	ePg	**Pg**	**15 53 53.0**	**+1.2**
OUR				eSg	**Sg**	**15 54 00.5**	**+1.7**
PAIG	**Paliouri**	**0.72**	**255**	ePg	**Pg**	**15 53 56.4**	**+0.4**
PAIG				eSg	**Sg**	**15 54 05.7**	**+0.1**
PLG	**Polygyros**	**0.91**	**287**	ePB	**Pb**	**15 54 00.0**	**+1.0**
AOS	**Alonnisos**	**1.09**	**210**	ePg	**Pg**	**15 54 01.7**	**-1.6**
AOS				eSg	**Sg**	**15 54 17.3**	**-0.6**
SOH	**Sokhos**	**1.18**	**307**	ePg	**Pg**	**15 54 04.6**	**-0.5**
RDO	**Rodhopi**	**1.26**	**35**	ePB	**Pb**	**15 54 05.0**	**+0.1**
THE	**Thessaloniki**	**1.34**	**293**	ePg	**Pg**	**15 54 06.6**	**-1.7**
ALN	**Alexandroupoli**	**1.36**	**54**	ePg	**Pg**	**15 54 06.6**	**-2.0**
ALN				eSg	**Sg**	**15 54 25.1**	**-1.7**
PRK	**Paraskevi**	**1.56**	**123**	ePB	**Pb**	**15 54 12.1**	**+1.9**
RZN	**Rozhen**	**1.57**	**4**	i P	**Pn**	**15 54 10.4**	**+0.6**
LIT	**Litokhoron**	**1.61**	**270**	ePg	**Pg**	**15 54 09.8**	**-3.9**
MMB	**Musomiste**	**1.61**	**336**	i P	**Pn**	**15 54 10.0**	**-0.3**
KDZ	**Kurdzhali**	**1.66**	**22**	P	**Pn**	**15 54 10.0**	**-1.0**
KNT	**Kendrikon**	**1.66**	**310**	ePb	**Pb**	**15 54 11.5**	**-0.3**
KNT				eSb	**Sb**	**15 54 32.6**	**-0.1**
GRG	**Griva**	**1.87**	**297**	ePb	**Pb**	**15 54 14.7**	**-0.6**
GRG				eSb	**Sb**	**15 54 38.9**	**+0.2**
PLD	**Plovdiv**	**1.99**	**2**	P	**Pn**	**15 54 21.7**	**+6.0**
AGG	**Agios Georgios**	**2.06**	**239**	ePn	**Pn**	**15 54 16.6**	**-0.1**
AGG				eSn	**Sn**	**15 54 41.7**	**-1.0**
AGG	**Agios Georgios**	**2.06**	**239**	ePn	**Pn**	**15 54 16.5**	**-0.2**
AGG				eSn	**Sn**	**15 54 41.7**	**-1.0**
DIM	**Dimitrovgrad**	**2.06**	**20**	P	**Pn**	**15 54 21.0**	**+4.3**
KKB	**Krupnik**	**2.09**	**327**	i P	**Pn**	**15 54 17.5**	**+0.4**
PGB	**Panagyurishte**	**2.45**	**353**	P	**Pn**	**15 54 23.5**	**+1.1**
FNA	**Florina**	**2.54**	**286**	ePn	**Pn**	**15 54 23.9**	**+0.3**
VTS	**Vitosha**	**2.68**	**338**	P	**Pn**	**15 54 30.5**	**+4.9**

*NEIC **23** 16:14:58.0, 18.86N×67.89W, h74^{km}, MD3.5(RSPR), After RSPR.*

RSPR 23 16:14:58.0, 18.86N×67.89W, h74^{km}±7^{km}**, MD3.5**/5**, MD3.5**/5**, 2C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**1.13**	**139**	⇑eP	P	16 15 17.5	-1.1
CRPR				eS	S	16 15 33.4	-0.6
AOPR	**Arecibo Observ**	**1.20**	**115**	⇓eP	P	16 15 18.3	-1.2
AOPR				eS	S	16 15 34.4	-1.2
ICM	**Isla Caja Muer**	**1.62**	**126**	⇓eP	P	16 15 24.5	-0.7
ICM				eS	S	16 15 43.8	-1.5
CBYP	**Canovanas**	**2.02**	**107**	⇓eP	P	16 15 29.6	-1.0
CBYP				eS	S	16 15 53.9	-0.8
MTP	**Monte Pirata**	**2.34**	**109**	⇑eP	P	16 15 33.6	-1.6
MTP				eS	S	16 16 02.2	-0.6

*IDC **23** 16:17:45.8±0.6, 29.69S×178.34W, h152^{km}±4^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.8/14, mbtmp4.2/7, Error ellipse: s-maj=24.4km s-min=17.5km az=155.0*

*NEIC **23** 16:17:46.6±0.9, 29.55S×178.33W, h161^{km}±8^{km}, mb4.3/2, Error ellipse: s-maj=18.8km s-min=14.9km az=182.0*

ISC 23 16:17:44.2±0.6**, 30.02S**±0.06×**178.6W**±0.1**, h134^{km}**±7^{km}**, n43, σ1^{s}28**/35**, mb3.9**/8**, 2C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.98**	**39**	P	**P**	**16 18 09.1**	**+1.6**
	603nm,0.3s,baz=100,slow=22,SNR=24						
RAO				S	**S**	**16 18 25.2**	**-0.3**
	578nm,0.3s,baz=108,slow=22,SNR=10						
RAO	**Raoul Island**	**0.98**	**39**	eP	**P**	**16 18 08.8**	**+1.3**
MXZ	**Matakaoa Point**	**7.95**	**198**	PN	**P**	**16 19 37.4**	**-0.7**
MXZ				SN	**S**	**16 21 08.5**	**+1.6**
PUZ	**Puketiti**	**8.44**	**197**	PN	**P**	**16 19 42.9**	**-1.8**
PUZ				SN	**S**	**16 21 17.7**	**-1.0**
MWZ	**Matawai**	**8.89**	**200**	PN	**P**	**16 19 49.4**	**-1.2**
URZ	**Urewera**	**8.95**	**202**	P	**P**	**16 19 50.6**	**-0.8**
	0.9nm,0.3s,baz=260,slow=7.4,SNR=16						
URZ				S	**S**	**16 21 33.1**	**+2.2**
	7.1nm,0.3s,baz=326,slow=23,SNR=18						
URZ	**Urewera**	**8.95**	**202**	PN	**P**	**16 19 50.2**	**-1.3**
URZ				SN	**S**	**16 21 32.6**	**+1.8**
KNZ	**Kokohu**	**9.49**	**198**	PN	**P**	**16 19 54.5**	**-4.0**
NOUC	**Port Laguerre**	**15.66**	**297**	eP	**P**	**16 21 31.3**	**+13**
CTA	**Charters Tower**	**33.20**	**279**	eP	**P**	**16 24 11.2**	**+0.9**
	2.3nm,0.3s,mb4.4						
CTA	**Charters Tower**	**33.20**	**279**	P	**P**	**16 24 11.3**	**+1.0**
	3.4nm,0.4s,mb4.4,baz=99,slow=10,SNR=16						
CTAO	**Charters Tower**	**33.20**	**279**	eP	**P**	**16 24 11.0**	**+0.7**
STKA	**Stephens Creek**	**34.04**	**257**	P	**P**	**16 24 18.7**	**+1.3**
	0.8nm,0.3s,mb3.9,baz=133,slow=10.0,SNR=5.5						
STKA	**Stephens Creek**	**34.04**	**257**	eP	**P**	**16 24 19.6**	**+2.3**
WB2	**Warramunga Arr**	**43.53**	**272**	eP	**P**	**16 25 35.6**	**-0.6**
WRAB	**Tennant Creek**	**43.53**	**272**	eP	**P**	**16 25 35.6**	**-0.6**
	5.8nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**43.54**	**272**	P	**P**	**16 25 35.3**	**-1.0**
	3.5nm,0.5s,mb4.2,baz=112,slow=6.4,SNR=50						
WRA				pP	pP	16 26 17.3	+10
	4.5nm,0.7s,baz=109,slow=7.9,SNR=11						
WRA				PcP	PcP	16 27 20.4	-1.9
	2.8nm,0.8s,baz=113,slow=3.3,SNR=11						
FITZ	**Fitzroy Crossi**	**51.82**	**270**	P	**P**	**16 26 41.1**	**+0.4**
	4.1nm,0.7s,mb4.2,baz=170,slow=4.8,SNR=5.9						
MAW	**Mawson**	**72.48**	**201**	P	**P**	**16 28 57.4**	**0.0**
	0.9nm,0.7s,mb3.6,baz=180,slow=6.1,SNR=3.5						
SNAA	**Sanae**	**78.55**	**179**		**P**	**16 29 41.5**	**+10**
SNAA	**Sanae**	**78.55**	**179**	P	**P**	**16 29 32.1**	**+0.5**

	0.1nm,0.4s,mb2.8,baz=261,slow=0.6,SNR=6.4						
SNAA	Sanae	78.55	179	P	P	16 29 32.1	+0.5
VNA3	Neumayer Olymp	78.72	176	⇑i	P	16 29 34.3	+1.8
VNA3	Neumayer Olymp	78.72	176		P	16 29 40.1	+7.6
VNA3	Neumayer Olymp	78.72	176		P	16 29 50.5	+18
VNA2	Neumayer--Watz	79.15	177	⇑i	P	16 29 37.0	+2.2
VNA2	Neumayer--Watz	79.15	177		P	16 29 44.9	+10
VNA1	Neumayer--Stat	79.39	177		P	16 29 34.9	-1.2
VNA1	Neumayer--Stat	79.39	177		P	16 29 39.0	+2.9
NVAR	Mina Array Bea	88.33	43	P	P	16 30 20.1	-1.7
	1.5nm,0.8s,mb3.9,baz=206,slow=7.1,SNR=14						
MKAR	Makanchi Array	117.11	310	PKiKP		16 36 11.3	
	0.5nm,0.8s,baz=212,slow=0.1,SNR=6.6						
MKAR	Makanchi Array	117.11	310	PKPdf	PKPdf	16 36 11.3	-1.8
BVAR	Borovoye Array	125.75	316	PKP	PKPdf	16 36 28.5	-1.1
	1.6nm,0.7s,baz=90,slow=1.5,SNR=12						
AKTK	Aktyubinsk	133.44	313	PKP	PKPdf	16 36 43.5	-0.8
AKTO	Aktyubinsk	133.44	313	PKP	PKPdf	16 36 43.5	-0.8
	1.2nm,0.7s,baz=331,slow=3.3,SNR=5.2						
FINES	FINESS Array B	144.60	340	PKP	PKPdf	16 37 01.3	-2.6
	9.3nm,0.6s,baz=53,slow=3.6,SNR=36						
NB2	NORSAR Subarra	148.29	351	PKPabc	PKPdf	16 37 12.0	+1.9
	3.2nm,0.7s,baz=15,slow=2.8						
NOA	NORSAR Array B	148.29	351	PKPbc	PKPdf	16 37 12.3	+2.2
	6.4nm,0.8s,baz=15,slow=4.3,SNR=12						
HFS	Hagfors	148.76	348	PKPbc	PKPdf	16 37 12.3	+1.4
	3.5nm,0.5s,baz=63,slow=3.3,SNR=12						
AKASG	Malin Array Be	150.66	323	PKPbc	PKPdf	16 37 18.2	+4.1
	4.7nm,0.7s,baz=49,slow=2.8,SNR=17						
BRTR	Keskin Array B	151.94	299	PKPbc	PKPdf	16 37 22.1	+5.7
	0.7nm,0.5s,baz=141,slow=5.2,SNR=4.7						
BRTR				PKPab	PKPab	16 37 32.1	-3.0
	0.9nm,0.7s,baz=143,slow=6.2,SNR=4.1						
EKA	Eskdalemuir Ar	154.49	6	PKPab	PKPab	16 37 40.4	-5.0
	1.3nm,0.7s,baz=315,slow=3.5,SNR=3.8						
DAVOX	Davos	162.00	341	PKPab	PKPab	16 38 16.0	-2.0
	5.4nm,0.8s,baz=304,slow=14,SNR=4.4						

IDC 23 16:25:58.6±1.2**, 29.23S**×**178.26W, h158**^{km}±18^{km}**, mb3.6**/2**, mb1 3.8**/2**, mb1mx3.5**/12**, mbtmp4.1**/2**, Error ellipse: s-maj=183.8km s-min=33.4km az=169.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.30	95	P	P	16 26 20.8	+0.4
	225nm,0.3s,baz=104,slow=22,SNR=16						
RAO				S	S	16 26 37.3	+0.2
	268nm,0.3s,baz=78,slow=22,SNR=8.5						
CTA	Charters Tower	33.41	278	P	P	16 32 23.6	-0.7
	2.2nm,0.6s,baz=70,slow=10,SNR=4.6						
WRA	Warramunga Arr	43.84	271	P	P	16 33 48.5	-2.3
	1.3nm,0.6s,baz=110,slow=7.8,SNR=14						
FINES	FINESS Array B	143.97	340	PKP	PKPdf	16 45 13.3	-1.0
	2.5nm,0.6s,baz=63,slow=3.1,SNR=16						
NB2	NORSAR Subarra	147.56	351	PKPbc	PKPdf	16 45 24.3	+3.8
	2.1nm,0.8s,baz=15,slow=4.5						
NOA	NORSAR Array B	147.56	351	PKPbc	PKPdf	16 45 24.1	+3.7
	1.5nm,0.7s,baz=15,slow=4.4,SNR=4.0						
AKASG	Malin Array Be	150.23	324	PKPbc	PKPdf	16 45 29.2	+4.2
	0.5nm,0.5s,baz=48,slow=2.8,SNR=5.7						

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*NEIC **23** 16:38:31.3, 58.07N×133.77W, h10^{km}, ML2.8(AEIC), After AEIC.*

PGC 23 16:38:32.0, 58.30N×**133.54W, h1**^{km}**, ML3.3**/4**, ML2.8**/2(AEIC)**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESE	Bessie Mountai	0.74	293	P	Pg	16 38 45.2	-1.6
BESE				S	Sg	16 38 56.4	-0.5
DLBC	Dease Lake	1.86	84	Pn	Pn	16 39 03.6	-1.6
DLBC				Pg	Pg	16 39 05.3	-3.9
DLBC				Sn	Sn	16 39 29.0	-0.7
DLBC				Sg	Sg	16 39 30.4	-3.5
DLBC				Trac		16 39 35.9	
	comp=Z,199nm,0.7s						
DLBC	Dease Lake	1.86	84	P	Pn	16 39 03.6	-1.7
DLBC				S	Sn	16 39 28.6	-1.1
PLBC	Pleasant Camp	1.87	310	Pn	Pn	16 39 05.3	-0.1
PLBC				Sg	Sg	16 39 29.8	-4.5
WHY	Whitehorse	2.47	345	P	Pn	16 39 10.4	-3.6
WHY				Pn	Pn	16 39 12.1	-1.9
WHY				Pg	Pg	16 39 16.1	-5.2
WHY				Sg	Sg	16 39 47.7	-6.4
WHY				Trac		16 39 56.8	
	comp=Z,84nm,0.8s						
HYT	Haines Junctio	3.24	323	Pn	Pn	16 39 24.4	-0.6
HYT				Pg	Pg	16 39 30.4	-6.3
HYT				Sg	Sg	16 40 13.1	-6.8
HYT				Trac		16 40 25.9	
	comp=Z,33nm,0.6s						
RUBB	Prince Rupert	4.38	154	Sg	Sg	16 40 49.5	-8.4
FNBB	Fort Nelson	5.54	79	Pg	Pg	16 40 13.5	-9.2
FNBB				Sg	Sg	16 41 24.2	-12
FNBB				Trac		16 41 44.1	
	comp=Z,12nm,0.9s						
DAWY	Dawson	6.44	336	Pn	Pn	16 40 07.2	-3.1
DAWY				qP		16 40 07.8	
DAWY				Pg	Pg	16 40 28.2	-12
DAWY				Sg	Sg	16 41 50.9	-15
DAWY				Trac		16 41 56.1	
	comp=Z,17nm,0.8s						
DAWY	Dawson	6.44	336	P	Pn	16 40 07.8	-2.6
BMBC	Bull Mountain	6.61	105	Sg	Sg	16 41 56.0	-16
INK	Inuvik	10.05	0	P	P	16 40 56.7	-3.7

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*NEIC **23** 17:03:06.5±1.1, 12.91S×168.83E, h633^{km}±13^{km}, mb4.2/3, Error ellipse: s-maj=18.1km s-min=12.3km az=46.0*

*IDC **23** 17:03:06.2±2.3, 12.91S×168.87E, h629^{km}±30^{km}, mb3.3/7, mb1 3.4/9, mb1mx3.2/19, mbtmp4.4/9, Error ellipse: s-maj=28.2km s-min=16.9km az=40.0*

ISC 23 17:03:06.4±1.4**, 13.0S**±0.1×**168.9E**±0.1**, h660**^{km}±18^{km}**, n27, σ0**^{s}**75**/27**, mb4.2**/8**, 3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.28	194	P	P	17 05 20.6	+1.0
	1.4nm,0.3s,baz=47,slow=19,SNR=13						
HNR	Honiara	9.46	291	P	P	17 05 19.7	-1.5
	4.9nm,0.3s,baz=117,slow=6.7,SNR=6.5						
HNR				S	S	17 07 09.9	+0.9
	1.8nm,0.3s,baz=204,slow=20,SNR=3.9						
CTA	Charters Tower	22.77	249	eP	P	17 07 23.6	-1.0
	4.6nm,1.1s,mb3.8						
CTA	Charters Tower	22.77	249	P	P	17 07 23.3	-1.3
	2.7nm,0.6s,mb3.9,baz=70,slow=9.9,SNR=6.9						
CTAO	Charters Tower	22.77	249	eP	P	17 07 23.6	-1.0
URZ	Urewera	26.18	165	P	P	17 07 53.9	-0.3
	4.8nm,0.3s,mb4.5,baz=284,slow=6.5,SNR=10						
TSZ	Takapari Road	27.64	168	PN	P	17 08 05.7	-1.0
QRZ	Quartz Range	27.88	174	ePN	P	17 08 10.3	+1.6
MRZ	Mangatainoka R	28.15	169	PN	P	17 08 10.2	-0.8
KIW	Kapiti Island	28.23	170	PN	P	17 08 11.2	-0.4
NNZ	Nelson	28.36	173	ePN	P	17 08 13.8	+1.0
TCW	Tory Channel	28.47	171	PN	P	17 08 14.0	+0.2
CAW	Cannon Point	28.49	170	PN	P	17 08 13.7	-0.3
MRW	Makara Radio	28.55	171	PN	P	17 08 14.2	-0.2
MTW	Mount Morrison	28.62	170	PN	P	17 08 14.1	-0.9
TUWZ	Tuamarina	28.64	172	PN	P	17 08 15.2	+0.1
THZ	Tophouse	28.84	174	ePN	P	17 08 16.9	0.0
RPZ	Rata Peaks	30.64	177	P	P	17 08 32.5	+0.4
	12nm,0.8s,mb4.5,baz=349,slow=20,SNR=4.5						
STKA	Stephens Creek	31.27	229	eP	P	17 08 38.4	+0.8
	2.1nm,0.4s,mb4.0						
STKA	Stephens Creek	31.27	229	P	P	17 08 38.6	+1.1
	2.4nm,0.5s,mb4.0,baz=45,slow=8.5,SNR=9.9						
WB2	Warramunga Arr	33.76	254	⇑iP	P	17 08 58.1	-0.3
WRAB	Tennant Creek	33.76	254	eP	P	17 08 57.8	-0.6
	7.0nm,0.4s,mb4.5						
WRA	Warramunga Arr	33.77	254	P	P	17 08 58.3	-0.1
	9.0nm,0.5s,mb4.6,baz=84,slow=8.7,SNR=137						
ASPA	Alice Springs	34.75	247	⇑iP	P	17 09 06.6	+0.1
KAKA	Kakadu	35.50	266	⇑iP	Px	17 09 32.9	
	6.7nm,0.2s						
FITZ	Fitzroy Crossi	41.88	257	P	P	17 10 04.5	+0.4
	1.7nm,0.3s,mb3.9,baz=55,slow=10.0,SNR=13						
ILAR	Eielson Array	84.44	17	P	P	17 14 33.4	+0.7
	1.0nm,0.8s,mb3.4,baz=237,slow=5.2,SNR=4.8						

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*NEIC **23** 17:08:46.4±5.0, 2.74S×139.26E, h49^{km}±47^{km}, mb4.2/3, Error ellipse: s-maj=29.0km s-min=17.7km az=51.0*

*IDC **23** 17:09:01.5±4.6, 3.06S×139.08E, h196^{km}±47^{km}, mb3.4/6, mb1 3.7/9, mb1mx3.6/12, mbtmp4.1/9, MS3.1/2, Ms1 3.1/2, ms1mx2.6/13, Error ellipse: s-maj=27.4km s-min=12.6km az=109.0*

ISC 23 17:08:50.4±3.4**, 2.9S**±0.1×**139.1E**±0.2**, h104**^{km}±34^{km}**, n16, σ0**^{s}**60**/19**, mb3.8**/6**, 1C-2D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	Kakadu	11.79	214	⇑iP	Px	17 11 54.3	
	14nm,0.5s						
KAKA				eS	Sx	17 13 59.4	
WRAB	Tennant Creek	17.57	195	eP	P	17 12 50.1	0.0
	17nm,0.4s						
WB2	Warramunga Arr	17.57	195	eP	P	17 12 50.0	-0.2
WB2				eS	S	17 15 54.2	-5.7
WRA	Warramunga Arr	17.58	195	P	P	17 12 49.6	-0.6
	4.4nm,0.3s,baz=18,slow=12,SNR=75						
WRA				S	S	17 15 53.9	-6.1
	0.6nm,0.3s,baz=3.0,slow=23,SNR=6.0						
CTA	Charters Tower	18.44	158	P	P	17 12 59.8	-0.6
	0.3nm,0.3s,baz=309,slow=12,SNR=5.1						
CTA				LR	LR	17 19 07.1	
	comp=Z,50nm,19.5s,baz=42,slow=33						
FITZ	Fitzroy Crossi	20.09	220	⇓iP	P	17 13 18.2	+0.3
	4.9nm,0.4s						
FITZ				eS	S	17 16 51.3	-1.4
FITZ	Fitzroy Crossi	20.09	220	P	P	17 13 18.3	+0.4
	1.3nm,0.3s,baz=51,slow=11,SNR=17						
FITZ				S	S	17 16 52.1	-0.6
	2.0nm,0.3s,baz=121,slow=12,SNR=7.2						
ASPA	Alice Springs	21.26	193	eP	P	17 13 31.0	+1.2
ASPA				eS	S	17 17 25.6	+11
STKA	Stephens Creek	28.92	176	eP	P	17 14 42.7	+0.9
	1.9nm,0.5s,mb4.0						
STKA	Stephens Creek	28.92	176	P	P	17 14 42.6	+0.8
	2.3nm,0.5s,mb4.1,baz=339,slow=7.3,SNR=9.7						
STKA				LR	LR	17 27 57.6	
	comp=Z,54nm,21.3s,baz=206,slow=40						
SONM	Songino Array	58.07	335	P	P	17 18 35.0	0.0
	0.2nm,0.5s,mb3.4,baz=153,slow=8.3,SNR=3.4						
MKAR	Makanchi Array	70.20	322	P	P	17 19 54.4	+0.4
	0.9nm,0.7s,mb3.7,baz=96,slow=8.5,SNR=12						
ZAL	Zalesovo	72.32	330	P	P	17 20 06.0	-0.5
	0.8nm,0.5s,mb3.8,baz=259,slow=1.3,SNR=3.2						
BVAR	Borovoye Array	79.71	325	P	P	17 20 48.4	+0.3
	1.0nm,0.5s,mb3.9,baz=114,slow=8.2,SNR=7.0						
ILAR	Eielson Array	85.83	24	P	P	17 21 18.4	-0.6
	0.8nm,0.7s,mb3.8,baz=260,slow=4.8,SNR=14						
CLL	Collm	114.13	326	⇓P	PKPdf	17 27 19.8	+2.4

CASC 23 17:25:52.5±1.6**, 12.48N**×**87.63W, h72**^{km}±21^{km}**, MD3.6, ML3.5, 3C-9D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRIN	San Cristobal	0.61	68	⇓eP	P	17 26 07.2	+0.5
LEON	Leon	0.72	95	⇓eP	P	17 26 07.6	-0.4
TEL3	Telica 3	0.77	83	⇓eP	P	17 26 08.5	0.0
TELN	Telica	0.79	81	⇓eP	P	17 26 08.5	-0.2
CNCH	Conchagua	0.82	346	eP	P	17 26 26.4	+17
CNCH				eS	S	17 26 40.0	+19
MIRN	Miramar	0.90	92	⇑eP	P	17 26 10.0	0.0
CNGN	Cerro Negro	0.91	88	⇓eP	P	17 26 09.9	-0.2
CNGN				eS	S	17 26 25.0	+1.7
COPN	Copaltepe	1.06	106	⇑eP	P	17 26 11.9	-0.1
COPN				eS	S	17 26 26.0	-0.5
MOMJ	Momotombo	1.07	94	⇓eP	P	17 26 12.0	-0.2
BLLM	Bellamira	1.13	328	eP	P	17 26 30.8	+18
BLLM				eS	S	17 26 46.5	+18
VSM	San Miguel	1.14	326	eP	P	17 26 31.1	+18
VSM				eS	S	17 26 47.1	+19
XAVN	Gruta Xavier	1.31	104	⇓eP	P	17 26 15.4	-0.1
MGAN	Managua	1.39	103	eP	P	17 26 16.3	-0.3
MGAN				eS	S	17 26 33.5	-0.9
MGAN				i		17 26 35.6	
	comp=E,771nm,0.3s						
CAHU	Cacacuatique	1.41	336	eP	P	17 26 34.3	+18
TICN	Ticuantepe	1.44	108	⇓eP	P	17 26 17.1	-0.1
WILN	Americas 2	1.44	102	eP	P	17 26 16.7	-0.6
WILN				eS	S	17 26 35.5	-0.1
PYTN	Playitas	1.54	88	⇓eP	P	17 26 17.7	-0.8
APON	Apoyo	1.62	110	⇑eP	P	17 26 19.8	+0.1
SNVI	San Vicente	1.63	314	eP	P	17 26 38.0	+18
SNVI				eS	S	17 26 58.1	+18
LCBS	La Ceiba	1.76	312	eP	P	17 26 39.6	+18
LCBS				eS	S	17 27 01.2	+18
LFRS	El Faro	1.80	309	eP	P	17 26 40.0	+18
LFRS				eS	S	17 27 02.7	+19
SSNN	San Juan del S	2.10	124	eP	P	17 26 25.7	-0.6
CONN	Concepcion	2.16	115	eP	P	17 26 26.9	-0.1
RTR	El Retiro	2.42	306	eP	P	17 26 47.4	+17
RTR				eS	S	17 27 17.5	+18

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*IDC **23** 17:29:55.1±0.7, 1.68N×92.24E, mb4.2/14, mb1 4.4/14, mb1mx4.2/21, mbtmp4.2/14, MS4.3/9, Ms1 4.3/9, ms1mx4.2/14, Error ellipse: s-maj=22.6km s-min=18.8km az=59.0*

*BJI **23** 17:29:57.2, 1.69N×92.55E, h20^{km}, mB4.7, mb4.6, Ms4.7, Msz4.4*

*MOS **23** 17:29:59.0±1.5, 1.74N×92.19E, h33^{km}, mb4.4/6, MS4.4/4, Error ellipse: s-maj=20.1km s-min=8.9km az=107.0*

*NEIC **23** 17:29:59.6±0.5, 1.65N×92.08E, h30^{km}, mb4.7/7, Error ellipse: s-maj=14.9km s-min=9.2km az=220.0*

ISC 23 17:29:58.6±0.5**, 1.72N**±0.07×**92.23E**±0.06**, h33**^{km}**, (h27**^{km}±5.3^{km}**:pP-P), n75, σ1**^{s}**27**/77**, mb4.5**/38**, MS4.4**/19**, 4C-3D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	12.74	296	eP	P	17 32 54.8	-5.6
	51nm,1.0s						
TRD	Trivandrum	16.63	294	eP	P	17 33 45.6	-5.4
TRD				ex	x	17 36 59.6	
KSM	Kuching	18.08	91	eP	P	17 34 12.3	+3.2
VIS	Vishakhapatnam	18.15	332	eP	P	17 34 08.0	-2.0
VIS				AMb	AMB	17 34 19.9	
	comp=Z,72nm,1.5s						
HYB	Hyderabad	20.59	320	i P	P	17 34 35.0	-2.6
HYB				eS	S	17 38 25.0	+3.9
HYB	Hyderabad	20.59	320	eP	P	17 34 35.0	-2.6
HYB				eS	S	17 38 30.0	+8.9
CAL	Calcutta	21.04	350	ex	x	17 34 33.0	
CAL				ex	x	17 38 45.8	
LATR	Latur	22.62	318	eP	P	17 34 57.5	-0.6
BOK	Bokaro	22.79	345	eP	P	17 35 01.4	+1.7
BOK				AMb	AMB	17 35 03.8	
	comp=Z,11nm,0.5s,mb4.5						
KAD	Karad	23.55	312	eP	P	17 35 06.8	-0.3
KAD				AMb	AMB	17 35 24.5	
	comp=Z,36nm,0.7s,mb4.9						
SHL	Shillong	23.71	359	eP	P	17 35 12.0	+3.3
SHL				eS	S	17 39 25.0	+6.7
POO	Poona	24.57	314	ex	x	17 35 25.0	
POO				ex	x	17 39 49.0	
KMI	Kunming	25.39	23	P	P	17 35 22.8	-2.0
KMI				AP	pP	17 35 27.3	-6.8
KMI				PP	PP	17 36 03.6	-0.4
KMI				S	S	17 39 56.1	+9.5
KMI				XS		17 40 03.8	
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
KMI				LR	LR		
	comp=N,980nm,13.1s,MS4.6						
KMI				LR	LR		
	comp=E,1μm,14.9s,MS4.6						
KMI				LR	LR		
	comp=Z,880nm,13.6s,MS4.4						
BHPL	Bhopal	25.77	327	eP	P	17 35 27.9	-0.5
BHPL				AMb	AMB	17 36 27.6	
	comp=Z,19nm,0.5s,mb4.9						
PKI	Pulchoki	26.52	346	eP	P	17 35 36.7	+1.3
DMN	Daman	26.63	346	eP	P	17 35 36.9	+0.5
	comp=Z,25nm,1.0s,mb4.7						
GUN	Gumba	26.74	347	eP	P	17 35 37.4	0.0
	comp=Z,33nm,0.7s,mb5.0						
KKN	Kakani	26.76	346	eP	P	17 35 37.1	-0.5
	comp=Z,32nm,1.1s,mb4.8						
GKN	Gorkha	27.13	345	eP	P	17 35 40.5	-0.4
	comp=Z,18nm,0.6s,mb4.8						
KOLN	Koldanda	27.19	343	eP	P	17 35 41.2	-0.3
	comp=Z,14nm,0.6s,mb4.7						
LSA	Lhasa	27.85	358	P	P	17 35 48.8	+1.4
LSA				S	S	17 40 30.0	+3.2
LSA				AMB	AMB		
	comp=Z,40nm,6.6s						
LSA				LR	LR		
	comp=N,320nm,16.3s						
LSA				LR	LR		
	comp=E,880nm,24.3s						
LSA				LR	LR		
	comp=Z,610nm,23.3s						
LSA	Lhasa	27.85	358	eP	P	17 35 48.6	+1.1
	comp=Z,22nm,0.6s,mb5.0						
LSA	Lhasa	27.85	358	eP	P	17 35 48.6	+1.2
LSA				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.0						
GYA	Guiyang	28.24	28	⇑iP	P	17 35 50.6	-0.4
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CD2	Chengdu	31.02	19	P	P	17 36 15.6	-0.1
CD2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
ENH	Enshi	32.78	28	eP	P	17 36 30.0	-1.1
	comp=Z,13nm,1.0s,mb4.8						
WHN	Wuhan	35.52	34	eP	P	17 36 52.3	-2.3
XAN	Xi’an	35.74	24	P	P	17 36 55.6	-0.9
XAN				AP	pP	17 37 05.9	-0.3
XAN				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
XAN				LR	LR		
	comp=N,340nm,12.2s,MS4.5						
XAN				LR	LR		
	comp=E,460nm,13.1s,MS4.5						
XAN				LR	LR		
	comp=Z,770nm,14.5s,MS4.6						
GTA	Gaotai	38.15	10	eP	P	17 37 16.8	+0.2
GTA				AP	pP	17 37 21.3	-5.1
GTA				XP	sP	17 37 24.8	-5.8
GTA				AMB	AMB		
	comp=Z,70nm,4.9s						
GTA				LR	LR		
	comp=N,300nm,16.0s,MS4.4						
GTA				LR	LR		
	comp=E,350nm,14.1s,MS4.4						
GTA				LR	LR		
	comp=Z,320nm,12.9s,MS4.3						
FITZ	Fitzroy Crossi	38.34	122	LR	LR	17 50 52.8	
	comp=Z,429nm,21.3s,MS4.2,baz=112,slow=33						
NJ2	Nanjing	39.24	37	eP	P	17 37 25.8	0.0
NJ2				AP	pP	17 37 35.4	-0.2
NJ2				XP	sP	17 37 39.5	-0.3
NJ2				PP	PP	17 39 00.5	+0.6
NJ2				S	S	17 43 25.0	+1.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,90nm,4.6s						
NJ2				LR	LR		
	comp=N,2μm,13.8s,MS5.2						
NJ2				LR	LR		
	comp=E,2μm,14.4s,MS5.2						
NJ2				LR	LR		
	comp=Z,540nm,15.5s,MS4.5						
SSE	Sheshan	40.04	40	eP	P	17 37 31.9	-0.6
SSE				AP	pP	17 37 42.1	-0.2
SSE				XP	sP	17 37 45.6	-0.9
SSE				PP	PP	17 39 05.9	-2.4
SSE				PCP	PcP	17 39 36.3	-1.3
SSE				S	S	17 43 36.8	+0.8
SSE				XS		17 43 51.9	
SSE				SCS	ScS	17 47 35.3	+0.6
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.1						
SSE				AMB	AMB		
	comp=Z,50nm,7.0s						
SSE				LR	LR		
	comp=N,140nm,15.9s,MS4.6						
SSE				LR	LR		
	comp=E,690nm,15.9s,MS4.6						
SSE				LR	LR		
	comp=Z,610nm,17.4s,MS4.5						
NWAO	Narrogin (SRO)	41.78	148	LR	LR	17 54 02.9	
	comp=Z,512nm,19.1s,MS4.4,baz=42,slow=35						
WMQ	Urumqi	42.12	355	P	P	17 37 52.6	+3.1
WMQ				AP	pP	17 38 02.0	+2.7
WMQ				XP	sP	17 38 06.0	+2.5
WMQ				PP	PP	17 39 31.0	+1.0
WMQ				S	S	17 44 02.0	-4.6
WMQ				XS		17 44 19.0	
WMQ				AMB	AMB		
	comp=Z,100nm,4.4s						
WMQ				LR	LR		
	comp=N,510nm,28.4s,MS4.5						
WMQ				LR	LR		
	comp=E,610nm,27.5s,MS4.5						
WMQ				LR	LR		
	comp=Z,510nm,25.0s,MS4.3						
AAK	Ala-Archa	43.72	341	eP	P	17 38 03.4	+0.8
	comp=Z,3.4nm,1.0s,mb4.0						
AAK	Ala-Archa	43.72	341	eP	P	17 38 03.4	+0.8
AAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
MKAR	Makanchi Array	45.73	350	P	P	17 38 18.1	-0.5
	comp=Z,2.7nm,0.7s,mb4.3,baz=162,slow=8.9,SNR=15						
MKAR				LR	LR	17 58 47.8	
	comp=Z,174nm,18.9s,MS4.0,baz=142,slow=38						
MKAR	Makanchi Array	45.73	350	i P	P	17 38 19.2	+0.6
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WRA	Warramunga Arr	46.57	120	P	P	17 38 25.9	+0.4
	comp=Z,1.9nm,0.6s,mb4.2,baz=298,slow=8.6,SNR=29						
WRAB	Tennant Creek	46.57	120	eP	P	17 38 26.0	+0.4
	comp=Z,6.1nm,0.8s,mb4.6						
WRAB	Tennant Creek	46.57	120	eP	P	17 38 26.0	+0.4
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
WB2	Warramunga Arr	46.58	120	eP	P	17 38 25.5	-0.1
SONM	Songino Array	47.55	13	P	P	17 38 33.3	+0.4
	comp=Z,3.3nm,0.6s,mb4.5,baz=194,slow=8.6,SNR=28						
SONM				LR	LR	18 00 04.4	
	comp=Z,213nm,19.1s,MS4.1,baz=177,slow=38						
ZAK	Zakamensk	49.39	9	eP	P	17 38 50.2	+3.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
KURK	Kurchatov	50.16	349	eP	P	17 38 53.9	+0.8
	comp=Z,3.2nm,0.7s,mb4.5						
KURK	Kurchatov	50.16	349	⇑eP	P	17 38 54.4	+1.3
ZAL	Zalesovo	52.41	354	P	P	17 39 10.1	+0.1
	comp=Z,2.2nm,0.5s,mb4.3,baz=291,slow=4.5,SNR=12						
ZAL				LR	LR	18 03 31.0	
	comp=Z,397nm,19.5s,MS4.5,baz=289,slow=38						
NVS	Novosibirsk	53.46	354	eP	P	17 39 15.3	-2.5
NVS				pmax	pmax		
	comp=N,4.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb4.3						
BVAR	Borovoye Array	54.26	344	P	P	17 39 21.6	-2.0
	comp=Z,3.0nm,0.7s,mb4.3,baz=159,slow=9.7,SNR=17						
MJAR	Matsushiro Arr	54.76	45	P	P	17 39 25.3	-2.3
	comp=Z,3.0nm,0.9s,mb4.3,baz=235,slow=8.8,SNR=5.2						
MJAR				LR	LR	18 05 14.7	
	comp=Z,240nm,18.5s,MS4.3,baz=235,slow=39						
AKTK	Aktyubinsk	56.53	334	P	P	17 39 39.1	-1.0
AKTO	Aktyubinsk	56.53	334	P	P	17 39 39.1	-1.0
	comp=Z,0.8nm,0.7s,mb3.9,baz=138,slow=12,SNR=4.3						
STKA	Stephens Creek	57.44	130	P	P	17 39 43.8	-3.1
	comp=Z,1.8nm,0.7s,mb4.2,baz=325,slow=12,SNR=2.7						
SVE	Sverdlovsk	60.47	341	eP	P	17 40 05.8	-1.7
SVE				MLR	MLR		
	comp=N,200nm,11.0s,MS4.7						
SVE				MLR	MLR		
	comp=E,200nm,11.0s,MS4.7						
SVE				MLR	MLR		
	comp=Z,200nm,11.0s,MS4.5						
SOC	Sochi	62.45	319	eP	P	17 40 22.9	+1.9
SOC				e		17 41 02.9	
SOC				e		17 42 40.2	
SOC				eS	S	17 48 52.1	+8.0
SOC				e		17 50 00.9	
SOC				pmax	pmax		

	comp=Z,19nm,1.2s,mb5.1						
SOC				MLR	MLR		
	comp=Z,262nm,21.0s,MS4.4						
BRTR	**Keskin Array B**	**65.12**	**313**	P	**P**	**17 40 37.8**	**-0.8**
	comp=Z,1.8nm,0.7s,mb4.2,baz=130,slow=5.6,SNR=7.9						
MATP	**Matopo**	**66.13**	**247**	P	**P**	**17 40 45.0**	**-0.4**
	comp=Z,3.5nm,0.7s,mb4.5,baz=78,slow=8.5,SNR=8.2						
YAK	**Yakutsk**	**66.40**	**18**	*e*P	**P**	**17 40 45.6**	**-0.7**
	comp=Z,10nm,0.8s,mb4.9						
YAK	**Yakutsk**	**66.40**	**18**	⇑*e*P	**P**	**17 40 46.9**	**+0.6**
YAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
YAK				MLR	MLR		
	comp=Z,300nm,19.0s,MS4.5						
LBTB	**Lobatse**	**69.68**	**243**	P	**P**	**17 41 07.0**	**-0.5**
	comp=Z,4.7nm,0.9s,mb4.4,baz=138,slow=8.5,SNR=4.1						
AKASG	**Malin Array Be**	**71.85**	**323**	P	**P**	**17 41 20.4**	**+0.4**
	comp=Z,1.1nm,0.6s,mb4.0,baz=96,slow=5.4,SNR=4.9						
AKASG	**Malin Array Be**	**71.85**	**323**	P	**P**	**17 41 20.4**	**+0.4**
AKASG	**Malin Array Be**	**71.85**	**323**	*i* P	**P**	**17 41 21.2**	**+1.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VRI	**Vrincioaia**	**71.88**	**318**	⇓P	**P**	**17 41 20.8**	**+0.5**
MLR	**Muntele Rosu**	**72.30**	**317**	⇓P	**P**	**17 41 25.3**	**+2.5**
BURAR	**Bucovina Array**	**73.38**	**319**	⇓P	**P**	**17 41 31.5**	**+2.3**
TIXI	**Tiksi**	**73.60**	**11**	⇑*e*P	**P**	**17 41 30.2**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,300nm,20.0s,MS4.6						
JOF	**Joensuu**	**75.59**	**336**	*e*p	**P**	**17 41 42.6**	**+0.9**
FINES	**FINESS Array B**	**77.27**	**333**	P	**P**	**17 41 51.7**	**+0.4**
	comp=Z,3.3nm,0.7s,mb4.4,baz=108,slow=8.8,SNR=8.1						
FINES	**FINESS Array B**	**77.27**	**333**	P	**P**	**17 41 51.7**	**+0.4**
KAF	**Kangasniemi**	**77.41**	**334**	*e*p	**P**	**17 41 52.4**	**+0.4**
ARCES	**ARCESS Array B**	**80.40**	**341**	LR	LR	18 20 06.5	
	comp=Z,327nm,18.8s,MS4.7,baz=320,slow=37						
GERES	**GERESS Array B**	**81.16**	**319**	P	**P**	**17 42 13.7**	**+1.2**
	comp=Z,3.5nm,0.8s,mb4.3,baz=104,slow=5.5,SNR=18						
GERES				LR	LR	18 20 13.1	
	comp=Z,81nm,18.1s,MS4.1,baz=108,slow=37						
NOA	**NORSAR Array B**	**84.14**	**331**	LR	LR	18 21 46.1	
	comp=Z,124nm,18.1s,MS4.3,baz=80,slow=37						
TXAR	**Lajitas Array**	**145.58**	**25**	PKPbc	PKPbc	17 49 37.2	+2.3
	comp=Z,5.3nm,0.9s,baz=309,slow=1.3,SNR=25						

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*MOS **23** 17:35:15.6±0.5, 64.58N×148.56E, h4^{km}, mb3.9/1, Error ellipse: s-maj=99.9km s-min=18.9km az=93.7*

NERS 23 17:35:15.6, 64.58N×148.56E, h4^{km}, 1C, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUUS	**Susuman**	**1.82**	**186**	*e*Pg	Pg	17 35 48.5	-3.4
SUUS				Pgmax		17 35 54.0	
	20nm,0.2s						
SUUS				Pgmax		17 35 54.0	
	10.0nm,0.2s						
SUUS				Pgmax		17 35 54.0	
	20nm,0.2s						
SUUS				*e*Sg	Sg	17 36 13.2	-2.9
SUUS				Sgmax		17 36 16.3	
	30nm,0.4s						
SUUS				Sgmax		17 36 16.3	
	180nm,0.4s						
SUUS	**Susuman**	**1.82**	**186**	*e*P	Pn	17 35 48.5	+0.6
SUUS				*e*		17 36 13.2	
SUUS				pmax	pmax		
	comp=N,20nm,0.2s						
SUUS				pmax	pmax		
	comp=E,10.0nm,0.2s						
SUUS				pmax	pmax		
	comp=Z,20nm,0.2s						
SUUS				smax			
	comp=N,30nm,0.4s						
SUUS				smax			
	comp=E,180nm,0.4s						
SEY	**Seymchan**	**2.37**	**133**	*e*P	Pn	17 35 56.2	+0.3
SEY				⇑*i*Pg	Pg	17 36 00.4	-2.5
SEY				Pgmax		17 36 01.0	
	comp=E,20nm,0.3s						
SEY				Pgmax		17 36 01.0	
	comp=E,10.0nm,0.3s						
SEY				Pgmax		17 36 01.0	
	comp=E,10.0nm,0.3s						
SEY				*e*Sg	Sg	17 36 31.9	-2.6
SEY				Sgmax		17 36 34.5	
	comp=E,140nm,0.3s						
SEY				Sgmax		17 36 34.5	
	comp=E,130nm,0.3s						
SEY	**Seymchan**	**2.37**	**133**	*e*P	Pn	17 35 56.2	+0.3
SEY				*e*		17 36 31.9	
SEY				pmax	pmax		
	comp=N,20nm,0.3s						
SEY				pmax	pmax		
	comp=E,10.0nm,0.3s						
SEY				pmax	pmax		
	comp=Z,10.0nm,0.3s						
SEY				smax			
	comp=N,140nm,0.3s						
SEY				smax			
	comp=E,130nm,0.3s						
OCHR	**Omchak**	**2.94**	**186**	*e*P	Pn	17 36 05.1	+1.1
OCHR				*e*Pg	Pg	17 36 09.8	-4.6
OCHR				*e*S	Sn	17 36 36.2	-4.1
OCHR				*e*Sg	Sg	17 36 47.3	-6.3
OCHR				Sgmax		17 36 54.5	
	comp=E,70nm,0.3s						
OCHR				Sgmax		17 36 54.5	
	comp=E,90nm,0.3s						
OCHR	**Omchak**	**2.94**	**186**	*e*P	Pn	17 36 05.1	+1.1
OCHR				*e*S	Sn	17 36 36.2	-4.1
OCHR				smax			
	comp=N,70nm,0.3s						
OCHR				smax			
	comp=E,90nm,0.3s						
MGD	**Magadan 1**	**4.66**	**166**	*e*P	Pn	17 36 27.8	-0.7
MGD				*e*		17 37 11.7	
MGD				*e*Sg	Sg	17 37 41.3	-10
MGD				Sgmax		17 37 52.4	
	comp=E,40nm,0.3s						
MA2	**Magadan**	**5.13**	**167**	*e*P	Pn	17 36 34.3	-0.8
MA2				*e*Sg	Sg	17 38 00.0	-6.4

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*MOS **23** 17:37:47.0±0.7, 25.35S×70.19E, h12^{km}, mb5.4/7, Error ellipse: s-maj=16.8km s-min=9.7km az=101.3*

*IDC **23** 17:37:47.2±0.6, 25.31S×70.08E, mb4.2/17, mb1 4.3/17, mb1mx4.2/22, mbtmp4.2/17, MS4.2/6, Ms1 4.2/6, ms1mx4.0/11, Error ellipse: s-maj=18.1km s-min=14.9km az=7.0*

*BJI **23** 17:37:48.2, 24.82S×70.09E, h5^{km}, mB5.3, mb4.8, Ms5.4, Msz4.7*

*HRVD **23** 17:37:48.8±0.5, 25.00S×69.89E, h12^{km}, MW5.0/49, Centroid moment Tensor Solution. LP body waves: s15,c16;Mantle waves: s49,c77; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.18±.14; $M_{\theta\theta}$0.06±.13; $M_{\phi\phi}$2.12±.12; $M_{r\theta}$-0.17±.56; $M_{\theta\phi}$-0.99±.10; $M_{\phi r}$2.18±.43; Best double couple: $M_0$3.219×10^{16} NP1:ϕ_s324°, δ26°, λ-115°. NP2:ϕ_s170°, δ67°, λ-79°. Principal axes: T 3.329, Plg21°, Azm252°; N -.222, Plg10°, Azm346°; P -3.108, Plg66°, Azm101°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **23** 17:37:48.8±0.2, 25.34S×70.09E, h10^{km}, mb5.1/13 Error ellipse: s-maj=7.7km s-min=7.1km az=101.0*

ISC 23 17:37:47.1±0.3**, 25.35S**±0.06×**70.13E**±0.07**, h10^{km}, (h19^{km}±.6^{km}:pP-P), n96,** $\sigma 0^{s}$**89**/91**, mb4.7**/40**, MS4.2**/7**, 9C-5D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**22.30**	**283**	P	**P**	**17 42 47.9**	**+1.6**
	6.0nm,0.9s,mb4.0,baz=113,slow=5.4,SNR=6.7						
MATP	**Matopo**	**38.56**	**269**	P	**P**	**17 45 10.9**	**-1.0**
	baz=103,slow=10						
KMBO	**Kilima Mbogo**	**39.82**	**302**	P	**P**	**17 45 23.4**	**+0.9**
	2.0nm,0.9s,mb3.8,baz=80,slow=10,SNR=5.2						
BOSA	**Boshof**	**39.95**	**255**	P	**P**	**17 45 23.8**	**+0.4**
	9.6nm,1.1s,mb4.4,baz=54,slow=5.2,SNR=5.7						
BOSA				LR	LR	17 58 11.1	
	comp=Z,491nm,21.4s,MS4.3,baz=92,slow=31						
BOSA	**Boshof**	**39.95**	**255**	P	**P**	**17 45 23.8**	**+0.3**
BOSA				LR	LR	17 58 11.1	
LSZ	**Lusaka**	**40.45**	**276**	P	**P**	**17 45 27.3**	**-0.3**
	1.4nm,0.5s,mb3.9,baz=110,slow=5.7,SNR=6.2						
MAW	**Mawson**	**42.51**	**184**	P	**P**	**17 45 42.5**	**-1.4**
	0.6nm,0.4s,baz=104,slow=8.3,SNR=5.0						
MAW				LR	LR	17 59 14.7	
	comp=Z,283nm,19.9s,MS4.2,baz=170,slow=30						
FITZ	**Fitzroy Crossi**	**51.77**	**94**	*e*P	**P**	**17 46 58.0**	**+0.7**
	31nm,1.1s,mb5.1						
FITZ	**Fitzroy Crossi**	**51.77**	**94**	P	**P**	**17 46 58.6**	**+1.3**
	34nm,0.9s,mb5.3,baz=247,slow=6.8,SNR=20						
KOLN	**Koldanda**	**54.38**	**15**	*e*P	**P**	**17 47 16.3**	**-0.2**
	73nm,1.4s,mb5.4						
DMN	**Daman**	**54.59**	**16**	*e*P	**P**	**17 47 18.3**	**+0.2**
PKI	**Pulchoki**	**54.63**	**17**	*e*P	**P**	**17 47 18.1**	**-0.3**
	14nm,1.0s,mb5.0						
KKN	**Kakani**	**54.80**	**16**	*e*P	**P**	**17 47 19.3**	**-0.4**
	25nm,1.0s,mb5.2						
SHL	**Shillong**	**54.80**	**24**	*e*P	**P**	**17 47 21.0**	**+1.3**
GKN	**Gorkha**	**54.85**	**16**	*e*P	**P**	**17 47 19.4**	**-0.6**
	32nm,1.2s,mb5.2						
GUN	**Gumba**	**55.08**	**17**	*e*P	**P**	**17 47 21.8**	**+0.1**
ASPA	**Alice Springs**	**57.55**	**103**	*e*P	**P**	**17 47 39.5**	**+0.1**
LSA	**Lhasa**	**58.33**	**22**	*e*P	**P**	**17 47 45.5**	**+0.7**
	13nm,1.1s,mb4.9						
WRA	**Warramunga Arr**	**59.02**	**99**	P	**P**	**17 47 49.8**	**+0.1**
	8.5nm,1.1s,mb4.7,baz=254,slow=7.1,SNR=26						
WB2	**Warramunga Arr**	**59.03**	**99**	*e*P	**P**	**17 47 50.1**	**+0.3**
WRAB	**Tennant Creek**	**59.03**	**99**	*e*P	**P**	**17 47 49.6**	**-0.2**
	39nm,1.2s,mb5.3						
WRAB				LR	LR		
	comp=Z,120nm,19.0s,MS4.0						
WRAB	**Tennant Creek**	**59.03**	**99**	*e*P	**P**	**17 47 49.6**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.3						
WRAB				MLR	MLR		
	comp=Z,120nm,19.0s,MS4.0						
KAKA	**Kakadu**	**59.77**	**90**	*e*P	**P**	**17 48 15.0**	**+20**
	comp=Z,18nm,0.8s,mb5.2						
SNAA	**Sanae**	**60.81**	**200**	P	**P**	**17 48 02.1**	**+0.7**
SNAA	**Sanae**	**60.81**	**200**		**P**	**17 48 10.5**	**+9.1**
SNAA	**Sanae**	**60.81**	**200**	P	**P**	**17 48 01.2**	**-0.1**
	comp=Z,1.1nm,1.0s,mb3.9,baz=89,slow=7.6,SNR=10						
STKA	**Stephens Creek**	**62.06**	**114**	P	**P**	**17 48 10.1**	**-0.3**
	comp=Z,2.6nm,0.9s,mb4.3,baz=320,slow=7.9,SNR=3.3						
STKA				LR	LR	18 11 26.0	
	comp=Z,283nm,21.6s,MS4.4,baz=110,slow=32						
VNA2	**Neumayer--Watz**	**62.20**	**201**	⇑*i*P	**P**	**17 48 12.6**	**+1.8**
VNA2	**Neumayer--Watz**	**62.20**	**201**	⇑*i*	**P**	**17 48 18.0**	**+7.2**
VNA2	**Neumayer--Watz**	**62.20**	**201**	⇑*i*	**P**	**17 48 22.0**	**+11**
GYA	**Guiyang**	**62.41**	**37**	⇑*i*P	**P**	**17 48 13.1**	**+0.3**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.3						
VNA1	**Neumayer--Stat**	**62.48**	**202**	P	**P**	**17 48 18.1**	**+5.5**
VNA3	**Neumayer Olymp**	**62.96**	**201**	⇑*i*P	**P**	**17 48 13.6**	**-2.1**
VNA3	**Neumayer Olymp**	**62.96**	**201**		**P**	**17 48 18.4**	**+2.6**
VNA3	**Neumayer Olymp**	**62.96**	**201**	⇑*i*	**P**	**17 48 29.2**	**+13**
QSPA	**South Pole Qui**	**64.78**	**180**	*e*P	**P**	**17 48 27.5**	**-0.1**
	comp=Z,12nm,1.2s,mb4.8						
VNDA	**Vanda**	**65.82**	**166**	*e*P	**P**	**17 48 33.9**	**-0.3**
	comp=Z,12nm,1.1s,mb4.8						
VNDA	**Vanda**	**65.82**	**166**	*e*P	**P**	**17 48 33.9**	**-0.3**
VNDA				pmax	pmax		
	comp=Z,12nm,1.1s						
AAK	**Ala-Archa**	**67.76**	**3**	*e*P	**P**	**17 48 46.2**	**-0.9**
	comp=Z,24nm,1.6s,mb5.0						
AAK	**Ala-Archa**	**67.76**	**3**	*e*P	**P**	**17 48 46.2**	**-0.9**
AAK				pmax	pmax		
	comp=Z,24µm,1.6s						
LZH	**Lanzhou**	**68.90**	**29**	*e*P	**P**	**17 48 55.0**	**+0.7**
LZH				AP	pP	17 49 00.9	+3.5
LZH				XP	sP	17 49 03.0	+4.5
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,60nm,4.0s						
GNI	**Garni**	**69.32**	**339**	*e*P	**P**	**17 48 57.2**	**+0.4**
	comp=Z,13nm,1.1s,mb4.8						
GNI	**Garni**	**69.32**	**339**	*e*P	**P**	**17 48 57.2**	**+0.4**
GNI				pmax	pmax		
	comp=Z,13nm,1.1s						
WHN	**Wuhan**	**69.87**	**40**	*e*P	**P**	**17 49 01.0**	**+0.7**
GTA	**Gaotai**	**70.13**	**24**	*e*P	**P**	**17 49 02.1**	**+0.3**
GTA				AP	pP	17 49 08.8	+3.9
GTA				XP	sP	17 49 12.3	+6.3
WMQ	**Urumqi**	**70.69**	**13**	P	**P**	**17 49 05.0**	**-0.1**
MKAR	**Makanchi Array**	**72.64**	**9**	P	**P**	**17 49 15.7**	**-1.0**
	comp=Z,4.2nm,0.8s,mb4.4,baz=195,slow=5.9,SNR=18						
MKAR				LR	LR	18 20 02.9	
	comp=Z,113nm,18.4s,MS4.2,baz=251,slow=35						
MKAR	**Makanchi Array**	**72.64**	**9**	*i* P	**P**	**17 49 15.6**	**-1.1**
MKAR				pmax	pmax		
	comp=Z,4µm,0.8s						
BR131	**Keskin Array S**	**73.14**	**331**	*e*P	**P**	**17 49 18.7**	**-1.1**
	comp=Z,4.3nm,0.3s,mb4.9						
BRTR	**Keskin Array B**	**73.14**	**331**	P	**P**	**17 49 19.1**	**-0.7**
	comp=Z,2.9nm,0.9s,mb4.2,baz=143,slow=6.2,SNR=11						
KIV	**Kislovodsk**	**73.41**	**340**	*e*P	**P**	**17 49 18.3**	**-3.0**
KIV				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
ESKT	**Eskisehir**	**74.22**	**329**	*i* P	**P**	**17 49 23.6**	**-2.4**
ESKT				*i* S	PcP	17 49 42.1	+0.8
AB31	**Akbulak array**	**74.82**	**353**	*i* P	**P**	**17 49 28.2**	**-1.1**
AB31				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
KURK	**Kurchatov**	**76.09**	**6**	*e*P	**P**	**17 49 36.2**	**-0.4**
	comp=Z,24nm,1.3s,mb5.0						
KURK	**Kurchatov**	**76.09**	**6**	*e*P	**P**	**17 49 36.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,24µm,1.3s						
AKTK	**Aktyubinsk**	**76.20**	**352**	P	**P**	**17 49 36.2**	**-0.9**
AKTO	**Aktyubinsk**	**76.20**	**352**	P	**P**	**17 49 36.2**	**-0.9**
	comp=Z,3.1nm,0.8s,mb4.3,baz=116,slow=3.3,SNR=13						
BVA0	**Borovoye Array**	**78.04**	**0**	*i* P	**P**	**17 49 45.7**	**-1.6**
BVA0				pmax	pmax		
	comp=Z,6.0nm,2.3s,mb4.1						
DBIC	**Dimbokro**	**79.42**	**283**	P	**P**	**17 49 54.4**	**-1.2**
	comp=Z,2.7nm,0.9s,mb4.2,baz=112,slow=5.4,SNR=3.0						
DBIC	**Dimbokro**	**79.42**	**283**	P	**P**	**17 49 54.4**	**-1.2**
SONM	**Songino Array**	**79.81**	**24**	P	**P**	**17 49 57.4**	**+0.4**
	comp=Z,3.3nm,1.0s,mb4.2,baz=215,slow=5.4,SNR=18						
SONM				LR	LR	18 24 03.1	
	comp=Z,125nm,18.8s,MS4.3,baz=194,slow=35						
CFR	**Carcaliu**	**79.94**	**331**	⇓P	**P**	**17 49 56.0**	**-1.8**
ZAL	**Zalesovo**	**79.97**	**9**	P	**P**	**17 49 57.5**	**-0.3**
	comp=Z,1.6nm,0.8s,mb4.0,baz=255,slow=5.5,SNR=9.4						
ULN	**Ulaanbaatar**	**80.08**	**24**	*e*P	**P**	**17 49 59.0**	**+0.5**
	comp=Z,19nm,1.3s,mb4.9						
ULN	**Ulaanbaatar**	**80.08**	**24**	*e*P	**P**	**17 49 59.0**	**+0.5**
ULN				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.9						
NVS	**Novosibirsk**	**80.65**	**8**	*e*P	**P**	**17 50 00.0**	**-1.4**
NVS				pmax	pmax		
	comp=Z,34µm,2.1s						
VRI	**Vrincioaia**	**81.09**	**331**	⇓P	**P**	**17 50 04.8**	**+0.9**
MLR	**Muntele Rosu**	**81.15**	**330**	⇓P	**P**	**17 50 05.2**	**+1.0**
VOIR		**81.52**	**330**	⇑P	**P**	**17 50 08.3**	**+2.2**
ARU	**Arti**	**82.04**	**354**	*e*P	**P**	**17 50 09.2**	**+0.6**
	comp=Z,30nm,1.4s,mb5.0						
ARU	**Arti**	**82.04**	**354**	⇓*i*P	**P**	**17 50 08.8**	**+0.2**
ARU				*e*		17 53 15.8	
ARU				*e*PPP	PPP	17 55 06.0	-4.7
ARU				*e*S	S	18 00 19.8	-1.8
ARU				*e*SS	SS	18 05 37.1	-6.9
ARU				pmax	pmax		
	comp=Z,20nm,1.4s,mb4.8						
SVE	**Sverdlovsk**	**82.24**	**355**	*e*P	**P**	**17 50 10.6**	**+1.0**
SVE				*e*	pP	17 50 15.7	+2.9
SVE				pmax	pmax		
	comp=Z,64nm,2.5s,mb5.1						
BURAR	**Bucovina Array**	**83.11**	**331**	⇓P	**P**	**17 50 19.0**	**+4.7**
AKASG	**Malin Array Be**	**83.90**	**335**	P	**P**	**17 50 17.7**	**-0.6**
	comp=Z,2.6nm,0.8s,mb4.4,baz=136,slow=4.5,SNR=14						
OBN	**Obninsk**	**85.14**	**341**	*e*P	**P**	**17 50 23.7**	**-0.7**
OBN				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.0						
KOLS	**Kolonicke sedl**	**85.39**	**331**	*e*P	**P**	**17 50 26.0**	**+0.2**
CRVS	**Cervenica-Dubn**	**85.73**	**330**	*e*P	**P**	**17 50 27.2**	**-0.3**
CRVS				*e*sP	sP	17 50 34.3	+2.6
KECS	**Kecovo**	**85.87**	**329**	*e*sP	sP	17 50 34.3	+1.9
STHS	**Stebnicka Huta**	**86.21**	**330**	*e*sP	sP	17 50 37.0	+2.9
VYHS	**Vyhne**	**86.65**	**329**	*e*P	**P**	**17 50 32.6**	**+0.6**
VYHS				*e*sP	sP	17 50 38.7	+2.4
OJC	**Ojcow**	**87.43**	**330**	⇑*i*P	**P**	**17 50 36.4**	**+0.6**
OJC				*e*PcP	PcP	17 50 42.4	+4.2
OKC	**Ostrava-Krasne**	**87.91**	**329**	*e*P	**P**	**17 50 37.8**	**-0.3**
MORC	**Moravsky Berou**	**88.15**	**329**	*e*P	**P**	**17 50 39.4**	**+0.2**
	comp=Z,11nm,1.1s,mb5.0						
MORC	**Moravsky Berou**	**88.15**	**329**	*e*P	**P**	**17 50 39.4**	**+0.2**
MORC				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.0						
MAT	**Matsushiro**	**88.87**	**48**	P	**P**	**17 50 50.0**	**+7.0**
MJAR	**Matsushiro Arr**	**88.87**	**48**	LR	LR	18 30 26.8	
	comp=Z,130nm,18.3s,MS4.4,baz=235,slow=36						
DPC	**Dobruska-Polom**	**89.12**	**329**	*e*P	**P**	**17 50 44.4**	**+0.6**
DPC				*e*pP	pP	17 50 50.9	+3.8
UPC	**Upice**	**89.37**	**329**	*e*P	**P**	**17 50 45.6**	**+0.6**
UPC				*e*pP	pP	17 50 51.6	+3.4
GERES	**GERESS Array B**	**89.38**	**327**	P	**P**	**17 50 45.6**	**+0.5**
	comp=Z,0.3nm,0.5s,mb3.9,baz=153,slow=4.4,SNR=4.0						
KLMR	**Klimovskoe**	**89.43**	**346**	*c i*P	**P**	**17 50 45.5**	**+0.5**
KLMR				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.6						
KHC	**Kasperske Hory**	**89.62**	**327**	*e*P	**P**	**17 50 45.8**	**-0.5**
KHC				*e*pP	pP	17 50 52.4	+2.9
PRU	**Pruhonice**	**89.72**	**328**	*e*P	**P**	**17 50 47.3**	**+0.6**
PRU				*e*pP	pP	17 50 53.5	+3.6
NKC	**Novy Kostel**	**90.90**	**327**	*e*P	**P**	**17 50 53.0**	**+0.9**
NKC				*e*pP	pP	17 50 58.8	+3.5
MDT	**Midelt**	**91.67**	**306**	P	**P**	**17 50 57.7**	**+1.5**
	comp=Z,1.1nm,0.6s,mb4.3,baz=90,slow=5.1,SNR=2.9						
FRNY	**Flat Rock**	**144.90**	**313**	*e*PKPdf	PKPdf	17 57 24.7	-2.7
FRNY				*e*		17 57 31.4	
MIV	**Mineville/With**	**145.13**	**312**	*e*PKPdf	PKPdf	17 57 25.7	-2.1

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*FUNV **23** 17:50:47.8, 6.72N×73.10W, h3^{km}, MW3.5*

*BJI **23** 17:50:51.4, 6.80N×72.90W, h165^{km}, mB4.9*

*NEIC **23** 17:50:51.5±0.2, 6.78N×72.88W, mb4.6/31, Error ellipse: s-maj=6.2km s-min=4.1km az=60.0*

*IDC **23** 17:50:51.2±0.6, 6.74N×72.93W, h157^{km}±6^{km}, mb4.1/13, mb1 4.4/17, mb1mx4.1/25, mbtmp4.7/17, Error ellipse: s-maj=10.6km s-min=6.8km az=121.0*

ISC 23 17:50:50.5±0.4**, 6.82N**±0.03×**72.88W**±0.03**, h164^{km}**±4^{km}**, h161^{km}**±.6^{km}**:pP-P, n114,** $\sigma 0^{s}$**85**/122**, mb4.5**/41**, 9C-4D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.42**	**217**	P	**P**	**17 51 31.9**	**-0.1**
	416nm,0.3s,baz=86,slow=16,SNR=430						
ROSC				S	**S**	**17 52 02.4**	**-1.4**
	692nm,0.3s,baz=96,slow=23,SNR=17						
SDV	**Santo Domingo**	**3.03**	**47**	P	**P**	**17 51 41.6**	**+2.1**
	348nm,0.3s,baz=237,slow=4.9,SNR=1862						
SDV				S	**S**	**17 52 18.6**	**+1.6**
	454nm,0.3s,baz=254,slow=16,SNR=18						
SDV	**Santo Domingo**	**3.03**	**47**	*e*P	**P**	**17 51 41.0**	**+1.6**
SDV				*e*S	**S**	**17 52 18.3**	**+1.3**
VIRV	**Villa del Rosa**	**3.69**	**7**	⇓*i*P	**P**	**17 51 47.2**	**-0.8**
VIRV				*e*S	**S**	**17 52 29.2**	**-3.0**
QARV	**Quebrada Arrib**	**4.10**	**35**	*e*S	**S**	**17 52 40.3**	**-1.1**
SANV	**Sanarito**	**4.25**	**51**	*e*S	**S**	**17 52 45.7**	**+0.7**
CURV	**Curarigua**	**4.29**	**42**	*e*S	**S**	**17 52 45.5**	**-0.5**
SIQV	**Siquisique**	**4.87**	**38**	⇓*i*P	**P**	**17 52 04.1**	**+0.9**
SIQV				*e*S	**S**	**17 52 59.6**	**+0.1**
BAUV	**El Baul**	**5.24**	**66**	⇓*i*P	**P**	**17 52 08.3**	**+0.2**
BAUV				*e*S	**S**	**17 53 07.6**	**-0.6**
IMOV	**Isla Los Monje**	**5.84**	**19**	*e*P	**P**	**17 52 15.5**	**-0.6**
MONV	**Montecano**	**5.86**	**29**	*e*P	**P**	**17 52 16.1**	**-0.1**
MONV				*e*S	**S**	**17 53 21.8**	**-1.1**
TURV	**Turiamo**	**6.15**	**54**	*e*P	**P**	**17 52 20.7**	**+0.5**
TURV				*e*S	**S**	**17 53 29.8**	**-0.2**
POTV	**Potrerito**	**6.23**	**59**	*e*P	**P**	**17 52 21.7**	**+0.5**
CAOV	**Caicara del Or**	**6.53**	**85**	*e*P	**P**	**17 52 25.7**	**+0.5**
CAOV				*e*S	**S**	**17 53 38.3**	**-0.6**
INTV	**Intevep**	**6.77**	**58**	*e*P	**P**	**17 52 29.6**	**+1.1**
INTV				*e*S	**S**	**17 53 44.5**	**-0.1**
IVIV	**IVIC**	**6.84**	**58**	*e*P	**P**	**17 52 30.3**	**+0.9**
IVIV				*e*S	**S**	**17 53 45.7**	**-0.6**
OCUV	**OCUMARITO**	**6.85**	**61**	*e*P	**P**	**17 52 30.1**	**+0.6**
OCUV				*e*P		17 52 30.1	
OCUV				*e*S	**S**	**17 53 45.5**	**-1.0**
FDCV	**FORTIN DE LA C**	**6.93**	**57**	*e*P	**P**	**17 52 31.2**	**+0.7**
FDCV				*e*S	**S**	**17 53 47.7**	**-0.8**
MERV	**Las Mercedes**	**6.95**	**69**	*e*P	**P**	**17 52 31.3**	**+0.4**
FUNV	**FUNVISIS**	**7.01**	**58**	*e*P	**P**	**17 52 32.6**	**+0.9**
FUNV				*e*S	**S**	**17 53 50.0**	**-0.5**
LLAV	**El Llanito**	**7.01**	**58**	*e*P	**P**	**17 52 32.4**	**+0.7**
LLAV				*e*S	**S**	**17 53 50.1**	**-0.3**
BIRV	**Birongo**	**7.48**	**60**	*e*P	**P**	**17 52 38.1**	**+0.2**
BIRV				*e*S	**S**	**17 54 01.0**	**-0.6**
CUPV	**Cœpira**	**7.72**	**65**	⇓*i*P	**P**	**17 52 41.5**	**+0.4**
CUPV				*e*S	**S**	**17 54 06.8**	**-0.5**
ORCV	**Isla La Orchil**	**8.26**	**53**	*e*P	**P**	**17 52 48.0**	**-0.1**
GUNV	**Guanoco**	**10.38**	**71**	*e*P	**P**	**17 53 17.4**	**+1.3**
STH	**Stony Hill**	**11.83**	**341**	⇑*e*P	**P**	**17 53 36.5**	**+1.6**
STH				*e*S	**S**	**17 55 35.5**	**-8.7**
BNJ	**Bonny Gate**	**12.10**	**341**	⇑*e*P	**P**	**17 53 39.8**	**+1.3**
BNJ				*e*S	**S**	**17 55 42.4**	**-8.1**
JTS	**JuntasAbangare**	**12.43**	**287**	P	**P**	**17 53 43.3**	**+0.6**
	1.2nm,0.3s,baz=50,slow=5.9,SNR=7.9						
JTS	**JuntasAbangare**	**12.43**	**287**	*e*P	**P**	**17 53 43.1**	**+0.4**
	107nm,0.8s						
SJG	**San Juan**	**13.00**	**30**	P	**P**	**17 53 50.8**	**+0.7**
	18nm,0.3s,baz=209,slow=11,SNR=26						
SJG	**San Juan**	**13.00**	**30**	*e*P	**P**	**17 53 50.6**	**+0.5**
	55nm,0.4s						
CPD	**Cerro la Pandu**	**13.06**	**31**	*e*P	**P**	**17 53 49.5**	**-1.3**
MTP	**Monte Pirata**	**13.29**	**32**	*e*P	**P**	**17 53 53.5**	**-0.3**
SAML	**Samuel**	**18.40**	**148**	*e*P	**P**	**17 54 55.0**	**-0.8**
	22nm,0.7s						
LPAZ	**La Paz**	**23.43**	**168**	P	**P**	**17 55 46.3**	**+0.3**
	6.8nm,0.8s,mb4.2,baz=356,slow=8.7,SNR=25						
LPAZ	**La Paz**	**23.43**	**168**	*e*P	**P**	**17 55 46.5**	**+0.4**
	9.1nm,0.9s,mb4.2						
SIV	**San Ignacio**	**25.50**	**153**	P	**P**	**17 56 05.0**	**-0.6**
	3.4nm,0.8s,mb4.0,baz=331,slow=9.0,SNR=15						
WVT	**Waverly**	**32.23**	**337**	*e*P	**P**	**17 57 05.2**	**-0.2**
	20nm,0.8s,mb4.9						
BDFB	**Brasilia**	**33.24**	**132**	P	**P**	**17 57 14.8**	**+0.5**
	3.2nm,0.6s,mb4.3,baz=300,slow=11,SNR=5.7						
BAO	**Brasilia Array**	**33.25**	**132**	P	**P**	**17 57 12.0**	**-2.4**
CCM	**Cathedral Cave**	**35.28**	**334**	*e*P	**P**	**17 57 31.2**	**-0.2**
	44nm,0.8s,mb5.1						
TXAR	**Lajitas Array**	**36.64**	**312**	P	**P**	**17 57 42.7**	**-0.3**
	7.7nm,0.6s,mb4.5,baz=129,slow=9.3,SNR=41						
TXAR				PcP	PcP	18 00 02.9	+0.2
	1.8nm,0.8s,baz=127,slow=6.3,SNR=4.4						
TXAR	**Lajitas Array**	**36.64**	**312**	P	**P**	**17 57 42.7**	**-0.3**
TXAR				PcP	PcP	18 00 02.9	+0.2
CFAA	**Coronel Fontan**	**38.46**	**174**	P	**P**	**17 57 56.5**	**-1.7**
	0.2nm,0.5s,mb3.0,baz=328,slow=7.7,SNR=4.6						
AMTX	**Amarillo**	**38.51**	**320**	*e*P	**P**	**17 57 57.8**	**-0.7**
	29nm,0.8s,mb5.0						
GDL2	**Guadalupe Moun**	**38.69**	**315**	*e*P	**P**	**17 57 60.0**	**-0.1**
CPRX	**Cap Rock**	**38.82**	**316**	*e*P	**P**	**17 58 00.5**	**-0.7**
MNTX	**Cornudas Mount**	**39.15**	**313**	*e*P	**P**	**17 58 03.3**	**-0.5**
	17nm,0.7s,mb4.8						
LAZ	**Ladron**	**41.84**	**316**	*e*P	**P**	**17 58 26.8**	**+0.8**
SDCO	**Great Sand Dun**	**42.70**	**321**	*e*P	**P**	**17 58 33.9**	**+1.0**
	13nm,0.9s,mb4.6						
TUC	**Tucson**	**43.43**	**311**	*e*P	**P**	**17 58 39.0**	**+0.2**
	5.7nm,0.8s,mb4.2						
ISCO	**Idaho Springs**	**44.05**	**323**	*e*P	**P**	**17 58 44.6**	**+0.9**
	12nm,0.9s,mb4.5						
ISCO				*e*pP	pP	17 59 20.2	+0.1
WUAZ	**Wupatki**	**45.39**	**315**	*e*P	**P**	**17 58 55.1**	**+0.7**
	32nm,0.9s,mb5.0						
SRU	**San Rafael**	**46.70**	**319**	*e*P	**P**	**17 59 04.9**	**+0.3**
	17nm,1.0s,mb4.6						
PLCA	**Paso Flores**	**47.36**	**178**	P	**P**	**17 59 07.6**	**-2.2**
	2.5nm,0.8s,mb3.9,baz=350,slow=7.8,SNR=3.1						
PLCA	**Paso Flores**	**47.36**	**178**	P	**P**	**17 59 07.6**	**-2.2**
ULM	**Lac du Bonnet**	**47.37**	**340**	P	**P**	**17 59 09.0**	**-0.7**
	12nm,0.5s,mb4.8,baz=138,slow=7.7,SNR=27						
MSU	**Marysvale**	**47.47**	**318**	*e*P	**P**	**17 59 11.3**	**+0.7**
MVU	**Marysvale**	**47.49**	**318**	*e*P	**P**	**17 59 11.7**	**+0.9**
	15nm,0.8s,mb4.7						
DAU	**Daniels Canyon**	**47.89**	**320**	*e*P	**P**	**17 59 14.4**	**+0.5**
NEN	**Nelson**	**47.95**	**313**	*e*P	**P**	**17 59 13.3**	**-1.1**
SCHQ	**Schefferville**	**48.12**	**5**	P	**P**	**17 59 16.4**	**+0.9**
	6.3nm,0.5s,mb4.5,baz=189,slow=6.4,SNR=25						
PDAR	**Pinedale Array**	**48.22**	**324**	P	**P**	**17 59 16.2**	**-0.2**
	5.1nm,0.6s,mb4.3,baz=125,slow=9.0,SNR=45						
TCUT	**Toone Canyon**	**48.38**	**321**	*e*P	**P**	**17 59 17.6**	**0.0**
HWUT	**Hardware Ranch**	**48.75**	**321**	*e*P	**P**	**17 59 20.1**	**-0.4**
	7.3nm,0.6s,mb4.5						
DUG	**Dugway**	**48.77**	**319**	*e*P	**P**	**17 59 20.9**	**+0.3**

	5.1nm,0.6s,mb4.3						
REDW	**Red Top Meadow**	49.34	324	*e*P	P	17 59 24.7	-0.2
	27nm,0.9s,mb4.9						
LOHW	**Long Hollow**	49.34	324	*e*P	P	17 59 25.2	+0.2
	10nm,0.6s,mb4.6						
TPAW	**Teton Pass**	49.47	324	*e*P	P	17 59 25.6	-0.4
	17nm,0.8s,mb4.7						
MOOW	**Moose Ponds**	49.50	324	*e*P	P	17 59 25.9	-0.3
	7.3nm,0.8s,mb4.4						
TPNV	**Topopah Spring**	49.54	314	*e*P	P	17 59 27.1	+0.5
	11nm,1.0s,mb4.4						
HVU	**Hansel Valley**	49.60	321	*e*P	P	17 59 26.4	-0.6
	5.1nm,0.6s,mb4.3						
IMW	**Indian Meadow**	49.70	324	*e*P	P	17 59 27.8	+0.1
	9.0nm,0.6s,mb4.6						
YMR	**Madison River**	50.18	325	*e*P	P	17 59 31.7	+0.3
	5.3nm,0.6s,mb4.3						
ELK	**Elko**	50.64	319	*e*P	P	17 59 33.6	-1.2
	3.7nm,0.7s,mb4.1						
BOZ	**Bozeman (W)**	51.15	326	*e*P	P	17 59 38.3	-0.3
	7.7nm,0.9s,mb4.3						
MCMT	**McKenzie Canyo**	51.36	324	*e*P	P	17 59 41.0	+0.7
HLID	**Hailey**	51.59	322	*e*P	P	17 59 41.9	-0.1
	7.6nm,0.8s,mb4.4						
NVAR	**Mina Array Bea**	51.65	314	P	P	17 59 42.6	+0.1
	3.0nm,0.7s,mb4.0,baz=121,slow=7.7,SNR=24						
NVAR				PcP	PcP	18 00 54.3	+0.4
	0.6nm,0.4s,baz=138,slow=4.9,SNR=6.2						
HRY	**Holter Researc**	51.90	327	*e*P	P	17 59 44.3	0.0
WVOR	**Wild Horse Val**	53.69	319	*e*P	P	17 59 56.9	-0.6
	12nm,0.9s,mb4.6						
OHCM	**Honcut**	54.29	314	*e*P	P	18 00 01.7	-0.2
YBH	**Yreka Blue Hor**	56.11	316	*e*P	P	18 00 12.7	-2.4
	3.5nm,0.5s,mb4.5						
YBH				pP	pP	18 00 50.2	-2.8
KHMM	**Horse Mountain**	56.48	315	*e*P	P	18 00 17.6	0.0
EDM	**Edmonton**	56.74	332	*e*P	P	18 00 17.9	-1.5
KBO	**Bosley Butte**	57.33	316	*e*P	P	18 00 23.6	0.0
KEBM	**Edson Butte**	57.67	317	*e*P	P	18 00 26.1	+0.2
YKA	**Yellowknife Ar**	63.35	340	P	P	18 01 03.4	-0.7
	12nm,0.7s,mb4.8,baz=132,slow=6.5,SNR=52						
YKA	**Yellowknife Ar**	63.35	340	P	P	18 01 03.4	-0.7
DLBC	**Dease Lake**	67.44	331	P	P	18 01 30.8	+0.4
	4.3nm,0.6s,mb4.5,baz=144,slow=8.7,SNR=5.8						
DLBC	**Dease Lake**	67.44	331	P	P	18 01 30.8	+0.4
DBIC	**Dimbokro**	67.50	86	P	P	18 01 31.5	0.0
	1.5nm,0.4s,mb4.2,baz=208,slow=7.6,SNR=7.1						
SUMG	**Summit**	68.95	11	*e*P	P	18 01 40.6	+1.2
	5.6nm,0.6s,mb4.5						
INK	**Inuvik**	73.11	340	*e*P	P	18 02 04.3	0.0
	3.2nm,0.6s,mb4.2						
INK				pP	pP	18 02 43.4	-0.9
ARCES	**ARCESS Array B**	86.59	20	P	P	18 03 15.7	-0.2
	3.3nm,0.8s,mb4.2,baz=333,slow=5.4,SNR=3.7						
VNA3	**Neumayer Olymp**	88.10	163	⇑*i*	P	18 03 23.9	+0.8
VNA3	**Neumayer Olymp**	88.10	163	⇑*i*	P	18 03 25.5	+2.4
VNA1	**Neumayer--Stat**	88.24	162	⇑*i*	P	18 03 25.2	+1.4
VNA1	**Neumayer--Stat**	88.24	162	⇑*i*	P	18 03 26.6	+2.8
VNA2	**Neumayer--Watz**	88.62	163	⇑*i*	P	18 03 26.4	+0.9
VNA2	**Neumayer--Watz**	88.62	163	⇑*i*	P	18 03 28.0	+2.5
SNAA	**Sanae**	90.27	163		P	18 03 32.8	-0.5
SNAA	**Sanae**	90.27	163		P	18 03 35.2	+1.9
MKAR	**Makanchi Array**	122.25	20	PKP	PKPdf	18 09 27.7	+1.7
	0.3nm,0.5s,baz=308,slow=2.4,SNR=11						
SONM	**Songino Array**	125.58	1	PKP	PKPdf	18 09 34.7	+2.2
	0.2nm,0.4s,baz=322,slow=1.5,SNR=6.9						
WMQ	**Urumqi**	126.62	17	*e*PKP	PKPdf	18 09 35.5	+1.0
LZH	**Lanzhou**	137.21	4	*e*PKP	PKPdf	18 09 52.9	-1.8
LZH				XPKP		18 10 53.5	
SSE	**Sheshan**	139.97	341	*e*PKP	PKPdf	18 10 00.0	+0.1
CD2	**Chengdu**	142.35	5	*e*PKP	PKPdf	18 10 04.1	0.0
KMI	**Kunming**	147.97	7	PKP	PKPdf	18 10 15.1	+1.3
ASPA	**Alice Springs**	149.30	234	*e*P	PKPdf	18 10 21.3	+5.3
WB2	**Warramunga Arr**	150.53	241	⇑*i*P	PKPdf	18 10 24.7	+6.8
WRAB	**Tennant Creek**	150.54	241	*e*PKPbc	PKPdf	18 10 24.3	+6.4
WRA	**Warramunga Arr**	150.54	241	PKPbc	PKPdf	18 10 24.3	+6.4
	2.7nm,0.4s,baz=106,slow=3.0,SNR=82						

MAN 23 18:03:31.7, 18.34N×121.90E, h3^{km}, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	0.18	125	*e*P	Pg	18 03 35.8	+0.6
CVP	**Callao Caves**	0.64	186	*e*P	Pg	18 03 45.5	+1.0
APYP	**Conner**	0.78	232	*e*P	Pg	18 03 47.3	0.0
APYP				*e*S	Sg	18 03 59.0	+1.2
ABRA	**Dolores**	1.32	239	*e*P	Pb	18 03 56.0	-0.8
ABRA				*e*S	Sb	18 04 14.2	+0.1
CAUP	**Cauayan**	1.39	183	*e*P	Pb	18 03 58.7	+0.6
CAUP				*e*S	Sb	18 04 20.1	+3.9
BALP	**Baler**	2.61	187	*e*P	Pn	18 04 14.8	-0.6
BALP				*e*S	Sn	18 04 49.5	+1.5

*NEIC **23** 18:24:17.5, 15.95N×96.29W, h60^{km}, MD3.6(MEX), After MEX.*

MEX 23 18:24:17.5±0.9**, 15.95N×96.29W, h60^{km}**±11^{km}**, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	0.25	135	*i* P	P	18 24 26.2	-1.1
HUIG				*i* S	S	18 24 32.4	-2.1
VHO	**Vista Hermosa**	1.19	339	*i* P	P	18 24 37.1	-1.3
VHO				*i* S	S	18 24 51.6	-2.4
OXX	**Oaxaca**	1.20	340	*i* P	P	18 24 36.7	-1.7
OXX				*i* S	S	18 24 51.7	-2.4
CMIG	**Matias Romero**	1.77	50	*i* P	P	18 24 43.7	-2.6
CMIG				*i* S	S	18 25 05.8	-1.9

MAN 23 18:34:00.5, 7.73N×126.76E, h1^{km}, mb4.2, ML3.1, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	0.60	319	⇓*e*P	Pg	18 34 14.1	+1.6
BIPH				*e*S	Sg	18 34 27.1	+6.6
MATI	**Mati**	0.93	213	*e*P	Pg	18 34 18.5	-0.5
MATI				*e*S	Sg	18 34 33.4	+2.0
BUTP	**Butuan**	1.67	318	*e*P	Pn	18 34 31.5	+0.5
BUTP				*e*S	Sb	18 34 56.9	+3.7
BUKP	**Musuan**	1.69	275	*e*P	Pn	18 34 33.6	+2.3
BUKP				*e*S	Sb	18 35 02.5	+8.7
MSLP	**Maasin**	3.04	322	*e*P	Pn	18 34 50.3	-0.3
MSLP				*e*S	Sn	18 35 31.9	+3.8

*ATH **23** 19:15:52.3, 38.21N×26.99E, h31^{km}±7^{km}, MD3.3/5*
*NEIC **23** 19:15:52.3, 38.21N×26.99E, h31^{km}, MD3.4(ISK), MD3.3(ATH), After ATH.*
*ISK **23** 19:15:53.2, 38.16N×26.73E, h16^{km}, MD3.4*
*CSEM **23** 19:15:53.8±0.1, 38.16N×26.76E, h20^{km}, MD3.4, Error ellipse: s-maj=2.9km s-min=1.5km az=73.0*

ISC 23 19:15:52.6±0.7**, 38.13N**±0.03×**26.68E**±0.04**, h8^{km}**±5^{km}**, n35, σ0^{s}82**/44**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	0.24	343	*i* P	Pg	19 15 57.0	-0.5
URLA				*i* S	Sg	19 16 00.3	-0.4
BLCB	**Balcova**	0.38	48	PG	Pg	19 16 01.0	+0.7
SMG	**Samos**	0.44	164	⇑*i*PN	Pn	19 16 03.8	-1.0
SMG				*e*SN	Sn	19 16 11.3	-1.7
IZM	**Izmir**	0.53	60	*i* PG	Pg	19 16 03.4	+0.2
IZM				*i* SG	Sg	19 16 10.6	+0.3
KDAG	**Bornova**	0.53	60	*i* P	Pg	19 16 02.6	-0.7
KDAG				*i* S	Sg	19 16 09.5	-1.0
PRK	**Paraskevi**	1.16	344	*e*PN	Pn	19 16 14.6	-0.4
PRK				*e*SN	Sn	19 16 30.2	-0.9
AKS	**Akhisar**	1.16	50	PN	Pn	19 16 15.0	0.0
AYVA	**Ayvalik**	1.17	0	*i* P	Pb	19 16 15.2	+0.6
AYVA				*i* S	Sb	19 16 32.7	+2.8
BODT	**Bodrum**	1.18	155	*e*PN	Pn	19 16 15.8	+0.4
MLSB	**Milas**	1.21	134	*e*PN	Pn	19 16 15.8	+0.1
APE	**Apeiranthos**	1.40	221	*e*PN	Pn	19 16 19.1	+0.6
APE	**Apeiranthos**	1.40	221	*e*PN	Pn	19 16 19.0	+0.5
APE				*e*SN	Sn	19 16 42.5	+5.2
MANT	**Manisa**	1.52	76	*i* P	Pn	19 16 21.9	+1.7
MANT				*i* S	Sb	19 16 39.4	-0.5
DAT	**Datca**	1.57	153	*e*PN	Pn	19 16 21.4	+0.4
YER	**Yerkesik**	1.62	128	PN	Pn	19 16 21.9	+0.3
EZN	**Ezine**	1.71	351	*e*PN	Pn	19 16 22.4	-0.6
BALB	**Balikesir**	1.77	32	*e*PN	Pn	19 16 23.6	-0.2
DENT	**Denizli**	1.90	101	*e*PN	Pn	19 16 25.7	+0.1
DNZL	**Cakiroluk**	1.92	103	*i* P	Pn	19 16 26.8	+0.9
BTOK	**Tokmak**	1.94	33	*i* P	Pn	19 16 29.9	+3.8
DALT	**Dalyan (Mudla)**	2.07	131	*e*PN	Pn	19 16 28.1	0.0
LIA	**Limnos Island**	2.11	327	*e*PN	Pn	19 16 28.9	+0.2
DST	**Dursunbey**	2.11	45	*e*PN	Pn	19 16 28.6	-0.1
KHL	**Karahalli**	2.25	84	*e*PN	Pn	19 16 30.3	-0.3
GDZ	**Gediz**	2.39	66	*i* P	Pn	19 16 38.0	+5.3
EDC	**Edincik**	2.39	22	*e*PN	Pn	19 16 32.6	-0.1
BNT	**Bandirma**	2.42	23	*e*PN	Pn	19 16 32.3	-0.8
FETY	**Fethiye**	2.43	127	*e*PN	Pn	19 16 33.0	-0.2
MRMT	**Marmara Adasi**	2.57	16	*e*PN	Pn	19 16 35.1	-0.1
ORLT	**Orhaneli**	2.57	41	*e*PN	Pn	19 16 35.2	-0.1
MFT	**Murefte**	2.69	10	*e*PN	Pn	19 16 36.9	-0.1
MGER	**Gerania Oros**	2.70	268	*e*PN	Pn	19 16 38.8	+1.6
ALT	**Altintas**	2.84	70	*e*PN	Pn	19 16 38.7	-0.4
TKTP	**Tekketepe**	2.87	91	*i* P	Pg	19 16 48.6	-1.4
TKTP				*i* S	Sg	19 17 30.3	+2.1
ELL	**Elmali**	2.92	117	*e*PN	Pn	19 16 40.1	-0.1

*NDI **23** 19:32:25.3±3.0, 34.38N×73.43E, h10^{km}, MD3.5, ML3.3*
*NNC **23** 19:32:34.6±5.2, 34.94N×72.88E, mpv3.7, Error ellipse: s-maj=67.2km s-min=40.9km az=116.0*

ISC 23 19:32:23.3±0.7**, 34.31N**±0.05×**73.84E**±0.10**, h10^{km}, n17, σ1^{s}19**/28**, 5C-2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	2.44	140	*e*P	Pg	19 33 10.4	-1.7
THN				*e*SB	Sg	19 33 47.5	+2.9
BHK	**Bhakra**	3.61	142	*e*SB	Sg	19 34 23.0	-0.4
SDNR	**Sundarnagar**	3.84	136	*e*P	Pn	19 33 28.8	+5.0
SDNR				*e*S	Sn	19 34 14.8	+5.2
KLP	**Kalpa**	4.62	126	*e*P	Pn	19 33 40.0	+5.0
KLP				*e*S	Sn	19 34 35.5	+6.2
KLP				AML	AML	19 34 57.5	
	comp=E,360nm,0.4s						
KLP				AML	AML	19 34 59.5	
	comp=N,256nm,0.5s						
KHET	**Khetri**	6.44	164	*e*P	Pn	19 34 00.8	+0.3
KHET				*e*S	Sn	19 35 12.6	-2.3
KHET				AML	AML	19 35 52.9	
	comp=E,18nm,0.3s						
KHET				AML	AML	19 35 53.9	
	comp=N,12nm,0.4s						
KUDL	**Kundal**	6.55	159	*e*P	Pn	19 34 03.5	+1.4
KUDL				*e*S	Sn	19 35 17.1	-0.5
SONA	**Sohna**	6.64	154	*e*P	Pn	19 34 05.1	+1.6
SONA				*e*S	Sn	19 35 20.6	+0.6
SONA				AML	AML	19 35 31.0	
	comp=N,12nm,0.5s						
SONA				AML	AML	19 35 31.1	
	comp=E,16nm,0.4s						
AAK	**Ala-Archa**	8.33	3	⇑Pn	P	19 34 29.4	+2.4
	comp=E,1.8nm,0.7s						
AAK				⇑Sn	Sn	19 36 01.7	-0.4
	comp=E,4.0nm,1.1s						
KK31	**Karatay Array**	9.16	344	⇓Pn	P	19 34 39.4	+0.9
	comp=E,3.4nm,0.5s,baz=156,slow=12,SNR=100						
KK31				⇑Sn	Sn	19 36 16.6	-6.1
	comp=E,1.4nm,0.3s,baz=144,slow=23,SNR=6.8						
KOLN	**Koldanda**	10.60	125	*e*P	P	19 34 58.5	+0.1
	comp=E,9.1nm,0.4s						
KOLN				*e*S	S	19 36 57.4	-0.9
GKN	**Gorkha**	11.18	121	*e*P	P	19 35 06.3	+0.1
	comp=E,16nm,0.4s						
GKN				*e*S	S	19 37 08.7	-3.6
DMN	**Daman**	11.74	122	*e*P	P	19 35 13.7	-0.3
	comp=E,12nm,0.3s						
KKN	**Kakani**	11.76	120	*e*P	P	19 35 13.6	-0.6
	comp=E,20nm,0.5s						
PKI	**Pulchoki**	11.98	121	*e*P	P	19 35 16.6	-0.6
	comp=E,18nm,0.3s						
GUN	**Gumba**	12.12	118	*e*P	P	19 35 19.0	-0.1
	comp=E,11nm,0.4s						
AB31	**Akbulak array**	18.13	330	⇑P	P	19 36 36.4	-0.4
	comp=E,0.7nm,0.4s,baz=271,slow=21,SNR=29						
AB31				⇓S	S	19 39 49.8	-6.6
	comp=E,1.4nm,0.8s						
AKTO	**Aktyubinsk**	19.84	329	⇑P	P	19 36 56.4	-0.6
	comp=E,0.6nm,0.5s						

*ORF **23** 19:32:27.5, 46.79N×149.77E, h30^{km}, mb5.8*
*SKO **23** 19:33:41.3, 50.10N×147.67E, h600^{km}*
*BJI **23** 19:33:43.6, 50.02N×147.66E, h621^{km}, mB5.4, mb6.3*
*MOS **23** 19:33:43.6±0.7, 50.10N×147.74E, h624^{km}, mb5.4/123, Error ellipse: s-maj=6.6km s-min=3.3km az=102.8*
*SKHL **23** 19:33:44.2±1.9, 50.05N×147.84E, h577^{km}±20^{km}, mb6.2/10, mbh6.2/6, Ms4.8/3, msh6.0/12*
*INMG **23** 19:33:44.4, 50.04N×147.70E, h622^{km}, MW5.6*
*BGS **23** 19:33:45.4, 50.26N×148.78E, h632^{km}, mb5.2*
*HRVD **23** 19:33:45.3±0.2, 50.04N×147.79E, h639^{km}±2^{km}, MW5.5/67, Centroid moment Tensor Solution. LP body waves: s67,c126; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.72±.05; $M_{\theta\theta}$0.15±.09; $M_{\phi\phi}$-1.87±.08; $M_{r\theta}$0.40±.09; $M_{\theta\phi}$0.26±.07; $M_{\phi r}$-1.75±.08; Best double couple: $M_0$2.55×10^{17} NP1:ϕ_s358°, δ23°, λ98°. NP2:ϕ_s169°, δ67°, λ87°. Principal axes: T 2.464, Plg67°, Azm72°; N .174, Plg3°, Azm170°; P -2.637, Plg22°, Azm261°; nsta1 refers to body waves, cutoff=40s.*
*IDC **23** 19:33:45.0±0.4, 50.06N×147.74E, h630^{km}±3^{km}, mb5.1/26, mb1 5.2/29, mb1mx5.2/29, mbtmp6.2/29 Error ellipse: s-maj=6.9km s-min=5.1km az=114.0*
*NEIC **23** 19:33:45.3±0.1, 50.07N×147.70E, mb5.4/234, MW5.5, Error ellipse: s-maj=2.8km s-min=2.2km az=172.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17} Nm; M_{rr}1.71; $M_{\theta\theta}$-0.01; $M_{\phi\phi}$-1.70; $M_{r\theta}$0.93; $M_{\theta\phi}$0.38; $M_{\phi r}$-1.56; Best double couple: $M_0$2.5×10^{17} NP1:ϕ_s1°, δ24°, λ114°. NP2:ϕ_s155°, δ68°, λ80°. Principal axes: T 2.53, Plg65°, Azm47°; N -.03, Plg10°, Azm158°; P -2.51, Plg23°, Azm253°;*

ISC 23 19:33:44.0±0.1**, 50.07N**±0.02×**147.71E**±0.03**, h629^{km}, h629^{km}**±1.2^{km}**:pP-P, n1182, σ0^{s}80**/1156**, mb5.5**/333**, 336C-62D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TYV	**Tymovskoe**	3.33	286	*e*P	P	19 35 02.5	-5.2
TYV				AMB	AMB	19 35 14.5	
	2µm,1.0s						
TYV				⇓*i*S	S	19 36 10.0	-4.2
TYV				A		19 36 11.0	
	20µm,4.0s						
TYV				A		19 36 11.0	
	18µm,4.0s						
TYV				AMS	AMS	19 37 24.0	
	2µm,6.0s						
UGL	**Uglegorsk**	3.81	257	*i* P	P	19 35 11.0	+0.3
UGL				*i* P		19 35 11.0	
UGL				AMB	AMB	19 35 12.0	
	4µm,1.0s						
UGL				AMB	AMB	19 35 12.0	
	9µm,1.0s						
UGL				AMB	AMB	19 35 12.0	
	28µm,1.0s						
UGL				AMB	AMB	19 35 12.0	
	2µm,0.7s						
UGL				AMB	AMB	19 35 12.0	
	640nm,0.7s						
UGL				AMB	AMB	19 35 12.0	
	14µm,0.7s						
UGL				AMB	AMB	19 35 13.5	
	7µm,0.8s						
UGL				AMB	AMB	19 35 13.5	
	8µm,0.8s						
UGL				AMB	AMB	19 35 13.5	
	11µm,0.8s						
UGL				A		19 36 24.0	
	980nm,1.0s						
UGL				A		19 36 24.0	
	6µm,1.0s						
UGL				A		19 36 25.0	
	33µm,4.0s						
UGL				A		19 36 25.0	
	14µm,4.0s						
UGL				A		19 36 25.0	
	4µm,2.0s						
UGL	**Uglegorsk**	3.81	257α	*i*P	P	19 35 11.0	+0.3
UGL				*i* S	S	19 36 21.7	+2.2
UGL				pmax	pmax		
	comp=N,4µm,1.0s						
UGL				pmax	pmax		
	comp=E,9µm,1.0s						
UGL				pmax	pmax		
	comp=Z,28µm,1.0s						
UGL				pmax	pmax		
	comp=N,2µm,0.8s						
UGL				pmax	pmax		
	comp=Z,1µm,0.8s						
UGL				pmax	pmax		
	comp=E,640nm,0.6s						
UGL				smax			
	comp=N,980nm,0.8s						
UGL				smax			
	comp=E,6µm,1.3s						
UGL				smax			
	comp=N,4µm,1.5s						
UGL				smax			
	comp=E,33µm,4.0s						
UGL				smax			
	comp=Z,14µm,3.0s						
YSS	**Yuzh-Sakhalins**	4.53	229	*i* P	P	19 35 15.9	+0.3
YSS				*i* P		19 35 15.9	
YSS				⇑*i*P		19 35 15.9	
YSS				AMB	AMB	19 35 16.9	
	comp=Z,5µm,0.8s						
YSS				AMB	AMB	19 35 16.9	
	comp=Z,6µm,0.8s						
YSS				AMB	AMB	19 35 16.9	
	comp=Z,12µm,0.8s						
YSS				AMB	AMB	19 35 16.9	
	comp=Z,4µm,1.0s						
YSS				AMB	AMB	19 35 16.9	
	comp=Z,7µm,1.0s						
YSS				AMB	AMB	19 35 16.9	
	comp=Z,6µm,1.0s						
YSS				A		19 36 31.0	
	comp=Z,43µm,2.0s						
YSS				A		19 36 31.0	
	comp=Z,31µm,2.0s						
YSS				A		19 36 31.0	
	comp=Z,35µm,2.0s						
YSS				A		19 36 31.0	
	comp=Z,24µm,2.0s						
YSS				A		19 36 31.8	
	comp=Z,11µm,1.1s						
YSS				A		19 36 31.8	
	comp=Z,7µm,1.1s						
YSS				A		19 36 32.2	
	comp=Z,25µm,1.5s						
YSS	**Yuzh-Sakhalins**	4.53	229	⇑*i*P	P	19 35 16.1	+0.6
YSS				*e*S	S	19 36 30.7	+2.3
YSS	**Yuzh-Sakhalins**	4.53	229	⇑*i*P	P	19 35 16.2	+0.6
YSS				*i* S	S	19 36 29.4	+1.0
YSS				pmax	pmax		
	comp=Z,9µm,1.0s						
YSS				pmax	pmax		
	comp=Z,12µm,0.7s						
OKH	**Okha**	4.58	321	⇑*i*P	P	19 35 14.0	-1.9
OKH				AMB	AMB	19 35 14.2	
	comp=Z,23µm,6.0s						
OKH				⇑*i*P		19 35 14.3	
OKH				AMB	AMB	19 35 15.2	
	comp=Z,11µm,0.5s						
OKH				⇑*i*S	S	19 36 29.8	+0.8
OKH				A		19 36 30.6	
	comp=Z,6µm,1.0s						
OKH				A		19 36 31.6	
	comp=Z,47µm,5.0s						
OKH				A		19 36 31.6	
	comp=Z,23µm,5.0s						
OKH	**Okha**	4.58	321	*i* P	P	19 35 14.0	-1.9
OKH				*i* S	S	19 36 29.8	+0.8
OKH				pmax	pmax		
	comp=Z,23µm,6.0s						
OKH				smax			
	comp=N,47nm,5.0s						
KUR	**Kuril'sk**	4.84	179	*i* P	P	19 35 12.4	-5.3
KUR				*i* P		19 35 12.4	
KUR				AMB	AMB	19 35 13.8	
	comp=N,640nm,1.0s						
KUR				AMB	AMB	19 35 13.8	
	comp=N,750nm,1.0s						
KUR				AMB	AMB	19 35 13.8	
	comp=N,3µm,1.0s						
KUR				AMB	AMB	19 35 14.0	
	comp=N,12µm,2.0s						
KUR				*i* S	S	19 36 27.0	-5.4
KUR				A		19 36 30.0	
	comp=N,15µm,2.0s						
KUR				A		19 36 30.0	
	comp=N,25µm,2.0s						
KUR				A		19 36 30.0	
	comp=N,25µm,3.0s						
KUR				A		19 36 30.0	
	comp=N,28µm,3.0s						
KUR				A		19 36 30.0	
	comp=N,3µm,1.2s						
KUR				A		19 36 30.0	
	comp=N,6µm,1.2s						
NKL	**Nikolayevsk**	5.36	308	*i* P	P	19 35 18.0	-3.8
NKL				AMB	AMB	19 35 19.0	
	comp=N,4µm,2.0s						
NKL				AMB	AMB	19 35 19.0	
	comp=N,10µm,2.0s						
NKL				AMB	AMB	19 35 20.5	
	comp=N,1µm,1.0s						
NKL				AMB	AMB	19 35 20.5	
	comp=N,660nm,1.0s						
NKL				AMB	AMB	19 35 20.5	
	comp=N,5µm,1.0s						
NKL				*i* S	S	19 36 38.0	-1.6
NKL				A		19 36 39.5	
	comp=N,12µm,9.0s						
NKL				A		19 36 39.5	
	comp=N,16µm,4.0s						
NKL				A		19 36 39.5	
	comp=N,4µm,1.0s						
NKL				A		19 36 39.5	
	comp=N,1µm,1.0s						
NKL				AMS	AMS	19 37 21.0	
	comp=N,4µm,5.0s						
NKL				AMS	AMS	19 37 21.0	
	comp=N,2µm,5.0s						
NKL				AMS	AMS	19 37 21.0	
	comp=N,2µm,5.0s						
SKR	**Severo-Kuril's**	5.41	80	*i* P	P	19 35 16.5	-5.7
SKR				*i* P		19 35 16.5	
SKR				*i* P		19 35 16.5	
SKR				AMB	AMB	19 35 18.0	
	comp=N,5µm,2.0s						
SKR				AMB	AMB	19 35 18.0	
	comp=N,11µm,2.0s						
SKR				AMB	AMB	19 35 18.0	
	comp=N,4µm,2.0s						
SKR				AMB	AMB	19 35 18.0	
	comp=N,10µm,2.0s						
SKR				AMB	AMB	19 35 18.0	
	comp=N,390nm,0.5s						
SKR				AMB	AMB	19 35 18.0	
	comp=N,290nm,0.5s						
SKR				AMB	AMB	19 35 18.0	
	comp=N,1µm,0.5s						
SKR				*i* S	S	19 36 27.9	-12
SKR				A		19 36 39.0	
	comp=N,2µm,0.9s						
SKR				A		19 36 39.0	
	comp=N,1µm,0.9s						
SKR				A		19 36 39.0	
	comp=N,430nm,0.9s						
SKR				A		19 36 39.0	
	comp=N,7µm,5.0s						
SKR				A		19 36 39.0	
	comp=N,10µm,5.0s						
SKR				A		19 36 39.0	
	comp=N,3µm,5.0s						
SKR				A		19 36 39.0	
	comp=N,8µm,5.0s						
SKR				A		19 36 39.0	
	comp=N,10µm,5.0s						
SKR				A		19 36 39.0	
	comp=N,4µm,5.0s						
SKR				AMS	AMS	19 38 18.0	

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             comp=N,3µm,16.0s
YUK    Yuzh-Kuril'sk        6.16 193  eP     P       19 35 23.0  -5.3
YUK                                    AMB    AMB     19 35 26.5
             comp=N,360nm,0.3s
YUK                                    AMB    AMB     19 35 26.5
             comp=N,1µm,0.3s
YUK                                    AMB    AMB     19 35 27.5
             comp=N,5µm,1.6s
YUK                                  i S      S       19 36 46.0  -5.3
YUK                                    A              19 36 48.0
             comp=N,16µm,3.0s
YUK                                    A              19 36 48.0
             comp=N,11µm,3.0s
YUK                                    A              19 36 59.7
             comp=N,2µm,0.5s
YUK                                    A              19 36 59.7
             comp=N,2µm,0.5s
YUK    Yuzh-Kuril'sk        6.16 193  eP     P       19 35 23.0  -5.3
YUK                                  i S      S       19 36 46.0  -5.3
YUK                                    pmax   pmax
             comp=N,360nm,0.3s
YUK                                    pmax   pmax
             comp=E,360nm,0.3s
YUK                                    pmax   pmax
             comp=Z,1µm,0.3s
YUK                                    pmax   pmax
             comp=Z,5µm,1.6s
YUK                                    smax
             comp=N,16µm,3.0s
YUK                                    smax
             comp=E,11µm,3.0s
YUK                                    smax
             comp=N,2µm,0.5s
YUK                                    smax
             comp=E,2µm,0.4s
ASAJ   Asahikawa            6.90 212   P      P       19 35 33.0  -1.7
             comp=E,46nm,0.3s,baz=28,slow=5.0,SNR=146
ASAJ                                   S      S       19 37 01.6  -1.2
             comp=E,8.6nm,0.3s,baz=215,slow=32,SNR=6.8
ASAJ                                   PcP    PcP     19 41 06.7  -0.8
             comp=E,1.8nm,0.3s,baz=351,slow=6.6,SNR=3.3
ASAJ                                   ScP            19 43 39.2
             comp=E,1.5nm,0.3s,baz=245,slow=6.0,SNR=10
ASAJ   Asahikawa            6.90 212   P      P       19 35 32.8  -1.8
GRNR   Gornyy               7.25 280  eP      P       19 35 30.1  -7.6
GRNR                                   AMB    AMB     19 35 31.2
             comp=E,200nm,0.8s
GRNR                                   AMB    AMB     19 35 31.2
             comp=E,480nm,0.8s
GRNR                                   AMB    AMB     19 35 31.2
             comp=E,210nm,0.8s
GRNR                                  eS      S       19 37 00.0  -8.4
GRNR                                   A              19 37 01.2
             comp=E,1µm,0.8s
GRNR                                   A              19 37 01.2
             comp=E,1µm,0.8s
GRNR                                   A              19 37 01.2
             comp=E,530nm,0.8s
GRNR                                   A              19 37 03.5
             comp=E,26nm,1.0s
PET    Petropavlovsk        7.44  62⇓iP      P       19 35 37.2  -2.2
PET                                    AMB    AMB     19 35 37.7
             comp=E,1µm,0.7s
PET                                    AMB    AMB     19 35 38.3
             comp=E,4µm,2.6s
PET                                    AMB    AMB     19 35 38.3
             comp=E,5µm,2.6s
PET                                    AMB    AMB     19 35 38.3
             comp=E,12µm,2.6s
PET                                  i S      S       19 37 07.1  -4.4
PET                                    A              19 37 09.4
             comp=E,3µm,4.8s
PET                                    A              19 37 14.4
             comp=E,1µm,14.0s
PET                                    A              19 37 30.2
             comp=E,1µm,20.0s
PET                                    AMS    AMS     19 39 17.3
             comp=E,400nm,20.0s
PET    Petropavlovsk        7.44  62⇓iP      P       19 35 37.2  -2.1
             comp=E,6µm,1.1s
PET    Petropavlovsk        7.44  62⇓iP      P       19 35 37.3  -2.1
PET                                    pmax   pmax
             comp=Z,6µm,1.1s
JEW    Eniwo                8.42 213   P      P       19 35 46.4  -1.9
JEW                                    S      S       19 37 23.2  -4.6
JEM    Erimo                8.65 203   P      P       19 35 48.1  -2.4
TEY    Ternei               9.04 240 i P      P       19 35 50.0  -4.1
TEY                                    AMB    AMB     19 35 51.5
             comp=Z,20nm,1.0s
TEY                                    AMB    AMB     19 35 51.5
             comp=Z,70nm,1.0s
TEY                                    AMB    AMB     19 35 53.5
             comp=Z,130nm,0.6s
TEY                                    AMB    AMB     19 35 53.5
             comp=Z,230nm,0.6s
TEY                                    AMB    AMB     19 35 53.5
             comp=Z,360nm,0.6s
TEY                                  i S      S       19 37 34.0  -4.4
TEY                                    A              19 37 40.0
             comp=Z,3µm,1.3s
TEY                                    A              19 37 40.0
             comp=Z,870nm,1.3s
TEY                                    A              19 37 42.0
             comp=Z,6µm,12.0s
TEY                                    A              19 37 42.0
             comp=Z,5µm,12.0s
JSH    Shimam               9.12 218   P      P       19 35 52.8  -2.1
JSH                                    S      S       19 37 35.5  -4.2
MA2    Magadan              9.69   9d iP     P       19 36 00.3  +0.1
MA2                                  i S      S       19 37 49.2  -0.3
MA2                                    pmax   pmax
             comp=N,200nm,0.6s
MA2                                    pmax   pmax
             comp=Z,300nm,0.6s
MA2                                    pmax   pmax
             comp=E,50nm,0.7s
JOT    Ohata                9.85 211   P      P       19 35 59.6  -2.1
JOT                                    S      S       19 37 46.3  -6.0
JTM    Tenmabayashi        10.38 209   P      P       19 36 05.2  -1.6
JTM                                    S      S       19 37 57.3  -4.3
KLR    Kul'dur             10.39 272 i P      P       19 36 07.5  +0.7
KLR                                 ⇓iP              19 36 07.5
KLR                                    AMB    AMB     19 36 07.8
             comp=E,300nm,1.6s
KLR                                    AMB    AMB     19 36 07.8
             comp=E,600nm,1.6s
KLR                                   eS      S       19 38 05.0  +3.3
KLR                                    A              19 38 10.0
             comp=E,6µm,7.0s
KLR                                    A              19 38 10.0
             comp=E,14µm,7.0s
KLR    Kul'dur             10.39 272⇑iP      P       19 36 07.5  +0.7
KLR                                   eS      S       19 38 05.0  +3.3
KLR                                    pmax   pmax
             comp=E,300nm,1.6s
KLR                                    pmax   pmax
             comp=Z,600nm,1.6s
KLR                                    pmax   pmax
             comp=Z,3µm,8.0s
KLR                                    smax
             comp=N,6µm,7.0s
KLR                                    smax
             comp=E,14µm,7.0s
JYA    Atsumi              12.81 209   P      P       19 36 31.3  +1.0
JYA                                    S      S       19 38 47.9  +4.0
SEY    Seymchan            13.15   9⇑iP      P       19 36 34.0  +0.5
ZEA    Zeya                13.15 294⇓iP      P       19 36 30.3  -3.3
ZEA                                 ⇓iP              19 36 30.3
ZEA                                    AMB    AMB     19 36 32.4
             comp=E,400nm,0.7s
ZEA                                    AMB    AMB     19 36 32.4
             comp=E,390nm,0.7s
ZEA                                    AMB    AMB     19 36 32.4
             comp=E,830nm,0.7s
ZEA                                    AMB    AMB     19 36 33.0
             comp=E,1µm,4.0s
ZEA                                    AMB    AMB     19 36 33.0
             comp=E,2µm,4.0s
ZEA                                    A              19 38 53.0
             comp=E,4µm,4.0s
ZEA                                    A              19 38 53.0
             comp=E,10µm,4.0s
ZEA                                    AMS    AMS     19 41 44.0
             comp=E,600nm,6.0s
ZEA                                    AMS    AMS     19 41 44.0
             comp=E,900nm,6.0s
ZEA                                    AMS    AMS     19 41 44.0
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             comp=E,700nm,6.0s
JMM    Marumori            13.17 205   P      P       19 36 34.1  +0.3
JMM                                    S      S       19 38 53.1  +2.9
KROS   Kirovskiy           13.42 297 i P      P       19 36 35.9  -0.3
KROS                                   AMB    AMB     19 36 37.9
             comp=E,950nm,1.0s
KROS                                   AMB    AMB     19 36 37.9
             comp=E,1µm,1.0s
MDJ    Mudanjiang          13.43 253   P      P       19 36 35.6  -0.7
MDJ                                    S      S       19 38 55.4  +0.6
MDJ                                    PCP    PcP     19 41 12.1  -1.9
MDJ                                    SCP            19 43 47.6
MDJ                                    PCS            19 44 46.8
MDJ                                    SCS    ScS     19 47 23.8  -1.3
MDJ                                    AMB    AMB
             comp=Z,1µm,0.8s
MDJ                                    AMB    AMB
             comp=Z,790nm,4.0s
MDJ    Mudanjiang          13.43 253  eP      P       19 36 35.4  -0.9
             comp=Z,1µm,0.9s
JSD    Sado                13.80 213   P      P       19 36 40.6  +0.8
JSD                                    S      S       19 39 04.6  +3.5
JYT    Yasato              14.87 204   P      P       19 36 50.3  +0.2
JYT                                    S      S       19 39 20.7  +1.0
CLNS   Chul'man            15.14 305  eP      P       19 36 53.7  +1.1
CLNS                                  eS      S       19 39 28.6  +4.3
CLNS                                   pmax   pmax
             comp=Z,4µm,0.7s
CLNS                                   pmax   pmax
             comp=N,1µm,0.8s
CLNS                                   pmax   pmax
             comp=E,1µm,0.9s
CLNS                                   smax
             comp=N,1µm,1.0s
CLNS                                   smax
             comp=Z,380nm,1.4s
CLNS                                   smax
             comp=E,3µm,1.5s
MAJO   Matsushiro          15.17 211⇓iP      P       19 36 53.5  +0.5
             comp=E,2µm,0.8s
MAJO   Matsushiro          15.17 211⇓iP      P       19 36 53.5  +0.5
MAJO                                   pmax   pmax
             comp=Z,2µm,0.8s
MAT    Matsushiro          15.17 211   P      P       19 36 53.3  +0.3
MAT                                    S      S       19 39 29.8  +5.0
MAT    Matsushiro          15.17 211   P      P       19 36 53.3  +0.3
MAT                                    S      S       19 39 28.6  +3.8
MAT    Matsushiro          15.17 211  eP      P       19 36 53.0   0.0
MAT                                   eS      S       19 39 30.0  +5.2
MJAR   Matsushiro Arr      15.17 211   P      P       19 36 53.6  +0.6
             comp=Z,183nm,0.3s,baz=15,slow=10,SNR=926
MJAR                                   S      S       19 39 28.9  +4.1
             baz=25,slow=15,SNR=7.6
MJAR                                   ScP            19 43 50.1
             comp=Z,4.5nm,0.3s,baz=94,slow=1.0,SNR=50
NRGR   Nerungri            15.18 305 i P      P       19 36 53.9  +0.9
JRY    Ryogami san         15.43 208   P      P       19 36 55.9  +0.4
JRY                                    S      S       19 39 28.6  -0.7
YAK    Yakutsk             15.58 327⇓iP      P       19 36 56.8   0.0
             comp=Z,1µm,0.3s
YAK                                   e               19 39 32.3
YAK    Yakutsk             15.58 327⇓iP      P       19 36 56.8   0.0
YAK                                   e               19 39 32.3
YAK                                    pmax   pmax
             comp=Z,1µm,0.3s
JOD2   Odawara 2           16.08 206   P      P       19 37 01.0  -0.6
JOD2                                   S      S       19 39 40.6  +0.2
FX1    Attu Island--F      16.08  70   P      P       19 37 02.0  +0.6
             comp=Z,126nm,0.3s,baz=284,slow=6.0,SNR=218
FX1                                    S      S       19 39 41.6  +1.3
             comp=Z,3.2nm,0.3s,baz=255,slow=23,SNR=7.5
FX1                                    ScP            19 43 52.5
             comp=Z,21nm,0.3s,baz=203,slow=0.9,SNR=29
FX1                                    ScS    ScS     19 47 31.1  -0.8
             comp=Z,1.3nm,0.3s,baz=31,slow=19,SNR=6.8
FX1    Attu Island--F      16.08  70⇓iP      P       19 37 02.0  +0.5
JGF    Kuroka              16.30 211   P      P       19 37 03.8  +0.1
CN2    Changchun           16.42 256 ⇑P      P       19 37 04.3  -0.3
CN2                                   eXP             19 39 24.9
CN2                                   eS      S       19 39 43.0  -3.1
CN2                                    AMB    AMB
             comp=Z,200nm,4.0s
SMY    Shemya              16.65  71⇓iP      P       19 37 06.6  -0.1
             comp=Z,335nm,1.0s
SMY    Shemya              16.65  71   P      P       19 37 06.7   0.0
SMY                                    pmax   pmax
             comp=Z,330nm,1.0s
JSG    Sagara              16.89 208   P      P       19 37 10.1  +1.0
JWT    Wachi               17.29 216   P      P       19 37 12.4  -0.4
JIE    Ise                 17.62 211   P      P       19 37 16.4  +0.4
JHJ2   Mitsune             17.92 202   P      P       19 37 18.5  -0.2
JHJ    Hachijo jima 2      17.92 202   P      P       19 37 18.7   0.0
             comp=Z,106nm,0.3s,baz=187,slow=4.9,SNR=40
HIA    Hailar              18.09 278  eP      P       19 37 19.3  -0.9
             comp=Z,666nm,0.6s
HIA    Hailar              18.09 278  eP      P       19 37 19.3  -0.8
HIA                                    pmax   pmax
             comp=Z,665nm,0.6s
SNY    Shenyang            18.63 253 ⇓P      P       19 37 25.9  +0.7
SNY                                    S      S       19 40 23.4  +0.3
SNY                                    SCS    ScS     19 47 38.8  -0.9
SNY                                    AMB    AMB
             comp=Z,2µm,0.6s
SNY                                    AMB    AMB
             comp=Z,1µm,7.3s
JWZ    Kozaga              18.75 213   P      P       19 37 26.6  +0.3
KS15   Wonju Array Si      19.02 236⇓iP      P       19 37 29.4  +0.7
JMN    Monobe              19.25 217   P      P       19 37 31.4  +0.5
INCN   Inchon              19.66 238⇓iP      P       19 37 35.1  +0.4
             comp=Z,473nm,0.8s
BILL   Bilibino            20.23  20⇑iP      P       19 37 38.5  -1.2
             comp=Z,156nm,0.4s
BILL   Bilibino            20.23  20⇑iP      P       19 37 38.5  -1.2
BILL                                   pmax   pmax
             comp=Z,156nm,0.4s
JTU    Tsushima            20.52 228   P      P       19 37 42.5   0.0
JNU    Nakatsue            21.02 223   P      P       19 37 47.4  +0.4
             comp=Z,214nm,0.8s,mb5.8,baz=35,slow=8.6,SNR=107
JNU                                    S      S       19 41 00.8  -1.2
             comp=Z,16nm,0.8s,baz=160,slow=29,SNR=3.9
JNU    Nakatsue            21.02 223   P      P       19 37 47.1  +0.1
BOD    Bodaibo             21.12 304⇑iP      P       19 37 46.5  -1.3
CIT    Chita               21.45 288⇓iP      P       19 37 50.8  -0.1
CIT                                    pmax   pmax
             comp=Z,733nm,1.1s,mb6.2
DL2    Dalian              21.58 249 i PR     P       19 37 52.0  -0.1
DL2                                    S      S       19 41 10.1  -1.1
DL2                                    PCP    PcP     19 41 29.6  +1.9
DL2                                    SCP            19 44 04.6
DL2                                    PCS            19 45 07.0
DL2                                    SCS    ScS     19 47 46.4  -3.7
DL2                                    AMB    AMB
             comp=Z,730nm,0.6s,mb6.5
DL2                                    AMB    AMB
             comp=Z,460nm,4.5s
JFU    Fukue jima 2        22.37 226   P      P       19 37 59.3  +0.1
JSU    Suzuyama            22.58 221   P      P       19 38 00.8  -0.3
TIXI   Tiksi               23.30 345⇑iP      P       19 38 05.9  -1.1
TIXI   Tiksi               23.30 345⇑iP      P       19 38 03.2  -3.8
TIXI                                  e*SP            19 40 41.4
TIXI                                  eS      S       19 41 29.3  -8.6
TIXI                                   pmax   pmax
             comp=Z,51nm,0.6s,mb5.3
CBIJ   Chichi jima         23.33 193   P      P       19 38 06.7  -1.0
             comp=Z,260nm,0.7s,mb6.0,baz=334,slow=4.2,SNR=24
CBIJ                                   PcP    PcP     19 41 29.1  -2.2
             comp=Z,112nm,0.6s,baz=290,slow=5.7,SNR=6.1
CBIJ   Chichi jima         23.33 193   P      P       19 38 06.5  -1.2
JAM    Amami Oshima        25.64 219   P      P       19 38 27.6  -0.4
TIA    Tai'an              26.05 250 ⇓P      P       19 38 31.4  -0.1
TIA                                    SCP            19 44 14.6
TIA                                    PCS            19 45 11.5
TIA                                    SCS    ScS     19 48 06.8  -1.5
TIA                                    AMB    AMB
             comp=Z,550nm,0.8s,mb6.2
ULN    Ulaanbaatar         26.55 281  eP      P       19 38 35.4  -0.3
             comp=Z,468nm,0.8s,mb6.2
ULN                                   eScP            19 44 18.2
ULN    Ulaanbaatar         26.55 281  eP      P       19 38 35.4  -0.4
ULN                                    pmax   pmax
             comp=Z,468nm,0.8s,mb6.2
HHC    Hu-ho-hao-te        26.75 264⇑iP      P       19 38 37.8  +0.3
HHC                                    S      S       19 42 40.3  +8.0
HHC                                    SCP            19 44 17.8
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HHC                                    AMB    AMB
             comp=Z,490nm,0.9s,mb6.1
SONM   Songino Array       26.98 281   P      P       19 38 39.6  +0.1
             comp=Z,104nm,0.4s,mb5.9,baz=83,slow=7.9,SNR=1235
SONM                                   PcP    PcP     19 41 38.5  -0.9
             comp=Z,12nm,0.6s,baz=96,slow=1.0,SNR=5.7
SONM                                   ScP            19 44 19.7
             comp=Z,79nm,0.8s,baz=77,slow=2.3,SNR=23
SONM                                   ScS    ScS     19 48 09.6  -2.7
             comp=Z,5.8nm,1.0s,baz=153,slow=3.3,SNR=3.9
SONM   Songino Array       26.98 281   P      P       19 38 39.6  +0.2
SONM                                                  19 41 38.5
SONM                                                  19 48 09.6
IRK    Irkutsk             27.04 292  eP      P       19 38 39.0  -0.9
IRK                                   e               19 42 38.2
SSE    Sheshan             27.43 236 ⇓P      P       19 38 43.5  +0.1
SSE                                    PCP    PcP     19 41 40.3  -0.4
SSE                                    S      S       19 42 41.9  -1.0
SSE                                    SCS    ScS     19 48 13.6  -0.9
SSE                                    AMB    AMB
             comp=Z,260nm,0.9s,mb5.9
SSE                                    AMB    AMB
             comp=Z,390nm,4.4s
TNA    Tin City            27.50  39  eP      P       19 38 43.3  -0.4
             comp=Z,322nm,1.5s,mb5.7
TNA                                   epP             19 40 19.3
TNA                                   ePcP    PcP     19 41 39.4  -1.1
TLY    Talaya              27.54 291   P      P       19 38 43.6  -0.6
JOW    Kunigami            27.59 220   P      P       19 38 44.3  -0.5
             comp=Z,861nm,0.6s,mb6.5,baz=3.0,slow=9.7,SNR=208
JOW                                    PcP    PcP     19 41 40.0  -1.1
             comp=Z,33nm,0.8s,baz=45,slow=5.7,SNR=3.3
JOW                                    S      S       19 42 43.0  -2.4
             comp=Z,39nm,0.7s,baz=232,slow=29,SNR=10
JOW                                    ScP            19 44 22.7
             comp=Z,48nm,0.6s,baz=179,slow=0.8,SNR=8.0
JOW    Kunigami            27.59 220   P      P       19 38 44.2  -0.6
BTO    Baotou              27.87 265  eP      P       19 38 47.6  +0.5
BTO                                    AMB    AMB
             comp=Z,430nm,0.6s,mb6.3
NJ2    Nanjing             27.98 241  eP      P       19 38 47.9  -0.3
NJ2                                    XP     sP      19 41 31.9  -5.5
NJ2                                    S      S       19 42 51.0  -0.5
NJ2                                    SCP            19 44 23.0
NJ2                                    AMB    AMB
             comp=Z,990nm,0.8s,mb6.5
NJ2                                    AMB    AMB
             comp=Z,510nm,8.5s
ZAK    Zakamensk           28.11 288  eP      P       19 38 49.7  +0.6
ZAK                                   e               19 41 38.9
ZAK                                    pmax   pmax
             comp=Z,417nm,0.9s,mb6.1
MOY    Mondy               29.14 291  eP      P       19 38 58.6  +0.7
MOY                                    pmax   pmax
             comp=Z,433nm,1.6s,mb5.8
WHN    Wuhan               31.68 245⇓iP      P       19 39 19.5  -0.1
WHN                                    S      S       19 43 46.0  -2.3
WHN                                    SCP            19 44 35.4
WHN                                    AMB    AMB
             comp=Z,1µm,0.7s
WHN                                    AMB    AMB
             comp=Z,1µm,5.4s
TATO   Taipei              32.25 229  eP      P       19 39 24.8  +0.4
             comp=Z,275nm,0.6s,mb6.1
XAN    Xi'an               32.52 255   P      P       19 39 26.8  +0.2
XAN                                    AMB    AMB
             comp=Z,440nm,9.7s
YHNB   Yeheng              32.56 229  eP      P       19 39 24.1  -3.0
NACB   Ninganchiao         32.87 228  eP      P       19 39 27.6  -2.0
IMA2   Indian Mountai      33.37  39  eP      P       19 39 32.9  -0.5
IMA2                                  ePcP    PcP     19 41 54.8  -1.4
IMA2                                  eS      S       19 44 11.4  -2.2
QZH    Quanzhou            33.72 233 i PR     P       19 39 36.8  +0.1
QZH                                    S      S       19 44 18.3  -0.9
QZH                                    SS     SS      19 47 37.5   +14
QZH                                    AMB    AMB
             comp=Z,310nm,0.6s,mb6.1
QZH                                    AMB    AMB
             comp=Z,1µm,2.8s,mb6.1
LZH    Lanzhou             34.44 263 ⇓P      P       19 39 44.3  +1.8
LZH                                    S      S       19 44 29.0  -0.9
LZH                                    SCP            19 44 45.5
LZH                                    SCS    ScS     19 48 51.0  +1.2
LZH                                    AMB    AMB
             comp=Z,510nm,1.0s,mb6.1
LZH                                    AMB    AMB
             comp=Z,3µm,4.0s
ENH    Enshi               34.76 250  eP      P       19 39 45.1  -0.2
             comp=Z,2µm,0.7s
GTA    Gaotai              35.09 271⇓iP      P       19 39 49.4  +1.5
GTA                                    PCP    PcP     19 42 04.3  +2.7
GTA                                    XP     sP      19 42 37.8  -3.5
GTA                                    S      S       19 44 39.1  -0.5
GTA                                    SCP            19 44 47.8
GTA                                    PCS            19 45 51.8
GTA                                    XS             19 47 43.0
GTA                                    SS     SS      19 47 48.0  +1.6
GTA                                    SCS    ScS     19 48 56.3  +2.9
GTA                                    AMB    AMB
             comp=Z,730nm,0.9s,mb6.3
GTA                                    AMB    AMB
             comp=Z,2µm,6.1s
FIB    Fire Island         35.42  48  eP      P       19 39 50.3   0.0
             comp=Z,747nm,1.3s,mb6.2
FIB    Fire Island         35.42  48  eP      P       19 39 50.3   0.0
FIB                                    pmax   pmax
             comp=Z,747nm,1.3s,mb6.2
SLKM   Skilak Lake         35.53  49  eP      P       19 39 50.4  -0.8
SLKM                                  ePcP    PcP     19 42 01.4  -1.3
SLKM                                  eS      S       19 44 39.8  -6.0
MCK    McKinley            35.57  43  eP      P       19 39 51.0  -0.6
             comp=Z,33nm,0.6s,mb5.0
MCK                                   epP             19 41 34.5
MCK                                   ePcP    PcP     19 42 01.3  -1.5
MCK                                   eScP            19 44 45.3
MCK    McKinley            35.57  43  eP      P       19 39 51.0  -0.5
MCK                                   e               19 42 01.3
MCK                                   e               19 44 45.3
MCK                                    pmax   pmax
             comp=Z,33nm,0.6s,mb5.0
PMR    Palmer              35.84  47  eP      P       19 39 52.1  -1.6
             comp=Z,211nm,0.6s,mb5.8
PMR                                   ePcP    PcP     19 42 02.5  -1.1
PMR                                   eS      S       19 44 47.9  -2.5
PMR    Palmer              35.84  47  eP      P       19 39 52.1  -1.6
PMR                                   e               19 42 02.5
PMR                                   eS      S       19 44 47.9  -2.5
PMR                                    pmax   pmax
             comp=Z,211nm,0.6s,mb5.8
COLA   College             35.89  41  eP      P       19 39 53.5  -0.6
             comp=Z,780nm,0.6s,mb6.4
COLA                                  ePcP    PcP     19 42 01.7  -2.0
COLA                                  eS      S       19 44 48.5  -2.6
COLA   College             35.89  41  eP      P       19 39 53.5  -0.6
COLA                                  e               19 42 01.7
COLA                                  eS      S       19 44 48.5  -2.6
COLA                                   pmax   pmax
             comp=Z,780nm,0.6s,mb6.4
SML    Sawmill             36.17  46  eP      P       19 39 56.0  -0.4
SML    Sawmill             36.17  46   P      P       19 39 56.3  -0.1
ILAR   Eielson Array       36.31  41   P      P       19 39 56.6  -0.9
             comp=Z,547nm,0.7s,mb6.2,baz=268,slow=6.8,SNR=1242
ILAR                                   PcP    PcP     19 42 02.6  -2.4
             comp=Z,57nm,0.7s,baz=279,slow=3.6,SNR=9.4
ILAR                                   ScP            19 44 51.5
             comp=Z,11nm,0.8s,baz=298,slow=3.5,SNR=8.3
ILAR                                   PKiKP          19 49 18.3
             comp=Z,1.4nm,0.6s,baz=298,slow=3.0,SNR=5.0
GUMO   Guam                36.45 185   P      P       19 39 58.1  -1.1
             comp=Z,74nm,0.6s,mb5.4,baz=218,slow=20,SNR=5.9
GUMO                                   PcP    PcP     19 42 03.0  -2.9
             comp=Z,34nm,0.5s,baz=240,slow=20,SNR=2.5
GUMO   Guam                36.45 185   P      P       19 39 59.0  -0.2
THY    Trims Highway       37.03  43  eP      P       19 40 02.5  -1.0
THY                                   ePcP    PcP     19 42 06.5  -0.7
DIV    Divide              37.52  47  eP      P       19 40 07.2  -0.3
             comp=Z,1µm,0.6s
DIV                                   ePcP    PcP     19 42 08.2  -0.6
DIV                                   eS      S       19 45 15.9  +0.9
ZAL    Zalesovo            37.80 301   P      P       19 40 10.1  +0.2
             comp=Z,137nm,0.4s,mb5.8,baz=49,slow=6.5,SNR=501
ZAL                                    PcP    PcP     19 42 08.5  -1.3
             comp=Z,22nm,0.5s,baz=61,slow=5.5,SNR=3.1
ZAL                                    ScP            19 44 57.4
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	comp=Z,58nm,0.9s,baz=42,slow=5.3,SNR=15						
SGCP	Mt. Cagua	37.82	222	eP	P	19 40 09.1	-1.3
CD2	Chengdu	37.85	256	⇓iP	P	19 40 11.3	+0.7
CD2				XP	sP	19 43 04.8	-0.1
CD2				S	S	19 45 19.0	-1.3
CD2				XS		19 48 27.3	
CD2				AMB	AMB		
	comp=Z,710nm,0.7s,mb6.3						
CD2				AMB	AMB		
	comp=Z,510nm,4.2s						
GZH	Guangzhou	38.00	238	S	S	19 45 14.6	-7.9
NVS	Novosibirsk	38.34	303	eP	P	19 40 12.8	-1.4
NVS				e*PP		19 41 58.4	
NVS				eS	S	19 45 21.3	-5.8
NVS				e		19 49 07.1	
NVS				pmax	pmax		
	comp=E,144nm,0.5s						
NVS				pmax	pmax		
	comp=Z,181nm,0.5s,mb5.9						
NVS				pmax	pmax		
	comp=N,32nm,0.7s						
NVS				smax			
	comp=N,347nm,1.5s						
NVS				smax			
	comp=E,214nm,1.5s						
CVP	Callao Caves	38.39	222	⇓eP	P	19 40 14.0	-1.0
APYP	Conner	38.51	223	eP	P	19 40 14.0	-1.9
ABRA	Dolores	38.93	224	eP	P	19 40 18.3	-1.0
CAUP	Cauayan	39.07	222	eP	P	19 40 20.9	+0.4
GYA	Guiyang	39.24	249	⇑iP	P	19 40 21.9	+0.2
GYA				PP	PP	19 42 13.5	+6.2
GYA				SCP		19 45 03.6	
GYA				S	S	19 45 38.0	-2.4
GYA				XS		19 48 54.0	
GYA				SCS	ScS	19 49 19.4	+2.0
GYA				AMB	AMB		
	comp=Z,780nm,0.8s,mb6.3						
GYA				AMB	AMB		
	comp=Z,980nm,2.7s,mb5.9						
DAWY	Dawson	39.64	41	eP	P	19 40 23.6	-1.0
BALP	Baler	40.25	221	eP	P	19 40 29.8	-0.1
BOLP	Bolinao	40.40	224	eP	P	19 40 31.9	+0.8
WMQ	Urumqi	40.47	285	⇓iP	P	19 40 32.5	+1.0
WMQ				AP	pP	19 42 20.0	+1.9
WMQ				PP	PP	19 42 23.0	+4.7
WMQ				XP	sP	19 43 31.0	+4.0
WMQ				SCP		19 45 10.0	
WMQ				S	S	19 45 59.0	+1.0
WMQ				PCS		19 46 10.0	
WMQ				XS		19 49 10.0	
WMQ				SS	SS	19 49 21.0	+1.1
WMQ				AMB	AMB		
	comp=Z,550nm,0.7s,mb6.2						
WMQ				AMB	AMB		
	comp=Z,840nm,4.6s						
INK	Inuvik	40.84	34	P	P	19 40 33.5	-0.7
	comp=Z,496nm,0.5s,mb6.3,baz=297,slow=6.4,SNR=2395						
INK				pP	pP	19 42 18.4	-2.7
	comp=Z,57nm,0.5s,baz=328,slow=2.8,SNR=4.6						
INK				ScP		19 45 10.0	
	comp=Z,34nm,0.9s,baz=273,slow=2.2,SNR=6.1						
INK				S	S	19 46 00.7	-2.3
	comp=Z,74nm,1.0s,baz=90,slow=30,SNR=21						
INK				PKiKP		19 49 22.7	
	comp=Z,5.7nm,0.7s,baz=49,slow=4.3,SNR=4.5						
INK	Inuvik	40.84	34	eP	P	19 40 33.4	-0.8
	comp=Z,16nm,1.0s,mb4.5						
INK				ePcP	PcP	19 42 18.3	-1.2
INK	Inuvik	40.84	34	P	P	19 40 33.5	-0.6
INK				*PP	pP	19 42 18.4	-2.7
INK				S	S	19 46 00.7	-2.3
INK				i		19 49 22.7	
INK				pmax	pmax		
	comp=Z,496nm,0.5s						
SCZP	Santa Cruz	40.94	223	eP	P	19 40 34.5	-0.9
POLP	Polilio Island	41.00	220	eP	P	19 40 36.3	+0.4
PVCP	Virac	41.15	216	eP	P	19 40 37.2	+0.1
CNP	Catarman	41.95	215	eP	P	19 40 43.6	+0.2
AUQP	San Andres	41.97	218	eP	P	19 40 43.1	-0.5
TGY	Tagaytay City	41.98	221	P	P	19 40 44.1	+0.4
	comp=Z,468nm,0.6s,mb6.2,baz=296,slow=1.9,SNR=40						
BOAC	Boac	42.18	219	eP	P	19 40 45.2	-0.1
MKAR	Makanchi Array	42.29	292	P	P	19 40 45.9	+0.2
	comp=Z,585nm,0.8s,mb6.2,baz=71,slow=8.4,SNR=1826						
MKAR				PcP	PcP	19 42 23.7	-0.8
	comp=Z,21nm,0.6s,baz=75,slow=3.3,SNR=5.3						
MKAR				ScP		19 45 14.5	
	comp=Z,86nm,0.9s,baz=56,slow=4.4,SNR=14						
MKAR				ScS	ScS	19 49 33.6	-2.1
	comp=Z,49nm,1.1s,baz=72,slow=9.1,SNR=13						
MKAR	Makanchi Array	42.29	292	P	P	19 40 45.9	+0.2
MKAR				PcP	PcP	19 42 23.7	-0.8
MKAR				ScP		19 45 14.5	
MKAR				ScS	ScS	19 49 33.6	-2.1
MKAR	Makanchi Array	42.29	292	P	P	19 40 45.9	+0.2
MKAR						19 42 23.7	
MKAR						19 49 33.6	
BESP	Borongan	42.51	213	eP	P	19 40 48.7	+0.9
KURK	Kurchatov	42.57	299	eP	P	19 40 47.9	+0.1
	comp=Z,30nm,1.0s,mb4.8						
KURK	Kurchatov	42.57	299	eP	P	19 40 47.9	+0.1
KURK				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.8						
KMI	Kunming	42.60	251	⇓P	P	19 40 49.1	+0.8
KMI				PCP	PcP	19 42 25.8	-0.1
KMI				AP	pP	19 42 38.0	+1.6
KMI				PP	PP	19 42 43.4	+3.9
KMI				PPP	PPP	19 43 36.1	-22
KMI				XP	sP	19 43 47.1	+2.1
KMI				SCP		19 45 17.3	
KMI				PCS		19 46 19.4	
KMI				S	S	19 46 26.9	-1.3
KMI				SCS	ScS	19 49 35.5	-2.4
KMI				XS		19 49 40.9	
KMI				SS	SS	19 49 51.6	-4.2
KMI				SSS	SSS	19 51 19.4	-37
KMI				AMB	AMB		
	comp=Z,1µm,0.7s,mb6.5						
KMI				AMB	AMB		
	comp=Z,2µm,3.1s						
LUBP	Lubang	42.60	221	eP	P	19 40 46.7	-1.8
OTRP	Odiongan	43.10	218	eP	P	19 40 53.0	+0.6
QIZ	Qiongzhong	43.19	238	⇓iP	P	19 40 54.3	+1.3
QIZ				S	S	19 46 40.0	+3.4
QIZ				XS		19 49 47.8	
QIZ				AMB	AMB		
	comp=Z,220nm,0.9s,mb5.7						
QIZ				AMB	AMB		
	comp=Z,440nm,5.1s						
QIZ	Qiongzhong	43.19	238	eP	P	19 40 54.0	+1.0
	comp=Z,273nm,1.1s,mb5.7						
OCLP	Ormoc	43.32	214	eP	P	19 40 54.2	+0.1
SJMP	San Jose	43.38	220	eP	P	19 40 54.4	-0.1
MSLP	Maasin	44.08	213	eP	P	19 40 59.4	-0.6
BUSP	Coron	44.17	220	eP	P	19 40 59.8	-0.9
SCPH	Surigao	44.19	212	eP	P	19 40 59.5	-1.3
GUIM	Jordan	44.46	217	eP	P	19 41 02.9	0.0
CUYO	Cuyo Island	44.88	219	eP	P	19 41 05.8	-0.4
BUTP	Butuan	44.90	212	eP	P	19 41 05.4	-0.9
ENPP	El Nido	45.22	221	eP	P	19 41 08.6	-0.1
VOSK	Vostochnaya	45.82	304	P	P	19 41 12.7	-0.1
VOSK				pmax	pmax		
	comp=Z,118nm,0.5s,mb5.7						
DLBC	Dease Lake	45.90	47	eP	P	19 41 14.0	+0.7
BVA0	Borovoye Array	45.99	305	i P	P	19 41 14.0	-0.1
BVA0				pmax	pmax		
	comp=Z,11nm,0.5s,mb4.6						
BVAR	Borovoye Array	45.99	305	P	P	19 41 13.9	-0.1
	comp=Z,233nm,0.4s,mb6.1,baz=59,slow=7.5,SNR=2093						
BVAR				PcP	PcP	19 42 36.4	-1.0
	comp=Z,22nm,0.5s,baz=45,slow=4.2,SNR=4.0						
BVAR				pP	pP	19 43 02.8	-1.7
	comp=Z,51nm,0.7s,baz=51,slow=9.5,SNR=3.9						
BVAR				ScP		19 45 29.7	
	comp=Z,28nm,0.6s,baz=63,slow=3.3,SNR=8.2						
BVAR				S	S	19 47 14.5	-0.6
	comp=Z,12nm,0.7s,baz=63,slow=13,SNR=8.5						
BVAR				ScS	ScS	19 49 56.5	-2.8
	comp=Z,11nm,0.9s,slow=3.0,SNR=5.6						
BVAR	Borovoye Array	45.99	305	P	P	19 41 13.9	-0.2
BVAR						19 42 36.4	
BVAR				*PP	pP	19 43 02.8	-1.7
BVAR				S	S	19 47 14.5	-0.6
BVAR						19 49 56.5	
BRVK	Borovoye	46.03	305	eP	P	19 41 14.2	-0.1
	comp=Z,243nm,1.8s,mb5.4						
BRVK	Borovoye	46.03	305	eP	P	19 41 14.3	-0.1
BRVK				pmax	pmax		
	comp=Z,243nm,1.8s,mb5.4						
DCPH	Dipolog City	46.06	215	⇓eP	P	19 41 13.5	-1.6
BUKP	Musuan	46.10	212	eP	P	19 41 15.2	-0.3
MATI	Mati	46.58	210	eP	P	19 41 17.5	-1.6
LSA	Lhasa	46.69	266	P	P	19 41 21.4	+1.7
LSA				S	S	19 47 27.4	+2.2
LSA				AMB	AMB		
	comp=Z,560nm,0.8s,mb6.2						
LSA				AMB	AMB		
	comp=Z,330nm,4.6s						
LSA	Lhasa	46.69	266	eP	P	19 41 21.1	+1.4
	comp=Z,454nm,0.6s,mb6.2						
LSA	Lhasa	46.69	266	eP	P	19 41 21.2	+1.5
LSA				pmax	pmax		
	comp=Z,454nm,0.6s,mb6.2						
PAGZ	Pagadian	46.72	214	eP	P	19 41 18.8	-1.4
PPR	Puerto Princes	46.79	221	⇓eP	P	19 41 21.5	+0.9
IPIL	Ipil	47.08	215	eP	P	19 41 21.5	-1.3
BATP	Bataraza	48.06	221	eP	P	19 41 29.7	-0.4
IMP	Imphal	48.33	259	eP	P	19 41 31.0	-1.0
CHRT	Chiangrai	48.34	249	⇓P	P	19 41 32.5	+0.4
	comp=Z,2µm,0.9s,mb6.5						
ULHL	Ulahol	48.38	290	P	P	19 41 32.9	+0.7
	SNR=243						
ULHL	Ulahol	48.38	290	P		19 45 40.7	
	SNR=7.2						
TKM2	Tokmak 2	48.38	291	P	P	19 41 32.7	+0.6
	SNR=230						
TKM2	Tokmak 2	48.38	291	P		19 45 40.2	
	SNR=15						
KBS	Kingsbay	48.63	350	P	P	19 41 31.9	-1.7
USP	Ospenovka	48.84	292	P	P	19 41 36.0	+0.4
	SNR=72						
USP	Ospenovka	48.84	292	P		19 45 42.4	
	SNR=11						
CHMS	Chumysh	48.84	291	P	P	19 41 35.8	+0.2
	SNR=160						
CHMS	Chumysh	48.84	291	P		19 45 42.4	
	SNR=14						
KBK	Karagaybulak	48.92	291	P	P	19 41 36.7	+0.5
	SNR=216						
KBK	Karagaybulak	48.92	291	P		19 45 42.8	
	SNR=6.8						
SVE	Sverdlovsk	48.94	313	⇓iP	P	19 41 45.8	+10
SVE				e		19 42 46.5	
SVE				e	pP	19 43 35.6	+6.9
SVE				e		19 47 54.0	
SVE				eS	S	19 48 11.0	+16
SVE				eSS	SS	19 51 16.0	-23
SVE				e		19 51 46.0	
SVE				pmax	pmax		
	comp=Z,360nm,0.8s,mb5.8						
SVE				MLR	MLR		
	comp=N,200nm,12.0s						
SVE				MLR	MLR		
	comp=E,200nm,12.0s						
SVE				MLR	MLR		
	comp=Z,200nm,12.0s						
FRU	Bishkek	49.02	291	⇓iP	P	19 41 37.0	+0.1
FRU				e		19 47 58.0	
FRU				pmax	pmax		
	comp=Z,750nm,1.0s,mb6.1						
SHL	Shillong	49.07	262	⇓iP	P	19 41 39.0	+1.5
SHL				eS	S	19 47 59.0	+1.3
KZA	Kyzart	49.07	290	P	P	19 41 38.7	+1.4
	SNR=220						
KZA	Kyzart	49.07	290	P		19 45 44.4	
	SNR=6.3						
AAK	Ala-Archa	49.21	291	P	P	19 41 38.7	+0.4
	SNR=602						
AAK	Ala-Archa	49.21	291	P		19 45 44.0	
	SNR=7.5						
AAK	Ala-Archa	49.21	291	eP	P	19 41 37.5	-0.8
	comp=Z,167nm,1.0s,mb5.4						
AAK	Ala-Archa	49.21	291	d iP	P	19 41 37.4	-0.9
AAK				i *PP	pP	19 43 26.9	-4.1
AAK				pmax	pmax		
	comp=Z,450nm,0.8s,mb6.0						
AAK				MLR	MLR		
	comp=Z,200nm,19.0s						
SOKR	Solikamsk	49.24	318	d iP	P	19 41 37.6	-0.7
SOKR				pmax	pmax		
	comp=Z,70nm,0.9s,mb5.1						
KKTK	Khon Kaen	49.30	243	P	P	19 41 39.0	-0.3
	comp=Z,7µm,0.5s						
UCH	Uchtor	49.43	291	P	P	19 41 40.7	+0.8
	SNR=65						
UCH	Uchtor	49.43	291	P		19 45 46.0	
	SNR=10						
EKS2	Erkin-Say	49.62	291	P	P	19 41 41.8	+0.5
	SNR=79						
EKS2	Erkin-Say	49.62	291	P		19 45 46.0	
	SNR=11						
CHG	Chiang Mai	49.65	249	⇓P	P	19 41 42.1	+0.3
	comp=Z,150nm,1.0s,mb5.4						
AML	Almayashu	49.98	291	P	P	19 41 44.9	+1.0
	SNR=119						
AML	Almayashu	49.98	291	P		19 45 48.0	
	SNR=8.5						
ARU	Arti	50.13	314	eP	P	19 41 43.9	-0.9
	comp=Z,3µm,2.0s,mb6.4						
ARU				ePcP	PcP	19 42 50.8	-1.7
ARU	Arti	50.13	314	⇓iP	P	19 41 44.4	-0.4
ARU				i		19 42 50.6	
ARU				e	pP	19 43 37.1	-1.1
ARU				ePPP	sP	19 44 41.6	-4.1
ARU				eS	S	19 48 10.5	-0.9
ARU				i		19 50 23.8	
ARU				eSS	SS	19 51 51.3	-6.6
ARU				pmax	pmax		
	comp=Z,254nm,0.6s,mb5.8						
KSH	Kashi	50.15	287	i PR	P	19 41 46.1	+0.9
KSH				ePCP	PcP	19 42 54.0	+1.1
KSH				ePP	PP	19 43 51.1	+2.3
KSH				eXP	sP	19 44 40.1	-6.0
KSH				eSCP		19 45 54.1	
KSH				ePCS		19 46 52.0	
KSH				eS	S	19 48 10.0	-2.0
KSH				eSCS	ScS	19 50 31.1	+3.4
KSH				eSS	SS	19 51 56.3	-2.2
KSH				AMB	AMB		
	comp=Z,1µm,1.5s,mb6.1						
YKA	Yellowknife Ar	50.41	37	P	P	19 41 45.6	-1.2
	comp=Z,372nm,0.6s,mb6.0,baz=304,slow=7.2,SNR=1027						
YKA				PcP	PcP	19 42 52.6	-1.0
	comp=Z,48nm,0.5s,baz=309,slow=3.6,SNR=16						
YKA				ScP		19 45 49.9	
	comp=Z,17nm,0.8s,baz=305,slow=4.2,SNR=9.0						
YKA				S	S	19 48 14.5	-0.7
	comp=Z,6.7nm,0.9s,baz=321,slow=14,SNR=4.1						
YKA	Yellowknife Ar	50.41	37	P	P	19 41 45.6	-1.2
YKA				PcP	PcP	19 42 52.6	-1.0
YKA				ScP		19 45 49.9	
YKA				S	S	19 48 14.5	-0.7
YKA	Yellowknife Ar	50.41	37	P	P	19 41 45.6	-1.2
YKA						19 42 52.6	
YKA				S	S	19 48 14.5	-0.7
KIP	Kipapa	51.08	104	eP	P	19 41 51.7	-0.5
	comp=Z,124nm,0.8s,mb5.4						
KIP	Kipapa	51.08	104	eP	P	19 41 51.7	-0.4
KIP				pmax	pmax		
	comp=Z,124nm,0.8s,mb5.4						
KKM	Kota Kinabalu	51.21	222	eP	P	19 41 53.5	+0.3
KKM	Kota Kinabalu	51.21	222	P	P	19 41 53.1	-0.1
GUN	Gumba	51.30	269	eP	P	19 41 54.2	+0.5
	comp=Z,897nm,0.5s,mb6.5						
KKAR	Karatay Array	51.30	294	i P	P	19 41 53.1	-0.4
KKAR				pmax	pmax		
	comp=Z,72nm,0.6s,mb5.3						
NST	Nakhon Sawan	51.39	246	⇑P	P	19 41 55.0	+0.6
KKN	Kakani	51.77	269	eP	P	19 41 57.5	+0.5
	comp=Z,1µm,0.5s,mb6.4						
PKI	Pulchoki	51.83	269	eP	P	19 41 57.9	+0.4
	comp=Z,809nm,0.7s,mb6.2						
DMN	Daman	52.00	269	eP	P	19 41 59.4	+0.7
	comp=Z,2µm,0.8s,mb6.4						
GKN	Gorkha	52.04	270	eP	P	19 41 59.5	+0.6
	comp=Z,1µm,0.5s,mb6.4						
TSM	Tawau	52.10	219	P	P	19 41 59.4	-0.1
LVZ	Lovozero	52.25	334	⇑eP	P	19 41 59.7	-0.1
LVZ	Lovozero	52.25	334	⇓eP	P	19 41 58.2	-1.6
LVZ				eS	S	19 48 35.5	-4.0
LVZ				pmax	pmax		
	comp=Z,37nm,0.6s,mb4.9						
LVZ				pmax	pmax		
	comp=N,20nm,1.0s						
LVZ				smax			
	comp=E,381nm,1.8s						
APA	Apatity	52.82	334	⇑iP	P	19 42 03.4	-0.5
APA				i		19 42 59.5	
APA				eS	S	19 48 46.2	-0.9
APA				pmax	pmax		
	comp=Z,49nm,0.6s,mb5.0						
KOLN	Koldanda	52.86	270	eP	P	19 42 05.4	+0.6
	comp=Z,2µm,0.9s,mb6.4						
KEV	Kevo	52.97	338	ep	P	19 42 03.1	-1.8
DAG	Danmarks Havn	53.14	356	⇓iP	P	19 42 04.9	-1.2
	comp=Z,122nm,1.0s,mb5.2						
DAG				i		19 43 01.8	
DAG	Danmarks Havn	53.14	356	⇓iP	P	19 42 04.9	-1.2
DAG				i		19 43 01.8	
DAG				pmax	pmax		
	comp=Z,122nm,1.0s,mb5.2						
ARCES	ARCESS Array B	53.49	338	P	P	19 42 08.0	-0.6
	comp=Z,27nm,0.4s,mb4.9,baz=29,slow=7.4,SNR=175						
ARCES				PcP	PcP	19 43 03.9	-1.2
	comp=Z,45nm,0.7s,baz=56,slow=4.4,SNR=14						
ARCES				ScP		19 46 01.7	
	comp=Z,24nm,0.8s,baz=45,slow=6.9,SNR=9.1						
ARCES				S	S	19 48 54.8	-1.0
	comp=Z,26nm,1.0s,baz=29,slow=12,SNR=7.5						
ARCES				PKiKP		19 49 35.6	
	comp=Z,4.1nm,0.8s,baz=45,slow=1.7,SNR=5.6						
ARCES	ARCESS Array B	53.49	338	P	P	19 42 08.0	-0.6
ARCES				PcP	PcP	19 43 03.9	-1.2
ARCES				ScP		19 46 01.7	
ARCES				S	S	19 48 54.8	-0.9
ARCES	ARCESS Array B	53.49	338	P	P	19 42 08.0	-0.6
ARCES						19 43 03.9	
ARCES				S	S	19 48 54.8	-1.0
ARE0	ARCESS Array S	53.49	338	eP	P	19 42 08.0	-0.6
ARE0				ePcP	PcP	19 43 04.0	-1.1
AB31	Akbulak array	53.55	306	i P	P	19 42 09.0	-0.3
AB31				pmax	pmax		
	comp=Z,62nm,0.4s,mb5.3						
PTH	Pithoragarh	53.83	274	eP	P	19 42 11.2	-0.4
PTH				ex	x	19 44 07.0	
AKTO	Aktyubinsk	53.84	308	ScP		19 46 03.3	
	comp=Z,42nm,1.0s,baz=66,slow=4.3,SNR=7.4						
AKTO				S	S	19 48 59.6	-1.0
	comp=Z,6.1nm,0.8s,baz=319,slow=23,SNR=7.6						
AKTO	Aktyubinsk	53.84	308	P	P	19 42 10.6	-0.7
POHA	Pohakuloa	53.87	103	eP	P	19 42 11.3	-0.6
NNT	Nongplab	54.07	244	P	P	19 42 13.2	-0.2
	comp=Z,4µm,1.0s						
PGC	Sidney	54.48	55	eP	P	19 42 15.0	-0.8
	comp=Z,418nm,0.6s,mb5.9						
PGC				ePcP	PcP	19 43 08.9	-0.3
DLH	Dalhousie	54.56	280	eP	P	19 42 17.0	+0.4
DLH				ex	x	19 42 27.0	
SDNR	Sundarnagar	54.61	278	eP	P	19 42 16.0	-1.0
SDNR				eS	S	19 49 09.8	-1.1
OCWA	Octopus Mounta	54.65	56	eP	P	19 42 17.2	+0.2
	comp=Z,219nm,1.2s,mb5.4						
OCWA				ePcP	PcP	19 43 09.9	+0.1
DDI	Dehra Dun	54.70	277	eP	P	19 42 16.1	-1.5
SMLA	Simla	54.73	278	eP	P	19 42 16.1	-1.7
SMLA				eS	S	19 49 09.7	-2.8
THN	Thein Dam	54.79	280	eP	P	19 42 17.0	-1.2
THN				ex	x	19 49 09.6	
TRO	Tromso	54.91	341	⇑iP	P	19 42 16.8	-1.7
BHK	Bhakra	55.02	279	eP	P	19 42 21.6	+1.8
BHK				eP		19 42 22.0	
KLMR	Klimovskoe	55.37	326	c iP	P	19 42 21.4	-0.4
KLMR				e*PP	pP	19 44 14.3	-4.8
KLMR				e		19 44 34.2	
KLMR				e*SP	sP	19 45 21.5	-3.7
KLMR				i S	S	19 49 19.4	-0.9
KLMR				pmax	pmax		
	comp=Z,60nm,1.9s,mb4.6						
KLMR				smax			
	comp=E,1µm,3.5s						
NDI	New Delhi	56.35	276	eP	P	19 42 27.5	-1.4
NDI				ex	x	19 49 30.0	
EDM	Edmonton	56.58	45	eP	P	19 42 28.9	-1.2
EDM				ePcP	PcP	19 43 16.7	-0.7
EDM				epP	pP	19 44 26.8	-1.6
JOF	Joensuu	56.72	331	ep	P	19 42 28.9	-2.1
JOF	Joensuu	56.72	331	ep	pP	19 44 29.2	-0.1
COR	Corvallis	57.11	58	eP	P	19 42 34.9	+1.0
	comp=E,785nm,0.7s,mb6.0						
COR	Corvallis	57.11	58	eP	P	19 42 34.9	+1.0
COR				pmax	pmax		
	comp=Z,785nm,0.7s,mb6.0						
LOF	Lofoten	57.27	341	⇑iP	P	19 42 35.3	+0.6
LOF				AMb	AMB	19 42 37.4	
	comp=Z,196nm,1.4s,mb5.2						
LOF	Lofoten	57.27	341	⇑iP	P	19 42 35.3	+0.6
	comp=Z,196nm,1.4s,mb5.2						
SUMG	Summit	57.58	2	eP	P	19 42 36.8	+0.1
	comp=Z,454nm,0.8s,mb5.7						
KEBM	Edson Butte	57.64	60	eP	P	19 42 38.1	+0.7
KEBM				ePcP	PcP	19 43 21.8	+0.1
KSM	Kuching	57.91	226	P	P	19 42 39.3	-0.4
HAWA	Hanford	57.97	55	eP	P	19 42 39.3	-0.4
	comp=Z,13nm,0.8s						
HAWA				ePcP	PcP	19 43 21.7	-1.3
NEW	Newport	57.99	52	eP	P	19 42 39.0	-0.8
	comp=Z,197nm,0.8s,mb5.3						
NEW				ePcP	PcP	19 43 22.7	-0.4
NEW	Newport	57.99	52	eP	P	19 42 39.0	-0.7
NEW				e		19 43 22.7	
NEW				pmax	pmax		
	comp=Z,197nm,0.8s						
KBO	Bosley Butte	58.13	61	eP	P	19 42 41.4	+0.6
MELSS	Ber_school_2	58.30	340	eP	P	19 42 40.7	-0.8
HUMO	Hull Mountain	58.58	60	eP	P	19 42 44.2	+0.4
	comp=Z,132nm,0.6s,mb5.2						
MOR8	Moi Rana	58.72	340	⇑iP	P	19 42 42.5	-1.9
KRMB	Red Mountain	58.76	61	eP	P	19 42 45.6	+0.6
KAF	Kangasniemi	58.87	332	ep	P	19 42 44.7	-0.7
KAF	Kangasniemi	58.87	332	ep	pP	19 44 43.2	-2.2
STOK	Stokkvaagen	58.90	340	⇑iP	P	19 42 44.5	-1.1
PMG	Port Moresby	59.22	181	eP	P	19 42 47.8	-0.6
	comp=Z,39nm,0.7s,mb4.6						
PMG	Port Moresby	59.22	181	eP	P	19 42 47.8	-0.6
PMG				pmax	pmax		
	comp=Z,39nm,0.7s						
YBH	Yreka Blue Hor	59.30	61	eP	P	19 42 49.1	+0.6
	comp=Z,264nm,0.8s,mb5.4						
YBH	Yreka Blue Hor	59.30	61	eP	P	19 42 49.1	+0.6
YBH				pmax	pmax		
	comp=Z,265nm,0.8s						
PUL	Pulkovo	59.37	329	⇓eP	P	19 42 47.3	-1.5
PUL				pmax	pmax		
	comp=Z,125nm,0.8s,mb5.1						
FINES	FINESS Array B	59.46	332	P	P	19 42 48.4	-0.9
	comp=Z,79nm,0.5s,mb5.1,baz=34,slow=8.3,SNR=883						
FINES				PcP	PcP	19 43 27.2	-1.5
	comp=Z,45nm,0.7s,baz=63,slow=4.3,SNR=12						
FINES				pP	pP	19 44 48.8	-0.9
	comp=Z,44nm,1.0s,baz=27,slow=6.2,SNR=6.6						
FINES				S	S	19 50 11.4	-0.7
	comp=Z,10nm,0.8s,baz=56,slow=14,SNR=7.4						
FINES				PKPPKP		20 11 59.1	
	comp=Z,2.8nm,0.7s,baz=72,slow=6.0,SNR=5.0						
AJM	Ajmer	59.52	276	eP	P	19 42 49.5	-0.6
AJM				AMb	AMB	19 42 51.9	
	comp=Z,242nm,0.7s,mb5.6						
IPM	Ipoh	59.91	237	P	P	19 42 53.3	+0.3
BHPL	Bhopal	60.00	271	eP	P	19 42 52.9	-0.5
BHPL				AMb	AMB	19 42 54.0	
	comp=Z,508nm,0.7s,mb5.9						
BHPL				eS	S	19 50 18.1	-1.4
KIPM	Iron Peak	60.14	63	eP	P	19 42 54.4	+0.3
BMO	Blue Mountains	60.16	55	eP	P	19 42 53.8	-0.4
	comp=Z,398nm,1.4s,mb5.5						
BMO				ePcP	PcP	19 43 31.2	-0.5
WDC	Whiskeytown Da	60.16	61	eP	P	19 42 54.3	+0.1
	comp=Z,212nm,0.9s,mb5.4						
WDC				epP	pP	19 44 53.4	-1.7
WDC	Whiskeytown Da	60.16	61	eP	P	19 42 54.3	+0.1
WDC				e*PP	pP	19 44 53.4	-1.7
WDC				pmax	pmax		

	comp=Z,212nm,0.9s,mb5.4						
KCPM	**Cahto Peak**	60.16	63	*e*P	P	19 42 54.6	+0.3
HNR	**Honiara**	60.20	166	*e*P	P	19 42 54.0	-0.9
	comp=Z,141nm,0.8s,mb5.2						
HNR	**Honiara**	60.20	166	P	P	19 42 54.2	-0.7
HNR				pmax	pmax		
	comp=Z,140nm,0.8s,mb5.2						
VIS	**Vishakhapatnam**	60.20	262	*e*P	P	19 42 54.8	-0.1
VIS				AMb	AMB	19 42 55.7	
	comp=Z,309nm,0.5s,mb5.8						
FCC	**Fort Churchill**	60.40	32	*e*P	P	19 42 54.4	-1.2
	comp=Z,602nm,0.6s,mb6.0						
FCC	**Fort Churchill**	60.40	32	P	P	19 42 54.6	-1.0
FCC				pmax	pmax		
	comp=Z,600nm,0.6s,mb6.0						
FFC	**Flin Flon**	60.46	39	*e*P	P	19 42 55.0	-1.0
	comp=Z,447nm,0.7s,mb5.8						
FFC				*e*PcP	PcP	19 43 32.0	-0.8
FFC	**Flin Flon**	60.46	39	*e*P	P	19 42 55.0	-1.0
FFC				*e*		19 43 32.0	
FFC				pmax	pmax		
	comp=Z,447nm,0.7s,mb5.8						
OBN	**Obninsk**	60.51	322⇑	*e*P	P	19 42 55.6	-0.7
OBN	**Obninsk**	60.51	322	*e*P	P	19 42 55.6	-0.7
OBN				*i* *PP	pP	19 44 56.0	-1.4
OBN				*e*		19 45 16.8	
OBN				*e*S	S	19 50 22.4	-2.9
OBN				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.4						
MOD	**Modoc**	60.52	59	*e*P	P	19 42 56.7	+0.1
	comp=Z,224nm,0.6s,mb5.6						
MSO	**Missoula**	60.55	51	*e*P	P	19 42 56.3	-0.4
	comp=Z,190nm,0.9s,mb5.3						
MSO				*e*PcP	PcP	19 43 32.5	-0.9
NSS	**Namsos**	60.67	340⇑	*i*P	P	19 42 55.3	-1.9
CHMT	**Chamberlain Mo**	60.84	51	*e*P	P	19 42 57.9	-0.7
KGM	**Kluang**	60.86	233	P	P	19 43 00.0	+0.9
HOPS	**Hopland**	60.92	63	*e*P	P	19 42 59.0	-0.2
	comp=Z,210nm,1.0s,mb5.3						
WVOR	**Wild Horse Val**	61.08	58	*e*P	P	19 43 00.2	+0.1
	comp=Z,334nm,1.0s,mb5.5						
WVOR	**Wild Horse Val**	61.08	58	*e*P	P	19 43 00.3	+0.1
WVOR				pmax	pmax		
	comp=Z,334nm,1.0s,mb5.5						
NSHM	**Saint Helena R**	61.51	63	*e*P	P	19 43 02.8	-0.3
OHCM	**Honcut**	61.59	62	*e*P	P	19 43 02.9	-0.7
HRY	**Holter Researc**	61.68	50	*e*P	P	19 43 04.1	0.0
EGMT	**Eagleton**	61.78	48	*e*P	P	19 43 04.3	-0.3
	comp=Z,563nm,0.9s,mb5.8						
VOR	**Voronezh**	61.87	318	*e*P	P	19 43 04.5	-0.6
VOR				*e*S	S	19 50 39.7	-2.3
VOR				pmax	pmax		
	comp=Z,70nm,1.0s,mb4.8						
VOR				smax			
	comp=N,370nm,1.2s						
VRSR	**Storozhevoye**	62.24	318*c*	*i*P	P	19 43 06.7	-0.9
VRSR				*e*S	S	19 50 44.1	-2.5
VRSR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VRSR				smax			
	comp=N,10.0nm,0.9s						
VRSR				smax			
	comp=Z,4.0nm,1.0s						
VRSR				smax			
	comp=E,20nm,1.2s						
SAC	**San Andreas**	62.26	64	*e*P	P	19 43 07.1	-0.7
SAC	**San Andreas**	62.26	64	P	P	19 43 07.8	0.0
SFJD	**Kangerlussuaq**	62.44	8⇑	*i*P	P	19 43 07.5	-1.1
	comp=E,250nm,0.9s,mb5.4						
SFJD	**Kangerlussuaq**	62.44	8⇑	*i*P	P	19 43 07.5	-1.1
SFJD				pmax	pmax		
	comp=Z,250nm,0.9s,mb5.4						
MCMT	**McKenzie Canyo**	62.48	52	*e*P	P	19 43 08.6	-0.6
PAHR	**Pah Rah Range**	62.52	60	*e*P	P	19 43 09.7	+0.1
	comp=Z,253nm,0.8s,mb5.6						
BOZ	**Bozeman (W)**	62.53	51	*e*P	P	19 43 09.7	+0.2
	comp=Z,278nm,0.6s,mb5.8						
BOZ	**Bozeman (W)**	62.53	51	*e*P	P	19 43 09.7	+0.2
BOZ				pmax	pmax		
	comp=Z,278nm,0.6s,mb5.8						
HLID	**Hailey**	62.55	54	*e*P	P	19 43 09.7	0.0
	comp=Z,62nm,0.8s,mb5.0						
CMB	**Columbia Colle**	63.11	62	*e*P	P	19 43 13.1	-0.2
	comp=Z,308nm,0.9s,mb5.6						
CMB				*e*PcP	PcP	19 43 43.6	-0.4
CMB	**Columbia Colle**	63.11	62	*e*P	P	19 43 13.1	-0.2
CMB				*e*		19 43 43.6	
CMB				pmax	pmax		
	comp=Z,308nm,0.9s,mb5.6						
QLMT	**Earthquake Lak**	63.20	52	*e*P	P	19 43 13.7	0.0
MOL	**Molde**	63.35	341⇑	*i*P	P	19 43 21.9	+7.4
SAO	**San Andreas Ge**	63.38	64	*e*P	P	19 43 14.4	-0.7
	comp=Z,107nm,1.0s,mb5.1						
SAO	**San Andreas Ge**	63.38	64	P	P	19 43 14.6	-0.4
SAO				pmax	pmax		
	comp=Z,110nm,1.0s,mb5.1						
GCMT	**Greycliff**	63.40	50	*e*P	P	19 43 15.3	+0.3
DOMB	**Dombas**	63.49	340⇑	*i*P	P	19 43 14.7	-0.7
DOMB				AMb	AMB	19 43 15.5	
	comp=Z,135nm,0.7s,mb5.4						
DOMB	**Dombas**	63.49	340⇑	*i*P	P	19 43 14.7	-0.7
	comp=Z,135nm,0.7s,mb5.4						
HYB	**Hyderabad**	63.49	266⇓	*i*P	P	19 43 15.0	-0.9
	comp=Z,440nm,1.0s,mb5.7						
HYB				*e*sP	sP	19 46 24.0	+0.1
HYB				*e*ScP		19 46 48.0	
HYB				*e*PcS		19 47 47.0	
HYB				*e*S	S	19 51 02.0	0.0
HYB				*e*ScS	ScS	19 52 06.0	+0.4
HYB				*e*PKPPKP		20 12 04.0	
HYB	**Hyderabad**	63.49	266	*i* P	P	19 43 15.0	-0.9
	comp=Z,440nm,1.0s,mb5.7						
HYB				*e*S	S	19 51 00.0	-2.0
HYB	**Hyderabad**	63.49	266	*i* P	P	19 43 15.0	-0.9
HYB				*e*S	S	19 51 00.0	-2.0
HYB				pmax	pmax		
	comp=Z,440nm,1.0s,mb5.7						
YMR	**Madison River**	63.55	51	*e*P	P	19 43 16.2	+0.3
	comp=Z,678nm,1.1s,mb5.9						
YFT	**Old Faithful**	63.77	51	*e*P	P	19 43 18.9	+1.7
LRV	**Little Rabbit**	63.86	64	*e*P	P	19 43 18.1	+0.1
NB2	**NORSAR Subarra**	63.87	338	P	P	19 43 17.3	-0.3
	comp=Z,133nm,0.6s,mb5.5,baz=27,slow=6.5						
NB2	**NORSAR Subarra**	63.87	338	P	P	19 43 17.3	-0.3
	baz=27,slow=6.5						
NOA	**NORSAR Array B**	63.87	338	P	P	19 43 17.1	-0.5
	comp=Z,158nm,0.7s,mb5.5,baz=29,slow=6.5,SNR=458						
NOA				PcP	PcP	19 43 45.2	-1.4
	comp=Z,26nm,0.7s,baz=30,slow=3.2,SNR=8.4						
NOA				pP	pP	19 45 20.2	-0.6
	comp=Z,13nm,0.8s,baz=30,slow=7.2,SNR=6.9						
NOA				S	S	19 51 05.4	-0.4
	comp=Z,4.4nm,0.8s,baz=24,slow=11,SNR=4.7						
NOA	**NORSAR Array B**	63.87	338	P	P	19 43 17.1	-0.5
NOA				PcP	PcP	19 43 45.2	-1.4
NOA				pP	pP	19 45 20.2	-0.6
NOA				S	S	19 51 05.4	-0.4
LKWY	**Lake**	63.91	51	*e*P	P	19 43 19.7	+1.5
	comp=Z,162nm,0.8s,mb5.4						
LKWY				*e*pP	pP	19 45 21.4	0.0
LKWY	**Lake**	63.91	51	*e*P	P	19 43 19.7	+1.6
LKWY				*e**PP	pP	19 45 21.4	0.0
LKWY				pmax	pmax		
	comp=Z,162nm,0.8s,mb5.4						
KAKA	**Kakadu**	63.93	197⇑	*i*P	P	19 43 38.3	+20
	comp=Z,84nm,0.6s,mb5.2						
KAKA				*e*PCP	pP	19 45 43.9	+22
NVAR	**Mina Array Bea**	64.02	61	P	P	19 43 19.3	+0.4
	comp=Z,279nm,0.7s,mb5.7,baz=295,slow=5.7,SNR=1758						
HFA0	**Hagfors New Ar**	64.03	336	P	P	19 43 17.2	-1.4
HFS	**Hagfors**	64.03	336	S	S	19 51 06.7	-1.1
	comp=Z,6.4nm,0.7s,baz=59,slow=17,SNR=5.7						
LATR	**Latur**	64.04	268	*e*P	P	19 43 20.0	+0.6
DGMT	**Dagmar**	64.05	45	*e*P	P	19 43 18.6	-0.4
	comp=Z,639nm,0.6s,mb6.1						
ELK	**Elko**	64.08	57	*e*P	P	19 43 19.9	+0.6
	comp=Z,64nm,0.4s,mb5.3						
ELK	**Elko**	64.08	57	P	P	19 43 20.0	+0.7
ELK				pmax	pmax		
	comp=Z,210nm,1.0s						
MNV	**Mina**	64.10	61	*e*P	P	19 43 19.8	+0.3
	comp=Z,249nm,0.8s,mb5.6						
MNV	**Mina**	64.10	61	P	P	19 43 19.9	+0.4
MNV				pmax	pmax		
	comp=Z,250nm,0.8s,mb5.6						
IMW	**Indian Meadow**	64.11	52	*e*P	P	19 43 20.2	+0.8
	comp=Z,6.1nm,0.7s						
NAO	**NORSAR Subarra**	64.15	338	P	P	19 43 17.3	-2.1
	comp=Z,133nm,0.6s,mb5.5						
NAO	**NORSAR Subarra**	64.15	338	P	P	19 43 17.3	-2.1
NAO				pmax	pmax		
	comp=Z,133nm,0.6s,mb5.5						
MNK	**Minsk**	64.29	326	*e*P	P	19 43 18.0	-2.4
MNK				*e**PP	PcP	19 43 45.0	-3.5
MNK				*e*S	S	19 51 07.0	-4.0
MNK				*e*PS		19 52 07.0	
MOOW	**Moose Ponds**	64.31	52	*e*P	P	19 43 21.3	+0.6
	comp=Z,216nm,0.8s,mb5.5						
TPAW	**Teton Pass**	64.39	52	*e*P	P	19 43 21.9	+0.6
	comp=Z,307nm,0.9s,mb5.6						
LAO	**LASA Array**	64.42	47	*e*P	P	19 43 21.3	0.0
	comp=Z,320nm,0.9s,mb5.7						
LOHW	**Long Hollow**	64.48	52	*e*P	P	19 43 22.4	+0.7
	comp=Z,2µm,1.2s,mb6.3						
SNOW	**Snow King Moun**	64.51	52	*e*P	P	19 43 22.9	+1.0
	comp=Z,334nm,1.1s,mb5.7						
REDW	**Red Top Meadow**	64.54	52	*e*P	P	19 43 22.4	+0.3
	comp=Z,316nm,1.1s,mb5.7						
MTUM	**Tungsten Hills**	64.62	62	*e*P	P	19 43 23.0	+0.3
HVU	**Hansel Valley**	64.67	55	*e*P	P	19 43 23.3	+0.3
	comp=Z,120nm,0.9s,mb5.3						
HVU	**Hansel Valley**	64.67	55	P	P	19 43 23.4	+0.4
HVU				pmax	pmax		
	comp=Z,120nm,0.9s,mb5.3						
AHID	**Auburn Hatcher**	64.83	53	*e*P	P	19 43 24.1	+0.1
	comp=Z,139nm,0.7s,mb5.5						
AHID				*e*pP	pP	19 45 26.6	-1.2
PTRM	**Twissleman Ran**	64.87	64	*e*P	P	19 43 24.6	+0.3
TPH	**Tonopah**	64.87	60	*e*P	P	19 43 24.4	+0.1
	comp=Z,212nm,0.6s,mb5.8						
TPH	**Tonopah**	64.87	60	P	P	19 43 24.7	+0.4
TPH				pmax	pmax		
	comp=Z,250nm,0.7s,mb5.8						
HYA	**Hoyanger**	64.90	341⇓	*i*P	P	19 43 24.6	+0.5
HYA				AMb	AMB	19 43 25.6	
	comp=Z,172nm,1.3s,mb5.3						
HYA	**Hoyanger**	64.90	341⇓	*i*P	P	19 43 24.6	+0.5
	comp=Z,172nm,1.3s,mb5.3						
GOF	**Gofitskoye**	64.93	311⇓	*i*P	P	19 43 24.4	-0.2
GOF				*i* S	S	19 51 19.2	+0.4
GOF				pmax	pmax		
	comp=Z,430nm,0.8s,mb5.9						
GOF				smax			
	comp=N,230nm,1.3s						
OSL	**Oslo**	64.95	338	*e*P	P	19 43 23.9	-0.5
BHJ	**Bhuj**	64.99	277	*e*P	P	19 43 25.5	+0.3
BHJ				AMb	AMB	19 43 26.4	
	comp=Z,242nm,0.6s,mb5.8						
BORG	**Borgarnes**	65.21	355	*e*P	P	19 43 26.7	+0.8
SUE	**Sulen**	65.30	341⇑	*i*P	P	19 43 26.5	-0.1
HWUT	**Hardware Ranch**	65.42	54	*e*P	P	19 43 28.1	+0.4
	comp=Z,342nm,0.8s,mb5.8						
HWUT				*e*pP	pP	19 45 32.0	+0.2
KONO	**Kongsberg**	65.48	338	*e*P	P	19 43 26.7	-0.9
	comp=Z,56nm,0.8s,mb5.0						
KONO				*e*pP	pP	19 45 29.1	-2.8
KONO	**Kongsberg**	65.48	338	*e*P	P	19 43 26.7	-1.0
KONO				*e**PP	pP	19 45 29.1	-2.7
KONO				pmax	pmax		
	comp=Z,56nm,0.8s,mb5.0						
BW06	**Boulder Array**	65.62	52	*e*P	P	19 43 28.5	-0.4
	comp=Z,768nm,1.0s,mb6.1						
BW06				*e*pP	pP	19 45 30.4	-2.8
PDAR	**Pinedale Array**	65.62	52	P	P	19 43 28.8	-0.1
	comp=Z,285nm,0.6s,mb5.9,baz=301,slow=1.9,SNR=2155						
PDAR				pP	pP	19 45 31.9	-1.3
	comp=Z,13nm,0.8s,baz=315,slow=2.6,SNR=4.2						
PDAR				PKPPKP		20 11 58.2	
	comp=Z,0.8nm,0.7s,baz=90,slow=4.4,SNR=3.7						
POO	**Poona**	65.70	270	*e*x	x	19 43 40.0	
POO				AMb	AMB	19 43 42.1	
	comp=Z,250nm,1.2s,mb5.5						
ASK	**Askoy**	65.73	341⇑	*i*P	P	19 43 29.3	0.0
RUND	**Rundenannen**	65.75	341⇑	*i*P	P	19 43 29.5	+0.1
DUG	**Dugway**	65.78	56	*e*P	P	19 43 30.3	+0.5
	comp=Z,336nm,0.8s,mb5.8						
DUG				*e*pP	pP	19 45 32.9	-1.4
DUG	**Dugway**	65.78	56	*e*P	P	19 43 30.3	+0.4
DUG				*e**PP	pP	19 45 32.9	-1.3
DUG				pmax	pmax		
	comp=Z,336nm,0.8s,mb5.8						
BER	**Bergen**	65.79	341⇑	*i*P	P	19 43 29.5	-0.1
NOQ	**North Oquirrh**	65.82	55	*e*P	P	19 43 30.5	+0.3
	comp=Z,497nm,0.8s,mb6.0						
TCUT	**Toone Canyon**	65.86	54	*e*P	P	19 43 30.7	+0.4
ISA	**Isabella**	65.86	63	*e*P	P	19 43 29.2	-1.3
ISA	**Isabella**	65.86	63	P	P	19 43 30.3	-0.2
KIV	**Kislovodsk**	65.91	310	*e*P	P	19 43 30.6	0.0
	comp=Z,117nm,0.8s,mb5.4						
KIV	**Kislovodsk**	65.91	310	*e*P	P	19 43 31.1	+0.5
KIV				*e**PP	pP	19 45 31.8	-3.2
KIV				*e*		19 46 06.3	
KIV				*i* S	S	19 51 31.5	+1.3
KIV				*e*SSS	SSS	19 59 17.2	+1.5
KIV				pmax	pmax		
	comp=Z,138nm,0.9s,mb5.4						
EGD	**Espegrend**	65.91	341⇑	*i*P	P	19 43 30.3	-0.1
DAC	**Darwin (Calif)**	65.93	62	*e*P	P	19 43 30.7	-0.2
	comp=Z,154nm,0.7s,mb5.5						
DAC	**Darwin (Calif)**	65.93	62	*e*P	P	19 43 30.9	0.0
DAC				pmax	pmax		
	comp=Z,150nm,0.7s,mb5.5						
ODD1	**Odda**	65.93	340⇑	*i*P	P	19 43 29.4	-1.0
CTU	**Camp Tracy**	65.98	55	*e*P	P	19 43 31.1	0.0
	comp=Z,98nm,0.5s,mb5.5						
TPNV	**Topopah Spring**	66.21	61	*e*P	P	19 43 32.8	+0.2
	comp=Z,585nm,0.6s,mb6.2						
TPNV	**Topopah Spring**	66.21	61	P	P	19 43 32.9	+0.3
TPNV				pmax	pmax		
	comp=Z,580nm,0.6s,mb6.2						
ULM	**Lac du Bonnet**	66.28	39	P	P	19 43 31.6	-1.2
	comp=Z,161nm,0.7s,mb5.5,baz=316,slow=6.7,SNR=167						
SUW	**Suwalki**	66.32	328	*e*P	P	19 43 32.0	-1.0
SUW				*e*PcP	PcP	19 43 54.9	-2.1
SUW				*e*PP	PP	19 46 05.0	-5.4
SUW				*e*S	S	19 51 32.3	-2.5
SUW				*e*SKS	SKS	19 52 26.3	+0.6
SUW	**Suwalki**	66.32	328	*e*P	P	19 43 32.0	-1.0
SUW				*e*PcP	PcP	19 43 54.8	-2.2
SUW				*e*PP	PP	19 46 05.0	-5.4
SUW				*e*S	S	19 51 32.3	-2.6
SUW				*e*SKS	SKS	19 52 26.3	+0.7
SUW	**Suwalki**	66.32	328	*e*P	P	19 43 32.0	-1.0
SUW				*e*		19 43 54.8	
SUW				*e*S	S	19 51 32.3	-2.6
SUW				*e*		19 52 26.3	
NLU	**North Lily Min**	66.34	56	*e*P	P	19 43 33.7	+0.3
DGRG	**David-gareji**	66.38	307	P	P	19 43 32.8	-0.8
KAD	**Karad**	66.38	269	*e*P	P	19 43 33.5	-0.4
KAD				AMb	AMB	19 43 34.6	
	comp=Z,387nm,0.6s,mb6.0						
BLS5	**Blasjo**	66.41	340⇑	*i*P	P	19 43 34.8	+1.3
BLS5				AMb	AMB	19 43 36.8	
	comp=Z,63nm,1.6s,mb4.8						
DAU	**Daniels Canyon**	66.45	55	*e*P	P	19 43 34.3	+0.4
DAU	**Daniels Canyon**	66.45	55	P	P	19 43 34.6	+0.6
TI2	**Plekhanov**	66.49	307κ	*i*P	P	19 43 34.2	0.0
TI2				*i*	pP	19 45 38.0	-1.0
TI2				*i* S	S	19 51 38.2	+1.1
TI2				smax			
	comp=E,30nm,1.0s						
TI2				smax			
	comp=E,2µm,2.0s						
MTA	**Mtatsminda**	66.50	307	P	P	19 43 34.9	+0.6
TBLG	**Delisi**	66.50	307	P	P	19 43 35.0	+0.7
MPU	**Maple Canyon**	66.53	55	*e*P	P	19 43 34.9	+0.4
	comp=E,379nm,0.2s,mb6.5						
ONI	**Oni**	66.53	309	P	P	19 43 35.0	+0.5
ONI	**Oni**	66.53	309	P	S	19 51 40.0	+2.4
AKASG	**Malin Array Be**	66.76	323	P	P	19 43 34.8	-0.8
	comp=E,24nm,0.3s,mb5.0,baz=36,slow=6.3,SNR=264						
AKASG				pP	pP	19 45 38.9	-1.7
	comp=E,25nm,0.8s,baz=36,slow=7.1,SNR=5.9						
AKASG				S	S	19 51 38.0	-2.0
	comp=E,21nm,1.0s,baz=32,slow=12,SNR=22						
AKASG				PKPPKP		20 11 51.5	
	comp=E,4.2nm,1.0s,baz=222,slow=3.6,SNR=7.0						
ARUT	**Antelope Range**	67.17	58	*e*P	P	19 43 38.5	+0.1
ARUT	**Antelope Range**	67.17	58	P	P	19 43 38.6	+0.2
SNART	**Snartemo**	67.21	339⇑	*i*P	P	19 43 38.4	+0.1
SNART				AMb	AMB	19 43 39.1	
	comp=Z,162nm,0.7s,mb5.6						
SNART	**Snartemo**	67.21	339⇑	*i*P	P	19 43 38.4	+0.1
	comp=Z,162nm,0.7s,mb5.6						
WAL1	**Walls**	67.27	344⇑	*i*P	P	19 43 38.2	-0.3
TMUT	**Trail Mountain**	67.28	56	*e*P	P	19 43 39.4	+0.4
LRW	**Lerwick**	67.30	344⇑	*i*P	P	19 43 38.6	-0.2
MSU	**Marysvale**	67.33	57	*e*P	P	19 43 40.2	+0.8
RSSD	**Black Hills**	67.35	48	*e*P	P	19 43 39.0	-0.3
	comp=Z,431nm,0.8s,mb5.9						
RSSD				*e*pP	pP	19 45 43.5	-1.1
RSSD	**Black Hills**	67.35	48	*e*P	P	19 43 39.0	-0.4
RSSD				*e**PP	pP	19 45 43.5	-1.1
RSSD				pmax	pmax		
	comp=Z,431nm,0.8s,mb5.9						
SOC	**Sochi**	67.63	312*d*	*i*P	P	19 43 40.1	-1.0
SOC				*e**PP	pP	19 45 43.2	-3.2
SOC				*e*		19 46 19.8	
SOC				*e*PPP	PPP	19 48 06.6	+1.3
SOC				*i* S	S	19 51 49.7	-0.5
SOC				*e*		19 52 44.6	
SOC				*e*SS	SS	19 56 37.9	+7.5
SOC				*e*SSS	SSS	19 59 49.9	+6.2
SOC				pmax	pmax		
	comp=Z,51nm,0.7s,mb5.1						
GNI	**Garni**	67.65	306	*e*P	P	19 43 42.7	+1.5
	comp=Z,78nm,0.6s,mb5.3						
GNI				*e*pP	pP	19 45 47.3	+0.7
GNI	**Garni**	67.65	306	*e*P	P	19 43 42.7	+1.4
GNI				*e**PP	pP	19 45 47.3	+0.7
GNI				pmax	pmax		
	comp=Z,78nm,0.6s						
SRU	**San Rafael**	67.78	55	*e*P	P	19 43 42.0	-0.1
	comp=Z,479nm,0.8s,mb6.0						
SRU	**San Rafael**	67.78	55	P	P	19 43 42.1	0.0
SRU				pmax	pmax		
	comp=Z,380nm,0.8s,mb5.9						
ANN	**Anapa**	67.79	314	*e*P	P	19 43 41.3	-0.7
ANN				*i*		19 43 56.5	
ANN				*i* *PP	pP	19 45 46.8	-0.7
ANN				*i*		19 46 24.3	
ANN				*e*S	S	19 51 49.8	-2.3
ANN				pmax	pmax		
	comp=Z,25nm,0.7s,mb4.8						
BSD	**Bornholm Skovb**	68.02	333⇓	*i*P	P	19 43 42.8	-0.4
	comp=Z,181nm,0.7s,mb5.6						
BSD				*i*	pP	19 45 48.0	-0.8
BSD	**Bornholm Skovb**	68.02	333⇓	*i*P	P	19 43 42.8	-0.4
BSD				*i*	pP	19 45 48.0	-0.8
BSD				pmax	pmax		
	comp=Z,181nm,0.7s,mb5.6						
COP	**Copenhagen**	68.23	335⇑	*i*P	P	19 43 44.2	-0.3
	comp=Z,67nm,0.6s,mb5.2						
COP				*i*		19 44 03.7	
COP	**Copenhagen**	68.23	335⇑	*i*P	P	19 43 44.2	-0.3
COP				*i*		19 44 03.7	
COP				pmax	pmax		
	comp=Z,67nm,0.6s,mb5.2						
OWE	**Westray**	68.40	344⇑	*i*P	P	19 43 45.0	-0.4
MUD	**Monsted U’grnd**	68.42	337⇑	*i*P	P	19 43 45.4	-0.2
	comp=Z,56nm,0.8s,mb5.0						
MUD				*i*		19 43 59.2	
MUD				*e*	pP	19 45 50.6	-0.8
MUD	**Monsted U’grnd**	68.42	337⇑	*i*P	P	19 43 45.4	-0.2
MUD				*e*	pP	19 45 50.6	-0.8
MUD				pmax	pmax		
	comp=Z,56nm,0.8s,mb5.0						
PFO	**Pinyon Flat Ob**	68.49	63	P	P	19 43 45.0	-1.4
WAR	**Warsaw**	68.52	328	*e*P	P	19 43 37.0	-9.2
WAR				*e*PcP	PcP	19 44 04.9	-1.5
WAR				*e*SKS	SKS	19 52 45.0	+3.0
WAR	**Warsaw**	68.52	328	*e*P	P	19 43 37.0	-9.2
WAR				*e*PcP	PcP	19 44 04.9	-1.5
WAR				*e*SKS	SKS	19 52 45.0	+3.0
OST	**Stronsay**	68.53	344⇑	*i*P	P	19 43 45.6	-0.6
OHO	**Hoy**	68.90	344⇑	*i*P	P	19 43 48.1	-0.2
OBR	**Brabster**	69.09	344⇑	*i*P	P	19 43 49.3	-0.2
PV10	**Paradox Valley**	69.11	55	*e*P	P	19 43 50.5	+0.5
SIM	**Simferopol’**	69.19	316	P	P	19 43 51.6	+1.2
SIM				*e*S	S	19 52 08.0	-0.1
SIM				*e*SS	SS	19 56 58.0	+3.4
SIM				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.6						
ORE	**Reay**	69.25	344⇑	*i*P	P	19 43 50.3	-0.2
OTO	**Tongue**	69.41	345⇑	*i*P	P	19 43 51.4	0.0
LVV	**L’vov**	69.45	325	*e*P	P	19 43 51.0	-0.8
LVV				*e*		19 52 08.0	
VANB	**Van**	69.51	306	P	P	19 43 54.5	+2.2
PV01	**Paradox Valley**	69.53	55	*e*P	P	19 43 52.7	+0.2
TVAN	**Van**	69.55	306	*i* P	P	19 43 52.1	-0.5
SMCO	**Snowmass**	69.59	53	*e*P	P	19 43 53.2	+0.4
	comp=Z,469nm,0.6s,mb6.1						
RSC	**Scourie**	69.68	345⇑	*i*P	P	19 43 52.5	-0.5
PALK	**Pallekele**	69.77	257	*e*P	P	19 43 54.3	0.0
	comp=Z,145nm,0.8s,mb5.5						
ISCO	**Idaho Springs**	69.82	52	*e*P	P	19 43 54.5	+0.4
	comp=Z,232nm,1.3s,mb5.5						
ISCO				*e*pP	pP	19 45 58.2	-2.5
ISCO	**Idaho Springs**	69.82	52	*e*P	P	19 43 54.6	+0.5
ISCO				*e**PP	pP	19 45 58.2	-2.5
ISCO				pmax	pmax		
	comp=Z,232nm,1.3s,mb5.5						
CTA	**Charters Tower**	69.85	181⇑	*i*P	P	19 43 54.2	-0.5
	comp=Z,36nm,0.9s,mb4.8						
CTA				*i* S	S	19 52 15.0	-1.0
CTA	**Charters Tower**	69.85	181⇑	*i*P	P	19 43 54.2	-0.5
CTA				*i* S	S	19 52 15.0	-1.0
CTA				pmax	pmax		
	comp=Z,36nm,0.9s						
CTAO	**Charters Tower**	69.85	181	*e*P	P	19 43 54.1	-0.6
	comp=Z,75nm,1.0s,mb5.1						
CTAO				*e*pP	pP	19 46 02.2	+1.1
CTAO	**Charters Tower**	69.85	181	*e*P	P	19 43 54.1	-0.6
CTAO				*e**PP	pP	19 46 02.3	+1.1
CTAO				pmax	pmax		
	comp=Z,75nm,1.0s,mb5.1						
KIS	**Kishinev**	69.86	320	*e*P	P	19 43 54.0	-0.3
KIS				*e*		19 44 10.0	
KIS				*e**PP	pP	19 46 02.0	+1.2
KIS				*i* S	S	19 52 14.0	-1.6
KIS				*e*		19 52 43.0	
KIS				*e*		19 52 53.0	
KIS				pmax	pmax		
	comp=Z,74nm,1.0s,mb5.1						
KIS				smax			
	comp=N,500nm,2.0s						
KIS				smax			
	comp=E,180nm,1.6s						
EYMN	**Ely**	69.86	38	*e*P	P	19 43 53.0	-1.3
	comp=E,383nm,0.8s,mb5.9						
RW3	**Ridgway**	69.91	54	*e*P	P	19 43 55.0	+0.3
MVH1	**Achvaich**	69.92	344⇑	*i*P	P	19 43 54.2	-0.2
REB	**Eisghbrachaidh**	69.92	345⇑	*i*P	P	19 43 54.0	-0.4
WUAZ	**Wupatki**	69.96	59	*e*P	P	19 43 55.8	+0.7
	comp=E,258nm,1.0s,mb5.6						
MCD	**Coleburn Disti**	70.08	344⇑	*i*P	P	19 43 55.1	-0.2
KWP	**Kalwaria**	70.09	325	*e*P	P	19 43 56.0	+0.5
KWP				*e*PcP	PcP	19 44 10.6	-2.5
KWP				*e*pP	pP	19 46 04.0	+1.8
KWP				*e*S	S	19 52 17.6	-0.6
KWP	**Kalwaria**	70.09	325	*e*P	P	19 43 56.0	+0.4
KWP				*e*PcP	PcP	19 44 10.6	-2.5
KWP				*e*PP	pP	19 46 04.0	+1.8
KWP				*e*S	S	19 52 17.6	-0.6
RRR	**Rubha Reidh**	70.25	345⇑	*i*P	P	19 43 55.9	-0.5
MME1	**Meikle Cairn**	70.28	344⇑	*e*P	P	19 43 55.9	-0.6
RRH	**Rhenigidale**	70.34	346⇑	*i*P	P	19 43 56.4	-0.4
BSEG	**Bad Segeberg**	70.36	335	*e*P	P	19 43 57.0	0.0
BSEG				*e*pP	pP	19 46 05.5	+1.7
MDO	**Dochfour**	70.41	344⇑	*i*P	P	19 43 57.0	-0.2
KAC	**Achnashellach**	70.51	345⇑	*i*P	P	19 43 57.7	-0.2
FITZ	**Fitzroy Crossi**	70.62	202⇑	*i*P	P	19 43 59.2	+0.1
	comp=E,48nm,0.4s,mb5.4						
FITZ				*e*PCP	pP	19 46 08.0	+1.9
FITZ				*e*S	S	19 52 23.0	-1.6
FITZ	**Fitzroy Crossi**	70.62	202	PKPPKP		20 11 49.3	
	comp=E,55nm,1.1s,baz=217,slow=4.6,SNR=18						
OJC	**Ojcow**	70.63	328⇑	*i*P	P	19 43 58.9	+0.2
OJC				*i* PP	pP	19 46 06.6	+0.9
OJC				*e*S	S	19 52 22.6	-1.7
RUE	**Ruedersdorf**	70.64	332	*e*P	P	19 43 58.7	0.0
	comp=E,120nm,1.1s,mb5.3						

RUE				epP	pP	19 46 07.0	+1.4
WRAB	**Tennant Creek**	70.69	193	eP	P	19 43 59.3	-0.3
	comp=E,98nm,0.8s,mb5.4						
WRAB				epP	pP	19 46 07.0	+0.5
WRAB	**Tennant Creek**	70.69	193	eP	P	19 43 59.3	-0.2
WRAB				e*PP	pP	19 46 07.0	+0.5
WRAB				pmax	pmax		
	comp=Z,98nm,0.8s,mb5.4						
WB2	**Warramunga Arr**	70.69	193	⇑iP	P	19 43 59.3	-0.3
WB2				ePCP	pP	19 46 07.5	+1.0
WB2				eS	S	19 52 24.1	-1.3
WRA	**Warramunga Arr**	70.69	193	P	P	19 43 59.2	-0.4
	comp=Z,82nm,0.7s,mb5.4,baz=10,slow=6.2,SNR=405						
WRA				pP	pP	19 46 06.3	-0.2
	comp=Z,38nm,1.0s,baz=9.1,slow=6.7,SNR=14						
WRA				PKiKP		19 49 58.4	
	comp=Z,0.5nm,0.5s,baz=334,slow=1.8,SNR=4.9						
WRA				S	S	19 52 24.2	-1.2
	comp=Z,8.0nm,1.2s,baz=10.0,slow=11,SNR=8.8						
WRA				PKPPKP		20 11 46.6	
	comp=Z,11nm,0.8s,baz=197,slow=3.0,SNR=26						
KPL	**Plockton**	70.72	345	⇑iP	P	19 43 58.6	-0.6
STHS	**Stebnicka Huta**	70.80	326	i P	P	19 44 00.3	+0.6
STHS				e	pP	19 46 08.3	+1.6
STHS				eS	S	19 52 25.4	-0.7
BURAR	**Bucovina Array**	70.80	323	⇓P	P	19 44 00.1	+0.3
KSB	**Sheil Bridge**	70.81	345	⇑iP	P	19 43 59.5	-0.1
KOLS	**Kolonicke sedl**	70.83	325	i P	P	19 44 00.1	+0.2
KOLS				epP	pP	19 46 08.5	+1.6
KOLS	**Kolonicke sedl**	70.83	325	i P	P	19 44 00.1	+0.2
KOLS				e	pP	19 46 08.5	+1.6
NIE	**Niedzica**	71.13	327	⇑iP	P	19 44 02.4	+0.8
NIE				ePP	pP	19 46 10.5	+1.7
NIE				eS	S	19 52 29.5	-0.3
BEST	**Besiri**	71.14	307	i P	P	19 44 03.2	+1.3
CRVS	**Cervenica-Dubn**	71.15	326	i P	P	19 44 02.1	+0.4
CRVS				epP	pP	19 46 09.6	+0.7
KAR1	**Arisaig**	71.16	345	⇑iP	P	19 44 01.4	-0.2
TRD	**Trivandrum**	71.19	261	ex	x	19 46 08.6	
KSP	**Ksiaz**	71.28	330	eP	P	19 44 02.5	0.0
KSP				epP	pP	19 46 10.9	+1.3
KSP				eS	S	19 52 30.9	-0.5
KSP	**Ksiaz**	71.28	330	⇑iP	P	19 44 02.5	+0.1
KSP				epP	pP	19 46 11.2	+1.5
KSP				eS	S	19 52 26.0	-5.4
RAC	**Raciborz**	71.30	328	eP	P	19 44 03.2	+0.6
SDCO	**Great Sand Dun**	71.42	53	eP	P	19 44 03.8	+0.3
	comp=Z,58nm,0.6s,mb5.3						
SDCO				epP	pP	19 46 08.9	-2.0
OKC	**Ostrava-Krasne**	71.52	328	⇑iP	P	19 44 04.0	+0.1
OKC				epP	pP	19 46 12.3	+1.0
OKC				eS	S	19 52 33.0	-1.2
SCHQ	**Schefferville**	71.55	20	P	P	19 44 03.2	-0.6
	comp=Z,182nm,0.5s,mb5.8,baz=348,slow=5.8,SNR=458						
SCHQ	**Schefferville**	71.55	20	eP	P	19 44 03.0	-0.9
	comp=Z,229nm,0.6s,mb5.9						
BOYT	**Boyabat**	71.58	313	i P	P	19 44 04.5	+0.1
EAB	**Aberfoyle**	71.60	344	⇑iP	P	19 44 04.1	-0.1
EAB				AMb	AMB	19 44 05.4	
	comp=Z,177nm,1.0s,mb5.6						
CFR	**Carcaliu**	71.61	320	⇑P	P	19 44 03.9	-0.5
VRI	**Vrincioaia**	71.63	321	⇑P	P	19 44 05.2	+0.7
EDI	**Edinburgh**	71.64	343	⇑eP	P	19 44 03.9	-0.5
UPC	**Upice**	71.66	330	⇑iP	P	19 44 04.7	+0.1
UPC				epP	pP	19 46 13.2	+1.1
DPC	**Dobruska-Polom**	71.69	330	⇑iP	P	19 44 05.4	+0.6
DPC				epP	pP	19 46 14.4	+2.1
DPC				eS	S	19 52 35.5	-0.5
EBL	**Broad Law**	71.75	343	⇑eP	P	19 44 04.6	-0.4
EAU	**Auchinoon**	71.76	343	⇑eP	P	19 44 04.8	-0.3
EAU				AMb	AMB	19 44 06.3	
	comp=Z,222nm,1.5s,mb5.5						
MORC	**Moravsky Berou**	71.78	329	eP	P	19 44 05.6	+0.2
	comp=Z,84nm,0.8s,mb5.3						
MORC				epP	pP	19 46 11.9	-0.9
MORC	**Moravsky Berou**	71.78	329	eP	P	19 44 05.6	+0.3
MORC				e*PP	pP	19 46 11.9	-1.0
MORC				pmax	pmax		
	comp=Z,83nm,0.8s,mb5.3						
ELZG	**Elazig**	71.84	309	i P	P	19 44 06.4	+0.5
KECS	**Kecovo**	71.85	326	i P	P	19 44 06.1	+0.3
KECS				epP	pP	19 46 14.5	+1.1
KECS				e		20 16 25.3	
LIKS	**Likavka**	71.86	327	eP	P	19 44 06.7	+0.9
SVST	**Sivas**	71.87	311	i P	P	19 44 07.5	+1.4
CLL	**Collm**	71.90	332	⇑P	P	19 44 05.7	-0.3
	comp=Z,logA/T=2.3,mb5.6						
CLL				e*PP	pP	19 46 14.0	+0.4
CLL				eS	S	19 52 32.0	-6.4
CLL				eSCS	ScS	19 53 10.0	-1.2
CLL				e*SS		19 56 23.0	
CLL	**Collm**	71.90	332	⇑iP	P	19 44 05.7	-0.3
	comp=Z,160nm,0.8s,mb5.6						
CLL				epP	pP	19 46 14.0	+0.4
CLL				eS	S	19 52 32.0	-6.4
CLL				eScS	ScS	19 53 10.0	-1.2
CLL	**Collm**	71.90	332	⇑iP	P	19 44 05.7	-0.3
CLL				e*PP	pP	19 46 14.0	+0.4
CLL				eS	S	19 52 32.0	-6.4
CLL				e		19 53 10.0	
CLL				pmax	pmax		
	comp=Z,160nm,0.8s,mb5.6						
BRG	**Berggiesshubel**	71.99	331	⇑iP	P	19 44 06.0	-0.5
	comp=Z,33nm,0.8s,mb4.9						
BRG				i		19 44 19.9	
BRG				i pP	pP	19 46 15.2	+1.1
BRG				ePP	PP	19 47 00.6	+2.6
BRG				S	S	19 52 30.0	-9.4
BRG				e		20 11 34.8	
BRG	**Berggiesshubel**	71.99	331	⇑iP	P	19 44 06.1	-0.4
BRG				i		19 44 19.9	
BRG				i *PP	pP	19 46 15.2	+1.0
BRG				e		19 47 00.6	
BRG				S	S	19 52 30.0	-9.4
BRG				pmax	pmax		
	comp=Z,33nm,0.8s,mb4.9						
HARR	**Harsova**	72.09	319	⇑P	P	19 44 06.6	-0.6
PVCC	**Panska Ves**	72.10	331	⇑iP	P	19 44 07.4	+0.3
PVCC				epP	pP	19 46 16.2	+1.4
CLZ	**Clausthal**	72.20	334	eP	P	19 44 07.9	+0.2
	comp=Z,92nm,0.7s,mb5.4						
CLZ				epP	pP	19 46 17.4	+1.9
CLZ	**Clausthal**	72.20	334	eP	P	19 44 07.9	+0.2
CLZ				e*PP	pP	19 46 17.4	+1.9
CLZ				pmax	pmax		
	comp=Z,92nm,0.7s,mb5.4						
CTKT	**Corum**	72.25	313	i P	P	19 44 07.7	-0.5
MLR	**Muntele Rosu**	72.25	321	⇑P	P	19 44 08.6	+0.5
MLR	**Muntele Rosu**	72.25	321	P	P	19 44 09.7	+1.5
ECK	**Cauldkaine Hil**	72.33	343	⇑iP	P	19 44 08.2	-0.2
ECK				AMb	AMB	19 44 09.5	
	comp=Z,157nm,1.0s,mb5.5						
WIT	**Witteveen**	72.33	336	⇑eP	P	19 44 09.2	+0.8
	comp=Z,298nm,0.8s,mb5.9						
WIT				ex	x	19 46 18.5	
	comp=Z,341nm,1.8s						
VYHS	**Vyhne**	72.43	327	i P	P	19 44 09.7	+0.6
VYHS				epP	pP	19 46 16.6	-0.3
DRGR		72.45	324	⇑P	P	19 44 08.4	-0.8
VRAC	**Vranov**	72.50	329	P	P	19 44 10.2	+0.8
IBBN	**Ibbenburen**	72.51	336	P	P	19 44 08.4	-0.9
PSZ	**Piszkesteto**	72.54	326	eP	P	19 44 10.3	+0.6
	comp=Z,42nm,0.8s,mb5.0						
PSZ				epP	pP	19 46 17.5	0.0
PSZ	**Piszkesteto**	72.54	326	eP	P	19 44 10.3	+0.7
PSZ				e*PP	pP	19 46 17.5	-0.1
PSZ				pmax	pmax		
	comp=Z,42nm,0.8s,mb5.0						
PRU	**Pruhonice**	72.58	330	⇑iP	P	19 44 10.1	+0.3
PRU				epP	pP	19 46 19.4	+1.7
PRU				eS	S	19 52 44.1	-1.6
GMK	**Mull of Kintyr**	72.62	344	⇑iP	P	19 44 09.7	-0.2
LWH	**Whinny Nab**	72.64	341	⇑eP	P	19 44 10.2	+0.1
VOIR		72.66	322	⇓P	P	19 44 11.2	+0.9
TUC	**Tucson**	72.67	60	eP	P	19 44 10.9	+0.2
	comp=Z,96nm,0.9s,mb5.3						
TUC	**Tucson**	72.67	60	eP	P	19 44 10.9	+0.2
TUC				pmax	pmax		
	comp=Z,96nm,0.9s,mb5.3						
KRUC	**Moravsky**	72.78	329	P	P	19 44 10.4	-0.5
TREC	**Trest**	72.88	330	⇑iP	P	19 44 11.9	+0.4
TREC				epP	pP	19 46 20.6	+1.0
CKE	**Keswick**	72.89	343	⇑eP	P	19 44 11.9	+0.5
SMOL	**Smolenice**	72.90	328	i P	P	19 44 12.7	+1.0
SMOL				epP	pP	19 46 20.7	+0.9
MOX	**Moxa**	72.90	332	i P	P	19 44 11.6	0.0
	comp=Z,logA/T=1.9,mb5.2						
MOX				pP	pP	19 46 21.0	+1.3
MOX	**Moxa**	72.90	332	eP	P	19 44 11.6	0.0
	comp=Z,108nm,1.5s,mb5.2						
MOX				epP	pP	19 46 21.2	+1.5
MOX	**Moxa**	72.90	332	eP	P	19 44 11.6	0.0
MOX				e*PP	pP	19 46 21.2	+1.5
MOX				pmax	pmax		
	comp=Z,108nm,1.5s,mb5.2						
GAL1	**Galloway**	72.92	344	⇑iP	P	19 44 11.5	-0.1
AFI	**Afiamalu**	72.95	139	eP	P	19 44 10.8	-1.9
	comp=Z,93nm,0.8s,mb5.4						
AFI	**Afiamalu**	72.95	139	eP	P	19 44 10.8	-1.8
AFI				pmax	pmax		
	comp=Z,93nm,0.8s,mb5.4						
GCL	**Cushendall**	72.97	345	⇑iP	P	19 44 11.9	0.0
NKC	**Novy Kostel**	73.02	332	⇑iP	P	19 44 12.3	0.0
NKC				epP	pP	19 46 21.5	+1.1
XDE	**Dent Fell**	73.04	343	⇑iP	P	19 44 12.5	+0.2
XDE				AMb	AMB	19 44 13.1	
	comp=Z,195nm,1.4s,mb5.4						
ANMO	**Albuquerque**	73.04	56	eP	P	19 44 13.5	+0.7
	comp=Z,121nm,0.8s,mb5.5						
ANMO				epP	pP	19 46 20.9	0.0
ANMO	**Albuquerque**	73.04	56	eP	P	19 44 13.5	+0.7
ANMO				e*PP	pP	19 46 20.9	0.0
ANMO				pmax	pmax		
	comp=Z,121nm,0.8s						
WTSB	**Winterswijk**	73.07	336	⇑eP	P	19 44 12.5	-0.1
	comp=Z,141nm,0.8s,mb5.5						
WTSB				ex	x	19 46 21.9	
	comp=Z,81nm,2.0s						
LAZ	**Ladron**	73.09	57	eP	P	19 44 14.2	+1.1
CDU1	**Dunnerdale**	73.14	343	⇑eP	P	19 44 13.0	+0.1
SRO	**Srobarova**	73.19	327	eP	P	19 44 14.4	+1.1
BUD	**Budapest**	73.22	326	⇑eP	P	19 44 14.2	+0.7
SRO1	**Iza**	73.27	327	eP	P	19 44 14.6	+0.9
SRO1				epP	pP	19 46 22.4	+0.4
ZST	**Bratislava**	73.28	328	eP	P	19 44 14.5	+0.7
ZST				epP	pP	19 46 23.6	+1.5
GIM	**North Isle of**	73.42	343	⇑iP	P	19 44 14.5	+0.1
LPM	**Los Pinos Moun**	73.44	56	eP	P	19 44 15.7	+0.7
CBKS	**Cedar Bluff**	73.49	49	eP	P	19 44 14.1	-1.1
	comp=Z,286nm,0.8s,mb5.8						
CBKS	**Cedar Bluff**	73.49	49	P	P	19 44 14.2	-1.0
CBKS				pmax	pmax		
	comp=Z,290nm,0.8s,mb5.9						
BR131	**Keskin Array S**	73.50	313	eP	P	19 44 15.7	+0.5
	comp=Z,5.0nm,0.6s						
BR131				epP	pP	19 46 23.5	-0.2
BR131				ePP	PP	19 47 09.2	-1.8
BRTR	**Keskin Array B**	73.50	313	P	P	19 44 16.0	+0.7
	comp=Z,6.7nm,0.8s,baz=58,slow=3.6,SNR=25						
BRTR				pP	pP	19 46 22.8	-0.8
	comp=Z,16nm,0.9s,baz=68,slow=4.3,SNR=11						
PKSG		73.53	327	⇑eP	P	19 44 16.1	+0.9
WIM	**Isle of Man**	73.60	343	⇑iP	P	19 44 15.5	+0.1
LHO	**Holmfirth**	73.62	342	⇑iP	P	19 44 15.7	0.0
KHC	**Kasperske Hory**	73.63	331	⇑iP	P	19 44 16.2	+0.4
KHC				x	x	19 44 22.0	
KHC				epP	pP	19 46 25.8	+1.5
KHC				eS	S	19 52 56.3	-1.0
KHC				ex	x	19 53 43.5	
KHC	**Kasperske Hory**	73.63	331	⇑iP	P	19 44 16.2	+0.4
KHC				e		19 44 22.0	
KHC				epP	pP	19 46 25.8	+1.5
KHC				eS	S	19 52 56.3	-1.0
KHC				e		19 53 43.5	
NOUC	**Port Laguerre**	73.71	162	eP	P	19 44 18.1	+1.4
GMM	**Mts of Mourne**	73.74	344	⇑iP	P	19 44 16.0	-0.3
ANTO	**Ankara**	73.78	313	eP	P	19 44 18.0	+1.1
	comp=Z,15nm,0.6s,mb4.7						
ANTO				epP	pP	19 46 26.2	+0.8
ANTO	**Ankara**	73.78	313	eP	P	19 44 18.0	+1.2
ANTO				e*PP	pP	19 46 26.2	+0.8
ANTO				pmax	pmax		
	comp=Z,15nm,0.6s,mb4.7						
KBI1	**Birley Grange**	73.83	341	⇑iP	P	19 44 17.1	+0.3
WET	**Wettzell**	73.84	331	eP	P	19 44 17.4	+0.5
	comp=Z,87nm,1.2s,mb5.2						
WET				epP	pP	19 46 27.5	+2.0
WET	**Wettzell**	73.84	331	eP	P	19 44 17.4	+0.5
WET				e*PP	pP	19 46 27.5	+2.0
WET				pmax	pmax		
	comp=Z,87nm,1.2s,mb5.2						
GEC2	**GERESS Array S**	73.84	330	eP	P	19 44 17.0	0.0
	comp=Z,41nm,0.6s,mb5.1						
GEC2				epP	pP	19 46 27.2	+1.6
GEC2	**GERESS Array S**	73.84	330	eP	P	19 44 17.0	0.0
GEC2				e*PP	pP	19 46 27.2	+1.6
GEC2				pmax	pmax		
	comp=Z,41nm,0.6s,mb5.1						
GERES	**GERESS Array B**	73.84	330	P	P	19 44 17.2	+0.3
	comp=Z,37nm,0.6s,mb5.1,baz=35,slow=5.2,SNR=293						
GERES				pP	pP	19 46 25.2	-0.3
	comp=Z,4.8nm,0.8s,baz=27,slow=3.0,SNR=5.6						
BZS	**Buzias**	73.85	324	⇑P	P	19 44 17.0	0.0
BZS	**Buzias**	73.85	324	P	P	19 44 17.4	+0.4
PKS8	**Sarbogard**	73.86	326	⇑eP	P	19 44 17.2	+0.1
GRA1	**Grafenberg Arr**	73.86	332	eP	P	19 44 17.6	+0.5
	comp=Z,163nm,0.9s,mb5.6						
GRA1				epP	pP	19 46 27.7	+2.0
GRF	**Grafenberg Arr**	73.86	332	eP	P	19 44 17.6	+0.5
	comp=Z,163nm,0.9s,mb5.6						
GRF				epP	pP	19 46 27.7	+2.0
GRF	**Grafenberg Arr**	73.86	332	eP	P	19 44 17.6	+0.5
GRF				e*PP	pP	19 46 27.7	+2.0
GRF				pmax	pmax		
	comp=Z,163nm,0.9s,mb5.6						
GRF	**Grafenberg Arr**	73.86	332	eP	P	19 44 17.6	+0.5
GRF				e*PP	pP	19 46 27.7	+2.0
GRF				pmax	pmax		
	comp=Z,163nm,0.9s,mb5.6						
UMR	**Umm Al-Rimmam**	73.88	297	eP	P	19 44 17.7	+0.1
UMR				AMb	AMB	19 44 18.4	
	comp=Z,391nm,0.6s,mb6.1						
MIB	**Mutribah**	73.90	297	eP	P	19 44 18.0	+0.3
MIB				AMb	AMB	19 44 18.6	
	comp=Z,491nm,0.6s,mb6.2						
SOP	**Sopron**	73.91	328	P	P	19 44 17.6	+0.2
KWE	**Weaver Farm**	74.12	341	⇑iP	P	19 44 18.6	+0.2
KBD	**Kabd**	74.17	296	eP	P	19 44 19.6	+0.4
KBD				AMb	AMB	19 44 20.2	
	comp=Z,910nm,0.5s						
TNS	**Taunus Mts**	74.20	334	eP	P	19 44 19.0	+0.1
	comp=Z,72nm,0.8s,mb5.2						
TNS				epP	pP	19 46 29.3	+1.6
TNS	**Taunus Mts**	74.20	334	eP	P	19 44 19.0	+0.1
TNS				e*PP	pP	19 46 29.3	+1.6
TNS				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.2						
DMUB	**Kingscourt**	74.23	345	⇑iP	P	19 44 19.1	+0.1
WME	**Myndd Eilian**	74.24	343	⇑eP	P	19 44 18.9	-0.2
WCB1	**Church Bay**	74.31	343	⇑iP	P	19 44 18.8	-0.6
QRN	**Al-Qurain**	74.36	296	eP	P	19 44 20.6	+0.4
QRN				AMb	AMB	19 44 21.2	
	comp=Z,368nm,0.4s,mb6.3						
WLF1	**Llynfaes**	74.36	343	⇑eP	P	19 44 19.4	-0.3
NAY	**Al-Naaiem**	74.37	297	eP	P	19 44 20.5	+0.1
NAY				AMb	AMB	19 44 21.8	
	comp=Z,101nm,0.5s,mb5.6						
HGN	**Heimansgroeve**	74.39	336	⇑eP	P	19 44 19.9	0.0
	comp=Z,93nm,0.9s,mb5.3						
HGN				ex	x	19 46 29.2	
	comp=Z,50nm,1.8s						
HGN				ePP	PP	19 47 26.5	+8.4
ASPA	**Alice Springs**	74.42	193	⇑iP	P	19 44 21.5	+0.8
ASPA				eS	S	19 53 08.0	+1.7
YRC	**Rhoscolyn**	74.43	343	⇑eP	P	19 44 19.6	-0.5
RDF	**Al-Radifah**	74.44	296	eP	P	19 44 21.1	+0.4
RDF				AMb	AMB	19 44 21.7	
	comp=Z,437nm,0.5s,mb6.2						
PKSM	**Moragy**	74.45	326	P	P	19 44 20.0	-0.4
SBD1	**Bryn Du**	74.51	342	⇑iP	P	19 44 21.0	+0.4
MOA	**Molln**	74.53	330	⇑iP	P	19 44 21.4	+0.6
	comp=Z,44nm,0.8s,mb5.0,SNR=44						
MOA	**Molln**	74.53	330	⇑eX		19 46 30.7	
	comp=Z,25nm,1.6s						
ARSA	**Arzberg**	74.64	328	i P	P	19 44 22.0	+0.6
	comp=Z,32nm,0.5s,mb5.1,SNR=37						
ARSA	**Arzberg**	74.64	328	⇑iP	pP	19 46 32.8	+2.4
	comp=Z,28nm,1.2s						
SIND	**Sindeldorf**	74.65	333	⇑eP	P	19 44 21.4	0.0
SIND	**Sindeldorf**	74.65	333	P	P	19 44 21.7	+0.3
TOD	**Tromm**	74.65	334	⇑eP	P	19 44 21.7	+0.3
TOD	**Tromm**	74.65	334	eP	P	19 44 20.6	-0.8
YRE	**Yr Eifl**	74.66	343	⇑eP	P	19 44 21.2	-0.2
DLF	**Lyons Farm**	74.74	344	⇑iP	P	19 44 22.0	+0.1
RHK1	**Bakonya**	74.75	326	⇓iP	P	19 44 22.1	0.0
ABH	**Alteburg**	74.75	335	⇑eP	P	19 44 22.1	+0.1
ABH	**Alteburg**	74.75	335	eP	P	19 44 21.1	-0.9
DSB	**Dublin**	74.77	344	eP	P	19 44 22.1	+0.1
	comp=Z,97nm,0.8s,mb5.4						
HLM1	**Long Mynd**	74.80	342	⇑iP	P	19 44 22.4	+0.3
DCN	**Croghan**	74.83	345	⇑iP	P	19 44 22.3	0.0
SSP1	**Stoney Pound**	74.94	342	⇑iP	P	19 44 23.1	+0.2
RUP	**Ruppelstein**	75.05	335	eP	P	19 44 23.8	+0.2
RUP	**Ruppelstein**	75.05	335	eP	P	19 44 23.0	-0.6
SSW	**Stow on the Wo**	75.11	341	⇑iP	P	19 44 24.4	+0.4
SVIS	**Svilajnac**	75.11	323	i P	P	19 44 31.8	+7.7
SKP1	**Kophill**	75.12	340	⇑iP	P	19 44 23.9	-0.1
HDH	**Heidenheim**	75.16	332	⇑eP	P	19 44 24.3	+0.1
FUR	**Furstenfeldbru**	75.20	331	eP	P	19 44 24.9	+0.4
	comp=Z,126nm,1.0s,mb5.4						
FUR				epP	pP	19 46 35.5	+1.7
FUR	**Furstenfeldbru**	75.20	331	eP	P	19 44 24.9	+0.4
FUR				e*PP	pP	19 46 35.5	+1.7
FUR				pmax	pmax		
	comp=Z,126nm,1.0s,mb5.4						
GIVF	**Givet**	75.28	336	⇑iP	P	19 44 24.8	-0.1
	comp=Z,105nm,0.9s,mb5.1						
GIVF				epP	pP	19 46 33.2	-1.0
GIVF	**Givet**	75.28	336	⇑iP	P	19 44 24.8	-0.1
GIVF				e*PP	pP	19 46 33.2	-1.0
GIVF				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.1						
STU	**Stuttgart**	75.29	333	eP	P	19 44 25.1	+0.2
	comp=Z,48nm,0.7s,mb5.1						
STU	**Stuttgart**	75.29	333	eP	P	19 44 25.1	+0.1
STU				pmax	pmax		
	comp=Z,48nm,0.7s,mb5.1						
HTR	**Trewern Hill**	75.29	342	⇑eP	P	19 44 25.3	+0.4
MCH1	**Michaelchurch**	75.32	342	⇑iP	P	19 44 25.2	+0.2
GROS	**Grobnik**	75.33	328	i P	P	19 44 25.6	+0.3
	comp=Z,91nm,0.6s,mb5.5						
GROS				epP	pP	19 46 36.5	+1.9
PGB	**Panagyurishte**	75.40	320	i P	P	19 44 27.0	+1.3
BAIF	**Baives**	75.48	337	⇑iP	P	19 44 26.0	0.0
	comp=Z,39nm,0.6s,mb4.8						
BAIF	**Baives**	75.48	337	⇑iP	P	19 44 26.0	0.0
BAIF				pmax	pmax		
	comp=Z,19nm,0.6s,mb4.8						
LANF	**Langenberg**	75.50	334	eP	P	19 44 25.9	-0.2
LBG	**Lerchenberg**	75.50	333	⇑eP	P	19 44 26.3	+0.2
LBG	**Lerchenberg**	75.50	333	P	P	19 44 26.5	+0.4
KBA	**Koelnbreinsper**	75.51	330	⇑iP	P	19 44 27.6	+1.3
	comp=Z,252nm,0.9s,mb5.6,SNR=68						
KBA	**Koelnbreinsper**	75.51	330	i X	pP	19 46 38.4	+2.7
	comp=Z,104nm,0.9s,SNR=12						
KBA	**Koelnbreinsper**	75.51	330	⇑iP	P	19 44 27.6	+1.3
	comp=Z,252nm,0.9s,mb5.7						
KBA				e	pP	19 46 38.4	+2.7
KBA	**Koelnbreinsper**	75.51	330	⇑iP	P	19 44 27.6	+1.4
KBA				e	pP	19 46 38.4	+2.7
KBA				pmax	pmax		
	comp=Z,252nm,0.9s,mb5.7						
SWN1	**Swindon**	75.53	341	⇑iP	P	19 44 26.9	+0.7
BUCH	**Bad Urach**	75.53	333	⇑eP	P	19 44 26.8	+0.5
BUCH	**Bad Urach**	75.53	333	P	P	19 44 27.0	+0.7
AMTX	**Amarillo**	75.59	53	eP	P	19 44 27.1	+0.1
	comp=Z,419nm,0.9s,mb5.9						
OBKA	**Obir**	75.61	329	i P	P	19 44 27.1	+0.3
	comp=Z,45nm,0.6s,mb5.1,SNR=28						
OBKA	**Obir**	75.61	329	⇑eX	pP	19 46 38.4	+2.1
	comp=Z,38nm,1.1s						
HGH	**Gray Hill**	75.62	342	⇑iP	P	19 44 26.7	0.0
HGH				AMb	AMB	19 44 28.2	
	comp=Z,228nm,0.7s,mb5.7						
KDZ	**Kurdzhali**	75.63	319	i P	P	19 44 28.3	+1.3
GOLS	**Golise**	75.68	328	i P	P	19 44 27.3	+0.1
GOLS				epP	pP	19 46 38.4	+1.7
DIVS	**Divcibare**	75.75	324	i P	P	19 44 27.7	+0.1
VTS	**Vitosha**	75.76	321	i P	P	19 44 28.5	+0.8
WATA	**Walderalm**	75.85	331	i P	P	19 44 28.8	+0.7
	comp=Z,99nm,0.5s,mb5.5,SNR=44						
WATA	**Walderalm**	75.85	331	⇑iX	pP	19 46 39.9	+2.3
	comp=Z,39nm,0.9s						
WATA	**Walderalm**	75.85	331	i P	P	19 44 28.8	+0.7
	comp=Z,99nm,0.5s,mb5.5						
WATA				e	pP	19 46 39.9	+2.2
WATA	**Walderalm**	75.85	331	i P	P	19 44 28.8	+0.7
WATA				e	pP	19 46 39.9	+2.2
WATA				pmax	pmax		
	comp=Z,99nm,0.5s,mb5.5						
RZN	**Rozhen**	75.89	320	i P	P	19 44 29.5	+1.1
WTTA	**Wattenberg**	75.89	331	i X	pP	19 46 40.3	+2.4
	comp=Z,78nm,1.1s,SNR=9.2						
WTTA	**Wattenberg**	75.89	331	⇑iP	P	19 44 29.4	+1.0
	comp=Z,193nm,0.5s,mb5.8						
WTTA				e	pP	19 46 40.3	+2.3
WTTA	**Wattenberg**	75.89	331	⇑iP	P	19 44 29.4	+1.1
WTTA				e	pP	19 46 40.3	+2.4
WTTA				pmax	pmax		
	comp=Z,193nm,0.5s,mb5.8						
BFO	**Black Forest**	75.94	333	eP	P	19 44 28.5	0.0
	comp=Z,76nm,1.1s,mb5.0						
BFO				epP	pP	19 46 39.3	+1.1
BFO	**Black Forest**	75.94	333	eP	P	19 44 28.5	0.0
BFO				e*PP	pP	19 46 39.3	+1.1
BFO				pmax	pmax		
	comp=Z,76nm,1.1s,mb5.0						
GUT	**Gutenstein**	75.94	333	⇑eP	P	19 44 28.8	+0.2
GUT	**Gutenstein**	75.94	333	P	P	19 44 28.9	+0.3
ALN	**Alexandroupoli**	75.98	318	eP	P	19 44 29.4	+0.4
HASS	**Wahat al Ahsa’**	75.98	292	P	P	19 44 28.8	-0.5
MOTA	**Moosalm**	75.99	331	i P	P	19 44 29.5	+0.7
	comp=Z,109nm,0.8s,mb5.3,SNR=50						
MOTA	**Moosalm**	75.99	331	i X	pP	19 46 40.8	+2.3
	comp=Z,44nm,1.1s,SNR=6.9						
MOTA	**Moosalm**	75.99	331	i P	P	19 44 29.5	+0.7
	comp=Z,109nm,0.8s,mb5.3						
MOTA				e	pP	19 46 40.8	+2.3
MOTA	**Moosalm**	75.99	331	i P	P	19 44 29.5	+0.7
MOTA				e	pP	19 46 40.8	+2.3
MOTA				pmax	pmax		
	comp=Z,109nm,0.8s,mb5.3						
UBR	**Uberruh**	75.99	332	⇑eP	P	19 44 29.0	+0.1
UBR	**Uberruh**	75.99	332	P	P	19 44 29.3	+0.4
SPAK	**Spaichingen**	76.01	333	eP	P	19 44 29.2	+0.3
SPAK	**Spaichingen**	76.01	333	eP	P	19 44 29.6	+0.7
LJU	**Ljubljana**	76.03	328	eP	P	19 44 28.6	-0.5
SQTA	**Sankt Quirin**	76.07	331	⇑iP	P	19 44 30.2	+0.9
	comp=Z,83nm,0.7s,mb5.3,SNR=33						
SQTA	**Sankt Quirin**	76.07	331	⇑iX	pP	19 46 41.2	+2.3
	comp=Z,42nm,1.0s						
SQTA	**Sankt Quirin**	76.07	331	⇑iP	P	19 44 30.2	+0.9
	comp=Z,83nm,0.7s,mb5.3						
SQTA				e	pP	19 46 41.2	+2.3
SQTA	**Sankt Quirin**	76.07	331	⇑iP	P	19 44 30.2	+0.9
SQTA				e	pP	19 46 41.2	+2.2
SQTA				pmax	pmax		
	comp=Z,83nm,0.7s,mb5.3						
PTCC	**Patocco-Chiusa**	76.10	329	P	P	19 44 28.9	-0.6
MNTX	**Cornudas Mount**	76.11	57	eP	P	19 44 30.1	+0.3
	comp=Z,185nm,0.9s,mb5.5						
FVI	**Forni Avoltri**	76.12	330	P	P	19 44 29.3	-0.3
	comp=Z,29nm,0.5s,mb5.0						
FVI	**Forni Avoltri**	76.12	330	P	P	19 44 29.3	-0.3
FVI				pmax	pmax		
	comp=Z,29nm,0.5s,mb5.0						
WLS	**Welschbruch**	76.14	334	eP	P	19 44 29.9	+0.3
CDF	**Champ du Feu**	76.16	334	⇑iP	P	19 44 29.9	+0.1
	comp=Z,140nm,0.8s,mb5.2						
CDF				epP	pP	19 46 38.6	-0.9
CDF	**Champ du Feu**	76.16	334	⇑iP	P	19 44 29.9	+0.1
CDF				e*PP	pP	19 46 38.6	-0.9
CDF				pmax	pmax		
	comp=Z,70nm,0.8s,mb5.1						
GMNA	**Gemona**	76.25	329	P	P	19 44 29.8	-0.5
LIBD	**Limburg**	76.31	334	eP	P	19 44 30.7	+0.1
JAVS	**Javornik**	76.31	329	eP	P	19 44 30.0	-0.7
SISB	**Singen-Sch Ber**	76.33	333	P	P	19 44 31.0	+0.3
HEX	**Exmoor**	76.36	342	⇑iP	P	19 44 31.1	+0.3
NVSS	**Nova Varos 2**	76.36	324	⇓iP	P	19 44 31.8	+0.8

ECH	Echery	76.37	334	eP	P	19 44 30.9	0.0
STEIN	Stein am Rhein	76.37	333	⇑iP	P	19 44 30.9	0.0
MMB	Musomiste	76.38	320	i P	P	19 44 31.3	+0.2
KIZ	Kirchzarten	76.39	333	⇑eP	P	19 44 30.8	-0.2
KIZ	Kirchzarten	76.39	333	P	P	19 44 30.9	-0.1
SLE	Schleitheim	76.40	333	⇑P	P	19 44 30.9	-0.1
DAVA	Damuels	76.42	332	⇑iP	P	19 44 31.7	+0.6
	comp=Z,75nm,0.8s,mb5.2,SNR=45						
DAVA	Damuels	76.42	332	⇑iP	pP	19 46 41.5	+0.5
	comp=Z,40nm,1.1s						
DAVA	Damuels	76.42	332	⇑iP	P	19 44 31.7	+0.6
	comp=Z,75nm,0.8s,mb5.2						
KKB	Krupnik	76.42	321	i P	P	19 44 32.0	+0.7
FELD	Feldberg	76.44	333	⇑eP	P	19 44 31.4	+0.1
TRULL	Truellikon	76.45	333	⇑iP	P	19 44 31.3	0.0
HTL	Hartland	76.56	342	⇑eP	P	19 44 32.2	+0.3
WILA	Wila	76.59	333	⇑P	P	19 44 32.3	+0.2
VAL	Valentia	76.66	346	eP	P	19 44 31.6	-0.8
THEF	They Montfort	76.69	335	eP	P	19 44 32.8	+0.2
MEZF	Maizieres J'vi	76.69	336	⇑iP	P	19 44 33.0	+0.4
	comp=Z,158nm,0.7s,mb5.3						
MEZF				epP	pP	19 46 41.9	-0.7
MOF	Molkenrain	76.71	334	eP	P	19 44 32.8	+0.1
SULZ	Sulz-Cheisache	76.72	333	⇑iP	P	19 44 32.7	-0.1
SULZ	Sulz-Cheisache	76.72	333	⇑P	P	19 44 32.9	+0.1
ZUR	Zurich	76.73	333	⇑iP	P	19 44 32.8	0.0
ZUR	Zurich	76.73	333	⇑P	P	19 44 33.1	+0.3
PLONS	Plons	76.78	332	⇑iP	P	19 44 33.2	+0.1
HAU	Haudompre	76.79	334	⇑iP	P	19 44 33.1	0.0
	comp=Z,98nm,0.6s,mb5.1						
HAU	Haudompre	76.79	334	⇑iP	P	19 44 33.1	0.0
HAU				pmax	pmax		
	comp=Z,49nm,0.6s,mb5.1						
HINF	Hinteralfeld	76.82	334	⇑iP	P	19 44 33.1	-0.2
	comp=Z,60nm,0.7s,mb4.8						
HINF	Hinteralfeld	76.82	334	⇑iP	P	19 44 33.1	-0.2
HINF				pmax	pmax		
	comp=Z,30nm,0.7s,mb4.8						
DAVOX	Davos	76.87	332	⇑iP	P	19 44 34.2	+0.6
DAVOX	Davos	76.87	332	P	P	19 44 34.4	+0.8
FUORN	Ofenpass	76.89	331	⇑iP	P	19 44 34.5	+0.8
FUORN	Ofenpass	76.89	331	P	P	19 44 34.7	+1.0
BBS	Basel-Blauen	76.95	334	⇑eP	P	19 44 34.4	+0.4
BBS	Basel-Blauen	76.95	334	eP	P	19 44 33.3	-0.7
CTI	Castel Tesino	76.97	330	P	P	19 44 33.7	-0.4
	comp=Z,33nm,0.5s,mb5.0						
CTI	Castel Tesino	76.97	330	P	P	19 44 33.7	-0.4
CTI				pmax	pmax		
	comp=Z,33nm,0.5s,mb5.0						
BRMO	Bormio	76.99	331	P	P	19 44 35.1	+0.9
BALST	Balsthal	77.02	333	⇑iP	P	19 44 34.5	+0.2
LLS	Linth-Limmern	77.07	332	⇑iP	P	19 44 34.9	+0.3
LLS	Linth-Limmern	77.07	332	⇑P	P	19 44 35.1	+0.5
MUO	Muotathal	77.07	333	⇑iP	P	19 44 35.0	+0.3
MUO	Muotathal	77.07	333	⇑P	P	19 44 35.1	+0.4
KNT	Kendrikon	77.08	321	eP	P	19 44 35.4	+0.6
VAY	Valandovo	77.08	321	eP	P	19 44 34.9	+0.1
VAY				epP	pP	19 46 42.8	-2.2
VAY				i S	S	19 53 33.8	-0.3
VAY	Valandovo	77.08	321	eP	P	19 44 34.9	+0.1
VAY				epP	pP	19 46 42.8	-2.2
VAY				i S	S	19 53 33.8	-0.3
BOURR	Bourrignon	77.10	334	⇑iP	P	19 44 34.8	0.0
BERNI	Berninapass	77.15	331	⇑iP	P	19 44 35.8	+0.7
WMOK	Wichita Mounta	77.17	51	eP	P	19 44 35.2	-0.2
	comp=Z,211nm,0.9s,mb5.6						
WMOK	Wichita Mounta	77.17	51	P	P	19 44 35.4	-0.1
WMOK				pmax	pmax		
	comp=Z,210nm,0.9s,mb5.6						
LOMF	Lomont	77.25	334	eP	P	19 44 35.8	+0.2
CSA1	St Austell	77.26	342	⇑eP	P	19 44 35.4	-0.1
VDL	Val di Lei	77.26	332	⇑iP	P	19 44 36.2	+0.5
VDL	Val di Lei	77.26	332	⇑P	P	19 44 36.4	+0.7
TUE	Stuetta	77.31	332	⇑iP	P	19 44 36.7	+0.8
	comp=Z,44nm,0.9s,mb4.9						
MABI	Malga Bissina	77.32	331	P	P	19 44 36.4	+0.4
	comp=Z,31nm,0.6s,mb4.9						
HASLI	Hasliberg	77.41	333	⇑iP	P	19 44 36.6	+0.1
GRG	Griva	77.46	321	eP	P	19 44 37.2	+0.3
CCA1	Carnmenellis	77.48	343	⇑eP	P	19 44 37.0	+0.2
SALA	Sala	77.48	306	⇑P	P	19 44 41.8	+4.6
CRQ2	Rosemanowes 2	77.49	343	⇑iP	P	19 44 37.1	+0.3
CRQ2				AMb	AMB	19 44 38.3	
	comp=Z,230nm,1.1s,mb5.5						
FUSIO	Fusio	77.53	332	⇑iP	P	19 44 37.6	+0.5
CGW	Gweek	77.56	343	⇑iP	P	19 44 37.3	+0.1
CMA1	Manaccan	77.56	342	⇑iP	P	19 44 37.5	+0.3
CPZ	Penzance	77.58	343	⇑iP	P	19 44 37.5	+0.3
CPZ				AMb	AMB	19 44 38.3	
	comp=Z,239nm,0.6s,mb5.8						
CGH1	Goonhilly	77.60	342	⇑iP	P	19 44 37.7	+0.3
AAM	Ann Arbor	77.63	36	eP	P	19 44 37.4	-0.4
	comp=Z,289nm,0.6s,mb5.9						
AAM	Ann Arbor	77.63	36	P	P	19 44 37.6	-0.1
AAM				pmax	pmax		
	comp=Z,290nm,0.6s,mb5.9						
SAL	Salo	77.72	331	P	P	19 44 37.9	-0.2
	comp=Z,62nm,0.4s,mb5.4						
SAL	Salo	77.72	331	P	P	19 44 37.9	-0.2
SAL				pmax	pmax		
	comp=Z,62nm,0.4s,mb5.4						
BRANT	Les Verrieres	77.73	334	⇑iP	P	19 44 38.4	+0.2
PAIG	Paliouri	77.79	319	eP	P	19 44 38.6	-0.1
FLN	La Foliniere	77.82	339	⇑iP	P	19 44 38.8	+0.1
	comp=Z,154nm,0.7s,mb5.3						
FLN	La Foliniere	77.82	339	⇑iP	P	19 44 38.8	+0.1
FLN				pmax	pmax		
	comp=Z,77nm,0.7s,mb5.2						
BIA	Bitola	77.84	321	eP	P	19 44 38.2	-0.7
BIA	Bitola	77.84	321	eP	P	19 44 38.2	-0.7
MUGIO	Muggio	77.89	332	⇑iP	P	19 44 38.7	-0.4
MUGIO	Muggio	77.89	332	P	P	19 44 38.9	-0.2
LKBD	Leukerbad	77.90	333	⇑P	P	19 44 39.6	+0.5
LDF	La Druitiere	77.90	339	⇑iP	P	19 44 39.1	0.0
	comp=Z,91nm,0.7s,mb5.0						
LDF				epP	pP	19 46 48.1	-1.5
LDF	La Druitiere	77.90	339	⇑iP	P	19 44 39.1	0.0
LDF				e*PP	pP	19 46 48.1	-1.5
LDF				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.0						
OHR	Ohrid	77.97	322	eP	P	19 44 38.9	-0.7
OHR				epP	pP	19 46 49.4	-0.7
OHR				e		19 50 46.8	
OHR	Ohrid	77.97	322	eP	P	19 44 38.9	-0.7
OHR				i		19 50 46.7	
SENIN	Lac Senin	78.01	333	⇑iP	P	19 44 40.0	+0.3
SLM	Saint Louis	78.02	43	eP	P	19 44 39.4	-0.5
	comp=Z,413nm,0.8s,mb5.9						
SLM	Saint Louis	78.02	43	P	P	19 44 39.5	-0.4
SLM				pmax	pmax		
	comp=Z,410nm,0.8s,mb5.9						
FNA	Florina	78.02	321	eP	P	19 44 39.6	-0.3
VAI	Varese	78.03	332	P	P	19 44 39.7	-0.1
	comp=Z,42nm,0.4s,mb5.2						
VAI	Varese	78.03	332	P	P	19 44 39.7	-0.1
VAI				pmax	pmax		
	comp=Z,42nm,0.4s,mb5.2						
CCM	Cathedral Cave	78.05	44	eP	P	19 44 39.5	-0.7
	comp=Z,370nm,0.9s,mb5.8						
CCM	Cathedral Cave	78.05	44	eP	P	19 44 39.5	-0.6
CCM				pmax	pmax		
	comp=Z,370nm,0.9s,mb5.8						
MMK	Mattmark	78.10	333	P	P	19 44 41.1	+0.9
CABF	La Chapelle	78.14	334	⇑iP	P	19 44 40.7	+0.3
	comp=Z,56nm,0.7s,mb4.8						
CABF	La Chapelle	78.14	334	⇑iP	P	19 44 40.7	+0.3
CABF				pmax	pmax		
	comp=Z,28nm,0.7s,mb4.8						
LOR	Lormes	78.14	336	⇑iP	P	19 44 40.5	+0.1
	comp=Z,207nm,0.6s,mb5.4						
LOR				epP	pP	19 46 49.8	-1.2
LOR	Lormes	78.14	336	⇑iP	P	19 44 40.5	+0.1
LOR				e*PP	pP	19 46 49.8	-1.2
LOR				pmax	pmax		
	comp=Z,104nm,0.6s,mb5.4						
LIT	Litokhoron	78.14	320	eP	P	19 44 40.2	-0.4
MCGN	Macugnaga	78.18	333	P	P	19 44 41.2	+0.6
OG01	Vacheresse	78.22	334	eP	P	19 44 41.1	+0.3
DIX	Grande Dixence	78.24	333	⇑iP	P	19 44 41.7	+0.8
DIX	Grande Dixence	78.24	333	P	P	19 44 42.0	+1.1
GRR	Gorron	78.26	339	⇑iP	P	19 44 41.4	+0.4
	comp=Z,260nm,0.7s,mb5.5						
GRR	Gorron	78.26	339	⇑iP	P	19 44 41.4	+0.4
GRR				pmax	pmax		
	comp=Z,130nm,0.7s,mb5.5						
SALAN	Lac Salanfe	78.31	333	⇑iP	P	19 44 41.5	+0.2
EMV	Vieux Emosson	78.40	333	⇑iP	P	19 44 42.2	+0.4
EMV	Vieux Emosson	78.40	333	P	P	19 44 42.4	+0.6
HYF	Humbligny	78.46	337	⇑iP	P	19 44 42.6	+0.6
XOR	Xorichti	78.47	319	eP	P	19 44 42.0	-0.2
ORX	Oropa	78.47	332	P	P	19 44 41.9	-0.3
ORO	Oropa	78.48	332	P	P	19 44 42.3	+0.1
	comp=Z,13nm,0.3s,mb4.8						
ORO	Oropa	78.48	332	P	P	19 44 42.3	+0.1
ORO				pmax	pmax		
	comp=Z,13nm,0.3s,mb4.8						
AOI	Ancona	78.53	328	P	P	19 44 42.9	+0.4
TRAV		78.65	333	P	P	19 44 41.0	-2.2
FSSB	Fossombrone	78.69	328	P	P	19 44 43.9	+0.6
ZCCA	Zocca	78.70	330	⇓iP	P	19 44 45.2	+1.8
AVF	Avril sur Loir	78.72	336	⇑iP	P	19 44 43.7	+0.3
	comp=Z,212nm,0.8s,mb5.2						
AVF				epP	pP	19 46 53.3	-1.0
AVF	Avril sur Loir	78.72	336	⇑iP	P	19 44 43.7	+0.3
AVF				e*PP	pP	19 46 53.3	-1.0
AVF				pmax	pmax		
	comp=Z,106nm,0.8s,mb5.2						
SMF	Signal de Mont	78.72	336	⇑iP	P	19 44 43.7	+0.3
	comp=Z,321nm,0.8s,mb5.4						
SMF	Signal de Mont	78.72	336	⇑iP	P	19 44 43.7	+0.3
SMF				pmax	pmax		
	comp=Z,161nm,0.8s,mb5.4						
LOZ	Lake Ozonia	78.77	29	eP	P	19 44 42.5	-1.2
SGMF	Saint Gilles	78.77	340	⇑iP	P	19 44 44.2	+0.6
	comp=Z,305nm,0.6s,mb5.5						
SGMF	Saint Gilles	78.77	340	⇑iP	P	19 44 44.2	+0.6
SGMF				pmax	pmax		
	comp=Z,152nm,0.6s,mb5.5						
BOB	Bobbio (Coli)	78.81	331	⇑iP	P	19 44 44.5	+0.6
	comp=Z,91nm,1.5s,mb4.9						
BOB	Bobbio (Coli)	78.81	331	⇑iP	P	19 44 44.5	+0.6
BOB				pmax	pmax		
	comp=Z,91nm,1.5s,mb4.9						
SFI	Santa Sofia	78.81	329	P	P	19 44 45.1	+1.1
	comp=Z,89nm,1.0s,mb5.0						
SFI	Santa Sofia	78.81	329	P	P	19 44 45.1	+1.1
SFI				pmax	pmax		
	comp=Z,89nm,1.0s,mb5.0						
FNVD	Fontana Vidola	78.81	330	P	P	19 44 46.2	+2.2
ERBM	Eremo	78.82	330	P	P	19 44 44.2	+0.2
GSCL	Gusciola	78.82	330	⇑iP	P	19 44 45.2	+1.2
RSL	Roselend	78.82	333	eP	P	19 44 44.6	+0.6
OG05	Jujurieux	78.83	334	eP	P	19 44 44.4	+0.4
SEI	Scarperia	78.84	330	P	P	19 44 45.4	+1.3
ROSF	Rostrenen	78.84	341	⇑iP	P	19 44 44.6	+0.6
	comp=Z,184nm,0.6s,mb5.3						
ROSF				epP	pP	19 46 55.5	+0.6
ROSF	Rostrenen	78.84	341	⇑iP	P	19 44 44.6	+0.6
ROSF				e*PP	pP	19 46 55.5	+0.6
ROSF				pmax	pmax		
	comp=Z,92nm,0.6s,mb5.3						
VMG	Vicchio	78.86	329	P	P	19 44 45.7	+1.5
GRAM		78.86	331	P	P	19 44 43.4	-0.8
LTX	Lajitas	78.87	57	eP	P	19 44 45.2	+0.6
	comp=Z,328nm,0.9s,mb5.7						
LTX				epP	pP	19 46 54.7	-0.8
LTX	Lajitas	78.87	57	eP	P	19 44 45.2	+0.6
LTX				e*PP	pP	19 46 54.7	-0.8
LTX				pmax	pmax		
	comp=Z,328nm,0.9s,mb5.7						
TXAR	Lajitas Array	78.87	57	P	P	19 44 45.2	+0.6
	comp=Z,233nm,0.7s,mb5.6,baz=291,slow=3.8,SNR=1885						
TXAR				pP	pP	19 46 55.0	-0.6
	comp=Z,12nm,0.9s,baz=315,slow=2.6,SNR=3.9						
TXAR				PKiKP		19 50 12.2	
	comp=Z,1.4nm,0.6s,baz=160,slow=1.0,SNR=4.2						
TXAR	Lajitas Array	78.87	57	P	P	19 44 45.2	+0.6
TXAR				pP	pP	19 46 55.0	-0.6
LSD	Ceresole Reale	78.88	333	P	P	19 44 44.8	+0.5
HILS	Ha'il	78.89	299	P	P	19 44 45.8	+1.0
LPL	La Plagne	78.95	333	⇑iP	P	19 44 45.6	+1.0
	comp=Z,180nm,0.8s,mb5.1						
LPL	La Plagne	78.95	333	⇑iP	P	19 44 45.6	+1.0
LPL				pmax	pmax		
	comp=Z,90nm,0.8s,mb5.2						
LPG	La Plagne	78.96	333	⇑iP	P	19 44 45.8	+1.1
	comp=Z,165nm,0.9s,mb5.1						
LPG				epP	pP	19 46 55.9	+0.2
LPG	La Plagne	78.96	333	⇑iP	P	19 44 45.8	+1.1
LPG				e*PP	pP	19 46 55.9	+0.2
LPG				pmax	pmax		
	comp=Z,83nm,0.9s,mb5.1						
SNTG	Esanatoglia	79.02	328	P	P	19 44 45.6	+0.5
CODM		79.02	331	P	P	19 44 43.8	-1.2
CRE	Caprese Michel	79.03	329	P	P	19 44 46.0	+0.9
SARO	Sassorosso	79.03	330	P	P	19 44 45.1	0.0
BGF	Bois d'Agland	79.06	336	⇑iP	P	19 44 45.5	+0.3
	comp=Z,85nm,0.6s,mb5.0						
BGF	Bois d'Agland	79.06	336	⇑iP	P	19 44 45.5	+0.3
BGF				pmax	pmax		
	comp=Z,43nm,0.6s,mb5.0						
BDI	Bagni Di Lucca	79.08	330	P	P	19 44 46.5	+1.2
	comp=Z,106nm,1.1s,mb5.1						
BDI	Bagni Di Lucca	79.08	330	P	P	19 44 46.5	+1.2
BDI				pmax	pmax		
	comp=Z,106nm,1.1s,mb5.1						
AGG	Agios Georgios	79.12	320	eP	P	19 44 44.8	-0.8
RSP	Reno Superiore	79.13	333	P	P	19 44 44.6	-0.9
VINC	Vinca	79.15	330	P	P	19 44 44.8	-1.0
ERPA	Erie	79.15	34	eP	P	19 44 45.5	-0.3
	comp=Z,375nm,0.6s,mb5.9						
JAN	Janina	79.19	321	ePB	P	19 44 46.0	0.0
QUIF	Quistinic	79.22	341	⇑iP	P	19 44 46.3	+0.3
	comp=Z,87nm,0.7s,mb4.9						
QUIF	Quistinic	79.22	341	⇑iP	P	19 44 46.3	+0.3
QUIF				pmax	pmax		
	comp=Z,44nm,0.7s,mb4.9						
MAIM		79.24	330	P	P	19 44 44.2	-2.0
PCP	Pian Castagno	79.29	332	P	P	19 44 45.8	-0.7
FENE	Fenestrelle	79.30	333	P	P	19 44 44.9	-1.6
TERO	Teramo	79.35	327	P	P	19 44 47.1	+0.3
CSNT	Castellina Chi	79.38	329	⇓iP	P	19 44 47.0	+0.1
BNI	Bardonecchia	79.39	333	P	P	19 44 47.8	+0.9
	comp=Z,96nm,1.9s,mb4.8						
BNI	Bardonecchia	79.39	333	P	P	19 44 47.8	+0.9
BNI				pmax	pmax		
	comp=Z,96nm,1.9s,mb4.8						
PLDF	La Plantade	79.40	335	eP	P	19 44 47.7	+0.7
PII	Pisa	79.41	330	P	P	19 44 46.3	-0.8
	comp=Z,42nm,0.7s,mb4.9						
PII	Pisa	79.41	330	P	P	19 44 46.3	-0.8
PII				pmax	pmax		
	comp=Z,42nm,0.7s,mb4.9						
BHB	Bricherasio	79.41	333	P	P	19 44 45.2	-1.8
GDM	Grand'Maison	79.41	333	eP	P	19 44 48.1	+1.0
EVR	Evrytania	79.42	320	ePB	P	19 44 46.5	-0.8
NCB	Newcomb	79.46	29	eP	P	19 44 46.7	-0.6
	comp=Z,149nm,0.7s,mb5.4						
RGNG	Rignano Grg	79.48	326	P	P	19 44 47.4	-0.1
RRL	Cesana Torines	79.48	333	P	P	19 44 46.8	-0.6
TCF	Toulx Ste Croi	79.48	336	⇑iP	P	19 44 47.9	+0.5
	comp=Z,170nm,0.8s,mb5.1						
TCF				epP	pP	19 46 57.9	-0.7
TCF	Toulx Ste Croi	79.48	336	⇑iP	P	19 44 47.9	+0.5
TCF				e*PP	pP	19 46 57.9	-0.7
TCF				pmax	pmax		
	comp=Z,85nm,0.8s,mb5.1						
GRN	Grenoble	79.48	334	eP	P	19 44 48.4	+1.0
IGT	Igoumenitsa	79.50	321	eP	P	19 44 47.5	-0.2
ALLY	Alegheny Colle	79.50	34	eP	P	19 44 47.3	-0.3
MZLS	Mizel	79.51	295	P	P	19 44 48.6	+0.6
MBDF	Montbardon	79.66	333	⇑iP	P	19 44 48.6	+0.3
	comp=Z,47nm,0.7s,mb4.6						
MBDF	Montbardon	79.66	333	⇑iP	P	19 44 48.6	+0.3
MBDF				pmax	pmax		
	comp=Z,24nm,0.7s,mb4.6						
AQU	L'Aquila	79.66	327	P	P	19 44 49.6	+1.2
	comp=Z,52nm,0.6s,mb5.0						
AQU	L'Aquila	79.66	327	P	P	19 44 49.6	+1.2
AQU				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.0						
ACSO	Alum Creek Sta	79.67	37	eP	P	19 44 48.0	-0.5
	comp=Z,236nm,0.7s,mb5.6						
DOI	San Damiano	79.72	332	P	P	19 44 47.4	-1.3
ROB	Roburent	79.72	332	P	P	19 44 47.3	-1.4
ORIF	Oris-en-Rattie	79.74	334	⇑iP	P	19 44 49.6	+0.8
	comp=Z,221nm,0.7s,mb5.3						
ORIF				epP	pP	19 46 59.9	-0.2
ORIF	Oris-en-Rattie	79.74	334	⇑iP	P	19 44 49.6	+0.8
ORIF				e*PP	pP	19 46 59.9	-0.2
ORIF				pmax	pmax		
	comp=Z,110nm,0.7s,mb5.3						
PZZ	Prazzo	79.76	333	P	P	19 44 46.2	-2.7
MFF	Saint Martin d	79.77	338	⇑iP	P	19 44 49.6	+0.7
	comp=Z,182nm,0.8s,mb5.2						
MFF	Saint Martin d	79.77	338	⇑iP	P	19 44 49.6	+0.7
MFF				pmax	pmax		
	comp=Z,91nm,0.8s,mb5.2						
COLF	Collangettes	79.80	335	eP	P	19 44 49.8	+0.7
LCHF	La Chataignera	79.85	339	eP	P	19 44 50.9	+1.6
MIAR	Mount Ida	79.86	47	eP	P	19 44 49.6	-0.1
	comp=Z,126nm,0.7s,mb5.4						
MIAR	Mount Ida	79.86	47	P	P	19 44 49.7	+0.1
MIAR				pmax	pmax		
	comp=Z,130nm,0.7s,mb5.4						
SURF	Saint Ours	79.87	333	eP	P	19 44 50.1	+0.6
PARMO	Parma	79.87	44	eP	P	19 44 49.9	+0.3
MNS	Montasola	79.88	328	P	P	19 44 49.4	-0.2
	comp=Z,49nm,0.8s,mb4.9						
MNS	Montasola	79.88	328	P	P	19 44 49.4	-0.2
MNS				pmax	pmax		
	comp=Z,49nm,0.8s,mb4.9						
ENR	Entracque	79.92	332	P	P	19 44 46.7	-3.0
LBNH	Lisbon	79.93	28	eP	P	19 44 49.6	-0.1
	comp=Z,105nm,0.9s,mb5.2						
LBNH	Lisbon	79.93	28	eP	P	19 44 49.7	-0.1
LBNH				pmax	pmax		
	comp=Z,105nm,0.9s,mb5.2						
PTQR	Pietraquaria	79.95	327	P	P	19 44 50.6	+0.7
WCI	Wyandotte Cave	80.04	40	eP	P	19 44 50.0	-0.5
	comp=Z,245nm,0.6s,mb5.7						
WCI	Wyandotte Cave	80.04	40	eP	P	19 44 50.1	-0.4
WCI				pmax	pmax		
	comp=Z,245nm,0.6s,mb5.7						
IMI	Imperia	80.06	332	P	P	19 44 50.5	0.0
LKD	Levkas	80.08	321	eP	P	19 44 50.9	+0.2
SAOF	Saorge	80.10	332	eP	P	19 44 50.4	-0.2
LRYF	La Roche-sur-Y	80.12	339	eP	P	19 44 51.5	+0.8
AUTN	L'Aution	80.13	332	eP	P	19 44 51.1	+0.3
VIVF	Saint-Julien-l	80.14	334	⇑iP	P	19 44 51.5	+0.6
	comp=Z,130nm,0.8s,mb5.0						
VIVF				epP	pP	19 47 02.0	-0.3
VIVF	Saint-Julien-l	80.14	334	⇑iP	P	19 44 51.5	+0.6
VIVF				e*PP	pP	19 47 02.0	-0.3
VIVF				pmax	pmax		
	comp=Z,65nm,0.8s,mb5.0						
TOUF	Mont Tournerai	80.16	332	eP	P	19 44 51.1	+0.1
LBL	Lubilhac	80.18	335	eP	P	19 44 50.7	-0.4
OG25	Le Caire	80.19	333	eP	P	19 44 51.7	+0.6
ARMA	Armidale	80.20	177	⇑iP	P	19 44 52.9	+1.4
FRNF	Fournols	80.22	336	eP	P	19 44 53.3	+2.0
SBF	Sospel	80.24	332	⇑iP	P	19 44 51.2	-0.2
	comp=Z,72nm,0.7s,mb4.8						
SBF				epP	pP	19 47 01.9	-1.0
SBF	Sospel	80.24	332	⇑iP	P	19 44 51.2	-0.2
SBF				e*PP	pP	19 47 01.9	-1.0
SBF				pmax	pmax		
	comp=Z,36nm,0.7s,mb4.8						
MVIF	Mont Vial	80.30	332	eP	P	19 44 51.5	-0.2
GNAR	Gosnell	80.33	44	eP	P	19 44 52.4	+0.4
	comp=Z,1µm,1.0s,mb6.2						
REVF	Revere	80.38	332	eP	P	19 44 52.1	0.0
MATF	Mathat	80.53	338	eP	P	19 44 53.9	+1.1
SGO	Sicignano	80.55	325	P	P	19 44 53.0	-0.1
	comp=Z,50nm,1.4s,mb4.8						
SGO	Sicignano	80.55	325	P	P	19 44 53.0	-0.1
SGO				pmax	pmax		
	comp=Z,50nm,1.4s,mb4.8						
VLS	Valsamata	80.55	320	ePB	P	19 44 52.8	-0.3
RJF	Les Rejaudoux	80.57	337	⇑iP	P	19 44 53.6	+0.5
RJF				epP	pP	19 47 04.3	-0.4
HALT	Halls	80.68	44	eP	P	19 44 53.7	-0.1
SMRF	Simiane la Rot	80.69	333	eP	P	19 44 54.7	+1.0
	comp=Z,30nm,0.6s,mb4.6						
FRF	La Foret Royal	80.76	332	⇑iP	P	19 44 53.9	-0.1
	comp=Z,144nm,1.1s,mb5.0						
FRF	La Foret Royal	80.76	332	⇑iP	P	19 44 53.9	-0.1
FRF				pmax	pmax		
	comp=Z,72nm,1.1s,mb5.0						
CAF	Calviac	80.78	336	⇑iP	P	19 44 55.3	+1.2
	comp=Z,80nm,0.6s,mb5.0						
CAF	Calviac	80.78	336	⇑iP	P	19 44 55.3	+1.2
CAF				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.0						
AFFS	'Afif	80.87	296	P	P	19 44 55.7	+0.7
TAVF	Tavernes	80.88	333	eP	P	19 44 54.6	0.0
PGF	Pioggiola	80.95	330	⇑iP	P	19 44 54.9	-0.1
	comp=Z,141nm,1.0s,mb5.0						
PGF	Pioggiola	80.95	330	⇑iP	P	19 44 54.9	-0.1
PGF				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.0						
TDS	Terranova Siba	80.95	324	P	P	19 44 55.7	+0.6
	comp=Z,24nm,0.4s,mb5.0						
TDS	Terranova Siba	80.95	324	P	P	19 44 55.7	+0.6
TDS				pmax	pmax		
	comp=Z,24nm,0.4s,mb5.0						
PRAF	Pradon	80.97	334	eP	P	19 44 56.0	+0.9
LMR	La Mourre	81.00	332	⇑iP	P	19 44 55.4	+0.1
	comp=Z,193nm,0.8s,mb5.3						
LMR	La Mourre	81.00	332	⇑iP	P	19 44 55.4	+0.1
LMR				pmax	pmax		
	comp=Z,96nm,0.8s,mb5.3						
ALWS	Ilw as Safayha	81.04	305	P	P	19 44 57.0	+1.2
PUYF	Puyloubier	81.06	333	eP	P	19 44 56.3	+0.7
LASF	Ste Croix	81.09	335	⇑iP	P	19 44 56.7	+1.0
	comp=Z,57nm,0.8s,mb4.8						
LFF	La Frestale	81.11	337	⇑iP	P	19 44 56.8	+1.0
	comp=Z,380nm,0.8s,mb5.6						
LFF	La Frestale	81.11	337	⇑iP	P	19 44 56.8	+1.0
LFF				pmax	pmax		
	comp=Z,190nm,0.8s,mb5.6						
TBKS	Tabuk	81.12	304	P	P	19 44 57.5	+1.3
JMOS	Jabal al Moall	81.13	305	P	P	19 44 57.8	+1.6
WVT	Waverly	81.16	42	eP	P	19 44 55.9	-0.3
	comp=Z,174nm,0.7s,mb5.6						
WVT	Waverly	81.16	42	P	P	19 44 56.1	-0.1
WVT				pmax	pmax		
	comp=Z,170nm,0.7s,mb5.6						
BERF	Bertagne	81.27	333	eP	P	19 44 57.2	+0.6
GELF	Grande-Etoile	81.28	333	eP	P	19 44 57.2	+0.5
HAQS	Haql	81.32	305	P	P	19 44 58.4	+1.2
MCWV	Mont Chateau	81.36	35	eP	P	19 44 57.1	0.0
	comp=Z,304nm,1.0s,mb5.7						
KBRS	Khaybar	81.55	300	P	P	19 44 59.7	+1.3
NATX	Nacogdoches	81.61	50	eP	P	19 44 59.3	+0.7
	comp=Z,988nm,0.7s,mb6.5						
HRV	Harvard--Oak R	81.61	28	eP	P	19 44 58.3	-0.1
	comp=Z,218nm,1.0s,mb5.6						
HRV	Harvard--Oak R	81.61	28	P	P	19 44 58.2	-0.2
HRV				pmax	pmax		
	comp=Z,220nm,1.0s,mb5.6						
BDAS	Al Bad'	81.72	305	P	P	19 45 00.2	+0.9
STKA	Stephens Creek	81.76	185	⇑iP	P	19 44 59.7	+0.3
	comp=Z,45nm,0.9s,mb5.0						
STKA				eS	S	19 54 16.6	-5.1
STKA	Stephens Creek	81.76	185	P	P	19 44 59.9	+0.5
	comp=Z,49nm,0.8s,mb5.1,baz=344,slow=6.5,SNR=64						
OXF	Oxford	81.82	44	eP	P	19 44 59.4	-0.2
	comp=Z,689nm,0.9s,mb6.2						
AYUS	'Aynunah	81.83	304	P	P	19 45 00.9	+1.1
MAIG	Mazatlaan	82.11	63	⇑iP	P	19 45 01.7	+0.4
MTLF	Montolieu	82.22	335	⇑iP	P	19 45 02.5	+1.0
	comp=Z,72nm,0.6s,mb5.1						
MTLF	Montolieu	82.22	335	⇑iP	P	19 45 02.5	+1.0
MTLF				pmax	pmax		
	comp=Z,36nm,0.6s,mb5.1						
FORT	Forrest	82.36	197	⇑iP	P	19 45 02.5	+0.1
	comp=Z,135nm,0.7s,mb5.6						
FORT				e	pP	19 47 17.2	+2.5
SOI	Samo	82.44	323	P	P	19 45 02.4	-0.3
	comp=Z,52nm,0.6s,mb5.2						
SOI	Samo	82.44	323	P	P	19 45 02.4	-0.3
SOI				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.2						
MTTG	Motta San Giov	82.64	324	P	P	19 45 02.7	-1.0
FWV	Forest Hill	82.80	37	eP	P	19 45 04.2	-0.3
FILF	Fillols	82.85	335	eP	P	19 45 05.8	+1.2
EJON	La Jonquera	82.86	335	P	P	19 45 05.9	+1.2
	comp=Z,8.2nm,0.4s,mb4.6						
MLS	Moulis	82.87	336	eP	P	19 45 06.2	+1.5
EPF	Esparros	83.00	337	⇑iP	P	19 45 05.8	+0.5

	comp=Z,88nm,0.5s,mb5.2						
EPF	Esparros	83.00	337	⇑iP	P	19 45 05.8	+0.5
EPF				pmax	pmax		
	comp=Z,44nm,0.5s,mb5.2						
MELF	Melles	83.04	336	eP	P	19 45 06.4	+0.9
LABF	Labassere	83.05	337	eP	P	19 45 06.1	+0.5
RESF	Ens	83.21	336	eP	P	19 45 07.6	+1.2
VIEF	Viey	83.22	337	eP	P	19 45 07.3	+0.9
BLA	Blacksburg	83.28	37	eP	P	19 45 06.6	-0.3
	comp=Z,296nm,1.0s,mb5.8						
BLA	Blacksburg	83.28	37	eP	P	19 45 06.6	-0.2
BLA				pmax	pmax		
	comp=Z,296nm,1.0s,mb5.8						
EALK	Alkurruntz	83.28	338	P	P	19 45 06.7	0.0
	comp=Z,69nm,0.7s,mb5.3						
SJPF	Ste Jean	83.31	338	eP	P	19 45 07.5	+0.6
	comp=Z,58nm,0.6s,mb5.0						
SJPF	Ste Jean	83.31	338	eP	P	19 45 07.5	+0.6
SJPF				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.0						
LARF	Larrau	83.33	337	eP	P	19 45 07.5	+0.6
ETSF	Etsaut	83.35	337	eP	P	19 45 07.7	+0.6
	comp=Z,199nm,0.6s,mb5.5						
ETSF	Etsaut	83.35	337	eP	P	19 45 07.7	+0.6
ETSF				pmax	pmax		
	comp=Z,99nm,0.6s,mb5.5						
EBIE	Bielsa	83.37	337	P	P	19 45 07.6	+0.5
	comp=Z,83nm,0.6s,mb5.4						
CBN	Corbin	83.54	34	eP	P	19 45 08.2	+0.1
	comp=Z,361nm,0.6s,mb6.1						
EMIR	Miracle	83.73	335	P	P	19 45 10.2	+1.3
	comp=Z,130nm,0.7s,mb5.6						
EGRA	Graus	83.79	336	P	P	19 45 10.8	+1.6
	comp=Z,27nm,0.5s,mb5.0						
MTGR	Montagna Grand	83.83	326	P	P	19 45 09.4	-0.1
	comp=Z,15nm,0.7s,mb4.6						
LVI	Isola Levanzo	83.90	326	P	P	19 45 11.5	+1.6
EARI	Arriondas	84.05	340	P	P	19 45 10.7	+0.2
	comp=Z,225nm,1.5s,mb5.5						
EPOB	Poblet	84.37	335	P	P	19 45 12.2	+0.1
	comp=Z,162nm,1.1s,mb5.5						
EPON	Pontenova	84.43	342	P	P	19 45 10.3	-2.0
	comp=Z,54nm,0.5s,mb5.3						
ESAC	San Caprasio	84.43	337	P	P	19 45 13.3	+1.0
	comp=Z,135nm,0.4s,mb5.8						
CNB	Canberra Magne	85.02	179	⇑iP	P	19 45 16.3	+0.9
	comp=Z,31nm,1.0s,mb4.9						
EBR	Ebro Roquetas	85.03	336	eP	P	19 45 15.0	-0.2
STS	Santiago	85.13	343	P	P	19 45 14.0	-1.7
	comp=Z,2.5nm,0.3s						
STS	Santiago	85.13	343	P	P	19 45 14.0	-1.7
STS				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.4						
ERUA	La Rua	85.33	342	P	P	19 45 16.2	-0.4
	comp=Z,58nm,1.2s,mb5.1						
ERUA	La Rua	85.33	342	P	P	19 45 16.2	-0.4
ERUA				pmax	pmax		
	comp=Z,58nm,1.2s,mb5.1						
GOGA	Godfrey	85.35	41	eP	P	19 45 16.9	0.0
	comp=Z,169nm,1.2s,mb5.5						
GOGA	Godfrey	85.35	41	eP	P	19 45 16.9	-0.1
GOGA				pmax	pmax		
	comp=Z,169nm,1.2s,mb5.5						
ETOS	Mallorca	85.37	334	P	P	19 45 17.7	+0.8
	comp=Z,142nm,0.9s,mb5.6						
KLBR	Kellerberrin	85.53	205	⇑iP	P	19 45 17.3	-0.6
	comp=Z,52nm,0.8s,mb5.2						
ECAL	Calabor	85.68	341	P	P	19 45 16.5	-1.8
	comp=Z,5.9nm,0.5s,mb4.5						
EMOS	Mosqueruela	85.71	336	P	P	19 45 18.2	-0.3
	comp=Z,341nm,2.1s,mb5.6						
CJM	Chamela	85.79	65	i P	P	19 45 18.6	-0.7
PBRG	Braganca	85.81	341	eP	P	19 45 18.1	-0.8
	comp=Z,54nm,1.3s,mb5.0						
PMOR	Pomariorio Ree	85.84	119	⇑iP	P	19 45 20.9	+1.2
	comp=Z,235nm,1.0s,mb5.8						
EZAM	Zamans	85.87	343	P	P	19 45 18.5	-0.7
	comp=Z,38nm,0.7s,mb5.1						
EZAM	Zamans	85.87	343	P	P	19 45 18.5	-0.7
EZAM				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.1						
ELOB	Lobios	86.02	342	P	P	19 45 18.0	-1.9
PCAB	Cabril	86.16	342	eP	P	19 45 19.7	-0.9
	comp=Z,70nm,0.9s,mb5.3						
SFJM	Santa Fe	86.17	63	i P	P	19 45 21.0	-0.1
VAH	Vaihoa	86.18	119	⇑iP	P	19 45 22.4	+1.1
	comp=Z,263nm,1.0s,mb5.8						
MUN	Mundaring	86.33	206	eP	P	19 45 21.1	-0.6
GUD	Guadarrama	86.35	339	P	P	19 45 20.8	-0.8
	comp=Z,13nm,0.8s,mb4.6						
GUD	Guadarrama	86.35	339	P	P	19 45 20.8	-0.7
GUD				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.6						
EIBI	Ibiza	86.47	334	P	P	19 45 22.5	+0.3
	comp=Z,316nm,2.1s,mb5.6						
PVRL	Vila Real	86.52	342	eP	P	19 45 21.4	-0.9
	comp=Z,94nm,0.8s,mb5.6						
ECHE	Chera	86.56	336	P	P	19 45 22.4	-0.2
	comp=Z,27nm,1.2s,mb4.9						
ECHE	Chera	86.56	336	P	P	19 45 22.4	-0.2
ECHE				pmax	pmax		
	comp=Z,27nm,1.2s,mb4.8						
NWAO	Narrogin (SRO)	86.94	205	PKKPbc		20 03 12.7	
	comp=Z,11nm,0.8s,baz=176,slow=1.5,SNR=7.7						
NWAO	Narrogin (SRO)	86.94	205	eP	P	19 45 24.2	-0.2
NWAO				epP	pP	19 47 39.0	+0.6
NHSC	New Hope	86.96	39	eP	P	19 45 25.0	+0.4
	comp=Z,363nm,1.3s,mb6.0						
PPT	Papeete	86.99	122	⇑iP	P	19 45 26.4	+1.4
	comp=Z,188nm,1.1s,mb5.7						
PPT	Papeete	86.99	122	P	P	19 45 26.4	+1.4
	comp=Z,144nm,0.8s,mb5.8,baz=37,slow=1.7,SNR=10						
PAE	Paea	87.07	122	⇑iP	P	19 45 26.6	+1.2
	comp=Z,361nm,1.1s,mb6.0						
PVIS	Viseu	87.09	342	eP	P	19 45 23.9	-1.1
	comp=Z,39nm,1.5s,mb4.9						
ESDC	Sonseca Array	87.23	338	P	P	19 45 24.9	-0.8
	comp=Z,12nm,0.8s,mb4.7,baz=13,slow=4.3,SNR=40						
ESDC				pP	pP	19 47 38.8	-0.9
	comp=Z,9.8nm,0.9s,baz=7.5,slow=5.3,SNR=9.3						
ESDC				PKKPbc		20 03 11.3	
	comp=Z,2.1nm,0.6s,baz=198,slow=1.7,SNR=8.3						
ESDC	Sonseca Array	87.23	338	P	P	19 45 24.6	-1.1
	comp=Z,34nm,1.4s,mb4.9						
TOO	Toolangi	87.28	182	⇑iP	P	19 45 27.0	+1.0
	comp=Z,18nm,0.6s,mb5.0						
TOO	Toolangi	87.28	182	⇑iP	P	19 45 27.0	+1.0
TOO				pmax	pmax		
	comp=Z,18nm,0.6s,mb5.0						
MTE	Manteigas	87.33	341	eP	P	19 45 25.5	-0.6
	comp=Z,84nm,1.2s,mb5.3						
MTE				eS	S	19 55 17.5	+3.7
TVO	Taravao	87.34	122	⇑iP	P	19 45 28.2	+1.5
	comp=Z,290nm,1.0s,mb6.0						
ETOB	Tobarra	87.61	336	P	P	19 45 27.7	+0.2
	comp=Z,215nm,2.2s,mb5.5						
PCBR	Castelo Branco	87.85	341	eP	P	19 45 27.5	-1.1
	comp=Z,25nm,1.7s,mb4.7						
EVIA	Vianos	87.85	337	P	P	19 45 28.7	0.0
	comp=Z,9.1nm,0.4s,mb4.9						
EVIA	Vianos	87.85	337	P	P	19 45 28.7	+0.1
EVIA				pmax	pmax		
	comp=Z,9.0nm,0.4s,mb4.8						
MOIG	Morelia	87.86	62	⇑iP	P	19 45 29.2	+0.1
MEH	Mehetia	88.07	121	⇑iP	P	19 45 31.3	+1.2
	comp=Z,264nm,1.0s,mb5.9						
PTOM	Tomar	88.25	342	eP	P	19 45 29.0	-1.5
	comp=Z,57nm,1.3s,mb5.1						
EBAN	Banos Encina	88.62	338	P	P	19 45 31.7	-0.5
	comp=Z,22nm,1.2s,mb4.9						
EBAN	Banos Encina	88.62	338	P	P	19 45 31.7	-0.5
EBAN				pmax	pmax		
	comp=Z,22nm,1.2s,mb4.9						
EHUE	Huescar	88.66	337	P	P	19 45 31.8	-0.6
	comp=Z,6.2nm,0.6s,mb4.6						
EQES	Quesada	88.79	337	P	P	19 45 32.0	-1.0
	comp=Z,20nm,1.3s,mb4.8						
EBAD	Badajoz	88.79	340	P	P	19 45 31.5	-1.5
	comp=Z,9.2nm,1.1s,mb4.5						
EADA	Adamuz	88.81	338	P	P	19 45 31.9	-1.2
	comp=Z,50nm,2.0s,mb5.0						
EVO	Evora	89.22	341	⇑iP	P	19 45 33.7	-1.3
	comp=Z,36nm,1.0s,mb4.9						
ELUQ	Luque	89.31	338	P	P	19 45 34.9	-0.6
	comp=Z,13nm,0.8s,mb4.8						
ELUQ	Luque	89.31	338	P	P	19 45 34.9	-0.5
ELUQ				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.8						
ECOG	Cogollos-Vega	89.41	337	P	P	19 45 35.0	-0.9
	comp=Z,0.7nm,0.8s						
EMIN	Mina Concepcio	89.67	340	P	P	19 45 35.9	-1.2
	comp=Z,45nm,1.4s,mb5.1						
ELOJ	Sierra Loja	89.67	338	P	P	19 45 36.0	-1.1
	comp=Z,7.2nm,1.1s,mb4.4						
ELOJ	Sierra Loja	89.67	338	P	P	19 45 36.0	-1.1
ELOJ				pmax	pmax		
	comp=Z,7.0nm,1.1s,mb4.4						
PBEJ	Beja	89.68	341	eP	P	19 45 36.6	-0.5
	comp=Z,36nm,1.2s,mb5.1						
ERON	Agron	89.71	338	P	P	19 45 36.1	-1.2
	comp=Z,19nm,0.8s,mb5.0						
PPM	Popocatepetl	89.79	60	i P	P	19 45 38.5	+0.5
PPM				eP		19 45 38.9	
EGUA	Guajares	89.83	337	P	P	19 45 37.0	-0.9
PLIG	Platanillo	89.84	61	i P	P	19 45 37.8	-0.4
PTEO	Sao Teotonio	90.32	341	eP	P	19 45 39.0	-1.1
	comp=Z,99nm,1.3s,mb5.5						
ESPR	Espera	90.34	339	P	P	19 45 37.7	-2.5
CAIG	El Cayaco	90.48	62	i P	P	19 45 40.9	-0.3
CAIG				i P		19 45 41.1	
EJIF	Jimena Fronter	90.65	339	P	P	19 45 41.1	-0.5
DWPF	Disney	90.80	42	eP	P	19 45 43.1	+0.6
	comp=Z,72nm,0.8s,mb5.7						
TAU	Tasmania Unive	92.59	180	eP	P	19 45 50.7	+0.3
TAU	Tasmania Unive	92.59	180	P	P	19 45 50.0	-0.3
KMBO	Kilima Mbogo	103.90	285	PKiKP		19 50 55.7	
	comp=Z,1.6nm,0.7s,baz=238,slow=4.9,SNR=4.5						
KMBO				PP	PP	19 51 09.1	-0.9
	comp=Z,5.2nm,0.9s,baz=46,slow=9.6,SNR=6.9						
JTS	JuntasAbangare	104.41	54	P	Pdif	19 46 44.0	+0.1
OPO	Ambohidratompo	110.71	266	PP	PP	19 51 57.7	-1.5
	comp=Z,7.7nm,0.9s,baz=46,slow=7.0,SNR=8.4						
SDV	Santo Domingo	112.47	42	eP	PKPdf	19 51 10.5	+0.6
SDV				eSKPdf		19 53 48.0	
ROSC	El Rosal	114.37	47	PKP	PKPdf	19 51 15.0	+1.3
	comp=Z,6.5nm,0.3s,baz=99,slow=19,SNR=4.3						
DBIC	Dimbokro	118.68	329	PKP	PKPdf	19 51 22.1	+0.1
	comp=Z,33nm,0.6s,baz=10,slow=1.8,SNR=89						
DBIC				SKP		19 53 59.4	
	comp=Z,7.5nm,0.8s,baz=344,slow=2.2,SNR=4.4						
DBIC				PKKPbc		20 01 40.4	
	comp=Z,9.2nm,0.7s,baz=165,slow=3.5,SNR=14						
DBIC				PKKPab		20 01 45.0	
	comp=Z,9.2nm,0.7s,baz=186,slow=5.5,SNR=12						
DBIC	Dimbokro	118.68	329	ePKPdf	PKPdf	19 51 21.9	-0.1
DBIC	Dimbokro	118.68	329	PKIKP	PKPdf	19 51 22.1	+0.1
DBIC						20 01 40.4	
DBIC				pmax	pmax		
	comp=Z,33nm,0.6s						
LIC	Lamto	119.16	329	⇑iPKIKP	PKPdf	19 51 23.0	+0.1
	comp=Z,43nm,0.5s						
CASY	Casey	119.44	196	eP	PKPdf	19 51 22.5	+0.3
LSZ	Lusaka	120.44	283	PKP	PKPdf	19 51 26.2	+0.9
	comp=Z,30nm,0.6s,baz=35,slow=3.0,SNR=111						
LSZ				SKP		19 54 03.6	
	comp=Z,11nm,0.8s,baz=40,slow=2.7,SNR=6.6						
LSZ	Lusaka	120.44	283	ePKPdf	PKPdf	19 51 26.2	+0.9
MIR	Mirnyy	123.48	203c	iPKIKP	PKPdf	19 51 30.0	0.0
MIR				pmax	pmax		
	comp=Z,86nm,1.2s						
MATP	Matopo	124.08	279	PKP	PKPdf	19 51 33.0	+0.8
	comp=Z,18nm,0.5s,baz=27,slow=1.2,SNR=69						
MATP				PP	PP	19 53 27.2	-3.5
	comp=Z,30nm,0.9s,baz=48,slow=6.3,SNR=15						
MATP				SKP		19 54 10.2	
	comp=Z,13nm,1.0s,baz=99,slow=2.9,SNR=4.4						
MATP				PKKPab		20 01 22.1	
	comp=Z,7.7nm,0.7s,baz=216,slow=3.8,SNR=20						
MATP	Matopo	124.08	279	PKP	PKPdf	19 51 33.0	+0.8
MATP				PP	PP	19 53 27.2	-3.5
MATP				SKP		19 54 10.2	
MATP				PKKPab		20 01 22.1	
VNDA	Vanda	127.62	176	ePKPdf	PKPdf	19 51 37.7	0.0
VNDA				ePP	PP	19 53 57.1	+5.6
SBA	Scott Base	128.19	175	ePKPdf	PKPdf	19 51 39.2	+0.5
SBA				ePP	PP	19 54 00.9	+5.4
LBTB	Lobatse	129.23	277	PKP	PKPdf	19 51 43.1	+1.1
	comp=Z,19nm,0.5s,baz=68,slow=1.1,SNR=44						
LBTB				SKPbc		19 54 06.3	
	comp=Z,97nm,0.7s,baz=62,slow=2.8,SNR=42						
LBTB	Lobatse	129.23	277	ePKPdf	PKPdf	19 51 42.6	+0.6
LBTB	Lobatse	129.23	277	PKIKP	PKPdf	19 51 43.1	+1.1
LBTB						19 54 06.4	
LBTB				pmax	pmax		
	comp=Z,19nm,0.5s						
LBTB				pmax	pmax		
	comp=Z,97nm,0.7s						
TSUM	Tsumeb	129.98	289	PKP	PKPdf	19 51 45.0	+1.4
	comp=Z,7.8nm,0.6s,baz=358,slow=4.4,SNR=12						
TSUM				pPKP		19 54 09.6	
	comp=Z,228nm,1.0s,baz=11,slow=4.5,SNR=129						
SAML	Samuel	131.65	43	eP	PKPdf	19 51 47.6	+0.7
BOSA	Boshof	131.94	274	PKhKP		19 51 43.8	
	comp=Z,11nm,0.8s,baz=104,slow=15,SNR=7.7						
BOSA				PKP	PKPdf	19 51 47.7	+0.6
	comp=Z,11nm,0.8s,baz=67,slow=2.9,SNR=11						
BOSA				pPKP		19 54 13.1	
	comp=Z,44nm,0.6s,baz=50,slow=4.9,SNR=22						
BOSA				SKPbc		19 54 16.1	
	comp=Z,44nm,0.6s,baz=62,slow=3.5,SNR=24						
BOSA				PKKP	PKKP	20 01 42.9	+63
	comp=Z,1.4nm,0.5s,baz=41,slow=14,SNR=6.5						
BOSA	Boshof	131.94	274	ePKPdf	PKPdf	19 51 46.0	-1.1
BOSA				epPKPdf		19 54 12.5	
MAW	Mawson	133.16	212	eP		19 54 18.8	
	comp=Z,24nm,0.6s						
MAW	Mawson	133.16	212	PKP	PKPdf	19 51 49.3	+1.0
	comp=Z,18nm,0.6s,baz=7.1,slow=1.9,SNR=19						
MAW				SKPbc		19 54 19.2	
	comp=Z,31nm,0.6s,baz=67,slow=3.3,SNR=28						
MAW				PKKP	PKKP	20 01 39.6	+63
	comp=Z,1.6nm,0.9s,baz=305,slow=6.6,SNR=7.1						
ARE	Arequipa	133.99	57	eP	PKPdf	19 51 53.0	+1.9
LPAZ	La Paz	135.63	54	PKP	PKPdf	19 51 56.2	+2.1
	comp=Z,38nm,0.8s,baz=347,slow=4.0,SNR=41						
LPAZ				SKPbc		19 54 29.8	
	comp=Z,32nm,0.9s,baz=350,slow=4.7,SNR=13						
LPAZ	La Paz	135.63	54	eP	PKPdf	19 51 56.1	+2.0
LPAZ				PKP	PKPdf	19 51 56.2	+2.1
LPAZ				SKPbc		19 54 29.8	
RCBR	Riachuelo	135.81	5	ePKPpre		19 51 47.3	
RCBR				ePKPdf	PKPdf	19 51 55.7	+1.2
SUR	Sutherland	137.30	274	PKhKP		19 51 50.7	
	comp=Z,6.6nm,0.6s,baz=173,slow=11,SNR=6.7						
SUR				PKP	PKPdf	19 51 57.8	+0.9
	comp=Z,10nm,0.6s,baz=151,slow=5.8,SNR=8.0						
SUR				SKPbc		19 54 33.4	
	comp=Z,1.6nm,0.3s,baz=18,slow=3.1,SNR=9.1						
QSPA	South Pole Qui	139.80	180	ePKPpre		19 51 52.9	
QSPA				eSKPdf		19 54 37.2	
SYO	Syowa Base	141.77	214	⇓P	PKPdf	19 52 00.7	-2.8
SYO	Syowa Base	141.77	214	⇑P		19 54 44.0	
SYO	Syowa Base	141.77	214	⇓P		19 55 41.4	
SYO	Syowa Base	141.77	214	⇓eP	PKPdf	19 52 00.7	-2.8
BDFB	Brasilia	143.37	26	PKP	PKPdf	19 52 08.3	+0.4
	comp=Z,483nm,0.7s,baz=318,slow=2.8,SNR=481						
BDFB				SKPbc		19 54 49.9	
	comp=Z,32nm,0.9s,baz=121,slow=5.8,SNR=3.6						
TLL	Tololo Astrono	144.99	70	⇑iP	PKPdf	19 52 12.5	+2.2
PEL	Peldehue	147.12	74	⇑iP	PKPdf	19 52 14.9	+1.2
LNV	Longovilo	147.21	76	⇓iP	PKPdf	19 52 15.8	+1.9
TACH	Talagante	147.31	75	⇑iP	PKPdf	19 52 16.0	+1.9
FCH	Farellones	147.49	74	⇓iP	PKPdf	19 52 17.1	+2.8
PCH	Pirque	147.55	74	⇑iP	PKPdf	19 52 16.8	+2.3
PCH	Pirque	147.55	74	⇑iP	PKPdf	19 52 16.8	+2.4
SFDO	San Fernando	147.89	76	⇑iP	PKPdf	19 52 16.8	+1.8
CICH	Cipreses	148.07	75	eP	PKPdf	19 52 16.7	+1.5
CPUP	Villa Florida	149.46	48	ePKPdf	PKPdf	19 52 19.2	+1.5
CPUP				ePKPbc	PKPdf	19 52 24.1	+6.4
CPUP				ePKPab	PKPab	19 52 32.1	-1.2
CPUP	Villa Florida	149.46	48	ePKHKP		19 52 19.2	
CPUP				e		19 52 32.1	
NVL	N'lazarevskaya	151.01	208	⇑iPKIKP	PKPdf	19 52 26.0	+7.3
NVL				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NVL				MLR	MLR		
	comp=Z,14nm,18.2s						
CAM4	Nova Friburgo	151.19	20	eP	PKPdf	19 52 21.6	+1.3
CAM4				i		19 52 22.2	
CAM4				i		19 52 30.5	
CAM4				i		19 52 39.3	
PLCA	Paso Flores	151.83	85	PKP	PKPdf	19 52 21.3	+0.6
	comp=Z,23nm,0.9s,baz=286,slow=2.8,SNR=24						
PLCA				PKPbc	PKPdf	19 52 29.5	+8.8
	comp=Z,124nm,0.6s,baz=279,slow=3.3,SNR=184						
PLCA				PKPab	PKPab	19 52 42.2	-0.5
	comp=Z,146nm,0.8s,baz=296,slow=4.2,SNR=5.7						
PLCA	Paso Flores	151.83	85	ePKPdf	PKPdf	19 52 21.1	+0.4
PLCA				ePKPbc	PKPdf	19 52 29.3	+8.6
PLCA				ePKPab	PKPab	19 52 42.1	-0.7
PLCA	Paso Flores	151.83	85	PKIKP	PKPdf	19 52 21.3	+0.6
PLCA						19 52 42.2	
PLCA				pmax	pmax		
	comp=Z,23nm,1.0s						
PLCA				pmax	pmax		
	comp=Z,146nm,0.8s						
SNAA	Sanae	154.54	201	⇑iP	PKPdf	19 52 23.7	+0.2
SNAA	Sanae	154.54	201	⇑i	PKPdf	19 52 33.2	+10
SNAA	Sanae	154.54	201	⇑i	PKPdf	19 52 38.9	+15
SNAA	Sanae	154.54	201	⇑i	PKPdf	19 52 42.1	+19
SNAA	Sanae	154.54	201	⇑i	PKPdf	19 52 52.0	+28
SNAA	Sanae	154.54	201	⇑i	PKPdf	19 52 54.1	+31
SNAA	Sanae	154.54	201	⇑i		19 54 59.8	
SNAA	Sanae	154.54	201	⇑i		19 55 10.6	
SNAA	Sanae	154.54	201	⇑i	PP	19 56 32.4	+0.8
SNAA	Sanae	154.54	201	PKP	PKPdf	19 52 23.9	+0.4
	comp=Z,3.5nm,0.9s,baz=181,slow=2.2,SNR=44						
SNAA				PKPbc	PKPdf	19 52 33.0	+9.4
	comp=Z,7.7nm,0.9s,baz=140,slow=1.5,SNR=12						
SNAA				PKPab	PKPab	19 52 52.6	-0.6
	comp=Z,13nm,0.5s,baz=201,slow=5.4,SNR=29						
SNAA	Sanae	154.54	201	PKIKP	PKPdf	19 52 23.9	+0.4
SNAA						19 52 33.0	
SNAA						19 52 52.6	
SNAA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SNAA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SNAA				pmax	pmax		
	comp=Z,13nm,0.5s						
TRQA	Tornquist	155.69	72	ePKPdf	PKPdf	19 52 25.3	-0.7
TRQA				ePKPbc	PKPdf	19 52 37.1	+11
VNA2	Neumayer--Watz	156.11	200	⇑iP	PKPdf	19 52 27.1	+1.5
VNA2	Neumayer--Watz	156.11	200	⇑i	PKPdf	19 52 38.2	+13
VNA2	Neumayer--Watz	156.11	200	⇑i	PKPdf	19 52 42.6	+17
VNA2	Neumayer--Watz	156.11	200	⇑i	PKPdf	19 53 01.0	+35
VNA2	Neumayer--Watz	156.11	200	⇑i	PKPdf	19 53 06.2	+41
VNA2	Neumayer--Watz	156.11	200	⇑i	PKPdf	19 53 21.3	+56
VNA2	Neumayer--Watz	156.11	200	⇑i		19 55 05.7	
VNA2	Neumayer--Watz	156.11	200	⇑i		19 55 20.1	
VNA2	Neumayer--Watz	156.11	200	⇑i	PP	19 56 42.2	+1.9
VNA3	Neumayer Olymp	156.34	198	⇑iP	PKPdf	19 52 27.1	+1.2
VNA3	Neumayer Olymp	156.34	198	⇑i	PKPdf	19 52 33.3	+7.4
VNA3	Neumayer Olymp	156.34	198	⇑i	PKPdf	19 52 38.2	+12
VNA3	Neumayer Olymp	156.34	198	⇑i	PKPdf	19 53 00.5	+35
VNA3	Neumayer Olymp	156.34	198	⇑i	PKPdf	19 53 07.4	+42
VNA3	Neumayer Olymp	156.34	198	⇑i	PKPdf	19 53 16.7	+51
VNA3	Neumayer Olymp	156.34	198	⇑i		19 55 04.4	
VNA3	Neumayer Olymp	156.34	198	⇑i		19 55 17.0	
VNA3	Neumayer Olymp	156.34	198	⇑i	PP	19 56 42.9	+1.5
VNA1	Neumayer--Stat	156.51	200	⇑iP	PKPdf	19 52 27.7	+1.6
VNA1	Neumayer--Stat	156.51	200	⇑i	PKPdf	19 52 33.6	+7.5
VNA1	Neumayer--Stat	156.51	200	⇑i	PKPdf	19 52 39.0	+13
VNA1	Neumayer--Stat	156.51	200	⇑i	PKPdf	19 52 49.7	+24
VNA1	Neumayer--Stat	156.51	200	⇑i	PKPdf	19 53 02.9	+37
VNA1	Neumayer--Stat	156.51	200	⇑i	PKPdf	19 53 04.9	+39
VNA1	Neumayer--Stat	156.51	200	⇑i	PKPdf	19 53 18.4	+52
VNA1	Neumayer--Stat	156.51	200			19 55 07.8	
VNA1	Neumayer--Stat	156.51	200	⇑i		19 55 22.1	
PMSA	Palmer Station	157.77	143	ePKPdf	PKPdf	19 52 27.7	-0.2
PMSA				ePKPbc	PKPdf	19 52 40.5	+13
PMSA				ePKPab	PKPab	19 53 06.6	-0.7

IDC ***23*** *19:57:26.9±1.7, 18.90S×177.55W, h548km±19km, mb4.2/7, mb1 4.2/9, mb1mx3.8/18, mbtmp5.1/9, Error ellipse: s-maj=18.4km s-min=14.7km az=140.0*

NEIC ***23*** *19:57:27.5±0.9, 18.81S×177.61W, h554km±10km, mb4.7/9, Error ellipse: s-maj=14.8km s-min=9.6km az=144.0*

ISC 23 19:57:25.5±0.9, **18.8S**±0.1×**177.7W**±0.1, **h533**km±15km, **n74, σ0.93**/35, **mb4.5**/16, **11C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.52	50	P	P	19 59 19.5	+0.7
	24nm,0.3s,baz=69,slow=2.0,SNR=20						
AFI				S	S	20 00 48.3	-0.7
	11nm,0.3s,baz=45,slow=22,SNR=9.8						
DZM	Mont Dzumac	15.18	255	P	P	20 00 42.2	+5.4
	1.9nm,0.3s,baz=84,slow=17,SNR=22						
URZ	Urewera	19.88	192	P	P	20 01 20.5	-1.5
	1.8nm,0.3s,baz=345,slow=5.0,SNR=10						
ARMA	Armidale	30.05	242	eP	P	20 02 53.1	+0.4
CNB	Canberra Magne	33.39	234	⇓iP	P	20 03 22.2	+1.3
	6.9nm,0.4s,mb4.5						
CTA	Charters Tower	33.94	262	⇓iP	P	20 03 26.4	+0.7
	31nm,0.6s,mb5.0						
CTA	Charters Tower	33.94	262	P	P	20 03 26.5	+0.8
	41nm,0.6s,mb5.2,baz=94,slow=10,SNR=71						
CTAO	Charters Tower	33.94	262	eP	P	20 03 26.3	+0.6
	42nm,0.6s,mb5.1						
PMG	Port Moresby	35.25	280	P	P	20 03 38.0	+1.4
	61nm,0.8s,mb5.2,baz=79,slow=6.2,SNR=22						
TOO	Toolangi	37.10	232	eP	P	20 03 52.7	+1.0
	13nm,0.7s,mb4.6						
STKA	Stephens Creek	38.76	242	⇓iP	P	20 04 06.5	+1.3
	18nm,0.9s,mb4.6						
STKA	Stephens Creek	38.76	242	P	P	20 04 06.5	+1.3
	21nm,0.8s,mb4.7,baz=87,slow=9.8,SNR=46						
STKA	Stephens Creek	38.76	242	eP	P	20 04 06.2	+1.0
STKA				⇓iP		20 04 06.5	
WB2	Warramunga Arr	45.09	260	⇓iP	P	20 04 54.9	-0.7
WB2				eSCP		20 11 46.6	
WRAB	Tennant Creek	45.10	260	eP	P	20 04 54.9	-0.8
	19nm,0.6s,mb4.8						
WRA	Warramunga Arr	45.10	260	P	P	20 04 55.0	-0.7
	21nm,0.6s,mb4.8,baz=97,slow=7.9,SNR=275						
WRA				PcP	PcP	20 06 24.2	-1.2
	2.8nm,0.7s,baz=87,slow=4.1,SNR=4.9						
ASPA	Alice Springs	45.17	255	⇓iP	P	20 04 56.1	-0.1
ASPA				eS	S	20 10 54.1	-3.0
KAKA	Kakadu	48.21	270	eP	P	20 05 38.5	+19
	33nm,0.5s,mb5.1						
FORT	Forrest	50.20	245	eP	P	20 05 32.7	-1.4
	19nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	53.52	261	⇓iP	P	20 05 57.5	-0.7
	15nm,0.4s,mb4.7						
FITZ				eSCP		20 11 47.4	
FITZ	Fitzroy Crossi	53.52	261	P	P	20 05 57.7	-0.5
	18nm,0.5s,mb4.7,baz=110,slow=3.2,SNR=73						
KLBR	Kellerberrin	59.00	244	⇑iP	P	20 06 34.7	-1.1
	19nm,0.6s,mb4.5						
CBIJ	Chichi jima	59.95	318	P	P	20 06 41.9	-0.2
	60nm,0.8s,mb5.0,baz=128,slow=18,SNR=3.1						
MUN	Mundaring	60.28	243	⇑iP	P	20 06 43.6	-0.6
MDJ	Mudanjiang	79.30	325	eP	P	20 08 37.5	+0.9
MAW	Mawson	83.22	200	P	P	20 08 56.3	+0.1
	1.2nm,0.6s,mb3.6,baz=131,slow=7.6,SNR=6.1						
ENH	Enshi	85.31	304	eP	P	20 09 07.8	+0.5
	6.0nm,0.6s,mb4.3						
ILAR	Eielson Array	86.63	13	P	P	20 09 11.8	-0.9
	0.4nm,0.5s,mb3.3,baz=227,slow=5.3,SNR=7.2						
SNAA	Sanae	89.67	178		P	20 09 26.3	-0.5
SNAA	Sanae	89.67	178	P	P	20 09 26.4	-0.4
	0.4nm,0.7s,mb3.4,baz=225,slow=5.6,SNR=10						
SNAA	Sanae	89.67	178	P	P	20 09 26.3	-0.5
VNA3	Neumayer Olymp	89.79	176	⇑i	P	20 09 28.2	+0.9
VNA2	Neumayer--Watz	90.23	177	⇑i	P	20 09 30.7	+1.3
MKAR	Makanchi Array	110.23	314	PKiKP		20 14 55.6	
	0.8nm,0.5s,baz=187,slow=0.7,SNR=20						
BVAR	Borovoye Array	117.96	321	PKiKP		20 15 10.7	
	1.8nm,0.5s,baz=133,slow=1.4,SNR=20						
ARU	Arti	123.97	326	eP	PKPdf	20 15 22.4	-0.2
ARCES	ARCESS Array B	127.33	350	PKP	PKPdf	20 15 29.0	+0.2
	1.9nm,0.4s,baz=19,slow=1.2,SNR=19						
JOF	Joensuu	131.62	343	ep	PKPdf	20 15 30.6	-6.5
MATP	Matopo	133.28	215	PKP	PKPdf	20 15 42.1	+0.8
	1.4nm,0.9s,baz=222,slow=2.7,SNR=6.1						
KAF	Kangasniemi	133.62	345	ep	PKPdf	20 15 40.0	-0.8
FINES	FINESS Array B	134.24	344	PKP	PKPdf	20 15 42.2	+0.2
	2.0nm,0.8s,baz=117,slow=4.3,SNR=4.3						
NB2	NORSAR Subarra	137.36	354	PKPabc	PKPdf	20 15 49.3	+1.6
	0.8nm,0.5s,baz=13,slow=2.4						
NOA	NORSAR Array B	137.36	354	PKP	PKPdf	20 15 49.0	+1.3
	1.1nm,0.7s,baz=14,slow=4.0,SNR=4.4						
LSZ	Lusaka	137.58	219	PKP	PKPdf	20 15 50.8	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	1.2nm,0.6s,baz=57,slow=10,SNR=5.7						
NAO	NORSAR Subarra	137.61	354	PKPab	PKPdf	20 15 49.3	+1.1
STHS	Stebnicka Huta	145.88	338	ePKP	PKPdf	20 16 05.8	+2.9
STHS				e		20 16 08.5	
BRTR	Keskin Array B	145.88	314	PKPbc	PKPbc	20 16 05.2	+0.4
	2.9nm,0.7s,baz=142,slow=4.7,SNR=11						
KOLS	Kolonicke sedl	145.90	336	ePKP	PKPdf	20 16 05.9	+2.9
CLL	Collm	146.49	348	⇓iPKP1	PKPbc	20 16 06.8	+1.0
CLL				iPKP2	PKPab	20 16 09.2	-2.2
CLL	Collm	146.49	348	⇓iPKP	PKPdf	20 16 06.8	+2.9
CLL				⇑iPKP	PKPdf	20 16 09.2	+5.3
BRG	Berggiesshubel	146.71	346	eP	PKPdf	20 16 07.7	+3.5
BRG				i		20 16 09.8	
MLR	Muntele Rosu	146.94	329	PKPbc	PKPbc	20 16 07.5	+0.5
	4.4nm,0.5s,baz=59,slow=5.1,SNR=4.4						
KHC	Kasperske Hory	148.42	346	ePKPbc	PKPdf	20 16 12.0	+5.0
GERES	GERESS Array B	148.66	345	PKPbc	PKPdf	20 16 12.9	+5.4
	2.4nm,0.8s,baz=27,slow=3.0,SNR=16						
GIVF	Givet	148.73	357	ePKP1	PKPdf	20 16 12.6	+5.1
BAIF	Baives	148.80	358	ePKP1	PKPdf	20 16 12.9	+5.3
	7.9nm,0.7s						
MOA	Molln	149.44	344	⇑iP	PKPdf	20 16 14.1	+5.4
	comp=Z,3.0nm,0.7s						
FLN	La Foliniere	150.05	4	ePKP1	PKPdf	20 16 15.5	+5.8
	8.6nm,0.5s						
CDF	Champ du Feu	150.21	353	ePKP1	PKPdf	20 16 16.2	+6.3
	7.7nm,0.7s						
LDF	La Druitiere	150.24	3	ePKP1	PKPdf	20 16 15.7	+5.8
	7.5nm,0.6s						
MEZF	Maizieres J'vi	150.31	356	ePKP1	PKPdf	20 16 15.9	+5.8
	24nm,0.9s						
SGMF	Saint Gilles	150.38	7	ePKP1	PKPdf	20 16 16.0	+5.8
	21nm,0.9s						
KBA	Koelnbreinsper	150.39	345	⇑iP	PKPdf	20 16 16.1	+5.9
	comp=Z,5.9nm,0.5s						
GRR	Gorron	150.40	4	ePKP1	PKPdf	20 16 16.4	+6.2
	9.3nm,0.5s						
WTTA	Wattenberg	150.62	347	⇑iP	PKPdf	20 16 17.2	+6.6
	comp=Z,13nm,0.4s						
QUIF	Quistinic	150.65	7	ePKP1	PKPdf	20 16 16.1	+5.5
MOTA	Moosalm	150.65	348	⇑eP	PKPdf	20 16 17.4	+6.8
	comp=Z,3.2nm,0.4s						
HAU	Haudompre	150.71	354	ePKP1	PKPdf	20 16 17.2	+6.5
	8.1nm,0.5s						
SQTA	Sankt Quirin	150.75	347	⇑iP	PKPdf	20 16 17.4	+6.6
	comp=Z,5.4nm,0.5s						
HINF	Hinteralfeld	150.84	354	ePKP1	PKPdf	20 16 17.3	+6.4
	5.7nm,0.6s						
DAVA	Damuels	150.94	349	⇑iP	PKPdf	20 16 18.7	+7.7
	comp=Z,5.0nm,0.5s						
LOR	Lormes	151.60	358	ePKP1	PKPdf	20 16 19.5	+7.5
	12nm,0.8s						
MFF	Saint Martin d	152.23	4	ePKP1	PKPdf	20 16 20.5	+7.6
TCF	Toulx Ste Croi	152.61	0	ePKP1	PKPdf	20 16 21.4	+8.0
	4.4nm,0.7s						

CSEM ***23*** *20:31:14.6±0.1, 33.64N×5.56W, h15^{km}, MD4.1, Error ellipse: s-maj=2.4km s-min=1.5km az=118.0*

MDD ***23*** *20:31:16.7±0.6, 33.54N×5.57W, h10^{km}±6^{km}, mb4.2/14, Error ellipse: s-maj=4.7km s-min=3.6km az=132.0, PRXIMO*

NEIC ***23*** *20:31:18.0, 33.72N×5.71W, h4^{km}, MG4.1(MDD), After MDD.*

CNRM ***23*** *20:31:18.1, 33.49N×5.53W, h16^{km}, MD4.1*

SFS ***23*** *20:31:18.0, 33.77N×5.72W, ML4.0*

LDG ***23*** *20:31:19.1±0.3, 33.68N×5.74W, h10^{km}, Ml3.4/2, Error ellipse: s-maj=5.8km s-min=4.4km az=15.0*

INMG ***23*** *20:31:19.1±1.1, 33.71N×5.75W, h17^{km}±8^{km}, ML2.9, Error ellipse: s-maj=4.4km s-min=4.3km az=87.0*

IGIL ***23*** *20:31:19.8±42.0, 33.80N×5.70W, h2^{km}, ML3.0*

ISC 23 20:31:14.2±0.3**, 33.68N**±0.02×**5.71W**±0.03**, h10^{km}, n112,** σ**1^{s}42**/195**, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIF	Mishlifen	0.48	124	iP	Pg	20 31 23.5	-0.5
MIF				iS	Sg	20 31 27.0	-3.6
CZD	Col de Zad	0.85	139	iP	Pb	20 31 28.0	-2.6
CZD				iS	Sb	20 31 36.0	-5.9
RTC	Rabat Centre	1.00	288	iP	Pb	20 31 37.0	+3.8
RTC				iS	Sb	20 31 53.0	+6.8
TZK	Tazeka	1.33	72	iP	Pb	20 31 38.0	-0.8
TZK				iS	Sb	20 31 55.0	-0.8
TZC	Tazercounte	1.66	203	iP	Pn	20 31 44.0	+0.4
TZC				iS	Sn	20 32 04.0	-1.2
TSY	Tnine Yamani	1.70	353	iP	Pn	20 31 48.0	+3.8
TSY				iS	Sn	20 32 11.0	+4.8
ZFT	Errachidia	2.00	145	iP	Pn	20 31 46.0	-2.5
ZFT				iS	Sn	20 32 07.0	-6.7
TOU	Touzarine	2.06	51	iP	Pn	20 31 51.0	+1.6
TOU				iS	Sn	20 32 14.0	-1.4
MPAL	Palemas	2.12	43	iP	Pn	20 31 53.0	+2.8
MPAL				iS	Sn	20 32 19.0	+2.1
MDAL	Dalia	2.22	5	iP	Pn	20 31 56.0	+4.3
MDAL				iS	Sn	20 32 25.0	+5.6
ZAI	Zaio	2.77	61	iP	Pn	20 32 00.0	+0.5
ZAI				iS	Sn	20 32 33.0	-0.3
EJIF	Jimena Fronter	2.77	4	P	Pn	20 32 02.7	+3.2
	2.2nm,0.2s,SNR=7.0						
EJIF				S	Sn	20 32 35.6	+2.2
	12nm,0.6s,SNR=4.0						
EJIF	Jimena Fronter	2.77	4	P	Pn	20 32 02.7	+3.2
EJIF				S	Sn	20 32 32.8	-0.6
EJIF	Jimena Fronter	2.77	4	P	Pn	20 32 02.7	+3.2
EJIF				S	Sn	20 32 32.8	-0.6
EMEL	Melilla	2.79	54	P	Pn	20 32 02.1	+2.4
	305nm,1.8s,SNR=7.9						
EMEL				S	Sn	20 32 33.1	-0.8
	282nm,0.4s,SNR=7.9						
EMIJ	Mijas	2.98	15	P	Pn	20 32 02.5	0.0
	5.5nm,0.6s,SNR=6.0						
EMIJ				S	Sn	20 32 39.0	+0.3
	12nm,0.2s,SNR=4.8						
EMIJ	Mijas	2.98	15	P	Pn	20 32 02.6	+0.2
EMIJ				S	Sn	20 32 38.2	-0.4
EMIJ	Mijas	2.98	15	P	Pn	20 32 02.6	+0.1
EMIJ				S	Sn	20 32 38.2	-0.4
OUK	Oukaimeden	3.07	217	iP	Pn	20 32 04.0	+0.3
OUK				iS	Sn	20 32 39.0	-1.8
ESPR	Espera	3.18	358	P	Pn	20 32 07.4	+2.0
	2.4nm,0.3s,SNR=12						
ESPR				S	Sn	20 32 45.9	+2.2
	18nm,0.5s,SNR=7.9						
ESPR	Espera	3.18	358	P	Pn	20 32 07.4	+2.0
ESPR				S	Sn	20 32 42.8	-1.0
ESPR	Espera	3.18	358	P	Pn	20 32 07.4	+2.0
ESPR				S	Sn	20 32 42.8	-1.0
LIJA	Lijar	3.23	4	P	Pn	20 32 08.0	+2.0
LIJA				S	Sn	20 32 37.8	-7.2
LIJA	Lijar	3.23	4	eP	Pn	20 32 08.0	+2.0
CIA	Chichaoua	3.33	231	iP	Pn	20 32 09.0	+1.6
CIA				iS	Sn	20 32 45.0	-2.4
EGUA	Guajares	3.60	29	P	Pn	20 32 12.4	+1.1
	3.4nm,0.3s,SNR=7.9						
EGUA				S	Sn	20 32 53.1	-1.3
	2.9nm,0.6s,SNR=7.9						
EGUA	Guajares	3.60	29	P	Pn	20 32 12.0	+0.7
EGUA				S	Sn	20 32 53.1	-1.3
EGUA	Guajares	3.60	29	P	Pn	20 32 12.0	+0.7
EGUA				S	Sn	20 32 53.1	-1.3
ERON	Agron	3.68	24	P	Pn	20 32 14.8	+2.4
	3.3nm,0.2s,SNR=4.0						
ERON				S	Sn	20 32 55.9	-0.3
	5.3nm,0.4s,SNR=4.0						
ELOJ	Sierra Loja	3.69	20	P	Pn	20 32 14.2	+1.7
	3.6nm,0.3s,SNR=5.8						
ELOJ				S	Sn	20 32 56.3	-0.2
	8.7nm,0.6s,SNR=5.8						
JHA	Jbel Lahdid	3.70	239	iP	Pn	20 32 15.0	+2.3
JHA				iS	Sn	20 32 55.0	-1.9
EBER	Berja	3.95	35	P	Pn	20 32 16.7	+0.4
	5.8nm,0.3s,SNR=10						
EBER				S	Sn	20 33 01.7	-1.5
	48nm,0.6s,SNR=5.4						
EBER	Berja	3.95	35	P	Pn	20 32 16.7	+0.4
EBER				S	Sn	20 33 02.3	-1.0
EBER	Berja	3.95	35	P	Pn	20 32 16.7	+0.4
EBER				S	Sn	20 33 02.3	-1.0
EQUE	Quentar	3.98	27	P	Pn	20 32 18.7	+2.1
	2.6nm,0.3s,SNR=5.5						
EQUE				S	Sn	20 33 04.4	+0.6
	17nm,0.6s,SNR=4.8						
ECOG	Cogollos-Vega	3.99	25	P	Pn	20 32 19.4	+2.5
	1.6nm,0.2s,SNR=7.9						
ECOG				S	Sn	20 33 04.6	+0.4
	6.1nm,0.4s,SNR=7.9						
ELUQ	Luque	4.05	16	P	Pn	20 32 19.4	+1.7
	6.3nm,0.2s,SNR=8.9						
ELUQ				S	Sn	20 33 04.0	-1.6
	7.1nm,0.2s,SNR=7.9						
EGRO	El Granado	4.11	340	P	Pn	20 32 19.6	+1.1
	5.9nm,0.1s,SNR=86						
EGRO				S	Sn	20 33 08.9	+1.7
	16nm,0.3s,SNR=11						
EGRO	El Granado	4.11	340	P	Pn	20 32 19.4	+1.0
EGRO				S	Sn	20 33 05.2	-2.0
EGRO	El Granado	4.11	340	P	Pn	20 32 19.5	+1.0
EGRO				S	Sn	20 33 05.2	-2.0
EMIN	Mina Concepcio	4.15	349	P	Pn	20 32 20.3	+1.1
	2.1nm,0.1s,SNR=52						
EMIN				S	Sn	20 33 08.5	+0.1
	7.6nm,0.2s,SNR=6.7						
EMIN	Mina Concepcio	4.15	349	P	Pn	20 32 20.3	+1.1
EMIN				S	Sn	20 33 06.0	-2.3
EMIN	Mina Concepcio	4.15	349	P	Pn	20 32 20.3	+1.2
EMIN				S	Sn	20 33 06.0	-2.3
MORF	Marmelete	4.34	327	eP	Pn	20 32 23.8	+2.0
MORF				e		20 32 24.4	
	baz=325,slow=9.3						
MORF				eS	Sn	20 33 10.0	-3.1
MORF				eS	Sn	20 33 10.0	-3.1
MORF				AML	AML	20 33 16.4	
	comp=N,34nm,0.5s						
MORF	Marmelete	4.34	327	eP	Pn	20 32 23.8	+2.0
MORF				eS	Sn	20 33 10.0	-3.1
EADA	Adamuz	4.57	11	P	Pn	20 32 25.6	+0.5
	comp=N,6.5nm,0.2s,SNR=28						
EADA				S	Sn	20 33 16.8	-2.1
	comp=N,12nm,0.2s,SNR=4.6						
EADA	Adamuz	4.57	11	P	Pn	20 32 25.7	+0.6
EADA				S	Sn	20 33 16.8	-2.1
EADA	Adamuz	4.57	11	P	Pn	20 32 25.7	+0.6
EADA				S	Sn	20 33 16.8	-2.1
AFS	Agadir Fac de	4.57	226	eP	Pn	20 32 26.0	+0.9
AFS				eS	Sn	20 33 16.0	-3.0
PTEO	Sao Teotonio	4.57	328	ePn	Pn	20 32 27.3	+2.2
PTEO				eSn	Sn	20 33 17.3	-1.6
	comp=N,14nm,0.5s						
PTEO	Sao Teotonio	4.57	328	P	Pn	20 32 27.3	+2.2
PTEO				S	Sn	20 33 17.2	-1.7
EQES	Quesada	4.64	27	P	Pn	20 32 27.8	+1.8
	comp=N,3.4nm,0.3s,SNR=16						
EQES				S	Sn	20 33 20.0	-0.6
	comp=N,3.3nm,0.2s,SNR=5.3						
EQES	Quesada	4.64	27	P	Pn	20 32 28.1	+2.0
EQES				S	Sn	20 33 18.3	-2.4
EQES	Quesada	4.64	27	P	Pn	20 32 28.1	+2.1
EQES				S	Sn	20 33 18.3	-2.4
PBEJ	Beja	4.68	339	ePn	Pn	20 32 27.4	+0.8
PBEJ				eSn	Sn	20 33 19.0	-2.6
	comp=N,9.3nm,0.3s						
PBEJ	Beja	4.68	339	P	Pn	20 32 28.1	+1.5
PBEJ				S	Sn	20 33 19.1	-2.5
EBAN	Banos Encina	4.74	19	P	Pn	20 32 28.7	+1.3
	comp=N,8.9nm,0.3s,SNR=12						
EBAN				S	Sn	20 33 21.4	-1.8
	comp=N,11nm,0.3s,SNR=7.9						
EBAN	Banos Encina	4.74	19	P	Pn	20 32 28.7	+1.3
EBAN				S	Sn	20 33 20.9	-2.2
EBAN	Banos Encina	4.74	19	P	Pn	20 32 28.7	+1.2
EBAN				S	Sn	20 33 20.9	-2.3
EHUE	Huescar	4.84	31	P	Pn	20 32 30.5	+1.6
	comp=N,1.3nm,0.3s,SNR=8.3						
EHUE				S	Sn	20 33 24.0	-1.7
	comp=N,1.5nm,0.3s						
EHUE	Huescar	4.84	31	P	Pn	20 32 31.4	+2.5
EBAD	Badajoz	5.17	349	P	Pn	20 32 34.6	+1.0
	comp=N,6.3nm,0.1s,SNR=57						
EBAD				S	Sn	20 33 32.0	-2.0
	comp=N,17nm,0.3s,SNR=6.5						
EBAD	Badajoz	5.17	349	P	Pn	20 32 34.6	+1.0
EBAD				S	Sn	20 33 30.1	-4.0
EBAD	Badajoz	5.17	349	P	Pn	20 32 34.6	+1.0
EBAD				S	Sn	20 33 30.1	-4.0
EVO	Evora	5.19	340	ePn	Pn	20 32 34.1	+0.3
EVO				eSn	Sn	20 33 33.3	-1.2
	comp=N,70nm,0.9s						
EMUR	La Murta	5.52	40	S	Sn	20 33 37.7	-5.1
	comp=N,1.4nm,2.1s,SNR=7.9						
EVIA	Vianos	5.59	27	P	Pn	20 32 40.3	+0.9
	comp=N,11nm,0.5s,SNR=5.5						
EVIA				S	Sn	20 33 41.2	-3.2
	comp=N,5.2nm,0.4s,SNR=7.9						
ETOB	Tobarra	5.99	33	P	Pn	20 32 46.1	+1.0
	comp=N,3.1nm,0.2s,SNR=15						
ETOB				S	Sn	20 33 53.3	-1.2
	comp=N,1.0nm,0.3s,SNR=5.3						
ETOB	Tobarra	5.99	33	P	Pn	20 32 46.1	+1.0
ESDC	Sonseca Array	6.14	13	P	Pn	20 32 46.9	-0.4
	comp=N,0.6nm,0.4s,baz=194,slow=13,SNR=22						
ESDC				S	Sn	20 33 54.4	-4.0
	baz=196,slow=23,SNR=7.9						
ESDC	Sonseca Array	6.14	13	P	Pn	20 32 46.9	-0.4
PCBR	Castelo Branco	6.31	348	ePn	Pn	20 32 50.0	+0.4
PCBR				eSn	Sn	20 33 58.9	-3.7
	comp=N,5.3nm,0.3s						
PCBR	Castelo Branco	6.31	348	P	Pn	20 32 50.0	+0.4
PCBR				S	Sn	20 33 57.5	-5.1
PTOM	Tomar	6.31	341	eSn	Sn	20 33 58.9	-3.7
	comp=N,9.6nm,0.7s						
PTOM	Tomar	6.31	341	S	Sn	20 33 58.8	-3.8
MTE	Manteigas	6.87	348	ePn	Pn	20 32 58.1	+0.7
MTE				eSn	Sn	20 34 13.1	-3.4
	comp=N,12nm,0.3s						
MTE	Manteigas	6.87	348	P	Pn	20 32 58.1	+0.7
MTE				S	Sn	20 34 13.1	-3.4
	comp=N,5.8nm,0.3s						
ECHE	Chera	7.02	31	P	Pn	20 32 58.7	-0.9
	comp=N,3.2nm,0.4s,SNR=7.9						
GUD	Guadarrama	7.06	10	P	Pn	20 33 00.2	+0.1
	comp=N,0.6nm,0.3s,SNR=7.9						
GUD				S	Sn	20 34 16.6	-4.7
	comp=N,2.0nm,0.4s,SNR=7.9						
GUD	Guadarrama	7.06	10	P	Pn	20 33 00.2	+0.1
GUD				S	Sn	20 34 15.1	-6.2
PVIS	Viseu	7.24	347	eSn	Sn	20 34 21.4	-4.3
PVRL	Vila Real	7.75	349	ePn	Pn	20 33 11.1	+1.3
PVRL				eSn	Sn	20 34 33.6	-4.9
PVRL	Vila Real	7.75	349	P	Pn	20 33 10.9	+1.1
PVRL				S	Sn	20 34 33.6	-4.9
PVRL	Vila Real	7.75	349	P	Pn	20 33 10.9	+1.1
PVRL				S	Sn	20 34 31.6	-6.9
EMOS	Mosqueruela	7.88	31	P	Pn	20 33 11.7	+0.1
	comp=N,1.7nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	7.88	31	P	Pn	20 33 11.7	+0.1
EFAM	Famara	8.08	238	P	P	20 33 15.4	+1.1
	comp=N,2.4nm,0.2s,SNR=7.9						
EFAM				S	Sn	20 34 38.4	-8.3
	comp=N,3.9nm,0.3s,SNR=5.1						
EFAM	Famara	8.08	238	P	P	20 33 15.4	+1.1
EFAM				S	Sn	20 34 34.4	-12
EFAM	Famara	8.08	238	P	P	20 33 15.4	+1.0
PBRG	Braganca	8.15	355	ePn	P	20 33 15.2	-0.2
PBRG	Braganca	8.15	355	P	P	20 33 14.6	-0.8
PBRG				S	Sn	20 34 40.4	-8.2
ECAL	Calabor	8.29	355	P	P	20 33 17.0	-0.4
	comp=N,3.6nm,0.3s,SNR=7.3						
ECAL				S	Sn	20 34 45.1	-6.9
	comp=N,4.7nm,0.3s,SNR=7.9						
ECAL	Calabor	8.29	355	P	P	20 33 17.3	-0.1
ECAL	Calabor	8.29	355	P	P	20 33 17.3	0.0
ELOB	Lobios	8.38	348	P	P	20 33 18.6	-0.1
	comp=N,1.0nm,0.2s,SNR=7.9						
ELOB				S	Sn	20 34 48.4	-5.9
	comp=N,2.1nm,0.3s,SNR=7.9						
ELOB	Lobios	8.38	348	P	P	20 33 17.8	-0.9
ELOB	Lobios	8.38	348	P	P	20 33 17.8	-0.9
CFUE	Fuerteventura	8.65	237	S	Sn	20 34 53.5	-7.5
	comp=N,36nm,2.6s,SNR=7.9						
EARI	Arriondas	9.62	2	P	P	20 33 36.0	+0.3
	comp=N,0.4nm,0.2s,SNR=4.0						
EARI				S	Sn	20 35 17.6	-7.2
	comp=N,1.8nm,0.5s,SNR=4.0						
EARI	Arriondas	9.62	2	P	P	20 33 36.0	+0.3
EPON	Pontenova	9.70	354	P	P	20 33 36.9	0.0
	comp=N,0.7nm,0.3s,SNR=4.0						
EPON	Pontenova	9.70	354	P	P	20 33 36.9	+0.1
ELAN	Lanestosa	9.70	10	P	P	20 33 37.1	+0.3
	comp=N,0.6nm,0.2s,SNR=4.0						
ELAN	Lanestosa	9.70	10	P	P	20 33 37.2	+0.3
IPRE	Itoiz	9.73	19	S	Sn	20 35 18.3	-9.5
	comp=N,8.4nm,2.0s,SNR=7.9						
ETSF	Etsaut	10.05	22	ePn	P	20 33 41.7	0.0
ETSF				eSn	S	20 35 27.7	-7.9
	comp=N,0.5nm,0.3s						
SJPF	Ste Jean	10.05	19	ePn	P	20 33 41.3	-0.4
EPF	Esparros	10.47	25	ePn	P	20 33 47.3	-0.1
MTLF	Montolieu	11.46	30	ePn	P	20 34 00.1	-0.9
QUIF	Quistinic	14.35	7	ePn	P	20 34 38.9	-0.5
SGMF	Saint Gilles	14.75	8	ePn	P	20 34 44.2	-0.4
ROSF	Rostrenen	14.76	6	ePn	P	20 34 44.4	-0.3

IDC ***23*** *20:33:27.1±3.7, 5.16S×145.45E, h63^{km}±33^{km}, mb4.2/8, mb1 4.4/11, mb1mx4.4/15, mbtmp4.6/11, ML4.4/3, MS3.6/7, Ms1 3.6/7, ms1mx3.2/21, Error ellipse: s-maj=24.5km s-min=18.4km az=63.0*

BJI ***23*** *20:33:28.5, 5.20S×145.40E, h78^{km}, mB5.1, mb4.4*

NEIC ***23*** *20:33:29.0±1.4, 5.21S×145.38E, h78^{km}±12^{km}, mb4.9/9, Error ellipse: s-maj=9.6km s-min=8.8km az=218.0*

ISC 23 20:33:27.1±2.0**, 5.24S**±0.08×**145.37E**±0.08**, h75^{km}**±18^{km}**, n42,** σ**0^{s}72**/38**, mb4.5**/15**, 2C, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.50	157	P	P	20 34 34.4	0.0
	117nm,0.3s,baz=11,slow=5.3,SNR=310						
PMG				S	S	20 35 21.7	-4.2
	54nm,0.3s,baz=42,slow=5.0,SNR=3.8						
PMG	Port Moresby	4.50	157	eP	P	20 34 34.1	-0.3
CTA	Charters Tower	14.78	177	eP	P	20 36 55.7	+2.2
	7.7nm,0.4s						
CTA	Charters Tower	14.78	177	P	P	20 36 55.1	+1.6
	0.3nm,0.3s,baz=12,slow=9.3,SNR=3.6						
CTA				S	S	20 39 30.8	-5.0
	0.5nm,0.3s,baz=177,slow=24,SNR=2.2						
CTAO	Charters Tower	14.78	177	eP	P	20 36 56.3	+2.8
	14nm,0.8s						
HNR	Honiara	15.04	107	P	P	20 36 57.8	+0.8
	4.3nm,0.3s,baz=249,slow=2.3,SNR=9.6						
HNR	Honiara	15.04	107	eP	P	20 36 57.5	+0.5
	132nm,0.9s						
WRAB	Tennant Creek	18.11	215	eP	P	20 37 34.2	-1.1
	34nm,0.8s						
WB2	Warramunga Arr	18.12	215	eP	P	20 37 34.9	-0.5
WRA	Warramunga Arr	18.13	215	P	P	20 37 34.9	-0.5
	3.2nm,0.3s,baz=38,slow=12,SNR=139						
WRA				PcP	PcP	20 42 06.4	+0.1
	0.3nm,0.3s,baz=20,slow=1.4,SNR=7.7						
GUMO	Guam	18.72	358	LR	LR	20 42 41.5	
	comp=Z,126nm,20.8s,baz=93,slow=30						
ASPA	Alice Springs	21.39	210	eP	P	20 38 10.5	+0.1
FITZ	Fitzroy Crossi	23.13	235	eP	P	20 38 27.5	-0.1
	99nm,0.6s,mb5.3						
FITZ	Fitzroy Crossi	23.13	235	P	P	20 38 28.5	+0.9
	144nm,0.7s,mb5.4,baz=60,slow=9.0,SNR=170						
FITZ				LR	LR	20 49 19.2	
	comp=Z,230nm,18.8s,baz=54,slow=41						
ARMA	Armidale	25.73	167	eP	P	20 38 53.1	+0.7
DZM	Mont Dzumac	26.38	131	P	P	20 38 57.4	-1.1
	8.9nm,0.6s,mb4.4,baz=77,slow=17,SNR=11						
DZM				LR	LR	20 47 31.4	
	comp=Z,264nm,19.0s,baz=200,slow=32						
STKA	Stephens Creek	26.73	187	⇑iP	P	20 39 01.3	-0.3
	15nm,0.7s,mb4.6						
STKA	Stephens Creek	26.73	187	P	P	20 39 01.4	-0.3
	17nm,0.7s,mb4.7,baz=353,slow=8.5,SNR=45						
STKA				LR	LR	20 50 48.8	
	comp=Z,79nm,21.2s,baz=22,slow=39						
CNB	Canberra Magne	30.15	173	⇑iP	P	20 39 32.7	+0.4
	17nm,0.8s,mb4.7						
FORT	Forrest	30.17	211	eP	P	20 39 32.5	0.0
	19nm,0.7s,mb4.8						
KSM	Kuching	35.65	280	eP	P	20 40 20.5	+0.4
KLBR	Kellerberrin	36.83	221	eP	P	20 40 29.7	-0.2
	21nm,1.1s,mb5.0						
AFI	Afiamalu	43.06	105	LR	LR	20 56 48.5	
	comp=Z,79nm,21.1s,baz=64,slow=33						
URZ	Urewera	43.72	143	P	P	20 41 26.6	-0.1
	16nm,0.8s,mb4.8,baz=260,slow=0.8,SNR=7.2						
LZH	Lanzhou	56.59	320	eP	P	20 43 05.4	+0.7
LZH				AP	pP	20 43 25.8	+1.9
LZH				XP	sP	20 43 36.3	+3.9
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
LZH				AMB	AMB		
	comp=Z,90nm,4.3s						
GTA	Gaotai	61.13	321	eP	P	20 43 36.6	+0.5
SONM	Songino Array	62.96	332	P	P	20 43 47.3	-0.9
	comp=Z,0.7nm,0.7s,mb3.7,baz=163,slow=5.0,SNR=6.8						
SONM				LR	LR	21 11 41.5	
	comp=Z,37nm,18.6s,baz=110,slow=36						
GUN	Gumba	66.10	303	eP	P	20 44 09.5	+0.6
KKN	Kakani	66.56	303	eP	P	20 44 12.1	+0.3
DMN	Daman	66.64	303	eP	P	20 44 12.8	+0.5
GKN	Gorkha	67.16	303	eP	P	20 44 15.7	+0.1
KOLN	Koldanda	67.95	303	eP	P	20 44 19.5	-1.0
VNDA	Vanda	72.76	176	eP	P	20 44 48.7	0.0
	comp=Z,9.9nm,1.0s,mb4.6						
MKAR	Makanchi Array	75.89	321	P	P	20 45 07.2	-0.1
	comp=Z,1.3nm,0.9s,mb3.7,baz=96,slow=8.6,SNR=10						
ZAL	Zalesovo	77.52	328	P	P	20 45 16.1	-0.2
	comp=Z,0.9nm,0.5s,mb3.7,baz=9.2,slow=1.3,SNR=4.3						
ZAL				LR	LR	21 17 26.4	
	comp=Z,58nm,21.4s,baz=172,slow=34						
MAW	Mawson	82.32	203	P	P	20 45 41.9	+0.2
	comp=Z,5.2nm,0.7s,mb4.5,baz=86,slow=8.5,SNR=17						
QSPA	South Pole Qui	84.72	180	eP	P	20 45 54.2	+0.7
	comp=Z,7.0nm,0.5s,mb4.8						
ILAR	Eielson Array	85.43	23	P	P	20 45 55.9	-1.5
	comp=Z,5.9nm,0.7s,mb4.6,baz=252,slow=4.5,SNR=60						
PLCA	Paso Flores	123.63	148	PKP	PKPdf	20 52 18.3	+1.8
	comp=Z,2.4nm,0.6s,baz=263,slow=4.6,SNR=9.3						
SAML	Samuel	148.24	116	eP	PKPdf	20 53 05.5	+3.3
DBIC	Dimbokro	150.35	274	PKPbc	PKPdf	20 53 12.9	+7.3
	comp=Z,8.9nm,0.7s,baz=81,slow=3.5,SNR=23						
BDFB	Brasilia	155.38	148	PKPbc	PKPdf	20 53 22.9	+10
	comp=Z,2.9nm,0.4s,baz=23,slow=0.6,SNR=4.8						

BJI ***23*** *20:53:13.0, 48.90N×122.10W, h10^{km}, mB4.7, mb4.4, Ms4.5, Msz4.2*

IDC ***23*** *20:53:14.7±1.1, 48.96N×122.69W, mb3.4/3, mb1 3.8/7, mb1mx3.7/20, mbtmp3.6/7, ML2.9/4, MS3.3/2, Ms1 3.3/2, ms1mx2.8/16, Error ellipse: s-maj=30.4km s-min=13.5km az=58.0*

PNSN ***23*** *20:53:15.3, 48.85N×122.14W, h0^{km}, MD4.0, Fault plane solution: NP1:ϕ_s95°, δ60°, NP2:ϕ_s195°, δ73°, Principal axes: T Plg34°, Azm59°; P Plg8°, Azm323°;*

PGC ***23*** *20:53:15.4, 48.85N×122.15W, h1^{km}, Mw4.4/5, mb3.5/2(NEIC), MD4.1(SEA)*

PGC Near Deming, Washington. Felt (III-IV) in Albertabotsford, Chilliwack, Maple Ridge, Mission and Surrey, British Columbia.

NEIC ***23*** *20:53:15.0, 48.85N×122.14W, MD4.0(SEA), MW4.4(PGC), After SEA.*

NEIC Felt [V] at Deming; [IV] at Maple Falls; [III] at Bellingham, Everson and Sumas. Felt at Anacortes, Ferndale, Mount Vernon, Sedro Woolley and Seattle. Also felt at Abbotsford, Chilliwack, Maple Ridge, Mission and Surrey, British Columbia.

ISC 23 20:53:13.9±0.2**, 48.89N**±0.01×**122.17W**±0.02**, h1^{km}, n214,** σ**1^{s}00**/281**, mb3.9**/6**, 1C-44D, Washington**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VDB	Vedder Mountai	0.14	19	⇓P	Pg	20 53 18.6	+1.8
VDB				S	Sg	20 53 21.8	+3.0
VDB				Trac		20 53 23.7	
	comp=Z,17µm,0.3s						
VDB	Vedder Mountai	0.14	19	⇓P	Pg	20 53 18.6	+1.8
VDB				S	Sg	20 53 21.8	+3.0
VDB				Trac		20 53 23.7	
	comp=Z,17µm,0.3s						
MBW	Mount Baker	0.21	120	⇓P	Pg	20 53 18.9	+0.8
MBW	Mount Baker	0.21	120	⇓P	Pg	20 53 18.9	+0.8
CMW	Cultus Mountai	0.47	176	⇓P	Pg	20 53 23.2	0.0
CMW	Cultus Mountai	0.47	176	⇓P	Pg	20 53 23.2	0.0

HNB	Haney	0.47	325	⇓P	Pg	20 53 24.0	+0.7
HNB				S	Sg	20 53 31.1	+1.5
HNB				Trac		20 53 31.4	
	comp=Z,8µm,0.4s						
HNB	Haney	0.47	325	⇓P	Pg	20 53 24.0	+0.7
HNB				S	Sg	20 53 31.1	+1.5
HNB				Trac		20 53 31.4	
	comp=Z,8µm,0.4s						
MCW	Mount Constitu	0.48	245	⇑P	Pg	20 53 24.4	+0.9
MCW	Mount Constitu	0.48	245	⇑P	Pg	20 53 24.4	+0.9
RPW	Rockport	0.62	135	⇓P	Pg	20 53 26.0	-0.3
RPW	Rockport	0.62	135	⇓P	Pg	20 53 26.0	-0.3
SNB	Saturna Island	0.67	261	P	Pg	20 53 27.9	+0.6
SNB				S	Sg	20 53 37.2	+1.0
SNB				Trac		20 53 41.2	
	comp=Z,843nm,0.3s						
SNB	Saturna Island	0.67	261	P	Pg	20 53 27.9	+0.6
SNB				S	Sg	20 53 37.2	+1.0
SNB				Trac		20 53 41.2	
	comp=Z,843nm,0.3s						
HOPB	Hope	0.70	44	P	Pg	20 53 28.4	+0.4
HOPB				S	Sg	20 53 38.2	+0.9
HOPB				Trac		20 53 39.9	
	comp=Z,3µm,0.3s						
HOPB	Hope	0.70	44	P	Pg	20 53 28.4	+0.4
HOPB				S	Sg	20 53 38.2	+0.9
HOPB				Trac		20 53 39.9	
	comp=Z,3µm,0.3s						
JCW	Jim Creek	0.71	167	⇓P	Pg	20 53 27.7	-0.5
JCW	Jim Creek	0.71	167	⇓P	Pg	20 53 27.7	-0.5
PGC	Sidney	0.88	255	P	Pg	20 53 30.9	-0.5
PGC				S	Sg	20 53 42.5	-0.7
PGC				Trac		20 53 45.3	
	comp=Z,1µm,0.3s						
PGC	Sidney	0.88	255	P	Pg	20 53 30.9	-0.5
PGC				S	Sg	20 53 42.5	-0.7
PGC				Trac		20 53 45.3	
	comp=Z,1µm,0.3s						
PGC	Sidney	0.88	255	eP	Pg	20 53 30.6	-0.8
PGC				eS	Sg	20 53 43.0	-0.2
GOBB	Galiano Island	0.88	274	P	Pg	20 53 31.2	-0.3
GOBB				S	Sg	20 53 44.3	+1.0
GOBB				Trac		20 53 47.9	
	comp=Z,395nm,0.2s						
GOBB	Galiano Island	0.88	274	P	Pg	20 53 31.2	-0.3
GOBB				S	Sg	20 53 44.3	+1.0
GOBB				Trac		20 53 47.9	
	comp=Z,395nm,0.2s						
VGZ	Gonzales	0.90	239	P	Pg	20 53 31.1	-0.8
VGZ				S	Sg	20 53 43.3	-0.6
VGZ				Trac		20 53 45.9	
	comp=Z,2µm,0.3s						
VGZ	Gonzales	0.90	239	P	Pg	20 53 31.1	-0.8
VGZ				S	Sg	20 53 43.3	-0.6
VGZ				Trac		20 53 45.9	
	comp=Z,2µm,0.3s						
BIB	Bowen Island	0.91	305	⇓P	Pg	20 53 31.5	-0.5
BIB				S	Sg	20 53 44.2	+0.1
BIB				Trac		20 53 51.7	
	comp=Z,894nm,0.4s						
BIB	Bowen Island	0.91	305	⇓P	Pg	20 53 31.5	-0.5
BIB				S	Sg	20 53 44.2	+0.1
BIB				Trac		20 53 51.7	
	comp=Z,894nm,0.4s						
WPB	Watts Point	1.03	319	⇓P	Pb	20 53 33.6	-0.6
WPB				S	Sb	20 53 47.3	-0.6
WPB				Trac		20 53 47.7	
	comp=Z,2µm,0.2s						
WPB	Watts Point	1.03	319	⇓P	Pb	20 53 33.6	-0.6
WPB				S	Sb	20 53 47.3	-0.6
WPB				Trac		20 53 47.7	
	comp=Z,2µm,0.2s						
BLN	Blyn Mountain	1.03	211	⇑P	Pb	20 53 33.9	-0.3
BLN	Blyn Mountain	1.03	211	⇑P	Pb	20 53 33.9	-0.3
BLH	Bald Hill	1.06	175	P	Pb	20 53 34.5	-0.1
BLH	Bald Hill	1.06	175	P	Pb	20 53 34.5	-0.1
HTW	Haystack Looko	1.12	166	⇑P	Pb	20 53 34.9	-0.8
HTW	Haystack Looko	1.12	166	⇑P	Pb	20 53 34.9	-0.8
LZB	Mount Lazard	1.13	256	P	Pb	20 53 34.9	-1.0
LZB				S	Sb	20 53 49.8	-1.1
LZB				Trac		20 53 53.0	
	comp=Z,329nm,0.3s						
LZB	Mount Lazard	1.13	256	P	Pb	20 53 34.9	-1.0
LZB				S	Sb	20 53 49.8	-1.1
LZB				Trac		20 53 53.0	
	comp=Z,329nm,0.3s						
TTW	Tolt Reservoir	1.24	165	⇓P	Pb	20 53 37.0	-0.8
TTW				S	Sb	20 53 54.3	+0.2
TTW	Tolt Reservoir	1.24	165	⇓P	Pb	20 53 37.0	-0.8
TTW				S	Sb	20 53 54.3	+0.2
STW	Striped Peak	1.24	234	⇑P	Pb	20 53 37.0	-0.8
STW	Striped Peak	1.24	234	⇑P	Pb	20 53 37.0	-0.8
NLLB	Nanaimo Lost L	1.24	287	P	Pb	20 53 37.0	-0.9
NLLB				S	Sb	20 53 53.4	-0.9
NLLB				Trac		20 53 56.8	
	comp=Z,1µm,0.5s						
NLLB	Nanaimo Lost L	1.24	287	P	Pb	20 53 37.0	-0.9
NLLB				S	Sb	20 53 53.4	-0.9
NLLB				Trac		20 53 56.8	
	comp=Z,1µm,0.5s						
SHB	Sechelt	1.32	303	⇓P	Pb	20 53 38.5	-0.7
SHB				S	Sb	20 53 56.2	-0.4
SHB				Trac		20 53 59.4	
	comp=Z,4µm,0.3s						
SHB	Sechelt	1.32	303	⇓P	Pb	20 53 38.5	-0.7
SHB				S	Sb	20 53 56.2	-0.4
SHB				Trac		20 53 59.4	
	comp=Z,4µm,0.3s						
WSLR	Whistler	1.33	339	P	Pb	20 53 38.9	-0.5
WSLR				S	Sb	20 53 56.2	-0.6
WSLR				Trac		20 53 56.9	
	comp=Z,592nm,0.2s						
WSLR	Whistler	1.33	339	P	Pb	20 53 38.9	-0.5
WSLR				S	Sb	20 53 56.2	-0.6
WSLR				Trac		20 53 56.9	
	comp=Z,592nm,0.2s						
WRW	Wenatchee Ridg	1.34	140	⇓P	Pb	20 53 38.3	-1.3
WRW	Wenatchee Ridg	1.34	140	⇓P	Pb	20 53 38.3	-1.3
HDW	Hoodsport	1.37	206	⇓P	Pb	20 53 39.0	-1.1
HDW	Hoodsport	1.37	206	⇓P	Pb	20 53 39.0	-1.1
GNW	Green Mountain	1.40	198	⇓P	Pb	20 53 39.4	-1.1
GNW	Green Mountain	1.40	198	⇓P	Pb	20 53 39.4	-1.1
GMW	Gold Mountain	1.40	197	⇓P	Pb	20 53 39.7	-0.9
GMW	Gold Mountain	1.40	197	⇓P	Pb	20 53 39.7	-0.9
RMW	Rattlesnake Mo	1.45	170	⇓P	Pn	20 53 40.9	-0.4
RMW	Rattlesnake Mo	1.45	170	⇓P	Pn	20 53 40.9	-0.4
NLW	Nelson Butte	1.47	123	⇓P	Pn	20 53 41.2	-0.4
NLW	Nelson Butte	1.47	123	⇓P	Pn	20 53 41.2	-0.4
OSD	Olympics--Snow	1.48	224	⇑P	Pn	20 53 41.3	-0.5
OSD	Olympics--Snow	1.48	224	⇑P	Pn	20 53 41.3	-0.5
OBC	Olympics--Boni	1.53	237	P	Pn	20 53 41.6	-0.9
OBC	Olympics--Boni	1.53	237	P	Pn	20 53 41.6	-0.9
PFB	Port Renfrew	1.53	259	P	Pn	20 53 41.9	-0.7
PFB				S	Sb	20 54 01.9	-0.8
PFB				Trac		20 54 06.9	
	comp=Z,606nm,0.3s						
PFB	Port Renfrew	1.53	259	P	Pn	20 53 41.9	-0.7
PFB				S	Sb	20 54 01.9	-0.8
PFB				Trac		20 54 06.9	
	comp=Z,606nm,0.3s						
OTR	Olympics--Tyee	1.65	242	P	Pn	20 53 43.8	-0.5
OTR	Olympics--Tyee	1.65	242	P	Pn	20 53 43.8	-0.5
MGB	Mount Grey	1.66	275	P	Pn	20 53 43.7	-0.7
MGB				S	Sb	20 54 05.6	-0.9
MGB				Trac		20 54 07.5	
	comp=Z,877nm,0.2s						
MGB	Mount Grey	1.66	275	P	Pn	20 53 43.7	-0.7
MGB				S	Sb	20 54 05.6	-0.9
MGB				Trac		20 54 07.5	
	comp=Z,877nm,0.2s						
TXB	Texada	1.69	299	⇓P	Pn	20 53 44.0	-0.8
TXB				S	Sb	20 54 06.7	-0.5
TXB				Trac		20 54 09.5	
	comp=Z,2µm,0.4s						
TXB	Texada	1.69	299	⇓P	Pn	20 53 44.0	-0.8
TXB				S	Sb	20 54 06.7	-0.5
TXB				Trac		20 54 09.5	
	comp=Z,2µm,0.4s						
GSM	Grass Mountain	1.71	171	⇑P	Pn	20 53 44.8	-0.2
GSM	Grass Mountain	1.71	171	⇑P	Pn	20 53 44.8	-0.2
MEW	McNeil Island	1.72	191	P	Pn	20 53 45.5	+0.3
MEW	McNeil Island	1.72	191	P	Pn	20 53 45.5	+0.3
LLLB	Lillooet	1.73	6	P	Pn	20 53 45.5	+0.1
LLLB				S	Sn	20 54 09.1	+0.7
LLLB				Trac		20 54 12.2	
	comp=Z,2µm,0.5s						
LLLB	Lillooet	1.73	6	P	Pn	20 53 45.5	+0.1
LLLB				S	Sn	20 54 09.1	+0.7
LLLB				Trac		20 54 12.2	
	comp=Z,2µm,0.5s						
PNT	Penticton	1.73	75	P	Pn	20 53 45.7	+0.3
PNT				S	Sn	20 54 09.9	+1.4
PNT				Trac		20 54 15.8	
	comp=Z,1µm,0.5s						
PNT	Penticton	1.73	75	P	Pn	20 53 45.7	+0.3
PNT				S	Sn	20 54 09.9	+1.4
PNT				Trac		20 54 15.8	
	comp=Z,1µm,0.5s						
OCWA	Octopus Mounta	1.76	230	P	Pn	20 53 46.4	+0.6
OCWA	Octopus Mounta	1.76	230	⇑P	Pn	20 53 46.2	+0.5
OCWA				P		20 53 46.4	
OCWA				S	Sn	20 54 12.8	+3.7
OCWA	Octopus Mounta	1.76	230	⇑eP	Pn	20 53 46.2	+0.5
OCWA				eS	Sn	20 54 12.8	+3.7
OOW	Octopus West	1.77	230	⇑P	Pn	20 53 46.7	+0.8
OOW	Octopus West	1.77	230	⇑P	Pn	20 53 46.7	+0.8
ETW	Entiat	1.78	136	P	Pn	20 53 46.2	+0.2
ETW	Entiat	1.78	136	P	Pn	20 53 46.2	+0.2
ALB	Alberni	1.79	283	P	Pn	20 53 45.5	-0.7
ALB				S	Sn	20 54 09.1	-0.7
ALB				Trac		20 54 14.3	
	comp=Z,642nm,0.5s						
ALB	Alberni	1.79	283	P	Pn	20 53 45.5	-0.7
ALB				S	Sn	20 54 09.1	-0.7
ALB				Trac		20 54 14.3	
	comp=Z,642nm,0.5s						
OSR	Olympics--Salm	1.83	222	⇑P	Pn	20 53 47.4	+0.7
OSR	Olympics--Salm	1.83	222	⇑P	Pn	20 53 47.4	+0.7
GHW	Garrison Hill	1.85	182	P	Pn	20 53 47.0	0.0
GHW	Garrison Hill	1.85	182	P	Pn	20 53 47.0	0.0
WTV	Waterville	1.90	128	P	Pn	20 53 48.0	+0.2
WTV	Waterville	1.90	128	P	Pn	20 53 48.0	+0.2
RVC	Mount Rainier-	1.95	176	⇓P	Pn	20 53 48.7	+0.2
RVC	Mount Rainier-	1.95	176	⇓P	Pn	20 53 48.7	+0.2
TWW	Teanaway	1.96	153	P	Pn	20 53 49.7	+1.1
TWW	Teanaway	1.96	153	P	Pn	20 53 49.7	+1.1
FMW	Mount Fremont	1.99	170	⇓P	Pn	20 53 49.1	+0.1
FMW	Mount Fremont	1.99	170	⇓P	Pn	20 53 49.1	+0.1
TBM	Table Mountain	2.02	148	P	Pn	20 53 50.5	+1.0
TBM	Table Mountain	2.02	148	P	Pn	20 53 50.5	+1.0
CPW	Capitol Peak	2.02	199	⇓P	Pn	20 53 49.6	+0.1
CPW	Capitol Peak	2.02	199	⇓P	Pn	20 53 49.6	+0.1
RCS	Mount Rainier-	2.04	171	⇓P	Pn	20 53 50.3	+0.5
RCS	Mount Rainier-	2.04	171	⇓P	Pn	20 53 50.3	+0.5
RCM	Mount Rainier-	2.08	172	⇓P	Pn	20 53 50.8	+0.5
RCM	Mount Rainier-	2.08	172	⇓P	Pn	20 53 50.8	+0.5
REMR	Mount Rainier-	2.08	174	P	Pn	20 53 50.9	+0.5
REMR	Mount Rainier-	2.08	174	P	Pn	20 53 50.9	+0.5
LON	Longmire	2.15	173	P	Pn	20 53 52.0	+0.5
LON	Longmire	2.15	173	P	Pn	20 53 52.0	+0.5
OZB	Mount Ozzard	2.19	273	P	Pn	20 53 51.9	-0.1
OZB				S	Sn	20 54 20.9	+0.8
OZB				Trac		20 54 32.5	
	comp=Z,634nm,0.5s						
OZB	Mount Ozzard	2.19	273	P	Pn	20 53 51.9	-0.1
OZB				S	Sn	20 54 20.9	+0.8
OZB				Trac		20 54 32.5	
	comp=Z,634nm,0.5s						
LMW	Ladd Mountain	2.22	182	P	Pn	20 53 52.9	+0.5
LMW	Ladd Mountain	2.22	182	P	Pn	20 53 52.9	+0.5
WPW	White Pass	2.23	169	P	Pn	20 53 53.1	+0.6
WPW	White Pass	2.23	169	P	Pn	20 53 53.1	+0.6
EBG	Ellensburg	2.26	151	P	Pn	20 53 53.8	+1.0
EBG	Ellensburg	2.26	151	P	Pn	20 53 53.8	+1.0
BTB	Buttle Lake	2.27	286	P	Pn	20 53 53.5	+0.3
BTB				S	Sn	20 54 22.3	+0.2
BTB				Trac		20 54 28.0	
	comp=Z,792nm,0.4s						
BTB	Buttle Lake	2.27	286	P	Pn	20 53 53.5	+0.3
BTB				S	Sn	20 54 22.3	+0.2
BTB				Trac		20 54 28.0	
	comp=Z,792nm,0.4s						
NAC	Naches	2.34	157	P	Pn	20 53 55.0	+0.9
NAC	Naches	2.34	157	P	Pn	20 53 55.0	+0.9
GLK	Glacier Lake	2.36	170	⇑P	Pn	20 53 55.5	+1.2
GLK	Glacier Lake	2.36	170	⇑P	Pn	20 53 55.5	+1.2
CBB	Campbell River	2.38	300	P	Pn	20 53 54.5	-0.1
CBB				S	Sn	20 54 25.7	+0.9
CBB				Trac		20 54 28.4	
	comp=Z,300nm,0.6s						
CBB	Campbell River	2.38	300	P	Pn	20 53 54.5	-0.1
CBB				S	Sn	20 54 25.7	+0.9
CBB				Trac		20 54 28.4	
	comp=Z,300nm,0.6s						
KOSW	Kosmos	2.43	180	P	Pn	20 53 56.4	+1.0
KOSW	Kosmos	2.43	180	P	Pn	20 53 56.4	+1.0
TDL	Tradedollar La	2.54	181	P	Pn	20 53 57.9	+1.0
TDL	Tradedollar La	2.54	181	P	Pn	20 53 57.9	+1.0
MXC	Moxie City	2.64	151	P	Pn	20 53 58.7	+0.3
MXC	Moxie City	2.64	151	P	Pn	20 53 58.7	+0.3
ASR	Mount Adams--S	2.77	172	P	Pn	20 54 01.7	+1.5
ASR	Mount Adams--S	2.77	172	P	Pn	20 54 01.7	+1.5
CDFW	Cedar Flats	2.77	178	P	Pn	20 54 01.9	+1.6
CDFW	Cedar Flats	2.77	178	P	Pn	20 54 01.9	+1.6
ETB	Estevan Point	2.91	281	P	Pn	20 54 06.0	+3.8
ETB				Trac		20 55 09.6	
	comp=Z,203nm,0.7s						
ETB	Estevan Point	2.91	281	P	Pn	20 54 06.0	+3.8
ETB				Trac		20 55 09.6	
	comp=Z,203nm,0.7s						
NCRB	Newcastle Ridg	2.94	302	P	Pn	20 54 02.6	-0.1
NCRB				S	Sn	20 54 41.5	+2.3
NCRB				Trac		20 54 46.1	
	comp=Z,313nm,0.6s						
NCRB	Newcastle Ridg	2.94	302	P	Pn	20 54 02.6	-0.1
NCRB				S	Sn	20 54 41.5	+2.3
NCRB				Trac		20 54 46.1	
	comp=Z,313nm,0.6s						
HAWA	Hanford	3.07	143	eP	Pn	20 54 04.8	+0.3
HAWA				eS	Sn	20 54 49.3	+6.9
WOSB	Woss	3.13	296	P	Pn	20 54 06.3	+0.8
WOSB				S	Sn	20 54 47.8	+3.8
WOSB				Trac		20 54 56.5	
	comp=Z,210nm,0.5s						
WOSB	Woss	3.13	296	P	Pn	20 54 06.3	+0.8
WOSB				S	Sn	20 54 47.8	+3.8
WOSB				Trac		20 54 56.5	
	comp=Z,210nm,0.5s						
EDB	Eliza Dome	3.38	289	P	Pn	20 54 12.9	+4.0
EDB				S	Sn	20 54 56.1	+5.9
EDB				Trac		20 55 05.0	
	comp=Z,235nm,0.9s						
EDB	Eliza Dome	3.38	289	P	Pn	20 54 12.9	+4.0
EDB				S	Sn	20 54 56.1	+5.9
EDB				Trac		20 55 05.0	
	comp=Z,235nm,0.9s						
NEW	Newport	3.41	99	eP	Pn	20 54 08.3	-1.0
NEW				eS	Sn	20 55 01.3	+10
SLEB	Sale Mountain	3.46	47	P	Pn	20 54 09.6	-0.4
SLEB				Pg	Pg	20 54 19.1	-4.0
SLEB				Sn	Sn	20 54 50.5	-1.8
SLEB				Sg	Sg	20 55 01.8	-7.4
SLEB				Trac		20 55 13.1	
	comp=Z,419nm,0.6s						
SLEB	Sale Mountain	3.46	47	P	Pn	20 54 09.6	-0.4
SLEB				Pg	Pg	20 54 19.1	-4.0
SLEB				Sn	Sn	20 54 50.5	-1.8
SLEB				Sg	Sg	20 55 01.8	-7.4
SLEB				Trac		20 55 13.1	
	comp=Z,419nm,0.6s						
DOWB	Downie Slide	3.53	40	P	Pn	20 54 10.2	-0.8
DOWB				Pg	Pg	20 54 20.0	-4.4
DOWB				Sg	Sg	20 55 05.0	-6.4
DOWB	Downie Slide	3.53	40	P	Pn	20 54 10.2	-0.8
DOWB				Pg	Pg	20 54 20.0	-4.4
DOWB				Sg	Sg	20 55 05.0	-6.4
MAYB	Maynard	3.58	297	P	Pn	20 54 12.5	+0.7
MAYB				S	Sn	20 55 01.8	+6.4
MAYB				Trac		20 55 09.8	
	comp=Z,221nm,0.7s						
MAYB	Maynard	3.58	297	P	Pn	20 54 12.5	+0.7
MAYB				S	Sn	20 55 01.8	+6.4
MAYB				Trac		20 55 09.8	
	comp=Z,221nm,0.7s						
BLBC	Blue River	3.67	30	P	Pn	20 54 17.0	+4.0
BLBC				Sg	Sg	20 55 09.4	-6.7
BLBC	Blue River	3.67	30	P	Pn	20 54 17.0	+4.0
BLBC				Sg	Sg	20 55 09.4	-6.7
PHC	Port Hardy	3.86	300	P	Pn	20 54 16.6	+0.9
PHC				S	Sn	20 55 08.2	+5.8
PHC				Trac		20 55 20.0	
	comp=Z,136nm,0.7s						
PHC	Port Hardy	3.86	300	P	Pn	20 54 16.6	+0.9
PHC				S	Sn	20 55 08.2	+5.8
PHC				Trac		20 55 20.0	
	comp=Z,136nm,0.7s						
MNB	Mounoet Dainar	4.10	35	P	Pn	20 54 18.7	-0.5
MNB	Mounoet Dainar	4.10	35	P	Pn	20 54 18.7	-0.5
HOLB	Holberg	4.24	297	P	Pn	20 54 22.8	+1.6
HOLB				Sg	Sg	20 55 16.4	-19
HOLB				Trac		20 55 29.0	
	comp=Z,124nm,0.7s						
HOLB	Holberg	4.24	297	P	Pn	20 54 22.8	+1.6
HOLB				Sg	Sg	20 55 16.4	-19
HOLB				Trac		20 55 29.0	
	comp=Z,124nm,0.7s						
COR	Corvallis	4.37	191	eP	Pn	20 54 24.4	+1.4
BBB	Bella Bella	5.02	313	Pn	Pn	20 54 32.8	+0.5
	0.7nm,0.3s,baz=100,slow=20,SNR=4.5						
BBB				Pg	Pg	20 54 42.1	-12
	6.1nm,0.3s,baz=130,slow=9.8,SNR=20						
BBB				Lg		20 55 46.9	
	4.0nm,0.3s,baz=230,slow=23,SNR=3.7						
BBB	Bella Bella	5.02	313	P	Pn	20 54 42.1	+10
BBB				Trac		20 55 54.9	
	comp=Z,76nm,0.6s						
BBB	Bella Bella	5.02	313	Pn	Pn	20 54 32.8	+0.5
BBB				Pg	Pg	20 54 42.1	-12
BBB				P		20 54 42.1	
BBB				Trac		20 55 54.9	
	comp=Z,76nm,0.6s						
BMO	Blue Mountains	5.24	139	eP	Pn	20 54 34.2	-1.0
WALA	Waterton Lakes	5.44	85	P	Pn	20 54 37.4	-0.8
WALA				Trac		20 56 08.0	
	comp=Z,92nm,0.5s						
WALA	Waterton Lakes	5.44	85	P	Pn	20 54 37.4	-0.8
WALA				Trac		20 56 08.0	
	comp=Z,92nm,0.5s						
FSB	Fort Saint Jam	5.75	347	P	Pn	20 54 41.6	-0.9
FSB				Trac		20 56 20.3	
	comp=Z,44nm,0.7s						
FSB	Fort Saint Jam	5.75	347	P	Pn	20 54 41.6	-0.9
FSB				Trac		20 56 20.3	
	comp=Z,44nm,0.7s						
MSO	Missoula	5.91	107	eP	Pn	20 54 43.0	-1.7
KEBM	Edson Butte	6.20	195	eP	Pn	20 54 47.5	-1.4
HUMO	Hull Mountain	6.31	185	eP	Pn	20 54 50.9	+0.5
CHMT	Chamberlain Mo	6.32	105	eP	Pn	20 54 47.8	-2.7
WVOR	Wild Horse Val	6.91	158	eP	Pn	20 55 02.5	+3.6
EDM	Edmonton	7.05	49	Trac		20 57 06.6	
	comp=Z,33nm,0.5s						
EDM	Edmonton	7.05	49	Trac		20 57 06.6	
	comp=Z,33nm,0.5s						
MOD	Modoc	7.11	169	eP	Pn	20 55 03.8	+2.1
YBH	Yreka Blue Hor	7.17	183	eP	Pn	20 55 02.7	+0.2
BMBC	Bull Mountain	7.17	0	Trac		20 57 12.2	
	comp=Z,44nm,0.8s						
BMBC	Bull Mountain	7.17	0	Trac		20 57 12.2	
	comp=Z,44nm,0.8s						
HRY	Holter Researc	7.30	103	qP		20 55 03.0	
RUBB	Prince Rupert	7.41	320	Trac		20 57 25.1	
	comp=Z,40nm,0.8s						
RUBB	Prince Rupert	7.41	320	Trac		20 57 25.1	
	comp=Z,40nm,0.8s						
DLMT	Dillon	7.42	115	eP	Pn	20 55 04.6	-1.5
MCMT	McKenzie Canyo	7.57	119	eP	Pn	20 55 07.1	-1.0
EGMT	Eagleton	8.30	91	eP	P	20 55 18.8	+0.4
QLMT	Earthquake Lak	8.40	115	qP		20 55 20.5	
YMR	Madison River	8.77	115	eP	P	20 55 23.5	-1.4
IMW	Indian Meadow	9.23	119	eP	P	20 55 30.3	-0.9
ELK	Elko	9.51	146	Pn	P	20 55 39.6	+4.6
	0.1nm,0.3s,baz=298,slow=12,SNR=10						
ELK				LR	LR	20 59 28.4	
	comp=Z,150nm,20.6s,baz=342,slow=38						
ELK	Elko	9.51	146	eP	P	20 55 37.0	+2.0
FNBB	Fort Nelson	10.03	358	P	P	20 55 41.0	-1.2
FNBB				Trac		20 58 43.7	
	comp=Z,13nm,1.0s						
FNBB	Fort Nelson	10.03	358	P	P	20 55 41.0	-1.2
FNBB				Trac		20 58 43.7	
	comp=Z,13nm,1.0s						
HWUT	Hardware Ranch	10.43	130	eP	P	20 55 50.9	+3.3
DLBC	Dease Lake	10.63	337	Pn	P	20 55 52.3	+2.0
	0.4nm,0.3s,baz=162,slow=16,SNR=4.8						
PDAR	Pinedale Array	10.72	120	Pn	P	20 55 55.3	+3.8
	0.1nm,0.3s,baz=315,slow=10,SNR=8.2						
NVAR	Mina Array Bea	10.82	164	Pn	P	20 55 55.4	+2.3
	0.0nm,0.3s,baz=350,slow=11,SNR=11						
RSSD	Black Hills	13.37	104	eP	P	20 56 28.1	+0.8
YKA	Yellowknife Ar	14.27	14	LR	LR	21 02 18.5	
	comp=Z,170nm,21.5s,baz=230,slow=38						
ULM	Lac du Bonnet	17.09	75	Pn	P	20 57 12.8	-2.6
	0.3nm,0.3s,baz=297,slow=18,SNR=2.5						
ULM	Lac du Bonnet	17.09	75	Pn	P	20 57 12.8	-2.6
INK	Inuvik	20.29	348	P	P	20 57 54.3	+0.8
	3.2nm,0.9s,baz=166,slow=13,SNR=6.4						
INK	Inuvik	20.29	348	qP		20 57 54.2	
INK	Inuvik	20.29	348	P	P	20 57 54.2	+0.7
	5.2nm,1.1s						
ILAR	Eielson Array	20.66	329	P	P	20 57 53.4	-3.9
	2.0nm,1.1s,baz=144,slow=9.5,SNR=9.1						
MNTX	Cornudas Mount	21.34	137	eP	P	20 58 03.3	-1.3
	0.7nm,0.6s,mb3.2						
TXAR	Lajitas Array	24.12	137	P	P	20 58 31.8	-0.2
	1.4nm,1.0s,mb3.5,baz=335,slow=8.2,SNR=5.6						
CN2	Changchun	70.36	315	eP	P	21 04 31.6	+0.7
SONM	Songino Array	74.88	328	P	P	21 04 57.1	-0.3
	0.3nm,0.6s,mb3.5,baz=35,slow=3.7,SNR=3.7						
HHC	Hu-ho-hao-te	78.86	321	eP	P	21 05 20.3	+0.5
HHC				AP	pP	21 05 30.3	+10
HHC				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.7						
HHC				AMB	AMB		
	comp=Z,120nm,2.9s,mb5.4						
LPAZ	La Paz	80.63	128	P	P	21 05 28.1	-1.7
	comp=Z,0.7nm,0.3s,mb4.2,baz=346,slow=4.2,SNR=3.1						
MKAR	Makanchi Array	82.35	343	P	P	21 05 35.8	-2.4
	comp=Z,0.6nm,0.8s,mb3.8,baz=11,slow=4.7,SNR=4.6						

NEIC ***23*** *20:56:30.8±1.0, 21.66S×179.21W, h572^{km}±12^{km}, mb4.3/3, Error ellipse: s-maj=20.5km s-min=10.2km az=149.0*

IDC ***23*** *20:56:31.2±2.1, 21.66S×179.22W, h575^{km}±24^{km}, mb3.3/8, mb1 3.6/11, mb1mx3.5/16, mbtmp4.3/11, Error ellipse: s-maj=31.0km s-min=15.3km az=151.0*

ISC 23 20:56:30.9±1.2**, 21.76S**±0.10×**179.2W**±0.1**, h590**^{km}±18^{km}**, n36, σ1^{s}12**/27**, mb3.9**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	10.55	44	P	P	20 58 54.0	-1.2
	6.7nm,0.3s,baz=193,slow=16,SNR=8.2						
AFI	Afiamalu	10.55	44	eP	P	20 58 53.5	-1.8
DZM	Mont Dzumac	13.29	266	P	P	20 59 23.7	+1.3
	0.8nm,0.3s,baz=141,slow=22,SNR=8.5						
URZ	Urewera	16.75	190	P	P	20 59 55.8	0.0
	3.7nm,0.3s,baz=330,slow=2.8,SNR=14						
QRZ	Quartz Range	20.25	198	PN	P	21 00 29.5	+0.9
TUWZ	Tuamarina	20.44	195	PN	P	21 00 29.8	-0.5
KHZ	Kahutara	21.47	195	PN	P	21 00 38.8	-0.9
LTZ	Lake Taylor	22.14	197	PN	P	21 00 44.2	-1.5
CNB	Canberra Magne	30.57	237	eP	P	21 02 01.4	+2.1
	5.8nm,0.4s,mb4.6						
PMG	Port Moresby	34.52	286	P	P	21 02 33.0	+0.3
	12nm,0.7s,mb4.6,baz=104,slow=6.0,SNR=5.1						
STKA	Stephens Creek	36.20	245	eP	P	21 02 47.2	+0.8
	3.8nm,0.5s,mb4.2						
STKA	Stephens Creek	36.20	245	P	P	21 02 47.5	+1.1
	3.3nm,0.4s,mb4.2,baz=97,slow=8.7,SNR=23						
ASPA	Alice Springs	43.12	258	eP	P	21 03 43.6	+1.6
ASPA				eS	S	21 09 24.5	-2.5
WB2	Warramunga Arr	43.28	264	eP	P	21 03 43.1	-0.3
WB2				eS	S	21 09 24.7	-4.7
WRAB	Tennant Creek	43.28	264	eP	P	21 03 42.4	-1.0
WRA	Warramunga Arr	43.29	264	P	P	21 03 43.1	-0.3
	1.4nm,0.3s,mb4.0,baz=97,slow=7.6,SNR=76						
WRA				S	S	21 09 26.6	-3.0
	0.7nm,0.8s,baz=95,slow=13,SNR=4.9						

KAKA	Kakadu	46.86	273	eP	P	21 04 30.6	+20
	6.7nm,0.5s,mb4.4						
FITZ	Fitzroy Crossi	51.72	264	eP	P	21 04 45.7	-1.0
	1.5nm,0.3s,mb3.8						
MJAR	Matsushiro Arr	70.54	325	P	P	21 06 48.3	-0.6
	1.8nm,0.5s,mb3.8,baz=248,slow=10,SNR=5.7						
NVAR	Mina Array Bea	82.73	44	P	P	21 07 54.9	0.0
	0.2nm,0.6s,mb2.8,baz=220,slow=6.8,SNR=3.7						
NVAR	Mina Array Bea	82.73	44	P	P	21 07 54.9	0.0
TXAR	Lajitas Array	88.71	58	P	P	21 08 25.7	+1.9
	0.4nm,0.8s,mb3.3,baz=207,slow=5.6,SNR=5.8						
ILAR	Eielson Array	89.79	13	P	P	21 08 27.6	-0.4
	0.5nm,0.5s,mb3.6,baz=236,slow=5.2,SNR=7.4						
PDAR	Pinedale Array	90.67	44	P	P	21 08 33.4	+0.9
	0.3nm,0.4s,mb3.5,baz=225,slow=8.4,SNR=3.5						
MKAR	Makanchi Array	111.21	313	PKiKP		21 13 58.5	
	0.2nm,0.4s,baz=78,slow=1.9,SNR=5.9						
ARCES	ARCESS Array B	129.93	349	PKP	PKPdf	21 14 35.0	+1.4
	3.7nm,1.0s,baz=27,slow=2.7,SNR=7.2						
JOF	Joensuu	133.95	341	ep	PKPdf	21 14 38.7	-2.6
JOF	Joensuu	133.95	341	ep	PKPdf	21 14 43.0	+1.7
KAF	Kangasniemi	136.02	343	ep	PKPdf	21 14 41.5	-3.5
KAF	Kangasniemi	136.02	343	ep	PKPdf	21 14 44.6	-0.4
FINES	FINESS Array B	136.63	343	PKP	PKPdf	21 14 49.2	+3.0
	1.3nm,0.7s,SNR=6.3						
FINES	FINESS Array B	136.63	343	PKP	PKPdf	21 14 49.2	+3.0
NOA	NORSAR Array B	140.07	352	PKhKP		21 14 45.0	
	1.2nm,0.8s,baz=276,slow=4.4,SNR=3.5						
AKASG	Malin Array Be	143.52	329	PKP	PKPdf	21 14 58.5	-0.2
	2.3nm,0.3s,baz=42,slow=4.3,SNR=40						
BRTR	Keskin Array B	146.79	310	PKPbc	PKPbc	21 15 09.3	+2.6
	1.4nm,0.6s,baz=137,slow=4.4,SNR=7.4						
GERES	GERESS Array B	151.06	342	PKPbc	PKPdf	21 15 19.4	+8.5
	0.9nm,0.6s,baz=20,slow=2.0,SNR=6.8						

PGC 23 21:40:04.4, 58.35N×133.50W, h1^{km}, ML3.0/5, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLBC	Dease Lake	1.83	86	Pn	Pn	21 40 35.5	-1.7
DLBC				Pg	Pg	21 40 37.0	-3.9
DLBC				Sn	Sn	21 41 00.7	-0.8
DLBC				Sg	Sg	21 41 02.1	-3.3
DLBC				Trac		21 41 06.8	
	comp=Z,92nm,0.5s						
DLBC				Trac		21 41 07.0	
	comp=N,49nm,0.4s						
PLBC	Pleasant Camp	1.86	308	Pn	Pn	21 40 37.6	-0.1
PLBC				Sg	Sg	21 41 01.7	-4.6
WHY	Whitehorse	2.43	344	Pn	Pn	21 40 44.0	-1.8
WHY				Pg	Pg	21 40 46.4	-6.5
WHY				Sg	Sg	21 41 19.0	-6.2
WHY				Trac		21 41 27.3	
	comp=Z,39nm,0.5s						
HYT	Haines Junctio	3.21	322	Pn	Pn	21 40 56.6	-0.4
HYT				Pg	Pg	21 41 02.3	-6.2
HYT				Sg	Sg	21 41 44.5	-6.9
HYT				Trac		21 41 48.1	
	comp=Z,14nm,0.3s						
RUBB	Prince Rupert	4.42	154	Sg	Sg	21 42 20.0	-11
FNBB	Fort Nelson	5.51	80	Sg	Sg	21 42 57.6	-10
DAWY	Dawson	6.41	336	Sg	Sg	21 43 24.1	-14
BMBC	Bull Mountain	6.59	106	Sg	Sg	21 43 26.9	-17
INK	Inuvik	10.00	360	Pn	P	21 42 29.0	-3.1

NNC ***23*** *21:44:49.5±3.6, 43.54N×77.66E, mpv2.6, Error ellipse: s-maj=70.7km s-min=26.1km az=176.0*

KNET 23 21:44:48.8±0.4**, 42.87N×77.61E, h0^{km}±1^{km}, ml2.0, 13C-4D, Error ellipse: s-maj=3.2km s-min=1.5km az=19.0, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	Ulahol	1.19	239	⇑P	Pb	21 45 11.7	-0.2
	14nm,0.1s,SNR=97						
ULHL				⇑S	Sb	21 45 29.0	+1.3
	30nm,0.2s						
TKM2	Tokmak 2	1.48	273	⇓P	Pn	21 45 17.2	+0.4
	4.9nm,0.1s,SNR=18						
TKM2				⇑S	Sb	21 45 39.5	+3.3
	20nm,0.1s						
KZA	Kyzart	1.92	246	⇑P	Pn	21 45 25.1	+2.1
	3.3nm,0.1s,SNR=8.0						
KZA				⇑S	Sn	21 45 53.1	+4.9
	7.5nm,0.2s						
KBK	Karagaybulak	1.97	265	⇑P	Pn	21 45 25.9	+2.1
	6.5nm,0.1s,SNR=11						
KBK				⇓S	Sn	21 45 54.6	+5.0
	16nm,0.3s						
AAK	Ala-Archa	2.31	265	⇑P	Pn	21 45 31.4	+2.8
	6.4nm,0.2s,SNR=15						
AAK				⇑S	Sn	21 46 04.3	+6.1
	3.6nm,0.2s						
AAK	Ala-Archa	2.31	265	⇑P	Pn	21 45 31.4	+2.8
	1.7nm,0.2s						
AAK				⇑S	Sn	21 46 04.1	+6.0
	3.5nm,0.5s						
USP	Ospenovka	2.32	281	⇑P	Pn	21 45 30.2	+1.4
	5.6nm,0.2s,SNR=11						
USP				⇓S	Sn	21 46 03.7	+5.4
	13nm,0.4s						
UCH	Uchtor	2.38	255	⇓P	Pn	21 45 32.6	+3.0
	2.1nm,0.2s,SNR=5.5						
KK31	Karatay Array	5.21	275	⇑Pg	Pg	21 46 26.9	-6.1
	0.2nm,0.4s,baz=95,slow=18,SNR=4.9						
KK31				⇑Lg		21 47 32.9	
	0.4nm,0.4s,baz=91,slow=30,SNR=6.4						

ATH ***23*** *22:16:59.7, 35.96N×22.46E, h6^{km}±4^{km}, MD3.5/12, ML3.6*

NEIC ***23*** *22:16:59.7, 35.96N×22.46E, h6^{km}, ML3.6(ATH), After ATH.*

CSEM ***23*** *22:16:59.5±0.3, 35.89N×22.34E, h2^{km}, ML3.6, Error ellipse: s-maj=9.2km s-min=2.9km az=58.0*

IDC ***23*** *22:17:00.4±6.1, 35.66N×22.05E, h50^{km}±30^{km}, mb3.7/5, mb1 3.7/9, mb1mx3.5/26, mbtmp3.7/9, ML3.4/4, Error ellipse: s-maj=98.4km s-min=27.5km az=35.0*

THE ***23*** *22:17:03.0, 35.92N×22.43E, h25^{km}*

ISC 23 22:17:01.5±1.4**, 35.98N**±0.06×**22.44E**±0.09**, h20^{km}**±11^{km}**, n40, σ1^{s}21**/46**, mb3.9**/5**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KYTH	Kithira	0.57	58	ePB	Pb	22 17 11.0	-1.7
VLI	Veliai	0.84	28	ePB	Pb	22 17 16.1	-1.2
ITM	Ithomi	1.27	341	ePN	Pn	22 17 23.4	-0.9
ITM				eSG	Sn	22 17 41.7	+0.9
VAM	Vamos	1.54	111	ePG	Pn	22 17 28.0	-0.2
GVD	Gavdhos	1.76	130	eP	Pn	22 17 31.8	+0.4
NAIG	Nisos Aigina	1.96	25	ePN	Pn	22 17 35.5	+1.2
IDI	Anoyia	2.11	108	P	Pn	22 17 36.9	+0.5
	8.7nm,0.3s,baz=292,slow=16,SNR=25						
IDI				S	Sn	22 18 09.1	+6.8
	21nm,0.3s,baz=31,slow=18,SNR=5.0						
RLS	Riolos of Patr	2.21	340	ePN	Pn	22 17 40.2	+2.3
ATH	Athens Observa	2.23	27	ePN	Pn	22 17 40.0	+1.8
NPS	Neapolis	2.68	105	ePN	Pn	22 17 46.0	+1.5
LKR	Lokris	2.70	9	ePN	Pn	22 17 46.2	+1.4
APE	Apeiranthos	2.71	66	ePB	Pb	22 17 44.5	-4.8
EVR	Evrytania	2.97	350	ePN	Pn	22 17 51.5	+2.8
AGG	Agios Georgios	3.04	358	ePn	Pn	22 17 50.3	+0.7
AGG				eSn	Sn	22 18 26.1	+0.3
LKD	Levkas	3.07	333	ePn	Pn	22 17 50.7	+0.6
NEO	Neokhori	3.38	10	ePN	Pn	22 17 56.1	+1.7
AOS	Alonnisos	3.38	19	ePn	Pn	22 17 55.1	+0.6
XOR	Xorichti	3.43	10	ePn	Pn	22 17 55.7	+0.5
KARP	Karpathos	3.86	95	ePN	Pn	22 18 02.0	+0.7
JAN	Janina	3.88	342	ePN	Pn	22 18 01.5	0.0
IGT	Igoumenitsa	3.92	335	ePn	Pn	22 18 01.1	-1.0
IGT				eSn	Sn	22 18 47.4	-0.7
PAIG	Paliouri	4.06	14	ePn	Pn	22 18 03.8	-0.3
LIT	Litokhoron	4.11	1	ePn	Pn	22 18 06.0	+1.1
OUR	Ouranopolis	4.51	15	ePn	Pn	22 18 10.2	-0.4
THE	Thessaloniki	4.66	5	ePn	Pn	22 18 12.3	-0.3
FNA	Florina	4.87	350	ePn	Pn	22 18 14.6	-1.0
SOH	Sokhos	4.89	8	ePn	Pn	22 18 15.7	-0.2
GRG	Griva	4.97	360	ePn	Pn	22 18 16.6	-0.4
GRG				eSn	Sn	22 19 14.6	0.0
KNT	Kendrikon	5.18	4	ePn	Pn	22 18 19.4	-0.7
KNT				eSn	Sn	22 19 19.5	-0.5
ALN	Alexandroupoli	5.67	29	ePn	Pn	22 18 25.1	-1.7
ALN	Alexandroupoli	5.67	29	ePn	Pn	22 18 25.1	-1.7
BRTR	Keskin Array B	9.61	64	P	P	22 19 21.4	-0.5
	0.1nm,0.3s,baz=255,slow=16,SNR=3.0						
GERES	GERESS Array B	14.37	336	P	P	22 20 22.4	-3.4
	0.1nm,0.3s,baz=162,slow=12,SNR=2.6						
AKASG	Malin Array Be	15.51	16	P	P	22 20 41.3	+0.7
	1.0nm,0.3s,baz=215,slow=12,SNR=5.4						
HFS	Hagfors	24.82	350	P	P	22 22 20.0	-3.5
	1.2nm,0.5s,mb3.7,baz=150,slow=12,SNR=8.5						
FINES	FINESS Array B	25.59	4	P	P	22 22 27.9	-2.7
	2.9nm,0.9s,mb3.8,baz=140,slow=15,SNR=9.7						
ARCES	ARCESS Array B	33.65	2	P	P	22 23 39.0	-3.7
	8.6nm,1.1s,mb4.6,baz=188,slow=8.6,SNR=6.4						
BVAR	Borovoye Array	37.41	48	P	P	22 24 12.4	-2.3
	0.2nm,0.4s,mb3.3,baz=243,slow=9.7,SNR=3.1						
MKAR	Makanchi Array	45.18	57	P	P	22 25 15.3	-3.3
	1.1nm,0.5s,mb3.9,baz=270,slow=7.9,SNR=28						
MKAR	Makanchi Array	45.18	57	P	P	22 25 15.3	-3.3

MDD ***23*** *22:18:00.9±0.3, 43.65N×2.74W, mbLg3.1/40, Error ellipse: s-maj=3.0km s-min=2.1km az=162.0, PRXIMO II BILBAO LUMO BAKIO PLENTZIA II ARMINTZA I GORLIZ*

MDD EMS: III BERMEO.

NEIC ***23*** *22:18:00.8±0.1, 43.65N×2.73W, h10^{km}, ML3.5(LDG), ML3.5(STR), MN3.2(MDD), Error ellipse: s-maj=2.5km s-min=1.6km az=141.0*

NEIC Felt [III] at Bermeo and [II] at Bilbao and Gernika-Lumo.

CSEM ***23*** *22:18:02.2±0.0, 43.59N×2.72W, h8^{km}, ML3.6/33, Error ellipse: s-maj=1.0km s-min=0.7km az=129.0*

LDG ***23*** *22:18:03.0±0.1, 43.61N×2.69W, h10^{km}, Md3.4/2, Ml3.5/34, Error ellipse: s-maj=1.9km s-min=1.4km az=150.0*

INMG ***23*** *22:18:03.8±1.1, 43.56N×2.78W, h19^{km}±3^{km}, ML2.9, Error ellipse: s-maj=2.9km s-min=2.1km az=10.0*

STR ***23*** *22:18:07.0±0.9, 43.72N×2.28W, h5^{km}±1^{km}, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 23 22:17:58.1±0.2**, 43.70N**±0.01×**2.73W**±0.02**, h10^{km}, n169, σ1^{s}42**/328**, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELAN	Lanestosa	0.69	228	Pg	Pg	22 18 13.3	+1.3
	87nm,0.2s,SNR=7.9						
ELAN				Lg		22 18 22.3	
	590nm,0.2s,SNR=7.9						
ELAN	Lanestosa	0.69	228	Pg	Pg	22 18 13.3	+1.3
EALK	Alkurruntz	1.01	118	Pg	Pg	22 18 18.5	+0.2
	158nm,0.2s,SNR=134						
EALK				Lg		22 18 32.2	
	666nm,0.2s,SNR=15						
IUSE	Utxeti	1.14	131	Pg	Pg	22 18 22.0	+1.0
	48nm,0.2s,SNR=7.9						
IUSE				Lg		22 18 36.6	
	93nm,0.2s,SNR=7.9						
OSSF	Osses	1.15	112	Pg	Pg	22 18 23.6	+2.4
OSSF				Sg	Sg	22 18 37.1	+0.5
SJPF	Ste Jean	1.24	117	ePn	Pn	22 18 23.2	+1.7
SJPF				eSg	Sg	22 18 39.7	+0.2
	290nm,0.4s						
EARA	Aranguren	1.25	137	Pg	Pg	22 18 23.3	+0.3
	73nm,0.3s,SNR=17						
EARA				Lg		22 18 39.5	
	2µm,0.4s,SNR=18						
IUNC	Unciti	1.30	136	Pg	Pg	22 18 24.6	+0.5
	156nm,0.5s,SNR=7.9						
IUNC				Lg		22 18 41.7	
	364nm,0.6s,SNR=7.9						
IPRE	Itoiz	1.34	131	Pg	Pg	22 18 25.3	+0.4
	24nm,0.2s,SNR=24						
IPRE				Lg		22 18 42.8	
	67nm,0.4s,SNR=8.4						
ORDF	Ordiarp	1.39	110	Pg	Pg	22 18 26.1	+0.2
ORDF				Sg	Sg	22 18 44.0	-0.5
LARF	Larrau	1.43	117	Pg	Pg	22 18 26.0	-0.7
LARF				Sg	Sg	22 18 45.5	-0.2
ETSF	Etsaut	1.77	116	ePg	Pg	22 18 34.4	+0.9
ETSF				eSn	Sn	22 18 52.9	+1.1
ETSF				eSg	Sg	22 18 57.0	-0.1
	109nm,0.3s						
ETSF	Etsaut	1.77	116	Pn	Pn	22 18 31.6	+2.5
ETSF				Pg	Pg	22 18 34.4	+0.9
ETSF				Sn	Sn	22 18 52.9	+1.1
ETSF				Lg		22 18 57.0	
	55nm,0.3s						
ETSF	Etsaut	1.77	116	ePn	Pn	22 18 31.6	+2.5
ETSF				ePg	Pg	22 18 34.4	+0.9
ETSF				eSn	Sn	22 18 52.9	+1.1
ETSF				eSg	Sg	22 18 57.0	-0.1
ETSF	Etsaut	1.77	116	ePg	Pg	22 18 34.4	+0.9
ETSF				eSn	Sn	22 18 52.9	+1.1
ETSF				eSg	Sg	22 18 57.0	-0.1
	55nm,0.3s						
FDAF	Les Forges d'A	1.80	118	Pn	Pn	22 18 32.8	+3.2
FDAF				Sg	Sg	22 18 56.2	-2.0
REYF	Montagne du Re	1.81	109	Pn	Pn	22 18 33.5	+3.8
REYF				Sg	Sg	22 18 59.0	+0.5
REYF	Montagne du Re	1.81	109	Pn	Pn	22 18 33.5	+3.8
REYF				Sg	Sg	22 18 58.9	+0.4
EARI	Arriondas	1.85	259	Pn	Pn	22 18 32.6	+2.4
	20nm,0.2s,SNR=70						
EARI				Sn	Sn	22 18 55.4	+1.6
	64nm,0.3s,SNR=5.0						
EARI				Lg		22 18 59.7	
	SNR=7.9						
EARI	Arriondas	1.85	259	Pn	Pn	22 18 32.7	+2.5
EARI				Sn	Sn	22 18 55.4	+1.6
LABF	Labassere	2.14	107	Pn	Pn	22 18 39.2	+4.8
VIEF	Viey	2.17	111	Pn	Pn	22 18 38.5	+3.8
VIEF				Sg	Sg	22 19 06.6	-3.6
EBIE	Bielsa	2.33	115	Pn	Pn	22 18 40.6	+3.5
	24nm,0.3s,SNR=33						
EBIE				Sn	Sn	22 19 09.2	+3.2
	65nm,0.3s,SNR=10						
EBIE				Lg		22 19 15.4	
	SNR=7.9						
EBIE	Bielsa	2.33	115	Pn	Pn	22 18 40.6	+3.5
EBIE				Sn	Sn	22 19 09.2	+3.2
EPF	Esparros	2.33	105	eP	Pn	22 18 41.8	+4.7
EPF	Esparros	2.33	105	ePg	Pg	22 18 44.9	+0.2
EPF				eSn	Sn	22 19 07.1	+1.0
EPF				eSg	Sg	22 19 15.1	-0.7
	59nm,0.3s						
EPF	Esparros	2.33	105	Pn	Pn	22 18 39.3	+2.2
EPF				Pg	Pg	22 18 44.9	+0.2
EPF				Sn	Sn	22 19 07.1	+1.0
EPF				Lg		22 19 15.1	
	30nm,0.3s						
EPF	Esparros	2.33	105	ePn	Pn	22 18 39.3	+2.2
EPF				eP		22 18 41.8	
EPF				ePg	Pg	22 18 44.9	+0.2
EPF				eSn	Sn	22 19 07.1	+1.0
EPF				eSg	Sg	22 19 15.1	-0.7
EPF	Esparros	2.33	105	eP	Pn	22 18 41.8	+4.7
EPF	Esparros	2.33	105	ePg	Pg	22 18 44.9	+0.2
EPF				eSn	Sn	22 19 07.1	+1.0
EPF				eSg	Sg	22 19 15.1	-0.7
	30nm,0.3s						
RESF	Ens	2.41	111	Pn	Pn	22 18 42.2	+4.0
RESF				Sg	Sg	22 19 15.2	-3.1
ESAC	San Caprasio	2.58	139	Pn	Pn	22 18 43.0	+2.3
	4.4nm,0.1s,SNR=7.9						
ESAC				Pg	Pg	22 18 47.5	-2.2
	55nm,0.2s,SNR=8.9						
ESAC				Sn	Sn	22 19 13.0	+0.7
	170nm,0.4s,SNR=7.9						
ESAC				Lg		22 19 21.1	
	244nm,0.3s,SNR=4.0						
ESAC	San Caprasio	2.58	139	Pn	Pn	22 18 43.0	+2.3
ESAC	San Caprasio	2.58	139	Pg	Pg	22 18 47.5	-2.1
MELF	Melles	2.67	107	Pn	Pn	22 18 46.4	+4.4
EGRA	Graus	2.69	123	Pn	Pn	22 18 44.6	+2.4
	4.0nm,0.2s,SNR=22						
EGRA				Pg	Pg	22 18 50.7	-1.2
	13nm,0.2s,SNR=7.9						
EGRA				Lg		22 19 24.8	
	87nm,0.8s,SNR=5.9						
LFF	La Frestale	2.78	62	ePg	Pg	22 18 53.7	0.0
LFF				eSg	Sg	22 19 29.9	-0.9
	137nm,0.4s						
LFF	La Frestale	2.78	62	Pn	Pn	22 18 46.0	+2.4
LFF				Pg	Pg	22 18 53.7	0.0
LFF				Lg		22 19 29.9	
	68nm,0.4s						
LFF	La Frestale	2.78	62	ePn	Pn	22 18 46.0	+2.4
LFF				ePg	Pg	22 18 53.7	0.0
LFF				eSg	Sg	22 19 29.9	-0.9
LFF	La Frestale	2.78	62	ePg	Pg	22 18 53.7	0.0
LFF				eSg	Sg	22 19 29.9	-0.9
	68nm,0.4s						
SALF	Salau	3.01	107	Pn	Pn	22 18 50.9	+4.1
GUD	Guadarrama	3.23	200	Pn	Pn	22 18 50.6	+0.7
	2.4nm,0.2s,SNR=9.8						
GUD				Pg	Pg	22 18 59.5	-3.1
	11nm,0.4s,SNR=7.9						
GUD				Lg		22 19 37.9	
	52nm,0.4s,SNR=9.1						
GUD	Guadarrama	3.23	200	Pn	Pn	22 18 50.6	+0.7
GUD				Pg	Pg	22 18 59.5	-3.1
GUD				Lg		22 19 36.2	
EPON	Pontenova	3.24	265	Pn	Pn	22 18 52.1	+2.1
	4.5nm,0.1s,SNR=29						
EPON				Sn	Sn	22 19 29.2	+0.2
	29nm,0.3s,SNR=7.9						
EPON	Pontenova	3.24	265	Pn	Pn	22 18 52.1	+2.1
EPON				Sn	Sn	22 19 29.2	+0.1
ECAL	Calabor	3.43	241	Pn	Pn	22 18 54.2	+1.4
	9.1nm,0.3s,SNR=22						
ECAL				Pg	Pg	22 19 03.2	-3.4
	13nm,0.3s,SNR=7.9						
ECAL				Sn	Sn	22 19 33.5	-0.5
	16nm,0.2s,SNR=4.0						
ECAL				Lg		22 19 47.9	
	32nm,0.3s,SNR=7.9						
ECAL	Calabor	3.43	241	Pn	Pn	22 18 54.2	+1.4
ECAL				Pg	Pg	22 19 03.2	-3.4
ECAL				Sn	Sn	22 19 33.5	-0.5
ECAL				Lg		22 19 47.9	
ECAL	Calabor	3.43	241	Pg	Pg	22 19 03.2	-3.4
MFF	Saint Martin d	3.43	31	ePn	Pn	22 18 55.3	+2.5
MFF				eSn	Sn	22 19 34.4	+0.4
MFF				eSg	Sg	22 19 51.4	-1.0
	23nm,0.3s						
RJF	Les Rejaudoux	3.44	61	ePn	Pn	22 18 54.5	+1.7
RJF				eSn	Sn	22 19 34.1	0.0
RJF				eSg	Sg	22 19 50.7	-1.8
	64nm,0.3s						
ERUA	La Rua	3.49	250	Pn	Pn	22 18 55.5	+1.9
	4.1nm,0.2s,SNR=7.0						
ERUA				Sn	Sn	22 19 35.3	-0.1
	7.6nm,0.3s,SNR=5.0						
PBRG	Braganca	3.51	239	ePn	Pn	22 18 55.0	+1.1
PBRG				eSg	Sg	22 19 48.6	-6.3
	23nm,0.6s						
PBRG	Braganca	3.51	239	Pn	Pn	22 18 54.8	+0.9
PBRG				Sn	Sn	22 19 34.0	-1.9
PBRG				eSg	Sg	22 19 48.6	-6.3
	23nm,0.6s						
ERTA	Horta de San J	3.55	139	Pn	Pn	22 18 55.1	+0.6
	4.8nm,0.2s,SNR=20						
ERTA				Sn	Sn	22 19 35.4	-1.7
	18nm,0.3s,SNR=7.9						
ERTA				Lg		22 19 52.8	
	38nm,0.5s,SNR=7.9						
ERTA	Horta de San J	3.55	139	Pn	Pn	22 18 55.1	+0.6
ERTA				Sn	Sn	22 19 35.4	-1.7
EMIR	Miracle	3.60	118	Pn	Pn	22 18 57.0	+1.8
	11nm,0.2s,SNR=18						
EMIR				Pg	Pg	22 19 06.4	-3.6
	34nm,0.4s,SNR=7.9						
EMIR				Sn	Sn	22 19 38.6	+0.4
	18nm,0.3s,SNR=7.0						
EMIR				Lg		22 19 54.2	
	119nm,0.6s,SNR=5.0						
EMIR	Miracle	3.60	118	Pn	Pn	22 18 57.0	+1.8
EMIR	Miracle	3.60	118	Pg	Pg	22 19 06.4	-3.6
MTLF	Montolieu	3.61	94	ePn	Pn	22 18 57.1	+1.7
MTLF				eSn	Sn	22 19 36.8	-1.8
MTLF				eSg	Sg	22 19 54.7	-3.7
	28nm,0.4s						
CAF	Calviac	3.65	69	ePn	Pn	22 18 57.4	+1.5
CAF				eSn	Sn	22 19 39.1	-0.5
CAF				eSg	Sg	22 19 57.7	-2.0
	51nm,0.3s						
EPOB	Poblet	3.66	128	Pn	Pn	22 18 56.5	+0.5
	2.9nm,0.2s,SNR=110						
EPOB				Pg	Pg	22 19 07.5	-3.6
	3.8nm,0.2s,SNR=5.5						
EPOB				Sn	Sn	22 19 38.8	-0.9
	4.9nm,0.2s,SNR=5.0						
EPOB				Lg		22 19 58.3	
	48nm,0.5s,SNR=5.7						
EPOB	Poblet	3.66	128	Pn	Pn	22 18 56.5	+0.5
EPOB				Pg	Pg	22 19 07.5	-3.6
EPOB				Sn	Sn	22 19 38.8	-0.9
EPOB				Lg		22 19 54.0	
EPOB	Poblet	3.66	128	Pn	Pn	22 18 56.5	+0.5
EPOB	Poblet	3.66	128	Pg	Pg	22 19 07.6	-3.6
EMOS	Mosqueruela	3.73	152	Pn	Pn	22 18 58.2	+1.2
	0.8nm,0.1s,SNR=12						
EMOS				Pg	Pg	22 19 08.1	-4.4
	37nm,0.6s,SNR=7.9						
EMOS				Sn	Sn	22 19 40.3	-1.1
	3.8nm,0.2s,SNR=7.9						
EMOS				Lg		22 19 54.1	
	32nm,0.5s,SNR=5.0						
EMOS	Mosqueruela	3.73	152	Pn	Pn	22 18 58.2	+1.2
EMOS	Mosqueruela	3.73	152	Pg	Pg	22 19 08.1	-4.4
EBR	Ebro Roquetas	3.74	139	eRs		22 19 17.5	
EBR				eS*S*		22 20 00.0	
ESDC	Sonseca Array	4.12	193	Pn	Pn	22 19 01.2	-1.4
	2.9nm,0.2s,baz=16,slow=12,SNR=7.9						
ESDC				Pg	Pg	22 19 15.2	-5.2
	5.4nm,0.2s,baz=15,slow=18,SNR=7.9						
ESDC				Sn	Sn	22 19 45.6	-5.9
	7.3nm,0.2s,baz=13,slow=23,SNR=7.9						
ESDC				Lg		22 20 04.8	
	40nm,0.7s,baz=14,slow=29,SNR=7.9						
ESDC	Sonseca Array	4.12	193	Pn	Pn	22 19 01.2	-1.4
ESDC	Sonseca Array	4.12	193	Pg	Pg	22 19 15.2	-5.2
ESLA	Sonseca Array	4.12	193	eP	Pn	22 19 02.4	-0.2
QUIF	Quistinic	4.23	356	ePn	Pn	22 19 06.8	+2.6
QUIF				eSn	Sn	22 19 53.8	-0.5
	16nm,0.2s						
EJON	La Jonquera	4.30	105	Pn	Pn	22 19 06.7	+1.6
	3.1nm,0.3s,SNR=7.9						
EJON	La Jonquera	4.30	105	Pn	Pn	22 19 06.7	+1.6
ECHE	Chera	4.31	162	Pn	Pn	22 19 06.8	+1.6
	2.7nm,0.3s,SNR=7.9						
ECHE				Pg	Pg	22 19 19.2	-4.9
	5.4nm,0.4s,SNR=7.9						
ECHE				Sn	Sn	22 19 53.5	-2.6
	5.3nm,0.5s,SNR=7.9						
STS	Santiago	4.33	261	Pn	Pn	22 19 06.6	+1.0
	1.1nm,0.2s,SNR=7.9						
STS				Sn	Sn	22 19 54.1	-2.6
	5.1nm,0.1s,SNR=7.9						
ELOB	Lobios	4.33	247	Pn	Pn	22 19 06.2	+0.7
	4.3nm,0.2s,SNR=13						
ELOB				Sn	Sn	22 19 53.0	-3.7
	1.1nm,0.2s,SNR=5.0						
ELOB				Lg		22 20 18.0	
	36nm,0.6s,SNR=7.9						
ELOB	Lobios	4.33	247	Pn	Pn	22 19 06.2	+0.6
TCF	Toulx Ste Croi	4.36	52	ePn	Pn	22 19 07.2	+1.3
TCF				eSn	Sn	22 19 56.6	-0.8
TCF				eSg	Sg	22 20 19.8	-3.4
	20nm,0.3s						
PCAB	Cabril	4.38	245	Pn	Pn	22 19 08.2	+1.9
PCAB				Sn	Sn	22 19 54.4	-3.6
PVRL	Vila Real	4.41	238	ePn	Pn	22 19 07.8	+1.1
PVRL				eSn	Sn	22 19 55.5	-3.3
	20nm,0.4s						
PVRL	Vila Real	4.41	238	Pn	Pn	22 19 07.4	+0.7
PVRL				Sn	Sn	22 19 55.4	-3.4
LBL	Lubilhac	4.54	68	Pn	Pn	22 19 10.1	+1.5
LBL				Sn	Sn	22 20 02.7	+0.6
SGMF	Saint Gilles	4.56	1	ePn	Pn	22 19 11.4	+2.6
SGMF				eSn	Sn	22 20 01.8	-0.8
	13nm,0.3s						
EMAZ	Mazaricos	4.62	263	Pn	Pn	22 19 09.8	+0.2
	7.1nm,0.1s,SNR=11						
EMAZ				Sn	Sn	22 20 01.8	-2.3
	21nm,0.4s,SNR=5.0						
EMAZ	Mazaricos	4.62	263	Pn	Pn	22 19 09.8	+0.1
EMAZ				Sn	Sn	22 20 01.8	-2.3

EZAM	**Zamans**	**4.65**	**253**	Pn	**Pn**	**22 19 11.0**	**+1.0**
	1.9nm,0.3s,SNR=7.9						
EZAM				Sn	**Sn**	**22 20 01.8**	**-3.0**
	2.6nm,0.4s,SNR=7.9						
EZAM				Lg		22 20 28.2	
	25nm,0.9s,SNR=7.9						
ROSF	**Rostrenen**	**4.66**	**356**	*e*Pn	**Pn**	**22 19 12.9**	**+2.7**
ROSF				*e*Sn	**Sn**	**22 20 03.1**	**-1.9**
	14nm,0.3s						
LASF	**Ste Croix**	**4.77**	**83**	*e*Pn	**Pn**	**22 19 12.3**	**+0.4**
LASF				*e*Sn	**Sn**	**22 20 04.8**	**-3.1**
LASF				*e*Sg	**Sg**	**22 20 31.5**	**-5.6**
	35nm,0.6s						
PVIS	**Viseu**	**4.86**	**234**	*e*Pn	**Pn**	**22 19 13.8**	**+0.8**
PVIS				*e*Sn	**Sn**	**22 20 06.4**	**-3.6**
	13nm,0.4s						
PVIS	**Viseu**	**4.86**	**234**	Pn	**Pn**	**22 19 13.9**	**+0.9**
PVIS				Sn	**Sn**	**22 20 06.4**	**-3.6**
PVIS	**Viseu**	**4.86**	**234**	*e*Pn	**Pn**	**22 19 13.8**	**+0.8**
PVIS				*e*Sn	**Sn**	**22 20 06.4**	**-3.6**
	13nm,0.4s						
MTE	**Manteigas**	**4.87**	**229**	*e*Pn	**Pn**	**22 19 13.4**	**+0.2**
MTE				*e*Sn	**Sn**	**22 20 06.8**	**-3.5**
MTE				*e*Sg	**Sg**	**22 20 30.0**	**-10**
	26nm,0.2s						
MTE	**Manteigas**	**4.87**	**229**	*e*Pn	**Pn**	**22 19 13.4**	**+0.2**
MTE				*e*Sn	**Sn**	**22 20 06.8**	**-3.5**
MTE				*e*Sg	**Sg**	**22 20 30.0**	**-10**
	26nm,0.2s						
GRR	**Gorron**	**4.87**	**15**	*e*Pn	**Pn**	**22 19 15.1**	**+1.9**
GRR				*e*Sn	**Sn**	**22 20 09.0**	**-1.4**
	11nm,0.2s						
BGF	**Bois d’Agland**	**4.87**	**52**	*e*Pn	**Pn**	**22 19 13.9**	**+0.7**
BGF				*e*Sn	**Sn**	**22 20 08.6**	**-1.8**
BGF				*e*Sg	**Sg**	**22 20 36.6**	**-3.7**
	102nm,0.5s						
EVIA	**Vianos**	**5.05**	**178**	Pn	**Pn**	**22 19 16.1**	**+0.3**
	1.0nm,0.2s,SNR=7.9						
EVIA				Pg	**Pg**	**22 19 32.5**	**-6.5**
	4.2nm,0.2s,SNR=7.9						
EVIA				Sn	**Sn**	**22 20 10.5**	**-4.5**
	6.5nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.12**	**170**	Pn	**Pn**	**22 19 16.8**	**0.0**
	4.8nm,0.2s,SNR=23						
ETOB				Sn	**Sn**	**22 20 12.4**	**-4.4**
	7.5nm,0.4s,SNR=5.0						
ETOB				Lg		22 20 43.6	
	9.1nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**5.12**	**170**	Pn	**Pn**	**22 19 16.8**	**0.0**
ETOB				Sn	**Sn**	**22 20 12.4**	**-4.4**
ETOB				Lg		22 20 38.7	
ETOB	**Tobarra**	**5.12**	**170**	Pn	**Pn**	**22 19 16.8**	**0.0**
ETOB				Sn	**Sn**	**22 20 12.4**	**-4.3**
HYF	**Humbligny**	**5.20**	**45**	*e*Pn	**Pn**	**22 19 18.1**	**+0.3**
HYF				*e*Sn	**Sn**	**22 20 17.0**	**-1.6**
LDF	**La Druitiere**	**5.22**	**19**	*e*Pn	**Pn**	**22 19 20.0**	**+1.8**
LDF				*e*Sn	**Sn**	**22 20 17.3**	**-1.9**
	5.4nm,0.2s						
PCBR	**Castelo Branco**	**5.24**	**224**	*e*Pn	**Pn**	**22 19 18.4**	**0.0**
PCBR				*e*Sn	**Sn**	**22 20 15.4**	**-4.2**
	11nm,0.6s						
PCBR	**Castelo Branco**	**5.24**	**224**	Pn	**Pn**	**22 19 18.1**	**-0.3**
PCBR				Sn	**Sn**	**22 20 15.5**	**-4.1**
AVF	**Avril sur Loir**	**5.29**	**52**	*e*Pn	**Pn**	**22 19 19.6**	**+0.4**
AVF				*e*Sn	**Sn**	**22 20 19.1**	**-1.9**
AVF				*e*Sg	**Sg**	**22 20 48.2**	**-6.1**
	18nm,0.5s						
FLN	**La Foliniere**	**5.30**	**16**	*e*Pn	**Pn**	**22 19 21.1**	**+1.8**
	baz=194						
FLN				*e*Sn	**Sn**	**22 20 19.0**	**-2.2**
	7.4nm,0.2s						
EBEN	**Beniarda**	**5.33**	**158**	Pn	**Pn**	**22 19 20.2**	**+0.5**
	6.6nm,0.3s,SNR=27						
EBEN				Sn	**Sn**	**22 20 17.5**	**-4.5**
	7.5nm,0.5s,SNR=5.0						
EBEN	**Beniarda**	**5.33**	**158**	Pn	**Pn**	**22 19 20.2**	**+0.5**
EBEN				Sn	**Sn**	**22 20 17.5**	**-4.4**
VIVF	**Saint-Julien-l**	**5.44**	**75**	*e*Pn	**Pn**	**22 19 22.2**	**+1.0**
VIVF				*e*Sn	**Sn**	**22 20 21.5**	**-3.1**
	15nm,0.4s						
SMF	**Signal de Mont**	**5.50**	**55**	*e*Pn	**Pn**	**22 19 22.5**	**+0.4**
SMF				*e*Sn	**Sn**	**22 20 24.0**	**-2.2**
SMF				*e*Sg	**Sg**	**22 20 55.5**	**-5.8**
	18nm,0.5s						
EIBI	**Ibiza**	**5.58**	**145**	Pn	**Pn**	**22 19 24.0**	**+0.8**
	1.5nm,0.2s,SNR=7.9						
EIBI				Sn	**Sn**	**22 20 23.0**	**-5.1**
	8.2nm,0.6s,SNR=7.9						
EIBI	**Ibiza**	**5.58**	**145**	Pn	**Pn**	**22 19 24.0**	**+0.8**
EIBI				Sn	**Sn**	**22 20 23.0**	**-5.1**
EBAN	**Banos Encina**	**5.58**	**189**	Pn	**Pn**	**22 19 23.1**	**-0.2**
	1.2nm,0.3s,SNR=7.9						
EBAN				Pg	**Pg**	**22 19 42.6**	**-6.9**
	2.1nm,0.2s,SNR=7.9						
EBAN				Sn	**Sn**	**22 20 21.6**	**-6.7**
	5.7nm,0.5s,SNR=7.9						
EBAN				Lg		22 20 55.6	
	SNR=7.9						
EADA	**Adamuz**	**5.70**	**195**	Pn	**Pn**	**22 19 23.8**	**-1.1**
	1.2nm,0.2s,SNR=8.0						
EADA				Sn	**Sn**	**22 20 25.1**	**-6.0**
	2.6nm,0.3s,SNR=7.9						
EADA				Lg		22 20 54.7	
	8.5nm,0.3s,SNR=5.0						
EADA	**Adamuz**	**5.70**	**195**	Pn	**Pn**	**22 19 23.8**	**-1.1**
EADA				Sn	**Sn**	**22 20 22.7**	**-8.4**
EADA				Lg		22 20 54.7	
EADA	**Adamuz**	**5.70**	**195**	Pn	**Pn**	**22 19 23.8**	**-1.1**
ETOS	**Mallorca**	**5.71**	**132**	Pn	**Pn**	**22 19 25.8**	**+0.8**
	2.9nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	**5.71**	**132**	Pn	**Pn**	**22 19 25.8**	**+0.8**
LOR	**Lormes**	**5.85**	**50**	*e*Pn	**Pn**	**22 19 27.3**	**+0.3**
	baz=231						
LOR				*e*Sn	**Sn**	**22 20 32.2**	**-2.7**
LOR				*e*Sg	**Sg**	**22 21 07.2**	**-5.6**
	22nm,0.6s						
EHUE	**Huescar**	**5.88**	**179**	Pn	**Pn**	**22 19 27.2**	**-0.2**
	0.5nm,0.2s,SNR=7.7						
EHUE				Pg	**Pg**	**22 19 47.6**	**-7.8**
	1.1nm,0.2s,SNR=7.9						
EHUE				Sn	**Sn**	**22 20 28.6**	**-7.0**
	0.8nm,0.4s,SNR=7.9						
EHUE				Lg		22 21 01.8	
	2.9nm,0.4s,SNR=7.9						
PTOM	**Tomar**	**5.89**	**228**	*e*Pn	**Pn**	**22 19 27.7**	**+0.1**
PTOM				*e*Sg	**Sg**	**22 21 01.1**	**-13**
	17nm,0.4s						
PTOM	**Tomar**	**5.89**	**228**	Pn	**Pn**	**22 19 27.1**	**-0.5**
PTOM				Sn	**Sn**	**22 20 32.1**	**-3.9**
PTOM				Lg		22 21 01.1	
	8.4nm,0.4s						
PTOM	**Tomar**	**5.89**	**228**	Pn	**Pn**	**22 19 27.1**	**-0.5**
PTOM				Sn	**Sn**	**22 20 32.1**	**-3.9**
PTOM				Lg		22 20 53.4	
EQES	**Quesada**	**5.89**	**183**	Pn	**Pn**	**22 19 27.8**	**+0.2**
	0.4nm,0.1s,SNR=7.9						
EQES				Pg	**Pg**	**22 19 47.7**	**-8.1**
	4.6nm,0.3s,SNR=12						
EQES				Sn	**Sn**	**22 20 30.7**	**-5.3**
	3.5nm,0.5s,SNR=7.9						
EQES				Lg		22 21 01.8	
	13nm,0.5s,SNR=7.9						
EQES	**Quesada**	**5.89**	**183**	Pn	**Pn**	**22 19 27.8**	**+0.2**
EQES	**Quesada**	**5.89**	**183**	Pg	**Pg**	**22 19 47.7**	**-8.0**
EBAD	**Badajoz**	**5.90**	**215**	Pn	**Pn**	**22 19 26.7**	**-1.0**
	1.4nm,0.1s,SNR=7.9						
EBAD				Sn	**Sn**	**22 20 30.0**	**-6.2**
	2.7nm,0.3s,SNR=7.9						
EBAD				Lg		22 21 01.9	
	12nm,0.3s,SNR=7.9						
EBAD	**Badajoz**	**5.90**	**215**	Pn	**Pn**	**22 19 26.7**	**-1.0**
EBAD				Sn	**Sn**	**22 20 30.0**	**-6.2**
EMUR	**La Murta**	**5.95**	**169**	Pn	**Pn**	**22 19 28.8**	**+0.3**
	2.6nm,0.2s,SNR=7.1						
EMUR				Lg		22 21 09.5	
	4.2nm,0.3s,SNR=4.0						
EMUR	**La Murta**	**5.95**	**169**	Pn	**Pn**	**22 19 28.8**	**+0.3**
EMUR				Lg		22 21 06.6	
EMUR	**La Murta**	**5.95**	**169**	Pn	**Pn**	**22 19 28.8**	**+0.3**
SMRF	**Simiane la Rot**	**6.01**	**84**	*e*Pn	**Pn**	**22 19 30.6**	**+1.3**
SMRF				*e*Sn	**Sn**	**22 20 34.8**	**-4.2**
	2.8nm,0.3s						
ELUQ	**Luque**	**6.24**	**191**	Pn	**Pn**	**22 19 32.9**	**+0.4**
	1.0nm,0.3s,SNR=7.9						
ELUQ				Sn	**Sn**	**22 20 38.2**	**-6.5**
	5.5nm,0.7s,SNR=7.9						
ELUQ				Lg		22 21 17.7	
	6.3nm,0.8s,SNR=7.9						
ORIF	**Oris-en-Rattie**	**6.30**	**76**	*e*Pn	**Pn**	**22 19 34.2**	**+0.9**
ORIF				*e*Sn	**Sn**	**22 20 42.3**	**-3.8**
	5.1nm,0.4s						
ECOG	**Cogollos-Vega**	**6.44**	**186**	Pn	**Pn**	**22 19 35.6**	**+0.2**
	1.1nm,0.2s,SNR=7.9						
ECOG				Sn	**Sn**	**22 20 44.4**	**-5.4**
	2.3nm,0.4s,SNR=7.9						
ECOG				Lg		22 21 24.5	
	SNR=7.9						
EQUE	**Quentar**	**6.50**	**185**	Pn	**Pn**	**22 19 36.5**	**+0.2**
	1.1nm,0.2s,SNR=7.9						
EQUE				Sn	**Sn**	**22 20 42.9**	**-8.4**
	2.2nm,0.4s,SNR=7.9						
EQUE				Lg		22 21 23.9	
	9.6nm,0.4s,SNR=7.9						
EVO	**Evora**	**6.52**	**220**	*e*Pn	**Pn**	**22 19 36.6**	**+0.1**
EVO				*e*Sn	**Sn**	**22 20 46.1**	**-5.6**
EVO				*e*Sg	**Sg**	**22 21 24.9**	**-10**
	22nm,0.5s						
ELOJ	**Sierra Loja**	**6.63**	**190**	Pn	**Pn**	**22 19 38.5**	**+0.4**
	1.0nm,0.2s,SNR=7.9						
ELOJ				Sn	**Sn**	**22 20 48.0**	**-6.4**
	1.4nm,0.4s,SNR=7.9						
ELOJ				Lg		22 21 30.7	
	4.3nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**6.63**	**208**	Pn	**Pn**	**22 19 36.8**	**-1.3**
	0.4nm,0.1s,SNR=8.6						
EMIN				Sn	**Sn**	**22 20 44.8**	**-10**
	1.8nm,0.3s,SNR=7.9						
EMIN				Lg		22 21 25.4	
	4.4nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	**6.63**	**208**	Pn	**Pn**	**22 19 36.8**	**-1.3**
LMR	**La Mourre**	**6.72**	**90**	*e*Pn	**Pn**	**22 19 39.2**	**-0.2**
LMR				*e*Sn	**Sn**	**22 20 52.2**	**-4.6**
	1.7nm,0.2s						
EBER	**Berja**	**6.79**	**181**	Pn	**Pn**	**22 19 40.7**	**+0.4**
	1.0nm,0.2s,SNR=7.9						
EBER				Sn	**Sn**	**22 20 51.3**	**-7.1**
	2.1nm,0.3s,SNR=7.9						
EBER				Lg		22 21 35.8	
	15nm,0.6s,SNR=7.9						
EBER	**Berja**	**6.79**	**181**	Pn	**Pn**	**22 19 40.7**	**+0.4**
EBER				Sn	**Sn**	**22 20 51.3**	**-7.1**
EBER				Lg		22 21 34.0	
EBER	**Berja**	**6.79**	**181**	Pn	**Pn**	**22 19 40.7**	**+0.4**
EBER				Sn	**Sn**	**22 20 51.3**	**-7.2**
FRF	**La Foret Royal**	**6.80**	**88**	*e*Pn	**Pn**	**22 19 40.3**	**-0.2**
FRF				*e*Sn	**Sn**	**22 20 53.9**	**-4.9**
	3.8nm,0.3s						
PBEJ	**Beja**	**6.87**	**216**	*e*Pn	**Pn**	**22 19 41.6**	**+0.2**
PBEJ				*e*Sn	**Sn**	**22 20 54.7**	**-5.8**
	7.1nm,0.6s						
PBEJ	**Beja**	**6.87**	**216**	Pn	**Pn**	**22 19 41.6**	**+0.2**
PBEJ				Sn	**Sn**	**22 20 54.2**	**-6.3**
CABF	**La Chapelle**	**6.88**	**62**	*e*Pn	**Pn**	**22 19 41.0**	**-0.6**
CABF				*e*Sn	**Sn**	**22 20 57.0**	**-3.7**
MBDF	**Montbardon**	**6.90**	**78**	*e*Pn	**Pn**	**22 19 42.9**	**+1.0**
MBDF				*e*Sn	**Sn**	**22 20 56.7**	**-4.6**
	5.5nm,0.5s						
LPL	**La Plagne**	**6.99**	**72**	*e*Pn	**Pn**	**22 19 43.2**	**+0.1**
LPG	**La Plagne**	**7.00**	**72**	*e*Pn	**Pn**	**22 19 43.8**	**+0.5**
SFTF	**Sexfontaines**	**7.04**	**47**	*e*Pn	**Pn**	**22 19 43.8**	**-0.1**
SFTF				*e*Sn	**Sn**	**22 21 00.8**	**-4.0**
	8.0nm,0.5s						
EGRO	**El Granado**	**7.14**	**212**	Pn	**Pn**	**22 19 44.0**	**-1.2**
	1.7nm,0.2s,SNR=5.1						
EGRO				Sn	**Sn**	**22 21 00.3**	**-6.9**
	3.4nm,0.4s,SNR=7.9						
EGRO				Lg		22 21 45.8	
	21nm,0.6s,SNR=7.9						
EGRO	**El Granado**	**7.14**	**212**	Pn	**Pn**	**22 19 44.0**	**-1.2**
EGRO				Sn	**Sn**	**22 20 58.5**	**-8.6**
EGRO				Lg		22 21 36.4	
EGRO	**El Granado**	**7.14**	**212**	Pn	**Pn**	**22 19 44.0**	**-1.2**
ESPR	**Espera**	**7.22**	**200**	Pn	**Pn**	**22 19 45.8**	**-0.6**
	1.2nm,0.2s,SNR=6.1						
ESPR				Sn	**Sn**	**22 21 01.5**	**-7.8**
	3.5nm,0.3s,SNR=7.9						
ESPR				Lg		22 21 49.0	
	4.8nm,0.4s,SNR=7.9						
ESPR	**Espera**	**7.22**	**200**	Pn	**Pn**	**22 19 45.8**	**-0.6**
MEZF	**Maizieres J’vi**	**7.23**	**46**	*e*Pn	**Pn**	**22 19 46.8**	**+0.3**
MEZF				*e*Sn	**Sn**	**22 21 05.6**	**-4.0**
	9.5nm,0.4s						
EMIJ	**Mijas**	**7.29**	**193**	Pn	**Pn**	**22 19 47.2**	**-0.1**
	6.9nm,0.5s,SNR=7.9						
EMIJ				Sn	**Sn**	**22 21 04.6**	**-6.4**
	2.3nm,0.4s,SNR=7.9						
EMIJ				Lg		22 21 51.1	
	0.9nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**7.29**	**193**	Pn	**Pn**	**22 19 47.2**	**-0.1**
EMIJ				Sn	**Sn**	**22 21 04.6**	**-6.4**
EMIJ				Lg		22 21 48.4	
SBF	**Sospel**	**7.36**	**85**	*e*Pn	**Pn**	**22 19 48.1**	**-0.2**
RFYF	**Reffroy**	**7.53**	**46**	*e*Sn	**Sn**	**22 21 12.3**	**-4.7**
	9.6nm,0.3s						
EJIF	**Jimena Fronter**	**7.53**	**197**	Pn	**Pn**	**22 19 51.0**	**+0.3**
	0.7nm,0.2s,SNR=7.9						
HAU	**Haudompre**	**7.66**	**53**	*e*Pn	**Pn**	**22 19 52.4**	**-0.1**
HINF	**Hinteralfeld**	**7.86**	**55**	*e*Sn	**Sn**	**22 21 19.7**	**-5.6**
	1.9nm,0.3s						
BAIF	**Baives**	**7.94**	**34**	*e*Pn	**Pn**	**22 19 56.7**	**+0.3**
BAIF				*e*Sn	**Sn**	**22 21 22.9**	**-4.3**
	2.9nm,0.3s						
GIVF	**Givet**	**8.23**	**36**	*e*Sn	**Sn**	**22 21 29.3**	**-5.2**
	11nm,0.4s						
PGF	**Pioggiola**	**8.65**	**94**	*e*Pn	**P**	**22 20 05.5**	**-0.8**
PGF				*e*Sn	**Sn**	**22 21 38.1**	**-6.9**

BJI ***23*** *22:35:37.3, 2.73N×132.92E, h30^{km}, mB5.3, mb5.3, Ms4.4, Msz4.0*

MOS ***23*** *22:35:37.8±1.0, 3.08N×132.44E, h10^{km}, mb5.5/30, Error ellipse: s-maj=13.4km s-min=6.0km az=114.6*

IDC ***23*** *22:35:37.9±0.4, 3.08N×132.48E, mb5.1/21, mb1 5.0/22, mb1mx5.0/24, mbtmp5.0/22, ML5.8/1, MS4.3/22, Ms1 4.3/22, ms1mx4.1/27, Error ellipse: s-maj=22.7km s-min=10.8km az=67.0*

HRVD ***23*** *22:35:39.5±0.3, 3.02N×132.40E, h12^{km}, MW4.9/68, Centroid moment Tensor Solution. LP body waves: s26,c32;Mantle waves: s68,c107; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.69±.10; $M_{\theta\theta}$-2.32±.07; $M_{\phi\phi}$-0.37±.12; $M_{r\theta}$-0.01±.27; $M_{\theta\phi}$0.18±.08; $M_{\phi r}$-0.21±.39; Best double couple: $M_0$2.521×10^{16} NP1: ϕ_s271°, δ45°, λ84°. NP2: ϕ_s99°, δ45°, λ96°. Principal axes: T 2.705, Plg86°, Azm95°; N -.377, Plg4°, Azm275°; P -2.337, Plg0°, Azm185°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***23*** *22:35:39.5±0.2, 3.04N×132.47E, h10^{km}, mb5.2/29, MS4.9/27 Error ellipse: s-maj=9.0km s-min=4.7km az=70.0*

CSEM ***23*** *22:35:41.0, 3.03N×132.23E, h33^{km}, mb5.5*

ISC 23 22:35:38.7±1.9, **3.04N**±0.04×**132.50E**±0.06, **h15**^{km}±11^{km}, **h35**^{km}±1.8^{km}**:pP-P, n214, σ0^{s}97**/167, **mb5.2**/84, **MS4.4**/54, **17C-5D, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**7.97**	**300**	⇓*e*P	**Pn**	**22 37 34.0**	**-2.9**
KAKA	**Kakadu**	**15.65**	**180**	*e*P	**P**	**22 39 39.0**	**+18**
	62nm,0.6s						
TGY	**Tagaytay City**	**15.85**	**315**	Pn	**P**	**22 39 22.4**	**-0.7**
	41nm,0.3s,baz=117,slow=18,SNR=2.3						
GUMO	**Guam**	**16.10**	**49**	LR	LR	22 44 47.6	
	comp=Z,634nm,19.6s,baz=122,slow=34						
PMG	**Port Moresby**	**19.14**	**130**	P	**P**	**22 40 05.0**	**+0.9**
	baz=322,slow=11,SNR=16						
PMG	**Port Moresby**	**19.14**	**130**	*e*P	**P**	**22 40 06.2**	**+2.0**
	102nm,1.4s						
PMG	**Port Moresby**	**19.14**	**130**	⇑*e*P	**P**	**22 40 06.7**	**+2.6**
FITZ	**Fitzroy Crossi**	**22.07**	**198**	⇑*i*P	**P**	**22 40 35.0**	**0.0**
	112nm,1.5s,mb5.1						
FITZ	**Fitzroy Crossi**	**22.07**	**198**	P	**P**	**22 40 35.1**	**0.0**
	107nm,1.0s,mb5.2,baz=22,slow=13,SNR=58						
FITZ				LR	LR	22 50 18.3	
	comp=Z,452nm,20.0s,MS3.9,baz=18,slow=40						
KSM	**Kuching**	**22.23**	**266**	*e*P	**P**	**22 40 37.7**	**+1.1**
WRAB	**Tennant Creek**	**22.90**	**176**	*e*P	**P**	**22 40 42.4**	**-0.9**
	46nm,0.9s,mb4.9						
WRAB	**Tennant Creek**	**22.90**	**176**	*e*P	**P**	**22 40 42.4**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,46nm,0.9s,mb4.9						
WRA	**Warramunga Arr**	**22.91**	**176**	P	**P**	**22 40 42.6**	**-0.8**
	comp=Z,17nm,0.8s,mb4.5,baz=350,slow=11,SNR=66						
WB2	**Warramunga Arr**	**22.91**	**176**	*e*P	**P**	**22 40 42.7**	**-0.7**
WB2				*e*S	**S**	**22 44 55.6**	**+7.4**
NACB	**Ninganchiao**	**23.50**	**334**	*e*P	**P**	**22 40 50.0**	**+0.9**
JOW	**Kunigami**	**24.00**	**351**	P	**P**	**22 40 54.5**	**+0.6**
	comp=Z,64nm,1.0s,mb5.0,baz=171,slow=9.9,SNR=6.8						
JOW				LR	LR	22 48 22.1	
	comp=Z,1μm,21.1s,MS4.3,baz=151,slow=32						
YHNB	**Yeheng**	**24.03**	**334**	*e*P	**P**	**22 40 55.3**	**+1.0**
CBIJ	**Chichi jima**	**25.65**	**20**	LR	LR	22 49 03.6	
	comp=Z,607nm,19.6s,MS4.1,baz=310,slow=31						
ASPA	**Alice Springs**	**26.58**	**177**	*e*P	**P**	**22 41 18.5**	**+0.1**
CTA	**Charters Tower**	**26.66**	**150**	⇑*i*P	**P**	**22 41 19.9**	**+0.8**
	comp=Z,18nm,1.0s,mb4.6						
CTA	**Charters Tower**	**26.66**	**150**	P	**P**	**22 41 19.5**	**+0.4**
	comp=Z,29nm,1.1s,mb4.7,baz=330,slow=12,SNR=15						
CTA				PcP	PcP	22 44 42.5	-0.8
	comp=Z,8.3nm,1.0s,baz=155,slow=2.4,SNR=3.6						
CTA				LR	LR	22 52 49.7	
	comp=Z,546nm,18.4s,MS4.1,baz=356,slow=39						
CTA	**Charters Tower**	**26.66**	**150**	P	**P**	**22 41 19.5**	**+0.4**
CTA						22 44 42.6	
CTA				pmax	pmax		
	comp=Z,29nm,1.1s						
CTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CTA				MLR	MLR		
	comp=Z,546nm,18.4s						
CTAO	**Charters Tower**	**26.66**	**150**	*e*P	**P**	**22 41 19.5**	**+0.4**
	comp=Z,44nm,1.2s,mb4.9						
CTAO	**Charters Tower**	**26.66**	**150**	*e*P	**P**	**22 41 19.5**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,44nm,1.2s,mb4.9						
GZH	**Guangzhou**	**27.23**	**319**	P	**P**	**22 41 27.1**	**+2.8**
GZH				S	**S**	**22 46 10.4**	**+10**
GZH				LR	LR		
	comp=N,360nm,9.6s						
GZH				LR	LR		
	comp=E,300nm,11.5s						
GZH				LR	LR		
	comp=Z,400nm,20.8s						
QIZ	**Qiongzhong**	**27.27**	**307**	PFAKE		22 41 40.0	+15
QIZ				LR	LR		
	comp=Z,1μm,21.0s,MS4.4						
SSE	**Sheshan**	**29.88**	**340**	*e*P	**P**	**22 41 46.3**	**-1.8**
SSE				PCP	PcP	22 44 46.1	-5.1
SSE				S	**S**	**22 46 37.0**	**-6.3**
SSE				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
SSE				AMB	AMB		
	comp=Z,20nm,2.8s,mb4.3						
SSE				LR	LR		
	comp=N,270nm,22.1s,MS3.9						
SSE				LR	LR		
	comp=E,140nm,22.1s,MS3.9						
SSE				LR	LR		
	comp=Z,410nm,31.6s						
JNU	**Nakatsue**	**29.96**	**357**	P	**P**	**22 41 47.9**	**-1.0**
	comp=Z,33nm,0.9s,mb5.0,baz=170,slow=9.1,SNR=13						
JNU				LR	LR	22 51 32.9	
	comp=Z,553nm,21.4s,MS4.2,baz=171,slow=32						
HNR	**Honiara**	**30.02**	**115**	P	**P**	**22 41 48.3**	**-1.3**
	comp=Z,38nm,0.3s,mb5.5,baz=235,slow=11,SNR=4.5						
HNR				LR	LR	22 52 47.3	
	comp=Z,143nm,19.2s,MS3.6,baz=209,slow=34						
HNR	**Honiara**	**30.02**	**115**	P	**P**	**22 41 48.3**	**-1.3**
HNR				LR	LR	22 52 47.3	
JHJ	**Hachijo jima 2**	**30.69**	**12**	LR	LR	22 51 24.6	
	comp=Z,867nm,21.4s,MS4.4,baz=123,slow=31						
NJ2	**Nanjing**	**31.58**	**338**	*e*P	**P**	**22 42 04.1**	**+1.0**
NJ2				AP	pP	22 42 13.6	+6.0
NJ2				XP	sP	22 42 17.6	+8.1
NJ2				PP	PP	22 43 08.3	+0.6
NJ2				S	**S**	**22 47 06.0**	**-4.1**
NJ2				XS		22 47 23.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,220nm,5.2s						
NJ2				LR	LR		
	comp=N,700nm,23.1s,MS4.3						
NJ2				LR	LR		
	comp=E,430nm,21.9s,MS4.3						
NJ2				LR	LR		
	comp=Z,310nm,20.2s,MS4.0						
WHN	**Wuhan**	**32.29**	**330**	⇓P	**P**	**22 42 10.8**	**+1.4**
MJAR	**Matsushiro Arr**	**33.75**	**8**	P	**P**	**22 42 19.7**	**-2.3**
	comp=Z,9.2nm,1.0s,mb4.7,baz=196,slow=6.6,SNR=7.8						
MJAR				LR	LR	22 55 07.8	
	comp=Z,238nm,19.4s,MS3.9,baz=175,slow=35						
MAJO	**Matsushiro**	**33.75**	**8**	PFAKE		22 42 30.0	+8.0
MAJO				LR	LR		
	comp=Z,636nm,22.0s,MS4.3						
FORT	**Forrest**	**33.90**	**187**	*e*P	**P**	**22 42 23.1**	**-0.2**
	comp=Z,51nm,0.7s,mb5.6						
NST	**Nakhon Sawan**	**34.25**	**294**	⇓P	**P**	**22 42 27.6**	**+1.1**
	comp=Z,188nm,0.9s,mb6.0						
ENH	**Enshi**	**34.76**	**324**	*e*P	**P**	**22 42 31.0**	**+0.2**
	comp=Z,85nm,1.4s,mb5.5						
STKA	**Stephens Creek**	**35.78**	**167**	⇑*i*P	**P**	**22 42 39.2**	**-0.3**
	comp=Z,38nm,0.9s,mb5.3						
STKA	**Stephens Creek**	**35.78**	**167**	P	**P**	**22 42 38.8**	**-0.7**
	comp=Z,48nm,0.9s,mb5.4,baz=336,slow=7.8,SNR=49						
STKA				LR	LR	22 58 42.0	
	comp=Z,578nm,18.9s,MS4.4,baz=152,slow=39						
TIA	**Tai’an**	**35.93**	**339**	*e*P	**P**	**22 42 41.0**	**+0.3**
CHRT	**Chiangrai**	**36.05**	**300**	⇑P	**P**	**22 42 43.0**	**+1.2**
	comp=Z,658nm,0.9s						
KMI	**Kunming**	**36.09**	**310**	⇑P	**P**	**22 42 43.5**	**+1.4**
KMI				AP	pP	22 42 54.0	+7.4
KMI				XP	sP	22 42 57.8	+9.3
KMI				AMB	AMB		
	comp=Z,90nm,1.2s,mb5.6						
KMI				AMB	AMB		
	comp=Z,290nm,3.1s						
KMI				LR	LR		
	comp=N,170nm,8.3s						
KMI				LR	LR		
	comp=E,190nm,13.4s						
KMI				LR	LR		
	comp=Z,240nm,27.7s						
CHG	**Chiang Mai**	**36.38**	**298**	⇑P	**P**	**22 42 45.2**	**+0.6**
	comp=Z,106nm,1.3s,mb5.6						
KLBR	**Kellerberrin**	**37.19**	**201**	*e*P	**P**	**22 42 50.7**	**-0.6**
	comp=Z,13nm,0.6s,mb4.9						
XAN	**Xi’an**	**37.87**	**327**	P	**P**	**22 42 57.1**	**+0.1**
XAN				AMB	AMB		
	comp=Z,70nm,1.3s,mb5.2						
MUN	**Mundaring**	**38.11**	**203**	*e*P	**P**	**22 42 58.7**	**-0.3**
NWAO	**Narrogin (SRO)**	**38.58**	**201**	*e*P	**P**	**22 43 02.4**	**-0.6**
	comp=Z,49nm,1.4s,mb5.0						
NWAO	**Narrogin (SRO)**	**38.58**	**201**	*e*P	**P**	**22 43 02.4**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,49nm,1.4s						
CD2	**Chengdu**	**38.79**	**319**	P	**P**	**22 43 05.8**	**+1.1**
CD2				AMB	AMB		
	comp=Z,70nm,1.3s,mb5.2						
CN2	**Changchun**	**41.07**	**352**	*e*P	**P**	**22 43 23.5**	**+0.1**
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
CNB	**Canberra Magne**	**41.30**	**159**	*e*P	**P**	**22 43 27.2**	**+1.8**
	comp=Z,68nm,1.3s,mb5.1						
MDJ	**Mudanjiang**	**41.48**	**357**	P	**P**	**22 43 27.1**	**+0.3**
MDJ				AP	pP	22 43 36.8	+5.5
MDJ				XP	sP	22 43 42.3	+9.2
MDJ				PP	PP	22 45 07.3	+1.4
MDJ				S	**S**	**22 49 45.4**	**+4.0**
MDJ				SS	SS	22 52 47.4	+6.4
MDJ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,70nm,3.1s						
MDJ				LR	LR		
	comp=N,190nm,24.7s						
MDJ				LR	LR		
	comp=Z,220nm,22.2s,MS4.0						
MDJ	**Mudanjiang**	**41.48**	**357**	*e*P	**P**	**22 43 27.2**	**+0.4**
	comp=Z,28nm,1.4s,mb4.7						
DZM	**Mont Dzumac**	**41.52**	**129**	*e*P	**P**	**22 43 27.9**	**+0.5**
DZM	**Mont Dzumac**	**41.52**	**129**	P	**P**	**22 43 28.0**	**+0.6**
	comp=Z,42nm,1.2s,mb5.0,baz=9.7,slow=8.2,SNR=11						
DZM	**Mont Dzumac**	**41.52**	**129**	*e*P	**P**	**22 43 27.9**	**+0.5**

ASAJ	**Asahikawa**	**41.87**	**11**	LR	LR	23 00 18.7	
	comp=Z,255nm,19.1s,MS4.1,baz=152,slow=35						
TOO	**Toolangi**	**42.17**	**165**	*e*P	**P**	**22 43 34.4**	**+1.8**
	comp=Z,12nm,1.1s,mb4.5						
TOO	**Toolangi**	**42.17**	**165**	*e*P	**P**	**22 43 34.4**	**+1.8**
TOO				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.5						
LZH	**Lanzhou**	**42.21**	**325**	⇑P	**P**	**22 43 34.5**	**+1.6**
LZH				AP	pP	22 43 45.0	+7.6
LZH				XP	sP	22 43 49.3	+10
LZH				AMB	AMB		
	comp=Z,160nm,1.3s,mb5.5						
LZH				AMB	AMB		
	comp=Z,580nm,4.8s						
LZH				LR	LR		
	comp=N,510nm,11.7s						
LZH				LR	LR		
	comp=Z,860nm,13.4s,MS4.8						
BTO	**Baotou**	**42.55**	**334**	*e*P	**P**	**22 43 35.5**	**-0.1**
YSS	**Yuzh-Sakhalins**	**44.64**	**10**	*e*P	**P**	**22 43 52.5**	**0.0**
SHL	**Shillong**	**44.99**	**304**	*e*P	**P**	**22 43 57.0**	**+1.4**
SHL				*e*x	x	22 49 30.0	
KLR	**Kul’dur**	**46.02**	**359**	*e*P	**P**	**22 44 03.5**	**+0.1**
KLR				pmax	pmax		
	comp=E,40nm,1.6s						
KLR				pmax	pmax		
	comp=Z,50nm,1.6s,mb5.2						
KLR				MLR	MLR		
	comp=N,1μm,20.0s,MS4.8						
KLR				MLR	MLR		
	comp=E,500nm,20.0s,MS4.8						
GTA	**Gaotai**	**46.81**	**325**	⇑P	**P**	**22 44 10.8**	**+1.0**
GTA				AP	pP	22 44 24.6	+10
GTA				XP	sP	22 44 29.3	+13
GTA				PCP	PcP	22 45 44.6	+1.2
GTA				S	**S**	**22 50 58.6**	**-0.1**
GTA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
GTA				AMB	AMB		
	comp=Z,220nm,5.3s						
GTA				LR	LR		
	comp=N,110nm,16.4s,MS4.1						
GTA				LR	LR		
	comp=E,130nm,18.6s,MS4.1						
GTA				LR	LR		
	comp=Z,200nm,21.7s,MS4.0						
LSA	**Lhasa**	**47.30**	**309**	P	**P**	**22 44 15.4**	**+1.6**
LSA				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.1						
LSA	**Lhasa**	**47.30**	**309**	*e*P	**P**	**22 44 15.2**	**+1.3**
	comp=Z,30nm,0.8s,mb5.3						
LSA				LR	LR		
	comp=Z,138nm,20.0s,MS3.9						
LSA	**Lhasa**	**47.30**	**309**	*e*P	**P**	**22 44 15.2**	**+1.4**
LSA				pmax	pmax		
	comp=Z,30nm,0.8s,mb5.3						
LSA				MLR	MLR		
	comp=Z,138nm,20.0s,MS3.9						
HIA	**Hailar**	**47.33**	**349**	*e*P	**P**	**22 44 14.0**	**+0.2**
	comp=Z,52nm,1.3s,mb5.3						
HIA				LR	LR		
	comp=Z,363nm,20.0s,MS4.3						
HIA	**Hailar**	**47.33**	**349**	*e*P	**P**	**22 44 14.0**	**+0.2**
HIA				pmax	pmax		
	comp=Z,52nm,1.3s						
HIA				MLR	MLR		
	comp=Z,363nm,20.0s						
BOK	**Bokaro**	**49.50**	**299**	*e*P	**P**	**22 44 31.0**	**0.0**
BOK				AMb	AMB	22 44 33.2	
	comp=Z,31nm,1.5s,mb5.1						
ULN	**Ulaanbaatar**	**49.75**	**338**	*e*P	**P**	**22 44 33.4**	**+0.8**
	comp=Z,47nm,1.1s,mb5.4						
ULN				LR	LR		
	comp=Z,257nm,21.0s,MS4.2						
ULN	**Ulaanbaatar**	**49.75**	**338**	*e*P	**P**	**22 44 33.4**	**+0.8**
ULN				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.4						
ULN				MLR	MLR		
	comp=Z,257nm,21.0s,MS4.2						
SONM	**Songino Array**	**49.98**	**337**	P	**P**	**22 44 35.0**	**+0.7**
	comp=Z,18nm,1.0s,mb5.0,baz=154,slow=6.8,SNR=78						
SONM				PcP	PcP	22 45 54.2	-0.5
	comp=Z,5.2nm,0.8s,baz=159,slow=4.5,SNR=5.3						
SONM				LR	LR	23 06 56.5	
	comp=Z,210nm,18.1s,MS4.2,baz=305,slow=38						
GUN	**Gumba**	**50.84**	**304**	*e*P	**P**	**22 44 41.3**	**+0.1**
	comp=Z,65nm,0.8s,mb5.6						
PKI	**Pulchoki**	**51.11**	**303**	*e*P	**P**	**22 44 42.6**	**-0.6**
KKN	**Kakani**	**51.30**	**304**	*e*P	**P**	**22 44 44.1**	**-0.5**
	comp=Z,92nm,1.0s,mb5.7						
DMN	**Daman**	**51.38**	**303**	*e*P	**P**	**22 44 45.0**	**-0.3**
	comp=Z,100nm,1.0s,mb5.7						
GKN	**Gorkha**	**51.90**	**304**	*e*P	**P**	**22 44 48.8**	**-0.4**
	comp=Z,145nm,1.4s,mb5.7						
KOLN	**Koldanda**	**52.69**	**303**	*e*P	**P**	**22 44 55.1**	**-0.1**
	comp=Z,286nm,1.1s,mb6.1						
ZAK	**Zakamensk**	**53.24**	**337**	*e*P	**P**	**22 44 58.8**	**-0.1**
ZAK				*e*		22 46 06.8	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
CLNS	**Chul’man**	**53.98**	**355**	*e*P	**P**	**22 45 03.0**	**-1.2**
CLNS				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.2						
CLNS				pmax	pmax		
	comp=N,17nm,1.0s						
CLNS				pmax	pmax		
	comp=E,14nm,1.0s						
HYB	**Hyderabad**	**54.78**	**289**	⇑*i*P	**P**	**22 45 09.5**	**-1.1**
	comp=E,50nm,1.0s,mb5.5						
HYB				*e*sP	sP	22 45 16.0	-1.0
HYB				*e*PcP	PcP	22 46 13.0	0.0
HYB	**Hyderabad**	**54.78**	**289**	⇑*e*P	**P**	**22 45 09.5**	**-1.1**
	comp=E,50nm,1.0s,mb5.5						
HYB	**Hyderabad**	**54.78**	**289**	⇑*e*P	**P**	**22 45 09.5**	**-1.1**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
MOY	**Mondy**	**55.15**	**337**	*e*P	**P**	**22 45 13.7**	**+0.8**
MOY				pmax	pmax		
	comp=Z,93nm,1.5s,mb5.6						
TRD	**Trivandrum**	**55.49**	**278**	*e*x	x	22 46 52.6	
BOD	**Bodaibo**	**56.54**	**348**	*e*P	**P**	**22 45 21.8**	**-1.0**
BOD				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.2						
WMQ	**Urumqi**	**56.69**	**322**	⇑*i*P	**P**	**22 45 24.3**	**+0.2**
WMQ				AP	pP	22 45 34.0	+5.3
WMQ				XP	sP	22 45 39.0	+8.6
WMQ				PCP	PcP	22 46 20.0	-0.1
WMQ				PP	PP	22 47 32.0	+0.2
WMQ				*e*S	**S**	**22 53 14.0**	**-0.1**
WMQ				XS		22 53 30.0	
WMQ				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.7						
WMQ				AMB	AMB		
	comp=Z,410nm,4.7s						
WMQ				LR	LR		
	comp=N,210nm,23.5s,MS4.3						
WMQ				LR	LR		
	comp=E,160nm,19.8s,MS4.3						
WMQ				LR	LR		
	comp=Z,190nm,28.7s						
BHPL	**Bhopal**	**56.87**	**296**	*e*P	**P**	**22 45 24.9**	**-0.8**
BHPL				AMb	AMB	22 45 25.3	
	comp=Z,42nm,0.9s,mb5.5						
DDI	**Dehra Dun**	**58.09**	**304**	*e*x	x	22 51 47.2	
NDI	**New Delhi**	**58.34**	**302**	*e*P	**P**	**22 45 33.5**	**-2.4**
YAK	**Yakutsk**	**58.89**	**358**	*e*P	**P**	**22 45 38.8**	**-0.5**
	comp=Z,126nm,1.3s,mb5.8						
YAK	**Yakutsk**	**58.89**	**358**	*e*P	**P**	**22 45 37.9**	**-1.4**
YAK				pmax	pmax		
	comp=Z,41nm,0.8s,mb5.5						
YAK				pmax	pmax		
	comp=N,24nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
KAD	**Karad**	**58.90**	**288**	*e*P	**P**	**22 45 37.7**	**-2.2**
KAD				AMb	AMB	22 45 39.6	
	comp=Z,25nm,1.2s,mb5.1						
SDNR	**Sundarnagar**	**59.33**	**305**	*e*x	x	22 53 06.2	
SDNR				*e*x	x	22 53 28.4	
POO	**Poona**	**59.37**	**290**	*e*x	x	22 45 52.0	
POO				AMb	AMB	22 45 54.0	
	comp=Z,38nm,0.9s,mb5.4						
FX1	**Attu Island--F**	**59.93**	**27**	LR	LR	23 09 03.0	
	comp=Z,8.6nm,18.2s,baz=284,slow=34						
FX1	**Attu Island--F**	**59.93**	**27**	*e*P	**P**	**22 45 46.6**	**0.0**
AJM	**Ajmer**	**60.03**	**299**	*e*P	**P**	**22 45 46.6**	**-1.1**
AJM				AMb	AMB	22 45 48.1	
	comp=Z,45nm,1.2s,mb5.4						
SMY	**Shemya**	**60.26**	**28**	PFAKE		22 46 00.0	+11
SMY				LR	LR		
	comp=Z,694nm,20.0s,MS4.8						
THN	**Thein Dam**	**60.61**	**306**	*e*P	**P**	**22 45 49.8**	**-1.7**
MKAR	**Makanchi Array**	**61.49**	**323**	P	**P**	**22 45 57.3**	**0.0**
	comp=Z,34nm,0.7s,mb5.6,baz=117,slow=7.9,SNR=163						
MKAR				LR	LR	23 12 23.1	
	comp=Z,111nm,18.2s,MS4.0,baz=87,slow=36						
MKAR	**Makanchi Array**	**61.49**	**323**	P	**P**	**22 45 57.3**	**0.0**
MKAR				LR	LR	23 12 23.1	
MKAR	**Makanchi Array**	**61.49**	**323**	*i* P	**P**	**22 45 56.8**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,381nm,1.6s						
SEY	**Seymchan**	**61.54**	**10**	⇑*e*P	**P**	**22 45 58.4**	**+1.0**
KRAR	**Krasnoyarsk**	**61.60**	**336**	⇓*i*P	**P**	**22 45 57.7**	**-0.2**
KSH	**Kashi**	**62.65**	**313**	*e*P	**P**	**22 46 07.0**	**+1.8**
KSH				*e*AP	pP	22 46 17.0	+7.2
KSH				XP	sP	22 46 21.6	+10
KSH				*e*PCP	PcP	22 46 44.3	+0.5
KSH				*e*PP	PP	22 48 27.6	+2.7
KSH				*e*SCP		22 50 42.1	
KSH				*e*PCS		22 50 46.8	
KSH				*e*S	**S**	**22 54 32.1**	**+1.0**
KSH				*e*XS		22 54 50.6	
KSH				*e*PS	PS	22 54 56.1	+5.5
KSH				*e*SCS	ScS	22 55 53.3	-0.2
KSH				*e*SS	SS	22 58 41.3	+3.6
KSH				AMB	AMB		
	comp=Z,350nm,4.7s						
ULHL	**Ulahol**	**63.44**	**316**	P	**P**	**22 46 10.7**	**+0.4**
	SNR=11						
ZAL	**Zalesovo**	**63.91**	**331**	LR	LR	23 13 56.6	
	comp=Z,123nm,19.5s,MS4.1,baz=342,slow=36						
BHJ	**Bhuj**	**63.91**	**294**	*e*P	**P**	**22 46 13.1**	**-0.6**
BHJ				AMb	AMB	22 46 15.2	
	comp=Z,71nm,1.1s,mb5.6						
KZA	**Kyzart**	**64.07**	**316**	P	**P**	**22 46 15.7**	**+1.2**
	SNR=37						
TKM2	**Tokmak 2**	**64.13**	**317**	P	**P**	**22 46 15.1**	**+0.2**
	SNR=16						
KBK	**Karagaybulak**	**64.48**	**316**	P	**P**	**22 46 17.3**	**+0.1**
	SNR=13						
UCH	**Uchtor**	**64.63**	**316**	P	**P**	**22 46 19.2**	**+1.0**
	SNR=42						
CHMS	**Chumysh**	**64.74**	**317**	P	**P**	**22 46 18.7**	**-0.2**
	SNR=12						
FRU	**Bishkek**	**64.77**	**316**	*e*P	**P**	**22 46 19.0**	**-0.1**
FRU				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.2						
AAK	**Ala-Archa**	**64.79**	**316**	P	**P**	**22 46 19.9**	**+0.7**
	SNR=9.5						
AAK	**Ala-Archa**	**64.79**	**316**	*e*P	**P**	**22 46 18.1**	**-1.0**
	comp=Z,24nm,1.4s,mb5.0						
AAK				LR	LR		
	comp=Z,35nm,20.0s,MS3.5						
AAK	**Ala-Archa**	**64.79**	**316**	*e*P	**P**	**22 46 18.1**	**-1.1**
AAK				pmax	pmax		
	comp=Z,24nm,1.4s,mb5.0						
AAK				MLR	MLR		
	comp=Z,35nm,20.0s,MS3.5						
USP	**Ospenovka**	**65.01**	**317**	P	**P**	**22 46 20.5**	**-0.1**
	SNR=37						
AML	**Almayashu**	**65.17**	**315**	P	**P**	**22 46 22.6**	**+0.9**
	SNR=20						
NVS	**Novosibirsk**	**65.17**	**331**	*e*P	**P**	**22 46 19.3**	**-2.1**
NVS				pmax	pmax		
	comp=N,35nm,1.5s						
NVS				pmax	pmax		
	comp=E,39nm,1.5s						
NVS				pmax	pmax		
	comp=Z,60nm,1.5s,mb5.4						
EKS2	**Erkin-Say**	**65.29**	**316**	P	**P**	**22 46 22.9**	**+0.5**
	SNR=16						
KURK	**Kurchatov**	**65.49**	**326**	*e*P	**P**	**22 46 23.3**	**-0.2**
	comp=Z,151nm,1.3s,mb5.9						
KURK				LR	LR		
	comp=Z,29nm,20.0s,MS3.5						
KURK	**Kurchatov**	**65.49**	**326**	*e*P	**P**	**22 46 23.3**	**-0.2**
KURK				pmax	pmax		
	comp=Z,151nm,1.3s,mb5.9						
KURK				MLR	MLR		
	comp=Z,29nm,20.0s,MS3.5						
KKAR	**Karatay Array**	**67.71**	**316**	*i* P	**P**	**22 46 37.4**	**-0.4**
KKAR				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.2						
TIXI	**Tiksi**	**68.55**	**359**	*e*P	**P**	**22 46 38.3**	**-4.3**
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,158nm,15.0s,MS4.4						
BILL	**Bilibino**	**68.83**	**13**	⇓*i*P	**P**	**22 46 43.7**	**-0.7**
BILL				*e*		22 47 03.7	
BILL				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VOSK	**Vostochnaya**	**70.64**	**325**	P	**P**	**22 46 55.2**	**-0.5**
VOSK				pmax	pmax		
	comp=Z,64nm,1.4s,mb5.4						
BVA0	**Borovoye Array**	**71.09**	**326**	*i* P	**P**	**22 46 58.3**	**-0.1**
BVA0				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
BVAR	**Borovoye Array**	**71.09**	**326**	P	**P**	**22 46 58.4**	**0.0**
	comp=Z,31nm,0.8s,mb5.3,baz=117,slow=6.6,SNR=142						
BRVK	**Borovoye**	**71.16**	**326**	*e*P	**P**	**22 46 58.8**	**0.0**
	comp=Z,43nm,1.0s,mb5.3						
BRVK				LR	LR		
	comp=Z,22nm,22.0s,MS3.4						
BRVK	**Borovoye**	**71.16**	**326**	*e*P	**P**	**22 46 58.8**	**0.0**
BRVK				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.3						
BRVK				MLR	MLR		
	comp=Z,22nm,22.0s,MS3.4						
AB31	**Akbulak array**	**76.35**	**320**	*i* P	**P**	**22 47 28.9**	**-0.2**
AB31				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
SVE	**Sverdlovsk**	**77.59**	**328**	⇑*e*P	**P**	**22 47 36.1**	**+0.3**
SVE				pmax	pmax		
	comp=Z,135nm,2.4s,mb5.5						
AKTK	**Aktyubinsk**	**77.80**	**321**	P	**P**	**22 47 36.5**	**-0.5**
AKTO	**Aktyubinsk**	**77.80**	**321**	P	**P**	**22 47 36.5**	**-0.5**
	comp=Z,19nm,1.1s,mb4.9,baz=90,slow=6.0,SNR=27						
ARU	**Arti**	**78.62**	**327**	*e*P	**P**	**22 47 40.9**	**-0.6**
	comp=Z,47nm,1.3s,mb5.3						
ARU	**Arti**	**78.62**	**327**	⇑*i*P	**P**	**22 47 41.1**	**-0.4**
ARU				*e*		22 50 40.5	
ARU				*e*S	S	22 57 31.2	-5.2
ARU				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
PPT	**Papeete**	**79.42**	**108**	*e*LR	LR	23 12 36.0	
	comp=Z,92nm,28.0s						
PPT	**Papeete**	**79.42**	**108**	LR	LR	23 17 52.4	
	comp=Z,280nm,18.2s,MS4.6,baz=262,slow=32						
TBI	**Tubuai**	**80.24**	**114**	*e*LR	LR	23 12 58.1	
	comp=Z,149nm,29.0s						
FIB	**Fire Island**	**81.24**	**29**	PFAKE		22 48 10.0	+15
FIB				LR	LR		
	comp=Z,3μm,21.0s						
PMR	**Palmer**	**81.80**	**28**	PFAKE		22 48 10.0	+12
PMR				LR	LR		
	comp=Z,632nm,19.0s,MS5.0						
VNDA	**Vanda**	**82.07**	**174**	*e*P	**P**	**22 47 59.3**	**-0.2**
	comp=Z,16nm,1.2s,mb4.8						
VNDA	**Vanda**	**82.07**	**174**	*e*P	**P**	**22 47 59.3**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,16nm,1.2s						
SBA	**Scott Base**	**82.92**	**173**	*e*P	**P**	**22 48 04.8**	**+1.0**
	comp=Z,36nm,1.6s,mb5.2						
SBA	**Scott Base**	**82.92**	**173**	*e*P	**P**	**22 48 04.8**	**+0.9**
SBA				pmax	pmax		
	comp=Z,36nm,1.6s,mb5.2						
ILAR	**Eielson Array**	**83.25**	**25**	P	**P**	**22 48 05.0**	**-0.7**
	comp=Z,7.4nm,1.0s,mb4.7,baz=263,slow=4.0,SNR=32						
MIB	**Mutribah**	**84.31**	**299**	*e*P	**P**	**22 48 12.1**	**+0.1**
NAY	**Al-Naaiem**	**84.39**	**299**	*e*P	**P**	**22 48 12.3**	**0.0**
MAW	**Mawson**	**85.15**	**201**	P	**P**	**22 48 15.6**	**+0.4**
	comp=Z,9.6nm,0.7s,mb5.0,baz=71,slow=6.0,SNR=15						
MAW				LR	LR	23 25 30.2	
	comp=Z,86nm,18.4s,MS4.2,baz=71,slow=35						
MAW	**Mawson**	**85.15**	**201**	*e*P	**P**	**22 48 15.9**	**+0.7**
	comp=Z,12nm,1.3s,mb4.9						
MAW				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
MAW	**Mawson**	**85.15**	**201**	*e*P	**P**	**22 48 15.9**	**+0.7**
MAW				pmax	pmax		
	comp=Z,12nm,1.3s						
MAW				MLR	MLR		
	comp=Z,1μm,20.0s						
GNI	**Garni**	**86.34**	**310**	P	**P**	**22 48 23.8**	**+2.0**
	comp=Z,7.3nm,0.9s,mb4.9,baz=11,slow=20,SNR=4.4						
GNI	**Garni**	**86.34**	**310**	*e*P	**P**	**22 48 24.4**	**+2.6**
	comp=Z,28nm,1.1s,mb5.4						
GNI	**Garni**	**86.34**	**310**	P	**P**	**22 48 23.8**	**+2.0**
GNI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAWY	**Dawson**	**86.45**	**26**	*e*P	**P**	**22 48 23.3**	**+1.6**
GOF	**Gofitskoye**	**87.49**	**315**	*e*P	**P**	**22 48 21.5**	**-5.8**
KIV	**Kislovodsk**	**87.78**	**314**	P	**P**	**22 48 30.7**	**+2.0**
	comp=Z,11nm,0.9s,mb5.1						
KIV				LR	LR		
	comp=Z,85nm,21.0s,MS4.1						
KIV	**Kislovodsk**	**87.78**	**314**	*e*P	**P**	**22 48 26.3**	**-2.4**
KIV				pmax	pmax		
	comp=Z,13nm,1.2s,mb5.0						
VRHR	**Novokhopersk**	**88.21**	**321**	*e*P	**P**	**22 48 30.1**	**-0.4**
VRHR				pmax	pmax		
	comp=Z,50nm,1.5s,mb5.5						
VRHR				pmax	pmax		
	comp=N,10.0nm,1.0s						
VRHR				pmax	pmax		
	comp=E,30nm,1.3s						
INK	**Inuvik**	**88.67**	**22**	LR	LR	23 25 14.3	
	comp=E,189nm,21.1s,MS4.5,baz=313,slow=34						
KLMR	**Klimovskoe**	**88.82**	**331**	*e*P	**P**	**22 48 32.0**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,70nm,1.5s,mb5.8						
VRSR	**Storozhevoye**	**89.73**	**321**	*e*P	**P**	**22 48 36.7**	**-1.1**
VRSR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.5						
VRSR				pmax	pmax		
	comp=N,1.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,3.0nm,1.0s						
MOS	**Moscow**	**90.26**	**326**	*e*P	**P**	**22 48 38.5**	**-1.6**
MOS				pmax	pmax		
	comp=Z,33nm,1.3s,mb5.5						
OBN	**Obninsk**	**90.93**	**325**	*e*P	**P**	**22 48 43.0**	**-0.2**
OBN				*e*		22 52 19.1	
OBN				pmax	pmax		
	comp=Z,41nm,1.3s,mb5.6						
DLBC	**Dease Lake**	**91.34**	**31**	LR	LR	23 21 54.3	
	comp=Z,388nm,21.6s,MS4.8,baz=290,slow=30						
ANN	**Anapa**	**91.48**	**315**	*e*P	**P**	**22 48 38.9**	**-7.1**
ANN				pmax	pmax		
	comp=Z,23nm,1.2s,mb5.4						
QSPA	**South Pole Qui**	**92.95**	**180**	*e*P	**P**	**22 48 52.7**	**+0.7**
	comp=Z,35nm,1.3s,mb5.6						
ARCES	**ARCESS Array B**	**93.06**	**340**	P	**P**	**22 48 52.2**	**-0.5**
	comp=Z,9.9nm,0.7s,mb5.3,baz=77,slow=5.4,SNR=32						
ARCES				LR	LR	23 33 13.2	
	comp=Z,187nm,18.2s,MS4.6,baz=266,slow=37						
BBB	**Bella Bella**	**93.36**	**37**	LR	LR	23 33 21.9	
	comp=Z,340nm,18.0s,MS4.8,baz=62,slow=37						
RKT	**Rikitea**	**93.50**	**113**	*e*LR	LR	23 19 06.8	
	comp=Z,258nm,34.5s						
BRTR	**Keskin Array B**	**94.88**	**310**	P	**P**	**22 49 00.9**	**-0.8**
	comp=Z,1.3nm,1.0s,mb4.3,baz=135,slow=5.2,SNR=4.6						
FINES	**FINESS Array B**	**95.13**	**332**	P	**P**	**22 49 01.1**	**-1.3**
	comp=Z,4.9nm,1.0s,mb4.9,baz=90,slow=11,SNR=5.6						
FINES				PKKPbc		23 05 55.5	
	comp=Z,1.9nm,0.9s,baz=117,slow=4.3,SNR=3.7						
FINES				LR	LR	23 31 19.8	
	comp=Z,108nm,19.6s,MS4.3,baz=350,slow=35						
KMBO	**Kilima Mbogo**	**95.30**	**269**	P	**P**	**22 49 04.9**	**+0.6**
	comp=Z,7.3nm,1.0s,mb5.0,baz=36,slow=6.3,SNR=17						
KMBO	**Kilima Mbogo**	**95.30**	**269**	P	**P**	**22 49 04.9**	**+0.6**
KMBO				LR	LR		
	comp=Z,102nm,22.0s,MS4.2						
VSU	**Vasula**	**95.61**	**329**	⇑*e*P	**P**	**22 49 05.2**	**+0.5**
AKASG	**Malin Array Be**	**96.04**	**322**	P	**P**	**22 49 05.5**	**-1.4**
	comp=Z,0.7nm,0.5s,mb4.3,baz=65,slow=4.7,SNR=11						
YKA	**Yellowknife Ar**	**97.68**	**26**	LR	LR	23 32 56.4	
	comp=Z,163nm,21.5s,MS4.5,baz=275,slow=35						
WDC	**Whiskeytown Da**	**99.33**	**48**	PFAKE		22 49 30.0	+8.1
WDC				LR	LR		
	comp=Z,333nm,19.0s,MS4.9						
WVOR	**Wild Horse Val**	**101.74**	**46**	PFAKE		22 49 40.0	+7.2
WVOR				LR	LR		
	comp=Z,461nm,20.0s,MS5.0						
NOA	**NORSAR Array B**	**101.91**	**335**	P	P	22 49 30.8	-2.2
	comp=Z,1.6nm,1.0s,baz=59,slow=5.2,SNR=2.6						
NVAR	**Mina Array Bea**	**103.02**	**50**	Pdiff	Pdif	22 49 39.0	+0.4
	comp=Z,1.1nm,1.0s,baz=272,slow=3.5,SNR=7.3						
NVAR	**Mina Array Bea**	**103.02**	**50**	Pdif	Pdif	22 49 39.0	+0.4
MNV	**Mina**	**103.13**	**50**	PFAKE		22 49 50.0	+11
MNV				LR	LR		
	comp=Z,390nm,20.0s,MS4.9						
TPH	**Tonopah**	**103.93**	**50**	PFAKE		22 49 50.0	+7.4
TPH				LR	LR		
	comp=Z,195nm,20.0s,MS4.6						
HLID	**Hailey**	**104.38**	**44**	PFAKE		22 50 00.0	+15
HLID				LR	LR		
	comp=Z,403nm,20.0s,MS5.0						
BRG	**Berggiesshubel**	**105.17**	**325**	*e*P	PP	22 54 11.9	+0.1
GERES	**GERESS Array B**	**106.16**	**323**	Pdiff	Pdif	22 49 51.5	-0.7
	comp=Z,1.5nm,1.0s,baz=117,slow=3.0,SNR=6.5						
GERES				PP	PP	22 54 15.6	-3.2
	comp=Z,0.5nm,0.7s,baz=63,slow=6.0,SNR=5.2						
YMR	**Madison River**	**106.34**	**42**	PFAKE		22 54 20.0	
YMR				LR	LR		
	comp=Z,2μm,19.0s						
HWUT	**Hardware Ranch**	**107.01**	**45**	PFAKE		22 54 20.0	
HWUT				LR	LR		
	comp=Z,354nm,19.0s,MS4.9						
MPU	**Maple Canyon**	**107.50**	**46**	PFAKE		22 54 20.0	
MPU				LR	LR		
	comp=Z,2μm,22.0s						
MVU	**Marysvale**	**107.58**	**48**	PFAKE		22 54 20.0	
MVU				LR	LR		
	comp=Z,443nm,20.0s,MS5.0						
PMSA	**Palmer Station**	**117.25**	**172**	*e*P	PKPdf	22 54 22.2	-4.7
TXAR	**Lajitas Array**	**117.37**	**55**	PKP	PKPdf	22 54 25.9	-2.2
	comp=Z,0.3nm,0.8s,baz=270,slow=2.5,SNR=4.3						
TXAR				PKKPbc		23 04 51.1	
	comp=Z,0.7nm,0.8s,baz=117,slow=5.6,SNR=5.5						
SCHQ	**Schefferville**	**120.14**	**13**	PFAKE		22 54 40.0	+7.3
SCHQ				LR	LR		
	comp=Z,941nm,21.0s,MS5.4						
MIAR	**Mount Ida**	**122.82**	**45**	PFAKE		22 54 50.0	+12
MIAR				LR	LR		
	comp=Z,679nm,22.0s,MS5.3						
OXF	**Oxford**	**125.73**	**43**	PFAKE		22 54 50.0	+5.8
OXF				LR	LR		
	comp=Z,298nm,20.0s,MS5.0						
WES	**Weston**	**129.90**	**23**	PFAKE		22 55 00.0	+8.0
WES				LR	LR		
	comp=Z,2μm,21.0s						
GOGA	**Godfrey**	**130.32**	**40**	PFAKE		22 55 00.0	+7.0
GOGA				LR	LR		
	comp=Z,490nm,19.0s,MS5.2						
DBIC	**Dimbokro**	**136.35**	**283**	PKP	PKPdf	22 55 01.5	-3.2
	comp=Z,10.0nm,1.1s,baz=54,slow=1.9,SNR=4.5						
DBIC	**Dimbokro**	**136.35**	**283**	PKP	PKPdf	22 55 01.5	-3.2
DBIC				LR	LR		
	comp=Z,123nm,19.0s,MS4.7						
ROSC	**El Rosal**	**152.07**	**74**	PKPbc	PKPdf	22 55 36.9	+5.4
	comp=Z,7.6nm,0.6s,baz=94,slow=19,SNR=7.5						
CPD	**Cerro la Pandu**	**152.28**	**40**	*e*PKPbc	PKPdf	22 55 37.1	+5.4
MTP	**Monte Pirata**	**152.47**	**40**	*e*PKPbc	PKPdf	22 55 37.5	+5.5
SDV	**Santo Domingo**	**154.07**	**63**	*e*P	PKPdf	22 55 32.7	-1.6
SDV				LR	LR		
	comp=Z,109nm,20.0s,MS4.7						
CPUP	**Villa Florida**	**155.00**	**159**	*e*PKPdf	PKPdf	22 55 33.0	-2.2
CPUP				*e*PKPbc	PKPdf	22 55 42.8	+7.6
CPUP				*e*PKPab	PKPab	22 55 58.3	-0.1
LPAZ	**La Paz**	**155.81**	**124**	PKP	PKPdf	22 55 36.7	+0.2
	comp=Z,1.7nm,1.0s,baz=27,slow=2.2,SNR=6.9						
LPAZ				PKPbc	PKPdf	22 55 45.7	+9.2
	comp=Z,5.3nm,1.1s,baz=339,slow=2.8,SNR=11						
LPAZ				PKPab	PKPab	22 56 03.5	+1.4
	comp=Z,8.4nm,0.9s,baz=266,slow=1.9,SNR=17						
LPAZ	**La Paz**	**155.81**	**124**	*e*PKPdf	PKPdf	22 55 36.4	-0.1
LPAZ				*e*PKPbc	PKPdf	22 55 45.8	+9.3
LPAZ				*e*PKPab	PKPab	22 56 03.8	+1.7
SAML	**Samuel**	**163.34**	**111**	*e*PKPdf	PKPdf	22 55 43.6	-1.5
SAML				*e*PKPab	PKPab	22 56 34.4	-0.3
SAML				LR	LR		
	comp=Z,90nm,22.0s						
BDFB	**Brasilia**	**167.47**	**178**	PKP	PKPdf	22 55 45.9	-2.7
	comp=Z,7.2nm,1.1s,baz=225,slow=4.2,SNR=4.9						

JMA 23 22:55:03.5±0.6**,40.33N**×**145.57E,h53**^{km}**,M3.7,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEM	Erimo	2.48	314	P	P	22 55 43.4	+1.0
JEM				eS	S	22 56 10.2	-1.4
JAK	Akkeshi	2.74	346	P	P	22 55 45.6	-0.5
JAK				eS	S	22 56 16.7	-1.5
JCH	Churui	2.82	325	P	P	22 55 47.3	0.0
JCH				eS	S	22 56 18.1	-2.1
JTH	Tanohata	2.87	263	P	P	22 55 47.1	-0.8
JNBK	Urakawa-nobuka	2.88	313	P	P	22 55 49.2	+1.1
JNBK				eS	S	22 56 21.5	-0.2
NEM2	Nemuro 2	3.04	2	P	P	22 55 49.3	-1.0
NEM2				eS	S	22 56 22.2	-3.4
JANG	Nango	3.10	272	P	P	22 55 50.5	-0.7
JANG				eS	S	22 56 23.2	-4.0
JAR	Ashorobuto	3.26	336	P	P	22 55 52.8	-0.6
JAR				eS	S	22 56 28.1	-3.1
JOM	Ohasama	3.40	257	P	P	22 55 55.6	+0.2
JOM				eS	S	22 56 31.8	-3.0
JOT	Ohata	3.59	289	P	P	22 55 58.0	0.0
JOT				eS	S	22 56 36.6	-2.9
JFR	Furan	3.60	323	P	P	22 55 58.6	+0.3
JFR				eS	S	22 56 36.3	-3.6
JKB	Kayabe	3.77	296	P	P	22 56 00.8	+0.2
JTKR	Abashiri--Toko	3.84	342	eS	S	22 56 43.4	-2.6
JOSM	Okushiri--Mats	4.92	293	P	P	22 56 16.4	-0.4

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*BJI **23** 23:00:52.6,2.46N×133.08E,h10^{km},mB5.1,mb4.8,Ms4.2, Msz3.7*

*MOS **23** 23:00:58.4±0.8,3.02N×132.44E,h10^{km},mb4.7/6,Error ellipse: s-maj=20.6km s-min=8.2km az=113.8*

*IDC **23** 23:00:58.7±0.6,3.02N×132.42E,mb4.5/14,mb1 4.6/15, mb1mx4.5/22,mbtmp4.5/15,ML3.4/1,MS3.7/10,Ms1 3.7/10, ms1mx3.5/23,Error ellipse: s-maj=28.1km s-min=12.8km az=77.0*

*NEIC **23** 23:01:00.4±0.3,2.98N×132.40E,h10^{km},mb4.7/9,Error ellipse: s-maj=12.0km s-min=5.9km az=68.0*

ISC 23 23:01:02.0±0.3**,2.99N**±0.05×**132.51E**±0.09**,h33**^{km}**, (h23**^{km}±5.6^{km}**:pP-P),n76,**σ**0**^{s}**80**/68**,mb4.6**/37**,MS3.7**/9**, 3C-2D,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	15.60	180	eP	Px	23 04 59.7	
	32nm,0.6s						
GUMO	Guam	16.13	49	LR	LR	23 09 57.2	
	comp=Z,244nm,18.4s,baz=251,slow=33						
PMG	Port Moresby	19.10	130	P	P	23 05 25.7	+0.8
	0.4nm,0.3s,baz=311,slow=6.5,SNR=5.5						
PMG				LR	LR	23 13 19.0	
	comp=Z,45nm,20.6s,baz=318,slow=39						
FITZ	Fitzroy Crossi	22.02	198	eP	P	23 05 55.9	+0.5
	35nm,1.6s,mb4.5						
FITZ	Fitzroy Crossi	22.02	198	P	P	23 05 55.9	+0.5
	23nm,0.7s,mb4.7,baz=34,slow=12,SNR=35						
FITZ				LR	LR	23 15 03.0	
	comp=Z,189nm,18.0s,MS3.5,baz=2.6,slow=38						
KSM	Kuching	22.23	267	P	P	23 05 55.6	-1.9
WRAB	Tennant Creek	22.85	176	eP	P	23 06 03.3	-0.4
	10nm,0.5s,mb4.5						
WRAB	Tennant Creek	22.85	176	⇓iP	P	23 06 03.0	-0.7
WRA	Warramunga Arr	22.86	176	P	P	23 06 03.4	-0.3
	7.5nm,0.7s,mb4.3,baz=354,slow=10,SNR=56						
WB2	Warramunga Arr	22.86	176	eP	P	23 06 03.3	-0.5
JOW	Kunigami	24.05	351	LR	LR	23 14 23.5	
	comp=Z,117nm,18.4s,MS3.4,baz=34,slow=34						
ASPA	Alice Springs	26.53	177	eP	P	23 06 39.4	+0.6
CTA	Charters Tower	26.61	150	eP	P	23 06 40.8	+1.2
	4.7nm,0.7s,mb4.1						
CTA	Charters Tower	26.61	150	P	P	23 06 39.9	+0.3
	7.7nm,0.9s,mb4.2,baz=326,slow=9.8,SNR=6.2						
CTA	Charters Tower	26.61	150	eP	P	23 06 40.8	+1.2
CTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HNR	Honiara	30.00	115	LR	LR	23 17 19.3	
	comp=Z,82nm,19.1s,MS3.4,baz=123,slow=33						
JNU	Nakatsue	30.02	357	LR	LR	23 17 27.0	
	comp=Z,133nm,20.1s,MS3.6,baz=237,slow=33						
JHJ	Hachijo jima 2	30.74	12	LR	LR	23 16 45.3	
	comp=Z,165nm,20.4s,MS3.7,baz=78,slow=31						
NJ2	Nanjing	31.63	338	eP	P	23 07 24.3	-0.1
NJ2				PP	PP	23 08 32.4	+2.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,70nm,7.2s						
NJ2				LR	LR		
	comp=N,210nm,18.3s,MS4.0						
NJ2				LR	LR		
	comp=E,230nm,16.0s,MS4.0						
NJ2				LR	LR		
	comp=Z,140nm,16.9s,MS3.7						
WHN	Wuhan	32.34	330	eP	P	23 07 31.6	+1.0
ENH	Enshi	34.80	324	eP	P	23 07 51.5	-0.4
STKA	Stephens Creek	35.73	167	eP	P	23 07 59.9	+0.1
	comp=Z,11nm,0.9s,mb4.8						
STKA	Stephens Creek	35.73	167	P	P	23 07 59.5	-0.3
	comp=Z,14nm,0.9s,mb4.9,baz=343,slow=8.8,SNR=20						
STKA				LR	LR	23 23 50.8	
	comp=Z,149nm,20.8s,MS3.7,baz=24,slow=38						
KMI	Kunming	36.13	310	P	P	23 08 04.8	+1.6
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
KMI				AMB	AMB		
	comp=Z,120nm,6.5s						
XAN	Xi'an	37.92	327	P	P	23 08 17.6	-0.6
XAN				AP	pP	23 08 27.3	-0.6
XAN				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
NWAO	Narrogin (SRO)	38.54	201	P	P	23 08 22.9	-0.4
	comp=Z,4.7nm,0.8s,mb4.2,baz=23,slow=8.3,SNR=3.7						
CD2	Chengdu	38.83	319	P	P	23 08 26.0	+0.3
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
LZH	Lanzhou	42.25	325	eP	P	23 08 55.3	+1.2
LZH				AP	pP	23 09 03.3	-0.6
LZH				XP	sP	23 09 06.3	-1.8
LZH				AMB	AMB		
	comp=Z,30nm,1.4s,mb4.7						
LZH				AMB	AMB		
	comp=Z,140nm,4.2s						
SHL	Shillong	45.02	304	eP	P	23 09 18.0	+1.4
KLR	Kul'dur	46.07	359	eP	P	23 09 24.8	+0.2
GTA	Gaotai	46.85	325	eP	P	23 09 31.3	+0.4
GTA				AP	pP	23 09 36.9	-3.9
GTA				XP	sP	23 09 40.8	-4.1
GTA				PCP	PcP	23 11 05.1	+1.2
GTA				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.6						
LSA	Lhasa	47.33	309	eP	P	23 09 36.3	+1.5
LSA	Lhasa	47.33	309	eP	P	23 09 36.0	+1.2
	comp=Z,4.7nm,0.7s,mb4.5						
LSA	Lhasa	47.33	309	eP	P	23 09 36.0	+1.2
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
HIA	Hailar	47.38	349	P	P	23 09 34.8	-0.1
ULN	Ulaanbaatar	49.80	338	eP	P	23 09 54.0	+0.3
	comp=Z,14nm,1.3s,mb4.8						
ULN	Ulaanbaatar	49.80	338	eP	P	23 09 54.0	+0.4
ULN				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
SONM	Songino Array	50.02	337	P	P	23 09 55.8	+0.4
	comp=Z,6.5nm,1.2s,mb4.5,baz=156,slow=7.5,SNR=21						
SONM				PcP	PcP	23 11 14.8	-0.3
	comp=Z,1.7nm,1.0s,baz=156,slow=4.5,SNR=4.1						
SONM				LR	LR	23 31 21.9	
	comp=Z,60nm,19.7s,MS3.6,baz=180,slow=36						
GUN	Gumba	50.87	304	eP	P	23 10 02.0	-0.1
	comp=Z,19nm,0.8s,mb5.0						
PKI	Pulchoki	51.15	303	eP	P	23 10 03.8	-0.4
KKN	Kakani	51.33	304	eP	P	23 10 05.1	-0.4
DMN	Daman	51.41	303	eP	P	23 10 06.1	-0.1
GKN	Gorkha	51.94	304	eP	P	23 10 09.4	-0.7
	comp=Z,31nm,1.4s,mb5.0						
KOLN	Koldanda	52.72	303	eP	P	23 10 15.8	-0.2
	comp=Z,46nm,0.9s,mb5.4						
ZAK	Zakamensk	53.29	337	eP	P	23 10 17.3	-2.6
ZAK				e		23 11 26.6	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
WMQ	Urumqi	56.73	322	P	P	23 10 44.8	-0.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,180nm,3.6s						
YAK	Yakutsk	58.94	358	⇑eP	P	23 10 58.9	-1.4
YAK				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.3						
FX1	Attu Island--F	59.98	27	P	P	23 11 07.3	-0.2
	comp=Z,11nm,0.8s,mb5.0,baz=203,slow=13,SNR=3.8						
MKAR	Makanchi Array	61.53	323	P	P	23 11 18.1	-0.1
	comp=Z,8.4nm,0.8s,mb4.9,baz=119,slow=8.5,SNR=39						
MKAR				PcP	PcP	23 11 58.8	-0.7
	comp=Z,0.9nm,0.7s,baz=135,slow=6.1,SNR=2.6						
ZAL	Zalesovo	63.95	331	P	P	23 11 33.1	-1.0
	comp=Z,3.0nm,1.1s,mb4.2,baz=153,slow=18,SNR=13						
KZA	Kyzart	64.11	316	P	P	23 11 36.7	+1.4
	SNR=8.9						
UCH	Uchtor	64.67	316	P	P	23 11 40.4	+1.4
	SNR=8.1						
AAK	Ala-Archa	64.83	316	⇑eP	P	23 11 39.7	-0.3
AAK				pmax	pmax		
	comp=Z,7.0nm,2.1s,mb4.3						
USP	Ospenovka	65.05	317	P	P	23 11 41.6	+0.2
	SNR=8.3						
AML	Almayashu	65.21	315	P	P	23 11 43.6	+1.1
	SNR=5.5						
EKS2	Erkin-Say	65.33	316	P	P	23 11 44.0	+0.8
	SNR=5.4						
KURK	Kurchatov	65.53	326	eP	P	23 11 43.9	-0.5
	comp=Z,29nm,1.3s,mb5.2						
KURK	Kurchatov	65.53	326	eP	P	23 11 43.9	-0.5
KURK				pmax	pmax		
	comp=Z,29nm,1.3s,mb5.2						
KKAR	Karatay Array	67.75	316	iP	P	23 11 58.0	-0.5
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
TIXI	Tiksi	68.60	359	⇓iP	P	23 12 02.3	-1.1
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.9s,mb4.4						
BVA0	Borovoye Array	71.13	326	iP	P	23 12 19.3	+0.2
BVA0				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.2						
BVAR	Borovoye Array	71.13	326	P	P	23 12 18.4	-0.7
	comp=Z,9.6nm,0.9s,mb4.7,baz=117,slow=6.6,SNR=41						
BRVK	Borovoye	71.20	326	eP	P	23 12 19.6	+0.1
	comp=Z,12nm,1.2s,mb4.7						
BRVK	Borovoye	71.20	326	eP	P	23 12 19.6	+0.1
BRVK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
AB31	Akbulak array	76.40	320	iP	P	23 12 49.7	-0.2
AB31				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
SVE	Sverdlovsk	77.64	328	eP	P	23 12 57.1	+0.4
AKTO	Aktyubinsk	77.84	321	P	P	23 12 57.8	-0.1
AKTO				pmax	pmax		
	comp=Z,100nm,4.0s						
ARU	Arti	78.67	327	eP	P	23 13 01.1	-1.2
ARU	Arti	78.67	327	⇑iP	P	23 13 02.0	-0.3
ARU				e		23 16 00.9	
ARU				eS	S	23 22 51.3	-4.5
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
ILAR	Eielson Array	83.30	25	P	P	23 13 25.7	-0.8
	comp=Z,2.3nm,1.1s,mb4.1,baz=256,slow=4.2,SNR=9.0						
MAW	Mawson	85.11	201	P	P	23 13 35.0	-0.5
	comp=Z,1.0nm,0.5s,mb4.2,baz=50,slow=9.7,SNR=4.3						
DAWY	Dawson	86.50	26	eP	P	23 13 43.7	+1.3
INK	Inuvik	88.72	22	P	P	23 13 52.8	-0.2
	comp=Z,1.7nm,1.0s,mb4.3,baz=238,slow=2.8,SNR=3.8						
ARCES	ARCESS Array B	93.11	340	P	P	23 14 12.9	-0.6
	comp=Z,3.3nm,0.8s,mb4.8,baz=27,slow=5.4,SNR=6.5						
BBB	Bella Bella	93.41	37	LR	LR	23 47 37.5	
	comp=Z,199nm,20.4s,MS4.6,baz=63,slow=30						
LPAZ	La Paz	155.78	124	PKPab	PKPab	23 21 24.6	+2.2
	comp=Z,1.9nm,0.7s,baz=239,slow=2.9,SNR=8.7						

MEX 23 23:11:26.1±1.8**,19.35N**×**98.94W,h20**^{km}±999^{km}**,MD3.6, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPM	Popocatepetl	0.41	134	iP	Pb	23 11 33.5	-1.1
PPM				iP		23 11 34.3	
PPM				iS	Sb	23 11 38.0	-2.4
PPM				iS	Sb	23 11 40.9	+0.6
YAIG	Yautepec	0.50	194	iP	Pb	23 11 34.4	-1.8
YAIG				iS	Sb	23 11 41.8	-1.2

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*NEIC **23** 23:44:58.0±0.9,24.82N×142.85E,h10^{km},mb4.3/2,Error ellipse: s-maj=44.5km s-min=9.1km az=80.0*

*IDC **23** 23:45:01.5±7.8,24.74N×142.66E,h31^{km}±56^{km},mb3.9/9, mb1 4.0/10,mb1mx3.8/20,mbtmp4.1/10,ML4.1/1,Error ellipse: s-maj=69.3km s-min=17.3km az=80.0*

ISC 23 23:45:01.3±2.1**,24.70N**±0.09×**142.6E**±0.4**,h41**^{km}±19^{km}**, n18,**σ**0**^{s}**65**/19**,mb4.1**/11**,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.41	352	Pn	P	23 45 38.1	-1.0
	37nm,0.3s,baz=269,slow=21,SNR=18						
CBIJ				Sn	S	23 46 08.8	+1.2
	72nm,0.3s,baz=115,slow=23,SNR=8.5						
SONM	Songino Array	36.69	318	P	P	23 52 05.6	-0.5
	0.5nm,0.5s,mb3.6,baz=123,slow=8.8,SNR=9.1						
WRAB	Tennant Creek	45.08	191	eP	P	23 53 15.7	+0.3
WB2	Warramunga Arr	45.09	191	eP	P	23 53 15.7	+0.2
WRA	Warramunga Arr	45.09	191	P	P	23 53 15.6	+0.1
	1.4nm,0.5s,mb4.0,baz=7.0,slow=9.2,SNR=40						
FITZ	Fitzroy Crossi	45.63	203	eP	P	23 53 21.2	+1.4
	3.2nm,0.8s,mb4.3						
ZAL	Zalesovo	51.53	320	P	P	23 54 04.4	-0.6
	0.8nm,0.3s,mb4.1,baz=359,slow=8.8,SNR=3.7						
MKAR	Makanchi Array	52.27	311	P	P	23 54 10.5	-0.1
	0.2nm,0.4s,mb3.4,baz=84,slow=10,SNR=8.9						
STKA	Stephens Creek	56.27	181	P	P	23 54 39.0	-1.1
	1.4nm,0.6s,mb4.2,slow=9.1,SNR=4.9						
STKA	Stephens Creek	56.27	181	eP	P	23 54 39.3	-0.8
BRVK	Borovoye	60.10	318	eP	P	23 55 06.3	-0.3
	3.7nm,1.4s,mb4.2						
ARCES	ARCESS Array B	75.90	341	P	P	23 56 45.6	+0.8
	2.9nm,0.7s,mb4.3,baz=74,slow=8.8,SNR=9.9						
JOF	Joensuu	77.37	334	ep	P	23 56 53.3	+0.1
KAF	Kangasniemi	79.77	335	ep	P	23 57 06.2	-0.1
FINES	FINESS Array B	80.24	334	P	P	23 57 08.8	0.0
	1.6nm,0.5s,mb4.2,baz=72,slow=5.8,SNR=16						
AKASG	Malin Array Be	84.74	324	P	P	23 57 32.2	+0.1
	1.6nm,0.6s,mb4.3,baz=52,slow=4.9,SNR=13						
NB2	NORSAR Subarra	85.95	339	P	P	23 57 37.4	-0.5
	0.8nm,0.5s,mb4.2,baz=43,slow=4.8						
NOA	NORSAR Array B	85.95	339	P	P	23 57 37.3	-0.6
	1.0nm,0.6s,mb4.2,baz=46,slow=4.6,SNR=5.0						

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*ATH **23** 23:54:13.5,38.12N×26.86E,h43^{km},MD3.0/3*

*CSEM **23** 23:54:13.1±0.2,38.22N×26.72E,h0^{km}±1^{km},MD3.0,Error ellipse: s-maj=3.3km s-min=2.7km az=23.0*

*ISK **23** 23:54:15.1,38.22N×26.84E,h5^{km},MD3.0*

ISC 23 23:54:14.7±0.6**,38.21N**±0.03×**26.71E**±0.05**,h10**^{km}**,n18,**σ**1**^{s}**37**/23**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.18	329	iP	Pg	23 54 17.3	-1.3
URLA				iS	Sg	23 54 20.5	-0.8
BLCB	Balcova	0.32	56	PG	Pg	23 54 20.5	-0.7
IZM	Izmir	0.47	66	PG	Pg	23 54 23.5	-0.8
IZM				SG	Sg	23 54 30.5	-0.2
KDAG	Bornova	0.48	66	iP	Pg	23 54 22.7	-1.6
KDAG				iS	Sg	23 54 28.8	-2.1
SMG	Samos	0.51	169	eP	Pg	23 54 24.0	-1.0
SMG				eS	Sg	23 54 31.1	-0.8
PRK	Paraskevi	1.09	342	eP	Pb	23 54 35.3	+0.1
AKS	Akhisar	1.09	52	PG	Pg	23 54 35.0	-1.6
AYVA	Ayvalik	1.10	359	iP	Pb	23 54 35.7	+0.3
MLSB	Milas	1.24	137	ePN	Pn	23 54 38.7	+0.6
APE	Apeiranthos	1.47	220	ePN	Pn	23 54 44.6	+3.2
APE	Apeiranthos	1.47	220	eP	Pn	23 54 39.3	-2.1
MANT	Manisa	1.48	78	iP	Pn	23 54 42.1	+0.7
MANT				iS	Sb	23 55 02.4	+1.9
YER	Yerkesik	1.64	130	ePN	Pn	23 54 45.3	+1.4
BALB	Balikesir	1.70	32	ePN	Pn	23 54 46.5	+1.9
DNZL	Cakiroluk	1.92	105	iP	Pn	23 54 51.5	+3.7
DST	Dursunbey	2.04	46	ePN	Pn	23 54 51.2	+1.6
EDC	Edincik	2.31	22	ePN	Pn	23 54 55.6	+2.1
LSK	Leskovik	5.13	294	iSg	Sg	23 57 09.6	+4.1

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*BJI **24** 00:06:58.5,22.04N×94.12E,h64^{km},mb4.6,ML4.1,Ms4.5*

*NEIC **24** 00:06:58.7±1.3,21.98N×94.24E,h64^{km}±12^{km},mb3.9/3, Error ellipse: s-maj=16.9km s-min=10.8km az=73.0*

*IDC **24** 00:07:04.3±7.4,22.19N×94.63E,h118^{km}±66^{km},mb3.6/12, mb1 3.8/12,mb1mx3.6/23,mbtmp4.0/12,Error ellipse: s-maj=41.4km s-min=18.3km az=52.0*

ISC 24 00:06:58.1±0.7**,21.97N**±0.05×**94.18E**±0.06**,h82**^{km}±8^{km}**, n46,**σ**1**^{s}**30**/55**,mb4.0**/14**,Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	Imphal	2.81	355	eP	P	00 07 44.0	+2.0
SHL	Shillong	4.16	330	eP	P	00 08 03.0	+2.4
SHL				eS	S	00 08 46.0	-2.3
CHG	Chiang Mai	5.46	124	PN	P	00 08 18.0	-0.5
CHG				SG	S	00 09 21.0	+0.3
BOK	Bokaro	7.86	285	eP	P	00 08 50.8	-0.9
BOK				eS	S	00 10 10.7	-9.1
BOK				AML	AML	00 10 21.7	
	comp=E,145nm,0.6s						
BOK				AML	AML	00 10 23.1	
	comp=N,357nm,0.3s						
LSA	Lhasa	8.17	341	P	P	00 08 56.3	+0.4
LSA				S	S	00 10 22.6	-4.8
LSA				Smax			
	comp=N,30nm,0.8s						
LSA				Smax			
	comp=E,50nm,0.6s						
LSA	Lhasa	8.17	341	ePn	P	00 08 56.6	+0.8
	comp=E,124nm,0.4s						
LSA				eSn	S	00 10 24.7	-2.7
KMI	Kunming	8.46	67	P	P	00 09 03.3	+3.5
KMI				AMB	AMB		
	comp=Z,20nm,1.2s						
GUN	Gumba	9.57	310	ePn	P	00 09 15.0	-0.1
GUN				eSn	S	00 10 56.8	-5.0
	comp=Z,307nm,0.4s						
PKI	Pulchoki	9.72	307	ePn	P	00 09 16.8	-0.3
PKI				eSn	S	00 10 59.2	-6.2
	comp=Z,114nm,0.4s						
KKN	Kakani	9.94	307	ePn	P	00 09 19.3	-0.7
KKN				eSn	S	00 11 04.6	-6.0
	comp=Z,155nm,0.3s						
DMN	Daman	9.97	306	ePn	P	00 09 20.1	-0.3
DMN				eSn	S	00 11 05.7	-5.7
GKN	Gorkha	10.53	307	ePn	P	00 09 27.2	-0.8
GKN				eSn	S	00 11 18.3	-6.6
	comp=Z,178nm,0.3s						
VIS	Vishakhapatnam	11.05	249	eP	P	00 09 34.0	-0.9
VIS				eS	S	00 11 22.4	-15
KOLN	Koldanda	11.20	303	ePn	P	00 09 35.9	-1.1
KOLN				eSn	S	00 11 33.1	-8.0
	comp=Z,157nm,0.3s						
ALBI	Allahabad	11.82	289	ex	x	00 11 48.0	
HYB	Hyderabad	15.39	256	iP	P	00 10 32.0	+0.1
HYB				eS	S	00 13 26.0	+5.8
HYB	Hyderabad	15.39	256	eP	P	00 10 32.0	+0.1
BHPL	Bhopal	15.53	278	eP	P	00 10 36.7	+3.1
BHPL				ex	x	00 13 15.2	
NDI	New Delhi	16.72	297	ex	x	00 13 38.0	
AYAN	Aya Nagar	16.73	296	eP	P	00 10 51.2	+2.6
KLP	Kalpa	17.10	307	eP	P	00 10 56.2	+2.9
KLP				ex	x	00 13 58.8	
KUDL	Kundal	17.16	295	ex	x	00 13 49.4	
KHET	Khetri	17.72	294	eP	P	00 11 04.6	+3.7
KHET				AMb	AMB	00 11 07.6	
	comp=Z,7.6nm,0.6s						
KHET				ex	x	00 14 02.4	
KULM	Kulim	17.72	158	eP	P	00 11 01.6	+0.5
AJM	Ajmer	18.37	288	eP	P	00 11 08.4	-0.3
AJM				AMb	AMB	00 11 10.9	
	comp=Z,7.9nm,0.4s						
AJM				ex	x	00 14 18.3	
WMQ	Urumqi	22.45	348	eP	P	00 11 57.6	+6.6
AAK	Ala-Archa	26.37	326	eP	P	00 12 29.8	+1.4
	comp=Z,2.9nm,0.9s,mb3.7						
MKAR	Makanchi Array	26.58	342	P	P	00 12 30.9	+0.6
	comp=Z,1.9nm,0.5s,mb3.9,baz=163,slow=7.5,SNR=34						
SONM	Songino Array	27.62	18	P	P	00 12 37.8	-1.9
	comp=Z,0.2nm,0.5s,baz=211,slow=12,SNR=3.0						
SONM				PcP	PcP	00 15 54.9	-0.6
	comp=Z,0.3nm,0.3s,baz=196,slow=3.4,SNR=5.7						
ULN	Ulaanbaatar	27.84	19	P	P	00 12 36.3	-5.5
KURK	Kurchatov	31.18	341	eP	P	00 13 11.0	-0.3
	comp=Z,2.3nm,0.7s,mb4.0						
ZAL	Zalesovo	32.71	350	P	P	00 13 24.9	+0.2
	comp=Z,4.4nm,0.3s,mb4.7,baz=304,slow=3.8,SNR=13						
BVAR	Borovoye Array	35.96	335	P	P	00 13 52.7	+0.2
	comp=Z,0.5nm,0.4s,mb3.8,baz=129,slow=9.5,SNR=7.0						
BRVK	Borovoye	36.02	335	eP	P	00 13 53.5	+0.4
	comp=Z,0.9nm,0.6s,mb3.9						
AKTK	Aktyubinsk	40.08	324	P	P	00 14 28.3	+1.5
AKTO	Aktyubinsk	40.08	324	P	P	00 14 28.3	+1.5
	comp=Z,1.8nm,0.3s,mb4.3,baz=124,slow=8.6,SNR=12						
WRA	Warramunga Arr	57.23	134	P	P	00 16 38.3	-1.2
	comp=Z,0.6nm,0.5s,mb3.9,baz=318,slow=7.6,SNR=18						
WB2	Warramunga Arr	57.23	134	eP	P	00 16 38.0	-1.6
FINES	FINESS Array B	60.49	329	P	P	00 17 01.0	-0.6
	comp=Z,1.9nm,0.9s,mb4.1,baz=27,slow=6.2,SNR=3.2						
SANT	Santorini	60.56	300	P	P	00 17 04.7	+2.4
	comp=Z,253nm,1.1s						
ARCES	ARCESS Array B	62.17	338	P	P	00 17 12.2	-0.5
	comp=Z,4.6nm,0.9s,mb4.5,baz=97,slow=9.8,SNR=4.9						
HFS	Hagfors	66.50	327	P	P	00 17 40.3	-0.6
	comp=Z,1.2nm,0.5s,mb4.0,baz=127,slow=7.2,SNR=4.5						
GERES	GERESS Array B	67.63	315	P	P	00 17 50.5	+2.3
	comp=Z,0.2nm,0.5s,mb3.2,baz=68,slow=5.3,SNR=3.4						
ILAR	Eielson Array	81.75	22	P	P	00 19 06.9	-1.9
	comp=Z,0.6nm,0.8s,mb3.5,baz=300,slow=5.6,SNR=8.0						
INK	Inuvik	83.52	16	P	P	00 19 17.0	-0.7
	comp=Z,0.8nm,0.5s,mb3.8,baz=269,slow=8.1,SNR=7.4						
TXAR	Lajitas Array	126.18	19	PKP	PKPdf	00 25 53.1	+1.5
	comp=Z,0.3nm,0.5s,baz=107,slow=0.5,SNR=5.9						

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*IDC **24** 00:10:07.0±3.4,1.15N×97.18E,mb3.7/5,mb1 3.8/5, mb1mx3.6/18,mbtmp3.7/5,Error ellipse: s-maj=138.9km s-min=27.0km az=54.0*

*NEIC **24** 00:10:11.7±1.0,1.15N×97.17E,h30^{km},mb4.6/2,Error ellipse: s-maj=25.9km s-min=14.5km az=71.0*

ISC 24 00:10:09.7±1.0**,1.2N**±0.1×**97.2E**±0.2**,h30**^{km}**,n10,** σ**0**^{s}**90**/10**,mb3.9**/7**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KULM	Kulim	5.37	40	eP	Pn	00 11 29.3	-0.6
YHNB	Yeheng	33.06	43	eP	P	00 16 47.2	+2.1
NWAO	Narrogin (SRO)	38.86	153	P	P	00 17 35.3	+1.1
	35nm,1.4s,mb4.9						
WRA	Warramunga Arr	42.06	122	P	P	00 18 00.4	-0.4
	0.6nm,0.5s,mb3.5,baz=301,slow=9.0,SNR=7.0						
WRAB	Tennant Creek	42.07	122	eP	P	00 17 59.6	-1.2
	7.6nm,1.2s,mb4.2						
SONM	Songino Array	47.15	8	P	P	00 18 41.6	+0.3
	0.4nm,0.4s,mb3.7,baz=198,slow=7.5,SNR=3.9						
MKAR	Makanchi Array	47.25	346	P	P	00 18 41.7	-0.3
	0.6nm,0.5s,mb3.8,baz=162,slow=9.1,SNR=13						
MKAR	Makanchi Array	47.25	346	P	P	00 18 41.7	-0.4
ZAL	Zalesovo	53.56	351	P	P	00 19 30.1	0.0
	0.9nm,0.6s,mb3.9,baz=289,slow=5.8,SNR=5.2						
BVAR	Borovoye Array	56.25	341	P	P	00 19 49.1	-0.5
	0.3nm,0.4s,mb3.6,baz=162,slow=9.1,SNR=4.0						

IDC 24 00:23:12.4±2.4**,15.17S**×**174.29W,mb4.0**/4**,mb1 4.4**/4**, mb1mx4.2**/10**,mbtmp4.0**/4**,MS4.0**/14**,Ms1 4.0**/14**, ms1mx3.9**/19**,Error ellipse: s-maj=134.8km s-min=29.8km az=153.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.73	63	Pn	Pn	00 23 48.0	-10
	13nm,0.3s,baz=250,slow=20,SNR=7.4						
AFI				Sn	Sn	00 24 15.0	-18
	26nm,0.3s,baz=58,slow=21,SNR=6.9						
AFI				LR	LR	00 24 43.8	

	comp=Z,2μm,18.8s,baz=247,slow=33						
RAR	**Rarotonga**	**15.04**	**116**	LR	LR	00 30 56.5	
	comp=Z,662nm,21.6s,baz=290,slow=31						
DZM	**Mont Dzumac**	**19.50**	**246**	LR	LR	00 33 16.3	
	comp=Z,136nm,18.2s,baz=19,slow=31						
PPT	**Papeete**	**23.83**	**99**	LR	LR	00 34 27.8	
	comp=Z,513nm,21.9s,baz=260,slow=28						
HNR	**Honiara**	**25.80**	**280**	LR	LR	00 37 25.5	
	comp=Z,192nm,18.2s,baz=107,slow=33						
TAOE	**Nuku Hiva Isla**	**33.95**	**83**	*e*LR	LR	00 38 21.5	
	2μm,30.4s						
RKT	**Rikitea**	**37.88**	**108**	*e*LR	LR	00 31 00.9	
	217nm,25.8s						
RKT	**Rikitea**	**37.88**	**108**	*e*LR	LR	00 40 19.5	
	675nm,26.5s						
STKA	**Stephens Creek**	**43.41**	**240**	LR	LR	00 48 10.2	
	comp=Z,142nm,19.6s,baz=31,slow=34						
WRA	**Warramunga Arr**	**49.06**	**257**	P	P	00 32 01.5	-2.2
	4.5nm,1.0s,baz=90,slow=7.1,SNR=14						
GUMO	**Guam**	**49.49**	**303**	LR	LR	00 51 14.7	
	comp=Z,119nm,19.0s,baz=96,slow=34						
MJAR	**Matsushiro Arr**	**68.21**	**320**	LR	LR	00 58 32.5	
	comp=Z,132nm,20.2s,baz=140,slow=31						
FX1	**Attu Island--F**	**68.63**	**352**	LR	LR	00 58 37.0	
	comp=Z,7.2nm,21.6s,baz=177,slow=31						
NVAR	**Mina Array Bea**	**74.73**	**42**	P	P	00 34 53.8	-2.4
	2.5nm,1.0s,baz=219,slow=7.6,SNR=7.4						
NVAR				LR	LR	01 01 17.5	
	comp=Z,93nm,19.2s,baz=285,slow=31						
TXAR	**Lajitas Array**	**81.19**	**56**	P	P	00 35 31.4	-0.5
	0.3nm,0.8s,baz=225,slow=3.8,SNR=3.0						
TXAR				LR	LR	01 04 03.0	
	comp=Z,73nm,18.3s,baz=320,slow=30						
ILAR	**Eielson Array**	**82.38**	**11**	P	P	00 35 36.0	-1.4
	1.6nm,1.2s,baz=173,slow=7.3,SNR=3.5						
PDAR	**Pinedale Array**	**82.67**	**42**	P	P	00 35 41.2	+1.9
	0.7nm,1.0s,baz=252,slow=4.7,SNR=3.5						
MAW	**Mawson**	**87.74**	**199**	LR	LR	01 10 50.0	
	comp=Z,73nm,19.2s,baz=74,slow=33						
YKA	**Yellowknife Ar**	**90.22**	**24**	LR	LR	01 14 49.8	
	comp=Z,133nm,18.8s,baz=225,slow=34						
PLCA	**Paso Flores**	**90.30**	**132**	LR	LR	01 07 42.3	
	comp=Z,138nm,19.1s,baz=86,slow=30						
SONM	**Songino Array**	**94.10**	**318**	LR	LR	01 12 18.1	
	comp=Z,115nm,21.5s,baz=134,slow=31						
BRTR	**Keskin Array B**	**145.43**	**320**	PKPbc	PKPbc	00 42 52.0	-1.2
	2.4nm,1.0s,baz=56,slow=4.5,SNR=5.6						
GERES	**GERESS Array B**	**145.78**	**351**	PKPbc	PKPbc	00 42 54.0	+0.2
	0.5nm,0.8s,baz=315,slow=6.9,SNR=5.3						

*IDC **24** 00:29:00.6±1.7,37.78N×144.90E,mb3.5/2,mb1 3.9/4, mb1mx3.6/22,mbtmp3.8/4,ML3.6/2,MS2.9/3,Ms1 2.9/3, ms1mx2.4/24,Error ellipse: s-maj=56.9km s-min=28.5km az=130.0*

*NIED **24** 00:29:00,38.00N×144.50E,h5^{km},Mw4.0 Best double couple: M$_0$9.87×10^{14} NP1:ϕ_s208°,δ74°,λ-90°. NP2:ϕ_s28°, δ16°,λ-91°.*

*JMA **24** 00:29:04.9±0.2,38.03N×144.54E,h54^{km},M3.5*

ISC 24 00:29:02.6±1.0,**37.97N**±0.07×**144.68E**±0.09,**h33**^{km}**,n13, $\sigma 1\overset{s}{.}08$**/17,**mb3.6**/2,**MS3.2**/1,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.61**	**296**	P	**P**	**00 29 44.3**	**+1.0**
JIO	**Ouri**	**2.67**	**282**	P	**P**	**00 29 45.1**	**+1.0**
JIO				*e*S	**S**	**00 30 14.6**	**-1.0**
MIYJ	**Miyakonagasawa**	**2.75**	**307**	P	**P**	**00 29 45.8**	**+0.5**
MIYJ				*e*S	**S**	**00 30 17.3**	**-0.4**
JMK	**Ichinoseki**	**2.88**	**291**	P	**P**	**00 29 48.2**	**+0.9**
JCH	**Churui**	**4.75**	**348**	P	**P**	**00 30 12.8**	**-0.9**
JCH				*e*S	**S**	**00 31 03.2**	**-5.2**
JRY	**Ryogami san**	**5.01**	**249**	P	**P**	**00 30 17.4**	**-0.1**
JRY				*e*S	**S**	**00 31 10.1**	**-5.0**
MJAR	**Matsushiro Arr**	**5.35**	**257**	Pn	**Pn**	**00 30 23.6**	**+1.3**
	1.0nm,0.3s,baz=79,slow=16,SNR=7.0						
JTKR	**Abashiri--Toko**	**6.03**	**355**	P	**P**	**00 30 30.2**	**-1.5**
JTKR				*e*S	**S**	**00 31 34.2**	**-6.2**
JHJ	**Hachijo jima 2**	**6.27**	**221**	Pn	**Pn**	**00 30 33.0**	**-2.2**
	7.0nm,0.3s,baz=63,slow=14,SNR=2.5						
JHJ				Sn	**Sn**	**00 31 40.8**	**-5.8**
	6.7nm,0.3s,baz=246,slow=18,SNR=2.7						
JHJ				LR	LR	00 33 06.2	
	comp=Z,84nm,20.9s,baz=69,slow=39						
JNU	**Nakatsue**	**12.23**	**251**	LR	LR	00 36 43.0	
	comp=Z,30nm,18.5s,baz=237,slow=38						
SONM	**Songino Array**	**29.46**	**302**	LR	LR	00 47 49.8	
	comp=Z,55nm,18.1s,MS3.2,baz=91,slow=38						
ILAR	**Eielson Array**	**47.31**	**33**	P	**P**	**00 37 35.8**	**+1.4**
	0.3nm,0.8s,mb3.3,baz=270,slow=8.1,SNR=2.5						
WRA	**Warramunga Arr**	**58.41**	**191**	P	**P**	**00 38 57.1**	**-0.3**
	0.8nm,0.7s,mb3.9,baz=12,slow=7.1,SNR=7.0						

*IDC **24** 01:30:30.6±1.5,53.96N×164.20W,mb3.7/8,mb1 3.8/9, mb1mx3.7/23,mbtmp3.6/9,ML2.9/1,Error ellipse: s-maj=35.6km s-min=22.9km az=13.0*

*NEIC **24** 01:30:37.1±0.5,53.95N×164.04W,h48^{km}±5^{km}, ML3.6(AEIC),Error ellipse: s-maj=9.7km s-min=3.4km az=158.0*

ISC 24 01:30:36.1±0.7,**53.90N**±0.07×**163.99W**±0.07,**h58**^{km}±7^{km}, **n35, $\sigma 0\overset{s}{.}82$**/44,**mb3.8**/7,**Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	**West Dahl East**	**0.67**	**329**	P	**P**	**01 30 49.7**	**-0.2**
WESS	**West Dahl Sout**	**0.72**	**324**	P	**P**	**01 30 50.4**	**-0.2**
WESS				S	**S**	**01 31 01.2**	**-0.1**
WESN	**West Dahl Nort**	**0.75**	**333**	P	**P**	**01 30 51.2**	**+0.3**
WFAR	**Faris Peak**	**0.79**	**324**	P	**P**	**01 30 51.4**	**0.0**
SSLS	**Shishaldin Sou**	**0.81**	**360**	P	**P**	**01 30 51.6**	**-0.1**
SSLS				S	**S**	**01 31 03.3**	**0.0**
WPOG	**Pogromni**	**0.82**	**328**	P	**P**	**01 30 52.0**	**+0.1**
WTUG	**Tugumak**	**0.97**	**347**	P	**P**	**01 30 54.1**	**+0.1**
WTUG				S	**S**	**01 31 08.1**	**+0.9**
AKA	**Akutan**	**1.07**	**283**	P	**P**	**01 30 55.4**	**0.0**
AKUT	**Akutan**	**1.07**	**283**	P	**P**	**01 30 55.2**	**-0.2**
AKUT				S	**S**	**01 31 09.9**	**+0.3**
AHB	**Akutan Harbor**	**1.10**	**282**	P	**P**	**01 30 55.5**	**-0.2**
AKLV	**Akutan Long Va**	**1.19**	**283**	P	**P**	**01 30 56.6**	**-0.3**
LVA	**Lava Point**	**1.23**	**283**	P	**P**	**01 30 57.4**	**-0.1**
DRIA	**Deer Island**	**1.47**	**43**	P	**P**	**01 30 59.6**	**-1.3**
DRIA				S	**S**	**01 31 19.2**	**0.0**
UNV	**Unalaska Valle**	**1.49**	**269**	P	**P**	**01 31 00.1**	**-1.1**
UNV				S	**S**	**01 31 21.9**	**+2.2**
MTBL	**Makushin Table**	**1.59**	**273**	P	**P**	**01 31 02.4**	**-0.1**
MNAT	**Makushin Natee**	**1.59**	**270**	P	**P**	**01 31 01.9**	**-0.7**
DTNA	**Dutton South F**	**1.61**	**38**	P	**P**	**01 31 02.2**	**-0.7**
MSW	**Makushin Switc**	**1.65**	**272**	P	**P**	**01 31 02.8**	**-0.6**
MCIR	**Makushin Cirqu**	**1.71**	**273**	P	**P**	**01 31 04.5**	**+0.2**
DOL	**Dolgoi Island**	**1.76**	**44**	P	**P**	**01 31 04.1**	**-0.9**
DOL				S	**S**	**01 31 26.9**	**+0.7**
HAG	**Hague Volcano**	**1.87**	**40**	P	**P**	**01 31 06.4**	**0.0**
PN7A	**Pavlof North-7**	**1.92**	**36**	P	**P**	**01 31 08.2**	**+1.1**
PVV	**Pavlof Volcano**	**1.95**	**40**	P	**P**	**01 31 07.7**	**+0.2**
PVV				S	**S**	**01 31 30.3**	**-0.5**
BLHA	**Black Hill**	**2.12**	**31**	P	**P**	**01 31 10.7**	**+0.8**
OKCD	**Okmok Cone D**	**2.50**	**261**	P	**P**	**01 31 16.0**	**+0.7**
SDPT	**Sand Point**	**2.51**	**53**	P	**P**	**01 31 14.9**	**-0.5**
SDPT				S	**S**	**01 31 45.4**	**+0.6**
ILAR	**Eielson Array**	**13.90**	**32**	Pn	**P**	**01 33 47.2**	**-4.1**
	0.0nm,0.3s,baz=222,slow=11,SNR=2.9						
INK	**Inuvik**	**20.29**	**33**	P	**P**	**01 35 05.8**	**-3.4**
	0.5nm,0.3s,baz=230,slow=17,SNR=3.5						
NVAR	**Mina Array Bea**	**34.55**	**98**	P	**P**	**01 37 22.3**	**+1.5**
	0.3nm,0.5s,mb3.5,baz=312,slow=7.8,SNR=3.6						
TXAR	**Lajitas Array**	**49.56**	**95**	P	**P**	**01 39 23.7**	**+0.7**
	0.5nm,0.8s,mb3.6,baz=306,slow=6.3,SNR=5.5						
SONM	**Songino Array**	**53.25**	**303**	P	**P**	**01 39 49.4**	**-1.2**
	0.3nm,0.4s,mb3.6,baz=42,slow=7.9,SNR=4.5						
ARCES	**ARCESS Array B**	**56.68**	**356**	P	**P**	**01 40 13.2**	**-2.0**
	3.3nm,0.9s,mb4.4,baz=10,slow=10,SNR=2.4						
FINES	**FINESS Array B**	**64.72**	**355**	P	**P**	**01 41 10.0**	**+0.3**
	1.6nm,0.8s,mb4.1,baz=27,slow=4.3,SNR=4.0						
MKAR	**Makanchi Array**	**65.03**	**316**	P	**P**	**01 41 11.6**	**-0.3**
	0.3nm,0.5s,mb3.6,baz=44,slow=6.6,SNR=3.9						
BRTR	**Keskin Array B**	**85.52**	**346**	P	**P**	**01 43 10.4**	**+2.0**
	0.8nm,0.8s,mb4.0,baz=22,slow=6.7,SNR=3.8						

*GUC **24** 01:42:07.0±0.8,31.54S×69.76W,h144^{km}±10^{km},MD3.8, ML4.0*

*NEIC **24** 01:42:07.0,31.54S×69.76W,h144^{km},MD3.8(GUC),After GUC.*

ISC 24 01:42:06.3±0.8,**31.50S**±0.04×**69.6W**±0.1,**h130**^{km}±12^{km}, **n23, $\sigma 0\overset{s}{.}83$**/34,**mb4.4**/1,**6C-5D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.28**	**285**	⇓*i*P	**P**	**01 42 32.7**	**+0.4**
CMCH				*i* S	**S**	**01 42 52.1**	**+0.1**
CMCH				AMP		01 42 54.2	
	comp=E,6μm,0.4s						
JACH	**Jahuel**	**1.47**	**216**	*e*P	**P**	**01 42 34.8**	**+0.4**
JACH				*i* S	**S**	**01 42 56.3**	**+0.5**
MDZ	**Mendoza**	**1.50**	**157**	⇓*i*P	**P**	**01 42 34.3**	**-0.5**
MDZ				*i* S	**S**	**01 42 46.0**	**-11**
CHNG	**Los Chungos**	**1.70**	**257**	⇑*i*P	**P**	**01 42 37.0**	**-0.1**
CHNG				*i* S	**S**	**01 42 58.9**	**-1.6**
CHNG				AMP		01 43 05.0	
	comp=E,850nm,0.6s						
ROCH	**El Roble**	**1.91**	**220**	⇓*i*P	**P**	**01 42 39.9**	**+0.3**
CLCH	**Cerro Calan**	**2.06**	**203**	*e*P	**P**	**01 42 42.6**	**+1.2**
CLCH				*i* S	**S**	**01 43 09.3**	**+1.2**
CLCH				AMP		01 43 12.0	
	comp=E,1μm,0.8s						
FSR	**Penalolen**	**2.13**	**202**	*e*P	**P**	**01 42 42.7**	**+0.4**
FSR				*i* S	**S**	**01 43 10.2**	**+0.4**
FSR				AMP		01 43 12.5	
	comp=E,952nm,0.2s						
LSCH	**La Serena**	**2.15**	**317**	*e*P	**P**	**01 42 43.4**	**+0.8**
LSCH				*i* S	**S**	**01 43 09.9**	**-0.3**
LSCH				AMP		01 43 10.6	
	comp=N,778nm,0.2s						
RCDM	**Rinconada Maip**	**2.24**	**208**	*e*P	**P**	**01 42 43.8**	**0.0**
RCDM				*i* S	**S**	**01 43 11.9**	**-0.4**
RCDM				AMP		01 43 12.9	
	comp=E,1μm,0.1s						
ANTU	**Antumapu**	**2.25**	**203**	*e*P	**P**	**01 42 44.2**	**+0.4**
ANTU				*i* S	**S**	**01 43 12.1**	**-0.4**
ANTU				AMP		01 43 13.8	
	comp=N,1μm,0.4s						
LMEL	**Las Melosas**	**2.40**	**193**	*e*P	**P**	**01 42 46.4**	**+0.6**
LMEL				AMP		01 43 22.1	
	comp=N,684nm,0.3s						
TACH	**Talagante**	**2.44**	**208**	⇓*i*P	**P**	**01 42 45.9**	**-0.4**
CHCH	**Chadas Angostu**	**2.59**	**201**	⇑*i*P	**P**	**01 42 48.2**	**-0.2**
CHCH				*i* S	**S**	**01 43 19.8**	**-0.5**
CACH	**El Canelo**	**2.75**	**198**	⇑*i*P	**P**	**01 42 51.1**	**+0.7**
CICH	**Cipreses**	**2.90**	**194**	*e*P	**P**	**01 42 53.0**	**+0.5**
CICH				*i* S	**S**	**01 43 27.4**	**0.0**
LNV	**Longovilo**	**2.90**	**212**	*e*P	**P**	**01 42 50.7**	**-1.7**
SFDO	**San Fernando**	**3.33**	**201**	⇓*i*P	**P**	**01 42 57.0**	**-1.2**
TRQA	**Tornquist**	**9.03**	**138**	*e*Pn	**P**	**01 44 13.0**	**-1.6**
	comp=N,11nm,0.6s						
NNA	**Nana**	**20.55**	**339**	P	**P**	**01 46 32.1**	**-4.3**
	comp=N,21nm,1.2s						
PMSA	**Palmer Station**	**33.47**	**176**	*e*P	**P**	**01 48 31.5**	**-3.2**
	comp=N,9.3nm,1.1s,mb4.4						
VNA3	**Neumayer Olymp**	**50.90**	**159**	⇑*i*	**P**	**01 51 04.6**	**+9.0**
VNA1	**Neumayer--Stat**	**51.17**	**158**	⇑*i*	**P**	**01 51 05.9**	**+8.2**
VNA2	**Neumayer--Watz**	**51.52**	**158**	⇑*i*	**P**	**01 51 01.8**	**+1.5**

IDC 24 02:09:54.1±2.1,**3.16N**×**132.96E,mb4.0**/5,**mb1 4.2**/5, **mb1mx4.0**/16,**mbtmp4.0**/5,**MS3.1**/2,**Ms1 3.0**/2, **ms1mx2.2**/20,**Error ellipse: s-maj=102.7km s-min=22.8km az=82.0,Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**15.68**	**48**	LR	LR	02 18 41.6	
	comp=Z,36nm,20.8s,baz=72,slow=34						
FITZ	**Fitzroy Crossi**	**22.32**	**199**	P	P	02 14 54.1	-1.0
	5.0nm,0.8s,baz=82,slow=10,SNR=3.9						
WRA	**Warramunga Arr**	**23.00**	**177**	P	P	02 15 00.4	-1.4
	0.6nm,0.5s,baz=354,slow=10,SNR=5.9						
STKA	**Stephens Creek**	**35.79**	**167**	LR	LR	02 31 41.9	
	comp=Z,51nm,20.4s,baz=216,slow=36						
SONM	**Songino Array**	**50.05**	**337**	P	P	02 18 50.6	-2.0
	0.5nm,0.6s,baz=140,slow=8.5,SNR=4.5						
MKAR	**Makanchi Array**	**61.67**	**323**	P	P	02 20 14.2	-2.1
	1.1nm,0.4s,baz=108,slow=8.5,SNR=21						
ARCES	**ARCESS Array B**	**93.10**	**340**	P	P	02 23 09.2	-1.6
	4.6nm,0.9s,baz=68,slow=6.5,SNR=4.6						

*ATH **24** 02:52:13.3,40.31N×25.25E,h26^{km}±1^{km},MD3.0/5*

*THE **24** 02:52:13.8,40.28N×25.30E,h5^{km},ML2.7*

*NEIC **24** 02:52:13.3,40.31N×25.25E,h26^{km},MD3.0(ATH),After ATH.*

*CSEM **24** 02:52:14.1±0.2,40.30N×25.30E,h20^{km},ML2.7,Error ellipse: s-maj=6.2km s-min=5.2km az=141.0*

ISC 24 02:52:14.1±0.7,**40.26N**±0.05×**25.35E**±0.06,**h21**^{km}±9^{km}, **n10, $\sigma 0\overset{s}{.}97$**/15,**2C,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.38**	**199**	⇑*i*PB	**Pb**	**02 52 22.4**	**+0.3**
LOS	**Limnos**	**0.38**	**212**	*e*Pg	**Pb**	**02 52 21.9**	**-0.2**
LOS				*e*Sg	**Sb**	**02 52 26.7**	**-0.9**
ALN	**Alexandroupoli**	**0.83**	**40**	*e*Pg	**Pb**	**02 52 29.8**	**+0.1**
ALN				*e*Sg	**Sb**	**02 52 41.3**	**+0.8**
RDO	**Rodhopi**	**0.90**	**9**	⇑*i*PN	**Pn**	**02 52 30.0**	**-1.5**
OUR	**Ouranopolis**	**1.05**	**275**	*e*Pg	**Pb**	**02 52 32.9**	**-0.5**
OUR				*e*Sg	**Sb**	**02 52 47.2**	**+0.5**
PRK	**Paraskevi**	**1.24**	**144**	*e*PN	**Pn**	**02 52 38.0**	**+1.6**
PAIG	**Paliouri**	**1.32**	**256**	*e*Pg	**Pn**	**02 52 37.1**	**-0.5**
PAIG				*e*Sg	**Sb**	**02 52 55.5**	**+0.9**
PLG	**Polygyros**	**1.46**	**275**	*e*PN	**Pn**	**02 52 38.3**	**-1.2**
NVR	**Nevrokopi**	**1.57**	**315**	*e*PN	**Pn**	**02 52 40.5**	**-0.6**
SOH	**Sokhos**	**1.62**	**291**	*e*Pg	**Pn**	**02 52 41.1**	**-0.7**
SOH				*e*Sg	**Sn**	**02 53 04.3**	**+2.1**

IDC 24 03:02:13.0±3.1,**8.86S**×**115.45E,mb3.4**/3,**mb1 3.5**/3, **mb1mx3.4**/14,**mbtmp3.4**/3,**Error ellipse: s-maj=139.6km s-min=30.5km az=49.0,Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.34**	**123**	P	P	03 07 01.9	-2.2
	0.3nm,0.5s,baz=298,slow=12,SNR=8.4						
SONM	**Songino Array**	**57.01**	**353**	P	P	03 12 00.9	-2.0
	0.4nm,0.5s,baz=163,slow=8.3,SNR=5.3						
MKAR	**Makanchi Array**	**62.78**	**335**	P	P	03 12 40.1	-2.6
	0.3nm,0.3s,baz=149,slow=6.6,SNR=8.1						

*NEIC **24** 03:08:56.4,16.02N×97.91W,h20^{km},MD3.9(MEX),After MEX.*

MEX 24 03:08:56.4±0.8,**16.02N**×**97.91W,h20**^{km}±31^{km},**MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.42**	**331**	*i* P	Pb	03 09 03.8	-1.3
PNIG				*i* S	Sb	03 09 09.1	-2.0
VHO	**Vista Hermosa**	**1.54**	**47**	*i* P	Pn	03 09 20.4	-2.7
VHO				*i* S	Sn	03 09 38.6	-4.1
OXX	**Oaxaca**	**1.55**	**47**	*i* P	Pn	03 09 20.3	-3.0
OXX				*i* S	Sn	03 09 38.8	-4.2
HUIG	**Huatulco**	**1.75**	**98**	*i* P	Pn	03 09 23.4	-2.8
HUIG				*i* S	Sn	03 09 42.7	-5.4
ACX	**Acapulco**	**2.10**	**294**	*i* P	Pn	03 09 32.5	+1.4
CAIG	**El Cayaco**	**2.48**	**295**	*e*P	Pn	03 09 34.3	-2.3
CAIG				*i* S	Sn	03 10 02.0	-4.6
PLIG	**Platanillo**	**2.81**	**327**	*i* P	Pn	03 09 39.1	-2.1
PLIG				*i* S	Sn	03 10 10.7	-4.2
CMIG	**Matias Romero**	**3.09**	**69**	*i* P	Pn	03 09 40.6	-4.7
CMIG				*i* S	Sn	03 10 16.1	-6.0
PPM	**Popocatepetl**	**3.11**	**347**	*i* P	Pn	03 09 40.5	-5.0
PPM				*e*P		03 09 46.0	
PPM				*i* S	Sn	03 10 18.2	-4.2
PPM	**Popocatepetl**	**3.11**	**347**	*i* P	Pn	03 09 40.5	-5.0
PPM				*i* S	Sn	03 10 18.2	-4.2

*TIF **24** 03:20:25.6,42.87N×46.86E,h0^{km}±3^{km}*

MOS 24 03:20:24.5±1.7,**42.89N**×**46.85E,h4**^{km},**mb3.5**/1,**2D, Error ellipse: s-maj=16.2km s-min=8.6km az=103.5, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRNR	**Karanay**	**0.08**	**146**	*e*PG	Pg	03 20 26.5	+0.3
KRNR				pmax	pmax		
	comp=Z,224nm,0.2s						
DBC	**Dubki**	**0.13**	**354**	*e*PG	Pg	03 20 28.0	+0.8
DBC				pmax	pmax		
	comp=Z,185nm,0.1s						
UNCR	**Uncukul**	**0.18**	**193**	⇓*i*PG	Pg	03 20 30.0	+1.8
UNCR				*e*S	Sg	03 20 33.0	+2.4
UNCR				pmax	pmax		
	comp=Z,143nm,0.2s						
BUJR	**Buynaksk**	**0.20**	**109**	*i* PG	Pg	03 20 31.5	+2.9
BUJR				*e*S	Sg	03 20 35.5	+4.2
DLMR	**Dylym**	**0.24**	**318**	⇓*i*PG	Pg	03 20 33.0	+3.6
DLMR				*i* S	Sg	03 20 38.0	+5.4
DLMR				pmax	pmax		
	comp=Z,700nm,0.2s						
ARKR	**Arakani**	**0.31**	**160**	*i* PG	Pg	03 20 32.5	+1.8
ARKR				*i* S	Sg	03 20 36.8	+2.0
ARKR				pmax	pmax		
	comp=Z,69nm,0.2s						
MAK	**Makhachkala**	**0.49**	**81**	*e*PG	Pg	03 20 41.5	+7.3
MAK				pmax	pmax		
	comp=N,490nm,0.5s						
MAK				pmax	pmax		
	comp=E,875nm,0.5s						
GNBR	**Gunib**	**0.51**	**170**	*e*PG	Pg	03 20 39.5	+4.8
GNBR				*e*S	Sg	03 20 47.0	+5.6
GNBR				pmax	pmax		
	comp=Z,42nm,0.3s						
BTLR	**Botlikh**	**0.52**	**244**	*i* PG	Pg	03 20 36.5	+1.7
BTLR				*e*S	Sg	03 20 45.0	+3.3
BTLR				pmax	pmax		
	comp=Z,29nm,0.2s						

*IDC **24** 03:20:33.5±1.2,3.07N×132.52E,mb4.0/6,mb1 4.2/6, mb1mx4.0/17,mbtmp4.1/6,MS3.4/3,Ms1 3.4/3, ms1mx2.9/21,Error ellipse: s-maj=74.3km s-min=18.4km az=75.0*

*NEIC **24** 03:20:35.0±0.6,3.00N×132.45E,h10^{km},mb4.3/4,Error ellipse: s-maj=24.7km s-min=9.9km az=71.0*

ISC 24 03:20:33.3±0.8,**3.03N**±0.10×**132.4E**±0.2,**h10**^{km}**,n16, $\sigma 0\overset{s}{.}80$**/13,**mb4.1**/10,**MS3.3**/2,**Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**16.16**	**49**	LR	LR	03 29 53.1	
	comp=Z,88nm,19.4s,baz=309,slow=35						
KKM	**Kota Kinabalu**	**16.43**	**281**	P	**P**	**03 24 25.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**22.04**	**197**	P	**P**	**03 25 31.9**	**+1.9**
	8.5nm,0.9s,mb4.2,baz=5.9,slow=13,SNR=3.8						
FITZ				LR	LR	03 33 31.5	
	comp=Z,142nm,22.0s,MS3.3,baz=233,slow=35						
WRA	**Warramunga Arr**	**22.91**	**175**	P	**P**	**03 25 37.8**	**-0.9**
	1.9nm,0.7s,mb3.6,baz=352,slow=9.9,SNR=12						
WB2	**Warramunga Arr**	**22.91**	**175**	*e*P	**P**	**03 25 37.9**	**-0.8**
JNU	**Nakatsue**	**29.97**	**357**	LR	LR	03 36 27.2	
	comp=Z,67nm,20.4s,MS3.3,baz=55,slow=32						
STKA	**Stephens Creek**	**35.79**	**167**	P	**P**	**03 27 34.7**	**-0.2**
	3.8nm,1.0s,mb4.3,baz=323,slow=10,SNR=4.6						
ULN	**Ulaanbaatar**	**49.73**	**338**	*e*P	**P**	**03 29 28.6**	**+0.9**
	3.9nm,1.0s,mb4.4						
SONM	**Songino Array**	**49.96**	**337**	P	**P**	**03 29 29.9**	**+0.4**
	0.8nm,1.0s,mb3.7,baz=145,slow=7.2,SNR=5.9						
MKAR	**Makanchi Array**	**61.45**	**323**	P	**P**	**03 30 52.2**	**-0.2**
	1.5nm,0.6s,mb4.3,baz=121,slow=7.1,SNR=6.8						
MKAR	**Makanchi Array**	**61.45**	**323**	P	**P**	**03 30 52.2**	**-0.2**
KURK	**Kurchatov**	**65.45**	**326**	*e*P	**P**	**03 31 18.5**	**-0.2**
	4.2nm,0.9s,mb4.5						
BVAR	**Borovoye Array**	**71.05**	**326**	P	**P**	**03 31 53.8**	**+0.3**
	2.5nm,0.9s,mb4.2,baz=117,slow=6.6,SNR=8.2						
BRVK	**Borovoye**	**71.12**	**326**	*e*P	**P**	**03 31 52.8**	**-1.1**
	2.5nm,0.9s,mb4.1						
VNDA	**Vanda**	**82.07**	**174**	*e*P	**P**	**03 32 55.5**	**+0.7**
	2.7nm,1.3s,mb4.0						
CFAA	**Coronel Fontan**	**145.55**	**148**	PKPbc	PKPbc	03 40 13.3	+0.2
	0.3nm,0.8s,baz=261,slow=5.7,SNR=6.0						

*NIED **24** 03:21:00,38.20N×144.80E,h11^{km},Mw3.9 Best double couple: M$_0$8.01×10^{14} NP1:ϕ_s209°,δ69°,λ-90°. NP2:ϕ_s28°, δ21°,λ-91°.*

*IDC **24** 03:21:13.6±1.3,38.09N×145.11E,mb3.7/6,mb1 3.9/8, mb1mx3.7/22,mbtmp3.7/8,ML3.6/2,MS3.2/3,Ms1 3.2/3, ms1mx2.6/24,Error ellipse: s-maj=28.5km s-min=23.9km az=111.0*

*NEIC **24** 03:21:14.9±0.6,38.06N×145.15E,h10^{km},mb4.9/6, MW3.9(NIED),Error ellipse: s-maj=14.3km s-min=9.7km az=152.0*

*JMA **24** 03:21:18.7±0.2,38.21N×144.77E,h52^{km},M4.0*

ISC 24 03:21:16.4±1.2,**38.26N**±0.05×**144.94E**±0.07,**h35**^{km}±11^{km}, **n28, $\sigma 1\overset{s}{.}28$**/39,**mb4.2**/11,**MS4.2**/1,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.69**	**289**	P	**P**	**03 21 59.3**	**+1.1**
OFUJ				*e*S	**S**	**03 22 29.4**	**-0.5**
MIYJ	**Miyakonagasawa**	**2.77**	**299**	P	**P**	**03 21 59.8**	**+0.4**
MIYJ				*e*S	**S**	**03 22 31.6**	**-0.3**
JIO	**Ouri**	**2.83**	**275**	P	**P**	**03 22 01.3**	**+1.1**
JIO				S	**S**	**03 22 32.6**	**-0.9**
JMK	**Ichinoseki**	**2.99**	**285**	P	**P**	**03 22 03.6**	**+1.0**
JMK				*e*S	**S**	**03 22 37.5**	**-0.2**
JOT	**Ohata**	**4.33**	**317**	P	**P**	**03 22 24.0**	**+2.5**
JCH	**Churui**	**4.52**	**345**	P	**P**	**03 22 25.6**	**+1.3**
JCH				*e*S	**S**	**03 23 13.8**	**-2.5**
NEM2	**Nemuro 2**	**5.14**	**7**	P	**P**	**03 22 31.5**	**-1.6**
NEM2				*e*S	**S**	**03 23 26.9**	**-5.1**
JRY	**Ryogami san**	**5.31**	**247**	P	**P**	**03 22 34.5**	**-1.0**
JRY				*e*S	**S**	**03 23 31.0**	**-5.4**
MJAR	**Matsushiro Arr**	**5.62**	**254**	Pn	**P**	**03 22 40.1**	**+0.3**
	1.9nm,0.3s,baz=76,slow=16,SNR=14						
MJAR				Sn	**S**	**03 23 44.3**	**+0.2**
	0.8nm,0.3s,baz=88,slow=28,SNR=3.1						
MJAR				LR	LR	03 25 06.0	
	comp=Z,121nm,20.7s,baz=70,slow=41						
MAJO	**Matsushiro**	**5.62**	**254**	*e*Pn	**P**	**03 22 39.4**	**-0.4**
	12nm,0.5s						
MAT	**Matsushiro**	**5.62**	**254**	P	**P**	**03 22 39.6**	**-0.2**
MAT				*e*S	**S**	**03 23 41.7**	**-2.4**
MAT	**Matsushiro**	**5.62**	**254**	*e*P	**P**	**03 22 40.0**	**+0.2**
	10nm,0.8s						
MAT				*e*S	**S**	**03 23 45.0**	**+0.9**
JTKR	**Abashiri--Toko**	**5.76**	**353**	P	**P**	**03 22 41.8**	**0.0**
JTKR				*e*S	**S**	**03 23 43.4**	**-4.2**
JHR	**Hokuryu**	**6.00**	**337**	*e*S	**S**	**03 23 53.3**	**-0.2**
ASAJ	**Asahikawa**	**6.12**	**344**	Pn	**P**	**03 22 46.4**	**-0.3**
	1.4nm,0.3s,baz=157,slow=15,SNR=6.8						
ASAJ				Sn	**S**	**03 23 55.8**	**-0.7**
	1.0nm,0.3s,baz=180,slow=33,SNR=4.2						
ASAJ				LR	LR	03 25 59.5	
	comp=Z,67nm,19.4s,baz=10,slow=45						
SONM	**Songino Array**	**29.48**	**301**	P	**P**	**03 27 22.2**	**+3.0**
	0.3nm,0.6s,mb3.2,baz=104,slow=6.4,SNR=3.8						
QIZ	**Qiongzhong**	**35.98**	**248**	*e*P	**P**	**03 28 12.8**	**-3.2**
	152nm,1.7s						
MKAR	**Makanchi Array**	**45.85**	**302**	P	**P**	**03 29 38.6**	**+1.8**
	0.7nm,0.7s,mb3.7,baz=63,slow=9.7,SNR=3.0						
ILAR	**Eielson Array**	**46.96**	**33**	P	**P**	**03 29 46.6**	**+1.3**
	0.7nm,0.8s,mb3.6,baz=259,slow=5.8,SNR=6.6						
BVAR	**Borovoye Array**	**51.82**	**312**	P	**P**	**03 30 24.8**	**+2.0**
	1.0nm,0.7s,mb3.8,baz=68,slow=8.0,SNR=4.8						
CTAO	**Charters Tower**	**58.05**	**179**	P	**P**	**03 31 07.0**	**-1.5**
	7.6nm,1.2s,mb4.6						
WRA	**Warramunga Arr**	**58.74**	**192**	P	**P**	**03 31 12.1**	**-1.3**
	0.7nm,0.9s,mb3.7,baz=12,slow=7.3,SNR=9.1						
FINES	**FINESS Array B**	**69.01**	**333**	P	**P**	**03 32 21.1**	**+1.2**
	1.4nm,0.7s,mb4.0,baz=342,slow=8.8,SNR=3.3						
SUMG	**Summit**	**69.44**	**1**	*e*P	**P**	**03 32 20.6**	**-1.8**
	8.7nm,1.1s,mb4.6						
KIV	**Kislovodsk**	**72.19**	**312**	P	**P**	**03 32 42.4**	**+3.0**
	17nm,1.2s,mb4.9						
BW06	**Boulder Array**	**74.80**	**47**	P	**P**	**03 32 54.5**	**-0.1**
	7.9nm,1.5s,mb4.4						
URZ	**Urewera**	**81.70**	**155**	LR	LR	04 02 00.1	
	comp=Z,111nm,21.2s,MS4.2,slow=30						
SCHQ	**Schefferville**	**83.36**	**18**	P	**P**	**03 33 36.4**	**-4.3**
	21nm,1.2s,mb5.0						

*IDC **24** 03:22:37.9±1.2,9.82S×160.92E,h102^{km}±7^{km},mb4.1/8, mb1 4.2/8,mb1mx4.0/16,mbtmp4.5/8,Error ellipse: s-maj=22.1km s-min=15.3km az=149.0*

*NEIC **24** 03:22:38.3±1.0, 9.49S×160.80E, mb4.2/5, Error ellipse: s-maj=19.5km s-min=17.2km az=74.0*

ISC 24 03:22:36.1±0.8**, 9.85S**±0.10×**161.0E**±0.1**, h104^{km}, h104^{km}**±1.4^{km}**:pP-P, n22,** σ**0^{s}88**/23**, mb4.2**/10**, 1D, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.08	293	P	P	03 22 58.2	+0.3
	972nm,0.3s,baz=155,slow=4.8,SNR=149						
HNR				S	S	03 23 15.0	+0.7
	2μm,0.3s,baz=239,slow=5.9,SNR=14						
DZM	Mont Dzumac	13.24	157	eP	P	03 25 48.3	+7.2
DZM	Mont Dzumac	13.24	157	P	P	03 25 48.4	+7.3
	0.9nm,0.3s,baz=72,slow=16,SNR=27						
CTA	Charters Tower	17.45	233	eP	P	03 26 38.1	+3.6
	6.7nm,0.8s						
CTA	Charters Tower	17.45	233	P	P	03 26 38.4	+3.9
	0.6nm,0.3s,baz=61,slow=14,SNR=11						
CTAO	Charters Tower	17.45	233	eP	P	03 26 37.9	+3.4
	9.4nm,0.8s						
WRAB	Tennant Creek	27.55	246	eP	P	03 28 15.0	-0.5
	10nm,0.8s,mb4.4						
WB2	Warramunga Arr	27.55	246	⇓iP	P	03 28 15.4	-0.1
WRA	Warramunga Arr	27.57	246	P	P	03 28 15.5	-0.1
	7.2nm,0.6s,mb4.4,baz=75,slow=9.4,SNR=56						
STKA	Stephens Creek	28.32	216	P	P	03 28 23.1	+0.9
	2.1nm,0.4s,mb4.0,baz=49,slow=15,SNR=8.5						
STKA	Stephens Creek	28.32	216	eP	P	03 28 23.0	+0.8
ASPA	Alice Springs	29.25	239	eP	P	03 28 29.7	-0.8
FITZ	Fitzroy Crossi	35.18	253	eP	P	03 29 21.3	-0.8
	4.0nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	35.18	253	P	P	03 29 21.5	-0.6
	5.9nm,0.7s,mb4.5,baz=61,slow=10,SNR=19						
KSM	Kuching	51.66	280	P	P	03 31 31.5	-3.3
ASAJ	Asahikawa	56.24	344	P	P	03 32 08.1	+0.2
	12nm,1.0s,mb4.9,baz=209,slow=10,SNR=5.0						
FX1	Attu Island--F	63.35	8	P	P	03 32 56.9	+0.5
	12nm,0.7s,mb4.9,baz=254,slow=7.4,SNR=3.1						
VNDA	Vanda	67.65	180	eP	P	03 33 24.3	+0.8
	1.3nm,0.7s,mb3.9						
SONM	Songino Array	74.97	325	P	P	03 34 08.0	+0.4
	2.5nm,0.8s,mb4.0,baz=139,slow=5.1,SNR=15						
SONM				pP	pP	03 34 34.1	-0.3
	0.8nm,0.7s,baz=127,slow=5.7,SNR=2.7						
ILAR	Eielson Array	83.94	20	P	P	03 34 55.0	-0.4
	0.2nm,0.5s,mb3.2,baz=247,slow=4.9,SNR=8.8						
ILAR				pP	pP	03 35 22.6	0.0
	0.3nm,0.5s,baz=236,slow=5.2,SNR=3.2						
MKAR	Makanchi Array	89.45	318	P	P	03 35 21.9	-0.6
	0.7nm,0.5s,mb4.0,baz=99,slow=5.9,SNR=13						
MKAR				pP	pP	03 35 49.9	-0.3
	0.2nm,0.6s,baz=100,slow=8.8,SNR=1.5						
MKAR	Makanchi Array	89.45	318	P	P	03 35 21.9	-0.6
MKAR				pP	pP	03 35 49.9	-0.3

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*IDC **24** 03:24:20.5±1.1, 10.84N×43.47W, mb4.0/6, mb1 4.2/6, mb1mx3.8/22, mbtmp4.0/6, MS3.8/11, Ms1 3.8/11, ms1mx3.5/21, Error ellipse: s-maj=29.9km s-min=25.8km az=109.0*

ISC 24 03:24:20.4±0.7**, 10.9N**±0.1×**43.4W**±0.1**, h10^{km}, n24,** σ**1^{s}08**/11**, mb4.0**/6**, MS3.8**/11**, 3C, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRM	Caravelle	17.48	285	eP	P	03 28 25.6	-0.5
FDF	Fort de France	17.70	284	⇑eP	P	03 28 30.1	+1.3
SJG	San Juan	23.13	291	LR	LR	03 36 22.1	
	comp=Z,142nm,19.0s,MS3.4,baz=273,slow=31						
BDFB	Brasilia	26.70	190	LR	LR	03 40 04.6	
	comp=Z,196nm,18.1s,MS3.7,baz=180,slow=35						
ROSC	El Rosal	31.16	261	LR	LR	03 44 07.0	
	comp=Z,269nm,18.5s,MS3.9,baz=59,slow=38						
SIV	San Ignacio	31.87	213	P	P	03 30 47.8	-0.5
	2.2nm,0.9s,mb4.0,baz=46,slow=9.6,SNR=14						
LPAZ	La Paz	36.38	223	P	P	03 31 27.2	+0.2
	2.9nm,0.8s,mb4.3,baz=38,slow=6.1,SNR=15						
LPAZ				LR	LR	03 45 38.7	
	comp=Z,97nm,21.2s,MS3.5,baz=112,slow=35						
DBIC	Dimbokro	38.34	93	P	P	03 31 43.8	+0.2
	2.7nm,0.8s,mb4.1,baz=230,slow=9.7,SNR=4.2						
PLCA	Paso Flores	57.12	204	LR	LR	04 01 24.6	
	comp=Z,70nm,18.7s,MS3.8,baz=18,slow=39						
ULM	Lac du Bonnet	58.14	323	P	P	03 34 17.7	+1.1
	3.3nm,0.8s,mb4.4,baz=131,slow=11,SNR=2.7						
TXAR	Lajitas Array	58.86	298	P	P	03 34 20.4	-1.6
	0.5nm,0.7s,mb3.6,baz=115,slow=7.3,SNR=7.6						
GERES	GERESS Array B	60.50	40	LR	LR	03 57 52.7	
	comp=Z,44nm,20.5s,MS3.6,baz=347,slow=33						
NOA	NORSAR Array B	63.90	26	LR	LR	04 01 08.4	
	comp=Z,37nm,18.4s,MS3.6,baz=60,slow=34						
PDAR	Pinedale Array	65.20	312	LR	LR	04 01 05.4	
	comp=Z,96nm,19.0s,MS4.0,baz=338,slow=34						
NVAR	Mina Array Bea	71.50	307	LR	LR	04 07 33.3	
	comp=Z,40nm,18.7s,MS3.7,baz=65,slow=36						
YKA	Yellowknife Ar	71.77	332	LR	LR	04 02 35.5	
	comp=Z,133nm,18.1s,MS4.2,baz=90,slow=32						
BOSA	Boshof	77.01	123	LR	LR	04 02 59.3	
	comp=Z,39nm,19.8s,MS3.7,baz=185,slow=30						
VNA3	Neumayer Olymp	85.00	170	⇑i	P	03 36 57.4	+0.5
VNA3	Neumayer Olymp	85.00	170	e	Px	03 37 07.6	
VNA2	Neumayer--Watz	85.15	169	⇑i	P	03 36 59.4	+1.8
VNA2	Neumayer--Watz	85.15	169	e	Px	03 37 08.8	
ILAR	Eielson Array	85.93	335	P	P	03 37 00.9	-0.7
	0.7nm,0.8s,mb3.9,baz=66,slow=4.8,SNR=5.6						
SNAA	Sanae	86.64	168	e	P	03 37 03.1	-1.9
SNAA	Sanae	86.64	168	e	Px	03 37 13.9	

JMA 24 03:49:52.8±0.1**, 38.23N**×**144.72E, h32^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.54	291	P	Pn	03 50 33.4	+0.7
OFUJ				eS	Sn	03 51 03.1	+0.3
MIYJ	Miyakonagasawa	2.63	302	P	Pn	03 50 34.4	+0.3
MIYJ				eS	Sn	03 51 05.6	+0.3
JIO	Ouri	2.66	276	P	Pn	03 50 35.0	+0.5
JIO				eS	Sn	03 51 06.5	+0.5
JMK	Ichinoseki	2.84	286	P	Pn	03 50 38.2	+1.2
JMK				eS	Sn	03 51 11.4	+0.9

IDC 24 03:53:55.4±1.4**, 20.18N**×**120.54E, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.6**/18**, mbtmp3.7**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/24**, Error ellipse: s-maj=151.1km s-min=24.5km az=65.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	9.71	45	LR	LR	04 00 04.8	
	comp=Z,78nm,19.1s,baz=86,slow=38						
SONM	Songino Array	29.88	341	P	P	04 00 04.9	-1.9
	1.1nm,0.9s,baz=157,slow=7.4,SNR=6.5						
MKAR	Makanchi Array	40.89	319	P	P	04 01 39.0	-1.9
	0.9nm,0.9s,baz=117,slow=9.7,SNR=3.9						
WRA	Warramunga Arr	42.10	160	P	P	04 01 49.1	-2.0
	0.8nm,0.7s,baz=342,slow=9.0,SNR=9.1						
WRA				PcP	PcP	04 03 44.5	-2.0
	0.5nm,0.7s,baz=339,slow=2.7,SNR=4.5						

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*NEIC **24** 03:57:11.6±1.0, 31.01N×8.57W, h10^{km}, MG4.2(MDD), Error ellipse: s-maj=25.6km s-min=5.0km az=137.0*

*SFS **24** 03:57:11.0, 31.01N×8.47W, ML4.3*

*LDG **24** 03:57:13.8±0.8, 30.98N×8.73W, h10^{km}, Ml3.4/3, Error ellipse: s-maj=21.7km s-min=17.1km az=107.0*

*INMG **24** 03:57:13.5±1.9, 31.09N×8.59W, h16^{km}±10^{km}, ML3.1, Error ellipse: s-maj=10.7km s-min=5.1km az=129.0*

*CNRM **24** 03:57:13.0, 30.94N×8.33W, h3^{km}, MD4.0*

CSEM 24 03:57:09.2±0.1**, 31.07N**×**8.51W, h10^{km}, MD4.0, Error ellipse: s-maj=6.7km s-min=2.3km az=135.0, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHA	Jbel Lahdid	1.04	310	i P	Pb	03 57 35.0	+6.1
JHA				i S	Sb	03 57 51.0	+8.6
AFS	Agadir Fac de	1.07	233	i P	Pb	03 57 34.0	+4.7
AFS				i S	Sb	03 57 50.0	+6.8
TZC	Tazercounte	2.03	58	eP	Pn	03 57 47.0	+3.1
TZC				i S	Sn	03 58 09.0	-0.6
CZD	Col de Zad	3.54	56	i P	Pn	03 58 07.0	+1.6
CZD				i S	Sn	03 58 47.0	-0.7
MIF	Mishlifen	3.63	49	i P	Pn	03 58 10.0	+3.3
MIF				i S	Sn	03 58 50.0	-0.1
ZFT	Errachidia	3.68	74	eP	Pn	03 58 08.0	+0.6
TZK	Tazeka	4.73	49	eP	Pn	03 58 24.0	+1.6
TZK				i S	Sn	03 59 16.0	-2.0
EFAM	Famara	4.76	247	P	Pn	03 58 23.0	+0.2
EFAM				S	Sn	03 59 16.4	-2.3
EFAM	Famara	4.76	247	P	Pn	03 58 23.0	+0.3
EFAM				S	Sn	03 59 16.4	-2.3
CFTV	Fuerteventura	5.52	243	P	Pn	03 58 33.6	+0.2
CFTV				S	Sn	03 59 33.6	-4.2
CFTV	Fuerteventura	5.52	243	P	Pn	03 58 33.6	+0.1
EJIF	Jimena Fronter	5.93	24	P	Pn	03 58 40.9	+1.6
EJIF				S	Sn	03 59 46.1	-2.1
EJIF	Jimena Fronter	5.93	24	P	Pn	03 58 40.9	+1.6
EJIF				S	Sn	03 59 46.1	-2.1
ESPR	Espera	6.19	20	P	Pn	03 58 43.5	+0.6
ESPR				S	Sn	03 59 50.3	-4.2
ESPR	Espera	6.19	20	P	Pn	03 58 43.5	+0.6
EMIJ	Mijas	6.30	29	P	Pn	03 58 45.4	+0.9
EMIJ				S	Sn	03 59 54.2	-3.2
EMIJ	Mijas	6.30	29	P	Pn	03 58 45.4	+0.9
EMIJ				S	Sn	03 59 54.2	-3.1
LIJA	Lijar	6.37	23	i P	Pn	03 58 47.0	+1.6
LIJA				eS	Sn	03 59 56.0	-3.0
PTEO	Sao Teotonio	6.46	359	ePn	Pn	03 58 48.0	+1.2
PTEO				eSn	Sn	03 59 57.4	-3.9
	12nm,0.3s						
PTEO	Sao Teotonio	6.46	359	ePn	Pn	03 58 48.0	+1.2
PTEO				eSn	Sn	03 59 57.4	-3.9
	12nm,0.3s						
EGRO	El Granado	6.50	7	P	Pn	03 58 48.0	+0.7
EGRO				S	Sn	03 59 58.4	-4.0
EGRO	El Granado	6.50	7	P	Pn	03 58 48.0	+0.6
EOSO	Osorio	6.82	246	P	Pn	03 58 51.6	-0.2
EOSO				S	Sn	04 00 06.3	-4.0
EOSO	Osorio	6.82	246	P	Pn	03 58 51.6	-0.2
EOSO				S	Sn	04 00 06.3	-4.0
EMIN	Mina Concepcio	6.85	12	P	Pn	03 58 52.3	+0.1
EMIN				S	Sn	04 00 06.0	-5.1
EMIN	Mina Concepcio	6.85	12	P	Pn	03 58 52.3	0.0
PBEJ	Beja	6.96	4	ePn	Pn	03 58 54.1	+0.3
PBEJ				eSn	Sn	04 00 09.9	-3.9
	4.8nm,0.2s						
PBEJ	Beja	6.96	4	ePn	Pn	03 58 54.1	+0.3
PBEJ				eSn	Sn	04 00 09.9	-3.9
	4.8nm,0.2s						
ELOJ	Sierra Loja	7.06	30	P	Pn	03 58 55.3	+0.2
ELOJ				S	Sn	04 00 12.5	-3.8
ELOJ	Sierra Loja	7.06	30	P	Pn	03 58 55.3	+0.2
ELOJ				S	Sn	04 00 12.5	-3.7
EBAJ	Bajamar	7.26	252	P	Pn	03 58 57.3	-0.7
EBAJ				S	Sn	04 00 15.2	-6.0
EBAJ	Bajamar	7.26	252	P	Pn	03 58 57.3	-0.6
ECOG	Cogollos-Vega	7.42	32	P	Pn	03 59 01.6	+1.3
ECOG				S	Sn	04 00 19.9	-5.5
ECOG	Cogollos-Vega	7.42	32	P	Pn	03 59 01.6	+1.3
EBER	Berja	7.45	37	P	Pn	03 59 02.3	+1.6
EBER				S	Sn	04 00 19.1	-7.1
EVO	Evora	7.46	3	ePn	Pn	03 59 01.4	+0.7
EVO				eSn	Sn	04 00 22.3	-3.9
	11nm,0.2s						
EBAD	Badajoz	7.76	9	P	Pn	03 59 05.1	+0.1
EBAD				S	Sn	04 00 29.5	-4.4
EBAD	Badajoz	7.76	9	P	Pn	03 59 05.1	0.0
EADA	Adamuz	7.79	24	P	Pn	03 59 05.0	-0.4
EADA				S	Sn	04 00 29.2	-5.3
EADA	Adamuz	7.79	24	P	Pn	03 59 05.0	-0.3
EBAN	Banos Encina	8.08	28	P	P	03 59 08.8	-0.6
EBAN				S	Sn	04 00 34.9	-6.8
EQES	Quesada	8.08	32	P	P	03 59 09.3	-0.1
EQES				S	Sn	04 00 35.8	-5.9
EGOM	La Gomera	8.11	251	P	P	03 59 06.0	-3.8
EGOM				S	Sn	04 00 35.8	-6.7
PCBR	Castelo Branco	8.79	5	ePn	P	03 59 19.7	+0.4
PCBR				eSn	Sn	04 00 53.8	-5.7
	7.2nm,0.6s						
PCBR	Castelo Branco	8.79	5	ePn	P	03 59 19.7	+0.4
PCBR				eSn	Sn	04 00 53.8	-5.7
	7.2nm,0.6s						
EVIA	Vianos	9.02	32	P	P	03 59 23.1	+0.6
MTE	Manteigas	9.34	5	ePn	P	03 59 27.8	+0.8
MTE				eSn	Sn	04 01 07.4	-5.8
	4.6nm,0.5s						
ESDC	Sonseca Array	9.35	22	P	P	03 59 26.4	-0.6
ESDC				S	Sn	04 01 05.0	-8.4
ESDC	Sonseca Array	9.35	22	P	P	03 59 26.4	-0.7
ETOB	Tobarra	9.47	35	P	P	03 59 28.9	+0.2
ETOB	Tobarra	9.47	35	P	P	03 59 29.0	+0.2
GUD	Guadarrama	10.18	19	P	P	03 59 38.7	+0.2
	0.5nm,0.2s						
GUD				S	S	04 01 24.6	-9.2
GUD	Guadarrama	10.18	19	P	P	03 59 38.7	+0.2
	0.5nm,0.2s						
ELOB	Lobios	10.78	2	P	P	03 59 47.5	+0.7
	0.8nm,0.3s						
ELOB				S	S	04 01 41.1	-7.4
ELOB	Lobios	10.78	2	P	P	03 59 47.5	+0.8
	0.8nm,0.3s						
PBRG	Braganca	10.81	7	ePn	P	03 59 47.3	+0.2
PBRG				eSn	S	04 01 44.8	-4.3
ECAL	Calabor	10.94	7	P	P	03 59 48.7	-0.2
	5.4nm,0.3s						
ECAL				S	S	04 01 44.3	-8.1
ECAL	Calabor	10.94	7	P	P	03 59 48.7	-0.2
	5.4nm,0.3s						
SJPF	Ste Jean	13.35	24	ePn	P	04 00 22.6	+1.4
SJPF				eSn	S	04 02 44.3	-6.4
	0.3nm,0.3s						
SJPF	Ste Jean	13.35	24	eSn	S	04 02 44.3	-6.4
	0.2nm,0.3s						
ETSF	Etsaut	13.40	26	ePn	P	04 00 22.8	+0.9
ETSF				eSn	S	04 02 45.6	-6.3
	0.6nm,0.3s						
EPF	Esparros	13.86	28	ePn	P	04 00 30.8	+2.8
MTLF	Montolieu	14.92	32	ePn	P	04 00 48.8	+6.9
LFF	La Frestale	15.63	25	ePn	P	04 00 53.4	+2.2
CAF	Calviac	16.13	28	ePn	P	04 00 59.0	+1.5
QUIF	Quistinic	17.31	12	ePn	P	04 01 16.1	+3.6
SGMF	Saint Gilles	17.75	13	ePn	P	04 01 22.2	+4.2

NEIC 24 03:59:44.5, 40.44N×**125.41W, h11^{km}, MD3.2**(NCEDC)**, After NCEDC., Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.35	71	eP	Pb	04 00 07.5	-1.8
KCPM	Cahto Peak	1.59	118	eP	Pn	04 00 10.0	-2.9
KIPM	Iron Peak	1.60	112	eP	Pn	04 00 10.5	-2.6
KBO	Bosley Butte	1.98	26	eP	Pn	04 00 16.0	-2.5
WDC	Whiskeytown Da	2.19	85	ePn	Pn	04 00 19.0	-2.4
HOPS	Hopland	2.31	128	ePn	Pn	04 00 19.2	-3.9
YBH	Yreka Blue Hor	2.42	57	ePn	Pn	04 00 22.1	-2.6
KEBM	Edson Butte	2.56	18	ePn	Pn	04 00 24.3	-2.4
LHEM	Herd Peak	2.69	63	P	Pn	04 00 27.3	-1.2
HUMO	Hull Mountain	2.84	40	ePn	Pn	04 00 28.2	-2.6
BUOR	Burton Butte	3.01	51	P	Pn	04 00 32.8	-0.3
LAB	Little Aspen B	3.11	53	P	Pn	04 00 34.7	+0.2
BBOR	Butler Butte	3.19	39	P	Pn	04 00 35.0	-0.7
VSP	Spence Mountai	3.22	53	P	Pn	04 00 36.0	-0.2
HOG	Hogback Mounta	3.32	56	P	Pn	04 00 36.9	-0.6
HSO	Harness Mounta	3.54	28	P	Pn	04 00 40.0	-0.6
HBO	Huckleberry Mo	4.11	33	P	Pn	04 00 48.2	-0.5
MOD	Modoc	4.12	68	ePn	Pn	04 00 45.7	-3.2
IRO	Indian Ridge	4.27	32	P	Pn	04 00 50.0	-1.0
BROR	Big Rock Looko	4.41	29	P	Pn	04 00 52.2	-0.8
FRIS	Frissel Point	4.50	32	P	Pn	04 00 53.7	-0.6
CMB	Columbia Colle	4.58	120	ePn	Pn	04 00 52.8	-2.6
VIPM	Ingram Point	5.39	39	P	Pn	04 01 06.2	-0.7
WVOR	Wild Horse Val	5.47	66	ePn	Pn	04 01 04.9	-3.1
ISA	Isabella	7.25	129	Pn	Pn	04 01 29.9	-3.2
BMO	Blue Mountains	7.42	51	ePn	Pn	04 01 33.3	-2.2
MCMT	McKenzie Canyo	10.24	61	ePn	P	04 02 11.7	-2.8

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*NIED **24** 04:39:00, 38.20N×144.80E, h5^{km}, Mw3.8 Best double couple: $M_0$6.05×10^{14} NP1:ϕ_s210°, δ70°, λ-90°. NP2:ϕ_s29°, δ20°, λ-90°.*

*IDC **24** 04:39:37.9±1.1, 38.25N×145.05E, mb3.5/6, mb1 3.8/7, mb1mx3.6/23, mbtmp3.5/7, ML3.4/1, Error ellipse: s-maj=31.0km s-min=23.7km az=139.0*

*JMA **24** 04:39:41.6±0.2, 38.21N×144.78E, h50^{km}, M3.8*

ISC 24 04:39:40.2±2.5**, 38.25N**±0.09×**144.86E**±0.07**, h30^{km}**±19^{km}**, n15,** σ**0^{s}90**/21**, mb3.5**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.63	289	P	Pn	04 40 22.3	+0.6
OFUJ				eS	Sn	04 40 52.8	-0.2
MIYJ	Miyakonagasawa	2.71	300	P	Pn	04 40 23.4	+0.5
MIYJ				eS	Sn	04 40 54.6	-0.5
JIO	Ouri	2.77	275	P	Pn	04 40 24.1	+0.5
JIO				S	Sn	04 40 55.6	-0.8
JMK	Ichinoseki	2.94	285	P	Pn	04 40 27.4	+1.4
JMK				eS	Sn	04 41 00.6	-0.1
JOT	Ohata	4.29	318	P	Pn	04 40 46.4	+1.1
JCH	Churui	4.51	346	P	Pn	04 40 47.3	-1.1
NEM2	Nemuro 2	5.15	7	P	Pn	04 40 54.0	-3.5
NEM2				eS	Sn	04 41 48.6	-8.1
JRY	Ryogami san	5.25	247	P	Pn	04 40 57.3	-1.6
JRY				eS	Sn	04 41 54.1	-5.1
MJAR	Matsushiro Arr	5.56	254	Pn	Pn	04 41 02.9	-0.3
	1.0nm,0.3s,baz=75,slow=14,SNR=5.9						
MKAR	Makanchi Array	45.80	302	P	P	04 48 01.5	+0.6
	0.3nm,0.6s,mb3.4,baz=80,slow=8.8,SNR=2.4						
ILAR	Eielson Array	47.00	33	P	P	04 48 09.2	-0.9
	0.7nm,0.9s,mb3.6,baz=265,slow=6.7,SNR=5.5						
BVAR	Borovoye Array	51.78	312	P	P	04 48 48.6	+1.5
	0.2nm,0.4s,mb3.4,baz=79,slow=7.3,SNR=2.9						
INK	Inuvik	52.05	28	P	P	04 48 49.1	+0.2
	1.0nm,0.9s,mb3.7,baz=292,slow=5.4,SNR=6.4						
WRA	Warramunga Arr	58.72	192	P	P	04 49 37.9	+0.1
	0.3nm,0.7s,mb3.4,baz=13,slow=7.0,SNR=2.6						
TXAR	Lajitas Array	87.20	54	P	P	04 52 25.0	0.0
	0.5nm,1.1s,mb3.7,baz=270,slow=3.6,SNR=2.6						

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*NEIC **24** 04:53:47.4, 12.03N×62.02W, h147^{km}, MD3.6(TRN), After TRN.*

TRN 24 04:53:47.4, 12.03N×**62.02W, h147^{km}, MD3.6, 1C-1D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRW	Mount Saint Ca	0.38	70	⇓iP	P	04 54 07.1	-1.3
GRW				eS	S	04 54 23.2	-1.2
SVB	Belmont	1.45	31	⇑iP	P	04 54 15.9	-0.6
SVB				eS	S	04 54 37.8	-1.1
TPR	Prospect	1.48	124	eP	P	04 54 16.0	-0.8
TPR				eS	S	04 54 35.7	-3.9
TRN	Trinidad (W)	1.50	156	eP	P	04 54 17.6	+0.6
TRN				eS	S	04 54 38.0	-2.0
TPP	Pointe-a-Pierr	1.79	162	eP	P	04 54 20.2	-0.1
TPP				eS	S	04 54 46.1	+0.6

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*NEIC **24** 04:56:34.4, 25.49S×68.97W, h96^{km}, MD3.7(GUC), After GUC.*

GUC 24 04:56:34.4±0.6**, 25.49S**×**68.97W, h96^{km}**±25^{km}**, MD3.7, ML3.6, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPN1	Cerro Paranal	1.56	303	⇑iP	P	04 57 02.0	+0.3
CPN1				i S	S	04 57 23.7	+1.8
CPN1				AMP		04 57 27.7	
	comp=E,493nm,0.3s						
CRCH	Chaqaral	1.71	240	⇑iP	P	04 57 03.6	+0.1
CRCH				i S	S	04 57 25.1	0.0
CRCH				AMP		04 57 33.4	
	comp=E,338nm,0.2s						
ANCH	Antofagasta	2.23	324	⇑iP	P	04 57 10.2	-0.3
ANCH				i S	S	04 57 37.4	+0.1
CPCH	Copiapo	2.23	213	⇑iP	P	04 57 10.3	-0.2
CPCH				i S	S	04 57 37.7	+0.4
CPCH				AMP		04 57 42.0	
	comp=E,1μm,0.1s						
CDCH	Caldera	2.29	226	eP	P	04 57 09.7	-1.6
CDCH				i S	S	04 57 37.5	-1.3
SPCH	San Pedro de A	2.67	15	eP	P	04 57 16.7	+0.2
SPCH				i S	S	04 57 48.2	+0.2
SPCH				AMP		04 57 54.1	
	comp=E,204nm,0.3s						

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*RSPR **24** 05:24:27.8, 19.81N×69.37W, h97^{km}±11^{km}, MD4.1/10, MD4.1/10*

*NEIC **24** 05:24:27.8, 19.81N×69.37W, h97^{km}, MD4.1(RSPR), After RSPR.*

ISC 24 05:24:24.7±0.8**, 19.8N**±0.2×**69.52W**±0.07**, h100^{km}, n15,** σ**0^{s}75**/29**, 10C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	2.88	127	⇑eP	P	05 25 10.5	+0.6
CRPR				eS	S	05 25 43.7	-0.1
MGP	Maguayo	2.90	127	⇑eP	P	05 25 10.9	+0.8
MGP				eS	S	05 25 44.2	+0.1
AOPR	Arecibo Observ	2.98	118	⇑eP	P	05 25 11.4	+0.2
AOPR				eS	S	05 25 45.7	-0.5
ICM	Isla Caja Muer	3.40	123	⇑eP	P	05 25 17.8	+0.9
ICM				eS	S	05 25 56.0	-0.5
SJG	San Juan	3.59	117	⇑eP	P	05 25 19.9	+0.3
SJG				eS	S	05 26 00.9	-0.3
SJG	San Juan	3.59	117	⇑eP	P	05 25 20.0	+0.4
SJG				eS	S	05 26 00.8	-0.4
CBYP	Canovanas	3.78	113	⇑eP	P	05 25 22.2	+0.2
CBYP				eS	S	05 26 05.0	-0.7
CPD	Cerro la Pandu	3.83	116	⇑eP	P	05 25 23.3	+0.6
CPD				eS	S	05 26 06.1	-0.8
HUMP	Col San Antoni	3.84	114	⇑eP	P	05 25 22.9	+0.1
HUMP				eS	S	05 26 06.6	-0.5
MTP	Monte Pirata	4.11	113	⇑eP	P	05 25 27.5	+0.9
MTP				eS	S	05 26 13.4	-0.4
MASC	Masc	4.45	276	eP	P	05 25 32.4	+1.2
MASC				eS	S	05 26 27.3	+5.2
	comp=N,826nm,0.0s comp=E,940nm,0.0s						
MOAC	Moa	5.18	281	eP	P	05 25 40.1	-1.1
MOAC				eS	S	05 26 40.9	+0.7
	comp=N,4μm,0.7s comp=E,7μm,0.8s						
HLGC	Holguin	6.23	281	eP	P	05 25 54.8	-0.8
HLGC				eS	S	05 27 04.1	-2.0
	comp=N,3μm,0.3s comp=E,3μm,0.3s						
LMGC	Las Mercedes	7.05	274	eP	P	05 26 08.0	+1.2
LMGC				eS	S	05 27 25.6	-0.3
	comp=N,20nm,0.6s comp=E,15nm,0.4s						
SDV	Santo Domingo	10.88	186	eP	P	05 26 52.7	-6.0
	comp=E,4.2nm,0.6s						

JMA 24 05:56:50.6±0.3**, 31.69N**×**140.32E, h126^{km}**±2^{km}**, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.48	343	P	P	05 57 18.7	+0.1
JHJ2				S	S	05 57 39.7	-0.2
BSO1	Boso 1	3.01	10	P	P	05 57 37.6	-0.4
BSO2	Boso 2	3.08	7	S	S	05 58 15.1	-0.6
TK01	Tokai 1	3.09	313	P	P	05 57 39.1	-0.1
BSO3	Boso 3	3.11	3	P	P	05 57 39.2	-0.2
BSO3				S	S	05 58 14.7	-1.7
JIM2	Oshima 3	3.11	346	P	P	05 57 39.1	-0.3
JOD2	Odawara 2	3.71	344	P	P	05 57 47.3	-0.1
JAO	Obara	4.39	325	P	P	05 57 56.2	-0.3
JRY	Ryogami san	4.47	345	P	P	05 57 57.6	-0.1
JAG	Ashikaga	4.78	352	P	P	05 57 59.7	-2.0
JAG				S	S	05 58 55.0	-1.5
CBIJ	Chichi jima	4.86	160	P	P	05 57 58.3	-4.5
JHO	Hitachi	4.91	2	P	P	05 58 01.8	-1.8
JHO				S	S	05 58 56.0	-3.8
JFK	Kawauchi	5.68	4	P	P	05 58 11.1	-2.7
JFK				S	S	05 59 12.7	-5.7

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*NNC **24** 06:19:25.4±3.1, 35.34N×72.19E, mpv3.3, Error ellipse: s-maj=40.9km s-min=23.2km az=91.0*

ISC 24 06:19:20.8±1.4**, 34.91N**±0.09×**72.9E**±0.2**, h33^{km}, n5,**

σ0^{s}43/8, 1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.40**	**136**	*e*P	**P**	**06 20 12.6**	**-0.2**
THN				*e*S	**S**	**06 20 58.8**	**+6.4**
KLP	**Kalpa**	**5.60**	**125**	*e*P	**P**	**06 20 49.8**	**+6.0**
KLP				*e*S	**S**	**06 21 43.3**	**-4.6**
KLP				AML	AML	06 22 12.1	
	comp=E,42nm,0.4s						
KLP				AML	AML	06 22 14.0	
	comp=N,42nm,0.4s						
AAK	**Ala-Archa**	**7.81**	**9**	Sn	**Sn**	**06 22 43.5**	**+0.2**
KK31	**Karatay Array**	**8.39**	**348**	Pn	**P**	**06 21 23.6**	**+0.6**
	comp=N,0.5nm,0.3s,baz=156,slow=11,SNR=13						
KK31				⇓Sn	**Sn**	**06 22 57.3**	**-0.6**
	comp=N,0.7nm,0.5s,baz=106,slow=73,SNR=4.2						
AB31	**Akbulak array**	**17.23**	**330**	P	**P**	**06 23 20.3**	**0.0**
	comp=N,0.2nm,0.3s,baz=152,slow=15,SNR=8.4						

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*MOS **24** 06:38:20.7±0.9, 33.87N×141.66E, h33^{km}, mb4.2/2, Error ellipse: s-maj=32.7km s-min=13.8km az=122.5*

*NEIC **24** 06:38:21.6±6.3, 33.90N×141.67E, h23^{km}±44^{km}, mb4.3/1, Error ellipse: s-maj=25.8km s-min=16.6km az=93.0*

*JMA **24** 06:38:22.1±0.4, 34.04N×141.66E, h31^{km}±3^{km}, M3.5*

*IDC **24** 06:38:24.3±3.3, 33.98N×141.68E, h40^{km}±30^{km}, mb3.5/5, mb1 3.8/7, mb1mx3.6/20, mbtmp3.8/7, ML3.7/2, Error ellipse: s-maj=30.3km s-min=19.2km az=77.0*

ISC 24 06:38:21.2±1.1**, 34.00N**±0.05×**141.79E**±0.09**, h35^{km}**±10^{km}**, n26, σ0^{s}71**/33**, mb3.7**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**0.94**	**314**	P	**P**	**06 38 37.6**	**-0.4**
BSO3	**Boso 3**	**1.33**	**308**	P	**P**	**06 38 43.5**	**-0.1**
BSO4	**Boso 4**	**1.55**	**310**	P	**P**	**06 38 47.5**	**+0.7**
JHJ2	**Mitsune**	**1.87**	**242**	P	**P**	**06 38 52.2**	**+0.9**
JHJ	**Hachijo jima 2**	**1.89**	**243**	Pn	**P**	**06 38 52.1**	**+0.5**
	77nm,0.3s,baz=63,slow=18,SNR=23						
JHJ				Sn	**S**	**06 39 14.8**	**+0.3**
	114nm,0.3s,baz=243,slow=23,SNR=11						
JIM2	**Oshima 3**	**2.08**	**291**	P	**P**	**06 38 54.1**	**-0.2**
JOD2	**Odawara 2**	**2.56**	**300**	P	**P**	**06 39 01.1**	**-0.1**
JYN	**Shimob**	**3.06**	**300**	P	**P**	**06 39 09.3**	**+0.9**
JAG	**Ashikaga**	**3.08**	**322**	P	**P**	**06 39 08.3**	**-0.4**
JRY	**Ryogami san**	**3.11**	**311**	P	**P**	**06 39 09.3**	**+0.2**
JRY				S	**S**	**06 39 45.7**	**+0.2**
MJAR	**Matsushiro Arr**	**3.87**	**312**	Pn	**P**	**06 39 20.1**	**+0.1**
	6.6nm,0.3s,baz=130,slow=12,SNR=27						
MJAR				Sn	**S**	**06 40 04.6**	**-0.3**
	2.1nm,0.3s,baz=147,slow=20,SNR=5.8						
MAJO	**Matsushiro**	**3.88**	**312**	*e*Pn	**P**	**06 39 18.9**	**-1.0**
MAT	**Matsushiro**	**3.88**	**312**	P	**P**	**06 39 20.0**	**+0.1**
MAT				S	**S**	**06 40 04.3**	**-0.6**
MAT	**Matsushiro**	**3.88**	**312**	P	**P**	**06 39 20.5**	**+0.6**
MAT				S	**S**	**06 40 03.1**	**-1.8**
MAT	**Matsushiro**	**3.88**	**312**	*e*P	**P**	**06 39 20.0**	**+0.1**
MAT				*e*S	**S**	**06 40 04.0**	**-0.9**
JMM	**Marumori**	**3.94**	**348**	P	**P**	**06 39 20.6**	**-0.3**
CBIJ	**Chichi jima**	**6.89**	**177**	Pn	**P**	**06 40 01.8**	**-0.6**
	4.1nm,0.3s,baz=282,slow=20,SNR=4.0						
CBIJ				Sn	**S**	**06 41 16.0**	**-4.5**
	2.8nm,0.3s,baz=68,slow=23,SNR=2.6						
SONM	**Songino Array**	**29.82**	**308**	P	**P**	**06 44 27.8**	**+0.8**
	0.5nm,0.5s,mb3.5,baz=117,slow=9.9,SNR=4.8						
ZAK	**Zakamensk**	**32.46**	**312**	*e*P	**P**	**06 44 42.3**	**-8.0**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.6						
MKAR	**Makanchi Array**	**46.04**	**305**	P	**P**	**06 46 43.1**	**-0.1**
	comp=Z,0.2nm,0.5s,mb3.3,baz=90,slow=10,SNR=4.3						
ILAR	**Eielson Array**	**51.91**	**31**	P	**P**	**06 47 29.3**	**+1.1**
	comp=Z,0.7nm,1.0s,mb3.6,baz=264,slow=6.2,SNR=7.7						
WRAB	**Tennant Creek**	**54.10**	**189**	P	**P**	**06 47 42.7**	**-2.3**
	comp=Z,2.8nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**54.10**	**189**	P	**P**	**06 47 42.7**	**-2.3**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	**54.11**	**189**	P	**P**	**06 47 45.1**	**0.0**
	comp=Z,1.1nm,0.4s,mb4.2,baz=3.3,slow=7.5,SNR=22						
INK	**Inuvik**	**56.96**	**26**	P	**P**	**06 48 05.8**	**+0.7**
AKASG	**Malin Array Be**	**76.89**	**323**	P	**P**	**06 50 11.1**	**-0.2**
	comp=Z,0.3nm,0.4s,mb3.5,baz=42,slow=6.0,SNR=5.2						

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*IDC **24** 06:39:37.5±2.0, 34.62N×73.45E, mb4.0/3, mb1 4.1/6, mb1mx3.7/21, mbtmp3.9/6, ML3.6/3, MS3.3/1, Ms1 3.3/1, ms1mx2.4/23, Error ellipse: s-maj=54.1km s-min=28.5km az=65.0*

*NNC **24** 06:39:48.7±2.3, 35.31N×72.27E, mpv3.8, Error ellipse: s-maj=33.3km s-min=17.9km az=91.0*

ISC 24 06:39:42.1±0.9**, 34.81N**±0.07×**73.1E**±0.1**, h33^{km}, n16, σ1^{s}45**/20**, mb3.8**/2**, MS3.3**/1**, 4C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.23**	**137**	*e*x	**P**	**06 40 30.7**	**-1.0**
THN				*e*S	**S**	**06 41 13.6**	**+4.1**
DLH	**Dalhousie**	**3.30**	**133**	*e*P	**P**	**06 40 35.0**	**+2.3**
DLH				*e*S	**S**	**06 41 13.0**	**+1.8**
BHK	**Bhakra**	**4.39**	**140**	*e*S	**S**	**06 41 38.5**	**-0.3**
SDNR	**Sundarnagar**	**4.64**	**134**	*e*P	**P**	**06 40 48.6**	**-3.1**
SDNR				*e*S	**S**	**06 41 38.4**	**-6.7**
AAK	**Ala-Archa**	**7.88**	**8**	⇑Pn	**Pn**	**06 41 40.5**	**+3.1**
	1.9nm,0.7s						
AAK				⇑Sn	**Sn**	**06 43 06.8**	**+0.3**
	8.4nm,1.0s						
KK31	**Karatay Array**	**8.52**	**347**	Pn	**P**	**06 41 47.4**	**+1.4**
	3.0nm,0.2s,baz=154,slow=11,SNR=140						
KK31				⇑Sn	**Sn**	**06 43 21.5**	**-0.7**
	3.3nm,0.6s,baz=183,slow=24,SNR=6.6						
MKAR	**Makanchi Array**	**13.83**	**27**	Pn	**P**	**06 42 55.4**	**-2.6**
	0.0nm,0.3s,baz=216,slow=12,SNR=3.8						
AB31	**Akbulak array**	**17.39**	**330**	⇑P	**P**	**06 43 43.0**	**-0.6**
	0.5nm,0.5s,baz=139,slow=13,SNR=16						
BVA0	**Borovoye Array**	**18.31**	**355**	P	**P**	**06 43 55.4**	**+0.3**
	0.3nm,0.8s,baz=235,slow=37,SNR=7.8						
BVAR	**Borovoye Array**	**18.31**	**355**	P	**P**	**06 43 56.0**	**+0.9**
	0.5nm,0.3s,baz=162,slow=9.4,SNR=8.9						
AKTO	**Aktyubinsk**	**19.09**	**329**	⇓P	**P**	**06 44 04.6**	**0.0**
	0.7nm,0.8s						
AKTO	**Aktyubinsk**	**19.09**	**329**	P	**P**	**06 44 04.7**	**+0.2**
	0.5nm,0.3s,baz=126,slow=9.5,SNR=8.2						
ZAL	**Zalesovo**	**20.82**	**20**	P	**P**	**06 44 21.8**	**-1.2**
	4.1nm,0.4s,baz=250,slow=9.1,SNR=11						
ARCES	**ARCESS Array B**	**43.35**	**338**	P	**P**	**06 47 43.4**	**+1.0**
	5.3nm,0.9s,mb4.2,baz=120,slow=7.3,SNR=3.9						
ASAJ	**Asahikawa**	**53.00**	**58**	LR	LR	07 14 60.0	
	comp=Z,26nm,19.0s,MS3.3,baz=346,slow=40						
WRA	**Warramunga Arr**	**79.65**	**123**	P	**P**	**06 51 45.2**	**-2.9**
	0.3nm,0.7s,mb3.4,baz=322,slow=4.9,SNR=4.7						

JMA 24 06:39:47.9±0.4**, 34.04N**×**141.77E, h19^{km}, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.82**	**336**	P	Pn	06 40 18.9	+0.2
JHJ2	**Mitsune**	**1.88**	**241**	P	Pn	06 40 20.3	+0.8
JIM2	**Oshima 3**	**2.05**	**290**	P	Pn	06 40 23.0	+1.0
JIZS	**Izushimoda**	**2.48**	**287**	P	Pn	06 40 28.2	0.0
JOD2	**Odawara 2**	**2.52**	**300**	P	Pn	06 40 27.8	-1.0
JOD2				*e*S	Sn	06 40 59.8	+0.5
JAG	**Ashikaga**	**3.04**	**322**	P	Pn	06 40 35.6	-0.6
JAG				S	Sn	06 41 13.2	+0.8
JRY	**Ryogami san**	**3.07**	**311**	P	Pn	06 40 36.3	-0.3
MAT	**Matsushiro**	**3.84**	**312**	P	Pn	06 40 47.3	-0.1
MAT				S	Sn	06 41 32.4	-0.1

GUC 24 07:28:34.0±0.8**, 22.93S**×**68.02W, h150^{km}**±6^{km}**, MD3.8, ML3.6, 2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	**0.16**	**277**	⇓*i*P	P	07 28 55.2	+0.6
SPCH				*i* S	S	07 29 11.3	+1.1
SPCH				AMP		07 29 12.0	
	comp=E,605nm,0.6s						
CEN1	**Los Morros**	**2.06**	**257**	⇓*i*P	P	07 29 12.7	+2.6
CEN1				*i* S	S	07 29 41.8	+4.0
CEN1				AMP		07 29 44.2	
	comp=N,279nm,0.5s						
ANCH	**Antofagasta**	**2.32**	**251**	*e*P	P	07 29 12.1	-1.3
ANCH				*i* S	S	07 29 43.0	-0.6
CPN1	**Cerro Paranal**	**2.76**	**232**	*e*P	P	07 29 20.6	+1.6
CPN1				*i* S	S	07 29 55.7	+2.3
CPN1				AMP		07 29 57.9	
	comp=E,396nm,0.4s						
CRCH	**Chaqaral**	**4.14**	**214**	*i* S	S	07 30 26.7	+1.3
CDCH	**Caldera**	**4.85**	**211**	*i* S	S	07 30 43.4	+1.3

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*NEIC **24** 07:52:07.3, 15.75N×93.88W, h65^{km}, mb4.5/1, MD4.4(MEX), After MEX.*

MEX 24 07:52:07.3±1.4**, 15.75N**×**93.88W, h65^{km}**±40^{km}**, MD4.4, 1C, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCX	**San Cristobal**	**1.55**	**51**	*i* P	P	07 52 31.8	-1.5
SCX				*i* S	S	07 52 49.5	-3.0
CMIG	**Matias Romero**	**1.64**	**324**	*i* P	P	07 52 33.1	-1.5
CMIG				*i* S	S	07 52 52.8	-1.9
CCIG	**Comitan**	**1.76**	**72**	⇑*i*P	P	07 52 35.0	-1.2
CCIG				*i* S	S	07 52 56.2	-1.3
HUIG	**Huatulco**	**2.14**	**271**	*i* P	P	07 52 38.8	-2.7
HUIG				*i* S	S	07 53 03.0	-3.9
TUIG	**Tuzandepetl**	**2.33**	**347**	*i* P	P	07 52 41.4	-2.7
TUIG				*i* S	S	07 53 08.1	-3.5
OXX	**Oaxaca**	**3.03**	**296**	*i* P	P	07 52 52.8	-1.3
OXX				*i* S	S	07 53 27.5	-1.8
VHO	**Vista Hermosa**	**3.04**	**296**	*i* P	P	07 52 53.5	-0.6
VHO				*i* S	S	07 53 27.1	-2.3
SCIG		**4.11**	**38**	*i* P	P	07 53 04.9	-4.2
SCIG				*i* S	S	07 53 52.2	-4.0
PPM	**Popocatepetl**	**5.60**	**307**	*i* P	P	07 53 27.4	-2.5
PPM				*i* S	S	07 54 32.9	-0.8
ACX	**Acapulco**	**5.90**	**282**	*e*P	P	07 53 29.8	-4.2
GDL2	**Guadalupe Moun**	**18.95**	**332**	*e*P	P	07 56 22.0	-3.8
AMTX	**Amarillo**	**20.30**	**341**	*e*P	P	07 56 35.3	-5.0
	15nm,0.7s						

PGC 24 07:57:02.5, 58.32N×**133.53W, h1^{km}, ML3.4**/4**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLBC	**Dease Lake**	**1.85**	**85**	Pn	Pn	07 57 33.8	-1.8
DLBC				Pg	Pg	07 57 35.5	-3.9
DLBC				Sn	Sn	07 57 59.4	-0.6
DLBC				Sg	Sg	07 58 00.6	-3.5
DLBC				Trac		07 58 06.4	
	comp=Z,160nm,0.7s						
PLBC	**Pleasant Camp**	**1.86**	**309**	Pn	Pn	07 57 35.7	-0.1
PLBC				Sg	Sg	07 58 00.2	-4.3
WHY	**Whitehorse**	**2.45**	**344**	Pn	Pn	07 57 42.0	-2.2
WHY				Pg	Pg	07 57 47.0	-4.4
WHY				Sg	Sg	07 58 18.2	-5.8
WHY				Trac		07 58 27.0	
	comp=Z,101nm,0.8s						
HYT	**Haines Junctio**	**3.23**	**323**	Pn	Pn	07 57 54.9	-0.4
HYT				Pg	Pg	07 58 00.6	-6.3
HYT				Sg	Sg	07 58 42.5	-7.3
HYT				Trac		07 58 47.1	
	comp=Z,85nm,0.9s						
RUBB	**Prince Rupert**	**4.40**	**154**	Sg	Sg	07 59 21.0	-7.9
FNBB	**Fort Nelson**	**5.53**	**80**	Trac		08 00 07.3	
	comp=Z,16nm,1.1s						
FNBB	**Fort Nelson**	**5.53**	**80**	Sg	Sg	07 59 54.4	-12
DAWY	**Dawson**	**6.42**	**336**	Pn	Pn	07 58 36.8	-3.7
DAWY				Pg	Pg	07 58 59.0	-12
DAWY				Sg	Sg	08 00 20.6	-16
DAWY				Trac		08 00 26.4	
	comp=Z,27nm,0.8s						
BMBC	**Bull Mountain**	**6.60**	**105**	Trac		08 00 48.2	
	comp=Z,20nm,0.8s						
BMBC	**Bull Mountain**	**6.60**	**105**	Sg	Sg	08 00 27.6	-15
INK	**Inuvik**	**10.03**	**0**	Pn	P	07 59 26.9	-3.6
INK				Sg	S	08 02 12.5	+48
INK				Trac		08 02 36.2	
	comp=Z,3.0nm,0.8s						

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*CSEM **24** 09:29:59.6±0.1, 58.98N×18.33E, h2^{km}, ML2.1, Error ellipse: s-maj=2.0km s-min=1.8km az=136.0, Mining explosion.*

*UPP **24** 09:30:00.4, 58.99N×18.21E, h0^{km}, ML3.0, Mining explosion.*

*NAO **24** 09:30:03.1±2.6, 59.17N×18.11E, ML2.1*

*BER **24** 09:30:03.9±3.5, 59.15N×18.13E, ML2.1(NAO), Suspected explosion*

HEL 24 09:30:01.3±0.1**, 58.99N**×**18.18E, ML2.1, ML3.0**(UPP)**, ML2.1**(NAO)**, Explosion, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NYNU	**Nynaeshamn**	**0.09**	**279**	*i* P	Pg	09 30 02.8	-0.4
NYNU				*i* S	Sg	09 30 04.1	-0.3
NRTU	**Norrtaelje**	**0.73**	**18**	*i* P	Pg	09 30 14.0	-1.8
UPP	**Uppsala**	**0.92**	**342**	*e*P	Pg	09 30 17.8	-1.8
ESKU	**Eskilstuna**	**0.95**	**285**	*e*P	Pg	09 30 18.4	-2.0
BACU	**Backbrunna**	**1.02**	**328**	*e*P	Pb	09 30 19.6	-2.0
FLYU	**Flymyra**	**1.15**	**353**	*e*P	Pb	09 30 21.9	-1.9
GOTU	**Gotland**	**1.32**	**171**	*e*P	Pb	09 30 24.8	-1.9
OSTU	**Oestervaala**	**1.35**	**337**	*e*P	Pb	09 30 25.5	-1.7
GRAU	**Graesoe**	**1.36**	**8**	*e*P	Pb	09 30 25.7	-1.6
GRAU				*e*S	Sb	09 30 43.7	-1.5
AAL	**Aland**	**1.51**	**37**	*e*P	Pn	09 30 28.1	-1.6
AAL				*e*S	Sb	09 30 47.7	-1.8
VSTU	**Vaestervik**	**1.59**	**214**	*e*P	Pn	09 30 30.1	-0.8
VSTU				*e*S	Sb	09 30 51.0	-0.9
VSTU	**Vaestervik**	**1.59**	**214**	P	Pn	09 30 30.0	-0.9
VSTU				S	Sb	09 30 51.0	-0.9
LNKU	**Linkoeping**	**1.60**	**242**	*e*P	Pn	09 30 30.1	-0.9
LNKU	**Linkoeping**	**1.60**	**242**	P	Pn	09 30 30.0	-1.0
NRAU	**Nora**	**1.71**	**291**	*e*P	Pn	09 30 32.0	-0.6
NRAU	**Nora**	**1.71**	**291**	P	Pn	09 30 32.0	-0.6
FALU	**Falun**	**1.92**	**323**	*e*P	Pn	09 30 35.0	-0.6
FALU				*e*S	Sn	09 31 01.0	+0.2
FALU	**Falun**	**1.92**	**323**	P	Pn	09 30 34.9	-0.7
FALU				S	Sn	09 31 00.9	+0.1
HFS	**Hagfors**	**2.56**	**299**	*e*P	Pn	09 30 44.6	0.0
HFS				*e*SB	Sb	09 31 18.4	-1.5
HFS	**Hagfors**	**2.56**	**299**	Pn	Pn	09 30 44.6	0.0
	baz=110,slow=18						
HFS				Lg		09 31 18.4	
	baz=110,slow=28						
HFS	**Hagfors**	**2.56**	**299**	P	Pn	09 30 44.6	-0.1
HFS				Sb	Sb	09 31 18.3	-1.6
ARNU	**Arnoeviken**	**2.74**	**352**	*e*P	Pn	09 30 45.8	-1.5
ARNU	**Arnoeviken**	**2.74**	**352**	P	Pn	09 30 45.7	-1.6
BLEU	**Blekinge**	**2.98**	**206**	*e*P	Pn	09 30 48.9	-1.8
NB2	**NORSAR Subarra**	**4.06**	**303**	*e*P	Pn	09 31 04.2	-1.8
NB2				*e*PG	Pg	09 31 13.3	-8.9
NB2				*e*SG	Sg	09 32 07.7	-8.6
NB2	**NORSAR Subarra**	**4.06**	**303**	Pn	Pn	09 31 04.2	-1.8
	baz=125,slow=14						
NB2				Pg	Pg	09 31 13.3	-8.9
NB2				Lg		09 32 07.7	
	baz=120,slow=28						
NB2	**NORSAR Subarra**	**4.06**	**303**	Pg	Pg	09 31 13.4	-8.9
NB2				Sg	Sg	09 32 07.7	-8.6
PVF	**Pernaja**	**4.18**	**65**	*e*P	Pn	09 31 06.3	-1.5
PVF				*e*S	Sn	09 31 55.1	-3.0
PVF				MSG		09 32 18.1	
	comp=Z,3.0nm,0.2s						
PVF	**Pernaja**	**4.18**	**65**	P	Pn	09 31 06.2	-1.6
PVF				S	Sn	09 31 55.1	-3.1
	comp=Z,3.0nm,0.2s						
KEF	**Keuruu**	**4.58**	**43**	MSG		09 32 23.6	
	comp=Z,1.7nm,0.2s						
VAF	**Ylistaro**	**4.61**	**26**	*e*P	Pn	09 31 12.6	-1.4
VAF				*e*S	Sn	09 32 06.2	-2.9
VAF				MSG		09 32 28.1	
	comp=Z,2.6nm,0.2s						
VAF	**Ylistaro**	**4.61**	**26**	P	Pn	09 31 12.5	-1.4
VAF				S	Sn	09 32 06.1	-3.0
	comp=Z,2.6nm,0.2s						
FIA0	**FINESS Array S**	**4.64**	**55**	Pn	Pn	09 31 12.9	-1.5
	baz=240,slow=12						
FIA0				Sn	Sn	09 32 06.7	-3.1
	baz=241,slow=22						
FIA0				Lg		09 32 23.6	
	baz=237,slow=22						
FIA0	**FINESS Array S**	**4.64**	**55**	*e*P	Pn	09 31 13.1	-1.2
FIA0				*e*S	Sn	09 32 06.2	-3.5
FIA0				MSG		09 32 29.2	
	comp=Z,2.6nm,0.2s						
FIA0	**FINESS Array S**	**4.64**	**55**	P	Pn	09 31 13.1	-1.2
FIA0				S	Sn	09 32 06.2	-3.6
	comp=Z,2.6nm,0.2s						
VJF	**Virojoki**	**4.99**	**68**	*e*P	Pn	09 31 16.6	-2.6
VJF				*e*S	Sn	09 32 14.0	-4.4
VJF				MSG		09 32 36.7	
	comp=Z,1.7nm,0.2s						
VJF	**Virojoki**	**4.99**	**68**	P	Pn	09 31 16.6	-2.6
VJF				S	Sn	09 32 14.0	-4.5
	comp=Z,1.7nm,0.2s						
SUF	**Sumiainen**	**5.40**	**43**	*e*P	Pn	09 31 22.2	-2.8
SUF				*e*S	Sn	09 32 23.6	-5.2
SUF				MSG		09 32 55.1	
	comp=Z,1.4nm,0.2s						
APA0	**Apatity Array**	**10.88**	**31**	Pn	P	09 32 35.8	-5.4
	baz=230,slow=10						
APA0	**Apatity Array**	**10.88**	**31**	*e*P	P	09 32 35.8	-5.4
ARA0	**ARCESS Array S**	**11.04**	**14**	Pn	P	09 32 37.2	-6.2
	baz=191,slow=14						
ARA0				Sn	S	09 34 34.6	-14
	baz=193,slow=28						
ARA0	**ARCESS Array S**	**11.04**	**14**	*e*P	P	09 32 37.2	-6.2
ARA0				*e*S	S	09 34 34.6	-14

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*IDC **24** 09:49:17.5±1.4, 26.03N×102.25E, mb3.8/4, mb1 3.9/4, mb1mx3.7/18, mbtmp3.8/4, MS3.3/4, Ms1 3.3/4, ms1mx2.8/25, Error ellipse: s-maj=70.0km s-min=23.5km az=61.0*

*BJI **24** 09:49:18.3, 25.92N×102.17E, h8^{km}, mB4.7, mb4.2, ML3.5, Ms4.0, Msz3.5*

*NEIC **24** 09:49:18.6±0.6, 26.03N×102.08E, h10^{km}, mb4.1/4, Error ellipse: s-maj=13.6km s-min=11.1km az=58.0*

ISC 24 09:49:16.3±0.5**, 25.97N**±0.04×**102.18E**±0.05**, h10^{km}, n21, σ0^{s}85**/24**, mb4.0**/9**, MS3.2**/4**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	**0.99**	**149**	PG	**Pg**	**09 49 35.5**	**-0.6**
KMI				SG	**Sg**	**09 49 49.1**	**-0.2**
KMI				Smax			
	comp=N,1μm,0.8s						
KMI				Smax			
	comp=E,1μm,0.9s						
KMI				LR	LR		
	comp=N,4μm,3.8s						
KMI				LR	LR		
	comp=E,3μm,3.8s						
GYA	**Guiyang**	**4.06**	**82**	P	**Pn**	**09 50 23.3**	**+3.4**
GYA				S	**Sn**	**09 51 07.6**	**-0.4**
GYA				SG	**Sg**	**09 51 20.8**	**-11**
GYA				Smax			
	comp=N,60nm,1.0s						
GYA				Smax			
	comp=E,60nm,0.8s						
GYA				LR	LR		
	comp=N,870nm,9.3s						
GYA				LR	LR		
	comp=E,220nm,6.3s						
GYA				LR	LR		
	comp=Z,480nm,5.4s						
CD2	**Chengdu**	**5.11**	**15**	*e*P	**Pn**	**09 50 38.3**	**+3.5**
CD2				*e*PG	**Pg**	**09 50 52.4**	**-5.9**
CD2				SG	**Sg**	**09 51 58.3**	**-8.1**
CD2				Smax			
	comp=N,170nm,1.0s						
CD2				Smax			
	comp=E,170nm,1.0s						
CD2				LR	LR		
	comp=E,1μm,9.6s						
CD2				LR	LR		
	comp=Z,230nm,11.2s						
ENH	**Enshi**	**7.74**	**55**	*e*Pn	**Pn**	**09 51 11.9**	**+0.1**
	comp=Z,17nm,0.8s						
ENH				*e*Sn	**Sn**	**09 52 40.1**	**-0.4**
XAN	**Xi’an**	**9.94**	**34**	P	**P**	**09 51 47.8**	**+5.6**
XAN				LG2		09 54 35.3	
XAN				LR	LR		
	comp=N,440nm,7.2s						
XAN				LR	LR		
	comp=E,520nm,7.1s						
XAN				LR	LR		
	comp=Z,120nm,7.4s						
LZH	**Lanzhou**	**10.18**	**8**	*e*P	**P**	**09 51 45.6**	**0.0**
LZH				AP		09 51 49.3	
LZH				*e*PP	PP	09 51 54.0	+0.4
LZH				*e*S	**S**	**09 53 41.1**	**+0.2**
LZH				SS	SS	09 53 53.4	-0.9
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s						
LZH				AMB	AMB		
	comp=Z,110nm,4.7s						
LZH				LR	LR		
	comp=E,280nm,10.1s						
LZH				LR	LR		
	comp=Z,330nm,11.0s						
WMQ	**Urumqi**	**21.35**	**330**	*e*P	**P**	**09 54 06.0**	**+0.2**
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
WMQ				AMB	AMB		
	comp=Z,150nm,4.9s						
SONM	**Songino Array**	**22.07**	**8**	P	**P**	**09 54 13.6**	**+0.6**
	comp=Z,2.0nm,0.8s,mb3.6,baz=192,slow=12,SNR=13						
JOW	**Kunigami**	**23.38**	**82**	LR	LR	10 04 06.3	
	comp=Z,75nm,20.7s,MS3.1,baz=270,slow=38						
JNU	**Nakatsue**	**25.91**	**67**	LR	LR	10 05 17.3	
	comp=Z,42nm,19.9s,MS3.0,baz=53,slow=37						
MKAR	**Makanchi Array**	**26.09**	**328**	P	**P**	**09 54 52.8**	**+1.0**
	comp=Z,2.6nm,0.7s,mb3.9,baz=137,slow=11,SNR=9.1						
AAK	**Ala-Archa**	**28.09**	**313**	P	**P**	**09 55 08.9**	**-1.2**
	comp=Z,1.0nm,0.6s,mb3.6						
KURK	**Kurchatov**	**30.59**	**330**	*e*P	**P**	**09 55 30.5**	**-1.9**
	comp=Z,3.9nm,1.0s,mb4.2						
MJAR	**Matsushiro Arr**	**32.38**	**62**	LR	LR	10 10 25.6	
	comp=Z,85nm,19.0s,MS3.5,baz=240,slow=39						
BVAR	**Borovoye Array**	**35.97**	**327**	P	**P**	**09 56 19.5**	**+0.5**
	comp=Z,1.4nm,0.7s,mb4.0,baz=117,slow=9.9,SNR=7.5						
BRVK	**Borovoye**	**36.04**	**327**	*e*P	**P**	**09 56 18.5**	**-1.1**
	comp=Z,2.4nm,0.9s,mb4.1						
AKTO	**Aktyubinsk**	**41.60**	**318**	LR	LR	10 14 57.5	
	comp=Z,38nm,18.7s,MS3.3,baz=196,slow=37						
ARU	**Arti**	**43.60**	**326**	P	**P**	**09 57 22.1**	**0.0**
DGAR	**Diego Garcia**	**43.99**	**225**	*e*P	**P**	**09 57 26.5**	**+0.6**
WRAB	**Tennant Creek**	**55.30**	**142**	P	**P**	**09 58 53.3**	**+0.7**
	comp=Z,10nm,1.2s,mb4.7						
WRA	**Warramunga Arr**	**55.30**	**142**	P	**P**	**09 58 53.1**	**+0.5**
	comp=Z,1.3nm,0.6s,mb4.1,baz=331,slow=8.2,SNR=10						

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*ROM **24** 09:55:38.7±0.4, 45.80N×14.16E, h8^{km}±3^{km}, Md2.8/8, Ml2.7/6, Error ellipse: s-maj=4.9km s-min=2.0km az=86.0*

*NEIC **24** 09:55:38.7, 45.80N×14.16E, h8^{km}, ML2.7(ROM), ML2.5(LJU), After ROM.*

*LJU **24** 09:55:39.1, 45.80N×14.19E, h15^{km}, ML2.5*

*CSEM **24** 09:55:39.4±0.1, 45.80N×14.18E, h12^{km}, ML3.2/14, Error ellipse: s-maj=1.3km s-min=0.7km az=15.0*

*VIE **24** 09:55:40.1±0.3, 45.85N×14.23E, h8^{km}, mb2.0/4, ML2.3/4, Error ellipse: s-maj=1.9km s-min=1.3km az=34.0*

ISC 24 09:55:39.3±0.3**, 45.81N**±0.02×**14.21E**±0.02**, h10^{km}, n83, σ1^{s}01**/144**, 20C-12D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAVS	**Javornik**	**0.13**	**310**	⇓*i*Pg	**Pg**	**09 55 43.0**	**+0.5**
JAVS				*i* Sg	**Sg**	**09 55 45.4**	**+0.7**
	comp=Z,992nm,0.1s						
JAVS	**Javornik**	**0.13**	**310**	⇓*i*Pg	**Pg**	**09 55 43.0**	**+0.5**
JAVS				*i* Sg	**Sg**	**09 55 45.4**	**+0.8**
	comp=Z,992nm,0.1s						
CEY	**Cerknica**	**0.17**	**114**	*i* Pg	**Pg**	**09 55 43.7**	**+0.7**
CEY				*i* Sg	**Sg**	**09 55 46.9**	**+1.4**
	comp=Z,268nm,0.1s						
CEY	**Cerknica**	**0.17**	**114**	*i* Pg	**Pg**	**09 55 43.7**	**+0.7**
CEY				*i* Sg	**Sg**	**09 55 46.9**	**+1.4**
	comp=Z,268nm,0.1s						
KNDS	**Knezji Dol**	**0.30**	**157**	*i* Pg	**Pg**	**09 55 45.8**	**+0.2**
VOY	**Vojsko**	**0.32**	**316**	⇓*i*Pg	**Pg**	**09 55 45.9**	**+0.1**
VOY				*e*Sg	**Sg**	**09 55 50.0**	**-0.2**
VOJS	**Vojsko**	**0.32**	**315**	*i* Pg	**Pg**	**09 55 45.9**	**-0.1**

VOJS				*i* Sg	Sg	09 55 50.8	+0.5
VOJS	**Vojsko**	0.32	315	*i* Pg	Pg	09 55 45.8	-0.1
VOJS				*i* Sg	Sg	09 55 50.8	+0.4
LJU	**Ljubljana**	0.32	43	*i* Pg	Pg	09 55 46.8	+0.9
LJU				*i* Sg	Sg	09 55 52.0	+1.5
	comp=Z,217nm,0.1s						
LJU	**Ljubljana**	0.32	43	*i* Pg	Pg	09 55 46.8	+0.8
LJU				*i* Sg	Sg	09 55 52.0	+1.5
	comp=Z,217nm,0.1s						
TRI	**Trieste**	0.33	253	Pg	Pg	09 55 45.6	-0.5
TRI				Sg	Sg	09 55 50.5	-0.1
	comp=Z,482nm,0.1s						
VISS	**Visnje**	0.44	90	⇑*i*Pg	Pg	09 55 48.7	+0.5
VISS				*i* Sg	Sg	09 55 55.1	+0.9
	comp=Z,94nm,0.1s						
VISS	**Visnje**	0.44	90	⇑*i*Pg	Pg	09 55 48.7	+0.5
VISS				*i* Sg	Sg	09 55 55.1	+0.9
	comp=Z,94nm,0.1s						
GORS	**Gorjuse**	0.53	344	*i* Pg	Pg	09 55 49.7	-0.3
GORS				*e*Sg	Sg	09 55 57.7	+0.4
CADS	**Cadrg**	0.54	322	*i* Pg	Pg	09 55 49.4	-0.8
CADS				*i* Sg	Sg	09 55 57.6	+0.3
	comp=Z,70nm,0.1s						
CADS	**Cadrg**	0.54	322	*i* Pg	Pg	09 55 49.3	-0.8
CADS				*i* Sg	Sg	09 55 57.6	+0.3
	comp=Z,70nm,0.1s						
DRE	**Drenchia**	0.54	313	⇑*i*Pg	Pg	09 55 49.4	-0.8
DRE				*i* Sg	Sg	09 55 57.8	+0.3
PDKS	**Podkum**	0.60	65	*i* Pg	Pg	09 55 52.0	+0.5
PDKS				*i* Sg	Sg	09 55 59.3	-0.3
	comp=Z,111nm,0.1s						
PDKS	**Podkum**	0.60	65	*i* Pg	Pg	09 55 52.0	+0.5
PDKS				*i* Sg	Sg	09 55 59.3	-0.3
	comp=Z,111nm,0.1s						
ROBS	**Robic**	0.66	312	*i* Pg	Pg	09 55 51.8	-0.7
ROBS				*i* Sg	Sg	09 56 01.5	+0.2
	comp=Z,43nm,0.1s						
ROBS	**Robic**	0.66	312	*i* Pg	Pg	09 55 51.8	-0.7
ROBS				*i* Sg	Sg	09 56 01.5	+0.2
	comp=Z,43nm,0.1s						
COLI	**Coloredo**	0.67	300	⇓*e*Pg	Pg	09 55 51.9	-0.8
COLI				*e*Sg	Sg	09 56 02.1	+0.5
COLI	**Coloredo**	0.67	300	*e*Pg	Pg	09 55 51.8	-0.9
COLI				*e*Sg	Sg	09 56 02.2	+0.6
OBKA	**Obir**	0.74	18	⇓*i*Pg	Pg	09 55 53.9	-0.3
	comp=Z,21nm,0.1s,SNR=36						
OBKA				⇑*e*Sg	Sg	09 56 04.2	+0.1
	comp=Z,37nm,0.2s						
OBKA	**Obir**	0.74	18	⇓*i*Pg	Pg	09 55 53.9	-0.3
OBKA				*e*Sg	Sg	09 56 04.2	+0.1
TLI	**Talmassons**	0.78	279	*e*Pg	Pg	09 55 53.9	-1.2
TLI	**Talmassons**	0.78	279	*e*Pg	Pg	09 55 53.8	-1.2
LEGS	**Legarje**	0.79	79	*i* Pg	Pg	09 55 55.0	-0.1
BOJS	**Bojanci**	0.79	112	*e*Sg	Sg	09 56 05.9	+0.1
	comp=Z,31nm,0.1s						
BOJS	**Bojanci**	0.79	112	*e*Sg	Sg	09 56 05.9	+0.1
	comp=Z,31nm,0.1s						
BAD	**Bernadia**	0.80	303	*e*Pg	Pg	09 55 54.1	-1.2
BAD				*e*Sg	Sg	09 56 05.7	-0.3
LSR	**Lussari**	0.82	325	*e*Pg	Pg	09 55 54.5	-1.3
LSR				*e*Sg	Sg	09 56 07.5	+0.7
GMNA	**Gemona**	0.82	305	Pg	Pg	09 55 56.0	+0.2
GMNA				Sg	Sg	09 56 09.1	+2.2
	comp=Z,142nm,0.2s						
PTCC	**Patocco-Chiusa**	0.84	315	Pg	Pg	09 55 55.2	-1.0
PTCC				Sg	Sg	09 56 08.6	+1.0
	comp=Z,51nm,0.2s						
BUA	**Buia**	0.86	299	*e*Pg	Pg	09 55 55.5	-1.0
BUA				*e*Sg	Sg	09 56 08.8	+0.7
BUA	**Buia**	0.86	299	*e*Pg	Pg	09 55 55.5	-1.1
BUA				*e*Sg	Sg	09 56 08.8	+0.7
CRES	**Cresnjev**	0.87	88	*i* Pg	Pg	09 55 56.7	0.0
CRES				*e*Sg	Sg	09 56 07.5	-0.9
	comp=Z,38nm,0.1s						
CRES	**Cresnjev**	0.87	88	*i* Pg	Pg	09 55 56.7	-0.1
CRES				*e*Sg	Sg	09 56 07.5	-0.9
	comp=Z,38nm,0.1s						
BOO	**Bordano**	0.93	304	*e*Pg	Pg	09 55 56.8	-1.1
DOBS	**Dobrina**	0.94	68	*i* Pg	Pg	09 55 57.8	-0.4
	comp=Z,73nm,0.1s						
DOBS	**Dobrina**	0.94	68	*i* Pg	Pg	09 55 57.8	-0.4
	comp=Z,73nm,0.1s						
MPRI	**Monte Prat**	0.96	297	*e*Pg	Pg	09 55 57.4	-1.0
MPRI				*e*Sg	Sg	09 56 12.0	+0.8
GCIS	**Gornji Cirnik**	0.99	86	*i* Pg	Pg	09 55 58.9	-0.3
GCIS				*e*Sg	Sg	09 56 13.8	+1.4
	comp=Z,54nm,0.1s						
GOLS	**Golise**	1.01	78	*i* Pg	Pg	09 55 59.1	-0.4
GOLS				*i* Sg	Sg	09 56 13.8	+0.9
PERS	**Pernice**	1.04	37	*i* Pg	Pg	09 55 59.3	-0.8
PERS				*i* Sg	Sg	09 56 13.0	-1.1
PLRO	**Paularo**	1.05	316	⇓*e*Pg	Pg	09 55 59.6	-0.6
PLRO				*e*Sg	Sg	09 56 15.3	+1.0
BISS	**Bistriski jare**	1.05	37	*i* Pg	Pg	09 55 59.6	-0.8
BISS				*i* Sg	Sg	09 56 13.3	-1.2
GROS	**Grobnik**	1.11	53	*i* Pg	Pg	09 56 00.7	-0.8
GROS				*i* Sg	Sg	09 56 16.1	-0.3
	comp=Z,26nm,0.1s						
GROS	**Grobnik**	1.11	53	*i* Pg	Pg	09 56 00.7	-0.8
GROS				*i* Sg	Sg	09 56 16.1	-0.3
	comp=Z,26nm,0.1s						
ZOU	**Zoufplan**	1.14	312	⇑*e*Pg	Pg	09 56 00.6	-1.5
ZOU				*e*Sg	Sg	09 56 18.3	+0.9
MLNI	**Malnisio**	1.17	288	⇑*i*Pg	Pg	09 56 02.1	-0.6
MLNI				*i* Sg	Sg	09 56 19.2	+1.0
CAE	**Caneva**	1.25	280	⇑*e*Pg	Pg	09 56 03.4	-1.0
CAE				*e*Sg	Sg	09 56 21.0	-0.1
FVI	**Forni Avoltri**	1.27	309	Pg	Pg	09 56 03.2	-1.5
FVI				Sg	Sg	09 56 22.1	+0.5
	comp=Z,106nm,0.4s						
NVLJ	**Novalja**	1.33	159	*i* Pn	Pn	09 56 04.8	+0.8
NVLJ				*i* Pg	Pg	09 56 04.8	-1.0
NVLJ				*i* Sg	Sg	09 56 23.6	+0.1
NVLJ	**Novalja**	1.33	159	*i* Pn	Pn	09 56 04.7	+0.8
NVLJ				*i* Sg	Sg	09 56 23.6	0.0
CSO	**Casso**	1.40	290	⇑*e*Pg	Pg	09 56 05.0	-2.1
CSO				*e*Sg	Sg	09 56 24.9	-0.9
KBA	**Koelnbreinsper**	1.41	335	⇓*e*Pn	Pn	09 56 06.0	+0.9
	comp=Z,3.0nm,0.2s,SNR=7.9						
KBA	**Koelnbreinsper**	1.41	335	⇓*e*Pn	Pn	09 56 06.0	+0.9
KBA				*e*Sg	Sg	09 56 26.6	+0.5
KBA	**Koelnbreinsper**	1.41	335	Pn	Pn	09 56 06.0	+1.0
	comp=Z,3.0nm,0.2s,SNR=7.9						
KBA				Sg	Sg	09 56 26.6	+0.4
	comp=Z,15nm,0.2s						
KOGS	**Kog**	1.56	65	*e*Pg	Pg	09 56 09.7	-0.7
SEST	**Monte Rota**	1.67	305	Pg	Pg	09 56 10.3	-2.4
SEST				Sg	Sg	09 56 33.7	-1.4
	comp=Z,102nm,0.6s						
ARSA	**Arzberg**	1.71	32	⇑*e*Pg	Pg	09 56 12.2	-1.2
	comp=Z,6.0nm,0.4s						
ARSA	**Arzberg**	1.71	32	⇑*e*Pg	Pg	09 56 12.2	-1.2
ARSA				Sg	Sg	09 56 34.5	-1.6
ARSA	**Arzberg**	1.71	32	Pg	Pg	09 56 12.2	-1.1
	comp=Z,6.0nm,0.4s						
ARSA				Sg	Sg	09 56 34.5	-1.6
	comp=Z,5.4nm,0.5s						
CTI	**Castel Tesino**	1.80	279	Pn	Pn	09 56 10.7	0.0
CTI				Sn	Sn	09 56 38.4	+4.6
	comp=Z,88nm,0.3s						
BRES	**Bressanone**	1.94	298	Pn	Pn	09 56 13.7	+1.1
	comp=Z,44nm,0.4s						
MOA	**Molln**	2.04	1	⇑*e*Pn	Pn	09 56 15.7	+1.5
	comp=Z,0.9nm,0.2s						
MOA	**Molln**	2.04	1	⇑*e*Pn	Pn	09 56 15.7	+1.5
MOA				Sn	Sn	09 56 40.8	+0.9
MOA	**Molln**	2.04	1	Pn	Pn	09 56 15.7	+1.5
	comp=Z,0.9nm,0.2s						
MOA				Sn	Sn	09 56 40.8	+0.9
	comp=Z,1.5nm,0.2s						
SCE	**Schlegeis**	2.12	306	⇓*i*Pn	Pn	09 56 16.7	+1.4
APPI	**Appiano**	2.18	289	Pn	Pn	09 56 16.6	+0.5
	comp=Z,33nm,0.2s						
WTTA	**Wattenberg**	2.30	310	⇑*e*Pn	Pn	09 56 19.6	+1.8
	comp=Z,3.2nm,0.2s						
WTTA	**Wattenberg**	2.30	310	⇑*e*Pn	Pn	09 56 19.6	+1.8
WTTA				Sg	Sg	09 56 52.4	-3.4
WTTA	**Wattenberg**	2.30	310	Pn	Pn	09 56 19.6	+1.8
	comp=Z,3.2nm,0.2s						
WTTA				Sg	Sg	09 56 52.4	-3.4
	comp=Z,24nm,0.4s						
WATA	**Walderalm**	2.38	311	⇓*i*Pn	Pn	09 56 21.5	+2.6
	comp=Z,8.2nm,0.2s						
WATA	**Walderalm**	2.38	311	⇓*i*Pn	Pn	09 56 21.5	+2.6
WATA				Sn	Sn	09 56 52.6	+4.3
WATA	**Walderalm**	2.38	311	Pn	Pn	09 56 21.5	+2.6
	comp=Z,8.2nm,0.2s						
WATA				Sn	Sn	09 56 52.6	+4.2
	comp=Z,3.5nm,0.2s						
SQTA	**Sankt Quirin**	2.51	305	⇑*e*Pn	Pn	09 56 23.2	+2.4
	comp=Z,7.4nm,0.2s						
MOTA	**Moosalm**	2.64	307	⇑*e*Pn	Pn	09 56 24.7	+2.0
	comp=Z,5.7nm,0.3s						
MOTA	**Moosalm**	2.64	307	⇑*e*Pn	Pn	09 56 24.7	+2.0
DAVA	**Damuels**	3.33	298	⇑*i*Pn	Pn	09 56 35.7	+3.1
	comp=Z,0.6nm,0.1s						
DAVA	**Damuels**	3.33	298	⇑*i*Sg	Sg	09 57 26.8	-3.5
	comp=Z,4.7nm,0.3s						
DAVA	**Damuels**	3.33	298	⇑Pn	Pn	09 56 35.7	+3.1
DAVA				Sg	Sg	09 57 26.8	-3.5

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*BER **24** 09:57:22.6±3.2, 59.33N×27.04E, ML2.4(NAO), Suspected explosion*
*HEL **24** 09:57:22.2±0.8, 59.33N×27.01E, ML2.4(NAO), Explosion*
*NAO **24** 09:57:23.2±2.7, 59.36N×26.74E, ML2.4*
*IDC **24** 09:57:23.4±1.9, 59.39N×27.08E, mb1 3.2/4, mb1mx3.1/21, mbtmp3.2/4, ML2.9/4, Error ellipse: s-maj=17.2km s-min=9.6km az=124.0*

ISC 24 09:57:18.1±2.0**, 59.37N**±0.09×**26.9E**±0.2**, n13, σ0^{s}96**/23**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	**FINESS Array S**	2.13	349	*e*P	Pn	09 57 59.6	+4.3
FIA0				*e*PG	Pg	09 58 05.1	+4.6
FIA0				*e*SG	Sg	09 58 29.2	+0.4
FIA0				*e*RG		09 59 45.3	
FIA0	**FINESS Array S**	2.13	349	Pn	Pn	09 57 59.7	+4.4
	baz=165,slow=18						
FIA0				Lg		09 58 29.9	
	baz=165,slow=37						
FINES	**FINESS Array B**	2.13	349	Pn	Pn	09 57 59.6	+4.4
	3.4nm,0.3s,baz=165,slow=16,SNR=71						
FINES				Pg	Pg	09 58 01.0	+0.5
	3.4nm,0.3s,baz=165,slow=16,SNR=74						
FINES				Lg		09 58 30.2	
	4.9nm,0.3s,baz=170,slow=28,SNR=26						
HFS	**Hagfors**	6.72	282	Pn	Pn	09 59 02.4	+2.0
	baz=98,slow=11						
HFS				Sn	Sn	10 00 17.8	-0.8
	baz=92,slow=28						
HFS				Lg		10 00 49.5	
	baz=94,slow=28						
HFS	**Hagfors**	6.72	282	*e*P	Pn	09 59 02.4	+2.0
HFS				*e*S	Sn	10 00 17.8	-0.8
HFS				*e*SG		10 00 49.5	
HFS	**Hagfors**	6.72	282	Pn	Pn	09 59 02.2	+1.8
	0.0nm,0.3s,baz=96,slow=13,SNR=4.1						
HFS				Sn	Sn	10 00 17.7	-1.0
	0.1nm,0.3s,baz=96,slow=28,SNR=3.5						
HFS				Lg		10 00 50.7	
	0.2nm,0.3s,baz=93,slow=33,SNR=7.3						
NB2	**NORSAR Subarra**	7.99	289	*e*P	Pn	09 59 18.1	-0.2
NB2				*e*SG		10 01 32.4	
NB2	**NORSAR Subarra**	7.99	289	Pn	Pn	09 59 18.1	-0.2
	baz=82,slow=14						
NB2				Lg		10 01 32.4	
	baz=102,slow=37						
NB2	**NORSAR Subarra**	7.99	289	P	Pn	09 59 18.0	-0.3
NOA	**NORSAR Array B**	7.99	289	Pn	Pn	09 59 18.1	-0.1
	0.2nm,0.3s,baz=86,slow=13,SNR=2.3						
NOA				Sn	Sn	10 00 46.0	-4.5
	0.2nm,0.3s,baz=169,slow=6.8,SNR=2.9						
NOA				Lg		10 01 31.6	
	0.5nm,0.3s,baz=312,slow=11,SNR=3.6						
ARA0	**ARCESS Array S**	10.23	357	Pn	P	09 59 48.5	-0.6
	baz=171,slow=16						
ARA0				Sn	S	10 01 37.9	-7.8
	baz=175,slow=28						
ARA0	**ARCESS Array S**	10.23	357	*e*P	P	09 59 48.5	-0.6
ARA0				*e*S	S	10 01 37.9	-7.8
ARCES	**ARCESS Array B**	10.23	357	Pn	P	09 59 48.3	-0.7
	0.1nm,0.3s,baz=180,slow=13,SNR=15						
ARCES				Sn	S	10 01 38.0	-7.7
	0.1nm,0.3s,baz=171,slow=24,SNR=2.6						

WEL 24 10:09:37.1±0.9**, 35.68S×177.70E, h33^{km}, ML3.7**/7**, Error ellipse: s-maj=9.3km s-min=6.2km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	1.95	166	P*	Pb	10 10 07.7	-4.1
PUZ	**Puketiti**	2.44	170	PN	Pn	10 10 13.6	-1.9
PUZ				SN	Sn	10 10 41.5	-3.0
URZ	**Urewera**	2.62	190	P*	Pb	10 10 18.1	-5.2
MWZ	**Matawai**	2.66	183	P*	Pb	10 10 17.8	-6.1
MWZ				S*	Sb	10 10 49.3	-7.1
BKZ	**Black Stump Fm**	3.62	195	P*	Pb	10 10 30.9	-9.3
TSZ	**Takapari Road**	4.59	197	PN	Pn	10 10 42.1	-3.9
TSZ				SN	Sn	10 11 31.2	-7.8
MRZ	**Mangatainoka R**	5.25	198	PN	Pn	10 10 49.4	-6.0
MRZ				SN	Sn	10 11 47.0	-8.6

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*ORF **24** 10:46:31.3, 31.06S×176.51W, h30^{km}, mb6.2*
*SKO **24** 10:46:33.2, 24.17S×176.40W, h8^{km}*
*MOS **24** 10:46:36.9±1.0, 24.11S×176.38W, h26^{km}, mb5.9/51, MS5.2/30, Error ellipse: s-maj=10.2km s-min=7.6km az=71.3*
*IDC **24** 10:46:36.6±3.9, 24.17S×176.26W, h21^{km}±24^{km}, mb5.3/17, mb1 5.4/18, mb1mx5.4/18, mbtmp5.4/18, MS5.0/14, Ms1 5.0/14, ms1mx4.9/17, Error ellipse: s-maj=17.1km s-min=12.6km az=159.0*
*CSEM **24** 10:46:37.1, 24.19S×176.43W, h33^{km}, mb5.8*
*BJI **24** 10:46:37.3, 23.82S×175.75W, h37^{km}, mB5.6, mb5.8, Ms5.3, Msz5.0*
*HRVD **24** 10:46:38.4±0.1, 24.37S×175.71W, h24^{km}, MW5.6/85, Centroid moment Tensor Solution. LP body waves: s81,c165;Mantle waves: s85,c237; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.25±.04; M$_{\theta\theta}$-0.15±.03; M$_{\phi\phi}$-2.10±.03; M$_{r\theta}$0.45±.05; M$_{\theta\phi}$-0.88±.02; M$_{\phi r}$1.20±.05; Best double couple: M$_0$2.671×10^{17} NP1: ϕ_s201°, δ31°, λ90°. NP2: ϕ_s21°, δ59°, λ90°. Principal axes: T 2.578, Plg76°, Azm290°; N .184, Plg0°, Azm21°; P -2.765, Plg14°, Azm111°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **24** 10:46:38.4±0.1, 24.27S×176.31W, h35^{km}, mb5.8/78, MS5.2/120, MW5.5 Error ellipse: s-maj=5.4km s-min=3.3km az=143.0, Moment Tensor Solution. s12 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.99; M$_{\theta\theta}$-0.70; M$_{\phi\phi}$-1.30; M$_{r\theta}$0.19; M$_{\theta\phi}$-0.67; M$_{\phi r}$0.68; Best double couple: M$_0$2×10^{17} NP1: ϕ_s218°, δ35°, λ98°. NP2: ϕ_s28°, δ55°, λ84°. Principal axes: T 2.13, Plg79°, Azm276°; N -.28, Plg5°, Azm31°; P -1.85, Plg10°, Azm122°;*
*BGS **24** 10:46:43.3, 24.27S×176.31W, h33^{km}*

ISC 24 10:46:37.0±0.1**, 24.28S**±0.04×**176.28W**±0.04**, h33^{km}, (h36^{km}**±1.8^{km}**:pP-P), n732, σ0^{s}90**/283**, mb5.6**/109**, MS5.2**/145**, 119C-17D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	5.16	196	Pn	Pn	10 47 55.0	+0.9
	129nm,0.3s,baz=268,slow=23,SNR=5.7						
RAO				Sn	Sn	10 48 53.6	+0.4
	340nm,0.3s,baz=104,slow=22,SNR=6.1						
RAO	**Raoul Island**	5.16	196	*e*Pn	Pn	10 47 52.0	-2.1
	1µm,0.8s						
RAO				*e*Sn	Sn	10 48 52.1	-1.1
RAO	**Raoul Island**	5.16	196	*e*P	P	10 47 52.0	-1.9
RAO				*e*		10 48 52.1	
RAO				pmax	pmax		
	comp=Z,1µm,0.8s						
AFI	**Afiamalu**	11.16	23	Pn	P	10 49 08.7	-8.6
	comp=Z,19nm,0.3s,baz=63,slow=3.8,SNR=22						
AFI				Sn	S	10 51 03.7	-18
	comp=Z,30nm,0.3s,baz=88,slow=20,SNR=6.6						
AFI	**Afiamalu**	11.16	23	*e*Pn	P	10 49 08.9	-8.4
	comp=Z,493nm,0.9s						
AFI				*e*Sn	S	10 51 01.3	-21
AFI	**Afiamalu**	11.16	23	*e*P	P	10 49 09.0	-8.3
AFI				pmax	pmax		
	comp=Z,493nm,0.9s						
URZ	**Urewera**	15.03	200	Pn	P	10 50 01.5	-7.1
	comp=Z,1.2nm,0.3s,baz=213,slow=18,SNR=7.3						
URZ				Sn	S	10 52 44.0	-11
	comp=Z,6.5nm,0.3s,baz=114,slow=23,SNR=8.7						
URZ				LR	LR	10 55 25.8	
	comp=Z,6µm,19.0s,baz=27,slow=35						
RAR	**Rarotonga**	15.53	82	Pn	P	10 50 05.7	-9.5
	comp=Z,31nm,0.3s,baz=245,slow=8.0,SNR=67						
RAR				Sn	S	10 52 39.1	-27
	comp=Z,11nm,0.3s,baz=103,slow=11,SNR=4.9						
DZM	**Mont Dzumac**	16.04	274	*e*P	P	10 50 26.9	+5.1
DZM	**Mont Dzumac**	16.04	274	Pn	P	10 50 26.8	+5.1
	comp=Z,1.9nm,0.3s,baz=93,slow=16,SNR=32						
NOUC	**Port Laguerre**	16.16	274	*e*P	P	10 50 29.7	+6.4
FUNA	**Funafuti**	16.25	344	*e*P	P	10 50 18.1	-6.4
RPZ	**Rata Peaks**	22.00	205	P	P	10 51 28.7	-1.1
	comp=Z,20nm,0.6s,mb4.8,baz=33,slow=1.9,SNR=10.0						
TBI	**Tubuai**	24.54	93	*e*LQ		10 56 33.9	
TBI	**Tubuai**	24.54	93	*e*P	P	10 51 53.7	-1.3
	comp=Z,165nm,1.0s,mb5.5						
TBI				*e*LR	LR	10 57 48.3	
	comp=Z,8µm,27.8s,baz=268						
PAE	**Paea**	25.76	80	*e*P	P	10 52 04.9	-1.7
	comp=Z,255nm,1.4s,mb5.6						
PPT	**Papeete**	25.79	80	*e*P	P	10 52 05.5	-1.4
	comp=Z,87nm,1.4s,mb5.1						
PPT	**Papeete**	25.79	80	*e*LQ		10 57 02.3	
PPT				*e*LR	LR	10 58 21.6	
	comp=Z,9µm,23.8s,baz=251						
PPT	**Papeete**	25.79	80	P	P	10 52 05.3	-1.6
	comp=Z,34nm,0.9s,mb4.9,baz=201,slow=17,SNR=3.6						
PPT				LR	LR	10 59 46.3	
	comp=Z,5µm,20.7s,MS5.0,baz=257,slow=31						
TVO	**Taravao**	26.02	81	*e*P	P	10 52 07.7	-1.3
	comp=Z,427nm,1.5s,mb5.8						
HNR	**Honiara**	27.06	299	P	P	10 52 17.4	-1.2
	comp=Z,254nm,1.0s,mb5.7,baz=172,slow=7.4,SNR=8.6						
HNR				LR	LR	11 01 31.6	
	comp=Z,4µm,20.7s,MS4.9,baz=204,slow=33						
HNR	**Honiara**	27.06	299	*e*P	P	10 52 16.6	-2.0
	comp=Z,286nm,1.1s,mb5.7						
HNR				LR	LR		
	comp=Z,4µm,21.0s,MS4.9						
HNR	**Honiara**	27.06	299	*e*P	P	10 52 16.6	-2.0
HNR				pmax	pmax		
	comp=Z,286nm,1.1s,mb5.7						
HNR				MLR	MLR		
	comp=Z,4µm,21.0s,MS4.9						
CNB	**Canberra Magne**	31.63	242	*e*P	P	10 53 00.1	+0.8
	comp=Z,37nm,1.1s,mb5.1						
CTA	**Charters Tower**	34.88	269	⇑*i*P	P	10 53 27.6	+0.2
	comp=Z,104nm,0.7s,mb5.9						
CTA				*e*S	S	10 58 59.4	+3.9
CTA	**Charters Tower**	34.88	269	P	P	10 53 27.4	-0.1
	comp=Z,128nm,0.7s,mb6.0,baz=96,slow=11,SNR=203						
CTA	**Charters Tower**	34.88	269	⇑*i*P	P	10 53 27.6	+0.2
CTA				*e*S	S	10 58 59.4	+3.9
CTA				pmax	pmax		
	comp=Z,104nm,0.7s						
CTAO	**Charters Tower**	34.88	269	⇑*e*P	P	10 53 27.5	0.0
	comp=Z,158nm,0.8s,mb6.0						
CTAO				LR	LR		
	comp=Z,2µm,22.0s,MS4.9						
CTAO	**Charters Tower**	34.88	269	⇑*e*P	P	10 53 27.5	+0.1
CTAO				pmax	pmax		
	comp=Z,158nm,0.8s,mb6.0						
CTAO				MLR	MLR		
	comp=Z,2µm,22.0s,MS4.9						
TOO	**Toolangi**	35.13	239	*e*P	P	10 53 30.1	+0.7
	comp=Z,16nm,0.9s,mb5.0						
TOO	**Toolangi**	35.13	239	*e*P	P	10 53 30.1	+0.7
TOO				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
TAU	**Tasmania Unive**	35.21	229	PFAKE		10 53 40.0	+10
TAU				LR	LR		
	comp=Z,984nm,20.0s,MS4.6						
TAOE	**Nuku Hiva Isla**	37.73	72	*e*LQ		11 02 27.7	
TAOE				*e*LR	LR	11 03 52.3	
	comp=Z,9µm,24.4s,baz=244						
RKT	**Rikitea**	37.74	97	*e*S	S	10 59 34.1	-5.4
RKT				*e*LQ		11 02 20.4	
RKT				*e*LR	LR	11 03 53.6	
	comp=Z,5µm,27.8s,baz=262						
STKA	**Stephens Creek**	37.75	249	⇑*i*P	P	10 53 51.7	+0.1
	comp=Z,19nm,0.9s,mb4.8						
STKA				*e*S	S	11 00 11.2	+32
STKA	**Stephens Creek**	37.75	249	P	P	10 53 52.1	+0.5
	comp=Z,9.7nm,0.5s,mb4.8,baz=87,slow=8.6,SNR=33						
STKA				PcP	PcP	10 56 08.7	+0.1
	comp=Z,11nm,0.7s,baz=341,slow=2.5,SNR=3.6						
STKA				LR	LR	11 07 23.1	
	comp=Z,6µm,21.0s,MS5.4,baz=77,slow=33						
PMG	**Port Moresby**	37.85	287	P	P	10 53 52.4	-0.2
	comp=Z,301nm,0.9s,mb6.0,baz=111,slow=4.8,SNR=74						
PMG	**Port Moresby**	37.85	287	*e*P	P	10 53 52.0	-0.6
	comp=Z,367nm,0.9s,mb6.1						
PMG				*e*PcP	PcP	10 56 09.2	+0.1
PMG				LR	LR		
	comp=Z,2µm,20.0s,MS5.0						
PMG	**Port Moresby**	37.85	287	*e*P	P	10 53 52.0	-0.6
PMG				*e*		10 56 09.2	
PMG				pmax	pmax		
	comp=Z,367nm,0.9s						
PMG				MLR	MLR		
	comp=Z,2µm,20.0s						
ASPA	**Alice Springs**	45.33	260	⇓*i*P	P	10 54 53.3	-0.6
WB2	**Warramunga Arr**	45.76	265	⇑*i*P	P	10 54 55.6	-1.8
WB2				*e*PCS		11 00 28.0	
WB2				*e*S	S	11 01 39.0	+1.1
WB2				*e*SCS	ScS	11 04 53.4	+5.2
WRAB	**Tennant Creek**	45.76	265	⇑*e*P	P	10 54 55.3	-2.1
	comp=Z,68nm,0.8s,mb5.6						
WRAB				LR	LR		
	comp=Z,1µm,19.0s,MS4.9						
WRAB	**Tennant Creek**	45.76	265	P	P	10 54 56.1	-1.3
WRAB				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.6						
WRA	**Warramunga Arr**	45.77	265	P	P	10 54 55.9	-1.6
	comp=Z,60nm,0.8s,mb5.5,baz=103,slow=8.3,SNR=368						
WRA				PcP	PcP	10 56 35.0	-0.2
	comp=Z,8.5nm,0.9s,baz=105,slow=4.2,SNR=5.6						
WRA				S	S	11 01 40.5	+2.5
	comp=Z,3.2nm,0.9s,baz=97,slow=14,SNR=4.6						
WRA	**Warramunga Arr**	45.77	265	P	P	10 54 55.9	-1.6
WRA				PcP	PcP	10 56 35.0	-0.2
WRA				S	S	11 01 40.5	+2.5
WAKE	**Wake Island**	46.39	337	PFAKE		10 55 10.0	+7.7
WAKE				LR	LR		
	comp=Z,4µm,22.0s,MS5.3						
POHA	**Pohakuloa**	48.21	27	*e*P	P	10 55 15.4	-1.2
	comp=Z,2µm,1.9s						
KIP	**Kipapa**	48.78	23	*i* P	P	10 55 19.7	-1.3
FORT	**Forrest**	49.36	249	*e*P	P	10 55 24.2	-1.2
	comp=Z,98nm,0.6s,mb6.0						
KAKA	**Kakadu**	49.73	274	⇑*i*P	Px	10 55 46.5	
	comp=Z,32nm,0.6s						
DRV	**Dumont d'Urvil**	50.37	201	P	P	10 55 29.0	-3.6
MIDW	**Midway**	52.20	359	PFAKE		10 56 00.0	+13
MIDW				LR	LR		
	comp=Z,3µm,20.0s,MS5.3						
GUMO	**Guam**	53.45	311	PFAKE		10 56 10.0	+14
GUMO				LR	LR		
	comp=Z,2µm,22.0s,MS5.0						
FITZ	**Fitzroy Crossi**	54.19	265	*e*P	P	10 56 00.2	-1.6
	comp=Z,76nm,0.7s,mb5.7						
FITZ				*e*PCS		11 01 04.8	
FITZ				*e*S	S	11 03 44.3	+9.4
SBA	**Scott Base**	54.23	184	⇑*i*P	P	10 56 03.4	+2.0
	comp=Z,150nm,1.0s,mb5.9						
SBA				*e*PcP	PcP	10 57 05.8	+0.5
SBA	**Scott Base**	54.23	184	⇑*i*P	P	10 56 03.4	+2.0
SBA				*e*		10 57 05.8	
SBA				pmax	pmax		
	comp=Z,150nm,1.0s,mb5.9						
VNDA	**Vanda**	54.31	186	⇑*i*P	P	10 56 03.0	+1.0
	comp=Z,61nm,1.1s,mb5.4						
VNDA				*e*PcP	PcP	10 57 06.0	+0.3
VNDA	**Vanda**	54.31	186	⇑*i*P	P	10 56 03.0	+1.0
VNDA				*e*		10 57 06.0	
VNDA				pmax	pmax		
	comp=Z,61nm,1.1s						
KLBR	**Kellerberrin**	57.97	247	*e*P	P	10 56 27.7	-1.1
	comp=Z,75nm,0.9s,mb5.7						
NWAO	**Narrogin (SRO)**	58.17	245	PFAKE		10 56 40.0	+10

NWAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.0						
MUN	**Mundaring**	**59.19**	**246**	*e*P	**P**	**10 56 37.1**	**-0.2**
RPN	**Rapa Nui**	**59.74**	**108**	LR	LR	11 15 40.3	
	comp=Z,798nm,20.1s,MS4.8,baz=78,slow=29						
RPN	**Rapa Nui**	**59.74**	**108**	PFAKE		10 56 50.0	+8.9
RPN				LR	LR		
	comp=Z,306nm,20.0s,MS4.4						
CASY	**Casey**	**61.26**	**206**	⇑*i*P	**P**	**10 56 50.5**	**-0.5**
DAV	**Davao City (W)**	**64.66**	**291**	PFAKE		10 57 30.0	+16
DAV				LR	LR		
	comp=Z,161nm,19.0s,MS4.2						
MIR	**Mirnyy**	**68.27**	**206**	*e*P	**P**	**10 57 36.0**	**-0.2**
MIR				pmax	pmax		
	comp=Z,600nm,4.0s						
MIR				MLR	MLR		
	comp=N,520nm,18.0s,MS5.0						
MIR				MLR	MLR		
	comp=E,620nm,18.0s,MS5.0						
MIR				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.1						
KKM	**Kota Kinabalu**	**72.28**	**285**	⇑*e*P	**P**	**10 58 00.3**	**-1.0**
MJAR	**Matsushiro Arr**	**74.18**	**323**	P	**P**	**10 58 10.9**	**-1.3**
	comp=Z,22nm,0.8s,mb5.1,baz=159,slow=5.4,SNR=35						
MJAR				LR	LR	11 25 51.7	
	comp=Z,1µm,21.9s,MS5.1,baz=130,slow=32						
MAJO	**Matsushiro**	**74.18**	**323**	⇑*i*P	**P**	**10 58 10.8**	**-1.4**
	comp=Z,30nm,0.9s,mb5.2						
MAJO				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
MAJO	**Matsushiro**	**74.18**	**323**	P	**P**	**10 58 11.2**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
MAT	**Matsushiro**	**74.18**	**323**	P	**P**	**10 58 11.0**	**-1.2**
MAT				S	S	11 07 43.0	+1.0
MAT	**Matsushiro**	**74.18**	**323**	*e*P	**P**	**10 58 11.0**	**-1.2**
	comp=Z,26nm,1.0s,mb5.1						
MAT				*e*S	S	11 07 44.0	+2.0
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS5.1						
MAT	**Matsushiro**	**74.18**	**323**	*e*P	**P**	**10 58 11.0**	**-1.2**
MAT				*e*S	S	11 07 44.0	+2.0
MAT				pmax	pmax		
	comp=Z,26nm,1.0s,mb5.1						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
KSM	**Kuching**	**75.52**	**278**	*e*P	**P**	**10 58 19.4**	**-1.1**
NACB	**Ninganchiao**	**77.11**	**304**	*e*P	**P**	**10 58 27.5**	**-1.6**
SMY	**Shemya**	**77.14**	**354**	*e*P	**P**	**10 58 28.2**	**-0.6**
	comp=Z,178nm,1.0s,mb6.0						
SMY				LR	LR		
	comp=Z,2µm,22.0s,MS5.3						
SMY	**Shemya**	**77.14**	**354**	*e*P	**P**	**10 58 28.2**	**-0.6**
SMY				pmax	pmax		
	comp=Z,179nm,1.0s,mb6.0						
SMY				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.3						
NIKO	**Nikolski**	**77.20**	**5**	*e*P	**P**	**10 58 27.6**	**-1.5**
PMSA	**Palmer Station**	**77.20**	**156**	*e*P	**P**	**10 58 27.6**	**-1.2**
	comp=Z,42nm,1.5s,mb5.2						
PMSA				LR	LR		
	comp=Z,1µm,22.0s,MS5.1						
FX1	**Attu Island--F**	**77.38**	**353**	*e*P	**P**	**10 58 29.1**	**-1.1**
YHNB	**Yeheng**	**77.55**	**304**	*e*P	**P**	**10 58 31.1**	**-0.5**
TATO	**Taipei**	**77.64**	**305**	PFAKE		10 58 40.0	+7.9
TATO				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
UNV	**Unalaska Valle**	**78.26**	**6**	*e*P	**P**	**10 58 33.4**	**-1.5**
	comp=Z,407nm,1.1s,mb6.3						
MAW	**Mawson**	**78.56**	**200**	⇑*i*P	**P**	**10 58 37.5**	**+1.2**
	comp=Z,60nm,0.9s,mb5.5						
MAW	**Mawson**	**78.56**	**200**	P	**P**	**10 58 37.6**	**+1.3**
	comp=Z,95nm,1.0s,mb5.7,baz=125,slow=7.3,SNR=74						
MAW				LR	LR	11 30 44.8	
	comp=Z,1µm,21.2s,MS5.2,baz=114,slow=34						
MAW	**Mawson**	**78.56**	**200**	⇑*i*P	**P**	**10 58 37.5**	**+1.2**
MAW				pmax	pmax		
	comp=Z,60nm,0.9s						
SNCC	**San Nicolas Is**	**78.69**	**46**	PFAKE		10 58 50.0	+12
SNCC				LR	LR		
	comp=Z,1µm,21.0s,MS5.1						
SAO	**San Andreas Ge**	**79.72**	**42**	*e*P	**P**	**10 58 42.9**	**-0.3**
	comp=Z,61nm,1.2s,mb5.4						
SAO				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
SAO	**San Andreas Ge**	**79.72**	**42**	P	**P**	**10 58 43.8**	**+0.5**
SAO				pmax	pmax		
	comp=Z,61nm,1.2s,mb5.4						
LRV	**Little Rabbit**	**79.77**	**42**	*e*P	**P**	**10 58 43.7**	**+0.2**
PTRM	**Twissleman Ran**	**79.77**	**43**	*e*P	**P**	**10 58 43.4**	**-0.2**
QZH	**Quanzhou**	**79.81**	**303**	⇑*i*P	**P**	**10 58 43.6**	**-0.4**
QZH				AMB	AMB		
	comp=Z,100nm,0.8s,mb5.8						
YSS	**Yuzh-Sakhalins**	**79.97**	**333**	*e*P	**P**	**10 58 44.7**	**+0.3**
	comp=Z,162nm,1.1s,mb5.9						
YSS				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
YSS	**Yuzh-Sakhalins**	**79.97**	**333**	α*i*P	**P**	**10 58 44.8**	**+0.4**
YSS				S	S	11 08 46.0	+1.6
YSS				pmax	pmax		
	comp=E,100nm,1.0s						
YSS				pmax	pmax		
	comp=Z,160nm,1.0s,mb5.9						
YSS				MLR	MLR		
	comp=E,400nm,18.0s						
YSS				MLR	MLR		
	comp=Z,400nm,18.0s,MS4.8						
PET	**Petropavlovsk**	**80.01**	**345**	*e*P	**P**	**10 58 43.3**	**-1.2**
	comp=Z,288nm,1.7s,mb5.9						
PET				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
PET	**Petropavlovsk**	**80.01**	**345**	*e*P	**P**	**10 58 43.2**	**-1.3**
PET				*e*		11 01 45.3	
PET				*e*S	S	11 08 43.9	-0.8
PET				*e*PS	PS	11 09 48.7	+15
PET				pmax	pmax		
	comp=Z,99nm,1.4s,mb5.5						
PET				pmax	pmax		
	comp=Z,300nm,19.8s						
PET				pmax	pmax		
	comp=Z,100nm,16.0s						
PET				smax			
	comp=N,200nm,15.0s						
PET				smax			
	comp=E,200nm,19.9s						
PET				MLR	MLR		
	comp=Z,500nm,19.0s,MS4.9						
HOPS	**Hopland**	**80.23**	**39**	*e*P	**P**	**10 58 45.9**	**0.0**
	comp=Z,63nm,1.4s,mb5.3						
HOPS				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
BAR	**Barrett**	**80.23**	**48**	*e*P	**P**	**10 58 45.2**	**-0.8**
MWC	**Mount Wilson**	**80.25**	**46**	*e*P	**P**	**10 58 45.8**	**-0.4**
MWC	**Mount Wilson**	**80.25**	**46**	P	**P**	**10 58 46.0**	**-0.2**
SDPT	**Sand Point**	**80.45**	**9**	*e*P	**P**	**10 58 46.3**	**-0.5**
	comp=Z,275nm,0.8s,mb6.2						
SDPT				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
KIPM	**Iron Peak**	**80.55**	**38**	*e*P	**P**	**10 58 47.2**	**-0.4**
ISA	**Isabella**	**80.88**	**44**	PFAKE		10 59 00.0	+11
ISA				LR	LR		
	comp=Z,202nm,22.0s,MS4.4						
PFO	**Pinyon Flat Ob**	**80.94**	**47**	*e*P	**P**	**10 58 49.4**	**-0.4**
	comp=Z,20nm,0.9s,mb5.0						
PFO				LR	LR		
	comp=Z,309nm,19.0s,MS4.7						
PFO	**Pinyon Flat Ob**	**80.94**	**47**	P	**P**	**10 58 49.5**	**-0.3**
PFO				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
CMB	**Columbia Colle**	**81.19**	**41**	*e*P	**P**	**10 58 50.2**	**-0.8**
	comp=Z,46nm,1.3s,mb5.2						
CMB				LR	LR		
	comp=Z,942nm,20.0s,MS5.1						
CMB	**Columbia Colle**	**81.19**	**41**	P	**P**	**10 58 50.7**	**-0.3**
CMB				pmax	pmax		
	comp=Z,46nm,1.2s,mb5.3						
SSE	**Sheshan**	**81.32**	**310**	*e*P	**P**	**10 58 50.1**	**-1.8**
SSE				PP	PP	11 01 58.3	-1.5
SSE				S	S	11 08 53.4	-5.4
SSE				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
SSE				AMB	AMB		
	comp=Z,130nm,3.7s						
SSE				LR	LR		
	comp=N,260nm,18.9s,MS4.8						
SSE				LR	LR		
	comp=E,300nm,19.0s,MS4.8						
SSE				LR	LR		
	comp=Z,470nm,19.7s,MS4.8						
INCN	**Inchon**	**81.57**	**318**	PFAKE		10 59 00.0	+7.0
INCN				LR	LR		
	comp=Z,752nm,21.0s,MS5.0						
WDC	**Whiskeytown Da**	**81.60**	**38**	*e*P	**P**	**10 58 52.9**	**-0.1**
	comp=Z,108nm,1.6s,mb5.5						
WDC				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
WDC	**Whiskeytown Da**	**81.60**	**38**	P	**P**	**10 58 53.2**	**+0.1**
WDC				pmax	pmax		
	comp=Z,110nm,1.6s,mb5.5						
DAC	**Darwin (Calif)**	**81.82**	**44**	*e*P	**P**	**10 58 54.1**	**-0.2**
	comp=Z,62nm,1.7s,mb5.3						
DAC				LR	LR		
	comp=Z,774nm,21.0s,MS5.0						
DAC	**Darwin (Calif)**	**81.82**	**44**	*e*P	**P**	**10 58 54.3**	**0.0**
DAC				pmax	pmax		
	comp=Z,62nm,1.7s,mb5.3						
MTUM	**Tungsten Hills**	**81.87**	**43**	*e*P	**P**	**10 58 54.8**	**+0.2**
CJM	**Chamela**	**81.88**	**64**	*i* P	**P**	**10 58 53.5**	**-1.5**
KTRM	**Thompson Ridge**	**82.03**	**37**	P	**P**	**10 58 56.3**	**+1.0**
YBH	**Yreka Blue Hor**	**82.27**	**37**	*e*P	**P**	**10 58 56.6**	**0.0**
	comp=Z,86nm,1.6s,mb5.4						
YBH				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
YBH	**Yreka Blue Hor**	**82.27**	**37**	P	**P**	**10 58 56.8**	**+0.3**
YBH				pmax	pmax		
	comp=Z,85nm,1.5s						
LDFC	**Landfair**	**82.70**	**46**	*e*P	**P**	**10 58 59.5**	**+0.6**
NVAR	**Mina Array Bea**	**82.71**	**42**	P	**P**	**10 58 59.1**	**+0.2**
	comp=Z,15nm,1.0s,mb5.0,baz=213,slow=7.2,SNR=93						
NVAR				PKPPKP		11 25 35.4	
	comp=Z,2.2nm,1.0s,baz=92,slow=3.1,SNR=10						
NVAR				LR	LR	11 30 13.6	
	comp=Z,701nm,21.0s,MS5.0,baz=230,slow=32						
HUMO	**Hull Mountain**	**82.73**	**37**	*e*P	**P**	**10 58 59.1**	**+0.3**
	comp=Z,192nm,1.8s,mb5.8						
HUMO				LR	LR		
	comp=Z,1µm,22.0s,MS5.2						
MNV	**Mina**	**82.80**	**42**	*e*P	**P**	**10 58 59.3**	**0.0**
	comp=Z,77nm,1.4s,mb5.5						
MNV				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
MNV	**Mina**	**82.80**	**42**	P	**P**	**10 58 59.5**	**+0.2**
MNV				pmax	pmax		
	comp=Z,77nm,1.3s,mb5.6						
PAHR	**Pah Rah Range**	**82.86**	**41**	*e*P	**P**	**10 58 59.7**	**+0.1**
BUOR	**Burton Butte**	**82.90**	**37**	P	**P**	**10 59 00.5**	**+0.8**
GZH	**Guangzhou**	**82.95**	**299**	P	**P**	**10 59 00.8**	**+0.4**
GZH				S	S	11 09 11.9	-3.6
GZH				LR	LR		
	comp=N,630nm,18.0s,MS5.0						
GZH				LR	LR		
	comp=E,350nm,21.8s,MS5.0						
GZH				LR	LR		
	comp=Z,620nm,19.6s,MS5.0						
TPNV	**Topopah Spring**	**83.08**	**44**	*e*P	**P**	**10 59 01.1**	**+0.3**
	comp=Z,66nm,1.4s,mb5.5						
TPNV	**Topopah Spring**	**83.08**	**44**	P	**P**	**10 59 01.2**	**+0.4**
TPNV				pmax	pmax		
	comp=Z,65nm,1.3s,mb5.5						
TPH	**Tonopah**	**83.15**	**43**	*e*P	**P**	**10 59 01.3**	**+0.2**
	comp=Z,136nm,1.6s,mb5.7						
TPH	**Tonopah**	**83.15**	**43**	P	**P**	**10 59 02.0**	**+0.9**
TPH				pmax	pmax		
	comp=Z,140nm,1.5s,mb5.8						
NEN	**Nelson**	**83.22**	**46**	*e*P	**P**	**10 59 01.4**	**-0.1**
SYO	**Syowa Base**	**83.40**	**192**	⇑P	**P**	**10 59 01.8**	**+0.1**
SYO	**Syowa Base**	**83.40**	**192**	⇓PcP	PcP	10 59 05.7	-0.8
SYO	**Syowa Base**	**83.40**	**192**	⇑*i*P	**P**	**10 59 01.8**	**+0.1**
SYO				⇓*e*PcP	PcP	10 59 05.7	-0.8
NJ2	**Nanjing**	**83.50**	**309**	*e*P	**P**	**10 59 05.0**	**+1.9**
NJ2				AP	pP	10 59 15.5	+2.0
NJ2				XP	sP	10 59 19.1	+2.0
NJ2				PP	PP	11 02 21.1	+3.8
NJ2				S	S	11 09 24.0	+3.1
NJ2				XS		11 09 41.0	
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.4						
NJ2				AMB	AMB		
	comp=Z,130nm,7.3s						
NJ2				LR	LR		
	comp=N,960nm,18.5s,MS5.3						
NJ2				LR	LR		
	comp=E,710nm,18.0s,MS5.3						
NJ2				LR	LR		
	comp=Z,450nm,18.6s,MS4.9						
MOD	**Modoc**	**83.74**	**38**	*e*P	**P**	**10 59 04.0**	**0.0**
	comp=Z,63nm,1.1s,mb5.7						
MOD				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
QIZ	**Qiongzhong**	**83.85**	**294**	P	**P**	**10 59 06.0**	**+0.9**
QIZ				PP	PP	11 02 18.8	-1.5
QIZ				S	S	11 09 25.8	+1.2
QIZ				LR	LR		
	comp=E,380nm,18.6s						
QIZ				LR	LR		
	comp=Z,670nm,18.6s,MS5.0						
QIZ	**Qiongzhong**	**83.85**	**294**	PFAKE		10 59 20.0	+15
QIZ				LR	LR		
	comp=Z,730nm,20.0s,MS5.1						
COR	**Corvallis**	**83.88**	**35**	PFAKE		10 59 20.0	+15
COR				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
TUC	**Tucson**	**84.09**	**51**	*e*P	**P**	**10 59 06.5**	**+0.4**
	comp=Z,53nm,0.9s,mb5.7						
TUC				LR	LR		
	comp=Z,2µm,19.0s,MS5.4						
TUC	**Tucson**	**84.09**	**51**	P	**P**	**10 59 06.8**	**+0.8**
TUC				pmax	pmax		
	comp=Z,53nm,1.0s,mb5.6						
SNAA	**Sanae**	**84.20**	**178**	*e*	**P**	**10 59 08.0**	**+2.3**
SNAA	**Sanae**	**84.20**	**178**	*e*	pP	10 59 17.0	+0.9
SNAA	**Sanae**	**84.20**	**178**	*e*	sP	10 59 24.1	+4.4
SNAA	**Sanae**	**84.20**	**178**	⇑*i*P	**P**	**10 59 05.7**	**0.0**
SNAA				*e*		10 59 08.0	
SNAA				*e*	pP	10 59 17.0	+0.9
SNAA				*e*		10 59 24.1	
SNAA				*e*		11 02 31.2	
SNAA				*e*		11 04 28.4	
SNAA				*e*		11 04 41.1	
SNAA	**Sanae**	**84.20**	**178**	⇑*i*P	**P**	**10 59 05.7**	**0.0**
SNAA				*e*	pP	10 59 17.0	+0.9
SNAA				*e*		11 02 31.2	
VNA3	**Neumayer Olymp**	**84.28**	**176**	*e*	**P**	**10 59 08.8**	**+2.7**
VNA3	**Neumayer Olymp**	**84.28**	**176**	*e*	pP	10 59 15.6	-0.9
VNA3	**Neumayer Olymp**	**84.28**	**176**	*e*	sP	10 59 23.1	+3.0
VNA3	**Neumayer Olymp**	**84.28**	**176**	⇑*i*P	**P**	**10 59 06.3**	**+0.2**
VNA3				*e*		10 59 08.8	
VNA3				*e*	pP	10 59 15.6	-0.9
VNA3				*e*		10 59 23.1	
VNA3				*e*		11 02 15.4	
VNA3				*e*		11 04 20.2	
VNA3				*e*		11 04 34.3	
MDJ	**Mudanjiang**	**84.51**	**324**	P	**P**	**10 59 08.6**	**+0.8**
MDJ				AP	pP	10 59 20.8	+2.5
MDJ				XP	sP	10 59 25.6	+3.8
MDJ				PP	PP	11 02 24.8	-0.3
MDJ				S	S	11 09 33.6	+3.0
MDJ				XS		11 09 53.4	
MDJ				SS	SS	11 15 05.9	+1.3
MDJ				AMB	AMB		
	comp=Z,60nm,1.4s,mb5.5						
MDJ				AMB	AMB		
	comp=Z,370nm,5.2s						
MDJ				LR	LR		
	comp=N,210nm,23.1s,MS4.8						
MDJ				LR	LR		
	comp=E,380nm,23.7s,MS4.8						
MDJ				LR	LR		
	comp=Z,720nm,19.0s,MS5.1						
MDJ	**Mudanjiang**	**84.51**	**324**	*e*P	**P**	**10 59 08.5**	**+0.7**
	comp=Z,91nm,1.2s,mb5.8						
MDJ				LR	LR		
	comp=Z,1µm,20.0s,MS5.2						
CAIG	**El Cayaco**	**84.73**	**69**	*i* P	**P**	**10 59 09.0**	**-0.5**
VNA2	**Neumayer--Watz**	**84.73**	**176**	*e*	**P**	**10 59 11.1**	**+2.8**
VNA2	**Neumayer--Watz**	**84.73**	**176**	*e*	pP	10 59 18.9	+0.1
VNA2	**Neumayer--Watz**	**84.73**	**176**	*e*	sP	10 59 26.0	+3.7
VNA2	**Neumayer--Watz**	**84.73**	**176**	⇑*i*P	**P**	**10 59 08.9**	**+0.6**
VNA2				*e*		10 59 11.1	
VNA2				*e*	pP	10 59 18.9	+0.1
VNA2				*e*		10 59 26.0	
VNA2				*e*		11 02 23.0	
VNA2				*e*		11 04 25.2	
VNA2				*e*		11 04 38.0	
VNA1	**Neumayer--Stat**	**84.95**	**176**	*e*	**P**	**10 59 12.4**	**+3.0**
VNA1	**Neumayer--Stat**	**84.95**	**176**	*e*	pP	10 59 20.3	+0.4
VNA1	**Neumayer--Stat**	**84.95**	**176**	*e*	sP	10 59 27.5	+4.1
VNA1	**Neumayer--Stat**	**84.95**	**176**	⇑*i*P	**P**	**10 59 10.3**	**+0.9**
VNA1				*e*		10 59 12.4	
VNA1				*e*	pP	10 59 20.3	+0.4
VNA1				*e*		10 59 27.5	
VNA1				*e*		11 02 24.2	
VNA1				*e*		11 04 28.3	
WVOR	**Wild Horse Val**	**85.03**	**39**	*e*P	**P**	**10 59 10.4**	**-0.1**
	comp=Z,70nm,1.2s,mb5.7						
WVOR	**Wild Horse Val**	**85.03**	**39**	P	**P**	**10 59 10.6**	**+0.1**
WVOR				pmax	pmax		
	comp=Z,70nm,1.2s,mb5.7						
MAIT	**Maitri**	**85.04**	**183**	⇑*i*P	**P**	**10 59 10.2**	**+0.3**
NVL	**N’lazarevskaya**	**85.04**	**183**	⇓*i*P	**P**	**10 59 08.8**	**-1.1**
NVL				*e*		10 59 15.6	
NVL				*e*SSS	SSS	11 18 44.4	+4.4
NVL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NVL				MLR	MLR		
	comp=Z,26nm,16.7s						
ON2	**Olympics--Nort**	**85.21**	**33**	P	**P**	**10 59 12.6**	**+1.4**
VIPM	**Ingram Point**	**85.26**	**36**	P	**P**	**10 59 11.9**	**+0.4**
ARUT	**Antelope Range**	**85.38**	**45**	*e*P	**P**	**10 59 12.7**	**+0.3**
ARUT	**Antelope Range**	**85.38**	**45**	P	**P**	**10 59 12.9**	**+0.6**
WUAZ	**Wupatki**	**85.45**	**48**	*e*P	**P**	**10 59 13.1**	**+0.4**
	comp=Z,77nm,1.2s,mb5.7						
WUAZ				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
ZAIG	**Zacatecas**	**85.48**	**63**	*i* P	**P**	**10 59 13.3**	**+0.2**
PLCA	**Paso Flores**	**85.54**	**133**	P	**P**	**10 59 13.7**	**+0.7**
	comp=Z,14nm,0.9s,mb5.2,baz=226,slow=4.7,SNR=15						
PLCA				LR	LR	11 28 11.6	
	comp=Z,563nm,19.6s,MS5.0,baz=86,slow=29						
PLCA	**Paso Flores**	**85.54**	**133**	*e*P	**P**	**10 59 13.4**	**+0.3**
	comp=Z,20nm,1.0s,mb5.3						
PLCA				LR	LR		
	comp=Z,808nm,22.0s,MS5.1						
PLCA	**Paso Flores**	**85.54**	**133**	*e*P	**P**	**10 59 13.4**	**+0.4**
PLCA				pmax	pmax		
	comp=Z,21nm,1.0s						
PLCA				MLR	MLR		
	comp=Z,808nm,22.0s						
DL2	**Dalian**	**85.56**	**316**	P	**P**	**10 59 11.3**	**-1.9**
DL2				S	S	11 09 36.8	-4.3
DL2				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.4						
DL2				AMB	AMB		
	comp=Z,230nm,5.2s						
DL2				LR	LR		
	comp=N,200nm,15.9s,MS4.8						
DL2				LR	LR		
	comp=E,190nm,15.1s,MS4.8						
DL2				LR	LR		
	comp=Z,470nm,18.3s,MS4.9						
OCWA	**Octopus Mounta**	**85.61**	**32**	PFAKE		10 59 20.0	+6.8
OCWA				LR	LR		
	comp=Z,804nm,19.0s,MS5.1						
WHN	**Wuhan**	**85.95**	**306**	P	**P**	**10 59 16.5**	**+1.2**
PLIG	**Platanillo**	**85.99**	**68**	*i* P	**P**	**10 59 15.9**	**+0.2**
ELK	**Elko**	**85.99**	**42**	*e*P	**P**	**10 59 15.0**	**-0.3**
	comp=Z,39nm,1.4s,mb5.4						
ELK				LR	LR		
	comp=Z,1µm,22.0s,MS5.2						
ELK	**Elko**	**85.99**	**42**	P	**P**	**10 59 15.2**	**-0.1**
ELK				pmax	pmax		
	comp=Z,39nm,1.3s						
PAYG	**Puerto Ayora**	**86.07**	**89**	PFAKE		10 59 30.0	+14
PAYG				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
SNY	**Shenyang**	**86.11**	**319**	⇑P	**P**	**10 59 16.4**	**+0.6**
SNY				AMB	AMB		
	comp=Z,40nm,1.6s,mb5.4						
SNY				AMB	AMB		
	comp=Z,330nm,5.5s						
SNY				LR	LR		
	comp=E,390nm,18.6s						
SNY				LR	LR		
	comp=Z,740nm,18.6s,MS5.1						
CN2	**Changchun**	**86.25**	**322**	*e*P	**P**	**10 59 17.8**	**+1.4**
CN2				*e*AP	pP	10 59 31.1	+4.2
CN2				*e*XP	sP	10 59 36.3	+5.9
CN2				*e*S	S	11 09 48.5	+0.9
CN2				AMB	AMB		
	comp=Z,30nm,1.1s,mb5.4						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,20.0s,MS5.1						
CN2				LR	LR		
	comp=E,600nm,20.0s,MS5.1						
CN2				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
KLR	**Kul’dur**	**86.58**	**329**	*e*P	**P**	**10 59 18.5**	**+0.6**
KLR				*e*S	S	11 09 54.2	+3.6
KLR				pmax	pmax		
	comp=E,30nm,1.6s						
KLR				pmax	pmax		
	comp=Z,80nm,1.6s,mb5.7						
KLR				pmax	pmax		
	comp=Z,800nm,9.5s						
MVU	**Marysvale**	**86.58**	**45**	*e*P	**P**	**10 59 19.3**	**+1.1**
	comp=Z,41nm,1.3s,mb5.5						
PGC	**Sidney**	**86.58**	**32**	*e*P	**P**	**10 59 17.8**	**-0.1**
	comp=Z,96nm,1.1s,mb5.9						
MSU	**Marysvale**	**86.61**	**45**	*e*P	**P**	**10 59 19.2**	**+0.9**
SVW2	**Sparrevohn**	**86.72**	**10**	*e*P	**P**	**10 59 18.3**	**0.0**
MXC	**Moxie City**	**86.78**	**35**	P	**P**	**10 59 19.7**	**+0.7**
TIA	**Tai’an**	**86.98**	**312**	⇑P	**P**	**10 59 20.8**	**+0.6**
TIA				AMB	AMB		
	comp=Z,130nm,1.1s,mb6.1						
PPM	**Popocatepetl**	**87.03**	**68**	*i* P	**P**	**10 59 22.1**	**+1.3**
EFI	**East Falkland**	**87.06**	**147**	PFAKE		10 59 30.0	+10
EFI				LR	LR		
	comp=Z,265nm,20.0s,MS4.6						
HAWA	**Hanford**	**87.06**	**35**	PFAKE		10 59 30.0	+10
HAWA				LR	LR		
	comp=Z,139nm,20.0s,MS4.4						
SLKM	**Skilak Lake**	**87.12**	**13**	*e*P	**P**	**10 59 20.2**	**-0.1**
SLKM	**Skilak Lake**	**87.12**	**13**	P	**P**	**10 59 20.7**	**+0.5**
DUG	**Dugway**	**87.17**	**43**	PFAKE		10 59 30.0	+9.0
DUG				LR	LR		
	comp=Z,946nm,22.0s,MS5.2						
WAH2	**Wahluke Slope**	**87.28**	**35**	P	**P**	**10 59 22.1**	**+0.7**
BMO	**Blue Mountains**	**87.30**	**38**	*e*P	**P**	**10 59 20.9**	**-0.7**
	comp=Z,119nm,2.0s,mb5.8						
BMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
MNTX	**Cornudas Mount**	**87.66**	**54**	*e*P	**P**	**10 59 23.6**	**0.0**
	comp=Z,90nm,0.9s,mb6.0						
MNTX				LR	LR		
	comp=Z,867nm,19.0s,MS5.2						
TMUT	**Trail Mountain**	**87.68**	**45**	*e*P	**P**	**10 59 24.2**	**+0.7**
FIB	**Fire Island**	**87.73**	**12**	PFAKE		10 59 30.0	+6.8
FIB				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
VHO	**Vista Hermosa**	**87.76**	**70**	*i* P	**P**	**10 59 24.9**	**+0.6**
OXX	**Oaxaca**	**87.77**	**70**	*i* P	**P**	**10 59 25.0**	**+0.6**
LTX	**Lajitas**	**87.78**	**57**	*e*P	**P**	**10 59 24.4**	**+0.2**
	comp=Z,93nm,1.1s,mb5.9						
LTX				LR	LR		
	comp=Z,902nm,19.0s,MS5.2						
LTX	**Lajitas**	**87.78**	**57**	P	**P**	**10 59 24.6**	**+0.4**
LTX				pmax	pmax		
	comp=Z,93nm,1.0s,mb6.0						
TXAR	**Lajitas Array**	**87.78**	**57**	P	**P**	**10 59 24.4**	**+0.3**
	comp=Z,53nm,0.9s,mb5.8,baz=213,slow=6.8,SNR=339						
TXAR				PKPPKP		11 25 21.5	
	comp=Z,1.2nm,1.1s,baz=108,slow=4.0,SNR=5.1						
TXAR				LR	LR	11 34 31.8	
	comp=Z,624nm,18.0s,MS5.1,baz=240,slow=33						
TXAR	**Lajitas Array**	**87.78**	**57**	P	**P**	**10 59 24.4**	**+0.3**
TXAR				P’P’		11 25 21.5	
TXAR				LR	LR	11 34 31.8	
LENM	**Lemitar**	**87.78**	**51**	*e*P	**P**	**10 59 24.6**	**+0.5**
MPU	**Maple Canyon**	**87.81**	**44**	*e*P	**P**	**10 59 24.4**	**+0.3**
	comp=Z,28nm,1.1s,mb5.4						
MPU				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
MA2	**Magadan**	**87.84**	**344**	*e*P	**P**	**10 59 23.2**	**-0.5**

	comp=Z,59nm,1.1s,mb5.7						
MA2	**Magadan**	**87.84**	**344**	*de*P	**P**	**10 59 27.8**	**+4.1**
MA2				*e*		11 11 09.2	
MA2				*e*		11 15 48.0	
MA2				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.6						
BNM	**Barren Site**	**88.01**	**51**	*e*P	**P**	**10 59 25.5**	**+0.3**
SRU	**San Rafael**	**88.02**	**45**	*e*P	**P**	**10 59 25.0**	**-0.1**
	comp=Z,49nm,1.1s,mb5.7						
SRU	**San Rafael**	**88.02**	**45**	P	**P**	**10 59 25.2**	**+0.1**
SRU				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.7						
SPUT	**South Promonto**	**88.03**	**43**	*e*P	**P**	**10 59 25.2**	**+0.1**
LPM	**Los Pinos Moun**	**88.09**	**51**	*e*P	**P**	**10 59 25.9**	**+0.3**
HVU	**Hansel Valley**	**88.11**	**42**	*e*P	**P**	**10 59 25.6**	**+0.1**
	comp=Z,27nm,1.2s,mb5.3						
HVU	**Hansel Valley**	**88.11**	**42**	P	**P**	**10 59 26.1**	**+0.6**
HVU				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.4						
CTU	**Camp Tracy**	**88.12**	**43**	*e*P	**P**	**10 59 24.7**	**-0.9**
	comp=Z,21nm,1.0s,mb5.3						
HLID	**Hailey**	**88.17**	**40**	*e*P	**P**	**10 59 25.8**	**+0.1**
	comp=Z,10nm,1.0s,mb5.0						
HLID				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
DAU	**Daniels Canyon**	**88.27**	**44**	*e*P	**P**	**10 59 26.5**	**+0.2**
DAU	**Daniels Canyon**	**88.27**	**44**	P	**P**	**10 59 27.3**	**+1.0**
PMR	**Palmer**	**88.33**	**13**	*e*P	**P**	**10 59 25.4**	**-0.6**
	comp=Z,206nm,2.1s,mb6.0						
PMR				LR	LR		
	comp=Z,800nm,20.0s,MS5.1						
PMR	**Palmer**	**88.33**	**13**	*e*P	**P**	**10 59 25.9**	**-0.1**
PMR				pmax	pmax		
	comp=Z,150nm,1.3s,mb6.1						
ANMO	**Albuquerque**	**88.54**	**50**	*e*P	**P**	**10 59 27.9**	**+0.2**
	comp=Z,57nm,1.1s,mb5.8						
ANMO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
ANMO	**Albuquerque**	**88.54**	**50**	*e*P	**P**	**10 59 27.9**	**+0.2**
ANMO				pmax	pmax		
	comp=Z,57nm,1.1s						
ANMO				MLR	MLR		
	comp=Z,2µm,19.0s						
TCUT	**Toone Canyon**	**88.57**	**43**	*e*P	**P**	**10 59 27.7**	**0.0**
PV10	**Paradox Valley**	**88.59**	**46**	*e*P	**P**	**10 59 27.3**	**-0.6**
DIV	**Divide**	**88.62**	**14**	*e*P	**P**	**10 59 27.5**	**0.0**
	comp=Z,490nm,1.0s						
DIV				LR	LR		
	comp=Z,6µm,19.0s,MS6.0						
GDL2	**Guadalupe Moun**	**88.66**	**54**	*e*P	**P**	**10 59 28.2**	**-0.2**
SML	**Sawmill**	**88.68**	**13**	*e*P	**P**	**10 59 27.4**	**-0.4**
SML	**Sawmill**	**88.68**	**13**	P	**P**	**10 59 28.2**	**+0.5**
HWUT	**Hardware Ranch**	**88.75**	**43**	*e*P	**P**	**10 59 28.1**	**-0.5**
	comp=Z,38nm,1.5s,mb5.5						
HWUT				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
PV01	**Paradox Valley**	**88.77**	**47**	*e*P	**P**	**10 59 28.5**	**-0.3**
CLNB	**Carlsbad**	**89.05**	**54**	*e*P	**P**	**10 59 30.2**	**0.0**
CMIG	**Matias Romero**	**89.36**	**71**	*i* P	**P**	**10 59 31.9**	**-0.1**
CPRX	**Cap Rock**	**89.44**	**53**	*e*P	**P**	**10 59 31.7**	**-0.3**
ENH	**Enshi**	**89.46**	**304**	*e*P	**P**	**10 59 33.4**	**+1.1**
	comp=Z,386nm,1.3s,mb6.6						
ENH				LR	LR		
	comp=Z,547nm,21.0s,MS5.0						
NEW	**Newport**	**89.52**	**35**	PFAKE		10 59 40.0	+8.0
NEW				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
AHID	**Auburn Hatcher**	**89.69**	**42**	*e*P	**P**	**10 59 33.0**	**0.0**
	comp=Z,38nm,1.1s,mb5.6						
AHID				LR	LR		
	comp=Z,874nm,20.0s,MS5.2						
NNT	**Nongplab**	**89.73**	**284**	P	**P**	**10 59 35.9**	**+2.1**
TNA	**Tin City**	**89.78**	**3**	*e*P	**P**	**10 59 32.8**	**-0.1**
	comp=Z,108nm,1.5s,mb6.0						
TNA				LR	LR		
	comp=Z,769nm,20.0s,MS5.1						
MCMT	**McKenzie Canyo**	**89.82**	**40**	*e*P	**P**	**10 59 33.9**	**+0.3**
GYA	**Guiyang**	**89.89**	**299**	⇑*i*P	**P**	**10 59 35.3**	**+1.0**
GYA				AP	pP	10 59 48.3	+3.4
GYA				XP	sP	10 59 53.0	+4.7
GYA				SKS	SKS	11 09 55.0	-5.4
GYA				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.9						
GYA				AMB	AMB		
	comp=Z,1µm,4.8s						
GYA				LR	LR		
	comp=N,370nm,19.4s,MS5.1						
GYA				LR	LR		
	comp=E,570nm,19.5s,MS5.1						
GYA				LR	LR		
	comp=Z,610nm,20.0s,MS5.0						
REDW	**Red Top Meadow**	**90.17**	**42**	*e*P	**P**	**10 59 35.1**	**-0.1**
	comp=Z,132nm,1.7s,mb6.0						
TPAW	**Teton Pass**	**90.18**	**41**	*e*P	**P**	**10 59 35.2**	**0.0**
	comp=Z,99nm,1.7s,mb5.9						
DLMT	**Dillon**	**90.27**	**39**	*e*P	**P**	**10 59 35.8**	**+0.1**
	comp=Z,164nm,1.7s,mb6.1						
SNOW	**Snow King Moun**	**90.29**	**42**	*e*P	**P**	**10 59 36.1**	**+0.3**
	comp=Z,34nm,1.0s,mb5.6						
MCK	**McKinley**	**90.32**	**12**	*e*P	**P**	**10 59 35.0**	**-0.4**
	comp=Z,70nm,1.0s,mb6.0						
MCK				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
MSO	**Missoula**	**90.37**	**37**	PFAKE		10 59 50.0	+14
MSO				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
SMCO	**Snowmass**	**90.38**	**47**	*e*P	**P**	**10 59 36.4**	**+0.1**
	comp=Z,36nm,1.1s,mb5.6						
SEY	**Seymchan**	**90.41**	**346**	⇓*i*P	**P**	**10 59 35.6**	**-0.2**
IMW	**Indian Meadow**	**90.42**	**41**	*e*P	**P**	**10 59 36.8**	**+0.4**
	comp=Z,66nm,1.3s,mb5.8						
MOOW	**Moose Ponds**	**90.45**	**41**	*e*P	**P**	**10 59 36.3**	**-0.2**
	comp=Z,88nm,1.8s,mb5.8						
LOHW	**Long Hollow**	**90.46**	**41**	*e*P	**P**	**10 59 36.5**	**0.0**
	comp=Z,128nm,1.8s,mb6.0						
BW06	**Boulder Array**	**90.63**	**43**	PFAKE		10 59 50.0	+13
BW06				LR	LR		
	comp=Z,745nm,20.0s,MS5.1						
PDAR	**Pinedale Array**	**90.64**	**43**	P	**P**	**10 59 36.9**	**-0.5**
	comp=Z,11nm,0.9s,mb5.2,baz=210,slow=2.3,SNR=58						
PDAR				PKKPbc		11 17 04.8	
	comp=Z,0.9nm,0.7s,baz=61,slow=3.8,SNR=7.3						
PDAR				LR	LR	11 34 50.5	
	comp=Z,476nm,18.3s,MS5.0,baz=246,slow=32						
SDCO	**Great Sand Dun**	**90.64**	**48**	*e*P	**P**	**10 59 37.5**	**0.0**
	comp=Z,34nm,1.1s,mb5.6						
SDCO				LR	LR		
	comp=Z,2µm,19.0s,MS5.5						
QLMT	**Earthquake Lak**	**90.65**	**40**	*e*P	**P**	**10 59 38.3**	**+0.9**
THY	**Trims Highway**	**90.66**	**13**	*e*P	**P**	**10 59 37.3**	**+0.3**
NST	**Nakhon Sawan**	**90.67**	**287**	P	**P**	**10 59 40.0**	**+1.9**
	comp=Z,100nm,1.0s,mb6.1						
MENT	**Mentasta**	**90.68**	**14**	*e*P	**P**	**10 59 37.8**	**+0.7**
YFT	**Old Faithful**	**90.79**	**41**	*e*P	**P**	**10 59 39.4**	**+1.3**
CHMT	**Chamberlain Mo**	**90.80**	**38**	*e*P	**P**	**10 59 37.3**	**-0.8**
YMR	**Madison River**	**90.83**	**40**	*e*P	**P**	**10 59 39.3**	**+1.0**
	comp=Z,140nm,1.6s,mb6.0						
YMR				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
DLBC	**Dease Lake**	**90.91**	**22**	*e*P	**P**	**10 59 39.4**	**+1.1**
BOZ	**Bozeman (W)**	**90.99**	**39**	*e*P	**P**	**10 59 38.8**	**-0.2**
	comp=Z,62nm,1.0s,mb5.9						
BOZ				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
BOZ	**Bozeman (W)**	**90.99**	**39**	*e*P	**P**	**10 59 38.8**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.9						
BOZ				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.2						
LKWY	**Lake**	**91.11**	**41**	*e*P	**P**	**10 59 40.9**	**+1.3**
	comp=Z,169nm,1.8s,mb6.1						
LKWY				LR	LR		
	comp=Z,903nm,20.0s,MS5.2						
LKWY	**Lake**	**91.11**	**41**	P	**P**	**10 59 41.7**	**+2.1**
LKWY				pmax	pmax		
	comp=Z,170nm,1.8s,mb6.1						
HRY	**Holter Researc**	**91.48**	**38**	*e*P	**P**	**10 59 41.2**	**0.0**
COLA	**College**	**91.56**	**12**	*e*P	**P**	**10 59 40.2**	**-1.0**
	comp=Z,116nm,0.9s,mb6.2						
COLA				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
COLA	**College**	**91.56**	**12**	*e*P	**P**	**10 59 40.2**	**-1.0**
COLA				pmax	pmax		
	comp=Z,116nm,0.9s,mb6.2						
COLA				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
ISCO	**Idaho Springs**	**91.60**	**47**	PFAKE		10 59 50.0	+8.0
ISCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
ILAR	**Eielson Array**	**91.64**	**12**	P	**P**	**10 59 40.8**	**-0.8**
	comp=Z,38nm,0.9s,mb5.7,baz=222,slow=4.6,SNR=252						
ILAR				PP	PP	11 03 18.8	-3.8
	comp=Z,4.5nm,1.0s,baz=224,slow=7.3,SNR=4.4						
XAN	**Xi'an**	**91.67**	**307**	P	**P**	**10 59 43.3**	**+0.9**
XAN				AP	pP	10 59 52.4	-0.7
XAN				SS	SS	11 16 50.3	+1.7
XAN				AMB	AMB		
	comp=Z,110nm,0.9s,mb6.2						
XAN				LR	LR		
	comp=N,250nm,19.2s,MS4.8						
XAN				LR	LR		
	comp=E,290nm,20.2s,MS4.8						
XAN				LR	LR		
	comp=Z,560nm,17.2s,MS5.1						
IMA2	**Indian Mountai**	**91.70**	**9**	*e*P	**P**	**10 59 40.6**	**-1.2**
AMTX	**Amarillo**	**91.92**	**52**	*e*P	**P**	**10 59 43.0**	**-0.5**
	comp=Z,49nm,1.1s,mb5.8						
AMTX				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
GCMT	**Greycliff**	**92.22**	**40**	*e*P	**P**	**10 59 45.0**	**+0.4**
KMI	**Kunming**	**92.46**	**296**	P	**P**	**10 59 47.5**	**+1.2**
KMI				AP	pP	10 59 59.9	+3.0
KMI				XP	sP	11 00 04.8	+4.5
KMI				PP	PP	11 03 29.8	-0.4
KMI				PPP	PPP	11 05 32.9	+1.3
KMI				SKS	SKS	11 10 15.3	-0.1
KMI				S	S	11 10 45.0	+0.1
KMI				XS		11 11 05.4	
KMI				PS	PS	11 12 06.4	+0.8
KMI				SS	SS	11 17 02.3	+1.9
KMI				SSS	SSS	11 20 39.3	+0.4
KMI				AMB	AMB		
	comp=Z,90nm,1.3s,mb5.9						
KMI				AMB	AMB		
	comp=Z,250nm,3.1s						
KMI				LR	LR		
	comp=N,410nm,16.1s						
KMI				LR	LR		
	comp=E,490nm,21.4s						
KMI				LR	LR		
	comp=Z,600nm,22.2s						
PHWY	**Pilot Hill**	**92.46**	**45**	*e*P	**P**	**10 59 46.2**	**+0.3**
TRQA	**Tornquist**	**92.60**	**134**	PFAKE		11 00 00.0	+13
TRQA				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
DAWY	**Dawson**	**92.66**	**15**	*e*P	**P**	**10 59 46.6**	**+0.4**
HIA	**Hailar**	**92.68**	**324**	*e*P	**P**	**10 59 46.8**	**+0.1**
	comp=Z,47nm,1.0s,mb5.9						
HIA				LR	LR		
	comp=Z,915nm,20.0s,MS5.2						
HIA	**Hailar**	**92.68**	**324**	P	**P**	**10 59 47.2**	**+0.5**
HIA				pmax	pmax		
	comp=Z,47nm,1.0s						
CHRT	**Chiangrai**	**92.72**	**290**	⇑P	**P**	**10 59 48.0**	**+0.4**
	comp=Z,750nm,1.1s						
BILL	**Bilibino**	**92.95**	**354**	*e*P	**P**	**10 59 47.3**	**-0.2**
	comp=Z,66nm,0.9s,mb6.1						
BILL				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
BILL	**Bilibino**	**92.95**	**354**	*ce*P	**P**	**10 59 47.7**	**+0.2**
BILL				*e*		11 03 35.1	
BILL				*e*PPP	PPP	11 05 30.3	-4.7
BILL				*i* PS	PS	11 12 10.9	+1.0
BILL				pmax	pmax		
	comp=Z,111nm,1.3s,mb6.1						
CHG	**Chiang Mai**	**93.00**	**289**	⇑P	**P**	**10 59 50.8**	**+1.9**
	comp=Z,150nm,1.0s,mb6.4						
HHC	**Hu-ho-hao-te**	**93.11**	**314**	⇑P	**P**	**10 59 50.3**	**+1.4**
HHC				AP	pP	11 00 00.6	+1.1
HHC				XP	sP	11 00 04.8	+1.9
HHC				PP	PP	11 03 38.9	+3.9
HHC				SKS	SKS	11 10 20.9	+2.2
HHC				S	S	11 10 55.4	+5.1
HHC				XS		11 11 13.3	
HHC				PS	PS	11 12 19.8	+7.5
HHC				AMB	AMB		
	comp=Z,110nm,1.3s,mb6.1						
HHC				AMB	AMB		
	comp=Z,240nm,9.5s						
HHC				LR	LR		
	comp=N,350nm,19.0s,MS5.0						
HHC				LR	LR		
	comp=E,420nm,22.6s,MS5.0						
HHC				LR	LR		
	comp=Z,560nm,21.4s,MS5.0						
NNA	**Nana**	**93.56**	**105**	PFAKE		11 00 00.0	+8.5
NNA				LR	LR		
	comp=Z,281nm,20.0s,MS4.7						
WMOK	**Wichita Mounta**	**93.97**	**54**	*e*P	**P**	**10 59 51.7**	**-1.2**
	comp=Z,17µm,1.4s						
WMOK				LR	LR		
	comp=Z,637nm,20.0s,MS5.1						
WMOK	**Wichita Mounta**	**93.97**	**54**	*e*P	**P**	**10 59 51.7**	**-1.2**
WMOK				pmax	pmax		
	comp=Z,10µm,1.4s						
WMOK				MLR	MLR		
	comp=Z,637nm,20.0s						
BTO	**Baotou**	**94.02**	**313**	*e*P	**P**	**10 59 52.8**	**-0.2**
BTO				AMB	AMB		
	comp=Z,70nm,1.3s,mb5.9						
CD2	**Chengdu**	**94.15**	**302**	⇑*i*P	**P**	**10 59 55.5**	**+1.7**
CD2				AP	pP	11 00 09.0	+4.6
CD2				PP	PP	11 03 45.4	+2.0
CD2				PPP	PPP	11 05 49.5	+2.8
CD2				SKS	SKS	11 10 24.8	+0.2
CD2				S	S	11 11 01.5	+2.1
CD2				SS	SS	11 17 28.3	+3.9
CD2				AMB	AMB		
	comp=Z,20nm,1.7s,mb5.3						
CD2				AMB	AMB		
	comp=Z,70nm,6.9s						
CD2				LR	LR		
	comp=E,250nm,19.2s						
CD2				LR	LR		
	comp=Z,260nm,24.0s,MS4.6						
EDM	**Edmonton**	**94.42**	**32**	*e*P	**P**	**10 59 53.9**	**-0.6**
EDM	**Edmonton**	**94.42**	**32**	*e*P	**P**	**10 59 54.2**	**-0.3**
CLNS	**Chul'man**	**94.70**	**332**	*e*P	**P**	**10 59 55.3**	**-0.4**
CLNS				pmax	pmax		
	comp=Z,25nm,1.1s,mb5.6						
CLNS				pmax	pmax		
	comp=N,11nm,1.4s						
CLNS				pmax	pmax		
	comp=E,10.0nm,1.4s						
LAO	**LASA Array**	**94.72**	**40**	*e*P	**P**	**10 59 56.5**	**+0.5**
	comp=E,42nm,1.0s,mb5.8						
LAO				*e*PP	PP	11 03 41.5	-5.5
LAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
RSSD	**Black Hills**	**94.78**	**43**	*e*P	**P**	**10 59 55.8**	**-0.5**
	comp=Z,54nm,1.0s,mb5.9						
RSSD	**Black Hills**	**94.78**	**43**	P	**P**	**10 59 56.1**	**-0.2**
RSSD				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.9						
CBKS	**Cedar Bluff**	**95.12**	**50**	PFAKE		11 00 10.0	+12
CBKS				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
JTS	**JuntasAbangare**	**95.36**	**81**	PFAKE		11 00 10.0	+10
JTS				LR	LR		
	comp=Z,192nm,19.0s,MS4.6						
JTS	**JuntasAbangare**	**95.36**	**81**	*i* P	**P**	**10 59 57.1**	**-2.6**
NATX	**Nacogdoches**	**95.79**	**58**	PFAKE		11 00 10.0	+8.7
NATX				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
YAK	**Yakutsk**	**96.20**	**337**	⇑*i*P	**P**	**11 00 01.0**	**-1.4**
YAK				LR	LR		
	comp=Z,482nm,22.0s,MS4.9						
YAK	**Yakutsk**	**96.20**	**337**	*c i*P	**P**	**11 00 01.9**	**-0.5**
YAK				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.8						
LZH	**Lanzhou**	**96.31**	**307**	⇑P	**P**	**11 00 05.3**	**+1.8**
LZH				AP	pP	11 00 17.8	+3.7
LZH				XP	sP	11 00 22.4	+4.9
LZH				PP	PP	11 04 02.0	+2.3
LZH				SKS	SKS	11 10 38.4	+2.2
LZH				*e*S	S	11 11 18.3	+0.7
LZH				XS		11 11 34.0	
LZH				PS	PS	11 12 48.0	+0.7
LZH				SS	SS	11 17 56.5	+2.0
LZH				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.8						
LZH				AMB	AMB		
	comp=Z,250nm,4.0s						
LZH				LR	LR		
	comp=E,910nm,15.4s						
LZH				LR	LR		
	comp=Z,1µm,21.0s						
DGMT	**Dagmar**	**96.80**	**40**	PFAKE		11 00 20.0	+15
DGMT				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
CIT	**Chita**	**97.48**	**324**	*e*P	**P**	**11 00 08.2**	**-0.3**
INK	**Inuvik**	**97.50**	**15**	*e*P	**P**	**11 00 07.7**	**-0.5**
	comp=Z,17nm,1.0s,mb5.4						
INK	**Inuvik**	**97.50**	**15**	P	**P**	**11 00 08.2**	**0.0**
INK				pmax	pmax		
	comp=Z,17nm,1.0s						
MIAR	**Mount Ida**	**97.77**	**56**	PFAKE		11 00 20.0	+10
MIAR				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
LPAZ	**La Paz**	**99.15**	**112**	P	**P**	**11 00 18.4**	**+1.7**
	comp=Z,2.4nm,0.9s,mb4.7,baz=174,slow=7.8,SNR=7.3						
LPAZ				PP	PP	11 04 18.2	-3.6
	comp=Z,1.1nm,0.8s,baz=243,slow=8.4,SNR=3.5						
LPAZ				LR	LR	11 37 02.2	
	comp=Z,405nm,20.2s,MS4.9,baz=173,slow=30						
LPAZ	**La Paz**	**99.15**	**112**	P	**P**	**11 00 18.4**	**+1.7**
LPAZ				PP	PP	11 04 18.2	-3.6
LPAZ				LR	LR	11 37 02.2	
YKA	**Yellowknife Ar**	**99.27**	**24**	P	**P**	**11 00 15.6**	**-0.7**
	comp=Z,5.7nm,1.1s,mb5.0,baz=225,slow=4.0,SNR=5.1						
YKA				LR	LR	11 39 37.4	
	comp=Z,489nm,19.9s,MS5.0,baz=215,slow=32						
SONM	**Songino Array**	**99.63**	**318**	P	**P**	**11 00 18.7**	**+0.4**
	comp=Z,5.2nm,1.0s,mb4.9,baz=114,slow=2.8,SNR=23						
SONM				PP	PP	11 04 15.1	-10
	comp=Z,1.3nm,0.9s,baz=158,slow=7.8,SNR=3.9						
SONM				PKKPbc		11 16 39.2	
	comp=Z,1.1nm,0.8s,baz=257,slow=2.5,SNR=6.0						
SONM				LR	LR	11 45 50.8	
	comp=Z,452nm,18.3s,MS5.0,baz=139,slow=36						
GTA	**Gaotai**	**100.58**	**308**	*e*P	P	11 00 23.3	+0.5
GTA				AP		11 00 36.5	
GTA				XP		11 00 42.0	
GTA				PP	PP	11 04 31.8	-0.9
GTA				PPP	PPP	11 06 40.3	-2.0
GTA				SKS	SKS	11 10 57.1	-0.7
GTA				XS		11 12 15.0	
GTA				AMB	AMB		
	comp=Z,10.0nm,1.4s						
GTA				AMB	AMB		
	comp=Z,100nm,4.2s						
GTA				LR	LR		
	comp=N,170nm,20.3s,MS5.0						
GTA				LR	LR		
	comp=E,500nm,20.6s,MS5.0						
GTA				LR	LR		
	comp=Z,540nm,20.2s,MS5.0						
CCM	**Cathedral Cave**	**100.88**	**53**	PFAKE		11 00 40.0	+16
CCM				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
OXF	**Oxford**	**100.92**	**57**	PFAKE		11 00 40.0	+16
OXF				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
FFC	**Flin Flon**	**100.94**	**35**	PFAKE		11 00 40.0	+16
FFC				LR	LR		
	comp=Z,243nm,19.0s,MS4.7						
SHL	**Shillong**	**101.65**	**293**	*e*P	P	11 00 29.0	+1.0
CPUP	**Villa Florida**	**102.47**	**126**	PFAKE		11 00 40.0	+8.4
CPUP				LR	LR		
	comp=Z,87nm,20.0s,MS4.3						
ZAK	**Zakamensk**	**102.54**	**320**	*e*P	Pdif	11 00 30.9	-0.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WVT	**Waverly**	**102.71**	**56**	PFAKE		11 00 40.0	+7.6
WVT				LR	LR		
	comp=Z,1µm,19.0s,MS5.4						
TIXI	**Tiksi**	**102.80**	**345**	PFAKE		11 00 40.0	+8.0
TIXI				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
TIXI	**Tiksi**	**102.80**	**345**	*e*P	Pdif	11 00 33.2	+1.2
TIXI				*e*SP	SP	11 13 46.2	-3.9
TIXI				*e*		11 14 41.4	
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
LSA	**Lhasa**	**103.72**	**297**	PFAKE		11 00 50.0	+13
LSA				LR	LR		
	comp=Z,467nm,21.0s,MS5.0						
EYMN	**Ely**	**104.30**	**44**	PFAKE		11 00 50.0	+11
EYMN				LR	LR		
	comp=Z,838nm,21.0s,MS5.2						
WCI	**Wyandotte Cave**	**104.58**	**54**	PFAKE		11 00 50.0	+9.4
WCI				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
PALK	**Pallekele**	**104.80**	**271**	PFAKE		11 00 50.0	+7.9
PALK				LR	LR		
	comp=Z,284nm,19.0s,MS4.8						
GOGA	**Godfrey**	**105.16**	**60**	PFAKE		11 05 10.0	
GOGA				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
MYNC	**Murphy**	**105.19**	**58**	PFAKE		11 05 10.0	
MYNC				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
DGAR	**Diego Garcia**	**106.02**	**254**	PFAKE		11 05 10.0	
DGAR				LR	LR		
	comp=Z,369nm,22.0s,MS4.9						
GUN	**Gumba**	**107.49**	**293**	*e*P		11 05 01.5	
	comp=Z,32nm,1.1s						
GUN	**Gumba**	**107.49**	**293**	*e*P	Pdif	11 00 59.7	+6.0
	comp=Z,9.0nm,0.8s						
GUN				*e*P		11 05 01.5	
ACSO	**Alum Creek Sta**	**107.65**	**53**	PFAKE		11 05 10.0	
ACSO				LR	LR		
	comp=Z,722nm,19.0s,MS5.2						
AAM	**Ann Arbor**	**107.77**	**51**	PFAKE		11 05 10.0	
AAM				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
PKI	**Pulchoki**	**107.78**	**293**	*e*P	Pdif	11 01 00.4	+5.5
	comp=Z,25nm,1.0s						
PKI	**Pulchoki**	**107.78**	**293**	*e*P		11 05 00.7	
	comp=Z,22nm,1.0s						
PKI	**Pulchoki**	**107.78**	**293**	*e*P	Pdif	11 01 00.4	+5.5
PKI				*e*P		11 05 00.7	
SDV	**Santo Domingo**	**107.81**	**88**	PFAKE		11 05 10.0	
SDV				LR	LR		
	comp=Z,574nm,21.0s,MS5.1						
KKN	**Kakani**	**107.96**	**293**	*e*P	Pdif	11 01 01.6	+5.9
	comp=Z,21nm,0.8s						
KKN	**Kakani**	**107.96**	**293**	*e*P		11 05 01.9	
	comp=Z,16nm,0.7s						
KKN	**Kakani**	**107.96**	**293**	*e*P	Pdif	11 01 01.6	+5.9
KKN				*e*P		11 05 01.9	
DMN	**Daman**	**108.05**	**293**	*e*P		11 05 01.0	
DMN	**Daman**	**108.05**	**293**	*e*P	Pdif	11 01 01.8	+5.7
DMN				*e*P		11 05 01.0	
GKN	**Gorkha**	**108.57**	**293**	*e*P	Pdif	11 01 03.7	+5.3
	comp=Z,21nm,0.9s						
GKN	**Gorkha**	**108.57**	**293**	*e*P		11 05 03.2	
	comp=Z,14nm,0.8s						
GKN	**Gorkha**	**108.57**	**293**	*e*P	Pdif	11 01 03.7	+5.3
GKN				*e*P		11 05 03.2	
KOLN	**Koldanda**	**109.37**	**292**	*e*P	Pdif	11 01 07.0	+5.1
	comp=Z,20nm,1.1s						
KOLN	**Koldanda**	**109.37**	**292**	*e*P		11 05 04.6	
	comp=Z,12nm,0.7s						
MCWV	**Mont Chateau**	**109.81**	**55**	PFAKE		11 05 20.0	
MCWV				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
ERPA	**Erie**	**110.34**	**52**	PFAKE		11 05 20.0	+14
ERPA				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
WMQ	**Urumqi**	**110.58**	**310**	*e*PKP	PKPdf	11 05 07.6	+1.6
WMQ				XPKP		11 05 22.0	
WMQ				*e*PP	PP	11 05 49.0	+1.9
WMQ				PPP	PPP	11 08 09.0	+1.4
WMQ				PKS	PKS	11 08 43.0	+1.1
WMQ				SKS	SKS	11 12 15.0	+33
WMQ				SKKS		11 12 39.0	
WMQ				SS	SS	11 21 12.0	+1.5
WMQ				PP	PP		
	comp=Z,80nm,5.3s						
WMQ				LR	LR		
	comp=N,650nm,16.8s,MS5.4						
WMQ				LR	LR		
	comp=E,690nm,18.5s,MS5.4						
WMQ				LR	LR		
	comp=Z,730nm,21.8s,MS5.2						

CBN	**Corbin**	**111.29**	**57**	PFAKE		11 05 20.0	+12
CBN				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
ZAL	**Zalesovo**	**114.42**	**320**	PKP	PKPdf	11 05 13.8	+0.6
	comp=Z,3.6nm,0.8s,baz=339,slow=1.9,SNR=18						
NCB	**Newcomb**	**114.87**	**51**	PFAKE		11 05 30.0	+16
NCB				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
MKAR	**Makanchi Array**	**114.92**	**312**	PKP	PKPdf	11 05 14.4	0.0
	comp=Z,9.0nm,0.9s,baz=72,slow=3.8,SNR=35						
MKAR				PKKPbc		11 15 52.3	
	comp=Z,4.5nm,1.0s,baz=288,slow=3.8,SNR=10						
SJG	**San Juan**	**115.15**	**81**	PFAKE		11 05 30.0	+14
SJG				LR	LR		
	comp=Z,450nm,22.0s,MS5.0						
NVS	**Novosibirsk**	**115.45**	**321**	*e*PKIKP	PKPdf	11 05 14.8	-0.5
NVS				pmax	pmax		
	comp=Z,24nm,1.0s						
HRV	**Harvard--Oak R**	**116.54**	**53**	PFAKE		11 05 30.0	+12
HRV				LR	LR		
	comp=Z,2μm,19.0s,MS5.7						
LBNH	**Lisbon**	**116.55**	**51**	PFAKE		11 05 30.0	+12
LBNH				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
WES	**Weston**	**116.69**	**53**	PFAKE		11 05 30.0	+12
WES				LR	LR		
	comp=Z,8μm,20.0s						
KURK	**Kurchatov**	**117.83**	**316**	*e*PKPdf	PKPdf	11 05 19.7	-0.1
KURK				LR	LR		
	comp=Z,239nm,20.0s,MS4.8						
KURK	**Kurchatov**	**117.83**	**316**	PKIKP	PKPdf	11 05 20.1	+0.2
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ULHL	**Ulahol**	**118.52**	**306**	P	PKPdf	11 05 23.3	+1.8
	SNR=20						
TKM2	**Tokmak 2**	**119.08**	**307**	P	PKPdf	11 05 23.4	+0.9
	SNR=12						
KZA	**Kyzart**	**119.23**	**306**	P	PKPdf	11 05 24.7	+1.8
	SNR=10						
CHMS	**Chumysh**	**119.70**	**307**	P	PKPdf	11 05 24.9	+1.1
	SNR=6.6						
FRU	**Bishkek**	**119.78**	**307**	*i* PKIKP	PKPdf	11 05 26.0	+2.0
FRU				pmax	pmax		
	comp=Z,40nm,2.0s						
FRU				MLR	MLR		
	comp=Z,500nm,24.0s,MS5.1						
UCH	**Uchtor**	**119.79**	**306**	P	PKPdf	11 05 26.2	+2.2
	SNR=21						
AAK	**Ala-Archa**	**119.85**	**307**	P	PKPdf	11 05 24.3	+0.2
	SNR=8.7						
AAK	**Ala-Archa**	**119.85**	**307**	*e*PKPdf	PKPdf	11 05 23.9	-0.3
AAK				LR	LR		
	comp=Z,131nm,20.0s,MS4.6						
AAK	**Ala-Archa**	**119.85**	**307**	PKIKP	PKPdf	11 05 24.2	+0.1
EKS2	**Erkin-Say**	**120.38**	**307**	P	PKPdf	11 05 26.2	+1.1
	SNR=7.8						
AML	**Almayashu**	**120.38**	**306**	P	PKPdf	11 05 27.2	+2.0
	SNR=5.7						
SCHQ	**Schefferville**	**120.62**	**39**	PKP	PKPdf	11 05 25.2	-0.1
	comp=Z,10nm,0.9s,baz=309,slow=3.9,SNR=4.8						
SCHQ	**Schefferville**	**120.62**	**39**	PKP	PKPdf	11 05 25.2	-0.1
SCHQ				LR	LR		
	comp=Z,1μm,19.0s,MS5.5						
SUR	**Sutherland**	**121.34**	**197**	*e*PKPdf	PKPdf	11 05 28.9	+1.7
KKAR	**Karatay Array**	**122.81**	**307**	*i* PKIKP	PKPdf	11 05 30.5	+0.7
KKAR				pmax	pmax		
	comp=Z,24nm,0.9s						
BVA0	**Borovoye Array**	**122.97**	**319**	*i* PKIKP	PKPdf	11 05 30.4	+0.5
BVA0				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRVK	**Borovoye**	**123.03**	**319**	*e*PKPdf	PKPdf	11 05 30.3	+0.3
BRVK				LR	LR		
	comp=Z,89nm,20.0s,MS4.4						
BRVK	**Borovoye**	**123.03**	**319**	PKIKP	PKPdf	11 05 30.8	+0.8
BOSA	**Boshof**	**123.47**	**203**	PKP	PKPdf	11 05 33.3	+1.8
	comp=Z,21nm,1.0s,baz=152,slow=2.7,SNR=20						
BOSA	**Boshof**	**123.47**	**203**	*e*PKPdf	PKPdf	11 05 32.6	+1.1
DAG	**Danmarks Havn**	**126.32**	**6**	⇑*i*P	PKPdf	11 05 35.5	-0.2
	comp=Z,11nm,0.9s						
SUMG	**Summit**	**126.42**	**15**	*e*PKPdf	PKPdf	11 05 37.1	+1.1
LBTB	**Lobatse**	**126.61**	**205**	PFAKE		11 05 50.0	+12
LBTB				LR	LR		
	comp=Z,699nm,19.0s,MS5.4						
SVE	**Sverdlovsk**	**127.98**	**324**	⇑*e*PKIKP	PKPdf	11 05 39.0	-0.4
SVE				*e*		11 05 51.3	
SVE				pmax	pmax		
	comp=Z,60nm,1.3s						
SOKR	**Solikamsk**	**129.13**	**328**	⇑*i*PKIKP	PKPdf	11 05 42.7	+1.2
SOKR				pmax	pmax		
	comp=Z,70nm,1.1s						
ARU	**Arti**	**129.19**	**324**	*e*PKPdf	PKPdf	11 05 43.2	+1.5
ARU				LR	LR		
	comp=Z,227nm,20.0s,MS4.9						
ARU	**Arti**	**129.19**	**324**	*i* PKIKP	PKPdf	11 05 42.5	+0.8
ARU				*e*		11 07 51.7	
ARU				*e*SS	SS	11 25 04.2	-5.8
ARU				MLR	MLR		
	comp=Z,700nm,20.0s,MS5.3						
ARU				MLR	MLR		
	comp=N,300nm,19.0s,MS5.3						
ARU				MLR	MLR		
	comp=E,500nm,19.0s,MS5.3						
AB31	**Akbulak array**	**129.89**	**315**	PKIKP	PKPdf	11 05 43.8	+0.6
AB31				pmax	pmax		
	comp=Z,14nm,1.0s						
RCBR	**Riachuelo**	**131.15**	**123**	PFAKE		11 06 00.0	+13
RCBR				LR	LR		
	comp=Z,429nm,20.0s,MS5.2						
KEV	**Kevo**	**132.47**	**349**	*e*p	PKPdf	11 05 47.0	-0.6
	comp=Z,20nm,0.9s						
KEV	**Kevo**	**132.47**	**349**	*e*P	PKPdf	11 05 47.0	-0.6
KEV				LR	LR		
	comp=Z,835nm,19.0s,MS5.5						
ARCES	**ARCESS Array B**	**132.91**	**350**	PKhKP		11 05 39.3	
	comp=Z,2.4nm,0.9s,slow=3.6,SNR=4.3						
ARCES				PKP	PKPdf	11 05 49.1	+0.7
	comp=Z,26nm,0.8s,slow=1.2,SNR=26						
APA	**Apatity**	**132.99**	**345**	⇑*i*PKIKP	PKPdf	11 05 49.0	+0.4
APA				pmax	pmax		
	comp=Z,13nm,1.0s						
APA				MLR	MLR		
	comp=Z,1μm,20.0s,MS5.5						
LSZ	**Lusaka**	**133.99**	**214**	*e*PKPpre		11 05 50.8	
LSZ				*e*PP	PP	11 08 25.2	-1.5
LSZ				LR	LR		
	comp=Z,902nm,21.0s,MS5.5						
KLMR	**Klimovskoe**	**135.97**	**336**	*e*PKIKP	PKPdf	11 05 50.2	-4.1
KLMR				pmax	pmax		
	comp=Z,30nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,1μm,24.0s,MS5.5						
JOF	**Joensuu**	**137.20**	**342**	*e*p	PKPdf	11 05 48.7	-7.8
	comp=Z,19nm,1.0s						
KMBO	**Kilima Mbogo**	**138.81**	**237**	PKP	PKPdf	11 06 03.4	+2.6
	comp=Z,5.9nm,0.8s,baz=254,slow=23,SNR=7.9						
KMBO	**Kilima Mbogo**	**138.81**	**237**	PKP	PKPdf	11 06 03.4	+2.6
KMBO				LR	LR		
	comp=Z,499nm,19.0s,MS5.3						
KAF	**Kangasniemi**	**139.21**	**344**	*e*p	PKPdf	11 05 53.5	-6.7
	comp=Z,15nm,0.9s						
FINES	**FINESS Array B**	**139.83**	**344**	PKhKP		11 05 55.8	
	comp=Z,8.2nm,0.9s,baz=90,slow=3.8,SNR=8.2						
FINES				PKP	PKPdf	11 06 02.0	+0.7
	comp=Z,16nm,0.9s,baz=90,slow=1.4,SNR=11						
OBN	**Obninsk**	**140.82**	**330**	*i* PKP	PKPdf	11 06 04.4	+1.2
OBN				LR	LR		
	comp=Z,183nm,19.0s,MS4.8						
OBN	**Obninsk**	**140.82**	**330**	⇑*e*PKHKP		11 05 58.9	
OBN				*i*		11 06 04.3	
OBN				*e*		11 09 03.6	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN				pmax	pmax		
	comp=Z,52nm,1.2s						
OBN				MLR	MLR		
	comp=Z,500nm,18.0s,MS5.3						
DGRG	**David-gareji**	**141.47**	**307**	P	PKPdf	11 06 04.1	-0.7
VRSR	**Storozhevoye**	**141.76**	**324**	*e*PKHKP		11 06 00.1	
VRSR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
VRSR				pmax	pmax		
	comp=N,1.0nm,2.0s						
VRSR				pmax	pmax		
	comp=E,1.0nm,1.7s						
TI2	**Plekhanov**	**141.86**	**307**	*e*PKHKP		11 06 01.8	
VSU	**Vasula**	**142.13**	**340**	*i* PKHKP		11 06 01.2	
GNI	**Garni**	**142.22**	**305**	*i* P	PKPdf	11 06 05.4	-0.7
GNI				*e*PKPdf	PKPdf	11 06 08.8	+2.7
GNI				LR	LR		
	comp=Z,369nm,20.0s,MS5.1						
MZLS	**Mizel**	**142.25**	**278**	P	PKPdf	11 06 04.3	-2.3
DJNS	**Zahran al Janu**	**142.35**	**268**	P	PKPdf	11 06 09.1	+2.1
KIV	**Kislovodsk**	**142.68**	**311**	*e*PKPpre		11 06 04.5	
KIV				LR	LR		
	comp=Z,560nm,19.0s,MS5.3						
KIV	**Kislovodsk**	**142.68**	**311**	*i* PKHKP		11 06 03.7	
KIV				pmax	pmax		
	comp=Z,16nm,0.7s						
NB2	**NORSAR Subarra**	**142.90**	**354**	PKPabc		11 06 03.4	
	comp=Z,24nm,0.8s,baz=16,slow=2.9						
NB2	**NORSAR Subarra**	**142.90**	**354**	PKPa		11 06 03.4	
	baz=16,slow=3.0						
NOA	**NORSAR Array B**	**142.90**	**354**	PKhKP		11 06 03.9	
	comp=Z,19nm,0.8s,baz=16,slow=4.6,SNR=35						
TATS	**Tathlith**	**142.90**	**271**	P	PKPdf	11 06 07.7	-0.2
CLDR	**Caldiran**	**143.05**	**303**	*e*P	PKPbc	11 06 04.6	-0.9
NAO	**NORSAR Subarra**	**143.15**	**354**	PKPab	PKPab	11 06 03.4	-1.8
BHD	**Baghdad**	**143.44**	**294**	*e*x	x	11 06 07.0	
HAKT	**HAKKARI**	**143.50**	**301**	*i* P	PKPbc	11 06 05.2	-1.7
TVAN	**Van**	**143.56**	**303**	*i* P	PKPbc	11 06 09.0	+1.9
VANB	**Van**	**143.56**	**303**	*e*P	PKPbc	11 06 07.4	+0.3
MSL	**Mosul**	**144.19**	**299**	*e*x	x	11 06 08.0	
AFFS	**‘Afif**	**144.22**	**278**	P	PKPbc	11 06 11.1	+1.6
KONO	**Kongsberg**	**144.42**	**355**	*e*PKPdf	PKPdf	11 06 08.0	-1.2
BLJS	**Baljurashi**	**144.70**	**270**	P	PKPbc	11 06 13.8	+3.0
SOC	**Sochi**	**144.83**	**312**	*i* P	PKPdf	11 06 11.0	+0.5
SOC	**Sochi**	**144.83**	**312**	*c* *i*PKIKP	PKPdf	11 06 10.4	-0.1
SOC				pmax	pmax		
	comp=Z,70nm,0.9s						
BTMT	**Batman**	**145.11**	**302**	*e*P	PKPdf	11 06 12.8	+1.6
BNGL	**BINGOL**	**145.19**	**304**	*i* P	PKPdf	11 06 11.9	+0.6
BEST	**Besiri**	**145.34**	**302**	*i* P	PKPdf	11 06 13.4	+1.8
HILS	**Ha’il**	**145.68**	**283**	P	PKPdf	11 06 15.9	+3.4
MARD	**Mardin**	**145.84**	**301**	*i* P	PKPdf	11 06 14.8	+2.3
ANN	**Anapa**	**145.85**	**315**	*e*P	PKPdf	11 06 12.7	+0.5
ANN	**Anapa**	**145.85**	**315**	*i* PKIKP	PKPdf	11 06 12.6	+0.4
ANN				pmax	pmax		
	comp=Z,206nm,1.2s						
GUMT	**Gumushane**	**146.03**	**307**	*e*P	PKPdf	11 06 15.3	+2.6
PTK	**Pertek**	**146.54**	**304**	*e*P	PKPdf	11 06 14.6	+1.0
GRSN	**GIRESUNGRSN**	**146.76**	**308**	*i* P	PKPdf	11 06 15.7	+1.8
SUW	**Suwalki**	**146.92**	**339**	⇑*i*PKP	PKPdf	11 06 16.9	+3.2
SUW				*e*		11 06 20.4	
SUW	**Suwalki**	**146.92**	**339**	⇑*i*PKP	PKPdf	11 06 16.9	+3.2
SUW				*e*		11 06 20.5	
ELZG	**Elazig**	**146.95**	**304**	*i* P	PKPdf	11 06 18.4	+4.1
AKASG	**Malin Array Be**	**147.07**	**330**	PKPbc	PKPdf	11 06 17.0	+2.9
	comp=Z,90nm,0.8s,baz=41,slow=3.8,SNR=255						
AKASG	**Malin Array Be**	**147.07**	**330**	PKPbc	PKPdf	11 06 17.0	+2.9
URFA	**Urfa**	**147.33**	**302**	*e*P	PKPdf	11 06 18.4	+3.4
MYA	**Malataya**	**147.42**	**304**	*e*P	PKPdf	11 06 19.3	+4.2
EAB	**Aberfoyle**	**147.59**	**8**	⇑*e*P	PKPdf	11 06 17.8	+3.1
EAB				AMb	AMB	11 06 20.0	
	comp=Z,270nm,1.2s						
MUD	**Monsted U’grnd**	**147.62**	**354**	⇑*i*P	PKPdf	11 06 18.9	+4.1
	comp=Z,218nm,1.1s						
MUD				*i*		11 30 28.7	
	comp=Z,410nm,20.0s						
KBRS	**Khaybar**	**147.82**	**280**	P	PKPdf	11 06 19.6	+3.5
SIM	**Simferopol’**	**147.88**	**317**	⇑*e*PKP2	PKPab	11 06 21.2	-2.0
SIM				pmax	pmax		
	comp=Z,250nm,11.0s						
COP	**Copenhagen**	**147.98**	**351**	⇑*i*P	PKPdf	11 06 19.9	+4.5
	comp=Z,74nm,0.9s						
COP				*e*		11 23 17.3	
	comp=Z,190nm,19.0s						
COP	**Copenhagen**	**147.98**	**351**	⇑*e*P	PKPdf	11 06 19.9	+4.5
COP				*e*		11 23 17.3	
COP				LR	LR		
	comp=Z,200nm,19.0s,MS4.9						
COP	**Copenhagen**	**147.98**	**351**	⇑*e*PKP2	PKPab	11 06 19.9	-3.3
COP				MLR	MLR		
	comp=Z,200nm,19.0s,MS4.9						
EDI	**Edinburgh**	**147.99**	**7**	⇑*e*P	PKPdf	11 06 19.5	+4.1
EDI				AMb	AMB	11 06 24.0	
	comp=Z,186nm,1.3s						
EAU	**Auchinoon**	**148.03**	**8**	⇑*e*P	PKPdf	11 06 19.7	+4.2
EAU				AMb	AMB	11 06 22.1	
	comp=Z,489nm,1.7s						
BSD	**Bornholm Skovb**	**148.11**	**348**	⇑*i*P	PKPdf	11 06 19.9	+4.3
	comp=Z,103nm,1.0s						
BSD				*e*		11 07 15.5	
EBL	**Broad Law**	**148.15**	**7**	⇑*e*P	PKPdf	11 06 19.9	+4.2
EBL				AMb	AMB	11 06 22.4	
	comp=Z,278nm,1.3s						
ESK	**Eskdalemuir**	**148.58**	**8**	*e*PKPbc	PKPdf	11 06 20.7	+4.4
GAZ	**Gaziantep**	**148.64**	**302**	*e*P	PKPdf	11 06 22.9	+5.8
ECK	**Cauldkaine Hil**	**148.72**	**8**	⇑*e*P	PKPdf	11 06 21.2	+4.6
ECK				AMb	AMB	11 06 24.5	
	comp=Z,131nm,1.8s						
YNBS	**Yanbu‘ al Bahr**	**148.81**	**277**	P	PKPdf	11 06 20.7	+3.0
BYBT	**Boyabat**	**149.02**	**311**	*e*P	PKPdf	11 06 24.2	+6.7
WAR	**Warsaw**	**149.12**	**339**	*e*PKP	PKPdf	11 06 22.9	+5.6
WAR	**Warsaw**	**149.12**	**339**	*e*PKP	PKPdf	11 06 22.9	+5.6
BNN	**Bunyan**	**149.20**	**306**	*e*P	PKPdf	11 06 23.5	+5.6
DMUB	**Kingscourt**	**149.36**	**12**	*e*P	PKPdf	11 06 18.2	+0.5
DMUB	**Kingscourt**	**149.36**	**12**	⇑*i*P	PKPdf	11 06 23.4	+5.7
WIM	**Isle of Man**	**149.52**	**10**	*e*P	PKPdf	11 06 23.6	+5.7
WIM				AMb	AMB	11 06 25.1	
	comp=Z,376nm,1.1s						
UMJS	**Umm Lajj**	**149.53**	**279**	P	PKPdf	11 06 26.0	+7.2
QURS	**Qurayyt al Mil**	**149.54**	**291**	P	PKPdf	11 06 26.1	+7.4
COBT	**Iskenderun**	**149.55**	**301**	*i* P	PKPdf	11 06 19.6	+1.0
CORM	**Corum**	**149.62**	**309**	*e*P	PKPdf	11 06 24.8	+6.2
KOZT	**Kozan**	**149.62**	**303**	*e*P	PKPdf	11 06 24.8	+6.2
TOS	**Tosya**	**149.71**	**311**	*e*P	PKPdf	11 06 25.6	+7.0
KIS	**Kishinev**	**149.75**	**325**	α*i*PKP2	PKPab	11 06 24.0	-6.8
KIS				pmax	pmax		
	comp=Z,400nm,1.0s						
KIS				pmax	pmax		
	comp=Z,400nm,1.0s						
LWH	**Whinny Nab**	**149.81**	**5**	⇑*e*P	PKPdf	11 06 23.9	+5.5
DCN	**Croghan**	**149.81**	**13**	*e*P	PKPdf	11 06 19.1	+0.7
DCN	**Croghan**	**149.81**	**13**	⇑*i*P	PKPdf	11 06 24.5	+6.1
CEYT	**Ceyhan**	**149.81**	**302**	*e*P	PKPdf	11 06 24.2	+5.3
AVNT	**Avonos**	**149.95**	**306**	*i* P	PKPdf	11 06 24.3	+5.2
BSEG	**Bad Segeberg**	**149.97**	**352**	*e*PKPdf	PKPdf	11 06 20.1	+1.5
BSEG				*e*PKPbc	PKPdf	11 06 25.3	+6.7
DLF	**Lyons Farm**	**150.01**	**12**	*e*P	PKPdf	11 06 19.3	+0.6
DLF	**Lyons Farm**	**150.01**	**12**	⇑*i*P	PKPdf	11 06 24.8	+6.1
CANT	**Cankiri**	**150.16**	**310**	*e*P	PKPdf	11 06 26.7	+7.4
KARA	**Karaisali**	**150.28**	**303**	*e*P	PKPdf	11 06 25.9	+6.3
WCB1	**Church Bay**	**150.28**	**10**	*e*P	PKPdf	11 06 25.2	+6.1
WCB1				AMb	AMB	11 06 26.4	
	comp=Z,178nm,1.1s						
WME	**Myndd Eilian**	**150.30**	**10**	*e*P	PKPdf	11 06 25.5	+6.3
TBKS	**Tabuk**	**150.35**	**285**	P	PKPdf	11 06 27.9	+7.8
NIG	**Nigde**	**150.35**	**305**	*e*P	PKPdf	11 06 26.9	+7.1
WLF1	**Llynfaes**	**150.39**	**10**	⇑*e*P	PKPdf	11 06 25.3	+6.0
WLF1				AMb	AMB	11 06 26.8	
	comp=Z,142nm,1.0s						
LHO	**Holmfirth**	**150.48**	**7**	⇑*e*P	PKPdf	11 06 25.7	+6.3
KAMT	**Kaman**	**150.58**	**308**	*e*P	PKPdf	11 06 26.3	+6.3
BHL	**Bhannes**	**150.60**	**296**	*e*P	PKPdf	11 06 27.8	+7.5
KWP	**Kalwaria**	**150.67**	**334**	⇑*i*PKP	PKPdf	11 06 27.2	+7.4
KWP				*e*		11 06 33.8	
KWP	**Kalwaria**	**150.67**	**334**	⇑*i*PKP	PKPdf	11 06 27.2	+7.4
KWP				*e*		11 06 33.8	
YRE	**Yr Eifl**	**150.69**	**10**	*e*P	PKPdf	11 06 26.0	+6.2
KBI1	**Birley Grange**	**150.80**	**6**	*e*P	PKPdf	11 06 26.3	+6.4
MERS	**Mersin**	**150.80**	**303**	*e*P	PKPdf	11 06 27.3	+6.8
RUE	**Ruedersdorf**	**150.82**	**347**	*e*PKPbc	PKPdf	11 06 26.8	+6.9
SBD1	**Bryn Du**	**150.93**	**9**	⇑*e*P	PKPdf	11 06 27.0	+6.9
SBD1				AMb	AMB	11 06 27.9	
	comp=Z,187nm,1.0s						
MKRJ	**Makawir**	**150.95**	**292**	P	PKPdf	11 06 29.1	+8.3
MMA0	**Mount Meron ar**	**150.95**	**295**	P	PKPdf	11 06 28.4	+7.6
KWE	**Weaver Farm**	**151.00**	**7**	⇑*e*P	PKPdf	11 06 26.8	+6.6
MMLI	**Mount Malkishu**	**151.03**	**293**	P	PKPdf	11 06 29.3	+8.4
ANTO	**Ankara**	**151.04**	**309**	*e*P	PKPdf	11 06 26.9	+6.2
ANTO	**Ankara**	**151.04**	**309**	*e*PKPdf	PKPdf	11 06 28.3	+7.6
ANTO				LR	LR		
	comp=Z,499nm,19.0s,MS5.3						
ANTO	**Ankara**	**151.04**	**309**	*e*PKIKP	PKPdf	11 06 22.3	+1.6
ANTO				*e*		11 06 28.5	
HNTI	**Hanita**	**151.13**	**295**	P	PKPdf	11 06 29.0	+7.9
MEST	**Erdemli**	**151.17**	**302**	*i* P	PKPdf	11 06 26.1	+5.1
MZDA	**Masada**	**151.22**	**291**	P	PKPdf	11 06 29.5	+8.3
OJC	**Ojcow**	**151.25**	**338**	*e*PKP	PKPdf	11 06 28.3	+7.6
SGKT	**Sivrigoynuk**	**151.26**	**311**	*i* P	PKPdf	11 06 25.3	+4.3
HAF	**Haifa**	**151.31**	**294**	P	PKPdf	11 06 29.4	+8.1
HLM1	**Long Mynd**	**151.36**	**8**	⇑*e*P	PKPdf	11 06 27.9	+7.2
HLM1				AMb	AMB	11 06 29.4	
	comp=Z,202nm,1.0s						
OFRI	**‘Ofer**	**151.36**	**294**	P	PKPdf	11 06 29.3	+7.9
KOLS	**Kolonicke sedl**	**151.40**	**334**	*e*PKP	PKPdf	11 06 22.5	+1.6
KOLS				*e*		11 06 29.4	
KOLS				*e*		11 06 36.6	
STHS	**Stebnicka Huta**	**151.40**	**336**	*e*PKP	PKPdf	11 06 23.3	+2.4
STHS				*i*		11 06 29.3	
WIT	**Witteveen**	**151.42**	**356**	PKiKP		11 06 29.2	
	comp=Z,628nm,1.2s						
SSP1	**Stoney Pound**	**151.43**	**9**	⇑*e*P	PKPdf	11 06 28.2	+7.3
SSP1				AMb	AMB	11 06 29.6	
	comp=Z,186nm,1.0s						
ZFRI	**Zfri**	**151.45**	**290**	P	PKPdf	11 06 30.1	+8.5
AYUS	**‘Aynunah**	**151.48**	**285**	P	PKPdf	11 06 29.9	+8.2
TIRR	**Tirgusor**	**151.54**	**321**	⇓P	PKPdf	11 06 29.7	+8.4
VRI	**Vrincioaia**	**151.58**	**325**	⇓P	PKPdf	11 06 29.3	+8.0
JMOS	**Jabal al Moall**	**151.59**	**287**	P	PKPdf	11 06 31.1	+9.2
HRFI	**Mount Harif**	**151.61**	**289**	P	PKPdf	11 06 28.4	+6.5
PRNI	**Paran**	**151.61**	**289**	P	PKPdf	11 06 30.5	+8.6
AQBJ	**Aqaba**	**151.62**	**288**	P	PKPdf	11 06 30.5	+8.6
BDAS	**Al Bad‘**	**151.62**	**285**	P	PKPdf	11 06 31.2	+9.3
ALWS	**Ilw as Safayha**	**151.63**	**287**	P	PKPdf	11 06 31.6	+10
HARR	**Harsova**	**151.68**	**322**	⇓P	PKPdf	11 06 29.5	+8.0
EIL	**Elat**	**151.71**	**288**	P	PKPdf	11 06 30.7	+8.7
MBH	**Mount Berech**	**151.73**	**288**	P	PKPdf	11 06 30.8	+8.7
CRVS	**Cervenica-Dubn**	**151.74**	**335**	*e*PKP	PKPdf	11 06 23.1	+1.7
CRVS				*e*		11 06 29.8	
CRVS				*e*		11 06 35.6	
MASH	**Mash‘abbe Sade**	**151.74**	**291**	P	PKPdf	11 06 30.5	+8.5
NIE	**Niedzica**	**151.74**	**337**	*e*PKP	PKPdf	11 06 22.8	+1.4
NIE				*e*		11 06 30.2	
HAQS	**Haql**	**151.76**	**287**	P	PKPdf	11 06 31.3	+9.2
KSP	**Ksiaz**	**151.76**	**343**	⇑*i*PKP	PKPdf	11 06 30.0	+8.6
KSP				*e*		11 06 39.2	
KSP	**Ksiaz**	**151.76**	**343**	*e*PKPdf	PKPdf	11 06 23.1	+1.7
KSP				*i* PKPdf	PKPdf	11 06 29.7	+8.3
KSP				*e*PKPab	PKPab	11 06 38.7	-0.3
KSP				*e*PP	PP	11 10 06.0	-5.6
KSP	**Ksiaz**	**151.76**	**343**	*e*PKIKP	PKPdf	11 06 23.1	+1.7
KSP				*i*		11 06 29.7	
KSP				*e*		11 10 06.0	
MCH1	**Michaelchurch**	**151.85**	**9**	⇑*e*P	PKPdf	11 06 28.9	+7.4
HAE	**Alders End**	**151.88**	**8**	⇑*e*P	PKPdf	11 06 29.1	+7.6
HAE				AMb	AMB	11 06 31.1	
	comp=Z,189nm,1.5s						
MDU	**Mudurnu**	**151.88**	**312**	*e*P	PKPdf	11 06 30.0	+8.0
CLZ	**Clausthal**	**152.02**	**351**	*e*PKPdf	PKPdf	11 06 23.1	+1.3
CLZ				*e*PKPbc	PKPdf	11 06 30.2	+8.4
KIZT	**Kizilcal**	**152.08**	**308**	*e*P	PKPdf	11 06 30.8	+8.5
KZIT	**Kziot**	**152.08**	**291**	P	PKPdf	11 06 31.4	+8.9
CLL	**Collm**	**152.09**	**348**	*e*PKIKP	PKPdf	11 06 23.0	+1.1
CLL				*i* PKP1	PKPdf	11 06 30.2	+8.3
CLL				*i* PKP2	PKPab	11 06 39.4	-1.0
CLL				*i* *PPKP		11 06 46.6	
CLL				*e*PP	PP	11 10 08.0	-5.3
CLL				*e*PPP	PPP	11 13 36.0	-5.5
CLL				*e*PS		11 23 24.0	
CLL				*e*SS	SS	11 29 42.0	+6.3
CLL				*e*		11 39 48.0	
CLL	**Collm**	**152.09**	**348**	*e*PKP	PKPdf	11 06 23.0	+1.1
CLL				⇑*i*PKP	PKPdf	11 06 30.2	+8.3
CLL				*i* PKP	PKPab	11 06 39.4	-1.0
CLL				*i* pPKP		11 06 46.6	
ERMK	**Ermenek**	**152.10**	**303**	*i* P	PKPdf	11 06 30.2	+7.8
OKC	**Ostrava-Krasne**	**152.12**	**340**	*e*PKP	PKPdf	11 06 23.7	+1.7
OKC				*e*		11 06 30.3	
OKC				*e*		11 06 38.3	
UPC	**Upice**	**152.14**	**343**	*e*PKP	PKPdf	11 06 23.7	+1.7
UPC				*e*		11 06 30.2	
UPC				*e*		11 06 39.6	
DPC	**Dobruska-Polom**	**152.19**	**343**	*e*PKP	PKPdf	11 06 24.0	+1.9
DPC				*e*		11 06 30.9	
DPC				*e*		11 06 39.9	
HGH	**Gray Hill**	**152.23**	**9**	⇑*e*P	PKPdf	11 06 29.6	+7.6
HGH				AMb	AMB	11 06 31.7	
	comp=Z,198nm,1.4s						
MLR	**Muntele Rosu**	**152.24**	**325**	⇑P	PKPdf	11 06 30.7	+8.4
CSS	**Prodhromos**	**152.24**	**299**	P	PKPdf	11 06 30.8	+8.2
CSS	**Prodhromos**	**152.24**	**299**	*e*PKPbc	PKPdf	11 06 30.7	+8.1
CSS				*e*PKPab	PKPab	11 06 41.2	-0.4
WTSB	**Winterswijk**	**152.26**	**356**	⇑PKiKP		11 06 30.1	
	comp=Z,148nm,1.2s						
WTSB				PKPpre		11 06 39.8	
	comp=Z,83nm,1.6s						
WTSB				PKPab	PKPab	11 06 53.5	+12
BRG	**Berggiesshubel**	**152.30**	**346**	⇓*i*PKP	PKPdf	11 06 23.9	+1.7
BRG				*i*		11 06 30.9	
BRG				*i*		11 06 41.1	
BRG				*i*		11 06 59.5	
BRG				*e*PP	PP	11 10 07.4	-7.1
BRG				LR	LR		
	comp=Z,530nm,17.9s,MS5.4						
BRG	**Berggiesshubel**	**152.30**	**346**	⇓*i*PKIKP	PKPdf	11 06 23.9	+1.7
BRG				*i*		11 06 30.9	
BRG				*e*		11 10 07.4	
BRG				MLR	MLR		
	comp=Z,530nm,17.9s,MS5.4						
MORC	**Moravsky Berou**	**152.36**	**341**	*e*PKPdf	PKPdf	11 06 23.4	+1.1
MORC				*e*PKPbc	PKPdf	11 06 30.9	+8.5
KECS	**Kecovo**	**152.46**	**335**	*e*PKP	PKPdf	11 06 32.0	+9.5
KECS				*e*		11 06 40.9	
PVCC	**Panska Ves**	**152.48**	**345**	*e*PKP	PKPdf	11 06 24.4	+1.9
PVCC				*e*		11 06 31.4	
PVCC				*e*		11 06 40.2	
ESKT	**Eskisehir**	**152.55**	**310**	*e*P	PKPdf	11 06 30.3	+7.4
ESKT	**Eskisehir**	**152.55**	**310**	*i* P	PKPdf	11 06 32.0	+9.1
SNX	**Sinaia**	**152.55**	**325**	⇓P	PKPdf	11 06 31.8	+9.1
VOIR		**152.74**	**326**	⇓P	PKPdf	11 06 32.7	+10
HRT	**Hereke**	**152.75**	**314**	*e*P	PKPab	11 06 41.9	-1.6
DRGR		**152.88**	**331**	⇑P	PKPdf	11 06 30.9	+7.8
MOX	**Moxa**	**152.98**	**349**	*i* P	PKPdf	11 06 24.2	+1.0
MOX				PP2		11 06 32.0	
MOX				PKP2	PKPab	11 06 43.0	-1.2
MOX				PP	PP	11 10 14.0	-4.7
MOX				L		12 24 42.0	
MOX	**Moxa**	**152.98**	**349**	*e*PKP	PKPdf	11 06 24.2	+1.0
MOX				⇑*e*PKP	PKPdf	11 06 32.1	+8.9
MOX				*e*PKPab	PKPab	11 06 42.9	-1.3
PRU	**Pruhonice**	**152.99**	**345**	*e*PKP	PKPdf	11 06 24.3	+1.1
PRU				*e*		11 06 32.0	
PRU				*e*		11 06 41.7	
VYHS	**Vyhne**	**153.05**	**338**	*e*PKP	PKPdf	11 06 25.6	+2.3
VYHS				*e*		11 06 32.3	
VYHS				*e*		11 06 44.4	
PSZ	**Piszkesteto**	**153.15**	**335**	*e*pPKP/F		11 06 32.7	
PSZ	**Piszkesteto**	**153.15**	**335**	*e*PKPdf	PKPdf	11 06 25.6	+2.2
PSZ				*e*PKPbc	PKPdf	11 06 32.3	+8.8
NKC	**Novy Kostel**	**153.22**	**348**	*e*PKP	PKPdf	11 06 25.1	+1.6
NKC				*e*		11 06 32.8	
NKC				*e*		11 06 43.3	
TREC	**Trest**	**153.38**	**343**	*e*PKIKP	PKPdf	11 06 25.3	+1.5
TREC				*e*		11 06 32.9	
TREC				*e*		11 06 42.6	
ISP	**Isparta**	**153.48**	**307**	PKIKP	PKPdf	11 06 26.0	+1.7
HGN	**Heimansgroeve**	**153.51**	**357**	⇑PKiKP		11 06 33.2	
	comp=Z,33nm,1.0s						
HGN				PKPpre		11 06 45.3	
	comp=Z,65nm,1.2s						
HGN				PKPab	PKPab	11 06 58.9	+12
	comp=Z,46nm,2.0s						
ZIMR		**153.76**	**323**	⇑P	PKPab	11 06 49.1	+1.4
TNS	**Taunus Mts**	**153.84**	**353**	*e*PKPbc	PKPdf	11 06 34.1	+10
TNS				*e*PKPab	PKPab	11 06 46.8	-1.0
ZST	**Bratislava**	**153.89**	**339**	*e*PKP	PKPdf	11 06 26.6	+2.1
ZST				*e*		11 06 35.0	
ZST				*e*		11 06 48.6	
GRA1	**Grafenberg Arr**	**153.97**	**349**	*e*PKPdf	PKPdf	11 06 25.7	+1.1
GRA1				*e*PKPbc	PKPdf	11 06 34.2	+10
GRA1				*e*PKPab	PKPab	11 06 47.7	-0.7
GRF	**Grafenberg Arr**	**153.97**	**349**	*e*PKP	PKPdf	11 06 25.7	+1.1
GRF				*e*PKP	PKPdf	11 06 34.2	+10
GRF				*e*PKP	PKPab	11 06 47.7	-0.7
KHC	**Kasperske Hory**	**154.02**	**345**	*e*PKP	PKPdf	11 06 26.0	+1.3
KHC				*e*		11 06 34.4	
KHC				*e*		11 06 45.0	

PKSG		**154.14**	**337**	eP	PKPdf	11 06 25.5	+0.6
WET	**Wettzell**	**154.16**	**346**	ePKPdf	PKPdf	11 06 25.9	+1.1
GIVF	**Givet**	**154.21**	**358**	ePKIKP	PKPdf	11 06 26.5	+1.6
GEC2	**GERESS Array S**	**154.25**	**345**	ePKPdf	PKPdf	11 06 26.3	+1.3
GERES	**GERESS Array B**	**154.25**	**345**	PKP	PKPdf	11 06 26.5	+1.5
	comp=Z,5.8nm,1.0s,baz=90,slow=1.3,SNR=25						
GERES				PKPbc	PKPdf	11 06 34.6	+10
	comp=Z,11nm,1.0s,baz=45,slow=1.9,SNR=17						
GERES				PKPab	PKPab	11 06 45.2	-4.4
	comp=Z,9.2nm,0.8s,baz=45,slow=1.9,SNR=11						
BAIF	**Baives**	**154.27**	**359**	ePKIKP	PKPdf	11 06 26.6	+1.6
ELL	**Elmali**	**154.34**	**305**	eP	PKPab	11 06 49.6	-0.7
BTOK	**Tokmak**	**154.37**	**313**	i P	PKPdf	11 06 34.9	+9.5
TOD	**Tromm**	**154.41**	**352**	PKP	PKPdf	11 06 25.7	+0.5
PKS8	**Sarbogard**	**154.47**	**336**	eP	PKPdf	11 06 26.1	+0.8
WLF	**Walferdange**	**154.59**	**356**	ePKPbc	PKPdf	11 06 36.3	+11
WLF				ePKPab	PKPab	11 06 50.0	-1.0
DNZL	**Cakiroluk**	**154.60**	**308**	i P	PKPdf	11 06 36.3	+11
MOA	**Molln**	**155.03**	**343**	⇑eP	PKPdf	11 06 27.8	+1.8
	comp=Z,10.0nm,1.4s						
MOA	**Molln**	**155.03**	**343**	⇑iP	PKPdf	11 06 37.2	+11
	comp=Z,13nm,1.3s						
MOA	**Molln**	**155.03**	**343**	⇑iP	PKPab	11 06 53.6	+0.7
	comp=Z,47nm,1.2s						
PKSM	**Moragy**	**155.04**	**335**	⇑eP	PKPdf	11 06 27.2	+1.1
LANF	**Langenberg**	**155.14**	**354**	PKP	PKPdf	11 06 27.4	+1.3
STU	**Stuttgart**	**155.18**	**351**	ePKPab	PKPab	11 06 52.8	-0.7
ARSA	**Arzberg**	**155.22**	**341**	⇑eP	PKPdf	11 06 28.2	+2.0
	comp=Z,10nm,1.2s						
ARSA	**Arzberg**	**155.22**	**341**	⇑iP	PKPab	11 06 53.0	-0.8
	comp=Z,23nm,1.2s						
ARSA	**Arzberg**	**155.22**	**341**	⇑eP	PKPdf	11 06 28.2	+2.0
FLN	**La Foliniere**	**155.34**	**7**	ePKIKP	PKPdf	11 06 27.9	+1.5
	comp=Z,125nm,1.6s						
FLN				eR			
	comp=Z,670nm,20.0s						
RHK1	**Bakonya**	**155.35**	**336**	⇑eP	PKPdf	11 06 28.0	+1.5
ROSF	**Rostrenen**	**155.36**	**11**	ePKIKP	PKPdf	11 06 27.7	+1.3
YER	**Yerkesik**	**155.38**	**307**	eP	PKPab	11 06 54.4	-0.4
FUR	**Furstenfeldbru**	**155.42**	**348**	ePKPdf	PKPdf	11 06 28.0	+1.5
FUR				ePKPab	PKPab	11 06 53.9	-0.7
SVIS	**Svilajnac**	**155.45**	**329**	i PKP	PKPdf	11 06 29.5	+2.8
AYVA	**Ayvalik**	**155.49**	**313**	i P	PKPab	11 06 53.1	-2.1
GRR	**Gorron**	**155.67**	**7**	ePKIKP	PKPdf	11 06 28.8	+2.0
	comp=Z,44nm,1.1s						
BFO	**Black Forest**	**155.72**	**353**	ePKPbc	PKPdf	11 06 37.9	+11
BFO				ePKPab	PKPab	11 06 54.7	-1.2
BFO	**Black Forest**	**155.72**	**353**	ePKP2	PKPab	11 06 54.7	-1.2
WLS	**Welschbruch**	**155.75**	**354**	PKP	PKPdf	11 06 27.0	+0.1
CDF	**Champ du Feu**	**155.75**	**354**	ePKIKP	PKPdf	11 06 28.1	+1.2
MEZF	**Maizieres J'vi**	**155.81**	**358**	ePKIKP	PKPdf	11 06 28.9	+1.9
GROS	**Grobnik**	**155.93**	**340**	ePKPdf	PKPdf	11 06 28.1	+0.9
GROS				ePKPab	PKPab	11 06 56.3	-0.5
ECH	**Echery**	**155.96**	**354**	PKP	PKPdf	11 06 27.4	+0.2
KBA	**Koelnbreinsper**	**155.99**	**344**	⇑iP	PKPdf	11 06 26.6	-0.7
	comp=Z,15nm,1.1s						
KBA	**Koelnbreinsper**	**155.99**	**344**	⇑iP	PKPab	11 06 57.6	+0.6
	comp=Z,46nm,1.2s						
KBA	**Koelnbreinsper**	**155.99**	**344**	⇑iP	PKPdf	11 06 26.6	-0.7
THEF	**They Montfort**	**156.04**	**356**	PKP	PKPdf	11 06 27.0	-0.3
WATA	**Walderalm**	**156.16**	**347**	⇑iP	PKPdf	11 06 29.8	+2.3
	comp=Z,8.8nm,0.9s						
WATA	**Walderalm**	**156.16**	**347**	⇑iP	PKPdf	11 06 39.3	+12
	comp=Z,6.6nm,0.6s						
WATA	**Walderalm**	**156.16**	**347**	⇑iP	PKPab	11 06 57.8	+0.1
	comp=Z,39nm,1.1s						
WATA	**Walderalm**	**156.16**	**347**	⇑P	PKPdf	11 06 29.8	+2.3
WATA				⇑eP		11 06 39.3	
OBKA	**Obir**	**156.18**	**341**	⇓P	PKPdf	11 06 28.7	+1.1
	comp=Z,6.1nm,1.2s						
OBKA	**Obir**	**156.18**	**341**	⇑eX		11 06 39.4	
	comp=Z,10nm,1.4s						
OBKA	**Obir**	**156.18**	**341**	⇑iP	PKPab	11 06 57.9	0.0
	comp=Z,23nm,0.9s						
OBKA	**Obir**	**156.18**	**341**	⇑P	PKPdf	11 06 28.7	+1.1
OBKA				⇑eP		11 06 57.9	
WTTA	**Wattenberg**	**156.21**	**347**	⇑iP	PKPdf	11 06 29.4	+1.8
	comp=Z,28nm,1.3s						
WTTA	**Wattenberg**	**156.21**	**347**	⇑iP	PKPdf	11 06 40.1	+12
	comp=Z,28nm,1.4s						
WTTA	**Wattenberg**	**156.21**	**347**	⇑iP	PKPab	11 06 58.4	+0.4
	comp=Z,48nm,0.9s						
HAU	**Haudompre**	**156.23**	**356**	ePKIKP	PKPdf	11 06 29.1	+1.5
HAU				eR			
	comp=Z,641nm,19.8s						
MOTA	**Moosalm**	**156.24**	**347**	⇑iP	PKPdf	11 06 29.5	+1.9
	comp=Z,16nm,1.1s						
MOTA	**Moosalm**	**156.24**	**347**	⇑iP	PKPdf	11 06 39.6	+12
	comp=Z,8.7nm,0.8s						
MOTA	**Moosalm**	**156.24**	**347**	⇑iP	PKPab	11 06 58.1	0.0
	comp=Z,29nm,0.8s						
MOTA	**Moosalm**	**156.24**	**347**	⇑P	PKPdf	11 06 29.5	+1.9
MOTA				⇑eP		11 06 39.6	
GOLS	**Golise**	**156.29**	**339**	ePKPab	PKPab	11 06 57.8	-0.5
MOF	**Molkenrain**	**156.32**	**354**	PKP	PKPdf	11 06 28.3	+0.6
SQTA	**Sankt Quirin**	**156.34**	**347**	⇑eP	PKPdf	11 06 29.9	+2.1
	comp=Z,15nm,1.1s						
SQTA	**Sankt Quirin**	**156.34**	**347**	⇓iP	PKPdf	11 06 40.1	+12
	comp=Z,7.6nm,0.8s						
SQTA	**Sankt Quirin**	**156.34**	**347**	⇓iP	PKPab	11 06 58.3	-0.3
	comp=Z,15nm,0.8s						
SQTA	**Sankt Quirin**	**156.34**	**347**	⇑eP	PKPdf	11 06 29.9	+2.1
SQTA				⇓eP		11 06 40.1	
HINF	**Hinteralfeld**	**156.38**	**355**	ePKIKP	PKPdf	11 06 29.0	+1.2
GORS	**Gorjuse**	**156.51**	**342**	ePKPdf	PKPdf	11 06 28.3	+0.3
GORS				ePKPab	PKPab	11 06 59.6	+0.3
DAVA	**Damuels**	**156.52**	**349**	⇑iP	PKPdf	11 06 30.4	+2.4
	comp=Z,13nm,1.2s						
DAVA	**Damuels**	**156.52**	**349**	⇑iP	PKPdf	11 06 40.7	+13
	comp=Z,26nm,1.4s						
DAVA	**Damuels**	**156.52**	**349**	⇑iP	PKPab	11 06 59.4	0.0
	comp=Z,41nm,0.9s						
DAVA	**Damuels**	**156.52**	**349**	⇑P	PKPdf	11 06 30.4	+2.4
PTCC	**Patocco-Chiusa**	**156.61**	**343**	PKP	PKPab	11 06 58.6	-1.1
BRES	**Bressanone**	**156.73**	**346**	PKP	PKPab	11 06 59.8	-0.4
GMNA	**Gemona**	**156.76**	**343**	PKP	PKPab	11 06 58.5	-1.9
LOMF	**Lomont**	**156.85**	**355**	PKP	PKPdf	11 06 28.1	-0.4
VAY	**Valandovo**	**156.85**	**322**	i PKP	PKPab	11 07 00.4	-0.6
SKO	**Skopje**	**157.03**	**324**	ePKP	PKPab	11 07 02.6	+1.0
LOR	**Lormes**	**157.06**	**360**	ePKIKP	PKPdf	11 06 30.4	+1.6
	comp=Z,83nm,1.3s						
LOR				eR			
	comp=Z,1µm,22.2s						
MFF	**Saint Martin d**	**157.51**	**7**	ePKIKP	PKPdf	11 06 30.5	+1.1
	comp=Z,56nm,1.1s						
AVF	**Avril sur Loir**	**157.54**	**1**	ePKIKP	PKPdf	11 06 30.8	+1.4
CABF	**La Chapelle**	**157.64**	**356**	ePKIKP	PKPdf	11 06 31.5	+1.9
	comp=Z,59nm,1.2s						
SMF	**Signal de Mont**	**157.69**	**360**	ePKIKP	PKPdf	11 06 30.8	+1.2
	comp=Z,58nm,1.4s						
BGF	**Bois d'Agland**	**157.76**	**2**	ePKIKP	PKPdf	11 06 31.3	+1.6
OHR	**Ohrid**	**157.97**	**324**	i PKP	PKPab	11 07 05.1	-0.7
TCF	**Toulx Ste Croi**	**158.01**	**3**	ePKIKP	PKPdf	11 06 31.4	+1.4
	comp=Z,18nm,1.0s						
ORX	**Oropa**	**158.42**	**352**	P	PKPab	11 07 06.7	-0.8
TRAV		**158.57**	**352**	P	PKPab	11 07 06.7	-1.5
LPL	**La Plagne**	**158.68**	**354**	ePKIKP	PKPdf	11 06 32.8	+1.9
LSD	**Ceresole Reale**	**158.69**	**353**	P	PKPab	11 07 08.4	-0.3
LPG	**La Plagne**	**158.69**	**354**	ePKIKP	PKPdf	11 06 33.1	+2.2
RJF	**Les Rejaudoux**	**158.95**	**4**	ePKIKP	PKPdf	11 06 32.6	+1.4
	comp=Z,19nm,0.8s						
RJF				eR			
	comp=Z,944nm,20.8s						
RSP	**Reno Superiore**	**158.98**	**353**	P	PKPab	11 07 09.1	-0.9
LBL	**Lubilhac**	**159.09**	**1**	PKP	PKPdf	11 06 29.8	-1.6
BNI	**Bardonecchia**	**159.14**	**354**	ePKPdf	PKPdf	11 06 30.8	-0.6
BNI				ePKPab	PKPab	11 07 10.6	-0.1
GRAM		**159.19**	**347**	P	PKPab	11 07 08.8	-2.1
LFF	**La Frestale**	**159.25**	**6**	ePKIKP	PKPdf	11 06 33.0	+1.4
RRL	**Cesana Torines**	**159.26**	**354**	P	PKPab	11 07 10.7	-0.5
BHB	**Bricherasio**	**159.29**	**353**	P	PKPab	11 07 09.5	-1.8
ORIF	**Oris-en-Rattie**	**159.34**	**356**	ePKIKP	PKPdf	11 06 33.3	+1.6
	comp=Z,37nm,1.2s						
ORIF				eR			
	comp=Z,657nm,23.0s						
CAF	**Calviac**	**159.36**	**3**	ePKIKP	PKPdf	11 06 32.6	+0.9
	comp=Z,68nm,1.7s						
BACM		**159.39**	**347**	P	PKPab	11 07 09.6	-2.1
SARO	**Sassorosso**	**159.41**	**346**	P	PKPab	11 07 09.9	-1.9
PCP	**Pian Castagno**	**159.41**	**350**	P	PKPab	11 07 10.2	-1.6
MBDF	**Montbardon**	**159.45**	**354**	ePKIKP	PKPdf	11 06 33.5	+1.7
VIVF	**Saint-Julien-l**	**159.46**	**358**	ePKIKP	PKPdf	11 06 33.7	+1.9
VINC	**Vinca**	**159.50**	**347**	P	PKPab	11 07 10.0	-2.2
PZZ	**Prazzo**	**159.64**	**353**	P	PKPab	11 07 10.9	-2.0
MAIM		**159.65**	**346**	P	PKPab	11 07 09.9	-3.0
ROB	**Roburent**	**159.75**	**351**	P	PKPab	11 07 10.9	-2.4
STV	**Sta Anna Valdi**	**159.87**	**352**	P	PKPab	11 07 11.4	-2.5
ENR	**Entracque**	**159.88**	**352**	P	PKPab	11 07 11.7	-2.2
IMI	**Imperia**	**160.12**	**351**	P	PKPab	11 07 13.4	-1.6
LIC	**Lamto**	**160.18**	**154**	⇑iPKIKP	PKPdf	11 06 34.2	+0.7
	comp=Z,70nm,1.1s						
LIC				eR			
	comp=Z,725nm,21.8s						
SMRF	**Simiane la Rot**	**160.30**	**356**	ePKIKP	PKPdf	11 06 34.5	+1.8
	comp=Z,171nm,1.7s						
PBRG	**Braganca**	**160.48**	**24**	ePKPab	PKPab	11 07 15.3	-1.2
PVRL	**Vila Real**	**160.55**	**27**	ePKPdf	PKPdf	11 06 34.5	+1.4
PVRL	**Vila Real**	**160.55**	**27**	ePKPab	PKPab	11 07 16.3	-0.6
DBIC	**Dimbokro**	**160.65**	**153**	PKP	PKPdf	11 06 35.5	+1.5
	comp=Z,10nm,0.9s,baz=143,slow=2.2,SNR=11						
DBIC				PKPab	PKPab	11 07 17.4	-0.8
	comp=Z,20nm,0.9s,baz=196,slow=6.4,SNR=8.8						
DBIC	**Dimbokro**	**160.65**	**153**	ePKPdf	PKPdf	11 06 33.0	-0.9
DBIC				ePKPab	PKPab	11 07 16.8	-1.3
DBIC				LR	LR		
	comp=Z,601nm,19.0s						
PVIS	**Viseu**	**160.94**	**28**	ePKPdf	PKPdf	11 06 35.5	+2.0
PVIS	**Viseu**	**160.94**	**28**	ePKPab	PKPab	11 07 18.0	-0.6
MTLF	**Montolieu**	**160.95**	**3**	ePKIKP	PKPdf	11 06 35.1	+1.7
EPF	**Esparros**	**161.09**	**8**	ePKIKP	PKPdf	11 06 35.4	+1.9
	comp=Z,100nm,1.7s						
ETSF	**Etsaut**	**161.10**	**10**	ePKIKP	PKPdf	11 06 36.0	+2.5
	comp=Z,19nm,0.9s						
MTE	**Manteigas**	**161.35**	**28**	ePKPdf	PKPdf	11 06 36.1	+2.2
MTE	**Manteigas**	**161.35**	**28**	eLR	LR	12 03 28.5	
	comp=Z,682nm,20.0s						
CCAN	**Las Canadas**	**161.35**	**73**	PKP	PKPdf	11 06 37.7	+3.5
PTOM	**Tomar**	**161.60**	**31**	ePKPab	PKPab	11 07 20.2	-1.3
PCBR	**Castelo Branco**	**161.84**	**29**	ePKPdf	PKPdf	11 06 36.3	+1.9
GUD	**Guadarrama**	**162.40**	**20**	PKP	PKPdf	11 06 37.5	+2.6
EVO	**Evora**	**162.64**	**32**	⇑iPKIKP	PKPdf	11 06 37.7	+2.5
	comp=Z,55nm,1.1s						
EVO				eR			
	comp=Z,680nm,20.2s						
EBAD	**Badajoz**	**162.94**	**30**	PKP	PKPdf	11 06 37.6	+2.1
PTEO	**Sao Teotonio**	**163.03**	**36**	ePKPdf	PKPdf	11 06 38.4	+2.8
PBEJ	**Beja**	**163.11**	**33**	ePKPdf	PKPdf	11 06 38.7	+3.0
ESDC	**Sonseca Array**	**163.34**	**21**	PKP	PKPdf	11 06 37.8	+1.9
	comp=Z,4.1nm,0.9s,baz=352,slow=3.4,SNR=18						
ESDC				PKPab	PKPab	11 07 28.3	-0.8
	comp=Z,14nm,0.9s,baz=334,slow=4.0,SNR=20						
ESDC				PP	PP	11 11 17.2	+2.0
	comp=Z,2.8nm,0.8s,baz=345,slow=5.9,SNR=7.4						
ESLA	**Sonseca Array**	**163.34**	**21**	ePKPdf	PKPdf	11 06 37.5	+1.7
ESLA				ePKPab	PKPab	11 07 28.8	-0.2
ESLA				LR	LR		
	comp=Z,3µm,19.0s						
CFTV	**Fuerteventura**	**163.52**	**72**	PKP	PKPdf	11 06 38.9	+2.5
ECAB	**El Cabril**	**164.20**	**27**	PKP	PKPdf	11 06 38.9	+2.1
EADA	**Adamuz**	**164.46**	**25**	PKP	PKPdf	11 06 39.6	+2.6
EVIA	**Vianos**	**164.74**	**19**	PKP	PKPdf	11 06 40.2	+2.9
EBAN	**Banos Encina**	**164.75**	**23**	PKP	PKPdf	11 06 40.0	+2.7
ESPR	**Espera**	**165.00**	**31**	PKP	PKPdf	11 06 40.0	+2.3
ELUQ	**Luque**	**165.10**	**25**	PKP	PKPdf	11 06 40.2	+2.5
EQES	**Quesada**	**165.33**	**22**	PKP	PKPdf	11 06 39.4	+1.5
EHUE	**Huescar**	**165.47**	**20**	PKP	PKPdf	11 06 39.9	+1.9
ELOJ	**Sierra Loja**	**165.51**	**26**	PKP	PKPdf	11 06 40.1	+2.0
EJIF	**Jimena Fronter**	**165.52**	**31**	PKP	PKPdf	11 06 42.2	+4.1
ECOG	**Cogollos-Vega**	**165.62**	**24**	PKP	PKPdf	11 06 39.8	+1.6

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*CSEM **24** 10:57:41.2±0.9, 12.10N×43.54E, h11^{km}, ML3.5, Error ellipse: s-maj=19.0km s-min=17.5km az=68.0, After DHMR*

DHMR 24 10:57:41.2±0.4**, 12.10N×43.54E, h12^{km}±2^{km}, ML3.5, 1C-7D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.26**	**26**	⇓eP	Pb	10 58 04.7	+0.2
TRBA				i S	Sb	10 58 22.5	+2.0
TRBA				AML	AML	10 58 25.8	
	comp=N,1µm,0.4s						
UDYN	**Al 'Udayn**	**1.91**	**13**	⇓eP	Pn	10 58 14.8	+0.8
UDYN				i S	Sn	10 58 41.1	+3.1
UDYN				AML	AML	10 58 51.2	
	comp=E,408nm,0.7s						
UDYN	**Al 'Udayn**	**1.91**	**13**	⇓eP	Pn	10 58 14.8	+0.9
UDYN				i S	Sn	10 58 41.1	+3.1
	comp=E,204nm,0.7s						
LBOS		**2.43**	**43**	⇑eP	Pn	10 58 23.2	+1.8
LBOS				i S	Sn	10 58 56.0	+4.8
DHBB	**Dhamar BB**	**2.59**	**18**	⇓eP	Pn	10 58 25.9	+2.1
DHBB				i S	Sn	10 59 00.8	+5.2
BDHA	**Al Bayda'**	**2.72**	**46**	⇓iP	Pn	10 58 27.7	+2.1
BDHA				i S	Sn	10 59 04.1	+5.4
BDHA				AML	AML	10 59 13.3	
	comp=N,247nm,0.7s						
BDHA	**Al Bayda'**	**2.72**	**46**	⇓iP	Pn	10 58 27.7	+2.1
BDHA				i S	Sn	10 59 04.1	+5.4
	comp=N,123nm,0.7s						
HAJJ	**Hajjah**	**3.58**	**1**	⇓eP	Pn	10 58 39.3	+1.5
HAJJ				i S	Sn	10 59 24.9	+4.3

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*IDC **24** 11:03:33.0±1.1, 23.72S×176.53W, mb4.1/6, mb1 4.5/8, mb1mx4.4/15, mbtmp4.2/8, ML4.6/1, MS4.4/4, Ms1 4.4/4, ms1mx4.2/16, Error ellipse: s-maj=57.4km s-min=21.5km az=145.0*

*NEIC **24** 11:03:43.9±2.5, 23.77S×176.54W, h85^{km}±22^{km}, mb4.7/8, Error ellipse: s-maj=19.5km s-min=14.1km az=174.0*

ISC 24 11:03:36.0±0.6**, 23.9S**±0.1×**176.5W**±0.1**, h33^{km}, (h32^{km}**±3.0^{km}**:pP-P), n45, σ1^{s}34**/34**, mb4.4**/13**, MS4.4**/4**, 4D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.48**	**193**	P	**P**	**11 05 04.6**	**+7.2**
	280nm,0.9s						
AFI	**Afiamalu**	**10.88**	**25**	Pn	**P**	**11 06 07.0**	**-5.6**
	9.4nm,0.3s,baz=108,slow=22,SNR=16						
AFI				Sn	**S**	**11 08 03.8**	**-10**
	5.3nm,0.3s,baz=76,slow=19,SNR=4.0						
AFI	**Afiamalu**	**10.88**	**25**	ePn	**P**	**11 06 06.8**	**-5.7**
AFI				eSn	**S**	**11 07 58.9**	**-15**
URZ	**Urewera**	**15.33**	**199**	Pn	**P**	**11 07 11.5**	**+0.1**
	2.5nm,0.3s,baz=321,slow=2.3,SNR=10						
URZ				Sn	**S**	**11 09 43.2**	**-17**
	1.8nm,0.3s,baz=118,slow=23,SNR=8.3						
RAR	**Rarotonga**	**15.65**	**83**	Pn	**P**	**11 07 04.4**	**-11**
	baz=216,slow=8.7,SNR=1.4						
RAR				Sn	S	11 09 34.6	-34
	3.5nm,0.3s,baz=152,slow=22,SNR=3.9						
HNR	**Honiara**	**26.72**	**299**	LR	LR	11 17 47.5	
	comp=Z,453nm,21.9s,MS4.0,baz=221,slow=32						
CTA	**Charters Tower**	**34.71**	**269**	eP	**P**	**11 10 26.6**	**+1.6**
	3.6nm,0.5s,mb4.6						
CTAO	**Charters Tower**	**34.71**	**269**	eP	**P**	**11 10 26.4**	**+1.4**
	3.8nm,0.4s,mb4.7						
STKA	**Stephens Creek**	**37.72**	**248**	P	**P**	**11 10 51.3**	**+0.9**
	1.0nm,0.5s,mb3.9,baz=77,slow=13,SNR=4.9						
STKA				LR	LR	11 23 53.9	
	comp=Z,650nm,18.8s,MS4.5,baz=290,slow=32						
STKA	**Stephens Creek**	**37.72**	**248**	eP	**P**	**11 10 51.5**	**+1.1**
WB2	**Warramunga Arr**	**45.62**	**265**	eP	**P**	**11 11 54.4**	**-0.8**
WRAB	**Tennant Creek**	**45.62**	**265**	eP	**P**	**11 11 54.3**	**-1.0**
	10nm,0.9s,mb4.8						
WRA	**Warramunga Arr**	**45.63**	**265**	P	**P**	**11 11 54.7**	**-0.6**
	1.2nm,0.3s,mb4.2,baz=97,slow=8.5,SNR=30						
FITZ	**Fitzroy Crossi**	**54.05**	**264**	eP	**P**	**11 13 00.6**	**+0.8**
	3.0nm,0.4s,mb4.6						
SBA	**Scott Base**	**54.59**	**184**	eP	**P**	**11 13 02.2**	**-0.8**
	11nm,1.3s,mb4.7						
VNDA	**Vanda**	**54.67**	**186**	P	**P**	**11 13 04.9**	**+1.3**
	7.6nm,1.5s,mb4.5						
NWAO	**Narrogin (SRO)**	**58.17**	**245**	LR	LR	11 37 31.0	
	comp=Z,537nm,18.1s,MS4.7,baz=290,slow=35						
CASY	**Casey**	**61.53**	**206**	eP	**P**	**11 13 53.5**	**+1.8**
	15nm,0.9s,mb5.1						
KS15	**Wonju Array Si**	**80.38**	**318**	P	**P**	**11 15 43.7**	**-2.0**
NVAR	**Mina Array Bea**	**82.54**	**42**	P	**P**	**11 15 57.6**	**+0.6**
	0.3nm,0.8s,mb3.4,baz=207,slow=6.9,SNR=5.8						
SNAA	**Sanae**	**84.58**	**178**	e	**P**	**11 16 10.8**	**+4.2**
SNAA	**Sanae**	**84.58**	**178**	e	pP	11 16 14.1	-3.0
SNAA	**Sanae**	**84.58**	**178**	e	sP	11 16 16.7	-3.9
SNAA	**Sanae**	**84.58**	**178**	⇓iP	**P**	**11 16 04.6**	**-2.0**
SNAA				e		11 16 10.8	
SNAA				e	pP	11 16 14.1	-3.0
SNAA				e	pP	11 16 16.7	-0.4
SNAA				e		11 19 12.5	
SNAA				e		11 25 22.3	
VNA3	**Neumayer Olymp**	**84.67**	**176**	e	**P**	**11 16 11.7**	**+4.7**
VNA3	**Neumayer Olymp**	**84.67**	**176**	e	pP	11 16 15.2	-2.3
VNA3	**Neumayer Olymp**	**84.67**	**176**	e	sP	11 16 18.6	-2.4
VNA3	**Neumayer Olymp**	**84.67**	**176**	⇓iP	**P**	**11 16 04.9**	**-2.1**
VNA3				e		11 16 11.7	
VNA3				e	pP	11 16 15.2	-2.3
VNA3				e		11 16 18.6	
VNA3				e		11 19 07.7	
VNA3				e		11 25 16.7	
VNA2	**Neumayer--Watz**	**85.12**	**176**	e	**P**	**11 16 13.6**	**+4.3**
VNA2	**Neumayer--Watz**	**85.12**	**176**	e	pP	11 16 17.0	-2.8
VNA2	**Neumayer--Watz**	**85.12**	**176**	e	sP	11 16 19.6	-3.7
VNA2	**Neumayer--Watz**	**85.12**	**176**	⇓iP	**P**	**11 16 07.6**	**-1.7**
VNA2				e		11 16 13.6	
VNA2				e	pP	11 16 17.0	-2.8
VNA2				e	pP	11 16 19.6	-0.2
VNA2				e		11 19 11.1	
VNA2				e		11 25 19.0	
VNA1	**Neumayer--Stat**	**85.34**	**176**	e	**P**	**11 16 14.6**	**+4.2**
VNA1	**Neumayer--Stat**	**85.34**	**176**	e	pP	11 16 17.5	-3.4
VNA1	**Neumayer--Stat**	**85.34**	**176**	e	sP	11 16 20.8	-3.6
VNA1	**Neumayer--Stat**	**85.34**	**176**	⇓iP	**P**	**11 16 07.9**	**-2.5**
VNA1				e		11 16 14.6	
VNA1				e	pP	11 16 17.5	-3.4
VNA1				e		11 16 20.8	
VNA1				e		11 19 13.1	
PLCA	**Paso Flores**	**85.92**	**133**	LR	LR	11 49 52.3	
	comp=Z,218nm,18.3s,MS4.6,baz=94,slow=32						
TXAR	**Lajitas Array**	**87.71**	**57**	P	**P**	**11 16 23.3**	**+0.4**
	2.1nm,1.0s,mb4.3,baz=211,slow=7.3,SNR=14						
TXAR	**Lajitas Array**	**87.71**	**57**	P	**P**	**11 16 23.3**	**+0.4**
ANMO	**Albuquerque**	**88.44**	**51**	eP	**P**	**11 16 26.7**	**+0.5**
	12nm,1.7s,mb4.8						
PDAR	**Pinedale Array**	**90.47**	**43**	P	**P**	**11 16 38.2**	**+2.6**
	0.6nm,1.0s,mb3.9,baz=256,slow=3.7,SNR=3.4						
ILAR	**Eielson Array**	**91.31**	**12**	P	**P**	**11 16 39.6**	**+0.6**
	0.9nm,1.0s,mb4.0,baz=218,slow=6.2,SNR=5.5						
ARCES	**ARCESS Array B**	**132.50**	**350**	PKP	PKPdf	11 22 47.6	+0.9
	2.1nm,0.8s,slow=4.9,SNR=4.7						
AKASG	**Malin Array Be**	**146.66**	**330**	PKPbc	PKPbc	11 23 15.2	+1.4
	0.8nm,0.4s,baz=42,slow=4.0,SNR=5.3						
GERES	**GERESS Array B**	**153.84**	**345**	PKPbc	PKPdf	11 23 33.4	+10
	0.4nm,0.6s,baz=90,slow=1.3,SNR=4.2						

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*IDC **24** 11:14:03.0±1.4, 33.97N×135.18E, mb3.6/3, mb1 3.6/4, mb1mx3.5/21, mbtmp3.4/4, ML2.9/1, Error ellipse: s-maj=30.3km s-min=18.5km az=133.0*

*JMA **24** 11:14:04.7, 34.03N×135.26E, h5^{km}, M3.7 Broadband fault plane solution: P waves. NP1:ϕ_s191°, δ26°, λ82°. NP2:ϕ_s20°, δ64°, λ94°. Principal axes: T Plg71°, Azm299°; N Plg4°, Azm198°; P Plg19°, Azm107°;*

JMA Felt II J1.

*NEIC **24** 11:14:10.2±1.2, 34.12N×135.46E, h64^{km}±18^{km}, mb4.0/1 Error ellipse: s-maj=20.4km s-min=13.1km az=120.0*

ISC 24 11:14:04.1±0.7**, 34.02N**±0.04×**135.24E**±0.05**, h13^{km}**±5^{km}**, n16, σ0^{s}79**/24**, mb3.6**/4**, 5D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWM	**Minabe**	**0.20**	**150**	⇓P	**Pg**	**11 14 08.8**	**+0.2**
JWM				S	**Sg**	**11 14 11.6**	**-0.1**
JWY	**Kouya**	**0.36**	**56**	⇓P	**Pg**	**11 14 11.4**	**-0.2**
JWY				S	**Sg**	**11 14 16.3**	**-0.2**
JAJ2	**Tsuna**	**0.49**	**324**	⇓P	**Pb**	**11 14 14.5**	**+0.4**
JAJ2				S	**Sb**	**11 14 21.3**	**+0.4**
JWZ	**Kozaga**	**0.63**	**141**	⇓P	**Pb**	**11 14 16.9**	**+0.4**
JWZ				S	**Sb**	**11 14 25.4**	**+0.4**
JAI	**Aioi**	**0.69**	**251**	⇓P	**Pb**	**11 14 18.2**	**+0.7**
MAJO	**Matsushiro**	**3.50**	**43**	ePn	**Pn**	**11 14 59.3**	**-0.2**
MAT	**Matsushiro**	**3.50**	**43**	P	**Pn**	**11 14 59.6**	**+0.2**
MAT				S	**Sn**	**11 15 43.3**	**+2.2**
MAT	**Matsushiro**	**3.50**	**43**	eP	**Pn**	**11 15 00.0**	**+0.6**
MAT				eS	**Sn**	**11 15 56.0**	**+15**
MJAR	**Matsushiro Arr**	**3.50**	**43**	Pn	**Pn**	**11 14 59.1**	**-0.3**
	1.0nm,0.3s,baz=237,slow=14,SNR=8.5						
MJAR				Pg	**Pg**	**11 15 09.6**	**-4.4**
	2.6nm,0.3s,baz=222,slow=16,SNR=14						
MJAR				Lg		11 15 56.0	
	2.3nm,0.3s,baz=218,slow=28,SNR=8.3						
MJAR	**Matsushiro Arr**	**3.50**	**43**	Pn	**Pn**	**11 14 59.1**	**-0.3**
MJAR				Pg	**Pg**	**11 15 09.6**	**-4.4**
MJAR				Lg		11 15 56.0	
NACB	**Ninganchiao**	**15.43**	**234**	P	**P**	**11 17 46.7**	**+3.5**
SONM	**Songino Array**	**25.61**	**311**	P	**P**	**11 19 33.6**	**-1.0**
	0.6nm,0.7s,mb3.2,baz=127,slow=11,SNR=4.5						
MKAR	**Makanchi Array**	**41.54**	**304**	P	**P**	**11 21 52.4**	**-0.3**
	0.5nm,0.8s,mb3.2,baz=90,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	**41.54**	**304**	P	**P**	**11 21 52.4**	**-0.3**
KURK	**Kurchatov**	**43.91**	**310**	eP	**P**	**11 22 11.6**	**-0.4**
	2.3nm,0.9s,mb3.9						
WRA	**Warramunga Arr**	**53.67**	**181**	P	**P**	**11 23 26.1**	**-1.8**
	1.3nm,0.9s,mb3.9,baz=356,slow=7.9,SNR=7.6						

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*FUNV **24** 11:25:07.3, 10.68N×62.65W, h86^{km}, MW2.2*

*TRN **24** 11:25:08.2, 10.82N×62.60W, h35^{km}, MD3.1*

*NEIC **24** 11:25:08.2, 10.82N×62.60W, h34^{km}, MD3.1(TRN), After TRN.*

ISC 24 11:25:04.8±0.8**, 10.70N**±0.06×**62.65W**±0.03**, h95^{km}**±8^{km}**, n11, σ1^{s}12**/22**, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	**Guiria**	**0.42**	**97**	eP	**P**	**11 25 20.6**	**+0.9**
GUIV				eS	**S**	**11 25 30.4**	**-0.5**
CRUV	**Carupano**	**0.57**	**268**	eP	**P**	**11 25 21.9**	**+1.0**
CRUV				eS	**S**	**11 25 32.1**	**-0.7**
GUNV	**Guanoco**	**0.60**	**208**	eP	**P**	**11 25 23.8**	**+2.7**
GUNV				eS	**S**	**11 25 33.1**	**-0.2**
ITEV	**Isla Los Testi**	**0.81**	**324**	eP	**P**	**11 25 24.6**	**+1.5**
ITEV				eS	**S**	**11 25 37.1**	**+0.6**
TRN	**Trinidad (W)**	**1.23**	**92**	eP	**P**	**11 25 27.9**	**0.0**
TRN				eS	**S**	**11 25 42.7**	**-2.5**
TPP	**Pointe-a-Pierr**	**1.24**	**108**	eP	**P**	**11 25 29.2**	**+1.1**
TPP				eS	**S**	**11 25 45.7**	**+0.2**
GRW	**Mount Saint Ca**	**1.75**	**34**	eP	**P**	**11 25 34.8**	**+0.4**
GRW				eS	**S**	**11 25 54.0**	**-2.3**
TPR	**Prospect**	**1.91**	**75**	eP	**P**	**11 25 37.4**	**+0.9**
TPR				eS	**S**	**11 25 59.1**	**-0.7**
PCRV	**Puerto La Cruz**	**2.02**	**255**	eP	**P**	**11 25 38.6**	**+0.7**
PCRV				eS	**S**	**11 26 01.8**	**-0.7**
CUPV	**Cœpira**	**3.15**	**259**	eP	**P**	**11 25 53.5**	**0.0**
CUPV				eS	**S**	**11 26 28.3**	**-1.9**
CAOV	**Caicara del Or**	**4.94**	**228**	eP	**P**	**11 26 17.2**	**-0.8**
CAOV				eS	**S**	**11 27 09.2**	**-5.1**

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*CSEM **24** 11:31:58.2±0.6, 35.11N×6.08W, h17^{km}, MD3.0, Error ellipse: s-maj=26.5km s-min=8.9km az=78.0, After CNRM*

*CNRM **24** 11:31:58.2, 35.11N×6.08W, h17^{km}, MD3.0*

MDD 24 11:31:58.1±0.7**, 35.23N×6.05W, h40^{km}**±5^{km}**, mb3.8**/8**, mbLg1.4**/1**, Error ellipse: s-maj=10.1km s-min=5.1km az=83.0, PRXIMO, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSY	**Tnine Yamani**	**0.15**	**24**	i P	P	11 32 06.0	+1.1
TSY				i S	S	11 32 08.0	-1.8
MDAL	**Dalia**	**0.81**	**34**	eP	P	11 32 14.0	+0.9
MDAL				i S	S	11 32 29.0	+4.9
EJIF	**Jimena Fronter**	**1.30**	**21**	P	P	11 32 18.9	-1.3
	1.1nm,0.2s,SNR=4.0						
EJIF				S	S	11 32 35.6	-1.1
	3.9nm,0.4s,SNR=4.0						
ESPR	**Espera**	**1.64**	**5**	S	S	11 32 42.7	-2.4
	16nm,0.2s,SNR=7.9						
EMIJ	**Mijas**	**1.69**	**37**	P	P	11 32 24.7	-1.0
	1.1nm,0.1s,SNR=7.9						
EMIJ				S	S	11 32 43.3	-2.9
	5.4nm,0.1s,SNR=5.5						
TZK	**Tazeka**	**1.91**	**126**	i P	P	11 32 27.0	-1.8
TZK				i S	S	11 32 51.0	-0.8
MIF	**Mishlifen**	**1.94**	**159**	i P	P	11 32 26.5	-2.7
MIF				i S	S	11 32 49.0	-3.5
CZD	**Col de Zad**	**2.34**	**159**	i P	P	11 32 34.5	-0.5
CZD				i S	S	11 33 00.0	-2.8
EGUA	**Guajares**	**2.57**	**51**	P	P	11 32 35.7	-2.5

	0.8nm,0.2s,SNR=4.0						
EGRO	**El Granado**	**2.57**	**334**	P	P	11 32 36.7	-1.7
	4.1nm,0.1s,SNR=12						
EGRO				S	S	11 33 04.5	-4.2
	19nm,0.2s,SNR=20						
ELUQ	**Luque**	**2.73**	**31**	S	S	11 33 08.7	-4.0
	6.2nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**2.88**	**10**	P	P	11 32 40.9	-1.9
	0.1nm,0.1s,SNR=14						
ECAB				S	S	11 33 10.8	-5.8
	3.9nm,0.2s,SNR=12						
EBER	**Berja**	**3.05**	**56**	P	P	11 32 42.4	-2.7
	0.6nm,0.1s,SNR=7.9						
EBER				S	S	11 33 17.8	-2.9
	1.0nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**3.16**	**22**	P	P	11 32 44.7	-2.0
	1.2nm,0.2s,SNR=6.1						
EADA				S	S	11 33 17.5	-6.0
	8.0nm,0.1s,SNR=10						
EBAN	**Banos Encina**	**3.44**	**31**	P	P	11 32 50.4	-0.2
	3.1nm,0.2s,SNR=17						
EBAN				S	S	11 33 24.4	-6.4
	12nm,0.1s						
EQES	**Quesada**	**3.51**	**42**	P	P	11 32 50.0	-1.7
	1.6nm,0.1s,SNR=4.7						
EQES				S	S	11 33 27.1	-5.3
	1.6nm,0.1s						
EBAD	**Badajoz**	**3.60**	**348**	P	P	11 32 50.8	-2.1
	0.5nm,0.1s,SNR=11						
EBAD				S	S	11 33 28.0	-6.8
	5.3nm,0.1s						
EHUE	**Huescar**	**3.79**	**46**	P	P	11 32 54.1	-1.5
	0.5nm,0.2s,SNR=7.9						
EHUE				S	S	11 33 34.6	-5.0
	1.3nm,0.3s,SNR=7.9						
EVIA	**Vianos**	**4.43**	**39**	P	P	11 33 02.5	-2.2
	0.8nm,0.2s,SNR=7.9						
EVIA				S	S	11 33 48.7	-7.0
	1.3nm,0.1s,SNR=7.9						
ESDC	**Sonseca Array**	**4.73**	**20**	S	S	11 33 54.2	-9.2
	1.1nm,0.2s,baz=202,slow=23,SNR=6.3						
ETOB	**Tobarra**	**4.96**	**45**	P	P	11 33 09.3	-2.8
	1.7nm,0.1s,SNR=7.4						
ETOB				S	S	11 34 01.8	-7.2
	1.0nm,0.1s,SNR=7.9						
ELOB	**Lobios**	**6.81**	**347**	S	S	11 34 45.1	-10
	1.7nm,0.2s,SNR=4.0						

*NNC **24** 11:59:39.4±1.8, 43.45N×77.05E, mpv2.9, Error ellipse: s-maj=47.0km s-min=11.5km az=142.0*

*KNET **24** 11:59:51.4±1.9, 43.14N×76.09E, h18^{km}±3^{km}, ml1.7, Error ellipse: s-maj=16.7km s-min=4.9km az=72.0*

ISC 24 11:59:40.6±1.5**, 43.4N**±0.3×**77.1E**±0.3**, h10^{km}, n12, σ1^{s}10**/11**, 5C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	**Tokmak 2**	**1.19**	**245**	⇓P	**Pb**	**12 00 00.3**	**-2.6**
	23nm,0.2s,SNR=17						
KBK	**Karagaybulak**	**1.74**	**244**	⇑P	**Pn**	**12 00 10.2**	**-0.9**
	20nm,0.2s,SNR=20						
CHMS	**Chumysh**	**1.75**	**256**	⇑P	**Pn**	**12 00 10.1**	**-1.1**
	7.7nm,0.1s,SNR=5.7						
USP	**Ospenovka**	**1.88**	**266**	⇓P	**Pn**	**12 00 13.1**	**0.0**
	10nm,0.2s,SNR=11						
AAK	**Ala-Archa**	**2.05**	**248**	⇑P	**Pn**	**12 00 15.3**	**-0.3**
	12nm,0.2s,SNR=17						
AAK	**Ala-Archa**	**2.05**	**248**	⇓P	**Pn**	**12 00 15.3**	**-0.3**
	6.9nm,0.6s						
AAK				⇑S	**Sn**	**12 00 42.7**	**+1.2**
	16nm,0.8s						
UCH	**Uchtor**	**2.23**	**238**	⇑P	**Pn**	**12 00 18.4**	**+0.2**
	8.1nm,0.2s,SNR=12						
EKS2	**Erkin-Say**	**2.53**	**253**	⇓P	**Pn**	**12 00 23.1**	**+0.6**
	5.3nm,0.2s,SNR=12						
AML	**Almayashu**	**2.81**	**243**	⇓P	**Pn**	**12 00 28.2**	**+1.8**
	5.9nm,0.2s						
KK31	**Karatay Array**	**4.80**	**268**	Lg		12 02 11.9	
	2.3nm,0.6s,baz=82,slow=28,SNR=7.1						
MK31	**Makanchi Array**	**4.99**	**46**	⇓Pn	**Pn**	**12 00 57.7**	**+0.3**
	0.6nm,0.3s,baz=224,slow=14,SNR=22						
MK31				Lg		12 02 19.1	
	1.3nm,0.1s,baz=210,slow=16,SNR=24						
KURK	**Kurchatov**	**7.36**	**8**	Lg		12 03 33.1	

*NAO **24** 12:09:18.5±3.5, 60.73N×28.97E, ML2.1*

*BER **24** 12:09:21.6±3.0, 60.98N×29.02E, ML2.1(NAO), Suspected explosion*

HEL 24 12:09:21.5±3.4**, 60.98N×29.03E, ML2.1**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIA0	**FINESS Array S**	**1.50**	**289**	*e*P	Pn	12 09 47.5	-2.3
FIA0				*e*S	Sb	12 10 07.4	-2.1
FIA0				*e*RG		12 10 16.9	
FIA0	**FINESS Array S**	**1.50**	**289**	Pn	Pn	12 09 47.5	-2.3
	baz=112,slow=16						
FIA0				Lg		12 10 08.3	
	baz=100,slow=37						
FIA0				Rg		12 10 16.1	
	baz=114,slow=37						
HFS	**Hagfors**	**7.60**	**270**	Lg		12 13 17.1	
	baz=94,slow=28						
HFS	**Hagfors**	**7.60**	**270**	*e*SG		12 13 17.1	
HFS	**Hagfors**	**7.60**	**270**	Lg		12 13 17.1	
	baz=94,slow=28						
ARA0	**ARCESS Array S**	**8.71**	**352**	Pn	P	12 11 27.5	-4.3
	baz=167,slow=12						
ARA0	**ARCESS Array S**	**8.71**	**352**	*e*P	P	12 11 27.5	-4.3

*NIED **24** 12:34:00, 38.60N×143.20E, h11^{km}, Mw3.6 Best double couple: M$_0$2.86×10^{14} NP1:φ$_s$116°, δ71°, λ-91°. NP2: φ$_s$298°, δ19°, λ-88°.*

*IDC **24** 12:34:16.4±1.4, 38.26N×143.74E, mb3.5/4, mb1 3.8/6, mb1mx3.6/21, mbtmp3.6/6, ML3.7/2, Error ellipse: s-maj=31.8km s-min=24.2km az=124.0*

*JMA **24** 12:34:17.3±0.2, 38.58N×143.24E, h10^{km}±4^{km}, M3.6*

*NEIC **24** 12:34:22.0±1.0, 38.19N×143.48E, h40^{km}, mb4.5/2, MW3.6(NIED), Error ellipse: s-maj=20.0km s-min=15.7km az=145.0*

ISC 24 12:34:16.3±1.6**, 38.53N**±0.04×**143.31E**±0.06**, h9^{km}**±12^{km}**, n24, σ1^{s}06**/36**, mb3.8**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**1.39**	**294**	P	**Pn**	**12 34 41.7**	**-0.4**
OFUJ				*e*S	**Sb**	**12 34 59.4**	**-0.5**
JIO	**Ouri**	**1.54**	**268**	P	**Pn**	**12 34 44.1**	**-0.1**
JIO				*e*S	**Sb**	**12 35 03.5**	**-0.7**
MIYJ	**Miyakonagasawa**	**1.56**	**312**	P	**Pn**	**12 34 44.0**	**-0.5**
MIYJ				*e*S	**Sb**	**12 35 03.4**	**-1.4**
JMK	**Ichinoseki**	**1.69**	**285**	P	**Pn**	**12 34 46.2**	**-0.1**
JMK				*e*S	**Sn**	**12 35 07.3**	**-0.9**
JOM	**Ohasama**	**1.83**	**302**	P	**Pn**	**12 34 48.4**	**0.0**
JOM				*e*S	**Sn**	**12 35 11.9**	**0.0**
JOU	**Okura**	**2.08**	**266**	P	**Pn**	**12 34 52.4**	**+0.4**
JOU				*e*S	**Sn**	**12 35 18.9**	**+0.6**
JMM	**Marumori**	**2.09**	**252**	P	**Pn**	**12 34 52.1**	**0.0**
JMM				*e*S	**Sn**	**12 35 18.3**	**-0.2**
JFK	**Kawauchi**	**2.25**	**240**	P	**Pn**	**12 34 54.3**	**-0.1**
JANG	**Nango**	**2.30**	**324**	P	**Pn**	**12 34 54.8**	**-0.4**
JYK	**Kaneyama**	**2.34**	**280**	P	**Pn**	**12 34 56.7**	**+1.0**
JFT	**Otama**	**2.56**	**248**	P	**Pn**	**12 34 59.8**	**+1.0**
JAH	**Hinai**	**2.65**	**309**	P	**Pn**	**12 35 01.9**	**+1.8**
MJAR	**Matsushiro Arr**	**4.51**	**245**	Pn	**Pn**	**12 35 27.5**	**+0.9**
	2.3nm,0.3s,baz=79,slow=16,SNR=16						
MJAR				Sn	**Sn**	**12 36 25.9**	**+6.0**
	baz=67,slow=28,SNR=2.2						
MAJO	**Matsushiro**	**4.51**	**245**	*e*Pn	**Pn**	**12 35 27.0**	**+0.4**
MAT	**Matsushiro**	**4.51**	**245**	P	**Pn**	**12 35 27.4**	**+0.8**
MAT				*e*S	**Sn**	**12 36 20.5**	**+0.6**
MAT	**Matsushiro**	**4.51**	**245**	*e*P	**Pn**	**12 35 27.0**	**+0.4**
MAT				*e*S	**Sn**	**12 36 31.0**	**+11**
ASAJ	**Asahikawa**	**5.61**	**355**	Pn	**Pn**	**12 35 40.0**	**-2.0**
	0.4nm,0.3s,baz=193,slow=12,SNR=4.4						
ASAJ				Sn	**Sn**	**12 36 48.4**	**+1.0**
	0.6nm,0.3s,baz=24,slow=10.0,SNR=2.2						
JHJ	**Hachijo jima 2**	**6.11**	**209**	Pn	**Pn**	**12 35 47.0**	**-2.2**
	8.2nm,0.3s,baz=93,slow=19,SNR=5.1						
JHJ				Sn	**Sn**	**12 36 52.8**	**-7.3**
	7.7nm,0.3s,baz=66,slow=19,SNR=2.6						
SONM	**Songino Array**	**28.25**	**301**	P	**P**	**12 40 16.2**	**+4.6**
	0.6nm,0.6s,mb3.4,baz=96,slow=8.0,SNR=6.2						
MKAR	**Makanchi Array**	**44.61**	**301**	P	**P**	**12 42 32.9**	**+2.2**
	0.3nm,0.7s,mb3.2,baz=87,slow=8.8,SNR=3.3						
KURK	**Kurchatov**	**46.21**	**307**	P	**P**	**12 42 44.9**	**+1.7**
	3.0nm,1.0s,mb4.2						
ILAR	**Eielson Array**	**47.42**	**33**	P	**P**	**12 42 52.2**	**-0.4**
	0.3nm,0.6s,mb3.4,baz=267,slow=6.3,SNR=5.3						
PMG	**Port Moresby**	**47.82**	**175**	P	**P**	**12 42 53.2**	**-3.3**
	13nm,1.0s,mb4.9						
WRA	**Warramunga Arr**	**58.77**	**190**	P	**P**	**12 44 15.0**	**-2.3**
	0.4nm,0.6s,mb3.6,baz=7.3,slow=7.0,SNR=7.0						

*IDC **24** 13:17:49.6±1.2, 4.03N×126.66E, mb4.0/6, mb1 4.2/6, mb1mx4.0/17, mbtmp4.1/6, MS3.6/1, Ms1 3.6/1, ms1mx2.6/26, Error ellipse: s-maj=91.2km s-min=17.4km az=70.0*

*NEIC **24** 13:17:54.6±0.4, 4.00N×126.60E, h35^{km}, mb4.4/6, Error ellipse: s-maj=26.7km s-min=7.2km az=73.0*

ISC 24 13:17:52.6±0.6**, 4.0N**±0.1×**126.4E**±0.3**, h33^{km}, n15, σ0^{s}51**/15**, mb4.2**/11**, MS3.7**/1**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.94**	**182**	*e*P	**P**	**13 22 45.9**	**+0.7**
	4.0nm,0.6s,mb4.0						
FITZ	**Fitzroy Crossi**	**21.94**	**182**	P	**P**	**13 22 45.1**	**-0.1**
	3.8nm,0.7s,mb3.9,baz=8.3,slow=11,SNR=5.5						
WRAB	**Tennant Creek**	**24.99**	**162**	*e*P	**P**	**13 23 14.5**	**-0.6**
	23nm,1.2s,mb4.6						
WRA	**Warramunga Arr**	**25.00**	**162**	P	**P**	**13 23 15.1**	**-0.1**
	7.3nm,0.9s,mb4.2,baz=344,slow=11,SNR=34						
WB2	**Warramunga Arr**	**25.00**	**162**	*e*P	**P**	**13 23 15.6**	**+0.4**
WB2				*i*		13 24 27.4	
STKA	**Stephens Creek**	**38.45**	**159**	P	**P**	**13 25 13.5**	**+0.3**
	3.0nm,0.6s,mb4.2,baz=344,slow=9.3,SNR=5.5						
STKA	**Stephens Creek**	**38.45**	**159**	*e*P	**P**	**13 25 13.2**	**0.0**
SONM	**Songino Array**	**46.98**	**342**	P	**P**	**13 26 23.5**	**+1.1**
	0.4nm,0.4s,mb3.7,baz=159,slow=7.6,SNR=5.3						
MKAR	**Makanchi Array**	**57.20**	**325**	P	**P**	**13 27 38.5**	**-0.5**
	1.1nm,0.5s,mb4.1,baz=122,slow=7.9,SNR=15						
MKAR				LR	LR	13 52 40.2	
	comp=Z,50nm,18.1s,MS3.7,baz=187,slow=36						
KURK	**Kurchatov**	**61.39**	**328**	*e*P	**P**	**13 28 07.1**	**-0.7**
	2.8nm,0.6s,mb4.6						
BVAR	**Borovoye Array**	**66.97**	**327**	P	**P**	**13 28 44.3**	**+0.2**
	1.6nm,0.8s,mb4.1,baz=135,slow=6.3,SNR=9.4						
BRVK	**Borovoye**	**67.04**	**327**	*e*P	**P**	**13 28 44.0**	**-0.5**
	2.6nm,0.9s,mb4.3						
ARU	**Arti**	**74.58**	**328**	P	**P**	**13 29 30.4**	**+0.4**
	7.9nm,1.2s,mb4.5						
IMA2	**Indian Mountai**	**82.28**	**24**	*e*P	**P**	**13 30 11.9**	**0.0**
MCK	**McKinley**	**84.08**	**26**	*e*P	**P**	**13 30 20.9**	**-0.3**
	1.5nm,0.8s,mb4.2						

*BUG **24** 13:23:01.9, 51.56N×6.84E, h1^{km}, ML1.7*

*CSEM **24** 13:23:03.6±0.1, 51.62N×6.73E, h5^{km}, ML3.1/3, Error ellipse: s-maj=5.7km s-min=2.3km az=116.0*

*LDG **24** 13:23:04.3±0.2, 51.53N×6.82E, h1^{km}, Ml3.0/5, Error ellipse: s-maj=2.9km s-min=1.9km az=18.0, Suspected Mining induced.*

*BNS **24** 13:23:04.0±0.9, 51.52N×6.82E, h1^{km}, ML2.3*

*NEIC **24** 13:23:04.3, 51.53N×6.82E, h1^{km}, ML3.0(LDG), After LDG.*

BGR 24 13:23:03.9±0.6**, 51.48N×6.95E, h1^{km}, ML2.1**/4**, 2D, Error ellipse: s-maj=6.7km s-min=3.3km az=116.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAUG	**Laupendahl**	**0.13**	**180**	*e*Pg	Pg	13 23 07.4	+0.9
BUG	**Bochum--Univer**	**0.21**	**101**	⇓*e*Pg	Pg	13 23 08.4	+0.4
BUG				Sg	Sg	13 23 13.2	+2.4
WTSB	**Winterswijk**	**0.49**	**349**	*e*Pg	Pg	13 23 10.2	-3.6
	31nm,0.2s						
BNS	**Bensberg**	**0.54**	**164**	*e*Pg	Pg	13 23 16.1	+1.4
BNS				*e*Sg	Sg	13 23 23.6	+1.8
HOBG	**Hohbusch**	**0.56**	**154**	*e*Pg	Pg	13 23 15.8	+0.8
HOBG				*e*Sg	Sg	13 23 24.6	+2.2
RODG	**Roetgen-Dahlhe**	**0.59**	**235**	*e*Sg	Sg	13 23 21.9	-1.5
STB	**Steinbach**	**0.89**	**184**	*e*Pg	Pg	13 23 22.0	+0.3
STB				*e*Sg	Sg	13 23 34.8	+1.3
	76nm,0.8s						
KLL	**Kalltalsperre**	**0.93**	**206**	*e*Pg	Pg	13 23 21.5	-0.9
KLL				*e*Sg	Sg	13 23 35.1	+0.4
	88nm,0.7s						
HGN	**Heimansgroeve**	**0.96**	**222**	⇓*e*Pg	Pg	13 23 22.1	-1.0
	22nm,0.2s						
HGN				*e*Sg	Sg	13 23 35.9	0.0
IBBN	**Ibbenburen**	**0.97**	**31**	*e*Pg	Pg	13 23 21.3	-1.9
	SNR=3.5						
IBBN				*e*Sg	Sg	13 23 35.2	-0.9
HILG	**Hillesheim**	**1.20**	**188**	*e*Sg	Sg	13 23 43.8	-0.2
BGG	**Burgeitz**	**1.30**	**169**	*e*Pg	Pg	13 23 28.6	-1.3
BGG				*e*Sg	Sg	13 23 46.7	-0.5
TNS	**Taunus Mts**	**1.58**	**142**	*e*Pg	Pg	13 23 33.9	-1.5
	SNR=3.0						
TNS				*e*Sg	Sg	13 23 54.3	-2.2
WLF	**Walferdange**	**1.89**	**196**	*e*Pg	Pg	13 23 39.7	-1.8
	SNR=1.4						
WLF				*e*Sg	Sg	13 24 03.3	-3.4
GIVF	**Givet**	**1.93**	**225**	*e*Pg	Pg	13 23 39.6	-2.8
GIVF				*e*Sn	Sn	13 23 59.2	-4.2
GIVF				*e*Sg	Sg	13 24 04.4	-3.7
	22nm,0.2s						
GIVF	**Givet**	**1.93**	**225**	*e*Pn	Pn	13 23 36.3	-1.9
GIVF				*e*Pg	Pg	13 23 39.6	-2.8
GIVF				*e*Sn	Sn	13 23 59.2	-4.2
GIVF				*e*Sg	Sg	13 24 04.4	-3.7
GIVF	**Givet**	**1.93**	**225**	*e*Pg	Pg	13 23 39.6	-2.8
GIVF				*e*Sn	Sn	13 23 59.2	-4.2
GIVF				*e*Sg	Sg	13 24 04.4	-3.7
	11nm,0.2s						
CLZ	**Clausthal**	**2.17**	**79**	*e*Pg	Pg	13 23 44.9	-2.2
	SNR=2.5						
CLZ				*e*Sg	Sg	13 24 12.1	-3.9
BAIF	**Baives**	**2.25**	**232**	*e*Pg	Pg	13 23 45.6	-3.1
BAIF				*e*Sn	Sn	13 24 06.9	-4.6
BAIF				*e*Sg	Sg	13 24 14.0	-4.7
	11nm,0.2s						
BAIF	**Baives**	**2.25**	**232**	*e*Pn	Pn	13 23 40.4	-2.3
BAIF				*e*Pg	Pg	13 23 45.6	-3.1
BAIF				*e*Sn	Sn	13 24 06.9	-4.6
BAIF				*e*Sg	Sg	13 24 14.0	-4.7
BAIF	**Baives**	**2.25**	**232**	*e*Pg	Pg	13 23 45.6	-3.1
BAIF				*e*Sn	Sn	13 24 06.9	-4.6
BAIF				*e*Sg	Sg	13 24 14.0	-4.7
	5.7nm,0.2s						
CDF	**Champ du Feu**	**3.08**	**176**	*e*Pn	Pn	13 23 53.3	-1.3
CDF				*e*Sg	Sg	13 24 42.3	-4.1
	7.4nm,0.4s						
SFTF	**Sexfontaines**	**3.50**	**201**	*e*Pn	Pn	13 23 57.1	-3.5
SFTF				*e*Sg	Sg	13 24 54.9	-5.7
	16nm,0.4s						
CABF	**La Chapelle**	**4.91**	**187**	*e*Pn	Pn	13 24 18.0	-2.6

*NEIC **24** 13:31:38.6, 39.01S×176.06E, h85^{km}, ML4.5(WEL), After WEL.*

WEL 24 13:31:38.5±0.1**, 39.01S×176.04E, h87^{km}**±1^{km}**, ML4.5**/22**, 34C-13D, Error ellipse: s-maj=0.8km s-min=0.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HATZ	**Hinemaiaia**	**0.12**	**18**	P	P	13 31 50.8	-0.1
HATZ				S	S	13 31 58.0	-2.3
HATZ	**Hinemaiaia**	**0.12**	**18**	P*	P	13 31 50.8	-0.1
HATZ				S*	S	13 31 59.6	-0.7
RITZ	**Rihia Road**	**0.15**	**282**	P	P	13 31 51.2	+0.2
RITZ	**Rihia Road**	**0.15**	**282**	⇑P*	P	13 31 51.2	+0.2
RATZ	**Rangitukua**	**0.25**	**304**	P	P	13 31 51.2	-0.2
RATZ	**Rangitukua**	**0.25**	**304**	⇑P*	P	13 31 51.2	-0.2
RATZ				S*	S	13 32 01.2	+0.1
KATZ	**Kakaramea**	**0.27**	**277**	P	P	13 31 51.4	-0.1
KATZ				S	S	13 32 01.6	+0.3
KATZ	**Kakaramea**	**0.27**	**277**	⇑P*	P	13 31 51.4	-0.1
KATZ				S*	S	13 32 01.5	+0.2
KRVZ	**Karewarewa**	**0.32**	**254**	⇑P*	P	13 31 51.6	-0.2
OTVZ	**Oturere**	**0.33**	**242**	P*	P	13 31 51.9	+0.1
OTVZ				S*	S	13 32 01.9	0.0
WHTZ	**Whakaora**	**0.35**	**349**	P	P	13 31 52.2	+0.3
WHTZ	**Whakaora**	**0.35**	**349**	P*	P	13 31 52.2	+0.2
WTVZ	**West Tongariro**	**0.37**	**253**	P	P	13 31 51.8	-0.2
WTVZ	**West Tongariro**	**0.37**	**253**	⇑P*	P	13 31 51.8	-0.2
WTVZ				S*	S	13 32 02.4	+0.1
NGZ	**Ngauruhoe**	**0.38**	**244**	P	P	13 31 51.9	-0.2
NGZ	**Ngauruhoe**	**0.38**	**244**	P*	P	13 31 51.9	-0.2
BKZ	**Black Stump Fm**	**0.38**	**114**	P	P	13 31 52.4	+0.3
BKZ	**Black Stump Fm**	**0.38**	**114**	⇑P*	P	13 31 52.4	+0.3
BKZ				S*	S	13 32 02.2	-0.3
WATZ	**Wairara**	**0.39**	**321**	P	P	13 31 51.9	-0.2
WATZ	**Wairara**	**0.39**	**321**	⇑P*	P	13 31 51.9	-0.2
WATZ				S*	S	13 32 01.8	-0.7
TUVZ	**Tukino**	**0.40**	**229**	P	P	13 31 52.4	+0.2
TUVZ	**Tukino**	**0.40**	**229**	⇑P*	P	13 31 52.4	+0.2
TUVZ				S*	S	13 32 02.5	-0.1
CNZ	**Chateau**	**0.43**	**244**	P	P	13 31 52.2	-0.3
CNZ	**Chateau**	**0.43**	**244**	⇓P*	P	13 31 52.2	-0.3
WPVZ	**Whakapapa**	**0.43**	**243**	P	P	13 31 52.2	-0.3
WPVZ	**Whakapapa**	**0.43**	**243**	⇑P*	P	13 31 52.2	-0.3
FWVZ	**Far West T-bar**	**0.45**	**237**	P	P	13 31 52.6	-0.1
FWVZ				S	S	13 32 03.2	-0.2
FWVZ	**Far West T-bar**	**0.45**	**237**	⇓P*	P	13 31 52.6	-0.1
FWVZ				S*	S	13 32 03.2	-0.2
DRZ	**Dome Shelter**	**0.46**	**234**	P	P	13 31 53.0	+0.3
DRZ	**Dome Shelter**	**0.46**	**234**	⇓P*	P	13 31 53.0	+0.2
MOVZ	**Moawhango**	**0.46**	**209**	P	P	13 31 52.5	-0.2
MOVZ	**Moawhango**	**0.46**	**209**	⇑P*	P	13 31 52.5	-0.3
MOVZ				S*	S	13 32 02.3	-1.2
WNVZ	**Wahianoa**	**0.47**	**227**	P	P	13 31 52.8	0.0
WNVZ	**Wahianoa**	**0.47**	**227**	⇑P*	P	13 31 52.8	0.0
WNVZ				S*	S	13 32 03.2	-0.4
TWVZ	**Taurewa**	**0.47**	**262**	P	P	13 31 52.5	-0.4
TWVZ	**Taurewa**	**0.47**	**262**	⇑P*	P	13 31 52.5	-0.3
TWVZ				S*	S	13 32 02.9	-0.7
TRVZ	**Turoa**	**0.48**	**233**	⇑P*	P	13 31 53.0	+0.1
TRVZ				S*	S	13 32 03.2	-0.6
MTVZ	**Mangateitei**	**0.58**	**230**	⇑P*	P	13 31 53.6	-0.3
MTVZ				S*	S	13 32 05.8	+0.6
PKVZ	**Pokaka**	**0.61**	**242**	⇑P*	P	13 31 53.8	-0.3
PKVZ				S*	S	13 32 05.1	-0.6
PATZ	**Paeroa**	**0.65**	**15**	P	P	13 31 54.6	+0.1
PATZ	**Paeroa**	**0.65**	**15**	⇓P*	P	13 31 54.6	+0.1
UTU	**Utuhina**	**0.84**	**8**	P	P	13 31 56.5	+0.1
UTU	**Utuhina**	**0.84**	**8**	⇓P*	P	13 31 56.5	+0.1
TAZ	**Tarawera**	**0.86**	**25**	P	P	13 31 56.6	0.0
TAZ	**Tarawera**	**0.86**	**25**	⇑P*	P	13 31 56.6	0.0
VRZ	**Vera Road**	**1.01**	**263**	⇓P*	P	13 31 57.8	-0.5
VRZ				S*	S	13 32 12.5	-0.7
HIZ	**Hauiti**	**1.05**	**298**	P	P	13 31 58.3	-0.5
HIZ	**Hauiti**	**1.05**	**298**	⇓PN	P	13 31 58.3	-0.5
HIZ				SN	S	13 32 12.5	-1.7
TSZ	**Takapari Road**	**1.05**	**183**	P	P	13 31 58.3	-0.5
TSZ	**Takapari Road**	**1.05**	**183**	⇑PN	P	13 31 58.3	-0.5
TSZ				SN	S	13 32 12.3	-1.8
EDRZ	**Edgecumbe**	**1.05**	**31**	P	P	13 31 58.5	-0.3
EDRZ	**Edgecumbe**	**1.05**	**31**	⇑P*	P	13 31 58.5	-0.4
WAZ	**Wanganui**	**1.11**	**227**	P	P	13 31 59.3	-0.2
WAZ	**Wanganui**	**1.11**	**227**	⇑PN	P	13 31 59.3	-0.2
WAZ				SN	S	13 32 15.2	-0.2
URZ	**Urewera**	**1.12**	**49**	P	P	13 31 59.2	-0.5
URZ	**Urewera**	**1.12**	**49**	⇓P*	P	13 31 59.2	-0.6
URZ				S*	S	13 32 14.7	-1.0
PXZ	**Pawanui**	**1.20**	**148**	⇑PN	P	13 32 00.4	-0.4
PXZ				SN	S	13 32 16.5	-0.9
KNZ	**Kokohu**	**1.27**	**91**	P	P	13 32 01.0	-0.6
KNZ	**Kokohu**	**1.27**	**91**	PN	P	13 32 01.0	-0.6
RAEZ	**Rainy Point**	**1.31**	**257**	P	P	13 32 02.0	-0.2
RAEZ	**Rainy Point**	**1.31**	**257**	⇓PN	P	13 32 02.0	-0.2
RAEZ				SN	S	13 32 19.3	-0.4
MWZ	**Matawai**	**1.34**	**60**	P	P	13 32 02.0	-0.6
MWZ	**Matawai**	**1.34**	**60**	⇓P*	P	13 32 02.0	-0.6
MWZ				S*	S	13 32 20.1	-0.4
TOZ	**Tahuroa Road**	**1.35**	**341**	P	P	13 32 02.2	-0.4
TOZ				S	S	13 32 19.8	-0.7
TOZ	**Tahuroa Road**	**1.35**	**341**	⇓P*	P	13 32 02.2	-0.4
TOZ				S*	S	13 32 19.8	-0.7
NEZ	**North Egmont**	**1.54**	**260**	P	P	13 32 02.3	-2.7
DFE	**Dawson Falls**	**1.54**	**258**	P	P	13 32 04.9	-0.2
DFE	**Dawson Falls**	**1.54**	**258**	PN	P	13 32 04.8	-0.2
PKE	**Pukeiti**	**1.61**	**263**	P	P	13 32 05.3	-0.7
PKE	**Pukeiti**	**1.61**	**263**	⇓PN	P	13 32 05.3	-0.6
PKE				SN	S	13 32 26.2	-0.1
NRZ	**Ngariki Road**	**1.67**	**258**	P	P	13 32 06.1	-0.7
NRZ	**Ngariki Road**	**1.67**	**258**	PN	P	13 32 06.1	-0.7
BFZ	**Birch Farm**	**1.68**	**175**	P	P	13 32 05.3	-1.5
BFZ	**Birch Farm**	**1.68**	**175**	⇑PN	P	13 32 05.3	-1.6
MRZ	**Mangatainoka R**	**1.69**	**192**	P	P	13 32 05.1	-1.9
MRZ	**Mangatainoka R**	**1.69**	**192**	⇑PN	P	13 32 05.1	-1.9
MRZ				SN	S	13 32 24.6	-3.4
NWEZ	**Newall Road**	**1.71**	**260**	P	P	13 32 06.5	-0.8
NWEZ	**Newall Road**	**1.71**	**260**	PN	P	13 32 06.5	-0.8
MYRZ	**Mayor Island**	**1.73**	**5**	P*	P	13 32 07.3	-0.3
WIZ	**White Island**	**1.73**	**32**	P	P	13 32 06.7	-0.9
WIZ	**White Island**	**1.73**	**32**	P*	P	13 32 06.2	-1.3
PUZ	**Puketiti**	**1.97**	**62**	P	P	13 32 09.6	-1.1
PUZ	**Puketiti**	**1.97**	**62**	PN	P	13 32 09.6	-1.1
PUZ				SN	S	13 32 33.5	-1.1
MKAZ	**Moumakai**	**2.02**	**340**	P	P	13 32 10.7	-0.6
MKAZ	**Moumakai**	**2.02**	**340**	PN	P	13 32 10.7	-0.6
KIW	**Kapiti Island**	**2.04**	**205**	P	P	13 32 09.2	-2.5
KIW	**Kapiti Island**	**2.04**	**205**	⇑PN	P	13 32 09.2	-2.5
KIW				SN	S	13 32 32.6	-3.7
MTW	**Mount Morrison**	**2.19**	**191**	P	P	13 32 10.8	-2.9
MTW	**Mount Morrison**	**2.19**	**191**	⇑PN	P	13 32 10.8	-2.9
CAW	**Cannon Point**	**2.23**	**199**	⇑PN	P	13 32 11.3	-3.0
CAW				SN	S	13 32 36.1	-4.7
OTAZ	**Otara**	**2.24**	**336**	⇑PN	P	13 32 13.7	-0.7
KUZ	**Kuaotunu**	**2.27**	**353**	⇑PN	P	13 32 14.0	-0.9
MXZ	**Matakaoa Point**	**2.29**	**52**	P	P	13 32 14.1	-1.1
MXZ	**Matakaoa Point**	**2.29**	**52**	⇓PN	P	13 32 14.0	-1.1
WTAZ	**Waiatarua**	**2.38**	**330**	P	P	13 32 15.6	-0.7
WTAZ	**Waiatarua**	**2.38**	**330**	⇑PN	P	13 32 15.6	-0.7
MTAZ	**Motutapu**	**2.39**	**338**	P	P	13 32 15.6	-1.0
TRWZ	**Traveller**	**2.40**	**186**	PN	P	13 32 13.5	-3.2
TRWZ				SN	S	13 32 40.0	-5.2
PAWZ	**Paruwai Farm**	**2.42**	**191**	P	P	13 32 13.5	-3.4
PAWZ	**Paruwai Farm**	**2.42**	**191**	⇑PN	P	13 32 13.5	-3.4
PAWZ				SN	S	13 32 39.7	-5.8
DUWZ	**D'Urville Isla**	**2.42**	**222**	PN	P	13 32 13.7	-3.3
DUWZ				SN	S	13 32 43.0	-2.7
KAAZ	**Kauri Point**	**2.42**	**334**	P	P	13 32 16.2	-0.8
KAAZ	**Kauri Point**	**2.42**	**334**	PN	P	13 32 16.2	-0.9
MRW	**Makara Radio**	**2.44**	**204**	P	P	13 32 13.8	-3.5
MRW	**Makara Radio**	**2.44**	**204**	PN	P	13 32 13.8	-3.5
MRW				SN	S	13 32 41.2	-5.0
WEL	**Wellington**	**2.47**	**203**	P	P	13 32 14.2	-3.5
WEL	**Wellington**	**2.47**	**203**	PN	P	13 32 14.2	-3.5
MSWZ	**Moikau Station**	**2.48**	**194**	P	P	13 32 14.2	-3.6
MSWZ	**Moikau Station**	**2.48**	**194**	⇑PN	P	13 32 14.2	-3.6
MSWZ				SN	S	13 32 40.6	-6.5
SNZO	**South Karori**	**2.52**	**204**	P	P	13 32 14.6	-3.7
SNZO	**South Karori**	**2.52**	**204**	⇑PN	P	13 32 14.6	-3.7
BHW	**Baring Head**	**2.56**	**200**	P	P	13 32 15.1	-3.8
BHW	**Baring Head**	**2.56**	**200**	PN	P	13 32 15.1	-3.8
TCW	**Tory Channel**	**2.58**	**211**	P	P	13 32 15.6	-3.6
TCW	**Tory Channel**	**2.58**	**211**	PN	P	13 32 15.6	-3.7
TUWZ	**Tuamarina**	**2.90**	**213**	PN	P	13 32 19.6	-4.1
NNZ	**Nelson**	**3.01**	**222**	P	P	13 32 20.9	-4.2
NNZ	**Nelson**	**3.01**	**222**	PN	P	13 32 20.7	-4.4
CMWZ	**Cape Campbell**	**3.07**	**206**	SN	S	13 32 57.8	-4.0
BSWZ	**Blackbirch Sta**	**3.17**	**211**	P	P	13 32 22.9	-4.4
QRZ	**Quartz Range**	**3.25**	**235**	*e*P	P	13 32 24.4	-4.1
THZ	**Tophouse**	**3.65**	**220**	P	P	13 32 29.3	-4.7
KHZ	**Kahutara**	**3.90**	**208**	P	P	13 32 32.2	-5.2
DSZ	**Denniston Nort**	**4.24**	**228**	P	P	13 32 36.6	-5.5
LTZ	**Lake Taylor**	**4.73**	**216**	P	P	13 32 42.5	-6.4
CRLZ	**Canterbury Las**	**5.24**	**208**	*e*P	P	13 32 48.3	-7.5
MQZ	**McQueen's Vall**	**5.34**	**207**	P	P	13 32 49.5	-7.7
RPZ	**Rata Peaks**	**6.01**	**217**	*e*P	P	13 33 00.0	-6.5
FOZ	**Fox Glacier**	**6.60**	**224**	*e*P	P	13 33 06.5	-8.2
LBZ	**Lake Benmore**	**6.93**	**217**	*e*P	P	13 33 12.3	-7.0
ODZ	**Otahua Downs**	**7.25**	**212**	*e*P	P	13 33 15.2	-8.3
JCZ	**Jackson Bay**	**7.45**	**225**	*e*P	P	13 33 18.8	-7.5
WKZ	**Wanaka**	**7.82**	**220**	*e*P	P	13 33 23.7	-7.7
EAZ	**Earnscleugh**	**7.98**	**217**	*e*P	P	13 33 25.5	-8.1
TUZ	**Tuapeka**	**8.40**	**212**	*e*P	P	13 33 31.5	-7.8
WB2	**Warramunga Arr**	**40.55**	**286**	*e*P	P	13 39 08.1	-2.5

SNAA	**Sanae**	69.62	180		P	13 42 38.2	-1.4
SNAA	**Sanae**	69.62	180	⇑*i*	P	13 42 42.8	+3.2
VNA3	**Neumayer Olymp**	69.98	178		P	13 42 44.3	+2.5
VNA3	**Neumayer Olymp**	69.98	178	⇑*i*	P	13 42 47.9	+6.1
VNA2	**Neumayer--Watz**	70.35	179		P	13 42 47.5	+3.5
VNA2	**Neumayer--Watz**	70.35	179	⇑*i*	P	13 42 48.7	+4.7

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*TIF **24** 13:48:12.3, 43.20N×46.05E, h6^{km}±2^{km}*
*MOS **24** 13:48:13.2±0.9, 43.25N×46.16E, h11^{km}, mb3.9/1, Error ellipse: s-maj=13.4km s-min=8.1km az=21.9*
ISC 24 13:48:12.4±0.8, 43.41N±0.06×46.16E±0.04, h10^{km}, n17, σ1^{s}33/32, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBC	**Dubki**	0.63	128	*i* PG	Pg	13 48 25.5	+0.5
DBC				*i* S	Sg	13 48 37.0	+3.6
KRNR	**Karanay**	0.80	136	*e*PG	Pg	13 48 27.5	-0.9
KRNR				*i* S	Sb	13 48 39.5	+1.0
KRNR				pmax	pmax		
	comp=Z,50nm,0.2s						
UNCR	**Uncukul**	0.83	146	*e*PG	Pg	13 48 27.2	-1.9
UNCR				*i* S	Sb	13 48 38.7	-0.8
UNCR				pmax	pmax		
	comp=Z,50nm,0.2s						
BUJR	**Buynaksk**	0.91	129	*i* PG	Pg	13 48 29.5	-1.1
BUJR				*i* S	Sb	13 48 43.5	+1.8
ARKR	**Arakani**	1.01	142	PG	Pg	13 48 29.5	-3.1
ARKR				*e*S	Sb	13 48 44.5	-0.2
ARKR				pmax	pmax		
	comp=Z,35nm,0.2s						
TRKR	**Terskaya**	1.08	288	*e*PG	Pg	13 48 35.5	+1.5
TRKR				*e*S	Sb	13 48 51.7	+5.0
VLKR	**Vladikavkaz**	1.14	252	*e*PG	Pg	13 48 33.4	-1.8
VLKR				*e*S	Sb	13 48 47.9	-0.5
KMSR	**Komsomolskaya**	1.36	269	*e*PG	Pg	13 48 38.3	-1.2
KMSR				*e*S	Sb	13 48 56.7	+2.0
ARNR	**Ardon**	1.39	262	*e*PG	Pg	13 48 38.1	-2.0
ARNR				*e*S	Sb	13 48 56.3	+0.7
PRTR	**Priterechnaya**	1.41	285	*e*PG	Pg	13 48 40.2	-0.3
PRTR				*e*S	Sb	13 49 00.1	+4.0
LACR	**Lac**	1.48	248	*e*PG	Pg	13 48 38.4	-3.6
LACR				*e*S	Sb	13 48 56.7	-1.6
KORR	**Kora**	1.56	259	*e*PG	Pg	13 48 40.4	-3.1
KORR				*e*S	Sb	13 49 00.6	+0.1
LSNR	**Lesken**	1.71	266	*e*PN	Pn	13 48 43.3	+0.8
LSNR				*e*S	Sn	13 49 05.8	+1.2
DIGR	**Digorskoe uzhe**	1.95	256	*e*PN	Pn	13 48 45.9	0.0
TI2	**Plekhanov**	1.97	212	*e*PN	Pn	13 48 48.2	+2.0
MTA	**Mtatsminda**	1.98	211	P	Pn	13 48 47.1	+0.7
MTA				S	Sn	13 49 11.2	-0.3
DGRG	**David-gareji**	2.04	197	P	Pn	13 48 48.3	+1.1
DGRG				S	Sn	13 49 14.0	+1.1

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*NDI **24** 14:10:48.5±4.1, 34.93N×72.53E, h45^{km}, MD3.7, ML3.6*
*NNC **24** 14:11:00.8±3.9, 35.12N×73.22E, h103^{km}±72^{km}, mpv3.8, Error ellipse: s-maj=69.4km s-min=31.9km az=97.0*
ISC 24 14:10:50.8±1.0, 34.61N±0.10×72.9E±0.2, h33^{km}, n10, σ1^{s}65/17, 1C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	3.23	131	*e*P	P	14 11 43.0	+2.7
THN				*e*S	S	14 12 24.2	+6.1
DLH	**Dalhousie**	3.31	128	*e*x	x	14 11 55.0	
DLH				*e*S	S	14 12 25.0	+4.7
SDNR	**Sundarnagar**	4.64	131	*e*P	P	14 12 00.8	+0.4
SDNR				*e*S	S	14 12 53.4	-0.4
KLP	**Kalpa**	5.47	123	*e*P	P	14 12 12.8	+0.7
KLP				*e*S	S	14 13 11.4	-3.3
KLP				AML	AML	14 13 18.5	
	comp=E,57nm,0.3s						
KLP				AML	AML	14 13 20.6	
	comp=N,82nm,0.8s						
KHET	**Khetri**	6.98	158	*e*P	P	14 12 33.6	+0.2
KHET				*e*S	S	14 13 49.7	-2.9
KHET				AML	AML	14 13 55.4	
	comp=N,170nm,0.2s						
KHET				AML	AML	14 13 56.0	
	comp=E,143nm,0.1s						
KUDL	**Kundal**	7.15	153	*e*P	P	14 12 34.6	-1.1
KUDL				*e*S	S	14 13 53.0	-3.7
SONA	**Sohna**	7.29	149	*e*S	S	14 13 55.4	-4.8
SONA				AML	AML	14 14 02.7	
	comp=N,12nm,0.3s						
SONA				AML	AML	14 14 03.2	
	comp=E,15nm,0.4s						
AAK	**Ala-Archa**	8.12	9	⇑P	P	14 12 51.6	+2.5
	comp=E,3.9nm,1.2s						
AAK				⇓S	S	14 14 12.8	-7.9
	comp=E,3.6nm,1.2s						
KK31	**Karatay Array**	8.68	349	P	P	14 12 57.4	+0.4
	comp=E,3.3nm,0.4s,baz=156,slow=11,SNR=48						
KK31				⇓S	S	14 14 29.8	-4.9
	comp=E,1.0nm,0.3s,baz=169,slow=23,SNR=6.4						
AB31	**Akbulak array**	17.47	331	P	P	14 14 54.0	+0.7

IDC 24 14:44:42.6±8.8, 19.16S×174.54W, h56^{km}±68^{km}, mb3.5/5, mb1 3.9/6, mb1mx3.7/16, mbtmp3.8/6, MS3.4/2, Ms1 3.4/2, ms1mx2.8/18, Error ellipse: s-maj=110.6km s-min=22.8km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	5.85	27	P	P	14 46 06.5	-2.3
	5.4nm,0.3s,baz=131,slow=1.4,SNR=11						
AFI				S	S	14 47 13.7	-1.7
	2.9nm,0.3s,baz=220,slow=24,SNR=2.6						
RAO	**Raoul Island**	10.51	196	LR	LR	14 50 32.3	
	comp=Z,134nm,20.2s,baz=24,slow=33						
DZM	**Mont Dzumac**	18.04	257	P	P	14 48 54.2	+3.0
	0.1nm,0.3s,baz=77,slow=18,SNR=2.4						
WRA	**Warramunga Arr**	48.03	260	P	P	14 53 16.7	-1.9
	1.3nm,0.7s,baz=96,slow=7.6,SNR=25						
MJAR	**Matsushiro Arr**	71.13	321	LR	LR	15 27 02.8	
	comp=Z,33nm,18.6s,baz=120,slow=36						
NVAR	**Mina Array Bea**	77.83	42	P	P	14 56 34.5	-1.5
	0.5nm,0.7s,baz=218,slow=9.0,SNR=5.9						
ELK	**Elko**	81.10	41	P	P	14 56 53.5	-0.2
	0.5nm,0.5s,baz=301,slow=12,SNR=2.1						
TXAR	**Lajitas Array**	83.59	56	P	P	14 57 04.7	-2.0
	0.4nm,1.0s,baz=211,slow=7.3,SNR=3.6						
PDAR	**Pinedale Array**	85.77	42	P	P	14 57 16.2	-1.0
	0.7nm,0.9s,baz=214,slow=3.3,SNR=3.8						
AKASG	**Malin Array Be**	143.31	335	PKP	PKPdf	15 04 09.2	-1.3
	1.1nm,0.6s,baz=39,slow=4.9,SNR=7.9						

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*IDC **24** 15:44:04.5±2.5, 2.11N×96.27E, mb4.1/6, mb1 4.2/6, mb1mx3.9/17, mbtmp4.1/6, Error ellipse: s-maj=102.9km s-min=26.7km az=54.0*
*NEIC **24** 15:44:09.2±0.6, 2.09N×96.30E, h30^{km}, mb4.3/4, Error ellipse: s-maj=18.5km s-min=10.9km az=59.0*
ISC 24 15:44:07.4±0.8, 2.1N±0.1×96.3E±0.1, h30^{km}, n15, σ0^{s}73/15, mb4.3/14, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	25.60	248	P	P	15 49 35.8	-0.3
	263nm,1.2s,mb5.6						
GUN	**Gumba**	27.52	340	*e*P	P	15 49 54.5	+0.8
	8.9nm,0.6s,mb4.6						
KKN	**Kakani**	27.63	339	*e*P	P	15 49 55.4	+0.8
	12nm,0.9s,mb4.5						
LSA	**Lhasa**	27.87	350	*e*P	P	15 49 56.5	-0.3
	5.9nm,1.0s,mb4.2						
GKN	**Gorkha**	28.06	338	*e*P	P	15 49 59.4	+0.9
	11nm,0.8s,mb4.5						
KOLN	**Koldanda**	28.26	336	*e*P	P	15 50 01.3	+1.0
	8.5nm,0.9s,mb4.4						
WRA	**Warramunga Arr**	43.28	122	P	P	15 52 08.3	-0.2
	0.9nm,0.7s,mb3.6,baz=300,slow=9.3,SNR=6.8						
WRAB	**Tennant Creek**	43.29	122	P	P	15 52 09.2	+0.7
	5.5nm,1.1s,mb4.2						
MKAR	**Makanchi Array**	46.15	347	P	P	15 52 30.6	-0.5
	2.4nm,0.7s,mb4.2,baz=162,slow=8.2,SNR=14						
SONM	**Songino Array**	46.38	9	P	P	15 52 32.5	-0.4
	0.9nm,0.5s,mb3.9,baz=194,slow=9.3,SNR=7.9						
KURK	**Kurchatov**	50.69	346	*e*P	P	15 53 05.4	-0.9
	10nm,1.6s,mb4.5						
ZAL	**Zalesovo**	52.52	351	P	P	15 53 19.8	-0.3
	2.1nm,0.5s,mb4.3,baz=305,slow=5.7,SNR=12						
BVAR	**Borovoye Array**	55.10	341	P	P	15 53 37.6	-1.6
	1.1nm,0.7s,mb4.0,baz=141,slow=7.9,SNR=9.9						
ARCES	**ARCESS Array B**	81.38	340	P	P	15 56 22.7	+0.2
	4.5nm,1.0s,mb4.3,baz=98,slow=6.4,SNR=4.1						
ARCES	**ARCESS Array B**	81.38	340	P	P	15 56 22.7	+0.2

IDC 24 16:20:52.1±3.1, 10.06S×161.20E, mb3.7/4, mb1 3.9/4, mb1mx3.7/14, mbtmp3.7/4, Error ellipse: s-maj=106.4km s-min=31.7km az=136.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	27.70	246	P	P	16 26 42.1	-2.2
	0.4nm,0.5s,baz=75,slow=9.3,SNR=4.7						
FITZ	**Fitzroy Crossi**	35.35	253	P	P	16 27 49.8	-1.9
	2.7nm,0.8s,baz=193,slow=17,SNR=3.0						
SONM	**Songino Array**	75.28	325	P	P	16 32 37.4	-1.4
	0.7nm,0.8s,baz=141,slow=6.6,SNR=5.7						
ILAR	**Eielson Array**	84.06	20	P	P	16 33 24.2	-1.4
	0.2nm,0.6s,baz=229,slow=4.7,SNR=5.2						

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*IDC **24** 16:34:38.0±0.7, 30.18N×99.85E, mb4.1/14, mb1 4.2/15, mb1mx4.2/22, mbtmp4.1/15, ML3.3/1, MS3.5/6, Ms1 3.5/6, ms1mx3.4/21, Error ellipse: s-maj=23.9km s-min=16.8km az=51.0*
*BJI **24** 16:34:40.6, 30.18N×99.84E, h23^{km}, mB4.8, mb4.5, ML4.0, Ms4.2, Msz4.0*
*MOS **24** 16:34:40.7±1.1, 30.13N×99.76E, h33^{km}, mb4.8/10, Error ellipse: s-maj=11.5km s-min=9.2km az=109.6*
*NEIC **24** 16:34:41.1±2.4, 30.11N×99.82E, h22^{km}±18^{km}, mb4.6/10, Error ellipse: s-maj=11.0km s-min=6.9km az=180.0*
ISC 24 16:34:41.3±0.9, 30.11N±0.05×99.80E±0.04, h37^{km}±10^{km}, n76, σ1^{s}26/79, mb4.4/29, MS3.5/5, 1C-1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	5.61	152	P	P	16 36 06.9	+2.4
KMI				SG	S	16 37 33.5	+25
KMI				Smax			
	comp=N,50nm,2.1s						
KMI				Smax			
	comp=E,50nm,2.1s						
KMI				LR	LR		
	comp=N,2µm,10.0s						
KMI				LR	LR		
	comp=E,3µm,10.0s						
LZH	**Lanzhou**	6.86	29	*e*PG	P	16 36 44.9	+23
LZH				S	S	16 37 46.6	+6.9
LZH				SG	S	16 38 17.8	+38
LZH				Smax			
	comp=N,140nm,1.1s						
LZH				Smax			
	comp=E,130nm,1.1s						
LZH				LR	LR		
	comp=E,1µm,8.4s						
LZH				LR	LR		
	comp=Z,2µm,9.8s						
GYA	**Guiyang**	7.06	119	⇑*i*P	P	16 36 25.4	+0.5
GYA				S	S	16 37 45.6	+0.8
GYA				SG	S	16 38 18.6	+34
GYA				Smax			
	comp=N,60nm,1.2s						
GYA				Smax			
	comp=E,80nm,1.0s						
GYA				LR	LR		
	comp=N,3µm,10.8s						
GYA				LR	LR		
	comp=E,2µm,11.4s						
GYA				LR	LR		
	comp=Z,1µm,10.2s						
LSA	**Lhasa**	7.52	269	P	P	16 36 33.3	+2.1
LSA	**Lhasa**	7.52	269	*e*Pn	P	16 36 32.1	+0.9
	comp=Z,32nm,0.6s						
LSA				*e*Sn	S	16 38 02.3	+6.1
LSA	**Lhasa**	7.52	269	*e*P	P	16 36 32.1	+0.9
LSA				*e*		16 38 02.3	
LSA				pmax	pmax		
	comp=Z,32nm,0.6s						
SHL	**Shillong**	8.34	239	*e*P	P	16 36 42.5	-0.1
SHL				*e*S	S	16 38 10.0	-6.6
ENH	**Enshi**	8.39	86	*e*P	P	16 36 41.4	-1.9
	comp=Z,31nm,0.8s						
XAN	**Xi’an**	8.68	61	P	P	16 36 45.1	-2.2
XAN				AP		16 36 56.3	
XAN				AMB	AMB		
	comp=Z,20nm,0.9s						
GUN	**Gumba**	12.38	263	*e*P	P	16 37 37.8	-0.1
	comp=Z,31nm,0.4s						
GUN				*e*S	S	16 39 55.1	-0.4
PKI	**Pulchoki**	12.87	262	*e*P	P	16 37 43.2	-1.2
	comp=Z,51nm,0.6s						
KKN	**Kakani**	12.92	263	*e*P	P	16 37 43.4	-1.7
	comp=Z,32nm,0.4s						
DMN	**Daman**	13.12	263	*e*P	P	16 37 47.3	-0.4
	comp=Z,31nm,0.6s						
GKN	**Gorkha**	13.43	265	*e*P	P	16 37 48.9	-2.9
	comp=Z,36nm,0.6s						
KOLN	**Koldanda**	14.38	265	*e*P	P	16 38 02.1	-2.1
	comp=Z,51nm,0.7s						
KOLN				*e*S	S	16 40 39.3	-4.0
WMQ	**Urumqi**	16.73	328	*e*P	P	16 38 35.8	+1.4
WMQ				AP		16 38 45.5	
WMQ				XP		16 38 51.0	
WMQ				*e*S	S	16 41 40.0	+1.9
WMQ				XS		16 41 54.0	
WMQ				SS	SS	16 42 02.0	+3.3
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s						
WMQ				AMB	AMB		
	comp=Z,90nm,4.7s						
WMQ				LR	LR		
	comp=N,350nm,10.6s						
WMQ				LR	LR		
	comp=E,390nm,9.8s						
WMQ				LR	LR		
	comp=Z,190nm,13.2s						
SONM	**Songino Array**	18.41	14	P	P	16 38 54.8	-0.7
	comp=Z,0.1nm,0.3s,baz=196,slow=8.8,SNR=12						
SONM				LR	LR	16 47 08.6	
	comp=Z,81nm,18.5s,baz=159,slow=41						
VIS	**Vishakhapatnam**	19.43	234	*e*x	x	16 37 40.9	
NDI	**New Delhi**	19.73	271	*e*P	P	16 39 12.0	+1.4
YHNB	**Yeheng**	19.90	101	P	P	16 39 10.1	-2.4
ZAK	**Zakamensk**	20.42	6	*e*P	P	16 39 17.0	-0.8
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BHPL	**Bhopal**	21.11	256	*e*P	P	16 39 27.0	+1.9
BHPL				AMb	AMB	16 39 31.3	
	comp=Z,34nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	21.50	326	P	P	16 39 28.8	0.0
	comp=Z,3.8nm,0.7s,mb3.8,baz=133,slow=12,SNR=15						
MKAR	**Makanchi Array**	21.50	326	P	P	16 39 28.8	0.0
KSH	**Kashi**	21.64	302	*e*P	P	16 39 35.0	+4.7
KSH				*e*AP		16 39 45.3	
KSH				AMB	AMB		
	comp=Z,110nm,1.6s,mb5.0						
AJM	**Ajmer**	22.43	267	*e*P	P	16 39 39.6	+1.3
AJM				AMb	AMB	16 39 46.0	
	comp=Z,22nm,0.6s,mb4.8						
AJM				*e*S	S	16 43 48.9	+12
SNY	**Shenyang**	22.44	52	⇓P	P	16 39 40.0	+1.8
SNY				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
KZA	**Kyzart**	23.07	308	P	P	16 39 49.6	+5.3
	SNR=14						
KBK	**Karagaybulak**	23.50	309	P	P	16 39 54.3	+5.7
	SNR=11						
AAK	**Ala-Archa**	23.80	309	P	P	16 39 56.7	+5.3
	SNR=9.7						
AAK	**Ala-Archa**	23.80	309	*e*P	P	16 39 54.2	+2.7
	comp=Z,6.6nm,0.7s,mb4.2						
AAK	**Ala-Archa**	23.80	309	*e*P	P	16 39 54.2	+2.7
AAK				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.2						
USP	**Ospenovka**	24.06	310	P	P	16 39 59.1	+5.1
	SNR=9.0						
EKS2	**Erkin-Say**	24.30	308	P	P	16 40 01.9	+5.5
	SNR=8.7						
HIA	**Hailar**	24.39	33	*e*P	P	16 39 57.9	+0.7
	comp=Z,14nm,1.0s,mb4.3						
HIA	**Hailar**	24.39	33	*e*P	P	16 39 57.9	+0.7
HIA				pmax	pmax		
	comp=Z,14nm,1.0s						
KS15	**Wonju Array Si**	24.41	65	*e*P	P	16 39 58.3	+0.8
CN2	**Changchun**	24.51	49	*e*P	P	16 39 59.3	+0.9
CN2				*e*S	S	16 44 12.0	-1.7
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
JOW	**Kunigami**	25.22	90	LR	LR	16 50 48.5	
	comp=Z,102nm,19.1s,MS3.4,baz=241,slow=38						
KURK	**Kurchatov**	25.98	328	*e*P	P	16 40 12.3	+0.1
	comp=Z,23nm,0.9s,mb4.7						
KURK	**Kurchatov**	25.98	328	*e*P	P	16 40 12.3	+0.1
KURK				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.7						
ZAL	**Zalesovo**	26.18	340	P	P	16 40 15.5	+1.5
	comp=Z,1.4nm,0.4s,mb3.8,baz=313,slow=11,SNR=7.3						
ZAL				LR	LR	16 50 11.6	
	comp=Z,58nm,18.4s,MS3.1,baz=145,slow=36						
POO	**Poona**	26.24	250	*e*P	P	16 40 19.0	+4.0
JNU	**Nakatsue**	26.59	75	LR	LR	16 51 58.6	
	comp=Z,188nm,19.0s,MS3.7,baz=59,slow=39						
MDJ	**Mudanjiang**	27.57	50	P	P	16 40 26.4	-0.5
	comp=Z,5.9nm,1.1s,mb4.1						
BRVK	**Borovoye**	31.45	325	*e*P	P	16 41 01.2	-0.1
	comp=Z,3.7nm,0.7s,mb4.3						
BRVK	**Borovoye**	31.45	325	*e*P	P	16 41 01.2	-0.1
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
MJAR	**Matsushiro Arr**	32.57	68	LR	LR	16 54 26.8	
	comp=Z,70nm,20.5s,MS3.3,baz=230,slow=36						
ASAJ	**Asahikawa**	36.47	55	P	P	16 41 44.8	+0.2
	comp=Z,14nm,1.0s,mb4.8,baz=105,slow=20,SNR=5.1						
ASAJ	**Asahikawa**	36.47	55	P	P	16 41 44.8	+0.2
ASAJ				pmax	pmax		
	comp=Z,14nm,1.0s						
YSS	**Yuzh-Sakhalins**	37.05	51	P	P	16 41 49.1	-0.4
AKTK	**Aktyubinsk**	37.16	315	P	P	16 41 51.4	+1.0
AKTO	**Aktyubinsk**	37.16	315	P	P	16 41 51.4	+1.0
	comp=Z,2.5nm,0.7s,mb4.2,baz=91,slow=16,SNR=9.4						
YAK	**Yakutsk**	37.40	23	P	P	16 41 53.9	+1.6
	comp=Z,7.1nm,0.9s,mb4.5						
YAK	**Yakutsk**	37.40	23	P	P	16 41 53.9	+1.6
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
ARU	**Arti**	39.01	324	*e*P	P	16 42 04.3	-1.4
	comp=Z,23nm,1.1s,mb4.8						
ARU	**Arti**	39.01	324	*e*P	P	16 42 04.3	-1.4
ARU				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
AKASG	**Malin Array Be**	55.36	313	P	P	16 44 13.1	-0.7
	comp=Z,2.1nm,0.5s,mb4.5,baz=70,slow=7.1,SNR=8.1						
FINES	**FINESS Array B**	56.33	326	P	P	16 44 19.4	-1.2
	comp=Z,2.2nm,0.7s,mb4.3,baz=90,slow=6.9,SNR=6.0						
ARCES	**ARCESS Array B**	56.65	336	P	P	16 44 20.8	-2.0
	comp=Z,2.4nm,0.8s,mb4.3,baz=8.1,slow=8.6,SNR=2.6						
ARCES				LR	LR	17 09 57.1	
	comp=Z,64nm,18.7s,MS3.8,baz=182,slow=37						
KWP	**Kalwaria**	59.66	313	*e*P	P	16 44 44.4	+0.2
	comp=Z,16nm,1.0s,mb5.0						
KWP	**Kalwaria**	59.66	313	*e*P	P	16 44 44.4	+0.3
KWP				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
WRAB	**Tennant Creek**	59.85	142	*e*P	P	16 44 45.7	-0.1
	comp=Z,9.2nm,0.6s,mb5.0						
WRAB	**Tennant Creek**	59.85	142	*e*P	P	16 44 45.7	-0.1
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.0						
WRA	**Warramunga Arr**	59.85	142	P	P	16 44 46.0	+0.2
	comp=Z,7.6nm,0.7s,mb4.8,baz=329,slow=7.6,SNR=87						
NB2	**NORSAR Subarra**	63.48	327	P	P	16 45 08.5	-1.2
	comp=Z,2.4nm,0.8s,mb4.4,baz=76,slow=6.5						
NOA	**NORSAR Array B**	63.48	327	P	P	16 45 08.3	-1.4
	comp=Z,0.9nm,0.8s,mb4.0,baz=55,slow=4.8,SNR=2.8						
NAO	**NORSAR Subarra**	63.72	327	P	P	16 45 08.5	-2.6
	comp=Z,2.4nm,0.8s,mb4.3						
NAO	**NORSAR Subarra**	63.72	327	P	P	16 45 08.5	-2.6
NAO				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
GERES	**GERESS Array B**	65.56	314	P	P	16 45 23.3	0.0
	comp=Z,1.1nm,0.6s,mb4.1,baz=63,slow=6.0,SNR=9.6						
KMBO	**Kilima Mbogo**	67.07	254	P	P	16 45 34.4	+1.0
	comp=Z,1.9nm,0.6s,mb4.3,baz=42,slow=14,SNR=8.3						
ILAR	**Eielson Array**	72.30	24	P	P	16 46 04.2	-0.2
	comp=Z,0.7nm,1.0s,mb3.6,baz=308,slow=3.8,SNR=4.9						
STKA	**Stephens Creek**	73.30	144	P	P	16 46 10.8	-0.2
	comp=Z,1.4nm,0.7s,mb4.0,baz=333,slow=11,SNR=3.4						
STKA	**Stephens Creek**	73.30	144	*e*P	P	16 46 10.0	-1.1
INK	**Inuvik**	74.28	18	P	P	16 46 15.7	-0.2
	comp=Z,2.0nm,0.8s,mb4.1,baz=348,slow=2.9,SNR=5.2						
BDFB	**Brasilia**	147.17	289	PKPbc	PKPdf	16 54 25.1	+6.1
	comp=Z,1.9nm,0.4s,baz=74,slow=7.4,SNR=2.9						

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*MOS **24** 16:51:40.5±1.8, 42.96N×46.98E, h10^{km}, mb3.8/1, Error ellipse: s-maj=17.8km s-min=11.5km az=95.4*
*TIF **24** 16:51:41.0, 42.96N×47.05E, h1^{km}±1^{km}*
*CSEM **24** 16:51:40.5±0.3, 42.96N×46.98E, h10^{km}, mb3.8, Error ellipse: s-maj=7.7km s-min=4.1km az=7.0, After OBN*
ISC 24 16:51:41.7±1.1, 43.03N±0.06×47.03E±0.05, h10^{km}, n12, σ1^{s}22/21, 1C-2D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBC	**Dubki**	0.15	265	*i* PG	Pg	16 51 44.5	-0.6
DBC				*i* S	Sg	16 51 48.0	+0.6
DBC				pmax	pmax		
	comp=Z,309nm,0.1s						
DBC	**Dubki**	0.15	265	*i* Pg	Pg	16 51 44.5	-0.6
	comp=Z,309nm,0.1s						
DBC				*i* Sg	Sg	16 51 48.0	+0.6
BUJR	**Buynaksk**	0.21	164	⇑*i*PG	Pg	16 51 44.5	-1.9
BUJR				*i* S	Sg	16 51 48.5	-1.0
BUJR				pmax	pmax		
	comp=Z,690nm,0.1s						
BUJR	**Buynaksk**	0.21	164	*i* Pg	Pg	16 51 44.5	-1.9
	comp=Z,690nm,0.1s						
BUJR				*i* Sg	Sg	16 51 48.5	-1.0
KRNR	**Karanay**	0.22	204	⇓*i*PG	Pg	16 51 43.3	-3.2
KRNR				pmax	pmax		
	comp=Z,174nm,0.2s						
KRNR	**Karanay**	0.22	204	*i* Pg	Pg	16 51 43.3	-3.2
	comp=Z,174nm,0.2s						
MAK	**Makhachkala**	0.36	101	*e*PG	Pg	16 51 50.0	+1.0
MAK				*i*		16 51 54.0	
MAK				smax			
	comp=N,2µm,1.0s						
MAK				smax			
	comp=E,1µm,1.0s						
UNCR	**Uncukul**	0.36	209	⇓*i*PG	Pg	16 51 48.0	-1.1
UNCR				*e*S	Sg	16 51 54.0	-0.1
UNCR				pmax	pmax		
	comp=Z,287nm,0.2s						
UNCR	**Uncukul**	0.36	209	*i* Pg	Pg	16 51 48.0	-1.1
	comp=Z,287nm,0.2s						
UNCR				*e*Sg	Sg	16 51 54.0	-0.1
XNZR	**Khunzakh**	0.55	206	*e*Pg	Pg	16 51 54.2	+1.5
XNZR				*e*Sg	Sg	16 52 02.2	+2.1
MNSR	**Manas**	0.60	123	PG	Pg	16 51 54.0	+0.1
MNSR				*i* S	Sg	16 52 02.8	+0.8
MNSR				pmax	pmax		
	comp=Z,107nm,0.3s						
MNSR	**Manas**	0.60	123	Pg	Pg	16 51 54.0	+0.1
	comp=Z,107nm,0.3s						
MNSR				*i* Sg	Sg	16 52 02.8	+0.8

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*NDI **24** 17:04:07.7±4.3, 34.77N×71.96E, h20^{km}, ML3.2*
*NNC **24** 17:04:28.2±19.0, 34.82N×72.23E, mpv3.4, Error ellipse: s-maj=1123.1km s-min=189.9km az=81.0*
ISC 24 17:04:15.7±2.5, 34.5N±0.1×73.3E±0.4, h10^{km}, n9, σ1^{s}53/12, 1D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	**Dalhousie**	2.98	130	*e*x	Pg	17 05 21.0	+5.8
DLH				*e*S	Sg	17 05 54.0	-1.0
KLP	**Kalpa**	5.12	124	*e*P	Pn	17 05 37.9	+3.5
KLP				*e*S	Sn	17 06 41.5	+7.2
KLP				AML	AML	17 07 04.5	
	comp=N,50nm,0.5s						
KLP				AML	AML	17 07 04.5	
	comp=E,82nm,0.5s						
AYAN	**Aya Nagar**	6.84	150	*e*S	Sn	17 07 17.2	-0.1

AYAN				AML	AML	17 08 03.4	
	comp=Z,9.0nm,0.6s						
SONA	**Sohna**	**7.03**	**151**	*e*S	**Sn**	**17 07 21.8**	**-0.3**
SONA				AML	AML	17 08 05.9	
	comp=E,9.6nm,0.3s						
SONA				AML	AML	17 08 07.4	
	comp=N,8.6nm,0.7s						
KK31	**Karatay Array**	**8.86**	**347**	P	**P**	**17 06 30.9**	**+4.2**
	comp=N,0.7nm,0.4s,baz=164,slow=12,SNR=14						
KK31				⇓S	**Sn**	**17 08 07.6**	**-0.1**
	comp=N,2.1nm,0.6s,baz=172,slow=23,SNR=9.8						
KOLN	**Koldanda**	**11.10**	**124**	*e*P	**P**	**17 06 58.5**	**+0.9**
	comp=N,3.3nm,0.5s						
GKN	**Gorkha**	**11.68**	**121**	*e*P	**P**	**17 07 04.2**	**-1.3**
	comp=N,7.6nm,0.4s						
KKN	**Kakani**	**12.26**	**120**	*e*P	**P**	**17 07 11.7**	**-1.7**
	comp=N,4.8nm,0.5s						
GUN	**Gumba**	**12.63**	**118**	*e*P	**P**	**17 07 17.3**	**-1.0**
	comp=N,4.4nm,0.3s						

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*TRN **24** 17:13:05.2,11.16N×61.85W,h75^{km},MD2.6*
*FUNV **24** 17:13:05.5,11.04N×61.91W,h79^{km},MW2.0*
ISC 24 17:13:04.2±1.4,**11.12N**±0.06×**61.91W**±0.04,**h76**^{km}±15^{km},
n7,$\sigma0\overset{s}{.}69$/14,**2D,Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.56**	**213**	*e*P	**P**	**17 13 19.2**	**+0.9**
GUIV				*e*S	**S**	**17 13 28.6**	**-0.1**
TRN	**Trinidad (W)**	**0.68**	**133**	⇓*i*P	**P**	**17 13 20.5**	**+1.0**
TRN				*e*S	**S**	**17 13 31.2**	**+0.2**
GRW	**Mount Saint Ca**	**1.06**	**13**	⇓*i*P	**P**	**17 13 24.0**	**0.0**
GRW				*e*S	**S**	**17 13 38.5**	**-0.4**
TPR	**Prospect**	**1.11**	**86**	*e*P	**P**	**17 13 24.8**	**+0.2**
TPR				*e*S	**S**	**17 13 39.1**	**-0.9**
ITEV	**Isla Los Testi**	**1.22**	**281**	*e*P	**P**	**17 13 27.2**	**+1.1**
ITEV				*e*S	**S**	**17 13 43.1**	**+0.6**
CRUV	**Carupano**	**1.38**	**251**	*e*P	**P**	**17 13 27.6**	**-0.7**
CRUV				*e*S	**S**	**17 13 44.9**	**-1.1**
GUNV	**Guanoco**	**1.39**	**227**	*e*P	**P**	**17 13 28.5**	**0.0**
GUNV				*e*S	**S**	**17 13 45.8**	**-0.7**

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*NEIC **24** 17:15:19.6,15.22N×96.85W,h30^{km},MD3.7(MEX),After MEX.*
MEX 24 17:15:19.2±1.4,**15.19N×96.88W,h20**^{km}±48^{km},**MD3.7,**
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.94**	**52**	*i* P	Pb	17 15 34.9	-1.7
HUIG				*i* S	Sb	17 15 44.6	-3.9
VHO	**Vista Hermosa**	**1.87**	**4**	*i* P	Pn	17 15 46.8	-3.8
VHO				*i* S	Sn	17 16 10.4	-3.5
OXX	**Oaxaca**	**1.88**	**4**	*i* P	Pn	17 15 46.7	-4.1
OXX				*i* S	Sn	17 16 10.5	-3.7
CMIG	**Matias Romero**	**2.69**	**45**	*e*P	Pn	17 15 59.0	-3.3
CMIG				*i* S	Sn	17 16 29.7	-4.9
CMIG	**Matias Romero**	**2.69**	**45**	*e*P	Pn	17 15 58.8	-3.5
CMIG				*i* S	Sn	17 16 27.7	-6.9
PPM	**Popocatepetl**	**4.20**	**337**	*i* P	Pn	17 16 19.4	-4.4

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*CSEM **24** 17:28:15.7±0.2,45.83N×11.19E,h10^{km},ML3.2/7,Error ellipse: s-maj=3.5km s-min=2.8km az=19.0*
*ROM **24** 17:28:16.8±0.2,45.86N×11.19E,h10^{km},Md2.5/7,Ml2.0/6, Error ellipse: s-maj=2.8km s-min=1.5km az=163.0*
*VIE **24** 17:28:17.7±0.5,45.91N×11.17E,mb1.9/1,ML2.7/5,Error ellipse: s-maj=3.5km s-min=2.4km az=129.0*
ISC 24 17:28:17.0±0.5,**45.85N**±0.03×**11.21E**±0.04,**h10**^{km},**n24,**
$\sigma0\overset{s}{.}93$/37,**7C-3D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTI	**Castel Tesino**	**0.36**	**57**	Pg	**Pg**	**17 28 24.7**	**+0.2**
CTI				Sg	**Sg**	**17 28 30.0**	**+0.5**
CGRP	**Cima Grappa**	**0.41**	**86**	⇑*i*Pg	**Pg**	**17 28 25.6**	**+0.1**
CGRP				*i* Sg	**Sg**	**17 28 31.1**	**+0.1**
MABI	**Malga Bissina**	**0.53**	**293**	Pg	**Pg**	**17 28 27.2**	**-0.5**
MABI				Sg	**Sg**	**17 28 35.2**	**+0.3**
	43nm,0.1s						
SALO	**Salr**	**0.54**	**245**	Pg	**Pg**	**17 28 27.7**	**-0.2**
	53nm,0.3s						
TEOL	**Teolo**	**0.59**	**147**	⇓*i*Pg	**Pg**	**17 28 28.0**	**-0.9**
TEOL				*i* Sg	**Sg**	**17 28 35.4**	**-1.4**
APPI	**Appiano**	**0.63**	**1**	Pg	**Pg**	**17 28 29.9**	**+0.2**
APPI				Sg	**Sg**	**17 28 38.8**	**+0.6**
	66nm,0.1s						
FAU	**Forcella Aurin**	**0.66**	**54**	*e*Pg	**Pg**	**17 28 30.3**	**+0.1**
BRMO	**Bormio**	**0.86**	**317**	⇓*i*Pg	**Pg**	**17 28 33.8**	**-0.4**
BRMO				Sg	**Sg**	**17 28 45.8**	**+0.1**
	28nm,0.2s						
CAE	**Caneva**	**0.87**	**79**	*e*Pg	**Pg**	**17 28 34.7**	**+0.3**
BRES	**Bressanone**	**0.92**	**23**	Pg	**Pg**	**17 28 35.1**	**-0.4**
	174µm,39.0s						
MLNI	**Malnisio**	**1.02**	**72**	⇑*e*Pg	**Pg**	**17 28 38.2**	**+0.7**
SEST	**Monte Rota**	**1.14**	**37**	Pg	**Pg**	**17 28 39.1**	**-0.7**
SEST				Sg	**Sg**	**17 28 56.9**	**+1.9**
	660nm,3.6s						
SCE	**Schlegeis**	**1.24**	**16**	⇓*i*Pg	**Pg**	**17 28 40.9**	**-0.9**
SCE				*i* Sg	**Sg**	**17 28 57.3**	**-1.0**
SQTA	**Sankt Quirin**	**1.37**	**360**	⇑*e*Pn	**Pn**	**17 28 42.7**	**+0.4**
	comp=Z,21nm,0.2s,SNR=22						
SQTA	**Sankt Quirin**	**1.37**	**360**	Pn	**Pn**	**17 28 42.7**	**+0.4**
	21nm,0.2s,SNR=22						
SQTA				Sg	**Sg**	**17 29 01.9**	**-0.9**
	24nm,0.2s						
WTTA	**Wattenberg**	**1.44**	**12**	⇑*e*Pn	**Pn**	**17 28 44.5**	**+1.2**
	comp=Z,3.5nm,0.1s,SNR=10						
WTTA	**Wattenberg**	**1.44**	**12**	Pn	**Pn**	**17 28 44.5**	**+1.1**
	3.5nm,0.1s,SNR=10						
WTTA				Sg	**Sg**	**17 29 03.9**	**-1.3**
	27nm,0.2s						
MOTA	**Moosalm**	**1.50**	**357**	*e*Pn	**Pn**	**17 28 45.8**	**+1.7**
	comp=Z,8.7nm,0.2s,SNR=21						
MOTA	**Moosalm**	**1.50**	**357**	Pn	**Pn**	**17 28 45.8**	**+1.7**
	8.7nm,0.2s,SNR=21						
MOTA				Sg	**Sg**	**17 29 05.7**	**-1.3**
	4.4nm,0.1s						
WATA	**Walderalm**	**1.51**	**9**	⇑*e*Pn	**Pn**	**17 28 45.5**	**+1.3**
	comp=Z,1.9nm,0.1s,SNR=6.1						
WATA	**Walderalm**	**1.51**	**9**	⇑*i*Sg	**Sg**	**17 29 06.0**	**-1.3**
	comp=Z,6.8nm,0.1s						
WATA	**Walderalm**	**1.51**	**9**	Pn	**Pn**	**17 28 45.5**	**+1.2**
	1.9nm,0.1s,SNR=6.1						
WATA				Sg	**Sg**	**17 29 06.0**	**-1.3**
	6.8nm,0.1s						
DAVA	**Damuels**	**1.71**	**328**	⇑Pn	**Pn**	**17 28 49.4**	**+2.3**
	comp=Z,1.7nm,0.2s						
DAVA	**Damuels**	**1.71**	**328**	Pn	**Pn**	**17 28 49.4**	**+2.3**
	1.7nm,0.2s						
DAVA				Sg	**Sg**	**17 29 09.1**	**-4.8**
	6.6nm,0.4s						

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*MOS **24** 18:16:19.4±1.9,57.28N×120.50E,h13^{km},mb4.0/1,Error ellipse: s-maj=27.9km s-min=19.6km az=45.1*
BYKL 24 18:16:16.4±0.4,**57.42N×120.68E,1D,Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.41**	**249**	⇓*i*Pg	Pg	18 16 42.7	-1.9
CRS				*i* Sg	Sg	18 17 00.3	-3.2
CRS				Pmax			
	96nm,0.6s						
CRS				Smax			
	243nm,1.0s						
CRS	**Chara**	**1.41**	**249**	*e*P	Pb	18 16 42.6	-0.8
CRS				*e*		18 17 00.6	
CRS				pmax	pmax		
	comp=Z,78nm,0.4s						
CRS				smax			
	comp=E,228nm,0.4s						
NRGR	**Nerungri**	**2.34**	**107**	*e*P	Pn	18 16 58.6	+1.9
NRGR				S	Sn	18 17 26.2	-0.3
CLNS	**Chul'man**	**2.37**	**103**	*e*	Pn	18 16 58.4	+1.3
CLNS				*e*Pg	Pg	18 16 59.9	-3.8
CLNS				*e*		18 17 28.1	
CLNS				*e*Sg	Sg	18 17 30.5	-4.8
CLNS				Pmax			
	comp=E,109nm,0.2s						
CLNS				Smax			
	comp=E,1µm,0.3s						
CLNS	**Chul'man**	**2.37**	**103**	*e*P	Pn	18 16 59.8	+2.7
CLNS				*e*S	Sn	18 17 28.3	+1.0
CLNS				pmax	pmax		
	comp=Z,13nm,0.3s						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,23nm,0.3s						
CLNS				pmax	pmax		
	comp=N,6.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,14nm,0.3s						
CLNS				smax			
	comp=N,22nm,0.3s						
CLNS				smax			
	comp=Z,12nm,0.2s						
CLNS				smax			
	comp=E,43nm,0.3s						
CLNS				smax			
	comp=N,125nm,0.3s						
CLNS				smax			
	comp=E,163nm,0.3s						
CLNS				smax			
	comp=Z,55nm,0.3s						
ALDR	**Aldan**	**2.79**	**63**	*e*	Pn	18 17 02.3	-0.7
ALDR				*e*Pg	Pg	18 17 06.4	-5.6
ALDR				*e*Sg	Sg	18 17 41.9	-7.2
ALDR				Pmax			
	comp=Z,43nm,0.2s						
ALDR				Smax			
	comp=Z,603nm,0.2s						
NLYR	**Nelyaty**	**2.88**	**253**	*e*Pn	Pn	18 17 04.2	-0.2
NLYR				*e*Pg	Pg	18 17 08.5	-5.4
NLYR				*e*Sg	Sg	18 17 44.9	-7.4
NLYR				Pmax			
	comp=Z,49nm,0.8s						
NLYR				Smax			
	comp=Z,207nm,1.1s						
NLYR	**Nelyaty**	**2.88**	**253**	*e*P	Pn	18 17 04.0	-0.4
NLYR				*e*		18 17 43.8	
NLYR				pmax	pmax		
	comp=Z,43nm,0.5s						
NLYR				smax			
	comp=E,207nm,1.0s						
TUP	**Tupik**	**3.03**	**188**	*e*Pn	Pn	18 17 05.1	-1.4
TUP				*e*Pg	Pg	18 17 10.1	-6.8
TUP				*e*Sg	Sg	18 17 49.1	-8.2
TUP				Pmax			
	comp=E,79nm,0.3s						
TUP				Smax			
	comp=E,400nm,0.9s						
TUP	**Tupik**	**3.03**	**188**	*e*P	Pn	18 17 05.1	-1.4
TUP				*e*S	Sn	18 17 40.4	-3.7
TUP				pmax	pmax		
	comp=Z,79nm,0.3s						
TUP				smax			
	comp=E,401nm,0.8s						
TNDR	**Tynda**	**3.20**	**134**	*e*	Pn	18 17 08.3	-0.7
TNDR				*e*Pg	Pg	18 17 14.8	-5.6
TNDR				*e*		18 17 46.6	
TNDR				*e*Sg	Sg	18 17 55.5	-7.6
TNDR				Pmax			
	comp=E,231nm,0.2s						
TNDR				Smax			
	comp=E,982nm,0.5s						
BOD	**Bodaibo**	**3.61**	**279**	*e*Pn	Pn	18 17 13.8	-1.0
BOD				*e*Pg	Pg	18 17 21.4	-7.1
BOD				*e*Sg	Sg	18 18 07.3	-9.4
BOD				Pmax			
	comp=E,12nm,0.2s						
BOD				Smax			
	comp=E,134nm,0.8s						
SVKR	**Severomuysk**	**4.13**	**255**	*e*Pn	Pn	18 17 22.2	0.0
SVKR				*e*Pg	Pg	18 17 31.9	-7.0
SVKR				*e*Sg	Sg	18 18 25.2	-8.7
SVKR				Pmax			
	comp=E,33nm,0.3s						
SVKR				Smax			
	comp=E,156nm,0.8s						
UKT	**Uakit**	**4.37**	**247**	*e*Pg	Pg	18 17 34.9	-8.6
UKT				*e*Sg	Sg	18 18 30.0	-12
UKT				Pmax			
	comp=E,7.0nm,0.5s						
UKT				Smax			
	comp=E,42nm,1.6s						
YOA	**Uoyan**	**5.09**	**259**	*e*	Pn	18 17 52.9	+17
YOA				*e*Sg	Sg	18 18 53.2	-13
YOA				Smax			
	comp=E,235nm,0.9s						
YOA	**Uoyan**	**5.09**	**259**	*e*P	Pn	18 17 49.0	+13
YOA				pmax	pmax		
	comp=Z,22nm,0.8s						
KMO	**Kumora**	**5.45**	**258**	*e*P	Pn	18 17 39.7	-1.2
KMO				*e*S	Sn	18 18 39.5	-5.7
KMO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KMO				smax			
	comp=N,79nm,1.4s						
YLYR	**Ulyunkhan**	**5.90**	**248**	*e*Pn	Pn	18 17 45.9	-1.3
YLYR				*e*Pg	Pg	18 18 03.3	-11
YLYR				*e*Sg	Sg	18 19 18.6	-14
YLYR				Pmax			
	comp=N,2.0nm,0.8s						
YLYR				Smax			
	comp=N,52nm,2.4s						
NIZ	**Nizh Angarsk**	**6.37**	**260**	*e*Sg	Sg	18 19 31.4	-17
NIZ				Smax			
	comp=N,48nm,2.0s						
YAK	**Yakutsk**	**6.49**	**41**	*e*P	Pn	18 18 03.9	+8.4
YAK				*e*S	Sn	18 19 17.2	+6.1
YAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
YAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YAK				smax			
	comp=N,11nm,1.0s						
YAK				smax			
	comp=E,8.0nm,0.7s						
YAK				smax			
	comp=Z,3.0nm,0.7s						
YAK				smax			
	comp=E,34nm,0.8s						
YAK				smax			
	comp=Z,20nm,0.8s						
YAK				smax			
	comp=N,39nm,0.7s						
YAK				MLR	MLR		
	comp=Z,11nm,5.0s						
CIT	**Chita**	**6.80**	**220**	*e*	Pn	18 18 23.4	+23
CIT				*e*Sg	Sg	18 19 45.3	-18
CIT				Smax			
	comp=Z,88nm,1.6s						
SYVR	**Suvo**	**7.13**	**243**	*e*	Pn	18 18 28.4	+24
SYVR				*e*Sg	Sg	18 19 57.7	-16
SYVR				Smax			
	comp=Z,67nm,2.5s						
KPC	**Khapcheranga**	**9.17**	**216**	*e*	P	18 18 31.8	-1.1
KPC				*e*Sg	Sg	18 21 01.5	-20
KPC				Smax			
	comp=Z,27nm,0.9s						

WEL 24 18:55:21.1±0.6,**38.42S×175.95E,h160**^{km}±4^{km},**ML3.8**/16,
7C,Error ellipse: s-maj=2.8km s-min=2.2km az=0.0,
North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.59**	**200**	PN	P	18 55 44.3	-0.1
WTVZ	**West Tongariro**	**0.75**	**202**	PN	P	18 55 45.0	-0.2
TWVZ	**Taurewa**	**0.76**	**212**	⇑PN	P	18 55 45.2	-0.2
OTVZ	**Oturere**	**0.77**	**197**	PN	P	18 55 45.6	+0.2
NGZ	**Ngauruhoe**	**0.80**	**200**	PN	P	18 55 45.6	0.0
CNZ	**Chateau**	**0.84**	**202**	PN	P	18 55 45.8	0.0
WPVZ	**Whakapapa**	**0.84**	**202**	PN	P	18 55 45.8	0.0
BKZ	**Black Stump Fm**	**0.85**	**151**	⇑PN	P	18 55 45.9	0.0
TUVZ	**Tukino**	**0.88**	**195**	⇑PN	P	18 55 46.1	+0.1
FWVZ	**Far West T-bar**	**0.89**	**201**	PN	P	18 55 46.1	0.0
URZ	**Urewera**	**0.92**	**80**	⇑PN	P	18 55 46.1	-0.3
URZ				SN	S	18 56 04.4	-1.5
TRVZ	**Turoa**	**0.93**	**200**	PN	P	18 55 46.5	+0.1
WNVZ	**Wahianoa**	**0.94**	**197**	⇑PN	P	18 55 46.5	0.0
MOVZ	**Moawhango**	**0.99**	**189**	⇑PN	P	18 55 46.5	-0.3
MTVZ	**Mangateitei**	**1.03**	**201**	PN	P	18 55 47.0	-0.1
VRZ	**Vera Road**	**1.17**	**233**	PN	P	18 55 48.0	-0.5
MWZ	**Matawai**	**1.24**	**86**	PN	P	18 55 49.0	-0.2
MWZ				SN	S	18 56 09.6	-1.2
KNZ	**Kokohu**	**1.47**	**114**	PN	P	18 55 51.4	0.0
WAZ	**Wanganui**	**1.53**	**209**	PN	P	18 55 51.2	-0.8
TSZ	**Takapari Road**	**1.63**	**180**	⇑PN	P	18 55 52.4	-0.8
PKE	**Pukeiti**	**1.72**	**243**	PN	P	18 55 53.9	-0.1
PXZ	**Pawanui**	**1.75**	**157**	PN	P	18 55 53.9	-0.4
MXZ	**Matakaoa Point**	**2.05**	**66**	PN	P	18 55 57.6	0.0
MXZ				SN	S	18 56 25.5	-0.4
MRZ	**Mangatainoka R**	**2.25**	**187**	PN	P	18 55 58.2	-2.0
BFZ	**Birch Farm**	**2.27**	**174**	PN	P	18 55 58.7	-1.7
KIW	**Kapiti Island**	**2.56**	**198**	PN	P	18 56 01.3	-2.7
MTW	**Mount Morrison**	**2.75**	**187**	PN	P	18 56 03.4	-3.0
CAW	**Cannon Point**	**2.77**	**194**	PN	P	18 56 03.5	-3.1
DUWZ	**D'Urville Isla**	**2.85**	**213**	PN	P	18 56 04.6	-3.0

IDC 24 18:57:34.0±6.1,**41.18N×29.40W,mb3.7**/7,**mb1 3.9**/7,
mb1mx3.7/24,**mbtmp3.7**/7,**MS3.7**/3,**Ms1 3.7**/3,
ms1mx3.0/32,**Error ellipse: s-maj=232.2km**
s-min=25.6km az=168.0,Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAE	**Valguarnera**	**33.82**	**82**	LR	LR	19 16 49.9	
	comp=Z,87nm,18.9s,baz=109,slow=34						
SADO	**Sadowa**	**36.12**	**293**	LR	LR	19 17 13.2	
	comp=Z,139nm,18.6s,baz=101,slow=33						
AKASG	**Malin Array Be**	**40.88**	**56**	P	P	19 05 17.1	-1.9
	0.1nm,0.2s,baz=273,slow=9.1,SNR=4.1						
PDAR	**Pinedale Array**	**57.40**	**301**	P	P	19 07 24.6	-1.9
	1.0nm,0.9s,baz=78,slow=13,SNR=2.5						
AKTO	**Aktyubinsk**	**58.26**	**49**	P	P	19 07 31.1	-1.3
	0.8nm,0.8s,baz=315,slow=11,SNR=3.5						
TXAR	**Lajitas Array**	**60.11**	**284**	P	P	19 07 43.1	-2.3
	2.0nm,1.1s,baz=90,slow=6.3,SNR=6.7						
TXAR				LR	LR	19 33 51.6	
	comp=Z,80nm,19.4s,baz=340,slow=36						
BVAR	**Borovoye Array**	**63.56**	**42**	P	P	19 08 05.5	-2.7
	0.4nm,0.5s,baz=315,slow=8.2,SNR=4.3						
ZAL	**Zalesovo**	**69.76**	**35**	P	P	19 08 44.9	-2.6
	0.5nm,0.3s,baz=158,slow=9.9,SNR=3.4						
SONM	**Songino Array**	**83.10**	**28**	P	P	19 10 02.4	-0.1
	0.6nm,0.9s,baz=315,slow=4.1,SNR=4.2						

NDI 24 19:10:57.5±2.0,**32.20N×77.78E,h33**^{km},**ML3.6,**
Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLP	**Kalpa**	**0.78**	**149**	*e*P	P	19 11 12.7	+0.7
KLP				*e*S	S	19 11 24.4	+1.8
KLP				AML	AML	19 11 25.6	
	comp=E,3µm,0.3s						
KLP				AML	AML	19 11 26.8	
	comp=N,1µm,0.4s						
SDNR	**Sundarnagar**	**0.98**	**225**	*e*P	P	19 11 15.6	+0.7
SDNR				*e*x	x	19 11 31.8	
SMLA	**Simla**	**1.19**	**206**	*e*P	P	19 11 17.4	-0.5
SMLA				*e*S	S	19 11 34.0	+0.8
BHK	**Bhakra**	**1.40**	**236**	*e*x	x	19 11 42.7	
DLH	**Dalhousie**	**1.57**	**283**	*e*P	P	19 11 24.0	+0.6
DLH				*e*S	S	19 11 45.0	+2.3
THN	**Thein Dam**	**1.76**	**278**	*e*P	P	19 11 25.8	-0.3
THN				*e*S	S	19 11 46.2	-1.4
KUDL	**Kundal**	**4.20**	**196**	*e*P	P	19 11 58.5	-2.3
KUDL				*e*S	S	19 12 44.4	-4.9

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*TEH **24** 19:12:11.0,32.18N×59.58E,h10^{km},Mn3.9*
*THR **24** 19:12:11.2±0.6,32.45N×59.37E,h18^{km}±13^{km},ML3.5*
*CSEM **24** 19:12:11.6±0.1,32.35N×59.34E,h14^{km},ML3.5,Error ellipse: s-maj=2.2km s-min=1.8km az=82.0*
ISC 24 19:12:11.0±0.6,**32.28N**±0.04×**59.31E**±0.06,**h10**^{km},**n22,**
$\sigma0\overset{s}{.}98$/24,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZHSF	**Zahedan**	**2.94**	**154**	*e*PN	**Pn**	**19 13 00.9**	**+2.2**
ZHSF				*e*SG	**Sg**	**19 13 47.5**	**-1.4**
ZHSF				AML	AML	19 14 09.2	
	comp=N,50nm,0.4s						
ZHSF	**Zahedan**	**2.94**	**154**	*e*Pn	**Pn**	**19 13 00.9**	**+2.1**
	SNR=52						
ZHSF				*e*Sg	**Sg**	**19 13 47.5**	**-1.5**
	SNR=91						
KRBR	**Kerman**	**3.17**	**224**	*e*PN	**Pn**	**19 13 04.7**	**+2.7**
KRBR				*e*Sg	**Sg**	**19 13 54.9**	**-1.6**
IBAF	**Bafgh**	**3.26**	**259**	Pn	**Pn**	**19 13 04.7**	**+1.4**
IMOG	**Moghan**	**3.82**	**0**	Pn	**Pn**	**19 13 10.9**	**-0.4**
MHI	**Mashhad**	**4.02**	**2**	Pn	**Pn**	**19 13 14.5**	**+0.4**
IMEH	**Mehriz**	**4.10**	**259**	Pn	**Pn**	**19 13 15.6**	**+0.4**
IMYA	**Miamay**	**4.11**	**9**	Pn	**Pn**	**19 13 14.8**	**-0.5**
ICHK	**Chekchek**	**4.16**	**271**	Pn	**Pn**	**19 13 16.4**	**+0.4**
IPAY	**Payeh**	**4.17**	**356**	Pn	**Pn**	**19 13 15.8**	**-0.4**
ISAD	**Sadrabad**	**4.79**	**267**	Pn	**Pn**	**19 13 25.6**	**+0.6**
IANJ	**Anjiloo**	**5.50**	**307**	Pn	**Pn**	**19 13 34.8**	**-0.3**
NASN	**Na'in**	**5.52**	**277**	*e*PN	**Pn**	**19 13 35.8**	**+0.5**
NASN				AML	AML	19 15 14.1	
	comp=N,48nm,0.6s						
ISHM	**Shahmirzad**	**6.11**	**307**	Pn	**Pn**	**19 13 43.4**	**-0.3**
ILAS	**Lasjerd**	**6.13**	**302**	Pn	**Pn**	**19 13 44.9**	**+1.0**
ISFB	**Sefidab**	**6.28**	**291**	Pn	**Pn**	**19 13 46.2**	**+0.2**
IFIR	**Firoozkooh**	**6.40**	**303**	Pn	**Pn**	**19 13 46.8**	**-0.9**
IDMV	**Damavand**	**6.89**	**301**	Pn	**Pn**	**19 13 54.2**	**-0.4**
IDMV	**Damavand**	**6.89**	**301**	Lg		19 15 54.2	
IAFJ	**Afjeh**	**7.25**	**302**	Pn	**Pn**	**19 13 59.0**	**-0.6**
IQOM	**Qom**	**7.34**	**293**	Pn	**Pn**	**19 14 00.3**	**-0.7**
ASAO	**Ashtian**	**8.09**	**289**	*e*Pn	**P**	**19 14 10.5**	**-0.9**

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*CSEM **24** 19:35:45.7±0.1,44.60N×10.39E,h12^{km},ML2.9/3,Error ellipse: s-maj=2.1km s-min=2.1km az=171.0*
*LDG **24** 19:35:46.2±0.8,44.55N×10.65E,h10^{km},Ml2.7/5,Error ellipse: s-maj=17.7km s-min=12.4km az=53.0*
*ROM **24** 19:35:46.1±0.3,44.55N×10.38E,h26^{km}±4^{km},Md2.4/5, Ml1.9/5,Error ellipse: s-maj=5.1km s-min=3.7km az=46.0*
*GEN **24** 19:35:46.5,44.52N×10.42E,h25^{km},ML2.0*
*NEIC **24** 19:35:46.1,44.55N×10.38E,h26^{km},ML2.7(LDG), ML2.1(GEN),ML1.9(ROM),After ROM.*
ISC 24 19:35:47.3±0.5,**44.54N**±0.03×**10.37E**±0.04,**h23**^{km}±3^{km},
n32,$\sigma0\overset{s}{.}77$/52,**2C,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERBM	**Eremo**	**0.12**	**165**	⇑*i*Pg	**Pb**	**19 35 51.7**	**-0.1**
ERBM				Sg	**Sb**	**19 35 56.0**	**+1.2**
	637nm,0.2s						
VALM		**0.21**	**205**	P	**Pb**	**19 35 52.3**	**-0.4**
VALM				S	**Sb**	**19 35 56.4**	**-0.1**
VALM		**0.21**	**205**	P	**Pb**	**19 35 52.3**	**-0.5**
GRAM		**0.22**	**258**	P	**Pb**	**19 35 52.9**	**-0.1**
GRAM				S	**Sb**	**19 35 57.2**	**+0.4**
GRAM		**0.22**	**258**	P	**Pb**	**19 35 52.9**	**-0.1**
GRAM				S	**Sb**	**19 35 57.2**	**+0.4**
GSCL	**Gusciola**	**0.24**	**140**	⇑*i*Pg	**Pb**	**19 35 52.9**	**-0.4**
GSCL				Sg	**Sb**	**19 35 57.8**	**+0.4**
	27nm,0.3s						
BACM		**0.33**	**220**	P	**Pb**	**19 35 54.2**	**-0.4**
BACM				S	**Sb**	**19 35 59.4**	**-0.2**
SARO	**Sassorosso**	**0.35**	**176**	P	**Pb**	**19 35 54.1**	**-0.8**
SARO				S	**Sb**	**19 35 59.3**	**-0.8**
SARO	**Sassorosso**	**0.35**	**176**	P	**Pb**	**19 35 54.1**	**-0.8**
SARO	**Sassorosso**	**0.35**	**176**	P	**Pb**	**19 35 54.1**	**-0.8**
VLC	**Villacollemand**	**0.38**	**178**	*e*Pg	**Pb**	**19 35 55.2**	**-0.2**
VLC				*e*Sg	**Sb**	**19 36 00.4**	**-0.3**
VLC	**Villacollemand**	**0.38**	**178**	*e*Pg	**Pb**	**19 35 55.2**	**-0.1**
VLC				*e*Sg	**Sb**	**19 36 00.4**	**-0.4**
CODM		**0.40**	**249**	P	**Pb**	**19 35 55.5**	**-0.2**
CODM				S	**Sb**	**19 36 01.5**	**+0.1**
CODM		**0.40**	**249**	P	**Pb**	**19 35 55.5**	**-0.2**
VINC	**Vinca**	**0.42**	**202**	P	**Pb**	**19 35 55.5**	**-0.5**
VINC				S	**Sb**	**19 36 01.5**	**-0.6**
VINC	**Vinca**	**0.42**	**202**	P	**Pb**	**19 35 55.5**	**-0.6**
VINC	**Vinca**	**0.42**	**202**	P	**Pb**	**19 35 55.5**	**-0.6**
ZCCA	**Zocca**	**0.47**	**113**	Pg	**Pb**	**19 35 57.7**	**+0.8**
	9.0nm,1.2s						
BDI	**Bagni Di Lucca**	**0.50**	**161**	Pg	**Pb**	**19 35 57.4**	**0.0**

	43nm,0.3s						
PZZT	Monte Pizzetto	0.54	139	Pg	Pb	19 35 57.6	-0.4
PZZT				Sg	Sb	19 36 06.5	+1.2
	63nm,0.3s						
SC2M	Scurtabr	0.61	258	P	Pb	19 35 58.9	-0.3
MAIM		0.63	172	P	Pb	19 35 58.3	-1.1
MAIM		0.63	172	P	Pb	19 35 58.3	-1.2
PII	Pisa	0.82	172	Pg	Pb	19 36 03.2	+0.4
PII				Sg	Sb	19 36 15.9	+2.5
	18nm,0.2s						
TEOL	Teolo	1.24	48	ePg	Pn	19 36 08.9	-0.5
TEOL				eSg	Sb	19 36 25.5	+0.1
TEOL	Teolo	1.24	48	ePg	Pn	19 36 08.9	-0.5
TEOL				eSg	Sb	19 36 25.5	+0.1
CTI	Castel Tesino	1.76	30	Pg	Pn	19 36 16.1	-0.8
	60nm,0.2s						
SBF	Sospel	2.21	253	ePn	Pn	19 36 23.7	+0.3
SBF				eSn	Sn	19 36 53.3	+3.0
	9.8nm,0.3s						
PGF	Pioggiola	2.22	207	ePn	Pn	19 36 23.3	-0.2
PGF				eSn	Sn	19 36 50.5	-0.1
	3.8nm,0.3s						
MBDF	Montbardon	2.58	276	ePn	Pn	19 36 29.7	+1.1
MBDF				eSn	Sn	19 37 00.8	+1.3
	1.4nm,0.2s						
FRF	La Foret Royal	2.85	251	ePn	Pn	19 36 32.4	-0.2
FRF				eSn	Sn	19 37 06.9	+0.3
	5.6nm,0.2s						
LMR	La Mourre	3.04	248	ePn	Pn	19 36 34.4	-0.7
LMR				eSn	Sn	19 37 09.9	-1.3
	7.0nm,0.3s						

*BJI **24** 19:57:15.2,6.81N×125.46E,h17^{km},mB4.9,mb4.6,Ms4.3,Msz4.0*

*MOS **24** 19:57:23.0±1.4,7.80N×125.31E,h10^{km},mb5.1/19,Error ellipse: s-maj=15.0km s-min=7.4km az=113.0*

*IDC **24** 19:57:23.2±0.6,7.80N×125.58E,mb4.4/17,mb1 4.5/18,mb1mx4.5/23,mbtmp4.5/18,ML4.0/1,MS3.9/9,Ms1 3.9/9,ms1mx3.6/29,Error ellipse: s-maj=29.8km s-min=12.8km az=82.0*

*MAN **24** 19:57:25.1,7.91N×124.97E,h5^{km},mb5.5,ML4.5,MS4.9*

MAN INTENSITY III - VALENCIA BUKIDNON CAGAYAN DE ORO CITY INTENSITY II - CAGAYAN DE ORO CITY.

*HRVD **24** 19:57:25.5±0.3,7.87N×125.09E,h20^{km}±1^{km},MW4.9/71, Centroid moment Tensor Solution. LP body waves: s21,c27;Mantle waves: s71,c126; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.16±.17; M$_{\theta\theta}$1.67±.11; M$_{\phi\phi}$-1.83±.16; M$_{r\theta}$-0.08±.23; M$_{\theta\phi}$-2.65±.10; M$_{\phi r}$-0.30±.26; Best double couple: M$_0$3.19×10^{16} NP1:ϕ_s73°,δ85°,λ-177°. NP2:ϕ_s343°,δ87°,λ-5°. Principal axes: T 3.097, Plg1°, Azm28°; N .187, Plg85°, Azm134°; P -3.282, Plg5°, Azm298°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **24** 19:57:25.5±4.8,7.82N×125.24E,h18^{km}±30^{km},mb4.9/24 Error ellipse: s-maj=11.4km s-min=6.4km az=73.0*

NEIC Felt [V PIVS] at Butong, [III PIVS] at Cagayan de Oro and Valencia; [II PIVS] at Kidapawan.

ISC 24 19:57:25.0±0.5**,7.86N**±0.02×**125.13E**±0.03**,h20**^{km}±3^{km}**,h22**^{km}±2.6^{km}**:pP-P,n137,**σ1^{s}**41**/145**,mb4.7**/50**,MS4.0**/15**,6C-7D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.07	290	eP	Pb	19 57 27.7	-1.0
CGP	Cagayan de Oro	0.73	324	⇑iP	Pb	19 57 37.3	-1.6
CGP				i S	Sb	19 57 47.2	-1.3
KCP	Kidapawan	0.84	182	⇑iP	Pb	19 57 42.0	+1.2
KCP				i S	Sb	19 57 53.8	+2.2
DMPH	Davao City--Mi	0.86	154	⇑iP	Pb	19 57 44.8	+3.8
DMPH				i S	Sb	19 57 58.7	+6.6
DAV	Davao City (W)	0.90	150	⇓eP	Pb	19 57 42.5	+0.7
DAV	Davao City (W)	0.90	150	ePg	Pb	19 57 42.8	+1.0
CTBH	Cotabato--PC H	1.08	234	⇑iP	Pb	19 57 43.7	-1.0
CTBH				i S	Sb	19 57 58.3	-0.1
BUTP	Butuan	1.21	24	eP	Pn	19 57 48.6	+1.7
BUTP				eS	Sb	19 58 09.3	+7.0
BIPH	Bislig	1.27	75	⇓eP	Pn	19 57 48.5	+0.7
BIPH				eS	Sb	19 58 06.9	+3.0
MATI	Mati	1.44	129	eP	Pn	19 57 50.5	+0.2
PAGZ	Pagadian	1.73	270	eP	Pn	19 57 54.2	-0.1
PAGZ				eS	Sn	19 58 18.6	+2.7
DCPH	Dipolog City	1.90	292	⇓eP	Pn	19 57 56.0	-0.7
SCPH	Surigao	1.95	11	eP	Pn	19 57 56.5	-1.0
SCPH				eS	Sn	19 58 12.9	-8.6
TBP	Tagbilaran	2.21	326	eP	Pn	19 57 59.9	-1.3
TBP				eS	Sn	19 58 26.5	-1.7
MSLP	Maasin	2.28	353	eP	Pn	19 58 02.3	+0.1
SNPH	Sibulan	2.38	308	⇓eP	Pn	19 58 04.0	+0.3
IPIL	Ipil	2.53	269	eP	Pn	19 58 07.4	+1.6
LLP	Lapu-Lapu	2.70	335	⇓iP	Pn	19 58 08.5	+0.2
LLP				eS	Sn	19 58 41.8	+1.1
OCLP	Ormoc	3.21	351	eP	Pn	19 58 16.0	+0.4
PLP	Palo	3.29	357	eP	Pn	19 58 16.6	-0.1
GUIM	Jordan	3.72	318	eP	Pn	19 58 22.1	-0.6
RCP	Roxas	4.37	328	⇓eP	Pn	19 58 32.0	+0.1
CNP	Catarman	4.65	354	eP	Pn	19 58 38.6	+2.8
KALP	Kalibo	4.69	324	eP	Pn	19 58 43.5	+7.0
CUYO	Cuyo Island	5.03	307	eP	Pn	19 58 41.3	0.0
PVCP	Virac	5.78	351	eP	Pn	19 58 53.6	+1.7
SJMP	San Jose	6.04	320	eP	Pn	19 58 55.5	-0.1
BUSP	Coron	6.37	311	eP	Pn	19 58 58.6	-1.6
ENPP	El Nido	6.53	301	eP	Pn	19 59 01.1	-1.4
PPR	Puerto Princes	6.60	287	⇓eP	Pn	19 59 06.1	+2.6
BATP	Bataraza	7.31	278	eP	Pn	19 59 21.7	+8.3
TGY	Tagaytay City	7.45	327	Pn	Pn	19 59 21.8	+6.5
	36nm,0.3s,baz=120,slow=13,SNR=5.5						
LUBP	Lubang	7.55	321	eP	Pn	19 59 23.1	+6.2
KKM	Kota Kinabalu	9.03	259	ePn	P	19 59 42.0	+4.8
SCZP	Santa Cruz	9.38	328	eP	P	19 59 49.5	+7.3
CAUP	Cauayan	9.59	341	eP	P	19 59 47.9	+2.8
KSM	Kuching	16.07	247	eP	P	20 01 12.8	+1.2
YHNB	Yeheng	17.10	348	P	P	20 01 26.8	+2.2
QZH	Quanzhou	18.10	341	eP	P	20 01 41.6	+4.4
QZH				LR	LR		
	comp=N,950nm,3.4s						
QZH				LR	LR		
	comp=E,1μm,5.2s						
QZH				LR	LR		
	comp=Z,990nm,20.4s						
QIZ	Qiongzhong	18.54	308	P	P	20 01 40.9	-1.6
QIZ				S	S	20 05 16.3	+11
QIZ				LR	LR		
	comp=N,550nm,14.5s						
QIZ				LR	LR		
	comp=Z,1μm,18.6s						
JOW	Kunigami	19.11	9	P	P	20 01 48.1	-1.2
	comp=Z,0.8nm,0.3s,baz=206,slow=10,SNR=4.5						
JOW				LR	LR	20 08 37.0	
	comp=Z,148nm,18.1s,baz=126,slow=35						
GUMO	Guam	20.21	72	LR	LR	20 08 23.9	
	comp=Z,150nm,21.1s,MS3.3,baz=248,slow=33						
KAKA	Kakadu	21.69	160	eP	P	20 02 34.9	+18
	comp=Z,59nm,0.6s,mb5.2						
JNU	Nakatsue	25.70	11	P	P	20 02 53.1	-2.6
	comp=Z,23nm,1.2s,mb4.6,baz=154,slow=18,SNR=4.2						
FITZ	Fitzroy Crossi	25.80	179	eP	P	20 02 54.5	-2.2
	comp=Z,51nm,0.6s,mb5.2						
FITZ	Fitzroy Crossi	25.80	179	P	P	20 02 54.4	-2.3
	comp=Z,20nm,0.7s,mb4.8,baz=53,slow=6.5,SNR=12						
ENH	Enshi	26.69	329	eP	P	20 03 03.4	-1.4
	comp=Z,18nm,1.0s,mb4.6						
KMI	Kunming	27.41	311	P	P	20 03 08.3	-3.1
KMI				AP	pP	20 03 16.3	-1.1
KMI				XP	sP	20 03 20.3	+0.2
KMI				AMB	AMB		
	comp=Z,110nm,4.4s						
KMI				LR	LR		
	comp=N,310nm,15.9s,MS4.1						
KMI				LR	LR		
	comp=E,310nm,18.3s,MS4.1						
KMI				LR	LR		
	comp=Z,320nm,18.3s,MS3.9						
PMG	Port Moresby	27.85	128	LR	LR	20 14 24.3	
	comp=Z,150nm,19.0s,MS3.6,baz=298,slow=37						
JHJ	Hachijo jima 2	28.57	26	LR	LR	20 14 01.6	
	comp=Z,150nm,20.3s,MS3.6,baz=133,slow=35						
WRAB	Tennant Creek	29.07	162	eP	P	20 03 23.3	-3.2
	comp=Z,31nm,1.0s,mb5.0						
WRAB	Tennant Creek	29.07	162	eP	P	20 03 23.3	-3.2
WRAB				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.0						
WRA	Warramunga Arr	29.07	162	P	P	20 03 23.3	-3.2
	comp=Z,6.5nm,0.8s,mb4.4,baz=340,slow=9.7,SNR=23						
WB2	Warramunga Arr	29.08	162	eP	P	20 03 23.2	-3.3
XAN	Xi’an	30.04	332	P	P	20 03 33.3	-1.7
XAN				AP	pP	20 03 39.8	-1.3
MJAR	Matsushiro Arr	30.95	21	P	P	20 03 42.5	-0.4
	comp=Z,1.5nm,0.7s,mb4.0,baz=196,slow=10,SNR=4.4						
MJAR				LR	LR	20 16 22.5	
	comp=Z,130nm,18.2s,MS3.6,baz=210,slow=37						
SNY	Shenyang	33.86	358	⇑P	P	20 04 06.6	-1.8
SNY				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
SNY				AMB	AMB		
	comp=Z,90nm,4.7s						
SNY				LR	LR		
	comp=E,320nm,23.0s						
SNY				LR	LR		
	comp=Z,220nm,16.7s						
LZH	Lanzhou	34.17	328	eP	P	20 04 11.4	+0.3
LZH				AP	pP	20 04 16.5	-0.7
LZH				XP	sP	20 04 20.0	+0.2
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,70nm,4.0s						
LZH				LR	LR		
	comp=N,620nm,14.2s						
LZH				LR	LR		
	comp=Z,960nm,16.0s,MS4.6						
CTA	Charters Tower	34.69	143	eP	P	20 04 14.9	-0.8
	comp=Z,10nm,0.9s,mb4.8						
CTA	Charters Tower	34.69	143	eP	P	20 04 14.9	-0.8
CTA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CTAO	Charters Tower	34.69	143	eP	P	20 04 13.6	-2.1
	comp=Z,24nm,1.1s,mb5.0						
CTAO	Charters Tower	34.69	143	eP	P	20 04 13.6	-2.1
CTAO				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.0						
HHC	Hu-ho-hao-te	35.01	342	eP	P	20 04 19.3	+1.1
HHC				AP	pP	20 04 29.0	+4.7
HHC				XP	sP	20 04 32.8	+5.9
HHC				PP	PP	20 05 42.3	+5.6
HHC				PCP	PcP	20 06 49.4	-1.0
HHC				S	S	20 09 50.4	+2.2
HHC				XS		20 10 07.3	
HHC				SCP		20 10 29.9	
HHC				SCS	ScS	20 14 34.5	-1.4
HHC				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
HHC				AMB	AMB		
	comp=Z,90nm,7.2s						
HHC				LR	LR		
	comp=N,290nm,16.8s,MS4.2						
HHC				LR	LR		
	comp=E,350nm,20.4s,MS4.2						
HHC				LR	LR		
	comp=Z,270nm,19.2s,MS4.0						
CN2	Changchun	35.81	0	eP	P	20 04 26.8	+1.8
CN2				eS	S	20 10 01.8	+1.2
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s,MS4.3						
CN2				LR	LR		
	comp=E,400nm,17.0s,MS4.3						
CN2				LR	LR		
	comp=Z,200nm,21.0s,MS3.9						
MDJ	Mudanjiang	36.83	5	eP	P	20 04 31.3	-2.2
	comp=Z,44nm,1.4s,mb5.1						
FORT	Forrest	38.52	176	eP	P	20 04 47.4	-0.5
	comp=Z,46nm,0.6s,mb5.4						
LSA	Lhasa	38.58	309	eP	P	20 04 47.4	-1.0
	comp=Z,31nm,1.4s,mb4.8						
LSA	Lhasa	38.58	309	eP	P	20 04 47.4	-1.0
LSA				pmax	pmax		
	comp=Z,31nm,1.4s,mb4.8						
GTA	Gaotai	38.77	328	eP	P	20 04 50.1	+0.2
GTA				AP	pP	20 04 54.4	-1.7
GTA				XP	sP	20 04 57.5	-1.1
ASAJ	Asahikawa	39.21	20	P	P	20 04 53.8	+0.2
	comp=Z,9.0nm,0.8s,mb4.6,baz=94,slow=3.8,SNR=4.7						
KLBR	Kellerberrin	39.85	190	eP	P	20 04 57.3	-1.7
	comp=Z,9.7nm,0.5s,mb4.8						
MUN	Mundaring	40.52	192	eP	P	20 05 03.0	-1.5
NWAO	Narrogin (SRO)	41.24	190	P	P	20 05 11.1	+0.7
	comp=Z,25nm,0.9s,mb4.8,baz=9.2,slow=9.5,SNR=6.9						
NWAO	Narrogin (SRO)	41.24	190	eP	P	20 05 10.7	+0.3
	comp=Z,39nm,1.1s,mb5.0						
NWAO	Narrogin (SRO)	41.24	190	eP	P	20 05 10.7	+0.2
NWAO				pmax	pmax		
	comp=Z,39nm,1.1s						
HIA	Hailar	41.52	355	eP	P	20 05 14.8	+2.2
	comp=Z,15nm,1.1s,mb4.5						
HIA	Hailar	41.52	355	eP	P	20 05 14.8	+2.3
HIA				pmax	pmax		
	comp=Z,15nm,1.1s						
KLR	Kul’dur	41.61	7	eP	P	20 05 11.7	-1.6
GUN	Gumba	42.08	303	eP	P	20 05 17.6	+0.2
	comp=Z,114nm,1.2s,mb5.4						
PKI	Pulchoki	42.35	303	eP	P	20 05 19.0	-0.7
STKA	Stephens Creek	42.53	159	P	P	20 05 19.8	-1.3
	comp=Z,15nm,0.8s,mb4.8,baz=327,slow=8.0,SNR=16						
STKA	Stephens Creek	42.53	159	eP	P	20 05 19.6	-1.5
KKN	Kakani	42.53	303	eP	P	20 05 20.6	-0.6
	comp=Z,39nm,0.9s,mb5.1						
DMN	Daman	42.62	303	eP	P	20 05 21.5	-0.4
	comp=Z,54nm,1.0s,mb5.2						
SONM	Songino Array	42.90	341	P	P	20 05 23.5	-0.4
	comp=Z,3.6nm,1.1s,mb4.0,baz=158,slow=8.0,SNR=11						
SONM				LR	LR	20 24 29.7	
	comp=Z,212nm,20.1s,MS4.0,baz=334,slow=38						
KOLN	Koldanda	43.93	302	eP	P	20 05 31.6	-0.9
	comp=Z,53nm,0.8s,mb5.3						
ADE	Adelaide	44.48	164	P	P	20 05 36.6	-0.3
ZAK	Zakamensk	46.13	341	eP	P	20 05 40.2	-10
ZAK				e		20 07 29.2	
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.0						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
HYB	Hyderabad	46.32	287	i P	P	20 05 53.0	+1.3
HYB	Hyderabad	46.32	287	eP	P	20 05 53.0	+1.3
BOD	Bodaibo	50.58	352	eP	P	20 06 25.4	+1.2
BOD				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.4						
MKAR	Makanchi Array	53.28	324	P	P	20 06 47.3	+2.5
	comp=Z,16nm,0.9s,mb5.0,baz=117,slow=2.7,SNR=8.5						
MKAR				LR	LR	20 29 30.8	
	comp=Z,148nm,21.1s,MS4.0,baz=194,slow=36						
MKAR	Makanchi Array	53.28	324	i P	P	20 06 47.0	+2.3
MKAR				pmax	pmax		
	comp=Z,16nm,0.9s						
YAK	Yakutsk	54.17	3	eP	P	20 06 48.2	-2.8
	comp=Z,57nm,1.0s,mb5.5						
YAK	Yakutsk	54.17	3	i P	P	20 06 48.8	-2.2
YAK				pmax	pmax		
	comp=Z,77nm,1.3s,mb5.5						
YAK				MLR	MLR		
	comp=Z,100nm,22.0s,MS3.8						
ZAL	Zalesovo	56.21	333	P	P	20 07 05.7	-0.2
	comp=Z,3.8nm,1.1s,mb4.3,baz=1.7,slow=7.1,SNR=7.2						
ZAL				LR	LR	20 33 19.0	
	comp=Z,161nm,18.8s,MS4.1,baz=342,slow=38						
ZAL	Zalesovo	56.21	333	P	P	20 07 05.7	-0.2
ZAL				LR	LR	20 33 18.9	
FRU	Bishkek	56.26	317	eP	P	20 07 06.0	-0.4
FRU				e	pP	20 07 12.0	-0.7
AAK	Ala-Archa	56.26	317	P	P	20 07 05.5	-1.0
	comp=Z,8.6nm,1.0s,mb4.7						
AAK	Ala-Archa	56.26	317	P	P	20 07 05.5	-1.0
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
KURK	Kurchatov	57.43	327	eP	P	20 07 14.4	-0.2
	comp=Z,75nm,1.1s,mb5.6						
KURK	Kurchatov	57.43	327	eP	P	20 07 14.5	-0.2
KURK				pmax	pmax		
	comp=Z,75nm,1.1s,mb5.6						
BVAR	Borovoye Array	63.02	326	P	P	20 07 54.7	+1.9
	comp=Z,15nm,1.1s,mb5.0,baz=127,slow=7.4,SNR=18						
BRVK	Borovoye	63.09	326	eP	P	20 07 54.7	+1.4
	comp=Z,35nm,1.3s,mb5.3						
BRVK	Borovoye	63.09	326	eP	P	20 07 54.7	+1.4
BRVK				pmax	pmax		
	comp=Z,35nm,1.3s,mb5.3						
TIXI	Tiksi	63.77	1	i P	P	20 07 56.7	-0.8
TIXI				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,400nm,20.0s,MS4.6						
BILL	Bilibino	66.02	16	P	P	20 08 10.3	-1.7
	comp=Z,8.6nm,1.0s,mb4.7						
BILL	Bilibino	66.02	16	P	P	20 08 10.3	-1.8
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
AKTK	Aktyubinsk	69.46	321	P	P	20 08 35.6	+1.7
AKTO	Aktyubinsk	69.46	321	P	P	20 08 35.6	+1.7
	comp=Z,2.6nm,0.7s,mb4.3,baz=99,slow=11,SNR=4.9						
SVE	Sverdlovsk	69.64	328	eP	P	20 08 34.8	-0.1
ARU	Arti	70.62	327	i P	P	20 08 43.0	+2.1
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.7						
HON	Honolulu	75.00	70	P	P	20 09 07.4	0.0
GNI	Garni	77.64	309	P	P	20 09 27.1	+5.2
	comp=Z,6.4nm,0.9s,mb4.5,baz=135,slow=11,SNR=5.6						
GNI	Garni	77.64	309	P	P	20 09 29.3	+7.5
	comp=Z,24nm,1.5s,mb4.9						
GNI	Garni	77.64	309	i P	P	20 09 25.4	+3.6
GNI				pmax	pmax		
	comp=Z,14nm,1.1s						
KIV	Kislovodsk	79.16	313	P	P	20 09 37.3	+7.2
	comp=Z,8.6nm,0.8s,mb4.7						
KIV	Kislovodsk	79.16	313	i P	P	20 09 33.7	+3.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
IMA2	Indian Mountai	79.29	24	eP	P	20 09 30.1	-0.2
MCK	McKinley	81.21	27	eP	P	20 09 39.3	-1.3
	comp=Z,7.2nm,0.9s,mb4.6						
MCK	McKinley	81.21	27	eP	P	20 09 39.3	-1.3
MCK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
COLA	College	81.68	26	P	P	20 09 42.9	-0.1
	comp=Z,5.1nm,1.0s,mb4.4						
COLA	College	81.68	26	P	P	20 09 42.9	-0.1
COLA				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
ILAR	Eielson Array	82.09	26	P	P	20 09 43.5	-1.7
	comp=Z,0.8nm,0.6s,mb3.8,baz=255,slow=4.5,SNR=9.6						
OBN	Obninsk	82.79	325	⇑eP	P	20 09 50.3	+1.3
OBN				eS	S	20 20 11.7	+7.1
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.2						
FINES	FINESS Array B	87.47	332	P	P	20 10 13.9	+1.7
	comp=Z,1.8nm,0.9s,mb4.3,baz=130,slow=11,SNR=2.7						
VNDA	Vanda	87.69	173	eP	P	20 10 12.7	-0.3
	comp=Z,2.5nm,0.9s,mb4.4						
VNDA	Vanda	87.69	173	eP	P	20 10 12.7	-0.3
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	87.71	321	P	P	20 10 16.4	+2.8
	comp=Z,0.7nm,0.6s,mb4.1,baz=69,slow=5.0,SNR=2.9						
KMBO	Kilima Mbogo	88.05	269	P	P	20 10 18.4	+2.3
	comp=Z,1.7nm,0.8s,mb4.3,baz=55,slow=12,SNR=5.2						
RES	Resolute Bay	94.06	10	eP	P	20 10 46.5	+3.9
	comp=Z,5.3nm,0.8s,mb5.0						
RES	Resolute Bay	94.06	10	eP	P	20 10 46.5	+3.9
RES				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb5.0						
NOA	NORSAR Array B	94.41	333	P	P	20 10 46.6	+2.1
	comp=Z,0.7nm,0.7s,mb4.2,baz=48,slow=2.0,SNR=2.5						
NOA				LR	LR	20 56 57.5	
	comp=Z,142nm,18.1s,MS4.5,baz=110,slow=38						
LSZ	Lusaka	98.69	256	P	P	20 11 04.2	-0.7
	comp=Z,2.3nm,1.0s,mb4.7						
LSZ	Lusaka	98.69	256	P	P	20 11 04.2	-0.7
LSZ				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.6						
TXAR	Lajitas Array	120.25	50	PKP	PKPdf	20 16 17.0	-2.5
	comp=Z,0.2nm,0.8s,baz=225,slow=1.3,SNR=2.6						
TXAR	Lajitas Array	120.25	50	PKP	PKPdf	20 16 17.0	-2.5

*HLW **24** 19:57:59.5,34.25N×25.85E,h33^{km},Mb4.1*

*CSEM **24** 19:57:59.9±0.0,33.94N×26.18E,h5^{km},mb4.3/6,Mw3.8, Error ellipse: s-maj=1.8km s-min=1.0km az=51.0*

*NEIC **24** 19:58:05.0±1.9,34.00N×25.94E,h23^{km}±13^{km},mb4.2/27, MD4.1(ATH),Error ellipse: s-maj=13.5km s-min=5.8km az=191.0*

*MOS **24** 19:58:07.4±1.6,34.32N×25.99E,h33^{km},mb4.5/10,Error ellipse: s-maj=9.3km s-min=4.4km az=117.9*

*IDC **24** 19:58:07.8±2.7,34.11N×25.60E,h56^{km}±24^{km},mb3.8/13, mb1 3.9/17,mb1mx3.8/26,mbtmp4.0/17,ML4.2/4,MS3.7/3, Ms1 3.7/3,ms1mx3.0/36,Error ellipse: s-maj=22.5km s-min=16.6km az=149.0*

*ATH **24** 19:58:09.3,36.31N×25.60E,h10^{km},MD4.1/3*

*NIC **24** 19:58:10.0±0.5,35.24N×26.13E,h25^{km},mb4.5,ML4.0, MW3.8*

ISC 24 19:58:02.9±0.8**,33.90N**±0.02×**26.11E**±0.02**,h30**^{km}±7^{km}**, n183,**σ1^{s}**28**/199**,mb4.1**/22**,MS4.0**/2**,7C-12D,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NPS	Neapolis	1.42	344	ePB	Pb	19 58 28.8	+0.1
IDI	Anoyia	1.71	325	P	Pn	19 58 29.8	-1.4
	11nm,0.3s,baz=159,slow=16,SNR=34						
KARP	Karpathos	1.86	28	ePB	Pb	19 58 37.1	+0.9
GVD	Gavdhos	1.92	300	ePn	Pn	19 58 31.3	-2.8
GVD	Gavdhos	1.92	300	ePn	Pn	19 58 31.3	-2.8
VAM	Vamos	2.18	314	ePB	Pb	19 58 36.8	-4.7
SANT	Santorini	2.53	348	ePn	Pn	19 58 41.4	-1.4
SANT	Santorini	2.53	348	ePn	Pn	19 58 41.4	-1.4
HMAT	Matruh	2.92	163	⇓P	Pn	19 58 49.0	+0.6
HMAT				S	Sn	19 59 25.1	+2.3
DAT	Datca	3.07	23	ePN	Pn	19 58 50.1	-0.5
DAT				eSN	Sn	19 59 28.4	+1.7
APE	Apeiranthos	3.20	352	ePN	Pn	19 58 50.2	-2.2
BDRM	Kayabasi	3.35	19	i P	Pn	19 58 56.6	+2.2
DABA	Dabaa	3.42	147	P	Pn	19 58 55.8	+0.4
DALT	Dalyan (Mudla)	3.54	35	ePN	Pn	19 58 57.1	-0.1
MLSB	Milas	3.66	21	ePN	Pn	19 58 58.4	-0.5
FETY	Fethiye	3.66	41	ePN	Pn	19 58 58.7	-0.3
YER	Yerkesik	3.69	28	ePN	Pn	19 58 59.0	-0.3
ELL	Elmali	4.21	46	ePN	Pn	19 59 05.9	-0.9
DNZL	Cakiroluk	4.48	31	i P	Pn	19 59 14.9	+4.4
HBRG	Burj al ‘Arab	4.58	135	P	Pn	19 59 12.6	+0.6
SWA1		4.63	184	P	Pn	19 59 12.0	-0.7
SWA1				S	Sn	20 00 05.6	-0.5
SWA2		4.67	187	⇓P	Pn	19 59 12.5	-0.8
BCK	Bucak	5.10	44	ePN	Pn	19 59 19.1	-0.1
AKS	Akhisar	5.16	15	ePN	Pn	19 59 19.5	-0.7
KHL	Karahalli	5.21	31	ePN	Pn	19 59 21.4	+0.5
PPCY	Paphos	5.25	77	P	Pn	19 59 23.6	+2.1
AKMC	Akamas	5.26	76	P	Pn	19 59 23.3	+1.7
ISP	Isparta	5.32	41	Pn	Pn	19 59 25.5	+3.1
ALFC	Alevga	5.51	75	P	Pn	19 59 26.7	+1.6
	3.5nm,0.3s						
ALFC				S	Sn	20 00 27.6	-0.5
SZAC	Souni-Zanaja	5.67	79	P	Pn	19 59 31.2	+3.8
SZAC				S	Sn	20 00 36.7	+4.4
HMYD	Mayadein	5.71	134	P	Pn	19 59 28.6	+0.6
HNAT	Natroun	5.73	137	P	Pn	19 59 28.7	+0.5
FYM	Al Fayyum	5.94	134	P	Pn	19 59 30.4	-0.7
FYM				S	Sn	20 00 37.9	-0.9
AYT	Al ‘Ayyat	5.99	133	P	Pn	19 59 31.2	-0.7
MAMC	Mammari	6.01	76	P	Pn	19 59 33.8	+1.7
CSS	Prodhromos	6.07	78	P	Pn	19 59 36.1	+3.1
	2.6nm,0.5s						
CSS				S	Sn	20 00 42.0	-0.1
CSS	Prodhromos	6.07	78	Pn	Pn	19 59 35.5	+2.5
CSS				Sn	Sn	20 00 41.9	-0.2
CSS	Prodhromos	6.07	78	Sn	Sn	20 00 41.9	-0.2
ALT	Altintas	6.08	31	ePN	Pn	19 59 32.6	-0.5
ERMK	Ermenek	6.21	62	i P	Pn	19 59 37.0	+2.1
KOT	Kottamia	6.27	128	⇓P	Pn	19 59 35.5	-0.3
HSAF	As Saff	6.30	131	P	Pn	19 59 35.7	-0.6
GLL	Jalalah	6.43	131	⇓P	Pn	19 59 37.7	-0.4
KONT	Konya--Tatoy	6.49	50	ePN	Pn	19 59 38.0	-0.8
ESKT	Eskisehir	6.78	33	ePN	Pn	19 59 42.3	-0.8
KIZT	Kizilcal	6.81	41	ePN	Pn	19 59 42.7	-0.8
AMAG	Maghara	6.83	116	⇓P	Pn	19 59 42.8	-0.9
HFRF	Wahat Farafira	6.99	164	P	Pn	19 59 45.5	-0.5
SUZ		7.00	123	P	Pn	19 59 44.9	-1.3
MEST	Erdemli	7.11	66	i P	Pn	19 59 45.5	-2.1

ZAF		7.17	128	P	Pn	19 59 48.1	-0.3
MERS	Mersin	7.49	64	ePN	Pn	19 59 50.9	-2.0
OFRI	‘Ofer	7.55	97	Pn	Pn	19 59 54.3	+0.6
OFRI				Sn	Sn	20 01 18.5	-0.6
KZIT	Kziot	7.62	111	Pn	Pn	19 59 56.4	+1.7
KZIT				Sn	Sn	20 01 19.3	-1.6
HNKL	Nakhl	7.78	118	⇓P	Pn	19 59 56.3	-0.7
MMA0	Mount Meron ar	7.82	94	Pn	Pn	19 59 58.7	+1.1
MMA1	Mount Meron ar	7.82	94	Pn	Pn	19 59 59.7	+2.1
MMA2	Mount Meron ar	7.82	94	Pn	Pn	19 59 59.7	+2.1
MASH	Mash‘abbe Sade	7.88	109	Pn	Pn	19 59 59.3	+0.8
MMLI	Mount Malkishu	7.95	98	Pn	Pn	20 00 01.0	+1.7
MMLI				Sn	Sn	20 01 26.8	-2.3
ASUT		8.00	143	⇓P	P	20 00 00.3	+0.2
GRB	Gharib	8.02	133	P	P	19 59 59.7	-0.6
KARA	Karaisali	8.03	63	ePN	P	19 59 59.0	-1.4
KAMT	Kaman	8.20	46	ePN	P	20 00 01.4	-1.4
MZDA	Masada	8.22	106	Pn	P	20 00 04.7	+1.5
PRNI	Paran	8.33	113	Pn	P	20 00 05.2	+0.5
MKRJ	Makawir	8.37	104	Pn	P	20 00 06.0	+0.8
ZFRI	Zfri	8.38	111	Pn	P	20 00 05.8	+0.5
HRFI	Mount Harif	8.51	114	Pn	P	20 00 08.4	+1.3
HRFI				Sn	Sn	20 01 40.6	-2.5
HTY	Hatay	8.53	72	ePN	P	20 00 05.4	-1.9
MBH	Mount Berech	8.54	116	Pn	P	20 00 08.7	+1.2
HKAT	Jabal Katrina	8.62	126	P	P	20 00 08.5	-0.2
EIL	Elat	8.63	117	Pn	P	20 00 09.2	+0.4
EIL				Sn	Sn	20 01 44.2	-1.8
AQBJ	Aqaba	8.67	116	Pn	P	20 00 10.3	+0.9
KOZT	Kozan	8.68	63	ePN	P	20 00 07.6	-1.9
HBST	Basata	8.71	120	⇓P	P	20 00 09.3	-0.6
HDK1	Dakhla	8.80	160	⇓P	P	20 00 10.8	-0.4
TR1		8.93	129	⇓P	P	20 00 12.6	-0.4
SHRM		9.13	129	P	P	20 00 15.0	-0.7
SOI	Samo	9.15	300	Pn	P	20 00 09.9	-6.1
AKRG	Al Kharijah	9.19	154	⇓P	P	20 00 16.1	-0.5
GTR	Jabal at Tayr	9.21	154	⇓P	P	20 00 16.3	-0.5
HHRG	Al Ghardaqah	9.25	134	⇑P	P	20 00 17.1	-0.3
BNN	Bunyan	9.28	55	ePN	P	20 00 15.8	-2.0
MTTG	Motta San Giov	9.38	299	Pn	P	20 00 13.3	-5.9
MTTG				Sn	Sn	20 01 50.8	-14
PZI	Palazzolo	9.63	292	Pn	P	20 00 16.8	-5.8
	18nm,0.1s						
HSFG		9.95	135	P	P	20 00 26.4	-0.6
VAE	Valguarnera	10.16	294	P	P	20 00 25.1	-4.7
	1.3nm,0.3s,baz=98,slow=14,SNR=2.8						
VAE				S	S	20 02 11.5	-12
	2.1nm,0.3s,baz=108,slow=6.4,SNR=3.1						
MLR	Muntele Rosu	11.58	359	P	P	20 00 48.4	-0.8
	0.4nm,0.3s,baz=176,slow=13,SNR=2.3						
MLR				LR	LR	20 06 16.8	
	comp=Z,144nm,19.0s,baz=345,slow=43						
VSL	Villasalto	14.53	297	Pn	P	20 01 27.7	-0.7
	52nm,1.3s						
VSL	Villasalto	14.53	297	Pn	P	20 01 27.7	-0.6
	52nm,1.3s						
KWP	Kalwaria	15.92	352	eP	P	20 01 43.4	-3.0
	20nm,1.2s						
KWP	Kalwaria	15.92	352	eP	P	20 01 43.4	-2.9
KWP				pmax	pmax		
	comp=Z,20nm,1.2s						
PGF	Pioggiola	15.96	308	eP	P	20 01 44.5	-2.3
KIV	Kislovodsk	16.32	47	ePn	P	20 01 55.3	+3.8
	comp=Z,15nm,1.0s						
KIV	Kislovodsk	16.32	47	eP	P	20 01 55.3	+3.8
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
AKASG	Malin Array Be	16.95	7	P	P	20 01 58.5	-0.8
	comp=Z,2.4nm,0.3s,baz=197,slow=11,SNR=24						
AKASG				S	S	20 05 11.1	+5.7
	comp=Z,0.1nm,0.3s,baz=188,slow=21,SNR=14						
AKASG	Malin Array Be	16.95	7	P	P	20 01 58.5	-0.8
AKASG				S	S	20 05 11.1	+5.7
MORC	Moravsky Berou	17.08	341	eP	P	20 01 54.7	-6.3
	comp=Z,3.7nm,0.9s						
WTTA	Wattenberg	17.25	325	⇑ePn	P	20 02 04.9	+1.8
	comp=Z,26nm,1.3s						
WTTA	Wattenberg	17.25	325	⇑eP	P	20 02 04.9	+1.7
WTTA				pmax	pmax		
	comp=Z,26nm,1.3s						
SQTA	Sankt Quirin	17.43	324	⇑ePn	P	20 02 06.4	+1.0
	comp=Z,2.9nm,0.4s						
SQTA	Sankt Quirin	17.43	324	⇑eP	P	20 02 06.4	+1.1
SQTA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
GERES	GERESS Array B	17.56	332	P	P	20 02 03.5	-3.5
	comp=Z,0.2nm,0.3s,baz=163,slow=13,SNR=6.5						
MOTA	Moosalm	17.57	324	⇑iPn	P	20 02 11.8	+4.7
	comp=Z,4.8nm,0.6s						
MOTA	Moosalm	17.57	324	⇑iPn	P	20 02 11.8	+4.7
	comp=Z,4.8nm,0.6s						
SBF	Sospel	17.58	310	eP	P	20 02 07.7	+0.5
	comp=Z,66nm,1.1s						
SBF	Sospel	17.58	310	eP	P	20 02 07.7	+0.5
SBF				pmax	pmax		
	comp=Z,33nm,1.1s						
KHC	Kasperske Hory	17.84	332	eP	P	20 02 09.3	-1.1
DPC	Dobruska-Polom	17.95	339	eP	P	20 02 12.0	+0.3
LMR	La Mourre	17.95	307	eP	P	20 02 13.1	+1.3
FRF	La Foret Royal	17.95	308	eP	P	20 02 12.9	+1.0
MBDF	Montbardon	18.41	312	eP	P	20 02 18.4	+0.8
	comp=Z,22nm,1.1s						
MBDF	Montbardon	18.41	312	eP	P	20 02 18.4	+0.8
MBDF				pmax	pmax		
	comp=Z,11nm,1.1s						
BNI	Bardonecchia	18.63	312	P	P	20 02 18.9	-1.3
	comp=Z,13nm,1.2s						
BNI	Bardonecchia	18.63	312	P	P	20 02 18.9	-1.4
BNI				pmax	pmax		
	comp=Z,13nm,1.2s						
BNI	Bardonecchia	18.63	312	P	P	20 02 18.9	-1.4
	comp=Z,13nm,1.2s						
LPG	La Plagne	18.82	314	eP	P	20 02 23.1	+0.7
	comp=Z,12nm,1.0s						
LPG	La Plagne	18.82	314	eP	P	20 02 23.1	+0.7
LPG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SMRF	Simiane la Rot	18.83	308	eP	P	20 02 23.1	+0.5
	comp=Z,90nm,1.4s						
LPL	La Plagne	18.84	314	eP	P	20 02 23.5	+0.8
	comp=Z,6.5nm,0.8s						
LPL	La Plagne	18.84	314	eP	P	20 02 23.5	+0.8
LPL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ORIF	Oris-en-Rattie	19.06	311	eP	P	20 02 26.2	+0.8
GRA1	Grafenberg Arr	19.24	330	eP	P	20 02 24.4	-3.0
	comp=Z,28nm,1.7s						
GRF	Grafenberg Arr	19.24	330	eP	P	20 02 24.4	-3.0
	comp=Z,28nm,1.7s						
GRF	Grafenberg Arr	19.24	330	eP	P	20 02 24.4	-3.0
GRF				pmax	pmax		
	comp=Z,28nm,1.7s						
GRF	Grafenberg Arr	19.24	330	eP	P	20 02 24.4	-3.0
GRF				pmax	pmax		
	comp=Z,28nm,1.7s						
VIVF	Saint-Julien-l	19.80	310	eP	P	20 02 34.2	+0.5
CABF	La Chapelle	19.80	316	eP	P	20 02 34.1	+0.4
MOX	Moxa	19.82	332	eP	P	20 02 36.0	+2.1
MOX				e		20 02 46.0	
LASF	Ste Croix	20.00	307	eP	P	20 02 36.7	+0.8
	comp=Z,169nm,1.7s						
HINF	Hinteralfeld	20.06	320	eP	P	20 02 36.4	0.0
	comp=Z,3.6nm,0.5s						
HINF	Hinteralfeld	20.06	320	eP	P	20 02 36.4	0.0
HINF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CDF	Champ du Feu	20.20	321	eP	P	20 02 37.7	-0.2
	comp=Z,6.4nm,0.7s						
CDF	Champ du Feu	20.20	321	eP	P	20 02 37.7	-0.2
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SUW	Suwalki	20.22	355	eP	P	20 02 35.4	-2.7
	comp=Z,76nm,0.9s						
SUW	Suwalki	20.22	355	eP	P	20 02 35.4	-2.6
SUW				pmax	pmax		
	comp=Z,76nm,0.9s						
HAU	Haudompre	20.45	319	eP	P	20 02 40.3	-0.1
	comp=Z,23nm,0.9s						
HAU	Haudompre	20.45	319	eP	P	20 02 40.3	-0.1
HAU				pmax	pmax		
	comp=Z,12nm,0.9s						
MTLF	Montolieu	20.85	304	eP	P	20 02 46.0	+1.4
	comp=Z,63nm,1.6s						
MTLF	Montolieu	20.85	304	eP	P	20 02 46.0	+1.4
MTLF				pmax	pmax		
	comp=Z,32nm,1.6s						
MEZF	Maizieres J’vi	21.44	319	eP	P	20 02 50.7	+0.2
CAF	Calviac	21.52	308	eP	P	20 02 52.1	+0.8
	comp=Z,33nm,1.2s,mb4.3						
CAF	Calviac	21.52	308	eP	P	20 02 52.1	+0.8
CAF				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.3						
SSF	Saint Saulge	21.55	314	eP	P	20 02 52.1	+0.4
WLF	Walferdange	21.57	323	P	P	20 02 51.5	-0.3
	comp=Z,43nm,1.4s,mb4.7						
WLF	Walferdange	21.57	323	P	P	20 02 51.5	-0.3
WLF				pmax	pmax		
	comp=Z,43nm,1.4s,mb4.7						
WLF	Walferdange	21.57	323	P	P	20 02 51.5	-0.3
	comp=Z,43nm,1.4s,mb4.7						
TCF	Toulx Ste Croi	21.98	311	eP	P	20 02 56.7	+0.7
	comp=Z,10nm,0.8s,mb4.0						
TCF	Toulx Ste Croi	21.98	311	eP	P	20 02 56.7	+0.7
TCF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
RJF	Les Rejaudoux	22.02	308	eP	P	20 02 57.1	+0.7
	comp=Z,47nm,1.4s,mb4.4						
RJF	Les Rejaudoux	22.02	308	eP	P	20 02 57.1	+0.7
RJF				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.4						
EPF	Esparros	22.07	302	eP	P	20 02 58.1	+1.2
LFF	La Frestale	22.39	307	eP	P	20 03 00.2	+0.1
ETSF	Etsaut	22.67	301	eP	P	20 03 04.0	+1.1
BAIF	Baives	22.80	322	eP	P	20 03 03.7	-0.3
	comp=Z,20nm,0.8s,mb4.3						
BAIF	Baives	22.80	322	eP	P	20 03 03.7	-0.3
BAIF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
SJPF	Ste Jean	23.20	301	eP	P	20 03 09.2	+1.2
ESDC	Sonseca Array	24.69	292	P	P	20 03 20.5	-2.0
	comp=Z,1.0nm,0.8s,mb3.4,baz=70,slow=10,SNR=3.0						
HFS	Hagfors	27.48	347	P	P	20 03 45.7	-2.4
	comp=Z,4.7nm,0.8s,mb4.1,baz=135,slow=8.4,SNR=7.5						
FINES	FINESS Array B	27.56	360	P	P	20 03 46.8	-2.1
	comp=Z,1.3nm,0.5s,mb3.8,baz=162,slow=10,SNR=9.6						
KAF	Kangasniemi	28.24	0	ep	P	20 03 54.5	-0.4
	comp=Z,2.4nm,0.5s,mb4.1						
KAF	Kangasniemi	28.24	0	eP	P	20 03 54.5	-0.4
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
AKTK	Aktyubinsk	28.56	45	P	P	20 03 59.4	+1.4
AKTK	Aktyubinsk	28.56	45	P	P	20 03 59.4	+1.4
AKTO	Aktyubinsk	28.56	45	P	P	20 03 59.4	+1.4
	comp=Z,1.8nm,0.5s,mb4.1,baz=225,slow=5.7,SNR=4.7						
NOA	NORSAR Array B	28.82	345	P	P	20 03 57.9	-2.3
	comp=Z,1.9nm,0.9s,mb3.8,baz=145,slow=9.9,SNR=2.8						
JOF	Joensuu	29.23	5	ep	P	20 04 00.7	-3.2
	comp=Z,4.0nm,0.9s,mb4.2						
ARCES	ARCESS Array B	35.69	360	P	P	20 04 57.5	-2.6
	comp=Z,3.5nm,0.8s,mb4.3,baz=183,slow=8.2,SNR=9.9						
BVAR	Borovoye Array	36.67	45	P	P	20 05 10.5	+2.0
	comp=Z,0.9nm,0.6s,mb3.8,baz=252,slow=4.6,SNR=4.2						
DBIC	Dimbokro	39.42	234	P	P	20 05 30.6	-1.4
	comp=Z,1.8nm,0.6s,mb4.0,baz=32,slow=8.8,SNR=3.2						
DBIC				LR	LR	20 24 22.2	
	comp=Z,122nm,18.3s,MS3.8,baz=25,slow=40						
KURK	Kurchatov	41.39	50	eP	P	20 05 50.9	+3.1
	comp=Z,5.9nm,1.1s,mb4.1						
KURK	Kurchatov	41.39	50	eP	P	20 05 50.9	+3.1
KURK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.1						
MKAR	Makanchi Array	43.83	56	P	P	20 06 10.1	+2.3
	comp=Z,1.2nm,0.6s,mb3.8,baz=268,slow=7.5,SNR=11						
MKAR	Makanchi Array	43.83	56	P	P	20 06 10.1	+2.3
NVS	Novosibirsk	44.44	44	eP	P	20 06 14.4	+1.8
ZAL	Zalesovo	45.31	45	P	P	20 06 20.9	+1.3
	comp=Z,1.9nm,0.3s,mb4.3,baz=201,slow=10.0,SNR=4.6						
MATP	Matopo	54.06	177	P	P	20 07 27.9	+0.9
	comp=Z,0.6nm,0.5s,mb3.8,baz=9.0,slow=7.6,SNR=3.1						
SONM	Songino Array	59.69	50	P	P	20 08 08.2	+1.5
	comp=Z,0.4nm,0.5s,mb3.7,baz=278,slow=7.1,SNR=4.4						
SCHQ	Schefferville	64.65	320	P	P	20 08 37.4	-2.3
	comp=Z,3.3nm,0.7s,mb4.5,baz=90,slow=8.1,SNR=3.9						
INK	Inuvik	76.97	352	P	P	20 09 58.0	+4.3
	comp=Z,4.5nm,1.0s,mb4.3						
INK	Inuvik	76.97	352	P	P	20 09 58.0	+4.3
INK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BDFB	Brasilia	85.95	248	LR	LR	20 50 08.2	
	comp=Z,87nm,19.8s,MS4.2,baz=108,slow=36						

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*IDC **24** 19:59:22.9±6.3, 36.37N×70.91E, h172^{km}±59^{km}, mb3.4/9, mb1 3.5/12, mb1mx3.4/23, mbtmp4.0/12, Error ellipse: s-maj=29.3km s-min=18.6km az=27.0*

*MOS **24** 19:59:23.9±1.1, 36.55N×70.78E, h190^{km}, mb3.9/1, Error ellipse: s-maj=15.8km s-min=7.2km az=95.1*

*NEIC **24** 19:59:24.2±1.3, 36.49N×70.87E, h180^{km}±13^{km}, mb4.1/11, Error ellipse: s-maj=15.3km s-min=5.9km az=58.0*

*NNC **24** 19:59:31.6±4.6, 37.09N×70.66E, h203^{km}±48^{km}, mpv4.1, Error ellipse: s-maj=42.2km s-min=28.9km az=28.0*

ISC 24 19:59:23.9±0.4**, 36.49N**±0.03×**70.98E**±0.07**, h194**^{km}±6^{km}**, n66, σ1^{s}25**/80**, mb3.6**/10**, 4C-11D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.77	164	⇓P	P	20 00 12.6	+1.6
CEP				S	S	20 00 46.0	-1.4
CHCP	Chirah Chowk	3.39	146	P	P	20 00 20.9	+2.4
THW	Thamme Wali	3.74	170	⇑P	P	20 00 24.1	+1.2
SBDP	Sheikh Budin	4.18	182	⇑P	P	20 00 29.5	+1.1
SARP	Sargodha	4.77	162	P	P	20 00 36.2	+0.3
SARP				S	S	20 01 29.0	-2.7
THN	Thein Dam	5.63	135	eP	P	20 00 47.6	+0.6
THN				eS	S	20 01 50.3	-1.3
DLH	Dalhousie	5.70	132	eP	P	20 00 50.0	+2.1
DLH				ex	x	20 01 55.0	
AML	Almayashu	6.01	20	P	P	20 00 52.3	+0.3
	SNR=62						
UCH	Uchtor	6.35	24	P	P	20 00 56.9	+0.6
	SNR=35						
KZA	Kyzart	6.49	29	P	P	20 00 58.2	+0.1
	SNR=14						
EKS2	Erkin-Say	6.53	18	P	P	20 00 59.1	+0.4
	SNR=21						
KK31	Karatay Array	6.61	357	P	P	20 00 59.3	-0.4
	6.8nm,0.5s,baz=183,slow=12,SNR=176						
KK31				⇑S	S	20 02 09.2	-5.3
	55nm,0.8s,baz=183,slow=13,SNR=18						
KK31	Karatay Array	6.61	357	P	P	20 00 59.3	-0.4
	6.8nm,0.4s						
KK31				S	S	20 02 09.2	-5.3
KKAR	Karatay Array	6.61	357	ePN	P	20 00 59.3	-0.5
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AAK	Ala-Archa	6.71	23	P	P	20 01 01.6	+0.6
	SNR=24						
AAK	Ala-Archa	6.71	23	⇓P	P	20 01 01.3	+0.3
	comp=Z,18nm,0.8s						
AAK				⇓S	S	20 02 15.2	-1.6
	comp=Z,26nm,0.8s						
AAK	Ala-Archa	6.71	23	⇓P	P	20 01 01.3	+0.3
	comp=Z,18nm,0.8s						
AAK				S	S	20 02 15.2	-1.6
BHK	Bhakra	6.79	137	eSG	S	20 02 16.4	-2.2
KBK	Karagaybulak	6.88	25	P	P	20 01 04.3	+1.0
	SNR=24						
SDNR	Sundarnagar	7.04	133	ePG	P	20 01 07.8	+2.4
SDNR				eS	S	20 02 20.8	-3.7
CHMS	Chumysh	7.12	23	P	P	20 01 06.4	0.0
	SNR=18						
USP	Ospenovka	7.29	21	P	P	20 01 08.7	0.0
	SNR=9.3						
TKM2	Tokmak 2	7.34	28	P	P	20 01 09.7	+0.4
	SNR=53						
SMLA	Simla	7.43	134	eP	P	20 01 09.7	-0.7
SMLA				eS	S	20 02 29.8	-3.8
KLP	Kalpa	7.80	127	eP	P	20 01 16.2	+0.8
KLP				eS	S	20 02 39.4	-3.1
KLP				AML	AML	20 02 42.0	
	comp=E,131nm,0.5s						
KLP				AML	AML	20 02 43.1	
	comp=N,155nm,0.5s						
KHET	Khetri	9.34	153	eP	P	20 01 35.2	-0.2
KHET				eS	S	20 03 12.8	-5.4
KHET				AML	AML	20 03 16.7	
	comp=E,35nm,0.3s						
KHET				AML	AML	20 03 16.9	
	comp=N,34nm,0.3s						
NDI	New Delhi	9.40	144	ex	x	20 03 13.5	
KUDL	Kundal	9.54	149	eP	P	20 01 36.9	-1.2
KUDL				eS	S	20 03 18.0	-5.0
SONA	Sohna	9.70	146	eS	S	20 03 21.2	-5.6
SONA				AML	AML	20 03 26.4	
	comp=E,30nm,0.4s						
SONA				AML	AML	20 03 26.5	
	comp=N,12nm,0.4s						
MKAR	Makanchi Array	13.31	36	P	P	20 02 25.9	-0.2
	comp=N,0.1nm,0.3s,baz=216,slow=13,SNR=5.5						
KOLN	Koldanda	13.78	126	eP	P	20 02 31.0	-1.1
KOLN				eS	S	20 04 57.3	-3.4
GKN	Gorkha	14.32	122	eP	P	20 02 39.6	+0.7
	comp=N,13nm,0.5s						
DMN	Daman	14.89	123	eP	P	20 02 47.2	+1.2
	comp=N,18nm,0.8s						
KKN	Kakani	14.89	122	eP	P	20 02 47.7	+1.7
AB31	Akbulak array	15.08	331	⇓P	P	20 02 46.8	-1.4
	comp=N,4.9nm,0.6s,baz=145,slow=12,SNR=62						
AB31				⇑S	S	20 05 23.5	-6.6
	comp=N,4.1nm,0.9s,baz=157,slow=22,SNR=2.7						
AB31	Akbulak array	15.08	331	⇓P	P	20 02 46.8	-1.4
AB31				S	S	20 05 23.5	-6.5
AB31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PKI	Pulchoki	15.12	122	eP	P	20 02 51.1	+2.3
GUN	Gumba	15.23	120	eP	P	20 02 52.9	+2.7
	comp=Z,8.5nm,0.4s						
KURK	Kurchatov	15.24	19	P	P	20 02 50.4	+0.2
	comp=Z,2.0nm,0.7s						
KURK	Kurchatov	15.24	19	P	P	20 02 50.4	+0.2
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VOSK	Vostochnaya	16.23	0	⇓P	P	20 03 00.4	-1.9
	comp=Z,3.1nm,0.8s						
VOSK	Vostochnaya	16.23	0	⇓P	P	20 03 00.4	-1.9
	comp=Z,3.1nm,0.8s						
VOSK	Vostochnaya	16.23	0	⇓P	P	20 03 00.4	-1.9
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BVA0	Borovoye Array	16.54	359	P	P	20 03 05.8	-0.2
	comp=Z,1.3nm,1.1s,baz=239,slow=32,SNR=15						
BVA0	Borovoye Array	16.54	359	P	P	20 03 05.8	-0.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BVAR	Borovoye Array	16.54	359	P	P	20 03 05.5	-0.5
	comp=Z,0.4nm,0.3s,baz=171,slow=11,SNR=14						
BRVK	Borovoye	16.57	359	P	P	20 03 03.8	-2.7
	comp=Z,5.7nm,1.0s						
BRVK	Borovoye	16.57	359	P	P	20 03 03.8	-2.6
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKTK	Aktyubinsk	16.78	330	⇓P	P	20 03 08.6	-0.3
AKTO	Aktyubinsk	16.78	330	⇓P	P	20 03 08.6	-0.3
	comp=Z,2.1nm,0.9s						
AKTO	Aktyubinsk	16.78	330	P	P	20 03 08.9	0.0
	comp=Z,0.5nm,0.3s,baz=142,slow=10,SNR=35						
LSA	Lhasa	18.19	106	eP	P	20 03 28.4	+3.9
	comp=Z,3.9nm,0.8s						
LSA	Lhasa	18.19	106	eP	P	20 03 28.4	+3.9
LSA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZAL	Zalesovo	19.91	25	P	P	20 03 43.2	+1.2
	comp=Z,1.2nm,0.4s,baz=252,slow=11,SNR=6.5						
ZAL	Zalesovo	19.91	25	P	P	20 03 43.2	+1.2
SONM	Songino Array	28.36	55	P	P	20 05 02.1	+0.4
	comp=Z,0.4nm,0.8s,mb3.1,baz=260,slow=7.8,SNR=3.7						
CSS	Prodhromos	30.48	278	P	P	20 05 26.2	+5.6
	comp=Z,8.5nm,0.6s,mb4.5						
FINES	FINESS Array B	37.48	326	P	P	20 06 19.0	-1.0
	comp=Z,1.5nm,0.7s,mb3.6,baz=113,slow=11,SNR=4.1						
ARCES	ARCESS Array B	41.14	338	P	P	20 06 50.5	+0.3
	comp=Z,3.8nm,0.9s,mb3.8,baz=90,slow=6.1,SNR=3.6						
HFS	Hagfors	43.06	322	P	P	20 07 05.5	-0.2
	comp=Z,1.7nm,0.6s,mb3.6,baz=95,slow=16,SNR=3.3						
NOA	NORSAR Array B	44.38	323	P	P	20 07 16.1	0.0
	comp=Z,0.8nm,0.9s,mb3.0,baz=96,slow=7.7,SNR=2.7						
ESLA	Sonseca Array	57.44	298	P	P	20 08 54.0	-0.4
	comp=Z,6.2nm,1.4s,mb4.0						
MATP	Matopo	69.39	223	P	P	20 10 12.3	-0.4
	comp=Z,0.5nm,0.5s,mb3.4,baz=28,slow=7.4,SNR=4.9						
MATP	Matopo	69.39	223	P	P	20 10 12.3	-0.4
YKA	Yellowknife Ar	81.25	3	P	P	20 11 20.8	+1.8
	comp=Z,0.5nm,0.4s,mb3.5,baz=352,slow=5.6,SNR=4.9						
WRA	Warramunga Arr	82.00	122	P	P	20 11 23.1	-0.5
	comp=Z,1.6nm,0.8s,mb3.7,baz=321,slow=4.8,SNR=12						

MAN 24 20:03:48.5, 7.96N×125.14E, h5^{km}, mb3.5, ML2.2, MS1.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.11	225	eP	Pg	20 03 51.4	+0.6
CGP	Cagayan de Oro	0.66	318	⇓eP	Pg	20 04 01.5	-0.3
CGP				eS	Sg	20 04 11.1	+0.5
PAGZ	Pagadian	1.75	267	eP	Pn	20 04 19.1	-0.5

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*IDC **24** 20:04:23.6±7.9, 33.49N×25.46E, mb3.6/2, mb1 3.6/4, mb1mx3.4/20, mbtmp3.5/4, ML3.6/2, Error ellipse: s-maj=144.9km s-min=38.6km az=37.0*

*ATH **24** 20:04:30.5, 34.03N×25.94E, h10^{km}, MD3.5/3*

*CSEM **24** 20:04:30.5, 34.03N×25.94E, h10^{km}, MD3.5/3, After ATH*

*NEIC **24** 20:04:30.5, 34.03N×25.94E, h10^{km}, MD3.5(ATH), After ATH.*

ISC 24 20:04:24.4±7.6**, 33.7N**±0.4×**25.7E**±0.2**, h1**^{km}±30^{km}**, n8, σ1^{s}22**/8**, mb3.6**/2**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	Khrisi	1.16	2	ePB	Pb	20 04 46.0	-0.9
NPS	Neapolis	1.55	359	ePG	Pg	20 04 55.0	-0.3
IDI	Anoyia	1.69	339	Pn	Pn	20 04 57.0	+1.7
	2.2nm,0.3s,baz=163,slow=14,SNR=12						
KARP	Karpathos	2.22	34	ePN	Pn	20 05 04.0	+1.2
AKASG	Malin Array Be	17.18	8	P	P	20 08 26.8	-0.3
	0.5nm,0.3s,baz=196,slow=11,SNR=5.0						
GERES	GERESS Array B	17.55	333	P	P	20 08 31.6	-0.2
	0.1nm,0.3s,baz=160,slow=12,SNR=2.7						
ARCES	ARCESS Array B	35.88	360	P	P	20 11 26.6	-0.8
	1.3nm,0.8s,mb3.8,baz=191,slow=4.6,SNR=2.9						
MKAR	Makanchi Array	44.25	55	P	P	20 12 36.7	-0.2
	0.4nm,0.5s,mb3.4,baz=267,slow=8.1,SNR=6.4						

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*BJI **24** 20:17:54.4, 53.91N×163.61W, h28^{km}, mB4.8, mb4.9, Ms4.6, Msz4.3*

*MOS **24** 20:17:54.7±0.9, 53.97N×164.08W, h10^{km}, mb5.3/36, Error ellipse: s-maj=10.6km s-min=4.6km az=85.6*

*IDC **24** 20:17:57.1±3.8, 53.90N×164.15W, h17^{km}±23^{km}, mb4.5/28, mb1 4.6/31, mb1mx4.6/34, mbtmp4.5/31, ML4.1/3, MS4.1/13, Ms1 4.1/13, ms1mx3.9/42, Error ellipse: s-maj=15.3km s-min=9.9km az=173.0*

*HRVD **24** 20:17:59.8±0.6, 53.74N×163.97W, h40^{km}±1^{km}, MW4.8/45, Centroid moment Tensor Solution. LP body waves: s27,c39;Mantle waves: s45,c65; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.48±.20; M$_{\theta\theta}$-0.27±.18; M$_{\phi\phi}$-1.21±.12; M$_{r\theta}$0.01±.15; M$_{\theta\phi}$-1.39±.08; M$_{\phi r}$0.82±.10; Best double couple: M$_0$2.062×10^{16} NP1:φ$_s$240°,δ40°, λ127°. NP2:φ$_s$15°,δ59°,λ63°. Principal axes: T 1.797, Plg65°, Azm237°; N .531, Plg23°, Azm30°; P -2.328, Plg10°, Azm124°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **24** 20:17:59.8±0.4, 53.84N×164.00W, h38^{km}±2^{km}, mb5.0/42, ML4.8(AEIC), ML4.6(PMR) Error ellipse: s-maj=5.4km s-min=2.7km az=166.0*

ISC 24 20:17:59.0±0.5**, 53.82N**±0.04×**164.00W**±0.04**, h45**^{km}±3^{km}**, h13**^{km}±6.5^{km}**:pP-P, n292, σ1^{s}01**/285**, mb4.9**/100**, MS4.2**/20**, 16C, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WESE	West Dahl East	0.74	332	P	P	20 18 13.5	+0.4
WESN	West Dahl Nort	0.82	335	P	P	20 18 15.2	+0.9
WFAR	Faris Peak	0.85	328	P	P	20 18 15.1	+0.4
WPOG	Pogromni	0.89	331	P	P	20 18 15.8	+0.6
SSLW	Shishaldin Wes	0.95	356	P	P	20 18 16.4	+0.2
AKUT	Akutan	1.09	287	P	P	20 18 18.3	+0.1
AKUT				S	S	20 18 33.7	+1.4
AHB	Akutan Harbor	1.11	286	P	P	20 18 18.6	+0.2
AKLV	Akutan Long Va	1.21	287	P	P	20 18 19.8	+0.1

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AKLV                             S       S       20 18 35.8 +0.6
LVA   Lava Point       1.25 287  P       P       20 18 20.7 +0.3
UNV   Unalaska Valle   1.48 272  P       P       20 18 23.1 -0.7
UNV                              S       S       20 18 42.3 +0.1
BALA  Baldy Mountain   1.54  27  P       P       20 18 26.5 +1.9
MNAT  Makushin Natee   1.59 273  P       P       20 18 24.9 -0.4
MNAT                             S       S       20 18 46.5 +1.6
MTBL  Makushin Table   1.59 276  P       P       20 18 25.3  0.0
DTNA  Dutton South F   1.67  37  P       P       20 18 26.2 -0.3
MCIR  Makushin Cirqu   1.72 275  P       P       20 18 27.4 +0.3
HAG   Hague Volcano    1.93  38  P       P       20 18 30.8 +0.7
PN7A  Pavlof North-7   1.99  35  P       P       20 18 31.4 +0.6
PVV   Pavlof Volcano   2.02  39  P       P       20 18 31.8 +0.6
BLHA  Black Hill       2.19  30  P       P       20 18 34.3 +0.6
OKCD  Okmok Cone D     2.48 263  P       P       20 18 38.1 +0.1
SDPT  Sand Point       2.56  52  P       P       20 18 38.9 -0.1
SDPT                             S       S       20 19 08.6 -0.5
NIKO  Nikolski         3.03 256 eP       P       20 18 44.8 -0.9
ANPK  Aniakchak Peak   4.51  46  P       P       20 19 07.4 +0.6
ATKA  Atka Island      6.37 259  P       P       20 19 32.3 -0.4
MGLS  Mageik LS        6.55  44  P       P       20 19 35.5 +0.2
KABR  Katmai Barrier   6.65  46  P       P       20 19 35.5 -1.2
KDAK  Kodiak Island    7.55  54  P       P       20 19 45.7 -3.6
SVW2  Sparrevohn       8.58  28 eP       P       20 20 03.5  0.0
SLKM  Skilak Lake     10.03  43 eP       P       20 20 20.7 -2.5
SEW   Seward          10.12  46  P       P       20 20 21.8 -2.6
PMR   Palmer          11.10  40 eP       P       20 20 33.6 -4.3
PMR                             eP               20 20 41.7
SML   Sawmill         11.54  40 eP       P       20 20 39.5 -4.2
HIN   Hinchinbrook I  11.54  48  P       P       20 20 40.4 -3.4
SCM   Sheep Creek Mo  11.94  41  P       P       20 20 44.7 -4.5
DIV   Divide          12.20  46  P       P       20 20 48.7 -4.0
KLU   Klutina         12.32  44  P       P       20 20 50.5 -3.8
MCK   McKinley        12.60  32 eP       P       20 20 57.0 -0.9
BMRM  Bremner River   12.63  48  P       P       20 20 54.8 -3.7
IMA2  Indian Mountai  13.30  19 eP       P       20 21 08.3 +1.1
FX1   Attu Island--F  13.66 275  Pn      P       20 21 10.8 -1.1
      3.3nm,0.3s,baz=47,slow=21,SNR=51
FX1                              LR      LR      20 25 49.0
      comp=Z,25nm,20.2s,baz=98,slow=35
FX1   Attu Island--F  13.66 275  P       P       20 21 11.0 -0.9
COLA  College         13.75  30 i P      P       20 21 10.5 -2.4
MENT  Mentasta        13.95  41 eP       P       20 21 17.0 +1.4
IL1   Eielson Array   13.97  31  P       P       20 21 11.4 -4.4
ILAR  Eielson Array   13.97  31  Pn      P       20 21 12.3 -3.5
      0.3nm,0.3s,baz=228,slow=12,SNR=41
ILAR                             PcP     PcP     20 26 34.0 -1.2
      0.1nm,0.3s,baz=267,slow=2.9,SNR=4.9
ILAR                             LR      LR      20 27 03.3
      comp=Z,706nm,18.8s,baz=239,slow=39
DLBC  Dease Lake      19.35  63  P       P       20 22 23.5 +0.4
      0.3nm,0.3s,baz=272,slow=16,SNR=6.2
DLBC                             LR      LR      20 29 00.4
      comp=Z,626nm,19.2s,baz=127,slow=34
DLBC  Dease Lake      19.35  63  P       P       20 22 23.5 +0.3
DLBC                             LR      LR      20 29 00.4
BILL  Bilibino        19.98 327 eP       P       20 22 29.6 -0.4
      40nm,1.1s
BILL  Bilibino        19.98 327 eP       P       20 22 27.3 -2.7
BILL                            eS       S       20 26 01.0 -6.2
BILL                             pmax    pmax
      comp=Z,35nm,1.2s
BILL                             MLR     MLR
      comp=Z,800nm,19.0s
INK   Inuvik          20.36  33  P       P       20 22 30.5 -3.4
      comp=Z,4.0nm,0.4s,baz=230,slow=8.7,SNR=35
INK                              LR      LR      20 30 45.2
      comp=Z,580nm,21.8s,MS3.9,baz=220,slow=38
INK   Inuvik          20.36  33 eP       P       20 22 30.4 -3.5
      comp=Z,17nm,0.6s
INK   Inuvik          20.36  33 eP       P       20 22 30.4 -3.5
INK                              pmax    pmax
      comp=Z,17nm,0.6s
PET   Petropavlovsk   22.11 283 eP       P       20 22 49.3 -2.4
PET                             e                20 23 12.9
PET                             eS       S       20 26 45.3 -2.3
PET                              pmax    pmax
      comp=Z,100nm,17.2s
PET                              pmax    pmax
      comp=Z,100nm,20.3s
PET                              smax
      comp=N,100nm,16.9s
PET                              MLR     MLR
      comp=Z,500nm,20.0s,MS3.9
YKA   Yellowknife Ar  26.82  51  P       P       20 23 35.8 -0.7
      comp=Z,4.7nm,0.6s,mb4.2,baz=273,slow=9.1,SNR=19
YKA                              LR      LR      20 35 17.6
      comp=Z,365nm,19.0s,MS4.0,baz=270,slow=39
YKA   Yellowknife Ar  26.82  51⇑eP       P       20 23 36.5 -0.1
NEW   Newport         29.55  81 eP       P       20 24 00.3 -1.0
MOD   Modoc           31.15  94 eP       P       20 24 16.0 +0.5
      comp=Z,12nm,1.1s,mb4.6
WVOR  Wild Horse Val  31.81  92 eP       P       20 24 21.4 +0.1
      comp=Z,12nm,0.9s,mb4.7
WVOR  Wild Horse Val  31.81  92 eP       P       20 24 21.4 +0.1
WVOR                             pmax    pmax
      comp=Z,12nm,0.9s,mb4.7
TIXI  Tiksi           33.20 328⇑eP       P       20 24 31.3 -1.8
TIXI                             pmax    pmax
      comp=Z,5.0nm,0.9s,mb4.4
TIXI                             MLR     MLR
      comp=Z,400nm,20.0s,MS4.1
HLID  Hailey          33.65  87 eP       P       20 24 36.3 -0.9
      comp=Z,3.8nm,1.2s,mb4.2
NVAR  Mina Array Bea  34.54  98  P       P       20 24 46.8 +1.8
      comp=Z,1.5nm,0.6s,mb4.1,baz=294,slow=9.8,SNR=20
NVAR                             PcP     PcP     20 27 18.9 -0.4
      comp=Z,1.1nm,0.6s,baz=307,slow=1.5,SNR=7.2
NVAR                             LR      LR      20 36 15.4
      comp=Z,267nm,19.0s,MS4.0,baz=310,slow=32
YAK   Yakutsk         34.67 311⇑eP       P       20 24 44.2 -1.6
YAK                              pmax    pmax
      comp=Z,18nm,1.2s,mb4.9
YAK                              MLR     MLR
      comp=Z,400nm,18.0s,MS4.2
ELK   Elko            34.86  92 eP       P       20 24 48.4 +0.7
      comp=Z,5.4nm,0.6s,mb4.7
ELK   Elko            34.86  92 eP       P       20 24 48.4 +0.7
ELK                              pmax    pmax
      comp=Z,5.0nm,0.6s
ASAJ  Asahikawa       35.59 276  P       P       20 24 53.1 -0.7
      comp=Z,11nm,0.8s,mb4.9,baz=56,slow=14,SNR=4.7
TPNV  Topopah Spring  36.74  98 eP       P       20 25 04.4 +0.8
      comp=Z,8.6nm,0.9s,mb4.6
TPNV  Topopah Spring  36.74  98 eP       P       20 25 04.4 +0.7
TPNV                             pmax    pmax
      comp=Z,9.0nm,0.9s,mb4.6
PDAR  Pinedale Array  36.99  85  P       P       20 25 06.2 +0.6
      comp=Z,0.6nm,0.6s,baz=311,slow=4.6,SNR=6.7
PDAR                             LR      LR      20 37 48.8
      comp=Z,167nm,21.8s,baz=318,slow=32
NEN   Nelson          38.46  98 eP       P       20 25 17.0 -1.0
SRU   San Rafael      38.70  90 eP       P       20 25 20.6 +0.6
      comp=Z,4.4nm,0.7s,mb4.3
SRU   San Rafael      38.70  90 eP       P       20 25 20.6 +0.7
SRU                              pmax    pmax
      comp=Z,4.0nm,0.7s,mb4.3
LDFC  Landfair        38.70  99 eP       P       20 25 19.2 -0.8
PV01  Paradox Valley  40.49  90 eP       P       20 25 35.1 +0.2
ULM   Lac du Bonnet   40.60  66  P       P       20 25 34.8 -0.8
      comp=Z,3.5nm,0.8s,mb4.1,baz=290,slow=8.5,SNR=4.5
ULM                              LR      LR      20 41 41.4
      comp=Z,191nm,19.2s,MS4.0,baz=327,slow=35
SDCO  Great Sand Dun  42.57  88 eP       P       20 25 51.7 -0.2
MDJ   Mudanjiang      42.85 286  P       P       20 25 56.8 +2.7
MDJ                              AP      pP      20 26 01.5 -4.9
MDJ                              XP      sP      20 26 05.3 -6.5
MDJ                              PP      PP      20 27 35.5 -0.7
MDJ                              PCP     PcP     20 27 48.9 +3.8
MDJ                              S       S       20 32 21.5 +6.5
MDJ                              LR      LR
      comp=N,160nm,26.1s,MS3.9
MDJ                              LR      LR
      comp=E,80nm,21.8s,MS3.9
MDJ                              LR      LR
      comp=Z,200nm,22.8s,MS4.0
MAJO  Matsushiro      42.96 270 eP       P       20 25 55.0 -0.1
      comp=Z,9.0nm,0.8s,mb4.5
MAJO  Matsushiro      42.96 270 eP       P       20 25 55.0 -0.1
MAJO                             pmax    pmax
      comp=Z,9.0nm,0.8s,mb4.5
MAT   Matsushiro      42.96 270  P       P       20 25 55.1  0.0
MAT                             eS       S       20 32 20.0 +3.3
MAT   Matsushiro      42.96 270 eP       P       20 25 55.0 -0.1
      comp=Z,27nm,1.3s,mb4.8
MAT   Matsushiro      42.96 270 eP       P       20 25 55.0 -0.1
MAT                              pmax    pmax
      comp=Z,27nm,1.3s,mb4.8
MJAR  Matsushiro Arr  42.96 270  P       P       20 25 54.7 -0.3
      comp=Z,2.6nm,0.7s,mb4.1,baz=29,slow=7.7,SNR=9.1
BOD   Bodaibo         43.58 310 eP       P       20 25 57.7 -2.1
BOD                              pmax    pmax
      comp=Z,6.0nm,1.0s,mb4.3
ANMO  Albuquerque     43.89  91  P       P       20 26 02.6 -0.1
      comp=Z,0.4nm,0.3s,baz=312,slow=14,SNR=2.1
ANMO                             PcP     PcP     20 27 49.0 +0.3
      comp=Z,3.2nm,0.7s,baz=295,slow=4.3,SNR=10
JHJ   Hachijo jima 2  44.39 266  LR      LR      20 40 47.4
      comp=Z,257nm,21.4s,MS4.1,baz=85,slow=31
CN2   Changchun       45.71 287 eP       P       20 26 15.5 -1.6
CN2                             eS       S       20 32 58.1 +1.8
CN2                              AMB     AMB
      comp=Z,10.0nm,0.7s,mb4.8
CN2                              AMB     AMB
      comp=Z,200nm,3.0s
CN2                              LR      LR
      comp=N,400nm,17.0s,MS4.5
CN2                              LR      LR
      comp=E,300nm,17.0s,MS4.5
CN2                              LR      LR
      comp=Z,400nm,21.0s,MS4.3
GDL2  Guadalupe Moun  47.06  92 eP       P       20 26 28.2 +0.3
DAG   Danmarks Havn   47.83  10⇑iP       P       20 26 32.3 -1.1
      comp=Z,13nm,0.5s,mb5.2
DAG   Danmarks Havn   47.83  10⇑iP       P       20 26 32.3 -1.1
DAG                              pmax    pmax
      comp=Z,13nm,0.5s,mb5.2
SUMG  Summit          48.39  19 eP       P       20 26 37.2 -0.6
      comp=Z,24nm,0.8s,mb5.3
TXAR  Lajitas Array   49.55  94  P       P       20 26 47.1 -0.1
      comp=Z,2.6nm,0.6s,mb4.4,baz=302,slow=5.9,SNR=37
TXAR                             PcP     PcP     20 28 08.4 -0.4
      comp=Z,1.6nm,0.6s,baz=262,slow=1.4,SNR=6.8
TXAR                             ScP             20 32 01.9
      comp=Z,0.6nm,0.9s,baz=297,slow=2.8,SNR=5.4
TXAR                             LR      LR      20 45 14.6
      comp=Z,157nm,18.5s,MS4.0,baz=340,slow=33
SFJD  Kangerlussuaq   49.61  28  P       P       20 26 47.1 -0.1
      comp=Z,28nm,1.0s,mb5.2,baz=327,slow=4.2,SNR=5.1
SCHQ  Schefferville   52.12  47  P       P       20 27 05.6 -0.7
      comp=Z,4.9nm,0.7s,mb4.5,baz=296,slow=9.9,SNR=5.4
SCHQ                             LR      LR      20 48 47.4
      comp=Z,389nm,20.5s,MS4.4,baz=295,slow=36
PARMO Parma           52.54  77  P       P       20 27 08.2 -1.6
ZAK   Zakamensk       53.09 307 eP       P       20 27 13.3 -0.4
ZAK                             e                20 28 17.9
ZAK                              pmax    pmax
      comp=Z,2.0nm,1.2s,mb3.9
ZAK                              pmax    pmax
      comp=Z,3.0nm,1.1s,mb4.1
SONM  Songino Array   53.29 303  P       P       20 27 14.5 -0.7
      comp=Z,1.9nm,0.5s,mb4.3,baz=40,slow=7.1,SNR=35
SONM                             PcP     PcP     20 28 22.4 +0.1
      comp=Z,4.1nm,0.9s,baz=52,slow=2.2,SNR=8.1
BTO   Baotou          56.38 294 eP       P       20 27 36.8 -1.0
ARCES ARCESS Array B  56.76 356  P       P       20 27 37.8 -2.3
      comp=Z,3.1nm,0.5s,mb4.6,baz=14,slow=7.7,SNR=32
ARCES                            PcP     PcP     20 28 36.4 +1.0
      comp=Z,2.4nm,0.6s,baz=10,slow=3.6,SNR=3.7
SSE   Sheshan         56.84 279 eP       P       20 27 37.8 -3.4
SSE                              AP      pP      20 27 47.3 -6.5
SSE                              XP      sP      20 27 49.8 -9.2
SSE                              PCP     PcP     20 28 34.6 -1.7
SSE                              PP      PP      20 29 43.8 -5.4
SSE                              S       S       20 35 27.5 -2.0
SSE                              XS              20 35 43.1
SSE                              SCS     ScS     20 37 24.8 +1.9
SSE                              SS      SS      20 39 20.4 +1.4
SSE                              AMB     AMB
      comp=Z,30nm,0.7s,mb5.4
SSE                              AMB     AMB
      comp=Z,50nm,5.4s
SSE                              LR      LR
      comp=N,110nm,26.3s,MS4.3
SSE                              LR      LR
      comp=E,340nm,26.3s,MS4.3
SSE                              LR      LR
      comp=Z,210nm,19.8s
NJ2   Nanjing         57.50 281 eP       P       20 27 45.1 -0.8
NJ2                              AP      pP      20 27 50.1 -8.5
NJ2                              S       S       20 35 45.0 +6.8
NJ2                              XS              20 35 53.0
NJ2                              AMB     AMB
      comp=Z,20nm,1.2s,mb5.0
NJ2                              AMB     AMB
      comp=Z,100nm,8.3s
NJ2                              LR      LR
      comp=N,530nm,15.4s,MS5.0
NJ2                              LR      LR
      comp=E,750nm,18.7s,MS5.0
NJ2                              LR      LR
      comp=Z,280nm,23.9s
ZAL   Zalesovo        58.49 320  P       P       20 27 51.9 -0.6
      comp=Z,1.3nm,0.5s,mb4.2,baz=66,slow=7.7,SNR=8.0
ZAL                              LR      LR      20 56 36.7
      comp=Z,221nm,18.9s,MS4.3,baz=243,slow=40
XAN   Xi’an           61.72 290  P       P       20 28 14.0 -0.8
XAN                              AMB     AMB
      comp=Z,10.0nm,0.9s,mb5.0
GTA   Gaotai          62.63 300 eP       P       20 28 19.3 -1.6
GTA                              PP      PP      20 30 34.5 -6.2
GTA                              S       S       20 36 44.8 +0.8
GTA                              SCS     ScS     20 38 05.1 -0.5
GTA                              SS      SS      20 40 50.9 +0.1
GTA                              AMB     AMB
      comp=Z,100nm,5.7s
GTA                              LR      LR
      comp=N,180nm,13.0s,MS4.5
GTA                              LR      LR
      comp=E,170nm,16.8s,MS4.5
GTA                              LR      LR
      comp=Z,250nm,18.3s,MS4.4
JOF   Joensuu         62.98 352 ep       P       20 28 20.5 -2.4
      comp=Z,3.1nm,0.3s,mb4.9
LZH   Lanzhou         62.99 295 eP       P       20 28 23.0 -0.3
LZH                              AP      pP      20 28 27.6 -8.5
LZH                              XP      sP      20 28 30.8  -10
LZH                              AMB     AMB
      comp=Z,20nm,1.4s,mb5.0
LZH                              AMB     AMB
      comp=Z,90nm,4.5s
KURK  Kurchatov       63.37 321 eP       P       20 28 24.0 -1.6
      comp=Z,19nm,1.1s,mb5.2
KURK  Kurchatov       63.37 321 i P      P       20 28 24.5 -1.1
KAF   Kangasniemi     64.12 355 ep       P       20 28 28.1 -2.0
      comp=Z,16nm,0.6s,mb5.2
KAF   Kangasniemi     64.12 355 eP       P       20 28 28.1 -2.0
KAF                              pmax    pmax
      comp=Z,16nm,0.6s,mb5.2
ENH   Enshi           64.21 286 eP       P       20 28 29.9 -1.3
      comp=Z,14nm,0.7s,mb5.1
BVA0  Borovoye Array  64.33 327 i P      P       20 28 30.8 -0.8
BVA0                             pmax    pmax
      comp=Z,2.0nm,0.8s,mb4.2
BVAR  Borovoye Array  64.33 327  P       P       20 28 30.8 -0.9
      comp=Z,12nm,0.6s,mb5.1,baz=44,slow=6.7,SNR=71
BRVK  Borovoye        64.33 327 eP       P       20 28 30.4 -1.2
      comp=Z,9.0nm,0.9s,mb4.8
BRVK  Borovoye        64.33 327 eP       P       20 28 30.5 -1.2
BRVK                             pmax    pmax
      comp=Z,9.0nm,0.9s,mb4.8
VOSK  Vostochnaya     64.39 326  P       P       20 28 30.9 -1.1
VOSK                             pmax    pmax
      comp=Z,4.0nm,0.8s,mb4.5
ARU   Arti            64.72 335⇑iP       P       20 28 32.9 -1.2
ARU                             e                20 29 05.4
ARU                             e                20 30 53.4
ARU                             eS       S       20 37 10.4 +0.8
ARU                             eSS      SS      20 41 21.9 -1.0
ARU                              pmax    pmax
      comp=Z,20nm,0.8s,mb5.2
FINES FINESS Array B  64.80 355  P       P       20 28 33.0 -1.6
      comp=Z,8.9nm,0.5s,mb5.0,baz=21,slow=7.9,SNR=95
MKAR  Makanchi Array  65.08 316  P       P       20 28 35.0 -1.6
      comp=Z,2.8nm,0.6s,mb4.5,baz=43,slow=6.8,SNR=28
MKAR                             LR      LR      20 58 57.2
      comp=Z,242nm,19.5s,MS4.4,baz=93,slow=38
NB2   NORSAR Subarra  65.42   3  P       P       20 28 37.2 -1.4
      comp=Z,9.2nm,0.8s,mb4.9,baz=358,slow=6.5
NOA   NORSAR Array B  65.42   3  P       P       20 28 37.4 -1.1
      comp=Z,8.3nm,0.7s,mb4.8,baz=358,slow=6.6,SNR=25
NOA   NORSAR Array B  65.42   3  P       P       20 28 37.4 -1.1
NAO   NORSAR Subarra  65.63   3  P       P       20 28 37.2 -2.7
      comp=Z,9.2nm,0.8s,mb4.9
NAO   NORSAR Subarra  65.63   3  P       P       20 28 37.2 -2.7
NAO                              pmax    pmax
      comp=Z,9.0nm,0.8s,mb4.8
HFS   Hagfors         66.38   1  P       P       20 28 43.2 -1.5
      comp=Z,17nm,0.5s,mb5.3,baz=28,slow=3.4,SNR=86
CD2   Chengdu         66.94 291⇑iP       P       20 28 47.9 -0.8
CD2                              AMB     AMB
      comp=Z,30nm,0.6s,mb5.5
EKA   Eskdalemuir Ar  70.07  12  P       P       20 29 07.8 +0.1
      comp=Z,5.1nm,0.6s,mb4.6,baz=344,slow=4.8,SNR=25
OBN   Obninsk         70.11 348⇑iP       P       20 29 06.8 -1.1
OBN                             e                20 31 41.5
OBN                              pmax    pmax
      comp=Z,22nm,1.2s,mb5.0
OBN                              MLR     MLR
      comp=Z,100nm,18.0s,MS4.1
AKTK  Aktyubinsk      70.28 333  P       P       20 29 08.9 -0.1
AKTO  Aktyubinsk      70.28 333  P       P       20 29 08.9 -0.1
      comp=Z,36nm,0.8s,mb5.3,baz=40,slow=6.7,SNR=97
AB31  Akbulak array   70.81 331 i P      P       20 29 12.0 -0.3
AB31                             pmax    pmax
      comp=Z,4.0nm,0.5s,mb4.6
TKM2  Tokmak 2        70.97 318  P       P       20 29 11.0 -2.4
      SNR=8.2
USP   Ospenovka       71.11 319  P       P       20 29 14.4 +0.2
      SNR=12
CHMS  Chumysh         71.24 319  P       P       20 29 15.3 +0.3
      SNR=8.6
FRU   Bishkek         71.44 319 i P      P       20 29 17.5 +1.4
FRU                              pmax    pmax
      comp=Z,40nm,1.2s,mb5.2
KBK   Karagaybulak    71.45 318  P       P       20 29 16.6 +0.4
      SNR=16
AAK   Ala-Archa       71.65 318  P       P       20 29 17.8 +0.4
      SNR=15
AAK   Ala-Archa       71.65 318 eP       P       20 29 16.2 -1.2
      comp=Z,14nm,0.6s,mb5.1
AAK   Ala-Archa       71.65 318 eP       P       20 29 16.2 -1.2
AAK                              pmax    pmax
      comp=Z,14nm,0.6s,mb5.1
KZA   Kyzart          71.82 318  P       P       20 29 19.1 +0.7
      SNR=5.9
EKS2  Erkin-Say       71.91 319  P       P       20 29 19.3 +0.4
      SNR=22
KMI   Kunming         71.98 288  P       P       20 29 20.4 +0.8
UCH   Uchtor          71.99 318  P       P       20 29 21.1 +1.7
      SNR=5.7
PPT   Papeete         72.17 166 eLR      LR      20 50 39.2
      comp=Z,210nm,24.0s,baz=351
SUW   Suwalki         72.37 356 eP       P       20 29 20.5 -0.9
AML   Almayashu       72.39 319  P       P       20 29 23.2 +1.4
      SNR=5.5
KKAR  Karatay Array   72.77 321 i P      P       20 29 23.4 -0.5
KKAR                             pmax    pmax
      comp=Z,7.0nm,0.6s,mb4.8
VRSR  Storozhevoye    73.54 345 eP       P       20 29 27.5 -0.8
VRSR                             pmax    pmax
      comp=Z,3.0nm,0.9s,mb4.2
VRSR                             pmax    pmax
      comp=N,3.0nm,0.8s
VRSR                             pmax    pmax
      comp=E,1.0nm,1.6s
LSA   Lhasa           74.65 299  P       P       20 29 36.3 +1.1
LSA   Lhasa           74.65 299 eP       P       20 29 35.8 +0.7
      comp=E,22nm,0.8s,mb5.1
LSA   Lhasa           74.65 299 eP       P       20 29 35.8 +0.6
LSA                              pmax    pmax
      comp=Z,22nm,0.8s,mb5.1
AKASG Malin Array Be  75.26 351  P       P       20 29 37.4 -0.9
      comp=Z,3.9nm,0.3s,mb4.8,baz=9.2,slow=5.7,SNR=38
PMG   Port Moresby    75.27 230  P       P       20 29 38.8 -0.2
      comp=Z,3.8nm,0.3s,mb4.8,baz=12,slow=9.3,SNR=2.8
MOX   Moxa            75.84   3 eP       P       20 29 42.0 +0.5
BAIF  Baives          76.02   8 eP       P       20 29 42.2 -0.4
DPC   Dobruska-Polom  76.20 360 eP       P       20 29 43.9 +0.3
NKC   Novy Kostel     76.28   2 eP       P       20 29 44.2 +0.2
PRU   Pruhonice       76.56   1 eP       P       20 29 46.1 +0.5
KWP   Kalwaria        76.77 356 eP       P       20 29 47.7 +0.9
KWP   Kalwaria        76.77 356 eP       P       20 29 47.7 +0.9
GRA1  Grafenberg Arr  76.78   3 eP       P       20 29 48.2 +1.3
      comp=Z,15nm,1.3s,mb4.8
GRF   Grafenberg Arr  76.78   3 eP       P       20 29 48.2 +1.3
      comp=Z,15nm,1.3s,mb4.8
GRF   Grafenberg Arr  76.78   3 eP       P       20 29 48.2 +1.3
GRF                              pmax    pmax
      comp=Z,15nm,1.3s,mb4.8
GRF   Grafenberg Arr  76.78   3 eP       P       20 29 48.2 +1.3
GRF                              pmax    pmax
      comp=Z,15nm,1.3s,mb4.8
FLN   La Foliniere    76.84  11 eP       P       20 29 47.5 +0.2
STHS  Stebnicka Huta  77.04 356 i P      P       20 29 49.3 +0.9
SGMF  Saint Gilles    77.09  13 eP       P       20 29 48.8 +0.1
GRR   Gorron          77.17  11 eP       P       20 29 48.7 -0.4
QUIF  Quistinic       77.34  13 eP       P       20 29 50.2 +0.1
KHC   Kasperske Hory  77.40   2 eP       P       20 29 51.1 +0.7
KOLS  Kolonicke sedl  77.48 356 i P      P       20 29 52.1 +1.3
CRVS  Cervenica-Dubn  77.55 356 i P      P       20 29 50.1 -1.1
SHL   Shillong        77.58 296 eP       P       20 29 52.0 +0.1
MEZF  Maizieres J’vi  77.63   7 eP       P       20 29 51.5 -0.2
GERES GERESS Array B  77.69   2  P       P       20 29 52.0 +0.1
      comp=Z,1.3nm,0.5s,mb4.1,baz=12,slow=5.1,SNR=9.7
CDF   Champ du Feu    77.87   6 eP       P       20 29 52.9 -0.1
KECS  Kecovo          78.00 357 i P      P       20 29 54.2 +0.5
KECS                            ePP      PP      20 32 51.8 -0.3
VYHS  Vyhne           78.03 358 eP       P       20 29 54.2 +0.4
HAU   Haudompre       78.22   7 eP       P       20 29 54.6 -0.3
HINF  Hinteralfeld    78.44   6 eP       P       20 29 55.8 -0.3
      comp=Z,12nm,0.9s,mb4.5
HINF  Hinteralfeld    78.44   6 eP       P       20 29 55.8 -0.3
HINF                             pmax    pmax
      comp=Z,6.0nm,0.9s,mb4.5
LOR   Lormes          78.76   8 eP       P       20 29 57.7 -0.2
      comp=Z,25nm,0.9s,mb4.8
LOR   Lormes          78.76   8 eP       P       20 29 57.7 -0.2
LOR                              pmax    pmax
      comp=Z,13nm,0.9s,mb4.9
GUN   Gumba           78.79 302 eP       P       20 29 58.8 +0.4
      comp=Z,32nm,0.6s,mb5.4
GOF   Gofitskoye      78.83 341 eP       P       20 29 57.6 -0.7
GOF                              pmax    pmax
      comp=Z,95nm,0.7s,mb5.8
SSF   Saint Saulge    78.93   9 eP       P       20 29 58.7 -0.1
      comp=Z,19nm,0.9s,mb5.0
SSF   Saint Saulge    78.93   9 eP       P       20 29 58.7 -0.1
SSF                              pmax    pmax
      comp=Z,19nm,0.9s,mb5.0
KIS   Kishinev        78.97 351 eP       P       20 29 56.0 -3.0
KIS                              MLR     MLR
      comp=Z,500nm,17.0s,MS4.9
KIS                              MLR     MLR
      comp=Z,600nm,16.0s
MFF   Saint Martin d  79.01  11 eP       P       20 29 59.2 -0.1
      comp=Z,30nm,0.8s,mb5.0
MFF   Saint Martin d  79.01  11 eP       P       20 29 59.2 -0.1
MFF                              pmax    pmax
      comp=Z,15nm,0.8s,mb5.0
KKN   Kakani          79.19 302 eP       P       20 30 00.7 +0.1
PKI   Pulchoki        79.30 302 eP       P       20 30 01.8 +0.5
      comp=Z,41nm,1.0s,mb5.3
GKN   Gorkha          79.33 303 eP       P       20 30 01.3 -0.1
      comp=Z,66nm,1.0s,mb5.5
BGF   Bois d’Agland   79.37   9 eP       P       20 30 01.0 -0.2
      comp=Z,22nm,0.9s,mb4.8
BGF   Bois d’Agland   79.37   9 eP       P       20 30 01.0 -0.2
BGF                              pmax    pmax
      comp=Z,11nm,0.9s,mb4.8
SMF   Signal de Mont  79.38   8 eP       P       20 30 00.9 -0.4
      comp=Z,54nm,1.0s,mb5.1
SMF   Signal de Mont  79.38   8 eP       P       20 30 00.9 -0.4
SMF                              pmax    pmax
      comp=Z,27nm,1.0s,mb5.1
DMN   Daman           79.42 303 eP       P       20 30 02.2 +0.3
      comp=Z,44nm,0.9s,mb5.4
TCF   Toulx Ste Croi  79.58  10 eP       P       20 30 01.9 -0.4
      comp=Z,37nm,1.2s,mb4.9
TCF   Toulx Ste Croi  79.58  10 eP       P       20 30 01.9 -0.4
TCF                              pmax    pmax
      comp=Z,19nm,1.2s,mb4.9
CABF  La Chapelle     79.59   7 eP       P       20 30 02.0 -0.4
      comp=Z,20nm,0.8s,mb4.8
CABF  La Chapelle     79.59   7 eP       P       20 30 02.0 -0.4
CABF                             pmax    pmax
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	comp=Z,10.0nm,0.8s,mb4.8						
PERS	**Pernice**	**79.92**	**1**	*i* P	**P**	**20 30 05.8**	**+1.6**
KIV	**Kislovodsk**	**79.95**	**341**	*e*P	**P**	**20 30 05.1**	**+0.7**
	comp=Z,25nm,0.8s,mb5.2						
KIV	**Kislovodsk**	**79.95**	**341**	*e*P	**P**	**20 30 05.5**	**+1.1**
KIV				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
KOLN	**Koldanda**	**80.04**	**304**	*e*P	**P**	**20 30 05.3**	**+0.1**
	comp=Z,45nm,1.0s,mb5.4						
GROS	**Grobnik**	**80.09**	**0**	*e*P	**P**	**20 30 06.3**	**+1.2**
RJF	**Les Rejaudoux**	**80.48**	**10**	*e*P	**P**	**20 30 06.8**	**-0.4**
ORX	**Oropa**	**80.69**	**6**	P	**P**	**20 30 09.6**	**+1.3**
LPL	**La Plagne**	**80.72**	**7**	*e*P	**P**	**20 30 08.6**	**+0.1**
	comp=Z,34nm,1.3s,mb4.8						
LPL	**La Plagne**	**80.72**	**7**	*e*P	**P**	**20 30 08.6**	**+0.1**
LPL				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.8						
LPG	**La Plagne**	**80.74**	**7**	*e*P	**P**	**20 30 08.9**	**+0.3**
	comp=Z,21nm,1.1s,mb4.7						
LPG	**La Plagne**	**80.74**	**7**	*e*P	**P**	**20 30 08.9**	**+0.3**
LPG				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.7						
LFF	**La Frestale**	**80.75**	**11**	*e*P	**P**	**20 30 08.7**	**0.0**
	comp=Z,49nm,1.0s,mb5.1						
LFF	**La Frestale**	**80.75**	**11**	*e*P	**P**	**20 30 08.7**	**0.0**
LFF				pmax	pmax		
	comp=Z,25nm,1.0s,mb5.1						
TRAV		**80.79**	**6**	P	**P**	**20 30 10.2**	**+1.3**
LSD	**Ceresole Reale**	**80.81**	**6**	P	**P**	**20 30 10.8**	**+1.9**
SOC	**Sochi**	**80.87**	**343**	*e*P	**P**	**20 30 10.4**	**+1.1**
SOC				*e*S	S	20 40 21.8	+9.0
SOC				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.3						
CAF	**Calviac**	**80.91**	**10**	*e*P	**P**	**20 30 09.4**	**-0.1**
RSP	**Reno Superiore**	**81.12**	**6**	P	**P**	**20 30 11.7**	**+1.1**
VIVF	**Saint-Julien-l**	**81.22**	**8**	*e*P	**P**	**20 30 11.3**	**+0.2**
FENE	**Fenestrelle**	**81.23**	**6**	P	**P**	**20 30 12.2**	**+1.0**
ORIF	**Oris-en-Rattie**	**81.26**	**7**	*e*P	**P**	**20 30 11.8**	**+0.5**
	comp=Z,24nm,0.8s,mb4.9						
ORIF	**Oris-en-Rattie**	**81.26**	**7**	*e*P	**P**	**20 30 11.8**	**+0.5**
ORIF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
RRL	**Cesana Torines**	**81.32**	**7**	P	**P**	**20 30 13.2**	**+1.5**
BHB	**Bricherasio**	**81.43**	**6**	P	**P**	**20 30 13.2**	**+0.9**
MBDF	**Montbardon**	**81.51**	**7**	*e*P	**P**	**20 30 12.9**	**+0.3**
	comp=Z,34nm,0.7s,mb5.1						
MBDF	**Montbardon**	**81.51**	**7**	*e*P	**P**	**20 30 12.9**	**+0.3**
MBDF				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
PZZ	**Prazzo**	**81.75**	**6**	P	**P**	**20 30 15.4**	**+1.5**
PCP	**Pian Castagno**	**81.81**	**5**	P	**P**	**20 30 14.9**	**+0.7**
ROB	**Roburent**	**82.01**	**6**	P	**P**	**20 30 15.3**	**0.0**
CODM		**82.02**	**4**	P	**P**	**20 30 16.8**	**+1.5**
STV	**Sta Anna Valdi**	**82.03**	**6**	P	**P**	**20 30 15.8**	**+0.5**
VALM		**82.08**	**4**	P	**P**	**20 30 17.3**	**+1.7**
BACM		**82.14**	**4**	P	**P**	**20 30 16.9**	**+1.0**
BOK	**Bokaro**	**82.17**	**300**	*e*P	**P**	**20 30 15.7**	**-0.7**
BOK				AMb	AMB	20 30 18.1	
	comp=Z,21nm,1.0s,mb5.0						
SMRF	**Simiane la Rot**	**82.17**	**8**	*e*P	**P**	**20 30 16.3**	**+0.3**
	comp=Z,51nm,1.1s,mb5.1						
MONE	**Monesi**	**82.22**	**6**	P	**P**	**20 30 15.8**	**-0.5**
SARO	**Sassorosso**	**82.25**	**4**	P	**P**	**20 30 17.6**	**+1.1**
SJPF	**Ste Jean**	**82.32**	**13**	*e*P	**P**	**20 30 17.4**	**+0.6**
IMI	**Imperia**	**82.40**	**6**	P	**P**	**20 30 17.8**	**+0.6**
SBF	**Sospel**	**82.41**	**6**	*e*P	**P**	**20 30 17.6**	**+0.3**
	comp=Z,51nm,0.8s,mb5.2						
SBF	**Sospel**	**82.41**	**6**	*e*P	**P**	**20 30 17.6**	**+0.3**
SBF				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
MTLF	**Montolieu**	**82.49**	**10**	*e*P	**P**	**20 30 18.1**	**+0.4**
	comp=Z,11nm,0.6s,mb4.7						
MTLF	**Montolieu**	**82.49**	**10**	*e*P	**P**	**20 30 18.1**	**+0.4**
MTLF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
MAIM		**82.53**	**4**	P	**P**	**20 30 18.4**	**+0.5**
EPF	**Esparros**	**82.59**	**12**	*e*P	**P**	**20 30 17.9**	**-0.3**
ETSF	**Etsaut**	**82.61**	**12**	*e*P	**P**	**20 30 19.0**	**+0.7**
	comp=Z,23nm,0.8s,mb5.0						
ETSF	**Etsaut**	**82.61**	**12**	*e*P	**P**	**20 30 19.0**	**+0.7**
ETSF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
FRF	**La Foret Royal**	**82.66**	**7**	*e*P	**P**	**20 30 18.6**	**0.0**
PBRG	**Braganca**	**82.76**	**17**	*e*P	**P**	**20 30 21.0**	**+1.9**
	comp=Z,8.1nm,1.1s,mb4.7						
PVRL	**Vila Real**	**83.10**	**18**	*e*P	**P**	**20 30 22.6**	**+1.7**
	comp=Z,34nm,1.4s,mb5.2						
PVIS	**Viseu**	**83.61**	**18**	*e*P	**P**	**20 30 25.2**	**+1.8**
	comp=Z,19nm,0.8s,mb5.3						
PGF	**Pioggiola**	**83.82**	**5**	*e*P	**P**	**20 30 24.4**	**0.0**
	comp=Z,54nm,1.0s,mb5.3						
PGF	**Pioggiola**	**83.82**	**5**	*e*P	**P**	**20 30 24.4**	**0.0**
PGF				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.3						
MTE	**Manteigas**	**83.98**	**18**	*e*P	**P**	**20 30 26.5**	**+1.2**
	comp=Z,22nm,1.8s,mb5.0						
PCBR	**Castelo Branco**	**84.54**	**18**	*e*P	**P**	**20 30 29.7**	**+1.6**
	comp=Z,7.7nm,0.7s,mb4.9						
VAY	**Valandovo**	**85.06**	**355**	*e*P	**P**	**20 30 31.9**	**+1.3**
VAY	**Valandovo**	**85.06**	**355**	*e*P	**P**	**20 30 31.9**	**+1.3**
CTA	**Charters Tower**	**85.12**	**226**	P	**P**	**20 30 32.1**	**+0.7**
	comp=Z,2.0nm,0.7s,mb4.4,baz=43,slow=10,SNR=3.5						
ESDC	**Sonseca Array**	**85.30**	**15**	P	**P**	**20 30 33.1**	**+1.3**
	comp=Z,5.7nm,0.6s,mb4.9,baz=342,slow=4.8,SNR=30						
OHR	**Ohrid**	**85.35**	**356**	*e*P	**P**	**20 30 32.9**	**+0.8**
OHR	**Ohrid**	**85.35**	**356**	*e*P	**P**	**20 30 32.9**	**+0.8**
AJM	**Ajmer**	**85.38**	**310**	*e*P	**P**	**20 30 32.8**	**+0.3**
AJM				AMb	AMB	20 30 35.0	
	comp=Z,18nm,1.3s,mb5.0						
ANTO	**Ankara**	**85.56**	**347**	*e*P	**P**	**20 30 34.1**	**+1.0**
	comp=Z,20nm,0.8s,mb5.4						
ANTO	**Ankara**	**85.56**	**347**	*e*P	**P**	**20 30 34.1**	**+1.0**
ANTO				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.4						
BHPL	**Bhopal**	**86.84**	**306**	*e*P	**P**	**20 30 40.1**	**+0.3**
BHPL				AMb	AMB	20 30 42.0	
	comp=Z,28nm,1.0s,mb5.4						
VIS	**Vishakhapatnam**	**88.52**	**298**	*e*P	**P**	**20 30 47.8**	**-0.2**
VIS				AMb	AMB	20 30 51.4	
	comp=Z,26nm,1.4s,mb5.3						
BHJ	**Bhuj**	**90.41**	**312**	*e*P	**P**	**20 30 56.6**	**-0.1**
BHJ				AMb	AMB	20 31 06.6	
	comp=Z,18nm,0.7s,mb5.5						
WRA	**Warramunga Arr**	**90.48**	**236**	P	**P**	**20 30 57.2**	**+0.1**
	comp=Z,1.7nm,0.9s,mb4.4,baz=35,slow=5.6,SNR=14						
HYB	**Hyderabad**	**91.22**	**302**	*i* P	**P**	**20 31 01.0**	**+0.3**
HYB	**Hyderabad**	**91.22**	**302**	*e*P	**P**	**20 31 01.0**	**+0.3**
POO	**Poona**	**92.58**	**306**	*e*x	x	20 30 21.3	
POO				AMb	AMB	20 30 23.9	
	comp=Z,8.3nm,0.6s,mb5.3						
FITZ	**Fitzroy Crossi**	**93.39**	**244**	P	**P**	**20 31 10.7**	**+0.1**
	comp=Z,6.9nm,0.9s,mb5.1,baz=33,slow=5.4,SNR=5.5						
RPN	**Rapa Nui**	**93.42**	**133**	LR	LR	21 05 59.3	
	comp=Z,114nm,18.0s,MS4.4,baz=124,slow=31						
PLCA	**Paso Flores**	**123.40**	**115**	PKP	PKPdf	20 36 52.1	+1.2
	comp=Z,1.7nm,0.7s,baz=191,slow=22,SNR=3.0						
KMBO	**Kilima Mbogo**	**124.62**	**334**	PKP	PKPdf	20 36 56.5	+2.7
	comp=Z,0.6nm,0.5s,baz=43,slow=23,SNR=5.3						
TSUM	**Tsumeb**	**145.42**	**357**	PKPbc	PKPbc	20 37 33.4	+0.9
	comp=Z,3.6nm,0.6s,baz=355,slow=6.9,SNR=14						
TSUM	**Tsumeb**	**145.42**	**357**	*e*PKP	PKPdf	20 37 32.5	+0.6
LBTB	**Lobatse**	**150.34**	**342**	*e*PKPbc	PKPdf	20 37 46.8	+7.0
BOSA	**Boshof**	**153.91**	**341**	PKPbc	PKPdf	20 37 54.6	+10
	comp=Z,2.4nm,0.8s,baz=264,slow=2.7,SNR=5.4						
BOSA				PKPab	PKPab	20 38 09.1	+0.5
	comp=Z,4.4nm,0.7s,baz=58,slow=4.0,SNR=6.9						
BOSA	**Boshof**	**153.91**	**341**	PKPbc	PKPdf	20 37 54.6	+10
BOSA				PKPab	PKPab	20 38 09.1	+0.5
VNA3	**Neumayer Olymp**	**159.21**	**157**	⇑*i*	PKPdf	20 37 51.1	+0.7
VNA3	**Neumayer Olymp**	**159.21**	**157**	⇑*i*	PKPdf	20 37 51.1	+0.7
VNA2	**Neumayer--Watz**	**159.96**	**158**	⇑*i*	PKPdf	20 37 52.3	+1.1
VNA2	**Neumayer--Watz**	**159.96**	**158**	⇑*i*	PKPdf	20 37 52.3	+1.1
VNA2	**Neumayer--Watz**	**159.96**	**158**	⇑*i*	PKPab	20 38 33.3	+0.1
VNA2	**Neumayer--Watz**	**159.96**	**158**	⇑*i*	PKPab	20 38 33.3	+0.1
SNAA	**Sanae**	**160.30**	**162**	⇑*i*	PKPdf	20 37 52.7	+1.2
SNAA	**Sanae**	**160.30**	**162**	⇑*i*	PKPdf	20 37 52.7	+1.2
SNAA	**Sanae**	**160.30**	**162**		PKPab	20 38 32.9	-1.7
SNAA	**Sanae**	**160.30**	**162**		PKPab	20 38 32.9	-1.7

NNC 24 20:18:55.1±0.6, 36.69N×70.63E, h124^{km}±23^{km}, mpv3.0, 1C, Error ellipse: s-maj=9.3km s-min=5.6km az=84.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.41**	**359**	P	P	20 20 27.1	-1.3
	0.4nm,0.3s,baz=177,slow=12,SNR=24						
KK31				⇑S	S	20 21 39.4	-1.2
	0.6nm,0.5s						
AAK	**Ala-Archa**	**6.65**	**25**	P	P	20 20 30.3	-1.3
AAK				S	S	20 21 45.5	-0.9
AB31	**Akbulak array**	**14.78**	**332**	P	P	20 22 17.7	-1.0
	0.6nm,0.3s,baz=154,slow=13,SNR=15						

MAN 24 20:24:24.9, 7.91N×124.97E, h1^{km}, mb5.0, ML3.9, MS3.9, 5C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUKP	**Musuan**	**0.10**	**106**	*e*P	Pg	20 24 27.7	+0.9
BUKP				*e*S	Sg	20 24 30.3	+2.1
CGP	**Cagayan de Oro**	**0.61**	**334**	⇑*i*P	Pg	20 24 37.0	-0.1
CGP				*i* S	Sg	20 24 46.3	+1.1
KCP	**Kidapawan**	**0.90**	**172**	⇑*e*P	Pg	20 24 42.4	-0.5
KCP				*i* S	Sg	20 24 54.2	-0.6
DMPH	**Davao City--Mi**	**0.98**	**147**	⇑*i*P	Pb	20 24 45.1	+0.8
DMPH				*i* S	Sg	20 24 59.0	+1.5
CTBH	**Cotabato--PC H**	**0.99**	**227**	⇑*i*P	Pb	20 24 43.9	-0.6
CTBH				*i* S	Sg	20 24 58.4	+0.5
BUTP	**Butuan**	**1.24**	**31**	*e*P	Pb	20 24 49.0	+0.2
PAGZ	**Pagadian**	**1.57**	**268**	*e*P	Pn	20 24 54.9	+0.7
PAGZ				*e*S	Sb	20 25 19.1	+4.2
MATI	**Mati**	**1.59**	**127**	*e*P	Pn	20 24 50.8	-3.7
DCPH	**Dipolog City**	**1.74**	**293**	⇑*e*P	Pn	20 24 56.5	0.0
DCPH				*e*S	Sn	20 25 22.2	+2.7
SCPH	**Surigao**	**1.93**	**15**	*e*P	Pn	20 24 57.3	-2.0
SCPH				*e*S	Sn	20 25 17.2	-7.3
TBP	**Tagbilaran**	**2.08**	**328**	*e*P	Pn	20 25 01.2	-0.3
TBP				*e*S	Sn	20 25 28.2	-0.2
MSLP	**Maasin**	**2.22**	**357**	*e*P	Pn	20 25 02.8	-0.5
SNPH	**Sibulan**	**2.23**	**310**	*e*P	Pn	20 25 05.0	+1.5
LLP	**Lapu-Lapu**	**2.59**	**338**	⇓*i*P	Pn	20 25 08.6	-0.1
LLP				*e*S	Sn	20 25 38.8	-2.5
GUIM	**Jordan**	**3.58**	**319**	*e*P	Pn	20 25 21.2	-1.6

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*IDC **24** 20:28:52.4±0.5, 3.09S×130.34E, mb4.7/16, mb1 4.7/18, mb1mx4.7/22, mbtmp4.7/18, ML3.5/1, MS4.4/9, Ms1 4.3/9, ms1mx4.0/25, Error ellipse: s-maj=22.5km s-min=13.2km az=73.0*

*BJI **24** 20:28:53.4, 3.19S×130.52E, h30^{km}, mB5.1, mb4.9, Ms4.5, Msz4.2*

*MOS **24** 20:28:55.6±1.0, 3.06S×130.28E, h33^{km}, mb5.3/19, Error ellipse: s-maj=13.7km s-min=7.3km az=112.2*

*HRVD **24** 20:28:56.7±0.4, 2.98S×130.15E, h22^{km}±1^{km}, MW5.0/53, Centroid moment Tensor Solution. LP body waves: s28,c41;Mantle waves: s53,c79; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.79±.21; $M_{\theta\theta}$-1.47±.12; $M_{\phi\phi}$-0.32±.15; $M_{r\theta}$-1.07±.21; $M_{\theta\phi}$1.84±.10; $M_{\phi r}$2.37±.34; Best double couple: $M_0$3.566×10^{16} NP1:ϕ_s96°,δ30°,λ39°. NP2:ϕ_s331°,δ72°,λ114°. Principal axes: T 3.329, Plg56°, Azm273°; N .465, Plg23°, Azm143°; P -3.804, Plg23°, Azm43°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **24** 20:28:56.7±2.3, 3.10S×130.33E, h32^{km}±17^{km}, mb5.1/25 Error ellipse: s-maj=8.2km s-min=5.1km az=62.0*

NEIC Felt [II] at Bula.

ISC 24 20:28:55.0±0.3, 3.18S±0.04×130.29E±0.05, h33^{km}, (h30^{km}±4.7^{km}:pP-P), n140, σ1^{s}04/133, mb5.0/65, MS4.4/14, 9C-5D, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**9.71**	**167**	*e*P	Px	20 31 33.0	
	49nm,0.5s						
DAV	**Davao City (W)**	**11.22**	**335**	*e*P	**P**	**20 31 34.9**	**-1.3**
	154nm,1.0s						
TSM	**Tawau**	**14.46**	**301**	P	**P**	**20 32 15.9**	**-3.6**
FITZ	**Fitzroy Crossi**	**15.52**	**197**	*e*P	**P**	**20 32 30.8**	**-2.4**
	64nm,0.8s						
FITZ	**Fitzroy Crossi**	**15.52**	**197**	Pn	**P**	**20 32 30.8**	**-2.4**
	3.0nm,0.3s,baz=29,slow=10,SNR=22						
FITZ				LR	LR	20 39 22.6	
	comp=Z,2µm,18.9s,baz=24,slow=40						
KKM	**Kota Kinabalu**	**16.78**	**303**	*e*P	**P**	**20 32 48.5**	**-0.7**
WRAB	**Tennant Creek**	**17.12**	**167**	*e*P	**P**	**20 32 51.5**	**-1.9**
	44nm,0.5s						
WRAB				*e*S	**S**	**20 35 58.5**	**-2.7**
WRAB	**Tennant Creek**	**17.12**	**167**	*e*P	**P**	**20 32 51.5**	**-1.9**
WRAB				*e*S	**S**	**20 35 58.5**	**-2.7**
WRAB				pmax	pmax		
	comp=Z,44nm,0.5s						
WRA	**Warramunga Arr**	**17.12**	**167**	P	**P**	**20 32 48.3**	**-5.2**
	comp=Z,0.7nm,0.3s,baz=348,slow=11,SNR=35						
WRA				S	**S**	**20 36 09.1**	**+7.8**
	comp=Z,1.1nm,0.3s,baz=346,slow=20,SNR=9.2						
WB2	**Warramunga Arr**	**17.13**	**167**	*e*P	**P**	**20 32 48.2**	**-5.3**
WB2				*e*S	**S**	**20 35 53.8**	**-7.6**
PMG	**Port Moresby**	**17.86**	**111**	P	**P**	**20 33 04.0**	**+1.2**
	comp=Z,0.5nm,0.3s,baz=342,slow=10,SNR=7.2						
PMG	**Port Moresby**	**17.86**	**111**	*e*P	**P**	**20 33 03.6**	**+0.8**
	comp=Z,74nm,1.1s						
PMG	**Port Moresby**	**17.86**	**111**	*e*P	**P**	**20 33 03.6**	**+0.8**
PMG				pmax	pmax		
	comp=Z,74nm,1.1s						
TGY	**Tagaytay City**	**19.52**	**332**	P	**P**	**20 33 22.8**	**+0.2**
	comp=Z,26nm,0.3s,baz=47,slow=7.1,SNR=4.1						
KSM	**Kuching**	**20.50**	**283**	*e*P	**P**	**20 33 33.5**	**+0.4**
CTA	**Charters Tower**	**22.91**	**138**	*e*P	**P**	**20 33 58.5**	**+1.2**
	comp=Z,28nm,1.0s,mb4.6						
CTA				*e*S	**S**	**20 38 09.2**	**+8.6**
CTA	**Charters Tower**	**22.91**	**138**	P	**P**	**20 33 59.0**	**+1.7**
	comp=Z,7.6nm,0.6s,mb4.3,baz=312,slow=11,SNR=12						
CTA	**Charters Tower**	**22.91**	**138**	*e*P	**P**	**20 33 58.5**	**+1.2**
CTA				*e*S	**S**	**20 38 09.2**	**+8.6**
CTA				pmax	pmax		
	comp=Z,28nm,1.0s						
CTAO	**Charters Tower**	**22.91**	**138**	*e*P	**P**	**20 33 58.1**	**+0.8**
	comp=Z,50nm,1.0s,mb4.9						
CTAO	**Charters Tower**	**22.91**	**138**	*e*P	**P**	**20 33 58.1**	**+0.8**
CTAO				pmax	pmax		
	comp=Z,50nm,1.0s,mb4.9						
KGM	**Kluang**	**27.45**	**280**	P	**P**	**20 34 38.3**	**-2.1**
FORT	**Forrest**	**27.53**	**184**	*e*P	**P**	**20 34 40.7**	**-0.2**
	comp=Z,24nm,0.6s,mb5.0						
QIZ	**Qiongzhong**	**29.86**	**318**	*e*P	**P**	**20 35 01.3**	**-0.6**
QIZ				S	**S**	**20 39 52.9**	**-2.5**
QIZ				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.0						
QIZ	**Qiongzhong**	**29.86**	**318**	*e*P	**P**	**20 35 01.3**	**-0.6**
	comp=Z,58nm,1.2s,mb5.2						
JOW	**Kunigami**	**29.90**	**356**	LR	LR	20 46 08.0	
	comp=Z,281nm,21.8s,MS3.9,baz=160,slow=35						
PPI	**Padang Panjang**	**30.00**	**275**	P	**P**	**20 35 02.7**	**-0.5**
	comp=Z,154nm,1.1s,mb5.7						
IPM	**Ipoh**	**30.24**	**285**	P	**P**	**20 35 05.8**	**+0.5**
STKA	**Stephens Creek**	**30.46**	**161**	P	**P**	**20 35 06.4**	**-0.7**
	comp=Z,10nm,0.8s,mb4.6,baz=333,slow=8.3,SNR=14						
KLBR	**Kellerberrin**	**30.63**	**201**	*e*P	**P**	**20 35 07.2**	**-1.4**
	comp=Z,14nm,0.6s,mb5.0						
MUN	**Mundaring**	**31.56**	**203**	*e*P	**P**	**20 35 18.3**	**+1.5**
NWAO	**Narrogin (SRO)**	**32.02**	**201**	P	**P**	**20 35 22.2**	**+1.4**
	comp=Z,6.3nm,0.5s,mb4.7,baz=39,slow=7.2,SNR=10						
NWAO	**Narrogin (SRO)**	**32.02**	**201**	*e*P	**P**	**20 35 20.7**	**-0.2**
	comp=Z,30nm,1.2s,mb5.0						
NWAO	**Narrogin (SRO)**	**32.02**	**201**	*e*P	**P**	**20 35 20.7**	**-0.2**
NWAO				pmax	pmax		
	comp=Z,30nm,1.2s						
CBIJ	**Chichi jima**	**32.21**	**20**	LR	LR	20 47 10.6	
	comp=Z,346nm,18.6s,MS4.1,baz=20,slow=34						
KKTK	**Khon Kaen**	**33.37**	**306**	⇑P	**P**	**20 35 32.5**	**-0.1**
	comp=Z,1µm,0.9s						
NST	**Nakhon Sawan**	**35.23**	**303**	P	**P**	**20 35 50.0**	**+1.3**
JNU	**Nakatsue**	**36.11**	**1**	P	**P**	**20 35 55.9**	**-0.1**
	comp=Z,9.3nm,0.8s,mb4.7,baz=203,slow=10,SNR=3.6						
JNU				LR	LR	20 50 38.7	
	comp=Z,345nm,19.1s,MS4.1,baz=182,slow=36						
WHN	**Wuhan**	**36.83**	**337**	⇓P	**P**	**20 36 02.8**	**+0.8**
CHG	**Chiang Mai**	**37.81**	**306**	⇑P	**P**	**20 36 11.4**	**+1.0**
	comp=Z,45nm,1.1s,mb5.1						
ENH	**Enshi**	**38.75**	**331**	*e*P	**P**	**20 36 17.3**	**-0.8**
	comp=Z,39nm,1.2s,mb5.0						
KMI	**Kunming**	**38.81**	**318**	⇑P	**P**	**20 36 20.3**	**+1.6**
KMI				PP	PP	20 37 52.9	+1.2
KMI				PCP	PcP	20 38 26.9	-3.2
KMI				PCS		20 42 16.1	
KMI				S	**S**	**20 42 18.1**	**+4.2**
KMI				SS	SS	20 45 02.6	+5.4
KMI				SCS	ScS	20 46 18.4	-5.5
KMI				AMB	AMB		
	comp=Z,50nm,1.3s,mb5.1						
KMI				AMB	AMB		
	comp=Z,210nm,3.1s						
KMI				LR	LR		
	comp=N,230nm,11.4s						
KMI				LR	LR		
	comp=E,250nm,20.5s						
KMI				LR	LR		
	comp=Z,240nm,20.4s						
DZM	**Mont Dzumac**	**39.78**	**121**	P	**P**	**20 36 27.7**	**+0.9**
	comp=Z,5.5nm,0.8s,mb4.3,baz=128,slow=19,SNR=3.0						
MAJO	**Matsushiro**	**40.20**	**10**	*e*P	**P**	**20 36 28.5**	**-1.5**
	comp=Z,10nm,0.9s,mb4.5						
MAJO	**Matsushiro**	**40.20**	**10**	*e*P	**P**	**20 36 28.5**	**-1.6**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
MJAR	**Matsushiro Arr**	**40.20**	**10**	P	**P**	**20 36 28.1**	**-2.0**
	comp=Z,1.8nm,0.7s,baz=192,slow=8.7,SNR=5.8						
MJAR				LR	LR	20 51 56.2	
	comp=Z,299nm,19.2s,MS4.2,baz=210,slow=34						
KS15	**Wonju Array Si**	**40.48**	**357**	P	**P**	**20 36 29.6**	**-2.8**
XAN	**Xi'an**	**42.15**	**333**	P	**P**	**20 36 45.6**	**-0.6**
XAN				AP	pP	20 36 56.3	+0.2
XAN				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.8						
CD2	**Chengdu**	**42.30**	**325**	⇑*i*P	**P**	**20 36 47.3**	**-0.2**
CD2				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.2						
SNY	**Shenyang**	**45.21**	**353**	⇓P	**P**	**20 37 10.8**	**-0.1**
SNY				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.8						
SNY				AMB	AMB		
	comp=Z,180nm,5.4s						
SNY				LR	LR		
	comp=N,290nm,18.2s						
SNY				LR	LR		
	comp=Z,270nm,18.8s,MS4.2						
LZH	**Lanzhou**	**46.23**	**330**	*e*P	**P**	**20 37 19.8**	**+0.8**
LZH				AP	pP	20 37 25.3	-3.6
LZH				XP	sP	20 37 27.4	-5.6
LZH				AMB	AMB		
	comp=Z,110nm,1.5s,mb5.6						
LZH				AMB	AMB		
	comp=Z,380nm,4.3s						
LZH				LR	LR		
	comp=E,560nm,15.5s						
LZH				LR	LR		
	comp=Z,890nm,16.9s,MS4.8						
SHL	**Shillong**	**46.92**	**310**	*e*P	**P**	**20 37 25.0**	**+0.4**
CN2	**Changchun**	**46.97**	**355**	*e*P	**P**	**20 37 23.8**	**-0.9**
CN2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
MDJ	**Mudanjiang**	**47.59**	**359**	*e*P	**P**	**20 37 28.7**	**-0.9**
	comp=Z,18nm,1.0s,mb5.0						
ASAJ	**Asahikawa**	**48.36**	**12**	P	**P**	**20 37 35.8**	**+0.2**
	comp=Z,9.7nm,0.9s,mb4.8,baz=246,slow=18,SNR=2.7						
LSA	**Lhasa**	**49.71**	**314**	P	**P**	**20 37 47.3**	**+1.0**
LSA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
LSA	**Lhasa**	**49.71**	**314**	*e*P	**P**	**20 37 46.7**	**+0.4**
	comp=Z,18nm,0.9s,mb5.1						
LSA	**Lhasa**	**49.71**	**314**	*e*P	**P**	**20 37 46.7**	**+0.4**
LSA				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
PALK	**Pallekele**	**50.57**	**282**	P	**P**	**20 37 50.5**	**-2.5**
	comp=Z,31nm,1.3s,mb5.1						
VIS	**Vishakhapatnam**	**50.74**	**296**	*e*P	**P**	**20 37 54.2**	**-0.1**
VIS				AMb	AMB	20 37 56.6	
	comp=Z,40nm,1.1s,mb5.2						
BOK	**Bokaro**	**50.86**	**304**	*e*P	**P**	**20 37 54.9**	**-0.1**
BOK				AMb	AMB	20 37 58.0	
	comp=Z,20nm,1.6s,mb4.8						
KLR	**Kul'dur**	**52.21**	**1**	*e*P	**P**	**20 38 04.5**	**-0.4**
MDRS	**Chennai**	**52.24**	**289**	*e*x	x	20 37 39.5	
GUN	**Gumba**	**52.73**	**309**	*e*P	**P**	**20 38 09.0**	**-0.1**
	comp=Z,130nm,1.1s,mb5.8						
PKI	**Pulchoki**	**52.94**	**308**	*e*P	**P**	**20 38 10.2**	**-0.5**
	comp=Z,87nm,1.2s,mb5.6						
KKN	**Kakani**	**53.14**	**308**	*e*P	**P**	**20 38 11.8**	**-0.4**
	comp=Z,92nm,1.2s,mb5.6						
DMN	**Daman**	**53.20**	**308**	*e*P	**P**	**20 38 12.3**	**-0.3**
	comp=Z,112nm,1.1s,mb5.7						
GKN	**Gorkha**	**53.75**	**308**	*e*P	**P**	**20 38 16.0**	**-0.6**
	comp=Z,119nm,1.1s,mb5.7						
RPZ	**Rata Peaks**	**54.10**	**144**	LR	LR	21 00 53.9	
	comp=Z,310nm,20.5s,MS4.4,baz=118,slow=36						
TRD	**Trivandrum**	**54.43**	**283**	*e*x	x	20 56 55.6	
KOLN	**Koldanda**	**54.46**	**308**	*e*P	**P**	**20 38 21.4**	**-0.4**
	comp=Z,198nm,1.1s,mb5.9						
SONM	**Songino Array**	**54.95**	**341**	P	**P**	**20 38 25.4**	**+0.2**
	comp=Z,6.0nm,0.7s,mb4.8,baz=156,slow=7.0,SNR=37						
SONM				PcP	PcP	20 39 26.9	+0.3
	comp=Z,3.2nm,1.0s,baz=164,slow=5.3,SNR=2.1						
HYB	**Hyderabad**	**54.98**	**294**	*i* P	**P**	**20 38 25.0**	**-0.7**
	comp=Z,50nm,1.0s,mb5.5						
HYB	**Hyderabad**	**54.98**	**294**	*e*P	**P**	**20 38 25.0**	**-0.7**
	comp=Z,50nm,1.0s,mb5.5						
HYB	**Hyderabad**	**54.98**	**294**	*e*P	**P**	**20 38 25.0**	**-0.7**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.5						
BHPL	**Bhopal**	**57.81**	**300**	*e*P	**P**	**20 38 44.8**	**-1.1**
BHPL				AMb	AMB	20 38 45.8	
	comp=Z,25nm,0.7s,mb5.3						
ZAK	**Zakamensk**	**58.18**	**340**	⇑*i*P	**P**	**20 38 47.9**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.5						
MOY	**Mondy**	**60.05**	**339**	*e*P	**P**	**20 39 01.3**	**+0.2**
MOY				pmax	pmax		
	comp=Z,43nm,2.1s,mb5.1						
WMQ	**Urumqi**	**60.40**	**326**	⇑*i*P	**P**	**20 39 02.9**	**-0.7**
WMQ				AP	pP	20 39 10.5	-3.2
WMQ				XP	sP	20 39 13.0	-4.6
WMQ				PCP	PcP	20 39 47.0	-1.1
WMQ				PP	PP	20 41 18.0	-0.7
WMQ				*e*S	**S**	**20 47 15.0**	**+0.5**
WMQ				XS		20 47 27.5	
WMQ				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,330nm,5.6s						
WMQ				LR	LR		
	comp=N,540nm,22.7s,MS4.7						
WMQ				LR	LR		
	comp=E,320nm,21.5s,MS4.7						
WMQ				LR	LR		
	comp=Z,320nm,21.1s,MS4.4						
AJM	**Ajmer**	**61.28**	**302**	AMb	AMB	20 39 11.3	
	comp=Z,30nm,1.6s,mb5.2						
BOD	**Bodaibo**	**62.20**	**350**	*e*P	**P**	**20 39 13.8**	**-1.7**
BOD				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.9						
MA2	**Magadan**	**64.62**	**11**	P	**P**	**20 39 28.7**	**-2.7**
	comp=Z,54nm,1.3s,mb5.4						
MA2	**Magadan**	**64.62**	**11**	P	**P**	**20 39 28.7**	**-2.6**
MA2				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.4						
YAK	**Yakutsk**	**65.03**	**360**	*e*P	**P**	**20 39 33.5**	**-0.5**
	comp=Z,42nm,0.8s,mb5.5						
YAK	**Yakutsk**	**65.03**	**360**	*c* *i*P	**P**	**20 39 33.7**	**-0.3**
YAK				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.6						
YAK				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
MKAR	**Makanchi Array**	**65.23**	**326**	P	**P**	**20 39 35.4**	**-0.1**
	comp=Z,13nm,0.8s,mb5.0,baz=111,slow=8.1,SNR=66						
KSH	**Kashi**	**65.44**	**316**	*e*P	**P**	**20 39 38.8**	**+1.7**
KSH				*e*AP	pP	20 39 50.4	+3.0
KSH				*e*XP	sP	20 39 54.1	+3.0
KSH				*e*PCP	PcP	20 40 10.0	+1.3
KSH				*e*PP	PP	20 42 07.3	+4.0
KSH				*e*PPP	PPP	20 43 43.0	+5.3
KSH				*e*SCP		20 44 09.3	
KSH				*e*PCS		20 44 13.3	
KSH				*e*S	S	20 48 19.8	+2.1
KSH				*e*XS		20 48 41.1	
KSH				*e*PS	PS	20 48 50.1	+7.1
KSH				*e*SCS	ScS	20 49 29.0	+2.9
KSH				AMB	AMB		
	comp=Z,310nm,3.9s						
KZA	**Kyzart**	**67.10**	**319**	P	**P**	**20 39 48.9**	**+1.4**

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      SNR=9.8
TKM2  Tokmak 2          67.26 319   P       P        20 39 49.1 +0.7
      SNR=13
KBK   Karagaybulak      67.56 319   P       P        20 39 50.7 +0.3
      SNR=7.8
UCH   Uchtor            67.66 318   P       P        20 39 52.8 +1.8
      SNR=20
CHMS  Chumysh           67.85 319   P       P        20 39 52.6 +0.4
      SNR=6.5
AAK   Ala-Archa         67.85 319   P       P        20 39 53.3 +1.1
      SNR=12
AAK   Ala-Archa         67.85 319  eP       P        20 39 51.6 -0.6
      comp=Z,28nm,1.2s,mb5.2
AAK   Ala-Archa         67.85 319  eP       P        20 39 51.6 -0.6
AAK                                 pmax    pmax
      comp=Z,28nm,1.2s,mb5.2
FRU   Bishkek           67.86 319  eP       P        20 39 53.0 +0.7
FRU                                e                 20 40 21.0
SEY   Seymchan          68.02  11  i P      P        20 39 54.4 +1.5
USP   Ospenovka         68.14 319   P       P        20 39 54.4 +0.4
      SNR=21
AML   Almayashu         68.16 318   P       P        20 39 55.6 +1.5
      SNR=11
ZAL   Zalesovo          68.32 333   P       P        20 39 54.9 -0.1
      comp=Z,12nm,1.1s,mb4.8,baz=0.8,slow=6.0,SNR=40
EKS2  Erkin-Say         68.34 319   P       P        20 39 55.8 +0.6
      SNR=15
KURK  Kurchatov         69.44 328  eP       P        20 40 01.9  0.0
      comp=Z,85nm,1.1s,mb5.6
KURK  Kurchatov         69.44 328  eP       P        20 40 01.9  0.0
KURK                                pmax    pmax
      comp=Z,85nm,1.1s,mb5.6
NVS   Novosibirsk       69.60 333⇑iP       P        20 40 01.4 -1.4
NVS                                 pmax    pmax
      comp=Z,34nm,1.3s,mb5.1
NVS                                 pmax    pmax
      comp=N,25nm,1.4s
NVS                                 pmax    pmax
      comp=E,35nm,1.4s
KKAR  Karatay Array     70.70 318  i P      P        20 40 09.8 +0.1
KKAR                                pmax    pmax
      comp=Z,43nm,1.2s,mb5.2
VOSK  Vostochnaya       74.56 327   P       P        20 40 32.0 -0.3
VOSK                                pmax    pmax
      comp=Z,11nm,0.8s,mb4.8
TIXI  Tiksi             74.70 360  i P      P        20 40 33.4 +0.6
TIXI                                pmax    pmax
      comp=Z,12nm,1.2s,mb4.7
BVA0  Borovoye Array    75.02 327  i P      P        20 40 35.4 +0.5
BVA0                                pmax    pmax
      comp=Z,8.0nm,1.2s,mb4.5
BVAR  Borovoye Array    75.02 327   P       P        20 40 35.0 +0.1
      comp=Z,16nm,0.9s,mb4.9,baz=135,slow=6.3,SNR=48
BRVK  Borovoye          75.09 327  eP       P        20 40 35.5 +0.2
      comp=Z,42nm,1.3s,mb5.2
BRVK  Borovoye          75.09 327  eP       P        20 40 35.5 +0.1
BRVK                                pmax    pmax
      comp=Z,42nm,1.3s,mb5.2
BILL  Bilibino          75.35  13⇓eP       P        20 40 35.8 -0.8
BILL                               i        pP       20 40 46.2 -0.7
BILL                               e                 20 43 22.8
BILL                               eS       S        20 50 21.1 +8.5
BILL                                pmax    pmax
      comp=Z,11nm,1.4s,mb4.6
BILL                                MLR     MLR
      comp=Z,100nm,15.0s,MS4.2
VNDA  Vanda             76.18 173  eP       P        20 40 42.2 +1.1
      comp=Z,4.5nm,1.0s,mb4.3
VNDA  Vanda             76.18 173  eP       P        20 40 42.2 +1.0
VNDA                                pmax    pmax
      comp=Z,5.0nm,1.0s
MAW   Mawson            78.59 201   P       P        20 40 55.6 +0.9
      comp=Z,8.0nm,0.9s,mb4.7,baz=61,slow=3.6,SNR=6.5
MAW                                 LR      LR       21 13 23.0
      comp=Z,232nm,18.2s,MS4.5,baz=192,slow=34
SVE   Sverdlovsk        81.67 329⇓eP       P        20 41 12.0 +0.6
SVE                                e                 20 41 26.0
SVE                                 pmax    pmax
      comp=Z,100nm,1.6s,mb5.5
SVE                                 MLR     MLR
      comp=N,100nm,12.0s,MS4.5
SVE                                 MLR     MLR
      comp=E,100nm,12.0s,MS4.5
SVE                                 MLR     MLR
      comp=Z,200nm,12.0s,MS4.7
OPO   Ambohidratompo    82.47 252   P       P        20 41 18.0 +1.7
      comp=Z,13nm,1.0s,mb4.8,baz=105,slow=7.0,SNR=11
ARU   Arti              82.64 328  eP       P        20 41 15.9 -0.5
      comp=Z,30nm,1.2s,mb5.2
ARU   Arti              82.64 328⇓iP       P        20 41 16.1 -0.3
ARU                                e                 20 44 25.7
ARU                                eS       S        20 51 31.8 +1.8
ARU                                eSS      SS       20 56 49.8 -5.8
ARU                                 pmax    pmax
      comp=Z,18nm,1.2s,mb5.0
UMR   Umm Al-Rimmam     85.10 300  eP       P        20 41 30.7 +1.2
MIB   Mutribah          85.46 300  eP       P        20 41 32.2 +1.0
MIB                                 AMb     AMB      20 41 34.5
      comp=Z,98nm,1.1s,mb5.8
NAY   Al-Naaiem         85.48 300  eP       P        20 41 32.4 +1.1
NAY                                 AMb     AMB      20 41 33.4
      comp=Z,52nm,0.8s,mb5.7
SLKM  Skilak Lake       87.58  29  eP       P        20 41 41.0 +0.2
GNI   Garni             88.62 310  eP       P        20 41 49.2 +2.9
      comp=Z,18nm,1.1s,mb5.3
GNI   Garni             88.62 310  eP       P        20 41 49.2 +2.9
GNI                                 pmax    pmax
      comp=Z,18nm,1.1s
MCK   McKinley          88.74  26  eP       P        20 41 46.7 +0.4
      comp=Z,7.6nm,1.1s,mb4.9
MCK   McKinley          88.74  26  eP       P        20 41 46.7 +0.4
MCK                                 pmax    pmax
      comp=Z,8.0nm,1.1s,mb5.0
MSL   Mosul             89.61 306  ex       x        20 41 52.5
ILAR  Eielson Array     89.79  25   P       P        20 41 51.4 +0.2
      comp=Z,0.9nm,0.6s,mb4.3,baz=298,slow=7.1,SNR=8.0
KMBO  Kilima Mbogo      92.97 269   P       P        20 42 09.2 +2.0
      comp=Z,7.4nm,1.1s,mb5.0,baz=56,slow=5.5,SNR=12
KMBO                                LR      LR       21 21 23.8
      comp=Z,427nm,20.2s,MS4.9,baz=276,slow=34
KMBO  Kilima Mbogo      92.97 269   P       P        20 42 09.2 +2.0
KMBO                                LR      LR       21 21 23.8
OBN   Obninsk           94.72 325⇑eP       P        20 42 13.5 -0.6
OBN                                e                 20 46 06.6
OBN                                eS                20 52 47.1
OBN                                eSS      SS       20 59 57.7 +7.6
OBN                                 pmax    pmax
      comp=Z,15nm,1.4s,mb5.2
INK   Inuvik            95.23  22   P       P        20 42 16.6 +0.5
      comp=Z,2.6nm,0.8s,mb4.7,baz=314,slow=6.2,SNR=5.6
ARCES ARCESS Array B    98.12 340   LR      LR       21 32 13.9
      comp=Z,183nm,18.5s,MS4.6,baz=288,slow=39
BOSA  Boshof           101.63 240   P       P        20 42 47.8 +1.7
      comp=Z,3.8nm,1.0s,baz=128,slow=8.3,SNR=3.9
PDAR  Pinedale Array   113.99  44   PKKPbc           20 58 20.9
      comp=Z,1.1nm,1.0s,baz=90,slow=4.5,SNR=5.6
TXAR  Lajitas Array    122.67  57   PKP     PKPdf    20 47 51.1 +2.9
      comp=Z,0.9nm,0.8s,baz=253,slow=1.2,SNR=5.6
CPUP  Villa Florida    149.75 166  ePKPbc   PKPdf    20 48 43.6 +6.1
LPAZ  La Paz           153.43 137   PKP     PKPdf    20 48 46.5 +3.3
      comp=Z,0.4nm,0.2s,baz=71,slow=1.3,SNR=3.2
LPAZ                                PKPbc   PKPdf    20 48 55.5  +12
      comp=Z,1.4nm,0.6s,baz=54,slow=2.5,SNR=6.2
LPAZ  La Paz           153.43 137   PKP     PKPdf    20 48 46.5 +3.3
LPAZ                               ePKPdf   PKPdf    20 48 47.6 +4.4
LPAZ                                PKPbc   PKPdf    20 48 55.5  +12
SDV   Santo Domingo    158.44  74  ePKPdf   PKPdf    20 48 52.4 +2.5
```

*NIED **24** 20:29:00, 44.20N×149.30E, h20^{km}, Mw4.2 Best double couple: M$_0$2.31×10^{15} NP1:φ$_s$52°, δ74°, λ151°. NP2:φ$_s$150°, δ62°, λ18°.*
*BJI **24** 20:30:01.7, 44.74N×149.02E, h37^{km}, mB5.1, mb4.6, Ms4.5, Msz4.1*
*IDC **24** 20:30:01.7±1.5, 44.15N×149.06E, h39^{km}±6^{km}, mb3.8/12, mb1 3.9/14, mb1mx3.9/22, mbtmp4.0/14, ML3.2/2, MS3.3/1, Ms1 3.3/1, ms1mx2.4/41, Error ellipse: s-maj=43.9km s-min=16.1km az=173.0*
*MOS **24** 20:30:02.2±1.1, 44.76N×148.75E, h33^{km}, mb4.8/10, Error ellipse: s-maj=16.0km s-min=10.8km az=121.8*
*NEIC **24** 20:30:02.1±0.8, 44.35N×148.90E, h35^{km}, mb4.6/10, Error ellipse: s-maj=18.5km s-min=10.1km az=157.0*
ISC 24 20:30:01.1±2.3, **44.3N**±0.1×**148.9E**±0.1, **h46**^{km}±22^{km}, **h39**^{km}±1.3^{km}**:pP-P, n49,** σ**1**^{s}**01**/48, **mb4.3**/23, **Kuril Islands**

```
Code  Station Name       Δ°  AZ°    Phase ID           Time      Res
                                    Op      ISC      h  m  s    ISC
ASAJ  Asahikawa          4.54 270   Pn      P        20 31 09.7 +0.6
      0.7nm,0.3s,baz=78,slow=28,SNR=7.4
ASAJ                                LR      LR       20 33 15.5
      comp=Z,282nm,18.4s,baz=177,slow=42
ASAJ  Asahikawa          4.54 270   PN      P        20 31 09.7 +0.6
ASAJ                                pmax    pmax
      comp=Z,1.0nm,0.3s
ASAJ                                MLR     MLR
      comp=Z,283nm,18.4s
YSS   Yuzh-Sakhalins     5.08 304   Pn      P        20 31 20.1 +3.4
YSS   Yuzh-Sakhalins     5.08 304  ePN      P        20 31 11.5 -5.2
MAJO  Matsushiro        11.22 230   P       P        20 32 46.8 +5.4
      comp=Z,8.5nm,0.9s
MAJO  Matsushiro        11.22 230   PN      P        20 32 46.8 +5.3
MAJO                                pmax    pmax
      comp=Z,9.0nm,0.9s
MJAR  Matsushiro Arr    11.22 230   Pn      P        20 32 40.9 -0.6
      comp=Z,0.2nm,0.3s,baz=30,slow=17,SNR=3.5
HIA   Hailar            20.52 294   P       P        20 34 34.8 -2.8
      comp=Z,4.9nm,1.0s
HIA   Hailar            20.52 294   P       P        20 34 34.8 -2.9
HIA                                 pmax    pmax
      comp=Z,5.0nm,1.0s
YAK   Yakutsk           21.05 334  eP       P        20 34 41.5 -1.5
      comp=Z,40nm,1.0s,mb4.7
YAK   Yakutsk           21.05 334  eP       P        20 34 41.5 -1.5
YAK                                 pmax    pmax
      comp=Z,40nm,1.0s,mb4.7
TIA   Tai'an            25.44 263  eP       P        20 35 25.8 -0.2
BOD   Bodaibo           25.45 315  eP       P        20 35 19.0 -6.9
BOD                                 pmax    pmax
      comp=Z,5.0nm,1.0s,mb4.0
SONM  Songino Array     29.44 292   P       P        20 36 03.2 +1.0
      comp=Z,2.4nm,0.6s,mb4.1,baz=81,slow=8.3,SNR=24
IMA2  Indian Mountai    37.54  34   P       P        20 37 13.1 +1.1
ILAR  Eielson Array     40.32  37   P       P        20 37 35.0 -0.2
      comp=Z,1.0nm,1.0s,mb3.5,baz=271,slow=10,SNR=6.5
ZAL   Zalesovo          41.71 307   P       P        20 37 47.5 +0.9
      comp=Z,0.8nm,0.5s,mb3.6,baz=36,slow=8.7,SNR=5.8
INK   Inuvik            45.32  31   P       P        20 38 16.9 +1.3
      comp=Z,2.0nm,0.8s,mb4.0,baz=259,slow=4.1,SNR=4.8
INK   Inuvik            45.32  31  eP       P        20 38 16.9 +1.3
      comp=Z,3.9nm,0.9s,mb4.2
INK   Inuvik            45.32  31  eP       P        20 38 16.9 +1.3
INK                                 pmax    pmax
      comp=Z,4.0nm,0.9s
MKAR  Makanchi Array    45.47 298   P       P        20 38 17.4 +0.4
      comp=Z,7.7nm,0.9s,mb4.5,baz=77,slow=8.0,SNR=19
MKAR  Makanchi Array    45.47 298   P       P        20 38 17.4 +0.3
KURK  Kurchatov         46.29 304  eP       P        20 38 23.7 +0.2
      comp=Z,6.5nm,0.8s,mb4.6
KURK  Kurchatov         46.29 304  eP       P        20 38 23.7 +0.2
KURK                                pmax    pmax
      comp=Z,6.0nm,0.8s,mb4.6
BVAR  Borovoye Array    50.15 310   P       P        20 38 54.4 +0.9
      comp=Z,2.1nm,0.8s,mb4.2,baz=68,slow=8.0,SNR=10
BVAR                                pP      pP       20 39 05.5 -0.8
      comp=Z,0.7nm,0.7s,baz=63,slow=6.6,SNR=3.2
BRVK  Borovoye          50.20 310  eP       P        20 38 53.8 -0.1
      comp=Z,3.1nm,0.8s,mb4.4
BRVK  Borovoye          50.20 310  eP       P        20 38 53.8 -0.1
BRVK                                pmax    pmax
      comp=Z,3.0nm,0.8s,mb4.4
AAK   Ala-Archa         52.27 296  eP       P        20 39 08.8 -0.8
      comp=Z,5.5nm,1.1s,mb4.4
AAK   Ala-Archa         52.27 296  eP       P        20 39 08.8 -0.8
AAK                                 pmax    pmax
      comp=Z,5.0nm,1.1s,mb4.4
RES   Resolute Bay      54.11  17   P       P        20 39 21.5 -1.3
      comp=Z,8.9nm,0.9s,mb4.7
RES   Resolute Bay      54.11  17   P       P        20 39 21.5 -1.4
RES                                 pmax    pmax
      comp=Z,9.0nm,0.9s,mb4.7
ARU   Arti              54.83 317  eP       P        20 39 27.7 -0.6
      comp=Z,6.9nm,0.9s,mb4.7
ARU   Arti              54.83 317  eP       P        20 39 27.7 -0.6
ARU                                 pmax    pmax
      comp=Z,7.0nm,0.9s,mb4.7
JOF   Joensuu           62.22 333  ep       P        20 40 17.9 -1.8
      comp=Z,5.1nm,0.5s,mb4.9
KAF   Kangasniemi       64.41 334  ep       P        20 40 25.0 -9.0
      comp=Z,6.5nm,0.8s,mb4.7
KAF   Kangasniemi       64.41 334  eP       P        20 40 25.0 -9.0
KAF                                 pmax    pmax
      comp=Z,7.0nm,0.8s,mb4.7
FINES FINESS Array B    64.99 334   P       P        20 40 38.0 +0.3
      comp=Z,4.9nm,0.8s,mb4.6,baz=34,slow=6.9,SNR=9.5
NVAR  Mina Array Bea    66.23  59   pP      pP       20 40 57.4 -2.1
      comp=Z,0.5nm,0.7s,baz=307,slow=5.8,SNR=4.5
PDAR  Pinedale Array    68.61  51   P       P        20 41 00.5 -0.5
      comp=Z,0.3nm,0.8s,mb3.3,baz=315,slow=6.4,SNR=2.6
PDAR                                pP      pP       20 41 12.9 -1.4
      comp=Z,0.7nm,0.7s,baz=5.6,slow=0.2,SNR=4.1
NB2   NORSAR Subarra    69.57 340   P       P        20 41 07.1 +0.6
      comp=Z,14nm,1.1s,mb4.8,baz=31,slow=6.2
NOA   NORSAR Array B    69.57 340   P       P        20 41 07.6 +1.1
      comp=Z,4.8nm,0.9s,mb4.4,baz=30,slow=6.3,SNR=3.8
NOA                                 pP      pP       20 41 18.7 -1.3
      comp=Z,2.0nm,0.6s,baz=31,slow=6.3,SNR=3.1
NOA   NORSAR Array B    69.57 340   P       P        20 41 07.6 +1.0
NOA                                 pP      pP       20 41 18.7 -1.3
NAO   NORSAR Subarra    69.85 340   P       P        20 41 07.1 -1.1
      comp=Z,14nm,1.1s,mb4.8
NAO   NORSAR Subarra    69.85 340   P       P        20 41 07.1 -1.1
NAO                                 pmax    pmax
      comp=Z,14nm,1.1s,mb4.8
KIV   Kislovodsk        70.36 313  eP       P        20 41 13.3 +1.8
      comp=Z,6.9nm,0.8s,mb4.6
KIV   Kislovodsk        70.36 313  eP       P        20 41 13.3 +1.7
KIV                                 pmax    pmax
      comp=Z,7.0nm,0.8s,mb4.6
AKASG Malin Array Be    71.91 324   P       P        20 41 20.9 +0.1
      comp=Z,2.0nm,0.7s,mb4.2,baz=38,slow=5.9,SNR=7.3
GERES GERESS Array B    79.32 332   P       P        20 42 03.8 +0.9
      comp=Z,0.5nm,0.5s,mb3.7,baz=45,slow=3.8,SNR=4.7
TXAR  Lajitas Array     81.31  57   P       P        20 42 13.6 -0.3
      comp=Z,0.3nm,0.6s,mb3.4,baz=299,slow=3.3,SNR=4.6
TXAR                                pP      pP       20 42 25.6 -2.0
      comp=Z,1.0nm,0.6s,baz=294,slow=3.5,SNR=8.7
```

*NEIC **24** 20:58:30.7±4.0, 18.22S×174.30W, h9^{km}±24^{km}, mb4.8/15, Error ellipse: s-maj=14.4km s-min=6.1km az=140.0*
*IDC **24** 20:58:38.1±3.0, 17.88S×174.69W, h58^{km}±27^{km}, mb4.2/7, mb1 4.5/8, mb1mx4.2/16, mbtmp4.6/8, MS3.6/4, Ms1 3.6/4, ms1mx3.3/19, Error ellipse: s-maj=40.7km s-min=15.9km az=142.0*
ISC 24 20:58:33.0±2.1, **18.2S**±0.1×**174.4W**±0.1, **h33**^{km}±18^{km}**, n54,** σ**0**^{s}**97**/48, **mb4.7**/22, **MS4.0**/2, **Tonga Islands**

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Code  Station Name       Δ°  AZ°    Phase ID           Time      Res
                                    Op      ISC      h  m  s    ISC
AFI   Afiamalu           4.91  31   P       P        20 59 46.6 +0.2
      58nm,0.3s,baz=80,slow=4.2,SNR=38
AFI                                 S       S        21 00 34.9 -7.9
      118nm,0.3s,baz=91,slow=22,SNR=11
AFI                                 LR      LR       21 00 45.2
      comp=Z,286nm,19.5s,baz=300,slow=26
AFI   Afiamalu           4.91  31  ePn      P        20 59 45.6 -0.8
AFI                                eSn      S        21 00 34.6 -8.3
AFI                                 LR      LR       21 00 45.2
RAR   Rarotonga         14.08 105   P       P        21 01 44.5 -7.9
      2.1nm,0.3s,baz=285,slow=8.7,SNR=13
RAR                                 S       S        21 04 06.4  -22
      1.8nm,0.3s,baz=17,slow=14,SNR=3.6
RAR                                 LR      LR       21 06 12.7
      comp=Z,113nm,19.8s,baz=252,slow=32
DZM   Mont Dzumac       18.43 255   P       P        21 02 50.2 +2.4
      0.5nm,0.3s,baz=74,slow=19,SNR=8.3
URZ   Urewera           21.36 199   P       P        21 03 17.3 -2.3
      46nm,0.7s,mb5.0,baz=8.7,slow=4.6,SNR=24
PPT   Papeete           23.61  92  eLR      LR       21 08 43.1
      521nm,30.2s
TBI   Tubuai            23.85 107  eLR      LR       21 08 51.2
      456nm,30.8s
RPZ   Rata Peaks        28.29 203   P       P        21 04 27.4 +1.9
      7.7nm,0.7s,mb4.4,slow=6.1,SNR=4.1
RKT   Rikitea           37.12 104  eLR      LR       21 15 00.0
      287nm,30.5s
CTA   Charters Tower    37.19 261  eP       P        21 05 44.1 +1.0
      16nm,0.7s,mb5.0
CTAO  Charters Tower    37.19 261  eP       P        21 05 43.9 +0.8
      18nm,0.7s,mb5.0
TAU   Tasmania Unive    40.68 224   P       P        21 06 09.3 -2.6
      52nm,1.2s,mb5.0
STKA  Stephens Creek    41.89 242   P       P        21 06 21.1 -1.0
      7.0nm,1.1s,mb4.2,baz=60,slow=6.9,SNR=5.6
STKA                                LR      LR       21 21 16.7
      comp=Z,117nm,19.8s,MS3.8,baz=26,slow=32
WB2   Warramunga Arr    48.35 259  eP       P        21 07 13.3 -0.5
WRAB  Tennant Creek     48.35 259  eP       P        21 07 13.3 -0.4
      10.0nm,0.6s,mb5.0
WRA   Warramunga Arr    48.36 259   P       P        21 07 13.4 -0.4
      10.0nm,0.7s,mb5.0,baz=97,slow=8.5,SNR=181
WRA                                 S       S        21 14 06.5 -4.3
      1.0nm,1.0s,baz=97,slow=14,SNR=5.2
KAKA  Kakadu            51.41 268  eP       P        21 07 57.5  +20
      9.9nm,0.6s,mb4.9
FITZ  Fitzroy Crossi    56.77 260  eP       P        21 08 16.4 -0.1
      5.1nm,0.8s,mb4.6
FITZ  Fitzroy Crossi    56.77 260   LR      LR       21 30 41.7
      comp=Z,174nm,21.1s,MS4.1,baz=282,slow=34
KKM   Kota Kinabalu     72.53 283   P       P        21 09 53.9 -5.3
ISA   Isabella          75.27  44  eP       P        21 10 13.9 -0.7
      9.3nm,1.0s,mb4.7
NVAR  Mina Array Bea    76.99  42   P       P        21 10 24.7 +0.3
      5.8nm,0.8s,mb4.6,baz=225,slow=10,SNR=17
TPH   Tonopah           77.48  43  eP       P        21 10 27.1  0.0
      7.2nm,0.6s,mb4.8
HLID  Hailey            82.34  39  eP       P        21 10 53.3 +0.3
      6.7nm,1.2s,mb4.5
MNTX  Cornudas Mount    82.61  53  eP       P        21 10 54.2 -0.4
      5.2nm,0.8s,mb4.6
TXAR  Lajitas Array     82.92  56   P       P        21 10 57.0 +0.8
      3.6nm,1.0s,mb4.4,baz=217,slow=6.3,SNR=8.0
PV10  Paradox Valley    83.09  46  eP       P        21 10 56.9  0.0
ANMO  Albuquerque       83.28  50   P       P        21 10 58.5 +0.6
      1.6nm,0.8s,mb4.1,baz=270,slow=7.1,SNR=3.3
ANMO  Albuquerque       83.28  50  eP       P        21 10 58.3 +0.3
      8.8nm,1.3s,mb4.6
PV01  Paradox Valley    83.29  46  eP       P        21 10 58.0 +0.1
NEW   Newport           83.50  34  eP       P        21 10 58.1 -0.7
      4.7nm,0.8s,mb4.6
GDL2  Guadalupe Moun    83.61  53  eP       P        21 11 00.1 +0.4
AHID  Auburn Hatcher    83.95  41   P       P        21 11 00.8 -0.5
      15nm,1.4s,mb4.9
MCK   McKinley          83.99  11   P       P        21 11 00.9  0.0
      2.6nm,0.9s,mb4.4
CPRX  Cap Rock          84.35  53  eP       P        21 11 03.7 +0.2
COLA  College           85.23  11  eP       P        21 11 07.0 -0.1
      11nm,0.9s,mb5.0
ILAR  Eielson Array     85.32  11   P       P        21 11 07.6 +0.1
      1.4nm,0.5s,mb4.3,baz=228,slow=6.1,SNR=46
VNA3  Neumayer Olymp    90.20 175           P        21 11 33.6 +2.7
VNA3  Neumayer Olymp    90.20 175           P        21 11 35.7 +4.8
VNA3  Neumayer Olymp    90.20 175           P        21 11 39.3 +8.4
SNAA  Sanae             90.21 177           P        21 11 33.8 +2.9
SNAA  Sanae             90.21 177           P        21 11 36.7 +5.8
SNAA  Sanae             90.21 177           P        21 11 49.6  +19
SNAA  Sanae             90.21 177  eP       P        21 11 32.6 +1.7
      3.0nm,0.9s,mb4.6
VNA2  Neumayer--Watz    90.69 176           P        21 11 33.5 +0.4
VNA2  Neumayer--Watz    90.69 176           P        21 11 35.8 +2.7
VNA2  Neumayer--Watz    90.69 176           P        21 11 37.6 +4.5
VNA2  Neumayer--Watz    90.69 176           P        21 11 42.8  +10
BVAR  Borovoye Array   119.46 321   PKP     PKPdf    21 17 20.4 +1.2
      0.9nm,0.7s,baz=136,slow=1.6,SNR=5.3
CLL   Collm            146.41 352   P       PKPdf    21 18 12.6 +3.5
      logA/T=0.9
CLL                                i                 21 18 23.6
CLL                                i                 21 18 33.6
CLL   Collm            146.41 352  i P      PKPdf    21 18 12.6 +3.5
CLL                                i                 21 18 23.6
CLL                                i                 21 18 33.6
GERES GERESS Array B   148.70 350   PKPbc   PKPdf    21 18 18.8 +5.9
      1.5nm,1.0s,baz=333,slow=3.0,SNR=6.3
DAVOX Davos            151.24 354   PKPbc   PKPdf    21 18 25.7 +8.7
      4.0nm,0.6s,baz=20,slow=7.0,SNR=5.3
DAVOX Davos            151.24 354   PKPbc   PKPdf    21 18 25.7 +8.7
```

*HLW **24** 21:00:15.0, 34.15N×25.76E, h14^{km}, Mb4.6*
*IDC **24** 21:00:17.1±0.6, 33.99N×25.77E, mb4.2/20, mb1 4.4/27, mb1mx4.3/32, mbtmp4.3/27, ML4.5/6, MS4.1/4, Ms1 4.1/4, ms1mx3.6/29, Error ellipse: s-maj=14.0km s-min=12.0km az=83.0*
*BJI **24** 21:00:18.0, 33.75N×25.37E, h41^{km}, mB5.4, mb4.9, Ms4.5, Msz4.2*
*ATH **24** 21:00:19.7, 33.90N×25.73E, h25^{km}, MD4.1/6*
*MOS **24** 21:00:19.1±1.1, 33.95N×25.69E, h27^{km}, mb4.7/33, Error ellipse: s-maj=5.4km s-min=2.5km az=112.0*
*NEIC **24** 21:00:19.7, 33.90N×25.73E, h25^{km}, mb4.4/73, MS3.9/5, MD4.1(ATH), After ATH.*
*SKO **24** 21:00:20.4, 33.39N×24.99E, h60^{km}*
*CSEM **24** 21:00:25.7, 34.20N×25.68E, h60^{km}, mb4.5*
*NIC **24** 21:00:26.6±0.4, 35.20N×26.14E, h25^{km}, mb4.7, ML4.3, MW3.8*
ISC 24 21:00:18.5±0.1, **33.87N**±0.02×**25.86E**±0.02, **h33**^{km}**, n479,** σ**1**^{s}**29**/521, **mb4.4**/75, **MS4.0**/11, **21C-24D, Eastern Mediterranean Sea**

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Code  Station Name       Δ°  AZ°    Phase ID           Time      Res
                                    Op      ISC      h  m  s    ISC
XRY   Khrisi             1.02 352  ePN      Pn       21 00 38.5 +1.8
ZKR   Zakros             1.28  13   Pn      Pn       21 00 43.9 +3.5
LAST  Lasithi            1.33 346   Pn      Pn       21 00 42.1 +0.9
NPS   Neapolis           1.41 352  ePN      Pn       21 00 44.6 +2.3
SIVA  Sivas              1.44 323   Pn      Pn       21 00 44.7 +2.0
IDI   Anoyia             1.63 331   Pn      Pn       21 00 46.4 +0.9
      37nm,0.3s,baz=158,slow=15,SNR=131
IDI                                 Sn      Sn       21 01 05.9 +0.5
      84nm,0.3s,baz=86,slow=19,SNR=10
IDI   Anoyia             1.63 331   Pn      Pn       21 00 46.3 +0.9
IDI                                 Sn      Sn       21 01 05.9 +0.4
GVD   Gavdhos            1.76 304  ePn      Pn       21 00 49.0 +1.7
GVD   Gavdhos            1.76 304  ePn      Pn       21 00 49.0 +1.7
KARP  Karpathos          1.99  32  ePN      Pn       21 00 54.5 +3.9
KARP                               eSN      Sn       21 01 19.7 +5.1
VAM   Vamos              2.06 319  ePN      Pn       21 00 53.8 +2.2
VAM                                eSN      Sn       21 01 18.6 +2.2
SANT  Santorini          2.52 353  ePn      Pn       21 00 59.1 +0.9
SANT  Santorini          2.52 353  ePn      Pn       21 00 59.1 +0.9
HMAT  Matruh             2.95 159 ⇓P       P        21 01 05.2 +1.0
HMAT                                S       S        21 01 41.4 +2.5
HMAT  Matruh             2.95 159   P       P        21 01 06.0 +1.8
ARG   Arkhangelos        2.99  38  ePN      Pn       21 01 08.6 +3.7
DAT   Datca              3.18  26  ePN      Pn       21 01 08.2 +0.6
DAT                                eSN      Sn       21 01 45.8 +1.0
APE   Apeiranthos        3.21 355  ePN      Pn       21 01 08.0 +0.1
BODT  Bodrum             3.40  20  ePN      Pn       21 01 10.4 -0.3
BDRM  Kayabasi           3.44  22  i P      P        21 01 11.9 +0.8
DABA  Dabaa              3.50 144   P       P        21 01 12.3 +0.2
DALT  Dalyan (Mudla)     3.68  37  ePN      Pn       21 01 15.9 +1.3
VLI   Veliai             3.72 321   Pn      Pn       21 01 16.5 +1.3
MLSB  Milas              3.76  24   PN      Pn       21 01 17.0 +1.2
YER   Yerkesik           3.81  30   PN      Pn       21 01 17.4 +0.9
FETY  Fethiye            3.82  43   PN      Pn       21 01 17.6 +1.0
AKAS  Kas                3.87  51  i P      P        21 01 19.9 +2.6
SMG   Samos              3.92  11   Pn      Pn       21 01 19.9 +1.9
ELL   Elmali             4.38  48   PN      Pn       21 01 25.3 +0.7
GOLH  Golhisar           4.52  41  i P      P        21 01 29.5 +3.1
SWA1                     4.59 182 ⇓P       P        21 01 27.7 +0.3
SWA1                                S       S        21 02 20.8 +0.4
SWA1                     4.59 182   P       P        21 01 28.1 +0.7
ITM   Ithomi             4.61 317   Pn      Pn       21 01 28.5 +0.7
BLCB  Balcova            4.61  12  ePN      Pn       21 01 28.2 +0.3
DNZL  Cakiroluk          4.61  33  i P      P        21 01 29.1 +1.4
SWA2                     4.62 184   P       P        21 01 28.2 +0.3
SWA2                     4.62 184   P       P        21 01 29.0 +1.1
DENT  Denizli            4.66  33   PN      Pn       21 01 29.2 +0.7
HBRG  Burj al ‘Arab      4.70 133   P       P        21 01 29.1  0.0
AKS   Akhisar            5.25  17   PN      Pn       21 01 37.2 +0.4
BCK   Bucak              5.26  46   PN      Pn       21 01 38.1 +1.1
KHL   Karahalli          5.34  33   PN      Pn       21 01 38.0 -0.2
PPCY  Paphos             5.46  77   P       P        21 01 41.1 +1.5
AKMC  Akamas             5.47  76   P       P        21 01 40.2 +0.4
ISP   Isparta            5.48  42   PN      Pn       21 01 40.9 +0.8
ISP   Isparta            5.48  42  ePn      Pn       21 01 42.4 +2.4
      39nm,0.6s
ISP   Isparta            5.48  42  i P      P        21 01 43.3 +3.4
RLS   Riolos of Patr     5.50 321   Pn      Pn       21 01 42.5 +2.2
TKTP  Tekketepe          5.51  40  i P      P        21 01 42.3 +1.9
ALFC  Alevga             5.71  75   P       P        21 01 42.7 -0.5
      10nm,0.5s
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ALFC				S	S	21 02 43.9	-4.6
HMYD	Mayadein	5.84	133	P	P	21 01 44.6	-0.4
HMYD	Mayadein	5.84	133	P	P	21 01 45.2	+0.2
HNAT	Natroun	5.85	135	⇓P	P	21 01 45.2	+0.1
HNAT	Natroun	5.85	135	P	P	21 01 45.4	+0.3
SZAC	Souni-Zanaja	5.88	79	P	P	21 01 46.9	+1.4
AGG	Agios Georgios	5.88	332	*e*P	P	21 01 46.7	+1.1
XOR	Xorichti	5.89	339	*e*P	P	21 01 45.7	-0.1
EZN	Ezine	5.96	3	*e*PN	Pn	21 01 46.0	-0.9
BALB	Balikesir	5.99	15	*e*PN	Pn	21 01 47.5	+0.3
SQR		6.03	130	P	P	21 01 48.5	+0.9
FYM	Al Fayyum	6.06	132	P	P	21 01 47.8	-0.3
FYM				S	S	21 02 56.0	-1.3
AWBH		6.11	154	⇓P	P	21 01 49.3	+0.5
AYT	Al ‘Ayyat	6.12	131	P	P	21 01 48.8	-0.2
HLW	Helwan	6.14	129	P	P	21 01 50.5	+1.3
ALT	Altintas	6.21	32	*e*PN	Pn	21 01 49.9	-0.5
MAMC	Mammari	6.21	76	P	P	21 01 50.7	+0.5
CSS	Prodhromos	6.27	78	P	P	21 01 52.3	+1.3
	6.0nm,0.5s						
CSS				S	S	21 02 58.5	-3.9
CSS	Prodhromos	6.27	78	Pn	Pn	21 01 52.4	+1.2
CSS				Sn	Sn	21 02 59.5	-3.0
PAIG	Paliouri	6.30	345	*e*P	P	21 01 51.0	-0.5
ERMK	Ermenek	6.40	62	*i* P	P	21 01 54.2	+1.3
KOT	Kottamia	6.41	126	⇓P	P	21 01 52.6	-0.5
KOT				S	S	21 03 03.5	-2.6
KOT	Kottamia	6.41	126	P	P	21 01 52.7	-0.4
HSAF	As Saff	6.43	130	⇓P	P	21 01 53.2	-0.2
GLL	Jalalah	6.56	129	⇓P	P	21 01 54.8	-0.4
GLL	Jalalah	6.56	129	P	P	21 01 55.1	-0.1
HHAG	Hagoal	6.58	125	P	P	21 01 56.5	+1.0
ORLT	Orhaneli	6.63	21	*e*PN	Pn	21 01 55.0	-1.3
KONT	Konya--Tatoy	6.66	50	*e*PN	Pn	21 01 55.9	-0.9
HBNS	Bani Suwayf	6.70	136	P	P	21 01 56.9	-0.3
PLG	Polygyros	6.78	344	P	P	21 01 59.6	+1.4
KDHN	Kadinhani	6.87	46	*i* P	P	21 01 59.8	+0.4
ESKT	Eskisehir	6.92	34	*e*PN	Pn	21 01 59.6	-0.8
KIZT	Kizilcal	6.97	42	*e*PN	Pn	21 02 00.2	-0.9
AMAG	Maghara	7.00	115	⇓P	P	21 01 58.9	-2.5
AMAG	Maghara	7.00	115	P	P	21 02 00.4	-1.0
HFRF	Wahat Farafira	7.02	162	⇑P	P	21 02 01.1	-0.5
ALN	Alexandroupoli	7.02	1	*e*P	P	21 01 58.9	-2.8
SUZ		7.16	122	P	P	21 02 02.7	-0.8
SUZ		7.16	122	P	P	21 02 03.7	+0.2
MEST	Erdemli	7.30	66	*i* P	P	21 02 03.3	-2.2
ZAF		7.31	127	P	P	21 02 04.8	-0.8
LSK	Leskovik	7.55	328	*e*Pn	Pn	21 02 08.0	-1.2
GRG	Griva	7.59	340	*e*P	P	21 02 09.8	+0.2
KEK	Kerkira	7.60	322	Pn	Pn	21 02 09.2	-0.7
NVR	Nevrokopi	7.64	349	Pn	Pn	21 02 10.6	+0.2
KNT	Kendrikon	7.65	343	*e*P	P	21 02 10.1	-0.3
MERS	Mersin	7.68	65	*e*PN	Pn	21 02 10.4	-0.6
OFRI	‘Ofer	7.74	97	Pn	Pn	21 02 10.2	-1.7
HAF	Haifa	7.74	96	Pn	Pn	21 02 10.3	-1.6
FNA	Florina	7.77	334	*e*P	P	21 02 11.9	-0.2
KZIT	Kziot	7.80	110	Pn	Pn	21 02 11.7	-1.0
KZIT				Sn	Sn	21 03 35.4	-5.3
HNTI	Hanita	7.82	93	Pn	Pn	21 02 12.0	-1.0
HNTI				Sn	Sn	21 03 36.4	-4.8
VAY	Valandovo	7.89	342	*e*Pn	Pn	21 02 14.1	+0.2
HNKL	Nakhl	7.94	117	⇓P	P	21 02 13.2	-1.2
HNKL				S	S	21 03 39.5	-4.5
RTMM	Retamin	7.97	108	Pn	Pn	21 02 14.5	-0.5
BIA	Bitola	8.00	335	*e*Pn	P	21 02 14.4	-0.8
BIA				*e*Sn	Sn	21 03 39.2	-6.5
BIA	Bitola	8.00	335	*e*Pn	P	21 02 14.4	-0.8
BIA				*e*Sn	Sn	21 03 39.3	-6.5
MMA0	Mount Meron ar	8.02	93	Pn	P	21 02 14.6	-0.9
MASH	Mash‘abbe Sade	8.07	108	Pn	P	21 02 15.7	-0.5
ASUT		8.10	141	⇓P	P	21 02 16.8	+0.2
MMLI	Mount Malkishu	8.14	97	Pn	P	21 02 15.8	-1.4
MMLI				Sn	Sn	21 03 43.9	-5.4
BHL	Bhannes	8.14	87	*e*Pn	P	21 02 14.6	-2.7
GRB	Gharib	8.14	131	P	P	21 02 16.5	-0.7
GRB	Gharib	8.14	131	P	P	21 02 17.0	-0.2
ANTO	Ankara	8.17	41	P	P	21 02 15.6	-2.0
ANTO				pmax	pmax		
	comp=Z,16nm,0.8s						
ANTO	Ankara	8.17	41	P	P	21 02 15.6	-2.0
	comp=Z,16nm,0.8s						
HRDS	Abu Rudays	8.18	127	⇓P	P	21 02 17.1	-0.6
KSDI	Kefar Szold	8.21	92	Pn	P	21 02 16.6	-1.5
KARA	Karaisali	8.22	63	*e*PN	P	21 02 18.2	-0.1
NIG	Nigde	8.26	57	*e*PN	P	21 02 17.1	-1.7
OHR	Ohrid	8.28	332	*e*Pn	P	21 02 18.1	-1.0
OHR				*e*Sn	Sn	21 03 43.8	-8.9
OHR	Ohrid	8.28	332	*e*Pn	P	21 02 18.1	-1.0
OHR				*e*Sn	Sn	21 03 43.8	-8.8
KAMT	Kaman	8.36	47	*e*PN	P	21 02 19.1	-1.2
HWQ	Hawqa	8.38	84	*e*Pn	P	21 02 19.6	-0.9
MZDA	Masada	8.41	105	Pn	P	21 02 19.6	-1.4
MZDA				Sn	Sn	21 03 50.3	-5.7
PRNI	Paran	8.51	112	Pn	P	21 02 22.1	-0.2
PRNI				Sn	Sn	21 03 52.4	-6.0
ZFRI	Zfri	8.55	110	Pn	P	21 02 22.3	-0.7
ZFRI				Sn	Sn	21 03 53.7	-5.9
MKRJ	Makawir	8.56	103	Pn	P	21 02 22.1	-0.9
MKRJ				Sn	Sn	21 03 53.4	-6.2
CEYT	Ceyhan	8.65	66	*e*PN	P	21 02 23.0	-1.4
TR2		8.67	127	⇓P	P	21 02 23.8	-0.8
HRFI	Mount Harif	8.68	114	Pn	P	21 02 24.5	-0.2
HRFI				Sn	Sn	21 03 57.9	-4.7
MBH	Mount Berech	8.71	115	Pn	P	21 02 24.5	-0.6
MBH				Sn	Sn	21 03 57.5	-5.8
HTY	Hatay	8.73	72	*e*PN	P	21 02 24.1	-1.2
HKAT	Jabal Katrina	8.76	125	⇓P	P	21 02 25.2	-0.7
EIL	Elat	8.79	116	Pn	P	21 02 25.7	-0.6
EIL				Sn	Sn	21 04 00.0	-5.5
AQBJ	Aqaba	8.84	115	Pn	P	21 02 27.0	+0.1
KOZT	Kozan	8.87	63	*e*PN	P	21 02 25.9	-1.5
HBST	Basata	8.87	119	⇓P	P	21 02 26.1	-1.3
LCI	Lecce	8.94	318	Pn	P	21 02 26.1	-2.2
SOI	Samo	8.99	301	Pn	P	21 02 26.7	-2.3
SOI				Sn	Sn	21 03 57.1	-13
ALWS	Ilw as Safayha	9.07	118	P	P	21 02 30.3	+0.2
ALWS				S	S	21 04 08.6	-3.4
TR1		9.07	128	P	P	21 02 29.2	-0.9
HDHB	Dhahab	9.08	122	⇓P	P	21 02 29.4	-0.8
GRI	Girifalco	9.08	306	P	P	21 02 28.8	-1.5
GRI				pmax	pmax		
	comp=Z,112nm,0.6s						
GRI	Girifalco	9.08	306	Pn	P	21 02 28.8	-1.5
	comp=Z,112nm,0.6s						
HAQS	Haql	9.11	119	P	P	21 02 31.3	+0.7
JMOS	Jabal al Moall	9.18	118	P	P	21 02 31.6	+0.1
MTTG	Motta San Giov	9.22	299	Pn	P	21 02 29.8	-2.4
MTTG				Sn	Sn	21 04 02.8	-13
SHRM		9.27	128	⇓P	P	21 02 31.7	-1.1
SHRM		9.27	128	P	P	21 02 32.4	-0.4
AGST	Augusta-Monte	9.30	294	Pn	P	21 02 30.2	-3.1
SCLL	Scilla	9.31	301	Pn	P	21 02 33.0	-0.4
HHRG	Al Ghardaqah	9.38	133	⇓P	P	21 02 33.7	-0.7
HHRG	Al Ghardaqah	9.38	133	P	P	21 02 33.6	-0.8
SSY	Sortino	9.39	294	Pn	P	21 02 31.8	-2.7
	comp=Z,187nm,0.4s						
SSY				Sn	Sn	21 04 09.2	-11
CORM	Corum	9.42	46	*e*PN	P	21 02 33.4	-1.6
PZI	Palazzolo	9.46	293	Pn	P	21 02 32.8	-2.6
PZI				Sn	Sn	21 04 10.6	-11
TDS	Terranova Siba	9.58	310	P	P	21 02 38.5	+1.4
BDAS	Al Bad‘	9.59	122	P	P	21 02 37.4	+0.1
ORI	Oriolo Calabro	9.74	312	P	P	21 02 40.4	+1.0
BRT	Bari-Castellan	9.82	318	Pn	P	21 02 37.3	-3.1
BRT				Sn	Sn	21 04 18.0	-13
GAZ	Gaziantep	9.82	67	PN	P	21 02 38.6	-1.9
AYUS	‘Aynunah	9.85	123	P	P	21 02 40.7	-0.2
QURS	Qurayyt al Mil	9.98	101	P	P	21 02 48.1	+5.5
VAE	Valguarnera	9.99	294	Pn	P	21 02 42.6	-0.1
	comp=Z,6.2nm,0.3s,baz=71,slow=7.0,SNR=8.5						
VAE				Sn	Sn	21 04 21.9	-13
	comp=Z,3.5nm,0.3s,baz=336,slow=4.1,SNR=4.6						
VAE				LR	LR	21 06 57.6	
	comp=Z,419nm,18.1s,baz=325,slow=40						
HSFG		10.07	134	⇓P	P	21 02 43.2	-0.8
MGR	Morigerati	10.35	310	P	P	21 02 47.1	-0.6
SLCN	Sala Consilina	10.44	312	Pn	P	21 02 46.6	-2.4
SLCN				Sn	S	21 04 37.4	-8.5
FAVR	Favara	10.50	292	Pn	P	21 02 50.3	+0.5
SGO	Sicignano	10.74	312	Pn	P	21 02 50.5	-2.6
	comp=Z,7.4nm,0.7s						
SGO				Sn	S	21 04 33.5	-20
SGO	Sicignano	10.74	312	P	P	21 02 50.5	-2.6
SGO				pmax	pmax		
	comp=Z,7.0nm,0.7s						
TBKS	Tabuk	10.75	119	P	P	21 02 53.3	+0.1
HEDF	Idfu	10.81	142	⇑P	P	21 02 53.2	-1.0
HEDF	Idfu	10.81	142	P	P	21 02 53.1	-1.1
CLTB	Caltabellotta	10.93	293	Pn	P	21 02 55.8	+0.2
	comp=Z,42nm,1.1s						
HQSR		10.96	135	P	P	21 02 54.3	-1.8
RGNG	Rignano Grg	11.26	317	Pn	P	21 02 57.4	-2.7
HADB		11.40	136	P	P	21 03 01.2	-0.9
MLR	Muntele Rosu	11.61	0	Pn	P	21 03 06.0	+1.1
	comp=Z,0.1nm,0.3s,baz=162,slow=19,SNR=3.1						
EMRS	Mersa Alam	11.78	136	P	P	21 03 06.5	-0.7
PTK	Pertek	12.00	61	*e*PN	P	21 03 08.0	-2.1
CII	Carovilli	12.04	314	Pn	P	21 03 10.8	+0.2
CII				Sn	S	21 05 13.6	-11
HMSM	Jabal Masmas	12.16	153	P	P	21 03 11.9	-0.4
BZS	Buzias	12.18	346	⇓P	P	21 03 09.8	-2.7
HAGS	Hagol	12.36	138	P	P	21 03 14.2	-0.8
UMJS	Umm Lajj	13.15	128	P	P	21 03 26.4	+0.8
KIS	Kishinev	13.31	9	*e*P	P	21 03 22.0	-5.5
PKSM	Moragy	13.51	338	P	P	21 03 31.2	+1.1
ANN	Anapa	14.10	36	*e*P	P	21 03 36.0	-2.0
ANN				*e*S	S	21 06 07.4	-6.9
ANN				pmax	pmax		
	comp=Z,63nm,1.2s						
ANN	Anapa	14.10	36	*e*P	P	21 03 36.0	-2.0
	comp=Z,63nm,1.2s						
KBRS	Khaybar	14.13	121	P	P	21 03 41.8	+3.3
YNBS	Yanbu‘ al Bahr	14.22	129	P	P	21 03 42.5	+2.9
GCIS	Gornji Cirnik	14.32	330	*e*Pn	P	21 03 36.6	-4.2
KMPD	K-Podol’skiy	14.69	2	P	P	21 03 46.0	+0.4
PSZ	Piszkesteto	14.74	344	*e*Pn	P	21 03 44.4	-1.9
	comp=Z,5.6nm,0.8s						
PSZ	Piszkesteto	14.74	344	*e*P	P	21 03 44.4	-1.9
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PSZ	Piszkesteto	14.74	344	*e*Pn	P	21 03 44.4	-1.9
	comp=Z,5.6nm,0.8s						
CEY	Cerknica	14.74	327	*e*Pn	P	21 03 42.1	-4.2
PERS	Pernice	15.15	331	*e*Pn	P	21 03 46.7	-4.9
HILS	Ha’il	15.15	111	P	P	21 03 54.7	+3.0
VOY	Vojsko	15.21	327	*e*Pn	P	21 03 49.7	-2.7
VOY				*e*		21 03 56.2	
VOY				*e*		21 04 04.3	
VOY				*e*		21 06 25.3	
OBKA	Obir	15.28	329	⇑*e*P	P	21 03 50.6	-2.7
	comp=Z,6.4nm,0.6s						
OBKA	Obir	15.28	329	⇑*e*P	P	21 03 50.6	-2.7
	comp=Z,6.4nm,0.6s						
KOLS	Kolonicke sedl	15.29	351	*e*PN	P	21 03 53.3	-0.1
CRVS	Cervenica-Dubn	15.38	349	*e*P	P	21 03 59.5	+4.9
ARSA	Arzberg	15.49	333	⇑*e*P	P	21 03 52.9	-3.1
	comp=Z,6.6nm,0.5s						
GMNA	Gemona	15.69	326	Pn	P	21 04 03.4	+4.8
PTCC	Patocco-Chiusa	15.73	326	Pn	P	21 04 00.5	+1.3
PGF	Pioggiola	15.82	308	*e*P	P	21 03 58.7	-1.6
	comp=Z,44nm,1.0s						
PGF	Pioggiola	15.82	308	*e*P	P	21 03 58.7	-1.6
PGF				pmax	pmax		
	comp=Z,22nm,1.0s						
STHS	Stebnicka Huta	15.91	349	*e*P	P	21 04 05.8	+4.4
KWP	Kalwaria	15.93	353	*e*P	P	21 04 02.0	+0.4
KWP				MLR	MLR	21 11 03.3	
	comp=Z,500nm,16.5s						
KWP	Kalwaria	15.93	353	*e*P	P	21 03 56.6	-5.0
	comp=Z,58nm,1.4s						
FVI	Forni Avoltri	16.14	326	Pn	P	21 04 03.8	-0.6
KBA	Koelnbreinsper	16.25	328	⇑*e*P	P	21 04 03.0	-2.7
	comp=Z,8.5nm,0.7s						
KBA	Koelnbreinsper	16.25	328	⇑*e*P	P	21 04 03.0	-2.7
KBA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CTI	Castel Tesino	16.30	322	Pn	P	21 04 04.9	-1.5
ONI	Oni	16.31	53	P	P	21 04 08.9	+2.4
GNI	Garni	16.32	62	Pn	P	21 04 10.1	+3.4
	comp=Z,0.3nm,0.3s,baz=204,slow=18,SNR=4.4						
GNI				LR	LR	21 12 16.5	
	comp=Z,600nm,19.2s,baz=271,slow=44						
GNI	Garni	16.32	62	*e*P	P	21 04 08.5	+1.8
	comp=Z,20nm,1.1s						
GNI	Garni	16.32	62	*e*P	P	21 04 08.5	+1.8
	comp=Z,20nm,1.1s						
MOA	Molln	16.47	331	⇑*e*P	P	21 04 05.8	-2.7
	comp=Z,20nm,1.3s						
MOA	Molln	16.47	331	⇑*e*P	P	21 04 05.8	-2.7
	comp=Z,20nm,1.3s						
KIV	Kislovodsk	16.49	47	*e*P	P	21 04 13.9	+5.1
	comp=Z,53nm,0.9s						
KIV	Kislovodsk	16.49	47	*e*P	P	21 04 14.0	+5.2
KIV				pmax	pmax		
	comp=Z,53nm,0.9s						
VRAC	Vranov	16.89	339	Pn	P	21 04 14.0	+0.2
	comp=Z,0.9nm,0.3s,baz=155,slow=12,SNR=6.7						
OKC	Ostrava-Krasne	16.95	343	*e*P	P	21 04 13.1	-1.4
KIEV	Kiev	17.00	7	P	P	21 04 15.0	-0.1
AKASG	Malin Array Be	17.00	7	Pn	P	21 04 15.3	+0.1
	comp=Z,7.2nm,0.3s,baz=196,slow=11,SNR=51						
AKASG	Malin Array Be	17.00	7	Pn	P	21 04 15.3	+0.1
MORC	Moravsky Berou	17.05	341	*e*P	P	21 04 13.8	-1.9
	comp=Z,25nm,1.3s						
MORC	Moravsky Berou	17.05	341	*e*P	P	21 04 13.8	-1.9
MORC				pmax	pmax		
	comp=Z,25nm,1.3s						
MORC	Moravsky Berou	17.05	341	*e*Pn	P	21 04 14.0	-1.7
WTTA	Wattenberg	17.16	325	⇑*e*P	P	21 04 17.6	+0.3
	comp=Z,77nm,1.4s						
WTTA	Wattenberg	17.16	325	⇑*e*P	P	21 04 17.6	+0.4
WTTA				pmax	pmax		
	comp=Z,77nm,1.4s						
TREC	Trest	17.23	337	*e*P	P	21 04 14.8	-3.3
WATA	Walderalm	17.25	326	⇑*i*P	P	21 04 17.9	-0.3
	comp=Z,9.8nm,0.5s						
WATA	Walderalm	17.25	326	⇑P	P	21 04 17.9	-0.3
WATA				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GOF	Gofitskoye	17.30	45	*e*P	P	21 04 25.4	+6.4
SQTA	Sankt Quirin	17.34	325	⇓*e*P	P	21 04 19.7	+0.3
	comp=Z,9.2nm,0.6s						
SQTA	Sankt Quirin	17.34	325	⇓*e*P	P	21 04 19.7	+0.3
	comp=Z,9.2nm,0.6s						
SQTA	Sankt Quirin	17.34	325	⇓*e*P	P	21 04 19.7	+0.3
SQTA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
SBF	Sospel	17.45	310	*e*P	P	21 04 19.4	-1.4
	comp=Z,74nm,0.9s						
SBF	Sospel	17.45	310	*e*P	P	21 04 19.4	-1.4
SBF				pmax	pmax		
	comp=Z,37nm,0.9s						
MOTA	Moosalm	17.48	325	⇑*e*P	P	21 04 21.4	+0.3
	comp=Z,9.3nm,0.7s						
MOTA	Moosalm	17.48	325	⇑*e*P	P	21 04 21.4	+0.3
MOTA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
GERES	GERESS Array B	17.50	332	P	P	21 04 20.3	-1.1
	comp=Z,0.9nm,0.3s,baz=145,slow=12,SNR=22						
DAVOX	Davos	17.70	322	P	P	21 04 24.9	+1.0
	comp=Z,1.4nm,0.3s,baz=148,slow=6.9,SNR=12						
KHC	Kasperske Hory	17.78	333	*e*P	P	21 04 25.5	+0.6
KHC				AMS	AMS	21 12 30.0	
	comp=Z,700nm,12.9s						
LMR	La Mourre	17.80	308	*e*P	P	21 04 23.7	-1.6
	comp=Z,56nm,1.2s						
LMR	La Mourre	17.80	308	*e*P	P	21 04 23.7	-1.6
LMR				pmax	pmax		
	comp=Z,28nm,1.2s						
FRF	La Foret Royal	17.81	309	*e*P	P	21 04 24.2	-1.2
DPC	Dobruska-Polom	17.90	340	*e*P	P	21 04 24.7	-1.7
FUR	Furstenfeldbru	17.99	327	P	P	21 04 27.7	+0.2
DAVA	Damuels	18.04	323	⇑*e*P	P	21 04 28.0	-0.1
	comp=Z,18nm,0.9s						
DAVA	Damuels	18.04	323	⇑*e*P	P	21 04 28.0	-0.1
	comp=Z,18nm,0.9s						
UPC	Upice	18.13	339	*e*P	P	21 04 24.7	-4.7
PRU	Pruhonice	18.14	336	*e*P	P	21 04 27.6	-1.9
MBDF	Montbardon	18.29	312	*e*P	P	21 04 30.8	-0.5
	comp=Z,69nm,1.0s						
MBDF	Montbardon	18.29	312	*e*P	P	21 04 30.8	-0.5
MBDF				pmax	pmax		
	comp=Z,34nm,1.0s						
KSP	Ksiaz	18.35	340	*e*P	P	21 04 31.1	-1.0
KSP	Ksiaz	18.35	340	*e*P	P	21 04 29.8	-2.3
BNI	Bardonecchia	18.50	313	*e*P	P	21 04 34.9	+0.9
	comp=Z,15nm,1.2s						
BNI	Bardonecchia	18.50	313	*e*P	P	21 04 34.9	+0.8
BNI				pmax	pmax		
	comp=Z,15nm,1.2s						
BNI	Bardonecchia	18.50	313	*e*P	P	21 04 34.9	+0.8
	comp=Z,15nm,1.2s						
PVCC	Panska Ves	18.60	337	*e*P	P	21 04 32.7	-2.4
LPG	La Plagne	18.69	314	*e*P	P	21 04 36.1	-0.2
	comp=Z,23nm,0.8s						
LPG	La Plagne	18.69	314	*e*P	P	21 04 36.1	-0.2
LPG				pmax	pmax		
	comp=Z,11nm,0.8s						
SMRF	Simiane la Rot	18.69	309	*e*P	P	21 04 36.2	-0.2
WAR	Warsaw	18.70	351	*e*P	P	21 04 35.2	-1.2
LPL	La Plagne	18.71	314	*e*P	P	21 04 36.0	-0.6
ORIF	Oris-en-Rattie	18.93	312	*e*P	P	21 04 38.3	-0.9
	comp=Z,63nm,1.4s						
ORIF				*e*R			
	comp=Z,470nm,20.0s						
BRG	Berggiesshubel	19.10	336	*e*P	P	21 04 39.8	-1.3
	comp=Z,16nm,1.5s						
BRG				*e*		21 05 04.8	
BRG				*e*		21 08 23.8	
BRG	Berggiesshubel	19.10	336	*e*P	P	21 04 39.8	-1.3
BRG				pmax	pmax		
	comp=Z,16nm,1.5s						
BRG	Berggiesshubel	19.10	336	*e*P	P	21 04 39.8	-1.3
NKC	Novy Kostel	19.10	333	*e*P	P	21 04 41.2	+0.1
GRFO	Grafenberg	19.16	330	P	P	21 04 41.5	-0.2
GRA1	Grafenberg Arr	19.16	330	*e*P	P	21 04 39.5	-2.3
	comp=Z,66nm,1.5s						
GRF	Grafenberg Arr	19.16	330	*e*P	P	21 04 39.5	-2.3
GRF				pmax	pmax		
	comp=Z,66nm,1.5s						
GRF	Grafenberg Arr	19.16	330	*e*P	P	21 04 39.5	-2.3
GRF				pmax	pmax		
	comp=Z,66nm,1.5s						
GRF	Grafenberg Arr	19.16	330	*e*P	P	21 04 39.5	-2.3
	comp=Z,66nm,1.5s						
BBS	Basel-Blauen	19.39	320	*e*P	P	21 04 45.8	+1.5
STU	Stuttgart	19.39	325	*e*P	P	21 04 39.1	-5.3
	comp=Z,44nm,1.1s						
STU	Stuttgart	19.39	325	*e*P	P	21 04 39.1	-5.2
STU				pmax	pmax		
	comp=Z,44nm,1.1s						
BFO	Black Forest	19.51	323	P	P	21 04 47.7	+2.0
VIVF	Saint-Julien-l	19.66	310	*e*P	P	21 04 47.0	-0.3
CABF	La Chapelle	19.68	316	*e*P	P	21 04 46.0	-1.5
	comp=Z,45nm,0.9s						
CABF	La Chapelle	19.68	316	*e*P	P	21 04 46.0	-1.5
CABF				pmax	pmax		
	comp=Z,23nm,0.9s						
LOMF	Lomont	19.69	319	*e*P	P	21 04 47.1	-0.5
MOX	Moxa	19.75	332	*i* P	P	21 04 48.0	-0.2
	comp=Z,logA/T=1.1						
MOX				L		21 13 06.0	
MOX	Moxa	19.75	332	*e*P	P	21 04 48.0	-0.2
MOX				pmax	pmax		
	comp=Z,20nm,1.4s						
MOX	Moxa	19.75	332	*e*P	P	21 04 48.0	-0.2
	comp=Z,20nm,1.4s						
CLL	Collm	19.79	336	⇑P	P	21 04 46.8	-1.8
	comp=Z,logA/T=1.5						
CLL				*i* *PP		21 04 54.0	
CLL				*i*		21 05 34.0	
CLL	Collm	19.79	336	⇑*i*P	P	21 04 46.8	-1.8
	comp=Z,64nm,2.1s						
CLL				*i*		21 04 54.0	
CLL				*i*		21 05 34.0	
CLL	Collm	19.79	336	⇑*i*P	P	21 04 46.8	-1.8
CLL				pmax	pmax		
	comp=Z,64nm,2.1s						
MOF	Molkenrain	19.82	320	*e*P	P	21 04 51.9	+2.8
LASF	Ste Croix	19.86	307	*e*P	P	21 04 49.2	-0.3
	comp=Z,88nm,1.2s						
VRSR	Storozhevoye	19.87	25	*e*P	P	21 04 50.1	+0.6
VRSR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
VRSR				pmax	pmax		
	comp=N,8.0nm,1.0s						
VRSR				pmax	pmax		
	comp=E,6.0nm,1.0s						
VRSR	Storozhevoye	19.87	25	*e*P	P	21 04 50.1	+0.6
	comp=E,4.0nm,0.9s						
HINF	Hinteralfeld	19.95	320	*e*P	P	21 04 50.1	-0.4
	comp=E,15nm,0.7s						
HINF	Hinteralfeld	19.95	320	*e*P	P	21 04 50.1	-0.4
HINF				pmax	pmax		
	comp=Z,8.0nm,0.6s						
ECH	Echery	20.04	321	*e*P	P	21 04 52.9	+1.5
CDF	Champ du Feu	20.10	322	*e*P	P	21 04 51.8	-0.2
	comp=Z,11nm,0.6s						
CDF	Champ du Feu	20.10	322	*e*P	P	21 04 51.8	-0.2
CDF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TOD	Tromm	20.16	326	*e*P	P	21 04 53.4	+0.8
LANF	Langenberg	20.20	324	*e*P	P	21 04 54.2	+1.1
SUW	Suwalki	20.23	355	*e*P	P	21 04 52.4	-1.0
SUW				MLR	MLR	21 13 44.5	
	comp=Z,600nm,20.8s,MS3.9						
SUW	Suwalki	20.23	355	*e*P	P	21 04 51.6	-1.8
	comp=Z,204nm,1.1s						
KTD	Kalmit	20.30	325	*e*P	P	21 04 55.5	+1.4
VOR	Voronezh	20.30	24	*e*P	P	21 04 55.0	+0.9
VOR				S	S	21 08 32.5	-2.5
VOR				pmax	pmax		
	comp=N,90nm,1.0s						
VOR				pmax	pmax		
	comp=Z,100nm,1.0s						
VOR				smax			
	comp=N,150nm,1.4s						
VOR				smax			
	comp=Z,110nm,1.5s						
VOR	Voronezh	20.30	24	*e*P	P	21 04 55.0	+0.9
	comp=Z,150nm,1.4s						
VOR				S	S	21 08 32.5	-2.5
	comp=Z,110nm,1.5s						
HAU	Haudompre	20.34	320	*e*P	P	21 04 54.0	-0.5
	comp=Z,70nm,1.0s						
HAU				*e*R			
	comp=Z,519nm,21.8s						
HAU	Haudompre	20.34	320	*e*P	P	21 04 54.0	-0.5
HAU				pmax	pmax		
	comp=Z,35nm,1.0s						
HAU				MLR	MLR		
	comp=Z,520nm,21.8s,MS3.9						
THEF	They Montfort	20.66	320	*e*P	P	21 05 00.9	+3.0
VRHR	Novokhopersk	20.70	29	*e*P	P	21 05 00.9	+2.6
VRHR				pmax	pmax		
	comp=Z,60nm,0.7s						
VRHR				pmax	pmax		
	comp=N,30nm,0.9s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.4s						
MTLF	Montolieu	20.70	304	*e*P	P	21 04 58.1	-0.2
	comp=E,41nm,1.3s						
MTLF	Montolieu	20.70	304	*e*P	P	21 04 58.1	-0.2
MTLF				pmax	pmax		
	comp=Z,21nm,1.3s						
ABH	Alteburg	20.94	325	*e*P	P	21 05 00.7	0.0
EPOB	Poblet	20.96	298	P	P	21 05 00.7	-0.3
	comp=Z,0.3nm,0.9s						
EPOB	Poblet	20.96	298	P	P	21 05 00.7	-0.3
	comp=Z,0.3nm,0.9s						
SMF	Signal de Mont	21.02	314	*e*P	P	21 05 00.9	-0.7
	comp=Z,49nm,1.1s,mb4.4						
SMF	Signal de Mont	21.02	314	*e*P	P	21 05 00.9	-0.7
SMF				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.4						
LOR	Lormes	21.32	315	*e*P	P	21 05 04.3	-0.3
	comp=Z,9.0nm,0.5s,mb4.0						
LOR				*e*R			
	comp=Z,559nm,21.8s						
LOR	Lormes	21.32	315	*e*P	P	21 05 04.3	-0.3
LOR				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.1						
LOR				MLR	MLR		
	comp=Z,560nm,21.8s,MS3.9						
MEZF	Maizieres J’vi	21.33	319	*e*P	P	21 05 04.7	0.0
	comp=Z,181nm,1.1s,mb5.0						
CAF	Calviac	21.38	308	*e*P	P	21 05 04.7	-0.4
	comp=Z,47nm,1.1s,mb4.4						
CAF	Calviac	21.38	308	*e*P	P	21 05 04.7	-0.4
CAF				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.4						

SSF	**Saint Saulge**	**21.43**	**315**	*e*P	**P**	**21 05 05.3**	**-0.3**
SSF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.2						
SSF	**Saint Saulge**	**21.43**	**315**	*e*P	**P**	**21 05 05.3**	**-0.3**
	comp=Z,11nm,0.9s,mb4.2						
WLF	**Walferdange**	**21.47**	**323**	*e*P	**P**	**21 05 07.3**	**+1.2**
	comp=Z,42nm,1.0s,mb4.7						
WLF	**Walferdange**	**21.47**	**323**	*e*P	**P**	**21 05 07.3**	**+1.2**
WLF				pmax	pmax		
	comp=Z,42nm,1.0s,mb4.7						
WLF	**Walferdange**	**21.47**	**323**	*e*P	**P**	**21 05 07.3**	**+1.2**
	comp=Z,42nm,1.0s,mb4.7						
BGF	**Bois d'Agland**	**21.58**	**313**	*e*P	**P**	**21 05 07.3**	**+0.1**
	comp=Z,25nm,0.8s,mb4.4						
BGF	**Bois d'Agland**	**21.58**	**313**	*e*P	**P**	**21 05 07.3**	**+0.1**
BGF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
TCF	**Toulx Ste Croi**	**21.85**	**312**	*e*P	**P**	**21 05 09.7**	**-0.2**
RJF	**Les Rejaudoux**	**21.88**	**309**	*e*P	**P**	**21 05 09.4**	**-0.8**
	comp=Z,35nm,1.0s,mb4.5						
RJF				*e*R			
	comp=Z,258nm,21.3s						
RJF	**Les Rejaudoux**	**21.88**	**309**	*e*P	**P**	**21 05 09.4**	**-0.8**
RJF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.4						
RJF				MLR	MLR		
	comp=Z,260nm,21.3s,MS3.6						
EPF	**Esparros**	**21.92**	**302**	*e*P	**P**	**21 05 10.3**	**-0.3**
EBIE	**Bielsa**	**21.96**	**301**	P	**P**	**21 05 10.9**	**-0.1**
	comp=Z,44nm,2.1s,mb4.5						
ECHE	**Chera**	**22.21**	**293**	P	**P**	**21 05 16.3**	**+2.8**
	comp=Z,23nm,1.0s,mb4.6						
ECHE	**Chera**	**22.21**	**293**	P	**P**	**21 05 16.3**	**+2.8**
ECHE				pmax	pmax		
	comp=Z,23nm,1.0s,mb4.6						
LFF	**La Frestale**	**22.25**	**307**	*e*P	**P**	**21 05 13.1**	**-0.8**
	comp=Z,57nm,1.0s,mb4.7						
LFF	**La Frestale**	**22.25**	**307**	*e*P	**P**	**21 05 13.1**	**-0.8**
LFF				pmax	pmax		
	comp=Z,29nm,1.0s,mb4.7						
ETSF	**Etsaut**	**22.52**	**301**	*e*P	**P**	**21 05 15.8**	**-0.7**
	comp=Z,45nm,1.1s,mb4.5						
ETSF	**Etsaut**	**22.52**	**301**	*e*P	**P**	**21 05 15.8**	**-0.7**
ETSF				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.5						
OBN	**Obninsk**	**22.52**	**16**	*e*P	**P**	**21 05 16.1**	**-0.3**
	comp=Z,62nm,1.0s,mb5.0						
OBN	**Obninsk**	**22.52**	**16**	⇓*e*P	**P**	**21 05 16.0**	**-0.5**
OBN				*e*S	**S**	**21 09 20.3**	**+3.7**
OBN				pmax	pmax		
	comp=Z,37nm,1.3s,mb4.7						
OBN				MLR	MLR		
	comp=Z,400nm,17.0s,MS3.9						
OBN	**Obninsk**	**22.52**	**16**	*e*P	**P**	**21 05 16.0**	**-0.5**
	comp=Z,37nm,1.3s,mb4.7						
BAIF	**Baives**	**22.70**	**322**	*e*P	**P**	**21 05 18.3**	**0.0**
	comp=Z,30nm,0.7s,mb4.5						
BAIF	**Baives**	**22.70**	**322**	*e*P	**P**	**21 05 18.3**	**0.0**
BAIF				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.5						
SJPF	**Ste Jean**	**23.04**	**302**	*e*P	**P**	**21 05 21.3**	**-0.4**
MOS	**Moscow**	**23.34**	**17**	*e*P	**P**	**21 05 31.9**	**+7.4**
MOS				*e*		21 05 38.7	
MOS				*e*		21 05 54.6	
MOS				*i* S	**S**	**21 09 33.4**	**+2.2**
MOS				*i*		21 09 41.2	
MOS				pmax	pmax		
	comp=Z,56nm,1.2s,mb4.9						
MOS				smax			
	comp=E,371nm,3.6s						
MOS				MLR	MLR		
	comp=N,336nm,6.0s						
MOS				MLR	MLR		
	comp=E,151nm,6.0s						
MOS				MLR	MLR		
	comp=Z,344nm,6.0s						
EHUE	**Huescar**	**23.36**	**288**	P	**P**	**21 05 27.3**	**+2.5**
	comp=Z,12nm,1.1s,mb4.2						
EHUE	**Huescar**	**23.36**	**288**	P	**P**	**21 05 27.3**	**+2.5**
EHUE				pmax	pmax		
	comp=Z,12nm,1.1s,mb4.2						
MFF	**Saint Martin d**	**23.46**	**311**	*e*P	**P**	**21 05 25.8**	**+0.1**
EBER	**Berja**	**23.60**	**286**	P	**P**	**21 05 29.8**	**+2.7**
	comp=Z,80nm,2.1s,mb4.8						
EQES	**Quesada**	**23.74**	**288**	P	**P**	**21 05 31.4**	**+2.9**
	comp=Z,14nm,2.1s,mb4.0						
ECOG	**Cogollos-Vega**	**24.13**	**287**	P	**P**	**21 05 37.2**	**+4.9**
	comp=Z,2.6nm,1.6s,mb3.4						
ECOG	**Cogollos-Vega**	**24.13**	**287**	P	**P**	**21 05 37.2**	**+4.8**
ECOG				pmax	pmax		
	comp=Z,3.0nm,1.6s,mb3.5						
ESDC	**Sonseca Array**	**24.52**	**292**	P	**P**	**21 05 37.1**	**+1.0**
	comp=Z,2.5nm,0.7s,mb3.8,baz=80,slow=9.0,SNR=7.9						
ESDC	**Sonseca Array**	**24.52**	**292**	P	**P**	**21 05 36.8**	**+0.7**
	comp=Z,0.8nm,0.4s,mb3.6						
ESDC	**Sonseca Array**	**24.52**	**292**	P	**P**	**21 05 36.8**	**+0.7**
	comp=Z,0.8nm,0.4s,mb3.6						
ESLA	**Sonseca Array**	**24.52**	**292**	P	**P**	**21 05 37.3**	**+1.2**
	comp=Z,1.6nm,0.8s,mb3.6						
ESLA	**Sonseca Array**	**24.52**	**292**	P	**P**	**21 05 37.3**	**+1.2**
	comp=Z,1.6nm,0.8s,mb3.6						
FLN	**La Foliniere**	**24.60**	**315**	*e*P	**P**	**21 05 37.0**	**+0.3**
	comp=Z,14nm,0.4s,mb4.6						
FLN				*e*R			
	comp=Z,561nm,21.2s						
FLN	**La Foliniere**	**24.60**	**315**	*e*P	**P**	**21 05 37.0**	**+0.3**
FLN				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.5						
FLN				MLR	MLR		
	comp=Z,560nm,21.3s,MS4.0						
ELOJ	**Sierra Loja**	**24.61**	**286**	P	**P**	**21 05 41.0**	**+4.1**
	comp=Z,5.3nm,1.3s,mb3.9						
ELOJ	**Sierra Loja**	**24.61**	**286**	P	**P**	**21 05 41.0**	**+4.1**
ELOJ				pmax	pmax		
	comp=Z,5.0nm,1.3s,mb3.9						
VSU	**Vasula**	**24.61**	**1**	*i* P	**P**	**21 05 36.2**	**-0.6**
GRR	**Gorron**	**24.65**	**314**	*e*P	**P**	**21 05 37.0**	**-0.3**
GUD	**Guadarrama**	**24.75**	**295**	P	**P**	**21 05 38.9**	**+0.5**
	comp=Z,5.5nm,1.8s,mb3.8						
GUD	**Guadarrama**	**24.75**	**295**	P	**P**	**21 05 38.9**	**+0.6**
GUD				pmax	pmax		
	comp=Z,6.0nm,1.8s,mb3.8						
GUD	**Guadarrama**	**24.75**	**295**	P	**P**	**21 05 38.9**	**+0.6**
	comp=Z,5.5nm,1.8s,mb3.8						
EMIJ	**Mijas**	**25.12**	**285**	P	**P**	**21 05 44.7**	**+2.8**
	comp=Z,24nm,1.5s,mb4.5						
MDT	**Midelt**	**25.44**	**276**	P	**P**	**21 05 46.8**	**+1.9**
	comp=Z,0.9nm,0.5s,mb3.6,baz=65,slow=7.6,SNR=3.6						
SGMF	**Saint Gilles**	**25.62**	**313**	*e*P	**P**	**21 05 46.7**	**+0.2**
EJIF	**Jimena Fronter**	**25.69**	**285**	P	**P**	**21 05 54.4**	**+7.1**
	comp=Z,1.8nm,0.4s,mb4.0						
EJIF	**Jimena Fronter**	**25.69**	**285**	P	**P**	**21 05 54.4**	**+7.1**
EJIF				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.0						
QUIF	**Quistinic**	**25.86**	**312**	*e*P	**P**	**21 05 48.4**	**-0.4**
	comp=Z,14nm,0.5s,mb4.5						
QUIF	**Quistinic**	**25.86**	**312**	*e*P	**P**	**21 05 48.4**	**-0.4**
QUIF				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.5						
EARI	**Arriondas**	**25.93**	**300**	P	**P**	**21 05 48.5**	**-0.9**
	comp=Z,1.0nm,1.3s						
EARI	**Arriondas**	**25.93**	**300**	P	**P**	**21 05 48.5**	**-0.9**
	comp=Z,1.0nm,1.3s						
ESPR	**Espera**	**25.98**	**286**	P	**P**	**21 05 52.4**	**+2.5**
	comp=Z,8.7nm,1.1s,mb4.2						
PUL	**Pulkovo**	**26.08**	**5**	⇓*e*P	**P**	**21 05 53.4**	**+2.8**
PUL				pmax	pmax		
	comp=Z,127nm,0.9s						
ROSF	**Rostrenen**	**26.09**	**312**	*e*P	**P**	**21 05 50.4**	**-0.5**
EMIN	**Mina Concepcio**	**26.59**	**288**	P	**P**	**21 05 55.7**	**+0.1**
	comp=Z,0.1nm,0.5s						
EMIN	**Mina Concepcio**	**26.59**	**288**	P	**P**	**21 05 55.7**	**+0.1**
	comp=Z,0.1nm,0.5s						
ECAL	**Calabor**	**26.84**	**297**	P	**P**	**21 05 58.4**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.3						
ECAL	**Calabor**	**26.84**	**297**	P	**P**	**21 05 58.4**	**+0.6**
	comp=Z,0.5nm,0.5s,mb3.3						
EBAD	**Badajoz**	**26.85**	**290**	P	**P**	**21 05 57.9**	**-0.1**
	comp=Z,0.6nm,0.7s						
EGRO	**El Granado**	**27.25**	**287**	P	**P**	**21 06 01.5**	**-0.1**
	comp=Z,1.1nm,0.8s,mb3.4						
EGRO	**El Granado**	**27.25**	**287**	P	**P**	**21 06 01.5**	**-0.1**
	comp=Z,1.1nm,0.8s,mb3.4						
HFS	**Hagfors**	**27.47**	**347**	P	**P**	**21 06 02.1**	**-1.2**
	comp=Z,3.3nm,0.4s,mb4.2,baz=129,slow=9.5,SNR=31						
HFA0	**Hagfors New Ar**	**27.48**	**347**	P	**P**	**21 06 02.4**	**-1.0**
FINES	**FINESS Array B**	**27.59**	**0**	P	**P**	**21 06 03.5**	**-1.0**
	comp=Z,3.0nm,0.3s,mb4.4,baz=163,slow=10,SNR=63						
FINES	**FINESS Array B**	**27.59**	**0**	P	**P**	**21 06 03.5**	**-1.0**
FINES	**FINESS Array B**	**27.59**	**0**	*i* P	**P**	**21 06 03.9**	**-0.6**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KAF	**Kangasniemi**	**28.27**	**0**	*e*p	**P**	**21 06 08.9**	**-1.6**
	comp=Z,5.7nm,0.6s,mb4.4						
KAF	**Kangasniemi**	**28.27**	**0**	*e*P	**P**	**21 06 08.9**	**-1.6**
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
KLMR	**Klimovskoe**	**28.42**	**14**	*e*P	**P**	**21 06 09.7**	**-2.2**
KLMR				*e*S	**S**	**21 10 51.0**	**-4.3**
KLMR				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
KLMR				smax			
	comp=E,1µm,4.9s						
KLMR				MLR	MLR		
	comp=Z,2µm,19.0s,MS4.6						
NAO	**NORSAR Subarra**	**28.68**	**345**	P	**P**	**21 06 13.2**	**-1.1**
NAO				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.2						
NAO	**NORSAR Subarra**	**28.68**	**345**	P	**P**	**21 06 13.2**	**-1.1**
	comp=Z,5.0nm,1.0s,mb4.2						
NAO01	**NORSAR Array S**	**28.69**	**345**	*e*P	**P**	**21 06 13.2**	**-1.1**
	comp=Z,8.3nm,0.7s,mb4.6						
NAO01	**NORSAR Array S**	**28.69**	**345**	*e*P	**P**	**21 06 13.2**	**-1.1**
	comp=Z,8.2nm,0.7s,mb4.6						
AKTK	**Aktyubinsk**	**28.73**	**45**	P	**P**	**21 06 16.0**	**+1.2**
AKTO	**Aktyubinsk**	**28.73**	**45**	P	**P**	**21 06 16.0**	**+1.2**
	comp=Z,2.8nm,0.4s,mb4.3,baz=252,slow=7.1,SNR=14						
NB2	**NORSAR Subarra**	**28.80**	**345**	P	**P**	**21 06 13.2**	**-2.1**
	comp=Z,5.0nm,1.0s,mb4.2,baz=151,slow=9.3						
NOA	**NORSAR Array B**	**28.80**	**345**	P	**P**	**21 06 14.2**	**-1.1**
	comp=Z,1.8nm,0.6s,mb4.0,baz=150,slow=11,SNR=5.2						
NOA	**NORSAR Array B**	**28.80**	**345**	P	**P**	**21 06 14.1**	**-1.2**
JOF	**Joensuu**	**29.28**	**5**	*e*p	**P**	**21 06 18.2**	**-1.3**
	comp=Z,2.0nm,0.4s,mb4.2						
EKA	**Eskdalemuir Ar**	**29.43**	**326**	P	**P**	**21 06 21.4**	**+0.4**
	comp=Z,3.4nm,0.8s,mb4.2,baz=122,slow=9.8,SNR=4.8						
ESK	**Eskdalemuir**	**29.44**	**326**	*e*P	**P**	**21 06 19.6**	**-1.5**
	comp=Z,76nm,1.4s,mb5.2						
ESK	**Eskdalemuir**	**29.44**	**326**	*e*P	**P**	**21 06 19.6**	**-1.5**
ESK				pmax	pmax		
	comp=Z,76nm,1.4s,mb5.2						
ESK	**Eskdalemuir**	**29.44**	**326**	*e*P	**P**	**21 06 19.6**	**-1.5**
	comp=Z,76nm,1.4s,mb5.2						
ARU	**Arti**	**31.77**	**35**	*e*P	**P**	**21 06 43.1**	**+1.4**
ARCES	**ARCESS Array B**	**35.72**	**360**	P	**P**	**21 07 14.9**	**-0.8**
	comp=Z,2.9nm,0.5s,mb4.5,baz=187,slow=9.0,SNR=44						
ARE0	**ARCESS Array S**	**35.72**	**360**	*e*P	**P**	**21 07 14.8**	**-0.9**
ARE0	**ARCESS Array S**	**35.72**	**360**	*e*P	**P**	**21 07 14.8**	**-0.9**
BRVK	**Borovoye**	**36.78**	**45**	*e*P	**P**	**21 07 26.1**	**+1.3**
	comp=Z,3.2nm,0.9s,mb4.2						
BRVK	**Borovoye**	**36.78**	**45**	*e*P	**P**	**21 07 26.1**	**+1.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.1						
BRVK	**Borovoye**	**36.78**	**45**	*e*P	**P**	**21 07 26.0**	**+1.3**
	comp=Z,3.2nm,0.9s,mb4.2						
BVAR	**Borovoye Array**	**36.84**	**45**	P	**P**	**21 07 26.6**	**+1.4**
	comp=Z,2.2nm,0.7s,mb4.1,baz=256,slow=6.1,SNR=12						
AAK	**Ala-Archa**	**38.73**	**62**	*e*P	**P**	**21 07 42.1**	**+0.9**
	comp=Z,24nm,1.8s,mb4.6						
AAK	**Ala-Archa**	**38.73**	**62**	*i* P	**P**	**21 07 44.6**	**+3.5**
AAK				pmax	pmax		
	comp=Z,16nm,2.3s,mb4.3						
AAK	**Ala-Archa**	**38.73**	**62**	*e*P	**P**	**21 07 42.1**	**+1.0**
	comp=Z,24nm,1.8s,mb4.6						
DBIC	**Dimbokro**	**39.24**	**233**	P	**P**	**21 07 46.5**	**+0.9**
	comp=Z,3.6nm,0.7s,mb4.2,baz=16,slow=9.1,SNR=6.3						
DBIC	**Dimbokro**	**39.24**	**233**	*e*P	**P**	**21 07 45.7**	**+0.1**
	comp=Z,5.8nm,0.8s,mb4.4						
DBIC	**Dimbokro**	**39.24**	**233**	*e*P	**P**	**21 07 45.7**	**+0.1**
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.8s						
DBIC	**Dimbokro**	**39.24**	**233**	*e*P	**P**	**21 07 45.7**	**+0.1**
	comp=Z,5.8nm,0.8s,mb4.4						
LIC	**Lamto**	**39.68**	**233**	*e*P	**P**	**21 07 49.7**	**+0.4**
LIC				*e*R			
	comp=Z,566nm,21.0s						
KURK	**Kurchatov**	**41.56**	**50**	*e*P	**P**	**21 08 05.7**	**+1.2**
	comp=Z,6.8nm,0.8s,mb4.3						
KURK	**Kurchatov**	**41.56**	**50**	*e*P	**P**	**21 08 05.7**	**+1.3**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.3						
KURK	**Kurchatov**	**41.56**	**50**	*e*P	**P**	**21 08 05.7**	**+1.3**
	comp=Z,6.8nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**44.02**	**55**	P	**P**	**21 08 26.7**	**+2.2**
	comp=Z,4.5nm,0.6s,mb4.4,baz=272,slow=6.9,SNR=55						
NVS	**Novosibirsk**	**44.61**	**44**	*e*P	**P**	**21 08 30.6**	**+1.5**
NVS				pmax	pmax		
	comp=Z,15nm,1.2s,mb4.7						
NVS				pmax	pmax		
	comp=E,9.0nm,1.0s						
NVS	**Novosibirsk**	**44.61**	**44**	*e*P	**P**	**21 08 30.6**	**+1.5**
	comp=E,15nm,1.2s,mb4.7						
ZAL	**Zalesovo**	**45.48**	**45**	P	**P**	**21 08 37.8**	**+1.7**
	comp=E,3.6nm,0.3s,mb4.6,baz=200,slow=6.9,SNR=18						
KBS	**Kingsbay**	**45.55**	**356**	P	**P**	**21 08 37.0**	**+0.6**
	comp=E,30nm,1.2s,mb5.1						
KBS	**Kingsbay**	**45.55**	**356**	P	**P**	**21 08 37.0**	**+0.6**
KBS				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.1						
KBS	**Kingsbay**	**45.55**	**356**	P	**P**	**21 08 37.0**	**+0.6**
	comp=Z,30nm,1.2s,mb5.1						
LSZ	**Lusaka**	**48.92**	**177**	P	**P**	**21 09 06.3**	**+2.7**
	comp=Z,1.1nm,0.7s,mb4.0,baz=25,slow=8.0,SNR=4.6						
LSZ				LR	LR	21 30 17.4	
	comp=Z,385nm,20.0s,MS4.4,baz=234,slow=37						
KOLN	**Koldanda**	**49.41**	**81**	*e*P	**P**	**21 09 09.3**	**+2.1**
HYB	**Hyderabad**	**49.72**	**96**	*i* P	**P**	**21 09 12.5**	**+2.8**
HYB	**Hyderabad**	**49.72**	**96**	*e*P	**P**	**21 09 12.5**	**+2.8**
GKN	**Gorkha**	**50.17**	**80**	*e*P	**P**	**21 09 14.9**	**+1.8**
	comp=Z,15nm,0.7s,mb5.1						
SUMG	**Summit**	**50.39**	**339**	P	**P**	**21 09 13.8**	**-0.4**
	comp=Z,18nm,1.2s,mb5.0						
DMN	**Daman**	**50.71**	**80**	*e*P	**P**	**21 09 19.3**	**+2.2**
	comp=Z,18nm,0.7s,mb5.1						
KKN	**Kakani**	**50.78**	**80**	*e*P	**P**	**21 09 19.6**	**+1.9**
	comp=Z,13nm,0.6s,mb5.0						
PKI	**Pulchoki**	**50.97**	**80**	*e*P	**P**	**21 09 21.2**	**+2.1**
	comp=Z,18nm,0.7s,mb5.1						
GUN	**Gumba**	**51.23**	**79**	*e*P	**P**	**21 09 23.0**	**+1.9**
	comp=Z,15nm,0.4s,mb5.2						
TSUM	**Tsumeb**	**53.36**	**190**	*e*P	**P**	**21 09 38.3**	**+1.2**
	comp=Z,3.5nm,0.9s,mb4.3						
MATP	**Matopo**	**54.05**	**177**	P	**P**	**21 09 44.5**	**+2.4**
	comp=Z,2.2nm,0.5s,mb4.3,baz=354,slow=10.0,SNR=18						
LSA	**Lhasa**	**54.83**	**75**	*e*P	**P**	**21 09 49.5**	**+1.8**
	comp=Z,8.3nm,1.2s,mb4.6						
LSA	**Lhasa**	**54.83**	**75**	*e*P	**P**	**21 09 49.5**	**+1.7**
LSA				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.6						
LSA	**Lhasa**	**54.83**	**75**	*e*P	**P**	**21 09 49.5**	**+1.7**
	comp=Z,8.0nm,1.2s,mb4.6						
ZAK	**Zakamensk**	**57.17**	**48**	*e*P	**P**	**21 10 06.7**	**+2.3**
ZAK				*e*	pP	21 10 15.2	+0.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
GTA	**Gaotai**	**58.07**	**61**	*e*P	**P**	**21 10 12.6**	**+1.8**
SONM	**Songino Array**	**59.86**	**50**	P	**P**	**21 10 25.1**	**+1.9**
	comp=Z,1.1nm,0.6s,mb4.1,baz=287,slow=7.7,SNR=14						
BOD	**Bodaibo**	**61.12**	**38**	*e*P	**P**	**21 10 30.8**	**-0.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
BOD	**Bodaibo**	**61.12**	**38**	*e*P	**P**	**21 10 30.8**	**-0.7**
	comp=Z,10.0nm,0.9s,mb5.0						
BOSA	**Boshof**	**62.14**	**181**	P	**P**	**21 10 40.9**	**+2.1**
	comp=Z,2.1nm,0.8s,mb4.3,baz=24,slow=6.9,SNR=4.7						
BOSA				LR	LR	21 41 13.7	
	comp=Z,210nm,18.4s,MS4.3,baz=4.0,slow=40						
BOSA	**Boshof**	**62.14**	**181**	*e*P	**P**	**21 10 40.8**	**+2.0**
	comp=Z,8.8nm,1.2s,mb4.8						
BOSA	**Boshof**	**62.14**	**181**	P	**P**	**21 10 40.9**	**+2.1**
BOSA				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
BOSA				MLR	MLR		
	comp=Z,211nm,18.4s,MS4.3						
TIXI	**Tiksi**	**62.17**	**20**	*i* P	**P**	**21 10 38.3**	**-0.1**
LZH	**Lanzhou**	**62.25**	**64**	*e*P	**P**	**21 10 41.5**	**+2.1**
LZH				AP	pP	21 10 51.0	+1.4
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb5.0						
SCHQ	**Schefferville**	**64.55**	**320**	P	**P**	**21 10 55.2**	**+1.0**
	comp=Z,2.5nm,0.4s,mb4.6,baz=248,slow=1.1,SNR=14						
YAK	**Yakutsk**	**66.71**	**30**	*i* P	**P**	**21 11 08.9**	**+1.1**
YAK				pmax	pmax		
	comp=Z,100nm,4.0s						
YAK	**Yakutsk**	**66.71**	**30**	*i* P	**P**	**21 11 08.9**	**+1.1**
	comp=Z,100nm,4.0s						
GYA	**Guiyang**	**68.59**	**72**	P	**P**	**21 11 21.3**	**+1.0**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
ENH	**Enshi**	**69.01**	**67**	P	**P**	**21 11 29.2**	**+6.4**
	comp=Z,19nm,1.4s,mb4.8						
CN2	**Changchun**	**73.61**	**48**	*e*P	**P**	**21 11 51.1**	**+1.0**
BILL	**Bilibino**	**74.17**	**14**	⇑*e*P	**P**	**21 11 58.7**	**+5.8**
BILL				*e*		21 14 43.1	
BILL				*e*SS	SS	21 26 15.9	+5.4
BILL				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.5						
BILL				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.2						
NJ2	**Nanjing**	**75.16**	**61**	*e*P	**P**	**21 12 00.8**	**+1.4**
NJ2				PP	PP	21 14 53.0	+3.0
NJ2				S	S	21 21 32.0	-2.5
NJ2				AMB	AMB		
	comp=Z,560nm,9.7s						
NJ2				LR	LR		
	comp=N,270nm,25.0s						
NJ2				LR	LR		
	comp=E,460nm,33.6s						
NJ2				LR	LR		
	comp=Z,210nm,31.9s						
SSE	**Sheshan**	**77.36**	**61**	*e*P	**P**	**21 12 10.8**	**-1.1**
SSE				PCP	PcP	21 12 20.5	-2.1
SSE				AP	pP	21 12 29.5	+7.3
SSE				S	S	21 21 54.0	-4.5
SSE				SCS	ScS	21 22 21.5	-2.2
SSE				XS		21 22 26.8	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE				LR	LR		
	comp=N,30nm,26.9s,MS3.8						
SSE				LR	LR		
	comp=E,60nm,26.8s,MS3.8						
SSE				LR	LR		
	comp=Z,40nm,16.5s						
YKA	**Yellowknife Ar**	**78.86**	**342**	P	**P**	**21 12 21.5**	**+2.1**
	comp=Z,0.5nm,0.6s,mb3.6,baz=30,slow=5.1,SNR=3.0						
YKA	**Yellowknife Ar**	**78.86**	**342**	P	**P**	**21 12 21.6**	**+2.2**
ILAR	**Eielson Array**	**81.53**	**357**	P	**P**	**21 12 36.0**	**+2.5**
	comp=Z,0.6nm,0.6s,mb3.7,baz=9.5,slow=5.5,SNR=4.7						
MJAR	**Matsushiro Arr**	**85.75**	**48**	P	**P**	**21 12 58.2**	**+2.7**
	comp=Z,1.4nm,0.8s,mb4.2,baz=306,slow=4.5,SNR=4.3						
WRA	**Warramunga Arr**	**115.86**	**97**	PKP	PKPdf	21 19 00.9	+2.6
	comp=Z,0.4nm,0.6s,baz=314,slow=1.6,SNR=8.9						

ATH ***24*** *21:01:31.3, 38.61N×23.02E, h39^{km}±2^{km}, MD3.8/6*
CSEM ***24*** *21:01:31.3±0.2, 38.61N×23.02E, h39^{km}, MD3.8/6, Error ellipse: s-maj=7.0km s-min=4.7km az=12.0, After ATH*
ISC 24 21:01:31.7±5.5**, 38.6N**±0.5×**23.1E**±0.3**, h39**^{km}±31^{km}**, n9,** σ**0**^{s}**70**/9**, 2C, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKR	**Lokris**	**0.08**	**322**	*e*PB	**P**	**21 01 37.8**	**-0.2**
NEO	**Neokhori**	**0.73**	**10**	*e*PN	**P**	**21 01 45.8**	**+0.2**
EVR	**Evrytania**	**1.03**	**289**	*e*PN	**P**	**21 01 50.3**	**+0.4**
KZN	**Kozani**	**1.99**	**330**	*e*PN	**P**	**21 02 03.6**	**0.0**
JAN	**Janina**	**2.03**	**303**	*e*PN	**P**	**21 02 04.2**	**+0.1**
KEK	**Kerkira**	**2.78**	**295**	*e*PN	**P**	**21 02 14.6**	**-0.2**
KEK	**Kerkira**	**2.78**	**295**	*e*Pn	**P**	**21 02 14.6**	**-0.2**
MLR	**Muntele Rosu**	**7.22**	**16**	⇑P	**P**	**21 03 18.8**	**+1.3**
BURAR	**Bucovina Array**	**9.16**	**9**	⇑P	**P**	**21 03 42.9**	**-1.5**

IDC ***24*** *21:17:47.6±0.8, 25.09N×60.39E, mb4.0/14, mb1 4.1/14, mb1mx4.0/23, mbtmp4.0/14, Error ellipse: s-maj=21.8km s-min=18.4km az=131.0*
NEIC ***24*** *21:17:49.7±0.4, 25.09N×60.37E, h10^{km}, mb4.2/10, Error ellipse: s-maj=10.6km s-min=7.5km az=178.0*
MOS ***24*** *21:17:50.7±0.7, 25.14N×60.25E, h29^{km}, mb4.5/6, Error ellipse: s-maj=15.4km s-min=12.7km az=72.9*
CSEM ***24*** *21:17:51.2±0.1, 25.27N×60.23E, h33^{km}, mb4.4/6, Error ellipse: s-maj=5.3km s-min=3.7km az=157.0*
ISC 24 21:17:47.3±0.4**, 25.08N**±0.07×**60.17E**±0.04**, h10**^{km}**, n55,** σ**1**^{s}**08**/55**, mb4.2**/26**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDF	**Al-Radifah**	**11.88**	**292**	*e*P	**P**	**21 20 38.6**	**-1.2**
RDF				AML	AML	21 22 47.3	
	comp=Z,5.2nm,0.3s						
UMR	**Umm Al-Rimmam**	**11.93**	**295**	*e*P	**P**	**21 20 39.4**	**-1.1**
UMR				AML	AML	21 22 45.6	
	comp=Z,7.4nm,0.4s						
NAY	**Al-Naaiem**	**12.23**	**293**	*e*P	**P**	**21 20 44.0**	**-0.6**
NAY				AML	AML	21 22 56.2	
	comp=Z,4.2nm,0.4s						
MIB	**Mutribah**	**12.32**	**295**	*e*P	**P**	**21 20 44.8**	**-1.0**
MIB				AML	AML	21 22 53.9	
	comp=Z,3.6nm,0.4s						
MZLS	**Mizel**	**13.66**	**269**	P	**P**	**21 21 03.0**	**-0.5**
KAMS	**Al Khamasin**	**15.15**	**255**	P	**P**	**21 21 21.4**	**-1.8**
TATS	**Tathlith**	**16.39**	**254**	P	**P**	**21 21 37.5**	**-1.7**
HILS	**Ha'il**	**16.65**	**282**	P	**P**	**21 21 42.9**	**+0.5**
GNI	**Garni**	**19.82**	**323**	*e*P	**P**	**21 22 21.8**	**+0.9**
	comp=Z,10.0nm,1.0s						
GNI	**Garni**	**19.82**	**323**	*e*P	**P**	**21 22 21.8**	**+0.9**
GNI				pmax	pmax		
	comp=Z,10µm,1.0s						
GNI	**Garni**	**19.82**	**323**	*e*P	**P**	**21 22 21.8**	**+0.9**
	comp=Z,10.0nm,1.0s						
AAK	**Ala-Archa**	**21.11**	**30**	*e*P	**P**	**21 22 34.9**	**+0.5**
	comp=Z,4.3nm,1.0s,mb3.7						
AAK	**Ala-Archa**	**21.11**	**30**	*e*P	**P**	**21 22 34.9**	**+0.5**
AAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb3.7						
AAK	**Ala-Archa**	**21.11**	**30**	*e*P	**P**	**21 22 34.9**	**+0.5**
	comp=Z,4.3nm,1.0s,mb3.7						
KOLN	**Koldanda**	**21.15**	**78**	*e*P	**P**	**21 22 33.2**	**-1.7**
	comp=Z,16nm,0.9s,mb4.3						
ATD	**Arta Tunnel**	**21.23**	**234**	P	**P**	**21 22 38.4**	**+2.6**
	comp=Z,5.6nm,0.8s,mb4.0,baz=244,slow=14,SNR=3.5						
ATD	**Arta Tunnel**	**21.23**	**234**	P	**P**	**21 22 38.3**	**+2.6**
GKN	**Gorkha**	**22.07**	**77**	*e*P	**P**	**21 22 43.3**	**-0.9**
	comp=Z,17nm,1.0s,mb4.4						
AYUS	**'Aynunah**	**22.46**	**283**	P	**P**	**21 22 52.6**	**+4.5**
DMN	**Daman**	**22.48**	**78**	*e*P	**P**	**21 22 48.4**	**+0.2**
	comp=Z,19nm,1.0s,mb4.5						
KKN	**Kakani**	**22.64**	**78**	*e*P	**P**	**21 22 49.0**	**-0.8**
	comp=Z,32nm,1.0s,mb4.7						
PKI	**Pulchoki**	**22.75**	**78**	*e*P	**P**	**21 22 51.5**	**+0.6**
	comp=Z,16nm,0.7s,mb4.6						
GUN	**Gumba**	**23.17**	**77**	*e*P	**P**	**21 22 55.0**	**0.0**
	comp=Z,54nm,1.1s,mb4.9						
KIV	**Kislovodsk**	**23.62**	**327**	*e*P	**P**	**21 23 04.6**	**+5.4**
	comp=Z,6.0nm,0.7s,mb4.1						
KIV	**Kislovodsk**	**23.62**	**327**	*e*P	**P**	**21 23 04.6**	**+5.4**
AKTK	**Aktyubinsk**	**25.36**	**357**	P	**P**	**21 23 16.6**	**+0.6**
AKTK	**Aktyubinsk**	**25.36**	**357**	P	**P**	**21 23 16.6**	**+0.6**
AKTO	**Aktyubinsk**	**25.36**	**357**	P	**P**	**21 23 16.6**	**+0.6**
	comp=Z,1.4nm,0.6s,mb3.6,baz=169,slow=7.1,SNR=6.1						
LSA	**Lhasa**	**27.84**	**74**	P	**P**	**21 23 38.9**	**-0.1**
LSA				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.8						
LSA	**Lhasa**	**27.84**	**74**	P	**P**	**21 23 38.9**	**-0.1**
	comp=Z,2.2nm,0.9s,mb3.8						
MKAR	**Makanchi Array**	**27.93**	**34**	P	**P**	**21 23 40.0**	**+0.3**
	comp=Z,1.7nm,1.0s,mb3.6,baz=214,slow=9.4,SNR=4.8						
BVAR	**Borovoye Array**	**28.95**	**13**	P	**P**	**21 23 47.6**	**-1.2**
	comp=Z,1.2nm,0.9s,mb3.6,baz=198,slow=9.4,SNR=6.4						
BRVK	**Borovoye**	**28.96**	**13**	*e*P	**P**	**21 23 52.0**	**+3.1**
	comp=Z,2.0nm,0.9s,mb3.9						
BRVK	**Borovoye**	**28.96**	**13**	*e*P	**P**	**21 23 52.0**	**+3.2**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.9						
MLR	**Muntele Rosu**	**34.20**	**315**	P	**P**	**21 24 35.3**	**+0.3**
	comp=Z,1.6nm,0.3s,mb4.4,baz=128,slow=17,SNR=4.8						
AKASG	**Malin Array Be**	**34.92**	**325**	P	**P**	**21 24 40.9**	**-0.2**
	comp=Z,0.2nm,0.3s,mb3.5,baz=122,slow=8.2,SNR=3.4						
SONM	**Songino Array**	**42.76**	**46**	P	**P**	**21 25 46.1**	**-0.4**
	comp=Z,0.6nm,0.8s,mb3.4,baz=234,slow=7.3,SNR=3.9						
FINES	**FINESS Array B**	**43.07**	**337**	P	**P**	**21 25 49.4**	**+0.6**
	comp=Z,2.5nm,0.8s,mb4.0,baz=194,slow=7.9,SNR=4.6						
MDT	**Midelt**	**56.45**	**294**	P	**P**	**21 27 33.3**	**+1.6**
	comp=Z,4.5nm,0.9s,mb4.5,baz=67,slow=6.5,SNR=7.8						
LBTB	**Lobatse**	**59.99**	**216**	*e*P	**P**	**21 27 58.3**	**+1.7**

```
      comp=Z,2.0nm,0.7s,mb4.3
LBTB  Lobatse          59.99 216 eP     P        21 27 58.3 +1.7
LBTB                                pmax   pmax
      comp=Z,2.0nm,0.7s,mb4.3
LBTB  Lobatse          59.99 216 eP     P        21 27 58.3 +1.7
      comp=Z,2.0nm,0.7s,mb4.3
BOSA  Boshof           63.07 214  P     P        21 28 17.9 +0.7
      comp=Z,2.7nm,1.0s,mb4.3,baz=178,slow=16,SNR=3.7
BOSA  Boshof           63.07 214  P     P        21 28 18.5 +1.2
      comp=Z,4.3nm,0.9s,mb4.6
BOSA  Boshof           63.07 214  P     P        21 28 18.5 +1.3
BOSA                                pmax   pmax
      comp=Z,4.0nm,0.9s,mb4.5
BOSA  Boshof           63.07 214  P     P        21 28 18.5 +1.3
      comp=Z,4.3nm,0.9s,mb4.6
DBIC  Dimbokro         64.60 265  P     P        21 28 28.9 +1.3
      comp=Z,2.2nm,0.6s,mb4.3,baz=105,slow=2.3,SNR=6.2
DBIC  Dimbokro         64.60 265 eP     P        21 28 29.0 +1.4
      comp=Z,2.2nm,0.5s,mb4.4
DBIC  Dimbokro         64.60 265 eP     P        21 28 29.0 +1.4
DBIC                                pmax   pmax
      comp=Z,2.0nm,0.5s
DBIC  Dimbokro         64.60 265 eP     P        21 28 29.0 +1.4
      comp=Z,2.2nm,0.5s,mb4.4
WRA   Warramunga Arr   84.85 115  P     P        21 30 23.7 -0.2
      comp=Z,1.8nm,0.9s,mb4.2,baz=311,slow=4.0,SNR=11
WRAB  Tennant Creek    84.86 115 eP     P        21 30 24.2 +0.2
WRAB                                pmax   pmax
      comp=Z,4.0nm,0.8s,mb4.6
WRAB  Tennant Creek    84.86 115 eP     P        21 30 24.2 +0.2
      comp=Z,3.9nm,0.8s,mb4.6
ILAR  Eielson Array    88.01  11  P     P        21 30 39.1 +0.7
      comp=Z,0.3nm,0.7s,mb3.6,baz=321,slow=5.3,SNR=4.2
STKA  Stephens Creek   96.12 122  P     P        21 31 14.7 -2.0
      comp=Z,3.2nm,1.1s,mb4.7,baz=284,slow=8.3,SNR=3.2
```

BJI ***24*** *21:24:57.2, 33.10N×24.76E, h27^{km}, mB5.2, mb4.5*
HLW ***24*** *21:25:03.1, 34.15N×25.77E, h33^{km}, Mb4.1*
IDC ***24*** *21:25:03.2±0.7, 34.04N×25.73E, mb4.0/17, mb1 4.1/21, mb1mx4.1/28, mbtmp4.0/21, ML4.2/4, MS3.2/4, Ms1 3.2/4, ms1mx3.0/31, Error ellipse: s-maj=16.0km s-min=13.0km az=95.0*
MOS ***24*** *21:25:04.7±1.0, 33.93N×25.69E, h26^{km}, mb4.6/13, Error ellipse: s-maj=9.2km s-min=4.7km az=116.1*
CSEM ***24*** *21:25:04.9±0.0, 33.80N×25.78E, h40^{km}, mb4.3/15, Ms3.2, Error ellipse: s-maj=2.7km s-min=0.8km az=43.0*
NEIC ***24*** *21:25:07.2±1.0, 33.99N×25.73E, h28^{km}±7^{km}, mb4.4/26, MD3.9(ATH), Error ellipse: s-maj=7.2km s-min=3.6km az=188.0*
NIC ***24*** *21:25:13.0±0.5, 36.58N×26.41E, h66^{km}, mb4.6, ML4.2*
ATH ***24*** *21:25:14.6, 36.18N×25.62E, h10^{km}, MD3.9/3*
ISC 24 21:25:03.9±0.7**, 33.85N**±0.03×**25.80E**±0.03**, h27**^{km}±6^{km}**, n163,** σ**1^{s}06**/175**, mb4.2**/34**, MS3.3**/2**, 8D, Eastern Mediterranean Sea**

```
Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                                   Op     ISC      h  m  s    ISC
NPS   Neapolis          1.41 354 ePB    Pb       21 25 31.6 +2.2
IDI   Anoyia            1.61 333  Pn    Pn       21 25 29.5 -1.5
      1.7nm,0.3s,baz=273,slow=16,SNR=9.7
IDI                               Sn    Sn       21 25 51.4 +0.2
      41nm,0.3s,baz=314,slow=12,SNR=7.4
GVD   Gavdhos           1.72 305 ePn    Pn       21 25 35.0 +2.4
GVD   Gavdhos           1.72 305 ePn    Pn       21 25 35.0 +2.4
KARP  Karpathos         2.03  33 ePB    Pb       21 25 41.0 +1.1
VAM   Vamos             2.03 320 ePB    Pb       21 25 40.9 +0.9
SANT  Santorini         2.53 354 ePn    Pn       21 25 44.0 -0.1
SANT  Santorini         2.53 354 ePn    Pn       21 25 44.0 -0.1
HMAT  Matruh            2.96 158 ⇓P     Pn       21 25 52.1 +1.8
DABA  Dabaa             3.53 143  P     Pn       21 25 59.6 +1.3
SWA1                    4.58 181 ⇓P     Pn       21 26 14.2 +1.0
SWA1                              S     Sn       21 27 06.4 +0.2
SWA1                    4.58 181  P     Pn       21 26 14.2 +1.0
SWA1                              S     Sn       21 27 06.4 +0.2
SWA2                    4.61 184 ⇓P     Pn       21 26 15.1 +1.5
HBRG  Burj al ‘Arab     4.74 133  P     Pn       21 26 15.8 +0.3
PPCY  Paphos            5.51  77  P     Pn       21 26 29.1 +2.7
ISP   Isparta           5.52  43  Pn    Pn       21 26 28.1 +1.6
ISP   Isparta           5.52  43  Pn    Pn       21 26 28.1 +1.5
ALFC  Alevga            5.77  75  P     Pn       21 26 29.5 -0.5
      2.8nm,0.4s
ALFC                              S     Sn       21 27 30.4 -5.7
HMYD  Mayadein          5.87 132  P     Pn       21 26 31.3 -0.2
HNAT  Natroun           5.88 134  P     Pn       21 26 31.5 -0.1
SZAC  Souni-Zanaja      5.93  79  P     Pn       21 26 34.4 +2.0
SZAC                              S     Sn       21 27 38.0 -2.3
FYM   Al Fayyum         6.10 131  P     Pn       21 26 34.5 -0.1
FYM   Al Fayyum         6.10 131  P     Pn       21 26 34.5 -0.2
AWBH                    6.12 153  P     Pn       21 26 35.7 +0.6
AYT   Al ‘Ayyat         6.16 131  P     Pn       21 26 35.5  0.0
MAMC  Mammari           6.27  76  P     Pn       21 26 36.6 -0.5
CSS   Prodhromos        6.33  78  P     Pn       21 26 38.1 +0.2
CSS                               S     Sn       21 27 45.5 -4.5
KOT   Kottamia          6.45 126  P     Pn       21 26 39.5 -0.2
KOT                               S     Sn       21 27 48.5 -4.7
HSAF  As Saff           6.47 129  P     Pn       21 26 40.1 +0.1
GLL   Jalalah           6.60 129 ⇓P     Pn       21 26 41.5 -0.3
HBNS  Bani Suwayf       6.73 135  P     Pn       21 26 43.6  0.0
HFRF  Wahat Farafira    7.03 161  P     Pn       21 26 47.2 -0.5
AMAG  Maghara           7.05 115  P     Pn       21 26 46.3 -1.8
SUZ                     7.20 122  P     Pn       21 26 49.5 -0.6
ZAF                     7.34 127  P     Pn       21 26 51.2 -1.0
HNKL  Nakhl             7.98 117  P     Pn       21 26 59.6 -1.5
HNKL                              S     Sn       21 28 25.9 -5.6
ASUT                    8.13 141 ⇓P     P        21 27 03.0 -0.1
GRB   Gharib            8.18 131 ⇓P     P        21 27 02.9 -1.0
HKAT  Jabal Katrina     8.80 125 ⇓P     P        21 27 11.6 -0.9
SOI   Samo              8.95 301  Pn    P        21 27 13.1 -1.4
      55nm,0.4s
SOI                               Sn    Sn       21 28 42.0  -13
SOI   Samo              8.95 301  P     P        21 27 13.1 -1.4
SOI                               pmax  pmax
      comp=Z,55nm,0.4s
TR1                     9.11 128  P     P        21 27 15.5 -1.2
ALWS  Ilw as Safayha    9.11 117  P     P        21 27 16.6 -0.1
ALWS                              S     Sn       21 28 53.9 -5.6
HAQS  Haql              9.15 119  P     P        21 27 16.4 -0.9
MTTG  Motta San Giov    9.18 300  Pn    P        21 27 16.1 -1.6
MTTG                              Sn    Sn       21 28 50.0  -11
JMOS  Jabal al Moall    9.22 118  P     P        21 27 17.9 -0.3
SHRM                    9.30 127 ⇓P     P        21 27 18.7 -0.7
PUK   Puka              9.41 332 ePn    P        21 27 21.3 +0.4
PZI   Palazzolo         9.41 293  Pn    P        21 27 19.6 -1.3
      comp=Z,25nm,0.1s
PZI   Palazzolo         9.41 293  P     P        21 27 19.6 -1.3
PZI                               pmax  pmax
      comp=Z,25nm,0.1s
HHRG  Al Ghardaqah      9.41 133  P     P        21 27 19.6 -1.3
AYUS  ‘Aynunah          9.89 122  P     P        21 27 26.5 -1.0
VAE   Valguarnera       9.94 295  Pn    P        21 27 27.7 -0.5
      comp=Z,1.9nm,0.3s,baz=101,slow=20,SNR=8.6
VAE                               Sn    Sn       21 29 10.6 -9.3
      comp=Z,2.0nm,0.3s,baz=307,slow=4.6,SNR=3.6
VAE                               LR    LR       21 31 14.2
      comp=Z,95nm,21.6s,baz=319,slow=38
HSFG                   10.11 134  P     P        21 27 29.1 -1.4
SLCN  Sala Consilina   10.41 312  Pn    P        21 27 34.1 -0.5
SGO   Sicignano        10.71 312  P     P        21 27 37.1 -1.6
SGO                               pmax  pmax
      comp=Z,2.0nm,0.6s
SGO   Sicignano        10.71 312  Pn    P        21 27 37.1 -1.6
      comp=Z,2.3nm,0.6s
MLR   Muntele Rosu     11.62   1  Pn    P        21 27 49.4 -1.7
      comp=Z,0.2nm,0.3s,baz=163,slow=13,SNR=1.8
UMJS  Umm Lajj         13.19 128  P     P        21 28 12.7 +0.6
HILS  Ha’il            15.20 111  P     P        21 28 38.7 +0.2
GNI   Garni            16.38  62 eP     P        21 28 59.9 +6.3
      comp=Z,4.3nm,0.8s
GNI   Garni            16.38  62 eP     P        21 28 59.9 +6.4
GNI                               pmax  pmax
      comp=Z,4µm,0.8s
KIV   Kislovodsk       16.54  47 eP     P        21 28 58.4 +2.8
      comp=Z,28nm,1.2s
KIV   Kislovodsk       16.54  47 eP     P        21 29 00.1 +4.5
KIV                               pmax  pmax
      comp=Z,26µm,1.2s
VRAC  Vranov           16.89 339  Pn    P        21 29 02.9 +3.0
      comp=Z,0.2nm,0.3s,baz=149,slow=12,SNR=3.6
AKASG Malin Array Be   17.02   7  Pn    P        21 29 02.2 +0.6
      comp=Z,2.1nm,0.3s,baz=198,slow=11,SNR=15
AKASG Malin Array Be   17.02   7  Pn    P        21 29 02.2 +0.6
MORC  Moravsky Berou   17.04 341 eP     P        21 28 60.0 -1.8
      comp=Z,4.6nm,1.0s
MORC  Moravsky Berou   17.04 341 eP     P        21 29 00.0 -1.8
MORC                              pmax  pmax
      comp=Z,5.0nm,1.0s
MORC  Moravsky Berou   17.04 341 eP     P        21 29 00.0 -1.8
      comp=Z,4.6nm,1.0s
GERES GERESS Array B   17.48 333  P     P        21 29 07.9 +0.5
      comp=Z,0.3nm,0.3s,baz=147,slow=12,SNR=9.4
GERES                             LR    LR       21 35 13.1
      comp=Z,46nm,21.2s,baz=299,slow=35
FRF   La Foret Royal   17.78 309 eP     P        21 29 09.2 -1.8
      comp=Z,152nm,1.7s
FRF   La Foret Royal   17.78 309 eP     P        21 29 09.2 -1.8
FRF                               pmax  pmax
      comp=Z,76nm,1.7s
MBDF  Montbardon       18.25 312 eP     P        21 29 16.4 -0.6
      comp=Z,42nm,1.2s
MBDF  Montbardon       18.25 312 eP     P        21 29 16.4 -0.6
MBDF                              pmax  pmax
      comp=Z,21nm,1.2s
SMRF  Simiane la Rot   18.66 309 eP     P        21 29 21.6 -0.3
      comp=Z,34nm,1.0s
LPG   La Plagne        18.66 314 eP     P        21 29 22.4 +0.5
LPL   La Plagne        18.68 314 eP     P        21 29 22.5 +0.3
GRA1  Grafenberg Arr   19.14 330 eP     P        21 29 27.6 -0.1
      comp=Z,21nm,1.5s
GRF   Grafenberg Arr   19.14 330 eP     P        21 29 27.6 -0.1
GRF                               pmax  pmax
      comp=Z,21nm,1.5s
GRF   Grafenberg Arr   19.14 330 eP     P        21 29 27.6 -0.1
GRF                               pmax  pmax
      comp=Z,21nm,1.5s
GRF   Grafenberg Arr   19.14 330 eP     P        21 29 27.6 -0.1
      comp=Z,21nm,1.5s
MZLS  Mizel            19.58 115  P     P        21 29 37.7 +4.9
CABF  La Chapelle      19.65 316 eP     P        21 29 32.4 -1.1
      comp=Z,20nm,0.9s
CABF  La Chapelle      19.65 316 eP     P        21 29 32.4 -1.1
CABF                              pmax  pmax
      comp=Z,10.0nm,0.9s
CLL   Collm            19.77 336  P     P        21 29 36.0 +1.2
CLL                              e*PP            21 29 42.0
CLL                              ePP    PP       21 29 49.0 -4.3
LASF  Ste Croix        19.82 307 eP     P        21 29 34.1 -1.3
HINF  Hinteralfeld     19.93 320 eP     P        21 29 36.0 -0.5
      comp=Z,6.7nm,0.7s
HINF  Hinteralfeld     19.93 320 eP     P        21 29 36.0 -0.5
HINF                              pmax  pmax
      comp=Z,3.0nm,0.7s
CDF   Champ du Feu     20.08 322 eP     P        21 29 38.2 +0.2
SUW   Suwalki          20.24 356 eP     P        21 29 39.1 -0.6
      comp=Z,39nm,0.8s
SUW   Suwalki          20.24 356 eP     P        21 29 39.1 -0.5
SUW                               pmax  pmax
      comp=Z,39nm,0.8s
SUW   Suwalki          20.24 356 eP     P        21 29 39.1 -0.5
      comp=Z,39nm,0.8s
HAU   Haudompre        20.31 320 eP     P        21 29 40.3 -0.1
HAU                              eR
      comp=Z,190nm,17.8s
MTLF  Montolieu        20.66 304 eP     P        21 29 44.0 -0.1
SMF   Signal de Mont   20.99 314 eP     P        21 29 47.5 +0.1
TATS  Tathlith         21.23 128  P     P        21 29 55.1 +5.0
LOR   Lormes           21.29 316 eP     P        21 29 50.7 +0.2
LOR                              eR
      comp=Z,203nm,22.0s
MEZF  Maizieres J’vi   21.30 320 eP     P        21 29 50.2 -0.4
      comp=Z,18nm,0.7s,mb4.2
CAF   Calviac          21.34 308 eP     P        21 29 50.8 -0.2
SSF   Saint Saulge     21.39 315 eP     P        21 29 51.5  0.0
KAMS  Al Khamasin      21.44 124  P     P        21 29 56.4 +4.3
WLF   Walferdange      21.45 323  P     P        21 29 52.2 +0.2
      comp=Z,20nm,1.0s,mb4.4
WLF   Walferdange      21.45 323  P     P        21 29 52.2 +0.1
WLF                               pmax  pmax
      comp=Z,20nm,1.0s,mb4.4
WLF   Walferdange      21.45 323  P     P        21 29 52.2 +0.1
      comp=Z,20nm,1.0s,mb4.4
TCF   Toulx Ste Croi   21.82 312 eP     P        21 29 55.0 -0.8
      comp=Z,22nm,1.1s,mb4.2
TCF   Toulx Ste Croi   21.82 312 eP     P        21 29 55.0 -0.8
TCF                               pmax  pmax
      comp=Z,11nm,1.1s,mb4.2
EPF   Esparros         21.88 302 eP     P        21 29 56.0 -0.4
LFF   La Frestale      22.21 307 eP     P        21 29 59.8  0.0
ETSF  Etsaut           22.48 301 eP     P        21 30 02.2 -0.2
BAIF  Baives           22.68 322 eP     P        21 30 04.1 -0.1
      comp=Z,32nm,1.1s,mb4.4
BAIF  Baives           22.68 322 eP     P        21 30 04.1 -0.1
BAIF                              pmax  pmax
      comp=Z,16nm,1.1s,mb4.4
SJPF  Ste Jean         23.00 302 eP     P        21 30 06.9 -0.6
      comp=Z,32nm,1.0s,mb4.4
SJPF  Ste Jean         23.00 302 eP     P        21 30 06.9 -0.6
SJPF                              pmax  pmax
      comp=Z,16nm,1.0s,mb4.4
MFF   Saint Martin d   23.42 311 eP     P        21 30 11.5  0.0
      comp=Z,42nm,1.3s,mb4.4
MFF   Saint Martin d   23.42 311 eP     P        21 30 11.5  0.0
MFF                               pmax  pmax
      comp=Z,21nm,1.3s,mb4.4
ESDC  Sonseca Array    24.47 292  P     P        21 30 22.9 +1.1
      comp=Z,0.9nm,0.7s,mb3.3,baz=106,slow=6.5,SNR=4.4
FLN   La Foliniere     24.57 315 eP     P        21 30 22.4 -0.2
      comp=Z,139nm,1.5s,mb5.0
FLN                              eR
      comp=Z,166nm,17.0s
MDT   Midelt           25.39 276  P     P        21 30 32.8 +2.2
      comp=Z,2.4nm,1.0s,mb3.7,baz=86,slow=15,SNR=3.3
HFS   Hagfors          27.46 347  P     P        21 30 48.2 -1.3
      comp=Z,4.2nm,0.7s,mb4.1,baz=141,slow=9.5,SNR=7.1
FINES FINESS Array B   27.61   0  P     P        21 30 49.2 -1.5
      comp=Z,1.4nm,0.5s,mb3.9,baz=162,slow=10,SNR=9.4
KAF   Kangasniemi      28.28   1 ep     P        21 30 52.0 -4.8
      comp=Z,6.1nm,0.9s,mb4.2
KAF   Kangasniemi      28.28   1 eP     P        21 30 52.0 -4.8
KAF                               pmax  pmax
      comp=Z,6.0nm,0.9s,mb4.2
NAO   NORSAR Subarra   28.68 345  P     P        21 31 01.0 +0.6
NAO                               pmax  pmax
      comp=Z,1.0nm,0.7s,mb3.6
NAO   NORSAR Subarra   28.68 345  P     P        21 31 01.0 +0.6
      comp=Z,1.0nm,0.7s,mb3.6
AKTK  Aktyubinsk       28.77  45  P     P        21 31 02.2 +0.8
AKTK  Aktyubinsk       28.77  45  P     P        21 31 02.2 +0.8
AKTO  Aktyubinsk       28.77  45  P     P        21 31 02.2 +0.8
      comp=Z,2.0nm,0.5s,mb4.1,baz=244,slow=7.6,SNR=8.6
NB2   NORSAR Subarra   28.79 345  P     P        21 31 01.0 -0.4
      comp=Z,1.0nm,0.7s,mb3.6,baz=151,slow=9.3
NOA   NORSAR Array B   28.79 345  P     P        21 31 02.3 +0.9
      comp=Z,1.7nm,0.8s,mb3.8,baz=150,slow=11,SNR=3.9
NOA                               LR    LR       21 42 30.7
      comp=Z,61nm,18.5s,MS3.2,baz=130,slow=37
JOF   Joensuu          29.29   5 ep     P        21 31 05.3 -0.6
      comp=Z,3.5nm,0.8s,mb4.1
ARU   Arti             31.81  35  P     P        21 31 20.2 -8.0
      comp=Z,5.2nm,0.8s,mb4.4
ARU   Arti             31.81  35  P     P        21 31 20.2 -8.0
ARU                               pmax  pmax
      comp=Z,5.0nm,0.8s,mb4.4
ARCES ARCESS Array B   35.73 360  P     P        21 32 00.5 -1.5
      comp=Z,2.9nm,0.9s,mb4.2,baz=187,slow=8.5,SNR=7.9
ARCES                             LR    LR       21 47 28.8
      comp=Z,61nm,20.3s,MS3.4,baz=186,slow=38
ARCES ARCESS Array B   35.73 360  P     P        21 32 00.5 -1.5
BRVK  Borovoye         36.83  45 eP     P        21 32 12.5 +1.1
      comp=Z,7.8nm,1.1s,mb4.5
BRVK  Borovoye         36.83  45 eP     P        21 32 12.5 +1.2
BRVK                              pmax  pmax
      comp=Z,8.0nm,1.1s,mb4.5
BRVK  Borovoye         36.83  45 eP     P        21 32 12.5 +1.2
      comp=Z,7.8nm,1.1s,mb4.5
BVAR  Borovoye Array   36.88  45  P     P        21 32 12.8 +1.0
      comp=Z,1.9nm,0.9s,mb3.9,baz=225,slow=2.1,SNR=9.8
DBIC  Dimbokro         39.18 233  P     P        21 32 33.1 +1.6
      comp=Z,1.6nm,0.4s,mb4.1,baz=3.8,slow=8.0,SNR=7.8
DBIC  Dimbokro         39.18 233 eP     P        21 32 32.4 +0.8
      comp=Z,12nm,1.2s,mb4.5
DBIC  Dimbokro         39.18 233  P     P        21 32 33.1 +1.6
DBIC                              pmax  pmax
      comp=Z,2.0nm,0.4s
DBIC  Dimbokro         39.18 233 eP     P        21 32 32.3 +0.8
      comp=Z,12nm,1.2s,mb4.5
KURK  Kurchatov        41.61  50 eP     P        21 32 51.6 +0.6
      comp=Z,5.4nm,1.0s,mb4.1
KURK  Kurchatov        41.61  50 eP     P        21 32 51.6 +0.6
KURK                              pmax  pmax
      comp=Z,5.0nm,1.0s,mb4.1
KURK  Kurchatov        41.61  50 eP     P        21 32 51.6 +0.6
      comp=Z,5.4nm,1.0s,mb4.1
MKAR  Makanchi Array   44.07  55  P     P        21 33 13.1 +1.9
      comp=Z,2.2nm,0.6s,mb4.0,baz=279,slow=5.6,SNR=7.3
NVS   Novosibirsk      44.65  44 eP     P        21 33 16.0 +0.2
NVS                               pmax  pmax
      comp=Z,11nm,1.5s,mb4.5
NVS                               pmax  pmax
      comp=E,10.0nm,1.7s
NVS   Novosibirsk      44.65  44 eP     P        21 33 16.0 +0.2
      comp=E,11nm,1.5s,mb4.5
LSZ   Lusaka           48.91 177  P     P        21 33 52.4 +2.7
      comp=E,0.3nm,0.3s,mb3.8,baz=17,slow=11,SNR=2.6
SUMG  Summit           50.38 339 eP     P        21 34 00.9 +0.6
      comp=E,8.8nm,1.1s,mb4.7
SUMG  Summit           50.38 339 eP     P        21 34 00.9 +0.6
      comp=E,8.8nm,1.1s,mb4.7
TSUM  Tsumeb           53.34 190  P     P        21 34 25.2 +1.9
      comp=E,1.2nm,0.8s,mb3.9,baz=333,slow=14,SNR=3.3
MATP  Matopo           54.04 177  P     P        21 34 31.0 +2.7
      comp=E,2.5nm,0.7s,mb4.2,baz=2.7,slow=8.4,SNR=9.5
ZAK   Zakamensk        57.22  48 eP     P        21 34 50.0 -1.0
ZAK                               pmax  pmax
      comp=Z,1.0nm,1.0s,mb3.8
ZAK   Zakamensk        57.22  48 eP     P        21 34 50.0 -1.0
      comp=Z,1.0nm,1.0s,mb3.8
SONM  Songino Array    59.91  50  P     P        21 35 11.1 +1.4
      comp=Z,1.1nm,0.8s,mb3.9,baz=282,slow=8.4,SNR=6.7
SCHQ  Schefferville    64.52 320  P     P        21 35 40.9 +0.6
      comp=Z,5.4nm,1.0s,mb4.5,baz=48,slow=12,SNR=3.7
HHC   Hu-ho-hao-te     65.93  56 eP     P        21 35 49.5 -0.1
SUR   Sutherland       66.05 185  P     P        21 35 49.2 -1.4
      comp=Z,21nm,1.2s,mb5.0
CN2   Changchun        73.66  48 eP     P        21 36 37.1 +0.4
ILAR  Eielson Array    81.53 357  P     P        21 37 20.6 +0.7
      comp=Z,0.3nm,0.7s,mb3.3,baz=338,slow=4.0,SNR=5.1
MJAR  Matsushiro Arr   85.80  48  P     P        21 37 43.9 +1.7
      comp=Z,0.9nm,0.4s,mb4.3,baz=307,slow=6.3,SNR=4.2
```

IDC ***24*** *21:26:42.3±0.9, 25.15N×60.40E, mb4.1/11, mb1 4.1/11, mb1mx3.9/23, mbtmp4.1/11, Error ellipse: s-maj=25.9km s-min=19.4km az=117.0*
NEIC ***24*** *21:26:44.5±0.8, 25.33N×60.22E, h10^{km}, mb4.2/4, Error ellipse: s-maj=18.4km s-min=12.3km az=181.0*
MOS ***24*** *21:26:45.8±1.1, 25.15N×60.24E, h33^{km}, mb4.5/2, Error ellipse: s-maj=20.6km s-min=16.5km az=93.1*
CSEM ***24*** *21:26:45.8±0.1, 25.44N×60.12E, h33^{km}, mb4.2/4*
ISC 24 21:26:42.6±0.5**, 25.21N**±0.10×**60.13E**±0.06**, h10**^{km}**, n29,** σ**0^{s}96**/29**, mb4.2**/19**, Southern Iran**

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Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                                   Op     ISC      h  m  s    ISC
RDF   Al-Radifah       11.80 291 eP     P        21 29 32.9 -1.2
RDF                               AML   AML      21 31 46.0
      comp=Z,14nm,0.5s
UMR   Umm Al-Rimmam    11.85 294 eP     P        21 29 33.6 -1.0
UMR                               AML   AML      21 31 42.9
      comp=Z,19nm,0.3s
NAY   Al-Naaiem        12.15 292 eP     P        21 29 38.2 -0.6
NAY                               AML   AML      21 31 51.4
      comp=Z,4.9nm,0.4s
MIB   Mutribah         12.24 295 eP     P        21 29 39.5 -0.4
MIB                               AML   AML      21 31 53.0
      comp=Z,7.3nm,0.4s
GNI   Garni            19.70 323 eP     P        21 31 09.4 -5.4
      comp=Z,25nm,1.4s
GNI   Garni            19.70 323 eP     P        21 31 09.5 -5.4
GNI                               pmax  pmax
      comp=Z,25nm,1.4s
AAK   Ala-Archa        21.02  31 eP     P        21 31 23.6 -5.2
      comp=Z,13nm,1.3s,mb4.1
AAK   Ala-Archa        21.02  31 eP     P        21 31 23.6 -5.2
AAK                               pmax  pmax
      comp=Z,13nm,1.3s,mb4.1
KOLN  Koldanda         21.16  78 eP     P        21 31 30.7 +0.4
      comp=Z,22nm,1.0s,mb4.4
ATD   Arta Tunnel      21.27 233  P     P        21 31 33.0 +1.5
      comp=Z,4.5nm,0.7s,mb3.9,baz=19,slow=12,SNR=4.1
GKN   Gorkha           22.08  77 eP     P        21 31 39.1 -0.5
      comp=Z,9.8nm,0.8s,mb4.3
DMN   Daman            22.49  78 eP     P        21 31 44.5 +0.9
      comp=Z,22nm,1.1s,mb4.5
KKN   Kakani           22.65  78 eP     P        21 31 45.2  0.0
      comp=Z,24nm,1.0s,mb4.6
PKI   Pulchoki         22.76  79 eP     P        21 31 46.6 +0.3
      comp=Z,18nm,0.8s,mb4.5
GUN   Gumba            23.18  78 eP     P        21 31 49.8 -0.6
      comp=Z,61nm,1.1s,mb4.9
KIV   Kislovodsk       23.49 327 eP     P        21 31 56.3 +3.0
      comp=Z,12nm,0.9s,mb4.3
KIV   Kislovodsk       23.49 327 eP     P        21 31 56.3 +3.0
KIV                               pmax  pmax
      comp=Z,12nm,0.9s,mb4.3
AKTK  Aktyubinsk       25.24 357  P     P        21 32 11.2 +1.1
AKTO  Aktyubinsk       25.24 357  P     P        21 32 11.2 +1.1
      comp=Z,1.6nm,0.6s,mb3.7,baz=185,slow=12,SNR=1.8
BVAR  Borovoye Array   28.84  13  P     P        21 32 41.6 -1.4
      comp=Z,0.8nm,0.8s,mb3.5,baz=180,slow=7.2,SNR=2.7
SONM  Songino Array    42.70  46  P     P        21 34 39.8 -1.5
      comp=Z,0.3nm,0.6s,mb3.2,baz=265,slow=8.1,SNR=4.0
FINES FINESS Array B   42.94 337  P     P        21 34 43.0  0.0
      comp=Z,9.5nm,1.1s,mb4.4,baz=162,slow=12,SNR=5.1
FINES FINESS Array B   42.94 337  P     P        21 34 43.0  0.0
HFS   Hagfors          47.22 330  P     P        21 35 18.7 +1.4
      comp=Z,6.5nm,1.1s,mb4.5,baz=90,slow=8.6,SNR=3.1
ARCES ARCESS Array B   48.80 345  P     P        21 35 29.3 -0.1
      comp=Z,2.3nm,0.9s,mb4.2,baz=122,slow=8.5,SNR=3.8
MDT   Midelt           56.36 294  P     P        21 36 27.4 +1.0
      comp=Z,2.5nm,0.6s,mb4.4,baz=83,slow=7.7,SNR=6.9
BOSA  Boshof           63.15 214  P     P        21 37 12.7 -0.4
      comp=Z,1.2nm,0.6s,mb4.2,baz=341,slow=17,SNR=3.7
DBIC  Dimbokro         64.57 265  P     P        21 37 22.8 +0.1
      comp=Z,2.6nm,0.6s,mb4.4,baz=80,slow=11,SNR=7.5
WRA   Warramunga Arr   84.93 115  P     P        21 39 18.6 -1.0
      comp=Z,1.4nm,0.9s,mb4.1,baz=312,slow=4.3,SNR=14
```

IDC ***24*** *21:36:12.2±1.9, 4.99N×94.78E, mb3.7/5, mb1 3.9/5, mb1mx3.7/18, mbtmp3.7/5, Error ellipse: s-maj=75.8km s-min=25.6km az=55.0*
NEIC ***24*** *21:36:16.4±1.9, 5.01N×94.75E, h30^{km}, mb4.0/1, Error ellipse: s-maj=77.9km s-min=17.5km az=52.0*
ISC 24 21:36:15.6±1.6**, 5.1N**±0.3×**94.9E**±0.4**, h33**^{km}**, n11,** σ**0^{s}81**/11**, mb3.8**/8**, Northern Sumatera**

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Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                                   Op     ISC      h  m  s    ISC
PKI   Pulchoki         24.14 339 eP     P        21 41 30.7 +0.9
DMN   Daman            24.29 338 eP     P        21 41 32.7 +1.5
GUN   Gumba            24.29 340 eP     P        21 41 29.8 -1.5
      5.7nm,0.5s,mb4.2
KKN   Kakani           24.39 339 eP     P        21 41 31.4 -0.8
GKN   Gorkha           24.82 338 eP     P        21 41 36.0 -0.4
      3.0nm,0.3s,mb4.2
KOLN  Koldanda         25.01 336 eP     P        21 41 38.7 +0.4
      8.2nm,0.7s,mb4.3
MKAR  Makanchi Array   42.98 347  P     P        21 44 14.1 +0.5
      1.1nm,0.4s,mb3.9,baz=162,slow=8.2,SNR=22
SONM  Songino Array    43.75  11  P     P        21 44 19.9 +0.2
      0.2nm,0.4s,mb3.2,baz=186,slow=7.6,SNR=5.9
WRA   Warramunga Arr   46.05 124  P     P        21 44 38.5  0.0
      1.3nm,0.6s,mb4.0,baz=302,slow=9.2,SNR=16
BVAR  Borovoye Array   51.88 341  P     P        21 45 22.0 -1.0
      0.4nm,0.6s,mb3.5,baz=153,slow=6.6,SNR=3.8
GERES GERESS Array B   80.41 319  P     P        21 48 25.8 +0.2
      0.1nm,0.3s,mb3.2,baz=112,slow=7.2,SNR=3.6
```

MAN 24 21:45:53.8, 7.94N×125.04E, h9^{km}, mb4.2, ML3.0, MS2.8, 3C-1D, Mindanao

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Code  Station Name      Δ°   AZ°   Phase ID         Time      Res
                                   Op     ISC      h  m  s    ISC
BUKP  Musuan            0.06 162  eP    Pg       21 45 56.8 +0.9
CGP   Cagayan de Oro    0.62 326⇑ eP    Pg       21 46 05.9 -0.4
CGP                               i S   Sg       21 46 15.2 +0.7
KCP   Kidapawan         0.93 177⇑ iP    Pb       21 46 11.4 -0.2
KCP                               i S   Sb       21 46 24.0 +0.2
DMPH  Davao City--Mi    0.97 151⇓ iP    Pb       21 46 13.8 +1.5
DMPH                              i S   Sb       21 46 33.9 +8.9
CTBH  Cotabato--PC H    1.06 228⇑ iP    Pb       21 46 12.8 -1.1
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CTBH				i S	Sb	21 46 27.1	-0.7
MATI	Mati	1.56	129	eP	Pn	21 46 21.2	-0.7
PAGZ	Pagadian	1.65	267	eP	Pn	21 46 24.1	+0.9
PAGZ				eS	Sn	21 46 47.1	+2.5

PGC 24 22:35:38.2, 48.62N×128.91W, h10km, MLSn3.5/1, Mw4.1, West of Vancouver Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDB	Eliza Dome	1.72	42	Pn	Pn	22 36 05.7	-2.9
EDB				Sn	Sn	22 36 24.2	-6.6
EDB				Trac		22 36 26.0	
	comp=Z,53nm,0.2s						
HOLB	Holberg	2.09	14	Pn	Pn	22 36 12.4	-1.4
HOLB				Sn	Sn	22 36 36.0	-4.1
	comp=Z,71nm,0.2s						
HOLB				Trac		22 36 37.5	
	comp=Z,71nm,0.2s						
MAYB	Maynard	2.12	32	Pn	Pn	22 36 11.5	-2.7
MAYB				Sn	Sn	22 36 36.2	-4.5
	comp=Z,20nm,0.2s						
MAYB				Trac		22 36 42.6	
	comp=Z,20nm,0.2s						
WOSB	Woss	2.17	44	Pn	Pn	22 36 13.4	-1.7
WOSB				Sn	Sn	22 36 38.1	-4.2
	comp=Z,83nm,0.2s						
WOSB				Trac		22 36 39.4	
	comp=Z,83nm,0.2s						
GDR	Gold River	2.22	57	Pn	Pn	22 36 13.3	-2.3
GDR				Sn	Sn	22 36 37.3	-6.1
	comp=Z,22nm,0.3s						
GDR				Trac		22 36 40.0	
	comp=Z,22nm,0.3s						
OZB	Mount Ozzard	2.29	80	Pn	Pn	22 36 13.8	-2.8
OZB				Sn	Sn	22 36 40.8	-4.4
OZB				Trac		22 36 41.3	
	comp=Z,27nm,0.3s						
PHC	Port Hardy	2.30	24	Pn	Pn	22 36 13.6	-3.3
PHC				Sn	Sn	22 36 38.3	-7.2
PHC				Trac		22 36 40.2	
	comp=Z,23nm,0.3s						
BTB	Buttle Lake	2.39	68	Pn	Pn	22 36 16.2	-1.9
BTB				Sn	Sn	22 36 44.1	-3.6
	comp=Z,154nm,0.5s						
BTB				Trac		22 36 45.2	
	comp=Z,154nm,0.5s						
NCRB	Newcastle Ridg	2.58	45	Pn	Pn	22 36 19.1	-1.7
NCRB				Sn	Sn	22 36 48.8	-3.8
	comp=Z,84nm,0.4s						
NCRB				Trac		22 36 50.2	
	comp=Z,84nm,0.4s						
CBB	Campbell River	2.72	57	Pn	Pn	22 36 20.9	-2.0
CBB				Sn	Sn	22 36 51.5	-4.5
CBB				Trac		22 36 54.1	
	comp=Z,37nm,0.5s						
ALB	Alberni	2.77	75	Sn	Sn	22 36 53.3	-4.1
	comp=Z,7.0nm,0.2s						
ALB				Trac		22 36 55.6	
	comp=Z,7.0nm,0.2s						
MGB	Mount Grey	2.82	81	Pn	Pn	22 36 21.6	-2.6
MGB				Sn	Sn	22 36 53.8	-4.7
	comp=Z,9.0nm,0.2s						
MGB				Trac		22 36 55.0	
	comp=Z,9.0nm,0.2s						
PFB	Port Renfrew	2.97	89	Pn	Pn	22 36 24.1	-2.3
PFB				Trac		22 37 02.2	
	comp=Z,5.0nm,0.4s						
TXB	Texada	3.13	68	Pn	Pn	22 36 26.9	-1.7
TXB				Sn	Sn	22 37 02.8	-3.7
	comp=Z,24nm,0.3s						
TXB				Trac		22 37 04.4	
	comp=Z,24nm,0.3s						
NLLB	Nanaimo Lost L	3.31	78	Pn	Pn	22 36 29.8	-1.3
NLLB				Trac		22 37 10.4	
	comp=Z,8.0nm,0.2s						
LZB	Mount Lazard	3.38	88	Pn	Pn	22 36 29.9	-2.2
SHB	Sechelt	3.45	72	Pn	Pn	22 36 31.3	-2.0
SHB				Sn	Sn	22 37 10.7	-3.9
SHB				Trac		22 37 17.1	
	comp=Z,17nm,0.3s						
GOBB	Galiano Island	3.59	83	Pn	Pn	22 36 33.6	-1.5
BBB	Bella Bella	3.61	8	Pn	Pn	22 36 32.9	-2.5
BBB				Sn	Sn	22 37 11.6	-7.0
BBB				Trac		22 37 13.4	
	comp=Z,20nm,0.1s						
BIB	Bowen Island	3.77	76	Pn	Pn	22 36 36.0	-1.8
BIB				Sn	Sn	22 37 18.8	-4.0
	comp=Z,4.0nm,0.3s						
BIB				Trac		22 37 23.9	
	comp=Z,4.0nm,0.3s						
SNB	Saturna Island	3.81	85	Pn	Pn	22 36 36.2	-2.0
SNB				Trac		22 37 29.8	
	comp=Z,5.0nm,0.4s						
WPB	Watts Point	3.89	72	Pn	Pn	22 36 37.9	-1.5
WSLR	Whistler	4.20	67	Pn	Pn	22 36 42.6	-1.2
WSLR				Trac		22 37 35.1	
	comp=Z,5.0nm,0.3s						
VDB	Vedder Mountai	4.52	82	Pn	Pn	22 36 46.3	-2.0
LLLB	Lillooet	4.99	64	Pn	Pn	22 36 53.2	-1.8
LLLB				Sn	Sn	22 37 50.5	-3.0
LLLB				Trac		22 37 52.5	
	comp=Z,6.0nm,0.5s						
FSB	Fort Saint Jam	6.53	24	Pn	Pn	22 37 14.4	-2.4
DOWB	Downie Slide	7.29	63	Pn	Pn	22 37 25.0	-2.5
SLEB	Sale Mountain	7.42	66	Pn	Pn	22 37 27.8	-1.4
MNB	Mounoet Dainar	7.62	58	Pn	Pn	22 37 26.1	-6.1
FNBB	Fort Nelson	10.86	16	Pn	P	22 38 13.8	-3.0

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*NNC **24** 22:39:07.4±11.0, 41.65N×82.57E, mpv3.4, Error ellipse: s-maj=83.0km s-min=36.5km az=141.0*

BJI 24 22:39:11.6, 41.75N×82.46E, h15km, ML3.3, 2C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	4.37	60	eP	Pn	22 40 22.5	+3.4
WMQ				S	Sn	22 41 15.5	+5.2
WMQ				Smax			
	comp=N,20nm,0.6s						
WMQ				Smax			
	comp=E,10.0nm,0.5s						
MK31	Makanchi Array	5.04	359	⇓Pn	Pn	22 40 27.4	-1.2
	comp=E,2.0nm,0.4s,baz=184,slow=11						
MK31				⇑Lg		22 41 49.2	
	comp=E,11nm,0.7s,baz=186,slow=29						
AAK	Ala-Archa	5.98	281	⇑Pg	Pg	22 41 00.8	-10
	comp=E,2.5nm,0.6s						
AAK				⇓Lg		22 42 21.1	
	comp=E,4.5nm,0.6s						

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*NDI **24** 22:42:35.7±2.2, 32.83N×70.84E, h35km, MD3.9*

*NNC **24** 22:42:53.3±9.3, 35.41N×72.30E, mpv3.4, Error ellipse: s-maj=135.0km s-min=66.0km az=105.0*

ISC 24 22:42:46.7±0.7**, 35.45N**±0.06×**74.6E**±0.1**, h10km, n14,** $\sigma 1\overset{s}{.}21$/21**, 1C-1D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	Dalhousie	3.10	159	eP	Pg	22 43 46.0	-2.6
DLH				eS	Sg	22 44 33.0	+3.0
THN	Thein Dam	3.14	163	eP	Pn	22 43 35.9	-1.3
THN				ex	Sn	22 44 15.5	+0.4
SDNR	Sundarnagar	4.39	153	eP	Pn	22 43 54.0	-1.0
SDNR				eS	Sn	22 44 48.0	+1.1
SMLA	Simla	4.80	153	eP	Pn	22 43 57.2	-3.6
SMLA				eS	Sn	22 44 56.5	-0.7
AAK	Ala-Archa	7.18	359	⇓Sn	Sb	22 46 09.4	-8.6
	2.6nm,0.7s						
KK31	Karatay Array	8.29	339	Pn	P	22 44 50.5	+0.7
	0.8nm,0.3s,baz=154,slow=11,SNR=20						
KK31				⇑Sn	Sn	22 46 23.4	-1.0
	0.9nm,0.5s,baz=166,slow=21,SNR=4.9						
KOLN	Koldanda	10.81	133	eP	P	22 45 25.9	+1.3
KOLN				eS	S	22 47 25.2	-1.5
GKN	Gorkha	11.29	128	eP	P	22 45 31.5	+0.3
GKN				eS	S	22 47 37.1	-1.3
KKN	Kakani	11.85	127	eP	P	22 45 39.5	+0.7
DMN	Daman	11.86	128	eP	P	22 45 39.7	+0.8
PKI	Pulchoki	12.08	128	eP	P	22 45 43.0	+1.1
GUN	Gumba	12.17	125	eP	P	22 45 43.7	+0.7
AB31	Akbulak array	17.51	326	P	P	22 46 53.0	+0.6
	0.5nm,0.4s,baz=146,slow=11,SNR=6.0						
AKTO	Aktyubinsk	19.23	326	P	P	22 47 06.7	-6.8

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*NEIC **24** 23:01:22.5±1.3, 20.25S×177.86W, h537km±17km, mb4.8/7, Error ellipse: s-maj=21.5km s-min=15.6km az=166.0*

*IDC **24** 23:01:22.2±2.1, 20.41S×177.72W, h541km±26km, mb3.7/2, mb1 3.7/5, mb1mx3.3/15, mbtmp4.5/5, Error ellipse: s-maj=39.0km s-min=20.8km az=139.0*

ISC 24 23:01:20.5±1.3**, 20.3S**±0.2×**177.9W**±0.1**, h515km**±24km**, n24,** $\sigma 0\overset{s}{.}94$/21**, mb4.6**/9**, 1C-1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.63	44	P	P	23 03 26.3	+1.5
	5.6nm,0.3s,baz=229,slow=17,SNR=3.0						
AFI				S	S	23 05 02.5	-1.2
	3.8nm,0.3s,baz=228,slow=23,SNR=5.8						
DZM	Mont Dzumac	14.72	260	P	P	23 04 28.9	+1.2
	0.3nm,0.3s,baz=72,slow=19,SNR=3.2						
URZ	Urewera	18.41	193	P	P	23 05 02.6	-1.3
	2.2nm,0.3s,baz=306,slow=2.2,SNR=8.7						
CTA	Charters Tower	33.61	264	eP	P	23 07 20.0	+1.0
	16nm,0.4s,mb4.9						
CTAO	Charters Tower	33.61	264	eP	P	23 07 19.7	+0.7
	23nm,0.4s,mb5.1						
PMG	Port Moresby	35.40	283	eP	P	23 07 34.5	+0.5
	9.6nm,0.8s,mb4.4						
STKA	Stephens Creek	37.97	244	eP	P	23 07 55.8	+0.9
	3.1nm,0.5s,mb4.1						
STKA	Stephens Creek	37.97	244	P	P	23 07 55.8	+1.0
	3.9nm,0.5s,mb4.2,baz=83,slow=11,SNR=13						
STKA	Stephens Creek	37.97	244	eP	P	23 07 55.5	+0.6
WB2	Warramunga Arr	44.72	262	eP	P	23 08 48.4	-0.6
WRAB	Tennant Creek	44.72	262	eP	P	23 08 48.4	-0.6
	28nm,1.0s,mb4.7						
WRA	Warramunga Arr	44.73	262	P	P	23 08 48.1	-1.0
	8.6nm,0.6s,mb4.4,baz=95,slow=7.7,SNR=270						
KAKA	Kakadu	48.08	271	⇓iP	P	23 09 34.5	+20
	11nm,0.3s,mb4.9						
FORT	Forrest	49.47	246	eP	P	23 09 24.3	-0.7
	18nm,0.5s,mb4.9						
FITZ	Fitzroy Crossi	53.16	262	eP	P	23 09 51.5	-0.5
	5.6nm,0.4s,mb4.2						
VNDA	Vanda	58.11	185	eP	P	23 10 25.5	-0.1
KLBR	Kellerberrin	58.23	245	eP	P	23 10 26.1	-0.9
	181nm,2.0s,mb5.0						
SNAA	Sanae	88.20	178		P	23 13 16.1	-0.5
VNA3	Neumayer Olymp	88.33	176	⇑i	P	23 13 18.2	+1.0
VNA2	Neumayer--Watz	88.77	177		P	23 13 20.8	+1.5
MKAR	Makanchi Array	111.14	313	PKiKP		23 18 53.0	
	0.2nm,0.5s,baz=189,slow=0.9,SNR=7.5						
AKASG	Malin Array Be	142.90	331	PKP	PKPdf	23 19 52.2	-2.3
	1.9nm,0.5s,baz=42,slow=4.2,SNR=18						
AKASG	Malin Array Be	142.90	331	PKP	PKPdf	23 19 52.2	-2.3
GERES	GERESS Array B	150.04	345	PKPbc	PKPdf	23 20 13.6	+7.2
	1.0nm,0.8s,SNR=5.2						

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*IDC **24** 23:05:36.4±1.5, 21.44S×66.60W, h203km±14km, mb3.6/4, mb1 3.6/8, mb1mx3.5/18, mbtmp4.0/8, Error ellipse: s-maj=19.2km s-min=14.4km az=86.0*

*NEIC **24** 23:05:37.8±0.9, 21.35S×66.66W, h218km±9km, mb3.9/3, Error ellipse: s-maj=13.8km s-min=9.4km az=88.0*

*GUC **24** 23:05:39.6±0.4, 21.96S×66.66W, h220km, MD3.8*

ISC 24 23:05:36.1±0.6**, 21.45S**±0.05×**66.60W**±0.08**, h221km**±7km**, n22,** $\sigma 1\overset{s}{.}35$/26**, mb3.8**/6**, 1C-1D, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEN1	Los Morros	3.85	239	⇓iP	P	23 06 41.6	+4.2
CEN1				i S	S	23 07 28.6	+3.7
ANCH	Antofagasta	4.17	237	⇑iP	P	23 06 42.9	+1.7
ANCH				i S	S	23 07 31.1	-0.7
CPN1	Cerro Paranal	4.72	227	eP	P	23 06 49.7	+1.5
CPN1				i S	S	23 07 43.1	-1.0
LPAZ	La Paz	5.33	344	P	P	23 06 57.0	+1.1
	0.7nm,0.3s,baz=95,slow=2.4,SNR=14						
LPAZ				S	S	23 07 58.1	+0.2
	0.4nm,0.3s,baz=351,slow=17,SNR=18						
LPAZ	La Paz	5.33	344	ePn	P	23 06 56.7	+0.8
LPAZ				eSn	S	23 07 58.0	0.0
CRCH	Chaqaral	6.11	216	i S	S	23 08 13.2	-2.5
SIV	San Ignacio	7.54	45	P	P	23 07 24.5	+0.3
	14nm,0.3s,baz=230,slow=13,SNR=285						
SIV				S	S	23 08 46.3	-2.4
	0.3nm,0.3s,baz=215,slow=17,SNR=2.3						
CFAA	Coronel Fontan	10.22	188	P	P	23 08 00.4	+1.6
	0.1nm,0.3s,baz=14,slow=15,SNR=12						
CFAA				S	S	23 09 47.8	-2.7
	0.3nm,0.3s,baz=281,slow=18,SNR=9.9						
SAML	Samuel	12.86	15	ePn	P	23 08 31.6	-0.5
	1.2nm,0.6s						
BDFB	Brasilia	18.54	75	P	P	23 09 39.5	+1.1
	0.5nm,0.3s,baz=275,slow=7.3,SNR=4.3						
SJG	San Juan	39.32	1	P	P	23 12 45.9	+0.4
	3.8nm,0.3s,mb4.3,baz=341,slow=6.3,SNR=2.9						
ELN	Prospectdale	59.87	347	eP	P	23 15 19.2	-1.4
WVT	Waverly	60.69	340	eP	P	23 15 23.4	-2.8
	5.5nm,0.8s,mb4.2						
SNAA	Sanae	61.63	161	eP	P	23 15 33.5	+1.5
	2.5nm,1.2s,mb3.7						
TXAR	Lajitas Array	61.84	323	P	P	23 15 33.6	-0.4
	0.1nm,0.4s,mb2.8,baz=135,slow=7.7,SNR=4.3						
DBIC	Dimbokro	66.66	72	P	P	23 16 05.2	-0.3
	2.2nm,0.7s,mb3.9,baz=222,slow=10,SNR=3.1						
DBIC	Dimbokro	66.66	72	P	P	23 16 05.2	-0.3
ANMO	Albuquerque	67.66	325	P	P	23 16 11.6	+0.2
YKA	Yellowknife Ar	91.87	340	P	P	23 18 20.8	+1.0
	0.5nm,0.5s,mb3.7,baz=132,slow=4.7,SNR=5.6						
WRA	Warramunga Arr	134.05	208	PKP	PKPdf	23 24 29.6	+1.8
	0.2nm,0.3s,baz=154,slow=2.0,SNR=13						
MKAR	Makanchi Array	144.31	37	PKP	PKPdf	23 24 47.4	+1.9
	1.9nm,0.6s,baz=347,slow=2.7,SNR=25						
SONM	Songino Array	153.08	10	PKPbc	PKPdf	23 25 10.0	+11
	0.2nm,0.3s,baz=325,slow=1.6,SNR=6.2						

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*NEIC **24** 23:48:34.8, 34.83S×71.69W, h39km, MD3.5(GUC), After GUC.*

GUC 24 23:48:34.8±0.8**, 34.83S×71.69W, h39km**±3km**, MD3.5, ML2.7, 2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFDO	San Fernando	0.59	69	⇑iP	P	23 48 47.4	+0.7
SFDO				i S	S	23 48 56.3	+0.9
LNV	Longovilo	0.90	15	eP	P	23 48 51.2	+0.1
LNV				i S	S	23 49 04.0	+0.9
CACH	El Canelo	1.14	52	eP	P	23 48 55.1	+0.6
CACH				i S	S	23 49 11.3	+2.1
CICH	Cipreses	1.16	64	⇑iP	P	23 48 55.7	+0.9
CICH				i S	S	23 49 11.3	+1.6
CHCH	Chadas Angostu	1.24	44	⇓iP	P	23 48 56.6	+0.8
CHCH				i S	S	23 49 12.9	+1.3
TACH	Talagante	1.33	28	eP	P	23 48 58.2	+0.9
TACH				i S	S	23 49 16.0	+2.0
RCDM	Rinconada Maip	1.52	29	eP	P	23 49 00.6	+0.6
RCDM				AMP		23 49 22.8	
	comp=E,181nm,0.1s						
ANTU	Antumapu	1.53	35	i S	S	23 49 21.2	+2.2
ANTU				AMP		23 49 25.3	
	comp=E,181nm,0.2s						
PCH	Pirque	1.55	39	eP	P	23 49 00.8	+0.4
PCH				i S	S	23 49 20.9	+1.4
FCH	Farellones	1.89	38	eP	P	23 49 06.0	+0.7
FCH				i S	S	23 49 30.8	+2.7
FCH				AMP		23 49 33.7	
	comp=N,115nm,0.2s						

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*NEIC **24** 23:56:51.8±1.9, 2.40S×77.13W, h130km±20km, mb4.2/15, Error ellipse: s-maj=21.0km s-min=10.7km az=69.0*

*IGQ **24** 23:56:54.3, 2.21S×77.13W, h19km±5km, mb4.4, Error ellipse: s-maj=5.6km s-min=2.1km az=85.7*

*IDC **24** 23:56:59.5±3.6, 2.24S×76.99W, h205km±37km, mb3.4/11, mb1 3.5/14, mb1mx3.5/24, mbtmp3.9/14, Error ellipse: s-maj=33.8km s-min=12.0km az=68.0*

ISC 24 23:56:53.8±0.6**, 2.33S**±0.06×**77.28W**±0.09**, h159km**±4km**, n61,** $\sigma 1\overset{s}{.}11$/64**, mb3.8**/18**, 6C-2D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARRY	Arrayan	1.43	305	⇑P	P	23 57 22.2	-1.4
ARRY				S	S	23 57 41.2	-5.6
RUN5	Runtun	1.46	309	⇑P	P	23 57 22.7	-1.3
JUIV	Juive	1.49	307	⇓P	P	23 57 22.9	-1.3
JUIV				S	S	23 57 43.5	-4.3
CUSU	Cusua	1.49	306	⇓P	P	23 57 23.1	-1.2
IGUA	Igualata	1.59	302	P	P	23 57 25.1	-0.2
PISA	Pisayambo	1.68	319	P	P	23 57 25.7	-0.6
TAMB	Tambo	1.96	326	P	P	23 57 29.8	+0.5
VC1	Cotopaxi 1	2.02	326	P	P	23 57 30.6	+0.6
CAMI	Rancho Maria	2.05	323	P	P	23 57 31.5	+1.1
ANTI	Antisana	2.07	335	P	P	23 57 30.4	-0.2
QIL1	Quilotoa	2.22	312	P	P	23 57 33.5	+1.1
LAV3	Lava3-Reventad	2.25	351	P	P	23 57 31.7	-1.1
CONE	Cono NE Rev Vo	2.28	351	P	P	23 57 32.1	-1.0
CAYR	Refugio Cayamb	2.44	343	P	P	23 57 35.9	+0.6
ANGU	Angureal	2.47	343	P	P	23 57 36.2	+0.6
JUA2	San Juan 2	2.49	328	P	P	23 57 36.2	+0.5
CAYA	Cayambe	2.49	343	P	P	23 57 36.4	+0.6
GGP	Refugio Guagua	2.52	329	P	P	23 57 36.6	+0.5
TERV	Terraza Guagua	2.52	328	P	P	23 57 36.9	+0.8
PINO	Pino	2.54	328	P	P	23 57 37.1	+0.7
YANA	Yana	2.55	330	P	P	23 57 36.9	+0.3
COTA	Cotacachi	2.85	338	P	P	23 57 41.4	+1.0
MAG1	Magdalena	3.35	312	P	P	23 57 45.9	-0.9
ROSC	El Rosal	7.73	22	P	P	23 58 47.6	+3.1
	0.8nm,0.3s,baz=105,slow=23,SNR=2.3						
NNA	Nana	9.60	177	ePn	P	23 59 03.5	-5.8
	14nm,0.4s						
NNA				eSn	S	00 00 39.1	-16
SDV	Santo Domingo	12.97	31	P	P	23 59 52.0	-1.2
	0.5nm,0.3s,baz=252,slow=11,SNR=9.3						
SDV	Santo Domingo	12.97	31	ePn	P	23 59 52.1	-1.1
JTS	JuntasAbangare	14.68	329	eP	P	00 00 18.0	+2.9
	16nm,1.1s						
SAML	Samuel	15.49	116	eP	P	00 00 20.1	-5.0
	2.0nm,0.5s						
LPAZ	La Paz	16.54	148	P	P	00 00 39.3	+1.3
	0.2nm,0.3s,baz=339,slow=12,SNR=9.3						
LPAZ	La Paz	16.54	148	eP	P	00 00 39.1	+1.0
	2.0nm,0.7s						
SIV	San Ignacio	20.95	131	P	P	00 01 24.7	-0.9
	3.0nm,0.5s,baz=318,slow=10,SNR=27						
SJG	San Juan	23.09	28	P	P	00 01 46.5	0.0
	3.8nm,0.4s,mb4.2,baz=223,slow=2.7,SNR=5.9						
SJG	San Juan	23.09	28	eP	P	00 01 45.5	-1.0
	39nm,1.2s,mb4.7						
PLCA	Paso Flores	38.70	172	P	P	00 04 04.7	+0.7
	4.3nm,0.8s,mb4.2,baz=348,slow=10,SNR=5.4						
PLCA	Paso Flores	38.70	172	eP	P	00 04 03.7	-0.2
	39nm,1.6s,mb4.8						
WVT	Waverly	39.51	347	eP	P	00 04 08.4	-2.2
	2.6nm,0.6s,mb4.0						
TXAR	Lajitas Array	40.37	323	P	P	00 04 18.6	+0.8
	0.4nm,0.7s,mb3.2,baz=141,slow=8.0,SNR=3.7						
WMOK	Wichita Mounta	42.04	333	eP	P	00 04 31.3	-0.1
	2.1nm,0.6s,mb3.9						
CPRX	Cap Rock	43.23	327	eP	P	00 04 42.9	+1.8
ANMO	Albuquerque	46.09	326	P	P	00 05 05.4	+1.6
	3.0nm,0.7s,mb4.0,baz=147,slow=9.8,SNR=13						
ANMO	Albuquerque	46.09	326	eP	P	00 05 05.2	+1.4
	5.0nm,1.0s,mb4.1						
ANMO				e	pP	00 05 35.8	-3.6
SDCO	Great Sand Dun	47.68	330	eP	P	00 05 17.3	+1.1
	3.3nm,0.6s,mb4.1						
PDAR	Pinedale Array	53.51	331	P	P	00 05 59.1	-1.0
	0.5nm,0.6s,mb3.4,baz=140,slow=12,SNR=3.9						
HWUT	Hardware Ranch	53.67	328	P	P	00 06 00.9	-0.5
	1.3nm,0.6s,mb3.8						
ULM	Lac du Bonnet	54.76	345	P	P	00 06 07.0	-2.1
	3.1nm,0.5s,mb4.3,baz=162,slow=5.2,SNR=10.0						
ELK	Elko	55.09	325	P	P	00 06 09.4	-2.3
	0.4nm,0.5s,mb3.4,baz=100,slow=11,SNR=3.0						
NVAR	Mina Array Bea	55.46	321	P	P	00 06 14.1	-0.3
	0.1nm,0.3s,mb3.0,baz=102,slow=8.3,SNR=3.4						
HLID	Hailey	56.54	328	eP	P	00 06 17.9	-4.2
	1.0nm,0.7s,mb3.8						
PMSA	Palmer Station	63.04	174	eP	P	00 07 05.5	-0.6
	5.6nm,0.7s,mb4.5						
YKA	Yellowknife Ar	70.54	343	P	P	00 07 51.7	-1.5
	0.5nm,0.6s,mb3.5,baz=143,slow=6.4,SNR=4.5						
SUMG	Summit	78.70	11	eP	P	00 08 39.6	+0.1
	4.5nm,0.8s,mb4.2						
INK	Inuvik	80.28	342	eP	P	00 08 47.9	-0.2
	1.5nm,0.6s,mb3.8						
VNA3	Neumayer Olymp	80.71	162	⇑i	P	00 08 51.3	+1.0
VNA3	Neumayer Olymp	80.71	162	e	P	00 08 56.6	+6.3
VNA1	Neumayer--Stat	80.94	162	⇑i	P	00 08 54.0	+2.4
VNA1	Neumayer--Stat	80.94	162	e	P	00 08 59.5	+7.9
VNA2	Neumayer--Watz	81.31	162	⇑i	P	00 08 54.2	+0.7
VNA2	Neumayer--Watz	81.31	162	e	P	00 08 59.3	+5.8
SNAA	Sanae	82.93	162	⇑i	P	00 09 02.5	+0.7
ILAR	Eielson Array	83.53	336	P	P	00 09 05.2	+0.3
	0.4nm,0.8s,mb3.2,baz=129,slow=4.6,SNR=5.7						

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*IDC **25** 00:10:52.3±1.0, 8.72S×115.43E, mb3.9/5, mb1 4.1/6, mb1mx4.0/15, mbtmp4.0/6, ML4.3/1, Error ellipse: s-maj=51.1km s-min=19.8km az=61.0*

*NEIC **25** 00:10:54.0±0.8, 8.71S×115.51E, h10km, mb4.1/2, Error ellipse: s-maj=32.5km s-min=14.4km az=51.0*

NEIC Felt [IV] at Karangasem and [II] on Nusadua.

ISC 25 00:10:55.1±0.9**, 8.7S**±0.1×**115.6E**±0.2**, h33km, n12,** $\sigma 1\overset{s}{.}18$/14**, mb4.0**/7**, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.54	135	eP	P	00 14 05.0	-2.4
	7.3nm,0.6s						
FITZ				eS	S	00 16 24.0	-14
FITZ	Fitzroy Crossi	13.54	135	Pn	P	00 14 05.1	-2.4
	1.2nm,0.3s,baz=320,slow=12,SNR=16						
FITZ				Sn	S	00 16 27.1	-11
	1.0nm,0.3s,baz=180,slow=18,SNR=4.7						
WRA	Warramunga Arr	21.32	124	P	P	00 15 41.9	+0.5
	3.6nm,0.7s,mb3.8,baz=298,slow=12,SNR=63						
WRA				S	S	00 19 30.5	-1.0
	0.4nm,0.6s,baz=294,slow=20,SNR=3.9						
WRA				PcP	PcP	00 19 45.8	+0.3
	0.5nm,0.4s,baz=306,slow=1.8,SNR=6.8						
WRAB	Tennant Creek	21.33	124	eP	P	00 15 42.0	+0.5
	11nm,0.8s,mb4.2						
WB2	Warramunga Arr	21.33	124	eP	P	00 15 42.2	+0.6
NWAO	Narrogin (SRO)	24.19	177	P	P	00 16 08.6	-1.1
	6.4nm,0.7s,mb4.2,baz=342,slow=3.2,SNR=3.9						
NWAO	Narrogin (SRO)	24.19	177	P	P	00 16 08.6	-1.1
STKA	Stephens Creek	33.42	137	P	P	00 17 34.6	+1.6
	1.5nm,0.4s,mb4.2,baz=309,slow=7.6,SNR=5.5						
SONM	Songino Array	56.84	353	P	P	00 20 38.7	-0.2
	0.6nm,0.8s,mb3.7,baz=176,slow=6.6,SNR=4.4						
MKAR	Makanchi Array	62.67	335	P	P	00 21 18.1	-0.9
	0.5nm,0.7s,mb3.8,baz=147,slow=7.0,SNR=10.0						
VNDA	Vanda	72.85	171	P	P	00 22 23.7	+1.6
	1.2nm,1.0s,mb3.8						
BDFB	Brasilia	150.89	214	PKPbc	PKPdf	00 30 49.5	+10
	1.5nm,0.5s,baz=138,slow=1.3,SNR=5.4						

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*WAR **25** 00:15:15.8, 50.26N×18.86E, h0km, ML2.8, Mining Induced*

*IPEC **25** 00:15:15.7±0.2, 50.25N×18.83E, h4km±1km, ML2.2/3, Error ellipse: s-maj=2.2km s-min=0.8km az=170.0*

*PRU **25** 00:15:16.8, 50.25N×18.77E*

*VIE **25** 00:15:16.4±1.6, 50.26N×18.69E, mb2.4/2, ML2.8/3, Error ellipse: s-maj=13.7km s-min=9.4km az=143.0, Suspected Mining induced.*

*CSEM **25** 00:15:16.3±0.2, 50.30N×18.82E, h2km, ML3.2/3, Error ellipse: s-maj=5.5km s-min=2.7km az=8.0*

*NEIC **25** 00:15:16.0±0.6, 50.24N×18.84E, h5km, MG2.8(WAR), Error ellipse: s-maj=9.2km s-min=4.3km az=9.0*

ISC 25 00:15:14.2±0.4**, 50.29N**±0.03×**18.79E**±0.03**, n34,** $\sigma 1\overset{s}{.}21$/60**, 2C-12D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.43	242	ePG	Pg	00 15 25.0	+2.1
RAC				eSG	Sg	00 15 32.0	+3.4
OKC	Ostrava-Krasne	0.61	223	ePG	Pg	00 15 27.9	+1.5
OKC				eSG	Sg	00 15 34.8	+0.3
OJC	Ojcow	0.65	95	⇓iPG	Pg	00 15 27.5	+0.3
OJC				⇓iSG	Sg	00 15 36.1	+0.3

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MORC  Moravsky Berou     0.95 238 ⇓P      Pg        00 15 33.8 +0.5
MORC  Moravsky Berou     0.95 238 ePg     Pg        00 15 33.8 +0.6
MORC                              eSg     Sg        00 15 47.0 +1.1
      42nm,0.3s
LIKS  Likavka            1.25 170 ePN     Pn        00 15 39.3 +0.4
NIE   Niedzica           1.31 131 ePG     Pg        00 15 40.0 -0.4
NIE                               eSG     Sg        00 15 58.0 +0.1
DPC   Dobruska-Polom     1.58 273 ePG     Pg        00 15 44.6 -1.2
DPC                               eSG     Sg        00 16 05.5 -1.4
      77nm,0.6s
DPC   Dobruska-Polom     1.58 273 ePn     Pn        00 15 44.7 +1.0
DPC                               eSg     Sg        00 16 06.1 -0.8
JAVC  Velka Javorina     1.60 207 ePn     Pn        00 15 44.8 +0.9
KSP   Ksiaz              1.69 290 ePN     Pn        00 15 46.0 +0.9
KSP                              ⇓iPG     Pg        00 15 48.1 +0.2
KSP                              ⇓eSG     Sg        00 16 11.1 +0.7
KSP   Ksiaz              1.69 290 ePn     Pn        00 15 46.4 +1.3
KSP                               ePg     Pg        00 15 48.1 +0.2
KSP                               eSg     Sg        00 16 11.7 +1.3
KSP   Ksiaz              1.69 290 ePn     Pn        00 15 45.7 +0.6
KSP                               e                 00 15 46.2
KSP                               i Pg    Pg        00 15 48.1 +0.2
KSP                               eSg     Sg        00 16 11.2 +0.8
KSP   Ksiaz              1.69 290 i Pg    Pg        00 15 48.1 +0.2
KSP                               eSg     Sg        00 16 11.2 +0.8
VRAC  Vranov             1.73 236 ⇓P      Pn        00 15 47.1 +1.4
VRAC  Vranov             1.73 236 ePn     Pn        00 15 46.8 +1.1
VRAC  Vranov             1.73 236 ⇓P      Pn        00 15 47.1 +1.4
VRAC                              eSg     Sg        00 16 09.7 -2.0
      27nm,0.3s
UPC   Upice              1.79 278 ePG     Pg        00 15 49.5 -0.5
UPC                               eSG     Sg        00 16 13.2 -0.7
VYHS  Vyhne              1.79 179 ePN     Pn        00 15 46.7 +0.1
VYHS                              eSN     Sn        00 16 09.3 -1.2
STHS  Stebnicka Huta     1.81 118 ePN     Pn        00 15 48.9 +2.0
STHS                              eSN     Sn        00 16 14.2 +3.3
KRUC  Moravsky           1.98 233 ePn     Pn        00 15 50.2 +0.9
KRUC                              eSg     Sg        00 16 16.8 -3.3
      12nm,0.2s
KECS  Kecovo             2.12 148 ePN     Pn        00 15 50.9 -0.4
KECS                              ePG     Pg        00 15 54.5 -2.0
KECS                              eSN     Sn        00 16 19.7 +1.0
CRVS  Cervenica-Dubn     2.22 128 ePN     Pn        00 15 53.1 +0.3
CRVS                              ePG     Pg        00 15 56.3 -2.2
CRVS                              eSN     Sn        00 16 24.3 +3.0
KWP   Kalwaria           2.61 103 ePG     Pg        00 16 05.0 -1.4
KOLS  Kolonicke sedl     2.64 120 e       Pn        00 15 58.6 -0.1
KOLS                              e                 00 16 03.7
PRU   Pruhonice          2.75 265 eSG     Sg        00 16 42.0 -3.8
KHC   Kasperske Hory     3.58 253 ePN     Pn        00 16 12.0 -0.1
KHC                               eSG     Sg        00 17 09.4 -3.8
CLL   Collm              3.81 288 ePG     Pg        00 16 30.0 -0.3
CLL                               i SG    Sg        00 17 20.6 -0.5
MOA   Molln              3.85 232⇑iPn     Pn        00 16 15.4 -0.5
      comp=Z,0.6nm,0.2s
MOA                              ⇓iSn     Sn        00 17 02.9 +0.4
      comp=N,3.6nm,0.3s
DRGR                     4.36 142 ⇑P      Pn        00 16 22.4 -0.8
BURAR Bucovina Array     5.01 120 ⇓P      Pn        00 16 30.8 -1.6
BURAR Bucovina Array     5.01 120 ⇓P      Pn        00 16 30.8 -1.6
BZS   Buzias             5.04 157 ⇓P      Pn        00 16 30.1 -2.8
BZS   Buzias             5.04 157 ⇓P      Pn        00 16 30.1 -2.8
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NIED ***25*** *00:28:00,38.20N×144.80E,h8^{km},Mw4.9 Best double couple: M$_0$2.21×10^{16} NP1:φ$_s$194°,δ64°,λ-89°. NP2:φ$_s$13°, δ26°,λ-91°.*

SKO ***25*** *00:28:06.8,36.47N×148.61E*

IDC ***25*** *00:28:14.8±0.6,38.01N×145.14E,mb4.3/23,mb1 4.4/27, mb1mx4.4/32,mbtmp4.3/27,ML3.9/4,MS4.1/22,Ms1 4.1/22, ms1mx4.0/27,Error ellipse: s-maj=16.4km s-min=14.2km az=149.0*

NEIC ***25*** *00:28:17.0±0.2,38.03N×145.07E,h10^{km},mb5.1/48, MW4.8(NIED),Error ellipse: s-maj=5.9km s-min=3.2km az=166.0*

BJI ***25*** *00:28:17.7,38.22N×144.67E,h10^{km},mB5.0,mb4.6, Ms4.4,Msz4.2*

HRVD ***25*** *00:28:17.0±0.4,38.41N×145.13E,h12^{km},MW4.9/69, Centroid moment Tensor Solution. LP body waves: s13,c16;Mantle waves: s69,c119; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.31±.08; M$_{\theta\theta}$0.50±.08; M$_{\phi\phi}$1.81±.07; M$_{r\theta}$2.01±.36; M$_{\theta\phi}$1.05±.07; M$_{\phi r}$-0.40±.30; Best double couple: M$_0$3.001×10^{16} NP1: φ$_s$7°,δ42°,λ-134°. NP2:φ$_s$240°,δ61°,λ-58°. Principal axes: T 2.509, Plg10°, Azm307°; N .984, Plg28°, Azm43°; P -3.494, Plg60°, Azm199°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***25*** *00:28:18.1±1.0,38.27N×144.93E,h21^{km},mb5.2/35, MS4.2/10 Error ellipse: s-maj=8.8km s-min=5.4km az=111.6*

JMA ***25*** *00:28:19.2±0.1,38.17N×144.81E,h50^{km},M4.8*

CSEM ***25*** *00:28:21.0,37.88N×144.22E,h33^{km},mb5.7*

ISC 25 00:28:19.0±0.2**,38.24N**±0.03×**144.85E**±0.03**,h27**^{km}**,** **h27**^{km}±1.0^{km}**:pP-P,n255,**σ1§**12**/252**,mb4.8**/91**,MS4.3**/32**,** **7C-8D,Off east coast of Honshu**

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Code  Station Name         Δ°   AZ°    Phase ID             Time      Res
                                     Op        ISC       h  m  s      ISC
OFUJ  Ofunato            2.63 290    P         Pn        00 29 00.4  -0.2
OFUJ                                eS         Sn        00 29 31.3  -0.7
MIYJ  Miyakonagasawa     2.71 300    P         Pn        00 29 01.5  -0.4
MIYJ                                eS         Sn        00 29 32.8  -1.4
JIO   Ouri               2.76 275    P         Pn        00 29 02.0  -0.6
JIO                                 eS         Sn        00 29 33.8  -1.6
JMK   Ichinoseki         2.93 285    P         Pn        00 29 04.8  -0.2
JMK                                 eS         Sn        00 29 39.0  -0.7
JOT   Ohata              4.29 318    P         Pn        00 29 24.7  +0.4
JOT                                 eS         Sn        00 30 10.6  -3.5
JCH   Churui             4.51 346    P         Pn        00 29 25.3  -2.1
JCH                                 eS         Sn        00 30 15.1  -4.6
JKB   Kayabe             4.67 322    P         Pn        00 29 29.9  +0.2
JKB                                 eS         Sn        00 30 22.1  -1.6
NEM2  Nemuro 2           5.16   7    P         Pn        00 29 32.1  -4.5
NEM2                                eS         Sn        00 30 28.1  -7.9
JRY   Ryogami san        5.25 247    P         Pn        00 29 35.6  -2.2
JRY                                 eS         Sn        00 30 32.2  -5.9
MJAR  Matsushiro Arr     5.55 254    Pn        Pn        00 29 41.6  -0.5
      7.5nm,0.3s,baz=76,slow=14,SNR=67
MJAR                                 Sn        Sn        00 30 45.5  -0.4
      4.4nm,0.3s,baz=344,slow=19,SNR=4.0
MAJO  Matsushiro         5.56 254   ePn        Pn        00 29 41.6  -0.5
      92nm,0.5s
MAJO  Matsushiro         5.56 254   eP         Pn        00 29 41.6  -0.5
MAJO                                 pmax      pmax
      comp=Z,92nm,0.5s
MAT   Matsushiro         5.56 254    P         Pn        00 29 41.7  -0.4
MAT                                  S         Sn        00 30 43.8  -2.1
MAT   Matsushiro         5.56 254    P         Pn        00 29 41.9  -0.2
MAT                                 eS         Sn        00 30 43.9  -2.0
MAT   Matsushiro         5.56 254   eP         Pn        00 29 42.0  -0.1
      comp=Z,97nm,0.7s
MAT                                 eS         Sn        00 30 44.0  -1.9
MAT   Matsushiro         5.56 254   eP         Pn        00 29 42.0  -0.1
MAT                                 eS         Sn        00 30 44.0  -1.9
MAT                                  pmax      pmax
      comp=Z,97nm,0.7s
YUK   Yuzh-Kuril'sk      5.84   7    P         Pn        00 29 40.0  -6.1
YUK                                 eS         Sn        00 30 43.0   -10
YUK                                  pmax      pmax
      comp=Z,640nm,0.4s
YUK                                  pmax      pmax
      comp=Z,2μm,2.0s
YUK                                  smax
      comp=E,350nm,0.4s
YUK                                  smax
      comp=N,420nm,0.5s
YUK                                  smax
      comp=N,3μm,3.0s
YUK                                  smax
      comp=E,3μm,2.0s
ASAJ  Asahikawa          6.11 345    Pn        Pn        00 29 50.0   0.0
      comp=E,3.7nm,0.3s,baz=222,slow=13,SNR=9.9
ASAJ                                 Sn        Sn        00 30 60.0  +0.2
      comp=E,2.0nm,0.3s,baz=1.2,slow=31,SNR=3.9
ASAJ                                 LR        LR        00 32 52.2
      comp=E,1μm,18.6s,baz=158,slow=43
ASAJ  Asahikawa          6.11 345    P         Pn        00 29 50.0  +0.1
ASAJ                                                     00 31 00.0
ASAJ                                 pmax      pmax
      comp=Z,4.0nm,0.3s
ASAJ                                 MLR       MLR
      comp=Z,1μm,18.7s
JHJ   Hachijo jima 2     6.57 220    Pn        Pn        00 29 51.5  -4.9
      comp=Z,21nm,0.3s,baz=259,slow=16,SNR=16
JHJ                                  Sn        Sn        00 31 02.6  -8.5
      comp=Z,71nm,0.3s,baz=73,slow=22,SNR=7.3
YSS   Yuzh-Sakhalins     8.84 351    P         P         00 30 26.0  -2.1
YSS                                 eS         Sn        00 32 08.0  +0.1
YSS                                  MLR       MLR
      comp=Z,600nm,11.0s
CBIJ  Chichi jima       11.34 192    LR        LR        00 35 41.3
      comp=Z,144nm,18.1s,baz=265,slow=40
JNU   Nakatsue          12.45 250    Pn        P         00 31 14.9  -2.5
      comp=Z,0.2nm,0.3s,baz=61,slow=9.2,SNR=3.0
JNU                                  LR        LR        00 36 14.7
      comp=Z,753nm,18.6s,baz=54,slow=38
MDJ   Mudanjiang        13.09 304    P         P         00 31 26.3  +0.5
MDJ                                  AP                  00 31 34.0
MDJ                                  S         S         00 33 49.3  -2.2
MDJ                                  SS        SS        00 34 03.5  -3.4
MDJ                                  AMB       AMB
      comp=Z,40nm,1.2s
MDJ                                  AMB       AMB
      comp=Z,110nm,4.3s
MDJ                                  LR        LR
      comp=N,410nm,23.4s
MDJ                                  LR        LR
      comp=E,820nm,20.9s
MDJ                                  LR        LR
      comp=Z,1μm,22.2s
MDJ   Mudanjiang        13.09 304   ePn        P         00 31 26.2  +0.3
      comp=Z,66nm,1.3s
KS15  Wonju Array Si    13.44 272    Pn        P         00 31 32.4  +2.0
KLR   Kul'dur           14.48 324   eP         P         00 31 41.5  -2.4
KLR                                  MLR       MLR
      comp=E,800nm,13.0s
KLR                                  MLR       MLR
      comp=Z,3μm,13.0s
CN2   Changchun         15.65 297   eP         P         00 32 00.6  +1.3
CN2                                 eXP                  00 32 07.6
CN2                                 eS         S         00 34 55.9  +3.9
CN2                                  AMB       AMB
      comp=Z,10.0nm,1.4s
CN2                                  AMB       AMB
      comp=Z,200nm,5.0s
CN2                                  LR        LR
      comp=N,600nm,15.0s
CN2                                  LR        LR
      comp=E,1μm,15.0s
CN2                                  LR        LR
      comp=Z,1μm,14.0s
SNY   Shenyang          16.68 289  ⇑P          P         00 32 11.4  -0.9
SNY                                  S         S         00 35 09.3  -6.4
SNY                                  AMB       AMB
      comp=Z,190nm,10.5s
SNY                                  LR        LR
      comp=E,710nm,14.7s
SNY                                  LR        LR
      comp=Z,830nm,22.2s
PET   Petropavlovsk     17.60  28   eP         P         00 32 16.6  -7.3
PET                                 e                    00 35 35.5
PET                                  pmax      pmax
      comp=Z,100nm,19.1s
PET                                  MLR       MLR
      comp=Z,200nm,17.0s
JOW   Kunigami          17.99 236    LR        LR        00 38 59.4
      comp=Z,240nm,21.6s,baz=102,slow=36
DL2   Dalian            18.17 279⇑iP           P         00 32 31.3  +0.3
DL2                                  XP                  00 32 43.0
DL2                                  S         S         00 35 55.1  +5.4
DL2                                  AMB       AMB
      comp=Z,30nm,1.3s
DL2                                  AMB       AMB
      comp=Z,200nm,4.1s
DL2                                  LR        LR
      comp=N,290nm,12.1s
DL2                                  LR        LR
      comp=E,370nm,11.7s
DL2                                  LR        LR
      comp=Z,540nm,14.1s
SSE   Sheshan           20.70 257   eP         P         00 32 56.3  -3.3
SSE                                  AP                  00 33 03.8
SSE                                  XP                  00 33 07.9
SSE                                  S         S         00 36 46.5  +2.0
SSE                                  SCS       ScS       00 44 22.4  -1.6
SSE                                  AMB       AMB
      comp=Z,40nm,0.7s
SSE                                  AMB       AMB
      comp=Z,30nm,3.5s
SSE                                  LR        LR
      comp=N,530nm,20.9s,MS3.9
SSE                                  LR        LR
      comp=E,230nm,20.9s,MS3.9
SSE                                  LR        LR
      comp=Z,470nm,19.9s,MS3.9
HIA   Hailar            21.12 310   eP         P         00 33 03.4  -0.4
      comp=Z,38nm,1.4s,mb4.5
HIA   Hailar            21.12 310   eP         P         00 33 03.4  -0.4
HIA                                  pmax      pmax
      comp=Z,38nm,1.4s
NJ2   Nanjing           22.10 262   eP         P         00 33 08.9  -4.8
NJ2                                  AP                  00 33 18.0
NJ2                                  XP                  00 33 22.3
NJ2                                  AMB       AMB
      comp=Z,10.0nm,0.5s,mb4.5
NJ2                                  AMB       AMB
      comp=Z,60nm,3.6s
NJ2                                  LR        LR
      comp=N,1μm,20.1s,MS4.5
NJ2                                  LR        LR
      comp=E,1μm,20.8s,MS4.5
NJ2                                  LR        LR
      comp=Z,370nm,23.4s,MS3.7
TIA   Tai'an            22.14 273   eP         P         00 33 13.8  -0.3
TIA                                  AMB       AMB
      comp=Z,50nm,1.4s,mb4.8
CLNS  Chul'man          22.82 331   eP         P         00 33 22.1  +1.5
CLNS                                e*PP                 00 33 30.2
CLNS                                e                    00 33 47.1
CLNS                                 pmax      pmax
      comp=Z,31nm,1.0s,mb4.7
CLNS                                 pmax      pmax
      comp=N,68nm,1.4s
CLNS                                 pmax      pmax
      comp=E,14nm,1.4s
CLNS                                 pmax      pmax
      comp=Z,25nm,1.0s,mb4.6
CLNS                                 pmax      pmax
      comp=N,22nm,1.1s
CLNS                                 pmax      pmax
      comp=E,16nm,1.1s
CLNS                                 MLR       MLR
      comp=N,300nm,12.0s,MS4.1
CLNS                                 MLR       MLR
      comp=Z,500nm,12.0s,MS4.2
CLNS                                 MLR       MLR
      comp=E,300nm,13.0s,MS4.1
FX1   Attu Island--F    24.43  44    LR        LR        00 42 57.7
      comp=E,5.1nm,19.1s,baz=256,slow=36
GUMO  Guam              24.55 180    LR        LR        00 41 17.0
      comp=E,212nm,20.1s,MS3.6,baz=65,slow=32
SEY   Seymchan          25.14   8   i P        P         00 33 43.1  +0.1
YAK   Yakutsk           25.59 343   eP         P         00 33 46.2  -1.0
YAK                                  pmax      pmax
      comp=Z,11nm,1.1s,mb4.3
YAK                                  pmax      pmax
      comp=N,8.0nm,1.2s
YAK                                  pmax      pmax
      comp=E,6.0nm,1.2s
HHC   Hu-ho-hao-te      25.72 286   eP         P         00 33 50.8  +2.2
HHC                                  AP        pP        00 33 55.8  -0.8
HHC                                  XP        sP        00 33 58.1  -2.1
HHC                                  PP        PP        00 34 32.9  +4.0
HHC                                  PCP       PcP       00 37 17.1  -1.9
HHC                                  S         S         00 38 20.6  +7.4
HHC                                  XS                  00 38 26.6
HHC                                  SCP                 00 40 55.3
HHC                                  PCS                 00 40 58.9
HHC                                  AMB       AMB
      comp=Z,10.0nm,1.7s,mb4.1
HHC                                  AMB       AMB
      comp=Z,320nm,4.8s
HHC                                  LR        LR
      comp=N,450nm,14.4s,MS4.6
HHC                                  LR        LR
      comp=E,1μm,15.6s,MS4.6
HHC                                  LR        LR
      comp=Z,1μm,15.6s,MS4.6
CIT   Chita             25.79 312   eP         P         00 33 50.6  +1.4
CIT                                 e                    00 38 23.6
CIT                                  pmax      pmax
      comp=Z,126nm,2.4s,mb5.0
QZH   Quanzhou          25.90 247   eP         P         00 33 49.3  -1.2
QZH                                  S         S         00 38 14.1  -2.3
QZH                                  LR        LR
      comp=N,630nm,3.8s
QZH                                  LR        LR
      comp=E,790nm,11.5s
QZH                                  LR        LR
      comp=Z,740nm,25.8s
BTO   Baotou            26.91 286   eP         P         00 34 01.5  +1.9
BTO                                  AMB       AMB
      comp=Z,40nm,1.9s,mb4.6
BOD   Bodaibo           28.05 324   eP         P         00 34 08.8  -1.0
BOD                                  pmax      pmax
      comp=Z,23nm,1.6s,mb4.6
SONM  Songino Array     29.43 301    P         P         00 34 23.3  +0.9
      comp=Z,2.7nm,1.0s,mb3.9,baz=92,slow=8.5,SNR=11
SONM                                 LR        LR        00 46 42.8
      comp=Z,669nm,19.5s,MS4.3,baz=87,slow=37
ENH   Enshi             30.15 265   eP         P         00 34 28.7  -0.2
      comp=Z,39nm,1.1s,mb5.0
ZAK   Zakamensk         31.71 306   eP         P         00 34 40.4  -2.1
ZAK                                  pmax      pmax
      comp=Z,4.0nm,1.2s,mb4.1
BILL  Bilibino          32.13  15   eP         P         00 34 44.6  -1.3
      comp=Z,18nm,1.4s,mb4.7
BILL  Bilibino          32.13  15   i P        P         00 34 44.7  -1.2
BILL                                 pmax      pmax
      comp=Z,21nm,1.5s,mb4.8
BILL                                 MLR       MLR
      comp=Z,200nm,21.0s,MS3.8
LZH   Lanzhou           32.56 279   eP         P         00 34 50.3  +0.3
LZH                                  AP        pP        00 34 59.3  +1.2
LZH                                  XP        sP        00 35 03.3  +1.7
LZH                                  PP        PP        00 35 58.6  -0.4
LZH                                 eS         S         00 40 02.0  -0.7
LZH                                  XS                  00 40 17.5
LZH                                 eSS        SS        00 41 57.8  -2.2
LZH                                  AMB       AMB
      comp=Z,50nm,1.5s,mb5.2
LZH                                  AMB       AMB
      comp=Z,140nm,4.8s
LZH                                  LR        LR
      comp=E,970nm,12.6s
LZH                                  LR        LR
      comp=Z,2μm,17.0s,MS4.8
GYA   Guiyang           34.11 261    P         P         00 35 02.9  -0.6
GYA                                  AMB       AMB
      comp=Z,10.0nm,1.3s,mb4.6
CD2   Chengdu           34.40 270   eP         P         00 35 05.8  -0.2
TIXI  Tiksi             34.47 351⇓iP           P         00 35 00.9  -5.3
TIXI                                 pmax      pmax
      comp=Z,7.0nm,1.4s,mb4.4
TIXI                                 MLR       MLR
      comp=Z,101nm,12.0s,MS3.8
GTA   Gaotai            34.83 286    P         P         00 35 11.1  +1.5
GTA                                  AP        pP        00 35 16.0  -1.7
GTA                                  XP        sP        00 35 19.0  -2.2
GTA                                  PCP       PcP       00 37 38.3  -4.3
GTA                                  AMB       AMB
      comp=Z,10.0nm,1.8s,mb4.4
GTA                                  AMB       AMB
      comp=Z,140nm,5.3s
GTA                                  LR        LR
      comp=N,280nm,18.3s,MS4.5
GTA                                  LR        LR
      comp=E,650nm,15.7s,MS4.5
GTA                                  LR        LR
      comp=Z,890nm,16.4s,MS4.6
KMI   Kunming           37.84 262    P         P         00 35 35.9  +0.8
KMI                                  AP        pP        00 35 43.3   0.0
KMI                                  XP        sP        00 35 46.1  -0.6
KMI                                  PP        PP        00 37 01.8  -3.0
KMI                                  PPP       PPP       00 37 22.3  -4.1
KMI                                  S         S         00 41 18.5  -5.6
KMI                                  XS                  00 41 30.9
KMI                                  AMB       AMB
      comp=Z,10.0nm,1.4s,mb4.3
KMI                                  AMB       AMB
      comp=Z,100nm,4.1s
KMI                                  LR        LR
      comp=N,310nm,22.9s
KMI                                  LR        LR
      comp=E,250nm,29.0s
KMI                                  LR        LR
      comp=Z,390nm,23.5s,MS4.1
WMQ   Urumqi            42.74 296    P         P         00 36 16.4  +1.0
WMQ                                  AP        pP        00 36 26.0  +2.4
WMQ                                  PCP       PcP       00 38 11.0  +3.7
WMQ                                  PPP       PPP       00 38 32.0  +0.9
WMQ                                 eS         S         00 42 37.5  +0.4
WMQ                                  AMB       AMB
      comp=Z,250nm,6.0s
WMQ                                  LR        LR
      comp=N,410nm,14.0s,MS4.6
WMQ                                  LR        LR
      comp=E,400nm,12.8s,MS4.6
WMQ                                  LR        LR
      comp=Z,550nm,29.0s
ZAL   Zalesovo          43.15 311    P         P         00 36 19.3  +0.7
      comp=Z,1.4nm,0.6s,mb3.9,baz=20,slow=6.7,SNR=18
ZAL                                  LR        LR        00 55 41.7
      comp=Z,609nm,18.9s,MS4.5,baz=30,slow=38
NVS   Novosibirsk       44.00 313   eP         P         00 36 25.7  +0.2
NVS                                  pmax      pmax
      comp=Z,53nm,1.9s,mb5.0
NVS                                  pmax      pmax
      comp=E,41nm,1.6s
LSA   Lhasa             44.81 276   eP         P         00 36 34.5  +2.1
LSA   Lhasa             44.81 276    P         P         00 36 33.3  +0.9
      comp=E,3.3nm,0.4s,mb4.5
LSA   Lhasa             44.81 276    P         P         00 36 33.3  +0.9
LSA                                  pmax      pmax
      comp=Z,3.0nm,0.4s,mb4.5
MKAR  Makanchi Array    45.80 302    P         P         00 36 40.4  +0.5
      comp=Z,2.3nm,0.8s,mb4.2,baz=84,slow=11,SNR=14
MKAR                                 LR        LR        00 56 31.5
      comp=Z,433nm,21.2s,MS4.4,baz=88,slow=37
MKAR  Makanchi Array    45.80 302    P         P         00 36 40.4  +0.5
MKAR                                 LR        LR        00 56 31.5
MCK   McKinley          46.10  34   eP         P         00 36 41.7  -0.5
      comp=Z,46nm,2.2s,mb5.0
MCK   McKinley          46.10  34   eP         P         00 36 41.7  -0.4
MCK                                  pmax      pmax
      comp=Z,45nm,2.2s,mb5.0
SHL   Shillong          46.14 270   eP         P         00 36 43.5  +0.5
ILAR  Eielson Array     47.01  33    P         P         00 36 47.9  -1.4
      comp=Z,3.7nm,0.9s,mb4.3,baz=263,slow=5.6,SNR=20
KURK  Kurchatov         47.35 308   eP         P         00 36 52.3  +0.1
      comp=Z,25nm,1.0s,mb5.1
KURK                                 LR        LR
      comp=Z,55nm,20.0s,MS3.5
KURK  Kurchatov         47.35 308d iP          P         00 36 52.2  +0.1
PMG   Port Moresby      47.45 177   i P        P         00 36 51.7  -1.7
GUN   Gumba             49.74 276   eP         P         00 37 12.0  +1.0
      comp=Z,80nm,1.2s,mb5.6
KKN   Kakani            50.27 277   eP         P         00 37 15.8  +0.8
      comp=Z,165nm,1.6s,mb5.8
PKI   Pulchoki          50.27 276   eP         P         00 37 15.7  +0.7
DMN   Daman             50.49 277   eP         P         00 37 17.1  +0.4
GKN   Gorkha            50.67 277   eP         P         00 37 18.7  +0.6
      comp=Z,198nm,1.5s,mb5.8
KOLN  Koldanda          51.59 277   eP         P         00 37 25.2  +0.1
      comp=Z,195nm,1.9s,mb5.7
BVAR  Borovoye Array    51.78 312    P         P         00 37 26.7  +0.5
      comp=Z,3.3nm,0.8s,mb4.3,baz=79,slow=7.6,SNR=15
BRVK  Borovoye          51.84 312   eP         P         00 37 26.2  -0.4
      comp=Z,44nm,1.9s,mb5.1
BRVK                                e                    00 37 49.4
BRVK  Borovoye          51.84 312   eP         P         00 37 26.2  -0.4
BRVK                                 pmax      pmax
      comp=Z,44nm,1.9s,mb5.1
KAKA  Kakadu            52.00 195   eP         P         00 37 45.7   +17
      comp=Z,43nm,1.3s,mb5.2
KAKA                                e          pP        00 37 54.3   +18
INK   Inuvik            52.06  28    P         P         00 37 27.1  -1.0
      comp=Z,4.0nm,0.8s,mb4.4,baz=292,slow=3.2,SNR=13
INK   Inuvik            52.06  28   eP         P         00 37 27.6  -0.4
      comp=Z,22nm,1.5s,mb4.9
INK   Inuvik            52.06  28    P         P         00 37 27.1  -1.0
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INK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FRU	**Bishkek**	**52.16**	**299**	*e*P	**P**	**00 37 30.0**	**+0.8**
FRU				*e*		00 39 32.0	
FRU				*e*		00 50 06.0	
AAK	**Ala-Archa**	**52.32**	**299**	*e*P	**P**	**00 37 29.6**	**-0.8**
	comp=Z,61nm,2.2s,mb5.1						
AAK	**Ala-Archa**	**52.32**	**299**	*e*P	**P**	**00 37 29.6**	**-0.7**
AAK				pmax	pmax		
	comp=Z,61nm,2.2s,mb5.1						
SVE	**Sverdlovsk**	**56.05**	**319**	*e*P	**P**	**00 37 59.0**	**+1.6**
SVE				*e*		00 40 10.6	
SVE				MLR	MLR		
	comp=N,300nm,14.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,500nm,14.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s,MS5.1						
ARU	**Arti**	**57.26**	**319**	*e*P	**P**	**00 38 06.0**	**-0.1**
	comp=Z,61nm,1.6s,mb5.4						
ARU	**Arti**	**57.26**	**319**	*i* P	**P**	**00 38 05.8**	**-0.3**
ARU				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.1						
ARU				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.6						
WRAB	**Tennant Creek**	**58.70**	**192**	*e*P	**P**	**00 38 12.9**	**-3.8**
	comp=Z,24nm,0.9s,mb5.2						
WRAB				*e*	pP	00 38 21.7	-3.5
WRAB	**Tennant Creek**	**58.70**	**192**	*e*P	**P**	**00 38 12.9**	**-3.8**
WRAB				*e*	pP	00 38 21.7	-3.5
WRAB				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
WB2	**Warramunga Arr**	**58.71**	**192**	⇓*i*P	**P**	**00 38 13.0**	**-3.8**
WB2				*e*	pP	00 38 21.6	-3.7
WRA	**Warramunga Arr**	**58.71**	**192**	P	**P**	**00 38 13.4**	**-3.4**
	comp=Z,7.5nm,1.0s,mb4.7,baz=12,slow=7.3,SNR=35						
WRA				PcP	PcP	00 39 02.8	-3.4
	comp=Z,1.6nm,0.6s,baz=4.2,slow=4.1,SNR=7.4						
FITZ	**Fitzroy Crossi**	**58.88**	**201**	*e*P	**P**	**00 38 15.8**	**-2.2**
	comp=Z,22nm,1.5s,mb5.0						
FITZ				*e*	pP	00 38 24.1	-2.4
AKTK	**Aktyubinsk**	**59.89**	**312**	P	**P**	**00 38 23.9**	**-0.6**
AKTK				LR	LR	01 05 34.3	
AKTO	**Aktyubinsk**	**59.89**	**312**	P	**P**	**00 38 23.9**	**-0.6**
	comp=Z,3.6nm,0.9s,mb4.4,baz=58,slow=12,SNR=9.7						
AKTO				LR	LR	01 05 34.3	
	comp=Z,260nm,18.2s,MS4.4,baz=344,slow=37						
RES	**Resolute Bay**	**60.74**	**15**	*e*P	**P**	**00 38 28.8**	**-1.2**
	comp=Z,20nm,1.3s,mb5.1						
RES	**Resolute Bay**	**60.74**	**15**	*e*P	**P**	**00 38 28.8**	**-1.2**
RES				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.1						
YKA	**Yellowknife Ar**	**61.38**	**31**	P	**P**	**00 38 32.1**	**-2.4**
	comp=Z,2.8nm,0.7s,mb4.5,baz=300,slow=7.0,SNR=6.1						
DZM	**Mont Dzumac**	**63.33**	**158**	LR	LR	01 02 22.6	
	comp=Z,141nm,19.1s,MS4.2,baz=2.6,slow=32						
ARCES	**ARCESS Array B**	**63.81**	**340**	LR	LR	01 10 45.8	
	comp=Z,143nm,19.2s,MS4.2,baz=14,slow=40						
POO	**Poona**	**64.03**	**274**	*e*P	**P**	**00 38 50.0**	**-2.7**
KLMR	**Klimovskoe**	**64.18**	**328**	*e*P	**P**	**00 38 46.2**	**-6.8**
KLMR				pmax	pmax		
	comp=Z,60nm,2.5s,mb5.2						
AFI	**Afiamalu**	**65.88**	**133**	LR	LR	01 03 42.1	
	comp=Z,193nm,18.7s,MS4.3,baz=344,slow=32						
JOF	**Joensuu**	**66.16**	**333**	*e*p	**P**	**00 39 02.3**	**-3.4**
EDM	**Edmonton**	**66.69**	**40**	*e*P	**P**	**00 39 07.7**	**-1.5**
EDM				*e*	pP	00 39 16.4	-1.4
NEW	**Newport**	**67.35**	**46**	*e*P	**P**	**00 39 13.1**	**-0.4**
	comp=Z,29nm,1.5s,mb5.1						
NEW	**Newport**	**67.35**	**46**	*e*P	**P**	**00 39 13.1**	**-0.4**
NEW				pmax	pmax		
	comp=Z,29nm,1.5s						
MOS	**Moscow**	**67.89**	**324**	*e*P	**P**	**00 39 15.1**	**-1.6**
MOS				pmax	pmax		
	comp=Z,47nm,1.1s,mb5.4						
KAF	**Kangasniemi**	**68.46**	**334**	*e*p	**P**	**00 39 16.7**	**-3.5**
OBN	**Obninsk**	**68.74**	**324**	⇑*e*P	**P**	**00 39 22.2**	**+0.1**
OBN				pmax	pmax		
	comp=Z,33nm,1.5s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,14.7s,MS4.5						
FINES	**FINESS Array B**	**68.99**	**333**	P	**P**	**00 39 23.1**	**-0.4**
	comp=Z,2.9nm,0.7s,mb4.3,baz=45,slow=8.1,SNR=8.8						
FINES				LR	LR	01 12 01.8	
	comp=Z,259nm,18.4s,MS4.5,baz=163,slow=38						
BMO	**Blue Mountains**	**69.09**	**49**	*e*P	**P**	**00 39 23.7**	**-0.7**
	comp=Z,17nm,1.6s,mb4.7						
BMO				*e*	pP	00 39 32.1	-0.9
WVOR	**Wild Horse Val**	**69.62**	**52**	*e*P	**P**	**00 39 27.1**	**-0.6**
	comp=Z,38nm,1.8s,mb5.0						
WVOR	**Wild Horse Val**	**69.62**	**52**	*e*P	**P**	**00 39 27.1**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,37nm,1.8s,mb5.0						
STKA	**Stephens Creek**	**69.83**	**183**	P	**P**	**00 39 25.7**	**-3.4**
	comp=Z,2.8nm,0.8s,mb4.3,baz=332,slow=18,SNR=4.3						
STKA				LR	LR	01 07 42.6	
	comp=Z,93nm,19.9s,MS4.0,baz=204,slow=34						
STKA	**Stephens Creek**	**69.83**	**183**	P	**P**	**00 39 25.7**	**-3.4**
STKA				LR	LR	01 07 42.6	
FFC	**Flin Flon**	**71.19**	**34**	*e*P	**P**	**00 39 36.7**	**-0.3**
	comp=Z,28nm,1.2s,mb5.1						
FFC	**Flin Flon**	**71.19**	**34**	*e*P	**P**	**00 39 36.7**	**-0.3**
FFC				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
GOF	**Gofitskoye**	**71.30**	**313**	⇓*i*P	**P**	**00 39 37.9**	**0.0**
GOF				*i*	pP	00 39 46.7	+0.3
GOF				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.2						
HLID	**Hailey**	**71.54**	**49**	*e*P	**P**	**00 39 39.0**	**-0.3**
	comp=Z,14nm,1.5s,mb4.7						
HLID				*e*	pP	00 39 47.2	-0.6
FCC	**Fort Churchill**	**71.68**	**28**	*e*P	**P**	**00 39 38.3**	**-1.5**
	comp=Z,100nm,1.6s,mb5.5						
FCC	**Fort Churchill**	**71.68**	**28**	*e*P	**P**	**00 39 38.3**	**-1.6**
FCC				pmax	pmax		
	comp=Z,100nm,1.6s,mb5.5						
BOZ	**Bozeman (W)**	**71.93**	**46**	*e*P	**P**	**00 39 40.9**	**-0.7**
	comp=Z,29nm,1.5s,mb5.0						
BOZ	**Bozeman (W)**	**71.93**	**46**	*e*P	**P**	**00 39 40.9**	**-0.7**
BOZ				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.0						
NVAR	**Mina Array Bea**	**72.07**	**55**	P	**P**	**00 39 40.7**	**-1.8**
	comp=Z,1.4nm,0.9s,mb3.9,baz=290,slow=3.5,SNR=15						
NVAR	**Mina Array Bea**	**72.07**	**55**	P	**P**	**00 39 40.7**	**-1.8**
KIV	**Kislovodsk**	**72.15**	**312**	*e*P	**P**	**00 39 44.1**	**+1.2**
	comp=Z,90nm,1.4s,mb5.5						
KIV	**Kislovodsk**	**72.15**	**312**	*d* *i*P	**P**	**00 39 43.2**	**+0.3**
KIV				pmax	pmax		
	comp=Z,75nm,1.5s,mb5.4						
TI2	**Plekhanov**	**72.22**	**309**	*e*P	**P**	**00 39 44.6**	**+1.2**
QLMT	**Earthquake Lak**	**72.53**	**46**	*e*P	**P**	**00 39 45.2**	**+0.1**
ELK	**Elko**	**72.67**	**52**	*e*P	**P**	**00 39 46.0**	**0.0**
	comp=Z,16nm,1.6s,mb4.7						
ELK	**Elko**	**72.67**	**52**	*e*P	**P**	**00 39 46.0**	**-0.1**
ELK				pmax	pmax		
	comp=Z,17nm,1.6s						
GNI	**Garni**	**73.14**	**308**	P	**P**	**00 39 50.0**	**+1.2**
	comp=Z,2.6nm,0.8s,mb4.2,baz=135,slow=4.3,SNR=8.7						
GNI	**Garni**	**73.14**	**308**	*e*P	**P**	**00 39 50.9**	**+2.1**
	comp=Z,42nm,1.5s,mb5.2						
GNI	**Garni**	**73.14**	**308**	*i* P	**P**	**00 39 49.0**	**+0.2**
GNI				pmax	pmax		
	comp=Z,31nm,1.5s						
GNI				MLR	MLR		
	comp=Z,200nm,17.0s						
MOOW	**Moose Ponds**	**73.57**	**47**	*e*P	**P**	**00 39 51.4**	**+0.2**
	comp=Z,46nm,1.8s,mb5.1						
TPAW	**Teton Pass**	**73.61**	**47**	*e*P	**P**	**00 39 51.6**	**+0.2**
	comp=Z,41nm,1.4s,mb5.2						
LOHW	**Long Hollow**	**73.74**	**47**	*e*P	**P**	**00 39 52.4**	**+0.2**
	comp=Z,46nm,2.0s,mb5.1						
SNOW	**Snow King Moun**	**73.74**	**47**	*e*P	**P**	**00 39 51.8**	**-0.4**
	comp=Z,9.8nm,1.2s,mb4.6						
HFS	**Hagfors**	**74.08**	**337**	P	**P**	**00 39 54.4**	**+0.5**
	comp=Z,4.9nm,1.0s,mb4.4,baz=63,slow=6.4,SNR=4.1						
HFS				LR	LR	01 15 19.0	
	comp=Z,230nm,18.6s,MS4.5,baz=47,slow=38						
NOA	**NORSAR Array B**	**74.10**	**339**	P	**P**	**00 39 54.5**	**+0.6**
	comp=Z,1.8nm,0.8s,mb4.0,baz=37,slow=6.0,SNR=3.3						
NOA				LR	LR	01 18 07.3	
	comp=Z,132nm,19.2s,MS4.2,baz=50,slow=40						
HWUT	**Hardware Ranch**	**74.39**	**49**	*e*P	**P**	**00 39 55.8**	**-0.2**
	comp=Z,31nm,1.5s,mb5.0						
DUG	**Dugway**	**74.49**	**51**	*e*P	**P**	**00 39 56.3**	**-0.3**
	comp=Z,28nm,1.5s,mb5.0						
DUG	**Dugway**	**74.49**	**51**	*e*P	**P**	**00 39 56.3**	**-0.3**
DUG				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.0						
ANN	**Anapa**	**74.63**	**315**	*e*P	**P**	**00 40 00.0**	**+2.7**
NOQ	**North Oquirrh**	**74.64**	**50**	*e*P	**P**	**00 39 57.3**	**-0.2**
	comp=Z,70nm,1.5s,mb5.4						
TCUT	**Toone Canyon**	**74.78**	**50**	*e*P	**P**	**00 39 58.8**	**+0.5**
BW06	**Boulder Array**	**74.86**	**47**	*e*P	**P**	**00 39 58.2**	**-0.5**
	comp=Z,24nm,1.6s,mb4.9						
PDAR	**Pinedale Array**	**74.86**	**47**	P	**P**	**00 39 57.7**	**-1.0**
	comp=Z,1.3nm,0.7s,mb4.0,baz=270,slow=1.5,SNR=12						
AKASG	**Malin Array Be**	**74.98**	**324**	P	**P**	**00 39 58.9**	**-0.3**
	comp=Z,0.5nm,0.4s,mb3.8,baz=39,slow=6.0,SNR=16						
AKASG	**Malin Array Be**	**74.98**	**324**	P	**P**	**00 39 58.9**	**-0.3**
DAU	**Daniels Canyon**	**75.30**	**50**	*e*P	**P**	**00 40 01.4**	**+0.1**
MSU	**Marysvale**	**75.90**	**52**	*e*P	**P**	**00 40 05.2**	**+0.4**
MSU				*e*	pP	00 40 14.0	+0.6
NEN	**Nelson**	**75.94**	**56**	*e*P	**P**	**00 40 04.2**	**-0.9**
MSL	**Mosul**	**76.49**	**306**	*e*	**P**	**00 40 09.0**	**+0.9**
SRU	**San Rafael**	**76.55**	**51**	*e*P	**P**	**00 40 07.7**	**-0.7**
	comp=Z,24nm,1.4s,mb4.9						
SRU	**San Rafael**	**76.55**	**51**	*e*P	**P**	**00 40 07.7**	**-0.7**
SRU				pmax	pmax		
	comp=Z,24nm,1.4s,mb4.9						
ULM	**Lac du Bonnet**	**76.97**	**35**	LR	LR	01 19 56.1	
	comp=Z,89nm,18.0s,MS4.1,baz=24,slow=40						
RSSD	**Black Hills**	**77.09**	**44**	*e*P	**P**	**00 40 10.4**	**-0.9**
	comp=Z,26nm,1.8s,mb4.9						
RSSD	**Black Hills**	**77.09**	**44**	*e*P	**P**	**00 40 10.4**	**-0.9**
RSSD				pmax	pmax		
	comp=Z,26nm,1.8s,mb4.9						
PV10	**Paradox Valley**	**77.91**	**51**	*e*P	**P**	**00 40 16.1**	**+0.2**
PV10				*e*pP	pP	00 40 24.5	-0.1
PV01	**Paradox Valley**	**78.35**	**51**	*e*P	**P**	**00 40 18.2**	**-0.1**
PV01				*e*pP	pP	00 40 26.9	-0.2
SMCO	**Snowmass**	**78.64**	**49**	*e*P	**P**	**00 40 20.3**	**+0.4**
	comp=Z,26nm,1.6s,mb4.9						
KWP	**Kalwaria**	**78.70**	**326**	*e*P	**P**	**00 40 21.8**	**+1.8**
KWP	**Kalwaria**	**78.70**	**326**	*e*P	**P**	**00 40 21.8**	**+1.8**
KOLS	**Kolonicke sedl**	**79.41**	**326**	*e*P	**P**	**00 40 25.2**	**+1.3**
STHS	**Stebnicka Huta**	**79.50**	**326**	*e*P	**P**	**00 40 26.2**	**+1.8**
CRVS	**Cervenica-Dubn**	**79.79**	**326**	*e*P	**P**	**00 40 27.2**	**+1.3**
MLR	**Muntele Rosu**	**80.19**	**321**	P	**P**	**00 40 28.9**	**+0.8**
	comp=Z,1.9nm,0.7s,mb4.1,baz=15,slow=8.2,SNR=3.0						
SDCO	**Great Sand Dun**	**80.45**	**49**	*e*P	**P**	**00 40 28.7**	**-1.0**
	comp=Z,42nm,2.1s,mb5.0						
KSP	**Ksiaz**	**80.47**	**330**	*e*P	**P**	**00 40 31.3**	**+1.8**
KSP	**Ksiaz**	**80.47**	**330**	*e*P	**P**	**00 40 28.7**	**-0.8**
OKC	**Ostrava-Krasne**	**80.50**	**328**	*e*P	**P**	**00 40 30.8**	**+1.1**
KECS	**Kecovo**	**80.53**	**326**	*e*P	**P**	**00 40 31.0**	**+1.1**
TUC	**Tucson**	**80.65**	**56**	*e*P	**P**	**00 40 30.3**	**-0.6**
	comp=Z,21nm,2.0s,mb4.7						
TUC	**Tucson**	**80.65**	**56**	*e*P	**P**	**00 40 30.3**	**-0.6**
TUC				pmax	pmax		
	comp=Z,21nm,2.0s,mb4.7						
MORC	**Moravsky Berou**	**80.80**	**329**	*e*P	**P**	**00 40 31.4**	**+0.2**
	comp=Z,18nm,1.5s,mb4.8						
MORC	**Moravsky Berou**	**80.80**	**329**	*e*P	**P**	**00 40 31.4**	**+0.1**
MORC				pmax	pmax		
	comp=Z,18nm,1.5s,mb4.8						
DPC	**Dobruska-Polom**	**80.85**	**329**	*e*P	**P**	**00 40 32.8**	**+1.3**
UPC	**Upice**	**80.85**	**330**	*e*P	**P**	**00 40 32.7**	**+1.2**
PSZ	**Piszkesteto**	**81.22**	**326**	*e*P	**P**	**00 40 34.3**	**+0.8**
	comp=Z,43nm,1.8s,mb5.1						
PSZ	**Piszkesteto**	**81.22**	**326**	*e*P	**P**	**00 40 34.3**	**+0.8**
PSZ				pmax	pmax		
	comp=Z,43nm,1.8s,mb5.1						
VYHS	**Vyhne**	**81.24**	**327**	*e*P	**P**	**00 40 34.6**	**+1.0**
BRG	**Berggiesshubel**	**81.36**	**331**	P	**P**	**00 40 35.0**	**+0.8**
	comp=Z,28nm,1.7s,mb4.9						
BRG	**Berggiesshubel**	**81.36**	**331**	P	**P**	**00 40 35.0**	**+0.8**
BRG				pmax	pmax		
	comp=Z,28nm,1.7s,mb4.9						
CLL	**Collm**	**81.37**	**332**	⇓P	**P**	**00 40 34.2**	**0.0**
	comp=Z,logA/T=1.4,mb5.1						
CLL				*i* *PP	pP	00 40 48.0	+5.1
CLL				*e*		00 40 59.0	
CLL	**Collm**	**81.37**	**332**	⇓*i*P	**P**	**00 40 34.2**	**0.0**
	comp=Z,42nm,1.7s,mb5.1						
CLL				*i*		00 40 48.0	
CLL	**Collm**	**81.37**	**332**	⇓*i*P	**P**	**00 40 34.2**	**0.0**
CLL				*i*		00 40 48.0	
CLL				pmax	pmax		
	comp=Z,42nm,1.7s,mb5.1						
PVCC	**Panska Ves**	**81.40**	**330**	*e*P	**P**	**00 40 34.3**	**-0.1**
VRAC	**Vranov**	**81.55**	**329**	P	**P**	**00 40 36.3**	**+1.1**
	comp=Z,2.9nm,0.9s,mb4.2,baz=35,slow=6.0,SNR=6.8						
ANMO	**Albuquerque**	**81.70**	**52**	*e*P	**P**	**00 40 36.4**	**+0.1**
	comp=Z,17nm,1.6s,mb4.7						
ANMO	**Albuquerque**	**81.70**	**52**	*e*P	**P**	**00 40 36.4**	**+0.1**
ANMO				pmax	pmax		
	comp=Z,17nm,1.6s						
PRU	**Pruhonice**	**81.84**	**330**	*e*P	**P**	**00 40 36.6**	**-0.1**
PRU				*e*pP	pP	00 40 48.5	+3.1
TREC	**Trest**	**82.01**	**329**	*e*P	**P**	**00 40 35.7**	**-1.9**
ZST	**Bratislava**	**82.21**	**328**	*e*P	**P**	**00 40 39.9**	**+1.3**
NKC	**Novy Kostel**	**82.44**	**331**	*e*P	**P**	**00 40 41.3**	**+1.5**
NKC				*e*pP	pP	00 40 56.7	+8.1
MZLS	**Mizel**	**82.59**	**295**	P	**P**	**00 40 41.5**	**+0.4**
PPT	**Papeete**	**82.78**	**119**	LR	LR	01 09 06.6	
	comp=Z,240nm,20.1s,MS4.6,baz=212,slow=30						
EKA	**Eskdalemuir Ar**	**82.86**	**342**	P	**P**	**00 40 42.6**	**+0.7**
	comp=Z,1.0nm,0.6s,mb4.0,baz=27,slow=3.7,SNR=3.7						
HILS	**Ha’il**	**82.89**	**299**	P	**P**	**00 40 43.8**	**+1.2**
KHC	**Kasperske Hory**	**82.90**	**330**	*e*P	**P**	**00 40 42.7**	**+0.5**
GERES	**GERESS Array B**	**83.08**	**330**	P	**P**	**00 40 43.6**	**+0.5**
	comp=Z,0.7nm,0.6s,mb3.9,baz=34,slow=4.8,SNR=6.0						
GERES				LR	LR	01 21 12.0	
	comp=Z,144nm,18.8s,MS4.4,baz=295,slow=38						
QURS	**Qurayyt al Mil**	**83.30**	**305**	P	**P**	**00 40 47.1**	**+2.4**
GRA1	**Grafenberg Arr**	**83.34**	**332**	*e*P	**P**	**00 40 45.8**	**+1.3**
	comp=Z,53nm,1.7s,mb5.3						
GRA1				*e*pP	pP	00 40 54.7	+1.5
GRA1				LR	LR		
	comp=Z,200nm,21.0s,MS4.5						
GRF	**Grafenberg Arr**	**83.34**	**332**	*e*P	**P**	**00 40 45.8**	**+1.3**
	comp=Z,53nm,1.7s,mb5.3						
GRF				*e*pP	pP	00 40 54.7	+1.5
GRF				LR	LR		
	comp=Z,200nm,21.0s,MS4.5						
GRF	**Grafenberg Arr**	**83.34**	**332**	*e*P	**P**	**00 40 45.8**	**+1.3**
GRF				*e**PP	pP	00 40 54.7	+1.5
GRF				pmax	pmax		
	comp=Z,53nm,1.7s,mb5.3						
GRF				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.5						
GRF	**Grafenberg Arr**	**83.34**	**332**	*e*P	**P**	**00 40 45.8**	**+1.3**
GRF				*e**PP	pP	00 40 54.7	+1.5
GRF				pmax	pmax		
	comp=Z,53nm,1.7s,mb5.3						
GRF				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.5						
AFFS	**‘Afif**	**84.23**	**296**	P	**P**	**00 40 50.8**	**+1.3**
MNTX	**Cornudas Mount**	**84.53**	**54**	*e*P	**P**	**00 40 50.2**	**-0.6**
	comp=Z,18nm,1.5s,mb5.0						
CPRX	**Cap Rock**	**84.59**	**52**	*e*P	**P**	**00 40 50.5**	**-0.6**
CPRX				*e*pP	pP	00 40 58.8	-1.1
AMTX	**Amarillo**	**84.66**	**49**	*e*P	**P**	**00 40 51.5**	**+0.1**
	comp=Z,18nm,1.4s,mb5.0						
AMTX				*e*pP	pP	00 40 59.2	-1.0
GDL2	**Guadalupe Moun**	**84.84**	**53**	*e*P	**P**	**00 40 51.5**	**-0.9**
GDL2				*e*pP	pP	00 41 00.3	-0.8
VAY	**Valandovo**	**84.91**	**320**	*e*P	**P**	**00 40 53.2**	**+0.6**
VAY	**Valandovo**	**84.91**	**320**	*e*P	**P**	**00 40 53.2**	**+0.7**
SKO	**Skopje**	**84.99**	**321**	*e*P	**P**	**00 40 55.2**	**+2.4**
SKO	**Skopje**	**84.99**	**321**	*e*P	**P**	**00 40 55.2**	**+2.3**
KAMS	**Al Khamasin**	**85.36**	**292**	P	**P**	**00 40 55.8**	**+0.5**
KBRS	**Khaybar**	**85.64**	**299**	P	**P**	**00 40 58.7**	**+2.1**
TBKS	**Tabuk**	**85.88**	**303**	P	**P**	**00 40 59.4**	**+1.7**
OHR	**Ohrid**	**85.95**	**321**	*e*P	**P**	**00 40 59.4**	**+1.7**
OHR	**Ohrid**	**85.95**	**321**	*e*P	**P**	**00 40 59.4**	**+1.7**
DAVOX	**Davos**	**86.25**	**331**	P	**P**	**00 41 00.5**	**+1.4**
	comp=Z,3.4nm,0.9s,mb4.6,baz=299,slow=10,SNR=3.5						
WMOK	**Wichita Mounta**	**86.47**	**48**	*e*P	**P**	**00 41 00.3**	**-0.2**
	comp=Z,16nm,1.5s,mb5.0						
WMOK	**Wichita Mounta**	**86.47**	**48**	*e*P	**P**	**00 41 00.3**	**-0.1**
WMOK				pmax	pmax		
	comp=Z,16nm,1.5s,mb5.0						
TATS	**Tathlith**	**86.65**	**292**	P	**P**	**00 41 03.1**	**+1.5**
LTX	**Lajitas**	**87.21**	**54**	*e*P	**P**	**00 41 03.2**	**-1.0**
	comp=Z,26nm,1.7s,mb5.2						
LTX	**Lajitas**	**87.21**	**54**	*e*P	**P**	**00 41 03.2**	**-1.0**
LTX				pmax	pmax		
	comp=Z,26nm,1.7s,mb5.2						
TXAR	**Lajitas Array**	**87.21**	**54**	P	**P**	**00 41 03.0**	**-1.2**
	comp=Z,1.0nm,0.7s,mb4.1,baz=315,slow=3.5,SNR=14						
TXAR				LR	LR	01 13 33.5	
	comp=Z,98nm,20.0s,MS4.2,baz=320,slow=31						
TXAR	**Lajitas Array**	**87.21**	**54**	P	**P**	**00 41 03.0**	**-1.2**
TXAR				LR	LR	01 13 33.5	
ATD	**Arta Tunnel**	**92.18**	**286**	LR	LR	01 30 14.9	
	comp=Z,62nm,18.0s,MS4.1,baz=335,slow=40						
SNAA	**Sanae**	**142.69**	**196**	*e*	PKPdf	00 47 47.1	-6.2
SNAA	**Sanae**	**142.69**	**196**	*e*	PKPdf	00 47 53.1	-0.2
SNAA	**Sanae**	**142.69**	**196**	*e*	PKPdf	00 47 54.8	+1.5
SNAA	**Sanae**	**142.69**	**196**	*e*	PKPdf	00 48 00.1	+6.8
SNAA	**Sanae**	**142.69**	**196**	⇑*i*PKPdf	PKPdf	00 47 44.5	-8.8
SNAA				*e*		00 47 47.1	
SNAA				*e*		00 47 53.1	
SNAA				*e*		00 47 54.8	
SNAA				*e*		00 48 00.1	
SNAA				*e*		00 50 57.8	
SNAA				*e*		00 51 36.3	
SNAA	**Sanae**	**142.69**	**196**	⇑*i*PKHKP		00 47 44.5	
SNAA				*e*		00 47 47.1	
SNAA				*e*		00 47 53.1	
SNAA				*e*		00 47 54.8	
SNAA				*e*		00 50 57.8	
VNA2	**Neumayer--Watz**	**144.22**	**195**	*e*	PKPbc	00 47 52.8	+2.3
VNA2	**Neumayer--Watz**	**144.22**	**195**	*e*	PKPbc	00 47 57.7	+7.2
VNA2	**Neumayer--Watz**	**144.22**	**195**	*e*	PKPbc	00 48 00.3	+10
VNA2	**Neumayer--Watz**	**144.22**	**195**	*e*	PKPbc	00 48 05.6	+15
VNA2	**Neumayer--Watz**	**144.22**	**195**	⇑*i*PKPdf	PKPdf	00 47 49.9	-6.1
VNA2				*e*		00 47 52.8	
VNA2				*e*		00 47 57.7	
VNA2				*e*		00 48 00.3	
VNA2				*e*		00 48 05.6	
VNA2				*e*		00 51 02.9	
VNA2				*e*		00 51 37.1	
VNA3	**Neumayer Olymp**	**144.41**	**194**	*e*	PKPbc	00 47 53.5	+2.4
VNA3	**Neumayer Olymp**	**144.41**	**194**	*e*	PKPbc	00 47 58.3	+7.2
VNA3	**Neumayer Olymp**	**144.41**	**194**	*e*	PKPbc	00 48 00.4	+9.3
VNA3	**Neumayer Olymp**	**144.41**	**194**	*e*	PKPbc	00 48 06.0	+15
VNA3	**Neumayer Olymp**	**144.41**	**194**	⇑*i*PKPdf	PKPdf	00 47 50.3	-6.0
VNA3				*e*		00 47 53.5	
VNA3				*e*		00 47 58.3	
VNA3				*e*		00 48 00.4	
VNA3				*e*		00 48 06.0	
VNA3				*e*		00 50 58.4	
VNA3				*e*		00 51 33.8	
VNA1	**Neumayer--Stat**	**144.61**	**195**	*e*	PKPbc	00 47 54.6	+3.0
VNA1	**Neumayer--Stat**	**144.61**	**195**	*e*	PKPbc	00 47 59.6	+8.0
VNA1	**Neumayer--Stat**	**144.61**	**195**	*e*	PKPbc	00 48 01.9	+10
VNA1	**Neumayer--Stat**	**144.61**	**195**	*e*	PKPbc	00 48 07.0	+15
VNA1	**Neumayer--Stat**	**144.61**	**195**	⇑*i*PKPdf	PKPdf	00 47 51.4	-5.3
VNA1				*e*		00 47 54.6	
VNA1				*e*		00 47 59.6	
VNA1				*e*		00 48 01.9	
VNA1				*e*		00 48 07.0	
VNA1				*e*		00 51 01.0	
VNA1				*e*		00 51 37.2	

PGC 25 00:42:03.5,58.18N×133.57W,h1^{km},ML3.5/4,51km southeast of Juneau, Ak Near Mt. Ogden, British Columbia - Alaska border.,Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLBC	**Dease Lake**	**1.89**	**81**	Pn	Pn	00 42 35.7	-1.5
DLBC				Pg	Pg	00 42 37.4	-3.8
DLBC				Sn	Sn	00 43 01.3	-0.6
DLBC				Sg	Sg	00 43 02.7	-3.6
DLBC				Trac		00 43 07.0	
	comp=Z,202nm,0.5s						
PLBC	**Pleasant Camp**	**1.93**	**313**	Pn	Pn	00 42 37.5	-0.3
PLBC				Sn	Sn	00 43 02.4	-0.7
WHY	**Whitehorse**	**2.57**	**345**	Pn	Pn	00 42 44.0	-3.0
WHY				Pg	Pg	00 42 48.8	-6.0
WHY				Sg	Sg	00 43 18.9	-10
WHY				Trac		00 43 28.8	
	comp=Z,120nm,0.8s						
HYT	**Haines Junctio**	**3.32**	**325**	Pn	Pn	00 42 56.6	-1.1
HYT				Pg	Pg	00 43 02.3	-7.5
HYT				Sg	Sg	00 43 47.2	-6.8
HYT				Trac		00 43 50.1	
	comp=Z,53nm,0.6s						
RUBB	**Prince Rupert**	**4.29**	**153**	Sg	Sg	00 44 24.1	-2.1
FNBB	**Fort Nelson**	**5.58**	**78**	Pg	Pg	00 43 45.7	-9.2
FNBB				Sg	Sg	00 44 59.4	-10
FNBB				Trac		00 45 16.7	
	comp=Z,22nm,1.0s						
DAWY	**Dawson**	**6.54**	**337**	Pg	Pg	00 44 02.6	-11
DAWY				Sg	Sg	00 45 27.5	-14
DAWY				Trac		00 45 28.6	
	comp=Z,44nm,0.8s						
BMBC	**Bull Mountain**	**6.59**	**104**	Sg	Sg	00 45 33.1	-10
INK	**Inuvik**	**10.16**	**0**	Pn	P	00 44 29.0	-4.4
INK				Trac		00 47 38.0	
	comp=Z,5.0nm,0.9s						

IDC ***25*** *00:48:36.6±1.2,37.50N×22.22E,mb3.9/8,mb1 3.9/11, mb1mx3.8/25,mbtmp3.9/11,ML3.5/3,Error ellipse: s-maj=27.4km s-min=17.0km az=34.0*

ATH ***25*** *00:48:37.2,37.38N×22.12E,h19^{km}±1^{km},MD3.5/7,ML3.4*

NEIC ***25*** *00:48:37.2,37.37N×22.12E,h20^{km},ML3.4(ATH),After ATH.*

CSEM ***25*** *00:48:38.3±0.5,37.38N×22.22E,h6^{km}±3^{km},ML3.4,Error ellipse: s-maj=4.1km s-min=2.7km az=50.0*

ISC 25 00:48:38.2±0.8,37.25N±0.06×22.07E±0.05,h29^{km}±8^{km}, n35,$\sigma 1\overset{s}{.}16$/42,mb3.9/8,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ITM	**Ithomi**	**0.14**	**240**	*e*PB	**Pb**	**00 48 43.0**	**-0.7**
VLI	**Veliai**	**0.87**	**127**	*e*PN	**Pn**	**00 48 55.0**	**+0.5**
NAIG	**Nisos Aigina**	**1.24**	**65**	*e*PN	**Pn**	**00 48 59.0**	**-0.8**
ATH	**Athens Observa**	**1.49**	**61**	*e*PN	**Pn**	**00 49 03.8**	**+0.4**
MPAR	**Parnis Oros**	**1.60**	**55**	*e*PN	**Pn**	**00 49 05.1**	**+0.2**
PTL	**Penteli**	**1.63**	**60**	*e*PN	**Pn**	**00 49 05.1**	**-0.3**
EVR	**Evrytania**	**1.68**	**353**	*e*PN	**Pn**	**00 49 06.0**	**-0.1**
NEO	**Neokhori**	**2.25**	**23**	*e*PN	**Pn**	**00 49 14.0**	**-0.2**
IDI	**Anoyia**	**3.00**	**130**	Pn	**Pn**	**00 49 26.6**	**+1.7**
	1.6nm,0.3s,baz=326,slow=12,SNR=10.0						
IDI				Sn	**Sn**	**00 50 06.0**	**+5.7**
	4.3nm,0.3s,baz=331,slow=21,SNR=4.1						
SRN	**Sarande**	**3.09**	**329**	*e*Pn	**Pn**	**00 49 27.6**	**+1.4**
BIA	**Bitola**	**3.81**	**351**	*e*Pg	**Pn**	**00 49 37.8**	**+1.3**
BIA				*i* Sg	**Sn**	**00 50 23.2**	**+2.4**
BIA	**Bitola**	**3.81**	**351**	*e*Pn	**Pn**	**00 49 37.8**	**+1.3**
BIA				*i* Sn	**Sn**	**00 50 23.2**	**+2.4**
PZI	**Palazzolo**	**5.70**	**270**	Pn	**Pn**	**00 50 01.8**	**-1.3**
PZI				Sn	**Sn**	**00 51 04.2**	**-4.1**
SLCN	**Sala Consilina**	**5.93**	**304**	Pn	**Pn**	**00 50 06.9**	**+0.5**
SLCN				Sn	**Sn**	**00 51 17.7**	**+3.6**
VAE	**Valguarnera**	**6.11**	**274**	Pn	**Pn**	**00 50 11.8**	**+2.9**
	2.1nm,0.3s,baz=84,slow=9.2,SNR=5.1						
VAE				Sn	**Sn**	**00 51 24.2**	**+5.6**
	0.6nm,0.3s,baz=233,slow=20,SNR=2.7						
SGO	**Sicignano**	**6.23**	**304**	Pn	**Pn**	**00 50 11.0**	**+0.4**
	8.8nm,0.6s						
SGO				Sn	**Sn**	**00 51 20.9**	**-0.7**
RGNG	**Rignano Grg**	**6.69**	**313**	Pn	**Pn**	**00 50 16.6**	**-0.5**
DIVS	**Divcibare**	**7.02**	**348**	*e*Pn	**Pn**	**00 50 19.8**	**-2.1**
DIVS				Sg	**Sn**	**00 51 36.7**	**-4.8**
SGG	**Gregorio Mates**	**7.26**	**307**	Pn	**Pn**	**00 50 25.9**	**+0.8**
MLR	**Muntele Rosu**	**8.73**	**18**	Pn	**P**	**00 50 47.0**	**+1.3**
	0.4nm,0.3s,baz=170,slow=20,SNR=7.4						
GERES	**GERESS Array B**	**13.10**	**335**	Pn	**P**	**00 51 42.3**	**-2.5**
	0.1nm,0.3s,baz=156,slow=13,SNR=5.1						
KHC	**Kasperske Hory**	**13.38**	**335**	*e*P	**P**	**00 51 57.5**	**+8.8**
HFS	**Hagfors**	**23.52**	**349**	P	**P**	**00 53 45.2**	**-1.2**
	2.9nm,0.8s,mb3.8,baz=157,slow=11,SNR=10						
FINES	**FINESS Array B**	**24.35**	**5**	P	**P**	**00 53 53.6**	**-0.8**
	4.7nm,1.0s,mb3.9,baz=180,slow=7.6,SNR=5.8						
NOA	**NORSAR Array B**	**24.78**	**347**	P	**P**	**00 53 58.4**	**-0.1**
	1.4nm,0.7s,mb3.6,baz=156,slow=8.7,SNR=3.2						
NOA	**NORSAR Array B**	**24.78**	**347**	P	**P**	**00 53 58.4**	**-0.1**
EKA	**Eskdalemuir Ar**	**24.90**	**325**	P	**P**	**00 54 00.0**	**+0.3**
	2.7nm,0.7s,mb3.9,baz=127,slow=10,SNR=5.6						
KAF	**Kangasniemi**	**25.03**	**5**	*e*p	**P**	**00 54 10.5**	**+10**
JOF	**Joensuu**	**26.32**	**10**	*e*p	**P**	**00 54 14.5**	**+1.6**
ARCES	**ARCESS Array B**	**32.40**	**2**	P	**P**	**00 55 06.2**	**-1.1**
	2.0nm,0.7s,mb4.1,baz=196,slow=10,SNR=14						
MKAR	**Makanchi Array**	**44.75**	**58**	P	**P**	**00 56 49.5**	**-1.0**
	0.7nm,0.5s,mb3.7,baz=270,slow=7.7,SNR=16						

ZAL	**Zalesovo**	**45.39**	**48**	P	**P**	**00 56 55.0**	**-0.6**
	0.7nm,0.3s,mb4.0,baz=178,slow=3.8,SNR=2.7						
ZAL	**Zalesovo**	**45.39**	**48**	P	**P**	**00 56 55.0**	**-0.6**
SCHQ	**Schefferville**	**59.98**	**318**	P	**P**	**00 58 43.3**	**-0.7**
	2.8nm,0.8s,mb4.4,baz=61,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**119.26**	**94**	PKP	PKPdf	01 07 26.5	-3.5
	0.3nm,0.8s,baz=321,slow=1.3,SNR=5.2						

*NEIC **25** 00:51:04.2±2.0,34.28N×25.76E,h61^{km}±20^{km},Error ellipse: s-maj=23.1km s-min=15.9km az=102.0*

*IDC **25** 00:51:05.2±2.6,34.35N×25.77E,h69^{km}±27^{km},mb3.7/7, mb1 3.7/10,mb1mx3.6/23,mbtmp3.9/10,Error ellipse: s-maj=33.6km s-min=21.2km az=95.0*

ISC 25 00:51:03.3±2.0,**34.3N**±0.1×**25.7E**±0.2,**h74**^{km}±19^{km},**n18**, σ**0^{s}85**/19,**mb3.8**/7,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IDI	**Anoyia**	**1.22**	**328**	P	**P**	**00 51 25.6**	**+0.5**
	5.0nm,0.3s,baz=159,slow=17,SNR=4.9						
GVD	**Gavdhos**	**1.44**	**294**	*e*Pn	**P**	**00 51 26.7**	**-1.6**
CSS	**Prodhromos**	**6.34**	**82**	*e*Pn	**P**	**00 52 30.0**	**-6.0**
	17nm,0.4s						
VAE	**Valguarnera**	**9.70**	**293**	P	**P**	**00 53 22.9**	**+0.8**
	0.7nm,0.3s,baz=82,slow=14,SNR=2.2						
VAE				S	**S**	**00 55 06.3**	**-4.0**
	1.1nm,0.3s,baz=247,slow=13,SNR=3.1						
AKASG	**Malin Array Be**	**16.63**	**8**	P	**P**	**00 54 54.0**	**+1.1**
	1.2nm,0.3s,baz=198,slow=11,SNR=10						
AKASG	**Malin Array Be**	**16.63**	**8**	P	**P**	**00 54 54.0**	**+1.1**
GERES	**GERESS Array B**	**17.08**	**332**	P	**P**	**00 55 00.0**	**+1.5**
	0.2nm,0.3s,baz=150,slow=11,SNR=6.4						
KHC	**Kasperske Hory**	**17.36**	**332**	*e*P	**P**	**00 55 01.5**	**-0.5**
KHC				pP		00 55 15.0	
KHC	**Kasperske Hory**	**17.36**	**332**	*e*P	**P**	**00 55 01.5**	**-0.5**
KHC				*e*		00 55 15.0	
HFS	**Hagfors**	**27.05**	**347**	P	**P**	**00 56 40.2**	**-0.2**
	2.8nm,0.8s,mb3.8,baz=150,slow=12,SNR=2.8						
FINES	**FINESS Array B**	**27.20**	**0**	P	**P**	**00 56 41.0**	**-0.8**
	1.7nm,0.4s,mb3.9,baz=165,slow=9.9,SNR=7.7						
FINES	**FINESS Array B**	**27.20**	**0**	P	**P**	**00 56 41.0**	**-0.8**
KAF	**Kangasniemi**	**27.88**	**1**	*e*p	**P**	**00 56 42.2**	**-5.7**
ARCES	**ARCESS Array B**	**35.33**	**360**	P	**P**	**00 57 52.4**	**-0.6**
	1.0nm,0.5s,mb3.9,baz=180,slow=8.5,SNR=6.5						
MKAR	**Makanchi Array**	**43.91**	**56**	P	**P**	**00 59 04.1**	**-0.1**
	1.0nm,0.6s,mb3.8,baz=269,slow=6.9,SNR=8.1						
ZAL	**Zalesovo**	**45.30**	**46**	P	**P**	**00 59 14.8**	**-0.4**
	1.0nm,0.4s,mb3.9,baz=232,slow=6.6,SNR=4.7						
MATP	**Matopo**	**54.45**	**177**	P	**P**	**01 00 26.3**	**+0.8**
	1.0nm,0.7s,mb4.0,baz=292,slow=16,SNR=3.2						
SONM	**Songino Array**	**59.72**	**50**	P	**P**	**01 01 02.1**	**-0.4**
	0.4nm,0.6s,mb3.6,baz=283,slow=6.1,SNR=3.5						

*IDC **25** 01:06:38.6±1.7,4.67N×123.90E,mb4.0/4,mb1 4.2/4, mb1mx3.8/18,mbtmp4.0/4,MS2.9/1,Ms1 2.9/1, ms1mx2.2/26,Error ellipse: s-maj=136.9km s-min=22.6km az=66.0*

*NEIC **25** 01:07:26.0±0.8,3.80N×123.09E,h500^{km},mb4.1/2,Error ellipse: s-maj=91.8km s-min=12.6km az=64.0*

ISC 25 01:07:24.4±1.1,**3.9N**±0.4×**123.2E**±0.7,**h500**^{km},**n10**, σ**0^{s}57**/9,**mb3.8**/6,**1C,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.96**	**174**	P	**P**	**01 11 42.1**	**0.0**
	2.0nm,0.7s,mb3.8,baz=8.1,slow=12,SNR=5.9						
WRAB	**Tennant Creek**	**26.08**	**155**	*e*P	**P**	**01 12 18.7**	**-0.4**
	3.9nm,0.3s,mb4.3						
WRA	**Warramunga Arr**	**26.08**	**155**	P	**P**	**01 12 18.8**	**-0.4**
	1.6nm,0.3s,mb3.9,baz=336,slow=9.6,SNR=53						
WRA	**Warramunga Arr**	**26.08**	**155**	P	**P**	**01 12 18.8**	**-0.4**
WB2	**Warramunga Arr**	**26.09**	**155**	⇑*i*P	**P**	**01 12 18.8**	**-0.4**
JNU	**Nakatsue**	**29.99**	**13**	LR	LR	01 24 26.0	
	comp=Z,22nm,18.6s,baz=62,slow=37						
STKA	**Stephens Creek**	**39.63**	**155**	P	**P**	**01 14 14.8**	**+1.3**
	2.9nm,1.0s,mb3.7,baz=338,slow=11,SNR=3.4						
STKA	**Stephens Creek**	**39.63**	**155**	P	**P**	**01 14 14.8**	**+1.3**
MKAR	**Makanchi Array**	**55.45**	**327**	P	**P**	**01 16 13.2**	**+0.2**
	0.9nm,0.3s,mb3.5,baz=124,slow=7.5,SNR=40						
KURK	**Kurchatov**	**59.75**	**329**	*e*P	**P**	**01 16 41.8**	**-0.3**
	1.4nm,0.4s,mb3.7						

*MOS **25** 01:21:55.0±1.7,46.28N×95.29E,h10^{km},mb4.2/2,Error ellipse: s-maj=16.2km s-min=10.3km az=114.9*

*IDC **25** 01:21:55.6±1.2,46.05N×95.19E,mb3.6/5,mb1 3.8/8, mb1mx3.6/22,mbtmp3.6/8,ML3.3/3,Error ellipse: s-maj=36.1km s-min=18.6km az=17.0*

*BJI **25** 01:21:57.4,46.22N×95.69E,h9^{km},ML4.2*

*NEIC **25** 01:21:57.1±0.7,46.36N×95.38E,h10^{km},mb4.0/4,Error ellipse: s-maj=13.9km s-min=10.9km az=208.0*

*NNC **25** 01:21:60.0±16.0,46.54N×95.18E,mpv3.7,Error ellipse: s-maj=174.0km s-min=145.1km az=151.0*

ISC 25 01:21:57.1±3.0,**46.25N**±0.08×**95.37E**±0.08,**h25**^{km}±25^{km}, **n28**,σ**0^{s}88**/27,**mb3.7**/7,**5C,Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**5.96**	**249**	*e*P	**Pn**	**01 23 32.3**	**+6.2**
WMQ				S	**Sn**	**01 24 33.3**	**-1.1**
WMQ				Smax			
	comp=N,110nm,0.7s						
WMQ				Smax			
	comp=E,170nm,1.0s						
AKAR	**Aktash**	**6.58**	**311**	*e*P	**Pn**	**01 23 34.9**	**-0.1**
ZAK	**Zakamensk**	**6.70**	**49**	*e*P	**Pn**	**01 23 36.1**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,21nm,0.5s						
SONM	**Songino Array**	**7.70**	**74**	Pn	**Pn**	**01 23 50.0**	**-0.6**
	comp=Z,0.5nm,0.3s,baz=262,slow=14,SNR=13						
SONM				Lg		01 25 54.3	
	comp=Z,5.9nm,0.3s,baz=278,slow=31,SNR=12						
MK31	**Makanchi Array**	**9.04**	**278**	Pn	**P**	**01 24 09.3**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=97,slow=15,SNR=6.9						
MK31				⇑Pg	P	01 24 41.6	+32
	comp=Z,3.9nm,0.8s,baz=80,slow=16,SNR=5.2						
MK31				⇑Lg		01 26 42.1	
	comp=Z,9.0nm,0.6s,baz=81,slow=30,SNR=5.4						
MKAR	**Makanchi Array**	**9.04**	**278**	Pn	**P**	**01 24 08.2**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=98,slow=14,SNR=6.4						
MKAR				Lg		01 26 41.0	
	comp=Z,2.2nm,0.3s,baz=85,slow=30,SNR=9.8						
ZAL	**Zalesovo**	**10.26**	**322**	Lg		01 27 18.4	
	comp=Z,0.3nm,0.3s,baz=320,slow=15,SNR=5.1						
KURK	**Kurchatov**	**11.98**	**298**	⇑Lg		01 28 12.9	
	comp=Z,16nm,0.9s,baz=116,slow=25						
VOSK	**Vostochnaya**	**17.07**	**301**	⇑P	**P**	**01 25 57.5**	**+2.0**
	comp=Z,5.5nm,1.9s						
BVA0	**Borovoye Array**	**17.49**	**302**	⇑P	**P**	**01 26 01.2**	**+0.4**
	comp=Z,1.3nm,1.6s,baz=128,slow=14,SNR=13						
BVAR	**Borovoye Array**	**17.49**	**302**	P	**P**	**01 26 01.1**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=99,slow=10.0,SNR=9.5						
BRVK	**Borovoye**	**17.56**	**302**	*e*P	**P**	**01 26 01.6**	**-0.1**
	comp=Z,2.9nm,0.9s						
BRVK	**Borovoye**	**17.56**	**302**	*e*P	**P**	**01 26 01.6**	**0.0**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GUN	**Gumba**	**19.78**	**206**	*e*P	**P**	**01 26 29.1**	**+0.7**
	comp=Z,13nm,0.6s						
KKN	**Kakani**	**20.08**	**207**	*e*P	**P**	**01 26 32.1**	**+0.5**
GKN	**Gorkha**	**20.09**	**209**	*e*P	**P**	**01 26 37.6**	**+5.9**
	comp=Z,4.2nm,0.3s						
KOLN	**Koldanda**	**20.66**	**211**	*e*P	**P**	**01 26 42.9**	**+5.3**
	comp=Z,8.9nm,0.6s						
ARU	**Arti**	**24.86**	**308**	P	**P**	**01 27 19.0**	**+0.3**
	comp=Z,2.7nm,0.5s,mb4.0						
ARU	**Arti**	**24.86**	**308**	P	**P**	**01 27 19.0**	**+0.3**
ARU				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.1						
AKTK	**Aktyubinsk**	**25.00**	**293**	P	**P**	**01 27 20.2**	**+0.1**
AKTO	**Aktyubinsk**	**25.00**	**293**	P	**P**	**01 27 20.2**	**+0.1**
	comp=Z,0.8nm,0.6s,mb3.4,baz=71,slow=13,SNR=4.0						
FINES	**FINESS Array B**	**41.47**	**317**	P	**P**	**01 29 43.5**	**+0.3**
	comp=Z,5.4nm,1.1s,mb4.1,baz=124,slow=6.9,SNR=5.8						
NB2	**NORSAR Subarra**	**48.44**	**320**	P	**P**	**01 30 37.9**	**-1.0**
	comp=Z,0.8nm,0.6s,mb3.9,baz=71,slow=7.4						
NOA	**NORSAR Array B**	**48.44**	**320**	P	**P**	**01 30 38.6**	**-0.3**
	comp=Z,1.1nm,0.8s,mb3.9,baz=4.7,slow=17,SNR=2.5						
NAO	**NORSAR Subarra**	**48.70**	**320**	P	**P**	**01 30 37.9**	**-3.0**
	comp=Z,0.8nm,0.6s,mb3.9						
NAO	**NORSAR Subarra**	**48.70**	**320**	P	**P**	**01 30 37.9**	**-3.0**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
ILAR	**Eielson Array**	**59.20**	**26**	P	**P**	**01 32 01.2**	**+3.3**
	comp=Z,0.3nm,0.8s,mb3.4,baz=306,slow=4.4,SNR=4.9						
WRA	**Warramunga Arr**	**74.72**	**142**	P	**P**	**01 33 36.8**	**+0.1**
	comp=Z,0.2nm,0.5s,mb3.3,baz=341,slow=6.3,SNR=7.8						

*IDC **25** 02:00:01.2±1.3,38.50N×98.74E,mb3.9/3,mb1 4.1/5, mb1mx3.8/22,mbtmp3.9/5,ML3.4/3,Error ellipse: s-maj=52.3km s-min=22.8km az=54.0*

*BJI **25** 02:00:02.8,38.72N×98.98E,h3^{km},ML3.6,Ms3.6,Msz3.5*

*NEIC **25** 02:00:02.9±1.0,38.54N×98.89E,h10^{km},mb3.5/1,Error ellipse: s-maj=15.7km s-min=14.6km az=1.0*

ISC 25 02:00:01.2±2.7,**38.59N**±0.07×**99.0E**±0.2,**h11**^{km}±19^{km}, **n12**,σ**0^{s}47**/14,**mb3.9**/3,**Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**1.03**	**37**	PG	**Pg**	**02 00 21.9**	**+0.1**
GTA				SG	**Sg**	**02 00 35.5**	**-0.1**
GTA				Smax			
	comp=N,550nm,0.7s						
GTA				Smax			
	comp=E,450nm,0.6s						
LZH	**Lanzhou**	**4.59**	**121**	P	**Pn**	**02 01 16.5**	**+4.3**
LZH				SG	**Sg**	**02 02 34.0**	**0.0**
LZH				Smax			
	comp=N,140nm,1.1s						
LZH				Smax			
	comp=E,90nm,1.2s						
LZH				LR	LR		
	comp=N,410nm,6.3s						
LZH				LR	LR		
	comp=Z,570nm,8.5s						
SONM	**Songino Array**	**10.69**	**28**	Pn	**P**	**02 02 37.7**	**+0.5**
	comp=Z,1.5nm,0.3s,baz=212,slow=14,SNR=37						
SONM				Lg		02 05 35.8	
	comp=Z,0.5nm,0.3s,baz=217,slow=31,SNR=5.2						
ULN	**Ulaanbaatar**	**10.96**	**30**	*e*Pn	**P**	**02 02 40.6**	**-0.3**
MKAR	**Makanchi Array**	**14.76**	**309**	Pn	**P**	**02 03 22.3**	**-9.1**
	comp=Z,0.0nm,0.3s,baz=122,slow=14,SNR=2.7						
MKAR	**Makanchi Array**	**14.76**	**309**	Pn	**P**	**02 03 22.3**	**-9.1**
ZAL	**Zalesovo**	**18.17**	**332**	P	**P**	**02 04 15.4**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=340,slow=9.0,SNR=5.4						
KURK	**Kurchatov**	**18.83**	**317**	*e*P	**P**	**02 04 22.5**	**-0.5**
	comp=Z,3.5nm,1.0s						
BVAR	**Borovoye Array**	**24.42**	**316**	P	**P**	**02 05 21.0**	**+0.6**
	comp=Z,0.5nm,0.7s,mb3.1,baz=112,slow=8.0,SNR=4.7						
FINES	**FINESS Array B**	**49.06**	**323**	P	**P**	**02 08 48.9**	**-0.8**
	comp=Z,5.7nm,1.0s,mb4.6,baz=27,slow=9.3,SNR=4.7						
FINES	**FINESS Array B**	**49.06**	**323**	P	**P**	**02 08 48.9**	**-0.8**
WRA	**Warramunga Arr**	**66.99**	**144**	P	**P**	**02 10 56.2**	**0.0**
	comp=Z,1.7nm,0.9s,mb4.1,baz=339,slow=6.7,SNR=11						

*NEIC **25** 02:02:47.5,53.11N×169.82W,h228^{km},MG3.5(AEIC), After AEIC.*

*IDC **25** 02:02:52.9±6.6,53.87N×170.36W,h255^{km}±98^{km},mb3.1/4, mb1 3.5/6,mb1mx3.1/24,mbtmp3.8/6,Error ellipse: s-maj=54.5km s-min=32.0km az=115.0*

ISC 25 02:02:48.2±0.5,**53.6N**±0.1×**169.99W**±0.09,**h210**^{km}±5^{km}, **n26**,σ**0^{s}81**/36,**mb3.4**/4,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIKO	**Nikolski**	**0.89**	**130**	P	**P**	**02 03 17.8**	**-0.7**
NIKO				S	**S**	**02 03 40.9**	**-1.2**
OKCE	**Okmok Cone E**	**1.10**	**96**	P	**P**	**02 03 20.3**	**+0.4**
OKCE				S	**S**	**02 03 45.3**	**+0.9**
OKCD	**Okmok Cone D**	**1.13**	**95**	P	**P**	**02 03 19.8**	**-0.4**
OKCD				S	**S**	**02 03 48.4**	**+3.5**
OKER	**East Rim**	**1.16**	**94**	P	**P**	**02 03 20.1**	**-0.3**
MSOM	**Makushin Julie**	**1.83**	**80**	P	**P**	**02 03 25.6**	**-0.5**
MSOM				S	**S**	**02 03 56.3**	**+0.9**
MGOD	**Makushin Gods**	**1.87**	**81**	P	**P**	**02 03 26.3**	**-0.2**
MNAT	**Makushin Natee**	**1.99**	**79**	P	**P**	**02 03 27.5**	**-0.2**
MTBL	**Makushin Table**	**2.01**	**76**	P	**P**	**02 03 27.9**	**0.0**
UNV	**Unalaska Valle**	**2.09**	**80**	P	**P**	**02 03 28.7**	**-0.2**
UNV				S	**S**	**02 03 59.7**	**-0.4**
LVA	**Lava Point**	**2.42**	**74**	P	**P**	**02 03 32.7**	**+0.3**
AKLV	**Akutan Long Va**	**2.47**	**74**	P	**P**	**02 03 33.1**	**+0.3**
AHB	**Akutan Harbor**	**2.54**	**75**	P	**P**	**02 03 33.9**	**+0.3**
AHB				S	**S**	**02 04 08.1**	**-0.7**
AKUT	**Akutan**	**2.57**	**75**	P	**P**	**02 03 33.9**	**0.0**
AKUT				S	**S**	**02 04 09.8**	**+0.5**
ATKA	**Atka Island**	**2.88**	**244**	P	**P**	**02 03 36.7**	**-0.8**
WFAR	**Faris Peak**	**3.23**	**70**	P	**P**	**02 03 42.0**	**+0.4**
WFAR				S	**S**	**02 04 23.6**	**+0.8**
WPOG	**Pogromni**	**3.26**	**69**	P	**P**	**02 03 42.1**	**+0.1**
WPOG				S	**S**	**02 04 25.2**	**+1.6**
SSLW	**Shishaldin Wes**	**3.66**	**68**	P	**P**	**02 03 46.9**	**0.0**
DTNA	**Dutton South F**	**4.80**	**67**	P	**P**	**02 04 00.6**	**-0.4**
DOL	**Dolgoi Island**	**5.02**	**68**	P	**P**	**02 04 03.0**	**-0.7**
SDPT	**Sand Point**	**5.84**	**68**	P	**P**	**02 04 12.6**	**-1.6**
FX1	**Attu Island--F**	**10.13**	**273**	P	**P**	**02 05 09.8**	**+0.2**
	1.5nm,0.3s,baz=274,slow=11,SNR=36						
FX1				S	**S**	**02 07 02.1**	**+1.5**
	0.5nm,0.3s,baz=107,slow=19,SNR=4.2						
ILAR	**Eielson Array**	**16.21**	**37**	P	**P**	**02 06 23.6**	**-1.9**
	0.4nm,0.3s,baz=229,slow=9.9,SNR=58						
INK	**Inuvik**	**22.58**	**35**	P	**P**	**02 07 30.2**	**-0.7**
	0.6nm,0.4s,mb3.5,baz=255,slow=9.3,SNR=9.7						
NVAR	**Mina Array Bea**	**38.07**	**92**	P	**P**	**02 09 49.4**	**+1.6**
	0.7nm,0.7s,mb3.3,baz=312,slow=6.8,SNR=8.7						
PDAR	**Pinedale Array**	**40.56**	**80**	P	**P**	**02 10 08.8**	**+0.6**
	0.5nm,0.3s,mb3.4,baz=323,slow=4.5,SNR=6.5						
TXAR	**Lajitas Array**	**53.10**	**89**	P	**P**	**02 11 45.8**	**0.0**
	0.7nm,0.4s,mb3.4,baz=303,slow=5.7,SNR=18						

*JMA **25** 02:15:41.8±0.5,33.53N×141.88E,h100^{km},M2.7*

*IDC **25** 02:15:57.7±1.4,32.65N×139.76E,h83^{km}±46^{km},mb3.1/2, mb1 3.2/3,mb1mx3.0/20,mbtmp3.3/3,ML2.9/1,Error ellipse: s-maj=169.2km s-min=29.0km az=66.0*

ISC 25 02:15:39.7±2.7,**33.58N**±0.06×**142.2E**±0.1,**h23**^{km}±24^{km}, **n11**,σ**0^{s}97**/17,**mb3.5**/2,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.46**	**318**	*e*S	**Sn**	**02 16 24.8**	**+1.4**
BSO3	**Boso 3**	**1.83**	**312**	P	**Pn**	**02 16 10.9**	**+0.6**
BSO3				*e*S	**Sn**	**02 16 33.4**	**+0.4**
JHJ2	**Mitsune**	**2.02**	**257**	P	**Pn**	**02 16 12.1**	**-0.9**
JHJ	**Hachijo jima 2**	**2.04**	**258**	P	**Pn**	**02 16 12.2**	**-1.2**
	22nm,0.3s,baz=78,slow=22,SNR=6.8						
JHJ				S	**Sn**	**02 16 33.4**	**-5.0**
	34nm,0.3s,baz=235,slow=23,SNR=6.3						
BSO4	**Boso 4**	**2.06**	**313**	P	**Pn**	**02 16 14.8**	**+1.1**
BSO4				*e*S	**Sn**	**02 16 39.5**	**+0.6**
JAG	**Ashikaga**	**3.61**	**323**	P	**Pn**	**02 16 36.0**	**+0.4**
JFT	**Otama**	**4.20**	**340**	P	**Pn**	**02 16 43.7**	**-0.4**
JFT				*e*S	**Sn**	**02 17 31.3**	**-1.8**
MJAR	**Matsushiro Arr**	**4.39**	**313**	P	**Pn**	**02 16 59.2**	**+12**
	0.7nm,0.3s,baz=157,slow=13,SNR=3.6						
MJAR				S	**Sn**	**02 17 36.9**	**-0.9**
	1.0nm,0.3s,baz=76,slow=41,SNR=4.3						
JMM	**Marumori**	**4.42**	**346**	P	**Pn**	**02 16 47.6**	**+0.4**
JMM				S	**Sn**	**02 17 35.7**	**-2.9**
MKAR	**Makanchi Array**	**46.54**	**305**	P	**P**	**02 24 07.4**	**+0.3**
	0.5nm,0.7s,mb3.6,baz=90,slow=9.7,SNR=4.7						
WRA	**Warramunga Arr**	**53.74**	**189**	P	**P**	**02 25 03.0**	**+0.4**
	0.4nm,0.7s,mb3.5,baz=5.0,slow=7.6,SNR=7.1						

*STR **25** 02:20:23.6±0.6,44.94N×6.78E,h5^{km}±1^{km},Ml2.4,Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*CSEM **25** 02:20:23.9±0.1,44.84N×6.66E,h10^{km},MD2.4/1, ML2.5/10,Error ellipse: s-maj=1.1km s-min=0.8km az=67.0*

*GEN **25** 02:20:23.1,44.81N×6.54E,h1^{km},ML2.0*

*LDG **25** 02:20:24.5±0.1,44.84N×6.62E,h2^{km},Md2.7/1,Ml2.6/11, Error ellipse: s-maj=1.4km s-min=0.8km az=62.0*

*ROM **25** 02:20:24.0±0.3,44.82N×6.68E,h10^{km},Md2.4/4,Error ellipse: s-maj=4.7km s-min=1.2km az=101.0*

*NEIC **25** 02:20:24.5,44.84N×6.62E,h2^{km},MD2.4(ROM), ML2.6(LDG),ML2.6(GEN),ML2.4(STR),After LDG.*

*ZUR **25** 02:21:41.7,45.82N×7.45E,h11^{km}±9^{km},ML1.0/2*

ISC 25 02:20:23.4±0.2,**44.82N**±0.01×**6.58E**±0.02,**h10**^{km}±2^{km}, **n69**,σ**0^{s}80**/126,**1C,France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBDF	**Montbardon**	**0.17**	**124**	*e*Pg	**Pg**	**02 20 27.1**	**-0.1**
MBDF				*e*Sg	**Sg**	**02 20 29.5**	**-0.3**
	260nm,0.3s						
RRL	**Cesana Torines**	**0.18**	**56**	P	**Pg**	**02 20 27.8**	**+0.4**
RRL				S	**Sg**	**02 20 30.9**	**+0.9**
RRL	**Cesana Torines**	**0.18**	**56**	P	**Pg**	**02 20 27.8**	**+0.4**
BNI	**Bardonecchia**	**0.24**	**17**	*e*Pg	**Pg**	**02 20 28.9**	**+0.4**
BNI	**Bardonecchia**	**0.24**	**17**	*e*Pg	**Pg**	**02 20 28.9**	**+0.3**
SURF	**Saint Ours**	**0.38**	**154**	Pg	**Pg**	**02 20 31.3**	**+0.1**
SURF				Sg	**Sg**	**02 20 37.7**	**+1.3**
FENE	**Fenestrelle**	**0.40**	**59**	P	**Pg**	**02 20 31.9**	**+0.2**
FENE				S	**Sg**	**02 20 37.7**	**+0.5**
FENE	**Fenestrelle**	**0.40**	**59**	P	**Pg**	**02 20 31.9**	**+0.2**
FENE				S	**Sg**	**02 20 37.7**	**+0.5**
BHB	**Bricherasio**	**0.49**	**87**	P	**Pg**	**02 20 33.3**	**-0.1**
BHB				S	**Sg**	**02 20 40.2**	**+0.2**
BHB	**Bricherasio**	**0.49**	**87**	P	**Pg**	**02 20 33.3**	**0.0**
BHB				S	**Sg**	**02 20 40.2**	**+0.2**
PZZ	**Prazzo**	**0.49**	**130**	P	**Pg**	**02 20 33.3**	**0.0**
PZZ				S	**Sg**	**02 20 40.2**	**+0.2**
PZZ	**Prazzo**	**0.49**	**130**	P	**Pg**	**02 20 33.3**	**-0.1**
GDM	**Grand'Maison**	**0.50**	**320**	Pg	**Pg**	**02 20 34.3**	**+0.7**
GDM				Sg	**Sg**	**02 20 41.3**	**+0.9**
ORIF	**Oris-en-Rattie**	**0.51**	**281**	*e*Pg	**Pg**	**02 20 34.1**	**+0.5**
ORIF				*e*Sg	**Sg**	**02 20 41.0**	**+0.5**
	117nm,0.4s						
DOI	**San Damiano**	**0.57**	**123**	Pg	**Pg**	**02 20 34.5**	**-0.5**
DOI				Sg	**Sg**	**02 20 42.9**	**+0.1**
RSP	**Reno Superiore**	**0.58**	**55**	P	**Pg**	**02 20 35.3**	**+0.1**
RSP				S	**Sg**	**02 20 43.3**	**+0.2**
RSP	**Reno Superiore**	**0.58**	**55**	P	**Pg**	**02 20 35.3**	**+0.1**
RSP				S	**Sg**	**02 20 43.3**	**+0.2**
LPG	**La Plagne**	**0.69**	**10**	*e*Pg	**Pg**	**02 20 37.5**	**+0.3**
LPG				*e*Sg	**Sg**	**02 20 46.3**	**-0.2**
	16nm,0.3s						
LPL	**La Plagne**	**0.70**	**9**	*e*Pg	**Pg**	**02 20 37.8**	**+0.3**
LPL				*e*Sg	**Sg**	**02 20 46.7**	**-0.3**
LPL				*e*Sn	**Sn**	**02 20 50.3**	**+0.4**
	47nm,0.7s						
LSD	**Ceresole Reale**	**0.76**	**33**	P	**Pb**	**02 20 38.3**	**+0.1**
LSD				S	**Sb**	**02 20 48.5**	**+0.3**
LSD	**Ceresole Reale**	**0.76**	**33**	P	**Pb**	**02 20 38.3**	**+0.2**
LSD				S	**Sb**	**02 20 48.5**	**+0.3**
STV	**Sta Anna Valdi**	**0.79**	**137**	P	**Pb**	**02 20 38.4**	**-0.3**
STV				S	**Sb**	**02 20 48.8**	**-0.4**
STV	**Sta Anna Valdi**	**0.79**	**137**	P	**Pb**	**02 20 38.4**	**-0.3**
STV				S	**Sb**	**02 20 48.8**	**-0.3**
STV2	**Anna di Valdie**	**0.79**	**137**	P	**Pb**	**02 20 38.4**	**-0.3**
STV2				S	**Sb**	**02 20 48.7**	**-0.4**
STV2	**Anna di Valdie**	**0.79**	**137**	P	**Pb**	**02 20 38.4**	**-0.3**
STV2				S	**Sb**	**02 20 48.7**	**-0.4**
ENR	**Entracque**	**0.85**	**134**	P	**Pb**	**02 20 39.5**	**-0.2**
ENR				S	**Sb**	**02 20 50.7**	**-0.2**
ENR	**Entracque**	**0.85**	**134**	P	**Pb**	**02 20 39.5**	**-0.2**
ENR				S	**Sb**	**02 20 50.7**	**-0.2**
TOUF	**Mont Tournerai**	**0.94**	**149**	Pg	**Pg**	**02 20 42.1**	**-0.2**
TOUF				Sg	**Sg**	**02 20 57.0**	**+2.1**
MVIF	**Mont Vial**	**1.01**	**156**	Pg	**Pg**	**02 20 43.9**	**+0.2**
AUTN	**L'Aution**	**1.03**	**143**	Pg	**Pg**	**02 20 44.0**	**0.0**
AUTN				Sg	**Sg**	**02 20 58.5**	**+0.8**
ROB	**Roburent**	**1.06**	**119**	P	**Pb**	**02 20 43.4**	**0.0**
ROB				S	**Sb**	**02 20 57.3**	**+0.1**
TRAV		**1.08**	**50**	P	**Pb**	**02 20 43.9**	**+0.2**
TRAV				S	**Sb**	**02 20 58.0**	**+0.4**
SAOF	**Saorge**	**1.09**	**140**	Pg	**Pg**	**02 20 44.3**	**-1.0**
SAOF				Sg	**Sg**	**02 20 59.3**	**-0.5**
CALN	**Calern**	**1.09**	**168**	Pg	**Pg**	**02 20 47.2**	**+1.9**
CALN				Sg	**Sg**	**02 21 03.7**	**+3.8**
SMRF	**Simiane la Rot**	**1.11**	**221**	*e*Pn	**Pn**	**02 20 46.2**	**+1.3**
SMRF				*e*Sg	**Sg**	**02 21 01.2**	**+0.7**
	13nm,0.3s						
MONE	**Monesi**	**1.12**	**131**	P	**Pb**	**02 20 44.3**	**-0.1**
MONE				S	**Sb**	**02 20 59.0**	**0.0**
MONE	**Monesi**	**1.12**	**131**	S	**Sb**	**02 20 59.0**	**+0.1**
SBF	**Sospel**	**1.14**	**147**	*e*Pg	**Pg**	**02 20 45.7**	**-0.5**
SBF				*e*Sn	**Sn**	**02 21 01.1**	**+0.1**
	63nm,0.4s						
EMV	**Vieux Emosson**	**1.26**	**10**	*e*Pg	**Pg**	**02 20 50.6**	**+2.0**
EMV				*e*Sg	**Sg**	**02 20 56.4**	**-9.1**
FRF	**La Foret Royal**	**1.26**	**178**	*e*Pg	**Pg**	**02 20 48.5**	**-0.2**
FRF				*e*Sg	**Sg**	**02 21 05.0**	**-0.5**
	59nm,0.3s						
FRF	**La Foret Royal**	**1.26**	**178**	*e*Pn	**Pn**	**02 20 47.7**	**+0.6**
FRF				*e*Pg	**Pg**	**02 20 48.5**	**-0.2**
FRF				*e*Sg	**Sg**	**02 21 05.0**	**-0.5**
FRF	**La Foret Royal**	**1.26**	**178**	*e*Pg	**Pg**	**02 20 48.5**	**-0.2**
FRF				*e*Sg	**Sg**	**02 21 05.0**	**-0.5**
	30nm,0.3s						
NEGI	**Negi**	**1.27**	**140**	P	**Pb**	**02 20 45.9**	**-0.9**
ORO	**Oropa**	**1.28**	**50**	Pg	**Pg**	**02 20 47.8**	**-1.2**
	5.0nm,0.3s						
ORX	**Oropa**	**1.28**	**50**	P	**Pb**	**02 20 47.1**	**0.0**
ORX	**Oropa**	**1.28**	**50**	P	**Pb**	**02 20 47.1**	**0.0**
IMI	**Imperia**	**1.31**	**134**	Pg	**Pg**	**02 20 48.6**	**-1.0**
	17nm,0.3s						
IMI	**Imperia**	**1.31**	**134**	P	**Pb**	**02 20 46.9**	**-0.7**
IMI	**Imperia**	**1.31**	**134**	Pg	**Pg**	**02 20 48.6**	**-1.0**
	17nm,0.3s						
FIN	**Finale Ligure**	**1.32**	**117**	P	**Pb**	**02 20 47.0**	**-0.7**
FIN	**Finale Ligure**	**1.32**	**117**	P	**Pb**	**02 20 47.0**	**-0.8**
VIVF	**Saint-Julien-l**	**1.35**	**272**	*e*Pg	**Pg**	**02 20 50.4**	**-0.1**
VIVF				*e*Sg	**Sg**	**02 21 08.6**	**0.0**
	18nm,0.4s						
VIVF	**Saint-Julien-l**	**1.35**	**272**	*e*Pn	**Pn**	**02 20 49.4**	**+1.0**
VIVF				*e*Pg	**Pg**	**02 20 50.4**	**-0.1**
VIVF				*e*Sg	**Sg**	**02 21 08.6**	**0.0**
VIVF	**Saint-Julien-l**	**1.35**	**272**	*e*Pg	**Pg**	**02 20 50.4**	**-0.1**
VIVF				*e*Sg	**Sg**	**02 21 08.6**	**0.0**
	9.0nm,0.4s						
DIX	**Grande Dixence**	**1.39**	**25**	⇑*i*Pg	**Pg**	**02 20 47.2**	**-4.0**
DIX				*e*Sg	**Sg**	**02 20 51.0**	**-19**
PCP	**Pian Castagno**	**1.43**	**101**	P	**Pn**	**02 20 49.6**	**+0.1**
PCP	**Pian Castagno**	**1.43**	**101**	P	**Pn**	**02 20 49.6**	**+0.1**
LMR	**La Mourre**	**1.49**	**182**	*e*Pg	**Pg**	**02 20 52.1**	**-1.1**
LMR				*e*Sn	**Sn**	**02 21 09.8**	**-0.1**
LMR				*e*Sg	**Sg**	**02 21 11.9**	**-1.1**
	20nm,0.2s						
LMR	**La Mourre**	**1.49**	**182**	*e*Pn	**Pn**	**02 20 50.7**	**+0.4**
LMR				*e*Pg	**Pg**	**02 20 52.1**	**-1.1**
LMR				*e*Sn	**Sn**	**02 21 09.8**	**-0.1**
LMR				*e*Sg	**Sg**	**02 21 11.9**	**-1.1**
LMR	**La Mourre**	**1.49**	**182**	*e*Pg	**Pg**	**02 20 52.1**	**-1.1**
LMR				*e*Sn	**Sn**	**02 21 09.8**	**-0.1**
LMR				*e*Sg	**Sg**	**02 21 11.9**	**-1.1**
	10.0nm,0.2s						
MCGN	**Macugnaga**	**1.51**	**41**	Pg	**Pg**	**02 20 52.3**	**-1.3**
MMK	**Mattmark**	**1.57**	**38**	*e*Pg	**Pg**	**02 20 50.0**	**-4.8**
CABF	**La Chapelle**	**1.82**	**349**	*e*Pg	**Pg**	**02 20 58.2**	**-1.6**
CABF				*e*Sg	**Sg**	**02 21 21.6**	**-2.5**
	3.9nm,0.3s						
LASF	**Ste Croix**	**2.09**	**250**	*e*Pg	**Pg**	**02 21 04.0**	**-1.1**
LASF				*e*Sg	**Sg**	**02 21 31.6**	**-1.3**
	1.1nm,0.3s						
LASF	**Ste Croix**	**2.09**	**250**	*e*Pn	**Pn**	**02 20 59.8**	**+0.9**
LASF				*e*Pg	**Pg**	**02 21 04.0**	**-1.1**
LASF				*e*Sg	**Sg**	**02 21 31.6**	**-1.3**
LASF	**Ste Croix**	**2.09**	**250**	*e*Pg	**Pg**	**02 21 04.0**	**-1.1**
LASF				*e*Sg	**Sg**	**02 21 31.6**	**-1.3**
	0.6nm,0.3s						
LOR	**Lormes**	**3.09**	**323**	*e*Pg	**Pg**	**02 21 22.0**	**-3.2**
LOR				*e*Sg	**Sg**	**02 22 01.8**	**-4.6**
	0.9nm,0.2s						
SSF	**Saint Saulge**	**3.10**	**317**	*e*Sg	**Sg**	**02 22 02.1**	**-4.5**
	1.5nm,0.3s						
BGF	**Bois d'Agland**	**3.14**	**305**	*e*Pn	**Pn**	**02 21 14.5**	**+0.6**
BGF				*e*Sg	**Sg**	**02 22 03.6**	**-4.3**
	13nm,0.5s						

*NEIC **25** 02:20:30.9±3.1,20.43S×178.69W,h572^{km}±27^{km},mb3.8/1, Error ellipse: s-maj=84.2km s-min=19.9km az=150.0*

*IDC **25** 02:20:33.2±2.9,20.30S×178.85W,h591^{km}±36^{km},mb3.1/6, mb1 3.4/7,mb1mx3.3/14,mbtmp4.1/7,Error ellipse: s-maj=89.2km s-min=15.1km az=157.0*

ISC 25 02:20:32.3±2.5,**20.5S**±0.2×**178.8W**±0.2,**h602**^{km}±30^{km}, **n25**,σ**0^{s}71**/17,**mb3.7**/7,**4C,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**13.85**	**261**	P	**P**	**02 23 29.1**	**-0.2**
	0.4nm,0.3s,baz=83,slow=19,SNR=4.4						
STKA	**Stephens Creek**	**37.11**	**244**	P	**P**	**02 26 54.9**	**+0.3**

	2.3nm,1.0s,mb3.7,baz=95,slow=12,SNR=3.1						
STKA	Stephens Creek	37.11	244	P	P	02 26 54.9	+0.3
WB2	Warramunga Arr	43.86	262	⇑iP	P	02 27 48.8	+0.2
WRAB	Tennant Creek	43.86	262	eP	P	02 27 48.5	-0.1
	1.0nm,0.3s,mb3.8						
WRA	Warramunga Arr	43.87	262	P	P	02 27 48.6	-0.1
	1.3nm,0.3s,mb4.0,baz=96,slow=7.3,SNR=67						
WRA				S	S	02 33 37.7	-0.2
	0.7nm,1.0s,baz=99,slow=13,SNR=3.5						
FITZ	Fitzroy Crossi	52.29	263	P	P	02 28 51.7	+0.2
	1.3nm,0.5s,mb3.6,baz=105,slow=7.9,SNR=5.9						
NVAR	Mina Array Bea	81.55	44	P	P	02 31 49.8	+0.3
	0.5nm,0.9s,mb3.1,baz=223,slow=7.8,SNR=5.2						
VNA3	Neumayer Olymp	88.16	176	⇑i	P	02 32 19.3	-1.4
VNA3	Neumayer Olymp	88.16	176	e	P	02 32 25.3	+4.6
ILAR	Eielson Array	88.50	13	P	P	02 32 22.2	-0.3
	2.0nm,0.9s,mb3.9,baz=218,slow=5.5,SNR=15						
VNA2	Neumayer--Watz	88.59	177	⇑i	P	02 32 21.2	-1.6
VNA2	Neumayer--Watz	88.59	177	e	P	02 32 27.4	+4.6
VNA1	Neumayer--Stat	88.83	177	⇑i	P	02 32 20.0	-3.9
VNA1	Neumayer--Stat	88.83	177	e	P	02 32 25.9	+2.0
PDAR	Pinedale Array	89.49	44	P	P	02 32 27.5	-0.1
	0.6nm,0.6s,mb3.6,baz=214,slow=4.1,SNR=5.9						
BVAR	Borovoye Array	118.63	320	PKP	PKPdf	02 38 14.1	+1.5
	0.8nm,0.3s,baz=124,slow=2.3,SNR=6.5						
AKTK	Aktyubinsk	126.60	318	PKP	PKPdf	02 38 30.4	+2.3
AKTO	Aktyubinsk	126.60	318	PKP	PKPdf	02 38 30.4	+2.3
	0.8nm,0.6s,baz=175,slow=2.9,SNR=4.2						
ARCES	ARCESS Array B	128.81	349	PKP	PKPdf	02 38 33.2	+1.4
	1.0nm,0.5s,SNR=4.4						
ARCES	ARCESS Array B	128.81	349	PKP	PKPdf	02 38 33.2	+1.4
FINES	FINESS Array B	135.59	343	PKP	PKPdf	02 38 46.6	+2.0
	5.1nm,1.2s,baz=135,slow=2.7,SNR=5.8						
AKASG	Malin Array Be	142.68	330	PKP	PKPdf	02 38 56.9	-0.7
	5.3nm,0.4s,baz=44,slow=4.3,SNR=40						
KHC	Kasperske Hory	149.79	344	ePKPbc	PKPdf	02 39 17.0	+7.7
GERES	GERESS Array B	150.02	343	PKPbc	PKPdf	02 39 16.8	+7.1
	1.5nm,0.8s,baz=27,slow=3.0,SNR=8.6						

*IDC **25** 02:27:23.3±2.0, 25.06N×60.14E, mb3.8/7, mb1 3.9/7, mb1mx3.7/21, mbtmp3.8/7, MS3.5/1, Ms1 3.5/1, ms1mx2.7/27, Error ellipse: s-maj=40.9km s-min=31.4km az=28.0*

ISC 25 02:27:29.3±2.1, **25.9N**±0.3×**60.1E**±0.2, **h10^{km}, n14, σ0^{s}97**/14, **mb3.9**/11, **MS3.5**/1, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOLN	Koldanda	21.07	80	eP	P	02 32 16.0	-0.1
	15nm,1.0s,mb4.3						
GKN	Gorkha	21.99	79	eP	P	02 32 26.5	+1.2
DMN	Daman	22.41	80	eP	P	02 32 28.7	-0.8
KKN	Kakani	22.56	79	eP	P	02 32 31.7	+0.6
	3.8nm,0.3s,mb4.3						
PKI	Pulchoki	22.68	80	eP	P	02 32 32.2	0.0
GUN	Gumba	23.09	79	eP	P	02 32 40.1	+3.9
	65nm,1.1s,mb5.0						
AKTO	Aktyubinsk	24.60	357	P	P	02 32 51.9	+1.3
	1.6nm,0.6s,mb3.7,baz=176,slow=12,SNR=5.9						
BRTR	Keskin Array B	26.07	309	P	P	02 33 03.9	-0.7
	0.7nm,0.7s,mb3.3						
MKAR	Makanchi Array	27.34	34	P	P	02 33 15.7	-0.6
	1.1nm,0.9s,mb3.4,baz=211,slow=8.4,SNR=3.9						
BVAR	Borovoye Array	28.22	13	P	P	02 33 24.5	+0.4
	0.3nm,0.5s,mb3.2,baz=207,slow=3.2,SNR=4.0						
ZAL	Zalesovo	33.52	27	P	P	02 34 09.8	-1.2
	1.4nm,0.4s,mb4.3,baz=205,slow=5.5,SNR=5.3						
SONM	Songino Array	42.29	46	P	P	02 35 23.5	-1.0
	0.9nm,0.9s,mb3.4,baz=248,slow=7.8,SNR=2.8						
SONM				LR	LR	02 56 40.7	
	comp=Z,63nm,19.3s,MS3.5,baz=118,slow=41						
FINES	FINESS Array B	42.33	336	P	P	02 35 28.1	+3.4
	4.8nm,1.0s,mb4.1,baz=141,slow=12,SNR=6.5						
WRA	Warramunga Arr	85.24	115	P	P	02 40 00.2	-7.7
	0.7nm,1.0s,mb3.8,baz=300,slow=3.2,SNR=4.6						

*NIED **25** 02:37:00, 38.20N×144.80E, h5^{km}, Mw4.0 Best double couple: $M_0 1.01\times10^{15}$ NP1:ϕ_s217°, δ69°, λ-88°. NP2:ϕ_s33°, δ22°, λ-95°.*

*IDC **25** 02:37:09.2±1.1, 38.07N×145.00E, mb3.5/6, mb1 3.8/8, mb1mx3.7/23, mbtmp3.6/8, ML3.5/2, MS2.8/2, Ms1 2.8/2, ms1mx2.5/26, Error ellipse: s-maj=26.5km s-min=22.8km az=147.0*

*NEIC **25** 02:37:10.9±0.9, 38.11N×145.08E, h10^{km}, MG4.0(JMA), Error ellipse: s-maj=23.5km s-min=12.0km az=153.0*

*JMA **25** 02:37:13.9±0.1, 38.17N×144.82E, h57^{km}, M4.0*

ISC 25 02:37:12.6±1.9, **38.29N**±0.05×**144.89E**±0.06, **h31^{km}**±16^{km}, **n23, σ1^{s}03**/33, **mb3.5**/6, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.64	288	P	Pn	02 37 55.1	+0.9
OFUJ				eS	Sn	02 38 26.4	+0.9
MIYJ	Miyakonagasawa	2.72	299	P	Pn	02 37 56.1	+0.8
MIYJ				eS	Sn	02 38 27.7	+0.2
JIO	Ouri	2.79	274	P	Pn	02 37 56.7	+0.4
JIO				S	Sn	02 38 28.6	-0.7
JMK	Ichinoseki	2.95	284	P	Pn	02 37 59.5	+0.9
JMK				eS	Sn	02 38 33.5	+0.1
JOM	Ohasama	3.05	294	P	Pn	02 38 01.1	+1.2
JMM	Marumori	3.26	264	P	Pn	02 38 02.8	-0.2
JMM				eS	Sn	02 38 39.3	-1.9
JCH	Churui	4.47	345	P	Pn	02 38 20.6	+0.4
JCH				eS	Sn	02 39 08.9	-2.9
JKB	Kayabe	4.65	322	eS	Sn	02 39 15.6	-0.8
NEM2	Nemuro 2	5.11	7	P	Pn	02 38 26.6	-2.5
JRY	Ryogami san	5.30	246	P	Pn	02 38 30.2	-1.6
JRY				eS	Sn	02 39 27.0	-5.6
MJAR	Matsushiro Arr	5.60	254	Pn	Pn	02 38 34.7	-1.4
	1.2nm,0.3s,baz=78,slow=15,SNR=11						
MJAR				Sn	Sn	02 39 41.1	+0.9
	0.8nm,0.3s,baz=85,slow=27,SNR=3.3						
MAJO	Matsushiro	5.60	254	ePn	Pn	02 38 36.4	+0.3
	12nm,0.6s						
MAT	Matsushiro	5.60	254	P	Pn	02 38 36.5	+0.4
MAT				eS	Sn	02 39 39.8	-0.4
MAT	Matsushiro	5.60	254	P	Pn	02 38 37.0	+0.9
	12nm,0.7s						
MAT				S	Sn	02 39 40.0	-0.2
JTKR	Abashiri--Toko	5.72	353	P	Pn	02 38 37.3	-0.5
ASAJ	Asahikawa	6.07	344	Pn	Pn	02 38 42.7	0.0
	1.1nm,0.3s,baz=262,slow=13,SNR=3.1						
ASAJ				Sn	Sn	02 39 52.1	+0.3
	0.7nm,0.3s,baz=121,slow=19,SNR=3.1						
ASAJ				LR	LR	02 41 37.4	
	comp=Z,74nm,18.2s,baz=341,slow=42						
JNU	Nakatsue	12.50	250	LR	LR	02 45 10.1	
	comp=Z,45nm,18.8s,baz=48,slow=38						
SONM	Songino Array	29.43	301	P	P	02 43 15.6	+0.1
	0.1nm,0.3s,mb3.1,baz=153,slow=6.4,SNR=2.7						
MKAR	Makanchi Array	45.80	302	P	P	02 45 34.0	+0.9
	0.3nm,0.7s,mb3.3,baz=80,slow=8.8,SNR=3.1						
ILAR	Eielson Array	46.95	33	P	P	02 45 42.7	+0.8
	0.6nm,0.8s,mb3.6,baz=276,slow=6.8,SNR=5.6						
BVAR	Borovoye Array	51.77	312	P	P	02 46 20.3	+1.1
	1.1nm,0.8s,mb3.9,baz=72,slow=9.4,SNR=4.5						
WRA	Warramunga Arr	58.77	192	P	P	02 47 07.4	-2.9
	0.9nm,0.8s,mb3.9,baz=12,slow=7.3,SNR=8.1						
PDAR	Pinedale Array	74.80	47	P	P	02 48 52.2	+0.7
	0.4nm,0.8s,mb3.4,baz=288,slow=4.7,SNR=4.2						

*IDC **25** 02:46:53.8±5.8, 5.19S×145.54E, h66^{km}±53^{km}, mb3.9/3, mb1 4.0/5, mb1mx3.7/13, mbtmp4.1/5, ML3.7/2, MS2.6/1, Ms1 2.6/1, ms1mx2.5/17, Error ellipse: s-maj=39.0km s-min=30.8km az=149.0*

*NEIC **25** 02:46:54.7±3.8, 5.15S×145.48E, h79^{km}±36^{km}, mb4.1/2, Error ellipse: s-maj=41.4km s-min=17.2km az=142.0*

ISC 25 02:46:55.2±4.2, **5.3S**±0.2×**145.5E**±0.2, **h95^{km}**±40^{km}, **n10, σ0^{s}61**/10, **mb3.9**/3, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.36	159	P	P	02 48 01.2	+0.7
	11nm,0.3s,baz=312,slow=12,SNR=26						
PMG				S	S	02 48 50.2	-0.4
	11nm,0.3s,baz=142,slow=21,SNR=15						
KAKA	Kakadu	14.87	240	eP	P	02 50 41.4	+20
	5.6nm,0.5s						
WRAB	Tennant Creek	18.15	216	eP	P	02 51 02.0	-0.5
	3.3nm,0.7s						
WB2	Warramunga Arr	18.16	216	eP	P	02 51 01.9	-0.7
WRA	Warramunga Arr	18.17	216	P	P	02 51 02.3	-0.3
	0.4nm,0.3s,baz=38,slow=12,SNR=28						
WRA				PcP	PcP	02 55 33.1	+1.1
	0.0nm,0.3s,baz=8.8,slow=1.7,SNR=5.0						
GUMO	Guam	18.80	358	LR	LR	02 56 28.9	
	comp=Z,18nm,20.7s,baz=80,slow=31						
FITZ	Fitzroy Crossi	23.23	235	eP	P	02 51 55.8	+1.1
	12nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	23.23	235	P	P	02 51 55.8	+1.0
	15nm,0.5s,mb4.6,baz=50,slow=9.7,SNR=37						
STKA	Stephens Creek	26.68	188	P	P	02 52 27.9	+0.6
	2.7nm,0.9s,mb3.8,baz=6.2,slow=10,SNR=5.4						
ILAR	Eielson Array	85.43	23	P	P	02 59 22.6	-0.5
	0.4nm,0.7s,mb3.5,baz=264,slow=5.4,SNR=7.1						

*CSEM **25** 03:00:47.0±0.1, 21.08N×37.95E, h12^{km}, ML3.4, Error ellipse: s-maj=5.0km s-min=1.6km az=49.0*

*IDC **25** 03:00:49.9±12.0, 21.22N×37.78E, mb3.8/5, mb1 4.0/5, mb1mx3.7/19, mbtmp3.8/5, Error ellipse: s-maj=282.1km s-min=37.3km az=14.0*

*SNSN **25** 03:00:51.9, 21.08N×37.97E, h35^{km}, Ml3.8*

*HLW **25** 03:00:51.9, 21.43N×38.00E, h13^{km}, Mb3.4*

ISC 25 03:00:47.9±0.7, **21.14N**±0.09×**37.93E**±0.07, **h10^{km}, n21, σ1^{s}21**/23, **mb3.8**/5, **2D, Sudan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSHL	Bi'r Shalatayn	3.06	310	⇓iP	Pn	03 01 37.4	+0.2
HSHL				S	Sn	03 02 11.1	-3.2
BLJS	Baljurashi	3.66	109	P	Pn	03 01 46.1	+0.3
BLJS				S	Sn	03 02 27.9	-1.6
UMJS	Umm Lajj	4.12	352	P	Pn	03 01 52.2	-0.1
EMRS	Mersa Alam	4.79	324	P	Pn	03 02 01.0	-1.0
HADB		5.18	325	⇓P	Pn	03 02 06.4	-1.0
HQSR		5.63	325	P	Pn	03 02 12.8	-1.0
HEDF	Idfu	5.88	313	P	Pn	03 02 17.1	-0.2
FRSS	Farasan al Kab	5.90	137	P	Pn	03 02 15.8	-1.7
AADN	Adndan	6.04	281	P	Pn	03 02 21.9	+2.5
ASHG	Umm Shaghir	6.19	291	P	Pn	03 02 22.6	+1.0
HSFG		6.53	327	P	Pn	03 02 25.2	-1.3
HHRG	Al Ghardaqah	7.25	328	P	Pn	03 02 35.1	-1.4
AYUS	‘Aynunah	7.43	341	P	Pn	03 02 38.9	-0.1
BDAS	Al Bad‘	7.70	341	P	Pn	03 02 43.0	+0.1
HAQS	Haql	8.34	342	P	P	03 02 52.1	+0.3
JMOS	Jabal al Moall	8.39	343	P	P	03 02 53.0	+0.5
GERES	GERESS Array B	33.75	331	P	P	03 07 31.8	+0.1
	0.8nm,0.8s,mb3.7,baz=129,slow=8.5,SNR=6.4						
MKAR	Makanchi Array	44.02	44	P	P	03 09 00.0	+2.7
	1.2nm,0.8s,mb3.6,baz=243,slow=6.4,SNR=9.5						
NOA	NORSAR Array B	44.03	342	P	P	03 08 58.4	+1.2
	1.9nm,0.8s,mb3.9,baz=138,slow=8.5,SNR=3.4						
ZAL	Zalesovo	48.20	35	P	P	03 09 32.3	+1.9
	0.6nm,0.5s,mb3.9,baz=179,slow=6.0,SNR=3.1						
SONM	Songino Array	60.28	46	P	P	03 11 00.2	+1.3
	1.3nm,0.8s,mb4.0,baz=270,slow=7.2,SNR=8.2						

*IDC **25** 03:05:59.8±1.0, 1.09N×97.07E, mb4.2/12, mb1 4.4/12, mb1mx4.2/20, mbtmp4.2/12, MS3.9/3, Ms1 3.9/3, ms1mx3.4/24, Error ellipse: s-maj=44.9km s-min=16.0km az=51.0*

*BJI **25** 03:06:01.5, 0.86N×97.40E, h33^{km}, mB5.1, mb4.8, Ms4.5, Msz4.1*

*MOS **25** 03:06:02.8±1.0, 1.13N×97.14E, h33^{km}, mb4.7/12, Error ellipse: s-maj=21.9km s-min=9.0km az=104.7*

*NEIC **25** 03:06:04.6±0.5, 1.09N×97.16E, h30^{km}, mb4.5/11, Error ellipse: s-maj=14.5km s-min=7.4km az=47.0*

ISC 25 03:06:01.9±0.6, **1.10N**±0.08×**97.14E**±0.08, **h26^{km}, h26^{km}**±1.8^{km}**:pP-P, n63, σ1^{s}03**/61, **mb4.5**/38, **MS4.2**/9, **1C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.44	40	ePn	Pn	03 07 23.5	0.0
KKM	Kota Kinabalu	19.65	75	eP	P	03 10 32.1	+0.1
KMI	Kunming	24.48	12	P	P	03 11 22.8	+2.4
KMI				AP		03 11 29.3	
KMI				XP		03 11 31.3	
KMI				PP	PP	03 12 00.0	+3.6
KMI				PPP	PPP	03 12 13.4	+6.6
KMI				S	S	03 15 46.1	+10
KMI				XS		03 15 56.0	
KMI				SSS	SSS	03 17 04.4	+16
KMI				AMB	AMB		
	comp=Z,40nm,1.2s,mb4.7						
KMI				AMB	AMB		
	comp=Z,160nm,4.2s						
KMI				LR	LR		
	comp=N,940nm,15.9s,MS4.5						
KMI				LR	LR		
	comp=E,460nm,13.6s,MS4.5						
KMI				LR	LR		
	comp=Z,920nm,14.0s,MS4.4						
SHL	Shillong	24.84	349	⇑iP	P	03 11 24.0	+0.1
GYA	Guiyang	26.82	19	P	P	03 11 42.3	0.0
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
GYA				AMB	AMB		
	comp=Z,130nm,4.8s						
GYA				LR	LR		
	comp=N,610nm,15.8s,MS4.3						
GYA				LR	LR		
	comp=E,370nm,16.0s,MS4.3						
GYA				LR	LR		
	comp=Z,730nm,15.7s,MS4.3						
PKI	Pulchoki	28.62	338	eP	P	03 12 00.5	+1.9
GUN	Gumba	28.76	339	eP	P	03 12 01.1	+1.3
	comp=Z,71nm,1.2s,mb5.3						
DMN	Daman	28.77	337	eP	P	03 12 01.4	+1.5
	comp=Z,18nm,0.8s,mb4.8						
LSA	Lhasa	29.00	349	P	P	03 12 04.0	+2.0
LSA	Lhasa	29.00	349	eP	P	03 12 03.5	+1.5
	comp=Z,5.6nm,0.6s,mb4.5						
LSA	Lhasa	29.00	349	eP	P	03 12 03.5	+1.5
LSA				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
GKN	Gorkha	29.30	337	eP	P	03 12 05.5	+0.8
KOLN	Koldanda	29.52	335	eP	P	03 12 07.8	+1.1
	comp=Z,24nm,0.8s,mb5.0						
ENH	Enshi	31.29	21	eP	P	03 12 21.1	-1.2
	comp=Z,11nm,1.0s,mb4.7						
ENH				epP	pP	03 12 27.4	-2.6
FITZ	Fitzroy Crossi	33.92	126	⇓iP	P	03 12 45.0	-0.3
	comp=Z,4.2nm,0.8s,mb4.4						
FITZ	Fitzroy Crossi	33.92	126	P	P	03 12 44.9	-0.4
	comp=Z,4.9nm,0.7s,mb4.5,baz=111,slow=21,SNR=6.8						
XAN	Xi’an	34.57	17	P	P	03 12 49.5	-1.3
XAN				AP	pP	03 12 56.0	-2.5
XAN				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
LZH	Lanzhou	35.36	9	eP	P	03 12 56.5	-1.0
LZH				AP	pP	03 13 04.5	-0.7
LZH				XP	sP	03 13 08.3	-0.2
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
KAKA	Kakadu	37.62	113	eP	P	03 13 35.4	+19
	comp=Z,10.0nm,1.1s,mb4.5						
GTA	Gaotai	38.20	3	eP	P	03 13 21.8	+0.4
GTA				AP	pP	03 13 28.9	-0.3
GTA				XP	sP	03 13 32.6	+0.1
GTA				PP	PP	03 14 53.1	+0.8
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
GTA				AMB	AMB		
	comp=Z,60nm,5.0s						
GTA				LR	LR		
	comp=N,240nm,13.0s,MS4.3						
GTA				LR	LR		
	comp=E,170nm,14.1s,MS4.3						
GTA				LR	LR		
	comp=Z,250nm,16.4s,MS4.1						
HHC	Hu-ho-hao-te	41.67	17	eP	P	03 13 50.5	+0.4
HHC				AP	pP	03 13 59.5	+1.6
HHC				XP	sP	03 14 04.3	+3.2
HHC				PCP	PcP	03 15 46.3	-0.9
HHC				SCP		03 19 34.0	
HHC				PCS		03 19 41.3	
HHC				S	S	03 20 06.3	+1.4
HHC				XS		03 20 21.9	
HHC				SS	SS	03 23 07.3	+1.8
HHC				SCS	ScS	03 23 49.3	-0.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.3						
HHC				AMB	AMB		
	comp=Z,70nm,8.4s						
HHC				LR	LR		
	comp=N,310nm,15.6s,MS4.5						
HHC				LR	LR		
	comp=E,350nm,16.8s,MS4.5						
HHC				LR	LR		
	comp=Z,310nm,15.6s,MS4.3						
WRA	Warramunga Arr	42.03	122	P	P	03 13 53.6	+0.3
	comp=Z,3.4nm,0.7s,mb4.1,baz=300,slow=9.1,SNR=37						
WRAB	Tennant Creek	42.04	122	eP	P	03 13 54.0	+0.7
	comp=Z,9.0nm,0.8s,mb4.5						
WRAB	Tennant Creek	42.04	122	eP	P	03 13 54.1	+0.7
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
WB2	Warramunga Arr	42.04	122	⇓iP	P	03 13 53.9	+0.5
WMQ	Urumqi	43.36	350	eP	P	03 14 05.3	+1.5
WMQ				AP	pP	03 14 15.0	+3.4
WMQ				XP	sP	03 14 19.0	+4.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,150nm,4.6s						
WMQ				LR	LR		
	comp=N,190nm,15.2s,MS4.3						
WMQ				LR	LR		
	comp=E,220nm,18.3s,MS4.3						
WMQ				LR	LR		
	comp=Z,160nm,26.4s						
AAK	Ala-Archa	46.06	337	eP	P	03 14 26.3	+0.7
	comp=Z,1.7nm,0.8s,mb4.0						
AAK	Ala-Archa	46.06	337	eP	P	03 14 26.3	+0.8
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.1						
SONM	Songino Array	47.23	8	P	P	03 14 35.3	+0.6
	comp=Z,4.8nm,0.9s,mb4.4,baz=189,slow=9.7,SNR=25						
SONM				PcP	PcP	03 16 06.0	-0.2
	comp=Z,1.2nm,0.7s,baz=180,slow=2.9,SNR=4.2						
MKAR	Makanchi Array	47.32	346	P	P	03 14 36.0	+0.5
	comp=Z,3.1nm,0.6s,mb4.4,baz=160,slow=9.1,SNR=48						
MKAR				LR	LR	03 35 57.1	
	comp=Z,67nm,20.6s,MS3.6,baz=144,slow=38						
ULN	Ulaanbaatar	47.37	9	eP	P	03 14 36.0	+0.3
	comp=Z,2.9nm,0.8s,mb4.3						
ULN	Ulaanbaatar	47.37	9	eP	P	03 14 36.0	+0.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
KKAR	Karatay Array	48.12	334	P	P	03 14 41.1	-0.6
ZAK	Zakamensk	49.37	5	eP	P	03 14 48.1	-3.2
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
CN2	Changchun	49.42	27	eP	P	03 14 51.3	-0.4
CN2				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.3						
HIA	Hailar	51.75	19	eP	P	03 15 09.0	-0.4
	comp=Z,10nm,0.8s,mb4.8						
HIA	Hailar	51.75	19	eP	P	03 15 09.0	-0.4
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MJAR	Matsushiro Arr	51.80	42	P	P	03 15 08.8	-1.1
	comp=Z,1.7nm,0.8s,mb4.0,baz=212,slow=7.2,SNR=4.9						
KURK	Kurchatov	51.87	345	eP	P	03 15 09.9	-0.4
	comp=Z,9.5nm,1.1s,mb4.6						
KURK	Kurchatov	51.87	345	eP	P	03 15 09.9	-0.4
KURK				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
STKA	Stephens Creek	53.33	132	eP	P	03 15 22.7	+1.2
	comp=Z,4.4nm,0.9s,mb4.4						
STKA	Stephens Creek	53.33	132	P	P	03 15 22.5	+1.0
	comp=Z,4.3nm,0.8s,mb4.4,baz=296,slow=5.7,SNR=5.9						
ZAL	Zalesovo	53.64	351	P	P	03 15 23.8	+0.5
	comp=Z,4.5nm,0.5s,mb4.7,baz=287,slow=6.3,SNR=30						
VOSK	Vostochnaya	55.88	341	P	P	03 15 38.6	-1.1
VOSK				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
BVA0	Borovoye Array	56.32	341	i P	P	03 15 42.0	-0.9
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.9						
BVAR	Borovoye Array	56.32	341	P	P	03 15 42.1	-0.8
	comp=Z,3.1nm,0.8s,mb4.4,baz=143,slow=7.4,SNR=18						
KLR	Kul’dur	56.37	27	eP	P	03 15 43.5	+0.2
BRVK	Borovoye	56.38	341	eP	P	03 15 42.1	-1.3
	comp=Z,3.2nm,0.6s,mb4.5						
BRVK	Borovoye	56.38	341	eP	P	03 15 42.1	-1.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
AB31	Akbulak array	57.57	332	i P	P	03 15 51.1	-0.8
AB31				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BOD	Bodaibo	58.12	11	eP	P	03 15 54.8	-0.7
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
AKTK	Aktyubinsk	59.29	332	P	P	03 16 02.5	-1.3
AKTO	Aktyubinsk	59.29	332	P	P	03 16 02.5	-1.3
	comp=Z,2.4nm,0.9s,mb4.2,baz=139,slow=5.9,SNR=7.9						
AKTO	Aktyubinsk	59.29	332	P	P	03 16 02.7	-1.1
AKTO				pmax	pmax		
	comp=Z,1.0nm,1.2s,mb3.7						
ARU	Arti	63.25	337	eP	P	03 16 29.0	-1.4
TIXI	Tiksi	73.29	10	eP	P	03 17 30.0	-2.6
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.4						
TIXI				MLR	MLR		
	comp=Z,205nm,16.0s,MS4.5						
BOSA	Boshof	74.68	240	LR	LR	03 49 07.7	
	comp=Z,88nm,18.3s,MS4.1,baz=342,slow=35						
AKASG	Malin Array Be	75.30	322	P	P	03 17 43.8	-0.8
	comp=Z,0.4nm,0.3s,mb3.8,baz=93,slow=3.5,SNR=5.9						
FINES	FINESS Array B	80.06	333	P	P	03 18 11.0	+0.3
	comp=Z,1.5nm,0.9s,mb3.9,baz=153,slow=4.3,SNR=4.2						
GERES	GERESS Array B	84.85	319	P	P	03 18 36.6	+0.9
	comp=Z,0.7nm,0.8s,mb3.9,baz=135,slow=3.8,SNR=3.2						
NOA	NORSAR Array B	87.06	331	LR	LR	04 03 36.1	
	comp=Z,105nm,18.4s,MS4.3,baz=350,slow=40						
TXAR	Lajitas Array	143.78	32	PKP	PKPdf	03 25 35.7	-4.5
	comp=Z,0.8nm,0.9s,baz=243,slow=2.8,SNR=6.9						
TXAR	Lajitas Array	143.78	32	PKP	PKPdf	03 25 35.7	-4.5

*TIF **25** 03:44:55.7, 43.03N×47.10E, h2^{km}±1^{km}*

*CSEM **25** 03:44:55.7±0.1, 43.06N×47.15E, h5^{km}, mb4.0/4, Error ellipse: s-maj=1.8km s-min=1.5km az=72.0*

*MOS **25** 03:44:56.6±1.4, 42.98N×47.19E, h10^{km}, mb4.4/4, Error ellipse: s-maj=5.3km s-min=4.5km az=114.9*

MOS Felt (IV) at Bujnaksk; (III) at Makhachkala.

*NEIC **25** 03:44:57.2±0.8, 42.97N×47.14E, h3^{km}±6^{km}, mb3.9/7, Error ellipse: s-maj=6.4km s-min=4.6km az=190.0*

NEIC Felt [IV] at Buynaksk and [III] at Makhachkala.

*IDC **25** 03:44:57.5±0.7, 42.97N×47.08E, mb4.0/11, mb1 4.1/17, mb1mx4.0/26, mbtmp4.0/17, ML3.8/6, MS3.3/3, Ms1 3.3/3, ms1mx2.8/38, Error ellipse: s-maj=15.4km s-min=10.3km az=136.0*

*NNC **25** 03:45:13.3±2.1, 43.43N×48.22E, h64^{km}±19^{km}, Error ellipse: s-maj=32.5km s-min=11.9km az=134.0*

ISC 25 03:44:57.3±0.2, **43.08N**±0.02×**47.39E**±0.03, **h10^{km}, n116, σ1^{s}54**/160, **mb4.0**/18, **MS3.7**/1, **20C-17D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAK	Makhachkala	0.14	145	⇑iPG	Pg	03 45 04.5	+3.8
MAK				i		03 45 09.9	
MAK				pmax	pmax		
	comp=Z,1µm,0.2s						
MAK				smax			
	comp=N,4µm,0.2s						
MAK				smax			
	comp=E,5µm,0.2s						
BUJR	Buynaksk	0.33	220	ePg	Pg	03 45 01.0	-3.1
BUJR				eSg	Sg	03 45 05.0	-3.7
DBC	Dubki	0.42	262	ePG	Pg	03 45 00.0	-5.9
KRNR	Karanay	0.44	235	PG	Pg	03 45 01.0	-5.2
MNSR	Manas	0.45	147	⇑iPG	Pg	03 45 09.5	+3.1
DLMR	Dylym	0.56	269	⇓iPG	Pg	03 45 03.8	-4.8
DLMR				i S	Sg	03 45 11.4	-4.8
DLMR				pmax	pmax		
	comp=Z,3µm,0.3s						
DLMR	Dylym	0.56	269	i Pg	Pg	03 45 03.8	-4.8
	comp=Z,3µm,0.3s						
DLMR				i Sg	Sg	03 45 11.4	-4.8
UNCR	Uncukul	0.57	231	⇓iPg	Pg	03 45 03.0	-5.9

UNCR				*i* S	Sg	03 45 09.0	-7.6
UNCR	Uncukul	0.57	231	*i* Pg	Pg	03 45 03.0	-5.9
UNCR				*i* Sg	Sg	03 45 09.0	-7.6
SGKR	Sergokala	0.65	162	*e*Pg	Pg	03 45 08.0	-2.4
SGKR				*i* S	Sb	03 45 22.0	+2.9
GNBR	Gunib	0.76	205	Pg	Pg	03 45 09.0	-3.6
GNBR				S	Sb	03 45 14.7	-7.6
URKR	Urkarakh	0.93	169	*i* PG	Pg	03 45 14.0	-2.0
URKR				*e*S	Sb	03 45 32.0	+4.7
URKR				pmax	pmax		
	comp=Z,916nm,0.3s						
URKR	Urkarakh	0.93	169	*i* Pg	Pg	03 45 14.0	-2.0
	comp=Z,916nm,0.3s						
BTLR	Botlikh	0.96	245	⇓*i*PG	Pg	03 45 10.5	-6.0
BTLR				*e*S	Sb	03 45 22.6	-5.4
DRN	Derbent	1.26	146	⇑*i*PG	Pg	03 45 20.7	-1.8
DRN				*e*S	Sg	03 45 39.5	+0.2
DRN				pmax	pmax		
	comp=Z,838nm,0.3s						
DRN	Derbent	1.26	146	*i* Pg	Pg	03 45 20.7	-1.8
	comp=Z,838nm,0.3s						
DRN				*e*Sg	Sg	03 45 39.5	+0.2
KSMR	Kasumkent	1.57	159	⇓*i*PG	Pg	03 45 26.0	-2.8
KSMR				*e*S	Sg	03 45 49.0	-0.8
KSMR				pmax	pmax		
	comp=Z,1µm,0.2s						
KSMR	Kasumkent	1.57	159	*i* Pg	Pg	03 45 26.0	-2.8
	comp=Z,1µm,0.2s						
KSMR				*e*Sg	Sg	03 45 49.0	-0.8
AKT	Akhty	1.62	171	⇑*i*PG	Pg	03 45 25.0	-4.7
AKT				S	Sn	03 45 48.0	+0.8
VLKR	Vladikavkaz	1.99	270	*e*PN	Pn	03 45 31.5	0.0
VLKR				*e*S	Sn	03 45 58.5	+1.8
TRKR	Terskaya	2.04	289	*i* PN	Pn	03 45 33.5	+1.3
TRKR				*i* S	Sn	03 46 02.1	+4.1
DGRG	David-gareji	2.21	223	P	Pn	03 45 35.4	+0.8
DGRG				S	Sn	03 46 04.1	+1.8
ARNR	Ardon	2.28	274	⇑*i*PN	Pn	03 45 35.7	0.0
ARNR				*i* S	Sn	03 46 06.3	+2.2
LACR	Lac	2.29	265	*e*PN	Pn	03 45 35.1	-0.6
LACR				*e*S	Sn	03 46 05.2	+1.0
PRTR	Priterechnaya	2.36	288	*i* PN	Pn	03 45 37.7	+0.9
PRTR				*i* S	Sn	03 46 09.9	+3.7
MTA	Mtatsminda	2.37	235	P	Pn	03 45 37.4	+0.5
MTA				S	Sn	03 46 07.5	+1.2
TI2	Plekhanov	2.38	236	⇑*i*PN	Pn	03 45 37.4	+0.4
TI2				*i* S	Sn	03 46 07.4	+1.0
TI2				pmax	pmax		
	comp=Z,140nm,0.6s						
TI2				pmax	pmax		
	comp=Z,1µm,0.8s						
TI2				smax			
	comp=E,2µm,1.0s						
TI2				smax			
	comp=E,700nm,0.8s						
TBLG	Delisi	2.38	236	⇑*i*Pn	Pn	03 45 37.4	+0.3
TBLG				*i* S	Sn	03 46 07.4	+0.7
TBLG	Delisi	2.38	236	P	Pn	03 45 38.1	+1.0
TBLG				S	Sn	03 46 08.6	+2.0
LSNR	Lesken	2.62	275	⇑*i*PN	Pn	03 45 40.4	-0.1
LSNR				*e*S	Sn	03 46 14.8	+2.0
GOR	Gori	2.66	247	P	Pn	03 45 43.9	+2.8
GOR				S	Sn	03 46 17.5	+3.7
DIGR	Digorskoe uzhe	2.80	268	*e*PN	Pn	03 45 42.4	-0.7
DIGR				*i* S	Sn	03 46 18.2	+0.9
ONI	Oni	2.94	262	P	Pn	03 45 45.5	+0.4
ONI				S	Sn	03 46 23.8	+2.9
KUBR	Kubataba	2.99	285	⇑*i*Pn	Pn	03 45 45.0	-0.8
AKH	Akhalkalaki	3.34	241	P	Pn	03 45 53.9	+3.1
AKH				S	Sn	03 46 35.2	+4.3
SHAR	Shatzhatmas	3.51	283	⇑*i*Pn	Pn	03 45 51.3	-1.8
SHAR	Shatzhatmas	3.51	283	*c i*PN	Pn	03 45 51.3	-1.8
KIV	Kislovodsk	3.53	286	⇑*i*Pn	Pn	03 45 51.7	-1.8
KIV				*i*		03 46 04.6	
KIV				*i*		03 46 32.5	
KIV	Kislovodsk	3.53	286	*c i*PN	Pn	03 45 51.7	-1.8
KIV				*i*		03 46 04.6	
KIV				*i*		03 46 32.5	
KIV				pmax	pmax		
	comp=Z,58nm,0.6s						
KIV				pmax	pmax		
	comp=Z,240nm,1.0s						
KIV				smax			
	comp=E,321nm,0.6s						
KIV	Kislovodsk	3.53	286	*e*Pn	Pn	03 45 51.8	-1.7
GNI	Garni	3.54	215	Pn	Pn	03 45 54.4	+0.9
	comp=E,9.9nm,0.3s,baz=354,slow=2.2,SNR=27						
GNI				Sn	Sn	03 46 37.7	+1.8
	comp=E,12nm,0.3s,baz=247,slow=22,SNR=4.0						
GNI				LR	LR	03 47 03.6	
	comp=E,157nm,18.2s,baz=331,slow=38						
GNI	Garni	3.54	215	*i* Pn	Pn	03 45 53.3	-0.2
GOF	Gofitskoye	3.71	304	⇓*i*PN	Pn	03 45 55.1	-0.9
GOF				*i*		03 46 08.3	
GOF				*i* S	Sn	03 46 40.3	0.0
GOF				pmax	pmax		
	comp=Z,30nm,0.6s						
GOF				smax			
	comp=N,240nm,1.0s						
GOF				smax			
	comp=E,340nm,1.0s						
SOC	Sochi	5.62	278	*e*P	Pn	03 46 19.8	-3.3
SOC				*e*		03 47 24.0	
SOC				pmax	pmax		
	comp=Z,31nm,1.0s						
SOC				MLR	MLR		
	comp=Z,113nm,7.0s						
SOC	Sochi	5.62	278	*e*P	Pn	03 46 19.8	-3.3
	comp=Z,31nm,1.0s						
SOC				*e*S	Sn	03 47 24.0	-4.5
	comp=Z,113nm,7.0s						
AKTK	Aktyubinsk	10.35	41	Pn	P	03 47 29.8	+0.9
AKTK				Sn	S	03 49 18.7	-7.3
AKTK				LR	LR	03 52 46.5	
AKTK	Aktyubinsk	10.35	41	P	P	03 47 29.8	+0.9
AKTO	Aktyubinsk	10.35	41	⇓Pn	P	03 47 30.2	+1.4
	comp=Z,1.2nm,0.6s						
AKTO				⇓Sn	S	03 49 18.6	-7.4
	comp=Z,5.5nm,0.8s						
AKTO	Aktyubinsk	10.35	41	Pn	P	03 47 29.8	+0.9
	comp=Z,1.6nm,0.3s,baz=218,slow=11,SNR=23						
AKTO				Sn	S	03 49 18.7	-7.3
	comp=Z,2.0nm,0.3s,baz=39,slow=23,SNR=11						
AKTO				LR	LR	03 52 46.5	
	comp=Z,163nm,19.3s,slow=44						
AB31	Akbulak array	10.67	50	Pn	P	03 47 33.7	+0.5
	comp=Z,2.4nm,0.4s,baz=240,slow=13,SNR=84						
AB31				⇓Sn	S	03 49 25.5	-8.2
	comp=Z,28nm,0.7s,baz=248,slow=24						
AB31	Akbulak array	10.67	50	P	P	03 47 33.7	+0.5
	comp=Z,1.0nm,0.3s						
AB31				*e*		03 49 28.8	
AB31	Akbulak array	10.67	50	P	P	03 47 33.7	+0.5
AB31						03 49 28.8	
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31				smax			
	comp=Z,9.0nm,0.5s						
OBN	Obninsk	13.95	333	⇓*e*P	P	03 48 16.3	-0.9
	comp=Z,13nm,0.6s						
OBN				*e*S	S	03 50 48.0	-5.1
OBN	Obninsk	13.95	333	⇓*e*P	P	03 48 16.3	-0.9
OBN				*e*S	S	03 50 48.0	-5.1
OBN				pmax	pmax		
	comp=Z,13nm,0.6s						
OBN	Obninsk	13.95	333	*e*P	P	03 48 16.3	-0.9
	comp=Z,13nm,0.6s						
AKASG	Malin Array Be	14.55	308	Pn	P	03 48 19.6	-5.4
	comp=Z,1.4nm,0.3s,baz=105,slow=12,SNR=9.7						
ARU	Arti	15.16	24	⇓*i*P	P	03 48 33.6	+0.6
	comp=Z,9.0nm,0.7s						
ARU				*e*S	S	03 51 25.2	+3.5
ARU	Arti	15.16	24	⇓*i*P	P	03 48 33.6	+0.6
ARU				*e*S	S	03 51 25.2	+3.5
ARU				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ARU	Arti	15.16	24	*i* P	P	03 48 33.6	+0.6
	comp=Z,9.0nm,0.7s						
ARU				*e*S	S	03 51 25.2	+3.5
MLR	Muntele Rosu	15.54	286	Pn	P	03 48 35.1	-3.0
	comp=Z,0.1nm,0.3s,baz=171,slow=22,SNR=2.4						
MLR	Muntele Rosu	15.54	286	⇑P	P	03 48 33.3	-4.8
MLR	Muntele Rosu	15.54	286	⇑P	P	03 48 33.3	-4.8
SVE	Sverdlovsk	16.14	27	*e*P	P	03 48 49.0	+3.3
SVE				*e*		03 51 38.2	
VOIR		16.17	286	⇑P	P	03 48 50.6	+4.4
VOIR		16.17	286	⇑P	P	03 48 50.6	+4.4
BURAR	Bucovina Array	16.22	294	⇓P	P	03 48 47.3	+0.6
BURAR	Bucovina Array	16.22	294	⇓P	P	03 48 47.3	+0.6
KK31	Karatay Array	16.88	82	⇓P	P	03 48 56.5	+1.3
	comp=Z,2.7nm,0.6s,baz=285,slow=15,SNR=8.3						
KKAR	Karatay Array	16.88	82	P	P	03 48 55.8	+0.6
KKAR				*e*		03 51 55.2	
SOKR	Solikamsk	17.50	16	*e*P	P	03 49 02.9	+0.2
	comp=Z,10.0nm,0.8s						
SOKR				S	S	03 52 08.5	-7.2
SOKR	Solikamsk	17.50	16	*e*P	P	03 49 02.9	+0.2
SOKR				S	S	03 52 08.5	-7.2
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	Borovoye	18.19	49	*e*P	P	03 49 10.1	-1.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	Borovoye	18.19	49	*e*P	P	03 49 10.1	-1.4
	comp=Z,4.0nm,0.6s						
KWP	Kalwaria	18.21	300	*e*P	P	03 49 10.0	-1.7
KWP				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KWP	Kalwaria	18.21	300	*e*P	P	03 49 10.0	-1.7
	comp=Z,5.5nm,0.6s						
BVA0	Borovoye Array	18.23	49	⇓P	P	03 49 12.1	+0.1
	comp=Z,1.0nm,0.7s						
BVA0				⇓S	S	03 52 28.1	-4.5
	comp=Z,2.4nm,0.8s						
BVAR	Borovoye Array	18.23	49	Pn	P	03 49 12.4	+0.4
	comp=Z,0.8nm,0.3s,baz=236,slow=14,SNR=17						
KLMR	Klimovskoe	18.43	348	*e*P	P	03 49 10.6	-3.7
KLMR				*e*		03 52 28.1	
KLMR				pmax	pmax		
	comp=Z,30nm,1.6s						
VOSK	Vostochnaya	18.45	50	⇑P	P	03 49 15.4	+0.8
	comp=Z,4.5nm,0.7s						
VOSK				⇑S	S	03 52 33.7	-3.7
	comp=Z,12nm,1.2s						
IDI	Anoyia	19.06	253	P	P	03 49 20.4	-1.8
	comp=Z,0.8nm,0.3s,baz=211,slow=23,SNR=4.9						
PSZ	Piszkesteto	19.82	294	*e*P	P	03 49 28.1	-2.7
	comp=Z,6.8nm,1.1s						
PSZ	Piszkesteto	19.82	294	*e*P	P	03 49 28.1	-2.7
PSZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PSZ	Piszkesteto	19.82	294	*e*P	P	03 49 28.1	-2.7
	comp=Z,6.8nm,1.1s						
OJC	Ojcow	20.17	300	*e*P	P	03 49 32.1	-2.4
MORC	Moravsky Berou	21.54	298	*e*P	P	03 49 46.9	-1.8
	comp=Z,3.2nm,0.8s,mb3.8						
MORC	Moravsky Berou	21.54	298	*e*P	P	03 49 46.9	-1.7
MORC				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
MORC	Moravsky Berou	21.54	298	*e*P	P	03 49 46.9	-1.7
	comp=Z,3.2nm,0.8s,mb3.8						
JOF	Joensuu	21.98	340	*e*p	P	03 49 51.9	-1.0
FINES	FINESS Array B	22.36	333	P	P	03 49 56.6	-0.1
	comp=Z,4.8nm,0.5s,mb4.2,baz=139,slow=12,SNR=33						
KURK	Kurchatov	22.54	59	*e*P	P	03 50 01.0	+2.5
KURK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.3						
KURK	Kurchatov	22.54	59	*e*P	P	03 50 01.0	+2.5
	comp=Z,14nm,1.1s,mb4.3						
KAF	Kangasniemi	22.77	334	*e*p	P	03 50 00.6	0.0
GERES	GERESS Array B	23.99	296	P	P	03 50 12.9	+0.3
	comp=Z,1.4nm,0.6s,mb3.5,baz=96,slow=9.0,SNR=10						
KHC	Kasperske Hory	24.07	296	*i* P	P	03 50 13.5	0.0
MK31	Makanchi Array	24.86	69	P	P	03 50 23.6	+2.6
	comp=Z,1.7nm,0.6s,mb3.8,baz=270,slow=8.1,SNR=25						
MKAR	Makanchi Array	24.86	69	P	P	03 50 23.6	+2.5
	comp=Z,1.6nm,0.6s,mb3.8,baz=273,slow=8.2,SNR=26						
VAE	Valguarnera	25.67	269	P	P	03 50 30.8	+1.9
	comp=Z,12nm,0.8s,mb4.5,baz=15,slow=4.7,SNR=3.7						
VAE	Valguarnera	25.67	269	P	P	03 50 30.8	+1.9
APA	Apatity	25.67	348	⇑*i*P	P	03 50 39.8	+11
APA				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.6						
LVZ	Lovozero	25.79	349	*e*P	P	03 50 31.1	+1.4
HFS	Hagfors	26.59	322	P	P	03 50 36.2	-0.8
	comp=Z,2.5nm,0.5s,mb4.0,baz=143,slow=7.4,SNR=12						
ZAL	Zalesovo	26.75	53	P	P	03 50 40.8	+2.1
	comp=Z,1.0nm,0.6s,mb3.5,baz=69,slow=23,SNR=3.3						
NB2	NORSAR Subarra	28.07	322	P	P	03 50 48.9	-1.7
	comp=Z,0.9nm,0.5s,mb3.7,baz=114,slow=8.6						
NOA	NORSAR Array B	28.07	322	P	P	03 50 49.1	-1.6
	comp=Z,2.2nm,0.8s,mb3.8,baz=117,slow=8.4,SNR=4.5						
NAO	NORSAR Subarra	28.16	322	P	P	03 50 48.9	-2.5
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
NAO	NORSAR Subarra	28.16	322	P	P	03 50 48.9	-2.5
	comp=Z,0.9nm,0.5s,mb3.7						
KEV	Kevo	28.71	345	*e*p	P	03 50 54.2	-2.1
ARCES	ARCESS Array B	28.81	344	P	P	03 50 58.0	+0.7
	comp=Z,0.8nm,0.4s,mb3.8,baz=192,slow=17,SNR=13						
EKA	Eskdalemuir Ar	34.46	309	P	P	03 51 44.6	-2.4
	comp=Z,0.8nm,0.4s,mb4.0,baz=100,slow=8.6,SNR=4.8						
SONM	Songino Array	40.79	62	LR	LR	04 11 23.4	
	comp=Z,92nm,18.2s,MS3.7,baz=3.7,slow=39						
ULN	Ulaanbaatar	41.20	62	*i* P	P	03 52 45.1	+1.5
SSE	Sheshan	58.32	75	*e*P	P	03 54 52.1	-2.6
	comp=Z,43nm,0.7s,mb5.6						
DBIC	Dimbokro	58.39	247	P	P	03 54 51.8	-3.7
	comp=Z,2.8nm,0.8s,mb4.3,baz=132,slow=6.5,SNR=6.6						
IMA2	Indian Mountai	69.97	9	*e*P	P	03 56 11.2	+0.9
ILAR	Eielson Array	71.91	6	P	P	03 56 22.0	0.0
	comp=Z,0.6nm,1.0s,mb3.5,baz=322,slow=1.9,SNR=5.8						
BOSA	Boshof	74.19	200	P	P	03 56 34.6	-1.4
	comp=Z,1.1nm,0.5s,mb4.0,baz=29,slow=8.4,SNR=3.2						

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*NNC **25** 03:53:47.0±12.0, 34.98N×72.72E, mpv3.4, Error ellipse: s-maj=145.8km s-min=106.9km az=97.0*

ISC 25 03:53:41.7±1.3**, 35.1N**±0.2×**74.0E**±0.3**, h10**^{km}**, n4,** σ**0**^{s}**87**/7**, 2C-1D, Northwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	2.98	151	*e*P	Pn	03 54 30.1	+0.1
THN				*e*S	Sn	03 55 13.7	+7.5
KLP	Kalpa	5.00	133	*e*P	Pg	03 55 19.8	-1.8
KLP				*e*S	Sn	03 55 58.5	+1.2
KLP				AML	AML	03 56 32.9	
	comp=E,43nm,0.9s						
KLP				AML	AML	03 56 35.2	
	comp=N,33nm,0.7s						
KK31	Karatay Array	8.48	342	⇑P	P	03 55 47.6	+0.1
	comp=N,0.6nm,0.3s,baz=165,slow=13,SNR=27						
KK31				⇑S	Sn	03 57 24.2	-0.1
	comp=N,1.0nm,0.5s,baz=169,slow=23,SNR=6.7						
AB31	Akbulak array	17.56	328	⇓P	P	03 57 48.4	+0.3
	comp=N,0.7nm,0.8s,baz=149,slow=14,SNR=4.5						

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*NEIC **25** 03:58:24.4, 36.66N×9.71W, MN2.8(MDD), After MDD.*

*INMG **25** 03:58:25.9±0.9, 36.58N×9.74W, h10^{km}, ML2.1, Error ellipse: s-maj=4.9km s-min=2.9km az=71.0*

MDD 25 03:58:24.0±1.4**, 36.61N×9.74W, mbLg2.6**/16**, Error ellipse: s-maj=12.9km s-min=9.5km az=59.0, PRXIMO, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTEO	Sao Teotonio	1.23	41	*e*P	Pb	03 58 47.9	0.0
PTEO				*e*S	Sb	03 59 04.1	-0.1
	14nm,0.1s						
PTEO	Sao Teotonio	1.23	41	P	Pb	03 58 47.9	0.0
PTEO				S	Sb	03 59 04.1	-0.1
	6.8nm,0.1s						
EGRO	El Granado	2.02	62	P	Pn	03 58 58.4	-1.3
	1.1nm,0.1s,SNR=25						
EGRO				S	Sn	03 59 23.3	-2.8
	11nm,0.1s,SNR=7.5						
PBEJ	Beja	2.05	46	*e*Pn	Pn	03 58 58.7	-1.5
PBEJ				*e*Sn	Sn	03 59 23.5	-3.3
	6.1nm,0.1s						
PBEJ	Beja	2.05	46	P	Pn	03 58 58.7	-1.5
PBEJ				S	Sn	03 59 23.5	-3.3
	3.0nm,0.1s						
EMIN	Mina Concepcio	2.70	64	P	Pn	03 59 07.5	-2.0
	0.5nm,0.1s,SNR=9.5						
EMIN				S	Sn	03 59 39.0	-4.4
	3.7nm,0.1s,SNR=12						
EBAD	Badajoz	3.04	44	P	Pn	03 59 11.6	-2.7
	2.2nm,0.1s,SNR=20						
EBAD				S	Sn	03 59 47.2	-4.7
	9.4nm,0.1s,SNR=11						
ESPR	Espera	3.13	84	P	Pn	03 59 13.1	-2.4
	5.0nm,0.1s,SNR=19						
ESPR				S	Sn	03 59 49.2	-4.9
	22nm,0.2s,SNR=7.1						
EJIF	Jimena Fronter	3.44	91	P	Pn	03 59 17.9	-2.0
	0.7nm,0.2s,SNR=7.9						
PCBR	Castelo Branco	3.68	28	*e*Pn	Pn	03 59 21.3	-2.1
PCBR				*e*Sn	Sn	04 00 03.0	-5.1
	2.3nm,0.1s						
PCBR	Castelo Branco	3.68	28	P	Pn	03 59 21.3	-2.1
PCBR				S	Sn	04 00 03.0	-5.1
	1.1nm,0.1s						
EMIJ	Mijas	3.99	89	P	Pn	03 59 25.3	-2.5
	0.4nm,0.2s,SNR=7.9						
EMIJ				S	Sn	04 00 10.3	-5.8
	0.4nm,0.1s,SNR=7.9						
MTE	Manteigas	4.15	24	*e*Pn	Pn	03 59 27.7	-2.4
MTE				*e*Sn	Sn	04 00 14.3	-5.8
	2.9nm,0.4s						
MTE	Manteigas	4.15	24	P	Pn	03 59 27.7	-2.4
MTE				S	Sn	04 00 14.3	-5.8
	1.4nm,0.4s						
PVIS	Viseu	4.34	19	*e*Pn	Pn	03 59 29.6	-3.2
PVIS				*e*Sn	Sn	04 00 18.9	-6.0
	4.3nm,0.1s						
PVIS	Viseu	4.34	19	P	Pn	03 59 29.6	-3.2
PVIS				S	Sn	04 00 18.9	-6.0
	2.2nm,0.1s						
EADA	Adamuz	4.39	68	P	Pn	03 59 31.1	-2.4
	2.6nm,0.2s,SNR=14						
EADA				S	Sn	04 00 18.8	-7.3
	2.0nm,0.1s,SNR=6.0						
EBAN	Banos Encina	4.98	70	P	Pn	03 59 38.8	-3.1
	1.4nm,0.1s,SNR=7.9						
EBAN				S	Sn	04 00 32.8	-8.3
	1.1nm,0.1s,SNR=7.9						
ECOG	Cogollos-Vega	4.99	81	P	Pn	03 59 39.5	-2.4
	0.3nm,0.2s,SNR=7.9						
ECOG				S	Sn	04 00 34.9	-6.3
	0.5nm,0.1s,SNR=7.9						
PCAB	Cabril	5.26	14	*e*Pn	Pn	03 59 42.3	-3.5
PCAB				*e*Sn	Sn	04 00 40.1	-7.9
	2.2nm,0.1s						
PCAB	Cabril	5.26	14	P	Pn	03 59 42.3	-3.5
PCAB				S	Sn	04 00 40.1	-7.9
	1.1nm,0.1s						
ELOB	Lobios	5.41	13	P	Pn	03 59 43.9	-3.9
	1.3nm,0.2s,SNR=5.8						
ELOB				S	Sn	04 00 42.5	-9.2
	0.8nm,0.1s,SNR=7.9						
EQES	Quesada	5.45	75	P	Pn	03 59 44.8	-3.6
	0.3nm,0.1s,SNR=7.9						
EQES				S	Sn	04 00 45.2	-7.6
	1.7nm,0.2s,SNR=8.0						
ESDC	Sonseca Array	5.48	54	P	Pn	03 59 45.8	-3.1
	1.6nm,0.2s,baz=240,slow=13,SNR=8.9						
ESDC				S	Sn	04 00 45.9	-7.7
	3.2nm,0.2s,SNR=7.9						
PBRG	Braganca	5.68	23	*e*Pn	Pn	03 59 48.5	-3.2
PBRG				*e*Sn	Sn	04 00 50.3	-8.3
	1.2nm,0.2s						
PBRG	Braganca	5.68	23	P	Pn	03 59 48.5	-3.2
PBRG				S	Sn	04 00 50.3	-8.3
	0.6nm,0.2s						
ECAL	Calabor	5.81	23	P	Pn	03 59 50.0	-3.5
	1.2nm,0.1s,SNR=11						
ECAL				S	Sn	04 00 53.3	-8.5
	2.3nm,0.2s,SNR=7.9						
EHUE	Huescar	5.83	76	P	Pn	03 59 49.7	-4.1
	0.3nm,0.2s,SNR=7.9						
EHUE				S	Sn	04 00 54.2	-8.1
	0.7nm,0.2s,SNR=5.8						
GUD	Guadarrama	5.94	46	P	Pn	03 59 52.4	-2.9
	0.8nm,0.2s,SNR=5.7						
GUD				S	Sn	04 00 55.2	-10
	0.6nm,0.2s,SNR=7.9						
ETOB	Tobarra	6.81	70	P	Pn	04 00 03.4	-4.2
	0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	04 01 16.6	-10
	0.4nm,0.1s,SNR=7.9						
EPON	Pontenova	6.99	16	P	Pn	04 00 05.8	-4.4
	0.6nm,0.3s,SNR=7.9						
EARI	Arriondas	7.53	26	P	Pn	04 00 14.7	-3.0
	0.2nm,0.2s,SNR=7.9						

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*NEIC **25** 04:08:07.2, 19.05N×68.28W, h96^{km}, MD3.6(RSPR), After RSPR.*

RSPR 25 04:08:07.2, 19.05N×68.28W, h96^{km}±5^{km}**, MD3.5**/9**, MD3.5**/9**, 9C, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	1.52	133	⇑*e*P	P	04 08 32.8	-1.1
CRPR				*e*S	S	04 08 53.3	-0.3
MGP	Maguayo	1.53	132	⇑*e*P	P	04 08 33.4	-0.7
MGP				*e*S	S	04 08 53.1	-0.8
AOPR	Arecibo Observ	1.61	115	⇑*e*P	P	04 08 34.0	-1.0
AOPR				*e*S	S	04 08 55.2	-0.3
ICM	Isla Caja Muer	2.02	124	⇑*e*P	P	04 08 39.8	-0.6
ICM				*e*S	S	04 09 04.8	-0.1
SJG	San Juan	2.22	114	⇑*e*P	P	04 08 42.0	-1.1
SJG				*e*S	S	04 09 09.3	-0.5
SJG	San Juan	2.22	114	⇑*e*P	P	04 08 42.0	-1.1
SJG				*e*S	S	04 09 09.2	-0.6
CBYP	Canovanas	2.42	108	⇑*e*P	P	04 08 44.6	-1.3
CBYP				*e*S	S	04 09 14.4	-0.4
CPD	Cerro la Pandu	2.46	114	⇑*e*P	P	04 08 45.5	-0.9
CPD				*e*S	S	04 09 15.1	-0.4
HUMP	Col San Antoni	2.47	111	⇑*e*P	P	04 08 45.6	-1.0
HUMP				*e*S	S	04 09 15.5	-0.5

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*NIED **25** 04:19:00, 38.20N×144.80E, h5^{km}, Mw3.9 Best double couple: $M_0$8.07×10^{14} NP1:ϕ_s203°, δ70°, λ-91°. NP2:ϕ_s25°, δ20°, λ-88°.*

*JMA **25** 04:19:51.5±0.1, 38.17N×144.78E, h56^{km}, M4.0*

ISC 25 04:19:51.6±1.9**, 38.28N**±0.09×**144.8E**±0.1**, h82**^{km}±56^{km}**, n8,** σ**0**^{s}**82**/15**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.58	289	P	P	04 20 32.5	+0.3
OFUJ				*e*S	S	04 21 02.8	+0.3
MIYJ	Miyakonagasawa	2.66	300	P	P	04 20 33.6	+0.2
MIYJ				S	S	04 21 04.8	+0.2
JIO	Ouri	2.72	275	P	P	04 20 33.8	-0.4
JIO				S	S	04 21 05.4	-0.6
JMK	Ichinoseki	2.88	285	*e*S	S	04 21 10.5	+0.4
JOM	Ohasama	2.99	295	P	P	04 20 38.6	+0.7
JOM				S	S	04 21 13.9	+1.2
JMM	Marumori	3.19	264	P	P	04 20 40.0	-0.7
JMM				S	S	04 21 15.7	-2.0
JCH	Churui	4.47	346	P	P	04 20 59.1	+0.7
JCH				*e*S	S	04 21 48.0	-1.6
MAT	Matsushiro	5.53	254	P	P	04 21 13.4	+0.5
MAT				*e*S	S	04 22 16.2	+0.4

MAN 25 04:23:53.1, 11.67N×121.76E, h6^{km}**, mb4.0, ML2.8, MS2.5, 1C, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KALP	Kalibo	0.56	89	*e*P	Pg	04 24 07.4	+3.0
OTRP	Odiongan	0.73	20	*e*P	Pg	04 24 06.8	-0.9
OTRP				*e*S	Sg	04 24 15.8	-1.8
RCP	Roxas	0.97	96	⇑*e*P	Pb	04 24 11.7	-0.2
SJMP	San Jose	1.01	321	*e*P	Pb	04 24 13.0	+0.5
CUYO	Cuyo Island	1.09	222	*e*P	Pb	04 24 13.5	-0.5
GUIM	Jordan	1.32	142	*e*P	Pb	04 24 16.9	-0.9
BUSP	Coron	1.57	282	*e*P	Pn	04 24 20.4	-1.2
BOAC	Boac	1.78	3	*e*P	Pn	04 24 23.9	-0.7
LUBP	Lubang	2.53	324	*e*P	Pn	04 24 35.3	-0.1

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*CSEM **25** 04:27:37.1±0.3, 43.00N×47.01E, h15^{km}, mb3.9, Error ellipse: s-maj=7.9km s-min=6.5km az=179.0, After OBN*

*TIF **25** 04:27:38.2, 43.01N×47.10E, h3^{km}±1^{km}*

MOS 25 04:27:37.1±1.7**, 43.00N×47.01E, h15**^{km}**, mb3.9**/1**, 3C, Error ellipse: s-maj=15.2km s-min=11.3km az=94.8,**

Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBC	**Dubki**	**0.14**	**281**	*i* PG	Pg	04 27 42.5	+1.6
DBC				*i* S	Sb	04 27 46.0	+2.8
DBC				pmax	pmax		
	comp=Z,185nm,0.1s						
DBC	**Dubki**	**0.14**	**281**	*i* Pg	Pg	04 27 42.5	+1.6
	comp=Z,185nm,0.1s						
DBC				*i* Sg	Sg	04 27 46.0	+2.5
BUJR	**Buynaksk**	**0.18**	**157**	*i* PG	Pg	04 27 43.0	+1.3
BUJR				*i* S	Sb	04 27 46.5	+1.9
BUJR				pmax	pmax		
	comp=Z,690nm,0.1s						
BUJR	**Buynaksk**	**0.18**	**157**	*i* Pg	Pg	04 27 43.0	+1.3
	comp=Z,690nm,0.1s						
BUJR				*i* Sg	Sg	04 27 46.5	+1.8
UNCR	**Uncukul**	**0.32**	**210**	*i* PG	Pg	04 27 45.0	+0.9
UNCR				*e*S	Sb	04 27 51.0	+2.3
UNCR				pmax	pmax		
	comp=Z,287nm,0.2s						
UNCR	**Uncukul**	**0.32**	**210**	*i* Pg	Pg	04 27 45.0	+0.9
	comp=Z,287nm,0.2s						
UNCR				*e*Sg	Sg	04 27 51.0	+2.2
MAK	**Makhachkala**	**0.36**	**95**	*e*PG	Pg	04 27 44.7	-0.1
MAK				*i*		04 27 50.0	
MAK				smax			
	comp=N,5μm,0.2s						
MAK	**Makhachkala**	**0.36**	**95**	*e*Pg	Pg	04 27 44.7	-0.1
	comp=N,5μm,0.2s						
MAK				*i* Sg	Sg	04 27 50.0	0.0
ARKR	**Arakani**	**0.39**	**182**	*i* PG	Pg	04 27 44.5	-0.9
ARKR				*i* S	Sb	04 27 51.0	+0.3
ARKR				pmax	pmax		
	comp=Z,132nm,0.3s						
ARKR	**Arakani**	**0.39**	**182**	*i* Pg	Pg	04 27 44.5	-0.9
	comp=Z,132nm,0.3s						
ARKR				*i* Sg	Sg	04 27 51.0	+0.1
XNZR	**Khunzakh**	**0.51**	**207**	*e*PG	Pg	04 27 50.4	+2.8
XNZR				*i* S	Sb	04 27 58.5	+4.5
XNZR				pmax	pmax		
	comp=Z,44nm,0.2s						
XNZR	**Khunzakh**	**0.51**	**207**	*e*Pg	Pg	04 27 50.4	+2.8
	comp=Z,44nm,0.2s						
XNZR				*i* Sg	Sg	04 27 58.5	+4.0
MNSR	**Manas**	**0.60**	**119**	*e*PG	Pg	04 27 52.2	+2.9
MNSR				*e*S	Sb	04 28 00.8	+4.2
MNSR				pmax	pmax		
	comp=Z,117nm,0.2s						
MNSR	**Manas**	**0.60**	**119**	*e*Pg	Pg	04 27 52.2	+2.9
	comp=Z,117nm,0.2s						
MNSR				*e*Sg	Sg	04 28 00.8	+3.3
KIV	**Kislovodsk**	**3.29**	**288**	⇑*e*PN	Pn	04 28 30.8	+1.6
GNI	**Garni**	**3.31**	**212**	⇑*e*PN	Pn	04 28 30.8	+1.2
GNI	**Garni**	**3.31**	**212**	*e*Pn	Pn	04 28 30.8	+1.2
KHC	**Kasperske Hory**	**23.86**	**297**	⇑*i*P	P	04 32 49.4	-1.0
KHC	**Kasperske Hory**	**23.86**	**297**	*i* P	P	04 32 49.4	-1.0

*NEIC **25** 04:51:24.3±1.2, 51.45N×16.07E, h5^{km}, ML2.8(SZGRF), ML2.4(CLL), Error ellipse: s-maj=14.2km s-min=6.5km az=198.0*
*WAR **25** 04:51:24.5, 51.48N×16.11E, h1^{km}, ML2.7, Mining Induced*
*PRU **25** 04:51:25.6, 51.39N×16.08E*
ISC 25 04:51:22.1±0.7**, 51.46N**±0.04×**16.11E**±0.03**, n20,** σ**1^{s}28**/44**, 3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**169**	⇓*i*PG	**Pg**	**04 51 36.3**	**+1.6**
KSP				⇓*e*SG	**Sg**	**04 51 45.3**	**+2.1**
KSP	**Ksiaz**	**0.63**	**169**	*e*Pg	**Pg**	**04 51 36.3**	**+1.6**
KSP				*e*Sg	**Sg**	**04 51 44.9**	**+1.7**
KSP	**Ksiaz**	**0.63**	**169**	⇓*i*Pg	**Pg**	**04 51 36.3**	**+1.6**
KSP				*e*Sg	**Sg**	**04 51 44.8**	**+1.6**
UPC	**Upice**	**0.96**	**184**	*e*PG	**Pg**	**04 51 42.3**	**+1.1**
DPC	**Dobruska-Polom**	**1.12**	**173**	*e*PG	**Pg**	**04 51 45.1**	**+0.6**
DPC				*e*SG	**Sg**	**04 51 59.8**	**+0.3**
PVCC	**Panska Ves**	**1.35**	**227**	*e*PG	**Pg**	**04 51 49.5**	**+0.5**
PVCC				*e*SG	**Sg**	**04 52 07.6**	**+0.6**
	91nm,0.4s						
BRG	**Berggiesshubel**	**1.48**	**247**	Pn	**Pn**	**04 51 51.1**	**+1.0**
BRG				Pg	**Pg**	**04 51 52.0**	**+0.3**
BRG				Sg	**Sg**	**04 52 12.1**	**+0.6**
PRU	**Pruhonice**	**1.78**	**215**	*e*PN	**Pn**	**04 51 55.1**	**+0.8**
PRU				*e*PG	**Pg**	**04 51 56.8**	**-0.8**
PRU				*e*SG	**Sg**	**04 52 20.1**	**-1.3**
MORC	**Moravsky Berou**	**1.92**	**151**	*e*Pn	**Pn**	**04 51 56.7**	**+0.4**
MORC				*e*Sn	**Sn**	**04 52 24.2**	**+2.6**
CLL	**Collm**	**1.95**	**267**	*i* PG	**Pg**	**04 52 00.2**	**-0.8**
CLL				*e*		04 52 03.0	
CLL				*e*SG	**Sg**	**04 52 26.0**	**-1.0**
CLL	**Collm**	**1.95**	**267**	*i* Pg	**Pg**	**04 52 00.2**	**-0.8**
CLL				*e*Sg	**Sg**	**04 52 26.0**	**-1.0**
OKC	**Ostrava-Krasne**	**2.08**	**141**	*e*PN	**Pn**	**04 51 58.9**	**+0.2**
OKC				*e*PG	**Pg**	**04 52 03.5**	**-0.2**
OKC				*e*SG	**Sg**	**04 52 28.9**	**-2.5**
TREC	**Trest**	**2.21**	**191**	*e*PN	**Pn**	**04 52 02.5**	**+2.0**
TREC				*e*PG	**Pg**	**04 52 05.2**	**-1.0**
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**04 52 07.4**	**+1.0**
NKC				*e*PG	**Pg**	**04 52 14.3**	**-0.2**
NKC				*e*SG	**Sg**	**04 52 48.4**	**-1.1**
	13nm,0.3s						
OJC	**Ojcow**	**2.65**	**117**	*e*PG	**Pg**	**04 52 14.0**	**-1.0**
OJC				*e*SG	**Sg**	**04 52 50.0**	**-0.4**
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**04 52 10.4**	**+0.9**
KHC				*e*PG	**Pg**	**04 52 16.3**	**-2.5**
KHC				*e*SN	**Sn**	**04 52 44.5**	**-0.5**
KHC				*e*SG	**Sg**	**04 52 54.6**	**-2.1**
GEC2	**GERESS Array S**	**3.04**	**211**	*e*Pn	**Pn**	**04 52 14.3**	**+1.9**
NIE	**Niedzica**	**3.38**	**126**	*e*P	**Pg**	**04 52 27.0**	**-2.6**
NIE				*e*S	**Sg**	**04 53 12.0**	**-2.6**
STHS	**Stebnicka Huta**	**3.87**	**120**	*e*PN	**Pn**	**04 52 25.8**	**+1.6**
STHS				*e*PG	**Pg**	**04 52 37.7**	**-1.7**
STHS				*e*SG	**Sg**	**04 53 32.0**	**+1.0**
KECS	**Kecovo**	**4.11**	**135**	*e*	**Pg**	**04 52 43.2**	**-0.9**

PRE 25 04:53:37.5±1.2**, 26.45S**×**27.40E, h2**^{km}**, ML3.6, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSR	**Koster**	**0.75**	**323**	*e*P	Pg	04 53 52.1	-0.3
KSR				*e*S	Sg	04 54 02.9	+0.6
KSR				AML	AML	04 54 10.4	
	comp=Z,3μm,0.7s						
SLR	**Silverton**	**1.07**	**48**	*e*P	Pb	04 53 58.2	-0.2
SLR				*e*S	Sb	04 54 12.6	0.0
SLR				AML	AML	04 54 18.3	
	comp=Z,368nm,0.2s						
SEK	**Senekal**	**1.88**	**174**	*e*S	Sn	04 54 36.0	+0.5
SEK				AML	AML	04 54 40.4	
	comp=Z,318nm,0.5s						
LBTB	**Lobatse**	**2.16**	**311**	*e*P	Pn	04 54 14.6	-0.4
LBTB				*e*S	Sn	04 54 41.9	-0.9
BOSA	**Boshof**	**2.87**	**221**	*e*P	Pn	04 54 24.9	-0.2
BOSA				*e*S	Sn	04 55 00.1	-0.7
BOSA				AML	AML	04 55 09.6	
	comp=Z,662nm,0.4s						
POGA	**Pongola**	**3.87**	**105**	*e*P	Pn	04 54 39.9	+0.6
POGA				*e*S	Sn	04 55 25.0	-1.1
POGA				AML	AML	04 55 46.0	
	comp=Z,59nm,0.4s						
PKA	**Prieska**	**5.21**	**231**	*e*P	Pn	04 54 44.0	-14
PKA				*e*S	Sn	04 55 41.4	-18
PKA				AML	AML	04 56 01.7	
	comp=Z,83nm,0.7s						
PKA	**Prieska**	**5.21**	**231**	*e*S	Sn	04 56 02.0	+2.3
PKA				AML	AML	04 56 15.4	
	comp=Z,83nm,0.7s						
UPI	**Upington**	**5.78**	**249**	*e*P	Pn	04 55 05.0	-1.4
UPI	**Upington**	**5.78**	**249**	*e*S	Sn	04 56 15.4	+1.1
UPI				AML	AML	04 56 43.9	
	comp=Z,45nm,0.4s						
SUR	**Sutherland**	**8.24**	**223**	*e*P	P	04 55 38.8	-2.1
SUR				*e*S	Sn	04 57 08.0	-7.6
CVNA	**Calvinia**	**8.36**	**231**	*e*S	Sn	04 57 39.2	+21
CVNA				AML	AML	04 58 05.7	
	comp=Z,35nm,0.5s						

*PDG **25** 04:58:39.2±0.3, 40.48N×20.41E, h9^{km}±1^{km}*
*SKO **25** 04:58:39.6, 40.86N×20.64E, h12^{km}, M2.7, ML2.8*
*NEIC **25** 04:58:40.9, 40.90N×20.60E, h4^{km}, MD3.4(ATH), MD3.2(PDG), ML2.8(SKO), After SKO.*
*TIR **25** 04:58:41.5, 40.98N×20.65E, h4^{km}*
*THE **25** 04:58:44.0, 40.91N×20.78E, h4^{km}, ML3.1*
*CSEM **25** 04:58:44.1±0.1, 41.08N×20.91E, h8^{km}, ML2.8, Error ellipse: s-maj=5.2km s-min=2.5km az=38.0*
*ATH **25** 04:58:54.1, 39.35N×19.91E, h10^{km}, MD3.4/3*
ISC 25 04:58:42.8±0.5**, 40.94N**±0.02×**20.81E**±0.03**, h0**^{km}±4^{km}**, n33,** σ**1^{s}22**/61**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.18**	**356**	*i* Pg	**Pg**	**04 58 45.1**	**-1.3**
OHR				*i* Sg	**Sg**	**04 58 49.2**	**+0.5**
OHR				*e*Lg		04 58 49.3	
	comp=E,2μm,0.3s						
KBN	**Korca**	**0.31**	**184**	*i* Pg	**Pg**	**04 58 48.8**	**-0.3**
KBN				*i* Sg	**Sg**	**04 58 54.4**	**+1.2**
BIA	**Bitola**	**0.40**	**78**	*i* Pg	**Pg**	**04 58 50.4**	**-0.3**
BIA				*i* Sg	**Sg**	**04 58 58.5**	**+2.5**
BIA	**Bitola**	**0.40**	**78**	*i* Pg	**Pg**	**04 58 50.4**	**-0.3**
BIA				*i* Sg	**Sg**	**04 58 58.5**	**+2.5**
FNA	**Florina**	**0.45**	**109**	*e*Pg	**Pg**	**04 58 52.5**	**+0.6**
FNA				*e*Sg	**Sg**	**04 59 00.4**	**+2.5**
QSH	**Qafa e Shtames**	**0.90**	**311**	*e*pg?	**Pg**	**04 59 00.0**	**-0.8**
QSH				*i* Sg	**Sg**	**04 59 14.0**	**+1.1**
SKO	**Skopje**	**1.14**	**24**	*e*Pn	**Pn**	**04 59 04.6**	**-1.3**
SKO				*i* Sn	**Sn**	**04 59 22.0**	**-0.3**
SKO				*e*Lg		04 59 23.3	
	comp=E,218nm,0.6s						
SKO				*e*Lg		04 59 23.3	
	comp=N,236nm,0.3s						
SKO				*i* Sn	**Sn**	**04 59 26.6**	**+4.2**
SKO	**Skopje**	**1.14**	**24**	*e*Pn	**Pn**	**04 59 04.6**	**-1.2**
SKO				*i* Sn	**Sn**	**04 59 22.0**	**-0.3**
SKO				Lg		04 59 23.3	
GRG	**Griva**	**1.20**	**88**	*e*Pg	**Pg**	**04 59 06.4**	**-0.5**
GRG				*e*Sg	**Sg**	**04 59 25.3**	**+2.4**
SRN	**Sarande**	**1.22**	**211**	*e*Pn	**Pn**	**04 59 05.6**	**-1.5**
SRN				*i* Sn	**Sn**	**04 59 25.4**	**+0.9**
JAN	**Janina**	**1.28**	**179**	*e*PG	**Pg**	**04 59 08.9**	**+0.6**
PUK	**Puka**	**1.30**	**328**	*i* Pn	**Pn**	**04 59 05.8**	**-2.4**
PUK				*i* Sn	**Sn**	**04 59 26.0**	**-0.6**
PUK	**Puka**	**1.30**	**328**	*e*Pn	**Pn**	**04 59 05.8**	**-2.4**
PUK				*i* Sn	**Sn**	**04 59 26.0**	**-0.6**
VAY	**Valandovo**	**1.38**	**73**	*e*Pn	**Pn**	**04 59 08.8**	**-0.5**
VAY				*i* Sn	**Sn**	**04 59 28.7**	**+0.2**
VAY				*e*Lg		04 59 31.6	
	comp=N,106nm,0.5s						
VAY				*e*Lg		04 59 31.8	
	comp=E,107nm,0.5s						
VAY	**Valandovo**	**1.38**	**73**	*e*Pn	**Pn**	**04 59 08.8**	**-0.5**
VAY				*i* Sn	**Sn**	**04 59 28.7**	**+0.2**
VAY				Lg		04 59 31.6	
VAY				Lg		04 59 31.8	
KEK	**Kerkira**	**1.45**	**213**	*e*PB	**Pb**	**04 59 01.5**	**-8.8**
ULC	**Ulcinj**	**1.56**	**312**	*e*Pn	**Pn**	**04 59 10.3**	**-1.6**
ULC				*e*Sn	**Sn**	**04 59 34.8**	**+1.7**
KNT	**Kendrikon**	**1.59**	**81**	*e*Pg	**Pg**	**04 59 12.5**	**-2.1**
KNT				*e*Sg	**Sg**	**04 59 36.4**	**+0.6**
THE	**Thessaloniki**	**1.66**	**100**	*e*Pb	**Pb**	**04 59 12.9**	**-1.1**
THE				*e*Sb	**Sb**	**04 59 34.7**	**-0.6**
PVY	**Plav**	**1.77**	**340**	*e*Pn	**Pn**	**04 59 15.7**	**+0.7**
PVY				*e*Sn	**Sn**	**04 59 44.9**	**+6.4**
TTG	**Podgorica**	**1.89**	**323**	*e*Pn	**Pn**	**04 59 15.5**	**-1.1**
TTG				*e*Sn	**Sn**	**04 59 45.1**	**+3.6**
SOH	**Sokhos**	**1.93**	**93**	*e*Pb	**Pb**	**04 59 17.4**	**-1.1**
BUM	**Brajici-Budva**	**1.98**	**314**	*e*Pn	**Pn**	**04 59 17.0**	**-0.9**
BUM				*e*Sn	**Sn**	**04 59 45.1**	**+1.3**
IVA	**Berane**	**2.05**	**341**	*e*Pn	**Pn**	**04 59 20.1**	**+1.2**
IVA				*e*Sn	**Sn**	**04 59 51.8**	**+6.2**
EVR	**Evrytania**	**2.16**	**159**	*e*PB	**Pb**	**04 59 23.0**	**+0.5**
AGG	**Agios Georgios**	**2.24**	**148**	*e*Pn	**Pn**	**04 59 22.2**	**+0.6**
AGG				*e*Sn	**Sn**	**04 59 50.6**	**+0.3**
HCY	**Herceg Novi**	**2.30**	**312**	*e*Pn	**Pn**	**04 59 20.4**	**-2.1**
HCY				*e*Sn	**Sn**	**04 59 52.0**	**+0.2**
NKY	**Niksic**	**2.31**	**325**	*e*Pn	**Pn**	**04 59 21.6**	**-1.1**
NKY				*e*Sn	**Sn**	**04 59 54.8**	**+2.6**
XOR	**Xorichti**	**2.40**	**130**	*e*Pn	**Pn**	**04 59 23.7**	**-0.3**
PAIG	**Paliouri**	**2.41**	**114**	*e*Pn	**Pn**	**04 59 23.1**	**-0.9**
PAIG				*e*Sn	**Sn**	**04 59 53.8**	**-0.8**
PLE	**Pljevlja**	**2.62**	**337**	*e*Pn	**Pn**	**04 59 28.1**	**+1.1**
PLE				*e*Sn	**Sn**	**05 00 04.8**	**+4.9**
UPM	**Unac-Piva**	**2.67**	**329**	*e*Pn	**Pn**	**04 59 27.9**	**+0.1**
UPM				*e*Sn	**Sn**	**05 00 04.5**	**+3.2**
DIVS	**Divcibare**	**3.22**	**349**	*i* Pn	**Pn**	**04 59 35.2**	**-0.4**

*IDC **25** 05:31:12.7±0.3, 6.00N×126.18E, mb5.1/30, mb1 5.2/31, mb1mx5.1/32, mbtmp5.1/31, ML5.4/1, MS5.1/27, Ms1 5.1/27, ms1mx5.1/33, Error ellipse: s-maj=16.4km s-min=8.4km az=77.0*
*MOS **25** 05:31:16.2±1.5, 5.93N×126.23E, h28^{km}, mb5.7/48, MS5.3/18, Error ellipse: s-maj=9.9km s-min=5.0km az=110.0*
*BJI **25** 05:31:18.2, 5.71N×126.49E, h61^{km}, mB5.7, mb5.2, Ms5.3, Msz5.1*
*HRVD **25** 05:31:18.8±0.1, 5.87N×126.33E, h46^{km}, MW5.8/89, Centroid moment Tensor Solution. LP body waves: s85,c179;Mantle waves: s89,c187; Half duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$6.27±.08; M$_{\theta\theta}$-0.61±.05; M$_{\phi\phi}$-5.66±.06; M$_{r\theta}$0.13±.05; M$_{\theta\phi}$1.62±.04; M$_{\phi r}$-1.18±.06; Best double couple: M$_0$6.315×10^{17} NP1: φ$_s$342°, δ40°, λ87°. NP2: φ$_s$166°, δ50°, λ92°. Principal axes: T 6.386, Plg84°, Azm93°; N -.144, Plg2°, Azm344°; P -6.244, Plg5°, Azm254°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **25** 05:31:18.3±0.2, 5.91N×126.39E, h34^{km}, mb5.5/72, ME5.5, MS5.1/16, MW5.7 Error ellipse: s-maj=6.8km s-min=4.4km az=68.0, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.86; M$_{\theta\theta}$-0.50; M$_{\phi\phi}$-4.36; M$_{r\theta}$0.37; M$_{\theta\phi}$1.67; M$_{\phi r}$-1.78; Best double couple: M$_0$5.2×10^{17} NP1: φ$_s$336°, δ35°, λ85°. NP2: φ$_s$163°, δ55°, λ94°. Principal axes: T 5.2, Plg80°, Azm87°; N .11, Plg3°, Azm341°; P -5.3, Plg10°, Azm250°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [II PIVS] at Davao and General Santos.
*MAN **25** 05:31:20.2, 5.69N×126.34E, h39^{km}, mb6.1, ML5.2, MS5.8*
ISC 25 05:31:17.4±0.2**, 5.91N**±0.03×**126.43E**±0.03**, h42**^{km}**, h42**^{km}±2.4^{km}**:pP-P, n437,** σ**1^{s}27**/403**, mb5.4**/115**, MS5.2**/68**, 20C-26D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.43**	**324**	⇓*e*P	**P**	**05 31 45.4**	**+4.0**
DAV	**Davao City (W)**	**1.43**	**324**	*e*Pn	**P**	**05 31 44.5**	**+3.1**
KCP	**Kidapawan**	**1.72**	**310**	⇓*e*P	**P**	**05 31 51.6**	**+6.1**
KCP				*i* S	**S**	**05 32 10.5**	**+4.1**
CGP	**Cagayan de Oro**	**3.06**	**326**	⇓*i*P	**P**	**05 32 09.1**	**+4.5**
CGP				*i* S	**S**	**05 32 53.2**	**+13**
BUTP	**Butuan**	**3.15**	**345**	*e*P	**P**	**05 32 10.4**	**+4.6**
PAGZ	**Pagadian**	**3.59**	**303**	*e*P	**P**	**05 32 14.6**	**+2.6**
DCPH	**Dipolog City**	**4.05**	**311**	⇑*e*P	**P**	**05 32 23.1**	**+4.5**
MSLP	**Maasin**	**4.48**	**340**	*e*P	**P**	**05 32 30.8**	**+6.2**
TBP	**Tagbilaran**	**4.54**	**326**	*e*P	**P**	**05 32 26.6**	**+1.2**
SNPH	**Sibulan**	**4.66**	**317**	*e*P	**P**	**05 32 32.0**	**+4.9**
LLP	**Lapu-Lapu**	**5.01**	**331**	*e*P	**P**	**05 32 36.6**	**+4.4**
LLP				*e*S	**S**	**05 33 36.1**	**+6.4**
PLP	**Palo**	**5.42**	**345**	*e*P	**P**	**05 32 43.8**	**+6.0**
OCLP	**Ormoc**	**5.42**	**341**	*e*P	**P**	**05 32 42.7**	**+4.9**
GUIM	**Jordan**	**6.04**	**321**	*e*P	**P**	**05 32 44.2**	**-2.2**
RCP	**Roxas**	**6.69**	**327**	⇓*e*P	**P**	**05 32 59.5**	**+3.8**
CNP	**Catarman**	**6.79**	**345**	*e*P	**P**	**05 33 02.6**	**+5.6**
CUYO	**Cuyo Island**	**7.26**	**313**	*e*P	**P**	**05 33 07.0**	**+3.3**
OTRP	**Odiongan**	**7.75**	**326**	*e*P	**P**	**05 33 15.6**	**+5.2**
PVCP	**Virac**	**7.96**	**344**	*e*P	**P**	**05 33 18.2**	**+4.9**
SJMP	**San Jose**	**8.36**	**322**	*e*P	**P**	**05 33 29.3**	**+10**
PPR	**Puerto Princes**	**8.54**	**297**	⇓*i*P	**P**	**05 33 21.5**	**+0.2**
TSM	**Tawau**	**8.67**	**260**	P	**P**	**05 33 23.6**	**+0.4**
ENPP	**El Nido**	**8.70**	**308**	*e*P	**P**	**05 33 24.9**	**+1.4**
GQP	**Guinayangan**	**8.86**	**334**	⇑*e*P	**P**	**05 33 32.8**	**+7.0**
TGY	**Tagaytay City**	**9.77**	**327**	Pn	**P**	**05 33 46.9**	**+8.4**
	57nm,0.3s,baz=83,slow=11,SNR=7.8						
TGY				LR	LR	05 38 14.4	
	comp=Z,93nm,18.1s,baz=140,slow=44						
LUBP	**Lubang**	**9.88**	**322**	*e*P	**P**	**05 33 47.4**	**+7.5**
KKM	**Kota Kinabalu**	**10.16**	**271**	*e*Pn	**P**	**05 33 42.2**	**-1.6**
KKM				*e*ScP		05 43 17.8	
KKM	**Kota Kinabalu**	**10.16**	**271**	P	**P**	**05 33 47.1**	**+3.4**
BALP	**Baler**	**10.87**	**334**	*e*P	**P**	**05 34 01.5**	**+8.0**
PCPH	**Palayan**	**10.93**	**332**	*e*P	**P**	**05 34 03.9**	**+10**
SCZP	**Santa Cruz**	**11.71**	**327**	*e*P	Px	05 34 15.9	
CAUP	**Cauayan**	**11.86**	**338**	*e*P	**P**	**05 34 11.8**	**+4.9**
BCPH	**Baguio City Da**	**11.88**	**332**	*e*P	**P**	**05 34 11.4**	**+4.2**
CVP	**Callao Caves**	**12.56**	**339**	*e*P	Px	05 34 30.0	
KSM	**Kuching**	**16.67**	**255**	*e*P	**P**	**05 35 11.0**	**+1.3**
KSM				*e*ScP		05 43 29.8	
YHNB	**Yeheng**	**19.28**	**346**	*e*P	**P**	**05 35 40.2**	**-1.3**
KAKA	**Kakadu**	**19.44**	**162**	*e*P	**P**	**05 36 02.4**	**+19**
	161nm,0.5s						
GUMO	**Guam**	**19.70**	**66**	P	**P**	**05 35 47.8**	**+1.6**
	10nm,0.3s,baz=119,slow=4.5,SNR=4.9						
GUMO				LR	LR	05 43 02.3	
	comp=Z,5μm,18.1s,baz=200,slow=36						
HKC	**Hong Kong**	**20.15**	**325**	⇓*i*P	**P**	**05 35 54.0**	**+3.1**
HKC				*i* S	**S**	**05 39 36.0**	**+6.1**
QZH	**Quanzhou**	**20.37**	**339**	⇑*i*P	**P**	**05 35 53.3**	**+0.1**
QZH				S	**S**	**05 39 37.0**	**+2.9**
QZH				AMB	AMB		
	comp=Z,280nm,0.9s						
QZH				AMB	AMB		
	comp=Z,3μm,11.6s						
QZH				LR	LR		
	comp=N,5μm,18.1s,MS5.3						
QZH				LR	LR		
	comp=E,11μm,22.8s,MS5.3						
QZH				LR	LR		
	comp=Z,19μm,26.8s,MS5.3						
QZH	**Quanzhou**	**20.37**	**339**	⇑*i*P	**P**	**05 35 53.3**	**+0.1**
	comp=Z,280nm,0.9s						
QZH				S	**S**	**05 39 37.0**	**+2.9**
QZH				LR	LR		
	comp=Z,19μm,26.8s,MS5.3						
QIZ	**Qiongzhong**	**20.76**	**310**	⇑*i*P	**P**	**05 35 57.8**	**+0.5**
QIZ				AP		05 36 12.3	
QIZ				S	**S**	**05 39 42.3**	**+0.5**
QIZ				SS	SS	05 40 15.5	+1.0
QIZ				LR	LR		
	comp=N,5μm,14.6s,MS5.1						
QIZ				LR	LR		
	comp=E,5μm,17.7s,MS5.1						
QIZ				LR	LR		
	comp=Z,7μm,18.8s,MS5.1						
JOW	**Kunigami**	**20.88**	**5**	P	**P**	**05 35 58.4**	**-0.2**
	comp=Z,22nm,0.7s,baz=181,slow=11,SNR=6.1						
JOW				S	**S**	**05 39 48.1**	**+4.0**
	comp=Z,16nm,1.0s,baz=106,slow=27,SNR=2.3						
JOW				LR	LR	05 43 55.9	
	comp=Z,6μm,19.7s,MS5.0,baz=179,slow=37						
GZH	**Guangzhou**	**21.23**	**325**	P	**P**	**05 36 07.8**	**+5.7**
GZH				AMB	AMB		
	comp=Z,150nm,1.0s,mb5.3						
GZH				LR	LR		
	comp=N,4μm,23.3s,MS4.9						
GZH				LR	LR		
	comp=E,4μm,21.5s,MS4.9						
GZH				LR	LR		
	comp=Z,8μm,22.4s,MS5.0						
GZH	**Guangzhou**	**21.23**	**325**	P	**P**	**05 36 07.8**	**+5.7**
	comp=Z,160nm,1.0s,mb5.3						
GZH				LR	LR		
	comp=Z,8μm,22.4s,MS5.0						
KGM	**Kluang**	**23.37**	**261**	P	**P**	**05 36 27.1**	**+3.7**
FITZ	**Fitzroy Crossi**	**23.87**	**182**	⇑*i*P	**P**	**05 36 27.9**	**-0.2**
	comp=Z,374nm,0.9s,mb5.8						
FITZ				*i* S	**S**	**05 40 40.4**	**+2.1**
FITZ	**Fitzroy Crossi**	**23.87**	**182**	P	**P**	**05 36 28.2**	**+0.1**
	comp=Z,204nm,0.7s,mb5.6,baz=18,slow=10.0,SNR=79						
FITZ				S	**S**	**05 40 44.6**	**+6.4**
	comp=Z,31nm,1.0s,baz=203,slow=15,SNR=2.6						
IPM	**Ipoh**	**25.33**	**268**	P	**P**	**05 36 44.4**	**+2.1**
KKTK	**Khon Kaen**	**25.34**	**296**	P	**P**	**05 36 42.5**	**+0.1**
	comp=Z,802nm,0.8s,mb6.3						
SSE	**Sheshan**	**25.54**	**350**	*e*P	**P**	**05 36 42.0**	**-2.1**
SSE				AP	pP	05 36 56.8	+1.7
SSE				XP	sP	05 37 03.6	+3.5
SSE				PCP	PcP	05 40 12.1	-3.3
SSE				S	**S**	**05 41 06.8**	**+0.5**
SSE				XS		05 41 32.3	
SSE				SCS	ScS	05 47 38.3	+0.7
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.9						
SSE				AMB	AMB		
	comp=Z,580nm,5.7s						
SSE				LR	LR		
	comp=N,1μm,26.2s,MS4.8						
SSE				LR	LR		
	comp=E,3μm,26.2s,MS4.8						
SSE				LR	LR		
	comp=Z,5μm,19.3s						
SSE	**Sheshan**	**25.54**	**350**	*e*P	**P**	**05 36 42.0**	**-2.1**
	comp=Z,39nm,0.7s,mb5.0						
SSE				pP	pP	05 36 56.8	+1.7
SSE				sP	sP	05 37 03.6	+3.5
SSE				PcP	PcP	05 40 12.1	-3.3
SSE				S	**S**	**05 41 06.8**	**+0.5**
SSE				sS		05 41 32.3	
SSE				ScS	ScS	05 47 38.3	+0.7
SSE				LR	LR		
	comp=Z,5μm,19.3s,MS5.0						
PMG	**Port Moresby**	**25.66**	**126**	P	**P**	**05 36 47.4**	**+2.0**
	comp=Z,12nm,0.8s,mb4.5,baz=282,slow=15,SNR=3.1						
PMG				LR	LR	05 47 27.0	
	comp=Z,5μm,19.2s,MS5.1,baz=335,slow=38						
PMG	**Port Moresby**	**25.66**	**126**	*e*P	**P**	**05 36 47.0**	**+1.6**
	comp=Z,88nm,1.2s,mb5.2						
PMG	**Port Moresby**	**25.66**	**126**	*e*P	**P**	**05 36 47.0**	**+1.7**
PMG				pmax	pmax		
	comp=Z,88nm,1.2s						
KULM	**Kulim**	**25.66**	**270**	*e*P	**P**	**05 36 46.2**	**+0.8**
CBIJ	**Chichi jima**	**25.87**	**34**	P	**P**	**05 36 45.6**	**-1.6**
	comp=Z,94nm,0.4s,mb5.6,baz=174,slow=3.9,SNR=16						
CBIJ				LR	LR	05 45 15.8	
	comp=Z,7μm,21.4s,MS5.2,baz=205,slow=32						
WRAB	**Tennant Creek**	**26.83**	**163**	*e*P	**P**	**05 36 54.9**	**-1.2**
	comp=Z,194nm,0.8s,mb5.7						
WRAB	**Tennant Creek**	**26.83**	**163**	*c i*P	**P**	**05 36 55.0**	**-1.2**
WRA	**Warramunga Arr**	**26.84**	**163**	P	**P**	**05 36 54.8**	**-1.4**
	comp=Z,30nm,0.6s,mb5.0,baz=343,slow=9.8,SNR=112						
WRA				S	**S**	**05 41 40.9**	**+13**
	comp=Z,28nm,1.2s,baz=338,slow=18,SNR=5.8						
WRA				PKiKP		05 47 56.0	
	comp=Z,1.0nm,0.8s,baz=310,slow=1.3,SNR=4.6						
WB2	**Warramunga Arr**	**26.84**	**163**	*e*P	**P**	**05 36 54.7**	**-1.6**
WB2				*i* S	**S**	**05 41 28.7**	**+0.9**
NJ2	**Nanjing**	**26.96**	**346**	*e*P	**P**	**05 37 00.5**	**+3.3**
NJ2				AP	pP	05 37 15.1	+6.8
NJ2				XP	sP	05 37 22.4	+8.9
NJ2				PP	PP	05 37 48.3	+4.7
NJ2				S	**S**	**05 41 29.0**	**-0.6**
NJ2				XS		05 41 51.0	
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,1μm,6.8s						
NJ2				LR	LR		
	comp=N,7μm,24.9s,MS5.3						
NJ2				LR	LR		
	comp=E,5μm,19.9s,MS5.3						
NJ2				LR	LR		
	comp=Z,2μm,25.6s						
NJ2	**Nanjing**	**26.96**	**346**	*e*P	**P**	**05 37 00.5**	**+3.3**
	comp=Z,30nm,1.0s,mb4.8						
NJ2				pP	pP	05 37 15.1	+6.8
NJ2				sP	sP	05 37 22.4	+8.9
NJ2				PP	PP	05 37 48.3	+4.7
NJ2				S	**S**	**05 41 29.0**	**-0.6**
NJ2				sS		05 41 51.0	
NJ2				LR	LR		
	comp=Z,2μm,25.6s,MS4.7						
NNT	**Nongplab**	**27.15**	**286**	P	**P**	**05 37 05.9**	**+6.7**
JNU	**Nakatsue**	**27.39**	**8**	P	**P**	**05 36 58.5**	**-2.7**
	comp=Z,12nm,0.7s,mb4.5,baz=150,slow=14,SNR=7.9						
JNU				LR	LR	05 46 31.1	
	comp=Z,4μm,21.6s,MS5.0,baz=328,slow=34						
NST	**Nakhon Sawan**	**27.56**	**293**	P	**P**	**05 37 03.5**	**+0.7**
GYA	**Guiyang**	**27.81**	**319**	P	**P**	**05 37 04.6**	**-0.4**

GYA				AP	pP	05 37 19.3	+3.1
GYA				XP	sP	05 37 26.6	+5.2
GYA				PP	PP	05 37 59.0	+4.2
GYA				PCP	PcP	05 40 22.8	+2.1
GYA				S	**S**	**05 41 51.6**	**+8.2**
GYA				XS		05 42 10.8	
GYA				AMB	AMB		
	comp=Z,90nm,0.8s,mb5.5						
GYA				AMB	AMB		
	comp=Z,1µm,6.9s						
GYA				LR	LR		
	comp=N,6µm,18.9s,MS5.3						
GYA				LR	LR		
	comp=E,4µm,18.3s,MS5.3						
GYA				LR	LR		
	comp=Z,7µm,19.2s,MS5.3						
GYA	**Guiyang**	**27.81**	**319**	P	**P**	**05 37 04.6**	**-0.4**
	comp=Z,90nm,0.8s,mb5.5						
GYA				pP	pP	05 37 19.3	+3.1
GYA				sP	sP	05 37 26.6	+5.2
GYA				PP	PP	05 37 59.0	+4.2
GYA				PcP	PcP	05 40 22.8	+2.1
GYA				S	**S**	**05 41 51.6**	**+8.2**
GYA				sS		05 42 10.8	
GYA				LR	LR		
	comp=Z,7µm,19.2s,MS5.3						
ENH	**Enshi**	**29.01**	**329**	*e*P	**P**	**05 37 15.6**	**-0.1**
	comp=Z,56nm,0.8s,mb5.3						
ENH				*e*ScP		05 44 01.4	
KMI	**Kunming**	**29.67**	**313**	P	**P**	**05 37 23.1**	**+1.5**
KMI				AP	pP	05 37 36.8	+3.9
KMI				XP	sP	05 37 42.9	+4.7
KMI				PP	PP	05 38 20.8	+1.8
KMI				PPP	PPP	05 38 35.1	+2.5
KMI				S	**S**	**05 42 13.3**	**+0.2**
KMI				XS		05 42 37.0	
KMI				SS	SS	05 43 49.8	+0.8
KMI				SSS	SSS	05 44 11.1	+1.0
KMI				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.8						
KMI				AMB	AMB		
	comp=Z,390nm,5.7s						
KMI				LR	LR		
	comp=N,2µm,17.9s						
KMI				LR	LR		
	comp=E,5µm,23.1s						
KMI				LR	LR		
	comp=Z,8µm,21.2s,MS5.3						
KMI	**Kunming**	**29.67**	**313**	P	**P**	**05 37 23.1**	**+1.5**
	comp=Z,21nm,1.0s,mb4.8						
KMI				pP	pP	05 37 36.8	+3.9
KMI				sP	sP	05 37 42.9	+4.7
KMI				PP	PP	05 38 20.8	+1.8
KMI				S	**S**	**05 42 13.3**	**+0.2**
KMI				sS		05 42 37.0	
KMI				SS	SS	05 43 49.8	+0.8
KMI				LR	LR		
	comp=Z,8µm,21.2s,MS5.3						
CHG	**Chiang Mai**	**29.69**	**298**	P	**P**	**05 37 21.9**	**0.0**
	comp=Z,34nm,0.8s,mb5.1						
JHJ	**Hachijo jima 2**	**29.79**	**23**	LR	LR	05 47 33.5	
	comp=Z,8µm,21.2s,MS5.3,baz=244,slow=33						
TIA	**Tai’an**	**31.35**	**345**	⇓P	**P**	**05 37 35.3**	**-1.1**
TIA				*e*S	**S**	**05 42 36.5**	**-2.9**
TIA				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.5						
TIA				LR	LR		
	comp=N,2µm,17.0s,MS5.0						
TIA				LR	LR		
	comp=E,2µm,16.0s,MS5.0						
TIA	**Tai’an**	**31.35**	**345**	⇓P	**P**	**05 37 35.3**	**-1.1**
	comp=E,90nm,1.0s,mb5.5						
TIA				*e*S	**S**	**05 42 36.5**	**-2.9**
KS15	**Wonju Array Si**	**31.42**	**2**	*e*P	**P**	**05 37 38.5**	**+1.6**
MAT	**Matsushiro**	**32.34**	**18**	P	**P**	**05 37 45.5**	**+0.4**
MAT				S	**S**	**05 43 00.0**	**+5.0**
MAT	**Matsushiro**	**32.34**	**18**	P	**P**	**05 37 46.0**	**+0.9**
	comp=E,10nm,0.9s,mb4.7						
MAT				*e*S	**S**	**05 43 00.0**	**+5.0**
MAT				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
MAT	**Matsushiro**	**32.34**	**18**	P	**P**	**05 37 46.0**	**+0.9**
MAT				*e*S	**S**	**05 43 00.0**	**+5.0**
MAT				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.7						
MAT				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.1						
MJAR	**Matsushiro Arr**	**32.34**	**18**	P	**P**	**05 37 42.8**	**-2.4**
	comp=Z,1.0nm,0.4s,baz=48,slow=31,SNR=6.5						
MJAR				ScP		05 44 13.2	
	comp=Z,5.8nm,1.0s,baz=218,slow=3.0,SNR=6.6						
MJAR				LR	LR	05 51 03.2	
	comp=Z,3µm,18.1s,MS5.0,baz=205,slow=37						
XAN	**Xi’an**	**32.36**	**332**	P	**P**	**05 37 44.0**	**-1.2**
XAN				AP	pP	05 37 58.0	+1.3
XAN				S	**S**	**05 42 56.0**	**+0.8**
XAN				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.5						
XAN				LR	LR		
	comp=N,290nm,11.8s,MS4.3						
XAN				LR	LR		
	comp=E,230nm,10.9s,MS4.3						
XAN				LR	LR		
	comp=Z,260nm,9.8s						
XAN	**Xi’an**	**32.36**	**332**	P	**P**	**05 37 44.0**	**-1.2**
	comp=Z,97nm,1.0s,mb5.6						
XAN				pP	pP	05 37 58.0	+1.3
XAN				S	**S**	**05 42 56.0**	**+0.8**
CTA	**Charters Tower**	**32.36**	**143**	*e*P	**P**	**05 37 45.6**	**+0.2**
	comp=Z,25nm,0.8s,mb5.1						
CTA				*e*S	**S**	**05 42 49.9**	**-5.6**
CTA	**Charters Tower**	**32.36**	**143**	P	**P**	**05 37 45.7**	**+0.2**
	comp=Z,18nm,0.9s,mb4.9,baz=317,slow=10,SNR=17						
CTA	**Charters Tower**	**32.36**	**143**	*e*P	**P**	**05 37 45.6**	**+0.2**
CTA				*e*S	**S**	**05 42 49.9**	**-5.6**
CTA				pmax	pmax		
	comp=Z,25nm,0.8s						
CTAO	**Charters Tower**	**32.36**	**143**	*e*P	**P**	**05 37 45.6**	**+0.1**
	comp=Z,38nm,0.8s,mb5.3						
CTAO				*e*PcP	PcP	05 40 32.9	+0.3
CTAO	**Charters Tower**	**32.36**	**143**	*e*P	**P**	**05 37 45.6**	**+0.2**
CTAO				*e*		05 40 32.9	
CTAO				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.3						
CD2	**Chengdu**	**32.73**	**322**	P	**P**	**05 37 48.8**	**+0.2**
CD2				XP	sP	05 38 11.5	+6.2
CD2				PP	PP	05 38 59.4	+0.7
CD2				PPP	PPP	05 39 12.8	-1.7
CD2				S	**S**	**05 42 56.0**	**-5.1**
CD2				SS	SS	05 44 57.4	-3.3
CD2				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.4						
CD2				LR	LR		
	comp=E,2µm,18.0s						
CD2				LR	LR		
	comp=Z,4µm,18.6s,MS5.1						
CD2	**Chengdu**	**32.73**	**322**	P	**P**	**05 37 48.8**	**+0.2**
	comp=Z,40nm,0.8s,mb5.4						
CD2				sP	sP	05 38 11.5	+6.2
CD2				PP	PP	05 38 59.4	+0.7
CD2				S	**S**	**05 42 56.0**	**-5.1**
CD2				SS	SS	05 44 57.4	-3.3
CD2				LR	LR		
	comp=Z,4µm,18.6s,MS5.1						
DL2	**Dalian**	**33.14**	**353**	⇑*i*P	**P**	**05 37 53.3**	**+1.3**
DL2				XP	sP	05 38 15.1	+6.3
DL2				PPP	PPP	05 39 29.8	+10
DL2				S	**S**	**05 43 09.9**	**+2.6**
DL2				XS		05 43 35.6	
DL2				SSS	SSS	05 45 35.6	+1.0
DL2				AMB	AMB		
	comp=Z,60nm,1.0s,mb5.5						
DL2				AMB	AMB		
	comp=Z,370nm,5.9s						
DL2				LR	LR		
	comp=N,800nm,15.9s,MS4.9						
DL2				LR	LR		
	comp=E,2µm,18.8s,MS4.9						
DL2				LR	LR		
	comp=Z,2µm,19.3s,MS4.8						
DL2	**Dalian**	**33.14**	**353**	⇑*i*P	**P**	**05 37 53.3**	**+1.3**
	comp=Z,60nm,1.0s,mb5.5						
DL2				sP	sP	05 38 15.1	+6.3
DL2				S	**S**	**05 43 09.9**	**+2.6**
DL2				sS		05 43 35.6	
DL2				LR	LR		
	comp=Z,2µm,19.3s,MS4.8						
TIY	**Taiyuan**	**34.13**	**340**	*e*P	**P**	**05 38 00.0**	**-0.5**
TIY				S	**S**	**05 43 21.0**	**-1.7**
TIY				LR	LR		
	comp=N,3µm,16.0s						
SNY	**Shenyang**	**35.86**	**356**	⇑P	**P**	**05 38 14.6**	**-0.7**
SNY				S	**S**	**05 43 47.3**	**-2.1**
SNY				AMB	AMB		
	comp=Z,110nm,0.9s,mb5.8						
SNY				LR	LR		
	comp=N,2µm,16.5s,MS5.2						
SNY				LR	LR		
	comp=E,3µm,20.1s,MS5.2						
SNY				LR	LR		
	comp=Z,2µm,19.5s,MS5.0						
SNY	**Shenyang**	**35.86**	**356**	⇑P	**P**	**05 38 14.6**	**-0.7**
	comp=Z,110nm,0.9s,mb5.8						
SNY				S	**S**	**05 43 47.3**	**-2.1**
SNY				LR	LR		
	comp=Z,2µm,19.5s,MS5.0						
LZH	**Lanzhou**	**36.49**	**328**	⇓P	**P**	**05 38 22.4**	**+1.7**
LZH				AP	pP	05 38 32.5	+0.3
LZH				PP	PP	05 39 43.6	-1.8
LZH				S	**S**	**05 43 55.0**	**-4.2**
LZH				AMB	AMB		
	comp=Z,150nm,1.5s,mb5.7						
LZH				AMB	AMB		
	comp=Z,390nm,5.6s						
LZH				LR	LR		
	comp=E,4µm,12.9s						
LZH				LR	LR		
	comp=Z,6µm,17.0s,MS5.5						
LZH	**Lanzhou**	**36.49**	**328**	⇓P	**P**	**05 38 22.4**	**+1.7**
	comp=Z,150nm,1.5s,mb5.7						
LZH				pP	pP	05 38 32.5	+0.3
LZH				PP	PP	05 39 43.6	-1.8
LZH				S	**S**	**05 43 55.0**	**-4.2**
LZH				LR	LR		
	comp=Z,6µm,17.0s,MS5.5						
FORT	**Forrest**	**36.51**	**178**	*e*P	**P**	**05 38 21.1**	**+0.3**
	comp=Z,150nm,0.9s,mb5.8						
HNR	**Honiara**	**36.71**	**114**	LR	LR	05 51 41.3	
	comp=Z,3µm,20.7s,MS5.0,baz=122,slow=33						
HHC	**Hu-ho-hao-te**	**37.25**	**341**	*e*P	**P**	**05 38 27.5**	**+0.5**
HHC				AP	pP	05 38 39.4	+0.9
HHC				PP	PP	05 39 57.3	+2.5
HHC				PCP	PcP	05 40 44.0	-2.4
HHC				S	**S**	**05 44 16.3**	**+5.6**
HHC				SCP		05 44 25.8	
HHC				PCS		05 44 31.8	
HHC				XS		05 44 35.4	
HHC				SCS	ScS	05 48 35.3	0.0
HHC				AMB	AMB		
	comp=Z,50nm,1.3s,mb5.2						
HHC				AMB	AMB		
	comp=Z,1µm,6.0s						
HHC				LR	LR		
	comp=N,3µm,19.2s						
HHC				LR	LR		
	comp=E,2µm,25.2s						
HHC				LR	LR		
	comp=Z,3µm,21.6s,MS5.0						
HHC	**Hu-ho-hao-te**	**37.25**	**341**	*e*P	**P**	**05 38 27.5**	**+0.5**
	comp=Z,51nm,1.3s,mb5.2						
HHC				pP	pP	05 38 39.4	+0.9
HHC				PP	PP	05 39 57.3	+2.5
HHC				PcP	PcP	05 40 44.0	-2.4
HHC				S	**S**	**05 44 16.3**	**+5.6**
HHC				ScP		05 44 25.8	
HHC				PcS		05 44 31.8	
HHC				sS		05 44 35.4	
HHC				ScS	ScS	05 48 35.3	0.0
HHC				LR	LR		
	comp=Z,3µm,21.6s,MS5.0						
BTO	**Baotou**	**37.55**	**339**	*e*P	**P**	**05 38 30.4**	**+0.9**
BTO				AMB	AMB		
	comp=Z,50nm,2.0s,mb4.9						
BTO	**Baotou**	**37.55**	**339**	*e*P	**P**	**05 38 30.4**	**+0.9**
	comp=Z,52nm,2.0s,mb4.9						
CN2	**Changchun**	**37.75**	**359**	*e*P	**P**	**05 38 33.0**	**+1.9**
CN2				*e*XP	sP	05 38 55.8	+7.9
CN2				*e*PP	PP	05 40 04.1	+3.4
CN2				PCP	PcP	05 40 49.4	+1.4
CN2				*e*S	**S**	**05 44 19.3**	**+1.0**
CN2				*e*SS	SS	05 46 58.0	+3.2
CN2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.8						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,22.0s,MS5.0						
CN2				LR	LR		
	comp=E,2µm,22.0s,MS5.0						
CN2				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
CN2	**Changchun**	**37.75**	**359**	*e*P	**P**	**05 38 33.0**	**+1.9**
	comp=Z,20nm,0.9s,mb4.8						
CN2				*e*sP	sP	05 38 55.8	+7.9
CN2				*e*PP	PP	05 40 04.1	+3.4
CN2				PcP	PcP	05 40 49.4	+1.4
CN2				*e*S	**S**	**05 44 19.3**	**+1.0**
CN2				*e*SS	SS	05 46 58.0	+3.2
CN2				LR	LR		
	comp=Z,2µm,21.0s,MS4.9						
KLBR	**Kellerberrin**	**38.20**	**192**	*e*P	**P**	**05 38 34.7**	**-0.2**
	comp=Z,104nm,1.1s,mb5.5						
SHL	**Shillong**	**38.38**	**304**	*e*P	**P**	**05 38 36.0**	**-0.5**
SHL				*e*S	**S**	**05 44 31.0**	**+3.0**
MDJ	**Mudanjiang**	**38.66**	**4**	P	**P**	**05 38 41.5**	**+2.9**
MDJ				AP	pP	05 38 54.3	+4.1
MDJ				XP	sP	05 39 00.5	+5.1
MDJ				PP	PP	05 40 09.0	-2.3
MDJ				PCP	PcP	05 40 52.1	+1.4
MDJ				S	**S**	**05 44 31.4**	**-0.7**
MDJ				XS		05 44 56.8	
MDJ				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
MDJ				AMB	AMB		
	comp=Z,590nm,5.0s						
MDJ				LR	LR		
	comp=N,2µm,22.5s,MS5.1						
MDJ				LR	LR		
	comp=E,2µm,19.9s,MS5.1						
MDJ				LR	LR		
	comp=Z,3µm,23.2s,MS5.1						
MDJ	**Mudanjiang**	**38.66**	**4**	P	**P**	**05 38 41.5**	**+2.9**
	comp=Z,38nm,1.1s,mb5.0						
MDJ				pP	pP	05 38 54.3	+4.1
MDJ				sP	sP	05 39 00.5	+5.1
MDJ				PP	PP	05 40 09.0	-2.3
MDJ				PcP	PcP	05 40 52.1	+1.4
MDJ				S	**S**	**05 44 31.4**	**-0.7**
MDJ				sS		05 44 56.8	
MDJ				LR	LR		
	comp=Z,3µm,23.2s,MS5.1						
MUN	**Mundaring**	**38.91**	**194**	*e*P	**P**	**05 38 40.1**	**-0.8**
NWAO	**Narrogin (SRO)**	**39.59**	**192**	P	**P**	**05 38 46.3**	**-0.3**
	comp=Z,28nm,0.5s,mb5.3,baz=24,slow=9.3,SNR=36						
NWAO	**Narrogin (SRO)**	**39.59**	**192**	*e*P	**P**	**05 38 45.8**	**-0.8**
	comp=Z,147nm,0.9s,mb5.7						
NWAO	**Narrogin (SRO)**	**39.59**	**192**	P	**P**	**05 38 46.3**	**-0.3**
NWAO				pmax	pmax		
	comp=Z,150nm,1.0s						
STKA	**Stephens Creek**	**40.26**	**160**	⇑*i*P	**P**	**05 38 52.1**	**0.0**
	comp=Z,70nm,0.6s,mb5.6						
STKA				*e*S	**S**	**05 44 54.8**	**-1.5**
STKA	**Stephens Creek**	**40.26**	**160**	P	**P**	**05 38 52.2**	**+0.1**
	comp=Z,116nm,0.8s,mb5.7,baz=335,slow=9.2,SNR=103						
STKA				PcP	PcP	05 40 56.4	+0.4
	comp=Z,41nm,0.6s,baz=339,slow=9.8,SNR=4.3						
CAL	**Calcutta**	**40.30**	**298**	*e*P	**P**	**05 38 53.2**	**+0.7**
CAL				*e*x	x	05 44 38.8	
ASAJ	**Asahikawa**	**40.62**	**18**	P	**P**	**05 38 56.0**	**+1.1**
	comp=Z,16nm,0.7s,mb4.8,baz=198,slow=3.2,SNR=4.0						
LSA	**Lhasa**	**40.80**	**310**	P	**P**	**05 38 57.4**	**+0.8**
LSA				S	**S**	**05 44 55.3**	**-9.1**
LSA				AMB	AMB		
	comp=Z,220nm,5.7s						
LSA				LR	LR		
	comp=N,1µm,21.6s,MS5.0						
LSA				LR	LR		
	comp=E,2µm,21.6s,MS5.0						
LSA				LR	LR		
	comp=Z,2µm,20.4s,MS5.1						
LSA	**Lhasa**	**40.80**	**310**	*e*P	**P**	**05 38 58.5**	**+1.9**
LSA				pmax	pmax		
	comp=Z,65nm,1.1s,mb5.2						
GTA	**Gaotai**	**41.09**	**328**	*e*P	**P**	**05 38 58.5**	**-0.4**
GTA				AP	pP	05 39 14.0	+3.5
GTA				XP	sP	05 39 21.3	+5.6
GTA				PP	PP	05 40 35.9	-1.0
GTA				PCP	PcP	05 41 01.9	+3.3
GTA				PPP	PPP	05 41 03.4	-3.8
GTA				PCS		05 44 52.3	
GTA				S	**S**	**05 45 04.6**	**-4.0**
GTA				XS		05 45 30.8	
GTA				SS	SS	05 48 09.8	+2.1
GTA				SCS	ScS	05 48 57.9	+0.3
GTA				AMB	AMB		
	comp=Z,760nm,7.3s						
GTA				LR	LR		
	comp=N,3µm,24.1s,MS5.2						
GTA				LR	LR		
	comp=E,3µm,27.1s,MS5.2						
GTA				LR	LR		
	comp=Z,5µm,29.4s,MS5.2						
GTA	**Gaotai**	**41.09**	**328**	*e*P	**P**	**05 38 58.5**	**-0.4**
	comp=Z,8.0nm,1.2s						
GTA				pP	pP	05 39 14.0	+3.5
GTA				sP	sP	05 39 21.3	+5.6
GTA				PP	PP	05 40 35.9	-1.0
GTA				PcP	PcP	05 41 01.9	+3.3
GTA				PcS		05 44 52.3	
GTA				S	**S**	**05 45 04.6**	**-4.0**
GTA				sS		05 45 30.8	
GTA				SS	SS	05 48 09.8	+2.1
GTA				ScS	ScS	05 48 57.9	+0.3
GTA				LR	LR		
	comp=Z,5µm,29.4s,MS5.2						
ADE	**Adelaide**	**42.27**	**165**	⇑*i*P	**P**	**05 39 09.8**	**+1.1**
BOK	**Bokaro**	**42.82**	**299**	*e*P	**P**	**05 39 12.8**	**-0.6**
YSS	**Yuzh-Sakhalins**	**43.24**	**16**	P	**P**	**05 39 20.0**	**+3.5**
YSS				*e*		05 39 26.0	
YSS				*e*S	**S**	**05 45 39.0**	**-1.1**
YSS				*e*SSS	SS	05 49 13.0	+26
YSS				MLR	MLR		
	comp=Z,1µm,17.0s,MS4.9						
YSS				MLR	MLR		
	comp=N,2µm,18.0s						
KLR	**Kul’dur**	**43.41**	**5**	*e*P	**P**	**05 39 18.5**	**+0.7**
KLR				*e*S	**S**	**05 45 41.5**	**-1.0**
KLR				*e*		05 49 16.0	
KLR				pmax	pmax		
	comp=N,900nm,9.0s						
KLR				pmax	pmax		
	comp=Z,1µm,9.0s						
KLR				smax			
	comp=N,3µm,19.0s						
KLR				smax			
	comp=E,1µm,19.0s						
KLR				MLR	MLR		
	comp=E,1µm,13.0s						
KLR				MLR	MLR		
	comp=Z,3µm,13.0s,MS5.4						
ARMA	**Armidale**	**43.45**	**148**	*e*P	**P**	**05 39 19.8**	**+1.5**
HIA	**Hailar**	**43.58**	**354**	*e*P	**P**	**05 39 20.0**	**+0.8**
	comp=Z,78nm,1.3s,mb5.3						
HIA				*e*PcP	PcP	05 41 08.1	+1.3
HIA	**Hailar**	**43.58**	**354**	*e*P	**P**	**05 39 20.0**	**+0.9**
HIA				*e*		05 41 08.1	
HIA				pmax	pmax		
	comp=Z,78nm,1.3s						
VIS	**Vishakhapatnam**	**43.68**	**289**	*e*P	**P**	**05 39 19.3**	**-1.0**
VIS				AMb	AMB	05 39 41.4	
	comp=Z,66nm,0.8s,mb5.4						
JIRN	**Jiri**	**43.88**	**304**	*e*P	**P**	**05 39 21.4**	**-0.5**
	comp=Z,152nm,1.0s,mb5.7						
GUN	**Gumba**	**44.23**	**304**	*e*P	**P**	**05 39 24.6**	**-0.1**
	comp=Z,114nm,0.7s,mb5.7						
PKI	**Pulchoki**	**44.49**	**304**	*e*P	**P**	**05 39 27.5**	**+0.7**
KKN	**Kakani**	**44.68**	**304**	*e*P	**P**	**05 39 28.4**	**+0.1**
	comp=Z,45nm,0.6s,mb5.4						
DMN	**Daman**	**44.76**	**304**	*e*P	**P**	**05 39 29.0**	**+0.1**
	comp=Z,116nm,1.0s,mb5.7						
ULN	**Ulaanbaatar**	**44.97**	**342**	*e*P	**P**	**05 39 29.8**	**-0.5**
	comp=Z,83nm,1.1s,mb5.5						
ULN	**Ulaanbaatar**	**44.97**	**342**	*e*P	**P**	**05 39 29.8**	**-0.5**
ULN				pmax	pmax		
	comp=Z,83nm,1.1s,mb5.5						
SONM	**Songino Array**	**45.15**	**341**	P	**P**	**05 39 30.7**	**-1.1**
	comp=Z,21nm,1.1s,mb4.9,baz=160,slow=7.8,SNR=35						
SONM				PcP	PcP	05 41 12.6	+0.4
	comp=Z,15nm,0.9s,baz=154,slow=3.2,SNR=4.4						
SONM				ScP		05 45 04.4	
	comp=Z,4.4nm,1.0s,baz=180,slow=4.3,SNR=4.1						
SONM				LR	LR	06 00 17.6	
	comp=Z,3µm,21.3s,MS5.2,baz=161,slow=39						
GKN	**Gorkha**	**45.29**	**304**	*e*P	**P**	**05 39 32.9**	**-0.3**
KOLN	**Koldanda**	**46.06**	**303**	*e*P	**P**	**05 39 39.6**	**+0.3**
	comp=Z,79nm,0.7s,mb5.8						
CNB	**Canberra Magne**	**46.34**	**154**	*e*P	**P**	**05 39 42.0**	**+0.6**
	comp=Z,61nm,0.9s,mb5.5						
TOO	**Toolangi**	**46.76**	**159**	*e*P	**P**	**05 39 45.8**	**+1.1**
	comp=Z,29nm,0.6s,mb5.4						
TOO	**Toolangi**	**46.76**	**159**	*e*P	**P**	**05 39 45.8**	**+1.1**
TOO				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.4						
ALBI	**Allahabad**	**46.82**	**299**	*e*P	**P**	**05 39 44.5**	**-0.8**
CIT	**Chita**	**47.19**	**349**	*e*P	**P**	**05 39 50.0**	**+2.2**
	comp=Z,288nm,2.6s,mb5.7						
CIT	**Chita**	**47.19**	**349**	*e*P	**P**	**05 39 50.0**	**+2.2**
CIT				pmax	pmax		
	comp=Z,288nm,2.6s,mb5.7						
DZM	**Mont Dzumac**	**48.05**	**127**	*e*P	**P**	**05 39 54.5**	**-0.4**
DZM	**Mont Dzumac**	**48.05**	**127**	P	**P**	**05 39 55.2**	**+0.3**
	comp=Z,15nm,0.6s,mb5.2,baz=254,slow=8.6,SNR=20						
DZM				LR	LR	05 58 10.9	
	comp=Z,6µm,21.6s,MS5.5,baz=297,slow=34						
DZM	**Mont Dzumac**	**48.05**	**127**	*e*P	**P**	**05 39 54.5**	**-0.5**
HYB	**Hyderabad**	**48.13**	**288**	*i* P	**P**	**05 39 55.0**	**-0.7**
HYB				*e*S	**S**	**05 46 48.0**	**-2.4**
HYB	**Hyderabad**	**48.13**	**288**	*e*P	**P**	**05 39 55.0**	**-0.7**
HYB				*e*S	**S**	**05 46 48.0**	**-2.4**
ZAK	**Zakamensk**	**48.38**	**340**	*e*P	**P**	**05 39 58.1**	**+0.9**
	comp=Z,8.0nm,1.4s,mb4.6						
ZAK				*e*		05 41 22.4	
ZAK	**Zakamensk**	**48.38**	**340**	*e*P	**P**	**05 39 58.1**	**+0.9**
ZAK				*e*		05 41 22.4	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.6						
ZAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
TRD	**Trivandrum**	**49.12**	**276**	*e*x	x	05 46 58.1	
IRK	**Irkutsk**	**49.68**	**342**	*e*P	**P**	**05 40 08.5**	**+1.4**
	comp=Z,168nm,2.4s,mb5.7						
IRK	**Irkutsk**	**49.68**	**342**	*e*P	**P**	**05 40 08.5**	**+1.4**
IRK				pmax	pmax		
	comp=Z,168nm,2.4s,mb5.7						
AKL	**Akola**	**50.07**	**292**	⇓*i*x	x	05 38 48.0	
BHPL	**Bhopal**	**50.18**	**295**	*e*P	**P**	**05 40 10.3**	**-1.1**
BHPL				AMb	AMB	05 40 13.7	
	comp=Z,28nm,0.7s,mb5.4						
MOY	**Mondy**	**50.25**	**340**	*e*P	**P**	**05 40 13.0**	**+1.5**
	comp=Z,274nm,2.8s,mb5.8						
MOY	**Mondy**	**50.25**	**340**	*e*P	**P**	**05 40 13.0**	**+1.5**
MOY				pmax	pmax		
	comp=Z,274nm,2.8s,mb5.8						
WMQ	**Urumqi**	**50.79**	**324**	*e*P	**P**	**05 40 16.3**	**+0.6**
WMQ				AP	pP	05 40 31.0	+3.5
WMQ				XP	sP	05 40 38.0	+5.5
WMQ				PP	PP	05 42 14.0	+1.2
WMQ				PPP	PPP	05 43 14.5	+2.3
WMQ				S	**S**	**05 47 27.0**	**0.0**
WMQ				XS		05 47 54.0	
WMQ				SS	SS	05 51 00.0	+0.6
WMQ				AMB	AMB		
	comp=Z,40nm,1.3s,mb5.2						
WMQ				AMB	AMB		
	comp=Z,400nm,5.2s						
WMQ				LR	LR		
	comp=N,8µm,30.4s,MS5.6						
WMQ				LR	LR		
	comp=E,4µm,28.8s,MS5.6						
WMQ				LR	LR		
	comp=Z,5µm,26.6s,MS5.4						
WMQ	**Urumqi**	**50.79**	**324**	*e*P	**P**	**05 40 16.3**	**+0.6**
	comp=Z,41nm,1.3s,mb5.2						
WMQ				pP	pP	05 40 31.0	+3.5
WMQ				sP	sP	05 40 38.0	+5.5

WMQ				PP	PP	05 42 14.0	+1.2
WMQ				S	**S**	**05 47 27.0**	**0.0**
WMQ				sS		05 47 54.0	
WMQ				SS	SS	05 51 00.0	+0.6
WMQ				LR	LR		
	comp=Z,5µm,26.6s,MS5.4						
CLNS	**Chul’man**	**50.81**	**359**	*e*P	**P**	**05 40 14.5**	**-1.2**
MNGI	**Mangalore**	**51.31**	**282**	*e*x	x	05 40 31.8	
MNGI				*e*S	**S**	**05 47 38.2**	**+3.6**
NDI	**New Delhi**	**51.70**	**302**	*e*P	**P**	**05 40 21.0**	**-1.8**
KAD	**Karad**	**52.26**	**287**	*e*P	**P**	**05 40 26.8**	**-0.3**
KAD				AMb	AMB	05 40 38.4	
	comp=Z,33nm,0.6s,mb5.4						
SMLA	**Simla**	**52.46**	**305**	*e*P	**P**	**05 40 25.1**	**-3.3**
BOD	**Bodaibo**	**52.68**	**352**	*e*P	**P**	**05 40 29.5**	**-0.2**
	comp=Z,73nm,1.4s,mb5.4						
BOD	**Bodaibo**	**52.68**	**352**	*e*P	**P**	**05 40 29.5**	**-0.2**
BOD				pmax	pmax		
	comp=Z,73nm,1.4s,mb5.4						
POO	**Poona**	**52.71**	**289**	*e*P	**P**	**05 40 29.9**	**-0.6**
POO				*e*P		05 40 31.0	
POO	**Poona**	**52.71**	**289**	*e*P	**P**	**05 40 31.0**	**+0.5**
BHK	**Bhakra**	**53.16**	**305**	*e*x	x	05 40 43.3	
AJM	**Ajmer**	**53.35**	**299**	*e*P	**P**	**05 40 34.6**	**-0.6**
AJM				AMb	AMB	05 40 35.9	
	comp=Z,36nm,1.0s,mb5.3						
BOM	**Bombay**	**53.73**	**289**	*e*P	**P**	**05 40 37.5**	**-0.5**
	comp=Z,422nm,4.7s						
BOM				*e*x	x	05 48 09.3	
PET	**Petropavlovsk**	**53.86**	**24**	⇑*i*P	**P**	**05 40 38.7**	**+0.2**
	comp=Z,73nm,1.2s,mb5.5						
PET				*e*		05 41 43.7	
PET				*e*		05 42 40.7	
PET				*i* S	**S**	**05 48 11.7**	**+2.8**
PET				LR	LR		
	comp=Z,1µm,17.0s,MS5.1						
PET	**Petropavlovsk**	**53.86**	**24**	*c i*P	**P**	**05 40 38.7**	**+0.2**
PET				*e*		05 41 43.7	
PET				*e*		05 42 40.7	
PET				*i* S	**S**	**05 48 11.7**	**+2.8**
PET				pmax	pmax		
	comp=Z,1µm,22.9s						
PET				pmax	pmax		
	comp=Z,73nm,1.2s,mb5.5						
PET				pmax	pmax		
	comp=Z,200nm,14.5s						
PET				pmax	pmax		
	comp=Z,200nm,14.2s						
PET				smax			
	comp=N,1µm,23.0s						
PET				smax			
	comp=E,700nm,28.0s						
PET				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.1						
DLH	**Dalhousie**	**53.87**	**306**	*e*P	**P**	**05 40 41.0**	**+2.1**
MKAR	**Makanchi Array**	**55.61**	**325**	P	**P**	**05 40 50.0**	**-1.4**
	comp=Z,6.4nm,0.5s,mb4.9,baz=117,slow=6.8,SNR=48						
MKAR				LR	LR	06 07 31.8	
	comp=Z,4µm,19.3s,MS5.5,baz=100,slow=39						
MKAR	**Makanchi Array**	**55.61**	**325**	P	**P**	**05 40 50.0**	**-1.4**
YAK	**Yakutsk**	**56.06**	**2**	*e*P	**P**	**05 40 53.3**	**-1.1**
	comp=Z,58nm,1.0s,mb5.6						
YAK				*e*pP	pP	05 41 03.3	-3.1
YAK				*e*		05 41 55.0	
YAK				*e*		05 42 56.4	
YAK				*e*S	**S**	**05 48 34.2**	**-4.0**
YAK				*e*		05 50 39.8	
YAK				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
YAK	**Yakutsk**	**56.06**	**2**	*e*P	**P**	**05 40 53.3**	**-1.1**
YAK				e*PP	pP	05 41 03.3	-3.1
YAK				*e*		05 41 55.0	
YAK				*e*		05 42 56.4	
YAK				*e*S	**S**	**05 48 34.2**	**-4.0**
YAK				*e*		05 50 39.8	
YAK				pmax	pmax		
	comp=Z,58nm,1.0s,mb5.6						
YAK				pmax	pmax		
	comp=N,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				smax			
	comp=N,10.0nm,1.6s						
YAK				smax			
	comp=E,3.0nm,1.1s						
YAK				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.1						
YAK				MLR	MLR		
	comp=N,1µm,19.0s,MS5.2						
YAK				MLR	MLR		
	comp=E,618nm,15.0s,MS5.2						
KSH	**Kashi**	**56.31**	**314**	*e*P	**P**	**05 40 57.0**	**+0.5**
KSH				*e*AP	pP	05 41 12.0	+3.5
KSH				*e*XP	sP	05 41 19.3	+5.9
KSH				*e*PCP	PcP	05 41 54.3	+0.9
KSH				*e*PP	PP	05 43 03.3	-0.3
KSH				*e*PPP	PPP	05 44 20.3	-0.6
KSH				*e*SCP		05 45 46.3	
KSH				*e*PCS		05 45 53.5	
KSH				*e*S	**S**	**05 48 38.0**	**-3.9**
KSH				*e*PS	PS	05 48 59.1	-0.7
KSH				*e*XS		05 49 06.1	
KSH				*e*SCS	ScS	05 50 37.0	-1.5
KSH				*e*SS	SS	05 52 25.3	-4.1
KSH				AMB	AMB		
	comp=Z,360nm,3.3s						
KSH				LR	LR		
	comp=N,1µm,5.8s						
KSH				LR	LR		
	comp=E,2µm,7.2s						
KSH	**Kashi**	**56.31**	**314**	*e*P	**P**	**05 40 57.0**	**+0.5**
KSH				*e*pP	pP	05 41 12.0	+3.5
KSH				*e*sP	sP	05 41 19.3	+5.9
KSH				*e*PcP	PcP	05 41 54.3	+0.9
KSH				*e*PP	PP	05 43 03.3	-0.3
KSH				*e*ScP		05 45 46.3	
KSH				*e*PcS		05 45 53.5	
KSH				*e*S	**S**	**05 48 38.0**	**-3.9**
KSH				*e*sS		05 49 06.1	
KSH				*e*ScS	ScS	05 50 37.0	-1.5
KSH				*e*SS	SS	05 52 25.3	-4.1
MA2	**Magadan**	**56.68**	**15**	*e*P	**P**	**05 41 00.1**	**+1.2**
MA2				*e*S	**S**	**05 48 47.4**	**+0.9**
MA2				*e*PS	PS	05 49 08.8	+4.1
MA2				*e*		05 50 45.2	
MA2				LR	LR		
	comp=Z,4µm,23.0s,MS5.5						
BHJ	**Bhuj**	**57.22**	**294**	*e*P	**P**	**05 41 03.2**	**0.0**
BHJ				*e*x	x	05 41 04.7	
BHJ				AMb	AMB	05 41 04.8	
	comp=Z,62nm,0.9s,mb5.6						
KZA	**Kyzart**	**57.82**	**317**	P	**P**	**05 41 07.8**	**+0.6**
	SNR=8.8						
TKM2	**Tokmak 2**	**57.93**	**318**	P	**P**	**05 41 06.8**	**-1.1**
	SNR=7.3						
UCH	**Uchtor**	**58.39**	**317**	P	**P**	**05 41 11.0**	**-0.1**
	SNR=19						
CHMS	**Chumysh**	**58.53**	**318**	P	**P**	**05 41 11.0**	**-1.1**
	SNR=5.8						
FRU	**Bishkek**	**58.56**	**317**	*e*P	**P**	**05 41 11.0**	**-1.3**
FRU				*e*	pP	05 41 24.0	-0.4
FRU				MLR	MLR		
	comp=E,3µm,23.0s						
FRU				MLR	MLR		
	comp=Z,4µm,23.0s,MS5.5						
FRU				MLR	MLR		
	comp=E,2µm,18.0s						
FRU				MLR	MLR		
	comp=Z,2µm,18.0s						
USP	**Ospenovka**	**58.81**	**318**	P	**P**	**05 41 12.7**	**-1.3**
	SNR=9.5						
AML	**Almayashu**	**58.91**	**316**	P	**P**	**05 41 15.9**	**+1.1**
	SNR=6.2						
EKS2	**Erkin-Say**	**59.06**	**317**	P	**P**	**05 41 14.9**	**-0.9**
	SNR=8.0						
KURK	**Kurchatov**	**59.76**	**327**	*e*P	**P**	**05 41 18.9**	**-1.6**
KURK				e*PP	pP	05 41 30.6	-2.0
KURK				pmax	pmax		
	comp=Z,209nm,1.1s,mb6.1						
NVS	**Novosibirsk**	**59.81**	**333**	*e*P	**P**	**05 41 19.6**	**-1.2**
	comp=Z,59nm,1.1s,mb5.5						
NVS				*e*	pP	05 41 30.0	-2.9
NVS				*e*S	**S**	**05 49 31.8**	**+4.4**
NVS	**Novosibirsk**	**59.81**	**333**	*e*P	**P**	**05 41 19.6**	**-1.2**
NVS				*e*	pP	05 41 30.0	-2.9
NVS				*e*S	**S**	**05 49 31.8**	**+4.4**
NVS				pmax	pmax		
	comp=Z,59nm,1.1s,mb5.5						
NVS				pmax	pmax		
	comp=E,36nm,1.2s						
NVS				smax			
	comp=N,134nm,2.4s						
SEY	**Seymchan**	**59.99**	**13**	⇑*i*P	**P**	**05 41 20.9**	**-1.1**
FX1	**Attu Island--F**	**60.36**	**31**	*e*P	**P**	**05 41 25.4**	**+0.8**
KKAR	**Karatay Array**	**61.45**	**316**	*i* P	**P**	**05 41 30.2**	**-1.9**
	comp=N,11nm,0.6s,mb5.2						
KKAR	**Karatay Array**	**61.45**	**316**	*i* P	**P**	**05 41 30.2**	**-1.9**
KKAR				pmax	pmax		
	comp=Z,11nm,0.6s,mb5.2						
RPZ	**Rata Peaks**	**63.71**	**145**	LR	LR	06 11 28.0	
	comp=Z,2µm,19.7s,MS5.2,baz=261,slow=38						
URZ	**Urewera**	**64.33**	**137**	LR	LR	06 08 37.6	
	comp=Z,2µm,19.9s,MS5.3,baz=133,slow=35						
AFI	**Afiamalu**	**64.40**	**108**	LR	LR	06 06 28.6	
	comp=Z,2µm,21.8s,MS5.2,baz=281,slow=33						
BVA0	**Borovoye Array**	**65.35**	**327**	*i* P	**P**	**05 41 55.9**	**-1.7**
	comp=Z,21nm,1.2s,mb5.0						
BVA0	**Borovoye Array**	**65.35**	**327**	*i* P	**P**	**05 41 55.9**	**-1.7**
BVA0				pmax	pmax		
	comp=Z,21nm,1.2s,mb5.0						
BVAR	**Borovoye Array**	**65.35**	**327**	P	**P**	**05 41 55.8**	**-1.8**
	comp=Z,19nm,0.9s,mb5.1,baz=135,slow=8.9,SNR=30						
BVAR	**Borovoye Array**	**65.35**	**327**	P	**P**	**05 41 55.8**	**-1.8**
BRVK	**Borovoye**	**65.42**	**327**	*e*P	**P**	**05 41 56.3**	**-1.7**
	comp=Z,71nm,0.9s,mb5.7						
BRVK				*e*pP	pP	05 42 07.6	-2.7
BRVK	**Borovoye**	**65.42**	**327**	*e*P	**P**	**05 41 56.3**	**-1.7**
BRVK				e*PP	pP	05 42 07.6	-2.7
BRVK				pmax	pmax		
	comp=Z,71nm,0.9s,mb5.7						
TIXI	**Tiksi**	**65.68**	**1**	*e*P	**P**	**05 41 53.3**	**-6.2**
	comp=Z,61nm,1.0s,mb5.6						
TIXI				⇑*i*P		05 41 58.6	
TIXI				*e*		05 44 27.6	
TIXI				*e*S	S	05 50 34.0	-6.7
TIXI				*e*sS		05 50 56.6	
TIXI				LR	LR		
	comp=Z,1µm,17.0s,MS5.2						
TIXI	**Tiksi**	**65.68**	**1**	*e*P	**P**	**05 41 53.3**	**-6.2**
TIXI				*e*		05 44 27.6	
TIXI				*e*S	S	05 50 34.0	-6.7
TIXI				e*SS		05 50 56.6	
TIXI				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.6						
TIXI				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.2						
MCQ	**Macquarie Isla**	**66.03**	**160**	*e*P	**P**	**05 42 03.1**	**+1.2**
BILL	**Bilibino**	**67.54**	**15**	P	**P**	**05 42 10.7**	**-0.5**
	comp=Z,61nm,1.3s,mb5.5						
BILL	**Bilibino**	**67.54**	**15**	P	**P**	**05 42 10.7**	**-0.5**
BILL				pmax	pmax		
	comp=Z,61nm,1.3s,mb5.5						
AB31	**Akbulak array**	**70.29**	**320**	*i* P	**P**	**05 42 26.5**	**-2.0**
	comp=Z,24nm,0.8s,mb5.2						
AB31	**Akbulak array**	**70.29**	**320**	*i* P	**P**	**05 42 26.5**	**-2.0**
AB31				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
AKTK	**Aktyubinsk**	**71.78**	**321**	P	**P**	**05 42 36.0**	**-1.4**
AKTK				LR	LR	06 17 28.7	
AKTO	**Aktyubinsk**	**71.78**	**321**	P	**P**	**05 42 36.0**	**-1.4**
	comp=Z,25nm,0.7s,mb5.3,baz=100,slow=8.7,SNR=46						
AKTO				LR	LR	06 17 28.7	
	comp=Z,3µm,18.2s,MS5.6,baz=281,slow=39						
SVE	**Sverdlovsk**	**71.96**	**328**	⇓*e*P	**P**	**05 42 38.5**	**+0.1**
	comp=Z,100nm,1.8s,mb5.4						
SVE				*e*	pP	05 42 49.4	-1.3
SVE				*e*		05 56 29.0	
SVE				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
SVE	**Sverdlovsk**	**71.96**	**328**	⇓*e*P	**P**	**05 42 38.5**	**+0.1**
SVE				*e*	pP	05 42 49.4	-1.3
SVE				*e*		05 56 29.0	
SVE				pmax	pmax		
	comp=Z,100nm,1.8s,mb5.4						
SVE				MLR	MLR		
	comp=N,500nm,20.0s,MS5.0						
SVE				MLR	MLR		
	comp=E,600nm,20.0s,MS5.0						
SVE				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.3						
CASY	**Casey**	**72.93**	**187**	*e*P	**P**	**05 42 44.0**	**+0.1**
ARU	**Arti**	**72.95**	**327**	⇓*i*P	**P**	**05 42 42.5**	**-1.7**
	comp=Z,36nm,0.9s,mb5.3						
ARU				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
ARU	**Arti**	**72.95**	**327**	⇓*i*P	**P**	**05 42 42.5**	**-1.7**
ARU				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
ARU				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.2						
DRV	**Dumont d’Urvil**	**73.06**	**174**	P	**P**	**05 42 54.0**	**+9.3**
SOKR	**Solikamsk**	**74.68**	**330**	*e*P	**P**	**05 42 54.2**	**0.0**
	comp=Z,40nm,1.1s,mb5.3						
SOKR	**Solikamsk**	**74.68**	**330**	*e*P	**P**	**05 42 54.2**	**0.0**
SOKR				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.3						
UMR	**Umm Al-Rimmam**	**77.30**	**299**	*e*P	**P**	**05 43 07.8**	**-2.0**
UMR				AMb	AMB	05 43 11.9	
	comp=Z,62nm,0.6s,mb5.7						
RDF	**Al-Radifah**	**77.44**	**298**	*e*P	**P**	**05 43 08.1**	**-2.5**
RDF				AMb	AMB	05 43 14.7	
	comp=Z,63nm,1.1s,mb5.5						
MIB	**Mutribah**	**77.63**	**299**	*e*P	**P**	**05 43 09.3**	**-2.2**
MIB				AMb	AMB	05 43 13.8	
	comp=Z,105nm,0.7s,mb5.9						
NAY	**Al-Naaiem**	**77.71**	**299**	*e*P	**P**	**05 43 09.3**	**-2.7**
NAY				AMb	AMB	05 43 14.2	
	comp=Z,33nm,0.8s,mb5.3						
DGRG	**David-gareji**	**79.42**	**311**	P	**P**	**05 43 19.0**	**-2.1**
MZLS	**Mizel**	**79.62**	**293**	P	**P**	**05 43 22.4**	**-0.1**
MTA	**Mtatsminda**	**79.86**	**311**	P	**P**	**05 43 23.3**	**-0.1**
GNI	**Garni**	**79.87**	**310**	P	**P**	**05 43 24.4**	**+0.8**
	comp=Z,4.1nm,0.4s,mb4.7,baz=174,slow=6.4,SNR=11						
GNI	**Garni**	**79.87**	**310**	*e*P	**P**	**05 43 25.1**	**+1.5**
	comp=Z,48nm,1.0s,mb5.4						
GNI	**Garni**	**79.87**	**310**	*e*P	**P**	**05 43 25.1**	**+1.5**
GNI				pmax	pmax		
	comp=Z,48nm,1.0s						
TI2	**Plekhanov**	**79.89**	**311**	*i* P	**P**	**05 43 20.0**	**-3.7**
TI2				*i*		05 43 24.0	
TI2				*i*		05 43 37.0	
TI2				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.2						
TI2				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.4						
TI2				MLR	MLR		
	comp=E,500nm,17.0s						
TI2				MLR	MLR		
	comp=Z,1µm,17.0s,MS5.2						
TBLG	**Delisi**	**79.90**	**311**	*i* P	**P**	**05 43 20.0**	**-3.7**
	comp=Z,30nm,1.0s,mb5.2						
TBLG				*i*		05 43 24.0	
TBLG				*i*		05 43 37.0	
TBLG				LR	LR		
	comp=Z,1µm,17.0s,MS5.2						
BHD	**Baghdad**	**80.15**	**303**	*e*x	x	05 43 25.0	
IMA2	**Indian Mountai**	**80.53**	**24**	*e*P	**P**	**05 43 27.2**	**+0.7**
TVAN	**Van**	**80.90**	**308**	*i* P	**P**	**05 43 30.6**	**+1.6**
MSL	**Mosul**	**81.17**	**306**	*e*x	x	05 43 28.5	
MSL				*e*x	x	05 43 44.5	
MSL				*e*x	x	05 53 32.5	
GOF	**Gofitskoye**	**81.19**	**315**	*e*P	pP	05 43 42.4	-0.6
GOF				pmax	pmax		
	comp=Z,50nm,0.6s,mb5.6						
TATS	**Tathlith**	**81.42**	**289**	P	**P**	**05 43 31.8**	**-0.4**
KIV	**Kislovodsk**	**81.43**	**313**	*e*P	**P**	**05 43 31.9**	**+0.2**
	comp=Z,20nm,0.7s,mb5.2						
KIV	**Kislovodsk**	**81.43**	**313**	*e*P	**P**	**05 43 31.9**	**+0.2**
KIV				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
SLKM	**Skilak Lake**	**81.61**	**30**	*e*P	**P**	**05 43 32.5**	**+0.2**
SLKM	**Skilak Lake**	**81.61**	**30**	P	**P**	**05 43 34.8**	**+2.4**
AFFS	**‘Afif**	**81.64**	**293**	P	**P**	**05 43 32.8**	**-0.5**
OPO	**Ambohidratompo**	**81.73**	**250**	P	**P**	**05 43 34.6**	**+0.8**
	comp=Z,3.4nm,0.8s,mb4.3,baz=41,slow=7.1,SNR=5.4						
VRHR	**Novokhopersk**	**82.17**	**321**	*e*P	**P**	**05 43 34.2**	**-1.2**
VRHR				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,30nm,0.7s						
PMR	**Palmer**	**82.19**	**29**	*e*P	**P**	**05 43 34.3**	**-1.0**
	comp=E,41nm,0.9s,mb5.4						
PMR	**Palmer**	**82.19**	**29**	*e*P	**P**	**05 43 34.3**	**-1.0**
PMR				pmax	pmax		
	comp=Z,41nm,0.9s,mb5.4						
MCK	**McKinley**	**82.36**	**27**	*e*P	**P**	**05 43 36.6**	**+0.4**
	comp=Z,60nm,1.1s,mb5.4						
MCK	**McKinley**	**82.36**	**27**	P	**P**	**05 43 36.9**	**+0.8**
MCK				pmax	pmax		
	comp=Z,60nm,1.1s,mb5.4						
HILS	**Ha’il**	**82.56**	**297**	P	**P**	**05 43 38.7**	**+0.8**
ATD	**Arta Tunnel**	**82.57**	**281**	LR	LR	06 20 02.6	
	comp=Z,458nm,21.4s,MS4.8,baz=271,slow=36						
COLA	**College**	**82.87**	**25**	*e*P	**P**	**05 43 38.5**	**-0.3**
	comp=Z,24nm,0.8s,mb5.3						
COLA	**College**	**82.87**	**25**	P	**P**	**05 43 38.9**	**+0.2**
COLA				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.2						
MARD	**Mardin**	**83.00**	**307**	*i* P	**P**	**05 43 48.0**	**+8.1**
BLJS	**Baljurashi**	**83.17**	**289**	P	**P**	**05 43 41.5**	**+0.4**
ILAR	**Eielson Array**	**83.28**	**26**	P	**P**	**05 43 40.5**	**-0.3**
	comp=Z,20nm,1.1s,mb5.0,baz=247,slow=4.3,SNR=68						
ILAR				LR	LR	06 17 52.8	
	comp=Z,1µm,21.8s,MS5.3,baz=247,slow=34						
KLMR	**Klimovskoe**	**83.37**	**331**	*e*P	**P**	**05 43 42.1**	**+0.8**
KLMR				*e*S	S	05 53 53.5	-4.3
KLMR				pmax	pmax		
	comp=Z,200nm,1.4s,mb6.0						
KLMR				pmax	pmax		
	comp=E,720nm,7.3s						
KLMR				smax			
	comp=E,2µm,6.1s						
KLMR				MLR	MLR		
	comp=Z,5µm,25.0s,MS5.8						
SOC	**Sochi**	**83.59**	**313**	⇑*i*P	**P**	**05 43 38.0**	**-4.8**
	comp=Z,23nm,0.7s,mb5.4						
SOC				*e*		05 46 51.6	
SOC				*i* S	S	05 53 55.5	-4.8
SOC				*e*SSS	SSS	06 02 55.6	-0.9
SOC	**Sochi**	**83.59**	**313**	*c i*P	**P**	**05 43 38.0**	**-4.8**
SOC				*e*		05 46 51.6	
SOC				*i* S	S	05 53 55.5	-4.8
SOC				*e*SSS	SSS	06 02 55.6	-0.9
SOC				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.4						
SOC				pmax	pmax		
	comp=Z,315nm,5.1s						
MACK	**Trabzon**	**83.65**	**310**	*i* P	**P**	**05 43 41.4**	**-1.8**
VOR	**Voronezh**	**83.69**	**321**	P	**P**	**05 43 43.0**	**-0.1**
VOR				*e*	pP	05 43 53.0	-2.7
VOR				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.9						
VRSR	**Storozhevoye**	**83.71**	**321**	*e*P	**P**	**05 43 42.9**	**-0.3**
	comp=Z,5.0nm,0.8s,mb4.7						
VRSR	**Storozhevoye**	**83.71**	**321**	*e*P	**P**	**05 43 42.9**	**-0.3**
VRSR				pmax	pmax		
	comp=N,2.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,3.0nm,0.8s						
VRSR				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.7						
THY	**Trims Highway**	**83.78**	**27**	*e*P	**P**	**05 43 44.6**	**+1.3**
DIV	**Divide**	**83.81**	**29**	*e*P	**P**	**05 43 43.4**	**-0.1**
	comp=Z,243nm,1.0s,mb6.3						
ELZG	**Elazig**	**84.36**	**308**	*i* P	**P**	**05 43 46.7**	**-0.2**
MOS	**Moscow**	**84.49**	**325**	*e*P	**P**	**05 43 46.4**	**-0.7**
	comp=Z,104nm,1.1s,mb5.9						
MOS				*e*	pP	05 43 56.5	-3.2
MOS				*e*S	S	05 54 01.7	-7.3
MOS	**Moscow**	**84.49**	**325**	*e*P	**P**	**05 43 46.4**	**-0.7**
MOS				*e*	pP	05 43 56.5	-3.2
MOS				*e*S	S	05 54 01.7	-7.3
MOS				pmax	pmax		
	comp=Z,104nm,1.1s,mb5.9						
GRSN	**GIRESUNGRSN**	**84.78**	**310**	*i* P	**P**	**05 43 59.5**	**+11**
ATAB	**Bozova**	**84.97**	**307**	*i* P	**P**	**05 43 48.1**	**-1.8**
OBN	**Obninsk**	**85.12**	**325**	⇓*i*P	**P**	**05 43 49.4**	**-0.8**
	comp=Z,99nm,1.1s,mb5.8						
OBN				*i*		05 43 54.6	
OBN				*i*	pP	05 44 02.3	-0.6
OBN				*e*		05 47 11.2	
OBN				*i* S	S	05 54 17.3	+2.1
OBN	**Obninsk**	**85.12**	**325**	⇓*i*P	**P**	**05 43 49.4**	**-0.8**
OBN				*i*		05 43 54.6	
OBN				*i*	pP	05 44 02.3	-0.6
OBN				*e*		05 47 11.2	
OBN				*i* S	S	05 54 17.3	+2.1
OBN				pmax	pmax		
	comp=Z,99nm,1.1s,mb5.8						
ANN	**Anapa**	**85.17**	**314**	*e*P	**P**	**05 44 00.1**	**+9.4**
	comp=Z,222nm,1.3s,mb6.1						
ANN				*e*S	S	05 54 23.7	+7.8
ANN				LR	LR		
	comp=Z,2µm,24.0s,MS5.3						
ANN	**Anapa**	**85.17**	**314**	*e*P	**P**	**05 44 00.1**	**+9.4**
ANN				*e*S	S	05 54 23.7	+7.8
ANN				pmax	pmax		
	comp=Z,222nm,1.3s,mb6.1						
ANN				MLR	MLR		
	comp=Z,2µm,24.0s,MS5.3						
LVZ	**Lovozero**	**85.24**	**338**	*e*P	**P**	**05 43 51.7**	**+1.2**
LVZ				*e*S	S	05 54 11.8	-4.3
LVZ				pmax	pmax		
	comp=Z,84nm,1.4s,mb5.7						
LVZ				pmax	pmax		
	comp=N,39nm,2.1s						
LVZ				pmax	pmax		
	comp=E,20nm,1.2s						
LVZ				smax			
	comp=N,2µm,9.7s						
LVZ				MLR	MLR		
	comp=Z,4µm,23.0s,MS5.7						
LVZ				MLR	MLR		
	comp=N,2µm,28.0s,MS5.6						
LVZ				MLR	MLR		
	comp=E,3µm,25.0s,MS5.6						
VNDA	**Vanda**	**85.61**	**173**	*e*P	**P**	**05 43 52.0**	**-0.3**
	comp=E,28nm,1.0s,mb5.4						
VNDA	**Vanda**	**85.61**	**173**	P	**P**	**05 43 52.4**	**+0.2**
VNDA				pmax	pmax		
	comp=Z,28nm,1.0s						
MAW	**Mawson**	**85.68**	**200**	*e*P	**P**	**05 43 55.7**	**+3.0**
	comp=Z,11nm,0.8s,mb5.1						
MAW	**Mawson**	**85.68**	**200**	P	**P**	**05 43 53.1**	**+0.4**
	comp=Z,16nm,1.0s,mb5.2,baz=56,slow=11,SNR=4.1						
MAW				LR	LR	06 22 43.0	
	comp=Z,408nm,18.8s,MS4.8,baz=53,slow=36						
MAW	**Mawson**	**85.68**	**200**	*e*P	**P**	**05 43 55.7**	**+3.0**
MAW				pmax	pmax		
	comp=Z,11nm,0.8s						
APA	**Apatity**	**85.74**	**337**	⇓*e*P	**P**	**05 43 53.9**	**+0.9**
APA				*i*	pP	05 44 07.5	+1.8
PPT	**Papeete**	**86.07**	**108**	*e*LR	LR	06 11 22.4	
	baz=286						
PPT	**Papeete**	**86.07**	**108**	LR	LR	06 15 54.0	
	comp=Z,2µm,21.4s,MS5.4,baz=268,slow=31						
SBA	**Scott Base**	**86.52**	**172**	*e*P	**P**	**05 43 58.0**	**+1.4**
	comp=Z,48nm,1.1s,mb5.6						
SBA	**Scott Base**	**86.52**	**172**	P	**P**	**05 43 58.3**	**+1.7**
SBA				pmax	pmax		
	comp=Z,48nm,1.1s,mb5.6						
DAWY	**Dawson**	**86.56**	**26**	*e*P	**P**	**05 43 58.9**	**+1.8**
DAWY				*e*pP	pP	05 44 09.9	+0.2
UMJS	**Umm Lajj**	**86.72**	**295**	P	**P**	**05 44 00.2**	**+1.4**
TBI	**Tubuai**	**86.93**	**114**	*e*PP	PP	05 47 24.1	-1.5
TBI	**Tubuai**	**86.93**	**114**	*e*LR	LR	06 11 49.2	
	comp=Z,5µm,26.2s,baz=295						
JOF	**Joensuu**	**87.12**	**333**	*e*p	**P**	**05 43 58.9**	**-0.9**
TBKS	**Tabuk**	**87.14**	**298**	P	**P**	**05 44 02.0**	**+1.2**
SIM	**Simferopol’**	**87.51**	**315**	*e*P	pP	05 44 16.0	+1.1
SIM				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.7						
AVNT	**Avonos**	**87.57**	**309**	*i* P	**P**	**05 44 03.0**	**+0.3**
KEV	**Kevo**	**87.76**	**340**	*e*p	**P**	**05 44 04.2**	**+1.4**
INK	**Inuvik**	**88.26**	**21**	*e*P	**P**	**05 44 05.0**	**-0.2**
	comp=Z,576nm,1.0s						
INK	**Inuvik**	**88.26**	**21**	*e*P	**P**	**05 44 05.0**	**-0.2**
INK				pmax	pmax		
	comp=Z,18nm,1.0s						
ARCES	**ARCESS Array B**	**88.31**	**340**	P	**P**	**05 44 04.0**	**-1.5**

	comp=Z,42nm,0.7s,mb5.8,baz=82,slow=5.6,SNR=43						
ARCES				PKKPbc		06 01 48.8	
	comp=Z,4.6nm,0.9s,baz=333,slow=2.7,SNR=5.4						
ARCES				LR	LR	06 27 56.5	
	comp=Z,2µm,18.8s,MS5.4,baz=77,slow=39						
ARCES	ARCESS Array B	88.31	340	P	P	05 44 04.0	-1.5
ARCES				PKKPbc		06 01 48.8	
ARCES				LR	LR	06 27 56.5	
ARE0	ARCESS Array S	88.31	340	eP	P	05 44 06.3	+0.9
ALWS	Ilw as Safayha	88.33	299	P	P	05 44 07.9	+1.4
BRTR	Keskin Array B	88.41	310	P	P	05 44 04.7	-1.9
	comp=Z,6.6nm,0.9s,mb4.9,baz=112,slow=5.4,SNR=15						
HAQS	Haql	88.47	299	P	P	05 44 09.1	+1.9
KBS	Kingsbay	88.82	350	eP	P	05 44 09.6	+1.9
KBS				eSKSa		05 54 30.8	
KBS				AMS	AMS	06 29 54.5	
	comp=Z,1µm,18.6s,MS5.4						
ANTO	Ankara	89.04	310	eP	P	05 44 09.7	0.0
	comp=Z,9.6nm,0.8s,mb5.2						
ANTO	Ankara	89.04	310	eP	P	05 44 09.7	+0.1
ANTO				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb5.2						
KMBO	Kilima Mbogo	89.30	269	P	P	05 44 11.1	-0.4
	comp=Z,1.0nm,0.5s,baz=76,slow=16,SNR=5.5						
KAF	Kangasniemi	89.54	332	ep	P	05 44 10.7	-0.7
FINES	FINESS Array B	89.78	332	P	P	05 44 10.9	-1.7
	comp=Z,23nm,0.8s,mb5.5,baz=95,slow=3.8,SNR=40						
FINES				LR	LR	06 27 54.1	
	comp=Z,2µm,21.7s,MS5.5,baz=273,slow=38						
AKASG	Malin Array Be	90.03	321	P	P	05 44 11.9	-2.0
	comp=Z,3.8nm,0.6s,mb4.9,baz=69,slow=4.5,SNR=16						
MNK	Minsk	90.21	325	eP	P	05 44 13.0	-1.7
TRO	Tromso	90.51	340	eP	P	05 44 14.7	-1.2
TRO				AMS	AMS	06 29 44.5	
	comp=Z,742nm,20.8s,MS5.1						
VRI	Vrincioaia	92.52	316	⇓P	P	05 44 27.0	+1.3
SUW	Suwalki	92.98	325	eP	P	05 44 25.5	-2.1
SUW				MLR	MLR	06 26 36.1	
	comp=Z,2µm,25.2s,MS5.4						
SUW	Suwalki	92.98	325	eP	P	05 44 28.8	+1.2
	comp=Z,92nm,1.0s,mb6.2						
SUW	Suwalki	92.98	325	eP	P	05 44 28.8	+1.2
SUW				pmax	pmax		
	comp=Z,92nm,1.0s,mb6.2						
MLR	Muntele Rosu	93.13	316	P	P	05 44 27.1	-1.4
	comp=Z,6.1nm,0.6s,mb5.2,baz=293,slow=6.5,SNR=17						
BURAR	Bucovina Array	93.19	318	⇑P	P	05 44 28.9	+0.2
TAOE	Nuku Hiva Isla	94.26	98	eLR	LR	06 15 15.4	
	comp=Z,19µm,25.7s,baz=280						
SYO	Syowa Base	94.33	201	⇓P	P	05 44 35.4	+2.1
SYO	Syowa Base	94.33	201	⇓PcP	PcP	05 44 39.0	+4.9
SYO	Syowa Base	94.33	201	⇓eP	P	05 44 35.4	+2.1
SYO				⇓ePcP	PcP	05 44 39.0	+4.9
KWP	Kalwaria	94.34	321	eP	P	05 44 33.5	-0.3
KWP				MLR	MLR	06 29 17.4	
	comp=Z,1µm,23.5s,MS5.3						
KWP	Kalwaria	94.34	321	eP	P	05 44 33.5	-0.3
NSS	Namsos	94.93	337	eP	P	05 44 34.7	-1.5
NSS				AMS	AMS	06 32 11.6	
	comp=Z,2µm,22.4s,MS5.5						
DAG	Danmarks Havn	95.07	352	⇓iP	P	05 44 36.2	-0.4
	comp=Z,28nm,0.7s,mb5.8						
DAG	Danmarks Havn	95.07	352	⇓eP	P	05 44 36.2	-0.4
	comp=Z,28nm,0.7s,mb5.8						
DAG	Danmarks Havn	95.07	352	⇓eP	P	05 44 36.2	-0.4
DAG				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.8						
CRVS	Cervenica-Dubn	95.32	320	eP	P	05 44 38.1	-0.2
CRVS				epP	pP	05 44 50.9	-0.2
STHS	Stebnicka Huta	95.32	321	eP	P	05 44 38.0	-0.3
STHS				epP	pP	05 44 51.1	0.0
RES	Resolute Bay	95.74	10	eP	P	05 44 42.4	+2.8
	comp=Z,631nm,1.4s						
RES	Resolute Bay	95.74	10	eP	P	05 44 42.4	+2.7
RES				pmax	pmax		
	comp=Z,20nm,1.4s,mb5.3						
HFS	Hagfors	95.96	332	P	P	05 44 39.9	-1.1
	comp=Z,7.2nm,0.6s,mb5.3,baz=108,slow=4.7,SNR=23						
OJC	Ojcow	96.00	322	eP	P	05 44 42.6	+1.3
KECS	Kecovo	96.06	320	eP	P	05 44 41.7	+0.1
KECS				epP	pP	05 44 53.1	-1.3
NB2	NORSAR Subarra	96.72	334	P	P	05 44 42.6	-1.8
	comp=Z,9.0nm,0.8s,mb5.2,baz=66,slow=4.5						
NB2	NORSAR Subarra	96.72	334	P	P	05 44 42.6	-1.8
	baz=66,slow=4.6						
NOA	NORSAR Array B	96.72	334	P	P	05 44 42.6	-1.8
	comp=Z,5.9nm,0.7s,mb5.1,baz=65,slow=4.6,SNR=18						
NOA				PKKPbc		06 01 27.9	
	comp=Z,1.1nm,0.7s,baz=71,slow=2.9,SNR=4.3						
NOA				LR	LR	06 32 46.1	
	comp=Z,1µm,20.2s,MS5.4,baz=65,slow=38						
NAO01	NORSAR Array S	96.94	334	eP	P	05 44 44.6	-0.8
	comp=Z,16nm,0.9s,mb5.5						
NAO	NORSAR Subarra	96.98	334	P	P	05 44 42.6	-3.0
	comp=Z,9.0nm,0.8s,mb5.2						
NAO	NORSAR Subarra	96.98	334	P	P	05 44 42.6	-3.0
NAO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
MORC	Moravsky Berou	97.52	322	eP	P	05 44 49.3	+1.0
	comp=Z,5.5nm,1.0s,mb5.0						
MORC	Moravsky Berou	97.52	322	eP	P	05 44 49.3	+1.0
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb5.0						
DIVS	Divcibare	97.58	316	i P	P	05 44 47.2	-1.5
YKA	Yellowknife Ar	97.65	24	P	P	05 44 47.8	-0.8
	comp=Z,2.2nm,0.8s,mb4.8,baz=297,slow=4.3,SNR=3.7						
YKA				PKKPbc		06 01 28.2	
	comp=Z,1.0nm,0.7s,baz=122,slow=3.4,SNR=3.5						
YKA				LR	LR	06 31 14.2	
	comp=Z,586nm,21.6s,MS5.0,baz=285,slow=37						
YKA	Yellowknife Ar	97.65	24	P	P	05 44 47.8	-0.8
YKA				PKKPbc		06 01 28.2	
YKA				LR	LR	06 31 14.2	
KSP	Ksiaz	97.94	323	eP	P	05 44 51.5	+1.4
KSP				MLR	MLR	06 28 53.5	
	comp=Z,2µm,27.8s,MS5.5						
KSP	Ksiaz	97.94	323	eP	P	05 44 49.2	-0.9
KSP				epP	pP	05 45 02.0	-0.9
KSP				eS	S	05 56 11.0	+1.3
KSP				eSS	SS	06 02 52.0	-3.9
KSP				LR	LR		
	comp=Z,2µm,27.8s,MS5.5						
DPC	Dobruska-Polom	98.08	323	eP	P	05 44 52.5	+1.7
DPC				epP	pP	05 45 02.5	-1.1
UPC	Upice	98.22	323	eP	P	05 44 50.7	-0.7
UPC				epP	pP	05 45 04.2	0.0
VRAC	Vranov	98.26	322	P	P	05 44 50.7	-0.9
	comp=Z,3.5nm,0.8s,mb4.9,baz=80,slow=6.1,SNR=2.8						
PVCC	Panska Ves	99.07	323	eP	P	05 44 57.7	+2.4
PRU	Pruhonice	99.28	323	eP	P	05 44 57.7	+1.4
PRU				epP	pP	05 45 08.3	-0.7
BRG	Berggiesshubel	99.32	324	eP	P	05 44 48.3	-8.1
	comp=Z,25nm,1.9s,mb5.4						
BRG				e		05 44 56.1	
BRG				LR	LR		
	comp=Z,2µm,20.3s,MS5.6						
BRG	Berggiesshubel	99.32	324	eP	P	05 44 48.3	-8.1
BRG				e		05 44 56.1	
BRG				pmax	pmax		
	comp=Z,25nm,1.9s,mb5.4						
BRG				MLR	MLR		
	comp=Z,2µm,20.3s,MS5.6						
MATP	Matopo	99.45	250	LR	LR	06 28 45.2	
	comp=Z,1µm,19.5s,MS5.4,baz=90,slow=35						
LSZ	Lusaka	99.46	256	LR	LR	06 32 02.4	
	comp=Z,1µm,19.7s,MS5.5,baz=99,slow=37						
LSZ	Lusaka	99.46	256	ePdif	P	05 44 58.5	+0.6
BER	Bergen	99.58	334	AMS	AMS	06 32 42.8	
	comp=Z,2µm,24.7s,MS5.5						
CLL	Collm	99.71	324	ePDIF	P	05 45 00.0	+1.8
CLL				e	pP	05 45 10.0	-1.0
CLL				e		05 45 24.0	
CLL				ePP	PP	05 49 18.0	+13
CLL				ePS	PS	05 57 54.0	-7.9
CLL				eSS	SS	06 03 54.0	+33
KHC	Kasperske Hory	100.17	322	eP	P	05 45 00.6	+0.2
KHC				pP		05 45 12.5	
KHC				AMS	AMS	06 29 50.0	
	comp=Z,2µm,21.9s						
KHC	Kasperske Hory	100.17	322	eP	P	05 45 00.6	+0.2
KHC				e		05 45 12.5	
KHC				LR	LR		
	comp=Z,2µm,21.9s,MS5.5						
KHC	Kasperske Hory	100.17	322	eP	P	05 45 00.6	+0.2
KHC				MLR	MLR		
	comp=Z,2µm,21.9s,MS5.5						
RKT	Rikitea	100.19	112	ePP	PP	05 49 07.4	-2.3
RKT	Rikitea	100.19	112	eLR	LR	06 17 40.9	
	comp=Z,3µm,25.0s,baz=289						
GERES	GERESS Array B	100.20	322	P	P	05 44 59.5	-1.0
	comp=Z,1.2nm,0.7s,baz=72,slow=4.2,SNR=8.2						
GERES				LR	LR	06 36 54.6	
	comp=Z,1µm,20.3s,MS5.4,baz=64,slow=39						
NKC	Novy Kostel	100.44	323	eP	P	05 45 02.4	+0.8
GRA1	Grafenberg Arr	101.39	323	ePdif	P	05 45 06.3	+0.5
GRF	Grafenberg Arr	101.39	323	ePdif	P	05 45 06.3	+0.5
NVAR	Mina Array Bea	105.68	48	Pdiff	Pdif	05 45 25.9	+0.8
	comp=Z,0.6nm,0.9s,baz=67,slow=36,SNR=3.9						
NVAR				PKiKP		05 49 40.9	
	comp=Z,0.7nm,0.7s,baz=243,slow=2.0,SNR=6.3						
SNAA	Sanae	107.23	195	⇑iP	tx	05 50 01.8	
SNAA	Sanae	107.23	195	e	tx	05 50 09.6	
SNAA	Sanae	107.23	195	e	tx	05 50 17.9	
SNAA	Sanae	107.23	195	e	tx	05 50 23.0	
SNOW	Snow King Moun	108.81	40	ePKP		05 49 46.5	
VNA2	Neumayer--Watz	108.84	195	e	tx	05 49 54.9	
VNA2	Neumayer--Watz	108.84	195	e	tx	05 49 59.3	
VNA2	Neumayer--Watz	108.84	195	e	tx	05 50 07.4	
VNA2	Neumayer--Watz	108.84	195	e	tx	05 50 12.0	
VNA2	Neumayer--Watz	108.84	195	⇑iPKPdf		05 49 45.1	
VNA2				e		05 49 54.9	
VNA2				e		05 49 59.3	
VNA2				e		05 50 07.4	
VNA2				e		05 50 12.0	
VNA3	Neumayer Olymp	109.18	194	⇑iPKPdf		05 49 42.2	
VNA3				e		05 49 52.5	
VNA3				e		05 49 57.4	
VNA3				e		05 50 04.4	
VNA1	Neumayer--Stat	109.24	195	e	tx	05 49 56.0	
VNA1	Neumayer--Stat	109.24	195	e	tx	05 50 05.2	
VNA1	Neumayer--Stat	109.24	195	e	tx	05 50 11.2	
VNA1	Neumayer--Stat	109.24	195	⇑iPKPdf		05 49 48.9	
VNA1				e		05 49 56.0	
VNA1				e		05 50 05.2	
VNA1				e		05 50 11.2	
PDAR	Pinedale Array	109.92	40	PKiKP		05 49 47.1	
	comp=Z,0.8nm,0.8s,baz=90,slow=2.7,SNR=4.7						
PDAR				PKKPab		06 00 58.8	
	comp=Z,2.5nm,1.0s,baz=119,slow=5.9,SNR=5.7						
SRU	San Rafael	110.97	44	ePKP	PKPdf	05 49 50.7	+4.2
PV10	Paradox Valley	112.33	44	ePKP	PKPdf	05 49 50.0	+0.9
RSSD	Black Hills	112.65	37	ePKP	PKPdf	05 49 51.6	+2.0
PV01	Paradox Valley	112.78	44	ePKP	PKPdf	05 49 53.4	+3.4
ULM	Lac du Bonnet	113.20	28	PKiKP		05 49 51.9	
	comp=Z,2.8nm,0.8s,baz=56,slow=3.3,SNR=4.5						
ULM	Lac du Bonnet	113.20	28	PKPdf	PKPdf	05 49 51.9	+1.4
SDCO	Great Sand Dun	115.08	44	ePKP	PKPdf	05 49 57.5	+2.9
ANMO	Albuquerque	115.77	47	ePKP	PKPdf	05 49 59.2	+3.3
BNM	Barren Site	116.02	48	ePKPdf	PKPdf	05 49 58.8	+2.4
MNTX	Cornudas Mount	118.09	49	ePKPdf	PKPdf	05 50 02.6	+2.1
SCHQ	Schefferville	118.48	9	PKP	PKPdf	05 50 02.2	+1.6
	comp=Z,5.1nm,0.5s,baz=338,slow=1.8,SNR=15						
MDT	Midelt	119.66	313	PKP	PKPdf	05 50 06.3	+2.8
	comp=Z,2.0nm,0.7s,baz=142,slow=3.0,SNR=6.9						
KSU1	Kansas State U	120.10	38	ePKPdf	PKPdf	05 50 06.1	+1.9
LTX	Lajitas	120.49	51	ePKPdf	PKPdf	05 50 07.6	+2.4
TXAR	Lajitas Array	120.49	51	PKP	PKPdf	05 50 07.5	+2.2
	comp=Z,2.3nm,0.7s,baz=230,slow=0.5,SNR=28						
TXAR				PKKPbc		06 00 12.8	
	comp=Z,0.1nm,0.6s,baz=76,slow=22,SNR=3.8						
TXAR	Lajitas Array	120.49	51	PKP	PKPdf	05 50 07.5	+2.2
TXAR				PKKPbc		06 00 12.8	
WMOK	Wichita Mounta	121.28	43	ePKPdf	PKPdf	05 50 08.2	+1.6
FVM	French Village	124.49	35	ePKPdf	PKPdf	05 50 14.7	+1.9
FVM	French Village	124.49	35	PKIKP	PKPdf	05 50 16.0	+3.3
MIAR	Mount Ida	124.84	40	ePKPdf	PKPdf	05 50 15.9	+2.4
MIAR	Mount Ida	124.84	40	PKIKP	PKPdf	05 50 16.3	+2.7
NATX	Nacogdoches	125.81	44	ePKPdf	PKPdf	05 50 16.4	+0.9
WCI	Wyandotte Cave	126.59	32	ePKPdf	PKPdf	05 50 18.9	+2.1
ACSO	Alum Creek Sta	126.70	28	ePKPdf	PKPdf	05 50 18.3	+1.3
WVT	Waverly	127.27	35	ePKPdf	PKPdf	05 50 19.7	+1.5
WVT	Waverly	127.27	35	PKIKP	PKPdf	05 50 19.8	+1.6
OXF	Oxford	127.47	38	ePKPdf	PKPdf	05 50 20.4	+1.8
OXF	Oxford	127.47	38	PKIKP	PKPdf	05 50 21.3	+2.7
DBIC	Dimbokro	129.80	284	PKP	PKPdf	05 50 25.2	+1.6
	comp=Z,7.5nm,0.7s,baz=118,slow=1.4,SNR=9.3						
DBIC	Dimbokro	129.80	284	ePKPdf	PKPdf	05 50 25.1	+1.5
DBIC	Dimbokro	129.80	284	PKIKP	PKPdf	05 50 25.8	+2.2
PLCA	Paso Flores	142.13	159	PKhKP		05 50 43.1	
	comp=Z,4.6nm,0.8s,baz=216,slow=6.9,SNR=5.6						
PLCA	Paso Flores	142.13	159	ePKPdf	PKPdf	05 50 44.9	-0.7
PLCA	Paso Flores	142.13	159	PKIKP	PKPdf	05 50 45.4	-0.2
TRQA	Tornquist	147.10	168	ePKPbc	PKPdf	05 50 57.8	+3.6
FCH	Farellones	148.60	152	eP	PKPdf	05 51 03.7	+7.0
TLL	Tololo Astrono	150.92	148	eP	PKPdf	05 51 08.9	+8.4
SJG	San Juan	153.10	27	ePKPbc	PKPdf	05 51 13.6	+10
CPD	Cerro la Pandu	153.27	27	ePKPdf	PKPdf	05 51 07.4	+3.3
CPD				ePKPbc	PKPdf	05 51 14.0	+10
CPD				ePKPab	PKPab	05 51 24.5	-1.5
MTP	Monte Pirata	153.38	26	ePKPbc	PKPdf	05 51 13.9	+10
ROSC	El Rosal	156.68	63	PKP	PKPdf	05 51 12.6	+3.7
	comp=Z,16nm,0.8s,baz=286,slow=3.0,SNR=11						
SDV	Santo Domingo	157.52	49	ePKPdf	PKPdf	05 51 12.2	+2.3
CPUP	Villa Florida	159.38	170	ePKPdf	PKPdf	05 51 14.6	+2.7
CPUP				ePKPab	PKPab	05 51 51.9	0.0
LPAZ	La Paz	162.39	127	PKP	PKPdf	05 51 18.5	+3.3
	comp=Z,9.1nm,0.9s,baz=27,slow=1.5,SNR=17						
LPAZ				PKPab	PKPab	05 52 07.6	+2.4
	comp=Z,7.1nm,0.7s,baz=196,slow=5.5,SNR=7.0						
LPAZ	La Paz	162.39	127	ePKPdf	PKPdf	05 51 18.9	+3.7
LPAZ				ePKPab	PKPab	05 52 07.0	+1.7
BAO	Brasilia Array	168.89	209	PKPdf	PKPdf	05 51 23.5	+3.0
BDFB	Brasilia	168.89	209	PKPab	PKPab	05 52 33.9	+0.3
	comp=Z,2.0nm,0.7s,baz=135,slow=2.9,SNR=2.9						
SAML	Samuel	170.00	108	ePKPdf	PKPdf	05 51 23.6	+2.3
SAML				ePKPab	PKPab	05 52 39.2	+0.6

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*CSEM **25** 05:48:48.8, 32.89S×179.03W, h33^{km}, mb5.5*

*BJI **25** 05:48:49.7, 32.92S×179.20W, h51^{km}, mB5.5, mb5.3, Ms5.3, Msz5.0*

*MOS **25** 05:48:50.6±1.3, 32.58S×179.10W, h44^{km}, mb5.4/11, Error ellipse: s-maj=14.1km s-min=10.4km az=77.9*

*HRVD **25** 05:48:51.7±0.6, 32.84S×178.71W, h63^{km}±2^{km}, MW5.1/43, Centroid moment Tensor Solution. LP body waves: s29,c39;Mantle waves: s43,c56; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$6.33±.41; M$_{\theta\theta}$-0.69±.33; M$_{\phi\phi}$-5.64±.31; M$_{r\theta}$-1.22±.26; M$_{\theta\phi}$-0.56±.38; M$_{\phi r}$1.73±.27; Best double couple: M$_0$6.355×10^{16} NP1:ϕ_s196°,δ38°, λ107°. NP2:ϕ_s355°,δ53°,λ77°. Principal axes: T 6.796, Plg77°, Azm220°; N -.888, Plg10°, Azm3°; P -5.914, Plg8°, Azm94°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **25** 05:48:51.7±0.2, 32.65S×179.24W, mb5.2/20 Error ellipse: s-maj=9.3km s-min=5.9km az=119.0*

*IDC **25** 05:48:54.0±2.7, 32.51S×178.97W, h68^{km}±22^{km}, mb4.7/11, mb1 4.8/14, mb1mx4.8/16, mbtmp5.0/14, MS4.4/4, Ms1 4.4/4, ms1mx3.9/18, Error ellipse: s-maj=19.7km s-min=13.4km az=155.0*

ISC 25 05:48:50.4±0.3**, 32.88S**±0.04×**179.27W**±0.07**, h45**^{km}**, h45**^{km}±1.4^{km}**:pP-P, n198,** σ1.**34**/139**, mb5.0**/30**, MS5.0**/6**, 14C-7D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	3.79	18	P	P	05 49 43.1	-4.8
	451nm,0.3s,baz=244,slow=3.3,SNR=28						
RAO				S	S	05 50 23.3	-8.5
	885nm,0.3s,baz=45,slow=22,SNR=8.3						
RAO				LR	LR	05 50 43.8	
	comp=Z,589nm,20.6s,baz=359,slow=33						
RAO	Raoul Island	3.79	18	ePn	P	05 49 43.7	-4.3
RAO				eSn	S	05 50 26.1	-5.8
MXZ	Matakaoa Point	5.08	202	PN	P	05 50 08.3	+2.2
MXZ	Matakaoa Point	5.08	202	P	P	05 50 08.3	+2.3
WIZ	White Island	5.47	211	PN	P	05 50 16.6	+5.2
WIZ				SN	S	05 51 21.4	+7.4
PUZ	Puketiti	5.56	201	ePN	P	05 50 14.0	+1.3
PUZ				SN	S	05 51 21.2	+4.9
PUZ	Puketiti	5.56	201	eP	P	05 50 14.0	+1.2
PUZ				S	S	05 51 21.2	+4.9
MWZ	Matawai	6.04	205	PN	P	05 50 20.8	+1.4
MWZ				SN	S	05 51 32.9	+4.8
MWZ	Matawai	6.04	205	P	P	05 50 20.8	+1.4
MWZ				S	S	05 51 32.9	+4.7
WCZ	Waipu Caves	6.10	238	ePN	P	05 50 28.0	+7.8
WCZ	Waipu Caves	6.10	238	eP	P	05 50 28.0	+7.8
URZ	Urewera	6.13	208	P	P	05 50 22.3	+1.6
	41nm,0.3s,baz=290,slow=2.3,SNR=121						
URZ				S	S	05 51 35.4	+5.0
	45nm,0.3s,baz=30,slow=20,SNR=7.8						
URZ	Urewera	6.13	208	ePN	P	05 50 22.2	+1.6
URZ				SN	S	05 51 35.4	+5.0
URZ	Urewera	6.13	208	eP	P	05 50 22.2	+1.5
OUZ	Omahuta	6.36	246	PN	P	05 50 31.2	+7.2
UTU	Utuhina	6.45	214	PN	P	05 50 30.5	+5.2
BKZ	Black Stump Fm	7.15	207	PN	P	05 50 35.3	+0.2
OTVZ	Oturere	7.50	212	PN	P	05 50 41.7	+1.9
FWVZ	Far West T-bar	7.62	212	PN	P	05 50 43.7	+2.2
PXZ	Pawanui	7.79	202	PN	P	05 50 44.0	+0.1
PXZ				SN	S	05 52 08.7	-3.0
TSZ	Takapari Road	8.13	207	PN	P	05 50 47.7	-0.9
BFZ	Birch Farm	8.58	203	PN	P	05 50 52.7	-2.1
MRZ	Mangatainoka R	8.80	207	PN	P	05 50 55.5	-2.3
KIW	Kapiti Island	9.23	209	PN	P	05 51 01.8	-2.0
KIW				SN	S	05 52 42.9	-4.5
TRWZ	Traveller	9.41	204	PN	P	05 51 04.7	-1.6
TRWZ				SN	S	05 52 47.6	-4.2
DUWZ	D’Urville Isla	9.61	213	PN	P	05 51 08.5	-0.4
DUWZ				SN	S	05 52 55.8	-0.8
MRW	Makara Radio	9.63	208	PN	P	05 51 08.1	-1.1
MRW				SN	S	05 52 51.9	-5.3
NNZ	Nelson	10.18	213	PN	P	05 51 14.1	-2.8
NNZ				SN	S	05 53 08.7	-2.1
BSWZ	Blackbirch Sta	10.37	210	PN	P	05 51 16.5	-2.9
BSWZ				SN	S	05 53 11.4	-3.9
KHZ	Kahutara	11.09	209	PN	P	05 51 25.6	-3.7
MQZ	McQueen’s Vall	12.53	208	PN	P	05 51 43.7	-4.8
MQZ				SN	S	05 53 56.9	-11
WVZ	Waitaha Valley	12.87	215	SN	S	05 54 07.1	-8.5
RPZ	Rata Peaks	13.21	212	P	P	05 51 54.1	-3.4
	3.5nm,0.3s,baz=220,slow=1.2,SNR=7.9						
RPZ				S	S	05 54 16.7	-7.2
	4.6nm,0.3s,baz=2.0,slow=14,SNR=9.3						
JCZ	Jackson Bay	14.57	216	PN	P	05 52 11.6	-3.7
DZM	Mont Dzumac	16.61	307	eP	P	05 52 46.5	+4.9
DZM	Mont Dzumac	16.61	307	P	P	05 52 43.4	+1.8
	0.6nm,0.3s,baz=101,slow=16,SNR=10						
AFI	Afiamalu	20.08	22	P	P	05 53 17.2	-5.7
	2.1nm,0.3s,baz=90,slow=7.1,SNR=3.7						
AFI				S	S	05 56 38.8	-22
	1.8nm,0.3s,baz=48,slow=24,SNR=3.0						
AFI	Afiamalu	20.08	22	eP	P	05 53 17.3	-5.6
	95nm,1.1s						
AFI	Afiamalu	20.08	22	eP	P	05 53 17.3	-5.6
AFI				pmax	pmax		
	comp=Z,95nm,1.1s						
RAR	Rarotonga	20.86	61	P	P	05 53 28.7	-2.1
	comp=Z,32nm,0.6s,baz=218,slow=8.4,SNR=9.1						
RAR				S	S	05 57 01.3	-15
	comp=Z,8.5nm,0.4s,baz=70,slow=18,SNR=4.3						
ARMA	Armidale	24.86	268	eP	P	05 54 17.1	+6.9
HNR	Honiara	30.21	316	P	P	05 54 58.3	-0.7
	comp=Z,62nm,0.5s,mb5.6,baz=213,slow=3.4,SNR=3.3						
STKA	Stephens Creek	32.94	261	eP	P	05 55 26.7	+3.9
	comp=Z,7.5nm,0.9s,mb4.6						
STKA	Stephens Creek	32.94	261	P	P	05 55 25.8	+2.9
	comp=Z,9.1nm,0.8s,mb4.7,baz=108,slow=9.1,SNR=15						
STKA				LR	LR	06 07 02.9	
	comp=Z,2µm,20.4s,MS4.8,baz=27,slow=33						
CTA	Charters Tower	33.23	284	⇑iP	P	05 55 28.6	+3.2
	comp=Z,32nm,0.8s,mb5.3						
CTA	Charters Tower	33.23	284	P	P	05 55 27.3	+1.9
	comp=Z,41nm,0.7s,mb5.5,baz=110,slow=10,SNR=66						
CTA	Charters Tower	33.23	284	⇑iP	P	05 55 28.6	+3.2
CTA				pmax	pmax		
	comp=Z,32nm,0.8s						
CTAO	Charters Tower	33.23	284	eP	P	05 55 28.6	+3.1
	comp=Z,36nm,0.7s,mb5.4						
CTAO	Charters Tower	33.23	284	eP	P	05 55 28.6	+3.2
CTAO				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.4						
PMG	Port Moresby	38.78	299	P	P	05 56 13.3	+0.9
	comp=Z,28nm,0.8s,mb5.0,baz=114,slow=3.9,SNR=7.0						
PMG	Port Moresby	38.78	299	eP	P	05 56 14.2	+1.8
	comp=Z,42nm,1.0s,mb5.1						
PMG	Port Moresby	38.78	299	eP	P	05 56 14.2	+1.8
PMG				pmax	pmax		
	comp=Z,42nm,1.0s						
WB2	Warramunga Arr	43.17	275	eP	P	05 56 46.6	-2.0
WB2				i		05 56 49.8	
WRAB	Tennant Creek	43.17	275	eP	P	05 56 49.9	+1.2
	comp=Z,119nm,0.9s,mb5.6						
WRAB				epP	pP	05 57 03.8	+2.8
WRAB	Tennant Creek	43.17	275	eP	P	05 56 49.9	+1.2
WRAB				e*PP	pP	05 57 03.8	+2.8
WRAB				pmax	pmax		
	comp=Z,119nm,0.9s,mb5.6						
WRA	Warramunga Arr	43.18	275	P	P	05 56 49.6	+0.9
	comp=Z,50nm,0.6s,mb5.4,baz=114,slow=8.0,SNR=296						
WRA				PKiKP		06 05 38.6	
	comp=Z,0.4nm,0.3s,baz=83,slow=0.4,SNR=31						
FORT	Forrest	44.41	258	eP	P	05 56 59.2	+0.6
	comp=Z,58nm,0.8s,mb5.4						
SBA	Scott Base	45.50	184	eP	P	05 57 11.0	+4.3
	comp=Z,8.5nm,0.8s,mb4.6						
SBA	Scott Base	45.50	184	eP	P	05 57 11.0	+4.4
SBA				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.7						
VNDA	Vanda	45.53	186	eP	P	05 57 10.4	+3.5
	comp=Z,3.3nm,0.8s,mb4.3						
VNDA	Vanda	45.53	186	eP	P	05 57 10.4	+3.5
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KAKA	Kakadu	48.36	283	⇑iP	Px	05 57 50.2	
	comp=Z,25nm,0.8s						
FITZ	Fitzroy Crossi	51.33	273	⇑iP	P	05 57 53.0	+0.5
	comp=Z,29nm,0.9s,mb5.2						
FITZ				i	pP	05 58 07.0	+1.9
FITZ	Fitzroy Crossi	51.33	273	P	P	05 57 53.2	+0.6
	comp=Z,34nm,0.8s,mb5.3,baz=145,slow=8.1,SNR=32						
FITZ				LR	LR	06 18 49.9	
	comp=Z,1µm,19.3s,MS5.0,baz=286,slow=35						
CASY	Casey	52.45	209	eP	P	05 58 00.7	+0.3
	comp=Z,30nm,0.9s,mb5.2						
NWAO	Narrogin (SRO)	52.55	251	LR	LR	06 20 24.9	
	comp=Z,397nm,18.2s,MS4.5,baz=246,slow=36						
KLBR	Kellerberrin	52.56	253	⇑iP	P	05 58 00.9	-0.7
	comp=Z,48nm,1.0s,mb5.4						
MUN	Mundaring	53.67	252	eP	P	05 58 09.2	-0.7
MAW	Mawson	69.61	201	P	P	05 59 56.9	+0.5
	comp=Z,14nm,0.9s,mb4.9,baz=110,slow=8.1,SNR=11						
KKM	Kota Kinabalu	72.32	290	eP	P	06 00 12.3	-1.3
KSM	Kuching	74.45	282	eP	P	06 00 25.1	-1.0
SYO	Syowa Base	74.46	194	⇑P	P	06 00 25.7	+0.6
SYO	Syowa Base	74.46	194	⇓pP	pP	06 00 38.2	-0.1
SYO	Syowa Base	74.46	194	⇓sP	sP	06 00 45.9	+2.7
SYO	Syowa Base	74.46	194	⇑iP	P	06 00 25.7	+0.6
SYO				⇓ipP	pP	06 00 38.2	-0.1
SYO				⇓esP	sP	06 00 45.9	+2.7
SNAA	Sanae	75.72	179	e	P	06 00 37.7	+5.5
SNAA	Sanae	75.72	179	e	P	06 00 38.3	+6.1
SNAA	Sanae	75.72	179	e	P	06 00 39.6	+7.4
SNAA	Sanae	75.72	179	e	P	06 00 48.4	+16
SNAA	Sanae	75.72	179	⇑iP	P	06 00 33.5	+1.3
SNAA				e		06 00 37.7	
SNAA				e		06 00 38.3	
SNAA				e		06 00 39.6	
SNAA				e	pP	06 00 48.4	+3.0
SNAA	Sanae	75.72	179	⇑iP	P	06 00 33.5	+1.3
SNAA				e	pP	06 00 48.4	+3.0
VNA3	Neumayer Olymp	75.91	177	e	P	06 00 39.4	+6.1
VNA3	Neumayer Olymp	75.91	177	e	P	06 00 40.0	+6.7
VNA3	Neumayer Olymp	75.91	177	e	P	06 00 41.5	+8.2
VNA3	Neumayer Olymp	75.91	177	e	P	06 00 47.7	+14
VNA3	Neumayer Olymp	75.91	177	⇑iP	P	06 00 34.8	+1.5
VNA3				e		06 00 39.4	
VNA3				e		06 00 40.0	
VNA3				e		06 00 41.5	
VNA3				e	pP	06 00 47.7	+1.1
VNA2	Neumayer--Watz	76.33	177	e	P	06 00 42.1	+6.4
VNA2	Neumayer--Watz	76.33	177	e	P	06 00 42.9	+7.2
VNA2	Neumayer--Watz	76.33	177	e	P	06 00 44.2	+8.5
VNA2	Neumayer--Watz	76.33	177	e	P	06 00 49.9	+14
VNA2	Neumayer--Watz	76.33	177	⇑iP	P	06 00 37.5	+1.8
VNA2				e		06 00 42.1	
VNA2				e		06 00 42.9	
VNA2				e		06 00 44.2	
VNA2				e	pP	06 00 49.9	+0.9

MAIT	**Maitri**	**76.34**	**184**	eP	**P**	**06 00 37.5**	**+1.7**
NVL	**N'lazarevskaya**	**76.35**	**184**	eP	**P**	**06 00 37.9**	**+2.1**
NVL				e	pP	06 00 50.3	+1.3
NVL				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
VNA1	**Neumayer--Stat**	**76.57**	**177**	e	**P**	**06 00 43.8**	**+6.7**
VNA1	**Neumayer--Stat**	**76.57**	**177**	e	**P**	**06 00 44.9**	**+7.8**
VNA1	**Neumayer--Stat**	**76.57**	**177**	e	**P**	**06 00 45.8**	**+8.7**
VNA1	**Neumayer--Stat**	**76.57**	**177**	e	**P**	**06 00 53.5**	**+16**
VNA1	**Neumayer--Stat**	**76.57**	**177**	⇑iP	**P**	**06 00 39.0**	**+1.9**
VNA1				e		06 00 43.8	
VNA1				e		06 00 44.9	
VNA1				e		06 00 45.8	
VNA1				e	pP	06 00 53.5	+3.2
MJAR	**Matsushiro Arr**	**79.67**	**326**	P	**P**	**06 00 52.2**	**-2.7**
	comp=Z,2.9nm,0.8s,mb4.3,baz=151,slow=3.9,SNR=5.5						
PLCA	**Paso Flores**	**81.61**	**133**	P	**P**	**06 01 05.9**	**+0.9**
	comp=Z,3.2nm,0.8s,mb4.3,baz=210,slow=4.7,SNR=4.6						
SSE	**Sheshan**	**84.93**	**312**	eP	**P**	**06 01 21.5**	**-0.6**
SSE				AMB	AMB		
	comp=Z,30nm,0.6s,mb5.6						
SSE				AMB	AMB		
	comp=Z,420nm,11.1s						
SSE				LR	LR		
	comp=N,20nm,22.2s,MS4.4						
SSE				LR	LR		
	comp=E,160nm,22.3s,MS4.4						
SSE				LR	LR		
	comp=Z,240nm,19.6s,MS4.6						
YSS	**Yuzh-Sakhalins**	**86.51**	**335**	P	**P**	**06 01 29.6**	**+0.2**
	comp=Z,17nm,0.8s,mb5.3						
YSS	**Yuzh-Sakhalins**	**86.51**	**335**	P	**P**	**06 01 29.6**	**+0.2**
YSS				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.3						
NJ2	**Nanjing**	**87.04**	**311**	eP	**P**	**06 01 31.6**	**-0.8**
NJ2				AP	pP	06 01 42.1	-3.8
NJ2				PP	PP	06 04 58.1	-0.5
NJ2				S	S	06 12 09.0	+2.8
NJ2				XS		06 12 27.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,240nm,4.7s						
NJ2				LR	LR		
	comp=N,2µm,22.6s,MS5.8						
NJ2				LR	LR		
	comp=E,4µm,21.8s,MS5.8						
NJ2				LR	LR		
	comp=Z,430nm,13.6s						
PTRM	**Twissleman Ran**	**87.78**	**44**	eP	**P**	**06 01 36.0**	**+0.1**
CFAA	**Coronel Fontan**	**88.62**	**127**	P	**P**	**06 01 40.7**	**+0.7**
	comp=Z,0.1nm,0.4s,baz=259,slow=5.7,SNR=3.8						
PFO	**Pinyon Flat Ob**	**88.67**	**48**	eP	**P**	**06 01 40.0**	**-0.2**
	comp=Z,56nm,1.8s,mb5.6						
PFO				epP	pP	06 01 53.9	+0.2
PFO	**Pinyon Flat Ob**	**88.67**	**48**	eP	**P**	**06 01 40.0**	**-0.2**
PFO				e*PP	pP	06 01 53.9	+0.2
PFO				pmax	pmax		
	comp=Z,56nm,1.8s,mb5.6						
ISA	**Isabella**	**88.81**	**45**	eP	**P**	**06 01 40.8**	**0.0**
	comp=Z,20nm,1.7s,mb5.2						
ISA				epP	pP	06 01 54.8	+0.5
ISA	**Isabella**	**88.81**	**45**	eP	**P**	**06 01 40.8**	**0.0**
ISA				e*PP	pP	06 01 54.8	+0.4
ISA				pmax	pmax		
	comp=Z,20nm,1.7s,mb5.2						
MTUM	**Tungsten Hills**	**89.90**	**44**	eP	**P**	**06 01 45.7**	**-0.2**
MTUM				epP	pP	06 01 59.3	-0.2
NVAR	**Mina Array Bea**	**90.78**	**43**	P	**P**	**06 01 49.4**	**-0.6**
	comp=Z,6.5nm,0.9s,mb4.9,baz=205,slow=6.7,SNR=21						
NEN	**Nelson**	**91.01**	**47**	eP	**P**	**06 01 50.7**	**-0.4**
CN2	**Changchun**	**91.47**	**323**	eP	**P**	**06 01 52.4**	**-0.7**
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.4						
TUC	**Tucson**	**91.49**	**52**	eP	**P**	**06 01 54.3**	**+0.9**
	comp=Z,16nm,1.3s,mb5.2						
TUC				epP	pP	06 02 07.7	+0.7
TUC	**Tucson**	**91.49**	**52**	eP	**P**	**06 01 54.3**	**+0.8**
TUC				e*PP	pP	06 02 07.7	+0.6
TUC				pmax	pmax		
	comp=Z,16nm,1.3s,mb5.2						
WVOR	**Wild Horse Val**	**93.31**	**40**	eP	**P**	**06 02 00.8**	**-0.7**
	comp=Z,8.5nm,1.0s,mb5.1						
WVOR				epP	pP	06 02 13.8	-1.3
WVOR	**Wild Horse Val**	**93.31**	**40**	eP	**P**	**06 02 00.9**	**-0.6**
WVOR				e*PP	pP	06 02 13.9	-1.3
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.2						
ELK	**Elko**	**94.09**	**43**	eP	**P**	**06 02 05.0**	**-0.1**
	comp=Z,3.1nm,0.8s,mb4.8						
ELK	**Elko**	**94.09**	**43**	eP	**P**	**06 02 05.0**	**-0.1**
ELK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TXAR	**Lajitas Array**	**94.63**	**58**	P	**P**	**06 02 06.8**	**-1.0**
	comp=Z,1.9nm,1.1s,mb4.5,baz=217,slow=6.3,SNR=6.3						
MNTX	**Cornudas Mount**	**94.79**	**55**	eP	**P**	**06 02 08.3**	**-0.2**
	comp=Z,3.4nm,1.0s,mb4.7						
MNTX				epP	pP	06 02 21.2	-0.9
HLID	**Hailey**	**96.38**	**41**	eP	**P**	**06 02 15.1**	**-0.3**
	comp=Z,3.3nm,0.9s,mb4.8						
HHC	**Hu-ho-hao-te**	**97.18**	**314**	eP	**P**	**06 02 20.5**	**+1.3**
HHC				AP	pP	06 02 34.5	+1.7
HHC				XP	sP	06 02 39.3	+1.9
HHC				PP	PP	06 06 22.3	+3.9
HHC				SKS	SKS	06 12 53.1	+1.8
HHC				S	S	06 13 41.1	+5.6
HHC				XS		06 14 02.6	
HHC				PS	PS	06 15 15.8	+7.1
HHC				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb5.2						
HHC				AMB	AMB		
	comp=Z,320nm,9.6s						
HHC				LR	LR		
	comp=N,340nm,16.8s,MS5.0						
HHC				LR	LR		
	comp=E,290nm,15.6s,MS5.0						
HHC				LR	LR		
	comp=Z,630nm,14.4s,MS5.2						
PDAR	**Pinedale Array**	**98.67**	**44**	PKKPbc		06 18 54.3	
	comp=Z,0.2nm,0.3s,baz=67,slow=5.8,SNR=3.8						
ILAR	**Eielson Array**	**100.58**	**14**	P	P	06 02 32.9	-1.1
	comp=Z,1.3nm,0.8s,baz=213,slow=5.6,SNR=5.4						
ILAR				PKiKP		06 06 57.6	
	comp=Z,0.5nm,0.5s,baz=283,slow=2.8,SNR=11						
ILAR				PKKPbc		06 18 49.5	
	comp=Z,0.2nm,0.5s,baz=28,slow=2.5,SNR=7.6						
SONM	**Songino Array**	**104.25**	**318**	PKKPbc		06 18 37.8	
	comp=Z,0.7nm,0.9s,baz=229,slow=3.5,SNR=4.1						
TIXI	**Tiksi**	**110.35**	**345**	i PKIKP	PKPdf	06 07 13.7	-2.9
BOSA	**Boshof**	**114.56**	**204**	PKP	PKPdf	06 07 27.9	+2.0
	comp=Z,2.8nm,0.8s,baz=7.3,slow=3.2,SNR=4.5						
BOSA	**Boshof**	**114.56**	**204**	PKP	PKPdf	06 07 27.9	+2.0
MKAR	**Makanchi Array**	**118.51**	**309**	PKP	PKPdf	06 07 32.4	-0.7
	comp=Z,1.7nm,0.8s,baz=79,slow=5.4,SNR=12						
RES	**Resolute Bay**	**119.93**	**18**	ePKPdf	PKPdf	06 07 34.1	-1.2
NVS	**Novosibirsk**	**120.28**	**318**	ePKIKP	PKPdf	06 07 35.1	-1.2
KURK	**Kurchatov**	**121.95**	**313**	ePKPdf	PKPdf	06 07 39.0	-0.6
LSZ	**Lusaka**	**125.39**	**213**	ePKPdf	PKPdf	06 07 48.8	+1.6
TSUM	**Tsumeb**	**125.77**	**200**	ePKPdf	PKPdf	06 07 48.9	+1.1
BVAR	**Borovoye Array**	**127.39**	**315**	PKP	PKPdf	06 07 49.0	-1.1
	comp=Z,1.8nm,0.3s,baz=117,slow=3.3,SNR=19						
BRVK	**Borovoye**	**127.46**	**315**	ePKPdf	PKPdf	06 07 49.6	-0.6
KMBO	**Kilima Mbogo**	**131.72**	**233**	PKP	PKPdf	06 08 01.3	+1.9
	comp=Z,1.9nm,0.8s,baz=24,slow=4.4,SNR=2.3						
ARU	**Arti**	**134.27**	**319**	i PKIKP	PKPdf	06 08 02.1	-0.9
ARU				e		06 10 33.1	
ARU				eSS	SS	06 28 21.2	-1.1
AKTK	**Aktyubinsk**	**134.92**	**311**	PKP	PKPdf	06 08 05.0	+0.6
AKTO	**Aktyubinsk**	**134.92**	**311**	PKP	PKPdf	06 08 05.0	+0.6
	comp=Z,1.0nm,0.6s,baz=109,slow=5.1,SNR=5.3						
SUMG	**Summit**	**135.37**	**16**	ePKPdf	PKPdf	06 08 06.4	+1.8
TATS	**Tathlith**	**139.68**	**262**	P	PKPdf	06 08 20.3	+6.4
ARCES	**ARCESS Array B**	**140.75**	**347**	PKhKP		06 08 09.4	
	comp=Z,1.9nm,0.6s,baz=103,slow=1.9,SNR=15						
BLJS	**Baljurashi**	**141.40**	**261**	P	PKPdf	06 08 17.3	+0.3
KLMR	**Klimovskoe**	**142.39**	**330**	ePKHKP		06 08 11.0	
KLMR				pmax	pmax		
	comp=Z,90nm,3.2s						
GNI	**Garni**	**144.18**	**294**	⇑iPKIKP	PKPdf	06 08 26.1	+5.0
JOF	**Joensuu**	**144.28**	**336**	epkp	PKPdf	06 08 18.4	-2.2
MELSS	**Ber_school_2**	**145.11**	**351**	eP	PKPdf	06 08 22.9	+1.0
BORG	**Borgarnes**	**145.34**	**16**	ePKPdf	PKPdf	06 08 23.2	+0.8
KIV	**Kislovodsk**	**145.65**	**301**	⇓iPKP2	PKPab	06 08 28.2	+1.9
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
MOR8	**Moi Rana**	**145.67**	**350**	eP	PKPdf	06 08 22.4	-0.5
MOR8				AMb	AMB	06 08 25.6	
	comp=Z,75nm,1.5s						
MOS	**Moscow**	**145.71**	**323**	ePKHKP		06 08 18.6	
MOS				pmax	pmax		
	comp=Z,80nm,1.0s						
STOK	**Stokkvaagen**	**145.71**	**351**	eP	PKPdf	06 08 23.8	+0.8
STOK				AMb	AMB	06 08 28.1	
	comp=Z,155nm,1.6s						
VOR	**Voronezh**	**146.39**	**316**	PKP2	PKPab	06 08 27.0	-1.9
VOR				pmax	pmax		
	comp=Z,120nm,1.8s						
KAF	**Kangasniemi**	**146.48**	**338**	epkp	PKPdf	06 08 35.1	+11
KAF	**Kangasniemi**	**146.48**	**338**	ePKIKP	PKPdf	06 08 25.1	+0.7
KAF				e		06 08 35.1	
OBN	**Obninsk**	**146.52**	**322**	⇓ePKIKP	PKPdf	06 08 24.9	+0.2
OBN				i		06 08 27.6	
OBN				i		06 08 40.8	
OBN				pmax	pmax		
	comp=Z,14nm,0.8s						
OBN				pmax	pmax		
	comp=Z,72nm,1.4s						
VRSR	**Storozhevoye**	**146.56**	**315**	ePKP2	PKPab	06 08 26.5	-3.1
VRSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VRSR				pmax	pmax		
	comp=N,3.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,4.0nm,0.9s						
FINES	**FINESS Array B**	**147.06**	**338**	PKPbc	PKPdf	06 08 26.7	+1.3
	comp=E,41nm,0.8s,baz=50,slow=4.2,SNR=97						
FINES	**FINESS Array B**	**147.06**	**338**	PKPbc	PKPdf	06 08 26.7	+1.3
FINES	**FINESS Array B**	**147.06**	**338**	⇑iPKP2	PKPab	06 08 27.0	-4.2
UMJS	**Umm Lajj**	**147.25**	**266**	P	PKPdf	06 08 31.4	+4.6
NSS	**Namsos**	**147.57**	**351**	eP	PKPdf	06 08 27.4	+1.3
TBKS	**Tabuk**	**148.90**	**271**	P	PKPdf	06 08 35.5	+6.1
VSU	**Vasula**	**149.00**	**333**	i PKP2	PKPab	06 08 32.5	-6.6
AYUS	**'Aynunah**	**149.97**	**270**	P	PKPdf	06 08 37.8	+6.6
BDAS	**Al Bad'**	**150.18**	**271**	P	PKPdf	06 08 38.3	+6.9
JMOS	**Jabal al Moall**	**150.38**	**272**	P	PKPdf	06 08 38.5	+6.7
HAQS	**Haql**	**150.50**	**272**	P	PKPdf	06 08 39.6	+7.6
NB2	**NORSAR Subarra**	**151.00**	**349**	PKPabc	PKPdf	06 08 37.6	+6.0
	comp=E,27nm,0.8s,baz=18,slow=2.6						
NB2	**NORSAR Subarra**	**151.00**	**349**	PKPa		06 08 37.6	
	baz=18,slow=2.6						
NOA	**NORSAR Array B**	**151.00**	**349**	PKP	PKPdf	06 08 31.5	-0.1
	comp=E,4.7nm,0.8s,baz=218,slow=20,SNR=5.6						
NOA				PKPbc	PKPdf	06 08 37.3	+5.7
	comp=E,15nm,0.8s,baz=14,slow=4.1,SNR=34						
MNK	**Minsk**	**151.13**	**327**	ePKIKP	PKPdf	06 08 36.0	+4.0
NAO01	**NORSAR Array S**	**151.24**	**350**	ePKPbc	PKPdf	06 08 38.8	+6.8
NAO	**NORSAR Subarra**	**151.27**	**350**	PKIKP	PKPdf	06 08 37.6	+5.6
NAO	**NORSAR Subarra**	**151.27**	**350**	PKPab	PKPdf	06 08 37.6	+5.6
AKASG	**Malin Array Be**	**152.53**	**319**	PKP	PKPdf	06 08 33.4	-0.9
	comp=E,0.2nm,0.2s,baz=50,slow=2.3,SNR=3.6						
AKASG				PKPbc	PKPdf	06 08 40.8	+6.6
	comp=E,1.8nm,0.3s,baz=49,slow=3.1,SNR=18						
BRTR	**Keskin Array B**	**152.71**	**294**	PKPbc	PKPdf	06 08 42.5	+7.7
	comp=E,1.2nm,0.4s,baz=144,slow=4.6,SNR=9.4						
DBIC	**Dimbokro**	**153.41**	**168**	PKP	PKPdf	06 08 38.4	+1.8
	comp=E,9.3nm,1.0s,baz=176,slow=4.3,SNR=7.0						
DBIC				PKPab	PKPab	06 08 58.8	-0.1
	comp=E,23nm,0.9s,baz=187,slow=5.4,SNR=8.8						
DBIC	**Dimbokro**	**153.41**	**168**	PKP	PKPdf	06 08 38.4	+1.8
DBIC				ePKPbc	PKPdf	06 08 46.1	+10
DBIC				PKPab	PKPab	06 08 58.8	-0.1
DBIC				ePKPab	PKPab	06 08 58.9	0.0
DBIC	**Dimbokro**	**153.41**	**168**	PKIKP	PKPdf	06 08 38.4	+1.8
DBIC				e		06 08 46.1	
DBIC						06 08 58.8	
DBIC				e		06 08 58.9	
SUW	**Suwalki**	**153.52**	**330**	ePKP	PKPdf	06 08 44.0	+8.6
SUW				e		06 08 56.2	
SUW	**Suwalki**	**153.52**	**330**	ePKP	PKPdf	06 08 44.0	+8.5
SUW				e		06 08 56.2	
KWP	**Kalwaria**	**156.61**	**322**	ePKP	PKPab	06 09 09.6	-1.8
KWP	**Kalwaria**	**156.61**	**322**	ePKP	PKPab	06 09 09.6	-1.8
KOLS	**Kolonicke sedl**	**157.26**	**321**	ePKP	PKPab	06 09 12.3	-1.9
STHS	**Stebnicka Huta**	**157.49**	**323**	ePKP	PKPab	06 09 14.7	-0.5
STHS				e		06 09 26.9	
KECS	**Kecovo**	**158.47**	**322**	ePKP	PKPab	06 09 17.5	-1.9
KSP	**Ksiaz**	**158.71**	**332**	ePKP	PKPab	06 09 19.1	-1.3
KSP				e		06 09 33.1	
VYHS	**Vyhne**	**159.30**	**324**	ePKP	PKPab	06 09 21.1	-1.9
VYHS				e		06 09 34.2	
VYHS	**Vyhne**	**159.30**	**324**	ePKP2	PKPab	06 09 21.1	-1.9
VYHS				e		06 34 08.1	
CLL	**Collm**	**159.50**	**338**	i PKP2	PKPab	06 09 22.2	-1.6
CLL				i *PPKP2		06 09 35.6	
KHC	**Kasperske Hory**	**161.13**	**333**	ePKPab	PKPab	06 09 29.0	-1.9
KHC				pPKP		06 09 43.0	
KHC	**Kasperske Hory**	**161.13**	**333**	⇓iPKIKP	PKPdf	06 08 44.9	-0.1
GERES	**GERESS Array B**	**161.31**	**332**	PKP	PKPdf	06 08 45.0	-0.2
	comp=E,0.7nm,0.6s,SNR=8.2						
GERES				PKPab	PKPab	06 09 29.3	-2.4
	comp=E,1.9nm,0.8s,slow=2.7,SNR=6.5						
ESDC	**Sonseca Array**	**172.23**	**28**	PKP	PKPdf	06 08 55.3	+1.4
	comp=E,1.1nm,0.7s,baz=342,slow=4.7,SNR=5.5						
ESDC				PKPab	PKPab	06 10 17.3	-2.5
	comp=E,1.2nm,0.6s,baz=344,slow=4.6,SNR=5.3						

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*NEIC **25** 05:57:25.0,18.40N×94.77W,h80^{km},MD4.1(MEX),After MEX.*

MEX 25 05:57:24.9±0.4**,18.43N×94.79W,h78**^{km}±7^{km}**,MD4.1, Bay of Campeche**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUIG	**Tuzandepetl**	**0.53**	**138**	i P	P	05 57 37.1	-1.6
TUIG				i S	S	05 57 47.3	-1.8
CMIG	**Matias Romero**	**1.33**	**184**	i P	P	05 57 46.7	-1.8
CMIG				i S	S	05 58 03.7	-2.2
OXX	**Oaxaca**	**2.28**	**234**	i P	P	05 57 59.0	-2.2
OXX				i S	S	05 58 25.0	-3.1
VHO	**Vista Hermosa**	**2.29**	**234**	i P	P	05 57 59.8	-1.6
VHO				i S	S	05 58 26.4	-2.0
PPM	**Popocatepetl**	**3.69**	**281**	i P	P	05 58 20.0	-0.9
PPM				i S	S	05 59 02.5	-0.9
PPM				eS	S	05 59 03.3	-0.1

DHMR 25 06:08:19.6±1.1**,12.11N×42.02E,h4**^{km}±10^{km}**,ML3.6,5C, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRBA	**At Turbah**	**2.33**	**61**	⇑eP	Pn	06 09 00.5	+1.3
TRBA				i S	Sn	06 09 33.1	+4.5
TRBA				AML	AML	06 09 40.4	
	comp=E,754nm,0.5s						
UDYN	**Al 'Udayn**	**2.65**	**46**	i P	Pn	06 09 06.5	+2.7
UDYN				i S	Sn	06 09 41.4	+4.7
UDYN				AML	AML	06 09 52.5	
	comp=E,262nm,0.5s						
DHBB	**Dhamar BB**	**3.36**	**43**	⇑iP	Pn	06 09 16.0	+2.1
DHBB				i S	Sn	06 09 59.9	+5.1
LBOS		**3.60**	**61**	⇑iP	Pn	06 09 18.6	+1.3
LBOS				i S	Sn	06 10 05.2	+4.3
BDHA	**Al Bayda'**	**3.92**	**61**	⇑iP	Pn	06 09 23.1	+1.2
BDHA				i S	Sn	06 10 13.1	+4.1
BDHA				AML	AML	06 10 29.7	
	comp=N,240nm,0.6s						
BDHA	**Al Bayda'**	**3.92**	**61**	⇑iP	Pn	06 09 23.1	+1.2
BDHA				i S	Sn	06 10 13.1	+4.1
	comp=N,120nm,0.6s						

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*IDC **25** 06:09:19.1±0.7,2.43S×68.07E,mb4.2/17,mb1 4.3/17, mb1mx4.2/25,mbtmp4.2/17,MS4.5/7,Ms1 4.4/7, ms1mx4.2/23,Error ellipse: s-maj=18.8km s-min=15.1km az=137.0*

*NEIC **25** 06:09:21.0±0.4,2.45S×68.05E,h10^{km},mb4.6/6,Error ellipse: s-maj=13.3km s-min=8.9km az=134.0*

*BJI **25** 06:09:21.5,2.57S×67.87E,h21^{km},mb4.6*

ISC 25 06:09:19.3±0.5**,2.41S**±0.08**×68.05E**±0.08**,h10**^{km}**,n52, σ1**^{s}**17**/42**,mb4.2**/21**,MS4.5**/7**,4C-2D,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**15.88**	**53**	ePn	**P**	**06 13 03.5**	**-1.3**
OPO	**Ambohidratompo**	**25.99**	**230**	P	**P**	**06 14 54.9**	**+0.6**
	1.5nm,0.8s,mb3.6,baz=337,slow=9.4,SNR=8.0						
ATD	**Arta Tunnel**	**28.63**	**299**	P	**P**	**06 15 19.2**	**+0.9**
	1.5nm,0.5s,mb4.0,baz=266,slow=16,SNR=3.9						
KMBO	**Kilima Mbogo**	**30.80**	**272**	P	**P**	**06 15 38.8**	**+1.0**
	1.3nm,0.8s,mb3.8,baz=42,slow=21,SNR=3.8						
KOLN	**Koldanda**	**33.54**	**25**	eP	**P**	**06 16 02.7**	**+1.1**
DMN	**Daman**	**34.07**	**28**	eP	**P**	**06 16 08.2**	**+2.0**
GKN	**Gorkha**	**34.20**	**27**	eP	**P**	**06 16 08.3**	**+1.1**
KKN	**Kakani**	**34.31**	**28**	eP	**P**	**06 16 09.4**	**+1.2**
GUN	**Gumba**	**34.69**	**28**	eP	**P**	**06 16 11.9**	**+0.4**
LSA	**Lhasa**	**38.84**	**33**	eP	**P**	**06 16 49.4**	**+2.9**
LSZ	**Lusaka**	**41.31**	**250**	P	**P**	**06 17 07.0**	**+0.1**
	7.2nm,0.9s,mb4.3,baz=76,slow=6.8,SNR=16						
LSZ	**Lusaka**	**41.31**	**250**	eP	**P**	**06 17 08.1**	**+1.1**
	13nm,1.0s,mb4.5						
MATP	**Matopo**	**42.52**	**242**	P	**P**	**06 17 16.4**	**-0.5**
	4.2nm,0.9s,mb4.2,baz=51,slow=6.8,SNR=5.6						
MATP	**Matopo**	**42.52**	**242**	P	**P**	**06 17 16.4**	**-0.5**
LBTB	**Lobatse**	**46.65**	**237**	LR	LR	06 34 16.2	
	comp=Z,570nm,21.4s,MS4.5,baz=82,slow=32						
GNI	**Garni**	**47.43**	**336**	P	**P**	**06 17 56.7**	**+0.6**
	2.4nm,0.3s,mb4.6,baz=353,slow=11,SNR=3.8						
BOSA	**Boshof**	**48.35**	**233**	P	**P**	**06 18 01.3**	**-2.1**
	4.3nm,0.8s,mb4.5,baz=52,slow=10,SNR=6.3						
BOSA				LR	LR	06 37 55.8	
	comp=Z,551nm,18.8s,MS4.6,baz=68,slow=36						
BOSA	**Boshof**	**48.35**	**233**	P	**P**	**06 18 02.5**	**-0.9**
	6.1nm,0.9s,mb4.6						
MKAR	**Makanchi Array**	**50.58**	**13**	P	**P**	**06 18 18.7**	**-1.6**
	1.4nm,0.7s,mb4.0,baz=196,slow=7.3,SNR=8.0						
LZH	**Lanzhou**	**50.81**	**38**	eP	**P**	**06 18 29.5**	**+7.3**
LZH				AP	pP	06 18 37.0	+12
LZH				XP	sP	06 18 41.3	+15
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.8						
GTA	**Gaotai**	**50.83**	**32**	eP	**P**	**06 18 26.1**	**+3.8**
GTA				AP	pP	06 18 30.3	+5.0
GTA				XP	sP	06 18 33.8	+7.3
BRTR	**Keskin Array B**	**52.47**	**327**	P	**P**	**06 18 34.2**	**-0.5**
	comp=Z,2.6nm,0.9s,mb4.1,baz=151,slow=13,SNR=7.8						
XAN	**Xi'an**	**52.84**	**43**	P	**P**	**06 18 37.0**	**-0.5**
AKTK	**Aktyubinsk**	**53.34**	**352**	P	**P**	**06 18 40.4**	**-0.6**
AKTO	**Aktyubinsk**	**53.34**	**352**	P	**P**	**06 18 40.4**	**-0.6**
	comp=Z,2.4nm,0.7s,mb4.2,baz=169,slow=7.6,SNR=10						
SUR	**Sutherland**	**53.39**	**231**	LR	LR	06 37 46.0	
	comp=Z,813nm,20.6s,MS4.8,baz=357,slow=32						
KURK	**Kurchatov**	**53.69**	**8**	eP	**P**	**06 18 43.5**	**0.0**
	comp=Z,13nm,1.1s,mb4.8						
BVAR	**Borovoye Array**	**55.27**	**2**	P	**P**	**06 18 52.9**	**-2.2**
	comp=Z,0.3nm,0.5s,mb3.6,baz=43,slow=46,SNR=4.6						
BRVK	**Borovoye**	**55.30**	**2**	eP	**P**	**06 18 54.8**	**-0.6**
	comp=Z,1.0nm,0.6s,mb4.0						
ZAL	**Zalesovo**	**57.86**	**12**	P	**P**	**06 19 13.1**	**-0.5**
	comp=Z,1.6nm,0.5s,mb4.3,baz=269,slow=8.7,SNR=7.8						
FITZ	**Fitzroy Crossi**	**58.52**	**110**	P	**P**	**06 19 19.3**	**+0.6**
	comp=Z,6.9nm,0.9s,mb4.7,baz=311,slow=3.9,SNR=5.0						
SONM	**Songino Array**	**60.20**	**29**	P	**P**	**06 19 30.0**	**+0.1**
	comp=Z,2.7nm,0.8s,mb4.3,baz=223,slow=6.7,SNR=13						
SONM				LR	LR	06 45 50.1	
	comp=Z,273nm,18.7s,MS4.4,baz=62,slow=36						
AKASG	**Malin Array Be**	**62.44**	**333**	P	**P**	**06 19 42.9**	**-2.1**
	comp=Z,0.8nm,0.6s,mb4.1,baz=128,slow=5.8,SNR=6.6						
MAW	**Mawson**	**65.17**	**182**	LR	LR	06 40 19.5	
	comp=Z,332nm,21.4s,MS4.5,baz=103,slow=29						
WRA	**Warramunga Arr**	**66.92**	**111**	P	**P**	**06 20 13.2**	**-1.4**
	comp=Z,3.3nm,0.9s,mb4.3,baz=281,slow=6.3,SNR=17						
WRAB	**Tennant Creek**	**66.92**	**111**	eP	**P**	**06 20 14.9**	**+0.3**
	comp=Z,3.2nm,0.7s,mb4.5						
SYO	**Syowa Base**	**69.17**	**191**	⇑X		06 20 24.6	
SYO	**Syowa Base**	**69.17**	**191**	⇓pP	pP	06 20 33.7	+2.8
SYO	**Syowa Base**	**69.17**	**191**	⇓epP	pP	06 20 33.7	+2.8
STKA	**Stephens Creek**	**74.77**	**122**	LR	LR	06 53 46.9	
	comp=Z,137nm,19.1s,MS4.3,baz=126,slow=36						
MJAR	**Matsushiro Arr**	**75.63**	**51**	LR	LR	06 56 16.2	
	comp=Z,233nm,18.8s,MS4.5,baz=280,slow=37						
ESDC	**Sonseca Array**	**77.78**	**311**	P	**P**	**06 21 18.9**	**+0.3**
	comp=Z,2.5nm,0.8s,mb4.2,baz=82,slow=4.8,SNR=6.4						
SNAA	**Sanae**	**81.77**	**198**	e	**P**	**06 21 43.4**	**+4.1**
SNAA	**Sanae**	**81.77**	**198**	⇑iP	**P**	**06 21 37.0**	**-2.3**
SNAA				e		06 21 43.4	
VNA2	**Neumayer--Watz**	**82.99**	**199**	e	**P**	**06 21 52.9**	**+7.2**
VNA2	**Neumayer--Watz**	**82.99**	**199**	e	**P**	**06 21 59.5**	**+14**
VNA2	**Neumayer--Watz**	**82.99**	**199**	⇑iP	**P**	**06 21 47.6**	**+1.9**
VNA2				e		06 21 52.9	
VNA2				e		06 21 59.5	
VNA3	**Neumayer Olymp**	**83.78**	**199**	e	**P**	**06 21 51.8**	**+2.1**
VNA3	**Neumayer Olymp**	**83.78**	**199**	e	**P**	**06 21 58.1**	**+8.4**
VNA3	**Neumayer Olymp**	**83.78**	**199**	⇑iP	**P**	**06 21 45.8**	**-3.9**
VNA3				e		06 21 51.8	
VNA3				e		06 21 58.1	
WMOK	**Wichita Mounta**	**145.58**	**341**	ePKPbc	PKPbc	06 29 00.1	+1.0
TXAR	**Lajitas Array**	**152.09**	**344**	PKPbc	PKPdf	06 29 16.3	+4.3
	comp=Z,0.5nm,0.9s,baz=45,slow=1.8,SNR=4.4						

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*NEIC **25** 06:16:39.4,18.84N×68.86W,h132^{km},MD3.9(RSPR), After RSPR.*

RSPR 25 06:16:39.4,18.84N×68.86W,h132^{km}±9^{km}**,MD3.9**/10**, MD3.9**/10**,10C,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**1.85**	**116**	⇑eP	P	06 17 12.0	-0.1
CRPR				eS	S	06 17 36.8	-0.2
MGP	**Maguayo**	**1.87**	**116**	⇑eP	P	06 17 12.2	-0.1
MGP				eS	S	06 17 37.4	+0.1
AOPR	**Arecibo Observ**	**2.06**	**103**	⇑eP	P	06 17 14.4	-0.2
AOPR				eS	S	06 17 41.9	+0.6
ICM	**Isla Caja Muer**	**2.41**	**113**	⇑eP	P	06 17 18.4	-0.8
ICM				eS	S	06 17 48.8	-0.6
SJG	**San Juan**	**2.67**	**105**	⇑eP	P	06 17 22.3	-0.2
SJG				eS	S	06 17 55.4	+0.1
SJG	**San Juan**	**2.67**	**105**	⇑eP	P	06 17 22.4	-0.1
SJG				eS	S	06 18 05.4	+10
CBYP	**Canovanas**	**2.90**	**101**	⇑eP	P	06 17 25.1	-0.4
CBYP				eS	S	06 18 01.3	+0.6
CPD	**Cerro la Pandu**	**2.90**	**105**	⇑eP	P	06 17 25.0	-0.6
CPD				eS	S	06 18 00.2	-0.5
HUMP	**Col San Antoni**	**2.94**	**103**	⇑eP	P	06 17 25.6	-0.5
HUMP				eS	S	06 18 01.3	-0.2
MTP	**Monte Pirata**	**3.22**	**103**	⇑eP	P	06 17 29.6	-0.2
MTP	**Monte Pirata**	**3.22**	**103**	eS	S	06 18 08.3	+0.1

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*NEIC **25** 06:31:03.1,37.73S×177.56E,h44^{km},ML4.0(WEL),After WEL.*

WEL 25 06:31:02.9±0.1**,37.74S×177.56E,h48**^{km}±2^{km}**,ML4.0**/10**, 1C-3D,Error ellipse: s-maj=0.9km s-min=0.7km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.36**	**305**	P	P	06 31 12.2	-0.3
WIZ	**White Island**	**0.36**	**305**	P*	P	06 31 12.2	-0.2
MWZ	**Matawai**	**0.60**	**183**	P	P	06 31 14.6	-0.6
MWZ				S	S	06 31 23.7	-0.5
MWZ	**Matawai**	**0.60**	**183**	⇑P*	P	06 31 14.6	-0.6
MWZ				S*	S	06 31 23.5	-0.7
MXZ	**Matakaoa Point**	**0.61**	**74**	P	P	06 31 15.0	-0.5
MXZ	**Matakaoa Point**	**0.61**	**74**	P*	P	06 31 15.0	-0.4
URZ	**Urewera**	**0.63**	**214**	P	P	06 31 15.3	-0.4
URZ	**Urewera**	**0.63**	**214**	⇓P*	P	06 31 15.3	-0.3
URZ				S*	S	06 31 24.7	-0.4
PUZ	**Puketiti**	**0.64**	**122**	P	P	06 31 15.8	0.0
PUZ				S	S	06 31 26.8	+1.5
PUZ	**Puketiti**	**0.64**	**122**	⇓PN	P	06 31 15.8	0.0
PUZ				SN	S	06 31 25.8	+0.5
MARZ	**Manawahe**	**0.75**	**250**	P	P	06 31 16.9	-0.3
MARZ	**Manawahe**	**0.75**	**250**	P*	P	06 31 16.9	-0.3
MARZ				S*	S	06 31 27.3	-0.5
EDRZ	**Edgecumbe**	**0.75**	**240**	P	P	06 31 17.3	0.0
EDRZ	**Edgecumbe**	**0.75**	**240**	P*	P	06 31 17.3	0.0
TAZ	**Tarawera**	**0.97**	**239**	P	P	06 31 20.3	0.0
TAZ	**Tarawera**	**0.97**	**239**	P*	P	06 31 20.3	0.0
TGRZ	**Tauranga**	**1.03**	**270**	P	P	06 31 20.8	-0.4
TGRZ	**Tauranga**	**1.03**	**270**	P*	P	06 31 20.8	-0.4
MYRZ	**Mayor Island**	**1.15**	**293**	P*	P	06 31 22.3	-0.4
UTU	**Utuhina**	**1.17**	**248**	P*	P	06 31 23.1	+0.1
KNZ	**Kokohu**	**1.28**	**176**	PN	P	06 31 23.6	-1.2
BKZ	**Black Stump Fm**	**1.66**	**210**	P*	P	06 31 29.1	-1.0
BKZ				S*	S	06 31 49.5	-0.7
KUZ	**Kuaotunu**	**1.77**	**303**	⇓PN	P	06 31 30.6	-1.1
KUZ				SN	S	06 31 50.8	-2.3
OTVZ	**Oturere**	**2.06**	**226**	P*	P	06 31 35.3	-0.5

WTVZ	West Tongariro	2.07	228	P*	P	06 31 35.6	-0.3
NGZ	Ngauruhoe	2.11	226	P*	P	06 31 36.0	-0.4
TUVZ	Tukino	2.14	224	P*	P	06 31 36.3	-0.7
MOVZ	Moawhango	2.19	220	P*	P	06 31 36.3	-1.3
WNVZ	Wahianoa	2.21	224	P*	P	06 31 37.1	-0.8
PXZ	Pawanui	2.36	193	PN	P	06 31 36.3	-3.7
TSZ	Takapari Road	2.63	208	PN	P	06 31 41.8	-2.1
WAZ	Wanganui	2.85	224	PN	P	06 31 46.4	-0.7
BFZ	Birch Farm	3.11	199	PN	P	06 31 47.1	-3.7
BFZ				SN	S	06 32 22.5	-4.5
WCZ	Waipu Caves	3.14	304	PN	P	06 31 50.3	-0.9

IDC ***25*** *06:50:46.5±2.7, 39.13N×141.72E, h67^{km}±25^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.5/21, mbtmp3.7/8, Error ellipse: s-maj=32.0km s-min=15.3km az=116.0*

JMA ***25*** *06:50:47.6, 39.11N×141.75E, h72^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1:φ$_s$67°, δ36°, λ156°. NP2:φ$_s$177°, δ76°, λ57°. Principal axes: T Plg48°, Azm51°; N Plg32°, Azm186°; P Plg24°, Azm292°;*

JMA Felt II J1.

NEIC ***25*** *06:50:49.7±1.8, 39.04N×141.64E, h100^{km}±20^{km}, MG3.9(JMA) Error ellipse: s-maj=26.8km s-min=20.9km az=122.0*

NEIC Recorded [2 JMA] in Iwate and [1 JMA] in Miyagi Prefectures.

ISC 25 06:50:46.2±0.5**, 39.12N**±0.04×**141.80E**±0.09**, h77**^{km}±4^{km}**, n23, σ0^{s}82**/36**, mb3.5**/6**, 10C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.11	249	⇑P	P	06 50 58.1	+0.6
OFUJ				S	S	06 51 05.7	-0.1
MIYJ	Miyakonagasawa	0.46	2	⇑P	P	06 51 00.4	+1.0
MIYJ				S	S	06 51 09.5	+0.1
JMK	Ichinoseki	0.48	250	⇑P	P	06 50 59.9	+0.2
JMK				S	S	06 51 09.0	-0.8
JOM	Ohasama	0.53	312	⇑P	P	06 51 00.7	+0.5
JOM				S	S	06 51 10.3	-0.2
JIO	Ouri	0.75	208	⇑P	P	06 51 02.7	+0.2
JIO				S	S	06 51 13.6	-1.0
JYK	Kaneyama	1.14	260	⇑P	P	06 51 07.6	+0.4
JYK				eS	S	06 51 22.8	-0.1
JOU	Okura	1.17	230	⇑P	P	06 51 07.8	+0.3
JOU				S	S	06 51 23.0	-0.4
JANG	Nango	1.27	350	⇑P	P	06 51 09.2	+0.3
JANG				S	S	06 51 25.8	0.0
JAH	Hinai	1.40	320	⇓P	P	06 51 11.3	+0.7
JMM	Marumori	1.48	213	⇑P	P	06 51 11.3	-0.4
JMM				S	S	06 51 29.7	-0.9
JYS	Shirataka	1.63	237	⇑P	P	06 51 14.2	+0.5
JYS				S	S	06 51 34.3	+0.4
MAJO	Matsushiro	3.84	229	ePn	P	06 51 45.0	+0.7
MAT	Matsushiro	3.84	229	P	P	06 51 45.4	+1.1
MAT				eS	S	06 52 29.1	+0.6
MAT	Matsushiro	3.84	229	eP	P	06 51 45.0	+0.7
MAT				S	S	06 52 43.0	+15
MJAR	Matsushiro Arr	3.84	229	P	P	06 51 44.0	-0.3
	2.2nm,0.3s,baz=45,slow=9.5,SNR=10						
ASAJ	Asahikawa	5.03	7	P	P	06 51 59.0	-1.7
	2.9nm,0.3s,baz=218,slow=13,SNR=8.1						
ASAJ				S	S	06 52 55.4	-2.7
	1.5nm,0.3s,baz=120,slow=29,SNR=3.7						
MKAR	Makanchi Array	43.30	300	P	P	06 58 41.0	-0.7
	4.3nm,0.8s,mb4.2,baz=85,slow=9.5,SNR=20						
MKAR	Makanchi Array	43.30	300	P	P	06 58 41.0	-0.7
ILAR	Eielson Array	47.58	33	P	P	06 59 15.7	+0.2
	1.0nm,0.6s,mb3.8,baz=269,slow=6.3,SNR=23						
WRA	Warramunga Arr	59.16	188	P	P	07 00 39.2	-2.2
	0.3nm,0.6s,mb3.5,baz=6.2,slow=6.9,SNR=9.0						
NVAR	Mina Array Bea	73.50	54	P	P	07 02 13.6	+1.5
	0.5nm,0.8s,mb3.3,baz=290,slow=3.9,SNR=4.0						
PDAR	Pinedale Array	75.99	46	P	P	07 02 26.1	-0.2
	0.3nm,0.7s,mb3.2,baz=225,slow=2.1,SNR=3.5						
TXAR	Lajitas Array	88.61	53	P	P	07 03 32.7	+0.9
	0.1nm,0.4s,mb3.2,baz=243,slow=1.5,SNR=4.6						

NEIC ***25*** *07:03:12.5, 31.03S×71.41W, h51^{km}, MD4.1(GUC), After GUC.*

GUC 25 07:03:12.5±0.8**, 31.03S**×**71.41W, h51**^{km}±7^{km}**, MD4.1, ML3.2, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	Combarbala	0.38	112	⇑iP	P	07 03 22.7	+0.2
CMCH				i S	S	07 03 30.8	+1.1
CMCH				AMP		07 03 30.9	
	comp=N,7µm,0.1s						
ILCH	Illapel	0.64	161	⇓iP	P	07 03 26.0	+0.5
ILCH				i S	S	07 03 35.9	+0.8
ILCH				AMP		07 03 37.5	
	comp=N,3µm,0.1s						
CHNG	Los Chungos	0.85	185	⇓iP	P	07 03 28.8	+0.4
CHNG				i S	S	07 03 40.7	+0.5
CHNG				AMP		07 03 42.2	
	comp=N,769nm,0.2s						
TLL	Tololo Astrono	1.01	31	⇑iP	P	07 03 31.3	+0.7
TLL				i S	S	07 03 45.3	+1.4
TLL				AMP		07 03 46.1	
	comp=E,1µm,0.4s						
LSCH	La Serena	1.13	7	⇓iP	P	07 03 32.9	+0.6
LSCH				i S	S	07 03 47.4	+0.4
LSCH				AMP		07 03 48.9	
	comp=E,311nm,0.5s						
JACH	Jahuel	1.79	157	eP	P	07 03 41.6	+0.1
JACH				i S	S	07 04 04.0	+1.0
ROCH	El Roble	1.96	170	eP	P	07 03 43.8	-0.2
PEL	Peldehue	2.19	164	AMP		07 04 16.8	
	comp=E,194nm,0.4s						
LCCH	Las Cruces	2.44	183	eP	P	07 03 49.7	-1.1
FCH	Farellones	2.48	158	eP	P	07 03 52.0	+0.7
FCH				i S	S	07 04 21.8	+1.3
FCH				AMP		07 04 37.4	
	comp=E,72nm,0.2s						
RCDM	Rinconada Maip	2.50	168	eP	P	07 03 51.2	-0.5
RCDM				eS	S	07 04 20.6	-0.5
RCDM				AMP		07 04 34.3	
	comp=E,166nm,0.2s						
FSR	Penalolen	2.55	163	eP	P	07 03 52.3	-0.1
FSR				i S	S	07 04 22.4	+0.1
FSR				AMP		07 04 38.5	
	comp=E,129nm,0.8s						
TACH	Talagante	2.64	171	⇑iP	P	07 03 53.3	-0.4

MAN 25 07:03:55.3, 10.50N×**125.70E, h15**^{km}**, mb3.7, ML2.4, MS2.0, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	Maasin	0.90	246	eP	Pb	07 04 12.2	+0.1
MSLP				eS	Sb	07 04 27.0	+3.3
PLP	Palo	0.96	313	eP	Pb	07 04 13.0	-0.2
PLP				i S	Sb	07 04 28.2	+2.7
BESP	Borongan	1.12	347	eP	Pb	07 04 15.1	-0.8
BESP				eS	Sb	07 04 29.4	-0.6

NIED ***25*** *07:19:00, 27.60N×142.00E, h56^{km}, Mw4.7 Best double couple: M$_0$1.29×10^{16} NP1:φ$_s$320°, δ64°, λ51°. NP2:φ$_s$201°, δ46°, λ142°.*

MOS ***25*** *07:19:21.1±0.9, 27.69N×141.64E, h10^{km}, mb4.6/3, Error ellipse: s-maj=31.4km s-min=11.8km az=105.2*

NEIC ***25*** *07:19:22.9±0.3, 27.66N×141.67E, h10^{km}, mb4.5/2, MW4.7(NIED), Error ellipse: s-maj=14.5km s-min=7.4km az=83.0*

IDC ***25*** *07:19:25.4±3.6, 27.62N×141.76E, h26^{km}±24^{km}, mb4.0/14, mb1 4.1/15, mb1mx4.0/21, mbtmp4.1/15, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/25, Error ellipse: s-maj=23.0km s-min=11.0km az=63.0*

JMA ***25*** *07:19:27.2±0.1, 27.61N×141.98E, h34^{km}, M4.5*

ISC 25 07:19:25.6±0.7**, 27.60N**±0.05×**141.7E**±0.1**, h42**^{km}±7^{km}**, n41, σ0^{s}97**/44**, mb4.2**/17**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	0.63	142	Pn	P	07 19 38.3	+0.1
	950nm,0.3s,baz=33,slow=5.0,SNR=990						
CBIJ				Sn	S	07 19 46.2	-1.1
	1µm,0.3s,baz=95,slow=24,SNR=52						
CBIJ	Chichi jima	0.63	142	P	P	07 19 38.2	0.0
CBIJ				S	S	07 19 46.1	-1.3
JHHJ	Haha-jima-NKT	1.04	158	P	P	07 19 45.2	+1.3
JHHJ				eS	S	07 19 57.2	-0.2
JHJ	Hachijo jima 2	5.76	343	Pn	P	07 20 51.8	+1.1
	5.7nm,0.3s,baz=144,slow=19,SNR=2.2						
BSO1	Boso 1	7.07	355	P	P	07 21 09.6	+0.5
BSO3	Boso 3	7.26	352	P	P	07 21 12.3	+0.5
BSO4	Boso 4	7.47	351	P	P	07 21 16.8	+2.1
JOD2	Odawara 2	7.97	344	P	P	07 21 22.6	+0.9
JHU	Hanno	8.49	346	P	P	07 21 28.5	-0.4
JRY	Ryogami san	8.74	345	P	P	07 21 32.5	+0.3
JRY				eS	S	07 23 08.6	-1.9
JAG	Ashikaga	9.02	348	P	P	07 21 34.9	-1.2
JAG				eS	S	07 23 12.1	-5.3
JHO	Hitachi	9.04	354	P	P	07 21 34.1	-2.4
MJAR	Matsushiro Arr	9.41	342	Pn	P	07 21 36.6	-4.9
	0.5nm,0.3s,baz=116,slow=17,SNR=2.9						
JOW	Kunigami	12.01	269	LR	LR	07 26 24.0	
	comp=Z,145nm,20.5s,baz=346,slow=35						
KLR	Kul'dur	22.94	343	eP	P	07 24 28.7	+1.9
SONM	Songino Array	34.08	316	P	P	07 26 07.0	-1.1
	0.4nm,0.6s,mb3.6,baz=123,slow=7.9,SNR=3.7						
SONM				ScP		07 32 26.5	
	0.5nm,0.6s,baz=122,slow=2.7,SNR=4.5						
BOD	Bodaibo	35.94	335	eP	P	07 26 24.1	+0.3
BOD				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.4						
WRAB	Tennant Creek	47.79	189	eP	P	07 28 01.0	+0.1
	comp=Z,3.0nm,0.6s,mb4.5						
WRAB	Tennant Creek	47.79	189	eP	P	07 28 01.0	+0.1
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
WB2	Warramunga Arr	47.80	189	eP	P	07 28 01.0	0.0
WRA	Warramunga Arr	47.80	189	P	P	07 28 01.1	+0.1
	comp=Z,2.6nm,0.5s,mb4.5,baz=11,slow=8.4,SNR=41						
WRA				PcP	PcP	07 29 30.3	+0.5
	comp=Z,0.7nm,0.6s,baz=3.3,slow=3.8,SNR=5.6						
MKAR	Makanchi Array	49.86	309	P	P	07 28 15.3	-1.2
	comp=Z,0.3nm,0.3s,mb3.8,baz=86,slow=10.0,SNR=8.5						
MKAR				PcP	PcP	07 29 37.3	+0.4
	comp=Z,0.7nm,0.5s,baz=75,slow=10,SNR=8.1						
BVAR	Borovoye Array	57.41	317	P	P	07 29 11.3	-0.8
	comp=Z,1.2nm,0.4s,mb4.3,baz=94,slow=7.7,SNR=11						
BVAR				PcP	PcP	07 30 05.3	-0.1
	comp=Z,1.2nm,0.6s,baz=90,slow=4.4,SNR=4.3						
ILAR	Eielson Array	57.46	29	P	P	07 29 11.3	-1.0
	comp=Z,0.9nm,0.7s,mb3.9,baz=264,slow=5.9,SNR=13						
STKA	Stephens Creek	59.14	180	P	P	07 29 23.9	-0.5
	comp=Z,2.2nm,0.8s,mb4.2,baz=338,slow=11,SNR=3.2						
INK	Inuvik	62.74	25	P	P	07 29 48.1	-0.2
	comp=Z,0.7nm,0.5s,mb4.0,baz=38,slow=28,SNR=12						
YKA	Yellowknife Ar	71.89	28	P	P	07 30 45.7	-0.1
	comp=Z,0.6nm,0.4s,mb3.9,baz=295,slow=6.2,SNR=4.4						
YKA	Yellowknife Ar	71.89	28	P	P	07 30 45.7	-0.1
ARCES	ARCESS Array B	72.94	341	P	P	07 30 51.1	-0.7
	comp=Z,4.7nm,0.8s,mb4.5,baz=53,slow=6.1,SNR=10						
JOF	Joensuu	74.46	334	ep	P	07 31 00.9	+0.1
KAF	Kangasniemi	76.86	334	ep	P	07 31 15.3	+0.8
FINES	FINESS Array B	77.33	334	P	P	07 31 17.9	+0.8
	comp=Z,6.7nm,0.6s,mb4.8,baz=67,slow=5.5,SNR=41						
FINES	FINESS Array B	77.33	334	P	P	07 31 17.9	+0.8
AKASG	Malin Array Be	81.98	324	P	P	07 31 42.5	+0.2
	comp=Z,1.7nm,0.5s,mb4.2,baz=52,slow=5.4,SNR=4.4						
NB2	NORSAR Subarra	83.00	338	P	P	07 31 48.0	+0.7
	comp=Z,2.0nm,0.6s,mb4.3,baz=43,slow=4.8						
NOA	NORSAR Array B	83.00	338	P	P	07 31 48.2	+0.9
	comp=Z,3.0nm,0.7s,mb4.4,baz=46,slow=4.7,SNR=8.4						
NAO	NORSAR Subarra	83.29	338	P	P	07 31 48.0	-0.8
	comp=Z,2.0nm,0.6s,mb4.3						
NAO	NORSAR Subarra	83.29	338	P	P	07 31 48.0	-0.8
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
PDAR	Pinedale Array	84.13	45	P	P	07 31 55.0	+1.6
	comp=Z,0.5nm,0.8s,mb3.7,baz=315,slow=2.1,SNR=4.1						
GERES	GERESS Array B	90.88	329	P	P	07 32 25.9	+0.1
	comp=Z,1.5nm,0.7s,mb4.5,baz=45,slow=5.7,SNR=10						
LPAZ	La Paz	150.17	74	PKPbc	PKPdf	07 39 14.9	+7.5
	comp=Z,1.2nm,0.8s,baz=44,slow=6.9,SNR=4.6						

IDC 25 08:19:13.4±2.7**, 5.54N**×**93.16E, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.7**/18**, mbtmp3.8**/4**, Error ellipse: s-maj=108.8km s-min=28.1km az=57.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	42.16	349	P	P	08 27 07.8	-1.5
	0.4nm,0.5s,baz=169,slow=8.4,SNR=5.9						
SONM	Songino Array	43.64	13	P	P	08 27 19.8	-1.6
	0.2nm,0.3s,baz=191,slow=7.3,SNR=3.6						
WRA	Warramunga Arr	47.75	123	P	P	08 27 52.6	-1.9
	1.0nm,0.6s,baz=302,slow=9.1,SNR=13						
ARCES	ARCESS Array B	77.13	341	P	P	08 31 08.3	-1.8
	2.2nm,0.8s,baz=101,slow=6.2,SNR=5.2						

NEIC ***25*** *09:08:14.6±3.8, 5.12S×145.38E, h84^{km}±36^{km}, mb4.2/2, Error ellipse: s-maj=41.9km s-min=17.3km az=141.0*

IDC ***25*** *09:08:16.0±6.0, 5.27S×145.60E, h96^{km}±57^{km}, mb4.1/3, mb1 4.2/5, mb1mx3.8/13, mbtmp4.4/5, ML3.8/2, Error ellipse: s-maj=47.7km s-min=27.4km az=137.0*

ISC 25 09:08:15.7±4.2**, 5.4S**±0.2×**145.5E**±0.2**, h105**^{km}±40^{km}**, n12, σ0^{s}81**/13**, mb4.1**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.35	158	P	P	09 09 22.0	+1.0
	16nm,0.3s,baz=352,slow=5.3,SNR=56						
PMG				S	S	09 10 10.3	-0.6
	29nm,0.3s,baz=151,slow=20,SNR=15						
CTA	Charters Tower	14.66	177	eP	P	09 11 46.8	+7.6
	2.9nm,0.6s						
CTA	Charters Tower	14.66	177	P	P	09 11 46.2	+7.1
	0.8nm,0.3s,baz=358,slow=13,SNR=6.7						
CTAO	Charters Tower	14.66	177	eP	P	09 11 45.9	+6.8
	3.3nm,0.3s						
KAKA	Kakadu	14.81	240	eP	P	09 12 00.1	+19
	8.8nm,0.6s						
WRAB	Tennant Creek	18.10	216	eP	P	09 12 21.3	-0.5
	6.3nm,0.6s						
WB2	Warramunga Arr	18.11	216	eP	P	09 12 20.9	-1.0
WRA	Warramunga Arr	18.11	216	P	P	09 12 21.7	-0.3
	0.5nm,0.3s,baz=40,slow=12,SNR=31						
FITZ	Fitzroy Crossi	23.17	235	eP	P	09 13 14.7	+0.8
	12nm,0.6s,mb4.4						
FITZ	Fitzroy Crossi	23.17	235	P	P	09 13 15.2	+1.4
	21nm,0.6s,mb4.6,baz=56,slow=8.9,SNR=25						
STKA	Stephens Creek	26.64	187	P	P	09 13 47.5	+1.0
	2.8nm,0.6s,mb4.0,baz=6.3,slow=8.2,SNR=6.2						
ILAR	Eielson Array	85.48	23	P	P	09 20 42.0	-0.7
	1.1nm,0.8s,mb3.9,baz=246,slow=4.7,SNR=16						

CSEM ***25*** *09:29:50.8, 25.69S×177.91W, h100^{km}, mb5.5*

CRAAG ***25*** *09:29:55.1, 25.58S×177.99W, Mb5.4*

MOS ***25*** *09:29:55.7±0.9, 25.68S×177.83W, h142^{km}, mb5.1/20, Error ellipse: s-maj=9.5km s-min=7.8km az=72.5*

SKO ***25*** *09:29:55.1, 25.58S×177.99W, h137^{km}*

BJI ***25*** *09:29:58.8, 25.34S×177.60W, h167^{km}, mB5.5, mb5.3*

HRVD ***25*** *09:29:59.8±0.2, 25.88S×177.46W, h181^{km}±1^{km}, MW5.5/90, Centroid moment Tensor Solution. LP body waves: s70,c128; Mantle waves: s90,c194; Half duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.67±.04; M$_{\theta\theta}$-0.99±.05; M$_{\phi\phi}$1.66±.05; M$_{r\theta}$-1.52±.03; M$_{\theta\phi}$0.05±.05; M$_{\phi r}$-1.61±.03; Best double couple: M$_0$2.645×10^{17} NP1: φ$_s$143°, δ30°, λ-163°. NP2:φ$_s$39°, δ82°, λ-61°. Principal axes: T 2.652, Plg30°, Azm105°; N -.013, Plg29°, Azm214°; P -2.638, Plg46°, Azm338°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***25*** *09:29:59.8±0.1, 25.81S×177.83W, mb5.0/66 Error ellipse: s-maj=5.3km s-min=3.8km az=145.0*

IDC ***25*** *09:29:59.8±0.5, 25.84S×177.73W, h172^{km}±4^{km}, mb4.9/18, mb1 5.1/20, mb1mx5.1/20, mbtmp5.4/20, MS4.4/6, Ms1 4.4/6, ms1mx4.0/26, Error ellipse: s-maj=10.6km s-min=8.8km az=114.0*

ISC 25 09:29:56.8±0.1**, 26.37S**±0.02×**177.76W**±0.04**, h172**^{km}**, h172**^{km}±1.5^{km}**:pP-P, n557, σ1^{s}17**/280**, mb5.2**/97**, 34C-47D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.88	183	P	P	09 30 51.9	+7.8
	1µm,0.3s,baz=285,slow=7.5,SNR=70						
RAO				S	S	09 31 34.3	+14
	6µm,0.3s,baz=103,slow=23,SNR=20						
RAO				LR	LR	09 31 57.5	
	comp=Z,10µm,18.1s,baz=183,slow=34						
RAO	Raoul Island	2.88	183	eP	P	09 30 51.7	+7.6
MXZ	Matakaoa Point	11.65	196	ePN	P	09 32 37.0	-1.6
MXZ				SN	S	09 34 47.2	+1.3
PUZ	Puketiti	12.15	195	ePN	P	09 32 42.6	-2.5
MWZ	Matawai	12.58	197	ePN	P	09 32 48.0	-2.6
MWZ				eSN	S	09 35 04.8	-2.6
URZ	Urewera	12.62	199	P	P	09 32 53.2	+2.0
	1.4nm,0.3s,baz=321,slow=13,SNR=3.9						
URZ				S	S	09 35 13.3	+4.8
	33nm,0.3s,baz=271,slow=21,SNR=12						
URZ	Urewera	12.62	199	ePN	P	09 32 49.6	-1.6
URZ				eSN	S	09 35 10.5	+2.0
KNZ	Kokohu	13.19	196	eSN	S	09 35 18.5	-2.9
AFI	Afiamalu	13.60	25	P	P	09 32 51.2	-13
	52nm,0.3s,baz=49,slow=4.3,SNR=63						
AFI				S	S	09 35 03.3	-28
	57nm,0.3s,baz=55,slow=22,SNR=6.2						
AFI	Afiamalu	13.60	25	eP	P	09 32 50.7	-13
	287nm,0.6s						
AFI	Afiamalu	13.60	25	eP	P	09 32 50.7	-13
AFI				pmax	pmax		
	comp=Z,287nm,0.6s						
BKZ	Black Stump Fm	13.64	199	ePN	P	09 32 59.6	-4.6
BKZ				SN	S	09 35 34.4	+2.5
PXZ	Pawanui	14.35	197	ePN	P	09 33 10.0	-3.0
PXZ				SN	S	09 35 45.7	-2.2
TSZ	Takapari Road	14.63	199	eSN	S	09 35 53.7	-0.6
DZM	Mont Dzumac	15.03	283	eP	P	09 33 26.3	+4.6
DZM				eS	S	09 36 08.0	+4.4
DZM	Mont Dzumac	15.03	283	P	P	09 33 26.9	+5.2
	comp=Z,4.4nm,0.3s,baz=98,slow=15,SNR=52						
DZM				S	S	09 36 16.5	+13
	baz=94,slow=19,SNR=1.6						
DZM	Mont Dzumac	15.03	283	eP	P	09 33 26.3	+4.6
DZM				eS	S	09 36 08.0	+4.4
BFZ	Birch Farm	15.12	198	ePN	P	09 33 22.0	-0.7
BFZ				eSN	S	09 36 02.6	-2.9
NOUC	Port Laguerre	15.14	283	eP	P	09 33 28.2	+5.1
MRZ	Mangatainoka R	15.29	200	ePN	P	09 33 23.1	-1.8
MRZ				SN	S	09 36 07.9	-1.5
KIW	Kapiti Island	15.68	201	ePN	P	09 33 30.9	+1.2
KIW				SN	S	09 36 17.4	-0.8
MTW	Mount Morrison	15.77	199	eSN	S	09 36 17.6	-2.7
PAWZ	Paruwai Farm	16.00	199	eSN	S	09 36 24.8	-0.5
TUWZ	Tuamarina	16.52	202	ePN	P	09 33 39.8	-0.1
TUWZ				SN	S	09 36 37.0	+0.1
QRZ	Quartz Range	16.52	207	SN	S	09 36 41.0	+4.0
NNZ	Nelson	16.53	204	ePN	P	09 33 42.0	+2.0
NNZ				eSN	S	09 36 37.7	+0.5
THZ	Tophouse	17.18	204	ePN	P	09 33 47.4	-0.4
THZ				SN	S	09 36 52.7	+1.2
RAR	Rarotonga	17.24	76	P	P	09 33 46.3	-2.3
	comp=Z,7.3nm,0.3s,baz=224,slow=7.5,SNR=21						
RAR				S	S	09 36 46.9	-6.1
	comp=Z,3.0nm,0.3s,baz=97,slow=17,SNR=3.6						
RAR				LR	LR	09 39 17.6	
	comp=Z,922nm,20.2s,baz=62,slow=33						
KHZ	Kahutara	17.53	202	ePN	P	09 33 51.1	-0.7
KHZ				eSN	S	09 36 58.0	-1.2
DSZ	Denniston Nort	17.59	207	SN	S	09 37 00.3	-0.1
FUNA	Funafuti	17.98	350	eP	P	09 33 47.7	-9.2
LTZ	Lake Taylor	18.30	204	eSN	S	09 37 14.8	-0.4
MQZ	McQueen's Vall	18.98	202	SN	S	09 37 29.2	+0.5
WVZ	Waitaha Valley	19.13	206	SN	S	09 37 33.4	+1.7
RPZ	Rata Peaks	19.55	205	P	P	09 34 17.7	+4.6
	comp=Z,4.8nm,0.5s,baz=353,slow=12,SNR=3.7						
RPZ				S	S	09 37 42.6	+3.0
	comp=Z,74nm,0.7s,baz=349,slow=20,SNR=11						
RPZ	Rata Peaks	19.55	205	eSN	S	09 37 42.8	+3.2
TBI	Tubuai	25.83	89	eP	P	09 35 13.6	-0.5
	comp=Z,337nm,1.0s,mb5.9						
HNR	Honiara	27.01	304	P	P	09 35 22.3	-2.6
	comp=Z,249nm,0.7s,mb5.9,baz=204,slow=2.6,SNR=9.2						
HNR	Honiara	27.01	304	eP	P	09 35 22.4	-2.4
	comp=Z,299nm,1.0s,mb5.9						
HNR	Honiara	27.01	304	eP	P	09 35 22.5	-2.4
HNR				pmax	pmax		
	comp=Z,299nm,1.0s,mb5.9						
PAE	Paea	27.48	77	eP	P	09 35 27.9	-1.2
	comp=Z,144nm,1.0s,mb5.5						
PAE				epP	pP	09 36 04.0	-0.2
	comp=Z,65nm,1.1s						
PPT	Papeete	27.52	77	eP	P	09 35 28.2	-1.3
	comp=Z,62nm,1.0s,mb5.3						
PPT	Papeete	27.52	77	eLR	LR	09 42 43.2	
	comp=Z,850nm,23.7s						
PPT	Papeete	27.52	77	P	P	09 35 28.6	-0.9
	comp=Z,83nm,1.0s,mb5.4,baz=211,slow=4.1,SNR=9.7						
PPT				LR	LR	09 43 49.2	
	comp=Z,685nm,18.3s,baz=37,slow=30						
PPT	Papeete	27.52	77	P	P	09 35 28.6	-0.9
PPT				LR	LR	09 43 49.2	
TVO	Taravao	27.72	78	eP	P	09 35 30.2	-1.1
	comp=Z,146nm,1.0s,mb5.7						
CNB	Canberra Magne	29.50	244	eP	P	09 35 53.2	+6.2
	comp=Z,42nm,1.2s,mb5.0						
CNB				epP	pP	09 36 37.4	+15
PMOR	Pomariorio Ree	30.07	74	eP	P	09 35 50.7	-1.5
	comp=Z,57nm,1.0s,mb5.3						
VAH	Vaihoa	30.19	74	eP	P	09 35 51.8	-1.5
	comp=Z,108nm,1.1s,mb5.5						
TOO	Toolangi	32.93	241	eP	P	09 36 21.3	+4.4
	comp=Z,18nm,0.7s,mb4.9						
TOO				eSCS	ScS	09 46 30.5	+7.7
TOO	Toolangi	32.93	241	eP	P	09 36 21.3	+4.4
TOO				e		09 46 30.5	
TOO				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.9						
CTA	Charters Tower	33.58	273	⇓iP	P	09 36 24.2	+1.6
	comp=Z,405nm,0.7s						
CTA				eSCP		09 42 30.1	
CTA				ePCS		09 42 47.4	
CTA				eSCS	ScS	09 46 32.1	+5.7
CTA				eSKIKP		09 50 00.3	
CTA	Charters Tower	33.58	273	LR	LR	09 48 38.8	
	comp=Z,1µm,18.7s,baz=90,slow=33						
CTA	Charters Tower	33.58	273	⇓iP	P	09 36 24.2	+1.6
CTA				e		09 46 32.1	
CTA				pmax	pmax		
	comp=Z,405nm,0.7s						
CTAO	Charters Tower	33.58	273	eP	P	09 36 24.2	+1.6
	comp=Z,439nm,0.8s,mb6.2						
CTAO	Charters Tower	33.58	273	eP	P	09 36 24.2	+1.6
CTAO				pmax	pmax		
	comp=Z,439nm,0.8s,mb6.2						
STKA	Stephens Creek	35.78	251	P	P	09 36 45.0	+3.9
	comp=Z,14nm,0.5s,mb4.8,baz=84,slow=7.7,SNR=54						
STKA				PcP	PcP	09 39 08.1	+2.7
	comp=Z,18nm,0.7s,baz=80,slow=3.7,SNR=5.8						
STKA	Stephens Creek	35.78	251	⇓iP	P	09 36 44.4	+3.2
PMG	Port Moresby	37.24	290	P	P	09 36 54.5	+1.0
	comp=Z,426nm,0.9s,mb6.1,baz=115,slow=5.5,SNR=115						
PMG				PcP	PcP	09 39 11.2	+1.3
	comp=Z,24nm,0.8s,baz=59,slow=2.4,SNR=3.1						
PMG	Port Moresby	37.24	290	eP	P	09 36 53.8	+0.3
	comp=Z,494nm,0.9s,mb6.1						
PMG				ePcP	PcP	09 39 11.4	+1.4
PMG	Port Moresby	37.24	290	eP	P	09 36 53.8	+0.3
PMG				e		09 39 11.4	
PMG				pmax	pmax		
	comp=Z,494nm,0.9s						
TAOE	Nuku Hiva Isla	39.66	71	eP	P	09 37 11.9	-1.7
	comp=Z,826nm,0.9s						
WB2	Warramunga Arr	44.30	268	⇓iP	P	09 37 52.2	+0.9
WB2				epP	pP	09 38 35.8	+6.7
WB2				eSCP		09 43 11.1	
WB2				eS	S	09 44 12.1	+0.6
WB2				eSCS	ScS	09 47 32.5	+3.9
WB2				eSKIKP		09 49 40.3	
WRAB	Tennant Creek	44.30	268	⇓iP	P	09 37 52.0	+0.7
	comp=Z,316nm,0.8s,mb6.0						
WRAB				epP	pP	09 38 34.9	+5.8
WRAB	Tennant Creek	44.30	268	⇓iP	P	09 37 52.0	+0.7
WRAB				pmax	pmax		
	comp=Z,316nm,0.8s,mb6.0						

WRA	**Warramunga Arr**	**44.31**	**268**	P	**P**	**09 37 52.2**	**+0.8**
	comp=Z,221nm,0.8s,mb5.8,baz=104,slow=7.7,SNR=371						
WRA				pP	pP	09 38 34.8	+5.5
	comp=Z,81nm,0.9s,baz=103,slow=8.2,SNR=4.7						
WRA				PcP	PcP	09 39 34.8	+1.8
	comp=Z,36nm,1.2s,baz=109,slow=4.0,SNR=6.7						
WRA				ScP		09 43 11.4	
	comp=Z,11nm,1.1s,baz=104,slow=4.1,SNR=6.7						
WRA				S	**S**	**09 44 11.0**	**-0.6**
	comp=Z,9.2nm,0.9s,baz=98,slow=14,SNR=12						
WRA				PKiKP		09 46 32.3	
	comp=Z,0.6nm,0.6s,baz=94,slow=0.4,SNR=5.3						
WRA	**Warramunga Arr**	**44.31**	**268**	P	**P**	**09 37 52.2**	**+0.8**
WRA						09 39 34.8	
WRA				S	**S**	**09 44 11.0**	**-0.6**
FORT	**Forrest**	**47.41**	**251**	⇓*i*P	**P**	**09 38 17.1**	**+1.5**
	comp=Z,210nm,0.6s,mb5.9						
KAKA	**Kakadu**	**48.58**	**276**	⇓*i*P	**P**	**09 38 44.4**	**+20**
	comp=Z,119nm,0.6s,mb5.7						
HKL	**Haleakala**	**51.23**	**26**	*e*P	**P**	**09 38 42.3**	**-2.7**
SBA	**Scott Base**	**52.06**	**184**	*e*P	**P**	**09 38 58.1**	**+7.6**
	comp=Z,90nm,1.4s,mb5.2						
SBA				*e*pP	pP	09 39 36.4	+7.0
SBA				*e*ScP		09 43 45.1	
SBA	**Scott Base**	**52.06**	**184**	*e*P	**P**	**09 38 58.1**	**+7.7**
SBA				pmax	pmax		
	comp=Z,90nm,1.4s,mb5.2						
VNDA	**Vanda**	**52.12**	**186**	*e*P	**P**	**09 38 57.3**	**+6.5**
	comp=Z,39nm,1.5s,mb4.8						
VNDA				*e*pP	pP	09 39 36.5	+6.7
VNDA				*e*ScP		09 43 44.7	
VNDA	**Vanda**	**52.12**	**186**	*e*P	**P**	**09 38 57.3**	**+6.4**
VNDA				pmax	pmax		
	comp=Z,39nm,1.5s						
FITZ	**Fitzroy Crossi**	**52.69**	**267**	⇓*i*P	**P**	**09 38 56.6**	**+0.7**
	comp=Z,265nm,0.8s,mb6.0						
FITZ				*e*pP	pP	09 39 40.7	+5.8
GUMO	**Guam**	**53.83**	**313**	P	**P**	**09 39 02.2**	**-2.1**
	comp=Z,135nm,0.7s,mb5.8,baz=160,slow=7.7,SNR=8.9						
KLBR	**Kellerberrin**	**55.94**	**248**	⇓*i*P	**P**	**09 39 20.2**	**+0.9**
	comp=Z,83nm,0.8s,mb5.6						
NWAO	**Narrogin (SRO)**	**56.10**	**247**	LR	LR	10 01 35.3	
	comp=Z,280nm,20.8s,baz=257,slow=34						
MUN	**Mundaring**	**57.15**	**248**	*e*P	**P**	**09 39 29.2**	**+1.4**
CASY	**Casey**	**58.81**	**207**	*e*P	**P**	**09 39 41.9**	**+3.0**
BUKP	**Musuan**	**65.06**	**293**	*e*P	**P**	**09 40 20.5**	**-0.8**
PAGZ	**Pagadian**	**66.44**	**292**	*e*P	**P**	**09 40 29.2**	**-0.9**
MSLP	**Maasin**	**66.49**	**295**	*e*P	**P**	**09 40 29.1**	**-1.3**
TBP	**Tagbilaran**	**67.05**	**294**	*e*P	**P**	**09 40 31.9**	**-2.1**
IPIL	**Ipil**	**67.08**	**292**	*e*P	**P**	**09 40 33.2**	**-1.0**
SNPH	**Sibulan**	**67.37**	**294**	*e*P	**P**	**09 40 35.0**	**-1.0**
PVCP	**Virac**	**69.02**	**298**	*e*P	**P**	**09 40 46.0**	**-0.1**
TSM	**Tawau**	**69.26**	**286**	P	**P**	**09 40 47.7**	**+0.1**
OTRP	**Odiongan**	**70.04**	**296**	*e*P	**P**	**09 40 51.1**	**-1.1**
KKM	**Kota Kinabalu**	**71.56**	**287**	*e*P	**P**	**09 41 00.5**	**-0.9**
KKM	**Kota Kinabalu**	**71.56**	**287**	P	**P**	**09 41 01.2**	**-0.1**
TGY	**Tagaytay City**	**71.88**	**296**	P	**P**	**09 41 03.5**	**+0.3**
	comp=Z,152nm,0.3s,mb6.2,baz=239,slow=5.9,SNR=7.3						
KSM	**Kuching**	**74.52**	**280**	⇓*i*P	**P**	**09 41 18.9**	**+0.1**
MJAR	**Matsushiro Arr**	**75.07**	**325**	P	**P**	**09 41 19.2**	**-2.3**
	comp=Z,57nm,0.8s,mb5.2,baz=160,slow=5.5,SNR=68						
MJAR	**Matsushiro Arr**	**75.07**	**325**	P	**P**	**09 41 19.2**	**-2.3**
MAJO	**Matsushiro**	**75.07**	**325**	*e*P	**P**	**09 41 19.5**	**-2.0**
	comp=Z,62nm,0.8s,mb5.3						
MAJO	**Matsushiro**	**75.07**	**325**	*e*P	**P**	**09 41 19.5**	**-2.0**
MAJO				pmax	pmax		
	comp=Z,62nm,0.8s,mb5.3						
MAT	**Matsushiro**	**75.07**	**325**	P	**P**	**09 41 18.5**	**-3.0**
MAT				S	S	09 50 42.0	-1.8
MAT	**Matsushiro**	**75.07**	**325**	*e*P	**P**	**09 41 19.0**	**-2.5**
	comp=Z,58nm,0.8s,mb5.3						
MAT				*e*S	S	09 50 47.0	+3.2
MAT	**Matsushiro**	**75.07**	**325**	*e*P	**P**	**09 41 19.0**	**-2.5**
MAT				*e*S	S	09 50 47.0	+3.2
MAT				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.3						
MAW	**Mawson**	**76.15**	**200**	*e*P	**P**	**09 41 32.2**	**+5.4**
	comp=Z,38nm,0.6s,mb5.2						
MAW	**Mawson**	**76.15**	**200**	P	**P**	**09 41 32.3**	**+5.4**
	comp=Z,71nm,0.9s,mb5.3,baz=127,slow=7.3,SNR=68						
MAW	**Mawson**	**76.15**	**200**	*e*P	**P**	**09 41 32.2**	**+5.4**
MAW				pmax	pmax		
	comp=Z,39nm,0.6s						
YHNB	**Yeheng**	**77.64**	**306**	*e*P	**P**	**09 41 35.1**	**-0.9**
SMY	**Shemya**	**79.08**	**355**	*e*P	**P**	**09 41 41.6**	**-1.6**
	comp=Z,457nm,1.1s,mb6.0						
SMY				LR	LR		
	comp=Z,3µm,19.0s						
SMY	**Shemya**	**79.08**	**355**	*e*P	**P**	**09 41 41.6**	**-1.6**
SMY				pmax	pmax		
	comp=Z,457nm,1.1s,mb6.0						
SMY				MLR	MLR		
	comp=Z,3µm,19.0s						
USHA	**Ushuaia**	**79.14**	**146**	LR	LR	10 11 56.3	
	comp=Z,185nm,18.9s,baz=125,slow=32						
FX1	**Attu Island--F**	**79.31**	**354**	*e*P	**P**	**09 41 42.5**	**-2.0**
NIKO	**Nikolski**	**79.38**	**5**	*e*P	**P**	**09 41 42.7**	**-2.1**
UNV	**Unalaska Valle**	**80.47**	**7**	*e*P	**P**	**09 41 48.8**	**-1.8**
	comp=Z,830nm,1.4s,mb6.2						
KGM	**Kluang**	**80.98**	**277**	P	**P**	**09 41 55.7**	**+1.6**
SYO	**Syowa Base**	**81.08**	**193**	⇓P	**P**	**09 41 57.0**	**+3.5**
SYO	**Syowa Base**	**81.08**	**193**	⇓PcP	PcP	09 42 05.5	+5.8
SYO	**Syowa Base**	**81.08**	**193**	⇑pP	pP	09 42 40.9	+5.0
SYO	**Syowa Base**	**81.08**	**193**	SH	S	09 51 50.5	+3.6
SYO	**Syowa Base**	**81.08**	**193**	⇓*e*P	**P**	**09 41 57.0**	**+3.5**
SYO				⇓*e*PcP	PcP	09 42 05.5	+5.8
SYO				⇑*e*pP	pP	09 42 40.9	+5.0
YSS	**Yuzh-Sakhalins**	**81.23**	**334**	⇓*i*P	**P**	**09 41 54.1**	**-0.7**
	comp=Z,114nm,0.8s,mb5.5						
YSS	**Yuzh-Sakhalins**	**81.23**	**334**	⇑*i*P	**P**	**09 41 53.0**	**-1.7**
YSS				*e*		09 51 47.0	
YSS				*e*		09 52 58.0	
YSS				pmax	pmax		
	comp=Z,210nm,1.1s,mb5.7						
KS15	**Wonju Array Si**	**81.45**	**319**	*e*P	**P**	**09 41 54.9**	**-1.2**
SSE	**Sheshan**	**81.64**	**311**	*e*P	**P**	**09 41 56.0**	**-1.2**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,190nm,7.5s						
PET	**Petropavlovsk**	**81.68**	**346**	*e*P	**P**	**09 41 55.4**	**-1.6**
	comp=Z,31nm,0.6s,mb5.1						
PET	**Petropavlovsk**	**81.68**	**346**	κ *i*P	**P**	**09 41 55.3**	**-1.7**
PET				*e*		09 45 03.1	
PET				*e*S	S	09 51 50.0	-3.4
PET				*e**SS		09 53 04.5	
PET				pmax	pmax		
	comp=Z,97nm,0.7s,mb5.5						
PET				pmax	pmax		
	comp=N,100nm,21.6s						
PET				pmax	pmax		
	comp=Z,200nm,15.6s						
PET				pmax	pmax		
	comp=Z,200nm,18.7s						
PET				pmax	pmax		
	comp=Z,100nm,16.0s						
PET				smax			
	comp=N,100nm,12.6s						
PET				smax			
	comp=E,100nm,15.1s						
SNAA	**Sanae**	**82.17**	**178**	*e*	**P**	**09 42 05.9**	**+6.8**
SNAA	**Sanae**	**82.17**	**178**	*e*	pP	09 42 44.2	+2.6
SNAA	**Sanae**	**82.17**	**178**	*e*	sP	09 43 08.0	+8.0
SNAA	**Sanae**	**82.17**	**178**	⇑*i*P	**P**	**09 42 03.6**	**+4.5**
SNAA				*e*		09 42 05.9	
SNAA				*e*	pP	09 42 44.2	+2.6
SNAA				*e*		09 43 08.0	
SNAA	**Sanae**	**82.17**	**178**	⇑*i*P	**P**	**09 42 03.6**	**+4.5**
SNAA				*e*	pP	09 42 44.2	+2.6
INCN	**Inchon**	**82.21**	**319**	*e*P	**P**	**09 42 00.1**	**+0.1**
	comp=E,13nm,0.4s,mb4.9						
INCN				*e*		09 42 55.8	
VNA3	**Neumayer Olymp**	**82.30**	**176**	*e*	**P**	**09 42 06.5**	**+6.7**
VNA3	**Neumayer Olymp**	**82.30**	**176**	*e*	pP	09 42 43.8	+1.5
VNA3	**Neumayer Olymp**	**82.30**	**176**	*e*	sP	09 43 06.0	+5.3
VNA3	**Neumayer Olymp**	**82.30**	**176**	⇑*i*P	**P**	**09 42 04.4**	**+4.6**
VNA3				*e*		09 42 06.5	
VNA3				*e*	pP	09 42 43.8	+1.5
VNA3				*e*		09 43 06.0	
MWC	**Mount Wilson**	**82.66**	**46**	*e*P	**P**	**09 42 02.1**	**-0.3**
VNA2	**Neumayer--Watz**	**82.74**	**177**	*e*	**P**	**09 42 09.6**	**+7.5**
VNA2	**Neumayer--Watz**	**82.74**	**177**	*e*	pP	09 42 47.4	+2.8
VNA2	**Neumayer--Watz**	**82.74**	**177**	*e*	sP	09 43 09.9	+6.8
VNA2	**Neumayer--Watz**	**82.74**	**177**	⇑*i*P	**P**	**09 42 07.1**	**+5.0**
VNA2				*e*		09 42 09.6	
VNA2				*e*	pP	09 42 47.4	+2.8
VNA2				*e*		09 43 09.9	
MAIT	**Maitri**	**82.90**	**183**	*e*P	**P**	**09 42 07.4**	**+4.5**
NVL	**N'lazarevskaya**	**82.90**	**183**	⇓*i*P	**P**	**09 42 07.3**	**+4.4**
NVL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VNA1	**Neumayer--Stat**	**82.97**	**176**	*e*	**P**	**09 42 10.5**	**+7.3**
VNA1	**Neumayer--Stat**	**82.97**	**176**	*e*	pP	09 42 49.7	+3.9
VNA1	**Neumayer--Stat**	**82.97**	**176**	*e*	sP	09 43 15.4	+11
VNA1	**Neumayer--Stat**	**82.97**	**176**	⇑*i*P	**P**	**09 42 08.4**	**+5.2**
VNA1				*e*		09 42 10.5	
VNA1				*e*	pP	09 42 49.7	+3.9
VNA1				*e*		09 43 15.4	
ISA	**Isabella**	**83.29**	**45**	*e*P	**P**	**09 42 05.7**	**+0.1**
	comp=Z,16nm,0.9s,mb4.8						
ISA				*e*pP	pP	09 42 47.8	-0.4
ISA	**Isabella**	**83.29**	**45**	*e*P	**P**	**09 42 05.7**	**+0.1**
ISA				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
QIZ	**Qiongzhong**	**83.48**	**295**	⇓P	**P**	**09 42 09.3**	**+2.5**
QIZ				XP	sP	09 43 12.5	+4.6
QIZ				S	S	09 52 11.5	-0.7
QIZ				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
CMB	**Columbia Colle**	**83.63**	**42**	*e*P	**P**	**09 42 07.0**	**-0.3**
	comp=Z,18nm,0.9s,mb4.8						
CMB				*e*pP	pP	09 42 50.5	+0.6
CMB	**Columbia Colle**	**83.63**	**42**	*e*P	**P**	**09 42 07.0**	**-0.2**
CMB				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.8						
NJ2	**Nanjing**	**83.80**	**310**	*e*P	**P**	**09 42 07.3**	**-0.9**
NJ2				S	S	09 52 06.0	-9.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,230nm,3.7s						
NJ2				LR	LR		
	comp=N,1µm,21.4s						
NJ2				LR	LR		
	comp=E,460nm,12.9s						
NJ2				LR	LR		
	comp=Z,190nm,29.4s						
WDC	**Whiskeytown Da**	**84.05**	**39**	*e*P	**P**	**09 42 09.5**	**+0.2**
	comp=Z,23nm,0.9s,mb4.9						
WDC				pP	pP	09 42 47.3	-4.7
WDC				sP	sP	09 43 04.9	-5.5
WDC	**Whiskeytown Da**	**84.05**	**39**	*e*P	**P**	**09 42 09.5**	**+0.2**
WDC				*PP	pP	09 42 47.3	-4.7
WDC				*SP	sP	09 43 04.9	-5.5
WDC				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
IPM	**Ipoh**	**84.17**	**278**	P	**P**	**09 42 11.6**	**+1.1**
MTUM	**Tungsten Hills**	**84.30**	**43**	*e*P	**P**	**09 42 11.0**	**+0.4**
MTUM				pP	pP	09 42 54.6	+1.3
YBH	**Yreka Blue Hor**	**84.73**	**38**	*e*P	**P**	**09 42 13.5**	**+0.8**
	comp=Z,16nm,0.8s,mb4.8						
YBH	**Yreka Blue Hor**	**84.73**	**38**	*e*P	**P**	**09 42 13.5**	**+0.8**
YBH				pmax	pmax		
	comp=Z,16nm,0.8s						
KULM	**Kulim**	**84.83**	**278**	⇓*i*P	**P**	**09 42 14.8**	**+1.0**
PLCA	**Paso Flores**	**85.10**	**133**	P	**P**	**09 42 18.9**	**+4.4**
	comp=Z,16nm,1.0s,mb4.7,baz=228,slow=5.6,SNR=14						
PLCA				pP	pP	09 43 02.3	+5.0
	comp=Z,21nm,1.0s,baz=240,slow=4.1,SNR=6.9						
PLCA	**Paso Flores**	**85.10**	**133**	*e*P	**P**	**09 42 18.6**	**+4.1**
	comp=Z,46nm,1.4s,mb5.0						
PLCA				*e*pP	pP	09 43 02.9	+5.6
PLCA	**Paso Flores**	**85.10**	**133**	*e*P	**P**	**09 42 18.6**	**+4.1**
PLCA				pmax	pmax		
	comp=Z,45nm,1.4s						
LDFC	**Landfair**	**85.10**	**47**	⇓*i*P	**P**	**09 42 15.8**	**+1.1**
LDFC				*e*pP	pP	09 42 57.2	-0.3
NVAR	**Mina Array Bea**	**85.14**	**43**	P	**P**	**09 42 15.1**	**+0.3**
	comp=Z,17nm,0.8s,mb4.8,baz=209,slow=6.8,SNR=152						
NVAR				pP	pP	09 42 58.7	+1.2
	comp=Z,9.7nm,1.0s,baz=209,slow=7.2,SNR=2.8						
NVAR				PKKPbc		10 00 24.6	
	comp=Z,0.2nm,0.6s,baz=98,slow=3.6,SNR=3.7						
NVAR				PKPPKP		10 08 32.6	
	comp=Z,1.3nm,1.0s,baz=67,slow=3.2,SNR=6.3						
NVAR	**Mina Array Bea**	**85.14**	**43**	P	**P**	**09 42 15.1**	**+0.3**
NVAR				pP	pP	09 42 58.7	+1.2
NVAR				PKKPbc		10 00 24.6	
NVAR				P'P'		10 08 32.6	
HUMO	**Hull Mountain**	**85.19**	**37**	*e*P	**P**	**09 42 15.1**	**+0.2**
	comp=Z,22nm,1.1s,mb4.8						
HUMO				*e*pP	pP	09 42 58.4	+0.7
MNV	**Mina**	**85.23**	**43**	⇓*e*P	**P**	**09 42 15.5**	**+0.3**
	comp=Z,21nm,0.9s,mb4.9						
MNV				*e*pP	pP	09 42 58.0	-0.1
MNV	**Mina**	**85.23**	**43**	⇓*e*P	**P**	**09 42 15.5**	**+0.3**
MNV				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.9						
MDJ	**Mudanjiang**	**85.44**	**325**	P	**P**	**09 42 15.5**	**-0.6**
MDJ				AP	pP	09 42 57.0	-1.9
MDJ				XP	sP	09 43 15.0	-2.3
MDJ				PP	PP	09 45 33.0	-5.0
MDJ				SKS	SKS	09 52 20.0	-1.5
MDJ				S	S	09 52 31.0	+0.2
MDJ				XS		09 53 42.5	
MDJ				PS	PS	09 53 54.3	+0.7
MDJ				SS	SS	09 58 06.5	-6.8
MDJ				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,350nm,3.8s						
MDJ				LR	LR		
	comp=N,140nm,24.2s						
MDJ				LR	LR		
	comp=E,280nm,21.0s						
MDJ				LR	LR		
	comp=Z,430nm,17.8s						
MDJ	**Mudanjiang**	**85.44**	**325**	*e*P	**P**	**09 42 15.9**	**-0.1**
	comp=Z,31nm,0.7s,mb5.2						
TPNV	**Topopah Spring**	**85.50**	**45**	*e*P	**P**	**09 42 17.2**	**+0.6**
	comp=Z,10nm,0.8s,mb4.6						
TPNV	**Topopah Spring**	**85.50**	**45**	*e*P	**P**	**09 42 17.2**	**+0.6**
TPNV				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
TPH	**Tonopah**	**85.58**	**44**	⇓*i*P	**P**	**09 42 17.3**	**+0.3**
	comp=Z,26nm,0.9s,mb5.0						
TPH				*e*pP	pP	09 43 00.7	+0.9
TPH	**Tonopah**	**85.58**	**44**	⇓*i*P	**P**	**09 42 17.3**	**+0.3**
TPH				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.0						
NEN	**Nelson**	**85.62**	**47**	*e*P	**P**	**09 42 17.7**	**+0.6**
NEN				*e*pP	pP	09 43 01.8	+1.8
WHN	**Wuhan**	**86.10**	**307**	⇑P	**P**	**09 42 20.5**	**+0.8**
WHN				AMB	AMB		
	comp=Z,80nm,1.0s,mb5.4						
DL2	**Dalian**	**86.15**	**317**	P	**P**	**09 42 19.8**	**+0.1**
DL2				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.9						
DL2				AMB	AMB		
	comp=Z,180nm,5.0s						
DL2				LR	LR		
	comp=N,160nm,18.5s						
DL2				LR	LR		
	comp=E,130nm,14.5s						
DL2				LR	LR		
	comp=Z,480nm,19.8s						
TUC	**Tucson**	**86.44**	**51**	*e*P	**P**	**09 42 22.7**	**+1.4**
	comp=Z,16nm,0.9s,mb4.8						
TUC				*e*pP	pP	09 43 07.2	+3.1
TUC	**Tucson**	**86.44**	**51**	*e*P	**P**	**09 42 22.7**	**+1.5**
TUC				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
SNY	**Shenyang**	**86.83**	**320**	⇓P	**P**	**09 42 22.5**	**-0.4**
SNY				S	S	09 52 44.0	-0.2
SNY				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.3						
SNY				LR	LR		
	comp=N,400nm,18.9s						
SNY				LR	LR		
	comp=E,340nm,20.1s						
SNY				LR	LR		
	comp=Z,570nm,19.5s						
CN2	**Changchun**	**87.07**	**323**	*e*P	**P**	**09 42 25.5**	**+1.5**
CN2				*e*XP	sP	09 43 25.3	-0.1
CN2				*e*S	S	09 52 46.5	+0.2
CN2				*e*SS	SS	09 58 33.5	-3.3
CN2				AMB	AMB		
	comp=Z,80nm,1.1s,mb5.5						
CN2				AMB	AMB		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,22.0s						
CN2				LR	LR		
	comp=E,400nm,22.0s						
CN2				LR	LR		
	comp=Z,400nm,21.0s						
WVOR	**Wild Horse Val**	**87.48**	**39**	*e*P	**P**	**09 42 26.2**	**+0.2**
	comp=Z,6.3nm,0.9s,mb4.5						
WVOR	**Wild Horse Val**	**87.48**	**39**	*e*P	**P**	**09 42 26.2**	**+0.2**
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.4						
KLR	**Kul'dur**	**87.67**	**330**	⇑*i*P	**P**	**09 42 26.5**	**-0.2**
KLR				*e*		09 54 17.5	
KLR				pmax	pmax		
	comp=Z,52µm,1.0s						
ARUT	**Antelope Range**	**87.79**	**46**	*e*P	**P**	**09 42 28.7**	**+1.1**
WUAZ	**Wupatki**	**87.84**	**48**	*e*P	**P**	**09 42 28.3**	**+0.4**
	comp=Z,13nm,0.9s,mb4.8						
WUAZ				*e*pP	pP	09 43 12.5	+1.7
ELK	**Elko**	**88.43**	**42**	P	**P**	**09 42 30.9**	**+0.4**
	comp=Z,7.2nm,1.0s,mb4.5,baz=232,slow=5.2,SNR=29						
ELK				pP	pP	09 43 14.3	+0.8
	comp=Z,4.0nm,1.0s,baz=219,slow=4.6,SNR=3.0						
ELK	**Elko**	**88.43**	**42**	*e*P	**P**	**09 42 30.7**	**+0.2**
	comp=Z,7.4nm,0.9s,mb4.5						
ELK				*e*pP	pP	09 43 14.2	+0.7
ELK	**Elko**	**88.43**	**42**	*e*P	**P**	**09 42 30.7**	**+0.2**
ELK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MVU	**Marysvale**	**89.00**	**46**	*e*P	**P**	**09 42 34.6**	**+1.4**
	comp=Z,5.7nm,0.8s,mb4.5						
SVW2	**Sparrevohn**	**89.00**	**11**	*e*P	**P**	**09 42 32.0**	**-0.7**
MSU	**Marysvale**	**89.02**	**46**	*e*P	**P**	**09 42 34.5**	**+1.1**
EBG	**Ellensburg**	**89.33**	**35**	P	**P**	**09 42 35.4**	**+0.9**
SLKM	**Skilak Lake**	**89.44**	**13**	*e*P	**P**	**09 42 34.3**	**-0.5**
MA2	**Magadan**	**89.47**	**345**	*e*P	**P**	**09 42 32.8**	**-2.1**
	comp=Z,169nm,1.0s,mb5.9						
MA2	**Magadan**	**89.47**	**345**	*ce*P	**P**	**09 42 34.4**	**-0.5**
MA2				*e**SP	sP	09 43 14.2	-22
MA2				*e*S	S	09 52 58.1	-10
MA2				pmax	pmax		
	comp=Z,40nm,0.7s,mb5.5						
MA2				MLR	MLR		
	comp=Z,980nm,27.0s						
ENH	**Enshi**	**89.51**	**304**	*e*P	**P**	**09 42 36.6**	**+0.7**
	comp=Z,95nm,0.8s,mb5.8						
DUG	**Dugway**	**89.60**	**44**	*e*P	**P**	**09 42 36.0**	**0.0**
	comp=Z,2.2nm,0.8s						
DUG	**Dugway**	**89.60**	**44**	*e*P	**P**	**09 42 36.0**	**0.0**
DUG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GYA	**Guiyang**	**89.74**	**300**	⇑*i*P	**P**	**09 42 39.8**	**+2.8**
GYA				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.5						
GYA				AMB	AMB		
	comp=Z,420nm,5.2s						
GYA				LR	LR		
	comp=N,970nm,17.8s						
GYA				LR	LR		
	comp=E,1µm,18.0s						
GYA				LR	LR		
	comp=Z,1µm,18.2s						
BMO	**Blue Mountains**	**89.76**	**38**	*e*P	**P**	**09 42 36.6**	**0.0**
	comp=Z,6.2nm,0.8s,mb4.6						
WRW	**Wenatchee Ridg**	**89.79**	**34**	P	**P**	**09 42 37.1**	**+0.4**
MNTX	**Cornudas Mount**	**89.97**	**54**	*e*P	**P**	**09 42 38.6**	**+0.6**
	comp=Z,7.8nm,0.8s,mb4.7						
WRD	**Warden**	**90.00**	**36**	P	**P**	**09 42 38.9**	**+1.1**
LTX	**Lajitas**	**90.03**	**57**	*e*P	**P**	**09 42 39.2**	**+0.9**
	comp=Z,4.9nm,1.0s,mb4.4						
LTX	**Lajitas**	**90.03**	**57**	*e*P	**P**	**09 42 39.2**	**+0.9**
LTX				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.4						
TXAR	**Lajitas Array**	**90.03**	**57**	P	**P**	**09 42 39.4**	**+1.0**
	comp=Z,2.4nm,0.8s,mb4.2,baz=211,slow=7.1,SNR=27						
TXAR				pP	pP	09 43 21.7	+0.2
	comp=Z,2.0nm,0.9s,baz=230,slow=7.0,SNR=1.8						
TXAR				PKKP	PKKP	10 00 12.3	+31
	comp=Z,0.7nm,0.9s,baz=90,slow=3.8,SNR=4.6						
TXAR	**Lajitas Array**	**90.03**	**57**	P	**P**	**09 42 39.4**	**+1.0**
TXAR				pP	pP	09 43 21.7	+0.2
TXAR				PKKP	PKKP	10 00 12.3	+31
TMUT	**Trail Mountain**	**90.09**	**45**	*e*P	**P**	**09 42 39.6**	**+1.3**
TMUT				*e*pP	pP	09 43 22.1	+0.6
LENM	**Lemitar**	**90.12**	**52**	*e*P	**P**	**09 42 40.0**	**+1.4**
NLW	**Nelson Butte**	**90.21**	**34**	P	**P**	**09 42 39.0**	**+0.4**
MPU	**Maple Canyon**	**90.23**	**45**	*e*P	**P**	**09 42 39.5**	**+0.5**
	comp=Z,6.5nm,0.8s,mb4.6						
BNM	**Barren Site**	**90.36**	**52**	*e*P	**P**	**09 42 40.8**	**+1.1**
SRU	**San Rafael**	**90.42**	**46**	*e*P	**P**	**09 42 40.5**	**+0.6**
	comp=Z,13nm,0.9s,mb4.9						
SRU				*e*pP	pP	09 43 22.5	-0.6
SRU	**San Rafael**	**90.42**	**46**	*e*P	**P**	**09 42 40.5**	**+0.6**
SRU				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
LPM	**Los Pinos Moun**	**90.44**	**52**	*e*P	**P**	**09 42 40.9**	**+0.8**
OD2	**Odessa Site #2**	**90.61**	**36**	P	**P**	**09 42 41.0**	**+0.5**
HLID	**Hailey**	**90.62**	**41**	*e*P	**P**	**09 42 41.2**	**+0.6**
	comp=Z,12nm,0.9s,mb4.9						
PMR	**Palmer**	**90.65**	**13**	*e*P	**P**	**09 42 39.4**	**-1.0**
	comp=Z,38nm,0.9s,mb5.4						
PMR	**Palmer**	**90.65**	**13**	*e*P	**P**	**09 42 39.4**	**-1.0**
PMR				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.4						
ANMO	**Albuquerque**	**90.89**	**51**	P	**P**	**09 42 43.2**	**+1.0**
	comp=Z,8.0nm,0.9s,mb4.8,baz=215,slow=5.3,SNR=37						
ANMO				pP	pP	09 43 26.6	+1.2
	comp=Z,5.4nm,1.0s,baz=221,slow=8.2,SNR=2.7						
ANMO	**Albuquerque**	**90.89**	**51**	*e*P	**P**	**09 42 43.1**	**+0.8**
	comp=Z,6.9nm,0.8s,mb4.7						
ANMO				*e*pP	pP	09 43 26.5	+1.0
ANMO	**Albuquerque**	**90.89**	**51**	*e*P	**P**	**09 42 43.1**	**+0.9**
ANMO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GDL2	**Guadalupe Moun**	**90.97**	**54**	*e*P	**P**	**09 42 43.4**	**+0.8**
TCUT	**Toone Canyon**	**91.00**	**44**	*e*P	**P**	**09 42 43.2**	**+0.7**
SML	**Sawmill**	**91.01**	**13**	*e*P	**P**	**09 42 41.6**	**-0.5**
PV01	**Paradox Valley**	**91.16**	**48**	*e*P	**P**	**09 42 43.7**	**+0.3**
HWUT	**Hardware Ranch**	**91.18**	**43**	*e*P	**P**	**09 42 43.0**	**-0.4**
	comp=Z,3.3nm,0.7s,mb4.5						
CPRX	**Cap Rock**	**91.75**	**54**	*e*P	**P**	**09 42 47.1**	**+0.8**
TNA	**Tin City**	**91.94**	**4**	*e*P	**P**	**09 42 46.0**	**-0.3**
	comp=Z,25nm,1.0s,mb5.2						
NEW	**Newport**	**91.99**	**36**	*e*P	**P**	**09 42 46.1**	**-0.8**
	comp=Z,5.3nm,0.9s,mb4.6						
NEW	**Newport**	**91.99**	**36**	*e*P	**P**	**09 42 46.1**	**-0.8**
NEW				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SEY	**Seymchan**	**92.11**	**347**	⇑*i*P	**P**	**09 42 47.1**	**0.0**
TRQA	**Tornquist**	**92.11**	**135**	*e*P	**P**	**09 42 51.4**	**+3.6**
	comp=Z,11nm,1.0s,mb4.8						
AHID	**Auburn Hatcher**	**92.12**	**43**	*e*P	**P**	**09 42 48.3**	**+0.6**
	comp=Z,17nm,0.9s,mb5.1						
KMI	**Kunming**	**92.19**	**297**	P	**P**	**09 42 50.5**	**+2.0**
KMI				AP	pP	09 43 34.8	+3.1
KMI				XP	sP	09 43 53.3	+3.1
KMI				PP	PP	09 46 34.8	+1.5
KMI				PPP	PPP	09 48 37.5	+1.7
KMI				SKS	SKS	09 53 05.0	+1.5
KMI				S	S	09 53 34.5	+1.3
KMI				XS		09 54 52.0	
KMI				PS	PS	09 55 12.3	-0.4
KMI				SS	SS	09 59 51.3	+0.4
KMI				SSS	SSS	10 03 31.0	+0.5
KMI				AMB	AMB		
	comp=Z,80nm,0.9s,mb5.8						
KMI				AMB	AMB		
	comp=Z,250nm,3.2s						
KMI				LR	LR		
	comp=N,210nm,16.8s						
KMI				LR	LR		
	comp=E,300nm,22.6s						
KMI				LR	LR		
	comp=Z,290nm,24.3s						
MCMT	**McKenzie Canyo**	**92.27**	**40**	*e*P	**P**	**09 42 49.1**	**+0.7**
REDW	**Red Top Meadow**	**92.61**	**42**	*e*P	**P**	**09 42 50.3**	**+0.3**
	comp=Z,18nm,1.0s,mb5.2						
TPAW	**Teton Pass**	**92.62**	**42**	*e*P	**P**	**09 42 50.6**	**+0.6**
	comp=Z,10nm,1.0s,mb4.9						
MCK	**McKinley**	**92.63**	**12**	*e*P	**P**	**09 42 48.3**	**-1.2**
	comp=Z,32nm,1.1s,mb5.4						
MCK	**McKinley**	**92.63**	**12**	*e*P	**P**	**09 42 48.3**	**-1.2**
MCK				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.4						

Sta	Name	Dist	Azi	Phase	ISC	Time	Res
SNOW	Snow King Moun	92.73	42	eP	P	09 42 51.0	+0.6
	comp=Z,25nm,0.9s,mb5.3						
DLMT	Dillon	92.73	40	eP	P	09 42 50.7	+0.3
	comp=Z,16nm,1.0s,mb5.1						
SMCO	Snowmass	92.78	47	eP	P	09 42 51.5	+0.8
	comp=Z,10nm,0.9s,mb5.0						
IMW	Indian Meadow	92.86	42	eP	P	09 42 51.6	+0.6
	comp=Z,16nm,1.0s,mb5.1						
MOOW	Moose Ponds	92.89	42	eP	P	09 42 51.3	+0.1
	comp=Z,3.4nm,0.9s,mb4.5						
LOHW	Long Hollow	92.90	42	eP	P	09 42 51.2	0.0
	comp=Z,15nm,1.3s,mb5.0						
THY	Trims Highway	92.99	14	eP	P	09 42 49.8	-1.4
SDCO	Great Sand Dun	93.01	49	eP	P	09 42 52.5	+0.6
	comp=Z,4.0nm,0.8s,mb4.6						
BW06	Boulder Array	93.07	43	eP	P	09 42 52.1	+0.1
	comp=Z,8.1nm,0.8s,mb4.9						
BW06				epP	pP	09 43 35.5	+0.2
PDAR	Pinedale Array	93.07	43	P	P	09 42 52.2	+0.2
	comp=Z,8.9nm,0.8s,mb5.0,baz=205,slow=3.1,SNR=68						
PDAR				pP	pP	09 43 35.1	-0.2
	comp=Z,3.6nm,0.8s,baz=243,slow=3.3,SNR=2.9						
PDAR				PKKP	PKKP	10 00 04.2	+28
	comp=Z,0.4nm,0.5s,baz=79,slow=7.6,SNR=4.2						
QLMT	Earthquake Lak	93.10	41	eP	P	09 42 53.2	+1.1
YFT	Old Faithful	93.23	41	eP	P	09 42 54.6	+1.8
DLBC	Dease Lake	93.34	23	P	P	09 42 53.0	+0.2
	comp=Z,5.6nm,0.8s,mb4.7,baz=200,slow=25,SNR=6.4						
BOZ	Bozeman (W)	93.45	40	eP	P	09 42 54.0	+0.3
	comp=Z,9.5nm,1.1s,mb4.8						
BOZ				epP	pP	09 43 37.6	+0.6
BOZ				esP	sP	09 43 54.9	-0.6
BOZ	Bozeman (W)	93.45	40	eP	P	09 42 54.0	+0.3
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.9						
HHC	Hu-ho-hao-te	93.59	314	⇓P	P	09 42 55.0	+0.6
HHC				AMB	AMB		
	comp=Z,30nm,1.4s,mb5.2						
HHC				AMB	AMB		
	comp=Z,330nm,8.4s						
HHC				LR	LR		
	comp=N,310nm,18.0s						
HHC				LR	LR		
	comp=E,290nm,18.0s						
HHC				LR	LR		
	comp=Z,260nm,22.8s						
COLA	College	93.86	12	eP	P	09 42 53.8	-1.3
	comp=Z,18nm,0.6s,mb5.4						
COLA	College	93.86	12	eP	P	09 42 54.6	-0.5
HRY	Holter Researc	93.94	39	eP	P	09 42 55.9	0.0
ILAR	Eielson Array	93.96	13	P	P	09 42 54.2	-1.3
	comp=Z,8.7nm,0.8s,mb4.9,baz=223,slow=5.5,SNR=66						
ILAR				PP	PP	09 46 39.2	-7.1
	comp=Z,5.4nm,0.9s,baz=222,slow=7.6,SNR=6.5						
IMA2	Indian Mountai	93.97	10	eP	P	09 42 54.7	-0.8
ISCO	Idaho Springs	94.00	47	eP	P	09 42 56.8	+0.5
	comp=Z,3.7nm,0.8s,mb4.6						
ISCO	Idaho Springs	94.00	47	eP	P	09 42 56.8	+0.5
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
CD2	Chengdu	94.12	302	⇑iP	P	09 42 58.3	+1.2
CD2				AP	pP	09 43 38.8	-1.5
CD2				PP	PP	09 46 49.3	+1.0
CD2				PPP	PPP	09 48 48.3	-4.7
CD2				S	S	09 53 53.0	+3.3
CD2				SS	SS	10 00 18.0	-0.3
CD2				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.8						
AMTX	Amarillo	94.25	53	eP	P	09 42 57.0	-0.5
	comp=Z,4.9nm,0.8s,mb4.7						
BILL	Bilibino	94.87	354	eP	P	09 42 59.0	-0.6
	comp=Z,64nm,1.2s,mb5.7						
BILL	Bilibino	94.87	354	⇓iP	P	09 42 58.6	-1.0
BILL				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.7						
DAWY	Dawson	95.01	16	eP	P	09 43 00.2	-0.1
LZH	Lanzhou	96.48	307	eP	P	09 43 08.0	+0.3
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb5.2						
RSSD	Black Hills	97.20	44	eP	P	09 43 10.6	-0.2
	comp=Z,5.7nm,0.9s,mb4.9						
RSSD	Black Hills	97.20	44	eP	P	09 43 10.6	-0.2
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
YAK	Yakutsk	97.61	338	eP	P	09 43 11.1	-1.1
	comp=Z,42nm,0.8s,mb5.9						
YAK	Yakutsk	97.61	338	c iP	P	09 43 11.2	-1.0
YAK				pmax	pmax		
	comp=Z,75nm,1.0s,mb6.1						
LPAZ	La Paz	99.57	113	P	P	09 43 25.1	+2.8
	comp=Z,1.3nm,0.7s,mb4.5,baz=187,slow=8.2,SNR=3.3						
LPAZ				PKKPbc		09 59 45.4	
	comp=Z,1.3nm,0.3s,baz=74,slow=2.9,SNR=3.9						
LPAZ	La Paz	99.57	113	ePdif	P	09 43 28.4	+6.2
LPAZ				PKKPbc		09 59 45.4	
INK	Inuvik	99.85	15	PP	PP	09 47 23.9	-7.0
	comp=Z,7.8nm,1.0s,baz=230,slow=7.2,SNR=6.0						
SONM	Songino Array	100.29	318	P	P	09 43 25.3	+0.6
	comp=Z,3.3nm,0.8s,baz=149,slow=3.8,SNR=2.9						
SONM				PP	PP	09 47 27.5	-7.3
	comp=Z,2.8nm,1.0s,baz=133,slow=6.9,SNR=5.3						
SONM				PKKPbc		09 59 44.3	
	comp=Z,0.6nm,0.8s,baz=308,slow=2.6,SNR=3.5						
GTA	Gaotai	100.82	309	eP	P	09 43 26.0	-1.3
GTA				AP		09 44 10.0	
GTA				XP		09 44 28.5	
GTA				PP	PP	09 47 33.5	-5.8
GTA				PPP	PPP	09 49 46.5	-4.4
GTA				SKS	SKS	09 53 47.3	-1.0
GTA				S	S	09 54 41.8	-4.1
GTA				XS		09 55 58.0	
GTA				SS	SS	10 01 42.0	-9.3
GTA				AMB	AMB		
	comp=Z,140nm,5.3s						
GTA				LR	LR		
	comp=N,310nm,19.1s						
GTA				LR	LR		
	comp=E,380nm,21.4s						
GTA				LR	LR		
	comp=Z,460nm,20.6s						
ZAK	Zakamensk	103.26	320	eP	Pdif	09 43 37.5	-0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULM	Lac du Bonnet	104.91	41	PKKP	PKKP	09 59 48.2	+33
	comp=Z,8.4nm,1.0s,baz=70,slow=3.5,SNR=7.5						
SIV	San Ignacio	105.46	117	PKKPbc		09 59 26.3	
	comp=Z,0.8nm,0.7s,baz=97,slow=8.5,SNR=7.5						
SIV				PKKPab		09 59 44.9	
	comp=Z,2.5nm,0.7s,baz=110,slow=6.1,SNR=8.6						
SAML	Samuel	107.48	110	ePdif	Pdif	09 44 04.5	+7.3
	comp=Z,11nm,1.1s						
SDV	Santo Domingo	109.20	89	PKKPbc		09 59 30.2	
	comp=Z,2.7nm,0.5s,baz=268,slow=21,SNR=4.6						
WMQ	Urumqi	110.87	309	ePKP	PKPdf	09 48 11.8	+2.7
WMQ				ePP	PP	09 48 54.0	+0.5
WMQ				XPKP		09 49 11.0	
WMQ				PKS	PKS	09 51 47.0	+2.3
WMQ				PP	PP		
	comp=Z,140nm,5.8s						
ZAL	Zalesovo	115.15	320	PKP	PKPdf	09 48 18.0	+0.8
	comp=Z,4.2nm,0.6s,baz=357,slow=2.1,SNR=11						
MKAR	Makanchi Array	115.31	312	PKP	PKPdf	09 48 18.9	+1.2
	comp=Z,6.6nm,0.5s,baz=164,slow=0.8,SNR=42						
MKAR				SKP		09 51 39.0	
	comp=Z,2.0nm,0.8s,baz=90,slow=2.9,SNR=3.6						
MKAR				PKKPbc		09 58 57.4	
	comp=Z,1.0nm,0.5s,baz=268,slow=4.4,SNR=5.4						
MKAR	Makanchi Array	115.31	312	PKP	PKPdf	09 48 18.9	+1.2
MKAR				SKP		09 51 39.0	
MKAR				PKKPbc		09 58 57.4	
MKAR	Makanchi Array	115.31	312	PKIKP	PKPdf	09 48 18.9	+1.2
MKAR						09 58 57.4	
BDFB	Brasilia	115.74	125	PKKPbc		09 58 54.2	
	comp=Z,3.0nm,0.7s,baz=303,slow=12,SNR=3.9						
NVS	Novosibirsk	116.20	320	ePKIKP	PKPdf	09 48 19.4	+0.2
KURK	Kurchatov	118.38	315	ePKPdf	PKPdf	09 48 24.0	+0.5
KURK	Kurchatov	118.38	315	d iPKIKP	PKPdf	09 48 24.4	+0.9
SUR	Sutherland	118.96	198	ePKPdf	PKPdf	09 48 29.7	+4.5
TKM2	Tokmak 2	119.24	306	P	PKPdf	09 48 27.5	+2.1
	SNR=6.3						
KBK	Karagaybulak	119.67	306	P	PKPdf	09 48 28.3	+2.1
	SNR=5.3						
CHMS	Chumysh	119.86	306	P	PKPdf	09 48 28.4	+1.8
	SNR=6.9						
UCH	Uchtor	119.91	305	P	PKPdf	09 48 29.9	+3.2
	SNR=8.8						
AAK	Ala-Archa	119.99	306	ePKPdf	PKPdf	09 48 27.7	+0.8
AAK	Ala-Archa	119.99	306	PKIKP	PKPdf	09 48 28.6	+1.8
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
USP	Ospenovka	120.09	306	P	PKPdf	09 48 28.6	+1.6
	SNR=6.8						
AML	Almayashu	120.50	305	P	PKPdf	09 48 30.6	+2.7
	SNR=6.3						
BOSA	Boshof	121.04	204	PKP	PKPdf	09 48 33.9	+4.6
	comp=Z,6.9nm,0.7s,baz=145,slow=3.3,SNR=21						
BOSA				PKKPbc		09 58 32.7	
	comp=Z,3.1nm,0.8s,baz=356,slow=7.9,SNR=6.1						
BOSA	Boshof	121.04	204	ePKPdf	PKPdf	09 48 33.6	+4.3
FRB	Frobisher Bay	121.80	30	PKP	PKPdf	09 48 29.6	-0.2
	comp=Z,21nm,1.1s,baz=222,slow=1.7,SNR=4.1						
KKAR	Karatay Array	122.96	306	i PKIKP	PKPdf	09 48 34.2	+1.6
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SCHQ	Schefferville	123.07	40	PKP	PKPdf	09 48 33.4	+0.9
	comp=Z,5.2nm,0.9s,baz=260,slow=6.1,SNR=3.3						
SCHQ	Schefferville	123.07	40	PKP	PKPdf	09 48 33.4	+0.9
VOSK	Vostochnaya	123.26	317	PKIKP	PKPdf	09 48 33.6	+0.7
VOSK				pmax	pmax		
	comp=Z,19nm,0.8s						
BVA0	Borovoye Array	123.62	318	i PKIKP	PKPdf	09 48 35.0	+1.3
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	Borovoye Array	123.62	318	PKhKP		09 48 25.0	
	comp=Z,0.8nm,0.5s,baz=90,slow=1.5,SNR=3.6						
BVAR				PKP	PKPdf	09 48 35.2	+1.5
	comp=Z,26nm,0.8s,baz=108,slow=1.4,SNR=59						
BRVK	Borovoye	123.69	318	ePKPdf	PKPdf	09 48 35.1	+1.3
LBTB	Lobatse	124.16	206	ePKPdf	PKPdf	09 48 39.5	+4.1
KBS	Kingsbay	127.18	358	⇑ePKP	PKPdf	09 48 41.8	+1.9
SUMG	Summit	128.76	15	ePKPdf	PKPdf	09 48 45.1	+2.1
ARU	Arti	130.06	323	ePKPdf	PKPdf	09 48 47.0	+1.2
ARU	Arti	130.06	323	i PKIKP	PKPdf	09 48 46.7	+0.8
ARU				e		09 50 57.0	
ARU				e		09 55 36.8	
ARU				eSS	SS	10 08 04.1	-8.8
SOKR	Solikamsk	130.17	327	⇑iPKIKP	PKPdf	09 48 48.6	+2.6
SOKR				pmax	pmax		
	comp=Z,30nm,0.9s						
AB31	Akbulak array	130.37	313	i PKIKP	PKPdf	09 48 48.0	+1.3
AB31				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AKTK	Aktyubinsk	131.47	315	PKP	PKPdf	09 48 51.0	+2.3
AKTK				SKPbc		09 51 57.5	
AKTO	Aktyubinsk	131.47	315	PKP	PKPdf	09 48 51.0	+2.3
	comp=Z,10nm,0.7s,baz=95,slow=2.2,SNR=24						
AKTO				SKPbc		09 51 57.5	
	comp=Z,7.8nm,1.1s,baz=51,slow=6.1,SNR=6.0						
LSZ	Lusaka	131.52	214	ePKPdf	PKPdf	09 48 54.0	+4.2
LSZ				eSKPbc		09 52 03.9	
TSUM	Tsumeb	132.32	200	ePKPdf	PKPdf	09 48 54.9	+3.7
TSUM				eSKPbc		09 52 06.6	
KEV	Kevo	134.24	348	epkp	PKPdf	09 48 53.8	+0.4
APA	Apatity	134.63	344	⇑iPKIKP	PKPdf	09 48 56.7	+2.5
APA				pmax	pmax		
	comp=Z,18nm,0.8s						
ARCES	ARCESS Array B	134.70	349	PKhKP		09 48 40.4	
	comp=Z,5.0nm,0.9s,baz=45,slow=5.1,SNR=3.8						
ARCES				PKP	PKPdf	09 48 55.6	+1.3
	comp=Z,23nm,0.6s,baz=28,slow=1.0,SNR=42						
ARCES				SKPbc		09 52 09.1	
	comp=Z,29nm,1.0s,baz=27,slow=2.7,SNR=9.9						
ARE0	ARCESS Array S	134.70	349	ePKPdf	PKPdf	09 48 55.5	+1.3
ARE0				eSKPbc		09 52 09.9	
KMBO	Kilima Mbogo	136.56	237	PKP	PKPdf	09 49 03.9	+4.7
	comp=Z,4.4nm,0.8s,baz=33,slow=4.0,SNR=8.2						
KMBO				SKPbc		09 52 21.0	
	comp=Z,4.4nm,0.9s,baz=88,slow=2.9,SNR=8.0						
JOF	Joensuu	138.73	340	epkp	PKPdf	09 48 54.5	-7.3
KAMS	Al Khamasin	140.79	270	P	PKPdf	09 49 12.9	+6.2
KAF	Kangasniemi	140.81	342	epkp	PKPdf	09 48 58.2	-7.3
DJNS	Zahran al Janu	140.89	266	P	PKPdf	09 49 11.7	+4.7
FINES	FINESS Array B	141.42	342	PKhKP		09 49 01.3	
	comp=Z,11nm,0.6s,baz=49,slow=4.0,SNR=46						
OBN	Obninsk	141.93	328	⇑ePKP	PKPdf	09 49 10.8	+3.2
OBN	Obninsk	141.93	328	⇑ePKHKP		09 49 03.9	
OBN				i		09 49 09.3	
OBN				pmax	pmax		
	comp=Z,28nm,0.8s						
OBN				pmax	pmax		
	comp=Z,34nm,0.9s						
TI2	Plekhanov	141.99	305	ePKHKP		09 49 06.0	
GNI	Garni	142.25	302	ePKPpre		09 49 07.0	
GNI	Garni	142.25	302	⇑iPKIKP	PKPdf	09 49 07.6	-1.0
GOF	Gofitskoye	142.47	311	ePKIKP	PKPdf	09 49 11.7	+2.8
VRSR	Storozhevoye	142.59	322	ePKHKP		09 49 05.5	
VRSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VRSR				pmax	pmax		
	comp=N,1.0nm,0.6s						
VRSR				pmax	pmax		
	comp=E,1.0nm,0.8s						
BHD	Baghdad	142.99	291	ex	x	09 49 10.0	
KIV	Kislovodsk	143.00	309	ePKHKP		09 49 08.1	
CLDR	Caldiran	143.02	301	eP	PKPbc	09 49 08.8	+0.7
HAKT	HAKKARI	143.36	298	i P	PKPbc	09 49 08.8	-0.3
VSU	Vasula	143.60	338	c iPKIKP	PKPdf	09 49 08.9	-1.5
MSL	Mosul	143.96	296	ex	x	09 49 11.5	
NB2	NORSAR Subarra	144.80	352	PKPabc	PKPab	09 49 12.7	-1.4
	comp=E,151nm,0.8s,baz=10.0,slow=3.4						
NB2	NORSAR Subarra	144.80	352	PKPa	PKPab	09 49 12.7	-1.4
	baz=9.6,slow=3.5						
NOA	NORSAR Array B	144.80	352	PKP	PKPdf	09 49 12.3	-0.1
	comp=E,122nm,0.8s,baz=14,slow=2.4,SNR=241						
NOA	NORSAR Array B	144.80	352	PKP	PKPdf	09 49 12.3	-0.1
ERZM	Erzurum	144.85	303	i P	PKPdf	09 49 15.1	+1.9
EZM	Erzurum	144.85	303	P	PKPdf	09 49 16.3	+3.1
BTMT	Batman	145.03	300	P	PKPdf	09 49 16.4	+2.9
NAO01	NORSAR Array S	145.03	353	ePKPdf	PKPdf	09 49 13.6	+0.8
NAO	NORSAR Subarra	145.06	353	PKPab	PKPab	09 49 12.7	-2.4
SOC	Sochi	145.17	309	i PKIKP	PKPdf	09 49 14.5	+0.9
SOC				e		09 50 03.9	
SOC				e		09 52 39.2	
SOC				eSS	SS	10 11 03.4	-7.9
SOC				pmax	pmax		
	comp=Z,78nm,0.7s						
BNGL	BINGOL	145.18	301	i P	PKPdf	09 49 16.3	+2.5
BEST	Besiri	145.24	299	i P	PKPdf	09 49 17.1	+3.1
HFS	Hagfors	145.34	350	PKP	PKPdf	09 49 14.4	+1.1
	comp=Z,178nm,0.6s,baz=72,slow=4.7,SNR=430						
MARD	Mardin	145.70	298	i P	PKPdf	09 49 16.6	+1.9
MACK	Trabzon	145.83	305	i P	PKPdf	09 49 17.6	+2.7
GUMT	Gumushane	146.15	304	P	PKPdf	09 49 20.0	+4.6
MNK	Minsk	146.18	333	⇓ePKIKP	PKPdf	09 49 15.0	+0.1
ANN	Anapa	146.32	312	⇓iPKP2	PKPab	09 49 18.8	-1.6
ANN				pmax	pmax		
	comp=Z,287nm,0.8s						
KONO	Kongsberg	146.34	353	ePKPbc	PKPbc	09 49 17.5	+1.1
KONO	Kongsberg	146.34	353	d iPKIKP	PKPdf	09 49 17.1	+2.1
PTK	Pertek	146.54	301	P	PKPdf	09 49 20.5	+4.5
KBRS	Khaybar	146.81	277	P	PKPdf	09 49 23.3	+6.4
ELZG	Elazig	146.92	301	i P	PKPdf	09 49 21.7	+5.0
GRSN	GIRESUNGRSN	146.93	305	i P	PKPdf	09 49 19.4	+2.8
URFA	Urfa	147.23	299	eP	PKPdf	09 49 23.0	+5.8
MYA	Malataya	147.39	301	P	PKPdf	09 49 23.6	+6.1
YNBS	Yanbu‘ al Bahr	147.69	274	P	PKPdf	09 49 25.3	+6.9
AKASG	Malin Array Be	148.14	327	PKP	PKPdf	09 49 19.8	+1.5
	comp=Z,48nm,0.5s,baz=45,slow=3.9,SNR=200						
AKASG				PKPbc	PKPdf	09 49 23.0	+4.7
	comp=Z,102nm,0.7s,baz=46,slow=4.1,SNR=235						
AKASG	Malin Array Be	148.14	327	i PKP2	PKPab	09 49 23.0	-4.3
AKASG				pmax	pmax		
	comp=Z,102nm,0.7s						
GZT	Gaziantep	148.23	299	i P	PKPdf	09 49 24.4	+5.5
SUW	Suwalki	148.33	336	ePKP	PKPdf	09 49 24.2	+5.7
SUW				e		09 49 27.1	
SUW	Suwalki	148.33	336	ePKP	PKPdf	09 49 24.2	+5.7
SUW				e		09 49 27.1	
SIM	Simferopol’	148.43	314	d iPKP2	PKPab	09 49 26.0	-2.7
SIM				pmax	pmax		
	comp=Z,118nm,1.0s						
UMJS	Umm Lajj	148.46	276	P	PKPdf	09 49 27.5	+7.9
KVT	Kavak	148.51	306	eP	PKPdf	09 49 25.0	+5.8
GAZ	Gaziantep	148.54	299	P	PKPdf	09 49 26.0	+6.6
BOYT	Boyabat	149.22	308	i P	PKPdf	09 49 27.1	+6.8
BNN	Bunyan	149.25	302	eP	PKPdf	09 49 26.4	+5.9
BYBT	Boyabat	149.30	308	eP	PKPdf	09 49 26.0	+5.5
COBT	Iskenderun	149.40	298	i P	PKPdf	09 49 25.6	+4.8
TBKS	Tabuk	149.51	281	P	PKPdf	09 49 29.6	+8.4
CTKT	Corum	149.55	306	i P	PKPdf	09 49 27.2	+6.4
KOZT	Kozan	149.56	300	eP	PKPdf	09 49 26.7	+5.7
FKH	Fakeheh	149.59	293	eP	PKPdf	09 49 29.4	+8.3
CEYT	Ceyhan	149.72	299	eP	PKPdf	09 49 27.1	+5.9
CORM	Corum	149.80	305	P	PKPdf	09 49 26.7	+5.4
TOS	Tosya	149.97	307	P	PKPdf	09 49 29.4	+7.9
AVNT	Avonos	150.02	303	i P	PKPdf	09 49 29.2	+7.6
CDAG	Cicekdag	150.15	304	i P	PKPdf	09 49 28.1	+6.3
KARA	Karaisali	150.21	300	eP	PKPdf	09 49 29.2	+7.2
BHL	Bhannes	150.24	293	eP	PKPdf	09 49 30.7	+8.6
BALT	Daday	150.26	308	i P	PKPdf	09 49 29.1	+7.2
KSDI	Kefar Szold	150.29	291	P	PKPdf	09 49 31.1	+8.9
MKRJ	Makawir	150.39	288	P	PKPdf	09 49 31.4	+9.0
CANT	Cankiri	150.41	307	P	PKPdf	09 49 30.3	+8.1
MMLI	Mount Malkishu	150.54	290	P	PKPdf	09 49 31.9	+9.3
ELDT	Eldivan	150.58	306	i P	PKPdf	09 49 29.0	+6.6
KIS	Kishinev	150.60	321	ePKIKP	PKPdf	09 49 29.0	+6.8
AYUS	‘Aynunah	150.64	281	P	PKPdf	09 49 31.6	+8.7
MZDA	Masada	150.64	287	P	PKPdf	09 49 31.8	+9.0
BR131	Keskin Array S	150.66	305	ePKPdf	PKPdf	09 49 25.7	+3.1
BR131				ePKPbc	PKPdf	09 49 30.6	+8.1
BR131				ePKPab	PKPab	09 49 38.8	+0.7
BRTR	Keskin Array B	150.66	305	PKP	PKPdf	09 49 24.8	+2.2
	comp=Z,31nm,0.8s,baz=135,slow=3.5,SNR=24						
BRTR				PKPbc	PKPdf	09 49 30.6	+8.0
	comp=Z,47nm,0.8s,baz=132,slow=3.3,SNR=70						
BRTR				PKPab	PKPab	09 49 38.4	+0.2
	comp=Z,80nm,0.6s,baz=98,slow=3.7,SNR=31						
HNTI	Hanita	150.71	291	P	PKPdf	09 49 31.5	+8.6
MERS	Mersin	150.71	299	P	PKPdf	09 49 30.1	+7.4
KAMT	Kaman	150.72	304	P	PKPdf	09 49 30.5	+7.8
EKA	Eskdalemuir Ar	150.79	6	PKP	PKPdf	09 49 24.5	+2.3
	comp=Z,4.5nm,0.9s,baz=315,slow=2.0,SNR=4.2						
EKA				PKPbc	PKPdf	09 49 29.6	+7.4
	comp=Z,13nm,0.8s,baz=326,slow=1.1,SNR=12						
EKA				PKPab	PKPab	09 49 36.6	-1.5
	comp=Z,30nm,0.8s,baz=333,slow=3.2,SNR=20						
EKA	Eskdalemuir Ar	150.79	6	PKIKP	PKPdf	09 49 24.5	+2.3
EKA						09 49 36.7	
BDAS	Al Bad‘	150.80	282	P	PKPdf	09 49 32.3	+9.2
ZFRI	Zfri	150.80	286	P	PKPdf	09 49 32.3	+9.2
ESK	Eskdalemuir	150.81	6	ePKPbc	PKPdf	09 49 29.6	+7.3
ESK				ePKPab	PKPab	09 49 36.3	-1.9
JMOS	Jabal al Moall	150.83	283	P	PKPdf	09 49 32.4	+9.2
SAFT	Safranbolu	150.85	308	P	PKPdf	09 49 30.8	+8.0
ALWS	Ilw as Safayha	150.88	283	P	PKPdf	09 49 32.6	+9.4
OFRI	‘Ofer	150.90	290	P	PKPdf	09 49 31.9	+8.7
AQBJ	Aqaba	150.90	284	P	PKPdf	09 49 32.5	+9.3
PRNI	Paran	150.95	286	P	PKPdf	09 49 32.7	+9.4
HAQS	Haql	150.99	283	P	PKPdf	09 49 32.9	+9.5
EIL	Elat	150.99	284	P	PKPdf	09 49 32.6	+9.2
MEST	Erdemli	151.06	298	i P	PKPdf	09 49 28.2	+5.0
RTMM	Retamin	151.22	287	P	PKPdf	09 49 33.0	+9.3
ANTO	Ankara	151.24	306	eP	PKPdf	09 49 31.7	+8.3
ANTO	Ankara	151.24	306	ePKPdf	PKPdf	09 49 25.5	+2.1
ANTO				ePKPbc	PKPdf	09 49 32.2	+8.7
LOD	Lodumlu	151.25	306	P	PKPdf	09 49 32.4	+8.9
PHNC	Paralimni	151.43	295	P	PKPdf	09 49 32.5	+8.6
	comp=Z,2.3nm,0.7s						
KZIT	Kziot	151.47	287	P	PKPdf	09 49 33.7	+10
IKL	Isikli	151.49	298	P	PKPdf	09 49 32.8	+8.9
KWP	Kalwaria	151.90	331	ePKP	PKPdf	09 49 33.4	+9.3
KWP				e		09 49 42.5	
KWP	Kalwaria	151.90	331	ePKP	PKPdf	09 49 33.4	+9.3
KWP				e		09 49 42.5	
CSS	Prodhromos	152.01	295	P	PKPdf	09 49 34.2	+9.5
CFR	Carcaliu	152.02	319	⇓P	PKPdf	09 49 32.7	+8.3
CFR	Carcaliu	152.02	319	⇓P	PKPdf	09 49 32.7	+8.3
ERMK	Ermenek	152.02	299	i P	PKPdf	09 49 29.9	+5.2
BURAR	Bucovina Array	152.14	326	⇓P	PKPdf	09 49 34.1	+10
BURAR	Bucovina Array	152.14	326	⇓P	PKPdf	09 49 34.1	+10
KDHN	Kadinhani	152.15	303	i P	PKPdf	09 49 32.9	+8.0
MDU	Mudurnu	152.17	308	P	PKPdf	09 49 34.1	+9.3
KIZT	Kizilcal	152.22	304	P	PKPdf	09 49 34.5	+10
TIRR	Tirgusor	152.24	317	⇓P	PKPdf	09 49 33.5	+8.7
TIRR	Tirgusor	152.24	317	⇓P	PKPdf	09 49 33.5	+8.8
SZAC	Souni-Zanaja	152.40	295	P	PKPdf	09 49 34.7	+9.4
HARR	Harsova	152.41	318	⇓P	PKPdf	09 49 33.9	+8.9
HARR	Harsova	152.41	318	⇓P	PKPdf	09 49 33.9	+8.9
VRI	Vrincioaia	152.44	321	⇓P	PKPdf	09 49 32.6	+7.6
VRI	Vrincioaia	152.44	321	⇓P	PKPdf	09 49 32.6	+7.6
ALFC	Alevga	152.56	296	P	PKPdf	09 49 35.0	+9.5
	comp=Z,1.7nm,0.7s						
KOLS	Kolonicke sedl	152.61	331	ePKP	PKPdf	09 49 27.9	+2.8
KOLS				e		09 49 35.3	
KOLS	Kolonicke sedl	152.61	331	eP	PKPdf	09 49 28.0	+2.9
KOLS				i		09 49 35.4	
OJC	Ojcow	152.62	335	ePKP	PKPdf	09 49 34.6	+9.5
STHS	Stebnicka Huta	152.68	332	ePKP	PKPdf	09 49 35.5	+10
STHS				e		09 49 46.5	
STHS	Stebnicka Huta	152.68	332	i P	PKPdf	09 49 35.4	+10
ESKT	Eskisehir	152.77	306	P	PKPdf	09 49 35.5	+10
ESKT	Eskisehir	152.77	306	i P	PKPdf	09 49 34.4	+8.7
CRVS	Cervenica-Dubn	152.99	331	ePKP	PKPdf	09 49 28.3	+2.7
CRVS				e		09 49 35.8	
CRVS				e		09 49 46.7	
CRVS	Cervenica-Dubn	152.99	331	eP	PKPdf	09 49 28.6	+3.0
CRVS				i		09 49 46.9	
NIE	Niedzica	153.06	333	ePKP	PKPdf	09 49 36.6	+11
MLR	Muntele Rosu	153.10	321	PKPbc	PKPdf	09 49 35.9	+10
	comp=Z,25nm,0.9s,baz=4.1,slow=3.1,SNR=16						
KSP	Ksiaz	153.30	340	ePKP	PKPdf	09 49 36.6	+11
KSP				e		09 49 48.2	
KSP	Ksiaz	153.30	340	ePKPdf	PKPdf	09 49 28.8	+2.8
KSP				i PKPdf	PKPdf	09 49 36.4	+10
KSP				ePKPab	PKPab	09 49 47.7	-1.1
KSP				epPKP		09 50 22.9	
KSP	Ksiaz	153.30	340	ePKIKP	PKPdf	09 49 28.8	+2.8
KSP				e		09 49 47.7	
KSP				e		09 50 22.9	
OKC	Ostrava-Krasne	153.54	337	⇑ePKPB	PKPdf	09 49 36.4	+10
OKC				ePKPAB	PKPab	09 49 48.7	-1.2
ISP	Isparta	153.56	303	ePKPbc	PKPdf	09 49 36.4	+10
ISP				ePKPab	PKPab	09 49 49.3	-1.0
ISP	Isparta	153.56	303	⇓iPKIKP	PKPdf	09 49 26.1	-0.7
VOIR		153.63	322	⇑P	PKPdf	09 49 36.3	+10
VOIR		153.63	322	⇑P	PKPdf	09 49 36.3	+10
TKTP	Tekketepe	153.65	303	i P	PKPdf	09 49 37.2	+10
UPC	Upice	153.68	340	ePKPDF	PKPdf	09 49 29.6	+3.1
UPC				⇑ePKPB	PKPdf	09 49 37.1	+11
UPC				ePKPAB	PKPab	09 49 49.5	-0.9
DPC	Dobruska-Polom	153.72	339	ePKPDF	PKPdf	09 49 29.2	+2.6
DPC				⇑ePKPB	PKPdf	09 49 36.9	+10
DPC				ePKPAB	PKPab	09 49 50.0	-0.6
KECS	Kecovo	153.72	332	ePKP	PKPdf	09 49 36.8	+10
KECS				e		09 49 49.9	
KECS	Kecovo	153.72	332	i P	PKPdf	09 49 32.0	+5.3
KECS				i		09 49 49.9	
CLL	Collm	153.78	345	ePKIKP	PKPdf	09 49 29.0	+2.3
	comp=Z,logA/T=1.1						
CLL				i PKP1	PKPdf	09 49 36.8	+10
CLL				i PKP2	PKPab	09 49 48.6	-2.2
CLL				i		09 49 57.1	
CLL				i *PPKP		09 50 24.1	
CLL	Collm	153.78	345	ePKP	PKPdf	09 49 29.0	+2.3
CLL				⇓iPKP	PKPdf	09 49 36.8	+10
CLL				i PKP	PKPab	09 49 48.6	-2.2
CLL				i pPKP		09 50 24.1	
CLL	Collm	153.78	345	ePKIKP	PKPdf	09 49 29.0	+2.3
CLL				i		09 49 48.6	
CLL				i		09 50 24.1	
MORC	Moravsky Berou	153.81	337	ePKPdf	PKPdf	09 49 28.5	+1.8
MORC				ePKPbc	PKPdf	09 49 37.1	+10
MORC				ePKPab	PKPab	09 49 50.0	-1.0
MORC	Moravsky Berou	153.81	337	ePKIKP	PKPdf	09 49 28.5	+1.8
MORC				e		09 49 50.0	
BRG	Berggiesshubel	153.94	343	ePKP	PKPdf	09 49 29.6	+2.7
BRG				i		09 49 37.5	
BRG				i		09 49 49.1	
BRG				e		10 05 04.4	
BRG	Berggiesshubel	153.94	343	ePKIKP	PKPdf	09 49 29.6	+2.7
BRG				i		09 49 49.1	
PVCC	Panska Ves	154.09	342	ePKPDF	PKPdf	09 49 29.6	+2.5
PVCC				⇑ePKPB	PKPdf	09 49 37.7	+11
PVCC				ePKPAB	PKPab	09 49 50.9	-1.2
PVCC	Panska Ves	154.09	342	ePKIKP	PKPdf	09 49 29.6	+2.5
PVCC				e		09 49 50.9	
VYHS	Vyhne	154.39	334	ePKP	PKPdf	09 49 38.0	+10
VYHS				e		09 49 52.7	
VYHS	Vyhne	154.39	334	i P	PKPdf	09 49 38.4	+11

VYHS				i		09 49 53.0	
PSZ	Piszkesteto	154.41	332	ePKP/F	PKPdf	09 49 38.6	+11
VRAC	Vranov	154.53	338	PKPbc	PKPdf	09 49 39.1	+11
	comp=Z,3.5nm,0.3s,baz=50,slow=3.9,SNR=4.6						
VRAC				PKPab	PKPab	09 49 53.4	-0.7
	comp=Z,37nm,0.9s,baz=45,slow=4.6,SNR=18						
PRU	Pruhonice	154.58	341	ePKPDF	PKPdf	09 49 24.8	-3.0
PRU				⇑ePKPB	PKPdf	09 49 39.0	+11
PRU				ePKPAB	PKPab	09 49 52.7	-1.5
PRU	Pruhonice	154.58	341	ePKIKP	PKPdf	09 49 24.8	-3.0
PRU				e		09 49 52.7	
MOX	Moxa	154.72	346	ePKP	PKPdf	09 49 37.8	+10
MOX				ePKPab	PKPab	09 49 49.5	-5.3
NKC	Novy Kostel	154.91	344	⇑ePKPB	PKPdf	09 49 39.6	+11
NKC				ePKPAB	PKPab	09 49 54.5	-1.1
KHC	Kasperske Hory	155.62	342	ePKPDF	PKPdf	09 49 31.5	+2.3
KHC				⇑ePKPB	PKPdf	09 49 41.1	+12
KHC				ePKPAB	PKPab	09 49 56.6	-2.1
KHC	Kasperske Hory	155.62	342	ePKIKP	PKPdf	09 49 31.5	+2.3
KHC				e		09 49 56.6	
GRA1	Grafenberg Arr	155.70	346	ePKP	PKPdf	09 49 31.6	+2.4
GRF	Grafenberg Arr	155.70	346	ePKP	PKPdf	09 49 31.6	+2.4
GERES	GERESS Array B	155.85	341	PKP	PKPdf	09 49 31.5	+2.0
	comp=Z,0.9nm,0.3s,baz=90,slow=1.3,SNR=9.9						
GERES				PKPab	PKPab	09 49 58.7	-1.0
	comp=Z,12nm,0.7s,baz=34,slow=4.8,SNR=13						
GIVF	Givet	156.22	356	ePKP2	PKPab	09 49 58.9	-2.3
BAIF	Baives	156.30	357	ePKP2	PKPab	09 49 59.3	-2.3
	comp=Z,23nm,0.6s						
VTS	Vitosha	156.42	319	⇓P	PKPab	09 50 02.1	-0.2
WLF	Walferdange	156.54	354	ePKPab	PKPab	09 50 00.9	-1.8
STU	Stuttgart	156.99	348	ePKPab	PKPab	09 50 02.7	-1.9
PERS	Pernice	157.33	337	ePKPab	PKPab	09 50 05.0	-1.2
FLN	La Foliniere	157.54	5	ePKP2	PKPab	09 50 04.6	-2.4
	comp=Z,66nm,0.8s						
CDF	Champ du Feu	157.64	351	ePKP2	PKPab	09 50 05.7	-1.7
	comp=Z,43nm,0.8s						
OBKA	Obir	157.64	337	i P	PKPab	09 50 06.2	-1.3
	SNR=6.7						
MEZF	Maizieres J'vi	157.79	355	ePKP2	PKPab	09 50 05.8	-2.3
SKO	Skopje	157.84	319	⇑iPKP	PKPab	09 50 09.2	+0.7
SANT	Santorini	157.86	302	ePKPab	PKPab	09 50 07.2	-1.5
GRR	Gorron	157.88	5	ePKP2	PKPab	09 50 06.2	-2.2
	comp=Z,60nm,0.9s						
MOTA	Moosalm	157.92	344	i P	PKPab	09 50 07.7	-0.9
	SNR=8.3						
SQTA	Sankt Quirin	158.01	344	i P	PKPab	09 50 08.6	-0.5
	SNR=6.2						
LJU	Ljubljana	158.05	337	ePKPab	PKPab	09 50 07.8	-1.5
BOJS	Bojanci	158.24	335	ePKPdf	PKPdf	09 49 35.4	+2.7
BOJS				ePKPab	PKPab	09 50 08.8	-1.3
DAVA	Damuels	158.26	346	i P	PKPab	09 50 09.4	-0.8
	SNR=11						
HINF	Hinteralfeld	158.28	352	ePKP2	PKPab	09 50 08.1	-2.1
VOJS	Vojsko	158.29	338	ePKPdf	PKPdf	09 49 34.8	+2.1
VOJS				ePKPab	PKPab	09 50 08.0	-2.3
BIA	Bitola	158.49	318	⇑iPKP	PKPab	09 50 09.7	-1.6
DAVOX	Davos	158.74	345	PKP	PKPdf	09 49 35.3	+2.0
	comp=Z,2.6nm,0.4s,baz=22,slow=5.4,SNR=3.5						
DAVOX				PKPab	PKPab	09 50 11.3	-0.9
	comp=Z,38nm,0.7s,baz=358,slow=3.0,SNR=15						
OHR	Ohrid	158.75	318	⇑iPKP	PKPab	09 50 11.1	-1.3
LIC	Lamto	158.80	160	ePKIKP	PKPdf	09 49 36.8	+2.4
	comp=Z,43nm,1.2s						
LOR	Lormes	159.10	357	ePKP2	PKPab	09 50 11.6	-2.1
	comp=Z,105nm,1.3s						
DBIC	Dimbokro	159.28	160	PKP	PKPdf	09 49 38.5	+3.5
	comp=Z,5.8nm,0.9s,baz=108,slow=5.9,SNR=5.0						
DBIC				PKPab	PKPab	09 50 18.5	+3.0
	comp=Z,4.2nm,0.6s,baz=177,slow=7.2,SNR=6.0						
DBIC	Dimbokro	159.28	160	ePKPdf	PKPdf	09 49 38.4	+3.5
DBIC				ePKPab	PKPab	09 50 18.3	+2.8
CABF	La Chapelle	159.56	352	ePKP2	PKPab	09 50 14.1	-1.6
BGF	Bois d'Agland	159.84	359	ePKP2	PKPab	09 50 15.1	-1.8
	comp=Z,44nm,0.8s						
TCF	Toulx Ste Croi	160.12	0	ePKP2	PKPab	09 50 16.0	-2.1
	comp=Z,14nm,0.6s						
LPL	La Plagne	160.55	350	ePKP2	PKPab	09 50 19.0	-1.0
	comp=Z,50nm,1.0s						
LPG	La Plagne	160.57	350	ePKP2	PKPab	09 50 19.4	-0.7
	comp=Z,56nm,1.0s						
BNI	Bardonecchia	161.02	350	ePKPab	PKPab	09 50 21.2	-0.8
RJF	Les Rejaudoux	161.09	2	ePKP2	PKPab	09 50 20.2	-2.2
	comp=Z,40nm,0.9s						
ORIF	Oris-en-Rattie	161.26	352	ePKP2	PKPab	09 50 21.6	-1.5
	comp=Z,63nm,0.9s						
MBDF	Montbardon	161.32	350	ePKP2	PKPab	09 50 22.1	-1.3
LFF	La Frestale	161.43	3	ePKP2	PKPab	09 50 22.2	-1.6
	comp=Z,122nm,1.0s						
VIVF	Saint-Julien-l	161.45	355	ePKP2	PKPab	09 50 22.3	-1.6
	comp=Z,75nm,1.2s						
CAF	Calviac	161.48	0	ePKP2	PKPab	09 50 22.2	-1.9
	comp=Z,34nm,0.9s						
SBF	Sospel	162.04	348	ePKP2	PKPab	09 50 25.1	-1.5
	comp=Z,146nm,0.8s						
SMRF	Simiane la Rot	162.22	352	ePKP2	PKPab	09 50 25.3	-2.1
FRF	La Foret Royal	162.47	349	ePKP2	PKPab	09 50 26.8	-1.7
LMR	La Mourre	162.72	349	ePKP2	PKPab	09 50 28.1	-1.4
	comp=Z,92nm,1.2s						
PGF	Pioggiola	162.93	343	ePKP2	PKPab	09 50 28.8	-1.7
	comp=Z,128nm,1.1s						
MTLF	Montolieu	163.06	0	ePKP2	PKPab	09 50 29.0	-2.0
	comp=Z,35nm,0.8s						
EPF	Esparros	163.30	5	ePKP2	PKPab	09 50 29.9	-2.2
	comp=Z,31nm,1.0s						
ETSF	Etsaut	163.35	7	ePKP2	PKPab	09 50 30.5	-1.8
	comp=Z,55nm,1.0s						
MTE	Manteigas	163.81	28	ePKPdf	PKPdf	09 49 43.0	+4.3
PCBR	Castelo Branco	164.31	29	ePKPdf	PKPdf	09 49 43.1	+3.9
GUD	Guadarrama	164.80	19	PKP	PKPdf	09 49 44.0	+4.2
EVO	Evora	165.11	33	ePKP2	PKPab	09 50 37.6	-2.5
PBEJ	Beja	165.58	34	ePKPdf	PKPdf	09 49 44.4	+3.9
ESDC	Sonseca Array	165.75	20	PKP	PKPdf	09 49 43.0	+2.4
	comp=Z,1.9nm,0.8s,baz=354,slow=3.1,SNR=6.8						
ESDC				PKPab	PKPab	09 50 41.7	-1.1
	comp=Z,7.1nm,0.9s,baz=331,slow=3.9,SNR=12						
ESDC	Sonseca Array	165.75	20	PKP	PKPdf	09 49 43.7	+3.1
EMIN	Mina Concepcio	166.36	31	PKP	PKPdf	09 49 45.1	+4.0
EVIA	Vianos	167.13	17	PKP	PKPdf	09 49 45.7	+4.1
EBAN	Banos Encina	167.19	22	PKP	PKPdf	09 49 45.3	+3.7
ESPR	Espera	167.47	31	PKP	PKPdf	09 49 47.3	+5.5
EQES	Quesada	167.75	20	PKP	PKPdf	09 49 45.6	+3.6
EHUE	Huescar	167.88	19	PKP	PKPdf	09 49 45.7	+3.6
ELOJ	Sierra Loja	167.96	25	PKP	PKPdf	09 49 46.3	+4.1
ERON	Agron	168.20	24	PKP	PKPdf	09 49 46.1	+3.8
MDT	Midelt	171.23	41	PKP	PKPdf	09 49 47.2	+2.9
	comp=Z,11nm,0.8s,baz=33,slow=1.0,SNR=22						
MDT				PKPab	PKPab	09 51 06.9	-0.3
	comp=Z,3.7nm,0.8s,baz=288,slow=5.4,SNR=5.4						

WEL 25 09:30:53.1±0.3**, 37.41S×175.81E, h258**^{km}±6^{km}**, ML3.5**/12**, Error ellipse: s-maj=9.6km s-min=8.1km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	1.33	130	PN	P	09 31 30.8	-0.5
URZ				SN	S	09 32 00.2	-0.8
MWZ	Matawai	1.64	125	PN	P	09 31 33.4	-0.1
MWZ				eSN	S	09 32 04.5	-0.5
BKZ	Black Stump Fm	1.83	163	PN	P	09 31 34.8	-0.3
BKZ				SN	S	09 32 06.9	-0.8
FWVZ	Far West T-bar	1.85	186	PN	P	09 31 36.3	+1.1
TUVZ	Tukino	1.86	184	PN	P	09 31 36.0	+0.8
WNVZ	Wahianoa	1.92	185	PN	P	09 31 36.3	+0.5
MXZ	Matakaoa Point	1.99	95	PN	P	09 31 36.2	-0.2
MOVZ	Moawhango	2.00	181	PN	P	09 31 36.2	-0.2
MOVZ				SN	S	09 32 09.9	-0.2
PUZ	Puketiti	2.05	110	PN	P	09 31 36.5	-0.4
PUZ				SN	S	09 32 09.2	-1.8
WAZ	Wanganui	2.43	195	PN	P	09 31 40.3	-0.3
WAZ				SN	S	09 32 18.4	+0.9
PXZ	Pawanui	2.75	163	PN	P	09 31 41.2	-2.5
PXZ				SN	S	09 32 19.4	-3.8
MRZ	Mangatainoka R	3.25	183	PN	P	09 31 46.3	-2.9
MRZ				SN	S	09 32 29.0	-3.9
BFZ	Birch Farm	3.28	174	PN	P	09 31 46.8	-2.8
BFZ				SN	S	09 32 28.8	-4.7
KIW	Kapiti Island	3.52	191	PN	P	09 31 49.4	-2.9
KIW				SN	S	09 32 33.9	-4.3
DUWZ	D'Urville Isla	3.69	203	PN	P	09 31 51.6	-2.7
CAW	Cannon Point	3.74	189	PN	P	09 31 51.4	-3.3
MTW	Mount Morrison	3.75	184	PN	P	09 31 51.1	-3.8
MRW	Makara Radio	3.91	192	PN	P	09 31 53.5	-3.2
TCW	Tory Channel	3.98	197	PN	P	09 31 54.4	-3.1

HLW 25 09:30:51.6, 35.39N×23.43E, h20^{km}*, Mb4.8*

BJI 25 09:30:52.9, 35.06N×22.81E, h41^{km}*, mB5.2, mb5.2, Ms5.1, Msz4.7*

IDC 25 09:30:52.8±0.5, 35.19N×23.51E, mb5.0/29, mb1 5.1/33, mb1mx5.1/35, mbtmp5.0/33, ML4.6/4, MS4.6/22, Ms1 4.6/22, ms1mx4.4/37, Error ellipse: s-maj=13.1km s-min=12.4km az=92.0

MOS 25 09:30:54.9±1.1, 35.14N×23.44E, h25^{km}*, mb5.6/65, MS4.6/19, Error ellipse: s-maj=3.4km s-min=1.8km az=105.6*

HRVD 25 09:30:56.9±0.4, 34.73N×23.21E, h54^{km}*±1*^{km}*, MW5.2/67, Centroid moment Tensor Solution. LP body waves: s53,c78;Mantle waves: s67,c115; Half duration: 1*^{s}*0 Moment tensor: Scale 10*^{16}*Nm;* M_{rr}*5.60±.35;* $M_{\theta\theta}$*-4.61±.25;* $M_{\phi\phi}$*-0.98±.25;* $M_{r\theta}$*1.95±.22;* $M_{\theta\phi}$*4.47±.20;* $M_{\phi r}$*-2.62±.20; Best double couple:* M_0*7.42×10*^{16} *NP1:* ϕ_s*289°, δ34°, λ67°. NP2:*ϕ_s*136°, δ59°, λ105°. Principal axes: T 6.531, Plg72°, Azm82°; N 1.783, Plg13°, Azm308°; P -8.309, Plg13°, Azm215°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC 25 09:30:56.9, 35.02N×23.32E, h32^{km}*, mb5.2/148, MS4.6/8, ML5.2(ATH), ML5.0(THE), After ATH.*

PDG 25 09:30:57.9±0.1, 35.21N×22.40E, h10^{km}*±11*^{km}

ATH 25 09:30:57.0, 35.02N×23.32E, h33^{km}*±2*^{km}*, ML5.2*

CSEM 25 09:30:58.2, 35.36N×23.47E, h40^{km}*, mb5.3*

SKO 25 09:30:58.9, 35.23N×22.70E

NIC 25 09:30:58.4±0.3, 36.24N×23.74E, h25^{km}*, mb5.1, ML4.7, MW4.0, Earthquake Crete, Greece 22 km SW Kastellion.*

CRAAG 25 09:30:59.0, 35.32N×23.48E, Mb5.0

BGS 25 09:31:07.0±2.3, 35.28N×21.66E, h33^{km}*, mb5.3*

ISC 25 09:30:55.2±0.1**, 35.08N**±0.01×**23.51E**±0.01**, h33**^{km}**, n1066,** σ**1**^{s}**31**/1143**, mb5.2**/167**, MS4.7**/38**, 116C-79D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.53	116	ePN	Pn	09 31 10.5	+4.2
VAM	Vamos	0.65	59	⇓iPN	Pn	09 31 13.1	+5.0
VAM				eSN	Sn	09 31 24.9	+7.6
IDI	Anoyia	1.15	79	Pg	P	09 31 20.7	+5.7
	193nm,0.3s,baz=261,slow=15,SNR=280						
KYTH	Kithira	1.26	342	ePN	Pn	09 31 21.0	+4.1
VLI	Veliai	1.71	344	ePB	Pb	09 31 27.4	+1.6
VLI				eSN	Sn	09 31 48.7	+4.7
NPS	Neapolis	1.73	83	⇑iPB	Pb	09 31 29.1	+2.8
NPS				eSN	Sn	09 31 51.9	+7.2
XRY	Khrisi	1.80	96	ePN	Pn	09 31 29.5	+4.9
SANT	Santorini	2.04	50	ePn	Pn	09 31 31.1	+3.1
SANT	Santorini	2.04	50	ePn	Pn	09 31 31.1	+3.1
ITM	Ithomi	2.46	329	ePN	Pn	09 31 36.6	+2.6
ITM				eSN	Sn	09 32 04.8	+1.5
APE	Apeiranthos	2.57	39	eP	P	09 31 37.3	+1.9
APE	Apeiranthos	2.57	39	i P	P	09 31 38.3	+2.9
APE	Apeiranthos	2.57	39	ePn	Pn	09 31 40.8	+5.2
NAIG	Nisos Aigina	2.68	360	ePN	Pn	09 31 40.4	+3.3
ATH	Athens Observa	2.90	3	ePN	Pn	09 31 43.6	+3.4
PTL	Penteli	2.98	5	ePN	Pn	09 31 44.4	+3.0
MPAR	Parnis Oros	3.08	3	ePN	Pn	09 31 46.2	+3.5
NISR	Nisiros	3.31	61	ePN	Pn	09 31 51.5	+5.4
RLS	Riolos of Patr	3.40	332	ePN	Pn	09 31 50.6	+3.2
LKR	Lokris	3.59	354	ePN	Pn	09 31 53.6	+3.5
BODT	Bodrum	3.66	56	eP	P	09 31 52.3	+1.4
DAT	Datca	3.69	62	eP	P	09 31 52.2	+0.9
BDRM	Kayabasi	3.75	57	i P	P	09 31 56.3	+4.1
VLS	Valsamata	3.89	324	ePN	Pn	09 31 55.8	+1.5
ARG	Arkhangelos	3.92	72	ePN	Pn	09 32 00.3	+5.5
AGG	Agios Georgios	4.05	347	eP	P	09 31 58.6	+2.1
EVR	Evrytania	4.07	341	ePN	Pn	09 32 00.3	+3.4
AOS	Alonnisos	4.10	4	eP	P	09 31 59.0	+1.9
URLA	Izmir	4.11	36	i P	P	09 31 59.3	+2.1
NEO	Neokhori	4.23	357	ePN	Pn	09 32 01.9	+2.7
XOR	Xorichti	4.29	357	eP	P	09 32 01.8	+2.0
YER	Yerkesik	4.37	61	eP	P	09 32 02.2	+1.1
IZM	Izmir	4.48	41	eP	P	09 32 04.8	+2.3
DALT	Dalyan (Mudla)	4.49	66	eP	P	09 32 03.4	+0.7
PRK	Paraskevi	4.71	27	ePN	Pn	09 32 09.9	+4.0
FETY	Fethiye	4.78	69	eP	P	09 32 07.6	+0.7
PAIG	Paliouri	4.84	2	eP	P	09 32 09.3	+1.5
HMAT	Matruh	4.98	142	P	P	09 32 09.2	-0.4
JAN	Janina	5.04	336	ePN	Pn	09 32 12.1	+1.5
AKAS	Kas	5.09	75	i P	P	09 32 12.6	+1.4
AKS	Akhisar	5.12	41	eP	P	09 32 13.2	+1.5
DNZL	Cakiroluk	5.17	58	i P	P	09 32 16.8	+4.5
DENT	Denizli	5.19	57	eP	P	09 32 13.8	+1.2
EZN	Ezine	5.24	24	eP	P	09 32 14.6	+1.3
OUR	Ouranopolis	5.26	4	eP	P	09 32 15.2	+1.5
OUR	Ouranopolis	5.26	4	P	P	09 32 15.2	+1.5
OUR				S	S	09 33 09.6	-4.3
OUR	Ouranopolis	5.26	4	P	P	09 32 15.1	+1.5
OUR				S	S	09 33 09.6	-4.3
PLG	Polygyros	5.29	359	ePN	Pn	09 32 16.4	+2.3
GOLH	Golhisar	5.35	64	i P	P	09 32 17.4	+2.6
ELL	Elmali	5.45	70	eP	P	09 32 16.8	+0.6
KEK	Kerkira	5.49	329	ePN	Pn	09 32 18.8	+1.8
SRN	Sarande	5.55	331	i Pn	Pn	09 32 18.2	+0.4
SRN	Sarande	5.55	331	ePn	Pn	09 32 18.2	+0.4
THE	Thessaloniki	5.56	356	eP	P	09 32 18.2	+0.4
LSK	Leskovik	5.57	336	i Pn	Pn	09 32 19.5	+1.5
LSK	Leskovik	5.57	336	ePn	Pn	09 32 19.5	+1.5
DABA	Dabaa	5.70	134	P	P	09 32 18.4	-1.3
BALB	Balikesir	5.73	36	eP	P	09 32 22.3	+2.1
SOH	Sokhos	5.74	359	eP	P	09 32 21.9	+1.6
TPE	Tepelena	5.90	333	ePn	Pn	09 32 22.8	0.0
FNA	Florina	5.94	344	eP	P	09 32 23.5	+0.3
FNA	Florina	5.94	344	P	P	09 32 23.5	+0.3
FNA				S	S	09 33 28.0	-3.0
SWA2		6.04	164	P	P	09 32 24.6	+0.1
ANTB	Antalya	6.07	70	eP	P	09 32 29.5	+4.6
DST	Dursunbey	6.08	41	eP	P	09 32 27.1	+2.0
SWA1		6.09	162	⇓eP	P	09 32 24.6	-0.6
SWA1				S	S	09 33 32.1	-2.5
KNT	Kendrikon	6.10	356	eP	P	09 32 26.0	+0.7
ALN	Alexandroupoli	6.15	18	eP	P	09 32 26.9	+0.9
BIA	Bitola	6.18	344	i Pn	Pn	09 32 26.4	-0.3
BIA				i Sn	Sn	09 33 31.7	-5.3
TKTP	Tekketepe	6.22	60	i P	P	09 32 28.4	+1.3
GDZ	Gediz	6.23	48	i P	P	09 32 28.8	+1.6
RDO	Rodhopi	6.27	14	ePN	Pn	09 32 29.0	+1.1
ISP	Isparta	6.28	62	ePn	Pn	09 32 29.5	+1.5
	253nm,0.9s						
ISP	Isparta	6.28	62	eP	Pn	09 32 29.5	+1.4
ISP				pmax	pmax		
	comp=Z,253nm,0.9s						
ISP	Isparta	6.28	62	ePn	Pn	09 32 29.5	+1.4
	comp=Z,253nm,0.9s						
VAY	Valandovo	6.28	353	i Pn	Pn	09 32 28.4	+0.3
VAY				i Sn	Sn	09 33 37.9	-1.6
VAY	Valandovo	6.28	353	i Pn	Pn	09 32 28.4	+0.3
VAY				i Sn	Sn	09 33 37.8	-1.6
EDC	Edincik	6.29	32	eP	P	09 32 29.8	+1.8
OHR	Ohrid	6.39	341	⇓iPn	Pn	09 32 29.0	-0.7
OHR				i Sn	Sn	09 33 37.6	-4.7
OHR				i Sn	Sn	09 33 46.0	+3.6
MMB	Musomiste	6.50	1	i P	P	09 32 31.0	-0.1
ORLT	Orhaneli	6.55	39	eP	P	09 32 32.2	+0.5
ALT	Altintas	6.60	51	eP	P	09 32 33.6	+1.2
RZN	Rozhen	6.67	8	i P	P	09 32 35.0	+1.6
SOI	Samo	6.71	299	Pn	P	09 32 32.0	-1.9
	comp=Z,186nm,0.7s						
SOI				Sn	Sn	09 33 39.4	-11
SOI	Samo	6.71	299	P	P	09 32 32.0	-1.9
SOI						09 33 39.4	
SOI				pmax	pmax		
	comp=Z,186nm,0.7s						
KDZ	Kurdzhali	6.73	12	i P	P	09 32 35.0	+0.7
LCI	Lecce	6.77	322	Pn	P	09 32 33.6	-1.3
	comp=Z,127nm,0.2s						
LCI				Sn	Sn	09 33 40.5	-11
LCI	Lecce	6.77	322	P	P	09 32 33.6	-1.3
LCI				pmax	pmax		
	comp=Z,127nm,0.2s						
KKB	Krupnik	6.79	357	i P	P	09 32 36.0	+0.9
GRI	Girifalco	6.80	305	Pn	P	09 32 35.2	0.0
	comp=Z,938nm,0.7s						
GRI				Sn	Sn	09 33 44.2	-8.3
GRI	Girifalco	6.80	305	P	P	09 32 35.2	0.0
GRI						09 33 44.2	
GRI				pmax	pmax		
	comp=Z,938nm,0.7s						
TIR	Tirane	6.89	336	P	Pn	09 32 36.6	-0.1
TIR				pmax	pmax		
	comp=Z,2μm,1.0s						
TIR	Tirane	6.89	336	Pn	Pn	09 32 36.6	-0.1
	comp=Z,2μm,1.0s						
MTTG	Motta San Giov	6.94	297	Pn	Pn	09 32 34.1	-3.3
MTTG				Sn	Sn	09 33 43.7	-12
HBRG	Burj al 'Arab	6.96	128	P	P	09 32 35.9	-1.6
SCLL	Scilla	7.03	299	Pn	Pn	09 32 37.9	-0.7
QSH	Qafa e Shtames	7.03	337	ePn	Pn	09 32 37.0	-1.7
QSH				i Sn	Sn	09 33 54.0	-4.3
AGST	Augusta-Monte	7.05	290	Pn	Pn	09 32 36.0	-2.9
SKO	Skopje	7.08	347	i Pn	Pn	09 32 38.9	-0.3
SKO				i Sn	Sn	09 33 54.1	-5.2
PLD	Plovdiv	7.08	7	i P	P	09 32 40.5	+1.4
MSI	Messina ING	7.12	298	Pn	P	09 32 39.1	-0.6
	comp=Z,593nm,0.6s						
MSI				Sn	Sn	09 33 50.7	-10
MSI	Messina ING	7.12	298	P	P	09 32 39.1	-0.6
MSI						09 33 50.7	
MSI				pmax	pmax		
	comp=Z,593nm,0.6s						
DIM	Dimitrovgrad	7.14	12	i P	P	09 32 41.5	+1.5
SSY	Sortino	7.14	289	Pn	Pn	09 32 39.2	-1.0
	comp=Z,2μm,0.5s						
SSY				Sn	Sn	09 33 49.2	-12
YLV	Yalova	7.18	38	eP	P	09 32 42.4	+1.9
PZI	Palazzolo	7.21	288	Pn	Pn	09 32 39.5	-1.7
PZI				Sn	Sn	09 33 53.1	-10
EDRB	Edirne	7.22	20	eP	P	09 32 41.1	0.0
AKMC	Akamas	7.23	88	P	P	09 32 40.8	-0.4
PPCY	Paphos	7.25	89	P	P	09 32 41.2	-0.3
BORA	Eskisehir	7.31	47	i P	P	09 32 44.4	+2.1
TDS	Terranova Siba	7.32	311	Pn	Pn	09 32 41.5	-1.2
ESKT	Eskisehir	7.34	51	eP	P	09 32 43.5	+0.8
ESKT	Eskisehir	7.34	51	i P	P	09 32 44.6	+1.9
ISK	Istanbul-Kandi	7.41	35	eP	P	09 32 45.2	+1.5
ALFC	Alevga	7.45	87	P	P	09 32 43.3	-0.9
	comp=Z,13nm,0.2s						
ALFC				S	S	09 34 04.7	-3.7
PGB	Panagyurishte	7.48	4	i P	P	09 32 44.0	-0.7
ORI	Oriolo Calabro	7.50	314	P	P	09 32 44.0	-1.0
ORI						09 34 02.3	
ORI				pmax	pmax		
	comp=Z,772nm,0.5s						
ORI	Oriolo Calabro	7.50	314	Pn	P	09 32 44.0	-1.0
	comp=Z,772nm,0.5s						
ORI				Sn	Sn	09 34 02.3	-7.6
VTS	Vitosha	7.51	358	i P	P	09 32 46.0	+0.9
VTS	Vitosha	7.51	358	⇑P	P	09 32 46.1	+1.0
VTS	Vitosha	7.51	358	⇑P	P	09 32 46.2	+1.1
HRT	Hereke	7.52	38	eP	P	09 32 45.2	0.0
BRT	Bari-Castellan	7.64	321	P	P	09 32 45.2	-1.7
BRT						09 34 05.1	
BRT				pmax	pmax		
	comp=Z,161nm,0.4s						
BRT	Bari-Castellan	7.64	321	Pn	P	09 32 45.2	-1.7
	comp=Z,161nm,0.4s						
BRT				Sn	Sn	09 34 05.1	-8.3
ULC	Ulcinj	7.64	335	⇓iPn	Pn	09 32 45.1	-2.1
ULC				eSn	Sn	09 34 04.7	-8.9
KIZT	Kizilcal	7.70	58	eP	P	09 32 48.0	+0.3
SZAC	Souni-Zanaja	7.70	90	P	P	09 32 48.1	+0.3
SZAC				S	S	09 34 13.8	-1.0
VAE	Valguarnera	7.73	291	Pn	Pn	09 32 47.7	-0.7
	comp=Z,7.6nm,0.3s,baz=292,slow=8.6,SNR=10.0						
VAE				Sn	Sn	09 34 08.0	-7.8
	comp=Z,80nm,0.3s,baz=286,slow=5.6,SNR=12						
VAE				LR	LR	09 36 14.6	
	comp=Z,2μm,18.5s,baz=310,slow=42						
JMB	Yambol	7.76	17	i P	P	09 32 50.0	+1.4
SLNA	Salina	7.78	299	Pn	Pn	09 32 51.1	+1.9
SLNA				Sn	Sn	09 34 05.5	-12
ERMK	Ermenek	7.79	76	i P	P	09 32 48.5	-0.5
BARS	Barje	7.84	351	⇓iPn	Pn	09 32 48.3	-1.7
BAI	Bari	7.97	321	ePn	Pn	09 32 49.2	-2.6
PVY	Plav	8.00	341	⇓iPn	Pn	09 32 51.1	-1.0
PVY				eSn	Sn	09 34 15.1	-7.3
CSS	Prodhromos	8.05	88	P	P	09 32 51.8	-0.9
CSS				S	S	09 34 22.1	-1.5
CSS	Prodhromos	8.05	88	Pn	P	09 32 53.1	+0.4
CSS				Sn	Sn	09 34 19.8	-4.0
CSS	Prodhromos	8.05	88	Pn	P	09 32 53.1	+0.4
CSS				S	S	09 34 22.1	-1.5
TTG	Podgorica	8.06	337	⇓iPn	P	09 32 50.7	-2.1
TTG				eSn	Sn	09 34 15.1	-8.8
BUM	Brajici-Budva	8.06	335	⇓iPn	P	09 32 50.6	-2.3
BUM				eSn	Sn	09 34 14.6	-9.4
MGR	Morigerati	8.09	311	Pn	P	09 32 51.5	-1.7
	comp=Z,102nm,0.4s						
MGR				Sn	Sn	09 34 10.7	-14
HNAT	Natroun	8.10	130	P	P	09 32 52.6	-0.7
HMYD	Mayadein	8.10	129	P	P	09 32 51.5	-1.8
HMYD	Mayadein	8.10	129	P	P	09 32 51.5	-1.8
MDU	Mudurnu	8.13	46	eP	P	09 32 54.1	+0.4
AWBH		8.15	144	P	P	09 32 52.9	-1.1
GIB	Gibilmanna	8.17	294	P	P	09 32 54.1	-0.2
GIB						09 34 18.4	
GIB				pmax	pmax		
	comp=Z,322nm,0.7s						
GIB	Gibilmanna	8.17	294	Pn	P	09 32 54.1	-0.2
	comp=Z,322nm,0.7s						
GIB				Sn	Sn	09 34 18.4	-8.3
SLCN	Sala Consilina	8.19	313	Pn	P	09 32 54.7	+0.1
SLCN				Sn	Sn	09 34 20.2	-7.0
PVL	Pavlikeni	8.25	9	i P	P	09 32 54.0	-1.4
FAVR	Favara	8.26	288	Pn	P	09 32 55.0	-0.5
FAVR				Sn	Sn	09 34 13.5	-15
CDT	Castel del Mon	8.28	319	ePn	P	09 32 53.5	-2.3
IVA	Berane	8.28	341	⇓iPn	P	09 32 54.7	-1.1
IVA				eSn	Sn	09 34 22.0	-7.3
SQR		8.30	126	⇓P	P	09 32 54.7	-1.4
FYM	Al Fayyum	8.32	128	P	P	09 32 55.8	-0.7
FYM				S	S	09 34 25.6	-4.8
HCY	Herceg Novi	8.34	333	⇓iPn	P	09 32 53.8	-2.9
HCY				eSn	Sn	09 34 20.9	-10
IKL	Isikli	8.36	79	eP	P	09 32 55.7	-1.2
AYT	Al 'Ayyat	8.39	128	⇓eP	P	09 32 56.2	-1.1
AYT	Al 'Ayyat	8.39	128	P	P	09 32 56.2	-1.1
NKY	Niksic	8.49	337	⇓iPn	P	09 32 56.4	-2.3
NKY				eSn	Sn	09 34 25.6	-8.9
NKY	Niksic	8.49	337	⇓iPn	P	09 32 56.4	-2.3
NKY				eSn	Sn	09 34 25.6	-9.0
SGO	Sicignano	8.49	313	Pn	P	09 32 57.7	-1.1
	comp=Z,124nm,0.4s						
SGO				Sn	Sn	09 34 20.5	-14
SGO	Sicignano	8.49	313	P	P	09 32 57.7	-1.1
SGO				pmax	pmax		
	comp=Z,124nm,0.4s						
MRLC	Muro Lucano	8.51	314	Pn	P	09 32 57.4	-1.6
PRD	Provadia	8.65	19	i P	P	09 33 01.0	0.0
CLTB	Caltabellotta	8.68	290	Pn	P	09 33 08.7	+7.3
KOT	Kottamia	8.70	124	P	P	09 32 59.5	-2.1
KOT				S	S	09 34 32.3	-7.3
HSAF	As Saff	8.71	126	P	P	09 32 59.8	-1.9
FG4	Candela	8.73	316	P	P	09 33 00.6	-1.5
FG4						09 34 33.7	
FG4				pmax	pmax		
	comp=Z,1μm,0.9s						
FG4	Candela	8.73	316	Pn	P	09 33 00.6	-1.5
	comp=Z,1μm,0.9s						
FG4				Sn	Sn	09 34 33.7	-6.9
ANTO	Ankara	8.79	54	eP	P	09 33 02.2	-0.7
ANTO	Ankara	8.79	54	ePn	P	09 33 04.7	+1.8
	comp=Z,343nm,1.1s						
ANTO	Ankara	8.79	54	eP	P	09 33 04.7	+1.8
ANTO				pmax	pmax		
	comp=Z,343nm,1.1s						
ANTO	Ankara	8.79	54	ePn	P	09 33 04.7	+1.8
	comp=Z,343nm,1.1s						
GLL	Jalalah	8.84	126	⇓eP	P	09 33 01.7	-1.8
PLE	Pljevlja	8.84	340	⇓iPn	P	09 33 02.1	-1.5
PLE				eSn	Sn	09 34 35.2	-8.1
HHAG	Hagoal	8.87	123	P	P	09 33 02.5	-1.5
UPM	Unac-Piva	8.87	338	⇓iPn	P	09 33 02.1	-1.9
UPM				eSn	Sn	09 34 35.2	-8.8
FGMS	Monte Sant'Ang	8.89	320	Pn	P	09 33 01.7	-2.6

	comp=Z,631nm,1.0s						
FGMS				Sn	Sn	09 34 32.2	-12
MS1	Monte Sant'Ang	8.89	320	*e*Pn	P	09 33 01.3	-3.1
CRJA	Costa Raja	8.89	291	Pn	P	09 33 05.7	+1.3
HFRF	Wahat Farafira	8.91	151	P	P	09 33 03.3	-1.3
NVSS	Nova Varos 2	8.92	342	⇓*i*Pn	P	09 33 01.6	-3.1
NVSS				Sn	Sn	09 34 35.8	-10
HBNS	Bani Suwayf	8.94	131	⇓*e*P	P	09 33 04.0	-1.1
STON	Ston	9.00	332	*i* Pn	P	09 33 03.2	-2.6
STON				*i* Sn	Sn	09 34 34.5	-13
USI	Ustica	9.04	297	Pn	P	09 33 05.3	-1.0
	comp=Z,39nm,0.3s						
RGNG	Rignano Grg	9.06	319	Pn	P	09 33 03.7	-3.0
RGNG				Sn	Sn	09 34 38.2	-11
GRUS	Gruza	9.06	347	*i* Pn	P	09 33 03.7	-3.0
MERS	Mersin	9.10	75	*e*P	P	09 33 05.7	-1.5
AMAG	Maghara	9.27	116	P	P	09 33 06.2	-3.5
BR131	Keskin Array S	9.29	57	*e*Pn	P	09 33 11.3	+1.4
	comp=Z,48nm,0.8s						
BR131	Keskin Array S	9.29	57	*e*Pn	P	09 33 11.3	+1.4
	comp=Z,48nm,0.8s						
BRTR	Keskin Array B	9.29	57	Pn	P	09 33 11.4	+1.5
	comp=Z,1.4nm,0.3s,baz=238,slow=12,SNR=72						
BRTR				ScP		09 42 56.0	
	comp=Z,0.1nm,0.3s,baz=215,slow=3.2,SNR=3.7						
BRTR	Keskin Array B	9.29	57	Pn	P	09 33 11.4	+1.5
PSN	Preselentsi	9.32	21	*i* P	P	09 33 10.0	-0.3
BBLS	Bajina Basta -	9.33	341	*i* Pn	P	09 33 07.9	-2.5
BBLS				Sn	Sn	09 34 46.4	-9.1
SVIS	Svilajnac	9.38	350	⇑*i*Pn	P	09 33 08.2	-2.9
FG2	Serracapriola	9.38	318	Pn	P	09 33 08.8	-2.3
	comp=Z,367nm,0.2s						
FG2				Sn	Sn	09 34 48.0	-8.7
DIVS	Divcibare	9.41	344	*i* Pn	P	09 33 08.2	-3.3
DIVS				Sn	Sn	09 34 48.5	-9.0
CIGN	Sant'Elia a Pi	9.42	317	Pn	P	09 33 10.1	-1.6
	comp=Z,481nm,0.8s						
SUZ		9.44	121	P	P	09 33 09.7	-2.3
SUZ		9.44	121	P	P	09 33 09.6	-2.4
ELDT	Eldivan	9.53	53	*i* P	P	09 33 14.9	+1.8
SGG	Gregorio Mates	9.55	314	Pn	P	09 33 11.4	-2.1
	comp=Z,343nm,0.8s						
DJES	Djerdap	9.58	356	*e*Pn	P	09 33 13.2	-0.6
DJES	Djerdap	9.58	356	Pn	P	09 33 13.1	-0.7
KARA	Karaisali	9.58	74	*e*P	P	09 33 12.8	-1.1
ZAF		9.59	125	P	P	09 33 11.9	-2.1
MSC	Monte Massico	9.68	312	Pn	P	09 33 13.1	-2.1
CANT	Cankiri	9.71	52	*e*P	P	09 33 15.1	-0.5
RFI	Roccamonfina	9.74	312	Pn	P	09 33 14.2	-1.8
	comp=Z,25nm,1.0s						
CDAG	Cicekdag	9.76	59	*i* P	P	09 33 16.2	-0.2
CII	Carovilli	9.81	315	Pn	P	09 33 16.3	-0.7
CII				Sn	Sn	09 34 58.2	-9.0
HAF	Haifa	9.83	100	Pn	P	09 33 17.0	-0.4
OFRI	'Ofer	9.85	101	Pn	P	09 33 16.9	-0.7
OFRI				Sn	Sn	09 35 02.3	-5.9
HNTI	Hanita	9.87	98	Pn	P	09 33 18.3	+0.4
HNTI				Sn	Sn	09 35 03.6	-5.2
BEO	Belgrade	10.01	347	⇓*i*Pn	P	09 33 15.8	-4.0
SLTI	Sal'it	10.01	103	Pn	P	09 33 18.9	-0.9
KZIT	Kziot	10.04	111	Pn	P	09 33 18.9	-1.3
KZIT				Sn	S	09 35 05.9	-6.9
MMC6	Mount Meron ar	10.07	98	Pn	P	09 33 20.9	+0.3
MMA4	Mount Meron ar	10.07	98	Pn	P	09 33 20.3	-0.3
MMB2	Mount Meron ar	10.07	98	Pn	P	09 33 20.9	+0.3
BALT	Daday	10.08	47	*i* P	P	09 33 21.9	+1.2
BHL	Bhannes	10.09	93	*e*Pn	P	09 33 23.9	+3.0
MMC4	Mount Meron ar	10.09	98	Pn	P	09 33 20.6	-0.3
CEYT	Ceyhan	10.09	75	*e*P	P	09 33 19.2	-1.7
TIRR	Tirgusor	10.10	20	*e*Pn	P	09 33 21.3	+0.4
TIRR	Tirgusor	10.10	20	*e*P	P	09 33 21.3	+0.3
CORM	Corum	10.18	57	*e*P	P	09 33 21.2	-0.9
HARR	Harsova	10.18	18	⇑P	P	09 33 18.8	-3.3
HARR	Harsova	10.18	18	⇑P	P	09 33 18.8	-3.3
RTMM	Retamin	10.20	110	Sn	S	09 35 09.6	-7.0
TOS	Tosya	10.20	51	*e*P	P	09 33 21.9	-0.4
MTUR	Matau	10.21	6	P	P	09 33 21.5	-1.0
MTUR	Matau	10.21	6	P	P	09 33 21.5	-1.0
HNKL	Nakhl	10.22	117	P	P	09 33 20.4	-2.3
INTR	Introdacqua	10.22	315	Pn	P	09 33 20.8	-1.9
	comp=Z,869nm,1.4s						
MMLI	Mount Malkishu	10.26	101	Pn	P	09 33 23.1	-0.1
ASUT		10.29	136	P	P	09 33 22.4	-1.4
VVLD	Villa Vallelon	10.30	314	Pn	P	09 33 21.7	-2.0
	comp=Z,400nm,0.9s						
HTY	Hatay	10.33	81	*e*P	P	09 33 22.6	-1.6
GRB	Gharib	10.41	128	P	P	09 33 23.1	-2.2
VOIR		10.42	6	⇓P	P	09 33 25.6	+0.3
VOIR		10.42	6	⇓P	P	09 33 25.6	+0.3
KSHT	Keshet	10.42	98	Pn	P	09 33 25.5	+0.1
CTKT	Corum	10.49	55	*i* P	P	09 33 26.9	+0.5
PTQR	Pietraquaria	10.52	314	Pn	P	09 33 25.2	-1.6
DSI	Dead Sea	10.52	106	Pn	P	09 33 26.2	-0.7
BNN	Bunyan	10.56	65	*e*P	P	09 33 25.3	-2.0
MLR	Muntele Rosu	10.57	9	Pn	P	09 33 27.6	+0.2
	comp=Z,0.7nm,0.3s,baz=207,slow=5.5,SNR=13						
MLR	Muntele Rosu	10.57	9	P	P	09 33 28.0	+0.6
MZDA	Masada	10.61	107	Pn	P	09 33 27.3	-0.8
MZDA				Sn	S	09 35 19.8	-7.0
BZS	Buzias	10.63	353	⇑P	P	09 33 26.6	-1.6
BZS	Buzias	10.63	353	P	P	09 33 26.1	-2.1
FKH	Fakeheh	10.65	91	*e*Pn	P	09 33 26.6	-2.0
KMTI	Karmit	10.67	115	Pn	P	09 33 27.5	-1.4
AQU	L'Aquila	10.73	316	P	P	09 33 29.3	-0.3
AQU				pmax	pmax		
	comp=Z,146nm,0.8s						
AQU	L'Aquila	10.73	316	Pn	P	09 33 29.3	-0.3
	comp=Z,146nm,0.8s						
MKRJ	Makawir	10.74	106	Pn	P	09 33 28.0	-1.8
PRNI	Paran	10.76	113	Pn	P	09 33 28.6	-1.5
PRNI				Sn	S	09 35 22.6	-7.8
HDK1	Dakhla	10.77	150	⇓P	P	09 33 28.5	-1.8
TERO	Teramo	10.79	317	Pn	P	09 33 29.3	-1.1
ZFRI	Zfri	10.80	111	Pn	P	09 33 28.7	-1.9
ZFRI				Sn	S	09 35 24.4	-6.9
HRFI	Mount Harif	10.94	114	Pn	P	09 33 30.1	-2.5
HRFI				Sn	S	09 35 26.6	-8.2
TR2		10.95	125	P	P	09 33 30.6	-2.1
BOYT	Boyabat	10.96	51	*i* P	P	09 33 33.4	+0.6
MBH	Mount Berech	10.98	116	Pn	P	09 33 30.9	-2.1
MBH				Sn	S	09 35 28.7	-7.0
HKAT	Jabal Katrina	11.05	123	P	P	09 33 32.0	-2.0
VRI	Vrincioaia	11.05	12	⇑P	P	09 33 34.1	+0.1
VRI	Vrincioaia	11.05	12	⇑P	P	09 33 34.1	+0.1
EIL	Elat	11.07	116	Pn	P	09 33 32.7	-1.6
EIL				Sn	S	09 35 30.4	-7.5
AQBJ	Aqaba	11.11	115	Pn	P	09 33 33.5	-1.3
MNS	Montasola	11.17	314	P	P	09 33 34.1	-1.5
MNS				pmax	pmax		
	comp=Z,49nm,0.5s						
MNS	Montasola	11.17	314	Pn	P	09 33 34.1	-1.5
	comp=Z,49nm,0.5s						
AKRG	Al Kharijah	11.29	146	P	P	09 33 36.4	-0.9
GTR	Jabal at Tayr	11.31	146	⇓P	P	09 33 36.4	-1.1
ALWS	Ilw as Safayha	11.34	117	P	P	09 33 36.4	-1.6
TR1		11.35	126	P	P	09 33 35.9	-2.2
TR1		11.35	126	P	P	09 33 35.8	-2.3
HDHB	Dhahab	11.36	121	P	P	09 33 36.9	-1.4
HAQS	Haql	11.39	119	P	P	09 33 37.1	-1.5
JMOS	Jabal al Moall	11.46	118	P	P	09 33 38.1	-1.4
RHK3	Tenkes	11.52	341	⇓*i*P	P	09 33 36.1	-4.2
	comp=Z,1.3nm,0.4s						
RHK3				*e*S	S	09 35 34.9	-14
NVLJ	Novalja	11.57	328	*i* Pn	P	09 33 38.4	-2.5
SNTG	Esanatoglia	11.57	318	Pn	P	09 33 39.3	-1.7
GZT	Gaziantep	11.58	75	*i* P	P	09 33 38.5	-2.6
HHRG	Al Ghardaqah	11.63	130	P	P	09 33 39.4	-2.5
DRGR		11.72	357	⇑P	P	09 33 42.3	-0.7
DRGR		11.72	357	P	P	09 33 41.5	-1.5
DRGR		11.72	357	P	P	09 33 41.5	-1.5
PKSM	Moragy	11.72	343	⇓*e*P	P	09 33 38.9	-4.1
PKSM				*e*S	S	09 35 42.1	-12
ARV	Arcevia	11.73	319	⇓*i*Pn	P	09 33 41.5	-1.7
	comp=Z,193nm,1.2s						
RHK1	Bakonya	11.76	341	⇑*e*P	P	09 33 39.4	-4.1
BDAS	Al Bad'	11.87	121	P	P	09 33 46.2	+1.1
FSSB	Fossombrone	11.95	319	⇓*i*Pn	P	09 33 44.6	-1.5
FSSB				Sn	S	09 35 47.1	-12
AYUS	'Aynunah	12.14	121	P	P	09 33 50.2	+1.5
BOJS	Bojanci	12.17	331	*i* Pn	P	09 33 46.3	-2.8
HSFG		12.32	131	P	P	09 33 49.9	-1.4
HSFG		12.32	131	P	P	09 33 49.8	-1.4
PKS8	Sarbogard	12.34	344	⇑*i*P	P	09 33 49.0	-2.4
PKS8				*e*S	S	09 35 59.2	-10
CRE	Caprese Michel	12.36	317	P	P	09 33 53.0	+1.4
CRE				pmax	pmax		
	comp=Z,65nm,0.8s						
CRE	Caprese Michel	12.36	317	P	P	09 33 53.0	+1.4
	comp=Z,65nm,0.8s						
CRES	Cresnjev	12.36	333	*e*Pn	P	09 33 48.3	-3.3
KIS	Kishinev	12.56	17	*e*P	P	09 33 55.0	+0.7
KIS				MLR	MLR		
	comp=N,4µm,10.0s						
KIS				MLR	MLR		
	comp=Z,4µm,10.0s						
URFA	Urfa	12.58	75	*e*P	P	09 33 52.5	-2.1
BURAR	Bucovina Array	12.59	5	⇑P	P	09 33 56.7	+1.9
BURAR	Bucovina Array	12.59	5	⇑P	P	09 33 56.7	+1.9
CEY	Cerknica	12.69	330	*i* Pn	P	09 33 53.0	-3.2
SIM	Simferopol'	12.77	36	⇓*e*P	P	09 34 01.0	+3.9
SIM	Simferopol'	12.77	36	*e*P	P	09 34 02.0	+4.9
SIM				pmax	pmax		
	comp=Z,67nm,0.9s						
SIM				MLR	MLR		
	comp=Z,2µm,17.3s						
VMG	Vicchio	12.80	317	Pn	P	09 33 58.8	+1.3
VMG				Sn	S	09 36 12.3	-7.5
ELZG	Elazig	12.86	70	*i* P	P	09 33 60.0	+1.6
PKSG		12.89	344	⇑*e*P	P	09 33 56.5	-2.2
	comp=Z,1.1nm,0.4s						
PKSG				*e*S	S	09 36 13.9	-8.1
LJU	Ljubljana	12.90	331	*e*Pn	P	09 33 54.8	-4.1
TRI	Trieste	12.95	328	Pn	P	09 33 57.3	-2.2
	comp=Z,548nm,0.8s						
TRI				Sn	S	09 36 08.5	-15
TRI	Trieste	12.95	328	P	P	09 33 57.3	-2.2
TRI				pmax	pmax		
	comp=Z,548nm,0.8s						
SEI	Scarperia	12.96	317	Pn	P	09 34 00.6	+0.9
HEDF	Idfu	12.99	137	P	P	09 33 58.9	-1.2
GRSN	GIRESUNGRSN	13.01	59	*i* P	P	09 34 01.7	+1.3
TBKS	Tabuk	13.03	118	P	P	09 34 00.5	-0.1
PSZ	Piszkesteto	13.11	349	⇓*e*P	P	09 33 59.5	-2.2
PSZ				*e*S	S	09 36 19.6	-7.7
VOY	Vojsko	13.15	329	*e*Pn	P	09 33 58.0	-4.2
VOY				*e*Sn	S	09 36 15.8	-12
PERS	Pernice	13.17	334	*e*Pn	P	09 33 59.3	-3.1
PERS				*e*Sn	S	09 36 15.7	-13
PTK	Pertek	13.25	69	*e*P	P	09 34 02.7	-0.8
OBKA	Obir	13.28	332	⇓*i*Pn	P	09 34 01.3	-2.5
	comp=Z,8.6nm,0.3s,SNR=9.1						
OBKA	Obir	13.28	332	⇑*i*Sn	S	09 36 20.9	-10
	comp=Z,139nm,0.9s						
CORF	Corte	13.33	307	*e*P	P	09 34 05.8	+1.3
TLI	Talmassons	13.41	327	⇓*e*P	P	09 34 05.0	-0.5
PGF	Pioggiola	13.54	308	*e*P	P	09 34 06.8	-0.5
	comp=Z,208nm,1.2s						
PGF	Pioggiola	13.54	308	*e*P	P	09 34 06.8	-0.5
PGF				pmax	pmax		
	comp=Z,104nm,1.2s						
ARSA	Arzberg	13.56	336	⇑*e*Pn	P	09 34 04.5	-3.0
	comp=Z,13nm,0.4s,SNR=17						
ARSA	Arzberg	13.56	336	⇑*i*Sn	S	09 36 28.9	-9.1
	comp=Z,14nm,0.6s						
UZH	Uzhgorod	13.57	357	*e*P	P	09 34 07.0	-0.7
KECS	Kecovo	13.58	351	*e*PN	P	09 34 06.2	-1.6
KECS				*e*		09 34 16.3	
KECS	Kecovo	13.58	351	*e*SN	S	09 36 36.6	-1.9
KECS	Kecovo	13.58	351	*e*P	P	09 34 06.2	-1.6
KECS				*e*		09 36 36.6	
BAD	Bernadia	13.59	328	⇓*e*P	P	09 34 06.0	-1.9
GMNA	Gemona	13.62	328	Pn	P	09 34 07.7	-0.6
KMPD	K-Podol'skiy	13.65	8	P	P	09 34 08.0	-0.7
LSR	Lussari	13.66	329	⇑*e*P	P	09 34 07.0	-1.8
PTCC	Patocco-Chiusa	13.68	329	Pn	P	09 34 06.0	-3.0
ASHG	Umm Shaghir	13.74	147	⇑P	P	09 34 10.3	+0.3
MLNI	Malnisio	13.80	327	⇑*e*P	P	09 34 12.0	+1.3
VYHS	Vyhne	13.85	347	*e*P	P	09 34 08.1	-3.2
VYHS				*e*		09 34 19.4	
VYHS				*e*Sn	S	09 36 37.9	-7.0
VYHS	Vyhne	13.85	347	*e*P	P	09 34 08.1	-3.2
VYHS				*e*		09 36 37.9	
AAHD	Abu Hadid	13.85	142	⇓P	P	09 34 11.2	-0.3
PLRO	Paularo	13.88	329	⇑*e*P	P	09 34 10.0	-1.6
KOLS	Kolonicke sedl	13.88	357	*e*PN	P	09 34 12.0	+0.4
KOLS				*e*		09 34 18.6	
CRVS	Cervenica-Dubn	13.90	354	*e*PN	P	09 34 11.6	-0.3
ZST	Bratislava	13.95	342	*e*SN	S	09 36 37.0	-10
ZOU	Zoufplan	13.96	328	⇑*e*P	P	09 34 13.0	+0.3
EMRS	Mersa Alam	14.02	133	P	P	09 34 13.4	-0.2
CODM		14.02	316	P	P	09 34 13.1	-0.5
CODM		14.02	316	P	P	09 34 13.1	-0.5
FVI	Forni Avoltri	14.07	328	Pn	P	09 34 13.2	-1.0
	comp=Z,204nm,1.0s						
FVI				Sn	S	09 36 36.6	-14
FVI	Forni Avoltri	14.07	328	P	P	09 34 13.2	-1.0
FVI				pmax	pmax		
	comp=Z,204nm,1.0s						
MARD	Mardin	14.12	76	*i* P	P	09 34 15.4	+0.5
HMSM	Jabal Masmas	14.18	147	P	P	09 34 16.6	+0.8
HKFR	Khafra	14.18	149	P	P	09 34 16.9	+1.1
KBA	Koelnbreinsper	14.22	331	⇓*i*Pn	P	09 34 14.8	-1.3
	comp=Z,5.7nm,0.3s,SNR=11						
KBA	Koelnbreinsper	14.22	331	⇓*i*Sn	S	09 36 39.5	-14
	comp=Z,29nm,0.6s						
KBA	Koelnbreinsper	14.22	331	P	P	09 34 15.9	-0.2
STHS	Stebnicka Huta	14.43	354	*e*PN	P	09 34 18.4	-0.5
SEST	Monte Rota	14.44	327	Pn	P	09 34 19.3	+0.3
	comp=Z,317nm,1.0s						
BOB	Bobbio (Coli)	14.48	316	Pn	P	09 34 26.7	+7.1
MOA	Molln	14.51	334	⇑*i*Pn	P	09 34 17.7	-2.2
	comp=Z,22nm,0.4s,SNR=25						
MOA	Molln	14.51	334	⇓*e*Sn	S	09 36 52.3	-8.2
	comp=Z,51nm,0.8s						
MOA	Molln	14.51	334	P	P	09 34 18.0	-1.9
NIE	Niedzica	14.53	352	⇓*e*P	P	09 34 19.8	-0.3
KWP	Kalwaria	14.56	358	*e*P	P	09 34 21.1	+0.6
KWP				MLR	MLR	09 39 52.4	
	comp=Z,4µm,21.6s						
HAGS	Hagol	14.58	134	P	P	09 34 21.7	+0.6
BNGL	BINGOL	14.61	69	*i* P	P	09 34 22.0	+0.6
AADN	Adndan	14.69	149	P	P	09 34 24.2	+1.7
SET	Setif	14.78	280	P	P	09 34 32.0	+8.5
PCP	Pian Castagno	14.87	314	P	P	09 34 25.0	+0.3
PCP	Pian Castagno	14.87	314	P	P	09 34 25.0	+0.3
FIN	Finale Ligure	14.89	312	P	P	09 34 25.2	+0.3
FIN	Finale Ligure	14.89	312	P	P	09 34 25.2	+0.3
IMI	Imperia	14.93	311	P	P	09 34 25.1	-0.3
IMI	Imperia	14.93	311	P	P	09 34 25.1	-0.3
NEGI	Negi	15.01	310	P	P	09 34 27.0	+0.5
NEGI	Negi	15.01	310	P	P	09 34 27.0	+0.5
WTTA	Wattenberg	15.09	327	⇓*i*Pn	P	09 34 26.2	-1.2
	comp=Z,8.6nm,0.3s,SNR=8.1						
WTTA	Wattenberg	15.09	327	⇑*e*Sn	S	09 37 03.4	-11
	comp=Z,63nm,0.7s						
WTTA	Wattenberg	15.09	327	P	P	09 34 28.2	+0.7
WTTA	Wattenberg	15.09	327	P	P	09 34 28.2	+0.7
MONE	Monesi	15.10	311	P	P	09 34 28.2	+0.6
MONE	Monesi	15.10	311	P	P	09 34 28.2	+0.6
BRMO	Bormio	15.10	323	Pn	P	09 34 28.7	+1.0
VRAC	Vranov	15.11	342	Pn	P	09 34 24.8	-3.0
	comp=Z,0.5nm,0.3s,baz=182,slow=13,SNR=10						
VRAC	Vranov	15.11	342	⇑P	P	09 34 33.5	+5.8
VRAC	Vranov	15.11	342	P	P	09 34 24.8	-2.9
VRAC				pmax	pmax		
	comp=Z,1.0nm,0.3s						
VRAC	Vranov	15.11	342	*e*Pn	P	09 34 25.6	-2.1
SOC	Sochi	15.13	51	*i* P	P	09 34 28.2	+0.2
ROB	Roburent	15.14	312	P	P	09 34 28.5	+0.3
ROB	Roburent	15.14	312	P	P	09 34 28.5	+0.3
WATA	Walderalm	15.17	327	⇓*i*Pn	P	09 34 29.5	+0.9
	comp=Z,32nm,0.6s,SNR=9.3						
WATA	Walderalm	15.17	327	⇑*i*Sn	S	09 37 08.2	-7.8
	comp=Z,38nm,0.7s						
WATA	Walderalm	15.17	327	P	P	09 34 29.6	+1.1
SAOF	Saorge	15.17	311	*e*P	P	09 34 30.0	+1.4
SBF	Sospel	15.19	310	*e*P	P	09 34 28.4	-0.4
	comp=Z,168nm,0.9s						
SBF	Sospel	15.19	310	*e*P	P	09 34 28.4	-0.4
SBF				pmax	pmax		
	comp=Z,84nm,0.9s						
SQTA	Sankt Quirin	15.24	326	⇓*i*Pn	P	09 34 30.7	+1.2
	comp=Z,20nm,0.5s,SNR=29						
SQTA	Sankt Quirin	15.24	326	⇑*i*Sn	S	09 37 11.6	-6.2
	comp=Z,47nm,0.5s						
SQTA	Sankt Quirin	15.24	326	P	P	09 34 30.8	+1.3
AUTN	L'Aution	15.26	311	*e*P	P	09 34 30.3	+0.6
OKC	Ostrava-Krasne	15.27	347	*e*P	P	09 34 27.8	-2.0
OKC				*e*x	x	09 34 35.8	
MORC	Moravsky Berou	15.33	345	*e*Pn	P	09 34 27.5	-3.2
	comp=Z,134nm,0.9s						
MORC	Moravsky Berou	15.33	345	⇑P	P	09 34 30.9	+0.3
MORC	Moravsky Berou	15.33	345	*e*Pn	P	09 34 27.5	-3.1
	comp=Z,134nm,0.9s						
MORC	Moravsky Berou	15.33	345	P	P	09 34 30.9	+0.3
OJC	Ojcow	15.38	351	*e*P	P	09 34 29.7	-1.5
TOUF	Mont Tournerai	15.38	310	*e*P	P	09 34 32.9	+1.6
ENR	Entracque	15.38	311	P	P	09 34 32.0	+0.7
ENR	Entracque	15.38	311	P	P	09 34 32.0	+0.7
MVIF	Mont Vial	15.38	310	*e*P	P	09 34 32.7	+1.4
MOTA	Moosalm	15.38	327	*i* Pn	P	09 34 31.0	-0.4
	comp=Z,49nm,0.8s,SNR=18						
MOTA	Moosalm	15.38	327	⇑*i*Sn	S	09 37 11.9	-9.1
	comp=Z,47nm,0.7s						
MOTA	Moosalm	15.38	327	P	P	09 34 30.9	-0.4
TREC	Trest	15.39	340	*e*P	P	09 34 29.5	-1.9
UMJS	Umm Lajj	15.43	126	P	P	09 34 33.6	+1.5
STV2	Anna di Valdie	15.45	311	P	P	09 34 33.1	+0.9
STV2	Anna di Valdie	15.45	311	P	P	09 34 33.1	+0.9
STV	Sta Anna Valdi	15.45	311	P	P	09 34 32.8	+0.7
STV	Sta Anna Valdi	15.45	311	P	P	09 34 32.8	+0.6
LMR	La Mourre	15.53	307	*e*P	P	09 34 32.9	-0.3
	comp=Z,165nm,1.4s						
LMR	La Mourre	15.53	307	*e*P	P	09 34 32.9	-0.3
LMR				pmax	pmax		
	comp=Z,83nm,1.4s						
FRF	La Foret Royal	15.54	308	*e*P	P	09 34 32.8	-0.6
	comp=Z,107nm,1.2s						
FRF	La Foret Royal	15.54	308	*e*P	P	09 34 32.8	-0.6
FRF				pmax	pmax		
	comp=Z,54nm,1.2s						
GEC2	GERESS Array S	15.55	335	*e*P	P	09 34 39.2	+5.7
	comp=Z,205nm,1.0s						
GEC2	GERESS Array S	15.55	335	*e*P	P	09 34 39.2	+5.7
GEC2				pmax	pmax		
	comp=Z,205nm,1.0s						
GERES	GERESS Array B	15.55	335	Pn	P	09 34 31.3	-2.2
	comp=Z,2.2nm,0.3s,baz=159,slow=11,SNR=48						
GERES				Sn	S	09 37 15.1	-10
	comp=Z,1.8nm,0.3s,baz=152,slow=19,SNR=6.4						
GERES				ScP		09 43 04.5	
	comp=Z,0.1nm,0.3s,baz=90,slow=2.7,SNR=4.6						
DAVOX	Davos	15.56	323	Pn	P	09 34 35.3	+1.7
	baz=143,slow=11						
DAVOX				Sn	S	09 37 15.7	-9.4
	comp=Z,3.8nm,0.3s,baz=331,slow=19,SNR=6.1						
PZZ	Prazzo	15.72	312	P	P	09 34 35.7	0.0
PZZ	Prazzo	15.72	312	P	P	09 34 35.7	0.0
BHB	Bricherasio	15.80	313	P	P	09 34 37.5	+0.9
BHB	Bricherasio	15.80	313	P	P	09 34 37.5	+0.8
KHC	Kasperske Hory	15.84	335	*e*P	P	09 34 34.9	-2.3
KHC				*e*x	x	09 34 42.6	
KHC				*e*pP		09 34 49.5	
KHC				AMS	AMS	09 41 50.0	
	comp=Z,6µm,17.2s						
SURF	Saint Ours	15.88	311	*e*P	P	09 34 37.8	0.0
TRAV		15.89	316	P	P	09 34 38.1	+0.3
TRAV		15.89	316	P	P	09 34 38.1	+0.2
DAVA	Damuels	15.91	324	⇓*i*Pn	P	09 34 40.8	+2.7
	comp=Z,44nm,0.7s,SNR=52						
DAVA	Damuels	15.91	324	⇑*i*Sn	S	09 37 22.5	-11
	comp=Z,48nm,0.7s						
FUR	Furstenfeldbru	15.93	329	*e*P	P	09 34 42.6	+4.2
	comp=Z,713nm,1.0s						
FUR	Furstenfeldbru	15.93	329	*e*P	P	09 34 42.6	+4.2
FUR				pmax	pmax		
	comp=Z,713nm,1.0s						
MSL	Mosul	15.96	80	*e*x	x	09 34 42.0	
MSL				*e*x	x	09 34 54.5	
MSL				*e*x	x	09 37 47.5	
MSL				*e*x	x	09 39 45.0	
MSL				*e*x	x	09 41 02.0	
RSP	Reno Superiore	15.97	314	P	P	09 34 39.5	+0.6
RSP	Reno Superiore	15.97	314	P	P	09 34 39.5	+0.6
FENE	Fenestrelle	16.02	313	P	P	09 34 40.1	+0.6
FENE	Fenestrelle	16.02	313	P	P	09 34 40.1	+0.6
MBDF	Montbardon	16.04	312	*e*P	P	09 34 39.3	-0.4
	comp=Z,452nm,1.2s						
MBDF	Montbardon	16.04	312	*e*P	P	09 34 39.3	-0.4
MBDF				pmax	pmax		
	comp=Z,226nm,1.2s						
UBR	Uberruh	16.09	326	⇓*e*P	P	09 34 45.1	+4.7
WET	Wettzell	16.10	334	*e*P	P	09 34 44.3	+3.8
	comp=Z,499nm,1.1s						
WET	Wettzell	16.10	334	*e*P	P	09 34 44.3	+3.8
WET				pmax	pmax		
	comp=Z,499nm,1.1s						
RRL	Cesana Torines	16.13	313	P	P	09 34 42.1	+1.3
RRL	Cesana Torines	16.13	313	P	P	09 34 42.2	+1.3
DPC	Dobruska-Polom	16.14	343	*e*P	P	09 34 38.1	-2.9
DPC				*e*x	x	09 34 44.7	
DPC				AMS	AMS	09 41 50.0	
	comp=Z,5µm,19.7s						
AKASG	Malin Array Be	16.16	13	Pn	P	09 34 38.8	-2.4
	comp=Z,3.0nm,0.3s,baz=203,slow=12,SNR=87						
AKASG				Sn	S	09 37 49.8	+11
	comp=Z,2.4nm,0.3s,baz=199,slow=23,SNR=4.0						
AKASG				ScP		09 43 05.4	
	baz=229,slow=1.3,SNR=4.2						
AKASG	Malin Array Be	16.16	13	*i* P	P	09 34 38.7	-2.5
AKASG				pmax	pmax		
	comp=Z,21nm,0.7s						
LSD	Ceresole Reale	16.20	315	P	P	09 34 43.1	+1.3
LSD	Ceresole Reale	16.20	315	P	P	09 34 43.1	+1.3
BNI	Bardonecchia	16.26	313	*e*P	P	09 34 44.2	+1.6
	comp=Z,124nm,1.1s						
BNI	Bardonecchia	16.26	313	*e*P	P	09 34 44.2	+1.6
BNI				pmax	pmax		
	comp=Z,124nm,1.1s						
BNI	Bardonecchia	16.26	313	*e*P	P	09 34 44.2	+1.6
	comp=Z,124nm,1.1s						
PRU	Pruhonice	16.29	339	*e*P	P	09 34 41.2	-1.6
PRU				*e*x	x	09 34 46.7	
PRU				AMS	AMS	09 42 00.0	
	comp=Z,6µm,20.2s						
UPC	Upice	16.36	343	*e*P	P	09 34 42.6	-1.2
UPC				*e*x	x	09 34 48.1	
KBRS	Khaybar	16.42	120	P	P	09 34 46.5	+1.8
SMRF	Simiane la Rot	16.42	308	*e*P	P	09 34 43.9	-0.7
	comp=Z,99nm,1.1s						
LPG	La Plagne	16.46	314	*e*P	P	09 34 44.7	-0.4
	comp=Z,138nm,1.0s						
LPG	La Plagne	16.46	314	*e*P	P	09 34 44.7	-0.4
LPG				pmax	pmax		
	comp=Z,69nm,1.0s						
HAKT	HAKKARI	16.46	75	*i* P	P	09 34 46.4	+1.2
LPL	La Plagne	16.48	314	*e*P	P	09 34 44.7	-0.6
	comp=Z,56nm,0.8s						
LPL	La Plagne	16.48	314	*e*P	P	09 34 44.7	-0.6
LPL				pmax	pmax		
	comp=Z,28nm,0.8s						
YNBS	Yanbu' al Bahr	16.49	127	P	P	09 34 49.8	+4.1
KSP	Ksiaz	16.61	344	*e*P	P	09 34 47.6	+0.7
KSP				MLR	MLR	09 42 06.0	
	comp=Z,7µm,23.4s						
KSP	Ksiaz	16.61	344	*e*P	P	09 34 45.4	-1.5
KSP				*e*pP		09 34 50.5	
KSP				*e*S	S	09 37 53.0	+3.6
KSP	Ksiaz	16.61	344	*e*P	P	09 34 45.4	-1.5
KSP				*e*S	S	09 37 53.0	+3.6
ABA	Alger-Bouzarea	16.68	282	P	P	09 34 44.0	-3.9
ORIF	Oris-en-Rattie	16.68	311	*e*P	P	09 34 46.7	-1.1
	comp=Z,89nm,1.1s						
ORIF				*e*R			
	comp=Z,3µm,19.8s						
GDM	Grand'Maison	16.68	313	*e*P	P	09 34 48.5	+0.7
HDH	Heidenheim	16.71	328	⇓*e*P	P	09 34 51.7	+3.5
PVCC	Panska Ves	16.76	340	*e*P	P	09 34 46.8	-2.0
PVCC				*e*x	x	09 34 51.3	
PVCC				AMS	AMS	09 42 10.0	
	comp=Z,6µm,22.3s						
GUT	Gutenstein	16.83	325	⇓*e*P	P	09 34 53.3	+3.6
AKH	Akhalkalaki	16.91	62	P	P	09 34 49.7	-1.0
BUCH	Bad Urach	17.00	326	⇓*e*P	P	09 34 54.9	+3.1
SPAK	Spaichingen	17.01	324	⇓*e*P	P	09 34 54.3	+2.3
SPAK	Spaichingen	17.01	324	*e*P	P	09 34 52.6	+0.6
GRA1	Grafenberg Arr	17.16	332	*e*P	P	09 34 56.7	+2.8
	comp=Z,1µm,1.2s						

GRF	Grafenberg Arr	17.16	332	eP	P	09 34 56.7	+2.8
GRF				pmax	pmax		
	comp=Z,1µm,1.2s						
GRF	Grafenberg Arr	17.16	332	eP	P	09 34 56.7	+2.8
GRF				pmax	pmax		
	comp=Z,1µm,1.2s						
GRF	Grafenberg Arr	17.16	332	eP	P	09 34 56.7	+2.8
	comp=Z,1µm,1.2s						
NKC	Novy Kostel	17.17	335	eP	P	09 34 53.7	-0.2
NKC				AMS	AMS	09 42 40.0	
	comp=Z,6µm,17.5s						
KIV	Kislovodsk	17.22	53	eP	P	09 34 58.2	+3.6
	comp=Z,115nm,0.9s						
KIV	Kislovodsk	17.22	53c	iP	P	09 34 58.0	+3.4
KIV				pmax	pmax		
	comp=Z,116nm,1.1s						
KIV				MLR	MLR		
	comp=Z,2µm,20.0s						
BBS	Basel-Blauen	17.22	321⇓	eP	P	09 34 54.7	+0.1
BBS	Basel-Blauen	17.22	321	eP	P	09 34 55.5	+0.9
ONI	Oni	17.22	58	P	P	09 34 56.3	+1.6
FELD	Feldberg	17.24	323⇓	eP	P	09 34 55.2	+0.4
BRG	Berggiesshubel	17.25	339	eP	P	09 34 52.5	-2.5
	comp=Z,18nm,1.4s						
BRG				i		09 34 57.3	
BRG				i		09 35 06.0	
BRG	Berggiesshubel	17.25	339	eP	P	09 34 52.5	-2.4
BRG				pmax	pmax		
	comp=Z,18nm,1.4s						
STU	Stuttgart	17.30	327	eP	P	09 34 55.4	-0.2
	comp=Z,142nm,1.0s						
STU	Stuttgart	17.30	327	eP	P	09 34 55.4	-0.2
STU				pmax	pmax		
	comp=Z,142nm,1.0s						
STU	Stuttgart	17.30	327	eP	P	09 34 55.4	-0.2
	comp=Z,142nm,1.0s						
KIZ	Kirchzarten	17.34	323⇓	eP	P	09 34 56.3	+0.2
BHD	Baghdad	17.36	90	ex	x	09 35 01.0	
BHD				ex	x	09 38 19.0	
BFO	Black Forest	17.39	324	eP	P	09 34 58.2	+1.5
BFO				pmax	pmax		
	comp=Z,183nm,1.6s						
BFO	Black Forest	17.39	324	eP	P	09 34 58.2	+1.5
	comp=Z,183nm,1.6s						
HILS	Ha’il	17.40	111	P	P	09 34 58.7	+1.8
VIVF	Saint-Julien-l	17.40	310	eP	P	09 34 55.5	-1.4
	comp=Z,101nm,0.9s						
VIVF	Saint-Julien-l	17.40	310	eP	P	09 34 55.5	-1.4
VIVF				pmax	pmax		
	comp=Z,51nm,0.9s						
LBG	Lerchenberg	17.41	326	eP	P	09 34 59.8	+2.8
CABF	La Chapelle	17.47	317	eP	P	09 34 56.4	-1.3
	comp=Z,95nm,0.8s						
CABF	La Chapelle	17.47	317	eP	P	09 34 56.4	-1.3
CABF				pmax	pmax		
	comp=Z,47nm,0.8s						
LOMF	Lomont	17.50	320	eP	P	09 34 57.5	-0.7
SIND	Sindeldorf	17.55	329⇓	eP	P	09 35 01.0	+2.2
GNI	Garni	17.55	67	eP	P	09 35 00.3	+1.5
	comp=Z,120nm,1.1s						
GNI	Garni	17.55	67	eP	P	09 35 00.3	+1.4
GNI				pmax	pmax		
	comp=Z,120nm,1.1s						
GNI	Garni	17.55	67	eP	P	09 35 00.3	+1.4
	comp=Z,120nm,1.1s						
LASF	Ste Croix	17.59	307	eP	P	09 34 58.1	-1.1
	comp=Z,345nm,1.5s						
LIBD	Limburg	17.62	323	eP	P	09 34 59.8	+0.2
MOF	Molkenrain	17.66	321	eP	P	09 34 59.5	-0.7
EJON	La Jonquera	17.67	301	⇑P	P	09 35 01.0	+0.8
	comp=Z,264nm,1.9s						
EJON	La Jonquera	17.67	301	⇑P	P	09 35 01.0	+0.8
	comp=Z,264nm,1.9s						
HINF	Hinteralfeld	17.79	321	eP	P	09 35 01.0	-0.7
	comp=Z,214nm,1.1s						
HINF	Hinteralfeld	17.79	321	eP	P	09 35 01.0	-0.7
HINF				pmax	pmax		
	comp=Z,107nm,1.1s						
MOX	Moxa	17.80	335	i P	P	09 35 02.8	+1.0
	comp=Z,logA/T=2.0						
MOX				L		09 43 23.0	
MOX	Moxa	17.80	335	eP	P	09 35 02.8	+1.0
MOX				pmax	pmax		
	comp=Z,146nm,1.3s						
MOX	Moxa	17.80	335	eP	P	09 35 02.8	+1.0
	comp=Z,146nm,1.3s						
ECH	Echery	17.89	322	eP	P	09 35 02.6	-0.4
TI2	Plekhanov	17.90	62α	iP	P	09 35 06.0	+2.8
TI2				pmax	pmax		
	comp=Z,100nm,1.0s						
TI2				MLR	MLR		
	comp=E,2µm,8.0s						
TI2				MLR	MLR		
	comp=Z,2µm,8.0s						
CLL	Collm	17.91	338	⇑P	P	09 35 02.8	-0.4
	comp=Z,logA/T=2.2						
CLL				i *PP		09 35 08.9	
CLL				i PP	PP	09 35 23.5	+5.5
CLL	Collm	17.91	338⇑	iP	P	09 35 02.8	-0.4
	comp=Z,284nm,1.6s						
CLL				i		09 35 23.5	
CLL	Collm	17.91	338⇑	iP	P	09 35 02.8	-0.4
CLL				pmax	pmax		
	comp=Z,284nm,1.6s						
GOF	Gofitskoye	17.92	50⇓	iP	P	09 35 03.6	+0.2
GOF				pmax	pmax		
	comp=Z,180nm,1.0s						
GOF	Gofitskoye	17.92	50	i P	P	09 35 03.6	+0.2
	comp=Z,180nm,1.0s						
WLS	Welschbruch	17.92	323	eP	P	09 35 02.6	-0.8
CDF	Champ du Feu	17.96	323	eP	P	09 35 04.2	+0.4
	comp=Z,393nm,1.4s						
CDF	Champ du Feu	17.96	323	eP	P	09 35 04.2	+0.4
CDF				pmax	pmax		
	comp=Z,197nm,1.4s						
SWS	Schriesheim	18.05	327⇓	eP	P	09 35 07.3	+2.4
TOD	Tromm	18.09	328	eP	P	09 35 07.9	+2.4
TOD	Tromm	18.09	328	eP	P	09 35 05.7	+0.2
KTD	Kalmit	18.20	326⇓	eP	P	09 35 08.8	+1.9
COLF	Collangettes	18.32	311	eP	P	09 35 07.1	-1.3
MTLF	Montolieu	18.42	303	eP	P	09 35 09.3	-0.4
	comp=Z,77nm,1.3s						
MTLF	Montolieu	18.42	303	eP	P	09 35 09.3	-0.4
MTLF				pmax	pmax		
	comp=Z,39nm,1.3s						
LBL	Lubilhac	18.47	309	eP	P	09 35 10.4	+0.1
EMIR	Miracle	18.49	298	⇓P	P	09 35 11.3	+0.7
	comp=Z,456nm,1.9s						
EMIR	Miracle	18.49	298	⇓P	P	09 35 11.3	+0.7
	comp=Z,456nm,1.9s						
THEF	They Montfort	18.50	321	eP	P	09 35 10.5	-0.1
EPOB	Poblet	18.69	296	⇑P	P	09 35 11.8	-1.1
	comp=Z,217nm,1.7s						
EPOB	Poblet	18.69	296	⇑P	P	09 35 11.8	-1.2
	comp=Z,217nm,1.7s						
TNS	Taunus Mts	18.70	329	eP	P	09 35 13.3	+0.2
TNS				pmax	pmax		
	comp=Z,123nm,0.9s						
TNS	Taunus Mts	18.70	329	eP	P	09 35 13.3	+0.2
	comp=Z,123nm,0.9s						
RUE	Ruedersdorf	18.73	341	eP	P	09 35 12.6	-0.9
	comp=Z,259nm,1.0s						
RUE	Ruedersdorf	18.73	341	eP	P	09 35 12.6	-0.9
	comp=Z,259nm,1.0s						
ABH	Alteburg	18.85	327⇓	eP	P	09 35 15.5	+0.6
ABH	Alteburg	18.85	327	eP	P	09 35 14.6	-0.3
AGO	Saint Agoulin	18.92	312	eP	P	09 35 14.4	-1.3
SUW	Suwalki	18.94	359	eP	P	09 35 13.7	-2.1
SUW				MLR	MLR	09 42 39.7	
	comp=Z,3µm,25.1s						
RUP	Ruppelstein	18.95	325⇓	eP	P	09 35 16.8	+0.8
RUP	Ruppelstein	18.95	325	eP	P	09 35 16.4	+0.4
FRNF	Fournols	18.97	309	eP	P	09 35 15.9	-0.5
EBR	Ebro Roquetas	19.02	294	ePNPN		09 35 33.0	
MLS	Moulis	19.08	301	eP	P	09 35 16.5	-1.1
CAF	Calviac	19.10	307	eP	P	09 35 17.3	-0.5
	comp=Z,101nm,1.1s						
CAF	Calviac	19.10	307	eP	P	09 35 17.3	-0.5
CAF				pmax	pmax		
	comp=Z,50nm,1.1s						
MEZF	Maizieres J’vi	19.16	320	eP	P	09 35 18.6	+0.2
	comp=Z,458nm,1.0s						
SSF	Saint Saulge	19.20	315	eP	P	09 35 16.4	-2.5
	comp=Z,45nm,0.8s						
SSF	Saint Saulge	19.20	315	eP	P	09 35 16.4	-2.5
SSF				pmax	pmax		
	comp=Z,45nm,0.8s						
CLZ	Clausthal	19.23	335	eP	P	09 35 18.9	-0.3
CLZ				pmax	pmax		
	comp=Z,108nm,0.9s						
CLZ	Clausthal	19.23	335	eP	P	09 35 18.9	-0.3
	comp=Z,108nm,0.9s						
BGF	Bois d’Agland	19.34	313	eP	P	09 35 19.5	-0.9
	comp=Z,243nm,1.0s						
BGF	Bois d’Agland	19.34	313	eP	P	09 35 19.5	-0.9
BGF				pmax	pmax		
	comp=Z,122nm,1.0s						
WLF	Walferdange	19.35	324	eP	P	09 35 21.3	+0.8
	comp=Z,358nm,1.3s						
WLF	Walferdange	19.35	324	eP	P	09 35 21.3	+0.8
WLF				pmax	pmax		
	comp=Z,358nm,1.3s						
WLF	Walferdange	19.35	324	eP	P	09 35 21.3	+0.8
	comp=Z,358nm,1.3s						
EGRA	Graus	19.43	298	⇑P	P	09 35 22.4	+0.9
	comp=Z,44nm,1.0s						
EGRA	Graus	19.43	298	⇑P	P	09 35 22.4	+0.9
	comp=Z,44nm,1.0s						
RESF	Ens	19.57	300	eP	P	09 35 23.1	+0.1
TCF	Toulx Ste Croi	19.59	311	eP	P	09 35 22.1	-1.2
	comp=Z,182nm,1.3s						
TCF	Toulx Ste Croi	19.59	311	eP	P	09 35 22.1	-1.2
TCF				pmax	pmax		
	comp=Z,91nm,1.3s						
RJF	Les Rejaudoux	19.61	308	eP	P	09 35 23.1	-0.3
	comp=Z,76nm,0.9s						
RJF				eR			
	comp=Z,2µm,20.5s						
EPF	Esparros	19.63	301	eP	P	09 35 23.0	-0.7
	comp=Z,36nm,0.9s						
EPF	Esparros	19.63	301	eP	P	09 35 23.0	-0.7
EPF				pmax	pmax		
	comp=Z,18nm,0.9s						
MNK	Minsk	19.66	8⇑	eP	P	09 35 19.0	-4.9
MNK				pmax	pmax		
	comp=N,1µm,1.6s						
EMOS	Mosqueruela	19.67	293	⇑P	P	09 35 24.8	+0.7
	comp=N,449nm,2.4s						
EMOS	Mosqueruela	19.67	293	⇑P	P	09 35 24.8	+0.6
	comp=N,449nm,2.4s						
EBIE	Bielsa	19.68	300	⇑P	P	09 35 24.3	+0.1
	comp=N,127nm,1.1s						
VRSR	Storozhevoye	19.71	30	eP	P	09 35 23.0	-1.4
VRSR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VRSR				pmax	pmax		
	comp=N,10.0nm,1.1s						
VRSR				pmax	pmax		
	comp=E,10.0nm,1.0s						
VRSR	Storozhevoye	19.71	30	eP	P	09 35 23.0	-1.4
	comp=E,10.0nm,1.1s						
LABF	Labassere	19.82	301	eP	P	09 35 26.1	+0.3
ECHE	Chera	19.96	290	⇓P	P	09 35 28.2	+0.9
	comp=E,54nm,1.6s						
ECHE	Chera	19.96	290	⇓P	P	09 35 28.2	+0.9
ECHE				pmax	pmax		
	comp=Z,54nm,1.6s						
ECHE	Chera	19.96	290	⇓P	P	09 35 28.2	+0.9
	comp=Z,54nm,1.6s						
LFF	La Frestale	19.98	306	eP	P	09 35 26.9	-0.5
	comp=Z,204nm,1.2s						
LFF	La Frestale	19.98	306	eP	P	09 35 26.9	-0.5
LFF				pmax	pmax		
	comp=Z,102nm,1.2s						
EMUR	La Murta	20.09	285	⇑P	P	09 35 28.9	+0.2
	comp=Z,94nm,1.5s						
EMUR	La Murta	20.09	285	⇑P	P	09 35 28.9	+0.3
	comp=Z,94nm,1.5s						
VOR	Voronezh	20.10	29	eP	P	09 35 26.5	-2.2
VOR				e		09 35 40.0	
VOR				e		09 39 15.0	
VOR				pmax	pmax		
	comp=E,190nm,1.5s						
VOR				pmax	pmax		
	comp=Z,220nm,1.5s						
VOR				pmax	pmax		
	comp=N,280nm,1.3s						
VOR	Voronezh	20.10	29	eP	P	09 35 26.5	-2.2
	comp=N,280nm,1.3s						
MAK	Makhachkala	20.19	60⇓	iP	P	09 35 30.3	+0.6
MAK	Makhachkala	20.19	60d	iP	P	09 35 30.0	+0.3
MAK				i		09 35 53.0	
MAK				eS	S	09 39 05.0	-4.5
MAK				eSS	SS	09 39 42.0	+3.3
MAK				eSSS	SSS	09 39 54.0	+1.1
MAK				pmax	pmax		
	comp=Z,1µm,2.0s						
MAK				smax			
	comp=N,2µm,5.0s						
MAK				smax			
	comp=E,500nm,5.0s						
MAK	Makhachkala	20.19	60	i P	P	09 35 30.0	+0.3
	comp=E,1µm,2.0s						
HGN	Heimansgroeve	20.21	326⇑	eP	P	09 35 30.6	+0.7
	comp=E,122nm,1.1s						
HGN				eS	S	09 39 24.9	+15
HGN				ex	x	09 42 23.6	
ETSF	Etsaut	20.23	300	eP	P	09 35 30.3	+0.2
	comp=E,130nm,0.9s						
ETSF	Etsaut	20.23	300	eP	P	09 35 30.3	+0.2
ETSF				pmax	pmax		
	comp=Z,65nm,0.9s						
AFFS	‘Afif	20.24	118	P	P	09 35 33.1	+2.7
GIVF	Givet	20.28	323	eP	P	09 35 30.0	-0.6
	comp=Z,369nm,1.0s						
GIVF	Givet	20.28	323	eP	P	09 35 30.0	-0.6
GIVF				pmax	pmax		
	comp=Z,184nm,1.0s						
ETOB	Tobarra	20.35	287	P	P	09 35 32.9	+1.5
	comp=Z,171nm,2.9s						
BAIF	Baives	20.56	323	eP	P	09 35 32.9	-0.6
	comp=Z,316nm,0.9s						
BAIF	Baives	20.56	323	eP	P	09 35 32.9	-0.6
BAIF				pmax	pmax		
	comp=Z,158nm,0.9s						
VRHR	Novokhopersk	20.68	34	eP	P	09 35 33.6	-1.1
VRHR				eS	S	09 39 18.5	-0.5
VRHR				pmax	pmax		
	comp=E,410nm,1.6s						
VRHR				pmax	pmax		
	comp=Z,320nm,1.6s						
VRHR				pmax	pmax		
	comp=N,390nm,1.1s						
VRHR				smax			
	comp=N,200nm,0.8s						
VRHR				smax			
	comp=E,100nm,0.8s						
VRHR				smax			
	comp=Z,40nm,0.7s						
WTSB	Winterswijk	20.70	330⇑	eP	P	09 35 34.9	0.0
	comp=Z,334nm,1.1s						
SJPF	Ste Jean	20.76	300	eP	P	09 35 35.9	+0.3
	comp=Z,258nm,1.1s						
SJPF	Ste Jean	20.76	300	eP	P	09 35 35.9	+0.3
SJPF				pmax	pmax		
	comp=Z,129nm,1.1s						
MIB	Mutribah	20.77	98	eP	P	09 35 35.7	0.0
MIB				AMb	AMB	09 35 56.6	
	comp=Z,241nm,0.5s						
NAY	Al-Naaiem	20.89	100	eP	P	09 35 37.0	0.0
NAY				AMb	AMB	09 36 03.5	
	comp=Z,197nm,1.1s						
NAY	Al-Naaiem	20.89	100	eP	P	09 35 37.0	0.0
BSD	Bornholm Skovb	20.91	346⇓	iP	P	09 35 34.9	-2.1
	comp=Z,242nm,0.9s						
BSD	Bornholm Skovb	20.91	346⇓	iP	P	09 35 34.9	-2.1
BSD				pmax	pmax		
	comp=Z,242nm,0.9s						
BSEG	Bad Segeberg	21.01	338	eP	P	09 35 36.8	-1.3
EVIA	Vianos	21.09	287	⇑P	P	09 35 39.5	+0.4
	comp=Z,65nm,1.4s,mb4.8						
EVIA	Vianos	21.09	287	⇑P	P	09 35 39.5	+0.4
EVIA				pmax	pmax		
	comp=Z,65nm,1.4s,mb4.8						
EVIA	Vianos	21.09	287	⇑P	P	09 35 39.5	+0.4
	comp=Z,65nm,1.4s,mb4.8						
EHUE	Huescar	21.16	285	⇓P	P	09 35 40.2	+0.5
	comp=Z,40nm,1.2s,mb4.6						
EHUE	Huescar	21.16	285	⇓P	P	09 35 40.2	+0.5
EHUE				pmax	pmax		
	comp=Z,41nm,1.2s,mb4.6						
EHUE	Huescar	21.16	285	⇓P	P	09 35 40.2	+0.5
	comp=Z,40nm,1.2s,mb4.6						
UMR	Umm Al-Rimmam	21.16	98	eP	P	09 35 39.5	-0.3
UMR				AMb	AMB	09 35 42.8	
	comp=Z,466nm,1.1s,mb5.8						
MFF	Saint Martin d	21.20	310	eP	P	09 35 40.0	0.0
	comp=Z,210nm,0.8s,mb5.2						
MFF	Saint Martin d	21.20	310	eP	P	09 35 40.0	0.0
MFF				pmax	pmax		
	comp=Z,105nm,0.8s,mb5.2						
RDF	Al-Radifah	21.26	100	eP	P	09 35 40.9	+0.1
RDF				AMb	AMB	09 35 56.3	
	comp=Z,116nm,0.8s,mb5.2						
WIT	Witteveen	21.39	331⇑	eP	P	09 35 42.7	+0.8
	comp=Z,1µm,1.1s,mb6.1						
EBER	Berja	21.42	283	⇑P	P	09 35 43.0	+0.6
	comp=Z,47nm,0.9s,mb4.8						
EBER	Berja	21.42	283	⇑P	P	09 35 43.0	+0.6
	comp=Z,47nm,0.9s,mb4.8						
EQES	Quesada	21.54	285	⇑P	P	09 35 43.6	+0.1
	comp=Z,66nm,1.0s,mb5.0						
EQES	Quesada	21.54	285	⇑P	P	09 35 43.6	+0.1
	comp=Z,66nm,1.0s,mb5.0						
ECRI	Cripan	21.57	298	⇑P	P	09 35 44.8	+1.0
	comp=Z,30nm,0.8s,mb4.8						
ECRI	Cripan	21.57	298	⇑P	P	09 35 44.8	+1.1
ECRI				pmax	pmax		
	comp=Z,30nm,0.8s,mb4.8						
ECRI	Cripan	21.57	298	⇑P	P	09 35 44.8	+1.1
	comp=Z,30nm,0.8s,mb4.8						
LCHF	La Chataignera	21.60	310	eP	P	09 35 44.1	0.0
ECOG	Cogollos-Vega	21.95	284	P	P	09 35 49.1	+1.5
	comp=Z,55nm,0.9s,mb5.0						
ECOG	Cogollos-Vega	21.95	284	P	P	09 35 49.1	+1.5
ECOG				pmax	pmax		
	comp=Z,55nm,0.9s,mb5.0						
ECOG	Cogollos-Vega	21.95	284	P	P	09 35 49.1	+1.5
	comp=Z,55nm,0.9s,mb5.0						
EGUA	Guajares	21.97	282	P	P	09 35 48.9	+1.0
EGUA	Guajares	21.97	282	P	P	09 35 48.9	+1.1
COP	Copenhagen	21.98	343	i P	P	09 35 48.2	+0.4
	comp=Z,128nm,1.0s,mb5.3						
	comp=Z,2µm,20.0s						
COP	Copenhagen	21.98	343	eP	P	09 35 48.2	+0.4
	comp=Z,128nm,1.0s,mb5.3						
COP				LR	LR		
	comp=Z,2µm,20.0s,MS4.4						
COP	Copenhagen	21.98	343	eP	P	09 35 48.2	+0.4
COP				pmax	pmax		
	comp=Z,128nm,1.0s,mb5.3						
COP				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.4						
OBN	Obninsk	21.98	20	eP	P	09 35 46.4	-1.4
	comp=Z,432nm,1.4s,mb5.7						
OBN	Obninsk	21.98	20⇓	eP	P	09 35 46.3	-1.5
OBN				eS	S	09 39 44.9	+1.4
OBN				pmax	pmax		
	comp=Z,400nm,1.3s,mb5.7						
OBN				MLR	MLR		
	comp=Z,3µm,20.0s,MS4.7						
OBN	Obninsk	21.98	20	eP	P	09 35 46.3	-1.5
	comp=Z,400nm,1.3s,mb5.7						
OBN				eS	S	09 39 44.9	+1.4
	comp=Z,3µm,20.0s						
EBAN	Banos Encina	22.10	286	⇓P	P	09 35 49.5	+0.4
	comp=Z,23nm,0.8s,mb4.7						
EBAN	Banos Encina	22.10	286	⇓P	P	09 35 49.5	+0.4
EBAN				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.7						
EBAN	Banos Encina	22.10	286	⇓P	P	09 35 49.5	+0.4
	comp=Z,23nm,0.8s,mb4.7						
ERON	Agron	22.15	283	P	P	09 35 49.8	+0.2
	comp=Z,71nm,1.2s,mb5.0						
ESDC	Sonseca Array	22.27	290	P	P	09 35 51.1	+0.2
	comp=Z,23nm,0.8s,mb4.7,baz=84,slow=11,SNR=30						
ESDC				PcP	PcP	09 39 47.4	+0.2
	comp=Z,0.6nm,0.4s,baz=64,slow=2.6,SNR=5.8						
ESDC				ScP		09 43 20.8	
	comp=Z,0.3nm,0.3s,baz=45,slow=3.6,SNR=5.2						
ESDC	Sonseca Array	22.27	290	P	P	09 35 51.0	+0.2
	comp=Z,23nm,0.8s,mb4.7						
ESDC	Sonseca Array	22.27	290	P	P	09 35 51.0	+0.2
	comp=Z,23nm,0.8s,mb4.7						
ESLA	Sonseca Array	22.27	290	eP	P	09 35 51.2	+0.3
	comp=Z,24nm,1.2s,mb4.5						
ESLA				LR	LR		
	comp=Z,5µm,20.0s,MS4.9						
ESLA	Sonseca Array	22.27	290	eP	P	09 35 51.2	+0.4
	comp=Z,24nm,1.2s,mb4.5						
FLN	La Foliniere	22.37	315	eP	P	09 35 51.7	0.0
	comp=Z,689nm,0.9s,mb5.8						
FLN				eR			
	comp=Z,2µm,20.5s						
FLN	La Foliniere	22.37	315	eP	P	09 35 51.7	0.0
FLN				pmax	pmax		
	comp=Z,345nm,0.9s,mb5.8						
FLN				MLR	MLR		
	comp=Z,2µm,20.5s,MS4.4						
GRR	Gorron	22.41	314	eP	P	09 35 52.5	+0.3
	comp=Z,580nm,1.0s,mb5.7						
GRR	Gorron	22.41	314	eP	P	09 35 52.5	+0.3
GRR				pmax	pmax		
	comp=Z,290nm,1.0s,mb5.7						
ELOJ	Sierra Loja	22.42	283	P	P	09 35 53.6	+1.3
	comp=Z,7.2nm,0.8s,mb4.2						
ELOJ	Sierra Loja	22.42	283	P	P	09 35 53.6	+1.3
	comp=Z,7.2nm,0.8s,mb4.2						
ELUQ	Luque	22.49	284	P	P	09 35 53.4	+0.4
	comp=Z,5.4nm,0.3s,mb4.5						
ELUQ	Luque	22.49	284	P	P	09 35 53.4	+0.4
ELUQ				pmax	pmax		
	comp=Z,5.0nm,0.3s,mb4.4						
ELUQ	Luque	22.49	284	P	P	09 35 53.4	+0.4
	comp=Z,5.4nm,0.3s,mb4.5						
GUD	Guadarrama	22.49	293	⇑P	P	09 35 53.4	+0.4
	comp=Z,32nm,0.8s,mb4.8						
GUD	Guadarrama	22.49	293	⇑P	P	09 35 53.4	+0.4
GUD				pmax	pmax		
	comp=Z,32nm,0.8s,mb4.8						
GUD	Guadarrama	22.49	293	⇑P	P	09 35 53.4	+0.4
	comp=Z,32nm,0.8s,mb4.8						
EADA	Adamuz	22.72	286	P	P	09 35 55.4	+0.1
	comp=Z,89nm,1.8s,mb4.9						
EADA	Adamuz	22.72	286	P	P	09 35 55.4	+0.1
	comp=Z,89nm,1.8s,mb4.9						
MOS	Moscow	22.83	21	eP	P	09 35 55.2	-0.9
MOS				e		09 36 07.5	
MOS				ePPP	PPP	09 36 21.6	-14
MOS				e		09 36 41.2	
MOS				eS	S	09 39 55.2	-3.6
MOS				eSSS	SSS	09 40 54.4	-4.1
MOS				pmax	pmax		
	comp=Z,448nm,1.4s,mb5.7						
MOS				MLR	MLR		
	comp=Z,3µm,19.6s,MS4.8						
MOS	Moscow	22.83	21	eP	P	09 35 55.2	-0.9
	comp=Z,448nm,1.4s,mb5.7						
EMIJ	Mijas	22.95	282	P	P	09 35 59.5	+2.0
	comp=Z,69nm,1.0s,mb5.0						
EMIJ	Mijas	22.95	282	P	P	09 35 59.5	+1.9
	comp=Z,69nm,1.0s,mb5.0						
SGMF	Saint Gilles	23.38	312	eP	P	09 36 01.9	+0.4
	comp=Z,271nm,0.9s,mb5.4						
SGMF	Saint Gilles	23.38	312	eP	P	09 36 01.9	+0.4
SGMF				pmax	pmax		
	comp=Z,135nm,0.9s,mb5.4						
ECAB	El Cabril	23.39	286	P	P	09 36 02.9	+1.1
	comp=Z,27nm,0.8s,mb4.7						
ZFT	Errachidia	23.39	270	i P	P	09 36 03.0	+1.1
MDT	Midelt	23.41	273	P	P	09 36 03.2	+1.1
	comp=Z,16nm,0.9s,mb4.5,baz=90,slow=11,SNR=20						
MDT				LR	LR	09 47 50.3	
	comp=Z,1µm,19.5s,MS4.4,baz=81,slow=44						
VSU	Vasula	23.49	4⇑	eP	P	09 36 01.8	-0.8
MUD	Monsted U’grnd	23.51	340⇑	iP	P	09 36 03.1	+0.3
	comp=Z,154nm,0.9s,mb5.4						
MUD				eS	S	09 40 25.6	+15
	comp=Z,3µm,21.0s						
EJIF	Jimena Fronter	23.52	282	⇑P	P	09 36 04.2	+1.1
	comp=Z,16nm,0.8s,mb4.5						
EJIF	Jimena Fronter	23.52	282	⇑P	P	09 36 04.2	+1.1
EJIF				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.5						
EJIF	Jimena Fronter	23.52	282	⇑P	P	09 36 04.2	+1.1
	comp=Z,16nm,0.8s,mb4.5						
QUIF	Quistinic	23.61	311	eP	P	09 36 04.8	+1.0
	comp=Z,791nm,1.1s,mb5.8						

QUIF	Quistinic	23.61	311	eP	P	09 36 04.8	+1.0
QUIF				pmax	pmax		
	comp=Z,396nm,1.1s,mb5.8						
ESPR	Espera	23.80	283	⇑P	P	09 36 06.0	+0.2
	comp=Z,81nm,1.5s,mb4.9						
ESPR	Espera	23.80	283	⇑P	P	09 36 06.0	+0.2
	comp=Z,81nm,1.5s,mb4.9						
SIW	Isle of Wight	23.83	318	eP	P	09 36 04.8	-1.1
ROSF	Rostrenen	23.84	312	eP	P	09 36 06.6	+0.5
	comp=Z,382nm,0.9s,mb5.5						
ROSF	Rostrenen	23.84	312	eP	P	09 36 06.6	+0.5
ROSF				pmax	pmax		
	comp=Z,191nm,0.9s,mb5.5						
TSY	Tnine Yamani	24.05	279	i P	P	09 36 10.0	+1.8
SKP1	Kophill	24.10	321	⇑eP	P	09 36 08.8	+0.3
EMIN	Mina Concepcio	24.39	285	P	P	09 36 12.3	+0.8
	comp=Z,245nm,2.6s,mb5.2						
EMIN	Mina Concepcio	24.39	285	P	P	09 36 12.3	+0.8
	comp=Z,245nm,2.6s,mb5.2						
SWN1	Swindon	24.50	320	⇑eP	P	09 36 13.0	+0.5
PBRG	Braganca	24.55	295	eP	P	09 36 13.9	+0.9
	comp=Z,78nm,1.7s,mb5.0						
PBRG	Braganca	24.55	295	eP	P	09 36 14.1	+1.1
SWK	Warminster	24.55	319	⇑eP	P	09 36 13.7	+0.7
ECAL	Calabor	24.56	295	P	P	09 36 14.6	+1.4
	comp=Z,256nm,2.0s,mb5.4						
ECAL	Calabor	24.56	295	P	P	09 36 14.6	+1.5
	comp=Z,256nm,2.0s,mb5.4						
EBAD	Badajoz	24.62	288	⇑P	P	09 36 14.3	+0.5
	comp=Z,60nm,1.0s,mb5.1						
EBAD	Badajoz	24.62	288	⇑P	P	09 36 14.3	+0.5
	comp=Z,60nm,1.0s,mb5.1						
SSW	Stow on the Wo	24.77	321	eP	P	09 36 15.9	+0.9
ERUA	La Rua	24.91	296	P	P	09 36 15.2	-1.3
ERUA	La Rua	24.91	296	P	P	09 36 15.2	-1.3
PCBR	Castelo Branco	24.99	290	eP	P	09 36 17.9	+0.6
	comp=Z,39nm,1.4s,mb4.8						
PCBR	Castelo Branco	24.99	290	eP	P	09 36 17.6	+0.3
EGRO	El Granado	25.05	285	P	P	09 36 17.6	-0.2
	comp=Z,16nm,0.8s,mb4.6						
EGRO	El Granado	25.05	285	P	P	09 36 17.6	-0.3
	comp=Z,16nm,0.8s,mb4.6						
MTE	Manteigas	25.05	292	eP	P	09 36 18.7	+0.8
	comp=Z,42nm,1.6s,mb4.7						
MTE				eS	S	09 40 42.5	+5.1
MTE	Manteigas	25.05	292	eP	P	09 36 17.8	-0.1
	comp=Z,41nm,1.4s,mb4.8						
MTE	Manteigas	25.05	292	eP	P	09 36 17.8	-0.1
	comp=Z,41nm,1.4s,mb4.8						
HGH	Gray Hill	25.10	319	⇑eP	P	09 36 18.3	+0.1
HGH				AMb	AMB	09 36 22.2	
	comp=Z,231nm,1.4s,mb5.5						
PUL	Pulkovo	25.10	8	i P	P	09 36 19.3	+1.2
PUL	Pulkovo	25.10	8	d iP	P	09 36 19.1	+1.0
PUL				pmax	pmax		
	comp=Z,1µm,1.1s						
PUL				pmax	pmax		
	comp=N,1µm,1.3s						
PUL				MLR	MLR		
	comp=Z,3µm,24.0s,MS4.8						
PUL				MLR	MLR		
	comp=N,3µm,19.0s,MS4.9						
PUL				MLR	MLR		
	comp=E,3µm,20.0s,MS4.9						
PUL	Pulkovo	25.10	8	i P	P	09 36 19.1	+1.0
	comp=E,3µm,19.0s						
TZC	Tazercounte	25.11	272	i P	P	09 36 20.0	+1.4
PVRL	Vila Real	25.23	294	eP	P	09 36 20.6	+1.0
	comp=E,49nm,1.1s,mb5.0						
PVRL	Vila Real	25.23	294	eP	P	09 36 20.8	+1.2
PBEJ	Beja	25.32	286	eP	P	09 36 22.4	+2.0
	comp=E,48nm,1.4s,mb4.8						
PBEJ	Beja	25.32	286	eP	P	09 36 22.5	+2.1
PVIS	Viseu	25.34	292	eP	P	09 36 21.2	+0.6
	comp=E,81nm,1.6s,mb5.0						
PVIS	Viseu	25.34	292	eP	P	09 36 21.5	+0.9
MCH1	Michaelchurch	25.39	320	⇑eP	P	09 36 20.5	-0.4
MCH1				AMb	AMB	09 36 24.8	
	comp=Z,151nm,1.6s,mb5.3						
EVO	Evora	25.41	287	eP	P	09 36 22.1	+0.8
	comp=Z,118nm,1.4s,mb4.9						
EVO				eR			
	comp=Z,1µm,18.8s						
ELOB	Lobios	25.54	295	P	P	09 36 23.2	+0.8
	comp=Z,27nm,0.7s,mb4.9						
ELOB	Lobios	25.54	295	P	P	09 36 23.2	+0.8
	comp=Z,27nm,0.7s,mb4.9						
HTR	Trewern Hill	25.58	320	⇑eP	P	09 36 22.7	0.0
HTR				AMb	AMB	09 36 27.1	
	comp=Z,106nm,2.0s,mb5.0						
HLM1	Long Mynd	25.61	321	⇑eP	P	09 36 22.2	-0.8
HLM1				AMb	AMB	09 36 24.6	
	comp=Z,134nm,1.0s,mb5.4						
SSP1	Stoney Pound	25.67	321	⇑eP	P	09 36 23.4	-0.2
SSP1				AMb	AMB	09 36 25.9	
	comp=Z,161nm,1.6s,mb5.3						
PTOM	Tomar	25.70	290	eP	P	09 36 24.6	+0.6
	comp=Z,52nm,0.8s,mb5.1						
HFS	Hagfors	25.87	349	P	P	09 36 24.7	-0.6
	comp=Z,45nm,0.5s,mb5.3,baz=153,slow=13,SNR=103						
HFA0	Hagfors New Ar	25.88	349	P	P	09 36 24.7	-0.8
STS	Santiago	26.00	297	P	P	09 36 27.7	+0.9
	comp=Z,31nm,0.9s,mb4.8						
STS	Santiago	26.00	297	P	P	09 36 27.7	+0.9
STS				pmax	pmax		
	comp=Z,31nm,0.9s,mb4.8						
STS	Santiago	26.00	297	P	P	09 36 27.7	+0.9
	comp=Z,31nm,0.9s,mb4.8						
SBD1	Bryn Du	26.01	322	⇑eP	P	09 36 26.9	+0.2
SBD1				AMb	AMB	09 36 29.0	
	comp=Z,198nm,1.0s,mb5.6						
PTEO	Sao Teotonio	26.03	285	eP	P	09 36 27.6	+0.5
	comp=Z,111nm,1.3s,mb5.2						
EZAM	Zamans	26.03	295	P	P	09 36 28.1	+1.0
	comp=Z,9.5nm,0.6s,mb4.5						
EZAM	Zamans	26.03	295	P	P	09 36 28.1	+1.0
EZAM				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.5						
EZAM	Zamans	26.03	295	P	P	09 36 28.0	+0.9
	comp=Z,9.5nm,0.6s,mb4.5						
KONO	Kongsberg	26.22	344	eP	P	09 36 28.4	-0.2
	comp=Z,64nm,0.8s,mb5.2						
KONO	Kongsberg	26.22	344	eP	P	09 36 28.4	-0.2
KONO				pmax	pmax		
	comp=Z,64nm,0.8s,mb5.2						
KONO	Kongsberg	26.22	344	eP	P	09 36 28.4	-0.2
	comp=Z,64nm,0.8s,mb5.2						
OSL	Oslo	26.24	345	eP	P	09 36 27.7	-1.1
FINES	FINESS Array B	26.44	3	P	P	09 36 29.6	-1.0
	comp=Z,65nm,1.1s,mb5.1,baz=160,slow=9.0,SNR=47						
FINES				LR	LR	09 48 02.7	
	comp=Z,3µm,20.1s,MS4.8,baz=178,slow=39						
FINES	FINESS Array B	26.44	3	P	P	09 36 29.5	-1.1
OUK	Oukaimeden	26.50	271	i P	P	09 36 33.0	+1.5
BLS5	Blasjo	26.81	341	eP	P	09 36 36.7	+2.7
NAO	NORSAR Subarra	27.03	346	P	P	09 36 36.3	+0.3
	comp=Z,2.1nm,0.6s						
NAO01	NORSAR Array S	27.04	346	eP	P	09 36 35.4	-0.7
	comp=Z,29nm,0.6s,mb5.0						
NAO01	NORSAR Array S	27.04	346	eP	P	09 36 35.4	-0.7
	comp=Z,29nm,0.6s,mb5.0						
KAF	Kangasniemi	27.12	3	ep	P	09 36 36.1	-0.7
	comp=Z,76nm,1.0s,mb5.2,baz=181,slow=9.7						
KAF	Kangasniemi	27.12	3	eP	P	09 36 36.1	-0.7
KAF				pmax	pmax		
	comp=Z,76nm,1.0s,mb5.2						
NB2	NORSAR Subarra	27.16	347	P	P	09 36 36.3	-0.9
	comp=Z,2.1nm,0.6s,baz=153,slow=9.3						
NB2	NORSAR Subarra	27.16	347	P	P	09 36 36.3	-0.9
	baz=153,slow=10						
NOA	NORSAR Array B	27.16	347	P	P	09 36 36.5	-0.7
	comp=Z,24nm,0.7s,mb4.8,baz=150,slow=8.8,SNR=48						
EKA	Eskdalemuir Ar	27.34	326	P	P	09 36 38.6	-0.4
	comp=Z,51nm,0.9s,mb5.1,baz=123,slow=6.8,SNR=29						
ESK	Eskdalemuir	27.36	326	eP	P	09 36 38.7	-0.4
	comp=Z,179nm,1.1s,mb5.5						
ESK	Eskdalemuir	27.36	326	eP	P	09 36 38.7	-0.4
ESK				pmax	pmax		
	comp=Z,179nm,1.1s,mb5.5						
ESK	Eskdalemuir	27.36	326	eP	P	09 36 38.7	-0.4
	comp=Z,179nm,1.1s,mb5.5						
DLF	Lyons Farm	27.91	320	⇑iP	P	09 36 42.4	-1.7
JOF	Joensuu	28.29	8	ep	P	09 36 45.5	-1.9
	comp=Z,8.8nm,0.7s,mb4.5						
DCN	Croghan	28.32	320	⇑iP	P	09 36 46.2	-1.6
DOMB	Dombas	28.49	346	eP	P	09 36 48.3	-0.9
ATD	Arta Tunnel	29.29	138	LR	LR	09 50 26.8	
	comp=Z,495nm,18.6s,MS4.2,baz=133,slow=40						
AKTK	Aktyubinsk	29.30	48	P	P	09 36 55.7	-0.9
AKTK				LR	LR	09 51 37.1	
AKTK	Aktyubinsk	29.30	48	P	P	09 36 55.7	-0.8
AKTO	Aktyubinsk	29.30	48	P	P	09 36 55.7	-0.9
	comp=Z,4.3nm,0.5s,mb4.4,baz=257,slow=8.9,SNR=18						
AKTO				LR	LR	09 51 37.1	
	comp=Z,731nm,18.4s,MS4.3,slow=43						
VAL	Valentia	29.38	315	eP	P	09 36 56.9	-0.3
AB31	Akbulak array	30.17	51	i P	P	09 37 03.6	-0.7
NSS	Namsos	30.31	350	eP	P	09 37 04.1	-1.3
NSS				AMb	AMB	09 37 05.5	
	comp=Z,200nm,1.1s,mb5.8						
NSS	Namsos	30.31	350	eP	P	09 37 04.1	-1.3
	comp=Z,200nm,1.1s,mb5.8						
NSS	Namsos	30.31	350	eP	P	09 37 04.1	-1.3
	comp=Z,200nm,1.1s,mb5.8,SNR=32						
MOR8	Moi Rana	31.59	353	eP	P	09 37 16.8	0.0
MOR8				AMb	AMB	09 37 18.4	
	comp=Z,120nm,1.5s,mb5.5						
MOR8	Moi Rana	31.59	353	eP	P	09 37 16.8	0.0
	comp=Z,120nm,1.5s,mb5.5						
MOR8	Moi Rana	31.59	353	eP	P	09 37 16.8	+0.1
	comp=Z,120nm,1.5s,mb5.5,SNR=32						
STOK	Stokkvaagen	31.90	352	eP	P	09 37 19.0	-0.5
ARU	Arti	31.93	37	eP	P	09 37 18.4	-1.4
	comp=Z,113nm,1.2s,mb5.6						
ARU	Arti	31.93	37	c iP	P	09 37 18.3	-1.5
ARU				pmax	pmax		
	comp=Z,113nm,1.3s,mb5.5						
ARU				MLR	MLR		
	comp=Z,1µm,19.0s,MS4.6						
ARU	Arti	31.93	37	i P	P	09 37 18.3	-1.5
	comp=Z,1µm,19.0s						
MELSS	Ber_school_2	32.34	353	eP	P	09 37 23.0	-0.3
SOKR	Solikamsk	32.71	31	c iP	P	09 37 25.4	-1.1
SOKR				pmax	pmax		
	comp=Z,170nm,1.0s,mb5.9						
SOKR				MLR	MLR		
	comp=Z,2µm,22.0s,MS4.8						
SOKR	Solikamsk	32.71	31	i P	P	09 37 25.4	-1.1
	comp=Z,2µm,22.0s						
APA	Apatity	33.03	7	⇓iP	P	09 37 28.5	-0.8
APA				pmax	pmax		
	comp=Z,160nm,1.7s,mb5.7						
APA				MLR	MLR		
	comp=Z,2µm,17.0s,MS5.0						
APA	Apatity	33.03	7	i P	P	09 37 28.5	-0.8
	comp=Z,2µm,17.0s						
SVE	Sverdlovsk	33.13	37	⇑iP	P	09 37 29.3	-1.0
SVE				e		09 37 44.7	
SVE				pmax	pmax		
	comp=Z,220nm,1.4s,mb5.9						
SVE				MLR	MLR		
	comp=N,600nm,16.0s,MS4.7						
SVE				MLR	MLR		
	comp=E,1µm,16.0s,MS4.7						
SVE				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.6						
SVE	Sverdlovsk	33.13	37	i P	P	09 37 29.3	-1.0
	comp=Z,220nm,1.4s,mb5.9						
LVZ	Lovozero	33.48	8	eP	P	09 37 32.1	-1.0
LVZ				eS	S	09 42 57.5	+5.9
LVZ				pmax	pmax		
	comp=Z,85nm,1.9s,mb5.3						
LVZ				MLR	MLR		
	comp=Z,2µm,21.0s,MS4.8						
LVZ				MLR	MLR		
	comp=N,2µm,22.0s						
LVZ				MLR	MLR		
	comp=E,984nm,16.0s						
LVZ	Lovozero	33.48	8	eP	P	09 37 32.1	-1.0
	comp=E,85nm,1.9s,mb5.3						
LOF	Lofoten	33.59	353	eP	P	09 37 35.7	+1.6
KTK1	Kautokeino	33.99	360	eP	P	09 37 36.6	-0.9
ARCES	ARCESS Array B	34.53	1	P	P	09 37 40.6	-1.5
	comp=E,5.9nm,0.4s,mb4.8,baz=178,slow=8.0,SNR=46						
ARCES				LR	LR	09 52 44.0	
	comp=E,4µm,22.0s,MS5.1,baz=184,slow=38						
ARE0	ARCESS Array S	34.53	1	eP	P	09 37 40.9	-1.2
ARE0	ARCESS Array S	34.53	1	eP	P	09 37 40.9	-1.3
TRO	Tromso	34.70	357	eP	P	09 37 42.2	-1.5
TRO				AMb	AMB	09 37 43.7	
	comp=Z,108nm,1.5s,mb5.6						
TRO	Tromso	34.70	357	eP	P	09 37 42.2	-1.5
	comp=Z,108nm,1.5s,mb5.6,SNR=31						
KEV	Kevo	34.79	2	ep	P	09 37 44.5	+0.1
	comp=Z,3.4nm,0.3s,mb4.8						
KEV	Kevo	34.79	2	eP	P	09 37 44.5	+0.1
KEV				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.7						
KKAR	Karatay Array	36.95	63	i P	P	09 38 03.8	+0.9
KKAR				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.3						
KKAR	Karatay Array	36.95	63	i P	P	09 38 03.8	+0.9
	comp=Z,45nm,0.9s,mb5.3						
BRVK	Borovoye	37.33	46	eP	P	09 38 05.8	-0.2
	comp=Z,11nm,0.7s,mb4.8						
BRVK				LR	LR		
	comp=Z,169nm,22.0s,MS3.8						
BRVK	Borovoye	37.33	46	eP	P	09 38 05.8	-0.2
	comp=Z,11nm,0.7s,mb4.8						
BVA0	Borovoye Array	37.38	47	i P	P	09 38 06.4	-0.1
BVA0				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.3						
BVA0	Borovoye Array	37.38	47	i P	P	09 38 06.4	-0.1
	comp=Z,7.0nm,1.3s,mb4.3						
BVAR	Borovoye Array	37.38	47	P	P	09 38 06.7	+0.3
	comp=Z,11nm,0.9s,mb4.7,baz=270,slow=5.8,SNR=8.8						
CHKZ	Chkalovo	37.63	46	eP	P	09 38 08.4	-0.2
	comp=Z,29nm,0.7s,mb5.1						
CHKZ	Chkalovo	37.63	46	eP	P	09 38 08.4	-0.1
CHKZ				pmax	pmax		
	comp=Z,29nm,0.7s,mb5.1						
CHKZ	Chkalovo	37.63	46	eP	P	09 38 08.4	-0.1
	comp=Z,29nm,0.7s,mb5.1						
VOSK	Vostochnaya	37.69	47	P	P	09 38 08.8	-0.2
VOSK				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.0						
VOSK	Vostochnaya	37.69	47	P	P	09 38 08.8	-0.2
	comp=Z,39nm,1.1s,mb5.0						
KMBO	Kilima Mbogo	38.24	157	P	P	09 38 16.9	+2.9
	comp=Z,2.0nm,0.2s,mb4.5,baz=39,slow=24,SNR=5.3						
KMBO				LR	LR	09 54 51.1	
	comp=Z,864nm,21.1s,MS4.5,baz=98,slow=38						
KMBO	Kilima Mbogo	38.24	157	P	P	09 38 16.9	+2.9
KMBO				LR	LR	09 54 51.1	
DBIC	Dimbokro	38.48	229	P	P	09 38 16.2	+0.2
	comp=Z,32nm,1.0s,mb5.0,baz=20,slow=10,SNR=32						
DBIC				LR	LR	09 54 29.0	
	comp=Z,636nm,21.9s,MS4.4,baz=15,slow=37						
DBIC	Dimbokro	38.48	229	eP	P	09 38 16.1	+0.1
	comp=Z,21nm,0.6s,mb5.0						
DBIC				LR	LR		
	comp=Z,704nm,22.0s,MS4.4						
DBIC	Dimbokro	38.48	229	P	P	09 38 16.2	+0.2
DBIC				pmax	pmax		
	comp=Z,32nm,1.0s						
DBIC				MLR	MLR		
	comp=Z,636nm,21.9s						
DBIC	Dimbokro	38.48	229	eP	P	09 38 16.0	0.0
	comp=Z,21nm,0.6s,mb5.0						
LIC	Lamto	38.93	229	eP	P	09 38 19.6	-0.1
	comp=Z,78nm,0.7s,mb5.2						
LIC				eR			
	comp=Z,1µm,23.0s						
EKS2	Erkin-Say	39.37	63	P	P	09 38 25.1	+1.9
	SNR=24						
JMIC	Jan Mayen	39.79	344	P	P	09 38 27.3	+0.9
	comp=Z,52nm,0.6s,mb5.5,baz=151,slow=19,SNR=2.4						
USP	Ospenovka	39.84	62	P	P	09 38 28.0	+1.0
	SNR=6.0						
AAK	Ala-Archa	39.90	63	P	P	09 38 29.6	+2.1
	SNR=38						
AAK	Ala-Archa	39.90	63	⇑iP	P	09 38 28.4	+0.8
	comp=Z,86nm,1.1s,mb5.4						
AAK				ePcP	PcP	09 40 34.2	+0.7
AAK	Ala-Archa	39.90	63	⇑iP	P	09 38 28.4	+0.8
AAK				e		09 40 34.2	
AAK				pmax	pmax		
	comp=Z,86nm,1.1s,mb5.4						
AAK	Ala-Archa	39.90	63	⇑iP	P	09 38 28.4	+0.8
	comp=Z,86nm,1.1s,mb5.4						
UCH	Uchtor	39.97	64	P	P	09 38 30.2	+2.2
	SNR=10						
FRU	Bishkek	39.97	63	eP	P	09 38 30.0	+1.9
FRU				pmax	pmax		
	comp=Z,360nm,1.9s,mb5.8						
FRU	Bishkek	39.97	63	eP	P	09 38 30.0	+1.9
	comp=Z,360nm,1.9s,mb5.8						
BORG	Borgarnes	39.98	332	P	P	09 38 31.4	+3.4
	comp=Z,26nm,1.0s,mb4.9,baz=147,slow=6.8,SNR=3.0						
CHMS	Chumysh	40.05	63	P	P	09 38 30.3	+1.5
	SNR=22						
KBK	Karagaybulak	40.23	63	P	P	09 38 32.4	+2.1
	SNR=10						
KZA	Kyzart	40.53	64	P	P	09 38 35.5	+2.7
	SNR=14						
TKM2	Tokmak 2	40.67	63	P	P	09 38 35.6	+1.6
	SNR=7.3						
ULHL	Ulahol	41.23	64	P	P	09 38 41.6	+3.0
	SNR=6.1						
KSH	Kashi	41.48	68	⇑iP	P	09 38 43.0	+2.3
KSH				eAP	pP	09 38 53.0	+2.5
KSH				eXP	sP	09 38 57.0	+2.3
KSH				ePP	PP	09 40 23.3	+3.8
KSH				ePCP	PcP	09 40 41.3	+2.7
KSH				ePPP	PPP	09 40 54.3	+3.8
KSH				eSCP		09 44 27.0	
KSH				ePCS		09 44 31.0	
KSH				eS	S	09 44 54.8	+1.1
KSH				eXS		09 45 14.3	
KSH				eSS	SS	09 47 58.0	+4.2
KSH				eSCS	ScS	09 48 42.3	+2.8
KSH				AMB	AMB		
	comp=Z,820nm,2.8s,mb5.9						
KSH				LR	LR		
	comp=N,1µm,6.5s						
KSH				LR	LR		
	comp=E,820nm,4.4s						
KURK	Kurchatov	42.28	51	⇑iP	P	09 38 46.9	-0.1
	comp=E,57nm,1.1s,mb5.1						
KURK	Kurchatov	42.28	51	⇑iP	P	09 38 46.9	-0.1
KURK				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.1						
KURK	Kurchatov	42.28	51	⇑iP	P	09 38 46.9	-0.1
	comp=Z,57nm,1.1s,mb5.1						
SCO	Scoresbysund	42.94	339	i P	P	09 38 53.6	+1.5
	comp=Z,20nm,0.7s,mb5.0						
THN	Thein Dam	43.08	78	eP	P	09 38 54.8	+1.0
BHK	Bhakra	43.97	79	eP	P	09 39 05.0	+3.9
KBS	Kingsbay	44.22	357	eP	P	09 39 02.9	+0.4
	comp=Z,98nm,1.0s,mb5.5						
KBS				LR	LR		
	comp=Z,2µm,19.0s,MS5.0						
KBS	Kingsbay	44.22	357	eP	P	09 39 02.9	+0.4
KBS				pmax	pmax		
	comp=Z,98nm,1.0s,mb5.5						
KBS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.0						
KBS	Kingsbay	44.22	357	eP	P	09 39 02.9	+0.4
	comp=Z,98nm,1.0s,mb5.5						
AJM	Ajmer	44.35	87	ex	x	09 39 14.8	
SMLA	Simla	44.67	79	eP	P	09 39 05.3	-1.3
SMLA				ex	x	09 45 41.8	
MKAR	Makanchi Array	44.95	56	P	P	09 39 09.0	+0.4
	comp=Z,26nm,0.8s,mb5.1,baz=279,slow=6.7,SNR=89						
MKAR				LR	LR	10 01 56.6	
	comp=Z,174nm,22.0s,MS3.9,baz=273,slow=42						
MKAR	Makanchi Array	44.95	56	P	P	09 39 09.0	+0.4
MKAR				LR	LR	10 01 56.6	
MKAR	Makanchi Array	44.95	56	i P	P	09 39 09.2	+0.6
MKAR				pmax	pmax		
	comp=Z,23nm,0.7s						
NVS	Novosibirsk	45.10	45	⇑iP	P	09 39 09.2	-0.6
NVS				eS	S	09 45 43.1	-3.0
NVS				pmax	pmax		
	comp=Z,142nm,1.4s,mb5.6						
NVS				pmax	pmax		
	comp=N,54nm,1.6s						
NVS				pmax	pmax		
	comp=E,43nm,1.3s						
NVS				smax			
	comp=N,51nm,1.6s						
NVS	Novosibirsk	45.10	45	i P	P	09 39 09.2	-0.6
	comp=N,54nm,1.6s,mb5.1						
NDI	New Delhi	45.59	82	eP	P	09 39 14.5	+0.4
NDI				ex	x	09 45 57.0	
DAG	Danmarks Havn	45.84	348	⇓iP	P	09 39 15.5	+0.1
	comp=N,20nm,0.8s,mb5.1						
DAG	Danmarks Havn	45.84	348	⇓iP	P	09 39 15.5	+0.1
DAG				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
ZAL	Zalesovo	46.02	46	P	P	09 39 16.9	-0.3
	comp=Z,13nm,0.4s,mb5.2,baz=198,slow=6.4,SNR=46						
ZAL				LR	LR	10 04 00.4	
	comp=Z,546nm,20.3s,MS4.5,baz=198,slow=43						
ZAL	Zalesovo	46.02	46	i P	P	09 39 16.8	-0.3
ZAL				pmax	pmax		
	comp=Z,13nm,0.4s						
ZAL	Zalesovo	46.02	46	i P	P	09 39 16.8	-0.3
	comp=Z,13nm,0.4s,mb5.2						
BOM	Bombay	46.33	97	eP	P	09 39 22.1	+2.2
POO	Poona	47.36	97	eP	P	09 39 29.0	+0.9
BHPL	Bhopal	48.02	89	eP	P	09 39 34.2	+1.0
BHPL				AMb	AMB	09 39 37.3	
	comp=Z,50nm,1.3s,mb5.4						
SUMG	Summit	48.58	339	eP	P	09 39 37.6	+0.7
	comp=Z,40nm,1.0s,mb5.4						
SUMG				ePcP	PcP	09 41 03.4	+0.8
SUMG	Summit	48.58	339	eP	P	09 39 37.6	+0.7
	comp=Z,40nm,1.0s,mb5.4						
LSZ	Lusaka	50.27	174	eP	P	09 39 51.5	+0.8
	comp=Z,5.7nm,0.7s,mb4.7						
LSZ	Lusaka	50.27	174	eP	P	09 39 51.5	+0.9
LSZ				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
LSZ	Lusaka	50.27	174	eP	P	09 39 51.5	+0.9
	comp=Z,5.7nm,0.7s,mb4.7						
KRAR	Krasnoyarsk	50.53	43	⇓iP	P	09 39 51.4	-0.7
KRAR	Krasnoyarsk	50.53	43	i P	P	09 39 51.4	-0.7
KOLN	Koldanda	51.13	81	eP	P	09 39 57.4	+0.4
	comp=Z,152nm,1.3s,mb5.8						
HYB	Hyderabad	51.76	95	i P	P	09 40 01.0	-0.9
HYB	Hyderabad	51.76	95	eP	P	09 40 01.0	-0.9
GKN	Gorkha	51.87	80	eP	P	09 40 02.8	+0.2
	comp=Z,224nm,1.2s,mb6.0						
SFJD	Kangerlussuaq	52.11	331	LR	LR	10 03 14.0	
	comp=Z,934nm,20.7s,MS4.8,baz=66,slow=37						
DMN	Daman	52.41	80	eP	P	09 40 07.1	+0.5
	comp=Z,296nm,1.2s,mb6.1						
KKN	Kakani	52.48	80	eP	P	09 40 07.4	+0.3
	comp=Z,141nm,1.3s,mb5.8						
PKI	Pulchoki	52.67	80	eP	P	09 40 09.0	+0.4
	comp=Z,262nm,1.3s,mb6.0						
GUN	Gumba	52.91	79	eP	P	09 40 10.9	+0.5
	comp=Z,227nm,1.2s,mb6.0						
JIRN	Jiri	53.27	80	eP	P	09 40 13.4	+0.4
	comp=Z,179nm,1.3s,mb5.8						
TSUM	Tsumeb	54.27	187	eP	P	09 40 20.9	+0.4
	comp=Z,9.7nm,1.1s,mb4.7						
TSUM				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
TSUM	Tsumeb	54.27	187	eP	P	09 40 20.9	+0.4
	comp=Z,9.7nm,1.1s,mb4.7						
VIS	Vishakhapatnam	55.52	92	eP	P	09 40 30.1	+0.5
VIS				AMb	AMB	09 40 32.4	
	comp=Z,43nm,1.1s,mb5.4						
MOY	Mondy	56.06	47	eP	P	09 40 33.5	+0.5
MOY				pmax	pmax		
	comp=Z,65nm,2.4s,mb5.2						
MOY	Mondy	56.06	47	eP	P	09 40 33.5	+0.5
	comp=Z,65nm,2.4s,mb5.2						
LSA	Lhasa	56.39	75	P	P	09 40 36.8	+1.1
LSA				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.2						
LSA	Lhasa	56.39	75	eP	P	09 40 36.8	+1.0
	comp=Z,25nm,0.8s,mb5.3						
LSA	Lhasa	56.39	75	eP	P	09 40 36.8	+1.1
LSA				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.3						
LSA	Lhasa	56.39	75	eP	P	09 40 36.8	+1.1
	comp=Z,25nm,0.8s,mb5.3						
ZAK	Zakamensk	57.81	48	⇑iP	P	09 40 45.9	+0.4
ZAK				pmax	pmax		
	comp=Z,19nm,1.1s,mb5.0						
ZAK	Zakamensk	57.81	48	i P	P	09 40 45.9	+0.4
	comp=Z,19nm,1.1s,mb5.0						
IRK	Irkutsk	57.85	46	eP	P	09 40 42.8	-3.0
IRK				pmax	pmax		
	comp=Z,91nm,2.2s,mb5.4						
SHL	Shillong	58.76	79	eP	P	09 40 51.0	-1.5

SHL				*i* x	x	09 47 41.0	
PALK	Pallekele	59.15	104	*e*P	P	09 40 55.9	+0.6
	comp=Z,25nm,1.3s,mb5.1						
PALK	Pallekele	59.15	104	*e*P	P	09 40 55.9	+0.6
	comp=Z,25nm,1.3s,mb5.1						
LBTB	Lobatse	59.79	178	*e*P	P	09 41 00.1	+0.5
	comp=Z,26nm,1.4s,mb5.1						
LBTB	Lobatse	59.79	178	*e*P	P	09 41 00.1	+0.4
LBTB				pmax	pmax		
	comp=Z,26nm,1.4s,mb5.1						
LBTB	Lobatse	59.79	178	*e*P	P	09 41 00.1	+0.4
	comp=Z,26nm,1.4s,mb5.1						
FRB	Frobisher Bay	60.05	329	P	P	09 41 01.4	+0.5
	comp=Z,88nm,0.9s,mb5.8,baz=87,slow=11						
SONM	Songino Array	60.58	50	P	P	09 41 04.7	0.0
	comp=Z,35nm,1.0s,mb5.4,baz=285,slow=8.6,SNR=144						
SONM				LR	LR	10 11 08.7	
	comp=Z,347nm,20.4s,MS4.5,baz=293,slow=40						
ULN	Ulaanbaatar	60.98	50	⇑*i*P	P	09 41 07.2	-0.2
ULN				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.6						
ULN	Ulaanbaatar	60.98	50	⇑*i*P	P	09 41 07.2	-0.2
	comp=Z,51nm,1.0s,mb5.6						
BOD	Bodaibo	61.35	38	*e*P	P	09 41 07.1	-2.7
BOD				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
TIXI	Tiksi	61.72	20	⇑*i*P	P	09 41 11.2	-0.9
SCHQ	Schefferville	62.37	319	P	P	09 41 16.8	+0.2
	comp=Z,17nm,0.7s,mb5.3,baz=53,slow=6.4,SNR=20						
SCHQ				LR	LR	10 07 25.3	
	comp=Z,408nm,21.2s,MS4.6,baz=89,slow=35						
SCHQ	Schefferville	62.37	319	*e*P	P	09 41 16.6	-0.1
	comp=Z,24nm,0.8s,mb5.4						
SCHQ	Schefferville	62.37	319	*e*P	P	09 41 16.6	-0.1
	comp=Z,24nm,0.8s,mb5.4						
CIT	Chita	63.29	44	*e*P	P	09 41 22.3	-0.5
CIT				pmax	pmax		
	comp=Z,78nm,2.3s,mb5.4						
CIT	Chita	63.29	44	*e*P	P	09 41 22.3	-0.5
	comp=Z,78nm,2.3s,mb5.4						
BOSA	Boshof	63.37	178	P	P	09 41 24.2	+0.6
	comp=Z,3.9nm,0.5s,mb4.8,baz=357,slow=6.3,SNR=14						
BOSA				LR	LR	10 11 27.2	
	comp=Z,1µm,19.7s,MS5.1,baz=0.3,slow=38						
BOSA	Boshof	63.37	178	*e*P	P	09 41 23.7	+0.1
	comp=Z,55nm,1.7s,mb5.4						
BOSA	Boshof	63.37	178	P	P	09 41 24.3	+0.7
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.8						
BOSA				MLR	MLR		
	comp=Z,1µm,19.7s,MS5.1						
BOSA	Boshof	63.37	178	*e*P	P	09 41 23.7	+0.1
	comp=Z,55nm,1.7s,mb5.4						
RES	Resolute Bay	63.40	345	*e*P	P	09 41 23.4	+0.1
	comp=Z,28nm,1.3s,mb5.2						
RES	Resolute Bay	63.40	345	*e*P	P	09 41 23.4	+0.2
RES				pmax	pmax		
	comp=Z,28nm,1.3s,mb5.2						
RES	Resolute Bay	63.40	345	*e*P	P	09 41 23.4	+0.2
	comp=Z,28nm,1.3s,mb5.2						
BTO	Baotou	65.86	56	*e*P	P	09 41 36.0	-3.6
YAK	Yakutsk	66.62	30	*e*P	P	09 41 42.1	-1.9
	comp=Z,90nm,0.9s,mb5.8						
YAK	Yakutsk	66.62	30	*e*P	P	09 41 42.1	-1.9
YAK				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.8						
YAK	Yakutsk	66.62	30	*e*P	P	09 41 42.1	-1.9
	comp=Z,90nm,0.9s,mb5.8						
CLNS	Chul’man	67.11	36	*e*P	P	09 41 46.5	-0.6
CLNS				pmax	pmax		
	comp=N,11nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,46nm,1.1s,mb5.4						
CLNS				pmax	pmax		
	comp=E,16nm,1.3s						
SUR	Sutherland	67.15	182	LR	LR	10 13 43.1	
	comp=E,1µm,18.4s,MS5.1,baz=6.9,slow=38						
CHG	Chiang Mai	67.74	82	⇑P	P	09 41 51.9	+0.2
	comp=E,74nm,1.0s,mb5.7						
HIA	Hailar	68.04	45	⇑*i*P	P	09 41 53.5	+0.3
	comp=E,96nm,1.2s,mb5.7						
HIA	Hailar	68.04	45	⇑*i*P	P	09 41 53.5	+0.4
HIA				pmax	pmax		
	comp=Z,96nm,1.2s						
HIA	Hailar	68.04	45	⇑*i*P	P	09 41 53.5	+0.4
	comp=Z,96nm,1.2s,mb5.7						
XAN	Xi’an	68.08	63	P	P	09 41 54.0	+0.3
ENH	Enshi	70.32	66	*e*P	P	09 42 07.3	-0.2
	comp=Z,35nm,1.1s,mb5.2						
ENH	Enshi	70.32	66	*e*P	P	09 42 07.3	-0.2
	comp=Z,35nm,1.1s,mb5.2						
NST	Nakhon Sawan	70.34	84	P	P	09 42 08.8	+1.0
WES	Weston	70.55	308	*e*P	P	09 42 10.3	+1.6
	comp=Z,141nm,1.5s,mb5.7						
WES	Weston	70.55	308	*e*P	P	09 42 10.3	+1.6
WES				pmax	pmax		
	comp=Z,141nm,1.5s,mb5.7						
WES	Weston	70.55	308	*e*P	P	09 42 10.3	+1.6
	comp=Z,141nm,1.5s,mb5.7						
ACCN	Adirondack Com	71.53	310	*e*P	P	09 42 16.1	+1.6
ACCN	Adirondack Com	71.53	310	*e*P	P	09 42 16.1	+1.5
TIA	Tai’an	72.86	58	*e*P	P	09 42 22.5	-0.1
TIA				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.3						
FCC	Fort Churchill	73.13	331	*e*P	P	09 42 24.7	+1.0
	comp=Z,42nm,0.9s,mb5.4						
FCC	Fort Churchill	73.13	331	*e*P	P	09 42 24.7	+1.0
FCC				pmax	pmax		
	comp=Z,42nm,0.9s,mb5.4						
FCC	Fort Churchill	73.13	331	*e*P	P	09 42 24.7	+1.0
	comp=Z,42nm,0.9s,mb5.4						
BILL	Bilibino	73.47	14	⇑*i*P	P	09 42 25.3	-0.2
	comp=Z,46nm,0.9s,mb5.4						
BILL	Bilibino	73.47	14	⇑*i*P	P	09 42 25.3	-0.2
BILL				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.4						
BILL	Bilibino	73.47	14	⇑*i*P	P	09 42 25.3	-0.2
	comp=Z,46nm,0.9s,mb5.4						
SADO	Sadowa	74.13	314	P	P	09 42 31.5	+1.7
	comp=Z,23nm,0.9s,mb5.1,baz=51,slow=5.4,SNR=6.4						
SEY	Seymchan	74.14	22	⇓*i*P	P	09 42 30.9	+1.4
SEY	Seymchan	74.14	22	⇓*i*P	P	09 42 30.8	+1.3
INK	Inuvik	75.51	351	P	P	09 42 37.5	+0.3
	comp=Z,12nm,1.1s,mb4.7,baz=30,slow=11,SNR=14						
INK	Inuvik	75.51	351	*e*P	P	09 42 37.4	+0.1
INK				pmax	pmax		
	comp=Z,24nm,1.1s						
INK	Inuvik	75.51	351	*e*P	P	09 42 37.4	+0.1
	comp=Z,24nm,1.1s,mb5.0						
YKW3	Yellowknife Ar	77.05	342	*e*P	P	09 42 46.6	+0.4
YKW3	Yellowknife Ar	77.05	342	*e*P	P	09 42 46.6	+0.4
YKA	Yellowknife Ar	77.11	341	P	P	09 42 47.0	+0.5
	comp=Z,20nm,1.0s,mb5.0,baz=37,slow=5.3,SNR=22						
YKA				LR	LR	10 16 55.7	
	comp=Z,647nm,20.0s,MS4.9,baz=45,slow=36						
YKA	Yellowknife Ar	77.11	341	P	P	09 42 47.0	+0.5
YKA				LR	LR	10 16 55.7	
SSE	Sheshan	78.46	60	*e*P	P	09 42 52.3	-2.3
SSE				PCP	PcP	09 43 01.8	-2.2
SSE				AP	pP	09 43 06.8	+1.9
SSE				XP	sP	09 43 12.5	+3.9
SSE				PP	PP	09 45 49.3	-4.7
SSE				S	S	09 52 43.8	-3.1
SSE				XS		09 53 09.0	
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
SSE				AMB	AMB		
	comp=Z,60nm,8.4s						
SSE				LR	LR		
	comp=N,220nm,22.4s,MS4.5						
SSE				LR	LR		
	comp=E,150nm,22.4s,MS4.5						
SSE				LR	LR		
	comp=Z,260nm,26.5s,MS4.4						
KS15	Wonju Array Si	79.38	52	*e*P	P	09 42 60.0	+0.5
KS15	Wonju Array Si	79.38	52	*e*P	P	09 43 00.0	+0.5
SJG	San Juan	79.55	285	LR	LR	10 15 22.9	
	comp=Z,170nm,19.7s,MS4.4,baz=181,slow=34						
ULM	Lac du Bonnet	79.62	325	P	P	09 43 00.9	+0.4
	comp=Z,24nm,1.1s,mb5.1,baz=49,slow=5.0,SNR=18						
ULM				LR	LR	10 18 51.8	
	comp=Z,478nm,21.9s,MS4.8,baz=272,slow=36						
COLA	College	80.15	356	⇑*i*P	P	09 42 54.1	-8.9
YSS	Yuzh-Sakhalins	81.82	37	⇑*i*P	P	09 43 13.4	+1.3
	comp=Z,174nm,1.0s,mb5.9						
YSS	Yuzh-Sakhalins	81.82	37	*c* *i*P	P	09 43 13.2	+1.0
YSS				pmax	pmax		
	comp=Z,178nm,1.0s,mb6.0						
YSS	Yuzh-Sakhalins	81.82	37	*i* P	P	09 43 13.2	+1.0
	comp=Z,178nm,1.0s,mb6.0						
YHNB	Yeheng	82.22	65	*e*P	P	09 43 16.6	+1.9
YHNB	Yeheng	82.22	65	*e*P	P	09 43 16.6	+1.9
WCI	Wyandotte Cave	82.32	312	*e*P	P	09 43 16.6	+1.7
	comp=Z,59nm,1.1s,mb5.4						
WCI	Wyandotte Cave	82.32	312	*e*P	P	09 43 16.6	+1.7
WCI				pmax	pmax		
	comp=Z,59nm,1.1s,mb5.4						
WCI	Wyandotte Cave	82.32	312	*e*P	P	09 43 16.6	+1.7
	comp=Z,59nm,1.1s,mb5.4						
PET	Petropavlovsk	83.99	25	*e*P	P	09 43 25.6	+2.6
PET				*e*S	S	09 53 42.1	-1.2
PET				pmax	pmax		
	comp=Z,100nm,21.6s						
PET				smax			
	comp=E,100nm,16.2s						
PET				MLR	MLR		
	comp=Z,400nm,22.0s,MS4.8						
PET	Petropavlovsk	83.99	25	*e*P	P	09 43 25.6	+2.6
	comp=Z,100nm,21.6s						
PET	Petropavlovsk	83.99	25	*e*S	S	09 53 42.1	-1.2
	comp=Z,400nm,22.0s						
DLBC	Dease Lake	84.24	346	P	P	09 43 26.6	+2.4
	comp=Z,9.6nm,1.0s,mb4.9,baz=5.5,slow=12,SNR=4.2						
BAO	Brasilia Array	84.41	247	P	P	09 43 28.0	+2.0
EDM	Edmonton	84.42	336	*e*P	P	09 43 26.5	+1.3
EDM	Edmonton	84.42	336	*e*P	P	09 43 26.5	+1.3
BDFB	Brasilia	84.43	247	P	P	09 43 28.2	+2.1
	comp=Z,2.7nm,0.7s,mb4.5,baz=62,slow=7.3,SNR=3.1						
BDFB				LR	LR	10 21 46.0	
	comp=Z,742nm,19.1s,MS5.1,baz=62,slow=36						
WVT	Waverly	84.60	311	*e*P	P	09 43 27.0	+0.5
	comp=Z,95nm,1.9s,mb5.6						
WVT	Waverly	84.60	311	*e*P	P	09 43 27.0	+0.5
WVT				pmax	pmax		
	comp=Z,95nm,1.9s,mb5.6						
WVT	Waverly	84.60	311	*e*P	P	09 43 27.0	+0.5
	comp=Z,95nm,1.9s,mb5.6						
FVM	French Village	84.97	314	*e*P	P	09 43 29.4	+1.0
	comp=Z,27nm,1.1s,mb5.3						
FVM	French Village	84.97	314	*e*P	P	09 43 29.4	+1.0
FVM				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.3						
FVM	French Village	84.97	314	*e*P	P	09 43 29.4	+1.0
	comp=Z,27nm,1.1s,mb5.3						
MAJO	Matsushiro	86.38	47	*e*P	P	09 43 35.6	+0.3
MAJO				pmax	pmax		
	comp=Z,60nm,1.4s,mb5.6						
MAJO	Matsushiro	86.38	47	*e*P	P	09 43 35.6	+0.3
	comp=Z,60nm,1.4s,mb5.6						
MAT	Matsushiro	86.38	47	P	P	09 43 36.6	+1.3
MAT	Matsushiro	86.38	47	*e*P	P	09 43 37.0	+1.7
	comp=Z,77nm,1.3s,mb5.8						
MAT				LR	LR		
	comp=Z,350nm,20.0s,MS4.8						
MAT	Matsushiro	86.38	47	*e*P	P	09 43 37.0	+1.7
MAT				pmax	pmax		
	comp=Z,77nm,1.3s,mb5.8						
MAT				MLR	MLR		
	comp=Z,350nm,20.0s,MS4.8						
MJAR	Matsushiro Arr	86.38	47	P	P	09 43 37.0	+1.7
	comp=Z,28nm,1.0s,mb5.4,baz=307,slow=5.4,SNR=21						
MJAR				LR	LR	10 26 20.0	
	comp=Z,312nm,20.2s,MS4.7,baz=325,slow=38						
MJAR	Matsushiro Arr	86.38	47	P	P	09 43 37.0	+1.7
MJAR				LR	LR	10 26 20.0	
LAO	LASA Array	86.91	328	⇑*i*P	P	09 43 39.9	+2.3
	comp=Z,124nm,1.1s,mb6.0						
LAO	LASA Array	86.91	328	⇑*i*P	P	09 43 39.9	+2.3
	comp=Z,124nm,1.1s,mb6.0						
EGMT	Eagleton	87.33	331	*e*P	P	09 43 41.6	+2.0
	comp=Z,106nm,1.1s,mb6.0						
EGMT	Eagleton	87.33	331	*e*P	P	09 43 41.6	+2.0
	comp=Z,106nm,1.1s,mb6.0						
KSU1	Kansas State U	87.76	318	*e*P	P	09 43 43.0	+1.0
KSU1	Kansas State U	87.76	318	*e*P	P	09 43 43.0	+1.1
RSSD	Black Hills	87.89	325	*e*P	P	09 43 44.3	+1.9
	comp=Z,10nm,1.3s,mb4.9						
RSSD	Black Hills	87.89	325	*e*P	P	09 43 44.3	+1.9
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.3s,mb4.9						
RSSD	Black Hills	87.89	325	*e*P	P	09 43 44.3	+1.9
	comp=Z,10nm,1.3s,mb4.9						
UALR	University of	88.26	312	*e*P	P	09 43 45.8	+1.4
	comp=Z,30nm,1.4s,mb5.3						
UALR	University of	88.26	312	*e*P	P	09 43 45.8	+1.4
	comp=Z,30nm,1.4s,mb5.3						
SDV	Santo Domingo	88.33	280	*e*P	P	09 43 46.2	+1.0
	comp=Z,62nm,1.4s,mb5.7						
SDV	Santo Domingo	88.33	280	*e*P	P	09 43 46.2	+1.0
	comp=Z,62nm,1.4s,mb5.7						
ATTU	Attu Island--F	88.51	18	*e*P	P	09 43 46.3	+1.2
FX1	Attu Island--F	88.51	18	*e*P	P	09 43 46.3	+1.2
FX1	Attu Island--F	88.51	18	*e*P	P	09 43 46.3	+1.2
HRY	Holter Researc	89.22	331	*e*P	P	09 43 50.2	+1.5
HRY	Holter Researc	89.22	331	*e*P	P	09 43 50.2	+1.5
CHMT	Chamberlain Mo	89.61	332	*e*P	P	09 43 52.3	+1.8
CHMT	Chamberlain Mo	89.61	332	*e*P	P	09 43 52.3	+1.8
CBKS	Cedar Bluff	89.67	319	⇑*i*P	P	09 43 52.3	+1.3
	comp=Z,42nm,1.0s,mb5.7						
CBKS	Cedar Bluff	89.67	319	⇑*i*P	P	09 43 52.3	+1.3
CBKS				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.7						
CBKS	Cedar Bluff	89.67	319	⇑*i*P	P	09 43 52.3	+1.3
	comp=Z,42nm,1.0s,mb5.7						
NEW	Newport	89.89	335	*e*P	P	09 43 53.7	+1.9
	comp=Z,58nm,1.2s,mb5.8						
NEW	Newport	89.89	335	*e*P	P	09 43 53.7	+1.9
NEW				pmax	pmax		
	comp=Z,58nm,1.2s						
NEW	Newport	89.89	335	*e*P	P	09 43 53.7	+1.9
	comp=Z,58nm,1.2s,mb5.8						
BOZ	Bozeman (W)	90.01	330	*e*P	P	09 43 54.7	+2.3
	comp=Z,17nm,1.1s,mb5.3						
BOZ	Bozeman (W)	90.01	330	*e*P	P	09 43 54.7	+2.3
BOZ				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.3						
BOZ	Bozeman (W)	90.01	330	*e*P	P	09 43 54.7	+2.3
	comp=Z,17nm,1.1s,mb5.3						
YFT	Old Faithful	90.65	329	*e*P	P	09 43 59.2	+3.7
PHWY	Pilot Hill	90.72	324	⇑*i*P	P	09 43 57.4	+1.5
PHWY	Pilot Hill	90.72	324	⇑*i*P	P	09 43 57.4	+1.5
MOOW	Moose Ponds	91.18	329	*e*P	P	09 43 59.9	+1.9
	comp=Z,42nm,1.7s,mb5.5						
MOOW	Moose Ponds	91.18	329	*e*P	P	09 43 59.9	+1.9
	comp=Z,42nm,1.7s,mb5.5						
LOHW	Long Hollow	91.23	329	*e*P	P	09 44 00.1	+1.9
	comp=Z,8.3nm,1.0s,mb5.0						
SNOW	Snow King Moun	91.42	329	*e*P	P	09 44 01.3	+2.2
	comp=Z,15nm,1.0s,mb5.3						
SNOW	Snow King Moun	91.42	329	*e*P	P	09 44 01.3	+2.2
	comp=Z,15nm,1.0s,mb5.3						
PDAR	Pinedale Array	91.46	327	P	P	09 44 00.0	+0.7
	comp=Z,3.5nm,1.0s,mb4.7,baz=45,slow=2.1,SNR=5.4						
PDAR				LR	LR	10 27 13.8	
	comp=Z,669nm,19.7s,MS5.1,baz=34,slow=37						
TPAW	Teton Pass	91.48	329	*e*P	P	09 44 00.9	+1.5
	comp=Z,16nm,0.9s,mb5.3						
ISCO	Idaho Springs	91.95	323	*e*P	P	09 44 03.4	+1.8
	comp=Z,17nm,1.3s,mb5.2						
ISCO	Idaho Springs	91.95	323	*e*P	P	09 44 03.4	+1.8
ISCO				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.2						
ISCO	Idaho Springs	91.95	323	*e*P	P	09 44 03.4	+1.8
	comp=Z,17nm,1.3s,mb5.2						
WMOK	Wichita Mounta	92.09	316	*e*P	P	09 44 04.0	+1.6
WMOK				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.2						
WMOK	Wichita Mounta	92.09	316	*e*P	P	09 44 04.0	+1.6
	comp=Z,18nm,1.3s,mb5.2						
SMCO	Snowmass	93.10	324	*e*P	P	09 44 08.4	+1.5
	comp=Z,6.8nm,1.0s,mb5.0						
SMCO	Snowmass	93.10	324	*e*P	P	09 44 08.4	+1.5
	comp=Z,6.8nm,1.0s,mb5.0						
HWUT	Hardware Ranch	93.28	328	*e*P	P	09 44 09.2	+1.6
HWUT	Hardware Ranch	93.28	328	*e*P	P	09 44 09.2	+1.6
SDCO	Great Sand Dun	93.47	322	*e*P	P	09 44 09.6	+0.9
	comp=Z,6.5nm,0.9s,mb5.1						
SDCO	Great Sand Dun	93.47	322	*e*P	P	09 44 09.6	+1.0
	comp=Z,6.4nm,0.9s,mb5.0						
PV01	Paradox Valley	94.69	324	*e*P	P	09 44 15.3	+1.2
PV01	Paradox Valley	94.69	324	*e*P	P	09 44 15.3	+1.2
PV10	Paradox Valley	94.72	324	*e*P	P	09 44 14.8	+0.6
PV10	Paradox Valley	94.72	324	*e*P	P	09 44 14.9	+0.6
DUG	Dugway	94.97	328	*e*P	P	09 44 17.0	+1.6
	comp=Z,4.5nm,0.9s,mb4.9						
DUG	Dugway	94.97	328	*e*P	P	09 44 17.0	+1.6
DUG				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.9						
DUG	Dugway	94.97	328	*e*P	P	09 44 17.0	+1.6
	comp=Z,4.5nm,0.9s,mb4.9						
WVOR	Wild Horse Val	95.45	333	*e*P	P	09 44 19.0	+1.5
	comp=Z,7.1nm,0.9s,mb5.1						
WVOR	Wild Horse Val	95.45	333	*e*P	P	09 44 19.0	+1.5
WVOR				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
WVOR	Wild Horse Val	95.45	333	*e*P	P	09 44 19.0	+1.5
	comp=Z,7.1nm,0.9s,mb5.1						
ELK	Elko	95.55	330	P	P	09 44 20.6	+2.6
	comp=Z,4.9nm,1.1s,mb4.9,baz=80,slow=9.1,SNR=4.2						
ELK	Elko	95.55	330	*e*P	P	09 44 19.9	+2.0
	comp=Z,6.9nm,1.0s,mb5.0						
ELK	Elko	95.55	330	P	P	09 44 20.6	+2.6
ELK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ELK	Elko	95.55	330	*e*P	P	09 44 20.0	+2.0
	comp=Z,6.9nm,1.0s,mb5.0						
ANMO	Albuquerque	96.12	321	*i* P	P	09 44 19.2	-1.5
MNTX	Cornudas Mount	98.04	318	*e*P	P	09 44 30.3	+0.8
	comp=Z,6.3nm,1.1s,mb5.1						
NVAR	Mina Array Bea	98.76	331	P	P	09 44 34.2	+1.6
	comp=Z,1.8nm,0.9s,mb4.6,baz=45,slow=6.4,SNR=4.3						
NVAR				PP	PP	09 48 26.3	-10
	comp=Z,1.6nm,1.0s,baz=34,slow=8.0,SNR=4.6						
NVAR				LR	LR	10 31 12.3	
	comp=Z,328nm,19.7s,MS4.8,baz=95,slow=37						
TXAR	Lajitas Array	98.86	315	P	P	09 44 34.1	+0.9
	comp=Z,1.5nm,0.9s,mb4.5,baz=63,slow=4.0,SNR=3.9						
TXAR				PP	PP	09 48 33.2	-4.2
	comp=Z,1.1nm,1.0s,baz=72,slow=5.7,SNR=3.8						
WRA	Warramunga Arr	117.92	96	PKP	PKPdf	09 49 40.7	+1.8
	comp=Z,2.3nm,0.7s,baz=324,slow=1.5,SNR=40						
WRA				PP	PP	09 50 55.3	-2.8
	comp=Z,2.0nm,1.1s,baz=302,slow=4.7,SNR=3.3						
WRA				PKKP	PKKP	10 00 32.0	+11
	comp=Z,0.5nm,0.9s,baz=116,slow=2.2,SNR=5.2						
CTA	Charters Tower	127.75	89	PKP	PKPdf	09 49 59.9	+1.9
	comp=Z,5.4nm,0.9s,baz=326,slow=2.7,SNR=4.5						
STKA	Stephens Creek	128.98	105	PKP	PKPdf	09 50 02.0	+2.0
	comp=Z,5.0nm,0.7s,baz=264,slow=1.2,SNR=5.7						
DZM	Mont Dzumac	145.16	78	*e*P	PKPdf	09 50 32.7	+3.0
DZM	Mont Dzumac	145.16	78	PKPbc	PKPbc	09 50 32.8	+2.7
	comp=Z,44nm,1.1s,baz=28,slow=4.9,SNR=14						
RKT	Rikitea	157.80	297	*e*LR	LR	10 43 55.8	
	comp=Z,239nm,24.0s						
PPT	Papeete	161.51	339	*e*LR	LR	10 45 46.4	
	comp=Z,570nm,27.8s						
TBI	Tubuai	166.81	330	*e*LR	LR	10 48 10.9	
	comp=Z,411nm,25.5s						

IDC 25 10:01:59.8±6.8**, 18.17S**×**177.27W, h27^{km}**±31^{km}**, mb3.7**/4**,
mb1 3.9**/4**, mb1mx3.6**/14**, mbtmp3.9**/4**, Error ellipse:
s-maj=148.4km s-min=32.5km az=140.0, Fiji Islands
region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	34.47	261	P	P	10 08 46.5	-1.3
	2.2nm,0.6s,baz=85,slow=8.8,SNR=4.3						
STKA	Stephens Creek	39.46	242	P	P	10 09 28.8	-0.9
	0.8nm,0.4s,baz=90,slow=11,SNR=6.5						
WB2	Warramunga Arr	45.64	260	*e*P	P	10 10 16.3	-3.9
WRA	Warramunga Arr	45.65	260	P	P	10 10 16.9	-3.3
	0.8nm,0.5s,baz=98,slow=6.5,SNR=51						
WRA				ScP		10 15 46.8	
	2.2nm,1.1s,baz=94,slow=4.3,SNR=11						
ILAR	Eielson Array	85.90	13	P	P	10 14 37.0	-1.2
	0.7nm,1.1s,baz=225,slow=5.0,SNR=8.2						

*IDC **25** 10:08:08.7±1.7, 28.13S×176.79W, mb4.2/7, mb1 4.4/7,
mb1mx4.3/13, mbtmp4.2/7, Error ellipse: s-maj=80.5km
s-min=23.8km az=160.0*

*NEIC **25** 10:08:18.1±1.8, 28.25S×176.89W, h72^{km}±15^{km}, mb4.4/3,
Error ellipse: s-maj=21.1km s-min=13.9km az=187.0*

ISC 25 10:08:18.1±2.3**, 28.2S**±0.2×**177.0W**±0.1**, h84^{km}**±18^{km}**, n22,
σ0^{s}53**/16**, mb4.0**/8**, 2C-1D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.31	218	⇓*i*Pn	P	10 08 41.1	-0.5
RAO				*e*Sn	S	10 08 59.5	+0.4
CTA	Charters Tower	34.40	275	P	P	10 15 00.3	+1.0
	2.4nm,0.5s,mb4.3,baz=106,slow=11,SNR=9.3						
CTA	Charters Tower	34.40	275	P	P	10 15 00.3	+1.0
CTAO	Charters Tower	34.40	275	*e*P	P	10 14 59.6	+0.3
	2.7nm,0.6s,mb4.2						
STKA	Stephens Creek	35.88	254	P	P	10 15 12.2	+0.4
	0.8nm,0.3s,mb4.1,baz=90,slow=12,SNR=4.8						
WB2	Warramunga Arr	44.94	269	*e*P	P	10 16 26.1	-0.5
WRAB	Tennant Creek	44.95	269	*e*P	P	10 16 25.8	-0.9
	1.8nm,0.5s,mb4.1						
WRA	Warramunga Arr	44.95	269	P	P	10 16 26.2	-0.5
	1.5nm,0.4s,mb4.1,baz=110,slow=7.8,SNR=45						
WRA				PcP	PcP	10 18 07.7	+0.6
	0.7nm,0.8s,baz=101,slow=3.3,SNR=4.9						
FITZ	Fitzroy Crossi	53.29	268	*e*P	P	10 17 31.9	+1.1
	2.7nm,0.4s,mb4.6						
FITZ	Fitzroy Crossi	53.29	268	P	P	10 17 31.4	+0.5
	3.3nm,0.5s,mb4.7,baz=115,slow=9.4,SNR=7.6						
MJAR	Matsushiro Arr	76.98	324	P	P	10 20 03.1	-0.2
	1.4nm,0.7s,mb3.8,baz=153,slow=4.7,SNR=5.2						
VNA3	Neumayer Olymp	80.41	176	*e*	PcP	10 20 30.5	+2.1
VNA3	Neumayer Olymp	80.41	176	⇑*i*P	P	10 20 21.1	-0.2
VNA3				*e*		10 20 30.5	
VNA2	Neumayer--Watz	80.86	177	*e*	PcP	10 20 32.9	+2.6
VNA2	Neumayer--Watz	80.86	177	⇑*i*P	P	10 20 23.7	0.0
VNA2				*e*		10 20 32.9	
NVAR	Mina Array Bea	86.04	42	P	P	10 20 51.1	+0.6
	0.6nm,0.8s,mb3.6,baz=210,slow=6.6,SNR=7.3						
TXAR	Lajitas Array	90.46	57	P	P	10 21 11.7	-0.1
	0.1nm,0.8s,mb3.0,baz=225,slow=5.3,SNR=4.1						
FINES	FINESS Array B	143.39	342	PKhKP		10 27 40.0	
	3.6nm,1.0s,baz=27,slow=4.3,SNR=5.2						
NB2	NORSAR Subarra	146.72	353	PKPabc	PKPdf	10 27 50.7	+2.9
	0.9nm,0.5s,baz=16,slow=3.5						
NAO	NORSAR Subarra	146.98	353	PKPab	PKPab	10 27 50.7	-3.4
AKASG	Malin Array Be	150.06	326	PKPbc	PKPdf	10 27 59.8	+6.3
	1.7nm,0.6s,baz=44,slow=3.1,SNR=9.2						
BRTR	Keskin Array B	152.26	302	PKPab	PKPab	10 28 16.9	+0.4
	0.4nm,0.5s,baz=108,slow=3.9,SNR=4.1						

*NEIC **25** 10:21:38.0±3.7, 5.17S×145.43E, h91^{km}±35^{km}, mb4.0/2,
Error ellipse: s-maj=42.0km s-min=17.4km az=141.0*

*IDC **25** 10:21:38.8±6.2, 5.29S×145.59E, h99^{km}±59^{km}, mb4.0/3,
mb1 4.0/5, mb1mx3.7/13, mbtmp4.2/5, ML3.7/2, MS3.6/1,
Ms1 3.6/1, ms1mx2.8/27, Error ellipse: s-maj=49.6km
s-min=27.7km az=138.0*

ISC 25 10:21:38.7±4.1**, 5.4S**±0.2×**145.5E**±0.2**, h109^{km}**±40^{km}**, n13,
σ0^{s}78**/13**, mb4.0**/3**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.32	158	P	P	10 22 44.5	+0.9
	12nm,0.3s,baz=329,slow=5.0,SNR=35						
PMG				S	S	10 23 32.7	-0.5
	11nm,0.3s,baz=133,slow=22,SNR=14						
CTA	Charters Tower	14.64	177	*e*P	P	10 25 08.7	+7.1
	1.0nm,0.3s						
CTA	Charters Tower	14.64	177	P	P	10 25 07.7	+6.0
	0.6nm,0.3s,baz=7.7,slow=15,SNR=4.9						
CTAO	Charters Tower	14.64	177	Pn	P	10 25 07.9	+6.3
KAKA	Kakadu	14.82	240	*e*P	P	10 25 22.5	+19
	2.9nm,0.4s						
WRAB	Tennant Creek	18.09	216	*e*P	P	10 25 43.8	-0.6
	2.8nm,0.6s						
WB2	Warramunga Arr	18.10	216	*e*P	P	10 25 44.1	-0.4
WRA	Warramunga Arr	18.10	216	P	P	10 25 43.7	-0.8
	0.4nm,0.3s,baz=37,slow=11,SNR=22						
FITZ	Fitzroy Crossi	23.17	235	*e*P	P	10 26 37.7	+1.2
	10nm,0.6s,mb4.3						
FITZ	Fitzroy Crossi	23.17	235	P	P	10 26 37.7	+1.2
	17nm,0.7s,mb4.5,baz=57,slow=7.4,SNR=20						
STKA	Stephens Creek	26.62	187	P	P	10 27 09.8	+0.8
	4.0nm,1.0s,mb3.9,baz=5.0,slow=12,SNR=3.8						
CBIJ	Chichi jima	32.44	354	LR	LR	10 37 51.8	
	comp=Z,122nm,21.5s,baz=3.9,slow=30						

ILAR	Eielson Array	85.50	23	P	P	10 34 04.7	-0.6
	1.0nm,0.8s,mb3.8,baz=253,slow=5.4,SNR=13						

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*MOS **25** 10:37:37.5±0.7, 23.52S×179.99W, h518^{km}, mb4.8/13, Error ellipse: s-maj=12.5km s-min=9.8km az=141.4*
*BJI **25** 10:37:38.1, 23.60S×179.90W, h529^{km}, mB4.4, mb4.4*
*IDC **25** 10:37:38.4±0.8, 23.56S×179.86W, h521^{km}±8^{km}, mb4.3/21, mb1 4.3/25, mb1mx4.3/25, mbtmp5.1/25, Error ellipse: s-maj=11.0km s-min=10.0km az=4.0*
*NEIC **25** 10:37:39.1±0.5, 23.57S×179.95W, h529^{km}±5^{km}, mb4.7/39, Error ellipse: s-maj=5.7km s-min=4.0km az=152.0*
ISC 25 10:37:37.9±0.7**, 23.64S**±0.04×**180.00E**±0.05**, h525**^{km}±8^{km}**, n196, σ0^{s}.84**/170**, mb4.7**/58**, 16C-14D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.89	162	P	P	10 39 16.2	+1.0
	183nm,0.3s,baz=286,slow=24,SNR=13						
RAO				S	S	10 40 32.0	-0.2
	213nm,0.3s,baz=76,slow=21,SNR=7.0						
RAO	Raoul Island	5.89	162	ePn	P	10 39 16.1	+0.9
	720nm,0.6s						
RAO				eS	S	10 40 31.5	-0.7
RAO	Raoul Island	5.89	162	eP	P	10 39 16.1	+0.9
RAO				eS	S	10 40 31.5	-0.7
RAO				pmax	pmax		
	comp=Z,720nm,0.6s						
AFI	Afiamalu	12.42	40	P	P	10 40 18.7	-2.8
	comp=Z,1.2nm,0.3s,baz=240,slow=20,SNR=4.5						
AFI				S	S	10 42 25.1	-7.8
	comp=Z,1.6nm,0.3s,baz=307,slow=20,SNR=3.5						
AFI	Afiamalu	12.42	40	P	P	10 40 18.7	-2.8
AFI				S	S	10 42 25.1	-7.8
DZM	Mont Dzumac	12.60	274	eP	P	10 40 25.7	+2.4
DZM	Mont Dzumac	12.60	274	P	P	10 40 25.5	+2.2
	comp=Z,1.3nm,0.3s,baz=80,slow=13,SNR=13						
DZM				ScP		10 48 01.8	
	comp=Z,0.8nm,0.3s,baz=30,slow=19,SNR=9.4						
PUZ	Puketiti	14.46	186	PN	P	10 40 44.8	+2.6
URZ	Urewera	14.78	189	P	P	10 40 46.8	+1.4
	comp=Z,8.4nm,0.3s,baz=350,slow=3.7,SNR=35						
URZ				S	S	10 43 21.7	+5.0
	comp=Z,2.8nm,0.3s,baz=28,slow=23,SNR=14						
URZ	Urewera	14.78	189	PN	P	10 40 44.0	-1.4
MWZ	Matawai	14.80	188	PN	P	10 40 46.5	+0.9
BKZ	Black Stump Fm	15.76	190	PN	P	10 40 53.7	-1.4
BKZ				SN	S	10 43 32.7	-1.8
BFZ	Birch Farm	17.28	190	SN	S	10 44 01.0	-0.3
MRZ	Mangatainoka R	17.38	191	PN	P	10 41 09.3	-1.7
MRZ				SN	S	10 43 59.7	-3.2
KIW	Kapiti Island	17.70	193	PN	P	10 41 13.1	-1.0
CAW	Cannon Point	17.90	192	PN	P	10 41 15.6	-0.4
QRZ	Quartz Range	18.25	198	PN	P	10 41 20.8	+1.4
QRZ				SN	S	10 44 19.6	+1.7
TUWZ	Tuamarina	18.45	195	PN	P	10 41 20.8	-0.5
THZ	Tophouse	19.02	196	PN	P	10 41 26.9	+0.2
THZ				SN	S	10 44 28.4	-2.7
DSZ	Denniston Nort	19.31	199	PN	P	10 41 30.5	+1.0
LTZ	Lake Taylor	20.14	197	PN	P	10 41 35.9	-1.3
LTZ				SN	S	10 44 46.0	-3.8
WVZ	Waitaha Valley	20.84	199	PN	P	10 41 43.2	-0.6
RPZ	Rata Peaks	21.34	198	P	P	10 41 48.1	-0.2
	comp=Z,15nm,0.5s,mb4.8,baz=350,slow=3.2,SNR=18						
RPZ				ScP		10 48 16.6	
	comp=Z,4.7nm,0.6s,baz=180,slow=2.0,SNR=6.8						
HNR	Honiara	23.81	303	P	P	10 42 10.4	-0.7
	comp=Z,143nm,0.8s,mb5.6,baz=359,slow=0.8,SNR=4.1						
HNR	Honiara	23.81	303	eP	P	10 42 10.1	-0.9
	comp=Z,124nm,0.9s,mb5.5						
HNR	Honiara	23.81	303	eP	P	10 42 10.1	-0.9
HNR				pmax	pmax		
	comp=Z,124nm,0.9s,mb5.5						
CNB	Canberra Magne	28.98	239	eP	P	10 42 58.1	+1.7
	comp=Z,39nm,1.0s,mb5.0						
PPT	Papeete	29.07	84	P	P	10 42 56.6	-0.7
	comp=Z,18nm,0.6s,mb4.9,baz=257,slow=6.0,SNR=4.3						
CTA	Charters Tower	31.48	270	⇓iP	P	10 43 19.0	+1.1
	comp=Z,176nm,0.4s,mb5.9						
CTA				eS	S	10 47 49.1	-0.5
CTA				eSCP		10 48 50.0	
CTA	Charters Tower	31.48	270	P	P	10 43 19.0	+1.2
	comp=Z,214nm,0.5s,mb6.0,baz=96,slow=11,SNR=687						
CTA				ScP		10 48 49.9	
	comp=Z,7.9nm,0.8s,baz=78,slow=1.9,SNR=7.0						
CTA	Charters Tower	31.48	270	⇓iP	P	10 43 19.0	+1.1
CTA				eS	S	10 47 49.1	-0.5
CTA				pmax	pmax		
	comp=Z,176nm,0.4s						
CTAO	Charters Tower	31.48	270	⇓iP	P	10 43 18.8	+1.0
	comp=Z,208nm,0.5s,mb5.9						
CTAO	Charters Tower	31.48	270	⇓iP	P	10 43 18.8	+0.9
CTAO				pmax	pmax		
	comp=Z,208nm,0.5s,mb5.9						
TOO	Toolangi	32.59	237	eP	P	10 43 28.4	+1.3
	comp=Z,14nm,0.5s,mb4.7						
TOO	Toolangi	32.59	237	eP	P	10 43 28.4	+1.3
TOO				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.8						
PMG	Port Moresby	34.41	289	P	P	10 43 43.1	+0.5
	comp=Z,166nm,0.8s,mb5.6,baz=102,slow=5.4,SNR=53						
PMG	Port Moresby	34.41	289	⇓iP	P	10 43 42.9	+0.3
	comp=Z,175nm,0.9s,mb5.6						
PMG	Port Moresby	34.41	289	⇓iP	P	10 43 42.9	+0.3
PMG				pmax	pmax		
	comp=Z,175nm,0.9s						
STKA	Stephens Creek	34.82	248	P	P	10 43 47.0	+1.2
	comp=Z,30nm,0.6s,mb5.0,baz=93,slow=9.7,SNR=83						
STKA	Stephens Creek	34.82	248	eP	P	10 43 46.7	+0.9
WB2	Warramunga Arr	42.41	266	⇓iP	P	10 44 47.5	-0.2
WB2				eSCP		10 49 30.9	
WB2				ePCS		10 50 27.7	
WRAB	Tennant Creek	42.42	266	⇓iP	P	10 44 47.3	-0.4
	comp=Z,154nm,0.8s,mb5.6						
WRAB	Tennant Creek	42.42	266	⇓iP	P	10 44 47.3	-0.4
WRAB				pmax	pmax		
	comp=Z,154nm,0.8s,mb5.6						
WRA	Warramunga Arr	42.42	266	P	P	10 44 48.0	+0.2
	comp=Z,61nm,0.5s,mb5.4,baz=91,slow=8.4,SNR=766						
WRA				ScP		10 49 31.6	
	comp=Z,13nm,0.9s,baz=99,slow=4.1,SNR=15						
WRA				S	S	10 50 28.5	-3.5
	comp=Z,7.8nm,1.0s,baz=101,slow=14,SNR=11						
WRA	Warramunga Arr	42.42	266	P	P	10 44 48.0	+0.2
WRA				S	S	10 50 28.5	-3.5
KAKA	Kakadu	46.29	275	⇓iP	P	10 45 37.3	+19
	comp=Z,68nm,0.8s,mb5.2						
FORT	Forrest	46.40	249	⇓iP	P	10 45 18.1	-0.5
	comp=Z,179nm,0.6s,mb5.8						
GUMO	Guam	50.49	314	P	P	10 45 48.7	-0.8
	comp=Z,62nm,0.6s,mb5.2,baz=108,slow=6.4,SNR=4.2						
FITZ	Fitzroy Crossi	50.85	265	⇓iP	P	10 45 51.8	-0.2
	comp=Z,69nm,0.7s,mb5.1						
FITZ				eSCP		10 50 06.9	
FITZ	Fitzroy Crossi	50.85	265	P	P	10 45 51.9	-0.2
	comp=Z,96nm,0.8s,mb5.2,baz=124,slow=5.9,SNR=87						
FITZ				ScP		10 50 07.3	
	comp=Z,15nm,1.1s,baz=81,slow=0.4,SNR=3.9						
SBA	Scott Base	54.63	183	⇑eP	P	10 46 20.0	+1.6
	comp=Z,32nm,0.9s,mb4.6						
SBA				ePcP	PcP	10 47 13.3	0.0
SBA	Scott Base	54.63	183	⇑eP	P	10 46 20.0	+1.6
SBA				e		10 47 13.3	
SBA				pmax	pmax		
	comp=Z,32nm,0.9s,mb4.5						
VNDA	Vanda	54.64	185	eP	P	10 46 18.7	+0.3
	comp=Z,6.1nm,0.8s,mb3.9						
VNDA				ePcP	PcP	10 47 12.5	-0.7
VNDA	Vanda	54.64	185	eP	P	10 46 18.7	+0.3
VNDA				e		10 47 12.5	
VNDA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLBR	Kellerberrin	55.09	247	⇓iP	P	10 46 21.6	-0.5
	comp=Z,35nm,0.7s,mb4.7						
NWAO	Narrogin (SRO)	55.34	245	P	P	10 46 23.2	-0.6
	comp=Z,7.1nm,0.5s,mb4.1,baz=96,slow=4.4,SNR=8.4						
MUN	Mundaring	56.34	246	⇓iP	P	10 46 30.5	-0.2
CASY	Casey	60.34	206	eP	P	10 46 56.3	-0.9
	comp=Z,13nm,0.7s,mb4.4						
KKM	Kota Kinabalu	68.83	287	eP	P	10 47 51.1	-0.4
JOW	Kunigami	70.82	312	P	P	10 48 03.3	+0.2
	comp=Z,30nm,0.7s,mb5.0,baz=159,slow=9.4,SNR=8.6						
MJAR	Matsushiro Arr	71.68	326	P	P	10 48 07.3	-0.7
	comp=Z,6.3nm,0.8s,mb4.1,baz=159,slow=6.0,SNR=12						
MAJO	Matsushiro	71.69	326	P	P	10 48 07.4	-0.5
	comp=Z,8.2nm,0.8s,mb4.2						
MAJO	Matsushiro	71.69	326	P	P	10 48 07.4	-0.6
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
KSM	Kuching	72.06	280	eP	P	10 48 10.1	-0.4
JNU	Nakatsue	73.33	319	P	P	10 48 17.3	-0.2
	comp=Z,5.0nm,0.7s,mb4.0,baz=182,slow=8.2,SNR=3.2						
YHNB	Yeheng	74.40	306	eP	P	10 48 23.5	-0.1
MAW	Mawson	77.99	200	P	P	10 48 43.3	+0.9
	comp=Z,12nm,0.7s,mb4.4,baz=126,slow=7.4,SNR=20						
PMSA	Palmer Station	79.15	157	⇑iP	P	10 48 48.9	+0.4
	comp=Z,46nm,1.3s,mb4.6						
LRV	Little Rabbit	81.64	44	eP	P	10 49 02.2	+0.2
MDJ	Mudanjiang	82.05	326	P	P	10 49 02.3	-1.6
MDJ				AMB	AMB		
	comp=Z,60nm,4.9s						
MWC	Mount Wilson	82.29	48	eP	P	10 49 05.1	-0.2
KULM	Kulim	82.40	279	eP	P	10 49 06.5	+0.2
ISA	Isabella	82.84	46	eP	P	10 49 08.3	+0.2
	comp=Z,29nm,1.4s,mb4.6						
ISA	Isabella	82.84	46	eP	P	10 49 08.3	+0.2
ISA				pmax	pmax		
	comp=Z,29nm,1.4s,mb4.6						
CMB	Columbia Colle	83.01	43	eP	P	10 49 08.7	-0.2
	comp=Z,20nm,0.8s,mb4.7						
CMB	Columbia Colle	83.01	43	eP	P	10 49 08.7	-0.2
CMB				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.7						
SYO	Syowa Base	83.26	193	⇑P	P	10 49 09.2	-0.3
SYO	Syowa Base	83.26	193	⇑P	P	10 49 13.6	+4.1
SYO	Syowa Base	83.26	193	⇑iP	P	10 49 09.2	-0.3
SYO				⇑iP		10 49 13.6	
CN2	Changchun	83.68	324	eP	P	10 49 12.3	+0.2
GSC	Goldstone	83.75	47	eP	P	10 49 12.6	-0.1
MTUM	Tungsten Hills	83.77	45	eP	P	10 49 13.1	+0.3
NVAR	Mina Array Bea	84.57	44	P	P	10 49 16.4	-0.2
	comp=Z,7.1nm,0.9s,mb4.2,baz=208,slow=6.7,SNR=43						
LDFC	Landfair	84.78	48	⇑iP	P	10 49 18.1	+0.4
SNAA	Sanae	84.93	179	e	P	10 49 18.0	+0.4
SNAA	Sanae	84.93	179	e	P	10 49 21.1	+3.5
SNAA	Sanae	84.93	179	⇑iP	P	10 49 16.9	-0.7
SNAA				e		10 49 18.0	
SNAA				e		10 49 21.1	
SNAA				e		10 51 23.0	
SNAA				e		10 51 29.2	
VNA3	Neumayer Olymp	85.13	177	e	P	10 49 19.5	+0.9
VNA3	Neumayer Olymp	85.13	177	e	P	10 49 22.9	+4.3
VNA3	Neumayer Olymp	85.13	177	e	tx	10 49 40.8	
VNA3	Neumayer Olymp	85.13	177	⇑iP	P	10 49 18.1	-0.5
VNA3				e		10 49 19.5	
VNA3				e		10 49 22.9	
VNA3				e		10 49 40.8	
VNA3				e	pP	10 51 17.1	+2.9
VNA3				e		10 51 23.1	
NEN	Nelson	85.27	48	eP	P	10 49 19.9	-0.2
MAIT	Maitri	85.48	184	eP	P	10 49 20.1	-0.2
VNA2	Neumayer--Watz	85.55	178	e	P	10 49 21.4	+0.8
VNA2	Neumayer--Watz	85.55	178	e	P	10 49 25.0	+4.4
VNA2	Neumayer--Watz	85.55	178	e	tx	10 49 43.7	
VNA2	Neumayer--Watz	85.55	178	⇑iP	P	10 49 20.4	-0.2
VNA2				e		10 49 21.4	
VNA2				e		10 49 25.0	
VNA2				e		10 49 43.7	
VNA2				e		10 51 22.0	
VNA2				e		10 51 28.2	
VNA1	Neumayer--Stat	85.79	177	e	P	10 49 23.6	+1.9
VNA1	Neumayer--Stat	85.79	177	e	P	10 49 26.9	+5.2
VNA1	Neumayer--Stat	85.79	177	e	tx	10 49 46.6	
VNA1	Neumayer--Stat	85.79	177	⇑iP	P	10 49 22.6	+0.9
VNA1				e		10 49 23.6	
VNA1				e		10 49 26.9	
VNA1				e		10 49 46.6	
VNA1				e		10 51 24.4	
ENH	Enshi	86.29	305	eP	P	10 49 25.6	+0.6
	comp=Z,6.0nm,0.7s,mb4.3						
TUC	Tucson	86.36	52	⇑iP	P	10 49 26.2	+0.8
	comp=Z,19nm,0.9s,mb4.7						
TUC	Tucson	86.36	52	⇑iP	P	10 49 26.2	+0.8
TUC				pmax	pmax		
	comp=Z,19nm,0.9s,mb4.7						
WVOR	Wild Horse Val	86.71	41	eP	P	10 49 26.8	+0.1
	comp=Z,22nm,1.3s,mb4.6						
WVOR	Wild Horse Val	86.71	41	eP	P	10 49 26.8	0.0
WVOR				pmax	pmax		
	comp=Z,22nm,1.3s,mb4.6						
ELK	Elko	87.83	43	eP	P	10 49 32.2	+0.1
	comp=Z,8.1nm,1.1s,mb4.4						
ELK	Elko	87.83	43	eP	P	10 49 32.2	+0.1
ELK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
EBG	Ellensburg	88.31	36	P	P	10 49 34.8	+0.6
PLCA	Paso Flores	88.45	134	P	P	10 49 36.1	+1.2
	comp=Z,6.6nm,1.0s,mb4.3,baz=7.0,slow=1.8,SNR=5.1						
PLCA	Paso Flores	88.45	134	eP	P	10 49 35.6	+0.7
	comp=Z,15nm,1.1s,mb4.6						
PLCA	Paso Flores	88.45	134	eP	P	10 49 35.6	+0.6
PLCA				pmax	pmax		
	comp=Z,15nm,1.1s						
MSU	Marysvale	88.61	47	eP	P	10 49 36.5	+0.8
GBL	Gable Mountain	88.73	37	P	P	10 49 36.6	+0.5
DUG	Dugway	89.08	45	eP	P	10 49 37.8	-0.2
	comp=Z,5.4nm,1.1s,mb4.3						
DUG	Dugway	89.08	45	eP	P	10 49 37.8	-0.1
DUG				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.3						
OD2	Odessa Site #2	89.61	37	P	P	10 49 40.3	+0.1
TMUT	Trail Mountain	89.66	46	⇑iP	P	10 49 41.4	+0.8
MPU	Maple Canyon	89.75	46	eP	P	10 49 41.3	+0.2
	comp=Z,13nm,0.9s,mb4.8						
HLID	Hailey	89.90	41	eP	P	10 49 41.8	+0.2
	comp=Z,12nm,1.1s,mb4.6						
SPUT	South Promonto	89.91	44	eP	P	10 49 41.6	-0.1
HVU	Hansel Valley	89.95	44	eP	P	10 49 42.3	+0.4
	comp=Z,34nm,1.2s,mb5.1						
HVU	Hansel Valley	89.95	44	eP	P	10 49 42.3	+0.4
HVU				pmax	pmax		
	comp=Z,34nm,1.2s,mb5.0						
SRU	San Rafael	90.02	47	eP	P	10 49 42.5	+0.2
	comp=Z,32nm,0.9s,mb5.2						
SRU	San Rafael	90.02	47	eP	P	10 49 42.5	+0.2
SRU				pmax	pmax		
	comp=Z,32nm,0.9s,mb5.2						
CTU	Camp Tracy	90.03	45	eP	P	10 49 42.3	0.0
	comp=Z,18nm,0.9s,mb4.9						
LENM	Lemitar	90.05	52	eP	P	10 49 42.6	+0.1
MNTX	Cornudas Mount	90.07	55	⇑eP	P	10 49 42.8	+0.1
	comp=Z,9.3nm,0.9s,mb4.6						
MNTX				e		10 50 03.5	
DAU	Daniels Canyon	90.21	45	eP	P	10 49 43.7	+0.6
LTX	Lajitas	90.29	58	eP	P	10 49 44.0	+0.3
	comp=Z,10nm,0.8s,mb4.7						
LTX	Lajitas	90.29	58	eP	P	10 49 44.1	+0.3
LTX				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.7						
TXAR	Lajitas Array	90.29	58	P	P	10 49 44.2	+0.4
	comp=Z,11nm,0.7s,mb4.8,baz=213,slow=6.5,SNR=144						
TXAR	Lajitas Array	90.29	58	P	P	10 49 44.2	+0.4
BNM	Barren Site	90.30	53	eP	P	10 49 43.9	+0.2
TCUT	Toone Canyon	90.47	45	eP	P	10 49 44.5	+0.2
HWUT	Hardware Ranch	90.63	44	eP	P	10 49 44.7	-0.3
	comp=Z,8.6nm,0.7s,mb4.8						
PV10	Paradox Valley	90.65	48	eP	P	10 49 45.0	-0.3
ANMO	Albuquerque	90.80	52	eP	P	10 49 45.9	-0.1
	comp=Z,13nm,1.2s,mb4.7						
ANMO	Albuquerque	90.80	52	eP	P	10 49 45.9	-0.1
ANMO				pmax	pmax		
	comp=Z,13nm,1.2s						
GDL2	Guadalupe Moun	91.06	55	eP	P	10 49 47.7	+0.4
AHID	Auburn Hatcher	91.53	43	eP	P	10 49 49.6	+0.5
	comp=Z,9.9nm,0.9s,mb4.8						
MCMT	McKenzie Canyo	91.53	41	eP	P	10 49 49.5	+0.4
ILAR	Eielson Array	91.78	14	P	P	10 49 48.2	-1.6
	comp=Z,0.8nm,0.8s,mb3.8,baz=206,slow=5.1,SNR=7.4						
ILAR				PKKP	PKKP	11 07 03.9	+56
	comp=Z,0.2nm,0.6s,baz=345,slow=2.8,SNR=5.4						
CPRX	Cap Rock	91.82	55	eP	P	10 49 50.8	+0.1
TPAW	Teton Pass	91.99	43	eP	P	10 49 51.6	+0.3
	comp=Z,6.5nm,1.1s,mb4.6						
SNOW	Snow King Moun	92.10	43	eP	P	10 49 51.8	0.0
	comp=Z,11nm,1.2s,mb4.8						
MOOW	Moose Ponds	92.25	43	eP	P	10 49 52.4	-0.1
	comp=Z,1.1nm,0.6s,mb4.1						
LOHW	Long Hollow	92.27	43	eP	P	10 49 52.2	-0.3
	comp=Z,3.3nm,0.7s,mb4.5						
SMCO	Snowmass	92.45	48	eP	P	10 49 53.6	+0.1
	comp=Z,8.3nm,0.9s,mb4.8						
BW06	Boulder Array	92.50	44	eP	P	10 49 53.3	-0.3
	comp=Z,6.0nm,0.9s,mb4.6						
PDAR	Pinedale Array	92.50	44	P	P	10 49 53.2	-0.4
	comp=Z,2.1nm,0.9s,mb4.2,baz=342,slow=19,SNR=35						
PDAR				PP	PP	10 53 41.5	-4.1
	comp=Z,0.9nm,1.0s,baz=270,slow=3.0,SNR=5.0						
BOZ	Bozeman (W)	92.70	41	eP	P	10 49 54.3	-0.2
	comp=Z,2.6nm,0.9s,mb4.3						
BOZ	Bozeman (W)	92.70	41	eP	P	10 49 54.3	-0.1
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.3						
SDCO	Great Sand Dun	92.80	50	eP	P	10 49 54.8	-0.3
	comp=Z,7.2nm,0.8s,mb4.8						
RSSD	Black Hills	96.69	45	eP	P	10 50 12.1	-0.5
	comp=Z,4.0nm,0.9s,mb4.7						
RSSD	Black Hills	96.69	45	eP	P	10 50 12.1	-0.5
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.7						
SONM	Songino Array	96.91	319	P	P	10 50 13.1	-0.4
	comp=Z,0.3nm,0.5s,mb3.8,baz=124,slow=5.2,SNR=3.1						
SONM				PP	PP	10 54 22.2	+3.3
	comp=Z,2.3nm,1.2s,baz=127,slow=7.4,SNR=5.8						
SONM				PKKPbc		11 06 52.3	
	comp=Z,1.2nm,0.7s,baz=274,slow=2.7,SNR=10						
INK	Inuvik	97.78	16	P	P	10 50 14.2	-2.8
	comp=Z,1.4nm,1.0s,mb4.2,baz=268,slow=5.8,SNR=4.6						
MKAR	Makanchi Array	111.98	313	PKiKP		10 55 12.9	
	comp=Z,0.7nm,0.6s,baz=203,slow=1.2,SNR=7.0						
MKAR				SKP		10 57 58.9	
	comp=Z,1.8nm,0.8s,SNR=7.7						
MKAR				PKKPbc		11 06 07.3	
	comp=Z,0.9nm,0.8s,baz=270,slow=3.6,SNR=3.6						
MKAR				PKKPab		11 06 17.3	
	comp=Z,1.7nm,0.7s,baz=280,slow=3.9,SNR=7.0						
MKAR	Makanchi Array	111.98	313	PKPdf	PKPdf	10 55 12.9	+0.1
MKAR				SKP		10 57 58.9	
MKAR				PKKPbc		11 06 07.3	
MKAR				PKKPab		11 06 17.3	
BVAR	Borovoye Array	120.25	319	SKP		10 58 15.0	
	comp=Z,1.3nm,0.6s,baz=90,slow=3.0,SNR=3.5						
SUR	Sutherland	120.85	200	ePKPdf	PKPdf	10 55 31.8	+1.4
SCHQ	Schefferville	122.27	39	PKP	PKPdf	10 55 32.5	-0.2
	comp=Z,6.6nm,1.1s,baz=230,slow=7.9,SNR=2.9						
BOSA	Boshof	122.63	206	PKP	PKPdf	10 55 35.4	+1.4
	comp=Z,2.3nm,0.7s,baz=168,slow=5.1,SNR=6.6						
BOSA	Boshof	122.63	206	ePKPdf	PKPdf	10 55 35.3	+1.3
ARU	Arti	126.67	324	ePKPdf	PKPdf	10 55 41.5	+0.5
ARU	Arti	126.67	324	ePKIKP	PKPdf	10 55 41.5	+0.5
AKTK	Aktyubinsk	128.11	316	PKP	PKPdf	10 55 45.0	+1.0
AKTO	Aktyubinsk	128.11	316	PKP	PKPdf	10 55 45.0	+1.0
	comp=Z,1.7nm,0.4s,baz=92,slow=2.2,SNR=7.3						
ARCES	ARCESS Array B	131.63	348	PKP	PKPdf	10 55 50.2	0.0
	comp=Z,5.0nm,0.9s,baz=27,slow=2.7,SNR=7.2						
ARCES				SKPbc		10 58 27.0	
	comp=Z,11nm,1.0s,baz=342,slow=3.8,SNR=5.3						
ARCES	ARCESS Array B	131.63	348	PKP	PKPdf	10 55 50.2	0.0
ARCES				SKPbc		10 58 27.0	
TSUM	Tsumeb	134.09	203	ePKPdf	PKPdf	10 55 57.3	+1.3
KMBO	Kilima Mbogo	136.22	241	SKPbc		10 58 45.6	
	comp=Z,2.0nm,0.7s,baz=72,slow=4.7,SNR=5.4						
FINES	FINESS Array B	138.20	342	PKP	PKPdf	10 56 02.3	-0.2
	comp=Z,0.8nm,0.6s,baz=63,slow=4.3,SNR=4.1						
FINES				SKPbc		10 58 47.3	
	comp=Z,6.2nm,0.6s,baz=45,slow=3.2,SNR=16						
NB2	NORSAR Subarra	141.83	351	PKPabc	PKPdf	10 56 04.8	-4.0
	comp=Z,4.3nm,1.1s,baz=16,slow=3.1						
NOA	NORSAR Array B	141.83	351	PKhKP		10 56 04.7	
	comp=Z,2.6nm,0.8s,baz=16,slow=4.8,SNR=5.4						
NOA				SKPbc		10 58 57.2	
	comp=Z,2.6nm,0.6s,baz=15,slow=4.2,SNR=6.7						
NAO	NORSAR Subarra	142.09	351	PKPab	PKPdf	10 56 04.8	-4.5
HFS	Hagfors	142.29	349	PKhKP		10 56 06.3	
	comp=Z,4.2nm,0.3s,baz=72,slow=4.7,SNR=24						
HFS				SKPbc		10 58 58.0	
	comp=Z,5.2nm,0.8s,baz=90,slow=3.0,SNR=4.4						
AKASG	Malin Array Be	144.75	327	PKP	PKPdf	10 56 14.3	+0.1
	comp=Z,3.9nm,0.5s,baz=44,slow=4.1,SNR=34						
AKASG				SKPbc		10 59 04.2	
	comp=Z,8.3nm,0.8s,baz=46,slow=2.6,SNR=20						
AKASG	Malin Array Be	144.75	327	PKP	PKPdf	10 56 14.3	+0.1
AKASG				SKPbc		10 59 04.2	
BR131	Keskin Array S	147.42	307	ePKPbc	PKPdf	10 56 23.2	+4.3
BR131				ePKPab	PKPab	10 56 27.9	-0.7
BRTR	Keskin Array B	147.42	307	PKPbc	PKPdf	10 56 23.2	+4.3
	comp=Z,1.9nm,0.6s,baz=146,slow=5.8,SNR=5.3						
EKA	Eskdalemuir Ar	148.26	3	PKPbc	PKPdf	10 56 24.0	+4.2
	comp=Z,5.2nm,0.9s,baz=79,slow=4.3,SNR=7.2						
KOLS	Kolonicke sedl	149.25	331	e	PKPdf	10 56 28.5	+6.9
STHS	Stebnicka Huta	149.34	332	e	PKPdf	10 56 28.5	+6.8
OKC	Ostrava-Krasne	150.24	336	ePKPbc	PKPdf	10 56 30.0	+6.9
UPC	Upice	150.43	339	ePKPbc	PKPdf	10 56 30.2	+6.8
DPC	Dobruska-Polom	150.46	339	ePKPbc	PKPdf	10 56 30.1	+6.7
DPC				ex	x	10 56 49.0	
DPC				epPKP		10 58 39.0	
MORC	Moravsky Berou	150.51	337	ePKPbc	PKPdf	10 56 30.3	+6.8
CLL	Collm	150.61	343	i PKP1	PKPdf	10 56 30.6	+7.0
CLL				e*PPKP2		10 58 40.0	
BRG	Berggiesshubel	150.74	342	i P	PKPdf	10 56 31.1	+7.3
BRG				e		10 58 39.6	
PVCC	Panska Ves	150.86	341	ePKPbc	PKPdf	10 56 31.4	+7.4
PVCC				epPKP		10 58 40.0	
KHC	Kasperske Hory	152.40	341	epPKP		10 58 43.5	
GERES	GERESS Array B	152.61	340	PKP	PKPdf	10 56 29.0	+2.4
	comp=Z,0.7nm,0.9s,slow=3.9,SNR=2.8						
GERES				PKPbc	PKPdf	10 56 34.3	+7.7
	comp=Z,2.1nm,0.9s,baz=45,slow=1.9,SNR=7.6						
DBIC	Dimbokro	162.49	164	PKP	PKPdf	10 56 40.4	+0.9
	comp=Z,4.8nm,0.8s,baz=208,slow=3.3,SNR=4.7						
DBIC				PKPab	PKPab	10 57 32.1	-0.9
	comp=Z,4.7nm,0.7s,baz=162,slow=8.4,SNR=6.1						
ESDC	Sonseca Array	163.67	11	PKPab	PKPab	10 57 36.0	-1.5
	comp=Z,0.3nm,0.3s,baz=342,slow=4.1,SNR=5.1						

WEL 25 10:59:00.5±0.8**, 35.35S×178.15E, h33**^{km}**, ML3.6**/6**, Error ellipse: s-maj=9.2km s-min=5.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	2.21	177	P*	Pb	10 59 34.6	-5.0
MXZ				S*	Sb	11 00 00.4	-6.4
PUZ	Puketiti	2.72	178	PN	Pn	10 59 41.2	-1.7
PUZ				SN	Sn	11 00 11.8	-3.2
MWZ	Matawai	3.02	189	P*	Pb	10 59 46.8	-6.7
MWZ				S*	Sb	11 00 22.5	-7.7
URZ	Urewera	3.02	196	P*	Pb	10 59 46.8	-6.6
BKZ	Black Stump Fm	4.03	199	P*	Pb	10 59 60.0	-11
BKZ				S*	Sb	11 00 46.7	-13
MRZ	Mangatainoka R	5.68	200	PN	Pn	11 00 18.8	-6.0

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*MOS **25** 11:00:21.5±1.0, 30.13N×42.05W, h10^{km}, mb5.0/18, Error ellipse: s-maj=12.3km s-min=9.1km az=59.7*
*IDC **25** 11:00:21.7±0.6, 30.11N×42.09W, mb4.4/20, mb1 4.5/20, mb1mx4.4/29, mbtmp4.4/20, MS3.9/9, Ms1 3.9/9, ms1mx3.7/23, Error ellipse: s-maj=16.8km s-min=14.2km az=154.0*
*NEIC **25** 11:00:23.3±0.3, 30.10N×42.04W, h10^{km}, mb4.6/29, Error ellipse: s-maj=7.8km s-min=5.2km az=170.0*
ISC 25 11:00:21.5±0.3**, 30.11N**±0.07×**42.05W**±0.05**, h10**^{km}**, n98, σ0^{s}.82**/94**, mb4.5**/50**, MS3.9**/10**, 4C-1D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	San Juan	24.97	247	LR	LR	11 13 06.6	
	comp=Z,102nm,19.1s,MS3.3,baz=80,slow=31						
SCHQ	Schefferville	30.43	331	P	P	11 06 34.5	-1.6
	6.9nm,0.9s,mb4.4,baz=118,slow=13,SNR=4.0						
SCHQ				LR	LR	11 17 50.3	
	comp=Z,203nm,19.7s,MS3.8,baz=111,slow=34						
SDV	Santo Domingo	34.05	238	eP	P	11 07 09.0	+0.8
	9.3nm,0.9s,mb4.7						
BORG	Borgarnes	37.01	15	P	P	11 07 34.4	+1.5
	24nm,1.1s,mb4.9,baz=159,slow=4.6,SNR=4.1						
ROSC	El Rosal	39.47	237	LR	LR	11 22 10.0	
	comp=Z,76nm,21.5s,MS3.5,baz=18,slow=33						
DBIC	Dimbokro	41.99	116	P	P	11 08 14.1	-0.6
	6.1nm,0.8s,mb4.3,baz=293,slow=11,SNR=5.9						
DBIC				LR	LR	11 23 50.0	
	comp=Z,177nm,19.0s,MS4.0,baz=207,slow=34						

DBIC	Dimbokro	41.99	116	eP	P	11 08 13.7	-1.0
	9.0nm,0.9s,mb4.4						
DBIC	Dimbokro	41.99	116	eP	P	11 08 13.7	-1.0
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SUMG	Summit	42.57	2	eP	P	11 08 19.2	+0.5
	comp=Z,11nm,1.0s,mb4.5						
DAVOX	Davos	43.13	52	P	P	11 08 24.4	+0.7
	comp=Z,5.0nm,0.8s,mb4.3,baz=294,slow=15,SNR=4.5						
SAML	Samuel	43.83	211	eP	P	11 08 29.0	-0.7
	comp=Z,8.1nm,0.9s,mb4.5						
GRA1	Grafenberg Arr	44.27	48	eP	P	11 08 32.5	-0.3
	comp=Z,14nm,1.1s,mb4.6						
GRF	Grafenberg Arr	44.27	48	eP	P	11 08 32.5	-0.3
	comp=Z,14nm,1.1s,mb4.6						
GRF	Grafenberg Arr	44.27	48	eP	P	11 08 32.5	-0.3
GRF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
GRF	Grafenberg Arr	44.27	48	eP	P	11 08 32.5	-0.3
GRF				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
ULM	Lac du Bonnet	44.68	313	P	P	11 08 35.3	-0.8
	comp=Z,2.1nm,0.6s,mb4.1,baz=127,slow=6.8,SNR=3.9						
ULM				LR	LR	11 24 57.3	
	comp=Z,102nm,19.7s,MS3.8,baz=352,slow=33						
CLL	Collm	45.57	46	P	P	11 08 43.0	-0.1
KHC	Kasperske Hory	45.76	49	eP	P	11 08 44.5	-0.2
KHC	Kasperske Hory	45.76	49	⇑eP	P	11 08 44.6	-0.1
GERES	GERESS Array B	45.83	50	P	P	11 08 44.9	-0.3
	comp=Z,2.1nm,0.7s,mb4.2,baz=259,slow=7.7,SNR=13						
BDFB	Brasilia	45.84	188	P	P	11 08 46.1	+0.3
	comp=Z,2.7nm,0.6s,mb4.3,baz=352,slow=8.8,SNR=3.2						
JAVS	Javornik	46.00	54	eP	P	11 08 46.6	-0.1
BRG	Berggiesshubel	46.12	47	eP	P	11 08 55.8	+8.3
	comp=Z,5.4nm,0.9s,mb4.5						
VISS	Visnje	46.55	54	eP	P	11 08 51.0	0.0
WMOK	Wichita Mounta	47.58	291	eP	P	11 08 59.4	+0.1
	comp=Z,7.2nm,1.2s,mb4.6						
WMOK	Wichita Mounta	47.58	291	eP	P	11 08 59.4	+0.1
WMOK				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.6						
FFC	Flin Flon	48.82	318	P	P	11 09 08.6	0.0
	comp=Z,5.7nm,0.8s,mb4.7						
FFC	Flin Flon	48.82	318	P	P	11 09 08.6	0.0
FFC				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
VYHS	Vyhne	49.22	50	eP	P	11 09 10.8	-1.0
SIV	San Ignacio	49.36	204	P	P	11 09 12.6	-0.7
	comp=Z,2.5nm,0.8s,mb4.3,baz=37,slow=6.8,SNR=14						
AMTX	Amarillo	49.89	292	eP	P	11 09 17.4	+0.3
	comp=Z,12nm,1.1s,mb4.8						
STHS	Stebnicka Huta	50.78	49	eP	P	11 09 25.2	+1.5
STHS	Stebnicka Huta	50.78	49	epP	pP	11 09 25.2	-1.6
CRVS	Cervenica-Dubn	50.95	50	eP	P	11 09 27.5	+2.5
LPAZ	La Paz	52.53	212	P	P	11 09 37.3	-0.1
	comp=Z,5.7nm,0.9s,mb4.5,baz=359,slow=9.2,SNR=14						
LPAZ	La Paz	52.53	212	eP	P	11 09 37.1	-0.3
	comp=Z,6.5nm,0.9s,mb4.6						
LPAZ	La Paz	52.53	212	eP	P	11 09 37.1	-0.3
LPAZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GDL2	Guadalupe Moun	52.70	289	eP	P	11 09 39.1	+0.7
TXAR	Lajitas Array	52.92	286	P	P	11 09 39.8	-0.3
	comp=Z,1.7nm,0.9s,mb4.0,baz=100,slow=7.6,SNR=14						
FINES	FINESS Array B	53.64	34	i P	P	11 09 44.5	-0.5
FINES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MNTX	Cornudas Mount	53.67	289	eP	P	11 09 45.8	+0.1
	comp=Z,1.2nm,0.9s,mb3.8						
ANMO	Albuquerque	53.70	293	eP	P	11 09 46.6	+0.8
	comp=Z,1.9nm,0.8s,mb4.1						
ANMO	Albuquerque	53.70	293	eP	P	11 09 46.6	+0.8
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KAF	Kangasniemi	53.79	33	ep	P	11 09 41.9	-4.2
VSU	Vasula	53.89	37	eP	P	11 09 46.3	-0.5
BNM	Barren Site	54.03	292	eP	P	11 09 49.0	+0.8
LENM	Lemitar	54.30	292	eP	P	11 09 51.1	+0.9
BW06	Boulder Array	54.42	303	eP	P	11 09 50.1	-0.9
	comp=Z,14nm,1.1s,mb4.8						
PDAR	Pinedale Array	54.42	303	P	P	11 09 50.5	-0.5
	comp=Z,6.3nm,0.8s,mb4.6,baz=83,slow=7.5,SNR=41						
PDAR				LR	LR	11 31 19.5	
	comp=Z,276nm,18.6s,MS4.3,baz=95,slow=34						
LOHW	Long Hollow	55.03	304	eP	P	11 09 55.2	-0.3
	comp=Z,4.0nm,0.9s,mb4.5						
MOOW	Moose Ponds	55.10	305	eP	P	11 09 55.6	-0.4
	comp=Z,2.3nm,0.9s,mb4.2						
SNOW	Snow King Moun	55.16	304	eP	P	11 09 56.6	+0.2
	comp=Z,7.7nm,0.9s,mb4.7						
TPAW	Teton Pass	55.30	304	eP	P	11 09 57.5	0.0
	comp=Z,12nm,1.1s,mb4.8						
HRY	Holter Researc	55.37	308	eP	P	11 09 57.6	-0.4
BOZ	Bozeman (W)	55.40	307	eP	P	11 09 58.0	-0.2
	comp=Z,1.5nm,0.7s,mb4.1						
BOZ	Bozeman (W)	55.40	307	eP	P	11 09 58.0	-0.2
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
EDM	Edmonton	55.54	316	eP	P	11 09 57.8	-1.2
APE	Apeiranthos	55.68	64	i P	P	11 09 59.5	-0.7
YKA	Yellowknife Ar	55.76	328	LR	LR	11 31 22.1	
	comp=Z,178nm,20.2s,MS4.1,baz=75,slow=33						
AKASG	Malin Array Be	55.80	47	P	P	11 09 59.4	-1.5
	comp=Z,3.9nm,0.6s,mb4.6,baz=276,slow=6.6,SNR=23						
AKASG	Malin Array Be	55.80	47	P	P	11 09 59.4	-1.5
HWUT	Hardware Ranch	56.11	302	eP	P	11 10 03.0	-0.3
	comp=Z,4.6nm,0.9s,mb4.5						
JOF	Joensuu	56.13	32	ep	P	11 10 01.0	-2.1
DUG	Dugway	57.35	301	eP	P	11 10 12.3	+0.2
	comp=Z,5.8nm,1.1s,mb4.5						
DUG	Dugway	57.35	301	eP	P	11 10 12.3	+0.1
DUG				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
NEW	Newport	58.64	311	eP	P	11 10 20.5	-0.5
	comp=Z,13nm,0.9s,mb5.0						
NEW	Newport	58.64	311	eP	P	11 10 20.5	-0.5
NEW				pmax	pmax		
	comp=Z,13nm,0.9s						
OBN	Obninsk	59.55	41	⇑iP	P	11 10 26.3	-1.0
OBN				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.2						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS4.1						
WVOR	Wild Horse Val	61.03	305	eP	P	11 10 37.4	-0.1
	comp=Z,2.1nm,0.8s,mb4.3						
WVOR	Wild Horse Val	61.03	305	eP	P	11 10 37.4	-0.2
WVOR				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.3						
BR131	Keskin Array S	61.13	59	eP	P	11 10 37.4	-0.9
	comp=Z,5.1nm,0.9s,mb4.7						
BRTR	Keskin Array B	61.13	59	P	P	11 10 37.9	-0.4
	comp=Z,4.6nm,0.8s,mb4.6,baz=279,slow=4.0,SNR=14						
NVAR	Mina Array Bea	61.92	300	P	P	11 10 43.5	-0.3
	comp=Z,1.4nm,0.8s,mb4.1,baz=77,slow=7.3,SNR=12						
NVAR				LR	LR	11 35 57.5	
	comp=Z,143nm,18.0s,MS4.2,baz=100,slow=34						
INK	Inuvik	62.93	335	eP	P	11 10 49.9	-0.1
	comp=Z,16nm,1.0s,mb5.1						
INK	Inuvik	62.93	335	eP	P	11 10 49.9	-0.1
INK				pmax	pmax		
	comp=Z,16nm,1.0s						
DAWY	Dawson	66.45	332	eP	P	11 11 13.7	+0.9
GNI	Garni	69.04	55	eP	P	11 11 28.7	-0.7
	comp=Z,15nm,1.0s,mb4.9						
GNI	Garni	69.04	55	eP	P	11 11 28.7	-0.7
GNI				pmax	pmax		
	comp=Z,15nm,1.0s						
ILAR	Eielson Array	69.16	334	P	P	11 11 30.1	+0.3
	comp=Z,5.8nm,0.9s,mb4.5,baz=59,slow=4.2,SNR=42						
COLA	College	69.48	334	eP	P	11 11 32.2	+0.5
	comp=Z,9.6nm,0.9s,mb4.7						
COLA	College	69.48	334	eP	P	11 11 32.2	+0.5
COLA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
ARU	Arti	70.95	35	⇑iP	P	11 11 40.6	-0.2
ARU				pmax	pmax		
	comp=Z,25nm,2.5s,mb4.7						
IMA2	Indian Mountai	71.02	336	eP	P	11 11 41.5	+0.5
AKTK	Aktyubinsk	73.33	41	P	P	11 11 55.3	+0.3
AKTO	Aktyubinsk	73.33	41	P	P	11 11 55.3	+0.3
	comp=Z,4.7nm,0.9s,mb4.4,baz=299,slow=7.1,SNR=10						
TIXI	Tiksi	78.33	3	⇓iP	P	11 12 21.3	-1.5
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
BRVK	Borovoye	78.51	35	eP	P	11 12 24.9	+0.8
	comp=Z,2.2nm,0.9s,mb4.1						
BRVK	Borovoye	78.51	35	eP	P	11 12 24.9	+0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BVAR	Borovoye Array	78.58	35	P	P	11 12 25.6	+1.0
	comp=Z,4.1nm,0.9s,mb4.4,baz=304,slow=5.3,SNR=12						
BILL	Bilibino	79.89	350	⇑iP	P	11 12 32.3	+0.9
BILL				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
KMBO	Kilima Mbogo	81.31	96	P	P	11 12 42.7	+2.7
	comp=Z,0.4nm,0.3s,mb3.8,baz=22,slow=11,SNR=2.2						
KMBO				LR	LR	11 47 49.5	
	comp=Z,128nm,18.4s,MS4.3,baz=94,slow=35						
KMBO	Kilima Mbogo	81.31	96	P	P	11 12 42.7	+2.7
KMBO				LR	LR	11 47 49.5	
KURK	Kurchatov	84.02	33	eP	P	11 12 53.8	+0.6
	comp=Z,3.6nm,0.3s,mb5.0						
KURK	Kurchatov	84.02	33	eP	P	11 12 53.8	+0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb5.0						
ZAL	Zalesovo	84.54	28	P	P	11 12 56.9	+1.2
	comp=Z,1.4nm,0.7s,mb4.2,baz=168,slow=5.7,SNR=10						
ZAL	Zalesovo	84.54	28	P	P	11 12 56.9	+1.2
YAK	Yakutsk	87.95	4	eP	P	11 13 13.3	+1.1
YAK				pmax	pmax		
	comp=Z,17nm,1.3s,mb5.1						
MKAR	Makanchi Array	88.47	35	P	P	11 13 15.7	+0.6
	comp=Z,1.4nm,0.9s,mb4.2,baz=307,slow=6.1,SNR=5.4						

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*JMA **25** 11:05:13.1±0.1, 38.26N×144.70E, h57^{km}, M3.9*

ISC 25 11:05:11.0±1.3**, 38.43N**±0.06×**144.89E**±0.08**, h33**^{km}**, n11, σ1ˢ25**/21**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.60	285	P	P	11 05 52.7	+1.2
OFUJ				S	S	11 06 22.5	+0.2
MIYJ	Miyakonagasawa	2.65	297	P	P	11 05 53.8	+1.5
MIYJ				S	S	11 06 24.0	+0.4
JIO	Ouri	2.78	272	P	P	11 05 54.5	+0.4
JIO				S	S	11 06 25.5	-1.4
JMK	Ichinoseki	2.92	281	P	P	11 05 57.1	+1.0
JMK				eS	S	11 06 30.1	-0.3
JOT	Ohata	4.17	316	P	P	11 06 16.4	+2.5
JOT				eS	S	11 07 03.3	+1.1
JCH	Churui	4.34	345	P	P	11 06 17.6	+1.3
JCH				eS	S	11 07 05.1	-1.3
JKB	Kayabe	4.54	321	eS	S	11 07 11.2	-0.4
NEM2	Nemuro 2	4.97	7	P	P	11 06 24.0	-1.3
NEM2				eS	S	11 07 17.6	-4.7
JRY	Ryogami san	5.35	245	P	P	11 06 28.4	-2.2
JRY				eS	S	11 07 23.8	-8.1
JTKR	Abashiri--Toko	5.58	353	P	P	11 06 34.3	+0.5
JTKR				eS	S	11 07 35.3	-2.4
MAT	Matsushiro	5.64	253	P	P	11 06 35.0	+0.4
MAT				eS	S	11 07 37.6	-1.5

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*IDC **25** 11:18:11.9±1.0, 7.91S×123.87E, mb4.3/5, mb1 4.4/7, mb1mx4.2/15, mbtmp4.3/7, ML3.6/2, MS3.9/2, Ms1 4.0/2, ms1mx2.9/16, Error ellipse: s-maj=60.1km s-min=17.8km az=73.0*

*BJI **25** 11:18:13.2, 7.90S×123.90E, h12^{km}, mB4.9, mb4.3, Ms4.5, Msz4.4*

*NEIC **25** 11:18:13.2±0.5, 7.88S×123.92E, h10^{km}, mb4.6/7, Error ellipse: s-maj=19.8km s-min=7.0km az=65.0*

ISC 25 11:18:14.7±0.5**, 7.82S**±0.08×**124.1E**±0.1**, h33**^{km}**, n23, σ1ˢ20**/24**, mb4.3**/12**, MS4.4**/2**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAKA	Kakadu	9.52	121	eP	Px	11 20 56.3	
	28nm,0.8s						
FITZ	Fitzroy Crossi	10.33	172	eP	P	11 20 40.7	-3.1
	11nm,0.8s						
FITZ	Fitzroy Crossi	10.33	172	Pn	P	11 20 40.7	-3.1
	0.8nm,0.3s,baz=15,slow=11,SNR=16						
FITZ				Sn	S	11 22 42.2	+2.7
	1.2nm,0.3s,baz=103,slow=13,SNR=5.5						
FITZ				LR	LR	11 25 35.8	
	comp=Z,373nm,19.0s,baz=4.3,slow=43						
WRA	Warramunga Arr	15.60	142	Pn	P	11 21 54.2	+0.3
	0.2nm,0.3s,baz=318,slow=13,SNR=20						
WRA				Sn	S	11 24 57.9	+12
	0.1nm,0.3s,baz=308,slow=24,SNR=6.4						
WRAB	Tennant Creek	15.60	142	eP	P	11 21 53.7	-0.2
	21nm,1.1s						
WB2	Warramunga Arr	15.61	142	eP	P	11 21 54.1	+0.1
WB2				eS	S	11 24 44.8	-1.2
FORT	Forrest	23.14	171	eP	P	11 23 20.1	+1.0
	16nm,0.6s,mb4.6						
KLBR	Kellerberrin	24.39	193	eP	P	11 23 30.7	-0.6
	11nm,0.7s,mb4.4						
CTA	Charters Tower	24.66	122	P	P	11 23 40.1	+6.2
	16nm,1.0s,mb4.5,baz=291,slow=10,SNR=15						
CTAO	Charters Tower	24.66	122	eP	P	11 23 39.9	+5.9
	21nm,1.0s,mb4.6						
NWAO	Narrogin (SRO)	25.79	193	P	P	11 23 43.0	-1.6
	20nm,1.1s,mb4.6,baz=36,slow=8.7,SNR=5.1						
NWAO	Narrogin (SRO)	25.79	193	P	P	11 23 43.0	-1.6
STKA	Stephens Creek	28.94	148	P	P	11 24 13.9	+0.6
	4.7nm,1.0s,mb4.2,baz=288,slow=6.4,SNR=2.5						
LZH	Lanzhou	47.65	338	eP	P	11 26 53.5	+3.5
LZH				AP	pP	11 27 00.5	+0.7
LZH				XP	sP	11 27 03.8	-0.2
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb5.0						
LZH				AMB	AMB		
	comp=Z,40nm,5.6s						
LZH				LR	LR		
	comp=N,250nm,13.3s						
LZH				LR	LR		
	comp=Z,360nm,17.2s,MS4.4						
LSA	Lhasa	48.96	321	eP	P	11 27 00.0	-0.1
GTA	Gaotai	52.11	336	eP	P	11 27 27.0	+3.0
GTA				AP	pP	11 27 32.3	-1.6
GTA				XP	sP	11 27 35.3	-2.7
SONM	Songino Array	57.59	346	P	P	11 28 04.4	+0.6
	comp=Z,1.1nm,0.7s,mb4.0,baz=157,slow=7.6,SNR=9.1						
MKAR	Makanchi Array	65.85	330	P	P	11 28 59.2	0.0
	comp=Z,3.3nm,0.6s,mb4.6,baz=130,slow=7.7,SNR=32						
AAK	Ala-Archa	67.52	323	eP	P	11 29 09.1	-0.7
	comp=Z,1.5nm,0.5s,mb4.3						
ZAL	Zalesovo	69.86	336	P	P	11 29 23.6	-0.5
	comp=Z,1.4nm,0.7s,mb4.0,baz=324,slow=3.5,SNR=8.0						
KURK	Kurchatov	70.29	331	eP	P	11 29 25.4	-1.3
	comp=Z,11nm,1.1s,mb4.7						
VNDA	Vanda	72.40	172	P	P	11 29 40.0	+1.0
	comp=Z,0.3nm,0.6s,mb3.4						
ILAR	Eielson Array	96.58	26	LR	LR	12 17 22.7	
	comp=Z,101nm,19.1s,MS4.3,baz=184,slow=37						

WEL 25 11:22:52.2±0.1**, 39.31S**×**176.36E, h51**^{km}±1^{km}**, ML3.6**/5**, 4C-17D, Error ellipse: s-maj=0.7km s-min=0.5km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKZ	Black Stump Fm	0.18	35	⇓PN	P	11 23 00.1	-0.3
BKZ				SN	S	11 23 06.1	-0.3
HATZ	Hinemaiaia	0.47	333	⇓PN	P	11 23 02.7	-0.5
HATZ				SN	S	11 23 10.2	-0.9
MOVZ	Moawhango	0.48	258	⇓PN	P	11 23 03.0	-0.4
MOVZ				SN	S	11 23 10.9	-0.4
RITZ	Rihia Road	0.51	310	⇓PN	P	11 23 03.6	-0.1
TUVZ	Tukino	0.55	274	⇓PN	P	11 23 04.1	-0.1
TUVZ				SN	S	11 23 13.2	+0.4
OTVZ	Oturere	0.56	285	⇓PN	P	11 23 04.2	-0.1
OTVZ				SN	S	11 23 12.5	-0.5
WNVZ	Wahianoa	0.59	268	⇓PN	P	11 23 04.5	-0.1
KRVZ	Karewarewa	0.60	291	⇓PN	P	11 23 04.6	-0.2
NGZ	Ngauruhoe	0.60	283	⇓PN	P	11 23 04.7	-0.1
KATZ	Kakaramea	0.62	303	⇓PN	P	11 23 04.8	-0.1
KATZ				SN	S	11 23 13.9	-0.4
DRZ	Dome Shelter	0.62	273	⇑PN	P	11 23 04.9	-0.1
FWVZ	Far West T-bar	0.63	275	⇑PN	P	11 23 04.9	-0.2
FWVZ				SN	S	11 23 13.5	-1.2
WTVZ	West Tongariro	0.63	288	⇓PN	P	11 23 05.0	-0.1
TRVZ	Turoa	0.63	271	⇓PN	P	11 23 05.0	-0.1
RATZ	Rangitukua	0.64	314	PN	P	11 23 04.9	-0.3
CNZ	Chateau	0.64	280	⇑PN	P	11 23 05.2	-0.1
WPVZ	Whakapapa	0.64	279	⇓PN	P	11 23 05.2	-0.1
WPVZ				SN	S	11 23 14.8	-0.1
MTVZ	Mangateitei	0.69	264	⇓PN	P	11 23 05.7	-0.3
MTVZ				SN	S	11 23 16.3	+0.2
WHTZ	Whakaora	0.71	334	PN	P	11 23 06.2	0.0
TWVZ	Taurewa	0.76	288	⇓PN	P	11 23 06.1	-0.7
TWVZ				SN	S	11 23 17.3	-0.3
WATZ	Wairara	0.78	321	PN	P	11 23 06.4	-0.7
PKVZ	Pokaka	0.79	271	⇓PN	P	11 23 06.9	-0.3
TSZ	Takapari Road	0.81	202	⇑PN	P	11 23 07.4	-0.1
TSZ				SN	S	11 23 19.0	+0.2
PXZ	Pawanui	0.82	152	PN	P	11 23 07.1	-0.5
PXZ				SN	S	11 23 19.4	+0.4
PATZ	Paeroa	0.93	355	PN	P	11 23 09.1	-0.1
KNZ	Kokohu	1.06	75	PN	P	11 23 10.3	-0.7
TAZ	Tarawera	1.08	6	PN	P	11 23 10.8	-0.5
UTU	Utuhina	1.14	353	PN	P	11 23 12.4	+0.3
WAZ	Wanganui	1.15	247	PN	P	11 23 12.0	-0.2
URZ	Urewera	1.20	29	PN	P	11 23 12.3	-0.6
URZ				SN	S	11 23 28.0	-0.4
EDRZ	Edgecumbe	1.24	14	PN	P	11 23 12.9	-0.6
VRZ	Vera Road	1.26	278	PN	P	11 23 13.0	-0.8
MWZ	Matawai	1.33	43	PN	P	11 23 14.4	-0.6
BFZ	Birch Farm	1.37	184	PN	P	11 23 13.8	-1.6
HIZ	Hauiti	1.42	304	⇓PN	P	11 23 15.2	-0.9
HIZ				SN	S	11 23 32.4	-1.5
MRZ	Mangatainoka R	1.48	204	PN	P	11 23 15.3	-1.6
MRZ				SN	S	11 23 32.8	-2.5
KIW	Kapiti Island	1.91	215	PN	P	11 23 21.1	-1.8
PUZ	Puketiti	1.93	51	PN	P	11 23 21.7	-1.6
MTW	Mount Morrison	1.96	199	PN	P	11 23 21.0	-2.6
CAW	Cannon Point	2.05	208	PN	P	11 23 22.4	-2.5
TRWZ	Traveller	2.15	194	PN	P	11 23 23.5	-2.9
TRWZ				SN	S	11 23 48.2	-3.6
PAWZ	Paruwai Farm	2.19	199	PN	P	11 23 24.1	-2.8
PAWZ				SN	S	11 23 48.9	-3.9
MSWZ	Moikau Station	2.27	202	PN	P	11 23 24.9	-3.2
MSWZ				SN	S	11 23 50.7	-4.1
WEL	Wellington	2.32	211	PN	P	11 23 27.6	-1.2
MXZ	Matakaoa Point	2.32	42	PN	P	11 23 27.7	-1.0
SNZO	South Karori	2.36	212	PN	P	11 23 26.1	-3.3
SNZO				SN	S	11 23 53.7	-3.6
MQZ	McQueen’s Vall	5.20	211	SN	S	11 24 56.8	-12

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*IDC **25** 11:40:55.5±0.7, 30.11N×41.99W, mb4.1/11, mb1 4.4/11, mb1mx4.1/24, mbtmp4.1/11, MS3.9/14, Ms1 3.9/14, ms1mx3.7/32, Error ellipse: s-maj=21.8km s-min=18.0km az=167.0*

*NEIC **25** 11:40:57.0±0.3, 30.11N×41.97W, h10^{km}, mb4.5/13, Error ellipse: s-maj=8.6km s-min=7.9km az=181.0*

ISC 25 11:40:55.2±0.5**, 30.13N**±0.09×**41.99W**±0.10**, h10**^{km}**, n35, σ0ˢ62**/25**, mb4.3**/22**, MS3.9**/14**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SJG	San Juan	25.03	247	LR	LR	11 53 32.0	
	comp=Z,114nm,21.4s,MS3.4,baz=267,slow=30						
SCHQ	Schefferville	30.43	331	LR	LR	11 57 55.1	
	comp=Z,132nm,20.6s,MS3.6,baz=318,slow=34						
MDT	Midelt	31.89	75	LR	LR	11 57 15.6	
	comp=Z,134nm,18.1s,MS3.7,baz=161,slow=31						
SADO	Sadowa	32.60	307	LR	LR	11 58 42.2	
	comp=Z,250nm,18.6s,MS3.9,baz=64,slow=33						
SDV	Santo Domingo	34.11	238	eP	P	11 47 43.5	+1.1
	12nm,1.2s,mb4.7						
ROSC	El Rosal	39.52	237	LR	LR	12 03 31.3	
	comp=Z,74nm,18.9s,MS3.5,baz=2.6,slow=34						
DBIC	Dimbokro	41.96	116	P	P	11 48 47.9	-0.3
	6.6nm,1.0s,mb4.2,baz=279,slow=7.4,SNR=5.3						
DBIC				LR	LR	12 03 43.7	
	comp=Z,141nm,19.5s,MS3.9,baz=202,slow=33						
DBIC	Dimbokro	41.96	116	eP	P	11 48 47.5	-0.6
	8.4nm,1.0s,mb4.3						
SAML	Samuel	43.87	211	eP	P	11 49 03.1	-0.7
	5.5nm,0.9s,mb4.3						
ULM	Lac du Bonnet	44.70	313	LR	LR	12 04 54.5	
	comp=Z,140nm,19.6s,MS3.9,baz=102,slow=32						
GERES	GERESS Array B	45.77	50	P	P	11 49 18.8	+0.2
	1.1nm,0.7s,mb3.9,baz=270,slow=8.0,SNR=7.5						
BDFB	Brasilia	45.87	188	P	P	11 49 20.2	+0.4
	3.1nm,0.7s,mb4.4,baz=346,slow=5.3,SNR=4.1						
BDFB				LR	LR	12 07 58.0	
	comp=Z,57nm,18.1s,MS3.5,baz=110,slow=35						
LPAZ	La Paz	52.58	212	P	P	11 50 11.6	+0.1
	3.4nm,0.8s,mb4.3,baz=6.3,slow=9.5,SNR=13						
LPAZ	La Paz	52.58	212	eP	P	11 50 11.2	-0.2
	5.8nm,0.9s,mb4.5						
TXAR	Lajitas Array	52.96	286	P	P	11 50 13.7	-0.5
	1.2nm,0.9s,mb3.8,baz=80,slow=7.6,SNR=8.2						
BNM	Barren Site	54.06	292	eP	P	11 50 23.0	+0.8
BW06	Boulder Array	54.45	303	eP	P	11 50 24.8	-0.2
	3.9nm,0.8s,mb4.4						
PDAR	Pinedale Array	54.45	303	P	P	11 50 24.8	-0.2
	3.6nm,0.8s,mb4.4,baz=84,slow=8.3,SNR=29						
PDAR				LR	LR	12 12 11.9	
	comp=Z,286nm,19.6s,MS4.3,baz=65,slow=34						
LOHW	Long Hollow	55.05	304	eP	P	11 50 29.1	-0.3
	2.1nm,0.9s,mb4.2						
SNOW	Snow King Moun	55.19	304	eP	P	11 50 30.4	0.0
	5.9nm,0.9s,mb4.6						
TPAW	Teton Pass	55.33	304	eP	P	11 50 31.2	-0.2
	5.4nm,1.0s,mb4.5						
AKASG	Malin Array Be	55.75	47	P	P	11 50 33.1	-1.2
	0.4nm,0.3s,mb4.0,baz=275,slow=6.8,SNR=13						
YKA	Yellowknife Ar	55.77	328	LR	LR	12 15 02.0	
	comp=Z,151nm,19.7s,MS4.1,baz=130,slow=37						
HWUT	Hardware Ranch	56.14	302	eP	P	11 50 37.1	-0.1
	2.6nm,0.7s,mb4.4						
DUG	Dugway	57.38	301	eP	P	11 50 45.7	-0.4
	2.9nm,0.9s,mb4.3						
NEW	Newport	58.66	311	eP	P	11 50 54.4	-0.5
	5.1nm,0.9s,mb4.5						
BRTR	Keskin Array B	61.07	59	P	P	11 51 11.7	+0.1
	3.0nm,0.9s,mb4.4,baz=252,slow=4.7,SNR=9.2						
NVAR	Mina Array Bea	61.95	300	P	P	11 51 17.3	-0.3
	0.8nm,0.8s,mb3.9,baz=74,slow=7.6,SNR=9.2						
NVAR				LR	LR	12 15 24.8	
	comp=Z,164nm,18.2s,MS4.2,baz=10.0,slow=33						
INK	Inuvik	62.93	335	eP	P	11 51 23.6	-0.1
	5.6nm,0.9s,mb4.7						
ILAR	Eielson Array	69.16	334	P	P	11 52 04.2	+0.8
	2.8nm,0.9s,mb4.2,baz=54,slow=4.3,SNR=21						
COLA	College	69.48	334	P	P	11 52 05.8	+0.4
	4.6nm,0.9s,mb4.4						
AKTO	Aktyubinsk	73.28	41	LR	LR	12 21 26.2	
	comp=Z,79nm,18.7s,MS4.0,slow=33						
LSZ	Lusaka	81.22	113	LR	LR	12 29 48.2	
	comp=Z,96nm,18.1s,MS4.2,baz=350,slow=36						
KMBO	Kilima Mbogo	81.27	96	LR	LR	12 28 03.7	
	comp=Z,104nm,18.2s,MS4.2,baz=76,slow=35						
ZAL	Zalesovo	84.49	28	P	P	11 53 31.0	+1.8
	0.8nm,0.4s,mb4.2,baz=171,slow=4.2,SNR=5.3						

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*NEIC **25** 12:18:29.2±0.8, 11.10N×91.69E, Error ellipse: s-maj=35.8km s-min=11.7km az=54.0*

*IDC **25** 12:18:29.0±1.4, 11.08N×91.66E, h22^{km}±6^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.8/21, mbtmp4.0/9, Error ellipse: s-maj=53.0km s-min=15.7km az=57.0*

ISC 25 12:18:26.8±1.0**, 11.0N**±0.2×**91.5E**±0.2**, h24**^{km}**, h24**^{km}±.2^{km}**:pP-P, n12, σ0ˢ62**/13**, mb3.9**/9**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIS	Vishakhapatnam	10.37	311	eP	P	12 20 56.0	-1.3
VIS				eS	S	12 22 43.0	-11
MKAR	Makanchi Array	36.52	349	P	P	12 25 32.1	-0.2
	1.3nm,0.7s,mb3.9,baz=167,slow=7.8,SNR=8.7						
MKAR				pP	pP	12 25 39.1	-0.2
	1.7nm,0.8s,baz=153,slow=8.1,SNR=8.1						
SONM	Songino Array	38.79	16	P	P	12 25 50.9	-0.5
	0.4nm,0.5s,mb3.4,baz=198,slow=9.9,SNR=5.7						
SONM				pP	pP	12 25 58.1	-0.3
	0.5nm,0.7s,baz=207,slow=6.6,SNR=3.6						
FITZ	Fitzroy Crossi	44.40	130	P	P	12 26 37.3	-0.4
	7.3nm,1.1s,mb4.3,baz=331,slow=4.2,SNR=6.6						
FITZ				pP	pP	12 26 44.4	-0.5
	4.8nm,0.8s,baz=120,slow=3.1,SNR=3.4						
BVAR	Borovoye Array	45.22	342	P	P	12 26 43.7	-0.2
	0.4nm,0.5s,mb3.5,baz=143,slow=7.4,SNR=3.7						
AKTK	Aktyubinsk	47.98	332	P	P	12 27 06.4	+0.7
AKTO	Aktyubinsk	47.98	332	P	P	12 27 06.4	+0.7
	0.7nm,0.5s,mb4.0,baz=111,slow=12,SNR=3.5						

WRA	**Warramunga Arr**	**52.18**	**126**	P	**P**	**12 27 38.1**	**-0.1**
	0.7nm,0.5s,mb3.8,baz=301,slow=10.0,SNR=23						
FINES	**FINESS Array B**	**68.75**	**332**	P	**P**	**12 29 30.5**	**-0.2**
	1.7nm,0.9s,mb4.0,baz=108,slow=6.0,SNR=3.3						
ARCES	**ARCESS Array B**	**71.46**	**340**	P	**P**	**12 29 47.5**	**+0.4**
	3.8nm,0.9s,mb4.3,baz=83,slow=7.3,SNR=3.8						
ARCES	**ARCESS Array B**	**71.46**	**340**	P	**P**	**12 29 47.5**	**+0.4**
GERES	**GERESS Array B**	**73.78**	**318**	P	**P**	**12 30 02.1**	**+1.0**
	0.6nm,0.6s,mb3.7,baz=117,slow=3.0,SNR=4.8						

ECX 25 12:32:53.6±0.4**,31.29N×114.27W,h6^{km},MD3.7,ML3.8, 3C-4D,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPX	**San Pedro Mart**	**1.05**	**257**	*e*P	Pb	12 33 12.2	-1.6
SPX				*e*S	Sb	12 33 26.4	-1.3
SPX				*e*		12 33 28.5	
	comp=N,1μm,0.6s						
RDX	**Rancho Dowling**	**1.57**	**295**	*e*S	Sb	12 33 41.8	-0.8
RDX				⇓*e*		12 33 42.5	
	comp=E,1μm,0.4s						
RDX				⇑*e*		12 33 50.7	
	comp=N,784nm,0.7s						
ENX	**Ensenada**	**2.13**	**287**	*e*PN	Pn	12 33 29.1	-1.1
ENX				*e*S	Sn	12 33 57.0	-0.2
ENX				⇓*e*		12 34 07.1	
	comp=E,624nm,0.7s						
ENX				⇓*e*		12 34 07.5	
	comp=N,498nm,0.7s						
PBX	**Punta Banda**	**2.14**	**283**	*e*PN	Pn	12 33 29.7	-0.7
PBX				⇓*e*		12 34 08.3	
	comp=N,397nm,1.1s						
CBX	**Cerro Bola**	**2.28**	**297**	*e*PN	Pn	12 33 31.5	-0.8
CBX				*e*S	Sn	12 34 01.6	+0.6
CBX				⇑*e*		12 34 14.6	
	comp=N,1μm,0.8s						
CBX				⇑*e*		12 34 19.0	
	comp=E,1μm,0.9s						

IDC ***25*** *12:50:24.1±1.4,28.37N×89.41E,mb3.5/4,mb1 3.6/5, mb1mx3.5/21,mbtmp3.5/5,ML3.5/1,Error ellipse: s-maj=48.7km s-min=23.8km az=57.0*
NEIC ***25*** *12:50:25.1±1.2,28.07N×88.91E,h10^{km},mb3.7/1,Error ellipse: s-maj=23.9km s-min=17.9km az=213.0*
ISC 25 12:50:28.6±1.1**,28.4N**±0.1×**88.92E**±0.09**,h33^{km},n9, σ1^{s}07**/11**,mb3.6**/5**,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSA	**Lhasa**	**2.37**	**55**	*e*Pn	**Pn**	**12 51 07.0**	**+0.9**
LSA				*e*Sn	**Sn**	**12 51 33.8**	**-0.5**
SHL	**Shillong**	**3.83**	**136**	*e*P	**P**	**12 51 27.0**	**+0.3**
SHL				*e*S	**S**	**12 52 22.0**	**+11**
MKAR	**Makanchi Array**	**19.13**	**346**	P	**P**	**12 54 51.0**	**-0.5**
	0.2nm,0.3s,baz=174,slow=11,SNR=4.9						
KURK	**Kurchatov**	**23.66**	**344**	*e*P	**P**	**12 55 38.4**	**+0.7**
	2.1nm,0.9s,mb3.6						
SONM	**Songino Array**	**23.72**	**30**	P	**P**	**12 55 34.8**	**-3.5**
	0.3nm,0.5s,mb3.0,baz=218,slow=7.9,SNR=2.9						
BVAR	**Borovoye Array**	**28.20**	**336**	P	**P**	**12 56 21.5**	**+1.3**
	0.6nm,0.5s,mb3.5,baz=140,slow=11,SNR=2.1						
AKASG	**Malin Array Be**	**49.66**	**314**	P	**P**	**12 59 17.8**	**-1.1**
	0.9nm,0.5s,mb4.1,baz=83,slow=7.3,SNR=5.1						
AKASG	**Malin Array Be**	**49.66**	**314**	P	**P**	**12 59 17.8**	**-1.1**
WRA	**Warramunga Arr**	**65.05**	**132**	P	**P**	**13 01 04.7**	**-3.5**
	0.4nm,0.4s,mb3.8,baz=326,slow=6.5,SNR=11						

NEIC ***25*** *13:00:06.9,17.79N×69.05W,h90^{km},MD3.7(RSPR), After RSPR.*
RSPR 25 13:00:06.9,17.79N×69.05W,h90^{km}±3^{km}**,MD3.7**/6**, MD3.7**/6**,9C,Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	**1.86**	**83**	⇑*e*P	P	13 00 37.0	-0.8
CRPR				*e*S	S	13 01 00.1	-0.5
MGP	**Maguayo**	**1.88**	**83**	⇑*e*P	P	13 00 37.0	-1.1
LSP	**Las Mesas**	**1.91**	**78**	⇑*e*P	P	13 00 37.6	-0.8
AOPR	**Arecibo Observ**	**2.26**	**75**	⇑*e*P	P	13 00 42.1	-1.1
AOPR				*e*S	S	13 01 09.5	-0.7
ICM	**Isla Caja Muer**	**2.41**	**87**	⇑*e*P	P	13 00 44.3	-1.1
ICM				*e*S	S	13 01 13.5	-0.5
SJG	**San Juan**	**2.78**	**83**	⇑*e*P	P	13 00 49.4	-1.1
HUMP	**Col San Antoni**	**3.07**	**83**	⇑*e*P	P	13 00 53.3	-1.2
HUMP				*e*S	S	13 01 29.2	-1.0
CBYP	**Canovanas**	**3.08**	**81**	⇑*e*P	P	13 00 53.1	-1.5
CBYP				*e*S	S	13 01 29.8	-0.6
MTP	**Monte Pirata**	**3.34**	**84**	⇑*e*P	P	13 00 56.9	-1.3
MTP				*e*S	S	13 01 36.0	-1.0

JMA ***25*** *13:05:23.9±0.2,36.75N×142.24E,h35^{km},M3.4*
IDC ***25*** *13:05:31.2±3.7,37.27N×141.92E,h40^{km}±33^{km},mb3.4/4, mb1 3.6/6,mb1mx3.4/22,mbtmp3.6/6,ML3.6/2,MS2.6/1, Ms1 2.6/1,ms1mx2.1/16,Error ellipse: s-maj=32.6km s-min=24.2km az=117.0*
ISC 25 13:05:23.7±2.0**,36.76N**±0.06×**142.27E**±0.08**,h27^{km}**±19^{km}**, n18,σ0^{s}70**/25**,mb3.6**/4**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.23**	**286**	P	**Pn**	**13 05 44.6**	**-0.7**
JFK	**Kawauchi**	**1.27**	**299**	P	**Pn**	**13 05 45.6**	**-0.3**
JFK				S	**Sn**	**13 06 02.0**	**-0.2**
JHO	**Hitachi**	**1.38**	**264**	P	**Pn**	**13 05 46.9**	**-0.6**
JFT	**Otama**	**1.72**	**297**	P	**Pn**	**13 05 52.6**	**+0.2**
JFT				S	**Sn**	**13 06 13.7**	**0.0**
JIO	**Ouri**	**1.84**	**337**	P	**Pn**	**13 05 54.3**	**+0.2**
JIO				S	**Sn**	**13 06 16.9**	**+0.2**
JOU	**Okura**	**2.05**	**322**	P	**Pn**	**13 05 58.1**	**+1.0**
JFY	**Yanaizu**	**2.15**	**288**	P	**Pn**	**13 05 58.7**	**+0.1**
JYS	**Shirataka**	**2.28**	**310**	P	**Pn**	**13 06 00.9**	**+0.5**
JAG	**Ashikaga**	**2.29**	**262**	P	**Pn**	**13 06 00.4**	**-0.2**
JAG				S	**Sn**	**13 06 27.3**	**-0.9**
JMK	**Ichinoseki**	**2.34**	**339**	P	**Pn**	**13 06 01.7**	**+0.5**
JMK				S	**Sn**	**13 06 29.3**	**-0.1**
JKT	**Katashina**	**2.43**	**271**	P	**Pn**	**13 06 02.1**	**-0.4**
MJAR	**Matsushiro Arr**	**3.28**	**267**	P	**Pn**	**13 06 15.1**	**+0.6**
	6.2nm,0.3s,baz=87,slow=14,SNR=56						
MJAR				S	**Sn**	**13 06 54.3**	**+1.2**
	2.2nm,0.3s,baz=95,slow=12,SNR=5.1						
MAT	**Matsushiro**	**3.28**	**267**	P	**Pn**	**13 06 15.6**	**+1.0**
MAT				S	**Sn**	**13 06 52.7**	**-0.4**
ASAJ	**Asahikawa**	**7.35**	**2**	P	**Pn**	**13 07 09.8**	**-2.2**
	1.4nm,0.3s,baz=49,slow=29,SNR=13						
ASAJ				LR	LR	13 10 46.7	
	comp=Z,44nm,19.1s,baz=197,slow=46						
SONM	**Songino Array**	**28.51**	**304**	P	**P**	**13 11 18.9**	**+0.1**
	1.1nm,0.8s,mb3.6,baz=104,slow=9.2,SNR=9.8						
SONM				pP	pP	13 11 27.1	+0.4
	0.9nm,0.8s,baz=100,slow=9.0,SNR=6.5						
MKAR	**Makanchi Array**	**44.85**	**302**	P	**P**	**13 13 36.7**	**-0.5**
	0.3nm,0.4s,mb3.5,baz=75,slow=10,SNR=3.1						
ILAR	**Eielson Array**	**49.36**	**32**	P	**P**	**13 14 12.9**	**+0.7**
	0.5nm,0.8s,mb3.6,baz=258,slow=6.2,SNR=6.3						
WRA	**Warramunga Arr**	**56.89**	**189**	P	**P**	**13 15 16.1**	**+7.3**
	0.5nm,0.8s,mb3.6,baz=5.8,slow=7.9,SNR=5.3						

NEIC ***25*** *13:20:42.5,17.34N×101.26W,h10^{km},MD3.8(MEX),After MEX.*
MEX 25 13:20:42.6±1.1**,17.29N×101.30W,h16^{km}**±16^{km}**,MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.35**	**333**	*i* P	Pb	13 20 48.6	-1.4
ZIIG				*i* S	Sb	13 20 53.5	-1.5
CAIG	**El Cayaco**	**1.01**	**104**	*i* P	Pb	13 20 57.9	-3.5
CAIG				*i* S	Sb	13 21 09.8	-4.4
ACX	**Acapulco**	**1.39**	**107**	*e*P	Pn	13 21 05.5	-1.9
ACX				*i* S	Sb	13 21 23.0	-2.0
PLIG	**Platanillo**	**2.03**	**57**	*i* P	Pn	13 21 13.6	-3.1
PLIG				*i* S	Sn	13 21 36.5	-5.4
MOIG	**Morelia**	**2.38**	**2**	*i* P	Pn	13 21 17.6	-4.0
MOIG				*i* S	Sn	13 21 45.7	-4.9

IDC ***25*** *13:39:27.6±2.3,45.23S×97.17E,mb4.4/2,mb1 4.6/2, mb1mx4.0/11,mbtmp4.4/2,MS3.7/3,Ms1 3.7/3, ms1mx3.3/10,Error ellipse: s-maj=108.0km s-min=53.6km az=169.0*
NEIC ***25*** *13:39:28.4±0.5,45.09S×96.98E,h10^{km},mb4.7/3,Error ellipse: s-maj=17.0km s-min=8.5km az=135.0*
ISC 25 13:39:26.5±0.8**,45.1S**±0.2×**97.0E**±0.2**,h10^{km},n26, σ0^{s}28**/10**,mb4.4**/5**,MS3.7**/3**,3C,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CASY	**Casey**	**22.47**	**166**	*e*P	**P**	**13 44 26.2**	**-0.7**
CASY	**Casey**	**22.47**	**166**	*e*P	**P**	**13 44 27.7**	**+0.8**
	49nm,1.6s,mb4.7						
MAW	**Mawson**	**28.74**	**207**	LR	LR	13 54 57.0	
	comp=Z,178nm,20.5s,MS3.7,baz=186,slow=32						
STKA	**Stephens Creek**	**36.89**	**85**	P	**P**	**13 46 36.9**	**-0.1**
	4.3nm,1.0s,mb4.2,baz=232,slow=19,SNR=5.8						
STKA				LR	LR	13 59 02.9	
	comp=Z,65nm,18.9s,MS3.4,baz=206,slow=32						
WRA	**Warramunga Arr**	**39.75**	**63**	P	**P**	**13 47 01.1**	**+0.1**
	5.5nm,0.9s,mb4.3,baz=223,slow=8.4,SNR=36						
WB2	**Warramunga Arr**	**39.76**	**63**	*e*P	**P**	**13 47 01.0**	**-0.1**
WRAB	**Tennant Creek**	**39.77**	**63**	*e*P	**P**	**13 47 01.2**	**+0.1**
	7.9nm,1.0s,mb4.4						
SNAA	**Sanae**	**50.84**	**204**		tx	13 48 32.0	
SNAA	**Sanae**	**50.84**	**204**		tx	13 48 37.9	
SNAA	**Sanae**	**50.84**	**204**		tx	13 48 41.1	
SNAA	**Sanae**	**50.84**	**204**		tx	13 48 46.2	
SNAA	**Sanae**	**50.84**	**204**	⇑*i*P	**P**	**13 48 28.3**	**-0.3**
SNAA				P	pP	13 48 32.0	+0.3
SNAA				P		13 48 37.9	
SNAA				P		13 48 41.1	
SNAA				P		13 48 46.2	
VNA2	**Neumayer--Watz**	**52.49**	**204**		tx	13 48 43.7	
VNA2	**Neumayer--Watz**	**52.49**	**204**		tx	13 48 47.6	
VNA2	**Neumayer--Watz**	**52.49**	**204**		tx	13 48 55.0	
VNA2	**Neumayer--Watz**	**52.49**	**204**	⇑*i*P	**P**	**13 48 41.2**	**+0.1**
VNA2				P		13 48 47.6	
VNA2				P		13 48 55.0	
VNA1	**Neumayer--Stat**	**52.87**	**204**		tx	13 48 43.3	
VNA3	**Neumayer Olymp**	**52.96**	**203**		tx	13 48 51.1	
VNA3	**Neumayer Olymp**	**52.96**	**203**		tx	13 48 55.6	
VNA3	**Neumayer Olymp**	**52.96**	**203**		tx	13 49 03.2	
VNA3	**Neumayer Olymp**	**52.96**	**203**	⇑*i*P	**P**	**13 48 44.8**	**+0.2**
VNA3				P		13 48 51.1	
VNA3				P		13 48 55.6	
VNA3				P		13 49 03.2	
LSZ	**Lusaka**	**64.38**	**274**	*e*P	**P**	**13 50 05.0**	**0.0**
	7.1nm,1.1s,mb4.6						
MKAR	**Makanchi Array**	**92.41**	**350**	LR	LR	14 29 02.7	
	comp=Z,59nm,19.0s,MS4.1,baz=257,slow=32						
INK	**Inuvik**	**145.38**	**30**	PKPbc	PKPbc	13 59 05.5	+1.7
	5.8nm,1.0s,baz=302,slow=4.2,SNR=17						
INK	**Inuvik**	**145.38**	**30**	PKPbc	PKPbc	13 59 05.5	+1.7
NVAR	**Mina Array Bea**	**153.02**	**92**	PKPbc	PKPdf	13 59 26.2	+7.1
	1.4nm,0.6s,baz=210,slow=3.8,SNR=17						

IDC 25 14:13:15.5±4.2**,1.41N×97.33E,mb3.7**/4**,mb1 3.8**/4**, mb1mx3.7**/16**,mbtmp3.7**/4**,Error ellipse: s-maj=162.0km s-min=28.1km az=57.0,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.04**	**122**	P	P	14 21 09.1	-1.7
	0.3nm,0.6s,baz=301,slow=9.2,SNR=7.1						
WRA				pP	pP	14 21 16.4	+5.6
	0.3nm,0.4s,baz=309,slow=8.9,SNR=8.4						
SONM	**Songino Array**	**46.91**	**8**	P	P	14 21 48.1	-1.5
	0.6nm,0.7s,baz=194,slow=8.7,SNR=5.7						
MKAR	**Makanchi Array**	**47.07**	**346**	P	P	14 21 48.7	-2.2
	0.4nm,0.4s,baz=164,slow=9.3,SNR=7.3						
MKAR				pP	pP	14 21 56.9	+6.0
	0.4nm,0.4s,baz=167,slow=8.1,SNR=5.0						
ZAL	**Zalesovo**	**53.36**	**351**	P	P	14 22 36.5	-2.4
	1.1nm,0.3s,baz=196,slow=6.2,SNR=4.9						

JMA 25 14:17:35.4±0.2**,38.22N×144.71E,h46^{km},M3.5,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.53**	**291**	P	P	14 18 15.3	+0.3
MIYJ	**Miyakonagasawa**	**2.63**	**302**	P	P	14 18 16.6	+0.2
MIYJ				*e*S	S	14 18 47.0	-0.3
JIO	**Ouri**	**2.65**	**276**	P	P	14 18 17.3	+0.6
JIO				*e*S	S	14 18 48.0	+0.1
JMK	**Ichinoseki**	**2.83**	**286**	P	P	14 18 20.2	+0.9
JMK				*e*S	S	14 18 53.8	+1.4
JKB	**Kayabe**	**4.62**	**324**	*e*S	S	14 19 34.6	-3.1
JRY	**Ryogami san**	**5.14**	**246**	P	P	14 18 51.0	-0.8
JRY				*e*S	S	14 19 46.6	-4.0

ISK ***25*** *14:18:51.6,39.78N×43.70E,h21^{km},ML3.2*
TIF ***25*** *14:18:51.6,39.78N×43.75E,h5^{km}±1^{km}*
ISC 25 14:18:52.4±0.5**,39.78N**±0.03×**43.70E**±0.04**,h5^{km},n13, σ1^{s}32**/21**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLDR	**Caldiran**	**0.66**	**165**	PG	**Pg**	**14 19 04.0**	**-1.6**
CLDR				SG	**Sg**	**14 19 15.0**	**+0.6**
GNI	**Garni**	**0.88**	**65**	PG	**Pg**	**14 19 09.4**	**-0.5**
GNI				SG	**Sg**	**14 19 22.1**	**+0.4**
KARS	**Kars**	**0.95**	**331**	PG	**Pg**	**14 19 10.1**	**-1.3**
VANB	**Van**	**1.21**	**192**	*e*PN	**Pn**	**14 19 13.8**	**-2.1**
TVAN	**Van**	**1.27**	**191**	*i* P	**Pb**	**14 19 16.6**	**+0.2**
TVAN				*i* S	**Sb**	**14 19 34.8**	**+1.9**
ERZM	**Erzurum**	**1.80**	**275**	*i* P	**Pn**	**14 19 23.8**	**-0.6**
ERZM				*i* S	**Sn**	**14 19 49.4**	**+1.6**
EZM	**Erzurum**	**1.81**	**275**	PN	**Pn**	**14 19 22.6**	**-1.8**
ARTV	**Artvin**	**1.95**	**317**	*i* P	**Pn**	**14 19 27.1**	**+0.6**
ARTV				*i* S	**Sn**	**14 19 59.4**	**+7.8**
MTA	**Mtatsminda**	**2.08**	**23**	P	**Pn**	**14 19 32.1**	**+3.8**
MTA				S	**Sn**	**14 19 58.8**	**+3.9**
DGRG	**David-gareji**	**2.10**	**37**	P	**Pn**	**14 19 30.0**	**+1.4**
BNGL	**BINGOL**	**2.15**	**248**	*i* P	**Pn**	**14 19 29.5**	**+0.2**
BNGL				*i* S	**Sn**	**14 19 58.4**	**+1.8**
BEST	**Besiri**	**2.68**	**226**	*i* P	**Pn**	**14 19 36.0**	**-0.9**
BEST				*i* S	**Sn**	**14 20 15.0**	**+4.9**
PTK	**Pertek**	**3.46**	**256**	*e*PN	**Pn**	**14 19 46.8**	**-1.2**

NEIC ***25*** *14:35:05.9±0.8,23.93S×179.92W,h505^{km}±10^{km},mb4.7/7, Error ellipse: s-maj=12.2km s-min=9.7km az=167.0*
IDC ***25*** *14:35:07.8±1.3,24.03S×179.89E,h519^{km}±12^{km},mb3.6/9, mb1 3.7/11,mb1mx3.6/16,mbtmp4.4/11,Error ellipse: s-maj=18.8km s-min=14.2km az=172.0*
ISC 25 14:35:06.2±1.2**,23.99S**±0.08×**179.94E**±0.10**, h514^{km}**±15^{km}**,n35,σ0^{s}78**/33**,mb4.3**/14**,3D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.58**	**160**	P	**P**	**14 36 39.6**	**-0.4**
	108nm,0.3s,baz=101,slow=23,SNR=7.8						
DZM	**Mont Dzumac**	**12.58**	**276**	P	**P**	**14 37 53.9**	**+2.3**
	0.3nm,0.3s,baz=96,slow=18,SNR=4.1						
AFI	**Afiamalu**	**12.72**	**39**	P	**P**	**14 37 48.5**	**-4.5**
	2.8nm,0.3s,baz=335,slow=15,SNR=5.6						
AFI				S	**S**	**14 39 58.5**	**-8.7**
	0.8nm,0.3s,baz=119,slow=19,SNR=2.5						
AFI	**Afiamalu**	**12.72**	**39**	P	**P**	**14 37 48.5**	**-4.5**
AFI				S	**S**	**14 39 58.5**	**-8.7**
URZ	**Urewera**	**14.43**	**189**	P	**P**	**14 38 09.8**	**-0.6**
	1.5nm,0.3s,baz=25,slow=7.1,SNR=12						
URZ				S	**S**	**14 40 39.5**	**+0.6**
	0.9nm,0.3s,baz=92,slow=22,SNR=12						
RPZ	**Rata Peaks**	**20.99**	**198**	P	**P**	**14 39 14.3**	**+0.4**
	4.5nm,0.5s,baz=32,slow=15,SNR=5.4						
HNR	**Honiara**	**23.96**	**304**	P	**P**	**14 39 40.3**	**-0.9**
	32nm,0.6s,mb5.1,baz=189,slow=1.0,SNR=3.8						
HNR	**Honiara**	**23.96**	**304**	*e*P	**P**	**14 39 40.2**	**-1.0**
	18nm,0.8s,mb4.8						
CTA	**Charters Tower**	**31.42**	**270**	⇓*i*P	**P**	**14 40 47.3**	**+1.0**
	23nm,0.4s,mb5.1						
CTAO	**Charters Tower**	**31.42**	**270**	*e*P	**P**	**14 40 47.1**	**+0.8**
	13nm,0.4s,mb4.8						
PMG	**Port Moresby**	**34.47**	**289**	P	**P**	**14 41 12.8**	**+0.8**
	21nm,0.7s,mb4.8,baz=98,slow=8.1,SNR=10						
PMG	**Port Moresby**	**34.47**	**289**	*e*P	**P**	**14 41 12.3**	**+0.3**
STKA	**Stephens Creek**	**34.64**	**248**	P	**P**	**14 41 14.0**	**+0.8**
	2.2nm,0.4s,mb4.0,baz=74,slow=11,SNR=7.0						
STKA	**Stephens Creek**	**34.64**	**248**	*e*P	**P**	**14 41 13.7**	**+0.5**
WB2	**Warramunga Arr**	**42.34**	**266**	⇓*i*P	**P**	**14 42 15.7**	**-0.4**
WRAB	**Tennant Creek**	**42.34**	**266**	*e*P	**P**	**14 42 15.6**	**-0.5**
	15nm,0.8s,mb4.6						
WRA	**Warramunga Arr**	**42.35**	**266**	P	**P**	**14 42 15.9**	**-0.3**
	12nm,0.4s,mb4.8,baz=96,slow=8.3,SNR=318						
WRA				ScP		14 46 59.5	
	1.7nm,1.0s,baz=95,slow=4.1,SNR=6.9						
WRA				S	**S**	**14 47 57.0**	**-3.5**
	0.6nm,0.8s,baz=104,slow=13,SNR=3.9						
FORT	**Forrest**	**46.23**	**250**	*e*P	**P**	**14 42 45.2**	**-1.1**
	22nm,0.6s,mb4.9						
KAKA	**Kakadu**	**46.27**	**275**	⇓*i*P	**P**	**14 43 06.1**	**+19**
	8.2nm,0.2s,mb4.9						
FITZ	**Fitzroy Crossi**	**50.77**	**266**	*e*P	**P**	**14 43 20.3**	**-0.2**
	15nm,0.8s,mb4.4						
KKM	**Kota Kinabalu**	**68.88**	**287**	*e*P	**P**	**14 45 20.8**	**-0.2**
MJAR	**Matsushiro Arr**	**71.94**	**326**	P	**P**	**14 45 38.0**	**-0.6**
	2.1nm,0.6s,mb3.7,baz=165,slow=6.3,SNR=4.7						
KSM	**Kuching**	**72.07**	**280**	*e*P	**P**	**14 45 39.5**	**-0.2**
SNAA	**Sanae**	**84.58**	**179**		**P**	**14 46 44.2**	**-0.9**
NVAR	**Mina Array Bea**	**84.86**	**44**	P	**P**	**14 46 47.4**	**+0.2**
	0.4nm,0.5s,mb3.2,baz=232,slow=9.6,SNR=4.6						
VNA2	**Neumayer--Watz**	**85.20**	**178**		**P**	**14 46 48.2**	**+0.1**
TXAR	**Lajitas Array**	**90.53**	**58**	P	**P**	**14 47 15.0**	**+0.9**
	1.2nm,0.7s,mb3.9,baz=213,slow=6.9,SNR=7.3						
ANMO	**Albuquerque**	**91.06**	**52**	*e*P	**P**	**14 47 16.6**	**+0.2**
	0.8nm,0.6s,mb3.8						
PDAR	**Pinedale Array**	**92.79**	**44**	P	**P**	**14 47 24.9**	**+0.7**
	0.2nm,0.3s,mb3.6,baz=214,slow=3.3,SNR=3.6						
ARCES	**ARCESS Array B**	**131.97**	**348**	PKP	PKPdf	14 53 20.8	+0.7
	6.3nm,1.0s,baz=64,slow=3.4,SNR=6.1						
FINES	**FINESS Array B**	**138.52**	**341**	PKP	PKPdf	14 53 34.1	+1.8
	1.0nm,0.5s,baz=143,slow=9.5,SNR=5.9						
FINES				SKPbc		14 56 18.8	
	3.6nm,0.9s,baz=57,slow=5.6,SNR=7.6						
HFS	**Hagfors**	**142.63**	**349**	PKhKP		14 53 37.1	
	2.5nm,0.4s,baz=63,slow=3.3,SNR=26						
AKASG	**Malin Array Be**	**145.02**	**327**	PKPbc	PKPbc	14 53 45.0	+0.2
	1.2nm,0.3s,baz=45,slow=4.4,SNR=5.4						
AKASG				SKPbc		14 56 36.2	
	1.3nm,0.5s,baz=46,slow=3.3,SNR=6.4						
AKASG	**Malin Array Be**	**145.02**	**327**	PKPbc	PKPbc	14 53 45.0	+0.2
AKASG				SKPbc		14 56 36.2	
EKA	**Eskdalemuir Ar**	**148.62**	**3**	PKPbc	PKPdf	14 53 54.5	+4.8
	2.0nm,1.0s,baz=326,slow=2.6,SNR=4.1						

IDC ***25*** *14:59:38.0±4.8,5.16S×145.48E,h68^{km}±45^{km},mb4.0/5, mb1 4.2/8,mb1mx4.0/15,mbtmp4.4/8,ML4.0/3,MS2.8/2, Ms1 2.8/2,ms1mx2.6/15,Error ellipse: s-maj=30.4km s-min=25.7km az=6.0*
NEIC ***25*** *14:59:38.4±2.6,5.13S×145.39E,h73^{km}±24^{km},mb4.3/2, Error ellipse: s-maj=21.4km s-min=14.1km az=153.0*
ISC 25 14:59:37.6±3.7**,5.2S**±0.2×**145.4E**±0.1**,h77^{km}**±34^{km}**,n17, σ0^{s}89**/18**,mb4.0**/5**,1C,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.49**	**158**	P	**P**	**15 00 45.4**	**+0.7**
	46nm,0.3s,baz=323,slow=6.2,SNR=221						
PMG				S	**S**	**15 01 35.2**	**-0.9**
	46nm,0.3s,baz=154,slow=18,SNR=16						
PMG				LR	LR	15 02 03.6	
	comp=Z,86nm,19.6s,baz=129,slow=32						
PMG	**Port Moresby**	**4.49**	**158**	*e*Pn	**P**	**15 00 45.3**	**+0.6**
PMG				*e*Sn	**S**	**15 01 35.4**	**-0.7**
CTA	**Charters Tower**	**14.79**	**177**	*e*P	**P**	**15 03 10.4**	**+6.4**
	2.8nm,0.6s						
CTA	**Charters Tower**	**14.79**	**177**	P	**P**	**15 03 05.8**	**+1.8**
	0.2nm,0.3s,baz=22,slow=17,SNR=3.2						
CTA				LR	LR	15 08 41.1	
	comp=Z,47nm,18.2s,baz=51,slow=37						
CTA	**Charters Tower**	**14.79**	**177**	P	**P**	**15 03 05.8**	**+1.8**
CTA				LR	LR	15 08 41.1	
CTAO	**Charters Tower**	**14.79**	**177**	*e*P	**P**	**15 03 09.6**	**+5.6**
	3.8nm,0.6s						
KAKA	**Kakadu**	**14.82**	**239**	⇑*i*P	**P**	**15 03 25.1**	**+21**
	8.1nm,0.3s						
WRAB	**Tennant Creek**	**18.16**	**215**	*e*P	**P**	**15 03 45.6**	**-0.5**
	7.7nm,0.7s						
WB2	**Warramunga Arr**	**18.17**	**215**	*e*P	**P**	**15 03 45.3**	**-0.9**
WRA	**Warramunga Arr**	**18.18**	**215**	P	**P**	**15 03 45.8**	**-0.5**
	0.8nm,0.3s,baz=39,slow=12,SNR=40						
FITZ	**Fitzroy Crossi**	**23.19**	**235**	*e*P	**P**	**15 04 39.9**	**+1.6**
	16nm,0.6s,mb4.5						
FITZ	**Fitzroy Crossi**	**23.19**	**235**	P	**P**	**15 04 40.1**	**+1.8**
	24nm,0.7s,mb4.7,baz=62,slow=8.8,SNR=34						
DZM	**Mont Dzumac**	**26.34**	**131**	P	**P**	**15 05 09.0**	**+0.6**
	8.6nm,1.1s,mb4.1,baz=313,slow=19,SNR=4.2						
STKA	**Stephens Creek**	**26.75**	**187**	P	**P**	**15 05 12.2**	**+0.1**
	3.3nm,0.5s,mb4.1,baz=350,slow=10,SNR=7.8						
MKAR	**Makanchi Array**	**75.91**	**321**	P	**P**	**15 11 17.6**	**0.0**
	0.6nm,0.9s,mb3.3,baz=95,slow=9.2,SNR=8.1						
ILAR	**Eielson Array**	**85.39**	**23**	P	**P**	**15 12 06.2**	**-1.1**
	1.6nm,1.0s,mb3.9,baz=255,slow=5.8,SNR=7.3						
DBIC	**Dimbokro**	**150.41**	**274**	PKPbc	PKPdf	15 19 22.6	+6.8
	3.6nm,0.9s,baz=90,slow=6.1,SNR=4.9						

IDC 25 15:37:34.6±24.0**,49.54S×107.27E,mb3.7**/1**,mb1 4.1**/1**, mb1mx3.6**/10**,mbtmp3.7**/1**,MS3.7**/4**,Ms1 3.7**/4**, ms1mx3.5**/10**,Error ellipse: s-maj=1326.0km s-min=56.8km az=117.0,Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**31.08**	**68**	LR	LR	15 53 33.4	
	comp=Z,124nm,21.4s,baz=204,slow=31						
WRA	**Warramunga Arr**	**36.59**	**46**	P	P	15 44 42.2	-1.9
	2.1nm,1.1s,baz=210,slow=8.4,SNR=6.2						
CTA	**Charters Tower**	**42.69**	**61**	LR	LR	15 59 52.8	
	comp=Z,51nm,21.0s,baz=142,slow=31						
RPZ	**Rata Peaks**	**43.02**	**108**	LR	LR	15 59 18.5	
	comp=Z,161nm,21.9s,baz=186,slow=30						
BOSA	**Boshof**	**63.83**	**256**	LR	LR	16 08 53.9	
	comp=Z,81nm,18.1s,baz=142,slow=29						
NVAR	**Mina Array Bea**	**145.87**	**91**	PKPbc	PKPbc	15 57 14.7	-0.8
	0.3nm,0.5s,baz=211,slow=5.3,SNR=3.6						
TXAR	**Lajitas Array**	**149.06**	**119**	PKPbc	PKPdf	15 57 24.0	+2.0
	0.3nm,0.8s,baz=203,slow=6.9,SNR=3.6						

NEIC ***25*** *16:29:08.9±0.3,44.94N×114.24W,h5^{km},ML3.5,Error ellipse: s-maj=5.0km s-min=3.9km az=220.0*
IDC ***25*** *16:29:12.4±1.2,44.74N×114.18W,mb1 3.7/6, mb1mx3.6/24,mbtmp3.4/6,ML3.3/6,Error ellipse: s-maj=14.1km s-min=8.9km az=134.0*
ISC 25 16:29:08.9±0.3**,44.90N**±0.02×**114.24W**±0.04**,h10^{km},n59, σ1^{s}00**/67**,1C,Western Idaho**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCMT	**McKenzie Canyo**	**0.99**	**94**	*e*P	**Pb**	**16 29 27.0**	**-0.7**
DLMT	**Dillon**	**1.25**	**68**	*e*P	**Pb**	**16 29 32.0**	**-0.1**
HLID	**Hailey**	**1.35**	**185**	*e*P	**Pb**	**16 29 34.0**	**+0.2**
HLID				*e*S	**Sb**	**16 29 51.1**	**+0.2**
MSO	**Missoula**	**1.94**	**6**	⇑*i*P	**Pn**	**16 29 42.2**	**-0.1**
MSO				*e*S	**Sn**	**16 30 09.3**	**+2.4**
BOZ	**Bozeman (W)**	**1.99**	**67**	*e*P	**Pn**	**16 29 42.5**	**-0.4**
BOZ				*e*S	**Sn**	**16 30 08.9**	**+0.8**
QLMT	**Earthquake Lak**	**2.00**	**91**	*e*P	**Pn**	**16 29 44.5**	**+1.4**
CHMT	**Chamberlain Mo**	**2.12**	**19**	*e*P	**Pn**	**16 29 44.6**	**-0.3**
BMO	**Blue Mountains**	**2.18**	**270**	*e*P	**Pn**	**16 29 45.4**	**-0.3**
BMO				*e*S	**Sn**	**16 30 18.6**	**+5.6**
HRY	**Holter Researc**	**2.47**	**42**	*e*P	**Pn**	**16 29 49.0**	**-1.0**
YFT	**Old Faithful**	**2.47**	**99**	Pn	**Pn**	**16 29 49.9**	**0.0**
IMW	**Indian Meadow**	**2.57**	**112**	*e*P	**Pn**	**16 29 52.0**	**+0.6**
TPAW	**Teton Pass**	**2.76**	**120**	*e*P	**Pn**	**16 29 54.8**	**+0.8**
LKWY	**Lake**	**2.76**	**96**	Pn	**Pn**	**16 29 53.9**	**-0.1**
MOOW	**Moose Ponds**	**2.76**	**114**	*e*Pn	**Pn**	**16 29 54.8**	**+0.7**
REDW	**Red Top Meadow**	**2.89**	**121**	*e*Pn	**Pn**	**16 29 55.8**	**-0.1**
SNOW	**Snow King Moun**	**2.89**	**119**	Pn	**Pn**	**16 29 56.1**	**+0.2**
LOHW	**Long Hollow**	**2.92**	**115**	*e*P	**Pn**	**16 29 57.8**	**+1.5**
BSMT	**Bassoo Peak**	**2.97**	**353**	P	**Pn**	**16 29 57.4**	**+0.4**
AHID	**Auburn Hatcher**	**3.12**	**132**	Pn	**Pn**	**16 29 59.4**	**+0.2**
HVU	**Hansel Valley**	**3.30**	**161**	*e*P	**Pn**	**16 30 02.5**	**+0.7**
GCMT	**Greycliff**	**3.34**	**73**	P	**Pn**	**16 30 03.1**	**+0.8**
SPUT	**South Promonto**	**3.83**	**159**	*e*P	**Pn**	**16 30 11.5**	**+2.3**
HWUT	**Hardware Ranch**	**3.83**	**148**	Pn	**Pn**	**16 30 10.0**	**+0.8**
NEW	**Newport**	**3.90**	**330**	*e*P	**Pn**	**16 30 09.5**	**-0.8**
OT3	**Othello 3**	**3.91**	**299**	P	**Pn**	**16 30 11.1**	**+0.7**

OD2	**Odessa Site #2**	**3.98**	**310**	P	**Pn**	**16 30 11.7**	**+0.3**
HAWA	**Hanford**	**4.00**	**294**	Pn	**Pn**	**16 30 10.4**	**-1.2**
PDAR	**Pinedale Array**	**4.00**	**121**	Pn	**Pn**	**16 30 17.9**	**+6.2**
	0.9nm,0.3s,baz=310,slow=12,SNR=20						
PDAR				Pg	**Pg**	**16 30 28.1**	**-0.8**
	2.7nm,0.3s,baz=301,slow=16,SNR=38						
PDAR				Lg		16 31 13.8	
	0.9nm,0.3s,baz=312,slow=18,SNR=3.1						
PDAR	**Pinedale Array**	**4.00**	**121**	Pn	**Pn**	**16 30 17.9**	**+6.2**
PDAR				Pg	**Pg**	**16 30 28.1**	**-0.8**
PDAR				Lg		16 31 13.8	
GBL	**Gable Mountain**	**4.03**	**297**	P	**Pn**	**16 30 12.8**	**+0.8**
WVOR	**Wild Horse Val**	**4.03**	**234**	*e*Pn	**Pn**	**16 30 12.1**	**-0.1**
SNIWA	**Snively Ranch**	**4.11**	**294**	P	**Pn**	**16 30 13.7**	**+0.5**
ELK	**Elko**	**4.22**	**190**	Pn	**Pn**	**16 30 15.9**	**+1.1**
	1.5nm,0.3s,baz=2.4,slow=12,SNR=24						
ELK				Pg	**Pg**	**16 30 25.9**	**-7.2**
	8.5nm,0.3s,baz=14,slow=15,SNR=33						
ELK				Lg		16 31 18.0	
	14nm,0.3s,baz=219,slow=12,SNR=11						
ELK	**Elko**	**4.22**	**190**	*e*Pn	**Pn**	**16 30 15.4**	**+0.6**
TCUT	**Toone Canyon**	**4.32**	**150**	*e*Pn	**Pn**	**16 30 15.7**	**-0.5**
EGMT	**Eagleton**	**4.40**	**43**	*e*Pn	**Pn**	**16 30 15.6**	**-1.8**
NOQ	**North Oquirrh**	**4.53**	**159**	Pn	**Pn**	**16 30 18.9**	**-0.3**
CTU	**Camp Tracy**	**4.59**	**156**	Pn	**Pn**	**16 30 20.0**	**0.0**
DUG	**Dugway**	**4.82**	**167**	Pn	**Pn**	**16 30 22.1**	**-1.3**
EBG	**Ellensburg**	**4.85**	**297**	P	**Pn**	**16 30 24.3**	**+0.6**
TBM	**Table Mountain**	**4.97**	**299**	P	**Pn**	**16 30 25.7**	**+0.3**
DAU	**Daniels Canyon**	**5.00**	**153**	Pn	**Pn**	**16 30 25.7**	**-0.1**
NLU	**North Lily Min**	**5.20**	**161**	Pn	**Pn**	**16 30 28.6**	**0.0**
MPU	**Maple Canyon**	**5.25**	**158**	Pn	**Pn**	**16 30 29.6**	**+0.2**
MOD	**Modoc**	**5.34**	**238**	*e*Pn	**Pn**	**16 30 29.0**	**-1.6**
LAO	**LASA Array**	**5.88**	**70**	*e*Pn	**Pn**	**16 30 36.1**	**-2.2**
SRU	**San Rafael**	**6.42**	**153**	Pn	**Pn**	**16 30 45.3**	**-0.5**
MSU	**Marysvale**	**6.57**	**166**	Pn	**Pn**	**16 30 48.1**	**+0.1**
MNV	**Mina**	**7.10**	**206**	*e*Pn	**Pn**	**16 30 54.5**	**-0.9**
ARUT	**Antelope Range**	**7.14**	**175**	Pn	**Pn**	**16 30 55.1**	**-0.9**
NVAR	**Mina Array Bea**	**7.15**	**207**	Pn	**Pn**	**16 30 59.0**	**+2.9**
	0.3nm,0.3s,baz=31,slow=14,SNR=11						
NVAR				Pg	**Pg**	**16 31 22.3**	**-9.3**
	1.3nm,0.3s,baz=50,slow=42,SNR=14						
NVAR				Lg		16 32 55.2	
	0.8nm,0.3s,baz=295,slow=21,SNR=3.8						
NVAR	**Mina Array Bea**	**7.15**	**207**	Pn	**Pn**	**16 30 59.0**	**+2.9**
NVAR				Pg	**Pg**	**16 31 22.3**	**-9.3**
NVAR				Lg		16 32 55.2	
TPH	**Tonopah**	**7.18**	**199**	Pn	**Pn**	**16 30 56.1**	**-0.4**
RSSD	**Black Hills**	**7.34**	**93**	*e*Pn	**Pn**	**16 30 56.1**	**-2.6**
TPNV	**Topopah Spring**	**8.09**	**192**	Pn	**P**	**16 31 07.0**	**-2.3**
ULM	**Lac du Bonnet**	**13.49**	**60**	Pn	**P**	**16 32 21.1**	**-1.7**
	0.2nm,0.3s,baz=238,slow=15,SNR=2.8						
ULM				Lg		16 36 10.1	
	0.4nm,0.3s,baz=159,slow=22,SNR=3.6						
YKA	**Yellowknife Ar**	**17.62**	**359**	Pn	**P**	**16 33 16.4**	**+0.5**
	0.2nm,0.3s,baz=177,slow=12,SNR=4.5						
TXAR	**Lajitas Array**	**17.66**	**148**	Pn	**P**	**16 33 18.6**	**+2.1**
	0.1nm,0.3s,baz=337,slow=9.5,SNR=4.1						
WRA	**Warramunga Arr**	**118.86**	**270**	PKhKP		16 47 58.2	
	0.8nm,0.9s,baz=44,slow=1.9,SNR=10						

NIED ***25*** *16:51:00,34.90N×140.00E,h56^{km},Mw3.6 Best double couple: M$_0$2.98×10^{14} NP1:φ$_s$294°,δ84°,λ-164°. NP2: φ$_s$202°,δ74°,λ-6°.*

JMA ***25*** *16:51:16.9±0.1,34.90N×139.93E,h54^{km}±1^{km},M3.7 Broadband fault plane solution: P waves. NP1:φ$_s$109°, δ84°,λ175°. NP2:φ$_s$199°,δ85°,λ6°. Principal axes: T Plg8°, Azm64°; N Plg82°, Azm237°; P Plg1°, Azm334°;*

JMA Felt I J1.

ISC 25 16:51:16.8±0.8,**34.88N**±0.05×**139.94E**±0.04,**h54**^{km}±8^{km}, **n14,**σ**0**^{s}**41**/23,**6C-4D,Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATJ	**Tateyama 2**	**0.16**	**345**	⇓P	**P**	**16 51 25.8**	**+0.4**
TATJ				S	**S**	**16 51 32.1**	**+0.5**
BSO4	**Boso 4**	**0.34**	**71**	⇑P	**P**	**16 51 27.3**	**+0.4**
KTR	**Katsuura**	**0.41**	**48**	⇑P	**P**	**16 51 27.5**	**0.0**
KTR				S	**S**	**16 51 35.1**	**-0.1**
JYO	**Yokosk**	**0.41**	**327**	⇓P	**P**	**16 51 27.9**	**+0.4**
JIM2	**Oshima 3**	**0.45**	**250**	P	**P**	**16 51 27.7**	**-0.2**
JIM2				S	**S**	**16 51 35.5**	**-0.4**
BSO3	**Boso 3**	**0.47**	**99**	⇑P	**P**	**16 51 28.4**	**+0.2**
JOD2	**Odawara 2**	**0.80**	**299**	P	**P**	**16 51 31.8**	**-0.4**
JOD2				S	**S**	**16 51 42.6**	**-0.9**
JMY	**Miyakejima3**	**0.88**	**204**	P	**P**	**16 51 33.5**	**+0.3**
JMY				S	**S**	**16 51 45.7**	**+0.3**
BSO1	**Boso 1**	**0.88**	**104**	⇑P	**P**	**16 51 32.9**	**-0.3**
BSO1				S	**S**	**16 51 44.7**	**-0.8**
JIZS	**Izushimoda**	**0.89**	**260**	⇑P	**P**	**16 51 33.6**	**+0.2**
JIZS				S	**S**	**16 51 45.4**	**-0.3**
JYN	**Shimob**	**1.30**	**299**	⇓P	**P**	**16 51 39.0**	**-0.3**
JYN				S	**S**	**16 51 55.9**	**0.0**
JRY	**Ryogami san**	**1.42**	**324**	⇓P	**P**	**16 51 40.4**	**-0.5**
SHZ3	**Shizuoka 3**	**1.44**	**278**	⇑P	**P**	**16 51 41.6**	**+0.5**
MAT	**Matsushiro**	**2.18**	**320**	P	**P**	**16 51 51.9**	**+0.4**
MAT				S	**S**	**16 52 17.7**	**+0.4**

CSEM ***25*** *16:59:08.8±0.1,24.11N×36.40E,h35^{km},ML3.0,Error ellipse: s-maj=4.5km s-min=3.1km az=168.0*

HLW ***25*** *16:59:09.6,24.06N×36.35E,h17^{km},Mb3.0*

SNSN ***25*** *16:59:11.4,24.28N×36.74E,h10^{km},Ml2.0*

ISC 25 16:59:06.4±0.8,**24.11N**±0.05×**36.40E**±0.06,**h10**^{km}**,n14,** σ**0**^{s}**98**/17,**1C-5D,Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAGS	**Hagol**	**1.32**	**282**	⇓*e*P	**Pb**	**16 59 31.8**	**+0.9**
HSHL	**Bi'r Shalatayn**	**1.35**	**223**	⇑*i*P	**Pb**	**16 59 31.7**	**+0.2**
HSHL				S	**Sb**	**16 59 47.0**	**-1.6**
UMJS	**Umm Lajj**	**1.40**	**36**	P	**Pn**	**16 59 32.3**	**+0.3**
UMJS				S	**Sb**	**16 59 47.6**	**-2.2**
YNBS	**Yanbu' al Bahr**	**1.47**	**81**	P	**Pn**	**16 59 33.3**	**+0.2**
EMRS	**Mersa Alam**	**1.69**	**303**	⇓*e*P	**Pn**	**16 59 36.7**	**+0.5**
HADB		**2.04**	**308**	⇓*e*P	**Pn**	**16 59 42.0**	**+0.8**
HQSR		**2.46**	**312**	⇓*e*P	**Pn**	**16 59 47.6**	**+0.3**
HQSR				S	**Sn**	**17 00 15.7**	**-1.9**
HEDF	**Idfu**	**3.09**	**289**	P	**Pn**	**16 59 56.4**	**+0.1**
HEDF	**Idfu**	**3.09**	**289**	P	**Pn**	**16 59 56.3**	**0.0**
HSFG		**3.32**	**318**	⇓*e*P	**Pn**	**16 59 59.3**	**-0.2**
AAHD	**Abu Hadid**	**3.36**	**265**	P	**Pn**	**17 00 00.5**	**+0.4**
AAHD	**Abu Hadid**	**3.36**	**265**	P	**Pn**	**17 00 00.4**	**+0.3**
AKRL	**Khor El Raml**	**3.40**	**263**	P	**Pn**	**17 00 00.6**	**0.0**
TBKS	**Tabuk**	**4.11**	**2**	P	**Pn**	**17 00 12.2**	**+1.5**

IDC ***25*** *17:05:19.8±4.0,2.54N×125.70E,h108^{km}±36^{km},mb3.9/5, mb1 4.1/5,mb1mx3.7/15,mbtmp4.3/5,MS4.1/1,Ms1 4.1/1, ms1mx2.8/24,Error ellipse: s-maj=84.9km s-min=13.8km az=70.0*

NEIC ***25*** *17:05:20.7±4.3,2.51N×125.67E,h118^{km}±42^{km},mb4.4/6, Error ellipse: s-maj=46.8km s-min=8.7km az=69.0*

ISC 25 17:05:14.1±4.1,**2.5N**±0.2×**125.4E**±0.5,**h68**^{km}±37^{km}**,n14,** σ**0**^{s}**55**/14,**mb4.2**/9,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.46**	**179**	*e*P	**P**	**17 09 49.4**	**+0.8**
	5.8nm,0.3s						
FITZ	**Fitzroy Crossi**	**20.46**	**179**	P	**P**	**17 09 49.5**	**+0.9**
	7.3nm,0.3s,baz=20,slow=10.0,SNR=22						
WRAB	**Tennant Creek**	**23.97**	**159**	*e*P	**P**	**17 10 23.3**	**+0.1**
	8.9nm,0.6s,mb4.3						
WRA	**Warramunga Arr**	**23.97**	**159**	P	**P**	**17 10 23.4**	**+0.1**
	5.2nm,0.5s,mb4.1,baz=341,slow=9.9,SNR=54						
WRA				S	**S**	**17 14 33.3**	**+1.1**
	2.0nm,0.8s,baz=332,slow=20,SNR=9.8						
WB2	**Warramunga Arr**	**23.98**	**159**	*e*P	**P**	**17 10 23.2**	**-0.2**
ENH	**Enshi**	**31.46**	**333**	P	**P**	**17 11 31.9**	**+0.4**
	3.6nm,0.6s,mb4.3						
JHJ	**Hachijo jima 2**	**33.35**	**22**	LR	LR	17 22 19.4	
	comp=Z,320nm,21.5s,baz=279,slow=31						
STKA	**Stephens Creek**	**37.49**	**157**	P	**P**	**17 12 22.8**	**-0.3**
	8.1nm,0.8s,mb4.7,baz=327,slow=7.1,SNR=8.8						
STKA	**Stephens Creek**	**37.49**	**157**	P	**P**	**17 12 22.8**	**-0.3**
SONM	**Songino Array**	**48.05**	**343**	P	**P**	**17 13 49.0**	**+0.5**
	0.6nm,0.7s,mb3.5,baz=158,slow=7.6,SNR=6.5						
MKAR	**Makanchi Array**	**57.80**	**326**	P	**P**	**17 15 00.7**	**-0.1**
	1.2nm,0.4s,mb4.2,baz=122,slow=7.4,SNR=16						
KURK	**Kurchatov**	**62.06**	**328**	*e*P	**P**	**17 15 29.7**	**-0.1**
	5.8nm,0.7s,mb4.7						
CASY	**Casey**	**69.43**	**186**	*e*P	**P**	**17 16 16.1**	**-0.6**
	3.5nm,0.7s,mb4.3						
VNDA	**Vanda**	**82.38**	**172**	*e*P	**P**	**17 17 28.6**	**-1.1**
	1.0nm,0.8s,mb3.7						

NIED ***25*** *17:12:00,36.30N×141.00E,h41^{km},Mw3.8 Best double couple: M$_0$6.26×10^{14} NP1:φ$_s$29°,δ72°,λ84°. NP2:φ$_s$228°, δ19°,λ108°.*

NEIC ***25*** *17:12:36.3±2.6,36.19N×141.04E,h42^{km}±21^{km}, MG4.1(JMA),Error ellipse: s-maj=27.6km s-min=21.2km az=76.0*

NEIC Recorded [2 JMA] in Ibaraki and [1 JMA] in Fukushima Prefectures.

IDC ***25*** *17:12:36.2±2.6,36.25N×141.11E,h40^{km}±24^{km},mb3.5/6, mb1 3.8/10,mb1mx3.6/24,mbtmp3.9/10,ML3.8/4,MS2.9/1, Ms1 2.9/1,ms1mx2.0/25,Error ellipse: s-maj=25.4km s-min=17.4km az=79.0*

JMA ***25*** *17:12:36.5±0.1,36.22N×140.90E,h47^{km}±1^{km},M4.1*

JMA Felt II J1.

ISC 25 17:12:34.7±0.7,**36.26N**±0.04×**141.13E**±0.07,**h45**^{km}±7^{km}, **n21,**σ**1**^{s}**07**/28,**mb3.7**/6,**1C-6D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.57**	**308**	⇓P	**P**	**17 12 46.9**	**+0.3**
JHO				S	**S**	**17 12 54.1**	**-1.1**
CHOJ	**Chosi**	**0.60**	**202**	⇑P	**P**	**17 12 47.8**	**+0.8**
CHOJ				S	**S**	**17 12 55.3**	**-0.6**
JYT	**Yasato**	**0.76**	**268**	⇓P	**P**	**17 12 48.6**	**-0.5**
JYT				S	**S**	**17 12 56.8**	**-2.8**
ONAJ	**Iwakimizuishiy**	**0.88**	**342**	⇓P	**P**	**17 12 52.1**	**+1.3**
ONAJ				S	**S**	**17 13 03.1**	**+0.4**
JFK	**Kawauchi**	**1.12**	**350**	⇓P	**P**	**17 12 55.4**	**+1.2**
JAG	**Ashikaga**	**1.36**	**277**	⇓P	**P**	**17 12 57.1**	**-0.7**
JKT	**Katashina**	**1.60**	**289**	⇓P	**P**	**17 13 01.3**	**+0.2**
MJAR	**Matsushiro Arr**	**2.37**	**278**	Pn	**P**	**17 13 11.4**	**-0.7**
	24nm,0.3s,baz=99,slow=8.8,SNR=255						
MJAR				Sn	**S**	**17 13 41.4**	**+1.3**
	11nm,0.3s,baz=90,slow=18,SNR=4.3						
MAJO	**Matsushiro**	**2.37**	**278**	*e*Pn	**P**	**17 13 12.4**	**+0.3**
MAT	**Matsushiro**	**2.37**	**278**	P	**P**	**17 13 11.6**	**-0.5**
MAT				S	**S**	**17 13 40.9**	**+0.8**
MAT	**Matsushiro**	**2.37**	**278**	*e*P	**P**	**17 13 12.0**	**-0.1**
MAT				*e*S	**S**	**17 13 41.0**	**+0.9**
JHJ	**Hachijo jima 2**	**3.33**	**200**	Pn	**P**	**17 13 27.0**	**+1.4**
	14nm,0.3s,baz=260,slow=19,SNR=12						
JHJ				Sn	**S**	**17 14 05.5**	**+1.2**
	52nm,0.3s,baz=77,slow=23,SNR=7.4						
ASAJ	**Asahikawa**	**7.92**	**8**	Pn	**P**	**17 14 28.1**	**-1.9**
	0.9nm,0.3s,baz=339,slow=26,SNR=11						
JNU	**Nakatsue**	**9.00**	**253**	LR	LR	17 18 22.1	
	comp=Z,81nm,19.9s,baz=54,slow=38						
CBIJ	**Chichi jima**	**9.18**	**174**	Pn	**P**	**17 14 44.5**	**-3.0**
	7.5nm,0.3s,baz=146,slow=21,SNR=6.7						
SONM	**Songino Array**	**28.04**	**305**	P	**P**	**17 18 23.2**	**-0.5**
	0.5nm,0.4s,mb3.5,baz=106,slow=8.9,SNR=6.7						
MKAR	**Makanchi Array**	**44.34**	**303**	P	**P**	**17 20 41.4**	**-0.6**
	0.4nm,0.4s,mb3.5,baz=82,slow=8.6,SNR=5.0						
ILAR	**Eielson Array**	**50.27**	**32**	P	**P**	**17 21 28.4**	**+0.3**
	0.5nm,0.8s,mb3.6,baz=270,slow=5.4,SNR=5.0						
BVAR	**Borovoye Array**	**50.92**	**313**	P	**P**	**17 21 33.0**	**-0.4**
	0.4nm,0.4s,mb3.7,baz=70,slow=7.5,SNR=5.3						
WRA	**Warramunga Arr**	**56.27**	**188**	P	**P**	**17 22 12.0**	**-1.1**
	0.4nm,0.5s,mb3.7,baz=2.8,slow=7.6,SNR=12						
FINES	**FINESS Array B**	**69.39**	**332**	P	**P**	**17 23 41.1**	**+1.7**
	4.9nm,1.1s,mb4.4,baz=45,slow=5.9,SNR=3.5						

PRU ***25*** *17:30:37.1,51.53N×16.03E*

WAR 25 17:30:37.2,51.56N×16.01E,h1^{km}**,ML2.7,2C,Mining Induced,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.74**	**166**	*e*PG	Pg	17 30 51.0	-1.0
KSP				*e*SG	Sg	17 31 01.0	-0.9
UPC	**Upice**	**1.06**	**180**	*e*PG	Pg	17 30 56.3	-2.0
DPC	**Dobruska-Polom**	**1.23**	**170**	*e*PG	Pg	17 30 59.5	-2.3
DPC				*e*SG	Sg	17 31 15.4	-2.7
	27nm,0.3s						
PVCC	**Panska Ves**	**1.38**	**222**	*e*PG	Pg	17 31 02.2	-2.5
PVCC				*e*SG	Sg	17 31 22.2	-0.8
	48nm,0.2s						
PRU	**Pruhonice**	**1.83**	**211**	*e*PN	Pn	17 31 08.4	-1.6
PRU				*e*PG	Pg	17 31 10.2	-3.5
PRU				*e*SG	Sg	17 31 34.1	-4.0
CLL	**Collm**	**1.90**	**263**	*i* PN	Pn	17 31 09.0	-2.0
CLL				*i* PG	Pg	17 31 12.4	-2.7
CLL				*i*		17 31 15.7	
CLL				*i* SG	Sg	17 31 36.9	-3.4
OKC	**Ostrava-Krasne**	**2.20**	**141**	*e*PG	Pg	17 31 17.5	-3.6
OKC				*e*SG	Sg	17 31 46.6	-3.8
TREC	**Trest**	**2.29**	**189**	*e*PN	Pn	17 31 16.2	-0.5
NKC	**Novy Kostel**	**2.62**	**241**	*e*PN	Pn	17 31 20.1	-1.2
NKC				*e*PG	Pg	17 31 25.4	-4.0
NKC				*e*SG	Sg	17 32 01.8	-2.5
OJC	**Ojcow**	**2.75**	**118**	*e*PG	Pg	17 31 30.0	-2.2
OJC				*e*SG	Sg	17 32 05.0	-3.8
KHC	**Kasperske Hory**	**2.89**	**214**	*e*PN	Pn	17 31 23.9	-1.3
KHC				*e*PG	Pg	17 31 29.3	-5.6
KHC				*e*SG	Sg	17 32 07.2	-6.1
MOA	**Molln**	**3.88**	**198**	⇑*i*Pn	Pn	17 31 37.4	-1.9
	comp=Z,0.7nm,0.1s						
MOA				⇑*i*Sg	Sg	17 32 42.3	-4.2
	comp=N,7.1nm,0.5s						

NEIC ***25*** *17:41:32.2±5.2,51.55N×6.87E,h10^{km},ML2.8(LDG), Error ellipse: s-maj=58.8km s-min=11.9km az=214.0*

CSEM ***25*** *17:41:32.7±0.1,51.59N×6.89E,h2^{km},ML2.8/4,Error ellipse: s-maj=3.6km s-min=1.7km az=101.0*

LDG ***25*** *17:41:33.1±0.1,51.58N×6.85E,h1^{km},Ml2.8/5,Error ellipse: s-maj=2.4km s-min=1.4km az=36.0,Suspected Mining induced.*

BGR ***25*** *17:41:33.5±0.6,51.49N×6.87E,h1^{km},ML2.3/2,Error ellipse: s-maj=8.9km s-min=4.4km az=113.0*

BNS ***25*** *17:41:34.1±1.1,51.52N×6.84E,h1^{km},ML2.1*

ISC 25 17:41:30.9±0.4,**51.57N**±0.02×**6.67E**±0.04,**n31,**σ**1**^{s}**26**/56, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	**Hlnxe**	**0.14**	**67**	Pg	**Pg**	**17 41 33.1**	**-0.5**
BZER				Sg	**Sg**	**17 41 34.6**	**-0.9**
LAUG	**Laupendahl**	**0.28**	**141**	*e*Pg	**Pg**	**17 41 37.3**	**+0.9**
BUG	**Bochum--Univer**	**0.40**	**108**	*e*Pg	**Pg**	**17 41 39.1**	**+0.3**
WTSB	**Winterswijk**	**0.41**	**11**	*e*Pg	**Pg**	**17 41 40.3**	**+1.2**
BNS	**Bensberg**	**0.68**	**152**	*e*Pg	**Pg**	**17 41 46.4**	**+1.8**
BNS				*e*Sg	**Sg**	**17 41 54.4**	**+0.8**
HOBG	**Hohbusch**	**0.72**	**144**	*e*Pg	**Pg**	**17 41 45.8**	**+0.5**
HOBG				*e*Sg	**Sg**	**17 41 54.5**	**-0.3**
HGN	**Heimansgroeve**	**0.93**	**210**	*e*Pg	**Pg**	**17 41 52.1**	**+2.7**
	20nm,0.3s						
HGN				*e*Sg	**Sg**	**17 42 06.2**	**+4.4**
KLL	**Kalltalsperre**	**0.95**	**194**	*e*Pg	**Pg**	**17 41 51.8**	**+1.9**
KLL				*e*Sg	**Sg**	**17 42 05.0**	**+2.5**
	62nm,0.3s						
STB	**Steinbach**	**0.98**	**174**	*e*Pg	**Pg**	**17 41 51.8**	**+1.3**
STB				*e*Sg	**Sg**	**17 42 04.6**	**+1.1**
	66nm,0.6s						
IBBN	**Ibbenburen**	**1.00**	**42**	*e*Pg	**Pg**	**17 41 51.2**	**+0.3**
	SNR=3.0						
IBBN				*e*Sg	**Sg**	**17 42 05.0**	**+0.8**
HILG	**Hillesheim**	**1.28**	**180**	*e*Sg	**Sg**	**17 42 14.0**	**+0.6**
BGG	**Burgeitz**	**1.43**	**162**	*e*Pg	**Pg**	**17 41 58.3**	**-1.1**
BGG				*e*Sg	**Sg**	**17 42 17.7**	**-0.7**
TNS	**Taunus Mts**	**1.75**	**139**	*e*Pg	**Pg**	**17 42 03.7**	**-2.3**
	SNR=2.2						
TNS				*e*Sg	**Sg**	**17 42 24.7**	**-4.6**
GIVF	**Givet**	**1.88**	**219**	*e*Pg	**Pg**	**17 42 09.6**	**+1.2**
GIVF				*e*Sg	**Sg**	**17 42 34.6**	**+1.2**
	26nm,0.3s						
GIVF	**Givet**	**1.88**	**219**	*e*Pn	**Pn**	**17 42 05.7**	**+1.2**
GIVF				*e*Pg	**Pg**	**17 42 09.6**	**+1.2**
GIVF				*e*Sg	**Sg**	**17 42 34.6**	**+1.2**
GIVF	**Givet**	**1.88**	**219**	*e*Pg	**Pg**	**17 42 09.6**	**+1.2**
GIVF				*e*Sg	**Sg**	**17 42 34.6**	**+1.2**
	13nm,0.3s						
WLF	**Walferdange**	**1.93**	**190**	*e*Pg	**Pg**	**17 42 09.7**	**+0.2**
	SNR=1.6						
WLF				*e*Sg	**Sg**	**17 42 33.3**	**-2.0**
BAIF	**Baives**	**2.17**	**227**	*e*Pg	**Pg**	**17 42 14.8**	**+0.5**
BAIF				*e*Sg	**Sg**	**17 42 44.0**	**+0.8**
	9.6nm,0.2s						
BAIF	**Baives**	**2.17**	**227**	*e*Pn	**Pn**	**17 42 09.7**	**+0.9**
BAIF				*e*Pg	**Pg**	**17 42 14.8**	**+0.5**
BAIF				*e*Sg	**Sg**	**17 42 44.0**	**+0.8**
BAIF	**Baives**	**2.17**	**227**	*e*Pg	**Pg**	**17 42 14.8**	**+0.5**
BAIF				*e*Sg	**Sg**	**17 42 44.0**	**+0.8**
	4.8nm,0.2s						
CLZ	**Clausthal**	**2.32**	**82**	*e*Sg	**Sg**	**17 42 43.8**	**-4.4**
CDF	**Champ du Feu**	**3.18**	**173**	*e*Pn	**Pn**	**17 42 22.1**	**-1.1**
CDF				*e*Sg	**Sg**	**17 43 12.9**	**-4.0**
	4.7nm,0.3s						
MEZF	**Maizieres J'vi**	**3.24**	**199**	*e*Pn	**Pn**	**17 42 23.6**	**-0.4**
MEZF				*e*Sg	**Sg**	**17 43 16.2**	**-2.6**
	4.1nm,0.3s						
LOR	**Lormes**	**4.68**	**204**	*e*Pn	**Pn**	**17 42 43.6**	**-0.8**
LOR				*e*Sn	**Sn**	**17 43 35.8**	**-4.5**
SSF	**Saint Saulge**	**4.96**	**206**	*e*Pn	**Pn**	**17 42 47.4**	**-1.1**
AVF	**Avril sur Loir**	**5.25**	**206**	*e*Pn	**Pn**	**17 42 51.0**	**-1.5**
SMF	**Signal de Mont**	**5.26**	**202**	*e*Pn	**Pn**	**17 42 51.0**	**-1.7**
LDF	**La Druitiere**	**5.29**	**238**	*e*Pn	**Pn**	**17 42 52.7**	**-0.4**
LDF				*e*Sn	**Sn**	**17 43 51.8**	**-3.8**
FLN	**La Foliniere**	**5.38**	**241**	*e*Pn	**Pn**	**17 42 53.9**	**-0.5**
FLN				*e*Sn	**Sn**	**17 43 55.1**	**-3.0**
BGF	**Bois d'Agland**	**5.61**	**208**	*e*Pn	**Pn**	**17 42 56.3**	**-1.3**
BGF				*e*Sn	**Sn**	**17 43 57.8**	**-5.8**
GRR	**Gorron**	**5.80**	**240**	*e*Pn	**Pn**	**17 42 59.5**	**-0.8**
GRR				*e*Sn	**Sn**	**17 44 02.8**	**-5.8**

MOS ***25*** *17:44:47.1±0.7,45.46N×137.15E,h311^{km},mb4.0/9,Error ellipse: s-maj=19.8km s-min=10.3km az=118.3*

BJI ***25*** *17:44:48.9,45.35N×137.23E,h349^{km},mB3.9,mb4.1*

JMA ***25*** *17:44:49.7±0.4,45.06N×137.27E,h366^{km},M3.7*

SKHL ***25*** *17:44:50.1±1.2,45.41N×137.04E,h330^{km}±9^{km},mb4.3/7, msh4.5/2*

NEIC ***25*** *17:44:50.3±0.6,45.25N×137.17E,h341^{km}±6^{km},mb4.1/15, Error ellipse: s-maj=8.3km s-min=6.9km az=127.0*

IDC ***25*** *17:44:50.0±1.1,45.20N×137.11E,h337^{km}±14^{km}, mb3.4/13,mb1 3.5/18,mb1mx3.4/27,mbtmp4.2/18,Error ellipse: s-maj=13.7km s-min=11.9km az=131.0*

ISC 25 17:44:48.9±0.3,**45.17N**±0.04×**137.07E**±0.05,**h339**^{km}±4^{km}, **n87,**σ**1**^{s}**16**/102,**mb3.8**/29,**3D,Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEY	**Ternei**	**0.36**	**248**	⇓*e*P	**P**	**17 45 31.0**	**-0.9**
TEY				AMB	AMB	17 45 31.9	
	50nm,0.7s						
TEY				*e*S	**S**	**17 46 04.4**	**-1.2**
TEY				A		17 46 05.0	
	170nm,0.9s						
JSK	**Shakotan**	**3.05**	**125**	P	**P**	**17 45 49.0**	**+0.7**
JWK2	**Keihoku**	**3.41**	**86**	P	**P**	**17 45 53.2**	**+1.4**
JOSM	**Okushiri--Mats**	**3.55**	**150**	P	**P**	**17 45 54.1**	**+0.9**
JOSM				*e*S	**S**	**17 46 44.3**	**+0.8**
JHR	**Hokuryu**	**3.63**	**112**	P	**P**	**17 45 54.7**	**+0.8**
JSE	**Soyaes**	**3.91**	**91**	P	**P**	**17 45 57.7**	**+0.9**
JSE				*e*S	**S**	**17 46 51.1**	**+1.0**
JEW	**Eniwo**	**3.93**	**125**	P	**P**	**17 45 57.7**	**+0.7**
ASAJ	**Asahikawa**	**4.08**	**103**	P	**P**	**17 45 59.3**	**+0.7**
	15nm,0.3s,baz=277,slow=7.0,SNR=135						
ASAJ				S	**S**	**17 46 55.1**	**+1.8**
	baz=31,slow=31,SNR=2.9						
ASAJ	**Asahikawa**	**4.08**	**103**	P	**P**	**17 45 59.3**	**+0.7**
ASAJ				S	**S**	**17 46 55.2**	**+1.9**
ASAJ				pmax	pmax		
	comp=Z,15nm,0.3s						
JKK2	**Kamakawa 2**	**4.26**	**106**	P	**P**	**17 46 01.1**	**+0.6**
JKK2				*e*S	**S**	**17 46 58.1**	**+1.4**
YSS	**Yuzh-Sakhalins**	**4.34**	**64**	*e*P	**P**	**17 46 02.0**	**+0.7**
YSS				AMB	AMB	17 46 02.9	
	comp=Z,24nm,0.9s						
YSS				*i* S	**S**	**17 46 58.5**	**+0.3**
YSS				A		17 46 59.6	
	comp=Z,70nm,1.0s						
YSS	**Yuzh-Sakhalins**	**4.34**	**64**	*e*Pn	**P**	**17 46 01.8**	**+0.4**
JKB	**Kayabe**	**4.37**	**137**	P	**P**	**17 46 01.5**	**-0.2**
JFR	**Furan**	**4.45**	**115**	P	**P**	**17 46 02.6**	**0.0**
JFR				*e*S	**S**	**17 47 00.2**	**-0.2**
JOT	**Ohata**	**4.77**	**141**	P	**P**	**17 46 06.5**	**+0.4**
JNBK	**Urakawa-nobuka**	**5.03**	**123**	*e*S	**S**	**17 47 10.9**	**-0.8**
JTKR	**Abashiri--Toko**	**5.03**	**101**	P	**P**	**17 46 09.1**	**+0.2**
JTKR				*e*S	**S**	**17 47 12.3**	**+0.6**
JAR	**Ashorobuto**	**5.17**	**109**	P	**P**	**17 46 10.5**	**+0.1**
JAR				*e*S	**S**	**17 47 14.3**	**-0.1**
UGL	**Uglegorsk**	**5.18**	**39**	*e*P	**P**	**17 46 11.0**	**+0.4**
JCH	**Churui**	**5.22**	**117**	P	**P**	**17 46 09.8**	**-1.2**
JCH				*e*S	**S**	**17 47 11.0**	**-4.5**
MDJ	**Mudanjiang**	**5.34**	**267**	P	**P**	**17 46 14.5**	**+2.1**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.7s						
MDJ				AMB	AMB		
	comp=Z,40nm,3.1s						
MDJ	**Mudanjiang**	**5.34**	**267**	*e*Pn	**P**	**17 46 14.4**	**+2.0**
	comp=Z,14nm,0.7s						
JANG	**Nango**	**5.81**	**144**	P	**P**	**17 46 16.4**	**-1.3**
JANG				*e*S	**S**	**17 47 23.8**	**-3.7**
NEM2	**Nemuro 2**	**6.49**	**103**	P	**P**	**17 46 23.9**	**-1.8**
NEM2				*e*S	**S**	**17 47 35.4**	**-6.3**
TYV	**Tymovskoe**	**6.81**	**31**	⇓*i*P	**P**	**17 46 25.0**	**-4.6**
TYV				AMB	AMB	17 46 26.2	
	comp=Z,48nm,0.8s						
JMK	**Ichinoseki**	**6.94**	**152**	P	**P**	**17 46 29.6**	**-1.5**
JMK				*e*S	**S**	**17 47 49.0**	**-2.3**
EKMR	**Ekimchan**	**8.35**	**343**	*e*P	**P**	**17 46 43.9**	**-4.0**
EKMR				AMB	AMB	17 46 44.6	
	comp=Z,4.0nm,0.5s						
MJAR	**Matsushiro Arr**	**8.67**	**174**	P	**P**	**17 46 52.9**	**+1.2**
	comp=Z,0.9nm,0.3s,baz=97,slow=27,SNR=6.2						
JRY	**Ryogami san**	**9.25**	**171**	P	**P**	**17 46 57.8**	**-0.9**
JOD2	**Odawara 2**	**10.02**	**170**	*e*S	**S**	**17 48 55.1**	**-2.8**
YASR	**Yasnyy**	**10.06**	**327**	*e*P	**P**	**17 47 05.1**	**-3.2**
YASR				AMB	AMB	17 47 09.3	
	comp=Z,7.0nm,0.5s						
ZEA	**Zeya**	**10.68**	**327**	*e*P	**P**	**17 47 13.5**	**-2.4**
ZEA				AMB	AMB	17 47 15.9	
	comp=Z,20nm,0.6s						
BMKR	**Bomnak**	**10.91**	**334**	⇓*e*P	**P**	**17 47 16.0**	**-2.6**
BMKR				AMB	AMB	17 47 17.0	
	comp=Z,10.0nm,0.6s						
KROS	**Kirovskiy**	**11.32**	**329**	*e*P	**P**	**17 47 21.3**	**-2.3**
JHJ	**Hachijo jima 2**	**12.22**	**169**	P	**P**	**17 47 32.7**	**-1.8**
	comp=Z,10nm,0.3s,baz=35,slow=21,SNR=3.4						
JHJ				S	**S**	**17 49 42.9**	**-2.8**
	comp=Z,3.6nm,0.3s,baz=222,slow=16,SNR=4.4						
HIA	**Hailar**	**12.47**	**295**	*e*Pn	**P**	**17 47 38.4**	**+1.0**
	comp=Z,9.5nm,0.6s						
HIA	**Hailar**	**12.47**	**295**	*e*P	**P**	**17 47 38.4**	**+1.0**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JNU	**Nakatsue**	**12.95**	**204**	P	**P**	**17 47 44.0**	**+0.7**
	comp=Z,0.5nm,0.3s,baz=348,slow=16,SNR=4.2						
YAK	**Yakutsk**	**17.43**	**348**	*e*P	**P**	**17 48 29.4**	**-2.3**
	comp=Z,14nm,0.5s						
YAK	**Yakutsk**	**17.43**	**348**	*e*P	**P**	**17 48 29.4**	**-2.3**
YAK				pmax	pmax		
	comp=Z,14nm,0.5s						
JOW	**Kunigami**	**19.61**	**204**	P	**P**	**17 48 54.0**	**+0.3**
	comp=Z,1.0nm,0.3s,baz=92,slow=14,SNR=7.3						
ULN	**Ulaanbaatar**	**20.77**	**288**	*e*P	**P**	**17 49 05.1**	**+0.3**
	comp=Z,2.4nm,0.5s						
ULN	**Ulaanbaatar**	**20.77**	**288**	*e*P	**P**	**17 49 05.1**	**+0.2**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SONM	**Songino Array**	**21.21**	**288**	P	**P**	**17 49 10.0**	**+0.8**
	comp=Z,6.5nm,0.8s,mb3.9,baz=81,slow=9.2,SNR=36						
ZAK	**Zakamensk**	**23.16**	**295**	*e*P	**P**	**17 49 27.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.6						
ZAL	**Zalesovo**	**34.31**	**304**	P	**P**	**17 51 05.7**	**+0.2**
	comp=Z,4.7nm,0.5s,mb4.0,baz=28,slow=8.5,SNR=23						
MKAR	**Makanchi Array**	**37.45**	**293**	P	**P**	**17 51 32.2**	**+0.4**
	comp=Z,2.0nm,0.7s,mb3.5,baz=82,slow=11,SNR=18						
KURK	**Kurchatov**	**38.65**	**300**	*e*P	**P**	**17 51 41.8**	**+0.1**
	comp=Z,4.6nm,0.3s,mb4.2						
KURK	**Kurchatov**	**38.65**	**300**	*e*P	**P**	**17 51 41.8**	**+0.1**
KURK				pmax	pmax		

	comp=Z,5.0nm,0.3s,mb4.2						
BRVK	**Borovoye**	**42.96**	**306**	*e*P	**P**	**17 52 16.8**	**+0.3**
	comp=Z,1.3nm,0.8s,mb3.1						
BRVK	**Borovoye**	**42.96**	**306**	*e*P	**P**	**17 52 16.8**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.0						
GUN	**Gumba**	**43.82**	**265**	*e*P	**P**	**17 52 25.1**	**+1.3**
	comp=Z,15nm,0.4s,mb4.5						
AAK	**Ala-Archa**	**44.16**	**290**	*e*P	**P**	**17 52 26.1**	**-0.1**
	comp=Z,2.7nm,0.3s,mb3.9						
AAK	**Ala-Archa**	**44.16**	**290**	*e*P	**P**	**17 52 26.1**	**-0.1**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb3.9						
KKN	**Kakani**	**44.32**	**265**	*e*P	**P**	**17 52 29.2**	**+1.5**
	comp=Z,8.2nm,0.6s,mb4.1						
PKI	**Pulchoki**	**44.36**	**265**	*e*P	**P**	**17 52 29.1**	**+1.0**
	comp=Z,7.0nm,0.4s,mb4.1						
DMN	**Daman**	**44.55**	**265**	*e*P	**P**	**17 52 31.1**	**+1.5**
ILAR	**Eielson Array**	**44.62**	**36**	P	**P**	**17 52 28.0**	**-1.6**
	comp=Z,0.4nm,0.5s,mb2.8,baz=268,slow=5.3,SNR=12						
GKN	**Gorkha**	**44.64**	**266**	*e*P	**P**	**17 52 31.4**	**+1.1**
	comp=Z,13nm,0.4s,mb4.5						
KOLN	**Koldanda**	**45.52**	**266**	*e*P	**P**	**17 52 38.6**	**+1.5**
	comp=Z,5.0nm,0.3s,mb4.2						
INK	**Inuvik**	**48.78**	**30**	P	**P**	**17 53 00.8**	**-1.0**
	comp=Z,0.6nm,0.3s,mb3.3,baz=303,slow=7.1,SNR=6.6						
INK	**Inuvik**	**48.78**	**30**	P	**P**	**17 53 00.6**	**-1.2**
	comp=Z,0.9nm,0.4s,mb3.4						
INK	**Inuvik**	**48.78**	**30**	P	**P**	**17 53 00.8**	**-0.9**
INK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	**ARCESS Array B**	**55.23**	**337**	P	**P**	**17 53 48.0**	**-0.9**
	comp=Z,2.5nm,0.8s,mb3.6,baz=55,slow=8.3,SNR=7.1						
JOF	**Joensuu**	**57.28**	**328**	*e*p	**P**	**17 54 01.9**	**-1.4**
	comp=Z,1.4nm,0.4s,mb3.6						
KAF	**Kangasniemi**	**59.61**	**329**	*e*p	**P**	**17 54 18.0**	**-1.3**
	comp=Z,2.1nm,0.5s,mb3.8,baz=48,slow=6.5						
KAF	**Kangasniemi**	**59.61**	**329**	*e*P	**P**	**17 54 18.0**	**-1.3**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.8						
FINES	**FINESS Array B**	**60.12**	**329**	P	**P**	**17 54 21.9**	**-0.8**
	comp=Z,4.5nm,0.6s,mb4.1,baz=55,slow=7.8,SNR=39						
WRA	**Warramunga Arr**	**64.85**	**183**	P	**P**	**17 54 54.3**	**+0.3**
	comp=Z,0.5nm,0.4s,mb3.5,baz=0.2,slow=6.9,SNR=10						
NB2	**NORSAR Subarra**	**65.43**	**334**	P	**P**	**17 54 55.9**	**-1.1**
	comp=Z,1.1nm,0.5s,mb3.7,baz=36,slow=6.5						
NOA	**NORSAR Array B**	**65.43**	**334**	P	**P**	**17 54 56.5**	**-0.5**
	comp=Z,1.4nm,0.6s,mb3.8,baz=38,slow=6.3,SNR=5.0						
NAO	**NORSAR Subarra**	**65.71**	**334**	P	**P**	**17 54 55.9**	**-2.9**
	comp=Z,1.1nm,0.5s,mb3.8						
NAO	**NORSAR Subarra**	**65.71**	**334**	P	**P**	**17 54 55.9**	**-2.9**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
AKASG	**Malin Array Be**	**65.94**	**318**	P	**P**	**17 55 00.3**	**-0.1**
	comp=Z,2.4nm,0.5s,mb4.2,baz=43,slow=6.5,SNR=26						
BRTR	**Keskin Array B**	**71.14**	**308**	P	**P**	**17 55 33.4**	**+0.9**
	comp=Z,0.9nm,0.6s,mb3.7,baz=76,slow=5.1,SNR=4.4						
CLL	**Collm**	**72.45**	**327**	P	**P**	**17 55 40.0**	**0.0**
GERES	**GERESS Array B**	**74.12**	**325**	P	**P**	**17 55 50.5**	**+0.8**
	comp=Z,0.6nm,0.5s,mb3.6,baz=27,slow=6.0,SNR=6.1						
PDAR	**Pinedale Array**	**74.24**	**45**	P	**P**	**17 55 51.7**	**+1.2**
	comp=Z,0.2nm,0.5s,mb3.1,baz=270,slow=1.5,SNR=2.3						
LPL	**La Plagne**	**79.59**	**327**	*e*P	**P**	**17 56 20.5**	**+0.8**
	comp=Z,7.1nm,0.7s,mb4.2						
LPL	**La Plagne**	**79.59**	**327**	*e*P	**P**	**17 56 20.5**	**+0.8**
LPL				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
LPG	**La Plagne**	**79.60**	**327**	*e*P	**P**	**17 56 20.7**	**+1.0**
	comp=Z,5.4nm,0.6s,mb4.1						
LPG	**La Plagne**	**79.60**	**327**	*e*P	**P**	**17 56 20.7**	**+1.0**
LPG				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
SMF	**Signal de Mont**	**79.71**	**329**	*e*P	**P**	**17 56 20.4**	**+0.1**
AVF	**Avril sur Loir**	**79.77**	**330**	*e*P	**P**	**17 56 20.8**	**+0.2**
	comp=Z,2.6nm,0.5s,mb3.9						
AVF	**Avril sur Loir**	**79.77**	**330**	*e*P	**P**	**17 56 20.8**	**+0.2**
AVF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
MBDF	**Montbardon**	**80.23**	**327**	*e*P	**P**	**17 56 23.7**	**+0.6**
	comp=Z,12nm,0.8s,mb4.4						
MBDF	**Montbardon**	**80.23**	**327**	*e*P	**P**	**17 56 23.7**	**+0.6**
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						

NDI ***25*** *18:15:31.1±3.2,34.52N×72.91E,h10^{km},MD3.5,ML3.2*
NNC ***25*** *18:15:38.7±38.0,35.47N×73.85E,mpv3.5,Error ellipse: s-maj=389.3km s-min=385.6km az=72.0*
ISC 25 18:15:23.8±1.4,**34.14N**±0.08×**72.2E**±0.1,**h10**^{km}**,n8,** σ**1**^{s}**37**/14,**1D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	**Thein Dam**	**3.41**	**119**	*e*P	**Pn**	**18 16 22.9**	**+4.7**
THN				*e*SB	**Sb**	**18 17 06.3**	**+0.6**
DLH	**Dalhousie**	**3.54**	**116**	*e*x	**Sn**	**18 17 00.0**	**-2.4**
DLH				*e*SB	**Sb**	**18 17 10.0**	**+0.4**
SDNR	**Sundarnagar**	**4.81**	**122**	*e*P	**Pn**	**18 16 39.8**	**+1.7**
SDNR				*e*x	**Sb**	**18 17 49.4**	**+3.0**
SMLA	**Simla**	**5.16**	**124**	*e*P	**Pn**	**18 16 44.4**	**+1.4**
SMLA				*e*S	**Sn**	**18 17 40.8**	**-2.6**
KLP	**Kalpa**	**5.73**	**115**	*e*P	**Pn**	**18 16 50.6**	**-0.4**
KLP				*e*S	**Sn**	**18 17 48.8**	**-8.7**
KLP				AML	AML	18 17 56.7	
	comp=E,36nm,0.6s						
KLP				AML	AML	18 18 00.7	
	comp=N,38nm,0.8s						
KHET	**Khetri**	**6.80**	**152**	*e*S	**Sn**	**18 18 23.8**	**-0.6**
KUDL	**Kundal**	**7.02**	**147**	*e*S	**Sn**	**18 18 29.9**	**-0.1**
KK31	**Karatay Array**	**9.04**	**352**	P	**P**	**18 17 36.9**	**-0.5**
	comp=N,1.0nm,0.4s,baz=162,slow=12,SNR=37						
KK31				⇓S	**Sn**	**18 19 09.9**	**-10**
	comp=N,1.0nm,0.5s,baz=159,slow=22,SNR=6.9						

NDI ***25*** *18:33:03.6±2.1,34.47N×73.92E,h10^{km},MD3.2,ML2.8*
NNC ***25*** *18:33:08.2±204.0,34.70N×72.90E,mpv3.2,Error ellipse: s-maj=2406.4km s-min=1843.6km az=78.0*
ISC 25 18:33:02.9±1.0,**34.9N**±0.1×**74.6E**±0.3,**h10**^{km}**,n4,**σ**1**^{s}**05**/7,**1C,Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	**Dalhousie**	**2.60**	**154**	*e*SB	**Sb**	**18 34 24.0**	**+2.5**
THN	**Thein Dam**	**2.62**	**159**	*e*P	**Pn**	**18 33 45.8**	**-0.3**
THN				*e*SB	**Sb**	**18 34 20.7**	**-1.3**
KLP	**Kalpa**	**4.53**	**137**	*e*P	**Pn**	**18 34 13.7**	**+0.4**
KLP				*e*S	**Sn**	**18 35 06.0**	**-0.7**
KLP				AML	AML	18 35 30.9	
	comp=E,24nm,0.3s						
KLP				AML	AML	18 35 31.1	
	comp=N,16nm,0.6s						
KK31	**Karatay Array**	**8.79**	**340**	P	**P**	**18 35 13.8**	**+0.7**
	comp=N,0.5nm,0.5s,baz=154,slow=12,SNR=15						
KK31				⇑S	**Sn**	**18 36 52.8**	**-0.6**
	comp=N,0.5nm,0.4s,baz=171,slow=23						

ISK ***25*** *18:41:16.5,38.27N×26.73E,h13^{km},MD2.6*
ATH ***25*** *18:41:16.2,38.15N×26.52E,h20^{km}±1^{km},MD3.1/3*
NEIC ***25*** *18:41:16.0,38.21N×26.75E,h17^{km},MD3.1(ISK), MD3.1(ATH),After ISK.*
CSEM ***25*** *18:41:16.4±0.1,38.23N×26.76E,h12^{km},MD2.6,Error ellipse: s-maj=1.6km s-min=1.0km az=105.0*
ISC 25 18:41:16.0±0.8,**38.20N**±0.03×**26.69E**±0.05,**h5**^{km}±6^{km}**, n15,**σ**0**^{s}**84**/24,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.18**	**337**	*i* P	**Pg**	**18 41 19.8**	**+0.1**
URLA				*i* S	**Sg**	**18 41 23.0**	**+0.9**
BLCB	**Balcova**	**0.34**	**56**	*i* PG	**Pg**	**18 41 22.6**	**-0.2**
BLCB				*i* SG	**Sg**	**18 41 26.6**	**-0.7**
IZM	**Izmir**	**0.50**	**66**	*i* PG	**Pg**	**18 41 25.9**	**-0.1**
IZM				*i* SG	**Sg**	**18 41 32.8**	**+0.2**
SMG	**Samos**	**0.50**	**166**	*e*PN	**Pn**	**18 41 26.4**	**-3.1**
SMG				*e*SN	**Sn**	**18 41 33.7**	**-4.9**
AYDN	**Tasoluk**	**1.09**	**119**	*i* P	**Pb**	**18 41 37.5**	**+0.6**
AYDN				*i* S	**Sb**	**18 41 50.8**	**-0.4**
PRK	**Paraskevi**	**1.09**	**343**	*e*PN	**Pn**	**18 41 37.3**	**-0.6**
PRK				*e*SN	**Sn**	**18 41 53.1**	**-0.5**
AYVA	**Ayvalik**	**1.11**	**0**	*i* P	**Pb**	**18 41 38.2**	**+0.9**
AYVA				*i* S	**Sb**	**18 41 52.5**	**+0.6**
AKS	**Akhisar**	**1.11**	**52**	PG	**Pg**	**18 41 37.0**	**-1.3**
BODT	**Bodrum**	**1.24**	**156**	*e*PN	**Pn**	**18 41 40.2**	**+0.2**
MLSB	**Milas**	**1.25**	**136**	*e*PN	**Pn**	**18 41 40.9**	**+0.7**
BDRM	**Kayabasi**	**1.28**	**152**	*i* P	**Pb**	**18 41 41.9**	**+1.6**
BDRM				*i* S	**Sb**	**18 41 57.3**	**+0.4**
APE	**Apeiranthos**	**1.45**	**219**	*e*PN	**Pn**	**18 41 41.6**	**-1.5**
MANT	**Manisa**	**1.50**	**78**	*i* P	**Pn**	**18 41 44.4**	**+0.7**
MANT				*i* S	**Sb**	**18 42 03.5**	**+0.2**
BALB	**Balikesir**	**1.71**	**33**	*e*PN	**Pn**	**18 41 46.1**	**-0.7**
LIA	**Limnos Island**	**2.06**	**326**	*e*PN	**Pn**	**18 41 51.7**	**0.0**

NEIC ***25*** *20:01:30.6±0.8,51.59N×16.23E,h5^{km},ML3.0(SZGRF), ML2.7(CLL),Error ellipse: s-maj=8.8km s-min=5.2km az=195.0*
IPEC ***25*** *20:01:30.0±0.3,51.61N×16.23E,ML2.3/3,Error ellipse: s-maj=2.1km s-min=1.1km az=24.0*
BGR ***25*** *20:01:31.4±0.6,51.42N×16.22E,h1^{km},ML3.0/9,Error ellipse: s-maj=10.0km s-min=6.7km az=167.0*
PRU ***25*** *20:01:32.8,51.47N×16.09E*
CSEM ***25*** *20:01:32.5±0.1,51.50N×16.13E,h0^{km},ML3.3/7,Error ellipse: s-maj=2.6km s-min=1.3km az=12.0*
IDC ***25*** *20:01:32.3±1.1,51.48N×16.11E,mb1 3.4/4, mb1mx3.3/20,mbtmp3.3/4,ML3.0/4,Error ellipse: s-maj=17.0km s-min=9.2km az=124.0*
WAR 25 20:01:32.3,51.54N×16.13E,h1^{km}**,ML2.9,5C-4D,Mining Induced,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**172**	⇓*i*PG	Pg	20 01 45.3	-1.2
KSP				⇓*e*SG	Sg	20 01 54.3	-1.6
KSP	**Ksiaz**	**0.71**	**172**	*e*Pg	Pg	20 01 45.3	-1.2
KSP				*e*Sg	Sg	20 01 54.6	-1.3
KSP	**Ksiaz**	**0.71**	**172**	⇓*i*Pg	Pg	20 01 45.3	-1.2
KSP				*e*Sg	Sg	20 01 54.4	-1.5
UPC	**Upice**	**1.04**	**184**	*e*PG	Pg	20 01 51.2	-1.9
UPC	**Upice**	**1.04**	**184**	*e*Pg	Pg	20 01 51.4	-1.7
DPC	**Dobruska-Polom**	**1.20**	**174**	*e*PG	Pg	20 01 54.0	-2.3
DPC				*e*SG	Sg	20 02 09.6	-2.7
	20nm,0.2s						
PVCC	**Panska Ves**	**1.42**	**225**	*e*PG	Pg	20 01 57.9	-2.7
PVCC				*e*SG	Sg	20 02 16.5	-3.0
	211nm,0.4s						
BRG	**Berggiesshubel**	**1.53**	**245**	*e*Pg	Pg	20 01 59.6	-3.2
BRG				*e*Sg	Sg	20 02 21.2	-2.0
BRG	**Berggiesshubel**	**1.53**	**245**	Pn	Pn	20 01 59.6	-1.3
BRG				Pg	Pg	20 02 00.2	-2.7
BRG				Sg	Sg	20 02 21.1	-2.2
BRG	**Berggiesshubel**	**1.53**	**245**	Pg	Pg	20 02 00.2	-2.7
BRG				*e*Sg	Sg	20 02 20.9	-2.4
FBE	**Freiberg**	**1.85**	**251**	*e*Sg	Sg	20 02 30.9	-3.1
PRU	**Pruhonice**	**1.86**	**214**	*e*PN	Pn	20 02 03.7	-1.8
PRU				*e*PG	Pg	20 02 05.7	-3.6
PRU				*e*SG	Sg	20 02 30.1	-4.0
PRU	**Pruhonice**	**1.86**	**214**	*e*Pg	Pg	20 02 05.7	-3.6
PRU				*e*Sg	Sg	20 02 30.1	-4.0
CLL	**Collm**	**1.97**	**264**	*i* PN	Pn	20 02 04.8	-2.4
CLL				*i* PG	Pg	20 02 08.0	-3.7
CLL				*i*		20 02 11.7	
CLL				*i* SG	Sg	20 02 34.3	-3.7
CLL	**Collm**	**1.97**	**264**	*e*Pn	Pn	20 02 04.9	-2.3
CLL				*e*Sg	Sg	20 02 35.2	-2.8
CLL	**Collm**	**1.97**	**264**	*i* Pn	Pn	20 02 04.8	-2.4
CLL				*i* Pg	Pg	20 02 08.0	-3.7
CLL				*i* Sg	Sg	20 02 34.3	-3.7
CLL	**Collm**	**1.97**	**264**	*i* Pg	Pg	20 02 08.0	-3.7
CLL				Sg	Sg	20 02 35.2	-2.8
MORC	**Moravsky Berou**	**1.98**	**153**	*e*Pn	Pn	20 02 05.3	-2.0
MORC				*e*Sg	Sg	20 02 34.4	-4.0
MORC	**Moravsky Berou**	**1.98**	**153**	*e*Pn	Pn	20 02 05.3	-2.1
MORC				*e*Sg	Sg	20 02 34.4	-4.0
OKC	**Ostrava-Krasne**	**2.14**	**142**	*e*PG	Pg	20 02 11.1	-3.9
OKC				*e*SG	Sg	20 02 38.2	-5.2
VRAC	**Vranov**	**2.26**	**172**	Pn	Pn	20 02 09.8	-1.5
	2.0nm,0.3s,baz=344,slow=16,SNR=22						
VRAC				Lg		20 02 41.6	
	7.8nm,0.3s,baz=241,slow=21,SNR=9.9						
VRAC	**Vranov**	**2.26**	**172**	*e*Pn	Pn	20 02 09.7	-1.6
VRAC				*e*Sg	Sg	20 02 41.5	-6.0
	26nm,0.4s						
TREC	**Trest**	**2.29**	**191**	*e*PN	Pn	20 02 10.1	-1.6
TREC				*e*PG	Pg	20 02 13.6	-4.4
KRUC	**Moravsky**	**2.49**	**176**	*e*Pn	Pn	20 02 13.1	-1.5
KRUC				*e*Sg	Sg	20 02 49.4	-5.8
	7.1nm,0.2s						
TANN	**Tannenbergstha**	**2.58**	**245**	*e*Pn	Pn	20 02 14.0	-1.9
TANN				*e*Sg	Sg	20 02 53.4	-4.8
WERD	**Werda**	**2.65**	**247**	*e*Pn	Pn	20 02 15.0	-2.0
WERD				*e*Sg	Sg	20 02 54.6	-6.1
OJC	**Ojcow**	**2.67**	**118**	*e*PG	Pg	20 02 23.0	-2.7
OJC				*e*SG	Sg	20 02 57.0	-4.4
OJC	**Ojcow**	**2.67**	**118**	*e*Pg	Pg	20 02 22.8	-2.9
OJC				*e*Sg	Sg	20 02 56.8	-4.6
NKC	**Novy Kostel**	**2.68**	**242**	*e*PN	Pn	20 02 15.8	-1.5
NKC				*e*PG	Pg	20 02 22.0	-3.7
NKC				*e*SG	Sg	20 02 58.0	-3.4
	52nm,0.3s						
GUNZ	**Gunzen**	**2.68**	**245**	*e*Pn	Pn	20 02 15.0	-2.3
GUNZ				*e*Sg	Sg	20 02 57.3	-4.1
WERN	**Wernitzgruen**	**2.69**	**244**	*e*Pn	Pn	20 02 15.9	-1.5
WERN				*e*Sg	Sg	20 02 58.0	-3.8
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	Pn	20 02 18.6	-2.1
KHC				*e*PG	Pg	20 02 24.6	-5.9
KHC				*e*SG	Sg	20 03 03.5	-5.9
KHC	**Kasperske Hory**	**2.92**	**215**	*e*Pn	Pn	20 02 18.2	-2.5
KHC	**Kasperske Hory**	**2.92**	**215**	*e*Pg	Pg	20 02 24.6	-5.9
KHC				*e*Sg	Sg	20 03 03.5	-5.9
MOX	**Moxa**	**2.98**	**254**	Pg	Pg	20 02 28.0	-3.9
MOX				Sg	Sg	20 03 08.0	-3.7
MOX	**Moxa**	**2.98**	**254**	*e*Pn	Pn	20 02 19.3	-2.4
ROTZ	**Rotzenmuhle**	**3.07**	**236**	*e*Pn	Pn	20 02 21.2	-1.6
NOTT	**Nottersdorf**	**3.08**	**237**	*e*Pn	Pn	20 02 21.1	-1.9
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	Pn	20 02 22.3	-1.3
GEC2				*e*Sg	Sg	20 03 06.1	-10
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	Pn	20 02 22.3	-1.3
GEC2				*e*Sg	Sg	20 03 06.1	-10
GERES	**GERESS Array B**	**3.12**	**211**	Pn	Pn	20 02 21.6	-2.0
	1.9nm,0.3s,baz=28,slow=12,SNR=61						
GERES				Pg	Pg	20 02 28.8	-5.8
	2.7nm,0.3s,baz=34,slow=17,SNR=30						
GERES				Lg		20 03 08.7	
	3.8nm,0.3s,baz=41,slow=27,SNR=9.8						
GERES	**GERESS Array B**	**3.12**	**211**	Pg	Pg	20 02 28.8	-5.8
WET	**Wettzell**	**3.18**	**222**	*e*Pn	Pn	20 02 22.5	-1.9
WET	**Wettzell**	**3.18**	**222**	*e*Pn	Pn	20 02 22.5	-1.9
WET	**Wettzell**	**3.18**	**222**	*e*Pn	Pn	20 02 22.4	-2.0
NIE	**Niedzica**	**3.42**	**127**	*e*P	Pg	20 02 35.0	-5.5
NIE				*e*S	Sg	20 03 20.0	-6.0
GRA1	**Grafenberg Arr**	**3.63**	**241**	*e*Pn	Pn	20 02 29.1	-1.8
GRA1	**Grafenberg Arr**	**3.63**	**241**	Pn	Pn	20 02 29.1	-1.8
GRF	**Grafenberg Arr**	**3.63**	**241**	*e*Pn	Pn	20 02 29.1	-1.8
MOA	**Molln**	**3.89**	**199**	⇑*i*Pn	Pn	20 02 32.5	-2.1
	comp=Z,4.4nm,0.2s						
MOA	**Molln**	**3.89**	**199**	Pn	Pn	20 02 32.5	-2.0
	4.4nm,0.2s						
MOA				Sg	Sg	20 03 35.8	-6.0
	17nm,0.7s						
STHS	**Stebnicka Huta**	**3.90**	**121**	*e*PG	Pg	20 02 45.9	-4.2
STHS				*e*SG	Sg	20 03 39.5	-2.6
ARSA	**Arzberg**	**4.32**	**186**	⇑*i*Pn	Pn	20 02 40.5	-0.1
	comp=Z,2.2nm,0.3s						
ARSA	**Arzberg**	**4.32**	**186**	Pn	Pn	20 02 40.5	-0.1
	2.2nm,0.3s						
ARSA				Sg	Sg	20 03 51.4	-4.6
	11nm,0.6s						
KBA	**Koelnbreinsper**	**4.83**	**203**	⇑*i*Pn	Pn	20 02 45.8	-2.0
KBA	**Koelnbreinsper**	**4.83**	**203**	Pn	Pn	20 02 45.8	-2.0
KBA				Sg	Sg	20 04 07.5	-5.5
	8.1nm,0.6s						
WTTA	**Wattenberg**	**5.19**	**216**	⇑*i*Pn	Pn	20 02 49.7	-3.3
WTTA	**Wattenberg**	**5.19**	**216**	Pn	Pn	20 02 49.7	-3.3
WTTA				Sg	Sg	20 04 17.1	-8.0
	3.8nm,0.4s						
MOTA	**Moosalm**	**5.33**	**220**	⇓*i*Pn	Pn	20 02 52.6	-2.3
	comp=Z,1.1nm,0.3s						
SQTA	**Sankt Quirin**	**5.39**	**219**	⇑*i*Pn	Pn	20 02 54.3	-1.4
	comp=Z,2.4nm,0.2s						
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	P	20 03 30.1	-6.4
	0.9nm,0.3s,baz=279,slow=12,SNR=4.1						
FINES	**FINESS Array B**	**11.33**	**25**	Pn	P	20 04 11.2	-7.0
	0.1nm,0.3s,baz=219,slow=8.9,SNR=3.1						

IDC 25 20:11:04.4±5.0,**26.70N**×**95.64E,mb3.6**/3,**mb1 3.9**/3, **mb1mx3.6**/18,**mbtmp3.6**/3,**Error ellipse: s-maj=92.9km s-min=73.8km az=24.0,Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.67**	**336**	P	P	20 16 07.3	-1.1
	0.6nm,0.7s,baz=158,slow=9.4,SNR=4.7						
SONM	**Songino Array**	**22.72**	**19**	P	P	20 16 07.8	-1.2
	0.3nm,0.4s,baz=189,slow=8.2,SNR=7.7						
YKA	**Yellowknife Ar**	**87.88**	**14**	P	P	20 23 55.6	-0.9
	3.0nm,0.8s,baz=345,slow=4.1,SNR=5.5						

TIR ***25*** *20:20:41.5,41.83N×19.79E,h22^{km}*
SKO ***25*** *20:20:42.4,41.99N×19.81E,M2.0,ML2.2*
PDG ***25*** *20:20:43.6±0.1,41.86N×19.76E,h11^{km}*
NEIC ***25*** *20:20:43.6,41.86N×19.76E,h11^{km},MD2.6(PDG), ML2.0(SKO),After PDG.*
ISC 25 20:20:43.1±0.4,**41.85N**±0.02×**19.76E**±0.04,**h11**^{km}**,n20,** σ**1**^{s}**10**/40,**3C-6D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LACI	**Lac**	**0.21**	**191**	*i* Pg	**Pg**	**20 20 47.5**	**-0.3**
LACI				*i* Sg	**Sg**	**20 20 51.9**	**+1.0**
QSH	**Qafa e Shtames**	**0.34**	**162**	*i* Pg	**Pg**	**20 20 49.0**	**-1.2**
QSH				*i* Sg	**Sg**	**20 20 56.5**	**+1.6**
ULC	**Ulcinj**	**0.40**	**287**	⇑*i*Pg	**Pg**	**20 20 51.0**	**-0.4**
ULC				*e*Sg	**Sg**	**20 20 57.6**	**+0.8**
TTG	**Podgorica**	**0.69**	**328**	⇓*i*Pg	**Pg**	**20 20 56.0**	**-1.1**
TTG				*e*Sg	**Sg**	**20 21 07.1**	**+0.6**
PVY	**Plav**	**0.77**	**12**	⇓*i*Pg	**Pg**	**20 20 57.5**	**-1.0**
PVY				*e*Sg	**Sg**	**20 21 09.3**	**+0.5**
BUM	**Brajici-Budva**	**0.79**	**306**	⇓*i*Pg	**Pg**	**20 20 58.1**	**-0.8**
BUM				*e*Sg	**Sg**	**20 21 10.4**	**+0.9**
IVA	**Berane**	**1.03**	**6**	⇓*i*Pg	**Pg**	**20 21 02.4**	**-1.4**
IVA				*e*Sg	**Sg**	**20 21 18.5**	**+0.9**
OHR	**Ohrid**	**1.07**	**133**	*e*Pg	**Pg**	**20 21 04.1**	**-0.5**
OHR				*i* Sg	**Sg**	**20 21 19.6**	**+0.7**
OHR				*e*Lg		20 21 19.9	
	comp=E,75nm,0.7s						
OHR	**Ohrid**	**1.07**	**133**	*e*Pg	**Pg**	**20 21 04.1**	**-0.5**
OHR				*i* Sg	**Sg**	**20 21 19.6**	**+0.7**
OHR				Lg		20 21 19.9	
HCY	**Herceg Novi**	**1.12**	**303**	⇓*i*Pg	**Pg**	**20 21 04.1**	**-1.4**
HCY				*e*Sg	**Sg**	**20 21 21.4**	**+0.9**
NKY	**Niksic**	**1.12**	**330**	⇓*i*Pg	**Pg**	**20 21 04.1**	**-1.5**
NKY				*e*Sg	**Sg**	**20 21 21.5**	**+0.9**
SKO	**Skopje**	**1.26**	**84**	*i* Pn	**Pn**	**20 21 07.0**	**+0.3**
SKO				*e*Sn	**Sn**	**20 21 24.7**	**+1.1**
SKO				*e*Lg		20 21 25.5	
	comp=E,39nm,0.3s						
SKO	**Skopje**	**1.26**	**84**	*i* Pn	**Pn**	**20 21 07.0**	**+0.3**
SKO				*e*Sn	**Sn**	**20 21 24.7**	**+1.0**
SKO				Lg		20 21 25.5	
BIA	**Bitola**	**1.44**	**125**	*e*Pn	**Pn**	**20 21 09.4**	**+0.2**
BIA				*i* Sg	**Sg**	**20 21 30.2**	**-0.8**
BIA	**Bitola**	**1.44**	**125**	*e*Pn	**Pn**	**20 21 09.4**	**+0.2**
BIA				*i* Sg	**Sg**	**20 21 30.2**	**-0.8**
UPM	**Unac-Piva**	**1.50**	**335**	⇑*i*Pg	**Pg**	**20 21 10.8**	**-2.2**
UPM				*e*Sg	**Sg**	**20 21 33.2**	**+0.2**
PLE	**Pljevlja**	**1.51**	**350**	*e*Pg	**Pg**	**20 21 11.2**	**-2.1**
PLE				*e*Sg	**Sg**	**20 21 33.4**	**0.0**
NVSS	**Nova Varos 2**	**1.66**	**358**	⇑*i*Pn	**Pn**	**20 21 14.3**	**+1.9**
NVSS				Sn	**Sn**	**20 21 36.4**	**+2.5**
VAY	**Valandovo**	**2.17**	**103**	*e*Pn	**Pn**	**20 21 19.6**	**-0.1**
VAY				*i* Sg	**Sg**	**20 21 48.9**	**-6.5**
VAY	**Valandovo**	**2.17**	**103**	*e*Pn	**Pn**	**20 21 19.6**	**-0.1**
VAY				*i* Sg	**Sg**	**20 21 48.9**	**-6.6**

NEIC ***25*** *20:32:21.0,30.13S×117.20E,h2^{km},mb3.3/1, ML3.6(AUST),After AUST.*
AUST 25 20:32:21.5,30.13S×117.20E,h2^{km}**,ML3.6,1D,Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLDU	**Ballidu**	**0.64**	**221**	⇓*i*P	Pg	20 32 33.0	-1.2
BLDU				*e*S	Sg	20 32 40.9	-1.8
	2µm,0.6s						
BLDU				*e*RG		20 32 45.2	
MORW	**Morawa**	**1.46**	**316**	*e*P	Pn	20 32 47.4	-1.6
MORW				*e*S	Sb	20 33 05.9	-2.2
	143nm,0.2s						
KLBR	**Kellerberrin**	**1.53**	**162**	*e*P	Pn	20 32 48.5	-1.5
KLBR				*e*S	Sb	20 33 08.6	-1.4
	310nm,0.2s						
MUN	**Mundaring**	**2.02**	**204**	*e*P	Pn	20 32 55.5	-1.5
MUN				*e*S	Sn	20 33 20.2	-3.0
NWAO	**Narrogin (SRO)**	**2.79**	**179**	*e*P	Pn	20 33 05.4	-2.5
NWAO				*e*S	Sn	20 33 37.5	-5.0
	223nm,0.6s						
MEEK	**Meekatharra**	**3.70**	**20**	*e*P	Pn	20 33 18.3	-2.6
MEEK				*e*S	Sn	20 34 01.2	-4.5
	36nm,0.2s						
KMBL	**Kambalda**	**4.22**	**108**	*e*P	Pn	20 33 24.5	-3.8
KMBL				*e*S	Sn	20 34 11.3	-7.5
	130nm,0.3s						
RKGY	**Rocky Gully**	**4.47**	**182**	*e*P	Pn	20 33 35.0	+3.2
	3.0nm,0.2s						
FITZ	**Fitzroy Crossi**	**14.23**	**35**	*e*P	P	20 35 39.3	-7.1
	4.7nm,0.5s						
FITZ				*e*S	S	20 38 05.0	-21
WB2	**Warramunga Arr**	**18.54**	**61**	*e*P	P	20 36 34.0	-7.3
WB2				*e*S	S	20 39 46.9	-19
WRAB	**Tennant Creek**	**18.55**	**61**	*e*P	P	20 36 38.0	-3.4
	1.1nm,0.5s						

NIED ***25*** *20:37:00,40.20N×141.70E,h119^{km},Mw3.7 Best double couple: M$_0$3.67×10^{14} NP1:ϕ_s142°,δ77°,λ-82°. NP2: ϕ_s290°,δ15°,λ-121°.*
MOS ***25*** *20:37:01.0±1.0,40.09N×142.04E,h77^{km},mb4.0/2,Error ellipse: s-maj=56.7km s-min=12.6km az=66.9*
NEIC ***25*** *20:37:03.2±0.6,39.84N×142.25E,h100^{km},mb3.8/1,Error ellipse: s-maj=49.5km s-min=8.9km az=131.0*
IDC ***25*** *20:37:03.9±2.1,40.38N×140.94E,h122^{km}±35^{km},mb3.4/3, mb1 3.6/5,mb1mx3.2/21,mbtmp3.7/5,Error ellipse: s-maj=163.3km s-min=13.7km az=113.0*
JMA ***25*** *20:37:04.3±0.1,40.16N×141.68E,h108^{km}±1^{km},M3.7 Broadband fault plane solution: P waves. NP1:ϕ_s333°, δ23°,λ-68°. NP2:ϕ_s129°,δ69°,λ-99°. Principal axes: T Plg23°, Azm226°; N Plg8°, Azm132°; P Plg65°, Azm24°;*
JMA Felt II J1.
ISC 25 20:37:02.5±0.5,**40.18N**±0.04×**141.73E**±0.08,**h115**^{km}±4^{km}**, n24,**σ**0**^{s}**86**/39,**mb3.6**/4,**1C-8D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JANG	**Nango**	**0.26**	**320**	⇓P	**P**	**20 37 19.6**	**+0.8**
JANG				S	**S**	**20 37 30.8**	**-0.3**
JTH	**Tanohata**	**0.26**	**157**	⇓P	**P**	**20 37 19.9**	**+1.1**
JTH				S	**S**	**20 37 31.2**	**+0.1**
JKZ	**Kuzumaki**	**0.36**	**238**	⇓P	**P**	**20 37 20.3**	**+1.1**
JKZ				S	**S**	**20 37 32.1**	**+0.2**
JOM	**Ohasama**	**0.78**	**206**	⇓P	**P**	**20 37 22.7**	**+0.5**
JOM				*e*S	**S**	**20 37 36.6**	**-0.4**
JTM	**Tenmabayashi**	**0.79**	**321**	⇓P	**P**	**20 37 22.9**	**+0.6**
JTM				*e*S	**S**	**20 37 36.9**	**-0.3**
JAH	**Hinai**	**0.84**	**271**	⇓P	**P**	**20 37 23.3**	**+0.5**
JAH				*e*S	**S**	**20 37 37.6**	**-0.4**
JMK	**Ichinoseki**	**1.28**	**198**	⇓P	**P**	**20 37 27.7**	**+0.1**
JMK				*e*S	**S**	**20 37 45.3**	**-1.1**
JOT	**Ohata**	**1.31**	**337**	⇑P	**P**	**20 37 28.3**	**+0.4**
JOT				*e*S	**S**	**20 37 46.5**	**-0.6**
JIW	**Iwasaki**	**1.38**	**288**	⇓P	**P**	**20 37 29.1**	**+0.4**
JIW				*e*S	**S**	**20 37 48.9**	**+0.5**
ASAJ	**Asahikawa**	**3.99**	**9**	P	**P**	**20 38 03.0**	**0.0**
	3.4nm,0.3s,baz=214,slow=13,SNR=36						
ASAJ				S	**S**	**20 38 47.2**	**-1.9**
	3.3nm,0.3s,baz=223,slow=13,SNR=4.9						
ASAJ	**Asahikawa**	**3.99**	**9**	P	**P**	**20 38 03.0**	**+0.1**
ASAJ				S	**S**	**20 38 47.3**	**-1.8**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJAR	**Matsushiro Arr**	**4.56**	**218**	P	**P**	**20 38 10.5**	**-0.2**
	comp=Z,1.4nm,0.3s,baz=27,slow=13,SNR=19						

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MJAR  Matsushiro Arr      4.56 218   P        P         20 38 10.5  -0.2
MJAR                                 pmax     pmax
        comp=Z,1.0nm,0.3s
MAJO  Matsushiro          4.56 218  ePn       P         20 38 10.3  -0.4
MAT   Matsushiro          4.56 218   P        P         20 38 10.4  -0.3
MAT                                  S        S         20 39 02.7  -0.3
MAT   Matsushiro          4.56 218  eP        P         20 38 10.0  -0.7
MAT                                 eS        S         20 39 03.0   0.0
YUK   Yuzh-Kuril'sk       4.93  37  eP        P         20 38 13.9  -1.8
YUK                                 eS        S         20 39 07.5  -4.5
YUK                                  pmax     pmax
        comp=Z,360nm,0.3s
YUK                                  smax
        comp=N,1µm,0.5s
YUK                                  smax
        comp=E,190nm,0.5s
YUK                                  smax
        comp=N,3µm,2.0s
YUK                                  smax
        comp=E,4µm,2.0s
JHJ   Hachijo jima 2      7.21 193   P        P         20 38 42.2  -4.5
        comp=E,11nm,0.3s,baz=203,slow=17,SNR=4.8
JHJ                                  S        S         20 40 00.5  -7.2
        comp=E,15nm,0.3s,baz=81,slow=22,SNR=8.7
ILAR  Eielson Array      46.73  34   P        P         20 45 22.4  +1.2
        comp=E,1.0nm,0.8s,mb3.6,baz=265,slow=6.2,SNR=11
ILAR  Eielson Array      46.73  34   P        P         20 45 22.4  +1.2
ILAR                                 pmax     pmax
        comp=Z,1.0nm,0.8s
INK   Inuvik             51.49  28  eP        P         20 45 58.4  +0.7
        comp=Z,0.6nm,0.6s,mb3.8
WRA   Warramunga Arr     60.20 188   P        P         20 46 58.6  -2.1
        comp=Z,0.3nm,0.4s,mb3.7,baz=4.1,slow=6.1,SNR=11
WRA                                  pP       pP        20 47 26.2  -2.6
        comp=Z,0.7nm,0.8s,baz=7.5,slow=7.4,SNR=5.9
WRA   Warramunga Arr     60.20 188   P        P         20 46 58.6  -2.1
WRA                                  *PP      pP        20 47 26.2  -2.6
WRA                                  pmax     pmax
        comp=Z,1.0nm,0.8s
PDAR  Pinedale Array     75.30  46   P        P         20 48 35.8  +1.5
        comp=Z,0.6nm,0.6s,mb3.5,baz=259,slow=1.8,SNR=7.6
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*BJI **25** 20:47:43.7, 6.78N×92.50E, h34^{km}, mB5.2, mb4.7, Ms4.2, Msz3.9*

*MOS **25** 20:47:45.7±0.9, 7.00N×92.39E, h39^{km}, mb5.0/21, Error ellipse: s-maj=15.0km s-min=6.5km az=112.2*

*NEIC **25** 20:47:45.7±0.3, 6.98N×92.39E, mb4.8/17, Error ellipse: s-maj=8.9km s-min=5.3km az=223.0*

*IDC **25** 20:47:46.0±0.7, 7.02N×92.39E, h25^{km}±4^{km}, mb4.4/19, mb1 4.5/19, mb1mx4.4/24, mbtmp4.5/19, MS3.7/3, Ms1 3.6/3, ms1mx3.0/28, Error ellipse: s-maj=21.2km s-min=13.3km az=55.0*

ISC 25 20:47:44.2±2.2**, 7.01N**±0.05×**92.39E**±0.05**, h27**^{km}±15^{km}**, h25**^{km}±.9^{km}**:pP-P, n126,** σ0^{s}**98**/128**, mb4.6**/56**, MS3.8**/5**, 11C-7D, Nicobar Islands region**

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Code  Station Name        Δ°  AZ°    Phase ID             Time      Res
                                     Op       ISC        h  m  s    ISC
PBA   Port Blair          4.63   4  eP        Pn        20 48 54.3   0.0
PBA                                 eS        Sn        20 49 39.8  -8.1
SNG   Songkhla            8.17  88   P        P         20 50 04.0  +20
NNT   Nongplab            9.12  52   P        P         20 49 57.4  +0.2
PALK  Pallekele          11.60 272  ePn       P         20 50 29.6  -1.7
        26nm,0.6s
PALK                                eSn       S         20 52 31.6  -9.3
CHG   Chiang Mai         13.36  28 ⇑P         P         20 51 03.3  +8.6
        22nm,1.0s
VIS   Vishakhapatnam     13.84 321  eP        P         20 50 59.4  -1.8
VIS                                  AMb      AMB       20 51 02.6
        comp=Z,80nm,0.3s
VIS                                 eS        S         20 53 18.4   -16
VIS                                  AML      AML       20 53 26.1
        comp=E,14nm,0.4s
VIS                                  AML      AML       20 53 26.1
        comp=N,11nm,0.4s
TRD   Trivandrum         15.36 277  ex        x         20 54 03.6
HYB   Hyderabad          17.01 309  i P       P         20 51 41.5  -0.6
HYB                                 eS        S         20 54 54.0  +5.0
HYB   Hyderabad          17.01 309  eP        P         20 51 41.5  -0.6
HYB                                 eS        S         20 54 54.0  +5.0
SHL   Shillong           18.46 359  eP        P         20 52 00.0  -0.1
SHL                                 eS        S         20 55 20.0  -1.9
KMI   Kunming            20.56  28   P        P         20 52 24.3  +0.7
KMI                                  AP                 20 52 33.0
KMI                                  AMB      AMB
        comp=Z,10.0nm,0.8s
KMI                                  LR       LR
        comp=N,130nm,14.8s,MS3.5
KMI                                  LR       LR
        comp=E,100nm,14.0s,MS3.5
KMI                                  LR       LR
        comp=Z,130nm,13.6s,MS3.5
QIZ   Qiongzhong         20.76  53  eP        P         20 52 24.3  -1.4
QIZ                                 eS        S         20 56 11.8  +0.6
QIZ                                  LR       LR
        comp=E,540nm,12.0s
QIZ                                  LR       LR
        comp=Z,790nm,12.5s,MS4.3
POO   Poona              21.37 304  ex        x         20 52 38.8
POO                                  AMb      AMB       20 52 40.9
        comp=Z,21nm,2.0s,mb4.1
PKI   Pulchoki           21.50 343  eP        P         20 52 34.3  +1.1
        comp=Z,127nm,1.0s,mb5.2
PKI   Pulchoki           21.50 343  eP        P         20 52 34.3  +1.1
PKI                                  pmax     pmax
        comp=Z,63nm,1.0s,mb4.9
DMN   Daman              21.62 342  eP        P         20 52 35.4  +1.0
        comp=Z,98nm,0.8s,mb5.3
GUN   Gumba              21.69 344  eP        P         20 52 35.8  +0.7
        comp=Z,54nm,0.8s,mb5.0
KKN   Kakani             21.74 343  eP        P         20 52 36.4  +0.8
        comp=Z,43nm,0.8s,mb4.9
GKN   Gorkha             22.14 342  eP        P         20 52 40.5  +1.0
        comp=Z,101nm,0.8s,mb5.3
KOLN  Koldanda           22.27 339  eP        P         20 52 42.0  +1.1
        comp=Z,43nm,0.7s,mb5.0
LSA   Lhasa              22.60 357   P        P         20 52 47.3  +3.0
LSA                                  AMB      AMB
        comp=Z,10.0nm,0.6s,mb4.4
LSA   Lhasa              22.60 357  eP        P         20 52 46.5  +2.3
        comp=Z,20nm,0.7s,mb4.7
LSA   Lhasa              22.60 357  eP        P         20 52 46.5  +2.2
LSA                                  pmax     pmax
        comp=Z,20nm,0.7s,mb4.7
KKM   Kota Kinabalu      23.69  91  eP        P         20 52 56.1  +1.2
SONA  Sohna              25.61 327  eP        P         20 53 13.5  +0.2
KUDL  Kundal             25.85 326  eP        P         20 53 15.4  -0.1
KUDL                                 AMb      AMB       20 53 19.8
        comp=Z,10nm,1.2s,mb4.2
CD2   Chengdu            26.06  23  eP        P         20 53 17.0  -0.4
KHET  Khetri             26.18 325  eP        P         20 53 16.7  -1.8
KHET                                 AMb      AMB       20 53 21.1
        comp=Z,11nm,1.2s,mb4.3
KLP   Kalpa              27.75 333  eP        P         20 53 33.3  +0.4
KLP                                  AMb      AMB       20 53 40.4
        comp=Z,9.9nm,1.7s,mb4.2
ENH   Enshi              28.17  33  eP        P         20 53 35.6  -1.1
        comp=Z,7.9nm,0.6s,mb4.5
LZH   Lanzhou            30.79  18  eP        P         20 53 59.0  -1.0
LZH                                  AP       pP        20 54 07.0  -0.9
LZH                                  XP       sP        20 54 12.0  +0.6
LZH                                  AMB      AMB
        comp=Z,20nm,1.6s,mb4.7
XAN   Xi'an              30.94  27   P        P         20 53 59.5  -1.8
GTA   Gaotai             32.95  11   P        P         20 54 19.3  +0.5
GTA                                  AP       pP        20 54 26.5  -0.3
GTA                                  XP       sP        20 54 30.0  -0.2
GTA                                  AMB      AMB
        comp=Z,10.0nm,0.8s,mb4.8
NJ2   Nanjing            35.06  41  eP        P         20 54 37.5  +0.4
NJ2                                  AP       pP        20 54 47.0  +1.9
NJ2                                  XP       sP        20 54 51.0  +2.5
NJ2                                  PP       PP        20 55 59.5  +3.6
NJ2                                  S        S         21 00 13.0  +6.1
NJ2                                  AMB      AMB
        comp=Z,10.0nm,0.9s,mb4.8
NJ2                                  AMB      AMB
        comp=Z,290nm,6.0s
NJ2                                  LR       LR
        comp=N,250nm,15.4s
NJ2                                  LR       LR
        comp=E,350nm,23.8s
NJ2                                  LR       LR
        comp=Z,270nm,22.8s
UCH   Uchtor             38.48 339   P        P         20 55 08.1  +2.2
        SNR=7.9
AML   Almayashu          38.70 338   P        P         20 55 09.9  +2.2
        SNR=14
KBK   Karagaybulak       38.70 339   P        P         20 55 09.9  +2.2
        SNR=6.5
AAK   Ala-Archa          38.84 339   P        P         20 55 11.1  +2.2
        SNR=7.4
AAK   Ala-Archa          38.84 339  eP        P         20 55 09.8  +0.9
        comp=Z,15nm,1.1s,mb4.6
AAK   Ala-Archa          38.84 339d iP        P         20 55 10.0  +1.1
AAK                                  pmax     pmax
        comp=Z,13nm,0.8s,mb4.7
EKS2  Erkin-Say          39.13 338   P        P         20 55 13.3  +2.0
        SNR=6.6
JOW   Kunigami           39.38  56   P        P         20 55 13.2  -0.3
        comp=Z,5.2nm,0.5s,mb4.5,baz=291,slow=7.8,SNR=4.0
USP   Ospenovka          39.39 339   P        P         20 55 14.9  +1.4
        SNR=13
MKAR  Makanchi Array     40.58 349   P        P         20 55 23.4  +0.2
        comp=Z,8.1nm,0.5s,mb4.7,baz=166,slow=8.8,SNR=199
MKAR                                 pP       pP        20 55 30.9  -0.4
        comp=Z,4.9nm,0.5s,baz=166,slow=8.9,SNR=12
MKAR  Makanchi Array     40.58 349   P        P         20 55 23.4  +0.2
MKAR                                 pP       pP        20 55 30.9  -0.4
FITZ  Fitzroy Crossi     41.23 128  eP        P         20 55 28.9  +0.1
        comp=Z,15nm,0.7s,mb4.7
FITZ  Fitzroy Crossi     41.23 128   P        P         20 55 29.2  +0.4
        comp=Z,22nm,0.8s,mb4.8,baz=309,slow=5.2,SNR=22
SONM  Songino Array      42.40  14   P        P         20 55 38.6  +0.4
        comp=Z,3.8nm,0.9s,mb4.0,baz=200,slow=7.3,SNR=31
SONM                                 PcP      PcP       20 57 32.3  +0.6
        comp=Z,2.1nm,0.6s,baz=211,slow=3.8,SNR=7.3
SONM                                 LR       LR        21 13 52.5
        comp=Z,64nm,20.8s,MS3.5,baz=184,slow=37
ULN   Ulaanbaatar        42.59  15  eP        P         20 55 39.6  -0.1
        comp=Z,2.2nm,0.8s,mb3.9
ULN   Ulaanbaatar        42.59  15  eP        P         20 55 39.6  -0.1
ULN                                  pmax     pmax
        comp=Z,2.0nm,0.8s,mb3.9
ZAK   Zakamensk          44.18  10  eP        P         20 55 53.1  +0.5
ZAK                                  pmax     pmax
        comp=Z,3.0nm,1.2s,mb3.9
ZAK                                  pmax     pmax
        comp=Z,2.0nm,1.0s,mb3.8
KURK  Kurchatov          45.05 348  eP        P         20 55 59.9  +0.3
        comp=Z,16nm,0.9s,mb4.8
KURK  Kurchatov          45.05 348  eP        P         20 55 59.9  +0.3
KURK                                 pmax     pmax
        comp=Z,16nm,0.9s,mb4.8
CN2   Changchun          46.69  33  eP        P         20 56 12.5  -0.1
CN2                                  AMB      AMB
        comp=Z,10.0nm,0.8s,mb4.8
ZAL   Zalesovo           47.20 354   P        P         20 56 17.1  +0.6
        comp=Z,2.6nm,0.3s,mb4.6,baz=288,slow=5.7,SNR=15
HIA   Hailar             48.00  24  eP        P         20 56 22.2  -0.7
        comp=Z,6.1nm,0.7s,mb4.7
HIA   Hailar             48.00  24  eP        P         20 56 22.2  -0.7
HIA                                  pmax     pmax
        comp=Z,6.0nm,0.7s
NVS   Novosibirsk        48.26 353  eP        P         20 56 23.0  -1.8
NVS                                  pmax     pmax
        comp=N,4.0nm,0.9s
NVS                                  pmax     pmax
        comp=E,4.0nm,0.9s
NVS                                  pmax     pmax
        comp=Z,6.0nm,0.9s,mb4.6
KRAR  Krasnoyarsk        48.87   0  eP        P         20 56 29.6  +0.1
WRA   Warramunga Arr     49.20 124   P        P         20 56 32.4  -0.1
        comp=Z,8.4nm,0.8s,mb4.8,baz=304,slow=8.8,SNR=65
WRAB  Tennant Creek      49.20 124  eP        P         20 56 32.3  -0.3
        comp=Z,22nm,0.9s,mb5.2
WRAB                                epP       pP        20 56 40.1  -0.6
WRAB  Tennant Creek      49.20 124  eP        P         20 56 32.3  -0.3
WRAB                                e*PP      pP        20 56 40.2  -0.6
WRAB                                 pmax     pmax
        comp=Z,22nm,0.9s,mb5.2
WB2   Warramunga Arr     49.21 124  eP        P         20 56 32.4  -0.2
BRVK  Borovoye           49.33 343  eP        P         20 56 32.7  -0.3
        comp=Z,3.8nm,0.8s,mb4.5
BRVK                                epP       pP        20 56 40.1  -1.2
BRVK  Borovoye           49.33 343  eP        P         20 56 32.7  -0.3
BRVK                                e*PP      pP        20 56 40.1  -1.2
BRVK                                 pmax     pmax
        comp=Z,4.0nm,0.8s,mb4.5
AKTK  Aktyubinsk         51.89 333   P        P         20 56 52.7   0.0
AKTO  Aktyubinsk         51.89 333   P        P         20 56 52.7   0.0
        comp=Z,2.8nm,0.7s,mb4.3,baz=129,slow=8.1,SNR=11
BOD   Bodaibo            53.40  14  eP        P         20 57 03.7   0.0
BOD                                  pmax     pmax
        comp=Z,12nm,0.9s,mb4.8
BOD                                  pmax     pmax
        comp=Z,12nm,0.9s,mb4.8
GNI   Garni              53.81 315  eP        P         20 57 08.2  +1.2
        comp=Z,21nm,1.4s,mb4.9
GNI   Garni              53.81 315⇑eP         P         20 57 07.4  +0.4
GNI                                  pmax     pmax
        comp=Z,8.0nm,1.0s
KMBO  Kilima Mbogo       55.60 264   LR       LR        21 19 45.3
        comp=Z,52nm,18.4s,MS3.6,baz=82,slow=34
ARU   Arti               56.02 338⇑eP         P         20 57 21.7  -1.2
ARU                                  pmax     pmax
        comp=Z,8.0nm,0.6s,mb4.9
KIV   Kislovodsk         56.80 319⇑eP         P         20 57 28.0  -0.7
KIV                                  pmax     pmax
        comp=Z,11nm,0.9s,mb4.9
YSS   Yuzh-Sakhalins     58.53  38⇑eP         P         20 57 34.6  -6.2
YSS                                  pmax     pmax
        comp=Z,85nm,2.3s,mb5.4
SOC   Sochi              58.62 317  eP        P         20 57 40.7  -0.7
SOC                                 eS        S         21 05 52.1  +10
SOC                                 e                   21 07 23.3
SOC                                  pmax     pmax
        comp=Z,31nm,1.0s,mb5.3
CTA   Charters Tower     59.42 118  eP        P         20 57 47.1  -0.2
        comp=Z,4.2nm,1.0s,mb4.4
CTA   Charters Tower     59.42 118  eP        P         20 57 47.1  -0.2
CTA                                  pmax     pmax
        comp=Z,4.0nm,1.0s
CTAO  Charters Tower     59.42 118  eP        P         20 57 47.1  -0.1
        comp=Z,6.3nm,0.9s,mb4.7
CTAO  Charters Tower     59.42 118  eP        P         20 57 47.1  -0.2
CTAO                                 pmax     pmax
        comp=Z,6.0nm,0.9s,mb4.6
STKA  Stephens Creek     60.79 132   P        P         20 57 56.5  +0.1
        comp=Z,8.1nm,0.7s,mb5.0,baz=311,slow=7.5,SNR=13
STKA  Stephens Creek     60.79 132  eP        P         20 57 57.0  +0.5
YAK   Yakutsk            61.37  19d iP        P         20 57 58.2  -1.8
YAK                                  pmax     pmax
        comp=Z,14nm,0.8s,mb5.1
OBN   Obninsk            65.19 328⇑eP         P         20 58 23.8  -1.5
OBN                                  pmax     pmax
        comp=Z,18nm,1.5s,mb4.9
AKASG Malin Array Be     67.76 322   P        P         20 58 40.1  -1.6
        comp=Z,0.9nm,0.5s,mb4.0,baz=97,slow=5.7,SNR=6.2
TIXI  Tiksi              68.42  12c iP        P         20 58 44.7  -0.8
TIXI                                 pmax     pmax
        comp=Z,21nm,0.8s,mb5.2
MLR   Muntele Rosu       68.58 316   P        P         20 58 47.9  +1.0
        comp=Z,12nm,1.0s,mb4.8,baz=190,slow=3.3,SNR=10
MLR   Muntele Rosu       68.58 316 ⇑P         P         20 58 48.0  +1.1
VOIR                     69.19 316 ⇑P         P         20 58 50.6   0.0
BURAR Bucovina Array     69.52 318 ⇓P         P         20 58 53.0  +0.3
JOF   Joensuu            70.88 335  ep        P         20 58 59.8  -0.9
DRGR                     71.04 317 ⇓P         P         20 59 01.4  -0.5
BZS   Buzias             71.59 316 ⇓P         P         20 59 05.1  -0.1
KOLS  Kolonicke sedl     71.71 319  eP        P         20 59 05.5  -0.4
KOLS                                epP       pP        20 59 13.9  -0.4
CRVS  Cervenica-Dubn     72.23 319  eP        P         20 59 08.9  -0.1
STHS  Stebnicka Huta     72.47 320  eP        P         20 59 10.1  -0.3
FINES FINESS Array B     72.67 333   P        P         20 59 10.5  -0.8
        comp=Z,2.6nm,0.7s,mb4.3,baz=88,slow=6.8,SNR=12
FINES FINESS Array B     72.67 333   P        P         20 59 10.5  -0.8
KAF   Kangasniemi        72.77 333  ep        P         20 59 09.3  -2.6
OJC   Ojcow              73.52 320  eP        P         20 59 16.8  +0.3
BOSA  Boshof             73.65 238   P        P         20 59 17.9  +0.1
        comp=Z,3.7nm,0.6s,mb4.5,baz=29,slow=8.9,SNR=12
BOSA                                 pP       pP        20 59 26.5  +0.3
        comp=Z,2.2nm,0.5s,baz=77,slow=5.5,SNR=3.3
BOSA                                 LR       LR        21 27 59.8
        comp=Z,66nm,18.9s,MS4.0,baz=258,slow=33
ARCES ARCESS Array B     75.49 340   P        P         20 59 27.6  +0.1
        comp=Z,3.0nm,0.8s,mb4.3,baz=101,slow=6.2,SNR=6.4
KSP   Ksiaz              75.82 321  eP        P         20 59 30.7  +0.9
KSP   Ksiaz              75.82 321  eP        P         20 59 30.6  +0.8
GERES GERESS Array B     77.31 318   P        P         20 59 39.1  +1.0
        comp=Z,2.6nm,0.8s,mb4.2,baz=90,slow=4.0,SNR=18
GERES                                pP       pP        20 59 46.5  -0.2
        comp=Z,1.7nm,0.7s,baz=76,slow=5.5,SNR=6.8
KHC   Kasperske Hory     77.41 319  eP        P         20 59 38.5  -0.2
KHC                                  pP       pP        20 59 44.5  -2.7
KHC   Kasperske Hory     77.41 319  eP        P         20 59 38.5  -0.2
KHC                                 e                   20 59 44.5
HFS   Hagfors            78.33 330   P        P         20 59 43.3  -0.1
        comp=Z,1.3nm,0.4s,mb4.2,baz=104,slow=6.1,SNR=9.5
GRA1  Grafenberg Arr     78.98 319  eP        P         20 59 48.4  +1.1
        comp=Z,12nm,1.2s,mb4.7
GRA1                                epP       pP        20 59 55.9  +0.1
GRF   Grafenberg Arr     78.98 319  eP        P         20 59 48.4  +1.1
        comp=Z,12nm,1.2s,mb4.7
GRF                                 epP       pP        20 59 55.9  +0.1
GRF   Grafenberg Arr     78.98 319  eP        P         20 59 48.4  +1.1
GRF                                 e*PP      pP        20 59 55.9  +0.1
GRF                                  pmax     pmax
        comp=Z,12nm,1.2s,mb4.7
GRF   Grafenberg Arr     78.98 319  eP        P         20 59 48.4  +1.1
GRF                                 e*PP      pP        20 59 55.9  +0.1
GRF                                  pmax     pmax
        comp=Z,12nm,1.2s,mb4.7
NB2   NORSAR Subarra     79.63 331   P        P         20 59 50.1  -0.4
        comp=Z,1.1nm,0.6s,mb4.0,baz=98,slow=5.0
NOA   NORSAR Array B     79.63 331   P        P         20 59 50.1  -0.4
        comp=Z,1.4nm,0.6s,mb4.0,baz=94,slow=5.7,SNR=3.8
NAO   NORSAR Subarra     79.80 330   P        P         20 59 50.1  -1.4
        comp=Z,1.1nm,0.6s,mb4.0
NAO                                  SKPab              21 28 58.8
NAO   NORSAR Subarra     79.80 330   P        P         20 59 50.1  -1.4
NAO                                  pmax     pmax
        comp=Z,1.0nm,0.6s,mb3.9
DAVOX Davos              79.81 316   P        P         20 59 53.3  +1.5
        comp=Z,6.8nm,0.7s,mb4.7,baz=132,slow=7.9,SNR=7.8
LPG   La Plagne          81.99 315  eP        P         21 00 03.9  +0.6
        comp=Z,42nm,1.3s,mb4.9
LPG   La Plagne          81.99 315  eP        P         21 00 03.9  +0.6
LPG                                  pmax     pmax
        comp=Z,21nm,1.3s,mb4.9
SYO   Syowa Base         84.07 197 ⇓P         P         21 00 17.9  +4.4
SYO   Syowa Base         84.07 197 ⇑pP        pP        21 00 27.1  +5.0
SYO   Syowa Base         84.07 197⇓eP         P         21 00 17.9  +4.4
SYO                               ⇑epP        pP        21 00 27.1  +5.0
ILAR  Eielson Array      96.19  22   P        P         21 01 11.5  +0.7
        comp=Z,0.5nm,0.8s,mb4.0,baz=303,slow=3.9,SNR=4.8
INK   Inuvik             98.30  16   P        P         21 01 19.9  -0.3
        comp=Z,1.4nm,0.8s,mb4.5,baz=306,slow=1.5,SNR=3.8
PDAR  Pinedale Array    126.59  20   PKP      PKPdf     21 06 47.9  -2.4
        comp=Z,1.1nm,0.8s,baz=38,slow=2.4,SNR=5.9
PDAR                                 pPKP               21 06 55.5
        comp=Z,1.6nm,1.0s,baz=359,slow=1.3,SNR=5.0
ANMO  Albuquerque       134.63  22   PKP      PKPdf     21 07 01.3  -4.5
        comp=Z,1.6nm,0.8s,baz=214,slow=22,SNR=2.2
TXAR  Lajitas Array     140.70  22   PKP      PKPdf     21 07 12.7  -4.5
        comp=Z,0.3nm,0.6s,baz=297,slow=2.0,SNR=3.6
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*LDG **25** 21:06:42.7±0.5, 14.62S×166.85E, h10^{km}, Mb4.7/3, Error ellipse: s-maj=48.5km s-min=27.8km az=12.0*

*BJI **25** 21:07:04.9, 14.90S×167.64E, h227^{km}, mB4.8, mb4.2*

*IDC **25** 21:07:04.3±2.1, 14.36S×167.24E, h184^{km}±19^{km}, mb4.1/10, mb1 4.1/11, mb1mx4.0/18, mbtmp4.5/11, MS3.0/3, Ms1 3.0/3, ms1mx2.7/23, Error ellipse: s-maj=19.0km s-min=15.8km az=168.0*

*NEIC **25** 21:07:08.0±1.8, 14.53S×167.23E, h219^{km}±17^{km}, mb4.3/10, Error ellipse: s-maj=15.9km s-min=10.3km az=183.0*

ISC 25 21:07:08.9±2.1**, 14.7S**±0.1×**167.18E**±0.10**, h242**^{km}±21^{km}**, n65,** σ1^{s}**06**/33**, mb4.2**/14**, Vanuatu Islands**

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Code  Station Name        Δ°  AZ°    Phase ID             Time      Res
                                     Op       ISC        h  m  s    ISC
DZM   Mont Dzumac         7.42 185  eP        P         21 08 54.6  -0.9
DZM                                 eS        S         21 10 19.5  +0.6
DZM   Mont Dzumac         7.42 185   P        P         21 08 55.2  -0.3
        2.8nm,0.3s,baz=30,slow=16,SNR=26
DZM                                  S        S         21 10 20.2  +1.3
        2.1nm,0.3s,baz=115,slow=22,SNR=4.1
DZM                                  LR       LR        21 11 14.5
        comp=Z,124nm,19.1s,baz=196,slow=32
DZM   Mont Dzumac         7.42 185  eP        P         21 08 54.6  -0.9
DZM                                 eS        S         21 10 19.5  +0.6
NOUC  Port Laguerre       7.46 186  eP        P         21 08 56.2  +0.2
NOUC  Port Laguerre       7.46 186  eP        P         21 08 56.2  +0.1
HNR   Honiara             8.77 305   LR       LR        21 12 07.8
        comp=Z,72nm,18.6s,baz=110,slow=35
PMG   Port Moresby       20.26 283   P        P         21 11 26.0  -1.1
        11nm,0.7s,baz=121,slow=5.9,SNR=3.7
PMG   Port Moresby       20.26 283   P        P         21 11 27.9  +0.7
        8.7nm,0.6s
AFI   Afiamalu           20.41  91   P        P         21 11 28.6   0.0
        26nm,0.7s,baz=270,slow=15,SNR=2.9
AFI   Afiamalu           20.41  91  eP        P         21 11 28.5  -0.1
        15nm,0.5s
CTA   Charters Tower     20.68 252  eP        P         21 11 32.7  +1.4
        5.0nm,0.5s
CTA   Charters Tower     20.68 252   P        P         21 11 32.6  +1.3
        5.0nm,0.5s,baz=79,slow=11,SNR=20
CTAO  Charters Tower     20.68 252  eP        P         21 11 33.0  +1.7
        5.4nm,0.5s
ARMA  Armidale           21.24 220  eP        P         21 11 41.1  +4.4
STKA  Stephens Creek     28.98 229   P        P         21 12 49.4  +1.0
        11nm,0.4s,mb4.8,baz=58,slow=9.5,SNR=46
RPZ   Rata Peaks         29.16 174   P        P         21 12 49.6  -0.2
        4.6nm,0.5s,mb4.3,baz=341,slow=16,SNR=6.0
WB2   Warramunga Arr     31.75 256  eP        P         21 13 11.6  -1.1
WRAB  Tennant Creek      31.75 256  eP        P         21 13 11.6  -1.1
        2.6nm,0.4s,mb4.1
WRA   Warramunga Arr     31.76 256   P        P         21 13 11.5  -1.3
        1.9nm,0.4s,mb4.0,baz=85,slow=9.3,SNR=80
GUMO  Guam               35.71 321   LR       LR        21 26 06.3
        comp=Z,26nm,19.7s,baz=76,slow=32
KNA   Kununurra          37.05 263  eP        P         21 13 55.3  -2.4
        3.2nm,0.9s,mb3.9
FITZ  Fitzroy Crossi     39.95 259  eP        P         21 14 21.7  +0.2
        7.9nm,0.9s,mb4.1
KKM   Kota Kinabalu      54.55 289  eP        P         21 16 14.9  +0.5
VNDA  Vanda              62.94 181  eP        P         21 17 10.8  -0.5
        1.2nm,0.6s,mb3.7
ENH   Enshi              71.25 309  eP        P         21 18 03.4  -0.4
        3.9nm,0.7s,mb4.2
LZH   Lanzhou            78.20 312  eP        P         21 18 45.0  +1.6
LZH                                  AMB      AMB
        comp=Z,20nm,1.6s,mb4.5
ULN   Ulaanbaatar        82.02 324  eP        P         21 19 03.9  +0.7
        comp=Z,10nm,1.3s,mb4.3
SONM  Songino Array      82.38 324   P        P         21 19 05.5  +0.4
        comp=Z,2.4nm,0.8s,mb3.9,baz=134,slow=5.0,SNR=23
GTA   Gaotai             82.55 314  eP        P         21 19 07.8  +1.7
ILAR  Eielson Array      86.48  18   P        P         21 19 22.5  -2.6
        comp=Z,1.3nm,0.6s,mb3.8,baz=239,slow=5.3,SNR=13
MKAR  Makanchi Array     97.09 316   P        P         21 20 15.2  +0.7
        comp=Z,1.3nm,0.7s,mb4.3,baz=93,slow=6.3,SNR=11
ZAL   Zalesovo           97.28 324   P        P         21 20 15.2  -0.2
        comp=Z,1.0nm,0.6s,mb4.2,baz=67,slow=5.9,SNR=8.1
JOF   Joensuu           122.78 338  epkp      PKPdf     21 25 34.3  -1.4
KAF   Kangasniemi       125.09 339  epkp      PKPdf     21 25 37.1  -3.0
FINES FINESS Array B    125.62 338   PKP      PKPdf     21 25 42.4  +1.3
        comp=Z,0.5nm,0.5s,baz=45,slow=3.9,SNR=11
NOA   NORSAR Array B    130.53 345   SKPbc              21 28 59.5
        comp=Z,4.2nm,0.7s,baz=32,slow=3.0,SNR=9.5
AKASG Malin Array Be    130.62 326   PKP      PKPdf     21 25 51.8  +0.8
        comp=Z,0.4nm,0.5s,baz=40,slow=2.4,SNR=5.5
AKASG                                SKPbc              21 28 59.5
        comp=Z,0.9nm,0.5s,baz=48,slow=4.6,SNR=8.1
CABF  La Chapelle       144.42 337  ePKP1     PKPbc     21 26 18.2  +2.2
        comp=Z,10nm,0.7s
LOR   Lormes            144.63 340  ePKP1     PKPbc     21 26 17.7  +1.1
        comp=Z,11nm,0.7s
SSF   Saint Saulge      144.93 340  ePKP1     PKPbc     21 26 18.8  +1.4
        comp=Z,32nm,0.8s
GRR   Gorron            144.94 346  ePKP1     PKPbc     21 26 18.2  +0.8
        comp=Z,32nm,0.6s
HYF   Humbligny         145.02 342  ePKP1     PKPbc     21 26 19.8  +2.1
LPL   La Plagne         145.09 336  ePKP1     PKPbc     21 26 19.9  +2.0
        comp=Z,22nm,0.7s
LPG   La Plagne         145.09 336  ePKP1     PKPbc     21 26 20.0  +2.1
        comp=Z,16nm,0.6s
SMF   Signal de Mont    145.19 340  ePKP1     PKPbc     21 26 19.4  +1.3
AVF   Avril sur Loir    145.22 340  ePKP1     PKPbc     21 26 19.5  +1.3
        comp=Z,6.9nm,0.5s
SGMF  Saint Gilles      145.43 348  ePKP1     PKPbc     21 26 19.7  +1.0
        comp=Z,13nm,0.5s
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BNI	Bardonecchia	145.49	335	ePKPbc	PKPbc	21 26 21.7	+2.8
BGF	Bois d'Agland	145.59	341	ePKP1	PKPbc	21 26 20.8	+1.7
MBDF	Montbardon	145.72	335	ePKP1	PKPbc	21 26 21.3	+1.8
ORIF	Oris-en-Rattie	145.92	336	ePKP1	PKPbc	21 26 22.2	+2.2
	comp=Z,12nm,0.5s						
TCF	Toulx Ste Croi	146.03	341	ePKP1	PKPbc	21 26 22.1	+1.9
	comp=Z,48nm,1.2s						
SBF	Sospel	146.13	333	ePKP1	PKPbc	21 26 22.2	+1.7
MFF	Saint Martin d	146.42	344	ePKP1	PKPbc	21 26 23.0	+1.9
VIVF	Saint-Julien-l	146.43	337	ePKP1	PKPbc	21 26 23.5	+2.3
	comp=Z,41nm,1.3s						
FRF	La Foret Royal	146.72	334	ePKP1	PKPbc	21 26 24.0	+2.1
	comp=Z,18nm,0.7s						
SMRF	Simiane la Rot	146.82	335	ePKP1	PKPbc	21 26 25.1	+3.0
LMR	La Mourre	146.96	334	ePKP1	PKPbc	21 26 24.6	+2.1
	comp=Z,18nm,0.8s						
RJF	Les Rejaudoux	147.12	341	ePKP1	PKPdf	21 26 25.4	+4.5
CAF	Calviac	147.29	340	ePKP1	PKPdf	21 26 26.5	+5.4
LASF	Ste Croix	147.40	337	ePKP1	PKPdf	21 26 26.3	+5.0
LFF	La Frestale	147.69	342	ePKP1	PKPdf	21 26 26.8	+5.1
	comp=Z,18nm,0.6s						
MTLF	Montolieu	148.63	339	ePKP1	PKPdf	21 26 29.5	+6.2
	comp=Z,16nm,0.7s						
RCBR	Riachuelo	149.38	130	ePKPbc	PKPdf	21 26 31.7	+6.4
ETSF	Etsaut	149.94	342	ePKP1	PKPdf	21 26 33.5	+8.2

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*ATH **25** 21:22:15.8, 39.01N×23.30E, h23^{km}±1^{km}, MD2.9/6, ML3.0*
*NEIC **25** 21:22:15.8, 39.01N×23.31E, h23^{km}, MD2.9(ATH), After ATH.*
*THE **25** 21:22:16.5, 38.98N×23.37E, h4^{km}, ML2.3*
*CSEM **25** 21:22:16.3±0.1, 38.97N×23.38E, h12^{km}, MD2.9, Error ellipse: s-maj=3.1km s-min=2.5km az=104.0*
ISC 25 21:22:15.9±0.6, **39.00N**±0.03×**23.37E**±0.04, **h13**^{km}±6^{km}, **n13**, σ**0^{s}.65**/19, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	Neokhori	0.33	340	ePB	Pb	21 22 23.1	0.0
NEO				eSB	Sb	21 22 27.7	-0.3
XOR	Xorichti	0.39	340	ePg	Pg	21 22 24.2	+0.1
AOS	Alonnisos	0.43	66	ePg	Pg	21 22 24.8	-0.1
AOS				eSg	Sg	21 22 31.2	+0.4
LKR	Lokris	0.45	220	ePB	Pb	21 22 25.3	+0.1
LKR				eSB	Sb	21 22 31.2	-0.3
AGG	Agios Georgios	0.81	272	ePg	Pg	21 22 31.5	-0.7
AGG				eSg	Sg	21 22 43.7	+0.6
MPAR	Parnis Oros	0.89	161	ePB	Pb	21 22 33.0	+0.2
MPAR				eSN	Sn	21 22 46.1	-0.7
PAIG	Paliouri	0.96	14	ePg	Pg	21 22 35.0	-0.2
PAIG				eSg	Sg	21 22 48.7	+0.6
PTL	Penteli	1.02	158	ePN	Pn	21 22 36.2	+0.3
ATH	Athens Observa	1.06	165	ePN	Pn	21 22 36.3	-0.1
NAIG	Nisos Aigina	1.24	176	ePN	Pn	21 22 40.0	+1.0
PLG	Polygyros	1.38	2	ePN	Pn	21 22 40.9	0.0
OUR	Ouranopolis	1.42	19	ePg	Pg	21 22 41.9	-2.3
KNT	Kendrikon	2.19	351	ePn	Pn	21 22 53.5	+0.9

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*CSEM **25** 21:52:29.3±0.1, 32.59N×5.52W, h18^{km}, MD3.0, Error ellipse: s-maj=4.5km s-min=3.2km az=149.0, After CNRM*
*CNRM **25** 21:52:29.3, 32.59N×5.52W, h18^{km}, MD3.0*
MDD 25 21:52:29.7±5.4, **32.79N**×**5.69W**, **mb3.6**/3, **Error ellipse: s-maj=83.3km s-min=42.6km az=92.0, PRXIMO SIN SOLUCIN, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZFT	Errachidia	1.36	123	i P	Pb	21 52 49.0	-6.8
ZFT				i S	Sb	21 53 03.5	-10
EGRO	El Granado	4.96	343	P	Pn	21 53 44.2	-3.0
	0.5nm,0.1s,SNR=7.9						
EGRO				S	Sn	21 54 38.9	-7.2
	0.8nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	5.03	351	P	Pn	21 53 45.2	-3.0
	0.1nm,0.1s,SNR=7.9						
EMIN				S	Sn	21 54 40.3	-7.7
	0.1nm,0.1s,SNR=7.9						
EADA	Adamuz	5.44	9	S	Sn	21 54 50.5	-7.7
	0.3nm,0.1s,SNR=7.9						
EBAD	Badajoz	6.05	350	P	Pn	21 53 59.2	-3.4
	0.5nm,0.1s,SNR=7.9						
EBAD				S	Sn	21 55 05.5	-8.0
	0.3nm,0.1s,SNR=7.9						

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*NEIC **25** 22:14:22.1±1.5, 51.57N×16.16E, h5^{km}, ML2.8(SZGRF), ML2.6(CLL), Error ellipse: s-maj=16.0km s-min=5.9km az=207.0*
*WAR **25** 22:14:23.5, 51.54N×16.13E, h1^{km}, ML2.7, Mining Induced*
*PRU **25** 22:14:24.1, 51.48N×16.08E*
ISC 25 22:14:21.1±0.8, **51.51N**±0.05×**16.14E**±0.03, **n23**, σ**1^{s}.17**/43, **3D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.68	172	⇓iPG	Pg	22 14 36.5	+1.9
KSP				⇓eSG	Sg	22 14 46.5	+2.9
KSP	Ksiaz	0.68	172	ePg	Pg	22 14 36.5	+1.9
KSP				eSg	Sg	22 14 45.8	+2.2
KSP	Ksiaz	0.68	172	⇓iPg	Pg	22 14 36.5	+1.9
KSP				eSg	Sg	22 14 45.6	+2.0
UPC	Upice	1.01	185	ePG	Pg	22 14 42.6	+1.4
DPC	Dobruska-Polom	1.17	174	ePG	Pg	22 14 45.2	+0.8
DPC				eSG	Sg	22 15 00.8	+0.9
	17nm,0.2s						
PVCC	Panska Ves	1.40	226	ePG	Pg	22 14 48.9	0.0
BRG	Berggiesshubel	1.52	246	Pg	Pg	22 14 51.4	-0.1
BRG				Sg	Sg	22 15 12.4	+0.7
PRU	Pruhonice	1.83	214	ePN	Pn	22 14 55.0	+1.0
PRU				ePG	Pg	22 14 56.9	-0.7
PRU				eSG	Sg	22 15 21.4	-0.6
RAC	Raciborz	1.94	137	eP	Pg	22 15 00.0	+0.3
RAC				eS	Sg	22 15 26.0	+0.5
MORC	Moravsky Berou	1.95	152	ePn	Pn	22 14 56.4	+0.6
MORC				eSg	Sg	22 15 24.0	-2.1
CLL	Collm	1.97	265	ePN	Pn	22 14 56.0	-0.1
CLL				i PG	Pg	22 14 59.2	-1.3
CLL				i		22 15 03.0	
CLL				i SG	Sg	22 15 25.6	-1.2
CLL	Collm	1.97	265	ePn	Pn	22 14 56.0	-0.1
CLL				i Pg	Pg	22 14 59.2	-1.3
CLL				i Sg	Sg	22 15 25.6	-1.2
OKC	Ostrava-Krasne	2.11	142	ePG	Pg	22 15 02.7	-0.4
OKC				eSG	Sg	22 15 29.5	-1.7
TREC	Trest	2.26	191	ePN	Pn	22 15 02.2	+2.0
TREC				ePG	Pg	22 15 05.1	-1.0
OJC	Ojcow	2.66	118	ePG	Pg	22 15 14.0	-0.1
OJC				eSG	Sg	22 15 49.0	-0.5
NKC	Novy Kostel	2.67	243	eSG	Sg	22 15 49.5	-0.3
	29nm,0.3s						
KHC	Kasperske Hory	2.89	216	ePN	Pn	22 15 09.7	+0.5
KHC				ePG	Pg	22 15 16.0	-2.8
KHC				eSG	Sg	22 15 54.4	-3.0
GEC2	GERESS Array S	3.09	211	ePn	Pn	22 15 13.6	+1.5
WET	Wettzell	3.16	223	ePn	Pn	22 15 13.8	+0.8
WET				eSg	Sg	22 16 01.2	-5.0
NIE	Niedzica	3.39	127	eP	Pg	22 15 28.8	0.0
NIE				eS	Sg	22 16 11.1	-2.9
GRA1	Grafenberg Arr	3.62	242	ePn	Pn	22 15 19.7	+0.1
GRF	Grafenberg Arr	3.62	242	ePn	Pn	22 15 19.7	+0.1
STHS	Stebnicka Huta	3.88	121	eSG	Sg	22 16 30.1	0.0

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*IDC **25** 22:14:58.0±0.7, 8.51S×74.90W, h140^{km}±5^{km}, mb4.1/11, mb1 4.2/15, mb1mx4.2/21, mbtmp4.5/15, MS3.0/2, Ms1 3.1/2, ms1mx2.7/27, Error ellipse: s-maj=19.0km s-min=11.3km az=55.0*
*NEIC **25** 22:14:58.1±0.2, 8.53S×74.93W, mb4.5/28, Error ellipse: s-maj=7.2km s-min=4.5km az=57.0*
NEIC Felt [III] at Pucallpa.
ISC 25 22:14:56.7±0.3, **8.54S**±0.05×**75.02W**±0.06, **h142**^{km}, **h142**^{km}±2.6^{km}**:pP-P, n80**, σ**0^{s}.83**/69, **mb4.3**/36, **2C, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.87	208	ePn	P	22 15 56.9	+1.0
NNA				eSn	S	22 16 40.1	-1.2
LPAZ	La Paz	10.22	140	P	P	22 17 19.8	-1.0
	1.7nm,0.3s,baz=327,slow=15,SNR=18						
LPAZ				LR	LR	22 21 30.6	
	comp=Z,84nm,18.9s,baz=32,slow=39						
LPAZ	La Paz	10.22	140	ePn	P	22 17 20.2	-0.5
	16nm,0.8s						
SAML	Samuel	11.71	93	ePn	P	22 17 35.7	-4.6
	53nm,0.3s						
ROSC	El Rosal	13.32	3	P	P	22 18 02.2	+0.9
	1.7nm,0.3s,baz=96,slow=19,SNR=3.8						
ROSC				S	S	22 20 33.0	+6.6
	1.1nm,0.3s,baz=72,slow=19,SNR=2.1						
SIV	San Ignacio	15.50	120	P	P	22 18 27.3	-1.7
	5.2nm,0.3s,baz=292,slow=13,SNR=80						
SIV				S	S	22 21 09.5	-7.0
	0.7nm,0.3s,baz=308,slow=19,SNR=2.4						
SDV	Santo Domingo	17.85	14	P	P	22 18 56.5	-1.1
	8.5nm,0.3s,baz=176,slow=6.8,SNR=33						
SDV				S	S	22 22 16.0	+6.9
	0.3nm,0.3s,baz=194,slow=18,SNR=2.5						
SDV	Santo Domingo	17.85	14	eP	P	22 18 56.9	-0.7
	16nm,0.4s						
CFAA	Coronel Fontan	23.80	166	P	P	22 19 59.9	+2.3
	0.1nm,0.4s,baz=332,slow=4.5,SNR=3.5						
BDFB	Brasilia	27.31	108	P	P	22 20 28.2	-2.1
	13nm,0.6s,mb4.8,baz=279,slow=11,SNR=20						
BDFB				pP	pP	22 21 00.0	-0.1
	7.0nm,0.5s,baz=275,slow=12,SNR=4.3						
BDFB				LR	LR	22 33 26.7	
	comp=Z,33nm,18.2s,baz=101,slow=41						
BDFB	Brasilia	27.31	108	P	P	22 20 28.2	-2.1
BDFB				pP	pP	22 21 00.0	-0.1
BDFB				LR	LR	22 33 26.7	
BAO	Brasilia Array	27.33	108	P	P	22 20 32.0	+1.5
SJG	San Juan	27.89	18	P	P	22 20 33.9	-1.7
	9.2nm,0.4s,mb4.9,baz=335,slow=18,SNR=4.3						
LTX	Lajitas	46.69	325	eP	P	22 23 13.7	+0.6
	1.8nm,0.4s,mb4.0						
TXAR	Lajitas Array	46.69	325	P	P	22 23 13.8	+0.8
	1.2nm,0.5s,mb3.8,baz=150,slow=8.9,SNR=19						
WMOK	Wichita Mounta	48.56	334	P	P	22 23 26.5	-1.1
	1.1nm,0.6s,mb3.7						
MNTX	Cornudas Mount	49.44	325	eP	P	22 23 34.6	+0.3
	2.8nm,1.1s,mb3.8						
CPRX	Cap Rock	49.63	328	eP	P	22 23 36.6	+0.8
CPRX				epP	pP	22 24 11.9	+3.4
ANMO	Albuquerque	52.48	327	eP	P	22 23 57.5	+0.2
	2.0nm,0.9s,mb3.8						
LOZ	Lake Ozonia	52.91	0	eP	P	22 23 59.5	-0.8
SDCO	Great Sand Dun	54.14	330	eP	P	22 24 09.8	+0.4
	9.8nm,1.1s,mb4.5						
SDCO				epP	pP	22 24 42.0	-0.6
PV01	Paradox Valley	55.99	328	eP	P	22 24 23.2	+0.4
RSSD	Black Hills	58.63	336	eP	P	22 24 41.5	+0.3
	4.6nm,1.2s,mb4.2						
DAU	Daniels Canyon	59.08	328	eP	P	22 24 44.8	+0.4
TCUT	Toone Canyon	59.67	329	eP	P	22 24 48.5	0.0
DUG	Dugway	59.75	327	eP	P	22 24 49.0	0.0
	7.8nm,1.3s,mb4.4						
DUG				epP	pP	22 25 22.5	-0.4
BW06	Boulder Array	59.99	331	eP	P	22 24 50.5	-0.1
	1.5nm,0.4s,mb4.2						
PDAR	Pinedale Array	59.99	331	P	P	22 24 49.6	-1.0
	1.1nm,0.4s,mb4.1,baz=125,slow=9.6,SNR=14						
HWUT	Hardware Ranch	60.11	329	eP	P	22 24 50.9	-0.5
	3.3nm,0.5s,mb4.4						
LOHW	Long Hollow	61.13	331	eP	P	22 24 57.9	-0.5
	1.2nm,0.5s,mb4.0						
TPAW	Teton Pass	61.20	331	eP	P	22 24 58.7	-0.2
	1.5nm,0.5s,mb4.1						
ULM	Lac du Bonnet	61.30	345	P	P	22 24 57.8	-1.5
	5.5nm,0.5s,mb4.7,baz=156,slow=7.1,SNR=17						
IMW	Indian Meadow	61.50	331	eP	P	22 25 00.2	-0.6
	3.5nm,0.9s,mb4.2						
NVAR	Mina Array Bea	61.70	322	P	P	22 25 01.6	-0.6
	0.5nm,0.4s,mb3.7,baz=132,slow=6.8,SNR=4.6						
NVAR				pP	pP	22 25 35.7	-0.6
	1.5nm,1.0s,baz=133,slow=6.8,SNR=2.7						
NVAR	Mina Array Bea	61.70	322	P	P	22 25 01.6	-0.6
NVAR				pP	pP	22 25 35.7	-0.6
SCHQ	Schefferville	63.51	5	P	P	22 25 12.9	-1.0
	1.7nm,0.4s,mb4.2,baz=249,slow=16,SNR=7.7						
FFC	Flin Flon	66.97	343	eP	P	22 25 35.3	-0.8
	3.1nm,0.5s,mb4.4						
FCC	Fort Churchill	68.82	349	eP	P	22 25 46.7	-0.8
	5.9nm,0.4s,mb4.7						
EDM	Edmonton	69.59	337	eP	P	22 25 51.6	-0.6
DBIC	Dimbokro	71.56	80	P	P	22 26 03.4	-1.3
	4.4nm,0.3s,mb4.6,baz=249,slow=6.7,SNR=41						
DBIC	Dimbokro	71.56	80	eP	P	22 26 03.2	-1.5
	9.7nm,0.5s,mb4.8						
SNAA	Sanae	76.37	162	eP	P	22 26 32.0	+0.6
	7.2nm,1.3s,mb4.1						
YKA	Yellowknife Ar	77.10	342	P	P	22 26 35.4	-0.3
	2.9nm,0.5s,mb4.2,baz=141,slow=5.9,SNR=27						
YKA				pP	pP	22 27 09.9	-1.2
	1.2nm,0.5s,baz=140,slow=6.2,SNR=2.9						
YKA	Yellowknife Ar	77.10	342	P	P	22 26 35.4	-0.3
YKA				pP	pP	22 27 09.9	-1.2
YKW3	Yellowknife Ar	77.16	342	eP	P	22 26 35.6	-0.3
ESDC	Sonseca Array	81.14	48	P	P	22 26 58.6	+0.6
	1.7nm,0.6s,mb3.9,baz=258,slow=4.8,SNR=8.3						
SJPF	Ste Jean	84.16	45	eP	P	22 27 14.1	+0.8
	16nm,0.6s,mb4.6						
SUMG	Summit	84.34	10	eP	P	22 27 14.6	+1.1
	44nm,1.2s,mb5.1						
MFF	Saint Martin d	85.92	42	eP	P	22 27 22.5	+0.6
LFF	La Frestale	86.05	44	⇑iP	P	22 27 23.3	+0.8
	12nm,0.5s,mb4.6						
RJF	Les Rejaudoux	86.67	43	⇑iP	P	22 27 26.1	+0.5
	3.8nm,0.4s,mb4.2						
INK	Inuvik	86.84	341	eP	P	22 27 26.3	+0.5
	7.2nm,1.0s,mb4.5						
INK				epP	pP	22 28 02.1	-0.1
CAF	Calviac	86.95	44	eP	P	22 27 26.7	-0.2
TCF	Toulx Ste Croi	87.40	43	eP	P	22 27 29.3	+0.3
BGF	Bois d'Agland	87.90	42	eP	P	22 27 31.8	+0.4
	13nm,0.7s,mb4.6						
AVF	Avril sur Loir	88.29	42	eP	P	22 27 33.4	+0.1
SMF	Signal de Mont	88.58	43	eP	P	22 27 35.0	+0.3
LOR	Lormes	88.74	42	eP	P	22 27 35.5	+0.1
ORIF	Oris-en-Rattie	89.58	45	eP	P	22 27 40.0	+0.6
	12nm,0.5s,mb4.8						
LMR	La Mourre	89.69	46	eP	P	22 27 40.4	+0.5
GIVF	Givet	90.03	39	eP	P	22 27 41.9	+0.5
ILAR	Eielson Array	90.08	336	P	P	22 27 41.5	+0.3
	0.8nm,0.4s,mb4.0,baz=137,slow=3.7,SNR=25						
ILAR				pP	pP	22 28 17.3	-0.5
	0.7nm,0.7s,baz=92,slow=2.7,SNR=4.2						
LPL	La Plagne	90.29	44	eP	P	22 27 43.4	+0.7
	9.9nm,0.7s,mb4.5						
LPG	La Plagne	90.30	44	eP	P	22 27 43.6	+0.8
	18nm,0.8s,mb4.8						
COLA	College	90.50	336	eP	P	22 27 43.6	+0.4
	7.7nm,0.9s,mb4.7						
STKA	Stephens Creek	126.72	219	PKP	PKPdf	22 33 46.3	+2.4
	2.5nm,0.8s,baz=101,slow=10,SNR=4.5						
ZAL	Zalesovo	131.90	16	PKP	PKPdf	22 33 55.2	+2.0
	2.1nm,0.9s,baz=171,slow=1.6,SNR=16						
ZAL				pPKP		22 34 31.5	
	1.9nm,0.8s,baz=210,slow=2.4,SNR=6.0						
KURK	Kurchatov	132.63	23	ePKPdf	PKPdf	22 33 56.6	+1.9
MKAR	Makanchi Array	137.24	23	PKP	PKPdf	22 34 04.7	+1.4
	0.8nm,0.5s,baz=288,slow=3.0,SNR=15						
MKAR				pPKP		22 34 41.2	
	1.0nm,0.7s,baz=296,slow=3.2,SNR=4.4						
WB2	Warramunga Arr	139.54	225	ePKP	PKPdf	22 34 07.8	-0.4
WRAB	Tennant Creek	139.55	225	ePKPdf	PKPdf	22 34 10.7	+2.5
WRA	Warramunga Arr	139.55	225	PKP	PKPdf	22 34 10.6	+2.4
	1.4nm,0.4s,baz=123,slow=2.1,SNR=14						
WRA				pPKP		22 34 46.7	
	0.9nm,0.4s,baz=125,slow=2.0,SNR=4.5						
SONM	Songino Array	140.82	358	PKhKP		22 34 07.5	
	0.3nm,0.4s,baz=294,slow=1.6,SNR=7.2						
KAKA	Kakadu	145.50	233	ePKP	PKPdf	22 34 41.5	+23
	5.1nm,0.4s						
KAKA				epPKP		22 35 14.1	
FITZ	Fitzroy Crossi	146.58	218	ePKP	PKPdf	22 34 24.9	+4.4
	14nm,0.9s						
FITZ				epPKP		22 34 58.1	
KOLN	Koldanda	152.19	44	eP	PKPdf	22 34 37.7	+8.7
GKN	Gorkha	152.74	42	eP	PKPdf	22 34 39.4	+10
	25nm,0.4s						
KKN	Kakani	153.30	42	eP	PKPdf	22 34 40.5	+10
GUN	Gumba	153.61	41	eP	PKPdf	22 34 41.5	+10
	52nm,1.1s						
LSA	Lhasa	155.27	30	ePKPab	PKPab	22 35 01.4	-0.2

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*IDC **25** 22:20:17.4±2.3, 36.39N×138.94E, h151^{km}±7^{km}, mb2.9/2, mb1 3.2/2, mb1mx2.9/19, mbtmp3.3/2, Error ellipse: s-maj=69.1km s-min=26.4km az=66.0*
*JMA **25** 22:20:17.9±0.1, 36.33N×139.16E, h143^{km}±1^{km}, M3.1*
ISC 25 22:20:16.3±0.7, **36.33N**±0.05×**139.15E**±0.07, **h151**^{km}±5^{km}, **n15**, σ**0^{s}.72**/25, **mb3.2**/2, **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAG	Ashikaga	0.26	68	P	P	22 20 37.6	+0.4
JAG				eS	S	22 20 52.3	-0.9
JRY	Ryogami san	0.37	213	P	P	22 20 38.3	+0.7
JRY				eS	S	22 20 53.8	-0.1
JKT	Katashina	0.45	10	P	P	22 20 38.5	+0.6
JKT				S	S	22 20 54.0	-0.5
MJAR	Matsushiro Arr	0.79	286	P	P	22 20 39.3	-0.4
	61nm,0.3s,baz=105,slow=5.7,SNR=468						
MJAR				S	S	22 20 57.3	-0.6
	12nm,0.3s,baz=43,slow=16,SNR=16						
MAT	Matsushiro	0.79	286	P	P	22 20 40.0	+0.2
MAT				S	S	22 20 56.9	-1.0
JYN	Shimob	0.96	211	P	P	22 20 41.7	+0.7
JYN				eS	S	22 21 00.3	+0.3
JOD2	Odawara 2	1.06	183	P	P	22 20 42.3	+0.5
JOD2				eS	S	22 21 00.7	-0.8
JNS	Sasagawa	1.50	5	P	P	22 20 46.9	+0.7
JIM2	Oshima 3	1.62	172	P	P	22 20 48.3	+0.8
JIM2				eS	S	22 21 11.1	-0.5
JSD	Sado	1.85	338	P	P	22 20 50.1	+0.1
JMM	Marumori	2.02	40	P	P	22 20 52.8	+0.8
JMM				eS	S	22 21 19.0	-0.5
JGM	Miyama	2.07	253	P	P	22 20 53.8	+1.2
JGM				eS	S	22 21 20.8	+0.3
JAW	Awa shima	2.13	2	P	P	22 20 54.0	+0.7
MKAR	Makanchi Array	42.96	302	P	P	22 27 59.8	-1.8
	0.2nm,0.5s,mb3.0,baz=90,slow=8.3,SNR=4.2						
WRA	Warramunga Arr	56.15	185	P	P	22 29 41.7	-0.9
	0.4nm,0.6s,mb3.5,baz=0.1,slow=7.5,SNR=8.5						

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*LDG **25** 22:34:51.8±0.1, 43.96N×6.79E, h5^{km}, Md2.9/2, Ml2.8/11, Error ellipse: s-maj=1.2km s-min=1.1km az=20.0*
*STR **25** 22:34:51.9±0.1, 43.98N×6.79E, h11^{km}±1^{km}, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*ROM **25** 22:34:51.3±0.6, 44.02N×6.81E, h9^{km}, Md2.8/4, Error ellipse: s-maj=6.3km s-min=3.4km az=126.0*
*GEN **25** 22:34:51.2, 43.97N×6.78E, h1^{km}, ML2.0*
*NEIC **25** 22:34:51.9, 43.98N×6.79E, h11^{km}, MD2.8(ROM), ML2.8(LDG), ML2.6(STR), ML2.6(GEN), After STR.*
*CSEM **25** 22:34:52.2±0.1, 44.01N×6.83E, h12^{km}, ML2.8/14, Error ellipse: s-maj=1.1km s-min=0.8km az=29.0*
ISC 25 22:34:50.8±0.2, **43.98N**±0.01×**6.75E**±0.02, **h15**^{km}±2^{km}, **n91**, σ**0^{s}.99**/177, **3D, Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVIF	Mont Vial	0.30	106	Pg	Pg	22 34 57.3	0.0
TOUF	Mont Tournerai	0.36	84	Pg	Pg	22 34 58.4	0.0
TOUF				Sg	Sg	22 35 05.0	+1.4
FRF	La Foret Royal	0.42	190	ePg	Pg	22 34 59.2	-0.4
FRF				eSg	Sg	22 35 05.2	-0.3
	295nm,0.2s						
AUTN	L'Aution	0.49	88	Pg	Pg	22 35 00.9	0.0
AUTN				Sg	Sg	22 35 08.2	+0.6
STV	Sta Anna Valdi	0.49	57	P	Pb	22 35 00.7	+0.1
STV				S	Sb	22 35 07.3	+0.1
STV	Sta Anna Valdi	0.49	57	P	Pb	22 35 00.7	+0.1
STV2	Anna di Valdie	0.49	57	P	Pb	22 35 00.6	0.0
STV2				S	Sb	22 35 07.2	-0.2
STV2	Anna di Valdie	0.49	57	P	Pb	22 35 00.6	0.0
SURF	Saint Ours	0.51	5	Pg	Pg	22 35 01.2	0.0
SURF				Sg	Sg	22 35 08.7	+0.6
REVF	Revere	0.51	118	Pg	Pg	22 35 01.3	+0.1
REVF				Sg	Sg	22 35 08.9	+0.7
SBF	Sospel	0.51	103	ePn	Pn	22 35 02.3	-0.9
SBF				eSg	Sg	22 35 06.9	-1.3
	251nm,0.3s						
SBF				eSn	Sn	22 35 09.7	-1.8
	284nm,0.3s						
SBF	Sospel	0.51	103	ePg	Pg	22 35 01.2	0.0
SBF				ePn	Pn	22 35 02.3	-0.9
SBF				eSg	Sg	22 35 06.9	-1.3
SBF				eSn	Sn	22 35 09.7	-1.8
SBF	Sospel	0.51	103	ePn	Pn	22 35 02.3	-0.9
SBF				eSg	Sg	22 35 06.9	-1.3
	126nm,0.3s						
SBF				eSn	Sn	22 35 09.7	-1.8
	142nm,0.3s						
ENR	Entracque	0.54	62	P	Pb	22 35 01.6	+0.2
ENR				S	Sb	22 35 09.1	+0.3
ENR	Entracque	0.54	62	P	Pb	22 35 01.6	+0.1
ENR				S	Sb	22 35 09.1	+0.3
SAOF	Saorge	0.58	89	Pg	Pg	22 35 02.4	-0.3
SAOF				Sg	Sg	22 35 10.8	+0.2
PZZ	Prazzo	0.58	25	P	Pb	22 35 02.5	+0.4
PZZ				S	Sb	22 35 10.6	+0.6
PZZ	Prazzo	0.58	25	P	Pb	22 35 02.5	+0.3
PZZ				S	Sb	22 35 10.6	+0.6
STOF	St-Etienne Org	0.61	272	Pg	Pg	22 35 06.4	+3.2
OG25	Le Caire	0.62	309	Pg	Pg	22 35 04.4	+0.9
OG25				Sg	Sg	22 35 14.5	+2.5
DOI	San Damiano	0.64	34	⇓iPg	Pg	22 35 03.5	-0.2
DOI				Sg	Sg	22 35 11.6	-0.8
	80nm,0.2s						
LMR	La Mourre	0.67	195	ePn	Pn	22 35 05.8	+0.4
LMR				eSg	Sg	22 35 12.3	-1.1
	67nm,0.3s						
LMR				eSn	Sn	22 35 16.1	+0.6
LMR	La Mourre	0.67	195	ePg	Pg	22 35 03.4	-0.9
LMR				ePn	Pn	22 35 05.8	+0.4
LMR				eSg	Sg	22 35 12.3	-1.1
LMR				eSn	Sn	22 35 16.1	+0.6
LMR	La Mourre	0.67	195	ePn	Pn	22 35 05.8	+0.4
LMR				eSg	Sg	22 35 12.3	-1.1
	33nm,0.3s						
LMR				eSn	Sn	22 35 16.1	+0.6
MONE	Monesi	0.73	82	P	Pb	22 35 05.1	+0.4
MONE				S	Sb	22 35 14.4	+0.2
MONE	Monesi	0.73	82	P	Pb	22 35 05.1	+0.4
MONE				S	Sb	22 35 14.4	+0.2
MBDF	Montbardon	0.75	1	ePn	Pn	22 35 08.0	+1.4
MBDF				eSg	Sg	22 35 16.1	0.0
MBDF				eSn	Sn	22 35 19.1	+1.5
	30nm,0.2s						
MBDF	Montbardon	0.75	1	ePg	Pg	22 35 05.4	-0.5
MBDF				ePn	Pn	22 35 08.0	+1.4
MBDF				eSg	Sg	22 35 16.1	0.0
MBDF				eSn	Sn	22 35 19.1	+1.5
MBDF	Montbardon	0.75	1	ePn	Pn	22 35 08.0	+1.4
MBDF				eSg	Sg	22 35 16.1	0.0
MBDF				eSn	Sn	22 35 19.1	+1.5
	15nm,0.2s						
IMI	Imperia	0.83	94	⇓iPg	Pg	22 35 07.1	-0.3
IMI				Sg	Sg	22 35 19.2	+0.6
	50nm,0.1s						
IMI	Imperia	0.83	94	P	Pb	22 35 06.8	+0.5
IMI	Imperia	0.83	94	⇓iPg	Pg	22 35 07.1	-0.3
IMI				S	Sb	22 35 17.5	+0.5
IMI				Sg	Sg	22 35 19.2	+0.6
	50nm,0.1s						
SMRF	Simiane la Rot	0.85	270	ePn	Pn	22 35 09.7	+1.7
SMRF				eSg	Sg	22 35 19.7	+0.4
SMRF				eSn	Sn	22 35 21.6	+1.4
	54nm,0.3s						
SMRF	Simiane la Rot	0.85	270	ePg	Pg	22 35 07.9	0.0
SMRF				ePn	Pn	22 35 09.7	+1.7
SMRF				eSg	Sg	22 35 19.7	+0.4
SMRF				eSn	Sn	22 35 21.6	+1.4
SMRF	Simiane la Rot	0.85	270	ePn	Pn	22 35 09.7	+1.7
SMRF				eSg	Sg	22 35 19.7	+0.4
SMRF				eSn	Sn	22 35 21.6	+1.4
	27nm,0.3s						
OG22	Abries	0.86	9	Pg	Pg	22 35 07.4	-0.6
ROB	Roburent	0.87	68	P	Pb	22 35 07.6	+0.6
ROB				S	Sb	22 35 18.3	+0.2
ROB	Roburent	0.87	68	P	Pb	22 35 07.6	+0.6
ROB				S	Sb	22 35 18.3	+0.1
PUYF	Puyloubier	0.88	240	Pg	Pg	22 35 08.4	-0.1

BHB	**Bricherasio**	**0.94**	**23**	P	**Pb**	**22 35 08.8**	**+0.5**
BHB				S	**Sb**	**22 35 21.1**	**+0.9**
BHB	**Bricherasio**	**0.94**	**23**	P	**Pb**	**22 35 08.8**	**+0.6**
BHB				S	**Sb**	**22 35 21.1**	**+0.8**
BERF	**Bertagne**	**1.02**	**230**	Pg	**Pg**	**22 35 11.4**	**+0.2**
BERF				Sg	**Sg**	**22 35 26.6**	**+1.7**
BNI	**Bardonecchia**	**1.08**	**357**	*e*Pg	**Pg**	**22 35 11.6**	**-0.8**
BNI				*e*Sg	**Sg**	**22 35 26.2**	**-0.6**
BNI	**Bardonecchia**	**1.08**	**357**	*e*Pg	**Pg**	**22 35 11.6**	**-0.8**
BNI				*e*Sg	**Sg**	**22 35 26.2**	**-0.6**
FENE	**Fenestrelle**	**1.08**	**12**	P	**Pb**	**22 35 11.6**	**+1.1**
FENE				S	**Sb**	**22 35 25.6**	**+1.4**
FENE	**Fenestrelle**	**1.08**	**12**	P	**Pb**	**22 35 11.6**	**+1.0**
FENE				S	**Sb**	**22 35 25.6**	**+1.4**
FIN	**Finale Ligure**	**1.08**	**77**	Pg	**Pg**	**22 35 11.2**	**-1.2**
FIN				Sg	**Sg**	**22 35 27.9**	**+1.1**
	46nm,0.3s						
FIN	**Finale Ligure**	**1.08**	**77**	P	**Pb**	**22 35 10.7**	**+0.1**
FIN	**Finale Ligure**	**1.08**	**77**	Pg	**Pg**	**22 35 11.2**	**-1.2**
FIN				S	**Sb**	**22 35 24.2**	**0.0**
FIN				Sg	**Sg**	**22 35 27.9**	**+1.1**
	46nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.13**	**327**	*e*Pn	**Pn**	**22 35 13.0**	**+1.0**
ORIF				*e*Sg	**Sg**	**22 35 28.5**	**-0.1**
	69nm,0.3s						
GELF	**Grande-Etoile**	**1.13**	**239**	Pg	**Pg**	**22 35 13.2**	**-0.2**
GELF				Sg	**Sg**	**22 35 29.9**	**+1.3**
PRAF	**Pradon**	**1.16**	**262**	Pg	**Pg**	**22 35 14.1**	**+0.1**
OCF	**Saint Nazaire**	**1.20**	**300**	Pg	**Pg**	**22 35 15.6**	**+0.7**
OG26	**St.-Nazaire-De**	**1.20**	**300**	Pg	**Pg**	**22 35 15.6**	**+0.7**
RSP	**Reno Superiore**	**1.23**	**17**	P	**Pb**	**22 35 13.7**	**+0.6**
RSP	**Reno Superiore**	**1.23**	**17**	P	**Pb**	**22 35 13.7**	**+0.5**
GDM	**Grand’Maison**	**1.31**	**340**	Pg	**Pg**	**22 35 17.6**	**+0.6**
PCP	**Pian Castagno**	**1.41**	**66**	P	**Pn**	**22 35 17.2**	**+1.2**
PCP				S	**Sb**	**22 35 33.7**	**-0.2**
PCP	**Pian Castagno**	**1.41**	**66**	P	**Pn**	**22 35 17.2**	**+1.2**
PCP				S	**Sb**	**22 35 33.7**	**-0.2**
LSD	**Ceresole Reale**	**1.51**	**11**	P	**Pn**	**22 35 19.6**	**+2.2**
LSD				S	**Sb**	**22 35 38.8**	**+2.0**
LSD	**Ceresole Reale**	**1.51**	**11**	P	**Pn**	**22 35 19.6**	**+2.1**
LSD				S	**Sb**	**22 35 38.8**	**+2.0**
LPG	**La Plagne**	**1.52**	**0**	*e*Pg	**Pg**	**22 35 20.6**	**-0.6**
LPG				*e*Sg	**Sg**	**22 35 40.7**	**-0.8**
	24nm,0.4s						
LPG	**La Plagne**	**1.52**	**0**	*e*Pn	**Pn**	**22 35 19.1**	**+1.5**
LPG				*e*Pg	**Pg**	**22 35 20.6**	**-0.6**
LPG				*e*Sg	**Sg**	**22 35 40.7**	**-0.8**
LPG	**La Plagne**	**1.52**	**0**	*e*Pg	**Pg**	**22 35 20.6**	**-0.6**
LPG				*e*Sg	**Sg**	**22 35 40.7**	**-0.8**
	12nm,0.4s						
LPL	**La Plagne**	**1.54**	**360**	*e*Pg	**Pg**	**22 35 20.1**	**-1.5**
LPL				*e*Sg	**Sg**	**22 35 41.0**	**-1.2**
	28nm,0.5s						
LPL	**La Plagne**	**1.54**	**360**	*e*Pn	**Pn**	**22 35 18.8**	**+0.9**
LPL				*e*Pg	**Pg**	**22 35 20.1**	**-1.5**
LPL				*e*Sg	**Sg**	**22 35 41.0**	**-1.2**
LPL	**La Plagne**	**1.54**	**360**	*e*Pg	**Pg**	**22 35 20.1**	**-1.5**
LPL				*e*Sg	**Sg**	**22 35 41.0**	**-1.2**
	14nm,0.5s						
TRAV		**1.69**	**24**	P	**Pn**	**22 35 20.6**	**+0.5**
TRAV		**1.69**	**24**	P	**Pn**	**22 35 20.6**	**+0.5**
RSL	**Roselend**	**1.71**	**357**	Pg	**Pg**	**22 35 23.7**	**-1.3**
VIVF	**Saint-Julien-l**	**1.73**	**301**	*e*Pn	**Pn**	**22 35 21.3**	**+0.7**
VIVF				*e*Sn	**Sn**	**22 35 42.6**	**+0.1**
	20nm,0.4s						
ORO	**Oropa**	**1.87**	**28**	Pg	**Pg**	**22 35 24.4**	**-3.7**
ORO				Sg	**Sg**	**22 35 51.1**	**-2.0**
	13nm,0.3s						
ORX	**Oropa**	**1.87**	**27**	P	**Pn**	**22 35 23.4**	**+0.7**
ORX	**Oropa**	**1.87**	**27**	P	**Pn**	**22 35 23.4**	**+0.7**
LASF	**Ste Croix**	**2.09**	**274**	*e*Pn	**Pn**	**22 35 26.1**	**+0.3**
LASF				*e*Sn	**Sn**	**22 35 51.1**	**-0.6**
	4.9nm,0.2s						
PGF	**Pioggiola**	**2.18**	**130**	*e*Pn	**Pn**	**22 35 26.3**	**-0.7**
PGF				*e*Sn	**Sn**	**22 35 51.2**	**-2.7**
	25nm,0.2s						
CORF	**Corte**	**2.43**	**133**	Pn	**Pn**	**22 35 30.3**	**-0.4**
CABF	**La Chapelle**	**2.67**	**350**	*e*Pg	**Pg**	**22 35 41.7**	**-2.5**
CABF	**La Chapelle**	**2.67**	**350**	*e*Pn	**Pn**	**22 35 34.2**	**0.0**
CABF				*e*Pg	**Pg**	**22 35 41.7**	**-2.5**
CABF	**La Chapelle**	**2.67**	**350**	*e*Pg	**Pg**	**22 35 41.7**	**-2.5**
MTLF	**Montolieu**	**3.35**	**261**	*e*Pn	**Pn**	**22 35 43.4**	**-0.4**
MTLF				*e*Sn	**Sn**	**22 36 21.5**	**-2.2**
	4.3nm,0.4s						
SMF	**Signal de Mont**	**3.37**	**323**	*e*Pn	**Pn**	**22 35 43.6**	**-0.4**
SMF				*e*Sn	**Sn**	**22 36 21.3**	**-2.7**
	4.6nm,0.4s						
CAF	**Calviac**	**3.49**	**287**	*e*Pn	**Pn**	**22 35 44.9**	**-0.8**
BGF	**Bois d’Agland**	**3.77**	**314**	*e*Pn	**Pn**	**22 35 49.2**	**-0.6**
SSF	**Saint Saulge**	**3.83**	**325**	*e*Pn	**Pn**	**22 35 49.9**	**-0.7**
SSF				*e*Sg	**Sg**	**22 36 53.2**	**-5.3**
	2.5nm,0.6s						
HINF	**Hinteralfeld**	**3.84**	**1**	*e*Pn	**Pn**	**22 35 49.8**	**-0.9**
HINF				*e*Sn	**Sn**	**22 36 33.1**	**-3.0**
LOR	**Lormes**	**3.87**	**329**	*e*Pn	**Pn**	**22 35 51.0**	**-0.1**
LOR				*e*Sn	**Sn**	**22 36 33.9**	**-2.8**
RJF	**Les Rejaudoux**	**3.96**	**291**	*e*Pn	**Pn**	**22 35 51.5**	**-1.0**
HAU	**Haudompre**	**4.04**	**356**	*e*Pg	**Pg**	**22 36 06.7**	**-4.7**
HAU				*e*Sn	**Sn**	**22 36 37.7**	**-3.4**
	5.6nm,0.5s						
HAU	**Haudompre**	**4.04**	**356**	*e*Pn	**Pn**	**22 35 52.9**	**-0.6**
HAU				*e*Pg	**Pg**	**22 36 06.7**	**-4.7**
HAU				*e*Sn	**Sn**	**22 36 37.7**	**-3.4**
EPF	**Esparros**	**4.76**	**261**	*e*Pn	**Pn**	**22 36 02.5**	**-1.3**

MAN 25 23:04:26.6, 17.94N×120.73E, h6^{km}, mb3.8, ML2.5, MS2.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.29**	**183**	*e*P	Pg	23 04 33.2	+0.7
APYP	**Conner**	**0.50**	**99**	*e*P	Pg	23 04 35.8	-0.8
APYP				*e*S	Sg	23 04 41.5	-1.7
CVP	**Callao Caves**	**1.07**	**103**	*e*P	Pb	23 04 46.5	-0.6
CAUP	**Cauayan**	**1.44**	**133**	*e*P	Pn	23 04 53.5	+0.2
BCPH	**Baguio City Da**	**1.56**	**185**	⇑*i*P	Pn	23 04 53.1	-1.8
BCPH				*i* S	Sb	23 05 14.5	-0.8

GCG ***25*** *23:27:03.3, 13.18N×89.34W, h75^{km}, MD4.1, ML4.5*
INET ***25*** *23:27:04.9, 13.76N×88.71W, h30^{km}, MD4.0, ML3.8*

CASC 25 23:27:02.3±2.1, 13.12N×89.15W, h46^{km}±41^{km}, MD4.0, ML3.9, 2C-14D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LFRS	**El Faro**	**0.51**	**10**	⇓*i*P	P	23 27 17.1	+3.6
LFRS				*e*S	S	23 27 26.0	+4.5
LCBS	**La Ceiba**	**0.56**	**17**	⇓*i*P	P	23 27 17.6	+3.5
LCBS				*e*S	S	23 27 26.4	+3.8
SNVI	**San Vicente**	**0.58**	**32**	⇓*e*P	P	23 27 17.9	+3.5
SNVI				*e*S	S	23 27 27.7	+4.6
BOQS	**Boqueron**	**0.63**	**349**	⇓*e*P	P	23 27 18.9	+3.9
BOQS				*e*S	S	23 27 28.6	+4.4
LBRS	**Las Brisas**	**0.63**	**10**	⇓*i*P	P	23 27 18.9	+4.0
LBRS				*e*S	S	23 27 27.7	+3.5
LFU	**La Fuente**	**0.63**	**3**	⇓*e*P	P	23 27 18.9	+3.9
LFU				*e*S	S	23 27 29.5	+5.2
SBLS	**San Blas**	**0.85**	**328**	⇓*e*P	P	23 27 21.5	+3.5
SBLS				*e*S	S	23 27 35.6	+6.0
SNJE	**San Jose**	**0.87**	**330**	⇓*e*P	P	23 27 21.8	+3.5
SNJE				*e*S	S	23 27 34.5	+4.5
VSM	**San Miguel**	**0.91**	**70**	⇓*e*P	P	23 27 22.7	+3.8
VSM				*e*S	S	23 27 36.4	+5.3
RTR	**El Retiro**	**0.91**	**328**	⇓*e*P	P	23 27 22.6	+3.7
RTR				*e*S	S	23 27 36.3	+5.1
BLLM	**Bellamira**	**0.95**	**70**	⇓*e*P	P	23 27 22.9	+3.6
BLLM				*e*S	S	23 27 36.4	+4.4
RBDL	**Robledal**	**1.12**	**332**	⇑*e*P	P	23 27 18.9	-2.9
RBDL				*e*S	S	23 27 34.3	-1.9
CAHU	**Cacacuatique**	**1.12**	**54**	⇑*e*P	P	23 27 25.7	+3.9
CAHU				*e*S	S	23 27 40.4	+4.0
CNCH	**Conchagua**	**1.29**	**83**	⇓*e*P	P	23 27 27.4	+3.0
CNCH				*e*S	S	23 27 45.0	+4.3
IXG	**Ixpaco**	**1.65**	**310**	⇓*e*P	P	23 27 28.6	-0.7
IXG				*e*S	S	23 27 50.0	+0.6
IXG				AML	AML	23 27 51.0	
	comp=E,10µm,0.4s						
MRL	**Marmol**	**2.01**	**345**	⇓*e*P	P	23 27 35.0	+0.6
CRIN	**San Cristobal**	**2.09**	**101**	*e*P	P	23 27 35.1	-0.5
CRIN				*e*S	S	23 28 01.1	+0.6
LEON	**Leon**	**2.31**	**107**	*e*P	P	23 27 37.2	-1.6
TEL3	**Telica 3**	**2.31**	**103**	*e*P	P	23 27 37.8	-1.0
TEL3				*e*S	S	23 28 03.8	-2.4
	comp=Z,426nm,0.6s						
TELN	**Telica**	**2.32**	**102**	*e*P	P	23 27 38.2	-0.7
CNGN	**Cerro Negro**	**2.47**	**104**	*e*P	P	23 27 40.8	-0.2
MIRN	**Miramar**	**2.47**	**105**	*e*P	P	23 27 41.6	+0.5
MIRN				*e*S	S	23 28 08.6	-1.6
	comp=Z,448nm,0.3s						
MOMJ	**Momotombo**	**2.64**	**105**	*e*P	P	23 27 42.9	-0.6
COPN	**Copaltepe**	**2.67**	**110**	*e*P	P	23 27 43.5	-0.3
TICN	**Ticuantepe**	**3.05**	**110**	*e*P	P	23 27 49.5	+0.3
TICN				*e*S	S	23 28 24.6	-0.2
	comp=Z,338nm,0.2s						

PGC 25 23:41:20.7, 49.11N×128.61W, h10^{km}, Mw3.9, 3C-1D, 192km southwest of Gold R., Bc West of Vancouver Island, British Columbia, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BPBC	**Brooks Peninsu**	**1.19**	**27**	⇑Pn	Pn	23 41 40.9	-2.4
BPBC				Trac		23 41 57.0	
	comp=Z,196nm,0.3s						
EDB	**Eliza Dome**	**1.24**	**51**	⇑Pn	Pn	23 41 41.6	-2.5
EDB				Trac		23 42 06.7	
	comp=Z,184nm,0.5s						
ETB	**Estevan Point**	**1.39**	**78**	Pn	Pn	23 41 44.2	-2.0
HOLB	**Holberg**	**1.57**	**11**	Pn	Pn	23 41 46.5	-2.2
HOLB				Trac		23 42 10.2	
	comp=Z,80nm,0.2s						
MAYB	**Maynard**	**1.60**	**35**	⇑Pn	Pn	23 41 46.9	-2.3
WOSB	**Woss**	**1.69**	**51**	⇑Pn	Pn	23 41 48.8	-1.8
WOSB				Trac		23 42 10.7	
	comp=Z,124nm,0.5s						
PHC	**Port Hardy**	**1.77**	**25**	⇓Pn	Pn	23 41 49.5	-2.2
PHC				Sn	Sn	23 42 09.7	-4.8
PHC				Trac		23 42 15.8	
	comp=Z,49nm,0.3s						
GDR	**Gold River**	**1.81**	**67**	⇑Pn	Pn	23 41 49.9	-2.3
BTB	**Buttle Lake**	**2.06**	**79**	⇑Pn	Pn	23 41 53.8	-2.0
BTB				Sn	Sn	23 42 18.2	-3.4
	comp=Z,122nm,0.5s						
BTB				Trac		23 42 25.5	
	comp=Z,122nm,0.5s						
OZB	**Mount Ozzard**	**2.06**	**93**	Pn	Pn	23 41 53.1	-2.7
OZB				Sn	Sn	23 42 16.2	-5.5
OZB				Trac		23 42 17.3	
	comp=Z,52nm,0.3s						
NCRB	**Newcastle Ridg**	**2.10**	**51**	⇑Pn	Pn	23 41 55.1	-1.4
NCRB				Trac		23 42 21.3	
	comp=Z,101nm,0.4s						
CBB	**Campbell River**	**2.31**	**65**	⇑Pn	Pn	23 41 57.6	-1.7
CBB				Trac		23 42 27.8	
	comp=Z,18nm,0.3s						
ALB	**Alberni**	**2.49**	**85**	Pn	Pn	23 41 59.6	-2.3
ALB				Trac		23 42 29.5	
	comp=Z,17nm,0.4s						
MGB	**Mount Grey**	**2.58**	**91**	Pn	Pn	23 42 00.5	-2.8
MGB				Sn	Sn	23 42 29.5	-5.5
MGB				Trac		23 42 31.8	
	comp=Z,16nm,0.2s						
TXB	**Texada**	**2.79**	**76**	Pn	Pn	23 42 04.5	-1.8
TXB				Trac		23 42 50.1	
	comp=Z,50nm,0.6s						
PFB	**Port Renfrew**	**2.81**	**99**	Trac		23 42 40.3	
	comp=Z,6.0nm,0.2s						
PFB	**Port Renfrew**	**2.81**	**99**	Sn	Sn	23 42 34.2	-6.5
NLLB	**Nanaimo Lost L**	**3.04**	**86**	Pn	Pn	23 42 08.0	-1.8
NLLB				Sn	Sn	23 42 43.4	-3.2
NLLB				Trac		23 42 54.2	
	comp=Z,15nm,0.3s						
BBB	**Bella Bella**	**3.10**	**6**	Pn	Pn	23 42 08.6	-2.0
BBB				Sn	Sn	23 42 43.5	-4.6
BBB				Trac		23 42 48.1	
	comp=Z,37nm,0.3s						
LZB	**Mount Lazard**	**3.20**	**97**	Pn	Pn	23 42 09.7	-2.4
LZB				Sn	Sn	23 42 45.0	-5.6
LZB				Trac		23 42 55.9	
	comp=Z,4.0nm,0.3s						
GOBB	**Galiano Island**	**3.36**	**91**	Pn	Pn	23 42 13.1	-1.3
GOBB				Trac		23 43 00.5	
	comp=Z,8.0nm,0.3s						
BIB	**Bowen Island**	**3.49**	**83**	Pn	Pn	23 42 14.5	-1.7
BIB				Trac		23 43 00.9	
	comp=Z,9.0nm,0.4s						
VGZ	**Gonzales**	**3.57**	**99**	Sn	Sn	23 42 53.7	-6.2
WPB	**Watts Point**	**3.57**	**79**	Pn	Pn	23 42 16.4	-1.0
SNB	**Saturna Island**	**3.60**	**93**	Pn	Pn	23 42 16.4	-1.4
SNB				Trac		23 43 03.1	
	comp=Z,12nm,0.5s						
WSLR	**Whistler**	**3.84**	**72**	Pn	Pn	23 42 21.6	+0.5
HNB	**Haney**	**3.96**	**85**	Pn	Pn	23 42 21.3	-1.6
VDB	**Vedder Mountai**	**4.28**	**89**	Pn	Pn	23 42 25.7	-1.7
LLLB	**Lillooet**	**4.61**	**68**	Pn	Pn	23 42 31.0	-1.1
RUBB	**Prince Rupert**	**5.33**	**350**	Pn	Pn	23 42 40.9	-1.3
PNT	**Penticton**	**5.90**	**85**	Pn	Pn	23 42 48.0	-2.3
FSB	**Fort Saint Jam**	**6.00**	**25**	Pn	Pn	23 42 51.0	-0.7
DOWB	**Downie Slide**	**6.90**	**66**	Pn	Pn	23 43 01.3	-3.1
SLEB	**Sale Mountain**	**7.04**	**69**	Pn	Pn	23 43 04.4	-2.1
MNB	**Mounoet Dainar**	**7.20**	**61**	Pn	Pn	23 43 06.7	-1.9
FNBB	**Fort Nelson**	**10.34**	**16**	Pn	P	23 43 50.0	-2.0

KRSC 25 23:56:49.6±1.4, 51.06N×154.74E, h376^{km}±8^{km}, ML4.2, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APC	**Apacha**	**2.39**	**38**	*e*P	P	23 57 46.5	0.0
RUS	**Russkaya**	**2.72**	**58**	P	P	23 57 48.5	-0.5
RUS				S	S	23 58 32.3	-3.3
RUS	**Russkaya**	**2.72**	**58**	*i* P	P	23 57 48.7	-0.3
RUS				*e*S	S	23 58 32.3	-3.3
GNL	**Ganaly**	**3.29**	**35**	*i* P	P	23 57 52.4	-1.5
AVH	**Avacha**	**3.31**	**47**	*e*P	P	23 57 54.8	+0.7
AVH				*e*S	S	23 58 42.0	-2.7
UGLR	**Uglovaya**	**3.31**	**48**	*e*P	P	23 57 55.1	+1.0
NLC	**Nalytchevo**	**3.54**	**52**	P	P	23 57 54.7	-1.5
NLC				S	S	23 58 44.7	-3.8
NLC	**Nalytchevo**	**3.54**	**52**	*e*P	P	23 57 55.5	-0.7
NLC				*e*S	S	23 58 45.0	-3.5
SPN	**Mys Shipunski**	**3.84**	**56**	P	P	23 57 57.4	-1.7
SPN				S	S	23 58 49.4	-4.3
SPN	**Mys Shipunski**	**3.84**	**56**	*i* P	P	23 57 59.2	+0.1
SPN				*e*S	S	23 58 49.7	-4.0
MKZ	**Mys Kozlova**	**5.50**	**48**	P	P	23 58 15.0	-1.4
MKZ				S	S	23 59 19.0	-5.5
MKZ	**Mys Kozlova**	**5.50**	**48**	*i* P	P	23 58 17.1	+0.7
MKZ				*e*S	S	23 59 19.3	-5.2
KBTR	**Krutoberegovo**	**7.04**	**40**	*e*P	P	23 58 34.1	+0.2
KBTR				*e*S	S	23 59 50.7	-5.3
BKI	**Bering**	**7.93**	**54**	*e*P	P	23 58 39.9	-4.3

JMA ***26*** *00:00:11.7±0.2, 37.19N×133.76E, h440^{km}, M3.2*
IDC ***26*** *00:00:14.3±1.3, 37.23N×133.84E, h411^{km}±33^{km}, mb2.7/4, mb1 3.0/6, mb1mx2.9/22, mbtmp3.5/6, Error ellipse: s-maj=59.2km s-min=20.6km az=174.0*

ISC 26 00:00:13.5±0.6, 37.3N±0.2×133.8E±0.1, h414^{km}±16^{km}, n17, σ$0^{s}68$/18, mb3.1/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHS	**Saijyo**	**2.33**	**194**	P	**P**	**00 01 12.9**	**-0.4**
JWT	**Wachi**	**2.36**	**147**	P	**P**	**00 01 14.4**	**+0.9**
JWT				S	**S**	**00 02 00.9**	**+0.2**
JGT	**Gotsu**	**2.54**	**209**	P	**P**	**00 01 14.7**	**0.0**
JGM	**Miyama**	**2.81**	**123**	P	**P**	**00 01 17.4**	**+0.6**
JHT	**Toyohira**	**2.84**	**204**	P	**P**	**00 01 16.1**	**-0.8**
JNG	**Nsakai**	**3.54**	**103**	P	**P**	**00 01 23.6**	**+0.8**
MJAR	**Matsushiro Arr**	**3.59**	**100**	P	**P**	**00 01 23.7**	**+0.4**
	2.2nm,0.3s,baz=282,slow=9.0,SNR=18						
JSD	**Sado**	**3.61**	**76**	P	**P**	**00 01 23.9**	**+0.5**
JIE	**Ise**	**3.71**	**140**	P	**P**	**00 01 24.2**	**-0.1**
JHK	**Hiroka**	**4.15**	**89**	P	**P**	**00 01 28.2**	**-0.2**
JNU	**Nakatsue**	**4.79**	**211**	P	**P**	**00 01 34.4**	**-0.3**
	1.9nm,0.3s,baz=12,slow=12,SNR=9.8						
JMM	**Marumori**	**5.57**	**82**	P	**P**	**00 01 42.1**	**-0.7**
JFK	**Kawauchi**	**5.63**	**87**	P	**P**	**00 01 41.9**	**-1.4**
SONM	**Songino Array**	**22.68**	**306**	P	**P**	**00 04 43.1**	**+0.6**
	0.6nm,0.5s,mb3.3,baz=120,slow=9.1,SNR=3.9						
MKAR	**Makanchi Array**	**38.82**	**301**	P	**P**	**00 07 01.7**	**-0.1**
	0.4nm,0.8s,mb2.8,baz=92,slow=9.3,SNR=5.8						
ILAR	**Eielson Array**	**52.53**	**32**	P	**P**	**00 08 46.8**	**-1.1**
	0.3nm,0.5s,mb2.7,baz=285,slow=8.1,SNR=6.4						
PDAR	**Pinedale Array**	**81.68**	**42**	P	**P**	**00 11 48.9**	**+1.1**
	0.5nm,0.6s,mb3.4,baz=333,slow=2.0,SNR=4.0						

MAN 26 00:21:16.5, 18.00N×120.76E, mb3.6, ML2.3, MS1.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.35**	**188**	*e*P	Pg	00 21 23.1	-0.3
ABRA				*e*S	Sg	00 21 27.1	-0.9
APYP	**Conner**	**0.48**	**106**	*e*P	Pg	00 21 25.9	-0.1
APYP				*e*S	Sg	00 21 31.8	-0.5
CVP	**Callao Caves**	**1.05**	**106**	*e*P	Pb	00 21 36.5	-0.7

NEIC 26 00:30:02.1, 37.62S×177.67E, h96^{km}, ML3.7(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**0.51**	**84**	P	P	00 30 17.5	-0.2
MXZ				S	S	00 30 29.4	+0.1
PUZ	**Puketiti**	**0.65**	**134**	*e*P	P	00 30 18.5	-0.4
PUZ				S	S	00 30 30.3	-1.1
MWZ	**Matawai**	**0.72**	**189**	P	P	00 30 19.4	-0.2
MWZ				S	S	00 30 32.4	-0.2
URZ	**Urewera**	**0.78**	**215**	P	P	00 30 19.8	-0.3

BJI ***26*** *00:49:36.3, 29.68N×115.67E, h10^{km}, mB5.3, mb5.2, ML6.0, Ms5.7, Msz5.3*
MOS ***26*** *00:49:36.9±0.9, 29.68N×115.68E, h15^{km}, mb5.6/82, MS5.0/26, Error ellipse: s-maj=7.1km s-min=3.8km az=120.8*
HRVD ***26*** *00:49:37.7±0.2, 29.66N×115.71E, h18^{km}, MW5.2/80, Centroid moment Tensor Solution. LP body waves: s45,c61;Mantle waves: s80,c151; Half duration: $1^{s}0$ Moment tensor: Scale 10^{17}Nm; M_{rr}0.34±.02; $M_{\theta\theta}$0.45±.01; $M_{\phi\phi}$-0.79±.02; $M_{r\theta}$-0.20±.03; $M_{\theta\phi}$-0.09±.01; $M_{\phi r}$-0.16±.03; Best double couple: M_0.718×10^{17} NP1:ϕ_s324°,δ57°,λ23°. NP2:ϕ_s221°,δ71°,λ145°. Principal axes: T .605, Plg38°, Azm179°; N .226, Plg51°, Azm16°; P -.831, Plg9°, Azm275°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***26*** *00:49:37.8±0.1, 29.67N×115.69E, mb5.4/124, MS4.9/16, MW5.2 Error ellipse: s-maj=3.3km s-min=2.8km az=204.0, Moment Tensor Solution. s5 Moment tensor: Scale 10^{16} Nm; M_{rr}5.88; $M_{\theta\theta}$-0.60; $M_{\phi\phi}$-5.28; $M_{r\theta}$-2.56; $M_{\theta\phi}$-1.09; $M_{\phi r}$-5.21; Best double couple: $M_0$8.1×10^{16} NP1:ϕ_s5°,δ23°, λ74°. NP2:ϕ_s202°,δ68°,λ97°. Principal axes: T 8.38, Plg66°, Azm124°; N -.51, Plg6°, Azm19°; P -7.88, Plg23°, Azm287°;*
NEIC At least 16 people killed, 8,000 injured and 150,000 houses destroyed in the Jiujiang-Ruichang area. Minor damage at Wuhan. Felt in Anhui, Hubei, Hunan and Zhejiang.
IDC ***26*** *00:49:43.7±3.1, 29.76N×115.71E, h53^{km}±28^{km}, mb4.8/29, mb1 4.9/32, mb1mx4.9/32, mbtmp5.1/32, ML3.9/2, MS4.6/21, Ms1 4.6/21, ms1mx4.4/34 Error ellipse: s-maj=13.7km s-min=11.9km az=33.0*

ISC 26 00:49:36.5±0.1, 29.69N±0.02×115.66E±0.02, h11^{km}, h11^{km}±.8^{km}:pP-P, n549, σ$1^{s}03$/580, mb5.3/158, MS4.8/50, 66C-31D, Southeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHN	**Wuhan**	**1.42**	**307**	⇓PG	**Pg**	**00 50 03.5**	**-1.4**
WHN				SG	**Sg**	**00 50 25.5**	**+1.7**
WHN				Smax			
	comp=N,279µm,1.0s						
WHN				Smax			
	comp=E,152µm,0.4s						
NJ2	**Nanjing**	**3.62**	**49**	*e*P	**Pn**	**00 50 32.0**	**-1.7**
NJ2				PG	**Pg**	**00 50 41.0**	**-7.8**
NJ2				SG	**Sg**	**00 51 29.0**	**-8.1**
NJ2				Smax			
	comp=N,52µm,0.9s						
NJ2				Smax			
	comp=E,32µm,0.6s						
NJ2				LR	LR		
	comp=N,186µm,6.9s						
NJ2				LR	LR		
	comp=E,224µm,6.1s						
NJ2				LR	LR		
	comp=Z,82µm,7.2s						
SSE	**Sheshan**	**4.98**	**72**	P	**Pn**	**00 50 51.0**	**-2.0**
SSE				S	**Sn**	**00 51 51.5**	**+0.2**
SSE				LR	LR		
	comp=N,29µm,16.9s						
SSE				LR	LR		
	comp=E,14µm,16.9s						
SSE				LR	LR		
	comp=Z,22µm,8.8s						
ENH	**Enshi**	**5.38**	**278**	*e*P	**Pn**	**00 50 58.6**	**-0.2**
	comp=Z,0.2nm,0.4s						
QZH	**Quanzhou**	**5.40**	**150**	⇑*i*P	**Pn**	**00 50 56.0**	**-2.9**
QZH				S	**Sn**	**00 51 53.8**	**-8.0**
QZH				Smax			
	comp=N,28µm,0.8s						
QZH				Smax			
	comp=E,30µm,0.7s						
TIA	**Tai’an**	**6.62**	**10**	P	**Pn**	**00 51 16.0**	**-0.2**
TIA				PG	**Pg**	**00 51 33.5**	**-15**
TIA				S	**Sn**	**00 52 28.0**	**-4.4**
TIA				SG	**Sg**	**00 53 01.5**	**-15**
TIA				LR	LR		
	comp=N,17µm,10.0s						
TIA				LR	LR		
	comp=E,9µm,5.0s						
TATO	**Taipei**	**6.99**	**131**	*e*P	**Pn**	**00 51 18.3**	**-3.2**
	comp=E,242nm,0.8s						
TATO				S	**Sn**	**00 52 43.8**	**+2.1**
XAN	**Xi’an**	**7.18**	**309**	P	**Pn**	**00 51 22.0**	**-2.1**
XAN				PG	**Pg**	**00 51 46.0**	**-14**
XAN				SG	**Sg**	**00 53 26.0**	**-10**
XAN				Smax			
	comp=N,4µm,1.3s						
XAN				Smax			
	comp=E,4µm,1.0s						
HKC	**Hong Kong**	**7.47**	**191**	*i* Pg	**Pg**	**00 52 00.0**	**-5.7**
HKC				*i* Sg	**Sg**	**00 53 44.0**	**-1.4**
NACB	**Ninganchiao**	**7.63**	**135**	*e*P	**Pn**	**00 51 26.7**	**-3.7**
NACB				*e*S	**Sn**	**00 52 46.8**	**-11**
TIY	**Taiyuan**	**8.44**	**342**	*e*P	**P**	**00 51 40.0**	**-1.6**
TIY				S	**Sn**	**00 53 15.0**	**-2.9**
TIY				LR	LR		
	comp=N,25µm,9.0s						
GYA	**Guiyang**	**8.57**	**250**	P	**P**	**00 51 44.0**	**+0.6**
GYA				S	**Sn**	**00 53 12.3**	**-8.8**
GYA				Smax			
	comp=N,3µm,1.0s						
GYA				Smax			
	comp=E,3µm,0.9s						
GYA				LR	LR		
	comp=N,25µm,6.2s						
GYA				LR	LR		
	comp=E,32µm,5.3s						
GYA				LR	LR		
	comp=Z,31µm,7.4s						
DL2	**Dalian**	**10.43**	**27**	*e*P	**P**	**00 52 11.3**	**+2.2**
DL2				S	**S**	**00 54 10.3**	**+3.2**
DL2				LG1		00 54 59.5	
DL2				LG2		00 55 12.5	
DL2				AMB	AMB		
	comp=Z,30nm,1.1s						
DL2				AMB	AMB		
	comp=Z,160nm,3.8s						
DL2				LR	LR		
	comp=N,17µm,11.6s						
DL2				LR	LR		
	comp=E,9µm,10.2s						
DL2				LR	LR		
	comp=Z,5µm,12.7s						
DL2	**Dalian**	**10.43**	**27**	*e*P	**P**	**00 52 11.3**	**+2.2**
	comp=Z,30nm,1.1s						
DL2				S	**S**	**00 54 10.3**	**+3.2**

JOW	**Kunigami**	**11.48**	**101**	P	**P**	**00 52 22.8**	**-0.7**
	comp=Z,2.6nm,0.3s,baz=301,slow=12,SNR=15						
JOW				S	**S**	**00 54 25.1**	**-7.7**
	comp=Z,1.9nm,0.3s,baz=295,slow=28,SNR=5.1						
JOW				LR	LR	00 56 41.6	
	comp=Z,2µm,21.1s,baz=151,slow=36						
JOW	**Kunigami**	**11.48**	**101**	P	**P**	**00 52 22.8**	**-0.7**
JOW				S	**S**	**00 54 25.1**	**-7.7**
JOW				LR	LR	00 56 41.6	
HHC	**Hu-ho-hao-te**	**11.62**	**344**	*e*P	**P**	**00 52 27.8**	**+2.4**
HHC				AP		00 52 31.0	
HHC				XP		00 52 34.3	
HHC				PP	PP	00 52 36.5	+2.0
HHC				S	**S**	**00 54 42.5**	**+6.3**
HHC				XS		00 54 47.5	
HHC				AMB	AMB		
	comp=Z,30nm,1.4s						
HHC				LR	LR		
	comp=N,16µm,9.9s						
HHC				LR	LR		
	comp=E,5µm,9.9s						
HHC				LR	LR		
	comp=Z,11µm,11.7s						
HHC	**Hu-ho-hao-te**	**11.62**	**344**	*e*P	**P**	**00 52 27.8**	**+2.4**
	comp=Z,31nm,1.4s						
HHC				pP		00 52 31.0	
HHC				sP		00 52 34.3	
HHC				PP	PP	00 52 36.5	+2.0
HHC				S	**S**	**00 54 42.5**	**+6.3**
HHC				sS		00 54 47.5	
LZH	**Lanzhou**	**11.80**	**306**	⇑P	**P**	**00 52 25.5**	**-2.2**
LZH				AP		00 52 29.0	
LZH				XP		00 52 32.0	
LZH				PP	PP	00 52 35.5	-1.6
LZH				S	**S**	**00 54 38.3**	**-2.1**
LZH				SS	SS	00 54 52.3	-2.4
LZH				AMB	AMB		
	comp=Z,180nm,1.0s						
LZH				AMB	AMB		
	comp=Z,910nm,4.1s						
LZH				LR	LR		
	comp=N,13µm,5.7s						
LZH				LR	LR		
	comp=Z,14µm,8.3s						
LZH	**Lanzhou**	**11.80**	**306**	⇑P	**P**	**00 52 25.5**	**-2.2**
	comp=Z,190nm,1.0s						
LZH				pP		00 52 29.0	
LZH				sP		00 52 32.0	
LZH				PP	PP	00 52 35.5	-1.6
LZH				S	**S**	**00 54 38.3**	**-2.1**
LZH				SS	SS	00 54 52.3	-2.4
LZH	**Lanzhou**	**11.80**	**306**	⇑P	**P**	**00 52 25.5**	**-2.2**
LZH				pmax	pmax		
	comp=Z,187nm,1.0s						
BTO	**Baotou**	**11.82**	**339**	*e*P	**P**	**00 52 30.8**	**+2.7**
BTO				AMB	AMB		
	comp=Z,40nm,2.0s						
BTO	**Baotou**	**11.82**	**339**	*e*P	**P**	**00 52 30.8**	**+2.7**
	comp=Z,40nm,2.0s						
QIZ	**Qiongzhong**	**11.86**	**208**	P	**P**	**00 52 27.5**	**-1.1**
QIZ				*e*S	**S**	**00 54 40.0**	**-1.9**
QIZ				LR	LR		
	comp=E,21µm,13.7s						
INCN	**Inchon**	**12.00**	**47**	*e*P	**P**	**00 52 27.5**	**-3.0**
	comp=E,75nm,1.0s						
KMI	**Kunming**	**12.34**	**251**	PR	**P**	**00 52 34.5**	**-0.6**
KMI				AP		00 52 36.3	
KMI				XP		00 52 38.0	
KMI				PP	PP	00 52 43.5	-1.5
KMI				S	**S**	**00 54 46.5**	**-7.1**
KMI				AMB	AMB		
	comp=Z,190nm,0.6s						
KMI				AMB	AMB		
	comp=Z,670nm,6.3s						
KMI				LR	LR		
	comp=N,17µm,8.3s						
KMI				LR	LR		
	comp=E,25µm,8.5s						
KMI				LR	LR		
	comp=Z,24µm,8.3s						
KMI	**Kunming**	**12.34**	**251**	⇓P	**P**	**00 52 34.5**	**-0.6**
	comp=Z,190nm,0.6s						
KMI				pP		00 52 36.3	
KMI				sP		00 52 38.0	
KMI				PP	PP	00 52 43.5	-1.5
KMI				S	**S**	**00 54 46.5**	**-7.1**
KMI	**Kunming**	**12.34**	**251**	P	**P**	**00 52 34.5**	**-0.6**
KMI				S	**S**	**00 54 46.6**	**-7.0**
KMI				pmax	pmax		
	comp=Z,193nm,0.6s						
KS15	**Wonju Array Si**	**12.79**	**50**	*e*P	**P**	**00 52 40.5**	**-0.5**
CVP	**Callao Caves**	**13.20**	**153**	*e*P	**P**	**00 52 47.5**	**+1.0**
JNU	**Nakatsue**	**13.44**	**71**	P	**P**	**00 52 51.1**	**+1.4**
	comp=Z,0.3nm,0.3s,baz=231,slow=17,SNR=4.6						
JNU				S	**S**	**00 55 22.5**	**+2.4**
	comp=Z,0.2nm,0.3s,baz=88,slow=44,SNR=1.7						
JNU				LR	LR	00 57 34.9	
	comp=Z,2µm,19.5s,baz=261,slow=35						
SNY	**Shenyang**	**13.71**	**26**	⇑P	**P**	**00 52 53.8**	**+0.7**
SNY				AP		00 52 56.0	
SNY				PP	PP	00 53 03.0	-1.0
SNY				S	**S**	**00 55 20.5**	**-5.8**
SNY				SS	SS	00 55 46.0	+3.7
SNY				AMB	AMB		
	comp=Z,40nm,2.4s						
SNY				LR	LR		
	comp=N,13µm,11.0s						
SNY				LR	LR		
	comp=E,8µm,11.6s						
SNY				LR	LR		
	comp=Z,4µm,16.2s						
SNY	**Shenyang**	**13.71**	**26**	⇑P	**P**	**00 52 53.8**	**+0.7**
	comp=Z,40nm,2.4s						
SNY				pP		00 52 56.0	
SNY				PP	PP	00 53 03.0	-1.0
SNY				S	**S**	**00 55 20.5**	**-5.8**
SNY				SS	SS	00 55 46.0	+3.7
BCPH	**Baguio City Da**	**14.00**	**160**	⇑*e*P	**P**	**00 52 58.1**	**+1.0**
BALP	**Baler**	**14.91**	**157**	*e*P	**P**	**00 53 16.4**	**+7.3**
CN2	**Changchun**	**16.11**	**26**	*e*P	**P**	**00 53 26.8**	**+2.4**
CN2				*e*AP		00 53 30.3	
CN2				*e*XP		00 53 33.8	
CN2				AMB	AMB		
	comp=Z,20nm,1.0s						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,12µm,8.0s						
CN2				LR	LR		
	comp=E,14µm,8.0s						
CN2				LR	LR		
	comp=Z,4µm,18.0s						
CN2	**Changchun**	**16.11**	**26**	*e*P	**P**	**00 53 26.8**	**+2.4**
	comp=Z,20nm,1.0s						
CN2				*e*pP		00 53 30.3	
CN2				*e*sP		00 53 33.8	
GTA	**Gaotai**	**16.24**	**311**	P	**P**	**00 53 25.3**	**-0.9**
GTA				AP		00 53 29.5	
GTA				XP		00 53 32.0	
GTA				PP	PP	00 53 38.3	-1.2
GTA				S	**S**	**00 56 23.5**	**-2.6**
GTA				SS	SS	00 56 41.0	-4.6
GTA				AMB	AMB		
	comp=Z,110nm,1.2s						
GTA				LR	LR		
	comp=N,10µm,12.5s						
GTA				LR	LR		
	comp=E,7µm,16.0s						
GTA				LR	LR		
	comp=Z,11µm,13.3s						
GTA	**Gaotai**	**16.24**	**311**	P	**P**	**00 53 25.3**	**-0.9**
	comp=Z,120nm,1.2s						
GTA				pP		00 53 29.5	
GTA				sP		00 53 32.0	
GTA				PP	PP	00 53 38.3	-1.2
GTA				S	**S**	**00 56 23.5**	**-2.6**
GTA				SS	SS	00 56 41.0	-4.6
TGY	**Tagaytay City**	**16.26**	**161**	P	**P**	**00 53 32.4**	**+5.8**
	comp=Z,62nm,0.3s,baz=171,slow=7.9,SNR=17						
LUBP	**Lubang**	**16.43**	**164**	*e*P	**P**	**00 53 33.3**	**+4.5**
BOAC	**Boac**	**17.14**	**159**	*e*P	**P**	**00 53 48.7**	**+11**
CHRT	**Chiangrai**	**17.40**	**239**	⇓P	**P**	**00 53 44.5**	**+3.6**
	comp=Z,645nm,1.4s						
MDJ	**Mudanjiang**	**18.54**	**33**	P	**P**	**00 53 55.8**	**+0.8**
MDJ				AP		00 53 59.0	
MDJ				XP		00 54 00.0	
MDJ				S	**S**	**00 57 25.5**	**+6.9**
MDJ				SCP		01 01 59.5	
MDJ				PCS		01 02 01.0	
MDJ				AMB	AMB		
	comp=Z,150nm,1.3s						
MDJ				AMB	AMB		
	comp=Z,660nm,5.1s						
MDJ				LR	LR		
	comp=N,6µm,15.5s						
MDJ				LR	LR		
	comp=E,5µm,14.2s						
MDJ				LR	LR		
	comp=Z,5µm,9.4s						
MDJ	**Mudanjiang**	**18.54**	**33**	P	**P**	**00 53 55.8**	**+0.8**
	comp=Z,150nm,1.3s						
MDJ				pP		00 53 59.0	
MDJ				sP		00 54 00.0	
MDJ				S	**S**	**00 57 25.5**	**+6.9**
MDJ				ScP		01 01 59.5	
MDJ				PcS		01 02 01.0	
CHG	**Chiang Mai**	**18.67**	**238**	P	**P**	**00 53 58.0**	**+1.3**
	comp=Z,35nm,1.1s						
ULN	**Ulaanbaatar**	**19.33**	**342**	*e*P	**P**	**00 54 04.7**	**+0.3**
	comp=Z,208nm,1.3s						
ULN	**Ulaanbaatar**	**19.33**	**342**	*e*P	**P**	**00 54 04.7**	**+0.4**
ULN				pmax	pmax		
	comp=Z,208nm,1.3s						
SONM	**Songino Array**	**19.48**	**341**	P	**P**	**00 54 06.8**	**+0.7**
	comp=Z,5.1nm,0.3s,baz=160,slow=11,SNR=135						
SONM				LR	LR	01 01 38.1	
	comp=Z,1µm,19.1s,baz=155,slow=37						
HIA	**Hailar**	**19.80**	**8**	*e*P	**P**	**00 54 08.7**	**-0.9**
	comp=Z,95nm,1.2s						
HIA	**Hailar**	**19.80**	**8**	*e*P	**P**	**00 54 08.7**	**-1.0**
HIA				pmax	pmax		
	comp=Z,95nm,1.2s						
NST	**Nakhon Sawan**	**19.96**	**229**	P	**P**	**00 54 11.0**	**-0.7**
MAJO	**Matsushiro**	**20.06**	**64**	*e*P	**P**	**00 54 11.9**	**-0.7**
	comp=Z,264nm,1.6s						
MAJO				LR	LR		
	comp=Z,2µm,21.0s,MS4.3						
MAJO	**Matsushiro**	**20.06**	**64**	*e*P	**P**	**00 54 11.9**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,256nm,1.6s						
MAJO				MLR	MLR		
	comp=Z,1µm,21.0s,MS4.3						
MAT	**Matsushiro**	**20.06**	**64**	P	**P**	**00 54 12.0**	**-0.6**
MAT				S	**S**	**00 57 58.2**	**+5.9**
MAT	**Matsushiro**	**20.06**	**64**	*e*P	**P**	**00 54 12.0**	**-0.6**
	comp=Z,35nm,0.9s						
MAT				*e*S	**S**	**00 57 58.0**	**+5.7**
MAT				LR	LR		
	comp=Z,1µm,20.0s,MS4.3						
MAT	**Matsushiro**	**20.06**	**64**	*e*P	**P**	**00 54 12.0**	**-0.6**
MAT				*e*S	**S**	**00 57 58.0**	**+5.7**
MAT				pmax	pmax		
	comp=Z,35nm,0.9s						
MAT				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.3						
MJAR	**Matsushiro Arr**	**20.07**	**64**	P	**P**	**00 54 12.5**	**-0.1**
	comp=Z,23nm,0.8s,baz=259,slow=11,SNR=39						
MJAR				LR	LR	01 01 13.6	
	comp=Z,1µm,19.3s,MS4.2,baz=260,slow=34						
LLP	**Lapu-Lapu**	**20.78**	**156**	⇓*e*P	**P**	**00 54 21.2**	**+1.1**
JHJ	**Hachijo jima 2**	**20.86**	**74**	LR	LR	01 01 53.9	
	comp=Z,1µm,18.9s,MS4.3,baz=151,slow=35						
BATP	**Bataraza**	**20.88**	**174**	*e*P	**P**	**00 54 22.4**	**+1.2**
MSLP	**Maasin**	**21.27**	**154**	*e*P	**P**	**00 54 26.6**	**+1.4**
LSA	**Lhasa**	**21.28**	**276**	P	**P**	**00 54 26.0**	**+0.8**
LSA				AP		00 54 33.8	
LSA				XP		00 54 38.0	
LSA				S	**S**	**00 58 10.8**	**-5.8**
LSA				XS		00 58 32.3	
LSA				SCP		01 02 06.5	
LSA				PCS		01 02 10.3	
LSA				AMB	AMB		
	comp=Z,310nm,1.2s,mb5.5						
LSA				LR	LR		
	comp=N,2µm,15.2s,MS5.2						
LSA				LR	LR		
	comp=E,6µm,12.5s,MS5.2						
LSA				LR	LR		
	comp=Z,8µm,13.4s,MS5.3						
LSA	**Lhasa**	**21.28**	**276**	P	**P**	**00 54 26.0**	**+0.8**
	comp=Z,310nm,1.2s,mb5.5						
LSA				pP		00 54 33.8	
LSA				sP		00 54 38.0	
LSA				S	**S**	**00 58 10.8**	**-5.8**
LSA				sS		00 58 32.3	
LSA				ScP		01 02 06.5	
LSA				PcS		01 02 10.3	
LSA				LR	LR		
	comp=Z,8µm,13.4s,MS5.3						
LSA	**Lhasa**	**21.28**	**276**	*e*P	**P**	**00 54 25.8**	**+0.6**
LSA				pmax	pmax		
	comp=Z,494nm,1.1s,mb5.8						
TBP	**Tagbilaran**	**21.32**	**157**	*e*P	**P**	**00 54 25.8**	**0.0**
SHL	**Shillong**	**21.45**	**265**	*e*P	**P**	**00 54 27.0**	**+0.1**
SHL				*e*P		00 54 27.0	
SHL				*e*S	**S**	**00 58 26.0**	**+6.3**
SHL				*e*S	**S**	**00 58 26.0**	**+6.3**
CIT	**Chita**	**22.37**	**357**	*e*P	**P**	**00 54 37.6**	**+1.7**
	comp=Z,360nm,1.6s,mb5.5						
CIT	**Chita**	**22.37**	**357**	*e*P	**P**	**00 54 37.6**	**+1.7**
CIT				pmax	pmax		
	comp=Z,360nm,1.6s,mb5.5						
NNT	**Nongplab**	**22.54**	**224**	P	**P**	**00 54 39.3**	**+1.4**
ZAK	**Zakamensk**	**22.68**	**339**	*e*P	**P**	**00 54 39.8**	**+0.8**
	comp=Z,48nm,1.1s,mb4.8						
ZAK	**Zakamensk**	**22.68**	**339**	*e*P	**P**	**00 54 39.8**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,48nm,1.1s,mb4.8						
KLR	**Kul’dur**	**23.05**	**28**	*e*P	**P**	**00 54 42.0**	**-0.6**
KLR				*e*S	**S**	**00 58 54.0**	**+5.2**
KLR				pmax	pmax		
	comp=E,90nm,1.4s						
KLR				pmax	pmax		
	comp=Z,120nm,1.4s,mb5.1						
KLR				smax			
	comp=N,800nm,10.0s						
KLR				smax			
	comp=E,2µm,10.0s						
KLR				MLR	MLR		
	comp=N,3µm,12.0s						
KLR				MLR	MLR		
	comp=Z,17µm,12.0s,MS5.7						
BUKP	**Musuan**	**23.43**	**156**	*e*P	**P**	**00 54 48.5**	**+1.9**
CBIJ	**Chichi jima**	**23.46**	**90**	LR	LR	01 04 29.5	
	comp=Z,988nm,18.3s,MS4.3,baz=99,slow=38						
KKM	**Kota Kinabalu**	**23.52**	**179**	*e*P	**P**	**00 54 48.7**	**+1.1**
KKM	**Kota Kinabalu**	**23.52**	**179**	P	**P**	**00 54 48.9**	**+1.3**
IRK	**Irkutsk**	**24.06**	**343**	*e*P	**P**	**00 54 54.0**	**+1.6**
	comp=Z,475nm,2.4s,mb5.5						
IRK	**Irkutsk**	**24.06**	**343**	*e*P	**P**	**00 54 54.0**	**+1.6**
IRK				pmax	pmax		
	comp=Z,475nm,2.4s,mb5.5						
DAV	**Davao City (W)**	**24.36**	**156**	*e*P	**P**	**00 54 58.0**	**+2.2**
DAV	**Davao City (W)**	**24.36**	**156**	P	**P**	**00 54 55.3**	**-0.4**
TSM	**Tawau**	**25.34**	**175**	P	**P**	**00 55 05.7**	**+0.5**
CAL	**Calcutta**	**25.51**	**260**	*e*P	**P**	**00 55 03.8**	**-2.8**
CAL				*e*P		00 55 03.8	
CAL				*e*S	**S**	**00 59 39.0**	**+7.8**
CAL				*e*S	**S**	**00 59 39.0**	**+7.8**
ASAJ	**Asahikawa**	**25.77**	**49**	P	**P**	**00 55 08.7**	**-0.1**
	comp=Z,70nm,0.9s,mb5.2,baz=249,slow=12,SNR=13						
JIRN	**Jiri**	**25.90**	**273**	*e*P	**P**	**00 55 10.0**	**-0.3**
GUN	**Gumba**	**26.12**	**273**	*e*P	**P**	**00 55 12.3**	**0.0**
	comp=Z,445nm,0.9s,mb6.0						
WMQ	**Urumqi**	**26.32**	**310**	P	**P**	**00 55 16.0**	**+2.0**
WMQ				AP	pP	00 55 20.0	+2.8
WMQ				XP	sP	00 55 23.0	+4.3
WMQ				PP	PP	00 55 57.0	+0.4
WMQ				S	**S**	**00 59 48.0**	**+3.5**
WMQ				XS		00 59 54.0	
WMQ				SS	SS	01 00 55.3	+2.1
WMQ				PCS		01 02 20.0	
WMQ				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.2						
WMQ				LR	LR		
	comp=N,5µm,13.8s,MS5.4						
WMQ				LR	LR		
	comp=E,4µm,10.3s,MS5.4						
WMQ				LR	LR		
	comp=Z,3µm,12.8s,MS5.0						
WMQ	**Urumqi**	**26.32**	**310**	P	**P**	**00 55 16.0**	**+2.0**
	comp=Z,95nm,1.1s,mb5.2						
WMQ				pP	pP	00 55 20.0	+2.8
WMQ				sP	sP	00 55 23.0	+4.3
WMQ				PP	PP	00 55 57.0	+0.4
WMQ				S	**S**	**00 59 48.0**	**+3.5**
WMQ				sS		00 59 54.0	
WMQ				SS	SS	01 00 55.3	+2.1
WMQ				PcS		01 02 20.0	
WMQ				LR	LR		
	comp=Z,3µm,12.8s,MS5.0						
PKI	**Pulchoki**	**26.60**	**273**	*e*P	**P**	**00 55 16.2**	**-0.5**
	comp=Z,99nm,0.7s,mb5.4						
PKI	**Pulchoki**	**26.60**	**273**	*e*P	**P**	**00 55 16.2**	**-0.5**
PKI				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.2						
KKN	**Kakani**	**26.67**	**273**	*e*P	**P**	**00 55 16.0**	**-1.3**
	comp=Z,188nm,0.8s,mb5.7						
KKN	**Kakani**	**26.67**	**273**	*e*P	**P**	**00 55 16.0**	**-1.3**
KKN				pmax	pmax		
	comp=Z,94nm,0.8s,mb5.4						
DMN	**Daman**	**26.86**	**273**	*e*P	**P**	**00 55 18.8**	**-0.2**
	comp=Z,105nm,0.8s,mb5.4						
YSS	**Yuzh-Sakhalins**	**27.17**	**43**	*i* Pdu	**P**	**00 55 22.0**	**+0.3**
	comp=Z,220nm,1.2s,mb5.6						
YSS				S	**S**	**01 00 04.0**	**+5.7**
YSS				LR	LR		
	comp=Z,2µm,12.0s,MS4.8						
YSS	**Yuzh-Sakhalins**	**27.17**	**43***j*	*i*P	**P**	**00 55 22.0**	**+0.3**
YSS				S	**S**	**01 00 04.0**	**+5.7**
YSS				pmax	pmax		
	comp=Z,220nm,1.2s,mb5.6						
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=E,60nm,1.0s						
YSS				MLR	MLR		
	comp=N,2µm,12.0s,MS5.0						
YSS				MLR	MLR		
	comp=E,2µm,12.0s,MS5.0						
YSS				MLR	MLR		
	comp=Z,2µm,12.0s,MS4.8						
GKN	**Gorkha**	**27.18**	**274**	*e*P	**P**	**00 55 21.4**	**-0.6**
	comp=Z,102nm,0.7s,mb5.5						
NRGR	**Nerungri**	**27.71**	**11**	*e*P	**P**	**00 55 26.7**	**+0.2**
CLNS	**Chul’man**	**27.91**	**11**	*e*P	**P**	**00 55 31.6**	**+3.3**
KOLN	**Koldanda**	**28.13**	**274**	*e*P	**P**	**00 55 30.1**	**-0.5**
	comp=Z,73nm,0.8s,mb5.3						
BOD	**Bodaibo**	**28.15**	**358**	*e*P	**P**	**00 55 29.2**	**-1.2**
	comp=Z,32nm,1.3s,mb4.8						
BOD	**Bodaibo**	**28.15**	**358**	*e*P	**P**	**00 55 29.2**	**-1.2**
BOD				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.8						
KSM	**Kuching**	**28.52**	**191**	*e*P	**P**	**00 55 33.9**	**-0.3**
ALBI	**Allahabad**	**30.27**	**270**	*e*P	**P**	**00 55 47.5**	**-2.4**
KRAR	**Krasnoyarsk**	**30.88**	**335**	*e*P	**P**	**00 55 54.1**	**-0.7**
MKAR	**Makanchi Array**	**30.98**	**313**	P	**P**	**00 55 55.8**	**0.0**
	comp=Z,54nm,0.7s,mb5.5,baz=104,slow=9.8,SNR=245						
MKAR				PcP	PcP	00 58 51.1	-1.0
	comp=Z,12nm,0.8s,baz=90,slow=5.8,SNR=4.0						
MKAR	**Makanchi Array**	**30.98**	**313**	P	**P**	**00 55 55.8**	**0.0**
MKAR				*e*		00 58 51.1	
GUMO	**Guam**	**31.40**	**114**	P	**P**	**00 55 59.4**	**-0.5**
	comp=Z,59nm,0.7s,mb5.5,baz=324,slow=17,SNR=1.8						
GUMO				LR	LR	01 08 08.2	
	comp=Z,633nm,18.4s,MS4.3,baz=284,slow=35						
KALG	**Kalgarh**	**32.00**	**279**	*e*P	**P**	**00 56 06.0**	**+0.9**
KLP	**Kalpa**	**32.15**	**283**	*e*P	**P**	**00 56 05.3**	**-1.0**
KLP				AMb	AMB	00 56 12.0	
	comp=Z,47nm,1.1s,mb5.2						
AGRA	**Agra**	**33.15**	**275**	*e*P	**P**	**00 56 14.5**	**-0.6**
BISR	**Bishrakh**	**33.30**	**278**	*e*P	**P**	**00 56 17.5**	**+1.1**
NDI	**New Delhi**	**33.47**	**278**	*e*x	x	00 56 18.0	
AYAN	**Aya Nagar**	**33.59**	**278**	*e*P	**P**	**00 56 19.7**	**+0.8**
YAK	**Yakutsk**	**33.63**	**12**	*e*P	**P**	**00 56 14.1**	**-4.8**
	comp=Z,10.0nm,0.9s,mb4.8						
YAK				*i* pP	pP	00 56 19.4	-2.8
YAK				*i*		00 59 00.9	
YAK				*i* SSS	SSS	01 04 12.8	+2.7
YAK				LR	LR		
	comp=Z,500nm,14.0s,MS4.4						
YAK	**Yakutsk**	**33.63**	**12**	*e*P	**P**	**00 56 14.1**	**-4.8**
YAK				*i* *PP	pP	00 56 19.4	-2.8
YAK				*i*		00 59 00.9	
YAK				*i* SSS	SSS	01 04 12.8	+2.7
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				MLR	MLR		
	comp=E,582nm,14.0s,MS4.5						
YAK				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.4						
YAK				MLR	MLR		
	comp=N,514nm,19.0s,MS4.5						
BHGR	**Bahadurgarh**	**33.71**	**278**	*e*P	**P**	**00 56 20.5**	**+0.6**
BHK	**Bhakra**	**33.72**	**283**	*e*x	x	01 01 44.0	
KSH	**Kashi**	**33.87**	**298**	*e*P	**P**	**00 56 27.3**	**+6.1**
KSH				*e*XP	sP	00 56 32.0	+6.0
KSH				*e*PP	PP	00 57 39.5	+4.9
KSH				*e*PPP	PPP	00 57 57.5	+5.2
KSH				*e*PCP	PcP	00 59 01.5	+1.4
KSH				*e*S	**S**	**01 01 54.0**	**+10**
KSH				*e*XS		01 01 57.3	
KSH				*e*SCP		01 02 45.0	
KSH				*e*PCS		01 02 47.0	
KSH				*e*SCS	ScS	01 06 46.5	+2.7
KSH				AMB	AMB		
	comp=Z,340nm,1.6s,mb6.0						
KSH				LR	LR		
	comp=N,8µm,13.8s,MS5.7						
KSH				LR	LR		
	comp=E,5µm,11.0s,MS5.7						
KSH	**Kashi**	**33.87**	**298**	*e*P	**P**	**00 56 27.3**	**+6.1**
	comp=E,340nm,1.6s,mb6.0						
KSH				*e*pP	pP	00 56 29.0	+4.5
KSH				*e*sP	sP	00 56 32.0	+6.0
KSH				*e*PP	PP	00 57 39.5	+4.9
KSH				*e*PcP	PcP	00 59 01.5	+1.4
KSH				*e*S	**S**	**01 01 54.0**	**+10**
KSH				*e*sS		01 01 57.3	
KSH				*e*ScP		01 02 45.0	
KSH				*e*PcS		01 02 47.0	
KSH				*e*ScS	ScS	01 06 46.5	+2.7
KUDL	**Kundal**	**34.21**	**277**	*e*P	**P**	**00 56 23.6**	**-0.7**
KUDL				AMb	AMB	00 56 28.6	
	comp=Z,38nm,1.2s,mb5.2						
NVS	**Novosibirsk**	**34.23**	**327**	*e*P	**P**	**00 56 22.8**	**-1.3**
	comp=Z,122nm,1.6s,mb5.6						
NVS	**Novosibirsk**	**34.23**	**327**	*e*P	**P**	**00 56 22.8**	**-1.3**
NVS				pmax	pmax		
	comp=N,94nm,1.6s						
NVS				pmax	pmax		
	comp=E,94nm,1.6s						
NVS				pmax	pmax		
	comp=Z,122nm,1.6s,mb5.6						
TKM2	**Tokmak 2**	**34.56**	**304**	P	**P**	**00 56 29.5**	**+2.5**
	SNR=9.5						
BHPL	**Bhopal**	**34.71**	**269**	*e*P	**P**	**00 56 26.9**	**-1.7**
BHPL				*e*P		00 56 26.9	
BHPL				AMb	AMB	00 56 32.3	
	comp=Z,52nm,1.4s,mb5.3						
BHPL				AMb	AMB	00 56 32.3	
	comp=Z,52nm,1.4s,mb5.3						
KURK	**Kurchatov**	**34.72**	**318**	*e*P	**P**	**00 56 28.6**	**+0.2**
KURK				pmax	pmax		
	comp=Z,51nm,1.0s,mb5.4						
KHET	**Khetri**	**34.81**	**277**	*e*P	**P**	**00 56 26.8**	**-2.6**
KHET				AMb	AMB	00 56 34.9	
	comp=Z,40nm,1.6s,mb5.1						
KBK	**Karagaybulak**	**34.99**	**303**	P	**P**	**00 56 32.9**	**+2.1**
	SNR=8.9						
CHMS	**Chumysh**	**35.18**	**304**	P	**P**	**00 56 34.4**	**+2.0**
	SNR=7.2						
UCH	**Uchtor**	**35.25**	**302**	P	**P**	**00 56 36.3**	**+3.3**
	SNR=20						
AAK	**Ala-Archa**	**35.32**	**303**	*e*P	**P**	**00 56 33.9**	**+0.3**
	comp=Z,15nm,0.8s,mb5.0						
AAK				LR	LR		
	comp=Z,480nm,19.0s,MS4.3						
AAK	**Ala-Archa**	**35.32**	**303**	*e*P	**P**	**00 56 33.9**	**+0.3**
AAK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
AAK				MLR	MLR		

	comp=Z,477nm,19.0s,MS4.3						
AML	**Almayashu**	**35.84**	**302**	P	**P**	**00 56 40.4**	**+2.3**
	SNR=13						
EKS2	**Erkin-Say**	**35.84**	**303**	P	**P**	**00 56 40.3**	**+2.3**
	SNR=6.3						
HYB	**Hyderabad**	**35.99**	**259**	*i* P	**P**	**00 56 39.5**	**0.0**
HYB	**Hyderabad**	**35.99**	**259**	*e*P	**P**	**00 56 39.5**	**0.0**
MA2	**Magadan**	**38.15**	**28**	*e*P	**P**	**00 56 56.9**	**-0.3**
MA2				*e*S	**S**	**01 02 47.9**	**-1.9**
MA2				*e*SSS	SSS	01 06 04.4	+4.7
MA2				pmax	pmax		
	comp=E,50nm,1.0s						
MA2				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.5						
MA2				MLR	MLR		
	comp=Z,800nm,18.0s,MS4.6						
PET	**Petropavlovsk**	**39.00**	**41**	*e*P	**P**	**00 57 03.3**	**-1.1**
PET				*e*S	**S**	**01 03 00.4**	**-2.4**
PET				*e*SS	SS	01 05 42.7	-3.6
PET				pmax	pmax		
	comp=Z,100nm,10.7s						
PET				smax			
	comp=E,100nm,15.6s						
PET				smax			
	comp=N,100nm,13.9s						
PET				MLR	MLR		
	comp=Z,800nm,16.0s,MS4.6						
JASL	**Jaisalmer**	**39.32**	**277**	*e*P	**P**	**00 57 05.5**	**-1.9**
POO	**Poona**	**39.55**	**263**	*e*P	**P**	**00 57 10.2**	**+0.8**
POO				*e*P		00 57 10.2	
POO				AMb	AMB	00 57 22.0	
	comp=Z,60nm,1.3s,mb5.2						
POO				AMb	AMB	00 57 22.0	
	comp=Z,60nm,1.3s,mb5.2						
POO	**Poona**	**39.55**	**263**	⇓*i*P	**P**	**00 57 08.0**	**-1.4**
	comp=Z,300nm,1.0s,mb6.0						
PALK	**Pallekele**	**39.69**	**243**	P	**P**	**00 57 14.4**	**+3.8**
BVAR	**Borovoye Array**	**40.30**	**318**	P	**P**	**00 57 15.7**	**+0.5**
	comp=Z,85nm,0.6s,mb5.7,baz=107,slow=9.4,SNR=212						
BVAR	**Borovoye Array**	**40.30**	**318**	P	**P**	**00 57 15.7**	**+0.5**
BRVK	**Borovoye**	**40.37**	**318**	*e*P	**P**	**00 57 16.3**	**+0.5**
	comp=Z,52nm,0.6s,mb5.4						
BRVK	**Borovoye**	**40.37**	**318**	*e*P	**P**	**00 57 16.3**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,52nm,0.6s,mb5.4						
SEY	**Seymchan**	**40.78**	**25**	⇓*i*P	**P**	**00 57 19.5**	**+0.5**
TRD	**Trivandrum**	**41.91**	**248**	*e*x	x	01 04 01.6	
TRD				*e*x	x	01 08 57.6	
TIXI	**Tiksi**	**42.63**	**6**	⇑*i*P	**P**	**00 57 32.3**	**-1.8**
KAKA	**Kakadu**	**45.15**	**157**	*e*P	**P**	**00 58 14.6**	**+19**
	comp=Z,21nm,0.9s,mb5.0						
SVE	**Sverdlovsk**	**46.70**	**322**	*e*P	**P**	**00 58 09.0**	**+2.2**
SVE				*e*S	**S**	**01 04 48.0**	**-7.4**
SVE				*e*PS	PS	01 05 08.0	+4.0
SVE				MLR	MLR		
	comp=N,500nm,14.0s,MS5.1						
SVE				MLR	MLR		
	comp=E,2µm,14.0s,MS5.1						
SVE				MLR	MLR		
	comp=Z,2µm,14.0s,MS5.2						
KNA	**Kununurra**	**46.91**	**163**	P	**P**	**00 58 06.0**	**-3.0**
FX1	**Attu Island--F**	**47.53**	**44**	P	**P**	**00 58 13.3**	**-0.2**
	comp=Z,33nm,0.8s,mb5.4,baz=45,slow=7.1,SNR=4.9						
ARU	**Arti**	**47.75**	**321**	⇑*i*P	**P**	**00 58 15.3**	**+0.1**
	comp=Z,164nm,0.8s,mb6.1						
ARU				*e*		00 59 45.2	
ARU				*e*		01 00 07.2	
ARU				*e*PPP	PPP	01 00 56.5	+0.8
ARU				*e*S	**S**	**01 05 10.4**	**+0.1**
ARU				*e*SS	SS	01 08 40.0	+6.9
ARU				*e*SSS	SSS	01 09 49.0	+1.5
ARU				LR	LR		
	comp=Z,800nm,18.0s,MS4.7						
ARU	**Arti**	**47.75**	**321**	⇑*i*P	**P**	**00 58 15.3**	**+0.1**
ARU				*e*		00 59 45.2	
ARU				*e*		01 00 07.2	
ARU				*e*PPP	PPP	01 00 56.5	+0.8
ARU				*e*S	**S**	**01 05 10.4**	**+0.1**
ARU				*e*SS	SS	01 08 40.0	+6.9
ARU				*e*SSS	SSS	01 09 49.0	+1.5
ARU				pmax	pmax		
	comp=Z,164nm,0.8s,mb6.1						
ARU				MLR	MLR		
	comp=E,700nm,18.0s,MS4.8						
ARU				MLR	MLR		
	comp=Z,800nm,18.0s,MS4.7						
ARU				MLR	MLR		
	comp=N,500nm,15.0s,MS4.8						
BILL	**Bilibino**	**48.37**	**23**	*e*P	**P**	**00 58 18.2**	**-1.7**
	comp=N,30nm,1.0s,mb5.3						
BILL	**Bilibino**	**48.37**	**23**	*e*P	**P**	**00 58 18.2**	**-1.7**
BILL				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
FITZ	**Fitzroy Crossi**	**48.48**	**167**	⇑*i*P	**P**	**00 58 20.5**	**-0.8**
	comp=Z,22nm,0.9s,mb5.2						
FITZ	**Fitzroy Crossi**	**48.48**	**167**	LR	LR	01 19 01.1	
	comp=Z,380nm,19.8s,MS4.4,baz=162,slow=36						
SOKR	**Solikamsk**	**49.22**	**325**	*i* P	**P**	**00 58 26.9**	**+0.4**
	comp=Z,100nm,0.9s,mb5.8						
SOKR				LR	LR		
	comp=Z,1µm,14.0s,MS5.0						
SOKR	**Solikamsk**	**49.22**	**325**	*d i*P	**P**	**00 58 26.9**	**+0.4**
SOKR				pmax	pmax		
	comp=Z,100nm,0.9s,mb5.8						
SOKR				MLR	MLR		
	comp=Z,1µm,14.0s,MS5.0						
PMG	**Port Moresby**	**49.30**	**137**	*e*P	**P**	**00 58 27.6**	**-0.2**
	comp=Z,95nm,1.0s,mb5.8						
PMG	**Port Moresby**	**49.30**	**137**	*e*P	**P**	**00 58 27.6**	**-0.1**
PMG				pmax	pmax		
	comp=Z,95nm,1.0s						
COEN	**Coen**	**50.87**	**145**	P	**P**	**00 58 39.4**	**-0.2**
WRAB	**Tennant Creek**	**52.52**	**158**	*e*P	**P**	**00 58 51.3**	**-0.9**
	comp=Z,61nm,1.0s,mb5.5						
WRAB	**Tennant Creek**	**52.52**	**158**	*e*P	**P**	**00 58 51.3**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,88nm,1.0s,mb5.6						
WRA	**Warramunga Arr**	**52.52**	**158**	P	**P**	**00 58 51.6**	**-0.5**
	comp=Z,24nm,0.9s,mb5.1,baz=344,slow=8.1,SNR=106						
WRA				PcP	PcP	01 00 01.8	-0.8
	comp=Z,8.3nm,1.0s,baz=346,slow=4.1,SNR=4.9						
WB2	**Warramunga Arr**	**52.53**	**158**	⇑*i*P	**P**	**00 58 51.7**	**-0.5**
DGRG	**David-gareji**	**56.93**	**302**	P	**P**	**00 59 25.6**	**+1.6**
MTA	**Mtatsminda**	**57.31**	**303**	P	**P**	**00 59 26.7**	**0.0**
TI2	**Plekhanov**	**57.33**	**303**	*e*P	**P**	**00 59 29.0**	**+2.2**
TI2				MLR	MLR		
	comp=E,500nm,11.0s						
TI2				MLR	MLR		
	comp=Z,1µm,11.0s,MS5.2						
TBLG	**Delisi**	**57.34**	**303**	*e*P	**P**	**00 59 29.0**	**+2.1**
TBLG				LR	LR		
	comp=Z,1µm,11.0s,MS5.2						
TBLG	**Delisi**	**57.34**	**303**	P	**P**	**00 59 26.6**	**-0.2**
CTA	**Charters Tower**	**57.60**	**145**	⇑*i*P	**P**	**00 59 28.8**	**-0.2**
	comp=Z,19nm,1.2s,mb5.0						
CTA	**Charters Tower**	**57.60**	**145**	⇑*i*P	**P**	**00 59 28.8**	**-0.2**
CTA				pmax	pmax		
	comp=Z,19nm,1.2s						
CTAO	**Charters Tower**	**57.60**	**145**	*e*P	**P**	**00 59 28.3**	**-0.7**
	comp=Z,40nm,1.1s,mb5.4						
CTAO	**Charters Tower**	**57.60**	**145**	*e*P	**P**	**00 59 28.3**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
GNI	**Garni**	**57.69**	**301**	*e*P	**P**	**00 59 29.6**	**+0.3**
GNI	**Garni**	**57.69**	**301**	*e*P	**P**	**00 59 29.7**	**+0.4**
GNI				pmax	pmax		
	comp=Z,73nm,1.1s						
HNR	**Honiara**	**57.70**	**125**	*e*P	**P**	**00 59 29.1**	**-0.7**
	comp=Z,58nm,0.7s,mb5.7						
HNR	**Honiara**	**57.70**	**125**	*e*P	**P**	**00 59 29.1**	**-0.7**
HNR				pmax	pmax		
	comp=Z,50nm,0.7s,mb5.7						
VRHR	**Novokhopersk**	**57.77**	**314**	*e*P	**P**	**00 59 29.0**	**-0.7**
VRHR				pmax	pmax		
	comp=Z,140nm,0.7s,mb6.1						
VRHR				pmax	pmax		
	comp=N,70nm,1.4s						
VRHR				pmax	pmax		
	comp=E,30nm,0.8s						
GOF	**Gofitskoye**	**57.87**	**307**	⇓*i*P	**P**	**00 59 30.0**	**-0.6**
ONI	**Oni**	**58.09**	**304**	P	**P**	**00 59 33.3**	**+1.2**
UMR	**Umm Al-Rimmam**	**58.23**	**288**	*e*P	**P**	**00 59 33.2**	**-0.1**
UMR				AMb	AMB	00 59 37.8	
	comp=Z,189nm,0.9s,mb6.1						
QRN	**Al-Qurain**	**58.32**	**287**	*e*P	**P**	**00 59 33.3**	**-0.6**
QRN				AMb	AMB	00 59 37.4	
	comp=Z,173nm,0.6s,mb6.2						
KIV	**Kislovodsk**	**58.34**	**306**	*e*P	**P**	**00 59 34.2**	**+0.3**
	comp=Z,152nm,1.0s,mb6.0						
KIV	**Kislovodsk**	**58.34**	**306**	*e*P	**P**	**00 59 34.2**	**+0.3**
KIV				pmax	pmax		
	comp=Z,152nm,1.0s,mb6.0						
KBD	**Kabd**	**58.37**	**288**	*e*P	**P**	**00 59 34.0**	**-0.3**
KBD				AMb	AMB	00 59 38.9	
	comp=Z,479nm,0.8s						
MIB	**Mutribah**	**58.46**	**289**	*e*P	**P**	**00 59 34.1**	**-0.8**
MIB				AMb	AMB	00 59 39.3	
	comp=Z,276nm,0.8s,mb6.3						
CLDR	**Caldiran**	**58.55**	**300**	P	**P**	**00 59 32.9**	**-2.5**
RDF	**Al-Radifah**	**58.56**	**288**	*e*P	**P**	**00 59 34.9**	**-0.8**
RDF				AMb	AMB	00 59 40.2	
	comp=Z,386nm,0.8s						
NAY	**Al-Naaiem**	**58.72**	**288**	*e*P	**P**	**00 59 35.7**	**-1.0**
NAY				AMb	AMB	00 59 41.1	
	comp=Z,152nm,1.1s,mb6.0						
VANB	**Van**	**59.08**	**300**	*e*P	**P**	**00 59 40.9**	**+1.8**
VOR	**Voronezh**	**59.16**	**315**	P	**P**	**00 59 39.5**	**0.0**
VOR				pmax	pmax		
	comp=E,240nm,1.4s						
VOR				pmax	pmax		
	comp=Z,250nm,1.4s,mb6.0						
VRSR	**Storozhevoye**	**59.26**	**315**	*e*P	**P**	**00 59 40.2**	**0.0**
	comp=Z,20nm,1.0s,mb5.1						
VRSR	**Storozhevoye**	**59.26**	**315**	*e*P	**P**	**00 59 40.2**	**0.0**
VRSR				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
VRSR				pmax	pmax		
	comp=N,7.0nm,0.7s						
VRSR				pmax	pmax		
	comp=E,20nm,0.7s						
MOS	**Moscow**	**59.44**	**320**	*e*P	**P**	**00 59 38.6**	**-2.7**
	comp=E,325nm,1.7s,mb6.1						
MOS				*e*		01 00 27.3	
MOS				*e*		01 01 49.3	
MOS				*e*S	**S**	**01 07 46.6**	**-2.0**
MOS	**Moscow**	**59.44**	**320**	*e*P	**P**	**00 59 38.6**	**-2.7**
MOS				*e*		01 00 27.3	
MOS				*e*		01 01 49.3	
MOS				*e*S	**S**	**01 07 46.6**	**-2.0**
MOS				pmax	pmax		
	comp=Z,700nm,1.9s,mb6.4						
MOS				pmax	pmax		
	comp=Z,325nm,1.7s,mb6.1						
LVZ	**Lovozero**	**59.50**	**334**	⇓*i*P	**P**	**00 59 43.3**	**+1.7**
LVZ				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.5						
LVZ				MLR	MLR		
	comp=Z,800nm,13.0s,MS5.0						
BHD	**Baghdad**	**59.80**	**293**	*e*x	x	00 59 43.0	
MSL	**Mosul**	**59.93**	**297**	*e*x	x	00 59 45.0	
OBN	**Obninsk**	**60.14**	**319**	*e*Pcu		00 59 44.7	
	comp=Z,189nm,1.2s						
OBN				*i*		00 59 48.1	
OBN				*e*		01 00 37.7	
OBN				*e*		01 08 20.8	
OBN				LR	LR		
	comp=Z,900nm,18.0s,MS5.0						
OBN	**Obninsk**	**60.14**	**319**	*αe*P	**P**	**00 59 44.7**	**-1.4**
OBN				*i*	pP	00 59 48.1	-1.5
OBN				*e*		01 00 37.7	
OBN				*e*		01 08 20.8	
OBN				pmax	pmax		
	comp=Z,189nm,1.2s,mb6.0						
OBN				MLR	MLR		
	comp=Z,900nm,18.0s,MS5.0						
EZM	**Erzurum**	**60.26**	**301**	*e*P	**P**	**00 59 48.1**	**+0.9**
SOC	**Sochi**	**60.52**	**306**	*i* P	**P**	**00 59 48.8**	**-0.1**
	comp=Z,73nm,1.2s,mb5.7						
SOC				*e*		01 00 33.0	
SOC				*e*PPP	PPP	01 03 25.9	-5.6
SOC				*e*S	**S**	**01 08 01.6**	**-1.0**
SOC				*e*SS	SS	01 12 06.7	+4.7
SOC				LR	LR		
	comp=Z,1µm,15.0s,MS5.1						
SOC	**Sochi**	**60.52**	**306**	*d i*P	**P**	**00 59 48.8**	**-0.1**
SOC				*e*		01 00 33.0	
SOC				*e*PPP	PPP	01 03 25.9	-5.6
SOC				*e*S	**S**	**01 08 01.6**	**-1.0**
SOC				*e*SS	SS	01 12 06.7	+4.7
SOC				pmax	pmax		
	comp=Z,73nm,1.2s,mb5.7						
SOC				MLR	MLR		
	comp=Z,1µm,15.0s,MS5.1						
BTMT	**Batman**	**60.63**	**300**	*i* P	**P**	**00 59 50.8**	**+1.1**
KLBR	**Kellerberrin**	**60.97**	**178**	*e*P	**P**	**00 59 51.3**	**-0.9**
	comp=Z,21nm,0.7s,mb5.4						
FORT	**Forrest**	**61.28**	**168**	*e*P	**P**	**00 59 53.7**	**-0.6**
	comp=Z,62nm,0.8s,mb5.8						
MUN	**Mundaring**	**61.33**	**179**	⇓*i*P	**P**	**00 59 54.1**	**-0.5**
JOF	**Joensuu**	**61.49**	**329**	*e*p	**P**	**00 59 53.4**	**-1.8**
	comp=Z,19nm,0.7s,mb5.3						
GUMT	**Gumushane**	**61.50**	**303**	*e*P	**P**	**00 59 55.7**	**+0.1**
DIY	**Diyarbakir**	**61.67**	**300**	*e*P	**P**	**00 59 57.0**	**+0.2**
ANN	**Anapa**	**61.80**	**308**	*e*P	**P**	**00 59 59.4**	**+1.8**
	comp=Z,294nm,1.6s,mb6.2						
ANN				LR	LR		
	comp=Z,1µm,18.0s,MS5.1						
ANN	**Anapa**	**61.80**	**308**	*e*P	**P**	**00 59 59.4**	**+1.8**
ANN				pmax	pmax		
	comp=Z,294nm,1.6s,mb6.2						
ANN				MLR	MLR		
	comp=Z,1µm,18.0s,MS5.1						
PTK	**Pertek**	**62.01**	**301**	*e*P	**P**	**00 59 58.5**	**-0.6**
KEV	**Kevo**	**62.02**	**337**	*e*p	**P**	**00 59 57.3**	**-1.5**
	comp=Z,21nm,0.9s,mb5.3						
KEV	**Kevo**	**62.02**	**337**	*e*P	**P**	**00 59 57.3**	**-1.5**
KEV				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.3						
NWAO	**Narrogin (SRO)**	**62.29**	**179**	LR	LR	01 26 42.0	
	comp=Z,165nm,18.1s,MS4.2,baz=154,slow=36						
NWAO	**Narrogin (SRO)**	**62.29**	**179**	*e*P	**P**	**00 59 59.8**	**-1.3**
	comp=Z,19nm,0.8s,mb5.3						
NWAO	**Narrogin (SRO)**	**62.29**	**179**	*e*P	**P**	**00 59 59.8**	**-1.3**
NWAO				pmax	pmax		
	comp=Z,19nm,0.8s						
PUL	**Pulkovo**	**62.56**	**325**	⇓*e*P	**P**	**01 00 01.5**	**-1.0**
	comp=Z,85nm,1.1s,mb5.8						
PUL				LR	LR		
	comp=Z,2µm,16.0s,MS5.3						
PUL	**Pulkovo**	**62.56**	**325**	⇓*e*P	**P**	**01 00 01.5**	**-1.0**
PUL				pmax	pmax		
	comp=Z,85nm,1.1s,mb5.8						
PUL				pmax	pmax		
	comp=N,91nm,1.0s						
PUL				pmax	pmax		
	comp=E,59nm,0.9s						
PUL				MLR	MLR		
	comp=Z,2µm,16.0s,MS5.3						
PUL				MLR	MLR		
	comp=N,1µm,15.0s,MS5.3						
PUL				MLR	MLR		
	comp=E,1µm,14.0s,MS5.3						
ARCES	**ARCESS Array B**	**62.58**	**337**	P	**P**	**01 00 01.6**	**-0.9**
	comp=E,16nm,0.8s,mb5.2,baz=76,slow=8.6,SNR=34						
ARCES				LR	LR	01 28 58.3	
	comp=E,621nm,18.4s,MS4.8,baz=246,slow=38						
URFA	**Urfa**	**62.87**	**299**	*e*P	**P**	**01 00 05.5**	**+0.7**
IMA2	**Indian Mountai**	**63.52**	**27**	*e*P	**P**	**01 00 07.9**	**-0.7**
HILS	**Ha'il**	**63.87**	**288**	P	**P**	**01 00 12.0**	**+0.4**
SVW2	**Sparrevohn**	**63.91**	**33**	*e*P	**P**	**01 00 11.2**	**0.0**
KAF	**Kangasniemi**	**63.93**	**328**	*e*p	**P**	**01 00 09.5**	**-1.8**
	comp=E,13nm,0.9s,mb5.0,baz=74,slow=6.0						
KAF	**Kangasniemi**	**63.93**	**328**	*e*P	**P**	**01 00 09.5**	**-1.8**
KAF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
SIM	**Simferopol'**	**64.03**	**309**	⇑*e*P	**P**	**01 00 12.9**	**+0.6**
	comp=Z,49nm,0.7s,mb5.7						
SIM				LR	LR		
	comp=Z,880nm,20.0s,MS4.9						
SIM	**Simferopol'**	**64.03**	**309**	⇑*e*P	**P**	**01 00 12.9**	**+0.6**
SIM				pmax	pmax		
	comp=Z,49nm,0.7s,mb5.7						
SIM				MLR	MLR		
	comp=Z,880nm,20.0s,MS4.9						
AFFS	**'Afif**	**64.14**	**284**	P	**P**	**01 00 13.4**	**-0.1**
FINES	**FINESS Array B**	**64.20**	**328**	P	**P**	**01 00 11.9**	**-1.2**
	comp=Z,9.4nm,0.6s,mb5.0,baz=61,slow=6.4,SNR=87						
FINES				LR	LR	01 28 09.3	
	comp=Z,946nm,18.9s,MS5.0,baz=87,slow=36						
FINES	**FINESS Array B**	**64.20**	**328**	*i* P	**P**	**01 00 11.8**	**-1.3**
FINES				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KAMS	**Al Khamasin**	**64.22**	**280**	P	**P**	**01 00 13.1**	**-0.9**
VSU	**Vasula**	**64.67**	**324**	⇑*i*P	**P**	**01 00 15.1**	**-1.2**
TATS	**Tathlith**	**65.48**	**279**	P	**P**	**01 00 22.1**	**0.0**
AKASG	**Malin Array Be**	**65.50**	**316**	P	**P**	**01 00 20.4**	**-1.3**
	comp=Z,19nm,0.7s,mb5.2,baz=62,slow=6.7,SNR=65						
AKASG	**Malin Array Be**	**65.50**	**316**	*i* P	**P**	**01 00 20.3**	**-1.4**
	comp=Z,19nm,0.7s,mb5.2						
AKASG	**Malin Array Be**	**65.50**	**316**	*i* P	**P**	**01 00 20.3**	**-1.4**
AKASG				pmax	pmax		
	comp=Z,19nm,0.7s						
KIEV	**Kiev**	**65.51**	**316**	P	**P**	**01 00 20.0**	**-1.8**
FKH	**Fakeheh**	**65.77**	**297**	*e*P	**P**	**01 00 24.2**	**+0.4**
BR131	**Keskin Array S**	**65.99**	**303**	*e*P	**P**	**01 00 25.1**	**0.0**
	comp=Z,55nm,0.8s,mb5.6						
BRTR	**Keskin Array B**	**65.99**	**303**	P	**P**	**01 00 24.9**	**-0.1**
	comp=Z,58nm,0.9s,mb5.6,baz=103,slow=6.3,SNR=137						
BRTR	**Keskin Array B**	**65.99**	**303**	P	**P**	**01 00 24.9**	**-0.1**
STKA	**Stephens Creek**	**66.00**	**156**	P	**P**	**01 00 24.8**	**-0.5**
	comp=Z,13nm,0.6s,mb5.1,baz=328,slow=7.1,SNR=16						
STKA	**Stephens Creek**	**66.00**	**156**	*e*P	**P**	**01 00 24.1**	**-1.1**
	comp=Z,18nm,0.7s,mb5.2						
QURS	**Qurayyt al Mil**	**66.06**	**294**	P	**P**	**01 00 27.0**	**+1.4**
MCK	**McKinley**	**66.12**	**29**	*e*P	**P**	**01 00 23.9**	**-1.6**
	comp=Z,5µm,0.6s						
DJNS	**Zahran al Janu**	**66.19**	**277**	P	**P**	**01 00 27.0**	**+0.3**
COLA	**College**	**66.20**	**28**	*e*P	**P**	**01 00 25.5**	**-0.4**
	comp=Z,33nm,0.9s,mb5.4						
COLA	**College**	**66.20**	**28**	*c i*P	**P**	**01 00 25.4**	**-0.5**
BHL	**Bhannes**	**66.47**	**297**	*e*P	**P**	**01 00 28.4**	**+0.1**
ANTO	**Ankara**	**66.56**	**304**	*e*P	**P**	**01 00 28.6**	**-0.1**
	comp=Z,51nm,0.8s,mb5.6						
ANTO	**Ankara**	**66.56**	**304**	⇑P	**P**	**01 00 28.2**	**-0.5**
KBRS	**Khaybar**	**66.56**	**287**	P	**P**	**01 00 30.1**	**+1.2**
ILAR	**Eielson Array**	**66.62**	**28**	P	**P**	**01 00 27.4**	**-1.3**
	comp=Z,4.2nm,1.0s,mb4.4,baz=275,slow=6.2,SNR=18						
ILAR				LR	LR	01 32 35.9	
	comp=Z,307nm,18.1s,MS4.6,baz=308,slow=39						
KSDI	**Kefar Szold**	**66.72**	**296**	P	**P**	**01 00 30.5**	**+0.7**
PMR	**Palmer**	**66.74**	**31**	*e*P	**P**	**01 00 29.1**	**-0.3**
	comp=Z,54nm,1.3s,mb5.4						
PMR				LR	LR		
	comp=Z,500nm,18.0s,MS4.8						
PMR	**Palmer**	**66.74**	**31**	*e*P	**P**	**01 00 29.1**	**-0.3**
PMR				pmax	pmax		
	comp=Z,54nm,1.3s,mb5.4						
PMR				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.8						
KIS	**Kishinev**	**66.92**	**312**	*e*P	**P**	**01 00 28.0**	**-2.8**
BLJS	**Baljurashi**	**66.95**	**280**	P	**P**	**01 00 31.9**	**+0.4**
SML	**Sawmill**	**67.02**	**31**	*e*P	**P**	**01 00 30.1**	**-1.2**
HNTI	**Hanita**	**67.14**	**296**	P	**P**	**01 00 33.4**	**+0.9**
MMLI	**Mount Malkishu**	**67.18**	**295**	P	**P**	**01 00 34.0**	**+1.2**
MKRJ	**Makawir**	**67.33**	**294**	P	**P**	**01 00 34.9**	**+1.1**
HAF	**Haifa**	**67.37**	**296**	P	**P**	**01 00 36.6**	**+2.6**
OFRI	**'Ofer**	**67.46**	**296**	P	**P**	**01 00 35.4**	**+0.9**
MZDA	**Masada**	**67.64**	**294**	P	**P**	**01 00 36.7**	**+1.0**
IAS	**Iasi**	**67.66**	**313**	⇑P	**P**	**01 00 33.1**	**-2.4**
IAS	**Iasi**	**67.66**	**313**	⇑P	**P**	**01 00 33.1**	**-2.4**
TBKS	**Tabuk**	**67.86**	**291**	P	**P**	**01 00 37.6**	**+0.5**
CSS	**Prodhromos**	**67.88**	**299**	P	**P**	**01 00 37.1**	**-0.1**
	comp=Z,1.1nm,0.7s						
KMPD	**K-Podol'skiy**	**67.89**	**314**	P	**P**	**01 00 36.0**	**-0.9**
MAMC	**Mammari**	**67.89**	**299**	⇑P	**P**	**01 00 36.7**	**-0.5**
SUW	**Suwalki**	**67.94**	**320**	*e*P	**P**	**01 00 36.4**	**-0.8**
SUW	**Suwalki**	**67.94**	**320**	*e*P	**P**	**01 00 36.4**	**-0.8**
SUW	**Suwalki**	**67.94**	**320**	P	**P**	**01 00 36.3**	**-0.9**
SUW				pmax	pmax		
	comp=Z,56nm,1.0s,mb5.5						
CFR	**Carcaliu**	**67.98**	**310**	⇓P	**P**	**01 00 36.3**	**-1.3**
CFR	**Carcaliu**	**67.98**	**310**	⇓P	**P**	**01 00 36.3**	**-1.3**
TIRR	**Tirgusor**	**68.04**	**310**	⇓P	**P**	**01 00 37.4**	**-0.6**
TIRR	**Tirgusor**	**68.04**	**310**	⇓P	**P**	**01 00 37.4**	**-0.6**
ZFRI	**Zfri**	**68.07**	**293**	P	**P**	**01 00 39.3**	**+0.9**
MASH	**Mash'abbe Sade**	**68.22**	**294**	P	**P**	**01 00 40.0**	**+0.7**
HARR	**Harsova**	**68.28**	**310**	⇓P	**P**	**01 00 38.7**	**-0.8**
HARR	**Harsova**	**68.28**	**310**	⇓P	**P**	**01 00 38.7**	**-0.8**
PRNI	**Paran**	**68.29**	**293**	P	**P**	**01 00 40.6**	**+0.8**
SZAC	**Souni-Zanaja**	**68.30**	**298**	P	**P**	**01 00 39.4**	**-0.4**
UMJS	**Umm Lajj**	**68.40**	**287**	P	**P**	**01 00 41.1**	**+0.6**
DIV	**Divide**	**68.41**	**31**	*e*P	**P**	**01 00 39.1**	**-0.9**
	comp=Z,118nm,1.1s,mb5.8						
AQBJ	**Aqaba**	**68.49**	**293**	P	**P**	**01 00 41.5**	**+0.5**
KZIT	**Kziot**	**68.56**	**294**	P	**P**	**01 00 42.0**	**+0.5**
EIL	**Elat**	**68.59**	**293**	P	**P**	**01 00 42.1**	**+0.4**
MENT	**Mentasta**	**68.60**	**29**	*e*P	**P**	**01 00 41.5**	**+0.4**
JMOS	**Jabal al Moall**	**68.66**	**292**	P	**P**	**01 00 42.6**	**+0.5**
HAQS	**Haql**	**68.85**	**292**	P	**P**	**01 00 43.9**	**+0.6**
AYUS	**'Aynunah**	**68.91**	**291**	P	**P**	**01 00 44.1**	**+0.4**
ISP	**Isparta**	**68.94**	**302**	*e*P	**P**	**01 00 42.9**	**-0.7**
	comp=Z,97nm,1.0s,mb5.7						
ISP	**Isparta**	**68.94**	**302**	*e*P	**P**	**01 00 42.9**	**-0.8**
ISP				pmax	pmax		
	comp=Z,97nm,1.0s,mb5.7						
BDAS	**Al Bad'**	**68.95**	**291**	P	**P**	**01 00 44.6**	**+0.7**
BURAR	**Bucovina Array**	**69.00**	**314**	⇓P	**P**	**01 00 42.8**	**-1.1**
BURAR	**Bucovina Array**	**69.00**	**314**	⇓P	**P**	**01 00 42.8**	**-1.1**
PRD	**Provadia**	**69.18**	**309**	*e*P	**P**	**01 00 45.0**	**0.0**
MLR	**Muntele Rosu**	**69.31**	**311**	⇓P	**P**	**01 00 46.5**	**+0.7**
MLR	**Muntele Rosu**	**69.31**	**311**	⇓P	**P**	**01 00 46.5**	**+0.7**
MLR	**Muntele Rosu**	**69.31**	**311**	P	**P**	**01 00 46.2**	**+0.4**
ATD	**Arta Tunnel**	**69.52**	**272**	P	**P**	**01 00 48.8**	**+1.2**
	comp=Z,28nm,1.0s,mb5.2,baz=37,slow=1.9,SNR=12						
BUC1	**Bucharest**	**69.68**	**310**	P	**P**	**01 00 49.1**	**+1.1**
KWP	**Kalwaria**	**69.80**	**316**	*e*P	**P**	**01 00 48.8**	**+0.1**
KWP	**Kalwaria**	**69.80**	**316**	*e*P	**P**	**01 00 48.8**	**+0.1**
DAWY	**Dawson**	**69.89**	**27**	*e*P	**P**	**01 00 47.5**	**-1.5**
VOIR		**69.92**	**311**	⇓P	**P**	**01 00 50.0**	**+0.5**
VOIR		**69.92**	**311**	⇓P	**P**	**01 00 50.0**	**+0.6**
INK	**Inuvik**	**69.97**	**22**	P	**P**	**01 00 48.5**	**-1.0**
	comp=Z,28nm,0.7s,mb5.3,baz=305,slow=5.9,SNR=141						
INK				LR	LR	01 35 48.0	
	comp=Z,630nm,18.5s,MS4.9,baz=125,slow=40						
INK	**Inuvik**	**69.97**	**22**	*e*P	**P**	**01 00 47.9**	**-1.6**
	comp=Z,1µm,0.8s						
INK	**Inuvik**	**69.97**	**22**	*e*P	**P**	**01 00 47.9**	**-1.6**
INK				pmax	pmax		
	comp=Z,37nm,0.8s						
JMB	**Yambol**	**70.01**	**308**	*e*P	**P**	**01 00 50.0**	**-0.1**
DAG	**Danmarks Havn**	**70.15**	**350**	⇓*i*P	**P**	**01 00 39.1**	**-11**
	comp=Z,18nm,0.7s,mb5.1						
DAG	**Danmarks Havn**	**70.15**	**350**	⇓*e*P	**P**	**01 00 39.1**	**-11**
KOLS	**Kolonicke sedl**	**70.33**	**316**	*i* P	**P**	**01 00 52.0**	**0.0**
KOLS				*e*pP	pP	01 00 54.8	-0.7
HFA0	**Hagfors New Ar**	**70.35**	**329**	P	**P**	**01 00 50.4**	**-1.5**
STHS	**Stebnicka Huta**	**70.77**	**316**	*e*P	**P**	**01 00 54.2**	**-0.4**
CRVS	**Cervenica-Dubn**	**70.84**	**316**	*e*P	**P**	**01 00 54.6**	**-0.4**
DRGR		**70.89**	**313**	⇓P	**P**	**01 00 57.5**	**+2.1**
DRGR		**70.89**	**313**	⇓P	**P**	**01 00 57.5**	**+2.1**
DRGR		**70.89**	**313**	P	**P**	**01 00 54.7**	**-0.7**
DZM	**Mont Dzumac**	**70.96**	**131**	*e*P	**P**	**01 00 56.1**	**-0.2**
DZM	**Mont Dzumac**	**70.96**	**131**	*e*P	**P**	**01 00 56.1**	**-0.2**
NB2	**NORSAR Subarra**	**71.05**	**330**	P	**P**	**01 00 54.6**	**-1.5**
	comp=Z,13nm,0.7s,mb5.0,baz=62,slow=6.2						
NB2	**NORSAR Subarra**	**71.05**	**330**	P	**P**	**01 00 54.6**	**-1.5**
	baz=62,slow=6.2						
NB2	**NORSAR Subarra**	**71.05**	**330**	P	**P**	**01 00 58.2**	**+2.1**
NOA	**NORSAR Array B**	**71.05**	**330**	P	**P**	**01 00 54.6**	**-1.5**
	comp=Z,19nm,0.8s,mb5.1,baz=64,slow=6.0,SNR=27						
NOA				LR	LR	01 34 12.0	
	comp=Z,1µm,18.2s,MS5.1,baz=50,slow=38						
KDZ	**Kurdzhali**	**71.12**	**308**	*e*P	**P**	**01 00 57.0**	**+0.1**
RDO	**Rodhopi**	**71.24**	**307**	P	**P**	**01 00 56.9**	**-0.7**
NAO01	**NORSAR Array S**	**71.28**	**330**	*e*P	**P**	**01 00 55.3**	**-2.2**
	comp=Z,16nm,0.9s,mb5.0						
OJC	**Ojcow**	**71.30**	**318**	*e*P	**P**	**01 00 57.2**	**-0.6**
NAO	**NORSAR Subarra**	**71.31**	**330**	P	**P**	**01 00 54.6**	**-3.1**
	comp=Z,13nm,0.7s,mb5.0						
NAO	**NORSAR Subarra**	**71.31**	**330**	P	**P**	**01 00 54.6**	**-3.1**
NAO				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
NIE	**Niedzica**	**71.32**	**317**	*e*P	**P**	**01 00 58.4**	**+0.4**
RZN	**Rozhen**	**71.59**	**308**	*e*P	**P**	**01 01 00.0**	**+0.3**
KECS	**Kecovo**	**71.60**	**316**	*e*P	**P**	**01 00 59.5**	**-0.1**
KECS				*e*pP	pP	01 01 03.1	-0.1
BSD	**Bornholm Skovb**	**71.93**	**324**	*i* P	**P**	**01 00 59.6**	**-1.9**
	comp=Z,36nm,0.9s,mb5.3						
BSD	**Bornholm Skovb**	**71.93**	**324**	*e*P	**P**	**01 00 59.6**	**-1.9**
	comp=Z,36nm,0.9s,mb5.3						
BSD	**Bornholm Skovb**	**71.93**	**324**	*e*P	**P**	**01 00 59.6**	**-1.9**
BSD				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						

PSZ	Piszkesteto	72.19	315	eP	P	01 01 02.9	-0.3
	comp=Z,57nm,1.9s,mb5.2						
PSZ	Piszkesteto	72.19	315	eP	P	01 01 02.9	-0.3
PSZ				pmax	pmax		
	comp=Z,57nm,1.9s,mb5.2						
VTS	Vitosha	72.25	309	i P	P	01 01 04.0	+0.4
RAC	Raciborz	72.30	318	eP	P	01 01 04.7	+0.9
RAC				LME		01 28 35.9	
RAC				LMN		01 28 36.1	
RAC				MLR	MLR	01 32 16.2	
	comp=Z,2µm,16.3s,MS5.3						
RAC	Raciborz	72.30	318	eP	P	01 01 04.7	+0.9
RAC				LR	LR		
	comp=Z,2µm,16.3s,MS5.3						
MMB	Musomiste	72.31	308	eP	P	01 01 02.0	-2.0
OKC	Ostrava-Krasne	72.43	318	eP	P	01 01 04.2	-0.4
VYHS	Vyhne	72.59	316	eP	P	01 01 05.5	0.0
VYHS				epP	pP	01 01 09.2	+0.2
KKB	Krupnik	72.64	309	eP	P	01 01 05.0	-0.9
MORC	Moravsky Berou	72.81	318	eP	P	01 01 05.8	-1.0
	comp=Z,17nm,1.0s,mb4.9						
MORC	Moravsky Berou	72.81	318	eP	P	01 01 05.8	-1.0
MORC				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.9						
KSP	Ksiaz	73.06	319	eP	P	01 01 08.2	0.0
KSP	Ksiaz	73.06	319	eP	P	01 01 07.9	-0.3
KSP				epP	pP	01 01 11.3	-0.5
JAVC	Velka Javorina	73.13	317	P	P	01 01 10.3	+1.6
VAY	Valandovo	73.21	308	⇓iP	P	01 01 08.4	-0.9
VAY				i	pP	01 01 11.8	-1.0
SANT	Santorini	73.23	303	eP	P	01 01 08.1	-1.4
	comp=Z,132nm,1.1s,mb5.8						
DPC	Dobruska-Polom	73.27	319	eP	P	01 01 09.5	+0.1
DPC				epP	pP	01 01 13.0	+0.1
DPC				AMS	AMS	01 32 40.0	
	comp=Z,1µm,15.2s						
UPC	Upice	73.37	319	eP	P	01 01 09.9	-0.1
UPC				e	pP	01 01 13.3	-0.3
SMOL	Smolenice	73.43	317	eP	P	01 01 11.2	+0.8
SMOL				epP	pP	01 01 14.1	+0.2
VRAC	Vranov	73.57	318	⇑P	P	01 01 11.1	-0.1
PKSM	Moragy	73.69	314	P	P	01 01 11.6	-0.4
SKO	Skopje	73.70	309	i P	P	01 01 13.2	+1.1
SKO				i	pP	01 01 16.3	+0.6
KRUC	Moravsky	73.80	317	P	P	01 01 13.1	+0.6
RES	Resolute Bay	73.98	8	eP	P	01 01 12.1	-1.0
	comp=Z,2µm,1.7s						
RES	Resolute Bay	73.98	8	eP	P	01 01 12.1	-1.0
RES				pmax	pmax		
	comp=Z,72nm,1.7s,mb5.3						
IDI	Anoyia	74.11	302	P	P	01 01 13.9	-0.7
	comp=Z,37nm,1.0s,mb5.2,baz=28,slow=8.7,SNR=9.5						
MUD	Monsted U'grnd	74.17	326	i P	P	01 01 15.2	+0.7
	comp=Z,42nm,0.8s,mb5.4						
	comp=Z,1µm,18.0s						
PVCC	Panska Ves	74.19	319	eP	P	01 01 14.3	-0.4
TREC	Trest	74.22	318	eP	P	01 01 15.1	+0.1
TREC				epP	pP	01 01 18.3	-0.2
SOP	Sopron	74.32	316	P	P	01 01 16.3	+0.7
BRG	Berggiesshubel	74.38	320	i P	P	01 01 15.5	-0.3
	comp=Z,11nm,1.0s,mb4.8						
BRG				i	pP	01 01 18.9	-0.5
BRG				LR	LR		
	comp=Z,810nm,16.0s,MS5.1						
BRG	Berggiesshubel	74.38	320	i P	P	01 01 15.5	-0.3
BRG				i	pP	01 01 18.9	-0.5
BRG				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.7						
BRG				MLR	MLR		
	comp=Z,810nm,16.0s,MS5.1						
PRU	Pruhonice	74.45	319	eP	P	01 01 16.4	+0.1
PRU				epP	pP	01 01 19.6	-0.2
PRU				AMS	AMS	01 33 20.0	
	comp=Z,1µm,10.1s						
PRU	Pruhonice	74.45	319	eP	P	01 01 16.4	+0.1
PRU				e	pP	01 01 19.6	-0.2
PRU				LR	LR		
	comp=Z,1µm,10.1s,MS5.4						
CLL	Collm	74.70	321	⇑P	P	01 01 17.3	-0.4
	comp=Z,logA/T=1.5,mb5.2						
CLL				i *PP	pP	01 01 20.4	-0.8
CLL	Collm	74.70	321	⇑iP	P	01 01 17.3	-0.4
	comp=Z,26nm,0.8s,mb5.2						
CLL				i pP	pP	01 01 20.4	-0.8
CLL	Collm	74.70	321	⇑iP	P	01 01 17.3	-0.4
CLL				i *PP	pP	01 01 20.4	-0.8
CLL				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.2						
BSEG	Bad Segeberg	74.85	324	eP	P	01 01 18.8	+0.3
ARSA	Arzberg	75.14	316	⇑eP	P	01 01 20.1	-0.2
	comp=Z,9.8nm,1.1s,mb4.6						
KHC	Kasperske Hory	75.41	318	eP	P	01 01 21.7	-0.1
KHC				pP	pP	01 01 28.0	+2.6
KHC				AMS	AMS	01 34 00.0	
	comp=Z,1µm,9.0s						
KHC	Kasperske Hory	75.41	318	eP	P	01 01 21.7	-0.1
GEC2	GERESS Array S	75.47	318	eP	P	01 01 22.2	0.0
	comp=Z,14nm,1.1s,mb4.8						
GEC2	GERESS Array S	75.47	318	eP	P	01 01 22.2	0.0
GEC2				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.8						
GERES	GERESS Array B	75.47	318	P	P	01 01 22.4	+0.2
	comp=Z,11nm,0.9s,mb4.8,baz=72,slow=4.2,SNR=43						
GERES				LR	LR	01 34 27.9	
	comp=Z,537nm,20.1s,MS4.8,baz=240,slow=36						
NKC	Novy Kostel	75.52	320	P	P	01 01 23.4	+1.0
MOA	Molln	75.61	317	⇑iP	P	01 01 23.4	+0.4
	comp=Z,22nm,0.9s,mb5.1						
SCO	Scoresbysund	75.63	346	eP	P	01 01 19.8	-2.9
PERS	Pernice	75.67	316	eP	P	01 01 23.1	-0.3
MOX	Moxa	75.78	320	i P	P	01 01 23.9	0.0
MOX				L		01 33 13.0	
MOX	Moxa	75.78	320	eP	P	01 01 23.9	0.0
MOX				LR	LR		
	comp=Z,400nm,20.0s,MS4.7						
WET	Wettzell	75.80	319	eP	P	01 01 24.5	+0.4
	comp=Z,8.0nm,1.2s,mb4.5						
WET	Wettzell	75.80	319	eP	P	01 01 24.5	+0.4
WET				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.5						
CLZ	Clausthal	75.87	322	eP	P	01 01 25.1	+0.7
	comp=Z,23nm,1.1s,mb5.0						
CLZ	Clausthal	75.87	322	eP	P	01 01 25.1	+0.7
CLZ				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.0						
BOJS	Bojanci	76.12	315	eP	P	01 01 26.5	+0.5
VISS	Visnje	76.24	315	eP	P	01 01 26.7	+0.1
VISS				i		01 01 38.4	
LJU	Ljubljana	76.32	315	i P	P	01 01 27.3	+0.3
SUMG	Summit	76.47	352	eP	P	01 01 27.0	-0.3
	comp=Z,44nm,0.8s,mb5.4						
GRA1	Grafenberg Arr	76.48	320	eP	P	01 01 28.2	+0.3
	comp=Z,38nm,1.0s,mb5.3						
GRA1				epP	pP	01 01 31.8	+0.4
GRA1				LR	LR		
	comp=Z,900nm,19.4s,MS5.1						
GRF	Grafenberg Arr	76.48	320	eP	P	01 01 28.2	+0.3
	comp=Z,38nm,1.0s,mb5.3						
GRF				epP	pP	01 01 31.8	+0.4
GRF				LR	LR		
	comp=Z,900nm,19.4s,MS5.1						
GRF	Grafenberg Arr	76.48	320	eP	P	01 01 28.2	+0.3
GRF				e*PP	pP	01 01 31.8	+0.4
GRF				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.3						
GRF				MLR	MLR		
	comp=Z,900nm,19.4s,MS5.1						
GRF	Grafenberg Arr	76.48	320	eP	P	01 01 28.2	+0.3
GRF				e*PP	pP	01 01 31.8	+0.4
GRF				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.3						
GRF				MLR	MLR		
	comp=Z,900nm,19.4s,MS5.1						
KBA	Koelnbreinsper	76.53	317	⇑iP	P	01 01 28.8	+0.6
	comp=Z,17nm,0.9s,mb5.0						
DLBC	Dease Lake	76.67	30	P	P	01 01 29.6	+0.9
	comp=Z,9.2nm,0.9s,mb4.7,baz=291,slow=2.4,SNR=12						
ROBS	Robic	76.84	316	eP	P	01 01 29.3	-0.6
FUR	Furstenfeldbru	77.21	318	eP	P	01 01 32.3	+0.3
	comp=Z,36nm,0.9s,mb5.3						
FUR	Furstenfeldbru	77.21	318	eP	P	01 01 32.3	+0.3
FUR				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
WATA	Walderalm	77.45	317	⇑iP	P	01 01 33.8	+0.5
	comp=Z,3.7nm,0.6s,mb4.5						
WTTA	Wattenberg	77.45	317	⇑iP	P	01 01 33.6	+0.2
	comp=Z,15nm,1.1s,mb4.8						
MOTA	Moosalm	77.73	318	⇑eP	P	01 01 35.2	+0.4
	comp=Z,6.1nm,0.8s,mb4.6						
MOTA	Moosalm	77.73	318	⇑eP	P	01 01 35.2	+0.4
	comp=Z,6.1nm,0.8s,mb4.6						
SQTA	Sankt Quirin	77.73	318	i P	P	01 01 34.8	0.0
	comp=Z,4.0nm,0.9s,mb4.4						
SQTA	Sankt Quirin	77.73	318	P	P	01 01 34.8	-0.1
	comp=Z,4.0nm,0.9s,mb4.3						
BFO	Black Forest	78.81	320	eP	P	01 01 40.5	-0.3
	comp=Z,6.0nm,0.9s,mb4.5						
BFO	Black Forest	78.81	320	eP	P	01 01 40.5	-0.3
BFO				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
AQU	L'Aquila	78.82	312	eP	P	01 01 41.1	+0.2
	comp=Z,36nm,0.9s,mb5.3						
AQU	L'Aquila	78.82	312	eP	P	01 01 41.1	+0.1
AQU				pmax	pmax		
	comp=Z,36nm,0.9s,mb5.3						
CDF	Champ du Feu	79.36	320	⇑iP	P	01 01 43.8	+0.1
	comp=Z,86nm,1.1s,mb5.3						
CDF	Champ du Feu	79.36	320	⇑iP	P	01 01 43.8	+0.1
CDF				pmax	pmax		
	comp=Z,43nm,1.1s,mb5.3						
YKW3	Yellowknife Ar	79.69	21	eP	P	01 01 44.5	-0.7
YKA	Yellowknife Ar	79.74	21	P	P	01 01 44.9	-0.6
	comp=Z,12nm,0.7s,mb4.9,baz=319,slow=4.8,SNR=31						
YKA				LR	LR	01 41 08.7	
	comp=Z,357nm,18.9s,MS4.7,baz=285,slow=39						
GIVF	Givet	79.76	322	eP	P	01 01 46.1	+0.2
	comp=Z,63nm,1.1s,mb5.2						
GIVF	Givet	79.76	322	eP	P	01 01 46.1	+0.2
GIVF				pmax	pmax		
	comp=Z,32nm,1.1s,mb5.2						
HINF	Hinteralfeld	79.92	320	eP	P	01 01 46.5	-0.3
	comp=Z,61nm,1.3s,mb5.1						
HINF	Hinteralfeld	79.92	320	eP	P	01 01 46.5	-0.3
HINF				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
HAU	Haudompre	80.10	320	eP	P	01 01 47.6	-0.1
	comp=Z,42nm,1.0s,mb5.0						
HAU				eR			
	comp=Z,962nm,20.0s						
HAU	Haudompre	80.10	320	eP	P	01 01 47.6	-0.1
HAU				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
HAU				MLR	MLR		
	comp=Z,960nm,20.0s,MS5.1						
BAIF	Baives	80.12	322	eP	P	01 01 48.1	+0.3
	comp=Z,37nm,1.0s,mb5.0						
BAIF	Baives	80.12	322	eP	P	01 01 48.1	+0.3
BAIF				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.0						
KMBO	Kilima Mbogo	80.49	263	P	P	01 01 52.1	+1.6
	comp=Z,15nm,0.9s,mb4.9,baz=44,slow=8.4,SNR=32						
KMBO				LR	LR	01 41 40.5	
	comp=Z,224nm,18.3s,MS4.5,baz=92,slow=39						
MEZF	Maizieres J'vi	80.54	321	eP	P	01 01 50.3	+0.2
CABF	La Chapelle	81.02	319	eP	P	01 01 52.8	+0.1
LPG	La Plagne	81.26	318	⇑iP	P	01 01 54.8	+0.9
	comp=Z,97nm,1.0s,mb5.4						
LPG	La Plagne	81.26	318	⇑iP	P	01 01 54.8	+0.9
LPG				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.4						
LPL	La Plagne	81.26	318	⇑iP	P	01 01 54.7	+0.8
	comp=Z,83nm,1.0s,mb5.3						
LPL	La Plagne	81.26	318	⇑iP	P	01 01 54.7	+0.8
LPL				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
BNI	Bardonecchia	81.55	317	eP	P	01 01 55.7	+0.3
	comp=Z,21nm,1.0s,mb5.0						
BNI	Bardonecchia	81.55	317	eP	P	01 01 55.7	+0.3
BNI				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.0						
OPO	Ambohidratompo	81.55	243	P	P	01 01 56.9	+1.0
	comp=Z,16nm,1.0s,mb4.9,baz=36,slow=5.1,SNR=15						
MBDF	Montbardon	81.67	317	eP	P	01 01 56.0	-0.1
	comp=Z,36nm,1.0s,mb5.0						
MBDF	Montbardon	81.67	317	eP	P	01 01 56.0	-0.1
MBDF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
SBF	Sospel	81.75	316	eP	P	01 01 56.5	0.0
	comp=Z,103nm,0.9s,mb5.4						
SBF	Sospel	81.75	316	eP	P	01 01 56.5	0.0
SBF				pmax	pmax		
	comp=Z,52nm,0.9s,mb5.5						
LOR	Lormes	81.91	320	⇑iP	P	01 01 57.1	-0.1
	comp=Z,65nm,1.0s,mb5.2						
LOR				eR			
	comp=Z,712nm,18.8s						
LOR	Lormes	81.91	320	⇑iP	P	01 01 57.1	-0.1
LOR				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.2						
LOR				MLR	MLR		
	comp=Z,710nm,18.8s,MS5.0						
ORIF	Oris-en-Rattie	82.09	318	⇑iP	P	01 01 58.7	+0.5
	comp=Z,64nm,0.9s,mb5.3						
ORIF				eR			
	comp=Z,785nm,18.8s						
SSF	Saint Saulge	82.22	320	⇑iP	P	01 01 59.0	+0.1
	comp=Z,22nm,0.9s,mb5.1						
SSF	Saint Saulge	82.22	320	⇑iP	P	01 01 59.0	+0.1
SSF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
SMF	Signal de Mont	82.28	320	⇑iP	P	01 01 59.3	+0.1
	comp=Z,125nm,1.1s,mb5.5						
SMF	Signal de Mont	82.28	320	⇑iP	P	01 01 59.3	+0.1
SMF				pmax	pmax		
	comp=Z,63nm,1.1s,mb5.5						
FRF	La Foret Royal	82.40	316	eP	P	01 02 00.0	+0.1
	comp=Z,87nm,1.3s,mb5.2						
FRF	La Foret Royal	82.40	316	eP	P	01 02 00.0	+0.1
FRF				pmax	pmax		
	comp=Z,44nm,1.3s,mb5.2						
AVF	Avril sur Loir	82.47	320	⇑iP	P	01 02 00.3	+0.2
	comp=Z,84nm,1.0s,mb5.3						
AVF	Avril sur Loir	82.47	320	⇑iP	P	01 02 00.3	+0.2
AVF				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
HYF	Humbligny	82.58	321	eP	P	01 02 01.4	+0.7
LMR	La Mourre	82.61	316	⇑iP	P	01 02 01.2	+0.2
	comp=Z,78nm,1.2s,mb5.3						
LMR	La Mourre	82.61	316	⇑iP	P	01 02 01.2	+0.2
LMR				pmax	pmax		
	comp=Z,39nm,1.2s,mb5.3						
SMRF	Simiane la Rot	82.81	317	eP	P	01 02 02.6	+0.6
VIVF	Saint-Julien-l	82.83	318	⇑iP	P	01 02 02.3	+0.2
	comp=Z,32nm,0.9s,mb5.0						
VIVF	Saint-Julien-l	82.83	318	⇑iP	P	01 02 02.3	+0.2
VIVF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
BGF	Bois d'Agland	82.89	320	eP	P	01 02 02.3	0.0
	comp=Z,76nm,1.2s,mb5.3						
BGF	Bois d'Agland	82.89	320	eP	P	01 02 02.3	0.0
BGF				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.3						
SFJD	Kangerlussuaq	83.06	355	eP	P	01 02 02.4	-0.4
	comp=Z,55nm,0.8s,mb5.6						
LDF	La Druitiere	83.27	323	eP	P	01 02 04.2	0.0
	comp=Z,48nm,1.1s,mb5.1						
LDF	La Druitiere	83.27	323	eP	P	01 02 04.2	0.0
LDF				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
FLN	La Foliniere	83.35	323	eP	P	01 02 04.4	-0.3
FLN				eR			
	comp=Z,824nm,22.5s						
TCF	Toulx Ste Croi	83.40	320	⇑iP	P	01 02 05.4	+0.4
	comp=Z,76nm,1.1s,mb5.3						
TCF	Toulx Ste Croi	83.40	320	⇑iP	P	01 02 05.4	+0.4
TCF				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.3						
LASF	Ste Croix	83.76	318	eP	P	01 02 07.6	+0.7
	comp=Z,42nm,0.9s,mb5.3						
GRR	Gorron	83.78	323	eP	P	01 02 07.1	+0.3
	comp=Z,80nm,1.3s,mb5.4						
GRR	Gorron	83.78	323	eP	P	01 02 07.1	+0.3
GRR				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.4						
CAF	Calviac	84.30	319	⇑iP	P	01 02 10.5	+1.0
	comp=Z,34nm,1.0s,mb5.1						
CAF	Calviac	84.30	319	⇑iP	P	01 02 10.5	+1.0
CAF				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.1						
RJF	Les Rejaudoux	84.38	320	⇑iP	P	01 02 10.8	+0.9
	comp=Z,70nm,0.9s,mb5.5						
RJF				eR			
	comp=Z,790nm,22.0s						
RJF	Les Rejaudoux	84.38	320	⇑iP	P	01 02 10.8	+0.9
RJF				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.5						
RJF				MLR	MLR		
	comp=Z,790nm,22.0s,MS5.0						
MFF	Saint Martin d	84.51	321	eP	P	01 02 11.0	+0.5
SGMF	Saint Gilles	84.74	324	eP	P	01 02 11.9	+0.2
	comp=Z,63nm,1.1s,mb5.4						
SGMF	Saint Gilles	84.74	324	eP	P	01 02 11.9	+0.2
SGMF				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.3						
LFF	La Frestale	85.04	320	⇑iP	P	01 02 14.3	+1.1
	comp=Z,46nm,0.9s,mb5.3						
LFF	La Frestale	85.04	320	⇑iP	P	01 02 14.3	+1.1
LFF				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.3						
ROSF	Rostrenen	85.06	324	eP	P	01 02 13.5	+0.3
	comp=Z,175nm,1.4s,mb5.7						
ROSF	Rostrenen	85.06	324	eP	P	01 02 13.5	+0.3
ROSF				pmax	pmax		
	comp=Z,88nm,1.4s,mb5.7						
MTLF	Montolieu	85.16	318	eP	P	01 02 14.5	+0.6
	comp=Z,75nm,1.3s,mb5.3						
MTLF	Montolieu	85.16	318	eP	P	01 02 14.5	+0.6
MTLF				pmax	pmax		
	comp=Z,38nm,1.3s,mb5.4						
QUIF	Quistinic	85.27	324	eP	P	01 02 14.3	0.0
	comp=Z,101nm,1.2s,mb5.5						
QUIF	Quistinic	85.27	324	eP	P	01 02 14.3	0.0
QUIF				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.5						
EPF	Esparros	86.44	318	eP	P	01 02 20.9	+0.7
ETSF	Etsaut	87.03	319	eP	P	01 02 24.2	+1.0
EDM	Edmonton	87.11	27	eP	P	01 02 23.8	+0.6
SJPF	Ste Jean	87.28	319	eP	P	01 02 25.8	+1.5
	comp=Z,102nm,1.3s,mb5.6						
SJPF	Ste Jean	87.28	319	eP	P	01 02 25.8	+1.5
SJPF				pmax	pmax		
	comp=Z,51nm,1.3s,mb5.6						
FCC	Fort Churchill	88.46	15	eP	P	01 02 29.4	-0.2
	comp=Z,62nm,1.3s,mb5.7						
FCC	Fort Churchill	88.46	15	eP	P	01 02 29.4	-0.2
FCC				pmax	pmax		
	comp=Z,62nm,1.3s,mb5.7						
NEW	Newport	89.15	32	eP	P	01 02 33.8	+0.6
	comp=Z,15nm,1.0s,mb5.3						
NEW	Newport	89.15	32	eP	P	01 02 33.8	+0.7
NEW				pmax	pmax		
	comp=Z,16nm,1.0s						
FFC	Flin Flon	89.91	21	eP	P	01 02 35.8	-0.8
	comp=Z,31nm,1.1s,mb5.5						
FFC	Flin Flon	89.91	21	eP	P	01 02 35.8	-0.7
FFC				pmax	pmax		
	comp=Z,31nm,1.1s,mb5.5						
ESDC	Sonseca Array	91.07	318	P	P	01 02 42.8	+0.5
	comp=Z,2.1nm,0.8s,mb4.5,baz=36,slow=4.7,SNR=5.1						
BMO	Blue Mountains	91.52	35	eP	P	01 02 44.8	+0.6
	comp=Z,14nm,1.1s,mb5.2						
MSO	Missoula	91.66	32	eP	P	01 02 44.8	0.0
	comp=Z,16nm,1.3s,mb5.2						
CHMT	Chamberlain Mo	91.91	31	eP	P	01 02 46.3	+0.4
EGMT	Eagleton	92.57	29	eP	P	01 02 49.2	+0.2
	comp=Z,17nm,1.1s,mb5.4						
HRY	Holter Researc	92.70	31	eP	P	01 02 49.8	+0.2
OHCM	Honcut	93.16	41	eP	P	01 02 52.1	+0.2
DLMT	Dillon	93.38	32	eP	P	01 02 53.3	+0.5
	comp=Z,17nm,1.0s,mb5.4						
MCMT	McKenzie Canyo	93.67	32	eP	P	01 02 55.1	+1.0
HLID	Hailey	93.88	34	eP	P	01 02 56.6	+1.5
	comp=Z,12nm,1.0s,mb5.3						
HLID				LR	LR		
	comp=Z,447nm,19.0s,MS5.0						
EVO	Evora	94.17	319	eP	P	01 02 58.1	+1.5
	comp=Z,65nm,1.5s,mb5.5						
EVO				eR			
	comp=Z,790nm,20.2s						
QLMT	Earthquake Lak	94.32	32	eP	P	01 02 57.9	+0.8
DGMT	Dagmar	94.40	25	eP	P	01 02 57.5	+0.1
	comp=Z,32nm,0.9s,mb5.7						
LSZ	Lusaka	95.28	256	P	P	01 03 02.1	-0.1
	comp=Z,8.7nm,0.9s,mb5.2,baz=54,slow=3.5,SNR=21						
LSZ	Lusaka	95.28	256	eP	P	01 03 01.6	-0.6
	comp=Z,12nm,1.0s,mb5.3						
LSZ	Lusaka	95.28	256	eP	P	01 03 01.6	-0.5
LSZ				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.3						
ELK	Elko	95.55	36	eP	P	01 03 03.4	+0.5
NVAR	Mina Array Bea	95.57	40	P	P	01 03 04.3	+1.3
	comp=Z,0.3nm,0.5s,baz=338,slow=4.2,SNR=4.1						
NVAR				LR	LR	01 46 52.8	
	comp=Z,178nm,19.3s,MS4.5,baz=100,slow=36						
NVAR	Mina Array Bea	95.57	40	P	P	01 03 04.3	+1.3
NVAR				LR	LR	01 46 52.8	
ULM	Lac du Bonnet	95.64	20	P	P	01 03 02.5	-0.6
	comp=Z,5.0nm,0.8s,mb5.0,baz=337,slow=6.0,SNR=8.3						
ULM				LR	LR	01 47 58.9	
	comp=Z,284nm,20.3s,MS4.7,baz=310,slow=37						
ULM	Lac du Bonnet	95.64	20	P	P	01 03 02.5	-0.6
ULM				LR	LR	01 47 58.9	
SCHQ	Schefferville	95.80	1	P	P	01 03 02.9	-0.8
	comp=Z,8.5nm,0.9s,mb5.2,baz=7.1,slow=8.1,SNR=2.7						
SCHQ				LR	LR	01 47 46.2	
	comp=Z,279nm,20.7s,MS4.7,baz=27,slow=36						
HWUT	Hardware Ranch	96.73	34	eP	P	01 03 08.7	+0.5
	comp=Z,4.7nm,1.1s,mb4.8						
PDAR	Pinedale Array	96.78	32	P	P	01 03 07.7	-0.7
	comp=Z,0.4nm,0.7s,slow=5.4,SNR=3.3						
PDAR				LR	LR	01 49 08.8	
	comp=Z,205nm,19.4s,MS4.6,baz=166,slow=37						
DUG	Dugway	97.19	35	eP	P	01 03 10.4	+0.1
	comp=Z,1.1nm,0.7s,mb4.4						
DUG	Dugway	97.19	35	eP	P	01 03 10.4	+0.1
DUG				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.3						
MATP	Matopo	97.50	251	P	P	01 03 11.4	-0.7
	comp=Z,5.1nm,0.8s,mb5.0,baz=64,slow=4.6,SNR=11						
RSSD	Black Hills	98.07	28	eP	P	01 03 14.4	+0.2
	comp=Z,11nm,1.4s,mb5.2						
RSSD	Black Hills	98.07	28	eP	P	01 03 14.4	+0.2
RSSD				pmax	pmax		
	comp=Z,12nm,1.4s,mb5.2						
PPT	Papeete	102.52	103	eLR	LR	01 36 56.8	
	comp=Z,277nm,23.8s						
TXAR	Lajitas Array	110.34	36	PKiKP		01 08 10.4	
	comp=Z,0.6nm,0.6s,baz=217,slow=1.4,SNR=9.1						
RKT	Rikitea	117.26	102	eLR	LR	01 43 46.5	
	comp=Z,338nm,34.8s						
SNAA	Sanae	126.78	200	e	PKPdf	01 08 44.5	+1.9
SNAA	Sanae	126.78	200	e	PKPdf	01 08 45.7	+3.1
SNAA	Sanae	126.78	200	⇑iPKIKP	PKPdf	01 08 40.1	-2.5
SNAA				e		01 08 44.5	
SNAA				e		01 08 45.7	
VNA2	Neumayer--Watz	128.42	201	e	PKPdf	01 08 47.8	+1.8
VNA2	Neumayer--Watz	128.42	201	e	PKPdf	01 08 49.9	+3.9
VNA2	Neumayer--Watz	128.42	201	⇑iPKPdf	PKPdf	01 08 44.7	-1.3
VNA2				e		01 08 47.8	
VNA2				e		01 08 49.9	
VNA3	Neumayer Olymp	128.98	200	e	PKPdf	01 08 49.8	+2.8
VNA3	Neumayer Olymp	128.98	200	⇑iPKPdf	PKPdf	01 08 45.6	-1.4
VNA3				e		01 08 49.8	
SDV	Santo Domingo	141.18	10	ePKPpre		01 09 02.8	
ROSC	El Rosal	144.34	17	PKP	PKPdf	01 09 14.5	-2.1
	comp=Z,53nm,0.9s,baz=288,slow=20,SNR=27						
PMSA	Palmer Station	144.90	180	ePKP	PKPdf	01 09 12.8	-3.2
SAML	Samuel	159.34	357	ePKPdf	PKPdf	01 09 36.6	-1.9
SAML				ePKPab	PKPab	01 10 12.7	-2.6
BDFB	Brasilia	159.48	309	PKPab	PKPab	01 10 14.6	-1.2
	comp=Z,13nm,0.9s,baz=70,slow=2.3,SNR=10						
LPAZ	La Paz	166.22	15	PKP	PKPdf	01 09 44.2	-1.1
	comp=Z,3.1nm,1.0s,baz=22,slow=5.3,SNR=9.4						
LPAZ				PKPab	PKPab	01 10 44.3	-0.8
	comp=Z,1.5nm,0.8s,baz=300,slow=5.5,SNR=2.7						
LPAZ	La Paz	166.22	15	ePKPdf	PKPdf	01 09 44.3	-1.0

MEX 26 00:56:31.7±1.6, 15.75N×99.21W, h15km, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	1.31	329	i P	Pb	00 56 50.5	-4.9
CAIG	El Cayaco	1.65	322	i P	Pn	00 56 56.7	-3.7
CAIG				i S	Sn	00 57 17.2	-4.1
PLIG	Platanillo	2.65	354	i P	Pn	00 57 11.5	-3.2

PLIG				*i* S	Sn	00 57 41.2	-5.5

IDC ***26*** *01:07:20.3±0.6, 10.66N×91.77E, mb4.3/18, mb1 4.4/18, mb1mx4.4/22, mbtmp4.3/18, MS3.9/1, Ms1 3.9/1, ms1mx3.0/25, Error ellipse: s-maj=20.2km s-min=13.9km az=48.0*
BJI ***26*** *01:07:22.1, 10.42N×91.77E, h34*^{km}*, mB5.2, mb4.9, Ms4.7, Msz4.3*
MOS ***26*** *01:07:23.7±1.1, 10.67N×91.76E, h33*^{km}*, mb5.0/16, Error ellipse: s-maj=13.0km s-min=6.7km az=103.5*
NEIC ***26*** *01:07:24.2±0.2, 10.55N×91.66E, h30*^{km}*, mb4.7/20, Error ellipse: s-maj=7.1km s-min=4.4km az=50.0*
ISC 26 01:07:20.5±1.3,**10.51N**±0.05×**91.64E**±0.04,**h17**^{km}±9^{km}, **h22**^{km}±2.4^{km}**:pP-P, n117,** σ**1**^{s}**01**/122,**mb4.6**/49,**MS4.3**/7, **7C-3D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNG	**Songkhla**	**9.47**	**110**	P	**P**	**01 09 42.0**	**+2.7**
VIS	**Vishakhapatnam**	**10.78**	**313**	*e*P	**P**	**01 09 55.1**	**-2.2**
VIS				AMb	AMB	01 10 03.1	
	comp=Z,214nm,0.9s						
VIS				*e*S	S	01 11 38.4	-20
PALK	**Pallekele**	**11.27**	**254**	*e*P	**P**	**01 10 03.1**	**-0.9**
	comp=Z,19nm,1.0s						
HYB	**Hyderabad**	**14.43**	**300**	*i* P	**P**	**01 10 46.5**	**+0.3**
HYB				*e*S	**S**	**01 13 23.0**	**-3.6**
HYB	**Hyderabad**	**14.43**	**300**	*e*P	**P**	**01 10 55.0**	**+8.8**
HYB				*e*S	**S**	**01 13 23.0**	**-3.6**
TRD	**Trivandrum**	**14.61**	**263**	*e*P	**P**	**01 10 47.9**	**-0.7**
TRD				AMb	AMB	01 10 49.2	
	comp=Z,56nm,1.0s						
TRD				*e*S	**S**	**01 13 19.5**	**-11**
SHL	**Shillong**	**14.98**	**1**	*e*x	x	01 10 48.0	
SHL				*e*x	x	01 13 28.0	
JIRN	**Jiri**	**17.81**	**344**	*e*P	**P**	**01 11 29.9**	**+0.5**
	comp=Z,42nm,0.7s						
KMI	**Kunming**	**17.95**	**35**	P	**P**	**01 11 31.8**	**+0.7**
KMI				AMB	AMB		
	comp=Z,20nm,1.0s						
KMI				LR	LR		
	comp=N,1µm,17.0s						
KMI				LR	LR		
	comp=E,520nm,13.0s						
KMI				LR	LR		
	comp=Z,690nm,15.0s						
KMI	**Kunming**	**17.95**	**35**	P	**P**	**01 11 31.7**	**+0.6**
	comp=Z,23nm,1.0s						
KMI	**Kunming**	**17.95**	**35**	P	**P**	**01 11 31.7**	**+0.6**
KMI				pmax	pmax		
	comp=Z,23nm,1.0s						
PKI	**Pulchoki**	**17.95**	**342**	*e*P	**P**	**01 11 31.8**	**+0.7**
	comp=Z,71nm,0.9s						
PKI	**Pulchoki**	**17.95**	**342**	*e*P	**P**	**01 11 31.8**	**+0.7**
PKI				pmax	pmax		
	comp=Z,35nm,0.9s						
DMN	**Daman**	**18.08**	**341**	*e*P	**P**	**01 11 33.3**	**+0.5**
GUN	**Gumba**	**18.14**	**343**	*e*P	**P**	**01 11 34.9**	**+1.5**
	comp=Z,109nm,1.1s						
KKN	**Kakani**	**18.20**	**342**	*e*P	**P**	**01 11 34.5**	**+0.3**
	comp=Z,48nm,0.8s						
KKN	**Kakani**	**18.20**	**342**	*e*P	**P**	**01 11 34.5**	**+0.3**
KKN				pmax	pmax		
	comp=Z,24nm,0.8s						
BHPL	**Bhopal**	**18.56**	**315**	*e*P	**P**	**01 11 37.1**	**-1.5**
BHPL				AMb	AMB	01 11 43.4	
	comp=Z,22nm,1.1s						
BHPL				*e*S	**S**	**01 14 54.8**	**-7.2**
GKN	**Gorkha**	**18.60**	**340**	*e*P	**P**	**01 11 39.8**	**+0.6**
KOLN	**Koldanda**	**18.76**	**337**	*e*P	**P**	**01 11 41.7**	**+0.6**
	comp=Z,60nm,0.7s						
LSA	**Lhasa**	**19.10**	**359**	P	**P**	**01 11 44.8**	**-0.3**
LSA	**Lhasa**	**19.10**	**359**	*e*P	**P**	**01 11 44.9**	**-0.2**
	comp=Z,35nm,0.8s						
LSA	**Lhasa**	**19.10**	**359**	*e*P	**P**	**01 11 44.9**	**-0.2**
LSA				pmax	pmax		
	comp=Z,35nm,0.8s						
KSM	**Kuching**	**20.61**	**115**	*e*P	**P**	**01 12 02.2**	**+0.4**
AGRA	**Agra**	**21.05**	**324**	*e*P	**P**	**01 12 05.7**	**-0.5**
AGRA				AMb	AMB	01 12 07.0	
	comp=Z,73nm,0.2s,mb5.6						
GYA	**Guiyang**	**21.29**	**40**	⇑*i*P	**P**	**01 12 08.3**	**-0.3**
GYA				AP		01 12 22.8	
GYA				S	**S**	**01 15 57.0**	**-2.5**
GYA				AMB	AMB		
	comp=Z,70nm,0.8s,mb5.0						
GYA				AMB	AMB		
	comp=Z,350nm,6.9s						
GYA				LR	LR		
	comp=N,940nm,13.7s,MS4.5						
GYA				LR	LR		
	comp=E,840nm,13.4s,MS4.5						
GYA				LR	LR		
	comp=Z,830nm,13.0s,MS4.3						
BISR	**Bishrakh**	**22.36**	**325**	*e*P	**P**	**01 12 19.1**	**-0.2**
AYAN	**Aya Nagar**	**22.47**	**325**	*e*P	**P**	**01 12 22.3**	**+1.9**
NDI	**New Delhi**	**22.57**	**325**	*e*x	x	01 12 10.0	
KUDL	**Kundal**	**22.58**	**323**	*e*P	**P**	**01 12 22.1**	**+0.5**
KUDL				AMb	AMB	01 12 26.9	
	comp=Z,23nm,1.2s,mb4.5						
KUDL				*e*S	**S**	**01 16 21.8**	**-1.7**
KHET	**Khetri**	**22.94**	**322**	*e*P	**P**	**01 12 24.8**	**-0.3**
KHET				AMb	AMB	01 12 31.9	
	comp=Z,26nm,1.3s,mb4.5						
KHET				*e*S	**S**	**01 16 30.8**	**+0.9**
CD2	**Chengdu**	**23.21**	**27**	P	**P**	**01 12 27.5**	**-0.2**
CD2				AMB	AMB		
	comp=Z,40nm,1.0s,mb4.8						
KLP	**Kalpa**	**24.32**	**331**	*e*P	**P**	**01 12 40.5**	**+2.1**
KLP				AMb	AMB	01 12 50.6	
	comp=Z,43nm,1.1s,mb4.8						
KLP				*e*S	**S**	**01 16 55.7**	**+1.9**
KKM	**Kota Kinabalu**	**24.72**	**98**	*e*P	**P**	**01 12 43.3**	**+0.8**
ENH	**Enshi**	**25.75**	**38**	*e*P	**P**	**01 12 50.7**	**-1.4**
	comp=Z,69nm,0.8s,mb5.2						
LZH	**Lanzhou**	**27.77**	**22**	*e*P	**P**	**01 13 09.0**	**-1.5**
LZH				AP	pP	01 13 17.5	+2.1
LZH				XP	sP	01 13 21.0	+3.4
LZH				AMB	AMB		
	comp=Z,40nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,150nm,5.6s						
LZH				LR	LR		
	comp=N,950nm,13.1s						
LZH				LR	LR		
	comp=Z,2µm,17.4s,MS4.7						
LZH	**Lanzhou**	**27.77**	**22**	*e*P	**P**	**01 13 09.0**	**-1.5**
	comp=Z,41nm,1.5s,mb4.8						
LZH				pP	pP	01 13 17.5	+2.1
LZH				sP	sP	01 13 21.0	+3.4
LZH				PP	PP	01 14 22.5	+23
LZH				*e*S	S	01 18 30.2	+39
LZH				sS		01 18 43.6	
LZH				*e*SS		01 20 37.1	
LZH				LR	LR		
	comp=Z,2µm,17.4s,MS4.7						
GTA	**Gaotai**	**29.69**	**13**	*e*P	**P**	**01 13 28.5**	**+0.7**
GTA				AP	pP	01 13 35.0	+2.2
GTA				XP	sP	01 13 38.5	+3.6
GTA				PP	PP	01 14 25.8	+1.3
GTA				PPP	PPP	01 14 38.0	-0.2
GTA				PCP	PcP	01 16 32.3	+0.3
GTA				S	**S**	**01 18 24.0**	**+2.5**
GTA				SS	SS	01 19 58.8	+2.7
GTA				SCP		01 20 13.8	
GTA				PCS		01 20 15.0	
GTA				SCS	ScS	01 24 06.0	+0.5
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
GTA				AMB	AMB		
	comp=Z,370nm,5.3s						
GTA				LR	LR		
	comp=N,330nm,14.8s,MS4.3						
GTA				LR	LR		
	comp=E,360nm,14.1s,MS4.3						
GTA				LR	LR		
	comp=Z,280nm,11.4s,MS4.1						
NJ2	**Nanjing**	**33.03**	**45**	*e*P	**P**	**01 13 57.5**	**+0.2**
NJ2				AP	pP	01 14 06.0	+3.8
NJ2				XP	sP	01 14 11.0	+6.6
NJ2				PP	PP	01 15 07.0	-1.0
NJ2				PPP	PPP	01 15 22.0	-2.1
NJ2				S	**S**	**01 19 11.0**	**-3.0**
NJ2				XS		01 19 29.0	
NJ2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,400nm,6.0s						
NJ2				LR	LR		
	comp=N,670nm,10.4s						
NJ2				LR	LR		
	comp=E,510nm,16.2s						
NJ2				LR	LR		
	comp=Z,440nm,10.2s,MS4.5						
WMQ	**Urumqi**	**33.36**	**355**	*e*P	**P**	**01 14 00.5**	**+0.5**
WMQ				AP	pP	01 14 05.0	0.0
WMQ				PP	PP	01 15 13.0	+1.1
WMQ				*e*S	**S**	**01 19 19.5**	**+0.5**
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,210nm,4.4s						
WMQ				LR	LR		
	comp=N,580nm,18.0s,MS4.5						
WMQ				LR	LR		
	comp=E,690nm,21.4s,MS4.5						
WMQ				LR	LR		
	comp=Z,350nm,17.2s,MS4.1						
SSE	**Sheshan**	**34.20**	**49**	P	**P**	**01 14 05.3**	**-2.1**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,150nm,6.6s						
SSE	**Sheshan**	**34.20**	**49**	P	**P**	**01 14 05.2**	**-2.2**
	comp=Z,32nm,0.8s,mb5.3						
HHC	**Hu-ho-hao-te**	**34.97**	**27**	*e*P	**P**	**01 14 13.3**	**-0.6**
HHC				PP	PP	01 15 31.0	-1.2
HHC				PCP	PcP	01 16 45.3	-1.1
HHC				S	**S**	**01 19 45.0**	**+1.1**
HHC				SCP		01 20 29.5	
HHC				PCS		01 20 34.3	
HHC				SS	SS	01 21 58.0	-0.8
HHC				SCS	ScS	01 24 31.5	-0.7
HHC				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
HHC				AMB	AMB		
	comp=Z,250nm,9.6s						
HHC				LR	LR		
	comp=N,380nm,19.2s,MS4.4						
HHC				LR	LR		
	comp=E,530nm,15.6s,MS4.4						
HHC				LR	LR		
	comp=Z,400nm,14.4s,MS4.3						
AAK	**Ala-Archa**	**35.33**	**338**	*e*P	**P**	**01 14 17.7**	**+0.7**
AAK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.7						
MKAR	**Makanchi Array**	**37.02**	**349**	P	**P**	**01 14 31.5**	**+0.4**
	comp=Z,9.1nm,0.8s,mb4.7,baz=168,slow=8.1,SNR=55						
MKAR				PcP	PcP	01 16 52.3	-0.1
	comp=Z,0.9nm,0.6s,baz=212,slow=3.5,SNR=4.7						
MKAR	**Makanchi Array**	**37.02**	**349**	P	**P**	**01 14 31.5**	**+0.4**
MKAR				PcP	PcP	01 16 52.3	-0.1
JOW	**Kunigami**	**38.14**	**60**	P	**P**	**01 14 40.8**	**0.0**
	comp=Z,6.3nm,0.5s,mb4.6,baz=262,slow=7.1,SNR=6.1						
JOW				LR	LR	01 29 34.6	
	comp=Z,166nm,19.8s,MS3.9,baz=132,slow=35						
SONM	**Songino Array**	**39.23**	**16**	P	**P**	**01 14 50.2**	**+0.6**
	comp=Z,9.2nm,0.9s,mb4.5,baz=200,slow=8.3,SNR=32						
SONM				ScP		01 20 46.8	
	comp=Z,0.4nm,0.7s,baz=225,slow=2.0,SNR=3.9						
ULN	**Ulaanbaatar**	**39.43**	**16**	*e*P	**P**	**01 14 51.2**	**-0.1**
	comp=Z,8.4nm,1.0s,mb4.4						
ULN	**Ulaanbaatar**	**39.43**	**16**	*e*P	**P**	**01 14 51.2**	**-0.2**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.4						
ZAK	**Zakamensk**	**40.90**	**11**	*e*P	**P**	**01 15 02.5**	**-0.9**
ZAK				*e*		01 16 59.3	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.7						
KURK	**Kurchatov**	**41.49**	**348**	⇓*i*P	**P**	**01 15 09.2**	**+0.9**
JNU	**Nakatsue**	**42.46**	**52**	P	**P**	**01 15 10.7**	**-5.8**
	comp=Z,9.0nm,1.1s,mb4.3,baz=5.7,slow=10,SNR=2.5						
FITZ	**Fitzroy Crossi**	**43.99**	**130**	⇑*i*P	**P**	**01 15 28.9**	**-0.2**
	comp=Z,10nm,0.6s,mb4.7						
FITZ	**Fitzroy Crossi**	**43.99**	**130**	P	**P**	**01 15 29.3**	**+0.2**
	comp=Z,14nm,0.7s,mb4.8,baz=296,slow=4.2,SNR=32						
CN2	**Changchun**	**44.22**	**35**	*e*P	**P**	**01 15 30.5**	**-0.1**
CN2				*e*S	**S**	**01 22 03.0**	**+0.2**
CN2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.0						
NVS	**Novosibirsk**	**44.72**	**353**	*e*P	**P**	**01 15 32.9**	**-1.6**
KRAR	**Krasnoyarsk**	**45.40**	**1**	*e*P	**P**	**01 15 38.8**	**-1.1**
BVAR	**Borovoye Array**	**45.72**	**342**	P	**P**	**01 15 42.9**	**+0.4**
	comp=Z,2.0nm,0.9s,mb4.1,baz=153,slow=9.9,SNR=12						
BRVK	**Borovoye**	**45.78**	**342**	*e*P	**P**	**01 15 42.6**	**-0.4**
	comp=Z,3.9nm,1.0s,mb4.3						
BRVK	**Borovoye**	**45.78**	**342**	*e*P	**P**	**01 15 42.6**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
AKTK	**Aktyubinsk**	**48.47**	**332**	P	**P**	**01 16 04.1**	**0.0**
AKTO	**Aktyubinsk**	**48.47**	**332**	P	**P**	**01 16 04.1**	**0.0**
	comp=Z,1.9nm,0.9s,mb4.1,baz=126,slow=16,SNR=5.8						
MJAR	**Matsushiro Arr**	**49.32**	**50**	P	**P**	**01 16 09.8**	**-1.1**
	comp=Z,2.5nm,0.7s,mb4.3,baz=283,slow=6.3,SNR=5.6						
MJAR	**Matsushiro Arr**	**49.32**	**50**	P	**P**	**01 16 09.8**	**-1.1**
BOD	**Bodaibo**	**50.22**	**15**	*e*P	**P**	**01 16 13.9**	**-3.6**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
GNI	**Garni**	**50.84**	**314**	P	**P**	**01 16 22.8**	**+0.4**
	comp=Z,13nm,1.0s,mb4.8						
GNI	**Garni**	**50.84**	**314**	P	**P**	**01 16 22.8**	**+0.4**
GNI				pmax	pmax		
	comp=Z,13nm,1.0s						
WRA	**Warramunga Arr**	**51.80**	**126**	P	**P**	**01 16 29.6**	**-0.3**
	comp=Z,7.4nm,0.7s,mb4.7,baz=306,slow=8.3,SNR=53						
WRAB	**Tennant Creek**	**51.80**	**126**	*e*P	**P**	**01 16 29.4**	**-0.6**
	comp=Z,120nm,1.6s,mb5.6						
WRAB	**Tennant Creek**	**51.80**	**126**	⇓*i*P	**P**	**01 16 30.3**	**+0.3**
WB2	**Warramunga Arr**	**51.81**	**126**	*e*P	**P**	**01 16 29.6**	**-0.4**
ARU	**Arti**	**52.52**	**338**	*i* P	**P**	**01 16 35.9**	**+1.0**
KIV	**Kislovodsk**	**53.72**	**317**	⇑P	**P**	**01 16 45.0**	**+1.1**
KIV				*e*	pP	01 16 51.4	+2.4
KIV				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.8						
KMBO	**Kilima Mbogo**	**55.31**	**261**	P	**P**	**01 16 58.2**	**+2.1**
	comp=Z,0.3nm,0.5s,mb3.6,baz=49,slow=19,SNR=2.5						
KMBO	**Kilima Mbogo**	**55.31**	**261**	P	**P**	**01 16 58.2**	**+2.1**
YAK	**Yakutsk**	**58.33**	**20**	⇑*e*P	**P**	**01 17 15.7**	**-1.1**
YAK				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.2						
BRTR	**Keskin Array B**	**58.85**	**310**	P	**P**	**01 17 20.1**	**-0.7**
	comp=Z,1.3nm,0.8s,mb4.0,baz=80,slow=7.5,SNR=5.9						
CTA	**Charters Tower**	**61.75**	**120**	*e*P	**P**	**01 17 41.1**	**+0.3**
	comp=Z,7.2nm,1.0s,mb4.8						
CTA	**Charters Tower**	**61.75**	**120**	*e*P	**P**	**01 17 41.1**	**+0.3**
CTA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CTAO	**Charters Tower**	**61.75**	**120**	*e*P	**P**	**01 17 40.7**	**-0.2**
	comp=Z,12nm,1.0s,mb5.0						
CTAO	**Charters Tower**	**61.75**	**120**	*e*P	**P**	**01 17 40.7**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,12nm,1.0s,mb5.0						
OBN	**Obninsk**	**61.84**	**328**	⇑P	**P**	**01 17 41.0**	**0.0**
OBN				*e*	pP	01 17 46.9	+0.7
KLMR	**Klimovskoe**	**63.02**	**334**	*e*P	**P**	**01 17 54.3**	**+5.6**
KLMR				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.2						
STKA	**Stephens Creek**	**63.70**	**133**	P	**P**	**01 17 54.3**	**+0.6**
	comp=Z,6.3nm,0.6s,mb4.8,baz=325,slow=5.4,SNR=17						
AKASG	**Malin Array Be**	**64.56**	**321**	P	**P**	**01 17 57.8**	**-1.2**
	comp=Z,0.8nm,0.6s,mb3.9,baz=91,slow=5.5,SNR=6.8						
AKASG	**Malin Array Be**	**64.56**	**321**	*i* P	**P**	**01 17 58.5**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TIXI	**Tiksi**	**65.17**	**12**	⇑*i*P	**P**	**01 18 01.3**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
JOF	**Joensuu**	**67.42**	**334**	*e*p	**P**	**01 18 16.0**	**-1.0**
LSZ	**Lusaka**	**67.86**	**249**	P	**P**	**01 18 24.1**	**+3.5**
	comp=Z,2.0nm,1.0s,mb4.1,baz=79,slow=16,SNR=2.7						
LSZ	**Lusaka**	**67.86**	**249**	P	**P**	**01 18 24.1**	**+3.5**
VSU	**Vasula**	**68.07**	**329**	⇑*i*P	**P**	**01 18 23.3**	**+2.1**
KWP	**Kalwaria**	**68.43**	**319**	*e*P	**P**	**01 18 23.8**	**+0.1**
KWP	**Kalwaria**	**68.43**	**319**	*e*P	**P**	**01 18 23.7**	**+0.1**
SUW	**Suwalki**	**68.93**	**324**	*e*P	**P**	**01 18 26.5**	**-0.1**
SUW	**Suwalki**	**68.93**	**324**	*e*P	**P**	**01 18 26.5**	**-0.1**
FINES	**FINESS Array B**	**69.24**	**332**	P	**P**	**01 18 28.6**	**+0.2**
	comp=Z,3.0nm,0.8s,mb4.3,baz=124,slow=5.0,SNR=5.9						
KAF	**Kangasniemi**	**69.33**	**333**	*e*p	**P**	**01 18 28.4**	**-0.5**
	comp=Z,3.0nm,0.8s,mb4.3,baz=106,slow=5.8						
KAF	**Kangasniemi**	**69.33**	**333**	*e*P	**P**	**01 18 28.4**	**-0.5**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
ARCES	**ARCESS Array B**	**71.96**	**340**	P	**P**	**01 18 45.7**	**+0.9**
	comp=Z,3.5nm,0.8s,mb4.3,baz=82,slow=8.6,SNR=4.9						
KSP	**Ksiaz**	**72.67**	**320**	*e*P	**P**	**01 18 53.3**	**+4.0**
GERES	**GERESS Array B**	**74.22**	**318**	P	**P**	**01 18 57.8**	**-0.6**
	comp=Z,1.5nm,0.9s,mb3.9,baz=101,slow=6.8,SNR=8.3						
BILL	**Bilibino**	**74.58**	**22**	⇓*i*P	**P**	**01 19 00.2**	**+0.2**
BILL				pmax	pmax		
	comp=Z,19nm,2.5s,mb4.6						
NB2	**NORSAR Subarra**	**76.23**	**330**	P	**P**	**01 19 08.9**	**-0.7**
	comp=Z,14nm,1.2s,mb4.8,baz=92,slow=5.3						
NOA	**NORSAR Array B**	**76.23**	**330**	P	**P**	**01 19 08.7**	**-0.9**
	comp=Z,1.9nm,0.8s,mb4.0,baz=93,slow=5.7,SNR=3.7						
NAO	**NORSAR Subarra**	**76.41**	**330**	P	**P**	**01 19 08.9**	**-1.7**
	comp=Z,14nm,1.2s,mb4.8						
NAO	**NORSAR Subarra**	**76.41**	**330**	P	**P**	**01 19 08.9**	**-1.7**
NAO				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.8						
LPG	**La Plagne**	**79.02**	**314**	*e*P	**P**	**01 19 32.8**	**+7.5**
	comp=Z,26nm,1.2s,mb4.8						
LPG	**La Plagne**	**79.02**	**314**	*e*P	**P**	**01 19 32.8**	**+7.5**
LPG				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.7						
IMA2	**Indian Mountai**	**90.12**	**22**	*e*P	**P**	**01 20 21.1**	**+0.5**
ILAR	**Eielson Array**	**93.23**	**21**	P	**P**	**01 20 35.2**	**+0.2**
	comp=Z,1.1nm,0.7s,mb4.4,baz=301,slow=4.1,SNR=12						
PDAR	**Pinedale Array**	**123.55**	**19**	PKP	PKPdf	01 26 18.1	-3.1
	comp=Z,0.4nm,0.8s,baz=51,slow=5.8,SNR=3.0						
NVAR	**Mina Array Bea**	**123.86**	**28**	PKP	PKPdf	01 26 19.8	-2.3
	comp=Z,0.7nm,0.8s,baz=41,slow=1.5,SNR=3.7						
MSU	**Marysvale**	**126.40**	**23**	*e*PKP	PKPdf	01 26 25.9	-1.0
TXAR	**Lajitas Array**	**137.73**	**20**	PKP	PKPdf	01 26 47.1	-1.4
	comp=Z,0.3nm,0.7s,SNR=3.6						
PLCA	**Paso Flores**	**146.03**	**205**	PKPbc	PKPbc	01 27 01.6	+1.6
	comp=Z,1.4nm,0.8s,baz=233,slow=5.1,SNR=3.0						
LPAZ	**La Paz**	**159.50**	**252**	PKP	PKPdf	01 27 21.7	-1.0
	comp=Z,0.5nm,0.4s,baz=159,slow=12,SNR=2.9						
LPAZ				PKPab	PKPab	01 28 03.4	+4.0
	comp=Z,2.5nm,1.1s,baz=62,slow=8.6,SNR=2.1						

BJI 26 01:10:37.8, 29.73N×115.72E, h15^{km}**, ML3.4, Ms3.9, Msz3.5, 1C, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHN	**Wuhan**	**1.44**	**305**	⇑PG	Pg	01 11 03.0	-3.6
WHN				SG	Sg	01 11 23.5	-2.4
WHN				Smax			
	comp=E,640nm,0.2s						

BJI ***26*** *01:25:22.2, 29.65N×115.69E, h11*^{km}*, mB4.8, mb4.6, ML4.4, Ms4.0, Msz3.8*
MOS ***26*** *01:25:23.6±1.0, 29.72N×115.81E, h33*^{km}*, mb4.2/2, Error ellipse: s-maj=29.3km s-min=11.4km az=123.8*
NEIC ***26*** *01:25:23.0±0.6, 29.81N×115.75E, h10*^{km}*, mb4.3/1, Error ellipse: s-maj=17.1km s-min=8.8km az=193.0*
IDC ***26*** *01:25:29.3±4.5, 29.78N×115.81E, h63*^{km}*±42*^{km}*, mb3.8/10, mb1 3.9/12, mb1mx3.8/21, mbtmp4.1/12, ML3.7/2, Error ellipse: s-maj=34.1km s-min=18.8km az=50.0*
ISC 26 01:25:20.1±1.1,**29.74N**±0.06×**115.81E**±0.04,**h7**^{km}±7^{km}, **n35,** σ**1**^{s}**14**/46,**mb4.1**/12,**Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WHN	**Wuhan**	**1.49**	**303**	PG	**Pg**	**01 25 49.3**	**-0.6**
WHN				SG	**Sg**	**01 26 10.3**	**+0.5**
WHN				Smax			
	comp=E,6µm,0.6s						
NJ2	**Nanjing**	**3.48**	**48**	*e*P	**Pn**	**01 26 18.0**	**+2.1**
NJ2				PG	**Pg**	**01 26 26.8**	**-2.9**
NJ2				SG	**Sg**	**01 27 13.3**	**-2.8**
NJ2				Smax			
	comp=N,2µm,0.8s						
NJ2				Smax			
	comp=E,1µm,0.6s						
NJ2				LR	LR		
	comp=N,2µm,6.4s						
NJ2				LR	LR		
	comp=E,1µm,5.4s						
NJ2				LR	LR		
	comp=Z,460nm,8.4s						
SSE	**Sheshan**	**4.84**	**72**	P	**Pn**	**01 26 35.5**	**+0.4**
SSE				S	**Sn**	**01 27 40.0**	**+7.8**
SSE				Smax			
	comp=N,430nm,0.6s						
SSE				Smax			
	comp=E,250nm,0.6s						
SSE				LR	LR		
	comp=N,620nm,20.0s						
SSE				LR	LR		
	comp=E,200nm,20.0s						
SSE				LR	LR		
	comp=Z,320nm,19.1s						
SSE	**Sheshan**	**4.84**	**72**	Pn	**Pn**	**01 26 35.6**	**+0.5**
SSE				Sn	**Sn**	**01 27 40.1**	**+7.9**
QZH	**Quanzhou**	**5.38**	**152**	P	**Pn**	**01 26 41.5**	**-1.3**
QZH				S	**Sn**	**01 27 38.8**	**-7.2**
QZH				Smax			
	comp=N,810nm,0.6s						
QZH				Smax			
	comp=E,820nm,0.6s						
ENH	**Enshi**	**5.51**	**277**	*e*P	**Pn**	**01 26 45.4**	**+0.8**
	comp=E,54nm,0.6s						
TIA	**Tai’an**	**6.54**	**9**	P	**Pn**	**01 26 59.5**	**+0.3**
TIA				SG	**Sg**	**01 28 42.5**	**-15**
TIA				Smax			
	comp=N,70nm,0.9s						
TIA				Smax			
	comp=E,130nm,0.8s						
GYA	**Guiyang**	**8.71**	**250**	P	**P**	**01 27 30.3**	**+0.8**
GYA				Smax			
	comp=N,60nm,1.1s						
GYA				Smax			
	comp=E,50nm,1.2s						
GYA				LR	LR		
	comp=N,390nm,7.2s						
GYA				LR	LR		
	comp=E,600nm,9.0s						
GYA				LR	LR		
	comp=Z,540nm,8.7s						
CD2	**Chengdu**	**10.48**	**279**	*e*P	**P**	**01 27 51.5**	**-2.4**
CD2				PP	PP	01 28 00.3	-1.7
CD2				*e*S	**S**	**01 29 48.0**	**-4.7**
CD2				SS	SS	01 30 01.8	-4.3
JOW	**Kunigami**	**11.36**	**102**	P	**P**	**01 28 08.2**	**+2.2**
	comp=Z,0.7nm,0.3s,baz=319,slow=18,SNR=2.5						
LZH	**Lanzhou**	**11.87**	**305**	*e*P	**P**	**01 28 15.0**	**+2.1**
LZH				AP		01 28 18.3	
LZH				XP		01 28 21.5	
LZH				PP	PP	01 28 24.8	+2.4
LZH				*e*S	**S**	**01 30 27.5**	**+0.8**
LZH				XS		01 30 33.5	
LZH				SS	SS	01 30 42.5	+1.7
LZH				AMB	AMB		
	comp=Z,30nm,1.2s						
LZH				AMB	AMB		
	comp=Z,110nm,4.0s						
LZH				LR	LR		
	comp=N,920nm,5.6s						
LZH				LR	LR		
	comp=Z,1µm,8.5s						
LZH	**Lanzhou**	**11.87**	**305**	*e*P	**P**	**01 28 15.1**	**+2.2**
	comp=Z,32nm,1.2s						
LZH				pP		01 28 18.3	
LZH				sP		01 28 21.5	
LZH				PP	PP	01 28 24.8	+2.4
LZH	**Lanzhou**	**11.87**	**305**	*e*P	**P**	**01 28 15.1**	**+2.2**
LZH				pmax	pmax		
	comp=Z,32nm,1.2s						
SNY	**Shenyang**	**13.60**	**25**	*e*P	**P**	**01 28 44.3**	**+8.4**
SNY				S	**S**	**01 31 14.8**	**+6.5**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.4s						
SNY				LR	LR		
	comp=E,430nm,14.3s						
SNY				LR	LR		

	comp=Z,270nm,13.7s						
GTA	**Gaotai**	**16.30**	**311**	*e*P	**P**	**01 29 12.0**	**+0.9**
GTA				AP		01 29 15.5	
GTA				XP		01 29 18.3	
GTA				S	**S**	**01 32 10.3**	**-1.8**
GTA				AMB	AMB		
	comp=Z,120nm,3.8s						
GTA				LR	LR		
	comp=N,200nm,11.4s						
GTA				LR	LR		
	comp=E,260nm,13.7s						
GTA				LR	LR		
	comp=Z,240nm,12.5s						
SONM	**Songino Array**	**19.47**	**341**	P	**P**	**01 29 51.4**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=162,slow=12,SNR=20						
LSA	**Lhasa**	**21.41**	**276**	P	**P**	**01 30 11.3**	**+0.6**
LSA	**Lhasa**	**21.41**	**276**	*e*P	**P**	**01 30 11.1**	**+0.3**
	comp=Z,15nm,0.9s,mb4.3						
LSA	**Lhasa**	**21.41**	**276**	*e*P	**P**	**01 30 11.1**	**+0.4**
LSA				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.3						
ZAK	**Zakamensk**	**22.67**	**339**	*e*P	**P**	**01 30 24.1**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
MKAR	**Makanchi Array**	**31.04**	**313**	P	**P**	**01 31 40.9**	**+0.2**
	comp=Z,1.8nm,0.5s,mb4.2,baz=104,slow=11,SNR=41						
ZAL	**Zalesovo**	**32.98**	**326**	P	**P**	**01 31 57.6**	**+0.1**
	comp=Z,3.3nm,0.6s,mb4.5,baz=358,slow=8.0,SNR=14						
KURK	**Kurchatov**	**34.77**	**318**	*e*P	**P**	**01 32 12.1**	**-0.9**
WRA	**Warramunga Arr**	**52.53**	**158**	P	**P**	**01 34 36.7**	**+0.2**
	comp=Z,1.3nm,1.0s,mb3.8,baz=347,slow=8.2,SNR=8.8						
KIV	**Kislovodsk**	**58.41**	**306**	P	**P**	**01 35 17.8**	**-0.9**
KIV	**Kislovodsk**	**58.41**	**306**	P	**P**	**01 35 17.8**	**-0.9**
ARCES	**ARCESS Array B**	**62.58**	**337**	P	**P**	**01 35 46.1**	**-0.7**
	comp=Z,4.1nm,1.1s,mb4.5,baz=80,slow=10,SNR=5.0						
FINES	**FINESS Array B**	**64.22**	**328**	P	**P**	**01 35 56.8**	**-0.8**
	comp=Z,0.7nm,0.4s,mb4.0,baz=51,slow=6.4,SNR=12						
AKASG	**Malin Array Be**	**65.55**	**316**	P	**P**	**01 36 05.5**	**-0.9**
	comp=Z,0.3nm,0.3s,mb3.8,baz=60,slow=7.0,SNR=4.2						
BRTR	**Keskin Array B**	**66.07**	**303**	P	**P**	**01 36 09.8**	**-0.1**
	comp=Z,2.1nm,0.8s,mb4.2,baz=105,slow=5.9,SNR=9.7						
INK	**Inuvik**	**69.87**	**22**	P	**P**	**01 36 32.9**	**-0.2**
	comp=Z,2.1nm,0.6s,mb4.2,baz=306,slow=5.9,SNR=9.6						
INK	**Inuvik**	**69.87**	**22**	P	**P**	**01 36 32.9**	**-0.3**
NOA	**NORSAR Array B**	**71.06**	**330**	P	**P**	**01 36 39.4**	**-1.1**
	comp=Z,1.5nm,0.9s,mb3.9,baz=64,slow=6.2,SNR=2.8						
YKA	**Yellowknife Ar**	**79.64**	**21**	P	**P**	**01 37 29.3**	**+0.1**
	comp=Z,0.8nm,0.8s,mb3.7,baz=319,slow=4.9,SNR=4.2						
YKA	**Yellowknife Ar**	**79.64**	**21**	P	**P**	**01 37 29.3**	**+0.1**

*NEIC **26** 01:40:00.9±0.7, 25.63S×179.49E, h525^{km}±8^{km}, mb3.3/2, Error ellipse: s-maj=12.4km s-min=10.7km az=211.0*

*IDC **26** 01:40:00.5±1.4, 25.57S×179.50E, h515^{km}±18^{km}, mb3.3/5, mb1 3.7/8, mb1mx3.5/14, mbtmp4.3/8, Error ellipse: s-maj=30.8km s-min=20.0km az=177.0*

ISC 26 01:40:00.6±0.8**, 25.65S**±0.09×**179.4E**±0.1**, h530**^{km}±10^{km}**, n22,** σ0^{s}**77**/18**, mb3.6**/7**, 2C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.29**	**147**	P	**P**	**01 41 22.8**	**-1.2**
	85nm,0.3s,baz=278,slow=23,SNR=6.4						
RAO				S	**S**	**01 42 30.6**	**+0.6**
	75nm,0.3s,baz=80,slow=23,SNR=3.3						
DZM	**Mont Dzumac**	**12.41**	**284**	P	**P**	**01 42 45.6**	**+1.7**
	0.6nm,0.3s,baz=95,slow=14,SNR=12						
URZ	**Urewera**	**12.73**	**188**	P	**P**	**01 42 46.7**	**-0.4**
	2.8nm,0.3s,baz=15,slow=2.8,SNR=17						
URZ				S	**S**	**01 45 01.3**	**+0.1**
	1.2nm,0.3s,baz=244,slow=8.6,SNR=3.9						
WB2	**Warramunga Arr**	**41.80**	**268**	⇓*i*P	**P**	**01 47 04.9**	**-0.2**
WRAB	**Tennant Creek**	**41.80**	**268**	*e*P	**P**	**01 47 04.2**	**-0.9**
WRA	**Warramunga Arr**	**41.81**	**268**	P	**P**	**01 47 05.1**	**-0.1**
	3.0nm,0.7s,mb4.0,baz=103,slow=8.0,SNR=25						
WRA				ScP		01 51 52.6	
	0.5nm,0.6s,baz=100,slow=3.7,SNR=5.8						
VNDA	**Vanda**	**52.60**	**185**	*e*P	**P**	**01 48 25.9**	**-0.3**
	0.8nm,0.7s,mb3.2						
MJAR	**Matsushiro Arr**	**73.05**	**326**	P	**P**	**01 50 37.5**	**-0.6**
	0.5nm,0.3s,mb3.4,baz=166,slow=5.2,SNR=4.1						
SNAA	**Sanae**	**82.94**	**179**		**P**	**01 51 30.1**	**+0.1**
VNA3	**Neumayer Olymp**	**83.17**	**177**	⇑*i*	**P**	**01 51 31.5**	**+0.3**
VNA2	**Neumayer--Watz**	**83.58**	**178**	⇑*i*	**P**	**01 51 33.8**	**+0.7**
NVAR	**Mina Array Bea**	**86.36**	**44**	P	**P**	**01 51 47.2**	**-0.1**
	0.6nm,0.4s,mb3.6,baz=216,slow=7.2,SNR=6.1						
ELK	**Elko**	**89.63**	**44**	P	**P**	**01 52 02.6**	**0.0**
HLID	**Hailey**	**91.73**	**42**	P	**P**	**01 52 13.0**	**+0.8**
	0.3nm,0.6s,mb3.5						
TXAR	**Lajitas Array**	**91.78**	**58**	P	**P**	**01 52 13.9**	**+1.1**
	0.5nm,0.7s,mb3.7,baz=230,slow=6.1,SNR=7.4						
ILAR	**Eielson Array**	**93.84**	**14**	P	**P**	**01 52 19.8**	**-1.6**
	0.4nm,0.8s,mb3.6,baz=224,slow=5.9,SNR=4.5						
FINES	**FINESS Array B**	**139.92**	**340**	PKP	PKPdf	01 58 26.4	-1.3
	3.2nm,1.0s,baz=342,slow=4.4,SNR=6.2						
NB2	**NORSAR Subarra**	**143.71**	**350**	PKPabc	PKPdf	01 58 34.2	+0.1
	1.2nm,0.4s,baz=18,slow=3.2						
NOA	**NORSAR Array B**	**143.71**	**350**	PKP	PKPdf	01 58 34.2	+0.2
	2.0nm,0.6s,baz=23,slow=3.8,SNR=8.1						
NAO01	**NORSAR Array S**	**143.95**	**350**	*e*PKP	PKPdf	01 58 34.8	+0.4
AKASG	**Malin Array Be**	**146.13**	**325**	PKPbc	PKPbc	01 58 41.8	+1.4
	0.6nm,0.4s,baz=46,slow=3.9,SNR=5.5						
BRTR	**Keskin Array B**	**148.18**	**305**	PKPbc	PKPdf	01 58 48.6	+6.3
	0.4nm,0.6s,baz=140,slow=2.9,SNR=2.8						

*NEIC **26** 02:07:31.4, 34.13S×70.00W, h14^{km}, ML2.7(GUC), After GUC.*

GUC 26 02:07:31.4±0.6**, 34.13S×70.00W, h14**^{km}±4^{km}**, MD3.9, ML2.7, 6C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMEL	**Las Melosas**	**0.33**	**329**	⇑*e*P	Pg	02 07 37.9	-0.4
LMEL				*i* S	Sg	02 07 43.4	+0.3
LMEL				AMP		02 07 44.2	
	comp=N,2µm,0.2s						
CICH	**Cipreses**	**0.40**	**241**	⇑*i*P	Pg	02 07 39.3	-0.4
CICH				*i* S	Sg	02 07 45.0	-0.2
CACH	**El Canelo**	**0.50**	**271**	⇓*i*P	Pb	02 07 41.0	-0.5
CACH				*i* S	Sb	02 07 47.6	-0.6
SJCH	**San Jose de Ma**	**0.57**	**329**	*e*P	Pb	02 07 41.9	-0.8
SJCH				*i* S	Sb	02 07 50.3	0.0
CHCH	**Chadas Angostu**	**0.58**	**290**	⇑*i*P	Pb	02 07 42.6	-0.2
CHCH				*i* S	Sb	02 07 50.6	0.0
FCH	**Farellones**	**0.83**	**343**	*e*P	Pb	02 07 47.3	+0.1
FCH				*i* S	Sb	02 07 59.5	+1.4
FCH				AMP		02 08 00.4	
	comp=E,561nm,0.2s						
TACH	**Talagante**	**0.91**	**301**	*e*P	Pb	02 07 48.3	-0.3
TACH				*i* S	Sb	02 08 00.9	+0.5
RCDM	**Rinconada Maip**	**0.93**	**313**	⇑*i*P	Pb	02 07 48.9	+0.1
RCDM				*i* S	Sb	02 08 01.9	+1.2
RCDM				AMP		02 08 02.9	
	comp=E,303nm,0.1s						
SFDO	**San Fernando**	**0.97**	**240**	⇑*i*P	Pb	02 07 49.5	0.0
SFDO				*i* S	Sb	02 08 02.6	+0.6
PEL	**Peldehue**	**1.14**	**330**	*e*P	Pb	02 07 52.7	+0.3
PEL				*i* S	Sb	02 08 08.2	+1.3
PEL				AMP		02 08 12.0	
	comp=N,354nm,0.5s						
LNV	**Longovilo**	**1.19**	**278**	⇑*i*P	Pb	02 07 52.8	-0.4
LCCH	**Las Cruces**	**1.46**	**296**	⇓*i*P	Pn	02 07 57.7	+0.2
LCCH				*i* S	Sb	02 08 17.2	+1.0
JACH	**Jahuel**	**1.53**	**341**	*i* P	Pn	02 07 59.1	+0.6
JACH				*i* S	Sb	02 08 20.4	+2.3

*THE **26** 02:09:35.7, 39.63N×25.82E, h10^{km}, ML3.4*

*ISK **26** 02:09:36.5, 39.74N×25.28E, h33^{km}, MD3.3*

*ATH **26** 02:09:37.2, 39.72N×25.57E, h27^{km}, MD3.3/7*

*NEIC **26** 02:09:37.2, 39.72N×25.57E, h27^{km}, MD3.3(ATH), After ATH.*

*CSEM **26** 02:09:37.6±0.1, 39.72N×25.64E, h10^{km}, MD3.3, Error ellipse: s-maj=3.2km s-min=1.9km az=15.0*

ISC 26 02:09:36.7±0.5**, 39.68N**±0.03×**25.59E**±0.03**, h2**^{km}±5^{km}**, n41,** σ1^{s}**32**/60**, 1D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LIA	**Limnos Island**	**0.38**	**305**	⇓*i*PB	**Pg**	**02 09 45.2**	**+0.9**
LIA				*e*SB	**Sg**	**02 09 51.1**	**+1.7**
LOS	**Limnos**	**0.47**	**303**	*e*Pg	**Pg**	**02 09 47.1**	**+1.1**
LOS				*e*Sg	**Sg**	**02 09 58.4**	**+6.1**
LOS	**Limnos**	**0.47**	**303**	*e*Pg	**Pg**	**02 09 47.1**	**+1.1**
LOS				*e*Sg	**Sg**	**02 09 58.3**	**+6.0**
PRK	**Paraskevi**	**0.68**	**129**	*e*PN	**Pg**	**02 09 51.5**	**+1.2**
PRK				*e*SN	**Sg**	**02 10 02.3**	**+3.0**
AYVA	**Ayvalik**	**0.93**	**113**	*i* P	**Pg**	**02 09 57.0**	**+1.9**
AYVA				*i* S	**Sg**	**02 10 10.8**	**+3.3**
LPK	**Lapseki**	**1.13**	**52**	PN	**Pn**	**02 09 58.0**	**-1.4**
LPK				SN	**Sn**	**02 10 15.1**	**-0.7**
ALN	**Alexandroupoli**	**1.26**	**16**	*e*Pg	**Pg**	**02 10 00.4**	**-1.4**
OUR	**Ouranopolis**	**1.40**	**298**	*e*Pg	**Pg**	**02 10 02.7**	**-1.9**
OUR				*e*Sg	**Sg**	**02 10 25.2**	**+2.0**
AOS	**Alonnisos**	**1.42**	**250**	*e*Pg	**Pg**	**02 10 03.6**	**-1.4**
RDO	**Rodhopi**	**1.46**	**358**	*e*PN	**Pn**	**02 10 03.2**	**-1.0**
PAIG	**Paliouri**	**1.50**	**280**	*e*Pb	**Pb**	**02 10 04.0**	**-0.9**
PAIG				*e*Sb	**Sb**	**02 10 28.1**	**+3.9**
PAIG	**Paliouri**	**1.50**	**280**	*e*Pb	**Pb**	**02 10 04.0**	**-0.8**
PAIG				*e*Sb	**Sb**	**02 10 28.1**	**+3.9**
SART	**Tekirdag**	**1.58**	**50**	*i* P	**Pn**	**02 10 06.8**	**+1.0**
SART				*i* S	**Sb**	**02 10 27.1**	**+0.5**
SART	**Tekirdag**	**1.58**	**50**	*i* P	**Pn**	**02 10 05.3**	**-0.5**
SART				*i* S	**Sb**	**02 10 27.2**	**+0.6**
MFT	**Murefte**	**1.70**	**49**	PN	**Pn**	**02 10 06.9**	**-0.7**
BALB	**Balikesir**	**1.77**	**91**	*e*PN	**Pn**	**02 10 08.8**	**+0.3**
PLG	**Polygyros**	**1.79**	**293**	*e*PB	**Pb**	**02 10 08.1**	**-1.8**
KDAG	**Bornova**	**1.82**	**134**	*i* P	**Pn**	**02 10 08.7**	**-0.7**
KDAG				*i* S	**Sn**	**02 10 30.7**	**-2.7**
EDC	**Edincik**	**1.86**	**68**	PN	**Pn**	**02 10 10.5**	**+0.6**
NEO	**Neokhori**	**1.87**	**259**	*e*PN	**Pn**	**02 10 09.5**	**-0.5**
BTOK	**Tokmak**	**1.88**	**87**	*i* P	**Pn**	**02 10 12.7**	**+2.6**
BTOK				*i* S	**Sn**	**02 10 46.1**	**+11**
XOR	**Xorichti**	**1.88**	**261**	*e*Pn	**Pg**	**02 10 12.5**	**-1.7**
XOR				*e*Sn	**Sg**	**02 10 38.2**	**-1.2**
AKS	**Akhisar**	**1.90**	**114**	*e*PN	**Pn**	**02 10 10.5**	**+0.1**
BNT	**Bandirma**	**1.91**	**69**	*e*PN	**Pn**	**02 10 10.6**	**0.0**
KDZ	**Kurdzhali**	**1.97**	**356**	*i* P	**Pn**	**02 10 10.0**	**-1.5**
SOH	**Sokhos**	**2.06**	**304**	*e*Pn	**Pn**	**02 10 12.2**	**-0.5**
RZN	**Rozhen**	**2.11**	**342**	*i* P	**Pn**	**02 10 13.0**	**-0.5**
NVR	**Nevrokopi**	**2.13**	**322**	*e*PB	**Pb**	**02 10 12.9**	**-2.8**
SMG	**Samos**	**2.20**	**153**	*e*PN	**Pn**	**02 10 14.4**	**-0.3**
THE	**Thessaloniki**	**2.23**	**296**	*e*Pn	**Pn**	**02 10 17.3**	**+2.2**
THE				*e*Sn	**Sn**	**02 10 48.1**	**+4.5**
DST	**Dursunbey**	**2.34**	**91**	*e*PN	**Pn**	**02 10 17.0**	**+0.2**
MMB	**Musomiste**	**2.38**	**324**	*i* P	**Pn**	**02 10 17.5**	**+0.2**
KNT	**Kendrikon**	**2.53**	**307**	*e*Pn	**Pn**	**02 10 19.2**	**-0.3**
KNT				*e*Sn	**Sn**	**02 10 54.2**	**+2.8**
ORLT	**Orhaneli**	**2.57**	**81**	*e*PN	**Pn**	**02 10 20.9**	**+0.9**
MANT	**Manisa**	**2.59**	**116**	*i* P	**Pg**	**02 10 29.1**	**+0.6**
MANT				*i* S	**Sg**	**02 11 03.4**	**+0.3**
AGG	**Agios Georgios**	**2.61**	**256**	*e*Pn	**Pn**	**02 10 20.5**	**-0.2**
GRG	**Griva**	**2.75**	**299**	*e*Pn	**Pn**	**02 10 23.3**	**+0.7**
GRG				*e*Sn	**Sn**	**02 10 59.5**	**+2.5**
ULDT	**Uludag**	**2.76**	**79**	*i* P	**Pg**	**02 10 30.0**	**-1.9**
ULDT				*i* S	**Sg**	**02 11 04.9**	**-3.8**
KKB	**Krupnik**	**2.90**	**320**	*i* P	**Pn**	**02 10 32.0**	**+7.3**
YLV	**Yalova**	**3.03**	**72**	*e*PN	**Pn**	**02 10 26.3**	**-0.3**
FNA	**Florina**	**3.41**	**290**	*e*Pn	**Pn**	**02 10 32.3**	**+0.3**

KRSC 26 02:33:10.1±0.3**, 49.70N×156.00E, h21**^{km}±15^{km}**, ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.99**	**4**	*e*P	Pb	02 33 26.3	-2.1
SKR				*e*S	Sb	02 33 40.2	-0.8
ALID	**Alaid**	**1.21**	**346**	*i* P	Pn	02 33 32.4	+0.5
PAU	**Pauzhetka**	**1.84**	**16**	*i* P	Pn	02 33 41.8	+0.7
PAU				*e*S	Sn	02 34 04.8	+0.9
PAU				Smax			
	560nm,0.3s						
MIPR	**Malaya Ipel'ka**	**2.62**	**10**	*e*P	Pn	02 33 52.4	+0.2
GRL	**Gorelyy**	**3.14**	**24**	*e*P	Pn	02 34 00.7	+1.1
GRL				*e*S	Sn	02 34 37.6	+0.7
RUS	**Russkaya**	**3.16**	**29**	*e*P	Pn	02 33 59.4	-0.5
RUS				*e*S	Sn	02 34 35.5	-1.9
APC	**Apacha**	**3.31**	**12**	*e*P	Pn	02 34 04.5	+2.5
PET	**Petropavlovsk**	**3.72**	**26**	*e*S	Sn	02 34 52.6	+1.1
UGLR	**Uglovaya**	**3.93**	**26**	*i* P	Pn	02 34 12.3	+1.5
AVH	**Avacha**	**3.96**	**25**	*e*P	Pn	02 34 13.2	+2.0
SMAR	**Somma**	**3.97**	**25**	*e*P	Pn	02 34 13.2	+1.8
SDLR	**Sedlovina**	**4.01**	**26**	*e*P	Pn	02 34 12.8	+0.9
NLC	**Nalytchevo**	**4.06**	**30**	*e*P	Pn	02 34 12.9	+0.3
NLC				*e*S	Sn	02 34 59.3	-0.8
GNL	**Ganaly**	**4.18**	**16**	*i* P	Pn	02 34 15.9	+1.6
SPN	**Mys Shipunski**	**4.23**	**35**	*e*P	Pn	02 34 14.7	-0.4
SPN				*i* S	Sn	02 35 01.8	-2.7
MKZ	**Mys Kozlova**	**6.01**	**34**	*e*S	Sn	02 35 43.2	-5.9
KMNR	**Kamenistaya**	**6.59**	**21**	*e*P	Pn	02 34 49.8	+1.4
KBTR	**Krutoberegovo**	**7.71**	**30**	*e*P	Pn	02 35 02.1	-1.9

*NEIC **26** 02:38:24.3±1.6, 7.81S×115.84E, h263^{km}±17^{km}, mb4.1/8, Error ellipse: s-maj=17.7km s-min=7.4km az=58.0*

*IDC **26** 02:38:24.1±1.8, 7.82S×115.87E, h261^{km}±17^{km}, mb3.9/10, mb1 4.0/11, mb1mx3.8/18, mbtmp4.5/11, Error ellipse: s-maj=16.4km s-min=9.2km az=57.0*

ISC 26 02:38:23.7±1.5**, 7.80S**±0.08×**115.8E**±0.1**, h271**^{km}±16^{km}**, n35,** σ1^{s}**15**/36**, mb4.2**/17**, 4C-1D, Bali Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSM	**Kuching**	**10.71**	**329**	*e*Pn	**P**	**02 40 53.9**	**+2.0**
KKM	**Kota Kinabalu**	**13.75**	**2**	*e*P	**P**	**02 41 30.7**	**+1.1**
FITZ	**Fitzroy Crossi**	**14.03**	**138**	*e*P	**P**	**02 41 30.5**	**-2.4**
	28nm,1.1s						
FITZ				*e*S	**S**	**02 44 04.6**	**+2.1**
FITZ	**Fitzroy Crossi**	**14.03**	**138**	P	**P**	**02 41 30.6**	**-2.2**
	2.8nm,0.3s,baz=318,slow=8.8,SNR=39						
FITZ				S	**S**	**02 44 08.6**	**+6.0**
	2.6nm,0.3s,baz=190,slow=19,SNR=5.5						
FITZ				ScP		02 49 40.6	
	0.3nm,0.3s,baz=243,slow=4.5,SNR=3.8						
KAKA	**Kakadu**	**17.09**	**108**	*e*P	**P**	**02 42 25.6**	**+18**
	13nm,0.8s						
WRA	**Warramunga Arr**	**21.65**	**126**	P	**P**	**02 42 53.1**	**-0.4**
	6.4nm,0.7s,mb4.0,baz=296,slow=13,SNR=57						
WRA				S	**S**	**02 46 33.2**	**+2.2**
	4.0nm,1.2s,baz=296,slow=18,SNR=5.4						
WRA				ScP		02 49 57.3	
	0.7nm,0.6s,baz=331,slow=2.1,SNR=5.3						
WRAB	**Tennant Creek**	**21.65**	**126**	*e*P	**P**	**02 42 52.5**	**-0.9**
	13nm,0.8s,mb4.3						
WB2	**Warramunga Arr**	**21.66**	**126**	⇓*i*P	**P**	**02 42 53.0**	**-0.5**
TGY	**Tagaytay City**	**22.34**	**13**	P	**P**	**02 42 59.3**	**-0.8**
	145nm,0.3s,baz=232,slow=12,SNR=2.4						
NWAO	**Narrogin (SRO)**	**25.04**	**177**	P	**P**	**02 43 23.5**	**-1.7**
	15nm,0.7s,mb4.5,baz=14,slow=6.4,SNR=7.9						
CTA	**Charters Tower**	**31.92**	**116**	P	**P**	**02 44 26.2**	**-0.2**
	2.0nm,0.4s,mb4.0,baz=276,slow=12,SNR=7.2						
CTA				PcP	PcP	02 47 09.2	-0.8
	1.1nm,0.4s,baz=278,slow=1.8,SNR=3.0						
CTAO	**Charters Tower**	**31.92**	**116**	*e*P	**P**	**02 44 26.1**	**-0.3**
	3.8nm,0.8s,mb4.0						
STKA	**Stephens Creek**	**33.92**	**138**	P	**P**	**02 44 42.8**	**-0.7**
	16nm,0.5s,mb4.8,baz=317,slow=9.2,SNR=47						
STKA				PcP	PcP	02 47 14.6	-0.9
	1.5nm,0.4s,baz=323,slow=15,SNR=2.7						
STKA	**Stephens Creek**	**33.92**	**138**	*e*P	**P**	**02 44 42.8**	**-0.7**
STKA				PcP	PcP	02 47 14.6	-0.9
ARMA	**Armidale**	**40.37**	**129**	⇑*i*P	**P**	**02 45 39.1**	**+1.9**
JIRN	**Jiri**	**45.42**	**322**	*e*P	**P**	**02 46 17.8**	**+0.1**
	6.4nm,0.3s,mb4.3						
GUN	**Gumba**	**45.79**	**322**	*e*P	**P**	**02 46 20.8**	**+0.2**
	16nm,0.8s,mb4.4						
PKI	**Pulchoki**	**45.83**	**321**	*e*P	**P**	**02 46 19.0**	**-2.0**
KOLN	**Koldanda**	**47.11**	**320**	*e*P	**P**	**02 46 29.1**	**-1.8**
ULN	**Ulaanbaatar**	**55.95**	**353**	*e*P	**P**	**02 47 36.1**	**+0.2**
	1.7nm,0.5s,mb3.7						
SONM	**Songino Array**	**56.01**	**352**	P	**P**	**02 47 36.8**	**+0.5**
	2.1nm,0.6s,mb3.7,baz=174,slow=8.1,SNR=18						
RPZ	**Rata Peaks**	**59.85**	**136**	P	**P**	**02 48 02.7**	**-0.4**
	4.0nm,0.7s,mb4.1,baz=191,slow=20,SNR=5.6						
MKAR	**Makanchi Array**	**61.98**	**335**	P	**P**	**02 48 16.7**	**-0.5**
	2.5nm,0.5s,mb4.1,baz=154,slow=6.9,SNR=55						
KURK	**Kurchatov**	**66.55**	**335**	*e*P	**P**	**02 48 46.1**	**-0.4**
	1.5nm,0.5s,mb4.0						
ZAL	**Zalesovo**	**66.83**	**341**	P	**P**	**02 48 48.0**	**-0.2**
	1.5nm,0.5s,mb4.0,baz=343,slow=4.0,SNR=6.2						
OPO	**Ambohidratompo**	**67.33**	**253**	P	**P**	**02 48 51.6**	**-0.3**
	3.5nm,0.4s,mb4.5,baz=252,slow=20,SNR=18						
MAW	**Mawson**	**69.31**	**199**	P	**P**	**02 49 03.8**	**+0.6**
	3.8nm,0.7s,mb4.3,baz=67,slow=9.4,SNR=7.4						
VNDA	**Vanda**	**73.67**	**171**	*e*P	**P**	**02 49 28.6**	**-0.6**
	1.0nm,0.4s,mb3.8						
SBA	**Scott Base**	**74.70**	**170**	P	**P**	**02 49 35.1**	**+0.2**
SNAA	**Sanae**	**91.28**	**196**	⇑*i*	**P**	**02 51 00.8**	**+1.6**
SNAA	**Sanae**	**91.28**	**196**	*e*P	**P**	**02 51 00.1**	**+0.9**
	2.0nm,0.5s,mb4.2						
VNA2	**Neumayer--Watz**	**92.93**	**196**	⇑*i*	**P**	**02 51 08.3**	**+1.4**
VNA3	**Neumayer Olymp**	**93.35**	**195**	⇑*i*	**P**	**02 51 11.4**	**+2.6**
BDFB	**Brasilia**	**151.73**	**215**	PKPbc	PKPdf	02 57 49.2	+9.0
	3.1nm,0.4s,baz=180,slow=1.7,SNR=13						
LPAZ	**La Paz**	**155.76**	**171**	PKPab	PKPab	02 58 16.5	+0.2
	1.0nm,0.7s,baz=208,slow=6.8,SNR=4.2						

*NEIC **26** 02:45:54.6±0.7, 30.10S×178.75W, h150^{km}, mb4.0/3, Error ellipse: s-maj=25.8km s-min=15.1km az=205.0*

*IDC **26** 02:46:19.6±29.0, 30.16S×179.67W, h354^{km}±252^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.6/13, mbtmp4.4/4, Error ellipse: s-maj=150.0km s-min=91.8km az=97.0*

ISC 26 02:45:53.3±4.2**, 30.1S**±0.8×**178.8W**±0.6**, h150**^{km}**, n19,** σ0^{s}**82**/12**, mb4.2**/6**, 3C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.04**	**279**	P	**P**	**02 52 17.5**	**+1.0**
	1.8nm,0.6s,mb4.0,baz=91,slow=12,SNR=4.6						
CTAO	**Charters Tower**	**33.04**	**279**	P	**P**	**02 52 17.9**	**+1.4**
	1.6nm,0.5s,mb4.0						
STKA	**Stephens Creek**	**33.84**	**257**	P	**P**	**02 52 23.9**	**+0.6**
	5.5nm,0.5s,mb4.5,baz=87,slow=12,SNR=13						
STKA	**Stephens Creek**	**33.84**	**257**	*e*P	**P**	**02 52 23.5**	**+0.2**
WB2	**Warramunga Arr**	**43.35**	**272**	*e*P	**P**	**02 53 42.3**	**-0.1**
WRAB	**Tennant Creek**	**43.36**	**272**	*e*P	**P**	**02 53 42.0**	**-0.4**
	5.3nm,0.5s,mb4.4						
WRA	**Warramunga Arr**	**43.36**	**272**	P	**P**	**02 53 42.5**	**+0.1**
	4.2nm,0.5s,mb4.4,baz=111,slow=7.8,SNR=55						
FITZ	**Fitzroy Crossi**	**51.64**	**270**	P	**P**	**02 54 45.5**	**-1.3**
	4.5nm,1.0s,mb4.1,baz=117,slow=9.0,SNR=3.5						
SNAA	**Sanae**	**78.47**	**179**	⇑*i*	**P**	**02 57 36.9**	**-1.5**
SNAA	**Sanae**	**78.47**	**179**	*e*P	**P**	**02 57 38.2**	**-0.2**
	1.0nm,0.7s,mb3.5						
VNA3	**Neumayer Olymp**	**78.64**	**176**	⇑*i*	**P**	**02 57 40.6**	**+1.2**
VNA2	**Neumayer--Watz**	**79.07**	**177**	⇑*i*	**P**	**02 57 41.4**	**-0.3**
KAF	**Kangasniemi**	**144.03**	**340**	*e*p	PKPbc	03 05 08.3	-1.1
	3.3nm,1.0s						
FINES	**FINESS Array B**	**144.62**	**340**	PKP	PKPdf	03 05 11.8	+0.7
	5.9nm,0.7s,baz=56,slow=5.0,SNR=40						
NB2	**NORSAR Subarra**	**148.35**	**351**	PKPabc	PKPdf	03 05 23.3	+5.9
	0.9nm,0.6s,baz=12,slow=2.5						
NOA	**NORSAR Array B**	**148.35**	**351**	PKPbc	PKPdf	03 05 23.0	+5.6
	1.3nm,0.6s,baz=14,slow=4.1,SNR=4.1						
NAO	**NORSAR Subarra**	**148.61**	**351**	PKPab	PKPab	03 05 23.3	-4.6
AKASG	**Malin Array Be**	**150.63**	**322**	PKPbc	PKPdf	03 05 28.5	+7.3
	4.0nm,0.7s,baz=51,slow=2.8,SNR=17						
BRTR	**Keskin Array B**	**151.82**	**299**	PKPbc	PKPdf	03 05 31.9	+8.5
	0.8nm,0.5s,baz=135,slow=2.0,SNR=6.7						

*IDC **26** 02:54:54.9±2.1, 4.62S×145.11E, mb3.9/3, mb1 4.0/5, mb1mx3.8/13, mbtmp3.9/5, ML3.5/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/19, Error ellipse: s-maj=49.0km s-min=26.3km az=72.0*

*NEIC **26** 02:54:56.5±1.6, 4.62S×145.18E, h10^{km}, mb4.1/2, Error ellipse: s-maj=28.6km s-min=20.2km az=61.0*

ISC 26 02:54:57.9±1.6**, 4.7S**±0.1×**145.2E**±0.2**, h33**^{km}**, n12,** σ0^{s}**72**/13**, mb3.8**/3**, MS2.8**/1**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.10**	**158**	Pn	**Pn**	**02 56 14.5**	**+0.4**
	5.3nm,0.3s,baz=359,slow=8.1,SNR=10.0						
PMG				Sn	**Sn**	**02 57 16.6**	**+4.0**
	14nm,0.3s,baz=158,slow=14,SNR=9.3						
PMG	**Port Moresby**	**5.10**	**158**	*e*Pn	**Pn**	**02 56 13.9**	**-0.2**
PMG				*e*Sn	**Sn**	**02 57 12.7**	**+0.1**
CTA	**Charters Tower**	**15.37**	**176**	Pn	**P**	**02 58 41.0**	**+6.8**
	0.3nm,0.3s,baz=6.0,slow=15,SNR=4.4						
CTA	**Charters Tower**	**15.37**	**176**	Pn	**P**	**02 58 41.0**	**+6.8**
WRAB	**Tennant Creek**	**18.50**	**214**	*e*P	**P**	**02 59 13.7**	**0.0**
	9.7nm,0.9s						
WB2	**Warramunga Arr**	**18.51**	**214**	*e*P	**P**	**02 59 14.5**	**+0.8**
WRA	**Warramunga Arr**	**18.51**	**214**	P	**P**	**02 59 14.0**	**+0.2**
	0.3nm,0.3s,baz=38,slow=11,SNR=21						
FITZ	**Fitzroy Crossi**	**23.34**	**234**	*e*P	**P**	**03 00 03.7**	**-0.6**
	5.0nm,0.6s,mb4.1						
FITZ	**Fitzroy Crossi**	**23.34**	**234**	P	**P**	**03 00 03.8**	**-0.5**
	7.6nm,0.8s,mb4.2,baz=66,slow=9.5,SNR=8.3						
DZM	**Mont Dzumac**	**26.89**	**132**	LR	LR	03 09 46.8	
	comp=Z,25nm,19.5s,MS2.8,baz=214,slow=33						
STKA	**Stephens Creek**	**27.29**	**187**	P	**P**	**03 00 40.3**	**-1.3**
	1.7nm,0.8s,mb3.6,baz=10,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**75.33**	**321**	P	**P**	**03 06 40.3**	**+0.5**
	0.5nm,0.7s,mb3.5,baz=117,slow=5.4,SNR=4.6						

*IDC **26** 03:09:15.1±2.5, 8.44S×108.83E, mb4.0/4, mb1 4.1/4, mb1mx3.9/13, mbtmp4.0/4, Error ellipse: s-maj=114.9km s-min=22.2km az=55.0*

*NEIC **26** 03:09:27.4±1.8, 8.36S×109.04E, h100^{km}, mb4.0/2, Error ellipse: s-maj=90.0km s-min=13.1km az=51.0*

ISC 26 03:09:18.2±2.4**, 8.3S**±0.5×**109.0E**±0.6**, h33**^{km}**, n7,** σ0^{s}**28**/7**, mb4.0**/6**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**27.15**	**118**	P	**P**	**03 15 00.6**	**-0.2**
	0.8nm,0.5s,mb3.5,baz=290,slow=11,SNR=5.7						
WRAB	**Tennant Creek**	**27.16**	**118**	P	**P**	**03 15 00.6**	**-0.2**
	1.2nm,0.4s,mb3.8						
STKA	**Stephens Creek**	**38.33**	**132**	P	**P**	**03 16 38.1**	**+0.3**
	1.9nm,0.4s,mb4.2,baz=321,slow=13,SNR=9.7						
STKA	**Stephens Creek**	**38.33**	**132**	*e*P	**P**	**03 16 38.2**	**+0.4**
SONM	**Songino Array**	**55.96**	**358**	P	**P**	**03 18 56.0**	**+0.4**
	0.6nm,0.5s,mb3.9,baz=175,slow=8.9,SNR=9.3						
MKAR	**Makanchi Array**	**59.79**	**339**	P	**P**	**03 19 22.4**	**-0.2**
	1.3nm,0.5s,mb4.2,baz=150,slow=8.1,SNR=23						
KURK	**Kurchatov**	**64.41**	**339**	P	**P**	**03 19 53.1**	**-0.2**
	1.5nm,0.4s,mb4.4						

JMA 26 03:15:20.8±0.4**, 31.25N×139.26E, h414**^{km}±5^{km}**, M3.5, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**1.92**	**14**	P	P	03 16 17.9	-0.1
BSO1	**Boso 1**	**3.69**	**23**	P	P	03 16 31.9	+0.5
BSO1				*e*S	S	03 17 29.8	+2.9
BSO3	**Boso 3**	**3.69**	**16**	*e*S	S	03 17 28.2	+1.2
JRY	**Ryogami san**	**4.76**	**356**	P	P	03 16 42.0	+0.2
CBIJ	**Chichi jima**	**4.87**	**148**	*e*S	S	03 17 41.9	-5.1
JYT	**Yasato**	**5.03**	**9**	*e*S	S	03 17 49.0	-0.9
JAG	**Ashikaga**	**5.16**	**2**	P	P	03 16 45.3	-0.5
JAG				*e*S	S	03 17 50.1	-2.4

*IDC **26** 03:16:58.7±0.9, 2.67N×126.69E, mb4.1/9, mb1 4.3/9, mb1mx4.1/17, mbtmp4.2/9, Error ellipse: s-maj=47.3km s-min=15.0km az=77.0*

*NEIC **26** 03:17:00.1±0.4, 2.65N×126.66E, h10^{km}, mb4.3/5, Error ellipse: s-maj=23.7km s-min=7.0km az=73.0*

ISC 26 03:17:01.7±0.5**, 2.65N**±0.09×**126.6E**±0.2**, h33**^{km}**, n20,** σ0^{s}**49**/20**, mb4.1**/12**, 1C, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	**16.34**	**159**	*e*P	**P**	**03 21 10.0**	**+20**
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**20.64**	**183**	*e*P	**P**	**03 21 40.9**	**-0.3**
	13nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.64**	**183**	P	**P**	**03 21 41.0**	**-0.2**
	9.7nm,0.6s,baz=25,slow=11,SNR=19						
WRAB	**Tennant Creek**	**23.71**	**162**	*e*P	**P**	**03 22 11.7**	**-0.1**
	17nm,0.4s,mb4.8						
WRA	**Warramunga Arr**	**23.71**	**162**	P	**P**	**03 22 12.0**	**+0.2**
	5.2nm,0.4s,mb4.4,baz=342,slow=10,SNR=48						
WB2	**Warramunga Arr**	**23.72**	**162**	⇑*i*P	**P**	**03 22 11.9**	**+0.1**
MJAR	**Matsushiro Arr**	**35.39**	**16**	P	**P**	**03 23 56.1**	**-0.4**
	1.5nm,0.9s,mb3.9,baz=182,slow=9.5,SNR=4.8						
NWAO	**Narrogin (SRO)**	**36.47**	**193**	P	**P**	**03 24 06.0**	**+0.2**
	13nm,1.1s,mb4.8,baz=13,slow=6.5,SNR=3.2						
STKA	**Stephens Creek**	**37.19**	**159**	P	**P**	**03 24 11.1**	**-0.6**
	4.6nm,0.7s,mb4.5,baz=345,slow=9.7,SNR=13						
STKA	**Stephens Creek**	**37.19**	**159**	*e*P	**P**	**03 24 11.2**	**-0.5**

ARMA	Armidale	40.66	146	eP	P	03 24 41.2	+0.5
SONM	Songino Array	48.26	342	P	P	03 25 42.8	+1.3
	0.3nm,0.4s,mb3.7,baz=156,slow=8.8,SNR=5.7						
MKAR	Makanchi Array	58.35	326	P	P	03 26 56.0	-0.1
	1.0nm,0.4s,mb4.2,baz=119,slow=7.7,SNR=19						
MKAR	Makanchi Array	58.35	326	P	P	03 26 56.0	-0.1
KURK	Kurchatov	62.56	328	eP	P	03 27 24.3	-0.5
	2.8nm,0.5s,mb4.7						
BVAR	Borovoye Array	68.14	327	P	P	03 28 00.3	-0.1
	0.2nm,0.4s,mb3.5,baz=112,slow=7.8,SNR=3.6						
BRVK	Borovoye	68.21	327	P	P	03 28 00.0	-0.9
	0.4nm,0.5s,mb3.7						
AKTK	Aktyubinsk	74.40	322	P	P	03 28 38.5	+0.4
AKTO	Aktyubinsk	74.40	322	P	P	03 28 38.5	+0.4
	0.9nm,0.8s,mb3.8,baz=102,slow=9.7,SNR=4.6						
VNDA	Vanda	82.38	173	P	P	03 29 21.3	-0.1
	0.5nm,0.5s,mb3.7						

NIED **26** *03:20:00, 23.10N×121.50E, h38^{km}, Mw4.5 Best double couple: $M_0$5.65×10^{15} NP1:ϕ_s25°, δ70°, λ122°. NP2:ϕ_s143°, δ37°, λ34°.*

IDC **26** *03:20:27.4±0.5, 23.14N×121.49E, mb4.3/15, mb1 4.4/17, mb1mx4.3/24, mbtmp4.3/17, ML3.8/2, MS3.8/4, Ms1 3.8/4, ms1mx3.1/26, Error ellipse: s-maj=25.2km s-min=12.6km az=65.0*

BJI **26** *03:20:30.3, 22.99N×121.59E, h32^{km}, mB4.4, mb4.3, ML4.6, Ms4.4, Msz4.2*

MOS **26** *03:20:30.3±1.1, 23.19N×121.59E, h33^{km}, mb4.7/14, Error ellipse: s-maj=15.2km s-min=8.7km az=111.8*

NEIC **26** *03:20:32.1±2.2, 23.15N×121.63E, h33^{km}±16^{km}, mb4.5/18, Error ellipse: s-maj=8.0km s-min=6.2km az=69.0*

NEIC Recorded [4 TAP] in T'ai-tung; [3 TAP] in Hua-lien; [2 TAP] in Kao-hsiung and Yun-lin; [1 TAP] in Chia-i, Nan-t'ou and T'ai-nan Counties.

JMA **26** *03:20:32.2±0.3, 23.13N×121.52E, h77^{km}, M4.2*

ISC 26 03:20:32.0±0.6, **23.16N**±0.04×**121.53E**±0.03, **h47**^{km}±6^{km}, **n97**, σ**1**^{s}**24**/110, **mb4.4**/30, **MS4.2**/5, **2C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NACB	Ninganchiao	1.01	3	eP	P	03 20 48.3	-1.7
YHNB	Yeheng	1.51	355	ePn	P	03 20 57.1	0.0
TATO	Taipei	1.81	359	ePn	P	03 21 00.7	-0.6
YOJ	Yonaguni jima	1.88	46	P	P	03 21 03.2	+0.9
YOJ				eS	S	03 21 26.7	+1.9
HATJ	Hateruma jima	2.27	66	P	P	03 21 08.5	+0.6
HATJ				eS	S	03 21 35.2	+0.5
IRIF	Iriomote-Funau	2.33	59	P	P	03 21 09.5	+0.8
IRIF				eS	S	03 21 38.1	+1.8
JKRS	Kuro-shima	2.51	64	P	P	03 21 12.3	+1.0
JIJ	Ishigaki jima	2.68	63	P	P	03 21 13.9	+0.2
JIJ				eS	S	03 21 44.9	-0.2
QZH	Quanzhou	3.22	304	⇑iP	P	03 21 19.5	-1.9
QZH				S	S	03 21 54.0	-4.9
QZH				Smax			
	comp=N,2μm,0.6s						
QZH				Smax			
	comp=E,2μm,0.5s						
JTJ	Tarama	3.25	62	P	P	03 21 22.0	+0.1
JTJ				eS	S	03 22 01.2	+1.4
JMJ	Miyako jima 2	3.81	64	P	P	03 21 30.3	+0.5
JMJ				eS	S	03 22 14.4	+0.5
JOGS	Gusukube	3.89	65	P	P	03 21 31.2	+0.4
JOGS				eS	S	03 22 17.0	+1.3
CVP	Callao Caves	5.43	177	eP	P	03 21 55.0	+2.5
JKE	Kume jima 2	5.72	55	P	P	03 21 54.9	-1.7
JAGN	Aguni-jima	6.21	55	P	P	03 22 02.0	-1.4
JIH	Iheya	6.99	55	P	P	03 22 11.9	-2.5
JOW	Kunigami	7.13	58	Pn	P	03 22 13.3	-2.9
	comp=E,4.2nm,0.3s,baz=221,slow=9.2,SNR=12						
JOW	Kunigami	7.13	58	P	P	03 22 13.3	-3.0
JOW				eS	S	03 23 35.5	-1.2
JTK	Tokunoshima	8.13	54	P	P	03 22 26.8	-3.4
JAM	Amami Oshima	8.96	53	P	P	03 22 37.9	-3.7
NJ2	Nanjing	9.17	346	eP	P	03 22 42.0	-2.5
NJ2				LR	LR		
	comp=N,2μm,11.2s						
NJ2				LR	LR		
	comp=E,3μm,20.0s						
NJ2				LR	LR		
	comp=Z,1μm,12.5s						
JMZ	Minamidaito 2	9.21	71	P	P	03 22 41.1	-4.0
QIZ	Qiongzhong	11.66	252	eP	P	03 23 17.3	-1.2
QIZ				eS	S	03 25 31.0	+2.9
QIZ				LR	LR		
	comp=N,530nm,18.0s						
QIZ				LR	LR		
	comp=E,440nm,18.0s						
QIZ				LR	LR		
	comp=Z,710nm,17.6s						
QIZ	Qiongzhong	11.66	252	P	P	03 23 17.3	-1.2
JNU	Nakatsue	12.90	38	LR	LR	03 28 46.7	
	comp=Z,246nm,21.2s,baz=74,slow=39						
GYA	Guiyang	13.90	287	P	P	03 23 47.5	-0.7
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s						
GYA				AMB	AMB		
	comp=Z,80nm,5.5s						
GYA				LR	LR		
	comp=N,570nm,12.9s						
GYA				LR	LR		
	comp=E,1μm,12.6s						
GYA				LR	LR		
	comp=Z,1μm,12.3s						
KS15	Wonju Array Si	15.25	20	P	P	03 24 05.5	-0.3
KMI	Kunming	17.27	280	P	P	03 24 23.6	-7.7
KMI				S	S	03 27 34.5	-5.6
CD2	Chengdu	17.60	300	P	P	03 24 38.0	+2.4
CD2				PP	PP	03 24 54.0	+3.6
CD2				AMB	AMB		
	comp=Z,20nm,0.7s						
CD2				AMB	AMB		
	comp=Z,50nm,5.7s						
CD2				LR	LR		
	comp=E,440nm,13.2s						
CD2				LR	LR		
	comp=Z,590nm,13.2s						
KKM	Kota Kinabalu	17.77	198	eP	P	03 24 37.8	+0.1
SNY	Shenyang	18.70	5	⇑P	P	03 24 50.8	+1.9
SNY				AMB	AMB		
	comp=Z,10.0nm,0.7s						
SNY				AMB	AMB		
	comp=Z,60nm,11.8s						
SNY				LR	LR		
	comp=N,200nm,12.8s						
SNY				LR	LR		
	comp=Z,300nm,13.3s						
JHJ	Hachijo jima 2	18.88	54	LR	LR	03 32 53.9	
	comp=Z,117nm,18.4s,baz=166,slow=39						
MAJO	Matsushiro	19.64	43	P	P	03 24 57.7	-1.8
MAT	Matsushiro	19.64	43	P	P	03 24 58.7	-0.8
MAT	Matsushiro	19.64	43	P	P	03 24 58.0	-1.5
MJAR	Matsushiro Arr	19.64	43	P	P	03 24 58.5	-1.0
	comp=Z,0.3nm,0.3s,baz=229,slow=8.2,SNR=11						
LZH	Lanzhou	20.02	314	eP	P	03 25 05.0	+1.4
LZH				AP		03 25 14.0	
LZH				XP		03 25 18.0	
LZH				PP	PP	03 25 22.8	-0.9
LZH				eS	S	03 28 35.0	-6.1
LZH				eSS	SS	03 29 10.5	-0.4
LZH				AMB	AMB		
	comp=Z,20nm,1.3s						
LZH				AMB	AMB		
	comp=Z,160nm,5.1s						
LZH				LR	LR		
	comp=N,980nm,10.1s						
LZH				LR	LR		
	comp=Z,1μm,11.6s,MS4.4						
LZH	Lanzhou	20.02	314	eP	P	03 25 05.0	+1.4
	comp=Z,27nm,1.3s						
LZH				pP		03 25 14.1	
LZH				sP		03 25 18.0	
LZH				PP	PP	03 25 22.7	-1.0
LZH				eS	S	03 28 35.0	-6.1
LZH				sS		03 28 47.2	
LZH				eSS	SS	03 29 10.5	-0.4
LZH				LR	LR		
	comp=Z,1μm,11.6s,MS4.4						
LZH	Lanzhou	20.02	314	eP	P	03 25 05.0	+1.4
LZH				*SP		03 25 18.0	
LZH						03 25 22.7	
LZH				eS	S	03 28 35.0	-6.1
LZH				*SS		03 28 47.2	
LZH				eSS	SS	03 29 10.5	-0.4
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
LZH				MLR	MLR		
	comp=Z,1μm,11.6s,MS4.4						
CN2	Changchun	20.84	8	eP	P	03 25 12.5	+0.4
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s						
GTA	Gaotai	24.54	316	eP	P	03 25 50.5	+2.0
GTA				AP		03 26 02.8	
GTA				PP	PP	03 26 28.3	+2.8
GTA				S	S	03 30 08.8	+5.6
GTA				SCS	ScS	03 36 47.3	+0.4
GTA				AMB	AMB		
	comp=Z,60nm,5.3s						
GTA				LR	LR		
	comp=N,480nm,11.8s,MS4.3						
GTA				LR	LR		
	comp=E,550nm,15.2s,MS4.3						
GTA				LR	LR		
	comp=Z,770nm,13.7s,MS4.4						
SHL	Shillong	27.09	281	eP	P	03 26 15.0	+2.5
ULN	Ulaanbaatar	27.23	338	eP	P	03 26 12.1	-1.4
	comp=Z,9.7nm,1.4s,mb4.1						
ULN	Ulaanbaatar	27.23	338	eP	P	03 26 12.1	-1.5
ULN				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.2						
SONM	Songino Array	27.43	338	P	P	03 26 14.8	-0.7
	comp=Z,1.6nm,0.6s,mb3.7,baz=158,slow=9.5,SNR=11						
LSA	Lhasa	27.92	290	P	P	03 26 22.8	+2.7
LSA	Lhasa	27.92	290	eP	P	03 26 21.7	+1.6
	comp=Z,14nm,0.6s,mb4.8						
LSA	Lhasa	27.92	290	eP	P	03 26 21.7	+1.6
LSA				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.8						
JIRN	Jiri	32.17	285	eP	P	03 26 59.1	+1.4
	comp=Z,16nm,0.9s,mb4.9						
GUN	Gumba	32.44	286	eP	P	03 27 01.8	+1.7
	comp=Z,25nm,0.9s,mb5.0						
DMN	Daman	33.13	285	eP	P	03 27 07.1	+1.1
KOLN	Koldanda	34.46	286	eP	P	03 27 17.1	-0.4
	comp=Z,10nm,0.8s,mb4.8						
WMQ	Urumqi	34.60	315	eP	P	03 27 18.0	-0.5
WMQ				AP	pP	03 27 27.0	-4.0
WMQ				eS	S	03 32 43.0	-0.5
WMQ				LR	LR		
	comp=N,230nm,16.0s,MS4.3						
WMQ				LR	LR		
	comp=E,400nm,16.6s,MS4.3						
WMQ				LR	LR		
	comp=Z,240nm,14.2s,MS4.1						
MKAR	Makanchi Array	39.30	317	P	P	03 27 58.9	+0.9
	comp=Z,3.6nm,0.7s,mb4.2,baz=109,slow=10.0,SNR=18						
MKAR				PcP	PcP	03 30 06.5	-0.1
	comp=Z,2.3nm,0.7s,baz=90,slow=4.9,SNR=7.2						
FITZ	Fitzroy Crossi	41.20	174	eP	P	03 28 12.4	-1.6
	comp=Z,3.2nm,0.7s,mb4.1						
FITZ	Fitzroy Crossi	41.20	174	P	P	03 28 12.7	-1.3
	comp=Z,2.0nm,0.6s,mb4.0,baz=359,slow=5.2,SNR=7.4						
FITZ				PcP	PcP	03 30 12.5	-0.6
	comp=Z,2.7nm,0.8s,baz=315,slow=4.3,SNR=3.5						
NVS	Novosibirsk	42.54	328	eP	P	03 28 23.1	-1.5
NVS				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.3						
NVS				pmax	pmax		
	comp=N,1.0nm,0.1s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.2s						
KURK	Kurchatov	43.08	321	eP	P	03 28 29.1	+0.1
	comp=E,5.0nm,0.6s,mb4.4						
KURK	Kurchatov	43.08	321	eP	P	03 28 29.2	+0.1
KURK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
WRAB	Tennant Creek	44.62	163	eP	P	03 28 40.6	-1.3
	comp=Z,7.2nm,0.9s,mb4.5						
WRAB	Tennant Creek	44.62	163	eP	P	03 28 40.6	-1.2
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.5						
WRA	Warramunga Arr	44.62	163	P	P	03 28 41.2	-0.7
	comp=Z,2.7nm,0.5s,mb4.4,baz=345,slow=8.7,SNR=20						
WRA				PcP	PcP	03 30 23.8	-0.7
	comp=Z,0.8nm,0.6s,baz=345,slow=3.7,SNR=5.6						
WB2	Warramunga Arr	44.63	163	eP	P	03 28 40.7	-1.2
BVAR	Borovoye Array	48.67	321	P	P	03 29 14.1	+0.8
	comp=Z,3.0nm,0.6s,mb4.5,baz=106,slow=8.3,SNR=18						
BRVK	Borovoye	48.74	321	eP	P	03 29 14.0	+0.2
	comp=Z,4.9nm,1.0s,mb4.5						
BRVK	Borovoye	48.74	321	eP	P	03 29 14.0	+0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
CTA	Charters Tower	49.29	149	⇓iP	P	03 29 19.9	+1.4
	comp=Z,3.6nm,1.0s,mb4.4						
CTA	Charters Tower	49.29	149	P	P	03 29 19.6	+1.1
	comp=Z,4.6nm,0.8s,mb4.6,baz=315,slow=10,SNR=9.3						
CTA	Charters Tower	49.29	149	⇓iP	P	03 29 19.9	+1.4
CTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CTAO	Charters Tower	49.29	149	eP	P	03 29 18.0	-0.5
	comp=Z,6.2nm,1.0s,mb4.6						
CTAO	Charters Tower	49.29	149	eP	P	03 29 18.0	-0.5
CTAO				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
BILL	Bilibino	52.54	19	eP	P	03 29 43.4	+0.9
	comp=Z,5.5nm,0.7s,mb4.6						
BILL	Bilibino	52.54	19	eP	P	03 29 43.4	+0.9
BILL				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
AKTK	Aktyubinsk	55.73	316	P	P	03 30 06.9	+0.8
AKTO	Aktyubinsk	55.73	316	P	P	03 30 06.9	+0.7
	comp=Z,4.6nm,0.9s,mb4.5,baz=118,slow=7.2,SNR=12						
ARU	Arti	56.12	323	eP	P	03 30 08.1	-0.7
	comp=Z,10nm,0.7s,mb5.0						
ARU	Arti	56.12	323	eP	P	03 30 08.1	-0.7
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
STKA	Stephens Creek	57.99	160	P	P	03 30 22.3	-0.2
	comp=Z,4.8nm,0.7s,mb4.7,baz=338,slow=6.4,SNR=15						
STKA	Stephens Creek	57.99	160	eP	P	03 30 21.6	-0.8
JOF	Joensuu	69.75	331	ep	P	03 31 37.8	-1.1
	comp=Z,5.2nm,0.8s,mb4.5						
ILAR	Eielson Array	69.98	27	P	P	03 31 41.2	+1.0
	comp=Z,0.8nm,0.6s,mb3.8,baz=296,slow=6.9,SNR=12						
ARCES	ARCESS Array B	70.61	338	P	P	03 31 43.1	-0.8
	comp=Z,2.9nm,0.7s,mb4.3,baz=53,slow=6.1,SNR=6.4						
ARCES				LR	LR	04 06 23.1	
	comp=Z,106nm,18.2s,MS4.1,baz=8.9,slow=39						
KAF	Kangasniemi	72.20	331	ep	P	03 31 52.7	-0.9
	comp=Z,2.7nm,0.6s,mb4.3,baz=73,slow=5.6						
KAF	Kangasniemi	72.20	331	eP	P	03 31 52.7	-0.9
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
FINES	FINESS Array B	72.49	330	P	P	03 31 55.1	-0.2
	comp=Z,3.3nm,0.7s,mb4.4,baz=53,slow=6.2,SNR=29						
AKASG	Malin Array Be	73.85	319	P	P	03 32 03.2	-0.2
	comp=Z,0.7nm,0.5s,mb3.8,baz=62,slow=6.3,SNR=4.0						
BR131	Keskin Array S	74.04	307	eP	P	03 32 05.4	+0.6
	comp=Z,0.7nm,0.5s,mb3.9						
BRTR	Keskin Array B	74.04	307	P	P	03 32 05.8	+1.0
	comp=Z,2.6nm,1.0s,mb4.1,baz=96,slow=5.3,SNR=7.2						
INK	Inuvik	74.05	22	eP	P	03 32 05.2	+0.9
	comp=Z,1.3nm,0.6s,mb4.0						
INK	Inuvik	74.05	22	eP	P	03 32 05.2	+0.9
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	79.28	332	P	P	03 32 33.1	-0.7
	comp=Z,1.3nm,0.6s,mb4.0,baz=61,slow=5.0						
NOA	NORSAR Array B	79.28	332	P	P	03 32 33.1	-0.7
	comp=Z,2.5nm,0.7s,mb4.2,baz=66,slow=5.4,SNR=7.3						
NOA				LR	LR	04 07 09.6	
	comp=Z,91nm,19.4s,MS4.1,baz=60,slow=35						
NAO	NORSAR Subarra	79.55	332	P	P	03 32 33.1	-2.1
	comp=Z,1.3nm,0.6s,mb4.0						
NAO	NORSAR Subarra	79.55	332	P	P	03 32 33.1	-2.1
NAO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
OJC	Ojcow	79.66	320	eP	P	03 32 36.7	+0.6
GERES	GERESS Array B	83.84	321	P	P	03 32 58.5	+0.7
	comp=Z,1.8nm,0.8s,mb4.2,baz=45,slow=3.8,SNR=10						
SDV	Santo Domingo	146.00	22	ePKPdf	PKPdf	03 40 08.6	+1.9

BJI **26** *03:59:31.7, 6.12S×147.43E, h127^{km}, mB4.9, mb4.6*

MOS **26** *03:59:32.5±1.3, 5.82S×146.74E, h98^{km}, mb4.8/12, Error ellipse: s-maj=17.7km s-min=8.3km az=84.8*

NEIC **26** *03:59:34.1±1.1, 5.92S×146.92E, h100^{km}±10^{km}, mb4.8/20, Error ellipse: s-maj=8.0km s-min=6.2km az=102.0*

IDC **26** *03:59:35.9±0.6, 6.04S×146.75E, h117^{km}±5^{km}, mb4.3/9, mb1 4.5/12, mb1mx4.5/14, mbtmp4.8/12, MS3.6/10, Ms1 3.6/10, ms1mx3.5/22, Error ellipse: s-maj=16.8km s-min=10.7km az=105.0*

ISC 26 03:59:32.5±1.5, **5.94S**±0.05×**146.90E**±0.06, **h101**^{km}±14^{km}, **h116**^{km}±6.8^{km}**:pP-P, n92**, σ**0**^{s}**96**/79, **mb4.7**/29, **4D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.45	176	P	P	04 00 25.3	-0.2
	232nm,0.3s,baz=23,slow=5.4,SNR=259						
PMG				S	S	04 01 00.5	-5.1
	98nm,0.3s,baz=330,slow=6.7,SNR=9.5						
PMG				LR	LR	04 01 14.1	
	comp=Z,252nm,21.0s,baz=2.4,slow=29						
PMG	Port Moresby	3.45	176	eP	P	04 00 25.1	-0.3
CTA	Charters Tower	14.08	182	eP	P	04 02 51.9	+3.4
	21nm,0.6s						
CTA	Charters Tower	14.08	182	P	P	04 02 51.9	+3.3
	4.8nm,0.3s,baz=358,slow=14,SNR=39						
CTA				S	S	04 05 19.8	-2.8
	0.9nm,0.3s,baz=276,slow=23,SNR=2.9						
CTA	Charters Tower	14.08	182	eP	P	04 02 51.9	+3.4
CTA				pmax	pmax		
	comp=Z,21nm,0.6s						
CTAO	Charters Tower	14.08	182	eP	P	04 02 50.3	+1.8
	comp=Z,26nm,0.6s						
CTAO	Charters Tower	14.08	182	eP	P	04 02 50.3	+1.8
CTAO				pmax	pmax		
	comp=Z,26nm,0.6s						
WRAB	Tennant Creek	18.50	220	eP	P	04 03 42.5	-0.9
	comp=Z,113nm,0.8s						
WRAB	Tennant Creek	18.50	220	eP	P	04 03 42.5	-0.8
WRAB				pmax	pmax		
	comp=Z,113nm,0.8s						
WB2	Warramunga Arr	18.51	220	eP	P	04 03 42.6	-0.8
WB2				eS	S	04 07 05.8	+2.7
WRA	Warramunga Arr	18.52	220	P	P	04 03 42.7	-0.8
	comp=Z,5.5nm,0.3s,baz=43,slow=12,SNR=124						
WRA				S	S	04 07 02.4	-0.8
	comp=Z,1.5nm,0.3s,baz=114,slow=13,SNR=5.3						
GUMO	Guam	19.50	354	P	P	04 03 54.2	-0.1
	comp=Z,5.9nm,0.3s,baz=323,slow=19,SNR=3.7						
GUMO				LR	LR	04 10 33.5	
	comp=Z,48nm,18.4s,baz=208,slow=34						
FITZ	Fitzroy Crossi	24.02	238	⇓iP	P	04 04 40.1	+1.0
	comp=Z,798nm,0.7s						
FITZ				eS	S	04 08 51.6	+5.7
FITZ	Fitzroy Crossi	24.02	238	P	P	04 04 39.5	+0.4
	comp=Z,894nm,0.7s,baz=66,slow=11,SNR=568						
FITZ				LR	LR	04 15 08.8	
	comp=Z,677nm,19.0s,baz=60,slow=39						
ARMA	Armidale	24.75	170	eP	P	04 04 47.6	+1.4
DZM	Mont Dzumac	24.78	132	P	P	04 04 46.3	-0.2
	comp=Z,10nm,0.7s,mb4.3,baz=294,slow=19,SNR=9.0						
DZM				pP		04 05 11.8	
	comp=Z,23nm,0.9s,baz=321,slow=18,SNR=5.9						
STKA	Stephens Creek	26.28	190	P	P	04 05 00.1	-0.3
	comp=Z,7.8nm,0.5s,mb4.4,baz=2.6,slow=7.2,SNR=32						
STKA				pP	pP	04 05 25.6	+3.1
	comp=Z,15nm,0.8s,baz=2.5,slow=10.0,SNR=5.3						
STKA				LR	LR	04 16 28.4	
	comp=Z,154nm,18.7s,baz=270,slow=39						
STKA	Stephens Creek	26.28	190	eP	P	04 05 00.4	0.0
FORT	Forrest	30.39	213	eP	P	04 05 37.7	+0.3
	comp=Z,32nm,0.7s,mb5.0						
FUNA	Funafuti	32.14	97	eP	P	04 05 52.5	-0.2
CBIJ	Chichi jima	33.15	352	LR	LR	04 18 27.0	
	comp=Z,60nm,19.1s,baz=56,slow=34						
KLBR	Kellerberrin	37.35	223	⇓iP	P	04 06 37.5	+0.5
	comp=Z,45nm,0.4s,mb5.8						
NWAO	Narrogin (SRO)	38.51	222	P	P	04 06 46.7	+0.1
	comp=Z,16nm,0.6s,mb5.0,baz=54,slow=7.5,SNR=13						
NWAO	Narrogin (SRO)	38.51	222	P	P	04 06 46.7	+0.1
MUN	Mundaring	38.64	224	eP	P	04 06 49.1	+1.4
YHNB	Yeheng	39.29	322	P	P	04 06 55.1	+1.9
JNU	Nakatsue	41.72	340	LR	LR	04 21 33.9	
	comp=Z,53nm,19.1s,baz=55,slow=32						
MJAR	Matsushiro Arr	43.03	350	P	P	04 07 23.5	-0.4
	comp=Z,1.7nm,0.7s,mb3.9,baz=180,slow=6.1,SNR=4.5						
KMI	Kunming	52.88	308	P	P	04 08 41.5	+1.0
KMI	Kunming	52.88	308	P	P	04 08 41.4	+0.9
	comp=Z,7.0nm,0.5s,mb5.0						
KMI	Kunming	52.88	308	P	P	04 08 41.4	+0.9
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb5.0						
CN2	Changchun	53.17	341	eP	P	04 08 43.5	+1.1
RAR	Rarotonga	53.75	112	LR	LR	04 27 40.8	
	comp=Z,103nm,18.3s,baz=308,slow=31						
HHC	Hu-ho-hao-te	56.73	328	eP	P	04 09 04.8	-3.4
HHC				S	S	04 16 50.5	-0.6
HHC				SCS	ScS	04 18 39.8	-3.9
HHC				AMB	AMB		
	comp=Z,50nm,8.4s						
HHC				LR	LR		
	comp=N,110nm,19.2s						
HHC				LR	LR		
	comp=E,130nm,18.0s						
HHC				LR	LR		
	comp=Z,90nm,16.8s						
HIA	Hailar	59.86	340	eP	P	04 09 29.0	-0.8
	comp=Z,30nm,1.3s,mb5.2						
HIA	Hailar	59.86	340	eP	P	04 09 29.0	-0.8
HIA				pmax	pmax		
	comp=Z,30nm,1.3s						
SHL	Shillong	61.90	303	eP	P	04 09 44.0	0.0
GTA	Gaotai	62.63	320	eP	P	04 09 49.0	+0.4
GTA				PCP	PcP	04 10 26.0	-0.3
GTA				PP	PP	04 12 11.0	+1.7
GTA				SCP		04 14 13.5	
GTA				PCS		04 14 28.0	
GTA				S	S	04 18 12.3	+5.3
GTA				AMB	AMB		
	comp=Z,70nm,4.2s						
GTA				LR	LR		
	comp=N,90nm,17.1s						
GTA				LR	LR		
	comp=E,190nm,14.1s						
GTA				LR	LR		
	comp=Z,40nm,16.7s						
FX1	Attu Island--F	62.69	18	eP	P	04 09 49.5	+0.7
ULN	Ulaanbaatar	64.01	331	eP	P	04 09 57.4	-0.2
	comp=Z,3.3nm,0.7s,mb4.3						
ULN	Ulaanbaatar	64.01	331	eP	P	04 09 57.4	-0.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
SONM	Songino Array	64.30	331	P	P	04 09 59.1	-0.3
	comp=Z,3.8nm,1.0s,mb4.2,baz=142,slow=8.7,SNR=16						
SONM				LR	LR	04 36 34.0	
	comp=Z,48nm,18.4s,baz=171,slow=34						
JIRN	Jiri	67.41	303	eP	P	04 10 19.8	+0.2
	comp=Z,4.9nm,0.7s,mb4.5						
ZAK	Zakamensk	67.54	331	eP	P	04 10 20.0	0.0
ZAK				e	pP	04 10 42.2	-3.4
ZAK				e		04 12 46.8	
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.2						
GUN	Gumba	67.75	303	eP	P	04 10 21.6	-0.1
	comp=Z,13nm,0.7s,mb4.9						
DMN	Daman	68.30	303	eP	P	04 10 25.3	+0.2
	comp=Z,12nm,0.7s,mb4.8						
GKN	Gorkha	68.82	303	eP	P	04 10 27.9	-0.4
	comp=Z,5.7nm,0.5s,mb4.7						
BOD	Bodaibo	68.89	342	eP	P	04 10 24.8	-3.4
BOD				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.4						
KOLN	Koldanda	69.61	302	eP	P	04 10 32.9	-0.3
VNDA	Vanda	71.98	177	eP	P	04 10 47.3	+0.7
	comp=Z,9.3nm,1.0s,mb4.6						
VNDA	Vanda	71.98	177	eP	P	04 10 47.3	+0.7
VNDA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WMQ	Urumqi	72.68	319	eP	P	04 10 51.5	+0.2
WMQ				AMB	AMB		
	comp=Z,160nm,5.2s						
BILL	Bilibino	75.06	7	eP	P	04 11 04.9	+0.3
	comp=Z,21nm,1.0s,mb4.8						
BILL	Bilibino	75.06	7	eP	P	04 11 04.9	+0.3
BILL				pmax	pmax		
	comp=Z,21nm,1.0s,mb4.8						
MKAR	Makanchi Array	77.39	321	P	P	04 11 17.2	-0.8

	comp=Z,2.7nm,1.0s,mb3.9,baz=97,slow=7.4,SNR=12						
TIXI	**Tiksi**	78.34	354	*e*P	P	04 11 19.5	-3.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
KURK	**Kurchatov**	81.10	323	*e*P	P	04 11 36.8	-1.3
	comp=Z,4.4nm,1.1s,mb4.2						
KURK	**Kurchatov**	81.10	323	*e*P	P	04 11 36.8	-1.3
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
AAK	**Ala-Archa**	81.23	315	*e*P	P	04 11 38.3	-0.6
SLKM	**Skilak Lake**	82.24	26	*e*P	P	04 11 43.6	-0.2
MAW	**Mawson**	82.27	203	P	P	04 11 42.6	-1.2
	comp=Z,3.1nm,0.8s,mb4.2,baz=104,slow=13,SNR=4.1						
MAW				pP	pP	04 12 12.9	+2.7
	comp=Z,4.8nm,0.7s,baz=112,slow=8.8,SNR=3.1						
IMA2	**Indian Mountai**	83.53	21	*e*P	P	04 11 50.7	+0.5
SML	**Sawmill**	83.63	26	*e*P	P	04 11 50.7	0.0
MCK	**McKinley**	84.21	24	*e*P	P	04 11 53.2	-0.4
	comp=Z,10nm,0.8s,mb4.7						
MCK	**McKinley**	84.21	24	*e*P	P	04 11 53.2	-0.4
MCK				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.7						
DIV	**Divide**	84.48	27	*e*P	P	04 11 53.9	-1.1
	comp=Z,32nm,0.7s,mb5.3						
COLA	**College**	85.13	23	*e*P	P	04 11 57.4	-0.8
	comp=Z,17nm,0.7s,mb5.1						
COLA	**College**	85.13	23	*e*P	P	04 11 57.4	-0.8
COLA				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
ILAR	**Eielson Array**	85.47	23	P	P	04 11 59.5	-0.3
	comp=Z,20nm,0.7s,mb5.2,baz=257,slow=5.1,SNR=333						
DAWY	**Dawson**	88.26	25	*e*P	P	04 12 14.3	+1.0
SYO	**Syowa Base**	90.62	200	⇓pP	pP	04 12 51.7	+0.4
INK	**Inuvik**	91.64	21	*e*P	P	04 12 28.6	-0.4
	comp=Z,8.1nm,1.0s,mb4.9						
INK	**Inuvik**	91.64	21	*e*P	P	04 12 28.6	-0.5
INK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NVAR	**Mina Array Bea**	97.41	52	P	P	04 12 57.9	+1.8
	comp=Z,0.7nm,0.7s,mb4.2,baz=251,slow=4.1,SNR=6.0						
NVAR				LR	LR	04 54 45.7	
	comp=Z,32nm,18.5s,baz=260,slow=34						
NEW	**Newport**	98.38	42	*e*P	P	04 13 01.8	+1.5
	comp=Z,4.4nm,0.8s,mb5.0						
NEW	**Newport**	98.38	42	*e*P	P	04 13 01.8	+1.6
NEW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
YKA	**Yellowknife Ar**	99.16	28	LR	LR	04 54 48.0	
	comp=Z,65nm,19.1s,baz=55,slow=33						
PDAR	**Pinedale Array**	103.95	48	Pdiff	Pdif	04 13 27.1	+1.9
	comp=Z,0.7nm,0.7s,baz=291,slow=3.1,SNR=6.9						
GERES	**GERESS Array B**	121.80	325	PKP	PKPdf	04 18 16.0	+1.2
	comp=Z,0.5nm,0.5s,baz=135,slow=1.9,SNR=5.7						
GERES				pPKP		04 18 48.3	
	comp=Z,1.3nm,0.6s,baz=70,slow=1.5,SNR=7.3						
PLCA	**Paso Flores**	122.23	147	PKP	PKPdf	04 18 18.1	+2.2
	comp=Z,5.2nm,0.8s,baz=278,slow=1.4,SNR=13						
LPAZ	**La Paz**	138.90	123	PKhKP		04 18 42.3	
	comp=Z,1.9nm,0.7s,baz=308,slow=4.8,SNR=9.5						
LPAZ				PKP	PKPdf	04 18 51.0	+2.9
	comp=Z,8.0nm,0.9s,baz=265,slow=2.7,SNR=15						
LPAZ	**La Paz**	138.90	123	PKP	PKPdf	04 18 42.3	-5.7
LPAZ				PKP	PKPdf	04 18 51.0	+2.9
ROSC	**El Rosal**	138.95	89	PKhKP		04 18 42.1	
	comp=Z,4.4nm,0.6s,baz=107,slow=19,SNR=3.5						
ROSC				PKP	PKPdf	04 18 51.1	+2.9
	comp=Z,4.3nm,0.6s,baz=269,slow=17,SNR=3.4						
CPUP	**Villa Florida**	140.24	145	*e*PKP	PKPdf	04 18 45.1	-5.1
SDV	**Santo Domingo**	142.68	83	*e*PKP	PKPdf	04 18 53.0	-1.9
SJG	**San Juan**	145.56	67	*e*PKPdf	PKPdf	04 19 01.6	+1.8
CAM4	**Nova Friburgo**	150.39	162	⇓*i*P	PKPdf	04 19 17.7	+10
CAM4				*i*		04 19 19.4	
CAM4				*i*		04 19 42.7	
CAM4				*i*		04 19 55.5	
DBIC	**Dimbokro**	151.92	273	PKPbc	PKPdf	04 19 18.6	+8.6
	comp=Z,7.0nm,1.0s,baz=157,slow=20,SNR=5.7						
DBIC				PKPab	PKPab	04 19 28.0	-0.5
	comp=Z,7.0nm,1.1s,baz=80,slow=8.6,SNR=4.3						
DBIC				pPKPbc		04 19 49.2	
	comp=Z,14nm,0.8s,baz=85,slow=4.1,SNR=7.5						
DBIC	**Dimbokro**	151.92	273	PKPbc	PKPdf	04 19 18.6	+8.6
DBIC				PKPab	PKPab	04 19 28.0	-0.5
DBIC				pPKPbc		04 19 49.2	
BDFB	**Brasilia**	153.96	146	PKP	PKPdf	04 19 16.3	+3.6
	comp=Z,6.0nm,0.8s,baz=54,slow=1.6,SNR=7.3						
BDFB				PKPbc	PKPdf	04 19 23.3	+11
	comp=Z,9.5nm,0.6s,baz=307,slow=1.5,SNR=14						
BDFB				pPKPbc		04 19 54.6	
	comp=Z,4.7nm,0.5s,baz=183,slow=4.6,SNR=3.5						
BDFB	**Brasilia**	153.96	146	PKIKP	PKPdf	04 19 16.3	+3.6
BDFB						04 19 54.7	
BAO	**Brasilia Array**	153.98	146	P	PKPdf	04 19 17.0	+4.3

NNC 26 04:35:53.1±6.8**,36.86N×71.52E,h182^{km}**±131^{km}**,mpv3.2, 1C-3D,Error ellipse: s-maj=74.9km s-min=42.6km az=21.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	6.21	21	⇑P	P	04 37 23.6	0.0
	0.8nm,0.5s						
AAK				⇓S	S	04 38 34.0	0.0
	14nm,1.8s						
KK31	**Karatay Array**	6.29	353	⇓P	P	04 37 23.1	-1.6
	1.0nm,0.4s,baz=169,slow=12,SNR=5.9						
KK31				⇓S	S	04 38 36.2	+0.3
	3.8nm,0.8s,baz=160,slow=20,SNR=5.2						
AB31	**Akbulak array**	14.98	329	P	P	04 39 15.8	-1.0
	0.2nm,0.3s,baz=167,slow=7.6,SNR=7.4						

BJI ***26*** *04:51:08.3,34.09N×24.39E,h44^{km},mB5.1,mb4.9,Ms4.9, Msz4.6*

MOS ***26*** *04:51:12.5±1.2,34.44N×25.15E,h30^{km},mb4.6/17,Error ellipse: s-maj=6.5km s-min=3.4km az=111.0*

HLW ***26*** *04:51:12.0,35.01N×25.25E,h33^{km},Mb4.6*

CSEM ***26*** *04:51:14.4±0.0,34.62N×25.33E,h40^{km},mb4.6/16,Ms3.3, Error ellipse: s-maj=1.9km s-min=0.8km az=39.0*

ATH ***26*** *04:51:17.8,34.73N×25.21E,h44^{km}±2^{km},MD4.2/16, ML4.5*

NEIC ***26*** *04:51:17.8,34.73N×25.21E,h44^{km},mb4.5/28, MD4.2(ATH),After ATH.*

IDC ***26*** *04:51:19.1±1.4,34.89N×25.13E,h54^{km}±7^{km},mb4.0/17, mb1 4.1/23,mb1mx4.0/31,mbtmp4.2/23,MS3.6/9, Ms1 3.6/9,ms1mx3.4/27,Error ellipse: s-maj=20.9km s-min=11.9km az=165.0*

ISC 26 04:51:15.1±0.2**,34.56N**±0.02×**25.26E**±0.02**,h52^{km}**±3^{km}**, n313,**σ1§**24**/339**,mb4.4**/40**,MS3.6**/10**,9C-35D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	**Khrisi**	0.47	49	*e*P	P	04 51 28.0	+1.8
NPS	**Neapolis**	0.76	22	⇑*i*P	P	04 51 31.4	+1.7
NPS				*e*S	S	04 51 40.5	0.0
IDI	**Anoyia**	0.79	337	P	P	04 51 30.8	+0.7
	725nm,0.3s,baz=155,slow=15,SNR=4752						
IDI				S	S	04 51 40.5	-0.7
	1µm,0.3s,baz=252,slow=19,SNR=41						
GVD	**Gavdhos**	1.01	286	⇓*i*P	P	04 51 35.9	+2.7
GVD	**Gavdhos**	1.01	286	*e*Pn	P	04 51 35.9	+2.7
VAM	**Vamos**	1.21	314	⇑*i*P	P	04 51 38.2	+2.2
VAM				*e*S	S	04 51 51.9	+0.3
SANT	**Santorini**	1.81	5	*e*Pn	P	04 51 44.5	0.0
KARP	**Karpathos**	1.84	57	*e*P	P	04 51 48.3	+3.4
KARP				*e*S	S	04 52 09.1	+2.0
KYTH	**Kithira**	2.50	314	*e*P	P	04 51 55.0	+0.7
APE	**Apeiranthos**	2.51	5	PN	P	04 51 53.5	-1.0
APE				SN	S	04 52 26.7	+2.8
APE	**Apeiranthos**	2.51	5	*e*P	P	04 51 54.8	+0.3
APE				*e*S	S	04 52 23.5	-0.4
ARG	**Arkhangelos**	2.86	54	*e*P	P	04 52 02.3	+2.8
VLI	**Veliai**	2.87	319	*e*P	P	04 52 00.3	+0.8
DAT	**Datca**	2.87	40	PN	P	04 52 00.5	+1.0
BODT	**Bodrum**	3.00	33	PN	P	04 52 01.9	+0.5
BDRM	**Kayabasi**	3.06	35	*i* P	P	04 52 03.0	+0.7
BDRM				*i* S	S	04 52 35.2	-2.7
SLUM		3.06	181	⇓P	P	04 52 04.3	+2.0
MLSB	**Milas**	3.41	36	*e*PN	P	04 52 08.2	+1.1
NAIG	**Nisos Aigina**	3.50	336	*e*P	P	04 52 09.0	+0.6
DALT	**Dalyan (Mudla)**	3.52	50	*e*PN	P	04 52 08.8	+0.1
YER	**Yerkesik**	3.55	43	*e*PN	P	04 52 10.8	+1.6
ATH	**Athens Observa**	3.62	340	*e*P	P	04 52 11.4	+1.2
FETY	**Fethiye**	3.74	55	*e*PN	P	04 52 11.9	+0.1
AYDN	**Tasoluk**	3.75	34	*i* P	P	04 52 13.7	+1.7
AYDN				*i* S	S	04 53 04.3	+9.1
ITM	**Ithomi**	3.76	315	*e*P	P	04 52 13.2	+1.1
MGER	**Gerania Oros**	3.78	335	*e*P	P	04 52 13.0	+0.6
MPAR	**Parnis Oros**	3.79	341	*e*P	P	04 52 12.8	+0.3
HMAT	**Matruh**	3.79	155	⇓P	P	04 52 14.5	+2.0
HMAT				S	S	04 52 59.0	+2.8
AKAS	**Kas**	3.92	64	*i* P	P	04 52 14.4	+0.1
AKAS				*i* S	S	04 52 58.8	-0.8
KDAG	**Bornova**	4.16	22	*i* P	P	04 52 15.8	-1.9
KDAG				*i* S	S	04 53 24.8	+19
ELL	**Elmali**	4.37	59	*e*PN	P	04 52 21.4	+0.7
GOLH	**Golhisar**	4.39	51	*i* P	P	04 52 22.1	+1.1
GOLH				*i* S	S	04 53 10.3	-1.2
DENT	**Denizli**	4.41	43	*e*PN	P	04 52 22.8	+1.5
LKR	**Lokris**	4.47	337	*e*P	P	04 52 23.1	+1.0
RLS	**Riolos of Patr**	4.64	320	*e*P	P	04 52 25.7	+1.1
MANT	**Manisa**	4.73	33	*i* P	P	04 52 26.4	+0.6
MANT				*i* S	S	04 53 21.6	+1.6
AKS	**Akhisar**	4.77	25	*e*PN	P	04 52 26.8	+0.5
NEO	**Neokhori**	5.01	342	*e*P	P	04 52 30.7	+1.0
EVR	**Evrytania**	5.15	328	*e*P	P	04 52 32.7	+1.0
BCK	**Bucak**	5.20	55	*e*PN	P	04 52 33.2	+0.9
VLS	**Valsamata**	5.22	315	*e*P	P	04 52 33.6	+1.0
SWA1		5.30	176	⇓P	P	04 52 35.3	+1.7
SWA2		5.31	178	P	P	04 52 35.7	+1.9
EZN	**Ezine**	5.32	9	*e*PN	P	04 52 33.2	-0.8
ISP	**Isparta**	5.36	51	*e*Pn	P	04 52 34.0	-0.5
	41nm,0.8s						
ISP	**Isparta**	5.36	51	*e*P	P	04 52 34.0	-0.5
ISP				pmax	pmax		
	comp=Z,41nm,0.8s						
ISP	**Isparta**	5.36	51	*e*Pn	P	04 52 34.0	-0.5
	comp=Z,41nm,0.8s						
ALT	**Altintas**	5.93	40	*e*PN	P	04 52 42.8	+0.3
ERMK	**Ermenek**	6.57	69	*i* P	P	04 52 50.8	-0.7
ERMK				*i* S	S	04 54 00.4	-5.4
CSS	**Prodhromos**	6.65	84	*e*Pn	P	04 52 52.1	-0.6
CSS				*e*Sn	S	04 54 04.1	-3.8
CSS	**Prodhromos**	6.65	84	*e*Pn	P	04 52 52.1	-0.6
CSS				*e*Sn	S	04 54 04.1	-3.8
KONT	**Konya--Tatoy**	6.65	57	*e*PN	P	04 52 53.4	+0.7
ESKT	**Eskisehir**	6.67	40	*e*PN	P	04 52 52.7	-0.1
HMYD	**Mayadein**	6.68	134	P	P	04 52 52.6	-0.4
HNAT	**Natroun**	6.69	136	⇓P	P	04 52 53.1	-0.1
KEK	**Kerkira**	6.74	321	Pn	P	04 52 51.9	-2.0
SRN	**Sarande**	6.77	323	*e*Pg	P	04 52 52.7	-1.5
KIZT	**Kizilcal**	6.84	49	*e*PN	P	04 52 55.6	+0.3
FYM	**Al Fayyum**	6.90	133	P	P	04 52 55.8	-0.4
FYM				S	S	04 54 11.8	-2.2
AWBH		6.96	152	P	P	04 52 57.7	+0.8
AYT	**Al ‘Ayyat**	6.96	133	P	P	04 52 56.7	-0.2
VAY	**Valandovo**	7.07	343	*e*Pn	P	04 52 56.3	-2.2
IKL	**Isikli**	7.08	74	*e*PN	P	04 52 58.0	-0.6
MMB	**Musomiste**	7.12	351	*e*P	P	04 52 57.5	-1.6
RZN	**Rozhen**	7.13	357	*e*P	P	04 52 59.0	-0.3
BIA	**Bitola**	7.16	335	*e*Pn	P	04 52 58.5	-1.2
KOT	**Kottamia**	7.23	128	⇓P	P	04 53 00.2	-0.5
HSAF	**As Saff**	7.26	131	P	P	04 53 00.6	-0.6
GLL	**Jalalah**	7.39	131	P	P	04 53 02.7	-0.2
HHAG	**Hagoal**	7.39	127	P	P	04 53 02.4	-0.5
MEST	**Erdemli**	7.51	72	*i* P	P	04 53 02.0	-2.6
MEST				*i* S	S	04 54 19.6	-10
HBNS	**Bani Suwayf**	7.55	136	P	P	04 53 05.0	0.0
AMAG	**Maghara**	7.76	118	P	P	04 53 06.1	-1.9
HFRF	**Wahat Farafira**	7.84	160	P	P	04 53 10.2	+1.1
MERS	**Mersin**	7.88	70	*e*PN	P	04 53 10.1	+0.5
SUZ		7.96	124	P	P	04 53 10.2	-0.5
SKO	**Skopje**	7.98	339	*e*Pn	P	04 53 17.8	+6.7
ANTO	**Ankara**	8.01	46	*e*Pn	P	04 53 11.2	-0.2
ANTO	**Ankara**	8.01	46	⇓P	P	04 53 12.1	+0.7
ANTO	**Ankara**	8.01	46	*e*Pn	P	04 53 11.2	-0.2
PGB	**Panagyurishte**	8.02	354	*e*P	P	04 53 18.0	+6.4
LCI	**Lecce**	8.09	317	P	P	04 53 10.0	-2.6
LCI				pmax	pmax		
	comp=Z,20nm,0.3s						
LCI	**Lecce**	8.09	317	Pn	P	04 53 10.0	-2.6
	comp=Z,20nm,0.3s						
ZAF		8.13	128	P	P	04 53 12.7	-0.4
VTS	**Vitosha**	8.18	349	*e*P	P	04 53 21.0	+7.3
SOI	**Samo**	8.21	298	Pn	P	04 53 13.1	-1.2
GRI	**Girifalco**	8.28	303	P	P	04 53 13.9	-1.2
GRI				pmax	pmax		
	comp=Z,9µm,0.1s						
GRI	**Girifalco**	8.28	303	Pn	P	04 53 13.9	-1.2
	comp=Z,9µm,0.1s						
ZNM		8.28	127	P	P	04 53 14.6	-0.5
HAF	**Haifa**	8.33	100	P	P	04 53 15.8	-0.1
OFRI	**‘Ofer**	8.34	101	P	P	04 53 14.6	-1.4
HNTI	**Hanita**	8.38	97	P	P	04 53 15.6	-0.9
KARA	**Karaisali**	8.39	68	*e*PN	P	04 53 16.7	0.0
CEL	**Celeste**	8.40	299	Pn	P	04 53 15.4	-1.5
BR131	**Keskin Array S**	8.44	50	*e*Pn	P	04 53 16.9	-0.5
BRTR	**Keskin Array B**	8.44	50	P	P	04 53 17.1	-0.3
	comp=Z,0.3nm,0.3s,baz=234,slow=13,SNR=17						
BRTR				S	S	04 54 50.7	-1.6
	comp=Z,0.3nm,0.3s,baz=210,slow=24,SNR=3.1						
KZIT	**Kziot**	8.51	113	P	P	04 53 16.9	-1.5
KZIT				S	S	04 54 46.2	-7.9
AGST	**Augusta-Monte**	8.57	291	Pn	P	04 53 16.5	-2.7
PUK	**Puka**	8.58	332	*e*Pn	P	04 53 15.8	-3.5
BHL	**Bhannes**	8.63	91	*e*Pn	P	04 53 21.6	+1.6
RTMM	**Retamin**	8.67	111	P	P	04 53 18.9	-1.6
HNKL	**Nakhl**	8.71	120	P	P	04 53 19.8	-1.2
HNKL				S	S	04 54 53.2	-5.7
PZI	**Palazzolo**	8.74	290	Pn	P	04 53 19.2	-2.3
MMLI	**Mount Malkishu**	8.74	101	P	P	04 53 20.5	-1.1
KSDI	**Kefar Szold**	8.75	96	P	P	04 53 19.5	-2.2
MASH	**Mash‘abbe Sade**	8.77	111	P	P	04 53 20.1	-1.8
HWQ	**Hawqa**	8.83	89	*e*Pn	P	04 53 22.3	-0.5
ARNB	**Al Arnab**	8.86	79	⇓*i*P	P	04 53 23.1	-0.1
ORI	**Oriolo Calabro**	8.91	311	P	P	04 53 21.8	-2.0
ORI				pmax	pmax		
	comp=Z,77nm,1.2s						
ORI	**Oriolo Calabro**	8.91	311	Pn	P	04 53 21.8	-2.0
	comp=Z,77nm,1.2s						
BRBR	**Barbar**	8.95	94	⇓*i*P	P	04 53 23.6	-0.8
BRBR				⇓*i*S	rx	04 54 25.2	
BRT	**Bari-Castellan**	8.97	317	P	P	04 53 21.4	-3.3
BRT				pmax	pmax		
	comp=Z,23nm,0.4s						
BRT	**Bari-Castellan**	8.97	317	Pn	P	04 53 21.4	-3.3
	comp=Z,23nm,0.4s						
GRB	**Gharib**	8.98	132	P	P	04 53 24.5	-0.3
SLNF	**Slenfeh**	9.04	80	⇓*i*P	P	04 53 24.5	-1.2
SLNF				⇓*i*S	rx	04 54 28.5	
MZDA	**Masada**	9.09	108	P	P	04 53 25.4	-0.9
BIDA	**Albida**	9.11	84	⇓*i*P	P	04 53 25.4	-1.2
BIDA				⇓*i*S	rx	04 54 29.7	
TCHB	**Talchebab**	9.13	99	⇓*i*P	P	04 53 26.4	-0.4
TCHB				⇓*i*S	rx	04 54 30.8	
WRDH	**Warideh**	9.19	81	⇓*i*P	P	04 53 26.4	-1.3
WRDH				⇓*i*S	rx	04 54 31.8	
QASN	**Qassioun**	9.20	93	⇑*i*P	P	04 53 26.5	-1.3
QASN				⇑*i*S	rx	04 54 32.5	
MKRJ	**Makawir**	9.21	106	P	P	04 53 27.3	-0.7
PRNI	**Paran**	9.24	114	P	P	04 53 27.6	-0.8
PRNI				S	S	04 55 03.3	-8.7
VAE	**Valguarnera**	9.26	291	P	P	04 53 28.5	-0.2
	comp=Z,1.3nm,0.3s,baz=84,slow=9.2,SNR=4.9						
VAE				S	S	04 55 08.2	-4.2
	comp=Z,3.0nm,0.3s,baz=125,slow=16,SNR=2.8						
BTCH	**Batrach**	9.27	78	⇓*i*P	P	04 53 29.0	+0.2
ZFRI	**Zfri**	9.27	113	P	P	04 53 27.7	-1.1
MBH	**Mount Berech**	9.46	118	P	P	04 53 31.0	-0.4
DRWC	**Darouich**	9.51	74	⇓*i*P	P	04 53 32.9	+0.8
EIL	**Elat**	9.55	118	P	P	04 53 32.2	-0.5
HKAT	**Jabal Katrina**	9.57	127	P	P	04 53 32.7	-0.3
AQBJ	**Aqaba**	9.59	117	P	P	04 53 32.6	-0.7
SLCN	**Sala Consilina**	9.61	310	Pn	P	04 53 32.0	-1.4
HBST	**Basata**	9.65	121	P	P	04 53 33.2	-0.8
HDK1	**Dakhla**	9.68	157	P	P	04 53 35.0	+0.6
SALA	**Sala**	9.74	98	⇓*i*P	P	04 53 35.0	-0.3
SALA				⇓*i*S	rx	04 54 45.6	
ALWS	**Ilw as Safayha**	9.84	119	P	P	04 53 37.1	+0.5
HDHB	**Dhahab**	9.87	124	P	P	04 53 36.5	-0.6
HAQS	**Haql**	9.89	121	P	P	04 53 37.0	-0.3
TR1		9.89	129	P	P	04 53 36.8	-0.6
SGO	**Sicignano**	9.91	310	P	P	04 53 35.2	-2.4
SGO				pmax	pmax		
	comp=Z,252nm,2.5s						
SGO	**Sicignano**	9.91	310	Pn	P	04 53 35.2	-2.4
	comp=Z,252nm,2.5s						
JMOS	**Jabal al Moall**	9.95	120	P	P	04 53 38.4	+0.2
AKRG	**Al Kharijah**	10.10	152	P	P	04 53 41.1	+0.9
GTR	**Jabal at Tayr**	10.12	152	⇓P	P	04 53 41.0	+0.5
TIRR	**Tirgusor**	10.18	13	⇓P	P	04 53 41.0	-0.2
HHRG	**Al Ghardaqah**	10.22	134	P	P	04 53 41.5	-0.3
BDAS	**Al Bad‘**	10.38	123	P	P	04 53 43.0	-1.1
RGNG	**Rignano Grg**	10.41	316	Pn	P	04 53 40.6	-3.8
AYUS	**‘Aynunah**	10.65	124	P	P	04 53 46.6	-1.1
CFR	**Carcaliu**	10.83	11	⇓P	P	04 53 55.6	+5.5
CFR	**Carcaliu**	10.83	11	⇓P	P	04 53 55.6	+5.6
MLR	**Muntele Rosu**	10.93	3	P	P	04 53 49.4	-2.0
	comp=Z,0.3nm,0.3s,baz=204,slow=7.7,SNR=4.5						
MLR				LR	LR	04 58 31.1	
	comp=Z,358nm,19.1s,baz=179,slow=41						
MLR	**Muntele Rosu**	10.93	3	⇑P	P	04 53 50.4	-1.0
MLR	**Muntele Rosu**	10.93	3	⇑P	P	04 53 50.4	-1.0
SGG	**Gregorio Mates**	10.96	312	Pn	P	04 53 49.1	-2.7
TBKS	**Tabuk**	11.52	120	P	P	04 54 00.6	+1.1
HEDF	**Idfu**	11.67	142	P	P	04 54 01.4	-0.1
HQSR		11.80	136	P	P	04 54 03.1	-0.1
HADB		12.25	136	P	P	04 54 10.2	+0.9
DRGR		12.37	352	⇓P	P	04 54 13.9	+3.1
DRGR		12.37	352	⇓P	P	04 54 13.9	+3.2
AAHD	**Abu Hadid**	12.60	147	P	P	04 54 15.0	+1.0
BURAR	**Bucovina Array**	13.04	360	⇑P	P	04 54 25.0	+5.3
BURAR	**Bucovina Array**	13.04	360	⇑P	P	04 54 25.0	+5.3
PSZ	**Piszkesteto**	13.94	345	P	P	04 54 32.1	+0.8
PSZ	**Piszkesteto**	13.94	345	P	P	04 54 32.1	+0.8
UMJS	**Umm Lajj**	13.98	128	P	P	04 54 33.1	+1.1
SOC	**Sochi**	14.38	47	*e*P	P	04 54 43.1	+5.9
SOC				*e*		04 57 28.8	
SOC				pmax	pmax		
	comp=Z,61nm,1.3s						
KOLS	**Kolonicke sedl**	14.53	352	*e*P	P	04 54 44.2	+5.1
ARSA	**Arzberg**	14.64	333	⇓*i*Pn	P	04 54 46.9	+6.3
	comp=Z,3.6nm,0.4s						
STHS	**Stebnicka Huta**	15.14	350	*e*PN	P	04 54 46.1	-0.9
KBA	**Koelnbreinsper**	15.39	328	⇓*i*Pn	P	04 54 55.4	+5.1
	comp=Z,7.1nm,0.8s						
VRAC	**Vranov**	16.07	339	P	P	04 54 57.3	-1.6
	comp=Z,0.2nm,0.3s,baz=132,slow=15,SNR=4.0						
VRAC				LR	LR	05 00 43.3	
	comp=Z,165nm,20.2s,baz=318,slow=36						
AKASG	**Malin Array Be**	16.39	9	P	P	04 55 02.6	-0.3
	comp=Z,11nm,0.3s,baz=200,slow=11,SNR=70						
KIV	**Kislovodsk**	16.41	50	*e*Pn	P	04 55 04.2	+1.0
	comp=Z,56nm,1.0s						
KIV				*e*P		04 55 06.7	
KIV	**Kislovodsk**	16.41	50	*c**e*P	P	04 55 07.3	+4.1
KIV				pmax	pmax		
	comp=Z,66nm,1.2s						
KIV				MLR	MLR		
	comp=Z,100nm,16.0s						
KIV	**Kislovodsk**	16.41	50	*e*Pn	P	04 55 04.2	+1.0
	comp=Z,56nm,1.0s						
KIV	**Kislovodsk**	16.41	50	*e*P	P	04 55 06.7	+3.5
GNI	**Garni**	16.45	64	⇑*e*P	P	04 55 07.8	+4.0
GNI				pmax	pmax		
	comp=Z,13nm,1.7s						
GNI				MLR	MLR		
	comp=Z,200nm,19.0s						
SQTA	**Sankt Quirin**	16.48	324	⇓*e*Pn	P	04 55 07.5	+3.4
	comp=Z,6.6nm,0.8s						
SBF	**Sospel**	16.62	309	*e*P	P	04 55 05.8	0.0
MOTA	**Moosalm**	16.62	324	⇓*e*Pn	P	04 55 00.6	-5.2
	comp=Z,3.3nm,0.6s						
GEC2	**GERESS Array S**	16.65	332	*e*P	P	04 55 08.9	+2.7
GERES	**GERESS Array B**	16.65	332	P	P	04 55 05.0	-1.1
	comp=Z,0.9nm,0.3s,baz=147,slow=12,SNR=31						
DAVOX	**Davos**	16.85	321	P	P	04 55 10.2	+1.5
	comp=Z,0.3nm,0.3s,baz=138,slow=18,SNR=4.8						
KHC	**Kasperske Hory**	16.93	333	*e*P	P	04 55 12.3	+2.6
KHC				pP		04 55 20.5	
KHC				x	x	04 55 34.5	
KHC	**Kasperske Hory**	16.93	333	*e*P	P	04 55 13.7	+4.0
DPC	**Dobruska-Polom**	17.08	340	*e*P	P	04 55 13.8	+2.2
GOF	**Gofitskoye**	17.18	47	*e*P	P	04 55 14.0	+1.2
DAVA	**Damuels**	17.18	322	⇓*e*Pn	P	04 55 14.8	+1.9
	comp=Z,19nm,1.4s						
WET	**Wettzell**	17.21	332	*e*P	P	04 55 14.6	+1.4
MBDF	**Montbardon**	17.45	311	*e*P	P	04 55 16.0	-0.3
LPG	**La Plagne**	17.85	313	*e*P	P	04 55 21.5	+0.2
LPL	**La Plagne**	17.87	313	*e*P	P	04 55 21.6	+0.1
BRG	**Berggiesshubel**	18.26	337	*e*P	P	04 55 26.0	-0.3
	comp=Z,4.7nm,0.8s						
BRG	**Berggiesshubel**	18.26	337	*e*P	P	04 55 26.0	-0.3
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRG	**Berggiesshubel**	18.26	337	*e*P	P	04 55 26.0	-0.3
	comp=Z,4.7nm,0.8s						
GRA1	**Grafenberg Arr**	18.31	330	*e*P	P	04 55 27.0	+0.1
GRF	**Grafenberg Arr**	18.31	330	*e*P	P	04 55 27.0	+0.1
BFO	**Black Forest**	18.66	323	*e*P	P	04 55 29.9	-1.2
CABF	**La Chapelle**	18.84	315	*e*P	P	04 55 32.4	-0.8
	comp=Z,40nm,1.1s						
CABF	**La Chapelle**	18.84	315	*e*P	P	04 55 32.4	-0.8
CABF				pmax	pmax		
	comp=Z,20nm,1.1s						
MOX	**Moxa**	18.90	332	*i* P	P	04 55 32.7	-1.2
MOX				S	S	04 59 17.0	+18
MOX	**Moxa**	18.90	332	*e*P	P	04 55 32.7	-1.2
MOX				*e*S	S	04 59 17.6	+18
CLL	**Collm**	18.95	336	P	P	04 55 34.0	-0.4
HINF	**Hinteralfeld**	19.10	319	*e*P	P	04 55 34.4	-1.8
	comp=Z,6.5nm,0.5s						
HINF	**Hinteralfeld**	19.10	319	*e*P	P	04 55 34.4	-1.8
HINF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CDF	**Champ du Feu**	19.25	321	*e*P	P	04 55 36.5	-1.3
	comp=Z,24nm,0.8s						
CDF	**Champ du Feu**	19.25	321	*e*P	P	04 55 36.5	-1.3
CDF				pmax	pmax		
	comp=Z,12nm,0.8s						
MIB	**Mutribah**	19.27	98	*e*P	P	04 55 39.9	+1.7
MIB				AMb	AMB	04 55 41.2	
	comp=Z,30nm,0.4s						
NAY	**Al-Naaiem**	19.39	100	*e*P	P	04 55 42.0	+2.6
NAY				AMb	AMB	04 55 43.0	
	comp=Z,21nm,0.4s						
HAU	**Haudompre**	19.49	319	*e*P	P	04 55 39.1	-1.3
	comp=Z,12nm,0.5s						
HAU				*e*R			
	comp=Z,206nm,17.5s						
UMR	**Umm Al-Rimmam**	19.66	99	*e*P	P	04 55 44.2	+1.8
UMR				AMb	AMB	04 55 45.7	
	comp=Z,89nm,0.5s						
TNS	**Taunus Mts**	19.90	327	*e*P	P	04 55 43.3	-1.6
TNS				pmax	pmax		
	comp=Z,83nm,2.1s						
TNS	**Taunus Mts**	19.90	327	*e*P	P	04 55 43.3	-1.6
	comp=Z,83nm,2.1s						
TNS				*e*S	S	04 59 34.5	+14
SMF	**Signal de Mont**	20.18	313	*e*P	P	04 55 46.0	-1.8
CLZ	**Clausthal**	20.33	333	*e*P	P	04 55 49.3	0.0
CLZ				*e*S	S	04 59 48.1	+19
VRHR	**Novokhopersk**	20.34	31	*e*P	P	04 55 48.5	-1.0
VRHR				pmax	pmax		
	comp=Z,20nm,0.3s						
VRHR				pmax	pmax		
	comp=N,3.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,8.0nm,0.5s						
MEZF	**Maizieres J’vi**	20.48	319	*e*P	P	04 55 50.1	-0.8
	comp=E,28nm,0.7s						
LOR	**Lormes**	20.48	315	*e*P	P	04 55 49.8	-1.1
LOR				*e*R			
	comp=E,233nm,19.7s						
AVF	**Avril sur Loir**	20.54	313	*e*P	P	04 55 50.1	-1.5
CAF	**Calviac**	20.56	307	*e*P	P	04 55 52.2	+0.5
SSF	**Saint Saulge**	20.58	314	*e*P	P	04 55 51.4	-0.6
SSF				pmax	pmax		
	comp=Z,13nm,1.0s						
SSF	**Saint Saulge**	20.58	314	*e*P	P	04 55 51.4	-0.6
	comp=Z,13nm,1.0s						
WLF	**Walferdange**	20.62	323	*e*P	P	04 55 51.2	-1.1
	comp=Z,18nm,0.9s						
WLF	**Walferdange**	20.62	323	*e*P	P	04 55 51.2	-1.1
WLF				pmax	pmax		
	comp=Z,18nm,0.9s						
WLF	**Walferdange**	20.62	323	*e*P	P	04 55 51.2	-1.1
	comp=Z,18nm,0.9s						

BGF	**Bois d'Agland**	**20.74**	**312**	*e*P	**P**	**04 55 53.8**	**+0.2**
	comp=Z,63nm,1.2s						
BGF	**Bois d'Agland**	**20.74**	**312**	*e*P	**P**	**04 55 53.8**	**+0.2**
BGF				pmax	pmax		
	comp=Z,32nm,1.2s						
RJF	**Les Rejaudoux**	**21.06**	**308**	*e*P	**P**	**04 55 57.6**	**+0.7**
RJF				*e*R			
	comp=Z,197nm,18.0s						
LFF	**La Frestale**	**21.44**	**306**	*e*P	**P**	**04 56 01.7**	**+1.0**
GIVF	**Givet**	**21.56**	**322**	*e*P	**P**	**04 56 01.2**	**-0.6**
BAIF	**Baives**	**21.85**	**322**	*e*P	**P**	**04 56 04.1**	**-0.6**
	comp=Z,27nm,0.8s,mb4.5						
BAIF	**Baives**	**21.85**	**322**	*e*P	**P**	**04 56 04.1**	**-0.6**
BAIF				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.4						
OBN	**Obninsk**	**22.00**	**17**	⇑*i*P	**P**	**04 56 06.9**	**+0.7**
OBN				*e*		04 56 14.8	
OBN				*e*		04 56 19.1	
OBN				*e*		04 56 33.0	
OBN				pmax	pmax		
	comp=Z,47nm,1.7s,mb4.6						
OBN				MLR	MLR		
	comp=Z,200nm,18.0s,MS3.6						
OBN	**Obninsk**	**22.00**	**17**	*e*P	**P**	**04 56 06.4**	**+0.2**
	comp=Z,14nm,0.4s,mb4.7						
MFF	**Saint Martin d**	**22.63**	**310**	*e*P	**P**	**04 56 14.5**	**+2.1**
MOS	**Moscow**	**22.83**	**18**	*e*P	**P**	**04 56 11.7**	**-2.6**
MOS				pmax	pmax		
	comp=Z,39nm,0.6s,mb5.0						
LDF	**La Druitiere**	**23.46**	**314**	*e*P	**P**	**04 56 21.3**	**+0.8**
FLN	**La Foliniere**	**23.75**	**314**	*e*P	**P**	**04 56 24.1**	**+0.8**
	comp=Z,11nm,0.4s,mb4.3						
FLN				*e*R			
	comp=Z,249nm,21.2s						
FLN	**La Foliniere**	**23.75**	**314**	*e*P	**P**	**04 56 24.1**	**+0.8**
FLN				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.4						
FLN				MLR	MLR		
	comp=Z,250nm,21.3s,MS3.6						
ESDC	**Sonseca Array**	**23.80**	**291**	P	**P**	**04 56 25.5**	**+1.6**
	comp=Z,0.8nm,0.4s,mb3.5,baz=82,slow=9.8,SNR=7.7						
GRR	**Gorron**	**23.81**	**313**	*e*P	**P**	**04 56 25.1**	**+1.3**
SGMF	**Saint Gilles**	**24.79**	**312**	*e*P	**P**	**04 56 34.0**	**+0.7**
MDT	**Midelt**	**24.88**	**274**	P	**P**	**04 56 35.6**	**+1.2**
	comp=Z,0.8nm,0.3s,mb3.7,baz=70,slow=15,SNR=1.5						
QUIF	**Quistinic**	**25.03**	**311**	*e*P	**P**	**04 56 36.6**	**+0.9**
ROSF	**Rostrenen**	**25.26**	**312**	*e*P	**P**	**04 56 37.9**	**+0.1**
HFS	**Hagfors**	**26.68**	**347**	P	**P**	**04 56 48.2**	**-2.7**
	comp=Z,1.6nm,0.5s,mb3.9,baz=135,slow=8.4,SNR=12						
HFS				LR	LR	05 07 16.7	
	comp=Z,268nm,18.7s,MS3.8,baz=0.7,slow=36						
FINES	**FINESS Array B**	**26.90**	**1**	P	**P**	**04 56 50.5**	**-2.4**
	comp=Z,3.7nm,0.3s,mb4.3,baz=159,slow=11,SNR=92						
FINES				LR	LR	05 08 17.0	
	comp=Z,133nm,19.8s,MS3.5,baz=147,slow=38						
EVO	**Evora**	**26.94**	**288**	*e*P	**P**	**04 56 57.1**	**+3.6**
	comp=Z,57nm,1.3s,mb4.6						
KAF	**Kangasniemi**	**27.58**	**1**	*e*p	**P**	**04 56 52.7**	**-6.4**
	comp=Z,3.4nm,0.7s,mb4.1						
KAF	**Kangasniemi**	**27.58**	**1**	*e*P	**P**	**04 56 52.7**	**-6.4**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.0						
NOA	**NORSAR Array B**	**28.00**	**345**	P	**P**	**04 57 00.4**	**-2.5**
	comp=Z,0.6nm,0.5s,mb3.5,baz=149,slow=7.8,SNR=3.8						
NOA				LR	LR	05 08 03.9	
	comp=Z,84nm,19.0s,MS3.4,baz=270,slow=36						
EKA	**Eskdalemuir Ar**	**28.58**	**325**	P	**P**	**04 57 07.5**	**-0.6**
	comp=Z,2.8nm,0.4s,mb4.3,baz=112,slow=11,SNR=18						
AKTK	**Aktyubinsk**	**28.60**	**46**	P	**P**	**04 57 08.2**	**-0.2**
AKTK				LR	LR	05 11 52.1	
AKTK	**Aktyubinsk**	**28.60**	**46**	P	**P**	**04 57 08.2**	**-0.2**
AKTO	**Aktyubinsk**	**28.60**	**46**	P	**P**	**04 57 08.2**	**-0.2**
	comp=Z,6.4nm,0.6s,mb4.5,baz=252,slow=8.9,SNR=16						
AKTO				LR	LR	05 11 52.1	
	comp=Z,62nm,19.6s,MS3.2,slow=43						
AKTO	**Aktyubinsk**	**28.60**	**46**	P	**P**	**04 57 08.2**	**-0.2**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
AKTO				MLR	MLR		
	comp=Z,62nm,19.6s,MS3.2						
JOF	**Joensuu**	**28.63**	**6**	*e*p	**P**	**04 57 05.2**	**-3.3**
	comp=Z,3.2nm,0.7s,mb4.2						
ARU	**Arti**	**31.49**	**36**	*e*P	**P**	**04 57 34.5**	**+0.6**
	comp=Z,8.6nm,0.6s,mb4.8						
ARU	**Arti**	**31.49**	**36**	⇓*i*P	**P**	**04 57 33.5**	**-0.4**
ARU				*e*		04 58 34.1	
ARU				*e*		05 00 23.5	
ARU				*e*S	**S**	**05 02 38.0**	**+0.9**
ARU				*e*SS	SS	05 04 30.6	+2.7
ARU				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
ARU	**Arti**	**31.49**	**36**	*e*P	**P**	**04 57 34.5**	**+0.6**
	comp=Z,8.6nm,0.6s,mb4.8						
ARCES	**ARCESS Array B**	**35.03**	**0**	P	**P**	**04 58 01.8**	**-2.6**
	comp=Z,2.0nm,0.4s,mb4.4,baz=173,slow=9.5,SNR=40						
ARCES				LR	LR	05 13 08.5	
	comp=Z,160nm,19.1s,MS3.8,slow=38						
BRVK	**Borovoye**	**36.65**	**46**	*e*P	**P**	**04 58 19.3**	**+1.0**
	comp=Z,2.0nm,0.9s,mb4.0						
BRVK	**Borovoye**	**36.65**	**46**	*e*P	**P**	**04 58 19.3**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb4.0						
BRVK	**Borovoye**	**36.65**	**46**	*e*P	**P**	**04 58 19.3**	**+1.1**
	comp=Z,2.0nm,0.9s,mb4.0						
BVAR	**Borovoye Array**	**36.70**	**46**	P	**P**	**04 58 19.4**	**+0.7**
	comp=Z,2.6nm,0.9s,mb4.1,baz=256,slow=6.1,SNR=9.8						
KMBO	**Kilima Mbogo**	**37.24**	**160**	LR	LR	05 17 31.3	
	comp=Z,40nm,18.0s,MS3.3,baz=94,slow=42						
AAK	**Ala-Archa**	**38.85**	**63**	⇑*e*P	**P**	**04 58 38.7**	**+2.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.0						
AAK				MLR	MLR		
	comp=Z,300nm,17.0s,MS4.2						
AAK	**Ala-Archa**	**38.85**	**63**	*e*P	**P**	**04 58 38.4**	**+1.7**
	comp=Z,4.4nm,0.9s,mb4.2						
DBIC	**Dimbokro**	**39.26**	**232**	P	**P**	**04 58 42.5**	**+2.1**
	comp=Z,2.3nm,0.6s,mb4.1,baz=26,slow=10,SNR=9.6						
DBIC	**Dimbokro**	**39.26**	**232**	*e*P	**P**	**04 58 42.7**	**+2.3**
	comp=Z,2.0nm,0.5s,mb4.1						
DBIC	**Dimbokro**	**39.26**	**232**	*e*P	**P**	**04 58 42.7**	**+2.2**
DBIC				pmax	pmax		
	comp=Z,2.0nm,0.5s						
DBIC	**Dimbokro**	**39.26**	**232**	*e*P	**P**	**04 58 42.7**	**+2.2**
	comp=Z,2.0nm,0.5s,mb4.1						
KURK	**Kurchatov**	**41.49**	**50**	*e*P	**P**	**04 58 59.0**	**+0.5**
	comp=Z,7.5nm,0.7s,mb4.4						
KURK	**Kurchatov**	**41.49**	**50**	*c* *i*P	**P**	**04 58 59.8**	**+1.3**
KURK	**Kurchatov**	**41.49**	**50**	*e*P	**P**	**04 58 59.0**	**+0.5**
	comp=Z,7.5nm,0.7s,mb4.4						
MKAR	**Makanchi Array**	**44.03**	**56**	P	**P**	**04 59 20.9**	**+1.6**
	comp=Z,2.1nm,0.4s,mb4.2,baz=266,slow=8.0,SNR=34						
MKAR	**Makanchi Array**	**44.03**	**56**	*i* P	**P**	**04 59 21.1**	**+1.8**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NVS	**Novosibirsk**	**44.45**	**44**	*e*P	**P**	**04 59 22.0**	**-0.5**
NVS				pmax	pmax		
	comp=N,2.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.6						
SUMG	**Summit**	**49.56**	**339**	*e*P	**P**	**05 00 01.7**	**-0.7**
	comp=Z,12nm,1.1s,mb4.8						
LSZ	**Lusaka**	**49.64**	**176**	P	**P**	**05 00 01.4**	**-2.3**
LSZ	**Lusaka**	**49.64**	**176**	P	**P**	**05 00 01.4**	**-2.3**
KOLN	**Koldanda**	**49.79**	**81**	*e*P	**P**	**05 00 07.0**	**+2.3**
GKN	**Gorkha**	**50.54**	**80**	*e*P	**P**	**05 00 12.3**	**+1.8**
	comp=Z,8.2nm,0.4s,mb5.1						
DMN	**Daman**	**51.08**	**80**	*e*P	**P**	**05 00 16.6**	**+2.1**
	comp=Z,18nm,0.8s,mb5.1						
KKN	**Kakani**	**51.15**	**80**	*e*P	**P**	**05 00 16.4**	**+1.3**
	comp=Z,8.1nm,0.4s,mb5.0						
PKI	**Pulchoki**	**51.34**	**80**	*e*P	**P**	**05 00 17.8**	**+1.3**
	comp=Z,15nm,0.9s,mb4.9						
PKI	**Pulchoki**	**51.34**	**80**	*e*P	**P**	**05 00 17.8**	**+1.3**
PKI				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
GUN	**Gumba**	**51.59**	**80**	*e*P	**P**	**05 00 20.4**	**+2.0**
	comp=Z,18nm,0.7s,mb5.1						
JIRN	**Jiri**	**51.94**	**80**	*e*P	**P**	**05 00 22.3**	**+1.3**
	comp=Z,9.9nm,0.6s,mb4.9						
LBTB	**Lobatse**	**59.25**	**180**	P	**P**	**05 01 11.1**	**-2.6**
LBTB	**Lobatse**	**59.25**	**180**	P	**P**	**05 01 11.1**	**-2.6**
SONM	**Songino Array**	**59.80**	**50**	P	**P**	**05 01 18.8**	**+1.6**
	comp=Z,4.0nm,0.5s,mb4.7,baz=285,slow=7.4,SNR=16						
ULN	**Ulaanbaatar**	**60.21**	**50**	*e*P	**P**	**05 01 20.7**	**+0.8**
	comp=Z,7.4nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**60.21**	**50**	*e*P	**P**	**05 01 20.7**	**+0.7**
ULN				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
ULN	**Ulaanbaatar**	**60.21**	**50**	*e*P	**P**	**05 01 20.7**	**+0.7**
	comp=Z,7.4nm,0.7s,mb4.8						
TIXI	**Tiksi**	**61.70**	**20**	⇓*i*P	**P**	**05 01 28.9**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.5						
BOSA	**Boshof**	**62.83**	**180**	LR	LR	05 32 01.3	
	comp=Z,70nm,19.8s,MS3.8,baz=204,slow=39						
SCHQ	**Schefferville**	**63.70**	**320**	P	**P**	**05 01 44.0**	**+0.9**
	comp=Z,2.7nm,0.4s,mb4.7,baz=81,slow=2.6,SNR=17						
SCHQ	**Schefferville**	**63.70**	**320**	P	**P**	**05 01 41.7**	**-1.4**
RES	**Resolute Bay**	**64.27**	**345**	*e*P	**P**	**05 01 46.6**	**+0.1**
RES				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
RES	**Resolute Bay**	**64.27**	**345**	*e*P	**P**	**05 01 46.6**	**+0.1**
	comp=Z,3.2nm,0.8s,mb4.4						
INK	**Inuvik**	**76.22**	**352**	P	**P**	**05 02 59.5**	**+0.5**
	comp=Z,1.4nm,0.7s,mb4.0,baz=31,slow=6.7,SNR=3.4						
INK	**Inuvik**	**76.22**	**352**	P	**P**	**05 02 59.5**	**+0.5**
SSE	**Sheshan**	**77.46**	**61**	P	**P**	**05 03 06.3**	**-0.5**
SSE				AMB	AMB		
	comp=Z,40nm,1.2s,mb5.2						
SSE				AMB	AMB		
	comp=Z,240nm,6.6s						
SSE	**Sheshan**	**77.46**	**61**	P	**P**	**05 03 06.2**	**-0.6**
	comp=Z,42nm,1.2s,mb5.2						
YKA	**Yellowknife Ar**	**78.04**	**342**	P	**P**	**05 03 09.7**	**+0.4**
	comp=Z,1.3nm,0.7s,mb4.0,baz=30,slow=5.1,SNR=5.7						
YKA	**Yellowknife Ar**	**78.04**	**342**	P	**P**	**05 03 09.7**	**+0.4**
IMA2	**Indian Mountai**	**79.69**	**360**	P	**P**	**05 03 17.9**	**-0.3**
IMA2	**Indian Mountai**	**79.69**	**360**	P	**P**	**05 03 17.9**	**-0.3**
ILAR	**Eielson Array**	**80.80**	**357**	P	**P**	**05 03 25.6**	**+1.5**
	comp=Z,0.6nm,0.7s,mb3.6,baz=346,slow=4.1,SNR=7.5						
ILAR	**Eielson Array**	**80.80**	**357**	P	**P**	**05 03 25.6**	**+1.4**
MJAR	**Matsushiro Arr**	**85.66**	**48**	P	**P**	**05 03 51.8**	**+2.4**
	comp=Z,1.2nm,0.6s,mb4.3,baz=291,slow=5.4,SNR=4.3						

BJI ***26*** *04:55:36.6,29.64N×115.66E,h10^{km},mB4.7,mb4.6,*
ML5.3,Ms4.7,Msz4.2

IDC ***26*** *04:55:38.0±0.6,29.64N×115.47E,mb4.3/21,mb1 4.4/23,*
mb1mx4.4/28,mbtmp4.3/23,ML4.1/2,MS3.8/14,Ms1 3.8/14,
ms1mx3.7/21,Error ellipse: s-maj=19.1km s-min=14.2km
az=45.0

NEIC ***26*** *04:55:38.6±1.5,29.66N×115.62E,h6^{km}±10^{km},mb4.6/20,*
Error ellipse: s-maj=6.4km s-min=5.4km az=192.0

MOS ***26*** *04:55:40.7±1.1,29.66N×115.53E,h33^{km},mb4.8/12,Error*
ellipse: s-maj=11.7km s-min=8.2km az=121.0

ISC 26 04:55:37.2±0.3**,29.68N**±0.03×**115.61E**±0.03**,h10^{km},n110,**
σ1^{s}19/133**,mb4.5**/37**,MS3.9**/17**,10C,Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WHN	**Wuhan**	**1.40**	**309**	PG	**Pg**	**04 56 06.0**	**+0.8**
WHN				SG	**Sg**	**04 56 25.0**	**+1.2**
WHN				Smax			
	comp=N,61μm,0.8s						
WHN				Smax			
	comp=E,44μm,0.6s						
NJ2	**Nanjing**	**3.66**	**49**	*e*P	**Pn**	**04 56 33.5**	**-1.6**
NJ2				PG	**Pg**	**04 56 41.5**	**-8.8**
NJ2				SG	**Sg**	**04 57 28.5**	**-11**
NJ2				Smax			
	comp=E,12μm,1.0s						
NJ2				Smax			
	comp=N,18μm,0.7s						
NJ2				LR	LR		
	comp=N,20μm,10.3s						
NJ2				LR	LR		
	comp=E,23μm,9.6s						
NJ2				LR	LR		
	comp=Z,8μm,6.4s						
SSE	**Sheshan**	**5.02**	**72**	Pn	**Pn**	**04 56 47.3**	**-7.2**
SSE				Sn	**Sn**	**04 57 48.3**	**-4.9**
ENH	**Enshi**	**5.35**	**278**	*e*P	**Pn**	**04 56 59.6**	**+0.4**
	comp=Z,0.3nm,0.4s						
QZH	**Quanzhou**	**5.41**	**150**	⇑*i*P	**Pn**	**04 56 57.3**	**-2.6**
QZH				S	**Sn**	**04 57 56.5**	**-6.5**
QZH				Smax			
	comp=N,8μm,0.8s						
QZH				Smax			
	comp=E,10μm,0.8s						
QZH				LR	LR		
	comp=N,16μm,5.1s						
QZH				LR	LR		
	comp=E,31μm,4.8s						
QZH				LR	LR		
	comp=Z,5μm,6.6s						
TIA	**Tai'an**	**6.64**	**11**	P	**Pn**	**04 57 15.5**	**-1.8**
TIA				SG	**Sg**	**04 59 01.5**	**-17**
TIA				Smax			
	comp=N,440nm,0.8s						
TIA				Smax			
	comp=E,510nm,0.8s						
YHNB	**Yeheng**	**7.15**	**133**	*e*P	**Pn**	**04 57 20.1**	**-4.5**
XAN	**Xi'an**	**7.16**	**309**	P	**Pn**	**04 57 23.5**	**-1.2**
XAN				PG	**Pg**	**04 57 47.5**	**-13**
XAN				SG	**Sg**	**04 59 27.3**	**-8.5**
XAN				Smax			
	comp=N,1μm,1.3s						
XAN				Smax			
	comp=E,980nm,1.0s						
NACB	**Ninganchiao**	**7.65**	**134**	*e*P	**Pn**	**04 57 27.7**	**-3.8**
GYA	**Guiyang**	**8.53**	**250**	P	**P**	**04 57 43.8**	**0.0**
GYA				S	**Sn**	**04 59 22.8**	**+1.7**
GYA				Smax			
	comp=N,820nm,1.0s						
GYA				Smax			
	comp=E,430nm,1.2s						
GYA				LR	LR		
	comp=N,2μm,4.8s						
GYA				LR	LR		
	comp=E,3μm,5.2s						
GYA				LR	LR		
	comp=Z,4μm,6.4s						
CD2	**Chengdu**	**10.32**	**280**	⇑*i*P	**P**	**04 58 06.5**	**-2.0**
CD2				PP	PP	04 58 15.3	-1.3
CD2				S	**S**	**05 00 05.8**	**+0.4**
CD2				SS	SS	05 00 20.0	+1.2
CD2				AMB	AMB		
	comp=Z,100nm,0.6s						
CD2				AMB	AMB		
	comp=Z,40nm,9.0s						
CD2				LR	LR		
	comp=E,2μm,6.6s						
CD2				LR	LR		
	comp=Z,2μm,7.8s						
CD2	**Chengdu**	**10.32**	**280**	⇑*i*P	**P**	**04 58 06.5**	**-2.0**
	comp=Z,100nm,0.6s						
CD2				PP	PP	04 58 15.3	-1.3
CD2				S	**S**	**05 00 05.8**	**+0.4**
CD2				SS	SS	05 00 20.0	+1.2
DL2	**Dalian**	**10.46**	**27**	*e*P	**P**	**04 58 13.0**	**+2.6**
DL2				*e*S	**S**	**05 00 11.8**	**+3.1**
DL2				LG1		05 01 00.0	
DL2				LG2		05 01 12.5	
DL2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
DL2				AMB	AMB		
	comp=Z,140nm,5.9s						
DL2				LR	LR		
	comp=N,1μm,11.6s						
DL2				LR	LR		
	comp=E,2μm,13.7s						
DL2				LR	LR		
	comp=Z,850nm,10.8s						
DL2	**Dalian**	**10.46**	**27**	*e*P	**P**	**04 58 13.0**	**+2.6**
	comp=Z,10.0nm,0.9s						
DL2				*e*S	**S**	**05 00 11.8**	**+3.1**
JOW	**Kunigami**	**11.52**	**101**	Pn	**P**	**04 58 25.6**	**+0.7**
	comp=Z,1.6nm,0.3s,baz=289,slow=11,SNR=8.4						
JOW				LR	LR	05 03 03.7	
	comp=Z,278nm,18.9s,baz=262,slow=38						
HHC	**Hu-ho-hao-te**	**11.63**	**345**	*e*P	**P**	**04 58 22.0**	**-4.3**
HHC				AP		04 58 28.8	
HHC				PP	PP	04 58 30.8	-4.6
HHC				XP		04 58 31.8	
HHC				S	**S**	**05 00 29.8**	**-7.4**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.2s						
HHC				AMB	AMB		
	comp=Z,90nm,5.0s						
HHC				LR	LR		
	comp=N,1μm,11.0s						
HHC				LR	LR		
	comp=E,3μm,12.0s						
HHC				LR	LR		
	comp=Z,480nm,12.0s						
HHC	**Hu-ho-hao-te**	**11.63**	**345**	*e*P	**P**	**04 58 22.0**	**-4.3**
	comp=Z,17nm,1.2s						
HHC				pP		04 58 28.8	
HHC				PP	PP	04 58 30.8	-4.6
HHC				sP		04 58 31.8	
HHC				S	**S**	**05 00 29.8**	**-7.4**
LZH	**Lanzhou**	**11.77**	**306**	*e*P	**P**	**04 58 26.5**	**-1.8**
LZH				AP		04 58 29.8	
LZH				XP		04 58 33.0	
LZH				PP	PP	04 58 36.3	-1.4
LZH				*e*S	**S**	**05 00 39.5**	**-1.3**
LZH				XS		05 00 54.3	
LZH				AMB	AMB		
	comp=Z,50nm,1.2s						
LZH				AMB	AMB		
	comp=Z,230nm,4.0s						
LZH				LR	LR		
	comp=N,2μm,5.6s						
LZH				LR	LR		
	comp=Z,4μm,7.5s						
LZH	**Lanzhou**	**11.77**	**306**	*e*P	**P**	**04 58 26.5**	**-1.8**
	comp=Z,59nm,1.2s						
LZH				pP		04 58 29.8	
LZH				sP		04 58 33.0	
LZH				PP	PP	04 58 36.3	-1.4
LZH				*e*S	**S**	**05 00 39.5**	**-1.3**
LZH				sS		05 00 54.3	
LZH	**Lanzhou**	**11.77**	**306**	*e*P	**P**	**04 58 26.5**	**-1.8**
LZH				*e*S	**S**	**05 00 39.5**	**-1.3**
LZH				pmax	pmax		
	comp=Z,59nm,1.2s						
QIZ	**Qiongzhong**	**11.83**	**208**	P	**P**	**04 58 28.8**	**-0.3**
QIZ				S	**S**	**05 00 43.5**	**+1.3**
QIZ				LR	LR		
	comp=E,3μm,13.7s						
KMI	**Kunming**	**12.30**	**251**	⇑P	**P**	**04 58 35.8**	**+0.3**
KMI				PP	PP	04 58 44.8	-0.5
KMI				S	**S**	**05 00 48.5**	**-5.2**
KMI				SS	SS	05 01 02.3	-6.0
KMI				AMB	AMB		
	comp=Z,50nm,0.7s						
KMI				LR	LR		
	comp=N,2μm,8.6s						
KMI				LR	LR		
	comp=E,3μm,8.6s						
KMI				LR	LR		
	comp=Z,3μm,8.6s						
KMI	**Kunming**	**12.30**	**251**	⇑P	**P**	**04 58 35.8**	**+0.3**
	comp=Z,53nm,0.7s						
KMI				PP	PP	04 58 44.8	-0.5
KMI				S	**S**	**05 00 48.5**	**-5.2**
KMI				SS	SS	05 01 02.3	-6.0
KMI	**Kunming**	**12.30**	**251**	⇑P	**P**	**04 58 35.7**	**+0.2**
KMI				S	**S**	**05 00 48.4**	**-5.3**
KMI				pmax	pmax		
	comp=Z,53nm,0.7s						
KS15	**Wonju Array Si**	**12.82**	**50**	*e*P	**P**	**04 58 42.4**	**-0.1**
JNU	**Nakatsue**	**13.48**	**71**	LR	LR	05 03 34.8	
	comp=Z,357nm,19.8s,baz=99,slow=35						
SNY	**Shenyang**	**13.73**	**26**	⇑P	**P**	**04 58 57.3**	**+2.9**
SNY				AP		04 58 59.5	
SNY				XP		04 59 01.5	
SNY				S	**S**	**05 01 35.3**	**+7.3**
SNY				SS	SS	05 01 44.5	+0.6
SNY				AMB	AMB		
	comp=Z,20nm,1.0s						
SNY				AMB	AMB		
	comp=Z,60nm,4.7s						
SNY				LR	LR		
	comp=N,960nm,15.7s						
SNY				LR	LR		
	comp=E,2μm,12.6s						
SNY				LR	LR		
	comp=Z,570nm,10.8s						
SNY	**Shenyang**	**13.73**	**26**	⇑P	**P**	**04 58 57.3**	**+2.9**
	comp=Z,20nm,1.0s						
SNY				pP		04 58 59.5	
SNY				sP		04 59 01.5	
SNY				S	**S**	**05 01 35.3**	**+7.3**
SNY				SS	SS	05 01 44.5	+0.6
CN2	**Changchun**	**16.13**	**26**	*e*P	**P**	**04 59 29.3**	**+3.6**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s						
CN2				LR	LR		
	comp=N,1μm,13.0s						
CN2				LR	LR		
	comp=E,1μm,13.0s						
CN2	**Changchun**	**16.13**	**26**	*e*P	**P**	**04 59 29.3**	**+3.6**
	comp=E,20nm,0.9s						
GTA	**Gaotai**	**16.22**	**311**	*e*P	**P**	**04 59 26.5**	**-0.3**
GTA				AP		04 59 30.5	
GTA				XP		04 59 33.5	
GTA				PP	PP	04 59 40.0	-0.1
GTA				S	**S**	**05 02 25.5**	**-1.1**
GTA				SS	SS	05 02 43.3	-2.7
GTA				AMB	AMB		
	comp=Z,10.0nm,1.5s						
GTA				AMB	AMB		
	comp=Z,90nm,4.9s						
GTA				LR	LR		
	comp=N,2μm,11.4s						
GTA				LR	LR		
	comp=E,910nm,15.6s						
GTA				LR	LR		
	comp=Z,750nm,15.2s						
GTA	**Gaotai**	**16.22**	**311**	*e*P	**P**	**04 59 26.5**	**-0.3**
	comp=Z,18nm,1.5s						
GTA				pP		04 59 30.5	
GTA				sP		04 59 33.5	
GTA				PP	PP	04 59 40.0	-0.1
GTA				S	**S**	**05 02 25.5**	**-1.1**
GTA				SS	SS	05 02 43.3	-2.7
MDJ	**Mudanjiang**	**18.57**	**33**	P	**P**	**04 59 57.0**	**+0.7**
MDJ				AP		04 59 59.8	
MDJ				XP		05 00 01.0	
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s						
MDJ				LR	LR		
	comp=N,630nm,10.8s						
MDJ				LR	LR		
	comp=E,700nm,12.5s						
MDJ				LR	LR		
	comp=Z,510nm,11.1s						
MDJ	**Mudanjiang**	**18.57**	**33**	P	**P**	**04 59 57.0**	**+0.7**
	comp=Z,27nm,1.1s						
MDJ				pP		04 59 59.8	
MDJ				sP		05 00 01.0	
ULN	**Ulaanbaatar**	**19.33**	**342**	*e*P	**P**	**05 00 05.6**	**+0.4**
	comp=Z,19nm,1.0s						
ULN	**Ulaanbaatar**	**19.33**	**342**	*e*P	**P**	**05 00 05.6**	**+0.4**
ULN				pmax	pmax		
	comp=Z,19nm,1.0s						
SONM	**Songino Array**	**19.48**	**341**	P	**P**	**05 00 08.0**	**+1.0**
	comp=Z,1.7nm,0.3s,baz=160,slow=12,SNR=54						
MAJO	**Matsushiro**	**20.10**	**64**	P	**P**	**05 00 15.0**	**+1.0**
MJAR	**Matsushiro Arr**	**20.10**	**64**	P	**P**	**05 00 13.8**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=261,slow=11,SNR=7.4						
MJAR				LR	LR	05 08 18.0	
	comp=Z,195nm,21.9s,MS3.4,baz=270,slow=38						
JHJ	**Hachijo jima 2**	**20.90**	**74**	LR	LR	05 08 03.9	
	comp=Z,194nm,18.5s,MS3.5,baz=129,slow=35						
LSA	**Lhasa**	**21.25**	**276**	*e*P	**P**	**05 00 26.5**	**+0.7**
	comp=Z,62nm,0.8s,mb5.0						
LSA	**Lhasa**	**21.25**	**276**	*e*P	**P**	**05 00 26.5**	**+0.7**
LSA				pmax	pmax		
	comp=Z,62nm,0.8s,mb5.0						
SHL	**Shillong**	**21.41**	**265**	*e*P	**P**	**05 00 26.5**	**-1.0**
SHL				*e*S	**S**	**05 04 28.0**	**+7.9**
CIT	**Chita**	**22.38**	**357**	*e*P	**P**	**05 00 37.2**	**+0.2**
ZAK	**Zakamensk**	**22.68**	**339**	*e*P	**P**	**05 00 40.8**	**+0.9**
	comp=Z,8.0nm,1.0s,mb4.1						
ZAK	**Zakamensk**	**22.68**	**339**	*e*P	**P**	**05 00 40.8**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.1						
KLR	**Kul'dur**	**23.07**	**28**	*e*P	**P**	**05 00 41.3**	**-2.5**
KLR				*e*S	**S**	**05 04 55.5**	**+5.2**
KLR				MLR	MLR		
	comp=N,800nm,12.5s,MS4.5						

KLR				MLR	MLR		
	comp=E,600nm,12.5s,MS4.5						
KLR				MLR	MLR		
	comp=Z,2µm,12.5s,MS4.8						
CBIJ	**Chichi jima**	23.50	90	LR	LR	05 09 19.4	
	comp=Z,132nm,21.8s,MS3.4,baz=324,slow=35						
ASAJ	**Asahikawa**	25.80	49	P	P	05 01 13.6	+3.5
	comp=Z,11nm,0.8s,mb4.4,baz=199,slow=22,SNR=4.1						
ASAJ				LR	LR	05 11 35.2	
	comp=Z,90nm,18.3s,MS3.3,baz=244,slow=37						
JIRN	**Jiri**	25.87	273	eP	P	05 01 11.3	+0.5
	comp=Z,21nm,0.6s,mb4.9						
GUN	**Gumba**	26.09	273	eP	P	05 01 15.4	+2.5
	comp=Z,63nm,0.8s,mb5.2						
WMQ	**Urumqi**	26.30	310	eP	P	05 01 13.0	-1.7
WMQ				XP	sP	05 01 20.0	+1.1
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.3						
WMQ				AMB	AMB		
	comp=Z,150nm,5.1s						
WMQ				LR	LR		
	comp=N,670nm,10.0s,MS4.5						
WMQ				LR	LR		
	comp=E,500nm,13.0s,MS4.5						
WMQ				LR	LR		
	comp=Z,530nm,15.4s,MS4.2						
WMQ	**Urumqi**	26.30	310	eP	P	05 01 13.0	-1.7
	comp=Z,10.0nm,0.9s,mb4.3						
WMQ				sP	sP	05 01 20.0	+1.1
WMQ				LR	LR		
	comp=Z,530nm,15.4s,MS4.2						
PKI	**Pulchoki**	26.56	273	eP	P	05 01 17.1	-0.2
	comp=Z,22nm,0.7s,mb4.8						
PKI	**Pulchoki**	26.56	273	eP	P	05 01 17.1	-0.2
PKI				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.5						
KKN	**Kakani**	26.63	273	eP	P	05 01 18.0	+0.1
YSS	**Yuzh-Sakhalins**	27.21	43	eP	P	05 01 27.0	+4.0
MKAR	**Makanchi Array**	30.96	313	P	P	05 01 56.6	0.0
	comp=Z,3.7nm,0.6s,mb4.4,baz=104,slow=11,SNR=18						
MKAR	**Makanchi Array**	30.96	313	P	P	05 01 56.6	0.0
GUMO	**Guam**	31.43	114	LR	LR	05 14 29.6	
	comp=Z,63nm,19.2s,MS3.3,baz=58,slow=36						
KURK	**Kurchatov**	34.70	318	eP	P	05 02 29.1	-0.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
MA2	**Magadan**	38.17	28	P	P	05 03 00.6	+2.2
	comp=Z,25nm,0.7s,mb5.0						
MA2	**Magadan**	38.17	28	P	P	05 03 00.6	+2.2
MA2				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.0						
BVAR	**Borovoye Array**	40.29	318	P	P	05 03 16.3	+0.3
	comp=Z,5.6nm,0.6s,mb4.5,baz=107,slow=9.4,SNR=35						
BVAR	**Borovoye Array**	40.29	318	P	P	05 03 16.3	+0.3
BRVK	**Borovoye**	40.36	318	eP	P	05 03 16.8	+0.2
	comp=Z,5.0nm,0.6s,mb4.4						
BRVK	**Borovoye**	40.36	318	eP	P	05 03 16.8	+0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
TIXI	**Tiksi**	42.65	6	eP	P	05 03 30.3	-4.8
	comp=Z,3.0nm,0.9s,mb4.0						
TIXI				LR	LR		
	comp=Z,140nm,11.0s,MS4.1						
TIXI	**Tiksi**	42.65	6	eP	P	05 03 30.3	-4.8
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.0						
TIXI				MLR	MLR		
	comp=Z,142nm,11.0s,MS4.1						
AKTK	**Aktyubinsk**	47.40	313	P	P	05 04 13.6	+0.2
AKTO	**Aktyubinsk**	47.40	313	P	P	05 04 13.6	+0.2
	comp=Z,3.6nm,0.7s,mb4.4,baz=102,slow=17,SNR=7.8						
ARU	**Arti**	47.74	321	eP	P	05 04 15.3	-0.7
	comp=Z,14nm,0.8s,mb5.0						
ARU	**Arti**	47.74	321	eP	P	05 04 15.3	-0.7
ARU				pmax	pmax		
	comp=Z,14nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	48.47	167	P	P	05 04 21.1	-1.1
	comp=Z,5.9nm,0.7s,mb4.7,baz=27,slow=9.0,SNR=3.3						
WRAB	**Tennant Creek**	52.52	158	eP	P	05 04 52.1	-0.9
	comp=Z,1.9nm,0.7s,mb4.1						
WRAB	**Tennant Creek**	52.52	158	eP	P	05 04 52.2	-0.9
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	52.53	158	P	P	05 04 52.7	-0.4
	comp=Z,2.0nm,0.7s,mb4.2,baz=346,slow=7.9,SNR=10.0						
KIV	**Kislovodsk**	58.32	306	eP	P	05 05 35.2	+0.6
	comp=Z,26nm,1.5s,mb5.0						
KIV				e		05 05 41.9	
KIV				LR	LR		
	comp=Z,100nm,20.0s,MS3.9						
KIV	**Kislovodsk**	58.32	306	eP	P	05 05 35.2	+0.6
KIV				e		05 05 41.9	
KIV				pmax	pmax		
	comp=Z,26nm,1.5s,mb5.0						
KIV				MLR	MLR		
	comp=Z,100nm,20.0s,MS3.9						
MIB	**Mutribah**	58.43	289	eP	P	05 05 35.1	-0.5
MIB				AMb	AMB	05 05 35.7	
	comp=Z,54nm,0.6s						
RDF	**Al-Radifah**	58.53	288	eP	P	05 05 35.8	-0.6
RDF				AMb	AMB	05 05 36.4	
	comp=Z,98nm,0.6s						
NAY	**Al-Naaiem**	58.68	288	eP	P	05 05 36.4	-1.0
NAY				AMb	AMB	05 05 37.4	
	comp=Z,21nm,0.6s,mb5.4						
OBN	**Obninsk**	60.12	319	⇑eP	P	05 05 51.1	+4.1
	comp=Z,21nm,1.3s,mb5.0						
OBN				e		05 06 08.1	
OBN				LR	LR		
	comp=Z,200nm,17.0s,MS4.3						
OBN	**Obninsk**	60.12	319	⇑eP	P	05 05 51.1	+4.1
OBN				e		05 06 08.1	
OBN				pmax	pmax		
	comp=Z,21nm,1.3s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,17.0s,MS4.3						
ARCES	**ARCESS Array B**	62.58	337	P	P	05 06 03.3	-0.1
	comp=Z,3.4nm,0.9s,mb4.5,baz=72,slow=7.7,SNR=8.8						
ARCES				LR	LR	05 34 22.7	
	comp=Z,102nm,18.5s,MS4.0,baz=346,slow=37						
FINES	**FINESS Array B**	64.19	328	P	P	05 06 12.7	-1.4
	comp=Z,3.0nm,1.0s,mb4.3,baz=72,slow=6.0,SNR=8.3						
FINES				LR	LR	05 33 50.1	
	comp=Z,142nm,18.2s,MS4.2,baz=154,slow=36						
AKASG	**Malin Array Be**	65.48	316	P	P	05 06 21.2	-1.3
	comp=Z,2.5nm,0.7s,mb4.4,baz=60,slow=6.8,SNR=6.1						
BR131	**Keskin Array S**	65.97	303	eP	P	05 06 25.2	-0.6
	comp=Z,3.9nm,0.8s,mb4.5						
BRTR	**Keskin Array B**	65.97	303	P	P	05 06 25.9	+0.1
	comp=Z,5.5nm,0.8s,mb4.6,baz=107,slow=6.9,SNR=30						
STKA	**Stephens Creek**	66.00	156	P	P	05 06 27.1	+1.0
	comp=Z,3.0nm,0.7s,mb4.4,baz=344,slow=7.7,SNR=6.0						
STKA	**Stephens Creek**	66.00	156	P	P	05 06 27.4	+1.2
COLA	**College**	66.23	28	eP	P	05 06 26.6	-0.4
	comp=Z,2.9nm,0.8s,mb4.4						
COLA	**College**	66.23	28	eP	P	05 06 26.6	-0.5
COLA				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
ILAR	**Eielson Array**	66.65	28	P	P	05 06 30.8	+1.0
	comp=Z,0.3nm,0.6s,mb3.5,baz=272,slow=3.9,SNR=5.8						
MLR	**Muntele Rosu**	69.29	311	P	P	05 06 47.7	+1.1
	comp=Z,2.4nm,0.6s,mb4.3,baz=169,slow=4.5,SNR=5.3						
ATD	**Arta Tunnel**	69.48	272	P	P	05 06 49.8	+1.5
	comp=Z,2.0nm,0.3s,mb4.5,baz=112,slow=8.6,SNR=3.6						
INK	**Inuvik**	70.00	22	P	P	05 06 52.3	+1.7
	comp=Z,3.2nm,0.5s,mb4.5,baz=306,slow=7.6,SNR=14						
INK	**Inuvik**	70.00	22	eP	P	05 06 52.0	+1.5
	comp=Z,244nm,0.9s						
INK	**Inuvik**	70.00	22	eP	P	05 06 52.0	+1.4
INK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HFS	**Hagfors**	70.34	329	P	P	05 06 51.8	-0.9
	comp=Z,3.0nm,0.7s,mb4.3,baz=72,slow=4.7,SNR=11						
NB2	**NORSAR Subarra**	71.04	330	P	P	05 06 55.4	-1.6
	comp=Z,2.5nm,0.7s,mb4.2,baz=62,slow=6.2						
NOA	**NORSAR Array B**	71.04	330	P	P	05 06 55.8	-1.2
	comp=Z,1.3nm,0.6s,mb4.0,baz=64,slow=6.0,SNR=4.2						
NOA				LR	LR	05 40 20.7	
	comp=Z,117nm,18.0s,MS4.2,baz=90,slow=38						
NAO	**NORSAR Subarra**	71.30	330	P	P	05 06 55.4	-3.2
	comp=Z,2.5nm,0.7s,mb4.2						
NAO	**NORSAR Subarra**	71.30	330	P	P	05 06 55.4	-3.2
NAO				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
GERES	**GERESS Array B**	75.46	318	P	P	05 07 22.5	-0.5
	comp=Z,0.3nm,0.4s,mb3.5,baz=11,slow=14,SNR=4.1						
GERES				LR	LR	05 42 53.8	
	comp=Z,93nm,19.3s,MS4.1,baz=80,slow=38						
SUMG	**Summit**	76.47	352	eP	P	05 07 28.1	-0.3
YKA	**Yellowknife Ar**	79.76	21	P	P	05 07 48.1	+1.5
	comp=Z,2.0nm,0.7s,mb4.2,baz=321,slow=4.9,SNR=7.6						
YKA				LR	LR	05 47 27.0	
	comp=Z,54nm,18.5s,MS3.9,baz=90,slow=39						
KMBO	**Kilima Mbogo**	80.45	263	P	P	05 07 52.9	+1.7
	comp=Z,1.3nm,0.6s,mb4.1,baz=44,slow=21,SNR=5.1						
KMBO				LR	LR	05 45 09.9	
	comp=Z,51nm,18.4s,MS3.9,baz=83,slow=37						
EDM	**Edmonton**	87.13	27	P	P	05 08 25.4	+1.1
ULM	**Lac du Bonnet**	95.67	20	LR	LR	05 54 47.4	
	comp=Z,79nm,18.0s,MS4.2,baz=62,slow=37						

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*VIE **26** 04:57:09.8±0.2, 47.33N×15.09E, h4^{km}±20^{km}, mb2.0/4, ML2.4/9, Error ellipse: s-maj=1.6km s-min=1.4km az=128.0*

*IPEC **26** 04:57:10.5±0.1, 47.36N×15.11E, ML2.3/2, Error ellipse: s-maj=0.8km s-min=0.7km az=21.0*

*NEIC **26** 04:57:11.7±0.7, 47.27N×15.12E, h10^{km}, ML2.6(LJU), ML2.3(FUR), Error ellipse: s-maj=10.8km s-min=8.0km az=82.0*

*CSEM **26** 04:57:11.5±0.1, 47.25N×15.06E, h2^{km}, ML2.9/5, Error ellipse: s-maj=2.5km s-min=2.3km az=130.0*

*PRU **26** 04:57:13.2, 47.49N×15.05E*

ISC 26 04:57:10.0±0.3**, 47.33N**±0.02×**15.05E**±0.03**, h4^{km}, n44, σ1^{s}.21**/75**, 7C-8D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSA	**Arzberg**	0.33	104	⇓ePg	Pg	04 57 16.2	-0.4
	comp=Z,65nm,0.1s,SNR=560						
ARSA				⇓iSg	Sg	04 57 20.1	-1.1
	comp=N,257nm,0.2s						
PERS	**Pernice**	0.70	176	i Pg	Pg	04 57 23.8	-0.1
PERS				i Sg	Sg	04 57 32.4	-0.8
	comp=Z,156nm,0.2s						
MOA	**Molln**	0.74	315	⇓ePg	Pg	04 57 24.8	-0.1
	comp=Z,3.1nm,0.1s,SNR=29						
MOA	**Molln**	0.74	315	Pg	Pg	04 57 24.8	0.0
	comp=Z,3.1nm,0.1s,SNR=29						
MOA				Sg	Sg	04 57 35.0	+0.2
	comp=Z,27nm,0.3s						
MOA				Sn	Sn	04 57 39.4	+0.7
OBKA	**Obir**	0.89	203	⇓iPg	Pg	04 57 28.2	+0.3
	comp=Z,8.8nm,0.1s,SNR=14						
OBKA	**Obir**	0.89	203	⇓eSg	Sg	04 57 40.1	+0.4
	comp=Z,28nm,0.2s						
OBKA	**Obir**	0.89	203	ePg	Pg	04 57 28.0	+0.2
OBKA				eSg	Sg	04 57 39.6	-0.1
GROS	**Grobnik**	0.92	160	i Pg	Pg	04 57 27.4	-1.0
KBA	**Koelnbreinsper**	1.19	258	⇑iPg	Pg	04 57 33.4	-0.4
	comp=Z,0.1nm,0.1s						
KBA	**Koelnbreinsper**	1.19	258	⇑eSg	Sg	04 57 49.5	-0.2
	comp=Z,15nm,0.4s						
KBA	**Koelnbreinsper**	1.19	258	Pg	Pg	04 57 33.4	-0.4
	comp=Z,0.1nm,0.1s						
KBA				eSg	Sg	04 57 49.4	-0.3
DOBS	**Dobrina**	1.22	166	i Pg	Pg	04 57 33.5	-0.8
BGLD	**Berchtesgaden**	1.42	284	⇓iPg	Pg	04 57 38.4	0.0
BGLD				i Sg	Sg	04 57 58.8	+1.5
VOY	**Vojsko**	1.52	212	ePn	Pn	04 57 40.4	+2.3
VOY				eSn	Sn	04 58 00.5	+1.9
CRES	**Cresnjev**	1.53	169	ePn	Pn	04 57 39.7	+1.5
ZST	**Bratislava**	1.63	57	ePN	Pn	04 57 39.8	+0.1
ZST				eSN	Sn	04 58 01.2	-0.1
GERES	**GERESS Array B**	1.76	330	ePn	Pn	04 57 42.0	+0.4
GERES				eSg	Sg	04 58 05.6	-3.2
KRUC	**Moravsky**	1.95	27	ePn	Pn	04 57 44.3	+0.1
KRUC				eSn	Sn	04 58 09.8	+0.4
	comp=Z,14nm,0.2s						
TREC	**Trest**	1.99	8	ePN	Pn	04 57 45.0	+0.3
TREC				ePG	Pg	04 57 46.4	-3.3
TREC	**Trest**	1.99	8	ePg	Pg	04 57 46.4	-3.3
TREC				eSn	Sn	04 58 11.7	+1.4
SMOL	**Smolenice**	1.99	53	ePN	Pn	04 57 45.7	+0.9
SMOL				eSN	Sn	04 58 12.3	+1.9
KHC	**Kasperske Hory**	2.05	332	ePG	Pg	04 57 48.5	-2.5
KHC				x	x	04 58 09.5	
KHC				eSG	Sg	04 58 14.6	-3.7
	comp=Z,19nm,0.2s						
KHC	**Kasperske Hory**	2.05	332	ePg	Pg	04 57 48.5	-2.5
KHC				eSg	Sg	04 58 14.6	-3.7
KHC	**Kasperske Hory**	2.05	332	ePn	Pn	04 57 46.8	+1.1
KHC	**Kasperske Hory**	2.05	332	ePg	Pg	04 57 48.5	-2.5
KHC				eSn	Sn	04 58 13.2	+1.2
KHC				eSg	Sg	04 58 14.6	-3.7
	comp=Z,19nm,0.2s						
VRAC	**Vranov**	2.23	27	ePn	Pn	04 57 48.0	-0.2
VRAC				eSn	Sn	04 58 17.1	+0.6
WTTA	**Wattenberg**	2.33	270	⇑iPg	Pg	04 57 54.1	-2.3
	comp=Z,6.3nm,0.2s						
WTTA	**Wattenberg**	2.33	270	Pg	Pg	04 57 54.1	-2.3
	comp=Z,6.3nm,0.2s						
WTTA				Sg	Sg	04 58 28.1	+0.7
	comp=Z,9.6nm,0.5s						
WATA	**Walderalm**	2.36	271	⇑ePg	Pg	04 57 56.2	-1.0
	comp=Z,3.4nm,0.3s						
WATA	**Walderalm**	2.36	271	Pg	Pg	04 57 56.2	-1.0
	comp=Z,3.4nm,0.3s						
WATA				Sg	Sg	04 58 30.2	+1.5
	comp=Z,3.2nm,0.2s						
SQTA	**Sankt Quirin**	2.62	269	⇑ePg	Pg	04 58 00.9	-1.3
	comp=Z,2.7nm,0.3s						
SQTA	**Sankt Quirin**	2.62	269	Pg	Pg	04 58 00.9	-1.4
	comp=Z,2.7nm,0.3s						
SQTA				Sg	Sg	04 58 35.7	-1.5
	comp=Z,3.6nm,0.3s						
PRU	**Pruhonice**	2.68	353	ePG	Pg	04 57 59.1	-4.4
PRU				eSN	Sn	04 58 26.5	-1.5
PRU				eSG	Sg	04 58 33.9	-5.4
PRU	**Pruhonice**	2.68	353	ePn	Pn	04 57 55.0	+0.3
PRU	**Pruhonice**	2.68	353	ePg	Pg	04 57 59.1	-4.4
PRU				eSn	Sn	04 58 26.5	-1.5
PRU				eSg	Sg	04 58 33.9	-5.4
MOTA	**Moosalm**	2.68	272	⇑ePn	Pn	04 57 58.2	+3.4
	comp=Z,0.2nm,0.1s						
MOTA	**Moosalm**	2.68	272	Pn	Pn	04 57 58.2	+3.5
	comp=Z,0.2nm,0.1s						
MOTA				Sg	Sg	04 58 39.0	-0.4
	comp=Z,1.2nm,0.1s						
DPC	**Dobruska-Polom**	3.14	15	ePG	Pg	04 58 07.0	-5.6
DPC				eSG	Sg	04 58 47.2	-7.2
DPC	**Dobruska-Polom**	3.14	15	ePn	Pn	04 58 01.1	-0.1
DPC				eSn	Sn	04 58 39.3	-0.2
DPC				eSg	Sg	04 58 47.2	-7.2
UPC	**Upice**	3.24	11	eSG	Sg	04 58 49.9	-8.0
NKC	**Novy Kostel**	3.38	330	eSG	Sg	04 58 56.1	-6.3
	comp=Z,12nm,0.3s						
DAVA	**Damuels**	3.52	271	⇑Sg	Sg	04 59 07.8	+0.6
	comp=Z,2.5nm,0.3s						
DAVA	**Damuels**	3.52	271	⇓Pn	Pn	04 58 09.5	+3.0
	comp=Z,0.3nm,0.1s						
DAVA				⇓iPg	Pg	04 58 17.9	-2.3
	comp=Z,1.6nm,0.2s						
CLL	**Collm**	4.20	342	i SG	Sg	04 59 22.1	-7.7

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*NEIC **26** 05:07:55.2, 42.69N×7.61E, h17^{km}, ML3.2(GEN), ML2.9(LDG), ML2.8(STR), After STR.*

*CSEM **26** 05:07:57.8±0.1, 42.63N×7.60E, h40^{km}, ML3.0/17, Error ellipse: s-maj=2.3km s-min=1.9km az=11.0*

*GEN **26** 05:07:57.0, 42.64N×7.68E, h2^{km}, ML3.0*

*LDG **26** 05:07:58.2±0.2, 42.55N×7.51E, h25^{km}, Md3.1/1, Ml2.9/19, Error ellipse: s-maj=4.8km s-min=3.2km az=132.0*

STR 26 05:07:55.2±0.3**, 42.69N×7.61E, h17^{km}±1^{km}, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, Western Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMR	**La Mourre**	1.03	309	ePn	Pn	05 08 15.3	+0.4
LMR				eSn	Sn	05 08 28.2	-0.8
	62nm,0.2s						
REVF	**Revere**	1.06	350	Pn	Pn	05 08 18.1	+2.7
FRF	**La Foret Royal**	1.12	321	ePn	Pn	05 08 17.0	+0.8
FRF				eSn	Sn	05 08 30.9	-0.3
	56nm,0.2s						
NEGI	**Negi**	1.16	3	P	Pb	05 08 18.4	+2.0
NEGI				S	Sb	05 08 33.0	+2.0
NEGI	**Negi**	1.16	3	P	Pb	05 08 18.4	+2.0
NEGI				S	Sb	05 08 33.0	+2.0
SBF	**Sospel**	1.18	354	ePn	Pn	05 08 18.7	+1.7
SBF				eSn	Sn	05 08 34.8	+2.1
	67nm,0.2s						
CALN	**Calern**	1.19	334	Pn	Pn	05 08 18.7	+1.6
CALN				Sg	Sb	05 08 34.5	+2.8
CORF	**Corte**	1.21	108	Pn	Pn	05 08 17.9	+0.5
IMI	**Imperia**	1.24	9	P	Pb	05 08 19.9	+2.2
IMI	**Imperia**	1.24	9	Pg	Pb	05 08 20.1	+2.4
IMI				S	Sb	05 08 34.6	+1.4
MVIF	**Mont Vial**	1.25	345	Pn	Pn	05 08 20.0	+2.0
MVIF				Sg	Sb	05 08 36.2	+2.5
SAOF	**Saorge**	1.30	358	Pn	Pn	05 08 20.4	+1.7
SAOF				Sg	Sb	05 08 36.6	+1.6
AUTN	**L'Aution**	1.31	354	Pn	Pn	05 08 20.8	+1.9
AUTN				Sg	Sb	05 08 37.9	+2.5
TOUF	**Mont Tournerai**	1.35	349	Pn	Pn	05 08 21.5	+2.1
TOUF				Sg	Sb	05 08 38.8	+2.3
MONE	**Monesi**	1.39	4	P	Pn	05 08 22.2	+2.2
MONE				S	Sb	05 08 39.5	+1.8
MONE	**Monesi**	1.39	4	P	Pn	05 08 22.2	+2.1
MONE				S	Sb	05 08 39.5	+1.7
TAVF	**Tavernes**	1.47	310	Pn	Pn	05 08 22.3	+1.2
BERF	**Bertagne**	1.54	295	Pn	Pn	05 08 22.5	+0.3
ENR	**Entracque**	1.54	355	P	Pn	05 08 24.8	+2.6
ENR				S	Sn	05 08 43.7	+1.8
ENR	**Entracque**	1.54	355	P	Pn	05 08 24.8	+2.6
ENR				S	Sn	05 08 43.7	+1.8
STV	**Sta Anna Valdi**	1.57	352	P	Pn	05 08 24.9	+2.4
STV				S	Sn	05 08 44.2	+1.6
STV	**Sta Anna Valdi**	1.57	352	P	Pn	05 08 24.9	+2.3
STV				S	Sn	05 08 44.2	+1.7
STV2	**Anna di Valdie**	1.57	353	P	Pn	05 08 24.9	+2.4
STV2				S	Sn	05 08 44.2	+1.6
STV2	**Anna di Valdie**	1.57	353	P	Pn	05 08 24.9	+2.3
STV2				S	Sn	05 08 44.2	+1.6
FIN	**Finale Ligure**	1.58	16	P	Pn	05 08 23.8	+1.1
FIN	**Finale Ligure**	1.58	16	Pg	Pn	05 08 25.4	+2.7
ROB	**Roburent**	1.61	7	P	Pn	05 08 25.9	+2.7
ROB				S	Sn	05 08 45.7	+1.9
ROB	**Roburent**	1.61	7	P	Pn	05 08 25.9	+2.7
ROB				S	Sn	05 08 45.7	+1.9
GELF	**Grande-Etoile**	1.74	294	Pn	Pn	05 08 25.4	+0.3
STOF	**St-Etienne Org**	1.80	317	Pn	Pn	05 08 29.0	+3.1
DOI	**San Damiano**	1.83	352	Pg	Pn	05 08 29.1	+2.8
PZZ	**Prazzo**	1.85	349	P	Pn	05 08 29.8	+3.1
PZZ				S	Sn	05 08 51.8	+2.1
PZZ	**Prazzo**	1.85	349	P	Pn	05 08 29.8	+3.2
PZZ				S	Sn	05 08 51.8	+2.0
SMRF	**Simiane la Rot**	1.96	312	ePn	Pn	05 08 29.7	+1.5
SMRF				eSn	Sn	05 08 51.6	-1.0
	13nm,0.3s						
PCP	**Pian Castagno**	1.97	20	P	Pn	05 08 30.6	+2.3
PCP				S	Sn	05 08 53.7	+0.9
PCP	**Pian Castagno**	1.97	20	P	Pn	05 08 30.6	+2.3
PCP				S	Sn	05 08 53.7	+0.9
PRAF	**Pradon**	2.10	303	Pn	Pn	05 08 31.0	+0.8
MBDF	**Montbardon**	2.12	344	ePn	Pn	05 08 33.6	+3.1
MBDF				eSn	Sn	05 08 57.6	+0.9
	16nm,0.3s						
BHB	**Bricherasio**	2.17	353	P	Pn	05 08 33.2	+2.0
BHB				S	Sn	05 08 58.3	+0.5
BHB	**Bricherasio**	2.17	353	P	Pn	05 08 33.2	+2.1
BHB				S	Sn	05 08 58.3	+0.5
SC2M	**Scurtabr**	2.21	39	P	Pn	05 08 34.0	+2.2
FENE	**Fenestrelle**	2.37	351	P	Pn	05 08 36.4	+2.3
RSP	**Reno Superiore**	2.47	354	P	Pn	05 08 37.5	+2.0
RSP	**Reno Superiore**	2.47	354	P	Pn	05 08 37.5	+2.0
ORIF	**Oris-en-Rattie**	2.56	331	ePn	Pn	05 08 38.9	+2.2
ORIF				eSn	Sn	05 09 06.7	-1.0
	5.4nm,0.2s						
LSD	**Ceresole Reale**	2.79	353	P	Pn	05 08 44.3	+4.3
LSD	**Ceresole Reale**	2.79	353	P	Pn	05 08 44.3	+4.3
LPG	**La Plagne**	2.87	348	ePn	Pn	05 08 45.7	+4.5
LPG				eSn	Sn	05 09 15.6	-0.1
	3.4nm,0.2s						
LPL	**La Plagne**	2.90	348	ePn	Pn	05 08 45.8	+4.3
LPL				eSn	Sn	05 09 15.8	-0.5
	4.9nm,0.3s						
VIVF	**Saint-Julien-l**	3.04	317	ePn	Pn	05 08 43.5	0.0
VIVF				eSn	Sn	05 09 17.1	-2.7
	3.8nm,0.2s						
LASF	**Ste Croix**	3.07	298	ePn	Pn	05 08 42.7	-1.3
LASF				eSn	Sn	05 09 15.2	-5.4
	14nm,0.3s						
EJON	**La Jonquera**	3.50	268	P	Pn	05 08 46.6	-3.4
EJON				S	Sn	05 09 23.5	-7.9
EJON	**La Jonquera**	3.50	268	P	Pn	05 08 46.6	-3.5
MTLF	**Montolieu**	4.01	281	ePn	Pn	05 08 54.7	-2.6
MTLF				eSn	Sn	05 09 37.6	-6.8
	5.0nm,0.2s						
EMIR	**Miracle**	4.58	262	P	Pn	05 09 03.3	-2.1
EMIR				S	Sn	05 09 49.8	-9.0
EMIR	**Miracle**	4.58	262	P	Pn	05 09 03.3	-2.1
CAF	**Calviac**	4.59	301	ePn	Pn	05 09 04.5	-1.2
CAF				eSn	Sn	05 09 53.4	-5.9
	2.4nm,0.2s						
ETOS	**Mallorca**	4.65	233	P	Pn	05 09 03.3	-3.1
ETOS				S	Sn	05 09 48.2	-12
ETOS	**Mallorca**	4.65	233	P	Pn	05 09 03.3	-3.1
SMF	**Signal de Mont**	4.78	327	ePn	Pn	05 09 08.3	0.0
SMF				eSn	Sn	05 09 59.5	-4.5
	1.8nm,0.2s						
EPOB	**Poblet**	5.04	257	P	Pn	05 09 09.5	-2.6
EPOB				S	Sn	05 10 00.2	-10
EPOB	**Poblet**	5.04	257	P	Pn	05 09 09.5	-2.5
AVF	**Avril sur Loir**	5.10	325	ePn	Pn	05 09 12.5	-0.3
RJF	**Les Rejaudoux**	5.11	303	ePn	Pn	05 09 12.0	-1.0
RJF				eSn	Sn	05 10 06.0	-6.3
	3.3nm,0.2s						
BGF	**Bois d'Agland**	5.15	320	ePn	Pn	05 09 13.2	-0.3
SSF	**Saint Saulge**	5.25	328	ePn	Pn	05 09 14.2	-0.8
TCF	**Toulx Ste Croi**	5.28	315	ePn	Pn	05 09 14.5	-0.8
LOR	**Lormes**	5.29	331	ePn	Pn	05 09 14.7	-0.9
LOR				eSn	Sn	05 10 11.8	-5.1
	2.4nm,0.2s						
EPF	**Esparros**	5.36	276	ePn	Pn	05 09 13.1	-3.3
EPF				eSn	Sn	05 10 09.7	-8.7
	2.6nm,0.4s						
HAU	**Haudompre**	5.39	351	eSn	Sn	05 10 15.3	-4.0
	2.7nm,0.3s						
EGRA	**Graus**	5.42	267	P	Pn	05 09 15.0	-2.3
EGRA				S	Sn	05 10 12.1	-8.0
LFF	**La Frestale**	5.46	297	ePn	Pn	05 09 16.3	-1.5
LFF				eSn	Sn	05 10 13.7	-7.2
	0.9nm,0.1s						
EBIE	**Bielsa**	5.50	272	P	Pn	05 09 16.9	-1.6
EBIE				S	Sn	05 10 15.7	-6.5
HYF	**Humbligny**	5.78	324	ePn	Pn	05 09 20.2	-2.2
ETSF	**Etsaut**	6.01	275	ePn	Pn	05 09 24.3	-1.4
ETSF				eSn	Sn	05 10 25.7	-9.2
	3.3nm,0.4s						
SJPF	**Ste Jean**	6.50	277	ePn	Pn	05 09 29.2	-3.4
MFF	**Saint Martin d**	6.77	308	ePn	Pn	05 09 33.6	-2.8
GRR	**Gorron**	8.23	317	ePn	P	05 09 54.3	-2.5

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*CSEM **26** 05:20:51.9±0.1, 48.31N×7.45E, h10^{km}, ML2.5/7, Error ellipse: s-maj=1.4km s-min=1.2km az=16.0*

*LDG **26** 05:20:52.0±0.1, 48.30N×7.43E, h10^{km}, Md2.2/2, Ml2.5/7, Error ellipse: s-maj=1.6km s-min=1.2km az=93.0*

*STR **26** 05:20:52.0±0.2, 48.30N×7.44E, h5^{km}±1^{km}, Ml2.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

*BGR **26** 05:20:52.2±0.3, 48.30N×7.46E, h5^{km}, ML1.7/2, Error ellipse: s-maj=4.4km s-min=3.3km az=149.0*

*NEIC **26** 05:20:52.0, 48.30N×7.44E, h5^{km}, ML2.5(LDG), ML2.0(STR), After STR.*

ISC 26 05:20:50.8±0.4**, 48.31N**±0.02×**7.42E**±0.03**, h10^{km}, n31, σ1^{s}.13**/55**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WLS	**Welschbruch**	0.12	337	Pg	Pg	05 20 55.1	+1.4
WLS				Sg	Sg	05 20 57.2	+1.5
WLS	**Welschbruch**	0.12	337	ePg	Pg	05 20 55.1	+1.4
CDF	**Champ du Feu**	0.14	318	ePg	Pg	05 20 55.6	+1.4
CDF				eSg	Sg	05 20 58.2	+1.8
	63nm,0.2s						
LIBD	**Limburg**	0.20	142	ePg	Pg	05 20 55.7	+0.6
LIBD	**Limburg**	0.20	142	Pg	Pg	05 20 55.6	+0.5
ECH	**Echery**	0.20	243	Pg	Pg	05 20 56.2	+1.1

ECH				Sg	Sg	05 20 59.3	+1.3
ECH	**Echery**	0.20	243	*e*Pg	Pg	05 20 56.3	+1.2
ECH	**Echery**	0.20	243	Pg	Pg	05 20 56.3	+1.2
ECH				Sg	Sg	05 20 59.3	+1.3
MOF	**Molkenrain**	0.49	203	Pg	Pg	05 21 01.4	+0.6
MOF	**Molkenrain**	0.49	203	*e*Pg	Pg	05 21 01.5	+0.7
BFO	**Black Forest**	0.61	87	*e*Pg	Pg	05 21 03.0	0.0
BFO				*e*Sg	Sg	05 21 10.8	-0.4
HINF	**Hinteralfeld**	0.62	218	*e*Pn	Pn	05 21 05.1	-0.2
HINF				*e*Sg	Sg	05 21 12.0	+0.4
HINF				*e*Sn	Sn	05 21 14.5	-0.8
	32nm,0.2s						
HINF	**Hinteralfeld**	0.62	218	*e*Pg	Pg	05 21 03.7	+0.4
HINF				*e*Pn	Pn	05 21 05.1	-0.2
HINF				*e*Sg	Sg	05 21 12.0	+0.4
HINF				*e*Sn	Sn	05 21 14.5	-0.8
HINF	**Hinteralfeld**	0.62	218	*e*Pn	Pn	05 21 05.1	-0.2
HINF				*e*Sg	Sg	05 21 12.0	+0.4
HINF				*e*Sn	Sn	05 21 14.5	-0.8
	16nm,0.2s						
HAU	**Haudompre**	0.78	248	*e*Pn	Pn	05 21 07.6	0.0
HAU				*e*Sn	Sn	05 21 18.4	-0.9
	40nm,0.4s						
HAU	**Haudompre**	0.78	248	*e*Pg	Pg	05 21 07.0	+0.6
HAU				*e*Pn	Pn	05 21 07.6	0.0
HAU				*e*Sn	Sn	05 21 18.4	-0.9
HAU	**Haudompre**	0.78	248	*e*Pn	Pn	05 21 07.6	0.0
HAU				*e*Sn	Sn	05 21 18.4	-0.9
	20nm,0.4s						
BBS	**Basel-Blauen**	0.84	176	Pg	Pg	05 21 08.3	+0.6
BBS				Sg	Sg	05 21 20.4	+1.4
THEF	**They Montfort**	0.96	266	Pg	Pg	05 21 10.6	+0.6
THEF				Sg	Sg	05 21 24.4	+1.5
THEF	**They Montfort**	0.96	266	*e*Pg	Pg	05 21 10.8	+0.8
LOMF	**Lomont**	1.03	203	Pg	Pg	05 21 11.7	+0.2
LOMF				Sg	Sg	05 21 25.5	+0.2
LOMF	**Lomont**	1.03	203	*e*Pg	Pg	05 21 11.9	+0.4
STU	**Stuttgart**	1.27	68	*e*Sg	Sg	05 21 32.0	-1.0
RFYF	**Reffroy**	1.34	285	*e*Pg	Pg	05 21 17.1	-0.4
	baz=109						
RFYF				*e*Sg	Sg	05 21 34.5	-0.8
	20nm,0.2s,baz=102						
MEZF	**Maizieres J’vi**	1.59	278	*e*Pg	Pg	05 21 21.8	-0.8
	baz=95						
MEZF				*e*Sg	Sg	05 21 42.2	-1.6
	4.0nm,0.2s						
SFTF	**Sexfontaines**	1.60	267	*e*Pn	Pn	05 21 19.1	-0.1
SFTF				*e*Sg	Sg	05 21 42.8	-1.2
	12nm,0.2s						
CABF	**La Chapelle**	1.92	209	*e*Pn	Pn	05 21 23.6	-0.3
CABF				*e*Sg	Sg	05 21 52.5	-2.3
	2.1nm,0.3s						
TNS	**Taunus Mts**	2.03	19	*e*Sg	Sg	05 21 56.7	-1.8
SSF	**Saint Saulge**	2.92	246	*e*Sg	Sg	05 22 23.8	-4.3
	0.6nm,0.3s						
SMF	**Signal de Mont**	2.94	237	*e*Pg	Pg	05 21 47.0	-2.5
SMF				*e*Sg	Sg	05 22 24.6	-4.1
	1.6nm,0.2s						
AVF	**Avril sur Loir**	3.15	243	*e*Pg	Pg	05 21 50.9	-2.7

GUC 26 05:49:49.2±0.4**,32.71S**×**71.70W,h7**^{km}±19^{km}**,MD3.6, ML2.1,1C-2D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	0.64	114	⇑*i*P	Pg	05 50 02.6	+0.7
ROCH				*i* S	Sg	05 50 12.7	+2.2
JACH	**Jahuel**	0.94	89	⇓*i*P	Pb	05 50 06.9	-0.5
JACH				*i* S	Sb	05 50 20.7	+0.9
PEL	**Peldehue**	0.96	117	*e*P	Pb	05 50 07.3	-0.4
PEL				*i* S	Sb	05 50 22.2	+1.8
PEL				AMP		05 50 25.2	
	comp=E,276nm,0.3s						
RCDM	**Rinconada Maip**	1.08	136	*e*P	Pb	05 50 09.2	-0.7
RCDM				*i* S	Sb	05 50 24.1	+0.1
RCDM				AMP		05 50 29.4	
	comp=E,60nm,0.2s						
FCH	**Farellones**	1.34	118	⇓*i*P	Pb	05 50 13.8	-0.5
FCH				*i* S	Sb	05 50 32.5	+1.1
FCH				AMP		05 50 33.3	
	comp=E,57nm,0.2s						

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*NEIC **26** 06:08:20.4,63.45N×151.13W,h16^{km},ML4.1(PMR), ML3.8(AEIC),After AEIC.*
*IDC **26** 06:08:22.1±3.5,63.52N×151.18W,h20^{km}±19^{km},mb3.7/7, mb1 3.9/11,mb1mx3.7/21,mbtmp3.7/11,ML3.5/4,Error ellipse: s-maj=25.7km s-min=16.3km az=26.0*
ISC 26 06:08:20.1±0.6**,63.49N**±0.03×**151.20W**±0.09**,h22**^{km}±4^{km}**, n51,**σ**0.**^{s}**72**/55**,mb3.8**/7**,Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTH	**Kantishna Hill**	0.14	62	P	Pb	06 08 24.7	0.0
KTH				S	Sb	06 08 27.6	-0.3
TRF	**Thorofare Moun**	0.41	95	P	Pb	06 08 28.2	-0.4
TRF				S	Sb	06 08 33.8	-0.7
HUR	**Hurricane**	0.87	125	P	Pb	06 08 35.7	-0.7
BWN	**Browne**	1.03	47	P	Pb	06 08 40.7	+1.6
MCK	**McKinley**	1.04	75	P	Pb	06 08 39.5	+0.2
MCK				S	Sb	06 08 53.8	+1.3
RND	**Reindeer**	1.06	93	P	Pb	06 08 39.3	-0.2
NEA	**Nenana**	1.44	40	P	Pn	06 08 45.2	+0.1
WRH	**Wood River Hil**	1.69	53	P	Pn	06 08 48.6	-0.1
CCB	**Clear Creek Bu**	1.89	51	P	Pn	06 08 51.4	-0.2
MDM	**Murphy Dome**	1.97	40	P	Pn	06 08 52.8	+0.1
GHO	**Glory Hole Cre**	2.02	148	P	Pn	06 08 53.2	-0.2
STLK	**Strandline Lak**	2.02	189	P	Pn	06 08 53.7	+0.3
COLA	**College**	2.02	45	P	Pn	06 08 53.4	-0.1
PMR	**Palmer**	2.13	152	P	Pn	06 08 55.0	0.0
SML	**Sawmill**	2.14	141	P	Pn	06 08 54.9	-0.3
TT01	**Tatalina**	2.26	257	P	Pn	06 08 56.2	-0.7
ILAR	**Eielson Array**	2.29	54	Pn	Pn	06 08 56.9	-0.4
	3.1nm,0.3s,baz=235,slow=13,SNR=119						
ILAR				Pg	Pn	06 09 03.6	+6.3
	28nm,0.3s,baz=239,slow=16,SNR=106						
ILAR				Lg		06 09 31.4	
	109nm,0.3s,baz=242,slow=29,SNR=17						
IL1	**Eielson Array**	2.29	54	P	Pn	06 08 56.9	-0.4
SPU	**Mount Spurr**	2.35	190	P	Pn	06 08 58.2	+0.1
FIB	**Fire Island**	2.38	168	P	Pn	06 08 59.5	+1.0
SCM	**Sheep Creek Mo**	2.44	131	P	Pn	06 08 59.0	-0.4
THY	**Trims Highway**	2.45	89	P	Pn	06 09 00.3	+0.8
RC01	**Rabbit Creek A**	2.50	164	P	Pn	06 09 00.5	+0.1
PAX	**Paxson**	2.64	99	P	Pn	06 09 02.9	+0.6
IM3	**Indian Mountai**	2.73	338	P	Pn	06 09 04.7	+1.0
IMA2	**Indian Mountai**	2.80	339	*e*P	Pn	06 09 05.6	+1.0
SLKM	**Skilak Lake**	3.03	171	P	Pn	06 09 07.6	-0.2
SVW2	**Sparrevohn**	3.15	222	*e*P	Pn	06 09 08.4	-1.2
KLU	**Klutina**	3.16	127	P	Pn	06 09 10.1	+0.4
VLZ	**Valdez**	3.28	134	P	Pn	06 09 11.2	-0.1
MENT	**Mentasta**	3.43	96	*e*P	Pn	06 09 15.2	+1.7
DIV	**Divide**	3.47	131	P	Pn	06 09 14.2	+0.2
SEW	**Seward**	3.50	165	P	Pn	06 09 15.0	+0.5
ILW	**Iliamna West**	3.56	196	P	Pn	06 09 16.2	+0.8
CNPM	**China Poot**	3.98	180	P	Pn	06 09 21.3	0.0
BMRM	**Bremner River**	3.99	126	P	Pn	06 09 21.4	0.0
BM3	**Burnt Mountain**	4.81	32	P	Pn	06 09 32.0	-1.1
DAWY	**Dawson**	5.27	78	*e*P	Pn	06 09 37.7	-1.9
INK	**Inuvik**	8.68	48	Pn	P	06 10 25.2	-2.2
	0.8nm,0.3s,baz=235,slow=18,SNR=19						
INK	**Inuvik**	8.68	48	*e*P	P	06 10 24.8	-2.6
DLBC	**Dease Lake**	11.43	107	Pn	P	06 11 04.4	-0.6
	0.2nm,0.3s,baz=343,slow=20,SNR=2.9						
YKA	**Yellowknife Ar**	16.51	77	Pn	P	06 12 11.7	+0.3
	0.2nm,0.3s,baz=293,slow=11,SNR=8.4						
YKA	**Yellowknife Ar**	16.51	77	Pn	P	06 12 11.7	+0.3
EDM	**Edmonton**	22.01	100	*e*P	P	06 13 13.4	-0.8
PDAR	**Pinedale Array**	31.62	111	P	P	06 14 43.4	+0.2
	0.6nm,0.8s,mb3.5,baz=305,slow=11,SNR=2.8						
ULM	**Lac du Bonnet**	31.89	88	P	P	06 14 45.6	+0.2
	1.0nm,0.5s,mb3.9,baz=284,slow=4.2,SNR=3.3						
TXAR	**Lajitas Array**	45.56	116	P	P	06 16 40.4	+0.7
	0.8nm,0.5s,mb3.9,baz=331,slow=6.9,SNR=20						
SONM	**Songino Array**	53.46	305	P	P	06 17 40.8	+0.6
	1.4nm,0.8s,mb4.0,baz=19,slow=7.7,SNR=9.2						
FINES	**FINESS Array B**	55.37	2	P	P	06 17 53.5	-0.5
	2.7nm,1.0s,mb4.2,baz=11,slow=9.7,SNR=3.7						
MKAR	**Makanchi Array**	62.24	321	P	P	06 18 41.2	-0.7
	0.5nm,0.8s,mb3.7,baz=52,slow=7.9,SNR=3.5						
ESDC	**Sonseca Array**	73.92	26	P	P	06 19 54.8	+0.2
	0.2nm,0.4s,mb3.4,baz=322,slow=4.4,SNR=4.1						

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*CSEM **26** 06:12:46.8±0.2,29.22N×51.25E,h10^{km},ML3.3,Error ellipse: s-maj=4.4km s-min=1.7km az=43.0*
*THR **26** 06:12:49.1±0.3,29.19N×51.26E,h41^{km}±8^{km},ML3.4*
*TEH **26** 06:12:52.0,29.17N×51.38E,h23^{km},Mn3.3*
ISC 26 06:12:49.6±1.3**,29.39N**±0.09×**51.3E**±0.1**,h10**^{km}**,n20,** σ**1.**^{s}**01**/23**,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHI	**Shiraz**	1.10	76	Pn	Pn	06 13 11.4	+0.4
IMOK	**Mook**	1.29	105	Pn	Pn	06 13 13.3	-0.5
ISRV	**Sarvestan**	1.59	90	Pn	Pn	06 13 18.0	-0.1
IPAR	**Pars**	1.60	73	Pn	Pn	06 13 18.7	+0.5
GHIR	**Ghir-Karzin**	1.85	126	*e*PG	Pg	06 13 20.9	-5.7
GHIR				AML	AML	06 13 57.4	
	comp=N,507nm,0.5s						
IPIR	**Pirpir**	3.30	354	Pn	Pn	06 13 42.5	0.0
SHGR	**Shooshtar-Gavs**	3.46	322	*e*PN	Pn	06 13 44.0	-0.6
IZEF	**Zefreh**	3.61	14	Pn	Pn	06 13 48.8	+2.0
NASN	**Na’in**	3.64	21	*e*PN	Pn	06 13 47.7	+0.4
IKLH	**Kalahroud**	3.93	4	Pn	Pn	06 13 51.8	+0.4
KRBR	**Kerman**	4.80	82	*e*PN	Pn	06 14 01.6	-2.2
KRBR				AML	AML	06 15 30.6	
	comp=N,16nm,0.7s						
ISFB	**Sefidab**	5.02	9	Pn	Pn	06 14 07.9	+1.1
ISFB				Sn	Sn	06 15 04.4	-1.2
ASAO	**Ashtian**	5.26	349	*e*PN	Pn	06 14 09.7	-0.5
ASAO	**Ashtian**	5.26	349	*e*Pn	Pn	06 14 09.6	-0.6
	SNR=54						
IQOM	**Qom**	5.44	358	Pn	Pn	06 14 13.5	+0.7
IVRN	**Varamin**	5.61	4	Pn	Pn	06 14 16.1	+1.0
IDMV	**Damavand**	6.20	6	Pn	Pn	06 14 24.3	+0.7
IDMV				Sn	Sn	06 15 32.5	-2.8
DAMV	**Damavand**	6.25	5	*e*Pn	Pn	06 14 23.7	-0.6
IFIR	**Firoozkooh**	6.36	11	Pn	Pn	06 14 26.3	+0.6
IFIR				Sn	Sn	06 15 36.0	-3.2
SNGE	**Sanandaj**	6.59	331	*e*PN	Pn	06 14 27.9	-1.2

IDC 26 06:23:10.9±1.1**,4.98N**×**125.64E,mb4.1**/5**,mb1 4.3**/5**, mb1mx4.0**/15**,mbtmp4.1**/5**,Error ellipse: s-maj=62.9km s-min=20.4km az=75.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	22.94	180	P	P	06 28 16.2	-1.9
	3.2nm,0.7s,baz=11,slow=11,SNR=9.4						
WRA	**Warramunga Arr**	26.20	161	P	P	06 28 47.5	-1.8
	2.9nm,0.5s,baz=340,slow=10,SNR=18						
STKA	**Stephens Creek**	39.68	159	P	P	06 30 45.4	-1.2
	4.0nm,0.6s,baz=344,slow=8.9,SNR=8.9						
MKAR	**Makanchi Array**	55.91	325	P	P	06 32 50.8	-2.2
	0.6nm,0.4s,baz=118,slow=7.6,SNR=13						
ILAR	**Eielson Array**	84.44	25	P	P	06 35 45.0	-1.4
	0.6nm,0.8s,baz=246,slow=6.2,SNR=8.5						

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*HLW **26** 06:32:19.5,34.74N×25.53E,h33^{km},Mb3.0*
*CSEM **26** 06:32:19.9±0.1,34.55N×25.35E,h40^{km},MD3.3,Error ellipse: s-maj=3.2km s-min=2.3km az=64.0*
*ATH **26** 06:32:20.0,34.62N×25.24E,h38^{km}±3^{km},MD3.3/4*
*NEIC **26** 06:32:20.0,34.62N×25.24E,h38^{km},MD3.3(ATH),After ATH.*
ISC 26 06:32:19.7±0.6**,34.53N**±0.04×**25.31E**±0.08**,h33**^{km}**,n8,** σ**0.**^{s}**81**/11**,1D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	0.46	42	*e*PB	Pb	06 32 30.6	+0.8
NPS	**Neapolis**	0.77	19	*e*PN	Pn	06 32 33.9	-0.4
NPS				*e*SN	Sn	06 32 44.3	-0.5
GVD	**Gavdhos**	1.06	287	*e*PN	Pn	06 32 38.6	+0.2
VAM	**Vamos**	1.26	314	*e*PN	Pn	06 32 41.1	-0.3
VAM				*e*SN	Sn	06 32 57.3	-0.1
SLUM		3.03	182	P	P	06 33 08.0	+1.4
HMAT	**Matruh**	3.74	156	P	P	06 33 16.9	+0.3
SWA1		5.26	176	P	P	06 33 39.0	+0.9
SWA1				S	S	06 34 36.8	-1.7
HFRF	**Wahat Farafira**	7.80	160	⇓P	P	06 34 12.9	-0.7

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*IDC **26** 06:44:07.3±1.7,22.61S×170.78E,mb3.9/6,mb1 4.1/7, mb1mx4.1/13,mbtmp4.0/7,ML4.0/1,MS3.7/10,Ms1 3.7/10, ms1mx3.5/21,Error ellipse: s-maj=73.0km s-min=23.5km az=159.0*
*NEIC **26** 06:44:08.9±0.5,22.54S×170.65E,h10^{km},mb4.2/1,Error ellipse: s-maj=19.3km s-min=14.7km az=160.0*
ISC 26 06:44:11.6±6.4**,22.4S**±0.2×**170.5E**±0.1**,h31**^{km}±44^{km}**,n46,** σ**1.**^{s}**35**/20**,mb3.9**/7**,MS3.8**/7**,4C,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	3.79	275	*e*P	Pn	06 45 09.4	0.0
DZM				*e*S	Sn	06 45 52.0	-1.4
DZM	**Mont Dzumac**	3.79	275	Pn	Pn	06 45 09.6	+0.2
	11nm,0.3s,baz=290,slow=21,SNR=440						
DZM				Sn	Sn	06 45 55.0	+1.5
	7.1nm,0.3s,baz=183,slow=22,SNR=5.8						
HNR	**Honiara**	16.42	320	LR	LR	06 52 47.1	
	comp=Z,94nm,18.3s,baz=88,slow=31						
URZ	**Urewera**	16.77	162	LR	LR	06 53 00.8	
	comp=Z,320nm,20.1s,baz=321,slow=32						
AFI	**Afiamalu**	18.82	66	LR	LR	06 54 24.4	
	comp=Z,85nm,18.0s,baz=242,slow=33						
RPZ	**Rata Peaks**	21.24	179	LR	LR	06 55 24.8	
	comp=Z,225nm,19.4s,MS3.6,baz=20,slow=32						
CTA	**Charters Tower**	22.73	271	P	P	06 49 15.3	+3.0
	2.5nm,0.7s,mb3.7,baz=110,slow=14,SNR=6.3						
CTA				LR	LR	06 56 34.1	
	comp=Z,59nm,18.5s,MS3.0,baz=73,slow=32						
CTA	**Charters Tower**	22.73	271	P	P	06 49 15.3	+3.0
CTA				LR	LR	06 56 34.1	
STKA	**Stephens Creek**	27.33	244	P	P	06 49 56.0	+0.2
	3.7nm,0.8s,mb3.9,baz=74,slow=13,SNR=3.3						
STKA				LR	LR	06 59 24.4	
	comp=Z,171nm,19.2s,MS3.6,baz=202,slow=33						
WRAB	**Tennant Creek**	33.77	267	P	P	06 50 51.4	-1.4
	2.8nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	33.77	267	P	P	06 50 51.5	-1.4
	0.5nm,0.5s,mb3.7,baz=101,slow=8.3,SNR=3.2						
CBIJ	**Chichi jima**	56.34	329	LR	LR	07 14 32.7	
	comp=Z,287nm,21.2s,MS4.3,baz=100,slow=32						
JHJ	**Hachijo jima 2**	62.53	331	LR	LR	07 21 10.1	
	comp=Z,153nm,18.0s,MS4.2,baz=112,slow=35						
ASAJ	**Asahikawa**	70.99	339	LR	LR	07 26 59.0	
	comp=Z,129nm,18.7s,MS4.2,baz=152,slow=36						
SNAA	**Sanae**	86.04	182	*e*	P	06 56 52.0	+2.2
SNAA	**Sanae**	86.04	182	*e*	P	06 56 58.0	+8.2
SNAA	**Sanae**	86.04	182	⇑*i*P	P	06 56 48.3	-1.5
SNAA				*e*		06 56 52.0	
SNAA				*e*	pP	06 56 58.0	-1.9
VNA3	**Neumayer Olymp**	86.59	180	*e*	P	06 56 54.5	+2.0
VNA3	**Neumayer Olymp**	86.59	180	*e*	P	06 56 59.4	+6.9
VNA3	**Neumayer Olymp**	86.59	180	⇑*i*P	P	06 56 50.9	-1.6
VNA3				*e*		06 56 54.5	
VNA3				*e*	pP	06 56 59.4	-3.1
VNA2	**Neumayer--Watz**	86.89	181	*e*	P	06 56 56.1	+2.1
VNA2	**Neumayer--Watz**	86.89	181	P	P	06 56 53.1	-0.9
VNA2				*e*		06 56 56.1	
NVAR	**Mina Array Bea**	90.02	48	P	P	06 57 08.4	-1.2
	0.2nm,0.5s,mb3.7,baz=225,slow=6.4,SNR=2.7						
NVAR				LR	LR	07 31 27.1	
	comp=Z,30nm,19.3s,MS3.7,baz=135,slow=32						
SONM	**Songino Array**	90.47	323	P	P	06 57 12.2	+0.8
	1.9nm,1.0s,mb4.4,baz=128,slow=3.1,SNR=10						
ILAR	**Eielson Array**	92.91	17	P	P	06 57 23.1	+0.7
	0.2nm,0.8s,mb3.6,baz=230,slow=5.3,SNR=4.5						
ARCES	**ARCESS Array B**	128.44	345	PKP	PKPdf	07 03 14.3	-5.8
	6.1nm,1.1s,baz=72,slow=3.8,SNR=4.7						
OKC	**Ostrava-Krasne**	145.07	328	*e*P	PKPbc	07 03 47.3	+1.4
OKC				*e*		07 03 56.3	
KSP	**Ksiaz**	145.24	331	*e*PKP	PKPdf	07 03 47.1	-4.1
KSP				*e*		07 03 56.9	
DPC	**Dobruska-Polom**	145.58	330	*e*PKP	PKPdf	07 03 49.1	-2.6
DPC				*e*x	x	07 03 57.8	
UPC	**Upice**	145.61	331	*e*PKP	PKPdf	07 03 48.9	-2.9
UPC				*e*x	x	07 03 58.3	
PVCC	**Panska Ves**	146.23	332	*e*PKP	PKPdf	07 03 51.4	-1.5
BRG	**Berggiesshubel**	146.24	333	*e*P	PKPbc	07 03 50.3	+1.5
BRG				*e*		07 03 56.4	
BRG				*e*		07 04 01.1	
CLL	**Collm**	146.29	334	P	PKPbc	07 03 50.9	+2.0
	logA/T=1.2						
CLL				*e*		07 04 00.0	
CLL	**Collm**	146.29	334	*i* P	PKPbc	07 03 50.9	+2.0
CLL				*e*		07 04 00.0	
NKC	**Novy Kostel**	147.35	334	*e*PKP	PKPdf	07 03 53.7	-1.0
KHC	**Kasperske Hory**	147.69	331	*e*PKP	PKPdf	07 03 49.3	-6.0
GERES	**GERESS Array B**	147.85	331	PKPbc	PKPdf	07 03 55.3	-0.3
	1.3nm,0.6s,baz=34,slow=4.8,SNR=7.0						
GRA1	**Grafenberg Arr**	148.27	334	*e*PKP	PKPdf	07 03 58.7	+2.5
MOTA	**Moosalm**	150.13	331	⇑*e*P	PKPdf	07 04 05.4	+6.2
	comp=Z,4.4nm,0.9s						
SQTA	**Sankt Quirin**	150.17	331	⇑*e*P	PKPdf	07 04 04.9	+5.6
	comp=Z,11nm,1.2s						
CDF	**Champ du Feu**	150.82	337	*e*PKP2	PKPab	07 04 10.1	-0.1
HAU	**Haudompre**	151.50	337	*e*PKP2	PKPab	07 04 11.6	-1.4
MEZF	**Maizieres J’vi**	151.51	340	*e*PKP2	PKPab	07 04 12.1	-0.9
	34nm,1.0s						
LOR	**Lormes**	152.98	340	*e*PKP2	PKPab	07 04 16.6	-2.7
LPL	**La Plagne**	153.43	334	*e*PKP2	PKPab	07 04 19.5	-1.7
	9.3nm,0.8s						
LPG	**La Plagne**	153.44	334	*e*PKP2	PKPab	07 04 19.7	-1.5

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*NIED **26** 06:44:00,41.90N×139.20E,h8^{km},Mw4.0 Best double couple: $M_0$1.03×10^{15} NP1:ϕ_s354°,δ60°,λ100°. NP2: ϕ_s155°,δ31°,λ74°.*
*JMA **26** 06:44:28.9±0.1,41.90N×139.21E,h18^{km}±1^{km},M4.2*
JMA Felt II J1.
*NEIC **26** 06:44:34.0±1.5,41.86N×139.03E,h54^{km}±14^{km},mb4.3/1, Error ellipse: s-maj=13.3km s-min=11.0km az=67.0*
NEIC Recorded [2 JMA] on Okushiri-to and [1 JMA] in southwestern Hokkaido.
*IDC **26** 06:44:33.7±2.0,41.89N×139.04E,h49^{km}±19^{km},mb3.6/12, mb1 3.8/14,mb1mx3.8/22,mbtmp3.8/14,ML3.4/2,Error ellipse: s-maj=20.6km s-min=14.7km az=140.0*
ISC 26 06:44:28.5±0.8**,41.91N**±0.04×**139.19E**±0.06**,h24**^{km}±5^{km}**, n37,**σ**0.**^{s}**87**/36**,mb3.8**/13**,4C-5D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOSM	**Okushiri--Mats**	0.27	51	⇓P	Pb	06 44 34.8	-0.3
JOSM				S	Sb	06 44 38.8	-0.7
JYM2	**Yakumo 2**	0.90	76	⇓P	Pb	06 44 45.5	+0.1
JYM2				*e*S	Sb	06 44 57.4	+0.4
JSH	**Shimam**	0.97	41	⇓P	Pb	06 44 46.6	+0.1
JSH				*e*S	Sb	06 44 59.0	+0.1
JSR	**Shiriuchi**	0.99	112	⇓P	Pb	06 44 47.3	+0.4
JSR				*e*S	Sb	06 45 00.0	+0.3
JSI2	**Shiura 2**	1.25	133	P	Pn	06 44 50.7	0.0
JKB	**Kayabe**	1.37	90	⇓P	Pn	06 44 52.4	-0.1
JKB				*e*S	Sn	06 45 09.8	-0.2
JIW	**Iwasaki**	1.45	155	⇑P	Pn	06 44 52.9	-0.7
JNB	**Noboribetsu**	1.48	67	P	Pn	06 44 53.8	-0.2
JNB				*e*S	Sn	06 45 11.7	-1.0
JOT	**Ohata**	1.49	110	P	Pn	06 44 54.1	0.0
ASAJ	**Asahikawa**	3.33	47	P	Pn	06 45 24.2	+3.8
	3.4nm,0.3s,baz=211,slow=9.0,SNR=6.6						
ASAJ				S	Sn	06 46 04.3	+4.7
	3.9nm,0.3s,baz=120,slow=30,SNR=4.1						
MAJO	**Matsushiro**	5.42	188	P	Pn	06 45 50.2	+0.3
MJAR	**Matsushiro Arr**	5.42	188	P	Pn	06 45 52.7	+2.8
	0.5nm,0.3s,baz=6.2,slow=14,SNR=3.3						
SONM	**Songino Array**	23.87	296	P	P	06 49 42.1	+1.4
	0.3nm,0.7s,mb2.9,baz=78,slow=8.2,SNR=3.5						
SONM				PcP	PcP	06 53 23.8	-1.2
	0.3nm,0.5s,baz=102,slow=2.2,SNR=4.0						
MKAR	**Makanchi Array**	40.22	297	P	P	06 52 03.5	-1.1
	0.4nm,0.7s,mb3.3,baz=82,slow=14,SNR=3.7						
KURK	**Kurchatov**	41.68	304	P	P	06 52 15.4	-1.1
IMA2	**Indian Mountai**	43.45	33	P	P	06 52 31.4	+0.7
BVAR	**Borovoye Array**	46.10	309	P	P	06 52 52.0	-0.1
	0.8nm,0.4s,mb4.0,baz=61,slow=9.3,SNR=3.6						
ILAR	**Eielson Array**	46.38	35	P	P	06 52 55.8	+1.6
	0.4nm,0.6s,mb3.5,baz=279,slow=9.5,SNR=8.6						
ARCES	**ARCESS Array B**	58.84	338	P	P	06 54 27.3	+0.4
	4.1nm,1.0s,mb4.4,baz=56,slow=8.7,SNR=4.7						
YKA	**Yellowknife Ar**	60.48	31	P	P	06 54 38.0	-0.3
	0.8nm,0.6s,mb3.9,baz=300,slow=6.8,SNR=3.3						
YKA	**Yellowknife Ar**	60.48	31	P	P	06 54 38.0	-0.3
WRAB	**Tennant Creek**	61.69	185	P	P	06 54 44.8	-2.2
	1.8nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	61.70	185	P	P	06 54 45.9	-1.2
	0.5nm,0.5s,mb3.9,baz=3.2,slow=7.2,SNR=5.3						
FINES	**FINESS Array B**	63.72	330	P	P	06 54 59.2	-0.6
	2.6nm,0.6s,mb4.4,baz=45,slow=8.1,SNR=16						
NB2	**NORSAR Subarra**	69.04	336	P	P	06 55 33.7	0.0
	1.4nm,0.5s,mb4.2,baz=37,slow=6.2						
NOA	**NORSAR Array B**	69.04	336	P	P	06 55 33.9	+0.2
	4.9nm,1.0s,mb4.4,baz=39,slow=6.2,SNR=6.1						
AKASG	**Malin Array Be**	69.42	320	P	P	06 55 36.0	-0.2
	1.4nm,0.8s,mb3.9,baz=44,slow=6.3,SNR=6.5						
PDAR	**Pinedale Array**	75.46	45	P	P	06 56 13.2	+1.1
	1.1nm,0.7s,mb3.9,baz=314,slow=2.1,SNR=8.8						
TXAR	**Lajitas Array**	88.45	51	P	P	06 57 21.1	+1.1
	0.1nm,0.5s,mb3.3,baz=260,slow=1.5,SNR=3.9						
SNAA	**Sanae**	144.83	200	*e*	PKPbc	07 04 10.7	+8.6
SNAA	**Sanae**	144.83	200	⇑*i*P	PKPbc	07 04 03.5	+1.4
SNAA				*e*		07 04 10.7	
LPAZ	**La Paz**	145.32	51	PKPbc	PKPbc	07 04 07.2	+2.2
	0.3nm,0.4s,baz=270,slow=5.1,SNR=4.7						
LPAZ	**La Paz**	145.32	51	PKPbc	PKPbc	07 04 07.2	+2.2
VNA2	**Neumayer--Watz**	146.44	199	*e*	PKPbc	07 04 14.6	+8.5
VNA2	**Neumayer--Watz**	146.44	199	⇑*i*P	PKPbc	07 04 07.7	+1.6
VNA2				*e*		07 04 14.6	
VNA3	**Neumayer Olymp**	146.76	198	*e*	PKPbc	07 04 15.0	+8.2
VNA3	**Neumayer Olymp**	146.76	198	⇑*i*P	PKPbc	07 04 08.7	+1.9
VNA3				*e*		07 04 15.0	

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*KNET **26** 06:53:30.3±0.5,44.13N×74.60E,h10^{km}±2^{km},ml1.7,Error ellipse: s-maj=3.0km s-min=2.6km az=147.0*
*NNC **26** 06:53:33.9±9.8,44.05N×74.51E,mpv2.6,Error ellipse: s-maj=87.0km s-min=30.9km az=50.0*
ISC 26 06:53:30.0±2.1**,44.3N**±0.1×**74.6E**±0.1**,h10**^{km}**,n8,** σ**1.**^{s}**02**/15**,9C-6D,Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USP	**Ospenovka**	0.99	184	⇑P	Pb	06 53 47.0	-1.9
	5.2nm,0.2s,SNR=10						
USP				⇓S	Sb	06 54 00.0	-1.7
	9.2nm,0.3s						
TKM2	**Tokmak 2**	1.52	151	⇑P	Pn	06 53 56.8	-0.6
	3.7nm,0.2s,SNR=10						
TKM2				⇑S	Sb	06 54 17.5	+0.5
	5.8nm,0.1s						
KBK	**Karagaybulak**	1.62	171	⇓P	Pn	06 53 58.8	0.0
	2.9nm,0.1s						
KBK				⇑S	Sn	06 54 21.3	+1.3
	12nm,0.3s						
AAK	**Ala-Archa**	1.62	183	⇓P	Pn	06 53 58.9	0.0
	2.9nm,0.2s,SNR=6.9						
AAK				⇑S	Sn	06 54 20.3	+0.3
	14nm,0.5s						
AAK	**Ala-Archa**	1.62	183	⇑P	Pn	06 53 58.7	-0.2
	4.7nm,0.5s						
AAK				⇓S	Sn	06 54 20.1	0.0
	2.1nm,0.3s						
EKS2	**Erkin-Say**	1.70	201	⇑P	Pn	06 53 60.0	-0.1
	1.9nm,0.1s,SNR=11						
EKS2				⇓S	Sn	06 54 22.8	+0.7
	8.1nm,0.2s						
AML	**Almayashu**	2.22	198	⇓P	Pn	06 54 09.2	+1.6
	6.7nm,0.3s,SNR=5.2						
KK31	**Karatay Array**	3.18	250	⇑Pn	Pn	06 54 28.9	+7.7
	0.5nm,0.3s,baz=68,slow=16,SNR=16						
KK31				⇑Sn	Sn	06 55 06.0	+6.4
	1.0nm,0.5s,baz=67,slow=29,SNR=6.4						

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*MOS **26** 07:07:18.9±1.0,16.94N×147.01E,h33^{km},mb5.0/12,Error ellipse: s-maj=17.0km s-min=9.1km az=89.7*
*BJI **26** 07:07:22.4,16.90N×147.00E,h52^{km},mB5.1,mb4.7, Ms4.7,Msz4.2*
*NEIC **26** 07:07:22.4±1.1,16.86N×147.05E,h52^{km}±10^{km},mb4.8/14, Error ellipse: s-maj=6.8km s-min=5.1km az=82.0*
*IDC **26** 07:07:22.1±2.0,16.96N×147.14E,h47^{km}±19^{km},mb4.2/14, mb1 4.4/16,mb1mx4.2/22,mbtmp4.5/16,ML4.4/2,MS3.8/9, Ms1 3.8/9,ms1mx3.5/21,Error ellipse: s-maj=22.0km s-min=11.1km az=92.0*

ISC 26 07:07:19.6±1.4**,16.89N**±0.06×**147.04E**±0.06**,h38**^{km}±12^{km}**, n78,**σ**0^{s}90**/78**,mb4.6**/32**,MS3.9**/12**,1C,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.89**	**213**	P	**P**	**07 08 21.5**	**+2.9**
	24nm,0.3s,baz=164,slow=9.6,SNR=19						
GUMO				S	**S**	**07 09 08.3**	**+4.7**
	69nm,0.3s,baz=34,slow=23,SNR=5.1						
GUMO				LR	LR	07 09 56.9	
	comp=Z,598nm,20.4s,baz=39,slow=39						
GUMO	**Guam**	**3.89**	**213**	P	**P**	**07 08 19.7**	**+1.1**
CBIJ	**Chichi jima**	**11.11**	**337**	P	**P**	**07 09 58.1**	**-0.9**
	9.5nm,0.3s,baz=86,slow=23,SNR=8.1						
CBIJ				S	**S**	**07 11 57.6**	**-5.3**
	5.4nm,0.3s,baz=287,slow=19,SNR=5.2						
JOW	**Kunigami**	**20.01**	**303**	P	**P**	**07 11 50.9**	**-1.0**
	9.9nm,0.6s,baz=140,slow=7.9,SNR=3.1						
MJAR	**Matsushiro Arr**	**21.08**	**340**	P	**P**	**07 12 02.6**	**-0.3**
	16nm,0.8s,mb4.4,baz=171,slow=11,SNR=31						
MAJO	**Matsushiro**	**21.08**	**340**	*e*P	**P**	**07 12 02.2**	**-0.8**
	22nm,0.6s,mb4.7						
MAJO	**Matsushiro**	**21.08**	**340**	*e*P	**P**	**07 12 02.2**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,22nm,0.6s,mb4.7						
MAT	**Matsushiro**	**21.08**	**340**	P	**P**	**07 12 02.5**	**-0.5**
MAT				S	**S**	**07 15 54.6**	**+4.1**
MAT	**Matsushiro**	**21.08**	**340**	*e*P	**P**	**07 12 03.0**	**0.0**
	comp=Z,18nm,0.5s,mb4.7						
MAT	**Matsushiro**	**21.08**	**340**	*e*P	**P**	**07 12 03.0**	**0.0**
MAT				pmax	pmax		
	comp=Z,18nm,0.5s,mb4.7						
PMG	**Port Moresby**	**26.13**	**180**	P	**P**	**07 12 51.5**	**-0.7**
	comp=Z,18nm,0.9s,mb4.6,baz=10,slow=6.6,SNR=6.2						
PMG				LR	LR	07 21 32.8	
	comp=Z,98nm,21.1s,MS3.3,baz=9.6,slow=32						
PMG	**Port Moresby**	**26.13**	**180**	*e*P	**P**	**07 12 51.5**	**-0.7**
	comp=Z,35nm,1.2s,mb4.8						
PMG	**Port Moresby**	**26.13**	**180**	*e*P	**P**	**07 12 51.5**	**-0.7**
PMG				pmax	pmax		
	comp=Z,35nm,1.2s						
HNR	**Honiara**	**29.10**	**153**	LR	LR	07 24 01.1	
	comp=Z,214nm,20.1s,MS3.8,baz=89,slow=34						
CN2	**Changchun**	**32.46**	**330**	*e*P	**P**	**07 13 50.3**	**+1.7**
CN2				*e*S	**S**	**07 18 59.8**	**+0.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
CN2				LR	LR		
	comp=N,300nm,15.0s,MS4.2						
CN2				LR	LR		
	comp=E,200nm,15.0s,MS4.2						
CN2				LR	LR		
	comp=Z,400nm,16.0s,MS4.2						
KLR	**Kul'dur**	**34.57**	**342**	*e*P	**P**	**07 14 03.8**	**-2.9**
PET	**Petropavlovsk**	**37.19**	**12**	*e*P	**P**	**07 14 37.9**	**+9.0**
PET				MLR	MLR		
	comp=Z,100nm,19.0s,MS3.6						
GYA	**Guiyang**	**38.57**	**291**	P	**P**	**07 14 43.0**	**+2.3**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**38.66**	**199**	*e*P	**P**	**07 14 40.5**	**-1.0**
	comp=Z,11nm,0.8s,mb4.6						
WRAB	**Tennant Creek**	**38.66**	**199**	*e*P	**P**	**07 14 40.5**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
WB2	**Warramunga Arr**	**38.67**	**199**	*e*P	**P**	**07 14 41.1**	**-0.4**
WRA	**Warramunga Arr**	**38.67**	**199**	P	**P**	**07 14 41.5**	**0.0**
	comp=Z,6.6nm,0.8s,mb4.4,baz=25,slow=8.7,SNR=32						
WRA				ScP		07 20 37.5	
	comp=Z,1.2nm,0.9s,baz=14,slow=3.9,SNR=5.4						
KSM	**Kuching**	**39.24**	**251**	P	**P**	**07 14 45.4**	**-1.0**
KMI	**Kunming**	**42.01**	**289**	P	**P**	**07 15 09.3**	**+0.1**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
KMI	**Kunming**	**42.01**	**289**	P	**P**	**07 15 09.2**	**0.0**
	comp=Z,14nm,0.5s,mb4.8						
KMI	**Kunming**	**42.01**	**289**	P	**P**	**07 15 09.2**	**0.0**
KMI				pmax	pmax		
	comp=Z,14nm,0.5s,mb4.8						
DZM	**Mont Dzumac**	**43.13**	**153**	P	**P**	**07 15 17.2**	**-1.2**
	comp=Z,4.4nm,0.8s,mb4.2,baz=96,slow=9.4,SNR=6.5						
SONM	**Songino Array**	**45.35**	**322**	P	**P**	**07 15 35.8**	**0.0**
	comp=Z,1.9nm,0.5s,mb4.2,baz=132,slow=6.2,SNR=19						
GTA	**Gaotai**	**46.66**	**309**	P	**P**	**07 15 47.5**	**+1.1**
GTA				AP	pP	07 16 03.3	+6.0
GTA				XP	sP	07 16 11.0	+9.0
GTA				PP	PP	07 17 39.0	+3.1
GTA				PPP	PPP	07 18 25.8	+3.8
GTA				S	**S**	**07 22 33.8**	**+1.6**
GTA				XS		07 23 01.0	
GTA				AMB	AMB		
	comp=Z,80nm,7.2s						
GTA				LR	LR		
	comp=N,190nm,14.4s,MS4.5						
GTA				LR	LR		
	comp=E,350nm,17.1s,MS4.5						
GTA				LR	LR		
	comp=Z,210nm,16.3s,MS4.2						
YAK	**Yakutsk**	**46.73**	**349**	*e*P	**P**	**07 15 46.5**	**-0.1**
YAK				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.9						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.5s						
ZAK	**Zakamensk**	**48.35**	**324**	*e*P	**P**	**07 15 47.8**	**-12**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb4.1						
TIXI	**Tiksi**	**55.80**	**353**	⇑*e*P	**P**	**07 16 56.6**	**+1.6**
WMQ	**Urumqi**	**56.46**	**312**	*e*P	**P**	**07 17 00.5**	**+0.5**
WMQ				AP	pP	07 17 16.5	+5.2
WMQ				XP	sP	07 17 23.0	+7.3
WMQ				*e*S	**S**	**07 24 44.8**	**-1.8**
WMQ				AMB	AMB		
	comp=Z,130nm,5.0s						
WMQ				LR	LR		
	comp=N,100nm,19.9s,MS4.1						
WMQ				LR	LR		
	comp=E,100nm,17.5s,MS4.1						
WMQ				LR	LR		
	comp=Z,110nm,18.6s,MS4.0						
JIRN	**Jiri**	**56.84**	**292**	*e*P	**P**	**07 17 03.2**	**+0.2**
	comp=Z,10.0nm,0.7s,mb5.0						
GUN	**Gumba**	**57.10**	**293**	*e*P	**P**	**07 17 05.8**	**+0.9**
	comp=Z,4.1nm,0.4s,mb4.8						
DMN	**Daman**	**57.80**	**292**	*e*P	**P**	**07 17 09.9**	**+0.1**
GKN	**Gorkha**	**58.19**	**293**	*e*P	**P**	**07 17 12.5**	**0.0**
KOLN	**Koldanda**	**59.12**	**293**	*e*P	**P**	**07 17 18.7**	**-0.3**
	comp=Z,12nm,0.9s,mb4.9						
MKAR	**Makanchi Array**	**60.63**	**315**	P	**P**	**07 17 28.3**	**-0.8**
	comp=Z,0.9nm,0.5s,mb4.1,baz=90,slow=7.3,SNR=6.0						
MKAR				LR	LR	07 45 54.6	
	comp=Z,60nm,18.8s,MS3.8,baz=192,slow=38						
KURK	**Kurchatov**	**63.46**	**319**	*e*P	**P**	**07 17 46.5**	**-1.5**
	comp=Z,13nm,1.2s,mb4.9						
KURK	**Kurchatov**	**63.46**	**319**	*e*P	**P**	**07 17 46.5**	**-1.5**
KURK				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.9						
MCK	**McKinley**	**63.57**	**27**	*e*P	**P**	**07 17 48.2**	**-0.2**
	comp=Z,4.7nm,1.1s,mb4.4						
MCK	**McKinley**	**63.57**	**27**	*e*P	**P**	**07 17 48.2**	**-0.2**
MCK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
ILAR	**Eielson Array**	**64.70**	**26**	P	**P**	**07 17 53.8**	**-2.0**
	comp=Z,2.8nm,0.4s,mb4.7,baz=255,slow=6.0,SNR=136						
INK	**Inuvik**	**70.53**	**23**	P	**P**	**07 18 31.5**	**-0.7**
	comp=Z,4.8nm,1.0s,mb4.4,baz=266,slow=9.0,SNR=28						
INK	**Inuvik**	**70.53**	**23**	*e*P	**P**	**07 18 31.1**	**-1.1**
PPT	**Papeete**	**71.18**	**116**	LR	LR	07 45 06.1	
	comp=Z,202nm,18.5s,MS4.4,baz=57,slow=32						
DLBC	**Dease Lake**	**72.09**	**33**	*e*P	**P**	**07 18 42.0**	**+0.4**
YKA	**Yellowknife Ar**	**78.98**	**28**	P	**P**	**07 19 20.5**	**-0.3**
	comp=Z,10nm,1.0s,mb4.7,baz=281,slow=5.6,SNR=17						
YKA				LR	LR	07 54 07.4	
	comp=Z,67nm,19.0s,MS4.0,baz=280,slow=36						
EDM	**Edmonton**	**82.27**	**37**	*e*P	**P**	**07 19 38.3**	**-0.1**
NVAR	**Mina Array Bea**	**83.24**	**52**	P	**P**	**07 19 44.2**	**+0.5**
	comp=Z,2.8nm,0.9s,mb4.3,baz=266,slow=4.3,SNR=12						
NVAR				LR	LR	07 55 35.6	
	comp=Z,28nm,18.0s,MS3.7,baz=100,slow=35						
HLID	**Hailey**	**84.56**	**46**	*e*P	**P**	**07 19 50.1**	**-0.1**
ARCES	**ARCESS Array B**	**84.59**	**342**	P	**P**	**07 19 50.9**	**+1.1**
	comp=Z,2.7nm,0.6s,mb4.6,baz=69,slow=6.9,SNR=15						
ARCES	**ARCESS Array B**	**84.59**	**342**	P	**P**	**07 19 50.9**	**+1.1**
ELK	**Elko**	**84.84**	**49**	*e*P	**P**	**07 19 51.9**	**+0.2**
	comp=Z,8.9nm,1.4s,mb4.7						
ELK	**Elko**	**84.84**	**49**	*e*P	**P**	**07 19 51.9**	**+0.2**
ELK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MCMT	**McKenzie Canyo**	**85.22**	**45**	*e*P	**P**	**07 19 54.0**	**+0.5**
HRY	**Holter Researc**	**85.28**	**43**	*e*P	**P**	**07 19 54.3**	**+0.6**
BOZ	**Bozeman (W)**	**85.77**	**44**	*e*P	**P**	**07 19 56.6**	**+0.4**
	comp=Z,12nm,1.6s,mb4.9						
BOZ	**Bozeman (W)**	**85.77**	**44**	*e*P	**P**	**07 19 56.6**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,12nm,1.6s,mb4.9						
DAG	**Danmarks Havn**	**86.14**	**357**	*i* P	**P**	**07 19 57.0**	**-0.3**
DAG	**Danmarks Havn**	**86.14**	**357**	*e*P	**P**	**07 19 57.0**	**-0.3**
QLMT	**Earthquake Lak**	**86.18**	**44**	*e*P	**P**	**07 19 59.3**	**+1.2**
JOF	**Joensuu**	**86.19**	**336**	*e*p	**P**	**07 19 57.3**	**-0.5**
	comp=Z,1.7nm,0.6s,mb4.5						
YMR	**Madison River**	**86.54**	**44**	*e*P	**P**	**07 20 01.1**	**+1.1**
	comp=Z,9.6nm,1.0s,mb5.0						
DUG	**Dugway**	**86.77**	**49**	*e*P	**P**	**07 20 01.3**	**+0.1**
	comp=Z,3.5nm,0.7s,mb4.7						
DUG	**Dugway**	**86.77**	**49**	*e*P	**P**	**07 20 01.3**	**+0.1**
DUG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.8						
MSU	**Marysvale**	**87.79**	**50**	*e*P	**P**	**07 20 06.1**	**-0.1**
PDAR	**Pinedale Array**	**88.17**	**46**	P	**P**	**07 20 08.0**	**+0.1**
	comp=Z,0.7nm,0.7s,mb4.0,baz=297,slow=3.3,SNR=5.5						
PDAR				LR	LR	07 55 51.0	
	comp=Z,55nm,21.4s,MS3.9,baz=70,slow=33						
SRU	**San Rafael**	**88.80**	**49**	*e*P	**P**	**07 20 10.9**	**-0.1**
	comp=Z,9.5nm,1.3s,mb5.0						
SRU	**San Rafael**	**88.80**	**49**	*e*P	**P**	**07 20 10.9**	**-0.1**
SRU				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.9						
FINES	**FINESS Array B**	**89.05**	**336**	P	**P**	**07 20 11.1**	**-0.6**
	comp=Z,4.4nm,1.0s,mb4.7,baz=65,slow=4.7,SNR=7.6						
FINES				LR	LR	07 59 50.6	
	comp=Z,59nm,18.3s,MS4.0,baz=345,slow=35						
PV10	**Paradox Valley**	**90.14**	**50**	*e*P	**P**	**07 20 18.0**	**+0.6**
SDCO	**Great Sand Dun**	**92.96**	**49**	*e*P	**P**	**07 20 30.7**	**+0.3**
DBIC	**Dimbokro**	**143.66**	**308**	PKP	PKPdf	07 26 51.4	-0.1
	comp=Z,3.5nm,0.9s,baz=357,slow=5.9,SNR=4.7						
LPAZ	**La Paz**	**146.31**	**94**	PKPbc	PKPbc	07 26 60.0	+2.8
	comp=Z,1.3nm,0.4s,baz=347,slow=4.1,SNR=9.9						
LPAZ	**La Paz**	**146.31**	**94**	*e*PKP	PKPdf	07 26 59.0	+3.0
SAML	**Samuel**	**149.54**	**79**	*e*PKPbc	PKPdf	07 27 06.8	+5.5

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*NEIC **26** 07:10:14.1,15.45N×96.38W,h7^{km},MD4.1(MEX),After MEX.*

MEX 26 07:10:14.1±0.8**,15.45N×96.38W,h7**^{km}±7^{km}**,MD4.1,Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.41**	**40**	*i* P	Pg	07 10 21.8	-0.6
HUIG				*i* S	Sg	07 10 27.7	-0.2
VHO	**Vista Hermosa**	**1.64**	**348**	*i* P	Pn	07 10 40.1	-3.5
VHO				*i* S	Sb	07 10 59.2	-6.0
OXX	**Oaxaca**	**1.65**	**349**	*i* P	Pn	07 10 40.0	-3.7
OXX				*i* S	Sn	07 11 01.0	-4.4
PNIG	**Pinotepa**	**1.92**	**299**	*i* P	Pn	07 10 44.2	-3.4
PNIG				*i* S	Sn	07 11 07.0	-5.2
CMIG	**Matias Romero**	**2.17**	**41**	*i* P	Pn	07 10 46.9	-4.3
CMIG				*i* S	Sn	07 11 14.3	-4.4
CCIG	**Comitan**	**4.17**	**78**	*i* P	Pn	07 11 14.2	-5.5
CCIG				*i* S	Sn	07 12 03.0	-6.3
PPM	**Popocatepetl**	**4.18**	**330**	*i* S	Sn	07 12 05.5	-4.1

IDC 26 07:59:39.6±3.8**,46.20N×152.01E,mb3.7**/5**,mb1 4.0**/5**, mb1mx3.6**/19**,mbtmp3.7**/5**,Error ellipse: s-maj=91.5km s-min=37.7km az=6.0,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	**Eielson Array**	**37.46**	**38**	P	P	08 06 53.9	-2.1
	0.6nm,0.5s,baz=264,slow=8.0,SNR=18						
INK	**Inuvik**	**42.53**	**32**	P	P	08 07 36.5	-1.3
	0.6nm,0.3s,baz=300,slow=6.7,SNR=20						
FINES	**FINESS Array B**	**64.21**	**334**	P	P	08 10 15.6	-2.2
	1.2nm,0.8s,baz=45,slow=5.9,SNR=6.9						
NOA	**NORSAR Array B**	**68.50**	**341**	P	P	08 10 43.4	-1.8
	0.8nm,0.6s,baz=30,slow=6.2,SNR=2.5						
TXAR	**Lajitas Array**	**78.43**	**60**	P	P	08 11 42.4	-1.2
	0.1nm,0.5s,baz=304,slow=6.5,SNR=3.4						

NNC 26 08:13:26.6±2.7**,38.92N×69.66E,h6**^{km}±8^{km}**,mpv2.9, 3C-3D,Error ellipse: s-maj=19.8km s-min=18.4km az=8.0,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.22**	**8**	⇑Pn	Pn	08 14 33.8	+0.8
	0.5nm,0.5s,baz=175,slow=11,SNR=12						
KK31				⇓Sn	Sn	08 15 27.3	+4.1
	0.5nm,0.3s						
KK31				⇑Lg		08 15 40.2	
	1.9nm,0.5s,baz=184,slow=36,SNR=6.5						
AAK	**Ala-Archa**	**5.21**	**43**	⇓Pn	Pn	08 14 45.4	-1.6
	1.6nm,0.5s						
AAK				⇑Sn	Sn	08 15 47.5	-0.7
	9.1nm,1.6s						
AB31	**Akbulak array**	**12.46**	**329**	P	P	08 16 25.8	-1.4
	0.1nm,0.3s,baz=269,slow=11,SNR=7.6						
AB31				⇓S	S	08 18 46.4	-1.0
	1.4nm,0.9s,baz=155,slow=23,SNR=2.5						

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*NEIC **26** 08:27:49.8,27.49S×71.19W,h48^{km},MD4.0(GUC),After GUC.*

GUC 26 08:27:49.8±0.8**,27.49S×71.19W,h48**^{km}±11^{km}**,MD4.0, ML4.1,3C-3D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CDCH	**Caldera**	**0.52**	**38**	⇓*i*P	P	08 28 01.5	+0.3
CDCH				*i* S	S	08 28 09.9	+0.6
CPCH	**Copiapo**	**0.75**	**80**	⇓*i*P	P	08 28 04.4	+0.2
CPCH				*i* S	S	08 28 15.7	+1.0
CPCH				AMP		08 28 17.4	
	comp=E,91µm,0.1s						
CRCH	**Chaqaral**	**1.24**	**24**	⇓*i*P	P	08 28 11.6	+0.5
CRCH				*i* S	S	08 28 27.5	+0.6
CRCH				AMP		08 28 28.8	
	comp=N,2µm,0.2s						
LSCH	**La Serena**	**2.41**	**181**	AMP		08 29 14.0	
	comp=E,452nm,0.4s						
TLL	**Tololo Astrono**	**2.69**	**173**	⇑*i*P	P	08 28 31.7	0.0
TLL				*i* S	S	08 29 03.8	+0.6
TLL				AMP		08 29 26.1	
	comp=E,671nm,0.6s						
CPN1	**Cerro Paranal**	**2.94**	**14**	⇑*i*P	P	08 28 34.1	-1.0
CPN1				*i* S	S	08 29 08.5	-0.9
CPN1				AMP		08 29 37.1	
	comp=E,233nm,0.6s						
CMCH	**Combarbala**	**3.68**	**178**	⇑*i*P	P	08 28 43.2	-2.5
CMCH				*i* S	S	08 29 24.8	-3.4
CMCH				AMP		08 29 49.1	
	comp=E,1µm,0.6s						
CEN1	**Los Morros**	**4.18**	**13**	*i* P	P	08 28 48.3	-4.4
CEN1				*i* S	S	08 29 33.4	-7.4
CEN1				AMP		08 30 01.1	
	comp=E,65nm,1.2s						
ZON	**Zonda**	**4.60**	**152**	*e*P	P	08 29 07.0	+8.4
TRQA	**Tornquist**	**13.07**	**146**	*e*Pn	P	08 30 52.0	-3.0

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*NEIC **26** 08:52:12.3±1.0,21.49S×179.42W,h686^{km}±13^{km},mb4.3/3, Error ellipse: s-maj=23.7km s-min=11.4km az=150.0*

*IDC **26** 08:52:12.9±37.0,21.44S×179.49W,h689^{km}±406^{km}, mb3.3/2,mb1 3.5/2,mb1mx3.0/12,mbtmp4.5/2,Error ellipse: s-maj=285.8km s-min=118.1km az=52.0*

ISC 26 08:52:10.1±1.0**,21.8S**±0.2×**179.5W**±0.2**,h650**^{km}**,n14,** σ**0^{s}55**/8**,mb4.2**/5**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**10.75**	**45**	*e*P	**P**	**08 54 36.9**	**+0.1**
CTAO	**Charters Tower**	**31.96**	**267**	*e*P	**P**	**08 57 47.8**	**+0.3**
	4.1nm,0.4s,mb4.3						
STKA	**Stephens Creek**	**35.95**	**245**	P	**P**	**08 58 21.6**	**+1.2**
	3.0nm,0.5s,mb4.1,baz=88,slow=11,SNR=10						
WB2	**Warramunga Arr**	**43.01**	**264**	*e*P	**P**	**08 59 16.6**	**-0.3**
WRAB	**Tennant Creek**	**43.01**	**264**	*e*P	**P**	**08 59 16.4**	**-0.6**
	7.0nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	**43.02**	**264**	P	**P**	**08 59 16.5**	**-0.5**
	3.1nm,0.3s,mb4.2,baz=96,slow=7.7,SNR=177						
FITZ	**Fitzroy Crossi**	**51.45**	**264**	*e*P	**P**	**09 00 20.2**	**+0.2**
	2.8nm,0.3s,mb4.0						
VNDA	**Vanda**	**56.53**	**185**	*e*P	**P**	**09 00 54.3**	**-0.3**
BVAR	**Borovoye Array**	**119.11**	**320**	PKP	PKPdf	09 09 44.8	-2.0
	0.6nm,0.4s,baz=92,slow=2.0,SNR=4.7						
ARCES	**ARCESS Array B**	**129.89**	**349**	PKP	PKPdf	09 10 05.4	-1.7
	0.4nm,0.4s,baz=45,slow=1.3,SNR=6.6						
AKASG	**Malin Array Be**	**143.39**	**329**	PKP	PKPdf	09 10 29.3	-2.7
	0.6nm,0.3s,baz=45,slow=4.3,SNR=9.5						
AKASG	**Malin Array Be**	**143.39**	**329**	PKP	PKPdf	09 10 29.3	-2.7
BRTR	**Keskin Array B**	**146.59**	**310**	PKPbc	PKPbc	09 10 40.0	+0.1
	1.0nm,0.7s,baz=124,slow=4.2,SNR=3.8						
GERES	**GERESS Array B**	**150.99**	**342**	PKPbc	PKPdf	09 10 49.9	+5.6
	0.6nm,0.7s,baz=18,slow=3.1,SNR=3.9						

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*NEIC **26** 09:21:24.6±4.2,28.73S×175.66W,h3^{km}±27^{km},mb4.3/3, Error ellipse: s-maj=14.1km s-min=9.8km az=106.0*

*IDC **26** 09:21:24.4±1.0,28.96S×175.45W,mb4.1/6,mb1 4.4/9, mb1mx4.3/15,mbtmp4.2/9,ML4.1/2,MS3.3/8,Ms1 3.4/8, ms1mx3.3/16,Error ellipse: s-maj=47.1km s-min=19.8km az=153.0*

ISC 26 09:21:28.2±0.6**,28.9S**±0.1×**175.8W**±0.1**,h33**^{km}**, (h34**^{km}±1.3^{km}**:pP-P),n35,**σ**1^{s}01**/22**,mb4.1**/7**,MS3.3**/6**,3C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.94**	**258**	Pn	**Pn**	**09 22 02.9**	**+3.4**
	459nm,0.3s,baz=294,slow=4.1,SNR=32						
RAO				Sn	**Sn**	**09 22 27.6**	**+4.7**
	2µm,0.3s,baz=110,slow=21,SNR=24						
RAO				LR	LR	09 22 35.7	
	comp=Z,475nm,20.1s,baz=9.3,slow=33						
RAO	**Raoul Island**	**1.94**	**258**	*e*Pn	**Pn**	**09 22 00.8**	**+1.3**
RAO				*e*Sn	**Sn**	**09 22 28.0**	**+5.1**
URZ	**Urewera**	**11.10**	**211**	Pn	**P**	**09 24 06.3**	**-1.4**
	0.8nm,0.3s,baz=203,slow=23,SNR=4.5						
URZ				Sn	**S**	**09 26 00.8**	**-11**
	2.5nm,0.3s,baz=163,slow=20,SNR=9.6						
AFI	**Afiamalu**	**15.33**	**15**	Pn	**P**	**09 24 57.7**	**-6.1**
	1.3nm,0.3s,baz=137,slow=18,SNR=2.9						
AFI	**Afiamalu**	**15.33**	**15**	*e*Pn	**P**	**09 25 00.3**	**-3.5**
	17nm,0.8s						
DZM	**Mont Dzumac**	**17.43**	**289**	Pn	**P**	**09 25 28.4**	**-2.0**
	0.1nm,0.3s,baz=128,slow=19,SNR=2.4						
DZM				LR	LR	09 30 45.8	
	comp=Z,290nm,19.8s,baz=194,slow=32						
RPZ	**Rata Peaks**	**18.21**	**212**	Pn	**P**	**09 25 39.9**	**-0.2**
	1.2nm,0.3s,baz=175,slow=1.9,SNR=7.5						
RPZ	**Rata Peaks**	**18.21**	**212**	Pn	**P**	**09 25 39.9**	**-0.2**
TBI	**Tubuai**	**24.21**	**83**	*e*LQ		09 30 57.1	
TBI				*e*LR	LR	09 31 57.0	
	908nm,36.0s						
PPT	**Papeete**	**26.49**	**71**	*e*LQ		09 31 55.9	
PPT				*e*LR	LR	09 33 01.6	
	220nm,30.5s						
PPT	**Papeete**	**26.49**	**71**	LR	LR	09 33 58.9	
	comp=Z,14nm,21.0s,MS2.5,baz=87,slow=29						
HNR	**Honiara**	**29.89**	**305**	LR	LR	09 35 53.4	
	comp=Z,20nm,21.3s,MS2.7,baz=104,slow=29						
CTA	**Charters Tower**	**35.54**	**276**	P	**P**	**09 28 26.4**	**+2.0**
	1.9nm,0.7s,mb4.1,baz=114,slow=9.0,SNR=3.5						
CTAO	**Charters Tower**	**35.54**	**276**	*e*P	**P**	**09 28 24.1**	**-0.2**
	2.3nm,0.8s,mb4.2						
STKA	**Stephens Creek**	**36.75**	**254**	LR	LR	09 40 41.8	
	comp=Z,156nm,20.3s,MS3.8,baz=28,slow=31						
RKT	**Rikitea**	**36.97**	**91**	*e*LR	LR	09 37 50.5	
	145nm,32.8s						
WRAB	**Tennant Creek**	**46.02**	**269**	P	**P**	**09 29 50.1**	**-0.6**
	3.7nm,1.0s,mb4.3						
WRA	**Warramunga Arr**	**46.03**	**269**	P	**P**	**09 29 51.0**	**+0.3**
	0.8nm,0.5s,mb3.9,baz=108,slow=7.5,SNR=20						
WRA				PcP	PcP	09 31 27.2	-0.1
	1.8nm,1.2s,baz=118,slow=3.6,SNR=4.9						
GUMO	**Guam**	**56.82**	**313**	LR	LR	09 50 35.5	
	comp=Z,23nm,21.8s,MS3.2,baz=60,slow=31						
MJAR	**Matsushiro Arr**	**78.13**	**324**	LR	LR	10 01 04.7	
	comp=Z,24nm,19.6s,MS3.5,baz=120,slow=30						
SNAA	**Sanae**	**79.63**	**178**	⇑*i*P	**P**	**09 33 33.7**	**+0.5**
SNAA				*e*	pP	09 33 43.5	-0.1
VNA3	**Neumayer Olymp**	**79.70**	**175**	⇑*i*P	**P**	**09 33 33.7**	**+0.1**
VNA3				*e*	pP	09 33 44.5	+0.5
VNA2	**Neumayer--Watz**	**80.16**	**176**	⇑*i*P	**P**	**09 33 36.6**	**+0.5**
VNA2				*e*	pP	09 33 47.6	+1.1
NVAR	**Mina Array Bea**	**85.79**	**42**	P	**P**	**09 34 05.9**	**+0.4**
	1.3nm,0.8s,mb4.2,baz=227,slow=11,SNR=11						
TXAR	**Lajitas Array**	**89.91**	**56**	P	**P**	**09 34 24.8**	**-0.8**
	0.6nm,0.9s,mb3.9,baz=207,slow=5.6,SNR=7.2						
PDAR	**Pinedale Array**	**93.68**	**42**	P	**P**	**09 34 42.6**	**+0.1**
	0.4nm,0.9s,mb3.9,baz=270,slow=3.0,SNR=3.6						
ILAR	**Eielson Array**	**96.00**	**12**	P	**P**	**09 34 53.0**	**+0.4**
	0.7nm,0.7s,mb4.2,baz=221,slow=5.1,SNR=12						
LPAZ	**La Paz**	**96.96**	**113**	LR	LR	10 07 22.8	
	comp=Z,41nm,21.6s,MS3.9,baz=333,slow=28						
MKAR	**Makanchi Array**	**118.28**	**310**	PKP	PKPdf	09 40 12.1	+0.1
	0.4nm,0.6s,baz=137,slow=1.5,SNR=4.6						
BVAR	**Borovoye Array**	**126.65**	**316**	PKP	PKPdf	09 40 30.2	+2.1
	0.6nm,0.7s,baz=27,slow=3.3,SNR=3.8						
ARCES	**ARCESS Array B**	**137.47**	**349**	PKP	PKPdf	09 40 49.0	+1.0
	1.7nm,0.7s,baz=90,slow=1.2,SNR=4.7						
FINES	**FINESS Array B**	**144.33**	**342**	PKP	PKPdf	09 41 00.4	+0.2
	2.3nm,0.5s,baz=53,slow=3.4,SNR=22						
NB2	**NORSAR Subarra**	**147.48**	**354**	PKPabc	PKPdf	09 41 10.0	+4.4
	1.9nm,0.6s,baz=7.0,slow=2.8						
NOA	**NORSAR Array B**	**147.48**	**354**	PKPbc	PKPdf	09 41 09.9	+4.3
	2.1nm,0.6s,baz=14,slow=4.3,SNR=5.0						
AKASG	**Malin Array Be**	**151.19**	**326**	PKPbc	PKPdf	09 41 19.2	+7.5
	2.9nm,0.6s,baz=44,slow=2.6,SNR=16						
AKASG				PKPab	PKPab	09 41 29.3	+1.5
	0.4nm,0.4s,baz=44,slow=2.9,SNR=4.0						

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*IDC **26** 09:47:10.8±1.6,17.59S×178.77W,h516^{km}±22^{km},mb3.2/6, mb1 3.5/8,mb1mx3.3/16,mbtmp4.2/8,Error ellipse: s-maj=29.5km s-min=13.9km az=140.0*

*NEIC **26** 09:47:11.3±0.9,17.57S×178.80W,h524^{km}±12^{km},mb4.2/5, Error ellipse: s-maj=20.3km s-min=9.9km az=151.0*

ISC 26 09:47:10.3±1.0**,17.6S**±0.2×**178.8W**±0.1**,h526**^{km}±18^{km}**, n16,**σ**0^{s}90**/16**,mb4.0**/9**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.69**	**63**	P	**P**	**09 49 05.0**	**-0.2**
	9.1nm,0.3s,baz=79,slow=19,SNR=17						
AFI				S	**S**	**09 50 36.6**	**-0.1**
	1.0nm,0.3s,baz=77,slow=21,SNR=2.0						
DZM	**Mont Dzumac**	**14.57**	**250**	P	**P**	**09 50 17.9**	**+2.1**
	0.7nm,0.3s,baz=72,slow=16,SNR=12						
HNR	**Honiara**	**22.17**	**289**	*e*P	**P**	**09 51 27.4**	**-1.0**
	150nm,1.2s						
RPZ	**Rata Peaks**	**27.43**	**196**	P	**P**	**09 52 13.6**	**-1.5**
	2.3nm,0.6s,mb4.0,baz=24,slow=10.0,SNR=2.1						
CTA	**Charters Tower**	**33.12**	**260**	*e*P	**P**	**09 53 04.9**	**+0.8**
	2.8nm,0.7s,mb3.9						
CTAO	**Charters Tower**	**33.12**	**260**	*e*P	**P**	**09 53 04.3**	**+0.3**
	6.0nm,1.0s,mb4.1						
STKA	**Stephens Creek**	**38.45**	**241**	P	**P**	**09 53 48.9**	**+0.9**
	5.3nm,0.5s,mb4.4,baz=92,slow=10,SNR=17						
WB2	**Warramunga Arr**	**44.30**	**259**	*e*P	**P**	**09 54 34.5**	**-0.3**
WRAB	**Tennant Creek**	**44.31**	**259**	*e*P	**P**	**09 54 34.6**	**-0.2**
	35nm,1.6s,mb4.6						
WRA	**Warramunga Arr**	**44.31**	**259**	P	**P**	**09 54 34.7**	**-0.2**
	2.7nm,0.6s,mb4.0,baz=96,slow=7.3,SNR=107						
FORT	**Forrest**	**49.80**	**244**	*e*P	**P**	**09 55 15.9**	**-0.6**
	14nm,0.5s,mb4.6						
FITZ	**Fitzroy Crossi**	**52.70**	**260**	*e*P	**P**	**09 55 37.8**	**0.0**
	1.6nm,0.3s,mb3.8						
MJAR	**Matsushiro Arr**	**67.42**	**324**	P	**P**	**09 57 14.3**	**-0.6**
	0.5nm,0.5s,mb3.3,baz=162,slow=6.7,SNR=5.1						
ILAR	**Eielson Array**	**85.66**	**13**	P	**P**	**09 58 53.3**	**-0.2**
	0.5nm,0.8s,mb3.2,baz=237,slow=5.4,SNR=8.3						
TXAR	**Lajitas Array**	**86.14**	**58**	P	**P**	**09 58 58.6**	**+1.8**
	0.1nm,0.6s,baz=220,slow=7.0,SNR=3.2						
GERES	**GERESS Array B**	**147.20**	**345**	PKPbc	PKPdf	10 05 55.4	+4.8
	0.7nm,0.5s,baz=27,slow=3.0,SNR=5.7						

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*NEIC **26** 10:18:22.4±0.9,2.73N×94.17E,h30^{km},mb4.3/1,Error ellipse: s-maj=23.5km s-min=14.9km az=210.0*

*IDC **26** 10:18:22.1±1.7,2.71N×94.15E,h27^{km}±5^{km},mb3.9/5, mb1 4.1/5,mb1mx3.7/17,mbtmp4.0/5,MS3.9/1,Ms1 3.9/1, ms1mx2.7/25,Error ellipse: s-maj=63.7km s-min=20.9km*

az=58.0

ISC 26 10:18:21.4±1.1**,2.8N**±0.1×**94.3E**±0.1**,h29^{km}, h29^{km}**±.8^{km}**:pP-P,n12,**σ**0^{s}50**/10**,mb3.9**/6**,MS3.9**/1**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	**Kulim**	6.82	69	*e*Pn	Pn	10 20 02.0	-0.2
KULM				*e*pP		10 20 30.7	
SNG	**Songkhla**	7.67	55	P	Pn	10 20 14.0	-0.1
KKM	**Kota Kinabalu**	22.11	81	*e*P	P	10 23 17.0	+0.7
FITZ	**Fitzroy Crossi**	37.23	125	LR	LR	10 40 19.5	
	comp=Z,191nm,21.9s,MS3.9,baz=209,slow=35						
MKAR	**Makanchi Array**	45.04	348	P	P	10 26 35.9	-0.5
	2.0nm,0.5s,mb4.2,baz=166,slow=8.6,SNR=30						
MKAR				pP	pP	10 26 44.2	-0.9
	1.1nm,0.8s,baz=164,slow=8.8,SNR=13						
MKAR	**Makanchi Array**	45.04	348	P	P	10 26 35.9	-0.6
MKAR				pP	pP	10 26 44.2	-0.9
WRA	**Warramunga Arr**	45.36	122	P	P	10 26 38.5	-0.8
	0.4nm,0.8s,mb3.3,baz=296,slow=9.1,SNR=4.7						
WRA				pP	pP	10 26 47.6	-0.4
	1.3nm,0.9s,baz=299,slow=8.9,SNR=7.8						
WRAB	**Tennant Creek**	45.36	122	*e*P	P	10 26 39.5	+0.2
	4.6nm,1.1s,mb4.2						
SONM	**Songino Array**	46.07	11	P	P	10 26 44.3	-0.3
	1.4nm,0.7s,mb4.0,baz=194,slow=8.6,SNR=14						
SONM				pP	pP	10 26 52.9	-0.3
	1.9nm,0.7s,baz=189,slow=8.2,SNR=11						
GERES	**GERESS Array B**	81.69	319	P	P	10 30 38.8	+0.2
	0.3nm,0.3s,mb3.7,baz=101,slow=6.8,SNR=3.6						
ILAR	**Eielson Array**	99.36	22	P	P	10 32 02.9	+0.8
	0.4nm,0.9s,mb4.0,baz=284,slow=7.4,SNR=5.6						
TXAR	**Lajitas Array**	143.72	27	PKP	PKPdf	10 37 53.8	-5.6
	0.4nm,0.8s,baz=315,slow=1.3,SNR=4.5						
TXAR				pPKP		10 38 02.6	
	0.3nm,0.8s,baz=297,slow=2.0,SNR=2.8						

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*IDC **26** 10:26:08.9±1.6,17.78N×122.36E,mb3.6/4,mb1 3.9/5, mb1mx3.6/17,mbtmp3.8/5,ML4.5/1,Error ellipse: s-maj=52.7km s-min=17.6km az=92.0*

*MAN **26** 10:26:11.4,17.53N×120.96E,h21^{km},mb4.2,ML3.0, MS2.7*

ISC 26 10:26:12.0±0.5**,17.50N**±0.05×**120.98E**±0.05**,h33^{km},n13,** σ**1^{s}33**/19**,mb3.5**/4**,2C,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	**Dolores**	0.29	301	*e*P	P	10 26 18.8	-0.8
ABRA				*e*S	S	10 26 23.9	-1.1
APYP	**Conner**	0.44	35	*e*P	P	10 26 20.4	-1.3
APYP				*e*S	S	10 26 27.0	-1.6
CVP	**Callao Caves**	0.83	76	⇑*i*P	P	10 26 26.5	-0.7
CVP				*i* S	S	10 26 38.0	-0.5
CAUP	**Cauayan**	0.98	124	*e*P	P	10 26 30.2	+0.9
BCPH	**Baguio City Da**	1.17	199	⇑*e*P	P	10 26 31.3	-0.8
BCPH				*i* S	S	10 26 46.3	-0.9
SGCP	**Mt. Cagua**	1.26	54	*e*P	P	10 26 34.1	+0.8
SGCP				*e*S	S	10 26 50.7	+1.4
BOLP	**Bolinao**	1.50	223	*e*P	P	10 26 37.3	+0.4
SCZP	**Santa Cruz**	1.99	211	*e*P	P	10 26 45.6	+1.7
TGY	**Tagaytay City**	3.38	181	Pn	Pn	10 27 12.2	+8.4
	32nm,0.3s,baz=22,slow=5.4,SNR=2.4						
TGY				Sn	Sn	10 27 57.1	+14
	59nm,0.3s,baz=209,slow=8.0,SNR=3.0						
TGY				Lg		10 28 13.1	
	46nm,0.3s,baz=234,slow=4.2,SNR=3.3						
SONM	**Songino Array**	32.53	342	P	P	10 32 44.2	+2.2
	0.3nm,0.5s,mb3.5,baz=158,slow=8.9,SNR=4.2						
WRA	**Warramunga Arr**	39.45	160	P	P	10 33 38.9	-2.0
	0.2nm,0.8s,mb2.9,baz=342,slow=8.9,SNR=3.2						
MKAR	**Makanchi Array**	43.20	321	P	P	10 34 15.3	+3.7
	0.6nm,0.7s,mb3.4,baz=108,slow=7.7,SNR=6.6						
ARCES	**ARCESS Array B**	75.66	339	P	P	10 37 57.2	+2.1
	2.7nm,0.9s,mb4.2,baz=49,slow=8.3,SNR=3.8						

IDC 26 10:51:39.4±8.6**,22.37S**×**170.31E,h56^{km}**±59^{km}**,mb3.7**/4**, mb1 3.8**/5**,mb1mx3.7**/14**,mbtmp3.9**/5**,ML3.8**/1**,MS3.2**/5**, Ms1 3.2**/5**,ms1mx3.1**/16**,Error ellipse: s-maj=91.4km s-min=49.5km az=163.0,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	3.60	274	*e*P	P	10 52 30.9	-3.2
DZM				*e*S	S	10 53 15.0	-0.7
DZM	**Mont Dzumac**	3.60	274	P	P	10 52 31.5	-2.6
	8.7nm,0.3s,baz=143,slow=22,SNR=186						
DZM				S	S	10 53 15.0	-0.7
	10nm,0.3s,baz=133,slow=20,SNR=6.2						
RAO	**Raoul Island**	12.62	125	LR	LR	10 58 03.7	
	comp=Z,97nm,19.1s,baz=255,slow=30						
HNR	**Honiara**	16.26	321	LR	LR	11 00 51.3	
	comp=Z,57nm,20.5s,baz=93,slow=34						
URZ	**Urewera**	16.88	161	LR	LR	11 00 34.3	
	comp=Z,114nm,19.1s,baz=293,slow=32						
AFI	**Afiamalu**	18.97	67	LR	LR	11 01 15.6	
	comp=Z,50nm,19.5s,baz=231,slow=30						
CTA	**Charters Tower**	22.54	271	P	P	10 56 36.8	+1.1
	1.9nm,0.8s,baz=89,slow=13,SNR=4.4						
STKA	**Stephens Creek**	27.19	243	LR	LR	11 06 22.0	
	comp=Z,102nm,19.7s,baz=28,slow=32						
WRA	**Warramunga Arr**	33.59	267	P	P	10 58 13.3	-3.3
	0.3nm,0.5s,baz=100,slow=8.8,SNR=7.9						
FITZ	**Fitzroy Crossi**	42.02	267	P	P	10 59 24.7	-2.5
	4.8nm,0.7s,baz=139,slow=9.3,SNR=7.4						
SONM	**Songino Array**	90.31	323	P	P	11 04 32.6	-2.8
	1.3nm,1.0s,baz=119,slow=3.3,SNR=6.9						
GERES	**GERESS Array B**	147.70	331	PKPbc	PKPdf	11 11 19.5	+4.8
	0.9nm,0.8s,baz=27,slow=3.0,SNR=5.8						

WEL 26 11:21:38.8±0.1**,40.19S**×**175.04E,h12^{km},ML3.7**/32**, 1C-3D,Error ellipse: s-maj=1.2km s-min=0.5km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	**Wanganui**	0.43	355	⇑P*	Pb	11 21 48.2	+0.3
WAZ				S*	Sb	11 21 55.2	+1.2
WAZ				S*	Sb	11 21 55.2	+1.2
MRZ	**Mangatainoka R**	0.63	139	⇓P*	Pb	11 21 51.5	+0.2
MRZ				S*	Sb	11 22 00.2	+0.4
KIW	**Kapiti Island**	0.68	188	⇓P*	Pb	11 21 51.4	-0.7
KIW				S*	Sb	11 22 00.2	-1.1
TSZ	**Takapari Road**	0.72	80	⇓P*	Pb	11 21 52.8	0.0
TSZ				S*	Sb	11 22 02.5	+0.1
MTVZ	**Mangateitei**	0.87	23	P*	Pb	11 21 54.7	-0.6
CAW	**Cannon Point**	0.92	179	P*	Pb	11 21 55.9	-0.4
CAW				S*	Sb	11 22 07.6	-0.6
PKVZ	**Pokaka**	0.93	15	P*	Pb	11 21 55.7	-0.6
PKVZ				S*	Sb	11 22 08.0	-0.3
MOVZ	**Moawhango**	0.95	36	P*	Pb	11 21 55.6	-1.2
MOVZ				S*	Sb	11 22 08.2	-0.9
WNVZ	**Wahianoa**	0.96	27	P*	Pb	11 21 56.1	-0.8
WNVZ				S*	Sb	11 22 09.6	+0.3
TRVZ	**Turoa**	0.97	24	P*	Pb	11 21 56.3	-0.8
DRZ	**Dome Shelter**	0.99	24	P*	Pb	11 21 57.1	-0.4
FWVZ	**Far West T-bar**	1.01	23	P*	Pb	11 21 56.9	-0.9
FWVZ				S*	Sb	11 22 10.0	-0.8
RAEZ	**Rainy Point**	1.02	331	P*	Pb	11 21 58.4	+0.4
TUVZ	**Tukino**	1.03	28	P*	Pb	11 21 57.4	-0.8
TUVZ				S*	Sb	11 22 11.6	+0.2
MTW	**Mount Morrison**	1.03	160	P*	Pb	11 21 58.2	0.0
MTW				S*	Sb	11 22 12.3	+0.8
BFZ	**Birch Farm**	1.05	119	P*	Pb	11 21 58.4	-0.1
BFZ				S*	Sb	11 22 13.1	+1.2
DUWZ	**D'Urville Isla**	1.05	234	P*	Pb	11 21 57.5	-1.0
DUWZ				S*	Sb	11 22 11.7	-0.2
WPVZ	**Whakapapa**	1.05	22	P*	Pb	11 21 57.7	-0.8
WPVZ				S*	Sb	11 22 11.4	-0.7
CNZ	**Chateau**	1.06	22	P*	Pb	11 21 57.7	-0.9
MRW	**Makara Radio**	1.07	194	P*	Pb	11 21 58.2	-0.7
MRW				S*	Sb	11 22 11.7	-0.9
VRZ	**Vera Road**	1.08	348	P*	Pb	11 21 58.5	-0.5
VRZ				S*	Sb	11 22 14.2	+1.4
NGZ	**Ngauruhoe**	1.10	24	P*	Pb	11 21 58.5	-0.7
WEL	**Wellington**	1.12	190	P*	Pb	11 21 59.0	-0.6
DFE	**Dawson Falls**	1.12	320	P*	Pb	11 21 60.0	+0.3
OTVZ	**Oturere**	1.13	26	P*	Pb	11 21 59.1	-0.7
WTVZ	**West Tongariro**	1.15	22	P*	Pb	11 21 59.2	-1.0
SNZO	**South Karori**	1.15	193	P*	Pb	11 21 59.3	-0.9
TWVZ	**Taurewa**	1.15	16	P*	Pb	11 21 58.8	-1.4
TWVZ				S*	Sb	11 22 14.2	-0.8
TCW	**Tory Channel**	1.18	209	P*	Pb	11 21 59.2	-1.5
TCW				S*	Sb	11 22 15.5	-0.1
NRZ	**Ngariki Road**	1.20	315	P*	Pb	11 22 01.2	+0.1
BHW	**Baring Head**	1.23	186	P*	Pb	11 22 00.9	-0.6
PAWZ	**Paruwai Farm**	1.23	166	P*	Pb	11 22 01.4	-0.2
PAWZ				S*	Sb	11 22 18.5	+1.3
MSWZ	**Moikau Station**	1.24	173	P*	Pb	11 22 01.5	-0.2
PKE	**Pukeiti**	1.28	320	PN	Pn	11 22 02.3	-0.3
NWEZ	**Newall Road**	1.28	315	PN	Pn	11 22 01.7	-0.9
TRWZ	**Traveller**	1.31	158	PN	Pn	11 22 02.5	-0.5
TRWZ				SN	Sn	11 22 22.3	+1.8
KATZ	**Kakaramea**	1.31	23	PN	Pn	11 22 01.7	-1.3
RITZ	**Rihia Road**	1.36	28	PN	Pn	11 22 03.2	-0.6
RATZ	**Rangitukua**	1.43	24	PN	Pn	11 22 03.7	-1.1
TUWZ	**Tuamarina**	1.50	213	PN	Pn	11 22 04.3	-1.4
BKZ	**Black Stump Fm**	1.52	48	PN	Pn	11 22 05.3	-0.6
HATZ	**Hinemaiaia**	1.53	33	PN	Pn	11 22 05.4	-0.8
WATZ	**Wairara**	1.57	20	PN	Pn	11 22 05.5	-1.2
NNZ	**Nelson**	1.63	230	PN	Pn	11 22 06.1	-1.5
HIZ	**Hauiti**	1.68	355	PN	Pn	11 22 06.8	-1.4
WHTZ	**Whakaora**	1.68	25	PN	Pn	11 22 10.3	+2.1
BSWZ	**Blackbirch Sta**	1.76	210	PN	Pn	11 22 08.7	-0.7
QRZ	**Quartz Range**	2.02	251	PN	Pn	11 22 11.5	-1.6
THZ	**Tophouse**	2.26	225	PN	Pn	11 22 15.6	-1.0
TOZ	**Tahuroa Road**	2.48	9	PN	Pn	11 22 21.2	+1.5
KHZ	**Kahutara**	2.50	206	PN	Pn	11 22 18.1	-2.0
URZ	**Urewera**	2.51	41	PN	Pn	11 22 18.4	-1.8
MWZ	**Matawai**	2.67	47	PN	Pn	11 22 20.6	-1.9
DSZ	**Denniston Nort**	2.90	236	PN	Pn	11 22 24.0	-1.8
LTZ	**Lake Taylor**	3.33	218	PN	Pn	11 22 28.9	-2.9
MQZ	**McQueen's Vall**	3.94	206	PN	Pn	11 22 35.3	-5.2
WVZ	**Waitaha Valley**	4.33	227	PN	Pn	11 22 42.5	-3.6
FOZ	**Fox Glacier**	5.23	228	PN	Pn	11 22 53.1	-5.6
ODZ	**Otahua Downs**	5.84	212	PN	Pn	11 23 01.8	-5.5
JCZ	**Jackson Bay**	6.07	228	PN	Pn	11 23 05.5	-5.2

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*NEIC **26** 11:27:14.4±0.9,5.02S×146.62E,h30^{km},mb4.9/2,Error ellipse: s-maj=24.8km s-min=12.2km az=97.0*

*IDC **26** 11:27:25.9±3.6,5.23S×146.40E,h137^{km}±39^{km},mb3.6/4, mb1 4.0/5,mb1mx3.9/10,mbtmp4.2/5,Error ellipse: s-maj=37.8km s-min=24.1km az=121.0*

ISC 26 11:27:13.6±0.9**,4.82S**±0.06×**146.4E**±0.1**,h33^{km},n14,** σ**1^{s}38**/17**,mb4.2**/5**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	4.62	171	P	P	11 28 30.4	+7.6
	1.9nm,0.3s,baz=18,slow=7.3,SNR=7.7						
PMG				S	S	11 29 17.1	+1.2
	36nm,0.3s,baz=187,slow=21,SNR=54						
PMG	**Port Moresby**	4.62	171	*e*Pn	Pn	11 28 18.8	-4.2
PMG				*e*Sn	Sn	11 29 16.0	-0.1
CTA	**Charters Tower**	15.17	180	*e*P	P	11 30 54.4	+7.1
	3.9nm,0.9s						
CTA	**Charters Tower**	15.17	180	P	P	11 30 53.5	+6.2
	0.3nm,0.3s,baz=360,slow=10,SNR=6.1						
KAKA	**Kakadu**	15.85	239	*e*P	Px	11 31 19.3	
	12nm,0.5s						
WRAB	**Tennant Creek**	19.05	217	*e*P	P	11 31 34.9	-1.0
	45nm,1.0s						
WRAB				*e*S	S	11 35 06.8	+3.2
WB2	**Warramunga Arr**	19.06	217	*e*P	P	11 31 35.2	-0.8
WB2				*e*S	S	11 35 08.2	+4.5
WRA	**Warramunga Arr**	19.07	217	P	P	11 31 34.8	-1.3
	3.2nm,0.3s,baz=37,slow=12,SNR=343						
FITZ	**Fitzroy Crossi**	24.20	235	*e*P	P	11 32 27.7	-0.7
	41nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	24.20	235	P	P	11 32 27.5	-0.9
	52nm,0.6s,mb5.2,baz=55,slow=8.0,SNR=66						
STKA	**Stephens Creek**	27.29	189	P	P	11 32 54.9	-2.3
	1.3nm,0.4s,mb3.8,baz=346,slow=7.8,SNR=5.4						
SONM	**Songino Array**	63.09	331	P	P	11 37 41.8	+1.7
	0.5nm,0.8s,mb3.7,baz=146,slow=5.2,SNR=4.5						
MKAR	**Makanchi Array**	76.21	320	P	P	11 39 00.9	+0.4
	0.7nm,0.9s,mb3.6,baz=101,slow=7.3,SNR=3.3						
ILAR	**Eielson Array**	84.65	23	P	P	11 39 45.5	+0.6
	2.9nm,0.6s,mb4.6,baz=253,slow=5.3,SNR=46						

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*BUG **26** 11:37:50.2,51.54N×6.75E,h1^{km},ML1.2*

*LDG **26** 11:37:51.7±0.2,51.58N×6.87E,h1^{km},Ml2.7/4,Error ellipse: s-maj=4.0km s-min=2.2km az=30.0,Suspected Mining induced.*

*NEIC **26** 11:37:51.7,51.58N×6.87E,h1^{km},ML2.7(LDG),After LDG.*

*CSEM **26** 11:37:51.4±0.1,51.59N×6.91E,h2^{km},ML2.5/3,Error ellipse: s-maj=3.9km s-min=1.8km az=95.0*

*BNS **26** 11:37:52.7±0.7,51.55N×6.92E,h1^{km},ML1.7*

*BGR **26** 11:37:52.2±1.1,51.52N×6.91E,h1^{km},ML2.2/1,Error ellipse: s-maj=13.3km s-min=5.6km az=136.0*

ISC 26 11:37:49.7±0.5**,51.56N**±0.02×**6.70E**±0.05**,n23,**σ**1^{s}31**/43**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	**Hlnxe**	0.13	59	Pg	Pg	11 37 52.2	0.0
BZER				Sg	Sg	11 37 53.7	-0.2
LAUG	**Laupendahl**	0.26	143	*e*Pg	Pg	11 37 56.1	+1.3
BUG	**Bochum--Univer**	0.38	108	*e*Pg	Pg	11 37 57.6	+0.4
WTSB	**Winterswijk**	0.42	9	*e*Pg	Pg	11 37 59.4	+1.4
	19nm,0.3s						
WTSB				*e*Sg	Sg	11 38 03.6	+0.1
HOBG	**Hohbusch**	0.70	145	*e*Pg	Pg	11 38 04.7	+1.1
HOBG				*e*Sg	Sg	11 38 13.6	+0.6
HGN	**Heimansgroeve**	0.93	212	*e*Pg	Pg	11 38 11.1	+3.0
	11nm,0.1s						
HGN				*e*Sg	Sg	11 38 25.1	+4.6
STB	**Steinbach**	0.97	175	*e*Pg	Pg	11 38 10.9	+1.9
STB				*e*Sg	Sg	11 38 24.2	+2.4
	45nm,0.4s						
HILG	**Hillesheim**	1.27	180	*e*Pg	Pg	11 38 16.3	+1.3
HILG				*e*Sg	Sg	11 38 33.3	+1.5
BGG	**Burgeitz**	1.41	163	*e*Pg	Pg	11 38 17.3	-0.5
BGG				*e*Sg	Sg	11 38 35.6	-1.1
TNS	**Taunus Mts**	1.74	140	*e*Pg	Pg	11 38 23.3	-1.0
	SNR=2.6						
TNS				*e*Sg	Sg	11 38 43.9	-3.5
GIVF	**Givet**	1.88	220	*e*Pg	Pg	11 38 28.3	+1.2
GIVF				*e*Sg	Sg	11 38 53.5	+1.3
	14nm,0.3s						
GIVF	**Givet**	1.88	220	*e*Pn	Pn	11 38 24.1	+0.8
GIVF				*e*Pg	Pg	11 38 28.3	+1.2
GIVF				*e*Sg	Sg	11 38 53.5	+1.3
GIVF	**Givet**	1.88	220	*e*Pg	Pg	11 38 28.3	+1.2
GIVF				*e*Sg	Sg	11 38 53.5	+1.3
	7.1nm,0.3s						
WLF	**Walferdange**	1.92	191	*e*Pg	Pg	11 38 28.8	+0.8
	SNR=1.5						
WLF				*e*Sg	Sg	11 38 52.4	-1.3
CLZ	**Clausthal**	2.31	81	*e*Pg	Pg	11 38 33.1	-2.6
	SNR=1.0						
CLZ				*e*Sg	Sg	11 39 01.2	-5.3
CDF	**Champ du Feu**	3.17	173	*e*Pn	Pn	11 38 40.8	-1.0
CDF				*e*Sg	Sg	11 39 31.6	-3.6
	3.6nm,0.4s						
MEZF	**Maizieres J'vi**	3.23	200	*e*Pn	Pn	11 38 42.4	-0.3
MEZF				*e*Sg	Sg	11 39 35.0	-2.4
	3.3nm,0.4s						
LOR	**Lormes**	4.67	204	*e*Pn	Pn	11 39 02.4	-0.7
LOR				*e*Sn	Sn	11 39 54.6	-4.3
SSF	**Saint Saulge**	4.96	206	*e*Pn	Pn	11 39 06.4	-0.8
SMF	**Signal de Mont**	5.26	202	*e*Pn	Pn	11 39 09.6	-1.8
LDF	**La Druitiere**	5.30	239	*e*Pn	Pn	11 39 11.5	-0.4
LDF				*e*Sn	Sn	11 40 10.3	-4.3
FLN	**La Foliniere**	5.39	242	*e*Pn	Pn	11 39 12.6	-0.7
FLN				*e*Sn	Sn	11 40 13.3	-3.7
GRR	**Gorron**	5.81	240	*e*Pn	Pn	11 39 18.3	-0.9
GRR				*e*Sn	Sn	11 40 21.8	-5.8

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*HLW **26** 11:48:14.0,36.10N×24.68E,h33^{km},Mb3.6*

*ATH **26** 11:48:17.1,36.05N×24.33E,h78^{km}±2^{km}*

ISC 26 11:48:14.7±0.5**,35.94N**±0.04×**24.41E**±0.06**,h114^{km}**±7^{km}**, n22,**σ**1^{s}22**/30**,3D,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAM	**Vamos**	0.56	198	*e*P	P	11 48 33.4	+0.9
VAM				*e*S	S	11 48 44.3	-1.7
GVD	**Gavdhos**	1.12	194	*e*P	P	11 48 39.8	+1.9
KYTH	**Kithira**	1.16	288	*e*P	P	11 48 37.7	-0.7
NPS	**Neapolis**	1.19	124	*e*P	P	11 48 40.0	+1.3
NPS				*e*S	S	11 48 57.4	+0.9
VLI	**Veliai**	1.42	304	⇓*i*P	P	11 48 41.0	-0.3
VLI				*e*S	S	11 48 57.7	-3.6
APE	**Apeiranthos**	1.45	38	*e*P	P	11 48 42.6	+1.0
APE				*e*S	S	11 49 00.7	-1.2
XRY	**Khrisi**	1.49	135	*e*P	P	11 48 44.8	+2.7
NAIG	**Nisos Aigina**	1.96	338	*e*P	P	11 48 47.6	-0.3
MPAR	**Parnis Oros**	2.28	347	*e*P	P	11 48 52.7	+0.7
ITM	**Ithomi**	2.35	303	*e*P	P	11 48 53.7	+0.6
ITM				*e*S	S	11 49 20.2	-1.7
LKR	**Lokris**	2.93	338	*e*P	P	11 49 01.3	+0.4
RLS	**Riolos of Patr**	3.17	313	*e*P	P	11 49 05.4	+1.4
SLUM		4.48	171	P	P	11 49 21.9	+0.1
HMAT	**Matruh**	5.33	154	P	P	11 49 32.4	-0.8
HMAT				S	S	11 50 30.0	-3.8
SWA2		6.73	172	⇓P	P	11 49 52.6	+0.2
SWA1		6.74	170	⇓P	P	11 49 53.0	+0.4
SWA1				S	S	11 51 04.7	-3.7
GLL	**Jalalah**	8.83	134	P	P	11 50 20.0	-0.7
AMAG	**Maghara**	9.06	123	P	P	11 50 21.8	-2.1
SUZ		9.33	128	P	P	11 50 26.2	-1.3
HFRF	**Wahat Farafira**	9.37	158	P	P	11 50 28.7	+0.7
HNKL	**Nakhl**	10.03	124	P	P	11 50 35.6	-1.1
HNKL				S	S	11 52 19.0	-8.8
HDK1	**Dakhla**	11.21	156	P	P	11 50 53.9	+1.3

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*NEIC **26** 12:05:38.0,21.83S×69.08W,h10^{km},ML3.4(GUC),After GUC.*

GUC 26 12:05:38.0±0.7**,21.83S**×**69.08W,h10^{km}**±5^{km}**,MD3.8, ML3.4,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPCH	**San Pedro de A**	1.34	143	*e*P	Pb	12 06 01.9	-0.9
SPCH				*i* S	Sb	12 06 19.1	-0.7
SPCH				AMP		12 06 19.8	
	comp=E,1μm,0.3s						
CEN1	**Los Morros**	1.86	214	*e*P	Pn	12 06 15.6	+5.4
CEN1				*i* S	Sn	12 06 42.6	+8.5
CEN1				AMP		12 06 49.1	
	comp=N,349nm,0.7s						
ANCH	**Antofagasta**	2.21	214	*e*P	Pn	12 06 15.2	-0.1
ANCH				*i* S	Sn	12 06 43.8	+0.9
CPN1	**Cerro Paranal**	3.04	203	*i* P	Pn	12 06 28.4	+1.4
CPN1				*i* S	Sn	12 07 06.9	+3.2
CPN1				AMP		12 07 25.4	
	comp=E,166nm,0.4s						
LPAZ	**La Paz**	5.59	9	*e*Pn	Pn	12 07 02.1	-1.1
	comp=E,1.1nm,0.6s						
RCBR	**Riachuelo**	35.80	69	*e*P	P	12 12 37.2	-2.5

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*LDG **26** 12:32:45.7±0.1,49.32N×6.81E,h1^{km},Md3.1/1,Ml3.0/11, Error ellipse: s-maj=1.8km s-min=1.2km az=105.0, Suspected Mining induced.*

*BGR **26** 12:32:45.6±0.5,49.34N×6.78E,h1^{km},ML2.1/3,Error ellipse: s-maj=8.9km s-min=5.6km az=37.0*

*NEIC **26** 12:32:45.7,49.32N×6.81E,h1^{km},ML3.0(LDG),After LDG.*

*CSEM **26** 12:32:45.6±0.1,49.34N×6.82E,h2^{km},ML2.9/9,Error ellipse: s-maj=1.4km s-min=1.2km az=59.0*

*BNS **26** 12:32:46.1±1.1,49.33N×6.84E,h1^{km},ML2.1*

ISC 26 12:32:43.9±0.3**,49.31N**±0.01×**6.77E**±0.03**,n38,**σ**1^{s}01**/78**, 1D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	0.43	26	Pg	Pg	12 32 53.7	+1.2
WLF	**Walferdange**	0.54	311	*e*Pg	Pg	12 32 56.8	+2.2
WLF				*e*Sg	Sg	12 33 02.1	+0.4
WLF	**Walferdange**	0.54	311	*e*Pg	Pg	12 32 56.5	+1.9
WLF				*e*Sg	Sg	12 33 03.0	+1.3
WLF	**Walferdange**	0.54	311	*e*Pg	Pg	12 32 56.5	+1.9
WLF				*e*Sg	Sg	12 33 03.0	+1.3
LANF	**Langenberg**	0.76	116	Pg	Pg	12 32 59.5	+0.5
ABH	**Alteburg**	0.76	41	Pg	Pg	12 32 59.4	+0.3
ABH				Sg	Sg	12 33 10.7	+1.4
CDF	**Champ du Feu**	0.96	159	*e*Pn	Pn	12 33 04.6	+0.2
CDF				*e*Sg	Sg	12 33 16.2	+0.3
	49nm,0.2s						
CDF				*e*Sn	Sn	12 33 18.1	-0.9
	50nm,0.2s						
CDF	**Champ du Feu**	0.96	159	*e*Pg	Pg	12 33 03.5	+0.4
CDF				*e*Pn	Pn	12 33 04.6	+0.2
CDF				*e*Sg	Sg	12 33 16.2	+0.3
CDF				*e*Sn	Sn	12 33 18.1	-0.9
CDF	**Champ du Feu**	0.96	159	*e*Pn	Pn	12 33 04.6	+0.2
CDF				*e*Sg	Sg	12 33 16.2	+0.3
	24nm,0.2s						
CDF				*e*Sn	Sn	12 33 18.1	-0.9
	25nm,0.2s						
BGG	**Burgeitz**	0.97	22	⇓*e*Pg	Pg	12 33 03.3	+0.1
BGG				*e*Sg	Sg	12 33 16.7	+0.6
	35nm,0.3s						
WLS	**Welschbruch**	0.98	157	Pg	Pg	12 33 04.5	+1.1
HILG	**Hillesheim**	0.98	357	*e*Pg	Pg	12 33 04.3	+0.8
HILG				*e*Sg	Sg	12 33 17.6	+1.0
	100nm,0.3s						
RFYF	**Reffroy**	1.09	232	*e*Pg	Pg	12 33 07.0	+1.3
	baz=49						
RFYF				*e*Sg	Sg	12 33 21.6	+1.3
	44nm,0.2s						
ECH	**Echery**	1.13	167	Pg	Pg	12 33 07.0	+0.6
ECH				Sg	Sg	12 33 22.8	+1.4
THEF	**They Montfort**	1.20	206	Pg	Pg	12 33 08.4	+0.5
THEF				Sg	Sg	12 33 25.2	+1.2
STB	**Steinbach**	1.28	2	*e*Sg	Sg	12 33 26.6	-0.1
HAU	**Haudompre**	1.34	192	*e*Pg	Pg	12 33 11.2	+0.6
HAU				*e*Sn	Sn	12 33 27.5	-1.1
	38nm,0.3s						
HAU	**Haudompre**	1.34	192	*e*Pn	Pn	12 33 10.1	+0.3
HAU				*e*Pg	Pg	12 33 11.2	+0.6
HAU				*e*Sn	Sn	12 33 27.5	-1.1
HAU	**Haudompre**	1.34	192	*e*Pg	Pg	12 33 11.2	+0.6
HAU				*e*Sn	Sn	12 33 27.5	-1.1
	19nm,0.3s						
TOD	**Tromm**	1.36	77	Pn	Pn	12 33 09.5	-0.6
TOD				Sg	Sg	12 33 28.9	-0.2
MEZF	**Maizieres J'vi**	1.39	235	*e*Pn	Pn	12 33 11.2	+0.6
	baz=47						
MEZF				*e*Sg	Sg	12 33 30.6	+0.3
	10nm,0.2s						
TNS	**Taunus Mts**	1.42	49	*e*Pg	Pg	12 33 10.3	-1.9
TNS				*e*Sg	Sg	12 33 30.1	-1.1
BFO	**Black Forest**	1.42	133	*e*Pg	Pg	12 33 11.2	-1.1
BFO				*e*Sg	Sg	12 33 31.3	0.0
MOF	**Molkenrain**	1.48	171	Pn	Pn	12 33 13.1	+1.2
MOF				Sg	Sg	12 33 33.9	+0.7
GIVF	**Givet**	1.49	303	*e*Pn	Pn	12 33 11.7	-0.3
GIVF				*e*Pg	Pg	12 33 13.2	-0.5
GIVF				*e*Sn	Sn	12 33 31.4	-1.1
GIVF				*e*Sg	Sg	12 33 33.6	+0.1
GIVF	**Givet**	1.49	303	*e*Pg	Pg	12 33 13.2	-0.5
GIVF				*e*Sn	Sn	12 33 31.4	-1.1
GIVF				*e*Sg	Sg	12 33 33.6	+0.1
	7.2nm,0.3s						
HINF	**Hinteralfeld**	1.50	178	*e*Pn	Pn	12 33 11.7	-0.4
HINF				*e*Pg	Pg	12 33 13.8	0.0
HINF				*e*Sn	Sn	12 33 31.3	-1.3
HINF				*e*Sg	Sg	12 33 33.4	-0.3
HINF	**Hinteralfeld**	1.50	178	*e*Pg	Pg	12 33 13.8	0.0
HINF				*e*Sn	Sn	12 33 31.3	-1.3
HINF				*e*Sg	Sg	12 33 33.4	-0.3
	22nm,0.2s						
HGN	**Heimansgroeve**	1.55	340	*e*Pg	Pg	12 33 15.4	+0.6
HGN				*e*Sg	Sg	12 33 34.6	-0.9
SFTF	**Sexfontaines**	1.59	227	*e*Pn	Pn	12 33 14.4	+0.9
	baz=52						
SFTF				*e*Sg	Sg	12 33 36.8	-0.2
	10nm,0.2s						
HOBG	**Hohbusch**	1.71	12	*e*Sg	Sg	12 33 38.2	-2.7
CABF	**La Chapelle**	2.74	190	*e*Pn	Pn	12 33 29.8	-0.1
LOR	**Lormes**	2.82	225	*e*Pn	Pn	12 33 30.3	-0.7
	baz=43						
LOR				*e*Sn	Sn	12 34 03.3	-3.0
LOR				*e*Sg	Sg	12 34 15.2	-2.6
	7.5nm,0.3s						

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SSF   Saint Saulge         3.14 225 ePn    Pn     12 33 34.7 -0.8
SSF                                 eSg    Sg     12 34 29.1 +0.8
      2.7nm,0.4s
SMF   Signal de Mont       3.31 218 ePn    Pn     12 33 36.3 -1.8
AVF   Avril sur Loir       3.41 224 ePn    Pn     12 33 38.8 -0.6
BGF   Bois d'Agland        3.81 225 ePn    Pn     12 33 43.9 -1.3
TCF   Toulx Ste Croi       4.31 227 ePn    Pn     12 33 50.5 -1.7
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*NEIC **26** 12:48:41.9±0.6,11.27N×142.64E,mb4.0/1,Error ellipse: s-maj=19.5km s-min=13.5km az=109.0*

*IDC **26** 12:48:41.7±1.0,11.29N×142.60E,h44^{km}±6^{km},mb3.7/9, mb1 3.9/10,mb1mx3.8/18,mbtmp4.0/10,ML3.9/1,MS3.1/2, Ms1 3.1/2,ms1mx2.2/22,Error ellipse: s-maj=25.2km s-min=13.7km az=141.0*

ISC 26 12:48:38.3±4.9**,11.3N**±0.1×**142.5E**±0.1**,h33**^{km}±36^{km}**,n19,** σ**1^{s}04**/20**,mb4.0**/9**,MS2.9**/2**,South of Mariana Islands**

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Code  Station Name           Δ°  AZ°   Phase ID          Time      Res
                                    Op     ISC       h  m  s    ISC
GUMO  Guam                 3.28  45 P      Pn     12 49 29.5 +0.7
      14nm,0.3s,baz=240,slow=12,SNR=10.0
GUMO                                S      Sn     12 50 06.4 -0.8
      14nm,0.3s,baz=178,slow=20,SNR=3.1
GUMO  Guam                 3.28  45 ePn    Pn     12 49 28.7 -0.1
GUMO                                eSn    Sn     12 50 06.2 -1.0
JOW   Kunigami            20.49 321 P      P      12 53 17.6 +1.3
      2.3nm,0.4s,baz=132,slow=15,SNR=4.0
JOW                                 LR     LR     13 00 11.4
      comp=Z,47nm,18.7s,MS2.9,baz=305,slow=34
PMG   Port Moresby        21.04 167 LR     LR     13 01 01.3
      comp=Z,49nm,20.2s,MS2.9,baz=66,slow=35
YHNB  Yeheng              24.07 307 eP     P      12 53 59.5 +7.5
KKM   Kota Kinabalu       26.48 261 P      P      12 54 12.6 -2.2
WRAB  Tennant Creek       32.01 195 P      P      12 55 04.1 -0.1
      2.1nm,0.8s,mb4.0
WRA   Warramunga Arr      32.02 195 P      P      12 55 04.5 +0.2
      1.0nm,0.7s,mb3.8,baz=14,slow=9.7,SNR=16
SONM  Songino Array       47.37 327 P      P      12 57 11.1 -0.2
      0.3nm,0.4s,mb3.5,baz=137,slow=7.6,SNR=5.3
MKAR  Makanchi Array      61.59 317 P      P      12 58 55.4 +0.4
      0.5nm,0.5s,mb3.9,baz=96,slow=9.1,SNR=14
MKAR                                pP     pP     12 59 08.4 +3.2
      0.5nm,0.6s,baz=93,slow=8.5,SNR=5.4
MKAR                                sP     sP     12 59 11.9 +3.1
      0.5nm,0.6s,baz=102,slow=8.1,SNR=5.2
MKAR  Makanchi Array      61.59 317 P      P      12 58 55.4 +0.4
MKAR                                pP     pP     12 59 08.4 +3.2
MKAR                                sP     sP     12 59 11.9 +3.1
ILAR  Eielson Array       71.66  25 P      P      12 59 57.4 -1.2
      0.6nm,0.5s,mb3.8,baz=249,slow=6.0,SNR=16
ILAR                                pP     pP     13 00 11.8 +3.1
      0.7nm,0.7s,baz=258,slow=5.9,SNR=3.5
YKA   Yellowknife Ar      85.99  27 P      P      13 01 17.2 +0.8
      0.6nm,0.6s,mb4.0,baz=287,slow=5.0,SNR=4.9
YKA   Yellowknife Ar      85.99  27 P      P      13 01 17.2 +0.8
ARCES ARCESS Array B      88.58 342 P      P      13 01 29.5 +0.7
      0.9nm,0.5s,mb4.4,baz=59,slow=7.1,SNR=9.8
ARCES ARCESS Array B      88.58 342 P      P      13 01 29.5 +0.7
NVAR  Mina Array Bea      90.18  51 P      P      13 01 38.9 +1.8
      0.7nm,0.8s,mb4.1,baz=257,slow=5.0,SNR=4.3
FINES FINESS Array B      92.28 334 P      P      13 01 44.9 -1.2
      2.2nm,1.0s,mb4.5,baz=90,slow=5.7,SNR=4.1
FINES FINESS Array B      92.28 334 P      P      13 01 44.9 -1.2
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*MOS **26** 13:12:48.8±2.3,57.58N×120.67E,h10^{km},mb4.4/1,Error ellipse: s-maj=16.5km s-min=11.8km az=82.9*

*IDC **26** 13:12:49.1±1.1,57.27N×120.73E,mb3.7/7,mb1 3.9/8, mb1mx3.7/21,mbtmp3.6/8,ML3.0/1,Error ellipse: s-maj=25.8km s-min=21.5km az=148.0*

*BYKL **26** 13:12:50.0±0.5,57.34N×120.71E,h10^{km}±31^{km}*

*NEIC **26** 13:12:50.6±0.9,57.34N×120.78E,h10^{km},mb4.2/1,Error ellipse: s-maj=21.0km s-min=15.4km az=130.0*

ISC 26 13:12:48.0±0.5**,57.16N**±0.04×**120.84E**±0.05**,h10**^{km}**,n38,** σ**1^{s}15**/48**,mb3.7**/8**,1D,Southeastern Siberia**

```
Code  Station Name           Δ°  AZ°   Phase ID          Time      Res
                                    Op     ISC       h  m  s    ISC
CRS   Chara                1.43 260⇓iPg    Pg     13 13 15.8 -0.8
CRS                                 Pmax          13 13 18.9
      313nm,1.3s
CRS                                 eSg    Sg     13 13 33.5 -2.2
CRS                                 Smax          13 13 34.2
      659nm,1.0s
CRS   Chara                1.43 260 eP     Pn     13 13 15.9 +1.8
CRS                                 e             13 13 33.8
CRS                                 pmax   pmax
      comp=Z,301nm,0.6s
CRS                                 smax
      comp=E,659nm,0.7s
NRGR  Nerungri             2.19 102 eP     Pn     13 13 32.4 +7.4
NRGR                                S      Sn     13 14 00.3 +7.9
CLNS  Chul'man             2.24  97 ePg    Pg     13 13 31.6 -1.2
CLNS                                Pmax          13 13 36.5
      comp=E,510nm,0.3s
CLNS                                eSg    Sg     13 14 02.4 -0.3
CLNS                                Smax          13 14 03.9
      comp=E,8µm,0.4s
TUP   Tupik                2.79 191 ePn    Pn     13 13 37.8 +4.2
TUP                                 ePg    Pg     13 13 42.8 -0.9
TUP                                 Pmax          13 13 43.9
      comp=E,216nm,0.7s
TUP                                 eSg    Sg     13 14 20.9  0.0
TUP                                 Smax          13 14 24.5
      comp=E,1µm,0.7s
TUP   Tupik                2.79 191 eP     Pn     13 13 37.6 +4.0
TUP                                 eS     Sn     13 14 12.7 +5.1
TUP                                 pmax   pmax
      comp=Z,179nm,0.6s
TUP                                 smax
      comp=E,1µm,0.8s
ALDR  Aldan                2.84  57 e      Pn     13 13 40.1 +5.8
ALDR                                eSg    Sg     13 14 15.0 -7.6
ALDR                                Smax          13 14 15.9
      comp=E,9µm,0.3s
NLYR  Nelyaty              2.90 259 ePn    Pn     13 13 36.9 +1.7
NLYR                                ePg    Pg     13 13 41.3 -4.7
NLYR                                Pmax          13 13 43.9
      comp=E,205nm,0.8s
NLYR                                eSg    Sg     13 14 17.3 -7.4
NLYR                                Smax          13 14 20.9
      comp=E,873nm,0.7s
NLYR  Nelyaty              2.90 259 eP     Pn     13 13 37.4 +2.2
NLYR                                e             13 14 18.2
NLYR                                pmax   pmax
      comp=Z,201nm,0.8s
NLYR                                smax
      comp=N,804nm,1.3s
TNDR  Tynda                2.96 131 e      Pn     13 13 41.0 +4.9
TNDR                                ePg    Pg     13 13 47.7 +0.5
TNDR                                Pmax          13 13 49.0
      comp=N,417nm,0.3s
TNDR                                e             13 14 19.6
TNDR                                eSg    Sg     13 14 26.5 -0.3
TNDR                                Smax          13 14 30.5
      comp=N,4µm,0.4s
BOD   Bodaibo              3.75 283 ePn    Pn     13 13 47.7 +0.5
BOD                                 ePg    Pg     13 13 55.6 -7.3
BOD                                 Pmax          13 14 09.6
      comp=N,33nm,0.7s
BOD                                 eSg    Sg     13 14 41.9  -11
BOD                                 Smax          13 14 49.1
      comp=N,365nm,0.9s
BOD   Bodaibo              3.75 283 eP     Pn     13 13 47.7 +0.5
BOD                                 pmax   pmax
      comp=Z,48nm,0.6s
SVKR  Severomuysk          4.16 258 ePg    Pg     13 14 05.5 -5.5
SVKR                                Pmax          13 14 09.1
      comp=Z,71nm,0.6s
SVKR                                e             13 14 45.9
SVKR                                eSg    Sg     13 14 59.0 -7.4
SVKR                                Smax          13 15 11.4
      comp=Z,410nm,1.1s
UKT   Uakit                4.35 250 ePg    Pg     13 14 08.2 -6.7
UKT                                 Pmax          13 14 12.1
      comp=Z,29nm,0.6s
UKT                                 eSg    Sg     13 15 03.6 -9.3
UKT                                 Smax          13 15 12.1
      comp=Z,151nm,1.1s
ZEA   Zeya                 5.01 131 e      Pg     13 14 23.1 -4.9
ZEA                                 eSg    Sg     13 15 28.6 -6.2
YOA   Uoyan                5.14 262 e      Pg     13 14 24.8 -5.8
YOA                                 eSg    Sx     13 15 27.4
YOA                                 Smax          13 15 44.2
      comp=Z,876nm,2.5s
YLYR  Ulyunkhan            5.89 251 e      Px     13 14 51.1
YLYR                                eSg    Sx     13 15 50.7
YLYR                                Smax          13 15 57.9
      comp=Z,165nm,1.8s
NIZ   Nizh Angarsk         6.42 262 ePg    Px     13 14 44.3
NIZ                                 Pmax          13 14 53.9
      comp=Z,1.0nm,0.2s
NIZ                                 e             13 15 48.6
NIZ                                 eSg    Sx     13 16 05.6
NIZ                                 Smax          13 16 11.2
      comp=Z,57nm,0.6s
YAK   Yakutsk              6.63  39 eP     Pn     13 14 19.4 -8.5
YAK                                 eS     Sn     13 15 37.4 -7.0
YAK                                 pmax   pmax
      comp=Z,3.0nm,1.3s
YAK                                 pmax   pmax
      comp=N,3.0nm,1.2s
YAK                                 pmax   pmax
      comp=E,3.0nm,0.9s
YAK                                 pmax   pmax
      comp=N,13nm,1.1s
YAK                                 pmax   pmax
      comp=Z,14nm,0.9s
YAK                                 pmax   pmax
      comp=E,12nm,1.1s
YAK                                 smax
      comp=N,29nm,0.9s
YAK                                 smax
      comp=Z,29nm,0.8s
YAK                                 smax
      comp=E,18nm,1.0s
YAK                                 smax
      comp=N,108nm,0.9s
YAK                                 smax
      comp=E,98nm,0.9s
YAK                                 smax
      comp=Z,95nm,0.9s
YAK                                 MLR    MLR
      comp=Z,27nm,14.0s
CIT   Chita                6.67 222 ePg    Px     13 14 52.4
CIT                                 Pmax          13 14 59.9
      comp=Z,9.0nm,0.1s
CIT                                 eSg    Sx     13 16 19.2
CIT                                 Smax          13 16 27.0
      comp=Z,356nm,1.8s
SYVR  Suvo                 7.10 245 ePg    Px     13 15 00.1
SYVR                                Pmax          13 15 07.8
      comp=Z,6.0nm,1.0s
SYVR                                e             13 16 05.4
SYVR                                eSg    Sx     13 16 32.0
SYVR                                Smax          13 16 39.6
      comp=Z,163nm,1.7s
OGRR  Ongureny             8.32 251 e      Px     13 15 09.6
OGRR                                eSg    Sx     13 17 06.0
OGRR                                Smax          13 17 34.1
      comp=Z,73nm,1.6s
KPC   Khapcheranga         9.01 218 ePn    P      13 15 01.0 -0.2
KPC                                 ePg    Px     13 15 34.2
KPC                                 Pmax          13 15 43.0
      comp=Z,5.0nm,1.7s
KPC                                 eSg    Sx     13 17 31.3
KPC                                 Smax          13 17 41.0
      comp=Z,125nm,1.5s
TRG   Tyrgan               9.43 248 eSg    Sx     13 17 41.3
TRG                                 Smax          13 18 14.6
      comp=Z,15nm,0.7s
KLR   Kul'dur             10.28 136 eP     P      13 15 27.2 +8.6
LSTR  Listvyanka          10.70 247 eSg    Sx     13 18 20.7
LSTR                                Smax          13 18 30.8
      comp=Z,34nm,1.5s
SONM  Songino Array       12.81 229 Pn     P      13 15 54.0 +1.2
      comp=Z,0.1nm,0.3s,baz=32,slow=13,SNR=2.7
SONM                                Lg            13 19 35.7
      comp=Z,0.8nm,0.3s,baz=30,slow=32,SNR=7.4
ZAL   Zalesovo            20.49 276 P      P      13 17 29.3 +0.9
      baz=156,slow=10.0
MKAR  Makanchi Array      25.57 263 P      P      13 18 18.9 +0.6
      comp=Z,0.7nm,0.7s,mb3.3,baz=56,slow=9.1,SNR=8.4
BVAR  Borovoye Array      28.62 283 P      P      13 18 46.6 +0.4
      comp=Z,0.4nm,0.5s,mb3.5,baz=49,slow=13,SNR=3.1
ILAR  Eielson Array       41.55  40 P      P      13 20 38.0 +1.4
      comp=Z,0.5nm,0.5s,mb3.4,baz=289,slow=4.6,SNR=11
FINES FINESS Array B      44.47 317 P      P      13 20 59.1 -1.3
      comp=Z,2.3nm,0.7s,mb4.0,baz=40,slow=11,SNR=11
NB2   NORSAR Subarra      49.95 323 P      P      13 21 43.6 +0.2
      comp=Z,1.8nm,0.6s,mb4.3,baz=44,slow=7.9
NOA   NORSAR Array B      49.95 323 P      P      13 21 43.9 +0.5
      comp=Z,0.6nm,0.4s,mb4.0,baz=42,slow=7.8,SNR=3.3
NAO   NORSAR Subarra      50.24 323 P      P      13 21 43.6 -2.0
      comp=Z,1.8nm,0.6s,mb4.3
NAO   NORSAR Subarra      50.24 323 P      P      13 21 43.6 -2.0
NAO                                 pmax   pmax
      comp=Z,2.0nm,0.6s,mb4.3
GERES GERESS Array B      58.44 312 P      P      13 22 44.4 -1.4
      comp=Z,0.3nm,0.4s,mb3.7,baz=45,slow=9.4,SNR=5.0
WRA   Warramunga Arr      77.64 167 P      P      13 24 47.4 +1.4
      comp=Z,0.4nm,0.6s,mb3.5,baz=352,slow=6.5,SNR=8.8
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*BJI **26** 13:13:56.5,57.81N×120.85E,h40^{km},mB4.5,mb3.9, ML4.8,Ms4.0,Msz3.7*

*BYKL **26** 13:13:58.9±0.6,57.35N×120.76E*

*IDC **26** 13:13:58.4±0.7,57.30N×120.57E,mb3.9/16,mb1 4.1/17, mb1mx4.0/24,mbtmp3.9/17,ML3.0/1,MS3.1/6,Ms1 3.1/6, ms1mx2.9/26,Error ellipse: s-maj=16.4km s-min=15.5km az=171.0*

*MOS **26** 13:13:59.3±1.9,57.60N×120.60E,h13^{km},mb4.3/7,Error ellipse: s-maj=12.8km s-min=8.3km az=79.9*

*NEIC **26** 13:14:00.4±0.4,57.37N×120.60E,h10^{km},mb4.2/8,Error ellipse: s-maj=10.2km s-min=6.9km az=139.0*

ISC 26 13:13:58.4±0.3**,57.39N**±0.04×**120.35E**±0.05**,h10**^{km}**,n73,** σ**1^{s}55**/86**,mb4.0**/25**,MS3.2**/5**,1C,Southeastern Siberia**

```
Code  Station Name           Δ°  AZ°   Phase ID          Time      Res
                                    Op     ISC       h  m  s    ISC
CRS   Chara                1.24 247 ePg    Pg     13 14 24.7 +1.5
CRS                                 Pmax          13 14 26.7
      983nm,1.1s
CRS                                 eSg    Sg     13 14 42.4 +2.6
CRS                                 Smax          13 14 42.9
      2µm,0.8s
CRS   Chara                1.24 247 eP     Pb     13 14 25.2 +3.7
CRS                                 e             13 14 42.6
CRS                                 pmax   pmax
      comp=Z,976nm,0.5s
CRS                                 smax
      comp=E,2µm,0.8s
NRGR  Nerungri             2.50 105 eP     Pn     13 14 40.5 +0.6
NRGR                                S      Sn     13 15 08.8 -1.9
CLNS  Chul'man             2.54 101 ePg    Pg     13 14 40.9 -8.2
CLNS                                Pmax          13 14 43.2
      comp=E,754nm,0.3s
CLNS                                eSg    Sg     13 15 11.6  -11
CLNS                                Smax          13 15 15.4
      comp=E,20µm,0.6s
NLYR  Nelyaty              2.70 252 ePg    Pg     13 14 50.4 -2.0
NLYR                                Pmax          13 14 52.8
      comp=E,457nm,1.1s
NLYR                                eSg    Sg     13 15 26.3 -2.2
NLYR                                Smax          13 15 31.4
      comp=E,2µm,1.5s
NLYR  Nelyaty              2.70 252 eP     Pn     13 14 50.0 +7.2
NLYR                                e             13 15 25.2
NLYR                                pmax   pmax
      comp=Z,435nm,0.5s
NLYR                                smax
      comp=N,2µm,1.4s
ALDR  Aldan                2.96  63 e      Sn     13 15 17.8 -4.5
ALDR                                eSg    Sb     13 15 24.3 -2.9
ALDR                                Smax          13 15 24.9
      comp=N,12µm,0.4s
TUP   Tupik                2.98 184 i Sg   Sg     13 15 29.9 -7.9
TUP                                 Smax          13 15 30.7
      comp=N,3µm,0.9s
TUP   Tupik                2.98 184 eP     Pn     13 14 52.1 +5.3
TUP                                 eS     Sn     13 15 21.5 -1.5
TUP                                 pmax   pmax
      comp=Z,450nm,0.6s
TUP                                 smax
      comp=E,3µm,0.8s
BOD   Bodaibo              3.44 280 ePg    Pg     13 15 05.0 -2.2
BOD                                 Pmax          13 15 07.5
      comp=E,178nm,0.5s
BOD                                 eSg    Sg     13 15 50.3 -2.8
BOD                                 Smax          13 15 58.6
      comp=E,1µm,1.2s
SVKR  Severomuysk          3.95 254 ePg    Pg     13 15 14.6 -2.8
SVKR                                Pmax          13 15 18.5
      comp=E,182nm,1.3s
SVKR                                eSg    Sg     13 16 08.5 -1.6
SVKR                                Smax          13 16 13.6
      comp=E,1µm,1.5s
UKT   Uakit                4.19 246 ePg    Pg     13 15 17.1 -5.1
UKT                                 Pmax          13 15 21.6
      comp=E,111nm,1.3s
UKT                                 eSg    Sg     13 16 12.7 -5.4
UKT                                 Smax          13 16 21.0
      comp=E,447nm,1.7s
YOA   Uoyan                4.91 259 ePg    Pg     13 15 31.0 -5.5
YOA                                 Pmax          13 15 42.6
      comp=E,473nm,1.4s
YOA                                 eSg    Sg     13 16 37.6 -4.4
YOA                                 Smax          13 17 02.0
      comp=E,2µm,1.5s
YOA   Uoyan                4.91 259 i P    Pg     13 15 29.7 -6.8
YOA                                 pmax   pmax
      comp=Z,430nm,1.1s
YLYR  Ulyunkhan            5.72 248 ePg    Pg     13 15 46.4 -6.3
YLYR                                Pmax          13 15 55.3
      comp=Z,113nm,1.7s
YLYR                                eSg    Sg     13 17 01.5 -7.6
YLYR                                Smax          13 17 07.6
      comp=Z,425nm,1.7s
NIZ   Nizh Angarsk         6.19 259 ePg    Pg     13 15 54.1 -7.9
NIZ                                 Pmax          13 15 56.0
      comp=Z,19nm,0.7s
NIZ                                 eSg    Sg     13 17 14.9  -10
NIZ                                 Smax          13 17 27.6
      comp=Z,274nm,1.6s
YAK   Yakutsk              6.62  41 ePn    Pn     13 15 37.1 -1.2
      comp=Z,29nm,0.5s
YAK   Yakutsk              6.62  41 eP     Pn     13 15 34.6 -3.7
YAK                                 pmax   pmax
      comp=N,5.0nm,0.3s
YAK                                 pmax   pmax
      comp=Z,29nm,0.8s
YAK                                 pmax   pmax
      comp=N,24nm,0.9s
YAK                                 pmax   pmax
      comp=E,14nm,0.8s
YAK                                 MLR    MLR
      comp=Z,81nm,17.0s
CIT   Chita                6.67 219 ePg    Pg     13 16 00.8  -11
CIT                                 Pmax          13 16 03.3
      comp=Z,114nm,1.3s
CIT                                 eSg    Sg     13 17 27.1  -13
CIT                                 Smax          13 17 33.7
      comp=Z,656nm,1.0s
SYVR  Suvo                 6.97 242 ePg    Pg     13 16 08.9 -8.6
SYVR                                Pmax          13 16 19.9
      comp=Z,12nm,0.8s
SYVR                                eSg    Sg     13 17 40.6  -10
SYVR                                Smax          13 17 49.6
      comp=Z,133nm,0.9s
OGRR  Ongureny             8.15 248 ePg    P      13 16 42.5  +43
OGRR                                Pmax          13 16 59.2
      comp=Z,4.0nm,0.7s
OGRR                                eSg    Sg     13 18 18.4  -12
OGRR                                Smax          13 18 34.0
      comp=Z,2µm,0.0s
OGRR                                Smax          13 18 34.0
      comp=Z,100nm,0.0s
OGRR                                eSg    Sg     13 18 39.5  +10
OGRR                                Smax          13 18 50.0
      comp=Z,278nm,1.0s
TRG   Tyrgan               9.27 246 eSg    Sg     13 18 52.4  -15
TRG                                 Smax          13 19 04.2
      comp=Z,110nm,1.7s
ZAK   Zakamensk           12.25 242 eP     P      13 17 02.6 +6.8
ZAK                                 e             13 19 20.0
ZAK                                 pmax   pmax
      comp=Z,1.0nm,1.1s
ZAK                                 pmax   pmax
      comp=Z,7.0nm,0.9s
ULN   Ulaanbaatar         12.48 226 eP     P      13 17 01.7 +2.9
SONM  Songino Array       12.76 227 Pn     P      13 17 03.4 +0.7
      comp=Z,0.1nm,0.3s,baz=30,slow=12,SNR=5.1
SONM                                Lg            13 20 44.2
      comp=Z,2.0nm,0.3s,baz=47,slow=25,SNR=6.4
SONM                                LR     LR     13 22 16.4
      comp=Z,66nm,20.7s,baz=11,slow=39
SONM  Songino Array       12.76 227 Pn     P      13 17 03.4 +0.7
SONM                                Lg            13 20 44.2
SONM                                LR     LR     13 22 16.4
TIXI  Tiksi               14.75  11 eP     P      13 17 24.6 -3.9
TIXI                                pmax   pmax
      comp=Z,24nm,0.8s
TIXI                                MLR    MLR
      comp=Z,200nm,16.0s
KRAR  Krasnoyarsk         15.12 276 i P    P      13 17 34.7 +1.3
ASAJ  Asahikawa           19.23 124 LR     LR     13 26 23.9
      comp=Z,28nm,18.3s,baz=358,slow=39
NVS   Novosibirsk         20.68 279 i P    P      13 18 44.8 +3.9
NVS                                 eS     S      13 23 05.5  +39
NVS                                 pmax   pmax
      comp=Z,6.0nm,0.9s
NVS                                 smax
      comp=N,28nm,2.4s
PET   Petropavlovsk       22.08  85⇑iP     P      13 18 47.6 -7.4
PET                                 pmax   pmax
      comp=Z,567nm,0.5s
GTA   Gaotai              22.42 225 eP     P      13 18 59.8 +1.3
GTA                                 AP            13 19 10.3
GTA                                 XP            13 19 14.8
GTA                                 AMB    AMB
      comp=Z,60nm,5.3s
GTA                                 LR     LR
      comp=N,100nm,9.5s
GTA                                 LR     LR
      comp=E,180nm,9.5s
GTA                                 LR     LR
      comp=Z,70nm,12.9s,MS3.3
MJAR  Matsushiro Arr      24.01 143 P      P      13 19 14.6 +0.6
      comp=Z,0.5nm,0.5s,mb3.2,baz=324,slow=11,SNR=4.5
MJAR                                LR     LR     13 29 16.7
      comp=Z,49nm,18.7s,MS3.0,baz=330,slow=38
KURK  Kurchatov           25.06 273 P      P      13 19 26.2 +2.2
      comp=Z,2.0nm,0.3s,mb4.1
KURK  Kurchatov           25.06 273 P      P      13 19 26.2 +2.3
KURK                                pmax   pmax
      comp=Z,2.0nm,0.3s,mb4.1
JNU   Nakatsue            25.32 159 LR     LR     13 28 24.8
      comp=Z,40nm,18.7s,MS3.0,baz=198,slow=34
MKAR  Makanchi Array      25.34 262 P      P      13 19 28.5 +1.9
      comp=Z,2.3nm,0.8s,mb3.8,baz=60,slow=7.7,SNR=7.0
MKAR  Makanchi Array      25.34 262 P      P      13 19 28.5 +1.9
JHJ   Hachijo jima 2      27.66 143 LR     LR     13 30 36.2
      comp=Z,54nm,18.9s,MS3.1,baz=332,slow=36
BVAR  Borovoye Array      28.31 283 P      P      13 19 54.5 +0.7
      comp=Z,0.5nm,0.5s,mb3.4,baz=59,slow=8.4,SNR=2.3
AAK   Ala-Archa           32.26 263 eP     P      13 20 29.6 +0.6
      comp=Z,1.1nm,0.7s,mb3.8
AAK   Ala-Archa           32.26 263 eP     P      13 20 29.6 +0.6
AAK                                 pmax   pmax
      comp=Z,1.0nm,0.7s,mb3.8
AKTK  Aktyubinsk          36.19 286 P      P      13 21 04.0 +1.3
AKTO  Aktyubinsk          36.19 286 P      P      13 21 04.0 +1.3
      comp=Z,0.8nm,0.5s,mb3.9,baz=63,slow=4.5,SNR=3.4
AKTO  Aktyubinsk          36.19 286 P      P      13 21 04.0 +1.3
AKTO                                pmax   pmax
      comp=Z,1.0nm,0.5s,mb4.0
GUN   Gumba               38.14 234 eP     P      13 21 20.4 +1.1
      comp=Z,7.4nm,0.6s,mb4.6
KKN   Kakani              38.51 235 eP     P      13 21 24.2 +1.8
      comp=Z,8.0nm,0.5s,mb4.7
KKN   Kakani              38.51 235 eP     P      13 21 24.2 +1.8
KKN                                 pmax   pmax
      comp=Z,4.0nm,0.5s,mb4.4
GKN   Gorkha              38.61 236 eP     P      13 21 25.7 +2.4
      comp=Z,19nm,0.9s,mb4.8
KLMR  Klimovskoe          39.17 310 eP     P      13 21 28.0 +0.4
KLMR                                pmax   pmax
      comp=Z,20nm,2.0s,mb4.5
KOLN  Koldanda            39.28 237 eP     P      13 21 31.3 +2.4
      comp=Z,10nm,0.9s,mb4.6
ARCES ARCESS Array B      39.56 327 P      P      13 21 30.7 -0.1
      comp=Z,2.0nm,0.8s,mb3.9,baz=39,slow=7.8,SNR=6.5
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ILAR	**Eielson Array**	**41.55**	**40**	P	**P**	**13 21 46.9**	**0.0**
	comp=Z,1.2nm,0.7s,mb3.6,baz=295,slow=5.2,SNR=10						
INK	**Inuvik**	**43.57**	**31**	P	**P**	**13 22 04.0**	**+0.6**
	comp=Z,1.4nm,0.8s,mb3.7,baz=279,slow=2.6,SNR=3.7						
KAF	**Kangasniemi**	**43.61**	**317**	*e*p	**P**	**13 22 00.3**	**-3.6**
	comp=Z,3.7nm,0.8s,mb4.2						
KAF	**Kangasniemi**	**43.61**	**317**	*e*P	**P**	**13 22 00.3**	**-3.6**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
FINES	**FINESS Array B**	**44.12**	**317**	P	**P**	**13 22 08.6**	**+0.6**
	comp=Z,5.3nm,0.7s,mb4.4,baz=50,slow=9.6,SNR=17						
NB2	**NORSAR Subarra**	**49.61**	**323**	P	**P**	**13 22 51.3**	**+0.1**
	comp=Z,1.5nm,0.5s,mb4.3,baz=42,slow=7.4						
NOA	**NORSAR Array B**	**49.61**	**323**	P	**P**	**13 22 51.4**	**+0.2**
	comp=Z,1.7nm,0.4s,mb4.4,baz=42,slow=7.8,SNR=6.7						
NOA				LR	LR	13 44 37.8	
	comp=Z,36nm,18.6s,MS3.4,baz=120,slow=37						
NAO	**NORSAR Subarra**	**49.89**	**323**	P	**P**	**13 22 51.3**	**-2.1**
	comp=Z,1.5nm,0.5s,mb4.3						
NAO	**NORSAR Subarra**	**49.89**	**323**	P	**P**	**13 22 51.3**	**-2.1**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.4						
AKASG	**Malin Array Be**	**50.06**	**304**	P	**P**	**13 22 55.1**	**+0.4**
	comp=Z,1.3nm,0.5s,mb4.2,baz=42,slow=8.7,SNR=8.3						
AKASG	**Malin Array Be**	**50.06**	**304**	*i* P	**P**	**13 22 56.9**	**+2.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SOC	**Sochi**	**50.09**	**291**	*e*P	**P**	**13 22 53.5**	**-1.6**
SOC				*e*		13 24 09.3	
SOC				*e*PPP	PPP	13 25 49.5	+2.5
SOC				*e*S	**S**	**13 30 05.1**	**0.0**
SOC				*e*		13 32 37.7	
SOC				pmax	pmax		
	comp=Z,67nm,1.3s						
YKA	**Yellowknife Ar**	**53.11**	**28**	P	**P**	**13 23 18.9**	**+1.2**
	comp=Z,0.4nm,0.7s,mb3.5,baz=335,slow=6.1,SNR=2.7						
CLL	**Collm**	**56.42**	**314**	P	**P**	**13 23 43.8**	**+1.9**
CLL	**Collm**	**56.42**	**314**	*i* P	**P**	**13 23 43.8**	**+1.9**
KHC	**Kasperske Hory**	**57.91**	**312**	*e*P	**P**	**13 23 52.0**	**-0.5**
GERES	**GERESS Array B**	**58.09**	**312**	P	**P**	**13 23 53.8**	**+0.1**
	comp=Z,1.8nm,0.9s,mb4.1,baz=45,slow=5.7,SNR=10.0						
ELK	**Elko**	**71.69**	**41**	P	**P**	**13 25 21.8**	**-0.2**
	comp=Z,0.5nm,0.4s,mb3.8,baz=287,slow=5.2,SNR=4.9						
PDAR	**Pinedale Array**	**71.82**	**36**	P	**P**	**13 25 21.7**	**-1.0**
	comp=Z,0.5nm,0.6s,mb3.6,baz=328,slow=3.1,SNR=4.7						
FITZ	**Fitzroy Crossi**	**75.33**	**175**	P	**P**	**13 25 42.4**	**-1.1**
	comp=Z,3.7nm,0.7s,mb4.4,baz=70,slow=18,SNR=5.4						
WRA	**Warramunga Arr**	**77.92**	**167**	P	**P**	**13 25 56.4**	**-1.6**
	comp=Z,0.9nm,0.6s,mb3.9,baz=352,slow=6.6,SNR=18						

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*LDG **26** 13:31:45.6±0.2, 51.57N×6.88E, h1^{km}, Ml2.6/2, Error ellipse: s-maj=3.3km s-min=1.7km az=34.0, Suspected Mining induced.*
*BUG **26** 13:31:45.1, 51.53N×6.86E, h1^{km}, ML2.0*
*BNS **26** 13:31:45.6±0.6, 51.59N×6.93E, h1^{km}, ML1.9*
*CSEM **26** 13:31:45.6±0.1, 51.58N×6.85E, h2^{km}, ML2.4/2, Error ellipse: s-maj=4.5km s-min=2.3km az=98.0*
*NEIC **26** 13:31:45.6, 51.57N×6.88E, h1^{km}, ML2.6(LDG), After LDG.*
BGR 26 13:31:45.0±0.9**, 51.57N×6.86E, h1**^{km}**, ML2.4**/3**, Error ellipse: s-maj=11.1km s-min=4.4km az=132.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAUG	**Laupendahl**	**0.22**	**166**	*e*Pg	Pg	13 31 50.0	+0.6
BUG	**Bochum--Univer**	**0.28**	**116**	*e*Pg	Pg	13 31 51.3	+0.6
WTSB	**Winterswijk**	**0.40**	**355**	*e*Pg	Pg	13 31 53.4	+0.4
	53nm,0.5s						
BNS	**Bensberg**	**0.63**	**162**	*e*Pg	Pg	13 31 57.8	+0.2
HOBG	**Hohbusch**	**0.65**	**153**	*e*Pg	Pg	13 31 58.0	0.0
HOBG				*e*Sg	Sg	13 32 07.3	+0.5
STB	**Steinbach**	**0.97**	**181**	*e*Pg	Pg	13 32 04.2	-0.1
STB				*e*Sg	Sg	13 32 18.3	+0.9
	34nm,0.7s						
HGN	**Heimansgroeve**	**0.99**	**216**	*e*Pn	Pn	13 32 04.6	-1.3
	1.6nm,0.1s						
HGN				*e*Pg	Pg	13 32 05.3	+0.6
	48nm,0.2s						
HGN				*e*Sn	Sn	13 32 19.2	-1.5
HGN				*e*Sg	Sg	13 32 20.2	+2.2
HILG	**Hillesheim**	**1.28**	**185**	*e*Pg	Pg	13 32 09.2	-1.3
HILG				*e*Sg	Sg	13 32 26.9	-0.7
BGG	**Burgeitz**	**1.39**	**167**	*e*Pg	Pg	13 32 11.3	-1.5
BGG				*e*Sg	Sg	13 32 29.7	-1.7
TNS	**Taunus Mts**	**1.68**	**143**	*e*Pn	Pn	13 32 15.1	-0.6
TNS				*e*Pg	Pg	13 32 16.0	-2.4
	SNR=4.3						
TNS				*e*Sg	Sg	13 32 38.2	-2.6
GIVF	**Givet**	**1.95**	**222**	*e*Pg	Pg	13 32 21.9	-2.1
GIVF				*e*Sg	Sg	13 32 47.1	-2.9
GIVF	**Givet**	**1.95**	**222**	*e*Pn	Pn	13 32 18.2	-1.4
GIVF				*e*Pg	Pg	13 32 21.9	-2.1
GIVF				*e*Sg	Sg	13 32 47.1	-2.9
GIVF	**Givet**	**1.95**	**222**	*e*Pg	Pg	13 32 21.9	-2.1
GIVF				*e*Sg	Sg	13 32 47.1	-2.9
WLF	**Walferdange**	**1.96**	**194**	*e*Pg	Pg	13 32 21.8	-2.2
	SNR=4.3						
WLF				*e*Sg	Sg	13 32 47.2	-2.9
CLZ	**Clausthal**	**2.20**	**81**	*e*Pn	Pn	13 32 21.4	-1.8
CLZ				*e*Pg	Pg	13 32 26.4	-2.6
	SNR=3.2						
CLZ				*e*Sg	Sg	13 32 55.2	-3.1
CDF	**Champ du Feu**	**3.17**	**175**	*e*Pn	Pn	13 32 35.0	-1.9
CDF				*e*Sg	Sg	13 33 25.5	-4.9
	4.8nm,0.5s						
MEZF	**Maizieres J'vi**	**3.28**	**202**	*e*Sg	Sg	13 33 28.8	-5.4
	3.5nm,0.3s						
LOR	**Lormes**	**4.73**	**206**	*e*Pn	Pn	13 32 56.2	-2.9
CABF	**La Chapelle**	**4.98**	**186**	*e*Pn	Pn	13 33 00.4	-2.3
SSF	**Saint Saulge**	**5.01**	**207**	*e*Pn	Pn	13 33 00.0	-3.1
AVF	**Avril sur Loir**	**5.30**	**207**	*e*Pn	Pn	13 33 03.9	-3.3
SMF	**Signal de Mont**	**5.31**	**203**	*e*Pn	Pn	13 33 03.6	-3.7
LDF	**La Druitiere**	**5.39**	**239**	*e*Pn	Pn	13 33 05.3	-3.2
LDF				*e*Sn	Sn	13 34 04.5	-7.6
FLN	**La Foliniere**	**5.49**	**242**	*e*Pn	Pn	13 33 06.6	-3.3
BGF	**Bois d'Agland**	**5.66**	**209**	*e*Pn	Pn	13 33 09.2	-3.1
GRR	**Gorron**	**5.91**	**240**	*e*Pn	Pn	13 33 11.8	-4.0
GRR				*e*Sn	Sn	13 34 15.5	-10

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*IDC **26** 13:52:07.9±3.7, 23.42S×179.78W, h540^{km}±43^{km}, mb3.2/9, mb1 3.4/11, mb1mx3.4/16, mbtmp4.1/11, Error ellipse: s-maj=26.9km s-min=21.7km az=22.0*
*NEIC **26** 13:52:08.1±1.9, 23.51S×179.75W, h550^{km}±23^{km}, Error ellipse: s-maj=21.9km s-min=17.5km az=222.0*
ISC 26 13:52:08.8±3.0**, 23.5S**±0.2×**179.8W**±0.2**, h567**^{km}±42^{km}**, n21, σ0^{s}78**/11**, mb3.7**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.74**	**274**	P	**P**	**13 54 55.7**	**+0.7**
	0.2nm,0.3s,baz=90,slow=20,SNR=3.6						
URZ	**Urewera**	**14.90**	**189**	P	**P**	**13 55 15.5**	**-1.0**
	1.4nm,0.3s,baz=87,slow=3.8,SNR=8.1						
RPZ	**Rata Peaks**	**21.48**	**198**	P	**P**	**13 56 18.8**	**+0.3**
	5.6nm,0.4s,mb4.5,baz=11,slow=5.0,SNR=7.0						
PMG	**Port Moresby**	**34.52**	**288**	P	**P**	**13 58 10.9**	**-0.9**
	9.3nm,0.8s,mb4.3,baz=136,slow=0.9,SNR=4.6						
STKA	**Stephens Creek**	**34.99**	**248**	P	**P**	**13 58 16.7**	**+1.1**
	1.6nm,0.5s,mb3.8,baz=85,slow=6.6,SNR=5.5						
WRA	**Warramunga Arr**	**42.58**	**266**	P	**P**	**13 59 17.0**	**-0.1**
	2.8nm,0.6s,mb4.0,baz=97,slow=8.5,SNR=117						
MJAR	**Matsushiro Arr**	**71.68**	**325**	P	**P**	**14 02 34.7**	**-0.5**
	0.4nm,0.4s,mb3.2,baz=190,slow=7.6,SNR=4.1						
NVAR	**Mina Array Bea**	**84.39**	**44**	P	**P**	**14 03 44.0**	**+1.1**
	0.2nm,0.3s,mb3.1,baz=217,slow=4.5,SNR=3.1						
TXAR	**Lajitas Array**	**90.12**	**58**	P	**P**	**14 04 10.9**	**+0.8**
	0.3nm,0.3s,mb3.6,baz=217,slow=4.5,SNR=7.2						
ILAR	**Eielson Array**	**91.65**	**13**	P	**P**	**14 04 15.2**	**-1.0**
	0.3nm,0.5s,mb3.6,baz=224,slow=6.1,SNR=5.7						
PDAR	**Pinedale Array**	**92.33**	**44**	P	**P**	**14 04 19.5**	**-0.4**
	0.4nm,0.8s,mb3.5,baz=228,slow=5.0,SNR=3.6						
MKAR	**Makanchi Array**	**112.02**	**313**	PKiKP		14 09 40.6	
	0.2nm,0.5s,baz=216,slow=1.2,SNR=5.1						
ARCES	**ARCESS Array B**	**131.56**	**348**	PKP	PKPdf	14 10 16.1	-0.6
	2.4nm,0.9s,baz=90,slow=1.8,SNR=6.6						
FINES	**FINESS Array B**	**138.15**	**342**	PKP	PKPdf	14 10 30.8	+1.8
	2.8nm,1.1s,SNR=4.3						
NB2	**NORSAR Subarra**	**141.75**	**351**	PKPabc	PKPdf	14 10 32.3	-3.0
	1.0nm,0.7s,baz=15,slow=3.1						
NOA	**NORSAR Array B**	**141.75**	**351**	PKhKP		14 10 32.1	
	1.3nm,0.7s,baz=16,slow=4.8,SNR=4.7						
NAO	**NORSAR Subarra**	**142.01**	**352**	PKPab	PKPdf	14 10 32.3	-3.4
AKASG	**Malin Array Be**	**144.75**	**328**	PKP	PKPdf	14 10 42.2	+1.4
	3.0nm,0.5s,baz=44,slow=4.0,SNR=21						
AKASG	**Malin Array Be**	**144.75**	**328**	PKP	PKPdf	14 10 42.2	+1.4
BRTR	**Keskin Array B**	**147.48**	**308**	PKPbc	PKPdf	14 10 51.2	+5.5
	1.0nm,0.6s,baz=104,slow=5.1,SNR=3.9						
KSP	**Ksiaz**	**150.00**	**339**	*e*P	PKPdf	14 10 57.3	+8.0

CASC 26 14:09:08.8±2.9**, 11.31N×86.46W, h40**^{km}±105^{km}**, MD3.8, ML3.5, 14C-7D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SSNN	**San Juan del S**	**0.60**	**92**	⇓*e*P	P	14 09 20.8	-0.1
APON	**Apoyo**	**0.72**	**33**	⇑*e*P	P	14 09 22.4	-0.1
TICN	**Ticuantepe**	**0.76**	**17**	⇑*e*P	P	14 09 23.4	+0.3
XAVN	**Gruta Xavier**	**0.85**	**9**	⇑*i*P	P	14 09 25.0	+0.6
CONN	**Concepcion**	**0.86**	**73**	⇑*e*P	P	14 09 23.6	-0.9
MGAN	**Managua**	**0.86**	**14**	⇑*e*P	P	14 09 24.7	+0.2
MGAN				⇑*e*P		14 09 24.7	
MGAN				*e*P		14 09 25.6	
MGAN				*e*S	S	14 09 35.5	-0.6
MGAN				*e*S	S	14 09 36.4	+0.3
MGAN				*i*		14 09 36.8	
	comp=E,1μm,0.5s						
MGAN				*e*S	S	14 09 36.8	+0.7
COPN	**Copaltepe**	**0.88**	**352**	⇑*e*P	P	14 09 25.2	+0.5
WILN	**Americas 2**	**0.89**	**18**	⇑*i*P	P	14 09 24.9	-0.1
WILN				*e*S	S	14 09 36.6	-0.2
MADN	**Villa Maderas**	**0.92**	**84**	⇓*e*P	P	14 09 24.5	-0.9
MOMJ	**Momotombo**	**1.10**	**356**	⇑*e*P	P	14 09 28.1	+0.3
MIRN	**Miramar**	**1.15**	**348**	⇑*e*P	P	14 09 29.1	+0.4
LEON	**Leon**	**1.18**	**339**	⇓*i*P	P	14 09 29.7	+0.7
CNGN	**Cerro Negro**	**1.21**	**349**	⇓*e*P	P	14 09 29.7	+0.3
CNGN				*e*S	S	14 09 44.8	-0.2
TEL3	**Telica 3**	**1.31**	**344**	⇓*e*P	P	14 09 31.4	+0.3
LIM1	**Limonal**	**1.33**	**117**	*i* P	P	14 09 30.9	-0.5
LIM1				*i* S	S	14 09 48.6	+0.6
TELN	**Telica**	**1.34**	**344**	⇑*e*P	P	14 09 32.0	+0.6
VCR	**Vista de Mar**	**1.43**	**145**	*e*P	P	14 09 32.1	-0.6
CRIN	**San Cristobal**	**1.50**	**338**	⇑*e*P	P	14 09 34.2	+0.5
CGA2	**Cerro Gallo 2**	**2.34**	**123**	*e*P	P	14 09 45.3	-0.5
CGA2				*e*S	S	14 10 15.1	+1.5
CNCH	**Conchagua**	**2.37**	**326**	⇓*e*P	P	14 09 46.3	+0.1
CNCH				*e*S	S	14 10 12.3	-1.9
PRS1	**Puriscal**	**2.49**	**122**	*e*P	P	14 09 47.7	-0.1
PRS1				*e*S	S	14 10 18.0	+0.8
LAJ	**Bijagual**	**2.71**	**122**	*e*P	P	14 09 46.5	-4.5
BLLM	**Bellamira**	**2.74**	**321**	⇓*e*P	P	14 09 51.8	+0.4
BLLM				*e*S	S	14 10 23.3	-0.3
VSM	**San Miguel**	**2.75**	**320**	⇑*e*P	P	14 09 52.5	+0.9
VSM				*e*S	S	14 10 24.5	+0.6
LCR2	**La Lucha 2**	**2.88**	**122**	*e*P	P	14 09 52.3	-1.0
LCR2				*e*S	S	14 10 28.1	+1.1
URSC	**Urasca**	**3.02**	**119**	*e*P	P	14 09 54.8	-0.5
BUS	**Buena Vista**	**3.18**	**123**	*e*P	P	14 09 57.2	-0.4
BUS				*e*S	S	14 10 32.5	-2.2
SNVI	**San Vicente**	**3.26**	**315**	*e*P	P	14 09 59.5	+0.7
SNVI				*e*S	S	14 10 35.1	-1.7
LCBS	**La Ceiba**	**3.39**	**314**	*e*P	P	14 10 00.6	0.0
LCBS				*e*S	S	14 10 37.6	-2.4
LFRS	**El Faro**	**3.43**	**312**	⇑*e*P	P	14 10 01.2	+0.1
LFRS				*e*S	S	14 10 38.8	-2.3
ACR	**Cerro Adams**	**4.18**	**129**	*e*P	P	14 10 10.4	-1.4
ACR				*e*S	S	14 10 55.0	-5.1

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*IDC **26** 14:17:41.4±0.8, 35.30N×137.04E, h308^{km}±10^{km}, mb3.0/4, mb1 3.1/5, mb1mx3.0/20, mbtmp3.7/5, Error ellipse: s-maj=28.0km s-min=17.6km az=74.0*
*NEIC **26** 14:17:42.2, 35.46N×136.85E, h304^{km}, MG3.4(JMA), After JMA.*
*JMA **26** 14:17:42.1±0.1, 35.46N×136.85E, h304^{km}±1^{km}, M3.4*
ISC 26 14:17:40.9±0.6**, 35.38N**±0.08×**136.95E**±0.06**, h309**^{km}±4^{km}**, n22, σ0^{s}91**/36**, mb3.2**/4**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGM	**Miyama**	**0.37**	**329**	P	**P**	**14 18 20.9**	**+0.3**
JGM				*e*S	**S**	**14 18 50.7**	**-0.9**
JIE	**Ise**	**1.01**	**192**	P	**P**	**14 18 23.5**	**+1.0**
JIE				*e*S	**S**	**14 18 55.4**	**+0.3**
JKG	**Kaga**	**1.03**	**331**	P	**P**	**14 18 22.8**	**+0.2**
JKG				*e*S	**S**	**14 18 54.2**	**-1.1**
JWT	**Wachi**	**1.27**	**266**	P	**P**	**14 18 24.2**	**+0.3**
JWT				S	**S**	**14 18 56.5**	**-1.1**
JYN	**Shimob**	**1.30**	**84**	P	**P**	**14 18 24.9**	**+0.8**
MAJO	**Matsushiro**	**1.54**	**41**	*e*Pn	**P**	**14 18 25.6**	**0.0**
MAJO				*e*S	**S**	**14 18 59.5**	**-1.0**
MAT	**Matsushiro**	**1.54**	**41**	P	**P**	**14 18 26.2**	**+0.6**
MAT				S	**S**	**14 19 00.6**	**+0.1**
MAT	**Matsushiro**	**1.54**	**41**	P	**P**	**14 18 26.3**	**+0.7**
MAT				*e*S	**S**	**14 19 00.5**	**0.0**
MAT	**Matsushiro**	**1.54**	**41**	*e*P	**P**	**14 18 26.0**	**+0.4**
MAT				*e*S	**S**	**14 19 01.0**	**+0.5**
MJAR	**Matsushiro Arr**	**1.54**	**41**	P	**P**	**14 18 26.5**	**+0.9**
	6.4nm,0.3s,baz=264,slow=5.2,SNR=83						
MJAR				S	**S**	**14 19 01.2**	**+0.7**
	0.4nm,0.3s,baz=88,slow=30,SNR=11						
JWY	**Kouya**	**1.61**	**224**	P	**P**	**14 18 26.6**	**+0.6**
JWY				*e*S	**S**	**14 19 00.8**	**-0.5**
JRY	**Ryogami san**	**1.71**	**68**	P	**P**	**14 18 27.6**	**+0.9**
JRY				*e*S	**S**	**14 19 02.5**	**+0.1**
JOD2	**Odawara 2**	**1.75**	**93**	P	**P**	**14 18 28.1**	**+1.1**
JOD2				*e*S	**S**	**14 19 05.1**	**+2.2**
JAG	**Ashikaga**	**2.28**	**62**	P	**P**	**14 18 30.5**	**-0.7**
JAG				*e*S	**S**	**14 19 08.8**	**-1.6**
JHS	**Saijyo**	**3.17**	**264**	P	**P**	**14 18 39.2**	**-0.2**
BSO1	**Boso 1**	**3.38**	**101**	P	**P**	**14 18 41.1**	**-0.5**
BSO1				*e*S	**S**	**14 19 26.7**	**-2.2**
JNU	**Nakatsue**	**5.51**	**248**	P	**P**	**14 19 05.3**	**+0.1**
	0.9nm,0.3s,baz=72,slow=7.1,SNR=5.5						
SONM	**Songino Array**	**25.84**	**308**	P	**P**	**14 22 47.4**	**+1.2**
	0.5nm,0.6s,mb3.1,baz=127,slow=9.9,SNR=5.4						
MKAR	**Makanchi Array**	**41.97**	**303**	P	**P**	**14 25 03.2**	**-0.2**
	0.2nm,0.4s,mb2.7,baz=85,slow=10,SNR=6.2						
MKAR	**Makanchi Array**	**41.97**	**303**	P	**P**	**14 25 03.2**	**-0.2**
WRA	**Warramunga Arr**	**55.07**	**183**	P	**P**	**14 26 41.5**	**-1.7**
	0.5nm,0.3s,mb3.4,baz=0.2,slow=7.6,SNR=21						
FINES	**FINESS Array B**	**68.56**	**331**	P	**P**	**14 28 11.2**	**-0.4**
	0.8nm,0.5s,mb3.7,baz=45,slow=5.4,SNR=8.1						

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*NEIC **26** 14:36:13.7, 30.29S×71.61W, h16^{km}, ML3.5(GUC), After GUC.*
GUC 26 14:36:13.7±0.7**, 30.29S×71.61W, h16**^{km}±4^{km}**, MD3.6, ML3.5, 3C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	**La Serena**	**0.49**	**40**	⇓*i*P	Pb	14 36 23.4	-0.1
LSCH				*i* S	Sb	14 36 30.2	-0.1
LSCH				AMP		14 36 31.4	
	comp=N,4μm,0.7s						
TLL	**Tololo Astrono**	**0.71**	**80**	*i* P	Pb	14 36 27.4	+0.2
TLL				*i* S	Sb	14 36 37.9	+1.5
TLL				AMP		14 36 40.3	
	comp=E,3μm,0.5s						
CMCH	**Combarbala**	**1.02**	**149**	⇑*i*P	Pb	14 36 31.7	-0.9
CMCH				*i* S	Sb	14 36 45.6	0.0
CMCH				AMP		14 36 49.3	
	comp=E,7μm,0.6s						
ILCH	**Illapel**	**1.40**	**164**	*i* P	Pn	14 36 38.0	-0.7
ILCH				*i* S	Sb	14 36 55.8	-0.6
ILCH				AMP		14 37 01.1	
	comp=N,550nm,0.5s						
CHNG	**Los Chungos**	**1.59**	**177**	⇑*i*P	Pn	14 36 41.1	-0.4
CHNG				*i* S	Sn	14 37 01.2	-0.6
PEL	**Peldehue**	**2.95**	**165**	*i* P	Pn	14 37 00.8	-0.1
PEL				*i* S	Sn	14 37 37.0	+0.6
PEL				AMP		14 37 47.1	
	comp=N,346nm,0.4s						
FCH	**Farellones**	**3.23**	**160**	⇑*i*P	Pn	14 37 05.3	+0.4
FCH				*i* S	Sn	14 37 45.0	+1.7
FCH				AMP		14 37 59.5	
	comp=E,95nm,0.6s						

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*NNC **26** 14:41:37.4±1.6, 48.13N×96.14E, Error ellipse: s-maj=85.8km s-min=19.9km az=177.0*
MOS 26 14:41:09.1±2.8**, 49.46N×97.52E, h10**^{km}**, mb4.3**/1**, 1C-1D, Error ellipse: s-maj=17.0km s-min=11.9km az=87.3, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOY	**Mondy**	**3.13**	**44**	*e*PN	Pn	14 42 03.5	+4.0
MOY				*e*		14 42 44.6	
MOY				pmax	pmax		
	comp=Z,135nm,0.5s						
MOY				smax			
	comp=E,581nm,0.9s						
ORL	**Orlik**	**3.41**	**24**	*e*PN	Pn	14 42 08.5	+5.1
ORL				*e*		14 42 51.7	
ORL				pmax	pmax		
	comp=Z,42nm,0.6s						
ORL				smax			
	comp=E,184nm,1.2s						
ZAK	**Zakamensk**	**3.83**	**74**	*e*PN	Pn	14 42 09.8	+0.3
ZAK				*e*		14 42 17.8	
ZAK				*e*S	Sn	14 43 09.0	+14
ZAK				pmax	pmax		
	comp=Z,38nm,0.6s						
ZAK				smax			
	comp=N,240nm,0.7s						
ARS	**Arshan**	**3.97**	**50**	*e*PN	Pn	14 42 20.0	+8.5
ARS				*e*		14 43 12.1	
ARS				pmax	pmax		
	comp=Z,107nm,0.4s						
ARS				smax			
	comp=E,488nm,0.7s						
TLY	**Talaya**	**4.49**	**58**	*e*PN	Pn	14 42 16.5	-2.4
TLY				*e*		14 42 28.9	
TLY				*e*		14 43 28.2	
TLY				pmax	pmax		
	comp=Z,21nm,0.3s						
TLY				smax			
	comp=N,235nm,1.5s						
IRK	**Irkutsk**	**5.10**	**54**	*e*PN	Pn	14 42 38.2	+11
IRK				*e*		14 43 45.0	
IRK				pmax	pmax		
	comp=Z,41nm,0.1s						
IRK				smax			
	comp=N,465nm,1.1s						
CERR	**Cheremushki**	**5.13**	**314**	*i* PN	Pn	14 42 26.7	-1.2
CERR				*i*		14 42 40.2	
CERR				*i* S	Sn	14 43 43.3	+15
LSTR	**Listvyanka**	**5.24**	**60**	*e*PN	Pn	14 42 42.3	+13
LSTR				*e*		14 43 50.3	
LSTR				pmax	pmax		
	comp=Z,21nm,1.3s						
LSTR				smax			
	comp=N,111nm,1.4s						
TASR	**Tashtagol**	**6.91**	**302**	*e*PN	Pn	14 43 12.7	+20
TASR				*e*S	Sn	14 44 42.2	+30
MK31	**Makanchi Array**	**10.53**	**261**	⇓Pn	P	14 43 57.7	+15
	comp=N,0.7nm,0.8s,baz=77,slow=17,SNR=2.6						
MK31				⇑Lg		14 46 34.7	
	comp=N,9.6nm,0.9s,baz=77,slow=35,SNR=3.6						

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*HLW **26** 14:43:18.0, 38.07N×21.90E, h33^{km}, Mb3.7*
*NEIC **26** 14:43:20.9, 37.64N×21.00E, h17^{km}, ML3.3(ATH), ML3.3(CSEM), After ATH.*
*IDC **26** 14:43:20.9±2.2, 37.19N×20.50E, h80^{km}±23^{km}, mb3.6/7, mb1 3.5/12, mb1mx3.3/28, mbtmp3.7/12, Error ellipse: s-maj=25.9km s-min=15.8km az=32.0*
*CSEM **26** 14:43:20.1±0.1, 37.61N×20.93E, h2^{km}, ML3.7, Error ellipse: s-maj=2.9km s-min=1.7km az=45.0*
ATH 26 14:43:20.9, 37.64N×21.00E, h17^{km}±1^{km}**, MD3.7**/11**, ML3.7, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.56**	**41**	*e*PN	Pn	14 43 31.8	-2.0
RLS				*e*SN	Sn	14 43 39.6	-3.0
VLS	**Valsamata**	**0.63**	**329**	*e*PB	Pb	14 43 32.6	-0.4
VLS				*e*SN	Sn	14 43 42.5	-1.9
ITM	**Ithomi**	**0.87**	**122**	*e*PB	Pb	14 43 36.9	-0.2
ITM				*e*SN	Sn	14 43 50.5	0.0
EVR	**Evrytania**	**1.43**	**26**	*e*PN	Pn	14 43 47.6	+1.4
EVR				*e*SN	Sn	14 44 07.8	+3.2
AGG	**Agios Georgios**	**1.73**	**37**	*e*P	Pn	14 43 53.3	+2.7
AGG	**Agios Georgios**	**1.73**	**37**	P	Pn	14 43 53.2	+2.6
VLI	**Veliai**	**1.80**	**120**	*e*PN	Pn	14 43 54.1	+2.5
VLI				*e*SN	Sn	14 44 16.6	+2.4
LKR	**Lokris**	**1.87**	**57**	*e*PN	Pn	14 43 54.4	+1.8
IGT	**Igoumenitsa**	**1.96**	**345**	*e*P	Pn	14 43 54.7	+0.9
NAIG	**Nisos Aigina**	**1.98**	**86**	*e*PN	Pn	14 43 56.5	+2.4
JAN	**Janina**	**2.02**	**357**	*e*PN	Pn	14 43 56.2	+1.5
KYTH	**Kithira**	**2.12**	**129**	*e*PN	Pn	14 43 58.0	+1.8
ATH	**Athens Observa**	**2.18**	**80**	*e*PB	Pb	14 43 58.2	-1.3
MPAR	**Parnis Oros**	**2.22**	**76**	*e*PN	Pn	14 43 59.0	+1.4
KEK	**Kerkira**	**2.27**	**336**	*e*PN	Pn	14 44 00.6	+2.2
NEO	**Neokhori**	**2.41**	**46**	*e*PB	Pb	14 44 01.5	-2.0
XOR	**Xorichti**	**2.44**	**44**	*e*P	Pn	14 44 01.8	+1.1
AOS	**Alonnisos**	**2.73**	**55**	*e*P	Pn	14 44 05.5	+0.6
FNA	**Florina**	**3.15**	**5**	*e*P	Pn	14 44 11.6	+0.7
PLG	**Polygyros**	**3.33**	**34**	Pn	Pn	14 44 14.6	+1.2
THE	**Thessaloniki**	**3.36**	**26**	*e*P	Pn	14 44 14.3	+0.5
THE	**Thessaloniki**	**3.36**	**26**	P	Pn	14 44 14.1	+0.3
VAM	**Vamos**	**3.41**	**130**	Pn	Pn	14 44 14.8	+0.3
GRG	**Griva**	**3.49**	**18**	*e*P	Pn	14 44 16.0	+0.4
OUR	**Ouranopolis**	**3.56**	**40**	*e*P	Pn	14 44 17.2	+0.6
SOH	**Sokhos**	**3.67**	**29**	*e*P	Pn	14 44 19.8	+1.6
SANT	**Santorini**	**3.79**	**108**	*e*Pn	Pn	14 44 13.1	-6.8
KNT	**Kendrikon**	**3.81**	**22**	*e*P	Pn	14 44 20.9	+0.7
IDI	**Anoyia**	**3.92**	**126**	P	Pn	14 44 21.0	-0.7
	1.8nm,0.3s,baz=319,slow=13,SNR=7.7						
IDI				S	Sn	14 45 06.8	-1.0
	8.7nm,0.3s,baz=322,slow=21,SNR=10.0						
NVR	**Nevrokopi**	**4.32**	**30**	Pn	Pn	14 44 28.5	+1.1
MMB	**Musomiste**	**4.47**	**27**	*i* P	Pn	14 44 29.2	-0.4
KKB	**Krupnik**	**4.52**	**20**	P	Pn	14 44 31.0	+0.7
VTS	**Vitosha**	**5.23**	**18**	*e*P	Pn	14 44 40.0	-0.3
SLUM		**7.05**	**149**	P	Pn	14 44 59.9	-6.0
HMAT	**Matruh**	**8.25**	**141**	P	P	14 45 15.2	-7.5
HMAT				S	Sn	14 46 40.5	-16
MLR	**Muntele Rosu**	**8.67**	**24**	P	P	14 45 31.1	+2.5
	0.1nm,0.3s,baz=172,slow=18,SNR=2.2						
SWA2		**9.16**	**155**	P	P	14 45 30.5	-4.9
SWA1		**9.23**	**153**	P	P	14 45 31.1	-5.3
SWA1				S	Sn	14 47 08.6	-12
BRTR	**Keskin Array B**	**10.10**	**74**	P	P	14 45 48.8	+0.6
	0.1nm,0.3s,baz=264,slow=12,SNR=2.5						
PSZ	**Piszkesteto**	**10.30**	**356**	*e*Pn	P	14 45 50.3	-0.7
HFRF	**Wahat Farafira**	**12.14**	**147**	P	P	14 46 10.2	-6.0
GERES	**GERESS Array B**	**12.39**	**337**	P	P	14 46 18.9	-0.5
	0.1nm,0.3s,baz=163,slow=13,SNR=2.3						
AKASG	**Malin Array Be**	**14.32**	**22**	P	P	14 46 48.1	+3.4
	1.7nm,0.3s,baz=205,slow=9.4,SNR=7.1						
MDT	**Midelt**	**21.44**	**265**	P	P	14 47 57.6	-13
	11nm,0.8s,baz=244,slow=9.1,SNR=6.1						
HFS	**Hagfors**	**22.99**	**351**	P	P	14 48 22.2	-3.3
	0.8nm,0.3s,baz=167,slow=12,SNR=11						
FINES	**FINESS Array B**	**24.04**	**6**	P	P	14 48 31.8	-3.8
	0.5nm,0.4s,baz=182,slow=9.8,SNR=9.6						
EKA	**Eskdalemuir Ar**	**24.09**	**325**	P	P	14 48 32.5	-3.6
	3.4nm,1.1s,baz=135,slow=10.0,SNR=3.5						
AKTO	**Aktyubinsk**	**29.21**	**52**	P	P	14 49 19.8	-3.8
	0.9nm,0.4s,baz=276,slow=11,SNR=5.3						
ARCES	**ARCESS Array B**	**32.05**	**3**	P	P	14 49 44.5	-4.0
	1.0nm,0.7s,baz=194,slow=10.0,SNR=4.2						
BVAR	**Borovoye Array**	**37.18**	**49**	P	P	14 50 28.6	-4.0
	0.8nm,0.5s,baz=270,slow=7.4,SNR=6.7						
MKAR	**Makanchi Array**	**45.26**	**58**	P	P	14 51 35.3	-3.8
	0.8nm,0.4s,baz=270,slow=7.5,SNR=30						

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*LDG **26** 14:47:00.2±0.1, 49.37N×6.86E, h1^{km}, Md3.5/2, Ml3.6/27, Error ellipse: s-maj=1.1km s-min=1.0km az=140.0, Suspected Mining induced.*
*STR **26** 14:47:00.3±0.2, 49.35N×6.91E, h1^{km}±1^{km}, Ml3.0, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*BGR **26** 14:47:00.4±0.3, 49.37N×6.90E, h1^{km}, ML2.9/3, Error ellipse: s-maj=3.3km s-min=2.2km az=116.0*
*NEIC **26** 14:47:00.2, 49.37N×6.86E, h1^{km}, ML3.6(LDG), ML3.6(CSEM), ML3.2(STR), ML3.1(SZGRF), ML3.0(LEDBW), After LDG.*
*CSEM **26** 14:47:00.0±0.0, 49.36N×6.86E, h2^{km}, ML3.7/23, Error ellipse: s-maj=0.7km s-min=0.6km az=159.0*
*LEDBW **26** 14:47:00.4±0.5, 49.38N×6.91E, h1^{km}, ML3.0, Error*

ellipse: s-maj=16.0km s-min=4.0km az=81.0
*BNS **26** 14:47:00.3±1.0,49.39N×6.94E,h1^{km}±11^{km},ML3.1*
*PRU **26** 14:47:01.1,49.42N×6.97E*
*VIE **26** 14:47:11.3±1.3,49.03N×7.93E,h8^{km},mb2.7/3,ML2.5/8,*
Error ellipse: s-maj=11.5km s-min=5.7km az=97.0
ISC 26 14:46:57.8±0.2**,49.36N**±0.01×**6.77E**±0.02**,n149,**
σ1^{s}29/287**,10C-5D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUP	Ruppelstein	0.39	29	⇓P	Pg	14 47 06.9	+1.3
RUP	Ruppelstein	0.39	29	ePg	Pg	14 47 07.0	+1.3
RUP	Ruppelstein	0.39	29	Pg	Pg	14 47 07.0	+1.4
RUP				Sg	Sg	14 47 13.4	+2.5
WLF	Walferdange	0.51	308	ePg	Pg	14 47 11.3	+3.4
WLF				eSg	Sg	14 47 19.0	+4.3
	SNR=4.0						
WLF	Walferdange	0.51	308	ePn	Pn	14 47 10.4	-1.4
ABH	Alteburg	0.73	44	⇑P*	Pb	14 47 12.6	-0.4
ABH				ePg	Pg	14 47 12.7	+0.3
ABH	Alteburg	0.73	44	Pg	Pg	14 47 12.7	+0.4
LANF	Langenberg	0.78	119	Pg	Pg	14 47 13.6	+0.2
LANF	Langenberg	0.78	119	ePg	Pg	14 47 13.8	+0.4
KTD	Kalmit	0.86	92	ePg	Pg	14 47 15.0	0.0
KTD				P*	Pb	14 47 15.2	-0.1
KTD	Kalmit	0.86	92	P	Pg	14 47 15.2	+0.2
BGG	Burgeitz	0.92	23	ePg	Pg	14 47 16.4	+0.1
BGG				eSg	Sg	14 47 28.8	+0.2
HILG	Hillesheim	0.94	356	ePg	Pg	14 47 18.0	+1.5
HILG				eSg	Sg	14 47 30.5	+1.5
CDF	Champ du Feu	1.00	160	ePn	Pn	14 47 19.5	+0.5
CDF				eSg	Sg	14 47 31.3	0.0
	130nm,0.2s						
CDF	Champ du Feu	1.00	160	ePg	Pg	14 47 18.6	+0.7
CDF				ePn	Pn	14 47 19.5	+0.5
CDF				eSg	Sg	14 47 31.3	0.0
CDF	Champ du Feu	1.00	160	ePn	Pn	14 47 19.5	+0.5
CDF				eSg	Sg	14 47 31.3	0.0
	65nm,0.2s						
WLS	Welschbruch	1.02	158	Pg	Pg	14 47 19.2	+1.0
WLS	Welschbruch	1.02	158	ePg	Pg	14 47 19.1	+0.9
RFYF	Reffroy	1.12	230	ePg	Pg	14 47 23.1	+2.9
	baz=54						
RFYF				eSg	Sg	14 47 37.0	+1.8
	528nm,0.3s						
ECH	Echery	1.17	167	Pn	Pn	14 47 21.9	+0.5
ECH				Sg	Sg	14 47 37.7	+0.8
ECH	Echery	1.17	167	ePg	Pg	14 47 22.1	+0.9
ECH	Echery	1.17	167	Pg	Pg	14 47 22.1	+0.9
ECH				Sg	Sg	14 47 37.7	+0.8
STB	Steinbach	1.24	2	ePg	Pg	14 47 23.1	+0.6
STB				eSg	Sg	14 47 39.7	+0.7
	177nm,0.6s						
THEF	They Montfort	1.25	205	Pn	Pn	14 47 23.9	+1.5
THEF				Sg	Sg	14 47 41.5	+2.2
THEF	They Montfort	1.25	205	ePg	Pg	14 47 24.1	+1.4
THEF	They Montfort	1.25	205	Pg	Pg	14 47 24.1	+1.4
THEF				Sg	Sg	14 47 41.5	+2.2
SWS	Schriesheim	1.27	84	P	Pb	14 47 22.0	-0.2
SWS				S	Sb	14 47 39.1	0.0
SWS	Schriesheim	1.27	84	SG	Sg	14 47 39.1	-0.9
LIBD	Limburg	1.33	155	ePg	Pg	14 47 25.5	+1.2
LIBD	Limburg	1.33	155	Pn	Pn	14 47 25.0	+1.4
LIBD	Limburg	1.33	155	Pg	Pg	14 47 25.5	+1.1
TOD	Tromm	1.35	79	ePg	Pg	14 47 23.2	-1.6
TOD	Tromm	1.35	79	Pn	Pn	14 47 22.9	-1.0
TOD	Tromm	1.35	79	P	Pb	14 47 23.2	-0.5
TOD	Tromm	1.35	79	Pg	Pb	14 47 23.2	-0.5
TOD				Sg	Sg	14 47 41.5	-1.3
HAU	Haudompre	1.38	192	ePg	Pg	14 47 26.2	+0.8
HAU				eSn	Sn	14 47 42.9	-0.7
HAU				eSg	Sg	14 47 44.1	+0.2
	163nm,0.2s						
HAU	Haudompre	1.38	192	ePn	Pn	14 47 25.0	+0.6
HAU				ePg	Pg	14 47 26.2	+0.8
HAU				eSn	Sn	14 47 42.9	-0.7
HAU				eSg	Sg	14 47 44.1	+0.2
HAU	Haudompre	1.38	192	ePg	Pg	14 47 26.2	+0.8
HAU				eSn	Sn	14 47 42.9	-0.7
HAU				eSg	Sg	14 47 44.1	+0.2
	81nm,0.2s						
TNS	Taunus Mts	1.39	51	⇑P	Pb	14 47 23.9	-0.5
TNS				S	Sb	14 47 43.9	+1.3
TNS	Taunus Mts	1.39	51	ePn	Pn	14 47 23.8	-0.6
TNS				ePg	Pg	14 47 25.1	-0.4
	SNR=23						
TNS				eSg	Sg	14 47 43.1	-0.9
	SNR=4.0						
TNS	Taunus Mts	1.39	51	ePn	Pn	14 47 23.8	-0.7
TNS				eSg	Sg	14 47 44.0	-0.1
MEZF	Maizieres J'vi	1.42	233	ePn	Pn	14 47 25.9	+1.0
	baz=51						
MEZF	Maizieres J'vi	1.42	233	ePg	Pg	14 47 27.9	+1.7
	baz=52						
MEZF				eSn	Sn	14 47 44.5	-0.1
MEZF				eSg	Sg	14 47 46.3	+1.2
	176nm,0.3s						
MEZF	Maizieres J'vi	1.42	233	ePn	Pn	14 47 25.9	+1.0
MEZF				ePg	Pg	14 47 27.9	+1.7
MEZF				eSn	Sn	14 47 44.5	-0.1
MEZF				eSg	Sg	14 47 46.3	+1.2
MEZF	Maizieres J'vi	1.42	233	ePg	Pg	14 47 27.9	+1.7
MEZF				eSn	Sn	14 47 44.5	-0.1
MEZF				eSg	Sg	14 47 46.3	+1.2
	88nm,0.3s						
BFO	Black Forest	1.46	134	P	Pn	14 47 25.4	-0.1
BFO				P		14 47 27.0	
BFO				S	Sb	14 47 45.5	+1.0
BFO	Black Forest	1.46	134	ePn	Pn	14 47 25.5	0.0
BFO				ePg	Pg	14 47 26.7	-0.2
	SNR=23						
BFO				eSg	Sg	14 47 45.7	-0.7
	SNR=6.7						
BFO	Black Forest	1.46	134	ePn	Pn	14 47 25.5	+0.1
BFO				eSg	Sg	14 47 45.3	-1.0
GIVF	Givet	1.47	301	ePn	Pn	14 47 27.6	+2.0
GIVF				eSn	Sn	14 47 45.6	-0.1
GIVF				eSg	Sg	14 47 48.0	+1.4
	262nm,0.3s						
LBG	Lerchenberg	1.50	117	P	Pn	14 47 25.9	-0.2
LBG				P		14 47 27.6	
LBG				S	Sb	14 47 43.7	-2.1
LBG	Lerchenberg	1.50	117	PG	Pg	14 47 27.6	-0.2
LBG	Lerchenberg	1.50	117	P	Pn	14 47 25.9	-0.2
LBG				Pg	Pg	14 47 27.6	-0.2
LBG				S	Sb	14 47 43.7	-2.2
LBG	Lerchenberg	1.50	117	Pg	Pg	14 47 27.6	-0.2
HGN	Heimansgroeve	1.51	339	ePn	Pn	14 47 27.3	+1.1
	12nm,0.2s						
HGN				ePg	Pg	14 47 29.2	+1.3
	52nm,0.2s						
HGN				eSg	Sg	14 47 47.6	-0.4
HGN				eRg		14 48 12.7	
HGN	Heimansgroeve	1.51	339	ePg	Pg	14 47 29.2	+1.3
	52nm,0.2s						
HGN				eSg	Sg	14 47 47.6	-0.4
MOF	Molkenrain	1.53	171	Pn	Pn	14 47 28.2	+1.7
MOF				Sg	Sg	14 47 49.6	+0.9
MOF	Molkenrain	1.53	171	ePg	Pg	14 47 29.6	+1.3
	SNR=38						
HINF	Hinteralfeld	1.54	178	ePg	Pg	14 47 29.0	+0.4
HINF				eSn	Sn	14 47 46.6	-1.1
HINF				eSg	Sg	14 47 49.2	0.0
	355nm,0.2s						
HINF	Hinteralfeld	1.54	178	ePn	Pn	14 47 27.1	+0.4
HINF				ePg	Pg	14 47 29.0	+0.4
HINF				eSn	Sn	14 47 46.6	-1.1
HINF				eSg	Sg	14 47 49.2	0.0
HINF	Hinteralfeld	1.54	178	ePg	Pg	14 47 29.0	+0.4
HINF				eSn	Sn	14 47 46.6	-1.1
HINF				eSg	Sg	14 47 49.2	0.0
	177nm,0.2s						
KIZ	Kirchzarten	1.60	151	P	Pn	14 47 27.2	-0.2
KIZ				P		14 47 29.7	
KIZ				S	Sb	14 47 50.1	+1.5
KIZ	Kirchzarten	1.60	151	PG	Pg	14 47 29.7	0.0
KIZ				SG	Sg	14 47 50.1	-0.9
KIZ	Kirchzarten	1.60	151	P	Pn	14 47 27.2	-0.3
KIZ				Pg	Pg	14 47 29.7	0.0
KIZ				Sg	Sg	14 47 50.1	-0.9
KIZ	Kirchzarten	1.60	151	Pg	Pg	14 47 29.7	0.0
SFTF	Sexfontaines	1.63	225	ePn	Pn	14 47 29.2	+1.3
	baz=46						
SFTF				eSg	Sg	14 47 52.8	+0.9
	92nm,0.3s						
BNS	Bensberg	1.63	9	ePg	Pg	14 47 29.8	-0.6
BNS				eSg	Sg	14 47 49.5	-2.5
	239nm,0.7s						
HOBG	Hohbusch	1.67	12	ePg	Pg	14 47 28.9	-2.2
FELD	Feldberg	1.70	151	P	Pn	14 47 31.5	+2.6
FELD				S	Sb	14 47 53.5	+2.1
STU	Stuttgart	1.70	109	ePn	Pn	14 47 28.6	-0.3
STU				eSn	Sn	14 47 49.1	-2.6
STU	Stuttgart	1.70	109	ePn	Pn	14 47 28.6	-0.3
STU				eSn	Sn	14 47 49.1	-2.6
TUBL	Tuebingen Lnz	1.74	118	P	Pn	14 47 32.0	+2.5
TUBL				S	Sn	14 47 53.9	+1.2
SPAK	Spaichingen	1.83	133	Pg	Pg	14 47 33.9	-0.6
SIND	Sindeldorf	1.85	89	P	Pn	14 47 30.2	-0.9
BUCH	Bad Urach	1.93	117	P	Pn	14 47 32.2	0.0
BUCH				S	Sn	14 47 59.5	+1.9
BUCH	Bad Urach	1.93	117	SG	Sn	14 47 59.5	+1.9
BBS	Basel-Blauen	1.96	165	P	Pn	14 47 38.7	+6.1
LAUG	Laupendahl	2.00	3	ePg	Pg	14 47 32.9	-4.8
LAUG				eSg	Sg	14 47 57.5	-6.8
	106nm,0.6s						
LOMF	Lomont	2.01	179	Pn	Pn	14 47 34.3	+0.9
LOMF	Lomont	2.01	179	ePg	Pg	14 47 38.4	+0.5
	SNR=7.9						
GUT	Gutenstein	2.02	129	P	Pn	14 47 33.5	0.0
GUT				S	Sn	14 48 03.6	+3.8
GUT	Gutenstein	2.02	129	SG	Sg	14 48 03.6	-1.4
SISB	Singen-Sch Ber	2.22	138	P	Pn	14 47 41.9	+5.5
SISB				S	Sn	14 48 10.1	+5.2
HDH	Heidenheim	2.39	108	P	Pn	14 47 44.2	+5.3
UBBA	Unterbreizbach	2.54	54	eSg	Sg	14 48 18.9	-3.5
	SNR=2.8						
UBR	Uberruh	2.78	126	S	Sb	14 48 29.3	+6.2
UBR	Uberruh	2.78	126	P	Pn	14 47 44.9	+0.5
UBR				S*	Sb	14 48 29.3	+6.2
CABF	La Chapelle	2.79	190	ePn	Pn	14 47 45.1	+0.6
CABF				eSg	Sg	14 48 27.8	-2.8
	62nm,0.5s						
LOR	Lormes	2.85	224	ePn	Pn	14 47 45.8	+0.4
	baz=54						
LOR	Lormes	2.85	224	ePg	Pg	14 47 53.9	-0.9
	baz=48						
LOR				eSn	Sn	14 48 19.1	-1.9
LOR				eSg	Sg	14 48 30.4	-2.4
	38nm,0.2s						
LOR	Lormes	2.85	224	ePn	Pn	14 47 45.8	+0.4
LOR				ePg	Pg	14 47 53.9	-0.9
LOR				eSn	Sn	14 48 19.1	-1.9
LOR				eSg	Sg	14 48 30.4	-2.4
LOR	Lormes	2.85	224	ePg	Pg	14 47 53.9	-0.9
LOR				eSn	Sn	14 48 19.1	-1.9
LOR				eSg	Sg	14 48 30.4	-2.4
	19nm,0.2s						
GRF	Grafenberg Arr	2.92	82	e(Pg)	Pg	14 47 53.8	-2.3
	SNR=5.3						
GRF				eSg	Sg	14 48 30.6	-4.4
	SNR=2.4						
DAVA	Damuels	2.93	134	⇑ePn	Pn	14 47 48.0	+1.4
	comp=Z,2.5nm,0.2s						
DAVA	Damuels	2.93	134	⇑iSg	Sg	14 48 22.5	-13
	comp=N,4.9nm,0.2s						
SSF	Saint Saulge	3.17	225	ePn	Pn	14 47 49.9	0.0
SSF				eSn	Sn	14 48 26.4	-2.6
SSF				eSg	Sg	14 48 41.2	-2.1
	23nm,0.4s						
FUR	Furstenfeldbru	3.21	110	eSg	Sg	14 48 39.6	-5.1
	SNR=1.3						
SMF	Signal de Mont	3.35	217	ePn	Pn	14 47 51.8	-0.7
SMF				eSn	Sn	14 48 30.5	-3.1
SMF				eSg	Sg	14 48 46.5	-2.9
	30nm,0.2s						
MOX	Moxa	3.38	66	i P	Pn	14 47 52.1	-0.8
MOX				Pg	Pg	14 48 02.0	-3.3
MOX				Sg	Sg	14 48 46.0	-4.4
MOX	Moxa	3.38	66	ePn	Pn	14 47 52.1	-0.8
MOX				ePg	Pg	14 48 01.7	-3.6
	SNR=3.1						
MOX				e(Sg)	Sg	14 48 44.2	-6.2
	SNR=1.6						
MOX	Moxa	3.38	66	ePn	Pn	14 47 52.1	-0.8
MOX				ePg	Pg	14 48 01.6	-3.7
MOX				eSg	Sg	14 48 46.1	-4.3
MOX	Moxa	3.38	66	ePg	Pg	14 48 01.6	-3.7
CLZ	Clausthal	3.38	41	e(Pn)	Pn	14 47 52.4	-0.5
	SNR=1.9						
AVF	Avril sur Loir	3.44	223	ePn	Pn	14 47 52.8	-1.0
AVF				eSn	Sn	14 48 32.4	-3.5
AVF				eSg	Sg	14 48 49.1	-3.3
	26nm,0.4s						
HYF	Humbligny	3.46	234	ePn	Pn	14 47 54.8	+0.8
HYF				eSg	Sg	14 48 50.2	-2.8
MOTA	Moosalm	3.52	123	⇓ePn	Pn	14 47 56.2	+1.2
	comp=Z,1.4nm,0.2s						
MOTA	Moosalm	3.52	123	⇑iSn	Sn	14 48 36.0	-1.9
MOTA	Moosalm	3.52	123	Pn	Pn	14 47 56.2	+1.2
	1.4nm,0.2s						
MOTA				Sn	Sn	14 48 36.0	-2.0
SQTA	Sankt Quirin	3.66	124	⇑iPn	Pn	14 47 58.5	+1.6
	comp=Z,2.0nm,0.1s						
SQTA	Sankt Quirin	3.66	124	⇓iSn	Sn	14 48 32.6	-8.7
	comp=Z,4.0nm,0.2s						
SQTA	Sankt Quirin	3.66	124	Pn	Pn	14 47 58.5	+1.7
	2.0nm,0.1s						
SQTA				Sn	Sn	14 48 32.6	-8.7
	4.0nm,0.2s						
NEUB	Neuenburg	3.71	58	e(Sg)	Sg	14 48 56.1	-5.1
	SNR=2.4						
NKC	Novy Kostel	3.78	74	ePN	Pn	14 47 59.1	+0.5
NKC				ePG	Pg	14 48 08.7	-4.6
NKC				eSG	Sg	14 48 56.3	-7.4
	50nm,0.7s						
WATA	Walderalm	3.79	120	⇑ePn	Pn	14 48 00.4	+1.7
	comp=Z,2.4nm,0.2s						
TANN	Tannenbergstha	3.83	72	ePg	Pg	14 48 10.9	-3.4
	SNR=2.9						
TANN				e(Sg)	Sg	14 48 57.9	-7.4
	SNR=3.4						
LPL	La Plagne	3.84	180	ePn	Pn	14 47 59.7	+0.2
LPL				eSg	Sg	14 49 00.5	-5.3
	23nm,0.8s						
BGF	Bois d'Agland	3.85	225	ePn	Pn	14 47 58.8	-0.7
BGF				eSn	Sn	14 48 43.0	-3.1
BGF				eSg	Sg	14 49 01.5	-4.4
	167nm,0.6s						
LPG	La Plagne	3.86	180	ePn	Pn	14 48 00.0	+0.2
LPG				eSg	Sg	14 49 01.5	-4.9
	39nm,0.9s						
WTTA	Wattenberg	3.87	121	⇓iPn	Pn	14 48 01.6	+1.8
	comp=Z,2.5nm,0.2s						
WTTA	Wattenberg	3.87	121	Pn	Pn	14 48 01.6	+1.8
	2.5nm,0.2s						
WTTA				Sn	Sn	14 48 42.4	-4.2
	3.2nm,0.3s						
TCF	Toulx Ste Croi	4.34	227	ePg	Pg	14 48 21.4	-3.1
TCF				eSn	Sn	14 48 54.5	-4.2
TCF				eSg	Sg	14 49 17.2	-5.2
	16nm,0.3s						
TCF	Toulx Ste Croi	4.34	227	ePn	Pn	14 48 05.1	-1.5
TCF				ePg	Pg	14 48 21.4	-3.1
TCF				eSn	Sn	14 48 54.5	-4.2
TCF				eSg	Sg	14 49 17.2	-5.2
TCF	Toulx Ste Croi	4.34	227	ePn	Pn	14 48 05.1	-1.5
TCF				eSn	Sn	14 48 54.5	-4.2
TCF				eSg	Sg	14 49 17.2	-5.2
	8.1nm,0.3s						
CLL	Collm	4.44	62	ePG	Pg	14 48 25.0	-1.5
CLL				i SG	Sg	14 49 19.9	-5.9
KHC	Kasperske Hory	4.47	90	ePN	Pn	14 48 07.6	-0.8
KHC				PG	Pg	14 48 28.0	+1.0
KHC				eSN	Sn	14 48 55.9	-5.9
KHC				eSG	Sg	14 49 23.5	-3.0
KHC	Kasperske Hory	4.47	90	ePn	Pn	14 48 07.6	-0.8
KHC				eSn	Sn	14 48 55.9	-5.9
ORIF	Oris-en-Rattie	4.48	188	ePn	Pn	14 48 08.3	-0.3
ORIF				eSg	Sg	14 49 20.1	-7.0
	15nm,0.5s						
LDF	La Druitiere	4.60	263	ePn	Pn	14 48 10.9	+0.6
LDF				eSn	Sn	14 49 00.2	-5.1
LDF				eSg	Sg	14 49 26.3	-4.8
	34nm,0.4s						
MBDF	Montbardon	4.63	180	ePn	Pn	14 48 09.8	-0.9
MBDF				eSg	Sg	14 49 25.8	-6.3
	11nm,0.6s						
VIVF	Saint-Julien-l	4.73	198	ePn	Pn	14 48 12.0	0.0
VIVF				eSn	Sn	14 49 01.0	-7.4
	5.3nm,0.4s						
VIVF				eSg	Sg	14 49 28.9	-6.3
	10nm,0.4s						
FLN	La Foliniere	4.80	266	ePn	Pn	14 48 13.2	+0.1
	baz=86						
FLN				eSn	Sn	14 49 05.5	-4.9
FLN				eSg	Sg	14 49 32.1	-5.7
	19nm,0.3s						
BRG	Berggiesshubel	4.86	69	Pg	Pg	14 48 25.8	-9.1
BRG				Sg	Sg	14 49 29.1	-11
BRG	Berggiesshubel	4.86	69	Pg	Pg	14 48 25.8	-9.0
BRG				Sg	Sg	14 49 29.0	-11
KBA	Koelnbreinsper	4.95	115	⇑iPn	Pn	14 48 16.8	+1.6
	comp=Z,2.4nm,0.2s						
KBA	Koelnbreinsper	4.95	115	Pn	Pn	14 48 16.8	+1.6
	2.4nm,0.2s						
KBA				Sn	Sn	14 49 10.0	-4.1
	4.3nm,0.3s						
PRU	Pruhonice	5.09	80	ePN	Pn	14 48 15.1	-2.0
PRU				eSG	Sg	14 49 39.3	-7.9
GRR	Gorron	5.13	262	ePg	Pg	14 48 36.4	-3.7
GRR				eSn	Sn	14 49 13.6	-4.9
GRR				eSg	Sg	14 49 42.0	-6.5
	14nm,0.3s						
GRR	Gorron	5.13	262	ePn	Pn	14 48 17.9	+0.2
GRR				ePg	Pg	14 48 36.4	-3.7
GRR				eSn	Sn	14 49 13.6	-4.9
GRR				eSg	Sg	14 49 42.0	-6.5
MOA	Molln	5.20	104	⇓iPn	Pn	14 48 18.4	-0.3
	comp=Z,2.5nm,0.2s						
MOA	Molln	5.20	104	Pn	Pn	14 48 18.4	-0.3
	2.5nm,0.2s						
MOA				Sn	Sn	14 49 14.3	-6.0
	3.6nm,0.2s						
MFF	Saint Martin d	5.40	242	ePn	Pn	14 48 20.9	-0.7
CAF	Calviac	5.47	218	ePn	Pn	14 48 21.1	-1.5
CAF				eSn	Sn	14 49 21.0	-6.2
CAF				eSg	Sg	14 49 52.9	-7.1
	8.0nm,0.3s						
LASF	Ste Croix	5.65	202	eSg	Sg	14 49 58.0	-7.9
	21nm,0.5s						
ARSA	Arzberg	6.21	107	⇑iPn	Pn	14 48 33.1	+0.1
	comp=Z,1.7nm,0.2s						
ARSA	Arzberg	6.21	107	⇑iSn	Sn	14 49 39.6	-6.1
	comp=N,1.4nm,0.3s						
SGMF	Saint Gilles	6.26	263	ePn	Pn	14 48 32.9	-0.8
SGMF				eSn	Sn	14 49 39.4	-7.5
RGN	Rugen	6.59	35	ePn	Pn	14 48 33.4	-4.9
RGN	Rugen	6.59	35	ePn	Pn	14 48 33.4	-4.9
ROSF	Rostrenen	6.71	265	ePn	Pn	14 48 38.7	-1.3
ROSF				eSn	Sn	14 49 50.7	-7.4
QUIF	Quistinic	6.74	261	ePn	Pn	14 48 38.8	-1.7
QUIF				eSn	Sn	14 49 51.0	-7.9

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*NEIC **26** 14:48:56.5,32.83S×70.88W,h74^{km},MD3.8(GUC),After GUC.*
GUC 26 14:48:56.5±0.6**,32.83S**×**70.88W,h74**^{km}±1^{km}**,MD3.4,**
ML3.9,14C-5D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	El Roble	0.18	219	⇓iP	P	14 49 08.3	+0.8
ROCH				i S	S	14 49 17.2	+1.5
JACH	Jahuel	0.28	58	⇑iP	P	14 49 08.9	+0.7
JACH				i S	S	14 49 17.5	+0.7
PEL	Peldehue	0.35	152	⇓iP	P	14 49 08.9	+0.3
PEL				i S	S	14 49 18.1	+0.5
PEL				AMP		14 49 18.7	
	comp=E,9µm,0.2s						
CLCH	Cerro Calan	0.63	153	⇑iP	P	14 49 11.4	+0.3
CLCH				i S	S	14 49 22.8	+0.8
SAN	Santiago	0.64	164	i P	P	14 49 11.5	+0.2
SAN				i S	S	14 49 22.6	+0.3
RCDM	Rinconada Maip	0.66	175	⇑iP	P	14 49 11.5	+0.1
RCDM				i S	S	14 49 22.8	+0.3
RCDM				AMP		14 49 23.1	
	comp=E,10µm,0.2s						
IHA	Instituto Hidr	0.67	253	⇑iP	P	14 49 11.8	+0.3
IHA				i S	S	14 49 22.9	+0.2
FCH	Farellones	0.70	135	⇑iP	P	14 49 12.6	+0.7
FCH				i S	S	14 49 25.0	+1.7
FSR	Penalolen	0.71	155	⇑iP	P	14 49 12.5	+0.5
FSR				i S	S	14 49 24.1	+0.6
FSR				AMP		14 49 24.9	
	comp=N,4µm,0.5s						
ANTU	Antumapu	0.76	164	eP	P	14 49 12.7	+0.1
ANTU				i S	S	14 49 25.0	+0.4
ANTU				AMP		14 49 26.0	
	comp=E,4µm,0.2s						
TACH	Talagante	0.82	183	⇑iP	P	14 49 13.2	-0.1
TACH				i S	S	14 49 26.1	+0.4
PCH	Pirque	0.84	159	⇑iP	P	14 49 13.7	+0.2
PCH				i S	S	14 49 26.9	+0.7
LCCH	Las Cruces	0.86	222	⇓iP	P	14 49 14.1	+0.4
LCCH				i S	S	14 49 26.8	+0.2
SJCH	San Jose de Ma	0.92	151	i P	P	14 49 14.6	+0.2
SJCH				i S	S	14 49 28.5	+0.7
CHNG	Los Chungos	1.08	331	⇑iP	P	14 49 17.1	+0.6
CHNG				i S	S	14 49 32.1	+0.6
CHNG				AMP		14 49 33.0	
	comp=E,2µm,0.4s						
CHCH	Chadas Angostu	1.11	170	⇑iP	P	14 49 16.9	0.0
CHCH				i S	S	14 49 32.6	+0.5
LMEL	Las Melosas	1.16	151	⇑iP	P	14 49 18.1	+0.6
LMEL				i S	S	14 49 34.3	+1.1
LMEL				AMP		14 49 36.0	
	comp=N,7µm,0.2s						
LNV	Longovilo	1.20	202	⇓iP	P	14 49 17.6	-0.5
LNV				i S	S	14 49 34.3	+0.1
ILCH	Illapel	1.22	348	⇓iP	P	14 49 18.8	+0.5
ILCH				i S	S	14 49 35.1	+0.5
ILCH				AMP		14 49 35.7	
	comp=E,3µm,0.2s						
CACH	El Canelo	1.30	170	⇑iP	P	14 49 19.7	+0.2
CACH				i S	S	14 49 38.1	+1.6
CICH	Cipreses	1.53	166	⇑iP	P	14 49 22.9	+0.4
CICH				i S	S	14 49 42.6	+0.9
CMCH	Combarbala	1.66	356	i P	P	14 49 24.1	-0.1
CMCH				i S	S	14 49 45.1	+0.4
CMCH				AMP		14 49 46.7	
	comp=E,3µm,0.6s						
SFDO	San Fernando	1.78	184	⇑iP	P	14 49 25.8	0.0
SFDO				i S	S	14 49 48.0	+0.6
TLL	Tololo Astrono	2.66	1	eP	P	14 49 38.3	+0.2
TLL				i S	S	14 50 09.7	+0.5
TLL				AMP		14 50 18.0	
	comp=E,522nm,0.3s						
PLCA	Paso Flores	7.89	178	ePn	P	14 50 48.3	-2.3
	comp=E,3.8nm,1.2s						
PLCA				eSn	S	14 52 15.6	-3.5
TRQA	Tornquist	8.94	128	ePn	P	14 51 03.0	-1.9

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*GUC **26** 15:04:58.5±0.7,32.75S×71.87W,h29^{km}±3^{km},MD4.1,*
ML4.3
*NEIC **26** 15:04:58.5,32.75S×71.87W,h29^{km},mb3.9/1,*
ML4.3(GUC),After GUC.
NEIC Felt at Valparaiso and Vina del Mar.
*IDC **26** 15:05:00.6±3.1,32.71S×71.76W,h43^{km}±27^{km},mb3.8/6,*
mb1 3.9/10,mb1mx3.8/18,mbtmp3.9/10,ML4.2/2,Error
ellipse: s-maj=34.1km s-min=18.9km az=93.0
ISC 26 15:04:57.9±0.8**,32.75S**±0.03×**71.99W**±0.06**,h38**^{km}±8^{km}**,**
n40,σ0^{s}91/55**,mb3.9**/7**,8C-5D,Near coast of central**
Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IHA	Instituto Hidr	0.40	134	⇓iP	P	15 05 06.0	-1.2
IHA				i S	S	15 05 12.0	-1.7
LCCH	Las Cruces	0.81	154	⇑iP	P	15 05 12.8	0.0
LCCH				⇓iS	S	15 05 23.5	-0.2
ROCH	El Roble	0.85	106	⇑iP	P	15 05 12.7	-0.7
ROCH				i S	S	15 05 23.9	-0.9
PEL	Peldehue	1.16	110	⇑iP	P	15 05 17.9	0.0
PEL				i S	S	15 05 32.1	-0.7
PEL				AMP		15 05 35.8	
	comp=E,22µm,0.3s						

JACH	Jahuel	1.18	87	⇑iP	P	15 05 17.5	-0.5
JACH				iS	S	15 05 32.5	-0.6
RCDM	Rinconada Maip	1.23	127	⇓iP	P	15 05 18.8	-0.1
RCDM				iS	S	15 05 33.6	-1.1
TACH	Talagante	1.26	136	⇑iP	P	15 05 19.5	+0.2
TACH				iS	S	15 05 34.9	-0.4
LNV	Longovilo	1.30	158	⇑iP	P	15 05 19.9	+0.1
LNV				iS	S	15 05 36.7	+0.5
ILCH	Illapel	1.31	32	⇑iP	P	15 05 20.8	+0.8
ILCH				iS	S	15 05 37.3	+0.8
ILCH				AMP		15 05 44.0	
	comp=E,5µm,0.4s						
SAN	Santiago	1.31	123	iP	P	15 05 20.0	-0.1
SAN				iS	S	15 05 36.0	-0.7
SAN				AMP		15 05 43.0	
	comp=N,9µm,0.3s						
ANTU	Antumapu	1.40	126	iP	P	15 05 21.5	+0.2
ANTU				iS	S	15 05 39.1	+0.3
ANTU				AMP		15 05 47.5	
	comp=N,8µm,0.6s						
PCH	Pirque	1.51	126	eP	P	15 05 23.2	+0.3
PCH				iS	S	15 05 41.9	+0.3
FCH	Farellones	1.54	113	⇓iP	P	15 05 23.7	+0.4
FCH				iS	S	15 05 43.6	+1.4
FCH				AMP		15 05 44.3	
	comp=N,7µm,0.3s						
CHCH	Chadas Angostu	1.62	137	iS	S	15 05 45.2	+0.7
SJCH	San Jose de Ma	1.63	124	iP	P	15 05 25.0	+0.4
SJCH				iS	S	15 05 45.3	+0.7
SJCH				AMP		15 05 49.5	
	comp=N,4µm,0.4s						
CMCH	Combarbala	1.78	28	AMP		15 05 54.7	
	comp=E,15µm,0.6s						
LMEL	Las Melosas	1.85	127	AMP		15 05 57.6	
	comp=N,6µm,0.2s						
CICH	Cipreses	2.04	141	⇓iP	P	15 05 31.6	+1.2
CICH				iS	S	15 05 56.9	+2.0
MDZ	Mendoza	2.64	94	eP	P	15 05 42.3	+3.2
MDZ				iS	S	15 06 16.1	+5.9
TLL	Tololo Astrono	2.76	22	AMP		15 06 27.6	
	comp=E,2µm,0.4s						
ZON	Zonda	3.05	68	⇑iP	P	15 05 51.4	+6.5
ZON				eS	S	15 06 39.9	+19
CFAA	Coronel Fontan	3.38	71	P	P	15 05 49.9	+0.4
	comp=E,3.7nm,0.3s,baz=242,slow=12,SNR=70						
CFAA				S	S	15 06 34.2	+5.4
	comp=E,5.1nm,0.3s,baz=324,slow=24,SNR=8.5						
CFAA	Coronel Fontan	3.38	71	P	P	15 05 49.9	+0.4
CFAA				S	S	15 06 34.2	+5.3
PLCA	Paso Flores	8.05	172	P	P	15 06 53.5	-1.7
	comp=E,1.7nm,0.3s,baz=333,slow=11,SNR=34						
PLCA				S	S	15 08 33.5	+7.5
	baz=342,slow=18,SNR=1.2						
PLCA	Paso Flores	8.05	172	ePn	P	15 06 54.2	-0.9
	comp=E,5.0nm,0.4s						
TRQA	Tornquist	9.73	126	ePn	P	15 07 18.8	+0.4
	comp=E,22nm,1.3s						
CPUP	Villa Florida	14.26	67	ePn	P	15 08 20.2	+0.9
LPAZ	La Paz	16.75	13	P	P	15 08 51.6	+0.3
	comp=E,0.1nm,0.3s,baz=182,slow=6.3,SNR=4.6						
LPAZ	La Paz	16.75	13	eP	P	15 08 51.9	+0.5
	comp=E,2.4nm,0.9s						
SIV	San Ignacio	19.39	33	P	P	15 09 20.9	-2.6
	comp=E,0.1nm,0.3s,baz=226,slow=15,SNR=8.0						
SAML	Samuel	25.04	21	eP	P	15 10 20.0	-0.2
	comp=E,3.2nm,1.0s,mb3.8						
BDFB	Brasilia	27.61	58	P	P	15 10 41.0	-2.9
	comp=E,1.9nm,0.6s,mb3.9,baz=267,slow=6.0,SNR=3.8						
SDV	Santo Domingo	41.42	2	P	P	15 12 42.5	0.0
	comp=E,2.3nm,0.8s,mb3.9,baz=158,slow=19,SNR=2.4						
SDV	Santo Domingo	41.42	2	P	P	15 12 42.5	0.0
SNAA	Sanae	52.73	158	P	P	15 14 10.7	+0.1
	comp=E,0.8nm,0.8s,mb3.7,baz=272,slow=7.4,SNR=13						
TXAR	Lajitas Array	68.67	331	P	P	15 16 00.5	+1.0
	comp=E,0.2nm,0.6s,mb3.3,baz=158,slow=4.9,SNR=2.6						
DBIC	Dimbokro	74.74	72	P	P	15 16 34.5	-1.6
	comp=E,2.7nm,0.8s,mb4.2,baz=198,slow=7.7,SNR=3.6						
BOSA	Boshof	80.61	118	P	P	15 17 08.6	+0.2
	comp=E,5.0nm,1.0s,mb4.4,baz=159,slow=2.1,SNR=6.3						
WRA	Warramunga Arr	121.88	209	PKP	PKPdf	15 23 50.0	+1.4
	comp=E,0.2nm,0.8s,baz=158,slow=1.8,SNR=6.2						
MKAR	Makanchi Array	155.89	47	PKPab	PKPab	15 25 16.7	-0.1
	comp=E,0.9nm,0.6s,baz=288,slow=3.4,SNR=12						

CASC 26 15:18:50.4±1.1,**8.94N**×**82.92W**,**h14**^{km}±7^{km},**MD3.2**,
MW3.5,**1C-1D**,**Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTCR	Cotoan	0.17	104	eP	Pg	15 18 55.7	+1.1
BRU2	Volcan	0.27	122	⇑iP	Pg	15 18 56.9	+0.5
BRU2				eS	Sg	15 19 02.0	+1.6
ACR	Cerro Adams	0.37	220	eP	Pg	15 18 57.3	-1.0
ACR				eS	Sg	15 19 04.5	+1.1
BUS	Buena Vista	1.03	307	eP	Pb	15 19 09.4	0.0
BUS				eS	Sb	15 19 24.1	+1.6
URSC	Urasca	1.23	317	⇓iP	Pb	15 19 12.9	0.0
URSC				eS	Sb	15 19 29.7	+1.3
LCR2	La Lucha 2	1.33	307	eP	Pb	15 19 14.1	-0.6
LCR2				eS	Sb	15 19 32.1	+0.7
PRS1	Puriscal	1.72	307	eP	Pn	15 19 20.0	-0.2
PRS1				eS	Sn	15 19 42.2	+0.2

IDC ***26*** *15:30:02.9±2.0,17.79S×177.63W,h367^{km}±21^{km}, mb3.5/13,mb1 3.7/15,mb1mx3.7/19,mbtmp4.2/15,Error ellipse: s-maj=24.4km s-min=11.3km az=149.0*

NEIC ***26*** *15:30:03.5±1.2,17.36S×177.81W,h360^{km}±11^{km},mb3.8/2, Error ellipse: s-maj=37.5km s-min=9.6km az=155.0*

ISC 26 15:30:01.4±1.0,**17.7S**±0.2×**177.6W**±0.1,**h366**^{km}±12^{km},
n51,σ**0^{s}88**/25,**mb3.8**/14,**3D**,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	6.80	57	P	P	15 31 43.6	+1.0
	13nm,0.3s,baz=134,slow=1.2,SNR=31						
AFI				S	S	15 33 01.4	-0.9
	2.7nm,0.3s,baz=68,slow=22,SNR=2.1						
AFI	Afiamalu	6.80	57	P	P	15 31 43.6	+1.0
AFI				S	S	15 33 01.4	-0.9
DZM	Mont Dzumac	15.58	251	P	P	15 33 24.9	+1.1
	0.7nm,0.3s,baz=82,slow=19,SNR=9.4						
URZ	Urewera	20.96	192	P	P	15 34 16.6	-1.0
	2.7nm,0.3s,baz=299,slow=18,SNR=7.1						
CTA	Charters Tower	34.20	260	P	P	15 36 15.1	-0.3
	3.6nm,0.9s,mb3.6,baz=84,slow=14,SNR=4.7						
PMG	Port Moresby	35.16	279	P	P	15 36 24.4	+0.9
	7.1nm,0.7s,mb4.0,baz=146,slow=10.0,SNR=3.6						
STKA	Stephens Creek	39.35	241	P	P	15 36 59.0	+0.8
	4.0nm,0.6s,mb3.8,baz=86,slow=9.7,SNR=11						
STKA	Stephens Creek	39.35	241	P	P	15 36 59.0	+0.8
WB2	Warramunga Arr	45.37	259	eP	P	15 37 45.9	-0.7
WRA	Warramunga Arr	45.38	259	P	P	15 37 45.9	-0.8
	0.9nm,0.3s,mb3.3,baz=93,slow=6.8,SNR=43						
WRA				PcP	PcP	15 39 19.0	-0.5
	0.2nm,0.4s,baz=95,slow=3.6,SNR=3.0						
KAKA	Kakadu	48.32	269	eP	P	15 38 28.9	+20
	4.8nm,0.4s,mb4.1						
FITZ	Fitzroy Crossi	53.78	260	⇓iP	P	15 38 49.6	-0.2
	3.4nm,0.7s,mb3.8						
FITZ	Fitzroy Crossi	53.78	260	P	P	15 38 49.2	-0.5
	4.4nm,0.7s,mb3.9,baz=111,slow=21,SNR=11						
MJAR	Matsushiro Arr	68.21	323	P	P	15 40 24.1	-1.0
	0.7nm,0.7s,mb3.5,baz=156,slow=6.1,SNR=4.2						
NVAR	Mina Array Bea	78.79	44	P	P	15 41 26.8	+0.9
	1.9nm,0.7s,mb3.9,baz=216,slow=7.6,SNR=15						
NVAR	Mina Array Bea	78.79	44	P	P	15 41 26.8	+0.9
ELK	Elko	82.03	43	eP	P	15 41 41.7	-1.0
	1.4nm,0.8s,mb3.8						
TXAR	Lajitas Array	85.28	57	P	P	15 42 01.2	+1.9
	2.1nm,0.8s,mb4.0,baz=216,slow=5.6,SNR=20						
ILAR	Eielson Array	85.56	13	P	P	15 41 59.3	-0.4
	1.1nm,0.4s,mb4.1,baz=249,slow=4.6,SNR=40						
PDAR	Pinedale Array	86.72	43	P	P	15 42 06.5	+0.7
	0.8nm,0.7s,mb3.7,baz=224,slow=3.8,SNR=6.7						
YKA	Yellowknife Ar	93.87	25	P	P	15 42 37.9	-0.6
	0.4nm,0.5s,mb3.7,baz=238,slow=4.6,SNR=4.1						
YKA	Yellowknife Ar	93.87	25	P	P	15 42 37.9	-0.6
SONM	Songino Array	93.90	319	P	P	15 42 39.2	+0.1
	0.2nm,0.5s,mb3.5,baz=124,slow=4.1,SNR=4.1						
ARCES	ARCESS Array B	126.28	350	PKP	PKPdf	15 48 21.0	+0.5
	1.5nm,0.8s,SNR=9.0						
BRTR	Keskin Array B	145.18	315	PKPbc	PKPbc	15 48 57.8	+1.2
	1.0nm,0.5s,baz=129,slow=4.0,SNR=7.2						
CLZ	Clausthal	145.39	351	ePKP	PKPdf	15 48 58.1	+2.3
CLL	Collm	145.45	348	⇓P	PKPdf	15 48 58.0	+2.1
	logA/T=1.2						
CLL				e*PP		15 50 52.0	
CLL	Collm	145.45	348	⇓iP	PKPdf	15 48 58.0	+2.1
CLL				epP		15 50 52.0	
UPC	Upice	145.53	345	ePKP	PKPdf	15 48 58.7	+2.6
DPC	Dobruska-Polom	145.59	344	ePKP	PKPdf	15 48 58.7	+2.5
PVCC	Panska Ves	145.86	346	ePKP	PKPdf	15 48 59.6	+3.0
PRU	Pruhonice	146.37	346	ePKP	PKPdf	15 49 00.2	+2.7
NKC	Novy Kostel	146.59	348	ePKP	PKPdf	15 49 01.8	+3.9
GRA1	Grafenberg Arr	147.33	349	ePKP	PKPdf	15 49 01.9	+2.8
GRF	Grafenberg Arr	147.33	349	ePKP	PKPdf	15 49 01.9	+2.8
KHC	Kasperske Hory	147.39	346	ePKP	PKPdf	15 49 04.0	+4.8
GERES	GERESS Array B	147.63	346	PKPbc	PKPdf	15 49 04.3	+4.7
	2.2nm,0.7s,baz=22,slow=2.5,SNR=18						
GIVF	Givet	147.65	357	ePKP1	PKPdf	15 49 04.0	+4.4
FLN	La Foliniere	148.97	4	ePKP1	PKPdf	15 49 07.0	+5.3
BFO	Black Forest	149.10	352	ePKP	PKPdf	15 49 04.3	+2.3
CDF	Champ du Feu	149.14	354	ePKP1	PKPdf	15 49 07.9	+5.9
LDF	La Druitiere	149.16	3	ePKP1	PKPdf	15 49 07.4	+5.4
	4.5nm,0.4s						
SGMF	Saint Gilles	149.30	6	ePKP1	PKPdf	15 49 07.7	+5.4
GRR	Gorron	149.32	4	ePKP1	PKPdf	15 49 08.1	+5.8
	13nm,0.5s						
HAU	Haudompre	149.64	355	ePKP1	PKPdf	15 49 08.9	+6.1
	5.7nm,0.4s						
HINF	Hinteralfeld	149.78	354	ePKP1	PKPdf	15 49 08.5	+5.4
LOR	Lormes	150.53	358	ePKP1	PKPdf	15 49 11.2	+7.0
	5.7nm,0.5s						
SSF	Saint Saulge	150.74	358	ePKP1	PKPdf	15 49 11.7	+7.1
AVF	Avril sur Loir	151.02	359	ePKP1	PKPdf	15 49 11.9	+6.9
MFF	Saint Martin d	151.14	4	ePKP1	PKPdf	15 49 12.2	+7.0
TCF	Toulx Ste Croi	151.53	0	ePKP1	PKPdf	15 49 13.2	+7.5

BJI ***26*** *15:56:54.5,37.98N×38.09E,h39^{km},mB5.2,mb5.0,Ms5.2, Msz4.8*

CSEM ***26*** *15:56:55.3,38.25N×38.85E,h5^{km},mb5.2*

CRAAG ***26*** *15:56:55.3,38.25N×38.85E,Mb5.2*

MOS ***26*** *15:56:55.0±1.1,38.13N×38.83E,h10^{km},mb5.4/75, MS4.3/31,Error ellipse: s-maj=5.3km s-min=2.6km az=134.4*

HRVD ***26*** *15:56:55.0±0.3,38.34N×38.73E,h18^{km}±1^{km},MW5.1/77, Centroid moment Tensor Solution. LP body waves: s29,c35;Mantle waves: s77,c137; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.60±.20; $M_{\theta\theta}$-2.33±.16; $M_{\phi\phi}$3.93±.16; $M_{r\theta}$2.81±.53; $M_{\theta\phi}$2.55±.12; $M_{\phi r}$-2.53±.43; Best double couple: $M_0$5.653×10^{16} NP1: ϕ_s237°,δ51°,λ-20°. NP2:ϕ_s339°,δ75°,λ-139°. Principal axes: T 5.224, Plg15°, Azm103°; N .86, Plg47°, Azm357°; P -6.083, Plg39°, Azm206°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***26*** *15:56:55.0,38.26N×38.81E,h8^{km},mb5.3/115,MS4.4/8, ML5.3(ISK),ML5.0(NIC),After ISK.*

NEIC Minor damage at Doganyol. Felt at Puturge.

SKO ***26*** *15:56:55.3,38.25N×38.85E,h5^{km}*

ISK ***26*** *15:56:56.2,38.28N×38.83E,h13^{km},ML5.3*

IDC ***26*** *15:56:56.2±0.5,38.29N×38.77E,mb4.6/22,mb1 4.8/29, mb1mx4.8/32,mbtmp4.7/29,ML4.3/6,MS4.4/16,Ms1 4.4/16, ms1mx4.2/31,Error ellipse: s-maj=12.9km s-min=10.4km az=29.0*

GRAL ***26*** *15:56:56.7±2.5,38.35N×39.01E,h9^{km},MD5.1*

ISC 26 15:56:55.8±0.1,**38.24N**±0.01×**38.85E**±0.01,**h10**^{km},
(h34^{km}±5.2^{km}**:pP-P)**,**n761**,σ**1^{s}15**/810,**mb5.1**/158,
MS4.5/40,**71C-52D**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.28	22	iP	Pg	15 56 58.9	-2.6
ELZG				iS	Sg	15 57 05.8	+0.4
MYA	Malataya	0.35	284	iPG	Pg	15 57 02.3	-0.7
URFA	Urfa	0.80	182	iPG	Pg	15 57 12.3	+0.5
URFA				iSG	Sg	15 57 25.9	+3.3
ATAB	Bozova	0.89	210	iP	Pb	15 57 13.6	+0.7
ATAB				iS	Sb	15 57 26.5	+2.0
DIY	Diyarbakir	1.14	107	iPN	Pn	15 57 18.3	+0.6
GZT	Gaziantep	1.35	230	iP	Pb	15 57 20.8	0.0
GZT				iS	Sb	15 57 43.2	+5.2
GAZ	Gaziantep	1.68	231	iPN	Pn	15 57 26.4	+0.9
MARD	Mardin	1.78	121	iP	Pn	15 57 27.0	0.0
MARD				iS	Sn	15 57 51.9	+2.0
BNGL	BINGOL	1.93	68	iP	Pn	15 57 29.3	+0.2
BNGL				iS	Sb	15 57 57.2	+2.4
BEST	Besiri	1.94	100	iP	Pn	15 57 30.0	+0.8
BEST				iS	Sn	15 57 55.4	+1.7
BTMT	Batman	2.08	91	PN	Pn	15 57 30.9	-0.2
SVST	Sivas	2.13	316	iP	Pn	15 57 33.5	+1.6
SVST				iS	Sb	15 58 04.8	+4.3
GUMT	Gumushane	2.27	12	PN	Pn	15 57 34.7	+0.8
DRWC	Darouich	2.38	228	⇓iP	Pn	15 57 35.6	+0.1
BNN	Bunyan	2.44	285	PN	Pn	15 57 37.0	+0.7
KOZT	Kozan	2.51	253	PN	Pn	15 57 37.6	+0.2
EZM	Erzurum	2.56	49	PN	Pn	15 57 39.2	+1.1
ERZM	Erzurum	2.56	49	iP	Pn	15 57 38.3	+0.2
ERZM				eS	Sn	15 58 07.8	-2.0
JHLN	Al Jahlan	2.58	187	⇓iP	Pn	15 57 39.5	+1.1
COBT	Iskenderun	2.69	231	iP	Pn	15 57 39.1	-0.8
COBT				iS	Sb	15 58 19.4	+2.6
GRSN	GIRESUNGRSN	2.72	351	iP	Pn	15 57 39.9	-0.4
CEYT	Ceyhan	2.76	244	PN	Pn	15 57 41.0	+0.1
MACK	Trabzon	2.79	14	iP	Pn	15 57 43.1	+1.7
MACK				iS	Sb	15 58 21.8	+2.1
BTCH	Batrach	2.92	222	⇑iP	Pn	15 57 43.6	+0.5
HTY	Hatay	3.03	227	PN	Pn	15 57 44.8	0.0
KARA	Karaisali	3.17	253	PN	Pn	15 57 46.6	-0.1
AVNT	Avonos	3.18	281	iP	Pn	15 57 48.0	+1.0
NIG	Nigde	3.35	269	PN	Pn	15 57 49.8	+0.5
WRDH	Warideh	3.36	216	⇑iP	Pn	15 57 49.7	+0.3
SLNF	Slenfeh	3.38	219	⇓iP	Pn	15 57 50.2	+0.5
KFRA	Kufra	3.44	209	⇑iP	Pn	15 57 51.5	+0.8
KVT	Kavak	3.57	323	PN	Pn	15 57 52.8	+0.4
VANT	Van	3.57	85	PN	Pn	15 57 51.8	-0.7
VANB	Van	3.58	83	PN	Pn	15 57 53.3	+0.7
TVAN	Van	3.59	84	iP	Pn	15 57 51.9	-0.8
MERS	Mersin	3.71	250	PN	Pn	15 57 54.8	+0.4
BSTP	Nigde	3.75	267	iP	Pn	15 57 54.1	-0.9
BSTP				iS	Sg	15 58 59.6	-1.2
CDAG	Cicekdag	3.76	293	iP	Pn	15 57 54.5	-0.6
CDAG				iS	Sb	15 58 53.4	+5.6
CORM	Corum	3.81	302	PN	Pn	15 57 55.9	+0.1
BIDA	Albida	3.81	213	⇑iP	Pn	15 57 56.5	+0.6
BIDA				⇑iS	Sn	15 58 45.7	+4.4
HAKT	HAKKARI	3.90	99	iP	Pn	15 57 56.0	-1.1
HAKT				iS	Sn	15 58 49.8	+6.3
MSL	Mosul	3.90	119	ix	x	15 57 56.5	
MSL				ix	x	15 58 07.5	
MSL				ix	x	15 58 20.5	
MSL				ix	x	15 58 58.0	
MSL				ix	x	15 59 15.0	
MSL				ix	x	15 59 29.0	
HKR	Hakkari	3.92	98	PN	Pn	15 57 57.7	+0.3
CTKT	Corum	3.94	308	iP	Pn	15 57 57.9	+0.1
RABH	Abou Rabah	4.03	200	⇑iP	Pn	15 58 00.7	+1.8
KARS	Kars	4.05	53	PN	Pn	15 57 59.6	+0.4
CLDR	Caldiran	4.06	76	PN	Pn	15 57 59.9	+0.5
MEST	Erdemli	4.10	248	iP	Pn	15 57 56.7	-3.3
KAMT	Kaman	4.17	287	ePN	Pn	15 58 01.8	+0.8
HAWK	Haweek	4.21	209	⇓iP	Pn	15 58 02.4	+0.9
ROOS	tl_alroos	4.26	198	⇑iP	Pn	15 58 03.1	+0.9
BR131	Keskin Array S	4.33	292	ePn	Pn	15 58 03.4	+0.2
BR131	Keskin Array S	4.33	292	ePn	Pn	15 58 03.4	+0.2
BRTR	Keskin Array B	4.33	292	Pn	Pn	15 58 02.4	-0.7
	18nm,0.3s,baz=114,slow=13,SNR=389						
BRTR				Pg	Pg	15 58 15.5	-6.7
	59nm,0.3s,baz=121,slow=16,SNR=33						
BRTR				Lg		15 59 10.6	
	9.8nm,0.3s,baz=103,slow=32,SNR=2.8						
BRTR	Keskin Array B	4.33	292	Pn	Pn	15 58 02.4	-0.7
BRTR				Pg	Pg	15 58 15.5	-6.7
BRTR				Lg		15 59 10.6	
BRTR	Keskin Array B	4.33	292	Pg	Pg	15 58 15.5	-6.7
BOYT	Boyabat	4.40	317	iP	Pn	15 58 03.3	-0.9
FKH	Fakeheh	4.46	207	ePn	Pn	15 58 05.9	+0.7
FKH				Sn	Sn	15 58 56.8	-0.9
BYBT	Boyabat	4.50	317	ePN	Pn	15 58 05.3	-0.4
IKL	Isikli	4.58	246	ePN	Pn	15 58 07.1	+0.3
HWQ	Hawqa	4.60	212	ePn	Pn	15 58 07.6	+0.6
HWQ				Sn	Sn	15 58 58.0	-3.2
MARH	Ras Al Marh	4.62	205	⇑iP	Pn	15 58 08.7	+1.3
TOS	Tosya	4.66	308	ePN	Pn	15 58 08.4	+0.5
CANT	Cankiri	4.69	302	ePN	Pn	15 58 08.8	+0.4
ELDT	Eldivan	4.77	300	iP	Pn	15 58 08.3	-1.1
AKH	Akhalkalaki	4.77	47	P	Pn	15 58 17.9	+8.4
AKH				S	rx	15 59 47.3	
GNI	Garni	4.96	66	ePN	Pn	15 58 13.2	+1.1
GNI	Garni	4.96	66	ePn	Pn	15 58 12.3	+0.2
GNI	Garni	4.96	66	⇓eP	Pn	15 58 12.5	+0.4
GNI				pmax	pmax		
	comp=Z,74nm,1.1s						
GNI				MLR	MLR		
	comp=Z,8µm,19.0s						
GNI	Garni	4.96	66	ePn	Pn	15 58 12.3	+0.2
ANTO	Ankara	4.99	291	ePN	Pn	15 58 13.3	+0.7
ANTO	Ankara	4.99	291	ePn	Pn	15 58 12.9	+0.3
ANTO	Ankara	4.99	291	ePn	Pn	15 58 12.9	+0.3
ERMK	Ermenek	4.99	253	iP	Pn	15 58 11.9	-0.7
ERMK				iS	Sb	15 59 27.5	+3.9
LOD	Lodumlu	5.02	291	ePN	Pn	15 58 13.8	+0.8
BHL	Bhannes	5.04	212	ePn	Pn	15 58 13.5	+0.2
BHL				Sn	Sn	15 59 13.1	+0.6
PHNC	Paralimni	5.05	232	P	Pn	15 58 13.2	-0.2
KONT	Konya--Tatoy	5.13	269	ePN	Pn	15 58 14.3	-0.3
QASN	Qassioun	5.14	205	⇓iP	Pn	15 58 15.5	+0.7
BZK	Bozkurt	5.26	316	ePN	Pn	15 58 15.6	-0.7
KDHN	Kadinhani	5.30	275	iP	Pn	15 58 17.6	+0.7
BALT	Daday	5.34	310	iP	Pn	15 58 16.8	-0.7
BRBR	Barbar	5.37	207	⇓iP	Pn	15 58 19.1	+1.2
BRBR				⇓iS	Sn	15 59 24.8	+4.3
SOC	Sochi	5.38	7	ceP	Pn	15 58 14.8	-3.2
SOC				eS	Sn	15 59 30.2	+9.4
SOC				pmax	pmax		
	comp=Z,36nm,1.7s						
SOC				pmax	pmax		
	comp=Z,101nm,0.6s						
SOC				MLR	MLR		
	comp=Z,3µm,10.0s						
SOC	Sochi	5.38	7	eP	Pn	15 58 14.8	-3.2
	comp=Z,3µm,10.0s						
ZALF	Zalf	5.45	194	⇓iP	Pn	15 58 18.8	-0.3
MAMC	Mammari	5.47	238	P	Pn	15 58 17.0	-2.3
KIZT	Kizilcal	5.50	279	ePN	Pn	15 58 20.5	+0.7
CSS	Prodhromos	5.52	235	P	Pn	15 58 17.0	-3.0
	comp=Z,6.2nm,0.4s						
CSS				S	Sn	15 59 23.5	-0.8
MATL	Matirih	5.54	212	ePn	Pn	15 58 20.7	+0.3
ONI	Oni	5.57	38	P	Pn	15 58 23.1	+2.3
ONI				S	Sn	15 59 24.7	-1.1
SAFT	Safranbolu	5.62	304	ePN	Pn	15 58 20.7	-0.7
KSDI	Kefar Szold	5.67	208	P	Pn	15 58 22.8	+0.6
TBLG	Delisi	5.71	51	P	Pn	15 58 32.5	+10
TI2	Plekhanov	5.71	51	iP	Pn	15 58 22.0	-0.8
TI2				MLR	MLR		
	comp=N,20µm,10.0s						
TI2				MLR	MLR		
	comp=E,20µm,10.0s						
TI2				MLR	MLR		
	comp=Z,30µm,10.0s						
MTA	Mtatsminda	5.72	51	P	Pn	15 58 21.5	-1.4
SGKT	Sivrigoynuk	5.76	296	iP	Pn	15 58 22.8	-0.7
SALA	Sala	5.78	198	⇓iP	Pn	15 58 23.8	0.0
ALFC	Alevga	5.89	240	P	Pn	15 58 21.9	-3.4
	comp=Z,10nm,1.0s						
SZAC	Souni-Zanaja	5.94	236	P	Pn	15 58 26.4	+0.5
DGRG	David-gareji	5.95	55	P	Pn	15 58 25.6	-0.5
HNTI	Hanita	5.96	211	P	Pn	15 58 25.9	-0.3
HNTI				S	Sg	16 00 05.0	-9.1
TCHB	Talchebab	6.04	204	⇑iP	Pn	15 58 28.0	+0.6
PPCY	Paphos	6.22	239	P	Pn	15 58 28.3	-1.6
HAF	Haifa	6.28	211	P	Pn	15 58 30.4	-0.4
MDU	Mudurnu	6.32	293	ePN	Pn	15 58 31.1	-0.3
ESKT	Eskisehir	6.37	284	ePN	Pn	15 58 32.4	+0.3
ESKT	Eskisehir	6.37	284	iP	Pn	15 58 31.8	-0.3
KIV	Kislovodsk	6.40	26	ePn	Pn	15 58 32.7	+0.2
	comp=Z,110nm,0.9s						
KIV	Kislovodsk	6.40	26	ceP	Pn	15 58 32.9	+0.4
KIV				eSS	SS	15 59 57.7	-0.7
KIV				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KIV				MLR	MLR		
	comp=Z,5µm,18.0s						
KIV	Kislovodsk	6.40	26	eP	Pn	15 58 32.9	+0.4
	comp=Z,5µm,18.0s						
MMLI	Mount Malkishu	6.43	207	P	Pn	15 58 33.6	+0.6
MMLI				S	Sg	16 00 24.0	-6.0
OFRI	‘Ofer	6.43	211	P	Pn	15 58 32.8	-0.2
BCK	Bucak	6.59	266	ePN	Pn	15 58 35.8	+0.7
ISP	Isparta	6.60	269	ePN	Pn	15 58 35.7	+0.4
ISP	Isparta	6.60	269	ePn	Pn	15 58 34.0	-1.3
	comp=Z,165nm,1.1s						
ISP	Isparta	6.60	269	eP	Pn	15 58 34.0	-1.3
ISP				pmax	pmax		
	comp=Z,165nm,1.1s						
ISP	Isparta	6.60	269	eP	Pn	15 58 34.0	-1.3
	comp=Z,165nm,1.1s						
ISP	Isparta	6.60	269	ePn	Pn	15 58 35.7	+0.4
ANN	Anapa	6.64	351	eP	Pn	15 58 40.6	+4.7
ANN				iS	Sn	16 00 01.7	+9.3
ANN				pmax	pmax		
	comp=Z,65nm,1.3s						
ANN				MLR	MLR		
	comp=Z,543nm,13.0s						
HENT	Hendek	6.67	295	iP	Pn	15 58 34.8	-1.4
BHD	Baghdad	6.69	136	ex	x	15 58 45.0	
BHD				ex	x	15 59 01.0	
BHD				ex	x	16 00 10.0	
BHD				ix	x	16 00 47.0	
TKTP	Tekketepe	6.73	271	iP	Pn	15 58 37.2	+0.1
BORA	Eskisehir	6.74	287	iP	Pn	15 58 37.6	+0.4
ALT	Altintas	6.89	279	ePN	Pn	15 58 39.5	+0.1
QURS	Qurayyt al Mil	6.95	191	P	Pn	15 58 39.6	-0.7
MKRJ	Makawir	7.18	203	P	Pn	15 58 42.9	-0.5
ELL	Elmali	7.27	261	ePN	Pn	15 58 44.8	+0.1
GDZ	Gediz	7.38	279	iP	Pn	15 58 46.5	+0.2
MZDA	Masada	7.49	204	P	Pn	15 58 47.6	-0.2
GOF	Gofitskoye	7.49	23	⇑iP	Pn	15 58 59.0	+11
GOF				pmax	pmax		
	comp=Z,40nm,1.3s						
HRT	Hereke	7.55	293	ePN	Pn	15 58 47.8	-0.9
SIM	Simferopol’	7.58	334	⇑eP	Pn	15 58 51.9	+2.8
SIM				pmax	pmax		
	comp=Z,53nm,1.3s						
SIM				MLR	MLR		
	comp=Z,9µm,20.0s						
SIM	Simferopol’	7.58	334	eP	Pn	15 58 51.9	+2.8
	comp=Z,9µm,20.0s						
YLV	Yalova	7.70	291	ePN	Pn	15 58 50.7	0.0
ULDT	Uludag	7.78	287	iP	Pn	15 58 51.7	-0.2
FETY	Fethiye	7.94	261	ePN	Pn	15 58 53.0	-1.0
RTMM	Retamin	7.95	207	P	Pn	15 58 54.8	+0.6
MASH	Mash‘abbe Sade	7.97	206	P	Pn	15 58 54.6	+0.1
ISK	Istanbul-Kandi	8.06	294	ePN	P	15 58 54.8	-1.0
DST	Dursunbey	8.09	283	ePN	P	15 58 55.6	-0.5
MAK	Makhachkala	8.09	52	iP	P	15 59 01.3	+5.1
MAK				iS	Sn	16 00 35.5	+6.8
KZIT	Kziot	8.19	208	P	P	15 58 57.8	+0.3
KZIT				S	rx	16 01 20.4	
ZFRI	Zfri	8.25	203	P	P	15 58 57.9	-0.5
YER	Yerkesik	8.46	266	ePN	P	15 59 00.7	-0.5
PRNI	Paran	8.49	203	P	P	15 59 01.6	-0.1
PRNI				S	rx	16 01 27.6	
CTT	Catalca	8.54	293	ePN	P	15 59 01.0	-1.5
AKS	Akhisar	8.67	278	ePN	P	15 59 02.8	-1.5
BNT	Bandirma	8.74	287	ePN	P	15 59 04.6	-0.6
MBH	Mount Berech	9.04	202	P	P	15 59 08.8	-0.5
AQBJ	Aqaba	9.06	202	P	P	15 59 09.7	+0.1
EIL	Elat	9.14	202	P	P	15 59 10.1	-0.7
ALWS	Ilw as Safayha	9.45	201	P	P	15 59 14.8	-0.2
JMOS	Jabal al Moall	9.57	200	P	P	15 59 16.2	-0.5
HAQS	Haql	9.73	201	P	P	15 59 18.2	-0.7
PSN	Preselentsi	9.73	307	eP	P	15 59 20.0	+1.2
EDRB	Edirne	9.96	295	ePN	P	15 59 20.2	-1.8
PRD	Provadia	10.00	303	eP	P	15 59 24.0	+1.4
TIRR	Tirgusor	10.01	312	⇓P	P	15 59 21.7	-0.9
TIRR	Tirgusor	10.01	312	⇓P	P	15 59 21.7	-1.0
TBKS	Tabuk	10.17	192	P	P	15 59 23.7	-1.3
BDAS	Al Bad‘	10.27	199	P	P	15 59 25.3	-1.1
HARR	Harsova	10.42	312	⇑P	P	15 59 27.1	-1.2
HARR	Harsova	10.42	312	⇑P	P	15 59 27.1	-1.2
AYUS	‘Aynunah	10.46	198	P	P	15 59 28.2	-0.8

CFR	Carcaliu	10.59	314	⇑P	P	15 59 28.6	-2.0
CFR	Carcaliu	10.59	314	⇑P	P	15 59 28.6	-2.0
APE	Apeiranthos	10.63	268	eP	P	15 59 33.5	+2.3
APE	Apeiranthos	10.63	268	c iP	P	15 59 33.3	+2.1
APE	Apeiranthos	10.63	268	i P	P	15 59 33.3	+2.1
KDZ	Kurdzhali	10.86	292	eP	P	15 59 35.0	+0.6
DIM	Dimitrovgrad	10.88	295	eP	P	15 59 37.0	+2.3
SZH	Strazhica	11.01	301	eP	P	15 59 38.0	+1.6
HILS	Ha’il	11.11	166	P	P	15 59 35.0	-2.7
RZN	Rozhen	11.38	292	P	P	15 59 40.5	-1.0
KIS	Kishinev	11.45	323	eP	P	15 59 42.0	-0.3
KIS				eS	S	16 01 48.0	-3.3
KIS				MLR	MLR		
	comp=Z,2µm,11.0s						
KIS				MLR	MLR		
	comp=N,2µm,12.0s						
KIS				MLR	MLR		
	comp=Z,2µm,12.0s						
IDI	Anoyia	11.58	260	Pn	P	15 59 41.4	-2.8
	baz=180						
IDI				LR	LR	16 04 59.9	
	comp=Z,3µm,18.8s,baz=265,slow=42						
OUR	Ouranopolis	11.71	285	eP	P	15 59 46.2	+0.2
PAIG	Paliouri	11.91	283	eP	P	15 59 50.2	+1.5
PGB	Panagyurishte	11.99	296	eP	P	15 59 54.0	+4.2
MLR	Muntele Rosu	12.04	311	Pn	P	15 59 50.0	-0.3
	comp=Z,0.5nm,0.3s,baz=77,slow=5.1,SNR=18						
MLR				LR	LR	16 05 04.4	
	comp=Z,2µm,21.3s,baz=124,slow=41						
MLR	Muntele Rosu	12.04	311	⇑P	P	15 59 50.3	0.0
MLR	Muntele Rosu	12.04	311	P	P	15 59 50.0	-0.3
MLR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MLR				MLR	MLR		
	comp=Z,2µm,21.3s						
MLR	Muntele Rosu	12.04	311	⇑P	P	15 59 50.3	0.0
MMB	Musomiste	12.09	291	P	P	15 59 51.0	0.0
PLG	Polygyros	12.13	285	eP	P	15 59 52.0	+0.4
NAIG	Nisos Aigina	12.13	272	eP	P	15 59 53.5	+1.8
NEO	Neokhori	12.25	280	eP	P	15 59 55.0	+1.8
XOR	Xorichti	12.27	280	eP	P	15 59 54.8	+1.2
GVD	Gavdhos	12.35	259	eP	P	15 59 58.8	+4.1
GVD	Gavdhos	12.35	259	ePn	P	15 59 53.5	-1.1
	comp=Z,169nm,0.9s						
KBRS	Khaybar	12.42	178	P	P	15 59 55.8	+0.2
VOIR		12.55	309	⇑P	P	15 59 58.3	+1.1
VOIR		12.55	309	⇑P	P	15 59 58.3	+1.2
KKB	Krupnik	12.61	292	eP	P	16 00 02.0	+3.9
KNT	Kendrikon	12.63	288	eP	P	16 00 00.5	+2.2
VTS	Vitosha	12.69	295	P	P	16 00 01.5	+2.4
VLI	Veliai	12.74	268	eP	P	16 00 04.5	+4.7
KYTH	Kithira	12.76	266	eP	P	16 00 05.0	+5.0
VAY	Valandovo	12.90	289	eP	P	16 00 05.1	+3.2
VAY	Valandovo	12.90	289	eP	P	16 00 05.1	+3.2
AGG	Agios Georgios	12.95	279	eP	P	16 00 07.7	+5.2
VRSR	Storozhevoye	12.97	1	eP	P	16 00 04.3	+1.4
VRSR				eS	S	16 02 27.0	-1.3
VRSR				pmax	pmax		
	comp=Z,2.0nm,1.3s						
VRSR				pmax	pmax		
	comp=N,6.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,1.0nm,0.8s						
VRSR				smax			
	comp=N,7.0nm,1.7s						
VRSR				smax			
	comp=Z,3.0nm,2.1s						
VRSR				smax			
	comp=E,3.0nm,1.4s						
VRSR				MLR	MLR		
	comp=Z,90nm,20.0s						
VRSR				MLR	MLR		
	comp=N,20nm,14.0s						
VRSR				MLR	MLR		
	comp=E,90nm,18.0s						
VRSR	Storozhevoye	12.97	1	eP	P	16 00 04.3	+1.4
	comp=E,7.0nm,1.7s						
GRG	Griva	12.98	287	eP	P	16 00 09.0	+6.1
VRHR	Novokhopersk	13.00	8	eP	P	16 00 10.6	+7.4
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=N,20nm,0.5s						
VRHR				pmax	pmax		
	comp=E,30nm,0.7s						
UMJS	Umm Lajj	13.03	186	P	P	16 00 03.7	-0.1
EVR	Evrytania	13.36	278	eP	P	16 00 17.0	+9.0
ITM	Ithomi	13.45	271	eP	P	16 00 13.0	+3.8
BURAR	Bucovina Array	13.68	318	⇓P	P	16 00 11.0	-1.1
BURAR	Bucovina Array	13.68	318	⇓P	P	16 00 11.0	-1.1
FNA	Florina	13.73	286	eP	P	16 00 15.4	+2.6
SKO	Skopje	13.84	291	eP	P	16 00 20.1	+5.8
SKO	Skopje	13.84	291	eP	P	16 00 20.1	+5.8
YNBS	Yanbu‘ al Bahr	13.88	183	P	P	16 00 14.0	-0.9
JAN	Janina	14.09	281	eP	P	16 00 25.5	+8.0
OHR	Ohrid	14.20	287	eP	P	16 00 27.0	+8.0
AKASG	Malin Array Be	14.21	334	Pn	P	16 00 16.5	-2.6
	comp=E,1.6nm,0.3s,baz=153,slow=13,SNR=30						
VLS	Valsamata	14.37	275	eP	P	16 00 24.0	+2.8
IGT	Igoumenitsa	14.49	281	eP	P	16 00 30.1	+7.3
SVIS	Svilajnac	14.56	300	⇑iPn	P	16 00 27.2	+3.4
DRGR		14.63	311	⇓P	P	16 00 31.0	+6.4
DRGR		14.63	311	P	P	16 00 23.1	-1.5
DRGR		14.63	311	P	P	16 00 23.1	-1.5
AFFS	‘Afif	14.70	165	P	P	16 00 25.6	-0.1
BZS	Buzias	14.78	305	⇓P	P	16 00 28.1	+1.5
BZS	Buzias	14.78	305	⇓P	P	16 00 28.1	+1.6
KEK	Kerkira	14.90	282	eP	P	16 00 30.0	+1.8
QSH	Qafa e Shtames	14.91	289	ep	P	16 00 32.0	+3.7
PVY	Plav	15.02	293	⇓iP	P	16 00 34.1	+4.4
IVA	Berane	15.13	294	⇓iP	P	16 00 35.4	+4.3
NVSS	Nova Varos 2	15.40	296	⇑iPn	P	16 00 38.2	+3.4
ULC	Ulcinj	15.45	290	⇓iP	P	16 00 39.5	+4.2
TTG	Podgorica	15.51	292	⇓iP	P	16 00 39.0	+2.9
PLE	Pljevlja	15.58	295	⇓iP	P	16 00 42.7	+5.7
LVV	L’vov	15.70	322	eP	P	16 00 38.2	-0.3
LVV				eS	S	16 03 32.0	-0.9
BUM	Brajici-Budva	15.76	291	⇓iP	P	16 00 41.2	+1.9
NKY	Niksic	15.77	293	⇓iP	P	16 00 41.6	+2.2
UZH	Uzhgorod	15.86	316	eP	P	16 00 47.0	+6.4
UZH				eS	S	16 03 44.0	+7.4
UPM	Unac-Piva	15.90	294	⇓iP	P	16 00 45.6	+4.4
KOLS	Kolonicke sedl	16.04	317	eP	P	16 00 42.8	-0.1
HCY	Herceg Novi	16.07	292	⇓iP	P	16 00 45.1	+1.8
LCI	Lecce	16.20	284	P	P	16 00 47.4	+2.5
	comp=E,769nm,1.3s						
LCI	Lecce	16.20	284	P	P	16 00 47.4	+2.5
LCI				pmax	pmax		
	comp=Z,769nm,1.3s						
KWP	Kalwaria	16.24	320	eP	P	16 00 46.9	+1.5
KWP				e		16 00 52.9	
KWP	Kalwaria	16.24	320	eP	P	16 00 46.9	+1.5
KWP				e		16 00 52.9	
CRVS	Cervenica-Dubn	16.46	316	eP	P	16 00 50.6	+2.3
CRVS				eS	S	16 04 05.7	+15
KECS	Kecovo	16.79	313	eP	P	16 00 52.9	+0.5
PSZ	Piszkesteto	16.85	311	⇓eP	P	16 00 55.5	+2.2
STHS	Stebnicka Huta	16.87	317	e	P	16 00 57.3	+3.8
BRT	Bari-Castellan	16.90	286	P	P	16 00 56.2	+2.3
BRT				pmax	pmax		
	comp=Z,378nm,1.5s						
BRT	Bari-Castellan	16.90	286	P	P	16 00 56.2	+2.3
	comp=Z,378nm,1.5s						
PKSM	Moragy	16.93	305	⇓iP	P	16 00 57.9	+3.7
PKSM	Moragy	16.93	305	P	P	16 00 57.3	+3.1
OBN	Obninsk	16.95	355	eP	P	16 00 55.6	+1.2
	comp=Z,58nm,1.1s						
OBN	Obninsk	16.95	355	⇓eP	P	16 00 55.6	+1.2
OBN				eS	S	16 04 05.5	+3.7
OBN				pmax	pmax		
	comp=Z,45nm,1.6s						
OBN				MLR	MLR		
	comp=Z,1µm,16.0s						
OBN	Obninsk	16.95	355	eP	P	16 00 55.6	+1.2
	comp=Z,58nm,1.1s						
PKS8	Sarbogard	17.15	307	⇑eP	P	16 00 59.7	+2.7
BUD	Budapest	17.18	309	eP	P	16 00 59.1	+1.7
NIE	Niedzica	17.38	316	eP	P	16 00 59.4	-0.4
MOS	Moscow	17.52	358	eP	P	16 01 03.4	+1.8
MOS				eS	S	16 04 12.7	-2.2
MOS				pmax	pmax		
	comp=Z,36nm,1.0s						
MOS				MLR	MLR		
	comp=Z,2µm,16.9s						
MOS				MLR	MLR		
	comp=N,1µm,15.8s						
MOS	Moscow	17.52	358	eP	P	16 01 03.4	+1.8
	comp=N,2µm,16.9s						
GRI	Girifalco	17.56	279	P	P	16 01 06.7	+4.5
TDS	Terranova Siba	17.57	282	P	P	16 01 05.3	+3.0
SRO	Srobarova	17.76	309	esP		16 01 08.8	
CEL	Celeste	18.03	277	P	P	16 01 09.7	+1.6
SLCN	Sala Consilina	18.09	284	P	P	16 01 11.6	+2.8
RGNG	Rignano Grg	18.15	288	P	P	16 01 11.3	+1.7
AKTK	Aktyubinsk	18.28	42	P	P	16 01 09.2	-1.8
AKTK				LR	LR	16 10 09.7	
AKTK	Aktyubinsk	18.28	42	P	P	16 01 09.3	-1.8
	comp=N,3µm,18.2s						
AKTO	Aktyubinsk	18.28	42	P	P	16 01 09.2	-1.8
	comp=N,0.6nm,0.3s,baz=227,slow=13,SNR=40						
AKTO				LR	LR	16 10 09.7	
	comp=N,3µm,18.2s,slow=43						
AKTO	Aktyubinsk	18.28	42	P	P	16 01 09.3	-1.8
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,3µm,18.2s						
SGO	Sicignano	18.34	285	P	P	16 01 14.2	+2.3
SGO				pmax	pmax		
	comp=Z,85nm,1.0s						
SGO	Sicignano	18.34	285	P	P	16 01 14.2	+2.3
	comp=Z,85nm,1.0s						
PECR	Pechory	18.42	9	eP	P	16 01 12.6	-0.2
PECR				eS	S	16 04 45.0	+10
PECR				pmax	pmax		
	comp=Z,410nm,2.0s						
PECR				pmax	pmax		
	comp=Z,700nm,4.0s						
PECR				MLR	MLR		
	comp=Z,2µm,14.0s						
PECR				MLR	MLR		
	comp=N,1µm,13.0s						
PECR				MLR	MLR		
	comp=E,700nm,13.0s						
PECR	Pechory	18.42	9	eP	P	16 01 12.6	-0.2
	comp=E,2µm,14.0s						
CSSN	Cassano Irpino	18.55	286	P	P	16 01 16.9	+2.4
KOGS	Kog	18.57	303	eP	P	16 01 15.8	+1.2
NE53	Naroch’	18.57	338	ePcP	PcP	16 05 40.0	-4.5
SMOL	Smolenice	18.59	310	esP		16 01 16.9	
ZST	Bratislava	18.66	309	esP		16 01 16.5	
ZST				eS	S	16 04 52.4	+12
ZST				eL		16 10 15.6	
WAR	Warsaw	18.73	324	eP	P	16 01 21.7	+5.1
WAR	Warsaw	18.73	324	eP	P	16 01 21.7	+5.1
SOP	Sopron	18.79	307	⇑eP	P	16 01 21.9	+4.5
OKC	Ostrava-Krasne	18.80	315	eP	P	16 01 17.1	-0.3
OKC				eS	S	16 04 50.3	+6.5
OKC				AMS	AMS	16 10 10.0	
	comp=E,1µm,12.6s						
RAC	Raciborz	18.90	315	eP	P	16 01 19.6	+1.0
RAC				eS	S	16 04 54.6	+8.6
RAC				LMN		16 09 07.6	
RAC				LME		16 09 24.5	
RAC				MLR	MLR	16 12 04.8	
	comp=E,1µm,17.1s						
BOJS	Bojanci	18.97	300	eP	P	16 01 20.4	+0.9
SGG	Gregorio Mates	19.05	287	P	P	16 01 21.5	+1.0
SUW	Suwalki	19.08	331	eP	P	16 01 19.4	-1.4
SUW				e		16 01 23.1	
MORC	Moravsky Berou	19.11	314	eP	P	16 01 20.7	-0.4
	comp=E,398nm,2.1s						
MORC	Moravsky Berou	19.11	314	eP	P	16 01 20.7	-0.4
MORC				pmax	pmax		
	comp=Z,398nm,2.1s						
MORC	Moravsky Berou	19.11	314	eP	P	16 01 20.7	-0.4
	comp=Z,398nm,2.1s						
MIDA	Miranda	19.15	288	P	P	16 01 23.1	+1.4
RNI2	Rionero Sannit	19.23	288	P	P	16 01 19.7	-2.9
ARSA	Arzberg	19.30	305	⇑iP	P	16 01 27.0	+3.6
	comp=Z,7.3nm,1.1s,SNR=14						
VAE	Valguarnera	19.31	275	P	P	16 01 24.0	+0.5
	comp=Z,1.3nm,0.3s,baz=100,slow=11,SNR=2.6						
VAE				LR	LR	16 09 15.4	
	comp=Z,841nm,18.6s,baz=320,slow=38						
PERS	Pernice	19.37	303	eP	P	16 01 26.1	+1.8
INTR	Introdacqua	19.43	289	P	P	16 01 28.5	+3.6
VRAC	Vranov	19.44	312	P	P	16 01 25.2	+0.2
	comp=Z,0.2nm,0.3s,baz=121,slow=9.5,SNR=16						
VRAC				LR	LR	16 09 50.7	
	comp=Z,687nm,20.0s,baz=115,slow=40						
VRAC	Vranov	19.44	312	P	P	16 01 26.0	+1.0
VRAC	Vranov	19.44	312	⇑P	P	16 01 24.8	-0.2
VRAC	Vranov	19.44	312	eP	P	16 01 24.8	-0.2
VVLD	Villa Vallelon	19.63	289	P	P	16 01 27.8	+0.6
TERO	Teramo	19.69	291	P	P	16 01 28.3	+0.5
OBKA	Obir	19.71	303	⇑iP	P	16 01 30.5	+2.5
	comp=Z,28nm,0.9s,SNR=7.1						
AOI	Ancona	19.78	294	P	P	16 01 28.1	-0.8
PTQR	Pietraquaria	19.80	289	P	P	16 01 29.6	+0.5
AQU	L’Aquila	19.82	290	P	P	16 01 29.4	+0.1
VOY	Vojsko	20.02	301	eP	P	16 01 31.0	-0.5
VOY				e		16 01 34.9	
CING	Cingoli	20.05	293	P	P	16 01 31.6	-0.2
DPC	Dobruska-Polom	20.07	314	eP	P	16 01 30.9	-1.1
DPC				eS	S	16 05 21.4	+9.4
DPC				AMS	AMS	16 11 00.0	
	comp=Z,1µm,8.5s						
TREC	Trest	20.09	311	eP	P	16 01 31.4	-0.7
SNTG	Esanatoglia	20.23	293	P	P	16 01 32.8	-0.9
ARV	Arcevia	20.25	293	P	P	16 01 32.9	-1.0
	comp=Z,447nm,1.4s						
MOA	Molln	20.30	306	i P	P	16 01 34.5	+0.1
	comp=Z,105nm,0.8s,SNR=112						
RDP	Rocca di Papa	20.30	288	P	P	16 01 37.7	+3.2
UPC	Upice	20.32	314	eP	P	16 01 33.5	-1.1
KSP	Ksiaz	20.33	316	eP	P	16 01 34.0	-0.7
KSP				e		16 01 37.1	
KSP	Ksiaz	20.33	316	⇓eP	P	16 01 33.7	-1.0
KSP				epP		16 01 37.1	
KSP				eS	S	16 05 19.5	+2.3
KSP				LR	LR		
	comp=Z,2µm,26.2s,MS4.3						
ROBS	Robic	20.34	301	eP	P	16 01 34.8	0.0
MNS	Montasola	20.35	290	P	P	16 01 35.3	+0.3
PESA	Pesaro	20.38	294	P	P	16 01 36.0	+0.8
FSSB	Fossombrone	20.39	294	P	P	16 01 35.5	+0.1
PTCC	Patocco-Chiusa	20.48	302	P	P	16 01 36.7	+0.4
GMNA	Gemona	20.53	301	P	P	16 01 37.5	+0.7
MURB	Monte Urbino	20.53	292	P	P	16 01 36.9	+0.1
PIEI	Pieia	20.55	293	P	P	16 01 37.4	+0.4
KBA	Koelnbreinsper	20.66	303	⇑iP	P	16 01 38.1	-0.1
	comp=Z,16nm,0.6s,SNR=24						
BADI	Badiali	20.76	293	P	P	16 01 40.0	+0.8
FVI	Forni Avoltri	20.91	302	P	P	16 01 41.1	+0.4
	comp=Z,717nm,1.8s						
FVI	Forni Avoltri	20.91	302	P	P	16 01 41.1	+0.4
FVI				pmax	pmax		
	comp=Z,717nm,1.8s						
PRU	Pruhonice	20.93	312	eP	P	16 01 40.8	-0.1
PRU				eS	S	16 05 37.6	+8.2
PRU				AMS	AMS	16 12 10.0	
	comp=Z,1µm,12.2s						
CRE	Caprese Michel	20.98	293	P	P	16 01 44.5	+3.1
	comp=Z,191nm,1.1s						
CRE	Caprese Michel	20.98	293	P	P	16 01 44.5	+3.1
CRE				pmax	pmax		
	comp=Z,191nm,1.1s						
GEC2	GERESS Array S	21.00	308	eP	P	16 01 41.0	-0.6
	comp=Z,196nm,1.1s						
GEC2	GERESS Array S	21.00	308	eP	P	16 01 41.0	-0.6
GEC2				pmax	pmax		
	comp=Z,196nm,1.1s						
GERES	GERESS Array B	21.00	308	P	P	16 01 41.2	-0.4
	comp=Z,100nm,1.0s,baz=111,slow=9.6,SNR=120						
GERES				LR	LR	16 10 13.1	
	comp=Z,461nm,21.2s,MS3.8,baz=110,slow=38						
PRA	Prague	21.03	312	P	P	16 01 42.0	+0.1
SFI	Santa Sofia	21.08	294	P	P	16 01 43.8	+1.3
	comp=Z,243nm,1.0s,mb5.5						
SFI	Santa Sofia	21.08	294	P	P	16 01 43.8	+1.3
SFI				pmax	pmax		
	comp=Z,243nm,1.0s,mb5.5						
PVCC	Panska Ves	21.15	313	eP	P	16 01 43.0	-0.2
PGD	Poggio Sodo	21.17	294	P	P	16 01 44.8	+1.4
	comp=Z,82nm,2.0s,mb4.7						
PGD	Poggio Sodo	21.17	294	P	P	16 01 44.8	+1.4
PGD				pmax	pmax		
	comp=Z,83nm,2.0s,mb4.7						
KHC	Kasperske Hory	21.17	309	eP	P	16 01 42.5	-0.9
KHC				x	x	16 01 48.5	
KHC				x	x	16 01 56.0	
KHC				eS	S	16 05 43.9	+10
KHC				AMS	AMS	16 11 50.0	
	comp=Z,1µm,15.2s						
KHC	Kasperske Hory	21.17	309	eP	P	16 01 42.5	-0.9
KHC				eS	S	16 05 43.9	+10
KHC				LR	LR		
	comp=Z,1µm,15.2s,MS4.4						
VMG	Vicchio	21.31	294	P	P	16 01 45.9	+1.1
SEST	Monte Rota	21.32	302	P	P	16 01 45.8	+0.9
SEI	Scarperia	21.45	294	P	P	16 01 47.7	+1.5
CTI	Castel Tesino	21.55	300	P	P	16 01 47.2	0.0
WET	Wettzell	21.61	309	eP	P	16 01 47.0	-0.8
	comp=Z,177nm,1.2s,mb5.4						
WET	Wettzell	21.61	309	eP	P	16 01 47.0	-0.8
WET				pmax	pmax		
	comp=Z,177nm,1.2s,mb5.4						
BRES	Bressanone	21.64	302	P	P	16 01 49.3	+1.2
BRG	Berggiesshubel	21.66	314	eP	P	16 01 48.5	+0.2
	comp=Z,309nm,1.6s,mb5.5						
BRG				i		16 05 50.0	
BRG				LR	LR		
	comp=Z,1µm,13.1s,MS4.5						
BRG	Berggiesshubel	21.66	314	eP	P	16 01 48.5	+0.2
BRG				i		16 05 50.0	
BRG				pmax	pmax		
	comp=Z,309nm,1.6s,mb5.5						
BRG				MLR	MLR		
	comp=Z,1µm,13.1s,MS4.5						
VSU	Vasula	21.71	343	eP	P	16 01 48.4	-0.4
ZCCA	Zocca	21.76	295	P	P	16 01 53.5	+4.2
WTTA	Wattenberg	21.84	303	i P	P	16 01 51.2	+1.1
	comp=Z,35nm,0.7s,mb4.9,SNR=33						
WATA	Walderalm	21.89	303	⇑eP	P	16 01 52.1	+1.4
	comp=Z,34nm,0.9s,mb4.8						
APPI	Appiano	21.93	301	P	P	16 01 51.9	+0.9
GSCL	Gusciola	22.03	295	P	P	16 01 53.3	+1.2
MAIM		22.06	294	P	P	16 01 52.5	+0.2
MAIM		22.06	294	P	P	16 01 52.5	+0.2
SQTA	Sankt Quirin	22.11	303	⇑iP	P	16 01 54.2	+1.4
	comp=Z,37nm,1.0s,mb4.8,SNR=33						
SARO	Sassorosso	22.15	295	P	P	16 01 53.6	+0.3
SARO	Sassorosso	22.15	295	P	P	16 01 53.6	+0.4
VLC	Villacollemand	22.16	295	eP	P	16 01 54.3	+1.0
	comp=Z,120nm,1.0s,mb5.3						
MOTA	Moosalm	22.21	303	⇑iP	P	16 01 54.0	+0.2
	comp=Z,72nm,0.9s,mb5.1,SNR=42						
PUL	Pulkovo	22.22	349	⇓eP	P	16 01 56.8	+2.9
PUL				pmax	pmax		
	comp=Z,113nm,0.9s,mb5.3						
PUL				pmax	pmax		
	comp=N,245nm,1.0s						
PUL				pmax	pmax		
	comp=E,161nm,0.9s						
PUL				MLR	MLR		
	comp=N,777nm,14.0s,MS4.6						
PUL				MLR	MLR		
	comp=Z,1µm,14.0s,MS4.4						
PUL				MLR	MLR		
	comp=E,2µm,19.0s,MS4.6						
NKC	Novy Kostel	22.27	311	eP	P	16 01 54.6	+0.2
NKC				AMS	AMS	16 13 30.0	
	comp=E,1µm,13.6s						
VALM		22.28	295	P	P	16 01 55.2	+0.7
VALM		22.28	295	P	P	16 01 55.2	+0.7
FUR	Furstenfeldbru	22.31	305	eP	P	16 01 55.3	+0.5
	comp=E,111nm,1.0s,mb5.2						
FUR	Furstenfeldbru	22.31	305	eP	P	16 01 55.3	+0.5
FUR				pmax	pmax		
	comp=Z,111nm,1.0s,mb5.2						
VINC	Vinca	22.32	294	P	P	16 01 54.8	-0.1
VINC	Vinca	22.32	294	P	P	16 01 54.8	-0.2
VINC	Vinca	22.32	294	P	P	16 01 54.8	-0.2
MABI	Malga Bissina	22.33	300	P	P	16 01 55.7	+0.7
CLL	Collm	22.39	314	⇑P	P	16 01 55.6	+0.1
	comp=Z,logA/T=2.3,mb5.5						
CLL				eS	S	16 06 00.0	+3.6
CLL	Collm	22.39	314	⇑iP	P	16 01 55.6	+0.1
	comp=Z,344nm,1.7s,mb5.5						
CLL				eS	S	16 06 00.0	+3.6
CLL				LR	LR		
	comp=Z,2µm,10.7s,MS4.7						
CLL	Collm	22.39	314	⇑iP	P	16 01 55.6	+0.1
CLL				eS	S	16 06 00.0	+3.6
CLL				pmax	pmax		
	comp=Z,344nm,1.7s,mb5.5						
CLL				MLR	MLR		
	comp=Z,2µm,10.7s,MS4.7						
BACM		22.39	295	P	P	16 01 56.1	+0.4
BACM		22.39	295	P	P	16 01 56.1	+0.4
GRAM		22.42	295	P	P	16 01 56.5	+0.6
GRAM		22.42	295	P	P	16 01 56.5	+0.6
ARU	Arti	22.43	29	eP	P	16 01 54.1	-1.8
	comp=Z,512nm,1.9s,mb5.6						
ARU	Arti	22.43	29	⇑iP	P	16 01 54.5	-1.4
ARU				ePPP	PPP	16 02 23.7	-10
ARU				eS	S	16 05 59.0	+1.8
ARU				eSSS	SSS	16 06 41.8	-11
ARU				pmax	pmax		
	comp=Z,129nm,2.0s,mb5.0						
ARU				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.3						
ARU				MLR	MLR		
	comp=N,400nm,15.0s,MS4.4						
ARU				MLR	MLR		
	comp=E,1µm,15.0s,MS4.4						
RUE	Ruedersdorf	22.50	317	eP	P	16 01 57.0	+0.3
	comp=E,200nm,1.4s,mb5.3						
BRMO	Bormio	22.51	301	P	P	16 01 57.6	+0.9
CODM		22.56	295	P	P	16 01 58.2	+0.9
CODM		22.56	295	P	P	16 01 58.2	+0.9
FUORN	Ofenpass	22.61	301	⇓iP	P	16 01 58.9	+1.2
FUORN	Ofenpass	22.61	301	P	P	16 01 59.9	+2.2
KLMR	Klimovskoe	22.64	1	c iP	P	16 01 58.2	+0.3
KLMR				eS	S	16 06 04.9	+4.0
KLMR				pmax	pmax		
	comp=Z,200nm,1.6s,mb5.3						
KLMR				smax			
	comp=E,760nm,3.5s						
KLMR				MLR	MLR		
	comp=Z,1µm,16.0s,MS4.4						
BERNI	Berninapass	22.73	300	⇓iP	P	16 02 00.1	+1.2
SC2M	Scurtabr	22.79	295	P	P	16 01 59.2	-0.3
GRA1	Grafenberg Arr	22.81	309	eP	P	16 02 00.0	+0.3
	comp=Z,118nm,1.1s,mb5.2						
GRA1				eS	S	16 06 13.8	+10
GRA1				LR	LR		
	comp=Z,800nm,18.0s,MS4.2						
GRF	Grafenberg Arr	22.81	309	eP	P	16 02 00.0	+0.3
GRF				eS	S	16 06 13.8	+10
GRF				pmax	pmax		
	comp=Z,118nm,1.1s,mb5.2						
GRF				MLR	MLR		
	comp=Z,800nm,18.0s,MS4.2						
BOB	Bobbio (Coli)	22.89	296	P	P	16 02 01.7	+1.2
DAVOX	Davos	22.90	301	P	P	16 02 00.3	-0.3
	comp=Z,43nm,1.1s,mb4.8,baz=99,slow=6.7,SNR=17						
DAVOX				LR	LR	16 12 16.2	
	comp=Z,806nm,18.6s,MS4.2,baz=99,slow=40						
DAVOX	Davos	22.90	301	⇓iP	P	16 02 01.1	+0.5
DAVOX	Davos	22.90	301	P	P	16 02 01.5	+0.9
MOX	Moxa	22.92	312	i P	P	16 02 00.2	-0.5
	comp=Z,logA/T=1.9,mb5.1						
MOX				S	S	16 06 17.0	+11
MOX				L		16 13 33.0	
MOX	Moxa	22.92	312	eP	P	16 02 00.2	-0.5
	comp=Z,142nm,1.8s,mb5.1						
MOX				eS	S	16 06 17.0	+11
MOX				LR	LR		
	comp=Z,700nm,19.0s,MS4.1						
MOX	Moxa	22.92	312	eP	P	16 02 00.2	-0.5
MOX				pmax	pmax		
	comp=Z,142nm,1.8s,mb5.1						
MOX				MLR	MLR		
	comp=Z,700nm,19.0s,MS4.1						
UBR	Uberruh	22.94	304	⇑eP	P	16 02 01.3	+0.3
VSL	Villasalto	22.94	282	eP	P	16 02 00.8	-0.3
	comp=Z,194nm,1.2s,mb5.4						
DAVA	Damuels	23.00	302	i P	P	16 02 02.1	+0.6
	comp=Z,36nm,0.7s,mb4.9,SNR=25						
PGF	Pioggiola	23.08	290	⇑iP	P	16 02 01.2	-1.2

	comp=Z,402nm,1.3s,mb5.4						
PGF	Pioggiola	23.08	290⇑	iP	P	16 02 01.2	-1.2
PGF				pmax	pmax		
	comp=Z,201nm,1.3s,mb5.4						
HDH	Heidenheim	23.11	306	eP	P	16 02 02.5	-0.1
VDL	Val di Lei	23.12	300⇓	iP	P	16 02 03.7	+1.0
TUE	Stuetta	23.20	300	P	P	16 02 04.3	+0.8
LIENZ	Alp Oberkamor	23.26	302⇓	iP	P	16 02 04.1	0.0
PLONS	Plons	23.29	302⇓	iP	P	16 02 04.3	0.0
MUGIO	Muggio	23.32	299⇓	iP	P	16 02 04.6	-0.1
MUGIO	Muggio	23.32	299	P	P	16 02 08.8	+4.1
BSD	Bornholm Skovb	23.36	324	i P	P	16 02 08.0	+3.0
	comp=Z,37nm,0.8s,mb4.9						
BSD	Bornholm Skovb	23.36	324	eP	P	16 02 08.0	+3.0
	comp=Z,37nm,0.8s,mb4.9						
BSD	Bornholm Skovb	23.36	324	eP	P	16 02 08.0	+3.0
BSD				pmax	pmax		
	comp=Z,37nm,0.8s,mb4.9						
LLS	Linth-Limmern	23.50	301⇓	iP	P	16 02 06.3	-0.1
VAI	Varese	23.50	299	P	P	16 02 02.0	-4.4
PCP	Pian Castagno	23.51	295	P	P	16 02 05.5	-1.0
PCP	Pian Castagno	23.51	295	P	P	16 02 05.6	-0.9
SVE	Sverdlovsk	23.53	31⇑	iP	P	16 02 06.6	+0.1
SVE				e		16 02 46.0	
SVE				e		16 05 53.0	
SVE				e		16 06 23.0	
SVE				e		16 07 04.0	
SVE				pmax	pmax		
	comp=Z,420nm,2.2s,mb5.5						
SVE				MLR	MLR		
	comp=E,2µm,15.0s						
SVE				MLR	MLR		
	comp=Z,2µm,15.0s,MS4.6						
BUCH	Bad Urach	23.62	305⇑	eP	P	16 02 07.7	+0.1
WILA	Wila	23.68	302⇓	iP	P	16 02 08.0	-0.1
GUT	Gutenstein	23.68	304⇑	eP	P	16 02 08.5	+0.3
SIND	Sindeldorf	23.70	307⇑	eP	P	16 02 08.6	+0.2
FIN	Finale Ligure	23.72	294	P	P	16 02 07.3	-1.3
FIN	Finale Ligure	23.72	294	P	P	16 02 07.3	-1.3
MUO	Muotathal	23.77	301⇓	iP	P	16 02 09.1	+0.1
STU	Stuttgart	23.81	306	eP	P	16 02 09.3	-0.1
	comp=Z,211nm,1.4s,mb5.4						
STU	Stuttgart	23.81	306	eP	P	16 02 09.3	-0.1
STU				pmax	pmax		
	comp=Z,211nm,1.4s,mb5.4						
ZUR	Zurich	23.89	302⇓	iP	P	16 02 10.0	-0.1
SPAK	Spaichingen	23.91	304⇑	eP	P	16 02 11.1	+0.8
IMI	Imperia	23.93	294	P	P	16 02 09.7	-0.9
IMI	Imperia	23.93	294	P	P	16 02 09.7	-1.0
ROB	Roburent	23.97	295	P	P	16 02 09.8	-1.2
ROB	Roburent	23.97	295	P	P	16 02 09.8	-1.2
ORO	Oropa	24.02	298	P	P	16 02 12.8	+1.4
ORX	Oropa	24.02	298	P	P	16 02 10.4	-1.0
ORX	Oropa	24.02	298	P	P	16 02 10.4	-1.1
SLE	Schleitheim	24.02	303⇓	iP	P	16 02 11.3	-0.2
LBG	Lerchenberg	24.04	305⇑	eP	P	16 02 11.5	-0.1
MONE	Monesi	24.04	294	P	P	16 02 10.2	-1.5
MONE	Monesi	24.04	294	P	P	16 02 10.2	-1.5
MCGN	Macugnaga	24.05	299	P	P	16 02 13.8	+2.0
NEGI	Negi	24.07	293	P	P	16 02 09.9	-2.0
NEGI	Negi	24.07	293	P	P	16 02 09.9	-2.0
MMK	Mattmark	24.08	299	P	P	16 02 15.2	+3.1
CLZ	Clausthal	24.10	314	eP	P	16 02 12.9	+0.7
	comp=Z,252nm,1.7s,mb5.4						
CLZ	Clausthal	24.10	314	eP	P	16 02 12.9	+0.7
CLZ				pmax	pmax		
	comp=Z,252nm,1.7s,mb5.4						
TRAV		24.17	297	P	P	16 02 11.5	-1.4
TRAV		24.17	297	P	P	16 02 11.5	-1.4
SAOF	Saorge	24.18	294	eP	P	16 02 14.2	+1.1
SULZ	Sulz-Cheisache	24.23	302⇓	iP	P	16 02 13.1	-0.4
SOKR	Solikamsk	24.23	22c	iP	P	16 02 15.0	+1.6
SOKR				S	S	16 06 37.8	+9.1
SOKR				pmax	pmax		
	comp=Z,60nm,1.3s,mb4.9						
SOKR				MLR	MLR		
	comp=Z,630nm,14.0s,MS4.2						
BFO	Black Forest	24.25	304	eP	P	16 02 13.9	+0.2
	comp=Z,336nm,1.9s,mb5.5						
BFO	Black Forest	24.25	304	eP	P	16 02 13.9	+0.2
BFO				pmax	pmax		
	comp=Z,336nm,1.9s,mb5.5						
SBF	Sospel	24.26	293⇑	iP	P	16 02 13.0	-0.8
	comp=Z,247nm,1.1s,mb5.3						
SBF	Sospel	24.26	293⇑	iP	P	16 02 13.0	-0.8
SBF				pmax	pmax		
	comp=Z,124nm,1.1s,mb5.2						
AUTN	L’Aution	24.27	294	eP	P	16 02 15.3	+1.3
TOD	Tromm	24.28	308	eP	P	16 02 13.9	-0.1
TOD	Tromm	24.28	308	eP	P	16 02 13.5	-0.5
ENR	Entracque	24.29	294	P	P	16 02 12.6	-1.5
ENR	Entracque	24.29	294	P	P	16 02 12.6	-1.5
SWS	Schriesheim	24.31	307⇑	eP	P	16 02 14.2	-0.1
STV2	Anna di Valdie	24.36	294	P	P	16 02 13.1	-1.7
STV2	Anna di Valdie	24.36	294	P	P	16 02 13.1	-1.7
STV	Sta Anna Valdi	24.36	294	P	P	16 02 13.2	-1.7
STV	Sta Anna Valdi	24.36	294	P	P	16 02 13.1	-1.7
LKBD	Leukerbad	24.36	300⇓	iP	P	16 02 14.4	-0.4
FELD	Feldberg	24.37	303⇑	eP	P	16 02 15.1	+0.2
TOUF	Mont Tournerai	24.40	294	eP	P	16 02 16.6	+1.4
KIZ	Kirchzarten	24.44	303⇑	eP	P	16 02 15.6	0.0
BHB	Bricherasio	24.44	296	P	P	16 02 14.3	-1.3
MVIF	Mont Vial	24.47	293	eP	P	16 02 16.9	+1.1
DIX	Grande Dixence	24.47	299⇓	iP	P	16 02 15.8	-0.1
BALST	Balsthal	24.47	302⇓	iP	P	16 02 15.4	-0.5
RSP	Reno Superiore	24.48	297	P	P	16 02 13.9	-2.0
RSP	Reno Superiore	24.48	297	P	P	16 02 13.9	-2.0
PZZ	Prazzo	24.54	295	P	P	16 02 14.4	-2.1
FINES	FINESS Array B	24.55	345	P	P	16 02 16.8	+0.3
	comp=Z,9.1nm,0.5s,mb4.5,baz=144,slow=8.7,SNR=32						
FINES				LR	LR	16 14 09.5	
	comp=Z,780nm,18.8s,MS4.2,baz=334,slow=42						
FINES	FINESS Array B	24.55	345	i P	P	16 02 17.6	+1.1
FINES				pmax	pmax		
	comp=Z,9.0nm,0.5s						
LSD	Ceresole Reale	24.58	297	P	P	16 02 16.7	-0.2
LSD	Ceresole Reale	24.58	297	P	P	16 02 16.7	-0.2
FENE	Fenestrelle	24.60	296	P	P	16 02 15.7	-1.5
FENE	Fenestrelle	24.60	296	P	P	16 02 15.6	-1.5
BBS	Basel-Blauen	24.62	302⇑	eP	P	16 02 17.2	-0.1
CALN	Calern	24.65	293	eP	P	16 02 18.6	+1.0
OG22	Abries	24.67	296	eP	P	16 02 17.7	-0.1
STR	Strasbourg	24.68	305	eP	P	16 02 13.5	-4.3
TNS	Taunus Mts	24.68	309	eP	P	16 02 19.2	+1.4
	comp=Z,296nm,1.5s,mb5.6						
TNS	Taunus Mts	24.68	309	eP	P	16 02 19.2	+1.4
TNS				pmax	pmax		
	comp=Z,296nm,1.5s,mb5.6						
LIBD	Limburg	24.69	304	eP	P	16 02 18.9	+0.9
SURF	Saint Ours	24.74	295	eP	P	16 02 20.0	+1.5
MBDF	Montbardon	24.79	295⇑	iP	P	16 02 19.5	+0.6
	comp=Z,278nm,1.0s,mb5.5						
MBDF	Montbardon	24.79	295⇑	iP	P	16 02 19.5	+0.6
MBDF				pmax	pmax		
	comp=Z,139nm,1.0s,mb5.4						
EMV	Vieux Emosson	24.82	299	P	P	16 02 20.4	+1.2
FRF	La Foret Royal	24.82	293	eP	P	16 02 18.4	-0.9
	comp=Z,188nm,1.2s,mb5.2						
FRF	La Foret Royal	24.82	293	eP	P	16 02 18.4	-0.9
FRF				pmax	pmax		
	comp=Z,94nm,1.2s,mb5.2						
COP	Copenhagen	24.85	323	i P	P	16 02 24.8	+5.4
	comp=Z,41nm,1.0s,mb4.9						
COP				i S	S	16 06 43.6	+4.2
COP				i		16 06 51.6	
	comp=Z,340nm,16.0s						
COP	Copenhagen	24.85	323	eP	P	16 02 24.8	+5.4
COP				i S	S	16 06 43.6	+4.2
COP				i		16 06 51.6	
COP				pmax	pmax		
	comp=Z,41nm,1.0s,mb4.9						
COP				MLR	MLR		
	comp=Z,340nm,16.0s,MS3.9						
LPG	La Plagne	24.86	297⇑	iP	P	16 02 20.0	+0.4
	comp=Z,174nm,1.1s,mb5.2						
LPG	La Plagne	24.86	297⇑	iP	P	16 02 20.0	+0.4
LPG				pmax	pmax		
	comp=Z,87nm,1.1s,mb5.2						
BNI	Bardonecchia	24.88	296	P	P	16 02 19.8	0.0
LPL	La Plagne	24.88	297⇑	iP	P	16 02 20.0	+0.2
	comp=Z,108nm,1.0s,mb5.0						
LPL	La Plagne	24.88	297⇑	iP	P	16 02 20.0	+0.2
LPL				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.0						
WLS	Welschbruch	24.91	304	eP	P	16 02 20.1	0.0
LMR	La Mourre	24.92	292	eP	P	16 02 19.5	-0.7
	comp=Z,253nm,1.4s,mb5.3						
LMR	La Mourre	24.92	292	eP	P	16 02 19.5	-0.7
LMR				pmax	pmax		
	comp=Z,126nm,1.4s,mb5.2						
MOF	Molkenrain	24.94	303	eP	P	16 02 20.5	+0.1
CMAH	Djebel Manchou	24.96	276	P	P	16 02 22.0	+1.4
CDF	Champ du Feu	24.96	304⇑	iP	P	16 02 18.3	-2.2
	comp=Z,129nm,1.3s,mb5.0						
CDF	Champ du Feu	24.96	304⇑	iP	P	16 02 18.3	-2.2
CDF				pmax	pmax		
	comp=Z,64nm,1.3s,mb5.0						
RSL	Roselend	24.97	298	eP	P	16 02 20.3	-0.4
ECH	Echery	25.00	304	eP	P	16 02 19.4	-1.5
OG01	Vacheresse	25.00	299	eP	P	16 02 21.3	+0.3
BSEG	Bad Segeberg	25.02	318	eP	P	16 02 21.8	+0.7
LOMF	Lomont	25.05	302	eP	P	16 02 21.2	-0.3
HINF	Hinteralfeld	25.12	303	eP	P	16 02 20.8	-1.3
	comp=Z,88nm,0.9s,mb5.0						
HINF	Hinteralfeld	25.12	303	eP	P	16 02 20.8	-1.3
HINF				pmax	pmax		
	comp=Z,44nm,0.9s,mb5.0						
KAF	Kangasniemi	25.12	346	ep	P	16 02 23.4	+1.5
	comp=Z,11nm,0.9s,mb4.4						
KAF	Kangasniemi	25.12	346	eP	P	16 02 23.4	+1.5
KAF				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
JOF	Joensuu	25.13	352	ep	P	16 02 22.1	+0.1
	comp=Z,20nm,0.8s,mb4.7						
TAVF	Tavernes	25.25	293	eP	P	16 02 22.9	-0.5
OG25	Le Caire	25.26	295	eP	P	16 02 23.3	-0.2
GDM	Grand’Maison	25.28	296	eP	P	16 02 23.2	-0.4
CAEH	’Ain El Ouahch	25.37	277	P	P	16 02 24.0	-0.5
STOF	St-Etienne Org	25.37	294	eP	P	16 02 26.9	+2.5
ORIF	Oris-en-Rattie	25.43	296⇑	iP	P	16 02 24.0	-1.0
	comp=Z,367nm,1.3s,mb5.5						
ORIF				eR			
	comp=Z,825nm,20.2s						
CABF	La Chapelle	25.45	300⇑	iP	P	16 02 25.1	-0.1
	comp=Z,74nm,0.8s,mb5.0						
CABF	La Chapelle	25.45	300⇑	iP	P	16 02 25.1	-0.1
CABF				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.0						
HAU	Haudompre	25.49	303	eP	P	16 02 23.0	-2.5
	comp=Z,54nm,0.8s,mb4.8						
HAU				eR			
	comp=Z,1µm,18.2s						
HAU	Haudompre	25.49	303	eP	P	16 02 23.0	-2.5
HAU				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.8						
HAU				MLR	MLR		
	comp=Z,1µm,18.3s,MS4.4						
VILF	Villemus	25.50	293	eP	P	16 02 26.0	+0.3
PUYF	Puyloubier	25.51	293	eP	P	16 02 27.6	+1.8
BERF	Bertagne	25.52	292	eP	P	16 02 26.0	+0.2
GRN	Grenoble	25.55	297	eP	P	16 02 25.4	-0.7
CKFL	Kef-Lekhel	25.56	276	P	P	16 02 28.0	+1.7
SMRF	Simiane la Rot	25.61	294	eP	P	16 02 25.9	-0.8
	comp=Z,424nm,1.2s,mb5.5						
GELF	Grande-Etoile	25.71	292	eP	P	16 02 27.6	0.0
THEF	They Montfort	25.77	303	eP	P	16 02 28.3	+0.2
CASM	Ain Smara	25.77	276	P	P	16 02 29.0	+0.7
CTEI	Djebel Teioual	25.89	275	P	P	16 02 34.0	+4.6
PRAF	Pradon	25.90	293	eP	P	16 02 29.5	+0.1
DFRA	Djebel Bou Aff	26.18	277	P	P	16 02 33.0	+0.9
WTSB	Winterswijk	26.21	312	eP	P	16 02 35.2	+3.0
	comp=Z,126nm,1.8s,mb5.2						
BRVK	Borovoye	26.23	45	eP	P	16 02 32.1	-0.3
	comp=Z,127nm,2.0s,mb5.1						
BRVK				LR	LR		
	comp=Z,308nm,21.0s,MS3.8						
BRVK	Borovoye	26.23	45	eP	P	16 02 32.1	-0.3
BRVK				pmax	pmax		
	comp=Z,127nm,2.0s,mb5.1						
BRVK				MLR	MLR		
	comp=Z,308nm,21.0s,MS3.8						
BVAR	Borovoye Array	26.28	46	P	P	16 02 32.3	-0.6
	comp=Z,9.9nm,1.0s,mb4.3,baz=243,slow=6.6,SNR=16						
VIVF	Saint-Julien-l	26.28	296⇑	iP	P	16 02 32.1	-0.9
	comp=Z,108nm,0.9s,mb5.1						
VIVF	Saint-Julien-l	26.28	296⇑	iP	P	16 02 32.1	-0.9
VIVF				pmax	pmax		
	comp=Z,54nm,0.9s,mb5.1						
CMER	Merouana	26.40	275	P	P	16 02 33.0	-1.1
MEZF	Maizieres J’vi	26.43	304	eP	P	16 02 30.6	-3.7
CKHR	Kef el Ahmar	26.60	276	P	P	16 02 37.0	+1.0
SET	Setif	26.64	276	P	P	16 02 37.0	+0.7
AML	Almayashu	26.78	71	P	P	16 02 38.9	+1.3
	SNR=11						
MUD	Monsted U’grnd	26.81	322	i P	P	16 02 42.5	+4.8
	comp=Z,36nm,1.0s,mb4.9						
MUD				i S	S	16 07 21.4	+9.5
	comp=Z,320nm,14.0s						
MUD	Monsted U’grnd	26.81	322	eP	P	16 02 42.5	+4.8
MUD				i S	S	16 07 21.4	+9.5
MUD				pmax	pmax		
	comp=Z,36nm,1.0s,mb4.9						
MUD				MLR	MLR		
	comp=Z,320nm,14.0s,MS4.0						
EKS2	Erkin-Say	26.82	69	P	P	16 02 39.7	+1.8
	SNR=19						
LASF	Ste Croix	26.85	294	eP	P	16 02 36.7	-1.5
	comp=Z,418nm,1.8s,mb5.4						
GIVF	Givet	26.90	307	eP	P	16 02 31.5	-7.1
SMF	Signal de Mont	26.99	299⇑	iP	P	16 02 38.5	-0.9
	comp=Z,94nm,1.2s,mb4.9						
SMF	Signal de Mont	26.99	299⇑	iP	P	16 02 38.5	-0.9
SMF				pmax	pmax		
	comp=Z,47nm,1.2s,mb4.9						
LOR	Lormes	27.04	301	eP	P	16 02 37.6	-2.3
	comp=Z,29nm,0.8s,mb4.5						
LOR				eR			
	comp=Z,970nm,20.2s						
LOR	Lormes	27.04	301	eP	P	16 02 37.6	-2.3
LOR				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.6						
LOR				MLR	MLR		
	comp=Z,970nm,20.3s,MS4.4						
HFS	Hagfors	27.08	332	P	P	16 02 40.0	-0.2
	comp=Z,4.2nm,0.9s,baz=141,slow=9.2,SNR=5.3						
HFS				LR	LR	16 14 48.9	
	comp=Z,736nm,18.9s,MS4.3,baz=136,slow=40						
HFS	Hagfors	27.08	332	P	P	16 02 40.0	-0.2
HFS				LR	LR	16 14 48.9	
PLDF	La Plantade	27.09	298	eP	P	16 02 38.9	-1.4
SSF	Saint Saulge	27.26	300⇑	iP	P	16 02 41.0	-0.9
	comp=Z,47nm,1.2s,mb4.9						
SSF	Saint Saulge	27.26	300⇑	iP	P	16 02 41.0	-0.9
SSF				pmax	pmax		
	comp=Z,47nm,1.2s,mb4.9						
AVF	Avril sur Loir	27.34	300	eP	P	16 02 40.6	-2.0
	comp=Z,98nm,1.1s,mb4.9						
AVF	Avril sur Loir	27.34	300	eP	P	16 02 40.6	-2.0
AVF				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.0						
AAK	Ala-Archa	27.35	69	P	P	16 02 43.7	+1.0
	SNR=16						
AAK	Ala-Archa	27.35	69	eP	P	16 02 41.8	-1.0
	comp=Z,61nm,1.5s,mb4.9						
AAK	Ala-Archa	27.35	69c	iP	P	16 02 42.9	+0.1
AAK				pmax	pmax		
	comp=Z,67nm,2.1s,mb4.8						
AAK				MLR	MLR		
	comp=Z,2µm,15.0s,MS4.7						
FRU	Bishkek	27.43	69⇓	iP	P	16 02 44.5	+1.0
FRU				pmax	pmax		
	comp=Z,597nm,2.4s,mb5.7						
CHMS	Chumysh	27.52	69	P	P	16 02 45.1	+0.7
	SNR=19						
EJON	La Jonquera	27.60	290	P	P	16 02 41.7	-3.3
	comp=Z,15nm,0.8s,mb4.7						
BGF	Bois d’Agland	27.66	299	eP	P	16 02 44.2	-1.4
	comp=Z,66nm,1.1s,mb4.9						
BGF	Bois d’Agland	27.66	299	eP	P	16 02 44.2	-1.4
BGF				pmax	pmax		
	comp=Z,33nm,1.1s,mb4.9						
KBK	Karagaybulak	27.68	69	P	P	16 02 47.0	+1.2
	SNR=18						
ETOS	Mallorca	27.93	285	P	P	16 02 47.7	-0.4
	comp=Z,302nm,1.6s,mb5.7						
KZA	Kyzart	27.94	71	P	P	16 02 49.9	+1.7
	SNR=15						
MTLF	Montolieu	28.05	292	eP	P	16 02 48.7	-0.4
	comp=Z,109nm,1.2s,mb5.1						
MTLF	Montolieu	28.05	292	eP	P	16 02 48.7	-0.4
MTLF				pmax	pmax		
	comp=Z,55nm,1.2s,mb5.1						
TCF	Toulx Ste Croi	28.09	298⇑	iP	P	16 02 48.8	-0.6
CAF	Calviac	28.14	296	eP	P	16 02 49.3	-0.6
TKM2	Tokmak 2	28.14	69	P	P	16 02 50.9	+0.9
	SNR=18						
KONO	Kongsberg	28.37	329	eP	P	16 02 49.5	-2.4
	comp=Z,63nm,1.5s,mb5.0						
KONO	Kongsberg	28.37	329	eP	P	16 02 49.5	-2.3
KONO				pmax	pmax		
	comp=Z,63nm,1.5s,mb5.0						
RJF	Les Rejaudoux	28.53	296	eP	P	16 02 52.2	-1.2
RJF				eR			
	comp=Z,1µm,17.5s						
NB2	NORSAR Subarra	28.60	332	P	P	16 02 52.6	-1.3
	comp=Z,2.3nm,0.8s,baz=128,slow=9.3						
NOA	NORSAR Array B	28.60	332	P	P	16 02 52.6	-1.2
	comp=Z,4.4nm,0.9s,mb4.2,baz=127,slow=9.4,SNR=8.3						
NOA				LR	LR	16 15 44.3	
	comp=Z,473nm,19.4s,MS4.1,baz=145,slow=40						
NAO	NORSAR Subarra	28.61	331	P	P	16 02 52.6	-1.3
	comp=Z,2.3nm,0.8s						
NAO	NORSAR Subarra	28.61	331	P	P	16 02 52.6	-1.3
NAO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
EMIR	Miracle	28.65	289	P	P	16 02 54.0	-0.5
	comp=Z,59nm,1.1s,mb5.2						
KSH	Kashi	28.80	76	eP	P	16 02 56.5	+0.6
KSH				eAP	pP	16 03 02.5	+3.7
KSH				AMB	AMB		
	comp=Z,270nm,2.2s,mb5.6						
KSH				LR	LR		
	comp=N,2µm,12.1s,MS5.0						
KSH				LR	LR		
	comp=E,1µm,11.2s,MS5.0						
MLS	Moulis	28.89	291	eP	P	16 02 54.8	-1.9
EPOB	Poblet	29.04	288	P	P	16 02 56.6	-1.5
	comp=E,108nm,1.5s,mb5.4						
LFF	La Frestale	29.08	296	eP	P	16 02 57.5	-0.9
	comp=E,131nm,1.3s,mb5.2						
LFF	La Frestale	29.08	296	eP	P	16 02 57.5	-0.9
LFF				pmax	pmax		
	comp=Z,66nm,1.3s,mb5.2						
EPF	Esparros	29.44	292	eP	P	16 02 58.9	-2.7
	comp=Z,39nm,1.1s,mb4.7						
EPF	Esparros	29.44	292	eP	P	16 02 58.9	-2.7
EPF				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.8						
RESF	Ens	29.45	291	eP	P	16 03 01.9	+0.1
EGRA	Graus	29.52	290	P	P	16 03 01.3	-1.1
	comp=Z,29nm,0.8s,mb5.1						
EBIE	Bielsa	29.61	291	P	P	16 03 01.6	-1.6
	comp=Z,26nm,1.1s,mb4.9						
ERTA	Horta de San J	29.65	288	P	P	16 03 02.2	-1.4
	comp=Z,150nm,1.3s,mb5.6						
MFF	Saint Martin d	29.73	299	eP	P	16 03 02.5	-1.7
	comp=Z,57nm,1.2s,mb4.9						
MFF	Saint Martin d	29.73	299	eP	P	16 03 02.5	-1.7
MFF				pmax	pmax		
	comp=Z,29nm,1.2s,mb4.9						
LDF	La Druitiere	29.85	303	eP	P	16 03 04.0	-1.2
ETSF	Etsaut	30.10	292⇑	iP	P	16 03 06.5	-1.1
	comp=Z,58nm,1.0s,mb5.0						
ETSF	Etsaut	30.10	292⇑	iP	P	16 03 06.5	-1.1
ETSF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.0						
ESAC	San Caprasio	30.15	289	P	P	16 03 07.0	-1.0
	comp=Z,54nm,0.8s,mb5.3						
GRR	Gorron	30.32	302	eP	P	16 03 07.1	-2.3
EMOS	Mosqueruela	30.34	287	P	P	16 03 09.1	-0.5
	comp=Z,156nm,1.2s,mb5.6						
EBEN	Beniarda	30.44	283	P	P	16 03 09.9	-0.7
	comp=Z,770nm,2.3s,mb6.0						
KURK	Kurchatov	30.62	53	eP	P	16 03 12.1	+0.1
	comp=Z,114nm,1.5s,mb5.5						
KURK	Kurchatov	30.62	53	eP	P	16 03 12.1	+0.1
KURK				pmax	pmax		
	comp=Z,114nm,1.5s,mb5.5						
EMUR	La Murta	31.41	282	P	P	16 03 16.9	-2.2
	comp=Z,16nm,0.8s,mb4.9						
SGMF	Saint Gilles	31.44	302	eP	P	16 03 17.1	-2.2
ETOB	Tobarra	31.47	284	P	P	16 03 19.5	-0.1
	comp=Z,86nm,1.1s,mb5.5						
ROSF	Rostrenen	31.92	302	eP	P	16 03 20.8	-2.7
ARCES	ARCESS Array B	32.17	351	P	P	16 03 24.1	-1.4
	comp=Z,7.0nm,0.7s,mb4.6,baz=149,slow=7.1,SNR=14						
ARCES				LR	LR	16 17 23.4	
	comp=Z,600nm,21.5s,MS4.2,baz=160,slow=38						
EVIA	Vianos	32.20	284	P	P	16 03 25.7	-0.3
	comp=Z,44nm,0.8s,mb5.3						
EVIA	Vianos	32.20	284	P	P	16 03 25.7	-0.3
EVIA				pmax	pmax		
	comp=Z,44nm,0.8s,mb5.3						
EHUE	Huescar	32.46	282	P	P	16 03 27.9	-0.4
	comp=Z,40nm,1.0s,mb5.2						
EHUE	Huescar	32.46	282	P	P	16 03 27.9	-0.4
EHUE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.2						
MKAR	Makanchi Array	32.78	61	P	P	16 03 31.2	+0.2
	comp=Z,13nm,0.6s,mb5.0,baz=270,slow=7.4,SNR=176						
MKAR				LR	LR	16 19 12.3	
	comp=Z,657nm,18.7s,MS4.4,baz=267,slow=41						
MKAR	Makanchi Array	32.78	61	i P	P	16 03 31.2	+0.2
MKAR				pmax	pmax		
	comp=Z,13nm,0.6s						
EQES	Quesada	32.83	283	P	P	16 03 30.6	-0.9
	comp=Z,143nm,1.1s,mb5.8						
EKA	Eskdalemuir Ar	32.84	315	P	P	16 03 30.2	-1.2
	comp=Z,4.1nm,0.6s,mb4.6,baz=102,slow=8.6,SNR=15						
EBER	Berja	32.92	281	P	P	16 03 31.7	-0.6
	comp=Z,154nm,1.1s,mb5.8						
GUD	Guadarrama	33.06	288	P	P	16 03 32.3	-1.2
	comp=Z,15nm,0.7s,mb5.0						
GUD	Guadarrama	33.06	288	P	P	16 03 32.3	-1.2
GUD				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
ESDC	Sonseca Array	33.10	286	P	P	16 03 32.2	-1.7
	comp=Z,18nm,0.7s,mb5.1,baz=66,slow=9.1,SNR=43						
ESDC	Sonseca Array	33.10	286	P	P	16 03 32.7	-1.1
	comp=Z,17nm,0.6s,mb5.1						
ESLA	Sonseca Array	33.10	286	eP	P	16 03 32.5	-1.4
	comp=Z,25nm,1.3s,mb5.0						
ESLA				LR	LR		
	comp=Z,4µm,21.0s,MS5.1						
DDI	Dehra Dun	33.15	92	ex	x	16 03 30.0	
NDI	New Delhi	33.20	95	ex	x	16 03 35.0	
EBAN	Banos Encina	33.29	283	P	P	16 03 34.6	-1.0
	comp=Z,67nm,0.7s,mb5.7						
EBAN	Banos Encina	33.29	283	P	P	16 03 34.6	-0.9
EBAN				pmax	pmax		
	comp=Z,67nm,0.7s,mb5.7						
ECOG	Cogollos-Vega	33.34	282	P	P	16 03 34.8	-1.2
	comp=Z,29nm,0.6s,mb5.4						
ECOG	Cogollos-Vega	33.34	282	P	P	16 03 34.8	-1.2
ECOG				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.4						
ZAI	Zaio	33.35	277	eP	P	16 03 36.0	-0.1
EARI	Arriondas	33.45	293	P	P	16 03 38.0	+1.1
	comp=Z,172nm,1.6s,mb5.7						
EGUA	Guajares	33.45	281	P	P	16 03 36.1	-0.9
	comp=Z,6.6nm,0.9s,mb4.6						
EGUA	Guajares	33.45	281	P	P	16 03 36.1	-0.9
EGUA				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
ERON	Agron	33.59	281	P	P	16 03 36.7	-1.5
	comp=Z,33nm,0.7s,mb5.4						
ELUQ	Luque	33.81	283	P	P	16 03 37.6	-2.4
	comp=Z,45nm,1.3s,mb5.2						
ELUQ	Luque	33.81	283	P	P	16 03 37.6	-2.4
ELUQ				pmax	pmax		
	comp=Z,45nm,1.3s,mb5.2						
ELOJ	Sierra Loja	33.83	282	P	P	16 03 38.4	-1.8
	comp=Z,14nm,0.9s,mb4.9						
ELOJ	Sierra Loja	33.83	282	P	P	16 03 38.4	-1.8
ELOJ				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
EADA	Adamuz	33.90	284	P	P	16 03 39.8	-1.0
	comp=Z,389nm,1.9s,mb6.0						
NVS	Novosibirsk	34.07	46⇑	iP	P	16 03 41.2	-0.9
NVS				i		16 04 58.5	
NVS				pmax	pmax		
	comp=N,42nm,1.6s						
NVS				pmax	pmax		
	comp=Z,90nm,1.6s,mb5.5						
NVS				pmax	pmax		
	comp=E,38nm,1.4s						

EMIJ	Mijas	34.46	281	P	P	16 03 43.5	-2.2
	comp=E,125nm,1.0s,mb5.8						
ECAB	El Cabril	34.56	284	P	P	16 03 45.5	-1.0
	comp=E,101nm,1.0s,mb5.7						
EJIF	Jimena Fronter	35.03	281	P	P	16 03 48.3	-2.3
	comp=E,18nm,0.7s,mb5.1						
EJIF	Jimena Fronter	35.03	281	P	P	16 03 48.3	-2.3
EJIF				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
ESPR	Espera	35.21	282	P	P	16 03 49.6	-2.6
	comp=Z,189nm,1.5s,mb5.8						
MDT	Midelt	35.54	275	P	P	16 03 54.8	-0.1
	comp=Z,8.6nm,0.8s,mb4.7,baz=86,slow=12,SNR=5.5						
EMIN	Mina Concepcio	35.60	284	P	P	16 03 54.0	-1.4
	comp=Z,658nm,2.3s,mb6.2						
PVRL	Vila Real	35.60	290	eP	P	16 03 54.3	-1.1
	comp=Z,67nm,1.7s,mb5.3						
EBAD	Badajoz	35.61	285	P	P	16 03 53.6	-1.9
	comp=Z,31nm,1.3s,mb5.1						
ZFT	Errachidia	35.62	273	i P	P	16 03 55.5	-0.2
MTE	Manteigas	35.64	288	eP	P	16 03 54.9	-0.9
	comp=Z,114nm,1.2s,mb5.7						
MTE	Manteigas	35.64	288	eP	P	16 03 54.8	-1.0
	comp=Z,25nm,0.8s,mb5.2						
MTE				ePcP	PcP	16 06 27.1	+2.5
PCBR	Castelo Branco	35.71	287	eP	P	16 03 55.3	-1.0
	comp=Z,83nm,1.3s,mb5.5						
PCAB	Cabril	35.75	291	eP	P	16 03 55.3	-1.3
	comp=Z,53nm,1.3s,mb5.3						
MIF	Mishlifen	35.81	276	i P	P	16 03 57.5	+0.2
PVIS	Viseu	35.84	289	eP	P	16 03 56.3	-1.1
	comp=Z,50nm,1.1s,mb5.4						
EZAM	Zamans	36.16	292	P	P	16 03 59.5	-0.6
	comp=Z,18nm,0.8s,mb5.1						
EZAM	Zamans	36.16	292	P	P	16 03 59.5	-0.6
EZAM				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
EGRO	El Granado	36.28	284	P	P	16 03 59.1	-2.1
	comp=Z,17nm,0.7s,mb5.1						
PBEJ	Beja	36.44	285	eP	P	16 04 01.8	-0.7
	comp=Z,75nm,1.3s,mb5.5						
PTOM	Tomar	36.46	287	eP	P	16 04 01.9	-0.8
	comp=Z,94nm,1.5s,mb5.5						
WMQ	Urumqi	36.83	65	⇑iP	P	16 04 06.5	+0.8
WMQ				PCP	PcP	16 06 29.0	+1.0
WMQ				PCS		16 10 16.0	
WMQ				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,460nm,3.8s						
WMQ				LR	LR		
	comp=N,2µm,14.2s,MS5.1						
WMQ				LR	LR		
	comp=E,1µm,16.0s,MS5.1						
WMQ				LR	LR		
	comp=Z,2µm,14.6s,MS5.0						
KOLN	Koldanda	38.62	92	eP	P	16 04 20.8	-0.2
	comp=Z,148nm,1.3s,mb5.6						
KMBO	Kilima Mbogo	39.20	183	P	P	16 04 27.3	+1.4
	comp=Z,7.2nm,1.0s,mb4.4,baz=15,slow=9.9,SNR=15						
KMBO				LR	LR	16 22 31.2	
	comp=Z,127nm,19.6s,MS3.8,baz=284,slow=39						
KMBO	Kilima Mbogo	39.20	183	i P	P	16 04 28.5	+2.6
KMBO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GKN	Gorkha	39.34	91	eP	P	16 04 26.8	-0.1
	comp=Z,162nm,1.2s,mb5.6						
DMN	Daman	39.88	91	eP	P	16 04 31.5	+0.1
	comp=Z,144nm,1.1s,mb5.6						
KKN	Kakani	39.94	91	eP	P	16 04 31.9	0.0
	comp=Z,76nm,1.1s,mb5.3						
KKN	Kakani	39.94	91	eP	P	16 04 31.9	0.0
KKN				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.0						
PKI	Pulchoki	40.14	91	eP	P	16 04 33.6	+0.1
	comp=Z,155nm,1.4s,mb5.5						
PKI	Pulchoki	40.14	91	eP	P	16 04 33.6	+0.1
PKI				pmax	pmax		
	comp=Z,78nm,1.4s,mb5.2						
GUN	Gumba	40.35	90	eP	P	16 04 35.5	+0.2
	comp=Z,135nm,1.1s,mb5.6						
HYB	Hyderabad	40.38	110	i P	P	16 04 35.0	-0.6
HYB	Hyderabad	40.38	110	eP	P	16 04 35.0	-0.6
LSA	Lhasa	43.71	85	P	P	16 05 03.3	+0.6
LSA	Lhasa	43.71	85	eP	P	16 05 03.3	+0.6
	comp=Z,11nm,0.8s,mb4.7						
LSA	Lhasa	43.71	85	eP	P	16 05 03.3	+0.6
LSA				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
CFTV	Fuerteventura	44.78	274	P	P	16 05 10.7	-0.7
	comp=Z,24nm,0.9s,mb5.0						
SCO	Scoresbysund	44.80	335	i P	P	16 05 12.7	+1.7
	comp=Z,6.7nm,0.8s,mb4.5						
DAG	Danmarks Havn	45.79	344	i P	P	16 05 19.0	+0.2
	comp=Z,13nm,1.0s,mb4.8						
DAG	Danmarks Havn	45.79	344	eP	P	16 05 19.0	+0.2
	comp=Z,13nm,1.0s,mb4.8						
DAG	Danmarks Havn	45.79	344	eP	P	16 05 19.0	+0.2
DAG				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.8						
EOSO	Osorio	46.09	274	P	P	16 05 21.4	-0.3
	comp=Z,106nm,1.4s,mb5.6						
SHL	Shillong	46.19	90	eP	P	16 05 21.3	-1.3
ZAK	Zakamensk	46.28	53	eP	P	16 05 23.5	+0.5
ZAK				e		16 07 01.1	
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s,mb4.5						
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s,mb4.2						
EBAJ	Bajamar	46.50	275	P	P	16 05 24.4	-0.6
	comp=Z,70nm,1.2s,mb5.5						
GTA	Gaotai	46.70	69	eP	P	16 05 26.8	+0.4
GTA				AP	pP	16 05 34.8	+5.4
GTA				PCP	PcP	16 07 00.0	-0.5
GTA				SCP		16 10 50.5	
GTA				PCS		16 10 54.5	
GTA				SCS	ScS	16 15 18.0	-0.9
GTA				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.5						
GTA				AMB	AMB		
	comp=Z,220nm,6.5s						
GTA				LR	LR		
	comp=N,1µm,17.1s,MS5.1						
GTA				LR	LR		
	comp=E,1µm,16.0s,MS5.1						
GTA				LR	LR		
	comp=Z,1µm,18.6s,MS4.9						
SONM	Songino Array	48.84	56	P	P	16 05 43.3	+0.2
	comp=Z,1.9nm,0.8s,mb4.2,baz=285,slow=4.9,SNR=16						
SONM				PcP	PcP	16 07 07.8	-0.2
	comp=Z,1.9nm,0.7s,baz=260,slow=2.9,SNR=6.3						
ULN	Ulaanbaatar	49.26	56	⇑iP	P	16 05 46.6	+0.3
SUMG	Summit	50.22	338	eP	P	16 05 53.2	-0.1
	comp=Z,17nm,1.2s,mb5.0						
DBIC	Dimbokro	50.47	243	P	P	16 05 54.1	-1.9
	comp=Z,8.6nm,0.6s,mb4.9,baz=26,slow=9.5,SNR=17						
DBIC	Dimbokro	50.47	243	eP	P	16 05 54.5	-1.5
	comp=Z,18nm,1.0s,mb5.0						
DBIC	Dimbokro	50.47	243	P	P	16 05 54.1	-1.9
DBIC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LZH	Lanzhou	50.87	71	⇓P	P	16 05 59.5	+0.7
LZH				AMB	AMB		
	comp=Z,60nm,1.4s,mb5.3						
LZH				AMB	AMB		
	comp=Z,250nm,6.2s						
LZH				LR	LR		
	comp=N,1µm,15.3s						
LZH				LR	LR		
	comp=Z,2µm,17.4s,MS5.2						
LZH	Lanzhou	50.87	71	⇓P	P	16 05 59.4	+0.6
	comp=Z,67nm,1.4s,mb5.4						
LZH				pP	pP	16 06 13.5	+12
LZH				sP	sP	16 06 19.5	+17
LZH				PP	PP	16 07 38.5	-18
LZH				sS		16 12 33.7	
LZH				LR	LR		
	comp=Z,2µm,17.4s,MS5.2						
LZH	Lanzhou	50.87	71	⇓P	P	16 05 59.4	+0.6
LZH				pmax	pmax		
	comp=Z,67nm,1.4s,mb5.4						
LZH				MLR	MLR		
	comp=Z,2µm,17.4s,MS5.2						
LIC	Lamto	50.90	243	eP	P	16 05 56.9	-2.4
	comp=Z,65nm,1.0s,mb5.2						
LIC				eR			
	comp=Z,461nm,17.2s						
BOD	Bodaibo	51.05	42	eP	P	16 05 56.4	-3.4
BOD				pmax	pmax		
	comp=Z,36nm,1.4s,mb5.1						
CIT	Chita	52.19	49	eP	P	16 06 07.5	-1.1
CD2	Chengdu	52.98	77	eP	P	16 06 14.0	-0.8
CD2				PP	PP	16 08 15.3	-0.8
CD2				S	S	16 13 40.0	-2.6
CD2				AMB	AMB		
	comp=Z,10.0nm,1.4s,mb4.5						
CD2				AMB	AMB		
	comp=Z,60nm,9.8s						
CD2				LR	LR		
	comp=N,510nm,22.8s						
CD2				LR	LR		
	comp=Z,320nm,21.6s,MS4.3						
LSZ	Lusaka	54.17	193	eP	P	16 06 22.9	-0.7
	comp=Z,22nm,1.1s,mb5.0						
LSZ				ePcP	PcP	16 07 28.7	+0.5
LSZ				LR	LR		
	comp=Z,734nm,21.0s,MS4.7						
LSZ	Lusaka	54.17	193	eP	P	16 06 22.9	-0.7
LSZ				e		16 07 28.7	
LSZ				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.0						
LSZ				MLR	MLR		
	comp=Z,734nm,21.0s,MS4.7						
TIXI	Tiksi	54.23	23	eP	P	16 06 19.9	-3.4
TIXI				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
TIXI				MLR	MLR		
	comp=Z,300nm,15.0s,MS4.5						
HHC	Hu-ho-hao-te	54.61	63	eP	P	16 06 27.0	+0.4
HHC				PCS		16 11 23.8	
HHC				SCS	ScS	16 16 10.3	-2.3
HHC				AMB	AMB		
	comp=Z,30nm,1.9s,mb5.0						
HHC				AMB	AMB		
	comp=Z,390nm,9.6s						
HHC				LR	LR		
	comp=N,1µm,20.4s,MS5.0						
HHC				LR	LR		
	comp=E,890nm,16.8s,MS5.0						
HHC				LR	LR		
	comp=Z,1µm,16.8s,MS5.0						
KMI	Kunming	54.94	84	P	P	16 06 28.5	-0.7
KMI				PP	PP	16 08 33.0	-0.8
KMI				S	S	16 14 02.5	-6.6
KMI				SCS	ScS	16 16 10.0	-5.2
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.8						
KMI				AMB	AMB		
	comp=Z,120nm,5.4s						
KMI				LR	LR		
	comp=N,760nm,19.0s,MS4.9						
KMI				LR	LR		
	comp=E,640nm,19.5s,MS4.9						
KMI				LR	LR		
	comp=Z,440nm,21.0s,MS4.5						
KMI	Kunming	54.94	84	P	P	16 06 28.6	-0.6
	comp=Z,13nm,1.0s,mb4.9						
KMI				pP	pP	16 06 42.7	+10
KMI				sP	sP	16 06 48.1	+15
KMI				PP	PP	16 08 33.0	-0.8
KMI				PPP	PPP	16 09 44.7	-1.2
KMI				S	S	16 14 02.6	-6.5
KMI				ScS	ScS	16 16 09.9	-5.3
KMI				SS	SS	16 17 45.7	-6.8
KMI				SSS	SSS	16 19 43.9	-8.8
KMI				LR	LR		
	comp=Z,450nm,21.0s,MS4.5						
KMI	Kunming	54.94	84	P	P	16 06 28.6	-0.6
KMI						16 08 33.0	
KMI				PPP	PPP	16 09 44.7	-1.2
KMI				S	S	16 14 02.6	-6.5
KMI						16 16 09.9	
KMI				SS	SS	16 17 45.7	-6.8
KMI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
KMI				MLR	MLR		
	comp=Z,450nm,21.0s,MS4.5						
XAN	Xi’an	55.50	71	P	P	16 06 33.0	-0.2
HIA	Hailar	56.81	51	eP	P	16 06 42.4	0.0
	comp=Z,129nm,2.0s,mb5.6						
HIA	Hailar	56.81	51	eP	P	16 06 42.4	0.0
HIA				pmax	pmax		
	comp=Z,129nm,2.0s						
NRGR	Nerungri	56.96	41	eP	P	16 06 38.8	-4.6
OPO	Ambohidratompo	57.05	171	P	P	16 06 44.5	0.0
	comp=Z,4.8nm,0.9s,mb4.5,baz=6.2,slow=3.8,SNR=5.8						
GYA	Guiyang	57.33	80	P	P	16 06 45.3	-1.1
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
YAK	Yakutsk	57.44	34	eP	P	16 06 45.4	-1.2
YAK				pmax	pmax		
	comp=Z,56nm,1.4s,mb5.4						
ENH	Enshi	57.65	75	eP	P	16 06 47.7	-0.9
	comp=Z,30nm,1.3s,mb5.2						
WHN	Wuhan	61.20	72	⇑P	P	16 07 12.0	-1.0
WHN				S	S	16 15 27.0	-3.9
WHN				LR	LR		
	comp=Z,1µm,22.9s,MS5.0						
NJ2	Nanjing	63.79	69	eP	P	16 07 28.8	-1.5
NJ2				AP	pP	16 07 38.3	+4.9
NJ2				PCP	PcP	16 08 03.0	-3.1
NJ2				S	S	16 16 01.0	-2.6
NJ2				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
NJ2				LR	LR		
	comp=N,930nm,12.7s,MS5.2						
NJ2				LR	LR		
	comp=E,810nm,15.7s,MS5.2						
NJ2				LR	LR		
	comp=Z,390nm,13.4s,MS4.8						
SSE	Sheshan	65.99	69	P	P	16 07 44.3	-0.2
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.4						
SSE				AMB	AMB		
	comp=Z,70nm,5.2s						
SSE	Sheshan	65.99	69	P	P	16 07 44.2	-0.3
	comp=Z,33nm,0.8s,mb5.4						
SCHQ	Schefferville	67.69	323	P	P	16 07 55.1	+0.2
	comp=Z,6.6nm,0.5s,mb4.9,baz=58,slow=8.0,SNR=18						
BOSA	Boshof	67.71	193	P	P	16 07 55.5	-0.1
	comp=Z,5.5nm,0.8s,mb4.6,baz=44,slow=13,SNR=6.2						
BOSA				LR	LR	16 38 41.5	
	comp=Z,424nm,18.3s,MS4.7,baz=154,slow=37						
BOSA	Boshof	67.71	193	P	P	16 07 55.5	-0.1
BOSA				LR	LR	16 38 41.5	
JNU	Nakatsue	71.83	62	P	P	16 08 22.9	+2.3
	comp=Z,11nm,1.0s,mb4.8,baz=107,slow=7.4,SNR=3.7						
INK	Inuvik	73.62	357	P	P	16 08 31.2	+0.8
	comp=Z,2.2nm,0.9s,mb4.1,baz=7.7,slow=8.4,SNR=5.4						
MJAR	Matsushiro Arr	74.79	55	LR	LR	16 44 45.9	
	comp=Z,753nm,18.7s,MS5.0,baz=80,slow=38						
ILAR	Eielson Array	77.22	3	LR	LR	16 45 34.2	
	comp=Z,120nm,19.3s,MS4.2,baz=183,slow=38						
YKA	Yellowknife Ar	77.36	348	P	P	16 08 52.5	+0.7
	comp=Z,5.5nm,0.9s,mb4.5,baz=23,slow=6.0,SNR=16						
YKA	Yellowknife Ar	77.36	348	P	P	16 08 52.5	+0.7
ULM	Lac du Bonnet	83.29	333	P	P	16 09 22.8	-0.9
	comp=Z,9.1nm,0.9s,mb4.8,baz=66,slow=4.9,SNR=6.9						
MCWV	Mont Chateau	84.27	317	eP	P	16 09 28.1	-0.7
	comp=Z,22nm,0.8s,mb5.3						
ACSO	Alum Creek Sta	85.49	319	eP	P	16 09 33.5	-1.4
	comp=Z,6.3nm,0.7s,mb4.8						
EDM	Edmonton	85.78	344	eP	P	16 09 37.7	+1.7
FWV	Forest Hill	86.29	316	eP	P	16 09 36.4	-2.6
LAO	LASA Array	89.85	337	eP	P	16 09 56.3	+0.5
	comp=Z,23nm,1.0s,mb5.5						
NEW	Newport	91.26	344	eP	P	16 10 02.7	+0.5
	comp=Z,24nm,1.0s,mb5.5						
NEW				e		16 10 15.4	
NEW	Newport	91.26	344	eP	P	16 10 02.7	+0.5
NEW				pmax	pmax		
	comp=Z,24nm,1.0s						
CHMT	Chamberlain Mo	91.62	341	⇓iP	P	16 10 05.5	+1.6
PHWY	Pilot Hill	94.39	334	eP	P	16 10 18.1	+1.3
PDAR	Pinedale Array	94.41	337	P	P	16 10 18.0	+1.1
	comp=Z,0.9nm,0.8s,mb4.2,baz=45,slow=4.2,SNR=5.9						
WRA	Warramunga Arr	106.25	103	PKKPbc		16 26 41.7	
	comp=Z,0.4nm,0.7s,baz=120,slow=2.7,SNR=6.4						
SYO	Syowa Base	106.93	180	⇑pPdiff		16 11 21.4	
PLCA	Paso Flores	126.83	244	PKP	PKPdf	16 16 00.8	-1.9
	comp=Z,2.1nm,0.7s,baz=310,slow=5.4,SNR=4.1						
PLCA	Paso Flores	126.83	244	PKP	PKPdf	16 16 00.8	-1.9
RPZ	Rata Peaks	143.90	114	PKP	PKPdf	16 16 34.5	+0.6
	comp=Z,7.4nm,0.7s,baz=132,slow=1.5,SNR=4.6						
URZ	Urewera	147.42	103	PKPbc	PKPdf	16 16 41.3	+1.1
	comp=Z,17nm,0.7s,baz=116,slow=8.7,SNR=7.6						

CSEM ***26*** *16:02:38.7, 52.60N×159.38E, h10^{km}, mb5.5*

BJI ***26*** *16:02:41.3, 52.66N×159.51E, h44^{km}, mB5.1, mb5.0, Ms4.9, Msz4.6*

MOS ***26*** *16:02:43.8±1.0, 52.44N×159.33E, h48^{km}, mb5.6/108, MS4.9/21, Error ellipse: s-maj=7.6km s-min=3.3km az=96.9*

MOS Felt (II-III) at Petropavlovsk-Kamchatskii.

KRSC ***26*** *16:02:44.1±0.8, 52.41N×159.65E, h24^{km}±4^{km}, ML5.6*

HRVD ***26*** *16:02:44.7±0.2, 52.43N×159.94E, h48^{km}±2^{km}, MW5.2/79, Centroid moment Tensor Solution. LP body waves: s60,c115;Mantle waves: s79,c152; Half duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.72±.29; M$_{\theta\theta}$-2.21±.20; M$_{\phi\phi}$-2.51±.21; M$_{r\theta}$6.34±.25; M$_{\theta\phi}$-3.32±.16; M$_{\phi r}$3.07±.19; Best double couple: M$_0$8.788×10^{16} NP1: ϕ_s204°, δ21°, λ56°. NP2: ϕ_s61°, δ73°, λ102°. Principal axes: T 8.572, Plg61°, Azm349°; N .432, Plg12°, Azm237°; P -9.004, Plg27°, Azm141°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***26*** *16:02:44.6±0.1, 52.51N×159.39E, mb5.4/156, MS4.7/8 Error ellipse: s-maj=4.4km s-min=2.7km az=176.0*

NEIC Felt [III] at Petropavlovsk-Kamchatskiy.

IDC ***26*** *16:02:44.3±1.8, 52.60N×159.33E, h35^{km}±14^{km}, mb5.1/29, mb1 5.3/31, mb1mx5.2/32, mbtmp5.3/31, ML5.0/2, MS4.5/19, Ms1 4.5/19, ms1mx4.5/21, Error ellipse: s-maj=12.4km s-min=9.2km az=153.0*

ISC 26 16:02:42.5±0.1**, 52.36N**±0.02×**159.47E**±0.03**, h41^{km}, h41^{km}**±1.5^{km}**:pP-P, n789,** σ**1^{s}09**/797**, mb5.3**/241**, MS4.7**/47**, 130C-34D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RUS	Russkaya	0.59	278	i P	P	16 02 58.0	+3.5
SPN	Mys Shipunski	0.82	24	i P	P	16 02 58.0	+0.4
NLC	Nalytchevo	0.82	355	i P	P	16 02 58.9	+1.2
PET	Petropavlovsk	0.83	324	P	P	16 03 00.2	+2.3
PET				S	S	16 03 10.8	+1.7
PET	Petropavlovsk	0.83	324	i P	P	16 03 00.3	+2.4
PET	Petropavlovsk	0.83	324	ePn	P	16 02 59.6	+1.8
PET	Petropavlovsk	0.83	324	⇓iPN	P	16 03 00.4	+2.5
PET				eS	S	16 03 11.5	+2.4
GRL	Gorelyy	0.88	284	i P	P	16 03 02.7	+4.2
UGLR	Uglovaya	0.94	336	i P	P	16 03 01.9	+2.5
KRMR	Karymshinskiy	0.94	301	i P	P	16 03 01.8	+2.4
KRMR				i S	S	16 03 14.7	+2.8
SDLR	Sedlovina	0.99	339	i P	P	16 03 02.2	+2.1
SMAR	Somma	0.99	336	i P	P	16 03 02.4	+2.2
AVH	Avacha	1.01	334	i P	P	16 03 03.0	+2.6
KOK	Koryaka	1.06	332	i P	P	16 03 03.9	+2.8
APC	Apacha	1.52	293	i P	P	16 03 12.2	+4.5
APC				eS	S	16 03 32.9	+6.5
APC				Smax			
	22µm,0.8s						
GNL	Ganaly	1.63	326	i P	P	16 03 12.3	+3.1
MIPR	Malaya Ipel’ka	1.67	268	eP	P	16 03 14.5	+4.8
KII	Karymskiy	1.68	360	P	P	16 03 11.9	+1.9
KII	Karymskiy	1.68	360	i P	P	16 03 11.7	+1.7
PAU	Pauzhetka	1.87	243	i P	P	16 03 16.7	+4.0
PAU				eS	S	16 03 40.7	+5.5
PAU				Smax			
	35µm,1.3s						
MKZ	Mys Kozlova	2.59	31	P	P	16 03 22.0	-0.9
MKZ				S	S	16 03 48.2	-5.2
MKZ	Mys Kozlova	2.59	31	eP	P	16 03 21.9	-1.0
MKZ				eS	S	16 03 51.8	-1.6
SKR	Severo-Kuril’s	2.68	233	eP	P	16 03 24.6	+0.4
SKR				eS	S	16 03 58.0	+2.3
ALID	Alaid	2.86	240	eP	P	16 03 31.3	+4.5
ALID				eS	S	16 04 06.0	+5.7
TUMR	Tumrok	2.96	8	i P	P	16 03 30.3	+2.1
KMNR	Kamenistaya	3.44	7	eP	P	16 03 37.3	+2.3
ESO	Esso	3.61	353	i P	P	16 03 39.3	+1.9
ESO				Smax			
	3µm,0.9s						
KPT	Kopyto	3.65	7	i P	P	16 03 40.2	+2.3
KOZ	Kozyrevsk	3.72	4	P	P	16 03 40.8	+1.8
KOZ	Kozyrevsk	3.72	4	i P	P	16 03 41.2	+2.2
KOZR	Kozyr	3.73	4	PN	P	16 03 40.8	+1.7
ZLN	Zelenaya	3.75	12	eP	P	16 03 42.1	+2.7
LGNR	Loginova	3.80	10	i P	P	16 03 43.1	+2.9
CIRR	Tsirk	3.84	11	i P	P	16 03 43.3	+2.6
KRSR	Krestovskiy	3.92	9	eP	P	16 03 43.7	+1.8
SRDR	Sredinnyy	3.97	2	i P	P	16 03 44.2	+1.6
KLY	Klyuchi	4.03	9	P	P	16 03 45.8	+2.5
KLY	Klyuchi	4.03	9	i P	P	16 03 45.6	+2.3
KBTR	Krutoberegovo	4.33	26	P	P	16 03 47.6	-0.1
KBTR	Krutoberegovo	4.33	26	i P	P	16 03 48.5	+0.8
KBTR				eS	S	16 04 33.9	-3.7
BKI	Bering	4.80	51	i P	P	16 03 52.7	-1.6
BKI				i S	S	16 04 41.8	-7.5
BKI				Smax			
	1µm,1.9s						
OSSR	Ossora	7.20	15	eP	P	16 04 27.3	-0.6
OSSR				Smax			
	470nm,0.8s						
FX1	Attu Island--F	8.36	81	Pn	P	16 04 42.1	-1.8
	56nm,0.3s,baz=298,slow=6.3,SNR=145						
FX1				Sn	S	16 06 06.8	-11
	144nm,0.3s,baz=143,slow=17,SNR=12						
FX1				LR	LR	16 06 55.0	
	comp=Z,46nm,18.3s,baz=81,slow=30						
FX1	Attu Island--F	8.36	81	ePn	P	16 04 41.7	-2.2
FX1				eSn	S	16 06 06.5	-12
MA2	Magadan	8.72	329	ePN	P	16 04 50.2	+1.2
MA2				S	S	16 06 32.9	+5.8
MA2				pmax	pmax		
	comp=Z,30nm,0.7s						
SMY	Shemya	8.93	82	ePn	P	16 04 47.8	-4.0
	comp=Z,261nm,0.7s						
SMY				epPn		16 04 58.3	
SMY	Shemya	8.93	82	ePN	P	16 04 47.8	-4.1
SMY				pmax	pmax		
	comp=Z,261nm,0.7s						
SEY	Seymchan	11.26	343	⇑ePN	P	16 05 25.2	+1.6
UGL	Uglegorsk	11.51	260	ePN	P	16 05 33.3	+6.3
UGL				pmax	pmax		
	comp=Z,158nm,0.6s						
UGL				MLR	MLR		
	comp=N,3µm,15.0s						
UGL				MLR	MLR		
	comp=E,3µm,15.0s						
UGL				MLR	MLR		
	comp=Z,3µm,15.0s						
YSS	Yuzh-Sakhalins	12.09	250	ePn	P	16 05 40.0	+5.1
	comp=Z,52nm,0.8s						
YSS	Yuzh-Sakhalins	12.09	250	⇑iPN	P	16 05 40.0	+5.1
YSS				eS	S	16 08 02.0	+13
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
ASAJ	Asahikawa	13.91	240	Pn	P	16 06 01.4	+2.5
	comp=Z,11nm,0.3s,baz=54,slow=11,SNR=60						
ASAJ				LR	LR	16 11 29.5	
	comp=Z,1µm,18.8s,baz=58,slow=38						
ASAJ	Asahikawa	13.91	240	P	P	16 06 01.5	+2.6
ASAJ				pmax	pmax		
	comp=Z,11nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,1µm,18.8s						
BILL	Bilibino	16.08	9	ePn	P	16 06 25.6	-1.1
	comp=Z,180nm,1.0s						
BILL				e		16 06 46.0	
BILL	Bilibino	16.08	9c	iP	P	16 06 27.1	+0.3
BILL				pmax	pmax		
	comp=Z,60nm,0.6s						
BILL				MLR	MLR		
	comp=Z,1µm,15.0s						
KLR	Kul’dur	17.75	271	eP	P	16 06 45.5	-2.5
KLR				eS	S	16 10 02.5	+0.6
KLR				pmax	pmax		
	comp=E,900nm,10.0s						
KLR				pmax	pmax		
	comp=Z,2µm,10.0s						
KLR				smax			
	comp=N,2µm,11.0s						
KLR				smax			

	comp=E,600nm,11.0s						
KLR				MLR	MLR		
	comp=Z,3µm,13.5s						
YAK	**Yakutsk**	**18.65**	**313**	*e*P	**P**	**16 06 56.4**	**-2.6**
	comp=Z,50nm,1.3s						
YAK				*e*pPn		16 07 05.9	
YAK	**Yakutsk**	**18.65**	**313**	*c* *i*P	**P**	**16 06 59.8**	**+0.8**
YAK				pmax	pmax		
	comp=E,89nm,0.9s						
YAK				pmax	pmax		
	comp=Z,297nm,0.9s						
YAK				pmax	pmax		
	comp=N,28nm,1.1s						
YAK				MLR	MLR		
	comp=Z,1µm,23.0s						
YAK				MLR	MLR		
	comp=N,341nm,14.0s						
YAK				MLR	MLR		
	comp=E,1µm,22.0s						
UNV	**Unalaska Valle**	**20.38**	**72**	*e*P	**P**	**16 07 17.1**	**-0.9**
	comp=E,440nm,1.2s						
UNV				*e*pPn		16 07 29.4	
CLNS	**Chul'man**	**20.38**	**296**	*e*P	**P**	**16 07 21.0**	**+2.9**
CLNS				*e*PP	PP	16 07 36.0	-3.2
CLNS				*e*S	**S**	**16 11 03.0**	**+3.8**
CLNS				*e*SS	SS	16 11 30.0	0.0
TNA	**Tin City**	**21.07**	**39**	⇑*e*P	**P**	**16 07 24.6**	**-0.5**
	comp=E,114nm,1.0s,mb5.2						
MDJ	**Mudanjiang**	**21.14**	**260**	P	**P**	**16 07 25.5**	**-0.5**
MDJ				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
MDJ				AMB	AMB		
	comp=Z,40nm,4.0s						
MDJ	**Mudanjiang**	**21.14**	**260**	*e*P	**P**	**16 07 24.8**	**-1.2**
	comp=Z,59nm,0.9s,mb4.9						
MAJO	**Matsushiro**	**21.79**	**232**	*e*P	**P**	**16 07 33.8**	**+1.3**
	comp=Z,145nm,0.7s,mb5.5						
MAJO	**Matsushiro**	**21.79**	**232**	*e*P	**P**	**16 07 33.8**	**+1.3**
MAJO				pmax	pmax		
	comp=Z,145nm,0.7s,mb5.5						
MAT	**Matsushiro**	**21.79**	**232**	P	**P**	**16 07 34.0**	**+1.5**
MAT				S	**S**	**16 11 32.0**	**+6.0**
MJAR	**Matsushiro Arr**	**21.79**	**232**	P	**P**	**16 07 35.4**	**+3.0**
	comp=Z,101nm,0.9s,mb5.2,baz=18,slow=9.3,SNR=135						
MJAR				S	**S**	**16 11 34.4**	**+8.5**
	comp=Z,1.1nm,0.6s,baz=30,slow=33,SNR=3.5						
TIXI	**Tiksi**	**23.60**	**336**	⇑*i*P	**P**	**16 07 49.3**	**-0.5**
TIXI	**Tiksi**	**23.60**	**336**	⇓*i*P	**P**	**16 07 45.9**	**-3.9**
TIXI				*e**SP		16 08 04.2	
TIXI				*e*S	**S**	**16 12 00.7**	**+2.7**
TIXI				*e**SS		16 12 22.8	
TIXI				pmax	pmax		
	comp=Z,143nm,0.9s,mb5.4						
TIXI				MLR	MLR		
	comp=Z,3µm,16.0s,MS4.9						
JHJ	**Hachijo jima 2**	**23.91**	**224**	LR	LR	16 16 46.2	
	comp=Z,408nm,19.7s,MS3.9,baz=67,slow=35						
CN2	**Changchun**	**24.10**	**263**	*e*P	**P**	**16 07 54.5**	**-0.4**
CN2				AMB	AMB		
	comp=Z,40nm,0.6s,mb5.0						
HIA	**Hailar**	**25.07**	**279**	*e*P	**P**	**16 08 03.4**	**-0.9**
	comp=Z,116nm,0.8s,mb5.5						
HIA	**Hailar**	**25.07**	**279**	*e*P	**P**	**16 08 03.4**	**-0.9**
HIA				pmax	pmax		
	comp=Z,116nm,0.8s						
SVW2	**Sparrevohn**	**25.68**	**52**	*e*P	**P**	**16 08 10.8**	**+0.9**
BOD	**Bodaibo**	**26.18**	**300**	*e*P	**P**	**16 08 14.4**	**-0.2**
BOD				*e*	pP	16 08 27.8	+2.4
BOD				*e*		16 19 02.9	
BOD				pmax	pmax		
	comp=Z,37nm,1.0s,mb4.9						
SNY	**Shenyang**	**26.35**	**261**	⇓P	**P**	**16 08 16.0**	**-0.3**
SNY				S	**S**	**16 12 44.8**	**+0.4**
SNY				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
SNY				AMB	AMB		
	comp=Z,110nm,6.4s						
SNY				LR	LR		
	comp=N,2µm,14.3s,MS4.8						
SNY				LR	LR		
	comp=E,1µm,13.5s,MS4.8						
SNY				LR	LR		
	comp=Z,1µm,14.7s,MS4.6						
KS15	**Wonju Array Si**	**26.62**	**248**	*e*P	**P**	**16 08 19.7**	**+0.9**
IMA2	**Indian Mountai**	**26.84**	**41**	*e*P	**P**	**16 08 19.8**	**-0.8**
CIT	**Chita**	**27.79**	**288**	*e*P	**P**	**16 08 28.0**	**-1.4**
CIT				*e*		16 09 16.0	
CIT				pmax	pmax		
	comp=Z,50nm,2.4s,mb4.7						
JNU	**Nakatsue**	**28.18**	**238**	P	**P**	**16 08 34.5**	**+1.4**
	comp=Z,49nm,0.7s,mb5.2,baz=123,slow=17,SNR=26						
JNU				LR	LR	16 20 56.5	
	comp=Z,511nm,21.1s,MS4.1,baz=40,slow=39						
CBIJ	**Chichi jima**	**28.37**	**214**	LR	LR	16 18 10.9	
	comp=Z,514nm,21.6s,MS4.1,baz=346,slow=32						
MCK	**McKinley**	**28.74**	**46**	*e*P	**P**	**16 08 36.0**	**-1.7**
	comp=Z,11µm,1.0s						
MCK				*e*pP	pP	16 08 46.5	-2.2
PMR	**Palmer**	**28.76**	**51**	*e*P	**P**	**16 08 37.1**	**-0.9**
	comp=Z,3.1nm,0.5s,mb4.3						
PMR	**Palmer**	**28.76**	**51**	*e*P	**P**	**16 08 37.1**	**-0.9**
PMR				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
COLA	**College**	**29.20**	**44**	*e*P	**P**	**16 08 40.7**	**-1.1**
	comp=Z,22nm,0.8s,mb4.9						
COLA				*e*pP	pP	16 08 52.8	0.0
COLA	**College**	**29.20**	**44**	P	**P**	**16 08 40.9**	**-0.9**
COLA				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
DL2	**Dalian**	**29.31**	**258**	P	**P**	**16 08 42.3**	**-0.8**
DL2				S	**S**	**16 13 35.5**	**+3.3**
DL2				AMB	AMB		
	comp=Z,20nm,0.4s,mb5.2						
DL2				LR	LR		
	comp=N,360nm,19.9s,MS4.2						
DL2				LR	LR		
	comp=E,540nm,19.6s,MS4.2						
DL2				LR	LR		
	comp=Z,680nm,18.6s,MS4.3						
ILAR	**Eielson Array**	**29.61**	**44**	P	**P**	**16 08 43.9**	**-1.6**
	comp=Z,15nm,0.7s,mb4.9,baz=262,slow=7.9,SNR=109						
ILAR				PcP	PcP	16 11 47.4	-2.3
	comp=Z,2.6nm,0.7s,baz=279,slow=3.3,SNR=5.6						
ILAR				LR	LR	16 21 40.2	
	comp=Z,552nm,19.1s,MS4.2,baz=283,slow=38						
MENT	**Mentasta**	**31.14**	**48**	*e*P	**P**	**16 08 58.0**	**-1.1**
DAWY	**Dawson**	**32.91**	**45**	*e*P	**P**	**16 09 13.6**	**-1.0**
ULN	**Ulaanbaatar**	**33.30**	**284**	*i* P	**P**	**16 09 16.5**	**-1.6**
SONM	**Songino Array**	**33.70**	**284**	P	**P**	**16 09 20.6**	**-1.0**
	comp=Z,4.4nm,0.4s,mb4.7,baz=62,slow=8.0,SNR=79						
SONM				PcP	PcP	16 12 00.7	-0.1
	comp=Z,18nm,0.8s,baz=70,slow=2.1,SNR=17						
SONM				ScP		16 15 41.3	
	comp=Z,1.5nm,0.8s,baz=75,slow=0.7,SNR=3.9						
SONM				LR	LR	16 24 37.6	
	comp=Z,3µm,18.2s,MS5.0,baz=314,slow=39						
TIA	**Tai'an**	**33.78**	**258**	P	**P**	**16 09 21.8**	**-0.5**
ZAK	**Zakamensk**	**34.39**	**290**	*e*P	**P**	**16 09 26.5**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
INK	**Inuvik**	**34.69**	**37**	P	**P**	**16 09 29.4**	**-0.4**
	comp=Z,36nm,0.9s,mb5.3,baz=290,slow=7.2,SNR=62						
INK				PcP	PcP	16 12 02.6	-0.8
	comp=Z,5.5nm,0.5s,baz=304,slow=3.8,SNR=5.0						
INK	**Inuvik**	**34.69**	**37**	*e*P	**P**	**16 09 29.3**	**-0.5**
	comp=Z,59nm,0.9s,mb5.5						
INK	**Inuvik**	**34.69**	**37**	P	**P**	**16 09 29.5**	**-0.3**
INK						16 12 02.6	
INK				pmax	pmax		
	comp=Z,36nm,0.9s						
SSE	**Sheshan**	**35.02**	**248**	P	**P**	**16 09 30.3**	**-2.8**
SSE				S	**S**	**16 14 59.8**	**-1.7**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
SSE				AMB	AMB		
	comp=Z,40nm,6.7s						
SSE				LR	LR		
	comp=N,250nm,27.4s,MS4.0						
SSE				LR	LR		
	comp=E,320nm,27.3s,MS4.0						
SSE				LR	LR		
	comp=Z,360nm,21.9s						
DLBC	**Dease Lake**	**38.80**	**52**	*e*P	**P**	**16 10 04.7**	**+0.2**
TATO	**Taipei**	**39.61**	**241**	*e*P	**P**	**16 10 13.2**	**+1.6**
	comp=Z,35nm,0.6s,mb5.3						
YHNB	**Yeheng**	**39.91**	**241**	*e*P	**P**	**16 10 16.5**	**+2.3**
GUMO	**Guam**	**40.40**	**202**	LR	LR	16 28 23.1	
	comp=Z,324nm,18.3s,MS4.2,baz=23,slow=38						
LZH	**Lanzhou**	**41.95**	**270**	⇑P	**P**	**16 10 31.0**	**+0.2**
LZH				AP	pP	16 10 40.5	-1.7
LZH				XP	sP	16 10 44.5	-2.7
LZH				SCS	ScS	16 20 21.5	-6.2
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,160nm,5.6s						
LZH				LR	LR		
	comp=N,2µm,13.8s						
LZH				LR	LR		
	comp=Z,2µm,16.2s,MS5.1						
ENH	**Enshi**	**42.49**	**259**	*e*P	**P**	**16 10 34.5**	**-0.7**
	comp=Z,27nm,0.4s,mb5.2						
ENH				*e*PcP	PcP	16 12 28.0	-0.1
NVS	**Novosibirsk**	**43.22**	**305**	⇑*i*P	**P**	**16 10 39.3**	**-1.6**
NVS				*i*		16 12 19.3	
NVS				*e*S	**S**	**16 16 56.2**	**-8.3**
NVS				pmax	pmax		
	comp=Z,34nm,1.3s,mb4.9						
NVS				pmax	pmax		
	comp=N,46nm,1.7s						
NVS				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.7						
NVS				pmax	pmax		
	comp=N,18nm,1.5s						
NVS				smax			
	comp=N,33nm,2.1s						
YKW3	**Yellowknife Ar**	**43.93**	**42**	*e*P	**P**	**16 10 46.4**	**-0.1**
YKA	**Yellowknife Ar**	**43.97**	**42**	P	**P**	**16 10 46.7**	**-0.1**
	comp=N,22nm,0.8s,mb4.9,baz=299,slow=8.2,SNR=49						
YKA				LR	LR	16 30 29.2	
	comp=N,552nm,21.1s,MS4.4,baz=275,slow=38						
YKA	**Yellowknife Ar**	**43.97**	**42**	P	**P**	**16 10 46.7**	**-0.1**
YKA				LR	LR	16 30 29.2	
RES	**Resolute Bay**	**44.15**	**22**	*e*P	**P**	**16 10 47.9**	**-0.3**
	comp=N,25nm,0.8s,mb5.0						
RES				*e*PcP	PcP	16 12 32.4	-0.7
RES	**Resolute Bay**	**44.15**	**22**	*e*P	**P**	**16 10 47.9**	**-0.3**
RES				*e*		16 12 32.4	
RES				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.0						
GZH	**Guangzhou**	**45.62**	**248**	P	**P**	**16 10 57.0**	**-3.6**
GZH				S	**S**	**16 17 31.0**	**-8.5**
GZH				LR	LR		
	comp=N,460nm,20.2s,MS4.5						
GZH				LR	LR		
	comp=E,320nm,19.9s,MS4.5						
GZH				LR	LR		
	comp=Z,500nm,23.6s,MS4.4						
WMQ	**Urumqi**	**46.86**	**290**	⇑*i*P	**P**	**16 11 09.8**	**-0.2**
WMQ				AP	pP	16 11 21.0	-0.5
WMQ				XP	sP	16 11 27.0	+0.6
WMQ				PCP	PcP	16 12 43.5	+0.6
WMQ				PCS		16 16 36.0	
WMQ				S	**S**	**16 17 56.5**	**-0.4**
WMQ				XS		16 18 16.5	
WMQ				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
WMQ				AMB	AMB		
	comp=Z,150nm,4.3s						
WMQ				LR	LR		
	comp=N,910nm,10.2s,MS5.3						
WMQ				LR	LR		
	comp=E,2µm,13.0s,MS5.3						
WMQ				LR	LR		
	comp=Z,1µm,15.4s,MS4.9						
GYA	**Guiyang**	**46.97**	**258**	P	**P**	**16 11 11.0**	**-0.1**
GYA				S	**S**	**16 17 57.0**	**-1.7**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.8						
GYA				AMB	AMB		
	comp=Z,170nm,4.7s						
GYA				LR	LR		
	comp=N,600nm,18.9s,MS4.7						
GYA				LR	LR		
	comp=E,510nm,17.1s,MS4.7						
GYA				LR	LR		
	comp=Z,350nm,22.2s						
KURK	**Kurchatov**	**47.80**	**302**	*e*P	**P**	**16 11 15.0**	**-2.4**
	comp=Z,40nm,0.6s,mb5.6						
KURK				*e*PcP	PcP	16 12 45.0	-1.2
KURK	**Kurchatov**	**47.80**	**302**	*e*P	**P**	**16 11 15.0**	**-2.4**
KURK				*e*		16 12 45.0	
KURK				pmax	pmax		
	comp=Z,40nm,0.6s,mb5.6						
MKAR	**Makanchi Array**	**48.13**	**296**	P	**P**	**16 11 17.9**	**-2.1**
	comp=Z,17nm,0.5s,mb5.3,baz=59,slow=6.3,SNR=228						
MKAR				ScP		16 16 38.1	
	comp=Z,2.9nm,1.0s,baz=45,slow=5.1,SNR=5.2						
MKAR				LR	LR	16 32 48.8	
	comp=Z,990nm,18.1s,MS4.8,baz=65,slow=38						
MKAR				PKKP	PKKP	16 33 59.6	+3.3
	comp=Z,0.4nm,1.0s,baz=207,slow=0.9,SNR=2.1						
EDM	**Edmonton**	**49.52**	**52**	*e*P	**P**	**16 11 30.4**	**-0.2**
EDM	**Edmonton**	**49.52**	**52**	*e*P	**P**	**16 11 30.6**	**0.0**
KMI	**Kunming**	**50.32**	**260**	P	**P**	**16 11 38.0**	**+0.9**
	comp=Z,16nm,1.0s,mb5.0						
KMI				pP	pP	16 11 47.3	-1.4
KMI				sP	sP	16 11 51.0	-2.5
KMI				PP	PP	16 13 34.5	+1.0
KMI				PPP	PPP	16 14 32.4	+1.3
KMI				PcS		16 16 52.0	
KMI				S	**S**	**16 18 47.9**	**+2.3**
KMI				PS	PS	16 19 00.3	+0.5
KMI				sS		16 19 03.6	
KMI				SS	SS	16 22 19.0	+2.5
KMI				SSS	SSS	16 23 50.7	+1.7
KMI				LR	LR		
	comp=Z,450nm,21.9s,MS4.4						
KMI	**Kunming**	**50.32**	**260**	P	**P**	**16 11 38.0**	**+0.9**
KMI				*SP	sP	16 11 51.0	-2.5
KMI						16 13 34.5	
KMI				PPP	PPP	16 14 32.4	+1.3
KMI				S	**S**	**16 18 47.9**	**+2.3**
KMI				PS	PS	16 19 00.3	+0.5
KMI				*SS		16 19 03.6	
KMI				SS	SS	16 22 19.0	+2.5
KMI				SSS	SSS	16 23 50.7	+1.7
KMI				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.0						
KMI				MLR	MLR		
	comp=Z,450nm,21.9s,MS4.4						
BVAR	**Borovoye Array**	**50.55**	**309**	P	**P**	**16 11 36.4**	**-2.1**
	comp=Z,39nm,0.7s,mb5.5,baz=55,slow=7.5,SNR=195						
BVAR				PcP	PcP	16 12 55.3	-0.8
	comp=Z,9.1nm,0.5s,baz=86,slow=2.5,SNR=9.9						
BVAR				PP	PP	16 13 33.3	-1.9
	comp=Z,5.7nm,0.7s,baz=62,slow=6.1,SNR=2.0						
BVAR				ScP		16 16 47.1	
	comp=Z,4.9nm,0.9s,baz=63,slow=3.3,SNR=7.0						
BRVK	**Borovoye**	**50.58**	**309**	*e*P	**P**	**16 11 36.4**	**-2.3**
	comp=Z,17nm,0.6s,mb5.2						
BRVK				*e*PcP	PcP	16 12 54.9	-1.4
BRVK	**Borovoye**	**50.58**	**309**	*e*P	**P**	**16 11 36.4**	**-2.3**
BRVK				*e*		16 12 54.9	
BRVK				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2						
NEW	**Newport**	**50.61**	**59**	*e*P	**P**	**16 11 38.4**	**-0.6**
	comp=Z,17nm,1.0s,mb4.9						
NEW				*e*pP	pP	16 11 50.6	+0.1
NEW	**Newport**	**50.61**	**59**	*e*P	**P**	**16 11 38.4**	**-0.6**
NEW				*e**PP	pP	16 11 50.7	+0.2
NEW				pmax	pmax		
	comp=Z,17nm,1.0s						
QIZ	**Qiongzhong**	**50.81**	**248**	P	**P**	**16 11 43.5**	**+2.6**
QIZ				S	**S**	**16 18 55.8**	**+3.3**
QIZ				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.4						
QIZ				LR	LR		
	comp=N,490nm,17.2s,MS4.7						
QIZ				LR	LR		
	comp=E,410nm,15.5s,MS4.7						
QIZ				LR	LR		
	comp=Z,420nm,15.9s,MS4.5						
QIZ	**Qiongzhong**	**50.81**	**248**	*e*P	**P**	**16 11 42.6**	**+1.7**
	comp=Z,60nm,1.0s,mb5.5						
DAG	**Danmarks Havn**	**51.14**	**359**	⇓*i*P	**P**	**16 11 41.5**	**-1.2**
	comp=Z,217nm,1.0s,mb6.0						
DAG	**Danmarks Havn**	**51.14**	**359**	⇓*i*P	**P**	**16 11 41.5**	**-1.2**
DAG				pmax	pmax		
	comp=Z,217nm,1.0s,mb6.0						
SVE	**Sverdlovsk**	**52.55**	**317**	*e*P	**P**	**16 11 52.3**	**-1.2**
SVE				*e*	pP	16 12 06.8	+1.7
SVE				*e*S	S	16 19 38.0	+22
SVE				pmax	pmax		
	comp=Z,40nm,1.8s,mb5.0						
SVE				MLR	MLR		
	comp=E,500nm,14.0s						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s,MS5.0						
MOD	**Modoc**	**52.90**	**67**	*e*P	**P**	**16 11 56.8**	**+0.5**
	comp=Z,38nm,1.0s,mb5.3						
LVZ	**Lovozero**	**53.23**	**337**	*e*P	**P**	**16 11 56.7**	**-1.7**
LVZ				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.1						
LVZ				MLR	MLR		
	comp=N,667nm,15.0s,MS4.9						
LVZ				MLR	MLR		
	comp=E,491nm,16.0s,MS4.9						
WVOR	**Wild Horse Val**	**53.49**	**66**	*e*P	**P**	**16 12 00.7**	**0.0**
	comp=E,17nm,1.1s,mb4.9						
WVOR	**Wild Horse Val**	**53.49**	**66**	*e*P	**P**	**16 12 01.7**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
CHMT	**Chamberlain Mo**	**53.49**	**58**	*e*P	**P**	**16 12 00.3**	**-0.3**
ARU	**Arti**	**53.68**	**317**	*e*P	**P**	**16 11 59.4**	**-2.5**
	comp=Z,35nm,0.5s,mb5.5						
ARU	**Arti**	**53.68**	**317**	*c* *i*P	**P**	**16 11 59.5**	**-2.4**
ARU				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.4						
ARU				MLR	MLR		
	comp=Z,500nm,15.0s,MS4.7						
FFC	**Flin Flon**	**53.81**	**45**	*e*P	**P**	**16 12 02.4**	**-0.5**
	comp=Z,31nm,0.9s,mb5.2						
FFC				*e*pP	pP	16 12 15.1	+0.5
FFC	**Flin Flon**	**53.81**	**45**	*e*P	**P**	**16 12 02.4**	**-0.5**
FFC				*e**PP	pP	16 12 15.1	+0.5
FFC				pmax	pmax		
	comp=Z,31nm,0.9s,mb5.2						
ARCES	**ARCESS Array B**	**53.87**	**342**	P	**P**	**16 12 00.8**	**-2.3**
	comp=Z,13nm,0.6s,mb5.0,baz=50,slow=7.5,SNR=57						
ARCES				LR	LR	16 39 08.3	
	comp=Z,540nm,18.9s,MS4.6,baz=21,slow=41						
ARCES	**ARCESS Array B**	**53.87**	**342**	P	**P**	**16 12 00.8**	**-2.3**
ARCES				LR	LR	16 39 08.3	
ARE0	**ARCESS Array S**	**53.87**	**342**	*e*P	**P**	**16 12 00.7**	**-2.4**
OHCM	**Honcut**	**53.92**	**70**	*e*P	**P**	**16 12 04.2**	**+0.3**
OHCM				*e*pP	pP	16 12 14.9	-0.7
LSA	**Lhasa**	**54.09**	**273**	P	**P**	**16 12 05.5**	**+0.2**
LSA	**Lhasa**	**54.09**	**273**	*e*P	**P**	**16 12 05.5**	**+0.3**
	comp=Z,12nm,0.6s,mb5.0						
LSA				*e*pP	pP	16 12 18.1	+1.1
LSA	**Lhasa**	**54.09**	**273**	*e*P	**P**	**16 12 05.5**	**+0.2**
LSA				*e**PP	pP	16 12 18.1	+1.1
LSA				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
TKM2	**Tokmak 2**	**54.27**	**296**	P	**P**	**16 12 04.8**	**-1.6**
	SNR=12						
FCC	**Fort Churchill**	**54.30**	**38**	*e*P	**P**	**16 12 05.5**	**-0.9**
	comp=Z,51nm,0.6s,mb5.6						
FCC	**Fort Churchill**	**54.30**	**38**	P	**P**	**16 12 05.7**	**-0.7**
FCC				pmax	pmax		
	comp=Z,51nm,0.6s,mb5.6						
HRY	**Holter Researc**	**54.36**	**58**	*e*P	**P**	**16 12 07.1**	**+0.1**
USP	**Ospenovka**	**54.64**	**297**	P	**P**	**16 12 07.5**	**-1.6**
	SNR=26						
CHMS	**Chumysh**	**54.68**	**296**	P	**P**	**16 12 07.7**	**-1.7**
	SNR=7.7						
SUMG	**Summit**	**54.74**	**7**	*e*P	**P**	**16 12 08.9**	**-0.5**
	comp=Z,241nm,0.8s,mb6.3						
KTK1	**Kautokeino**	**54.75**	**342**	*e*P	**P**	**16 12 08.4**	**-1.1**
KTK1				AMb	AMB	16 12 12.5	
	comp=Z,101nm,1.3s,mb5.7						
KBK	**Karagaybulak**	**54.80**	**296**	P	**P**	**16 12 08.7**	**-1.6**
	SNR=15						
DLMT	**Dillon**	**54.85**	**60**	*e*P	**P**	**16 12 10.3**	**-0.3**
	comp=Z,46nm,1.5s,mb5.3						
DLMT				*e*pP	pP	16 12 22.1	-0.3
FRU	**Bishkek**	**54.86**	**296**	*e*P	**P**	**16 12 09.0**	**-1.7**
FRU				pmax	pmax		
	comp=Z,37nm,1.4s,mb5.2						
TRO	**Tromso**	**54.97**	**344**	*e*P	**P**	**16 12 08.3**	**-2.8**
TRO				AMb	AMB	16 12 18.2	
	comp=Z,66nm,1.5s,mb5.4						
AAK	**Ala-Archa**	**55.06**	**296**	P	**P**	**16 12 10.5**	**-1.7**
	SNR=24						
AAK	**Ala-Archa**	**55.06**	**296**	*e*P	**P**	**16 12 09.4**	**-2.8**
	comp=Z,16nm,0.8s,mb5.1						
AAK				*e*pP	pP	16 12 22.1	-1.9
AAK	**Ala-Archa**	**55.06**	**296**	*e*P	**P**	**16 12 09.4**	**-2.8**
AAK				*e**PP	pP	16 12 22.1	-1.9
AAK				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.1						
HLID	**Hailey**	**55.07**	**62**	*e*P	**P**	**16 12 12.9**	**+0.7**
	comp=Z,14nm,1.0s,mb4.9						
BOZ	**Bozeman (W)**	**55.17**	**59**	*e*P	**P**	**16 12 13.0**	**+0.1**
	comp=Z,9.7nm,0.7s,mb4.9						
BOZ	**Bozeman (W)**	**55.17**	**59**	*e*P	**P**	**16 12 13.0**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
CMB	**Columbia Colle**	**55.43**	**71**	*e*P	**P**	**16 12 15.6**	**+0.7**
	comp=Z,18nm,1.0s,mb5.0						
CMB	**Columbia Colle**	**55.43**	**71**	P	**P**	**16 12 16.1**	**+1.2**
CMB				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.1						
EKS2	**Erkin-Say**	**55.44**	**297**	P	**P**	**16 12 13.6**	**-1.4**
	SNR=9.8						
QLMT	**Earthquake Lak**	**55.82**	**59**	*e*P	**P**	**16 12 18.1**	**+0.5**
AML	**Almayashu**	**55.84**	**296**	P	**P**	**16 12 16.6**	**-1.2**
	SNR=13						
YMR	**Madison River**	**56.18**	**59**	*e*P	**P**	**16 12 20.8**	**+0.7**
	comp=Z,18nm,0.8s,mb5.2						
YMR				*e*pP	pP	16 12 30.1	-1.9
KSH	**Kashi**	**56.34**	**293**	*e*P	**P**	**16 12 21.0**	**-0.4**
KSH				*e*AP	pP	16 12 33.3	+0.1
KSH				*e*XP	sP	16 12 39.0	+1.1
KSH				*e*PCP	PcP	16 13 18.0	-0.2
KSH				*e*PP	PP	16 14 27.0	-1.5
KSH				*e*PPP	PPP	16 15 43.0	-3.0
KSH				*e*SCP		16 17 12.0	
KSH				*e*PCS		16 17 17.0	
KSH				*e*S	**S**	**16 20 02.8**	**-4.3**
KSH				*e*PS	PS	16 20 22.0	-2.8
KSH				*e*XS		16 20 25.3	
KSH				*e*SCS	ScS	16 22 02.0	-1.5
KSH				*e*SS	SS	16 23 50.0	-4.6
KSH				AMB	AMB		
	comp=Z,220nm,4.0s						
KSH				LR	LR		
	comp=N,760nm,10.3s						
KSH				LR	LR		
	comp=E,2µm,15.5s						
NVAR	**Mina Array Bea**	**56.36**	**69**	P	**P**	**16 12 22.7**	**+1.1**
	comp=E,8.6nm,0.8s,mb4.8,baz=303,slow=5.9,SNR=42						
NVAR				LR	LR	16 32 25.8	
	comp=E,189nm,22.0s,MS4.1,baz=90,slow=32						
NVAR	**Mina Array Bea**	**56.36**	**69**	P	**P**	**16 12 22.7**	**+1.1**
NVAR				LR	LR	16 32 25.8	
YFT	**Old Faithful**	**56.39**	**59**	*e*P	**P**	**16 12 19.7**	**-2.0**
MNV	**Mina**	**56.44**	**69**	*e*P	**P**	**16 12 22.9**	**+0.8**
	comp=E,27nm,1.1s,mb5.2						
MNV				*e*pP	pP	16 12 35.3	+1.4
MNV	**Mina**	**56.44**	**69**	*e*P	**P**	**16 12 22.9**	**+0.7**
MNV				*e**PP	pP	16 12 35.3	+1.3
MNV				pmax	pmax		
	comp=Z,27nm,1.1s,mb5.2						
ELK	**Elko**	**56.51**	**65**	*e*P	**P**	**16 12 23.4**	**+0.8**
	comp=Z,14nm,0.9s,mb5.0						
ELK				*e*pP	pP	16 12 33.3	-1.2
ELK	**Elko**	**56.51**	**65**	*e*P	**P**	**16 12 23.4**	**+0.8**
ELK				*e**PP	pP	16 12 33.3	-1.1
ELK				pmax	pmax		
	comp=Z,14nm,0.9s						
SHL	**Shillong**	**56.62**	**269**	*e*P	**P**	**16 12 22.3**	**-1.3**
IMW	**Indian Meadow**	**56.71**	**60**	*e*P	**P**	**16 12 25.0**	**+1.0**
	comp=Z,19nm,0.8s,mb5.2						
MOOW	**Moose Ponds**	**56.92**	**60**	*e*P	**P**	**16 12 25.8**	**+0.3**
	comp=Z,7.7nm,0.8s,mb4.8						
MTUM	**Tungsten Hills**	**56.95**	**70**	*e*P	**P**	**16 12 23.2**	**-2.6**
TPAW	**Teton Pass**	**56.98**	**60**	*e*P	**P**	**16 12 26.4**	**+0.4**
	comp=Z,26nm,1.1s,mb5.2						
TPAW				*e*pP	pP	16 12 38.2	+0.4
KKTK	**Khon Kaen**	**57.00**	**253**	P	**P**	**16 12 26.0**	**-0.5**
	comp=Z,309nm,1.0s,mb6.3						
LOHW	**Long Hollow**	**57.08**	**60**	*e*P	**P**	**16 12 27.3**	**+0.6**
	comp=Z,16nm,1.0s,mb5.0						
SNOW	**Snow King Moun**	**57.11**	**60**	*e*P	**P**	**16 12 27.7**	**+0.8**

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      comp=Z,26nm,1.1s,mb5.2
REDW  Red Top Meadow  57.12  60 eP     P       16 12 27.9 +0.9
      comp=Z,34nm,1.1s,mb5.3
HVU   Hansel Valley   57.17  63 eP     P       16 12 27.5 +0.2
      comp=Z,21nm,1.0s,mb5.1
HVU   Hansel Valley   57.17  63  P     P       16 12 28.4 +1.1
HVU                              pmax  pmax
      comp=Z,21nm,1.0s,mb5.1
LOF   Lofoten         57.18 346⇓iP     P       16 12 27.0 -0.1
LOF                              AMb   AMB     16 12 28.9
      comp=Z,271nm,1.2s,mb6.2
TPH   Tonopah         57.22  69 eP     P       16 12 28.6 +0.8
      comp=Z,35nm,1.1s,mb5.3
TPH   Tonopah         57.22  69  P     P       16 12 29.2 +1.5
TPH                              pmax  pmax
      comp=Z,35nm,1.0s,mb5.3
LAO   LASA Array      57.24  55 eP     P       16 12 27.9 +0.1
      comp=Z,24nm,0.8s,mb5.3
CHG   Chiang Mai      57.38 258 ⇑P     P       16 12 29.4 +0.3
      comp=Z,31nm,0.6s,mb5.5
KLMR  Klimovskoe      57.40 330 eP     P       16 12 26.6 -2.1
KLMR                             pmax  pmax
      comp=Z,90nm,1.9s,mb5.5
KLMR                             pmax  pmax
      comp=Z,800nm,10.8s
KLMR                             MLR   MLR
      comp=Z,3µm,21.0s,MS5.3
HWUT  Hardware Ranch  57.94  62 eP     P       16 12 33.5 +0.8
      comp=Z,21nm,0.8s,mb5.2
AKTK  Aktyubinsk      58.04 312  P     P       16 12 30.8 -2.5
AKTO  Aktyubinsk      58.04 312  P     P       16 12 30.8 -2.5
      comp=Z,10nm,0.4s,mb5.2,baz=58,slow=7.1,SNR=51
AKTO  Aktyubinsk      58.04 312  P     P       16 12 30.8 -2.5
AKTO                             pmax  pmax
      comp=Z,11nm,0.4s,mb5.2
JOF   Joensuu         58.08 335 ep     P       16 12 31.2 -2.2
      comp=Z,16nm,0.4s,mb5.4
PDAR  Pinedale Array  58.22  60  P     P       16 12 35.0 +0.3
      comp=Z,17nm,0.8s,mb5.1,baz=315,slow=2.1,SNR=31
DUG   Dugway          58.24  64 eP     P       16 12 35.4 +0.6
      comp=Z,26nm,1.0s,mb5.2
DUG   Dugway          58.24  64  P     P       16 12 35.9 +1.1
DUG                              pmax  pmax
      comp=Z,26nm,1.0s,mb5.2
MELSS Ber_school_2    58.32 345⇓iP     P       16 12 33.6 -1.4
CTU   Camp Tracy      58.48  63 eP     P       16 12 35.8 -0.7
      comp=Z,18nm,0.9s,mb5.1
CTU                             epP    pP      16 12 47.0 -1.3
TPNV  Topopah Spring  58.56  69 eP     P       16 12 38.1 +1.1
      comp=Z,21nm,0.9s,mb5.2
TPNV  Topopah Spring  58.56  69 eP     P       16 12 38.1 +1.0
TPNV                             pmax  pmax
      comp=Z,21nm,0.9s,mb5.2
GUN   Gumba           58.59 276 eP     P       16 12 36.3 -1.2
      comp=Z,66nm,0.4s,mb6.0
SFJD  Kangerlussuaq   58.82  13 eP     P       16 12 36.6 -1.9
SFJD  Kangerlussuaq   58.82  13  P     P       16 12 37.0 -1.5
MOR8  Moi Rana        58.84 344 eP     P       16 12 35.3 -3.3
MOR8                             AMb   AMB     16 12 37.5
      comp=Z,88nm,1.3s,mb5.6
STOK  Stokkvaagen     58.92 345 eP     P       16 12 37.5 -1.7
STOK                             AMb   AMB     16 12 41.2
      comp=Z,78nm,1.3s,mb5.6
DAU   Daniels Canyon  58.94  63 eP     P       16 12 40.6 +0.9
DAU   Daniels Canyon  58.94  63  P     P       16 12 41.1 +1.4
MPU   Maple Canyon    59.01  64 eP     P       16 12 40.6 +0.4
      comp=Z,17nm,0.8s,mb5.1
KKN   Kakani          59.04 276 eP     P       16 12 39.6 -1.0
      comp=Z,72nm,0.5s,mb6.0
KKN   Kakani          59.04 276 eP     P       16 12 39.6 -1.0
KKN                              pmax  pmax
      comp=Z,36nm,0.5s,mb5.7
NST   Nakhon Sawan    59.11 255  P     P       16 12 42.0 +0.8
PKI   Pulchoki        59.12 276 eP     P       16 12 40.0 -1.2
      comp=Z,41nm,0.5s,mb5.8
PKI   Pulchoki        59.12 276 eP     P       16 12 40.0 -1.2
PKI                              pmax  pmax
      comp=Z,21nm,0.5s,mb5.4
DMN   Daman           59.28 276 eP     P       16 12 41.4 -0.9
      comp=Z,80nm,0.5s,mb6.0
GKN   Gorkha          59.28 277 eP     P       16 12 40.0 -2.3
      comp=Z,31nm,0.4s,mb5.7
ARUT  Antelope Range  59.56  67 eP     P       16 12 44.6 +0.5
ARUT  Antelope Range  59.56  67  P     P       16 12 44.9 +0.8
ULM   Lac du Bonnet   59.61  46  P     P       16 12 43.6 -0.6
      comp=Z,15nm,0.4s,mb5.3,baz=317,slow=6.9,SNR=35
ULM                              LR    LR      16 39 34.4
      comp=Z,443nm,20.1s,MS4.6,baz=310,slow=37
TMUT  Trail Mountain  59.75  64  P     P       16 12 46.3 +1.0
MSU   Marysvale       59.76  65 eP     P       16 12 46.2 +0.8
MSU   Marysvale       59.76  65  P     P       16 12 46.4 +1.0
KAF   Kangasniemi     60.01 337 ep     P       16 12 44.6 -2.2
      comp=Z,21nm,0.5s,mb5.4
KAF   Kangasniemi     60.01 337 eP     P       16 12 44.6 -2.2
KAF                              pmax  pmax
      comp=Z,21nm,0.5s,mb5.4
KOLN  Koldanda        60.08 278 eP     P       16 12 46.4 -1.4
      comp=Z,25nm,0.4s,mb5.5
RSSD  Black Hills     60.14  56 eP     P       16 12 47.9  0.0
RSSD  Black Hills     60.14  56 eP     P       16 12 48.1 +0.2
SRU   San Rafael      60.26  64 eP     P       16 12 49.1 +0.3
      comp=Z,29nm,0.8s,mb5.4
SRU   San Rafael      60.26  64  P     P       16 12 49.5 +0.7
SRU                              pmax  pmax
      comp=Z,29nm,0.8s,mb5.4
NEN   Nelson          60.28  69 eP     P       16 12 49.5 +0.5
NEN                             epP    pP      16 13 02.2 +1.4
LDFC  Landfair        60.53  70 eP     P       16 12 50.8 +0.1
FINES FINESS Array B  60.65 336  P     P       16 12 49.2 -1.9
      comp=Z,27nm,0.6s,mb5.5,baz=38,slow=8.1,SNR=222
FINES                            LR    LR      16 42 49.9
      comp=Z,987nm,20.8s,MS4.9,baz=359,slow=40
FINES FINESS Array B  60.65 336 i P    P       16 12 49.2 -1.9
FINES                            pmax  pmax
      comp=Z,27nm,0.6s
NSS   Namsos          60.76 345⇑iP     P       16 12 49.1 -2.7
NSS                              AMb   AMB     16 12 50.9
      comp=Z,89nm,1.0s,mb5.9
HNR   Honiara         61.54 179  LR    LR      16 34 53.2
      comp=Z,500nm,21.3s,MS4.6,baz=12,slow=31
PV10  Paradox Valley  61.59  63 eP     P       16 12 58.9 +1.1
BOK   Bokaro          61.60 273 eP     P       16 12 56.5 -1.5
BOK                              AMb   AMB     16 12 58.5
      comp=Z,7.1nm,0.3s,mb5.3
NNT   Nongplab        61.78 253  P     P       16 13 00.4 +1.0
MOS   Moscow          62.07 327 eP     P       16 12 58.0 -2.8
MOS                              pmax  pmax
      comp=Z,60nm,0.6s,mb5.9
SMCO  Snowmass        62.14  61 eP     P       16 13 02.0 +0.5
      comp=Z,33nm,1.1s,mb5.4
WUAZ  Wupatki         62.35  67 eP     P       16 13 03.3 +0.4
      comp=Z,41nm,1.3s,mb5.4
PMG   Port Moresby    62.41 194  P     P       16 13 02.6 -1.0
      comp=Z,19nm,1.0s,mb5.2
PMG   Port Moresby    62.41 194  P     P       16 13 02.6 -1.0
PMG                              pmax  pmax
      comp=Z,19nm,1.0s
ISCO  Idaho Springs   62.42  60 eP     P       16 13 04.2 +0.8
      comp=Z,30nm,0.9s,mb5.4
ISCO  Idaho Springs   62.42  60 eP     P       16 13 05.7 +2.4
ISCO                             pmax  pmax
      comp=Z,30nm,0.9s,mb5.4
OBN   Obninsk         62.93 327⇓iP     P       16 13 04.7 -1.9
OBN                              LR    LR
      comp=Z,700nm,16.0s,MS4.9
OBN   Obninsk         62.93 327⇓eP     P       16 13 04.8 -1.8
OBN                                            16 13 42.0
OBN                             i S    S       16 21 28.7 -3.1
OBN                              pmax  pmax
      comp=Z,54nm,1.3s,mb5.5
OBN                              MLR   MLR
      comp=Z,700nm,16.0s,MS4.9
VSU   Vasula          63.05 334⇓iP     P       16 13 05.5 -1.8
EYMN  Ely             63.25  45 eP     P       16 13 07.5 -1.2
      comp=Z,27nm,0.9s,mb5.4
MOL   Molde           63.30 346 eP     P       16 13 07.3 -1.6
MOL                              AMb   AMB     16 13 10.9
      comp=Z,144nm,1.6s,mb5.9
MOL                             epP    pP      16 13 19.9 -0.8
DOMB  Dombas          63.56 345⇑iP     P       16 13 09.1 -1.3
DOMB                             AMb   AMB     16 13 10.0
      comp=Z,114nm,0.8s,mb6.0
SDCO  Great Sand Dun  63.97  61 eP     P       16 13 13.1 -0.4
      comp=Z,16nm,1.1s,mb5.0
NB2   NORSAR Subarra  64.14 343  P     P       16 13 13.2 -1.0
      comp=Z,66nm,0.6s,mb5.8,baz=22,slow=6.5
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NB2   NORSAR Subarra  64.14 343  P     P       16 13 13.2 -1.0
      baz=22,slow=6.9
NB2   NORSAR Subarra  64.14 343  P     P       16 13 13.1 -1.1
NOA   NORSAR Array B  64.14 343  P     P       16 13 13.0 -1.2
      comp=Z,56nm,0.5s,mb5.8,baz=21,slow=6.7,SNR=287
NOA                              LR    LR      16 46 58.9
      comp=Z,258nm,18.3s,MS4.5,baz=25,slow=42
NOA   NORSAR Array B  64.14 343  P     P       16 13 13.0 -1.2
NOA                              LR    LR      16 46 58.9
VRHR  Novokhopersk    64.38 322 eP     P       16 13 21.0 +5.1
VRHR                            ePPP   PPP     16 17 08.7 -3.8
VRHR                             pmax  pmax
      comp=N,10.0nm,0.5s
VRHR                             pmax  pmax
      comp=Z,20nm,0.5s,mb5.4
VRHR                             pmax  pmax
      comp=E,10.0nm,0.4s
VRHR                             MLR   MLR
      comp=Z,1µm,18.0s,MS5.1
VRHR                             MLR   MLR
      comp=N,1µm,22.0s,MS5.2
VRHR                             MLR   MLR
      comp=E,2µm,22.0s,MS5.2
NAO01 NORSAR Array S  64.39 344 eP     P       16 13 14.4 -1.4
      comp=E,15nm,0.4s,mb5.4
NAO   NORSAR Subarra  64.41 344  P     P       16 13 13.2 -2.8
      comp=E,66nm,0.6s,mb5.8
NAO   NORSAR Subarra  64.41 344  P     P       16 13 13.2 -2.8
NAO                              pmax  pmax
      comp=Z,66nm,0.6s,mb5.8
HFA0  Hagfors New Ar  64.53 342  P     P       16 13 14.9 -1.8
HFS   Hagfors         64.54 342  P     P       16 13 15.4 -1.4
      comp=Z,61nm,0.4s,mb6.0,baz=34,slow=5.3,SNR=413
FOO   Floro           64.59 347 eP     P       16 13 16.4 -0.7
FOO                              AMb   AMB     16 13 24.7
      comp=Z,87nm,1.6s,mb5.5
TUC   Tucson          65.01  69 eP     P       16 13 20.8 +0.4
      comp=Z,9.6nm,1.2s,mb4.7
TUC   Tucson          65.01  69  P     P       16 13 21.2 +0.8
TUC                              pmax  pmax
      comp=Z,10.0nm,1.2s,mb4.7
KSM   Kuching         65.09 236 eP     P       16 13 23.3 +2.1
SUE   Sulen           65.14 347 eP     P       16 13 19.7 -1.0
VRSR  Storozhevoye    65.19 323 eP     P       16 13 20.0 -1.2
VRSR                             pmax  pmax
      comp=E,3.0nm,0.9s
VRSR                             pmax  pmax
      comp=Z,6.0nm,0.9s,mb4.6
VRSR                             pmax  pmax
      comp=N,3.0nm,0.6s
ANMO  Albuquerque     65.50  64 eP     P       16 13 24.0 +0.5
      comp=N,9.8nm,0.9s,mb4.8
ANMO  Albuquerque     65.50  64  P     P       16 13 24.3 +0.8
ANMO                             pmax  pmax
      comp=Z,10.0nm,0.9s
LAZ   Ladron          65.53  65 eP     P       16 13 25.0 +1.4
SNG   Songkhla        65.62 249  P     P       16 13 26.0 +1.5
ASK   Askoy           65.64 346 eP     P       16 13 23.4 -0.5
BER   Bergen          65.71 346 eP     P       16 13 23.6 -0.7
BER                              AMb   AMB     16 13 25.4
      comp=Z,171nm,1.2s,mb6.0
KONO  Kongsberg       65.73 344 eP     P       16 13 22.7 -1.8
      comp=Z,116nm,1.3s,mb5.8
KONO  Kongsberg       65.73 344 eP     P       16 13 22.7 -1.8
KONO                             pmax  pmax
      comp=Z,116nm,1.3s,mb5.8
LENM  Lemitar         65.80  65 eP     P       16 13 26.2 +0.8
EGD   Espegrend       65.83 346⇓iP     P       16 13 24.7 -0.4
EGD                              AMb   AMB     16 13 26.5
      comp=Z,217nm,1.5s,mb6.0
LPM   Los Pinos Moun  65.88  65 eP     P       16 13 26.5 +0.6
BNM   Barren Site     66.00  65 eP     P       16 13 27.5 +0.9
CBKS  Cedar Bluff     66.22  57 eP     P       16 13 26.7 -1.3
      comp=Z,20nm,0.6s,mb5.3
CBKS  Cedar Bluff     66.22  57 eP     P       16 13 26.7 -1.3
CBKS                             pmax  pmax
      comp=Z,20nm,0.6s,mb5.3
AJM   Ajmer           66.43 283 eP     P       16 13 26.5 -3.0
BLS5  Blasjo          66.46 345⇑iP     P       16 13 29.0 -0.1
BLS5                             AMb   AMB     16 13 29.8
      comp=Z,50nm,1.0s,mb5.5
SCHQ  Schefferville   66.48  27  P     P       16 13 28.2 -1.1
      comp=Z,29nm,0.9s,mb5.3,baz=349,slow=5.0,SNR=32
SCHQ                             LR    LR      16 46 38.7
      comp=Z,381nm,19.0s,MS4.6,baz=58,slow=40
SCHQ  Schefferville   66.48  27 eP     P       16 13 28.0 -1.3
      comp=Z,31nm,1.0s,mb5.3
BHPL  Bhopal          67.17 279 eP     P       16 13 32.4 -1.8
BHPL                             AMb   AMB     16 13 35.1
      comp=Z,30nm,0.9s,mb5.3
SNART Snartemo        67.38 345 eP     P       16 13 34.3 -0.6
SNART                            AMb   AMB     16 13 36.5
      comp=Z,109nm,1.7s,mb5.6
SUW   Suwalki         67.92 334 eP     P       16 13 36.9 -1.4
SUW                              MLR   MLR     16 44 56.7
      comp=Z,2µm,24.4s,MS5.1
SUW   Suwalki         67.92 334 eP     P       16 13 36.9 -1.5
SUW   Suwalki         67.92 334  P     P       16 13 36.8 -1.6
SUW                              pmax  pmax
      comp=Z,120nm,0.9s,mb5.9
MNTX  Cornudas Mount  68.53  66 eP     P       16 13 43.1 +0.6
      comp=Z,9.9nm,0.8s,mb4.8
MUD   Monsted U'grnd  68.83 343⇑iP     P       16 13 44.0  0.0
      comp=Z,57nm,0.6s,mb5.7
MUD   Monsted U'grnd  68.83 343⇑iP     P       16 13 44.0  0.0
MUD                              pmax  pmax
      comp=Z,57nm,0.6s,mb5.7
COP   Copenhagen      68.93 341⇑iP     P       16 13 44.5 -0.1
      comp=Z,139nm,0.6s,mb6.1
      comp=Z,210nm,18.0s
COP   Copenhagen      68.93 341⇑iP     P       16 13 44.5 -0.1
COP                              pmax  pmax
      comp=Z,139nm,0.6s,mb6.1
COP                              MLR   MLR
      comp=Z,210nm,18.0s,MS4.4
BSD   Bornholm Skovb  68.94 339 i P    P       16 13 44.0 -0.7
      comp=Z,218nm,0.6s,mb6.3
BSD   Bornholm Skovb  68.94 339 i P    P       16 13 44.0 -0.7
BSD                              pmax  pmax
      comp=Z,218nm,0.6s,mb6.3
AKASG Malin Array Be  69.05 329  P     P       16 13 43.6 -1.8
      comp=Z,33nm,0.4s,mb5.6,baz=30,slow=6.3,SNR=193
KIEV  Kiev            69.06 329  P     P       16 13 43.0 -2.5
KIV   Kislovodsk      69.71 317 eP     P       16 13 48.8 -0.8
      comp=Z,22nm,0.6s,mb5.3
KIV   Kislovodsk      69.71 317 eP     P       16 13 49.1 -0.5
KIV                              pmax  pmax
      comp=Z,17nm,0.6s,mb5.2
KIV                              MLR   MLR
      comp=Z,600nm,19.0s,MS4.9
RGN   Rugen           69.81 340 eP     P       16 13 50.0  0.0
      comp=Z,194nm,0.7s,mb6.1
WMOK  Wichita Mounta  69.81  59 eP     P       16 13 50.0 -0.3
      comp=Z,29nm,0.9s,mb5.2
WMOK  Wichita Mounta  69.81  59  P     P       16 13 50.2 -0.2
WMOK                             pmax  pmax
      comp=Z,29nm,1.0s,mb5.2
HYB   Hyderabad       70.89 274 i P    P       16 13 56.5 -0.7
      comp=Z,30nm,1.0s,mb5.2
HYB   Hyderabad       70.89 274 eP     P       16 13 56.5 -0.7
      comp=Z,30nm,1.0s,mb5.2
HYB   Hyderabad       70.89 274 eP     P       16 13 56.5 -0.7
HYB                              pmax  pmax
      comp=Z,30nm,1.0s,mb5.2
BSEG  Bad Segeberg    71.00 341 eP     P       16 13 57.4 +0.1
LTX   Lajitas         71.28  66 eP     P       16 13 59.9 +0.5
      comp=Z,18nm,0.7s,mb5.1
LTX   Lajitas         71.28  66 eP     P       16 13 59.9 +0.5
LTX                              pmax  pmax
      comp=Z,18nm,0.7s,mb5.1
TXAR  Lajitas Array   71.28  66  P     P       16 14 00.0 +0.6
      comp=Z,8.4nm,0.5s,mb4.9,baz=299,slow=4.8,SNR=122
TXAR                             PKKPbc        16 33 49.5
      comp=Z,1.0nm,1.1s,baz=106,slow=9.1,SNR=3.9
TXAR  Lajitas Array   71.28  66  P     P       16 14 00.0 +0.6
TXAR                             PKKPbc        16 33 49.5
LVV   L'vov           71.42 331 i P    P       16 13 58.8 -1.0
FVM   French Village  71.49  51 eP     P       16 13 59.7 -0.8
      comp=Z,50nm,1.3s,mb5.3
FVM   French Village  71.49  51  P     P       16 14 00.0 -0.5
FVM                              pmax  pmax
      comp=Z,50nm,1.3s,mb5.3
RUE   Ruedersdorf     71.64 339 eP     P       16 14 01.1  0.0
      comp=Z,257nm,1.1s,mb6.1
EKA   Eskdalemuir Ar  71.72 350  P     P       16 14 00.9 -0.6
      comp=Z,13nm,0.4s,mb5.2,baz=15,slow=5.1,SNR=120
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KWP   Kalwaria        71.97 332 eP     P       16 14 03.2 +0.1
KWP                              MLR   MLR     16 46 56.8
      comp=Z,2µm,25.7s,MS5.2
KWP   Kalwaria        71.97 332 eP     P       16 14 03.2 +0.1
KIS   Kishinev        72.40 327 eP     P       16 14 05.0 -0.7
KIS                             e              16 24 10.0
KIS                              MLR   MLR
      comp=N,600nm,17.0s
KIS                              MLR   MLR
      comp=Z,700nm,17.0s,MS5.0
KIS                              MLR   MLR
      comp=Z,1µm,16.0s
KSP   Ksiaz           72.57 337 eP     P       16 14 06.6 +0.1
KSP                              MLR   MLR     16 47 04.4
      comp=Z,2µm,25.5s,MS5.3
KSP   Ksiaz           72.57 337⇑iP     P       16 14 06.4 -0.1
KSP                              LR    LR
      comp=Z,2µm,25.5s,MS5.3
STHS  Stebnicka Huta  72.58 333 i P    P       16 14 06.9 +0.3
IAS   Iasi            72.65 328  P     P       16 14 06.6 -0.5
KOLS  Kolonicke sedl  72.72 332 i P    P       16 14 07.3 -0.2
WIT   Witteveen       72.75 343⇑eP     P       16 14 08.6 +1.0
      comp=Z,585nm,0.7s
RAC   Raciborz        72.79 335 eP     P       16 14 08.1 +0.2
RAC                              LMN           16 49 30.8
RAC                              MLR   MLR     16 49 46.0
RAC                              LME           16 49 54.1
      comp=Z,1µm,19.0s
RAC   Raciborz        72.79 335 eP     P       16 14 08.1 +0.2
RAC                              LR    LR
      comp=Z,2µm,19.9s,MS5.4
NIE   Niedzica        72.83 333⇑iP     P       16 14 08.5 +0.4
CLL   Collm           72.91 339 ⇑P     P       16 14 08.0 -0.5
      comp=Z,logA/T=2.1,mb5.8
CLL                             i              16 14 11.5
CLL                             i *PP  pP      16 14 20.0 -0.6
CLL   Collm           72.91 339⇑iP     P       16 14 08.0 -0.5
      comp=Z,146nm,1.1s,mb5.8
CLL   Collm           72.91 339⇑iP     P       16 14 08.0 -0.5
CLL                              pmax  pmax
      comp=Z,146nm,1.1s,mb5.8
UPC   Upice           72.95 337 eP     P       16 14 08.7 -0.1
CLZ   Clausthal       72.97 341 eP     P       16 14 09.1 +0.2
      comp=Z,193nm,1.3s,mb5.9
CLZ   Clausthal       72.97 341 eP     P       16 14 09.1 +0.2
CLZ                              pmax  pmax
      comp=Z,193nm,1.3s,mb5.9
FRNY  Flat Rock       72.98  36 eP     P       16 14 07.8 -1.4
CRVS  Cervenica-Dubn  72.98 333 i P    P       16 14 08.9 -0.1
DPC   Dobruska-Polom  73.02 336 eP     P       16 14 09.6 +0.4
BURAR Bucovina Array  73.02 330 ⇑P     P       16 14 08.8 -0.5
BURAR Bucovina Array  73.02 330 ⇑P     P       16 14 08.8 -0.5
OKC   Ostrava-Krasne  73.03 335 eP     P       16 14 09.2 -0.1
OKC                              AMS   AMS     16 49 50.0
      comp=Z,1µm,16.8s
CTA   Charters Tower  73.05 193⇓iP     P       16 14 10.5 +0.5
      comp=Z,7.9nm,1.0s,mb4.6
CTA                             e              16 14 29.4
CTA   Charters Tower  73.05 193⇓iP     P       16 14 10.5 +0.5
CTA                             e              16 14 29.4
CTA                              pmax  pmax
      comp=Z,8.0nm,1.0s
CTAO  Charters Tower  73.05 193 eP     P       16 14 10.3 +0.3
      comp=Z,11nm,0.8s,mb4.8
CTAO                            epP    pP      16 14 22.0 -0.1
CTAO  Charters Tower  73.05 193 eP     P       16 14 10.3 +0.3
CTAO                            e*PP   pP      16 14 22.0 -0.1
CTAO                             pmax  pmax
      comp=Z,11nm,0.8s,mb4.8
ACSO  Alum Creek Sta  73.09  45 eP     P       16 14 09.3 -0.6
      comp=Z,28nm,1.0s,mb5.2
BRG   Berggiesshubel  73.10 338 i P    P       16 14 09.3 -0.4
      comp=Z,36nm,0.9s,mb5.3
BRG                             i      pP      16 14 23.5 +1.7
BRG                              LR    LR
      comp=Z,1µm,24.1s,MS5.1
BRG   Berggiesshubel  73.10 338 i P    P       16 14 09.3 -0.4
BRG                             i      pP      16 14 23.5 +1.7
BRG                              pmax  pmax
      comp=Z,36nm,0.9s,mb5.3
BRG                              MLR   MLR
      comp=Z,1µm,24.1s,MS5.1
ALLY  Alegheny Colle  73.12  42 eP     P       16 14 09.5 -0.5
MDRS  Chennai         73.19 270 ex     x       16 13 47.6
WCI   Wyandotte Cave  73.24  49 eP     P       16 14 10.2 -0.6
      comp=Z,37nm,0.9s,mb5.3
WCI   Wyandotte Cave  73.24  49  P     P       16 14 10.4 -0.4
WCI                              pmax  pmax
      comp=Z,37nm,0.9s,mb5.3
MORC  Moravsky Berou  73.24 335⇑eP     P       16 14 10.5  0.0
      comp=Z,72nm,0.8s,mb5.7
MORC                            epP    pP      16 14 20.6 -2.1
MORC  Moravsky Berou  73.24 335⇑eP     P       16 14 10.5  0.0
MORC                            e*PP   pP      16 14 20.6 -2.1
MORC                             pmax  pmax
      comp=Z,72nm,0.8s,mb5.7
PVCC  Panska Ves      73.28 337 eP     P       16 14 10.7  0.0
NCB   Newcomb         73.49  37 eP     P       16 14 11.0 -1.1
      comp=Z,23nm,0.9s,mb5.1
WTSB  Winterswijk     73.54 343⇑eP     P       16 14 12.4 +0.2
      comp=Z,107nm,0.8s,mb5.8
KECS  Kecovo          73.64 333 i P    P       16 14 12.7 -0.2
KAD   Karad           73.64 277 eP     P       16 14 12.9 -0.6
KAD                              AMb   AMB     16 14 14.7
      comp=Z,33nm,0.6s,mb5.5
PRU   Pruhonice       73.79 337 eP     P       16 14 13.8 +0.1
PRU                              AMS   AMS     16 47 00.0
      comp=Z,1µm,22.2s
MOX   Moxa            73.83 339 i P    P       16 14 13.9 -0.1
      comp=Z,logA/T=1.9,mb5.6
MOX                              L             16 48 37.0
MOX   Moxa            73.83 339 eP     P       16 14 13.9 -0.1
      comp=Z,122nm,1.5s,mb5.6
MOX                              LR    LR
      comp=Z,400nm,23.0s,MS4.6
MOX   Moxa            73.83 339 eP     P       16 14 13.9 -0.1
MOX                              pmax  pmax
      comp=Z,122nm,1.5s,mb5.6
MOX                              MLR   MLR
      comp=Z,400nm,23.0s,MS4.6
VRAC  Vranov          73.92 336  P     P       16 14 14.9 +0.5
      comp=Z,52nm,0.7s,mb5.6,baz=28,slow=5.9,SNR=68
VRAC  Vranov          73.92 336  P     P       16 14 14.9 +0.5
NKC   Novy Kostel     74.04 339 eP     P       16 14 15.3 +0.1
JAVC  Velka Javorina  74.05 335  P     P       16 14 16.4 +1.1
LBNH  Lisbon          74.10  36 eP     P       16 14 15.2 -0.4
      comp=Z,55nm,1.0s,mb5.4
LBNH  Lisbon          74.10  36  P     P       16 14 15.9 +0.3
LBNH                             pmax  pmax
      comp=Z,55nm,1.0s,mb5.4
KRUC  Moravsky        74.19 336  P     P       16 14 16.2 +0.1
TREC  Trest           74.20 336 eP     P       16 14 16.3 +0.2
WVT   Waverly         74.22  51 eP     P       16 14 16.3 -0.2
      comp=Z,14nm,0.8s,mb4.9
WVT   Waverly         74.22  51  P     P       16 14 16.5  0.0
WVT                              pmax  pmax
      comp=Z,14nm,0.8s,mb4.9
CFR   Carcaliu        74.23 327 ⇓P     P       16 14 14.8 -1.6
CFR   Carcaliu        74.23 327 ⇓P     P       16 14 14.8 -1.6
NATX  Nacogdoches     74.29  58 eP     P       16 14 16.9 -0.1
      comp=Z,19nm,0.7s,mb5.1
PSZ   Piszkesteto     74.31 333⇑iP     P       16 14 17.2 +0.4
PSZ   Piszkesteto     74.31 333  P     P       16 14 17.4 +0.6
DZM   Mont Dzumac     74.36 173  P     P       16 14 19.5 +2.0
      comp=Z,13nm,1.1s,mb4.8,baz=63,slow=18,SNR=4.5
HNH   Hanover         74.43  36 eP     P       16 14 17.3 -0.3
      comp=Z,3.4nm,0.9s,mb4.3
SMOL  Smolenice       74.43 335 i P    P       16 14 18.4 +0.9
DRGR                  74.52 331 ⇑P     P       16 14 16.8 -1.2
DRGR                  74.52 331 ⇑P     P       16 14 16.8 -1.2
DRGR                  74.52 331  P     P       16 14 17.0 -1.0
MLR   Muntele Rosu    74.68 328  P     P       16 14 19.0  0.0
      comp=Z,79nm,0.6s,mb5.8,baz=348,slow=4.3,SNR=133
MLR   Muntele Rosu    74.68 328 ⇑P     P       16 14 18.8 -0.2
MLR   Muntele Rosu    74.68 328 ⇑P     P       16 14 18.8 -0.2
MLR   Muntele Rosu    74.68 328  P     P       16 14 19.0  0.0
MLR                              pmax  pmax
      comp=Z,79nm,0.6s
HARR  Harsova         74.72 326 ⇑P     P       16 14 17.8 -1.4
HARR  Harsova         74.72 326 ⇑P     P       16 14 17.8 -1.5
TIRR  Tirgusor        74.76 326 ⇑P     P       16 14 19.0 -0.5
TIRR  Tirgusor        74.76 326  P     P       16 14 19.1 -0.4
ZST   Bratislava      74.81 335 i P    P       16 14 20.7 +1.0
KHC   Kasperske Hory  74.81 338 eP     P       16 14 20.1 +0.4
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KHC				pP	pP	16 14 29.5	-2.3
GRF	Grafenberg Arr	74.82	339	eP	P	16 14 25.8	+6.1
GRF				pmax	pmax		
	comp=Z,168nm,1.3s,mb5.8						
GRF				MLR	MLR		
	comp=Z,700nm,19.4s,MS5.0						
SRO	Srobarova	74.84	334	iP	P	16 14 20.7	+0.8
HGN	Heimansgroeve	74.85	343	⇑eP	P	16 14 19.9	+0.1
	comp=Z,116nm,1.3s,mb5.7						
FFD	Franklin Falls	74.86	36	eP	P	16 14 20.0	-0.1
	comp=Z,58nm,1.0s,mb5.5						
TNS	Taunus Mts	74.89	341	eP	P	16 14 20.5	+0.4
	comp=Z,46nm,0.9s,mb5.4						
TNS	Taunus Mts	74.89	341	eP	P	16 14 20.5	+0.4
TNS				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.4						
MCWV	Mont Chateau	74.91	43	eP	P	16 14 20.3	-0.1
	comp=Z,57nm,0.9s,mb5.5						
BUD	Budapest	74.95	333	⇑eP	P	16 14 20.9	+0.4
WET	Wettzell	74.96	338	eP	P	16 14 20.6	+0.1
	comp=Z,92nm,1.2s,mb5.6						
WET	Wettzell	74.96	338	eP	P	16 14 20.6	+0.1
WET				pmax	pmax		
	comp=Z,92nm,1.2s,mb5.6						
BOYT	Boyabat	75.00	320	iP	P	16 14 20.3	-0.6
VOIR		75.01	329	⇓P	P	16 14 21.0	+0.1
GEC2	GERESS Array S	75.05	337	eP	P	16 14 20.7	-0.3
	comp=Z,37nm,0.7s,mb5.4						
GEC2	GERESS Array S	75.05	337	eP	P	16 14 20.7	-0.3
GEC2				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.4						
GERES	GERESS Array B	75.05	337	P	P	16 14 20.9	-0.2
	comp=Z,26nm,0.6s,mb5.3,baz=34,slow=5.5,SNR=254						
GERES				LR	LR	16 52 10.0	
	comp=Z,779nm,19.0s,MS5.0,baz=15,slow=40						
MTUR	Matau	75.20	329	P	P	16 14 21.6	-0.3
PKSG		75.21	334	⇑eP	P	16 14 22.6	+0.6
WRAB	Tennant Creek	75.24	204	eP	P	16 14 23.6	+0.9
	comp=Z,61nm,0.9s,mb5.5						
WRAB	Tennant Creek	75.24	204	P	P	16 14 23.7	+1.0
WRAB				pmax	pmax		
	comp=Z,61nm,1.0s,mb5.5						
WB2	Warramunga Arr	75.25	204	eP	P	16 14 23.5	+0.8
WB2				e		16 14 39.2	
WRA	Warramunga Arr	75.25	204	P	P	16 14 23.6	+0.8
	comp=Z,10nm,0.7s,mb4.8,baz=20,slow=6.1,SNR=78						
GOA	Goa	75.25	276	eP	P	16 14 21.0	-1.8
ABH	Alteburg	75.39	342	⇑eP	P	16 14 23.1	+0.1
ABH	Alteburg	75.39	342	eP	P	16 14 23.0	0.0
TOD	Tromm	75.41	341	⇑eP	P	16 14 23.2	+0.1
SOP	Sopron	75.43	335	⇑iP	P	16 14 24.0	+0.8
SIND	Sindeldorf	75.49	340	⇑eP	P	16 14 23.5	0.0
SIND	Sindeldorf	75.49	340	P	P	16 14 23.8	+0.3
BALT	Daday	75.49	321	iP	P	16 14 22.6	-1.1
PSN	Preselentsi	75.52	326	eP	P	16 14 24.0	+0.1
SWS	Schriesheim	75.54	341	⇑eP	P	16 14 23.9	+0.1
PKS8	Sarbogard	75.60	333	⇑eP	P	16 14 24.2	0.0
RUP	Ruppelstein	75.66	342	eP	P	16 14 24.9	+0.4
RUP	Ruppelstein	75.66	342	P	P	16 14 25.7	+1.2
BUC1	Bucharest	75.66	327	P	P	16 14 24.6	0.0
GIVF	Givet	75.68	343	⇑iP	P	16 14 24.3	-0.3
	comp=Z,83nm,1.0s,mb5.3						
GIVF	Givet	75.68	343	⇑iP	P	16 14 24.3	-0.3
GIVF				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
MENF	Mencas	75.68	345	eP	P	16 14 25.6	+1.0
CTKT	Corum	75.72	320	iP	P	16 14 24.4	-0.6
KTD	Kalmit	75.82	341	eP	P	16 14 25.4	0.0
MOA	Molln	75.85	337	iP	P	16 14 25.8	+0.2
	comp=Z,30nm,0.6s,mb5.4,SNR=29						
MOA	Molln	75.85	337	P	P	16 14 25.8	+0.2
SWET	Sewanee	75.86	50	eP	P	16 14 24.2	-1.7
SWET				epP	pP	16 14 37.8	-0.3
WLF	Walferdange	75.86	342	eP	P	16 14 24.6	-1.1
	comp=Z,29nm,1.0s,mb5.2						
WLF	Walferdange	75.86	342	P	P	16 14 26.4	+0.7
WLF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.2						
BZS	Buzias	75.91	331	⇑P	P	16 14 25.5	-0.5
BZS	Buzias	75.91	331	P	P	16 14 25.9	-0.1
MVL	Millersville	76.06	41	eP	P	16 14 25.6	-1.4
FITZ	Fitzroy Crossi	76.07	213	eP	P	16 14 28.8	+1.3
	comp=Z,18nm,0.9s,mb5.0						
FITZ				i		16 14 44.1	
HDH	Heidenheim	76.08	340	⇑eP	P	16 14 27.0	+0.1
HDH	Heidenheim	76.08	340	P	P	16 14 27.3	+0.4
ARSA	Arzberg	76.09	336	⇑iP	P	16 14 27.8	+0.8
	comp=Z,37nm,0.6s,mb5.5,SNR=39						
ARSA	Arzberg	76.09	336	P	P	16 14 27.6	+0.6
STU	Stuttgart	76.12	340	eP	P	16 14 27.3	+0.1
	comp=Z,47nm,0.9s,mb5.4						
STU	Stuttgart	76.12	340	P	P	16 14 27.4	+0.3
STU				pmax	pmax		
	comp=Z,47nm,1.0s,mb5.4						
PAL	Palisades	76.16	39	eP	P	16 14 26.7	-0.8
	comp=Z,73nm,1.0s,mb5.6						
PAL	Palisades	76.16	39	P	P	16 14 26.9	-0.6
PAL				pmax	pmax		
	comp=Z,73nm,1.0s,mb5.6						
PRD	Provadia	76.22	326	eP	P	16 14 28.0	+0.2
PKSM	Moragy	76.22	333	P	P	16 14 27.3	-0.5
FWV	Forest Hill	76.23	45	eP	P	16 14 27.5	-0.5
FUR	Furstenfeldbru	76.25	339	eP	P	16 14 27.8	-0.1
	comp=Z,94nm,1.2s,mb5.6						
FUR	Furstenfeldbru	76.25	339	eP	P	16 14 27.8	-0.1
FUR				pmax	pmax		
	comp=Z,94nm,1.2s,mb5.6						
LBG	Lerchenberg	76.30	340	⇑eP	P	16 14 28.1	-0.1
LBG	Lerchenberg	76.30	340	P	P	16 14 28.6	+0.4
CPNY	Central Park	76.32	39	eP	P	16 14 27.7	-0.7
CPCT	Cooper Cave	76.33	49	eP	P	16 14 28.0	-0.6
BUCH	Bad Urach	76.39	340	⇑eP	P	16 14 29.2	+0.5
BUCH	Bad Urach	76.39	340	P	P	16 14 29.3	+0.6
RHK1	Bakonya	76.49	333	⇓eP	P	16 14 29.0	-0.3
ELN	Prospectdale	76.55	45	eP	P	16 14 29.2	-0.6
RHK3	Tenkes	76.63	333	⇑iP	P	16 14 29.4	-0.7
SZH	Strazhica	76.66	327	eP	P	16 14 29.5	-0.8
BLA	Blacksburg	76.71	45	eP	P	16 14 30.3	-0.4
	comp=Z,13nm,0.5s,mb5.1						
BLA	Blacksburg	76.71	45	P	P	16 14 30.8	+0.1
BLA				pmax	pmax		
	comp=Z,13nm,0.5s,mb5.1						
PERS	Pernice	76.77	336	eP	P	16 14 31.3	+0.4
KBA	Koelnbreinsper	76.79	337	⇑iP	P	16 14 32.1	+1.1
	comp=Z,171nm,0.7s,mb6.1,SNR=61						
KBA	Koelnbreinsper	76.79	337	P	P	16 14 32.0	+1.0
GUT	Gutenstein	76.80	340	⇑eP	P	16 14 31.3	+0.3
GUT	Gutenstein	76.80	340	P	P	16 14 31.5	+0.5
SGKT	Sivrigoynuk	76.83	322	iP	P	16 14 30.4	-0.9
WLS	Welschbruch	76.83	341	eP	P	16 14 31.4	+0.2
SPAK	Spaichingen	76.84	340	⇑eP	P	16 14 31.5	+0.3
SPAK	Spaichingen	76.84	340	P	P	16 14 32.0	+0.8
CDF	Champ du Feu	76.85	341	⇑iP	P	16 14 31.2	-0.1
	comp=Z,137nm,1.1s,mb5.5						
CDF	Champ du Feu	76.85	341	⇑iP	P	16 14 31.2	-0.1
CDF				pmax	pmax		
	comp=Z,69nm,1.1s,mb5.5						
PVL	Pavlikeni	76.90	327	eP	P	16 14 37.0	+5.3
BR131	Keskin Array S	76.95	320	⇑eP	P	16 14 31.5	-0.5
BRTR	Keskin Array B	76.95	320	P	P	16 14 31.6	-0.4
	comp=Z,29nm,0.6s,mb5.4,baz=51,slow=3.1,SNR=50						
BRTR				PP	PP	16 17 25.8	-1.0
	comp=Z,2.1nm,0.9s,baz=40,slow=6.8,SNR=4.2						
UBR	Uberruh	76.96	339	⇑eP	P	16 14 32.0	+0.1
UBR	Uberruh	76.96	339	P	P	16 14 32.5	+0.6
WATA	Walderalm	76.96	338	⇑iP	P	16 14 32.7	+0.8
	comp=Z,17nm,0.5s,mb5.2,SNR=8.3						
WATA	Walderalm	76.96	338	P	P	16 14 32.8	+0.9
BEO	Belgrade	76.98	331	⇑iP	P	16 14 30.6	-1.4
WTTA	Wattenberg	77.02	338	iP	P	16 14 33.1	+0.8
	comp=Z,106nm,1.1s,mb5.7,SNR=25						
WTTA	Wattenberg	77.02	338	P	P	16 14 33.0	+0.7
OBKA	Obir	77.03	336	⇑iP	P	16 14 32.9	+0.6
	comp=Z,96nm,1.2s,mb5.6,SNR=13						
OBKA	Obir	77.03	336	P	P	16 14 32.7	+0.4
MOTA	Moosalm	77.06	339	iP	P	16 14 33.0	+0.5
	comp=Z,43nm,0.9s,mb5.4,SNR=29						
MOTA	Moosalm	77.06	339	P	P	16 14 33.0	+0.5
ECH	Echery	77.06	341	eP	P	16 14 32.5	0.0
ANTO	Ankara	77.15	321	eP	P	16 14 33.1	-0.1
	comp=Z,38nm,0.7s,mb5.4						
ANTO	Ankara	77.15	321	P	P	16 14 33.3	+0.1
ANTO				pmax	pmax		
	comp=Z,38nm,0.7s,mb5.4						
SQTA	Sankt Quirin	77.15	338	iP	P	16 14 33.9	+0.9
	comp=Z,46nm,0.8s,mb5.5,SNR=25						
SQTA	Sankt Quirin	77.15	338	P	P	16 14 33.9	+0.9
KIZ	Kirchzarten	77.16	341	⇑eP	P	16 14 32.8	-0.2
KIZ	Kirchzarten	77.16	341	P	P	16 14 33.1	+0.1
MEZF	Maizieres J'vi	77.18	343	⇑iP	P	16 14 33.3	+0.1
	comp=Z,50nm,0.5s,mb5.4						
SISB	Singen-Sch Ber	77.20	340	P	P	16 14 33.8	+0.5
FELD	Feldberg	77.22	341	⇑eP	P	16 14 33.3	-0.1
THEF	They Montfort	77.27	342	eP	P	16 14 33.8	+0.1
SEST	Monte Rota	77.37	338	P	P	16 14 34.7	+0.5
FVI	Forni Avoltri	77.38	337	P	P	16 14 34.4	+0.1
	comp=Z,19nm,0.5s,mb5.3						
FVI	Forni Avoltri	77.38	337	P	P	16 14 34.4	+0.1
FVI				pmax	pmax		
	comp=Z,19nm,0.5s,mb5.3						
DAVA	Damuels	77.38	339	iP	P	16 14 34.7	+0.4
	comp=Z,45nm,1.0s,mb5.3,SNR=19						
DAVA	Damuels	77.38	339	P	P	16 14 34.7	+0.4
MOF	Molkenrain	77.41	341	eP	P	16 14 34.5	+0.1
PALK	Pallekele	77.42	266	eP	P	16 14 35.5	+0.4
	comp=Z,59nm,0.8s,mb5.6						
HAU	Haudompre	77.42	342	⇑iP	P	16 14 34.3	-0.2
	comp=Z,42nm,0.6s,mb5.3						
HAU				eR			
	comp=Z,627nm,21.8s						
HAU	Haudompre	77.42	342	⇑iP	P	16 14 34.3	-0.2
HAU				pmax	pmax		
	comp=Z,21nm,0.6s,mb5.2						
HAU				MLR	MLR		
	comp=Z,630nm,21.8s,MS4.9						
PTCC	Patocco-Chiusa	77.42	337	P	P	16 14 34.3	-0.2
LJU	Ljubljana	77.47	336	eP	P	16 14 34.9	+0.1
HINF	Hinteralfeld	77.50	341	⇑iP	P	16 14 34.5	-0.4
	comp=Z,22nm,0.7s,mb4.9						
HINF	Hinteralfeld	77.50	341	⇑iP	P	16 14 34.5	-0.4
HINF				pmax	pmax		
	comp=Z,11nm,0.7s,mb4.9						
BRES	Bressanone	77.53	338	P	P	16 14 35.9	+0.8
GMNA	Gemona	77.57	337	P	P	16 14 35.0	-0.3
BBS	Basel-Blauen	77.71	341	⇑eP	P	16 14 36.2	+0.1
BBS	Basel-Blauen	77.71	341	eP	P	16 14 36.3	+0.2
JAVS	Javornik	77.72	336	eP	P	16 14 35.4	-0.8
BOJS	Bojanci	77.78	335	eP	P	16 14 36.3	-0.2
FLN	La Foliniere	77.82	347	⇑iP	P	16 14 36.1	-0.6
	comp=Z,30nm,0.6s,mb5.1						
FLN				eR			
	comp=Z,497nm,20.0s						
FLN	La Foliniere	77.82	347	⇑iP	P	16 14 36.1	-0.6
FLN				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
FLN				MLR	MLR		
	comp=Z,500nm,20.0s,MS4.8						
DAVOX	Davos	77.86	339	P	P	16 14 37.5	+0.6
	comp=Z,18nm,0.5s,mb5.2,baz=359,slow=4.7,SNR=37						
DAVOX	Davos	77.86	339	P	P	16 14 38.2	+1.3
DIM	Dimitrovgrad	77.87	327	eP	P	16 14 37.0	-0.1
PGB	Panagyurishte	77.88	328	eP	P	16 14 38.0	+0.9
LDF	La Druitiere	77.94	346	⇑iP	P	16 14 36.8	-0.5
LOMF	Lomont	77.95	341	eP	P	16 14 37.7	+0.3
BRMO	Bormio	78.04	339	P	P	16 14 38.2	+0.3
PLD	Plovdiv	78.10	327	eP	P	16 14 38.0	-0.3
VTS	Vitosha	78.15	329	P	P	16 14 38.0	-0.6
CTI	Castel Tesino	78.16	338	P	P	16 14 38.4	-0.2
	comp=Z,172nm,1.6s,mb5.7						
CTI	Castel Tesino	78.16	338	P	P	16 14 38.4	-0.2
CTI				pmax	pmax		
	comp=Z,172nm,1.6s,mb5.7						
ESKT	Eskisehir	78.20	322	iP	P	16 14 37.4	-1.5
GRR	Gorron	78.24	347	⇑iP	P	16 14 38.7	-0.3
	comp=Z,56nm,0.7s,mb5.3						
GRR	Gorron	78.24	347	⇑iP	P	16 14 38.7	-0.3
GRR				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.3						
TUE	Stuetta	78.27	339	P	P	16 14 40.3	+1.1
ULDT	Uludag	78.30	323	iP	P	16 14 38.5	-1.0
NVSS	Nova Varos 2	78.40	331	⇑iP	P	16 14 39.8	-0.1
RZN	Rozhen	78.47	327	P	P	16 14 39.5	-0.9
LOR	Lormes	78.58	343	⇑iP	P	16 14 40.7	-0.2
	comp=Z,84nm,0.8s,mb5.4						
LOR				eR			
	comp=Z,669nm,22.2s						
LOR				eR			
	comp=Z,572nm,21.2s						
SGMF	Saint Gilles	78.60	348	⇑iP	P	16 14 40.7	-0.3
	comp=Z,78nm,0.8s,mb5.4						
SGMF	Saint Gilles	78.60	348	⇑iP	P	16 14 40.7	-0.3
SGMF				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.4						
ROSF	Rostrenen	78.61	348	⇑iP	P	16 14 40.8	-0.2
	comp=Z,55nm,0.7s,mb5.3						
ROSF	Rostrenen	78.61	348	⇑iP	P	16 14 40.8	-0.2
ROSF				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.3						
COBT	Iskenderun	78.62	317	iP	P	16 14 40.7	-0.6
PLE	Pljevlja	78.65	331	⇓iP	P	16 14 38.9	-2.4
ALN	Alexandroupoli	78.73	326	eP	P	16 14 41.4	-0.4
JSC	Jenkinsville	78.78	47	eP	P	16 14 39.9	-2.4
JSC	Jenkinsville	78.78	47	P	P	16 14 42.2	-0.1
CABF	La Chapelle	78.81	342	⇑iP	P	16 14 42.4	+0.3
	comp=Z,48nm,0.7s,mb5.2						
CABF	La Chapelle	78.81	342	⇑iP	P	16 14 42.4	+0.3
CABF				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
KKB	Krupnik	78.84	328	P	P	16 14 42.0	-0.4
SSF	Saint Saulge	78.85	344	⇑iP	P	16 14 42.2	-0.1
	comp=Z,25nm,0.7s,mb5.3						
SSF	Saint Saulge	78.85	344	⇑iP	P	16 14 42.2	-0.1
SSF				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.2						
MUGIO	Muggio	78.86	339	P	P	16 14 42.7	+0.3
MMB	Musomiste	78.89	328	iP	P	16 14 42.5	-0.2
UPM	Unac-Piva	78.91	332	⇓iP	P	16 14 40.2	-2.5
IVA	Berane	78.92	331	⇓iP	P	16 14 39.9	-2.9
OG01	Vacheresse	78.96	341	eP	P	16 14 43.3	+0.3
MMK	Mattmark	78.97	340	P	P	16 14 44.3	+1.3
VAI	Varese	78.97	340	P	P	16 14 43.1	0.0
	comp=Z,89nm,1.1s,mb5.6						
VAI	Varese	78.97	340	P	P	16 14 43.1	0.0
VAI				pmax	pmax		
	comp=Z,89nm,1.1s,mb5.6						
QUIF	Quistinic	79.01	348	⇑iP	P	16 14 42.9	-0.3
	comp=Z,76nm,1.1s,mb5.2						
QUIF	Quistinic	79.01	348	⇑iP	P	16 14 42.9	-0.3
QUIF				pmax	pmax		
	comp=Z,38nm,1.1s,mb5.2						
BTOK	Tokmak	79.03	324	iP	P	16 14 43.1	-0.4
MCGN	Macugnaga	79.05	340	P	P	16 14 44.6	+1.1
AVF	Avril sur Loir	79.14	344	⇑iP	P	16 14 43.8	-0.1
	comp=Z,127nm,1.0s,mb5.5						
AVF	Avril sur Loir	79.14	344	⇑iP	P	16 14 43.8	-0.1
AVF				pmax	pmax		
	comp=Z,64nm,1.0s,mb5.5						
PVY	Plav	79.15	331	⇓iP	P	16 14 40.0	-4.1
SMF	Signal de Mont	79.19	343	⇑iP	P	16 14 44.2	0.0
	comp=Z,78nm,0.9s,mb5.3						
SMF	Signal de Mont	79.19	343	⇑iP	P	16 14 44.2	0.0
SMF				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.3						
NKY	Niksic	79.24	332	⇓iP	P	16 14 41.8	-2.8
SKO	Skopje	79.27	329	iP	P	16 14 45.0	+0.2
SKO	Skopje	79.27	329	iP	P	16 14 45.0	+0.2
ORX	Oropa	79.36	340	P	P	16 14 45.4	+0.2
MEST	Erdemli	79.44	318	iP	P	16 14 41.4	-4.4
BGF	Bois d'Agland	79.45	344	⇑iP	P	16 14 45.7	+0.1
VAY	Valandovo	79.50	328	iP	P	16 14 45.5	-0.5
VAY	Valandovo	79.50	328	iP	P	16 14 45.6	-0.4
TTG	Podgorica	79.51	331	⇓iP	P	16 14 42.5	-3.6
KNT	Kendrikon	79.54	328	eP	P	16 14 46.1	-0.1
RSL	Roselend	79.59	341	eP	P	16 14 47.1	+0.7
TKTP	Tekketepe	79.69	322	iP	P	16 14 45.9	-1.3
SOH	Sokhos	79.70	328	eP	P	16 14 46.6	-0.5
LSD	Ceresole Reale	79.70	341	P	P	16 14 48.3	+1.3
TAOE	Nuku Hiva Isla	79.70	119	eLR	LR	16 38 51.9	
	comp=Z,2µm,30.2s						
HCY	Herceg Novi	79.72	332	⇓iP	P	16 14 43.8	-3.4
LPL	La Plagne	79.73	341	⇑iP	P	16 14 48.2	+1.0
	comp=Z,74nm,0.6s,mb5.5						
LPL	La Plagne	79.73	341	⇑iP	P	16 14 48.2	+1.0
LPL				pmax	pmax		
	comp=Z,37nm,0.6s,mb5.5						
BUM	Brajici-Budva	79.74	331	⇓iP	P	16 14 42.9	-4.3
LPG	La Plagne	79.74	341	⇑iP	P	16 14 48.5	+1.3
	comp=Z,96nm,0.8s,mb5.5						
LPG	La Plagne	79.74	341	⇑iP	P	16 14 48.5	+1.3
LPG				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.5						
ISP	Isparta	79.79	321	eP	P	16 14 44.7	-3.0
	comp=Z,43nm,0.5s,mb5.6						
ISP	Isparta	79.79	321	eP	P	16 14 44.7	-3.0
ISP				pmax	pmax		
	comp=Z,43nm,0.5s,mb5.6						
TCF	Toulx Ste Croi	79.82	344	⇑iP	P	16 14 47.7	+0.1
	comp=Z,83nm,1.0s,mb5.3						
TCF	Toulx Ste Croi	79.82	344	⇑iP	P	16 14 47.7	+0.1
TCF				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.3						
BOB	Bobbio (Coli)	79.87	339	P	P	16 14 49.1	+1.2
PLDF	La Plantade	79.88	343	eP	P	16 14 48.8	+0.8
PLDF	La Plantade	79.88	343	eP	P	16 14 48.8	+0.8
MFF	Saint Martin d	79.88	346	⇑iP	P	16 14 48.1	+0.1
	comp=Z,30nm,0.6s,mb5.1						
MFF	Saint Martin d	79.88	346	⇑iP	P	16 14 48.1	+0.1
MFF				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
GRG	Griva	79.89	328	eP	P	16 14 48.2	+0.1
AYVA	Ayvalik	79.91	325	iP	P	16 14 47.5	-0.8
OUR	Ouranopolis	79.93	327	eP	P	16 14 47.8	-0.6
ULC	Ulcinj	79.94	331	⇓iP	P	16 14 46.8	-1.6
RSP	Reno Superiore	79.97	340	P	P	16 14 48.5	+0.1
GRAM		79.99	338	P	P	16 14 48.4	-0.2
THE	Thessaloniki	80.00	328	eP	P	16 14 47.7	-1.0
GSCL	Gusciola	80.01	338	P	P	16 14 50.4	+1.7
FSSB	Fossombrone	80.11	336	P	P	16 14 50.1	+0.9
SEI	Scarperia	80.11	337	P	P	16 14 51.2	+2.0
FENE	Fenestrelle	80.13	341	P	P	16 14 49.2	-0.1
SFI	Santa Sofia	80.13	337	P	P	16 14 51.5	+2.1
	comp=Z,57nm,0.9s,mb5.5						
SFI	Santa Sofia	80.13	337	P	P	16 14 51.5	+2.1
SFI				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.5						
CODM		80.14	338	P	P	16 14 49.1	-0.3
VMG	Vicchio	80.15	337	P	P	16 14 51.4	+1.9
GDM	Grand'Maison	80.15	341	eP	P	16 14 50.6	+1.2
QSH	Qafa e Shtames	80.15	330	ep	P	16 14 49.0	-0.5
BIA	Bitola	80.17	329	iP	P	16 14 49.2	-0.4
BIA	Bitola	80.17	329	iP	P	16 14 49.2	-0.4
BNI	Bardonecchia	80.19	341	eP	P	16 14 50.6	+1.0
	comp=Z,49nm,1.1s,mb5.3						
BNI	Bardonecchia	80.19	341	eP	P	16 14 50.6	+1.0
BNI				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.3						
GRN	Grenoble	80.19	341	eP	P	16 14 50.9	+1.3
PGD	Poggio Sodo	80.19	337	P	P	16 14 51.6	+1.9
	comp=Z,205nm,1.4s,mb5.9						
PGD	Poggio Sodo	80.19	337	P	P	16 14 51.6	+1.9
PGD				pmax	pmax		
	comp=Z,205nm,1.4s,mb5.9						
BACM		80.19	338	P	P	16 14 49.2	-0.5
PYM	Petit Puy Mans	80.20	344	eP	P	16 14 50.9	+1.2
PYM	Petit Puy Mans	80.20	344	eP	P	16 14 50.9	+1.2
SARO	Sassorosso	80.21	338	P	P	16 14 49.6	-0.1
VLC	Villacollemand	80.24	338	eP	P	16 14 51.0	+1.1
	comp=Z,23nm,0.6s,mb5.3						
OHR	Ohrid	80.25	330	iP	P	16 14 49.3	-0.8
OHR	Ohrid	80.25	330	iP	P	16 14 49.3	-0.8
BHB	Bricherasio	80.27	340	P	P	16 14 49.0	-1.1
PCP	Pian Castagno	80.28	339	P	P	16 14 49.9	-0.2
COLF	Collangettes	80.31	343	eP	P	16 14 51.0	+0.8
VINC	Vinca	80.31	338	P	P	16 14 49.9	-0.4
FNA	Florina	80.37	329	eP	P	16 14 50.3	-0.4
PAIG	Paliouri	80.40	327	eP	P	16 14 49.9	-1.0
MAIM		80.44	338	P	P	16 14 49.6	-1.4
ORIF	Oris-en-Rattie	80.47	341	⇑iP	P	16 14 52.0	+0.9
	comp=Z,71nm,0.8s,mb5.4						
ORIF				eR			
	comp=Z,283nm,20.2s						
SNTG	Esanatoglia	80.47	336	P	P	16 14 52.0	+0.8
MBDF	Montbardon	80.48	341	⇑iP	P	16 14 51.5	+0.3
	comp=Z,34nm,0.7s,mb5.1						
MBDF	Montbardon	80.48	341	⇑iP	P	16 14 51.5	+0.3
MBDF				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
FKH	Fakeheh	80.50	315	eP	P	16 14 51.7	+0.2
PZZ	Prazzo	80.62	340	P	P	16 14 51.1	-0.9
FRNF	Fournols	80.63	344	eP	P	16 14 53.2	+1.2
LBL	Lubilhac	80.66	343	eP	P	16 14 52.7	+0.6
LBL	Lubilhac	80.66	343	eP	P	16 14 52.7	+0.6
ROB	Roburent	80.66	340	P	P	16 14 50.7	-1.4
CSNT	Castellina Chi	80.67	337	P	P	16 14 52.5	+0.3
VIVF	Saint-Julien-l	80.77	342	⇑iP	P	16 14 53.3	+0.6
	comp=Z,100nm,0.9s,mb5.5						
VIVF	Saint-Julien-l	80.77	342	⇑iP	P	16 14 53.3	+0.6
VIVF				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.4						
ENR	Entracque	80.82	340	P	P	16 14 51.5	-1.5
STV2	Anna di Valdie	80.83	340	P	P	16 14 51.7	-1.3
STV	Sta Anna Valdi	80.83	340	P	P	16 14 51.7	-1.3
RJF	Les Rejaudoux	80.89	344	⇑iP	P	16 14 53.8	+0.5
	comp=Z,43nm,0.9s,mb5.1						
RJF				eR			
	comp=Z,960nm,22.8s						
RJF	Les Rejaudoux	80.89	344	⇑iP	P	16 14 53.8	+0.5
RJF				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
RJF				MLR	MLR		
	comp=Z,960nm,22.8s,MS5.1						
MONE	Monesi	80.89	340	P	P	16 14 52.2	-1.2
OG25	Le Caire	80.96	341	eP	P	16 14 54.6	+0.9
AOS	Alonnisos	81.01	327	eP	P	16 14 53.6	-0.5
IMI	Imperia	81.03	340	P	P	16 14 54.6	+0.5
AUTN	L'Aution	81.04	340	eP	P	16 14 55.4	+1.2
XOR	Xorichti	81.06	327	eP	P	16 14 53.4	-1.0
BHL	Bhannes	81.11	316	eP	P	16 14 54.2	-0.5
CAF	Calviac	81.16	344	⇑iP	P	16 14 55.7	+0.9
	comp=Z,124nm,1.0s,mb5.5						
CAF	Calviac	81.16	344	⇑iP	P	16 14 55.7	+0.9
CAF				pmax	pmax		
	comp=Z,62nm,1.0s,mb5.5						
SBF	Sospel	81.17	340	⇑iP	P	16 14 54.6	-0.2
	comp=Z,46nm,0.7s,mb5.2						
SBF	Sospel	81.17	340	⇑iP	P	16 14 54.6	-0.2
SBF				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.2						
CSS	Prodhromos	81.17	318	P	P	16 14 54.6	-0.4
MVIF	Mont Vial	81.20	340	eP	P	16 14 55.4	+0.4
AQU	L'Aquila	81.20	335	P	P	16 14 56.7	+1.7
	comp=Z,100nm,1.0s,mb5.7						
AQU	L'Aquila	81.20	335	P	P	16 14 56.7	+1.7
AQU				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.7						
ALFC	Alevga	81.30	318	⇓P	P	16 14 54.7	-1.0
	comp=Z,2.4nm,0.6s,mb4.3						
ALFC	Alevga	81.30	318	⇓eP	P	16 14 54.7	-1.0
LFF	La Frestale	81.37	345	⇑iP	P	16 14 56.6	+0.7
	comp=Z,75nm,0.8s,mb5.4						
LFF	La Frestale	81.37	345	⇑iP	P	16 14 56.6	+0.7
LFF				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.4						
SMRF	Simiane la Rot	81.44	341	⇑iP	P	16 14 57.1	+0.9
HASS	Wahat al Ahsa'	81.59	300	P	P	16 14 57.0	-0.3
FRF	La Foret Royal	81.62	340	⇑iP	P	16 14 57.1	-0.1
	comp=Z,24nm,0.7s,mb4.9						
FRF	La Foret Royal	81.62	340	⇑iP	P	16 14 57.1	-0.1
FRF				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.9						
PPCY	Paphos	81.64	319	P	P	16 14 56.3	-1.2
LASF	Ste Croix	81.67	342	⇑iP	P	16 14 58.4	+1.0
	comp=Z,65nm,1.1s,mb5.2						
KSDI	Kefar Szold	81.71	315	P	P	16 14 57.9	0.0
SGG	Gregorio Mates	81.85	334	P	P	16 14 59.4	+1.0
LMR	La Mourre	81.87	340	⇑iP	P	16 14 58.5	0.0
	comp=Z,29nm,0.6s,mb5.0						
LMR	La Mourre	81.87	340	⇑iP	P	16 14 58.5	0.0
LMR				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
HNTI	Hanita	82.01	316	P	P	16 14 59.5	+0.1
GELF	Grande-Etoile	82.04	341	eP	P	16 15 00.6	+1.2
PGF	Pioggiola	82.08	338	eP	P	16 15 00.1	+0.5
HAF	Haifa	82.34	315	P	P	16 15 01.0	-0.1
PPT	Papeete	82.44	132	eLR	LR	16 40 10.2	
	comp=Z,1µm,25.2s,baz=332						
PPT	Papeete	82.44	132	LR	LR	16 42 31.8	
	comp=Z,556nm,21.9s,MS4.9,baz=292,slow=29						
MMLI	Mount Malkishu	82.46	315	P	P	16 15 02.1	+0.4
OFRI	'Ofer	82.49	315	P	P	16 15 01.8	-0.1
QURS	Qurayyt al Mil	82.52	313	P	P	16 15 02.9	+0.8
MTLF	Montolieu	82.68	343	⇑iP	P	16 15 03.6	+1.0

	comp=Z,87nm,1.0s,mb5.4						
MTLF	Montolieu	82.68	343	⇑iP	P	16 15 03.6	+1.0
MTLF				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
TDS	Terranova Siba	82.92	332	P	P	16 15 04.9	+1.0
	comp=Z,53nm,0.6s,mb5.7						
TDS	Terranova Siba	82.92	332	P	P	16 15 04.9	+1.0
TDS				pmax	pmax		
	comp=Z,53nm,0.6s,mb5.8						
MKRJ	Makawir	83.12	314	P	P	16 15 05.5	+0.4
MLS	Moulis	83.24	344	eP	P	16 15 06.8	+1.3
EPF	Esparros	83.29	345	⇑iP	P	16 15 06.0	+0.2
	comp=Z,77nm,0.9s,mb5.4						
EPF	Esparros	83.29	345	⇑iP	P	16 15 06.0	+0.2
EPF				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.4						
SJAF	Saint Jean de	83.39	343	eP	P	16 15 07.1	+0.8
EALK	Alkurruntz	83.39	346	P	P	16 15 08.6	+2.3
	comp=Z,184nm,1.6s,mb5.9						
EJON	La Jonquera	83.42	343	P	P	16 15 09.1	+2.7
	comp=Z,108nm,1.9s,mb5.5						
MZDA	Masada	83.45	314	P	P	16 15 07.0	+0.2
RESF	Ens	83.51	345	eP	P	16 15 08.8	+2.0
ETSF	Etsaut	83.56	345	⇑iP	P	16 15 08.4	+1.3
	comp=Z,69nm,0.7s,mb5.6						
ETSF	Etsaut	83.56	345	⇑iP	P	16 15 08.4	+1.3
ETSF				pmax	pmax		
	comp=Z,35nm,0.7s,mb5.6						
EBIE	Bielsa	83.66	345	P	P	16 15 09.8	+2.3
	comp=Z,143nm,1.7s,mb5.8						
HILS	Ha’il	83.80	308	P	P	16 15 09.3	+0.6
RTMM	Retamin	83.97	315	P	P	16 15 09.4	0.0
MASH	Mash‘abbe Sade	83.97	315	P	P	16 15 09.5	+0.1
EPON	Pontenova	84.00	350	P	P	16 15 10.5	+1.2
	comp=Z,1µm,4.0s						
EGRA	Graus	84.11	345	⇓P	P	16 15 11.7	+1.9
	comp=Z,63nm,1.4s,mb5.5						
ZFRI	Zfri	84.18	314	P	P	16 15 10.7	+0.2
KZIT	Kziot	84.22	315	P	P	16 15 10.7	0.0
PRNI	Paran	84.43	314	P	P	16 15 12.1	+0.4
EMAZ	Mazaricos	84.55	352	P	P	16 15 12.4	+0.4
	comp=Z,974nm,2.7s						
STS	Santiago	84.57	351	⇓P	P	16 15 12.8	+0.7
	comp=Z,31nm,0.8s,mb5.5						
STS	Santiago	84.57	351	⇓P	P	16 15 12.8	+0.7
STS				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.5						
HRFI	Mount Harif	84.69	314	P	P	16 15 13.1	+0.1
ESAC	San Caprasio	84.70	345	⇓P	P	16 15 15.0	+2.2
	comp=Z,794nm,2.9s,mb6.3						
MZLS	Mizel	84.87	303	P	P	16 15 14.2	+0.1
ERUA	La Rua	84.92	350	P	P	16 15 14.0	+0.1
	comp=Z,16nm,1.0s,mb5.1						
ERUA	La Rua	84.92	350	P	P	16 15 14.0	+0.1
ERUA				pmax	pmax		
	comp=Z,16nm,1.0s,mb5.1						
AQBJ	Aqaba	84.94	314	P	P	16 15 14.8	+0.5
MBH	Mount Berech	84.95	314	P	P	16 15 14.7	+0.4
EIL	Elat	85.04	314	P	P	16 15 15.1	+0.3
ALWS	Ilw as Safayha	85.30	314	P	P	16 15 16.6	+0.5
STKA	Stephens Creek	85.32	195	P	P	16 15 17.8	+1.7
	comp=Z,5.7nm,0.8s,mb4.7,baz=352,slow=8.4,SNR=7.3						
STKA				LR	LR	16 50 26.4	
	comp=Z,321nm,19.2s,MS4.7,baz=17,slow=34						
STKA	Stephens Creek	85.32	195	eP	P	16 15 18.1	+2.0
JMOS	Jabal al Moall	85.40	314	P	P	16 15 17.1	+0.5
PBRG	Braganca	85.46	350	eP	P	16 15 17.8	+1.2
	comp=Z,39nm,1.6s,mb5.3						
ERC	Erice	85.47	334	P	P	16 15 18.1	+1.4
TBKS	Tabuk	85.56	312	P	P	16 15 18.2	+0.8
HAQS	Haql	85.58	314	P	P	16 15 17.7	+0.2
BDAS	Al Bad‘	86.03	313	P	P	16 15 20.0	+0.4
AFFS	‘Afif	86.08	305	P	P	16 15 20.1	+0.1
PVRL	Vila Real	86.09	350	eP	P	16 15 20.8	+1.2
	comp=Z,67nm,1.1s,mb5.8						
AYUS	‘Aynunah	86.17	313	P	P	16 15 20.7	+0.4
GUD	Guadarrama	86.29	348	⇓P	P	16 15 22.1	+1.4
	comp=Z,30nm,1.2s,mb5.4						
GUD	Guadarrama	86.29	348	⇓P	P	16 15 22.1	+1.4
GUD				pmax	pmax		
	comp=Z,30nm,1.2s,mb5.4						
KBRS	Khaybar	86.36	309	P	P	16 15 22.3	+1.0
PVIS	Viseu	86.66	350	eP	P	16 15 24.2	+1.7
	comp=Z,32nm,1.6s,mb5.3						
MTE	Manteigas	86.94	350	eP	P	16 15 25.1	+1.3
	comp=Z,35nm,1.2s,mb5.5						
ESDC	Sonseca Array	87.22	347	P	P	16 15 25.2	0.0
	comp=Z,11nm,0.7s,mb5.2,baz=8.0,slow=4.9,SNR=20						
ESDC	Sonseca Array	87.22	347	P	P	16 15 25.7	+0.4
	comp=Z,22nm,0.8s,mb5.4						
ESLA	Sonseca Array	87.22	347	eP	P	16 15 25.3	+0.1
	comp=Z,8.6nm,1.1s,mb4.9						
PCBR	Castelo Branco	87.48	350	eP	P	16 15 27.3	+0.8
	comp=Z,41nm,1.3s,mb5.5						
TBI	Tubuai	87.54	134	eLR	LR	16 42 29.9	
	comp=Z,922nm,25.0s,baz=330						
UMJS	Umm Lajj	87.75	310	P	P	16 15 28.5	+0.4
EVIA	Vianos	88.03	346	P	P	16 15 29.9	+0.8
	comp=Z,9.9nm,0.9s,mb5.0						
EVIA	Vianos	88.03	346	P	P	16 15 29.9	+0.8
EVIA				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.0						
YNBS	Yanbu‘ al Bahr	88.19	309	P	P	16 15 30.7	+0.5
KAMS	Al Khamasin	88.27	302	P	P	16 15 30.4	-0.3
EVO	Evora	88.83	350	eP	P	16 15 38.1	+5.1
	comp=Z,60nm,1.3s,mb5.5						
EVO				eR			
	comp=Z,337nm,18.0s						
TATS	Tathlith	89.48	302	P	P	16 15 36.8	+0.4
BLJS	Baljurashi	90.16	304	P	P	16 15 40.3	+0.6
EJIF	Jimena Fronter	90.59	348	P	P	16 15 41.5	+0.2
	comp=Z,10nm,0.9s,mb5.2						
EJIF	Jimena Fronter	90.59	348	P	P	16 15 41.5	+0.2
EJIF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb5.2						
RKT	Rikitea	94.29	123	eLR	LR	16 45 41.5	
	comp=Z,701nm,24.8s,baz=326						
DBIC	Dimbokro	119.70	342	PKP	PKPdf	16 21 29.8	+1.5
	comp=Z,4.4nm,0.5s,baz=325,slow=2.1,SNR=17						
LIC	Lamto	120.17	342	ePKIKP	PKPdf	16 21 29.5	+0.2
	comp=Z,6.9nm,0.6s						
LIC				eR			
	comp=Z,290nm,20.5s						
LPAZ	La Paz	128.12	64	PKP	PKPdf	16 21 46.5	+2.0
	comp=Z,1.5nm,0.8s,baz=21,slow=9.0,SNR=6.2						
LPAZ	La Paz	128.12	64	ePKPdf	PKPdf	16 21 46.1	+1.6
LPAZ	La Paz	128.12	64	PKIKP	PKPdf	16 21 46.6	+2.1
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BDFB	Brasilia	137.38	41	PKP	PKPdf	16 22 03.5	+1.7
	comp=Z,1.2nm,0.4s,baz=90,slow=5.1,SNR=3.1						
SUR	Sutherland	144.15	287	PKP	PKPdf	16 22 15.0	+1.6
	comp=Z,11nm,0.6s,baz=260,slow=1.9,SNR=13						
PLCA	Paso Flores	144.38	91	PKP	PKPdf	16 22 14.2	+0.8
	comp=Z,6.5nm,0.9s,baz=276,slow=3.9,SNR=7.5						
PLCA	Paso Flores	144.38	91	ePKPdf	PKPdf	16 22 14.3	+0.8
PLCA				epPKPdf		16 22 29.4	
CAM4	Nova Friburgo	145.59	38	⇑iP	PKPdf	16 22 18.3	+2.2
CAM4				i		16 22 23.3	
CAM4				i		16 22 38.8	
SYO	Syowa Base	147.87	216	⇑PKPdf	PKPdf	16 22 22.8	+4.3
SYO	Syowa Base	147.87	216	⇑ePKPdf	PKPdf	16 22 22.8	+4.3
TRQA	Tornquist	147.97	80	ePKPbc	PKPdf	16 22 24.4	+4.7
USHA	Ushuaia	151.90	114	PKPbc	PKPdf	16 22 35.2	+10
	comp=Z,4.6nm,0.6s,baz=202,slow=2.7,SNR=4.7						

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*MOS **26** 16:06:05.1±0.5, 52.44N×159.67E, h30^{km}, mb4.1/1, Error ellipse: s-maj=44.3km s-min=17.4km az=91.0*

KRSC 26 16:06:05.2±0.6, **52.44N×159.63E, h20**^{km}±4^{km}**, ML4.1, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	0.68	270	P	Pb	16 06 18.9	+0.6
RUS				S	Sb	16 06 28.4	+1.1
RUS	Russkaya	0.68	270	i P	Pb	16 06 18.9	+0.6
RUS				eS	Sb	16 06 28.8	+1.5
SPN	Mys Shipunski	0.70	20	eP	Pb	16 06 19.1	+0.5
SPN				eS	Sb	16 06 29.2	+1.4
NLC	Nalytchevo	0.75	347	P	Pb	16 06 20.0	+0.5
NLC				S	Sb	16 06 30.4	+1.1
NLC	Nalytchevo	0.75	347	eP	Pb	16 06 20.0	+0.5
NLC				eS	Sb	16 06 30.6	+1.3
PET	Petropavlovsk	0.83	315	P	Pb	16 06 21.3	+0.4
PET				S	Sb	16 06 32.3	+0.7
PET	Petropavlovsk	0.83	315	eP	Pb	16 06 21.3	+0.4
PET				eS	Sb	16 06 32.8	+1.2
UGLR	Uglovaya	0.91	328	i P	Pb	16 06 23.1	+0.9
SDLR	Sedlovina	0.95	332	eP	Pb	16 06 22.9	0.0
GRL	Gorelyy	0.96	277	eP	Pb	16 06 23.8	+0.8
GRL				eS	Sb	16 06 37.2	+2.0
SMAR	Somma	0.97	329	eP	Pb	16 06 23.4	+0.3
AVH	Avacha	0.99	327	eP	Pb	16 06 24.1	+0.6
KRMR	Karymshinskiy	0.99	294	i P	Pb	16 06 22.8	-0.8
KRMR				eS	Sb	16 06 35.4	-0.8
KOK	Koryaka	1.04	325	eP	Pb	16 06 26.1	+1.7
APC	Apacha	1.58	289	eP	Pn	16 06 33.2	+0.7
APC				eS	Sn	16 06 53.9	+1.4
KII	Karymskiy	1.60	356	P	Pn	16 06 33.0	+0.2
KII				S	Sn	16 06 53.8	+0.7
KII	Karymskiy	1.60	356	eP	Pn	16 06 32.9	+0.1
KII				eS	Sn	16 06 54.3	+1.2
GNL	Ganaly	1.62	322	i P	Pn	16 06 33.8	+0.8
GNL				eS	Sn	16 06 54.7	+1.2
PAU	Pauzhetka	2.00	242	P	Pn	16 06 39.1	+0.6
MKZ	Mys Kozlova	2.46	30	eS	Sn	16 07 13.9	-1.0
ALID	Alaid	2.99	240	P	Pn	16 06 53.2	+0.6
KMNR	Kamenistaya	3.34	6	P	Pn	16 06 58.9	+1.3
KBTR	Krutoberegovo	4.21	25	P	Pn	16 07 09.2	-0.8
KBTR	Krutoberegovo	4.21	25	i P	Pn	16 07 09.3	-0.7

IDC 26 16:16:16.7±7.0**, 17.57S×178.50W, h499**^{km}±80^{km}**, mb3.2**/7**, mb1 3.6**/7**, mb1mx3.5**/13**, mbtmp4.0**/7**, Error ellipse: s-maj=49.7km s-min=26.9km az=155.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	38.72	241	P	P	16 22 57.6	-0.7
	2.8nm,0.5s,baz=100,slow=12,SNR=7.3						
WRA	Warramunga Arr	44.61	259	P	P	16 23 43.6	-1.9
	0.8nm,0.5s,baz=95,slow=7.1,SNR=24						
MJAR	Matsushiro Arr	67.58	323	P	P	16 26 23.8	-0.7
	1.4nm,0.8s,baz=160,slow=6.9,SNR=4.1						
NVAR	Mina Array Bea	79.24	44	P	P	16 27 30.2	-0.5
	0.8nm,0.6s,baz=210,slow=7.5,SNR=6.8						
ILAR	Eielson Array	85.58	13	P	P	16 28 00.3	-1.7
	0.7nm,0.4s,baz=224,slow=5.3,SNR=26						
TXAR	Lajitas Array	85.89	58	P	P	16 28 04.3	0.0
	1.0nm,0.7s,baz=219,slow=5.4,SNR=12						
PDAR	Pinedale Array	87.17	43	P	P	16 28 08.9	-1.2
	0.7nm,0.7s,baz=225,slow=2.1,SNR=5.0						
ARCES	ARCESS Array B	125.97	350	PKP	PKPdf	16 34 19.9	-0.9
	1.3nm,0.8s,slow=0.9,SNR=4.9						
BRTR	Keskin Array B	144.48	315	PKP	PKPdf	16 34 56.0	+0.5
	3.2nm,0.8s,baz=127,slow=3.4,SNR=20						
GERES	GERESS Array B	147.26	345	PKPbc	PKPdf	16 35 03.4	+3.6
	1.2nm,0.5s,baz=18,slow=2.2,SNR=10.0						

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*IDC **26** 16:45:58.2±1.1, 23.34N×142.12E, mb3.9/6, mb1 4.0/8, mb1mx3.8/22, mbtmp3.8/8, ML3.6/2, MS3.5/3, Ms1 3.5/3, ms1mx3.1/26, Error ellipse: s-maj=39.9km s-min=22.6km az=95.0*

*NEIC **26** 16:46:00.2±0.7, 23.27N×142.23E, h15^{km}, Error ellipse: s-maj=31.8km s-min=11.3km az=81.0*

ISC 26 16:46:01.7±2.7**, 23.4N**±0.1×**142.1E**±0.3**, h37**^{km}±24^{km}**, n13,** σ**0.^{s}74**/11**, mb3.9**/6**, MS3.5**/1**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	3.69	1	Pn	P	16 46 58.4	+0.6
	9.0nm,0.3s,baz=90,slow=20,SNR=12						
CBIJ				Sn	S	16 47 40.0	-0.6
	12nm,0.3s,baz=287,slow=19,SNR=3.8						
JHJ	Hachijo jima 2	9.91	349	LR	LR	16 51 17.1	
	comp=Z,251nm,21.7s,baz=102,slow=32						
GUMO	Guam	10.09	165	ePn	P	16 48 21.3	-6.0
	402nm,1.5s						
JOW	Kunigami	13.00	288	LR	LR	16 52 42.3	
	comp=Z,169nm,19.9s,baz=330,slow=31						
MJAR	Matsushiro Arr	13.53	346	Pn	P	16 49 13.5	-0.1
	0.2nm,0.3s,baz=169,slow=12,SNR=3.0						
ASAJ	Asahikawa	20.68	1	LR	LR	16 58 23.4	
	comp=Z,222nm,22.0s,MS3.5,baz=171,slow=36						
WB2	Warramunga Arr	43.73	191	eP	P	16 54 05.2	-0.3
WRA	Warramunga Arr	43.73	191	P	P	16 54 05.2	-0.3
	3.2nm,0.8s,mb4.1,baz=12,slow=8.2,SNR=22						
MKAR	Makanchi Array	52.83	312	P	P	16 55 16.0	+0.2
	0.4nm,0.8s,mb3.4,baz=84,slow=9.5,SNR=4.9						
BVAR	Borovoye Array	60.75	319	P	P	16 56 11.8	-0.2
	0.6nm,0.7s,mb3.8,baz=104,slow=5.9,SNR=3.4						
ILAR	Eielson Array	61.00	28	P	P	16 56 12.2	-1.3
	1.0nm,0.8s,mb4.0,baz=256,slow=7.4,SNR=5.6						
INK	Inuvik	66.42	24	P	P	16 56 50.6	+1.7
	0.8nm,0.6s,mb3.9,baz=238,slow=1.5,SNR=4.8						
FINES	FINESS Array B	81.23	334	P	P	16 58 15.5	+0.4
	1.3nm,0.5s,mb4.1,baz=90,slow=1.9,SNR=8.7						

PGC 26 16:49:35.4, 48.58N×128.74W, h10^{km}**, MLSn2.9**/1**, Mw3.5, West of Vancouver Island, British Columbia, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EDB	Eliza Dome	1.68	39	Pn	Pn	16 50 02.2	-2.9
EDB				Sn	Sn	16 50 22.2	-4.6
EDB				Trac		16 50 22.9	
	comp=Z,23nm,0.3s						
MAYB	Maynard	2.09	29	Pn	Pn	16 50 08.8	-2.3
HOLB	Holberg	2.10	11	Pn	Pn	16 50 08.8	-2.4
WOSB	Woss	2.13	41	Pn	Pn	16 50 09.2	-2.4
WOSB				Sn	Sn	16 50 33.6	-4.6
	comp=Z,23nm,0.4s						
WOSB				Trac		16 50 36.2	
	comp=Z,23nm,0.4s						
GDR	Gold River	2.15	55	Pn	Pn	16 50 09.4	-2.4
GDR				Sn	Sn	16 50 34.4	-4.3
	comp=Z,19nm,0.3s						
GDR				Trac		16 50 34.6	
	comp=Z,19nm,0.3s						
OZB	Mount Ozzard	2.18	79	Pn	Pn	16 50 09.7	-2.6
OZB				Sn	Sn	16 50 35.3	-4.3
OZB				Trac		16 50 36.4	
	comp=Z,11nm,0.1s						
PHC	Port Hardy	2.29	21	Pn	Pn	16 50 11.7	-2.3
PHC				Sn	Sn	16 50 36.9	-5.6
PHC				Trac		16 50 47.1	
	comp=Z,7.0nm,0.2s						
BTB	Buttle Lake	2.30	66	Pn	Pn	16 50 11.9	-2.1
BTB				Sn	Sn	16 50 38.1	-4.5
	comp=Z,37nm,0.2s						
BTB				Trac		16 50 39.2	
	comp=Z,37nm,0.2s						
NCRB	Newcastle Ridg	2.53	43	Pn	Pn	16 50 15.3	-2.0
NCRB				Sn	Sn	16 50 45.8	-2.7
	comp=Z,21nm,0.3s						
NCRB				Trac		16 50 46.9	
	comp=Z,21nm,0.3s						
CBB	Campbell River	2.65	55	Pn	Pn	16 50 17.3	-1.7
CBB				Sn	Sn	16 50 48.2	-3.2
CBB				Trac		16 50 50.6	
	comp=Z,13nm,0.4s						
ALB	Alberni	2.67	73	Pn	Pn	16 50 16.9	-2.4
ALB				Sn	Sn	16 50 47.5	-4.5
	comp=Z,8.0nm,0.3s						
ALB				Trac		16 50 50.1	
	comp=Z,8.0nm,0.3s						
MGB	Mount Grey	2.71	80	Pn	Pn	16 50 16.7	-3.2
MGB				Sn	Sn	16 50 48.0	-5.1
MGB				Trac		16 50 52.1	
	comp=Z,15nm,0.3s						
PFB	Port Renfrew	2.86	89	Pn	Pn	16 50 18.7	-3.2
PFB				Sn	Sn	16 50 51.3	-5.5
TXB	Texada	3.04	67	Pn	Pn	16 50 22.4	-2.2
TXB				Sn	Sn	16 50 57.0	-4.4
	comp=Z,15nm,0.3s						
TXB				Trac		16 51 00.9	
	comp=Z,15nm,0.3s						
NLLB	Nanaimo Lost L	3.20	77	Pn	Pn	16 50 25.4	-1.4
NLLB				Sn	Sn	16 51 01.8	-3.7
NLLB				Trac		16 51 05.7	
	comp=Z,5.0nm,0.2s						
LZB	Mount Lazard	3.27	88	Pn	Pn	16 50 25.0	-2.8
LZB				Sn	Sn	16 51 01.8	-5.3
LZB				Trac		16 51 06.0	
	comp=Z,1.0nm,0.2s						
SHB	Sechelt	3.36	70	Pn	Pn	16 50 27.9	-1.2
SHB				Sn	Sn	16 51 05.9	-3.6
SHB				Trac		16 51 07.8	
	comp=Z,13nm,0.3s						
VGZ	Gonzales	3.61	91	Trac		16 51 13.5	
	comp=Z,7.0nm,0.4s						
VGZ	Gonzales	3.61	91	Sn	Sn	16 51 12.2	-3.5
BBB	Bella Bella	3.63	6	Pn	Pn	16 50 31.1	-1.9
BBB				Sn	Sn	16 51 11.3	-5.1
BBB				Trac		16 51 18.1	
	comp=Z,10.0nm,0.4s						
WSLR	Whistler	4.11	66	Pn	Pn	16 50 38.5	-1.2
WSLR				Trac		16 50 44.4	
	comp=Z,7.0nm,0.3s						
HNB	Haney	4.12	78	Pn	Pn	16 50 38.8	-1.1
HNB				Sn	Sn	16 51 24.1	-4.8
VDB	Vedder Mountai	4.41	82	Pn	Pn	16 50 41.1	-2.9
LLLB	Lillooet	4.90	63	Pn	Pn	16 50 49.0	-2.1

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*IDC **26** 17:38:36.7±0.9, 17.98S×173.33W, mb4.1/8, mb1 4.3/10, mb1mx4.2/18, mbtmp4.1/10, ML2.7/2, MS3.9/12, Ms1 3.9/12, ms1mx3.7/27, Error ellipse: s-maj=37.7km s-min=18.5km az=126.0*

*NEIC **26** 17:38:38.7±0.7, 17.96S×173.44W, h10^{km}, mb4.2/1, Error ellipse: s-maj=29.6km s-min=13.3km az=125.0*

ISC 26 17:38:37.8±4.6**, 18.0S**±0.1×**173.5W**±0.1**, h19**^{km}±34^{km}**, n38,** σ**0.^{s}81**/16**, mb4.0**/9**, MS4.0**/11**, 2C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.34	22	Pn	Pn	17 39 44.7	+0.3
	6.5nm,0.3s,baz=254,slow=20,SNR=5.4						
AFI				Sn	Sn	17 40 24.6	-11
	7.6nm,0.3s,baz=129,slow=22,SNR=6.3						
AFI	Afiamalu	4.34	22	Pn	Pn	17 39 44.7	+0.3
AFI				Sn	Sn	17 40 24.6	-11
RAR	Rarotonga	13.30	106	Pn	P	17 41 34.7	-14
	1.3nm,0.3s,baz=243,slow=4.3,SNR=5.6						
RAR				LR	LR	17 45 51.8	
	comp=Z,462nm,18.6s,baz=296,slow=33						
DZM	Mont Dzumac	19.32	254	P	P	17 43 03.8	-1.0
	0.1nm,0.3s,baz=142,slow=17,SNR=2.5						
URZ	Urewera	21.84	200	P	P	17 43 30.3	-0.8
	4.2nm,0.3s,mb4.3,baz=337,slow=15,SNR=6.2						
PPT	Papeete	22.75	93	eLQ		17 47 28.9	
PPT				eLR	LR	17 48 25.7	
	755nm,26.5s,baz=262						
PPT	Papeete	22.75	93	LR	LR	17 50 50.2	
	comp=Z,350nm,18.1s,MS3.8,baz=265,slow=32						
TBI	Tubuai	23.08	107	eLQ		17 47 38.3	
TBI				eLR	LR	17 48 35.5	
	424nm,28.8s						
HNR	Honiara	27.16	285	LR	LR	17 53 41.1	
	comp=Z,120nm,19.9s,MS3.5,baz=348,slow=33						
RPZ	Rata Peaks	28.82	204	P	P	17 44 38.8	+1.9
	4.8nm,0.5s,mb4.5,baz=269,slow=2.5,SNR=3.4						
TAOE	Nuku Hiva Isla	33.59	79	eLR	LR	17 53 26.4	
	812nm,27.7s						
RKT	Rikitea	36.33	105	eLR	LR	17 54 43.5	
	434nm,28.0s						
CTA	Charters Tower	38.08	260	eP	P	17 45 57.9	+0.6
	3.2nm,0.7s,mb4.2						
STKA	Stephens Creek	42.76	242	P	P	17 46 36.4	+0.5
	5.2nm,1.1s,mb4.2,baz=95,slow=11,SNR=3.9						
STKA				LR	LR	18 01 39.6	
	comp=Z,217nm,20.6s,MS4.0,baz=31,slow=32						
WB2	Warramunga Arr	49.24	259	eP	P	17 47 26.7	-0.7
WRA	Warramunga Arr	49.25	259	P	P	17 47 27.2	-0.3
	2.0nm,0.5s,mb4.4,baz=97,slow=8.4,SNR=7.7						
FITZ	Fitzroy Crossi	57.66	260	LR	LR	18 10 53.7	
	comp=Z,221nm,20.3s,MS4.3,baz=289,slow=34						
MJAR	Matsushiro Arr	70.85	320	P	P	17 49 56.6	+1.0
	1.8nm,0.8s,mb4.0,baz=155,slow=4.7,SNR=4.8						
JOW	Kunigami	71.95	307	LR	LR	18 16 38.2	
	comp=Z,74nm,18.6s,MS4.0,baz=164,slow=32						
JNU	Nakatsue	73.50	314	LR	LR	18 18 03.1	
	comp=Z,71nm,18.7s,MS4.0,baz=71,slow=32						
NVAR	Mina Array Bea	76.26	42	LR	LR	18 21 35.9	
	comp=Z,44nm,18.4s,MS3.8,baz=325,slow=34						
TXAR	Lajitas Array	82.08	56	P	P	17 50 58.4	-0.4
	0.3nm,0.8s,mb3.2,baz=219,slow=5.8,SNR=3.2						
TXAR				LR	LR	18 18 45.2	
	comp=Z,60nm,19.0s,MS4.0,baz=280,slow=29						
PDAR	Pinedale Array	84.20	42	P	P	17 51 08.7	-0.8
	0.5nm,0.8s,mb3.7,baz=270,slow=3.0,SNR=4.1						
PDAR				LR	LR	18 24 05.6	
	comp=Z,79nm,18.6s,MS4.1,baz=251,slow=32						
ILAR	Eielson Array	84.95	11	P	P	17 51 12.6	-0.1
	1.1nm,1.0s,mb3.9,baz=223,slow=6.1,SNR=6.4						
ILAR				LR	LR	18 24 34.6	
	comp=Z,66nm,18.2s,MS4.1,baz=0.6,slow=32						
ULM	Lac du Bonnet	95.94	39	LR	LR	18 32 31.1	
	comp=Z,96nm,18.5s,MS4.3,baz=355,slow=34						
KMBO	Kilima Mbogo	144.31	241	PKP	PKPdf	17 58 15.7	-2.0
	5.4nm,1.0s,baz=62,slow=1.9,SNR=14						
KSP	Ksiaz	146.28	349	eP	PKPbc	17 58 20.3	+3.2
CLL	Collm	146.33	353	⇑P	PKPbc	17 58 20.3	+3.1
	logA/T=1.0						
CLL				i		17 58 24.4	
CLL				ePP	PP	18 01 58.0	+14
CLL	Collm	146.33	353	⇑iP	PKPbc	17 58 20.3	+3.1
CLL				i		17 58 24.4	
STHS	Stebnicka Huta	146.44	343	ePKP	PKPdf	17 58 22.6	+2.3
BRG	Berggiesshubel	146.63	351	eP	PKPbc	17 58 21.3	+3.4
CRVS	Cervenica-Dubn	146.84	342	e	PKPbc	17 58 11.1	-7.4
MOX	Moxa	147.14	354	eP	PKPdf	17 58 24.0	+2.6
KECS	Kecovo	147.50	343	ePKP	PKPdf	17 58 24.8	+2.8
BRTR	Keskin Array B	148.06	318	PKPbc	PKPdf	17 58 25.9	+2.7
	4.1nm,1.2s,baz=90,slow=1.4,SNR=10						
GRA1	Grafenberg Arr	148.12	354	ePKP	PKPdf	17 58 26.4	+3.4
KHC	Kasperske Hory	148.38	351	ePKPbc	PKPdf	17 58 26.5	+3.1
GERES	GERESS Array B	148.65	351	PKPbc	PKPdf	17 58 26.6	+2.7
	2.3nm,1.0s,slow=1.3,SNR=11						

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*IDC **26** 18:32:49.5±2.0, 8.97S×119.66E, mb4.1/3, mb1 4.3/4, mb1mx3.9/14, mbtmp4.2/4, ML4.5/1, Error ellipse: s-maj=144.0km s-min=23.4km az=56.0*

*NEIC **26** 18:33:02.4±2.8, 8.69S×120.37E, h105^{km}±32^{km}, mb4.4/6, Error ellipse: s-maj=57.9km s-min=12.9km az=224.0*

ISC 26 18:33:04.5±0.6**, 8.8S**±0.2×**120.4E**±0.3**, h150**^{km}**, n16,** σ**0.^{s}73**/18**, mb4.2**/10**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.55	152	eP	P	18 35 32.3	-0.4
	9.3nm,0.6s						
FITZ				eS	S	18 37 22.0	-6.7
KAKA	Kakadu	12.45	109	eP	P	18 36 16.7	+19
	26nm,0.4s						
WRA	Warramunga Arr	17.45	131	P	P	18 37 00.5	+0.4
	1.8nm,0.3s,baz=303,slow=13,SNR=29						
WRAB	Tennant Creek	17.45	131	ePn	P	18 36 59.6	-0.5
	6.0nm,0.4s						
WB2	Warramunga Arr	17.46	131	eP	P	18 36 59.8	-0.4
WB2				eS	S	18 40 00.2	-7.3
STKA	Stephens Creek	30.24	142	P	P	18 39 04.8	+1.4
	1.2nm,0.5s,mb3.9,baz=327,slow=9.5,SNR=5.4						
LSA	Lhasa	47.52	325	eP	P	18 41 27.7	+1.1
	4.4nm,0.6s,mb4.3						
GUN	Gumba	49.47	319	eP	P	18 41 42.5	+0.9
	10nm,0.6s,mb4.6						
DMN	Daman	49.77	318	eP	P	18 41 43.4	-0.6
	5.7nm,0.6s,mb4.4						
KKN	Kakani	49.78	318	eP	P	18 41 44.7	+0.7
	2.8nm,0.4s,mb4.2						
GKN	Gorkha	50.35	318	eP	P	18 41 48.0	-0.3
	5.8nm,0.3s,mb4.7						
KOLN	Koldanda	50.89	317	eP	P	18 41 51.8	-0.6
	3.2nm,0.3s,mb4.5						
SONM	Songino Array	57.74	349	P	P	18 42 42.3	+0.4
	1.6nm,0.6s,mb4.1,baz=164,slow=8.8,SNR=19						
MKAR	Makanchi Array	64.92	332	P	P	18 43 29.9	-0.3
	1.0nm,0.5s,mb3.9,baz=150,slow=5.8,SNR=23						
AAK	Ala-Archa	66.11	325	eP	P	18 43 36.6	-1.3
	0.9nm,0.6s,mb3.8						
KURK	Kurchatov	69.44	333	eP	P	18 43 58.0	-0.3

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*IDC **26** 18:36:09.6±1.6, 17.26S×175.09W, mb4.0/8, mb1 4.3/9, mb1mx4.2/16, mbtmp4.0/9, MS3.7/7, Ms1 3.7/7, ms1mx3.4/21, Error ellipse: s-maj=94.5km s-min=17.2km*

az=148.0

*NEIC **26** 18:36:12.9±0.6, 17.13S×175.16W, h20^{km}, mb4.4/1, Error ellipse: s-maj=28.7km s-min=10.7km az=147.0*

ISC 26 18:36:13.4±0.7, 17.1S±0.2×175.2W±0.2, h33^{km}, n27, σ1^{s}04/19, mb4.0/8, MS3.7/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.59	47	Pn	Pn	18 37 20.1	-2.4
	3.6nm,0.3s,baz=79,slow=15,SNR=4.5						
AFI				Sn	Sn	18 38 15.8	+0.5
	8.5nm,0.3s,baz=122,slow=23,SNR=4.0						
RAR	Rarotonga	15.18	108	LR	LR	18 43 40.4	
	comp=Z,302nm,20.5s,baz=333,slow=30						
DZM	Mont Dzumac	17.95	251	LR	LR	18 45 40.1	
	comp=Z,137nm,19.0s,baz=17,slow=32						
PPT	Papeete	24.50	95	LR	LR	18 48 00.6	
	comp=Z,134nm,20.2s,MS3.4,baz=259,slow=29						
RPZ	Rata Peaks	28.98	201	LR	LR	18 52 49.6	
	comp=Z,109nm,18.3s,MS3.5,baz=12,slow=35						
CTA	Charters Tower	36.57	259	P	P	18 43 18.8	+0.5
	3.5nm,0.8s,mb4.2,baz=94,slow=14,SNR=6.8						
CTA	Charters Tower	36.57	259	P	P	18 43 18.8	+0.5
CTAO	Charters Tower	36.57	259	*e*P	P	18 43 18.3	0.0
	7.7nm,1.2s,mb4.4						
PMG	Port Moresby	37.34	277	LR	LR	18 55 29.2	
	comp=Z,71nm,18.8s,MS3.5,baz=213,slow=31						
STKA	Stephens Creek	41.67	241	P	P	18 43 59.9	-0.8
	2.5nm,0.9s,mb3.8,baz=59,slow=5.9,SNR=3.5						
WRA	Warramunga Arr	47.76	258	P	P	18 44 49.9	+0.3
	0.7nm,0.4s,mb4.0,baz=98,slow=7.6,SNR=6.1						
FITZ	Fitzroy Crossi	56.15	259	P	P	18 45 51.9	-0.6
	3.6nm,0.8s,mb4.5,baz=145,slow=12,SNR=4.5						
FITZ	Fitzroy Crossi	56.15	259	P	P	18 45 51.9	-0.6
MJAR	Matsushiro Arr	69.11	321	LR	LR	19 13 33.9	
	comp=Z,40nm,20.4s,MS3.6,baz=330,slow=32						
NVAR	Mina Array Bea	76.75	43	P	P	18 48 03.3	-0.1
	0.5nm,0.4s,mb3.8,baz=214,slow=7.4,SNR=5.2						
TXAR	Lajitas Array	83.01	57	P	P	18 48 39.1	+2.0
	0.4nm,0.7s,mb3.6,baz=211,slow=5.3,SNR=3.1						
ILAR	Eielson Array	84.44	12	P	P	18 48 44.8	+1.3
	0.7nm,0.7s,mb3.9,baz=234,slow=6.1,SNR=14						
PDAR	Pinedale Array	84.69	42	P	P	18 48 44.4	-0.9
	1.5nm,0.9s,mb4.1,baz=207,slow=3.8,SNR=9.8						
PLCA	Paso Flores	89.69	133	LR	LR	19 18 56.4	
	comp=Z,93nm,19.0s,MS4.2,baz=183,slow=29						
VNA3	Neumayer Olymp	91.34	175		P	18 49 11.0	-5.6
VNA3	Neumayer Olymp	91.34	175		P	18 49 16.3	-0.3
VNA3	Neumayer Olymp	91.34	175	P	P	18 49 16.3	-0.3
VNA2	Neumayer--Watz	91.81	176		P	18 49 13.9	-4.9
VNA2	Neumayer--Watz	91.81	176		P	18 49 19.3	+0.5
VNA2	Neumayer--Watz	91.81	176	P	P	18 49 19.3	+0.5
BRTR	Keskin Array B	146.28	318	PKPbc	PKPbc	18 55 52.1	+1.2
	0.7nm,0.9s,baz=56,slow=8.3,SNR=3.4						
GERES	GERESS Array B	147.49	349	PKPbc	PKPdf	18 55 56.2	+4.8
	0.7nm,0.9s,SNR=4.9						

MEX 26 19:13:36.5±0.5, 23.98N×105.22W, h10^{km}, MD4.1, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAIG	Mazatlaan	1.36	235	*e*P	Pb	19 13 57.5	-4.0
MAIG				*i* S	Sb	19 14 14.5	-4.3
ZAIG	Zacatecas	2.72	116	*i* P	Pn	19 14 19.4	-1.7
ZAIG				*i* S	Sn	19 14 49.0	-5.3
SFJM	Santa Fe	4.02	149	*e*P	Pn	19 14 35.0	-4.5

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*THE **26** 20:04:53.8, 44.95N×21.00E, h24^{km}, ML4.5*

*PRU **26** 20:05:03.7, 43.54N×21.51E, M4.0*

*PDG **26** 20:05:07.5±0.0, 43.83N×21.80E, h25^{km}±4^{km}*

*NEIC **26** 20:05:07.5, 43.83N×21.80E, h25^{km}, mb4.0/1, ML3.6(PDG), After PDG.*

*BEO **26** 20:05:07.4±0.3, 43.80N×21.66E, h17^{km}*

*SOF **26** 20:05:07.2, 43.70N×21.67E, h2^{km}, MD3.7*

*CSEM **26** 20:05:09.6±0.0, 43.92N×21.73E, h35^{km}, Ms3.6, Error ellipse: s-maj=1.5km s-min=1.0km az=49.0*

*SKO **26** 20:05:11.2, 43.71N×21.80E, h15^{km}, M3.4*

*VIE **26** 20:05:12.9±1.5, 44.23N×21.44E, mb3.2/7, ML3.3/2, Ms3.6/5, Error ellipse: s-maj=22.9km s-min=12.9km az=29.0*

ISC 26 20:05:08.0±0.5, 43.89N±0.01×21.69E±0.02, h16^{km}±5^{km}, n126, σ1^{s}04/182, mb4.0/1, 22C-26D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SVIS	Svilajnac	0.53	320	⇑*i*Pg	Pb	20 05 18.7	+0.4
SVIS				Sg	Sb	20 05 26.9	+1.4
GRUS	Gruza	0.71	270	*i* Pg	Pb	20 05 20.9	-0.5
GRUS				Sg	Sb	20 05 29.8	-0.8
DJES	Djerdap	0.95	39	*i* Pg	Pb	20 05 26.7	+1.1
DJES				Sg	Sb	20 05 41.9	+4.1
BARS	Barje	1.08	175	⇓*i*Pg	Pb	20 05 26.5	-1.2
BARS				Sg	Sb	20 05 39.8	-1.5
DIVS	Divcibare	1.25	280	*i* Pg	Pb	20 05 30.5	-0.1
DIVS				Sg	Sb	20 05 47.7	+1.5
BEO	Belgrade	1.28	317	⇑*i*Pg	Pn	20 05 32.3	+1.0
BEO				Sg	Sb	20 05 51.1	+3.8
NVSS	Nova Varos 2	1.50	256	⇓*i*Pg	Pn	20 05 38.5	+4.2
NVSS				Sg	Sn	20 05 58.1	+4.6
BBLS	Bajina Basta -	1.65	270	*i* Pn	Pn	20 05 37.5	+0.9
BBLS				Sg	Sn	20 06 00.8	+3.3
IVA	Berane	1.66	233	⇓*i*Pn	Pn	20 05 36.5	-0.1
IVA				*e*Sn	Sn	20 05 59.0	+1.3
VTS	Vitosha	1.71	139	*i* P	Pn	20 05 38.0	+0.6
BZS	Buzias	1.73	358	⇑P	Pn	20 05 38.8	+1.2
BZS	Buzias	1.73	358	⇑P	Pn	20 05 38.8	+1.2
PLE	Pljevlja	1.76	252	⇑*i*Pn	Pn	20 05 38.3	+0.2
PLE				*e*Sn	Sn	20 06 02.2	+1.9
PVY	Plav	1.81	225	⇓*i*Pn	Pn	20 05 38.5	-0.2
PVY				*e*Sn	Sn	20 06 02.2	+0.7
PVY	Plav	1.81	225	⇓*i*Pn	Pn	20 05 38.5	-0.3
PVY				*e*Sn	Sn	20 06 02.2	+0.8
SKO	Skopje	1.93	186	*i* Pn	Pn	20 05 42.9	+2.4
SKO				*i* Pg	Pn	20 05 44.0	+3.5
SKO				*i* Sn	Sn	20 06 03.9	-0.7
SKO				*e*Sg	Sn	20 06 07.4	+2.9
SKO				*e*Lg		20 06 09.9	
	comp=N,784nm,0.6s						
SKO				*e*Lg		20 06 10.3	
	comp=E,701nm,1.0s						
SKO	Skopje	1.93	186	*i* Pg	Pn	20 05 44.0	+3.5
SKO				*i* Sn	Sn	20 06 03.9	-0.7
SKO				*e*Sg	Sn	20 06 07.4	+2.8
SKO				Lg		20 06 09.9	
SKO				Lg		20 06 10.3	
SKO	Skopje	1.93	186	*i* Pg	Pn	20 05 44.0	+3.5
SKO				*i* Sn	Sn	20 06 03.9	-0.7
UPM	Unac-Piva	2.14	252	⇓*i*Pn	Pn	20 05 43.5	-0.1
UPM				*e*Sn	Sn	20 06 11.2	+1.3
UPM	Unac-Piva	2.14	252	⇓*i*Pn	Pn	20 05 43.5	0.0
UPM				*e*Sn	Sn	20 06 11.1	+1.2
NKY	Niksic	2.24	242	⇑*i*Pn	Pn	20 05 45.0	-0.1
NKY				*e*Sn	Sn	20 06 13.3	+0.8
PGB	Panagyurishte	2.25	126	P	Pn	20 05 46.6	+1.4
PGB				Pg	Pn	20 05 49.8	+4.6
KKB	Krupnik	2.27	153	*i* P	Pn	20 05 45.8	+0.4
KKB				Pg	Pn	20 05 50.0	+4.6
PUK	Puka	2.27	216	*e*Pn	Pn	20 05 49.4	+3.9
PUK				*i* Sn	Sn	20 06 19.6	+6.3
TTG	Podgorica	2.30	231	⇑*i*Pn	Pn	20 05 45.4	-0.5
TTG				*e*Sn	Sn	20 06 14.3	+0.3
BUM	Brajici-Budva	2.59	233	⇓*i*Pn	Pn	20 05 49.3	-0.7
BUM				*e*Sn	Sn	20 06 21.4	0.0
ULC	Ulcinj	2.63	224	⇑*i*Pn	Pn	20 05 49.7	-0.9
ULC				*e*Sn	Sn	20 06 22.1	-0.4
VAY	Valandovo	2.65	166	*e*Pn	Pn	20 05 49.9	-0.9
VAY				*i* Pg	Pn	20 05 55.1	+4.3
VAY				*i* Sg	Sn	20 06 29.4	+6.5
VAY				*e*Lg		20 06 34.4	
	comp=E,270nm,0.7s						
VAY				*e*Lg		20 06 34.9	
	comp=N,664nm,0.6s						
VAY	Valandovo	2.65	166	*i* Pg	Pn	20 05 55.1	+4.2
VAY				*i* Sg	Sn	20 06 29.3	+6.4
VAY				Lg		20 06 34.4	
VAY				Lg		20 06 34.9	
QSH	Qafa e Shtames	2.71	210	*e*Pn	Pn	20 05 53.0	+1.3
QSH				*i* Sn	Sn	20 06 27.0	+2.6
PVL	Pavlikeni	2.73	103	P	Pn	20 05 51.9	-0.1
PVL				Pg	Pn	20 05 59.0	+7.0
HCY	Herceg Novi	2.75	239	⇑*i*Pn	Pn	20 05 51.7	-0.5
HCY				*e*Sn	Sn	20 06 25.4	0.0
MMB	Musomiste	2.75	146	*i* P	Pn	20 05 53.0	+0.8
MTUR	Matau	2.75	60	P	Pn	20 05 53.8	+1.5
MTUR	Matau	2.75	60	P	Pn	20 05 53.8	+1.5
PLD	Plovdiv	2.84	128	P	Pn	20 05 59.0	+5.4
VOIR		2.85	56	⇓P	Pn	20 05 56.2	+2.5
VOIR		2.85	56	⇓P	Pn	20 05 56.2	+2.5
OHR	Ohrid	2.86	194	*e*Pn	Pn	20 05 53.4	-0.4
OHR				*e*Pg	Pn	20 05 59.4	+5.6
OHR				*i* Sg	Sn	20 06 36.6	+8.5
OHR				*e*Lg		20 06 39.4	
	comp=E,678nm,0.8s						
OHR	Ohrid	2.86	194	*e*Pn	Pn	20 05 53.4	-0.4
OHR				*i* Sg	Sn	20 06 36.6	+8.5
OHR				Lg		20 06 39.4	
KNT	Kendrikon	2.87	162	*e*Pn	Pn	20 05 53.8	-0.2
BIA	Bitola	2.88	186	*i* Pn	Pn	20 05 53.3	-0.9
BIA				*i* Pg	Pn	20 05 59.6	+5.4
BIA				*i* Sg	Sn	20 06 35.9	+7.1
BIA	Bitola	2.88	186	*i* Pg	Pn	20 05 59.6	+5.4
BIA				*i* Sg	Sn	20 06 35.9	+7.1
GRG	Griva	2.98	170	*e*Pn	Pn	20 05 54.8	-0.7
GRG				*e*Sn	Sn	20 06 43.5	+12
DRGR		2.99	14	⇓P	Pn	20 05 56.1	+0.4
DRGR		2.99	14	⇓P	Pn	20 05 56.1	+0.5
FNA	Florina	3.12	184	*e*Pn	Pn	20 05 57.1	-0.4
FNA				*e*Sn	Sn	20 06 43.5	+8.9
RZN	Rozhen	3.13	134	P	Pn	20 05 58.0	+0.3
SZH	Strazhica	3.14	100	P	Pn	20 05 59.0	+1.1
RHK3	Tenkes	3.16	310	⇓*e*P	Pn	20 05 58.2	+0.1
RHK3				*e*S	Sn	20 06 49.2	+13
PKSM	Moragy	3.17	318	⇓*i*P	Pn	20 05 58.6	+0.3
PKSM				*e*S	Sn	20 06 49.3	+13
SOH	Sokhos	3.31	158	*e*Pn	Pn	20 05 59.3	-0.9
SOH				*e*Sn	Sn	20 06 51.0	+11
DIM	Dimitrovgrad	3.37	122	*e*P	Pn	20 06 03.0	+2.0
RHK1	Bakonya	3.38	312	⇓*e*P	Pn	20 06 01.1	-0.2
THE	Thessaloniki	3.39	163	*e*Pn	Pn	20 06 00.2	-1.2
MLR	Muntele Rosu	3.43	61	⇓P	Pn	20 06 04.5	+2.6
MLR	Muntele Rosu	3.43	61	⇓P	Pn	20 06 04.5	+2.6
KDZ	Kurdzhali	3.54	128	P	Pn	20 06 03.0	-0.5
PKS8	Sarbogard	3.67	326	⇑*e*P	Pn	20 06 05.2	-0.1
PKS8				*e*S	Sn	20 06 49.2	+0.6
	comp=E,1.2nm,0.2s						
JMB	Yambol	3.85	110	P	Pn	20 06 08.0	+0.1
OUR	Ouranopolis	3.94	154	*e*Pn	Pn	20 06 08.1	-1.1
BUD	Budapest	4.05	333	⇑*e*Pn	Pn	20 06 10.9	+0.2
BUD				*e*Sn	Sn	20 06 59.5	+1.2
BUD	Budapest	4.05	333	⇑*e*P	Pn	20 06 10.8	+0.1
BUD				*e*S	Sn	20 06 59.5	+1.2
PKSG		4.20	328	*e*P	Pn	20 06 12.4	-0.4
PRD	Provadia	4.21	98	P	Pn	20 06 14.0	+1.0
PSZ	Piszkesteto	4.22	343	⇓*i*Pn	Pn	20 06 12.9	-0.2
PSZ				*e*Sn	Sn	20 07 01.4	-1.2
PAIG	Paliouri	4.23	159	*e*Pn	Pn	20 06 11.9	-1.5
PAIG				*e*Sn	Sn	20 06 58.9	-4.0
ALN	Alexandroupoli	4.40	131	*e*Pn	Pn	20 06 16.2	+0.5
BURAR	Bucovina Array	4.46	32	⇑P	Pn	20 06 20.7	+4.0
BURAR	Bucovina Array	4.46	32	⇑P	Pn	20 06 20.7	+4.0
HARR	Harsova	4.55	78	⇑P	Pn	20 06 17.6	-0.2
SRO	Srobarova	4.58	330	*i* PN	Pn	20 06 18.4	+0.2
XOR	Xorichti	4.66	166	*e*Pn	Pn	20 06 17.8	-1.6
KECS	Kecovo	4.67	350	*i* PN	Pn	20 06 19.8	+0.3
KECS				*e*SN	Sn	20 07 12.4	-1.6
PSN	Preselentsi	4.71	90	*e*P	Pn	20 06 20.0	0.0
CFR	Carcaliu	4.78	72	⇑P	Pn	20 06 19.9	-1.3
CFR	Carcaliu	4.78	72	⇑P	Pn	20 06 19.9	-1.3
TIRR	Tirgusor	4.87	81	⇓P	Pn	20 06 22.2	-0.1
TIRR	Tirgusor	4.87	81	⇓P	Pn	20 06 22.2	-0.2
AGG	Agios Georgios	4.89	174	*e*Pn	Pn	20 06 22.4	-0.3
AGG				*e*Sn	Sn	20 07 10.3	-9.3
EVR	Evrytania	4.97	179	*e*P	Pn	20 06 25.5	+1.7
AOS	Alonnisos	5.00	160	*e*Pn	Pn	20 06 22.1	-2.1
AOS	Alonnisos	5.00	160	*e*Pn	Pn	20 06 22.0	-2.2
VYHS	Vyhne	5.01	338	*i* PN	Pn	20 06 24.0	-0.4
VYHS				*e*SN	Sn	20 07 19.8	-2.8
CRVS	Cervenica-Dubn	5.01	358	*i* PN	Pn	20 06 24.8	+0.4
CRVS				*e*		20 07 55.4	
KOLS	Kolonicke sedl	5.06	4	*i* PN	Pn	20 06 26.0	+1.0
KOLS				*e*		20 07 54.5	
ZST	Bratislava	5.36	325	*i* PN	Pn	20 06 28.8	-0.5
ARSA	Arzberg	5.48	310	⇓*i*Pn	Pn	20 06 30.5	-0.5
	comp=E,9.6nm,0.3s,SNR=22						
ARSA	Arzberg	5.48	310	⇑*i*Sn	Sn	20 07 33.4	-1.0
	comp=E,9.0nm,0.3s						
SMOL	Smolenice	5.49	329	*i* PN	Pn	20 06 30.0	-1.1
STHS	Stebnicka Huta	5.54	357	*i* PN	Pn	20 06 32.3	+0.5
STHS				*e*		20 08 17.3	
OBKA	Obir	5.69	300	⇑*i*Pn	Pn	20 06 33.6	-0.3
	comp=E,1.9nm,0.2s						
PRK	Paraskevi	5.77	142	*e*P	Pn	20 06 34.4	-0.7
KWP	Kalwaria	5.78	7	*e*Pn	Pn	20 06 27.4	-7.9
	comp=E,10nm,0.4s						
VOY	Vojsko	5.93	294	*e*Pn	Pn	20 06 37.9	+0.5
VOY				*e*Sn	Sn	20 07 41.3	-4.4
PTCC	Patocco-Chiusa	6.41	296	Pn	Pn	20 06 44.0	-0.1
OKC	Ostrava-Krasne	6.42	339	*e*PN	Pn	20 06 43.4	-0.9
OKC				*e*x	x	20 06 51.6	
OKC				*e*SN	Sn	20 07 58.6	+0.6
OKC	Ostrava-Krasne	6.42	339	*e*Pn	Pn	20 06 43.4	-0.9
OKC				*e*		20 07 58.6	
GMNA	Gemona	6.44	295	Pn	Pn	20 06 45.9	+1.3
VRAC	Vranov	6.46	329	⇓P	Pn	20 06 43.3	-1.4
MOA	Molln	6.52	310	⇓*i*Pn	Pn	20 06 45.5	-0.2
	comp=E,1.7nm,0.4s						
MOA	Molln	6.52	310	⇓*i*Sn	Sn	20 07 58.1	-2.3
	comp=E,7.9nm,0.4s						
MORC	Moravsky Berou	6.54	336	*e*Pn	Pn	20 06 44.6	-1.3
	comp=E,2.2nm,0.6s						
MORC				*e*Sn	Sn	20 08 01.9	+1.0
KBA	Koelnbreinsper	6.68	301	⇑*i*Pn	Pn	20 06 47.9	+0.1
	comp=E,1.2nm,0.3s						
FVI	Forni Avoltri	6.85	296	Pn	Pn	20 06 50.2	-0.1
	comp=E,5.5nm,0.2s						
GEC2	GERESS Array S	7.42	315	*e*Pn	Pn	20 06 57.8	-0.5
DPC	Dobruska-Polom	7.42	332	*e*PN	Pn	20 06 57.6	-0.8
DPC				*e*x	x	20 07 08.4	
DPC				*e*SN	Sn	20 08 22.4	-0.6
KHC	Kasperske Hory	7.66	316	*e*PN	Pn	20 07 00.8	-0.9
KHC				*e*x	x	20 07 09.9	
KHC				*e*x	x	20 08 02.5	
KHC				*e*x	x	20 08 35.5	
KHC				*e*x	x	20 09 12.5	
PRU	Pruhonice	7.82	324	*e*PN	Pn	20 07 01.4	-2.4
WTTA	Wattenberg	7.82	299	⇑*i*Pn	Pn	20 07 04.8	+0.9
	comp=E,2.0nm,0.2s						
APPI	Appiano	7.83	293	Pn	Pn	20 07 04.3	+0.2
	comp=E,246nm,3.1s						
KSP	Ksiaz	7.86	334	*e*Pn	Pn	20 07 04.6	+0.2
WET	Wettzell	8.03	314	*e*Pn	P	20 07 06.0	-0.8
SQTA	Sankt Quirin	8.07	298	⇓*i*Pn	P	20 07 08.2	+0.8
	comp=E,2.1nm,0.3s						
MOTA	Moosalm	8.19	299	⇓*i*Pn	P	20 07 09.2	+0.2
	comp=E,2.7nm,0.3s						
DAVOX	Davos	8.81	293	Pn	P	20 07 19.7	+2.1
DAVA	Damuels	8.95	296	⇑*i*Pn	P	20 07 19.4	-0.2
	comp=E,1.6nm,0.2s						
MBDF	Montbardon	10.73	280	*e*P	P	20 07 40.2	-3.8
	comp=E,4.5nm,0.6s						
LPG	La Plagne	10.76	284	*e*P	P	20 07 44.9	+0.5
	comp=E,30nm,1.0s						
LPL	La Plagne	10.78	284	*e*P	P	20 07 44.1	-0.5
HINF	Hinteralfeld	11.07	296	*e*P	P	20 07 46.3	-2.3
CABF	La Chapelle	11.33	289	*e*P	P	20 07 51.9	-0.3
	comp=E,11nm,0.6s						
HAU	Haudompre	11.45	296	*e*P	P	20 07 51.7	-2.0
SMF	Signal de Mont	12.87	289	*e*P	P	20 08 12.7	-0.2
AVF	Avril sur Loir	13.22	289	*e*P	P	20 08 16.9	-0.7
	comp=E,7.6nm,0.8s						
BRVK	Borovoye	32.92	56	*e*P	P	20 11 44.0	+0.7
	comp=E,1.2nm,0.6s,mb4.0						

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*BJI **26** 20:06:13.5, 5.50S×129.00E, h328^{km}, mB4.3, mb4.1*

*IDC **26** 20:06:13.9±4.0, 5.50S×128.60E, h309^{km}±44^{km}, mb3.8/8, mb1 4.1/11, mb1mx4.0/16, mbtmp4.7/11, Error ellipse: s-maj=19.0km s-min=13.2km az=81.0*

*NEIC **26** 20:06:14.4±1.6, 5.52S×128.63E, h318^{km}±19^{km}, mb4.5/14, Error ellipse: s-maj=12.6km s-min=7.7km az=66.0*

ISC 26 20:06:11.8±1.5, 5.53S±0.05×128.66E±0.08, h306^{km}±17^{km}, h324^{km}±3.6^{km}:pP-P, n47, σ1^{s}04/54, mb4.2/20, 2D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.84	193	*e*P	P	20 09 05.4	-0.2
	81nm,0.5s						
FITZ				*e*S	S	20 11 30.4	+7.2
FITZ	Fitzroy Crossi	12.84	193	P	P	20 09 05.4	-0.2
	20nm,0.3s,baz=29,slow=9.9,SNR=201						
FITZ				S	S	20 11 26.4	+3.3
	1.0nm,0.3s,baz=108,slow=13,SNR=3.5						
WRAB	Tennant Creek	15.35	159	*e*P	P	20 09 34.8	-0.3
	38nm,0.4s						
WRAB				*e*S	S	20 12 17.4	-0.1
WRA	Warramunga Arr	15.35	159	P	P	20 09 34.9	-0.3
	6.8nm,0.3s,baz=340,slow=11,SNR=78						
WRA				S	S	20 12 17.9	+0.4
	1.1nm,0.3s,baz=342,slow=21,SNR=16						
WB2	Warramunga Arr	15.36	159	*e*P	P	20 09 34.9	-0.3
WB2				*e*S	S	20 12 17.7	+0.1
KKM	Kota Kinabalu	16.93	313	*e*P	P	20 09 51.7	-0.3
PMG	Port Moresby	18.74	103	P	P	20 10 12.7	+2.2
	8.1nm,0.3s,baz=280,slow=3.5,SNR=38						
PMG	Port Moresby	18.74	103	*e*P	P	20 10 11.6	+1.1
	75nm,0.8s						
CTA	Charters Tower	22.41	132	*e*P	P	20 10 48.5	+2.3
	13nm,0.9s,mb4.3						
CTA	Charters Tower	22.41	132	P	P	20 10 48.8	+2.5
	17nm,0.8s,mb4.4,baz=313,slow=11,SNR=24						
CTAO	Charters Tower	22.41	132	*e*P	P	20 10 48.2	+1.9
	20nm,0.9s,mb4.4						
FORT	Forrest	25.12	181	*e*P	P	20 11 11.8	+0.5
	34nm,0.8s,mb4.8						
KLBR	Kellerberrin	27.86	200	*e*P	P	20 11 35.7	-0.4
	10nm,0.4s,mb4.6						
MUN	Mundaring	28.77	202	*e*P	P	20 11 43.7	-0.4
STKA	Stephens Creek	28.87	157	P	P	20 11 45.3	+0.3
	2.9nm,0.5s,mb3.9,baz=315,slow=10.0,SNR=8.3						
STKA	Stephens Creek	28.87	157	*e*P	P	20 11 45.7	+0.7
NWAO	Narrogin (SRO)	29.26	200	P	P	20 11 47.9	-0.5
	5.6nm,0.4s,mb4.4,baz=24,slow=8.0,SNR=9.8						
YHNB	Yeheng	30.84	347	*e*P	P	20 12 01.3	-1.0
HNR	Honiara	31.26	99	P	P	20 12 05.8	-0.1
	66nm,0.6s,mb5.3,baz=260,slow=2.4,SNR=5.8						
HNR	Honiara	31.26	99	*e*P	P	20 12 06.0	+0.1
	74nm,1.0s,mb5.2						
JNU	Nakatsue	38.50	3	P	P	20 13 06.3	-0.4
	7.1nm,0.8s,mb4.2,baz=73,slow=7.7,SNR=4.7						
KMI	Kunming	39.54	322	P	P	20 13 17.0	+1.6
KMI	Kunming	39.54	322	P	P	20 13 16.9	+1.5
	3.0nm,0.5s,mb3.9						
MJAR	Matsushiro Arr	42.80	11	P	P	20 13 40.5	-1.2
	6.4nm,0.8s,mb3.9,baz=188,slow=9.4,SNR=14						
MAJO	Matsushiro	42.80	11	*e*P	P	20 13 40.4	-1.4
	8.2nm,0.8s,mb4.0						
MAT	Matsushiro	42.80	11	P	P	20 13 40.4	-1.4
MAT	Matsushiro	42.80	11	*e*P	P	20 13 40.0	-1.8
	6.0nm,0.8s,mb3.9						
LZH	Lanzhou	47.49	333	*e*P	P	20 14 21.3	+2.7
LZH				AP	pP	20 15 27.3	+4.9
LZH				XP	sP	20 16 02.5	+5.9
LZH				PP	PP	20 16 16.5	+4.0
LZH				*e*S	S	20 20 51.5	+2.4
LZH				XS		20 22 48.0	
LZH				*e*SS	SS	20 24 21.3	+3.3
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.2						
LZH				AMB	AMB		
	comp=Z,60nm,4.6s						
LZH	Lanzhou	47.49	333	*e*P	P	20 14 21.3	+2.7
	comp=Z,23nm,1.6s,mb4.3						
LZH				pP	pP	20 15 27.3	+4.9
LZH				sP	sP	20 16 02.5	+5.9
LZH				PP	PP	20 16 16.6	+4.1
LZH				*e*S	S	20 20 51.5	+2.4
LZH				sS		20 22 48.1	
LZH				*e*SS	SS	20 24 21.3	+3.3
HHC	Hu-ho-hao-te	48.75	343	*e*P	P	20 14 30.0	+1.8
HHC				AP	pP	20 15 37.8	+5.5
HHC				XP	sP	20 16 12.5	+6.1
HHC				PP	PP	20 16 28.0	+3.8
HHC				SCP		20 19 11.0	
HHC				PCS		20 19 44.5	
HHC				S	S	20 21 08.5	+2.1
HHC				XS		20 23 07.3	
HHC				SCS	ScS	20 23 45.5	+0.5
HHC				SS	SS	20 24 44.3	+5.2
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.1						
HHC				AMB	AMB		
	comp=Z,130nm,8.4s						
HHC				LR	LR		
	comp=N,130nm,18.0s						
HHC				LR	LR		
	comp=E,110nm,15.6s						
HHC				LR	LR		
	comp=Z,120nm,10.8s						
GTA	Gaotai	52.05	332	*e*P	P	20 14 52.5	-0.3
GTA				AP	pP	20 16 02.0	+4.0
GTA				XP	sP	20 16 34.8	+3.1
GTA				PP	PP	20 16 56.5	+1.6
GTA				PPP	PPP	20 18 12.0	+1.3
GTA				S	S	20 21 51.0	-0.6
GTA				XS		20 23 49.3	
GTA				SS	SS	20 25 32.0	-1.1
GTA				AMB	AMB		
	comp=Z,80nm,6.1s						
GTA				LR	LR		
	comp=N,60nm,13.3s						
GTA				LR	LR		
	comp=E,50nm,14.8s						
GTA				LR	LR		
	comp=Z,60nm,12.9s						
GUN	Gumba	52.99	311	*e*P	P	20 15 00.0	+0.2
KKN	Kakani	53.37	311	*e*P	P	20 15 02.5	-0.1
	comp=Z,7.1nm,0.7s,mb4.1						
DMN	Daman	53.41	310	*e*P	P	20 15 02.7	-0.1
GKN	Gorkha	53.97	311	*e*P	P	20 15 06.5	-0.3
	comp=Z,4.3nm,0.2s,mb4.3						
KOLN	Koldanda	54.64	310	*e*P	P	20 15 11.6	-0.1
	comp=Z,5.2nm,0.7s,mb4.1						
SONM	Songino Array	56.64	342	P	P	20 15 26.3	+0.8
	comp=Z,1.6nm,0.7s,mb3.6,baz=153,slow=7.7,SNR=13						
WMQ	Urumqi	61.44	327	*e*P	P	20 16 00.0	+1.7
WMQ				AMB	AMB		
	comp=Z,100nm,4.6s						
MKAR	Makanchi Array	66.27	327	P	P	20 16 29.8	+0.4
	comp=Z,1.6nm,0.4s,mb4.1,baz=114,slow=8.6,SNR=35						
YAK	Yakutsk	67.37	1	*e*P	P	20 16 35.7	-0.2
	comp=Z,22nm,0.8s,mb5.0						
KURK	Kurchatov	70.58	329	*e*P	P	20 16 55.0	-0.7
VNDA	Vanda	74.06	173	*e*P	P	20 17 14.9	-0.9
SYO	Syowa Base	84.54	201	⇓P	P	20 18 09.1	-2.5
SYO	Syowa Base	84.54	201	⇓*e*P	P	20 18 09.1	-2.5
ILAR	Eielson Array	92.60	25	P	P	20 18 48.4	-1.4
	comp=Z,0.9nm,0.9s,mb3.7,baz=232,slow=5.7,SNR=8.0						
TXAR	Lajitas Array	125.30	58	PKP	PKPdf	20 24 39.4	+2.3
	comp=Z,0.3nm,0.5s,baz=243,slow=2.8,SNR=4.6						
TXAR	Lajitas Array	125.30	58	PKP	PKPdf	20 24 39.4	+2.3

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*NEIC **26** 20:18:59.7, 19.40N×68.10W, h80^{km}, MD3.6(RSPR), After RSPR.*

RSPR 26 20:18:59.7, 19.40N×68.10W, h80^{km}±20^{km}, MD3.6/12, MD3.6/12, 7C-5D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSP	Las Mesas	1.55	142	⇑*e*P	P	20 19 24.3	-1.8
LSP				*e*S	S	20 19 45.1	-0.6
AOPR	Arecibo Observ	1.65	129	⇑*e*P	P	20 19 25.6	-1.9
AOPR				*e*S	S	20 19 47.5	-0.5
CRPR	Cabo Rojo, PR	1.67	146	⇓*e*P	P	20 19 26.2	-1.6
CRPR				*e*S	S	20 19 47.9	-0.6
MGP	Maguayo	1.68	145	⇓*e*P	P	20 19 26.3	-1.7
MGP				*e*S	S	20 19 47.8	-0.9
CELP	Cerrillos	1.95	132	⇓*e*P	P	20 19 31.1	-0.4
CELP				*e*S	S	20 19 55.2	+0.3
ICM	Isla Caja Muer	2.12	135	⇓*e*P	P	20 19 33.5	-0.3
ICM				*e*S	S	20 19 57.6	-1.4
SJG	San Juan	2.25	125	⇑*e*P	P	20 19 34.3	-1.4
SJG				*e*S	S	20 20 01.9	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	ISC
SJG	**San Juan**	2.25	125	⇑*e*P	P	20 19 34.5	-1.2
SJG				*e*S	S	20 20 02.2	-0.1
CBYP	**Canovanas**	2.40	118	⇑*e*P	P	20 19 37.3	-0.5
HUMP	**Col San Antoni**	2.47	120	⇑*e*P	P	20 19 38.0	-0.7
HUMP				*e*S	S	20 20 07.0	-0.8
CPD	**Cerro la Pandu**	2.47	123	⇓*e*P	P	20 19 37.5	-1.2
CPD				*e*S	S	20 20 06.9	-1.0
MTP	**Monte Pirata**	2.73	118	⇑*e*P	P	20 19 41.5	-1.0
MTP				*e*S	S	20 20 12.5	-1.9
TBVI	**Tortola**	3.44	106	*e*S	S	20 20 30.1	-2.1

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*NEIC **26** 20:21:07.1, 18.13N×67.65W, h149^{km}, MD3.7(RSPR), After RSPR.*

RSPR 26 20:21:07.1, 18.13N×67.65W, h149^{km}, MD3.7/13, **MD3.7**/13, **8C-6D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRPR	**Cabo Rojo, PR**	0.53	104	⇑*e*P	P	20 21 28.0	-0.9
CRPR				*e*S	S	20 21 43.8	-1.8
LSP	**Las Mesas**	0.54	85	⇓*e*P	P	20 21 28.1	-0.9
LSP				*e*S	S	20 21 44.8	-1.0
MGP	**Maguayo**	0.55	103	⇓*e*P	P	20 21 28.1	-1.0
MGP				*e*S	S	20 21 44.6	-1.2
AOPR	**Arecibo Observ**	0.88	76	⇑*e*P	P	20 21 30.4	-0.6
AOPR				*e*S	S	20 21 49.0	-0.3
CELP	**Cerrillos**	1.02	93	⇓*e*P	P	20 21 32.1	+0.1
CELP				*e*S	S	20 21 51.0	-0.2
ICM	**Isla Caja Muer**	1.10	102	⇑*e*P	P	20 21 32.8	0.0
ICM				*e*S	S	20 21 52.5	-0.1
SJG	**San Juan**	1.42	91	⇓*e*P	P	20 21 35.6	-0.5
SJG				*e*S	S	20 21 58.1	-0.4
SJG	**San Juan**	1.42	91	⇑*e*P	P	20 21 35.5	-0.6
SJG	**San Juan**	1.42	91	*e*S	S	20 21 57.7	-0.7
SJG	**San Juan**	1.42	91	⇑*e*P	P	20 21 35.5	-0.6
SJG				*e*S	S	20 21 57.7	-0.7
CPD	**Cerro la Pandu**	1.65	93	⇓*e*P	P	20 21 38.2	-0.3
CPD				*e*S	S	20 22 02.0	-0.7
CBYP	**Canovanas**	1.71	85	⇑*e*P	P	20 21 38.7	-0.5
CBYP				*e*S	S	20 22 03.5	-0.3
HUMP	**Col San Antoni**	1.71	89	⇓*e*P	P	20 21 38.7	-0.5
HUMP				*e*S	S	20 22 03.2	-0.6
MTP	**Monte Pirata**	1.99	91	⇑*e*P	P	20 21 42.1	-0.2
MTP				*e*S	S	20 22 09.2	-0.2
CDVI	**St. Croix**	2.77	97	*e*S	S	20 22 25.8	-0.8
TBVI	**Tortola**	2.90	84	⇑*e*P	P	20 21 53.8	-0.1
TBVI				*e*S	S	20 22 28.7	-0.9

NIED 26 20:26:00, 44.10N×149.20E, h23^{km}, Mw3.7 Best double couple: $M_0$3.51×10^{14} **NP1:**ϕ_s61°, δ82°, λ167°. **NP2:** ϕ_s153°, δ77°, λ8°., **Kuril Islands**

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*ATH **26** 20:29:07.5, 33.66N×26.27E, h11^{km}±1^{km}, MD3.6/4*

*NEIC **26** 20:29:07.5, 33.66N×26.27E, h11^{km}, MD3.6(ATH), After ATH.*

*CSEM **26** 20:29:11.7±0.1, 33.83N×26.06E, h2^{km}, MD3.6, Error ellipse: s-maj=5.1km s-min=2.3km az=76.0*

*HLW **26** 20:29:13.3, 34.05N×25.82E, h33^{km}, Mb3.1*

ISC 26 20:29:12.9±0.5, **33.81N**±0.04×**26.09E**±0.09, **h11^{km}, n14, σ1^{s}16**/17, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
XRY	**Khrisi**	1.11	343	*e*PB	**Pb**	**20 29 32.0**	**-1.7**
XRY				*e*SB	**Sb**	**20 29 50.0**	**+2.0**
NPS	**Neapolis**	1.50	345	*e*PG	**Pn**	**20 29 39.0**	**-0.9**
NPS				*e*SB	**Sb**	**20 30 01.1**	**+1.8**
KARP	**Karpathos**	1.94	27	*e*PN	**Pn**	**20 29 43.5**	**-2.8**
KARP				*e*SN	**Sn**	**20 30 10.2**	**-0.6**
VAM	**Vamos**	2.23	316	*e*PN	**Pn**	**20 29 50.0**	**-0.4**
SLUM		2.43	198	P	**Pn**	**20 29 52.5**	**-0.7**
HMAT	**Matruh**	2.84	162	P	**Pn**	**20 30 00.3**	**+1.2**
HMAT				S	Sx	20 30 34.8	
SWA1		4.54	184	P	**Pn**	**20 30 23.6**	**+0.3**
SWA2		4.59	187	P	**Pn**	**20 30 23.5**	**-0.4**
HNAT	**Natroun**	5.67	136	P	**Pn**	**20 30 40.4**	**+1.2**
AMAG	**Maghara**	6.80	116	P	**Pn**	**20 30 55.6**	**+0.4**
HFRF	**Wahat Farafira**	6.91	163	P	**Pn**	**20 30 56.0**	**-0.6**
HFRF	**Wahat Farafira**	6.91	163	P	**Pn**	**20 30 56.0**	**-0.7**
SUZ		6.97	123	P	**Pn**	**20 30 58.0**	**+0.6**
SUZ		6.97	123	P	**Pn**	**20 30 58.0**	**+0.5**

MAN 26 20:33:05.7, 7.67N×127.13E, h1^{km}, mb4.3, ML3.2, MS2.9, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	0.92	304	⇑*i*P	Pg	20 33 23.9	-0.2
BIPH				*i* S	Sg	20 33 37.1	+0.8
MATI	**Mati**	1.13	230	*e*P	Pb	20 33 27.3	-0.3
MATI				*e*S	Sb	20 33 43.4	+0.8
BUTP	**Butuan**	1.98	311	*e*P	Pn	20 33 40.5	-0.1
BUKP	**Musuan**	2.06	276	*e*P	Pn	20 33 42.7	+0.8
BUKP				*e*S	Sn	20 34 09.6	+1.1

IDC 26 20:34:03.0±1.9, **6.91S×129.23E, mb3.5**/2, **mb1 3.7**/3, **mb1mx3.5**/11, **mbtmp3.6**/3, **ML3.8**/1, **Error ellipse: s-maj=150.3km s-min=29.9km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	13.87	160	Pn	P	20 37 19.7	-3.7
	0.4nm,0.3s,baz=342,slow=12,SNR=13						
WRA				Sn	S	20 39 42.0	-17
	0.9nm,0.3s,baz=333,slow=24,SNR=8.9						
STKA	**Stephens Creek**	27.39	157	P	P	20 39 50.7	-1.5
	1.4nm,0.8s,baz=320,slow=7.3,SNR=4.5						
MKAR	**Makanchi Array**	67.73	327	P	P	20 45 02.4	-2.2
	0.2nm,0.8s,baz=113,slow=8.0,SNR=4.1						

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*IDC **26** 21:00:55.6±2.5, 8.99S×110.56E, mb3.8/4, mb1 4.0/5, mb1mx3.8/12, mbtmp3.9/5, ML3.8/1, MS3.4/1, Ms1 3.4/1, ms1mx2.6/14, Error ellipse: s-maj=81.7km s-min=25.3km az=49.0*

NEIC 26 21:01:00.8±2.1, **9.01S×110.63E, h35^{km}, Error ellipse: s-maj=71.8km s-min=14.8km az=52.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	17.15	123	P	P	21 04 57.5	-2.1
	0.3nm,0.3s,baz=302,slow=11,SNR=4.4						
FITZ				S	S	21 07 55.3	-12
	0.4nm,0.3s,baz=342,slow=23,SNR=6.2						
FITZ				LR	LR	21 11 06.9	
	comp=Z,119nm,20.3s,baz=206,slow=36						
WRA	**Warramunga Arr**	25.36	118	P	P	21 06 25.5	-1.1
	0.7nm,0.6s,baz=290,slow=12,SNR=5.3						
MJAR	**Matsushiro Arr**	52.20	28	P	P	21 10 08.1	-2.4
	2.1nm,0.7s,baz=213,slow=8.3,SNR=7.4						
SONM	**Songino Array**	56.71	357	P	P	21 10 41.5	-1.9
	0.9nm,0.7s,baz=178,slow=7.6,SNR=7.9						
MKAR	**Makanchi Array**	61.03	338	P	P	21 11 10.6	-2.8
	0.7nm,0.4s,baz=150,slow=7.3,SNR=30						

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*NEIC **26** 21:15:03.2, 17.19N×94.53W, h146^{km}, MD4.1(MEX), After MEX.*

MEX 26 21:15:03.2±0.8, **17.18N×94.52W, h146^{km}**±8^{km}, **MD4.1, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	**Matias Romero**	0.35	256	*i* P	P	21 15 22.6	-1.4
CMIG				*i* S	S	21 15 37.0	-2.9
TUIG	**Tuzandepetl**	0.86	6	*i* P	P	21 15 25.4	-1.3
TUIG				*i* S	S	21 15 41.6	-3.1
HUIG	**Huatulco**	2.07	228	*i* P	P	21 15 35.9	-3.3
HUIG				*i* S	S	21 16 04.1	-2.9
VHO	**Vista Hermosa**	2.12	267	*i* P	P	21 15 38.4	-1.4
VHO				*i* S	S	21 16 05.4	-2.5
CCIG	**Comitan**	2.46	111	*i* P	P	21 15 40.2	-4.0
CCIG				*i* S	S	21 16 12.1	-3.4
PPM	**Popocatepetl**	4.33	296	*i* P	P	21 16 06.9	-1.7
PPM				*i* S	S	21 16 57.3	-1.5
PPM	**Popocatepetl**	4.33	296	*i* P	P	21 16 06.9	-1.7
PPM				*i* S	S	21 16 54.8	-4.1

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*ATH **26** 22:13:28.1, 41.73N×24.14E, h11^{km}±5^{km}, MD3.1/3*

*CSEM **26** 22:13:28.8±0.2, 41.70N×24.13E, h2^{km}, MD3.1, Error ellipse: s-maj=4.5km s-min=2.2km az=173.0*

*THE **26** 22:13:30.5, 41.66N×24.06E, h9^{km}, ML3.1*

ISC 26 22:13:27.7±1.2, **41.73N**±0.07×**24.06E**±0.05, **h11^{km}, n10, σ1^{s}11**/18, **Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVR	**Nevrokopi**	0.40	201	*e*PB	**Pb**	**22 13 36.7**	**+0.3**
NVR				*e*SB	**Sb**	**22 13 42.7**	**+0.5**
KNT	**Kendrikon**	1.04	237	*e*Pg	**Pg**	**22 13 48.7**	**+0.2**
KNT				*e*Sg	**Sg**	**22 14 04.1**	**+1.7**
SOH	**Sokhos**	1.05	211	*e*Pg	**Pg**	**22 13 48.6**	**-0.1**
SOH				*e*Sg	**Sg**	**22 14 04.3**	**+1.6**
RDO	**Rodhopi**	1.26	117	*e*PB	**Pb**	**22 13 50.7**	**-0.3**
RDO				*e*SB	**Sb**	**22 14 07.5**	**+0.5**
THE	**Thessaloniki**	1.37	217	*e*Pg	**Pg**	**22 13 54.3**	**-0.8**
THE				*e*Sg	**Sg**	**22 14 12.7**	**-0.7**
OUR	**Ouranopolis**	1.39	182	*e*Pg	**Pg**	**22 13 53.8**	**-1.8**
OUR				*e*Sg	**Sg**	**22 14 12.4**	**-1.7**
PLG	**Polygyros**	1.43	199	*e*PG	**Pg**	**22 13 55.1**	**-1.2**
PLG				*e*SB	**Sb**	**22 14 14.5**	**+2.6**
GRG	**Griva**	1.46	239	*e*Pg	**Pg**	**22 13 56.8**	**-0.2**
GRG				*e*Sg	**Sg**	**22 14 15.2**	**-1.4**
ALN	**Alexandroupoli**	1.71	118	*e*Pb	**Pb**	**22 13 59.6**	**+0.9**
XOR	**Xorichti**	2.45	196	*e*Pn	**Pn**	**22 14 08.8**	**+0.6**

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*NNC **26** 22:22:07.4±5.6, 37.27N×70.61E, h200^{km}±68^{km}, mpv3.3, Error ellipse: s-maj=54.3km s-min=36.9km az=40.0*

ISC 26 22:21:57.9±1.9, **36.66N**±0.09×**70.7E**±0.2, **h163^{km}**±31^{km}, **n10, σ1^{s}28**/15, **3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	5.89	134	*e*P	**P**	**22 23 21.6**	**-2.6**
THN				*e*S	**S**	**22 24 25.5**	**-5.7**
KK31	**Karatay Array**	6.44	359	P	**P**	**22 23 33.1**	**+1.7**
	1.1nm,0.3s,baz=184,slow=12,SNR=67						
KK31				⇑S	**S**	**22 24 40.0**	**-4.1**
	4.1nm,0.4s,baz=165,slow=38,SNR=6.2						
AAK	**Ala-Archa**	6.64	25	⇓P	**P**	**22 23 35.0**	**+0.9**
	2.9nm,1.1s						
AAK				⇓S	**S**	**22 24 48.3**	**-0.5**
	4.5nm,0.8s						
KOLN	**Koldanda**	14.04	125	*e*P	**P**	**22 25 11.8**	**+1.1**
GKN	**Gorkha**	14.58	122	*e*P	**P**	**22 25 18.4**	**+0.9**
	14nm,0.6s						
AB31	**Akbulak array**	14.84	331	⇓P	**P**	**22 25 20.9**	**+0.4**
	0.6nm,0.5s						
AB31				⇑S	**S**	**22 27 57.1**	**-3.6**
	0.4nm,0.4s						
DMN	**Daman**	15.15	122	*e*P	**P**	**22 25 23.3**	**-1.3**
	2.6nm,0.3s						
KKN	**Kakani**	15.15	122	*e*P	**P**	**22 25 24.7**	**0.0**
PKI	**Pulchoki**	15.38	122	*e*P	**P**	**22 25 27.7**	**+0.2**
AKTO	**Aktyubinsk**	16.53	330	⇓P	**P**	**22 25 42.5**	**+0.9**
	0.4nm,0.7s						
AKTO				⇑S	**S**	**22 28 38.0**	**-0.9**
	0.3nm,0.9s						

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*ISK **26** 22:27:49.7, 40.65N×29.08E, h10^{km}, MD3.3*

*NEIC **26** 22:27:49.0, 40.66N×29.08E, h9^{km}, MD3.7(ATH), MD3.3(ISK), After ISK.*

*CSEM **26** 22:27:49.8±0.1, 40.64N×29.08E, h10^{km}, MD3.3, Error ellipse: s-maj=1.2km s-min=1.1km az=176.0*

*ATH **26** 22:27:54.4, 40.62N×28.73E, h37^{km}±10^{km}, MD3.7/4*

ISC 26 22:27:49.7±0.3, **40.66N**±0.02×**29.07E**±0.02, **h5^{km}**±3^{km}, **n58, σ0^{s}91**/75, **6C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARMT	**Armutlu**	0.18	240	*i* PG	**Pg**	**22 27 54.3**	**+0.9**
BADT	**Buyukada**	0.20	11	*i* PG	**Pg**	**22 27 55.0**	**+1.2**
YLV	**Yalova**	0.25	111	*i* PG	**Pg**	**22 27 54.4**	**-0.3**
YLV				*i* SG	**Sg**	**22 27 58.6**	**+0.5**
ISK	**Istanbul-Kandi**	0.41	359	*i* PG	**Pg**	**22 27 57.8**	**-0.1**
ISK				*i* SG	**Sg**	**22 28 03.8**	**+0.4**
HRT	**Hereke**	0.49	70	*i* PG	**Pg**	**22 27 59.5**	**+0.1**
ULDT	**Uludag**	0.52	174	*i* P	**Pg**	**22 27 59.5**	**-0.6**
ULDT				*i* S	**Sg**	**22 28 05.0**	**-1.9**
KLYT	**Kilyos**	0.60	358	*i* PG	**Pg**	**22 28 02.2**	**+0.6**
ORLT	**Orhaneli**	0.62	192	*i* PG	**Pg**	**22 28 02.2**	**+0.1**
ORLT				*i* SG	**Sg**	**22 28 11.6**	**+1.1**
SILT	**Sile**	0.66	41	*i* PG	**Pg**	**22 28 03.2**	**+0.3**
KCT	**Karacabey**	0.67	234	*i* PG	**Pg**	**22 28 03.1**	**+0.1**
ELBA	**Catalca**	0.69	316	*i* P	**Pg**	**22 28 03.8**	**+0.3**
ELBA				*i* S	**Sg**	**22 28 10.9**	**-1.7**
CTT	**Catalca**	0.69	316	PG	**Pg**	**22 28 03.8**	**+0.4**
SLVT	**Silivri**	0.86	312	PG	**Pg**	**22 28 07.5**	**+0.5**
BNT	**Bandirma**	0.92	251	PG	**Pg**	**22 28 07.9**	**-0.2**
EDC	**Edincik**	0.97	252	PG	**Pg**	**22 28 08.6**	**-0.4**
GPA	**Golpazari**	1.02	111	PG	**Pg**	**22 28 10.0**	**0.0**
DST	**Dursunbey**	1.10	198	PN	**Pn**	**22 28 10.9**	**-0.8**
MRMT	**Marmara Adasi**	1.12	268	PN	**Pn**	**22 28 11.5**	**-0.4**
BTOK	**Tokmak**	1.19	222	*i* P	**Pb**	**22 28 12.4**	**0.0**
BTOK				*i* S	**Sb**	**22 28 29.6**	**+1.6**
TKR	**Tekirdag**	1.21	287	PN	**Pn**	**22 28 13.8**	**+0.6**
BORA	**Eskisehir**	1.31	126	*i* P	**Pb**	**22 28 14.8**	**+0.3**
BORA				*i* S	**Sb**	**22 28 32.9**	**+1.4**
BALB	**Balikesir**	1.36	222	PN	**Pn**	**22 28 15.3**	**-0.1**
MFT	**Murefte**	1.36	276	PN	**Pn**	**22 28 14.6**	**-0.8**
HENT	**Hendek**	1.40	83	*i* P	**Pn**	**22 28 15.2**	**-0.7**
HENT				*i* S	**Sb**	**22 28 35.4**	**+1.3**
SART	**Tekirdag**	1.44	272	*i* P	**Pn**	**22 28 15.8**	**-0.7**
SART				*i* S	**Sb**	**22 28 35.3**	**+0.3**
RKY	**Sarkoy-Tekirda**	1.44	272	PN	**Pn**	**22 28 16.6**	**+0.2**
GDZ	**Gediz**	1.60	168	*i* P	**Pn**	**22 28 17.6**	**-1.2**
GDZ				*i* S	**Sb**	**22 28 40.5**	**+0.8**
MDU	**Mudurnu**	1.65	96	PN	**Pn**	**22 28 20.1**	**+0.6**
ESKT	**Eskisehir**	1.78	129	PN	**Pn**	**22 28 21.6**	**+0.3**
ESKT	**Eskisehir**	1.78	129	*i* P	**Pn**	**22 28 20.1**	**-1.2**
ESKT				*i* S	**Sn**	**22 28 40.1**	**-4.5**
ALT	**Altintas**	1.79	153	PN	**Pn**	**22 28 21.5**	**0.0**
AKS	**Akhisar**	2.02	209	PN	**Pn**	**22 28 23.9**	**-0.9**
EDRB	**Edirne**	2.12	305	*e*PN	**Pn**	**22 28 25.8**	**-0.4**
MANT	**Manisa**	2.20	190	*i* P	**Pn**	**22 28 31.1**	**+3.8**
MANT				*i* S	**Sn**	**22 29 00.6**	**+5.3**
AYVA	**Ayvalik**	2.27	234	*i* P	**Pn**	**22 28 31.2**	**+2.9**
AYVA				*i* S	**Sn**	**22 29 03.4**	**+6.4**
PRK	**Paraskevi**	2.57	238	*e*PN	**Pn**	**22 28 32.3**	**-0.3**
KDAG	**Bornova**	2.65	212	*i* P	**Pn**	**22 28 38.3**	**+4.6**
KDAG				*i* S	**Sn**	**22 29 14.4**	**+7.8**
RDO	**Rodhopi**	2.72	282	*e*PN	**Pn**	**22 28 34.3**	**-0.5**
KIZT	**Kizilcal**	2.80	128	*e*PN	**Pn**	**22 28 36.1**	**+0.1**
SAFT	**Safranbolu**	2.80	77	*e*PN	**Pn**	**22 28 35.8**	**-0.2**
PRD	**Provadia**	2.83	334	*e*P	**Pn**	**22 28 40.0**	**+3.6**
KDZ	**Kurdzhali**	2.93	291	*e*P	**Pn**	**22 28 39.0**	**+1.2**
DIM	**Dimitrovgrad**	3.00	299	*e*P	**Pn**	**22 28 40.0**	**+1.2**
LIA	**Limnos Island**	3.06	257	*e*PN	**Pn**	**22 28 39.1**	**-0.6**
LIA				*e*SN	**Sn**	**22 29 11.5**	**-5.7**
PSN	**Preselentsi**	3.09	348	*e*P	**Pn**	**22 28 40.0**	**-0.1**
ELDT	**Eldivan**	3.33	91	*i* P	**Pn**	**22 28 43.1**	**-0.4**
ELDT				*i* S	**Sg**	**22 29 39.5**	**-0.9**
RZN	**Rozhen**	3.44	289	P	**Pn**	**22 28 44.0**	**-1.1**
BR131	**Keskin Array S**	3.62	103	*e*Pn	**Pn**	**22 28 45.1**	**-2.5**
BR131	**Keskin Array S**	3.62	103	*e*Pn	**Pn**	**22 28 45.1**	**-2.6**
TIRR	**Tirgusor**	3.83	353	⇑P	**Pn**	**22 28 49.7**	**-0.9**
TIRR	**Tirgusor**	3.83	353	⇑P	**Pn**	**22 28 49.7**	**-0.8**
NVR	**Nevrokopi**	4.00	282	*e*PN	**Pn**	**22 28 52.3**	**-0.7**
NVR				*e*SN	**Sn**	**22 29 34.6**	**-6.2**
MMB	**Musomiste**	4.14	285	P	**Pn**	**22 28 55.0**	**0.0**
CFR	**Carcaliu**	4.57	352	⇑P	**Pn**	**22 28 58.5**	**-2.6**
CFR	**Carcaliu**	4.57	352	⇑P	**Pn**	**22 28 58.5**	**-2.6**
VTS	**Vitosha**	4.80	296	*e*P	**Pn**	**22 29 05.0**	**+0.7**
MLR	**Muntele Rosu**	5.34	336	⇑P	**Pn**	**22 29 13.5**	**+1.4**
MLR	**Muntele Rosu**	5.34	336	⇑P	**Pn**	**22 29 13.5**	**+1.5**

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*IDC **26** 22:32:43.3±1.6, 6.38N×126.43E, mb4.1/6, mb1 4.2/6, mb1mx3.9/17, mbtmp4.1/6, Error ellipse: s-maj=87.9km s-min=19.8km az=71.0*

*NEIC **26** 22:32:50.2±0.8, 6.32N×126.33E, h50^{km}, mb4.5/1, Error ellipse: s-maj=39.9km s-min=11.2km az=72.0*

*MAN **26** 22:32:58.7, 6.09N×126.32E, h115^{km}, mb4.8, ML3.7, MS3.7*

ISC 26 22:32:58.5±0.6, **6.21N**±0.08×**126.40E**±0.10, **h145^{km}**±8^{km}, **n18, σ0^{s}86**/23, **mb4.2**/8, **1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	0.74	349	*e*P	**P**	**22 33 19.8**	**-1.2**
MATI				*e*S	**S**	**22 33 37.0**	**-1.4**
KCP	**Kidapawan**	1.52	302	⇑*e*P	**P**	**22 33 29.8**	**+1.6**
KCP				*i* S	**S**	**22 33 51.1**	**+0.1**
BIPH	**Bislig**	1.96	359	⇓*i*P	**P**	**22 33 34.0**	**+0.9**
BIPH				*i* S	**S**	**22 34 00.2**	**+0.5**
BUKP	**Musuan**	2.12	321	*e*P	**P**	**22 33 34.9**	**-0.2**
BUKP				*e*S	**S**	**22 34 03.0**	**-0.2**
CGP	**Cagayan de Oro**	2.80	323	⇓*e*P	**P**	**22 33 44.3**	**+0.5**
CGP				*e*S	**S**	**22 34 18.8**	**+0.6**
BUTP	**Butuan**	2.85	344	*e*P	**P**	**22 33 45.4**	**+1.1**
PAGZ	**Pagadian**	3.41	299	*e*P	**P**	**22 33 50.3**	**-1.3**
FITZ	**Fitzroy Crossi**	24.17	182	*e*P	**P**	**22 38 03.0**	**+0.3**
	8.2nm,0.5s,mb4.5						
FITZ	**Fitzroy Crossi**	24.17	182	P	**P**	**22 38 03.0**	**+0.3**
	12nm,0.5s,mb4.7,baz=19,slow=10,SNR=25						
WRA	**Warramunga Arr**	27.14	163	P	**P**	**22 38 29.5**	**-0.8**
	1.2nm,0.4s,mb3.9,baz=344,slow=10.0,SNR=4.9						
WB2	**Warramunga Arr**	27.14	163	*e*P	**P**	**22 38 30.0**	**-0.3**
FORT	**Forrest**	36.81	178	*e*P	**P**	**22 39 54.9**	**+0.7**
	21nm,0.4s,mb5.1						
KLBR	**Kellerberrin**	38.48	192	*e*P	**P**	**22 40 08.1**	**-0.1**
	19nm,1.0s,mb4.7						
MUN	**Mundaring**	39.20	194	*e*P	**P**	**22 40 14.1**	**0.0**
NWAO	**Narrogin (SRO)**	39.88	192	P	**P**	**22 40 20.2**	**+0.5**
	5.1nm,0.5s,mb4.5,baz=25,slow=9.7,SNR=12						
STKA	**Stephens Creek**	40.55	160	P	**P**	**22 40 26.2**	**+1.0**
	4.5nm,0.8s,mb4.2,baz=336,slow=9.6,SNR=6.2						
MKAR	**Makanchi Array**	55.35	324	P	**P**	**22 42 18.9**	**-0.7**
	0.2nm,0.4s,mb3.2,baz=116,slow=6.9,SNR=7.6						
BVAR	**Borovoye Array**	65.08	326	P	**P**	**22 43 24.0**	**-1.7**
	0.4nm,0.6s,mb3.5,baz=146,slow=5.2,SNR=3.6						

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*NEIC **26** 22:56:06.0, 19.38N×68.45W, h25^{km}, MD3.5(RSPR), After RSPR.*

RSPR 26 22:56:06.0, 19.38N×68.45W, h25^{km}±29^{km}, **MD3.5**/3, **MD3.5**/3, **4C, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	1.56	125	⇑*e*P	Pn	22 56 30.6	-2.0
AGPR				*e*S	Sn	22 56 48.7	-3.6
CRPR	**Cabo Rojo, PR**	1.87	137	⇑*e*P	Pn	22 56 34.2	-2.8
CRPR				*e*S	Sn	22 56 56.5	-3.6
AOPR	**Arecibo Observ**	1.91	122	⇑*e*P	Pn	22 56 35.2	-2.4
AOPR				*e*S	Sn	22 56 58.0	-3.2
MTP	**Monte Pirata**	3.03	115	⇑*e*P	Pn	22 56 50.3	-3.2

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*NDI **26** 22:59:27.6±4.3, 34.37N×72.11E, h10^{km}, ML2.8*

*IDC **26** 22:59:27.8±1.8, 34.51N×73.43E, mb3.7/3, mb1 3.8/6, mb1mx3.5/21, mbtmp3.6/6, ML3.3/3, Error ellipse: s-maj=66.6km s-min=26.7km az=60.0*

*NNC **26** 22:59:37.4±6.0, 34.84N×72.69E, h42^{km}±76^{km}, mpv3.7, Error ellipse: s-maj=74.0km s-min=43.4km az=98.0*

ISC 26 22:59:31.5±1.2, **34.65N**±0.06×**72.9E**±0.1, **h46^{km}**±16^{km}, **n19, σ1^{s}30**/25, **mb3.7**/3, **1C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	3.22	133	*e*P	**P**	**23 00 22.6**	**+1.8**
THN				*e*S	**S**	**23 01 06.0**	**+7.7**
DLH	**Dalhousie**	3.30	129	*e*P	**P**	**23 00 24.0**	**+2.0**
DLH				*e*S	**S**	**23 01 09.0**	**+8.6**
BHK	**Bhakra**	4.36	137	*e*S	**S**	**23 01 27.3**	**+0.1**
SDNR	**Sundarnagar**	4.63	132	*e*P	**P**	**23 00 41.0**	**+0.2**
SDNR				*e*x	x	23 01 33.0	
SMLA	**Simla**	5.01	133	*e*P	**P**	**23 00 46.6**	**+0.5**
SMLA				*e*x	x	23 01 59.1	
DDI	**Dehra Dun**	6.12	133	*e*x	x	23 01 05.0	
DDI				*e*S	**S**	**23 02 10.0**	**-1.2**
NDI	**New Delhi**	6.99	147	*e*x	x	23 02 35.0	
KHET	**Khetri**	7.01	159	*e*P	**P**	**23 01 11.5**	**-2.6**
KHET				*e*S	**S**	**23 02 24.2**	**-9.1**
KHET				*e*S	**S**	**23 02 26.6**	**-6.7**
KHET				AML	AML	23 02 31.7	
	comp=N,7.3nm,0.2s						
KHET				AML	AML	23 03 20.1	
	comp=E,7.3nm,0.3s						
KUDL	**Kundal**	7.17	154	*e*P	**P**	**23 01 14.9**	**-1.5**
KUDL				*e*S	**S**	**23 02 30.0**	**-7.3**
AAK	**Ala-Archa**	8.06	8	⇓P	**P**	**23 01 29.7**	**+1.0**
	comp=E,1.4nm,0.6s						
AAK				⇓S	**S**	**23 02 58.6**	**-0.9**
	comp=E,10nm,1.2s						
KK31	**Karatay Array**	8.64	348	P	**P**	**23 01 37.4**	**+0.7**
	comp=E,2.3nm,0.4s,baz=156,slow=11,SNR=53						
KK31				⇑S	**S**	**23 03 11.6**	**-2.4**
	comp=E,0.5nm,0.3s,baz=173,slow=24,SNR=5.2						
MKAR	**Makanchi Array**	14.04	27	Pn	**P**	**23 02 48.7**	**-0.6**
	comp=E,0.0nm,0.3s,baz=198,slow=15,SNR=3.0						
AB31	**Akbulak array**	17.46	331	⇓P	**P**	**23 03 32.0**	**-1.1**
	comp=E,0.6nm,0.5s						
BVAR	**Borovoye Array**	18.45	355	P	**P**	**23 03 46.5**	**+1.1**
	comp=E,0.3nm,0.3s,baz=164,slow=9.4,SNR=8.1						
AKTO	**Aktyubinsk**	19.16	330	⇓P	**P**	**23 03 55.0**	**+1.4**
	comp=E,1.0nm,1.1s						
AKTO	**Aktyubinsk**	19.16	330	P	**P**	**23 03 55.2**	**+1.5**
	comp=E,0.2nm,0.3s,baz=139,slow=11,SNR=12						
ARCES	**ARCESS Array B**	43.44	338	P	**P**	**23 07 35.6**	**+4.4**
	comp=E,2.7nm,0.8s,mb4.0,baz=106,slow=8.8,SNR=8.1						
WRA	**Warramunga Arr**	79.68	123	P	**P**	**23 11 35.3**	**-0.8**
	comp=E,0.5nm,0.9s,mb3.4,baz=323,slow=5.4,SNR=3.8						
YKA	**Yellowknife Ar**	83.00	4	P	**P**	**23 11 54.1**	**+1.5**
	comp=E,0.5nm,0.9s,mb3.5,baz=354,slow=5.3,SNR=4.8						

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*LDG **26** 23:05:47.7±0.7, 15.98S×166.53E, h10^{km}, Mb4.8/2, Ms4.1/1, Error ellipse: s-maj=108.0km s-min=49.1km az=35.0*

*BJI **26** 23:06:01.6, 15.22S×167.23E, h116^{km}, mb4.8*

*IDC **26** 23:06:02.5±2.4, 15.11S×167.61E, h120^{km}±19^{km}, mb4.3/11, mb1 4.3/13, mb1mx4.2/19, mbtmp4.7/13, Error ellipse: s-maj=20.7km s-min=14.0km az=70.0*

*NEIC **26** 23:06:04.1±1.8, 15.22S×167.39E, h122^{km}±14^{km}, mb4.7/8, Error ellipse: s-maj=15.4km s-min=10.6km az=74.0*

ISC 26 23:06:03.3±1.9, **15.22S**±0.07×**167.5E**±0.1, **h140^{km}**±14^{km}, **n88, σ1^{s}04**/48, **mb4.5**/18, **35C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	6.90	188	*e*P	**P**	**23 07 43.3**	**+0.2**
DZM				*e*S	**S**	**23 09 00.6**	**+0.1**
DZM	**Mont Dzumac**	6.90	188	P	**P**	**23 07 43.0**	**-0.1**
	14nm,0.3s,baz=44,slow=18,SNR=121						
DZM				S	**S**	**23 09 02.3**	**+1.8**
	12nm,0.3s,baz=162,slow=23,SNR=8.1						
DZM	**Mont Dzumac**	6.90	188	*e*P	**P**	**23 07 43.3**	**+0.2**
DZM				*e*S	**S**	**23 09 00.6**	**+0.1**
HNR	**Honiara**	9.38	307	P	**P**	**23 08 14.9**	**-1.3**
	baz=157,slow=12,SNR=1.8						
HNR				S	**S**	**23 10 01.2**	**+1.1**
	6.9nm,0.3s,baz=32,slow=19,SNR=2.4						
CTA	**Charters Tower**	20.85	253	P	**P**	**23 10 36.7**	**+1.1**
	4.1nm,0.7s,baz=71,slow=12,SNR=7.7						
CTA	**Charters Tower**	20.85	253	P	**P**	**23 10 36.7**	**+1.1**
URZ	**Urewera**	24.46	162	P	**P**	**23 11 10.6**	**0.0**
	9.9nm,0.7s,mb4.5,baz=48,slow=8.4,SNR=4.3						
CNB	**Canberra Magne**	25.81	216	*e*P	**P**	**23 11 24.0**	**+0.7**
	86nm,1.9s,mb5.1						
RPZ	**Rata Peaks**	28.56	175	P	**P**	**23 11 48.2**	**+0.1**
	16nm,0.7s,mb4.9,baz=306,slow=4.6,SNR=9.8						
STKA	**Stephens Creek**	28.88	230	P	**P**	**23 11 51.6**	**+0.5**
	20nm,0.6s,mb5.0,baz=49,slow=7.1,SNR=23						
STKA				PcP	PcP	23 14 55.8	-1.2
	2.8nm,0.6s,baz=63,slow=3.2,SNR=9.6						
STKA	**Stephens Creek**	28.88	230	*e*P	**P**	**23 11 51.2**	**+0.1**
WB2	**Warramunga Arr**	31.95	257	*e*P	**P**	**23 12 16.1**	**-2.2**
WRA	**Warramunga Arr**	31.96	257	P	**P**	**23 12 16.6**	**-1.8**
	3.3nm,0.6s,mb4.3,baz=86,slow=8.8,SNR=14						
WRA				ScP		23 18 39.0	
	0.3nm,0.3s,baz=75,slow=2.7,SNR=5.2						
FORT	**Forrest**	39.27	240	*e*P	**P**	**23 13 20.1**	**+0.1**
	30nm,0.7s,mb5.0						
FITZ	**Fitzroy Crossi**	40.18	260	*e*P	**P**	**23 13 27.0**	**-0.6**
	17nm,0.7s,mb4.8						
FITZ	**Fitzroy Crossi**	40.18	260	P	**P**	**23 13 27.5**	**0.0**

	24nm,0.7s,mb4.9,baz=100,slow=7.8,SNR=37						
KLBR	**Kellerberrin**	48.09	241	*e*P	P	23 14 29.5	-1.3
	10nm,0.6s,mb4.6						
NWAO	**Narrogin (SRO)**	48.73	239	P	P	23 14 34.9	-0.8
	15nm,0.9s,mb4.6,baz=121,slow=6.3,SNR=6.5						
KULM	**Kulim**	69.30	282	*e*P	P	23 17 10.0	+12
ENH	**Enshi**	71.87	309	*e*P	P	23 17 12.1	-1.0
	4.3nm,0.7s,mb4.3						
GYA	**Guiyang**	72.20	305	⇑*i*P	P	23 17 15.0	-0.1
GYA				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
QSPA	**South Pole Qui**	74.81	180	*e*P	P	23 17 28.9	-0.4
	comp=Z,20nm,1.9s,mb4.4						
LZH	**Lanzhou**	78.84	312	*e*P	P	23 17 54.0	+1.5
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.5						
MAW	**Mawson**	81.53	202	P	P	23 18 07.3	+1.1
	comp=Z,4.3nm,1.0s,mb4.0,baz=79,slow=10,SNR=3.7						
MAW	**Mawson**	81.53	202	*e*P	P	23 18 06.6	+0.4
SONM	**Songino Array**	83.04	324	P	P	23 18 15.0	+0.7
	comp=Z,3.2nm,0.8s,mb4.1,baz=149,slow=7.4,SNR=17						
GTA	**Gaotai**	83.19	314	*e*P	P	23 18 16.5	+1.2
SHL	**Shillong**	84.03	298	*e*P	P	23 18 20.0	+0.2
LSA	**Lhasa**	86.04	302	*e*P	P	23 18 30.7	+1.0
	comp=Z,3.6nm,0.9s,mb4.1						
ILAR	**Eielson Array**	86.91	18	P	P	23 18 32.1	-0.9
	comp=Z,0.9nm,0.7s,mb3.7,baz=238,slow=5.0,SNR=14						
PMSA	**Palmer Station**	91.23	160	*e*P	P	23 18 51.4	-2.0
SNAA	**Sanae**	93.08	183	⇑*i*	P	23 19 01.2	-0.6
SNAA	**Sanae**	93.08	183	⇑*i*	P	23 19 03.2	+1.4
SNAA	**Sanae**	93.08	183		P	23 19 08.1	+6.3
SNAA	**Sanae**	93.08	183		P	23 19 14.2	+12
SNAA	**Sanae**	93.08	183	⇑*i*P	P	23 19 03.2	+1.4
VNA3	**Neumayer Olymp**	93.74	181	⇑*i*	P	23 19 06.8	+2.0
VNA3	**Neumayer Olymp**	93.74	181	⇑*i*	P	23 19 08.9	+4.1
VNA3	**Neumayer Olymp**	93.74	181		P	23 19 15.3	+11
VNA2	**Neumayer--Watz**	94.00	182	⇑*i*	P	23 19 08.4	+2.4
VNA2	**Neumayer--Watz**	94.00	182	⇑*i*	P	23 19 09.9	+3.9
VNA2	**Neumayer--Watz**	94.00	182	⇑*i*	P	23 19 11.2	+5.2
VNA2	**Neumayer--Watz**	94.00	182		P	23 19 20.2	+14
MKAR	**Makanchi Array**	97.73	316	P	P	23 19 23.8	+0.3
	comp=Z,2.0nm,0.7s,mb4.7,baz=93,slow=6.6,SNR=25						
ARCES	**ARCESS Array B**	120.78	345	PKP	PKPdf	23 24 39.1	+0.7
	comp=Z,3.7nm,0.7s,baz=88,slow=1.5,SNR=18						
FINES	**FINESS Array B**	126.27	338	PKP	PKPdf	23 24 50.0	+1.0
	comp=Z,3.1nm,1.0s,baz=45,slow=5.4,SNR=6.7						
KMBO	**Kilima Mbogo**	128.24	256	PKP	PKPdf	23 24 56.7	+2.5
	comp=Z,2.1nm,0.7s,baz=51,slow=6.0,SNR=9.3						
KMBO	**Kilima Mbogo**	128.24	256	PKP	PKPdf	23 24 56.7	+2.5
NOA	**NORSAR Array B**	131.16	345	PKP	PKPdf	23 25 00.3	+1.8
	comp=Z,0.8nm,0.7s,baz=27,slow=2.0,SNR=3.1						
GERES	**GERESS Array B**	140.19	333	PKhKP		23 25 08.6	
	comp=Z,0.5nm,0.6s,slow=1.3,SNR=5.7						
GERES				PKP	PKPdf	23 25 17.0	+1.5
	comp=Z,0.7nm,0.6s,baz=63,slow=3.0,SNR=5.5						
BAIF	**Baives**	142.70	342	*e*PKP1	PKPdf	23 25 17.7	-2.1
CDF	**Champ du Feu**	143.12	338	*e*PKP1	PKPbc	23 25 19.0	+0.3
	comp=Z,7.6nm,0.5s						
HINF	**Hinteralfeld**	143.78	338	⇑*i*PKP1	PKPbc	23 25 20.8	+0.1
	comp=Z,6.9nm,0.5s						
HAU	**Haudompre**	143.80	338	⇑*i*PKP1	PKPbc	23 25 21.1	+0.4
	comp=Z,22nm,0.8s						
MEZF	**Maizieres J'vi**	143.81	340	⇑*i*PKP1	PKPbc	23 25 21.5	+0.7
	comp=Z,14nm,0.5s						
CABF	**La Chapelle**	145.07	337	⇑*i*PKP1	PKPbc	23 25 26.1	+1.7
	comp=Z,51nm,0.6s						
FLN	**La Foliniere**	145.13	346	⇑*i*PKP1	PKPbc	23 25 25.3	+0.9
	comp=Z,67nm,0.5s						
LDF	**La Druitiere**	145.20	346	⇑*i*PKP1	PKPbc	23 25 25.5	+0.9
	comp=Z,46nm,0.6s						
LOR	**Lormes**	145.28	340	⇑*i*PKP1	PKPbc	23 25 26.3	+1.4
	comp=Z,60nm,0.9s						
GRR	**Gorron**	145.56	346	⇑*i*PKP1	PKPbc	23 25 26.9	+1.4
	comp=Z,49nm,0.6s						
SSF	**Saint Saulge**	145.58	341	⇑*i*PKP1	PKPbc	23 25 27.3	+1.7
	comp=Z,43nm,0.6s						
HYF	**Humbligny**	145.66	342	*e*PKP1	PKPbc	23 25 27.9	+2.1
LPL	**La Plagne**	145.74	336	⇑*i*PKP1	PKPbc	23 25 28.3	+2.2
	comp=Z,24nm,0.6s						
LPG	**La Plagne**	145.75	336	⇑*i*PKP1	PKPbc	23 25 28.4	+2.3
	comp=Z,33nm,0.6s						
SMF	**Signal de Mont**	145.83	340	⇑*i*PKP1	PKPbc	23 25 27.8	+1.5
	comp=Z,30nm,0.8s						
AVF	**Avril sur Loir**	145.87	341	⇑*i*PKP1	PKPbc	23 25 27.8	+1.5
	comp=Z,40nm,0.7s						
SGMF	**Saint Gilles**	146.06	348	⇑*i*PKP1	PKPbc	23 25 28.3	+1.5
	comp=Z,27nm,0.5s						
ROSF	**Rostrenen**	146.12	349	⇑*i*PKP1	PKPbc	23 25 29.3	+2.4
BNI	**Bardonecchia**	146.15	335	*e*PKPdf	PKPdf	23 25 29.1	+3.2
BGF	**Bois d'Agland**	146.23	341	⇑*i*PKP1	PKPbc	23 25 29.1	+1.9
	comp=Z,49nm,0.5s						
MBDF	**Montbardon**	146.37	335	⇑*i*PKP1	PKPbc	23 25 30.3	+2.7
	comp=Z,18nm,0.6s						
QUIF	**Quistinic**	146.50	349	⇑*i*PKP1	PKPbc	23 25 29.4	+1.6
ORIF	**Oris-en-Rattie**	146.57	336	*e*PKP1	PKPbc	23 25 30.4	+2.3
	comp=Z,31nm,0.8s						
TCF	**Toulx Ste Croi**	146.67	341	⇑*i*PKP1	PKPbc	23 25 30.4	+2.2
	comp=Z,26nm,0.7s						
SBF	**Sospel**	146.79	333	*e*PKP1	PKPbc	23 25 31.1	+2.5
	comp=Z,52nm,0.7s						
MFF	**Saint Martin d**	147.06	344	⇑*i*PKP1	PKPdf	23 25 31.3	+4.0
	comp=Z,44nm,0.5s						
VIVF	**Saint-Julien-l**	147.09	337	⇑*i*PKP1	PKPdf	23 25 31.6	+4.2
	comp=Z,22nm,1.0s						
PGF	**Pioggiola**	147.10	330	*e*PKP1	PKPdf	23 25 32.9	+5.4
	comp=Z,61nm,1.0s						
FRF	**La Foret Royal**	147.38	334	*e*PKP1	PKPdf	23 25 31.9	+4.0
	comp=Z,15nm,0.6s						
SMRF	**Simiane la Rot**	147.48	335	*e*PKP1	PKPdf	23 25 33.0	+4.9
	comp=Z,15nm,0.8s						
LMR	**La Mourre**	147.62	334	⇑*i*PKP1	PKPdf	23 25 32.7	+4.3
	comp=Z,21nm,0.9s						
RJF	**Les Rejaudoux**	147.77	341	⇑*i*PKP1	PKPdf	23 25 33.5	+5.0
	comp=Z,15nm,0.6s						
CAF	**Calviac**	147.94	340	⇑*i*PKP1	PKPdf	23 25 34.1	+5.3
	comp=Z,14nm,0.9s						
LASF	**Ste Croix**	148.06	337	⇑*i*PKP1	PKPdf	23 25 34.4	+5.3
	comp=Z,23nm,0.9s						
LFF	**La Frestale**	148.34	342	⇑*i*PKP1	PKPdf	23 25 34.9	+5.4
	comp=Z,27nm,0.7s						
MTLF	**Montolieu**	149.28	339	*e*PKP1	PKPdf	23 25 37.4	+6.4
	comp=Z,18nm,0.8s						
EPF	**Esparros**	150.19	341	*e*PKP1	PKPdf	23 25 40.0	+7.6
	comp=Z,4.8nm,0.6s						
ETSF	**Etsaut**	150.58	342	*e*PKP1	PKPdf	23 25 41.0	+8.0
	comp=Z,13nm,0.7s						

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*CSEM **26** 23:20:00.6±0.1, 44.49N×7.02E, h10^{km}, ML2.4/7, Error ellipse: s-maj=1.4km s-min=1.1km az=65.0*
*LDG **26** 23:20:01.6±0.0, 44.48N×6.94E, h3^{km}, Md2.5/2, Ml2.4/7, Error ellipse: s-maj=1.1km s-min=0.7km az=68.0*
*GEN **26** 23:20:01.1, 44.46N×6.93E, h4^{km}, ML2.0*
*STR **26** 23:20:01.5±0.1, 44.48N×6.94E, h5^{km}±1^{km}, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
ISC 26 23:20:00.7±0.3**, 44.47N**±0.01×**6.92E**±0.02**, h10**^{km}±2^{km}**, n41, σ0^{s}68**/72**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SURF	**Saint Ours**	0.08	277	Pg	Pg	23 20 03.5	+0.5
SURF				Sg	Sg	23 20 05.4	+0.8
PZZ	**Prazzo**	0.13	76	P	Pg	23 20 04.2	+0.3
MBDF	**Montbardon**	0.28	337	*e*Pg	Pg	23 20 07.1	+0.6
MBDF				*e*Sg	Sg	23 20 10.8	+0.5
	38nm,0.2s						
OG22	**Abries**	0.35	3	Pg	Pg	23 20 08.5	+0.6
OG22				Sg	Sg	23 20 13.5	+0.8
STV	**Sta Anna Valdi**	0.37	128	P	Pg	23 20 08.2	0.0
STV2	**Anna di Valdie**	0.37	128	P	Pg	23 20 08.3	+0.1
ENR	**Entracque**	0.43	124	P	Pg	23 20 09.4	-0.1
TOUF	**Mont Tournerai**	0.52	153	Pg	Pg	23 20 11.0	-0.1
FENE	**Fenestrelle**	0.57	10	P	Pg	23 20 12.2	+0.1
FENE				S	Sg	23 20 19.6	-0.2
MVIF	**Mont Vial**	0.60	164	Pg	Pg	23 20 13.3	+0.5
MVIF				Sg	Sg	23 20 21.6	+0.8
AUTN	**L'Aution**	0.60	142	Pg	Pg	23 20 13.4	+0.6
AUTN				Sg	Sg	23 20 21.4	+0.5
OG25	**Le Caire**	0.62	261	Pg	Pg	23 20 13.8	+0.7
SAOF	**Saorge**	0.67	137	Pg	Pg	23 20 14.3	+0.2
SAOF				Sg	Sg	23 20 22.4	-0.7
ROB	**Roburent**	0.70	104	P	Pb	23 20 14.4	-0.2
ROB				S	Sb	23 20 23.4	-0.6
SBF	**Sospel**	0.71	149	*e*Pg	Pg	23 20 15.0	0.0
SBF				*e*Sg	Sg	23 20 24.0	-0.6
	34nm,0.4s						
MONE	**Monesi**	0.72	123	P	Pb	23 20 14.6	-0.2
MONE				S	Sb	23 20 23.8	-0.6
CALN	**Calern**	0.72	182	Pg	Pg	23 20 15.9	+0.7
RSP	**Reno Superiore**	0.72	19	P	Pb	23 20 15.0	+0.1
RSP				S	Sb	23 20 24.3	-0.2
ORIF	**Oris-en-Rattie**	0.87	301	*e*Pg	Pg	23 20 18.1	0.0
ORIF				*e*Sg	Sg	23 20 29.4	-0.3
	5.6nm,0.2s						
IMI	**Imperia**	0.90	129	P	Pb	23 20 18.0	+0.2
IMI				S	Sb	23 20 29.6	0.0
FRF	**La Foret Royal**	0.93	192	*e*Pg	Pg	23 20 18.9	-0.5
FRF	**La Foret Royal**	0.93	192	*e*Pn	Pn	23 20 20.3	+0.6
FRF				*e*Sg	Sg	23 20 31.3	-0.6
	19nm,0.2s						
FRF				*e*Sn	Sn	23 20 33.4	+0.3
FRF	**La Foret Royal**	0.93	192	*e*Pn	Pn	23 20 20.3	+0.6
FRF				*e*Sg	Sg	23 20 31.3	-0.6
	9.6nm,0.2s						
FRF				*e*Sn	Sn	23 20 33.4	+0.3
FIN	**Finale Ligure**	0.96	105	P	Pb	23 20 19.0	0.0
FIN				S	Sb	23 20 31.3	-0.2
LSD	**Ceresole Reale**	1.00	10	P	Pb	23 20 20.5	+0.9
LSD				S	Sb	23 20 33.4	+0.8
LPG	**La Plagne**	1.03	353	*e*Pg	Pg	23 20 21.0	-0.4
LPG				*e*Sg	Sg	23 20 34.2	-1.0
	7.5nm,0.3s						
LPG				*e*Sn	Sn	23 20 35.9	+0.2
LPL	**La Plagne**	1.05	353	*e*Pg	Pg	23 20 21.4	-0.4
LPL				*e*Sg	Sg	23 20 34.0	-1.8
	8.0nm,0.3s						
SMRF	**Simiane la Rot**	1.09	243	*e*Pg	Pg	23 20 22.3	-0.1
SMRF	**Simiane la Rot**	1.09	243	*e*P	Pb	23 20 23.3	+2.2
SMRF				*e*Sg	Sg	23 20 36.1	-0.9
SMRF				*e*Sn	Sn	23 20 37.4	+0.3
	23nm,0.3s						
SMRF	**Simiane la Rot**	1.09	243	*e*P	Pb	23 20 23.3	+2.2
SMRF				*e*Sg	Sg	23 20 36.1	-0.9
SMRF				*e*Sn	Sn	23 20 37.4	+0.3
	12nm,0.3s						
PCP	**Pian Castagno**	1.16	86	P	Pb	23 20 22.4	0.0
PCP				S	Sb	23 20 36.8	-0.6
LMR	**La Mourre**	1.18	195	*e*Pn	Pn	23 20 23.1	-0.1
LMR	**La Mourre**	1.18	195	*e*Pg	Pg	23 20 23.8	-0.4
LMR				*e*Sg	Sg	23 20 39.0	-0.9
	22nm,0.3s						
LMR	**La Mourre**	1.18	195	*e*Pg	Pg	23 20 23.8	-0.4
LMR				*e*Sg	Sg	23 20 39.0	-0.9
	11nm,0.3s						
TRAV		1.19	29	P	Pb	23 20 23.0	0.0
VIVF	**Saint-Julien-l**	1.65	284	*e*P	Pn	23 20 31.8	+1.9
VIVF	**Saint-Julien-l**	1.65	284	*e*Pg	Pg	23 20 32.6	-1.0
VIVF				*e*Sg	Sg	23 20 53.8	-1.9
	2.2nm,0.2s						
VIVF	**Saint-Julien-l**	1.65	284	*e*Pg	Pg	23 20 32.6	-1.0
VIVF				*e*Sg	Sg	23 20 53.8	-1.9
	1.1nm,0.2s						
LASF	**Ste Croix**	2.24	261	*e*Pn	Pn	23 20 38.1	-0.2
PGF	**Pioggiola**	2.45	141	*e*Pn	Pn	23 20 41.4	+0.1
CAF	**Calviac**	3.49	279	*e*Pn	Pn	23 20 55.2	-1.0

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*IDC **26** 23:22:44.7±1.3, 30.17N×97.26E, mb3.6/4, mb1 3.8/5, mb1mx3.6/19, mbtmp3.6/5, ML3.2/1, Error ellipse: s-maj=65.4km s-min=20.8km az=62.0*
*BJI **26** 23:22:45.9, 29.98N×97.44E, h16^{km}, mb4.4, ML3.6, Ms3.2, Msz3.2*
*NEIC **26** 23:22:45.3±0.6, 30.10N×97.14E, h10^{km}, mb3.9/1, Error ellipse: s-maj=12.0km s-min=8.9km az=198.0*
ISC 26 23:22:42.8±0.7**, 30.03N**±0.07×**97.07E**±0.07**, h10**^{km}**, n18, σ1^{s}03**/20**, mb3.9**/4**, 1C, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	**Lhasa**	5.15	268	P	Pn	23 24 09.0	+7.0
LSA				S	Sn	23 25 07.8	+5.6
LSA				Smax			
	comp=N,20nm,0.8s						
LSA				Smax			
	comp=E,40nm,0.8s						
LSA	**Lhasa**	5.15	268	*e*Pn	Pn	23 24 08.7	+6.7
	comp=E,34nm,0.9s						
CD2	**Chengdu**	5.84	80	*e*PG	Pn	23 24 20.0	+8.4
SHL	**Shillong**	6.39	227	*e*P	Pn	23 24 18.0	-1.4
SHL				*e*S	Sn	23 25 33.2	-0.1
KMI	**Kunming**	7.01	133	P	Pn	23 24 27.3	-0.8
KMI				LR	LR		
	comp=N,270nm,14.8s						
KMI				LR	LR		
	comp=E,140nm,15.6s						
KMI				LR	LR		
	comp=Z,280nm,16.4s						
LZH	**Lanzhou**	8.29	41	pP		23 24 59.5	
LZH				PP	PP	23 25 00.7	+6.9
LZH				sP		23 25 04.6	
LZH				*e*S	Sn	23 26 31.7	+11
LZH				sS		23 26 42.5	
LZH				*e*SS	SS	23 26 45.1	+11
GYA	**Guiyang**	9.18	110	⇑*i*P	P	23 24 52.5	-5.8
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
GUN	**Gumba**	10.03	261	*e*P	P	23 25 11.4	+1.3
	comp=Z,21nm,0.3s						
PKI	**Pulchoki**	10.52	259	*e*P	P	23 25 17.4	+0.6
	comp=Z,54nm,0.5s						
KKN	**Kakani**	10.57	261	*e*P	P	23 25 17.8	+0.3
	comp=Z,27nm,0.5s						
GKN	**Gorkha**	11.07	263	*e*P	P	23 25 24.2	-0.2
	comp=Z,20nm,0.5s						
KOLN	**Koldanda**	12.02	263	*e*P	P	23 25 35.4	-1.8
	comp=Z,20nm,0.7s						
SONM	**Songino Array**	19.18	19	P	P	23 27 07.5	-1.6
	comp=Z,0.1nm,0.3s,baz=204,slow=11,SNR=3.6						
MKAR	**Makanchi Array**	20.30	330	P	P	23 27 21.4	-0.1
	comp=Z,0.7nm,0.6s,baz=134,slow=8.4,SNR=8.2						
AAK	**Ala-Archa**	22.04	311	P	P	23 27 39.2	0.0
	comp=Z,5.6nm,1.0s,mb4.0						
BVAR	**Borovoye Array**	30.13	327	P	P	23 28 56.1	+1.2
	comp=Z,0.3nm,0.6s,mb3.2,baz=140,slow=11,SNR=3.2						
FITZ	**Fitzroy Crossi**	55.20	146	P	P	23 32 19.1	+0.7
	comp=Z,1.8nm,0.6s,mb4.2,baz=333,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	61.28	139	P	P	23 33 02.6	+1.6
	comp=Z,1.0nm,0.5s,mb4.2,baz=326,slow=7.8,SNR=3.9						

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*IDC **26** 23:53:06.2±1.4, 4.40S×139.25E, mb3.9/3, mb1 4.0/3, mb1mx3.8/7, mbtmp3.9/3, Error ellipse: s-maj=83.4km s-min=30.6km az=79.0*
*NEIC **26** 23:53:13.2±1.2, 4.82S×138.08E, h30^{km}, mb4.1/1, Error ellipse: s-maj=30.4km s-min=15.5km az=81.0*
ISC 26 23:53:11.8±1.3**, 4.8S**±0.1×**138.1E**±0.2**, h33**^{km}**, n9, σ0^{s}40**/9**, mb3.7**/3**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAKA	**Kakadu**	9.63	215	*e*P	Px	23 55 57.3	
	68nm,0.6s						
WRAB	**Tennant Creek**	15.46	193	*e*Pn	P	23 56 48.8	-0.4
	627nm,1.0s						
WRAB				*e*pPn		23 56 56.6	
WRAB				*e*Sn	S	23 59 39.8	+0.1
WB2	**Warramunga Arr**	15.47	193	*e*P	P	23 56 48.9	-0.4
WRA	**Warramunga Arr**	15.48	193	Pn	P	23 56 50.2	+0.8
	0.6nm,0.3s,baz=19,slow=12,SNR=5.1						
WRA				Sn	S	00 00 01.3	+21
	0.6nm,0.3s,baz=14,slow=21,SNR=4.5						
CTAO	**Charters Tower**	17.14	153	*e*Pn	P	23 57 10.6	+0.1
FITZ	**Fitzroy Crossi**	17.96	222	*e*P	P	23 57 27.0	+6.3
	6.4nm,0.4s						
STKA	**Stephens Creek**	27.13	173	P	P	23 58 53.7	-0.3
	0.8nm,0.2s,mb3.8,baz=346,slow=8.5,SNR=3.4						
MKAR	**Makanchi Array**	71.07	323	P	P	00 04 28.7	+0.1
	0.4nm,0.5s,mb3.6,baz=103,slow=7.9,SNR=9.2						
ILAR	**Eielson Array**	87.99	24	P	P	00 05 53.9	-5.5
	0.4nm,0.8s,mb3.7,baz=250,slow=4.5,SNR=4.6						

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*IDC **27** 00:17:30.1±2.2, 3.65S×152.94E, mb3.8/3, mb1 4.1/3, mb1mx3.8/11, mbtmp3.8/3, MS3.7/3, Ms1 3.7/3, ms1mx3.4/10, Error ellipse: s-maj=91.2km s-min=33.1km az=124.0*
*NEIC **27** 00:17:36.8±2.8, 3.84S×153.03E, h51^{km}±25^{km}, mb4.6/1, Error ellipse: s-maj=41.2km s-min=18.2km az=120.0*
ISC 27 00:17:33.5±1.1**, 3.8S**±0.2×**153.0E**±0.3**, h33**^{km}**, n11, σ0^{s}42**/8**, mb3.9**/4**, MS3.7**/3**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	8.08	226	*e*P	P	00 19 31.1	-0.2
	26nm,0.8s						
CTAO	**Charters Tower**	17.51	202	*e*P	P	00 21 36.7	-0.1
WRAB	**Tennant Creek**	24.28	227	*e*P	P	00 22 48.9	-0.2
	22nm,1.0s,mb4.5						
WRAB				*e*		00 22 58.0	
WB2	**Warramunga Arr**	24.29	227	*e*P	P	00 22 49.0	-0.1
WRA	**Warramunga Arr**	24.30	227	P	P	00 22 50.0	+0.8
	2.6nm,1.0s,mb3.6,baz=51,slow=9.8,SNR=10						
STKA	**Stephens Creek**	29.95	200	LR	LR	00 34 18.2	
	comp=Z,118nm,20.4s,MS3.5,baz=23,slow=34						
SONM	**Songino Array**	65.58	327	LR	LR	00 54 49.1	
	comp=Z,29nm,18.7s,MS3.5,baz=190,slow=34						
MKAR	**Makanchi Array**	79.70	319	P	P	00 29 39.5	-0.2
	0.7nm,0.9s,mb3.6,baz=101,slow=7.3,SNR=5.3						
COLA	**College**	80.82	22	P	P	00 29 45.8	+0.6
ILAR	**Eielson Array**	81.13	22	P	P	00 29 46.3	-0.5
	1.8nm,1.1s,mb3.9,baz=236,slow=6.4,SNR=6.7						
PDAR	**Pinedale Array**	97.99	48	LR	LR	01 12 08.0	
	comp=Z,73nm,18.6s,MS4.2,baz=254,slow=34						

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*NEIC **27** 00:47:46.9, 19.24N×68.36W, h35^{km}, MD3.6(RSPR), After RSPR.*
RSPR 27 00:47:46.9, 19.24N×68.36W, h35^{km}±33^{km}**, MD3.6**/7**, MD3.6**/7**, 8C, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	1.41	123	⇑*e*P	P	00 48 08.7	-1.7
AGPR				*e*S	S	00 48 25.9	-2.0
CRPR	**Cabo Rojo, PR**	1.70	136	⇑*e*P	P	00 48 12.1	-2.5
CRPR				*e*S	S	00 48 34.2	-1.2
MGP	**Maguayo**	1.71	135	⇑*e*P	P	00 48 12.7	-2.1
MGP				*e*S	S	00 48 34.0	-1.7
AOPR	**Arecibo Observ**	1.76	120	⇑*e*P	P	00 48 13.8	-1.7
AOPR				*e*S	S	00 48 34.6	-2.3
SJG	**San Juan**	2.37	118	⇑*e*P	P	00 48 23.1	-1.2
SJG				*e*S	S	00 48 49.7	-2.7
CBYP	**Canovanas**	2.56	112	⇑*e*P	P	00 48 25.9	-1.0
CBYP				*e*S	S	00 48 53.9	-3.1
HUMP	**Col San Antoni**	2.61	114	⇑*e*P	P	00 48 26.2	-1.4
HUMP				*e*S	S	00 48 56.2	-2.3
MTP	**Monte Pirata**	2.89	113	⇑*e*P	P	00 48 29.6	-1.9
MTP				*e*S	S	00 49 03.9	-1.5

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*NEIC **27** 00:54:00.0, 61.58N×140.37W, h5^{km}, ML3.7(PMR), ML3.6(PGC), ML3.6(AEIC), After PGC.*
PGC 27 00:54:00.1, 61.58N×140.42W, h1^{km}**, ML3.7**/3**, ML3.7**/12(AEIC)**, 1C, 180km northwest of Haines Jct., Yt St. Elias Mountains, Yukon Territory, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALM	**Baldy**	1.08	240	P	Pb	00 54 18.8	-2.4
YAH	**Yahtse**	1.38	208	P	Pb	00 54 24.7	-1.7
YAH				S	Sb	00 54 43.9	-0.5
CHX	**Chaix Hills**	1.56	193	P	Pn	00 54 28.6	-0.5
CHX				Trac			
HYT	**Haines Junctio**	1.60	117	⇑P	Pn	00 54 28.0	-1.7
HYT				S	Sb	00 54 50.9	0.0
HYT				Trac		00 54 56.9	
	comp=Z,233nm,0.3s						
GLB	**Gilahina Butte**	1.63	267	P	Pn	00 54 28.4	-1.6
GLB				S	Sb	00 54 50.4	-1.3
WANC	**Wrangell North**	1.78	285	P	Pn	00 54 32.6	+0.3
CYK	**Cape Yakataga**	1.81	215	P	Pn	00 54 33.6	+0.9
SNH	**Sunshine Point**	1.84	221	P	Pn	00 54 33.7	+0.6
SNH				P		00 54 33.7	
SNH				Trac			
MENT	**Mentasta**	2.06	313	P	Pn	00 54 34.9	-1.3
BMRM	**Bremner River**	2.11	255	P	Pn	00 54 36.9	-0.1
BMRM				Trac			
DAWY	**Dawson**	2.54	10	Pn	Pn	00 54 42.2	-0.8
DAWY				Pg	Pg	00 54 46.5	-4.2
DAWY				Sg	Sg	00 55 18.6	-6.0
DAWY				Trac		00 55 21.3	
	comp=Z,390nm,0.3s						
DIV	**Divide**	2.62	262	P	Pn	00 54 44.6	+0.4
DIV				Trac			
EYAK	**Cordova Ski Ar**	2.79	251	Trac			
EYAK	**Cordova Ski Ar**	2.79	251	P	Pn	00 54 47.2	+0.5
WHY	**Whitehorse**	2.84	107	Pn	Pn	00 54 45.6	-1.8
WHY				Pg	Pg	00 54 50.8	-6.1
WHY				Sg	Sg	00 55 28.7	-6.1
WHY				Trac		00 55 35.7	
	comp=Z,171nm,0.3s						
PLBC	**Pleasant Camp**	2.93	135	Pn	Pn	00 54 47.6	-1.1
PLBC				Pg	Pg	00 54 51.9	-6.7
PLBC				Sg	Sg	00 55 33.3	-4.2
THY	**Trims Highway**	3.08	309	*e*P	Pn	00 54 50.1	-0.7
SML	**Sawmill**	3.77	277	*e*P	Pn	00 55 00.3	-0.4
BESE	**Bessie Mountai**	4.10	135	Trac			
BESE	**Bessie Mountai**	4.10	135	P	Pn	00 55 03.9	-1.4
PMR	**Palmer**	4.16	274	*e*P	Pn	00 55 05.4	-0.8
MCK	**McKinley**	4.48	303	*e*P	Pn	00 55 10.5	-0.2
SLKM	**Skilak Lake**	4.88	262	*e*P	Pn	00 55 14.9	-1.6
DLBC	**Dease Lake**	6.09	117	qP		00 55 31.4	
DLBC				Pg	Pg	00 55 49.8	-12
DLBC				Sg	Sg	00 57 11.5	-11
DLBC				Trac		00 57 21.9	
	comp=Z,47nm,0.8s						
INK	**Inuvik**	7.36	20	Pn	Pn	00 55 47.0	-4.3
INK				Sn	Sn	00 57 07.2	-9.3
INK				Sg	Sg	00 57 52.1	-13
INK				Trac		00 58 11.7	
	comp=Z,18nm,0.7s						
INK	**Inuvik**	7.36	20	*e*P	Pn	00 55 47.3	-4.0
IMA2	**Indian Mountai**	7.39	313	*e*P	Pn	00 55 49.1	-2.6
FNBB	**Fort Nelson**	9.07	100	Pn	P	00 56 10.2	-4.8
FNBB				Sn	Sn	00 57 51.1	-8.0
FNBB				Sg	Sg	00 58 39.7	-22
FNBB				Trac		00 58 53.0	
	comp=Z,8.0nm,0.8s						
YKW3	**Yellowknife Ar**	12.11	74	Pn	P	00 56 52.7	-3.8

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*IDC **27** 01:10:29.2±3.1, 6.76N×126.68E, mb3.9/5, mb1 3.9/5, mb1mx3.8/15, mbtmp3.9/5, Error ellipse: s-maj=86.3km s-min=63.1km az=7.0*
*NEIC **27** 01:10:51.2±2.0, 7.25N×126.53E, h163^{km}±16^{km}, Error ellipse: s-maj=60.4km s-min=47.6km az=176.0*
ISC 27 01:10:51.0±1.1**, 7.7N**±0.1×**126.6E**±0.1**, h153**^{km}±6^{km}**, n9, σ0^{s}76**/11**, mb3.6**/5**, 2C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	0.52	334	⇑*i*P	P	01 11 14.2	+1.0
BIPH				*e*S	S	01 11 29.3	-0.9
DAV	**Davao City (W)**	1.19	237	*e*P	P	01 11 16.9	-1.1
KCP	**Kidapawan**	1.64	245	⇑*i*P	P	01 11 23.9	+1.4
KCP				*i* S	S	01 11 46.9	0.0
CGP	**Cagayan de Oro**	2.01	292	*e*S	S	01 11 54.3	0.0
SONM	**Songino Array**	43.51	340	P	P	01 18 41.8	+0.9
	0.3nm,0.5s,mb3.2,baz=153,slow=9.7,SNR=3.3						
MKAR	**Makanchi Array**	54.25	324	P	P	01 20 03.0	-0.2
	2.8nm,0.5s,mb4.3,baz=116,slow=7.3,SNR=75						
MKAR				PcP	PcP	01 21 05.2	-0.3
	1.3nm,0.7s,baz=117,slow=5.4,SNR=8.9						
ILAR	**Eielson Array**	81.59	26	P	P	01 22 53.0	+0.1
	0.2nm,0.5s,mb3.0,baz=258,slow=4.6,SNR=5.6						
BRTR	**Keskin Array B**	87.39	310	P	P	01 23 21.6	-0.6
	0.8nm,0.7s,mb3.7,baz=106,slow=4.3,SNR=4.3						
AKASG	**Malin Array Be**	88.73	321	P	P	01 23 27.7	-0.6
	0.5nm,0.4s,mb3.8,baz=68,slow=4.8,SNR=4.5						

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*NNC **27** 01:30:20.8±8.9, 38.26N×72.03E, h220^{km}±114^{km}, mpv3.3, Error ellipse: s-maj=126.2km s-min=66.5km az=32.0*
ISC 27 01:30:15.5±2.6**, 37.9N**±0.2×**72.0E**±0.3**, h216**^{km}±40^{km}**, n8, σ0^{s}92**/11**, 4C-2D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	4.41	17	P	P	01 31 23.2	-0.3

	SNR=13						
UCH	Uchtor	4.72	24	P	P	01 31 27.1	-0.3
	SNR=15						
KZA	Kyzart	4.86	30	P	P	01 31 27.8	-1.3
	SNR=5.3						
EKS2	Erkin-Say	4.93	16	P	P	01 31 30.2	+0.2
	SNR=9.9						
AAK	Ala-Archa	5.09	21	P	P	01 31 32.1	+0.1
	SNR=9.8						
AAK	Ala-Archa	5.09	21	⇓P	P	01 31 32.0	0.0
	3.2nm,0.3s						
AAK				⇑S	S	01 32 32.5	+1.0
	8.7nm,0.6s						
KK31	Karatay Array	5.30	348	⇑P	P	01 31 34.7	0.0
	0.5nm,0.2s,baz=173,slow=14,SNR=55						
KK31				⇓S	S	01 32 36.2	-0.1
	25nm,0.5s,baz=174,slow=23,SNR=46						
AB31	Akbulak array	14.27	326	⇑P	P	01 33 31.3	+2.3
	0.6nm,0.6s						
AB31				⇑S	S	01 36 01.1	-1.1
	2.9nm,0.8s						

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*KNET **27** 02:01:37.3±0.6,41.13N×73.40E,h7^{km}±2^{km},ml1.9,Error ellipse: s-maj=5.1km s-min=3.0km az=98.0*

*NNC **27** 02:01:38.4±1.9,41.06N×73.06E,h21^{km}±14^{km},mpv2.6, Error ellipse: s-maj=18.7km s-min=13.6km az=23.0*

ISC 27 02:01:36.9±1.6**,41.0N**±0.1×**73.2E**±0.1**,h7**^{km}**,n9,**σ**1^{s}03**/16**,11C-6D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	1.16	18	⇑P	Pb	02 01 57.3	-1.5
	14nm,0.2s,SNR=7.9						
AML				⇓S	Sb	02 02 13.0	-0.9
	18nm,0.2s						
UCH	Uchtor	1.54	39	⇑P	Pn	02 02 04.0	-0.9
	4.6nm,0.1s,SNR=6.3						
UCH				⇓S	Sb	02 02 24.0	-1.1
	11nm,0.2s						
EKS2	Erkin-Say	1.69	14	⇓P	Pn	02 02 06.8	-0.1
	3.0nm,0.2s,SNR=20						
KZA	Kyzart	1.85	55	⇓P	Pn	02 02 09.1	-0.3
	5.3nm,0.3s,SNR=9.1						
AAK	Ala-Archa	1.87	30	⇑P	Pn	02 02 09.9	+0.3
	8.0nm,0.2s,SNR=9.9						
AAK				⇓S	Sn	02 02 33.9	+0.3
	12nm,0.2s						
AAK	Ala-Archa	1.87	30	⇑P	Pn	02 02 10.0	+0.4
	4.9nm,0.3s						
AAK				⇑S	Sn	02 02 33.3	-0.3
	5.9nm,0.5s						
KBK	Karagaybulak	2.08	38	⇑P	Pn	02 02 13.2	+0.6
	4.7nm,0.2s,SNR=15						
KBK				⇑S	Sn	02 02 40.9	+1.9
	31nm,0.5s						
USP	Ospenovka	2.43	23	⇓P	Pn	02 02 17.9	+0.2
	2.8nm,0.3s,SNR=6.4						
USP				⇑S	Sn	02 02 50.7	+2.7
	6.2nm,0.3s						
KK31	Karatay Array	2.89	317	⇑Pn	Pn	02 02 24.5	+0.4
	0.6nm,0.4s,baz=128,slow=13,SNR=11						
KK31				⇑Pg	Pg	02 02 29.1	-5.4
	0.7nm,0.3s,baz=141,slow=16,SNR=8.7						
KK31				⇑Lg		02 03 08.0	
	2.2nm,0.3s,baz=132,slow=29,SNR=11						

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*IDC **27** 02:11:14.1±1.3,5.23N×94.37E,mb4.0/8,mb1 4.1/8, mb1mx3.9/19,mbtmp4.0/8,Error ellipse: s-maj=81.4km s-min=20.0km az=49.0*

*NEIC **27** 02:11:19.1±0.6,5.33N×94.49E,h30^{km},mb4.3/7,Error ellipse: s-maj=32.2km s-min=8.5km az=53.0*

ISC 27 02:11:17.3±1.0**,5.2N**±0.2×**94.4E**±0.3**,h33**^{km}**,n16,** σ**0^{s}54**/15**,mb4.1**/15**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIRN	Jiri	23.66	342	eP	P	02 16 28.0	+1.2
	4.8nm,0.3s,mb4.4						
GUN	Gumba	23.99	341	eP	P	02 16 30.3	+0.3
	5.6nm,0.4s,mb4.3						
GKN	Gorkha	24.50	339	eP	P	02 16 34.7	-0.3
	4.3nm,0.2s,mb4.5						
KOLN	Koldanda	24.68	337	eP	P	02 16 37.6	+0.8
	10.0nm,0.5s,mb4.6						
FITZ	Fitzroy Crossi	38.56	128	P	P	02 18 38.8	-0.1
	1.4nm,0.6s,mb3.9,baz=345,slow=12,SNR=3.4						
MKAR	Makanchi Array	42.74	348	P	P	02 19 12.9	-0.3
	2.4nm,0.6s,mb4.1,baz=166,slow=9.4,SNR=37						
WRA	Warramunga Arr	46.56	124	P	P	02 19 44.2	+0.1
	1.7nm,0.6s,mb4.2,baz=304,slow=9.3,SNR=12						
WRAB	Tennant Creek	46.56	124	eP	P	02 19 44.4	+0.2
	3.5nm,0.6s,mb4.5						
KURK	Kurchatov	47.25	346	eP	P	02 19 49.0	-0.2
	1.9nm,0.6s,mb4.2						
BVAR	Borovoye Array	51.59	342	P	P	02 20 21.9	-0.5
	1.1nm,0.6s,mb4.0,baz=149,slow=8.6,SNR=11						
BRVK	Borovoye	51.65	342	eP	P	02 20 21.9	-1.1
	0.6nm,0.5s,mb3.8						
BRTR	Keskin Array B	64.36	312	P	P	02 21 52.1	-0.2
	0.3nm,0.8s,mb3.4,baz=134,slow=7.6,SNR=3.5						
FINES	FINESS Array B	75.18	332	P	P	02 22 57.8	-0.2
	2.2nm,0.9s,mb4.1,baz=90,slow=5.6,SNR=3.9						
ARCES	ARCESS Array B	77.85	340	P	P	02 23 12.7	-0.3
	2.0nm,0.8s,mb4.1,baz=97,slow=7.3,SNR=3.7						
GERES	GERESS Array B	79.97	319	P	P	02 23 25.5	+0.6
	0.7nm,0.7s,mb3.7,baz=108,slow=6.2,SNR=6.5						
TXAR	Lajitas Array	141.54	26	PKP	PKPdf	02 30 50.0	+4.0
	0.2nm,0.4s,baz=93,slow=0.5,SNR=5.1						

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*NIED **27** 02:13:00,27.30N×140.90E,h380^{km},Mw4.8 Best double couple: $M_0$1.53×10^{16} NP1:ϕ_s45°,δ70°,λ-138°. NP2: ϕ_s299°,δ51°,λ-26°.*

*MOS **27** 02:13:15.7±0.8,27.08N×140.26E,h413^{km},mb4.8/47, Error ellipse: s-maj=10.0km s-min=5.0km az=109.7*

*IDC **27** 02:13:16.3±0.6,27.01N×140.31E,h410^{km}±5^{km},mb4.4/22, mb1 4.6/25,mb1mx4.5/27,mbtmp5.2/25,Error ellipse: s-maj=11.8km s-min=6.8km az=79.0*

*JMA **27** 02:13:17.7±0.2,27.26N×140.87E,h426^{km}±2^{km},M5.2*

*NEIC **27** 02:13:19.4±0.1,27.04N×140.26E,mb4.7/96, MW4.7(NIED),Error ellipse: s-maj=4.4km s-min=3.3km az=184.0*

*BJI **27** 02:13:21.6,27.08N×140.21E,h487^{km},mB4.8,mb4.7*

ISC 27 02:13:16.7±0.3**,27.07N**±0.03×**140.33E**±0.03**,h423**^{km}±2^{km}**, h438**^{km}±7.4^{km}**:pP-P,n399,**σ**1^{s}09**/424**,mb4.7**/117**,17C-25D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.65	89	P	P	02 14 12.2	-1.0
	211nm,0.3s,baz=221,slow=2.3,SNR=250						
CBIJ				S	S	02 14 54.2	-3.6
	95nm,0.3s,baz=271,slow=22,SNR=4.1						
CBIJ	Chichi jima	1.65	89	P	P	02 14 12.4	-0.9
CBIJ				S	S	02 14 55.1	-2.7
JHHJ	Haha-jima-NKT	1.70	104	P	P	02 14 13.1	-0.5
JHHJ				S	S	02 14 56.3	-1.9
JHJ2	Mitsune	6.04	356	P	P	02 14 51.0	-0.3
JHJ2				S	S	02 16 05.5	-0.2
JHJ	Hachijo jima 2	6.05	356	P	P	02 14 51.0	-0.4
	478nm,0.3s,baz=159,slow=10,SNR=63						
JHJ				S	S	02 16 04.8	-1.0
	236nm,0.3s,baz=51,slow=19,SNR=6.1						
TK01	Tokai 1	7.08	341	P	P	02 15 04.5	+1.8
TK02	Tokai 2	7.21	343	P	P	02 15 05.4	+1.3
JWZ	Kozaga	7.58	329	P	P	02 15 09.9	+1.7
JWZ				S	S	02 16 39.9	+3.6
BSO1	Boso 1	7.58	4	P	P	02 15 06.6	-1.7
BSO1				S	S	02 16 35.7	-0.6
JIM2	Oshima 3	7.67	354	P	P	02 15 08.3	-0.9
JIM2				eS	S	02 16 35.8	-2.2
BSO3	Boso 3	7.71	1	P	P	02 15 08.7	-1.0
JIZS	Izushimoda	7.73	351	P	P	02 15 09.3	-0.6
JIE	Ise	7.94	338	P	P	02 15 13.5	+1.2
JIE				eS	S	02 16 45.2	+1.7
JWM	Minabe	8.01	329	P	P	02 15 15.3	+2.2
JAA	Atsumi	8.02	341	P	P	02 15 14.2	+1.0
HMMJ	Hamamatsu 2	8.08	345	P	P	02 15 14.1	+0.2
JOD2	Odawara 2	8.24	353	P	P	02 15 14.4	-1.3
JOD2				S	S	02 16 48.7	-0.9
MRT2	Murotomisaki 2	8.27	321	P	P	02 15 19.0	+3.0
TSUJ	Tsu 2	8.33	337	P	P	02 15 18.3	+1.6
JAI	Aioi	8.41	324	P	P	02 15 20.3	+2.7
JNY	Yasuok	8.53	346	P	P	02 15 18.9	-0.1
JAO	Obara	8.59	343	P	P	02 15 20.1	+0.5
JMN	Monobe	8.67	322	P	P	02 15 23.5	+3.0
JAJ2	Tsuna	8.70	329	P	P	02 15 22.8	+1.9
JTO	Tosashimizu	8.71	313	P	P	02 15 23.7	+2.6
JKU	Kubokawa	8.85	316	P	P	02 15 25.3	+2.8
JNT	Takato	8.98	348	P	P	02 15 23.7	-0.3
JRY	Ryogami san	9.01	353	P	P	02 15 23.5	-0.9
JRY				S	S	02 17 03.9	-1.4
UWA2	Uwa jima 2	9.06	314	P	P	02 15 27.7	+2.8
JJS	Sakaide	9.13	324	P	P	02 15 27.9	+2.1
JGM	Miyama	9.14	341	P	P	02 15 26.4	+0.5
JFM	Mihama	9.22	337	P	P	02 15 28.0	+1.2
JAG	Ashikaga	9.36	356	P	P	02 15 25.9	-2.5
JAD	Aida	9.46	328	P	P	02 15 31.1	+1.6
JGN	Niukaw	9.48	345	P	P	02 15 29.3	-0.5
JKIT	Kitakata	9.49	308	P	P	02 15 33.0	+3.1
JNG	Nsakai	9.50	349	P	P	02 15 29.0	-1.0
JHO	Hitachi	9.52	1	P	P	02 15 28.7	-1.5
JUS	Usuki	9.54	311	P	P	02 15 33.6	+3.2
MJAR	Matsushiro Arr	9.62	350	P	P	02 15 29.4	-1.9
	16nm,0.3s,baz=165,slow=11,SNR=108						
MJAR				S	S	02 17 17.4	-0.5
	5.5nm,0.3s,baz=170,slow=15,SNR=6.3						
MAJO	Matsushiro	9.62	350	eP	P	02 15 29.2	-2.1
	161nm,0.4s						
MAJO	Matsushiro	9.62	350	eP	P	02 15 29.2	-2.1
MAJO				pmax	pmax		
	comp=Z,156nm,0.4s						
MAT	Matsushiro	9.62	350	P	P	02 15 28.9	-2.4
MAT				eS	S	02 17 18.2	+0.3
MAT	Matsushiro	9.62	350	eP	P	02 15 29.0	-2.3
	comp=Z,15nm,0.6s						
MAT				eS	S	02 17 15.0	-2.9
MAT	Matsushiro	9.62	350	eP	P	02 15 29.0	-2.3
MAT				eS	S	02 17 15.0	-2.9
MAT				pmax	pmax		
	comp=Z,15nm,0.6s						
JKY	Yasaka	9.63	334	P	P	02 15 33.0	+1.5
JKT	Katashina	9.71	355	P	P	02 15 30.2	-2.2
JHS	Saijyo	10.04	324	P	P	02 15 38.1	+2.0
JHS				S	S	02 17 32.3	+5.7
JNU	Nakatsue	10.17	309	P	P	02 15 40.1	+2.5
	comp=Z,7.0nm,0.3s,baz=144,slow=12,SNR=41						
JHT	Toyohira	10.17	320	P	P	02 15 39.3	+1.6
JHK	Hiroka	10.21	354	P	P	02 15 36.0	-2.1
JFY	Yanaizu	10.32	357	P	P	02 15 38.4	-1.0
JFA	Akaike	10.56	311	P	P	02 15 44.0	+1.8
JOW	Kunigami	10.76	271	P	P	02 15 46.0	+1.6
	comp=Z,2.4nm,0.3s,baz=102,slow=14,SNR=8.2						
JMM	Marumori	10.78	2	P	P	02 15 44.0	-0.6
JSD	Sado	11.08	351	P	P	02 15 45.6	-2.4
JYS	Shirataka	11.12	359	P	P	02 15 48.3	-0.2
JOU	Okura	11.27	1	P	P	02 15 50.0	-0.1
JMK	Ichinoseki	11.88	3	P	P	02 15 56.0	-0.8
JMK				S	S	02 18 01.4	-3.3
JRG	Rokugo	12.30	1	P	P	02 16 01.4	-0.1
JOM	Ohasama	12.40	3	P	P	02 16 02.3	-0.4
JAH	Hinai	13.09	1	P	P	02 16 10.5	+0.3
JIW	Iwasaki	13.49	359	P	P	02 16 14.8	+0.3
GUMO	Guam	14.06	162	P	P	02 16 19.7	-1.1
	comp=Z,20nm,0.3s,baz=149,slow=5.9,SNR=7.7						
GUMO	Guam	14.06	162	eP	P	02 16 21.1	+0.4
	comp=Z,387nm,1.0s						
GUMO	Guam	14.06	162	eP	P	02 16 21.2	+0.5
GUMO				pmax	pmax		
	comp=Z,355nm,1.0s						
JOT	Ohata	14.29	2	P	P	02 16 22.4	-0.5
KS15	Wonju Array Si	14.75	318	eP	P	02 16 29.2	+1.5
JKB	Kayabe	14.80	2	P	P	02 16 28.1	-0.1
JOSM	Okushiri--Mats	15.00	358	P	P	02 16 30.3	+0.1
NEM2	Nemuro 2	16.84	14	P	P	02 16 49.4	+0.5
ASAJ	Asahikawa	17.11	6	P	P	02 16 53.0	+1.5
	comp=Z,1.9nm,0.3s,baz=204,slow=9.5,SNR=18						
JTKR	Abashiri--Toko	17.11	9	P	P	02 16 53.4	+1.8
SSE	Sheshan	17.21	288	P	P	02 16 52.3	-0.4
SSE				AMB	AMB		
	comp=Z,10.0nm,0.6s						
SSE				AMB	AMB		
	comp=Z,40nm,5.5s						
SSE	Sheshan	17.21	288	P	P	02 16 52.3	-0.4
	comp=Z,18nm,0.6s						
NJ2	Nanjing	19.33	290	eP	P	02 17 14.0	+0.4
NJ2				S	S	02 20 22.0	-3.0
NJ2				AMB	AMB		
	comp=Z,20nm,0.6s						
NJ2				AMB	AMB		
	comp=Z,160nm,4.3s						
NJ2	Nanjing	19.33	290	eP	P	02 17 14.0	+0.4
	comp=Z,20nm,0.6s						
NJ2				S	S	02 20 22.0	-3.0
MDJ	Mudanjiang	19.52	337	P	P	02 17 21.0	+5.6
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.0s						
MDJ				AMB	AMB		
	comp=Z,100nm,4.8s						
MDJ	Mudanjiang	19.52	337	P	P	02 17 17.2	+1.7
	comp=Z,11nm,0.8s						
YSS	Yuzh-Sakhalins	19.94	5	⇓eP	P	02 17 21.3	+1.9
	comp=Z,16nm,1.0s						
YSS	Yuzh-Sakhalins	19.94	5	⇓eP	P	02 17 21.3	+1.9
YSS				pmax	pmax		
	comp=Z,16nm,1.0s						
CN2	Changchun	20.58	328	eP	P	02 17 27.0	+1.4
CN2				eS	S	02 20 46.5	+0.1
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2	Changchun	20.58	328	eP	P	02 17 27.0	+1.4
	comp=Z,10.0nm,0.6s						
CN2				eS	S	02 20 46.5	+0.1
WHN	Wuhan	23.01	285	⇑P	P	02 17 49.3	+0.9
WAKE	Wake Island	25.37	102	P	P	02 18 12.0	+2.2
ENH	Enshi	27.21	284	eP	P	02 18 25.6	-0.6
	comp=Z,20nm,0.8s,mb4.6						
HIA	Hailar	27.28	330	eP	P	02 18 26.1	-0.4
	comp=Z,4.3nm,0.4s,mb4.2						
HIA	Hailar	27.28	330	eP	P	02 18 26.1	-0.4
HIA				pmax	pmax		
	comp=Z,4.0nm,0.4s						
HHC	Hu-ho-hao-te	27.40	307	eP	P	02 18 28.3	+0.7
HHC				PCP	PcP	02 21 29.0	-5.1
HHC				S	S	02 22 40.0	+3.1
HHC				SCP		02 24 27.8	
HHC				PCS		02 25 12.0	
HHC				SCS	ScS	02 28 19.0	-5.4
HHC				AMB	AMB		
	comp=Z,110nm,8.4s						
HHC	Hu-ho-hao-te	27.40	307	eP	P	02 18 28.3	+0.7
	comp=Z,8.0nm,1.2s,mb4.0						
HHC				PcP	PcP	02 21 29.0	-5.1
HHC				S	S	02 22 40.0	+3.1
HHC				ScP		02 24 27.8	
HHC				PcS		02 25 12.0	
HHC				ScS	ScS	02 28 19.0	-5.4
GYA	Guiyang	30.02	277	⇑iP	P	02 18 51.0	+0.3
GYA				AP	pP	02 20 10.3	+3.0
GYA				PCP	PcP	02 21 40.5	-0.4
GYA				S	S	02 23 17.0	-1.0
GYA				SCS	ScS	02 28 34.5	-2.4
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
GYA	Guiyang	30.02	277	⇑iP	P	02 18 51.0	+0.3
	comp=Z,20nm,0.8s,mb4.5						
GYA				pP	pP	02 20 10.3	+3.0
GYA				PcP	PcP	02 21 40.5	-0.4
GYA				S	S	02 23 17.0	-1.0
GYA				ScS	ScS	02 28 34.5	-2.4
CD2	Chengdu	32.13	286	P	P	02 19 08.8	+0.1
CD2				AP	pP	02 20 29.5	+3.0
CD2				PP	PP	02 20 37.5	+4.6
CD2				S	S	02 23 48.5	-2.1
CD2				SS	SS	02 26 27.5	-0.7
CD2				AMB	AMB		
	comp=Z,30nm,0.6s,mb4.8						
CD2	Chengdu	32.13	286	P	P	02 19 08.8	+0.1
	comp=Z,30nm,0.6s,mb4.8						
CD2				pP	pP	02 20 29.5	+3.0
CD2				PP	PP	02 20 37.5	+4.6
CD2				S	S	02 23 48.5	-2.1
CD2				SS	SS	02 26 27.5	-0.7
LZH	Lanzhou	32.21	295	eP	P	02 19 08.5	-0.8
LZH				PP	PP	02 20 37.5	+3.8
LZH				eS	S	02 23 48.5	-3.3
LZH				eSS	SS	02 26 28.5	-1.2
LZH				AMB	AMB		
	comp=Z,20nm,1.4s,mb4.2						
LZH				AMB	AMB		
	comp=Z,70nm,4.6s						
LZH	Lanzhou	32.21	295	eP	P	02 19 08.5	-0.8
	comp=Z,22nm,1.4s,mb4.3						
LZH				PP	PP	02 20 37.5	+3.8
LZH				eS	S	02 23 48.5	-3.3
LZH				eSS	SS	02 26 28.5	-1.2
LZH	Lanzhou	32.21	295	eP	P	02 19 08.5	-0.8
LZH				*PP	pP	02 20 29.5	+2.3
LZH						02 20 37.5	
LZH				eS	S	02 23 48.5	-3.3
LZH				eSS	SS	02 26 28.5	-1.2
LZH				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.3						
ULN	Ulaanbaatar	33.22	318	eP	P	02 19 17.9	+0.1
ULN	Ulaanbaatar	33.22	318	d iP	P	02 19 18.1	+0.3
SONM	Songino Array	33.60	317	P	P	02 19 20.2	-0.8
	comp=Z,3.1nm,0.7s,mb3.8,baz=131,slow=7.0,SNR=17						
SONM				PcP	PcP	02 21 49.8	-0.6
	comp=Z,3.6nm,0.7s,baz=134,slow=3.2,SNR=11						
SONM				ScP		02 24 53.1	
	comp=Z,1.9nm,0.8s,baz=146,slow=3.4,SNR=6.6						
KMI	Kunming	33.74	275	P	P	02 19 24.0	+1.6
KMI				AP	pP	02 20 52.5	+11
KMI				S	S	02 24 14.8	-0.6
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.2						
KMI				AMB	AMB		
	comp=Z,70nm,4.7s						
KMI	Kunming	33.74	275	P	P	02 19 24.0	+1.6
	comp=Z,17nm,0.8s,mb4.4						
KMI				pP	pP	02 20 52.5	+11
KMI				S	S	02 24 14.8	-0.6
KMI	Kunming	33.74	275	P	P	02 19 23.9	+1.5
KMI				*PP	pP	02 20 52.4	+11
KMI				S	S	02 24 14.7	-0.7
KMI				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.4						
KMI				MLR	MLR		
	comp=Z,220nm,13.1s						
FX1	Attu Island--F	35.50	34	P	P	02 19 38.4	+1.5
	comp=Z,45nm,0.6s,mb5.0,baz=212,slow=0.6,SNR=11						
FX1				PcP	PcP	02 21 54.9	-1.1
	comp=Z,8.9nm,0.6s,baz=325,slow=12,SNR=5.9						
YAK	Yakutsk	35.68	351	i P	P	02 19 37.7	-0.6
	comp=Z,28nm,0.7s,mb4.7						
YAK	Yakutsk	35.68	351	d iP	P	02 19 37.7	-0.6
YAK				pmax	pmax		
	comp=Z,28nm,0.7s,mb4.7						
GTA	Gaotai	35.77	301	eP	P	02 19 38.8	-0.6
GTA				AP	pP	02 21 02.0	+3.2
GTA				PCP	PcP	02 21 56.5	-0.4
GTA				S	S	02 24 43.5	-2.6
GTA				SCP		02 24 58.5	
GTA				PCS		02 25 44.0	
GTA				SS	SS	02 27 38.8	-0.8
GTA				AMB	AMB		
	comp=Z,40nm,6.8s						
GTA	Gaotai	35.77	301	eP	P	02 19 38.8	-0.6
	comp=Z,8.0nm,0.9s,mb4.0						
GTA				pP	pP	02 21 02.0	+3.2
GTA				PcP	PcP	02 21 56.5	-0.4
GTA				S	S	02 24 43.5	-2.6
GTA				ScP		02 24 58.5	
GTA				PcS		02 25 44.0	
GTA				SS	SS	02 27 38.8	-0.8
BOD	Bodaibo	35.90	336	eP	P	02 19 40.2	0.0
	comp=Z,9.0nm,0.9s,mb4.1						
BOD	Bodaibo	35.90	336	eP	P	02 19 40.2	0.0
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.1						
ZAK	Zakamensk	36.55	320	eP	P	02 19 45.3	-0.5
	comp=Z,3.0nm,1.0s						
ZAK	Zakamensk	36.55	320	eP	P	02 19 45.3	-0.5
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SEY	Seymchan	36.73	9	⇑iP	P	02 19 47.5	+0.4
PMG	Port Moresby	36.85	169	P	P	02 19 47.6	-1.0
	comp=Z,7.1nm,0.5s,mb4.2,baz=274,slow=13,SNR=4.8						
KAKA	Kakadu	40.28	192	eP	P	02 20 36.1	+19
	comp=Z,23nm,0.8s,mb4.6						
HNR	Honiara	40.97	150	P	P	02 20 19.4	-2.9
	comp=Z,127nm,0.7s,mb5.4,baz=162,slow=3.2,SNR=2.5						
LSA	Lhasa	43.09	285	eP	P	02 20 40.9	+1.7
	comp=Z,8.3nm,0.6s,mb4.2						
LSA	Lhasa	43.09	285	eP	P	02 20 40.9	+1.7
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.2						
TIXI	Tiksi	45.08	355	⇓iP	P	02 20 53.4	-0.8
	comp=Z,14nm,1.2s,mb4.2						
TIXI	Tiksi	45.08	355	⇓iP	P	02 20 53.4	-0.8
TIXI				pmax	pmax		
	comp=Z,14nm,1.2s,mb4.2						
WMQ	Urumqi	45.25	306	⇓iP	P	02 20 56.5	+0.5
WMQ				PCP	PcP	02 22 26.5	-1.4
WMQ				PCS		02 26 21.0	
WMQ				S	S	02 27 03.0	-1.0
WMQ				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,190nm,3.8s						
WMQ	Urumqi	45.25	306	⇓iP	P	02 20 56.5	+0.5
	comp=Z,26nm,0.9s,mb4.6						
WMQ				PcP	PcP	02 22 26.5	-1.4
WMQ				PcS		02 26 21.0	
WMQ				S	S	02 27 03.0	-1.0
UNV	Unalaska Valle	47.05	40	P	P	02 21 08.9	-0.8
WRAB	Tennant Creek	47.08	188	eP	P	02 21 08.8	-1.6
	comp=Z,32nm,0.8s,mb4.7						
WRAB	Tennant Creek	47.08	188	c iP	P	02 21 08.9	-1.5
WB2	Warramunga Arr	47.09	188	⇑iP	P	02 21 08.9	-1.6
WB2				epP	pP	02 22 42.7	+8.8
WB2				eSCP		02 25 45.4	
WB2				eS	S	02 27 25.6	-4.4
WRA	Warramunga Arr	47.09	188	P	P	02 21 09.0	-1.4
	comp=Z,32nm,0.6s,mb4.8,baz=8.1,slow=8.0,SNR=108						
WRA				ScP		02 25 45.5	
	comp=Z,3.7nm,0.7s,baz=5.0,slow=4.4,SNR=9.7						
WRA				S	S	02 27 26.1	-3.9
	comp=Z,2.6nm,1.0s,baz=10.0,slow=14,SNR=6.5						
WRA	Warramunga Arr	47.09	188	P	P	02 21 09.0	-1.5
WRA				S	S	02 27 26.1	-3.9
FITZ	Fitzroy Crossi	47.11	199	eP	P	02 21 09.8	-0.8
	comp=Z,24nm,0.9s,mb4.5						
FITZ				eSCP		02 25 45.1	
FITZ				eS	S	02 27 27.6	-2.7
FITZ	Fitzroy Crossi	47.11	199	P	P	02 21 09.9	-0.7
	comp=Z,31nm,0.7s,mb4.7,baz=17,slow=8.2,SNR=37						
FITZ				ScP		02 25 44.9	
	comp=Z,4.7nm,0.6s,baz=325,slow=0.8,SNR=4.6						
CTA	Charters Tower	47.23	172	eP	P	02 21 10.8	-0.7
	comp=Z,1.5nm,0.6s						
CTA	Charters Tower	47.23	172	P	P	02 21 10.6	-0.9
	comp=Z,6.6nm,0.9s,mb4.0,baz=357,slow=5.5,SNR=12						
CTA	Charters Tower	47.23	172	eP	P	02 21 10.8	-0.7
CTA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
JIRN	Jiri	47.76	284	eP	P	02 21 16.6	+1.2
	comp=Z,85nm,0.8s,mb5.1						
GUN	Gumba	47.97	284	eP	P	02 21 18.1	+1.0
	comp=Z,86nm,0.8s,mb5.1						
PKI	Pulchoki	48.45	284	eP	P	02 21 21.0	+0.3
KKN	Kakani	48.52	284	eP	P	02 21 21.6	+0.4
	comp=Z,29nm,0.7s,mb4.7						
KKN	Kakani	48.52	284	eP	P	02 21 21.6	+0.4
KKN				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.4						
DMN	Daman	48.70	284	eP	P	02 21 23.0	+0.4
	comp=Z,34nm,0.9s,mb4.7						
GKN	Gorkha	49.02	285	eP	P	02 21 25.3	+0.2
	comp=Z,52nm,1.0s,mb4.8						
MKAR	Makanchi Array	49.22	310	P	P	02 21 26.1	-0.2
	comp=Z,12nm,0.8s,mb4.3,baz=90,slow=9.9,SNR=56						
MKAR				PcP	PcP	02 22 41.2	-1.0
	comp=Z,5.9nm,0.6s,baz=82,slow=6.6,SNR=12						
MKAR				ScP		02 25 55.0	
	comp=Z,3.7nm,0.9s,baz=81,slow=4.0,SNR=9.0						
MKAR	Makanchi Array	49.22	310	P	P	02 21 26.1	-0.2
MKAR				e		02 22 41.2	

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NVS   Novosibirsk        49.51 320  eP      P       02 21 26.5 -1.8
      comp=Z,23nm,1.6s,mb4.3
NVS                                 e               02 22 40.7
NVS   Novosibirsk        49.51 320  eP      P       02 21 26.5 -1.8
NVS                                 e               02 22 40.7
NVS                                  pmax   pmax
      comp=Z,23nm,1.6s,mb4.3
KOLN  Koldanda           49.97 285  eP      P       02 21 32.2  0.0
      comp=Z,37nm,0.8s,mb4.7
KURK  Kurchatov          51.83 315  eP      P       02 21 44.7 -0.9
KURK                                 pmax   pmax
      comp=Z,37nm,0.6s,mb4.8
TKM2  Tokmak 2           54.08 305   P      P       02 22 02.6 +0.6
      SNR=6.7
KZA   Kyzart             54.42 304   P      P       02 22 05.7 +1.3
      SNR=5.6
KBK   Karagaybulak       54.58 305   P      P       02 22 05.9 +0.3
      SNR=11
USP   Ospenovka          54.85 305   P      P       02 22 07.0 -0.4
      SNR=7.2
AAK   Ala-Archa          54.92 305   P      P       02 22 08.0 +0.1
      SNR=6.8
AAK   Ala-Archa          54.92 305  eP      P       02 22 06.7 -1.2
      comp=Z,4.0nm,0.6s,mb3.8
AAK                                 e               02 23 02.2
AAK   Ala-Archa          54.92 305  eP      P       02 22 06.7 -1.2
AAK                                 e               02 23 02.2
AAK                                  pmax   pmax
      comp=Z,4.0nm,0.6s,mb3.8
UCH   Uchtor             54.95 304   P      P       02 22 09.4 +1.2
      SNR=12
AML   Almayashu          55.56 304   P      P       02 22 13.4 +1.0
      SNR=12
IMA2  Indian Mountai     55.85  27  eP      P       02 22 13.7 -0.5
BVAR  Borovoye Array     56.95 317   P      P       02 22 21.4 -0.5
      comp=Z,56nm,0.4s,mb5.2,baz=87,slow=6.8,SNR=568
BVAR                                 PcP    PcP     02 23 10.5 -1.1
      comp=Z,9.8nm,0.6s,baz=100,slow=3.2,SNR=7.3
BVAR                                 ScP            02 26 27.8
      comp=Z,0.9nm,0.6s,baz=108,slow=4.8,SNR=3.9
BVAR                                 S      S       02 29 40.6 -1.2
      comp=Z,1.1nm,0.9s,baz=22,slow=16,SNR=5.5
BVAR  Borovoye Array     56.95 317   P      P       02 22 21.4 -0.5
BVAR                                e               02 23 10.5
BVAR                                 S      S       02 29 40.6 -1.3
BRVK  Borovoye           57.01 317  eP      P       02 22 21.6 -0.7
      comp=Z,25nm,0.6s,mb4.7
BRVK                                e               02 23 10.7
BRVK  Borovoye           57.01 317  eP      P       02 22 21.6 -0.7
BRVK                                e               02 23 10.7
BRVK                                 pmax   pmax
      comp=Z,25nm,0.6s,mb4.7
PMR   Palmer             57.34  32  eP      P       02 22 23.5 -1.0
      comp=Z,59nm,1.0s,mb4.9
PMR   Palmer             57.34  32  eP      P       02 22 23.5 -1.0
PMR                                  pmax   pmax
      comp=Z,59nm,1.0s,mb4.9
MCK   McKinley           57.57  30  eP      P       02 22 25.0 -1.0
      comp=Z,41nm,0.8s,mb4.8
MCK   McKinley           57.57  30  eP      P       02 22 25.0 -1.0
MCK                                  pmax   pmax
      comp=Z,41nm,0.8s,mb4.8
COLA  College            58.12  29  eP      P       02 22 28.4 -1.4
      comp=Z,17nm,0.6s,mb4.5
COLA  College            58.12  29  eP      P       02 22 29.3 -0.4
ILAR  Eielson Array      58.53  29   P      P       02 22 30.8 -1.7
      comp=Z,18nm,0.7s,mb4.5,baz=248,slow=6.4,SNR=138
STKA  Stephens Creek     58.63 179   P      P       02 22 31.4 -2.2
      comp=Z,2.0nm,0.7s,baz=346,slow=9.7,SNR=3.5
THY   Trims Highway      58.98  30  eP      P       02 22 34.8 -0.6
MENT  Mentasta           59.90  31  eP      P       02 22 41.7 +0.1
DAWY  Dawson             61.79  29  eP      P       02 22 53.8 -0.3
SVE   Sverdlovsk         62.24 322  eP      P       02 22 56.3 -0.9
      comp=Z,40nm,0.8s,mb5.0
SVE   Sverdlovsk         62.24 322  eP      P       02 22 56.3 -0.9
SVE                                  pmax   pmax
      comp=Z,40nm,0.8s,mb5.0
ARU   Arti               63.43 322⇓iP      P       02 23 04.0 -0.9
      comp=Z,32nm,0.7s,mb5.0
ARU                                 e               02 23 32.1
ARU                                 e               02 25 24.9
ARU                                 eS      S       02 31 01.4 -1.9
ARU                                 eSS     SS      02 35 16.1 -5.4
ARU   Arti               63.43 322⇓iP      P       02 23 04.0 -0.9
ARU                                 e               02 23 32.1
ARU                                 e               02 25 24.9
ARU                                 eS      S       02 31 01.4 -1.9
ARU                                 eSS     SS      02 35 16.1 -5.4
ARU                                  pmax   pmax
      comp=Z,32nm,0.7s,mb5.0
NWAO  Narrogin (SRO)     63.58 202   P      P       02 23 04.8 -1.5
      comp=Z,6.8nm,0.8s,mb4.2,baz=50,slow=7.2,SNR=6.0
INK   Inuvik             63.74  24  eP      P       02 23 05.5 -1.2
      comp=Z,603nm,0.7s
INK   Inuvik             63.74  24  eP      P       02 23 05.5 -1.1
INK                                  pmax   pmax
      comp=Z,19nm,0.7s
AKTO  Aktyubinsk         64.90 316   P      P       02 23 13.3 -1.0
      comp=Z,8.8nm,0.6s,mb4.5,baz=87,slow=7.4,SNR=32
KEV   Kevo               72.46 340  ep      P       02 23 59.5 -0.3
      comp=Z,14nm,0.6s,mb4.7
KEV   Kevo               72.46 340  eP      P       02 23 59.5 -0.3
KEV                                  pmax   pmax
      comp=Z,15nm,0.6s,mb4.7
RES   Resolute Bay       72.47  13  eP      P       02 23 59.5 -0.3
      comp=Z,459nm,0.8s,mb6.1
RES   Resolute Bay       72.47  13  eP      P       02 23 59.5 -0.3
RES                                  pmax   pmax
      comp=Z,14nm,0.8s,mb4.5
YKW3  Yellowknife Ar     72.91  28  eP      P       02 24 01.9 -0.5
YKA   Yellowknife Ar     72.94  28   P      P       02 24 02.1 -0.5
      comp=Z,34nm,0.8s,mb5.0,baz=297,slow=6.0,SNR=142
YKA   Yellowknife Ar     72.94  28   P      P       02 24 02.1 -0.5
ARCES ARCESS Array B     73.02 341   P      P       02 24 03.0 +0.1
      comp=Z,21nm,0.7s,mb4.8,baz=70,slow=8.3,SNR=83
ARE0  ARCESS Array S     73.02 341  eP      P       02 24 02.9 -0.1
PGC   Sidney             74.05  43  eP      P       02 24 09.8 +0.6
      comp=Z,42nm,0.8s,mb5.1
JOF   Joensuu            74.37 333  ep      P       02 24 10.4 -0.3
      comp=Z,18nm,0.4s,mb5.0
TRO   Tromso             74.85 342  eP      P       02 24 12.1 -1.2
RMW   Rattlesnake Mo     75.54  44   P      P       02 24 18.7 +1.1
OBN   Obninsk            75.61 325  i P     P       02 24 17.3 -0.5
      comp=Z,54nm,1.2s,mb5.0
OBN   Obninsk            75.61 325d iP      P       02 24 17.3 -0.5
OBN                                  pmax   pmax
      comp=Z,54nm,1.2s,mb5.0
VRSR  Storozhevoye       75.91 320  i P     P       02 24 19.3 -0.2
      comp=Z,9.0nm,1.0s,mb4.3
VRSR  Storozhevoye       75.91 320d iP      P       02 24 19.3 -0.2
VRSR                                 pmax   pmax
      comp=Z,9.0nm,1.0s,mb4.3
VRSR                                 pmax   pmax
      comp=N,7.0nm,0.8s
VRSR                                 pmax   pmax
      comp=E,5.0nm,0.7s
GOF   Gofitskoye         76.17 314  eP      P       02 24 20.3 -0.9
      comp=E,28nm,1.3s,mb4.7
GOF   Gofitskoye         76.17 314  eP      P       02 24 20.3 -0.9
GOF                                  pmax   pmax
      comp=Z,28nm,1.3s,mb4.7
TBM   Table Mountain     76.41  44   P      P       02 24 23.1 +0.7
TDH   Tom, Dick, Har     76.45  46   P      P       02 24 23.4 +0.8
EBG   Ellensburg         76.54  44   P      P       02 24 24.1 +0.9
WTV   Waterville         76.58  43   P      P       02 24 23.6 +0.3
KAF   Kangasniemi        76.78 334  ep      P       02 24 23.7 -0.4
      comp=Z,51nm,0.5s,mb5.4,baz=55,slow=5.2
KAF   Kangasniemi        76.78 334  eP      P       02 24 23.7 -0.4
KAF                                  pmax   pmax
      comp=Z,51nm,0.5s,mb5.4
GNI   Garni              77.05 308  eP      P       02 24 27.1 +1.0
      comp=Z,18nm,1.1s,mb4.6
GNI   Garni              77.05 308  eP      P       02 24 27.1 +1.0
GNI                                  pmax   pmax
      comp=Z,18nm,1.1s
FINES FINESS Array B     77.24 333   P      P       02 24 26.3 -0.3
      comp=Z,64nm,0.5s,mb5.5,baz=67,slow=5.5,SNR=821
YBH   Yreka Blue Hor     77.33  50  eP      P       02 24 28.6 +1.0
      comp=Z,15nm,0.8s,mb4.7
YBH   Yreka Blue Hor     77.33  50  eP      P       02 24 28.6 +1.0
YBH                                  pmax   pmax
      comp=Z,15nm,0.8s
WRD   Warden             77.46  44   P      P       02 24 28.5 +0.3
OD2   Odessa Site #2     77.47  43   P      P       02 24 28.5 +0.3
HOG   Hogback Mounta     77.79  49   P      P       02 24 31.2 +1.1
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EDM   Edmonton           77.82  36  eP      P       02 24 29.9 -0.1
NEW   Newport            78.03  42  eP      P       02 24 31.7 +0.5
      comp=Z,32nm,1.0s,mb4.9
NEW   Newport            78.03  42  eP      P       02 24 31.7 +0.5
NEW                                  pmax   pmax
      comp=Z,33nm,1.0s
MOR8  Moi Rana           78.39 340  eP      P       02 24 31.3 -1.4
MOR8                                 AMb    AMB     02 24 32.5
      comp=Z,35nm,0.9s,mb5.0
VSU   Vasula             78.61 331⇑eP      P       02 24 32.9 -1.2
MOD   Modoc              78.88  49  eP      P       02 24 36.5 +0.7
      comp=Z,33nm,1.2s,mb4.8
UMR   Umm Al-Rimmam      79.25 298  eP      P       02 24 38.0  0.0
MIB   Mutribah           79.44 298  eP      P       02 24 39.0 -0.1
MIB                                  AMb    AMB     02 24 40.5
      comp=Z,67nm,1.0s,mb5.2
BMO   Blue Mountains     79.49  45  eP      P       02 24 39.8 +0.8
      comp=Z,23nm,0.8s,mb4.8
BMO   Blue Mountains     79.49  45  eP      P       02 24 39.8 +0.8
BMO                                  pmax   pmax
      comp=Z,23nm,0.8s,mb4.9
RDF   Al-Radifah         79.64 297  eP      P       02 24 40.2 +0.1
RDF                                  AMb    AMB     02 24 41.4
      comp=Z,82nm,0.7s,mb5.5
NAY   Al-Naaiem          79.75 298  eP      P       02 24 40.6 -0.1
NAY                                  AMb    AMB     02 24 41.4
      comp=Z,50nm,0.6s,mb5.3
ANN   Anapa              79.86 315  eP      P       02 24 38.4 -2.5
      comp=Z,36nm,0.6s,mb5.2
ANN                                 i               02 24 50.6
ANN                                 i pP    pP      02 26 13.5 -2.5
ANN                                 ePPP    PPP     02 29 38.4 -5.4
ANN                                 eS      S       02 34 02.5 -5.5
ANN   Anapa              79.86 315  eP      P       02 24 38.4 -2.5
ANN                                 i               02 24 50.6
ANN                                 i *PP   pP      02 26 13.5 -2.5
ANN                                 ePPP    PPP     02 29 38.4 -5.4
ANN                                 eS      S       02 34 02.5 -5.5
ANN                                  pmax   pmax
      comp=Z,36nm,0.6s,mb5.2
NSS   Namsos             80.28 340  eP      P       02 24 41.1 -1.6
CMB   Columbia Colle     80.55  52  eP      P       02 24 45.2 +0.5
      comp=Z,17nm,1.0s,mb4.7
CMB   Columbia Colle     80.55  52  eP      P       02 24 45.2 +0.5
CMB                                  pmax   pmax
      comp=Z,17nm,1.0s,mb4.7
SUMG  Summit             80.62 360  eP      P       02 24 45.3 +1.0
      comp=Z,5.9nm,0.6s,mb4.5
CHMT  Chamberlain Mo     80.98  42  eP      P       02 24 47.3 +0.5
AKASG Malin Array Be     81.66 323   P      P       02 24 49.8 -0.3
      comp=Z,29nm,0.6s,mb5.2,baz=53,slow=5.3,SNR=211
NVAR  Mina Array Bea     81.83  51   P      P       02 24 52.0 +0.8
      comp=Z,11nm,0.6s,mb4.8,baz=282,slow=7.2,SNR=54
SIM   Simferopol'        81.85 316  i P     P       02 24 53.0 +1.8
      comp=Z,36nm,0.9s,mb5.1
SIM   Simferopol'        81.85 316  i P     P       02 24 53.0 +1.8
SIM                                  pmax   pmax
      comp=Z,36nm,0.9s,mb5.1
HRY   Holter Researc     81.92  41  eP      P       02 24 52.3 +0.8
HLID  Hailey             81.94  45  eP      P       02 24 52.8 +1.1
      comp=Z,13nm,0.8s,mb4.7
DLMT  Dillon             82.16  43  eP      P       02 24 53.5 +0.7
      comp=Z,29nm,1.0s,mb5.0
BOZ   Bozeman (W)        82.59  42  eP      P       02 24 55.7 +0.8
      comp=Z,17nm,0.9s,mb4.8
BOZ   Bozeman (W)        82.59  42  eP      P       02 24 55.7 +0.7
BOZ                                  pmax   pmax
      comp=Z,17nm,0.9s,mb4.8
TPH   Tonopah            82.74  51  eP      P       02 24 56.7 +0.8
      comp=Z,28nm,1.0s,mb5.0
TPH   Tonopah            82.74  51  eP      P       02 24 56.7 +0.8
TPH                                  pmax   pmax
      comp=Z,28nm,1.0s,mb5.0
ELK   Elko               82.79  48  eP      P       02 24 57.0 +0.9
      comp=Z,19nm,1.1s,mb4.7
ELK   Elko               82.79  48  eP      P       02 24 57.0 +0.9
ELK                                  pmax   pmax
      comp=Z,19nm,1.1s
SUW   Suwalki            82.81 328  eP      P       02 24 55.0 -0.9
      comp=Z,102nm,1.1s,mb5.5
SUW   Suwalki            82.81 328  eP      P       02 24 55.0 -0.9
SUW                                  pmax   pmax
      comp=Z,102nm,1.1s,mb5.5
NB2   NORSAR Subarra     83.02 338   P      P       02 24 56.1 -0.7
      comp=Z,29nm,0.8s,mb5.1,baz=48,slow=4.6
NB2   NORSAR Subarra     83.02 338   P      P       02 24 56.1 -0.7
      baz=48,slow=4.6
NOA   NORSAR Array B     83.02 338   P      P       02 24 56.1 -0.7
      comp=Z,22nm,0.7s,mb5.0,baz=46,slow=4.9,SNR=82
MOL   Molde              83.07 340  eP      P       02 25 01.9 +4.9
QLMT  Earthquake Lak     83.14  43  eP      P       02 24 60.0 +2.2
NAO01 NORSAR Array S     83.27 338  eP      P       02 24 57.1 -0.9
      comp=Z,17nm,0.8s,mb4.8
NAO   NORSAR Subarra     83.30 338   P      P       02 24 56.1 -2.1
      comp=Z,29nm,0.8s,mb5.1
NAO   NORSAR Subarra     83.30 338   P      P       02 24 56.1 -2.1
NAO                                  pmax   pmax
      comp=Z,29nm,0.8s,mb5.1
YMR   Madison River      83.51  43  eP      P       02 25 00.9 +1.3
      comp=Z,63nm,1.1s,mb5.3
MZLS  Mizel              83.66 294   P      P       02 25 02.0 +1.1
YFT   Old Faithful       83.70  43  eP      P       02 25 03.7 +3.1
HVU   Hansel Valley      83.88  46  eP      P       02 25 02.7 +1.1
      comp=Z,12nm,0.6s,mb4.8
HVU   Hansel Valley      83.88  46  eP      P       02 25 02.7 +1.2
HVU                                  pmax   pmax
      comp=Z,12nm,0.6s,mb4.8
LKWY  Lake               83.90  43  eP      P       02 25 04.4 +2.8
      comp=Z,9.5nm,0.8s,mb4.6
LKWY  Lake               83.90  43  eP      P       02 25 04.4 +2.8
LKWY                                 pmax   pmax
      comp=Z,13nm,0.8s,mb4.7
IMW   Indian Meadow      83.93  44  eP      P       02 25 03.4 +1.7
      comp=Z,25nm,0.8s,mb5.0
TPNV  Topopah Spring     83.97  52  eP      P       02 25 02.7 +0.6
      comp=Z,7.0nm,0.6s,mb4.6
TPNV  Topopah Spring     83.97  52  eP      P       02 25 02.7 +0.6
TPNV                                 pmax   pmax
      comp=Z,7.0nm,0.6s,mb4.6
MOOW  Moose Ponds        84.13  44  eP      P       02 25 04.1 +1.4
      comp=Z,9.5nm,0.8s,mb4.6
TPAW  Teton Pass         84.14  44  eP      P       02 25 04.1 +1.3
      comp=Z,14nm,0.8s,mb4.8
REDW  Red Top Meadow     84.27  44  eP      P       02 25 04.5 +1.1
      comp=Z,37nm,1.5s,mb4.9
SNOW  Snow King Moun     84.27  44  eP      P       02 25 04.4 +1.0
      comp=Z,17nm,1.2s,mb4.7
LOHW  Long Hollow        84.29  44  eP      P       02 25 04.4 +0.9
      comp=Z,6.4nm,0.7s,mb4.5
DUG   Dugway             84.67  47  eP      P       02 25 06.4 +0.9
      comp=Z,17nm,1.0s,mb4.7
DUG   Dugway             84.67  47  eP      P       02 25 06.4 +0.9
DUG                                  pmax   pmax
      comp=Z,17nm,1.0s,mb4.7
HWUT  Hardware Ranch     84.74  46  eP      P       02 25 06.7 +0.9
      comp=Z,20nm,1.1s,mb4.8
BR131 Keskin Array S     84.81 312  eP      P       02 25 05.3 -0.9
      comp=Z,4.4nm,0.6s,mb4.4
BRTR  Keskin Array B     84.81 312   P      P       02 25 05.9 -0.2
      comp=Z,5.2nm,0.6s,mb4.4,baz=80,slow=3.5,SNR=39
TCUT  Toone Canyon       85.10  46  eP      P       02 25 08.6 +1.0
LAO   LASA Array         85.18  39  eP      P       02 25 08.6 +0.8
      comp=Z,26nm,0.9s,mb5.0
DGMT  Dagmar             85.26  37  eP      P       02 25 08.2 +0.1
      comp=Z,8.9nm,0.6s,mb4.7
CFR   Carcaliu           85.31 319  ⇓P      P       02 25 07.6 -0.9
CFR   Carcaliu           85.31 319  ⇓P      P       02 25 07.6 -0.8
PDAR  Pinedale Array     85.39  44   P      P       02 25 09.6 +0.7
      comp=Z,5.7nm,0.9s,mb4.3,baz=251,slow=3.1,SNR=29
PFO   Pinyon Flat Ob     85.45  55  eP      P       02 25 09.3 -0.1
      comp=Z,39nm,1.0s,mb5.1
PFO   Pinyon Flat Ob     85.45  55  eP      P       02 25 09.3 -0.1
PFO                                  pmax   pmax
      comp=Z,40nm,1.0s,mb5.1
DAU   Daniels Canyon     85.57  47  eP      P       02 25 10.8 +1.0
BURAR Bucovina Array     85.57 322  ⇓P      P       02 25 09.6  0.0
BURAR Bucovina Array     85.57 322  ⇓P      P       02 25 09.6 -0.1
KWP   Kalwaria           85.70 325  eP      P       02 25 09.7 -0.5
      comp=Z,34nm,0.9s,mb5.1
KWP   Kalwaria           85.70 325  eP      P       02 25 09.7 -0.5
KWP                                  pmax   pmax
      comp=Z,34nm,0.9s,mb5.1
KAMS  Al Khamasin        85.86 291   P      P       02 25 11.2 -0.4
MSU   Marysvale          85.96  49  eP      P       02 25 13.1 +1.3
KOLS  Kolonicke sedl     86.35 324  i P     P       02 25 13.1 -0.2
MLR   Muntele Rosu       86.41 320  ⇑P      P       02 25 14.5 +0.8
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MLR   Muntele Rosu       86.41 320  ⇑P      P       02 25 14.5 +0.8
STHS  Stebnicka Huta     86.58 325  eP      P       02 25 15.2 +0.8
CRVS  Cervenica-Dubn     86.79 325  i P     P       02 25 15.4 -0.1
VOIR                     86.95 320  ⇓P      P       02 25 16.7 +0.4
VOIR                     86.95 320  ⇓P      P       02 25 16.7 +0.4
DRGR                     87.43 322  ⇓P      P       02 25 17.6 -1.0
DRGR                     87.43 322  ⇓P      P       02 25 17.6 -1.0
KECS  Kecovo             87.56 325  i P     P       02 25 18.9 -0.2
ZIMR                     87.81 319  ⇓P      P       02 25 20.1 -0.3
ZIMR                     87.81 319  ⇓P      P       02 25 20.1 -0.3
OKC   Ostrava-Krasne     87.86 327  eP      P       02 25 19.9 -0.6
DJNS  Zahran al Janu     87.92 289   P      P       02 25 22.6 +1.1
KSP   Ksiaz              88.08 328  eP      P       02 25 21.3 -0.2
PV10  Paradox Valley     88.11  47  eP      P       02 25 23.0 +1.0
MORC  Moravsky Berou     88.19 327  eP      P       02 25 21.8 -0.2
      comp=Z,5.8nm,0.6s,mb4.5
MORC  Moravsky Berou     88.19 327  ⇑P      P       02 25 22.1 +0.1
PSZ   Piszkesteto        88.22 325  eP      P       02 25 22.1 -0.1
      comp=Z,20nm,0.9s,mb4.8
PSZ   Piszkesteto        88.22 325  eP      P       02 25 22.1 -0.1
PSZ                                  pmax   pmax
      comp=Z,20nm,0.9s,mb4.8
ULM   Lac du Bonnet      88.36  32   P      P       02 25 21.8 -1.0
      comp=Z,2.8nm,0.5s,mb4.3,baz=325,slow=4.2,SNR=12
VYHS  Vyhne              88.39 325  i P     P       02 25 23.2 +0.2
DPC   Dobruska-Polom     88.40 328  eP      P       02 25 22.8 -0.2
UPC   Upice              88.44 328  eP      P       02 25 22.9 -0.3
BSEG  Bad Segeberg       88.51 333  eP      P       02 25 23.1 -0.3
PV01  Paradox Valley     88.56  47  eP      P       02 25 24.7 +0.6
BZS   Buzias             88.76 322  ⇓P      P       02 25 24.3 -0.5
BZS   Buzias             88.76 322  ⇓P      P       02 25 24.3 -0.5
VRAC  Vranov             88.97 327  ⇑P      P       02 25 26.1 +0.4
SMCO  Snowmass           89.00  46  eP      P       02 25 26.7 +0.6
      comp=Z,2.9nm,0.3s,mb4.5
SMOL  Smolenice          89.09 326  i P     P       02 25 26.8 +0.5
PVCC  Panska Ves         89.09 329  eP      P       02 25 26.0 -0.3
SRO   Srobarova          89.10 325  eP      P       02 25 26.5 +0.1
BRG   Berggiesshubel     89.14 329  i P     P       02 25 25.7 -0.8
      comp=Z,5.9nm,0.7s,mb4.4
BRG   Berggiesshubel     89.14 329  i P     P       02 25 25.7 -0.8
BRG                                  pmax   pmax
      comp=Z,6.0nm,0.7s,mb4.4
CLL   Collm              89.26 330  ⇑P      P       02 25 26.5 -0.5
      comp=Z,logA/T=1.2,mb4.7
CLL   Collm              89.26 330⇑iP      P       02 25 26.5 -0.5
      comp=Z,20nm,1.4s,mb4.7
CLL   Collm              89.26 330⇑iP      P       02 25 26.5 -0.5
CLL                                  pmax   pmax
      comp=Z,20nm,1.4s,mb4.7
ZST   Bratislava         89.46 326  i P     P       02 25 28.5 +0.5
PRU   Pruhonice          89.48 328  eP      P       02 25 27.7 -0.4
ISCO  Idaho Springs      89.51  45  eP      P       02 25 29.5 +1.0
      comp=Z,5.0nm,0.7s,mb4.5
ISCO  Idaho Springs      89.51  45  eP      P       02 25 29.5 +1.0
ISCO                                 pmax   pmax
      comp=Z,5.0nm,0.7s,mb4.5
TREC  Trest              89.51 327  eP      P       02 25 27.6 -0.6
CLZ   Clausthal          90.02 332  eP      P       02 25 30.4 -0.1
      comp=Z,22nm,1.3s,mb4.8
CLZ   Clausthal          90.02 332  eP      P       02 25 30.4 -0.1
CLZ                                  pmax   pmax
      comp=Z,22nm,1.3s,mb4.8
NKC   Novy Kostel        90.27 330  eP      P       02 25 31.6 -0.1
MOX   Moxa               90.35 330  i P     P       02 25 31.7 -0.3
MOX   Moxa               90.35 330  eP      P       02 25 31.7 -0.3
KHC   Kasperske Hory     90.53 328  eP      P       02 25 32.5 -0.4
GEC2  GERESS Array S     90.67 328  eP      P       02 25 33.4 -0.1
      comp=Z,10.0nm,0.9s,mb4.7
GEC2  GERESS Array S     90.67 328  eP      P       02 25 33.4 -0.1
GEC2                                 pmax   pmax
      comp=Z,10.0nm,0.9s,mb4.7
GERES GERESS Array B     90.67 328   P      P       02 25 32.8 -0.7
      comp=Z,7.0nm,0.7s,mb4.6,baz=34,slow=4.8,SNR=56
SDCO  Great Sand Dun     90.77  46  eP      P       02 25 35.1 +0.8
      comp=Z,11nm,0.9s,mb4.7
WET   Wettzell           90.85 329  eP      P       02 25 34.3  0.0
      comp=Z,10.0nm,1.5s,mb4.4
WET   Wettzell           90.85 329  eP      P       02 25 34.3  0.0
WET                                  pmax   pmax
      comp=Z,10.0nm,1.5s,mb4.4
MOA   Molln              91.09 327⇓iP      P       02 25 35.5 -0.1
      comp=Z,12nm,0.8s,mb4.8
GRA1  Grafenberg Arr     91.21 330  eP      P       02 25 36.3 +0.3
      comp=Z,34nm,1.5s,mb5.0
GRF   Grafenberg Arr     91.21 330  eP      P       02 25 36.3 +0.3
      comp=Z,34nm,1.5s,mb5.0
GRF   Grafenberg Arr     91.21 330  eP      P       02 25 36.3 +0.3
GRF                                  pmax   pmax
      comp=Z,34nm,1.5s,mb5.0
GRF   Grafenberg Arr     91.21 330  eP      P       02 25 36.3 +0.3
GRF                                  pmax   pmax
      comp=Z,34nm,1.5s,mb5.0
PERS  Pernice            91.51 326  i P     P       02 25 37.1 -0.4
GOLS  Golise             91.68 325  i P     P       02 25 38.0 -0.3
ANMO  Albuquerque        91.75  49  eP      P       02 25 39.8 +0.9
      comp=Z,16nm,0.9s,mb5.0
ANMO  Albuquerque        91.75  49  eP      P       02 25 39.8 +0.9
ANMO                                 pmax   pmax
      comp=Z,16nm,0.9s
CRES  Cresnjev           91.89 325  eP      P       02 25 38.9 -0.4
PDKS  Podkum             91.96 325  i P     P       02 25 39.2 -0.5
TNS   Taunus Mts         92.04 331  eP      P       02 25 39.3 -0.6
BNM   Barren Site        92.09  50  eP      P       02 25 41.9 +1.3
FUR   Furstenfeldbru     92.29 329  eP      P       02 25 41.2 +0.1
      comp=Z,42nm,1.0s,mb5.3
FUR   Furstenfeldbru     92.29 329  eP      P       02 25 41.2 +0.1
FUR                                  pmax   pmax
      comp=Z,42nm,1.0s,mb5.3
BFO   Black Forest       93.50 330  eP      P       02 25 45.9 -0.7
      comp=Z,7.0nm,0.7s,mb4.8
BFO   Black Forest       93.50 330  eP      P       02 25 45.9 -0.7
BFO                                  pmax   pmax
      comp=Z,7.0nm,0.7s,mb4.8
CDF   Champ du Feu       93.91 331  eP      P       02 25 47.6 -0.8
      comp=Z,7.2nm,0.7s,mb4.5
CDF   Champ du Feu       93.91 331  eP      P       02 25 47.6 -0.8
CDF                                  pmax   pmax
      comp=Z,4.0nm,0.6s,mb4.6
HINF  Hinteralfeld       94.54 331  eP      P       02 25 50.3 -1.1
HAU   Haudompre          94.62 331  eP      P       02 25 50.7 -1.0
MEZF  Maizieres J'vi     94.79 332  eP      P       02 25 51.8 -0.7
CABF  La Chapelle        95.80 330  eP      P       02 25 56.1 -1.1
LOR   Lormes             96.25 332  eP      P       02 25 57.7 -1.5
LPL   La Plagne          96.35 329  eP      P       02 25 58.8 -0.9
      comp=Z,16nm,0.9s,mb4.9
LPL   La Plagne          96.35 329  eP      P       02 25 58.8 -0.9
LPL                                  pmax   pmax
      comp=Z,8.0nm,0.9s,mb4.8
LPG   La Plagne          96.35 329  eP      P       02 25 59.0 -0.7
      comp=Z,14nm,0.7s,mb4.9
LPG   La Plagne          96.35 329  eP      P       02 25 59.0 -0.7
LPG                                  pmax   pmax
      comp=Z,7.0nm,0.7s,mb4.9
SSF   Saint Saulge       96.56 332  eP      P       02 25 59.4 -1.2
SMF   Signal de Mont     96.75 331  eP      P       02 26 00.4 -1.1
AVF   Avril sur Loir     96.84 332  eP      P       02 26 01.5 -0.4
      comp=Z,4.1nm,0.6s,mb4.4
AVF   Avril sur Loir     96.84 332  eP      P       02 26 01.5 -0.4
AVF                                  pmax   pmax
      comp=Z,2.0nm,0.6s,mb4.4
MBDF  Montbardon         96.93 329  eP      P       02 26 01.8 -0.5
      comp=Z,4.0nm,0.6s,mb4.4
MBDF  Montbardon         96.93 329  eP      P       02 26 01.8 -0.5
MBDF                                 pmax   pmax
      comp=Z,2.0nm,0.6s,mb4.4
TXAR  Lajitas Array      96.93  52   P      P       02 26 03.5 +0.7
      comp=Z,3.8nm,0.7s,mb4.6,baz=304,slow=2.6,SNR=49
LSZ   Lusaka            116.29 266   PKP    PKPdf   02 31 12.4 +1.0
      comp=Z,2.5nm,0.7s,baz=120,slow=0.9,SNR=7.8
MATP  Matopo            117.91 260   PKP    PKPdf   02 31 15.6 +1.2
      comp=Z,1.8nm,0.4s,baz=201,slow=1.2,SNR=14
SNAA  Sanae             130.93 195  e       PKPdf   02 31 45.7 +7.5
SNAA  Sanae             130.93 195  e       PKPdf   02 32 02.9  +25
SNAA  Sanae             130.93 195⇑iPKPdf  PKPdf   02 31 38.4 +0.2
SNAA                                e               02 31 45.7
SNAA                                e               02 32 02.9
DBIC  Dimbokro          132.46 310   PKP    PKPdf   02 31 43.4 +0.8
      comp=Z,4.2nm,0.7s,baz=39,slow=2.5,SNR=11
DBIC  Dimbokro          132.46 310   PKP    PKPdf   02 31 43.4 +0.8
VNA2  Neumayer--Watz    132.48 194  e       PKPdf   02 31 48.0 +6.9
VNA2  Neumayer--Watz    132.48 194  e       PKPdf   02 32 06.7  +26
VNA2  Neumayer--Watz    132.48 194⇑iPKPdf  PKPdf   02 31 42.0 +0.9
VNA2                                e               02 31 48.0
VNA2                                e               02 32 06.7
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VNA3	Neumayer Olymp	132.70	193	e	PKPdf	02 31 48.8	+7.3
VNA3	Neumayer Olymp	132.70	193	e	PKPdf	02 32 06.8	+25
VNA3	Neumayer Olymp	132.70	193	⇑iPKPdf	PKPdf	02 31 42.0	+0.5
VNA3				e		02 31 48.8	
VNA3				e		02 32 06.8	
SDV	Santo Domingo	133.32	44	ePKPdf	PKPdf	02 31 45.3	+1.1
PLCA	Paso Flores	151.13	126	PKPbc	PKPdf	02 32 22.2	+8.0
	comp=Z,13nm,0.8s,baz=226,slow=2.6,SNR=23						
PLCA	Paso Flores	151.13	126	ePKPbc	PKPdf	02 32 22.1	+7.9
SAML	Samuel	151.37	55	ePKPdf	PKPdf	02 32 16.7	+1.4
SAML				ePKPbc	PKPdf	02 32 22.7	+7.4
LPAZ	La Paz	151.52	74	PKPbc	PKPdf	02 32 24.5	+9.1
	comp=Z,13nm,0.7s,baz=319,slow=2.0,SNR=38						
LPAZ	La Paz	151.52	74	ePKPdf	PKPdf	02 32 17.1	+1.6
LPAZ				ePKPbc	PKPdf	02 32 24.3	+8.9
LPAZ				PKPbc	PKPdf	02 32 24.5	+9.1
CPUP	Villa Florida	164.19	91	ePKPdf	PKPdf	02 32 31.5	+1.2

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*IDC **27** 02:20:32.5±2.0, 1.08N×97.15E, mb4.1/7, mb1 4.2/7, mb1mx4.0/16, mbtmp4.1/7, Error ellipse: s-maj=99.7km s-min=18.4km az=56.0*

*BJI **27** 02:20:35.2, 1.10N×97.30E, h30^{km}, mb4.7*

*NEIC **27** 02:20:37.2±0.5, 1.08N×97.26E, h30^{km}, mb4.4/3, Error ellipse: s-maj=16.6km s-min=8.9km az=57.0*

ISC 27 02:20:36.0±0.9**, 1.1N**±0.1×**97.3E**±0.1**, h33^{km}, n17, σ0^{s}61**/15**, mb4.3**/10**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KULM	Kulim	5.34	39	eP	P	02 21 55.5	+0.1
JIRN	Jiri	28.46	339	eP	P	02 26 31.0	+0.7
	15nm,0.8s,mb4.7						
GUN	Gumba	28.80	339	eP	P	02 26 33.4	+0.1
	13nm,0.6s,mb4.8						
KKN	Kakani	28.91	338	eP	P	02 26 34.9	+0.6
GKN	Gorkha	29.35	337	eP	P	02 26 38.0	-0.2
KOLN	Koldanda	29.57	335	eP	P	02 26 40.4	+0.2
	9.0nm,0.6s,mb4.7						
FITZ	Fitzroy Crossi	33.81	126	P	P	02 27 16.3	-1.1
	2.1nm,0.6s,mb4.2,baz=310,slow=8.7,SNR=4.5						
GTA	Gaotai	38.19	3	eP	P	02 27 54.3	0.0
GTA				AP	pP	02 28 04.3	+0.2
GTA				XP	sP	02 28 09.5	+1.2
WRA	Warramunga Arr	41.92	122	P	P	02 28 25.9	+0.4
	2.5nm,0.7s,mb4.0,baz=300,slow=9.1,SNR=8.6						
SONM	Songino Array	47.21	8	P	P	02 29 07.6	0.0
	0.9nm,0.4s,mb4.1,baz=190,slow=9.1,SNR=11						
SONM				PcP	PcP	02 30 38.8	-0.2
	0.6nm,0.5s,baz=188,slow=3.3,SNR=4.1						
MKAR	Makanchi Array	47.35	346	P	P	02 29 08.4	-0.2
	1.8nm,0.5s,mb4.2,baz=160,slow=9.0,SNR=30						
STKA	Stephens Creek	53.23	132	P	P	02 29 54.8	+1.1
	1.7nm,0.6s,mb4.2,baz=287,slow=9.6,SNR=5.2						
STKA	Stephens Creek	53.23	132	P	P	02 29 54.5	+0.7
BVAR	Borovoye Array	56.36	341	P	P	02 30 14.8	-1.4
	0.8nm,0.5s,mb4.0,baz=148,slow=9.7,SNR=6.5						
ARCES	ARCESS Array B	82.65	340	P	P	02 32 57.0	-0.1
	2.3nm,0.8s,mb4.2,baz=56,slow=4.4,SNR=3.8						
TXAR	Lajitas Array	143.70	32	PKP	PKPdf	02 40 09.2	+0.8
	0.2nm,0.7s,baz=49,slow=4.3,SNR=3.5						
CPUP	Villa Florida	144.99	222	ePKPdf	PKPdf	02 40 11.5	+0.8

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*KMA **27** 02:47:03.9, 38.35N×123.99E, ML3.1*

*BJI **27** 02:47:10.5, 38.29N×124.19E, h34^{km}, ML3.3*

ISC 27 02:47:05.1±0.6**, 38.47N**±0.05×**124.16E**±0.06**, h10^{km}, n11, σ0^{s}94**/14**, 1C, North Korea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSBRD	Baengnyeongdo	0.62	143	P	Pb	02 47 16.2	-1.4
DL2	Dalian	2.03	283	P	Pg	02 47 45.5	-0.2
DL2				PG	Px	02 47 47.3	
DL2				SG	Sg	02 48 13.8	+1.1
DL2				Smax			
	comp=N,160nm,0.4s						
DL2				Smax			
	comp=E,110nm,0.5s						
KSMUS	Musan	2.13	105	P	Pn	02 47 42.8	+1.6
KSMUS				P	Sn	02 48 10.8	+2.8
KSSEO	Seoul	2.39	113	P	Pn	02 47 44.5	-0.4
KSSWO	Suwon	2.52	117	P	Pn	02 47 47.0	+0.2
KSCWO	Cheorwon	2.67	97	P	Pn	02 47 49.5	+0.5
KSICN	Icheon	2.83	113	P	Pn	02 47 51.0	-0.3
KSCHC	Chuncheon	2.96	102	P	Pn	02 47 53.3	+0.1
SNY	Shenyang	3.39	353	⇑PG	Pg	02 48 12.0	-0.7
SNY				SG	Sg	02 48 57.5	-0.4
SNY				Smax			
	comp=N,110nm,0.4s						
SNY				Smax			
	comp=E,140nm,0.3s						
KSCHJ	Chungju	3.42	117	P	Pn	02 47 58.9	-0.8
KSKWJ	Gwangju	4.01	145	P	Pn	02 48 07.3	-0.7

CASC 27 04:05:40.6±2.7**, 13.78N**×**90.90W, h1^{km}**±12^{km}**, MD4.0, 7C-6D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	0.58	47	eP	Pg	04 05 53.2	+1.0
IXG				eS	Sg	04 06 03.6	+3.5
TP2	Tecpan 2	1.01	353	⇓eP	Pb	04 05 59.9	-0.6
TP2				eS	Sb	04 06 16.8	+2.7
RBDL	Robledal	1.22	74	⇑eP	Pb	04 06 13.8	+10
RBDL				eS	Sb	04 06 32.0	+12
RTR	El Retiro	1.22	84	⇓eP	Pb	04 06 06.4	+2.3
RTR				eS	Sb	04 06 24.3	+4.1
SBLS	San Blas	1.24	87	⇑eP	Pb	04 06 06.3	+1.9
SBLS				eS	Sb	04 06 24.8	+4.1
SNJE	San Jose	1.26	86	⇓eP	Pb	04 06 06.6	+1.9
SNJE				eS	Sb	04 06 25.2	+4.0
MTO2	Montecristo 2	1.61	67	⇑eP	Pn	04 06 14.0	+3.7
MTO2				eS	Sb	04 06 35.4	+3.8
LFU	La Fuente	1.73	91	⇓eP	Pn	04 06 13.9	+1.9
LFU				eS	Sn	04 06 37.0	+2.0
MRL	Marmol	1.73	42	⇑eP	Pn	04 06 10.9	-1.1
MRL				eS	Sn	04 06 35.9	+0.9
LFRS	El Faro	1.79	95	⇓eP	Pn	04 06 14.0	+1.2
LFRS				eS	Sn	04 06 38.9	+2.5
LBRS	Las Brisas	1.80	91	⇑eP	Pn	04 06 14.4	+1.4
LBRS				eS	Sn	04 06 37.9	+1.1
LCBS	La Ceiba	1.87	93	⇑eP	Pn	04 06 15.0	+1.0
LCBS				eS	Sn	04 06 39.6	+1.1
SNVI	San Vicente	2.00	94	⇑eP	Pn	04 06 17.2	+1.3
SNVI				eS	Sn	04 06 44.2	+2.3
CNCH	Conchagua	3.02	99	⇓eP	Pn	04 06 29.9	-0.5
CNCH				eS	Sn	04 07 08.3	+0.6

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*CASC **27** 04:31:32.6±1.9, 12.86N×90.26W, h17^{km}±9^{km}, MD4.1, ML3.3, mb4.0(NEIC)*

*NEIC **27** 04:31:40.4±1.4, 13.24N×89.74W, h78^{km}±16^{km}, mb4.0/8, Error ellipse: s-maj=25.0km s-min=9.7km az=225.0*

*IDC **27** 04:31:41.1±4.1, 13.26N×89.77W, h82^{km}±63^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.6/18, mbtmp3.9/7, ML3.9/1, MS3.2/2, Ms1 3.2/2, ms1mx2.8/18, Error ellipse: s-maj=76.4km s-min=27.8km az=23.0*

ISC 27 04:31:36.7±1.2**, 13.1N**±0.1×**89.9W**±0.1**, h64^{km}**±8^{km}**, n43, σ0^{s}94**/35**, mb4.0**/10**, 12C-2D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBLS	San Blas	0.80	22	⇑eP	Px	04 32 00.3	
SBLS				eS	Sx	04 32 17.2	
SNJE	San Jose	0.83	22	⇑eP	Px	04 32 00.7	
SNJE				eS	Sx	04 32 16.7	
RTR	El Retiro	0.84	19	⇑eP	Px	04 32 01.1	
RTR				eS	Sx	04 32 18.0	
BOQS	Boqueron	0.90	45	⇓eP	Px	04 32 02.5	
BOQS				eS	Sx	04 32 20.9	
LFRS	El Faro	0.99	58	⇑eP	Px	04 32 03.4	
LFRS				eS	Sx	04 32 22.6	
LFU	La Fuente	1.03	51	eP	Px	04 32 04.4	
LFU				eS	Sx	04 32 23.9	
RBDL	Robledal	1.04	13	⇑eP	Px	04 32 04.1	
RBDL				eS	Sx	04 32 22.9	
LBRS	Las Brisas	1.07	54	⇑eP	Px	04 32 04.9	
LBRS				eS	Sx	04 32 24.8	
LCBS	La Ceiba	1.08	59	⇑eP	Px	04 32 04.6	
LCBS				eS	Sx	04 32 23.7	
SNVI	San Vicente	1.18	64	⇑eP	Px	04 32 06.0	
SNVI				eS	Sx	04 32 26.6	
IXG	Ixpaco	1.18	335	⇑eP	P	04 31 55.8	-1.8
IXG				eS	S	04 32 13.9	+0.7
IXG				eS	S	04 32 14.3	+1.0
MTO2	Montecristo 2	1.41	23	⇑eP	Px	04 32 09.4	
MTO2				eS	Sx	04 32 34.2	
NBG	Las Nubes	1.53	345	⇑eP	P	04 32 03.4	+0.9
VSM	San Miguel	1.65	78	eP	Px	04 32 12.8	
VSM				eS	Sx	04 32 38.0	
BLLM	Bellamira	1.69	78	⇓eP	Px	04 32 13.2	
BLLM				eS	Sx	04 32 40.0	
TP2	Tecpan 2	1.98	328	⇑eP	P	04 32 07.0	-1.6
TP2				eS	S	04 32 32.8	+0.6
CRIN	San Cristobal	2.84	98	eP	P	04 32 21.0	+0.2
LEON	Leon	3.04	103	eP	P	04 32 23.7	+0.1
TEL3	Telica 3	3.06	100	eP	P	04 32 24.6	+0.8
MIRN	Miramar	3.21	101	eP	P	04 32 26.6	+0.6
CNGN	Cerro Negro	3.21	100	eP	P	04 32 26.0	0.0
MOMJ	Momotombo	3.38	101	eP	P	04 32 28.6	+0.2
COPN	Copaltepe	3.39	105	eP	P	04 32 28.0	-0.5
JTS	JuntasAbangare	5.62	119	P	P	04 33 00.4	+0.9
	3.5nm,0.3s,baz=305,slow=19,SNR=16						
JTS				S	S	04 34 05.1	+1.6
	1.9nm,0.3s,baz=242,slow=17,SNR=2.7						
JTS				LR	LR	04 35 23.4	
	comp=Z,97nm,19.5s,baz=53,slow=40						
JTS	JuntasAbangare	5.62	119	eP	P	04 33 00.2	+0.6
JTS				S	S	04 34 05.1	+1.6
JTS				LR	LR	04 35 23.4	
PRS1	Puriscal	6.32	119	eP	P	04 33 08.5	-0.8
URSC	Urasca	6.85	118	eP	P	04 33 15.7	-1.1
BUS	Buena Vista	7.00	120	eP	P	04 33 17.4	-1.5
NATX	Nacogdoches	19.08	348	eP	P	04 35 55.3	-1.4
	8.5nm,0.6s						
TXAR	Lajitas Array	20.58	324	P	P	04 36 13.5	+0.7
	0.7nm,0.5s,baz=145,slow=11,SNR=18						
LTX	Lajitas	20.58	324	P	P	04 36 13.4	+0.7
	2.0nm,0.5s						
MNTX	Cornudas Mount	23.33	325	eP	P	04 36 41.0	+1.0
	3.7nm,1.2s,mb3.7						
WCI	Wyandotte Cave	25.24	7	P	P	04 36 58.3	-0.1
	7.4nm,0.8s,mb4.3						
SAML	Samuel	34.43	128	P	P	04 38 20.3	-0.1
	0.7nm,0.6s,mb3.8						
SNOW	Snow King Moun	35.17	333	eP	P	04 38 27.1	+0.7
	2.8nm,0.6s,mb4.4						
ELK	Elko	35.35	326	eP	P	04 38 29.0	+1.0
	1.2nm,0.7s,mb3.9						
NVAR	Mina Array Bea	35.64	320	P	P	04 38 31.9	+1.5
	2.0nm,0.8s,mb4.1,baz=133,slow=9.6,SNR=8.0						
NVAR	Mina Array Bea	35.64	320	P	P	04 38 31.9	+1.5
ULM	Lac du Bonnet	37.37	354	P	P	04 38 43.6	-1.3
	1.4nm,0.8s,mb3.9,baz=179,slow=12,SNR=3.0						
SCHQ	Schefferville	45.40	19	P	P	04 39 50.2	-0.4
	3.5nm,0.5s,mb4.4,baz=229,slow=9.3,SNR=12						
SCHQ				LR	LR	05 01 36.4	
	comp=Z,52nm,18.3s,baz=348,slow=40						
SCHQ	Schefferville	45.40	19	eP	P	04 39 50.1	-0.5
	3.4nm,0.4s,mb4.5						
SCHQ				LR	LR	05 01 36.4	
YKA	Yellowknife Ar	52.37	346	P	P	04 40 43.3	-1.0
	0.6nm,0.4s,mb3.9,baz=135,slow=7.2,SNR=14						
ILAR	Eielson Array	64.46	337	P	P	04 42 07.6	-0.9
	0.8nm,1.0s,mb3.7,baz=126,slow=4.9,SNR=4.5						

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*NNC **27** 04:42:38.0±5.2, 39.01N×73.61E, h204^{km}±43^{km}, mpv3.4, Error ellipse: s-maj=62.7km s-min=38.4km az=18.0*

ISC 27 04:42:26.2±1.8**, 38.2N**±0.1×**73.9E**±0.2**, h145^{km}**±40^{km}**, n11, σ0^{s}73**/14**, 5C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	4.48	6	⇑P	P	04 43 34.6	+1.1
	4.6nm,0.9s						
AAK				⇑S	S	04 44 23.9	-1.5
	9.2nm,0.9s						
KK31	Karatay Array	5.56	333	P	P	04 43 48.4	+0.5
	4.2nm,0.3s,baz=143,slow=13,SNR=288						
KK31				⇓S	S	04 44 46.6	-4.7
	7.0nm,0.4s,baz=156,slow=25,SNR=12						
MK31	Makanchi Array	10.60	33	⇑P	P	04 44 56.1	+1.1
	1.6nm,0.8s,baz=195,slow=15,SNR=5.4						
KOLN	Koldanda	13.17	139	eP	P	04 45 28.7	+0.1
	5.0nm,0.3s						
GKN	Gorkha	13.54	135	eP	P	04 45 33.1	-0.2
	9.5nm,0.2s						
KKN	Kakani	14.07	134	eP	P	04 45 39.6	-0.4
	5.1nm,0.3s						
DMN	Daman	14.11	135	eP	P	04 45 40.9	+0.4
GUN	Gumba	14.32	132	eP	P	04 45 42.7	-0.5
JIRN	Jiri	14.69	132	eP	P	04 45 47.8	-0.1
	9.0nm,0.3s						
AB31	Akbulak array	14.96	322	⇓P	P	04 45 50.2	-0.9
	0.6nm,0.4s,baz=132,slow=13,SNR=22						
AB31				⇑S	S	04 48 24.9	-8.2
	0.8nm,0.5s						
AKTO	Aktyubinsk	16.68	322	⇑P	P	04 46 12.9	+0.4
	0.4nm,0.6s						

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*TRN **27** 05:45:52.7, 10.70N×62.56W, h34^{km}, MD2.6*

*FUNV **27** 05:45:52.3, 10.72N×62.42W, h86^{km}, MW2.3*

ISC 27 05:45:51.3±0.9**, 10.69N**±0.08×**62.50W**±0.05**, h91^{km}**±9^{km}**, n9, σ0^{s}94**/15**, 2C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.27	98	⇑iP	P	05 46 04.8	+0.1
GUIV				eS	S	05 46 13.7	-1.2
GUNV	Guanoco	0.68	220	⇑iP	P	05 46 09.1	+1.2
GUNV				eS	S	05 46 21.3	+1.0
CRUV	Carupano	0.73	269	i P	P	05 46 08.6	+0.3
CRUV				eS	S	05 46 21.0	-0.1
TRN	Trinidad (W)	1.08	92	⇓iP	P	05 46 12.6	+0.5
TRN				eS	S	05 46 26.3	-1.6
GRW	Mount Saint Ca	1.68	29	eP	P	05 46 19.7	-0.1
GRW				eS	S	05 46 40.6	-0.3
TPR	Prospect	1.76	73	eP	P	05 46 22.4	+1.5
TPR				eS	S	05 46 43.5	+0.8
BIRV	Birongo	3.71	267	eP	P	05 46 48.1	+0.4
CAOV	Caicara del Or	5.04	229	eP	P	05 47 04.8	-1.1
BAUV	El Baul	5.73	253	eP	P	05 47 13.8	-1.6

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*ISK **27** 05:50:33.4, 34.46N×32.80E, h30^{km}, MD3.3*

*NEIC **27** 05:50:35.6, 34.83N×32.68E, h26^{km}, ML3.4(NIC), After NIC.*

*NIC **27** 05:50:35.6±0.1, 34.83N×32.68E, h26^{km}, ML3.4, MW3.0*

*CSEM **27** 05:50:36.0±0.1, 34.81N×32.69E, h20^{km}, Mw3.0, Error ellipse: s-maj=3.4km s-min=1.6km az=6.0*

ISC 27 05:50:36.2±1.4**, 34.73N**±0.09×**32.65E**±0.07**, h24^{km}**±7^{km}**, n15, σ0^{s}88**/21**, 1D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZAC	Souni-Zanaja	0.20	82	P	Pb	05 50 42.2	+0.5
PPCY	Paphos	0.29	302	P	Pb	05 50 43.8	+0.8
AKMC	Akamas	0.39	319	P	Pb	05 50 45.1	+0.5
ALFC	Alevga	0.43	355	P	Pb	05 50 44.2	-0.9
	55nm,0.2s						
ALFC				S	Sb	05 50 51.0	-0.3
CSS	Prodhromos	0.61	67	P	Pb	05 50 47.7	-0.4
	8.5nm,0.3s						
CSS				S	Sb	05 50 56.5	+0.2
CSS	Prodhromos	0.61	67	PG	Pb	05 50 46.9	-1.2
CSS	Prodhromos	0.61	67	P	Pb	05 50 47.7	-0.4
	8.5nm,0.3s						
CSS				S	Sb	05 50 56.5	+0.2
MAMC	Mammari	0.64	47	P	Pb	05 50 48.7	0.0
PHNC	Paralimni	1.17	76	⇓P	Pn	05 50 56.7	-0.6
PHNC				S	Sn	05 51 16.0	+3.4
IKL	Isikli	1.73	29	ePN	Pn	05 51 04.6	-0.7
IKL				eSN	Sn	05 51 27.8	+1.0
IKL	Isikli	1.73	29	ePN	Pn	05 51 02.5	-2.8
IKL				eSN	Sn	05 51 27.9	+1.2
MERS	Mersin	2.62	35	ePN	Pn	05 51 17.4	-0.7
MERS	Mersin	2.62	35	ePN	Pn	05 51 18.2	+0.1
KARA	Karaisali	3.19	37	ePN	Pn	05 51 25.6	-0.6
KARA	Karaisali	3.19	37	ePN	Pn	05 51 27.4	+1.2

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*BJI **27** 06:18:06.9, 10.87N×142.44E, h37^{km}, mB5.0, mb4.9, Ms4.7, Msz4.1*

*MOS **27** 06:18:15.9±1.1, 11.47N×141.83E, h65^{km}, mb4.8/14, Error ellipse: s-maj=13.3km s-min=8.0km az=114.7*

*IDC **27** 06:18:18.1±2.5, 11.48N×141.84E, h62^{km}±23^{km}, mb4.1/10, mb1 4.4/12, mb1mx4.2/18, mbtmp4.5/12, ML5.1/2, MS3.5/11, Ms1 3.5/11, ms1mx3.3/25, Error ellipse: s-maj=16.8km s-min=15.4km az=88.0*

*NEIC **27** 06:18:19.6±1.5, 11.56N×141.85E, h77^{km}±14^{km}, mb4.9/20, Error ellipse: s-maj=11.1km s-min=8.2km az=67.0*

ISC 27 06:18:17.7±1.6**, 11.46N**±0.07×**141.90E**±0.08**, h81^{km}**±16^{km}**, h31^{km}**±8.1^{km}**:pP-P, n80, σ0^{s}98**/75**, mb4.7**/38**, 3C-2D, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.59	54	P	P	06 19 12.6	+0.2
	117nm,0.3s,baz=190,slow=10,SNR=42						
GUMO				S	S	06 19 53.8	0.0
	117nm,0.3s,baz=20,slow=23,SNR=6.0						
GUMO				LR	LR	06 20 39.5	
	comp=Z,419nm,21.8s,baz=247,slow=39						
GUMO	Guam	3.59	54	eP	P	06 19 11.9	-0.5
JOW	Kunigami	19.96	322	P	P	06 22 46.0	+0.2
	8.9nm,0.3s,baz=129,slow=9.2,SNR=22						
JOW				LR	LR	06 28 57.5	
	comp=Z,84nm,19.8s,baz=9.2,slow=32						
TGY	Tagaytay City	20.61	280	P	P	06 22 52.9	+0.3
	96nm,0.3s,baz=136,slow=12,SNR=4.3						
PMG	Port Moresby	21.38	166	P	P	06 23 08.2	+7.9
	20nm,0.7s,mb4.5,baz=344,slow=8.4,SNR=7.4						
PMG				LR	LR	06 29 54.0	
	comp=Z,86nm,21.0s,baz=47,slow=32						
PMG	Port Moresby	21.38	166	P	P	06 23 04.9	+4.5
	43nm,1.3s,mb4.6						
PMG				LR	LR	06 29 54.0	
PMG	Port Moresby	21.38	166	P	P	06 23 04.9	+4.5
PMG				pmax	pmax		
	comp=Z,43nm,1.3s						
JNU	Nakatsue	23.81	337	P	P	06 23 25.5	+1.5
	comp=Z,13nm,0.7s,mb4.4,baz=128,slow=11,SNR=8.6						
JNU				LR	LR	06 32 09.9	
	comp=Z,36nm,18.9s,baz=230,slow=35						
MJAR	Matsushiro Arr	25.19	353	P	P	06 23 36.3	-1.0
	comp=Z,3.1nm,0.5s,mb4.0,baz=173,slow=11,SNR=14						
MJAR				LR	LR	06 33 30.8	
	comp=Z,62nm,18.2s,baz=95,slow=36						
MAJO	Matsushiro	25.19	353	eP	P	06 23 35.8	-1.5
	comp=Z,10nm,0.6s,mb4.4						
MAJO	Matsushiro	25.19	353	eP	P	06 23 35.8	-1.5
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
MAT	Matsushiro	25.19	353	P	P	06 23 36.0	-1.3
MAT	Matsushiro	25.19	353	eP	P	06 23 36.0	-1.3
SSE	Sheshan	27.37	319	P	P	06 24 00.8	+3.4
SSE				XP	sP	06 24 13.0	-13
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,30nm,4.5s						
HNR	Honiara	27.44	138	LR	LR	06 32 36.2	
	comp=Z,90nm,19.7s,baz=193,slow=31						
HNR	Honiara	27.44	138	eP	P	06 24 00.4	+2.1
NJ2	Nanjing	29.51	318	eP	P	06 24 18.5	+1.9
NJ2				AP	pP	06 24 28.0	-7.5
NJ2				XP	sP	06 24 32.0	-13
NJ2				S	S	06 29 21.0	+17
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.7						
NJ2				AMB	AMB		
	comp=Z,170nm,6.0s						
NJ2				LR	LR		
	comp=N,240nm,25.1s						
NJ2				LR	LR		
	comp=E,190nm,20.3s						
NJ2				LR	LR		
	comp=Z,240nm,16.4s						
WHN	Wuhan	31.82	311	⇓P	P	06 24 37.0	+0.1
WRAB	Tennant Creek	32.07	193	eP	P	06 24 37.6	-1.6
WRAB				e		06 24 46.9	
WRA	Warramunga Arr	32.08	193	P	P	06 24 38.2	-1.1
	comp=Z,2.9nm,0.7s,mb4.1,baz=12,slow=9.5,SNR=8.9						
ENH	Enshi	35.41	307	eP	P	06 25 07.3	-0.5
	comp=Z,22nm,0.9s,mb5.0						
KLR	Kul'dur	38.59	349	eP	P	06 25 32.2	-2.0
KMI	Kunming	39.43	296	P	P	06 25 42.3	+0.9
KMI				XP	sP	06 25 55.3	-15
KMI				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
KMI	Kunming	39.43	296	P	P	06 25 42.3	+0.9
	comp=Z,12nm,0.6s,mb4.9						
KMI				sP	sP	06 25 55.2	-16
KMI				LR	LR		
	comp=Z,70nm,31.9s						
KMI	Kunming	39.43	296	P	P	06 25 42.3	+0.9
KMI				*SP	sP	06 25 55.2	-16
KMI				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.9						
KMI				MLR	MLR		
	comp=Z,70nm,31.9s						
CD2	Chengdu	40.22	305	P	P	06 25 48.5	+0.6
CD2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
LZH	Lanzhou	42.18	312	eP	P	06 26 04.5	+0.5
LZH				AP	pP	06 26 10.3	-13
LZH				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
LZH	Lanzhou	42.18	312	eP	P	06 26 04.5	+0.5
	comp=Z,19nm,1.0s,mb4.8						
LZH				pP	pP	06 26 10.2	-14
LZH				sP	sP	06 26 13.9	-19
LZH	Lanzhou	42.18	312	eP	P	06 26 04.5	+0.5
LZH				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.8						
STKA	Stephens Creek	43.09	180	P	P	06 26 11.8	+0.3
	comp=Z,1.8nm,0.9s,mb3.8,baz=340,slow=12,SNR=2.8						
STKA	Stephens Creek	43.09	180	P	P	06 26 11.8	+0.3
GTA	Gaotai	46.49	314	P	P	06 26 39.0	+0.4
GTA				AP	pP	06 26 50.0	-8.6
GTA				XP	sP	06 26 55.5	-12
GTA				PCP	PcP	06 28 13.5	+1.2
GTA				PP	PP	06 28 29.0	+0.3
GTA				S	S	06 33 24.0	+4.2
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.9						
GTA				AMB	AMB		
	comp=Z,30nm,6.1s						
GTA				LR	LR		
	comp=N,150nm,12.9s						
GTA				LR	LR		
	comp=E,180nm,13.3s						
GTA				LR	LR		
	comp=Z,50nm,11.4s						
ULN	Ulaanbaatar	46.55	328	i P	P	06 26 40.6	+1.6
SONM	Songino Array	46.88	328	P	P	06 26 42.3	+0.8
	comp=Z,1.1nm,0.5s,mb3.8,baz=142,slow=6.2,SNR=11						
SONM				PcP	PcP	06 28 14.2	+0.7
	comp=Z,3.5nm,0.7s,baz=154,slow=3.6,SNR=16						
SONM				LR	LR	06 47 10.8	
	comp=Z,50nm,20.4s,baz=339,slow=37						
ZAK	Zakamensk	50.06	329	⇑iP	P	06 27 06.4	+0.3
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
LSA	Lhasa	50.43	299	eP	P	06 27 10.7	+1.4
	comp=Z,3.8nm,0.6s,mb4.5						
LSA	Lhasa	50.43	299	eP	P	06 27 10.7	+1.4
LSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
BOD	Bodaibo	50.92	341	eP	P	06 27 12.4	-0.2
BOD				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
YAK	Yakutsk	51.26	353	P	P	06 27 14.2	-0.9
	comp=Z,54nm,0.8s,mb5.6						
YAK	Yakutsk	51.26	353	⇓eP	P	06 27 15.2	+0.1
YAK				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.6						
JIRN	Jiri	54.47	296	eP	P	06 27 39.6	+0.2
	comp=Z,35nm,0.7s,mb5.5						
GUN	Gumba	54.77	296	eP	P	06 27 41.8	+0.2
	comp=Z,75nm,0.7s,mb5.8						
PKI	Pulchoki	55.16	296	eP	P	06 27 43.9	-0.5
	comp=Z,20nm,0.7s,mb5.2						
PKI	Pulchoki	55.16	296	eP	P	06 27 43.9	-0.5

PKI				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
KKN	Kakani	55.29	296	eP	P	06 27 44.7	-0.6
	comp=Z,34nm,0.8s,mb5.4						
KKN	Kakani	55.29	296	eP	P	06 27 44.7	-0.6
KKN				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.1						
DMN	Daman	55.43	296	eP	P	06 27 46.1	-0.2
	comp=Z,37nm,0.8s,mb5.5						
GKN	Gorkha	55.88	296	eP	P	06 27 49.1	-0.4
WMQ	Urumqi	56.55	315	eP	P	06 27 54.5	+0.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,170nm,4.8s						
WMQ				LR	LR		
	comp=N,60nm,18.7s						
WMQ				LR	LR		
	comp=E,80nm,26.7s						
WMQ				LR	LR		
	comp=Z,90nm,25.2s						
KOLN	Koldanda	56.77	296	eP	P	06 27 55.6	-0.3
	comp=Z,35nm,0.8s,mb5.5						
TIXI	Tiksi	60.67	355	⇑eP	P	06 28 20.9	-1.5
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
MKAR	Makanchi Array	61.04	317	P	P	06 28 25.1	-0.1
	comp=Z,4.2nm,0.9s,mb4.5,baz=98,slow=8.6,SNR=29						
MKAR				LR	LR	06 54 54.7	
	comp=Z,42nm,18.5s,baz=267,slow=36						
HYB	Hyderabad	61.41	284	i P	P	06 28 28.0	0.0
HYB	Hyderabad	61.41	284	eP	P	06 28 28.0	0.0
NVS	Novosibirsk	62.87	326	eP	P	06 28 36.1	-1.3
KURK	Kurchatov	64.36	321	eP	P	06 28 46.5	-0.6
	comp=Z,18nm,0.7s,mb5.0						
KURK	Kurchatov	64.36	321	c iP	P	06 28 46.8	-0.3
AAK	Ala-Archa	65.72	312	eP	P	06 28 54.4	-1.6
	comp=Z,2.6nm,0.8s,mb4.1						
AAK	Ala-Archa	65.72	312	i P	P	06 28 54.7	-1.3
AAK				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.1						
RAR	Rarotonga	65.84	120	LR	LR	06 54 13.7	
	comp=Z,79nm,20.0s,baz=351,slow=33						
CHKZ	Chkalovo	69.77	323	eP	P	06 29 20.4	-0.6
	comp=Z,4.1nm,0.7s,mb4.4						
CHKZ	Chkalovo	69.77	323	eP	P	06 29 20.5	-0.5
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.4						
BRVK	Borovoye	69.88	322	eP	P	06 29 21.9	+0.2
	comp=Z,6.3nm,0.6s,mb4.6						
BRVK	Borovoye	69.88	322	eP	P	06 29 21.9	+0.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
ILAR	Eielson Array	71.72	25	P	P	06 29 32.5	0.0
	comp=Z,5.2nm,0.7s,mb4.5,baz=251,slow=6.0,SNR=85						
THY	Trims Highway	71.94	27	eP	P	06 29 35.4	+1.5
THY				e		06 29 46.1	
YKA	Yellowknife Ar	86.07	27	P	P	06 30 52.6	+2.4
	comp=Z,1.4nm,0.5s,mb4.1,baz=289,slow=5.1,SNR=14						
YKA				LR	LR	07 09 57.9	
	comp=Z,59nm,18.4s,baz=55,slow=36						
KEV	Kevo	87.62	342	ep	P	06 30 58.0	+0.3
	comp=Z,2.8nm,0.6s,mb4.5						
KEV	Kevo	87.62	342	eP	P	06 30 58.0	+0.3
KEV				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
ARCES	ARCESS Array B	88.19	342	P	P	06 31 01.2	+0.8
	comp=Z,2.4nm,0.5s,mb4.5,baz=61,slow=6.3,SNR=21						
JOF	Joensuu	88.98	335	ep	P	06 31 03.5	-0.7
	comp=Z,1.6nm,0.6s,mb4.2						
KAF	Kangasniemi	91.42	335	ep	P	06 31 15.0	-0.7
	comp=Z,0.8nm,0.4s,mb4.2,baz=58,slow=4.4						
KAF	Kangasniemi	91.42	335	eP	P	06 31 15.0	-0.7
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.3						
FINES	FINESS Array B	91.84	334	P	P	06 31 17.5	-0.1
	comp=Z,4.1nm,0.4s,mb5.0,baz=56,slow=5.0,SNR=86						
NOA	NORSAR Array B	97.97	338	LR	LR	07 19 27.6	
	comp=Z,22nm,18.9s,baz=115,slow=38						
DBIC	Dimbokro	142.34	297	PKhKP		06 37 39.9	
	comp=Z,1.9nm,0.5s,baz=30,slow=2.8,SNR=6.6						
CFAA	Coronel Fontan	145.73	130	PKPbc	PKPbc	06 37 51.2	+3.0
	comp=Z,0.4nm,0.7s,baz=241,slow=3.2,SNR=11						
CFAA	Coronel Fontan	145.73	130	PKPbc	PKPbc	06 37 51.2	+3.0
LPAZ	La Paz	150.47	103	PKPbc	PKPdf	06 38 06.1	+11
	comp=Z,2.3nm,0.6s,baz=250,slow=3.3,SNR=11						
LPAZ	La Paz	150.47	103	ePKPbc	PKPdf	06 38 05.6	+10

IDC 27 06:20:24.7±3.3**, 9.12S**×**113.67E, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.7**/12**, mbtmp3.8**/4**, ML3.6**/1**, Error ellipse: s-maj=145.2km s-min=25.5km az=48.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	14.66	129	Pn	P	06 23 53.0	-2.5
	0.2nm,0.3s,baz=318,slow=12,SNR=5.2						
FITZ				Sn	S	06 26 23.3	-16
	0.4nm,0.3s,baz=67,slow=22,SNR=4.5						
WRA	Warramunga Arr	22.69	121	P	P	06 25 28.0	-1.4
	0.4nm,0.6s,baz=296,slow=11,SNR=2.8						
SONM	Songino Array	57.06	354	P	P	06 30 13.2	-1.9
	1.5nm,0.5s,baz=173,slow=8.6,SNR=7.9						
MKAR	Makanchi Array	62.30	336	P	P	06 30 48.4	-2.7
	0.9nm,0.5s,baz=151,slow=7.6,SNR=9.6						

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*CASC **27** 06:32:17.3±2.4, 15.38N×92.63W, h0^{km}±33^{km}, MD4.6, mb3.9(NEIC)*

*NEIC **27** 06:32:17.1±0.6, 14.97N×92.89W, mb3.9/9, MD4.3(MEX), Error ellipse: s-maj=15.9km s-min=7.2km az=224.0*

*MEX **27** 06:32:19.4±1.4, 15.07N×93.07W, h53^{km}±43^{km}, MD4.2*

*IDC **27** 06:32:19.3±0.9, 15.63N×92.04W, h83^{km}±8^{km}, mb3.5/9, mb1 3.7/10, mb1mx3.6/21, mbtmp3.9/10, MS3.4/2, Ms1 3.3/2, ms1mx2.8/25, Error ellipse: s-maj=35.2km s-min=11.9km az=47.0*

ISC 27 06:32:16.8±0.6**, 15.10N**±0.05×**92.92W**±0.05**, h93**^{km}±6^{km}**, h83**^{km}±1.5^{km}**:pP-P, n52,** σ1^{s}**34**/55**, mb4.0**/13**, 3C-1D, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	1.40	33	⇑iP	P	06 32 43.5	+1.6
CCIG				i S	S	06 33 01.5	+1.1
CCIG	Comitan	1.40	33	⇑iP	P	06 32 43.5	+1.6
CCIG				eS	S	06 33 03.0	+2.6
SCX	San Cristobal	1.65	10	i P	P	06 32 45.5	+0.4
SCX				i S	S	06 33 05.0	-0.9
NBG	Las Nubes	2.54	101	eP	P	06 32 57.8	+0.7
IXG	Ixpaco	2.56	111	⇓eP	P	06 32 57.6	+0.3
IXG				eS	S	06 33 30.9	+3.4
CMIG	Matias Romero	2.74	317	i P	P	06 33 00.3	+0.5
CMIG				i S	S	06 33 29.3	-2.8
CMIG	Matias Romero	2.74	317	i P	P	06 33 00.4	+0.5
CMIG				i S	S	06 33 29.3	-2.8
MRL	Marmol	3.12	90	⇑eP	P	06 33 05.0	-0.1
MRL				eS	S	06 33 40.6	-0.8
HUIG	Huatulco	3.15	283	i P	P	06 33 03.9	-1.6
HUIG				eS	S	06 33 36.6	-5.5
TUIG	Tuzandepetl	3.25	334	i P	P	06 33 06.4	-0.6
TUIG				i S	S	06 33 42.7	-2.1
RBDL	Robledal	3.28	107	eP	Px	06 33 17.8	
RBDL				eS	Sx	06 33 56.7	
SNJE	San Jose	3.44	110	eP	Px	06 33 17.2	
SNJE				eS	Sx	06 34 00.2	
MTO2	Montecristo 2	3.51	101	eP	Px	06 33 17.6	
MTO2				eS	Sx	06 33 57.9	
LBRS	Las Brisas	3.99	109	eP	Px	06 33 24.8	
LBRS				eS	Sx	06 34 11.1	
LFRS	El Faro	4.02	111	eP	Px	06 33 25.3	
LFRS				eS	Sx	06 34 13.8	
LCBS	La Ceiba	4.08	110	eP	Px	06 33 25.0	
LCBS				eS	Sx	06 34 13.0	
VHO	Vista Hermosa	4.16	299	i P	P	06 33 36.7	+17
VHO				i S	S	06 34 15.9	+8.8
SCIG		4.19	23	i P	P	06 33 19.2	-0.6
SCIG				i S	S	06 34 07.5	-0.4
CRIN	San Cristobal	6.18	112	eP	P	06 33 49.5	+2.4
TEL3	Telica 3	6.41	112	eP	P	06 33 50.7	+0.4
LEON	Leon	6.43	114	eP	P	06 33 51.5	+0.8
MIRN	Miramar	6.58	113	eP	P	06 33 52.2	-0.5
PPM	Popocatepetl	6.73	307	eP	P	06 33 54.8	0.0
COPN	Copaltepe	6.80	114	eP	P	06 33 56.4	+0.7
JTS	JuntasAbangare	9.12	121	P	P	06 34 25.8	-1.5
	2.2nm,0.3s,baz=324,slow=16,SNR=13						
SOR	Soroa	12.10	49	eP	P	06 35 05.3	-2.0
LTX	Lajitas	17.29	327	P	P	06 36 18.1	+4.3
	3.3nm,0.8s						
TXAR	Lajitas Array	17.29	327	P	P	06 36 16.9	+3.1
	0.2nm,0.3s,baz=154,slow=12,SNR=21						
MIAR	Mount Ida	19.37	358	eP	P	06 36 36.2	-1.5
	17nm,1.1s						
GDL2	Guadalupe Moun	19.97	330	eP	P	06 36 45.6	+1.6
MNTX	Cornudas Mount	20.07	328	eP	P	06 36 45.8	+0.7
	1.7nm,0.5s						
WMOK	Wichita Mounta	20.25	346	eP	P	06 36 46.5	-0.5
ROSC	El Rosal	20.93	117	P	P	06 36 52.1	-1.9
	0.8nm,0.4s,baz=102,slow=22,SNR=1.9						
AMTX	Amarillo	21.22	340	eP	P	06 36 56.7	-0.1
	4.2nm,0.4s,mb4.1						
SDV	Santo Domingo	22.65	103	P	P	06 37 05.7	-5.3
	3.1nm,0.6s,mb3.8,baz=315,slow=7.1,SNR=4.5						
SDV	Santo Domingo	22.65	103	eP	P	06 37 01.8	-9.2
	3.0nm,0.5s,mb3.9						
ANMO	Albuquerque	23.22	331	P	P	06 37 18.9	+2.6
	1.5nm,0.5s,mb3.6,baz=151,slow=13,SNR=9.2						
ANMO	Albuquerque	23.22	331	eP	P	06 37 18.5	+2.2
	2.4nm,0.9s,mb3.5						
SDCO	Great Sand Dun	25.16	336	eP	P	06 37 36.4	+1.4
	1.0nm,0.8s,mb3.3						
PDAR	Pinedale Array	31.06	336	P	P	06 38 29.5	+1.4
	0.3nm,0.6s,mb3.2,baz=148,slow=12,SNR=2.7						
SADO	Sadowa	31.80	19	LR	LR	06 51 33.7	
	comp=Z,64nm,20.1s,baz=333,slow=37						
SNOW	Snow King Moun	32.12	335	eP	P	06 38 38.6	+1.2
	7.9nm,0.8s,mb4.5						
NVAR	Mina Array Bea	32.26	321	P	P	06 38 42.0	+3.3
	0.4nm,0.5s,mb3.4,baz=131,slow=9.6,SNR=5.2						
NVAR				pP	pP	06 39 00.7	+0.6
	0.7nm,0.7s,baz=139,slow=8.3,SNR=3.4						
HLID	Hailey	33.79	331	eP	P	06 38 53.0	+1.2
SAML	Samuel	37.94	127	eP	P	06 39 24.9	-2.3
	2.5nm,0.6s,mb4.2						
SIV	San Ignacio	44.09	133	P	P	06 40 16.9	-0.8
	1.9nm,0.5s,mb4.0,baz=316,slow=8.7,SNR=19						
SIV				pP	pP	06 40 37.5	-2.4
	2.0nm,0.8s,baz=307,slow=8.2,SNR=4.7						
SIV				PcP	PcP	06 42 02.5	+0.5
	0.6nm,0.6s,baz=342,slow=6.4,SNR=4.1						
SCHQ	Schefferville	44.52	21	LR	LR	07 01 20.7	
	comp=Z,49nm,21.3s,baz=25,slow=40						
YKA	Yellowknife Ar	49.76	347	P	P	06 41 00.1	-1.5
	0.9nm,0.7s,mb3.8,baz=147,slow=7.6,SNR=4.2						
YKA	Yellowknife Ar	49.76	347	P	P	06 41 00.1	-1.5
BDFB	Brasilia	53.86	123	P	P	06 41 31.6	-1.4
	2.8nm,1.0s,mb4.3,baz=304,slow=7.3,SNR=4.7						
ILAR	Eielson Array	61.48	337	P	P	06 42 25.5	-0.3
	1.7nm,0.7s,mb4.2,baz=130,slow=5.3,SNR=34						
ILAR				pP	pP	06 42 46.9	-2.3
	0.7nm,0.8s,baz=132,slow=5.9,SNR=3.8						
PPT	Papeete	64.61	242	P	P	06 42 54.7	+7.6
	34nm,0.7s,mb5.3,baz=293,slow=6.7,SNR=3.6						

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*BJI **27** 06:38:09.3, 33.93N×25.15E, h42^{km}, mB5.0, mb4.8, Ms4.7, Msz4.2*

*CSEM **27** 06:38:11.1, 33.86N×26.08E, h60^{km}, mb4.5*

*HLW **27** 06:38:12.6, 34.42N×25.92E, h33^{km}, Mb4.6*

*ISK **27** 06:38:13.1, 34.22N×25.79E, h59^{km}, ML3.8*

*ATH **27** 06:38:15.5, 34.33N×25.99E, h91^{km}±3^{km}, ML4.5*

*MOS **27** 06:38:16.1±1.1, 34.35N×25.76E, h48^{km}, mb4.6/23, Error ellipse: s-maj=6.3km s-min=3.2km az=112.5*

*NEIC **27** 06:38:16.4±0.5, 34.26N×25.90E, h43^{km}±3^{km}, mb4.4/38, Error ellipse: s-maj=6.3km s-min=2.9km az=187.0*

*IDC **27** 06:38:19.1±2.0, 34.42N×25.87E, h58^{km}±17^{km}, mb4.1/20, mb1 4.2/26, mb1mx4.1/29, mbtmp4.4/26, MS3.2/2, Ms1 3.3/2, ms1mx2.6/28, Error ellipse: s-maj=17.2km s-min=12.5km az=155.0*

*NIC **27** 06:38:21.8±0.3, 34.98N×26.54E, h25^{km}, mb4.5, ML4.0, MW3.5*

ISC 27 06:38:14.2±0.2**, 34.17N**±0.02×**25.98E**±0.02**, h58**^{km}**, n339,** σ1^{s}**28**/350**, mb4.4**/53**, MS3.4**/5**, 11C-11D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	Neapolis	1.13	345	⇑eP	P	06 38 35.6	+1.4
NPS				eS	S	06 38 50.8	+1.8
IDI	Anoyia	1.43	322	P	P	06 38 40.4	+1.9
	29nm,0.3s,baz=141,slow=19,SNR=207						
KARP	Karpathos	1.69	35	⇑iP	P	06 38 42.7	+0.7
GVD	Gavdhos	1.70	294	eP	P	06 38 44.1	+2.0
GVD	Gavdhos	1.70	294	eP	P	06 38 43.6	+1.5
GVD	Gavdhos	1.70	294	eP	P	06 38 43.6	+1.5
VAM	Vamos	1.91	311	⇑iP	P	06 38 46.9	+1.8
SANT	Santorini	2.24	349	eP	P	06 38 49.4	-0.3
SANT	Santorini	2.24	349	eP	P	06 38 49.4	-0.3
ARG	Arkhangelos	2.70	40	eP	P	06 38 56.9	+0.7
SLUM		2.75	194	⇓P	P	06 38 57.8	+0.8
SLUM				S	S	06 39 30.0	+1.0
DAT	Datca	2.87	27	ePN	P	06 38 58.3	-0.4
APE	Apeiranthos	2.92	353	PN	P	06 38 57.8	-1.6
APE				SN	S	06 39 30.4	-2.9
APE	Apeiranthos	2.92	353	eP	P	06 38 59.2	-0.2
APE	Apeiranthos	2.92	353	⇑iP	P	06 38 59.1	-0.3
APE	Apeiranthos	2.92	353	eP	P	06 38 59.2	-0.2
APE				eSn	S	06 39 30.4	-2.9
BODT	Bodrum	3.08	20	ePN	P	06 39 01.6	-0.1
KYTH	Kithira	3.20	312	eP	P	06 39 03.8	+0.5
HMAT	Matruh	3.21	163	⇓P	P	06 39 04.9	+1.5
DALT	Dalyan (Mudla)	3.38	39	ePN	P	06 39 06.6	+0.7
MLSB	Milas	3.45	25	ePN	P	06 39 07.0	+0.2
YER	Yerkesik	3.50	32	ePN	P	06 39 08.7	+1.1
FETY	Fethiye	3.54	45	ePN	P	06 39 08.1	0.0
VLI	Veliai	3.55	317	eP	P	06 39 07.7	-0.6
KSL	Kastellorizon	3.56	55	eP	P	06 39 09.0	+0.7
SMG	Samos	3.60	11	eP	P	06 39 08.6	-0.4
DABA	Dabaa	3.70	148	P	P	06 39 11.1	+0.7
NAIG	Nisos Aigina	4.11	331	eP	P	06 39 16.0	-0.1
ELL	Elmali	4.11	50	ePN	P	06 39 17.5	+1.3
ATH	Athens Observa	4.21	335	eP	P	06 39 17.0	-0.6
DENT	Denizli	4.35	34	ePN	P	06 39 19.0	-0.5
MPAR	Parnis Oros	4.37	336	eP	P	06 39 20.0	+0.2
ITM	Ithomi	4.46	314	⇓iP	P	06 39 20.5	-0.5
HBRG	Burj al ‘Arab	4.85	137	P	P	06 39 26.7	+0.2
SWA1		4.90	183	⇓P	P	06 39 27.8	+0.7
AKS	Akhisar	4.93	17	ePN	P	06 39 28.0	+0.4
SWA2		4.93	185	⇑P	P	06 39 28.4	+0.7
BCK	Bucak	4.98	47	ePN	P	06 39 28.8	+0.4
PRK	Paraskevi	5.07	3	eP	P	06 39 29.2	-0.4
LKR	Lokris	5.08	333	eP	P	06 39 28.9	-0.7
ISP	Isparta	5.19	44	ePN	P	06 39 31.9	+0.7
ISP	Isparta	5.19	44	eP	P	06 39 32.2	+1.0
	22nm,0.6s						
ISP	Isparta	5.19	44	⇑eP	P	06 39 34.4	+3.2
ISP	Isparta	5.19	44	⇑eP	P	06 39 34.4	+3.2
ISP	Isparta	5.19	44	eP	P	06 39 32.2	+1.0
	22nm,0.6s						
AOS	Alonnisos	5.27	342	eP	P	06 39 32.1	-0.2
PPCY	Paphos	5.31	80	P	P	06 39 31.9	-0.9
ALFC	Alevga	5.55	78	P	P	06 39 35.1	-1.0
	15nm,0.2s						
ALFC				S	S	06 40 32.2	-7.2
NEO	Neokhori	5.58	337	⇓iP	P	06 39 36.3	-0.4
XOR	Xorichti	5.65	338	eP	P	06 39 37.1	-0.5
AGG	Agios Georgios	5.66	330	eP	P	06 39 37.9	+0.1
AGG	Agios Georgios	5.66	330	eP	P	06 39 37.8	+0.1
EVR	Evrytania	5.80	326	eP	P	06 39 39.6	-0.1
HNAT	Natroun	6.00	138	P	P	06 39 42.7	+0.2
PAIG	Paliouri	6.03	343	eP	P	06 39 42.2	-0.7
MAMC	Mammari	6.05	78	P	P	06 39 43.1	-0.1
CSS	Prodhromos	6.12	81	P	P	06 39 43.4	-0.7
	3.9nm,0.3s						
CSS				S	S	06 40 47.6	-6.0
FYM	Al Fayyum	6.20	135	P	P	06 39 45.4	+0.1
FYM				S	S	06 40 53.2	-2.5
FYM	Al Fayyum	6.20	135	P	P	06 39 45.3	0.0
FYM				S	S	06 40 53.2	-2.5
AWBH		6.34	156	P	P	06 39 47.6	+0.3
OUR	Ouranopolis	6.36	346	eP	P	06 39 47.3	-0.2
KOT	Kottamia	6.52	129	P	P	06 39 49.3	-0.6
HSAF	As Saff	6.56	132	P	P	06 39 50.2	-0.1
ESKT	Eskisehir	6.62	35	ePN	P	06 39 50.5	-0.6
IKL	Isikli	6.64	70	ePN	P	06 39 51.2	-0.3
HHAG	Hagoal	6.68	127	P	P	06 39 52.1	0.0
KIZT	Kizilcal	6.68	44	ePN	P	06 39 51.3	-0.8
PHNC	Paralimni	6.70	81	P	P	06 39 51.3	-1.0
PHNC				S	S	06 41 02.3	-5.6
ALN	Alexandroupoli	6.72	0	eS	S	06 41 05.4	-3.0
SOH	Sokhos	6.96	343	eP	P	06 39 55.9	-0.1
SOH	Sokhos	6.96	343	eP	P	06 39 55.8	-0.1
IGT	Igoumenitsa	7.01	321	eP	P	06 39 55.7	-0.9
HFRF	Wahat Farafira	7.28	163	P	P	06 40 00.4	+0.1
GRG	Griva	7.35	338	eP	P	06 40 00.4	-0.8
KNT	Kendrikon	7.39	342	eP	P	06 40 00.8	-1.1
SRN	Sarande	7.44	322	ePg	P	06 40 00.4	-2.1
MERS	Mersin	7.47	66	ePN	P	06 40 03.1	+0.1
FNA	Florina	7.55	332	eP	P	06 40 03.6	-0.5
VAY	Valandovo	7.63	340	ePn	P	06 39 59.8	-5.4
VAY	Valandovo	7.63	340	ePn	P	06 39 59.8	-5.4
OFRI	‘Ofer	7.69	99	P	P	06 40 04.2	-1.8
HNTI	Hanita	7.75	95	S	S	06 41 27.5	-6.5
BIA	Bitola	7.77	333	ePn	P	06 40 05.2	-1.9
KZIT	Kziot	7.82	112	P	P	06 40 06.1	-1.7
KZIT				S	S	06 41 28.3	-7.4
RTMM	Retamin	7.98	111	P	P	06 40 09.9	-0.1
HNKL	Nakhl	8.00	120	P	P	06 40 09.0	-1.3
KARA	Karaisali	8.00	65	ePN	P	06 40 09.6	-0.7
OHR	Ohrid	8.05	331	ePn	P	06 40 09.1	-2.0
MASH	Mash‘abbe Sade	8.08	111	P	P	06 40 10.6	-0.8
MMLI	Mount Malkishu	8.09	100	P	P	06 40 09.0	-2.6
HWQ	Hawqa	8.26	86	ePn	P	06 40 12.8	-1.0
BR131	Keskin Array S	8.27	46	eP	P	06 40 14.5	+0.5
	1.5nm,0.4s						
BRTR	Keskin Array B	8.27	46	P	P	06 40 15.0	+1.1
	0.5nm,0.3s,baz=218,slow=14,SNR=14						
MZDA	Masada	8.40	107	P	P	06 40 14.1	-1.7
MKRJ	Makawir	8.54	105	P	P	06 40 16.1	-1.6
PRNI	Paran	8.54	114	P	P	06 40 17.2	-0.5
ZFRI	Zfri	8.58	112	P	P	06 40 16.1	-2.1
FKH	Fakeheh	8.64	87	ePn	P	06 40 18.0	-1.0
KOZT	Kozan	8.65	65	ePN	P	06 40 18.0	-1.3
MBH	Mount Berech	8.76	117	P	P	06 40 20.2	-0.5
LCI	Lecce	8.78	317	P	P	06 40 18.2	-2.8
EIL	Elat	8.85	118	P	P	06 40 20.5	-1.4
AQBJ	Aqaba	8.89	117	P	P	06 40 20.9	-1.6
SOI	Samo	8.92	299	P	P	06 40 21.2	-1.7
GRI	Girifalco	8.98	304	P	P	06 40 21.9	-1.9
	10µm,0.1s						
CEL	Celeste	9.11	300	P	P	06 40 23.8	-1.7
ALWS	Ilw as Safayha	9.13	120	P	P	06 40 25.5	-0.2
MTTG	Motta San Giov	9.16	298	P	P	06 40 24.3	-1.9
HAQS	Haql	9.18	121	P	P	06 40 24.9	-1.5
JMOS	Jabal al Moall	9.24	120	P	P	06 40 26.5	-0.8
SCLL	Scilla	9.24	299	P	P	06 40 25.5	-1.8
AGST	Augusta-Monte	9.27	292	P	P	06 40 24.6	-3.1
PZI	Palazzolo	9.43	291	P	P	06 40 27.6	-2.3
	88nm,0.1s						
PZI	Palazzolo	9.43	291	P	P	06 40 27.6	-2.3
PZI				pmax	pmax		
	comp=Z,88nm,0.1s						
PZI	Palazzolo	9.43	291	P	P	06 40 27.6	-2.3
PZI				pmax	pmax		
	comp=Z,88nm,0.1s						
AKRG	Al Kharijah	9.48	154	P	P	06 40 30.8	+0.1
PE1	Pezze di Greco	9.49	317	ePn	P	06 40 26.5	-4.2
GTR	Jabal at Tayr	9.50	154	P	P	06 40 31.3	+0.4
HHRG	Al Ghardaqah	9.52	135	P	P	06 40 30.2	-1.0
BRT	Bari-Castellan	9.66	316	P	P	06 40 29.6	-3.4
BDAS	Al Bad‘	9.67	124	P	P	06 40 31.4	-1.9
AYUS	‘Aynunah	9.94	124	P	P	06 40 34.8	-2.1
VAE	Valguarnera	9.95	293	P	P	06 40 36.7	-0.3
	comp=Z,5.6nm,0.3s,baz=23,slow=3.4,SNR=8.9						
BAI	Bari	10.00	316	ePn	P	06 40 33.7	-3.9
SLCN	Sala Consilina	10.31	310	P	P	06 40 40.1	-1.9
TIRR	Tirgusor	10.45	10	eP	P	06 40 42.7	-1.0
TIRR	Tirgusor	10.45	10	eP	P	06 40 42.7	-1.1
SGO	Sicignano	10.62	310	P	P	06 40 43.4	-2.7
	comp=Z,116nm,2.1s						
SGO	Sicignano	10.62	310	P	P	06 40 43.4	-2.7
SGO				pmax	pmax		
	comp=Z,116nm,2.1s						
SGO	Sicignano	10.62	310	P	P	06 40 43.4	-2.7
SGO				pmax	pmax		
	comp=Z,116nm,2.1s						
DBAS	Duba	11.05	126	P	P	06 40 50.9	-1.1
MLR	Muntele Rosu	11.31	360	P	P	06 40 59.0	+3.6
	comp=Z,0.1nm,0.3s,baz=137,slow=18,SNR=2.2						
MLR				LR	LR	06 45 31.4	
	comp=Z,190nm,21.1s,baz=176,slow=39						
MLR	Muntele Rosu	11.31	360	P	P	06 40 59.0	+3.6
MLR				LR	LR	06 45 31.4	
FG2	Serracapriola	11.44	315	P	P	06 40 55.1	-2.0
	comp=Z,2µm,2.2s						
SOC	Sochi	14.23	45	eP	P	06 41 36.7	+2.7
SOC				e		06 44 17.9	
SOC				pmax	pmax		
	comp=Z,22nm,0.9s						
SOC				MLR	MLR		
	comp=Z,158nm,19.0s						
SOC	Sochi	14.23	45	eP	P	06 41 36.7	+2.7
SOC				e		06 44 17.9	
SOC				pmax	pmax		
	comp=Z,22nm,0.9s						
SOC				MLR	MLR		
	comp=Z,158nm,19.0s						
PSZ	Piszkesteto	14.47	343	eP	P	06 41 38.5	+1.3
PSZ	Piszkesteto	14.47	343	eP	P	06 41 38.5	+1.3
KECS	Kecovo	14.88	346	eP	P	06 41 47.9	+5.5
KOLS	Kolonicke sedl	15.01	351	eP	P	06 41 48.7	+4.6
STHS	Stebnicka Huta	15.63	348	eP	P	06 41 56.4	+4.3
PGF	Pioggiola	15.71	307	eP	P	06 41 50.5	-2.6
GNI	Garni	16.10	63	i P	P	06 42 02.6	+4.5
GNI	Garni	16.10	63	i P	P	06 42 02.6	+4.5
KIV	Kislovodsk	16.22	48	eP	P	06 42 03.9	+4.4
	comp=Z,25nm,0.9s						
KIV	Kislovodsk	16.22	48	⇓eP	P	06 42 04.6	+5.0
KIV	Kislovodsk	16.22	48	⇓eP	P	06 42 04.6	+5.0
VRAC	Vranov	16.65	338	P	P	06 42 06.1	+1.2
	comp=Z,1.2nm,0.3s,baz=149,slow=10,SNR=3.6						
AKASG	Malin Array Be	16.69	7	P	P	06 42 05.4	-0.1
	comp=Z,5.8nm,0.3s,baz=196,slow=11,SNR=28						
MORC	Moravsky Berou	16.79	341	eP	P	06 42 05.7	-1.0
MORC	Moravsky Berou	16.79	341	eP	P	06 42 05.7	-1.0
TREC	Trest	16.99	336	eP	P	06 42 10.4	+1.2
GEC2	GERESS Array S	17.27	332	eP	P	06 42 14.3	+1.5
GERES	GERESS Array B	17.27	332	P	P	06 42 11.6	-1.1
	comp=Z,1.0nm,0.3s,baz=144,slow=12,SNR=42						
DAVOX	Davos	17.52	321	P	P	06 42 16.4	+0.4
	comp=Z,0.6nm,0.3s,baz=137,slow=18,SNR=8.2						
KHC	Kasperske Hory	17.55	332	eP	P	06 42 17.6	+1.3
DPC	Dobruska-Polom	17.65	339	eP	P	06 42 18.6	+1.1
FUR	Furstenfeldbru	17.79	326	eP	P	06 42 18.1	-1.1
WET	Wettzell	17.84	331	eP	P	06 42 20.9	+1.1
UPC	Upice	17.88	339	eP	P	06 42 20.6	+0.2
PRU	Pruhonice	17.91	335	eP	P	06 42 18.8	-1.9
KSP	Ksiaz	18.10	340	eP	P	06 42 21.6	-1.5
MBDF	Montbardon	18.15	311	eP	P	06 42 22.9	-0.8
	comp=Z,21nm,0.7s						
MBDF	Montbardon	18.15	311	eP	P	06 42 22.9	-0.8
MBDF				pmax	pmax		
	comp=Z,11nm,0.7s						
MBDF	Montbardon	18.15	311	eP	P	06 42 22.9	-0.8
MBDF				pmax	pmax		
	comp=Z,11nm,0.7s						
BNI	Bardonecchia	18.37	312	eP	P	06 42 26.7	+0.4
BNI	Bardonecchia	18.37	312	eP	P	06 42 26.7	+0.3
LPG	La Plagne	18.55	313	eP	P	06 42 28.8	+0.3
	comp=Z,9.1nm,0.6s						
LPG	La Plagne	18.55	313	eP	P	06 42 28.8	+0.3
LPG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LPG	La Plagne	18.55	313	eP	P	06 42 28.8	+0.3
LPG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LPL	La Plagne	18.57	313	eP	P	06 42 29.1	+0.3
	comp=Z,3.5nm,0.3s						
LPL	La Plagne	18.57	313	eP	P	06 42 29.1	+0.3
LPL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
LPL	La Plagne	18.57	313	eP	P	06 42 29.1	+0.3
LPL				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ORIF	Oris-en-Rattie	18.80	311	eP	P	06 42 30.4	-1.1
ORIF				eR			
	comp=Z,104nm,21.0s						
GRA1	Grafenberg Arr	18.95	329	eP	P	06 42 33.1	0.0
	comp=Z,44nm,1.6s						

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GRF   Grafenberg Arr     18.95 329 eP     P       06 42 33.1  0.0
GRF                                 pmax  pmax
      comp=Z,44nm,1.6s
GRF   Grafenberg Arr     18.95 329 eP     P       06 42 33.1  0.0
GRF                                 pmax  pmax
      comp=Z,44nm,1.6s
GRF   Grafenberg Arr     18.95 329 eP     P       06 42 33.1  0.0
GRF                                 pmax  pmax
      comp=Z,44nm,1.6s
GRF   Grafenberg Arr     18.95 329 eP     P       06 42 33.1  0.0
GRF                                 pmax  pmax
      comp=Z,44nm,1.6s
GRF   Grafenberg Arr     18.95 329 eP     P       06 42 33.1  0.0
      comp=Z,44nm,1.6s
STU   Stuttgart          19.20 324 eP     P       06 42 36.5 +0.6
STU                                 pmax  pmax
      comp=Z,12nm,0.6s
STU   Stuttgart          19.20 324 eP     P       06 42 36.5 +0.6
STU                                 pmax  pmax
      comp=Z,12nm,0.6s
STU   Stuttgart          19.20 324 eP     P       06 42 36.5 +0.6
      comp=Z,12nm,0.6s
BFO   Black Forest       19.33 322 eP     P       06 42 37.4 +0.1
MOX   Moxa               19.52 332 i P    P       06 42 39.0 -0.4
MOX   Moxa               19.52 332 eP     P       06 42 39.0 -0.4
CABF  La Chapelle        19.53 315 eP     P       06 42 38.3 -1.2
      comp=Z,18nm,0.6s
CABF  La Chapelle        19.53 315 eP     P       06 42 38.3 -1.2
CABF                                pmax  pmax
      comp=Z,9.0nm,0.6s
CABF  La Chapelle        19.53 315 eP     P       06 42 38.3 -1.2
CABF                                pmax  pmax
      comp=Z,9.0nm,0.6s
VIVF  Saint-Julien-l     19.54 309 eP     P       06 42 39.1 -0.5
CLL   Collm              19.55 335  P     P       06 42 39.0 -0.7
CLL                                i              06 43 09.3
CLL   Collm              19.55 335 eP     P       06 42 39.0 -0.7
CLL                                i              06 43 09.3
LASF  Ste Croix          19.75 307 eP     P       06 42 41.3 -0.7
      comp=Z,41nm,1.3s
HINF  Hinteralfeld       19.78 319 eP     P       06 42 41.3 -0.9
      comp=Z,5.1nm,0.5s
HINF  Hinteralfeld       19.78 319 eP     P       06 42 41.3 -0.9
HINF                                pmax  pmax
      comp=Z,3.0nm,0.5s
HINF  Hinteralfeld       19.78 319 eP     P       06 42 41.3 -0.9
HINF                                pmax  pmax
      comp=Z,3.0nm,0.5s
CDF   Champ du Feu       19.92 321 eP     P       06 42 43.9 +0.2
      comp=Z,24nm,0.7s
CDF   Champ du Feu       19.92 321 eP     P       06 42 43.9 +0.2
CDF                                 pmax  pmax
      comp=Z,12nm,0.7s
CDF   Champ du Feu       19.92 321 eP     P       06 42 43.9 +0.2
CDF                                 pmax  pmax
      comp=Z,12nm,0.7s
SUW   Suwalki            19.94 355 eP     P       06 42 43.9  0.0
HAU   Haudompre          20.17 319 eP     P       06 42 45.8 -0.5
      comp=Z,6.9nm,0.4s
HAU                                eR
      comp=Z,115nm,21.5s
HAU   Haudompre          20.17 319 eP     P       06 42 45.8 -0.5
HAU                                 pmax  pmax
      comp=Z,3.0nm,0.4s
HAU                                 MLR   MLR
      comp=Z,110nm,21.5s,MS3.2
TNS   Taunus Mts         20.56 327 eP     P       06 42 50.6 +0.3
MTLF  Montolieu          20.61 303 eP     P       06 42 49.9 -1.0
      comp=Z,26nm,1.1s
MTLF  Montolieu          20.61 303 eP     P       06 42 49.9 -1.0
MTLF                                pmax  pmax
      comp=Z,13nm,1.1s
MTLF  Montolieu          20.61 303 eP     P       06 42 49.9 -1.0
MTLF                                pmax  pmax
      comp=Z,13nm,1.1s
SMF   Signal de Mont     20.88 313 eP     P       06 42 53.4 -0.2
      comp=Z,16nm,0.8s
SMF   Signal de Mont     20.88 313 eP     P       06 42 53.4 -0.2
SMF                                 pmax  pmax
      comp=Z,8.0nm,0.8s
SMF   Signal de Mont     20.88 313 eP     P       06 42 53.4 -0.2
SMF                                 pmax  pmax
      comp=Z,8.0nm,0.8s
MEZF  Maizieres J'vi     21.16 319 eP     P       06 42 55.8 -0.7
      comp=Z,42nm,0.7s,mb4.6
LOR   Lormes             21.18 315 eP     P       06 42 56.3 -0.3
      comp=Z,7.0nm,0.5s,mb3.9
LOR   Lormes             21.18 315 eP     P       06 42 56.3 -0.3
LOR                                 pmax  pmax
      comp=Z,4.0nm,0.5s,mb4.0
LOR   Lormes             21.18 315 eP     P       06 42 56.3 -0.3
LOR                                 pmax  pmax
      comp=Z,4.0nm,0.5s,mb4.0
AVF   Avril sur Loir     21.24 313 eP     P       06 42 57.6 +0.3
CAF   Calviac            21.26 307 eP     P       06 42 56.6 -0.9
SSF   Saint Saulge       21.28 314 eP     P       06 42 58.5 +0.8
SSF                                 pmax  pmax
      comp=Z,3.0nm,0.5s,mb3.9
SSF   Saint Saulge       21.28 314 eP     P       06 42 58.5 +0.8
SSF                                 pmax  pmax
      comp=Z,3.0nm,0.5s,mb3.9
SSF   Saint Saulge       21.28 314 eP     P       06 42 58.5 +0.8
      comp=Z,3.1nm,0.5s,mb3.9
BGF   Bois d'Agland      21.44 312 eP     P       06 42 58.9 -0.4
      comp=Z,37nm,0.7s,mb4.5
BGF   Bois d'Agland      21.44 312 eP     P       06 42 58.9 -0.4
BGF                                 pmax  pmax
      comp=Z,19nm,0.7s,mb4.5
BGF   Bois d'Agland      21.44 312 eP     P       06 42 58.9 -0.4
BGF                                 pmax  pmax
      comp=Z,19nm,0.7s,mb4.5
TCF   Toulx Ste Croi     21.72 311 eP     P       06 43 02.7 +0.7
RJF   Les Rejaudoux      21.77 308 eP     P       06 43 03.1 +0.6
      comp=Z,12nm,0.5s,mb4.3
RJF                                eR
      comp=Z,84nm,20.5s
RJF   Les Rejaudoux      21.77 308 eP     P       06 43 03.1 +0.6
RJF                                 pmax  pmax
      comp=Z,6.0nm,0.5s,mb4.3
RJF                                 MLR   MLR
      comp=Z,80nm,20.5s,MS3.1
RJF   Les Rejaudoux      21.77 308 eP     P       06 43 03.1 +0.6
RJF                                 pmax  pmax
      comp=Z,6.0nm,0.5s,mb4.3
RJF                                 MLR   MLR
      comp=Z,80nm,20.5s,MS3.1
LFF   La Frestale        22.15 307 eP     P       06 43 07.0 +0.7
      comp=Z,20nm,0.8s,mb4.3
LFF   La Frestale        22.15 307 eP     P       06 43 07.0 +0.7
LFF                                 pmax  pmax
      comp=Z,10.0nm,0.8s,mb4.3
LFF   La Frestale        22.15 307 eP     P       06 43 07.0 +0.7
LFF                                 pmax  pmax
      comp=Z,10.0nm,0.8s,mb4.3
OBN   Obninsk            22.21  16 eP     P       06 43 08.4 +1.6
      comp=Z,21nm,0.5s,mb4.8
OBN   Obninsk            22.21  16 eP     P       06 43 08.6 +1.8
OBN                                 pmax  pmax
      comp=Z,16nm,0.8s,mb4.5
OBN   Obninsk            22.21  16 eP     P       06 43 08.6 +1.8
OBN                                 pmax  pmax
      comp=Z,16nm,0.8s,mb4.5
OBN   Obninsk            22.21  16 eP     P       06 43 08.4 +1.6
      comp=Z,21nm,0.5s,mb4.8
BAIF  Baives             22.52 321 eP     P       06 43 10.7 +0.8
      comp=Z,33nm,0.5s,mb4.7
BAIF  Baives             22.52 321 eP     P       06 43 10.7 +0.8
BAIF                                pmax  pmax
      comp=Z,16nm,0.5s,mb4.7
BAIF  Baives             22.52 321 eP     P       06 43 10.7 +0.8
BAIF                                pmax  pmax
      comp=Z,16nm,0.5s,mb4.7
BSEG  Bad Segeberg       22.64 336 eP     P       06 43 10.6 -0.4
MFF   Saint Martin d     23.34 310 eP     P       06 43 19.9 +2.1
      comp=Z,6.3nm,0.6s,mb4.0
MFF   Saint Martin d     23.34 310 eP     P       06 43 19.9 +2.1
MFF                                 pmax  pmax
      comp=Z,3.0nm,0.6s,mb3.9
MFF   Saint Martin d     23.34 310 eP     P       06 43 19.9 +2.1
MFF                                 pmax  pmax
      comp=Z,3.0nm,0.6s,mb3.9
LDF   La Druitiere       24.16 314 eP     P       06 43 27.0 +1.2
      comp=Z,13nm,0.5s,mb4.3
LDF   La Druitiere       24.16 314 eP     P       06 43 27.0 +1.2
LDF                                 pmax  pmax
      comp=Z,7.0nm,0.5s,mb4.3
```

```
LDF   La Druitiere       24.16 314 eP     P       06 43 27.0 +1.2
LDF                                 pmax  pmax
      comp=Z,7.0nm,0.5s,mb4.3
FLN   La Foliniere       24.45 315 eP     P       06 43 29.8 +1.2
      comp=Z,32nm,0.6s,mb4.6
FLN                                eR
      comp=Z,116nm,21.2s
FLN   La Foliniere       24.45 315 eP     P       06 43 29.8 +1.2
FLN                                 pmax  pmax
      comp=Z,16nm,0.6s,mb4.6
FLN                                 MLR   MLR
      comp=Z,120nm,21.3s,MS3.4
FLN   La Foliniere       24.45 315 eP     P       06 43 29.8 +1.2
FLN                                 pmax  pmax
      comp=Z,16nm,0.6s,mb4.6
FLN                                 MLR   MLR
      comp=Z,120nm,21.3s,MS3.4
ESDC  Sonseca Array      24.49 292  P     P       06 43 31.5 +2.3
      comp=Z,4.1nm,0.5s,mb4.1,baz=77,slow=9.1,SNR=27
GRR   Gorron             24.51 314 eP     P       06 43 29.7 +0.5
SGMF  Saint Gilles       25.49 312 eP     P       06 43 39.0 +0.5
MDT   Midelt             25.50 276  P     P       06 43 40.3 +1.4
      comp=Z,2.8nm,0.8s,mb3.9,baz=106,slow=14,SNR=3.5
QUIF  Quistinic          25.74 311 eP     P       06 43 41.6 +0.8
      comp=Z,16nm,0.4s,mb4.6
QUIF  Quistinic          25.74 311 eP     P       06 43 41.6 +0.8
QUIF                                pmax  pmax
      comp=Z,8.0nm,0.4s,mb4.6
QUIF  Quistinic          25.74 311 eP     P       06 43 41.6 +0.8
QUIF                                pmax  pmax
      comp=Z,8.0nm,0.4s,mb4.6
ROSF  Rostrenen          25.96 312 eP     P       06 43 43.4 +0.5
HFS   Hagfors            27.19 347  P     P       06 43 53.9 -0.3
      comp=Z,2.3nm,0.4s,mb4.1,baz=149,slow=10,SNR=35
FINES FINESS Array B     27.29   0  P     P       06 43 54.5 -0.6
      comp=Z,4.0nm,0.3s,mb4.4,baz=164,slow=9.7,SNR=80
FINES FINESS Array B     27.29   0  P     P       06 43 54.5 -0.6
KAF   Kangasniemi        27.96   0 ep     P       06 44 00.7 -0.4
      comp=Z,3.6nm,0.3s,mb4.5
KAF   Kangasniemi        27.96   0 eP     P       06 44 00.7 -0.4
KAF                                 pmax  pmax
      comp=Z,4.0nm,0.3s,mb4.5
KAF   Kangasniemi        27.96   0 eP     P       06 44 00.7 -0.4
KAF                                 pmax  pmax
      comp=Z,4.0nm,0.3s,mb4.5
NAO   NORSAR Subarra     28.42 344  P     P       06 44 05.5 +0.3
NAO                                 pmax  pmax
      comp=Z,2.0nm,0.6s,mb3.9
NAO   NORSAR Subarra     28.42 344  P     P       06 44 05.5 +0.3
NAO                                 pmax  pmax
      comp=Z,2.0nm,0.6s,mb3.9
NAO   NORSAR Subarra     28.42 344  P     P       06 44 05.5 +0.3
      comp=Z,2.1nm,0.6s,mb3.9
AKTK  Aktyubinsk         28.45  45  P     P       06 44 07.2 +1.6
      comp=Z,3.0nm,0.5s,mb4.2
AKTO  Aktyubinsk         28.45  45  P     P       06 44 07.2 +1.6
      comp=Z,2.5nm,0.5s,mb4.1,baz=255,slow=10,SNR=12
AKTO  Aktyubinsk         28.45  45  P     P       06 44 07.2 +1.6
AKTO                                pmax  pmax
      comp=Z,3.0nm,0.5s,mb4.2
AKTO  Aktyubinsk         28.45  45  P     P       06 44 07.2 +1.6
AKTO                                pmax  pmax
      comp=Z,3.0nm,0.5s,mb4.2
NB2   NORSAR Subarra     28.53 345  P     P       06 44 05.5 -0.7
      comp=Z,2.1nm,0.6s,mb4.0,baz=158,slow=10
NOA   NORSAR Array B     28.53 345  P     P       06 44 06.0 -0.1
      comp=Z,1.8nm,0.6s,mb4.0,baz=157,slow=10,SNR=10
NOA                                 LR    LR      06 56 12.6
      comp=Z,32nm,18.1s,MS3.0,baz=165,slow=38
JOF   Joensuu            28.97   5 ep     P       06 44 09.5 -0.6
      comp=Z,1.5nm,0.2s,mb4.4
EKA   Eskdalemuir Ar     29.24 325  P     P       06 44 13.3 +0.8
      comp=Z,2.8nm,0.6s,mb4.2,baz=128,slow=9.9,SNR=8.5
ARU   Arti               31.47  35⇓iP     P       06 44 33.4 +1.1
ARU                                e              06 45 35.1
ARU                                eS     S       06 49 38.9 +4.0
ARU                                eSS    SS      06 51 28.9 +2.9
ARU                                e              06 54 59.3
ARU                                 pmax  pmax
      comp=Z,7.0nm,0.7s,mb4.6
ARU   Arti               31.47  35⇓iP     P       06 44 33.4 +1.1
ARU                                e              06 45 35.1
ARU                                eS     S       06 49 38.9 +4.0
ARU                                eSS    SS      06 51 28.9 +2.9
ARU                                e              06 54 59.3
ARU                                 pmax  pmax
      comp=Z,7.0nm,0.7s,mb4.6
ARU   Arti               31.47  35 i P    P       06 44 33.4 +1.1
      comp=Z,7.0nm,0.7s,mb4.6
ARU   Arti               31.47  35 eScS   ScS     06 54 59.3 +1.8
ARCES ARCESS Array B     35.42 360  P     P       06 45 06.0 -0.3
      comp=Z,4.0nm,0.4s,mb4.7,baz=179,slow=7.8,SNR=114
ARCES ARCESS Array B     35.42 360  P     P       06 45 05.9 -0.4
ARE0  ARCESS Array S     35.42 360 eP     P       06 45 05.8 -0.5
ARE0  ARCESS Array S     35.42 360 eP     P       06 45 05.8 -0.5
KEV   Kevo               35.65   1 ep     P       06 45 08.4 +0.2
      comp=Z,1.0nm,0.2s,mb4.4
KEV   Kevo               35.65   1 eP     P       06 45 08.4 +0.2
KEV                                 pmax  pmax
      comp=Z,1.0nm,0.2s,mb4.4
KEV   Kevo               35.65   1 eP     P       06 45 08.4 +0.2
KEV                                 pmax  pmax
      comp=Z,1.0nm,0.2s,mb4.4
BRVK  Borovoye           36.50  45 eP     P       06 45 17.8 +2.3
BRVK  Borovoye           36.50  45 eP     P       06 45 17.8 +2.3
BVAR  Borovoye Array     36.55  45  P     P       06 45 17.6 +1.6
      comp=Z,2.4nm,0.7s,mb4.1,baz=257,slow=6.3,SNR=14
CHKZ  Chkalovo           36.84  44 eP     P       06 45 20.7 +2.4
      comp=Z,6.9nm,0.6s,mb4.7
CHKZ  Chkalovo           36.84  44 eP     P       06 45 20.7 +2.3
CHKZ                                pmax  pmax
      comp=Z,7.0nm,0.6s,mb4.7
CHKZ  Chkalovo           36.84  44 eP     P       06 45 20.7 +2.3
CHKZ                                pmax  pmax
      comp=Z,7.0nm,0.6s,mb4.7
CHKZ  Chkalovo           36.84  44 eP     P       06 45 20.7 +2.3
      comp=Z,6.9nm,0.6s,mb4.7
AAK   Ala-Archa          38.51  63 eP     P       06 45 35.0 +2.7
      comp=Z,2.2nm,0.6s,mb4.1
AAK   Ala-Archa          38.51  63⇓eP     P       06 45 35.4 +3.0
AAK                                 pmax  pmax
      comp=Z,3.0nm,0.7s,mb4.1
AAK   Ala-Archa          38.51  63⇓eP     P       06 45 35.4 +3.0
AAK                                 pmax  pmax
      comp=Z,3.0nm,0.7s,mb4.1
AAK   Ala-Archa          38.51  63 eP     P       06 45 35.0 +2.6
      comp=Z,2.2nm,0.6s,mb4.1
DBIC  Dimbokro           39.49 233  P     P       06 45 43.4 +2.5
      comp=Z,2.2nm,0.6s,mb4.0,baz=27,slow=12,SNR=5.4
DBIC  Dimbokro           39.49 233  P     P       06 45 43.4 +2.5
LIC   Lamto              39.94 233 eP     P       06 45 47.0 +2.4
      comp=Z,11nm,0.8s,mb4.3
LIC                                eR
      comp=Z,94nm,17.8s
KURK  Kurchatov          41.29  50 eP     P       06 45 58.1 +2.7
      comp=Z,12nm,1.1s,mb4.4
KURK  Kurchatov          41.29  50c iP    P       06 45 58.3 +3.0
KURK  Kurchatov          41.29  50c iP    P       06 45 58.3 +3.0
KURK  Kurchatov          41.29  50 eP     P       06 45 58.1 +2.8
      comp=Z,12nm,1.1s,mb4.4
MKAR  Makanchi Array     43.77  56  P     P       06 46 18.6 +3.0
      comp=Z,7.7nm,0.5s,mb4.7,baz=277,slow=6.7,SNR=95
KOLN  Koldanda           49.27  81 eP     P       06 47 01.0 +1.8
      comp=Z,5.6nm,0.6s,mb4.7
GKN   Gorkha             50.03  80 eP     P       06 47 07.7 +2.7
      comp=Z,5.5nm,0.3s,mb5.1
KKN   Kakani             50.63  80 eP     P       06 47 12.3 +2.6
      comp=Z,5.7nm,0.3s,mb5.0
KKN   Kakani             50.63  80 eP     P       06 47 12.3 +2.6
KKN                                 pmax  pmax
      comp=Z,3.0nm,0.3s,mb4.7
KKN   Kakani             50.63  80 eP     P       06 47 12.3 +2.6
KKN                                 pmax  pmax
      comp=Z,3.0nm,0.3s,mb4.7
GUN   Gumba              51.08  80 eP     P       06 47 15.9 +2.9
      comp=Z,11nm,0.6s,mb5.0
JIRN  Jiri               51.43  80 eP     P       06 47 18.5 +2.8
      comp=Z,4.8nm,0.4s,mb4.8
ZAK   Zakamensk          56.90  48 eP     P       06 47 58.3 +2.9
ZAK                                 pmax  pmax
      comp=Z,3.0nm,0.8s,mb4.4
ZAK   Zakamensk          56.90  48 eP     P       06 47 58.3 +2.9
ZAK                                 pmax  pmax
      comp=Z,3.0nm,0.8s,mb4.4
ZAK   Zakamensk          56.90  48 eP     P       06 47 58.3 +2.9
      comp=Z,3.0nm,0.8s,mb4.4
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GTA   Gaotai             57.84  62 eP     P       06 48 04.5 +2.3
GTA                                 AP    pP      06 48 16.8 -0.9
GTA                                 XP    sP      06 48 22.5 -1.9
GTA                                 PP    PP      06 50 14.5 +2.1
GTA                                 PPP   PPP     06 51 39.3 +4.3
GTA                                 S     S       06 56 01.3 +5.8
GTA                                 PS    PS      06 56 20.0 +2.7
GTA                                 XS            06 56 21.5
GTA                                 SS    SS      06 59 53.3 +5.0
GTA                                 AMB   AMB
      comp=Z,80nm,4.6s
GTA                                 LR    LR
      comp=N,160nm,19.8s,MS4.5
GTA                                 LR    LR
      comp=E,270nm,17.9s,MS4.5
GTA                                 LR    LR
      comp=Z,60nm,13.7s,MS3.9
SONM  Songino Array      59.60  50  P     P       06 48 17.1 +2.9
      comp=Z,3.9nm,0.5s,mb4.7,baz=285,slow=8.0,SNR=47
ULN   Ulaanbaatar        60.01  50 eP     P       06 48 19.6 +2.6
      comp=Z,3.2nm,0.6s,mb4.5
ULN   Ulaanbaatar        60.01  50c iP    P       06 48 19.7 +2.6
ULN   Ulaanbaatar        60.01  50c iP    P       06 48 19.7 +2.6
ULN   Ulaanbaatar        60.01  50 eP     P       06 48 19.6 +2.5
      comp=Z,3.2nm,0.6s,mb4.5
BOD   Bodaibo            60.82  38 eP     P       06 48 23.8 +1.3
BOD                                 pmax  pmax
      comp=Z,6.0nm,0.9s,mb4.7
BOD   Bodaibo            60.82  38 eP     P       06 48 23.8 +1.3
BOD                                 pmax  pmax
      comp=Z,6.0nm,0.9s,mb4.7
BOD   Bodaibo            60.82  38 eP     P       06 48 23.8 +1.3
      comp=Z,6.0nm,0.9s,mb4.7
TIXI  Tiksi              61.86  20 i P    P       06 48 30.4 +1.1
TIXI                                pmax  pmax
      comp=Z,3.0nm,0.9s,mb4.4
TIXI  Tiksi              61.86  20 i P    P       06 48 30.4 +1.1
TIXI                                pmax  pmax
      comp=Z,3.0nm,0.9s,mb4.4
TIXI  Tiksi              61.86  20 i P    P       06 48 30.4 +1.1
      comp=Z,3.0nm,0.9s,mb4.4
BOSA  Boshof             62.45 181  P     P       06 48 37.7 +3.9
      comp=Z,1.9nm,0.5s,mb4.5,baz=351,slow=17,SNR=7.1
SCHQ  Schefferville      64.38 320  P     P       06 48 46.8 +0.8
      comp=Z,2.7nm,0.5s,mb4.5,baz=61,slow=7.9,SNR=12
NJ2   Nanjing            74.94  61 eP     P       06 49 53.8 +2.9
NJ2                                 AMB   AMB
      comp=Z,10.0nm,0.7s,mb4.8
SADO  Sadowa             76.21 315  P     P       06 50 01.2 +3.3
      comp=Z,5.9nm,0.5s,mb4.8,baz=39,slow=4.3,SNR=14
SSE   Sheshan            77.13  61  P     P       06 50 03.5 +0.1
SSE                                 AMB   AMB
      comp=Z,30nm,0.7s,mb5.3
SSE                                 AMB   AMB
      comp=Z,50nm,5.2s
SSE   Sheshan            77.13  61  P     P       06 50 03.5 +0.1
      comp=Z,33nm,0.7s,mb5.4
YKA   Yellowknife Ar     78.60 342  P     P       06 50 13.2 +2.5
      comp=Z,2.4nm,0.5s,mb4.4,baz=30,slow=5.4,SNR=19
YKA   Yellowknife Ar     78.60 342  P     P       06 50 13.2 +2.5
ILAR  Eielson Array      81.23 357  P     P       06 50 27.6 +2.7
      comp=Z,0.4nm,0.6s,mb3.5,baz=341,slow=3.0,SNR=7.2
YSS   Yuzh-Sakhalins     81.30  38 i P    P       06 50 23.3 -2.3
YSS   Yuzh-Sakhalins     81.30  38 i P    P       06 50 23.3 -2.3
DAWY  Dawson             81.41 354 eP     P       06 50 29.0 +3.2
ULM   Lac du Bonnet      81.50 327  P     P       06 50 29.4 +2.8
      comp=Z,1.2nm,0.5s,mb4.1,baz=72,slow=9.6,SNR=3.4
MJAR  Matsushiro Arr     85.48  48  P     P       06 50 50.4 +3.5
      comp=Z,1.6nm,0.7s,mb4.2,baz=289,slow=4.5,SNR=4.5
MJAR  Matsushiro Arr     85.48  48  P     P       06 50 50.4 +3.4
BDFB  Brasilia           85.96 248  P     P       06 50 54.8 +5.1
      comp=Z,3.0nm,0.6s,mb4.7,baz=254,slow=1.9,SNR=6.5
WRA   Warramunga Arr    115.80  97  PKP   PKPdf   06 56 54.8 +4.1
      comp=Z,0.4nm,0.5s,baz=306,slow=1.8,SNR=9.5
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*NEIC **27** 06:42:25.5, 16.99N×100.17W, h2^{km}, MD4.1(MEX), After MEX.*

MEX 27 06:42:25.5±1.6**, 17.00N×100.16W, h3^{km}±20^{km}, MD4.1, Guerrero**

```
Code  Station Name        Δ°  AZ°   Phase ID        Time       Res
                                   Op     ISC     h  m  s     ISC
CAIG  El Cayaco          0.11 294 i P    Pg      06 42 27.4  -0.4
CAIG                              i S    Sg      06 42 28.8  -0.5
ACX   Acapulco           0.27 120 i P    Pg      06 42 31.5  +0.6
ACX                               i S    Sg      06 42 33.0  -1.5
ZIIG  Zihuatanejo        1.38 296 i P    Pb      06 42 48.0  -3.7
ZIIG                              i S    Sb      06 43 05.9  -3.8
PLIG  Platanillo         1.52  24 i P    Pn      06 42 51.9  -1.9
PLIG                              i S    Sb      06 43 10.8  -2.8
YAIG  Yautepec           2.12  29 i P    Pn      06 42 57.9  -4.4
YAIG                              i S    Sn      06 43 23.3  -6.3
PPM   Popocatepetl       2.52  35 eP     Pn      06 43 04.9  -3.1
PPM                               i S    Sn      06 43 37.5  -2.2
MOIG  Morelia            2.83 340 eP     Pn      06 43 12.5   0.0
MOIG                              i S    Sn      06 43 42.8  -4.9
```

CASC 27 06:47:19.6±2.1**, 10.55N×84.66W, h13^{km}±3^{km}, MD3.6, ML3.1, 13C-11D, Costa Rica**

```
Code  Station Name        Δ°  AZ°   Phase ID        Time       Res
                                   Op     ISC     h  m  s     ISC
FORC  Fortuna            0.08 189⇓iP     Pg      06 47 22.7  +0.3
FORC                              i S    Sg      06 47 25.8  +1.6
VACR  Volcan Arenal      0.08 195⇓iP     Pg      06 47 22.7  +0.3
JTS   JuntasAbangare     0.39 228⇑iP     Pg      06 47 27.4  -0.4
POA2  Poas 2             0.55 133⇑eP     Pb      06 47 30.4  -0.1
VPS2  Volcan Poas 2      0.55 131⇓eP     Pb      06 47 30.2  -0.4
CGA2  Cerro Gallo 2      0.56 161⇓eP     Pb      06 47 30.3  -0.5
CGA2                              eS     Sb      06 47 37.5  -1.1
EPA   Esparza            0.56 174⇑iP     Pb      06 47 30.5  -0.3
LIM1  Limonal            0.61 284 i P    Pb      06 47 31.1  -0.5
PRS1  Puriscal           0.66 149⇓iP     Pb      06 47 33.1  +0.7
RIN3  Volcan Rincon      0.75 289⇓eP     Pb      06 47 33.5  -0.6
SJS   Escuela Geolog     0.85 136 eP     Pb      06 47 36.0  +0.2
IRZ2  Volcan Irazu 2     0.94 128⇑eP     Pb      06 47 36.8  -0.6
OCM   Ochomogo           0.95 134⇑eP     Pb      06 47 35.7  -1.7
OCM                              ⇓eP             06 47 37.0
CAO   Cobano             0.95 208⇑eP     Pb      06 47 37.2  -0.3
ICR   Volcan Irazu       0.99 125⇓eP     Pb      06 47 37.8  -0.4
ICR                               eS     Sb      06 47 51.6  +0.6
PICA  Picada             1.00 121⇑eP     Pb      06 47 37.8  -0.6
LCR2  La Lucha 2         1.03 141 eP     Pb      06 47 37.7  -1.2
LCR2                              eS     Sb      06 47 54.0  +1.9
VCR   Vista de Mar       1.05 246 eP     Pb      06 47 38.2  -1.0
URSC  Urasca             1.12 129 eP     Pb      06 47 40.0  -0.4
MADN  Villa Maderas      1.21 315⇑eP     Pb      06 47 41.1  -0.8
BUS   Buena Vista        1.33 138 eP     Pb      06 47 43.1  -0.9
BUS                               eS     Sb      06 48 02.1  +1.4
SSNN  San Juan del S     1.38 302⇑eP     Pn      06 47 43.9  -0.9
SSNN                              eS     Sb      06 48 03.0  +0.7
CONN  Concepcion         1.39 317⇓eP     Pn      06 47 43.4  -1.4
APON  Apoyo              1.94 315⇑eP     Pn      06 47 52.4  -0.2
TICN  Ticuantepe         2.13 314⇓eP     Pn      06 47 55.3  -0.2
MGAN  Managua            2.22 316⇓eP     Pn      06 47 56.5  -0.3
MGAN                              eS     Sn      06 48 29.0  +4.7
MGAN                              i              06 48 47.2
      comp=E,166nm,0.4s
ACR   Cerro Adams        2.39 142⇑eP     Pn      06 47 59.4  +0.2
ACR                               eS     Sn      06 48 30.1  +1.6
CTCR  Cotoan             2.49 131⇑eP     Pn      06 48 01.1  +0.5
COPN  Copaltepe          2.49 311 eP     Pn      06 47 59.7  -1.0
MIRN  Miramar            2.75 313 eP     Pn      06 48 02.8  -1.6
LEON  Leon               2.87 310 eP     Pn      06 48 04.7  -1.3
TEL3  Telica 3           2.94 313⇑eP     Pn      06 48 06.1  -0.9
```

KRSC 27 06:55:55.6±0.7**, 54.97N×161.91E, h58^{km}±5^{km}, ML3.9, Near east coast of Kamchatka Peninsula**

```
Code  Station Name        Δ°  AZ°   Phase ID        Time       Res
                                   Op     ISC     h  m  s     ISC
MKZ   Mys Kozlova        0.43 194 i P    P       06 56 07.2  +0.5
MKZ                               eS     S       06 56 15.2  +0.3
TUMR  Tumrok             1.06 288 i P    P       06 56 15.2  +0.6
TUMR                              eS     S       06 56 29.0  +0.3
ZLN   Zelenaya           1.22 329 i P    P       06 56 17.7  +0.8
ZLN                               eS     S       06 56 33.8  +1.1
KMNR  Kamenistaya        1.24 310 i P    P       06 56 17.5  +0.4
KMNR                              eS     S       06 56 32.8  -0.2
LGNR  Loginova           1.31 329 i P    P       06 56 19.2  +0.9
LGNR                              i S    S       06 56 36.2  +1.2
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CIRR	**Tsirk**	**1.32**	**331**	*i* P	P	06 56 19.0	+0.6
CIRR				*i* S	S	06 56 36.0	+0.7
KBTR	**Krutoberegovo**	**1.34**	**22**	*e*P	P	06 56 19.3	+0.6
KBTR				*e*S	S	06 56 37.3	+1.5
KPT	**Kopyto**	**1.39**	**317**	*e*P	P	06 56 19.6	+0.4
KPT				*e*S	S	06 56 36.6	-0.1
KRSR	**Krestovskiy**	**1.47**	**329**	*i* P	P	06 56 20.4	+0.1
KRSR				*e*S	S	06 56 38.7	+0.1
KLY	**Klyuchi**	**1.52**	**333**	*i* P	P	06 56 20.6	-0.5
KLY				*e*S	S	06 56 39.1	-0.9
KOZ	**Kozyrevsk**	**1.59**	**314**	*i* P	P	06 56 22.6	+0.6
KOZ				*e*S	S	06 56 42.9	+1.3
KII	**Karymskiy**	**1.71**	**238**	*e*P	P	06 56 24.2	+0.5
SRDR	**Sredinnyy**	**1.83**	**318**	*e*P	P	06 56 25.6	+0.2
ESO	**Esso**	**2.06**	**299**	*e*P	P	06 56 28.2	-0.4
ESO				*i* S	S	06 56 52.4	-0.7
ESO				Smax			
	80nm,0.2s						
SPN	**Mys Shipunski**	**2.18**	**211**	*i* P	P	06 56 30.1	-0.2
SPN				*i* S	S	06 56 54.9	-1.2
BKI	**Bering**	**2.35**	**83**	*e*P	P	06 56 32.4	-0.2
BKI				*e*S	S	06 56 58.0	-2.3
BKI				Smax			
	120nm,0.3s						
NLC	**Nalytchevo**	**2.35**	**221**	*i* P	P	06 56 32.9	+0.2
NLC				*i* S	S	06 57 00.9	+0.5
SMAR	**Somma**	**2.50**	**228**	*e*P	P	06 56 35.4	+0.5
SMAR				*e*S	S	06 57 04.4	+0.1
AVH	**Avacha**	**2.53**	**229**	*e*P	P	06 56 36.1	+0.8
AVH				*e*S	S	06 57 06.1	+1.2
UGLR	**Uglovaya**	**2.53**	**227**	*i* P	P	06 56 36.0	+0.7
UGLR				*e*S	S	06 57 05.8	+0.8
KOK	**Koryaka**	**2.56**	**230**	*e*P	P	06 56 36.5	+0.9
GNL	**Ganaly**	**2.65**	**243**	*e*P	P	06 56 37.6	+0.6
GNL				*e*S	S	06 57 07.4	-0.6
PET	**Petropavlovsk**	**2.74**	**226**	*e*P	P	06 56 38.9	+0.7
PET				*e*S	S	06 57 10.1	-0.1
KRMR	**Karymshinskiy**	**3.10**	**228**	*e*P	P	06 56 44.2	+0.9
KRMR				*e*S	S	06 57 20.1	+0.8
RUS	**Russkaya**	**3.25**	**220**	*e*P	P	06 56 45.0	-0.4
RUS				*e*S	S	06 57 21.8	-1.2
GRL	**Gorelyy**	**3.33**	**225**	*e*P	P	06 56 48.3	+1.8
GRL				*e*S	S	06 57 26.0	+1.0
APC	**Apacha**	**3.48**	**236**	*e*P	P	06 56 50.5	+1.9
PAU	**Pauzhetka**	**4.66**	**223**	P	P	06 57 06.2	+1.0

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*BJI **27** 07:05:52.3, 4.15S×143.80E, h97^{km}, mB4.6, mb5.0*

*NEIC **27** 07:05:54.3±0.4, 4.37S×143.75E, mb4.7/13, Error ellipse: s-maj=13.6km s-min=7.8km az=89.0*

*IDC **27** 07:05:54.0±0.7, 4.38S×144.00E, h107^{km}±5^{km}, mb4.1/7, mb1 4.3/10, mb1mx4.2/14, mbtmp4.5/10, MS3.6/5, Ms1 3.6/5, ms1mx3.2/18, Error ellipse: s-maj=24.3km s-min=12.2km az=74.0*

ISC 27 07:05:51.6±2.1**, 4.43S**±0.07×**143.72E**±0.09**, h94**^{km}±20^{km}**, h104**^{km}±6.2^{km}**:pP-P, n34, σ1^{s}06**/32**, mb4.5**/16**, 1C, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.01**	**146**	P	**P**	**07 07 20.3**	**+0.9**
	15nm,0.3s,baz=12,slow=6.8,SNR=31						
PMG				S	**S**	**07 08 25.0**	**-2.5**
	4.6nm,0.3s,baz=116,slow=24,SNR=4.2						
PMG	**Port Moresby**	**6.01**	**146**	*e*P	**P**	**07 07 19.9**	**+0.4**
	62nm,0.6s						
CTA	**Charters Tower**	**15.76**	**171**	P	**P**	**07 09 31.0**	**+1.6**
	0.3nm,0.3s,baz=352,slow=15,SNR=6.7						
CTA				LR	LR	07 15 40.1	
	comp=Z,100nm,18.6s,baz=5.8,slow=37						
CTAO	**Charters Tower**	**15.76**	**171**	*e*P	**P**	**07 09 32.3**	**+2.8**
	9.3nm,0.8s						
WRAB	**Tennant Creek**	**17.91**	**210**	*e*P	**P**	**07 09 55.8**	**-0.3**
	30nm,0.6s						
WRAB				*e*S	**S**	**07 13 07.9**	**-1.6**
WB2	**Warramunga Arr**	**17.92**	**210⇑**	*i*P	**P**	**07 09 56.2**	**0.0**
WB2				*e*S	**S**	**07 13 07.8**	**-1.9**
WRA	**Warramunga Arr**	**17.93**	**210**	P	**P**	**07 09 56.3**	**0.0**
	2.8nm,0.3s,baz=32,slow=12,SNR=86						
WRA				S	**S**	**07 13 10.8**	**+1.0**
	0.7nm,0.3s,baz=31,slow=23,SNR=5.3						
FITZ	**Fitzroy Crossi**	**22.30**	**231**	*e*P	**P**	**07 10 42.1**	**-0.1**
	53nm,0.6s,mb5.0						
FITZ	**Fitzroy Crossi**	**22.30**	**231**	P	**P**	**07 10 44.6**	**+2.4**
	68nm,0.6s,mb5.2,baz=53,slow=9.2,SNR=170						
FITZ				LR	LR	07 20 04.2	
	comp=Z,194nm,19.9s,baz=75,slow=38						
STKA	**Stephens Creek**	**27.38**	**184**	*e*P	**P**	**07 11 30.5**	**+0.3**
	5.3nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**27.38**	**184**	P	**P**	**07 11 30.6**	**+0.4**
	6.5nm,0.8s,mb4.2,baz=352,slow=8.6,SNR=10						
STKA				LR	LR	07 23 11.3	
	comp=Z,140nm,18.6s,baz=217,slow=38						
FORT	**Forrest**	**30.08**	**208**	*e*P	**P**	**07 11 54.1**	**-0.3**
	24nm,0.5s,mb5.1						
TOO	**Toolangi**	**33.02**	**177**	*e*P	**P**	**07 12 21.8**	**+1.8**
	12nm,0.9s,mb4.7						
KLBR	**Kellerberrin**	**36.39**	**219**	*e*P	**P**	**07 12 49.1**	**+0.3**
	24nm,0.8s,mb5.2						
NWAO	**Narrogin (SRO)**	**37.62**	**218**	LR	LR	07 29 34.6	
	comp=Z,64nm,20.0s,baz=38,slow=38						
RPZ	**Rata Peaks**	**45.97**	**152**	P	**P**	**07 14 08.8**	**+1.8**
	18nm,0.8s,mb4.9,baz=351,slow=3.2,SNR=8.1						
KMI	**Kunming**	**49.47**	**309**	P	**P**	**07 14 34.5**	**0.0**
KMI				AP	pP	07 14 55.3	-2.1
KMI				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
KMI	**Kunming**	**49.47**	**309**	P	**P**	**07 14 34.6**	**+0.1**
	comp=Z,13nm,0.7s,mb5.0						
KMI				pP	pP	07 14 55.3	-2.1
SONM	**Songino Array**	**61.48**	**332**	P	**P**	**07 16 01.1**	**+0.4**
	comp=Z,0.5nm,0.7s,mb3.7,baz=135,slow=4.1,SNR=4.4						
WMQ	**Urumqi**	**69.49**	**320**	*e*P	**P**	**07 16 52.0**	**0.0**
MKAR	**Makanchi Array**	**74.22**	**321**	P	**P**	**07 17 19.9**	**-0.2**
	comp=Z,0.9nm,0.7s,mb3.6,baz=110,slow=6.7,SNR=10.0						
MKAR				pP	pP	07 17 47.7	+3.0
	comp=Z,1.7nm,0.7s,baz=106,slow=8.8,SNR=9.3						
MAW	**Mawson**	**82.44**	**202**	P	**P**	**07 18 05.1**	**+0.5**
	comp=Z,4.5nm,0.7s,mb4.4,baz=87,slow=5.3,SNR=11						
BVAR	**Borovoye Array**	**83.59**	**324**	P	**P**	**07 18 10.8**	**+0.1**
	comp=Z,1.9nm,0.6s,mb4.1,baz=113,slow=7.2,SNR=15						
BVAR				pP	pP	07 18 39.1	+3.4
	comp=Z,4.6nm,0.7s,baz=117,slow=6.6,SNR=9.4						
CHKZ	**Chkalovo**	**83.64**	**325**	*e*P	**P**	**07 18 10.4**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.0						
MCK	**McKinley**	**84.14**	**24**	*e*P	**P**	**07 18 11.9**	**-1.2**
	comp=Z,2.5nm,0.7s,mb4.2						
COLA	**College**	**85.00**	**23**	*e*P	**P**	**07 18 16.1**	**-1.3**
	comp=Z,3.0nm,0.8s,mb4.3						
ILAR	**Eielson Array**	**85.35**	**24**	P	**P**	**07 18 17.7**	**-1.4**
	comp=Z,3.3nm,0.7s,mb4.4,baz=253,slow=4.7,SNR=63						
ILAR				pP	pP	07 18 45.3	+1.0
	comp=Z,4.3nm,1.0s,baz=268,slow=5.0,SNR=9.5						
QSPA	**South Pole Qui**	**85.53**	**180**	*e*P	**P**	**07 18 20.5**	**+0.8**
	comp=Z,11nm,0.6s,mb5.0						
DAWY	**Dawson**	**88.25**	**25**	*e*P	**P**	**07 18 33.6**	**+0.4**
NVAR	**Mina Array Bea**	**98.98**	**52**	LR	LR	07 55 09.2	
	comp=Z,33nm,19.8s,baz=150,slow=30						
LPAZ	**La Paz**	**142.37**	**124**	PKP	PKPdf	07 25 14.3	+0.1
	comp=Z,1.1nm,0.7s,baz=180,slow=4.0,SNR=4.7						
DBIC	**Dimbokro**	**148.65**	**276**	PKPbc	PKPdf	07 25 30.4	+5.4
	comp=Z,3.0nm,0.7s,baz=127,slow=5.1,SNR=11						
DBIC				pPKPbc		07 25 58.7	
	comp=Z,3.7nm,0.6s,baz=53,slow=2.9,SNR=3.4						
DBIC	**Dimbokro**	**148.65**	**276**	PKPbc	PKPdf	07 25 30.4	+5.4
DBIC				pPKPbc		07 25 58.7	
SAML	**Samuel**	**150.06**	**116**	*e*PKPdf	PKPdf	07 25 28.4	+1.2
SAML				*e*PKPbc	PKPdf	07 25 33.4	+6.2

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*SKO **27** 07:08:46.3, 39.76N×20.99E, M2.0, ML2.3*

*CSEM **27** 07:08:46.3±0.2, 39.79N×20.72E, h23^{km}±3^{km}, ML2.8, Error ellipse: s-maj=8.5km s-min=4.4km az=176.0*

*THE **27** 07:08:47.1, 39.76N×20.76E, h8^{km}, ML2.8*

ISC 27 07:08:46.4±0.7**, 39.65N**±0.05×**20.79E**±0.04**, h23**^{km}±6^{km}**, n11, σ0^{s}99**/21**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEV	**Metsovon**	**0.36**	**69**	*e*Pg	**Pb**	**07 08 54.0**	**-0.2**
MEV				*e*Sg	**Sb**	**07 09 00.1**	**+0.6**
IGT	**Igoumenitsa**	**0.38**	**251**	*e*Pg	**Pb**	**07 08 54.1**	**-0.3**
IGT				*e*Sg	**Sb**	**07 09 01.6**	**+1.8**
SRN	**Sarande**	**0.65**	**291**	*e*Pg	**Pb**	**07 08 57.4**	**-1.6**
SRN				*i* Sg	**Sb**	**07 09 07.0**	**-0.6**
FNA	**Florina**	**1.21**	**21**	*e*Pg	**Pn**	**07 09 07.3**	**-0.9**
FNA				*e*Sg	**Sb**	**07 09 25.1**	**+1.3**
AGG	**Agios Georgios**	**1.35**	**117**	*e*Pg	**Pn**	**07 09 11.7**	**+1.6**
AGG				*e*Sg	**Sn**	**07 09 32.7**	**+5.2**
BIA	**Bitola**	**1.42**	**16**	*i* Pn	**Pn**	**07 09 10.6**	**-0.5**
BIA				*i* Sn	**Sn**	**07 09 29.8**	**+0.5**
OHR	**Ohrid**	**1.46**	**0**	*i* Pn	**Pn**	**07 09 12.4**	**+0.8**
OHR				*i* Sn	**Sn**	**07 09 31.5**	**+1.3**
OHR				*e*Lg		07 09 33.8	
	comp=E,98nm,0.5s						
GRG	**Griva**	**1.79**	**43**	*e*Pb	**Pb**	**07 09 17.1**	**-1.3**
GRG				*e*Sb	**Sb**	**07 09 40.7**	**+0.3**
XOR	**Xorichti**	**1.88**	**98**	*e*Pb	**Pb**	**07 09 18.9**	**-0.9**
VAY	**Valandovo**	**2.15**	**39**	*e*Pn	**Pn**	**07 09 21.2**	**-0.3**
VAY				*i* Sn	**Sn**	**07 09 46.0**	**-1.8**
VAY				*e*Lg		07 09 51.1	
	comp=E,17nm,0.7s						
VAY				*e*Lg		07 09 55.4	
	comp=N,20nm,0.7s						
KNT	**Kendrikon**	**2.20**	**46**	*e*Pn	**Pn**	**07 09 22.2**	**-0.2**
KNT				*e*Sn	**Sn**	**07 09 49.7**	**+0.6**

CASC 27 08:09:48.7±2.6**, 8.85N×83.71W, MD4.1, ML3.4, 9C-10D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.57**	**110⇑**	*i*P	Pg	08 09 60.0	-0.1
ACR				*e*S	Sg	08 10 12.0	+4.4
BUS	**Buena Vista**	**0.70**	**356⇓**	*i*P	Pg	08 10 03.4	+0.7
BUS				*e*S	Sg	08 10 15.9	+3.8
LCR2	**La Lucha 2**	**0.93**	**342⇓**	*e*P	Pg	08 10 06.6	-0.7
CTCR	**Cotoan**	**0.94**	**87⇑**	*i*P	Pg	08 10 07.3	-0.1
URSC	**Urasca**	**0.98**	**356**	*e*P	Pb	08 10 08.1	-0.2
OCM	**Ochomogo**	**1.07**	**347⇓**	*e*P	Pb	08 10 07.9	-1.8
IRZ2	**Volcan Irazu 2**	**1.13**	**350⇓**	*i*P	Pb	08 10 10.7	0.0
ICR	**Volcan Irazu**	**1.13**	**354⇓**	*e*P	Pb	08 10 11.2	+0.4
ICR				*e*S	Sb	08 10 29.2	+3.3
SJS	**Escuela Geolog**	**1.14**	**343⇑**	*e*P	Pb	08 10 10.4	-0.5
SJS				*e*S	Sb	08 10 27.5	+1.5
VTU	**Volcan Turrial**	**1.17**	**358⇑**	*i*P	Pb	08 10 12.0	+0.6
PICA	**Picada**	**1.17**	**356⇓**	*e*P	Pb	08 10 11.6	+0.1
PRS1	**Puriscal**	**1.27**	**332⇓**	*e*P	Pb	08 10 10.6	-2.7
CGA2	**Cerro Gallo 2**	**1.38**	**327⇑**	*e*P	Pb	08 10 13.8	-1.2
CGA2				*e*S	Sb	08 10 35.2	+2.1
POA2	**Poas 2**	**1.42**	**338⇓**	*e*P	Pb	08 10 15.3	-0.5
POA2				*e*S	Sb	08 10 37.4	+3.0
VPS2	**Volcan Poas 2**	**1.43**	**339⇑**	*e*P	Pb	08 10 15.3	-0.6
VPS2				*e*S	Sb	08 10 35.9	+1.3
EPA	**Esparza**	**1.43**	**322⇓**	*e*P	Pb	08 10 15.4	-0.5
FORC	**Fortuna**	**1.87**	**330**	*i* P	Pn	08 10 22.0	-0.3
VACR	**Volcan Arenal**	**1.88**	**329⇑**	*e*P	Pn	08 10 22.4	+0.1
VACR				*e*S	Sn	08 10 48.8	+1.8
JTS	**JuntasAbangare**	**1.89**	**319**	*e*P	Pn	08 10 22.6	+0.1
VCR	**Vista de Mar**	**2.28**	**304**	*e*P	Pn	08 10 28.4	+0.3
LIM1	**Limonal**	**2.39**	**320⇑**	*e*P	Pn	08 10 29.7	0.0
RIN3	**Volcan Rincon**	**2.54**	**320⇓**	*e*P	Pn	08 10 31.7	-0.1
MADN	**Villa Maderas**	**3.11**	**325**	*e*P	Pn	08 10 41.7	+1.7
MADN				*i*		08 10 51.5	
	comp=Z,188nm,0.6s						
SSNN	**San Juan del S**	**3.21**	**319**	*e*P	Pn	08 10 41.6	+0.2
CONN	**Concepcion**	**3.29**	**325**	*e*P	Pn	08 10 43.2	+0.6
COPN	**Copaltepe**	**4.36**	**320⇑**	*e*P	Pn	08 10 54.8	-2.9
MIRN	**Miramar**	**4.63**	**321**	*e*P	Pn	08 11 01.7	+0.1
LEON	**Leon**	**4.73**	**319**	*e*P	Pn	08 11 02.6	-0.3

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*IDC **27** 08:14:54.4±3.2, 34.75S×54.48E, mb4.1/4, mb1 4.2/5, mb1mx3.9/17, mbtmp4.1/5, MS3.5/2, Ms1 3.5/2, ms1mx3.0/31, Error ellipse: s-maj=153.8km s-min=27.1km az=39.0*

*NEIC **27** 08:14:55.9±0.6, 34.85S×54.40E, h10^{km}, mb4.6/2, Error ellipse: s-maj=25.7km s-min=14.9km az=58.0*

ISC 27 08:14:54.3±0.8**, 34.9S**±0.2×**54.5E**±0.2**, h10**^{km}**, n12, σ0^{s}76**/7**, mb4.2**/6**, MS3.5**/2**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.47**	**336**	P	**P**	**08 19 00.3**	**+0.6**
	0.5nm,0.3s,baz=285,slow=16,SNR=3.9						
MAW	**Mawson**	**33.14**	**174**	LR	LR	08 32 45.7	
	comp=Z,120nm,18.5s,MS3.6,baz=255,slow=32						
KMBO	**Kilima Mbogo**	**37.20**	**331**	LR	LR	08 38 11.3	
	comp=Z,44nm,19.4s,MS3.3,baz=82,slow=38						
SNAA	**Sanae**	**47.12**	**201**	*e*P	**P**	**08 23 28.0**	**+0.1**
	2.6nm,0.9s,mb4.2						
FITZ	**Fitzroy Crossi**	**64.67**	**95**	P	**P**	**08 25 33.5**	**-1.3**
	2.2nm,0.7s,mb4.3,baz=252,slow=3.2,SNR=3.0						
WRA	**Warramunga Arr**	**70.81**	**101**	P	**P**	**08 26 14.1**	**+0.8**
	2.3nm,0.9s,mb4.1,baz=236,slow=5.2,SNR=12						
WRAB	**Tennant Creek**	**70.82**	**101**	*e*P	**P**	**08 26 14.2**	**+0.8**
	11nm,1.1s,mb4.7						
BRTR	**Keskin Array B**	**76.67**	**344**	P	**P**	**08 26 46.4**	**-0.7**
	0.7nm,0.6s,mb3.8,baz=173,slow=6.2,SNR=5.1						
AKASG	**Malin Array Be**	**88.06**	**344**	P	**P**	**08 27 45.4**	**-0.4**
	0.8nm,0.6s,mb4.1,baz=159,slow=4.8,SNR=6.8						
ILAR	**Eielson Array**	**147.40**	**17**	PKPbc	PKPdf	08 34 38.0	+0.1
	1.0nm,0.8s,baz=310,slow=3.8,SNR=13						
YKA	**Yellowknife Ar**	**151.50**	**349**	PKPbc	PKPdf	08 34 49.0	+4.6
	0.7nm,0.6s,baz=20,slow=1.7,SNR=5.2						
YKA	**Yellowknife Ar**	**151.50**	**349**	PKPbc	PKPdf	08 34 49.0	+4.6

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*BJI **27** 08:18:42.8, 1.22N×96.55E, h30^{km}, mB4.9, mb4.9, Ms4.5, Msz3.9*

*MOS **27** 08:18:49.7±0.9, 2.00N×96.73E, h33^{km}, mb5.0/17, Error ellipse: s-maj=15.2km s-min=7.9km az=104.7*

*NEIC **27** 08:18:50.9±0.3, 1.93N×96.71E, h30^{km}, mb4.8/21, Error ellipse: s-maj=9.5km s-min=5.1km az=222.0*

*IDC **27** 08:18:52.9±8.7, 1.95N×96.68E, h47^{km}±79^{km}, mb4.3/12, mb1 4.4/12, mb1mx4.2/18, mbtmp4.6/12, MS3.8/6, Ms1 3.8/6, ms1mx3.4/29, Error ellipse: s-maj=38.4km s-min=15.7km az=57.0*

ISC 27 08:18:48.9±0.5**, 1.94N**±0.07×**96.71E**±0.05**, h29**^{km}**, h29**^{km}±1.4^{km}**:pP-P, n91, σ0^{s}84**/91**, mb4.7**/43**, MS4.0**/16**, 7C-3D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	**Ipoh**	**5.04**	**59**	P	**Pn**	**08 20 04.9**	**+0.3**
KULM	**Kulim**	**5.15**	**50⇑**	*i*P	**Pn**	**08 20 06.2**	**+0.1**
KGM	**Kluang**	**6.61**	**89**	P	**Pn**	**08 20 27.8**	**+1.1**
KSM	**Kuching**	**13.60**	**92**	*e*P	**P**	**08 22 02.1**	**-0.5**
KKM	**Kota Kinabalu**	**19.88**	**78**	*e*P	**P**	**08 23 20.5**	**-0.6**
KKM	**Kota Kinabalu**	**19.88**	**78**	P	**P**	**08 23 21.3**	**+0.3**
TSM	**Tawau**	**21.26**	**83**	P	**P**	**08 23 35.4**	**+0.1**
QIZ	**Qiongzhong**	**21.30**	**36**	*e*P	**P**	**08 23 40.5**	**+4.8**
QIZ				LR	LR		
	comp=N,340nm,17.3s						
QIZ				LR	LR		
	comp=Z,260nm,15.3s,MS3.7						
HYB	**Hyderabad**	**23.55**	**312**	*i* P	**P**	**08 24 01.5**	**+3.5**
HYB	**Hyderabad**	**23.55**	**312**	*e*P	**P**	**08 24 01.5**	**+3.5**
KMI	**Kunming**	**23.77**	**14**	P	**P**	**08 24 01.8**	**+1.8**
KMI				S	**S**	**08 28 14.0**	**+3.7**
KMI				LR	LR		
	comp=N,220nm,10.5s						
KMI				LR	LR		
	comp=E,90nm,5.6s						
KMI				LR	LR		
	comp=Z,250nm,13.2s,MS3.9						
KMI	**Kunming**	**23.77**	**14**	P	**P**	**08 24 01.7**	**+1.7**
KMI				S	**S**	**08 28 14.0**	**+3.7**
KMI				LR	LR		
	comp=Z,250nm,13.2s,MS3.9						
JIRN	**Jiri**	**27.48**	**339**	*e*P	**P**	**08 24 36.6**	**+1.7**
	comp=Z,32nm,0.7s,mb5.0						
PKI	**Pulchoki**	**27.69**	**338**	*e*P	**P**	**08 24 37.5**	**+0.8**
	comp=Z,17nm,0.7s,mb4.8						
PKI	**Pulchoki**	**27.69**	**338**	*e*P	**P**	**08 24 37.5**	**+0.8**
PKI				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.5						
GUN	**Gumba**	**27.82**	**339**	*e*P	**P**	**08 24 38.5**	**+0.6**
	comp=Z,52nm,0.7s,mb5.3						
KKN	**Kakani**	**27.93**	**338**	*e*P	**P**	**08 24 40.1**	**+1.2**
	comp=Z,26nm,0.7s,mb4.9						
KKN	**Kakani**	**27.93**	**338**	*e*P	**P**	**08 24 40.1**	**+1.2**
KKN				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.7						
LSA	**Lhasa**	**28.11**	**350**	P	**P**	**08 24 40.5**	**0.0**
LSA	**Lhasa**	**28.11**	**350**	*e*P	**P**	**08 24 40.6**	**+0.2**
	comp=Z,12nm,0.6s,mb4.7						
LSA	**Lhasa**	**28.11**	**350**	*e*P	**P**	**08 24 40.7**	**+0.2**
LSA				pmax	pmax		
	comp=Z,12nm,0.6s,mb4.7						
GKN	**Gorkha**	**28.37**	**337**	*e*P	**P**	**08 24 43.0**	**+0.1**
	comp=Z,28nm,0.7s,mb5.0						
KOLN	**Koldanda**	**28.58**	**335**	*e*P	**P**	**08 24 44.9**	**+0.1**
	comp=Z,36nm,0.8s,mb5.2						
FITZ	**Fitzroy Crossi**	**34.76**	**126**	*e*P	**P**	**08 25 39.1**	**0.0**
	comp=Z,7.3nm,0.6s,mb4.8						
FITZ	**Fitzroy Crossi**	**34.76**	**126**	P	**P**	**08 25 39.1**	**0.0**
	comp=Z,11nm,0.7s,mb4.9,baz=307,slow=4.4,SNR=17						
FITZ	**Fitzroy Crossi**	**34.76**	**126**	*e*P	**P**	**08 25 39.1**	**0.0**
	comp=Z,7.3nm,0.6s,mb4.8						
NJ2	**Nanjing**	**36.50**	**33**	*e*P	**P**	**08 25 53.0**	**-0.7**
NJ2				AP	pP	08 26 03.0	+0.5
NJ2				XP	sP	08 26 06.8	+0.6
NJ2				S	**S**	**08 31 32.0**	**-1.3**
NJ2				XS		08 31 50.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,90nm,4.5s						
NJ2				LR	LR		
	comp=N,280nm,16.2s,MS4.3						
NJ2				LR	LR		
	comp=E,320nm,15.8s,MS4.3						
NJ2				LR	LR		
	comp=Z,170nm,18.0s,MS3.9						
SSE	**Sheshan**	**37.10**	**36**	P	**P**	**08 25 59.8**	**+1.0**
SSE				XP	sP	08 26 12.5	+1.2
SSE				PP	PP	08 27 25.8	0.0
SSE				S	**S**	**08 31 43.8**	**+1.3**
SSE				XS		08 31 59.0	
SSE				SS	SS	08 34 26.5	+13
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.7						
SSE				AMB	AMB		
	comp=Z,40nm,5.3s						
SSE				LR	LR		
	comp=N,140nm,21.3s,MS3.8						
SSE				LR	LR		
	comp=E,100nm,21.3s,MS3.8						
SSE				LR	LR		
	comp=Z,140nm,17.2s,MS3.8						
SSE	**Sheshan**	**37.10**	**36**	P	**P**	**08 25 59.7**	**+0.9**
	comp=Z,13nm,0.8s,mb4.8						
SSE				sP	sP	08 26 12.4	+1.1
SSE				PP	PP	08 27 25.7	-0.1
SSE				S	**S**	**08 31 43.8**	**+1.3**
SSE				sS		08 31 59.1	
SSE				SS	SS	08 34 26.5	+13
SSE				LR	LR		
	comp=Z,140nm,17.2s,MS3.8						
GTA	**Gaotai**	**37.40**	**4**	*e*P	**P**	**08 26 00.8**	**-0.4**
GTA				AP	pP	08 26 09.8	-0.2
GTA				XP	sP	08 26 14.5	+0.8
GTA				PP	PP	08 27 31.3	+2.0
GTA				S	**S**	**08 31 50.0**	**+3.0**
GTA				SS	SS	08 34 26.0	+6.1
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.0						
GTA				AMB	AMB		
	comp=Z,60nm,6.5s						
GTA				LR	LR		
	comp=N,190nm,11.4s,MS4.4						
GTA				LR	LR		
	comp=E,300nm,13.3s,MS4.4						
GTA				LR	LR		
	comp=Z,80nm,11.0s,MS3.8						
JOW	**Kunigami**	**39.10**	**48**	P	**P**	**08 26 15.9**	**+0.3**
	comp=Z,12nm,0.8s,mb4.7,baz=269,slow=19,SNR=3.7						
WMQ	**Urumqi**	**42.46**	**350**	*e*P	**P**	**08 26 43.5**	**+0.4**
WMQ				AP	pP	08 26 53.0	+1.1
WMQ				XP	sP	08 26 57.0	+1.4
WMQ				*e*S	**S**	**08 33 03.0**	**+0.2**
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,210nm,5.1s						
WMQ				LR	LR		
	comp=N,90nm,23.5s,MS3.8						
WMQ				LR	LR		
	comp=E,140nm,24.4s,MS3.8						
WMQ				LR	LR		
	comp=Z,80nm,18.8s						
WRA	**Warramunga Arr**	**42.84**	**122**	P	**P**	**08 26 47.0**	**+0.5**
	comp=Z,15nm,0.6s,mb4.9,baz=301,slow=9.2,SNR=67						
WRA				PcP	PcP	08 28 37.7	-0.1
	comp=Z,1.5nm,0.8s,baz=318,slow=2.5,SNR=5.1						
WRAB	**Tennant Creek**	**42.85**	**122**	*e*P	**P**	**08 26 46.3**	**-0.3**
	comp=Z,12nm,0.6s,mb4.8						
WRAB	**Tennant Creek**	**42.85**	**122***c*	*i*P	**P**	**08 26 47.2**	**+0.6**
WB2	**Warramunga Arr**	**42.85**	**122**	*e*P	**P**	**08 26 47.1**	**+0.5**
AAK	**Ala-Archa**	**45.13**	**337**	P	**P**	**08 27 01.5**	**-3.2**
	comp=Z,9.4nm,1.1s,mb4.5						
AAK	**Ala-Archa**	**45.13**	**337⇑**	*e*P	**P**	**08 27 06.0**	**+1.3**
AAK				pmax	pmax		
	comp=Z,13nm,1.6s,mb4.5						
AAK				MLR	MLR		
	comp=Z,100nm,23.0s,MS3.7						
KS15	**Wonju Array Si**	**45.49**	**35**	*e*P	**P**	**08 27 06.5**	**-1.1**
MKAR	**Makanchi Array**	**46.41**	**346**	P	**P**	**08 27 14.7**	**0.0**
	comp=Z,14nm,0.8s,mb5.0,baz=162,slow=7.4,SNR=145						
MKAR				LR	LR	08 50 43.0	
	comp=Z,65nm,20.6s,MS3.6,baz=150,slow=41						
SONM	**Songino Array**	**46.48**	**9**	P	**P**	**08 27 15.5**	**+0.3**
	comp=Z,7.5nm,0.8s,mb4.7,baz=189,slow=8.3,SNR=61						
SONM				PcP	PcP	08 28 49.4	-0.6
	comp=Z,1.8nm,0.7s,baz=193,slow=2.3,SNR=4.3						
ULN	**Ulaanbaatar**	**46.61**	**10**	*e*P	**P**	**08 27 16.6**	**+0.2**
	comp=Z,2.8nm,0.7s,mb4.3						
ULN	**Ulaanbaatar**	**46.61**	**10***d*	*i*P	**P**	**08 27 16.9**	**+0.6**
ZAK	**Zakamensk**	**48.59**	**6**	*e*P	**P**	**08 27 31.8**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.3						
CN2	**Changchun**	**48.87**	**28**	*e*P	**P**	**08 27 33.5**	**-0.6**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=E,200nm,16.0s,MS4.3						
CN2				LR	LR		
	comp=Z,300nm,12.0s,MS4.5						
KURK	**Kurchatov**	**50.95**	**345**	*e*P	**P**	**08 27 49.4**	**-0.5**
	comp=Z,11nm,1.0s,mb4.7						
KURK	**Kurchatov**	**50.95**	**345***c*	*i*P	**P**	**08 27 49.7**	**-0.2**
HIA	**Hailar**	**51.10**	**19**	*e*P	**P**	**08 27 50.2**	**-0.8**
	comp=Z,9.3nm,0.8s,mb4.8						
HIA	**Hailar**	**51.10**	**19**	*e*P	**P**	**08 27 50.2**	**-0.8**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MJAR	**Matsushiro Arr**	**51.48**	**43**	P	**P**	**08 27 53.8**	**-0.2**
	comp=Z,4.5nm,0.7s,mb4.5,baz=207,slow=6.5,SNR=11						
MJAR				LR	LR	08 52 04.8	
	comp=Z,69nm,19.4s,MS3.7,baz=220,slow=39						
PMG	**Port Moresby**	**51.50**	**104**	*e*P	**P**	**08 27 54.1**	**-0.4**
	comp=Z,40nm,0.7s,mb5.5						
PMG	**Port Moresby**	**51.50**	**104***c*	*i*P	**P**	**08 27 54.8**	**+0.3**
CTA	**Charters Tower**	**53.27**	**117**	*e*P	**P**	**08 28 08.8**	**+1.1**
	comp=Z,8.5nm,0.8s,mb4.7						
CTA	**Charters Tower**	**53.27**	**117**	*e*P	**P**	**08 28 08.8**	**+1.1**
CTA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CTAO	**Charters Tower**	**53.27**	**117**	*e*P	**P**	**08 28 07.6**	**-0.1**
	comp=Z,8.8nm,0.8s,mb4.7						
CTAO	**Charters Tower**	**53.27**	**117**	*e*P	**P**	**08 28 07.6**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
NVS	**Novosibirsk**	**53.87**	**350⇑**	*i*P	**P**	**08 28 09.8**	**-1.8**
NVS				pmax	pmax		
	comp=N,8.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
NVS				pmax	pmax		
	comp=E,5.0nm,0.8s						
STKA	**Stephens Creek**	**54.22**	**132**	P	**P**	**08 28 14.3**	**-0.2**
	comp=E,6.1nm,0.8s,mb4.6,baz=297,slow=6.1,SNR=8.2						
STKA	**Stephens Creek**	**54.22**	**132**	*e*P	**P**	**08 28 14.1**	**-0.4**
BRVK	**Borovoye**	**55.45**	**341**	*e*P	**P**	**08 28 21.9**	**-1.3**
	comp=E,2.8nm,0.8s,mb4.3						

BRVK	**Borovoye**	**55.45**	**341**	*e*P	**P**	**08 28 21.9**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
KLR	**Kul'dur**	**55.82**	**27**	*e*P	**P**	**08 28 24.0**	**-1.9**
CHKZ	**Chkalovo**	**55.87**	**342**	*e*P	**P**	**08 28 25.0**	**-1.2**
	comp=Z,9.2nm,0.7s,mb4.9						
CHKZ	**Chkalovo**	**55.87**	**342**	*e*P	**P**	**08 28 25.0**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.9						
BOD	**Bodaibo**	**57.38**	**11**	*e*P	**P**	**08 28 36.3**	**-0.6**
BOD				pmax	pmax		
	comp=Z,11nm,1.0s,mb4.8						
KMBO	**Kilima Mbogo**	**59.53**	**268**	LR	LR	08 49 59.1	
	comp=Z,80nm,19.7s,MS3.9,baz=88,slow=31						
YSS	**Yuzh-Sakhalins**	**60.02**	**35**	⇑*e*P	**P**	**08 28 55.0**	**-0.4**
YSS				*e*	pP	08 29 03.2	-1.4
SVE	**Sverdlovsk**	**61.82**	**338**	*e*P	**P**	**08 29 06.6**	**-0.9**
SVE				*e*		08 29 11.8	
SVE				MLR	MLR		
	comp=E,100nm,16.0s						
SVE				MLR	MLR		
	comp=Z,300nm,16.0s,MS4.5						
ARU	**Arti**	**62.31**	**337**	⇓*i*P	**P**	**08 29 05.3**	**-5.5**
ARU				*e*		08 29 42.8	
ARU				*e*S	**S**	**08 37 27.1**	**-6.3**
ARU				*e*SSS	SSS	08 44 15.8	-5.8
ARU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.0						
KIV	**Kislovodsk**	**63.43**	**319**	*e*P	**P**	**08 29 18.4**	**+0.1**
KIV				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.2						
YAK	**Yakutsk**	**64.85**	**16**	*e*P	**P**	**08 29 25.8**	**-1.5**
	comp=Z,44nm,0.9s,mb5.5						
YAK	**Yakutsk**	**64.85**	**16**	*i* P	**P**	**08 29 26.4**	**-0.9**
YAK				pmax	pmax		
	comp=Z,68nm,1.5s,mb5.5						
YAK				MLR	MLR		
	comp=Z,100nm,23.0s,MS4.0						
SOC	**Sochi**	**65.24**	**318**	*e*P	**P**	**08 29 29.5**	**-0.7**
SOC				*e**PP	pP	08 29 37.7	-1.7
SOC				*e*S	S	08 38 14.2	+4.2
SOC				*e**SS		08 38 27.9	
SOC				*e*		08 39 24.1	
SOC				*e*SS	SS	08 42 26.5	+1.9
SOC				pmax	pmax		
	comp=Z,12nm,0.7s,mb5.0						
OBN	**Obninsk**	**71.73**	**328**	*e*P	**P**	**08 30 10.6**	**+0.3**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
TIXI	**Tiksi**	**72.55**	**10**	⇓*e*P	**P**	**08 30 14.0**	**-0.8**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.2s,mb4.5						
AKASG	**Malin Array Be**	**74.37**	**322**	P	**P**	**08 30 25.0**	**-0.8**
	comp=Z,1.9nm,0.6s,mb4.2,baz=91,slow=5.2,SNR=13						
BOSA	**Boshof**	**74.72**	**240**	LR	LR	09 02 16.6	
	comp=Z,76nm,18.3s,MS4.0,baz=26,slow=35						
FINES	**FINESS Array B**	**79.12**	**333**	P	**P**	**08 30 52.4**	**+0.2**
	comp=Z,3.5nm,0.7s,mb4.4,baz=90,slow=5.6,SNR=12						
FINES				LR	LR	09 10 23.6	
	comp=Z,43nm,20.1s,MS3.8,baz=58,slow=39						
KAF	**Kangasniemi**	**79.20**	**333**	*e*p	**P**	**08 30 53.0**	**+0.4**
	comp=Z,3.7nm,0.6s,mb4.5,baz=103,slow=5.0						
KAF	**Kangasniemi**	**79.20**	**333**	*e*P	**P**	**08 30 53.0**	**+0.4**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
RPZ	**Rata Peaks**	**80.07**	**135**	LR	LR	09 06 32.5	
	comp=Z,145nm,20.5s,MS4.3,baz=350,slow=36						
ARCES	**ARCESS Array B**	**81.68**	**340**	P	**P**	**08 31 06.1**	**+0.5**
	comp=Z,2.0nm,0.6s,mb4.2,baz=90,slow=6.1,SNR=13						
ARCES	**ARCESS Array B**	**81.68**	**340**	P	**P**	**08 31 06.1**	**+0.5**
GERES	**GERESS Array B**	**83.94**	**319**	P	**P**	**08 31 18.3**	**+0.7**
	comp=Z,2.3nm,0.9s,mb4.3,baz=108,slow=4.2,SNR=16						
NOA	**NORSAR Array B**	**86.12**	**331**	P	**P**	**08 31 29.0**	**+0.7**
	comp=Z,1.6nm,0.8s,mb4.3,baz=94,slow=4.9,SNR=5.2						
IMA2	**Indian Mountai**	**96.09**	**23**	P	**P**	**08 32 14.7**	**-0.1**
BOZ	**Bozeman (W)**	**126.38**	**24**	*e*PKPdf	PKPdf	08 37 51.4	-3.0
NVAR	**Mina Array Bea**	**128.47**	**35**	PKP	PKPdf	08 37 55.0	-3.7
	comp=Z,0.1nm,0.3s,baz=231,slow=1.8,SNR=3.9						
PDAR	**Pinedale Array**	**129.59**	**25**	PKP	PKPdf	08 37 57.0	-3.7
	comp=Z,0.5nm,0.8s,baz=153,slow=2.0,SNR=3.1						
TXAR	**Lajitas Array**	**143.29**	**31**	PKP	PKPdf	08 38 20.4	-5.8
	comp=Z,0.6nm,0.6s,baz=12,slow=2.1,SNR=8.8						
CPUP	**Villa Florida**	**145.21**	**224**	*e*PKPdf	PKPdf	08 38 24.8	-4.8

*BJI **27** 08:46:11.9, 7.70S×77.60W, h51^{km}, mB5.4, Ms4.8, Msz4.7*

*NEIC **27** 08:46:12.0±0.9, 7.69S×77.64W, h52^{km}±9^{km}, mb4.8/15, Error ellipse: s-maj=13.1km s-min=5.2km az=67.0*

*IDC **27** 08:46:13.5±3.3, 7.83S×77.76W, h70^{km}±31^{km}, mb4.0/11, mb1 4.2/16, mb1mx4.1/22, mbtmp4.3/16, ML4.0/5, MS3.9/17, Ms1 3.9/17, ms1mx3.8/22, Error ellipse: s-maj=26.5km s-min=12.0km az=65.0*

ISC 27 08:46:10.0±1.4**, 7.71S**±0.06×**77.7W**±0.1**, h51**^{km}±13^{km}**, n70, σ0**^{s}**94**/54**, mb4.6**/23**, MS3.9**/13**, 4C-2D, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.33**	**169**	*e*P	**P**	**08 47 15.4**	**+0.3**
NNA				*e*S	**S**	**08 48 16.8**	**+12**
OTAV	**Otavalo**	**7.93**	**354**	*e*P	**P**	**08 48 04.7**	**-0.6**
	75nm,0.9s						
LPAZ	**La Paz**	**12.65**	**133**	P	**P**	**08 49 11.2**	**+1.6**
	0.2nm,0.3s,baz=316,slow=9.1,SNR=14						
LPAZ				LR	LR	08 55 17.9	
	comp=Z,2µm,20.0s,baz=292,slow=43						
LPAZ	**La Paz**	**12.65**	**133**	*e*P	**P**	**08 49 10.2**	**+0.6**
	12nm,1.0s						
ROSC	**El Rosal**	**12.92**	**15**	P	**P**	**08 49 18.1**	**+4.8**
	2.9nm,0.3s,baz=88,slow=15,SNR=4.9						
ROSC				S	S	08 52 01.6	+25
	1.2nm,0.3s,baz=100,slow=18,SNR=2.0						
SDV	**Santo Domingo**	**17.92**	**23**	P	**P**	**08 50 18.1**	**+0.8**
	3.5nm,0.3s,baz=245,slow=13,SNR=13						
SDV				LR	LR	08 57 58.2	
	comp=Z,612nm,20.3s,baz=218,slow=39						
SDV	**Santo Domingo**	**17.92**	**23**	*e*P	**P**	**08 50 17.1**	**-0.3**
	16nm,0.7s						
SIV	**San Ignacio**	**18.22**	**118**	P	**P**	**08 50 21.3**	**+0.3**
	1.6nm,0.3s,baz=303,slow=11,SNR=60						
JTS	**JuntasAbangare**	**19.29**	**338**	P	**P**	**08 50 34.2**	**+0.7**
	0.2nm,0.3s,baz=117,slow=7.6,SNR=9.4						
JTS				LR	LR	08 57 15.9	
	comp=Z,586nm,19.6s,baz=145,slow=34						
JTS	**JuntasAbangare**	**19.29**	**338**	*e*P	**P**	**08 50 33.4**	**-0.1**
	14nm,0.9s						
CFAA	**Coronel Fontan**	**25.36**	**161**	P	**P**	**08 51 34.0**	**-0.1**
	0.4nm,0.7s,baz=325,slow=10.0,SNR=8.3						
CFAA				LR	LR	09 00 10.5	
	comp=Z,29nm,21.6s,baz=325,slow=33						
CFAA	**Coronel Fontan**	**25.36**	**161**	P	**P**	**08 51 34.0**	**-0.1**
CFAA				LR	LR	09 00 10.5	
CPUP	**Villa Florida**	**26.79**	**136**	*e*P	**P**	**08 51 47.2**	**-0.3**
SJG	**San Juan**	**28.07**	**24**	P	**P**	**08 52 04.0**	**+4.9**
	14nm,0.7s,mb4.7,baz=197,slow=8.2,SNR=4.5						
SJG	**San Juan**	**28.07**	**24**	P	**P**	**08 51 57.6**	**-1.5**
	12nm,0.7s,mb4.6						
BDFB	**Brasilia**	**30.08**	**108**	P	**P**	**08 52 16.1**	**-1.0**
	2.7nm,0.5s,mb4.2,baz=276,slow=13,SNR=6.9						
BDFB				LR	LR	09 05 08.4	
	comp=Z,423nm,20.9s,MS4.1,baz=93,slow=38						
PLCA	**Paso Flores**	**33.50**	**170**	P	**P**	**08 52 44.1**	**-2.5**
	3.8nm,0.9s,mb4.3,baz=344,slow=16,SNR=4.6						
PLCA				LR	LR	09 03 55.1	
	comp=Z,111nm,20.8s,MS3.6,baz=347,slow=32						
PLCA	**Paso Flores**	**33.50**	**170**	*e*P	**P**	**08 52 45.2**	**-1.5**
	16nm,1.5s,mb4.7						
TXAR	**Lajitas Array**	**44.52**	**327**	P	**P**	**08 54 19.1**	**+0.5**
	2.3nm,1.0s,mb4.0,baz=146,slow=9.0,SNR=13						
TXAR				LR	LR	09 12 03.9	
	comp=Z,78nm,20.5s,MS3.6,baz=210,slow=35						
TXAR	**Lajitas Array**	**44.52**	**327**	P	**P**	**08 54 19.1**	**+0.5**
TXAR				LR	LR	09 12 03.9	
USHA	**Ushuaia**	**47.58**	**173**	P	**P**	**08 54 40.9**	**-1.5**
	3.5nm,0.8s,mb4.5,baz=117,slow=23,SNR=1.9						
KSU1	**Kansas State U**	**49.77**	**341**	*e*P	**P**	**08 54 59.6**	**0.0**
BNM	**Barren Site**	**49.85**	**328**	*e*P	**P**	**08 55 01.7**	**+1.4**
LAZ	**Ladron**	**50.31**	**328**	*e*P	**P**	**08 55 05.9**	**+2.0**
ANMO	**Albuquerque**	**50.38**	**329**	*e*P	**P**	**08 55 04.3**	**-0.1**
	11nm,1.2s,mb4.8						
SDCO	**Great Sand Dun**	**52.14**	**332**	*e*P	**P**	**08 55 17.1**	**-0.5**
	20nm,1.3s,mb4.9						
ISCO	**Idaho Springs**	**53.87**	**333**	*e*P	**P**	**08 55 30.3**	**-0.1**
	9.8nm,1.3s,mb4.6						
MSU	**Marysvale**	**56.06**	**328**	*e*P	**P**	**08 55 46.6**	**+0.2**
ARUT	**Antelope Range**	**56.22**	**326**	*e*P	**P**	**08 55 48.1**	**+0.6**
RSSD	**Black Hills**	**56.82**	**338**	*e*P	**P**	**08 55 52.3**	**+0.6**
	19nm,1.3s,mb5.0						
BW06	**Boulder Array**	**58.02**	**333**	*e*P	**P**	**08 55 58.4**	**-1.7**
	2.5nm,0.8s,mb4.3						
PDAR	**Pinedale Array**	**58.02**	**333**	P	**P**	**08 55 59.2**	**-0.9**
	1.4nm,0.7s,mb4.1,baz=123,slow=8.0,SNR=12						
PDAR				LR	LR	09 21 26.6	
	comp=Z,107nm,19.9s,MS4.0,baz=347,slow=36						
HWUT	**Hardware Ranch**	**58.07**	**330**	*e*P	**P**	**08 55 59.9**	**-0.5**
	27nm,1.4s,mb5.1						
ELK	**Elko**	**59.31**	**327**	*e*P	**P**	**08 56 08.8**	**-0.3**
	10nm,1.4s,mb4.7						
NVAR	**Mina Array Bea**	**59.44**	**324**	P	**P**	**08 56 10.9**	**+0.9**
	3.1nm,0.8s,mb4.4,baz=136,slow=7.4,SNR=20						
NVAR				LR	LR	09 22 32.6	
	comp=Z,29nm,20.7s,MS3.4,baz=180,slow=37						
ULM	**Lac du Bonnet**	**59.85**	**347**	P	**P**	**08 56 11.5**	**-1.1**
	7.6nm,0.8s,mb4.8,baz=162,slow=8.6,SNR=9.8						
ULM				LR	LR	09 22 44.5	
	comp=Z,114nm,20.4s,MS4.0,baz=137,slow=36						
ULM	**Lac du Bonnet**	**59.85**	**347**	P	**P**	**08 56 11.5**	**-1.2**
ULM				LR	LR	09 22 44.5	
HLID	**Hailey**	**60.92**	**330**	*e*P	**P**	**08 56 19.2**	**-0.9**
	7.1nm,1.4s,mb4.6						
EGMT	**Eagleton**	**62.28**	**336**	*e*P	**P**	**08 56 28.5**	**-0.7**
	13nm,1.1s,mb5.0						
SCHQ	**Schefferville**	**62.97**	**7**	P	**P**	**08 56 33.2**	**-0.5**
	8.2nm,1.0s,mb4.8,baz=70,slow=3.3,SNR=6.6						
SCHQ				LR	LR	09 22 37.2	
	comp=Z,89nm,19.3s,MS4.0,baz=305,slow=35						
MSO	**Missoula**	**63.13**	**333**	*e*P	**P**	**08 56 35.3**	**+0.5**
	15nm,1.3s,mb5.0						
EDM	**Edmonton**	**67.81**	**338**	*e*P	**P**	**08 57 03.8**	**-0.9**
PPT	**Papeete**	**70.49**	**254**	LR	LR	09 21 08.5	
	comp=Z,82nm,20.7s,MS4.0,baz=105,slow=30						
DBIC	**Dimbokro**	**74.03**	**81**	P	**P**	**08 57 44.3**	**+1.4**
	4.2nm,0.7s,mb4.5,baz=212,slow=6.2,SNR=8.6						
DBIC				LR	LR	09 26 44.4	
	comp=Z,105nm,20.4s,MS4.1,baz=222,slow=33						
DBIC	**Dimbokro**	**74.03**	**81**	*e*P	**P**	**08 57 44.0**	**+1.1**
YKA	**Yellowknife Ar**	**75.53**	**343**	P	**P**	**08 57 49.7**	**-0.8**
	1.3nm,0.7s,mb4.0,baz=141,slow=6.3,SNR=8.5						
YKA				LR	LR	09 32 33.2	
	comp=Z,63nm,19.4s,MS3.9,baz=135,slow=37						
YKA	**Yellowknife Ar**	**75.53**	**343**	P	**P**	**08 57 49.7**	**-0.9**
YKA				LR	LR	09 32 33.2	
VNA3	**Neumayer Olymp**	**75.75**	**162**	⇑*i*	**P**	**08 58 04.8**	**+13**
SNAA	**Sanae**	**77.97**	**162**	⇑*i*	**P**	**08 58 04.9**	**+0.8**
DAWY	**Dawson**	**85.01**	**337**	*e*P	**P**	**08 58 41.8**	**+0.8**
INK	**Inuvik**	**85.22**	**342**	*e*P	**P**	**08 58 43.1**	**+1.2**
	16nm,1.2s,mb5.0						
ILAR	**Eielson Array**	**88.25**	**336**	P	**P**	**08 58 57.9**	**+1.1**
	1.4nm,0.7s,mb4.3,baz=157,slow=4.3,SNR=14						
ILAR				PP	PP	09 02 26.5	-0.3
	0.8nm,1.0s,baz=132,slow=8.1,SNR=4.9						
SYO	**Syowa Base**	**92.26**	**161**	⇑P	**P**	**08 59 18.7**	**+3.3**
SYO	**Syowa Base**	**92.26**	**161**	⇓pP	pP	08 59 28.3	-2.2
SYO	**Syowa Base**	**92.26**	**161**	⇑*e*P	**P**	**08 59 18.7**	**+3.3**
SYO				⇓*e*pP	pP	08 59 28.3	-2.2
NOA	**NORSAR Array B**	**96.15**	**29**	LR	LR	09 37 58.4	
	comp=Z,52nm,21.0s,MS4.0,baz=120,slow=32						
GERES	**GERESS Array B**	**96.66**	**42**	LR	LR	09 37 50.4	
	comp=Z,60nm,18.8s,MS4.1,baz=311,slow=32						
BOSA	**Boshof**	**97.57**	**120**	LR	LR	09 41 06.5	
	comp=Z,130nm,18.6s,MS4.5,baz=240,slow=34						
AKTO	**Aktyubinsk**	**123.79**	**33**	PKP	PKPdf	09 05 04.1	+1.7
	0.9nm,0.5s,baz=10.0,slow=2.5,SNR=4.7						
MKAR	**Makanchi Array**	**137.44**	**20**	PKP	PKPdf	09 05 29.3	+0.9
	0.3nm,0.5s,slow=1.4,SNR=5.0						
MKAR	**Makanchi Array**	**137.44**	**20**	PKP	PKPdf	09 05 29.3	+0.9
WB2	**Warramunga Arr**	**138.18**	**228**	*e*P	PKPdf	09 05 33.4	+3.0
WRA	**Warramunga Arr**	**138.18**	**228**	PKP	PKPdf	09 05 32.1	+1.6
	1.9nm,0.6s,baz=122,slow=2.2,SNR=24						
CN2	**Changchun**	**138.75**	**334**	*e*PKP	PKPdf	09 05 26.5	-4.3
SONM	**Songino Array**	**139.86**	**356**	PKP	PKPdf	09 05 33.4	+0.7
	1.8nm,1.0s,baz=151,slow=0.5,SNR=6.0						
WMQ	**Urumqi**	**141.82**	**17**	*e*PKP	PKPdf	09 05 39.0	+2.7
WMQ				LR	LR		
	comp=N,80nm,28.6s						
WMQ				LR	LR		
	comp=E,90nm,22.9s						
WMQ				LR	LR		
	comp=Z,80nm,22.9s						
FITZ	**Fitzroy Crossi**	**145.53**	**222**	*e*P	PKPdf	09 05 45.0	+1.5
	comp=Z,16nm,0.9s						
GTA	**Gaotai**	**148.36**	**4**	*e*PKP	PKPdf	09 05 51.5	+4.0
GTA				APKP		09 06 03.3	
GTA				XPKP		09 06 08.8	
LZH	**Lanzhou**	**151.72**	**357**	*e*PKP	PKPdf	09 05 56.0	+3.1
LZH				APKP		09 06 05.5	
LZH				XPKP		09 06 11.5	
LZH				PP	PP	09 09 45.0	+2.1
LZH				*e*SKS	SKS	09 12 58.3	+5.1
LZH				SKKS		09 16 29.5	
LZH				*e*SS	SS	09 29 05.3	+3.3
LZH				PP	PP		
	comp=Z,80nm,4.6s						
LZH				LR	LR		
	comp=E,320nm,18.9s						
LZH				LR	LR		
	comp=Z,560nm,20.6s						
KMI	**Kunming**	**162.68**	**359**	PKP	PKPdf	09 06 06.3	-0.3

*MOS **27** 08:54:40.7±0.7, 57.74N×120.50E, h10^{km}, mb4.1/1, Error ellipse: s-maj=24.3km s-min=17.3km az=73.0*

BYKL 27 08:54:40.8±0.5**, 57.41N**×**120.68E, 1D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.41**	**250**	⇓*i*Pg	Pg	08 55 07.2	-1.7
CRS				*e*Sg	Sg	08 55 24.4	-3.3
CRS				Pmax			
	126nm,0.7s						
CRS				Smax			
	391nm,0.9s						
CRS	**Chara**	**1.41**	**250**	*e*P	Pb	08 55 07.2	-0.5
CRS				*e*		08 55 24.9	
CRS				pmax	pmax		
	comp=Z,106nm,0.3s						
CRS				smax			
	comp=E,329nm,0.6s						
NRGR	**Nerungri**	**2.33**	**107**	*e*P	Pn	08 55 24.2	+3.2
NRGR				S	Sn	08 55 52.3	+1.5
CLNS	**Chul'man**	**2.37**	**102**	*e*	Pn	08 55 22.8	+1.3
CLNS				*e*Pg	Pg	08 55 24.3	-3.8
CLNS				*e*		08 55 52.6	
CLNS				*e*Sg	Sg	08 55 55.0	-4.6
CLNS				Pmax			
	comp=E,271nm,0.3s						
CLNS				Smax			
	comp=E,2µm,0.3s						
CLNS	**Chul'man**	**2.37**	**102**	*e*P	Pn	08 55 22.9	+1.4
CLNS				*e*S	Sn	08 55 48.2	-3.5
CLNS				pmax	pmax		
	comp=N,9.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,5.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,20nm,0.3s						
CLNS				pmax	pmax		
	comp=N,15nm,0.3s						
CLNS				pmax	pmax		
	comp=E,14nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,33nm,0.3s						
CLNS				smax			
	comp=E,190nm,0.4s						
CLNS				smax			
	comp=Z,61nm,0.4s						
CLNS				smax			
	comp=N,50nm,0.3s						
CLNS				smax			
	comp=N,619nm,0.4s						
CLNS				smax			
	comp=E,208nm,0.3s						
CLNS				smax			
	comp=Z,85nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,100nm,12.0s						
ALDR	**Aldan**	**2.79**	**62**	*e*	Pn	08 55 27.5	0.0
ALDR				*e*Pg	Pg	08 55 31.0	-5.5
ALDR				*e*Sg	Sg	08 56 05.1	-8.6
ALDR				Pmax			
	comp=Z,60nm,0.2s						
ALDR				Smax			
	comp=Z,711nm,0.2s						
NLYR	**Nelyaty**	**2.88**	**253**	*e*Pn	Pn	08 55 28.5	-0.3
NLYR				*e*Pg	Pg	08 55 32.7	-5.5
NLYR				*e*Sg	Sg	08 56 08.9	-7.7
NLYR				Pmax			
	comp=Z,68nm,0.8s						
NLYR				Smax			
	comp=Z,335nm,0.8s						
NLYR	**Nelyaty**	**2.88**	**253**	*e*P	Pn	08 55 28.2	-0.6
NLYR				*e*		08 56 07.6	
NLYR				pmax	pmax		
	comp=Z,69nm,0.4s						
NLYR				smax			
	comp=E,334nm,1.1s						
TUP	**Tupik**	**3.02**	**188**	*e*Pn	Pn	08 55 29.7	-1.1
TUP				*e*Pg	Pg	08 55 34.6	-6.5
TUP				*e*Sg	Sg	08 56 12.6	-8.7
TUP				Pmax			
	comp=E,89nm,0.7s						
TUP				Smax			
	comp=E,552nm,0.8s						
TUP	**Tupik**	**3.02**	**188**	*e*P	Pn	08 55 34.7	+3.9
TUP				*e*S	Sn	08 56 04.6	-3.6
TUP				pmax	pmax		
	comp=Z,89nm,0.5s						
TUP				smax			
	comp=E,558nm,0.8s						
TNDR	**Tynda**	**3.20**	**133**	*e*	Pn	08 55 32.8	-0.5
TNDR				*e*Sg	Sg	08 56 19.8	-7.4
TNDR				Smax			
	comp=E,3µm,0.6s						
BOD	**Bodaibo**	**3.62**	**279**	*e*Pg	Pg	08 55 45.9	-7.1
BOD				*e*Sg	Sg	08 56 31.6	-10
BOD				Pmax			
	comp=E,14nm,0.4s						
BOD				Smax			
	comp=E,201nm,1.0s						
BOD	**Bodaibo**	**3.62**	**279**	*e*P	Pn	08 55 37.7	-1.5
BOD				pmax	pmax		
	comp=Z,23nm,0.6s						
SVKR	**Severomuysk**	**4.13**	**255**	*e*	Pn	08 56 25.5	+39
SVKR				*e*Sg	Sg	08 56 49.3	-8.9
SVKR				Smax			
	comp=Z,256nm,0.8s						
UKT	**Uakit**	**4.36**	**247**	*e*Pg	Pg	08 55 58.6	-9.3
UKT				*e*Sg	Sg	08 56 54.9	-11
UKT				Pmax			
	comp=Z,9.0nm,0.7s						
UKT				Smax			
	comp=Z,83nm,1.4s						
KROS	**Kirovskiy**	**4.63**	**127**	*e*	Pn	08 55 50.0	-3.6
KROS				*e*Sg	Sg	08 57 01.9	-13
KMO	**Kumora**	**5.45**	**258**	*e*	Pn	08 56 07.2	+2.0
KMO				*e*Pg	Pg	08 56 19.5	-10
KMO				*e*Sg	Sg	08 57 29.0	-13
KMO				Pmax			
	comp=Z,9.0nm,0.6s						
KMO				Smax			
	comp=Z,127nm,1.4s						
KMO	**Kumora**	**5.45**	**258**	*e*P	Pn	08 56 03.2	-2.0
KMO				*e*S	Sn	08 57 02.3	-7.3
YLYR	**Ulyunkhan**	**5.89**	**249**	*e*	Pn	08 56 15.2	+3.7
YLYR				*e*Pg	Pg	08 56 26.0	-12
YLYR				*e*Sg	Sg	08 57 42.0	-15
YLYR				Pmax			
	comp=Z,4.0nm,1.0s						
YLYR				Smax			
	comp=Z,78nm,1.3s						
NIZ	**Nizh Angarsk**	**6.37**	**260**	*e*	Pn	08 57 04.3	+46
NIZ				*e*Sg	Sg	08 57 56.4	-16
NIZ				Smax			
	comp=Z,72nm,1.2s						
CIT	**Chita**	**6.79**	**220**	*e*	Pg	08 57 54.1	+58
CIT				*e*Sg	Sg	08 58 10.8	-16
CIT				Smax			
	comp=Z,149nm,1.6s						
SYVR	**Suvo**	**7.13**	**243**	*e*Pg	Pg	08 56 50.5	-13
SYVR				*e*		08 58 01.0	
SYVR				*e*Sg	Sg	08 58 22.0	-16
SYVR				Pmax			
	comp=Z,4.0nm,0.7s						
SYVR				Smax			
	comp=Z,95nm,2.0s						
OGRR	**Ongureny**	**8.32**	**249**	*e*Sg	Sg	08 58 57.2	-21
OGRR				Smax			
	comp=Z,6.0nm,1.0s						
KPC	**Khapcheranga**	**9.16**	**216**	*e*	P	08 56 55.2	-2.0
KPC				*e*Pg	P	08 57 24.6	+27
KPC				*e*		08 58 43.8	
KPC				*e*Sg	Sg	08 59 21.6	-24
KPC				Pmax			
	comp=Z,1.0nm,0.8s						
KPC				Smax			
	comp=Z,52nm,1.5s						
TRG	**Tyrgan**	**9.44**	**247**	*e*Sg	Sg	08 59 35.0	-20
TRG				Smax			
	comp=Z,9.0nm,0.9s						
ARS	**Arshan**	**11.90**	**250**	*e*Sg	S	09 00 51.0	+62
ARS				Smax			
	comp=Z,34nm,1.6s						
TIXI	**Tiksi**	**14.70**	**10**	*i* P	P	08 58 06.1	-5.4

NNC 27 09:01:50.9±3.5**, 36.98N**×**70.71E, h188**^{km}±60^{km}**, mpv3.2, 5C, Error ellipse: s-maj=46.3km s-min=26.2km az=44.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.12**	**359**	⇑P	P	09 03 19.7	-0.6
	0.6nm,0.4s,baz=172,slow=12,SNR=14						
KK31				⇑S	S	09 04 29.7	-0.1
	0.6nm,0.5s,baz=180,slow=21,SNR=4.5						
AAK	**Ala-Archa**	**6.35**	**26**	⇑P	P	09 03 22.0	-1.4
	2.7nm,1.0s						
AAK				⇑S	S	09 04 36.8	+1.4
	3.1nm,0.8s						
AB31	**Akbulak array**	**14.55**	**331**	⇑P	P	09 05 08.0	-1.0
	1.4nm,0.7s,baz=248,slow=2.3,SNR=8.2						

*ISK **27** 09:22:02.5, 38.19N×26.44E, h31^{km}, MD3.1*

*ATH **27** 09:22:02.1, 38.15N×26.60E, h37^{km}±31^{km}, MD3.1/3*

*CSEM **27** 09:22:03.0±0.2, 38.18N×26.57E, h25^{km}, MD3.1, Error ellipse: s-maj=5.9km s-min=3.5km az=82.0*

ISC 27 09:22:01.5±0.9**, 38.20N**±0.03×**26.57E**±0.06**, h4**^{km}±6^{km}**, n14, σ0**^{s}**87**/24**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.17**	**8**	*i* P	**Pg**	**09 22 04.9**	**0.0**
URLA				*i* S	**Sg**	**09 22 07.7**	**+0.5**
SMG	**Samos**	**0.53**	**156**	⇑*i*PB	**Pb**	**09 22 12.8**	**-0.2**
SMG				*e*SB	**Sb**	**09 22 20.9**	**+0.2**
KDAG	**Bornova**	**0.59**	**69**	*i* P	**Pg**	**09 22 12.3**	**-1.0**
KDAG				*i* S	**Sg**	**09 22 20.4**	**-0.8**
PRK	**Paraskevi**	**1.07**	**348**	*e*PB	**Pb**	**09 22 22.4**	**+0.1**
PRK				*e*SN	**Sn**	**09 22 38.6**	**-0.1**
AYVA	**Ayvalik**	**1.11**	**5**	*i* P	**Pb**	**09 22 23.4**	**+0.3**
AYVA				*i* S	**Sb**	**09 22 38.5**	**+0.8**
AYDN	**Tasoluk**	**1.17**	**117**	*i* P	**Pb**	**09 22 24.4**	**+0.5**
AYDN				*i* S	**Sb**	**09 22 39.5**	**+0.3**
AKS	**Akhisar**	**1.19**	**55**	PN	**Pn**	**09 22 24.4**	**-0.5**
AKS				SN	**Sn**	**09 22 41.0**	**-0.7**
MLSB	**Milas**	**1.31**	**133**	*e*PN	**Pn**	**09 22 26.7**	**0.0**
MLSB				*e*SN	**Sn**	**09 22 42.8**	**-2.0**
BDRM	**Kayabasi**	**1.33**	**148**	*i* P	**Pb**	**09 22 27.9**	**+1.2**
BDRM				*i* S	**Sb**	**09 22 45.3**	**+1.5**
APE	**Apeiranthos**	**1.39**	**217**	*e*PN	**Pn**	**09 22 25.5**	**-2.3**
APE	**Apeiranthos**	**1.39**	**217**	*e*Pn	**Pn**	**09 22 26.7**	**-1.1**
MANT	**Manisa**	**1.59**	**79**	*i* P	**Pn**	**09 22 32.4**	**+1.8**
MANT				*i* S	**Sb**	**09 22 52.1**	**+0.5**
YER	**Yerkesik**	**1.73**	**127**	*e*PN	**Pn**	**09 22 32.3**	**-0.2**
BALB	**Balikesir**	**1.77**	**35**	*e*PN	**Pn**	**09 22 32.4**	**-0.8**

*LDG **27** 09:23:48.9±0.0, 47.03N×2.04W, h10^{km}, Md2.6/1, Ml2.4/17, Error ellipse: s-maj=1.0km s-min=0.5km az=59.0*

*CSEM **27** 09:23:48.9±0.1, 47.03N×2.04W, h10^{km}, ML2.4/16, Error ellipse: s-maj=1.3km s-min=0.6km az=55.0*

STR 27 09:23:48.6±0.5**, 47.01N**×**2.09W, h5**^{km}±1^{km}**, Ml2.6, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LRYF	**La Roche-sur-Y**	0.57	139	Pg	Pg	09 23 59.3	-0.7
LRYF				Sg	Sg	09 24 07.5	-0.1
LCHF	**La Chataignera**	0.99	110	Pg	Pg	09 24 07.2	-1.1
LCHF				Sg	Sg	09 24 20.7	-0.8
QUIF	**Quistinic**	1.16	322	ePn	Pn	09 24 09.6	-1.9
QUIF	**Quistinic**	1.16	322	ePg	Pg	09 24 11.1	-0.8
QUIF				eSn	Sn	09 24 26.1	-1.8
	7.6nm,0.2s						
QUIF	**Quistinic**	1.16	322	ePg	Pg	09 24 11.1	-0.8
QUIF				eSn	Sn	09 24 26.1	-1.8
	3.8nm,0.2s						
SGMF	**Saint Gilles**	1.28	346	ePn	Pn	09 24 11.1	-2.1
SGMF	**Saint Gilles**	1.28	346	ePg	Pg	09 24 12.8	-1.5
SGMF				eSn	Sn	09 24 27.2	-3.8
SGMF				eSg	Sg	09 24 29.3	-2.1
	19nm,0.3s						
SGMF	**Saint Gilles**	1.28	346	ePg	Pg	09 24 12.8	-1.5
SGMF				eSn	Sn	09 24 27.2	-3.8
SGMF				eSg	Sg	09 24 29.3	-2.1
	9.4nm,0.3s						
MFF	**Saint Martin d**	1.40	106	ePn	Pn	09 24 12.4	-2.4
MFF	**Saint Martin d**	1.40	106	ePg	Pg	09 24 14.6	-1.9
MFF				eSn	Sn	09 24 29.6	-4.2
MFF				eSg	Sg	09 24 32.1	-3.0
	14nm,0.3s						
MFF	**Saint Martin d**	1.40	106	ePg	Pg	09 24 14.6	-1.9
MFF				eSn	Sn	09 24 29.6	-4.2
MFF				eSg	Sg	09 24 32.1	-3.0
	7.1nm,0.3s						
ROSF	**Rostrenen**	1.55	329	ePg	Pg	09 24 17.7	-1.8
ROSF				eSg	Sg	09 24 37.0	-3.2
	4.0nm,0.2s						
GRR	**Gorron**	1.61	31	ePn	Pn	09 24 15.2	-2.7
GRR	**Gorron**	1.61	31	ePg	Pg	09 24 18.4	-2.4
GRR				eSn	Sn	09 24 34.4	-4.8
GRR				eSg	Sg	09 24 38.6	-3.6
	3.3nm,0.2s						
GRR	**Gorron**	1.61	31	ePg	Pg	09 24 18.4	-2.4
GRR				eSn	Sn	09 24 34.4	-4.8
GRR				eSg	Sg	09 24 38.6	-3.6
	1.6nm,0.2s						
FLN	**La Foliniere**	2.06	31	ePn	Pn	09 24 21.3	-3.0
FLN	**La Foliniere**	2.06	31	ePg	Pg	09 24 26.3	-3.4
FLN				eSg	Sg	09 24 52.6	-4.6
	3.5nm,0.3s						
FLN	**La Foliniere**	2.06	31	ePg	Pg	09 24 26.3	-3.4
FLN				eSg	Sg	09 24 52.6	-4.6
	1.8nm,0.3s						
LDF	**La Druitiere**	2.07	39	ePn	Pn	09 24 21.5	-2.9
LDF	**La Druitiere**	2.07	39	ePg	Pg	09 24 26.5	-3.4
LDF				eSn	Sn	09 24 45.3	-5.5
LDF				eSg	Sg	09 24 52.5	-4.9
	2.5nm,0.2s						
LDF	**La Druitiere**	2.07	39	ePg	Pg	09 24 26.5	-3.4
LDF				eSn	Sn	09 24 45.3	-5.5
LDF				eSg	Sg	09 24 52.5	-4.9
	1.2nm,0.2s						
LFF	**La Frestale**	2.86	135	ePn	Pn	09 24 32.6	-3.1
LFF	**La Frestale**	2.86	135	ePg	Pg	09 24 41.5	-4.2
LFF				eSg	Sg	09 25 18.2	-5.6
	3.9nm,0.3s						
LFF	**La Frestale**	2.86	135	ePg	Pg	09 24 41.5	-4.2
LFF				eSg	Sg	09 25 18.2	-5.6
	2.0nm,0.3s						
RJF	**Les Rejaudoux**	3.03	123	ePn	Pn	09 24 35.0	-3.2
RJF	**Les Rejaudoux**	3.03	123	ePg	Pg	09 24 44.5	-4.6
RJF				eSg	Sg	09 25 23.7	-5.8
	4.5nm,0.4s						
RJF	**Les Rejaudoux**	3.03	123	ePg	Pg	09 24 44.5	-4.6
RJF				eSg	Sg	09 25 23.7	-5.8
	2.2nm,0.4s						
TCF	**Toulx Ste Croi**	3.05	102	ePn	Pn	09 24 35.2	-3.2
TCF	**Toulx Ste Croi**	3.05	102	ePg	Pg	09 24 44.9	-4.6
TCF				eSg	Sg	09 25 23.3	-6.8
	1.9nm,0.2s						
TCF	**Toulx Ste Croi**	3.05	102	ePg	Pg	09 24 44.9	-4.6
TCF				eSg	Sg	09 25 23.3	-6.8
	0.9nm,0.2s						
BGF	**Bois d'Agland**	3.42	96	eSn	Sn	09 25 18.0	-7.2
BGF				eSg	Sg	09 25 33.5	-9.0
	8.2nm,0.5s						
CAF	**Calviac**	3.57	124	ePn	Pn	09 24 42.5	-3.3
CAF	**Calviac**	3.57	124	ePg	Pg	09 24 54.6	-5.2
CAF				eSn	Sn	09 25 22.2	-6.7
CAF				eSg	Sg	09 25 40.3	-7.1
	1.4nm,0.2s						
AVF	**Avril sur Loir**	3.74	91	ePn	Pn	09 24 44.2	-4.0
SSF	**Saint Saulge**	3.83	87	ePn	Pn	09 24 45.8	-3.7
SSF				eSg	Sg	09 25 47.9	-8.1
	1.3nm,0.5s						
LOR	**Lormes**	4.07	84	ePg	Pg	09 25 03.5	-6.3
LOR				eSg	Sg	09 25 55.2	-8.9
	2.2nm,0.3s						
ETSF	**Etsaut**	4.25	165	eSn	Sn	09 25 38.6	-7.6
ETSF				eSg	Sg	09 26 02.4	-7.8
	0.5nm,0.2s						
ETSF	**Etsaut**	4.25	165	eSg	Sg	09 26 02.4	-7.8
	0.2nm,0.2s						
EPF	**Esparros**	4.34	156	ePn	Pn	09 24 53.0	-3.7
EPF				eSn	Sn	09 25 40.8	-7.5
EPF				eSg	Sg	09 26 05.0	-8.0
	0.7nm,0.2s						
EPF	**Esparros**	4.34	156	ePn	Pn	09 24 53.0	-3.7
EPF				eSg	Sg	09 26 05.0	-8.0
	0.3nm,0.2s						
LASF	**Ste Croix**	5.10	123	ePn	Pn	09 25 03.2	-4.4
VIVF	**Saint-Julien-l**	5.19	112	ePn	Pn	09 25 04.0	-4.7

WEL 27 09:28:57.6±0.2**, 38.49S**×**177.80E, h30**^{km}±2^{km}**, ML3.5**/7**, 2C, Error ellipse: s-maj=2.0km s-min=1.4km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	**Matawai**	0.26	307	⇑P*	Pb	09 29 04.0	-0.5
MWZ				S*	Sb	09 29 09.3	+0.1
KNZ	**Kokohu**	0.54	190	P*	Pb	09 29 07.9	-0.6
KNZ				S*	Sb	09 29 16.9	+0.9
PUZ	**Puketiti**	0.55	41	P*	Pb	09 29 08.4	-0.4
PUZ				S*	Sb	09 29 17.8	+1.3
PUZ				S*	Sb	09 29 18.2	+1.7
URZ	**Urewera**	0.59	293	⇑P*	Pb	09 29 08.7	-0.7
URZ				S*	Sb	09 29 17.7	+0.3
EDRZ	**Edgecumbe**	0.92	294	PN	Pn	09 29 14.3	-0.3
MXZ	**Matakaoa Point**	1.01	24	ePN	Pn	09 29 15.0	-0.8
TAZ	**Tarawera**	1.05	284	PN	Pn	09 29 16.3	-0.1
WIZ	**White Island**	1.08	333	PN	Pn	09 29 16.1	-0.8
BKZ	**Black Stump Fm**	1.22	236	PN	Pn	09 29 17.9	-1.0
BKZ				SN	Sn	09 29 34.4	-0.1
MOVZ	**Moawhango**	1.84	240	ePN	Pn	09 29 26.7	-1.0
TSZ	**Takapari Road**	2.12	222	PN	Pn	09 29 28.2	-3.5
MRZ	**Mangatainoka R**	2.76	218	PN	Pn	09 29 36.1	-4.8
MTW	**Mount Morrison**	3.20	213	ePN	Pn	09 29 41.2	-5.8
KIW	**Kapiti Island**	3.25	222	ePN	Pn	09 29 43.0	-4.9
CAW	**Cannon Point**	3.35	218	ePN	Pn	09 29 43.3	-6.0
TCW	**Tory Channel**	3.84	224	SN	Sn	09 30 34.1	-6.8
QRZ	**Quartz Range**	4.69	239	ePN	Pn	09 30 02.6	-5.6
KHZ	**Kahutara**	5.09	218	SN	Sn	09 31 01.0	-11
LTZ	**Lake Taylor**	6.00	223	ePN	Pn	09 30 20.8	-6.0
MQZ	**McQueen's Vall**	6.50	215	SN	Sn	09 31 32.5	-15

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*IGIL **27** 10:22:16.3±53.0, 26.70N×55.80E, h2^{km}, MS5.7*

*IDC **27** 10:22:17.7±0.3, 26.89N×55.93E, mb5.7/48, mb1 5.7/49, mb1mx5.7/49, mbtmp5.6/49, ML6.5/1, MS5.8/23, Ms1 5.7/23, ms1mx5.7/28, Error ellipse: s-maj=7.8km s-min=6.9km az=111.0*

*DHMR **27** 10:22:17.0±2.0, 26.77N×55.72E, h9^{km}±185^{km}, mb6.1*

*BJI **27** 10:22:18.1, 27.06N×55.29E, h32^{km}, mB6.2, mb5.9, Ms6.1, Msz5.9*

*CRAAG **27** 10:22:19.1, 26.84N×55.84E, Mb6.1*

*HRVD **27** 10:22:19.2±0.1, 26.66N×55.80E, h12^{km}, MW6.0/88, Centroid moment Tensor Solution. LP body waves: s83,c173;Mantle waves: s88,c332; Half duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.95±.01; M$_{\theta\theta}$-1.03±.01; M$_{\phi\phi}$0.07±.01; M$_{r\theta}$0.23±.03; M$_{\theta\phi}$-0.17±.01; M$_{\phi r}$-0.04±.02; Best double couple: M$_0$1.029×10^{18} NP1: φ$_s$257°, δ39°, λ83°. NP2:φ$_s$86°, δ51°, λ96°. Principal axes: T .981, Plg82°, Azm29°; N .095, Plg5°, Azm263°; P -1.078, Plg6°, Azm172°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*THR **27** 10:22:19.2±0.8, 26.83N×55.82E, h8^{km}±5^{km}, mb6.0, ML5.6*

*NEIC **27** 10:22:19.2±0.1, 26.77N×55.86E, h10^{km}, mb6.1/199, ME5.9, MS5.8/145, MW5.8, MN5.9(TEH), Error ellipse: s-maj=3.7km s-min=2.3km az=203.0 Broadband fault plane solution: P waves. NP1:φ$_s$250°, δ50°, λ90°. NP2: φ$_s$70°, δ40°, λ90°. Principal axes: T Plg85°, Azm160°; N Plg0°, Azm0°; P Plg5°, Azm340°; Moment Tensor Solution. s34 Moment tensor: Scale 10^{17} Nm; M$_{rr}$7.31; M$_{\theta\theta}$-6.30; M$_{\phi\phi}$-1.03; M$_{r\theta}$-0.04; M$_{\theta\phi}$-2.49; M$_{\phi r}$0.09; Best double couple: M$_0$7.3×10^{17} NP1:φ$_s$68°, δ45°, λ89°. NP2: φ$_s$249°, δ45°, λ91°. Principal axes: T 7.31, Plg89°, Azm246°; N -.02, Plg1°, Azm68°; P -7.29, Plg0°, Azm338°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Thirteen people killed and about 100 injured on Qeshm. More than 80 percent of buildings destroyed at Zirang and at least seven villages severely damaged on Qeshm. Felt [III] at Bandar 'Abbas. Felt [IV] at Sharjah, [III] at Abu Dhabi, Ajman, Dubai, Al Fujayrah and Ra's al Khaymah, United Arab Emirates. Felt in Oman.

*MOS **27** 10:22:21.1±1.0, 26.84N×55.82E, h33^{km}, mb6.2/123, MS5.8/54 Error ellipse: s-maj=5.0km s-min=2.2km az=129.2*

*CSEM **27** 10:22:21.1±0.1, 26.66N×55.72E, h45^{km}, mb5.9/50, ML6.3/1, Ms5.8, Error ellipse: s-maj=2.4km s-min=1.6km az=85.0*

*TEH **27** 10:22:23.6, 26.83N×55.73E, h10^{km}, Mn5.9*

*BGS **27** 10:22:25.6, 27.47N×55.22E, h10^{km}, mb5.9*

*SFS **27** 10:22:28.0, 26.86N×54.29E, ML6.2*

ISC 27 10:22:17.5±0.1**, 26.75N**±0.01×**55.83E**±0.01**, h10**^{km}**, (h28**^{km}±4.2^{km}**:pP-P), n1414, σ1^{s}08**/1397**, mb6.0**/331**, MS5.8**/197**, 292C-71D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	0.72	25	ePg	Pg	10 22 32.0	+0.1
BNDS				eSg	Sg	10 22 41.0	-0.5
BNDS	**Bandar-Abbas**	0.72	25	i Pg	Pg	10 22 32.0	+0.1
	SNR=92						
BNDS				eSg	Sg	10 22 41.0	-0.5
	SNR=92						
BANOM	**Banah**	0.92	153	⇑P	Pb	10 22 38.9	+3.8
BANOM				⇓S	Sb	10 22 53.6	+6.4
ASHO	**Ashiyiah**	2.07	174	⇑P	Pn	10 22 57.7	+5.0
ASHO				⇑S	Sn	10 23 29.2	+10
GHIR	**Ghir-Karzin**	2.95	302	ePn	Pn	10 23 08.2	+2.8
GHIR				AML	AML	10 24 10.1	
	comp=N,25μm,0.6s						
GHIR	**Ghir-Karzin**	2.95	302	ePn	Pn	10 23 08.1	+2.8
	SNR=47						
KRBR	**Kerman**	3.33	14	ePn	Pn	10 23 13.2	+2.6
KRBR				Sn	Sn	10 23 51.9	+1.2
KRBR				AML	AML	10 24 09.0	
	comp=N,13μm,0.5s						
KRBR	**Kerman**	3.33	14	ePn	Pn	10 23 13.2	+2.6
	SNR=47						
KRBR				Sn	Sn	10 23 51.9	+1.3
	comp=N,13μm,0.5s,SNR=47						
HOQ	**Hoqain**	3.43	157	⇑P	Pn	10 23 13.3	+1.2
HOQ				⇑S	Sn	10 23 59.2	+6.0
ARQ	**Araqi**	3.46	169	⇑P	Pn	10 23 16.0	+3.5
ISRV	**Sarvestan**	3.55	318	Pn	Pn	10 23 16.9	+3.0
IMOK	**Mook**	3.58	310	Pn	Pn	10 23 17.0	+2.7
BIDO	**Bidbid**	3.83	147	⇑P	Pn	10 23 19.0	+1.2
IPAR	**Pars**	3.94	322	Pn	Pn	10 23 21.9	+2.6
BSY	**Bisya**	4.18	162	⇓P	Pn	10 23 25.6	+2.8
SMDO	**Samad**	4.19	151	⇑P	Pn	10 23 26.1	+3.2
BSYO	**Bisya**	4.20	162	P	Pn	10 23 25.6	+2.5
IMEH	**Mehriz**	4.75	347	Pn	Pn	10 23 32.5	+1.7
JMDO	**Jabal Madar**	4.83	154	⇑P	Pn	10 23 34.8	+2.9
IBAF	**Bafgh**	4.83	357	Pn	Pn	10 23 32.9	+0.9
WBK	**Wadi Bani Khal**	5.01	145	⇓P	Pn	10 23 36.3	+1.7
ZHSF	**Zahedan**	5.22	56	ePn	Pn	10 23 39.0	+1.6
ZHSF	**Zahedan**	5.22	56	i Pn	Pn	10 23 39.0	+1.6
	SNR=47						
ISAD	**Sadrabad**	5.48	341	Pn	Pn	10 23 43.1	+2.0
ICHK	**Chekchek**	5.62	348	Pn	Pn	10 23 44.0	+0.9
IGAR	**Garneh**	6.32	331	Pn	Pn	10 23 55.0	+1.9
NASN	**Na'in**	6.58	337	ePn	Pn	10 23 56.9	+0.2
IZEF	**Zefreh**	6.84	334	Pn	Pn	10 23 58.3	-2.0
QRN	**Al-Qurain**	7.29	288	eP	Pn	10 24 07.0	+0.4
QRN				AML	AML	10 25 29.9	
	comp=Z,2μm,0.3s						
IPIR	**Pirpir**	7.31	325	Pn	Pn	10 24 06.7	-0.2
IKLH	**Kalahroud**	7.51	332	Pn	Pn	10 24 08.1	-1.7
KBD	**Kabd**	7.59	290	eP	Pn	10 24 10.1	-0.7
KBD				AML	AML	10 25 35.1	
	comp=Z,4μm,0.3s						
RDF	**Al-Radifah**	7.64	288	eP	Pn	10 24 11.6	0.0
RDF				AML	AML	10 25 41.3	
	comp=Z,2μm,0.3s						
UMR	**Umm Al-Rimmam**	7.69	293	eP	Pn	10 24 12.3	+0.1
UMR				AML	AML	10 25 41.4	
	comp=Z,2μm,0.3s						
NAY	**Al-Naaiem**	7.99	290	eP	Pn	10 24 16.8	+0.4
NAY				AML	AML	10 25 47.1	
	comp=Z,1μm,0.5s						
MIB	**Mutribah**	8.08	294	eP	P	10 24 18.7	+1.0
MIB				AML	AML	10 25 47.9	
	comp=Z,2μm,0.5s						
ISFB	**Sefidab**	8.19	339	Pn	P	10 24 19.0	-0.2
ISFB				Sn	Sn	10 25 46.7	-6.1
RYDS	**Riyadh**	8.68	255	P	P	10 24 24.3	-1.8
WHFO	**Wadi Hawf**	8.99	193	⇑P	P	10 24 29.6	-0.7
WHFO				⇑S	Sn	10 26 05.8	-7.0
WHFO	**Wadi Hawf**	8.99	193	P	P	10 24 29.6	-0.8
WHFO				S	Sn	10 26 05.8	-6.9
ASAO	**Ashtian**	9.24	329	ePn	P	10 24 33.7	-0.1
IFIR	**Firoozkooh**	9.25	344	Pn	P	10 24 34.0	+0.1
IFIR				Sn	Sn	10 26 10.6	-8.5
RBK	**Rabkut**	9.32	190	⇓P	P	10 24 34.2	-0.8
IDMV	**Damavand**	9.38	341	Pn	P	10 24 35.8	0.0
DAMV	**Damavand**	9.45	341	ePn	P	10 24 36.9	+0.2
ABTO	**Aybut**	9.64	195	⇑P	P	10 24 37.6	-1.7
IAFJ	**Afjeh**	9.74	340	Pn	P	10 24 41.0	+0.3
IMOG	**Moghan**	9.80	17	Pn	P	10 24 42.7	+1.1
IMHD	**Mahdasht**	9.94	335	Pn	P	10 24 43.4	-0.1
CHTH	**Charan**	9.97	337	ePn	P	10 24 44.3	+0.3
MZLS	**Mizel**	9.98	257	P	P	10 24 41.9	-2.1
IRAZ	**Razeghan**	10.00	331	Pn	P	10 24 53.4	+9.1
MHI	**Mashhad**	10.02	17	Pn	P	10 24 47.1	+2.5
IPAY	**Payeh**	10.04	15	Pn	P	10 24 45.6	+0.7
THKV	**Tehran--Karaj**	10.07	336	ePn	P	10 24 45.9	+0.6
IMYA	**Miamay**	10.23	20	Pn	P	10 24 48.3	+0.8
IKRD	**Kardeh**	10.25	12	Pn	P	10 24 53.6	+5.8
IKOM	**Komasi**	10.30	318	Pn	P	10 24 47.2	-1.3
IGHG	**Ghaleghazi**	10.99	316	Pn	P	10 24 56.0	-1.8
VAN	**Vannovskaya**	11.33	9	P	P	10 25 01.3	-1.2
BHD	**Baghdad**	11.86	306	i x	x	10 25 06.5	
BHD				i x	x	10 27 13.0	
AFFS	**'Afif**	11.94	259	P	P	10 25 08.8	-1.9
KAMS	**Al Khamasin**	12.14	241	P	P	10 25 09.4	-4.2
BHJ	**Bhuj**	13.01	103	eP	P	10 25 22.9	-2.3
BHJ				AMb	AMB	10 25 30.5	
	comp=Z,502nm,0.8s						
BHJ				eS	S	10 27 38.3	-13
DRP	**Derazinda**	13.50	65	P	P	10 25 34.4	+2.8
GRMI	**Germi**	13.75	333	ePn	P	10 25 36.2	+1.3
GRMI				AMb	AMB	10 25 37.9	
	comp=Z,287nm,1.6s						
MUKL	**Al Mukalla**	13.76	209	⇓eP	P	10 25 31.9	-3.2
MUKL				i S	S	10 28 05.5	-3.6
SBDP	**Sheikh Budin**	14.16	63	⇑P	P	10 25 38.4	-1.9
MSL	**Mosul**	14.43	314	ex	x	10 25 40.5	
MSL				e		10 26 30.5	
MSL				ex	x	10 28 10.5	
MSL				i x	x	10 30 10.0	
MSL				i x	x	10 30 50.0	
MSL				ex	x	10 32 21.0	
DJNS	**Zahran al Janu**	14.49	234	P	P	10 25 41.0	-3.8
BLJS	**Baljurashi**	14.74	245	P	P	10 25 45.6	-2.4
HKR	**Hakkari**	14.86	320	i P	P	10 25 46.9	-2.6
HKR	**Hakkari**	14.86	320	P	P	10 25 46.8	-2.7
HAKT	**HAKKARI**	14.87	319	i P	P	10 25 45.9	-3.7
KBRS	**Khaybar**	14.89	270	P	P	10 25 50.1	+0.2
THW	**Thamme Wali**	15.07	63	⇑P	P	10 25 49.4	-2.8
SARP	**Sargodha**	15.56	67	P	P	10 25 56.4	-2.3
CEP	**Cherat**	15.57	59	⇓P	P	10 25 57.7	-1.0
MAKU	**Maku**	15.64	326	ePn	P	10 26 02.7	+3.0
MAKU				AMb	AMB	10 26 12.3	
	comp=Z,669nm,1.5s						
MAKU	**Maku**	15.64	326	i Pn	P	10 26 02.7	+3.0
	SNR=47						
SANA	**San'a**	15.65	226	⇓eP	P	10 25 57.2	-2.7
TVAN	**Van**	15.71	321	i P	P	10 26 00.6	+0.1
VANB	**Van**	15.77	322	i P	P	10 26 01.3	0.0
VANB	**Van**	15.77	322	P	P	10 26 01.2	0.0
HAJJ	**Hajjah**	15.82	228	⇓eP	P	10 25 59.1	-3.0
CLDR	**Caldiran**	15.88	324	i P	P	10 26 04.2	+1.6
CLDR	**Caldiran**	15.88	324	P	P	10 26 04.2	+1.5
BDHA	**Al Bayda'**	15.93	219	⇓eP	P	10 26 00.8	-2.6
BDHA				AMb	AMB	10 26 02.3	
	comp=Z,1μm,1.5s						
BDHA				i S	S	10 28 58.2	-2.0
DHBB	**Dhamar BB**	16.15	224	⇑eP	P	10 26 03.6	-2.6
DHBB				AMb	AMB	10 26 05.1	
	comp=Z,752nm,1.7s						
DHBB				i S	S	10 29 03.7	-1.7
LBOS		16.19	220	⇑eP	P	10 26 04.2	-2.6
LBOS				AMb	AMB	10 26 06.3	
	comp=Z,962nm,1.7s						
LBOS				i S	S	10 29 04.6	-1.7
GNI	**Garni**	16.23	328	i P	P	10 26 09.7	+2.5
GNI	**Garni**	16.23	328	eP	P	10 26 08.0	+0.8
	comp=Z,2μm,1.3s						
GNI				eS	S	10 29 02.5	-4.6
GNI	**Garni**	16.23	328	eP	P	10 26 08.0	+0.8
GNI				eS	S	10 29 02.5	-4.7
GNI				pmax	pmax		
	comp=Z,2μm,1.3s						
YNBS	**Yanbu' al Bahr**	16.28	265	P	P	10 26 09.0	+1.2
MARD	**Mardin**	16.52	313	i P	P	10 26 06.0	-4.9
BEST	**Besiri**	16.56	316	i P	P	10 26 08.0	-3.3
CHCP	**Chirah Chowk**	16.56	61	P	P	10 26 10.0	-1.4
BTMT	**Batman**	16.61	317	P	P	10 26 09.2	-2.8
UMJS	**Umm Lajj**	16.72	269	P	P	10 26 14.9	+1.5
AJM	**Ajmer**	16.83	87	eP	P	10 26 14.4	-0.5
AJM				AMb	AMB	10 26 21.8	
	comp=Z,824nm,1.3s						
AJM				eS	S	10 29 22.9	+1.9
UDYN	**Al 'Udayn**	16.88	223	⇓eP	P	10 26 13.0	-2.5
UDYN				i S	S	10 29 20.6	-1.5
DGRG	**David-gareji**	17.01	332	P	P	10 26 18.9	+1.9
TBKS	**Tabuk**	17.17	279	P	P	10 26 20.2	+1.1
DIY	**Diyarbakir**	17.22	314	eP	P	10 26 18.6	-1.0
DIY	**Diyarbakir**	17.22	314	P	P	10 26 18.6	-1.1
BNGL	**BINGOL**	17.30	318	i P	P	10 26 21.2	+0.6
TRBA	**At Turbah**	17.36	221	⇓eP	P	10 26 19.1	-2.5
TRBA				AMb	AMB	10 26 22.5	
	comp=Z,854nm,1.6s						
TRBA				i S	S	10 29 32.8	-0.4
KARS	**Kars**	17.39	326	eP	P	10 26 24.8	+3.0
KARS	**Kars**	17.39	326	P	P	10 26 24.8	+3.0
MTA	**Mtatsminda**	17.45	331	P	P	10 26 24.2	+1.6
BOM	**Bombay**	17.49	113	eP	P	10 26 25.2	+2.1
TI2	**Plekhanov**	17.50	331	α iP	P	10 26 24.4	+1.2
TI2				MLR	MLR		
	comp=E,18μm,16.0s						
TI2				MLR	MLR		
	comp=Z,28μm,16.0s						
TBLG	**Delisi**	17.51	331	P	P	10 26 25.7	+2.5
MAK	**Makhachkala**	17.54	339	i P	P	10 26 26.0	+2.3
MAK	**Makhachkala**	17.54	339	d iP	P	10 26 25.0	+1.3
MAK				eS	S	10 29 38.0	+0.9
MAK				pmax	pmax		
	comp=Z,8μm,2.0s						
MAK				pmax	pmax		
	comp=N,1μm,1.5s						
MAK				pmax	pmax		
	comp=E,5μm,1.5s						
MAK				pmax	pmax		
	comp=E,18μm,7.0s						
MAK				pmax	pmax		
	comp=Z,28μm,7.0s						
MAK				pmax	pmax		
	comp=N,14μm,10.0s						
MAK				smax			
	comp=N,33μm,6.0s						
MAK				smax			
	comp=E,15μm,6.0s						
DBAS	**Duba**	17.70	276	P	P	10 26 27.1	+1.3
ERZM	**Erzurum**	17.81	321	i P	P	10 26 28.8	+1.8
EZM	**Erzurum**	17.81	321	P	P	10 26 29.6	+2.6
AKH	**Akhalkalaki**	17.81	328	P	P	10 26 28.9	+1.9
URFA	**Urfa**	17.90	311	eP	P	10 26 27.7	-0.4
URFA	**Urfa**	17.90	311	P	P	10 26 27.6	-0.5
THN	**Thein Dam**	18.19	67	eP	P	10 26 30.2	-1.7
MKRJ	**Makawir**	18.27	290	P	P	10 26 32.6	-0.2
ATAB	**Bozova**	18.27	310	i P	P	10 26 32.7	-0.1
TAS	**Tashkent**	18.30	34	eP	P	10 26 31.0	-2.1
AYUS	**'Aynunah**	18.30	279	P	P	10 26 33.9	+0.7
FKH	**Fakeheh**	18.31	299	ePn	P	10 26 34.0	+0.6
PTK	**Pertek**	18.34	315	P	P	10 26 33.5	-0.1
PTK	**Pertek**	18.34	315	P	P	10 26 33.5	-0.1
ELZG	**Elazig**	18.37	314	i P	P	10 26 33.9	-0.1
MZDA	**Masada**	18.46	289	P	P	10 26 36.3	+1.1
MZDA	**Masada**	18.46	289	P	P	10 26 35.8	+0.6
JMOS	**Jabal al Moall**	18.46	282	P	P	10 26 36.8	+1.6
ZFRI	**Zfri**	18.51	287	P	P	10 26 37.0	+1.2
POO	**Poona**	18.52	112	eP	P	10 26 35.0	-1.0
POO				eS	S	10 30 07.0	+7.4
AQBJ	**Aqaba**	18.55	284	P	P	10 26 37.8	+1.6
KSDI	**Kefar Szold**	18.60	295	P	P	10 26 37.2	+0.3
MMLI	**Mount Malkishu**	18.62	293	P	P	10 26 38.4	+1.3
MMLI	**Mount Malkishu**	18.62	293	P	P	10 26 38.0	+0.9
EIL	**Elat**	18.63	284	P	P	10 26 37.2	0.0
	comp=E,120nm,0.3s,baz=109,slow=12,SNR=130						
EIL				LR	LR	10 34 58.8	
	comp=E,316μm,18.6s,baz=100,slow=41						
EIL	**Elat**	18.63	284	P	P	10 26 38.6	+1.4
MYA	**Malataya**	18.64	313	P	P	10 26 38.5	+1.2
MYA	**Malataya**	18.64	313	P	P	10 26 38.4	+1.1
PRNI	**Paran**	18.64	286	P	P	10 26 38.9	+1.5
PRNI	**Paran**	18.64	286	P	P	10 26 34.8	-2.6
MBH	**Mount Berech**	18.67	284	P	P	10 26 38.9	+1.2
MBH	**Mount Berech**	18.67	284	P	P	10 26 38.0	+0.3
HWQ	**Hawqa**	18.68	298	ePn	P	10 26 39.2	+1.3
GZT	**Gaziantep**	18.72	309	i P	P	10 26 37.2	-1.1
BHL	**Bhannes**	18.80	297	ePn	P	10 26 40.0	+0.7
KMTI	**Karmit**	18.86	285	P	P	10 26 40.7	+0.7
KMTI	**Karmit**	18.86	285	P	P	10 26 40.9	+0.9
GAZ	**Gaziantep**	18.88	308	P	P	10 26 41.3	+1.1
GAZ	**Gaziantep**	18.88	308	P	P	10 26 41.2	+1.0
MASH	**Mash'abbe Sade**	18.90	288	P	P	10 26 42.2	+1.6
MATL	**Matirih**	18.95	296	ePn	P	10 26 40.6	-0.5
HNTI	**Hanita**	18.97	294	P	P	10 26 42.8	+1.5
HNTI	**Hanita**	18.97	294	P	P	10 26 43.2	+1.9
RTMM	**Retamin**	19.00	288	P	P	10 26 43.0	+1.4
OFRI	**'Ofer**	19.02	293	P	P	10 26 43.2	+1.3
HAF	**Haifa**	19.02	293	P	P	10 26 43.5	+1.5
HAF	**Haifa**	19.02	293	P	P	10 26 43.2	+1.2
SMLA	**Simla**	19.17	72	eP	P	10 26 44.5	+0.8
SMLA				ex	x	10 30 05.2	
HTY	**Hatay**	19.20	304	P	P	10 26 44.8	+0.8
HTY	**Hatay**	19.20	304	P	P	10 26 44.7	+0.7
KZIT	**Kziot**	19.22	287	P	P	10 26 45.3	+0.9
GUMT	**Gumushane**	19.25	319	P	P	10 26 46.1	+1.4
GUMT	**Gumushane**	19.25	319	P	P	10 26 46.0	+1.3
COBT	**Iskenderun**	19.27	305	i P	P	10 26 45.1	+0.2
MACK	**Trabzon**	19.41	321	i P	P	10 26 46.7	+0.2
ATD	**Arta Tunnel**	19.45	221	P	P	10 26 48.0	+0.9
	comp=E,5.0nm,0.3s,baz=30,slow=6.7,SNR=62						
ATD				S	S	10 30 28.6	+8.0
	comp=E,0.8nm,0.3s,baz=6.0,slow=19,SNR=1.8						
ATD				LR	LR	10 34 57.8	
	comp=E,31μm,18.0s,baz=42,slow=39						
CEYT	**Ceyhan**	19.85	306	P	P	10 26 52.6	+1.2
CEYT	**Ceyhan**	19.85	306	P	P	10 26 52.6	+1.2
BHPL	**Bhopal**	19.88	95	eP	P	10 26 52.0	+0.1
BHPL				AMb	AMB	10 27 00.8	
	comp=Z,844nm,1.8s						
BHPL				eS	S	10 30 32.8	+2.9
BHPL				eS	S	10 30 34.3	+4.4
KOZT	**Kozan**	20.00	307	P	P	10 26 54.0	+1.0
KIV	**Kislovodsk**	20.20	332	⇑eP	P	10 26 55.8	+0.7
	comp=Z,3μm,1.1s						
KIV				eS	S	10 30 33.1	-3.2

KIV				LR	LR		
	comp=Z,20µm,20.0s,MS5.5						
KIV	Kislovodsk	20.20	332	c iP	P	10 26 56.1	+1.0
KIV				i S	S	10 30 40.7	+4.4
KIV				pmax	pmax		
	comp=Z,2µm,7.6s						
KIV				pmax	pmax		
	comp=Z,2µm,1.1s						
KIV				MLR	MLR		
	comp=Z,9µm,17.0s,MS5.2						
GRSN	GIRESUNGRSN	20.26	319	i P	P	10 26 55.0	-0.8
SVST	Sivas	20.39	314	i P	P	10 26 59.2	+2.0
PHNC	Paralimni	20.41	299	P	P	10 26 58.7	+1.3
KARA	Karaisali	20.46	306	P	P	10 26 58.6	+0.8
BNN	Bunyan	20.63	311	P	P	10 27 00.7	+1.0
BNN	Bunyan	20.63	311	P	P	10 27 00.7	+1.0
MERS	Mersin	20.69	304	P	P	10 27 00.8	+0.6
LATR	Latur	20.84	109	eP	P	10 27 03.2	+1.3
MEST	Erdemli	20.86	303	i P	P	10 26 59.6	-2.4
CSS	Prodhromos	20.95	298	P	P	10 27 03.1	+0.2
	comp=Z,8.9nm,1.0s						
TOKT	Tokat	20.95	315	P	P	10 27 04.2	+1.2
TOKT	Tokat	20.95	315	P	P	10 27 04.2	+1.2
GOF	Gofitskoye	20.96	334	⇑iP	P	10 27 02.8	-0.2
GOF				pmax	pmax		
	comp=Z,1µm,0.8s						
KSH	Kashi	21.08	48	⇑iP	P	10 27 01.3	-2.9
KSH				S	S	10 30 45.0	-8.9
KSH				AMB	AMB		
	comp=Z,970nm,1.8s,mb5.8						
KSH				LR	LR		
	comp=N,56µm,10.6s						
KSH				LR	LR		
	comp=E,86µm,8.0s						
MAMC	Mammari	21.10	299	P	P	10 27 06.6	+2.2
NIG	Nigde	21.14	308	P	P	10 27 07.3	+2.4
NIG	Nigde	21.14	308	P	P	10 27 07.3	+2.4
AML	Almayashu	21.21	39	P	P	10 27 04.7	-0.9
	SNR=243						
SZAC	Souni-Zanaja	21.24	298	P	P	10 27 07.1	+1.2
AVNT	Avonos	21.27	310	i P	P	10 27 07.4	+1.2
SOC	Sochi	21.28	326	⇑iP	P	10 27 06.1	-0.2
SOC	Sochi	21.28	326	c iP	P	10 27 05.8	-0.5
SOC				e		10 27 27.5	
SOC				i S	S	10 30 59.4	+1.7
SOC				e*SS		10 31 09.3	
SOC				eSS	SS	10 31 17.3	-14
SOC				eSSS	SSS	10 31 28.6	-17
SOC				pmax	pmax		
	comp=Z,2µm,2.2s,mb6.0						
SOC				pmax	pmax		
	comp=Z,352nm,0.9s,mb5.7						
SOC				MLR	MLR		
	comp=Z,23µm,12.0s,MS5.8						
BSTP	Nigde	21.43	307	i P	P	10 27 08.3	+0.6
ALFC	Alevga	21.58	299	P	P	10 27 09.8	+0.5
	comp=Z,9.9nm,0.6s						
EKS2	Erkin-Say	21.60	38	P	P	10 27 09.5	-0.1
	SNR=635						
PTH	Pithoragarh	21.68	77	ex	x	10 27 15.0	
PTH				eS	S	10 31 07.0	+1.7
KVT	Kavak	21.70	316	P	P	10 27 09.8	-0.7
PPCY	Paphos	21.70	298	P	P	10 27 12.2	+1.6
UCH	Uchtor	21.74	40	P	P	10 27 10.7	-0.2
	SNR=91						
ERMK	Ermenek	21.80	303	i P	P	10 27 11.5	-0.1
AAK	Ala-Archa	21.99	39	P	P	10 27 13.9	+0.5
	SNR=77						
AAK	Ala-Archa	21.99	39	⇑eP	P	10 27 12.7	-0.7
	comp=Z,847nm,0.9s,mb6.2						
AAK				eS	S	10 31 13.7	+2.8
AAK				LR	LR		
	comp=Z,5µm,21.0s,MS4.9						
AAK	Ala-Archa	21.99	39	⇑eP	P	10 27 12.7	-0.7
AAK				eS	S	10 31 13.7	+2.8
AAK				pmax	pmax		
	comp=Z,847nm,0.9s,mb6.2						
AAK				MLR	MLR		
	comp=Z,5µm,21.0s,MS4.9						
CDAG	Cicekdag	22.01	311	i P	P	10 27 13.6	0.0
KZA	Kyzart	22.07	41	P	P	10 27 14.6	+0.4
	SNR=218						
CORM	Corum	22.11	313	P	P	10 27 15.1	+0.4
FRU	Bishkek	22.18	39	⇑iP	P	10 27 15.0	-0.3
FRU				i		10 27 38.0	
FRU				i SS	SS	10 32 14.0	+20
FRU				pmax	pmax		
	comp=Z,2µm,1.8s,mb6.1						
FRU				pmax	pmax		
	comp=Z,7µm,6.0s						
CTKT	Corum	22.24	314	i P	P	10 27 17.0	+1.1
KBK	Karagaybulak	22.26	40	P	P	10 27 17.6	+1.6
	SNR=169						
KAMT	Kaman	22.34	310	P	P	10 27 18.0	+1.2
KAMT	Kaman	22.34	310	P	P	10 27 18.0	+1.1
CHMS	Chumysh	22.37	39	P	P	10 27 17.7	+0.6
	SNR=163						
USP	Ospenovka	22.40	38	P	P	10 27 17.7	+0.2
	SNR=184						
MNGI	Mangalore	22.49	124	eP	P	10 27 20.8	+2.2
MNGI				eS	S	10 31 30.2	+10
BR131	Keskin Array S	22.55	311	⇑eP	P	10 27 19.7	+0.6
	comp=Z,204nm,0.8s,mb5.6						
BR131				eS	S	10 31 28.6	+7.3
BRTR	Keskin Array B	22.55	311	P	P	10 27 19.9	+0.9
	comp=Z,177nm,0.9s,mb5.5,baz=130,slow=12,SNR=313						
BRTR				PcP	PcP	10 31 13.3	-0.5
	comp=Z,16nm,0.8s,baz=149,slow=3.3,SNR=4.9						
BRTR				S	S	10 31 28.6	+7.2
	comp=Z,8.0nm,1.0s,baz=138,slow=19,SNR=3.2						
BRTR				ScP		10 34 49.4	
	comp=Z,4.2nm,0.7s,baz=153,slow=5.8,SNR=5.2						
BRTR				P3KPbc		11 01 00.8	
	comp=Z,1.0nm,0.5s,slow=2.9,SNR=5.8						
BRTR				PKPPKP		11 02 30.4	
	comp=Z,1.9nm,0.9s,baz=90,slow=3.7,SNR=4.8						
BOYT	Boyabat	22.60	316	i P	P	10 27 20.1	+0.6
KONT	Konya--Tatoy	22.69	305	P	P	10 27 22.9	+2.5
KONT	Konya--Tatoy	22.69	305	P	P	10 27 22.9	+2.5
BYBT	Boyabat	22.71	316	P	P	10 27 21.9	+1.3
BYBT	Boyabat	22.71	316	P	P	10 27 21.8	+1.2
ULHL	Ulahol	22.76	42	P	P	10 27 22.2	+1.1
	SNR=131						
TKM2	Tokmak 2	22.80	40	P	P	10 27 21.8	+0.4
	SNR=228						
TOS	Tosya	22.95	314	P	P	10 27 23.8	+0.8
TOS	Tosya	22.95	314	P	P	10 27 23.7	+0.8
HYB	Hyderabad	22.98	109	⇑iP	P	10 27 24.5	+1.0
	comp=Z,1µm,1.6s,mb6.0						
HYB				eS	S	10 31 24.0	-5.3
HYB				LR	LR	10 38 52.0	
	comp=Z,27nm,16.0s						
HYB	Hyderabad	22.98	109	⇑eP	P	10 27 24.5	+1.0
	comp=Z,1µm,1.6s,mb6.0						
HYB				eS	S	10 31 32.0	+2.7
HYB	Hyderabad	22.98	109	⇑eP	P	10 27 24.5	+1.0
HYB				eS	S	10 31 32.0	+2.7
HYB				pmax	pmax		
	comp=Z,1µm,1.6s,mb6.0						
CANT	Cankiri	23.00	313	P	P	10 27 25.1	+1.8
CANT	Cankiri	23.00	313	P	P	10 27 25.1	+1.7
ELDT	Eldivan	23.07	312	i P	P	10 27 24.6	+0.6
KDHN	Kadinhani	23.09	306	i P	P	10 27 27.6	+3.2
ANTO	Ankara	23.20	310	P	P	10 27 26.4	+1.1
ANTO	Ankara	23.20	310	⇑eP	P	10 27 26.6	+1.3
	comp=Z,1µm,1.3s,mb6.1						
ANTO				LR	LR		
	comp=Z,24µm,20.0s,MS5.7						
ANTO	Ankara	23.20	310	⇑eP	P	10 27 26.6	+1.3
ANTO				pmax	pmax		
	comp=Z,1µm,1.3s,mb6.1						
ANTO				MLR	MLR		
	comp=Z,24µm,20.0s,MS5.7						
LOD	Lodumlu	23.23	310	P	P	10 27 28.0	+2.4
ANN	Anapa	23.30	325	⇑iP	P	10 27 26.5	+0.2
ANN	Anapa	23.30	325	c iP	P	10 27 26.5	+0.2
ANN				i S	S	10 31 37.3	+2.7
ANN				pmax	pmax		
	comp=Z,4µm,5.5s						
KIZT	Kizilcal	23.41	307	eP	P	10 27 29.4	+2.0
ANTB	Antalya	23.60	302	eP	P	10 27 28.8	-0.5
BALT	Daday	23.62	314	i P	P	10 27 30.0	+0.6
AKTO	Aktyubinsk	23.71	3	P	P	10 27 30.6	+0.4
	comp=Z,134nm,0.6s,mb5.5,baz=177,slow=9.7,SNR=209						
AKTO				S	S	10 31 43.6	+1.9
	comp=Z,14nm,0.9s,baz=325,slow=18,SNR=1.7						
AKTO				ScP		10 34 52.6	
	comp=Z,13nm,0.9s,baz=176,slow=13,SNR=4.4						
AKTO				LR	LR	10 37 57.7	
	comp=Z,30µm,21.6s,MS5.7,slow=40						
AAA	Alma-Ata	23.79	41	⇑iP	P	10 27 32.4	+1.3
AAA	Alma-Ata	23.79	41	eP	P	10 27 32.0	+0.9
AAA				eS	S	10 31 48.0	+4.8
AAA				pmax	pmax		
	comp=Z,12µm,4.5s						
AAA				smax			
	comp=E,24µm,14.5s						
AAA				MLR	MLR		
	comp=Z,62µm,10.5s,MS6.4						
BCK	Bucak	23.83	303	eP	P	10 27 33.3	+1.8
BCK	Bucak	23.83	303	P	P	10 27 33.2	+1.7
SAFT	Safranbolu	23.92	313	eP	P	10 27 33.9	+1.5
SAFT	Safranbolu	23.92	313	P	P	10 27 33.9	+1.5
ISP	Isparta	24.02	304	eP	P	10 27 34.2	+0.8
ISP	Isparta	24.02	304	⇑iP	P	10 27 34.7	+1.3
	comp=Z,306nm,0.7s,mb5.8						
ISP	Isparta	24.02	304	⇑iP	P	10 27 34.7	+1.4
ISP				pmax	pmax		
	comp=Z,306nm,0.7s,mb5.8						
SGKT	Sivrigoynuk	24.02	311	i P	P	10 27 34.3	+1.0
SLAT	Slait	24.09	248	i P	P	10 27 35.3	+1.0
	baz=56,slow=12						
SLAT				AMb	AMB	10 27 41.0	
	comp=Z,1µm,1.8s,mb6.0						
SLAT				⇑iS	S	10 31 59.4	+11
ELL	Elmali	24.12	301	eP	P	10 27 36.8	+2.4
ELL	Elmali	24.12	301	P	P	10 27 36.8	+2.4
KSL	Kastellorizon	24.21	299	eP	P	10 27 37.1	+1.9
AKAS	Kas	24.22	299	i P	P	10 27 34.4	-0.9
TKTP	Tekketepe	24.23	304	i P	P	10 27 35.8	+0.4
ESKT	Eskisehir	24.40	308	eP	P	10 27 39.5	+2.5
ESKT	Eskisehir	24.40	308	i P	P	10 27 37.5	+0.5
ESKT	Eskisehir	24.40	308	P	P	10 27 39.5	+2.5
MRKH	Merkhyat	24.43	248	i P	P	10 27 39.2	+1.6
MRKH				AMb	AMB	10 27 44.4	
	comp=Z,2µm,2.1s,mb6.1						
MRKH				⇓iS	S	10 32 05.0	+11
MRKH				⇓iS	S	10 32 06.9	+12
GOLH	Golhisar	24.54	302	i P	P	10 27 38.9	+0.5
MDU	Mudurnu	24.55	310	eP	P	10 27 39.9	+1.4
MDU	Mudurnu	24.55	310	P	P	10 27 39.8	+1.4
KOLN	Koldanda	24.69	81	eP	P	10 27 41.2	+1.2
	comp=Z,1µm,1.1s,mb6.3						
FETY	Fethiye	24.73	300	eP	P	10 27 38.7	-1.6
FETY	Fethiye	24.73	300	P	P	10 27 38.6	-1.7
ALT	Altintas	24.75	306	eP	P	10 27 42.6	+2.2
ALT	Altintas	24.75	306	P	P	10 27 42.5	+2.1
BORA	Eskisehir	24.82	308	i P	P	10 27 42.3	+1.2
HENT	Hendek	24.92	311	i P	P	10 27 42.1	+0.1
DNZL	Cakiroluk	25.06	302	i P	P	10 27 44.2	+0.7
GPA	Golpazari	25.09	309	eP	P	10 27 45.0	+1.3
GPA	Golpazari	25.09	309	P	P	10 27 44.9	+1.2
DENT	Denizli	25.09	303	eP	P	10 27 44.7	+1.0
DENT	Denizli	25.09	303	P	P	10 27 44.7	+1.0
DALT	Dalyan (Mudla)	25.11	300	eP	P	10 27 43.9	0.0
DALT	Dalyan (Mudla)	25.11	300	P	P	10 27 43.9	0.0
SIM	Simferopol’	25.16	322	c iP	P	10 27 45.5	+1.2
SIM				i S	S	10 32 08.4	+2.0
GDZ	Gediz	25.21	306	i P	P	10 27 44.5	-0.3
ARG	Arkhangelos	25.37	299	eP	P	10 27 47.8	+1.5
YER	Yerkesik	25.48	301	eP	P	10 27 49.3	+1.9
YER	Yerkesik	25.48	301	P	P	10 27 49.2	+1.8
GKN	Gorkha	25.59	81	eP	P	10 27 49.6	+1.1
	comp=Z,1µm,1.4s,mb6.2						
HRT	Hereke	25.76	310	eP	P	10 27 49.8	-0.1
HRT	Hereke	25.76	310	P	P	10 27 49.8	-0.2
ULDT	Uludag	25.86	308	i P	P	10 27 51.2	+0.3
YLV	Yalova	25.86	309	eP	P	10 27 50.8	-0.1
YLV	Yalova	25.86	309	P	P	10 27 50.7	-0.2
GBZT	Gebze	25.90	309	P	P	10 27 51.1	-0.2
MLSB	Milas	25.92	301	eP	P	10 27 52.4	+0.9
MLSB	Milas	25.92	301	P	P	10 27 52.3	+0.8
DAT	Datca	25.92	300	eP	P	10 27 45.3	-6.2
AYDN	Tasoluk	25.94	302	i P	P	10 27 52.6	+1.0
KARP	Karpathos	25.98	297	eP	P	10 27 51.4	-0.7
ORLT	Orhaneli	25.99	307	eP	P	10 27 51.1	-1.0
ORLT	Orhaneli	25.99	307	P	P	10 27 51.0	-1.1
DST	Dursunbey	26.02	306	eP	P	10 27 53.1	+0.8
DST	Dursunbey	26.02	306	P	P	10 27 53.1	+0.7
DMN	Daman	26.04	81	eP	P	10 27 53.9	+1.2
	comp=Z,1µm,1.6s,mb6.2						
BDRM	Kayabasi	26.11	300	i P	P	10 27 54.6	+1.3
BADT	Buyukada	26.15	309	eP	P	10 27 53.4	-0.2
BADT	Buyukada	26.15	309	P	P	10 27 53.3	-0.3
KKN	Kakani	26.18	81	eP	P	10 27 55.2	+1.3
	comp=Z,1µm,1.2s,mb6.3						
KKN	Kakani	26.18	81	eP	P	10 27 55.2	+1.3
KKN				pmax	pmax		
	comp=Z,585nm,1.2s,mb6.0						
BODT	Bodrum	26.21	300	eP	P	10 27 53.6	-0.6
BODT	Bodrum	26.21	300	P	P	10 27 53.6	-0.6
ISK	Istanbul-Kandi	26.28	310	eP	P	10 27 54.2	-0.6
ISK	Istanbul-Kandi	26.28	310	P	P	10 27 54.1	-0.7
PKI	Pulchoki	26.31	81	eP	P	10 27 56.2	+1.0
	comp=Z,1µm,1.3s,mb6.2						
PKI	Pulchoki	26.31	81	eP	P	10 27 56.2	+1.0
PKI				pmax	pmax		
	comp=Z,584nm,1.3s,mb6.0						
AKS	Akhisar	26.36	304	eP	P	10 27 57.8	+2.3
AKS	Akhisar	26.36	304	P	P	10 27 57.8	+2.3
BTOK	Tokmak	26.50	306	i P	P	10 27 57.6	+0.7
BALB	Balikesir	26.57	306	eP	P	10 27 57.8	+0.4
BALB	Balikesir	26.57	306	P	P	10 27 57.8	+0.4
VRHR	Novokhopersk	26.61	340	eP	P	10 27 58.0	+0.3
VRHR				e*PP	pP	10 28 05.8	+5.2
VRHR				eS	S	10 32 37.3	+6.8
VRHR				pmax	pmax		
	comp=E,50nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,180nm,0.5s,mb5.9						
VRHR				pmax	pmax		
	comp=N,130nm,0.9s						
VRHR				smax			
	comp=N,26µm,7.3s						
VRHR				smax			
	comp=Z,10µm,5.0s						
VRHR				smax			
	comp=E,6µm,3.7s						
VRHR				MLR	MLR		
	comp=N,12µm,24.0s						
VRHR				MLR	MLR		
	comp=E,6µm,18.0s						
KDAG	Bornova	26.62	303	i P	P	10 27 57.9	-0.1
MDRS	Chennai	26.62	116	eP	P	10 27 59.5	+1.4
ZKR	Zakros	26.66	295	eP	P	10 27 59.3	+1.0
GUN	Gumba	26.70	81	eP	P	10 28 00.0	+1.3
	comp=E,757nm,0.9s,mb6.2						
ELBA	Catalca	26.75	309	i P	P	10 27 59.1	0.0
CTT	Catalca	26.75	309	eP	P	10 27 57.4	-1.7
BNT	Bandirma	26.80	308	eP	P	10 28 00.7	+1.2
BNT	Bandirma	26.80	308	P	P	10 28 00.7	+1.2
VIS	Vishakhapatnam	26.95	104	eP	P	10 28 01.8	+0.7
VIS				AMb	AMB	10 28 13.3	
	comp=Z,150nm,1.7s,mb5.2						
JIRN	Jiri	26.99	81	eP	P	10 28 02.5	+1.1
	comp=Z,363nm,0.9s,mb5.9						
TRD	Trivandrum	27.02	128	ex	x	10 28 16.6	
TRD				ex	x	10 33 10.6	
XRY	Khrisi	27.04	295	eP	P	10 28 03.0	+1.2
URLA	Izmir	27.11	303	i P	P	10 28 01.9	-0.5
MRMT	Marmara Adasi	27.12	308	eP	P	10 28 01.9	-0.5
MRMT	Marmara Adasi	27.12	308	P	P	10 28 01.9	-0.6
BOK	Bokaro	27.31	90	eP	P	10 28 05.6	+1.2
BOK				AMb	AMB	10 28 13.2	
	comp=Z,738nm,1.4s,mb6.0						
AYVA	Ayvalik	27.33	305	i P	P	10 28 05.6	+1.2
MFT	Murefte	27.41	308	eP	P	10 28 04.3	-0.8
MFT	Murefte	27.41	308	P	P	10 28 04.3	-0.8
SANT	Santorini	27.50	298	eP	P	10 28 06.9	+0.9
VRSR	Storozhevoye	27.51	337	eP	P	10 28 04.6	-1.4
VRSR				i PPP	PPP	10 28 54.2	-12
VRSR				eS	S	10 32 42.9	-2.2
VRSR				e*SS		10 32 58.1	
VRSR				eSS	SS	10 33 59.9	-3.0
VRSR				smax			
	comp=N,20nm,1.2s						
VRSR				smax			
	comp=E,20nm,1.5s						
VRSR				smax			
	comp=Z,10.0nm,1.5s						
APE	Apeiranthos	27.60	299	eP	P	10 28 07.8	+0.9
APE	Apeiranthos	27.60	299	eP	P	10 28 07.8	+0.9
PRK	Paraskevi	27.61	304	eP	P	10 28 07.6	+0.6
EZN	Ezine	27.76	305	eP	P	10 28 09.0	+0.7
EZN	Ezine	27.76	305	P	P	10 28 08.9	+0.6
IDI	Anoyia	27.76	295	P	P	10 28 09.9	+1.6
	comp=Z,277nm,0.6s,mb6.1,baz=90,slow=9.3,SNR=116						
IDI				S	S	10 32 53.0	+3.8
	comp=Z,11nm,0.8s,baz=189,slow=19,SNR=1.7						
SIVA	Sivas	27.78	295	eP	P	10 28 08.9	+0.3
VOR	Voronezh	27.94	338	eP	P	10 28 09.5	-0.3
VOR				e		10 28 19.5	
VOR				S	S	10 32 51.0	-1.0
VOR				pmax	pmax		
	comp=N,330nm,1.5s						
VOR				pmax	pmax		
	comp=E,150nm,1.5s						
VOR				pmax	pmax		
	comp=Z,360nm,1.5s,mb5.8						
VOR				smax			
	comp=N,980nm,1.7s						
VOR				smax			
	comp=E,630nm,1.7s						
VOR				smax			
	comp=Z,360nm,2.0s						
PSN	Preselentsi	28.02	314	i P	P	10 28 11.2	+0.6
EDRB	Edirne	28.19	310	eP	P	10 28 12.3	+0.2
EDRB	Edirne	28.19	310	P	P	10 28 12.3	+0.1
TIRR	Tirgusor	28.25	316	⇓P	P	10 28 12.5	-0.2
TIRR	Tirgusor	28.25	316	⇓P	P	10 28 12.5	-0.2
TIRR	Tirgusor	28.25	316	P	P	10 28 13.6	+0.9
PRD	Provadia	28.31	313	i P	P	10 28 13.7	+0.5
ALN	Alexandroupoli	28.32	307	eP	P	10 28 13.7	+0.3
VAM	Vamos	28.34	296	eP	P	10 28 15.0	+1.4
GVD	Gavdhos	28.34	294	eP	P	10 28 14.6	+1.0
BRVK	Borovoye	28.41	18	eP	P	10 28 13.3	-0.7
	comp=Z,80nm,0.6s,mb5.5						
BRVK				LR	LR		
	comp=Z,2µm,20.0s,MS4.8						
BRVK	Borovoye	28.41	18	eP	P	10 28 13.3	-0.7
BRVK				pmax	pmax		
	comp=Z,80nm,0.6s,mb5.5						
BRVK				MLR	MLR		
	comp=Z,2µm,20.0s,MS4.8						
BVAR	Borovoye Array	28.41	19	P	P	10 28 13.3	-0.8
	comp=Z,219nm,0.8s,mb5.9,baz=202,slow=8.0,SNR=406						
BVAR				PcP	PcP	10 31 25.5	-1.2
	comp=Z,21nm,0.9s,baz=212,slow=2.7,SNR=7.9						
BVAR				S	S	10 32 56.7	-2.9
	comp=Z,3.7nm,0.8s,baz=180,slow=22,SNR=1.9						
BVAR				ScP		10 35 07.5	
	comp=Z,12nm,0.9s,baz=207,slow=3.2,SNR=3.5						
BVAR				P3KPbc		11 00 33.2	
	comp=Z,3.1nm,0.8s,baz=90,slow=4.4,SNR=3.6						
BVAR				P4KPbc		11 06 55.4	
	comp=Z,1.0nm,0.6s,baz=195,slow=7.5,SNR=5.3						
BVAR	Borovoye Array	28.41	19	P	P	10 28 13.3	-0.8
BVAR				PcP	PcP	10 31 25.5	-1.2
BVAR				S	S	10 32 56.7	-2.9
BVAR				ScP		10 35 07.5	
BVAR				e		11 00 33.2	
JMB	Yambol	28.54	311	P	P	10 28 16.7	+1.3
LIA	Limnos Island	28.62	305	eP	P	10 28 17.2	+1.2
LOS	Limnos	28.70	305	eP	P	10 28 18.3	+1.5
RDO	Rodhopi	28.77	308	eP	P	10 28 17.6	+0.2
CFR	Carcaliu	28.78	317	⇓P	P	10 28 16.0	-1.4
MKAR	Makanchi Array	28.92	39	P	P	10 28 18.3	-0.4
	comp=Z,46nm,0.8s,mb5.3,baz=226,slow=8.0,SNR=376						
MKAR				S	S	10 33 07.1	-0.8
	comp=Z,4.8nm,0.8s,baz=264,slow=14,SNR=2.5						
MKAR				LR	LR	10 41 45.6	
	comp=Z,12µm,21.2s,MS5.5,baz=258,slow=41						
KDZ	Kurdzhali	29.03	309	i P	P	10 28 20.7	+0.9
KDZ	Kurdzhali	29.03	309	P	P	10 28 20.5	+0.7
KDZ	Kurdzhali	29.03	309	P	P	10 28 20.5	+0.7
CHKZ	Chkalovo	29.05	18	⇑iP	P	10 28 18.6	-1.2
	comp=Z,24nm,0.4s,mb5.3						
CHKZ	Chkalovo	29.05	18	⇑iP	P	10 28 18.6	-1.2
CHKZ				pmax	pmax		
	comp=Z,23nm,0.4s,mb5.3						
ATH	Athens Observa	29.21	301	eP	P	10 28 21.4	0.0
SZH	Strazhica	29.31	312	i P	P	10 28 22.3	+0.1
KIS	Kishinev	29.35	321	⇑iP	P	10 28 20.0	-2.6
KIS	Kishinev	29.35	321	α iP	P	10 28 21.5	-1.1
KIS				i		10 29 18.0	
KIS				i S	S	10 33 12.0	-2.6
KIS				i		10 34 44.0	
KIS				pmax	pmax		
	comp=Z,200nm,1.0s,mb5.8						
KIS				pmax	pmax		
	comp=Z,2µm,10.0s						
KIS				pmax	pmax		
	comp=Z,2µm,15.0s						
KIS				smax			
	comp=E,3µm,6.0s						
KIS				MLR	MLR		
	comp=Z,13µm,24.0s,MS5.5						
KIS				MLR	MLR		
	comp=Z,14µm,19.0s						
KIS				MLR	MLR		
	comp=N,11µm,13.0s						
KIS				MLR	MLR		
	comp=E,16µm,18.0s						
AOS	Alonnisos	29.38	303	eP	P	10 28 24.2	+1.3
KYTH	Kithira	29.41	297	eP	P	10 28 23.0	-0.2
RZN	Rozhen	29.54	308	i P	P	10 28 24.5	+0.2
RZN	Rozhen	29.54	308	P	P	10 28 24.8	+0.5
VLI	Veliai	29.56	298	eP	P	10 28 23.4	-1.2
KURK	Kurchatov	29.58	30	⇑iP	P	10 28 24.1	-0.6
	comp=E,77nm,0.7s,mb5.5						
KURK				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
KURK	Kurchatov	29.58	30	⇑iP	P	10 28 24.1	-0.5
KURK				pmax	pmax		
	comp=Z,77nm,0.7s,mb5.5						
KURK				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.1						
OUR	Ouranopolis	29.63	305	eP	P	10 28 25.4	+0.3
PVL	Pavlikeni	29.69	311	i P	pP	10 28 36.7	+8.1
PLD	Plovdiv	29.70	309	i P	P	10 28 26.7	+1.0
BUC1	Bucharest	29.71	314	P	P	10 28 27.1	+1.3
ARU	Arti	29.72	3	eP	P	10 28 24.5	-1.3
	comp=Z,57nm,0.8s,mb5.3						
ARU				LR	LR		
	comp=Z,6µm,21.0s,MS5.2						
ARU	Arti	29.72	3	⇓iP	P	10 28 24.6	-1.2
ARU				e		10 29 20.1	
ARU				ePPP	PPP	10 29 29.8	-6.4
ARU				e		10 31 23.7	
ARU				eS	S	10 33 20.2	-0.3
ARU				eSS	SS	10 34 49.3	-5.6
ARU				eSSS	SSS	10 35 07.8	-7.8
ARU				e		10 38 59.3	
ARU				pmax	pmax		
	comp=Z,50nm,1.3s,mb5.1						
ARU				MLR	MLR		
	comp=E,3µm,19.0s,MS5.6						
ARU				MLR	MLR		
	comp=Z,18µm,19.0s,MS5.7						
ARU				MLR	MLR		
	comp=N,14µm,18.0s,MS5.6						
PAIG	Paliouri	29.73	304	eP	P	10 28 27.5	+1.4
CAL	Calcutta	29.79	91	eP	P	10 28 23.0	-3.8
CAL				ex	x	10 32 51.4	
ZIMR		29.84	312	⇑P	P	10 28 28.2	+1.1
ZIMR		29.84	312	⇑P	P	10 28 28.2	+1.1
NEO	Neokhori	29.90	303	eP	P	10 28 27.8	+0.2
LKR	Lokris	29.91	302	eP	P	10 28 27.8	+0.1
XOR	Xorichti	29.94	303	eP	P	10 28 28.7	+0.7
NVR	Nevrokopi	30.03	307	eP	P	10 28 29.3	+0.6
PLG	Polygyros	30.03	305	eP	P	10 28 29.3	+0.6
IAS	Iasi	30.17	320	P	P	10 28 30.3	+0.4
MMB	Musomiste	30.20	308	i P	P	10 28 30.0	-0.2
MMB	Musomiste	30.20	308	i P	P	10 28 30.0	-0.2
PGB	Panagyurishte	30.23	310	i P	P	10 28 30.3	-0.1
SOH	Sokhos	30.23	306	eP	P	10 28 31.1	+0.6
SVE	Sverdlovsk	30.25	5	⇑eP	P	10 28 30.0	-0.5
SVE				e		10 29 25.0	
SVE				e		10 31 34.0	
SVE				eS	S	10 33 28.0	-0.9
SVE				e		10 33 48.0	

SVE				pmax	pmax		
	comp=Z,220nm,1.9s,mb5.6						
SVE				MLR	MLR		
	comp=N,16µm,11.0s,MS6.1						
SVE				MLR	MLR		
	comp=E,19µm,11.0s,MS6.1						
SVE				MLR	MLR		
	comp=Z,42µm,11.0s,MS6.3						
MLR	Muntele Rosu	30.28	316	P	P	10 28 32.3	+1.4
	comp=Z,115nm,0.7s,mb5.7,baz=194,slow=4.8,SNR=72						
MLR				LR	LR	10 42 37.6	
	comp=Z,31µm,20.4s,MS5.9,baz=348,slow=40						
MLR	Muntele Rosu	30.28	316	⇓P	P	10 28 32.3	+1.4
MLR	Muntele Rosu	30.28	316	⇓P	P	10 28 32.2	+1.4
MLR	Muntele Rosu	30.28	316	P	P	10 28 31.8	+0.9
ITM	Ithomi	30.44	298	eP	P	10 28 31.6	-0.8
THE	Thessaloniki	30.45	305	eP	P	10 28 32.6	+0.1
AGG	Agios Georgios	30.51	302	eP	P	10 28 32.8	-0.1
PALK	Pallekele	30.56	125	eP	P	10 28 33.1	-0.6
	comp=Z,35nm,1.0s,mb5.2						
PALK				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
KNT	Kendrikon	30.66	306	eP	P	10 28 35.0	+0.7
MTUR	Matau	30.71	315	P	P	10 28 34.8	+0.1
PECR	Pechory	30.73	347	deP	P	10 28 33.2	-1.6
PECR				e		10 29 39.0	
PECR				e		10 31 35.0	
PECR				i S	S	10 33 34.0	-2.5
PECR				eSS	SS	10 35 43.0	+25
PECR				smax			
	comp=N,4µm,4.0s						
PECR				smax			
	comp=E,3µm,4.0s						
PECR				MLR	MLR		
	comp=E,8µm,13.0s,MS5.8						
PECR				MLR	MLR		
	comp=Z,13µm,13.0s,MS5.8						
PECR				MLR	MLR		
	comp=N,11µm,12.0s,MS5.8						
KKB	Krupnik	30.75	308	i P	P	10 28 35.0	0.0
KKB	Krupnik	30.75	308	i P	P	10 28 35.0	0.0
VOIR		30.82	315	⇑P	P	10 28 36.2	+0.6
VOIR		30.82	315	⇑P	P	10 28 36.2	+0.6
WMQ	Urumqi	30.84	48	⇑iP	P	10 28 36.5	+0.6
WMQ				AP	pP	10 28 46.0	+7.2
WMQ				XP	sP	10 28 50.0	+10
WMQ				PP	PP	10 29 38.0	+0.8
WMQ				PPP	PPP	10 29 53.0	+0.9
WMQ				PCP	PcP	10 31 33.0	+0.1
WMQ				S	S	10 33 38.0	-0.4
WMQ				XS		10 33 53.0	
WMQ				SS	SS	10 35 20.0	-1.0
WMQ				AMB	AMB		
	comp=Z,170nm,1.7s,mb5.6						
WMQ				AMB	AMB		
	comp=Z,4µm,5.3s						
WMQ				LR	LR		
	comp=N,28µm,15.4s,MS6.1						
WMQ				LR	LR		
	comp=E,18µm,18.5s,MS6.1						
WMQ				LR	LR		
	comp=Z,24µm,20.8s,MS5.8						
EVR	Evrytania	30.88	302	eP	P	10 28 35.5	-0.7
VTS	Vitosha	30.90	309	i P	P	10 28 36.5	+0.1
VTS	Vitosha	30.90	309	i P	P	10 28 37.0	+0.6
VAY	Valandovo	30.94	307	eP	P	10 28 34.3	-2.4
VAY	Valandovo	30.94	307	⇑iP	P	10 28 36.4	-0.4
VAY	Valandovo	30.94	307	⇑iP	P	10 28 36.4	-0.4
GRG	Griva	30.96	306	eP	P	10 28 37.6	+0.7
RLS	Riolos of Patr	30.96	300	eP	P	10 28 37.5	+0.5
CRAR	CRAIOVA	31.15	313	P	P	10 28 39.8	+1.3
LSA	Lhasa	31.19	76	P	P	10 28 40.0	+0.9
LSA				AP	pP	10 28 49.8	+7.8
LSA				XP	sP	10 28 53.5	+10
LSA				PCP	PcP	10 31 33.0	-1.0
LSA				S	S	10 33 42.8	-1.1
LSA				XS		10 34 02.3	
LSA				SCP		10 35 13.8	
LSA				PCS		10 35 16.8	
LSA				SCS	ScS	10 39 10.8	-0.8
LSA				AMB	AMB		
	comp=Z,120nm,1.1s,mb5.6						
LSA				AMB	AMB		
	comp=Z,3µm,6.9s						
LSA				LR	LR		
	comp=N,12µm,21.1s						
LSA				LR	LR		
	comp=E,17µm,15.5s						
LSA				LR	LR		
	comp=Z,19µm,17.4s,MS5.8						
LSA	Lhasa	31.19	76	⇑eP	P	10 28 40.8	+1.7
	comp=Z,110nm,0.8s,mb5.7						
LSA				LR	LR		
	comp=Z,11µm,20.0s,MS5.5						
LSA	Lhasa	31.19	76	⇑eP	P	10 28 40.8	+1.7
LSA				pmax	pmax		
	comp=Z,110nm,0.8s,mb5.7						
LSA				MLR	MLR		
	comp=Z,11µm,20.0s,MS5.5						
MSEY	Mahe Island	31.24	181	eP	P	10 28 38.4	-1.3
	comp=Z,46nm,0.8s,mb5.4						
MSEY				LR	LR		
	comp=Z,4µm,19.0s,MS5.1						
KZN	Kozani	31.24	304	eP	P	10 28 38.7	-0.7
AKASG	Malin Array Be	31.36	327	P	P	10 28 39.0	-1.4
	comp=Z,86nm,0.6s,mb5.8,baz=135,slow=8.3,SNR=468						
AKASG				PcP	PcP	10 31 33.5	-0.7
	comp=Z,33nm,0.7s,baz=102,slow=2.5,SNR=11						
AKASG				PKiKP		10 39 01.5	
	comp=Z,1.5nm,0.6s,baz=105,slow=1.0,SNR=4.9						
OBN	Obninsk	31.64	339	⇑eP	P	10 28 42.0	-0.7
	comp=Z,493nm,1.2s,mb6.2						
OBN				LR	LR		
	comp=Z,2µm,20.0s,MS4.9						
OBN	Obninsk	31.64	339	c iP	P	10 28 42.1	-0.6
OBN				e		10 31 31.0	
OBN				i S	S	10 33 47.1	-3.5
OBN				pmax	pmax		
	comp=Z,377nm,1.3s,mb6.1						
OBN				MLR	MLR		
	comp=Z,9µm,17.0s,MS5.5						
FNA	Florina	31.66	305	eP	P	10 28 43.7	+0.7
VLS	Valsamata	31.66	300	eP	P	10 28 42.6	-0.5
BURAR	Bucovina Array	31.75	319	⇑P	P	10 28 44.0	+0.2
BURAR	Bucovina Array	31.75	319	⇑P	P	10 28 44.0	+0.1
BIA	Bitola	31.76	305	⇑iP	P	10 28 44.4	+0.4
BIA	Bitola	31.76	305	⇑iP	P	10 28 44.4	+0.5
JAN	Janina	31.77	303	eP	P	10 28 44.2	+0.1
MOS	Moscow	31.83	340	⇑iP	P	10 28 44.2	-0.2
MOS	Moscow	31.83	340	α iP	P	10 28 44.6	+0.2
MOS				ePPP	PPP	10 29 51.1	-14
MOS				eS	S	10 33 46.5	-7.1
MOS				e		10 39 10.3	
MOS				pmax	pmax		
	comp=Z,2µm,2.9s,mb6.4						
MOS				pmax	pmax		
	comp=Z,389nm,1.7s,mb6.0						
MOS				MLR	MLR		
	comp=Z,13µm,19.0s,MS5.6						
MOS				MLR	MLR		
	comp=N,11µm,17.0s						
BARS	Barje	31.94	309	⇓iP	P	10 28 45.1	-0.4
SKO	Skopje	31.95	307	⇑iP	P	10 28 46.7	+1.1
SKO	Skopje	31.95	307	⇑iP	P	10 28 46.7	+1.1
DJES	Djerdap	32.11	312	eP	P	10 28 47.4	+0.5
IGT	Igoumenitsa	32.13	302	eP	P	10 28 47.3	+0.1
OHR	Ohrid	32.17	305	⇑iP	P	10 28 46.8	-0.7
OHR	Ohrid	32.17	305	⇑iP	P	10 28 46.8	-0.7
SHL	Shillong	32.32	84	⇑iP	P	10 28 48.5	-0.5
SHL				eS	S	10 34 04.0	+2.4
KEK	Kerkira	32.57	303	eP	P	10 28 50.6	-0.5
SOKR	Solikamsk	32.81	1	d iP	P	10 28 53.1	+0.2
SOKR				S	S	10 34 09.1	+0.2
SOKR				SSS	SSS	10 36 26.4	-4.6
SOKR				pmax	pmax		
	comp=Z,170nm,0.8s,mb6.0						
SOKR				MLR	MLR		
	comp=Z,19µm,18.0s,MS5.8						
SVIS	Svilajnac	32.85	311	⇓iP	P	10 28 53.9	+0.4
DRGR		32.88	316	⇑P	P	10 28 53.0	-0.6
DRGR		32.88	316	⇑P	P	10 28 53.0	-0.6
QSH	Qafa e Shtames	32.92	306	i p	P	10 28 52.8	-1.3
KMBO	Kilima Mbogo	32.99	216	P	P	10 28 57.4	+2.4
	comp=Z,71nm,1.0s,mb5.6,baz=29,slow=11,SNR=123						
KMBO				LR	LR	10 42 28.9	
	comp=Z,19µm,18.7s,MS5.8,baz=21,slow=36						
GRUS	Gruza	33.06	310	eP	P	10 28 51.5	-3.7
BZS	Buzias	33.08	314	⇓P	P	10 28 55.7	+0.3
BZS	Buzias	33.08	314	⇓P	P	10 28 55.7	+0.2
PVY	Plav	33.17	308	⇓iP	P	10 28 56.0	-0.3
IVA	Berane	33.30	308	⇓iP	P	10 28 57.4	0.0
ULC	Ulcinj	33.51	306	⇓iP	P	10 28 58.1	-1.1
BEO	Belgrade	33.55	312	⇓iP	P	10 28 59.1	-0.4
LVV	L’vov	33.56	322	eP	P	10 28 58.1	-1.4
DIVS	Divcibare	33.62	310	eP	P	10 29 00.6	+0.5
TTG	Podgorica	33.63	307	⇓iP	P	10 28 59.4	-0.8
NVSS	Nova Varos 2	33.63	309	⇓iP	P	10 28 58.2	-2.0
PLE	Pljevlja	33.79	309	⇓iP	P	10 29 01.9	+0.3
BUM	Brajici-Budva	33.85	307	⇓iP	P	10 29 01.3	-0.9
NKY	Niksic	33.92	308	⇓iP	P	10 29 01.1	-1.6
UPM	Unac-Piva	34.09	308	⇓iP	P	10 29 01.9	-2.3
KOLS	Kolonicke sedl	34.11	319	eP	P	10 29 05.1	+0.8
HCY	Herceg Novi	34.18	307	⇓iP	P	10 29 04.0	-1.0
KWP	Kalwaria	34.20	321	eP	P	10 29 05.1	0.0
	comp=Z,2µm,2.6s,mb6.5						
KWP				epP	pP	10 29 16.0	+7.9
KWP				ePcP	PcP	10 31 43.3	+1.2
KWP				eS	S	10 34 30.3	-0.2
KWP				esS		10 34 48.0	
KWP				MLR	MLR	10 43 50.9	
	comp=Z,15µm,32.3s,MS5.5						
NVS	Novosibirsk	34.48	28	⇑iP	P	10 29 05.8	-1.6
NVS				i S	S	10 34 32.5	-2.3
NVS				pmax	pmax		
	comp=Z,490nm,1.4s,mb6.2						
NVS				pmax	pmax		
	comp=N,445nm,1.6s						
NVS				pmax	pmax		
	comp=E,102nm,1.0s						
NVS				smax			
	comp=N,265nm,1.9s						
NVS				smax			
	comp=E,289nm,2.2s						
MNK	Minsk	34.50	331	eP	P	10 29 04.0	-3.6
MNK				eS	S	10 34 29.0	-6.1
MNK				pmax	pmax		
	comp=Z,2µm,1.0s,mb6.9						
MNK				pmax	pmax		
	comp=E,950nm,1.0s						
MNK				MLR	MLR		
	comp=Z,10µm,16.0s,MS5.7						
CRVS	Cervenica-Dubn	34.57	319	eP	P	10 29 08.5	+0.2
CRVS				i S	S	10 34 35.2	-1.1
CRVS				eL		10 44 22.3	
STON	Ston	34.86	307	i P	P	10 29 11.2	+0.4
STHS	Stebnicka Huta	34.94	320	eP	P	10 29 11.7	+0.3
KECS	Kecovo	34.97	318	i P	P	10 29 11.9	+0.2
GRI	Girifalco	35.00	300	P	P	10 29 13.0	+1.0
PSZ	Piszkesteto	35.09	317	⇓iP	P	10 29 13.6	+0.9
PSZ	Piszkesteto	35.09	317	P	P	10 29 12.5	-0.2
PSZ				pmax	pmax		
	comp=Z,120nm,1.0s,mb5.8						
TDS	Terranova Siba	35.19	302	P	P	10 29 15.8	+2.1
PKSM	Moragy	35.23	313	⇑eP	P	10 29 13.8	-0.2
CEL	Celeste	35.33	299	P	P	10 29 16.1	+1.2
PKS8	Sarbogard	35.45	314	⇑eP	P	10 29 15.6	-0.2
BUD	Budapest	35.45	316	ePd		10 29 16.6	
BUD	Budapest	35.45	316	⇓eP	P	10 29 16.6	+0.7
MTTG	Motta San Giov	35.46	299	P	P	10 29 17.7	+1.7
SCLL	Scilla	35.47	299	P	P	10 29 17.9	+1.8
NIE	Niedzica	35.48	319	⇑iP	P	10 29 16.1	+0.1
RHK1	Bakonya	35.56	313	⇓eP	P	10 29 16.4	-0.4
PKSG		35.82	315	⇑eP	P	10 29 18.9	0.0
SLCN	Sala Consilina	35.84	303	P	P	10 29 20.7	+1.5
KLMR	Klimovskoe	35.86	346	d iP	P	10 29 16.8	-2.3
KLMR				i		10 30 37.4	
KLMR				i S	S	10 34 51.0	-5.1
KLMR				pmax	pmax		
	comp=Z,730nm,2.0s,mb6.3						
KLMR				pmax	pmax		
	comp=Z,600nm,5.9s						
KLMR				smax			
	comp=E,3µm,3.7s						
KLMR				MLR	MLR		
	comp=Z,10µm,14.0s,MS5.8						
VYHS	Vyhne	35.97	317	i P	P	10 29 20.2	0.0
VYHS				i S	S	10 34 52.2	-5.7
VYHS				eL		10 45 30.9	
MRLC	Muro Lucano	36.01	303	P	P	10 29 21.8	+1.2
SRO	Srobarova	36.02	316	i P	P	10 29 21.1	+0.4
LIKS	Likavka	36.03	318	i P	P	10 29 21.0	+0.3
FG4	Candela	36.06	304	P	P	10 29 22.8	+1.8
	comp=Z,130nm,0.5s,mb6.1						
FG4	Candela	36.06	304	P	P	10 29 22.8	+1.8
FG4				pmax	pmax		
	comp=Z,130nm,0.5s,mb6.1						
RGNG	Rignano Grg	36.11	305	P	P	10 29 21.7	+0.2
SGO	Sicignano	36.11	303	P	P	10 29 22.6	+1.1
	comp=Z,676nm,1.2s,mb6.5						
SGO	Sicignano	36.11	303	P	P	10 29 22.6	+1.1
SGO				pmax	pmax		
	comp=Z,677nm,1.2s,mb6.5						
OJC	Ojcow	36.13	320	⇑iP	P	10 29 21.5	-0.1
OJC				ePcP	PcP	10 31 47.6	-0.1
OJC				eS	S	10 34 53.5	-7.0
SLNA	Salina	36.19	299	P	P	10 29 24.2	+2.0
SUW	Suwalki	36.32	327	eP	P	10 29 22.3	-0.7
	comp=Z,900nm,1.1s,mb6.6						
SUW				epP	pP	10 29 33.1	+7.0
SUW				ePcP	PcP	10 31 48.2	0.0
SUW				eS	S	10 35 01.7	-1.6
SUW				esS		10 35 18.5	
SUW				MLR	MLR	10 46 17.2	
	comp=Z,12µm,23.9s,MS5.6						
CSSN	Cassano Irpino	36.38	303	P	P	10 29 25.7	+2.0
MBAR	Mbarara	36.38	226	PFAKE		10 29 40.0	+16
MBAR				LR	LR		
	comp=Z,1.0nm,21.0s						
VAE	Valguarnera	36.42	298	P	P	10 29 27.4	+3.3
	comp=Z,502nm,0.8s,mb6.5,baz=28,slow=1.9,SNR=47						
VAE	Valguarnera	36.42	298	P	P	10 29 27.4	+3.3
WAR	Warsaw	36.44	324	eP	P	10 29 28.2	+4.1
WAR				ePP	PP	10 30 50.9	+3.0
WAR				eS	S	10 35 04.8	-0.3
WAR				esS		10 35 20.3	
WAR				MLR	MLR	10 46 39.7	
	comp=Z,23µm,23.7s,MS5.9						
CIGN	Sant’Elia a Pi	36.61	305	P	P	10 29 27.0	+1.4
	comp=Z,1µm,1.7s,mb6.5						
GIB	Gibilmanna	36.77	298	P	P	10 29 28.3	+1.3
	comp=Z,487nm,0.9s,mb6.3						
GIB	Gibilmanna	36.77	298	P	P	10 29 28.3	+1.3
GIB				pmax	pmax		
	comp=Z,487nm,0.9s,mb6.3						
JAVC	Velka Javorina	36.82	317	P	P	10 29 28.4	+1.0
SMOL	Smolenice	36.84	316	eP	P	10 29 27.4	-0.1
KOGS	Kog	36.87	313	eP	P	10 29 27.9	+0.1
ZST	Bratislava	36.92	316	i P	P	10 29 28.1	-0.1
OKC	Ostrava-Krasne	36.93	319	⇑iP	P	10 29 27.8	-0.5
OKC				ePP	PP	10 31 03.5	+9.3
OKC				AMS	AMS	10 47 10.0	
	comp=Z,15µm,15.6s						
SGG	Gregorio Mates	36.95	304	P	P	10 29 29.9	+1.4
RAC	Raciborz	37.00	319	eP	P	10 29 29.0	+0.1
RAC				eS	S	10 35 03.7	-10
RAC				LMN		10 45 02.4	
RAC				LME		10 45 46.2	
RAC				MLR	MLR	10 49 04.4	
	comp=Z,10µm,21.4s,MS5.6						
RAC	Raciborz	37.00	319	eP	P	10 29 29.0	+0.1
RAC				eS	S	10 35 03.7	-10
RAC				LR	LR		
	comp=Z,13µm,24.3s,MS5.6						
CII	Carovilli	37.06	305	P	P	10 29 31.4	+1.9
SOP	Sopron	37.08	315	⇑iP	P	10 29 29.4	-0.2
MIDA	Miranda	37.09	304	P	P	10 29 31.3	+1.6
	comp=Z,274nm,0.9s,mb6.1						
RNI2	Rionero Sannit	37.17	305	P	P	10 29 32.4	+2.0
	comp=Z,2µm,2.1s,mb6.5						
MSC	Monte Massico	37.22	304	P	P	10 29 32.6	+1.8
RFI	Roccamonfina	37.23	304	P	P	10 29 33.0	+2.2
	comp=Z,44nm,1.0s,mb5.2						
BOJS	Bojanci	37.26	311	eP	P	10 29 31.5	+0.4
BOJS				e		10 30 15.6	
BOJS				ePP	PP	10 31 00.4	+2.1
BOJS				eS	S	10 35 12.2	-5.6
MORC	Moravsky Berou	37.26	318	eP	P	10 29 30.6	-0.5
	comp=Z,193nm,0.9s,mb5.9						
MORC	Moravsky Berou	37.26	318	P	P	10 29 30.8	-0.2
MORC				pmax	pmax		
	comp=Z,190nm,1.0s,mb5.9						
LEGS	Legarje	37.34	312	eP	P	10 29 32.0	+0.3
CLTB	Caltabellotta	37.37	298	P	P	10 29 34.5	+2.4
	comp=Z,1µm,1.4s,mb6.5						
PUL	Pulkovo	37.39	339	i P	P	10 29 32.5	+0.5
PUL	Pulkovo	37.39	339	i P	P	10 29 31.7	-0.3
PUL				i		10 30 53.0	
PUL				i S	S	10 35 16.7	-2.9
PUL				pmax	pmax		
	comp=E,293nm,1.0s						
PUL				pmax	pmax		
	comp=Z,371nm,1.0s,mb6.2						
PUL				pmax	pmax		
	comp=N,331nm,1.1s						
PUL				pmax	pmax		
	comp=Z,195nm,0.6s,mb6.1						
PUL				pmax	pmax		
	comp=N,282nm,0.9s						
PUL				pmax	pmax		
	comp=E,156nm,0.9s						
INTR	Introdacqua	37.41	305	P	P	10 29 33.1	+0.7
	comp=E,1µm,1.7s,mb6.4						
USI	Ustica	37.50	299	P	P	10 29 34.9	+1.8
	comp=E,1µm,1.1s,mb6.6						
CRJA	Costa Raja	37.56	298	P	P	10 29 35.8	+2.1
	comp=E,557nm,0.8s,mb6.3						
MMGO	Monte Magaggia	37.57	298	P	P	10 29 35.9	+2.1
	comp=E,223nm,0.8s,mb6.0						
DGAR	Diego Garcia	37.59	152	eP	P	10 29 35.0	+0.8
	comp=E,1µm,1.9s,mb6.3						
DGAR				LR	LR		
	comp=Z,5µm,20.0s,MS5.3						
DGAR	Diego Garcia	37.59	152	eP	P	10 29 35.0	+0.8
DGAR				pmax	pmax		
	comp=Z,1µm,1.9s,mb6.3						
DGAR				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.3						
VVLD	Villa Vallelon	37.59	305	P	P	10 29 33.2	-0.7
ARSA	Arzberg	37.60	314	⇓iP	P	10 29 34.0	+0.1
	comp=Z,1µm,3.1s,SNR=39						
ARSA	Arzberg	37.60	314	P	P	10 29 33.8	-0.1
MFNL	Monte Finestre	37.62	298	P	P	10 29 36.5	+2.3
	comp=Z,315nm,0.7s,mb6.2						
VRAC	Vranov	37.65	317	P	P	10 29 34.4	+0.1
	comp=Z,153nm,0.9s,mb5.7,baz=107,slow=8.3,SNR=149						
VRAC	Vranov	37.65	317	⇑P	P	10 29 34.7	+0.4
VRAC	Vranov	37.65	317	P	P	10 29 34.4	+0.1
VRAC				pmax	pmax		
	comp=Z,153nm,0.9s						
VSU	Vasula	37.67	335	⇑iP	P	10 29 33.7	-0.7
TERO	Teramo	37.74	306	P	P	10 29 36.1	+0.9
MTGR	Montagna Grand	37.76	298	P	P	10 29 37.3	+2.0
	comp=Z,36nm,0.5s,mb5.4						
PTQR	Pietraquaria	37.78	305	P	P	10 29 36.2	+0.7
AQU	L’Aquila	37.84	305	P	P	10 29 37.4	+1.4
	comp=Z,560nm,0.9s,mb6.3						
AQU	L’Aquila	37.84	305	P	P	10 29 37.1	+1.1
AQU				pmax	pmax		
	comp=Z,500nm,1.0s,mb6.2						
CEY	Cerknica	37.88	311	eP	P	10 29 36.8	+0.5
LJU	Ljubljana	37.90	312	eP	P	10 29 37.1	+0.7
LJU				ePP	PP	10 31 08.8	+2.9
LJU				eS	S	10 35 21.6	-5.8
LJU				eSS	SS	10 38 15.2	+12
ERC	Erice	37.90	298	P	P	10 29 38.3	+1.7
	comp=Z,1µm,1.0s,mb6.5						
OBKA	Obir	38.01	312	⇑iP	P	10 29 37.7	+0.3
	comp=Z,2µm,3.0s,SNR=13						
CERT	Cerreto	38.08	305	P	P	10 29 38.7	+0.7
	comp=Z,291nm,1.3s,mb5.8						
DPC	Dobruska-Polom	38.21	319	⇑iP	P	10 29 38.7	-0.3
DPC				ePP	PP	10 31 17.3	+7.6
DPC				eS	S	10 35 28.3	-3.9
DPC				AMS	AMS	10 45 30.0	
	comp=Z,18µm,26.5s						
DPC	Dobruska-Polom	38.21	319	⇑iP	P	10 29 38.7	-0.3
DPC				eS	S	10 35 28.3	-3.9
DPC				MLR	MLR		
	comp=Z,18µm,26.5s,MS5.8						
MTCE	Montecelio	38.26	305	P	P	10 29 39.7	+0.1
TREC	Trest	38.32	317	⇑iP	P	10 29 39.8	-0.1
TREC				eS	S	10 35 29.9	-3.9
VOY	Vojsko	38.32	311	eP	P	10 29 38.7	-1.3
VOY				e	pP	10 29 40.4	-2.6
VOY				e		10 29 50.2	
SNTG	Esanatoglia	38.34	307	P	P	10 29 40.8	+0.6
MNS	Montasola	38.37	305	P	P	10 29 41.1	+0.7
KSP	Ksiaz	38.42	320	eP	P	10 29 40.8	0.0
	comp=Z,2µm,2.8s,mb6.4						
KSP				epP	pP	10 29 50.4	+6.6
KSP				ePcP	PcP	10 31 55.1	+0.4
KSP				eS	S	10 35 33.2	-2.2
KSP				esS		10 35 50.4	
KSP				eSS	SS	10 38 37.9	+23
KSP				MLR	MLR	10 45 55.9	
	comp=Z,33µm,27.8s,MS6.0						
KSP	Ksiaz	38.42	320	⇑eP	P	10 29 40.6	-0.2
KSP				epP	pP	10 29 43.2	-0.6
KSP				ePP	PP	10 31 08.0	-4.2
KSP				eS	S	10 35 28.5	-6.9
KSP				eSS	SS	10 38 24.0	+9.1
KSP				LR	LR		
	comp=Z,40µm,24.6s,MS6.1						
KSP	Ksiaz	38.42	320	⇑eP	P	10 29 40.6	-0.2
KSP				e		10 31 08.0	
KSP				eS	S	10 35 28.5	-6.9
KSP				MLR	MLR		
	comp=Z,40µm,24.6s,MS6.1						
UPC	Upice	38.46	319	⇑iP	P	10 29 40.9	-0.2
DRE	Drenchia	38.52	311	⇑iP	P	10 29 41.0	-0.7
MOA	Molln	38.60	314	i P	P	10 29 42.1	-0.2
	comp=Z,1µm,2.9s,mb6.1,SNR=153						
MOA	Molln	38.60	314	P	P	10 29 42.0	-0.3
GTA	Gaotai	38.60	60	⇑iP	P	10 29 43.3	+0.9
GTA				AP	pP	10 29 48.0	+2.6
GTA				PP	PP	10 31 15.5	+1.1
GTA				PCP	PcP	10 31 56.3	+0.9
GTA				S	S	10 35 38.8	+0.6
GTA				SCP		10 35 42.0	
GTA				PCS		10 35 43.8	
GTA				XS		10 35 50.8	
GTA				SS	SS	10 38 19.0	+0.1
GTA				SCS	ScS	10 39 51.3	+0.1
GTA				AMB	AMB		
	comp=Z,300nm,1.4s,mb5.8						
GTA				AMB	AMB		
	comp=Z,3µm,7.2s						
GTA				LR	LR		
	comp=N,15µm,17.0s,MS6.0						
GTA				LR	LR		
	comp=E,10µm,13.9s,MS6.0						
GTA				LR	LR		
	comp=Z,16µm,15.2s,MS6.0						
MURB	Monte Urbino	38.64	307	P	P	10 29 44.3	+1.6
	comp=Z,580nm,1.2s,mb6.2						
LSR	Lussari	38.68	312	⇑iP	P	10 29 43.0	0.0
COLI	Coloredo	38.69	311	⇓iP	P	10 29 43.0	-0.1
BAD	Bernadia	38.81	311	⇓eP	P	10 29 43.0	-1.1
BUA	Buia	38.88	311	⇓eP	P	10 29 45.0	+0.3
BADI	Badiali	38.89	307	P	P	10 29 46.6	+1.8
	comp=Z,367nm,0.9s,mb6.1						
PLRO	Paularo	38.95	312	⇑eP	P	10 29 45.0	-0.3
KBA	Koelnbreinsper	38.97	313	⇑eP	P	10 29 45.4	0.0
	comp=Z,577nm,1.6s,mb6.1,SNR=22						
KBA	Koelnbreinsper	38.97	313	P	P	10 29 45.4	0.0
MPRI	Monte Prat	38.98	311	⇓iP	P	10 29 45.0	-0.5
ZOU	Zoufplan	39.07	312	⇓iP	P	10 29 47.0	+0.7
PRU	Pruhonice	39.14	318	⇑iP	P	10 29 46.2	-0.6
PRU				ePP	PP	10 31 28.4	+7.9
PRU				eS	S	10 35 42.0	-4.2
PRU				AMS	AMS	10 47 30.0	
	comp=Z,14µm,18.4s						
PRU	Pruhonice	39.14	318	⇑iP	P	10 29 46.2	-0.6
PRU				eS	S	10 35 42.0	-4.2
PRU				MLR	MLR		
	comp=Z,14µm,18.4s,MS5.8						
PRA	Prague	39.23	318	⇑P	P	10 29 49.0	+1.4
PRA				ex	x	10 35 54.0	
PRA				AMS	AMS	10 50 20.0	
GEC2	GERESS Array S	39.27	316	eP	P	10 29 47.7	-0.2
	comp=Z,1µm,2.6s,mb6.1						

GEC2	**GERESS Array S**	**39.27**	**316**	*e*P	**P**	**10 29 47.7**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,1µm,2.6s,mb6.1						
GERES	**GERESS Array B**	**39.27**	**316**	P	**P**	**10 29 47.3**	**-0.6**
	comp=Z,40nm,0.7s,mb5.3,baz=110,slow=7.3,SNR=246						
GERES				PKiKP		10 39 08.3	
	comp=Z,0.8nm,0.6s,baz=90,slow=3.9,SNR=4.3						
GERES				LR	LR	10 48 18.8	
	comp=Z,8µm,19.0s,MS5.6,baz=111,slow=40						
CSMI	**Casera Mimoias**	**39.27**	**312**	⇓*e*P	**P**	**10 29 49.0**	**+1.0**
PVCC	**Panska Ves**	**39.32**	**318**	⇑*i*P	**P**	**10 29 47.8**	**-0.5**
PVCC				*e*S	**S**	**10 35 43.9**	**-5.0**
PVCC				AMS	AMS	10 47 50.0	
	comp=Z,11µm,19.8s						
KHC	**Kasperske Hory**	**39.44**	**316**	⇑*i*P	**P**	**10 29 48.9**	**-0.4**
KHC				*e*x	x	10 30 08.5	
KHC				*e*x	x	10 30 30.5	
KHC				*e*x	x	10 35 41.5	
KHC				AMS	AMS	10 47 40.0	
	comp=Z,10µm,19.2s						
KHC	**Kasperske Hory**	**39.44**	**316**	⇑*i*P	**P**	**10 29 48.9**	**-0.4**
KHC				*e*S	**S**	**10 35 41.5**	**-9.2**
KHC				LR	LR		
	comp=Z,10µm,19.2s,MS5.7						
KRAR	**Krasnoyarsk**	**39.54**	**32**	*i* P	**P**	**10 29 50.4**	**+0.4**
JOF	**Joensuu**	**39.61**	**343**	*e*p	**P**	**10 29 50.1**	**-0.5**
	comp=Z,12nm,0.3s,mb5.1						
BRG	**Berggiesshubel**	**39.81**	**319**	*i* P	**P**	**10 29 52.0**	**-0.4**
	comp=Z,176nm,1.1s,mb5.7						
BRG				PP	PP	10 31 25.0	-2.8
BRG				*e*PcP	PcP	10 31 57.4	-1.7
BRG				S	**S**	**10 36 00.0**	**+3.6**
BRG				SS	SS	10 38 57.0	+12
BRG				LR	LR		
	comp=Z,16µm,31.2s,MS5.7						
BRG	**Berggiesshubel**	**39.81**	**319**	*i* P	**P**	**10 29 52.0**	**-0.4**
BRG						10 31 25.0	
BRG				*e*		10 31 57.4	
BRG				S	**S**	**10 36 00.0**	**+3.6**
BRG				pmax	pmax		
	comp=Z,176nm,1.1s,mb5.7						
WET	**Wettzell**	**39.88**	**316**	*e*P	**P**	**10 29 52.3**	**-0.6**
	comp=Z,1µm,2.6s,mb6.1						
WET				*e*S	**S**	**10 35 53.9**	**-3.5**
WET	**Wettzell**	**39.88**	**316**	*e*P	**P**	**10 29 52.3**	**-0.6**
WET				*e*S	**S**	**10 35 53.9**	**-3.5**
WET				pmax	pmax		
	comp=Z,1µm,2.6s,mb6.1						
ZCCA	**Zocca**	**39.95**	**308**	P	**P**	**10 29 55.1**	**+1.5**
FINES	**FINESS Array B**	**40.04**	**338**	P	**P**	**10 29 53.5**	**-0.6**
	comp=Z,37nm,0.5s,mb5.4,baz=138,slow=9.7,SNR=484						
FINES				PcP	PcP	10 31 58.5	-1.2
	comp=Z,23nm,0.6s,baz=129,slow=3.7,SNR=5.7						
FINES	**FINESS Array B**	**40.04**	**338**	P	**P**	**10 29 53.5**	**-0.7**
FINES				PcP	PcP	10 31 58.5	-1.2
WTTA	**Wattenberg**	**40.14**	**313**	⇑*i*P	**P**	**10 29 54.8**	**-0.3**
	comp=Z,938nm,1.4s,mb6.3,SNR=207						
WTTA	**Wattenberg**	**40.14**	**313**	P	**P**	**10 29 54.7**	**-0.4**
WATA	**Walderalm**	**40.20**	**313**	⇓*i*P	**P**	**10 29 54.8**	**-0.8**
	comp=Z,361nm,1.1s,mb6.0,SNR=144						
WATA	**Walderalm**	**40.20**	**313**	P	**P**	**10 29 54.7**	**-0.9**
MAIM		**40.21**	**307**	P	**P**	**10 29 54.3**	**-1.4**
SARO	**Sassorosso**	**40.32**	**308**	P	**P**	**10 29 55.1**	**-1.6**
VLC	**Villacollemand**	**40.33**	**308**	*e*P	**P**	**10 29 56.5**	**-0.2**
	comp=Z,223nm,1.0s,mb5.8						
ERBM	**Eremo**	**40.35**	**308**	P	**P**	**10 29 55.8**	**-1.1**
CHG	**Chiang Mai**	**40.38**	**92**	P	**P**	**10 29 58.6**	**+1.3**
	comp=Z,150nm,1.1s,mb5.6						
DGI	**Dorgali Grotta**	**40.40**	**302**	P	**P**	**10 29 58.8**	**+1.5**
	comp=Z,821nm,3.0s						
SQTA	**Sankt Quirin**	**40.41**	**312**	⇑*i*P	**P**	**10 29 56.8**	**-0.6**
	comp=Z,228nm,1.0s,mb5.9,SNR=388						
SQTA	**Sankt Quirin**	**40.41**	**312**	P	**P**	**10 29 56.7**	**-0.6**
BERN	**Bernov**	**40.45**	**317**	⇑P	**P**	**10 30 02.6**	**+5.0**
KAF	**Kangasniemi**	**40.45**	**339**	*e*p	**P**	**10 29 57.2**	**-0.3**
VALM		**40.46**	**308**	P	**P**	**10 29 57.0**	**-0.8**
NKC	**Novy Kostel**	**40.49**	**317**	⇑*i*P	**P**	**10 29 57.9**	**0.0**
NKC				*e*S	**S**	**10 36 04.2**	**-2.3**
NKC				AMS	AMS	10 51 00.0	
	comp=Z,16µm,15.5s						
VINC	**Vinca**	**40.49**	**308**	P	**P**	**10 29 56.5**	**-1.6**
RUE	**Ruedersdorf**	**40.51**	**321**	*e*P	**P**	**10 29 57.2**	**-0.8**
	comp=Z,278nm,1.0s,mb5.8						
VSL	**Villasalto**	**40.51**	**300**	*e*P	**P**	**10 29 59.5**	**+1.2**
	comp=Z,666nm,1.1s,mb6.2						
MOTA	**Moosalm**	**40.51**	**313**	*i* P	**P**	**10 29 57.3**	**-0.9**
	comp=Z,306nm,1.1s,mb5.9,SNR=211						
MOTA	**Moosalm**	**40.51**	**313**	P	**P**	**10 29 57.2**	**-1.0**
CLL	**Collm**	**40.52**	**319**	⇑P	**P**	**10 29 58.2**	**0.0**
	comp=Z,logA/T=2.4,mb5.8						
CLL				*i* *PP	pP	10 30 01.8	+0.6
CLL				*i*		10 30 09.7	
CLL				*e*PP	PP	10 31 30.0	-5.1
CLL				*i*		10 31 45.6	
CLL				*e*S	**S**	**10 36 05.0**	**-2.0**
CLL				*e*SS	SS	10 39 13.0	+12
CLL				*e*SCS	ScS	10 39 54.0	-8.3
CLL	**Collm**	**40.52**	**319**	⇑*i*P	**P**	**10 29 58.2**	**0.0**
	comp=Z,329nm,1.3s,mb5.8						
CLL				*i*	pP	10 30 01.8	+0.6
CLL				*i* pP	pP	10 30 09.7	+8.5
CLL				*e*S	**S**	**10 36 05.0**	**-2.0**
CLL				LR	LR		
	comp=Z,11µm,19.0s,MS5.7						
CLL	**Collm**	**40.52**	**319**	⇑*i*P	**P**	**10 29 58.2**	**0.0**
CLL				*i* *PP	pP	10 30 09.7	+8.5
CLL				*e*S	**S**	**10 36 05.0**	**-2.0**
CLL				pmax	pmax		
	comp=Z,329nm,1.3s,mb5.8						
CLL				MLR	MLR		
	comp=Z,11µm,19.0s,MS5.7						
BACM		**40.57**	**308**	P	**P**	**10 29 57.0**	**-1.7**
FUR	**Furstenfeldbru**	**40.61**	**314**	*e*P	**P**	**10 29 58.6**	**-0.4**
	comp=Z,610nm,1.4s,mb6.0						
FUR	**Furstenfeldbru**	**40.61**	**314**	*e*P	**P**	**10 29 58.6**	**-0.4**
FUR				pmax	pmax		
	comp=Z,610nm,1.4s,mb6.0						
GRAM		**40.61**	**308**	P	**P**	**10 29 57.8**	**-1.2**
CODM		**40.75**	**308**	P	**P**	**10 29 59.2**	**-1.0**
CHRT	**Chiangrai**	**40.79**	**90**	⇓P	**P**	**10 30 00.0**	**-0.7**
	comp=Z,316nm,1.2s,mb5.8						
FUORN	**Ofenpass**	**40.90**	**311**	⇑*i*P	**P**	**10 30 01.5**	**+0.1**
BSD	**Bornholm Skovb**	**41.01**	**325**	⇓*i*P	**P**	**10 30 00.9**	**-1.2**
	comp=Z,255nm,0.9s,mb5.8						
BSD				*i*		10 30 06.0	
BSD	**Bornholm Skovb**	**41.01**	**325**	⇓*i*P	**P**	**10 30 00.9**	**-1.2**
BSD				*i*		10 30 06.0	
BSD				pmax	pmax		
	comp=Z,255nm,0.9s,mb5.8						
BERNI	**Berninapass**	**41.02**	**311**	⇑*i*P	**P**	**10 30 02.7**	**+0.4**
GRA1	**Grafenberg Arr**	**41.08**	**316**	*e*P	**P**	**10 30 02.9**	**+0.1**
	comp=Z,432nm,1.1s,mb6.0						
GRA1				*e*PP	PP	10 31 42.2	+1.5
GRA1				*e*S	**S**	**10 36 09.8**	**-5.4**
GRA1				LR	LR		
	comp=Z,10µm,21.1s,MS5.6						
GRF	**Grafenberg Arr**	**41.08**	**316**	*e*P	**P**	**10 30 02.9**	**+0.1**
	comp=Z,432nm,1.1s,mb6.0						
GRF				*e*PP	PP	10 31 42.2	+1.5
GRF				*e*S	**S**	**10 36 09.8**	**-5.4**
GRF				LR	LR		
	comp=Z,10µm,21.1s,MS5.6						
GRF	**Grafenberg Arr**	**41.08**	**316**	*e*P	**P**	**10 30 02.9**	**+0.1**
GRF				*e*		10 31 42.2	
GRF				*e*S	**S**	**10 36 09.8**	**-5.4**
GRF				pmax	pmax		
	comp=Z,432nm,1.1s,mb6.0						
GRF				MLR	MLR		
	comp=Z,10µm,21.1s,MS5.6						
GRF	**Grafenberg Arr**	**41.08**	**316**	*e*P	**P**	**10 30 02.9**	**+0.1**
GRF				*e*		10 31 42.2	
GRF				*e*S	**S**	**10 36 09.8**	**-5.4**
GRF				pmax	pmax		
	comp=Z,432nm,1.1s,mb6.0						
GRF				MLR	MLR		
	comp=Z,10µm,21.1s,MS5.6						
PGF	**Pioggiola**	**41.09**	**305**	⇑*i*P	**P**	**10 30 02.5**	**-0.4**
	comp=Z,137nm,0.6s,mb5.5						
PGF	**Pioggiola**	**41.09**	**305**	⇑*i*P	**P**	**10 30 02.5**	**-0.4**
PGF				pmax	pmax		
	comp=Z,69nm,0.6s,mb5.5						
MOX	**Moxa**	**41.13**	**318**	⇓*i*P	**P**	**10 30 02.9**	**-0.3**
	comp=Z,logA/T=2.2,mb5.6						
MOX				PP	PP	10 31 40.0	-1.2
MOX				S		10 35 48.0	
MOX				SS	SS	10 39 31.0	+17
MOX				L		10 51 43.0	
MOX	**Moxa**	**41.13**	**318**	⇓*e*P	**P**	**10 30 02.9**	**-0.3**
MOX				*e*		10 31 40.0	
MOX				pmax	pmax		
	comp=Z,243nm,1.7s,mb5.6						
MOX				MLR	MLR		
	comp=Z,12µm,18.0s,MS5.8						
DAVOX	**Davos**	**41.19**	**311**	P	**P**	**10 30 03.6**	**-0.1**
	comp=Z,204nm,0.7s,mb5.9,baz=109,slow=6.8,SNR=166						
DAVOX	**Davos**	**41.19**	**311**	⇑*i*P	**P**	**10 30 03.6**	**-0.2**
UBR	**Uberruh**	**41.25**	**313**	*e*P	**P**	**10 30 03.5**	**-0.7**
UBR	**Uberruh**	**41.25**	**313**	P	**P**	**10 30 03.6**	**-0.6**
DAVA	**Damuels**	**41.31**	**312**	⇑*i*P	**P**	**10 30 04.3**	**-0.4**
	comp=Z,856nm,1.1s,mb6.3,SNR=762						
DAVA	**Damuels**	**41.31**	**312**	P	**P**	**10 30 04.1**	**-0.6**
GENL	**Genova Univers**	**41.37**	**308**	P	**P**	**10 30 03.4**	**-1.9**
VDL	**Val di Lei**	**41.41**	**311**	⇑*i*P	**P**	**10 30 05.4**	**-0.1**
HDH	**Heidenheim**	**41.41**	**314**	*e*P	**P**	**10 30 04.0**	**-1.5**
HDH	**Heidenheim**	**41.41**	**314**	P	**P**	**10 30 04.2**	**-1.3**
LIENZ	**Alp Oberkamor**	**41.56**	**312**	⇑*i*P	**P**	**10 30 06.2**	**-0.6**
PLONS	**Plons**	**41.59**	**312**	⇑*i*P	**P**	**10 30 06.2**	**-0.8**
MUGIO	**Muggio**	**41.59**	**310**	⇑*i*P	**P**	**10 30 05.8**	**-1.2**
RGN	**Rugen**	**41.59**	**324**	*e*P	**P**	**10 30 07.0**	**+0.2**
	comp=Z,372nm,0.9s,mb6.0						
LZH	**Lanzhou**	**41.67**	**65**	⇑P	**P**	**10 30 09.0**	**+1.2**
LZH				AP	pP	10 30 18.5	+7.7
LZH				XP	sP	10 30 22.5	+10
LZH				AMB	AMB		
	comp=Z,360nm,1.1s,mb5.9						
LZH				AMB	AMB		
	comp=Z,4µm,8.2s						
LZH				LR	LR		
	comp=N,12µm,14.3s						
LZH				LR	LR		
	comp=Z,16µm,18.2s,MS5.9						
LZH	**Lanzhou**	**41.67**	**65**	⇑P	**P**	**10 30 09.1**	**+1.3**
LZH				*PP	pP	10 30 18.5	+7.7
LZH				*SP	sP	10 30 22.6	+11
LZH						10 36 14.8	
LZH				pmax	pmax		
	comp=Z,364nm,1.1s,mb5.9						
LZH				MLR	MLR		
	comp=Z,16µm,18.2s,MS5.9						
PCP	**Pian Castagno**	**41.69**	**308**	P	**P**	**10 30 05.8**	**-2.0**
LLS	**Linth-Limmern**	**41.79**	**311**	⇑*i*P	**P**	**10 30 08.1**	**-0.6**
FIN	**Finale Ligure**	**41.88**	**307**	P	**P**	**10 30 07.8**	**-1.6**
BUCH	**Bad Urach**	**41.92**	**314**	*e*P	**P**	**10 30 08.3**	**-1.4**
BUCH	**Bad Urach**	**41.92**	**314**	P	**P**	**10 30 08.8**	**-0.9**
ABSA	**Djebel Ababsia**	**41.93**	**295**	P	**P**	**10 30 11.5**	**+1.5**
CD2	**Chengdu**	**41.95**	**73**	P	**P**	**10 30 11.0**	**+0.9**
CD2				XP	sP	10 30 26.8	+12
CD2				PP	PP	10 31 52.3	+1.8
CD2				PPP	PPP	10 32 19.3	-2.4
CD2				S	**S**	**10 36 28.0**	**-0.3**
CD2				XS		10 36 42.3	
CD2				SS	SS	10 39 31.0	+1.5
CD2				AMB	AMB		
	comp=Z,140nm,1.0s,mb5.5						
CD2				AMB	AMB		
	comp=Z,1µm,5.7s						
CD2				LR	LR		
	comp=N,9µm,22.2s						
FUSIO	**Fusio**	**41.95**	**311**	⇑*i*P	**P**	**10 30 08.9**	**-1.0**
WEIN	**Weingarten**	**41.95**	**312**	⇑*i*P	**P**	**10 30 09.5**	**-0.5**
CMAH	**Djebel Manchou**	**41.98**	**296**	P	**P**	**10 30 13.0**	**+2.7**
WILA	**Wila**	**41.98**	**312**	⇑*i*P	**P**	**10 30 09.7**	**-0.5**
CGMA	**Guelma**	**41.98**	**296**	P	**P**	**10 30 15.0**	**+4.6**
GUT	**Gutenstein**	**41.99**	**313**	*e*P	**P**	**10 30 09.2**	**-1.1**
SIND	**Sindeldorf**	**41.99**	**315**	*e*P	**P**	**10 30 09.2**	**-1.0**
SIND	**Sindeldorf**	**41.99**	**315**	P	**P**	**10 30 09.5**	**-0.7**
SISB	**Singen-Sch Ber**	**42.00**	**313**	P	**P**	**10 30 10.2**	**-0.2**
MOY	**Mondy**	**42.02**	**41**	*e*P	**P**	**10 30 11.5**	**+1.0**
MOY				pmax	pmax		
	comp=Z,479nm,2.0s,mb5.8						
KMI	**Kunming**	**42.03**	**81**	P	**P**	**10 30 12.8**	**+1.8**
KMI				PP	PP	10 31 51.5	0.0
KMI				PCP	PcP	10 32 08.5	+1.9
KMI				PCS		10 35 59.0	
KMI				S	**S**	**10 36 30.8**	**+1.1**
KMI				SS	SS	10 39 31.5	+0.2
KMI				SCS	ScS	10 40 13.5	+1.8
KMI				SSS	SSS	10 40 15.5	+0.8
KMI				AMB	AMB		
	comp=Z,150nm,1.6s,mb5.4						
KMI				AMB	AMB		
	comp=Z,3µm,4.7s						
KMI				LR	LR		
	comp=N,5µm,18.6s,MS5.6						
KMI				LR	LR		
	comp=E,6µm,16.5s,MS5.6						
KMI				LR	LR		
	comp=Z,7µm,17.0s,MS5.6						
KMI	**Kunming**	**42.03**	**81**	P	**P**	**10 30 12.7**	**+1.7**
	comp=Z,157nm,1.6s,mb5.4						
KMI				pP	pP	10 30 15.7	+1.7
KMI				sP	sP	10 30 16.9	+1.7
KMI				PP	PP	10 31 51.5	0.0
KMI				PcP	PcP	10 32 08.6	+2.0
KMI				PPP	PPP	10 32 24.1	+1.2
KMI				PcS		10 35 59.0	
KMI				S	**S**	**10 36 30.8**	**+1.1**
KMI				sS		10 36 35.6	
KMI				SS	SS	10 39 31.4	+0.1
KMI				ScS	ScS	10 40 13.5	+1.8
KMI				SSS	SSS	10 40 15.5	+0.8
KMI				LR	LR		
	comp=Z,7µm,17.0s,MS5.6						
KMI	**Kunming**	**42.03**	**81**	P	**P**	**10 30 12.7**	**+1.7**
KMI						10 31 51.5	
KMI						10 32 08.6	
KMI				PPP	PPP	10 32 24.1	+1.2
KMI				S	**S**	**10 36 30.8**	**+1.1**
KMI				SS	SS	10 39 31.4	+0.1
KMI						10 40 13.5	
KMI				SSS	SSS	10 40 15.5	+0.8
KMI				pmax	pmax		
	comp=Z,157nm,1.6s,mb5.4						
KMI				MLR	MLR		
	comp=Z,7µm,17.0s,MS5.6						
STEIN	**Stein am Rhein**	**42.06**	**312**	⇑*i*P	**P**	**10 30 10.1**	**-0.8**
MUO	**Muotathal**	**42.07**	**311**	⇑*i*P	**P**	**10 30 10.2**	**-0.7**
MUO	**Muotathal**	**42.07**	**311**	⇑P	**P**	**10 30 10.3**	**-0.6**
IMI	**Imperia**	**42.07**	**307**	P	**P**	**10 30 10.5**	**-0.5**
STU	**Stuttgart**	**42.10**	**314**	*e*P	**P**	**10 30 09.3**	**-1.9**
	comp=Z,86nm,1.0s,mb5.3						
STU	**Stuttgart**	**42.10**	**314**	P	**P**	**10 30 09.6**	**-1.6**
STU				pmax	pmax		
	comp=Z,86nm,1.0s,mb5.3						
ROB	**Roburent**	**42.13**	**307**	P	**P**	**10 30 10.7**	**-0.9**
TRULL	**Truellikon**	**42.18**	**312**	⇑*i*P	**P**	**10 30 11.0**	**-0.8**
MONE	**Monesi**	**42.19**	**307**	P	**P**	**10 30 11.8**	**-0.2**
ZUR	**Zurich**	**42.19**	**312**	⇑*i*P	**P**	**10 30 11.3**	**-0.6**
ZUR	**Zurich**	**42.19**	**312**	⇑P	**P**	**10 30 10.7**	**-1.2**
BNALP	**Bannalp**	**42.19**	**311**	⇑*i*P	**P**	**10 30 11.0**	**-0.9**
NEGI	**Negi**	**42.19**	**307**	P	**P**	**10 30 11.5**	**-0.5**
SPAK	**Spaichingen**	**42.21**	**313**	*e*P	**P**	**10 30 11.2**	**-0.9**
SPAK	**Spaichingen**	**42.21**	**313**	*e*P	**P**	**10 30 12.1**	**0.0**
CLZ	**Clausthal**	**42.25**	**319**	*e*P	**P**	**10 30 13.0**	**+0.7**
	comp=Z,459nm,1.1s,mb6.0						
CLZ	**Clausthal**	**42.25**	**319**	*e*P	**P**	**10 30 13.0**	**+0.7**
CLZ				pmax	pmax		
	comp=Z,459nm,1.1s,mb6.0						
ORX	**Oropa**	**42.27**	**309**	P	**P**	**10 30 10.7**	**-1.9**
SAOF	**Saorge**	**42.32**	**307**	*e*P	**P**	**10 30 12.6**	**-0.4**
SLE	**Schleitheim**	**42.33**	**313**	⇑*i*P	**P**	**10 30 12.0**	**-1.1**
LBG	**Lerchenberg**	**42.34**	**314**	*e*P	**P**	**10 30 11.7**	**-1.4**
LBG	**Lerchenberg**	**42.34**	**314**	P	**P**	**10 30 12.0**	**-1.1**
MMK	**Mattmark**	**42.35**	**310**	⇑P	**P**	**10 30 12.4**	**-0.8**
HASLI	**Hasliberg**	**42.35**	**311**	⇑*i*P	**P**	**10 30 12.2**	**-1.1**
SBF	**Sospel**	**42.39**	**307**	⇑*i*P	**P**	**10 30 13.2**	**-0.4**
	comp=Z,645nm,1.0s,mb5.9						
SBF	**Sospel**	**42.39**	**307**	⇑*i*P	**P**	**10 30 13.2**	**-0.4**
SBF				pmax	pmax		
	comp=Z,322nm,1.0s,mb5.9						
TRAV		**42.41**	**309**	P	**P**	**10 30 11.4**	**-2.3**
AUTN	**L'Aution**	**42.41**	**307**	*e*P	**P**	**10 30 13.9**	**+0.1**
REVF	**Revere**	**42.42**	**306**	*e*P	**P**	**10 30 13.3**	**-0.6**
CAEH	**'Ain El Ouahch**	**42.43**	**296**	P	**P**	**10 30 16.0**	**+1.9**
ENR	**Entracque**	**42.45**	**307**	P	**P**	**10 30 12.7**	**-1.3**
STV	**Sta Anna Valdi**	**42.52**	**307**	P	**P**	**10 30 13.1**	**-1.5**
STV2	**Anna di Valdie**	**42.52**	**307**	P	**P**	**10 30 13.8**	**-0.8**
SULZ	**Sulz-Cheisache**	**42.53**	**312**	⇑*i*P	**P**	**10 30 13.8**	**-0.9**
TOUF	**Mont Tournerai**	**42.54**	**307**	*e*P	**P**	**10 30 14.7**	**-0.1**
CKFL	**Kef-Lekhel**	**42.54**	**296**	P	**P**	**10 30 17.0**	**+2.0**
NST	**Nakhon Sawan**	**42.56**	**96**	P	**P**	**10 30 16.0**	**+0.7**
	comp=Z,112nm,0.9s,mb5.6						
BFO	**Black Forest**	**42.56**	**313**	*e*P	**P**	**10 30 14.3**	**-0.6**
TOD	**Tromm**	**42.56**	**315**	*e*P	**P**	**10 30 14.3**	**-0.6**
TOD	**Tromm**	**42.56**	**315**	*e*P	**P**	**10 30 14.4**	**-0.5**
MVIF	**Mont Vial**	**42.59**	**307**	*e*P	**P**	**10 30 15.2**	**-0.1**
SWS	**Schriesheim**	**42.60**	**315**	*e*P	**P**	**10 30 14.4**	**-0.8**
LKBD	**Leukerbad**	**42.64**	**310**	⇑*i*P	**P**	**10 30 14.4**	**-1.2**
LKBD	**Leukerbad**	**42.64**	**310**	⇑P	**P**	**10 30 14.6**	**-1.0**
BHB	**Bricherasio**	**42.64**	**308**	P	**P**	**10 30 13.5**	**-2.2**
FELD	**Feldberg**	**42.67**	**313**	*e*P	**P**	**10 30 14.9**	**-1.0**
WIMIS	**Wimmis**	**42.69**	**311**	⇑*i*P	**P**	**10 30 14.9**	**-1.1**
RSP	**Reno Superiore**	**42.69**	**309**	P	**P**	**10 30 13.4**	**-2.7**
PZZ	**Prazzo**	**42.71**	**308**	P	**P**	**10 30 14.8**	**-1.4**
CASM	**Ain Smara**	**42.73**	**295**	P	**P**	**10 30 18.0**	**+1.5**
DIX	**Grande Dixence**	**42.73**	**310**	⇑*i*P	**P**	**10 30 15.8**	**-0.6**
KIZ	**Kirchzarten**	**42.75**	**313**	*e*P	**P**	**10 30 15.3**	**-1.2**
KIZ	**Kirchzarten**	**42.75**	**313**	P	**P**	**10 30 15.6**	**-0.9**
CALN	**Calern**	**42.77**	**306**	*e*P	**P**	**10 30 16.1**	**-0.6**
BALST	**Balsthal**	**42.77**	**312**	⇑*i*P	**P**	**10 30 15.9**	**-0.8**
CTEI	**Djebel Teioual**	**42.80**	**295**	P	**P**	**10 30 19.0**	**+1.9**
LSD	**Ceresole Reale**	**42.81**	**309**	P	**P**	**10 30 15.7**	**-1.3**
FENE	**Fenestrelle**	**42.81**	**308**	P	**P**	**10 30 16.1**	**-0.9**
SENIN	**Lac Senin**	**42.86**	**310**	⇑*i*P	**P**	**10 30 16.2**	**-1.2**
OG22	**Abries**	**42.86**	**308**	*e*P	**P**	**10 30 17.6**	**+0.1**
SURF	**Saint Ours**	**42.91**	**307**	*e*P	**P**	**10 30 18.1**	**+0.2**
BBS	**Basel-Blauen**	**42.92**	**312**	*e*P	**P**	**10 30 17.2**	**-0.7**
BBS	**Basel-Blauen**	**42.92**	**312**	*e*P	**P**	**10 30 17.0**	**-0.9**
FRF	**La Foret Royal**	**42.92**	**306**	⇑*i*P	**P**	**10 30 17.1**	**-0.8**
	comp=Z,213nm,1.1s,mb5.5						
FRF	**La Foret Royal**	**42.92**	**306**	⇑*i*P	**P**	**10 30 17.1**	**-0.8**
FRF				pmax	pmax		
	comp=Z,107nm,1.1s,mb5.5						
TNS	**Taunus Mts**	**42.94**	**316**	*e*P	**P**	**10 30 18.5**	**+0.5**
	comp=Z,1µm,2.0s,mb6.2						
TNS	**Taunus Mts**	**42.94**	**316**	*e*P	**P**	**10 30 18.5**	**+0.5**
TNS				pmax	pmax		
	comp=Z,1µm,2.0s,mb6.2						
KTD	**Kalmit**	**42.95**	**315**	*e*P	**P**	**10 30 17.5**	**-0.6**
MBDF	**Montbardon**	**42.97**	**308**	⇑*i*P	**P**	**10 30 17.6**	**-0.8**
	comp=Z,313nm,0.8s,mb5.8						
MBDF	**Montbardon**	**42.97**	**308**	⇑*i*P	**P**	**10 30 17.6**	**-0.8**
MBDF				pmax	pmax		
	comp=Z,157nm,0.8s,mb5.8						
STR	**Strasbourg**	**42.98**	**314**	*e*P	**P**	**10 30 17.5**	**-0.9**
BSEG	**Bad Segeberg**	**42.98**	**322**	*e*P	**P**	**10 30 18.7**	**+0.4**
BSEG				*e*S	**S**	**10 36 39.7**	**-3.6**
LMR	**La Mourre**	**42.99**	**306**	⇑*i*P	**P**	**10 30 17.7**	**-0.9**
	comp=Z,133nm,1.0s,mb5.3						
LMR	**La Mourre**	**42.99**	**306**	⇑*i*P	**P**	**10 30 17.7**	**-0.9**
LMR				pmax	pmax		
	comp=Z,66nm,1.0s,mb5.3						
LIBD	**Limburg**	**43.00**	**313**	*e*P	**P**	**10 30 17.7**	**-0.8**
ZAK	**Zakamensk**	**43.03**	**44**	*e*P	**P**	**10 30 19.1**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.2						
SALAN	**Lac Salanfe**	**43.05**	**310**	⇑*i*P	**P**	**10 30 17.7**	**-1.2**
LANF	**Langenberg**	**43.05**	**314**	*e*P	**P**	**10 30 15.1**	**-3.8**
LANF	**Langenberg**	**43.05**	**314**	*e*P	**P**	**10 30 18.2**	**-0.7**
APA	**Apatity**	**43.06**	**348**	⇓*i*P	**P**	**10 30 18.7**	**-0.1**
APA				*i*		10 30 29.9	
APA				*i*		10 31 57.5	
APA				*i*		10 32 14.5	
APA				*i* S	**S**	**10 36 41.0**	**-3.2**
APA				*i* SS	SS	10 39 43.0	-7.1
APA				pmax	pmax		
	comp=Z,140nm,1.0s,mb5.7						
APA				pmax	pmax		
	comp=Z,3µm,7.0s						
APA				smax			
	comp=N,5µm,10.0s						
APA				smax			
	comp=E,5µm,10.0s						
APA				MLR	MLR		
	comp=Z,26µm,15.0s,MS6.2						
EMV	**Vieux Emosson**	**43.08**	**310**	⇑P	**P**	**10 30 18.1**	**-1.1**
BNI	**Bardonecchia**	**43.08**	**308**	*e*P	**P**	**10 30 18.1**	**-1.2**
	comp=Z,359nm,1.2s,mb6.0						
BNI	**Bardonecchia**	**43.08**	**308**	*e*P	**P**	**10 30 18.1**	**-1.2**
BNI				pmax	pmax		
	comp=Z,359nm,1.2s,mb6.0						
AIGLE	**Aigle**	**43.09**	**310**	⇑*i*P	**P**	**10 30 17.9**	**-1.4**
BOURR	**Bourrignon**	**43.09**	**312**	⇑*i*P	**P**	**10 30 18.7**	**-0.6**
LPG	**La Plagne**	**43.10**	**309**	⇑*i*P	**P**	**10 30 18.6**	**-0.8**
	comp=Z,286nm,0.8s,mb5.8						
LPG	**La Plagne**	**43.10**	**309**	⇑*i*P	**P**	**10 30 18.6**	**-0.8**
LPG				pmax	pmax		
	comp=Z,143nm,0.8s,mb5.8						
LPL	**La Plagne**	**43.11**	**309**	⇑*i*P	**P**	**10 30 18.6**	**-0.9**
	comp=Z,411nm,0.7s,mb6.0						
LPL	**La Plagne**	**43.11**	**309**	⇑*i*P	**P**	**10 30 18.6**	**-0.9**
LPL				pmax	pmax		
	comp=Z,206nm,0.7s,mb6.0						
TORNY	**Torny**	**43.16**	**311**	⇑*i*P	**P**	**10 30 19.0**	**-0.9**
WLS	**Welschbruch**	**43.21**	**313**	*e*P	**P**	**10 30 18.8**	**-1.5**
DFRA	**Djebel Bou Aff**	**43.22**	**296**	P	**P**	**10 30 23.0**	**+2.5**
CMER	**Merouana**	**43.23**	**294**	P	**P**	**10 30 23.0**	**+2.4**
MOF	**Molkenrain**	**43.24**	**312**	*e*P	**P**	**10 30 19.8**	**-0.7**
CDF	**Champ du Feu**	**43.27**	**313**	⇑*i*P	**P**	**10 30 19.3**	**-1.4**
	comp=Z,257nm,1.0s,mb5.6						
CDF	**Champ du Feu**	**43.27**	**313**	⇑*i*P	**P**	**10 30 19.3**	**-1.4**
CDF				pmax	pmax		
	comp=Z,128nm,1.0s,mb5.6						
ECH	**Echery**	**43.30**	**313**	*e*P	**P**	**10 30 20.1**	**-0.9**
TAVF	**Tavernes**	**43.35**	**306**	*e*P	**P**	**10 30 21.0**	**-0.4**
LOMF	**Lomont**	**43.35**	**312**	*e*P	**P**	**10 30 21.2**	**-0.2**
ABH	**Alteburg**	**43.42**	**315**	*e*P	**P**	**10 30 21.2**	**-0.7**
ABH	**Alteburg**	**43.42**	**315**	*e*P	**P**	**10 30 21.3**	**-0.6**
HINF	**Hinteralfeld**	**43.42**	**312**	⇑*i*P	**P**	**10 30 20.8**	**-1.2**
	comp=Z,452nm,1.2s,mb5.8						
HINF	**Hinteralfeld**	**43.42**	**312**	⇑*i*P	**P**	**10 30 20.8**	**-1.2**
HINF				pmax	pmax		
	comp=Z,226nm,1.2s,mb5.8						
OG25	**Le Caire**	**43.42**	**307**	*e*P	**P**	**10 30 21.7**	**-0.3**
NNT	**Nongplab**	**43.45**	**100**	P	**P**	**10 30 23.5**	**+0.8**
GDM	**Grand'Maison**	**43.50**	**308**	*e*P	**P**	**10 30 21.8**	**-0.8**
STOF	**St-Etienne Org**	**43.50**	**307**	*e*P	**P**	**10 30 20.6**	**-2.0**
BRANT	**Les Verrieres**	**43.52**	**311**	⇑*i*P	**P**	**10 30 22.4**	**-0.3**
CKHR	**Kef el Ahmar**	**43.53**	**295**	P	**P**	**10 30 25.5**	**+2.5**
BERF	**Bertagne**	**43.59**	**306**	*e*P	**P**	**10 30 23.5**	**+0.1**
GIMEL	**Gimel**	**43.59**	**310**	⇑*i*P	**P**	**10 30 22.8**	**-0.6**
PUYF	**Puyloubier**	**43.60**	**306**	*e*P	**P**	**10 30 23.5**	**0.0**
SET	**Setif**	**43.62**	**295**	P	**P**	**10 30 26.0**	**+2.3**
VILF	**Villemus**	**43.62**	**306**	*e*P	**P**	**10 30 23.2**	**-0.4**
ORIF	**Oris-en-Rattie**	**43.63**	**308**	⇑*i*P	**P**	**10 30 21.6**	**-2.1**
	comp=Z,192nm,1.0s,mb5.5						
ORIF				*e*R			
	comp=Z,7µm,21.2s						
RUP	**Ruppelstein**	**43.69**	**315**	*e*P	**P**	**10 30 23.2**	**-0.9**
RUP	**Ruppelstein**	**43.69**	**315**	*e*P	**P**	**10 30 23.9**	**-0.2**
CABF	**La Chapelle**	**43.73**	**310**	⇑*i*P	**P**	**10 30 23.9**	**-0.5**
	comp=Z,470nm,1.1s,mb5.8						
CABF	**La Chapelle**	**43.73**	**310**	⇑*i*P	**P**	**10 30 23.9**	**-0.5**
CABF				pmax	pmax		
	comp=Z,235nm,1.0s,mb5.9						
SMRF	**Simiane la Rot**	**43.74**	**307**	⇑*i*P	**P**	**10 30 24.1**	**-0.5**
	comp=Z,309nm,1.3s,mb5.6						
GRN	**Grenoble**	**43.76**	**308**	*e*P	**P**	**10 30 23.1**	**-1.7**
GELF	**Grande-Etoile**	**43.78**	**306**	*e*P	**P**	**10 30 25.2**	**+0.2**
HAU	**Haudompre**	**43.79**	**312**	⇑*i*P	**P**	**10 30 23.6**	**-1.4**
	comp=Z,221nm,0.9s,mb5.6						
HAU				*e*R			
	comp=Z,11µm,19.8s						
HAU	**Haudompre**	**43.79**	**312**	⇑*i*P	**P**	**10 30 23.6**	**-1.4**
HAU				pmax	pmax		
	comp=Z,111nm,0.9s,mb5.6						
HAU				MLR	MLR		
	comp=Z,11µm,19.8s,MS5.8						
HFS	**Hagfors**	**43.99**	**331**	P	**P**	**10 30 25.7**	**-0.7**
	comp=Z,54nm,0.6s,mb5.5,baz=129,slow=8.4,SNR=215						
HFA0	**Hagfors New Ar**	**44.00**	**331**	P	**P**	**10 30 25.4**	**-1.1**
PRAF	**Pradon**	**44.01**	**306**	*e*P	**P**	**10 30 27.2**	**+0.4**
OG05	**Jujurieux**	**44.07**	**310**	*e*P	**P**	**10 30 26.5**	**-0.7**
THEF	**They Montfort**	**44.07**	**313**	*e*P	**P**	**10 30 26.2**	**-1.0**
IRK	**Irkutsk**	**44.13**	**41**	*e*P	**P**	**10 30 27.3**	**-0.3**
IRK				*e*		10 32 13.3	
IRK				pmax	pmax		
	comp=Z,358nm,2.2s,mb5.7						
WLF	**Walferdange**	**44.25**	**315**	⇑*e*P	**P**	**10 30 28.0**	**-0.7**

```
       comp=Z,222nm,1.0s,mb5.8
WLF    Walferdange       44.25 315   P      P      10 30 28.1 -0.6
WLF                                  pmax   pmax
       comp=Z,220nm,1.0s,mb5.8
WTSB   Winterswijk       44.40 318⇑eP     P      10 30 30.3 +0.4
       comp=Z,421nm,1.3s,mb6.0
VIVF   Saint-Julien-l    44.47 308⇑iP     P      10 30 29.4 -1.1
       comp=Z,454nm,1.1s,mb5.8
VIVF   Saint-Julien-l    44.47 308⇑iP     P      10 30 29.4 -1.1
VIVF                                  pmax   pmax
       comp=Z,227nm,1.1s,mb5.8
SONM   Songino Array     44.48  48   P      P      10 30 31.1 +0.6
       comp=Z,149nm,1.0s,mb5.7,baz=257,slow=6.0,SNR=437
SONM                                 PcP    PcP    10 32 14.4 -0.1
       comp=Z,13nm,0.8s,baz=228,slow=3.7,SNR=5.3
SONM                                 LR     LR     10 51 09.3
       comp=Z,25µm,18.8s,MS6.2,baz=265,slow=39
ATAF   Djebel Tarf       44.54 295   P      P      10 30 29.9 -1.3
HGN    Heimansgroeve     44.63 316⇑eP     P      10 30 32.2 +0.5
       comp=Z,482nm,2.2s,mb5.9
HGN                                 ePP     PP     10 32 22.8 +5.6
HGN                                 eS      S      10 37 10.3 +3.0
HGN                                 eSS     SS     10 40 15.5 -3.5
KKTK   Khon Kaen         44.71  94 ⇓P      P      10 30 33.0 +0.2
       comp=Z,494nm,0.9s,mb6.3
WIT    Witteveen         44.71 319  eP      P      10 30 33.3 +1.0
       comp=Z,752nm,1.3s,mb6.4
MEZF   Maizieres J'vi    44.73 313⇑iP     P      10 30 32.0 -0.6
       comp=Z,2µm,1.4s,mb6.4
AKET   Djebel Ketaf      44.85 295   P      P      10 30 33.4 -0.3
ULN    Ulaanbaatar       44.92  48⇑iP     P      10 30 34.6 +0.5
       comp=Z,203nm,0.9s,mb6.0
ULN                                  LR     LR
       comp=Z,22µm,19.0s,MS6.1
ULN    Ulaanbaatar       44.92  48⇑iP     P      10 30 34.6 +0.5
ULN                                  pmax   pmax
       comp=Z,203nm,0.9s,mb6.0
ULN                                  MLR    MLR
       comp=Z,22µm,19.0s,MS6.1
LASF   Ste Croix         44.98 307⇑iP     P      10 30 33.9 -0.7
       comp=Z,363nm,0.9s,mb5.9
GYA    Guiyang           45.20  78⇑iP     P      10 30 36.5 -0.1
GYA                                  S      S      10 37 10.5 -5.3
GYA                                  AMB    AMB
       comp=Z,100nm,1.0s,mb5.6
GYA                                  AMB    AMB
       comp=Z,3µm,6.0s
GYA                                  LR     LR
       comp=N,4µm,15.8s,MS5.7
GYA                                  LR     LR
       comp=E,6µm,15.3s,MS5.7
GYA                                  LR     LR
       comp=Z,4µm,16.2s,MS5.5
ADJB   Djebel Djouab     45.20 295   P      P      10 30 36.6 +0.1
OSL    Oslo              45.21 330  eP      P      10 30 35.1 -1.1
OSL                                  AMb    AMB    10 30 41.3
       comp=Z,350nm,1.4s,mb6.0
OSL    Oslo              45.21 330  eP      P      10 30 35.1 -1.1
       comp=Z,350nm,1.4s,mb6.0,SNR=25
COLF   Collangettes      45.23 309  eP      P      10 30 35.6 -1.0
SMF    Signal de Mont    45.26 310⇑iP     P      10 30 35.8 -1.0
       comp=Z,1µm,1.1s,mb6.3
SMF    Signal de Mont    45.26 310⇑iP     P      10 30 35.8 -1.0
SMF                                  pmax   pmax
       comp=Z,525nm,1.1s,mb6.3
PLDF   La Plantade       45.33 309  eP      P      10 30 36.8 -0.6
LOR    Lormes            45.33 311⇑iP     P      10 30 36.2 -1.2
       comp=Z,257nm,0.8s,mb5.8
LOR                                 eR
       comp=Z,19µm,21.0s
LOR    Lormes            45.33 311⇑iP     P      10 30 36.2 -1.2
LOR                                  pmax   pmax
       comp=Z,128nm,0.8s,mb5.8
LOR                                  MLR    MLR
       comp=Z,19µm,21.0s,MS6.0
ABA    Alger-Bouzarea    45.49 296   P      P      10 30 39.5 +0.7
NB2    NORSAR Subarra    45.50 331   P      P      10 30 37.3 -1.2
       comp=Z,155nm,1.0s,mb5.9,baz=116,slow=7.9
NB2    NORSAR Subarra    45.50 331   P      P      10 30 37.3 -1.2
       baz=116,slow=7.9
NB2    NORSAR Subarra    45.50 331   P      P      10 30 37.2 -1.3
NB2    NORSAR Subarra    45.50 331   P      P      10 30 37.3 -1.2
       baz=116,slow=7.7,SNR=24
NOA    NORSAR Array B    45.50 331   P      P      10 30 37.2 -1.3
       comp=Z,72nm,0.9s,mb5.6,baz=118,slow=7.6,SNR=133
NOA                                  S      S      10 37 21.3 +1.7
       comp=Z,4.9nm,1.0s,baz=122,slow=16,SNR=2.7
NOA                                  LR     LR     10 52 21.1
       comp=Z,10µm,21.8s,MS5.7,baz=120,slow=40
NOA    NORSAR Array B    45.50 331   P      P      10 30 37.2 -1.3
NOA                                  S      S      10 37 21.3 +1.7
NOA                                  LR     LR     10 52 21.1
LBL    Lubilhac          45.52 308  eP      P      10 30 37.7 -1.1
SSF    Saint Saulge      45.54 311⇑iP     P      10 30 38.1 -0.9
SSF                                  pmax   pmax
       comp=Z,454nm,1.1s,mb6.3
SSF    Saint Saulge      45.54 311⇑iP     P      10 30 38.1 -0.9
       comp=Z,454nm,1.1s,mb6.3
NAO01  NORSAR Array S    45.55 331  eP      P      10 30 37.6 -1.3
       comp=Z,84nm,0.8s,mb5.7
NAO01                                LR     LR
       comp=Z,11µm,19.0s,MS5.8
BAIF   Baives            45.56 315⇑iP     P      10 30 39.4 +0.2
       comp=Z,1µm,1.2s,mb6.4
BAIF   Baives            45.56 315⇑iP     P      10 30 39.4 +0.2
BAIF                                 pmax   pmax
       comp=Z,632nm,1.2s,mb6.4
NAO    NORSAR Subarra    45.57 331   P      P      10 30 37.3 -1.7
       comp=Z,155nm,1.0s,mb5.9
NAO    NORSAR Subarra    45.57 331   P      P      10 30 37.3 -1.7
NAO                                  pmax   pmax
       comp=Z,155nm,1.0s,mb5.9
EJON   La Jonquera       45.58 304   P      P      10 30 39.4  0.0
       comp=Z,66nm,1.1s,mb5.5
ETOS   Mallorca          45.58 300   P      P      10 30 39.9 +0.4
       comp=Z,350nm,1.1s,mb6.2
SJAF   Saint Jean de     45.59 304  eP      P      10 30 39.3 -0.2
EMHD   Djebel Mahouad    45.59 295   P      P      10 30 41.0 +1.4
KONO   Kongsberg         45.59 329  eP      P      10 30 37.8 -1.5
KONO                                eS      S      10 37 19.3 -1.5
KONO                                eSS     SS     10 40 45.6 +9.1
KONO   Kongsberg         45.59 329  eP      P      10 30 37.9 -1.4
       comp=Z,138nm,1.0s,mb5.8
KONO                                 LR     LR
       comp=Z,10µm,20.0s,MS5.8
KONO   Kongsberg         45.59 329   P      P      10 30 38.2 -1.0
KONO                                 pmax   pmax
       comp=Z,140nm,1.0s,mb5.8
AVF    Avril sur Loir    45.61 310⇑iP     P      10 30 38.4 -1.2
       comp=Z,210nm,0.8s,mb5.8
AVF    Avril sur Loir    45.61 310⇑iP     P      10 30 38.4 -1.2
AVF                                  pmax   pmax
       comp=Z,105nm,0.8s,mb5.8
AGO    Saint Agoulin     45.68 309  eP      P      10 30 39.6 -0.5
PYM    Petit Puy Mans    45.73 309  eP      P      10 30 41.0 +0.4
OPO    Ambohidratompo    45.82 191   P      P      10 30 43.8 +2.2
       comp=Z,52nm,1.1s,mb5.4,baz=7.5,slow=7.2,SNR=15
FILF   Fillols           45.83 304  eP      P      10 30 41.9 +0.5
BGF    Bois d'Agland     45.93 310⇑iP     P      10 30 41.3 -0.8
       comp=Z,461nm,0.9s,mb6.1
BGF    Bois d'Agland     45.93 310⇑iP     P      10 30 41.3 -0.8
BGF                                  pmax   pmax
       comp=Z,230nm,0.9s,mb6.1
FRNF   Fournols          46.01 308  eP      P      10 30 42.7 -0.1
VERF   Verneugheol       46.10 309  eP      P      10 30 43.1 -0.3
MTLF   Montolieu         46.12 305⇑iP     P      10 30 43.7 +0.1
       comp=Z,944nm,1.1s,mb6.3
MTLF   Montolieu         46.12 305⇑iP     P      10 30 43.7 +0.1
MTLF                                 pmax   pmax
       comp=Z,472nm,1.1s,mb6.3
HYF    Humbligny         46.16 311  eP      P      10 30 43.6 -0.3
CARF   Carcanieres       46.17 305  eP      P      10 30 44.9 +0.8
KEV    Kevo              46.18 347  ep      P      10 30 43.8  0.0
       comp=Z,40nm,0.4s,mb5.7
KEV    Kevo              46.18 347  eP      P      10 30 43.8  0.0
KEV                                  pmax   pmax
       comp=Z,40nm,0.4s,mb5.7
SNART  Snartemo          46.20 327⇓iP     P      10 30 44.7 +0.6
VALF   Valcebollere      46.22 304  eP      P      10 30 45.3 +0.8
CAF    Calviac           46.33 308⇑iP     P      10 30 44.8 -0.4
       comp=Z,556nm,1.1s,mb6.1
CAF    Calviac           46.33 308⇑iP     P      10 30 44.8 -0.4
CAF                                  pmax   pmax
       comp=Z,278nm,1.1s,mb6.1
LPEF   Le Peyrat         46.33 305  eP      P      10 30 45.6 +0.3
ARCES  ARCESS Array B    46.33 346   P      P      10 30 44.6 -0.3
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       comp=Z,46nm,0.8s,mb5.5,baz=138,slow=9.1,SNR=154
ARCES                                PcP    PcP    10 32 20.7  0.0
       comp=Z,46nm,0.9s,baz=166,slow=5.0,SNR=4.8
ARCES                                LR     LR     10 54 16.4
       comp=Z,10µm,20.0s,MS5.8,baz=144,slow=42
ARCES  ARCESS Array B    46.33 346   P      P      10 30 44.6 -0.3
ARCES                                PcP    PcP    10 32 20.7  0.0
ARCES                                LR     LR     10 54 16.4
ARE0   ARCESS Array S    46.33 346  eP      P      10 30 44.5 -0.4
TCF    Toulx Ste Croi    46.34 309⇑iP     P      10 30 44.6 -0.8
       comp=Z,241nm,0.7s,mb6.0
TCF    Toulx Ste Croi    46.34 309⇑iP     P      10 30 44.6 -0.8
TCF                                  pmax   pmax
       comp=Z,121nm,0.7s,mb5.9
KTK1   Kautokeino        46.45 344  eP      P      10 30 46.1 +0.2
KTK1                                 AMb    AMB    10 31 01.7
       comp=Z,186nm,2.2s,mb5.6
KTK1   Kautokeino        46.45 344  eP      P      10 30 46.1 +0.2
       comp=Z,186nm,2.2s,mb5.6,SNR=24
BTO    Baotou            46.49  58  eP      P      10 30 47.5 +0.9
BTO                                  AMB    AMB
       comp=Z,370nm,1.4s,mb6.1
EMIR   Miracle           46.58 303   P      P      10 30 48.0 +0.8
       comp=Z,1µm,1.2s,mb6.7
EBNR   Beni Rached       46.73 296   P      P      10 30 49.0 +0.4
EIBI   Ibiza             46.74 299   P      P      10 30 49.7 +1.2
       comp=Z,910nm,1.3s,mb6.5
RJF    Les Rejaudoux     46.74 308⇑iP     P      10 30 48.3 -0.2
       comp=Z,956nm,1.1s,mb6.3
RJF                                 eR
       comp=Z,9µm,20.5s
RJF    Les Rejaudoux     46.74 308⇑iP     P      10 30 48.3 -0.2
RJF                                  pmax   pmax
       comp=Z,478nm,1.1s,mb6.3
RJF                                  MLR    MLR
       comp=Z,9µm,20.5s,MS5.7
SNG    Songkhla          46.74 106   P      P      10 30 49.0  0.0
       comp=Z,92nm,1.0s,mb5.7
SALF   Salau             46.85 305  eP      P      10 30 49.4  0.0
ECHA   Ech Chlef         46.88 296   P      P      10 30 51.0 +1.3
DOMB   Dombas            46.88 332⇓iP     P      10 30 49.8 +0.4
DOMB                                 AMb    AMB    10 30 53.6
       comp=Z,278nm,2.0s,mb5.8
DOMB   Dombas            46.88 332⇓iP     P      10 30 49.8 +0.4
       comp=Z,278nm,2.0s,mb5.8,SNR=24
ECHF   Ech Chlef         46.90 296   P      P      10 30 51.0 +1.1
EPOB   Poblet            46.91 303 ⇑P      P      10 30 49.9  0.0
       comp=Z,1µm,1.5s,mb6.6
MLS    Moulis            46.92 305  eP      P      10 30 49.4 -0.6
ENH    Enshi             46.93  73⇑iP     P      10 30 50.9 +0.7
       comp=Z,310nm,1.0s,mb6.2
ENH                                  LR     LR
       comp=Z,7µm,19.0s,MS5.7
NSS    Namsos            46.97 336  eP      P      10 30 47.2 -2.8
NSS                                  AMb    AMB    10 31 03.9
       comp=Z,232nm,1.6s,mb5.9
NSS                                 eS      S      10 37 38.3 -2.2
NSS                                 eSS     SS     10 41 05.9 +5.8
NSS    Namsos            46.97 336  eP      P      10 30 47.2 -2.8
       comp=Z,232nm,1.6s,mb5.9,SNR=24
NSS                                 eS      S      10 37 38.3 -2.2
       SNR=26
NSS                                 eSS     SS     10 41 05.9 +5.7
       SNR=29
BLS5   Blasjo            46.97 328  eP      P      10 30 51.4 +1.3
BLS5                                 AMb    AMB    10 30 55.8
       comp=Z,125nm,1.6s,mb5.6
BLS5   Blasjo            46.97 328  eP      P      10 30 51.4 +1.3
       comp=Z,125nm,1.6s,mb5.6,SNR=24
ETRT   Tiaret            46.99 295   P      P      10 30 53.0 +2.3
MOR8   Moi Rana          47.03 338  eP      P      10 30 49.8 -0.8
MOR8                                 AMb    AMB    10 30 54.1
       comp=Z,162nm,1.9s,mb5.6
MOR8   Moi Rana          47.03 338  eP      P      10 30 49.8 -0.7
       comp=Z,162nm,1.9s,mb5.6,SNR=24
EANR   'Ain N'Sour       47.11 295   P      P      10 30 52.0 +0.4
MELF   Melles            47.17 305  eP      P      10 30 52.2 +0.3
LFF    La Frestale       47.26 308⇑iP     P      10 30 52.3 -0.4
       comp=Z,700nm,1.1s,mb6.2
LFF    La Frestale       47.26 308⇑iP     P      10 30 52.3 -0.4
LFF                                  pmax   pmax
       comp=Z,350nm,1.1s,mb6.2
EBR    Ebro Roquetas     47.35 302  i P     P      10 30 54.0 +0.6
ERTA   Horta de San J    47.47 302 ⇑P      P      10 30 54.9 +0.5
       comp=Z,1µm,1.6s,mb6.6
RESF   Ens               47.47 305  eP      P      10 30 55.1 +0.7
EPF    Esparros          47.48 305⇑iP     P      10 30 52.9 -1.5
       comp=Z,105nm,1.0s,mb5.4
EPF    Esparros          47.48 305⇑iP     P      10 30 52.9 -1.5
EPF                                  pmax   pmax
       comp=Z,53nm,1.0s,mb5.4
EGRA   Graus             47.48 304   P      P      10 30 54.6 +0.1
       comp=Z,101nm,0.8s,mb5.8
STOK   Stokkvaagen       47.59 338  eP      P      10 30 54.4 -0.6
STOK                                 AMb    AMB    10 30 56.9
       comp=Z,425nm,1.2s,mb6.3
STOK   Stokkvaagen       47.59 338  eP      P      10 30 54.4 -0.6
       comp=Z,425nm,1.2s,mb6.3,SNR=24
EBIE   Bielsa            47.62 304 ⇑P      P      10 30 56.2 +0.8
       comp=Z,519nm,2.4s,mb6.1
PSI    Prapat            47.63 113   P      P      10 30 55.9 -0.1
       comp=Z,17nm,0.8s,mb5.1,baz=320,slow=8.1,SNR=18
HHC    Hu-ho-hao-te      47.66  58  eP      P      10 30 56.8 +1.0
HHC                                  AP     pP     10 31 06.8 +7.9
HHC                                  XP     sP     10 31 10.8  +11
HHC                                  PCP    PcP    10 32 26.0 +0.3
HHC                                  PP     PP     10 32 48.8 +1.9
HHC                                  PCS           10 36 19.0
HHC                                  S      S      10 37 51.0 +0.5
HHC                                  XS            10 38 08.5
HHC                                  SCS    ScS    10 40 46.0 -1.0
HHC                                  SS     SS     10 41 16.0 +3.1
HHC                                  AMB    AMB
       comp=Z,250nm,1.2s,mb6.1
HHC                                  AMB    AMB
       comp=Z,3µm,6.6s
HHC                                  LR     LR
       comp=N,9µm,19.2s
HHC                                  LR     LR
       comp=E,9µm,13.8s
HHC                                  LR     LR
       comp=Z,10µm,13.8s
MELSS  Ber_school_2      47.67 339  eP      P      10 30 54.8 -0.8
LABF   Labassere         47.67 305  eP      P      10 30 55.9  0.0
KULM   Kulim             47.73 108  eP      P      10 30 55.3 -1.5
MOL    Molde             47.75 332  eP      P      10 30 56.9 +0.6
MOL                                  AMb    AMB    10 31 11.2
       comp=Z,151nm,2.0s,mb5.7
MOL    Molde             47.75 332  eP      P      10 30 56.9 +0.6
       comp=Z,151nm,2.0s,mb5.7,SNR=24
RUND   Rundenannen       47.84 329  eP      P      10 30 57.2 +0.1
RUND                                 AMb    AMB    10 31 03.0
       comp=Z,186nm,1.3s,mb6.0
RUND   Rundenannen       47.84 329  eP      P      10 30 57.2 +0.2
       comp=Z,186nm,1.3s,mb6.0,SNR=24
BER    Bergen            47.85 329  eP      P      10 30 57.2 +0.1
BER                                 eP      pP     10 30 58.4 -1.7
BER                                  AMb    AMB    10 31 01.7
       comp=Z,294nm,1.6s,mb6.1
BER                                  AMb    AMB    10 31 02.1
       comp=Z,267nm,1.5s,mb6.0
BER                                 eS      S      10 37 52.5 -0.5
BER                                 eSS     SS     10 41 25.6  +10
BER    Bergen            47.85 329  eP      P      10 30 57.2 +0.1
       SNR=24
BER                                 eS      S      10 37 52.5 -0.5
       SNR=25
BER                                 eSS     SS     10 41 25.6  +10
       SNR=29
EGD    Espegrend         47.86 329  eP      P      10 30 57.1 -0.1
EGD                                  AMb    AMB    10 31 02.0
       comp=Z,455nm,1.7s,mb6.2
EGD    Espegrend         47.86 329  eP      P      10 30 57.1  0.0
       comp=Z,455nm,1.7s,mb6.2,SNR=24
ASK    Askoy             47.95 329  eP      P      10 30 57.6 -0.3
ASK                                  AMb    AMB    10 31 02.5
       comp=Z,553nm,1.5s,mb6.4
ASK    Askoy             47.95 329  eP      P      10 30 57.6 -0.3
       comp=Z,553nm,1.5s,mb6.4,SNR=24
TRO    Tromso            47.96 344  eP      P      10 30 56.5 -1.3
TRO                                  AMb    AMB    10 31 01.3
       comp=Z,196nm,1.8s,mb5.8
TRO                                 eS      S      10 37 53.6 -0.8
TRO                                 eSS     SS     10 41 24.5 +6.6
TRO    Tromso            47.96 344  eP      P      10 30 56.5 -1.3
       comp=Z,196nm,1.8s,mb5.8,SNR=24
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TRO                                 eS      S      10 37 53.6 -0.8
       SNR=25
TRO                                 eSS     SS     10 41 24.5 +6.6
       SNR=29
EBEN   Beniarda          47.97 299 ⇑P      P      10 30 58.8 +0.5
       comp=Z,1µm,1.8s,mb6.6
MFF    Saint Martin d    47.99 310⇑iP     P      10 30 57.0 -1.4
       comp=Z,435nm,1.4s,mb6.0
MFF    Saint Martin d    47.99 310⇑iP     P      10 30 57.0 -1.4
MFF                                  pmax   pmax
       comp=Z,217nm,1.4s,mb6.0
REYF   Montagne du Re    48.02 305  eP      P      10 30 58.3 -0.3
MATF   Mathat            48.04 309  eP      P      10 30 59.1 +0.3
ESAC   San Caprasio      48.07 303   P      P      10 30 58.9 -0.1
       comp=Z,2µm,1.9s,mb6.8
EMOS   Mosqueruela       48.10 301 ⇑P      P      10 31 00.5 +1.2
       comp=Z,2µm,2.3s,mb6.7
ETSF   Etsaut            48.13 305⇑iP     P      10 30 59.5  0.0
       comp=Z,378nm,0.8s,mb6.2
ETSF   Etsaut            48.13 305⇑iP     P      10 30 59.5  0.0
ETSF                                 pmax   pmax
       comp=Z,189nm,0.8s,mb6.2
LDF    La Druitiere      48.15 312⇑iP     P      10 30 58.1 -1.5
ATE    Arette            48.24 305  eP      P      10 31 00.2 -0.1
FLN    La Foliniere      48.41 313⇑iP     P      10 31 00.2 -1.3
       comp=Z,684nm,1.1s,mb6.3
FLN                                 eR
       comp=Z,11µm,19.8s
FLN    La Foliniere      48.41 313⇑iP     P      10 31 00.2 -1.3
FLN                                  pmax   pmax
       comp=Z,342nm,1.1s,mb6.3
FLN                                  MLR    MLR
       comp=Z,11µm,19.8s,MS5.8
LCHF   La Chataignera    48.41 310  eP      P      10 31 00.3 -1.3
ORDF   Ordiarp           48.41 305  eP      P      10 31 01.6 -0.1
IPM    Ipoh              48.42 109   P      P      10 31 01.5 -0.6
FOO    Floro             48.43 330⇓iP     P      10 31 01.6 +0.1
FOO                                  AMb    AMB    10 31 05.6
       comp=Z,181nm,1.8s,mb5.8
FOO    Floro             48.43 330⇓iP     P      10 31 01.6  0.0
       comp=Z,181nm,1.8s,mb5.8,SNR=24
LARF   Larrau            48.45 305  eP      P      10 31 02.8 +0.8
TIY    Taiyuan           48.47  62 ⇑P      P      10 31 00.0 -2.2
TIY                                  S      S      10 38 03.0 +0.9
TIY                                  LR     LR
       comp=N,11µm,14.0s
TIY                                  LR     LR
       comp=Z,1µm,11.0s,MS5.1
LOF    Lofoten           48.48 340⇓iP     P      10 31 02.8 +1.0
LOF                                  AMb    AMB    10 31 04.8
       comp=Z,230nm,1.4s,mb6.0
LOF    Lofoten           48.48 340⇓iP     P      10 31 02.8 +1.0
       comp=Z,230nm,1.4s,mb6.0,SNR=24
ECHE   Chera             48.51 300   P      P      10 31 03.1 +0.7
       comp=Z,241nm,1.0s,mb6.2
ECHE   Chera             48.51 300   P      P      10 31 03.2 +0.8
ECHE                                 pmax   pmax
       comp=Z,241nm,1.0s,mb6.2
GRR    Gorron            48.62 312  eP      P      10 31 01.8 -1.4
OSSF   Osses             48.65 305  eP      P      10 31 03.2 -0.3
EMUR   La Murta          48.83 298 ⇑P      P      10 31 04.5 -0.5
       comp=Z,404nm,1.4s,mb6.3
SKP1   Kophill           48.97 316  eP      P      10 31 05.0 -0.9
ETOB   Tobarra           49.01 299 ⇑P      P      10 31 06.6 +0.3
       comp=Z,1µm,2.0s,mb6.7
SIW    Isle of Wight     49.19 315⇑eP     P      10 31 06.7 -0.9
SWN1   Swindon           49.56 316  eP      P      10 31 09.9 -0.4
ECRI   Cripan            49.57 304   P      P      10 31 09.3 -1.4
       comp=Z,78nm,0.7s,mb5.8
ECRI   Cripan            49.57 304   P      P      10 31 09.3 -1.3
ECRI                                 pmax   pmax
       comp=Z,78nm,0.7s,mb5.8
KBI1   Birley Grange     49.63 318⇑eP     P      10 31 10.2 -0.8
SSW    Stow on the Wo    49.65 317⇑eP     P      10 31 10.9 -0.1
LSZ    Lusaka            49.66 216   P      P      10 31 12.6 +0.9
       comp=Z,30nm,0.8s,mb5.3,baz=39,slow=8.0,SNR=49
LSZ                                  LR     LR     10 52 14.3
       comp=Z,20µm,19.7s,MS6.1,baz=53,slow=36
LSZ    Lusaka            49.66 216⇑eP     P      10 31 12.1 +0.5
       comp=Z,413nm,1.8s,mb6.2
LSZ                                  LR     LR
       comp=Z,19µm,20.0s,MS6.1
LSZ    Lusaka            49.66 216⇑eP     P      10 31 12.1 +0.5
LSZ                                  pmax   pmax
       comp=Z,413nm,1.8s,mb6.2
LSZ                                  MLR    MLR
       comp=Z,19µm,20.0s,MS6.1
CIT    Chita             49.68  43  eP      P      10 31 11.2 -0.1
CIT                                 e              10 31 28.4
CIT                                 e              10 33 10.5
CIT                                 e              10 38 15.6
CIT                                  pmax   pmax
       comp=Z,695nm,1.7s,mb6.4
SGMF   Saint Gilles      49.74 312⇑iP     P      10 31 10.7 -1.1
       comp=Z,630nm,1.1s,mb6.2
SGMF   Saint Gilles      49.74 312⇑iP     P      10 31 10.7 -1.1
SGMF                                 pmax   pmax
       comp=Z,315nm,1.1s,mb6.3
EVIA   Vianos            49.76 299   P      P      10 31 12.5 +0.4
       comp=Z,200nm,0.7s,mb6.3
EVIA   Vianos            49.76 299   P      P      10 31 12.5 +0.4
EVIA                                 pmax   pmax
       comp=Z,200nm,0.7s,mb6.3
KWE    Weaver Farm       49.79 318⇑eP     P      10 31 11.5 -0.6
SWK    Warminster        49.79 316⇑eP     P      10 31 11.5 -0.7
LHO    Holmfirth         49.87 319⇑eP     P      10 31 12.3 -0.5
EHUE   Huescar           49.90 298   P      P      10 31 12.7 -0.4
       comp=Z,239nm,1.4s,mb6.0
EHUE   Huescar           49.90 298   P      P      10 31 12.7 -0.5
EHUE                                 pmax   pmax
       comp=Z,239nm,1.4s,mb6.0
QIZ    Qiongzhong        50.05  87⇑iP     P      10 31 14.8 +0.2
QIZ                                  PP     PP     10 33 11.5 +0.8
QIZ                                  S      S      10 38 25.5 +1.2
QIZ                                  SS     SS     10 41 55.8 +1.6
QIZ                                  AMB    AMB
       comp=Z,160nm,1.6s,mb5.8
QIZ                                  AMB    AMB
       comp=Z,2µm,7.8s
QIZ                                  LR     LR
       comp=N,6µm,24.3s,MS5.6
QIZ                                  LR     LR
       comp=E,2µm,19.7s,MS5.6
QIZ                                  LR     LR
       comp=Z,4µm,23.0s,MS5.4
QIZ    Qiongzhong        50.05  87⇑iP     P      10 31 14.9 +0.4
       comp=Z,341nm,1.4s,mb6.2
QIZ                                  LR     LR
       comp=Z,5µm,20.0s,MS5.5
QUIF   Quistinic         50.13 311⇑iP     P      10 31 13.4 -1.4
       comp=Z,622nm,1.1s,mb6.2
QUIF   Quistinic         50.13 311⇑iP     P      10 31 13.4 -1.4
QUIF                                 pmax   pmax
       comp=Z,311nm,1.1s,mb6.2
HGH    Gray Hill         50.20 316⇑eP     P      10 31 14.1 -1.1
HGH                                  AMb    AMB    10 31 19.1
       comp=Z,462nm,1.3s,mb6.3
EBER   Berja             50.22 297   P      P      10 31 15.8 +0.1
       comp=Z,645nm,1.1s,mb6.6
ROSF   Rostrenen         50.22 312⇑iP     P      10 31 14.2 -1.3
       comp=Z,537nm,1.1s,mb6.2
ROSF   Rostrenen         50.22 312⇑iP     P      10 31 14.2 -1.3
ROSF                                 pmax   pmax
       comp=Z,268nm,1.1s,mb6.2
ELAN   Lanestosa         50.24 305   P      P      10 31 16.4 +0.7
       comp=Z,780nm,1.4s,mb6.5
EQES   Quesada           50.27 298   P      P      10 31 15.3 -0.8
       comp=Z,620nm,1.3s,mb6.5
HLM1   Long Mynd         50.34 317⇑eP     P      10 31 15.5 -0.9
HLM1                                 AMb    AMB    10 31 20.4
       comp=Z,307nm,1.4s,mb6.1
MCH1   Michaelchurch     50.35 317⇑eP     P      10 31 15.2 -1.2
MCH1                                 AMb    AMB    10 31 19.8
       comp=Z,478nm,1.7s,mb6.2
MELI   Melilla           50.45 295  i P     P      10 31 20.3 +2.9
MELI   Melilla           50.45 295   PcP    PP     10 33 09.0 -5.1
MELI                                i S     S      10 38 39.1  +10
SSP1   Stoney Pound      50.47 317⇑eP     P      10 31 16.5 -0.8
SSP1                                 AMb    AMB    10 31 22.2
       comp=Z,441nm,1.3s,mb6.3
HTR    Trewern Hill      50.53 317⇑eP     P      10 31 16.5 -1.3
HTR                                  AMb    AMB    10 31 22.1
       comp=Z,398nm,1.3s,mb6.2
SBD1   Bryn Du           50.62 318⇑eP     P      10 31 17.3 -1.2
SBD1                                 AMb    AMB    10 31 22.8
       comp=Z,594nm,1.6s,mb6.3
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ECOG	**Cogollos-Vega**	**50.72**	**298**	P	**P**	**10 31 19.2**	**-0.3**
	comp=Z,5.8nm,1.0s						
HEX	**Exmoor**	**50.76**	**315**	⇑*e*P	**P**	**10 31 18.2**	**-1.4**
EGUA	**Guajares**	**50.77**	**297**	P	**P**	**10 31 20.4**	**+0.6**
	comp=Z,7.5nm,0.4s,mb5.0						
EGUA	**Guajares**	**50.77**	**297**	P	**P**	**10 31 20.4**	**+0.6**
EGUA				pmax	pmax		
	comp=Z,8.0nm,0.4s,mb5.0						
EBAN	**Banos Encina**	**50.80**	**299**	P	**P**	**10 31 19.8**	**-0.3**
	comp=Z,693nm,1.3s,mb6.4						
EBAN	**Banos Encina**	**50.80**	**299**	P	**P**	**10 31 19.8**	**-0.3**
EBAN				pmax	pmax		
	comp=Z,693nm,1.3s,mb6.4						
ESDC	**Sonseca Array**	**50.81**	**301**	P	**P**	**10 31 19.7**	**-0.4**
	comp=Z,41nm,0.6s,mb5.6,baz=70,slow=7.2,SNR=146						
ESDC	**Sonseca Array**	**50.81**	**301**	⇑P	**P**	**10 31 19.3**	**-0.8**
	comp=Z,283nm,1.2s,mb6.1						
ESLA	**Sonseca Array**	**50.81**	**301**	⇑*e*P	**P**	**10 31 19.4**	**-0.7**
	comp=Z,24nm,0.8s,mb5.2						
ESLA				LR	LR		
	comp=Z,49µm,22.0s,MS6.5						
ECK	**Cauldkaine Hil**	**50.86**	**321**	⇑*e*P	**P**	**10 31 19.4**	**-0.8**
ECK				AMb	AMB	10 31 23.9	
	comp=Z,122nm,1.3s,mb5.7						
GUD	**Guadarrama**	**50.89**	**302**	P	**P**	**10 31 20.3**	**-0.3**
	comp=Z,139nm,1.0s,mb5.8						
GUD	**Guadarrama**	**50.89**	**302**	P	**P**	**10 31 20.3**	**-0.4**
GUD				pmax	pmax		
	comp=Z,139nm,1.0s,mb5.8						
EKA	**Eskdalemuir Ar**	**50.90**	**321**	P	**P**	**10 31 19.7**	**-0.9**
	comp=Z,29nm,0.9s,mb5.2,baz=99,slow=7.5,SNR=60						
EBL	**Broad Law**	**50.91**	**321**	*e*P	**P**	**10 31 19.4**	**-1.2**
EBL				AMb	AMB	10 31 24.7	
	comp=Z,178nm,1.5s,mb5.8						
BOD	**Bodaibo**	**50.91**	**36**	*e*P	**P**	**10 31 19.1**	**-1.5**
BOD				*e*		10 38 33.6	
BOD				pmax	pmax		
	comp=Z,439nm,1.1s,mb6.3						
ESK	**Eskdalemuir**	**50.93**	**321**	PFAKE		10 31 30.0	+9.2
ESK				LR	LR		
	comp=Z,2µm,19.0s,MS5.1						
ERON	**Agron**	**50.94**	**297**	P	**P**	**10 31 19.6**	**-1.5**
	comp=Z,88nm,0.6s,mb5.9						
XDE	**Dent Fell**	**50.97**	**320**	⇑*e*P	**P**	**10 31 20.7**	**-0.3**
XDE				AMb	AMB	10 31 25.1	
	comp=Z,286nm,1.6s,mb6.0						
WHN	**Wuhan**	**51.01**	**71**	⇓P	**P**	**10 31 23.3**	**+1.6**
WHN				PP	PP	10 33 24.5	+5.3
WHN				S	**S**	**10 38 40.0**	**+2.6**
WHN				AMB	AMB		
	comp=Z,6µm,7.0s						
WHN				LR	LR		
	comp=Z,19µm,17.0s,MS6.2						
EDI	**Edinburgh**	**51.01**	**322**	*e*P	**P**	**10 31 20.3**	**-1.1**
EDI				AMb	AMB	10 31 27.2	
	comp=Z,226nm,1.5s,mb5.9						
HSA	**Swansea**	**51.04**	**316**	⇑*e*P	**P**	**10 31 21.3**	**-0.4**
WPM1	**Penmaenmawr**	**51.05**	**318**	⇑*e*P	**P**	**10 31 21.4**	**-0.3**
WPM1				AMb	AMB	10 31 25.8	
	comp=Z,147nm,1.4s,mb5.7						
EAU	**Auchinoon**	**51.15**	**321**	⇑*e*P	**P**	**10 31 22.4**	**0.0**
EAU				AMb	AMB	10 31 26.4	
	comp=Z,214nm,1.9s,mb5.8						
ELOJ	**Sierra Loja**	**51.20**	**297**	P	**P**	**10 31 21.8**	**-1.3**
	comp=Z,65nm,0.8s,mb5.6						
ELOJ	**Sierra Loja**	**51.20**	**297**	P	**P**	**10 31 21.8**	**-1.3**
ELOJ				pmax	pmax		
	comp=Z,65nm,0.8s,mb5.6						
ELUQ	**Luque**	**51.24**	**298**	P	**P**	**10 31 21.7**	**-1.7**
	comp=Z,62nm,0.5s,mb5.8						
ELUQ	**Luque**	**51.24**	**298**	P	**P**	**10 31 21.7**	**-1.7**
ELUQ				pmax	pmax		
	comp=Z,62nm,0.5s,mb5.8						
WME	**Myndd Eilian**	**51.30**	**318**	*e*P	**P**	**10 31 22.8**	**-0.8**
WME				AMb	AMB	10 31 27.7	
	comp=Z,169nm,1.6s,mb5.7						
YRE	**Yr Eifl**	**51.33**	**318**	⇑*e*P	**P**	**10 31 22.9**	**-0.9**
YRE				AMb	AMB	10 31 27.9	
	comp=Z,424nm,1.7s,mb6.1						
WLF1	**Llynfaes**	**51.35**	**318**	*e*P	**P**	**10 31 23.5**	**-0.5**
WLF1				AMb	AMB	10 31 28.0	
	comp=Z,246nm,1.6s,mb5.9						
BJO	**Bjornoya**	**51.39**	**348**	*e*SS	SS	10 42 20.0	+4.1
BJO	**Bjornoya**	**51.39**	**348**	*e*SS	SS	10 42 20.0	+4.2
	SNR=29						
CSA1	**St Austell**	**51.40**	**314**	⇑*e*P	**P**	**10 31 23.4**	**-1.0**
EADA	**Adamuz**	**51.42**	**299**	P	**P**	**10 31 25.0**	**+0.2**
	comp=Z,2µm,1.7s,mb6.7						
YRC	**Rhoscolyn**	**51.45**	**318**	⇑*e*P	**P**	**10 31 23.9**	**-0.8**
YRC				AMb	AMB	10 31 29.0	
	comp=Z,475nm,1.5s,mb6.2						
GIM	**North Isle of**	**51.51**	**319**	*e*P	**P**	**10 31 25.0**	**-0.2**
CMA1	**Manaccan**	**51.53**	**314**	⇑*e*P	**P**	**10 31 25.2**	**-0.3**
EARI	**Arriondas**	**51.53**	**305**	P	**P**	**10 31 25.5**	**-0.1**
	comp=Z,91nm,1.1s,mb5.6						
CRQ2	**Rosemanowes 2**	**51.56**	**314**	⇑*e*P	**P**	**10 31 25.4**	**-0.3**
CRQ2				AMb	AMB	10 31 30.5	
	comp=Z,436nm,1.7s,mb6.1						
CCA1	**Carnmenellis**	**51.60**	**314**	⇑*e*P	**P**	**10 31 24.9**	**-1.1**
WIM	**Isle of Man**	**51.61**	**319**	*e*P	**P**	**10 31 25.0**	**-1.0**
WIM				AMb	AMB	10 31 30.8	
	comp=Z,438nm,1.6s,mb6.1						
GAL1	**Galloway**	**51.72**	**320**	⇑*e*P	**P**	**10 31 25.8**	**-1.0**
KGM	**Kluang**	**51.72**	**110**	P	**P**	**10 31 28.1**	**+0.7**
EMIJ	**Mijas**	**51.76**	**297**	P	**P**	**10 31 26.4**	**-0.9**
	comp=Z,738nm,1.3s,mb6.5						
GZH	**Guangzhou**	**51.92**	**81**	P	**P**	**10 31 30.0**	**+1.3**
GZH				S	**S**	**10 38 53.5**	**+3.4**
GZH				LR	LR		
	comp=N,4µm,13.7s,MS5.7						
GZH				LR	LR		
	comp=E,3µm,17.4s,MS5.7						
GZH				LR	LR		
	comp=Z,7µm,13.7s,MS5.9						
ECAB	**El Cabril**	**52.09**	**299**	P	**P**	**10 31 29.4**	**-0.4**
	comp=Z,2µm,1.5s,mb6.8						
MDT	**Midelt**	**52.20**	**292**	P	**P**	**10 31 31.3**	**+0.5**
	comp=Z,176nm,0.9s,mb6.0,baz=82,slow=7.1,SNR=180						
GMK	**Mull of Kintyr**	**52.28**	**321**	⇑*e*P	**P**	**10 31 30.6**	**-0.4**
EJIF	**Jimena Fronter**	**52.33**	**297**	P	**P**	**10 31 30.2**	**-1.5**
	comp=Z,210nm,1.4s,mb5.9						
EJIF	**Jimena Fronter**	**52.33**	**297**	P	**P**	**10 31 30.2**	**-1.5**
EJIF				pmax	pmax		
	comp=Z,211nm,1.4s,mb5.9						
GMM	**Mts of Mourne**	**52.37**	**319**	⇑*e*P	**P**	**10 31 31.2**	**-0.5**
TIA	**Tai'an**	**52.37**	**64**	⇑P	**P**	**10 31 31.5**	**-0.4**
TIA				S	**S**	**10 38 55.8**	**-0.2**
TIA				AMB	AMB		
	comp=Z,200nm,1.2s,mb5.9						
TIA				AMB	AMB		
	comp=Z,2µm,6.0s						
TIA				LR	LR		
	comp=E,9µm,14.0s						
TIA				LR	LR		
	comp=N,3µm,20.0s						
TIA				LR	LR		
	comp=E,2µm,17.2s						
KAC	**Achnashellach**	**52.42**	**323**	*e*P	**P**	**10 31 31.4**	**-0.6**
RSC	**Scourie**	**52.48**	**324**	⇑*e*P	**P**	**10 31 31.4**	**-1.2**
REB	**Eisghbrachaidh**	**52.51**	**324**	⇑*e*P	**P**	**10 31 31.9**	**-0.8**
DSB	**Dublin**	**52.53**	**318**	*e*P	**P**	**10 31 31.4**	**-1.5**
	comp=E,48nm,0.6s,mb5.6						
GCL	**Cushendall**	**52.56**	**320**	⇑*e*P	**P**	**10 31 32.6**	**-0.4**
KPL	**Plockton**	**52.58**	**323**	*e*P	**P**	**10 31 32.3**	**-0.9**
ESPR	**Espera**	**52.59**	**297**	P	**P**	**10 31 32.5**	**-1.1**
	comp=E,656nm,1.3s,mb6.4						
KAR1	**Arisaig**	**52.62**	**323**	⇑*e*P	**P**	**10 31 32.5**	**-1.1**
KAR1				AMb	AMB	10 31 38.2	
	comp=Z,461nm,1.4s,mb6.2						
DLF	**Lyons Farm**	**52.62**	**318**	*e*P	**P**	**10 31 31.6**	**-2.0**
ECAL	**Calabor**	**52.74**	**304**	P	**P**	**10 31 35.0**	**+0.3**
	comp=Z,829nm,1.7s,mb6.4						
RRR	**Rubha Reidh**	**52.74**	**324**	*e*P	**P**	**10 31 33.0**	**-1.4**
PBRG	**Braganca**	**52.75**	**304**	*e*P	**P**	**10 31 34.4**	**-0.3**
	comp=Z,252nm,1.9s,mb5.8						
HKC	**Hong Kong**	**52.88**	**81**	⇑*i*P	**P**	**10 31 37.0**	**+1.0**
HKC				*i* S	**S**	**10 39 12.0**	**+8.8**
SFS	**San Fernando**	**52.92**	**297**	*e*P	**P**	**10 31 35.2**	**-0.8**
	comp=Z,487nm,1.0s,mb6.4						
SFS	**San Fernando**	**52.92**	**297**	P	**P**	**10 31 35.7**	**-0.4**
SFS				pmax	pmax		
	comp=Z,490nm,1.0s,mb6.4						
SFS	**San Fernando**	**52.92**	**297**	*i* P	**P**	**10 31 36.5**	**+0.4**
SFS				*i* S	**S**	**10 39 09.2**	**+5.7**
EPON	**Pontenova**	**52.95**	**305**	P	**P**	**10 31 36.3**	**+0.1**
	comp=Z,656nm,1.4s,mb6.4						
ERUA	**La Rua**	**53.01**	**304**	P	**P**	**10 31 36.6**	**-0.1**
	comp=Z,152nm,1.1s,mb5.8						
ERUA	**La Rua**	**53.01**	**304**	P	**P**	**10 31 36.6**	**0.0**
ERUA				pmax	pmax		
	comp=Z,152nm,1.1s,mb5.8						
DCN	**Croghan**	**53.07**	**318**	*e*P	**P**	**10 31 35.2**	**-1.8**
EMIN	**Mina Concepcio**	**53.11**	**298**	P	**P**	**10 31 36.9**	**-0.6**
	comp=Z,1µm,2.4s,mb6.3						
EBAD	**Badajoz**	**53.26**	**300**	P	**P**	**10 31 38.3**	**-0.3**
	comp=Z,991nm,2.4s,mb6.3						
HIA	**Hailar**	**53.43**	**47**	*e*P	**P**	**10 31 39.3**	**-0.3**
	comp=Z,234nm,0.9s,mb6.1						
HIA				LR	LR		
	comp=Z,16µm,19.0s,MS6.1						
HIA	**Hailar**	**53.43**	**47**	*e*P	**P**	**10 31 39.3**	**-0.4**
HIA				pmax	pmax		
	comp=Z,234nm,0.9s						
HIA				MLR	MLR		
	comp=Z,16µm,19.0s						
MTE	**Manteigas**	**53.48**	**302**	*e*P	**P**	**10 31 39.5**	**-0.7**
	comp=Z,405nm,2.1s,mb6.0						
MTE				*e*S	**S**	**10 39 10.9**	**-0.2**
MTE				*e*SS	SS	10 42 57.0	+6.2
MTE	**Manteigas**	**53.48**	**302**	*e*P	**P**	**10 31 40.0**	**-0.1**
	comp=Z,630nm,1.8s,mb6.2						
PCBR	**Castelo Branco**	**53.49**	**301**	*e*P	**P**	**10 31 40.4**	**+0.2**
	comp=Z,367nm,1.5s,mb6.1						
PVRL	**Vila Real**	**53.53**	**303**	*e*P	**P**	**10 31 40.4**	**-0.1**
	comp=Z,428nm,1.8s,mb6.1						
PVIS	**Viseu**	**53.72**	**302**	*e*P	**P**	**10 31 42.3**	**+0.4**
	comp=Z,396nm,1.9s,mb6.0						
PCAB	**Cabril**	**53.72**	**304**	*e*P	**P**	**10 31 42.2**	**+0.3**
	comp=Z,338nm,2.0s,mb5.9						
EGRO	**El Granado**	**53.78**	**298**	P	**P**	**10 31 41.6**	**-0.8**
	comp=Z,694nm,2.1s,mb6.2						
HSP	**Hornsund**	**53.81**	**350**	*e*P	**P**	**10 31 42.7**	**+0.6**
MATP	**Matopo**	**53.86**	**212**	P	**P**	**10 31 43.3**	**+0.2**
	comp=Z,186nm,0.9s,mb6.0,baz=28,slow=8.8,SNR=192						
MATP				LR	LR	10 55 24.3	
	comp=Z,13µm,18.8s,MS6.0,baz=29,slow=37						
STS	**Santiago**	**54.00**	**305**	P	**P**	**10 31 44.2**	**+0.3**
	comp=Z,247nm,1.0s,mb6.1						
STS	**Santiago**	**54.00**	**305**	P	**P**	**10 31 44.2**	**+0.3**
STS				pmax	pmax		
	comp=Z,247nm,1.0s,mb6.1						
PBEJ	**Beja**	**54.02**	**299**	*e*P	**P**	**10 31 43.5**	**-0.6**
	comp=Z,252nm,2.2s,mb5.8						
EVO	**Evora**	**54.06**	**300**	⇑*i*P	**P**	**10 31 44.5**	**+0.1**
	comp=Z,249nm,1.0s,mb5.8						
EVO				*e*R			
	comp=Z,4µm,19.8s						
EZAM	**Zamans**	**54.17**	**304**	P	**P**	**10 31 45.7**	**+0.5**
	comp=Z,184nm,1.0s,mb6.0						
EZAM	**Zamans**	**54.17**	**304**	P	**P**	**10 31 45.7**	**+0.5**
EZAM				pmax	pmax		
	comp=Z,184nm,1.0s,mb6.0						
PTOM	**Tomar**	**54.23**	**301**	*e*P	**P**	**10 31 46.0**	**+0.4**
	comp=Z,535nm,2.0s,mb6.1						
EMAZ	**Mazaricos**	**54.31**	**305**	P	**P**	**10 31 46.6**	**+0.4**
	comp=Z,678nm,1.3s,mb6.4						
NJ2	**Nanjing**	**54.49**	**68**	*e*P	**P**	**10 31 47.5**	**-0.2**
NJ2				PP	PP	10 33 51.3	-0.2
NJ2				S	**S**	**10 39 23.0**	**-1.9**
NJ2				AMB	AMB		
	comp=Z,150nm,1.0s,mb5.9						
NJ2				AMB	AMB		
	comp=Z,2µm,7.0s						
NJ2				LR	LR		
	comp=N,18µm,22.6s						
NJ2				LR	LR		
	comp=E,12µm,17.0s						
NJ2				LR	LR		
	comp=Z,5µm,17.3s						
PTEO	**Sao Teotonio**	**54.76**	**299**	*e*P	**P**	**10 31 49.2**	**-0.4**
	comp=Z,240nm,2.1s,mb5.9						
VAL	**Valentia**	**54.82**	**316**	*e*P	**P**	**10 31 48.5**	**-1.3**
PLOU	**Loures**	**54.90**	**300**	*e*P	**P**	**10 31 50.4**	**-0.2**
	comp=Z,364nm,1.9s,mb6.1						
LIS	**Lisbon**	**54.92**	**300**	*e*P	**P**	**10 31 49.0**	**-1.7**
LIS				*e*		10 32 01.2	
	baz=262,slow=10						
LIS				*e*S	**S**	**10 39 31.7**	**+1.2**
LIS				*e*S	**S**	**10 39 32.4**	**+1.9**
LIS				AMS	AMS	10 57 08.3	
	comp=Z,6µm,18.9s,MS5.7						
LIS	**Lisbon**	**54.92**	**300**	*e*P	**P**	**10 31 49.0**	**-1.7**
LIS				*e*S	**S**	**10 39 32.4**	**+1.9**
DL2	**Dalian**	**55.53**	**60**	⇑*i*P	**P**	**10 31 54.8**	**-0.4**
DL2				PP	PP	10 33 59.0	-1.8
DL2				S	**S**	**10 39 38.5**	**-0.2**
DL2				AMB	AMB		
	comp=Z,110nm,1.2s,mb5.8						
DL2				AMB	AMB		
	comp=Z,1µm,5.1s						
DL2				LR	LR		
	comp=N,7µm,19.5s,MS5.8						
DL2				LR	LR		
	comp=E,3µm,18.6s,MS5.8						
DL2				LR	LR		
	comp=Z,5µm,14.9s,MS5.7						
COCO	**West Island**	**55.54**	**129**	*e*P	**P**	**10 31 55.7**	**+0.2**
COCO				LR	LR		
	comp=Z,924nm,20.0s,MS4.9						
KBS	**Kingsbay**	**55.68**	**351**	⇑*i*P	**P**	**10 31 55.5**	**-0.2**
KBS				AMb	AMB	10 31 60.0	
	comp=Z,165nm,2.5s,mb5.6						
KBS				*e*S	**S**	**10 39 40.6**	**+0.4**
KBS				*e*SS	SS	10 43 36.9	+11
KBS	**Kingsbay**	**55.68**	**351**	*e*P	**P**	**10 31 54.9**	**-0.9**
	comp=Z,73nm,0.7s,mb5.8						
KBS				LR	LR		
	comp=Z,6µm,20.0s,MS5.7						
KBS	**Kingsbay**	**55.68**	**351**	P	**P**	**10 31 55.0**	**-0.8**
KBS				pmax	pmax		
	comp=Z,73nm,0.7s,mb5.8						
KBS	**Kingsbay**	**55.68**	**351**	⇑*i*P	**P**	**10 31 55.5**	**-0.3**
	comp=Z,165nm,2.5s,mb5.6,SNR=22						
KBS				*e*S	**S**	**10 39 40.6**	**+0.4**
	SNR=24						
KBS				*e*SS	SS	10 43 36.9	+11
	SNR=28						
QZH	**Quanzhou**	**56.00**	**77**	⇑*i*P	**P**	**10 31 58.0**	**-0.7**
QZH				S	**S**	**10 39 43.0**	**-2.1**
QZH				AMB	AMB		
	comp=Z,390nm,1.2s,mb6.3						
QZH				AMB	AMB		
	comp=Z,5µm,7.2s						
QZH				LR	LR		
	comp=N,8µm,14.3s,MS6.0						
QZH				LR	LR		
	comp=E,4µm,11.2s,MS6.0						
QZH				LR	LR		
	comp=Z,11µm,15.1s,MS6.1						
SNY	**Shenyang**	**56.60**	**56**	⇑P	**P**	**10 32 01.8**	**-1.0**
SNY				S	**S**	**10 39 53.5**	**+0.6**
SNY				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.8						
SNY				AMB	AMB		
	comp=Z,2µm,6.0s						
SNY				LR	LR		
	comp=E,10µm,15.6s						
SNY				LR	LR		
	comp=Z,12µm,15.1s,MS6.1						
SSE	**Sheshan**	**56.64**	**69**	P	**P**	**10 32 03.3**	**0.0**
SSE				AP	pP	10 32 14.5	+8.2
SSE				XP	sP	10 32 20.0	+12
SSE				PCP	PcP	10 33 00.3	+0.9
SSE				PP	PP	10 34 08.3	-2.6
SSE				S	**S**	**10 39 50.8**	**-2.8**
SSE				XS		10 40 11.5	
SSE				SS	SS	10 43 38.5	-3.6
SSE				AMB	AMB		
	comp=Z,100nm,1.0s,mb5.8						
SSE				AMB	AMB		
	comp=Z,2µm,7.9s						
SSE				LR	LR		
	comp=N,8µm,23.8s,MS5.7						
SSE				LR	LR		
	comp=E,3µm,23.9s,MS5.7						
SSE				LR	LR		
	comp=Z,6µm,17.5s						
SSE	**Sheshan**	**56.64**	**69**	P	**P**	**10 32 03.3**	**0.0**
	comp=Z,100nm,1.0s,mb5.8						
SSE				pP	pP	10 32 14.6	+8.3
SSE				sP	sP	10 32 19.9	+12
SSE				PcP	PcP	10 33 00.2	+0.8
SSE				PP	PP	10 34 08.3	-2.6
SSE				S	**S**	**10 39 50.7**	**-2.9**
SSE				sS		10 40 11.4	
SSE				SS	SS	10 43 38.6	-3.5
SSE				LR	LR		
	comp=Z,6µm,17.5s,MS5.7						
JMIC	**Jan Mayen**	**56.65**	**339**	LR	LR	11 00 08.1	
	comp=Z,4µm,18.8s,MS5.6,baz=95,slow=40						
JMIC	**Jan Mayen**	**56.65**	**339**	*e*	**P**	**10 32 06.9**	**+4.2**
JMIC				*e*S	**S**	**10 39 57.6**	**+4.5**
CLNS	**Chul'man**	**56.66**	**38**	⇑*i*P	**P**	**10 32 02.6**	**-0.4**
CN2	**Changchun**	**57.71**	**53**	*e*P	**P**	**10 32 11.0**	**+0.4**
CN2				*e*S	**S**	**10 40 06.3**	**-1.1**
CN2				LR	LR		
	comp=N,20µm,21.0s,MS6.2						
CN2				LR	LR		
	comp=E,7µm,21.0s,MS6.2						
CN2				LR	LR		
	comp=Z,2µm,21.0s,MS5.2						
KSM	**Kuching**	**57.94**	**106**	*e*P	**P**	**10 32 12.1**	**-0.6**
YHNB	**Yeheng**	**58.50**	**76**	⇑*e*P	**P**	**10 32 18.0**	**+1.6**
TATO	**Taipei**	**58.50**	**76**	⇑*e*P	**P**	**10 32 17.7**	**+1.2**
	comp=Z,1µm,1.4s,mb6.7						
TATO				LR	LR		
	comp=Z,3µm,19.0s,MS5.5						
NACB	**Ninganchiao**	**58.84**	**77**	*e*P	**P**	**10 32 18.7**	**-0.1**
TSUM	**Tsumeb**	**58.84**	**223**	P	**P**	**10 32 19.3**	**+0.4**
	comp=Z,68nm,1.0s,mb5.6,baz=32,slow=6.5,SNR=48						
TSUM	**Tsumeb**	**58.84**	**223**	*e*P	**P**	**10 32 19.0**	**+0.1**
	comp=Z,104nm,1.1s,mb5.8						
TSUM				LR	LR		
	comp=Z,11µm,19.0s,MS6.0						
LBTB	**Lobatse**	**59.15**	**212**	P	**P**	**10 32 21.4**	**+0.4**
	comp=Z,96nm,0.5s,mb6.1,baz=40,slow=6.5,SNR=153						
LBTB	**Lobatse**	**59.15**	**212**	*e*P	**P**	**10 32 20.8**	**-0.2**
	comp=Z,179nm,0.7s,mb6.2						
LBTB				LR	LR		
	comp=Z,10µm,22.0s,MS5.9						
LBTB	**Lobatse**	**59.15**	**212**	*e*P	**P**	**10 32 20.8**	**-0.2**
LBTB				pmax	pmax		
	comp=Z,179nm,0.7s,mb6.2						
LBTB				MLR	MLR		
	comp=Z,10µm,22.0s,MS5.9						
YAK	**Yakutsk**	**59.20**	**32**	⇑*e*P	**P**	**10 32 18.2**	**-2.6**
	comp=Z,209nm,0.8s,mb6.2						
YAK				LR	LR		
	comp=Z,10µm,20.0s,MS5.9						
YAK	**Yakutsk**	**59.20**	**32**	*c* *i*P	**P**	**10 32 18.6**	**-2.2**
YAK				*e*		10 33 08.4	
YAK				*e*S	**S**	**10 40 23.4**	**-3.3**
YAK				*e**SS		10 40 38.2	
YAK				*e*		10 42 11.0	
YAK				*e*SS	SS	10 44 24.2	+1.4
YAK				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.6						
YAK				pmax	pmax		
	comp=N,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,13nm,1.1s						
YAK				smax			
	comp=E,566nm,9.8s						
YAK				smax			
	comp=Z,398nm,9.7s						
YAK				smax			
	comp=N,247nm,10.0s						
YAK				MLR	MLR		
	comp=E,7µm,12.0s,MS6.0						
YAK				MLR	MLR		
	comp=Z,9µm,12.0s,MS6.1						
YAK				MLR	MLR		
	comp=N,3µm,14.0s,MS6.0						
TIXI	**Tiksi**	**59.52**	**21**	⇑*i*P	**P**	**10 32 21.5**	**-1.4**
TIXI				LR	LR		
	comp=Z,14µm,19.0s,MS6.1						
TIXI	**Tiksi**	**59.52**	**21**	*e*P	**P**	**10 32 15.6**	**-7.3**
TIXI				*e*		10 34 30.2	
TIXI				*e*S	**S**	**10 40 23.8**	**-7.0**
TIXI				*e*		10 42 00.2	
TIXI				*e*SS	SS	10 44 19.2	-8.3
TIXI				*e*SSS	SSS	10 46 59.5	+4.0
TIXI				pmax	pmax		
	comp=Z,206nm,2.0s,mb5.8						
TIXI				pmax	pmax		
	comp=N,18nm,1.9s						
TIXI				pmax	pmax		
	comp=E,49nm,1.7s						
TIXI				pmax	pmax		
	comp=Z,1µm,2.3s,mb6.5						
TIXI				MLR	MLR		
	comp=N,7µm,14.0s,MS6.2						
TIXI				MLR	MLR		
	comp=E,11µm,14.0s,MS6.2						
TIXI				MLR	MLR		
	comp=Z,13µm,14.0s,MS6.2						
INCN	**Inchon**	**59.66**	**61**	*e*P	**P**	**10 32 22.9**	**-1.4**
	comp=Z,245nm,1.0s,mb6.2						
INCN				LR	LR		
	comp=Z,6µm,19.0s,MS5.8						
EFAM	**Famara**	**60.49**	**290**	P	**P**	**10 32 30.5**	**+0.4**
	comp=Z,800nm,1.6s,mb6.5						
MDJ	**Mudanjiang**	**60.53**	**52**	P	**P**	**10 32 29.0**	**-1.2**
MDJ				PCP	PcP	10 33 13.5	-1.1
MDJ				PP	PP	10 34 43.3	-2.4
MDJ				S	**S**	**10 40 43.5**	**-0.6**
MDJ				SS	SS	10 44 43.0	-0.6
MDJ				AMB	AMB		
	comp=Z,80nm,1.7s,mb5.6						
MDJ				AMB	AMB		
	comp=Z,1µm,8.4s						
MDJ				LR	LR		
	comp=N,12µm,24.2s,MS6.0						
MDJ				LR	LR		
	comp=E,6µm,29.1s,MS6.0						
MDJ				LR	LR		
	comp=Z,13µm,17.0s						
MDJ	**Mudanjiang**	**60.53**	**52**	⇑*e*P	**P**	**10 32 28.1**	**-2.1**
	comp=Z,78nm,1.0s,mb5.8						
MDJ				LR	LR		
	comp=Z,11µm,20.0s,MS6.0						
BCPH	**Baguio City Da**	**60.56**	**86**	⇑*e*P	**P**	**10 32 30.8**	**+0.1**
DAG	**Danmarks Havn**	**60.61**	**345**	⇓*i*P	**P**	**10 32 29.2**	**-1.1**
	comp=Z,175nm,1.2s,mb6.1						
DAG	**Danmarks Havn**	**60.61**	**345**	⇓*i*P	**P**	**10 32 29.2**	**-1.1**
DAG				pmax	pmax		
	comp=Z,175nm,1.2s,mb6.1						
KS15	**Wonju Array Si**	**60.64**	**60**	*e*P	**P**	**10 32 29.7**	**-1.3**
BORG	**Borgarnes**	**60.68**	**331**	P	**P**	**10 32 31.0**	**+0.1**
	comp=Z,55nm,0.9s,mb5.7,baz=108,slow=5.4,SNR=4.6						
BORG	**Borgarnes**	**60.68**	**331**	*e*P	**P**	**10 32 31.5**	**+0.6**
	comp=Z,271nm,1.6s,mb6.1						
BORG				LR	LR		
	comp=Z,1µm,19.0s,MS5.0						
DBIC	**Dimbokro**	**60.88**	**262**	P	**P**	**10 32 32.1**	**-0.9**
	comp=Z,101nm,0.9s,mb6.0,baz=43,slow=7.5,SNR=104						
DBIC				S	**S**	**10 40 57.1**	**+8.1**
	comp=Z,15nm,1.1s,baz=194,slow=17,SNR=3.9						
DBIC				LR	LR	11 00 37.0	
	comp=Z,4µm,18.6s,MS5.7,baz=36,slow=38						
DBIC	**Dimbokro**	**60.88**	**262**	⇑*e*P	**P**	**10 32 31.7**	**-1.3**
	comp=Z,107nm,0.8s,mb6.0						
DBIC				LR	LR		
	comp=Z,4µm,20.0s,MS5.6						
DBIC	**Dimbokro**	**60.88**	**262**	P	**P**	**10 32 32.1**	**-0.9**
DBIC				S	**S**	**10 40 57.1**	**+8.1**
DBIC				pmax	pmax		
	comp=Z,101nm,0.9s						
DBIC				MLR	MLR		
	comp=Z,4µm,18.6s						
KKM	**Kota Kinabalu**	**60.91**	**98**	⇑*e*P	**P**	**10 32 32.0**	**-1.1**
KKM	**Kota Kinabalu**	**60.91**	**98**	P	**P**	**10 32 32.6**	**-0.5**
CFTV	**Fuerteventura**	**61.15**	**289**	P	**P**	**10 32 34.0**	**-0.7**
	comp=Z,66nm,0.6s,mb5.9						
LIC	**Lamto**	**61.24**	**262**	⇑*i*P	**P**	**10 32 34.5**	**-0.9**
	comp=Z,321nm,1.0s,mb6.1						
LIC				*e*R			
	comp=Z,11µm,17.2s						
KLR	**Kul'dur**	**61.27**	**46**	*d* *i*P	**P**	**10 32 30.5**	**-4.6**
KLR				pmax	pmax		
	comp=E,280nm,1.8s						
KLR				pmax	pmax		
	comp=Z,350nm,1.8s,mb6.2						
KLR				pmax	pmax		
	comp=E,1µm,7.5s						
KLR				pmax	pmax		
	comp=Z,3µm,7.5s						

KLR				MLR	MLR		
	comp=E,6µm,12.0s						
KLR				MLR	MLR		
	comp=Z,36µm,12.0s,MS6.7						
TGY	**Tagaytay City**	**61.73**	**88**	LR	LR	11 03 46.6	
	comp=Z,21nm,19.0s,baz=303,slow=40						
BOSA	**Boshof**	**62.38**	**210**	P	**P**	**10 32 42.7**	**-0.1**
	comp=Z,89nm,0.5s,mb6.1,baz=30,slow=6.5,SNR=346						
BOSA				LR	LR	11 00 25.4	
	comp=Z,7µm,18.1s,MS5.8,baz=34,slow=37						
BOSA				PKP2bc		11 01 55.1	
	comp=Z,5.3nm,1.1s,baz=243,slow=2.8,SNR=3.3						
BOSA	**Boshof**	**62.38**	**210**	*e*P	**P**	**10 32 42.0**	**-0.8**
	comp=Z,150nm,0.7s,mb6.2						
BOSA				LR	LR		
	comp=Z,7µm,20.0s,MS5.8						
BOSA	**Boshof**	**62.38**	**210**	*e*P	**P**	**10 32 42.0**	**-0.9**
BOSA				pmax	pmax		
	comp=Z,150nm,0.7s,mb6.2						
BOSA				MLR	MLR		
	comp=Z,7µm,20.0s,MS5.8						
EOSO	**Osorio**	**62.49**	**289**	P	**P**	**10 32 44.2**	**+0.5**
	comp=Z,183nm,1.4s,mb6.0						
EBAJ	**Bajamar**	**63.02**	**290**	⇑P	**P**	**10 32 47.6**	**+0.5**
	comp=Z,476nm,1.2s,mb6.5						
TSM	**Tawau**	**63.17**	**99**	P	**P**	**10 32 47.1**	**-1.2**
CCAN	**Las Canadas**	**63.34**	**290**	P	**P**	**10 32 49.8**	**+0.7**
	comp=Z,77nm,1.0s,mb5.8						
JOW	**Kunigami**	**63.77**	**72**	P	**P**	**10 32 51.4**	**-0.7**
	comp=Z,81nm,0.8s,mb5.8,baz=289,slow=9.0,SNR=16						
JOW				LR	LR	11 04 54.8	
	comp=Z,3µm,18.2s,MS5.5,baz=110,slow=40						
EGOM	**La Gomera**	**63.86**	**290**	P	**P**	**10 32 52.9**	**+0.2**
	comp=Z,380nm,1.6s,mb6.2						
JNU	**Nakatsue**	**64.09**	**64**	P	**P**	**10 32 54.1**	**+0.1**
	comp=Z,81nm,0.9s,mb5.7,baz=35,slow=3.8,SNR=19						
EHIG	**Higuera**	**64.24**	**290**	P	**P**	**10 32 56.0**	**+0.8**
	comp=Z,234nm,0.9s,mb6.2						
CHIE	**El Hierro**	**64.63**	**290**	P	**P**	**10 32 58.2**	**+0.5**
	comp=Z,146nm,1.4s,mb5.8						
SUMG	**Summit**	**66.00**	**341**⇑	*e*P	**P**	**10 33 06.1**	**+0.4**
	comp=Z,270nm,1.0s,mb6.2						
TBP	**Tagbilaran**	**66.13**	**91**	*e*P	**P**	**10 33 06.4**	**-1.1**
SUR	**Sutherland**	**67.60**	**212**	P	**P**	**10 33 17.1**	**+0.5**
	comp=Z,101nm,0.9s,mb5.9,baz=23,slow=3.9,SNR=27						
SUR	**Sutherland**	**67.60**	**212**	*e*P	**P**	**10 33 17.4**	**+0.8**
	comp=Z,1µm,1.9s,mb6.6						
SUR				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
DAV	**Davao City (W)**	**68.78**	**93**	*e*P	**P**	**10 33 25.0**	**+0.7**
DAV	**Davao City (W)**	**68.78**	**93**	*e*P	**P**	**10 33 24.3**	**0.0**
DAV				LR	LR		
	comp=Z,2µm,19.0s,MS5.3						
MAJO	**Matsushiro**	**68.85**	**59**	*e*P	**P**	**10 33 22.7**	**-1.7**
	comp=Z,112nm,1.2s,mb5.7						
MAJO				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
MAJO	**Matsushiro**	**68.85**	**59**	P	**P**	**10 33 22.8**	**-1.5**
MAJO				pmax	pmax		
	comp=Z,110nm,1.2s,mb5.7						
MAT	**Matsushiro**	**68.85**	**59**	P	**P**	**10 33 22.8**	**-1.5**
MAT				S	S	10 42 24.0	-2.8
MAT	**Matsushiro**	**68.85**	**59**	*e*P	**P**	**10 33 23.0**	**-1.3**
	comp=Z,133nm,1.2s,mb5.7						
MAT				*e*S	S	10 42 25.0	-1.8
MAT				LR	LR		
	comp=Z,5µm,20.0s,MS5.8						
MAT	**Matsushiro**	**68.85**	**59**	*e*P	**P**	**10 33 23.0**	**-1.3**
MAT				*e*S	S	10 42 25.0	-1.8
MAT				pmax	pmax		
	comp=Z,133nm,1.2s,mb5.7						
MAT				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.8						
MJAR	**Matsushiro Arr**	**68.85**	**59**	P	**P**	**10 33 23.3**	**-1.0**
	comp=Z,39nm,1.0s,mb5.3,baz=289,slow=9.3,SNR=50						
MJAR				PKP2bc		11 01 35.3	
	comp=Z,2.7nm,1.0s,baz=214,slow=2.3,SNR=5.6						
MJAR				LR	LR	11 05 44.0	
	comp=Z,4µm,20.9s,MS5.7,baz=285,slow=38						
MJAR	**Matsushiro Arr**	**68.85**	**59**	P	**P**	**10 33 23.3**	**-1.0**
MJAR			⇑	*e*		11 01 35.3	
MJAR				LR	LR	11 05 44.0	
YSS	**Yuzh-Sakhalins**	**68.97**	**47**	*e*P	**P**	**10 33 23.4**	**-1.4**
	comp=Z,221nm,0.8s,mb6.1						
YSS				LR	LR		
	comp=Z,7µm,20.0s,MS5.9						
YSS	**Yuzh-Sakhalins**	**68.97**	**47**α	*i*P	**P**	**10 33 23.5**	**-1.3**
YSS				*i*		10 33 48.5	
YSS				*e*S	S	10 42 24.0	-4.0
YSS				*e*PPS	PPS	10 43 04.0	-2.7
YSS				*e*		10 43 12.0	
YSS				*e*		10 46 56.0	
YSS				pmax	pmax		
	comp=Z,260nm,0.9s,mb6.2						
YSS				pmax	pmax		
	comp=E,100nm,0.8s						
YSS				pmax	pmax		
	comp=E,500nm,6.0s						
YSS				pmax	pmax		
	comp=Z,2µm,6.0s						
YSS				smax			
	comp=E,1µm,8.0s						
YSS				MLR	MLR		
	comp=Z,8µm,15.0s,MS6.1						
YSS				MLR	MLR		
	comp=N,3µm,13.0s,MS6.1						
YSS				MLR	MLR		
	comp=E,7µm,17.0s,MS6.1						
SEY	**Seymchan**	**69.43**	**29**	*i* P	**P**	**10 33 27.4**	**0.0**
SEY	**Seymchan**	**69.43**	**29**	*i* P	**P**	**10 33 27.6**	**+0.2**
SEY				*e*		10 33 52.6	
SEY						10 36 00.5	
SEY				PPP	PPP	10 37 40.6	-1.3
SEY				*e*S	S	10 42 34.1	+0.9
SEY				*e*		10 43 22.3	
SEY				*e*SS	SS	10 46 58.8	-3.3
SEY				SSS	SSS	10 50 09.0	+3.6
SEY				pmax	pmax		
	comp=E,80nm,0.8s						
SEY				pmax	pmax		
	comp=Z,200nm,0.8s,mb6.1						
SEY				pmax	pmax		
	comp=N,40nm,0.9s						
SEY				smax			
	comp=N,2µm,7.9s						
SEY				smax			
	comp=E,270nm,6.0s						
SEY				MLR	MLR		
	comp=Z,21µm,16.0s,MS6.5						
SEY				MLR	MLR		
	comp=N,14µm,21.0s,MS6.4						
SEY				MLR	MLR		
	comp=E,18µm,17.0s,MS6.4						
ASAJ	**Asahikawa**	**69.71**	**50**	P	**P**	**10 33 28.5**	**-0.9**
	comp=E,42nm,0.8s,mb5.4,baz=276,slow=12,SNR=16						
ASAJ	**Asahikawa**	**69.71**	**50**	P	**P**	**10 33 28.5**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,42nm,0.8s						
MA2	**Magadan**	**69.75**	**33***c*	*i*P	**P**	**10 33 28.6**	**-0.8**
MA2				*e*		10 33 52.4	
MA2				*i* S	S	10 42 37.1	+0.1
MA2				*e*PS	PS	10 43 03.2	-1.5
MA2				*e*		10 43 21.6	
MA2				pmax	pmax		
	comp=Z,100nm,1.1s,mb5.7						
MA2				MLR	MLR		
	comp=E,13µm,21.0s						
SFJD	**Kangerlussuaq**	**71.81**	**337**	P	**P**	**10 33 41.6**	**-0.2**
	comp=E,36nm,0.6s,mb5.5,baz=68,slow=4.9,SNR=15						
SFJD	**Kangerlussuaq**	**71.81**	**337**	*e*P	**P**	**10 33 41.5**	**-0.3**
YUK	**Yuzh-Kuril'sk**	**71.96**	**49**⇑	*i*P	**P**	**10 33 40.8**	**-2.3**
YUK				*e*S	S	10 42 58.7	-4.3
YUK						10 43 31.0	
YUK				pmax	pmax		
	comp=Z,5µm,2.3s,mb7.0						
YUK				pmax	pmax		
	comp=N,2µm,1.4s						
YUK				pmax	pmax		
	comp=Z,390nm,0.8s,mb6.4						
YUK				smax			
	comp=N,3µm,5.0s						
YUK				smax			
	comp=E,2µm,5.0s						
YUK				MLR	MLR		
	comp=N,4µm,14.0s,MS6.2						
YUK				MLR	MLR		
	comp=Z,10µm,14.0s,MS6.2						
YUK				MLR	MLR		
	comp=E,8µm,15.0s,MS6.2						
CBIJ	**Chichi jima**	**75.32**	**67**	P	**P**	**10 34 02.5**	**-0.5**
	comp=E,69nm,1.0s,mb5.5,baz=300,slow=15,SNR=3.5						
PET	**Petropavlovsk**	**76.30**	**37**	PFAKE		10 34 20.0	+12
PET				LR	LR		
	comp=Z,7µm,19.0s,MS6.0						
PET	**Petropavlovsk**	**76.30**	**37***c*	*i*P	**P**	**10 34 05.2**	**-2.8**
PET				*e*		10 37 02.0	
PET				*e*PPP	PPP	10 38 41.3	-7.1
PET				*e*S	S	10 43 46.2	-5.1
PET				*e*PS	PS	10 44 25.1	-5.5
PET				*e*SS	SS	10 48 49.9	+1.6
PET				pmax	pmax		
	comp=Z,69nm,1.9s,mb5.3						
PET				pmax	pmax		
	comp=Z,800nm,12.7s						
PET				pmax	pmax		
	comp=Z,300nm,15.1s						
PET				MLR	MLR		
	comp=Z,6µm,19.0s,MS5.9						
RES	**Resolute Bay**	**77.04**	**352**	*e*P	**P**	**10 34 11.5**	**-0.2**
	comp=Z,329nm,2.1s,mb5.9						
RES	**Resolute Bay**	**77.04**	**352**	*e*P	**P**	**10 34 11.5**	**-0.2**
RES				pmax	pmax		
	comp=Z,329nm,2.1s,mb5.9						
FITZ	**Fitzroy Crossi**	**81.07**	**115**	*e*P	**P**	**10 34 34.7**	**+0.1**
	comp=Z,115nm,0.8s,mb5.9						
FITZ	**Fitzroy Crossi**	**81.07**	**115**	P	**P**	**10 34 34.8**	**+0.2**
	comp=Z,144nm,0.8s,mb6.0,baz=299,slow=4.4,SNR=118						
MUN	**Mundaring**	**81.97**	**132**	*e*P	**P**	**10 34 39.1**	**0.0**
TNA	**Tin City**	**82.05**	**17**	*e*P	**P**	**10 34 38.8**	**0.0**
	comp=Z,61nm,1.0s,mb5.5						
TNA				LR	LR		
	comp=Z,6µm,21.0s,MS5.9						
KLBR	**Kellerberrin**	**82.78**	**131**	*e*P	**P**	**10 34 42.2**	**-1.1**
	comp=Z,190nm,1.5s,mb5.9						
GUMO	**Guam**	**83.16**	**78**	PFAKE		10 35 00.0	+14
GUMO				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
NWAO	**Narrogin (SRO)**	**83.24**	**132**	P	**P**	**10 34 45.4**	**-0.3**
	comp=Z,76nm,0.8s,mb5.8,baz=302,slow=5.9,SNR=27						
FX1	**Attu Island--F**	**83.85**	**33**	*e*P	**P**	**10 34 48.5**	**+0.3**
SMY	**Shemya**	**84.39**	**33**	PFAKE		10 35 00.0	+9.0
SMY				LR	LR		
	comp=Z,10µm,21.0s,MS6.2						
IMA2	**Indian Mountai**	**84.76**	**12**	*e*P	**P**	**10 34 53.0**	**+0.4**
INK	**Inuvik**	**84.98**	**3**	P	**P**	**10 34 53.9**	**+0.3**
	comp=Z,64nm,1.0s,mb5.7,baz=358,slow=6.6,SNR=11						
INK				S	S	10 45 17.3	-3.8
	comp=Z,2.9nm,1.0s,baz=296,slow=27,SNR=5.9						
INK				LR	LR	11 18 33.4	
	comp=Z,5µm,20.9s,MS5.9,baz=2.0,slow=40						
INK	**Inuvik**	**84.98**	**3**	*e*P	**P**	**10 34 53.8**	**+0.2**
	comp=Z,679nm,1.9s,mb6.5						
SCHQ	**Schefferville**	**85.07**	**331**	P	**P**	**10 34 54.6**	**+0.3**
	comp=Z,36nm,0.9s,mb5.5,baz=57,slow=5.7,SNR=21						
SCHQ				LR	LR	11 15 37.9	
	comp=Z,3µm,19.9s,MS5.7,baz=51,slow=38						
SCHQ	**Schefferville**	**85.07**	**331**	*e*P	**P**	**10 34 54.8**	**+0.4**
	comp=Z,52nm,0.9s,mb5.7						
SCHQ				LR	LR		
	comp=Z,4µm,20.0s,MS5.8						
COLA	**College**	**86.84**	**10**	*e*P	**P**	**10 35 02.9**	**0.0**
	comp=Z,119nm,1.1s,mb6.0						
COLA				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
COLA	**College**	**86.84**	**10**	P	**P**	**10 35 02.2**	**-0.7**
COLA				pmax	pmax		
	comp=Z,120nm,1.1s,mb6.0						
ILAR	**Eielson Array**	**87.08**	**10**	P	**P**	**10 35 03.6**	**-0.4**
	comp=Z,38nm,0.6s,mb5.8,baz=323,slow=3.1,SNR=329						
ILAR				PP	PP	10 38 23.2	-6.9
	comp=Z,3.0nm,0.8s,baz=336,slow=10,SNR=5.5						
ILAR				PKKPbc		10 52 56.4	
	comp=Z,1.4nm,0.5s,baz=189,slow=2.0,SNR=24						
ILAR				LR	LR	11 16 27.0	
	comp=Z,5µm,22.0s,MS5.9,baz=68,slow=37						
MCK	**McKinley**	**87.73**	**11**	*e*P	**P**	**10 35 07.1**	**-0.1**
	comp=Z,196nm,1.2s,mb6.2						
MCK				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
MCK	**McKinley**	**87.73**	**11**	*e*P	**P**	**10 35 07.1**	**-0.1**
MCK				pmax	pmax		
	comp=Z,196nm,1.2s,mb6.2						
MCK				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.6						
THY	**Trims Highway**	**88.53**	**10**	*e*P	**P**	**10 35 10.6**	**-0.5**
DAWY	**Dawson**	**88.70**	**7**	*e*P	**P**	**10 35 12.3**	**+0.4**
SVW2	**Sparrevohn**	**88.83**	**15**	*e*P	**P**	**10 35 13.7**	**+1.2**
WRA	**Warramunga Arr**	**89.10**	**113**	P	**P**	**10 35 14.8**	**0.0**
	comp=Z,63nm,1.2s,mb5.8,baz=313,slow=4.0,SNR=120						
WRA				PKKPbc		10 52 52.1	
	comp=Z,3.1nm,0.9s,baz=118,slow=2.2,SNR=14						
WRA				PKPPKP		11 01 01.8	
	comp=Z,1.9nm,1.0s,baz=116,slow=1.7,SNR=6.4						
WRAB	**Tennant Creek**	**89.10**	**113**	*e*P	**P**	**10 35 14.8**	**0.0**
	comp=Z,573nm,1.8s,mb6.6						
WRAB				LR	LR		
	comp=Z,414nm,22.0s,MS4.8						
WRAB	**Tennant Creek**	**89.10**	**113**	*e*P	**P**	**10 35 14.8**	**0.0**
WRAB				pmax	pmax		
	comp=Z,573nm,1.8s,mb6.6						
WRAB				MLR	MLR		
	comp=Z,414nm,22.0s,MS4.8						
WB2	**Warramunga Arr**	**89.11**	**113**⇑	*i*P	**P**	**10 35 14.6**	**-0.2**
FORT	**Forrest**	**89.60**	**125**	*e*P	**P**	**10 35 17.7**	**+0.7**
	comp=Z,77nm,1.0s,mb6.0						
SML	**Sawmill**	**89.63**	**11**	*e*P	**P**	**10 35 15.4**	**-0.9**
PMR	**Palmer**	**89.69**	**12**	*e*P	**P**	**10 35 16.8**	**+0.2**
	comp=Z,83nm,0.9s,mb6.1						
PMR	**Palmer**	**89.69**	**12**	*e*P	**P**	**10 35 16.7**	**+0.1**
PMR				pmax	pmax		
	comp=Z,49nm,0.8s,mb5.9						
FIB	**Fire Island**	**89.89**	**12**	*e*P	**P**	**10 35 18.1**	**+0.6**
	comp=Z,123nm,0.8s,mb6.3						
FIB				LR	LR		
	comp=Z,5µm,22.0s,MS5.9						
FIB	**Fire Island**	**89.89**	**12**	*e*P	**P**	**10 35 18.1**	**+0.6**
FIB				pmax	pmax		
	comp=Z,123nm,0.8s,mb6.3						
FIB				MLR	MLR		
	comp=Z,5µm,22.0s,MS5.9						
TRIS	**Tristan da Cun**	**90.14**	**228**	PFAKE		10 35 30.0	+11
TRIS				LR	LR		
	comp=Z,6µm,21.0s,MS6.0						
SLKM	**Skilak Lake**	**90.49**	**13**	*e*P	**P**	**10 35 20.1**	**-0.2**
YKW3	**Yellowknife Ar**	**90.67**	**356**	*e*P	**P**	**10 35 21.5**	**+0.3**
DIV	**Divide**	**90.69**	**10**	*e*P	**P**	**10 35 21.6**	**+0.3**
	comp=Z,113nm,0.8s,mb6.2						
DIV				LR	LR		
	comp=Z,13µm,22.0s,MS6.3						
YKA	**Yellowknife Ar**	**90.74**	**356**	P	**P**	**10 35 22.0**	**+0.6**
	comp=Z,21nm,0.9s,mb5.5,baz=1.5,slow=4.9,SNR=43						
YKA				PP	PP	10 38 48.4	-11
	comp=Z,4.2nm,0.9s,baz=359,slow=7.4,SNR=2.7						
YKA				PKiKP		10 40 15.2	
	comp=Z,1.3nm,0.9s,baz=0.9,slow=1.5,SNR=4.1						
YKA				LR	LR	11 23 31.2	
	comp=Z,3µm,18.4s,MS5.8,baz=340,slow=40						
YKA	**Yellowknife Ar**	**90.74**	**356**	P	**P**	**10 35 22.0**	**+0.6**
YKA				PP	PP	10 38 48.4	-11
FCC	**Fort Churchill**	**91.21**	**345**	*e*P	**P**	**10 35 23.6**	**-0.1**
	comp=Z,25nm,0.8s,mb5.6						
FCC	**Fort Churchill**	**91.21**	**345**	*e*P	**P**	**10 35 23.6**	**-0.1**
FCC				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.6						
UNV	**Unalaska Valle**	**91.78**	**24**	PFAKE		10 35 40.0	+14
UNV				LR	LR		
	comp=Z,16µm,22.0s,MS6.4						
RCBR	**Riachuelo**	**94.13**	**266**	*e*P	**P**	**10 35 39.3**	**+1.1**
	comp=Z,251nm,2.0s,mb6.3						
RCBR				LR	LR		
	comp=Z,4µm,19.0s,MS5.9						
MAW	**Mawson**	**94.21**	**177**	P	**P**	**10 35 39.1**	**+1.8**
	comp=Z,26nm,0.8s,mb5.7,baz=332,slow=5.5,SNR=21						
MAW				PKKPbc		10 52 38.2	
	comp=Z,6.3nm,0.8s,baz=253,slow=5.0,SNR=8.0						
MAW				LR	LR	11 12 19.5	
	comp=Z,4µm,20.1s,MS5.9,baz=353,slow=32						
MAW	**Mawson**	**94.21**	**177**	*e*P	**P**	**10 35 38.3**	**+1.0**
	comp=Z,74nm,1.1s,mb6.0						
LBNH	**Lisbon**	**94.72**	**325**	*e*P	**P**	**10 35 41.3**	**+1.1**
	comp=Z,24nm,1.0s,mb5.6						
LBNH				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
LBNH	**Lisbon**	**94.72**	**325**	*e*P	**P**	**10 35 41.3**	**+1.1**
LBNH				pmax	pmax		
	comp=Z,24nm,1.0s,mb5.6						
LBNH				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.6						
DLBC	**Dease Lake**	**95.00**	**3**	P	**P**	**10 35 42.6**	**+1.5**
	comp=Z,16nm,0.8s,mb5.5,baz=352,slow=5.4,SNR=18						
DLBC				LR	LR	11 21 24.4	
	comp=Z,4µm,22.0s,MS5.8,baz=331,slow=37						
DLBC	**Dease Lake**	**95.00**	**3**	*e*P	**P**	**10 35 42.4**	**+1.2**
FRNY	**Flat Rock**	**95.13**	**327**	*e*P	**P**	**10 35 42.6**	**+0.5**
PMG	**Port Moresby**	**95.35**	**98**	P	**P**	**10 35 44.5**	**+0.7**
	comp=Z,13nm,0.8s,mb5.4,baz=350,slow=6.4,SNR=8.2						
PMG	**Port Moresby**	**95.35**	**98**	*e*P	**P**	**10 35 43.7**	**-0.1**
	comp=Z,7.2nm,0.6s,mb5.3						
PMG				LR	LR		
	comp=Z,745nm,21.0s,MS5.1						
PMG	**Port Moresby**	**95.35**	**98**	*e*P	**P**	**10 35 43.7**	**-0.1**
PMG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PMG				MLR	MLR		
	comp=Z,745nm,21.0s						
MIV	**Mineville/With**	**95.65**	**326**	*e*P	**P**	**10 35 44.8**	**+0.3**
WES	**Weston**	**95.71**	**324**	PFAKE		10 36 00.0	+15
WES				LR	LR		
	comp=Z,3µm,19.0s,MS5.7						
HRV	**Harvard--Oak R**	**95.75**	**324**	PFAKE		10 36 00.0	+15
HRV				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
LOZ	**Lake Ozonia**	**95.78**	**327**	*e*P	**P**	**10 35 44.4**	**-0.7**
NCB	**Newcomb**	**96.07**	**326**	PFAKE		10 36 00.0	+14
NCB				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
SYO	**Syowa Base**	**96.21**	**186**	⇓P	**P**	**10 35 44.3**	**-2.2**
SYO	**Syowa Base**	**96.21**	**186**	⇓PcP	PcP	10 35 54.1	+7.2
SYO	**Syowa Base**	**96.21**	**186**⇓	*e*P	**P**	**10 35 44.3**	**-2.2**
SYO			⇓	*e*PcP	PcP	10 35 54.1	+7.2
FFC	**Flin Flon**	**96.64**	**347**	*e*P	**P**	**10 35 48.7**	**0.0**
	comp=Z,58nm,1.5s,mb5.8						
FFC				LR	LR		
	comp=Z,772nm,20.0s,MS5.2						
FFC	**Flin Flon**	**96.64**	**347**	*e*P	**P**	**10 35 48.7**	**0.0**
FFC				pmax	pmax		
	comp=Z,58nm,1.5s,mb5.8						
FFC				MLR	MLR		
	comp=Z,772nm,20.0s,MS5.2						
SADO	**Sadowa**	**97.81**	**329**	P	**P**	**10 35 54.4**	**+0.2**
	comp=Z,9.1nm,0.9s,mb5.3,baz=24,slow=3.8,SNR=4.6						
BBSR	**BB Station**	**98.38**	**313**	PFAKE		10 36 10.0	+13
BBSR				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
WAKE	**Wake Island**	**98.82**	**63**	PFAKE		10 36 10.0	+11
WAKE				LR	LR		
	comp=Z,2µm,19.0s,MS5.6						
CTA	**Charters Tower**	**99.16**	**108**	*e*P	**P**	**10 36 01.4**	**+0.6**
	comp=Z,9.4nm,1.4s,mb5.1						
CTA	**Charters Tower**	**99.16**	**108**	P	**P**	**10 36 00.9**	**+0.1**
	comp=Z,5.7nm,0.8s,mb5.2,baz=303,slow=2.7,SNR=6.3						
CTA	**Charters Tower**	**99.16**	**108**	P	**P**	**10 36 01.0**	**+0.2**
CTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CTAO	**Charters Tower**	**99.16**	**108**	P	**P**	**10 36 00.7**	**-0.1**
	comp=Z,17nm,1.6s,mb5.3						
CTAO				LR	LR		
	comp=Z,2µm,21.0s,MS5.5						
CTAO	**Charters Tower**	**99.16**	**108**	P	**P**	**10 36 00.7**	**-0.1**
CTAO				pmax	pmax		
	comp=Z,17nm,1.6s,mb5.3						
CTAO				MLR	MLR		
	comp=Z,2µm,21.0s,MS5.5						
ULM	**Lac du Bonnet**	**99.34**	**342**	P	**P**	**10 36 00.6**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=34,slow=3.6,SNR=4.3						
ULM				PKP2bc		10 59 24.1	
	comp=Z,1.4nm,0.7s,baz=356,slow=21,SNR=8.7						
ULM				LR	LR	11 23 44.3	
	comp=Z,2µm,20.9s,MS5.6,baz=31,slow=37						
ULM	**Lac du Bonnet**	**99.34**	**342**	P	**P**	**10 36 00.6**	**-0.4**
ULM			⇑	*e*		10 59 24.1	
ULM				LR	LR	11 23 44.3	
EDM	**Edmonton**	**99.81**	**353**	*e*Pdif	**P**	**10 36 03.2**	**+0.2**
EYMN	**Ely**	**100.06**	**338**	PFAKE		10 36 20.0	+16
EYMN				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
ERPA	**Erie**	**100.25**	**328**	PFAKE		10 36 20.0	+15
ERPA				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
STKA	**Stephens Creek**	**100.32**	**120**	P	P	10 36 05.6	-0.3
	comp=Z,2.9nm,0.9s,baz=321,slow=6.6,SNR=3.4						
STKA				PP	PP	10 40 09.4	-5.4
	comp=Z,4.0nm,1.0s,baz=267,slow=12,SNR=3.7						
CASY	**Casey**	**101.56**	**160**	PFAKE		10 36 20.0	+9.3
CASY				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
AAM	**Ann Arbor**	**101.78**	**331**	PFAKE		10 36 20.0	+7.8
AAM				LR	LR		
	comp=Z,5µm,20.0s,MS6.0						
CBN	**Corbin**	**101.92**	**324**	PFAKE		10 36 20.0	+7.0
CBN				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
MCWV	**Mont Chateau**	**102.08**	**327**	PFAKE		10 36 30.0	+16
MCWV				LR	LR		
	comp=Z,4µm,22.0s,MS5.9						
DGMT	**Dagmar**	**103.01**	**347**	PFAKE		10 36 30.0	+12
DGMT				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
ACSO	**Alum Creek Sta**	**103.13**	**329**	PFAKE		10 36 30.0	+12
ACSO				LR	LR		
	comp=Z,3µm,22.0s,MS5.8						
BLA	**Blacksburg**	**104.25**	**325**	PFAKE		10 36 30.0	+6.7
BLA				LR	LR		
	comp=Z,3µm,21.0s,MS5.8						
NEW	**Newport**	**105.07**	**355**	*e*P	Pdif	10 36 27.9	+1.3
	comp=Z,33nm,1.8s						
NEW				LR	LR		
	comp=Z,5µm,21.0s,MS6.0						
NEW	**Newport**	**105.07**	**355**	*e*P	Pdif	10 36 27.9	+1.3
NEW				pmax	pmax		
	comp=Z,33nm,1.8s						
NEW				MLR	MLR		
	comp=Z,5µm,21.0s						
LAO	**LASA Array**	**105.12**	**347**	PFAKE		10 40 50.0	
LAO				LR	LR		
	comp=Z,4µm,21.0s,MS5.9						
OCWA	**Octopus Mounta**	**105.85**	**0**	PFAKE		10 40 50.0	
OCWA				LR	LR		
	comp=Z,5µm,19.0s,MS6.1						
CHMT	**Chamberlain Mo**	**106.02**	**352**	*e*PKKP	PKKP	10 52 23.0	+11
SNAA	**Sanae**	**106.11**	**196**⇑	*i*Pdif	Pdif	10 36 43.8	+13
SNAA				*e*PKiKP		10 40 42.2	
SNAA				*e*		10 40 43.9	
SNAA				*e*		10 40 54.8	
SNAA				*e*		10 41 01.3	
SNAA				*e*		10 52 05.2	
SNAA				*e*		10 52 20.1	
SNAA				*e*		10 52 23.5	
SNAA	**Sanae**	**106.11**	**196**⇑	*i*P	Pdif	10 36 43.8	+13
SNAA				*e*		10 41 01.3	
MSO	**Missoula**	**106.19**	**353**	PFAKE		10 41 00.0	
MSO				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
WCI	**Wyandotte Cave**	**106.26**	**330**	PFAKE		10 41 00.0	
WCI				LR	LR		
	comp=Z,4µm,21.0s,MS6.0						
HNR	**Honiara**	**106.75**	**92**	PFAKE		10 41 00.0	
HNR				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
VNA2	**Neumayer--Watz**	**106.88**	**198**	Pdif	Pdif	10 36 45.2	+11
VNA2				*e*		10 40 44.8	
VNA2				*e*		10 40 54.8	
VNA2				*e*		10 40 59.8	
VNA2				*e*		10 52 02.9	
VNA2				*e*		10 52 16.1	
VNA2				*e*		10 52 20.1	
VNA1	**Neumayer--Stat**	**106.97**	**198**	*e*	PP	10 41 00.3	-3.7
VNA1	**Neumayer--Stat**	**106.97**	**198**	*e*P	PP	10 40 55.5	-8.5
VNA1				*e*		10 41 00.3	
VNA1				*e*		10 52 01.5	
VNA1				*e*		10 52 14.3	
VNA1				*e*		10 52 19.2	
VNA1				*e*		11 11 53.2	
VNA1				*e*		11 11 58.4	
BOZ	**Bozeman (W)**	**107.05**	**351**	PKiKP		10 40 45.3	
BOZ				LR	LR		
	comp=Z,3µm,21.0s,MS5.9						
RSSD	**Black Hills**	**107.10**	**345**	*e*PKKP	PKKP	10 52 17.1	+7.2

RSSD				LR	LR		
	comp=Z,7μm,22.0s,MS6.2						
NHSC	**New Hope**	**107.25**	**322**	PFAKE		10 41 00.0	
NHSC				LR	LR		
	comp=Z,3μm,20.0s,MS5.8						
DLMT	**Dillon**	**107.47**	**351**	*e*PKKP	PKKP	10 52 16.4	+7.2
VNA3	**Neumayer Olymp**	**107.67**	**198**	Pdif	Pdif	10 36 41.5	+3.9
VNA3				*e*		10 40 46.0	
VNA3				*e*		10 40 56.4	
VNA3				*e*		10 41 00.3	
VNA3				*e*		10 52 00.2	
VNA3				*e*		10 52 13.3	
VNA3				*e*		10 52 17.3	
YMR	**Madison River**	**107.91**	**350**	PFAKE		10 41 00.0	
YMR				LR	LR		
	comp=Z,5μm,22.0s,MS6.0						
LKWY	**Lake**	**107.92**	**350**	PFAKE		10 41 00.0	
LKWY				LR	LR		
	comp=Z,8μm,20.0s,MS6.3						
MCMT	**McKenzie Canyo**	**108.03**	**352**	*e*PKKP	PKKP	10 52 14.0	+5.8
SJG	**San Juan**	**108.18**	**302**	PFAKE		10 41 00.0	
SJG				LR	LR		
	comp=Z,2μm,20.0s,MS5.6						
BMO	**Blue Mountains**	**108.47**	**355**	PFAKE		10 41 00.0	
BMO				LR	LR		
	comp=Z,4μm,19.0s,MS6.0						
IMW	**Indian Meadow**	**108.66**	**350**	*e*PP	PP	10 41 13.6	-3.6
WVT	**Waverly**	**108.68**	**330**	PFAKE		10 41 00.0	
WVT				LR	LR		
	comp=Z,3μm,19.0s,MS5.8						
TAU	**Tasmania Unive**	**108.71**	**129**	PFAKE		10 41 00.0	
TAU				LR	LR		
	comp=Z,616nm,20.0s,MS5.2						
GOGA	**Godfrey**	**108.76**	**325**	PFAKE		10 41 00.0	
GOGA				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
BAO	**Brasilia Array**	**109.01**	**262**	PKPdf	PP	10 41 06.0	-15
COR	**Corvallis**	**109.01**	**359**	PFAKE		10 41 00.0	
COR				LR	LR		
	comp=Z,3μm,19.0s,MS5.8						
BDFB	**Brasilia**	**109.03**	**262**	PP	PP	10 41 15.6	-5.2
	comp=Z,4.9nm,0.9s,baz=73,slow=9.0,SNR=3.7						
SNOW	**Snow King Moun**	**109.06**	**350**	*e*PKKP	PKKP	10 52 08.8	+2.3
TPAW	**Teton Pass**	**109.06**	**350**	*e*PKKP	PKKP	10 52 08.9	+2.5
HLID	**Hailey**	**109.47**	**352**	PFAKE		10 41 00.0	
HLID				LR	LR		
	comp=Z,5μm,20.0s,MS6.1						
BW06	**Boulder Array**	**109.53**	**349**	PFAKE		10 41 00.0	
BW06				LR	LR		
	comp=Z,6μm,21.0s,MS6.1						
PDAR	**Pinedale Array**	**109.53**	**349**	PKiKP		10 40 49.9	
	comp=Z,3.5nm,0.8s,baz=35,slow=2.8,SNR=12						
PDAR				PKKPbc		10 51 56.5	
	comp=Z,0.9nm,0.9s,baz=180,slow=3.0,SNR=4.7						
PDAR				PKKP	PKKP	10 52 06.0	+0.4
	comp=Z,5.4nm,0.9s,baz=182,slow=4.9,SNR=21						
OXF	**Oxford**	**110.74**	**330**	PFAKE		10 41 00.0	+6.3
OXF				LR	LR		
	comp=Z,4μm,20.0s,MS6.0						
CBKS	**Cedar Bluff**	**110.89**	**340**	PFAKE		10 41 00.0	+6.1
CBKS				LR	LR		
	comp=Z,5μm,20.0s,MS6.1						
WVOR	**Wild Horse Val**	**110.98**	**356**	*e*PKKP	PKKP	10 52 00.9	-1.8
WVOR				LR	LR		
	comp=Z,5μm,19.0s,MS6.1						
HUMO	**Hull Mountain**	**110.98**	**359**	PFAKE		10 41 00.0	+6.0
HUMO				LR	LR		
	comp=Z,3μm,22.0s,MS5.8						
HWUT	**Hardware Ranch**	**111.00**	**350**	*e*PKiKP		10 40 53.2	
HWUT				PKKP	PKKP	10 52 00.1	-2.7
HWUT				LR	LR		
	comp=Z,5μm,21.0s,MS6.1						
TCUT	**Toone Canyon**	**111.45**	**350**	*e*PKKP	PKKP	10 51 58.9	-3.0
ISCO	**Idaho Springs**	**111.57**	**345**	PFAKE		10 41 10.0	+15
ISCO				LR	LR		
	comp=Z,5μm,22.0s,MS6.1						
MOD	**Modoc**	**111.60**	**357**	PFAKE		10 41 10.0	+15
MOD				LR	LR		
	comp=Z,4μm,22.0s,MS5.9						
DWPF	**Disney**	**111.74**	**320**	PFAKE		10 41 10.0	+14
DWPF				LR	LR		
	comp=Z,3μm,20.0s,MS5.8						
YBH	**Yreka Blue Hor**	**111.85**	**359**	PFAKE		10 41 10.0	+14
YBH				LR	LR		
	comp=Z,3μm,19.0s,MS5.8						
ELK	**Elko**	**112.34**	**353**	PFAKE		10 41 10.0	+13
ELK				LR	LR		
	comp=Z,4μm,19.0s,MS6.0						
SMCO	**Snowmass**	**112.48**	**346**	*e*PKKP	PKKP	10 51 54.0	-5.9
MIAR	**Mount Ida**	**112.50**	**333**	PFAKE		10 41 10.0	+13
MIAR				LR	LR		
	comp=Z,4μm,19.0s,MS6.0						
MPU	**Maple Canyon**	**112.56**	**350**	*e*PKKP	PKKP	10 51 54.0	-5.7
MPU				LR	LR		
	comp=Z,5μm,20.0s,MS6.1						
DUG	**Dugway**	**112.57**	**351**	PFAKE		10 41 10.0	+13
DUG				LR	LR		
	comp=Z,3μm,21.0s,MS5.9						
WDC	**Whiskeytown Da**	**113.00**	**359**	PFAKE		10 41 10.0	+12
WDC				LR	LR		
	comp=Z,4μm,20.0s,MS6.0						
TMUT	**Trail Mountain**	**113.19**	**349**	PKiKP		10 40 58.3	
SRU	**San Rafael**	**113.25**	**348**	*e*PKKP	PKKP	10 51 50.6	-7.8
SDCO	**Great Sand Dun**	**113.50**	**344**	*e*PKiKP		10 40 57.9	
SDCO				*e*PKKP	PKKP	10 51 46.7	-11
SDCO				LR	LR		
	comp=Z,5μm,22.0s,MS6.0						
MSU	**Marysvale**	**114.12**	**350**	*e*PKKP	PKKP	10 51 40.8	-16
MVU	**Marysvale**	**114.13**	**350**	PFAKE		10 41 10.0	+10
MVU				LR	LR		
	comp=Z,3μm,21.0s,MS5.9						
WMOK	**Wichita Mounta**	**114.29**	**337**	*e*PKiKP		10 40 59.0	
WMOK				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
HOPS	**Hopland**	**114.59**	**359**	PFAKE		10 41 10.0	+9.0
HOPS				LR	LR		
	comp=Z,4μm,21.0s,MS6.0						
MNV	**Mina**	**114.92**	**355**	PFAKE		10 41 10.0	+8.3
MNV				LR	LR		
	comp=Z,4μm,20.0s,MS6.0						
NVAR	**Mina Array Bea**	**114.93**	**355**	PKP	PKPdf	10 41 00.6	-1.1
	comp=Z,8.8nm,0.9s,baz=72,slow=1.5,SNR=42						
NVAR				PKKPbc		10 51 37.7	
	comp=Z,3.1nm,1.0s,baz=192,slow=4.6,SNR=5.0						
NVAR	**Mina Array Bea**	**114.93**	**355**	PKP	PKPdf	10 41 00.6	-1.1
NVAR				PKKPbc		10 51 37.7	
AMTX	**Amarillo**	**115.11**	**340**	PFAKE		10 41 10.0	+7.8
AMTX				LR	LR		
	comp=Z,4μm,21.0s,MS6.0						
TPH	**Tonopah**	**115.19**	**354**	PFAKE		10 41 10.0	+7.8
TPH				LR	LR		
	comp=Z,3μm,19.0s,MS5.9						
NATX	**Nacogdoches**	**115.37**	**332**	*e*PKPdf	PKPdf	10 41 01.9	-0.9
NATX				LR	LR		
	comp=Z,4μm,19.0s,MS6.0						
CMB	**Columbia Colle**	**115.46**	**357**	PFAKE		10 41 10.0	+7.2
CMB				LR	LR		
	comp=Z,4μm,19.0s,MS6.0						
MTUM	**Tungsten Hills**	**116.02**	**355**	*e*PKPdf	PKPdf	10 41 04.8	+0.8
TPNV	**Topopah Spring**	**116.21**	**353**	PFAKE		10 41 10.0	+5.7
TPNV				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
ANMO	**Albuquerque**	**116.39**	**344**	PKP	PKPdf	10 41 03.7	-1.0
	comp=Z,3.1nm,0.9s,baz=65,slow=5.1,SNR=12						
ANMO	**Albuquerque**	**116.39**	**344**	PKP	PKPdf	10 41 03.7	-1.1
ANMO				*e*PKKP	PKKP	10 51 31.5	-21
ANMO				LR	LR		
	comp=Z,3μm,20.0s,MS5.9						
ANMO	**Albuquerque**	**116.39**	**344**	PKIKP	PKPdf	10 41 03.7	-1.0
ANMO				MLR	MLR		
	comp=Z,3μm,20.0s						
QSPA	**South Pole Qui**	**116.59**	**180**	*e*PKPdf	PKPdf	10 41 02.2	-1.9
QSPA				LR	LR		
	comp=Z,4μm,20.0s,MS6.1						
SAO	**San Andreas Ge**	**116.78**	**358**	PFAKE		10 41 20.0	+15
SAO				LR	LR		
	comp=Z,4μm,22.0s,MS6.0						
WUAZ	**Wupatki**	**116.90**	**348**	*e*PKPdf	PKPdf	10 41 05.2	-0.4
WUAZ				LR	LR		
	comp=Z,3μm,19.0s,MS5.9						
DAC	**Darwin (Calif)**	**117.01**	**354**	PFAKE		10 41 20.0	+14
DAC				LR	LR		
	comp=Z,3μm,22.0s,MS5.9						
LPM	**Los Pinos Moun**	**117.04**	**344**	*e*PKPdf	PKPdf	10 41 05.4	-0.5
LPM				*e*PKKP	PKKP	10 51 29.2	-22
LAZ	**Ladron**	**117.08**	**344**	*e*PKPdf	PKPdf	10 41 06.1	0.0
LAZ				*e*PKKP	PKKP	10 51 27.4	-24
SDV	**Santo Domingo**	**117.16**	**297**	PKP	PKPdf	10 41 05.5	-1.1
	comp=Z,2.8nm,0.5s,baz=141,slow=3.2,SNR=5.3						
SDV	**Santo Domingo**	**117.16**	**297**	PKP	PKPdf	10 41 05.5	-1.1
SDV				LR	LR		
	comp=Z,998nm,22.0s,MS5.4						
LENM	**Lemitar**	**117.26**	**344**	*e*PKPdf	PKPdf	10 41 05.7	-0.7
NEN	**Nelson**	**117.32**	**351**	*e*PKPdf	PKPdf	10 41 06.1	-0.4
DZM	**Mont Dzumac**	**117.34**	**102**	PKP	PKPdf	10 41 06.3	-0.5
	comp=Z,12nm,0.8s,baz=305,slow=0.8,SNR=6.3						
ISA	**Isabella**	**117.69**	**355**	PFAKE		10 41 20.0	+13
ISA				LR	LR		
	comp=Z,785nm,22.0s,MS5.3						
MNTX	**Cornudas Mount**	**119.18**	**342**	PFAKE		10 41 20.0	+10
MNTX				LR	LR		
	comp=Z,4μm,21.0s,MS6.0						
PFO	**Pinyon Flat Ob**	**119.53**	**353**	PFAKE		10 41 20.0	+9.3
PFO				LR	LR		
	comp=Z,1μm,22.0s,MS5.4						
SAML	**Samuel**	**119.84**	**275**	*e*PKPdf	PKPdf	10 41 10.9	-0.9
TUC	**Tucson**	**119.90**	**347**	*e*PKPdf	PKPdf	10 41 11.1	-0.4
TUC				*e*PKKP	PKKP	10 51 15.1	-31
TUC				LR	LR		
	comp=Z,3μm,21.0s,MS5.9						
TUC	**Tucson**	**119.90**	**347**	*e*PKIKP	PKPdf	10 41 11.1	-0.4
TUC				MLR	MLR		
	comp=Z,3μm,21.0s,MS5.9						
SNCC	**San Nicolas Is**	**120.17**	**355**	PFAKE		10 41 20.0	+8.0
SNCC				LR	LR		
	comp=Z,4μm,19.0s,MS6.1						
SIV	**San Ignacio**	**120.78**	**267**	PKP	PKPdf	10 41 12.2	-1.4
	comp=Z,10nm,0.8s,baz=105,slow=3.1,SNR=41						
CPUP	**Villa Florida**	**120.87**	**254**	*e*PKPdf	PKPdf	10 41 11.8	-1.8
CPUP				LR	LR		
	comp=Z,406nm,20.0s,MS5.1						
LTX	**Lajitas**	**120.87**	**339**	PFAKE		10 41 20.0	+6.4
LTX				LR	LR		
	comp=Z,2μm,20.0s,MS5.8						
TXAR	**Lajitas Array**	**120.87**	**339**	PKP	PKPdf	10 41 12.2	-1.3
	comp=Z,11nm,0.8s,baz=149,slow=1.0,SNR=70						
TXAR				PKKPbc		10 51 15.7	
	comp=Z,0.5nm,0.7s,baz=217,slow=6.3,SNR=3.6						
ROSC	**El Rosal**	**122.48**	**295**	PKP	PKPdf	10 41 17.1	+0.2
	comp=Z,27nm,0.8s,baz=282,slow=23,SNR=18						
EFI	**East Falkland**	**125.15**	**224**	PFAKE		10 41 30.0	+8.8
EFI				LR	LR		
	comp=Z,1μm,22.0s,MS5.5						
RPZ	**Rata Peaks**	**125.78**	**126**	PKP	PKPdf	10 41 21.8	-0.8
	comp=Z,40nm,0.9s,baz=335,slow=1.1,SNR=9.6						
PMSA	**Palmer Station**	**126.54**	**208**	*e*PKPdf	PKPdf	10 41 22.4	-1.0
PMSA				LR	LR		
	comp=Z,2μm,19.0s,MS5.8						
JTS	**JuntasAbangare**	**127.04**	**309**	PKP	PKPdf	10 41 24.4	-1.3
	comp=Z,4.6nm,0.8s,baz=46,slow=17,SNR=4.9						
JTS	**JuntasAbangare**	**127.04**	**309**	PKP	PKPdf	10 41 24.4	-1.3
JTS				LR	LR		
	comp=Z,377nm,20.0s,MS5.1						
TRQA	**Tornquist**	**127.16**	**241**	*e*PKPdf	PKPdf	10 41 24.0	-1.4
TRQA				LR	LR		
	comp=Z,5μm,20.0s,MS6.2						
LPAZ	**La Paz**	**127.19**	**269**	PKP	PKPdf	10 41 25.2	-0.8
	comp=Z,11nm,0.8s,baz=57,slow=4.4,SNR=43						
LPAZ	**La Paz**	**127.19**	**269**	*e*PKPdf	PKPdf	10 41 25.7	-0.3
LPAZ				LR	LR		
	comp=Z,3μm,19.0s,MS6.0						
LPAZ	**La Paz**	**127.19**	**269**	PKIKP	PKPdf	10 41 25.2	-0.8
LPAZ				pmax	pmax		
	comp=Z,11nm,0.8s						
SNZO	**South Karori**	**128.30**	**123**	PFAKE		10 41 40.0	+12
SNZO				LR	LR		
	comp=Z,2μm,20.0s,MS5.7						
OTAV	**Otavalo**	**128.49**	**294**	*e*PKPdf	PKPdf	10 41 28.3	-0.4
OTAV				LR	LR		
	comp=Z,1μm,19.0s,MS5.7						
URZ	**Urewera**	**129.91**	**119**	PKP	PKPdf	10 41 28.8	-2.0
	comp=Z,25nm,1.0s,baz=187,slow=7.7,SNR=4.1						
USHA	**Ushuaia**	**131.02**	**219**	PKP	PKPdf	10 41 31.1	-1.2
	comp=Z,6.2nm,0.5s,baz=338,slow=3.5,SNR=11						
USHA				SKPbc		10 44 58.5	
	comp=Z,12nm,0.9s,baz=93,slow=2.8,SNR=4.8						
CFAA	**Coronel Fontan**	**131.36**	**250**	PKP	PKPdf	10 41 30.6	-3.1
	comp=Z,6.2nm,1.0s,baz=50,slow=0.8,SNR=50						
CFAA				SKPbc		10 44 57.4	
	comp=Z,3.9nm,1.0s,baz=59,slow=7.6,SNR=16						
RAO	**Raoul Island**	**132.82**	**106**	PFAKE		10 41 50.0	+13
RAO				LR	LR		
	comp=Z,2μm,21.0s,MS5.9						
NNA	**Nana**	**133.27**	**279**	PFAKE		10 41 50.0	+12
NNA				LR	LR		
	comp=Z,606nm,19.0s,MS5.3						
TLL	**Tololo Astrono**	**133.31**	**253**	⇑*i*P	PKPdf	10 41 36.3	-1.1
FCH	**Farellones**	**133.32**	**248**	⇑*i*P	PKPdf	10 41 36.9	-0.4
AFI	**Afiamalu**	**133.82**	**84**	PKP	PKPdf	10 41 38.7	+0.1
	comp=Z,27nm,0.9s,baz=242,slow=5.1,SNR=5.2						
AFI	**Afiamalu**	**133.82**	**84**	PKP	PKPdf	10 41 38.7	+0.1
AFI				LR	LR		
	comp=Z,856nm,19.0s,MS5.5						
PLCA	**Paso Flores**	**133.95**	**238**	PKP	PKPdf	10 41 35.7	-2.5
	comp=Z,22nm,1.1s,baz=90,slow=1.6,SNR=13						
PLCA				SKPbc		10 45 09.1	
	comp=Z,4.0nm,1.0s,baz=103,slow=15,SNR=2.7						
PLCA	**Paso Flores**	**133.95**	**238**	PKPdf	PKPdf	10 41 36.5	-1.6
PLCA				LR	LR		
	comp=Z,3μm,20.0s,MS6.0						
PAYG	**Puerto Ayora**	**138.37**	**303**	PFAKE		10 42 00.0	+13
PAYG				LR	LR		
	comp=Z,1μm,21.0s,MS5.7						
RAR	**Rarotonga**	**147.08**	**88**	PKPbc	PKPdf	10 42 01.6	-0.6
	comp=Z,31nm,0.8s,baz=319,slow=19,SNR=4.7						
PPT	**Papeete**	**154.80**	**74**	*e*PP	PP	10 46 01.8	-12
PPT	**Papeete**	**154.80**	**74**	*e*LR	LR	11 34 04.3	
	comp=Z,3μm,23.8s						
PPT	**Papeete**	**154.80**	**74**	PKP	PKPdf	10 42 12.2	-1.5
	comp=Z,18nm,0.6s,baz=85,slow=19,SNR=3.3						
TAOE	**Nuku Hiva Isla**	**156.64**	**43**	*e*PP	PP	10 46 20.2	-3.8
TAOE	**Nuku Hiva Isla**	**156.64**	**43**	*e*LR	LR	11 34 45.4	
	comp=Z,9μm,22.9s						
TBI	**Tubuai**	**156.85**	**87**	*e*PP	PP	10 46 17.0	-7.8
TBI	**Tubuai**	**156.85**	**87**	*e*SS	SS	11 06 10.9	-4.0
TBI				*e*LR	LR	11 35 07.8	
	comp=Z,2μm,24.5s						
RPN	**Rapa Nui**	**166.75**	**265**	PFAKE		10 42 40.0	+14
RPN				LR	LR		
	comp=Z,412nm,19.0s						
RKT	**Rikitea**	**169.56**	**72**	*e*PKIKP	PKPdf	10 42 20.4	-7.9
	comp=Z,360nm,26.0s						
RKT	**Rikitea**	**169.56**	**72**	*e*PP	PP	10 47 25.1	-6.2
RKT	**Rikitea**	**169.56**	**72**	*e*LR	LR	11 40 51.1	
	comp=Z,5μm,29.8s						

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*CSEM **27** 10:42:56.1±0.7, 35.25N×3.68W, h15^{km}, MD2.8, Error ellipse: s-maj=36.8km s-min=17.0km az=31.0, After CNRM*

*CNRM **27** 10:42:56.1, 35.25N×3.68W, h15^{km}, MD2.8*

MDD 27 10:42:58.2±0.5**, 35.12N**×**3.95W, h12**^{km}±3^{km}**, mbLg2.2**/9**, Error ellipse: s-maj=7.7km s-min=3.5km az=57.0, PRXIMO, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	**Palemas**	**0.10**	**2**	P	Pg	10 43 01.0	-0.2
MPAL				S	Sg	10 43 03.0	-0.1
TOU	**Touzarine**	**0.22**	**135**	P	Pg	10 43 03.0	-0.2
TOU				S	Sg	10 43 06.0	-0.5
EMEL	**Melilla**	**0.83**	**77**	P	Pb	10 43 13.7	-0.4
	53nm,0.1s,SNR=4.7						
EMEL				S	Sb	10 43 24.8	-0.2
	171nm,0.2s,SNR=7.9						
ZAI	**Zaio**	**1.00**	**98**	P	Pb	10 43 11.0	-6.0
ZAI				S	Sb	10 43 21.0	-8.8
EMIJ	**Mijas**	**1.59**	**335**	P	Pn	10 43 23.7	-2.7
	2.8nm,0.2s,SNR=16						
EMIJ				S	Sn	10 43 44.7	-2.3
	5.4nm,0.3s,SNR=4.6						
EMIJ				T		10 44 44.0	
	SNR=7.9						
EJIF	**Jimena Fronter**	**1.81**	**317**	P	Pn	10 43 28.8	-0.8
	1.3nm,0.2s,SNR=7.9						
EJIF				S	Sn	10 43 51.6	-1.1
	1.1nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.97**	**25**	P	Pn	10 43 29.6	-2.3
	1.8nm,0.2s,SNR=6.1						
EBER				S	Sn	10 43 53.6	-3.0
	17nm,0.5s,SNR=6.2						
EQUE	**Quentar**	**2.12**	**11**	P	Pn	10 43 32.5	-1.5
	0.5nm,0.2s,SNR=7.9						
EQUE				S	Sn	10 43 58.2	-2.2
	3.6nm,0.3s,SNR=7.9						
EQES	**Quesada**	**2.77**	**15**	P	Pn	10 43 40.7	-2.6
	0.7nm,0.1s,SNR=6.7						
EQES				S	Sn	10 44 15.0	-1.9
	2.7nm,0.2s,SNR=6.1						
EADA	**Adamuz**	**3.08**	**351**	P	Pn	10 43 46.4	-1.3
	0.6nm,0.1s,SNR=7.3						
EADA				S	Sn	10 44 21.5	-3.3
	0.7nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**3.18**	**339**	P	Pn	10 43 47.0	-2.1
	0.4nm,0.2s,SNR=5.9						
ECAB				S	Sn	10 44 22.8	-4.5
	3.2nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.44**	**321**	P	Pn	10 43 50.3	-2.4
	0.7nm,0.2s,SNR=9.1						
EMIN				S	Sn	10 44 28.3	-5.5
	0.2nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**3.48**	**38**	S	Sn	10 44 29.9	-5.1
	4.3nm,0.5s,SNR=4.0						
EGRO	**El Granado**	**3.73**	**311**	P	Pn	10 43 54.8	-2.3
	0.6nm,0.1s,SNR=7.8						
EGRO				S	Sn	10 44 36.1	-5.4
	3.8nm,0.4s,SNR=5.7						
EBAD	**Badajoz**	**4.38**	**327**	P	Pn	10 44 03.4	-2.8
	0.6nm,0.1s,SNR=7.9						
EBAD				S	Sn	10 44 51.6	-6.1
	1.7nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**4.54**	**360**	P	Pn	10 44 06.8	-1.7
	0.2nm,0.3s,baz=178,slow=14,SNR=4.5						

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*IDC **27** 10:48:01.7±1.2, 26.88N×55.77E, mb3.8/11, mb1 3.9/11, mb1mx3.8/22, mbtmp3.9/11, Error ellipse: s-maj=31.1km s-min=18.6km az=105.0*

*NEIC **27** 10:48:03.3±0.8, 26.87N×55.78E, h10^{km}, mb4.1/1, Error ellipse: s-maj=19.9km s-min=13.8km az=110.0*

*MOS **27** 10:48:04.9±1.3, 26.88N×55.75E, h33^{km}, mb4.3/2, Error ellipse: s-maj=29.9km s-min=14.8km az=101.2*

*CSEM **27** 10:48:05.0±0.1, 26.88N×55.75E, h35^{km}, mb4.1/1, Error ellipse: s-maj=8.3km s-min=4.4km az=133.0*

*THR **27** 10:48:13.2±0.6, 27.34N×56.33E, h18^{km}±3^{km}, ML3.5*

ISC 27 10:48:01.2±0.8**, 26.73N**±0.08×**55.7E**±0.1**, h10**^{km}**, n21,** σ**1^{s}20**/22**, mb3.8**/13**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.79**	**33**	*e*PG	**Pg**	**10 48 17.8**	**+0.6**
GHIR	**Ghir-Karzin**	**2.85**	**303**	*e*Pn	**Pg**	**10 49 03.3**	**+5.0**
GHIR				AML	AML	10 50 00.3	
	comp=N,216nm,0.6s						
KRBR	**Kerman**	**3.37**	**16**	*e*PN	**Pn**	**10 48 57.8**	**+2.7**
KRBR				*e*SG	**Sn**	**10 49 36.6**	**+0.9**
KRBR				AML	AML	10 50 10.2	
	comp=N,144nm,0.6s						
ZHSF	**Zahedan**	**5.33**	**56**	*e*PN	**Pn**	**10 49 22.9**	**+0.1**
BRTR	**Keskin Array B**	**22.47**	**311**	P	**P**	**10 53 04.0**	**+2.0**
	comp=N,0.7nm,0.5s,mb3.4,baz=135,slow=12,SNR=6.0						
AKTO	**Aktyubinsk**	**23.74**	**4**	P	**P**	**10 53 14.2**	**-0.1**
	comp=N,3.8nm,0.7s,mb3.9,baz=172,slow=9.5,SNR=9.7						
BRVK	**Borovoye**	**28.47**	**19**	*e*P	**P**	**10 53 57.4**	**-0.9**
	comp=N,1.3nm,0.4s,mb3.9						
BRVK	**Borovoye**	**28.47**	**19**	*e*P	**P**	**10 53 57.4**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
BVAR	**Borovoye Array**	**28.47**	**19**	P	**P**	**10 53 56.3**	**-2.0**
	comp=Z,1.2nm,0.3s,mb4.0,baz=200,slow=7.2,SNR=13						
MKAR	**Makanchi Array**	**29.02**	**39**	P	**P**	**10 54 02.3**	**-1.0**
	comp=Z,0.3nm,0.5s,mb3.3,baz=228,slow=8.2,SNR=6.3						
AKASG	**Malin Array Be**	**31.30**	**327**	P	**P**	**10 54 21.5**	**-2.1**
	comp=Z,1.1nm,0.5s,mb3.9,baz=133,slow=8.7,SNR=9.0						
GERES	**GERESS Array B**	**39.19**	**316**	P	**P**	**10 55 30.9**	**-0.2**
	comp=Z,0.1nm,0.3s,mb3.0,baz=117,slow=6.6,SNR=4.0						
JOF	**Joensuu**	**39.59**	**343**	*e*p	**P**	**10 55 34.5**	**+0.3**
FINES	**FINESS Array B**	**40.01**	**338**	P	**P**	**10 55 37.2**	**-0.5**
	comp=Z,1.7nm,0.5s,mb4.0,baz=137,slow=11,SNR=15						
FINES	**FINESS Array B**	**40.01**	**338**	P	**P**	**10 55 37.2**	**-0.5**
ZAK	**Zakamensk**	**43.13**	**44**	*e*P	**P**	**10 55 53.3**	**-10**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb4.0						
NOA	**NORSAR Array B**	**45.46**	**331**	P	**P**	**10 56 20.4**	**-1.6**
	comp=Z,0.3nm,0.4s,mb3.5,baz=118,slow=6.6,SNR=2.7						
ARCES	**ARCESS Array B**	**46.31**	**346**	P	**P**	**10 56 28.8**	**+0.1**
	comp=Z,2.0nm,0.9s,mb4.1,baz=145,slow=9.2,SNR=10						
MATP	**Matopo**	**53.78**	**212**	P	**P**	**10 57 27.4**	**+1.0**
	comp=Z,1.8nm,0.8s,mb4.1,baz=21,slow=9.9,SNR=3.6						
BOSA	**Boshof**	**62.30**	**210**	P	**P**	**10 58 27.3**	**+1.1**
	comp=Z,3.0nm,0.9s,mb4.4,baz=141,slow=2.7,SNR=4.8						
BOSA	**Boshof**	**62.30**	**210**	P	**P**	**10 58 27.3**	**+1.1**

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*MOS **27** 10:50:03.3±0.9, 37.62N×134.52E, h368^{km}, mb4.8/39, Error ellipse: s-maj=8.3km s-min=5.9km az=91.3*

*BJI **27** 10:50:04.5, 37.58N×134.65E, h405^{km}, mB5.1, mb5.3*

*NEIC **27** 10:50:04.9±0.1, 37.50N×134.58E, mb4.9/79, Error ellipse: s-maj=4.8km s-min=3.0km az=154.0*

*IDC **27** 10:50:04.3±0.6, 37.54N×134.61E, h372^{km}±6^{km}, mb4.3/20, mb1 4.4/25, mb1mx4.3/29, mbtmp5.0/25, Error ellipse: s-maj=9.1km s-min=8.9km az=6.0*

*JMA **27** 10:50:04.0±0.1, 37.50N×134.78E, h397^{km}±2^{km}, M5.0*

ISC 27 10:50:04.3±0.1**, 37.60N**±0.02×**134.62E**±0.02**, h378**^{km}**, h378**^{km}±1.1^{km}**:pP-P, n320,** σ**0^{s}97**/342**, mb4.8**/104**, 24C-45D, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAI	**Saigo**	**1.73**	**217**	⇑P	**P**	**10 50 58.3**	**+1.4**
JHG	**Hegura jima**	**1.84**	**82**	⇓P	**P**	**10 50 58.3**	**+0.7**
JHG				S	**S**	**10 51 41.0**	**+1.7**
JJH	**Hakui**	**1.86**	**111**	P	**P**	**10 50 56.5**	**-1.1**
JJH				S	**S**	**10 51 41.2**	**+1.8**
JKG	**Kaga**	**1.91**	**133**	⇓P	**P**	**10 50 58.4**	**+0.4**
JKG				S	**S**	**10 51 40.5**	**+0.5**
JKSM	**Kasumi**	**2.01**	**179**	⇑P	**P**	**10 50 58.8**	**+0.2**
JSZ	**Suzu**	**2.19**	**93**	⇓P	**P**	**10 51 00.6**	**+0.7**
JSZ				S	**S**	**10 51 44.6**	**+1.2**
JFM	**Mihama**	**2.34**	**152**	⇑P	**P**	**10 51 01.6**	**+0.6**
JFM				S	**S**	**10 51 46.4**	**+1.0**
JTT	**Ttatey**	**2.39**	**114**	⇓P	**P**	**10 51 01.7**	**+0.4**
JTT				S	**S**	**10 51 47.2**	**+1.2**
JWT	**Wachi**	**2.40**	**164**	⇑P	**P**	**10 51 01.7**	**+0.3**
JWT				S	**S**	**10 51 46.7**	**+0.5**
JGM	**Miyama**	**2.54**	**138**	⇓P	**P**	**10 51 02.5**	**+0.1**
JGM				S	**S**	**10 51 47.9**	**-0.2**
JGN	**Niukaw**	**2.56**	**122**	⇓P	**P**	**10 51 02.3**	**-0.3**
JAD	**Aida**	**2.68**	**188**	⇑P	**P**	**10 51 03.9**	**+0.4**
JHS	**Saijyo**	**2.87**	**205**	⇑P	**P**	**10 51 05.6**	**+0.6**
JHS				S	**S**	**10 51 54.5**	**+1.8**
JJN	**Nakama**	**2.87**	**99**	⇓P	**P**	**10 51 05.1**	**+0.1**
JSD	**Sado**	**2.92**	**80**	⇓P	**P**	**10 51 05.5**	**+0.1**
JSD				S	**S**	**10 51 53.7**	**+0.2**
JGF	**Kuroka**	**2.98**	**131**	⇓P	**P**	**10 51 05.7**	**-0.2**
JNG	**Nsakai**	**3.03**	**112**	⇓P	**P**	**10 51 06.2**	**-0.2**
JNG				S	**S**	**10 51 58.1**	**+2.9**
MAJO	**Matsushiro**	**3.06**	**109**	⇓*i*Pn	**P**	**10 51 06.2**	**-0.4**
MAJO				*e*S	**S**	**10 51 55.8**	**+0.1**
MAT	**Matsushiro**	**3.06**	**109**	P	**P**	**10 51 06.4**	**-0.3**
MAT				S	**S**	**10 51 55.3**	**-0.4**
MAT	**Matsushiro**	**3.06**	**109**	P	**P**	**10 51 06.4**	**-0.3**
MAT				S	**S**	**10 51 56.1**	**+0.4**
MAT	**Matsushiro**	**3.06**	**109**	*e*P	**P**	**10 51 06.0**	**-0.7**
MAT				*e*S	**S**	**10 51 55.0**	**-0.7**
MJAR	**Matsushiro Arr**	**3.06**	**109**	P	**P**	**10 51 06.9**	**+0.2**
	55nm,0.3s,baz=285,slow=8.7,SNR=1495						
MJAR				S	**S**	**10 51 55.5**	**-0.2**
	baz=287,slow=13,SNR=1.1						
JHE	**Heguri**	**3.07**	**163**	⇑P	**P**	**10 51 06.7**	**0.0**
JNT	**Takato**	**3.31**	**120**	⇓P	**P**	**10 51 09.0**	**+0.1**
JNT				S	**S**	**10 52 00.9**	**+1.2**
JGK	**Kuni**	**3.38**	**107**	⇓P	**P**	**10 51 09.6**	**+0.1**
JNY	**Yasuok**	**3.44**	**130**	⇓P	**P**	**10 51 09.6**	**-0.5**
JHK	**Hiroka**	**3.52**	**94**	⇓P	**P**	**10 51 10.2**	**-0.6**
JIE	**Ise**	**3.63**	**152**	P	**P**	**10 51 11.7**	**-0.1**
JIE				S	**S**	**10 52 04.1**	**-0.8**
JNS	**Sasagawa**	**3.73**	**85**	⇓P	**P**	**10 51 12.2**	**-0.7**
JRY	**Ryogami san**	**3.79**	**113**	⇓P	**P**	**10 51 12.3**	**-1.1**
JKT	**Katashina**	**3.79**	**101**	⇓P	**P**	**10 51 12.7**	**-0.7**
JMN	**Monobe**	**3.91**	**189**	⇑P	**P**	**10 51 15.1**	**+0.5**
JAG	**Ashikaga**	**4.05**	**105**	P	**P**	**10 51 13.9**	**-2.0**
JFY	**Yanaizu**	**4.05**	**91**	⇓P	**P**	**10 51 15.2**	**-0.8**

JYA	**Atsumi**	4.14	75	⇓P	P	10 51 16.4	-0.5
JWZ	**Kozaga**	4.16	167	P	P	10 51 16.6	-0.5
JWZ				S	S	10 52 13.1	-1.1
JKD	**Kudamatsu**	4.18	213	⇑P	P	10 51 18.0	+0.7
JSB	**Shiboa**	4.28	97	⇓P	P	10 51 17.4	-0.9
JOD2	**Odawara 2**	4.30	122	⇓P	P	10 51 17.3	-1.2
JOD2				S	S	10 52 16.1	-0.5
JYS	**Shirataka**	4.35	80	⇓P	P	10 51 18.5	-0.5
JTY	**Toyota**	4.41	222	⇑P	P	10 51 19.4	-0.2
JKI	**Kunimi**	4.67	213	⇑P	P	10 51 23.0	+0.6
JOU	**Okura**	4.84	79	⇓P	P	10 51 23.1	-1.0
JHO	**Hitachi**	4.86	100	⇓P	P	10 51 21.5	-2.8
ONAJ	**Iwakimizuishiy**	4.95	94	⇓P	P	10 51 23.2	-2.1
JTO	**Tosashimizu**	4.96	198	P	P	10 51 25.6	+0.2
JTO				S	S	10 52 29.7	+0.8
JFK	**Kawauchi**	4.98	91	⇓P	P	10 51 24.0	-1.6
JTU	**Tsushima**	5.22	236	P	P	10 51 28.5	+0.3
KS15	**Wonju Array Si**	5.35	270	*e*P	P	10 51 31.9	+2.4
JMK	**Ichinoseki**	5.37	73	⇓P	P	10 51 28.5	-1.2
JIO	**Ouri**	5.38	79	⇓P	P	10 51 28.2	-1.7
JNU	**Nakatsue**	5.41	215	P	P	10 51 30.8	+0.5
	47nm,0.3s,baz=41,slow=12,SNR=287						
JNU				S	S	10 52 39.2	+1.6
	baz=114,slow=18,SNR=3.6						
JII	**Iki**	5.50	228	⇑P	P	10 51 31.7	+0.6
JOSM	**Okushiri--Mats**	5.83	38	⇓P	P	10 51 35.4	+0.6
JUR	**Ureshino**	5.90	222	⇑P	P	10 51 36.8	+1.3
BSO1	**Boso 1**	5.93	118	P	P	10 51 33.4	-2.5
JTH	**Tanohata**	6.12	65	⇓P	P	10 51 36.5	-1.6
JHJ	**Hachijo jima 2**	6.15	135	P	P	10 51 37.9	-0.5
	86nm,0.3s,baz=156,slow=3.2,SNR=28						
JHJ				S	S	10 52 51.0	-1.3
	39nm,0.3s,baz=241,slow=23,SNR=3.6						
JHJ2	**Mitsune**	6.17	135	P	P	10 51 37.9	-0.8
JOT	**Ohata**	6.24	51	P	P	10 51 39.1	-0.3
JHD	**Hondo**	6.31	217	P	P	10 51 41.5	+1.3
INCN	**Inchon**	6.34	271	⇓*i*P	P	10 51 42.7	+2.1
	176nm,0.8s						
JZO	**Okuchi**	6.37	212	P	P	10 51 41.6	+0.7
JTZ	**Takazaki**	6.39	208	P	P	10 51 41.8	+0.7
JKB	**Kayabe**	6.54	47	P	P	10 51 42.3	-0.5
JSJ	**Shimokoshiki**	7.16	216	P	P	10 51 50.8	+0.8
MDJ	**Mudanjiang**	7.96	333	P	P	10 52 01.3	+2.0
MDJ				S	S	10 53 35.5	+5.5
MDJ	**Mudanjiang**	7.96	333	*e*P	P	10 52 01.2	+1.9
	26nm,0.7s						
JAB	**Ashibetsu**	8.26	42	P	P	10 52 01.7	-1.1
ASAJ	**Asahikawa**	8.88	40	P	P	10 52 08.4	-1.6
	43nm,0.3s,baz=235,slow=11,SNR=265						
ASAJ				S	S	10 53 43.9	-5.4
	10nm,0.3s,baz=314,slow=32,SNR=29						
ASAJ	**Asahikawa**	8.88	40	P	P	10 52 08.5	-1.5
ASAJ				S	S	10 53 43.9	-5.4
ASAJ				pmax	pmax		
	comp=Z,43nm,0.3s						
CN2	**Changchun**	9.31	315	*e*P	P	10 52 15.8	+0.7
CN2				*e*AP		10 52 20.8	
CN2				AMB	AMB		
	comp=Z,20nm,0.9s						
DL2	**Dalian**	10.30	281	P	P	10 52 28.5	+1.7
DL2				S	S	10 54 29.5	+10
DL2				AMB	AMB		
	comp=Z,170nm,0.5s						
DL2				AMB	AMB		
	comp=Z,660nm,4.8s						
YUK	**Yuzh-Kuril’sk**	10.67	49	*e*P	P	10 52 29.7	-1.5
YUK				*i* S	S	10 54 22.0	-5.4
YUK				pmax	pmax		
	comp=Z,2µm,0.6s						
YUK				pmax	pmax		
	comp=N,2µm,0.7s						
YUK				pmax	pmax		
	comp=N,420nm,0.5s						
YUK				pmax	pmax		
	comp=Z,460nm,0.5s						
YUK				pmax	pmax		
	comp=E,210nm,0.6s						
YUK				smax			
	comp=E,690nm,0.5s						
YUK				smax			
	comp=N,3µm,0.7s						
YUK				smax			
	comp=N,8µm,1.0s						
YUK				smax			
	comp=E,4µm,1.0s						
YSS	**Yuzh-Sakhalins**	11.11	30	*e*P	P	10 52 33.9	-2.5
	comp=E,133nm,0.9s						
YSS				*e*S	S	10 54 33.0	-3.9
YSS	**Yuzh-Sakhalins**	11.11	30	⇑*e*P	P	10 52 34.0	-2.4
YSS				*e*S	S	10 54 32.0	-4.9
YSS				pmax	pmax		
	comp=N,100nm,1.0s						
YSS				pmax	pmax		
	comp=Z,130nm,1.0s						
YSS				pmax	pmax		
	comp=E,30nm,0.8s						
YSS				smax			
	comp=N,1µm,2.0s						
YSS				smax			
	comp=E,1µm,2.0s						
YSS				smax			
	comp=N,210nm,1.0s						
YSS				smax			
	comp=E,640nm,1.5s						
KLR	**Kul’dur**	11.81	351	*e*P	P	10 52 39.8	-4.7
KLR				*e*S	S	10 54 50.0	-1.7
KLR				pmax	pmax		
	comp=Z,32nm,1.0s						
KLR				smax			
	comp=E,100nm,1.8s						
JOW	**Kunigami**	12.00	208	P	P	10 52 42.9	-4.0
	comp=E,10nm,0.3s,baz=88,slow=15,SNR=51						
CBIJ	**Chichi jima**	12.27	146	P	P	10 52 43.0	-6.9
	comp=E,19nm,0.3s,baz=77,slow=2.5,SNR=21						
CBIJ				S	S	10 54 50.9	-11
	comp=E,85nm,0.3s,baz=299,slow=23,SNR=20						
SSE	**Sheshan**	12.85	244	P	P	10 52 55.5	-1.1
SSE				AMB	AMB		
	comp=Z,110nm,1.1s						
SSE				AMB	AMB		
	comp=Z,480nm,10.1s						
SSE	**Sheshan**	12.85	244	P	P	10 52 55.6	-1.0
	comp=Z,116nm,1.1s						
NJ2	**Nanjing**	14.08	252	*e*P	P	10 53 09.0	-1.2
NJ2				S	S	10 55 37.5	-1.5
NJ2				AMB	AMB		
	comp=Z,80nm,0.9s						
HIA	**Hailar**	15.86	322	*e*P	P	10 53 27.9	-0.8
	comp=Z,76nm,0.9s						
HIA	**Hailar**	15.86	322	*e*P	P	10 53 28.0	-0.7
HIA				pmax	pmax		
	comp=Z,76nm,0.9s						
TATO	**Taipei**	16.84	225	*e*P	P	10 53 38.4	-0.6
	comp=Z,762nm,0.9s						
YHNB	**Yeheng**	17.14	225	*e*P	P	10 53 39.5	-2.5
NACB	**Ninganchiao**	17.41	223	*e*P	P	10 53 40.4	-4.4
WHN	**Wuhan**	18.19	253	⇑P	P	10 53 51.3	-1.2
BTO	**Baotou**	19.31	287	*e*P	P	10 54 02.0	-1.5
BTO				AMB	AMB		
	comp=Z,120nm,1.1s						
ENH	**Enshi**	22.05	258	*e*P	P	10 54 29.1	-1.0
	comp=Z,552nm,0.6s,mb6.0						
ULN	**Ulaanbaatar**	22.58	306	*e*P	P	10 54 34.3	-0.4
	comp=Z,27nm,0.6s,mb4.7						
ULN	**Ulaanbaatar**	22.58	306	⇓*e*P	P	10 54 34.5	-0.3
PET	**Petropavlovsk**	22.72	40	*c i*P	P	10 54 35.8	-0.2
PET				pmax	pmax		
	comp=Z,141nm,1.5s,mb5.0						
SONM	**Songino Array**	23.00	305	P	P	10 54 38.5	-0.1
	comp=Z,24nm,0.5s,mb4.7,baz=110,slow=9.3,SNR=221						
SONM				ScP		11 01 15.9	
	comp=Z,1.6nm,0.7s,baz=112,slow=2.6,SNR=9.6						
GZH	**Guangzhou**	23.30	238	P	P	10 54 36.0	-5.6
GZH				S	S	10 58 21.8	-2.9
MA2	**Magadan**	24.32	20	*e*P	P	10 54 50.3	-0.1
MA2				*e*S	S	10 58 44.6	+3.7
MA2				pmax	pmax		
	comp=Z,30nm,0.9s,mb4.5						
MA2				MLR	MLR		
	comp=Z,14µm,24.0s						
LZH	**Lanzhou**	24.62	276	*e*P	P	10 54 52.8	-0.7
LZH				*e*S	S	10 58 42.0	-4.1
LZH				AMB	AMB		
	comp=Z,50nm,1.0s,mb4.7						
LZH				AMB	AMB		
	comp=Z,170nm,5.2s						
LZH	**Lanzhou**	24.62	276	*e*P	P	10 54 52.7	-0.8
LZH				*e*S	S	10 58 42.0	-4.1
LZH				pmax	pmax		
	comp=Z,52nm,1.0s,mb4.7						
LZH				MLR	MLR		
	comp=Z,2µm,16.2s						
YAK	**Yakutsk**	24.64	354	⇓*e*P	P	10 54 53.0	-0.4
YAK				pmax	pmax		
	comp=Z,80nm,1.2s,mb4.8						
ZAK	**Zakamensk**	25.70	310	*e*P	P	10 55 02.3	-0.8
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.8						
GYA	**Guiyang**	26.08	253	⇓*i*P	P	10 55 05.0	-1.7
GYA				S	S	10 59 09.0	-0.6
GYA				AMB	AMB		
	comp=Z,260nm,0.8s,mb5.5						
CD2	**Chengdu**	26.29	265	P	P	10 55 07.0	-1.6
GTA	**Gaotai**	27.20	285	⇓*i*P	P	10 55 15.8	-0.8
GTA				XP	sP	10 57 09.3	+0.3
GTA				PCP	PcP	10 58 25.5	-0.5
GTA				S	S	10 59 25.5	-1.6
GTA				SCP		11 01 28.5	
GTA				PCS		11 02 07.3	
GTA				SCS	ScS	11 05 19.5	-0.3
GTA				AMB	AMB		
	comp=Z,100nm,0.7s,mb5.2						
GTA				AMB	AMB		
	comp=Z,2µm,7.2s						
SEY	**Seymchan**	27.59	18	⇑*e*P	P	10 55 19.4	-0.4
KMI	**Kunming**	29.78	255	P	P	10 55 38.3	-1.1
KMI				AMB	AMB		
	comp=Z,70nm,1.3s,mb4.7						
KMI	**Kunming**	29.78	255	P	P	10 55 38.2	-1.2
	comp=Z,71nm,1.3s,mb4.7						
KMI				pP		10 55 57.2	
KMI	**Kunming**	29.78	255	P	P	10 55 38.2	-1.2
KMI				pmax	pmax		
	comp=Z,71nm,1.3s,mb4.7						
FX1	**Attu Island--F**	30.71	48	P	P	10 55 46.7	-0.4
	comp=Z,41nm,0.6s,mb4.8,baz=229,slow=4.9,SNR=12						
FX1	**Attu Island--F**	30.71	48	P	P	10 55 46.7	-0.4
FX1				pmax	pmax		
	comp=Z,41nm,0.6s						
TIXI	**Tiksi**	34.24	357	⇑*e*P	P	10 56 16.4	-0.7
TIXI				pmax	pmax		
	comp=Z,48nm,0.7s,mb4.8						
BILL	**Bilibino**	35.19	20	*e*P	P	10 56 24.9	-0.1
	comp=Z,60nm,0.8s,mb4.9						
BILL	**Bilibino**	35.19	20	*e*P	P	10 56 24.9	-0.1
BILL				pmax	pmax		
	comp=Z,60nm,0.8s,mb4.9						
WMQ	**Urumqi**	35.72	295	P	P	10 56 30.0	+0.2
WMQ				AP	pP	10 57 43.5	+1.1
WMQ				PCP	PcP	10 58 50.3	+1.3
WMQ				S	S	11 01 39.5	+0.5
WMQ				SCP		11 01 50.0	
WMQ				AMB	AMB		
	comp=Z,50nm,0.7s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,480nm,6.2s						
LSA	**Lhasa**	36.77	271	P	P	10 56 39.3	+0.6
LSA	**Lhasa**	36.77	271	*e*P	P	10 56 39.7	+1.1
	comp=Z,33nm,0.8s,mb4.6						
LSA	**Lhasa**	36.77	271	*e*P	P	10 56 39.7	+1.0
LSA				pmax	pmax		
	comp=Z,33nm,0.8s,mb4.6						
MKAR	**Makanchi Array**	39.20	301	P	P	10 56 58.1	-0.3
	comp=Z,18nm,0.5s,mb4.5,baz=88,slow=10,SNR=174						
MKAR				ScP		11 02 09.6	
	comp=Z,4.0nm,0.7s,baz=79,slow=4.6,SNR=11						
MKAR	**Makanchi Array**	39.20	301	P	P	10 56 58.1	-0.3
MKAR				ScP		11 02 09.6	
KURK	**Kurchatov**	41.29	307	*e*P	P	10 57 14.3	-1.1
	comp=Z,71nm,0.6s,mb5.1						
KURK	**Kurchatov**	41.29	307	*d i*P	P	10 57 14.6	-0.8
JIRN	**Jiri**	41.58	271	*e*P	P	10 57 18.6	+0.6
	comp=Z,78nm,0.3s,mb5.3						
GUN	**Gumba**	41.71	271	*e*P	P	10 57 19.5	+0.4
	comp=Z,151nm,0.3s,mb5.6						
PKI	**Pulchoki**	42.24	271	*e*P	P	10 57 23.1	-0.2
	comp=Z,55nm,0.5s,mb4.9						
PKI	**Pulchoki**	42.24	271	*e*P	P	10 57 23.1	-0.2
PKI				pmax	pmax		
	comp=Z,27nm,0.5s,mb4.6						
KKN	**Kakani**	42.24	271	*e*P	P	10 57 23.3	-0.1
DMN	**Daman**	42.46	271	*e*P	P	10 57 24.9	-0.2
	comp=Z,62nm,0.6s,mb4.9						
GKN	**Gorkha**	42.66	272	*e*P	P	10 57 26.5	-0.2
	comp=Z,110nm,0.3s,mb5.4						
TNA	**Tin City**	43.09	31	*e*P	P	10 57 29.9	+0.3
	comp=Z,33nm,1.2s,mb4.3						
KOLN	**Koldanda**	43.58	272	*e*P	P	10 57 34.2	+0.1
	comp=Z,45nm,0.3s,mb5.1						
ULHL	**Ulahol**	44.26	295	P	P	10 57 39.6	+0.4
	SNR=9.9						
TKM2	**Tokmak 2**	44.55	296	P	P	10 57 42.0	+0.5
	SNR=38						
KULM	**Kulim**	44.64	232	*e*P	P	10 57 41.6	-1.0
KZA	**Kyzart**	45.01	295	P	P	10 57 46.7	+1.5
	SNR=36						
KBK	**Karagaybulak**	45.08	296	P	P	10 57 46.4	+0.7
	SNR=36						
CHMS	**Chumysh**	45.14	296	P	P	10 57 46.3	+0.2
	SNR=13						
USP	**Ospenovka**	45.25	297	P	P	10 57 47.0	0.0
	SNR=24						
AAK	**Ala-Archa**	45.41	296	P	P	10 57 48.6	+0.3
	SNR=11						
AAK	**Ala-Archa**	45.41	296	*e*P	P	10 57 46.8	-1.5
	comp=Z,25nm,0.7s,mb4.5						
AAK				*e*ScP		11 02 33.7	
AAK	**Ala-Archa**	45.41	296	*e*P	P	10 57 46.8	-1.5
AAK				pmax	pmax		
	comp=Z,25nm,0.7s,mb4.5						
UCH	**Uchtor**	45.50	295	P	P	10 57 50.3	+1.3
	SNR=9.3						
EKS2	**Erkin-Say**	45.91	296	P	P	10 57 52.3	+0.1
	SNR=12						
CHKZ	**Chkalovo**	45.93	312	⇓*i*P	P	10 57 51.0	-1.2
	comp=Z,18nm,0.5s,mb4.5						
CHKZ	**Chkalovo**	45.93	312	⇓*i*P	P	10 57 51.0	-1.2
CHKZ				pmax	pmax		
	comp=Z,18nm,0.5s,mb4.5						
AML	**Almayashu**	46.12	296	P	P	10 57 55.0	+1.2
	SNR=22						
BVAR	**Borovoye Array**	46.15	311	P	P	10 57 53.0	-0.9
	comp=Z,7.6nm,0.4s,mb4.2,baz=88,slow=6.7,SNR=69						
BVAR				ScP		11 02 36.9	
	comp=Z,2.1nm,0.6s,baz=88,slow=4.4,SNR=5.1						
BRVK	**Borovoye**	46.20	311	*e*P	P	10 57 53.3	-1.1
	comp=Z,6.5nm,0.5s,mb4.0						
BRVK	**Borovoye**	46.20	311	*e*P	P	10 57 53.3	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.0						
SVW2	**Sparrevohn**	48.37	38	*e*P	P	10 58 10.8	0.0
IMA2	**Indian Mountai**	48.97	31	*e*P	P	10 58 15.7	+0.4
SVE	**Sverdlovsk**	51.09	317	*e*P	P	10 58 31.0	-0.2
SVE				pmax	pmax		
	comp=Z,40nm,1.5s,mb4.4						
MCK	**McKinley**	51.17	34	*e*P	P	10 58 31.2	-0.5
	comp=Z,34nm,1.0s,mb4.5						
MCK	**McKinley**	51.17	34	*e*P	P	10 58 31.2	-0.5
MCK				pmax	pmax		
	comp=Z,34nm,1.0s,mb4.5						
PMR	**Palmer**	51.40	36	*e*P	P	10 58 32.8	-0.6
	comp=Z,32nm,0.8s,mb4.6						
PMR				LR	LR		
	comp=Z,9µm,23.0s						
PMR	**Palmer**	51.40	36	*e*P	P	10 58 32.8	-0.6
PMR				pmax	pmax		
	comp=Z,32nm,0.8s,mb4.6						
PMR				MLR	MLR		
	comp=Z,9µm,23.0s						
COLA	**College**	51.49	32	*e*P	P	10 58 34.0	0.0
	comp=Z,66nm,1.3s,mb4.7						
COLA	**College**	51.49	32	*c i*P	P	10 58 34.1	0.0
SML	**Sawmill**	51.74	36	*e*P	P	10 58 35.5	-0.4
ILAR	**Eielson Array**	51.91	32	P	P	10 58 36.3	-0.9
	comp=Z,16nm,0.6s,mb4.5,baz=265,slow=5.6,SNR=324						
ARU	**Arti**	52.30	317	*e*P	P	10 58 38.5	-1.7
	comp=Z,18nm,0.5s,mb4.7						
ARU	**Arti**	52.30	317	⇓*i*P	P	10 58 39.1	-1.0
ARU				*e*		10 59 47.7	
ARU				*e*SS	SS	11 09 12.2	-7.2
ARU				pmax	pmax		
	comp=Z,19nm,0.7s,mb4.5						
THY	**Trims Highway**	52.63	34	*e*P	P	10 58 41.8	-0.7
HYB	**Hyderabad**	52.84	264	*i* P	P	10 58 42.0	-2.6
	comp=Z,30nm,1.0s,mb4.6						
HYB	**Hyderabad**	52.84	264	*e*P	P	10 58 42.0	-2.6
	comp=Z,30nm,1.0s,mb4.6						
HYB	**Hyderabad**	52.84	264	*e*P	P	10 58 42.0	-2.6
HYB				pmax	pmax		
	comp=Z,30nm,1.0s,mb4.6						
DIV	**Divide**	53.08	37	*e*P	P	10 58 45.4	-0.4
	comp=Z,156nm,1.0s,mb5.3						
MENT	**Mentasta**	53.63	34	*e*P	P	10 58 50.1	+0.4
AKTO	**Aktyubinsk**	54.21	310	P	P	10 58 52.6	-1.4
	comp=Z,14nm,0.6s,mb4.4,baz=85,slow=14,SNR=21						
AKTO	**Aktyubinsk**	54.21	310	P	P	10 58 52.6	-1.5
AKTO				pmax	pmax		
	comp=Z,14nm,0.6s,mb4.5						
DAWY	**Dawson**	55.24	32	*e*P	P	10 59 00.5	-0.7
FITZ	**Fitzroy Crossi**	56.05	190	*e*P	P	10 59 05.5	-2.0
	comp=Z,5.9nm,0.7s,mb4.0						
FITZ				*e*	pP	11 00 25.2	-1.7
INK	**Inuvik**	56.33	27	*e*P	P	10 59 07.8	-0.9
	comp=Z,36nm,0.9s,mb4.7						
INK				*e*PcP	PcP	11 00 00.1	-1.0
INK	**Inuvik**	56.33	27	*e*P	P	10 59 07.8	-0.9
INK				*e*		11 00 00.1	
INK				pmax	pmax		
	comp=Z,36nm,0.9s						
WRAB	**Tennant Creek**	57.23	180	*e*P	P	10 59 13.1	-2.5
	comp=Z,9.5nm,0.7s,mb4.2						
WRAB				*e*pP	pP	11 00 32.7	-2.9
WRAB	**Tennant Creek**	57.23	180	*e*P	P	10 59 13.1	-2.5
WRAB				*e**PP	pP	11 00 32.7	-2.8
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
WRA	**Warramunga Arr**	57.24	180	P	P	10 59 13.4	-2.2
	comp=Z,6.9nm,0.4s,mb4.3,baz=356,slow=7.7,SNR=212						
WRA				PcP	PcP	11 00 03.9	-1.4
	comp=Z,2.5nm,0.5s,baz=356,slow=4.6,SNR=5.6						
WRA				pP	pP	11 00 32.6	-3.0
	comp=Z,2.6nm,0.7s,baz=358,slow=7.4,SNR=3.1						
WRA				ScP		11 03 26.6	
	comp=Z,2.0nm,0.7s,baz=353,slow=4.7,SNR=7.5						
WB2	**Warramunga Arr**	57.24	180	⇑*i*P	P	10 59 13.4	-2.3
WB2				*e*	pP	11 00 33.5	-2.1
WB2				*e*SCP		11 03 27.4	
WB2				*e*S	S	11 06 37.0	-3.6
KEV	**Kevo**	60.92	338	*e*p	P	10 59 39.2	-0.6
ARCES	**ARCESS Array B**	61.49	338	P	P	10 59 43.0	-0.5
	comp=Z,8.3nm,0.7s,mb4.3,baz=62,slow=9.0,SNR=36						
JOF	**Joensuu**	62.83	330	*e*p	P	10 59 51.5	-0.9
	comp=Z,3.4nm,0.5s,mb4.1						
RES	**Resolute Bay**	63.34	13	*e*P	P	10 59 54.7	-0.9
	comp=Z,39nm,0.9s,mb4.9						
RES	**Resolute Bay**	63.34	13	*e*P	P	10 59 54.7	-0.8
RES				pmax	pmax		
	comp=Z,39nm,0.9s,mb4.9						
DAG	**Danmarks Havn**	64.67	353	⇓*i*P	P	11 00 03.2	-0.7
	comp=Z,18nm,1.0s,mb4.7						
DAG	**Danmarks Havn**	64.67	353	⇓*e*P	P	11 00 03.2	-0.7
	comp=Z,18nm,1.0s,mb4.7						
DAG	**Danmarks Havn**	64.67	353	⇓*e*P	P	11 00 03.2	-0.7
DAG				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.7						
KAF	**Kangasniemi**	65.23	331	*e*p	P	11 00 06.8	-0.9
	comp=Z,6.4nm,0.6s,mb4.4						
KAF	**Kangasniemi**	65.23	331	*e*P	P	11 00 06.8	-0.9
KAF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
FINES	**FINESS Array B**	65.70	330	P	P	11 00 10.0	-0.6
	comp=Z,4.2nm,0.5s,mb4.5,baz=72,slow=6.3,SNR=47						
FINES				PcP	PcP	11 00 37.0	-1.8
	comp=Z,3.4nm,0.5s,baz=68,slow=5.5,SNR=5.6						
YKA	**Yellowknife Ar**	65.96	28	P	P	11 00 11.7	-0.5
	comp=Z,14nm,0.9s,mb4.7,baz=316,slow=6.1,SNR=32						
YKA				PcP	PcP	11 00 39.3	-0.7
	comp=Z,2.6nm,0.7s,baz=312,slow=3.8,SNR=4.9						
YKA	**Yellowknife Ar**	65.96	28	P	P	11 00 11.7	-0.5
YKA				PcP	PcP	11 00 39.3	-0.7
KIV	**Kislovodsk**	66.36	308	*e*P	P	11 00 14.9	-0.2
	comp=Z,15nm,0.8s,mb4.8						
KIV	**Kislovodsk**	66.36	308	*e*P	P	11 00 15.4	+0.3
KIV				*e*S	S	11 08 32.6	-1.1
KIV				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.8						
GNI	**Garni**	66.95	304	*i* P	P	11 00 19.9	+1.1
GNI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VSU	**Vasula**	67.12	327	*d i*P	P	11 00 18.2	-1.4
STKA	**Stephens Creek**	69.43	174	P	P	11 00 33.0	-1.1
	comp=Z,2.3nm,0.5s,mb4.2,baz=1.3,slow=9.0,SNR=9.3						
SUMG	**Summit**	70.01	358	*e*P	P	11 00 37.8	+0.9
	comp=Z,56nm,0.8s,mb5.3						
AKASG	**Malin Array Be**	70.44	319	P	P	11 00 39.3	-0.5
	comp=Z,2.6nm,0.4s,mb4.3,baz=50,slow=6.2,SNR=19						
JCW	**Jim Creek**	70.86	44	P	P	11 00 42.9	+0.5
RMW	**Rattlesnake Mo**	71.35	44	P	P	11 00 46.1	+0.9
NB2	**NORSAR Subarra**	71.46	335	P	P	11 00 44.9	-0.8
	comp=Z,12nm,0.7s,mb4.7,baz=43,slow=5.8						
NB2	**NORSAR Subarra**	71.46	335	P	P	11 00 44.9	-0.8
	baz=43,slow=5.9						
NOA	**NORSAR Array B**	71.46	335	P	P	11 00 45.2	-0.5
	comp=Z,8.9nm,0.6s,mb4.7,baz=42,slow=6.0,SNR=49						
NAO	**NORSAR Subarra**	71.74	335	P	P	11 00 44.9	-2.5
	comp=Z,12nm,0.7s,mb4.7						
NAO	**NORSAR Subarra**	71.74	335	P	P	11 00 44.9	-2.5
NAO				pmax	pmax		
	comp=Z,12nm,0.7s,mb4.7						
NLW	**Nelson Butte**	71.79	43	P	P	11 00 48.4	+0.5
EDM	**Edmonton**	72.16	36	*e*P	P	11 00 49.8	-0.1
EBG	**Ellensburg**	72.36	44	P	P	11 00 52.1	+0.9
SAW	**Saint Andrews**	72.52	43	P	P	11 00 52.5	+0.4
VFP	**Flag Point**	72.80	46	P	P	11 00 54.7	+0.9
BROR	**Big Rock Looko**	72.85	47	P	P	11 00 54.7	+0.6
OD2	**Odessa Site #2**	73.08	43	P	P	11 00 55.5	+0.1
NEW	**Newport**	73.40	41	*e*P	P	11 00 57.3	+0.1
	comp=Z,22nm,1.1s,mb4.8						
NEW	**Newport**	73.40	41	*e*P	P	11 00 57.3	+0.1
NEW				pmax	pmax		
	comp=Z,22nm,1.1s						
LNOR	**Lincton Mounta**	74.24	44	P	P	11 01 02.9	+0.8
LHEM	**Herd Peak**	74.54	49	P	P	11 01 05.0	+1.2
BMO	**Blue Mountains**	75.42	44	*e*P	P	11 01 08.9	+0.2
	comp=Z,26nm,0.8s,mb5.0						
MOD	**Modoc**	75.52	48	*e*P	P	11 01 09.7	+0.4
	comp=Z,23nm,1.1s,mb4.8						
LBCM	**Butte Creek Ri**	75.54	49	P	P	11 01 09.9	+0.4
FCC	**Fort Churchill**	75.80	24	*e*P	P	11 01 10.3	-0.2
	comp=Z,23nm,0.7s,mb5.0						
FCC	**Fort Churchill**	75.80	24	*e*P	P	11 01 10.3	-0.2
FCC				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.0						
MSO	**Missoula**	75.97	41	*e*P	P	11 01 11.2	-0.6
	comp=Z,16nm,1.0s,mb4.7						
WVOR	**Wild Horse Val**	76.17	47	*e*P	P	11 01 13.3	+0.4
	comp=Z,20nm,0.9s,mb4.9						
WVOR	**Wild Horse Val**	76.17	47	*e*P	P	11 01 13.4	+0.4
WVOR				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
CHMT	**Chamberlain Mo**	76.28	41	*e*P	P	11 01 13.2	-0.2
KSP	**Ksiaz**	76.65	325	*e*P	P	11 01 16.0	+0.6
DPC	**Dobruska-Polom**	76.97	325	*e*P	P	11 01 17.4	+0.2
UPC	**Upice**	77.01	325	*e*P	P	11 01 17.7	+0.3
HRY	**Holter Researc**	77.14	40	*e*P	P	11 01 18.7	+0.5
EGMT	**Eagleton**	77.31	38	*e*P	P	11 01 18.7	-0.3
	comp=Z,44nm,0.8s,mb5.2						
DLMT	**Dillon**	77.64	42	⇑*i*P	P	11 01 21.6	+0.7
	comp=Z,82nm,0.7s,mb5.6						
CLL	**Collm**	77.78	327	⇑P	P	11 01 21.2	-0.3
	comp=Z,logA/T=1.1,mb4.6						
CLL				*e**PP	pP	11 02 39.0	-8.4
CLL				*e*		11 02 53.0	
CLL	**Collm**	77.78	327	⇑*i*P	P	11 01 21.2	-0.3
	comp=Z,9.0nm,0.8s,mb4.5						
CLL				*e*		11 01 38.0	
CLL				*e*		11 02 39.0	
CLL				*e*		11 02 53.0	
CLL	**Collm**	77.78	327	⇑*i*P	P	11 01 21.2	-0.3
CLL				*e*		11 01 38.0	
CLL				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
HLID	**Hailey**	77.84	44	*e*P	P	11 01 22.8	+0.7
	comp=Z,20nm,0.8s,mb4.9						
CMB	**Columbia Colle**	77.85	51	*e*P	P	11 01 22.4	+0.2
	comp=Z,28nm,0.9s,mb5.0						

CMB	Columbia Colle	77.85	51	eP	P	11 01 22.4	+0.2
CMB				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.0						
MCMT	McKenzie Canyo	77.86	42	eP	P	11 01 22.4	+0.3
BOZ	Bozeman (W)	77.96	41	eP	P	11 01 23.3	+0.7
	comp=Z,41nm,0.7s,mb5.3						
BOZ	Bozeman (W)	77.96	41	eP	P	11 01 23.3	+0.7
BOZ				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.3						
PRU	Pruhonice	78.04	325	eP	P	11 01 23.2	+0.2
TREC	Trest	78.10	324	eP	P	11 01 23.9	+0.6
QLMT	Earthquake Lak	78.61	42	eP	P	11 01 26.7	+0.6
NVAR	Mina Array Bea	78.88	50	P	P	11 01 28.6	+0.9
	comp=Z,12nm,0.7s,mb4.7,baz=300,slow=4.2,SNR=88						
NVAR				pP	pP	11 02 54.8	+1.1
	comp=Z,1.6nm,0.8s,baz=303,slow=3.8,SNR=4.7						
YMR	Madison River	78.97	41	eP	P	11 01 29.3	+1.3
	comp=Z,66nm,1.3s,mb5.2						
KHC	Kasperske Hory	79.10	325	eP	P	11 01 28.9	+0.3
YFT	Old Faithful	79.18	42	eP	P	11 01 31.7	+2.5
ELK	Elko	79.21	47	eP	P	11 01 30.1	+0.8
	comp=Z,5.5nm,0.7s,mb4.4						
ELK	Elko	79.21	47	eP	P	11 01 30.1	+0.7
ELK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GERES	GERESS Array B	79.25	325	P	P	11 01 29.2	-0.1
	comp=Z,1.4nm,0.6s,mb3.9,baz=37,slow=6.2,SNR=9.1						
LKWY	Lake	79.33	41	eP	P	11 01 32.6	+2.7
	comp=Z,49nm,0.9s,mb5.2						
LKWY	Lake	79.33	41	eP	P	11 01 32.6	+2.7
LKWY				pmax	pmax		
	comp=Z,49nm,0.9s,mb5.2						
MTUM	Tungsten Hills	79.40	51	eP	P	11 01 31.6	+1.1
PTRM	Twissleman Ran	79.44	53	eP	P	11 01 31.2	+0.5
IMW	Indian Meadow	79.50	42	eP	P	11 01 32.6	+1.8
	comp=Z,39nm,0.8s,mb5.2						
DGMT	Dagmar	79.64	35	eP	P	11 01 31.6	+0.1
	comp=Z,63nm,1.0s,mb5.3						
MOOW	Moose Ponds	79.70	42	eP	P	11 01 33.2	+1.2
	comp=Z,37nm,1.3s,mb5.0						
GRA1	Grafenberg Arr	79.74	327	eP	P	11 01 32.9	+0.9
	comp=Z,18nm,1.0s,mb4.8						
GRF	Grafenberg Arr	79.74	327	eP	P	11 01 32.9	+0.9
	comp=Z,18nm,1.0s,mb4.8						
GRF	Grafenberg Arr	79.74	327	eP	P	11 01 32.9	+0.9
GRF				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
GRF	Grafenberg Arr	79.74	327	eP	P	11 01 32.9	+0.9
GRF				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
TPH	Tonopah	79.76	50	eP	P	11 01 33.3	+0.9
	comp=Z,49nm,1.1s,mb5.2						
TPH	Tonopah	79.76	50	eP	P	11 01 33.3	+0.9
TPH				pmax	pmax		
	comp=Z,49nm,1.1s,mb5.2						
TPAW	Teton Pass	79.77	42	eP	P	11 01 33.8	+1.5
	comp=Z,71nm,1.3s,mb5.2						
LOHW	Long Hollow	79.87	42	eP	P	11 01 33.9	+1.1
	comp=Z,13nm,0.9s,mb4.7						
SNOW	Snow King Moun	79.89	42	eP	P	11 01 34.1	+1.2
	comp=Z,48nm,1.1s,mb5.1						
REDW	Red Top Meadow	79.91	42	eP	P	11 01 34.1	+1.1
	comp=Z,34nm,1.1s,mb5.0						
HVU	Hansel Valley	79.92	45	eP	P	11 01 34.2	+1.0
	comp=Z,42nm,1.3s,mb5.0						
HVU	Hansel Valley	79.92	45	eP	P	11 01 34.2	+1.0
HVU				pmax	pmax		
	comp=Z,42nm,1.3s,mb5.0						
LAO	LASA Array	79.96	38	eP	P	11 01 33.1	-0.1
	comp=Z,47nm,1.0s,mb5.2						
DAC	Darwin (Calif)	80.69	51	eP	P	11 01 37.5	+0.3
	comp=Z,12nm,0.9s,mb4.6						
DAC	Darwin (Calif)	80.69	51	eP	P	11 01 37.5	+0.2
DAC				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
HWUT	Hardware Ranch	80.71	44	eP	P	11 01 38.1	+0.8
	comp=Z,43nm,1.1s,mb5.1						
DUG	Dugway	80.96	46	eP	P	11 01 39.5	+0.9
	comp=Z,51nm,1.4s,mb5.1						
PDAR	Pinedale Array	81.01	42	P	P	11 01 39.2	+0.4
	comp=Z,18nm,0.8s,mb4.9,baz=290,slow=1.3,SNR=143						
PDAR				pP	pP	11 03 05.5	+0.2
	comp=Z,1.6nm,0.8s,baz=338,slow=8.0,SNR=4.2						
NOQ	North Oquirrh	81.05	45	eP	P	11 01 40.1	+1.1
	comp=Z,18nm,0.8s,mb4.8						
TPNV	Topopah Spring	81.08	50	eP	P	11 01 39.9	+0.6
	comp=Z,16nm,1.0s,mb4.7						
TCUT	Toone Canyon	81.13	44	eP	P	11 01 40.5	+1.0
CTU	Camp Tracy	81.23	45	eP	P	11 01 40.2	+0.3
	comp=Z,14nm,1.0s,mb4.7						
MPU	Maple Canyon	81.75	45	eP	P	11 01 43.5	+0.8
	comp=Z,25nm,1.0s,mb5.0						
ULM	Lac du Bonnet	81.87	30	P	P	11 01 43.0	-0.1
	comp=Z,31nm,0.8s,mb5.2,baz=318,slow=5.7,SNR=38						
ULM	Lac du Bonnet	81.87	30	P	P	11 01 43.0	-0.1
ARUT	Antelope Range	82.21	48	eP	P	11 01 45.7	+0.6
MSU	Marysvale	82.46	47	eP	P	11 01 47.6	+1.3
RSSD	Black Hills	82.88	38	eP	P	11 01 48.4	+0.1
	comp=Z,28nm,0.8s,mb5.2						
RSSD	Black Hills	82.88	38	eP	P	11 01 48.4	+0.1
RSSD				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.1						
SRU	San Rafael	83.00	45	eP	P	11 01 49.5	+0.5
	comp=Z,18nm,1.0s,mb4.8						
SRU	San Rafael	83.00	45	eP	P	11 01 49.5	+0.5
SRU				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.9						
RWWY	Rawlins	83.01	42	eP	P	11 01 49.5	+0.5
	comp=Z,31nm,0.9s,mb5.1						
ATD	Arta Tunnel	84.45	280	P	P	11 01 57.0	+0.2
	comp=Z,3.5nm,0.3s,mb4.6,baz=165,slow=23,SNR=3.6						
SMCO	Snowmass	84.92	43	eP	P	11 01 59.3	+0.7
	comp=Z,17nm,1.0s,mb4.8						
ISCO	Idaho Springs	85.21	42	eP	P	11 02 01.1	+1.1
	comp=Z,8.1nm,0.8s,mb4.6						
ISCO	Idaho Springs	85.21	42	eP	P	11 02 01.1	+1.2
ISCO				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.6						
EYMN	Ely	85.43	29	eP	P	11 02 00.9	+0.1
	comp=Z,24nm,0.8s,mb5.1						
SCHQ	Schefferville	86.11	12	P	P	11 02 04.3	+0.4
	comp=Z,18nm,0.7s,mb5.0,baz=2.6,slow=4.3,SNR=31						
SGMF	Saint Gilles	86.41	333	eP	P	11 02 04.5	-1.0
SGMF				pmax	pmax		
	comp=Z,33nm,1.1s,mb5.1						
SDCO	Great Sand Dun	86.75	44	eP	P	11 02 08.4	+1.0
	comp=Z,9.5nm,1.1s,mb4.5						
ANMO	Albuquerque	88.23	46	⇓eP	P	11 02 16.4	+1.9
LAZ	Ladron	88.23	47	eP	P	11 02 15.7	+1.3
GDL2	Guadalupe Moun	91.42	47	eP	P	11 02 30.1	+0.7
WMOK	Wichita Mounta	92.60	41	eP	P	11 02 34.2	-0.6
	comp=Z,14nm,1.1s,mb4.9						
WMOK	Wichita Mounta	92.60	41	eP	P	11 02 34.2	-0.6
WMOK				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.9						
TXAR	Lajitas Array	93.92	48	P	P	11 02 41.5	+0.7
	comp=Z,8.1nm,0.8s,mb4.8,baz=291,slow=3.2,SNR=82						
MATP	Matopo	114.68	263	PKP	PKPdf	11 08 00.5	+0.2
	comp=Z,0.8nm,0.4s,baz=114,slow=8.2,SNR=5.7						
MATP	Matopo	114.68	263	PKP	PKPdf	11 08 00.5	+0.1
MAW	Mawson	117.77	204	PKP	PKPdf	11 08 05.5	+0.3
	comp=Z,1.6nm,0.7s,baz=61,slow=10,SNR=2.8						
BOSA	Boshof	121.40	256	PKP	PKPdf	11 08 12.7	-0.6
	comp=Z,4.4nm,1.0s,baz=34,slow=6.0,SNR=2.5						
DBIC	Dimbokro	121.97	310	PKP	PKPdf	11 08 14.4	-0.3
	comp=Z,2.8nm,0.5s,baz=358,slow=2.7,SNR=8.2						
SDV	Santo Domingo	128.07	32	ePKPdf	PKPdf	11 08 27.1	+0.6
ROSC	El Rosal	129.90	39	PKP	PKPdf	11 08 32.2	+2.2
	comp=Z,3.2nm,0.4s,baz=110,slow=17,SNR=5.0						
SNAA	Sanae	139.60	199	P	PKPdf	11 08 37.6	-8.8
SNAA	Sanae	139.60	199	e	PKPdf	11 08 39.7	-6.7
VNA2	Neumayer--Watz	141.23	199	P	PKPdf	11 08 44.2	-5.0
VNA2	Neumayer--Watz	141.23	199	e	PKPdf	11 08 46.2	-3.0
VNA3	Neumayer Olymp	141.59	198	P	PKPdf	11 08 45.3	-4.5
VNA3	Neumayer Olymp	141.59	198	e	PKPdf	11 08 47.5	-2.3
SAML	Samuel	147.25	34	ePKPdf	PKPdf	11 09 02.0	+0.9
SAML				ePKPbc	PKPdf	11 09 04.7	+3.6
LPAZ	La Paz	150.78	50	PKP	PKPdf	11 09 08.9	+2.4
	comp=Z,7.9nm,0.7s,baz=318,slow=2.6,SNR=19						
LPAZ				PKPbc	PKPdf	11 09 14.6	+8.0
	comp=Z,7.9nm,0.7s,baz=343,slow=8.3,SNR=30						
LPAZ	La Paz	150.78	50	ePKPdf	PKPdf	11 09 08.8	+2.3
LPAZ				ePKPbc	PKPdf	11 09 14.4	+7.8
LPAZ	La Paz	150.78	50	PKIKP	PKPdf	11 09 08.9	+2.4
LPAZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LPAZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BDFB	Brasilia	158.00	7	PKPab	PKPab	11 09 53.4	-0.9
	comp=Z,4.5nm,0.6s,baz=329,slow=2.7,SNR=8.2						
PLCA	Paso Flores	160.26	107	PKPab	PKPab	11 10 03.0	-0.2
	comp=Z,4.0nm,0.9s,baz=206,slow=5.4,SNR=5.0						

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*NEIC **27** 10:53:11.9±0.7, 26.67N×55.81E, h10^{km}, mb4.2/13, MN4.1(TEH), Error ellipse: s-maj=15.4km s-min=10.3km az=86.0*
*IDC **27** 10:53:11.1±1.0, 26.83N×55.69E, mb4.0/16, mb1 4.1/16, mb1mx4.0/24, mbtmp4.0/16, Error ellipse: s-maj=26.9km s-min=19.2km az=91.0*
*THR **27** 10:53:11.9±0.5, 26.77N×55.80E, h10^{km}±7^{km}, ML4.0*
*TEH **27** 10:53:14.0, 26.71N×55.85E, h10^{km}, Mn4.1*
*MOS **27** 10:53:14.3±1.1, 26.81N×55.70E, h33^{km}, mb4.4/11, Error ellipse: s-maj=20.7km s-min=6.7km az=130.0*
*CSEM **27** 10:53:15.9±0.2, 26.82N×55.79E, h56^{km}±1^{km}, mb4.3/11, Error ellipse: s-maj=4.3km s-min=3.3km az=173.0*
ISC 27 10:53:10.5±0.6, **26.67N**±0.06×**55.74E**±0.06, **h10^{km}, n74, σ1^{s}22**/75, **mb4.0**/27, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.82	28	ePg	Pg	10 53 25.8	-1.3
GHIR	Ghir-Karzin	2.92	304	ePN	Pn	10 54 00.4	+2.4
GHIR				AML	AML	10 55 01.1	
	comp=N,403nm,0.4s						
KRBR	Kerman	3.42	15	ePN	Pn	10 54 06.2	+1.1
KRBR				AML	AML	10 54 53.7	
	comp=N,351nm,0.5s						
ISRV	Sarvestan	3.56	320	Pn	Pn	10 54 09.2	+2.1
IMOK	Mook	3.57	312	Pn	Pn	10 54 09.2	+2.0
IPAR	Pars	3.95	324	Pn	Pn	10 54 14.6	+2.0
IMEH	Mehriz	4.81	348	Pn	Pn	10 54 25.8	+1.1
IBAF	Bafgh	4.91	358	Pn	Pn	10 54 25.7	-0.5
ZHSF	Zahedan	5.33	55	ePN	Pn	10 54 32.3	+0.2
ISAD	Sadrabad	5.52	342	Pn	Pn	10 54 36.5	+1.6
ICHK	Chekchek	5.67	349	Pn	Pn	10 54 34.2	-2.8
NASN	Na'in	6.62	338	ePN	Pn	10 54 50.3	0.0
ISFB	Sefidab	8.23	339	Pn	P	10 55 13.6	+0.7
IAFJ	Afjeh	9.78	340	Pn	P	10 55 34.2	-0.2
IAFJ				Sn	Sn	10 57 16.5	-8.9
SARP	Sargodha	15.67	67	P	P	10 56 55.2	+2.1
GNI	Garni	16.26	329	eP	P	10 57 05.7	+5.1
	comp=N,9.5nm,0.8s						
GNI	Garni	16.26	329	eP	P	10 57 05.7	+5.1
GNI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIV	Kislovodsk	20.23	332	eP	P	10 57 49.4	+0.9
	comp=Z,20nm,0.6s						
KIV	Kislovodsk	20.23	332	eP	P	10 57 49.2	+0.7
KIV				pmax	pmax		
	comp=Z,40nm,1.0s						
KIV	Kislovodsk	20.23	332	eP	P	10 57 49.2	+0.7
	comp=Z,40nm,1.0s						
GOF	Gofitskoye	20.99	334	eP	P	10 57 54.9	-1.5
BR131	Keskin Array S	22.54	311	eP	P	10 58 15.3	+3.3
	comp=Z,1.6nm,0.6s,mb3.6						
BRTR	Keskin Array B	22.54	311	P	P	10 58 13.4	+1.4
	comp=Z,1.9nm,0.8s,mb3.5,baz=129,slow=14,SNR=8.1						
AKTO	Aktyubinsk	23.80	4	P	P	10 58 23.9	-0.1
	comp=Z,2.2nm,0.7s,mb3.7,baz=192,slow=9.4,SNR=6.2						
ISP	Isparta	23.99	304	eP	P	10 58 28.1	+1.9
	comp=Z,4.2nm,0.5s,mb4.1						
ISP	Isparta	23.99	304	eP	P	10 58 28.1	+1.9
ISP				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.1						
BVAR	Borovoye Array	28.51	19	P	P	10 59 06.5	-1.5
	comp=Z,1.8nm,0.7s,mb3.9,baz=202,slow=7.8,SNR=1.2						
MLR	Muntele Rosu	30.28	316	P	P	10 59 24.2	+0.2
	comp=Z,1.5nm,0.5s,mb4.0,baz=212,slow=17,SNR=3.1						
AKASG	Malin Array Be	31.38	327	P	P	10 59 31.4	-2.2
	comp=Z,2.4nm,0.5s,mb4.3,baz=132,slow=8.5,SNR=22						
NVS	Novosibirsk	34.59	28	eP	P	11 00 06.1	+4.7
MORC	Moravsky Berou	37.27	319	eP	P	11 00 26.2	+2.0
	comp=Z,1.9nm,0.7s,mb4.0						
MORC	Moravsky Berou	37.27	319	eP	P	11 00 26.2	+2.0
MORC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
MORC	Moravsky Berou	37.27	319	eP	P	11 00 26.2	+2.0
	comp=Z,1.9nm,0.7s,mb4.0						
GERES	GERESS Array B	39.27	316	P	P	11 00 40.2	-0.7
	comp=Z,0.3nm,0.4s,mb3.3,baz=112,slow=7.2,SNR=8.7						
FINES	FINESS Array B	40.08	338	P	P	11 00 45.4	-2.1
	comp=Z,2.0nm,0.5s,mb4.1,baz=131,slow=8.2,SNR=6.4						
MBDF	Montbardon	42.96	308	eP	P	11 01 10.7	-0.6
	comp=Z,5.4nm,0.7s,mb4.1						
MBDF	Montbardon	42.96	308	eP	P	11 01 10.7	-0.6
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
LPG	La Plagne	43.08	309	eP	P	11 01 12.3	0.0
	comp=Z,11nm,1.0s,mb4.3						
LPG	La Plagne	43.08	309	eP	P	11 01 12.3	0.0
LPG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
LPL	La Plagne	43.10	309	eP	P	11 01 12.0	-0.4
	comp=Z,5.6nm,0.7s,mb4.1						
LPL	La Plagne	43.10	309	eP	P	11 01 12.0	-0.4
LPL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
ZAK	Zakamensk	43.14	44	eP	P	11 01 21.3	+8.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.6						
ORIF	Oris-en-Rattie	43.61	308	eP	P	11 01 14.9	-1.7
CABF	La Chapelle	43.71	311	eP	P	11 01 17.6	+0.2
	comp=Z,5.8nm,0.7s,mb4.1						
CABF	La Chapelle	43.71	311	eP	P	11 01 17.6	+0.2
CABF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
SMF	Signal de Mont	45.25	310	eP	P	11 01 29.2	-0.6
LOR	Lormes	45.32	311	eP	P	11 01 29.4	-1.0
NOA	NORSAR Array B	45.53	331	P	P	11 01 29.6	-2.2
	comp=Z,1.5nm,0.8s,mb4.0,baz=117,slow=7.9,SNR=4.2						
SSF	Saint Saulge	45.53	311	eP	P	11 01 31.3	-0.7
SSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
SSF	Saint Saulge	45.53	311	eP	P	11 01 31.3	-0.7
	comp=Z,2.0nm,0.6s,mb4.2						
AVF	Avril sur Loir	45.60	310	eP	P	11 01 31.8	-0.8
	comp=Z,2.4nm,0.7s,mb4.0						
AVF	Avril sur Loir	45.60	310	eP	P	11 01 31.8	-0.8
AVF				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
BGF	Bois d'Agland	45.92	310	eP	P	11 01 34.7	-0.4
MTLF	Montolieu	46.09	305	eP	P	11 01 37.3	+0.8
CAF	Calviac	46.31	308	eP	P	11 01 38.2	0.0
TCF	Toulx Ste Croi	46.33	310	eP	P	11 01 38.3	0.0
	comp=Z,5.7nm,0.7s,mb4.3						
TCF	Toulx Ste Croi	46.33	310	eP	P	11 01 38.3	0.0
TCF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
ARCES	ARCESS Array B	46.38	346	P	P	11 01 37.4	-1.0
	comp=Z,3.7nm,1.0s,mb4.2,baz=156,slow=8.9,SNR=3.9						
ARCES	ARCESS Array B	46.38	346	P	P	11 01 37.5	-1.0
RJF	Les Rejaudoux	46.72	308	eP	P	11 01 42.0	+0.5
EPF	Esparros	47.45	305	eP	P	11 01 46.5	-0.8
ETSF	Etsaut	48.11	305	eP	P	11 01 52.5	+0.1
LDF	La Druitiere	48.14	312	eP	P	11 01 51.6	-1.0
	comp=Z,7.4nm,0.6s,mb4.6						
LDF	La Druitiere	48.14	312	eP	P	11 01 51.6	-1.0
LDF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
FLN	La Foliniere	48.40	313	eP	P	11 01 53.6	-1.0
ROSF	Rostrenen	50.21	312	eP	P	11 02 06.9	-1.6
ESDC	Sonseca Array	50.78	301	P	P	11 02 12.1	-0.8
	comp=Z,1.1nm,0.6s,mb4.0,baz=60,slow=7.1,SNR=6.2						
MATP	Matopo	53.75	212	P	P	11 02 36.4	+1.0
	comp=Z,1.9nm,0.8s,mb4.1,baz=50,slow=12,SNR=4.1						
DBIC	Dimbokro	60.79	262	P	P	11 03 24.6	-0.8
	comp=Z,2.3nm,0.8s,mb4.4,baz=43,slow=8.2,SNR=2.8						
BOSA	Boshof	62.27	210	P	P	11 03 35.6	+0.4
	comp=Z,2.4nm,0.8s,mb4.4,baz=38,slow=10,SNR=2.7						
INK	Inuvik	85.06	3	P	P	11 05 48.7	+1.6
	comp=Z,0.8nm,0.9s,mb3.9,baz=324,slow=4.0,SNR=2.4						
INK	Inuvik	85.06	3	P	P	11 05 48.7	+1.6
ILAR	Eielson Array	87.17	10	P	P	11 05 58.5	+0.9
	comp=Z,0.3nm,0.6s,mb3.7,baz=322,slow=4.9,SNR=6.1						
WRA	Warramunga Arr	89.14	113	P	P	11 06 09.6	+1.5
	comp=Z,0.4nm,0.7s,mb3.8,baz=307,slow=4.0,SNR=4.2						

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*NDI **27** 10:56:13.1±3.4, 34.61N×72.71E, h10^{km}, ML3.0*
ISC 27 10:55:51.4±2.5, **36.1N**±0.3×**71.6E**±0.2, **h174^{km}**±36^{km}**, n7, σ0^{s}72**/11, **1C, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	Cherat	2.25	172	⇑P	P	10 56 30.7	-0.6
CEP				S	S	10 57 02.0	0.0
CHCP	Chirah Chowk	2.78	149	P	P	10 56 38.4	+0.8
THN	Thein Dam	5.00	135	eP	P	10 57 06.1	+0.2
THN				eSG	S	10 58 04.8	+1.2
DLH	Dalhousie	5.06	133	eP	P	10 57 07.0	+0.2
DLH				eSG	S	10 58 04.0	-1.2
SMLA	Simla	6.79	135	eP	P	10 57 28.5	-1.1
SMLA				ex	x	10 58 00.7	
KLP	Kalpa	7.17	127	eP	P	10 57 34.9	+0.3
KLP				eS	S	10 58 38.2	-17
KLP				AML	AML	10 58 54.6	
	comp=E,48nm,0.7s						
KLP				AML	AML	10 58 56.9	
	comp=N,64nm,0.5s						
KHET	Khetri	8.74	154	eP	P	10 57 55.6	+0.3
KHET				AML	AML	10 58 22.5	
	comp=N,5.3nm,0.3s						
KHET				AML	AML	10 58 22.7	
	comp=E,6.1nm,0.3s						

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*ROM **27** 11:04:58.5±0.5, 46.28N×13.60E, h6^{km}±4^{km}, Md2.6/3, Ml2.3/2, Error ellipse: s-maj=6.4km s-min=4.7km az=154.0*
*LJU **27** 11:04:59.2, 46.32N×13.62E, h8^{km}, ML2.1*
*NEIC **27** 11:04:59.5±0.5, 46.28N×13.61E, h10^{km}, ML2.1(LJU), Error ellipse: s-maj=8.2km s-min=4.5km az=192.0*
NEIC Felt [III] at Bovec.
*CSEM **27** 11:04:59.2±0.1, 46.31N×13.60E, h12^{km}, ML2.7/4, Error ellipse: s-maj=1.4km s-min=1.1km az=28.0*
*VIE **27** 11:04:59.8±0.4, 46.30N×13.63E, h10^{km}, mb1.9/2, ML2.2/8, Error ellipse: s-maj=4.0km s-min=2.6km az=169.0*
ISC 27 11:04:59.4±0.2, **46.31N**±0.02×**13.62E**±0.02, **h10^{km}, n49, σ0^{s}84**/79, **7C-16D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROBS	Robic	0.10	231	⇓iPg	Pg	11 05 01.8	-0.3
ROBS				i Sg	Sg	11 05 03.4	-0.4
	comp=Z,753nm,0.1s						
ROBS	Robic	0.10	231	⇓iPg	Pg	11 05 01.8	-0.2
ROBS				i Sg	Sg	11 05 03.4	-0.4
	comp=Z,753nm,0.1s						
CADS	Cadrg	0.11	134	⇑iPg	Pg	11 05 02.4	+0.1
CADS				i Sg	Sg	11 05 04.4	+0.2
	comp=Z,704nm,0.2s						
CADS	Cadrg	0.11	134	⇑iPg	Pg	11 05 02.4	+0.1
CADS				i Sg	Sg	11 05 04.4	+0.2
	comp=Z,704nm,0.2s						
DRE	Drenchia	0.14	173	⇓iPg	Pg	11 05 02.5	-0.1
DRE				eSg	Sg	11 05 04.8	+0.1
LSR	Lussari	0.18	340	⇓iPg	Pg	11 05 02.8	-0.6
LSR				i Sg	Sg	11 05 05.7	-0.4
PTCC	Patocco-Chiusa	0.21	298	Pg	Pg	11 05 03.3	-0.6
COLI	Coloredo	0.24	224	⇓iPg	Pg	11 05 04.4	-0.1
COLI				i Sg	Sg	11 05 08.4	+0.5
GORS	Gorjuse	0.26	88	⇑iPg	Pg	11 05 04.8	-0.1
GORS				i Sg	Sg	11 05 09.2	+0.7
	comp=Z,180nm,0.1s						
GMNA	Gemona	0.27	263	Pg	Pg	11 05 05.9	+0.9
GMNA				Sg	Sg	11 05 11.0	+2.2
	comp=Z,216nm,0.2s						
BAD	Bernadia	0.27	255	⇑iPg	Pg	11 05 04.5	-0.6
BAD				i Sg	Sg	11 05 09.0	+0.2
VOJS	Vojsko	0.33	146	⇓iPg	Pg	11 05 06.2	-0.1
VOJS				i Sg	Sg	11 05 11.8	+1.0
BUA	Buia	0.35	256	⇓ePg	Pg	11 05 06.3	-0.3
BUA				eSg	Sg	11 05 11.8	+0.3
BUA	Buia	0.35	256	ePg	Pg	11 05 06.3	-0.4
BUA				eSg	Sg	11 05 11.8	+0.2
BOO	Bordano	0.36	272	⇑iPg	Pg	11 05 05.8	-1.0
PLRO	Paularo	0.41	307	⇓ePg	Pg	11 05 07.3	-0.4
PLRO				eSg	Sg	11 05 13.1	-0.2
MPRI	Monte Prat	0.44	262	⇑iPg	Pg	11 05 07.7	-0.7
MPRI				i Sg	Sg	11 05 14.8	+0.4
ZOU	Zoufplan	0.51	299	⇓ePg	Pg	11 05 09.2	-0.6
ZOU				eSg	Sg	11 05 17.0	+0.3
JAVS	Javornik	0.52	143	i Pg	Pg	11 05 09.3	-0.6
JAVS				eSg	Sg	11 05 17.5	+0.6
	comp=Z,26nm,0.1s						
JAVS	Javornik	0.52	143	i Pg	Pg	11 05 09.3	-0.6
JAVS				eSg	Sg	11 05 17.5	+0.6
	comp=Z,34nm,0.2s						
TRI	Trieste	0.61	170	Pg	Pg	11 05 10.6	-1.0
TRI				Sg	Sg	11 05 20.2	+0.4
	comp=Z,25nm,0.2s						
FVI	Forni Avoltri	0.65	297	Pg	Pg	11 05 12.0	-0.4
FVI				Sg	Sg	11 05 21.3	+0.1
	comp=Z,45nm,0.4s						
OBKA	Obir	0.68	72	⇓iPg	Pg	11 05 12.8	-0.2
	comp=Z,1.9nm,0.1s						
OBKA	Obir	0.68	72	Pg	Pg	11 05 12.8	-0.2
	comp=Z,1.9nm,0.1s						
OBKA				Sg	Sg	11 05 22.4	+0.3
	comp=Z,36nm,0.2s						
LJU	Ljubljana	0.68	112	ePg	Pg	11 05 13.4	+0.3
	comp=Z,34nm,0.2s						
KBA	Koelnbreinsper	0.80	346	⇓iPg	Pg	11 05 14.6	-0.8
	comp=Z,1.6nm,0.1s						
KBA	Koelnbreinsper	0.80	346	Pg	Pg	11 05 14.6	-0.8
	comp=Z,1.6nm,0.1s						
KBA				Sg	Sg	11 05 25.5	-0.5
	comp=Z,18nm,0.3s						
CEY	Cerknica	0.80	135	eSg	Sg	11 05 25.7	-0.5
	comp=Z,27nm,0.2s						
CEY	Cerknica	0.80	135	eSg	Sg	11 05 25.7	-0.5
	comp=Z,27nm,0.2s						
PERS	Pernice	1.09	72	i Pg	Pg	11 05 20.1	-1.1
LEGS	Legarje	1.23	106	eSg	Sg	11 05 41.2	+0.6
CRES	Cresnjev	1.37	110	i Sg	Sg	11 05 44.9	-0.1
CTI	Castel Tesino	1.39	260	Pg	Pg	11 05 25.9	-1.3
	comp=Z,20nm,0.2s						
BOJS	Bojanci	1.40	125	ePg	Pg	11 05 26.1	-1.2
BOJS				eSg	Sg	11 05 45.5	-0.4
GOLS	Golise	1.43	101	ePg	Pg	11 05 26.5	-1.4
MOA	Molln	1.61	16	⇓iPg	Pg	11 05 30.6	-0.9
	comp=Z,2.4nm,0.2s						
MOA	Molln	1.61	16	Pg	Pg	11 05 30.6	-0.9
	comp=Z,2.4nm,0.2s						
MOA				Sg	Sg	11 05 53.4	+0.5
	comp=Z,5.5nm,0.5s						
ARSA	Arzberg	1.61	54	⇓iPn	Pn	11 05 28.9	+0.7
	comp=Z,1.6nm,0.2s						
ARSA	Arzberg	1.61	54	Pn	Pn	11 05 28.9	+0.8
	comp=Z,1.6nm,0.2s						
ARSA				Sn	Sn	11 05 50.5	+1.4
	comp=Z,6.4nm,0.3s						
APPI	Appiano	1.66	277	Pg	Pg	11 05 31.0	-1.6
	comp=Z,62nm,0.4s						
WTTA	Wattenberg	1.67	306	⇓iPn	Pn	11 05 29.9	+1.0
WATA	Walderalm	1.74	307	⇑iPn	Pn	11 05 31.9	+1.9
SQTA	Sankt Quirin	1.89	300	⇓iPn	Pn	11 05 33.8	+1.7
	comp=Z,3.5nm,0.3s						
MOTA	Moosalm	2.02	302	⇓iPn	Pn	11 05 35.3	+1.4
	comp=Z,2.0nm,0.3s						
KHC	Kasperske Hory	2.83	359	ePN	Pn	11 05 46.4	+0.9
KHC				ePG	Pg	11 05 56.5	+0.7
KHC				eSN	Sn	11 06 21.0	+1.1
KHC				eSG	Sg	11 06 30.4	-3.1
KHC	Kasperske Hory	2.83	359	ePn	Pn	11 05 46.4	+0.9
KHC				eSn	Sn	11 06 21.0	+1.1
KHC				eSg	Sg	11 06 30.4	-3.1
PRU	Pruhonice	3.74	9	eSG	Sg	11 06 59.4	-4.4
PRU	Pruhonice	3.74	9	eSg	Sg	11 06 59.4	-4.4
NKC	Novy Kostel	4.01	349	eSG	Sg	11 07 07.4	-5.4

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*IDC **27** 11:07:09.7±8.2, 58.05N×156.61W, h104^{km}±75^{km}, mb3.1/2, mb1 3.3/5, mb1mx3.1/22, mbtmp3.5/5, ML3.6/3, Error ellipse: s-maj=62.4km s-min=34.9km az=18.0*
*NEIC **27** 11:07:11.1, 57.75N×156.36W, h112^{km}, MG3.1(AEIC), After AEIC.*
ISC 27 11:07:08.5±0.5, **57.78N**±0.06×**156.3W**±0.1, **h128^{km}**±4^{km}, **n48, σ0^{s}92**/58, **mb3.4**/2, **Alaska Peninsula**

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

KJL	**Kejulik**	**0.49**	**56**	P	**P**	**11 07 27.7**	**+0.3**
CNTC	**Contact Creek**	**0.54**	**27**	P	**P**	**11 07 27.9**	**+0.3**
CNTC				S	**S**	**11 07 41.3**	**-0.9**
ANCK	**Angle Creek**	**0.61**	**47**	P	**P**	**11 07 28.8**	**+0.6**
ANCK				S	**S**	**11 07 42.0**	**-1.1**
CAHL	**Cahill**	**0.62**	**64**	P	**P**	**11 07 28.4**	**+0.3**
ACHA	**Angle Creek He**	**0.69**	**51**	P	**P**	**11 07 29.3**	**+0.7**
MGLS	**Mageik LS**	**0.69**	**51**	P	**P**	**11 07 29.3**	**+0.7**
MGLS				S	**S**	**11 07 43.9**	**-0.2**
KABR	**Katmai Barrier**	**0.81**	**64**	P	**P**	**11 07 29.8**	**+0.2**
KABR				S	**S**	**11 07 45.0**	**-0.7**
KAWH	**Katmai**	**1.02**	**53**	P	**P**	**11 07 32.0**	**+0.4**
KAHC	**Katmai Hardscr**	**1.12**	**39**	P	**P**	**11 07 33.3**	**+0.6**
KAHC				S	**S**	**11 07 51.1**	**+0.2**
KAHG	**Katmai Hook Gl**	**1.19**	**52**	P	**P**	**11 07 34.2**	**+0.8**
KAPH	**Katmai Pasha**	**1.34**	**51**	P	**P**	**11 07 35.7**	**+0.7**
KAPH				S	**S**	**11 07 55.4**	**+0.2**
ANPK	**Aniakchak Peak**	**1.35**	**226**	P	**P**	**11 07 35.0**	**-0.2**
ANPK				S	**S**	**11 07 54.6**	**-0.9**
ANPB	**Aniakchak Plen**	**1.44**	**228**	P	**P**	**11 07 36.0**	**-0.2**
KDAK	**Kodiak Island**	**2.01**	**88**	P	**P**	**11 07 43.1**	**+0.2**
KDAK				S	**S**	**11 08 07.6**	**-1.4**
AUI	**Augustine Isla**	**2.18**	**43**	P	**P**	**11 07 45.9**	**+0.8**
AUL	**Augustine Lava**	**2.21**	**42**	P	**P**	**11 07 46.5**	**+1.0**
OPT	**Oil Point**	**2.48**	**40**	P	**P**	**11 07 50.1**	**+1.1**
ILW	**Iliamna West**	**2.83**	**35**	P	**P**	**11 07 54.3**	**+0.7**
INE	**Iliamna NE**	**2.85**	**35**	P	**P**	**11 07 54.7**	**+0.8**
CNPM	**China Poot**	**3.19**	**55**	P	**P**	**11 07 59.0**	**+0.6**
CNPM				S	**S**	**11 08 34.7**	**-1.7**
RSO	**Redoubt South**	**3.26**	**33**	P	**P**	**11 08 00.1**	**+0.7**
SVW2	**Sparrevohn**	**3.35**	**6**	P	**P**	**11 08 00.6**	**+0.1**
HAG	**Hague Volcano**	**3.95**	**234**	P	**P**	**11 08 08.2**	**-0.2**
CKL	**Chakachamna La**	**3.99**	**29**	P	**P**	**11 08 10.6**	**+1.6**
SPU	**Mount Spurr**	**4.05**	**31**	P	**P**	**11 08 11.4**	**+1.5**
SEW	**Seward**	**4.26**	**54**	P	**P**	**11 08 13.2**	**+0.5**
STLK	**Strandline Lak**	**4.37**	**30**	P	**P**	**11 08 15.9**	**+1.7**
RC01	**Rabbit Creek A**	**4.73**	**43**	P	**P**	**11 08 19.1**	**+0.1**
GHO	**Glory Hole Cre**	**5.48**	**40**	P	**P**	**11 08 28.4**	**-0.6**
HIN	**Hinchinbrook I**	**5.71**	**59**	P	**P**	**11 08 32.1**	**0.0**
SCM	**Sheep Creek Mo**	**6.10**	**44**	P	**P**	**11 08 36.5**	**-0.8**
EYAK	**Cordova Ski Ar**	**6.11**	**59**	P	**P**	**11 08 37.1**	**-0.5**
TRF	**Thorofare Moun**	**6.42**	**25**	P	**P**	**11 08 41.9**	**+0.2**
KLU	**Klutina**	**6.46**	**50**	P	**P**	**11 08 42.5**	**+0.1**
MCK	**McKinley**	**6.98**	**28**	P	**P**	**11 08 49.0**	**-0.5**
GLB	**Gilahina Butte**	**7.34**	**55**	P	**P**	**11 08 54.1**	**-0.1**
PAX	**Paxson**	**7.49**	**41**	P	**P**	**11 08 56.4**	**+0.2**
WRH	**Wood River Hil**	**7.80**	**27**	P	**P**	**11 08 58.6**	**-1.9**
BALM	**Baldy**	**7.85**	**60**	P	**P**	**11 09 00.9**	**-0.2**
YAH	**Yahtse**	**7.95**	**65**	P	**P**	**11 09 02.8**	**+0.3**
CCB	**Clear Creek Bu**	**8.02**	**27**	P	**P**	**11 09 01.1**	**-2.3**
MDM	**Murphy Dome**	**8.18**	**25**	P	**P**	**11 09 03.8**	**-1.8**
ILAR	**Eielson Array**	**8.35**	**29**	P	**P**	**11 09 05.6**	**-2.2**
	1.0nm,0.3s,baz=219,slow=13,SNR=84						
ILAR				S	**S**	**11 10 36.0**	**-4.9**
	0.6nm,0.3s,baz=222,slow=22,SNR=13						
IL1	**Eielson Array**	**8.35**	**29**	P	**P**	**11 09 06.2**	**-1.7**
DLBC	**Dease Lake**	**13.90**	**76**	P	**P**	**11 10 24.5**	**+4.1**
	0.1nm,0.3s,baz=234,slow=19,SNR=3.4						
INK	**Inuvik**	**14.66**	**35**	P	**P**	**11 10 29.1**	**-1.0**
	0.2nm,0.3s,baz=228,slow=16,SNR=12						
YKA	**Yellowknife Ar**	**21.02**	**60**	P	**P**	**11 11 44.3**	**+1.5**
	0.3nm,0.4s,mb3.0,baz=272,slow=9.9,SNR=5.2						
SONM	**Songino Array**	**54.67**	**305**	P	**P**	**11 16 25.5**	**-0.3**
	0.4nm,0.4s,mb3.8,baz=39,slow=5.6,SNR=10						

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*IDC **27** 11:07:26.7±1.1, 26.82N×55.63E, mb3.8/11, mb1 3.9/11, mb1mx3.8/21, mbtmp3.8/11, Error ellipse: s-maj=27.3km s-min=21.8km az=118.0*

*CSEM **27** 11:07:27.1±0.1, 26.72N×55.73E, h18^{km}, mb3.8/2, Error ellipse: s-maj=3.7km s-min=3.0km az=144.0*

*NEIC **27** 11:07:28.3±0.9, 26.82N×55.61E, h10^{km}, mb3.8/2, Error ellipse: s-maj=20.0km s-min=14.8km az=158.0*

*THR **27** 11:07:29.0±0.4, 26.85N×55.70E, h14^{km}±6^{km}, ML3.4*

ISC 27 11:07:28.7±2.5**, 26.8N**±0.2×**55.7E**±0.1**, h27**^{km}±14^{km}**, n21, σ1§22**/22**, mb3.7**/13**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.75**	**32**	*e*PG	**Pb**	**11 07 42.4**	**-0.7**
BNDS				AML	AML	11 07 54.5	
	comp=N,2µm,0.4s						
BNDS	**Bandar-Abbas**	**0.75**	**32**	*e*Pg	**Pb**	**11 07 42.3**	**-0.8**
	SNR=90						
GHIR	**Ghir-Karzin**	**2.87**	**303**	*e*PN	**Pn**	**11 08 15.4**	**+1.6**
GHIR				*e*Sg	**Sn**	**11 08 56.5**	**+8.7**
GHIR				AML	AML	11 09 23.9	
	comp=N,136nm,0.5s						
KRBR	**Kerman**	**3.34**	**16**	*e*PN	**Pn**	**11 08 22.1**	**+1.7**
AAK	**Ala-Archa**	**22.03**	**39**	*e*P	**P**	**11 12 24.5**	**+1.6**
	comp=N,6.0nm,1.0s,mb4.0						
AAK	**Ala-Archa**	**22.03**	**39**	*e*P	**P**	**11 12 24.5**	**+1.6**
	comp=N,6.0nm,1.0s,mb4.0						
BRTR	**Keskin Array B**	**22.48**	**311**	P	**P**	**11 12 27.2**	**0.0**
	comp=N,0.3nm,0.4s,mb3.0,baz=84,slow=13,SNR=3.5						
BRTR	**Keskin Array B**	**22.48**	**311**	P	**P**	**11 12 27.2**	**-0.1**
AKTO	**Aktyubinsk**	**23.71**	**4**	P	**P**	**11 12 38.3**	**-0.8**
	comp=N,1.2nm,0.6s,mb3.5,baz=176,slow=10,SNR=4.6						
BVAR	**Borovoye Array**	**28.43**	**19**	P	**P**	**11 13 22.2**	**-1.0**
	comp=N,1.3nm,0.6s,mb3.8,baz=204,slow=8.6,SNR=11						
MKAR	**Makanchi Array**	**28.97**	**39**	P	**P**	**11 13 27.2**	**-0.9**
	comp=N,0.6nm,0.8s,mb3.4,baz=217,slow=6.1,SNR=6.3						
CHKZ	**Chkalovo**	**29.07**	**18**	*e*P	**P**	**11 13 27.1**	**-1.8**
	comp=N,0.5nm,0.6s,mb3.4						
CHKZ	**Chkalovo**	**29.07**	**18**	*e*P	**P**	**11 13 27.1**	**-1.8**
	comp=N,0.5nm,0.6s,mb3.4						
AKASG	**Malin Array Be**	**31.30**	**327**	P	**P**	**11 13 46.7**	**-2.0**
	comp=N,0.6nm,0.5s,mb3.7,baz=135,slow=8.5,SNR=5.6						
AKASG	**Malin Array Be**	**31.30**	**327**	P	**P**	**11 13 46.7**	**-2.0**
FINES	**FINESS Array B**	**39.99**	**338**	P	**P**	**11 15 02.8**	**+0.2**
	comp=N,2.6nm,0.9s,mb4.0,baz=135,slow=12,SNR=11						
SONM	**Songino Array**	**44.54**	**48**	P	**P**	**11 15 41.5**	**+1.6**
	comp=N,1.2nm,0.9s,mb3.7,baz=256,slow=8.0,SNR=10						
NOA	**NORSAR Array B**	**45.45**	**331**	P	**P**	**11 15 46.0**	**-0.9**
	comp=N,0.3nm,0.5s,mb3.4,baz=124,slow=6.4,SNR=2.3						
ARCES	**ARCESS Array B**	**46.30**	**346**	P	**P**	**11 15 53.8**	**+0.3**
	comp=N,1.4nm,0.7s,mb4.0,baz=135,slow=8.9,SNR=3.3						
BOSA	**Boshof**	**62.34**	**210**	P	**P**	**11 17 51.0**	**-0.4**
	comp=N,3.0nm,0.6s,mb4.6,baz=13,slow=8.4,SNR=12						
ILAR	**Eielson Array**	**87.08**	**9**	P	**P**	**11 20 14.6**	**+1.8**
	comp=N,0.4nm,0.7s,mb3.8,baz=26,slow=1.9,SNR=5.3						

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*BJI **27** 11:13:07.0, 26.70N×55.80E, h10^{km}, mB5.5, mb5.0, Ms5.0, Msz4.8*

*IDC **27** 11:13:08.6±0.4, 26.83N×55.88E, mb4.9/26, mb1 5.0/27, mb1mx5.0/28, mbtmp4.9/27, ML4.0/1, MS4.3/3, Ms1 4.3/3, ms1mx3.8/29, Error ellipse: s-maj=14.1km s-min=11.5km az=108.0*

*CRAAG **27** 11:13:10.1, 26.82N×55.90E, Mb5.3*

*HRVD **27** 11:13:10.1±0.9, 26.70N×55.59E, h15^{km}±2^{km}, MW5.0/45, Centroid moment Tensor Solution. LP body waves: s11,c13;Mantle waves: s45,c77; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.85±.38; $M_{\theta\theta}$-3.10±.26; $M_{\phi\phi}$0.25±.23; $M_{r\theta}$-0.09±.43; $M_{\theta\phi}$0.51±.14; $M_{\phi r}$-1.87±.67; Best double couple: $M_0$3.512×10^{16} NP1:ϕ_s254°,δ49°,λ52°. NP2:ϕ_s124°,δ53°,λ126°. Principal axes: T 3.842, Plg62°, Azm96°; N -.659, Plg28°, Azm281°; P -3.182, Plg2°, Azm190°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **27** 11:13:10.1±0.2, 26.72N×55.79E, h10^{km}, mb5.2/133, MN4.8(TEH) Error ellipse: s-maj=4.5km s-min=3.2km az=200.0*

*THR **27** 11:13:11.6±0.8, 26.84N×55.82E, h15^{km}±10^{km}, ML4.5*

*CSEM **27** 11:13:11.4±0.1, 26.65N×55.75E, h35^{km}, mb5.3/60, Error ellipse: s-maj=2.8km s-min=1.9km az=86.0*

*MOS **27** 11:13:12.1±0.8, 26.83N×55.77E, h33^{km}, mb5.4/84, Error ellipse: s-maj=6.7km s-min=2.8km az=130.1*

*TEH **27** 11:13:13.3, 26.72N×55.76E, h10^{km}, Mn4.8*

ISC 27 11:13:10.6±0.5**, 26.74N**±0.02×**55.78E**±0.02**, h25**^{km}±4^{km}**, h25**^{km}±4.6^{km}**:pP-P, n677, σ1§03**/676**, mb5.1**/189**, MS4.5**/9**, 123C-27D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.74**	**28**	*e*Pg	**Pb**	**11 13 24.2**	**-0.6**
BNDS				*e*Sg	**Sb**	**11 13 33.1**	**-1.4**
BNDS				AML	AML	11 13 44.2	
	comp=N,15µm,0.4s						
BANOM	**Banah**	**0.94**	**150**	⇑P	**Pb**	**11 13 28.7**	**+0.5**
BANOM				⇑S	**Sb**	**11 13 44.4**	**+4.1**
ASHO	**Ashiyiah**	**2.07**	**173**	⇑P	**Pn**	**11 13 44.4**	**-0.1**
GHIR	**Ghir-Karzin**	**2.92**	**302**	*e*Pn	**Pn**	**11 13 59.3**	**+2.7**
GHIR				Sn	**Sn**	**11 14 34.1**	**+2.9**
GHIR				AML	AML	11 15 08.4	
	comp=N,3µm,0.8s						
KRBR	**Kerman**	**3.34**	**15**	*e*Pn	**Pn**	**11 14 04.7**	**+2.1**
KRBR				AML	AML	11 15 10.5	
	comp=N,1µm,0.7s						
HOQ	**Hoqain**	**3.44**	**156**	⇑P	**Pn**	**11 14 03.1**	**-0.9**
ARQ	**Araqi**	**3.46**	**169**	⇓P	**Pn**	**11 14 06.1**	**+1.8**
ISRV	**Sarvestan**	**3.53**	**319**	Pn	**Pn**	**11 14 07.8**	**+2.5**
IMOK	**Mook**	**3.55**	**311**	Pn	**Pn**	**11 14 07.3**	**+1.7**
BIDO	**Bidbid**	**3.85**	**146**	⇑P	**Pn**	**11 14 09.5**	**-0.4**
IPAR	**Pars**	**3.91**	**323**	Pn	**Pn**	**11 14 13.1**	**+2.3**
BSY	**Bisya**	**4.19**	**162**	⇑P	**Pn**	**11 14 16.3**	**+1.6**
SMDO	**Samad**	**4.21**	**150**	⇑P	**Pn**	**11 14 16.2**	**+1.2**
IMEH	**Mehriz**	**4.74**	**348**	Pn	**Pn**	**11 14 24.1**	**+1.6**
IBAF	**Bafgh**	**4.83**	**358**	Pn	**Pn**	**11 14 24.2**	**+0.4**
JMDO	**Jabal Madar**	**4.84**	**154**	⇑P	**Pn**	**11 14 24.9**	**+1.0**
JMDO				⇓S	**Sn**	**11 15 21.4**	**+1.4**
WBK	**Wadi Bani Khal**	**5.04**	**144**	⇓P	**Pn**	**11 14 26.8**	**+0.1**
WBK				⇑S	**Sn**	**11 15 23.0**	**-1.8**
ZHSF	**Zahedan**	**5.25**	**56**	*e*Pn	**Pn**	**11 14 30.5**	**+0.7**
ISAD	**Sadrabad**	**5.46**	**341**	Pn	**Pn**	**11 14 34.4**	**+1.7**
ICHK	**Chekchek**	**5.61**	**348**	Pn	**Pn**	**11 14 35.4**	**+0.6**
HASS	**Wahat al Ahsa'**	**5.69**	**256**	P	**Pn**	**11 14 33.5**	**-2.4**
IGAR	**Garneh**	**6.31**	**331**	Pn	**Pn**	**11 14 46.1**	**+1.5**
NASN	**Na'in**	**6.56**	**338**	*e*Pn	**Pn**	**11 14 48.8**	**+0.5**
IZEF	**Zefreh**	**6.82**	**335**	Pn	**Pn**	**11 14 50.7**	**-1.2**
QRN	**Al-Qurain**	**7.24**	**288**	*e*P	**Pn**	**11 14 56.4**	**-1.4**
QRN				AML	AML	11 16 17.3	
	comp=Z,166nm,0.3s						
IPIR	**Pirpir**	**7.29**	**326**	Pn	**Pn**	**11 14 56.3**	**-2.1**
IKLH	**Kalahroud**	**7.49**	**332**	Pn	**Pn**	**11 14 59.6**	**-1.7**
KBD	**Kabd**	**7.55**	**291**	*e*P	**Pn**	**11 15 00.8**	**-1.2**
KBD				AML	AML	11 16 25.3	
	comp=Z,320nm,0.3s						
RDF	**Al-Radifah**	**7.60**	**288**	*e*P	**Pn**	**11 15 01.2**	**-1.6**
RDF				AML	AML	11 16 28.1	
	comp=Z,165nm,0.3s						
UMR	**Umm Al-Rimmam**	**7.65**	**293**	*e*P	**Pn**	**11 15 02.3**	**-1.1**
UMR				AML	AML	11 16 25.9	
	comp=Z,94nm,0.3s						
NAY	**Al-Naaiem**	**7.95**	**290**	*e*P	**Pn**	**11 15 06.4**	**-1.2**
MIB	**Mutribah**	**8.04**	**294**	*e*P	**P**	**11 15 08.1**	**-0.8**
MIB				AML	AML	11 16 36.4	
	comp=Z,170nm,0.4s						
ISFB	**Sefidab**	**8.18**	**339**	Pn	**P**	**11 15 11.0**	**+0.2**
ISFB				Sn	**Sn**	**11 16 38.8**	**-4.5**
SHAO	**Shalim**	**8.68**	**181**	⇓S	**Sn**	**11 16 51.2**	**-4.7**
WHFO	**Wadi Hawf**	**8.98**	**192**	⇑P	**P**	**11 15 20.3**	**-1.6**
ASAO	**Ashtian**	**9.22**	**329**	*e*Pn	**P**	**11 15 25.1**	**-0.1**
IFIR	**Firoozkooh**	**9.24**	**344**	Pn	**P**	**11 15 25.4**	**-0.1**
RBK	**Rabkut**	**9.31**	**189**	⇓P	**P**	**11 15 25.0**	**-1.5**
IDMV	**Damavand**	**9.37**	**341**	Pn	**P**	**11 15 27.3**	**0.0**
IDMV				Sn	**Sn**	**11 17 06.7**	**-6.3**
ABTO	**Aybut**	**9.62**	**194**	⇑P	**P**	**11 15 28.4**	**-2.5**
IAFJ	**Afjeh**	**9.72**	**340**	Pn	**P**	**11 15 32.7**	**+0.5**
IAFJ				Sn	**Sn**	**11 17 14.9**	**-6.8**
IMOG	**Moghan**	**9.82**	**17**	Pn	**P**	**11 15 34.2**	**+0.7**
MZLS	**Mizel**	**9.93**	**257**	P	**P**	**11 15 32.4**	**-2.8**
IRAZ	**Razeghan**	**9.98**	**331**	Pn	**P**	**11 15 45.7**	**+10**
IPAY	**Payeh**	**10.06**	**15**	Pn	**P**	**11 15 36.9**	**+0.1**
IMYA	**Miamay**	**10.25**	**20**	Pn	**P**	**11 15 36.9**	**-2.6**
BHD	**Baghdad**	**11.82**	**306**	*e*x	x	11 15 59.0	
BHD				*e*x	x	11 18 08.5	
AFFS	**'Afif**	**11.89**	**259**	P	**P**	**11 15 59.4**	**-2.4**
KAMS	**Al Khamasin**	**12.10**	**240**	P	**P**	**11 16 00.5**	**-4.1**
HILS	**Ha'il**	**12.48**	**276**	P	**P**	**11 16 07.8**	**-1.9**
BHJ	**Bhuj**	**13.05**	**102**	*e*P	**P**	**11 16 14.3**	**-3.0**
BHJ				AMb	AMB	11 16 20.0	
	comp=Z,76nm,0.7s						
MSL	**Mosul**	**14.40**	**314**	*e*x	x	11 16 34.5	
MSL				*e*x	x	11 19 06.5	
DJNS	**Zahran al Janu**	**14.45**	**234**	P	**P**	**11 16 32.0**	**-3.9**
BLJS	**Baljurashi**	**14.70**	**245**	P	**P**	**11 16 35.8**	**-3.3**
HAKT	**HAKKARI**	**14.84**	**320**	*i* P	**P**	**11 16 36.3**	**-4.5**
KBRS	**Khaybar**	**14.85**	**270**	P	**P**	**11 16 40.2**	**-0.8**
TVAN	**Van**	**15.69**	**322**	*i* P	**P**	**11 16 50.8**	**-0.9**
VANB	**Van**	**15.74**	**322**	*e*P	**P**	**11 16 51.2**	**-1.3**
CLDR	**Caldiran**	**15.85**	**324**	*e*P	**P**	**11 16 55.1**	**+1.1**
CLDR	**Caldiran**	**15.85**	**324**	P	**P**	**11 16 55.0**	**+1.1**
GNI	**Garni**	**16.21**	**328**	*e*P	**P**	**11 16 58.4**	**-0.1**
GNI	**Garni**	**16.21**	**328**	*e*P	**P**	**11 16 60.0**	**+1.5**
	comp=Z,60nm,0.7s						
GNI	**Garni**	**16.21**	**328**	*e*P	**P**	**11 17 00.0**	**+1.5**
GNI				pmax	pmax		
	comp=Z,60nm,0.7s						
GNI	**Garni**	**16.21**	**328**	*e*P	**P**	**11 17 00.0**	**+1.5**
	comp=Z,60nm,0.7s						
YNBS	**Yanbu' al Bahr**	**16.23**	**265**	P	**P**	**11 16 59.7**	**+0.9**
MARD	**Mardin**	**16.50**	**313**	*i* P	**P**	**11 16 57.6**	**-4.5**
BTMT	**Batman**	**16.58**	**317**	*e*P	**P**	**11 16 59.5**	**-3.7**
UMJS	**Umm Lajj**	**16.67**	**269**	P	**P**	**11 17 05.6**	**+1.2**
AJM	**Ajmer**	**16.88**	**87**	*e*P	**P**	**11 17 05.0**	**-1.9**
AJM				AMb	AMB	11 17 14.4	
	comp=Z,68nm,1.2s						
TBKS	**Tabuk**	**17.13**	**279**	P	**P**	**11 17 10.7**	**+0.5**
BOM	**Bombay**	**17.53**	**113**	*e*P	**P**	**11 17 17.3**	**+2.2**
DBAS	**Duba**	**17.66**	**276**	P	**P**	**11 17 17.0**	**+0.3**
ERZM	**Erzurum**	**17.78**	**321**	*i* P	**P**	**11 17 19.2**	**+1.0**
EZM	**Erzurum**	**17.78**	**321**	*e*P	**P**	**11 17 20.4**	**+2.2**
EZM	**Erzurum**	**17.78**	**321**	P	**P**	**11 17 20.4**	**+2.2**
KHET	**Khetri**	**17.84**	**81**	*e*P	**P**	**11 17 18.0**	**-1.0**
KHET				AMb	AMB	11 17 25.0	
	comp=Z,43nm,1.2s						
URFA	**Urfa**	**17.86**	**311**	*e*P	**P**	**11 17 16.0**	**-3.3**
MKRJ	**Makawir**	**18.22**	**290**	P	**P**	**11 17 23.3**	**-0.5**
AYUS	**'Aynunah**	**18.26**	**279**	P	**P**	**11 17 24.9**	**+0.7**
FKH	**Fakeheh**	**18.27**	**299**	*e*Pn	**P**	**11 17 23.4**	**-1.0**
PTK	**Pertek**	**18.31**	**316**	*e*P	**P**	**11 17 23.2**	**-1.6**
PTK	**Pertek**	**18.31**	**316**	P	**P**	**11 17 23.1**	**-1.7**
ELZG	**Elazig**	**18.34**	**314**	*i* P	**P**	**11 17 24.4**	**-0.7**
BDAS	**Al Bad'**	**18.41**	**280**	P	**P**	**11 17 26.6**	**+0.6**
JMOS	**Jabal al Moall**	**18.42**	**282**	P	**P**	**11 17 26.6**	**+0.5**
KUDL	**Kundal**	**18.44**	**81**	*e*P	**P**	**11 17 25.7**	**-0.8**
KUDL				AMb	AMB	11 17 31.7	
	comp=Z,51nm,1.2s						
ALWS	**Ilw as Safayha**	**18.46**	**283**	P	**P**	**11 17 27.3**	**+0.6**
ZFRI	**Zfri**	**18.47**	**287**	P	**P**	**11 17 28.5**	**+1.7**
AQBJ	**Aqaba**	**18.50**	**284**	P	**P**	**11 17 27.3**	**+0.1**
POO	**Poona**	**18.56**	**112**	*e*P	**P**	**11 17 27.0**	**-1.0**
POO				AMb	AMB	11 17 40.1	
	comp=Z,49nm,1.1s						
HAQS	**Haql**	**18.57**	**282**	P	**P**	**11 17 28.7**	**+0.6**
MMLI	**Mount Malkishu**	**18.58**	**293**	P	**P**	**11 17 28.6**	**+0.5**
EIL	**Elat**	**18.58**	**284**	P	**P**	**11 17 28.4**	**+0.2**
PRNI	**Paran**	**18.60**	**286**	P	**P**	**11 17 29.0**	**+0.6**
MYA	**Malataya**	**18.60**	**313**	*e*P	**P**	**11 17 29.6**	**+1.2**
MBH	**Mount Berech**	**18.62**	**284**	P	**P**	**11 17 29.0**	**+0.3**
BHK	**Bhakra**	**18.62**	**71**	*e*x	x	11 17 33.4	
HWQ	**Hawqa**	**18.65**	**299**	*e*Pn	**P**	**11 17 30.8**	**+1.9**
GZT	**Gaziantep**	**18.68**	**309**	*i* P	**P**	**11 17 27.6**	**-1.8**
BHL	**Bhannes**	**18.76**	**297**	*e*Pn	**P**	**11 17 30.2**	**-0.1**
GAZ	**Gaziantep**	**18.84**	**308**	*e*P	**P**	**11 17 30.4**	**-0.8**
MATL	**Matirih**	**18.91**	**296**	*e*Pn	**P**	**11 17 33.4**	**+1.4**
OFRI	**'Ofer**	**18.98**	**293**	P	**P**	**11 17 33.6**	**+0.7**
AYAN	**Aya Nagar**	**19.00**	**80**	*e*P	**P**	**11 17 33.1**	**0.0**
AYAN				AMb	AMB	11 17 37.7	
	comp=Z,59nm,1.0s						
NDI	**New Delhi**	**19.08**	**79**	*e*P	**P**	**11 17 33.5**	**-0.6**
KZIT	**Kziot**	**19.18**	**288**	P	**P**	**11 17 36.0**	**+0.7**
GUMT	**Gumushane**	**19.23**	**319**	*e*P	**P**	**11 17 35.6**	**-0.2**
GUMT	**Gumushane**	**19.23**	**319**	P	**P**	**11 17 35.5**	**-0.3**
COBT	**Iskenderun**	**19.24**	**305**	*i* P	**P**	**11 17 35.6**	**-0.4**
ATD	**Arta Tunnel**	**19.42**	**221**	P	**P**	**11 17 38.7**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=22,slow=11,SNR=14						
ATD				LR	LR	11 26 06.4	
	comp=Z,601nm,19.5s,baz=28,slow=40						
ATD	**Arta Tunnel**	**19.42**	**221**	P	**P**	**11 17 38.7**	**+0.5**
ATD				LR	LR	11 26 06.4	
AGRA	**Agra**	**19.76**	**84**	*e*P	**P**	**11 17 40.0**	**-2.0**
AGRA				AMb	AMB	11 17 40.6	
	comp=Z,38nm,0.2s						
CEYT	**Ceyhan**	**19.82**	**306**	*e*P	**P**	**11 17 43.8**	**+1.4**
DDI	**Dehra Dun**	**19.89**	**74**	*e*P	**P**	**11 17 44.3**	**+1.0**
BHPL	**Bhopal**	**19.93**	**95**	*e*P	**P**	**11 17 41.3**	**-2.5**
KOZT	**Kozan**	**19.96**	**307**	*e*P	**P**	**11 17 44.7**	**+0.7**
KIV	**Kislovodsk**	**20.18**	**332**	⇑*e*P	**P**	**11 17 46.6**	**+0.5**
	comp=Z,272nm,0.7s						
KIV	**Kislovodsk**	**20.18**	**332**	*c i*P	**P**	**11 17 46.9**	**+0.7**
KIV				*e*		11 18 03.7	
KIV				*e*S	**S**	**11 21 31.9**	**+5.8**
KIV				pmax	pmax		
	comp=Z,271nm,0.7s						
KIV	**Kislovodsk**	**20.18**	**332**	⇑*e*P	**P**	**11 17 46.6**	**+0.4**
	comp=Z,272nm,0.7s						
GRSN	**GIRESUNGRSN**	**20.23**	**319**	*i* P	**P**	**11 17 45.9**	**-0.9**
KARA	**Karaisali**	**20.42**	**306**	*e*P	**P**	**11 17 51.0**	**+2.2**
BNN	**Bunyan**	**20.60**	**311**	*e*P	**P**	**11 17 51.7**	**+1.1**
BNN	**Bunyan**	**20.60**	**311**	P	**P**	**11 17 51.6**	**+1.0**
MERS	**Mersin**	**20.65**	**304**	*e*P	**P**	**11 17 51.9**	**+0.8**
CSS	**Prodhromos**	**20.91**	**299**	*e*P	**P**	**11 17 53.5**	**-0.3**
	comp=Z,90nm,0.8s						
CSS	**Prodhromos**	**20.91**	**299**	*e*P	**P**	**11 17 53.5**	**-0.3**
	comp=Z,90nm,0.8s						
GOF	**Gofitskoye**	**20.94**	**334**	⇑*i*P	**P**	**11 17 53.9**	**-0.2**
GOF				*e*S	**S**	**11 21 46.9**	**+5.5**
GOF				pmax	pmax		
	comp=Z,489nm,0.8s						
GOF				smax			
	comp=N,37nm,0.9s						
GOF	**Gofitskoye**	**20.94**	**334**	*i* P	**P**	**11 17 53.9**	**-0.2**
	comp=N,489nm,0.8s						
KSH	**Kashi**	**21.11**	**48**	*e*P	**P**	**11 17 51.5**	**-4.4**
AML	**Almayashu**	**21.24**	**39**	P	**P**	**11 17 56.1**	**-1.0**
	SNR=20						
AVNT	**Avonos**	**21.24**	**310**	*i* P	**P**	**11 17 58.2**	**+1.0**
SOC	**Sochi**	**21.26**	**326**	*d i*P	**P**	**11 17 57.4**	**+0.1**
SOC				*e*		11 18 18.7	
SOC				*e*S	**S**	**11 21 54.3**	**+7.0**
SOC				pmax	pmax		
	comp=Z,49nm,0.6s,mb5.0						
SOC				MLR	MLR		
	comp=Z,911nm,21.0s,MS4.1						
SOC	**Sochi**	**21.26**	**326**	*i* P	**P**	**11 17 57.4**	**+0.1**
	comp=Z,49nm,0.6s,mb5.0						
EKS2	**Erkin-Say**	**21.64**	**38**	P	**P**	**11 18 01.4**	**+0.3**
	SNR=39						
ERMK	**Ermenek**	**21.77**	**303**	*i* P	**P**	**11 18 02.4**	**0.0**
UCH	**Uchtor**	**21.77**	**40**	P	**P**	**11 18 02.7**	**+0.3**
	SNR=11						
CDAG	**Cicekdag**	**21.98**	**311**	*i* P	**P**	**11 18 04.1**	**-0.4**
AAK	**Ala-Archa**	**22.02**	**39**	P	**P**	**11 18 05.5**	**+0.5**
	SNR=12						
AAK	**Ala-Archa**	**22.02**	**39**	*e*P	**P**	**11 18 03.9**	**-1.0**
	comp=Z,63nm,1.3s,mb4.9						
AAK	**Ala-Archa**	**22.02**	**39**	*c i*P	**P**	**11 18 04.3**	**-0.6**
AAK				pmax	pmax		
	comp=Z,23nm,1.4s,mb4.4						
AAK	**Ala-Archa**	**22.02**	**39**	*i* P	**P**	**11 18 04.3**	**-0.6**
	comp=Z,23nm,1.4s,mb4.4						
CORM	**Corum**	**22.08**	**313**	*e*P	**P**	**11 18 05.5**	**-0.1**
KZA	**Kyzart**	**22.11**	**41**	P	**P**	**11 18 07.5**	**+1.7**
	SNR=18						
FRU	**Bishkek**	**22.21**	**39**	*e*P	**P**	**11 18 11.0**	**+4.1**
FRU				*e*		11 18 25.0	
FRU				pmax	pmax		
	comp=Z,80nm,1.8s,mb4.8						
KBK	**Karagaybulak**	**22.29**	**40**	P	**P**	**11 18 08.6**	**+0.9**
	SNR=21						
KAMT	**Kaman**	**22.30**	**310**	*e*P	**P**	**11 18 09.5**	**+1.7**
KAMT	**Kaman**	**22.30**	**310**	P	**P**	**11 18 09.4**	**+1.6**
CHMS	**Chumysh**	**22.40**	**39**	P	**P**	**11 18 11.7**	**+3.0**
	SNR=8.4						
USP	**Ospenovka**	**22.43**	**38**	P	**P**	**11 18 12.3**	**+3.2**
	SNR=15						
BR131	**Keskin Array S**	**22.52**	**311**	*e*P	**P**	**11 18 10.6**	**+0.6**
	comp=Z,24nm,0.8s,mb4.7						
BRTR	**Keskin Array B**	**22.52**	**311**	P	**P**	**11 18 10.7**	**+0.7**
	comp=Z,29nm,0.8s,mb4.8,baz=129,slow=12,SNR=130						
BRTR				PcP	PcP	11 22 04.5	0.0
	comp=Z,2.9nm,0.7s,baz=150,slow=5.2,SNR=4.2						
BRTR				ScP		11 25 41.5	
	comp=Z,0.9nm,0.8s,baz=117,slow=3.2,SNR=4.2						
BRTR	**Keskin Array B**	**22.52**	**311**	P	**P**	**11 18 10.6**	**+0.6**
BOYT	**Boyabat**	**22.57**	**316**	*i* P	**P**	**11 18 10.6**	**+0.1**
ULHL	**Ulahol**	**22.80**	**42**	P	**P**	**11 18 14.1**	**+1.5**
	SNR=16						
TKM2	**Tokmak 2**	**22.83**	**40**	P	**P**	**11 18 13.4**	**+0.5**
	SNR=8.8						
CANT	**Cankiri**	**22.96**	**313**	*e*P	**P**	**11 18 14.8**	**+0.5**
CANT	**Cankiri**	**22.96**	**313**	P	**P**	**11 18 14.7**	**+0.4**
HYB	**Hyderabad**	**23.02**	**109**	*i* P	**P**	**11 18 16.0**	**+0.9**
HYB	**Hyderabad**	**23.02**	**109**	*e*P	**P**	**11 18 16.0**	**+0.9**
ELDT	**Eldivan**	**23.03**	**312**	*i* P	**P**	**11 18 15.3**	**+0.3**
ANTO	**Ankara**	**23.16**	**310**	*e*P	**P**	**11 18 13.7**	**-2.5**
ANTO	**Ankara**	**23.16**	**310**	⇑P	**P**	**11 18 18.6**	**+2.4**
ANTO	**Ankara**	**23.16**	**310**	⇑P	**P**	**11 18 18.6**	**+2.4**
ANN	**Anapa**	**23.28**	**325**	*c i*P	**P**	**11 18 17.5**	**+0.2**
ANN				*i*		11 18 22.2	
ANN				*e*S	**S**	**11 22 28.2**	**+4.1**
ANN				pmax	pmax		
	comp=Z,45nm,1.1s,mb4.8						
ANN				MLR	MLR		
	comp=Z,380nm,13.0s,MS4.0						
ANN	**Anapa**	**23.28**	**325**	*i* P	**P**	**11 18 17.5**	**+0.2**
	comp=Z,45nm,1.1s,mb4.8						
KIZT	**Kizilcal**	**23.37**	**307**	*e*P	**P**	**11 18 20.7**	**+2.5**
BALT	**Daday**	**23.59**	**314**	*i* P	**P**	**11 18 20.6**	**+0.3**
AKTO	**Aktyubinsk**	**23.72**	**4**	P	**P**	**11 18 22.0**	**+0.5**
	comp=Z,14nm,0.6s,mb4.6,baz=182,slow=9.4,SNR=56						
AKTO				LR	LR	11 29 34.9	
	comp=Z,1µm,18.3s,MS4.5,slow=42						
SAFT	**Safranbolu**	**23.89**	**313**	*e*P	**P**	**11 18 26.0**	**+2.7**
ISP	**Isparta**	**23.98**	**304**	*e*P	**P**	**11 18 26.6**	**+2.4**
ISP	**Isparta**	**23.98**	**304**	*e*P	**P**	**11 18 25.6**	**+1.4**
	comp=Z,61nm,0.7s,mb5.1						
ISP	**Isparta**	**23.98**	**304**	*c i*P	**P**	**11 18 25.7**	**+1.5**
SGKT	**Sivrigoynuk**	**23.99**	**311**	*i* P	**P**	**11 18 25.2**	**+1.0**
ELL	**Elmali**	**24.09**	**301**	*e*P	**P**	**11 18 27.8**	**+2.5**
TKTP	**Tekketepe**	**24.19**	**304**	*i* P	**P**	**11 18 26.5**	**+0.3**
ESKT	**Eskisehir**	**24.36**	**308**	*e*P	**P**	**11 18 23.0**	**-4.9**
ESKT	**Eskisehir**	**24.36**	**308**	*i* P	**P**	**11 18 28.2**	**+0.3**
MDU	**Mudurnu**	**24.51**	**310**	*e*P	**P**	**11 18 31.1**	**+1.8**
KOLN	**Koldanda**	**24.74**	**81**	*e*P	**P**	**11 18 32.9**	**+1.3**
	comp=Z,77nm,1.1s,mb5.2						
HENT	**Hendek**	**24.89**	**311**	*i* P	**P**	**11 18 32.9**	**0.0**
SIM	**Simferopol'**	**25.14**	**322**	*d i*P	**P**	**11 18 37.2**	**+2.0**
SIM				*e*S	**S**	**11 22 54.0**	**-1.8**
YER	**Yerkesik**	**25.45**	**301**	*e*P	**P**	**11 18 37.5**	**-0.8**
YER	**Yerkesik**	**25.45**	**301**	P	**P**	**11 18 37.4**	**-0.9**
GKN	**Gorkha**	**25.64**	**81**	*e*P	**P**	**11 18 40.6**	**+0.5**
HRT	**Hereke**	**25.73**	**310**	*e*P	**P**	**11 18 38.5**	**-2.4**
HRT	**Hereke**	**25.73**	**310**	P	**P**	**11 18 41.1**	**+0.3**
ULDT	**Uludag**	**25.82**	**308**	*i* P	**P**	**11 18 41.9**	**+0.2**
DMN	**Daman**	**26.08**	**81**	*e*P	**P**	**11 18 44.8**	**+0.5**
KKN	**Kakani**	**26.22**	**81**	*e*P	**P**	**11 18 46.0**	**+0.5**
	comp=Z,56nm,1.0s,mb5.0						
KKN	**Kakani**	**26.22**	**81**	*e*P	**P**	**11 18 46.0**	**+0.5**
KKN				pmax	pmax		
	comp=Z,28nm,1.0s,mb4.8						
AKS	**Akhisar**	**26.33**	**304**	*e*P	**P**	**11 18 47.6**	**+1.2**
PKI	**Pulchoki**	**26.35**	**81**	*e*P	**P**	**11 18 47.6**	**+0.8**
	comp=Z,71nm,1.2s,mb5.1						
PKI	**Pulchoki**	**26.35**	**81**	*e*P	**P**	**11 18 47.6**	**+0.8**
PKI				pmax	pmax		
	comp=Z,35nm,1.2s,mb4.8						
BTOK	**Tokmak**	**26.47**	**306**	*i* P	**P**	**11 18 48.1**	**+0.4**
KDAG	**Bornova**	**26.58**	**303**	*i* P	**P**	**11 18 48.8**	**+0.1**
VRHR	**Novokhopersk**	**26.60**	**340**	*e*P	**P**	**11 18 48.5**	**-0.3**
VRHR				pmax	pmax		
	comp=Z,60nm,0.5s,mb5.4						
VRHR				pmax	pmax		
	comp=N,20nm,0.6s						
VRHR				pmax	pmax		
	comp=E,30nm,0.6s						
GUN	**Gumba**	**26.74**	**81**	*e*P	**P**	**11 18 51.2**	**+0.9**
	comp=E,64nm,0.9s,mb5.1						
JIRN	**Jiri**	**27.04**	**81**	*e*P	**P**	**11 18 53.5**	**+0.5**
	comp=E,26nm,0.8s,mb4.8						
BOK	**Bokaro**	**27.36**	**89**	*e*P	**P**	**11 18 57.0**	**+1.1**
BOK				AMb	AMB	11 19 03.1	
	comp=Z,37nm,1.2s,mb4.8						
VRSR	**Storozhevoye**	**27.50**	**337**	*e*P	**P**	**11 18 56.1**	**-0.9**
VRSR				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
VRSR				pmax	pmax		
	comp=N,4.0nm,0.8s						
IDI	**Anoyia**	**27.72**	**295**	P	**P**	**11 19 00.1**	**+0.9**
	comp=N,54nm,0.7s,mb5.3,baz=100,slow=7.7,SNR=36						
TIRR	**Tirgusor**	**28.22**	**316**	⇑P	**P**	**11 19 03.0**	**-0.6**
BRVK	**Borovoye**	**28.43**	**19**	*e*P	**P**	**11 19 04.7**	**-0.7**
	comp=N,28nm,1.4s,mb4.7						

BRVK	Borovoye	28.43	19	eP	P	11 19 04.7	-0.7
BRVK				pmax	pmax		
	comp=Z,28nm,1.4s,mb4.7						
BVAR	Borovoye Array	28.43	19	P	P	11 19 04.6	-0.8
	comp=Z,8.4nm,0.6s,mb4.6,baz=202,slow=8.0,SNR=53						
BVAR				PcP	PcP	11 22 17.0	-0.5
	comp=Z,5.2nm,0.9s,baz=207,slow=6.6,SNR=4.5						
CFR	Carcaliu	28.75	317	⇑P	P	11 19 07.4	-0.9
CFR	Carcaliu	28.75	317	⇑P	P	11 19 07.5	-0.9
MKAR	Makanchi Array	28.95	39	P	P	11 19 09.4	-0.7
	comp=Z,3.9nm,0.7s,mb4.3,baz=225,slow=8.1,SNR=44						
MKAR				PcP	PcP	11 22 17.6	-1.3
	comp=Z,1.9nm,0.8s,baz=241,slow=3.5,SNR=4.2						
CHKZ	Chkalovo	29.07	18	eP	P	11 19 09.3	-1.8
	comp=Z,22nm,1.5s,mb4.7						
CHKZ	Chkalovo	29.07	18	eP	P	11 19 09.3	-1.8
CHKZ				pmax	pmax		
	comp=Z,22nm,1.5s,mb4.7						
RZN	Rozhen	29.50	308	iP	P	11 19 25.8	+11
KURK	Kurchatov	29.61	30	eP	P	11 19 15.1	-1.0
	comp=Z,5.2nm,0.8s,mb4.3						
KURK	Kurchatov	29.61	30	⇓eP	P	11 19 15.7	-0.3
ARU	Arti	29.73	3	⇓iP	P	11 19 16.7	-0.4
ARU				e		11 22 17.8	
ARU				eS	S	11 24 12.3	+2.0
ARU				eSS	SS	11 25 37.6	-8.0
ARU				eSSS	SSS	11 26 00.7	-5.6
ARU				e		11 29 47.5	
ARU				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
MMB	Musomiste	30.17	308	iP	P	11 19 21.3	+0.2
MLR	Muntele Rosu	30.25	316	P	P	11 19 22.2	+0.4
	comp=Z,34nm,0.8s,mb5.2,baz=3.4,slow=11,SNR=33						
MLR				PcP	PcP	11 22 21.6	-0.7
	comp=Z,3.2nm,0.7s,baz=141,slow=13,SNR=2.3						
MLR	Muntele Rosu	30.25	316	⇓P	P	11 19 22.6	+0.9
MLR	Muntele Rosu	30.25	316	⇓P	P	11 19 22.6	+0.8
SVE	Sverdlovsk	30.26	5	eP	P	11 19 31.0	+9.3
SVE				e		11 19 44.5	
SVE				e		11 20 26.6	
SVE				MLR	MLR		
	comp=E,500nm,14.0s						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s,MS4.7						
KKB	Krupnik	30.71	308	iP	P	11 19 26.0	+0.1
VOIR		30.79	315	⇓P	P	11 19 27.0	+0.5
VTS	Vitosha	30.87	309	iP	P	11 19 28.0	+0.7
WMQ	Urumqi	30.88	48	eP	P	11 19 28.0	+0.7
WMQ				AP	pP	11 19 32.3	-2.3
WMQ				XP	sP	11 19 35.0	-2.8
WMQ				PP	PP	11 20 29.0	-0.1
WMQ				S	S	11 24 30.0	+1.3
WMQ				XS		11 24 38.0	
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,250nm,3.9s						
WMQ				LR	LR		
	comp=N,980nm,20.2s,MS4.6						
WMQ				LR	LR		
	comp=E,670nm,17.5s,MS4.6						
WMQ				LR	LR		
	comp=Z,780nm,27.2s						
VAY	Valandovo	30.91	307	iP	P	11 19 27.0	-0.6
LSA	Lhasa	31.23	76	P	P	11 19 32.3	+1.7
LSA	Lhasa	31.23	76	eP	P	11 19 32.1	+1.5
	comp=Z,7.8nm,0.7s,mb4.7						
LSA	Lhasa	31.23	76	eP	P	11 19 32.1	+1.5
LSA				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.7						
AKASG	Malin Array Be	31.34	327	P	P	11 19 29.9	-1.4
	comp=Z,47nm,0.6s,mb5.5,baz=134,slow=8.3,SNR=292						
AKASG				PcP	PcP	11 22 23.8	-1.3
	comp=Z,3.8nm,0.7s,baz=100,slow=2.4,SNR=9.2						
OBN	Obninsk	31.62	339	iP	P	11 19 33.6	-0.1
OBN				e		11 22 24.9	
OBN				pmax	pmax		
	comp=Z,55nm,0.8s,mb5.4						
BIA	Bitola	31.72	306	iP	P	11 19 34.9	+0.1
BURAR	Bucovina Array	31.73	319	⇓P	P	11 19 35.1	+0.4
BURAR	Bucovina Array	31.73	319	⇓P	P	11 19 35.1	+0.4
MOS	Moscow	31.82	340	eP	P	11 19 35.9	+0.4
SKO	Skopje	31.91	307	iP	P	11 19 36.9	+0.4
OHR	Ohrid	32.13	305	iP	P	11 19 37.7	-0.6
SHL	Shillong	32.37	84	ex	x	11 19 40.0	
SOKR	Solikamsk	32.82	1	d iP	P	11 19 44.7	+0.6
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
DRGR		32.85	316	⇑P	P	11 19 44.0	-0.5
DRGR		32.85	316	⇑P	P	11 19 44.0	-0.5
KMBO	Kilima Mbogo	32.97	216	P	P	11 19 47.5	+1.7
	comp=Z,23nm,1.1s,mb5.0,baz=31,slow=12,SNR=24						
BZS	Buzias	33.05	314	⇑P	P	11 19 46.3	0.0
BZS	Buzias	33.05	314	⇑P	P	11 19 46.4	0.0
KOLS	Kolonicke sedl	34.09	319	iP	P	11 19 55.8	+0.6
KWP	Kalwaria	34.17	321	eP	P	11 19 55.9	-0.1
NVS	Novosibirsk	34.50	28	iP	P	11 19 57.7	-1.1
NVS				iS	S	11 25 24.9	0.0
NVS				pmax	pmax		
	comp=N,24nm,1.5s						
NVS				pmax	pmax		
	comp=Z,27nm,1.5s,mb5.0						
NVS				smax			
	comp=N,35nm,1.7s						
CRVS	Cervenica-Dubn	34.55	319	iP	P	11 19 59.3	+0.1
STHS	Stebnicka Huta	34.91	320	iP	P	11 20 02.0	-0.3
KECS	Kecovo	34.94	318	iP	P	11 20 03.0	+0.4
PSZ	Piszkesteto	35.06	317	⇑epP	pP	11 20 03.4	-7.5
NIE	Niedzica	35.45	319	eP	P	11 20 07.5	+0.6
RHK1	Bakonya	35.53	313	⇑iP	P	11 20 07.5	-0.2
CUC	Castrocucco	35.60	302	P	P	11 20 09.6	+1.3
SLCN	Sala Consilina	35.80	303	P	P	11 20 11.9	+1.9
KLMR	Klimovskoe	35.85	346	eP	P	11 20 08.8	-1.4
KLMR				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
VYHS	Vyhne	35.94	317	iP	P	11 20 11.0	-0.1
VYHS				eS	S	11 26 11.4	+24
SRO	Srobarova	36.00	316	iP	P	11 20 12.0	+0.4
LIKS	Likavka	36.01	318	iP	P	11 20 12.0	+0.4
OJC	Ojcow	36.11	320	eP	P	11 20 12.5	0.0
SUW	Suwalki	36.30	328	eP	P	11 20 13.4	-0.6
VAE	Valguarnera	36.38	298	P	P	11 20 16.6	+1.7
	comp=Z,88nm,0.9s,mb5.7,baz=329,slow=3.0,SNR=18						
VAE	Valguarnera	36.38	298	P	P	11 20 16.6	+1.7
JAVC	Velka Javorina	36.79	317	P	P	11 20 19.5	+1.3
KOGS	Kog	36.84	313	eP	P	11 20 18.9	+0.2
ZST	Bratislava	36.89	316	iP	P	11 20 19.0	-0.1
OKC	Ostrava-Krasne	36.90	319	eP	P	11 20 18.9	-0.2
SGG	Gregorio Mates	36.91	304	P	P	11 20 21.3	+2.0
RAC	Raciborz	36.98	319	eP	P	11 20 19.9	+0.1
CII	Carovilli	37.03	305	P	P	11 20 22.8	+2.5
SOP	Sopron	37.05	315	P	P	11 20 21.0	+0.6
BOJS	Bojanci	37.23	311	eP	P	11 20 22.3	+0.3
MORC	Moravsky Berou	37.23	318	⇑P	P	11 20 21.9	0.0
MORC	Moravsky Berou	37.23	318	eP	P	11 20 21.7	-0.2
ARSA	Arzberg	37.57	314	⇑iP	P	11 20 25.1	+0.3
	comp=Z,13nm,0.8s,mb4.7,SNR=12						
ARSA	Arzberg	37.57	314	P	P	11 20 24.5	-0.3
VISS	Visnje	37.59	311	eP	P	11 20 25.3	+0.4
VRAC	Vranov	37.62	317	⇑P	P	11 20 25.5	+0.4
VRAC	Vranov	37.62	317	eP	P	11 20 25.3	+0.1
PERS	Pernice	37.65	313	iP	P	11 20 25.4	0.0
VSU	Vasula	37.66	335	d iP	P	11 20 25.3	-0.1
PTQR	Pietraquaria	37.74	305	P	P	11 20 27.2	+0.9
AQU	L'Aquila	37.80	305	P	P	11 20 28.7	+1.9
	comp=Z,83nm,0.9s,mb5.5						
AQU	L'Aquila	37.80	305	P	P	11 20 28.7	+1.9
AQU				pmax	pmax		
	comp=Z,83nm,0.9s,mb5.5						
LJU	Ljubljana	37.87	312	eP	P	11 20 27.8	+0.5
FIAM	Fiamignano	38.00	305	P	P	11 20 30.6	+2.2
DPC	Dobruska-Polom	38.19	319	eP	P	11 20 29.7	-0.2
TREC	Trest	38.29	317	eP	P	11 20 31.2	+0.4
MNS	Montasola	38.34	305	P	P	11 20 32.0	+0.7
	comp=Z,34nm,0.7s,mb5.2						
MNS	Montasola	38.34	305	P	P	11 20 32.0	+0.7
MNS				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.2						
ARV	Arcevia	38.35	307	P	P	11 20 32.5	+1.1
	comp=Z,26nm,0.8s,mb5.0						
KSP	Ksiaz	38.40	320	eP	P	11 20 31.7	0.0
KSP	Ksiaz	38.40	320	eP	P	11 20 31.5	-0.2
UPC	Upice	38.43	319	eP	P	11 20 31.7	-0.3
MOA	Molln	38.57	314	⇓iP	P	11 20 33.0	-0.1
	comp=Z,39nm,0.8s,mb5.2,SNR=46						
MOA	Molln	38.57	314	P	P	11 20 32.4	-0.8
GTA	Gaotai	38.64	60	eP	P	11 20 34.5	+0.6
GTA				AP	pP	11 20 42.5	+1.2
GTA				XP	sP	11 20 46.5	+2.1
GTA				PP	PP	11 22 07.8	+1.6
GTA				PPP	PPP	11 22 31.3	+2.2
GTA				PCP	PcP	11 22 46.0	-0.3
GTA				S	S	11 26 31.8	+3.3
GTA				XS		11 26 38.8	
GTA				SS	SS	11 29 14.0	+3.6
GTA				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
GTA				AMB	AMB		
	comp=Z,2µm,7.2s						
GTA				LR	LR		
	comp=N,630nm,16.7s,MS4.6						
GTA				LR	LR		
	comp=E,480nm,17.1s,MS4.6						
GTA				LR	LR		
	comp=Z,890nm,15.2s,MS4.7						
PTCC	Patocco-Chiusa	38.75	312	P	P	11 20 35.0	+0.3
GMNA	Gemona	38.79	312	P	P	11 20 35.3	+0.2
CRE	Caprese Michel	39.08	307	P	P	11 20 38.3	+0.8
	comp=Z,2µm,4.4s						
CRE	Caprese Michel	39.08	307	P	P	11 20 38.3	+0.8
CRE				pmax	pmax		
	comp=Z,2µm,4.4s						
PRU	Pruhonice	39.11	318	eP	P	11 20 37.1	-0.6
SFI	Santa Sofia	39.21	308	P	P	11 20 40.4	+1.8
	comp=Z,136nm,0.8s,mb5.7						
SFI	Santa Sofia	39.21	308	P	P	11 20 40.4	+1.8
SFI				pmax	pmax		
	comp=Z,136nm,0.8s,mb5.7						
GEC2	GERESS Array S	39.24	316	eP	P	11 20 38.1	-0.7
	comp=Z,16nm,1.0s,mb4.7						
GEC2	GERESS Array S	39.24	316	eP	P	11 20 38.1	-0.7
GEC2				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
GERES	GERESS Array B	39.24	316	P	P	11 20 37.8	-1.0
	comp=Z,8.5nm,0.6s,mb4.7,baz=112,slow=7.5,SNR=78						
GERES				PcP	PcP	11 22 47.2	-0.9
	comp=Z,1.6nm,0.6s,baz=153,slow=3.0,SNR=4.5						
PVCC	Panska Ves	39.29	318	eP	P	11 20 38.8	-0.4
KHC	Kasperske Hory	39.41	316	eP	P	11 20 39.8	-0.4
VMG	Vicchio	39.44	308	P	P	11 20 42.1	+1.6
SEI	Scarperia	39.59	308	P	P	11 20 43.3	+1.6
SEST	Monte Rota	39.59	312	P	P	11 20 42.1	+0.4
JOF	Joensuu	39.60	343	ep	P	11 20 41.3	-0.3
	comp=Z,5.1nm,0.4s,mb4.6						
BRG	Berggiesshubel	39.79	319	iP	P	11 20 42.6	-0.7
	comp=Z,25nm,0.8s,mb5.0						
BRG	Berggiesshubel	39.79	319	iP	P	11 20 42.6	-0.7
BRG				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.0						
CTI	Castel Tesino	39.80	311	P	P	11 20 43.6	+0.1
WET	Wettzell	39.85	316	eP	P	11 20 42.8	-1.0
	comp=Z,20nm,0.7s,mb5.0						
WET	Wettzell	39.85	316	eP	P	11 20 42.8	-1.0
WET				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
BRES	Bressanone	39.90	312	P	P	11 20 44.6	+0.3
ZCCA	Zocca	39.91	308	P	P	11 20 46.7	+2.3
FINES	FINESS Array B	40.02	338	P	P	11 20 44.4	-0.8
	comp=Z,12nm,0.5s,mb4.9,baz=138,slow=10,SNR=141						
FINES				PcP	PcP	11 22 49.3	-1.2
	comp=Z,2.9nm,0.6s,baz=128,slow=3.3,SNR=7.3						
WTTA	Wattenberg	40.11	313	iP	P	11 20 45.8	-0.2
	comp=Z,102nm,0.7s,mb5.7,SNR=68						
WTTA	Wattenberg	40.11	313	P	P	11 20 44.9	-1.1
WATA	Walderalm	40.17	313	⇑iP	P	11 20 45.8	-0.6
	comp=Z,44nm,1.0s,mb5.2,SNR=46						
WATA	Walderalm	40.17	313	P	P	11 20 45.9	-0.5
GSCL	Gusciola	40.19	308	P	P	11 20 48.2	+1.6
APPI	Appiano	40.19	311	P	P	11 20 46.3	-0.3
ERBM	Eremo	40.32	308	P	P	11 20 49.5	+1.8
SQTA	Sankt Quirin	40.38	312	iP	P	11 20 47.8	-0.4
	comp=Z,42nm,0.7s,mb5.3,SNR=90						
BERN	Bernov	40.42	317	⇑P	P	11 20 53.6	+5.1
CHG	Chiang Mai	40.42	92	P	P	11 20 49.3	+0.5
	comp=Z,12nm,0.8s,mb4.7						
KAF	Kangasniemi	40.44	339	ep	P	11 20 48.1	-0.4
	comp=Z,2.1nm,0.2s,mb4.5,baz=135,slow=8.6						
KAF	Kangasniemi	40.44	339	eP	P	11 20 48.1	-0.4
KAF				pmax	pmax		
	comp=Z,2.0nm,0.2s,mb4.5						
NKC	Novy Kostel	40.46	317	eP	P	11 20 49.2	+0.4
VSL	Villasalto	40.47	300	eP	P	11 20 50.9	+1.9
	comp=Z,81nm,0.8s,mb5.5						
MOTA	Moosalm	40.48	313	⇑iP	P	11 20 48.2	-0.8
	comp=Z,40nm,0.8s,mb5.2,SNR=50						
MOTA	Moosalm	40.48	313	P	P	11 20 48.4	-0.6
RUE	Ruedersdorf	40.48	321	eP	P	11 20 49.1	+0.1
	comp=Z,38nm,0.6s,mb5.3						
CLL	Collm	40.50	319	⇑P	P	11 20 49.0	-0.1
	comp=Z,logA/T=1.6,mb5.1						
CLL				i *PP	pP	11 20 51.3	-5.2
CLL				i		11 21 01.7	
CLL				e		11 22 43.0	
CLL	Collm	40.50	319	⇑iP	P	11 20 49.0	-0.1
	comp=Z,31nm,0.8s,mb5.1						
CLL				i		11 20 51.3	
CLL				i		11 21 01.7	
CLL	Collm	40.50	319	⇑iP	P	11 20 49.0	-0.1
CLL				i		11 21 01.7	
CLL				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.1						
MABI	Malga Bissina	40.58	310	P	P	11 20 50.5	+0.7
GRAM		40.58	308	P	P	11 20 48.8	-1.0
GRAM		40.58	308	P	P	11 20 48.8	-1.1
FUR	Furstenfeldbru	40.58	314	eP	P	11 20 49.4	-0.4
	comp=Z,54nm,0.7s,mb5.3						
FUR	Furstenfeldbru	40.58	314	eP	P	11 20 49.4	-0.4
FUR				pmax	pmax		
	comp=Z,54nm,0.7s,mb5.3						
CODM		40.71	308	P	P	11 20 49.5	-1.5
CODM		40.71	308	P	P	11 20 49.5	-1.5
BRMO	Bormio	40.76	311	P	P	11 20 51.8	+0.5
BSD	Bornholm Skovb	40.98	325	⇓iP	P	11 20 51.8	-1.2
	comp=Z,157nm,0.7s,mb5.8						
BSD	Bornholm Skovb	40.98	325	⇓iP	P	11 20 51.8	-1.2
BSD				pmax	pmax		
	comp=Z,157nm,0.7s,mb5.8						
GRA1	Grafenberg Arr	41.05	316	eP	P	11 20 53.8	+0.2
	comp=Z,78nm,0.8s,mb5.4						
GRF	Grafenberg Arr	41.05	316	eP	P	11 20 53.8	+0.2
	comp=Z,78nm,0.8s,mb5.4						
GRF	Grafenberg Arr	41.05	316	eP	P	11 20 53.8	+0.2
GRF				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.4						
GRF	Grafenberg Arr	41.05	316	eP	P	11 20 53.8	+0.2
GRF				pmax	pmax		
	comp=Z,78nm,0.8s,mb5.4						
PGF	Pioggiola	41.05	305	⇑iP	P	11 20 53.4	-0.4
	comp=Z,42nm,0.7s,mb4.9						
PGF	Pioggiola	41.05	305	⇑iP	P	11 20 53.4	-0.4
PGF				pmax	pmax		
	comp=Z,21nm,0.7s,mb4.9						
BOB	Bobbio (Coli)	41.06	308	P	P	11 20 54.7	+0.9
	comp=Z,40nm,0.8s,mb5.1						
BOB	Bobbio (Coli)	41.06	308	P	P	11 20 54.7	+0.9
BOB				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.1						
MOX	Moxa	41.10	318	iP	P	11 20 54.1	+0.1
	comp=Z,logA/T=1.1,mb4.5						
MOX	Moxa	41.10	318	eP	P	11 20 54.1	+0.1
	comp=Z,17nm,1.4s,mb4.5						
MOX	Moxa	41.10	318	eP	P	11 20 54.1	+0.1
MOX				pmax	pmax		
	comp=Z,17nm,1.4s,mb4.5						
DAVOX	Davos	41.16	311	P	P	11 20 54.7	+0.1
DAVA	Damuels	41.28	312	iP	P	11 20 55.2	-0.3
	comp=Z,232nm,0.5s,mb6.0,SNR=164						
VDL	Val di Lei	41.38	311	⇓P	P	11 20 56.7	+0.3
TUE	Stuetta	41.46	311	P	P	11 20 56.9	-0.1
MUGIO	Muggio	41.55	310	P	P	11 20 57.2	-0.6
PCP	Pian Castagno	41.66	308	P	P	11 20 56.3	-2.4
LZH	Lanzhou	41.71	65	eP	P	11 21 00.0	+0.8
LZH				AP	pP	11 21 09.8	+3.2
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb4.8						
LZH				AMB	AMB		
	comp=Z,80nm,5.6s						
LZH				LR	LR		
	comp=N,390nm,12.9s						
LZH				LR	LR		
	comp=Z,440nm,16.6s,MS4.4						
LLS	Linth-Limmern	41.76	311	⇑P	P	11 20 59.1	-0.4
FIN	Finale Ligure	41.85	307	P	P	11 20 58.7	-1.5
FIN	Finale Ligure	41.85	307	P	P	11 20 58.7	-1.6
CMAH	Djebel Manchou	41.94	296	P	P	11 21 03.0	+1.9
WILA	Wila	41.95	312	⇑P	P	11 21 00.8	-0.2
CD2	Chengdu	41.99	73	P	P	11 21 02.5	+0.9
CD2				AMB	AMB		
	comp=Z,170nm,0.7s,mb5.8						
IMI	Imperia	42.03	307	P	P	11 21 00.5	-1.3
IMI	Imperia	42.03	307	P	P	11 21 00.5	-1.3
MUO	Muotathal	42.03	311	⇑P	P	11 21 01.3	-0.5
KMI	Kunming	42.08	81	P	P	11 21 03.3	+0.9
KMI				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.3						
KMI	Kunming	42.08	81	P	P	11 21 03.3	+0.9
	comp=Z,18nm,1.2s,mb4.6						
ROB	Roburent	42.10	307	P	P	11 21 01.3	-1.0
ROB	Roburent	42.10	307	P	P	11 21 01.3	-1.0
MONE	Monesi	42.15	307	P	P	11 21 01.6	-1.2
MONE	Monesi	42.15	307	P	P	11 21 01.6	-1.2
ZUR	Zurich	42.16	312	⇑P	P	11 21 02.5	-0.2
NEGI	Negi	42.16	307	P	P	11 21 01.3	-1.5
NEGI	Negi	42.16	307	P	P	11 21 01.3	-1.5
CLZ	Clausthal	42.22	319	eP	P	11 21 04.0	+0.8
	comp=Z,83nm,0.7s,mb5.5						
CLZ	Clausthal	42.22	319	eP	P	11 21 04.0	+0.8
CLZ				pmax	pmax		
	comp=Z,83nm,0.7s,mb5.5						
ORX	Oropa	42.23	309	P	P	11 21 01.4	-1.9
ORX	Oropa	42.23	309	P	P	11 21 01.5	-1.9
SAOF	Saorge	42.28	307	eP	P	11 21 04.1	+0.3
SLE	Schleitheim	42.30	313	⇑P	P	11 21 03.1	-0.8
MMK	Mattmark	42.32	310	⇑P	P	11 21 03.5	-0.6
SBF	Sospel	42.35	307	⇑iP	P	11 21 04.2	-0.2
	comp=Z,137nm,0.8s,mb5.3						
SBF	Sospel	42.35	307	⇑iP	P	11 21 04.2	-0.2
SBF				pmax	pmax		
	comp=Z,68nm,0.8s,mb5.3						
TRAV		42.38	309	P	P	11 21 01.5	-3.1
AUTN	L'Aution	42.38	307	eP	P	11 21 04.9	+0.3
ENR	Entracque	42.41	307	P	P	11 21 04.0	-0.9
ENR	Entracque	42.41	307	P	P	11 21 04.0	-0.9
STV2	Anna di Valdie	42.48	307	P	P	11 21 03.7	-1.7
STV2	Anna di Valdie	42.48	307	P	P	11 21 03.7	-1.8
STV	Sta Anna Valdi	42.48	307	P	P	11 21 03.9	-1.6
STV	Sta Anna Valdi	42.48	307	P	P	11 21 03.9	-1.6
SULZ	Sulz-Cheisache	42.50	312	⇑P	P	11 21 05.0	-0.5
TOUF	Mont Tournerai	42.51	307	eP	P	11 21 06.0	+0.3
BFO	Black Forest	42.53	313	eP	P	11 21 06.0	+0.2
	comp=Z,15nm,0.8s,mb4.8						
BFO	Black Forest	42.53	313	eP	P	11 21 06.0	+0.2
BFO				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
TOD	Tromm	42.53	315	eP	P	11 21 04.0	-1.8
NST	Nakhon Sawan	42.60	96	P	P	11 21 04.5	-2.3
LKBD	Leukerbad	42.61	310	⇓P	P	11 21 05.8	-0.7
BHB	Bricherasio	42.61	308	P	P	11 21 04.2	-2.3
FELD	Feldberg	42.65	313	eP	P	11 21 06.1	-0.6
RSP	Reno Superiore	42.66	309	P	P	11 21 04.1	-2.8
PZZ	Prazzo	42.68	308	P	P	11 21 05.0	-2.0
PZZ	Prazzo	42.68	308	P	P	11 21 05.1	-2.0
CASM	Ain Smara	42.69	295	P	P	11 21 08.5	+1.2
DIX	Grande Dixence	42.70	310	⇑P	P	11 21 06.8	-0.4
CTEI	Djebel Teioual	42.77	295	P	P	11 21 10.0	+2.1
LSD	Ceresole Reale	42.78	309	P	P	11 21 06.4	-1.5
LSD	Ceresole Reale	42.78	309	P	P	11 21 06.4	-1.5
FENE	Fenestrelle	42.78	308	P	P	11 21 05.8	-2.0
FENE	Fenestrelle	42.78	308	P	P	11 21 05.8	-2.1
FRF	La Foret Royal	42.88	306	⇑iP	P	11 21 08.1	-0.7
	comp=Z,33nm,0.8s,mb4.8						
FRF	La Foret Royal	42.88	306	⇑iP	P	11 21 08.1	-0.7
FRF				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.8						
BBS	Basel-Blauen	42.89	312	eP	P	11 21 08.3	-0.4
TNS	Taunus Mts	42.91	316	eP	P	11 21 09.2	+0.3
	comp=Z,20nm,0.9s,mb4.8						
TNS	Taunus Mts	42.91	316	eP	P	11 21 09.2	+0.3
TNS				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
KTD	Kalmit	42.92	315	eP	P	11 21 08.5	-0.5
MBDF	Montbardon	42.94	308	⇑iP	P	11 21 08.5	-0.7
	comp=Z,53nm,0.7s,mb5.1						
MBDF	Montbardon	42.94	308	⇑iP	P	11 21 08.5	-0.7
MBDF				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.1						
BSEG	Bad Segeberg	42.96	322	eP	P	11 21 09.3	+0.1
LMR	La Mourre	42.96	306	⇑iP	P	11 21 08.7	-0.7
	comp=Z,55nm,1.1s,mb4.9						
LMR	La Mourre	42.96	306	⇑iP	P	11 21 08.7	-0.7
LMR				pmax	pmax		
	comp=Z,27nm,1.1s,mb4.9						
BNI	Bardonecchia	43.05	308	eP	P	11 21 09.1	-1.0
	comp=Z,38nm,0.8s,mb5.2						
BNI	Bardonecchia	43.05	308	eP	P	11 21 09.1	-1.0
BNI				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.2						
EMV	Vieux Emosson	43.05	310	⇑P	P	11 21 09.2	-0.9
LPG	La Plagne	43.06	309	⇑iP	P	11 21 09.6	-0.6
	comp=Z,82nm,0.7s,mb5.3						
LPG	La Plagne	43.06	309	⇑iP	P	11 21 09.6	-0.6
LPG				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.3						
ZAK	Zakamensk	43.06	44	eP	P	11 21 10.2	+0.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.9						
LPL	La Plagne	43.08	309	⇑iP	P	11 21 09.6	-0.7
	comp=Z,57nm,0.7s,mb5.1						
LPL	La Plagne	43.08	309	⇑iP	P	11 21 09.6	-0.7
LPL				pmax	pmax		
	comp=Z,28nm,0.7s,mb5.1						
WLS	Welschbruch	43.18	313	eP	P	11 21 10.5	-0.6
MOF	Molkenrain	43.21	312	eP	P	11 21 11.1	-0.3
CDF	Champ du Feu	43.23	313	⇑iP	P	11 21 10.4	-1.1
	comp=Z,44nm,0.8s,mb4.9						
CDF	Champ du Feu	43.23	313	⇑iP	P	11 21 10.4	-1.1
CDF				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.9						
ECH	Echery	43.27	313	eP	P	11 21 11.5	-0.3
LOMF	Lomont	43.32	312	eP	P	11 21 12.2	0.0
ABH	Alteburg	43.39	315	eP	P	11 21 12.4	-0.4
HINF	Hinteralfeld	43.39	312	⇑iP	P	11 21 11.9	-0.9
	comp=Z,62nm,0.8s,mb5.1						
HINF	Hinteralfeld	43.39	312	⇑iP	P	11 21 11.9	-0.9
HINF				pmax	pmax		
	comp=Z,31nm,0.8s,mb5.1						
SET	Setif	43.58	295	P	P	11 21 17.0	+2.5
ORIF	Oris-en-Rattie	43.59	308	⇑iP	P	11 21 12.7	-1.8
	comp=Z,35nm,1.0s,mb4.8						
ORIF	Oris-en-Rattie	43.59	308	⇑iP	P	11 21 12.7	-1.8
ORIF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
RUP	Ruppelstein	43.66	315	eP	P	11 21 14.6	-0.3
CABF	La Chapelle	43.69	310	⇑iP	P	11 21 14.9	-0.4
	comp=Z,72nm,0.7s,mb5.2						
CABF	La Chapelle	43.69	310	⇑iP	P	11 21 14.9	-0.4
CABF				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.2						
SMRF	Simiane la Rot	43.70	307	eP	P	11 21 14.9	-0.5
HAU	Haudompre	43.76	312	⇑iP	P	11 21 14.8	-1.0
	comp=Z,60nm,0.7s,mb5.1						
HAU	Haudompre	43.76	312	⇑iP	P	11 21 14.8	-1.0
HAU				pmax	pmax		
	comp=Z,30nm,0.7s,mb5.1						
HFA0	Hagfors New Ar	43.98	331	P	P	11 21 16.7	-0.7
THEF	They Montfort	44.04	313	eP	P	11 21 16.9	-1.2
WTSB	Winterswijk	44.38	318	⇑eP	P	11 21 21.5	+0.8
	comp=Z,50nm,0.8s,mb5.3						
VIVF	Saint-Julien-l	44.44	308	⇑iP	P	11 21 20.4	-1.0
	comp=Z,60nm,0.9s,mb5.0						
VIVF	Saint-Julien-l	44.44	308	⇑iP	P	11 21 20.4	-1.0
VIVF				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
SONM	Songino Array	44.52	48	P	P	11 21 22.2	+0.3
	comp=Z,8.1nm,0.9s,mb4.5,baz=256,slow=8.0,SNR=62						
SONM				PcP	PcP	11 23 04.6	-0.9
	comp=Z,1.8nm,0.8s,baz=235,slow=4.3,SNR=5.7						
HGN	Heimansgroeve	44.60	316	⇑eP	P	11 21 23.4	+0.8
	comp=Z,56nm,0.9s,mb5.4						
MEZF	Maizieres J'vi	44.70	313	⇑iP	P	11 21 23.1	-0.3
	comp=Z,114nm,0.9s,mb5.4						
LASF	Ste Croix	44.95	307	⇑iP	P	11 21 24.9	-0.5

	comp=Z,97nm,0.8s,mb5.4						
ULN	Ulaanbaatar	44.96	48	P	P	11 21 25.4	-0.1
SMF	Signal de Mont	45.23	310⇑	*i*P	P	11 21 26.8	-0.8
	comp=Z,163nm,0.8s,mb5.6						
SMF	Signal de Mont	45.23	310⇑	*i*P	P	11 21 26.8	-0.8
SMF				pmax	pmax		
	comp=Z,82nm,0.8s,mb5.6						
LOR	Lormes	45.30	311⇑	*i*P	P	11 21 27.3	-0.9
	comp=Z,57nm,0.8s,mb5.2						
LOR	Lormes	45.30	311⇑	*i*P	P	11 21 27.3	-0.9
LOR				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.1						
LBL	Lubilhac	45.48	308	*e*P	P	11 21 29.7	0.0
NB2	NORSAR Subarra	45.48	331	P	P	11 21 28.3	-1.2
	comp=Z,19nm,0.8s,mb5.0,baz=117,slow=7.9						
NB2	NORSAR Subarra	45.48	331	P	P	11 21 28.3	-1.2
	baz=117,slow=7.9						
NOA	NORSAR Array B	45.48	331	P	P	11 21 28.2	-1.2
	comp=Z,18nm,0.8s,mb4.9,baz=118,slow=8.0,SNR=61						
NOA				PcP	PcP	11 23 07.3	-1.4
	comp=Z,1.3nm,0.7s,baz=128,slow=5.2,SNR=3.9						
NOA				LR	LR	11 41 46.2	
	comp=Z,261nm,19.4s,MS4.2,baz=35,slow=38						
SSF	Saint Saulge	45.51	311⇑	*i*P	P	11 21 29.3	-0.6
SSF				pmax	pmax		
	comp=Z,65nm,0.8s,mb5.6						
SSF	Saint Saulge	45.51	311⇑	*i*P	P	11 21 29.3	-0.6
	comp=Z,65nm,0.8s,mb5.6						
BAIF	Baives	45.53	315⇑	*i*P	P	11 21 30.5	+0.5
	comp=Z,168nm,0.9s,mb5.7						
BAIF	Baives	45.53	315⇑	*i*P	P	11 21 30.5	+0.5
BAIF				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.7						
ETOS	Mallorca	45.55	300	P	P	11 21 30.6	+0.4
	comp=Z,42nm,0.8s,mb5.4						
NAO	NORSAR Subarra	45.55	331	P	P	11 21 28.3	-1.7
	comp=Z,19nm,0.8s,mb5.1						
NAO	NORSAR Subarra	45.55	331	P	P	11 21 28.3	-1.7
NAO				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.1						
KONO	Kongsberg	45.57	329	*i* P	P	11 21 29.3	-0.9
AVF	Avril sur Loir	45.58	310⇑	*i*P	P	11 21 29.5	-0.9
	comp=Z,55nm,0.7s,mb5.3						
AVF	Avril sur Loir	45.58	310⇑	*i*P	P	11 21 29.5	-0.9
AVF				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.3						
OPO	Ambohidratompo	45.81	191	P	P	11 21 34.1	+1.5
	comp=Z,3.8nm,0.7s,mb4.4,baz=33,slow=8.5,SNR=8.0						
BGF	Bois d'Agland	45.90	310⇑	*i*P	P	11 21 32.3	-0.6
	comp=Z,101nm,0.7s,mb5.6						
BGF	Bois d'Agland	45.90	310⇑	*i*P	P	11 21 32.3	-0.6
BGF				pmax	pmax		
	comp=Z,51nm,0.7s,mb5.6						
FRNF	Fournols	45.98	308	*e*P	P	11 21 33.9	+0.3
VERF	Verneugheol	46.07	309	*e*P	P	11 21 34.0	-0.3
MTLF	Montolieu	46.08	305⇑	*i*P	P	11 21 34.7	+0.3
	comp=Z,124nm,0.8s,mb5.6						
MTLF	Montolieu	46.08	305⇑	*i*P	P	11 21 34.7	+0.3
MTLF				pmax	pmax		
	comp=Z,62nm,0.8s,mb5.6						
HYF	Humbligny	46.12	311	*e*P	P	11 21 34.6	-0.1
KEV	Kevo	46.18	347	*e*p	P	11 21 34.7	-0.1
	comp=Z,24nm,0.7s,mb5.2						
KEV	Kevo	46.18	347	*e*P	P	11 21 34.7	-0.1
KEV				pmax	pmax		
	comp=Z,24nm,0.7s,mb5.2						
VALF	Valcebollere	46.19	304	*e*P	P	11 21 36.0	+0.7
LPEF	Le Peyrat	46.29	305	*e*P	P	11 21 36.7	+0.6
CAF	Calviac	46.29	308⇑	*i*P	P	11 21 35.9	-0.2
	comp=Z,104nm,0.8s,mb5.5						
CAF	Calviac	46.29	308⇑	*i*P	P	11 21 35.9	-0.2
CAF				pmax	pmax		
	comp=Z,52nm,0.8s,mb5.5						
TCF	Toulx Ste Croi	46.31	310⇑	*i*P	P	11 21 35.7	-0.5
	comp=Z,73nm,0.7s,mb5.4						
TCF	Toulx Ste Croi	46.31	310⇑	*i*P	P	11 21 35.7	-0.5
TCF				pmax	pmax		
	comp=Z,37nm,0.7s,mb5.4						
ARCES	ARCESS Array B	46.32	346	P	P	11 21 35.7	-0.2
	comp=Z,3.6nm,0.5s,mb4.5,baz=146,slow=9.3,SNR=39						
ARCES				PcP	PcP	11 23 10.6	-0.8
	comp=Z,8.0nm,0.8s,baz=162,slow=3.8,SNR=7.8						
ARCES	ARCESS Array B	46.32	346	P	P	11 21 35.7	-0.2
ARCES				PcP	PcP	11 23 10.6	-0.8
EMIR	Miracle	46.54	303	P	P	11 21 39.8	+1.7
	comp=Z,69nm,0.8s,mb5.6						
RJF	Les Rejaudoux	46.71	308⇑	*i*P	P	11 21 39.3	0.0
	comp=Z,130nm,0.9s,mb5.6						
RJF	Les Rejaudoux	46.71	308⇑	*i*P	P	11 21 39.3	0.0
RJF				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.6						
EPOB	Poblet	46.87	303	P	P	11 21 41.3	+0.6
	comp=Z,19nm,1.1s,mb4.9						
MLS	Moulis	46.89	305	*e*P	P	11 21 40.4	-0.4
ENH	Enshi	46.97	73	*e*P	P	11 21 42.6	+1.0
	comp=Z,16nm,0.9s,mb5.0						
LFF	La Frestale	47.23	308⇑	*i*P	P	11 21 43.3	-0.2
	comp=Z,124nm,0.8s,mb5.6						
LFF	La Frestale	47.23	308⇑	*i*P	P	11 21 43.3	-0.2
LFF				pmax	pmax		
	comp=Z,62nm,0.8s,mb5.6						
EBR	Ebro Roquetas	47.31	302	*i* P	P	11 21 45.0	+0.8
ERTA	Horta de San J	47.44	302	P	P	11 21 46.1	+0.9
	comp=Z,34nm,0.7s,mb5.4						
EPF	Esparros	47.44	305⇑	*i*P	P	11 21 43.8	-1.4
	comp=Z,20nm,0.8s,mb4.8						
EPF	Esparros	47.44	305⇑	*i*P	P	11 21 43.8	-1.4
EPF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.8						
EGRA	Graus	47.45	304	P	P	11 21 46.0	+0.7
	comp=Z,26nm,0.7s,mb5.3						
EBIE	Bielsa	47.58	304	P	P	11 21 46.8	+0.5
	comp=Z,17nm,1.0s,mb5.0						
EBEN	Beniarda	47.94	299	P	P	11 21 50.1	+0.9
	comp=Z,27nm,1.0s,mb5.2						
MFF	Saint Martin d	47.96	310⇑	*i*P	P	11 21 48.0	-1.2
	comp=Z,46nm,1.1s,mb5.1						
MFF	Saint Martin d	47.96	310⇑	*i*P	P	11 21 48.0	-1.2
MFF				pmax	pmax		
	comp=Z,23nm,1.1s,mb5.1						
ESAC	San Caprasio	48.03	303	P	P	11 21 50.1	+0.2
	comp=Z,48nm,0.8s,mb5.6						
EMOS	Mosqueruela	48.06	301	P	P	11 21 51.7	+1.7
	comp=Z,35nm,0.7s,mb5.5						
ETSF	Etsaut	48.10	305⇑	*i*P	P	11 21 50.5	+0.2
	comp=Z,118nm,0.8s,mb5.7						
ETSF	Etsaut	48.10	305⇑	*i*P	P	11 21 50.5	+0.2
ETSF				pmax	pmax		
	comp=Z,59nm,0.8s,mb5.7						
LDF	La Druitiere	48.12	312⇑	*i*P	P	11 21 49.1	-1.3
	comp=Z,54nm,0.7s,mb5.4						
LDF	La Druitiere	48.12	312⇑	*i*P	P	11 21 49.1	-1.3
LDF				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.4						
LCHF	La Chataignera	48.37	310	*e*P	P	11 21 52.3	-0.1
FLN	La Foliniere	48.38	313⇑	*i*P	P	11 21 51.3	-1.1
	comp=Z,114nm,0.8s,mb5.6						
FLN	La Foliniere	48.38	313⇑	*i*P	P	11 21 51.3	-1.1
FLN				pmax	pmax		
	comp=Z,57nm,0.8s,mb5.7						
LARF	Larrau	48.42	305	*e*P	P	11 21 54.0	+1.2
ECHE	Chera	48.47	300	P	P	11 21 54.5	+1.3
	comp=Z,14nm,0.7s,mb5.1						
ECHE	Chera	48.47	300	P	P	11 21 54.5	+1.3
ECHE				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
GRR	Gorron	48.59	312	*e*P	P	11 21 52.8	-1.2
EMUR	La Murta	48.79	298	P	P	11 21 55.1	-0.6
	comp=Z,14nm,0.8s,mb5.0						
ETOB	Tobarra	48.97	299	P	P	11 21 58.1	+1.0
	comp=Z,30nm,0.8s,mb5.4						
ECRI	Cripan	49.54	304	P	P	11 22 02.2	+0.8
	comp=Z,19nm,1.0s,mb5.1						
ECRI	Cripan	49.54	304	P	P	11 22 02.2	+0.8
ECRI				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.1						
LSZ	Lusaka	49.63	216	P	P	11 22 03.5	+1.1
	comp=Z,9.7nm,1.0s,mb4.8,baz=34,slow=9.2,SNR=8.3						
SGMF	Saint Gilles	49.71	312⇑	*i*P	P	11 22 01.8	-0.8
	comp=Z,95nm,0.8s,mb5.6						
SGMF	Saint Gilles	49.71	312⇑	*i*P	P	11 22 01.8	-0.8
SGMF				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.6						
EVIA	Vianos	49.72	299	P	P	11 22 03.6	+0.7
	comp=Z,69nm,0.6s,mb5.9						
EVIA	Vianos	49.72	299	P	P	11 22 03.6	+0.7
EVIA				pmax	pmax		
	comp=Z,69nm,0.6s,mb5.9						
EHUE	Huescar	49.86	298	P	P	11 22 04.2	+0.3
	comp=Z,22nm,1.1s,mb5.1						
EHUE	Huescar	49.86	298	P	P	11 22 04.2	+0.3
EHUE				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.1						
QUIF	Quistinic	50.09	311⇑	*i*P	P	11 22 04.4	-1.2
	comp=Z,130nm,0.9s,mb5.7						
QUIF	Quistinic	50.09	311⇑	*i*P	P	11 22 04.4	-1.2
QUIF				pmax	pmax		
	comp=Z,65nm,0.9s,mb5.7						
EBER	Berja	50.18	297	P	P	11 22 07.5	+1.1
	comp=Z,48nm,0.7s,mb5.6						
ROSF	Rostrenen	50.19	312⇑	*i*P	P	11 22 05.3	-1.0
	comp=Z,69nm,0.8s,mb5.5						
ROSF	Rostrenen	50.19	312⇑	*i*P	P	11 22 05.3	-1.0
ROSF				pmax	pmax		
	comp=Z,35nm,0.8s,mb5.4						
ELAN	Lanestosa	50.20	305	P	P	11 22 06.7	+0.1
	comp=Z,38nm,0.7s,mb5.5						
EQES	Quesada	50.24	298	P	P	11 22 06.9	0.0
	comp=Z,42nm,1.0s,mb5.4						
ECOG	Cogollos-Vega	50.68	298	P	P	11 22 09.7	-0.5
	comp=Z,13nm,0.7s,mb5.0						
ECOG	Cogollos-Vega	50.68	298	P	P	11 22 09.7	-0.5
ECOG				pmax	pmax		
	comp=Z,13nm,0.7s,mb5.0						
EGUA	Guajares	50.73	297	P	P	11 22 10.8	+0.2
	comp=Z,2.0nm,0.5s,mb4.3						
EGUA	Guajares	50.73	297	P	P	11 22 10.8	+0.2
EGUA				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.3						
EBAN	Banos Encina	50.76	299	P	P	11 22 10.9	+0.1
	comp=Z,36nm,0.7s,mb5.4						
EBAN	Banos Encina	50.76	299	P	P	11 22 10.9	+0.1
EBAN				pmax	pmax		
	comp=Z,36nm,0.7s,mb5.4						
ESDC	Sonseca Array	50.77	301	P	P	11 22 10.5	-0.3
	comp=Z,16nm,0.6s,mb5.1,baz=62,slow=7.8,SNR=59						
ESDC	Sonseca Array	50.77	301	P	P	11 22 10.7	-0.2
	comp=Z,17nm,0.6s,mb5.2						
ESLA	Sonseca Array	50.77	301	*e*P	P	11 22 10.1	-0.7
	comp=Z,2.9nm,0.7s,mb4.3						
GUD	Guadarrama	50.85	302	P	P	11 22 11.7	+0.3
	comp=Z,12nm,0.6s,mb5.0						
GUD	Guadarrama	50.85	302	P	P	11 22 11.7	+0.2
GUD				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
ERON	Agron	50.90	297	P	P	11 22 11.6	-0.2
	comp=Z,42nm,0.8s,mb5.4						
BOD	Bodaibo	50.94	36	*e*P	P	11 22 10.4	-1.5
BOD				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.1						
WHN	Wuhan	51.05	71	P	P	11 22 15.5	+2.4
ELOJ	Sierra Loja	51.16	297	P	P	11 22 12.9	-0.9
	comp=Z,16nm,0.6s,mb5.1						
ELOJ	Sierra Loja	51.16	297	P	P	11 22 12.9	-0.9
ELOJ				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.2						
ELUQ	Luque	51.20	298	P	P	11 22 12.6	-1.6
	comp=Z,27nm,0.7s,mb5.3						
ELUQ	Luque	51.20	298	P	P	11 22 12.6	-1.6
ELUQ				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.3						
EADA	Adamuz	51.38	299	P	P	11 22 15.0	-0.6
	comp=Z,24nm,0.7s,mb5.2						
EARI	Arriondas	51.50	305	P	P	11 22 14.5	-1.8
	comp=Z,27nm,0.8s,mb5.2						
EMIJ	Mijas	51.72	297	P	P	11 22 17.2	-0.9
	comp=Z,39nm,0.9s,mb5.3						
ECAB	El Cabril	52.05	299	P	P	11 22 20.4	-0.2
	comp=Z,66nm,0.6s,mb5.7						
ZFT	Errachidia	52.08	291	*i* P	P	11 22 21.5	+0.6
EJIF	Jimena Fronter	52.29	297	P	P	11 22 21.7	-0.8
	comp=Z,5.3nm,0.7s,mb4.6						
EJIF	Jimena Fronter	52.29	297	P	P	11 22 21.7	-0.8
EJIF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
CZD	Col de Zad	52.48	292	*i* P	P	11 22 26.0	+2.1
ESPR	Espera	52.55	297	P	P	11 22 23.3	-1.0
	comp=Z,12nm,0.7s,mb4.9						
MIF	Mishlifen	52.56	293	*i* P	P	11 22 25.0	+0.5
DLF	Lyons Farm	52.60	318⇑	*i*P	P	11 22 23.5	-1.0
ECAL	Calabor	52.70	304	P	P	11 22 25.8	+0.4
	comp=Z,22nm,0.7s,mb5.2						
PBRG	Braganca	52.72	304	*e*P	P	11 22 25.3	-0.2
	comp=Z,18nm,1.2s,mb4.9						
PBRG	Braganca	52.72	304	*e*P	P	11 22 25.4	-0.1
EPON	Pontenova	52.91	305	P	P	11 22 27.1	+0.1
	comp=Z,22nm,0.8s,mb5.2						
ERUA	La Rua	52.97	304	P	P	11 22 27.5	+0.1
	comp=Z,25nm,1.2s,mb5.0						
ERUA	La Rua	52.97	304	P	P	11 22 27.5	+0.1
ERUA				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.0						
DCN	Croghan	53.05	318⇑	*i*P	P	11 22 27.3	-0.5
EMIN	Mina Concepcio	53.08	298	P	P	11 22 26.8	-1.5
	comp=Z,5.0nm,0.7s,mb4.5						
EBAD	Badajoz	53.22	300	P	P	11 22 28.7	-0.6
	comp=Z,17nm,0.7s,mb5.1						
MTE	Manteigas	53.45	302	*e*P	P	11 22 31.3	+0.4
	comp=Z,50nm,1.1s,mb5.4						
MTE	Manteigas	53.45	302	*e*P	P	11 22 31.2	+0.3
HIA	Hailar	53.47	47	*e*P	P	11 22 31.1	+0.2
	comp=Z,16nm,0.8s,mb5.0						
HIA	Hailar	53.47	47	*e*P	P	11 22 31.1	+0.1
HIA				pmax	pmax		
	comp=Z,16nm,0.8s						
PVRL	Vila Real	53.49	303	*e*P	P	11 22 31.2	0.0
	comp=Z,36nm,1.0s,mb5.3						
PVIS	Viseu	53.68	302	*e*P	P	11 22 33.2	+0.6
	comp=Z,62nm,2.2s,mb5.2						
PCAB	Cabril	53.68	304	*e*P	P	11 22 32.6	0.0
ELOB	Lobios	53.69	304	P	P	11 22 33.1	+0.4
	comp=Z,23nm,0.7s,mb5.2						
EGRO	El Granado	53.74	298	P	P	11 22 31.7	-1.4
	comp=Z,7.9nm,0.6s,mb4.8						
TZC	Tazercounte	53.84	292	*i* P	P	11 22 34.0	+0.1
STS	Santiago	53.97	305	P	P	11 22 34.7	0.0
	comp=Z,35nm,0.9s,mb5.3						
STS	Santiago	53.97	305	P	P	11 22 34.7	0.0
STS				pmax	pmax		
	comp=Z,35nm,0.9s,mb5.3						
PBEJ	Beja	53.98	299	*e*P	P	11 22 34.5	-0.3
	comp=Z,14nm,1.0s,mb4.9						
EVO	Evora	54.02	300⇑	*i*P	P	11 22 35.4	+0.2
	comp=Z,47nm,0.8s,mb5.2						
EZAM	Zamans	54.14	304	P	P	11 22 36.5	+0.5
	comp=Z,13nm,0.6s,mb5.0						
EZAM	Zamans	54.14	304	P	P	11 22 36.5	+0.5
EZAM				pmax	pmax		
	comp=Z,13nm,0.6s,mb5.0						
PTOM	Tomar	54.20	301	*e*P	P	11 22 36.6	+0.2
	comp=Z,35nm,0.9s,mb5.3						
PTOM	Tomar	54.20	301	*e*P	P	11 22 36.8	+0.4
NJ2	Nanjing	54.53	68	*e*P	P	11 22 38.3	-0.7
NJ2				AP	pP	11 22 48.3	+1.7
NJ2				XP	sP	11 22 52.0	+2.5
NJ2				PP	PP	11 24 42.0	-0.9
NJ2				S	S	11 30 13.0	-2.0
NJ2				XS		11 30 29.0	
NJ2				AMB	AMB		
	comp=Z,150nm,1.0s,mb6.0						
NJ2				AMB	AMB		
	comp=Z,2μm,5.5s						
NJ2				LR	LR		
	comp=N,6μm,22.6s						
NJ2				LR	LR		
	comp=E,6μm,17.0s						
NJ2				LR	LR		
	comp=Z,4μm,17.3s						
OUK	Oukaimeden	55.19	291	*i* P	P	11 22 45.0	+1.2
CIA	Chichaoua	55.85	291	*i* P	P	11 22 49.0	+0.4
SSE	Sheshan	56.69	69	P	P	11 22 51.3	-3.3
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.4						
SSE				AMB	AMB		
	comp=Z,820nm,11.6s						
SSE	Sheshan	56.69	69	P	P	11 22 51.2	-3.4
	comp=Z,30nm,0.8s,mb5.4						
YHNB	Yeheng	58.54	76	*e*P	P	11 23 09.3	+1.6
TSUM	Tsumeb	58.81	223	P	P	11 23 09.8	+0.1
LBTB	Lobatse	59.13	212	*e*P	P	11 23 11.8	0.0
	comp=Z,33nm,0.8s,mb5.4						
LBTB	Lobatse	59.13	212	*e*P	P	11 23 11.8	0.0
LBTB				pmax	pmax		
	comp=Z,33nm,0.8s,mb5.4						
YAK	Yakutsk	59.23	32⇓	*e*P	P	11 23 10.2	-1.8
YAK				pmax	pmax		
	comp=Z,24nm,1.3s,mb5.1						
TIXI	Tiksi	59.54	21⇑	*e*P	P	11 23 12.4	-1.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.7						
EFAM	Famara	60.45	290	P	P	11 23 20.0	-0.9
	comp=Z,49nm,0.8s,mb5.6						
DAG	Danmarks Havn	60.60	345⇓	*i*P	P	11 23 20.2	-1.1
	comp=Z,9.3nm,0.6s,mb5.1						
	comp=Z,2μm,17.0s						
DAG	Danmarks Havn	60.60	345⇓	*e*P	P	11 23 20.2	-1.1
	comp=Z,9.3nm,0.6s,mb5.1						
DAG				LR	LR		
	comp=Z,2μm,17.0s,MS5.4						
DAG	Danmarks Havn	60.60	345⇓	*e*P	P	11 23 20.2	-1.1
DAG				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb5.1						
DAG				MLR	MLR		
	comp=Z,2μm,17.0s,MS5.4						
KS15	Wonju Array Si	60.68	60	*e*P	P	11 23 21.0	-1.3
DBIC	Dimbokro	60.84	262	P	P	11 23 23.0	-0.7
	comp=Z,17nm,0.8s,mb5.3,baz=53,slow=7.8,SNR=30						
DBIC	Dimbokro	60.84	262	*e*P	P	11 23 22.7	-0.9
	comp=Z,18nm,0.8s,mb5.3						
DBIC	Dimbokro	60.84	262	*e*P	P	11 23 22.7	-1.0
DBIC				pmax	pmax		
	comp=Z,18nm,0.8s						
SCO	Scoresbysund	60.96	338	*i* P	P	11 23 24.2	+0.5
	comp=Z,8.1nm,0.8s,mb4.9						
CFTV	Fuerteventura	61.11	289	P	P	11 23 25.5	+0.1
	comp=Z,20nm,0.6s,mb5.4						
LIC	Lamto	61.19	262	*e*P	P	11 23 25.5	-0.6
	comp=Z,26nm,0.9s,mb5.3						
KLR	Kul'dur	61.31	46	*e*P	P	11 23 21.7	-4.7
BOSA	Boshof	62.35	210	P	P	11 23 33.5	-0.1
	comp=Z,24nm,0.7s,mb5.5,baz=36,slow=6.3,SNR=71						
BOSA	Boshof	62.35	210	*e*P	P	11 23 33.4	-0.3
	comp=Z,25nm,0.7s,mb5.5						
BOSA	Boshof	62.35	210	*e*P	P	11 23 33.4	-0.3
BOSA				pmax	pmax		
	comp=Z,25nm,0.7s,mb5.5						
EBAJ	Bajamar	62.98	290	P	P	11 23 38.0	+0.1
	comp=Z,29nm,0.7s,mb5.5						
CCAN	Las Canadas	63.30	290	P	P	11 23 39.1	-0.8
	comp=Z,52nm,1.6s,mb5.4						
EGOM	La Gomera	63.82	290	P	P	11 23 43.6	+0.2
	comp=Z,17nm,0.7s,mb5.2						
SUMG	Summit	65.99	341	*e*P	P	11 23 57.1	+0.4
	comp=Z,37nm,0.8s,mb5.5						
MJAR	Matsushiro Arr	68.89	59	P	P	11 24 14.2	-1.3
	comp=Z,3.1nm,0.9s,mb4.2,baz=288,slow=7.9,SNR=6.8						
MJAR				PcP	PcP	11 24 38.2	-1.8
	comp=Z,1.6nm,0.8s,baz=290,slow=3.3,SNR=4.3						
MJAR	Matsushiro Arr	68.89	59	P	P	11 24 14.2	-1.3
MJAR				PcP	PcP	11 24 38.2	-1.8
YSS	Yuzh-Sakhalins	69.00	47	*e*P	P	11 24 14.5	-1.5
	comp=Z,14nm,0.6s,mb5.0						
YSS	Yuzh-Sakhalins	69.00	47⇑	*e*P	P	11 24 14.2	-1.9
YSS				*e*		11 24 32.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
SEY	Seymchan	69.45	29⇑	*e*P	P	11 24 19.1	+0.5
FITZ	Fitzroy Crossi	81.11	115	*e*P	P	11 25 25.8	0.0
	comp=Z,18nm,0.8s,mb5.0						
KNA	Kununurra	82.46	112	P	P	11 25 31.2	-1.7
INK	Inuvik	84.99	3	*e*P	P	11 25 44.7	+0.2
	comp=Z,6.0nm,0.8s,mb4.8						
INK	Inuvik	84.99	3	*e*P	P	11 25 44.7	+0.1
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SCHQ	Schefferville	85.05	331	P	P	11 25 45.1	0.0
	comp=Z,8.4nm,0.8s,mb4.9,baz=78,slow=4.4,SNR=7.3						
ILAR	Eielson Array	87.09	10	P	P	11 25 54.8	-0.3
	comp=Z,8.2nm,0.7s,mb5.1,baz=326,slow=3.3,SNR=134						
ILAR				PKKPbc		11 43 46.9	
	comp=Z,0.6nm,0.7s,baz=193,slow=1.8,SNR=14						
MCK	McKinley	87.74	11	*e*P	P	11 25 58.3	+0.1
	comp=Z,13nm,0.8s,mb5.2						
MCK	McKinley	87.74	11	*e*P	P	11 25 58.3	+0.1
MCK				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.2						
THY	Trims Highway	88.54	10	*e*P	P	11 26 02.0	0.0
DAWY	Dawson	88.71	7	*e*P	P	11 26 03.3	+0.4
WRA	Warramunga Arr	89.14	113	P	P	11 26 05.8	-0.1
	comp=Z,5.5nm,1.0s,mb4.8,baz=312,slow=3.9,SNR=39						
WRA				PKKPbc		11 43 43.6	
	comp=Z,0.5nm,0.7s,baz=121,slow=2.2,SNR=6.3						
WRAB	Tennant Creek	89.14	113	P	P	11 26 06.1	+0.2
WB2	Warramunga Arr	89.15	113	*e*P	P	11 26 06.2	+0.3
SLKM	Skilak Lake	90.50	13	*e*P	P	11 26 11.9	+0.6
YKA	Yellowknife Ar	90.74	356	P	P	11 26 12.8	+0.4
	comp=Z,2.6nm,0.7s,mb4.7,baz=356,slow=5.1,SNR=7.9						
MAW	Mawson	94.21	177	P	P	11 26 29.0	+0.8
	comp=Z,5.6nm,0.8s,mb5.0,baz=317,slow=6.5,SNR=8.9						
DLBC	Dease Lake	95.01	3	P	P	11 26 32.6	+0.6
	comp=Z,3.2nm,0.8s,mb4.8,baz=60,slow=6.8,SNR=5.7						
SYO	Syowa Base	96.20	186	⇓P	P	11 26 41.8	+4.5
SYO	Syowa Base	96.20	186⇓	*e*P	P	11 26 41.8	+4.5
EDM	Edmonton	99.81	353	*e*P	P	11 26 54.6	+0.7
VNA2	Neumayer--Watz	106.86	198⇑	*i*PKPdf		11 31 35.6	
VNA2				*e*		11 39 40.1	
VNA3	Neumayer Olymp	107.66	198⇑	*i*PKPdf		11 31 36.7	
VNA3				*e*		11 39 38.0	
PDAR	Pinedale Array	109.53	349	PKiKP		11 31 39.9	
	comp=Z,0.7nm,0.7s,baz=66,slow=2.4,SNR=6.4						
PDAR				PKKPbc		11 42 55.3	
	comp=Z,1.2nm,0.8s,baz=185,slow=4.5,SNR=9.7						
HOPS	Hopland	114.60	359	*e*P	Pdif	11 27 59.8	+0.2
NVAR	Mina Array Bea	114.93	355	PKP	PKPdf	11 31 52.4	-1.7
	comp=Z,1.9nm,0.8s,baz=43,slow=1.8,SNR=14						
SAML	Samuel	119.80	275	*e*PKPdf	PKPdf	11 32 01.1	-3.0
CPUP	Villa Florida	120.82	254	*e*PKPdf	PKPdf	11 32 02.5	-3.4
TXAR	Lajitas Array	120.86	339	PKP	PKPdf	11 32 03.2	-2.7
	comp=Z,2.2nm,0.7s,baz=129,slow=1.0,SNR=26						
ROSC	El Rosal	122.44	295	PKP	PKPdf	11 32 07.3	-1.9
	comp=Z,3.3nm,0.5s,baz=100,slow=22,SNR=4.4						
TRQA	Tornquist	127.12	241	*e*PKPdf	PKPdf	11 32 15.4	-2.4
LPAZ	La Paz	127.14	269	PKP	PKPdf	11 32 15.9	-2.4
	comp=Z,2.1nm,0.7s,baz=176,slow=1.9,SNR=11						
LPAZ	La Paz	127.14	269	*e*PKPdf	PKPdf	11 32 16.4	-1.9
OTAV	Otavalo	128.45	294	*e*PKPdf	PKPdf	11 32 19.8	-1.2
PLCA	Paso Flores	133.91	238	PKP	PKPdf	11 32 27.2	-3.3
	comp=Z,1.6nm,0.8s,baz=161,slow=3.8,SNR=3.1						

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*NEIC **27** 11:37:33.5±0.7, 49.89N×18.39E, h5km, MG2.5(WAR),*
Error ellipse: s-maj=11.2km s-min=6.5km az=193.0
*PRU **27** 11:37:34.3, 49.89N×18.36E*
ISC 27 11:37:31.8±0.4**, 49.84N**±0.03×**18.38E**±0.03**, n25,** σ1**⁹51**/45**,**
Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.15	268	*e*PG	Pg	11 37 37.7	+2.9
OKC				*e*SG	Sg	11 37 41.1	+4.2
	194nm,0.4s						
RAC	Raciborz	0.27	333	*e*Pg	Pg	11 37 39.3	+2.1
RAC				*e*Sg	Sg	11 37 43.6	+2.9
MORC	Moravsky Berou	0.55	263	*e*P	Pg	11 37 44.3	+1.5
MORC				*e*S	Sg	11 37 53.2	+3.1
LIKS	Likavka	0.92	149	*e*SG	Sg	11 38 07.8	+5.2
LIKS	Likavka	0.92	149	*e*Sg	Sg	11 38 07.8	+5.2
OJC	Ojcow	0.99	67	*e*Pg	Pg	11 37 50.2	-1.3
OJC				*e*Sg	Sg	11 38 02.9	-1.7
NIE	Niedzica	1.32	108	*e*Pg	Pg	11 37 57.5	-0.7
NIE				*e*Sg	Sg	11 38 15.9	0.0
VYHS	Vyhne	1.38	167	*i* PG	Pg	11 37 58.8	-0.6
VYHS				*e*SG	Sg	11 38 17.9	0.0
DPC	Dobruska-Polom	1.42	292	*e*PG	Pg	11 37 59.7	-0.5
DPC				*e*SG	Sg	11 38 19.8	+0.7
	14nm,0.3s						
SMOL	Smolenice	1.47	206	*i* PG	Pg	11 38 00.5	-0.7
SMOL				*i* SG	Sg	11 38 21.5	+0.7
UPC	Upice	1.66	294	*e*Pg	Pg	11 38 04.3	-0.7
UPC				*e*Sg	Sg	11 38 26.8	-0.3
KSP	Ksiaz	1.67	308	*e*Pn	Pn	11 38 03.4	+0.9
KSP				*e*Pg	Pg	11 38 06.5	+1.4
KSP				*e*Sg	Sg	11 38 27.8	+0.4
STHS	Stebnicka Huta	1.91	102	*i* PN	Pn	11 38 08.5	+2.6
STHS				*e*SN	Sn	11 38 35.5	+4.5
KECS	Kecovo	1.94	134	*e*PG	Pg	11 38 09.1	-1.4
KECS				*e*SN	Sn	11 38 33.9	+2.2

PSZ	Piszkesteto	2.17	152	eP	Pn	11 38 14.3	+4.7
CRVS	Cervenica-Dubn	2.22	114	ePN	Pn	11 38 13.8	+3.4
PRU	Pruhonice	2.49	275	ePG	Pg	11 38 19.7	-1.7
PRU				eSG	Sg	11 38 51.3	-3.3
PVCC	Panska Ves	2.55	287	eSG	Sg	11 38 54.2	-2.3
PVCC	Panska Ves	2.55	287	eSg	Sg	11 38 54.2	-2.3
KOLS	Kolonicke sedl	2.70	108	ePG	Pg	11 38 25.1	-0.6
BRG	Berggiesshubel	3.02	292	Pg	Pg	11 38 28.8	-3.4
BRG				Sg	Sg	11 39 08.8	-3.6
KHC	Kasperske Hory	3.21	259	ePN	Pn	11 38 24.7	+0.2
KHC				ePG	Pg	11 38 31.7	-4.2
KHC				eSN	Sn	11 39 08.0	+3.9
KHC				eSG	Sg	11 39 16.7	-2.1
KHC	Kasperske Hory	3.21	259	ePn	Pn	11 38 24.7	+0.2
KHC				ePg	Pg	11 38 31.7	-4.2
KHC				eSg	Sg	11 39 16.7	-2.1
CLL	Collm	3.73	295	eSG	Sg	11 39 35.0	-1.0
CLL	Collm	3.73	295	eSg	Sg	11 39 35.0	-1.0

BJI **27** *12:05:34.9, 26.60N×55.90E, h10^{km}, mB4.9, mb4.5, Ms4.2, Msz4.2*

NEIC **27** *12:05:34.9±0.4, 26.61N×55.88E, h10^{km}, mb4.5/70, ML4.1(THR), MN4.3(TEH), Error ellipse: s-maj=6.7km s-min=6.1km az=169.0*

CSEM **27** *12:05:34.0±0.1, 26.72N×55.71E, h9^{km}, mb4.5/76, Error ellipse: s-maj=2.7km s-min=1.9km az=73.0*

IDC **27** *12:05:34.5±0.8, 26.86N×55.85E, mb4.3/19, mb1 4.4/19, mb1mx4.3/24, mbtmp4.3/19, Error ellipse: s-maj=18.4km s-min=15.9km az=130.0*

TEH **27** *12:05:35.4, 26.51N×55.99E, h10^{km}, Mn4.3*

THR **27** *12:05:37.0±0.7, 26.82N×55.81E, h15^{km}±12^{km}, ML4.1*

MOS **27** *12:05:38.0±0.9, 26.83N×55.76E, h33^{km}, mb4.8/45, Error ellipse: s-maj=10.0km s-min=4.3km az=127.7*

ISC 27 12:05:34.9±0.2**, 26.77N**±0.02×**55.71E**±0.03**, h10^{km}, (h13^{km}**±3.9^{km}**:pP-P), n291,** σ1^{s}06/302**, mb4.4**/94**, MS4.4**/3**, 37C-24D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.76	33	ePG	Pg	12 05 49.9	-0.2
BNDS				AML	AML	12 06 24.2	
	comp=N,8µm,0.6s						
BANOM	Banah	0.99	147	⇓P	Pb	12 05 55.4	+1.6
BANOM				⇑S	Sb	12 06 10.2	+3.5
ASHO	Ashiyiah	2.10	171	⇓P	Pn	12 06 13.4	+2.9
ASHO				⇓S	Sn	12 06 49.1	+12
GHIR	Ghir-Karzin	2.85	303	ePN	Pn	12 06 24.9	+3.6
GHIR				AML	AML	12 07 30.7	
	comp=N,919nm,0.6s						
KRBR	Kerman	3.34	16	ePN	Pn	12 06 30.2	+2.0
KRBR				AML	AML	12 07 31.5	
	comp=N,475nm,0.6s						
ISRV	Sarvestan	3.47	319	Pn	Pn	12 06 33.7	+3.6
HOQ	Hoqain	3.49	155	⇓P	Pn	12 06 29.4	-1.0
IMOK	Mook	3.49	311	Pn	Pn	12 06 33.9	+3.5
ARQ	Araqi	3.49	168	⇓P	Pn	12 06 31.7	+1.3
IPAR	Pars	3.86	323	Pn	Pn	12 06 38.8	+3.2
BIDO	Bidbid	3.91	145	⇑P	Pn	12 06 36.5	+0.2
BIDO				⇓S	Sn	12 07 21.9	-0.9
BSY	Bisya	4.23	161	⇓P	Pn	12 06 42.2	+1.3
BSYO	Bisya	4.25	161	P	Pn	12 06 42.2	+1.0
SMDO	Samad	4.26	150	⇓P	Pn	12 06 44.3	+3.0
SMDO				⇑S	Sn	12 07 33.1	+1.4
IMEH	Mehriz	4.71	349	Pn	Pn	12 06 49.5	+1.8
IBAF	Bafgh	4.81	359	Pn	Pn	12 06 50.4	+1.3
JMDO	Jabal Madar	4.89	153	⇓P	Pn	12 06 51.6	+1.3
WBK	Wadi Bani Khal	5.09	144	⇓P	Pn	12 06 52.8	-0.3
ZHSF	Zahedan	5.30	56	ePN	Pn	12 06 56.3	+0.3
ISAD	Sadrabad	5.42	342	Pn	Pn	12 07 00.4	+2.6
ICHK	Chekchek	5.58	349	Pn	Pn	12 07 01.2	+1.2
NASN	Na'in	6.52	338	ePN	Pn	12 07 14.2	+0.9
QRN	Al-Qurain	7.18	288	eP	Pn	12 07 23.5	+1.0
KBD	Kabd	7.48	291	eP	Pn	12 07 26.9	+0.1
KBD				AML	AML	12 08 50.9	
	comp=Z,136nm,0.3s						
RDF	Al-Radifah	7.53	288	eP	Pn	12 07 27.9	+0.4
RDF				AML	AML	12 08 52.9	
	comp=Z,93nm,0.4s						
RDF	Al-Radifah	7.53	288	eP	Pn	12 07 27.5	0.0
RDF				eS	Sn	12 08 51.6	-2.3
UMR	Umm Al-Rimmam	7.58	293	eP	Pn	12 07 28.6	+0.4
NAY	Al-Naaiem	7.88	290	eP	Pn	12 07 32.2	-0.1
NAY	Al-Naaiem	7.88	290	eP	Pn	12 07 32.6	+0.3
MIB	Mutribah	7.97	294	eP	Pn	12 07 34.0	+0.4
MIB				AML	AML	12 09 03.5	
	comp=Z,106nm,0.4s						
ISFB	Sefidab	8.13	339	Pn	P	12 07 36.4	+0.5
WHFO	Wadi Hawf	8.98	192	⇓P	P	12 07 47.7	0.0
WHFO				⇑S	Sn	12 09 23.2	-6.7
IFIR	Firoozkooh	9.20	345	Pn	P	12 07 50.9	+0.2
IFIR				Sn	Sn	12 09 31.7	-3.7
RBK	Rabkut	9.32	189	⇓P	P	12 07 51.1	-1.2
IDMV	Damavand	9.33	341	Pn	P	12 07 53.7	+1.2
ABTO	Aybut	9.63	194	⇓P	P	12 07 55.1	-1.6
IAFJ	Afjeh	9.68	340	Pn	P	12 07 58.0	+0.6
IMHD	Mahdasht	9.88	335	Pn	P	12 07 52.4	-7.7
IRAZ	Razeghan	9.93	332	Pn	P	12 08 12.3	+12
AFFS	'Afif	11.83	259	P	P	12 08 25.8	-0.9
KAMS	Al Khamasin	12.05	240	P	P	12 08 27.1	-2.7
HILS	Ha'il	12.41	276	P	P	12 08 33.6	-1.0
DJNS	Zahran al Janu	14.41	234	P	P	12 08 59.3	-1.8
KBRS	Khaybar	14.79	270	P	P	12 09 06.2	+0.3
GNI	Garni	16.16	328	eP	P	12 09 26.8	+3.1
	comp=Z,20nm,0.7s						
GNI	Garni	16.16	328	d iP	P	12 09 26.9	+3.2
GNI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TBKS	Tabuk	17.06	279	P	P	12 09 36.9	+1.7
AYUS	'Aynunah	18.19	279	P	P	12 09 51.1	+1.8
BDAS	Al Bad'	18.34	280	P	P	12 09 53.4	+2.3
KIV	Kislovodsk	20.13	332	eP	P	12 10 12.8	+1.0
	comp=Z,62nm,0.6s						
KIV	Kislovodsk	20.13	332	c iP	P	12 10 12.9	+1.1
KIV				eS	S	12 13 56.5	+4.2
KIV				pmax	pmax		
	comp=Z,58nm,0.7s						
KIV	Kislovodsk	20.13	332	eP	P	12 10 12.8	+1.0
	comp=Z,62nm,0.6s						
GOF	Gofitskoye	20.89	334	⇓ iP	P	12 10 19.9	+0.2
GOF				pmax	pmax		
	comp=Z,82nm,0.6s						
GOF	Gofitskoye	20.89	334	i P	P	12 10 19.9	+0.2
	comp=Z,82nm,0.6s						
AML	Almayashu	21.27	39	P	P	12 10 22.2	-1.4
	SNR=14						
EKS2	Erkin-Say	21.66	38	P	P	12 10 27.1	-0.4
	SNR=19						
UCH	Uchtor	21.80	40	P	P	12 10 32.5	+3.7
	SNR=6.8						
AAK	Ala-Archa	22.04	39	P	P	12 10 34.9	+3.6
	SNR=7.7						
AAK	Ala-Archa	22.04	39	eP	P	12 10 29.5	-1.8
	comp=Z,24nm,1.2s,mb4.5						
AAK	Ala-Archa	22.04	39	eP	P	12 10 29.5	-1.8
AAK				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.5						
AAK	Ala-Archa	22.04	39	eP	P	12 10 29.5	-1.8
	comp=Z,24nm,1.2s,mb4.5						
KZA	Kyzart	22.13	41	P	P	12 10 32.9	+0.7
	SNR=9.8						
KBK	Karagaybulak	22.32	40	P	P	12 10 37.2	+3.2
	SNR=5.4						
USP	Ospenovka	22.46	38	P	P	12 10 37.2	+1.8
	SNR=6.8						
BR131	Keskin Array S	22.46	311	eP	P	12 10 37.1	+1.5
	comp=Z,2.7nm,0.5s,mb3.9						
BR131	Keskin Array S	22.46	311	eP	P	12 10 37.1	+1.6
	comp=Z,2.7nm,0.5s,mb3.9						
BRTR	Keskin Array B	22.46	311	P	P	12 10 35.5	0.0
	comp=Z,3.2nm,0.6s,mb3.9,baz=138,slow=11,SNR=19						
BRTR	Keskin Array B	22.46	311	P	P	12 10 35.5	0.0
ULHL	Ulahol	22.82	42	P	P	12 10 39.5	+0.5
	SNR=10						
AKTO	Aktyubinsk	23.70	4	P	P	12 10 47.3	-0.3
	comp=Z,6.4nm,0.6s,mb4.2,baz=177,slow=9.8,SNR=28						
ISP	Isparta	23.92	304	eP	P	12 10 52.1	+2.3
	comp=Z,9.6nm,0.6s,mb4.4						
ISP	Isparta	23.92	304	eP	P	12 10 52.1	+2.3
ISP				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.4						
IDI	Anoyia	27.65	295	P	P	12 11 26.1	+1.3
	comp=Z,12nm,0.6s,mb4.7,baz=64,slow=7.4,SNR=14						
TIRR	Tirgusor	28.16	316	eP	P	12 11 29.2	-0.1
TIRR	Tirgusor	28.16	316	eP	P	12 11 29.2	-0.1
BRVK	Borovoye	28.43	19	eP	P	12 11 30.4	-1.2
	comp=Z,2.2nm,0.7s,mb3.9						
BRVK	Borovoye	28.43	19	eP	P	12 11 30.4	-1.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
BRVK	Borovoye	28.43	19	eP	P	12 11 30.4	-1.2
	comp=Z,2.2nm,0.7s,mb3.9						
BVAR	Borovoye Array	28.43	19	P	P	12 11 29.8	-1.9
	comp=Z,4.2nm,0.6s,mb4.2,baz=203,slow=8.7,SNR=31						
MKAR	Makanchi Array	28.98	39	P	P	12 11 35.9	-0.8
	comp=Z,1.2nm,0.5s,mb3.9,baz=228,slow=7.5,SNR=22						
CHKZ	Chkalovo	29.07	18	eP	P	12 11 35.8	-1.6
	comp=Z,1.4nm,0.6s,mb3.9						
CHKZ	Chkalovo	29.07	18	eP	P	12 11 35.8	-1.6
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
CHKZ	Chkalovo	29.07	18	eP	P	12 11 35.8	-1.6
	comp=Z,1.4nm,0.6s,mb3.9						
MLR	Muntele Rosu	30.19	316	P	P	12 11 48.2	+0.6
	comp=Z,3.5nm,0.4s,mb4.5,baz=6.1,slow=9.4,SNR=11						
MLR	Muntele Rosu	30.19	316	⇑P	P	12 11 49.4	+1.8
MLR	Muntele Rosu	30.19	316	⇑P	P	12 11 49.4	+1.9
VOIR		30.73	315	⇑P	P	12 11 53.1	+0.9
VOIR		30.73	315	⇑P	P	12 11 53.1	+0.8
WMQ	Urumqi	30.91	48	eP	P	12 11 53.5	-0.4
WMQ				XP	sP	12 12 00.0	+1.9
WMQ				PP	PP	12 12 54.0	-1.6
WMQ				eS	S	12 16 55.5	-1.4
WMQ				AMB	AMB		
	comp=Z,90nm,4.7s						
WMQ				LR	LR		
	comp=N,380nm,27.4s,MS4.0						
WMQ				LR	LR		
	comp=E,300nm,27.4s,MS4.0						
WMQ				LR	LR		
	comp=Z,280nm,21.2s						
AKASG	Malin Array Be	31.29	327	P	P	12 11 56.0	-1.2
	comp=Z,8.3nm,0.5s,mb4.8,baz=134,slow=8.4,SNR=63						
OBN	Obninsk	31.58	339	eP	P	12 11 59.1	-0.6
	comp=Z,12nm,0.5s,mb5.0						
OBN	Obninsk	31.58	339	eP	P	12 11 59.3	-0.4
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.9						
OBN	Obninsk	31.58	339	eP	P	12 11 59.3	-0.4
	comp=Z,10.0nm,0.5s,mb4.9						
BURAR	Bucovina Array	31.67	319	⇑P	P	12 12 01.0	+0.5
BURAR	Bucovina Array	31.67	319	⇑P	P	12 12 01.0	+0.5
DRGR		32.79	316	⇓P	P	12 12 09.8	-0.5
DRGR		32.79	316	⇓P	P	12 12 09.8	-0.4
KMBO	Kilima Mbogo	32.95	216	P	P	12 12 14.0	+2.0
	comp=Z,1.2nm,0.7s,mb3.9,baz=28,slow=15,SNR=4.3						
BZS	Buzias	32.99	314	⇓P	P	12 12 12.4	+0.3
BZS	Buzias	32.99	314	⇓P	P	12 12 12.4	+0.4
KOLS	Kolonicke sedl	34.03	320	i P	P	12 12 22.0	+1.0
CRVS	Cervenica-Dubn	34.49	319	i P	P	12 12 25.0	0.0
CRVS				epP	pP	12 12 29.8	+1.8
NVS	Novosibirsk	34.51	28	eP	P	12 12 23.3	-1.9
KECS	Kecovo	34.88	318	i P	P	12 12 28.9	+0.5
KECS				ePP	PP	12 13 48.9	+2.9
PSZ	Piszkesteto	35.00	317	eP	P	12 12 28.6	-0.8
PSZ	Piszkesteto	35.00	317	eP	P	12 12 28.7	-0.7
OJC	Ojcow	36.05	320	eP	P	12 12 38.4	+0.1
SUW	Suwalki	36.24	328	eP	P	12 12 39.5	-0.4
OKC	Ostrava-Krasne	36.84	319	eP	P	12 12 44.9	-0.1
BOJS	Bojanci	37.17	311	i P	P	12 12 48.5	+0.8
BOJS	Bojanci	37.17	311	i P	P	12 12 48.5	+0.8
MORC	Moravsky Berou	37.18	318	⇓P	P	12 12 48.0	+0.2
MORC	Moravsky Berou	37.18	318	⇓P	P	12 12 48.0	+0.2
VRAC	Vranov	37.56	317	⇓P	P	12 12 51.6	+0.6
VRAC	Vranov	37.56	317	⇓P	P	12 12 51.6	+0.6
DPC	Dobruska-Polom	38.13	319	eP	P	12 12 55.8	+0.1
KSP	Ksiaz	38.34	320	eP	P	12 12 57.6	+0.1
UPC	Upice	38.37	319	eP	P	12 12 57.6	-0.2
GTA	Gaotai	38.69	60	eP	P	12 13 02.0	+1.4
GTA				AP	pP	12 13 12.0	+8.4
GTA				PP	PP	12 14 36.3	+3.4
GTA				S	S	12 19 00.3	+3.4
GTA				XS		12 19 07.0	
GTA				AMB	AMB		
	comp=Z,110nm,6.5s						
GTA				LR	LR		
	comp=N,150nm,14.5s,MS4.0						
GTA				LR	LR		
	comp=E,130nm,17.1s,MS4.0						
GTA				LR	LR		
	comp=Z,240nm,13.7s,MS4.2						
GEC2	GERESS Array S	39.18	316	eP	P	12 13 04.4	-0.2
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.2						
GEC2	GERESS Array S	39.18	316	eP	P	12 13 04.4	-0.2
	comp=Z,6.0nm,1.2s,mb4.2						
GERES	GERESS Array B	39.18	316	P	P	12 13 04.1	-0.5
	comp=Z,1.3nm,0.5s,mb4.0,baz=105,slow=7.4,SNR=37						
KHC	Kasperske Hory	39.35	316	eP	P	12 13 05.7	-0.3
BRG	Berggiesshubel	39.73	319	eP	P	12 13 08.7	-0.4
	comp=Z,3.3nm,0.7s,mb4.2						
BRG	Berggiesshubel	39.73	319	eP	P	12 13 08.7	-0.4
BRG				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
BRG	Berggiesshubel	39.73	319	eP	P	12 13 08.7	-0.4
	comp=Z,3.3nm,0.7s,mb4.2						
WET	Wettzell	39.79	316	eP	P	12 13 09.1	-0.5
FINES	FINESS Array B	39.98	338	P	P	12 13 08.1	-3.0
	comp=Z,3.2nm,0.4s,mb4.4,baz=139,slow=10,SNR=53						
FINES	FINESS Array B	39.98	338	eP	P	12 13 10.4	-0.7
WTTA	Wattenberg	40.05	313	i P	P	12 13 11.7	-0.1
	comp=Z,5.0nm,0.6s,mb4.4,SNR=16						
WATA	Walderalm	40.11	313	⇑ iP	P	12 13 11.8	-0.5
	comp=Z,5.5nm,0.8s,mb4.3,SNR=5.8						
SQTA	Sankt Quirin	40.32	312	⇑ iP	P	12 13 13.8	-0.2
	comp=Z,6.3nm,0.6s,mb4.5,SNR=32						
KAF	Kangasniemi	40.40	339	ep	P	12 13 13.8	-0.7
MOTA	Moosalm	40.42	313	⇑ iP	P	12 13 14.2	-0.6
	comp=Z,5.7nm,0.9s,mb4.3,SNR=12						
CLL	Collm	40.44	319	eP	P	12 13 15.0	+0.1
GRA1	Grafenberg Arr	40.99	316	eP	P	12 13 19.9	+0.4
	comp=Z,9.0nm,0.6s,mb4.6						
GRA1				epP	pP	12 13 22.5	0.0
GRF	Grafenberg Arr	40.99	316	eP	P	12 13 19.9	+0.4
GRF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
GRF	Grafenberg Arr	40.99	316	eP	P	12 13 19.9	+0.4
GRF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
GRF	Grafenberg Arr	40.99	316	eP	P	12 13 19.9	+0.4
	comp=Z,9.0nm,0.6s,mb4.6						
GRF				epP	pP	12 13 22.5	0.0
PGF	Pioggiola	40.99	305	⇑ iP	P	12 13 19.5	-0.1
	comp=Z,13nm,0.6s,mb4.4						
PGF	Pioggiola	40.99	305	⇑ iP	P	12 13 19.5	-0.1
PGF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.4						
DAVA	Damuels	41.22	312	i P	P	12 13 21.1	-0.2
	comp=Z,7.7nm,0.5s,mb4.6,SNR=66						
CLZ	Clausthal	42.16	319	eP	P	12 13 30.1	+1.0
CLZ				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
CLZ	Clausthal	42.16	319	eP	P	12 13 30.1	+1.0
	comp=Z,9.0nm,0.6s,mb4.6						
CLZ				epP	pP	12 13 32.7	+0.6
SBF	Sospel	42.29	307	eP	P	12 13 30.2	0.0
	comp=Z,45nm,0.9s,mb4.8						
SBF	Sospel	42.29	307	eP	P	12 13 30.2	0.0
SBF				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.8						
FRF	La Foret Royal	42.82	306	eP	P	12 13 34.4	-0.2
	comp=Z,9.9nm,0.8s,mb4.3						
FRF	La Foret Royal	42.82	306	eP	P	12 13 34.4	-0.2
FRF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
TNS	Taunus Mts	42.86	316	eP	P	12 13 35.1	+0.3
MBDF	Montbardon	42.88	308	eP	P	12 13 34.5	-0.5
	comp=Z,13nm,0.7s,mb4.5						
MBDF	Montbardon	42.88	308	eP	P	12 13 34.5	-0.5
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
LPG	La Plagne	43.00	309	eP	P	12 13 35.5	-0.5
	comp=Z,19nm,0.9s,mb4.5						
LPG	La Plagne	43.00	309	eP	P	12 13 35.5	-0.5
LPG				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
LPL	La Plagne	43.02	309	eP	P	12 13 35.6	-0.5
	comp=Z,12nm,0.6s,mb4.5						
LPL	La Plagne	43.02	309	eP	P	12 13 35.6	-0.5
LPL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
ZAK	Zakamensk	43.09	44	eP	P	12 13 38.2	+1.5
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
ZAK	Zakamensk	43.09	44	eP	P	12 13 38.2	+1.5
	comp=Z,1.0nm,0.8s,mb3.6						
CDF	Champ du Feu	43.17	313	eP	P	12 13 36.1	-1.3
	comp=Z,8.5nm,0.7s,mb4.3						
CDF	Champ du Feu	43.17	313	eP	P	12 13 36.1	-1.3
CDF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
HINF	Hinteralfeld	43.33	312	eP	P	12 13 37.8	-0.8
	comp=Z,6.3nm,0.6s,mb4.2						
HINF	Hinteralfeld	43.33	312	eP	P	12 13 37.8	-0.8
HINF				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
ORIF	Oris-en-Rattie	43.53	308	eP	P	12 13 38.6	-1.7
CABF	La Chapelle	43.63	310	eP	P	12 13 40.8	-0.3
	comp=Z,24nm,0.8s,mb4.7						
CABF	La Chapelle	43.63	310	eP	P	12 13 40.8	-0.3
CABF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.7						
SMRF	Simiane la Rot	43.64	307	eP	P	12 13 40.9	-0.3
HAU	Haudompre	43.70	312	eP	P	12 13 40.6	-1.0
	comp=Z,12nm,0.8s,mb4.4						
HAU	Haudompre	43.70	312	eP	P	12 13 40.6	-1.0
HAU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
VIVF	Saint-Julien-l	44.38	308	eP	P	12 13 46.4	-0.8
	comp=Z,22nm,1.2s,mb4.5						
VIVF	Saint-Julien-l	44.38	308	eP	P	12 13 46.4	-0.8
VIVF				pmax	pmax		
	comp=Z,11nm,1.2s,mb4.5						
SONM	Songino Array	44.55	48	P	P	12 13 47.3	-1.3
	comp=Z,2.2nm,0.9s,mb4.0,baz=265,slow=8.1,SNR=12						
LASF	Ste Croix	44.88	307	⇑ iP	P	12 13 50.8	-0.5
	comp=Z,32nm,1.1s,mb4.8						
ULN	Ulaanbaatar	44.99	48	⇓ eP	P	12 13 53.6	+1.5
ULN	Ulaanbaatar	44.99	48	eP	P	12 13 53.6	+1.5
SMF	Signal de Mont	45.17	310	⇑ iP	P	12 13 52.7	-0.8
	comp=Z,17nm,0.6s,mb4.7						
SMF	Signal de Mont	45.17	310	⇑ iP	P	12 13 52.7	-0.8
SMF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.7						
LOR	Lormes	45.24	311	eP	P	12 13 53.2	-0.9
	comp=Z,8.8nm,0.6s,mb4.5						
LOR	Lormes	45.24	311	eP	P	12 13 53.2	-0.9
LOR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.4						
NB2	NORSAR Subarra	45.44	331	P	P	12 13 54.0	-1.4
	comp=Z,1.7nm,0.5s,mb4.1,baz=117,slow=7.9						
NOA	NORSAR Array B	45.44	331	P	P	12 13 54.2	-1.2
	comp=Z,2.6nm,0.8s,mb4.1,baz=117,slow=7.9,SNR=8.3						
SSF	Saint Saulge	45.45	311	eP	P	12 13 55.1	-0.6
SSF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.7						
SSF	Saint Saulge	45.45	311	eP	P	12 13 55.1	-0.6
	comp=Z,9.4nm,0.7s,mb4.7						
BAIF	Baives	45.48	315	⇑ iP	P	12 13 56.4	+0.5
NAO	NORSAR Subarra	45.50	331	P	P	12 13 54.0	-1.9
NAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
NAO	NORSAR Subarra	45.50	331	P	P	12 13 54.0	-1.9
	comp=Z,1.7nm,0.5s,mb4.1						
AVF	Avril sur Loir	45.52	310	⇑ iP	P	12 13 55.4	-0.9
	comp=Z,9.6nm,0.7s,mb4.6						
AVF	Avril sur Loir	45.52	310	⇑ iP	P	12 13 55.4	-0.9
AVF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.5						
BGF	Bois d'Agland	45.84	310	⇑ iP	P	12 13 58.2	-0.6
	comp=Z,17nm,0.6s,mb4.8						
BGF	Bois d'Agland	45.84	310	⇑ iP	P	12 13 58.2	-0.6
BGF				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.9						
MTLF	Montolieu	46.02	305	⇑ iP	P	12 14 00.6	+0.3
	comp=Z,13nm,0.7s,mb4.7						
MTLF	Montolieu	46.02	305	⇑ iP	P	12 14 00.6	+0.3
MTLF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
HYF	Humbligny	46.06	311	eP	P	12 14 00.7	+0.1
KEV	Kevo	46.14	347	ep	P	12 14 00.4	-0.5
	comp=Z,4.6nm,0.6s,mb4.6						
KEV	Kevo	46.14	347	eP	P	12 14 00.4	-0.5
KEV				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.6						
CAF	Calviac	46.23	308	⇑ iP	P	12 14 01.8	-0.1
	comp=Z,14nm,0.7s,mb4.7						
CAF	Calviac	46.23	308	⇑ iP	P	12 14 01.8	-0.1
CAF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
TCF	Toulx Ste Croi	46.25	309	⇑ iP	P	12 14 01.6	-0.4
	comp=Z,12nm,0.6s,mb4.7						
TCF	Toulx Ste Croi	46.25	309	⇑ iP	P	12 14 01.6	-0.4
TCF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.7						
ARCES	ARCESS Array B	46.28	346	P	P	12 14 00.1	-1.9
	comp=Z,0.7nm,0.3s,mb4.0,baz=138,slow=6.9,SNR=18						
EMIR	Miracle	46.48	303	P	P	12 14 05.5	+1.6
	comp=Z,1.6nm,0.5s,mb4.2						
EMIR	Miracle	46.48	303	P	P	12 14 05.5	+1.6
	comp=Z,1.6nm,0.5s,mb4.2						
RJF	Les Rejaudoux	46.64	308	⇑ iP	P	12 14 05.2	0.0
	comp=Z,18nm,0.8s,mb4.7						
RJF	Les Rejaudoux	46.64	308	⇑ iP	P	12 14 05.2	0.0
RJF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
EPOB	Poblet	46.81	303	P	P	12 14 07.1	+0.6
	comp=Z,1.3nm,0.3s,mb4.3						
EPOB	Poblet	46.81	303	P	P	12 14 07.1	+0.6
	comp=Z,1.3nm,0.3s,mb4.3						
LFF	La Frestale	47.17	308	⇑ iP	P	12 14 09.3	0.0
	comp=Z,34nm,0.9s,mb5.0						
LFF	La Frestale	47.17	308	⇑ iP	P	12 14 09.3	0.0
LFF				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
ERTA	Horta de San J	47.37	302	P	P	12 14 11.9	+0.9
	comp=Z,1.1nm,0.4s,mb4.1						
ERTA	Horta de San J	47.37	302	P	P	12 14 11.9	+0.9
	comp=Z,1.1nm,0.4s,mb4.1						
EPF	Esparros	47.38	305	eP	P	12 14 09.8	-1.2
	comp=Z,7.9nm,0.9s,mb4.4						
EPF	Esparros	47.38	305	eP	P	12 14 09.8	-1.2
EPF				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
EGRA	Graus	47.38	304	P	P	12 14 12.5	+1.4
	comp=Z,2.1nm,0.4s,mb4.4						
EGRA	Graus	47.38	304	P	P	12 14 12.5	+1.4
	comp=Z,2.1nm,0.4s,mb4.4						
EBIE	Bielsa	47.52	304	P	P	12 14 12.7	+0.6
	comp=Z,1.1nm,0.4s,mb4.2						
EBIE	Bielsa	47.52	304	P	P	12 14 12.7	+0.6
	comp=Z,1.1nm,0.4s,mb4.2						
EBEN	Beniarda	47.87	299	P	P	12 14 15.8	+0.8
	comp=Z,1.9nm,0.5s,mb4.4						
EBEN	Beniarda	47.87	299	P	P	12 14 15.8	+0.8
	comp=Z,1.9nm,0.5s,mb4.4						
ESAC	San Caprasio	47.97	303	P	P	12 14 16.6	+0.9
	comp=Z,2.9nm,0.3s,mb4.8						
ESAC	San Caprasio	47.97	303	P	P	12 14 16.6	+0.9
	comp=Z,2.9nm,0.3s,mb4.8						
EMOS	Mosqueruela	47.99	301	P	P	12 14 17.6	+1.7
	comp=Z,1.9nm,0.6s,mb4.3						
EMOS	Mosqueruela	47.99	301	P	P	12 14 17.6	+1.7
	comp=Z,1.9nm,0.6s,mb4.3						
ETSF	Etsaut	48.04	305	eP	P	12 14 16.4	+0.2
	comp=Z,12nm,0.6s,mb4.8						
ETSF	Etsaut	48.04	305	eP	P	12 14 16.4	+0.2
ETSF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.8						
LDF	La Druitiere	48.06	312	⇑ iP	P	12 14 15.1	-1.2
	comp=Z,9.8nm,0.5s,mb4.8						
LDF	La Druitiere	48.06	312	⇑ iP	P	12 14 15.1	-1.2
LDF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
FLN	La Foliniere	48.31	313	eP	P	12 14 17.1	-1.2
	comp=Z,42nm,1.0s,mb5.1						
FLN	La Foliniere	48.31	313	eP	P	12 14 17.1	-1.2
FLN				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.1						
GRR	Gorron	48.53	312	eP	P	12 14 18.6	-1.3
ETOB	Tobarra	48.91	299	P	P	12 14 23.8	+0.9
	comp=Z,1.3nm,0.4s,mb4.3						
ETOB	Tobarra	48.91	299	P	P	12 14 23.8	+0.8

	comp=Z,1.3nm,0.4s,mb4.3						
SGMF	**Saint Gilles**	49.65	312	eP	P	12 14 27.7	-0.8
EVIA	**Vianos**	49.65	299	P	P	12 14 29.8	+1.1
	comp=Z,4.7nm,0.5s,mb4.8						
EVIA	**Vianos**	49.65	299	P	P	12 14 29.8	+1.1
EVIA				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.8						
EVIA	**Vianos**	49.65	299	P	P	12 14 29.8	+1.1
	comp=Z,4.7nm,0.5s,mb4.8						
EHUE	**Huescar**	49.79	298	P	P	12 14 30.5	+0.7
	comp=Z,1.1nm,0.4s,mb4.2						
EHUE	**Huescar**	49.79	298	P	P	12 14 30.5	+0.7
EHUE				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
EHUE	**Huescar**	49.79	298	P	P	12 14 30.5	+0.7
	comp=Z,1.1nm,0.4s,mb4.2						
QUIF	**Quistinic**	50.03	311	eP	P	12 14 30.3	-1.2
	comp=Z,25nm,0.9s,mb5.0						
QUIF	**Quistinic**	50.03	311	eP	P	12 14 30.3	-1.2
QUIF				pmax	pmax		
	comp=Z,13nm,0.9s,mb5.0						
EBER	**Berja**	50.12	297	P	P	12 14 33.2	+0.9
	comp=Z,5.3nm,0.5s,mb4.8						
EBER	**Berja**	50.12	297	P	P	12 14 33.2	+0.9
	comp=Z,5.3nm,0.5s,mb4.8						
ROSF	**Rostrenen**	50.13	312	eP	P	12 14 31.2	-1.0
EQES	**Quesada**	50.17	298	P	P	12 14 32.5	-0.2
	comp=Z,1.4nm,0.4s,mb4.3						
EBAN	**Banos Encina**	50.70	299	P	P	12 14 36.9	+0.2
	comp=Z,2.6nm,0.6s,mb4.3						
EBAN	**Banos Encina**	50.70	299	P	P	12 14 36.9	+0.2
EBAN				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
EBAN	**Banos Encina**	50.70	299	P	P	12 14 36.9	+0.2
	comp=Z,2.6nm,0.6s,mb4.3						
ESDC	**Sonseca Array**	50.71	301	P	P	12 14 36.4	-0.4
	comp=Z,2.3nm,0.4s,mb4.4,baz=69,slow=7.5,SNR=23						
ESDC	**Sonseca Array**	50.71	301	P	P	12 14 36.9	+0.1
	comp=Z,2.2nm,0.3s,mb4.6						
ESDC	**Sonseca Array**	50.71	301	P	P	12 14 36.9	+0.2
	comp=Z,2.2nm,0.3s,mb4.6						
ESLA	**Sonseca Array**	50.71	301	eP	P	12 14 36.5	-0.3
	comp=Z,0.4nm,0.6s,mb3.5						
ESLA	**Sonseca Array**	50.71	301	eP	P	12 14 36.5	-0.2
	comp=Z,0.4nm,0.6s,mb3.5						
GUD	**Guadarrama**	50.78	302	P	P	12 14 37.8	+0.5
	comp=Z,0.3nm,0.3s,mb3.7						
GUD	**Guadarrama**	50.78	302	P	P	12 14 37.8	+0.5
	comp=Z,0.3nm,0.3s,mb3.7						
BOD	**Bodaibo**	50.96	36	eP	P	12 14 36.5	-1.9
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
BOD	**Bodaibo**	50.96	36	eP	P	12 14 36.5	-1.9
	comp=Z,5.0nm,1.1s,mb4.4						
ELOJ	**Sierra Loja**	51.09	297	P	P	12 14 39.2	-0.6
	comp=Z,2.9nm,0.6s,mb4.4						
ELOJ	**Sierra Loja**	51.09	297	P	P	12 14 39.2	-0.5
ELOJ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.4						
ELOJ	**Sierra Loja**	51.09	297	P	P	12 14 39.2	-0.5
	comp=Z,2.9nm,0.6s,mb4.4						
EADA	**Adamuz**	51.32	299	P	P	12 14 41.3	-0.1
	comp=Z,1.5nm,0.4s,mb4.3						
EADA	**Adamuz**	51.32	299	P	P	12 14 41.3	-0.1
	comp=Z,1.5nm,0.4s,mb4.3						
EMIJ	**Mijas**	51.66	297	P	P	12 14 44.9	+0.8
	comp=Z,1.2nm,0.3s,mb4.3						
EMIJ	**Mijas**	51.66	297	P	P	12 14 44.8	+0.8
	comp=Z,1.2nm,0.3s,mb4.3						
ECAB	**El Cabril**	51.99	299	P	P	12 14 46.4	-0.1
	comp=Z,4.9nm,0.4s,mb4.8						
ECAB	**El Cabril**	51.99	299	P	P	12 14 46.4	-0.1
	comp=Z,4.9nm,0.4s,mb4.8						
ESPR	**Espera**	52.48	297	P	P	12 14 49.2	-1.0
	comp=Z,2.4nm,0.4s,mb4.5						
ESPR	**Espera**	52.48	297	P	P	12 14 49.2	-1.0
	comp=Z,2.4nm,0.4s,mb4.5						
EPON	**Pontenova**	52.85	305	P	P	12 14 52.9	0.0
	comp=Z,1.2nm,0.3s,mb4.3						
EPON	**Pontenova**	52.85	305	P	P	12 14 52.8	-0.1
	comp=Z,1.2nm,0.3s,mb4.3						
EMIN	**Mina Concepcio**	53.01	298	P	P	12 14 53.5	-0.7
	comp=Z,1.0nm,0.3s,mb4.2						
EMIN	**Mina Concepcio**	53.01	298	P	P	12 14 53.5	-0.7
	comp=Z,1.0nm,0.3s,mb4.2						
EBAD	**Badajoz**	53.15	300	P	P	12 14 54.7	-0.5
	comp=Z,0.2nm,0.1s,mb4.0						
PVRL	**Vila Real**	53.42	303	eP	P	12 14 57.4	+0.2
	comp=Z,35nm,1.7s,mb5.0						
PVIS	**Viseu**	53.61	302	eP	P	12 14 58.3	-0.2
	comp=Z,30nm,1.7s,mb5.0						
EGRO	**El Granado**	53.68	298	P	P	12 14 58.4	-0.7
	comp=Z,0.5nm,0.2s,mb4.1						
EGRO	**El Granado**	53.68	298	P	P	12 14 58.3	-0.8
	comp=Z,0.5nm,0.2s,mb4.1						
EVO	**Evora**	53.96	300	⇑iP	P	12 15 01.4	+0.3
	comp=Z,7.7nm,0.6s,mb4.5						
PTOM	**Tomar**	54.13	301	eP	P	12 15 01.7	-0.6
NJ2	**Nanjing**	54.59	68	eP	P	12 15 01.3	-4.5
NJ2				AP	pP	12 15 11.3	+2.4
NJ2				XP	sP	12 15 15.3	+5.3
NJ2				PP	PP	12 17 04.8	-5.0
NJ2				S	S	12 22 36.0	-7.6
NJ2				XS		12 22 51.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,360nm,6.3s						
NJ2				LR	LR		
	comp=Z,2μm,17.3s,MS5.2						
SSE	**Sheshan**	56.74	69	P	P	12 15 18.5	-2.9
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
SSE				AMB	AMB		
	comp=Z,60nm,4.2s						
SSE	**Sheshan**	56.74	69	P	P	12 15 18.5	-2.9
	comp=Z,20nm,0.8s,mb5.2						
DBIC	**Dimbokro**	60.78	262	P	P	12 15 49.6	-0.1
	comp=Z,2.6nm,0.7s,mb4.5,baz=36,slow=8.0,SNR=6.0						
DBIC	**Dimbokro**	60.78	262	eP	P	12 15 49.0	-0.7
	comp=Z,2.7nm,0.7s,mb4.5						
DBIC	**Dimbokro**	60.78	262	eP	P	12 15 49.0	-0.7
DBIC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DBIC	**Dimbokro**	60.78	262	eP	P	12 15 49.0	-0.7
	comp=Z,2.7nm,0.7s,mb4.5						
BOSA	**Boshof**	62.34	210	P	P	12 15 59.0	-1.0
	comp=Z,4.3nm,0.7s,mb4.7,baz=32,slow=6.4,SNR=7.9						
INK	**Inuvik**	84.97	3	P	P	12 18 10.4	-0.6
	comp=Z,2.2nm,1.1s,mb4.2,baz=349,slow=5.3,SNR=6.7						
ILAR	**Eielson Array**	87.08	9	P	P	12 18 20.6	-0.9
	comp=Z,0.8nm,0.7s,mb4.1,baz=318,slow=4.1,SNR=21						
DAWY	**Dawson**	88.70	7	eP	P	12 18 28.3	-1.0
WRA	**Warramunga Arr**	89.20	113	P	P	12 18 31.6	-1.2
	comp=Z,0.5nm,0.6s,mb4.0,baz=311,slow=3.9,SNR=10						
WRAB	**Tennant Creek**	89.21	113	eP	P	12 18 33.1	+0.3
	comp=Z,1.3nm,0.6s,mb4.4						
WRAB	**Tennant Creek**	89.21	113	eP	P	12 18 33.1	+0.4
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.3						
WRAB	**Tennant Creek**	89.21	113	eP	P	12 18 33.1	+0.4
	comp=Z,1.0nm,0.6s,mb4.3						

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*IDC **27** 12:19:37.8±1.3,26.66N×55.91E,mb3.8/11,mb1 3.9/11, mb1mx3.8/22,mbtmp3.8/11,Error ellipse: s-maj=29.5km s-min=24.5km az=138.0*

*THR **27** 12:19:38.8±0.5,26.56N×56.35E,h33^{km}±5^{km},ML3.7*

*NEIC **27** 12:19:39.5±0.9,26.66N×55.85E,h10^{km},mb3.8/4, ML3.7(THR),MN3.8(TEH),Error ellipse: s-maj=18.5km s-min=13.7km az=164.0*

*CSEM **27** 12:19:40.2±0.1,26.70N×55.85E,h30^{km},mb3.7/3,Error ellipse: s-maj=3.3km s-min=2.6km az=81.0*

*MOS **27** 12:19:41.3±1.0,26.69N×55.81E,h33^{km},mb4.1/4,Error ellipse: s-maj=22.7km s-min=12.9km az=87.1*

*TEH **27** 12:19:42.4,26.83N×55.97E,h10^{km},Mn3.8*

ISC 27 12:19:41.9±1.0,**26.8N**±0.1×**55.86E**±0.08,**h33**^{km}**,n37,** σ**1^{s}06**/40,**mb3.7**/14,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	0.67	25	ePG	P	12 19 55.1	+0.2
BNDS				AML	AML	12 20 24.3	
	comp=N,3μm,0.7s						
GHIR	**Ghir-Karzin**	2.95	301	ePN	Pn	12 20 32.3	+4.6
GHIR				eSG	S	12 21 23.7	+21
GHIR				AML	AML	12 21 29.7	
	comp=N,146nm,0.7s						
KRBR	**Kerman**	3.28	14	ePN	Pn	12 20 32.5	+0.2
KRBR				eSG	S	12 21 23.0	+12
ISRV	**Sarvestan**	3.54	317	Pn	Pn	12 20 36.2	+0.2
IMOK	**Mook**	3.58	310	Pn	Pn	12 20 38.2	+1.7
IPAR	**Pars**	3.92	321	Pn	Pn	12 20 41.8	+0.4
IMEH	**Mehriz**	4.71	347	Pn	Pn	12 20 53.1	+0.4
IBAF	**Bafgh**	4.79	357	Pn	Pn	12 20 53.4	-0.4
ZHSF	**Zahedan**	5.17	56	ePN	Pn	12 20 53.4	-5.7
ISAD	**Sadrabad**	5.45	340	Pn	Pn	12 21 02.7	-0.3
ICHK	**Chekchek**	5.58	347	Pn	Pn	12 21 04.6	-0.3
ISFB	**Sefidab**	8.16	338	Pn	P	12 21 39.6	-1.2
ISFB				Sn	Sn	12 23 06.9	-6.2
IAFJ	**Afjeh**	9.71	340	Pn	P	12 22 00.6	-1.7
IAFJ				Sn	Sn	12 23 43.3	-8.1
KIV	**Kislovodsk**	20.17	331	P	P	12 24 14.9	-1.3
	comp=N,22nm,1.1s						
KIV	**Kislovodsk**	20.17	331	P	P	12 24 14.9	-1.3
KIV				pmax	pmax		
	comp=Z,22nm,1.1s						
KIV	**Kislovodsk**	20.17	331	P	P	12 24 14.9	-1.3
	comp=Z,22nm,1.1s						
AAK	**Ala-Archa**	21.94	39	eP	P	12 24 34.7	+0.5
	comp=Z,2.0nm,0.9s,mb3.5						
AAK	**Ala-Archa**	21.94	39	eP	P	12 24 34.7	+0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s,mb3.5						
AAK	**Ala-Archa**	21.94	39	eP	P	12 24 34.7	+0.5
	comp=Z,2.0nm,0.9s,mb3.5						
BRTR	**Keskin Array B**	22.55	310	P	P	12 24 41.9	+1.6
	comp=Z,1.2nm,0.8s,mb3.4,baz=130,slow=11,SNR=4.2						
BRTR	**Keskin Array B**	22.55	310	P	P	12 24 41.8	+1.5
AKTO	**Aktyubinsk**	23.67	3	P	P	12 24 53.6	+2.5
	comp=Z,2.2nm,0.6s,mb3.8,baz=167,slow=9.1,SNR=9.8						
BRVK	**Borovoye**	28.36	18	eP	P	12 25 36.3	+1.3
	comp=Z,1.1nm,0.6s,mb3.7						
BRVK	**Borovoye**	28.36	18	eP	P	12 25 36.3	+1.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.6						
BRVK	**Borovoye**	28.36	18	eP	P	12 25 36.3	+1.4
	comp=Z,1.1nm,0.6s,mb3.7						
BVAR	**Borovoye Array**	28.36	19	P	P	12 25 34.5	-0.5
	comp=Z,2.5nm,0.7s,mb3.9,baz=196,slow=11,SNR=10						
MKAR	**Makanchi Array**	28.87	39	P	P	12 25 38.8	-0.7
	comp=Z,0.5nm,0.7s,mb3.3,baz=225,slow=6.9,SNR=6.1						
CHKZ	**Chkalovo**	29.00	18	P	P	12 25 41.5	+0.9
	comp=Z,0.7nm,0.5s,mb3.6						
CHKZ	**Chkalovo**	29.00	18	P	P	12 25 41.6	+1.0
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
CHKZ	**Chkalovo**	29.00	18	P	P	12 25 41.5	+0.9
	comp=Z,0.6nm,0.5s,mb3.6						
AKASG	**Malin Array Be**	31.34	327	P	P	12 25 59.8	-1.7
	comp=Z,1.0nm,0.6s,mb3.8,baz=134,slow=8.4,SNR=6.0						
GERES	**GERESS Array B**	39.26	316	P	P	12 27 09.2	+0.3
	comp=Z,0.4nm,0.7s,mb3.3,baz=101,slow=6.8,SNR=3.6						
FINES	**FINESS Array B**	40.01	338	P	P	12 27 14.3	-0.7
	comp=Z,0.9nm,0.6s,mb3.7,baz=153,slow=8.5,SNR=5.2						
SONM	**Songino Array**	44.44	48	P	P	12 27 50.5	-0.8
	comp=Z,0.6nm,0.8s,mb3.4,baz=252,slow=9.1,SNR=3.5						
BOSA	**Boshof**	62.43	210	P	P	12 30 02.6	-1.6
	comp=Z,1.7nm,0.7s,mb4.3,baz=30,slow=10,SNR=4.3						
INK	**Inuvik**	84.94	3	P	P	12 32 14.3	0.0
	comp=Z,0.6nm,0.8s,mb3.8,baz=292,slow=5.4,SNR=3.5						
ILAR	**Eielson Array**	87.03	10	P	P	12 32 25.4	+0.7
	comp=Z,0.5nm,0.6s,mb3.9,baz=330,slow=5.5,SNR=9.0						

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*NIED **27** 12:45:00,47.50N×147.20E,h460^{km},Mw4.9 Best double couple: M$_0$2.87×10^{16} NP1:φ$_s$345°,δ60°,λ63°. NP2:φ$_s$210°, δ40°,λ128°.*

*SKHL **27** 12:45:21.1±3.5,47.87N×147.07E,h462^{km}±16^{km},mb5.7/3, msh5.5/7*

*BJI **27** 12:45:23.8,48.00N×146.78E,h439^{km},mB4.8,mb5.0*

*JMA **27** 12:45:23.6±0.3,47.46N×147.23E,h497^{km},M5.1*

*IDC **27** 12:45:24.9±0.9,48.03N×146.84E,h447^{km}±10^{km}, mb4.1/19,mb1 4.3/24,mb1mx4.3/25,mbtmp5.0/24,Error ellipse: s-maj=11.2km s-min=8.2km az=133.0*

*MOS **27** 12:45:25.0±0.9,48.03N×146.80E,h457^{km},mb4.8/73, Error ellipse: s-maj=8.9km s-min=4.2km az=110.0*

*NEIC **27** 12:45:25.5±0.4,48.03N×146.87E,h456^{km}±4^{km},mb4.8/95, Error ellipse: s-maj=5.0km s-min=3.5km az=145.0*

ISC 27 12:45:23.0±0.1,**48.04N**±0.02×**146.90E**±0.04,**h436**^{km}, **h436**^{km}±2.7^{km}**:pP-P,n515,** σ**0^{s}99**/539,**mb4.8**/141, **117C-51D,Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	2.88	166	i P	P	12 46 27.4	-1.1
KUR				i P		12 46 27.4	
KUR				AMB	AMB	12 46 28.0	
	80nm,0.6s						
KUR				AMB	AMB	12 46 28.0	
	590nm,0.6s						
KUR				i S	S	12 47 19.7	-0.5
KUR				A		12 47 20.0	
	570nm,1.0s						
KUR				A		12 47 20.0	
	470nm,1.0s						
KUR				A		12 47 20.5	
	6μm,2.0s						
KUR				A		12 47 20.5	
	10μm,2.0s						
YSS	**Yuzh-Sakhalins**	3.01	250	⇓iP	P	12 46 33.4	+3.9
YSS				⇓iP		12 46 33.4	
YSS				AMB	AMB	12 46 34.0	
	730nm,0.8s						
YSS				AMB	AMB	12 46 34.0	
	360nm,0.8s						
YSS				AMB	AMB	12 46 34.0	
	530nm,0.9s						
YSS				i S	S	12 47 25.0	+3.0
YSS				A		12 47 29.0	
	1μm,1.0s						
YSS				A		12 47 29.0	
	2μm,1.6s						
YSS				A		12 47 31.0	
	5μm,5.0s						
YSS	**Yuzh-Sakhalins**	3.01	250	⇓iP	P	12 46 33.7	+4.2
YSS				eS	S	12 47 25.2	+3.3
YSS	**Yuzh-Sakhalins**	3.01	250	κ iPN	P	12 46 33.4	+3.9
YSS				i S	S	12 47 25.0	+3.0
YSS				pmax	pmax		
	comp=N,360nm,0.8s						
YSS				pmax	pmax		
	comp=Z,730nm,0.8s						
YSS				pmax	pmax		
	comp=E,530nm,0.9s						
YSS				smax			
	comp=E,1μm,1.0s						
YSS				smax			
	comp=E,2μm,1.6s						
YSS				smax			
	comp=E,5μm,5.0s						
UGL	**Uglegorsk**	3.38	290	⇓iP	P	12 46 37.0	+4.6
UGL				⇓iP		12 46 37.0	
UGL				AMB	AMB	12 46 38.0	
	comp=E,1μm,0.7s						
UGL				AMB	AMB	12 46 38.0	
	comp=E,2μm,1.0s						
UGL				AMB	AMB	12 46 38.5	
	comp=E,1μm,0.4s						
UGL				AMB	AMB	12 46 38.5	
	comp=E,1μm,0.4s						
UGL				AMB	AMB	12 46 38.5	
	comp=E,1μm,0.4s						
UGL				i S	S	12 47 34.0	+6.8
UGL				eS	S	12 47 34.0	+6.8
UGL				A		12 47 35.0	
	comp=E,2μm,4.0s						
UGL				A		12 47 35.0	
	comp=E,840nm,1.4s						
UGL				A		12 47 35.0	
	comp=E,600nm,1.0s						
UGL				A		12 47 35.0	
	comp=E,2μm,2.0s						
UGL				A		12 47 35.0	
	comp=E,4μm,2.0s						
UGL	**Uglegorsk**	3.38	290	⇓iPN	P	12 46 37.0	+4.6
UGL				i S	S	12 47 34.0	+6.8
UGL				pmax	pmax		
	comp=Z,1μm,0.7s						
UGL				pmax	pmax		
	comp=Z,2μm,1.0s						
UGL				smax			
	comp=N,2μm,2.0s						
UGL				smax			
	comp=E,4μm,2.0s						
UGL				smax			
	comp=N,840nm,1.4s						
UGL				smax			
	comp=E,600nm,1.0s						
TYV	**Tymovskoe**	3.96	317	⇑iP	P	12 46 36.0	-1.5
TYV				AMB	AMB	12 46 37.0	
	comp=E,52nm,0.6s						
TYV				AMB	AMB	12 46 37.0	
	comp=E,71nm,0.6s						
TYV				AMB	AMB	12 46 37.0	
	comp=E,127nm,0.6s						
TYV				AMB	AMB	12 46 37.5	
	comp=E,400nm,2.0s						
TYV				eS	S	12 47 37.0	+0.9
TYV				A		12 47 38.5	
	comp=E,268nm,1.1s						
TYV				A		12 47 38.5	
	comp=E,155nm,0.9s						
TYV				A		12 47 40.0	
	comp=E,2μm,5.0s						
TYV				A		12 47 40.0	
	comp=E,2μm,4.0s						
TYV				A		12 47 40.0	
	comp=E,1μm,4.0s						
YUK	**Yuzh-Kuril'sk**	4.07	191	⇓iP	P	12 46 37.0	-1.4
YUK				AMB	AMB	12 46 37.7	
	comp=E,3μm,1.0s						
YUK				AMB	AMB	12 46 39.1	
	comp=E,350nm,0.3s						
YUK				i S	S	12 47 36.9	-1.0
YUK				A		12 47 38.5	
	comp=E,7μm,2.0s						
YUK				A		12 47 38.5	
	comp=E,17μm,2.0s						
YUK				A		12 47 43.4	
	comp=E,4μm,0.5s						
YUK				A		12 47 43.4	
	comp=E,3μm,0.5s						
YUK	**Yuzh-Kuril'sk**	4.07	191	⇓iPN	P	12 46 37.0	-1.4
YUK				i S	S	12 47 36.9	-1.0
YUK				pmax	pmax		
	comp=Z,3μm,1.0s						
YUK				pmax	pmax		
	comp=Z,350nm,0.4s						
YUK				smax			
	comp=E,17μm,2.7s						
YUK				smax			
	comp=N,7μm,2.0s						
YUK				smax			
	comp=N,4μm,0.6s						
YUK				smax			
	comp=E,3μm,0.5s						
JRA	**Rausu**	4.28	197	P	P	12 46 41.0	+0.5
JRA				eS	S	12 47 43.1	+1.6
JSE	**Soyaes**	4.29	226	⇓P	P	12 46 43.2	+2.7
JSE				eS	S	12 47 44.9	+3.4
JWK2	**Keihoku**	4.39	234	⇓P	P	12 46 45.0	+3.5
JWK2				eS	S	12 47 48.4	+5.1
JTKR	**Abashiri--Toko**	4.57	208	⇓P	P	12 46 44.4	+1.2
JTKR				eS	S	12 47 47.8	+1.5
JMP	**Maruseppu**	4.72	213	⇓P	P	12 46 45.9	+1.2
NEM2	**Nemuro 2**	4.74	190	P	P	12 46 43.3	-1.6
NEM2				eS	S	12 47 46.0	-3.3
ASAJ	**Asahikawa**	4.93	219	P	P	12 46 48.5	+1.8
	comp=E,33nm,0.3s,baz=30,slow=5.4,SNR=220						
ASAJ				S	S	12 47 54.0	+1.4
	comp=E,5.0nm,0.3s,baz=5.3,slow=32,SNR=15						
ASAJ	**Asahikawa**	4.93	219	⇓P	P	12 46 48.5	+1.8
ASAJ	**Asahikawa**	4.93	219	PN	P	12 46 48.5	+1.8
ASAJ				S	S	12 47 54.0	+1.4
ASAJ				pmax	pmax		
	comp=Z,33nm,0.3s						
JSS	**Shosan**	5.05	226	⇓P	P	12 46 50.4	+2.5
JKK2	**Kamakawa 2**	5.07	216	⇓P	P	12 46 49.4	+1.3
JKK2				eS	S	12 47 54.8	-0.3
JAR	**Ashorobuto**	5.22	206	⇑P	P	12 46 50.0	+0.4
JAR				eS	S	12 47 57.6	-0.2
JYG	**Yagishiri**	5.24	228	P	P	12 46 51.6	+1.8
JAK	**Akkeshi**	5.27	198	P	P	12 46 48.5	-1.6
JAK				eS	S	12 47 55.1	-3.6
JAB	**Ashibetsu**	5.59	218	⇓P	P	12 46 54.7	+1.4
JHR	**Hokuryu**	5.61	222	⇓P	P	12 46 55.0	+1.4
JHR				eS	S	12 48 06.9	+2.0
JFR	**Furan**	5.73	213	⇓P	P	12 46 55.7	+0.9
JFR				eS	S	12 48 08.3	+1.1
JCH	**Churui**	5.97	206	P	P	12 46 55.7	-1.6
JCH				eS	S	12 48 06.8	-4.7
JBT2	**Biratori 2**	6.15	213	⇓P	P	12 46 59.0	-0.2
JEW	**Eniwo**	6.46	218	⇓P	P	12 47 03.1	+0.6
JEW				eS	S	12 48 19.2	-1.8
JNBK	**Urakawa-nobuka**	6.46	209	P	P	12 47 01.0	-1.5
JNBK				eS	S	12 48 14.4	-6.7
NKL	**Nikolayevsk**	6.47	325	⇓iP	P	12 47 03.0	+0.4
NKL				AMB	AMB	12 47 03.7	
	comp=Z,64nm,0.6s						
NKL				AMB	AMB	12 47 03.7	
	comp=Z,46nm,0.6s						
NKL				AMB	AMB	12 47 03.7	
	comp=Z,170nm,0.6s						
JSK	**Shakotan**	6.49	226	⇓P	P	12 47 03.8	+0.9
JSK				eS	S	12 48 22.1	+0.4
SKR	**Severo-Kuril's**	6.58	63	i P	P	12 47 02.9	-0.9
SKR				AMB	AMB	12 47 03.5	
	comp=Z,150nm,0.5s						
SKR				AMB	AMB	12 47 03.5	
	comp=Z,220nm,0.5s						
SKR				AMB	AMB	12 47 03.5	
	comp=Z,920nm,0.5s						
SKR				eS	S	12 48 22.6	-0.7
SKR				A		12 48 24.0	
	comp=Z,370nm,0.7s						
SKR				A		12 48 24.0	
	comp=Z,280nm,0.7s						
SKR				A		12 48 24.0	
	comp=Z,90nm,0.7s						
JNB	**Noboribetsu**	6.94	219	⇓P	P	12 47 07.2	-0.4
JSH	**Shimam**	7.24	224	⇓P	P	12 47 10.8	-0.2
PAU	**Pauzhetka**	7.28	58	i P	P	12 47 12.7	+1.3
GRNR	**Gornyy**	7.36	296	i P	P	12 47 07.0	-5.4
GRNR				AMB	AMB	12 47 08.0	
	comp=Z,100nm,1.0s						
GRNR				AMB	AMB	12 47 08.0	
	comp=Z,380nm,1.0s						
GRNR				AMB	AMB	12 47 08.0	
	comp=Z,970nm,1.0s						
GRNR				eS	S	12 48 35.7	-3.1
GRNR				A		12 48 36.9	
	comp=Z,130nm,1.0s						
JKB	**Kayabe**	7.42	216	⇑P	P	12 47 11.4	-1.6
JKB				eS	S	12 48 34.3	-5.7
TEY	**Ternei**	7.71	251	eP	P	12 47 16.0	-0.2
TEY				AMB	AMB	12 47 17.5	
	comp=Z,130nm,1.0s						
TEY				AMB	AMB	12 47 17.5	
	comp=Z,250nm,1.0s						
TEY				AMB	AMB	12 47 17.5	
	comp=Z,350nm,1.0s						
JOT	**Ohata**	7.85	214	P	P	12 47 15.4	-2.3
JOT				eS	S	12 48 42.2	-6.3
JOSM	**Okushiri--Mats**	7.94	224	P	P	12 47 16.9	-1.8
JANG	**Nango**	8.58	209	⇑P	P	12 47 23.2	-2.7
JANG				eS	S	12 48 56.8	-6.3
JKZ	**Kuzumaki**	8.99	209	P	P	12 47 29.0	-1.5
PET	**Petropavlovsk**	8.99	52	eP	P	12 47 31.0	+0.4
PET	**Petropavlovsk**	8.99	52	i PN	P	12 47 31.9	+1.4
JOM	**Ohasama**	9.47	207	P	P	12 47 34.6	-1.3
JOM				eS	S	12 49 18.0	-3.2
JMK	**Ichinoseki**	9.97	206	P	P	12 47 40.5	-0.9
KLR	**Kul'dur**	10.11	282	i P	P	12 47 42.0	-0.9
KLR				i P		12 47 42.2	
KLR				AMB	AMB	12 47 43.7	
	comp=Z,30nm,1.4s						
KLR				AMB	AMB	12 47 43.7	
	comp=Z,40nm,1.4s						
KLR				eS	S	12 49 34.5	+0.5
KLR				A		12 49 39.0	
	comp=Z,1μm,9.5s						
KLR				A		12 49 39.0	
	comp=Z,900nm,9.5s						

KLR	**Kul'dur**	**10.11**	**282**	⇑*i*PN	**P**	**12 47 42.0**	**-0.9**
KLR				*e*S	**S**	**12 49 34.5**	**+0.5**
KLR				pmax	pmax		
	comp=E,33nm,1.4s						
KLR				pmax	pmax		
	comp=Z,43nm,1.4s						
KLR				smax			
	comp=N,1µm,9.5s						
KLR				smax			
	comp=E,900nm,9.5s						
EKMR	**Ekimchan**	**10.20**	**305**	*e*P	**P**	**12 47 42.0**	**-2.0**
EKMR				AMB	AMB	12 47 44.3	
	comp=E,13nm,0.5s						
EKMR				AMB	AMB	12 47 44.3	
	comp=E,19nm,0.5s						
EKMR				AMB	AMB	12 47 44.3	
	comp=E,35nm,0.5s						
JYK	**Kaneyama**	**10.28**	**210**	P	**P**	**12 47 45.1**	**+0.3**
JOU	**Okura**	**10.68**	**207**	P	**P**	**12 47 49.9**	**+0.5**
JMM	**Marumori**	**11.10**	**206**	⇓P	**P**	**12 47 54.0**	**-0.1**
JFK	**Kawauchi**	**11.54**	**205**	P	**P**	**12 47 58.9**	**0.0**
MA2	**Magadan**	**11.78**	**10**	*e*PN	**P**	**12 48 03.7**	**+2.2**
MA2				pmax	pmax		
	comp=Z,20nm,0.7s						
ONAJ	**Iwakimizuishiy**	**11.81**	**205**	P	**P**	**12 48 01.7**	**-0.2**
JSD	**Sado**	**11.82**	**215**	P	**P**	**12 48 02.1**	**+0.2**
MDJ	**Mudanjiang**	**12.44**	**260**	*e*P	**P**	**12 48 08.6**	**-0.2**
	comp=Z,165nm,0.8s						
JAG	**Ashikaga**	**12.84**	**208**	P	**P**	**12 48 12.8**	**-0.3**
BMKR	**Bomnak**	**13.09**	**307**	*e*P	**P**	**12 48 13.7**	**-2.1**
BMKR				AMB	AMB	12 48 15.9	
	comp=Z,24nm,0.6s						
YASR	**Yasnyy**	**13.09**	**301**	*i* P	**P**	**12 48 13.7**	**-2.1**
YASR				AMB	AMB	12 48 14.4	
	comp=Z,4.0nm,0.5s						
YASR				AMB	AMB	12 48 14.4	
	comp=Z,13nm,0.5s						
YASR				AMB	AMB	12 48 14.4	
	comp=Z,30nm,0.5s						
MAJO	**Matsushiro**	**13.15**	**212**	*e*P	**P**	**12 48 16.1**	**-0.4**
	comp=Z,109nm,0.6s						
MAJO	**Matsushiro**	**13.15**	**212**	*e*PN	**P**	**12 48 16.1**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,109nm,0.6s						
MAT	**Matsushiro**	**13.15**	**212**	P	**P**	**12 48 16.2**	**-0.3**
MAT				S	**S**	**12 50 34.9**	**-0.7**
MAT	**Matsushiro**	**13.15**	**212**	*e*P	**P**	**12 48 16.0**	**-0.5**
	comp=Z,108nm,0.8s						
MAT				*e*S	**S**	**12 50 35.0**	**-0.6**
MAT	**Matsushiro**	**13.15**	**212**	*e*PN	**P**	**12 48 16.0**	**-0.5**
MAT				*e*S	**S**	**12 50 35.0**	**-0.6**
MAT				pmax	pmax		
	comp=Z,108nm,0.8s						
MJAR	**Matsushiro Arr**	**13.15**	**212**	P	**P**	**12 48 16.6**	**+0.1**
	comp=Z,22nm,0.3s,baz=14,slow=12,SNR=337						
MJAR				PcP	PcP	12 53 10.4	-1.7
	comp=Z,0.4nm,0.3s,baz=132,slow=0.9,SNR=4.5						
JRY	**Ryogami san**	**13.39**	**209**	P	**P**	**12 48 18.8**	**-0.2**
ZEA	**Zeya**	**13.63**	**302**	*e*P	**P**	**12 48 18.9**	**-2.5**
ZEA				AMB	AMB	12 48 19.9	
	comp=Z,24nm,1.1s						
ZEA				AMB	AMB	12 48 19.9	
	comp=Z,28nm,1.1s						
ZEA				*e*S	**S**	**12 50 44.0**	**-0.9**
ZEA				A		12 50 49.0	
	comp=Z,500nm,7.0s						
ZEA				*e*rx	rx	12 50 54.0	
JGN	**Niukaw**	**13.77**	**214**	P	**P**	**12 48 23.1**	**+0.1**
JYN	**Shimob**	**13.98**	**209**	P	**P**	**12 48 24.9**	**-0.3**
KROS	**Kirovskiy**	**14.01**	**305**	*i* P	**P**	**12 48 23.7**	**-1.6**
KROS				AMB	AMB	12 48 25.4	
	comp=Z,32nm,0.9s						
KROS				AMB	AMB	12 48 25.4	
	comp=Z,58nm,0.9s						
KROS				AMB	AMB	12 48 25.4	
	comp=Z,80nm,0.9s						
HMMJ	**Hamamatsu 2**	**14.84**	**211**	P	**P**	**12 48 34.0**	**-0.1**
SEY	**Seymchan**	**15.24**	**10**	⇑*e*P	**P**	**12 48 41.3**	**+3.3**
CN2	**Changchun**	**15.51**	**262**	⇓P	**P**	**12 48 40.0**	**-0.8**
CN2				AMB	AMB		
	comp=Z,20nm,0.9s						
JHJ	**Hachijo jima 2**	**15.84**	**202**	P	**P**	**12 48 45.0**	**+0.8**
	comp=Z,7.6nm,0.3s,baz=32,slow=19,SNR=2.1						
CLNS	**Chul'man**	**15.99**	**312**	*d i*P	**P**	**12 48 47.2**	**+1.6**
CLNS				pmax	pmax		
	comp=Z,230nm,0.8s						
CLNS				pmax	pmax		
	comp=N,65nm,0.7s						
CLNS				pmax	pmax		
	comp=E,76nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,56nm,0.7s						
CLNS				pmax	pmax		
	comp=N,60nm,0.8s						
JAD	**Aida**	**16.16**	**221**	P	**P**	**12 48 48.1**	**+0.6**
YAK	**Yakutsk**	**17.06**	**332**	⇑*i*P	**P**	**12 48 57.0**	**+0.7**
	comp=N,264nm,0.7s						
YAK	**Yakutsk**	**17.06**	**332**	*c i*P	**P**	**12 48 57.2**	**+0.8**
YAK				*e*S	**S**	**12 51 52.5**	**+3.2**
YAK				pmax	pmax		
	comp=Z,113nm,0.6s						
YAK				pmax	pmax		
	comp=N,11nm,0.5s						
YAK				pmax	pmax		
	comp=E,19nm,0.5s						
YAK				pmax	pmax		
	comp=Z,30nm,0.7s						
YAK				pmax	pmax		
	comp=N,26nm,0.6s						
YAK				pmax	pmax		
	comp=E,17nm,0.7s						
YAK				smax			
	comp=N,11nm,0.6s						
YAK				smax			
	comp=E,11nm,0.6s						
YAK				smax			
	comp=Z,15nm,0.6s						
FX1	**Attu Island--F**	**17.36**	**64**	P	**P**	**12 49 01.9**	**+2.4**
	comp=Z,34nm,0.3s,baz=277,slow=3.5,SNR=47						
FX1	**Attu Island--F**	**17.36**	**64**	*e*P	**P**	**12 49 01.8**	**+2.3**
FX1	**Attu Island--F**	**17.36**	**64**	P	**P**	**12 49 01.9**	**+2.4**
FX1				pmax	pmax		
	comp=Z,34nm,0.3s						
KS15	**Wonju Array Si**	**17.48**	**240**	*e*P	**P**	**12 49 01.7**	**+0.9**
SNY	**Shenyang**	**17.61**	**258**	⇑P	**P**	**12 49 03.8**	**+1.8**
SNY				AMB	AMB		
	comp=Z,20nm,0.6s						
SMY	**Shemya**	**17.92**	**65**	*e*P	**P**	**12 49 06.8**	**+1.7**
	comp=Z,100nm,0.8s						
SMY	**Shemya**	**17.92**	**65**	*e*P	**P**	**12 49 06.8**	**+1.8**
SMY				pmax	pmax		
	comp=Z,100nm,0.8s						
HIA	**Hailar**	**17.96**	**284**	*e*P	**P**	**12 49 05.4**	**0.0**
	comp=Z,16nm,0.7s						
HIA	**Hailar**	**17.96**	**284**	*e*P	**P**	**12 49 05.4**	**-0.1**
HIA				pmax	pmax		
	comp=Z,16nm,0.7s						
JKU	**Kubokawa**	**18.03**	**220**	P	**P**	**12 49 07.9**	**+1.6**
INCN	**Inchon**	**18.19**	**242**	*e*P	**P**	**12 49 09.5**	**+1.7**
	comp=Z,76nm,1.4s						
JNU	**Nakatsue**	**19.18**	**225**	P	**P**	**12 49 19.6**	**+2.0**
	comp=Z,2.5nm,0.3s,baz=34,slow=8.6,SNR=27						
DL2	**Dalian**	**20.41**	**253**	P	**P**	**12 49 30.8**	**+1.5**
DL2				*e*XP		12 51 30.3	
DL2				S	**S**	**12 52 51.5**	**+3.4**
DL2				AMB	AMB		
	comp=Z,50nm,0.8s						
BOD	**Bodaibo**	**21.90**	**309**	*e*P	**P**	**12 49 42.5**	**-0.8**
BOD				pmax	pmax		
	comp=Z,27nm,1.0s,mb4.6						
TIXI	**Tiksi**	**25.14**	**347**	*c i*P	**P**	**12 50 11.8**	**-0.5**
TIXI				pmax	pmax		
	comp=Z,21nm,1.3s,mb4.4						
JOW	**Kunigami**	**25.70**	**221**	P	**P**	**12 50 16.9**	**-0.8**
	comp=Z,11nm,0.8s,mb4.3,baz=348,slow=15,SNR=4.4						
JOW				PcP	PcP	12 53 34.1	-0.6
	comp=Z,13nm,0.9s,baz=129,slow=24,SNR=6.5						
SSE	**Sheshan**	**25.88**	**239**	P	**P**	**12 50 18.3**	**-1.1**
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
SSE				AMB	AMB		
	comp=Z,70nm,5.8s						
SSE	**Sheshan**	**25.88**	**239**	P	**P**	**12 50 18.3**	**-1.1**
	comp=Z,23nm,0.8s,mb4.7						
ULN	**Ulaanbaatar**	**26.49**	**285**	*e*P	**P**	**12 50 24.0**	**-0.7**
	comp=Z,7.3nm,0.6s,mb4.3						
ULN				*e*PcP	PcP	12 53 35.0	-1.4
ULN	**Ulaanbaatar**	**26.49**	**285**	*e*P	**P**	**12 50 24.0**	**-0.7**
ULN				*e*		12 53 35.0	
ULN				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.3						
NJ2	**Nanjing**	**26.56**	**243**	*e*P	**P**	**12 50 27.0**	**+1.6**
NJ2				XP	sP	12 52 36.0	+4.0
NJ2				S	**S**	**12 54 33.0**	**+4.9**
NJ2				SCP		12 56 32.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.4						
NJ2				AMB	AMB		
	comp=Z,160nm,4.0s						
SONM	**Songino Array**	**26.92**	**285**	P	**P**	**12 50 29.0**	**+0.5**
	comp=Z,7.5nm,0.8s,mb4.2,baz=70,slow=8.6,SNR=48						
SONM				PcP	PcP	12 53 36.3	-1.2
	comp=Z,5.5nm,0.6s,baz=114,slow=2.0,SNR=9.3						
SONM				ScP		12 56 31.2	
	comp=Z,1.6nm,0.8s,baz=79,slow=2.4,SNR=6.3						
ZAK	**Zakamensk**	**28.29**	**291**	*e*P	**P**	**12 50 41.5**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.4						
WHN	**Wuhan**	**30.35**	**247**	⇑P	**P**	**12 50 58.5**	**-0.1**
ENH	**Enshi**	**33.59**	**252**	*e*P	**P**	**12 51 25.8**	**-0.4**
	comp=Z,12nm,0.6s,mb4.4						
ENH				*e*PcP	PcP	12 53 54.1	-1.1
LZH	**Lanzhou**	**33.70**	**265**	⇑*i*P	**P**	**12 51 28.5**	**+1.5**
LZH				AMB	AMB		
	comp=Z,80nm,1.3s,mb4.9						
LZH				AMB	AMB		
	comp=Z,310nm,7.4s						
LZH	**Lanzhou**	**33.70**	**265**	⇑*i*P	**P**	**12 51 28.6**	**+1.6**
LZH				*SP	sP	12 53 55.1	+19
LZH				pmax	pmax		
	comp=Z,83nm,1.3s,mb4.9						
GTA	**Gaotai**	**34.64**	**273**	*e*P	**P**	**12 51 36.5**	**+1.6**
GTA				AP	pP	12 52 58.0	+2.3
GTA				XP	sP	12 53 47.0	+2.4
GTA				PCP	PcP	12 53 58.3	+0.1
GTA				S	**S**	**12 56 34.0**	**+0.8**
GTA				SCP		12 56 59.0	
GTA				PCS		12 57 46.0	
GTA				XS		12 58 59.3	
GTA				SS	SS	12 59 21.5	-1.2
GTA				SCS	ScS	13 01 03.8	-0.4
GTA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.5						
GTA				AMB	AMB		
	comp=Z,120nm,6.8s						
IMA2	**Indian Mountai**	**35.30**	**37**	*e*P	**P**	**12 51 40.6**	**+0.5**
IMA2				*e*S	**S**	**12 56 40.6**	**-2.3**
CD2	**Chengdu**	**36.89**	**258**	⇑*i*P	**P**	**12 51 54.5**	**+0.7**
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.6						
FIB	**Fire Island**	**37.20**	**46**	*e*P	**P**	**12 51 58.4**	**+2.4**
SLKM	**Skilak Lake**	**37.29**	**47**	*e*P	**P**	**12 51 57.0**	**+0.2**
MCK	**McKinley**	**37.44**	**41**	*e*P	**P**	**12 51 58.6**	**+0.7**
	comp=Z,5.0nm,0.7s,mb4.0						
MCK	**McKinley**	**37.44**	**41**	*e*P	**P**	**12 51 58.6**	**+0.7**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.0						
PMR	**Palmer**	**37.63**	**45**	*e*P	**P**	**12 51 59.6**	**0.0**
	comp=Z,11nm,0.6s,mb4.3						
PMR				pP	pP	12 53 20.4	-1.2
PMR				*e*PcP	PcP	12 54 05.7	-1.3
PMR				*e*ScP		12 57 09.4	
PMR	**Palmer**	**37.63**	**45**	*e*P	**P**	**12 51 59.6**	**0.0**
PMR				*PP	pP	12 53 20.4	-1.2
PMR				*e*		12 54 05.7	
PMR				*e*		12 57 09.4	
PMR				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.4						
COLA	**College**	**37.78**	**39**	*e*P	**P**	**12 52 01.5**	**+0.8**
	comp=Z,28nm,0.6s,mb4.8						
COLA	**College**	**37.78**	**39**	*e*P	**P**	**12 52 01.5**	**+0.7**
COLA				pmax	pmax		
	comp=Z,28nm,0.6s,mb4.8						
ILAR	**Eielson Array**	**38.20**	**39**	P	**P**	**12 52 04.2**	**0.0**
	comp=Z,15nm,0.6s,mb4.5,baz=259,slow=6.2,SNR=279						
ILAR				PcP	PcP	12 54 06.4	-2.4
	comp=Z,2.2nm,0.6s,baz=296,slow=4.0,SNR=7.4						
ILAR				ScP		12 57 10.6	
	comp=Z,2.4nm,0.8s,baz=285,slow=4.5,SNR=9.6						
THY	**Trims Highway**	**38.89**	**41**	*e*P	**P**	**12 52 10.7**	**+0.8**
NVS	**Novosibirsk**	**39.02**	**305**	⇑*i*P	**P**	**12 52 10.3**	**-0.7**
NVS				*i*		12 54 08.8	
NVS				*e*S	**S**	**12 57 34.2**	**-4.4**
NVS				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.5						
NVS				pmax	pmax		
	comp=E,25nm,0.9s						
NVS				smax			
	comp=E,52nm,3.0s						
DIV	**Divide**	**39.31**	**45**	*e*P	**P**	**12 52 14.2**	**+0.9**
	comp=E,56nm,0.5s,mb5.2						
WMQ	**Urumqi**	**40.52**	**287**	*e*P	**P**	**12 52 24.5**	**+1.2**
KMI	**Kunming**	**41.46**	**253**	P	**P**	**12 52 31.5**	**+0.4**
KMI				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.5						
KMI	**Kunming**	**41.46**	**253**	P	**P**	**12 52 31.5**	**+0.4**
	comp=Z,22nm,0.9s,mb4.5						
DAWY	**Dawson**	**41.53**	**40**	*e*P	**P**	**12 52 31.2**	**+0.1**
MKAR	**Makanchi Array**	**42.58**	**293**	P	**P**	**12 52 40.1**	**+0.4**
	comp=Z,38nm,0.6s,mb4.9,baz=68,slow=7.4,SNR=530						
MKAR				PcP	PcP	12 54 22.2	-1.0
	comp=Z,7.6nm,0.7s,baz=76,slow=5.0,SNR=8.3						
MKAR				ScP		12 57 28.4	
	comp=Z,1.0nm,0.6s,baz=46,slow=4.9,SNR=3.7						
INK	**Inuvik**	**42.84**	**33**	*e*P	**P**	**12 52 41.6**	**+0.1**
	comp=Z,8.6nm,0.3s,mb4.6						
INK	**Inuvik**	**42.84**	**33**	*e*P	**P**	**12 52 41.6**	**+0.1**
INK				pmax	pmax		
	comp=Z,9.0nm,0.3s						
KURK	**Kurchatov**	**43.10**	**300**	*e*P	**P**	**12 52 43.6**	**-0.2**
	comp=Z,57nm,0.6s,mb5.1						
KURK				*e*PcP	PcP	12 54 23.7	-1.3
KURK				*e*S	**S**	**12 58 32.5**	**-5.1**
KURK	**Kurchatov**	**43.10**	**300**	*e*P	**P**	**12 52 43.7**	**-0.1**
KURK				*e*		12 54 23.7	
KURK				*e*S	**S**	**12 58 32.5**	**-5.1**
KURK				pmax	pmax		
	comp=Z,57nm,0.6s,mb5.1						
LSA	**Lhasa**	**46.05**	**267**	P	**P**	**12 53 09.0**	**+1.8**
LSA				AMB	AMB		
	comp=Z,110nm,0.7s,mb5.3						
LSA	**Lhasa**	**46.05**	**267**	⇑*i*P	**P**	**12 53 09.1**	**+1.9**
	comp=Z,77nm,0.6s,mb5.2						
LSA	**Lhasa**	**46.05**	**267**	⇑*i*P	**P**	**12 53 09.1**	**+1.9**
LSA				pmax	pmax		
	comp=Z,77nm,0.6s,mb5.2						
CHKZ	**Chkalovo**	**46.33**	**307**	⇑*i*P	**P**	**12 53 08.4**	**-0.6**
	comp=Z,68nm,0.8s,mb5.0						
CHKZ	**Chkalovo**	**46.33**	**307**	⇑*i*P	**P**	**12 53 08.4**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,69nm,0.8s,mb5.0						
BRVK	**Borovoye**	**46.78**	**306**	⇑*i*P	**P**	**12 53 11.9**	**-0.6**
	comp=Z,26nm,0.9s,mb4.6						
BRVK				*e*PcP	PcP	12 54 36.5	-1.3
BRVK	**Borovoye**	**46.78**	**306**	⇑*i*P	**P**	**12 53 12.0**	**-0.5**
BRVK				*e*	pP	12 54 36.5	-1.4
BRVK				pmax	pmax		
	comp=Z,26nm,0.9s,mb4.6						
SHL	**Shillong**	**48.26**	**263**	*e*P	**P**	**12 53 24.0**	**-0.2**
SHL				*e*S	**S**	**12 59 48.0**	**-2.2**
CHG	**Chiang Mai**	**48.44**	**250**	P	**P**	**12 53 25.5**	**-0.1**
	comp=Z,32nm,0.8s,mb4.7						
ULHL	**Ulahol**	**48.58**	**291**	P	**P**	**12 53 27.3**	**+0.9**
	SNR=92						
TKM2	**Tokmak 2**	**48.62**	**292**	P	**P**	**12 53 27.5**	**+0.8**
	SNR=32						
CHMS	**Chumysh**	**49.10**	**293**	P	**P**	**12 53 30.6**	**+0.3**
	SNR=11						
USP	**Ospenovka**	**49.12**	**293**	P	**P**	**12 53 31.0**	**+0.6**
	SNR=94						
KBK	**Karagaybulak**	**49.17**	**292**	P	**P**	**12 53 31.5**	**+0.7**
	SNR=55						
FRU	**Bishkek**	**49.28**	**292**	*e*P	**P**	**12 53 31.0**	**-0.6**
FRU				pmax	pmax		
	comp=Z,80nm,1.8s,mb4.8						
KZA	**Kyzart**	**49.29**	**291**	P	**P**	**12 53 33.3**	**+1.6**
	SNR=63						
AAK	**Ala-Archa**	**49.46**	**292**	P	**P**	**12 53 33.5**	**+0.5**
	SNR=53						
AAK	**Ala-Archa**	**49.46**	**292**	*e*P	**P**	**12 53 32.1**	**-0.8**
	comp=Z,44nm,0.8s,mb4.8						
AAK	**Ala-Archa**	**49.46**	**292**	*c i*P	**P**	**12 53 32.4**	**-0.6**
AAK				pmax	pmax		
	comp=Z,35nm,0.6s,mb4.9						
UCH	**Uchtor**	**49.67**	**292**	P	**P**	**12 53 35.4**	**+0.9**
	SNR=9.1						
EKS2	**Erkin-Say**	**49.89**	**293**	P	**P**	**12 53 36.8**	**+0.6**
	SNR=95						
SVE	**Sverdlovsk**	**49.96**	**314**	⇑*i*P	**P**	**12 53 36.6**	**+0.1**
SVE				*e*		12 54 47.9	
SVE				pmax	pmax		
	comp=Z,140nm,0.9s,mb5.3						
NST	**Nakhon Sawan**	**50.07**	**246**	P	**P**	**12 53 37.3**	**-0.6**
AML	**Almayashu**	**50.23**	**292**	P	**P**	**12 53 39.8**	**+1.0**
	SNR=32						
KSH	**Kashi**	**50.25**	**288**	⇑*i*P	**P**	**12 53 40.0**	**+1.1**
KSH				*e*S	**S**	**13 00 16.8**	**-0.3**
KSH				AMB	AMB		
	comp=Z,260nm,1.6s,mb5.3						
SOKR	**Solikamsk**	**50.40**	**319**	*c i*P	**P**	**12 53 39.0**	**-0.8**
SOKR				pmax	pmax		
	comp=Z,40nm,0.8s,mb4.8						
JIRN	**Jiri**	**50.69**	**269**	*e*P	**P**	**12 53 42.9**	**+0.6**
	comp=Z,198nm,0.7s,mb5.4						
GUN	**Gumba**	**50.73**	**270**	*e*P	**P**	**12 53 43.0**	**+0.3**
	comp=Z,55nm,0.5s,mb5.1						
RES	**Resolute Bay**	**50.92**	**18**	⇑*i*P	**P**	**12 53 42.5**	**-0.9**
	comp=Z,45nm,0.6s,mb4.9						
RES				*e*PcP	PcP	12 54 51.6	-1.2
RES	**Resolute Bay**	**50.92**	**18**	⇑*i*P	**P**	**12 53 42.6**	**-0.9**
RES				*e*		12 54 51.6	
RES				pmax	pmax		
	comp=Z,45nm,0.6s,mb4.9						
ARU	**Arti**	**51.16**	**315**	*e*P	**P**	**12 53 43.7**	**-1.7**
	comp=Z,112nm,0.6s,mb5.3						
ARU				*e*PcP	PcP	12 54 52.1	-1.7
ARU	**Arti**	**51.16**	**315**	⇑*i*P	**P**	**12 53 44.8**	**-0.6**
ARU				*i*		12 54 52.1	
ARU				*e*	pP	12 55 12.0	-0.6
ARU				*e*		12 55 45.7	
ARU				*e*S	**S**	**13 00 28.6**	**-0.5**
ARU				*e*		13 02 41.9	
ARU				*e*SS		13 03 10.5	
ARU				*e*SS	SS	13 04 09.3	-2.8
ARU				pmax	pmax		
	comp=Z,84nm,0.6s,mb5.2						
KKN	**Kakani**	**51.21**	**270**	*e*P	**P**	**12 53 46.4**	**+0.2**
	comp=Z,48nm,0.4s,mb5.0						
PKI	**Pulchoki**	**51.27**	**270**	*e*P	**P**	**12 53 46.7**	**+0.1**
	comp=Z,64nm,0.7s,mb5.0						
PKI	**Pulchoki**	**51.27**	**270**	*e*P	**P**	**12 53 46.7**	**+0.1**
PKI				pmax	pmax		
	comp=Z,32nm,0.7s,mb4.7						
DMN	**Daman**	**51.45**	**270**	*e*P	**P**	**12 53 48.2**	**+0.3**
GKN	**Gorkha**	**51.51**	**271**	*e*P	**P**	**12 53 48.6**	**+0.2**
	comp=Z,128nm,0.5s,mb5.4						
KOLN	**Koldanda**	**52.35**	**271**	*e*P	**P**	**12 53 54.9**	**+0.3**
	comp=Z,130nm,0.8s,mb5.2						
YKA	**Yellowknife Ar**	**52.37**	**35**	P	**P**	**12 53 53.4**	**-0.8**
	comp=Z,2.7nm,0.6s,baz=303,slow=7.1,SNR=11						
YKA				PcP	PcP	12 54 57.4	-0.8
	comp=Z,3.3nm,0.6s,baz=305,slow=3.7,SNR=14						
YKA				ScP		12 58 10.7	
	comp=Z,1.3nm,0.6s,baz=300,slow=4.3,SNR=5.4						
YKA	**Yellowknife Ar**	**52.37**	**35**	P	**P**	**12 53 53.4**	**-0.8**
YKA				PcP	PcP	12 54 57.4	-0.8
YKA				ScP		12 58 10.7	
BOK	**Bokaro**	**53.47**	**266**	*e*P	**P**	**12 54 00.2**	**-2.4**
BOK				AMb	AMB	12 54 03.6	
	comp=Z,20nm,0.5s,mb4.6						
DDI	**Dehra Dun**	**54.42**	**277**	*e*P	**P**	**12 54 08.5**	**-0.9**
THN	**Thein Dam**	**54.64**	**281**	*e*x	x	12 55 09.8	
KEV	**Kevo**	**54.65**	**338**	*e*p	**P**	**12 54 09.5**	**-1.0**
	comp=Z,15nm,0.4s,mb4.6						
KEV	**Kevo**	**54.65**	**338**	*e*P	**P**	**12 54 09.5**	**-1.0**
KEV				pmax	pmax		
	comp=Z,15nm,0.4s,mb4.6						
DAG	**Danmarks Havn**	**55.13**	**356**	⇓*i*P	**P**	**12 54 12.3**	**-1.5**
	comp=Z,13nm,1.0s,mb4.1						
DAG	**Danmarks Havn**	**55.13**	**356**	⇓*e*P	**P**	**12 54 12.3**	**-1.5**
	comp=Z,13nm,1.0s,mb4.1						
DAG	**Danmarks Havn**	**55.13**	**356**	⇓*e*P	**P**	**12 54 12.3**	**-1.5**
DAG				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.1						
ARCES	**ARCESS Array B**	**55.18**	**339**	P	**P**	**12 54 13.2**	**-1.0**
	comp=Z,10nm,0.4s,mb4.4,baz=46,slow=8.4,SNR=87						
ARCES				PcP	PcP	12 55 07.3	-1.7
	comp=Z,5.0nm,0.6s,baz=63,slow=5.4,SNR=4.8						
ARE0	**ARCESS Array S**	**55.18**	**339**	*e*P	**P**	**12 54 13.2**	**-1.0**
NDI	**New Delhi**	**56.03**	**277**	*e*x	x	12 54 19.5	
KTK1	**Kautokeino**	**56.12**	**339**	⇑*i*P	**P**	**12 54 20.9**	**+0.1**
TRO	**Tromso**	**56.65**	**341**	*e*P	**P**	**12 54 22.5**	**-1.9**
KLMR	**Klimovskoe**	**56.75**	**326**	*e*P	**P**	**12 54 24.1**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,110nm,1.4s,mb5.0						
KULM	**Kulim**	**57.99**	**238**	⇑*e*P	**P**	**12 54 33.8**	**-0.5**
JOF	**Joensuu**	**58.23**	**331**	*e*p	**P**	**12 54 34.5**	**-0.8**
	comp=Z,51nm,0.5s,mb5.1						
AJM	**Ajmer**	**59.20**	**276**	*e*P	**P**	**12 54 40.5**	**-1.8**
VIS	**Vishakhapatnam**	**59.41**	**263**	*e*P	**P**	**12 54 42.7**	**-1.0**
VIS				AMb	AMB	12 54 44.5	
	comp=Z,48nm,0.7s,mb5.0						
BHPL	**Bhopal**	**59.52**	**272**	*e*P	**P**	**12 54 42.8**	**-1.6**
BHPL				AMb	AMB	12 54 44.9	
	comp=Z,81nm,0.6s,mb5.3						
SUMG	**Summit**	**59.63**	**2**	*e*P	**P**	**12 54 44.7**	**+0.2**
	comp=Z,38nm,0.8s,mb4.9						
MELSS	**Ber_school_2**	**60.03**	**341**	*e*P	**P**	**12 54 46.5**	**-0.8**
KAF	**Kangasniemi**	**60.42**	**332**	*e*p	**P**	**12 54 49.0**	**-0.9**
	comp=Z,22nm,0.5s,mb4.8,baz=40,slow=6.1						
KAF	**Kangasniemi**	**60.42**	**332**	*e*P	**P**	**12 54 49.0**	**-0.9**
KAF				pmax	pmax		
	comp=Z,22nm,0.5s,mb4.8						
MOR8	**Moi Rana**	**60.44**	**340**	⇑*i*P	**P**	**12 54 47.9**	**-2.1**
MOR8				AMb	AMB	12 54 49.4	
	comp=Z,88nm,0.7s,mb5.3						
MOS	**Moscow**	**60.92**	**322**	*e*P	**P**	**12 54 49.8**	**-3.5**
MOS				pmax	pmax		
	comp=Z,67nm,0.6s,mb5.2						
FINES	**FINESS Array B**	**60.99**	**332**	P	**P**	**12 54 52.9**	**-0.8**
	comp=Z,81nm,0.5s,mb5.4,baz=38,slow=8.8,SNR=718						
OBN	**Obninsk**	**61.79**	**322**	*e*P	**P**	**12 54 57.6**	**-1.4**
	comp=Z,55nm,0.8s,mb5.1						
OBN	**Obninsk**	**61.79**	**322**	*c i*P	**P**	**12 54 57.8**	**-1.2**
OBN				*e*		12 55 33.7	
OBN				*e**PP	pP	12 56 36.6	+5.4
OBN				pmax	pmax		
	comp=Z,55nm,0.5s,mb5.3						
MOD	**Modoc**	**62.04**	**58**	*e*P	**P**	**12 55 01.6**	**+0.7**
	comp=Z,8.4nm,1.2s,mb4.2						
FFC	**Flin Flon**	**62.38**	**38**	*e*P	**P**	**12 55 02.6**	**-0.3**
	comp=Z,6.6nm,0.7s,mb4.3						
FFC	**Flin Flon**	**62.38**	**38**	*e*P	**P**	**12 55 02.6**	**-0.3**
FFC				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.3						
HYB	**Hyderabad**	**62.81**	**266**	⇑*i*P	**P**	**12 55 05.5**	**-0.7**
	comp=Z,50nm,1.0s,mb5.0						
HYB				*e*pP	PcP	12 55 39.5	-0.6
HYB	**Hyderabad**	**62.81**	**266**	⇑*e*P	**P**	**12 55 05.5**	**-0.7**
	comp=Z,50nm,1.0s,mb5.0						
HYB	**Hyderabad**	**62.81**	**266**	⇑*e*P	**P**	**12 55 05.5**	**-0.7**
HYB				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.0						
VOR	**Voronezh**	**63.02**	**318**	*e*P	**P**	**12 55 06.0**	**-1.1**
VOR				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.2						
VSU	**Vasula**	**63.04**	**329**	*i* P	**P**	**12 55 06.3**	**-0.8**
VRSR	**Storozhevoye**	**63.39**	**318**	*e*P	**P**	**12 55 08.7**	**-0.8**
VRSR				pmax	pmax		
	comp=N,10.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,8.0nm,0.8s						
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.4						
EGMT	**Eagleton**	**63.55**	**47**	*e*P	**P**	**12 55 10.3**	**-0.2**
	comp=Z,9.4nm,0.8s,mb4.4						
MOL	**Molde**	**65.09**	**341**	*e*P	**P**	**12 55 21.3**	**+1.3**
MOL				AMb	AMB	12 55 33.6	
	comp=Z,123nm,1.6s,mb5.3						
POO	**Poona**	**65.18**	**270**	*e*P	**P**	**12 55 18.0**	**-3.3**
NVAR	**Mina Array Bea**	**65.49**	**59**	P	**P**	**12 55 24.2**	**+1.2**
	comp=Z,3.3nm,0.8s,mb4.0,baz=297,slow=4.5,SNR=24						
NB2	**NORSAR Subarra**	**65.55**	**338**	P	**P**	**12 55 22.4**	**-0.5**
	comp=Z,37nm,0.5s,mb5.3,baz=29,slow=6.5						
NB2	**NORSAR Subarra**	**65.55**	**338**	P	**P**	**12 55 22.4**	**-0.5**
	baz=29,slow=6.5						

NOA	**NORSAR Array B**	**65.55**	**338**	P	**P**	**12 55 22.4**	**-0.5**
	comp=Z,47nm,0.5s,mb5.4,baz=30,slow=6.4,SNR=204						
ELK	**Elko**	**65.65**	**56**	eP	**P**	**12 55 25.3**	**+1.4**
	comp=Z,2.7nm,0.9s,mb3.9						
ELK	**Elko**	**65.65**	**56**	eP	**P**	**12 55 25.3**	**+1.4**
ELK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NAO01	**NORSAR Array S**	**65.80**	**338**	eP	**P**	**12 55 23.3**	**-1.2**
	comp=Z,38nm,0.8s,mb5.1						
KAD	**Karad**	**65.82**	**269**	eP	**P**	**12 55 25.1**	**-0.2**
KAD				AMb	AMB	12 55 25.8	
	comp=Z,76nm,0.6s,mb5.5						
NAO	**NORSAR Subarra**	**65.83**	**338**	P	**P**	**12 55 22.4**	**-2.3**
	comp=Z,37nm,0.5s,mb5.3						
NAO	**NORSAR Subarra**	**65.83**	**338**	P	**P**	**12 55 22.4**	**-2.3**
NAO				pmax	pmax		
	comp=Z,37nm,0.5s,mb5.3						
GOF	**Gofitskoye**	**65.86**	**311**	⇑iP	**P**	**12 55 25.0**	**-0.1**
GOF				pmax	pmax		
	comp=Z,352nm,0.8s						
KIV	**Kislovodsk**	**66.81**	**310**	eP	**P**	**12 55 31.5**	**+0.5**
	comp=Z,105nm,0.7s,mb5.6						
KIV	**Kislovodsk**	**66.81**	**310**	eP	**P**	**12 55 31.8**	**+0.7**
KIV				pmax	pmax		
	comp=Z,102nm,0.6s,mb5.6						
KONO	**Kongsberg**	**67.16**	**338**	eP	**P**	**12 55 32.2**	**-0.8**
	comp=Z,22nm,1.1s,mb4.7						
KONO	**Kongsberg**	**67.16**	**338**	eP	**P**	**12 55 32.2**	**-0.7**
KONO				pmax	pmax		
	comp=Z,21nm,1.1s,mb4.7						
TI2	**Plekhanov**	**67.30**	**308**	α iP	**P**	**12 55 34.6**	**+0.5**
TI2				pmax	pmax		
	comp=Z,80nm,0.4s,mb5.7						
PDAR	**Pinedale Array**	**67.31**	**51**	P	**P**	**12 55 34.8**	**+0.6**
	comp=Z,2.7nm,0.6s,mb4.0,baz=297,slow=1.8,SNR=32						
SUW	**Suwalki**	**67.76**	**328**	eP	**P**	**12 55 35.7**	**-1.0**
SUW	**Suwalki**	**67.76**	**328**	eP	**P**	**12 55 35.7**	**-1.0**
AKASG	**Malin Array Be**	**68.05**	**323**	P	**P**	**12 55 36.9**	**-1.6**
	comp=Z,68nm,0.6s,mb5.4,baz=36,slow=6.2,SNR=246						
BLS5	**Blasjo**	**68.13**	**339**	eP	**P**	**12 55 40.1**	**+1.3**
ULM	**Lac du Bonnet**	**68.21**	**38**	P	**P**	**12 55 38.1**	**-1.3**
	comp=Z,4.9nm,0.7s,mb4.3,baz=321,slow=6.4,SNR=10						
GNI	**Garni**	**68.42**	**306**	eP	**P**	**12 55 42.1**	**+1.1**
	comp=Z,27nm,0.7s,mb5.0						
GNI	**Garni**	**68.42**	**306**	c iP	**P**	**12 55 42.6**	**+1.6**
GNI				pmax	pmax		
	comp=Z,46nm,1.2s						
FITZ	**Fitzroy Crossi**	**68.53**	**202**	eP	**P**	**12 55 41.3**	**-0.7**
	comp=Z,13nm,0.7s,mb4.7						
FITZ				e		12 56 02.7	
SOC	**Sochi**	**68.58**	**312**	eP	**P**	**12 55 41.2**	**-0.7**
SOC				pmax	pmax		
	comp=Z,41nm,0.7s,mb5.2						
WRAB	**Tennant Creek**	**68.59**	**193**	⇑eP	**P**	**12 55 40.7**	**-1.6**
WB2	**Warramunga Arr**	**68.59**	**193**	eP	**P**	**12 55 40.8**	**-1.5**
WB2				e		12 56 03.1	
WRA	**Warramunga Arr**	**68.60**	**193**	P	**P**	**12 55 41.0**	**-1.4**
	comp=Z,10nm,0.8s,mb4.5,baz=8.5,slow=6.5,SNR=98						
WRA				pP	pP	12 57 17.1	+0.3
	comp=Z,0.7nm,0.8s,baz=8.4,slow=6.7,SNR=2.0						
ANN	**Anapa**	**68.82**	**314**	eP	**P**	**12 55 41.7**	**-1.6**
ANN				i		12 56 11.4	
ANN				i *PP	pP	12 57 16.0	-1.7
ANN				eS	S	13 04 08.8	-2.5
ANN				pmax	pmax		
	comp=Z,54nm,0.7s,mb5.3						
TVAN	**Van**	**70.31**	**306**	i P	**P**	**12 55 53.0**	**+0.7**
HAKT	**HAKKARI**	**70.84**	**305**	i P	**P**	**12 55 55.4**	**-0.1**
GRSN	**GIRESUNGRSN**	**71.26**	**311**	i P	**P**	**12 55 56.3**	**-1.5**
KWP	**Kalwaria**	**71.46**	**325**	eP	**P**	**12 55 59.2**	**+0.3**
KWP	**Kalwaria**	**71.46**	**325**	eP	**P**	**12 55 59.2**	**+0.3**
BSEG	**Bad Segeberg**	**71.97**	**335**	eP	**P**	**12 56 01.7**	**-0.1**
OJC	**Ojcow**	**72.06**	**327**	eP	**P**	**12 56 02.6**	**+0.2**
BURAR	**Bucovina Array**	**72.10**	**323**	⇓P	**P**	**12 56 03.2**	**+0.6**
BURAR	**Bucovina Array**	**72.10**	**323**	⇓P	**P**	**12 56 03.1**	**+0.5**
BIDO	**Bidbid**	**72.10**	**285**	⇓P	**P**	**12 56 03.6**	**+0.5**
STHS	**Stebnicka Huta**	**72.19**	**326**	i P	**P**	**12 56 04.2**	**+1.1**
KOLS	**Kolonicke sedl**	**72.19**	**325**	i P	**P**	**12 56 03.5**	**+0.3**
WBK	**Wadi Bani Khal**	**72.20**	**284**	⇑P	**P**	**12 56 04.1**	**+0.5**
CRVS	**Cervenica-Dubn**	**72.53**	**326**	i P	**P**	**12 56 05.4**	**+0.4**
NIE	**Niedzica**	**72.53**	**327**	⇑iP	**P**	**12 56 05.8**	**+0.8**
BOYT	**Boyabat**	**72.57**	**313**	i P	**P**	**12 56 05.8**	**+0.3**
HOQ	**Hoqain**	**72.58**	**286**	⇓P	**P**	**12 56 05.3**	**-0.6**
MARD	**Mardin**	**72.61**	**307**	i P	**P**	**12 56 05.8**	**+0.1**
ELZG	**Elazig**	**72.69**	**309**	i P	**P**	**12 56 06.8**	**+0.6**
KSP	**Ksiaz**	**72.76**	**330**	eP	**P**	**12 56 06.4**	**+0.1**
KSP	**Ksiaz**	**72.76**	**330**	⇑eP	**P**	**12 56 06.5**	**+0.2**
CFR	**Carcaliu**	**72.81**	**320**	⇑P	**P**	**12 56 05.8**	**-0.9**
CFR	**Carcaliu**	**72.81**	**320**	⇑P	**P**	**12 56 05.8**	**-1.0**
JMDO	**Jabal Madar**	**72.93**	**285**	⇓P	**P**	**12 56 08.0**	**+0.1**
OKC	**Ostrava-Krasne**	**72.97**	**328**	eP	**P**	**12 56 07.7**	**+0.2**
UPC	**Upice**	**73.14**	**330**	eP	**P**	**12 56 08.7**	**+0.2**
DPC	**Dobruska-Polom**	**73.17**	**329**	eP	**P**	**12 56 09.2**	**+0.5**
BALT	**Daday**	**73.22**	**314**	i P	**P**	**12 56 09.4**	**+0.2**
MORC	**Moravsky Berou**	**73.23**	**328**	P	**P**	**12 56 09.6**	**+0.5**
MORC	**Moravsky Berou**	**73.23**	**328**	⇑P	**P**	**12 56 09.8**	**+0.7**
CTKT	**Corum**	**73.23**	**313**	i P	**P**	**12 56 08.9**	**-0.3**
KECS	**Kecovo**	**73.24**	**326**	i P	**P**	**12 56 09.4**	**+0.2**
BSY	**Bisya**	**73.25**	**285**	⇓P	**P**	**12 56 10.0**	**+0.2**
TIRR	**Tirgusor**	**73.25**	**319**	⇓P	**P**	**12 56 09.7**	**+0.4**
TIRR	**Tirgusor**	**73.25**	**319**	⇓P	**P**	**12 56 09.7**	**+0.4**
ARQ	**Araqi**	**73.27**	**286**	⇑P	**P**	**12 56 09.6**	**-0.2**
CLL	**Collm**	**73.44**	**332**	⇑P	**P**	**12 56 10.0**	**-0.2**
	comp=Z,logA/T=1.9,mb5.2						
CLL	**Collm**	**73.44**	**332**	⇑iP	**P**	**12 56 10.0**	**-0.2**
	comp=Z,71nm,0.9s,mb5.2						
CLL	**Collm**	**73.44**	**332**	⇑iP	**P**	**12 56 10.0**	**-0.2**
CLL				pmax	pmax		
	comp=Z,71nm,0.9s,mb5.2						
MLR	**Muntele Rosu**	**73.50**	**321**	⇓P	**P**	**12 56 11.4**	**+0.7**
MLR	**Muntele Rosu**	**73.50**	**321**	⇓P	**P**	**12 56 11.4**	**+0.7**
BRG	**Berggiesshubel**	**73.52**	**331**	i P	**P**	**12 56 10.4**	**-0.3**
	comp=Z,18nm,1.0s,mb4.7						
BRG	**Berggiesshubel**	**73.52**	**331**	i P	**P**	**12 56 10.4**	**-0.3**
BRG				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.7						
PVCC	**Panska Ves**	**73.61**	**331**	eP	**P**	**12 56 11.5**	**+0.3**
SCHQ	**Schefferville**	**73.64**	**20**	P	**P**	**12 56 09.8**	**-1.4**
	comp=Z,2.8nm,0.5s,mb4.2,baz=220,slow=8.5,SNR=13						
DRGR		**73.77**	**324**	⇑P	**P**	**12 56 11.5**	**-0.7**
DRGR		**73.77**	**324**	⇑P	**P**	**12 56 11.5**	**-0.7**
DRGR		**73.77**	**324**	P	**P**	**12 56 11.7**	**-0.5**
CLZ	**Clausthal**	**73.79**	**334**	eP	**P**	**12 56 12.6**	**+0.4**
	comp=Z,38nm,0.8s,mb5.1						
CLZ	**Clausthal**	**73.79**	**334**	eP	**P**	**12 56 12.6**	**+0.4**
CLZ				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.1						
VYHS	**Vyhne**	**73.84**	**327**	i P	**P**	**12 56 13.1**	**+0.5**
VOIR		**73.92**	**322**	⇓P	**P**	**12 56 14.0**	**+0.9**
VOIR		**73.92**	**322**	⇓P	**P**	**12 56 14.0**	**+1.0**
PSZ	**Piszkesteto**	**73.93**	**326**	eP	**P**	**12 56 13.4**	**+0.3**
	comp=Z,20nm,0.8s,mb4.8						
PSZ	**Piszkesteto**	**73.93**	**326**	P	**P**	**12 56 13.8**	**+0.7**
VRAC	**Vranov**	**73.96**	**329**	P	**P**	**12 56 13.9**	**+0.7**
VRAC	**Vranov**	**73.96**	**329**	⇑P	**P**	**12 56 14.1**	**+0.9**
ELDT	**Eldivan**	**74.00**	**313**	i P	**P**	**12 56 13.8**	**+0.1**
PRU	**Pruhonice**	**74.08**	**330**	eP	**P**	**12 56 14.1**	**+0.2**
CDAG	**Cicekdag**	**74.20**	**312**	i P	**P**	**12 56 14.3**	**-0.5**
GZT	**Gaziantep**	**74.29**	**309**	i P	**P**	**12 56 15.6**	**+0.2**
UMR	**Umm Al-Rimmam**	**74.31**	**297**	eP	**P**	**12 56 15.8**	**+0.1**
UMR				AMb	AMB	12 56 16.6	
	comp=Z,270nm,0.4s						
SMOL	**Smolenice**	**74.34**	**328**	i P	**P**	**12 56 16.3**	**+0.9**
TREC	**Trest**	**74.35**	**329**	eP	**P**	**12 56 15.7**	**+0.2**
MIB	**Mutribah**	**74.36**	**297**	eP	**P**	**12 56 16.0**	**+0.1**
MIB				AMb	AMB	12 56 16.9	
	comp=Z,242nm,0.6s						
MOX	**Moxa**	**74.45**	**332**	i P	**P**	**12 56 15.9**	**-0.1**
	comp=Z,logA/T=1.4,mb4.8						
MOX	**Moxa**	**74.45**	**332**	eP	**P**	**12 56 15.9**	**-0.1**
	comp=Z,31nm,1.1s,mb4.8						
MOX	**Moxa**	**74.45**	**332**	eP	**P**	**12 56 15.9**	**-0.1**
MOX				pmax	pmax		
	comp=Z,31nm,1.1s,mb4.8						
BR131	**Keskin Array S**	**74.49**	**313**	eP	**P**	**12 56 16.8**	**+0.4**
	comp=Z,10nm,0.7s,mb4.6						
BRTR	**Keskin Array B**	**74.49**	**313**	P	**P**	**12 56 17.1**	**+0.7**
	comp=Z,14nm,0.8s,mb4.7,baz=68,slow=4.4,SNR=35						
NKC	**Novy Kostel**	**74.55**	**332**	eP	**P**	**12 56 16.5**	**0.0**
KBD	**Kabd**	**74.60**	**296**	eP	**P**	**12 56 17.5**	**+0.2**
KBD				AMb	AMB	12 56 18.4	
	comp=Z,442nm,0.6s						
SGKT	**Sivrigoynuk**	**74.60**	**314**	i P	**P**	**12 56 17.1**	**0.0**
SRO	**Srobarova**	**74.61**	**327**	i P	**P**	**12 56 17.9**	**+1.0**
WTSB	**Winterswijk**	**74.70**	**336**	⇑eP	**P**	**12 56 17.2**	**-0.1**
	comp=Z,44nm,0.8s,mb5.2						
QRN	**Al-Qurain**	**74.77**	**296**	eP	**P**	**12 56 18.6**	**+0.3**
QRN				AMb	AMB	12 56 19.4	
	comp=Z,273nm,0.6s						
ANTO	**Ankara**	**74.79**	**313**	P	**P**	**12 56 19.0**	**+0.9**
ANTO	**Ankara**	**74.79**	**313**	⇓P	**P**	**12 56 19.4**	**+1.3**
NAY	**Al-Naaiem**	**74.81**	**297**	eP	**P**	**12 56 18.5**	**0.0**
NAY				AMb	AMB	12 56 19.5	
	comp=Z,88nm,0.7s,mb5.5						
RDF	**Al-Radifah**	**74.86**	**296**	eP	**P**	**12 56 19.0**	**+0.2**
RDF				AMb	AMB	12 56 20.0	
	comp=Z,314nm,0.5s						
KHC	**Kasperske Hory**	**75.14**	**330**	eP	**P**	**12 56 20.3**	**+0.5**
BZS	**Buzias**	**75.17**	**324**	⇑P	**P**	**12 56 20.1**	**0.0**
BZS	**Buzias**	**75.17**	**324**	⇑P	**P**	**12 56 20.1**	**0.0**
BZS	**Buzias**	**75.17**	**324**	P	**P**	**12 56 20.3**	**+0.2**
GEC2	**GERESS Array S**	**75.34**	**330**	eP	**P**	**12 56 21.1**	**+0.1**
	comp=Z,17nm,0.7s,mb4.8						
GEC2	**GERESS Array S**	**75.34**	**330**	eP	**P**	**12 56 21.1**	**+0.1**
GEC2				pmax	pmax		
	comp=Z,17nm,0.7s,mb4.8						
GERES	**GERESS Array B**	**75.34**	**330**	P	**P**	**12 56 20.9**	**-0.1**
	comp=Z,13nm,0.7s,mb4.7,baz=36,slow=5.3,SNR=99						
WET	**Wettzell**	**75.36**	**331**	eP	**P**	**12 56 21.6**	**+0.6**
	comp=Z,41nm,1.1s,mb5.0						
WET	**Wettzell**	**75.36**	**331**	eP	**P**	**12 56 21.6**	**+0.6**
WET				pmax	pmax		
	comp=Z,41nm,1.1s,mb5.0						
GRA1	**Grafenberg Arr**	**75.41**	**332**	eP	**P**	**12 56 21.9**	**+0.6**
	comp=Z,74nm,0.8s,mb5.4						
GRF	**Grafenberg Arr**	**75.41**	**332**	eP	**P**	**12 56 21.9**	**+0.6**
	comp=Z,74nm,0.8s,mb5.4						
GRF	**Grafenberg Arr**	**75.41**	**332**	eP	**P**	**12 56 21.9**	**+0.6**
GRF				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.4						
GRF	**Grafenberg Arr**	**75.41**	**332**	eP	**P**	**12 56 21.9**	**+0.6**
GRF				pmax	pmax		
	comp=Z,74nm,0.8s,mb5.4						
COBT	**Iskenderun**	**75.61**	**309**	i P	**P**	**12 56 22.6**	**-0.1**
TNS	**Taunus Mts**	**75.79**	**334**	eP	**P**	**12 56 23.6**	**+0.2**
	comp=Z,27nm,0.8s,mb4.9						
TNS	**Taunus Mts**	**75.79**	**334**	eP	**P**	**12 56 23.6**	**+0.2**
TNS				pmax	pmax		
	comp=Z,27nm,0.8s,mb4.9						
PKSM	**Moragy**	**75.83**	**326**	P	**P**	**12 56 23.4**	**-0.3**
ESKT	**Eskisehir**	**76.00**	**314**	i P	**P**	**12 56 23.9**	**-1.0**
MOA	**Molln**	**76.01**	**329**	i P	**P**	**12 56 25.0**	**+0.3**
	comp=Z,16nm,0.8s,mb4.7,SNR=16						
HGN	**Heimansgroeve**	**76.02**	**336**	⇑eP	**P**	**12 56 24.5**	**-0.2**
	comp=Z,26nm,0.7s,mb5.0						
TOD	**Tromm**	**76.23**	**333**	eP	**P**	**12 56 26.0**	**+0.1**
HASS	**Wahat al Ahsa’**	**76.26**	**292**	P	**P**	**12 56 26.2**	**-0.3**
ABH	**Alteburg**	**76.36**	**334**	eP	**P**	**12 56 26.5**	**-0.1**
DLF	**Lyons Farm**	**76.55**	**344**	eP	**P**	**12 56 27.2**	**-0.4**
DCN	**Croghan**	**76.64**	**344**	eP	**P**	**12 56 27.8**	**-0.3**
FUR	**Furstenfeldbru**	**76.73**	**331**	eP	**P**	**12 56 29.1**	**+0.4**
	comp=Z,57nm,0.9s,mb5.2						
FUR	**Furstenfeldbru**	**76.73**	**331**	eP	**P**	**12 56 29.1**	**+0.4**
FUR				pmax	pmax		
	comp=Z,57nm,0.9s,mb5.2						
PERS	**Pernice**	**76.76**	**328**	eP	**P**	**12 56 29.1**	**+0.3**
KBA	**Koelnbreinsper**	**76.99**	**329**	i P	**P**	**12 56 31.4**	**+1.2**
	comp=Z,38nm,0.6s,mb5.2,SNR=9.1						
VTS	**Vitosha**	**77.00**	**321**	i P	**P**	**12 56 30.5**	**+0.2**
RZN	**Rozhen**	**77.09**	**319**	i P	**P**	**12 56 31.5**	**+0.7**
GOLS	**Golise**	**77.11**	**327**	eP	**P**	**12 56 30.9**	**+0.1**
BAIF	**Baives**	**77.13**	**336**	⇑iP	**P**	**12 56 30.6**	**-0.2**
LEGS	**Legarje**	**77.28**	**328**	i P	**P**	**12 56 31.6**	**-0.1**
WATA	**Walderalm**	**77.36**	**331**	⇑iP	**P**	**12 56 32.8**	**+0.6**
	comp=Z,39nm,1.1s,mb5.0,SNR=14						
WTTA	**Wattenberg**	**77.40**	**331**	⇓iP	**P**	**12 56 33.2**	**+0.9**
	comp=Z,38nm,0.6s,mb5.2						
ISP	**Isparta**	**77.48**	**313**	eP	**P**	**12 56 32.8**	**-0.3**
	comp=Z,14nm,0.8s,mb4.6						
ISP	**Isparta**	**77.48**	**313**	d iP	**P**	**12 56 33.2**	**+0.2**
MOTA	**Moosalm**	**77.51**	**331**	i P	**P**	**12 56 33.4**	**+0.4**
	comp=Z,44nm,1.1s,mb5.0,SNR=24						
BFO	**Black Forest**	**77.51**	**333**	eP	**P**	**12 56 32.9**	**0.0**
	comp=Z,19nm,1.0s,mb4.7						
BFO	**Black Forest**	**77.51**	**333**	eP	**P**	**12 56 32.9**	**0.0**
BFO				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.7						
VISS	**Visnje**	**77.57**	**328**	eP	**P**	**12 56 33.0**	**-0.3**
PTCC	**Patocco-Chiusa**	**77.57**	**329**	P	**P**	**12 56 32.6**	**-0.7**
SQTA	**Sankt Quirin**	**77.58**	**331**	i P	**P**	**12 56 33.9**	**+0.6**
	comp=Z,31nm,1.1s,mb4.8,SNR=19						
MMB	**Musomiste**	**77.60**	**320**	i P	**P**	**12 56 34.0**	**+0.5**
BOJS	**Bojanci**	**77.68**	**327**	eP	**P**	**12 56 33.7**	**-0.2**
WLS	**Welschbruch**	**77.73**	**334**	eP	**P**	**12 56 34.0**	**-0.1**
CDF	**Champ du Feu**	**77.75**	**334**	⇑iP	**P**	**12 56 34.2**	**0.0**
	comp=Z,38nm,0.8s,mb4.8						
CDF	**Champ du Feu**	**77.75**	**334**	⇑iP	**P**	**12 56 34.2**	**0.0**
CDF				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.8						
LIBD	**Limburg**	**77.89**	**333**	eP	**P**	**12 56 34.7**	**-0.3**
DAVA	**Damuels**	**77.95**	**332**	⇑iP	**P**	**12 56 35.9**	**+0.6**
	comp=Z,26nm,0.7s,mb5.0						
ECH	**Echery**	**77.96**	**334**	eP	**P**	**12 56 35.1**	**-0.2**
THEF	**They Montfort**	**78.30**	**334**	eP	**P**	**12 56 36.9**	**-0.2**
MOF	**Molkenrain**	**78.30**	**334**	eP	**P**	**12 56 36.9**	**-0.2**
MEZF	**Maizieres J’vi**	**78.31**	**335**	⇑iP	**P**	**12 56 37.4**	**+0.2**
	comp=Z,38nm,0.8s,mb4.8						
CSS	**Prodhromos**	**78.32**	**310**	eP	**P**	**12 56 37.7**	**+0.1**
	comp=Z,22nm,0.6s,mb5.0						
HAU	**Haudompre**	**78.39**	**334**	eP	**P**	**12 56 37.4**	**-0.2**
	comp=Z,18nm,0.7s,mb4.5						
HAU	**Haudompre**	**78.39**	**334**	eP	**P**	**12 56 37.4**	**-0.2**
HAU				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.5						
HINF	**Hinteralfeld**	**78.41**	**334**	⇑iP	**P**	**12 56 37.3**	**-0.4**
	comp=Z,17nm,0.8s,mb4.4						
HINF	**Hinteralfeld**	**78.41**	**334**	⇑iP	**P**	**12 56 37.3**	**-0.4**
HINF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
CTI	**Castel Tesino**	**78.46**	**330**	P	**P**	**12 56 37.5**	**-0.6**
BRMO	**Bormio**	**78.51**	**331**	P	**P**	**12 56 39.3**	**+1.0**
LOMF	**Lomont**	**78.84**	**334**	eP	**P**	**12 56 39.7**	**-0.3**
QURS	**Qurayyt al Mil**	**78.94**	**305**	P	**P**	**12 56 42.8**	**+1.9**
WHFO	**Wadi Hawf**	**78.94**	**284**	⇑P	**P**	**12 56 40.5**	**-0.6**
RBK	**Rabkut**	**78.96**	**284**	⇓P	**P**	**12 56 40.5**	**-0.7**
HILS	**Ha’il**	**79.42**	**299**	P	**P**	**12 56 44.8**	**+1.3**
FLN	**La Foliniere**	**79.53**	**339**	⇑iP	**P**	**12 56 43.5**	**-0.1**
	comp=Z,29nm,0.7s,mb4.7						
FLN	**La Foliniere**	**79.53**	**339**	⇑iP	**P**	**12 56 43.5**	**-0.1**
FLN				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.7						
LDF	**La Druitiere**	**79.60**	**338**	⇑iP	**P**	**12 56 43.8**	**-0.2**
	comp=Z,25nm,0.8s,mb4.6						
LDF	**La Druitiere**	**79.60**	**338**	⇑iP	**P**	**12 56 43.8**	**-0.2**
LDF				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.6						
STKA	**Stephens Creek**	**79.69**	**185**	eP	**P**	**12 56 45.1**	**+0.3**
	comp=Z,3.8nm,0.8s,mb4.1						
STKA	**Stephens Creek**	**79.69**	**185**	P	**P**	**12 56 44.6**	**-0.2**
	comp=Z,5.8nm,0.8s,mb4.3,baz=349,slow=6.6,SNR=12						
LOR	**Lormes**	**79.77**	**335**	⇑iP	**P**	**12 56 44.8**	**-0.1**
	comp=Z,40nm,0.9s,mb4.8						
LOR	**Lormes**	**79.77**	**335**	⇑iP	**P**	**12 56 44.8**	**-0.1**
LOR				pmax	pmax		
	comp=Z,20nm,0.9s,mb4.8						
MZLS	**Mizel**	**79.88**	**295**	P	**P**	**12 56 46.5**	**+0.6**
GRR	**Gorron**	**79.97**	**339**	⇑iP	**P**	**12 56 46.1**	**+0.2**
	comp=Z,35nm,0.6s,mb4.9						
GRR	**Gorron**	**79.97**	**339**	⇑iP	**P**	**12 56 46.1**	**+0.2**
GRR				pmax	pmax		
	comp=Z,18nm,0.6s,mb4.9						
ORX	**Oropa**	**80.03**	**332**	P	**P**	**12 56 45.4**	**-0.8**
SSF	**Saint Saulge**	**80.06**	**336**	⇑iP	**P**	**12 56 46.3**	**-0.1**
	comp=Z,11nm,0.8s,mb4.5						
SSF	**Saint Saulge**	**80.06**	**336**	⇑iP	**P**	**12 56 46.3**	**-0.1**
SSF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.5						
HYF	**Humbligny**	**80.11**	**336**	eP	**P**	**12 56 47.0**	**+0.3**
TRAV		**80.21**	**332**	P	**P**	**12 56 46.0**	**-1.3**
FORT	**Forrest**	**80.26**	**196**	eP	**P**	**12 56 47.4**	**-0.4**
	comp=Z,10.0nm,0.5s,mb4.7						
SMF	**Signal de Mont**	**80.34**	**335**	⇑iP	**P**	**12 56 48.0**	**+0.1**
	comp=Z,65nm,0.9s,mb5.0						
SMF	**Signal de Mont**	**80.34**	**335**	⇑iP	**P**	**12 56 48.0**	**+0.1**
SMF				pmax	pmax		
	comp=Z,33nm,0.9s,mb5.0						
AVF	**Avril sur Loir**	**80.35**	**336**	⇑iP	**P**	**12 56 48.0**	**+0.1**
	comp=Z,70nm,1.2s,mb4.9						
AVF	**Avril sur Loir**	**80.35**	**336**	⇑iP	**P**	**12 56 48.0**	**+0.1**
AVF				pmax	pmax		
	comp=Z,35nm,1.2s,mb4.9						
GRAM		**80.36**	**330**	P	**P**	**12 56 47.4**	**-0.7**
TXAR	**Lajitas Array**	**80.42**	**57**	P	**P**	**12 56 49.8**	**+1.1**
	comp=Z,6.1nm,0.6s,mb4.4,baz=292,slow=3.6,SNR=66						
TXAR				pP	pP	12 58 27.2	+0.7
	comp=Z,0.8nm,1.0s,baz=352,slow=9.3,SNR=2.1						
TXAR	**Lajitas Array**	**80.42**	**57**	P	**P**	**12 56 49.8**	**+1.1**
TXAR				pP	pP	12 58 27.2	+0.7
LSD	**Ceresole Reale**	**80.44**	**333**	P	**P**	**12 56 47.8**	**-0.6**
SGMF	**Saint Gilles**	**80.50**	**340**	⇑iP	**P**	**12 56 49.1**	**+0.4**
	comp=Z,41nm,0.7s,mb4.8						
SGMF	**Saint Gilles**	**80.50**	**340**	⇑iP	**P**	**12 56 49.1**	**+0.4**
SGMF				pmax	pmax		
	comp=Z,20nm,0.7s,mb4.9						
LPL	**La Plagne**	**80.52**	**333**	⇑iP	**P**	**12 56 49.6**	**+0.7**
	comp=Z,38nm,1.1s,mb4.8						
LPL	**La Plagne**	**80.52**	**333**	⇑iP	**P**	**12 56 49.6**	**+0.7**
LPL				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.7						
SARO	**Sassorosso**	**80.52**	**330**	P	**P**	**12 56 49.0**	**+0.1**
CODM		**80.53**	**330**	P	**P**	**12 56 48.6**	**-0.4**
LPG	**La Plagne**	**80.53**	**333**	⇑iP	**P**	**12 56 49.8**	**+0.9**
	comp=Z,20nm,0.8s,mb4.6						
LPG	**La Plagne**	**80.53**	**333**	⇑iP	**P**	**12 56 49.8**	**+0.9**
LPG				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.6						
ROSF	**Rostrenen**	**80.58**	**340**	eP	**P**	**12 56 49.5**	**+0.4**
VINC	**Vinca**	**80.65**	**330**	P	**P**	**12 56 49.0**	**-0.6**
RSP	**Reno Superiore**	**80.68**	**332**	P	**P**	**12 56 47.8**	**-1.9**
BGF	**Bois d’Agland**	**80.70**	**336**	eP	**P**	**12 56 49.8**	**0.0**
	comp=Z,18nm,0.7s,mb4.6						
BGF	**Bois d’Agland**	**80.70**	**336**	eP	**P**	**12 56 49.8**	**0.0**
BGF				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.6						
MAIM		**80.73**	**330**	P	**P**	**12 56 49.2**	**-0.8**
PCP	**Pian Castagno**	**80.82**	**331**	P	**P**	**12 56 49.2**	**-1.3**
FENE	**Fenestrelle**	**80.85**	**332**	P	**P**	**12 56 49.0**	**-1.6**
BNI	**Bardonecchia**	**80.95**	**333**	eP	**P**	**12 56 51.5**	**+0.4**
	comp=Z,13nm,1.0s,mb4.6						
BNI	**Bardonecchia**	**80.95**	**333**	eP	**P**	**12 56 51.5**	**+0.4**
BNI				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.6						
QUIF	**Quistinic**	**80.95**	**340**	⇑iP	**P**	**12 56 51.3**	**+0.2**
	comp=Z,30nm,0.8s,mb4.8						
QUIF	**Quistinic**	**80.95**	**340**	⇑iP	**P**	**12 56 51.3**	**+0.2**
QUIF				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.8						
BHB	**Bricherasio**	**80.96**	**332**	P	**P**	**12 56 49.2**	**-1.9**
PLDF	**La Plantade**	**81.02**	**335**	eP	**P**	**12 56 51.9**	**+0.4**
TCF	**Toulx Ste Croi**	**81.12**	**336**	⇑iP	**P**	**12 56 52.3**	**+0.3**
	comp=Z,32nm,0.9s,mb4.8						
TCF	**Toulx Ste Croi**	**81.12**	**336**	⇑iP	**P**	**12 56 52.3**	**+0.3**
TCF				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
MBDF	**Montbardon**	**81.22**	**332**	⇑iP	**P**	**12 56 52.6**	**+0.1**
	comp=Z,15nm,0.6s,mb4.6						
MBDF	**Montbardon**	**81.22**	**332**	⇑iP	**P**	**12 56 52.6**	**+0.1**
MBDF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
FIN	**Finale Ligure**	**81.22**	**331**	P	**P**	**12 56 50.7**	**-1.8**
ROB	**Roburent**	**81.26**	**332**	P	**P**	**12 56 51.3**	**-1.4**
AFFS	**‘Afif**	**81.29**	**296**	P	**P**	**12 56 54.0**	**+0.7**
PZZ	**Prazzo**	**81.31**	**332**	P	**P**	**12 56 50.2**	**-2.8**
ORIF	**Oris-en-Rattie**	**81.32**	**333**	⇑iP	**P**	**12 56 53.6**	**+0.6**
	comp=Z,28nm,0.7s,mb4.8						
ORIF	**Oris-en-Rattie**	**81.32**	**333**	⇑iP	**P**	**12 56 53.6**	**+0.6**
ORIF				pmax	pmax		
	comp=Z,14nm,0.7s,mb4.8						
PYM	**Petit Puy Mans**	**81.40**	**335**	eP	**P**	**12 56 53.8**	**+0.4**
MFF	**Saint Martin d**	**81.45**	**338**	⇑iP	**P**	**12 56 54.2**	**+0.5**
	comp=Z,45nm,0.9s,mb4.9						
MFF	**Saint Martin d**	**81.45**	**338**	⇑iP	**P**	**12 56 54.2**	**+0.5**
MFF				pmax	pmax		
	comp=Z,23nm,0.9s,mb4.9						
ENR	**Entracque**	**81.46**	**332**	P	**P**	**12 56 51.8**	**-1.9**
STV2	**Anna di Valdie**	**81.47**	**332**	P	**P**	**12 56 51.1**	**-2.7**
STV	**Sta Anna Valdi**	**81.48**	**332**	P	**P**	**12 56 52.2**	**-1.7**
MONE	**Monesi**	**81.49**	**332**	P	**P**	**12 56 51.4**	**-2.5**
IMI	**Imperia**	**81.59**	**331**	P	**P**	**12 56 53.4**	**-1.1**
NEGI	**Negi**	**81.71**	**331**	P	**P**	**12 56 52.8**	**-2.2**
VIVF	**Saint-Julien-l**	**81.73**	**334**	⇑iP	**P**	**12 56 55.6**	**+0.5**
	comp=Z,29nm,1.0s,mb4.7						
VIVF	**Saint-Julien-l**	**81.73**	**334**	⇑iP	**P**	**12 56 55.6**	**+0.5**
VIVF				pmax	pmax		
	comp=Z,15nm,1.0s,mb4.7						
ALWS	**Ilw as Safayha**	**81.78**	**305**	P	**P**	**12 56 56.8**	**+1.1**
SBF	**Sospel**	**81.78**	**332**	eP	**P**	**12 56 56.0**	**+0.6**
TBKS	**Tabuk**	**81.79**	**303**	P	**P**	**12 56 57.1**	**+1.3**
JMOS	**Jabal al Moall**	**81.86**	**305**	P	**P**	**12 56 57.2**	**+1.0**
WCI	**Wyandotte Cave**	**81.94**	**40**	eP	**P**	**12 56 56.4**	**+0.1**
	comp=Z,13nm,0.9s,mb4.7						
WCI	**Wyandotte Cave**	**81.94**	**40**	eP	**P**	**12 56 56.4**	**+0.1**
WCI				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
HAQS	**Haql**	**82.05**	**305**	P	**P**	**12 56 58.0**	**+0.9**
KBRS	**Khaybar**	**82.10**	**300**	P	**P**	**12 56 58.7**	**+1.3**
RJF	**Les Rejaudoux**	**82.22**	**336**	⇑iP	**P**	**12 56 58.7**	**+1.1**
	comp=Z,22nm,0.8s,mb4.6						
RJF	**Les Rejaudoux**	**82.22**	**336**	⇑iP	**P**	**12 56 58.7**	**+1.1**
RJF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.6						
FRF	**La Foret Royal**	**82.31**	**332**	eP	**P**	**12 56 58.6**	**+0.5**
	comp=Z,15nm,0.8s,mb4.5						
FRF	**La Foret Royal**	**82.31**	**332**	eP	**P**	**12 56 58.6**	**+0.5**
FRF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
CAF	**Calviac**	**82.42**	**336**	⇑iP	**P**	**12 56 59.6**	**+1.0**
	comp=Z,19nm,0.7s,mb4.7						
CAF	**Calviac**	**82.42**	**336**	⇑iP	**P**	**12 56 59.6**	**+1.0**
CAF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
BDAS	**Al Bad‘**	**82.44**	**304**	P	**P**	**12 56 60.0**	**+0.9**
AYUS	**‘Aynunah**	**82.53**	**304**	P	**P**	**12 57 00.5**	**+1.0**
LMR	**La Mourre**	**82.55**	**332**	eP	**P**	**12 56 59.2**	**-0.1**
	comp=Z,49nm,0.9s,mb4.9						
LMR	**La Mourre**	**82.55**	**332**	eP	**P**	**12 56 59.2**	**-0.1**
LMR				pmax	pmax		
	comp=Z,24nm,0.9s,mb4.9						
LASF	**Ste Croix**	**82.69**	**334**	eP	**P**	**12 57 00.7**	**+0.7**
	comp=Z,19nm,0.9s,mb4.5						
LFF	**La Frestale**	**82.77**	**337**	⇑iP	**P**	**12 57 01.2**	**+0.9**
	comp=Z,40nm,0.7s,mb5.0						
LFF	**La Frestale**	**82.77**	**337**	⇑iP	**P**	**12 57 01.2**	**+0.9**
LFF				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.0						
DBAS	**Duba**	**82.89**	**303**	P	**P**	**12 57 01.9**	**+0.5**
WVT	**Waverly**	**83.03**	**42**	eP	**P**	**12 57 01.9**	**+0.1**
	comp=Z,8.1nm,0.6s,mb4.6						
WVT	**Waverly**	**83.03**	**42**	eP	**P**	**12 57 02.0**	**+0.2**
WVT				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.6						
KLBR	**Kellerberrin**	**83.47**	**205**	eP	**P**	**12 57 03.3**	**-0.9**
	comp=Z,8.9nm,0.6s,mb4.7						
MTLF	**Montolieu**	**83.83**	**335**	⇑iP	**P**	**12 57 06.6**	**+0.9**
	comp=Z,20nm,0.9s,mb4.5						
MTLF	**Montolieu**	**83.83**	**335**	⇑iP	**P**	**12 57 06.6**	**+0.9**
MTLF				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
WES	**Weston**	**83.84**	**27**	eP	**P**	**12 57 06.0**	**+0.2**
	comp=Z,30nm,0.9s,mb5.0						
WES	**Weston**	**83.84**	**27**	eP	**P**	**12 57 06.0**	**+0.3**
WES				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.0						
MUN	**Mundaring**	**84.27**	**206**	eP	**P**	**12 57 08.0**	**-0.1**
SWET	**Sewanee**	**84.63**	**41**	eP	**P**	**12 57 08.7**	**-1.1**
EPF	**Esparros**	**84.64**	**336**	eP	**P**	**12 57 10.1**	**+0.4**
	comp=Z,36nm,1.1s,mb4.7						
EPF	**Esparros**	**84.64**	**336**	eP	**P**	**12 57 10.1**	**+0.4**
EPF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7						
ETSF	**Etsaut**	**85.01**	**337**	⇑iP	**P**	**12 57 12.8**	**+1.4**
	comp=Z,46nm,0.8s,mb5.0						
ETSF	**Etsaut**	**85.01**	**337**	⇑iP	**P**	**12 57 12.8**	**+1.4**
ETSF				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.0						
ESDC	**Sonseca Array**	**88.92**	**338**	P	**P**	**12 57 29.2**	**-0.9**
	comp=Z,1.5nm,0.7s,mb3.8,baz=7.3,slow=3.9,SNR=5.0						
DBIC	**Dimbokro**	**120.12**	**327**	PKP	PKPdf	13 03 22.6	-0.6
	comp=Z,6.5nm,0.7s,baz=35,slow=0.9,SNR=14						
DBIC	**Dimbokro**	**120.12**	**327**	eP	PKPdf	13 03 22.9	-0.2
LIC	**Lamto**	**120.59**	**327**	ePKIKP	PKPdf	13 03 23.8	-0.3
	comp=Z,13nm,0.8s						
MAW	**Mawson**	**131.15**	**210**	PKP	PKPdf	13 03 43.7	+0.8
	comp=Z,4.2nm,0.6s,baz=69,slow=5.2,SNR=9.3						

BOSA	Boshof	131.51	272	PKP	PKPdf	13 03 45.2	+0.5
	comp=Z,1.6nm,0.5s,baz=313,slow=0.8,SNR=6.8						
SAML	Samuel	133.50	43	eP	PKPdf	13 03 48.7	0.0
LPAZ	La Paz	137.26	54	PKP	PKPdf	13 03 57.3	+1.8
	comp=Z,2.9nm,0.7s,baz=15,slow=5.6,SNR=16						
LPAZ				PP	PP	13 06 46.1	-2.7
	comp=Z,2.0nm,0.9s,baz=8.1,slow=7.9,SNR=6.8						
LPAZ	La Paz	137.26	54	eP	PKPdf	13 03 56.7	+1.2
LPAZ	La Paz	137.26	54	PKIKP	PKPdf	13 03 57.3	+1.8
LPAZ						13 06 46.1	
LPAZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BDFB	Brasilia	145.43	26	PKPbc	PKPbc	13 04 11.8	+0.9
	comp=Z,23nm,0.9s,baz=334,slow=1.8,SNR=23						
NVL	N'lazarevskaya	148.97	207	⇓iPKHKP		13 04 19.5	
NVL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CPUP	Villa Florida	151.20	50	ePKPbc	PKPdf	13 04 25.6	+6.8
SNAA	Sanae	152.46	200	⇑i	PKPdf	13 04 26.9	+7.7
SNAA	Sanae	152.46	200	⇓i	PKPdf	13 04 40.0	+21
SNAA	Sanae	152.46	200	⇑iPKPdf	PKPdf	13 04 20.4	+1.2
SNAA				⇑iP		13 04 26.9	
SNAA				⇓iP		13 04 40.0	
SNAA	Sanae	152.46	200	⇑iPKIKP	PKPdf	13 04 20.4	+1.2
SNAA				i		13 04 40.0	
PLCA	Paso Flores	152.47	89	PKPbc	PKPdf	13 04 28.6	+8.4
	comp=Z,7.9nm,0.7s,baz=258,slow=1.6,SNR=15						
VNA2	Neumayer--Watz	154.02	199	⇑i	PKPdf	13 04 32.0	+11
VNA2	Neumayer--Watz	154.02	199		PKPdf	13 04 48.1	+27
VNA2	Neumayer--Watz	154.02	199	⇑iPKPdf	PKPdf	13 04 23.2	+1.8
VNA2				⇑iP		13 04 32.0	
VNA2				P		13 04 48.1	
VNA3	Neumayer Olymp	154.25	197	⇑i	PKPdf	13 04 32.1	+10
VNA3	Neumayer Olymp	154.25	197		PKPdf	13 04 48.7	+27
VNA3	Neumayer Olymp	154.25	197	⇑iPKPdf	PKPdf	13 04 27.9	+6.2
VNA3				⇑iP		13 04 32.1	
VNA3				P		13 04 48.7	

*BJI **27** 12:59:27.4, 34.57N×72.39E, h10^{km}, mB4.8, mb4.8, ML4.6, Ms4.5, Msz4.3*

*NDI **27** 12:59:30.8±3.6, 34.98N×72.77E, h10^{km}, mb4.6*

*IDC **27** 12:59:31.6±0.6, 34.73N×73.04E, mb4.5/14, mb1 4.6/17, mb1mx4.4/22, mbtmp4.5/17, ML4.5/3, MS3.9/3, Ms1 3.9/3, ms1mx3.3/25, Error ellipse: s-maj=17.0km s-min=16.0km az=146.0*

*MOS **27** 12:59:33.9±1.0, 34.72N×73.02E, h27^{km}, mb4.9/21, Error ellipse: s-maj=11.2km s-min=5.3km az=87.5*

*NEIC **27** 12:59:33.2±0.3, 34.70N×73.01E, h10^{km}, mb4.7/22, MS4.1/1, Error ellipse: s-maj=6.6km s-min=5.3km az=48.0*

*NNC **27** 12:59:46.8±5.2, 35.43N×72.77E, h70^{km}±37^{km}, mpv4.6, Error ellipse: s-maj=53.8km s-min=28.8km az=29.0*

ISC 27 12:59:31.6±0.2**, 34.68N**±0.02×**72.98E**±0.04**, h10^{km}, n153,** σ**1^{s}22**/174**, mb4.5**/44**, MS4.0**/7**, 21C-9D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.05	167	⇓P	Pb	12 59 54.1	+2.8
CEP	Cherat	1.23	226	⇓P	Pb	12 59 56.6	+2.1
SRNI	Srinagar	1.65	110	eP	Pn	13 00 03.0	+2.1
SRNI				eS	Sn	13 00 27.5	+5.2
THW	Thamme Wali	2.14	209	⇑P	Pn	13 00 12.4	+4.5
JMU	Jammu	2.53	140	ex	x	13 00 20.5	
JMU				eS	Sn	13 00 52.0	+7.4
SARP	Sargodha	2.76	185	P	Pn	13 00 20.2	+3.5
SBDP	Sheikh Budin	2.99	218	P	Pn	13 00 24.3	+4.3
THN	Thein Dam	3.20	134	eP	Pn	13 00 27.1	+4.1
THN				ex	x	13 01 14.6	
DLH	Dalhousie	3.28	130	eP	Pn	13 00 28.0	+3.9
DLH				ex	x	13 01 16.0	
DRP	Derazinda	3.74	219	⇑P	Pn	13 00 34.7	+4.1
BHK	Bhakra	4.35	137	ex	x	13 00 49.7	
BHK				ex	x	13 01 37.5	
SDNR	Sundarnagar	4.61	132	eP	Pn	13 00 44.8	+1.8
SDNR				eS	Sn	13 01 38.6	+1.3
SMLA	Simla	4.99	134	eP	Pn	13 00 50.2	+1.8
SMLA				eS	Sn	13 01 47.9	+0.9
DDI	Dehra Dun	6.10	134	eP	Pn	13 01 05.6	+1.5
DDI				ex	x	13 02 19.6	
BHGR	Bahadurgarh	6.86	149	eP	Pn	13 01 16.0	+1.3
NDI	New Delhi	6.98	148	eP	Pn	13 01 16.0	-0.5
NDI				eS	Sn	13 02 35.5	-1.3
KHET	Khetri	7.01	159	eS	Sn	13 02 33.2	-4.4
KHET				eS	Sn	13 02 33.7	-3.8
AYAN	Aya Nagar	7.12	149	eP	Pn	13 01 19.9	+1.6
AYAN				eS	Sn	13 02 37.9	-2.3
KUDL	Kundal	7.17	154	eS	Sn	13 02 39.5	-2.0
SONA	Sohna	7.30	150	eP	Pn	13 01 21.4	+0.4
SONA				eS	Sn	13 02 41.4	-3.4
SONA				eS	Sn	13 02 43.2	-1.6
SONA				eS	Sn	13 02 43.7	-1.1
AML	Almayashu	7.46	4	P	Pn	13 01 24.7	+1.5
	SNR=48						
KZA	Kyzart	7.60	13	P	Pn	13 01 26.7	+1.6
	SNR=9.7						
UCH	Uchtor	7.63	9	P	Pn	13 01 27.0	+1.5
	SNR=66						
JASL	Jaisalmer	7.93	194	eP	Pn	13 01 29.8	0.0
ULHL	Ulahol	7.97	18	P	Pn	13 01 31.6	+1.2
	SNR=14						
PTH	Pithoragarh	7.99	128	eP	Pn	13 01 32.0	+1.5
PTH				eS	Sn	13 03 00.0	-1.9
EKS2	Erkin-Say	8.00	4	P	Pn	13 01 32.1	+1.5
	SNR=45						
AAK	Ala-Archa	8.03	8	P	P	13 01 32.2	+1.1
	SNR=19						
AAK	Ala-Archa	8.03	8	⇑Pn	P	13 01 33.9	+2.8
	35nm,1.2s						
AAK				⇑Sn	Sn	13 02 59.3	-3.6
	70nm,1.1s						
AAK	Ala-Archa	8.03	8	eP	P	13 01 30.8	-0.3
	16nm,0.6s						
AAK				Sn	Sn	13 02 59.3	-3.6
AAK	Ala-Archa	8.03	8	eP	P	13 01 30.8	-0.3
AAK						13 02 59.3	
AAK				pmax	pmax		
	comp=Z,16nm,0.6s						
KBK	Karagaybulak	8.11	10	P	P	13 01 34.9	+2.7
	SNR=14						
FRU	Bishkek	8.24	8	eP	P	13 01 36.0	+1.9
FRU				pmax	pmax		
	comp=Z,60nm,2.0s						
AJM	Ajmer	8.30	170	eP	P	13 01 34.8	-0.1
AJM				eS	Sn	13 03 07.7	-1.9
TKM2	Tokmak 2	8.48	13	P	P	13 01 39.9	+2.6
	SNR=24						
AGRA	Agra	8.56	149	eP	P	13 01 36.8	-1.7
AGRA				eS	Sn	13 03 11.6	-4.6
KK31	Karatay Array	8.63	348	Pn	P	13 01 39.8	+0.4
	comp=Z,22nm,0.5s,baz=155,slow=11,SNR=333						
KK31				⇑Sn	Sn	13 03 12.9	-4.9
	comp=Z,40nm,0.7s,baz=165,slow=24,SNR=4.2						
KK31	Karatay Array	8.63	348	Pn	P	13 01 39.8	+0.4
	comp=Z,22nm,0.4s						
KK31				Sn	Sn	13 03 12.9	-4.9
KK31	Karatay Array	8.63	348	P	P	13 01 39.8	+0.4
KK31						13 03 12.9	
KK31				pmax	pmax		
	comp=Z,22nm,0.4s						
USP	Ospenovka	8.66	7	P	P	13 01 41.4	+1.5
	SNR=8.7						
BHJ	Bhuj	11.75	195	eP	P	13 02 21.4	-1.0
BHJ				eS	S	13 04 26.6	-8.0
BHPL	Bhopal	12.04	160	eP	P	13 02 25.1	-1.2
BHPL				eS	S	13 04 33.0	-8.7
ALBI	Allahabad	12.07	138	eS	S	13 04 33.5	-8.8
MK02	Makanchi Array	13.98	27	⇑P	P	13 02 51.1	-0.8
MK02				pmax	pmax		
	comp=Z,11nm,0.9s						
MK31	Makanchi Array	14.00	27	⇑P	P	13 02 51.1	-0.9
	comp=Z,11nm,0.9s,baz=198,slow=13,SNR=84						
MK31	Makanchi Array	14.00	27	⇑P	P	13 02 51.1	-1.0
	comp=Z,11nm,0.9s						
MKAR	Makanchi Array	14.00	27	Pn	P	13 02 50.9	-1.2
	comp=Z,0.2nm,0.3s,baz=201,slow=12,SNR=25						
MKAR	Makanchi Array	14.00	27	Pn	P	13 02 50.9	-1.2
AKL	Akola	14.37	165	⇑ix	x	13 02 08.5	
AKL				i x	x	13 04 40.5	
WMQ	Urumqi	14.59	47	eP	P	13 03 06.0	+6.1
BOK	Bokaro	15.62	131	eP	P	13 03 14.0	+0.5
BOK				AMb	AMB	13 03 18.5	
	comp=Z,9.8nm,0.6s						
BOK				eS	S	13 05 59.4	-7.7
BOM	Bombay	15.72	181	eP	P	13 03 13.3	-1.5
BOM				ex	x	13 06 25.1	
POO	Poona	16.10	177	ex	x	13 03 24.0	
POO				ex	x	13 03 32.4	
POO				AMb	AMB	13 03 34.7	
	comp=Z,18nm,0.8s						
POO				ex	x	13 06 11.0	
LSA	Lhasa	16.16	103	eP	P	13 03 16.8	-3.6
	comp=Z,8.2nm,0.7s						
LSA	Lhasa	16.16	103	eP	P	13 03 16.8	-3.6
LSA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LATR	Latur	16.51	168	ex	x	13 06 17.8	
KURK	Kurchatov	16.55	13	⇑P	P	13 03 24.6	-0.5
	comp=Z,3.6nm,0.7s						
KURK	Kurchatov	16.55	13	⇑P	P	13 03 24.6	-0.5
KAD	Karad	17.33	176	eP	P	13 03 35.0	-0.3
KAD				AMb	AMB	13 03 36.8	
	comp=Z,16nm,1.7s						
AB31	Akbulak array	17.46	330	⇑P	P	13 03 35.9	-0.7
	comp=Z,6.3nm,0.6s						
AB31				⇑S	S	13 06 38.9	-10
	comp=Z,6.5nm,0.9s,baz=206,slow=32,SNR=4.1						
AB31	Akbulak array	17.46	330	⇑P	P	13 03 35.9	-0.7
AB31				S	S	13 06 38.9	-10
AB31				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HYB	Hyderabad	17.90	162	i P	P	13 03 37.0	-5.3
HYB				eS	S	13 07 08.0	+8.5
HYB	Hyderabad	17.90	162	eP	P	13 03 30.5	-12
HYB				eS	S	13 06 52.0	-7.5
VOSK	Vostochnaya	18.09	356	⇓P	P	13 03 44.1	-0.4
	comp=Z,11nm,0.8s						
VOSK	Vostochnaya	18.09	356	⇓P	P	13 03 44.1	-0.5
VOSK				pmax	pmax		
	comp=Z,11nm,0.8s						
BVA0	Borovoye Array	18.43	355	⇑P	P	13 03 48.7	-0.1
	comp=Z,3.2nm,0.7s,baz=160,slow=9.4,SNR=83						
BVA0	Borovoye Array	18.43	355	⇑P	P	13 03 48.7	-0.1
	comp=Z,3.2nm,0.6s						
BVA0	Borovoye Array	18.43	355	⇑P	P	13 03 48.7	-0.1
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BVAR	Borovoye Array	18.43	355	P	P	13 03 48.9	+0.1
	comp=Z,5.4nm,0.3s,baz=157,slow=9.3,SNR=77						
BRVK	Borovoye	18.47	355	eP	P	13 03 48.8	-0.4
	comp=Z,16nm,0.7s						
BRVK	Borovoye	18.47	355	eP	P	13 03 48.8	-0.5
BRVK				pmax	pmax		
	comp=Z,16nm,0.7s						
SHL	Shillong	18.68	114	ex	x	13 03 47.0	
SHL				ex	x	13 07 06.0	
CHKZ	Chkalovo	19.07	356	⇓P	P	13 03 54.4	-2.0
	comp=Z,23nm,1.6s						
AKTK	Aktyubinsk	19.16	330	⇓P	P	13 03 57.2	-0.3
AKTK				S	S	13 07 27.2	-0.7
AKTO	Aktyubinsk	19.16	330	⇓P	P	13 03 57.2	-0.3
	comp=Z,5.6nm,0.7s						
AKTO				⇓S	S	13 07 27.2	-0.7
	comp=Z,1.7nm,1.6s						
AKTO	Aktyubinsk	19.16	330	P	P	13 03 57.4	-0.2
	comp=Z,3.9nm,0.3s,baz=138,slow=9.8,SNR=122						
AKTO	Aktyubinsk	19.16	330	P	P	13 03 57.4	-0.1
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.3s						
NVS	Novosibirsk	21.39	16	eP	P	13 04 18.9	-2.4
NVS				eS	S	13 08 11.0	-2.8
NVS				pmax	pmax		
	comp=Z,43nm,1.1s,mb4.7						
NVS				pmax	pmax		
	comp=N,70nm,1.7s						
NVS				smax			
	comp=N,24nm,2.0s						
GTA	Gaotai	21.90	70	eP	P	13 04 26.5	-0.1
GTA				AP		13 04 31.5	
GTA				XP		13 04 34.3	
GTA				PP	PP	13 04 54.0	+2.0
GTA				PPP	PPP	13 05 03.5	+1.6
GTA				S	S	13 08 27.0	+3.6
GTA				XS		13 08 34.5	
GTA				SS	SS	13 09 06.5	+5.3
GTA				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
GTA				AMB	AMB		
	comp=Z,100nm,5.3s						
GTA				LR	LR		
	comp=N,120nm,13.3s,MS3.7						
GTA				LR	LR		
	comp=E,180nm,17.1s,MS3.7						
GTA				LR	LR		
	comp=Z,270nm,16.7s,MS3.7						
GNI	Garni	23.03	292	eP	P	13 04 42.8	+5.0
	comp=Z,30nm,1.0s,mb4.7						
GNI	Garni	23.03	292	eP	P	13 04 42.8	+5.1
GNI				pmax	pmax		
	comp=Z,30nm,1.0s						
SVE	Sverdlovsk	23.69	343	eP	P	13 04 45.7	+1.7
SVE				ePPP	PPP	13 05 18.0	-8.8
SVE				pmax	pmax		
	comp=Z,40nm,2.4s,mb4.4						
SVE				MLR	MLR		
	comp=E,300nm,12.0s						
SVE				MLR	MLR		
	comp=Z,200nm,12.0s,MS3.8						
ARU	Arti	23.88	340	eP	P	13 04 47.0	+1.1
	comp=Z,16nm,0.8s,mb4.5						
ARU	Arti	23.88	340	⇑iP	P	13 04 47.3	+1.5
ARU				ePPP	PPP	13 05 16.5	-13
ARU				eS	S	13 08 58.5	-0.2
ARU				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.5						
LZH	Lanzhou	25.16	78	eP	P	13 04 59.5	+1.1
LZH				AMB	AMB		
	comp=Z,50nm,1.5s,mb4.8						
LZH				AMB	AMB		
	comp=Z,80nm,6.1s						
LZH				LR	LR		
	comp=N,440nm,14.9s						
LZH				LR	LR		
	comp=Z,590nm,18.0s,MS4.1						
LZH	Lanzhou	25.16	78	eP	P	13 04 59.5	+1.1
	comp=Z,56nm,1.5s,mb4.9						
LZH				pP	pP	13 05 16.2	+15
LZH				sP	sP	13 05 22.1	+20
LZH				PP	PP	13 06 13.5	+37
LZH				LR	LR		
	comp=Z,600nm,18.0s,MS4.2						
CD2	Chengdu	26.09	90	P	P	13 05 07.3	+0.1
CD2				AMB	AMB		
	comp=Z,20nm,0.9s,mb4.7						
ZAK	Zakamensk	27.05	45	eP	P	13 05 15.9	+0.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.0						
KMI	Kunming	27.42	102	P	P	13 05 17.0	-2.4
KMI				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.4						
KMI	Kunming	27.42	102	P	P	13 05 16.9	-2.5
	comp=Z,14nm,0.8s,mb4.5						
KMI	Kunming	27.42	102	P	P	13 05 16.9	-2.5
KMI				pmax	pmax		
	comp=Z,14nm,0.8s,mb4.5						
SONM	Songino Array	28.11	52	P	P	13 05 25.0	-0.4
	comp=Z,3.3nm,0.9s,mb4.0,baz=252,slow=8.7,SNR=21						
SONM				LR	LR	13 17 58.2	
	comp=Z,198nm,20.5s,MS3.7,baz=205,slow=40						
ULN	Ulaanbaatar	28.55	52	eP	P	13 05 30.2	+0.8
	comp=Z,4.4nm,1.0s,mb4.1						
ULN	Ulaanbaatar	28.55	52	eP	P	13 05 30.2	+0.8
ULN				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
ANN	Anapa	28.94	301	eP	P	13 05 23.6	-9.3
ANN				i *PP	pP	13 05 39.4	+3.6
ANN				ePPP	PPP	13 06 22.7	-17
ANN				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
ENH	Enshi	31.00	88	eP	P	13 05 51.3	-0.1
	comp=Z,6.3nm,0.5s,mb4.7						
AKASG	Malin Array Be	35.35	311	P	P	13 06 28.0	-1.0
	comp=Z,0.7nm,0.4s,mb4.0,baz=82,slow=7.9,SNR=5.8						
BOD	Bodaibo	35.79	37	eP	P	13 06 32.1	-0.5
BOD				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
NJ2	Nanjing	38.15	81	eP	P	13 06 56.3	+3.5
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
JOF	Joensuu	38.25	331	ep	P	13 06 53.4	+0.2
	comp=Z,4.4nm,0.5s,mb4.4						
FINES	FINESS Array B	39.89	327	P	P	13 07 06.3	-0.7
	comp=Z,1.3nm,0.4s,mb4.0,baz=115,slow=9.2,SNR=18						
FINES	FINESS Array B	39.89	327	eP	P	13 07 06.9	0.0
KAF	Kangasniemi	40.02	328	ep	P	13 07 07.6	-0.4
SSE	Sheshan	40.34	81	P	P	13 07 11.3	+0.3
SSE				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.0						
SSE				AMB	AMB		
	comp=Z,100nm,8.0s						
SSE	Sheshan	40.34	81	P	P	13 07 11.2	+0.2
	comp=Z,20nm,0.7s,mb5.0						
CLNS	Chul'man	41.19	41	eP	P	13 07 15.2	-2.4
CLNS				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.9						
CLNS				pmax	pmax		
	comp=N,8.0nm,1.0s						
KEV	Kevo	43.09	339	ep	P	13 07 33.1	+0.2
	comp=N,3.4nm,0.5s,mb4.3						
KEV	Kevo	43.09	339	eP	P	13 07 33.1	+0.2
KEV				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.3						
ARCES	ARCESS Array B	43.44	338	P	P	13 07 36.2	+0.4
	comp=Z,7.1nm,0.4s,mb4.7,baz=116,slow=8.4,SNR=93						
ARCES	ARCESS Array B	43.44	338	P	P	13 07 36.2	+0.4
ARE0	ARCESS Array S	43.44	338	eP	P	13 07 36.3	+0.5
YAK	Yakutsk	44.54	34	P	P	13 07 42.8	-2.0
	comp=Z,20nm,0.8s,mb5.0						
YAK	Yakutsk	44.54	34	i P	P	13 07 44.7	-0.1
YAK				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.9						
YAK				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.6						
NB2	NORSAR Subarra	46.80	324	P	P	13 08 02.1	-0.7
	comp=Z,2.1nm,0.6s,mb4.2,baz=95,slow=7.4						
NOA	NORSAR Array B	46.80	324	P	P	13 08 02.5	-0.3
	comp=Z,2.6nm,0.7s,mb4.3,baz=96,slow=7.7,SNR=14						
NOA	NORSAR Array B	46.80	324	P	P	13 08 02.5	-0.3
TIXI	Tiksi	46.87	21	⇓eP	P	13 08 03.0	-0.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
NAO	NORSAR Subarra	46.97	324	P	P	13 08 02.1	-2.0
	comp=Z,2.1nm,0.6s,mb4.2						
NAO	NORSAR Subarra	46.97	324	P	P	13 08 02.1	-2.0
NAO				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.2						
JOW	Kunigami	47.66	84	P	P	13 08 09.1	-1.0
	comp=Z,12nm,0.8s,mb5.0,baz=139,slow=9.3,SNR=3.4						
KMBO	Kilima Mbogo	48.86	231	P	P	13 08 21.0	+1.5
	comp=Z,1.8nm,0.6s,mb4.3,baz=40,slow=11,SNR=8.1						
KMBO	Kilima Mbogo	48.86	231	P	P	13 08 21.0	+1.5
MAJO	Matsushiro	52.13	68	eP	P	13 08 43.1	-1.0
	comp=Z,16nm,0.7s,mb5.1						
MAJO	Matsushiro	52.13	68	eP	P	13 08 43.1	-1.1
MAJO				pmax	pmax		
	comp=Z,16nm,0.7s,mb5.1						
MAT	Matsushiro	52.13	68	P	P	13 08 42.9	-1.3
MAT	Matsushiro	52.13	68	eP	P	13 08 43.0	-1.2
	comp=Z,18nm,0.8s,mb5.0						
MAT	Matsushiro	52.13	68	eP	P	13 08 43.0	-1.2
MAT				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
MJAR	Matsushiro Arr	52.13	68	P	P	13 08 44.2	0.0
	comp=Z,3.1nm,0.6s,mb4.4,baz=293,slow=9.6,SNR=6.6						
YSS	Yuzh-Sakhalins	52.57	54	eP	P	13 08 47.2	-0.1
	comp=Z,30nm,1.1s,mb5.1						
YSS	Yuzh-Sakhalins	52.57	54	i P	P	13 08 47.5	+0.2
YSS				pmax	pmax		
	comp=Z,31nm,1.2s,mb5.1						
DAG	Danmarks Havn	56.92	344	⇑iP	P	13 09 18.0	-0.7
	comp=Z,2.0nm,0.6s,mb4.3						
DAG	Danmarks Havn	56.92	344	⇑eP	P	13 09 18.0	-0.7
	comp=Z,2.0nm,0.6s,mb4.3						
DAG	Danmarks Havn	56.92	344	⇑eP	P	13 09 18.0	-0.7
DAG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.3						
SUMG	Summit	63.30	342	eP	P	13 10 02.5	+0.1
	comp=Z,12nm,1.0s,mb5.0						
LSZ	Lusaka	65.41	228	P	P	13 10 17.1	+0.2
	comp=Z,0.7nm,0.5s,mb4.0,baz=38,slow=6.4,SNR=5.2						
GUMO	Guam	67.58	89	LR	LR	13 44 10.7	
	comp=Z,54nm,19.5s,MS3.8,baz=140,slow=40						
FITZ	Fitzroy Crossi	72.51	128	eP	P	13 11 00.6	-0.2
	comp=Z,3.6nm,0.9s,mb4.3						
IMA2	Indian Mountai	73.36	18	eP	P	13 11 04.2	-0.6
INK	Inuvik	75.43	10	eP	P	13 11 16.8	+0.1
	comp=Z,11nm,0.7s,mb4.9						
INK	Inuvik	75.43	10	eP	P	13 11 16.8	+0.1
INK				pmax	pmax		
	comp=Z,11nm,0.7s						
COLA	College	75.76	17	eP	P	13 11 19.0	+0.3
	comp=Z,9.4nm,1.1s,mb4.6						
COLA	College	75.76	17	eP	P	13 11 19.0	+0.3
COLA				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
ILAR	Eielson Array	76.08	16	P	P	13 11 20.1	-0.4
	comp=Z,3.2nm,1.0s,mb4.2,baz=311,slow=4.3,SNR=26						
DBIC	Dimbokro	76.24	269	P	P	13 11 22.1	-0.3
	comp=Z,3.3nm,0.8s,mb4.3,baz=43,slow=6.6,SNR=6.3						
BOSA	Boshof	77.43	222	P	P	13 11 29.5	+0.7
	comp=Z,5.5nm,0.8s,mb4.5,baz=62,slow=3.8,SNR=6.0						
DAWY	Dawson	78.31	14	eP	P	13 11 33.0	+0.1
WRA	Warramunga Arr	79.66	123	P	P	13 11 40.8	-0.3
	comp=Z,1.3nm,0.4s,mb4.2,baz=324,slow=5.0,SNR=36						
WB2	Warramunga Arr	79.66	123	eP	P	13 11 41.3	+0.2
YKA	Yellowknife Ar	82.97	4	P	P	13 11 57.8	+0.2
	comp=Z,1.9nm,0.4s,mb4.5,baz=347,slow=5.3,SNR=27						
YKA	Yellowknife Ar	82.97	4	P	P	13 11 57.8	+0.2
SCHQ	Schefferville	84.39	338	P	P	13 12 04.0	-0.9
	comp=Z,4.1nm,0.8s,mb4.6,baz=280,slow=3.1,SNR=3.6						
SCHQ	Schefferville	84.39	338	P	P	13 12 04.0	-0.9
SADO	Sadowa	96.97	340	LR	LR	14 01 12.3	
	comp=Z,122nm,18.6s,MS4.4,baz=65,slow=38						

*NEIC **27** 13:00:12.4, 58.25N×133.82W, h1^{km}, ML2.8(AEIC), After AEIC.*

PGC 27 13:00:12.3, 58.38N×133.48W, h1^{km}, ML3.1/4**,** **ML2.8**/5(AEIC)**, Near Mt. Ogden, British Columbia - Alaska border., Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESE	Bessie Mountai	0.75	286	P	Pg	13 00 25.3	-2.0
BESE				S	Sg	13 00 34.4	-2.8
DLBC	Dease Lake	1.82	87	Pn	Pn	13 00 43.2	-1.9
DLBC				Pg	Pg	13 00 44.9	-3.7
DLBC				Sn	Sn	13 01 08.3	-0.8
DLBC				Sg	Sg	13 01 09.9	-3.0
DLBC				Trac		13 01 14.7	
	comp=Z,91nm,0.4s						
DLBC	Dease Lake	1.82	87	P	Pn	13 00 44.9	-0.1
PLBC	Pleasant Camp	1.85	307	Pn	Pn	13 00 45.0	-0.4
PLBC				Sg	Sg	13 01 10.6	-3.1
WHY	Whitehorse	2.40	343	Pn	Pn	13 00 51.6	-1.7
WHY				Sn	Sn	13 01 21.9	-1.9
WHY				S	Sn	13 01 24.1	+0.3
WHY				Sg	Sg	13 01 27.0	-5.2
WHY				Trac		13 01 35.2	
	comp=Z,40nm,0.4s						
WHY	Whitehorse	2.40	343	P	Pn	13 00 52.1	-1.2
WHY				S	Sn	13 01 24.1	+0.3
CRAG	Craig	2.92	176	P	Pn	13 00 58.1	-2.7
HYT	Haines Junctio	3.20	322	Pn	Pn	13 01 03.9	-0.8
HYT				Pg	Pg	13 01 10.2	-5.9
HYT				Sg	Sg	13 01 51.0	-7.7
HYT				Trac		13 01 56.2	
	comp=Z,17nm,0.3s						
PNL	Peninsula	3.32	295	P	Pn	13 01 04.2	-2.2
PNL				Trac			
RUBB	Prince Rupert	4.44	155	Pn	Pn	13 01 18.9	-3.5
RUBB				Sg	Sg	13 02 29.1	-11
RUBB				Trac		13 02 43.5	
	comp=Z,57nm,1.0s						
DAWY	Dawson	6.38	336	Pn	Pn	13 01 46.9	-2.8
DAWY				Pg	Pg	13 02 08.2	-12
DAWY				Sg	Sg	13 03 32.0	-13
DAWY				Trac		13 03 36.2	
	comp=Z,21nm,0.8s						
INK	Inuvik	9.97	360	Pn	P	13 02 36.5	-3.1
INK				Sg	Sg	13 05 25.1	-19

INK				Trac		13 05 39.9	
	comp=Z,3.0nm,1.1s						

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*IDC **27** 13:05:06.1±1.4,34.67N×73.03E,mb3.9/9,mb1 4.2/12, mb1mx4.0/21,mbtmp4.0/12,ML4.1/3,Error ellipse: s-maj=35.8km s-min=20.0km az=32.0*
*NEIC **27** 13:05:07.3±0.8,34.60N×72.95E,h10^{km},mb3.9/3,Error ellipse: s-maj=16.1km s-min=11.9km az=56.0*
*MOS **27** 13:05:08.5±0.9,34.67N×72.95E,h29^{km},mb4.4/4,Error ellipse: s-maj=20.6km s-min=8.9km az=89.2*
*NDI **27** 13:05:09.6±4.6,34.59N×72.52E,h10^{km},ML3.6, mb3.9(NEIC)*
*NNC **27** 13:05:17.8±2.7,35.07N×72.80E,h61^{km}±17^{km},mpv3.9, Error ellipse: s-maj=31.7km s-min=21.8km az=105.0*
ISC 27 13:05:06.5±0.5,**34.73N**±0.04×**73.02E**±0.10,**h10**^{km}**,n44,** $\sigma 1^{s}$**06**/47,**mb3.9**/13,**6C-2D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.21	135	*e*x	x	13 05 43.6	
DLH	Dalhousie	3.28	131	*e*x	x	13 05 49.0	
DLH				*e*S	Sn	13 06 45.0	+6.3
BHK	Bhakra	4.36	138	*e*S	Sn	13 07 11.7	+5.7
SDNR	Sundarnagar	4.62	133	*e*x	x	13 06 01.6	
SDNR				*e*S	Sn	13 07 13.4	+0.9
DDI	Dehra Dun	6.11	135	*e*x	x	13 07 56.0	
DDI				*e*x	x	13 08 35.0	
NDI	New Delhi	7.00	148	*e*P	Pn	13 06 52.5	+0.7
NDI				*e*S	Sn	13 08 09.5	-2.8
KHET	Khetri	7.05	160	*e*P	Pn	13 06 53.7	+1.3
KHET				*e*S	Sn	13 08 06.1	-7.2
KHET				AML	AML	13 08 13.0	
	comp=N,39nm,0.3s						
KHET				AML	AML	13 08 13.9	
	comp=E,69nm,0.7s						
KUDL	Kundal	7.20	155	*e*S	Sn	13 08 11.6	-5.6
SONA	Sohna	7.33	151	*e*P	Pn	13 06 56.8	+0.5
SONA				AML	AML	13 08 20.6	
	comp=E,161nm,0.5s						
SONA				AML	AML	13 08 20.6	
	comp=N,54nm,0.5s						
AAK	Ala-Archa	7.97	8	⇑Pn	Pn	13 07 06.7	+1.4
	comp=N,3.3nm,0.7s						
AAK				⇑Sn	Sn	13 08 34.5	-2.1
	comp=N,7.5nm,0.7s						
AAK	Ala-Archa	7.97	8	*e*P	Pn	13 07 06.9	+1.6
AJM	Ajmer	8.34	170	*e*P	P	13 07 09.7	-0.7
AJM				*e*S	Sn	13 08 38.0	-7.7
AJM				AML	AML	13 08 42.8	
	comp=N,19nm,0.2s						
AJM				AML	AML	13 08 43.4	
	comp=E,18nm,0.1s						
KK31	Karatay Array	8.59	348	Pn	P	13 07 15.6	+1.8
	comp=E,3.6nm,0.3s,baz=164,slow=11,SNR=13						
KK31				⇓Sn	Sn	13 08 48.4	-3.4
	comp=E,14nm,0.7s,baz=174,slow=23,SNR=7.7						
MKAR	Makanchi Array	13.93	27	Pn	P	13 08 26.4	+0.2
	comp=E,0.1nm,0.3s,baz=220,slow=11,SNR=3.6						
MKAR	Makanchi Array	13.93	27	Pn	P	13 08 26.4	+0.2
AB31	Akbulak array	17.43	330	⇑P	P	13 09 11.3	+0.1
	comp=E,4.3nm,0.7s,baz=128,slow=12,SNR=8.8						
VOSK	Vostochnaya	18.05	356	⇑P	P	13 09 19.8	+0.8
	comp=E,2.4nm,0.6s						
BVA0	Borovoye Array	18.39	355	⇑P	P	13 09 24.1	+1.0
	comp=E,1.0nm,0.6s,baz=160,slow=10,SNR=17						
BVAR	Borovoye Array	18.39	355	P	P	13 09 24.1	+1.0
	comp=E,2.0nm,0.3s,baz=156,slow=9.5,SNR=24						
BRVK	Borovoye	18.43	355	*e*P	P	13 09 24.6	+0.9
	comp=E,4.5nm,0.9s						
BRVK	Borovoye	18.43	355	*e*P	P	13 09 24.6	+0.9
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHKZ	Chkalovo	19.02	356	⇓P	P	13 09 29.4	-1.4
	comp=Z,5.5nm,1.0s						
CHKZ	Chkalovo	19.02	356	*e*P	P	13 09 29.5	-1.3
	comp=Z,5.8nm,0.9s						
CHKZ	Chkalovo	19.02	356	*e*P	P	13 09 29.5	-1.3
CHKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKTO	Aktyubinsk	19.14	330	⇑P	P	13 09 32.5	+0.3
	comp=Z,2.6nm,0.8s						
AKTO	Aktyubinsk	19.14	330	P	P	13 09 32.7	+0.5
	comp=Z,2.0nm,0.3s,baz=137,slow=9.4,SNR=19						
AKTO	Aktyubinsk	19.14	330	P	P	13 09 32.7	+0.5
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NVS	Novosibirsk	21.33	16	*e*P	P	13 09 54.8	-0.9
NVS				pmax	pmax		
	comp=Z,24nm,1.9s,mb4.2						
NVS				pmax	pmax		
	comp=N,16nm,1.7s						
ZAK	Zakamensk	26.98	45	*e*P	P	13 10 51.0	+0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.6						
SONM	Songino Array	28.05	52	P	P	13 10 58.9	-1.0
	comp=Z,0.2nm,0.5s,mb3.0,baz=18,slow=42,SNR=2.6						
AKASG	Malin Array Be	35.34	310	P	P	13 12 02.4	-1.5
	comp=Z,0.4nm,0.5s,mb3.6,baz=97,slow=7.5,SNR=3.5						
FINES	FINESS Array B	39.87	327	P	P	13 12 40.8	-1.0
	comp=Z,1.2nm,0.8s,mb3.7,baz=112,slow=10,SNR=4.6						
ARCES	ARCESS Array B	43.41	338	P	P	13 13 11.0	+0.5
	comp=Z,3.9nm,0.6s,mb4.3,baz=114,slow=7.7,SNR=23						
ARCES	ARCESS Array B	43.41	338	P	P	13 13 11.0	+0.5
NB2	NORSAR Subarra	46.78	324	P	P	13 13 37.2	-0.4
	comp=Z,0.3nm,0.5s,mb3.5,baz=115,slow=7.9						
NOA	NORSAR Array B	46.78	324	P	P	13 13 37.7	+0.1
	comp=Z,1.2nm,0.8s,mb3.9,baz=96,slow=7.7,SNR=4.0						
TIXI	Tiksi	46.81	21	*e*P	P	13 13 37.1	-0.6
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
MJAR	Matsushiro Arr	52.08	68	P	P	13 14 18.5	-0.2
	comp=Z,1.3nm,0.5s,mb4.1,baz=293,slow=11,SNR=5.8						
ILAR	Eielson Array	76.02	16	P	P	13 16 53.9	-1.2
	comp=Z,1.4nm,1.1s,mb3.8,baz=326,slow=5.9,SNR=5.9						
WRA	Warramunga Arr	79.65	123	P	P	13 17 15.9	-0.1
	comp=Z,0.5nm,0.5s,mb3.8,baz=322,slow=5.0,SNR=9.2						
WRAB	Tennant Creek	79.65	123	*e*P	P	13 17 15.5	-0.5
	comp=Z,4.0nm,0.6s,mb4.5						
WRAB	Tennant Creek	79.65	123	*e*P	P	13 17 15.5	-0.5
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
YKA	Yellowknife Ar	82.92	4	P	P	13 17 33.0	+0.7
	comp=Z,0.9nm,0.5s,mb4.0,baz=346,slow=5.5,SNR=7.0						
YKA	Yellowknife Ar	82.92	4	P	P	13 17 33.0	+0.7

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*CSEM **27** 13:05:27.2±0.1,26.55N×55.84E,h10^{km},mb4.5/19,Error ellipse: s-maj=4.6km s-min=3.5km az=126.0*
*IDC **27** 13:05:28.7±1.0,26.80N×55.88E,mb4.0/14,mb1 4.2/15, mb1mx4.1/23,mbtmp4.1/15,ML4.2/1,Error ellipse: s-maj=23.9km s-min=16.2km az=116.0*
*NEIC **27** 13:05:29.9±0.6,26.65N×55.82E,h10^{km},mb4.5/22, MN4.1(TEH),Error ellipse: s-maj=10.9km s-min=8.6km az=104.0*
*TEH **27** 13:05:30.0,26.49N×55.76E,h10^{km},Mn4.1*
*MOS **27** 13:05:31.7±1.0,26.76N×55.91E,h33^{km},mb4.8/19,Error ellipse: s-maj=16.3km s-min=5.7km az=127.2*
*THR **27** 13:05:37.4±0.9,27.23N×56.44E,h17^{km}±5^{km},ML3.3*
ISC 27 13:05:25.9±1.6,**26.52N**±0.06×**55.84E**±0.06,**h1**^{km}±8^{km}, **n104,** $\sigma 1^{s}$**04**/108,**mb4.3**/33,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.92	19	*e*PG	Pg	13 05 43.8	-0.6
BNDS				AML	AML	13 06 20.0	
	comp=N,2μm,0.5s						
GHIR	Ghir-Karzin	3.08	305	*e*PN	Pg	13 06 29.0	+1.6
GHIR				Sn	Sg	13 07 07.8	-0.7
KRBR	Kerman	3.54	13	*e*PN	Pn	13 06 23.6	+0.3
KRBR				Sn	Sn	13 06 56.3	-10
KRBR				AML	AML	13 07 22.6	
	comp=N,215nm,0.6s						
KRBR	Kerman	3.54	13	*e*Pn	Pn	13 06 23.6	+0.4
	SNR=52						
KRBR				Sn	Sn	13 06 56.3	-10
	comp=N,215nm,0.6s,SNR=52						
ISRV	Sarvestan	3.73	320	Pn	Pn	13 06 26.5	+0.6
IMOK	Mook	3.74	313	Pn	Pn	13 06 27.2	+1.2
IPAR	Pars	4.12	324	Pn	Pn	13 06 32.0	+0.5
IMEH	Mehriz	4.97	348	Pn	Pn	13 06 43.9	+0.4
IBAF	Bafgh	5.06	357	Pn	Pn	13 06 45.3	+0.6
HASS	Wahat al Ahsa’	5.69	258	P	Pn	13 06 54.3	+0.7
ISAD	Sadrabad	5.69	341	Pn	Pn	13 06 53.3	-0.4
ISFB	Sefidab	8.40	339	Pn	P	13 07 30.8	-0.9
IDMV	Damavand	9.60	341	Pn	P	13 07 47.4	-0.9
IDMV				Sn	Sn	13 09 28.6	-9.4
MZLS	Mizel	9.93	258	P	P	13 07 52.1	-0.9
IAFJ	Afjeh	9.95	340	Pn	P	13 07 52.6	-0.6
IRAZ	Razeghan	10.20	332	Pn	Px	13 08 10.6	
AFFS	‘Afif	11.90	260	P	P	13 08 18.7	-1.2
AFFS				S	S	13 10 27.5	-7.0
HILS	Ha’il	12.56	277	P	P	13 08 27.8	-0.8
DJNS	Zahran al Janu	14.37	235	P	P	13 08 51.4	-1.2
BLJS	Baljurashi	14.66	246	P	P	13 08 55.0	-1.5
GNI	Garni	16.43	329	*e*P	P	13 09 20.6	+1.3
	comp=N,27nm,1.1s						
GNI	Garni	16.43	329	*e*P	P	13 09 20.6	+1.3
GNI				pmax	pmax		
	comp=Z,27nm,1.1s						
GNI	Garni	16.43	329	*e*P	P	13 09 20.6	+1.3
	comp=Z,27nm,1.1s						
ATD	Arta Tunnel	19.29	222	P	P	13 09 55.9	+1.0
	comp=Z,0.7nm,0.3s,baz=328,slow=19,SNR=2.7						
ATD	Arta Tunnel	19.29	222	P	P	13 09 55.9	+1.0
KIV	Kislovodsk	20.40	332	*e*P	P	13 10 07.6	+0.6
	comp=Z,54nm,1.0s						
KIV	Kislovodsk	20.40	332	*e*P	P	13 10 07.6	+0.6
KIV				pmax	pmax		
	comp=Z,54nm,1.0s						
KIV	Kislovodsk	20.40	332	*e*P	P	13 10 07.6	+0.6
	comp=Z,54nm,1.0s						
GOF	Gofitskoye	21.16	334	*e*P	P	13 10 14.0	-0.8
GOF				pmax	pmax		
	comp=Z,38nm,0.6s,mb4.9						
GOF	Gofitskoye	21.16	334	*e*P	P	13 10 14.0	-0.8
	comp=Z,38nm,0.6s,mb4.9						
AAK	Ala-Archa	22.16	39	*e*P	P	13 10 28.0	+3.1
	comp=Z,3.5nm,0.8s,mb3.8						
AAK	Ala-Archa	22.16	39	*e*P	P	13 10 28.0	+3.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb3.9						
BR131	Keskin Array S	22.70	311	*e*P	P	13 10 31.3	+1.0
	comp=Z,5.5nm,0.9s,mb4.1						
BR131	Keskin Array S	22.70	311	*e*P	P	13 10 31.3	+1.0
	comp=Z,5.5nm,0.9s,mb4.1						
BRTR	Keskin Array B	22.70	311	P	P	13 10 32.0	+1.7
	comp=Z,4.8nm,0.9s,mb4.0,baz=128,slow=12,SNR=20						
AKTO	Aktyubinsk	23.94	3	P	P	13 10 42.8	+0.6
	comp=Z,2.8nm,0.7s,mb3.9,baz=205,slow=15,SNR=2.4						
ISP	Isparta	24.15	304	*e*P	P	13 10 46.4	+2.0
	comp=Z,3.4nm,0.3s,mb4.3						
ISP	Isparta	24.15	304	*e*P	P	13 10 46.4	+2.0
ISP				pmax	pmax		
	comp=Z,3.0nm,0.3s,mb4.3						
IDI	Anoyia	27.86	296	P	P	13 11 20.4	+1.2
	comp=Z,7.0nm,0.7s,mb4.6,baz=83,slow=16,SNR=4.0						
BVAR	Borovoye Array	28.62	18	P	P	13 11 23.9	-1.9
	comp=Z,2.8nm,0.7s,mb4.2,baz=191,slow=7.6,SNR=8.2						
MKAR	Makanchi Array	29.09	39	P	P	13 11 28.6	-1.6
	comp=Z,0.5nm,0.7s,mb3.5,baz=217,slow=6.1,SNR=3.8						
AKASG	Malin Array Be	31.55	327	P	P	13 11 49.5	-2.4
	comp=Z,1.3nm,0.4s,mb4.2,baz=134,slow=8.3,SNR=11						
KMBO	Kilima Mbogo	32.82	216	P	P	13 12 07.6	+4.3
	comp=Z,0.8nm,0.6s,mb3.9,baz=34,slow=15,SNR=5.5						
KOLS	Kolonicke sedl	34.29	320	*i* P	P	13 12 16.6	+0.9
CRVS	Cervenica-Dubn	34.75	319	*e*P	P	13 12 19.7	0.0
KECS	Kecovo	35.14	318	*i* P	P	13 12 23.6	+0.6
OKC	Ostrava-Krasne	37.10	319	*e*P	P	13 12 41.1	+1.5
MORC	Moravsky Berou	37.44	319	*e*P	P	13 12 41.3	-1.1
MORC				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
MORC	Moravsky Berou	37.44	319	*e*P	P	13 12 41.3	-1.1
	comp=Z,3.8nm,0.8s,mb4.2						
DPC	Dobruska-Polom	38.39	319	*e*P	P	13 12 50.1	-0.3
TREC	Trest	38.49	317	*e*P	P	13 12 51.5	+0.3
UPC	Upice	38.63	319	*e*P	P	13 12 52.3	-0.1
GEC2	GERESS Array S	39.44	316	*e*P	P	13 12 57.5	-1.6
GERES	GERESS Array B	39.44	316	P	P	13 12 58.2	-0.9
	comp=Z,0.8nm,0.5s,mb3.6,baz=104,slow=7.0,SNR=10						
KHC	Kasperske Hory	39.60	316	*e*P	P	13 12 59.9	-0.7
BRG	Berggiesshubel	39.99	319	*e*P	P	13 13 03.7	0.0
	comp=Z,9.2nm,1.3s,mb4.2						
BRG	Berggiesshubel	39.99	319	*e*P	P	13 13 03.7	0.0
BRG				pmax	pmax		
	comp=Z,9.0nm,1.3s,mb4.2						
BRG	Berggiesshubel	39.99	319	*e*P	P	13 13 03.7	0.0
	comp=Z,9.2nm,1.3s,mb4.2						
WET	Wettzell	40.04	316	*e*P	P	13 13 02.5	-1.7
FINES	FINESS Array B	40.25	338	P	P	13 13 05.1	-0.6
	comp=Z,0.9nm,0.5s,mb3.7,baz=131,slow=9.4,SNR=8.5						
GRA1	Grafenberg Arr	41.24	316	*e*P	P	13 13 14.1	+0.1
	comp=Z,22nm,1.4s,mb4.7						
GRF	Grafenberg Arr	41.24	316	*e*P	P	13 13 14.1	+0.1
GRF				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
GRF	Grafenberg Arr	41.24	316	*e*P	P	13 13 14.1	+0.1
GRF				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.7						
GRF	Grafenberg Arr	41.24	316	*e*P	P	13 13 14.1	+0.1
	comp=Z,22nm,1.4s,mb4.7						
CLZ	Clausthal	42.42	319	*e*P	P	13 13 24.4	+0.8
CLZ				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.4						
CLZ	Clausthal	42.42	319	*e*P	P	13 13 24.4	+0.8
	comp=Z,7.0nm,0.9s,mb4.4						
BFO	Black Forest	42.72	314	*e*P	P	13 13 27.4	+1.3
BFO				pmax	pmax		
	comp=Z,7.0nm,1.5s,mb4.2						
BFO	Black Forest	42.72	314	*e*P	P	13 13 27.4	+1.3
	comp=Z,7.0nm,1.5s,mb4.2						
MBDF	Montbardon	43.12	308	*e*P	P	13 13 31.0	+1.6
	comp=Z,10nm,0.9s,mb4.3						
MBDF	Montbardon	43.12	308	*e*P	P	13 13 31.0	+1.6
MBDF				pmax	pmax		
	comp=Z,5.0nm,0.9s,mb4.2						
LPG	La Plagne	43.24	309	*e*P	P	13 13 32.1	+1.7
	comp=Z,12nm,0.8s,mb4.3						
LPG	La Plagne	43.24	309	*e*P	P	13 13 32.1	+1.7
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
LPL	La Plagne	43.26	309	*e*P	P	13 13 31.9	+1.3
	comp=Z,6.6nm,0.7s,mb4.2						
LPL	La Plagne	43.26	309	*e*P	P	13 13 31.9	+1.3
LPL				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
CDF	Champ du Feu	43.42	313	*e*P	P	13 13 32.1	+0.3
HINF	Hinteralfeld	43.58	312	*e*P	P	13 13 33.4	+0.3
HAU	Haudompre	43.95	313	*e*P	P	13 13 35.8	-0.3
SONM	Songino Array	44.63	48	P	P	13 13 41.6	0.0
	comp=Z,0.7nm,0.8s,mb3.7,baz=272,slow=9.1,SNR=4.2						
MEZF	Maizieres J’vi	44.89	313	*e*P	P	13 13 41.2	-2.6
LASF	Ste Croix	45.12	307	*e*P	P	13 13 45.1	-0.5
	comp=Z,20nm,1.1s,mb4.7						
SMF	Signal de Mont	45.41	310	*e*P	P	13 13 47.2	-0.7
	comp=Z,19nm,1.1s,mb4.7						
SMF	Signal de Mont	45.41	310	*e*P	P	13 13 47.2	-0.7
SMF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
LOR	Lormes	45.49	311	*e*P	P	13 13 47.7	-0.8
SSF	Saint Saulge	45.70	311	*e*P	P	13 13 49.6	-0.5
SSF				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
SSF	Saint Saulge	45.70	311	*e*P	P	13 13 49.6	-0.5
	comp=Z,9.8nm,1.0s,mb4.8						
NOA	NORSAR Array B	45.70	331	P	P	13 13 49.0	-1.0
	comp=Z,2.1nm,0.9s,mb4.2,baz=116,slow=7.9,SNR=5.3						
BAIF	Baives	45.73	315	*e*P	P	13 13 50.9	+0.6
	comp=Z,17nm,1.0s,mb4.8						
BAIF	Baives	45.73	315	*e*P	P	13 13 50.9	+0.6
BAIF				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
AVF	Avril sur Loir	45.77	310	*e*P	P	13 13 49.9	-0.8
BGF	Bois d’Agland	46.08	310	*e*P	P	13 13 52.7	-0.5
	comp=Z,10nm,0.7s,mb4.7						
BGF	Bois d’Agland	46.08	310	*e*P	P	13 13 52.7	-0.5
BGF				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
MTLF	Montolieu	46.25	306	*e*P	P	13 13 55.1	+0.5
	comp=Z,27nm,1.2s,mb4.8						
MTLF	Montolieu	46.25	306	*e*P	P	13 13 55.1	+0.5
MTLF				pmax	pmax		
	comp=Z,13nm,1.2s,mb4.8						
CAF	Calviac	46.47	308	*e*P	P	13 13 56.3	0.0
	comp=Z,15nm,1.0s,mb4.7						
CAF	Calviac	46.47	308	*e*P	P	13 13 56.3	0.0
CAF				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.7						
TCF	Toulx Ste Croi	46.49	310	*e*P	P	13 13 56.0	-0.4
LDF	La Druitiere	48.31	313	*e*P	P	13 14 09.4	-1.3
ESDC	Sonseca Array	50.93	301	P	P	13 14 30.8	-0.1
	comp=Z,0.8nm,0.5s,mb3.9,baz=68,slow=7.1,SNR=6.6						
BOSA	Boshof	62.19	210	P	P	13 15 53.9	+2.4
	comp=Z,4.4nm,0.7s,mb4.8,baz=87,slow=3.2,SNR=11						
BOSA	Boshof	62.19	210	*e*P	P	13 15 53.8	+2.3
	comp=Z,4.0nm,0.6s,mb4.8						
BOSA	Boshof	62.19	210	*e*P	P	13 15 53.8	+2.3
BOSA				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.8						
SUMG	Summit	66.22	341	P	P	13 16 18.0	+0.9
	comp=Z,14nm,1.2s,mb5.1						
SUMG	Summit	66.22	341	P	P	13 16 18.0	+0.9
	comp=Z,14nm,1.2s,mb5.1						
ILAR	Eielson Array	87.30	10	P	P	13 18 15.4	+0.3
	comp=Z,0.7nm,0.8s,mb3.9,baz=329,slow=4.5,SNR=6.3						

NIED 27 13:09:00,26.20N×142.20E,h29^{km}**,Mw3.9 Best double couple:** M$_0$7.17×10^{14} **NP1:**ϕ_s166°,δ69°,λ-79°. **NP2:** ϕ_s318°,δ23°,λ-116°.,**Bonin Islands region**

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*CNRM **27** 13:14:47.0,34.88N×2.94W,h30^{km},MD3.1*
*CSEM **27** 13:14:48.8±0.3,34.54N×3.35W,h30^{km},MD3.1,Error ellipse: s-maj=7.7km s-min=5.7km az=113.0*
*NEIC **27** 13:14:54.7,34.98N×3.08W,MG3.2(MDD),After MDD.*
*SFS **27** 13:14:54.0,34.96N×3.06W,ML3.3*
MDD 27 13:14:51.9±0.8,**34.85N**×**3.06W,mb3.2**/6,**1D,Error ellipse: s-maj=7.3km s-min=3.6km az=170.0,PRXIMO, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAI	Zaio	0.29	64	P	Pg	13 14 56.5	-1.1
ZAI				S	Sg	13 15 01.0	-0.5
MELI	Melilla	0.46	13	⇓P	Pg	13 15 00.8	-0.3
MELI				S	Sg	13 15 05.5	-1.6
MELI	Melilla	0.46	13	*i* P	Pg	13 15 00.8	-0.3
EMEL	Melilla	0.46	11	P	Pg	13 15 00.8	-0.3
	53nm,0.1s,SNR=11						
EMEL				S	Sg	13 15 05.3	-1.9
	516nm,0.2s,SNR=4.6						
TOU	Touzarine	0.58	282	*i* P	Pg	13 15 01.0	-2.5
TOU				*i* S	Sg	13 15 10.0	-1.3
EBER	Berja	2.05	4	P	Pn	13 15 26.3	-1.8
	0.6nm,0.2s,SNR=7.9						
EBER				S	Sn	13 15 48.2	-6.5
	30nm,0.5s,SNR=5.2						
EBER	Berja	2.05	4	P	Pn	13 15 26.3	-1.8
EMIJ	Mijas	2.21	321	P	Pn	13 15 28.9	-1.4
	0.8nm,0.1s,SNR=9.1						
EMIJ				S	Sn	13 15 54.3	-4.4
	5.5nm,0.4s,SNR=6.9						
EQUE	Quentar	2.37	353	P	Pn	13 15 32.0	-0.6
	0.5nm,0.1s,SNR=7.9						
EQUE				S	Sn	13 16 00.1	-2.8
	3.0nm,0.3s,SNR=7.9						
CZD	Col de Zad	2.45	223	*e*P	Pn	13 15 22.0	-12
CZD				*i* S	Sn	13 15 48.0	-17
ELUQ	Luque	2.88	341	P	Pn	13 15 37.9	-2.0
	0.7nm,0.2s,SNR=4.0						
EQES	Quesada	2.95	360	P	Pn	13 15 41.4	+0.5
	1.9nm,0.2s,SNR=10						
EQES				S	Sn	13 16 14.4	-3.1
	6.2nm,0.4s,SNR=6.8						
EQES	Quesada	2.95	360	P	Pn	13 15 41.4	+0.5
EQES				S	Sn	13 16 14.4	-3.2
EHUE	Huescar	2.99	7	P	Pn	13 15 41.0	-0.4
	0.7nm,0.2s,SNR=12						
EHUE				S	Sn	13 16 14.3	-4.1
	0.7nm,0.2s,SNR=4.0						
EMUR	La Murta	3.33	26	P	Pn	13 15 43.8	-2.5
	1.2nm,0.2s,SNR=10						
EMUR				S	Sn	13 16 18.1	-9.1
	2.2nm,0.3s						
EMUR	La Murta	3.33	26	P	Pn	13 15 43.8	-2.5
EADA	Adamuz	3.53	340	P	Pn	13 15 48.0	-1.2
	0.6nm,0.1s,SNR=51						
EADA				S	Sn	13 16 26.7	-5.6
	3.9nm,0.4s						
EADA	Adamuz	3.53	340	P	Pn	13 15 48.0	-1.2
EADA				S	Sn	13 16 26.7	-5.6
ECAB	El Cabril	3.74	330	P	Pn	13 15 51.5	-0.7
	0.5nm,0.2s,SNR=6.5						
ECAB				S	Sn	13 16 32.8	-4.7
	1.5nm,0.4s						
ETOB	Tobarra	3.98	17	P	Pn	13 15 55.2	-0.3
	0.5nm,0.2s,SNR=7.9						
ETOB				S	Sn	13 16 36.7	-6.9
	2.4nm,0.3s,SNR=7.9						
ETOB	Tobarra	3.98	17	P	Pn	13 15 55.2	-0.3
EMIN	Mina Concepcio	4.12	316	P	Pn	13 15 56.5	-1.1
	0.7nm,0.1s,SNR=9.8						
EMIN				S	Sn	13 16 41.1	-6.2
	0.4nm,0.2s						
EGRO	El Granado	4.47	308	P	Pn	13 16 01.5	-1.0
	0.9nm,0.1s,SNR=9.8						
EGRO				S	Sn	13 16 50.2	-5.8
	1.1nm,0.2s						
EBEN	Beniarda	4.47	30	P	Pn	13 16 01.6	-0.9
	0.3nm,0.2s,SNR=4.0						
EBEN	Beniarda	4.47	30	P	Pn	13 16 01.6	-0.9
EBAD	Badajoz	5.03	322	P	Pn	13 16 08.9	-1.5
	1.2nm,0.1s,SNR=9.1						
EBAD				S	Sn	13 17 03.5	-6.6
	2.7nm,0.2s						

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*KRSC **27** 13:18:12.7±1.5,53.81N×161.83E,h12^{km}±2^{km},ML5.0*
*MOS **27** 13:18:14.3±1.3,53.86N×161.86E,h41^{km},mb4.7/10,Error ellipse: s-maj=10.6km s-min=7.3km az=84.2*
*BJI **27** 13:18:16.4,53.90N×161.80E,h40^{km},mB4.4,mb4.3, Ms4.5,Msz4.3*
*NEIC **27** 13:18:16.5±0.4,53.92N×161.77E,mb4.6/15,Error ellipse: s-maj=11.7km s-min=7.1km az=156.0*
*IDC **27** 13:18:16.3±0.6,53.92N×161.71E,h38^{km}±4^{km},mb3.9/16, mb1 4.2/17,mb1mx4.1/23,mbtmp4.1/17,ML4.5/2,MS4.0/8, Ms1 4.0/8,ms1mx3.6/30,Error ellipse: s-maj=15.3km s-min=10.9km az=4.0*
ISC 27 13:18:14.5±0.3,**53.80N**±0.02×**161.97E**±0.04,**h40**^{km}, **h40**^{km}±.8^{km}**:pP-P,n134,** $\sigma 1^{s}$**21**/140,**mb4.3**/32,**MS4.0**/8,**2C, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.77	350	*e*P	P	13 18 27.2	-1.8
SPN	Mys Shipunski	1.36	240	P	P	13 18 36.3	-1.1
SPN				S	S	13 18 46.9	-7.5
SPN	Mys Shipunski	1.36	240	*e*P	P	13 18 36.3	-1.1
SPN				*e*S	S	13 18 54.3	-0.1
KII	Karymskiy	1.51	280	P	P	13 18 37.9	-1.6
KII	Karymskiy	1.51	280	*e*P	P	13 18 37.8	-1.7
NLC	Nalytchevo	1.69	249	P	P	13 18 40.6	-1.5
NLC				S	S	13 18 54.5	-8.1
NLC	Nalytchevo	1.69	249	*e*P	P	13 18 40.7	-1.4
NLC				*e*S	S	13 19 01.3	-1.3
TUMR	Tumrok	1.83	325	*i* P	P	13 18 43.7	-0.4
SMAR	Somma	1.96	255	*i* P	P	13 18 45.0	-1.0
SMAR				*e*S	S	13 19 10.2	+0.7
UGLR	Uglovaya	1.97	254	*e*P	P	13 18 45.5	-0.5
AVH	Avacha	2.00	256	*i* P	P	13 18 45.8	-0.7
AVH				*e*S	S	13 19 12.5	+2.1
KOK	Koryaka	2.05	257	*e*P	P	13 18 47.6	+0.4
KOK				*e*S	S	13 19 11.9	+0.1
PET	Petropavlovsk	2.13	250	P	P	13 18 47.5	-0.9
PET				S	S	13 19 07.6	-6.1
PET	Petropavlovsk	2.13	250	*i* P	P	13 18 47.4	-1.0
PET				*i* S	S	13 19 12.6	-1.1
PET	Petropavlovsk	2.13	250	*e*P	P	13 18 47.3	-1.1
KMNR	Kamenistaya	2.20	334	*i* P	P	13 18 49.7	+0.3
KMNR				*e*S	S	13 19 16.3	+0.6
ZLN	Zelenaya	2.32	344	*e*P	P	13 18 51.9	+0.7
ZLN				*e*S	S	13 19 21.0	+2.3
GNL	Ganaly	2.39	269	*i* P	P	13 18 51.6	-0.5
GNL				*e*S	S	13 19 18.6	-1.8
KPT	Kopyto	2.40	336	*i* P	P	13 18 52.6	+0.4
LGNR	Loginova	2.41	343	*i* P	P	13 18 53.0	+0.7
CIRR	Tsirk	2.43	344	*e*P	P	13 18 53.6	+1.0
CIRR				*e*S	S	13 19 23.5	+2.2
KBTR	Krutoberegovo	2.47	11	P	P	13 18 53.0	-0.2
KBTR	Krutoberegovo	2.47	11	*e*P	P	13 18 53.2	0.0

KBTR				*e*S	**S**	**13 19 24.1**	**+1.8**
RUS	**Russkaya**	**2.49**	**238**	P	**P**	**13 18 53.2**	**-0.3**
RUS				S	**S**	**13 19 17.7**	**-5.2**
RUS	**Russkaya**	**2.49**	**238**	*e*P	**P**	**13 18 52.5**	**-1.0**
RUS				*i* S	**S**	**13 19 23.2**	**+0.3**
KRMR	**Karymshinskiy**	**2.50**	**249**	*e*P	**P**	**13 18 54.1**	**+0.5**
KRMR				*i* S	**S**	**13 19 24.1**	**+1.0**
KRSR	**Krestovskiy**	**2.56**	**342**	*e*P	**P**	**13 18 54.6**	**+0.1**
KOZ	**Kozyrevsk**	**2.57**	**333**	P	**P**	**13 18 54.5**	**-0.1**
KOZ				S	**S**	**13 19 20.3**	**-4.6**
KOZ	**Kozyrevsk**	**2.57**	**333**	*e*P	**P**	**13 18 54.5**	**-0.1**
KOZ				*e*S	**S**	**13 19 25.2**	**+0.3**
KOZR	**Kozyr**	**2.57**	**333**	PN	**P**	**13 18 54.5**	**-0.1**
KOZR				S	**S**	**13 19 20.3**	**-4.6**
KLY	**Klyuchi**	**2.63**	**344**	P	**P**	**13 18 55.1**	**-0.5**
KLY				S	**S**	**13 19 20.1**	**-6.5**
KLY	**Klyuchi**	**2.63**	**344**	*e*P	**P**	**13 18 55.1**	**-0.5**
KLY				*e*S	**S**	**13 19 25.1**	**-1.4**
GRL	**Gorelyy**	**2.65**	**244**	*e*P	**P**	**13 18 56.3**	**+0.4**
GRL				*e*S	**S**	**13 19 28.3**	**+1.2**
BKI	**Bering**	**2.73**	**57**	*i* P	**P**	**13 18 56.4**	**-0.5**
BKI				*e*S	**S**	**13 19 27.3**	**-1.7**
BKI				Smax			
	500nm,0.6s						
SRDR	**Sredinnyy**	**2.84**	**334**	*e*P	**P**	**13 18 58.2**	**-0.3**
ESO	**Esso**	**2.85**	**320**	*e*P	**P**	**13 18 58.2**	**-0.4**
ESO				*e*S	**S**	**13 19 30.4**	**-1.6**
ESO				Smax			
	790nm,0.8s						
SRKR	**Sorokina**	**2.90**	**351**	*i* P	**P**	**13 19 00.2**	**+0.8**
APC	**Apacha**	**3.01**	**255**	*e*P	**P**	**13 19 01.8**	**+0.9**
APC				*e*S	**S**	**13 19 36.8**	**+0.7**
APC				Smax			
	1µm,0.8s						
PAU	**Pauzhetka**	**3.91**	**235**	*e*P	**P**	**13 19 14.8**	**+1.1**
PAU				Smax			
	2µm,0.9s						
FX1	**Attu Island--F**	**6.77**	**93**	Pn	**P**	**13 19 53.2**	**-0.7**
	35nm,0.3s,baz=319,slow=4.9,SNR=89						
FX1				Sn	**S**	**13 21 05.4**	**-5.2**
	43nm,0.3s,baz=79,slow=13,SNR=8.6						
FX1	**Attu Island--F**	**6.77**	**93**	*e*P	**P**	**13 19 52.3**	**-1.6**
FX1				*e*S	**S**	**13 21 05.1**	**-5.5**
MA2	**Magadan**	**8.45**	**318**	*e*PN	**P**	**13 20 18.1**	**+0.8**
MA2				*e*S	**S**	**13 21 55.4**	**+3.0**
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MA2				MLR	MLR		
	comp=Z,2µm,20.0s						
YSS	**Yuzh-Sakhalins**	**14.02**	**249**	P	**P**	**13 21 32.2**	**0.0**
	comp=Z,22nm,1.1s						
YSS	**Yuzh-Sakhalins**	**14.02**	**249**	⇑*e*P	**P**	**13 21 36.0**	**+3.8**
YSS				MLR	MLR		
	comp=Z,1µm,16.0s						
YSS				MLR	MLR		
	comp=E,900nm,15.0s						
ASAJ	**Asahikawa**	**15.94**	**240**	Pn	**P**	**13 21 56.0**	**-1.3**
	comp=E,2.5nm,0.3s,baz=85,slow=11,SNR=20						
ASAJ				LR	LR	13 27 59.6	
	comp=E,587nm,20.1s,baz=56,slow=37						
ASAJ	**Asahikawa**	**15.94**	**240**	P	**P**	**13 21 56.0**	**-1.2**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,587nm,20.1s						
YAK	**Yakutsk**	**18.85**	**309**	*e*P	**P**	**13 22 30.6**	**-2.7**
	comp=Z,19nm,0.6s						
YAK	**Yakutsk**	**18.85**	**309**	*e*P	**P**	**13 22 30.6**	**-2.7**
YAK				pmax	pmax		
	comp=Z,19nm,0.6s						
TIXI	**Tiksi**	**22.93**	**334**	*e*P	**P**	**13 23 11.0**	**-4.3**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.0						
MJAR	**Matsushiro Arr**	**23.86**	**233**	P	**P**	**13 23 25.8**	**+1.0**
	comp=Z,24nm,0.8s,mb4.7,baz=20,slow=11,SNR=27						
MJAR	**Matsushiro Arr**	**23.86**	**233**	P	**P**	**13 23 25.8**	**+1.0**
MAJO	**Matsushiro**	**23.86**	**233**	*e*P	**P**	**13 23 25.1**	**+0.4**
MAT	**Matsushiro**	**23.86**	**233**	P	**P**	**13 23 26.3**	**+1.5**
MAT				*e*S	**S**	**13 27 39.8**	**+4.8**
MAT	**Matsushiro**	**23.86**	**233**	*e*P	**P**	**13 23 26.0**	**+1.2**
	comp=Z,22nm,0.8s,mb4.7						
MAT	**Matsushiro**	**23.86**	**233**	*e*P	**P**	**13 23 26.0**	**+1.2**
MAT				pmax	pmax		
	comp=Z,22nm,0.8s,mb4.6						
IMA2	**Indian Mountai**	**24.76**	**43**	*e*P	**P**	**13 23 34.1**	**+0.9**
CN2	**Changchun**	**25.78**	**262**	*e*P	**P**	**13 23 43.8**	**+0.7**
HIA	**Hailar**	**26.36**	**277**	*e*P	**P**	**13 23 48.9**	**+0.6**
	comp=Z,8.4nm,0.6s,mb4.5						
HIA	**Hailar**	**26.36**	**277**	*e*P	**P**	**13 23 48.9**	**+0.6**
HIA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
COLA	**College**	**27.11**	**46**	*e*P	**P**	**13 23 54.9**	**-0.2**
	comp=Z,35nm,1.9s,mb4.6						
COLA	**College**	**27.11**	**46**	*e*P	**P**	**13 23 54.9**	**-0.2**
COLA				pmax	pmax		
	comp=Z,35nm,1.9s,mb4.6						
ILAR	**Eielson Array**	**27.52**	**46**	P	**P**	**13 23 58.9**	**0.0**
	comp=Z,3.0nm,0.8s,mb4.0,baz=264,slow=8.2,SNR=29						
ILAR				LR	LR	13 34 50.0	
	comp=Z,174nm,19.0s,MS3.6,baz=4.7,slow=36						
INK	**Inuvik**	**32.62**	**38**	P	**P**	**13 24 43.9**	**-0.2**
	comp=Z,1.3nm,0.5s,mb4.1,baz=281,slow=6.9,SNR=21						
INK				LR	LR	13 38 33.4	
	comp=Z,193nm,21.1s,MS3.8,baz=47,slow=37						
INK	**Inuvik**	**32.62**	**38**	*e*P	**P**	**13 24 44.0**	**-0.1**
SONM	**Songino Array**	**34.83**	**283**	P	**P**	**13 25 02.5**	**-0.8**
	comp=Z,0.5nm,0.5s,mb3.8,baz=55,slow=8.6,SNR=6.6						
SONM				PcP	PcP	13 27 34.9	-1.2
	comp=Z,0.5nm,0.6s,baz=69,slow=2.2,SNR=4.2						
SONM				LR	LR	13 40 23.2	
	comp=Z,355nm,20.6s,MS4.1,baz=247,slow=38						
NJ2	**Nanjing**	**37.54**	**252**	*e*P	**P**	**13 25 26.3**	**0.0**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
WHN	**Wuhan**	**41.23**	**255**	*e*P	**P**	**13 25 59.5**	**+2.5**
YKA	**Yellowknife Ar**	**41.88**	**44**	LR	LR	13 45 51.4	
	comp=Z,168nm,18.5s,MS4.0,baz=275,slow=40						
NVS	**Novosibirsk**	**43.64**	**305**	*e*P	**P**	**13 26 16.7**	**+0.5**
GTA	**Gaotai**	**43.64**	**277**	*e*P	**P**	**13 26 16.5**	**0.0**
GTA				PP	PP	13 28 00.8	+0.8
GTA				S	**S**	**13 32 46.0**	**+3.2**
GTA				SS	SS	13 35 54.3	+3.3
GTA				AMB	AMB		
	comp=Z,40nm,4.6s						
GTA				LR	LR		
	comp=N,330nm,15.2s,MS4.5						
GTA				LR	LR		
	comp=E,280nm,16.7s,MS4.5						
GTA				LR	LR		
	comp=Z,310nm,13.7s,MS4.4						
ENH	**Enshi**	**44.25**	**260**	P	**P**	**13 26 20.1**	**-1.4**
	comp=Z,6.3nm,0.6s,mb4.5						
EDM	**Edmonton**	**47.45**	**54**	*e*P	**P**	**13 26 46.4**	**-0.2**
WMQ	**Urumqi**	**47.79**	**290**	*e*P	**P**	**13 26 51.0**	**+1.6**
KURK	**Kurchatov**	**48.31**	**302**	*e*P	**P**	**13 26 53.5**	**+0.2**
	comp=Z,3.4nm,0.6s,mb4.5						
KURK	**Kurchatov**	**48.31**	**302**	*e*P	**P**	**13 26 53.5**	**+0.2**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
MKAR	**Makanchi Array**	**48.85**	**296**	P	**P**	**13 26 53.9**	**-3.7**
	comp=Z,1.0nm,0.7s,mb4.0,baz=58,slow=7.4,SNR=7.8						
MKAR	**Makanchi Array**	**48.85**	**296**	*i* P	**P**	**13 26 57.0**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,1µm,0.7s						
CHKZ	**Chkalovo**	**50.30**	**309**	*e*P	**P**	**13 27 05.9**	**-2.7**
	comp=Z,2.2nm,0.8s,mb4.2						
CHKZ	**Chkalovo**	**50.30**	**309**	*e*P	**P**	**13 27 05.9**	**-2.7**
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
BVAR	**Borovoye Array**	**50.83**	**309**	P	**P**	**13 27 10.1**	**-2.5**
	comp=Z,1.1nm,0.5s,mb4.0,baz=56,slow=7.3,SNR=4.6						
MOD	**Modoc**	**50.97**	**70**	*e*P	**P**	**13 27 15.5**	**+1.7**
	comp=Z,4.8nm,0.7s,mb4.5						
ARCES	**ARCESS Array B**	**52.96**	**342**	P	**P**	**13 27 26.2**	**-2.2**
	comp=Z,3.1nm,0.9s,mb4.3,baz=38,slow=10,SNR=4.4						
ARCES				pP	pP	13 27 38.1	-1.9
	comp=Z,1.7nm,0.6s,baz=36,slow=10.0,SNR=1.6						
SUMG	**Summit**	**53.12**	**8**	*e*P	**P**	**13 27 28.8**	**-0.8**
	comp=Z,9.8nm,0.9s,mb4.7						
NVAR	**Mina Array Bea**	**54.45**	**72**	P	**P**	**13 27 41.9**	**+2.0**
	comp=Z,4.8nm,0.8s,mb4.5,baz=308,slow=6.0,SNR=37						
ELK	**Elko**	**54.55**	**68**	*e*P	**P**	**13 27 42.0**	**+1.4**
	comp=Z,2.4nm,0.7s,mb4.3						
ELK	**Elko**	**54.55**	**68**	*e*P	**P**	**13 27 42.0**	**+1.5**
ELK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LSA	**Lhasa**	**55.50**	**274**	P	**P**	**13 27 49.3**	**+1.7**
	comp=Z,4.5nm,0.7s,mb4.6						
LSA	**Lhasa**	**55.50**	**274**	P	**P**	**13 27 49.3**	**+1.8**
LSA				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
PDAR	**Pinedale Array**	**56.20**	**62**	P	**P**	**13 27 53.3**	**+0.9**
	comp=Z,1.3nm,0.9s,mb4.0,baz=315,slow=2.1,SNR=7.8						
PDAR				LR	LR	13 49 58.2	
	comp=Z,88nm,20.0s,MS3.9,baz=93,slow=34						
JOF	**Joensuu**	**57.39**	**336**	*e*p	**P**	**13 27 58.2**	**-2.4**
ULM	**Lac du Bonnet**	**57.52**	**48**	LR	LR	13 53 53.5	
	comp=Z,199nm,19.3s,MS4.2,baz=296,slow=37						
AKTO	**Aktyubinsk**	**58.17**	**313**	P	**P**	**13 28 03.7**	**-2.5**
	comp=Z,0.6nm,0.3s,mb4.1,baz=85,slow=12,SNR=2.2						
AKTO	**Aktyubinsk**	**58.17**	**313**	P	**P**	**13 28 03.7**	**-2.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
KAF	**Kangasniemi**	**59.27**	**338**	*e*p	**P**	**13 28 11.9**	**-1.8**
	baz=29,slow=6.4						
FINES	**FINESS Array B**	**59.91**	**337**	P	**P**	**13 28 16.6**	**-1.5**
	comp=Z,1.7nm,0.6s,mb4.2,baz=28,slow=8.5,SNR=12						
FINES				pP	pP	13 28 27.6	-2.3
	comp=Z,3.0nm,0.6s,baz=59,slow=8.1,SNR=4.2						
NB2	**NORSAR Subarra**	**63.17**	**345**	P	**P**	**13 28 38.2**	**-1.9**
	comp=Z,2.3nm,0.7s,mb4.4,baz=21,slow=6.5						
NOA	**NORSAR Array B**	**63.17**	**345**	P	**P**	**13 28 38.3**	**-1.8**
	comp=Z,2.9nm,0.7s,mb4.5,baz=20,slow=6.6,SNR=14						
NOA				pP	pP	13 28 50.5	-1.4
	comp=Z,3.8nm,0.7s,baz=20,slow=6.7,SNR=8.0						
NAO	**NORSAR Subarra**	**63.44**	**345**	P	**P**	**13 28 38.2**	**-3.6**
	comp=Z,2.3nm,0.7s,mb4.4						
NAO	**NORSAR Subarra**	**63.44**	**345**	P	**P**	**13 28 38.2**	**-3.6**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.4						
ANMO	**Albuquerque**	**63.53**	**67**	⇑*e*P	**P**	**13 28 44.4**	**+1.7**
AKASG	**Malin Array Be**	**68.58**	**330**	P	**P**	**13 29 12.7**	**-1.9**
	comp=Z,0.4nm,0.4s,mb3.8,baz=28,slow=6.9,SNR=3.9						
AKASG				pP	pP	13 29 24.9	-1.6
	comp=Z,2.3nm,0.5s,baz=30,slow=7.0,SNR=10						
TXAR	**Lajitas Array**	**69.33**	**69**	P	**P**	**13 29 20.6**	**+1.0**
	comp=Z,1.2nm,0.4s,mb4.1,baz=295,slow=4.3,SNR=17						
CLL	**Collm**	**72.09**	**340**	P	**P**	**13 29 36.0**	**+0.2**
GERES	**GERESS Array B**	**74.27**	**339**	P	**P**	**13 29 48.6**	**+0.1**
	comp=Z,0.6nm,0.6s,mb3.7,baz=18,slow=4.2,SNR=6.6						
GERES				pP	pP	13 30 00.2	-0.4
	comp=Z,1.5nm,0.5s,baz=37,slow=5.7,SNR=10						
BAIF	**Baives**	**74.84**	**345**	*e*P	pP	13 30 03.6	-0.2
	comp=Z,13nm,0.8s						
CDF	**Champ du Feu**	**75.94**	**343**	*e*P	pP	13 30 10.2	0.0
	comp=Z,9.8nm,0.9s						
MEZF	**Maizieres J'vi**	**76.22**	**344**	*e*P	pP	13 30 11.9	+0.1
	comp=Z,9.3nm,0.6s						
HAU	**Haudompre**	**76.49**	**343**	*e*P	pP	13 30 13.2	-0.1
	comp=Z,9.4nm,0.7s						
FLN	**La Foliniere**	**76.74**	**348**	*e*P	pP	13 30 14.3	-0.5
	comp=Z,20nm,0.9s						
BR131	**Keskin Array S**	**76.78**	**322**	*e*P	**P**	**13 30 05.7**	**+2.6**
	comp=Z,1.7nm,0.6s,mb4.2						
BRTR	**Keskin Array B**	**76.78**	**322**	P	**P**	**13 30 04.3**	**+1.3**
	comp=Z,1.0nm,0.8s,mb3.8,baz=50,slow=4.2,SNR=4.7						
LDF	**La Druitiere**	**76.86**	**348**	*e*P	pP	13 30 14.9	-0.6
GRR	**Gorron**	**77.16**	**348**	*e*P	pP	13 30 16.9	-0.2
	comp=Z,17nm,0.7s						
WRAB	**Tennant Creek**	**77.19**	**207**	*e*P	**P**	**13 30 05.8**	**0.0**
	comp=Z,9.6nm,1.2s,mb4.6						
WRAB	**Tennant Creek**	**77.19**	**207**	*e*P	**P**	**13 30 05.8**	**0.0**
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.6						
WB2	**Warramunga Arr**	**77.20**	**207**	*e*P	**P**	**13 30 06.2**	**+0.4**
WRA	**Warramunga Arr**	**77.20**	**207**	P	**P**	**13 30 05.8**	**-0.1**
	comp=Z,3.2nm,0.8s,mb4.3,baz=19,slow=5.9,SNR=16						
WRA				pP	pP	13 30 18.2	+0.3
	comp=Z,3.3nm,0.8s,baz=20,slow=5.9,SNR=7.6						
SGMF	**Saint Gilles**	**77.48**	**349**	*e*P	pP	13 30 18.8	-0.1
	comp=Z,23nm,0.8s						
LOR	**Lormes**	**77.61**	**345**	*e*P	pP	13 30 19.5	-0.1
	comp=Z,10nm,0.6s						
SSF	**Saint Saulge**	**77.86**	**345**	*e*P	pP	13 30 20.9	-0.1
	comp=Z,10nm,0.7s						
CABF	**La Chapelle**	**77.89**	**343**	*e*P	pP	13 30 21.5	+0.3
	comp=Z,5.1nm,0.6s						
FITZ	**Fitzroy Crossi**	**78.11**	**215**	*e*P	**P**	**13 30 11.9**	**+1.0**
	comp=Z,5.3nm,0.7s,mb4.6						
AVF	**Avril sur Loir**	**78.15**	**345**	*e*P	pP	13 30 22.5	-0.1
	comp=Z,14nm,0.8s						
SMF	**Signal de Mont**	**78.22**	**345**	*e*P	pP	13 30 22.9	-0.1
TCF	**Toulx Ste Croi**	**78.81**	**346**	*e*P	pP	13 30 26.5	+0.2
	comp=Z,5.5nm,0.7s						
MFF	**Saint Martin d**	**78.83**	**348**	*e*P	pP	13 30 26.5	+0.1
LPL	**La Plagne**	**78.83**	**343**	*e*P	pP	13 30 27.6	+1.2
	comp=Z,17nm,0.8s						
LPG	**La Plagne**	**78.85**	**343**	*e*P	pP	13 30 27.9	+1.4
	comp=Z,15nm,0.7s						
ORIF	**Oris-en-Rattie**	**79.56**	**343**	*e*P	pP	13 30 31.5	+1.1
	comp=Z,8.3nm,0.6s						
MBDF	**Montbardon**	**79.59**	**342**	*e*P	pP	13 30 31.3	+0.7
VIVF	**Saint-Julien-l**	**79.83**	**344**	*e*P	pP	13 30 32.6	+0.7
	comp=Z,6.6nm,0.7s						
RJF	**Les Rejaudoux**	**79.88**	**346**	*e*P	pP	13 30 32.7	+0.6
CAF	**Calviac**	**80.17**	**346**	*e*P	pP	13 30 34.6	+0.9
	comp=Z,6.6nm,0.6s						
PPT	**Papeete**	**82.31**	**134**	LR	LR	14 03 19.8	
	comp=Z,124nm,19.8s,MS4.3,baz=22,slow=33						

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*IDC **27** 13:21:55.1±1.6, 34.76N×73.14E, mb3.9/7, mb1 4.1/10, mb1mx3.9/22, mbtmp4.0/10, ML3.9/3, MS4.2/1, Ms1 4.2/1, ms1mx3.2/25, Error ellipse: s-maj=42.6km s-min=24.1km az=48.0*

*MOS **27** 13:21:56.0±1.2, 34.86N×73.18E, h15^{km}, mb3.8/1, Error ellipse: s-maj=27.6km s-min=11.3km az=84.6*

*NEIC **27** 13:21:56.4±1.1, 34.77N×73.05E, h10^{km}, mb4.0/2, Error ellipse: s-maj=24.0km s-min=14.7km az=68.0*

*NNC **27** 13:22:05.0±3.2, 35.30N×72.53E, h15^{km}±54^{km}, mpv3.8, Error ellipse: s-maj=60.4km s-min=27.0km az=147.0*

ISC 27 13:21:55.8±0.7**, 34.90N**±0.06×**73.2E**±0.1**, h10**^{km}**, n33, σ1**^{s}**10**/39**, mb3.8**/8**, MS4.2**/1**, 9C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHK	**Bhakra**	**4.39**	**141**	*e*S	**Sn**	**13 23 59.3**	**+3.4**
SDNR	**Sundarnagar**	**4.63**	**136**	*e*P	**Pn**	**13 23 09.0**	**+1.5**
SDNR				*e*S	**Sn**	**13 24 01.8**	**-0.1**
SMLA	**Simla**	**5.02**	**137**	*e*P	**Pn**	**13 23 13.6**	**+0.6**
SMLA				*e*S	**Sn**	**13 24 11.2**	**-0.5**
KLP	**Kalpa**	**5.39**	**127**	*e*P	**Pn**	**13 23 19.6**	**+1.3**
KLP				*e*S	**Sn**	**13 24 19.9**	**-1.3**
KLP				AML	AML	13 24 51.8	
	comp=N,307nm,0.4s						
KLP				AML	AML	13 24 55.1	
	comp=E,166nm,0.4s						
DDI	**Dehra Dun**	**6.12**	**137**	*e*x	x	13 23 49.0	
NDI	**New Delhi**	**7.07**	**150**	*e*P	**Pn**	**13 23 40.5**	**-1.4**
NDI				*e*S	**Sn**	**13 24 57.5**	**-5.7**
AAK	**Ala-Archa**	**7.79**	**7**	⇑Pn	**Pn**	**13 23 56.5**	**+4.5**
	comp=E,5.1nm,1.1s						
AAK				⇑Sn	**Sn**	**13 25 21.9**	**+0.7**
	comp=E,12nm,1.4s						
AAK	**Ala-Archa**	**7.79**	**7**	*e*P	**Pn**	**13 23 51.5**	**-0.4**
	comp=E,3.0nm,0.6s						
AAK				*e*S	**Sn**	**13 25 20.8**	**-0.4**
AAK	**Ala-Archa**	**7.79**	**7**	*e*P	**Pn**	**13 23 51.5**	**-0.5**
AAK				*e*S	**Sn**	**13 25 20.8**	**-0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KK31	**Karatay Array**	**8.46**	**346**	⇑Pn	**P**	**13 24 02.7**	**+1.4**
	comp=Z,3.0nm,0.4s,baz=159,slow=12,SNR=94						
KK31				⇑Sn	**Sn**	**13 25 35.4**	**-2.4**
	comp=Z,1.8nm,0.3s,baz=144,slow=22,SNR=9.0						
MKAR	**Makanchi Array**	**13.71**	**27**	Pn	**P**	**13 25 13.7**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=202,slow=14,SNR=8.0						
AB31	**Akbulak array**	**17.36**	**330**	⇑P	**P**	**13 25 59.0**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=147,slow=14,SNR=21						
VOSK	**Vostochnaya**	**17.89**	**356**	⇑P	**P**	**13 26 07.5**	**+1.3**
	comp=Z,2.7nm,1.1s						
BVA0	**Borovoye Array**	**18.23**	**355**	⇑P	**P**	**13 26 11.7**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=163,slow=10,SNR=16						
BVAR	**Borovoye Array**	**18.23**	**355**	P	**P**	**13 26 10.7**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=158,slow=9.5,SNR=23						
CHKZ	**Chkalovo**	**18.86**	**355**	⇑P	**P**	**13 26 18.3**	**+0.1**
	comp=Z,2.8nm,1.1s						
CHKZ	**Chkalovo**	**18.86**	**355**	*e*P	**P**	**13 26 17.6**	**-0.6**
	comp=Z,3.8nm,1.0s						
CHKZ	**Chkalovo**	**18.86**	**355**	*e*P	**P**	**13 26 17.6**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
AKTO	**Aktyubinsk**	**19.07**	**329**	⇑P	**P**	**13 26 20.3**	**-0.4**
	comp=Z,1.3nm,0.8s						
AKTO	**Aktyubinsk**	**19.07**	**329**	P	**P**	**13 26 20.3**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=136,slow=9.7,SNR=33						
AKTO	**Aktyubinsk**	**19.07**	**329**	P	**P**	**13 26 20.3**	**-0.4**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZAK	**Zakamensk**	**26.76**	**45**	*e*P	**P**	**13 27 35.0**	**-2.3**
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.4						
SONM	**Songino Array**	**27.83**	**52**	P	**P**	**13 27 48.2**	**+1.1**
	comp=Z,0.9nm,0.6s,mb3.6,baz=72,slow=2.3,SNR=7.0						
ARCES	**ARCESS Array B**	**43.31**	**338**	P	**P**	**13 29 59.4**	**+0.4**
	comp=Z,1.9nm,0.5s,mb4.1,baz=114,slow=7.9,SNR=14						
MJAR	**Matsushiro Arr**	**51.88**	**68**	P	**P**	**13 31 05.8**	**-0.6**
	comp=Z,1.8nm,0.7s,mb4.1,baz=290,slow=8.7,SNR=5.3						
MJAR	**Matsushiro Arr**	**51.88**	**68**	P	**P**	**13 31 05.8**	**-0.6**
JMIC	**Jan Mayen**	**54.77**	**337**	LR	LR	13 54 00.8	
	comp=Z,198nm,18.9s,MS4.2,baz=87,slow=35						
INK	**Inuvik**	**75.18**	**10**	P	**P**	**13 33 39.4**	**-0.1**
	comp=Z,2.5nm,0.7s,mb4.3,baz=359,slow=7.7,SNR=24						
INK	**Inuvik**	**75.18**	**10**	*e*P	**P**	**13 33 40.1**	**+0.6**
	comp=Z,5.7nm,1.2s,mb4.4						
ILAR	**Eielson Array**	**75.81**	**17**	P	**P**	**13 33 43.5**	**+0.3**
	comp=Z,0.3nm,0.5s,mb3.4,baz=304,slow=4.4,SNR=6.4						
DAWY	**Dawson**	**78.05**	**14**	*e*P	**P**	**13 33 53.7**	**-1.9**
WRA	**Warramunga Arr**	**79.61**	**123**	P	**P**	**13 34 04.5**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.5,baz=323,slow=4.9,SNR=8.9						
YKA	**Yellowknife Ar**	**82.75**	**4**	P	**P**	**13 34 20.9**	**+0.3**
	comp=Z,0.6nm,0.5s,mb3.9,baz=345,slow=5.3,SNR=5.2						

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*IDC **27** 13:29:18.5±1.2, 44.03N×84.67E, mb3.7/5, mb1 3.8/9, mb1mx3.6/24, mbtmp3.6/9, ML3.3/4, Error ellipse: s-maj=35.3km s-min=15.1km az=44.0*

*BJI **27** 13:29:19.2, 43.80N×84.51E, h32^{km}, ML4.3*

*NNC **27** 13:29:21.6±2.6, 43.93N×84.53E, h27^{km}±12^{km}, mpv4.0, Error ellipse: s-maj=18.3km s-min=6.9km az=136.0*

*MOS **27** 13:29:21.7±1.2, 43.94N×84.30E, h33^{km}, mb4.1/1, Error ellipse: s-maj=18.0km s-min=7.7km az=122.3*

*NEIC **27** 13:29:24.8±1.3, 43.99N×84.32E, h45^{km}±11^{km}, mb3.8/1, Error ellipse: s-maj=14.7km s-min=11.4km az=172.0*

ISC 27 13:29:20.5±2.1**, 44.10N**±0.07×**84.43E**±0.06**, h22**^{km}±19^{km}**, n41, σ1**^{s}**08**/51**, mb3.7**/5**, 16C-14D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.37**	**96**	⇓*i*P	**Pn**	**13 29 57.0**	**-1.9**
WMQ				S	**Sn**	**13 30 27.5**	**-0.2**
WMQ				Smax			
	comp=N,810nm,0.4s						
WMQ				Smax			
	comp=E,740nm,0.4s						
MK02	**Makanchi Array**	**3.06**	**332**	⇓P	**Pn**	**13 30 13.6**	**+4.9**
MK31	**Makanchi Array**	**3.09**	**332**	⇓Pn	**Pn**	**13 30 13.6**	**+4.5**
	comp=E,23nm,0.4s,baz=147,slow=14,SNR=1320						
MK31				⇑Pg	**Pn**	**13 30 21.6**	**+13**
	comp=E,33nm,0.2s,baz=130,slow=15,SNR=6.4						
MK31				⇑Lg		13 31 05.8	
	comp=E,187nm,0.7s,baz=156,slow=26,SNR=7.9						
MK31	**Makanchi Array**	**3.09**	**332**	⇓Pn	**Pn**	**13 30 13.6**	**+4.5**
MK31				Pg	**Pn**	**13 30 21.6**	**+13**
MK31				Lg		13 31 05.8	
MKAR	**Makanchi Array**	**3.09**	**332**	Pn	**Pn**	**13 30 13.1**	**+4.0**
	comp=E,3.7nm,0.3s,baz=150,slow=14,SNR=75						
MKAR				Pg	**Pn**	**13 30 21.4**	**+12**
	comp=E,30nm,0.3s,baz=149,slow=17,SNR=102						
MKAR				Lg		13 31 03.8	
	comp=E,62nm,0.3s,baz=150,slow=26,SNR=12						
ULHL	**Ulahol**	**6.27**	**256**	P	**Pn**	**13 30 53.8**	**-0.4**
	SNR=12						
TKM2	**Tokmak 2**	**6.53**	**263**	P	**Pn**	**13 30 59.3**	**+1.5**
	SNR=14						
KZA	**Kyzart**	**7.02**	**256**	P	**Pn**	**13 31 03.9**	**-0.7**
	SNR=12						
KBK	**Karagaybulak**	**7.06**	**261**	P	**Pn**	**13 31 05.2**	**0.0**
	SNR=7.2						
AAK	**Ala-Archa**	**7.39**	**262**	⇓Pn	**Pn**	**13 31 08.7**	**-1.2**
	comp=E,9.7nm,0.6s						
AAK				⇑Pg	Pn	13 31 34.9	+25
AAK				⇑Lg		13 33 19.5	
	comp=E,31nm,0.7s						
AAK	**Ala-Archa**	**7.39**	**262**	⇓Pn	**Pn**	**13 31 08.7**	**-1.2**
	comp=E,9.7nm,0.6s						
AAK				Pg	Pn	13 31 34.9	+25
AAK				Lg		13 33 19.5	
AAK	**Ala-Archa**	**7.39**	**262**	⇓P	**Pn**	**13 31 08.7**	**-1.2**
AAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
UCH	**Uchtor**	**7.49**	**259**	P	**Pn**	**13 31 12.6**	**+1.3**
	SNR=5.7						
KURK	**Kurchatov**	**7.70**	**331**	⇓Pn	**Pn**	**13 31 14.3**	**+0.1**
	comp=Z,0.9nm,0.5s						
KURK				⇑Lg		13 33 30.8	
	comp=Z,42nm,1.1s						
KURK	**Kurchatov**	**7.70**	**331**	⇓Pn	**Pn**	**13 31 14.3**	**+0.1**
KURK				Lg		13 33 30.8	
KK31	**Karatay Array**	**10.15**	**269**	⇑Pn	**P**	**13 31 47.1**	**-0.9**
	comp=Z,0.4nm,0.3s,baz=79,slow=13,SNR=7.0						
KK31				⇑Lg		13 34 46.4	
	comp=Z,10nm,0.7s,baz=69,slow=30,SNR=4.3						
VOSK	**Vostochnaya**	**12.40**	**319**	⇓Pn	**P**	**13 32 17.8**	**-0.9**
	comp=Z,3.5nm,1.1s						
VOSK				⇑Sn	**S**	**13 34 35.1**	**-2.1**
	comp=Z,2.1nm,0.7s						
VOSK				⇑Lg		13 35 59.7	
	comp=Z,24nm,1.6s						
VOSK	**Vostochnaya**	**12.40**	**319**	⇓Pn	**P**	**13 32 17.8**	**-0.9**
	comp=Z,3.5nm,1.0s						
VOSK				Sn	**S**	**13 34 35.0**	**-2.1**
VOSK				Lg		13 35 59.7	
BVA0	**Borovoye Array**	**12.87**	**319**	Pn	**P**	**13 32 27.2**	**+2.3**
	comp=Z,0.5nm,1.0s,baz=127,slow=14,SNR=8.0						
BVA0				⇓Sn	**S**	**13 34 47.6**	**-0.8**
	comp=Z,0.3nm,0.6s						
BVA0				⇓Lg		13 36 17.4	
	comp=Z,4.3nm,0.9s						
BVAR	**Borovoye Array**	**12.87**	**319**	Pn	**P**	**13 32 24.0**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=120,slow=13,SNR=8.9						
BVAR				Sn	**S**	**13 34 49.5**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=112,slow=23,SNR=4.2						
BVAR				Lg		13 36 14.8	
	comp=Z,0.4nm,0.3s,baz=130,slow=23,SNR=3.4						
BRVK	**Borovoye**	**12.94**	**319**	P	**P**	**13 32 27.4**	**+1.6**
CHKZ	**Chkalovo**	**13.19**	**321**	⇑Pn	**P**	**13 32 28.4**	**-0.6**
	comp=Z,2.3nm,0.9s						
CHKZ				⇑Sn	**S**	**13 34 51.3**	**-4.6**
	comp=Z,1.1nm,0.5s						
CHKZ				⇓Lg		13 36 20.6	
	comp=Z,14nm,1.2s						
CHKZ	**Chkalovo**	**13.19**	**321**	⇑Pn	**P**	**13 32 28.4**	**-0.6**
CHKZ				Sn	**S**	**13 34 51.3**	**-4.6**
CHKZ				Lg		13 36 20.6	
SONM	**Songino Array**	**15.71**	**69**	Pn	**P**	**13 32 58.5**	**-3.5**
	comp=Z,0.0nm,0.3s,baz=271,slow=14,SNR=4.0						
SONM				Lg		13 37 32.3	
	comp=Z,0.1nm,0.3s,baz=276,slow=29,SNR=3.5						
ULN	**Ulaanbaatar**	**16.16**	**69**	P	**P**	**13 33 09.7**	**+2.0**
	comp=Z,1.3nm,0.7s						
ULN	**Ulaanbaatar**	**16.16**	**69**	P	**P**	**13 33 09.7**	**+2.0**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AB31	**Akbulak array**	**17.54**	**296**	⇑Pn	**P**	**13 33 24.6**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=101,slow=13,SNR=12						
AB31	**Akbulak array**	**17.54**	**296**	⇑P	**P**	**13 33 24.6**	**-0.5**
AB31				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKTK	**Aktyubinsk**	**18.95**	**299**	⇑Pn	**P**	**13 33 42.8**	**+0.3**
AKTO	**Aktyubinsk**	**18.95**	**299**	⇑Pn	**P**	**13 33 42.8**	**+0.3**
	comp=Z,1.3nm,1.5s						
AKTO	**Aktyubinsk**	**18.95**	**299**	P	**P**	**13 33 42.0**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=76,slow=12,SNR=2.4						
AKTO				Lg		13 39 29.1	
	comp=Z,0.1nm,0.3s,baz=19,slow=15,SNR=2.4						
JOF	**Joensuu**	**35.46**	**321**	*e*p	**P**	**13 36 17.3**	**+0.4**
KAF	**Kangasniemi**	**37.73**	**319**	*e*p	**P**	**13 36 37.0**	**+1.1**
FINES	**FINESS Array B**	**37.83**	**318**	P	**P**	**13 36 37.3**	**+0.5**
	comp=Z,0.5nm,0.5s,mb3.5,baz=114,slow=14,SNR=4.6						
ARCES	**ARCESS Array B**	**38.74**	**331**	P	**P**	**13 36 44.9**	**+0.5**
	comp=Z,3.0nm,0.9s,mb4.0,baz=90,slow=7.3,SNR=5.8						
NB2	**NORSAR Subarra**	**45.00**	**319**	P	**P**	**13 37 35.6**	**0.0**
	comp=Z,0.7nm,0.5s,mb3.8,baz=78,slow=7.9						
NOA	**NORSAR Array B**	**45.00**	**319**	P	**P**	**13 37 35.4**	**-0.1**

	comp=Z,0.9nm,0.8s,mb3.6,baz=126,slow=8.3,SNR=2.9						
INK	Inuvik	64.37	15	P	P	13 39 55.1	-1.1
	comp=Z,0.6nm,0.9s,mb3.6,baz=9.3,slow=10,SNR=3.1						
INK	Inuvik	64.37	15	*e*P	P	13 39 55.3	-0.9
	comp=Z,0.7nm,0.6s,mb3.9						
INK	Inuvik	64.37	15	*e*P	P	13 39 55.3	-0.9
INK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
WRA	Warramunga Arr	78.38	133	P	P	13 41 21.2	+0.2
	comp=Z,0.7nm,0.6s,mb3.8,baz=333,slow=5.1,SNR=7.3						

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*IDC **27** 13:40:46.6±1.2, 26.87N×55.83E, mb3.8/11, mb1 3.9/11, mb1mx3.8/22, mbtmp3.8/11, Error ellipse: s-maj=26.3km s-min=21.9km az=140.0*
*NEIC **27** 13:40:48.4±0.8, 26.91N×55.81E, h10^{km}, mb3.9/2, ML3.6(THR), Error ellipse: s-maj=16.0km s-min=11.7km az=172.0*
*CSEM **27** 13:40:49.4±0.3, 26.82N×55.68E, h35^{km}, mb3.9/2, Error ellipse: s-maj=9.6km s-min=2.5km az=8.0*
*THR **27** 13:40:50.7±1.1, 26.86N×56.06E, h14^{km}±9^{km}, ML3.6*
*KISR **27** 13:40:50.8±1.2, 26.55N×55.05E, h2^{km}±999^{km}, ML3.7*
*TEH **27** 13:40:51.0, 26.85N×55.94E, h10^{km}, Mn3.6*
ISC 27 13:40:46.3±0.8**, 26.76N**±0.07×**55.68E**±0.04**, h10**^{km}**, n35, σ1.^{s}22**/40**, mb3.7**/13**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.78	34	*e*PG	Pg	13 41 01.8	-0.2
BNDS				AML	AML	13 41 17.4	
	comp=N,2μm,0.4s						
GHIR	Ghir-Karzin	2.83	303	*e*Pn	Pg	13 41 41.1	-1.7
GHIR				AML	AML	13 42 53.5	
	comp=N,211nm,0.5s						
KRBR	Kerman	3.35	16	*e*PN	Pn	13 41 41.8	+1.9
KRBR				Sn	Sn	13 42 20.6	+0.4
KRBR				AML	AML	13 42 31.6	
	comp=N,201nm,0.6s						
ISRV	Sarvestan	3.46	320	Pn	Pn	13 41 42.3	+0.9
IMOK	Mook	3.48	312	Pn	Pn	13 41 41.9	+0.3
IPAR	Pars	3.85	324	Pn	Pn	13 41 48.0	+1.1
IMEH	Mehriz	4.71	349	Pn	Pn	13 42 00.5	+1.3
IBAF	Bafgh	4.82	359	Pn	Pn	13 42 01.9	+1.2
ZHSF	Zahedan	5.32	57	*e*Pn	Pn	13 42 07.7	-0.1
RDF	Al-Radifah	7.51	289	*e*P	Pn	13 42 40.0	+1.4
RDF				*e*S	Sn	13 44 03.4	-1.4
RDF				AML	AML	13 44 05.4	
	comp=Z,13nm,0.4s						
NAY	Al-Naaiem	7.86	290	*e*P	Pn	13 42 46.2	+2.7
NAY				*e*S	Sn	13 44 11.8	-1.6
NAY				AML	AML	13 44 12.3	
	comp=Z,4.8nm,0.4s						
MIB	Mutribah	7.95	294	*e*P	Pn	13 42 47.7	+3.0
MIB				AML	AML	13 44 14.7	
	comp=Z,16nm,0.5s						
MIB				*e*S	Sn	13 44 14.8	-0.9
MIB	Mutribah	7.95	294	*e*P	Pn	13 42 47.7	+2.9
MIB				*e*S	Sn	13 44 14.8	-0.9
IDMV	Damavand	9.33	341	Pn	P	13 43 02.7	-1.2
IAFJ	Afjeh	9.68	340	Pn	P	13 43 09.8	+1.0
GNI	Garni	16.16	329	P	P	13 44 34.0	-1.1
GNI	Garni	16.16	329	P	P	13 44 34.0	-1.0
AAK	Ala-Archa	22.07	39	*e*P	P	13 45 41.5	-1.5
	comp=Z,5.0nm,0.8s,mb4.0						
BRTR	Keskin Array B	22.45	311	P	P	13 45 49.2	+2.5
	comp=Z,0.7nm,0.6s,mb3.3,baz=135,slow=12,SNR=5.2						
BRTR	Keskin Array B	22.45	311	P	P	13 45 49.2	+2.4
AKTO	Aktyubinsk	23.71	4	P	P	13 45 58.8	-0.3
	comp=Z,2.7nm,0.6s,mb3.9,baz=179,slow=8.3,SNR=9.2						
BRVK	Borovoye	28.45	19	*e*P	P	13 46 41.9	-1.3
	comp=Z,1.1nm,0.6s,mb3.7						
BRVK	Borovoye	28.45	19	*e*P	P	13 46 41.9	-1.3
	comp=Z,1.1nm,0.6s,mb3.7						
BVAR	Borovoye Array	28.45	19	P	P	13 46 41.7	-1.5
	comp=Z,2.5nm,0.6s,mb4.0,baz=201,slow=9.2,SNR=21						
MKAR	Makanchi Array	29.00	39	P	P	13 46 47.3	-0.9
	comp=Z,0.3nm,0.5s,mb3.3,baz=224,slow=8.5,SNR=7.2						
AKASG	Malin Array Be	31.28	327	P	P	13 47 07.1	-1.4
	comp=Z,0.9nm,0.5s,mb3.9,baz=133,slow=8.4,SNR=6.5						
AKASG	Malin Array Be	31.28	327	P	P	13 47 07.1	-1.4
GERES	GERESS Array B	39.17	316	P	P	13 48 16.2	+0.3
	comp=Z,0.4nm,0.6s,mb3.3,baz=101,slow=6.8,SNR=5.1						
FINES	FINESS Array B	39.98	338	P	P	13 48 22.1	-0.3
	comp=Z,0.9nm,0.5s,mb3.8,baz=128,slow=9.0,SNR=12						
FINES	FINESS Array B	39.98	338	P	P	13 48 22.1	-0.4
DAVOX	Davos	41.09	311	P	P	13 48 32.7	+1.0
	comp=Z,1.4nm,0.5s,mb3.9,baz=354,slow=19,SNR=4.7						
SONM	Songino Array	44.58	48	P	P	13 48 59.5	-0.7
	comp=Z,1.0nm,1.0s,mb3.6,baz=273,slow=8.8,SNR=6.2						
BOSA	Boshof	62.32	210	P	P	13 51 12.2	+0.9
	comp=Z,1.0nm,0.6s,mb4.1,baz=42,slow=6.0,SNR=2.9						
INK	Inuvik	84.98	3	P	P	13 53 21.9	-0.5
	baz=315,slow=8.6						
ILAR	Eielson Array	87.09	9	P	P	13 53 32.6	-0.3
	comp=Z,0.5nm,0.6s,mb3.9,baz=325,slow=4.7,SNR=14						

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*CSEM **27** 13:49:14.0±0.3, 26.61N×55.84E, h14^{km}, ML3.3, Error ellipse: s-maj=8.6km s-min=3.4km az=169.0*
*THR **27** 13:49:17.4±0.5, 26.74N×55.99E, h26^{km}±3^{km}, ML3.3*
*KISR **27** 13:49:20.3±0.7, 27.06N×55.49E, h33^{km}, ML3.2*
ISC 27 13:49:15.7±1.6**, 26.8N**±0.1×**55.76E**±0.06**, h10**^{km}**, n7, σ0.^{s}84**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.71	31	*e*PG	Pg	13 49 30.7	+0.6
BNDS				AML	AML	13 49 42.9	
	comp=N,1μm,0.5s						
GHIR	Ghir-Karzin	2.88	302	*e*Pn	Pn	13 50 06.7	+4.2
GHIR				*e*Sg	Sg	13 50 50.9	-0.6
GHIR				AML	AML	13 51 21.1	
	comp=N,90nm,0.7s						
KRBR	Kerman	3.30	15	*e*PN	Pn	13 50 09.6	+1.1
KRBR				Sn	Sn	13 50 48.1	-0.2
ZHSF	Zahedan	5.25	56	*e*PN	Pn	13 50 34.4	-1.7
UMR	Umm Al-Rimmam	7.61	293	*e*P	Pn	13 51 09.3	-0.2
NAY	Al-Naaiem	7.92	290	*e*P	Pn	13 51 13.7	+0.1
NAY				*e*S	Sn	13 52 39.4	-4.8
NAY				AML	AML	13 52 40.6	
	comp=Z,3.1nm,0.4s						
MIB	Mutribah	8.01	294	*e*P	Pn	13 51 15.6	+0.7
MIB				*e*S	Sn	13 52 41.0	-5.5

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*MEX **27** 13:50:17.9±1.2, 17.85N×95.03W, h152^{km}±11^{km}, MD4.4*
*NEIC **27** 13:50:17.9, 17.85N×95.03W, h152^{km}, mb3.7/4, MD4.4(MEX), After MEX.*
*IDC **27** 13:50:25.3±3.9, 18.30N×94.49W, h198^{km}±39^{km}, mb3.1/4, mb1 3.3/7, mb1mx3.2/22, mbtmp3.6/7, Error ellipse: s-maj=98.2km s-min=15.9km az=51.0*
ISC 27 13:50:16.6±0.4**, 17.84N**±0.06×**95.05W**±0.04**, h142**^{km}±5^{km}**, n25, σ1.^{s}09**/34**, mb3.5**/6**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TUIG	Tuzandepetl	0.63	72	*i* P	P	13 50 38.7	+0.3
TUIG				*i* S	S	13 50 54.3	-0.7
CMIG	Matias Romero	0.76	168	*i* P	P	13 50 40.3	+1.2
CMIG				*i* S	S	13 50 56.3	-0.1
VHO	Vista Hermosa	1.78	245	*i* P	P	13 50 49.9	+0.9
VHO				*i* S	S	13 51 15.3	+1.4
HUIG	Huatulco	2.29	206	*i* P	P	13 50 54.9	-0.5
HUIG				*i* S	S	13 51 25.6	+0.7
CCIG	Comitan	3.19	119	*i* P	P	13 51 07.8	+0.9
CCIG				*i* S	S	13 51 43.8	-1.5
PNIG	Pinotepa	3.27	244	*i* P	P	13 51 06.2	-1.8
PNIG				*i* S	S	13 51 45.8	-1.5
PNIG	Pinotepa	3.27	244	*i* P	P	13 51 06.2	-1.8
PNIG				*i* S	S	13 51 44.1	-3.2
PPM	Popocatepetl	3.61	290	*i* P	P	13 51 13.5	+1.1
PPM				*i* S	S	13 51 54.3	-0.9
SCIG		3.84	72	*i* P	P	13 51 14.9	-0.5
PLIG	Platanillo	4.27	278	*i* P	P	13 51 20.8	-0.4
PLIG				*i* S	S	13 52 07.8	-3.0
PLIG	Platanillo	4.27	278	*i* P	P	13 51 20.8	-0.4
PLIG				*i* S	S	13 52 07.5	-3.3
MOIG	Morelia	6.10	288	*i* P	P	13 51 47.2	+1.7
JTS	JuntasAbangare	12.33	126	P	P	13 53 13.5	+5.2
	0.5nm,0.3s,baz=305,slow=19,SNR=3.0						
TXAR	Lajitas Array	13.90	327	P	P	13 53 34.0	+5.5
	0.1nm,0.3s,baz=138,slow=9.5,SNR=4.3						
WVT	Waverly	19.31	18	*e*P	P	13 54 34.0	+1.1
	2.9nm,0.5s						
ANMO	Albuquerque	19.84	331	P	P	13 54 38.4	-0.1
	baz=138,slow=12,SNR=5.6						
ANMO	Albuquerque	19.84	331	*e*P	P	13 54 38.5	+0.1
	1.0nm,0.6s						
ISCO	Idaho Springs	23.72	339	*e*P	P	13 55 16.8	+0.2
	1.6nm,0.8s,mb3.6						
PDAR	Pinedale Array	27.74	337	P	P	13 55 53.1	-0.7
	0.1nm,0.4s,mb2.9,baz=190,slow=27,SNR=3.3						
NVAR	Mina Array Bea	28.86	320	P	P	13 56 06.0	+2.1
	1.2nm,0.7s,mb3.7,baz=131,slow=10,SNR=8.9						
SIV	San Ignacio	47.44	133	P	P	13 58 39.3	+0.3
	0.4nm,0.4s,mb3.4,baz=311,slow=11,SNR=4.7						
DAWY	Dawson	55.04	338	*e*P	P	13 59 35.2	-0.2
INK	Inuvik	55.95	344	*e*P	P	13 59 40.3	-1.7
	0.6nm,0.5s,mb3.7						
ILAR	Eielson Array	58.18	337	P	P	13 59 57.2	-0.3
	0.7nm,0.5s,mb3.7,baz=140,slow=4.8,SNR=28						
WRA	Warramunga Arr	133.35	259	PKP	PKPdf	14 09 18.5	+1.9
	0.2nm,0.6s,baz=78,slow=1.8,SNR=9.7						

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*IDC **27** 14:17:19.4±0.8, 54.28N×161.65E, mb4.2/7, mb1 4.4/9, mb1mx4.0/22, mbtmp4.2/9, ML3.8/2, Error ellipse: s-maj=24.5km s-min=13.6km az=177.0*
*KRSC **27** 14:17:20.1±1.3, 53.80N×161.86E, h10^{km}±3^{km}, ML4.5*
*MOS **27** 14:17:22.4±2.3, 53.96N×161.77E, h47^{km}, mb4.4/3, Error ellipse: s-maj=15.2km s-min=10.1km az=68.0*
*NEIC **27** 14:17:22.7±0.5, 54.32N×161.35E, h20^{km}, mb4.3/5, Error ellipse: s-maj=14.8km s-min=8.5km az=142.0*
ISC 27 14:17:20.5±1.1**, 53.79N**±0.03×**161.93E**±0.06**, h13**^{km}±8^{km}**, n61, σ0.^{s}82**/92**, mb4.2**/12**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	Mys Kozlova	0.78	351	*i* P	Pb	14 17 35.2	-0.2
MKZ				*e*S	Sb	14 17 44.1	-1.5
SPN	Mys Shipunski	1.33	240	P	Pb	14 17 43.8	-1.1
SPN				S	Sb	14 17 54.1	-7.6
SPN	Mys Shipunski	1.33	240	*e*P	Pb	14 17 43.8	-1.1
SPN				*e*S	Sb	14 18 01.4	-0.3
KII	Karymskiy	1.49	281	P	Pn	14 17 46.0	-1.1
KII				S	Sb	14 17 58.1	-8.1
KII	Karymskiy	1.49	281	*i* P	Pn	14 17 46.1	-1.0
NLC	Nalytchevo	1.67	249	P	Pn	14 17 48.6	-1.0
NLC				S	Sn	14 18 02.3	-8.6
NLC	Nalytchevo	1.67	249	*e*P	Pn	14 17 48.6	-1.0
NLC				*e*S	Sn	14 18 09.4	-1.5
TUMR	Tumrok	1.82	326	*e*P	Pn	14 17 51.5	-0.4
TUMR				*e*S	Sn	14 18 15.1	+0.1
SMAR	Somma	1.94	256	*e*P	Pn	14 17 53.3	-0.3
SMAR				*e*S	Sn	14 18 18.0	+0.1
UGLR	Uglovaya	1.94	254	*e*P	Pn	14 17 53.5	-0.1
UGLR				*e*S	Sn	14 18 18.0	0.0
AVH	Avacha	1.98	256	*e*P	Pn	14 17 53.8	-0.3
AVH				*e*S	Sn	14 18 17.6	-1.3
KOK	Koryaka	2.03	257	*e*P	Pn	14 17 56.0	+1.2
KOK				*i* S	Sn	14 18 21.0	+0.8
PET	Petropavlovsk	2.11	250	P	Pn	14 17 55.4	-0.5
PET				S	Sn	14 18 14.0	-8.2
PET	Petropavlovsk	2.11	250	*e*P	Pn	14 17 55.3	-0.6
PET				*i* S	Sn	14 18 21.3	-0.9
PET	Petropavlovsk	2.11	250	*e*P	Pn	14 17 55.1	-0.9
PET				*e*S	Sn	14 18 20.3	-1.9
KMNR	Kamenistaya	2.20	334	*i* P	Pn	14 17 57.6	+0.3
KMNR				*e*S	Sn	14 18 24.8	+0.2
ZLN	Zelenaya	2.33	344	*e*P	Pn	14 17 59.4	+0.3
ZLN				*e*S	Sn	14 18 28.4	+0.6
GNL	Ganaly	2.37	269	*i* P	Pn	14 17 59.7	0.0
GNL				*e*S	Sn	14 18 27.8	-1.1
KPT	Kopyto	2.40	336	*i* P	Pn	14 18 00.9	+0.8
LGNR	Loginova	2.41	343	*e*P	Pn	14 18 00.8	+0.5
LGNR				*e*S	Sn	14 18 30.1	+0.3
CIRR	Tsirk	2.43	344	*e*P	Pn	14 18 01.1	+0.5
CIRR				*e*S	Sn	14 18 30.4	0.0
RUS	Russkaya	2.47	238	P	Pn	14 18 00.8	-0.3
RUS				S	Sn	14 18 23.8	-7.5
RUS	Russkaya	2.47	238	*e*P	Pn	14 18 00.8	-0.3
RUS				*e*S	Sn	14 18 30.7	-0.6
KRMR	Karymshinskiy	2.47	249	*e*P	Pn	14 18 01.8	+0.6
KRMR				*e*S	Sn	14 18 32.3	+0.8
KBTR	Krutoberegovo	2.48	12	*e*P	Pn	14 18 01.3	0.0
KRSR	Krestovskiy	2.56	343	*e*P	Pn	14 18 02.4	0.0
KOZ	Kozyrevsk	2.57	333	P	Pn	14 18 02.9	+0.4
KOZ				S	Sn	14 18 27.3	-6.5
KOZ	Kozyrevsk	2.57	333	*i* P	Pn	14 18 02.8	+0.3
KOZ				*e*S	Sn	14 18 33.9	+0.1
KOZR	Kozyr	2.57	334	PN	Pn	14 18 02.9	+0.4
KOZR				S	Sn	14 18 27.3	-6.6
GRL	Gorelyy	2.63	243	*e*P	Pn	14 18 04.6	+1.2
GRL				*e*S	Sn	14 18 36.5	+1.0
KLY	Klyuchi	2.64	344	P	Pn	14 18 03.1	-0.4
KLY				S	Sn	14 18 27.0	-8.6
KLY	Klyuchi	2.64	344	*e*P	Pn	14 18 03.1	-0.4
KLY				*i* S	Sn	14 18 35.6	0.0
BKI	Bering	2.75	57	*i* S	Sn	14 18 34.2	-4.3
SRDR	Sredinnyy	2.84	334	*e*P	Pn	14 18 07.5	+1.1
ESO	Esso	2.84	320	*e*P	Pn	14 18 05.4	-1.0
ESO				*e*S	Sn	14 18 40.8	0.0
ESO				Smax			
	150nm,0.6s						
APC	Apacha	2.99	255	*e*P	Pn	14 18 09.9	+1.4
APC				*e*S	Sn	14 18 44.4	-0.1
APC				Smax			
	270nm,0.9s						
FX1	Attu Island--F	6.79	93	Pn	Pn	14 19 01.5	-0.8
	6.6nm,0.3s,baz=175,slow=1.8,SNR=27						
FX1				Sn	Sn	14 20 13.0	-7.2
	4.6nm,0.3s,baz=85,slow=20,SNR=5.2						
FX1	Attu Island--F	6.79	93	*e*P	Pn	14 19 01.2	-1.2
ASAJ	Asahikawa	15.92	240	Pn	P	14 21 04.6	-1.0
	0.7nm,0.3s,baz=38,slow=18,SNR=6.8						
ASAJ	Asahikawa	15.92	240	P	P	14 21 04.6	-1.0
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YAK	Yakutsk	18.84	309	*e*P	P	14 21 34.6	-7.3
	comp=Z,4.8nm,0.5s						
YAK	Yakutsk	18.84	309	*e*P	P	14 21 34.6	-7.4
YAK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MAJO	Matsushiro	23.84	233	*e*P	P	14 22 34.9	+1.0
	comp=Z,6.5nm,0.4s,mb4.4						
MAJO	Matsushiro	23.84	233	*e*P	P	14 22 34.9	+1.0
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.4s,mb4.4						
MAT	Matsushiro	23.84	233	P	P	14 22 34.1	+0.2
MAT	Matsushiro	23.84	233	*e*P	P	14 22 34.0	+0.1
	comp=Z,8.4nm,0.5s,mb4.4						
MAT	Matsushiro	23.84	233	*e*P	P	14 22 34.0	+0.1
MAT				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb4.4						
MJAR	Matsushiro Arr	23.84	233	P	P	14 22 35.4	+1.5
	comp=Z,6.8nm,0.8s,mb4.2,baz=16,slow=11,SNR=13						
ILAR	Eielson Array	27.54	46	P	P	14 23 06.0	-2.3
	comp=Z,0.9nm,0.8s,mb3.5,baz=264,slow=8.3,SNR=9.9						
JOW	Kunigami	36.61	236	P	P	14 24 29.6	+1.5
	comp=Z,8.2nm,0.5s,mb4.8,baz=344,slow=9.5,SNR=5.1						
MKAR	Makanchi Array	48.84	296	P	P	14 26 01.9	-5.1
	comp=Z,0.2nm,0.6s,mb3.3,baz=56,slow=4.4,SNR=4.7						
MKAR	Makanchi Array	48.84	296	P	P	14 26 01.9	-5.1
NVAR	Mina Array Bea	54.48	72	P	P	14 26 50.4	+0.8
	comp=Z,1.7nm,0.6s,mb4.1,baz=308,slow=6.1,SNR=15						
BW06	Boulder Array	56.23	62	*e*P	P	14 27 02.3	+0.1
	comp=Z,3.7nm,0.6s,mb4.6						
FINES	FINESS Array B	59.91	337	P	P	14 27 22.6	-5.2
	comp=Z,10.0nm,1.2s,mb4.7,baz=45,slow=8.1,SNR=9.7						
NB2	NORSAR Subarra	63.17	345	P	P	14 27 46.3	-3.5
	comp=Z,0.6nm,0.6s,mb3.9,baz=20,slow=6.5						
NOA	NORSAR Array B	63.17	345	P	P	14 27 44.5	-5.3
	comp=Z,0.7nm,0.5s,mb4.0,baz=20,slow=6.6,SNR=4.5						
NAO	NORSAR Subarra	63.44	345	P	P	14 27 46.3	-5.2
	comp=Z,0.6nm,0.6s,mb3.9						
NAO	NORSAR Subarra	63.44	345	P	P	14 27 46.3	-5.2
NAO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.1						
TXAR	Lajitas Array	69.36	68	P	P	14 28 29.3	-0.3
	comp=Z,0.6nm,0.5s,mb3.8,baz=292,slow=4.5,SNR=5.4						
TXAR	Lajitas Array	69.36	68	P	P	14 28 29.3	-0.3

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*IDC **27** 14:19:41.4±1.2, 1.20N×126.97E, mb3.7/4, mb1 3.9/5, mb1mx3.8/14, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=70.0km s-min=21.8km az=75.0*
*NEIC **27** 14:19:46.8±0.6, 1.29N×127.23E, h35^{km}, mb4.2/3, Error ellipse: s-maj=43.0km s-min=10.2km az=74.0*
ISC 27 14:19:44.7±0.8**, 1.2N**±0.1×**126.9E**±0.4**, h33**^{km}**, n9, σ0.^{s}83**/9**, mb4.0**/6**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.22	184	*e*P	P	14 24 08.7	-0.3
	3.2nm,0.9s						
FITZ	Fitzroy Crossi	19.22	184	P	P	14 24 07.2	-1.8
	0.2nm,0.3s,baz=332,slow=13,SNR=4.0						
WRAB	Tennant Creek	22.24	161	*e*P	P	14 24 40.3	0.0
	4.6nm,0.5s,mb4.2						
WRA	Warramunga Arr	22.25	161	P	P	14 24 40.3	0.0
	1.3nm,0.5s,mb3.6,baz=335,slow=11,SNR=22						
WB2	Warramunga Arr	22.25	161	*e*P	P	14 24 41.6	+1.3
SONM	Songino Array	49.73	342	P	P	14 28 36.8	+0.9
	1.0nm,0.7s,mb4.0,baz=153,slow=8.2,SNR=8.1						
MKAR	Makanchi Array	59.72	326	P	P	14 29 48.4	-0.2
	1.1nm,0.6s,mb4.0,baz=116,slow=8.0,SNR=19						
KURK	Kurchatov	63.95	328	*e*P	P	14 30 17.2	+0.3
	5.1nm,0.8s,mb4.6						
ILAR	Eielson Array	87.30	25	P	P	14 32 27.8	-1.3
	0.3nm,0.9s,mb3.5,baz=256,slow=5.2,SNR=4.1						

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*BJI **27** 14:22:53.6, 23.50S×180.00W, h514^{km}, mB4.5, mb4.5*
*HRVD **27** 14:22:53.6±0.8, 23.85S×179.90W, h558^{km}±5^{km}, MW5.1/26, Centroid moment Tensor Solution. LP body waves: s26,c31; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$4.65±.49; M$_{\theta\theta}$-3.83±.87; M$_{\phi\phi}$-0.82±.94; M$_{r\theta}$1.99±.98; M$_{\theta\phi}$-0.73±.86; M$_{\phi r}$-5.04±.93; Best double couple: M$_0$6.225×10^{16} NP1:φ$_s$260°, δ28°, λ43°. NP2: φ$_s$131°, δ71°, λ112°. Principal axes: T 8.015, Plg58°, Azm71°; N -3.588, Plg21°, Azm304°; P -4.434, Plg23°, Azm204°; nsta1 refers to body waves, cutoff=40s.*
*NEIC **27** 14:22:53.6±0.6, 23.53S×179.96W, h515^{km}±7^{km}, mb4.9/25 Error ellipse: s-maj=8.5km s-min=6.4km az=145.0*
*MOS **27** 14:22:54.5±3.5, 23.45S×179.99E, h506^{km}, mb5.0/10, Error ellipse: s-maj=13.4km s-min=12.3km az=141.3*
*IDC **27** 14:22:54.9±1.1, 23.64S×179.97W, h531^{km}±12^{km}, mb4.1/16, mb1 4.2/19, mb1mx4.1/21, mbtmp4.9/19, Error ellipse: s-maj=13.2km s-min=10.1km az=176.0*
ISC 27 14:22:52.4±0.7**, 23.57S**±0.05×**179.98W**±0.05**, h507**^{km}±9^{km}**, n149, σ0.^{s}98**/110**, mb4.7**/39**, 10C-8D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	5.96	162	P	P	14 24 31.6	+2.2
	172nm,0.3s,baz=29,slow=23,SNR=9.9						
RAO				S	S	14 25 48.1	+1.7
	68nm,0.3s,baz=270,slow=20,SNR=2.3						
RAO	Raoul Island	5.96	162	*e*P	P	14 24 31.8	+2.3
	436nm,0.4s						
RAO				*e*S	S	14 25 37.1	-9.3
RAO	Raoul Island	5.96	162	P	P	14 24 31.6	+2.1
RAO				S	S	14 25 48.1	+1.7
RAO				pmax	pmax		
	comp=Z,172nm,0.3s						
RAO				smax			
	comp=E,68nm,0.3s						
AFI	Afiamalu	12.35	40	P	P	14 25 33.4	-2.0
	comp=E,2.8nm,0.3s,baz=49,slow=5.3,SNR=10						
AFI				S	S	14 27 40.3	-6.3
	comp=E,3.1nm,0.3s,baz=44,slow=22,SNR=6.5						
AFI	Afiamalu	12.35	40	*e*P	P	14 25 33.1	-2.3
	comp=E,41nm,0.8s						
AFI	Afiamalu	12.35	40	P	P	14 25 33.4	-2.0
AFI				S	S	14 27 40.3	-6.2
AFI				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AFI				smax			
	comp=E,3.0nm,0.3s						
DZM	Mont Dzumac	12.61	274	P	P	14 25 39.5	+1.4
	comp=E,1.4nm,0.3s,baz=88,slow=20,SNR=14						
URZ	Urewera	14.86	189	P	P	14 26 00.3	-0.8
	comp=E,6.3nm,0.3s,baz=290,slow=6.3,SNR=30						
URZ				S	S	14 28 33.9	+0.4
	comp=E,4.5nm,0.3s,baz=300,slow=23,SNR=11						
URZ	Urewera	14.86	189	SN	S	14 28 32.1	-1.4
URZ				SN	S	14 28 34.2	+0.7
FUNA	Funafuti	14.98	357	*e*P	P	14 26 02.3	-0.1
MRZ	Mangatainoka R	17.45	191	PN	P	14 26 24.4	-2.4
QRZ	Quartz Range	18.33	198	PN	P	14 26 36.6	+1.3
DSZ	Denniston Nort	19.39	199	PN	P	14 26 45.8	+0.4
KHZ	Kahutara	19.56	194	PN	P	14 26 47.2	+0.2
KHZ				SN	S	14 29 51.2	-4.8
LTZ	Lake Taylor	20.21	197	PN	P	14 26 51.4	-1.8
WVZ	Waitaha Valley	20.92	199	PN	P	14 26 58.3	-1.4
RPZ	Rata Peaks	21.41	198	P	P	14 27 02.8	-1.5
	comp=E,7.2nm,0.5s,mb4.5,baz=61,slow=1.0,SNR=8.2						
HNR	Honiara	23.79	303	P	P	14 27 25.3	-0.8
	comp=E,19nm,0.4s,mb4.9,baz=193,slow=12,SNR=4.7						
HNR	Honiara	23.79	303	P	P	14 27 25.0	-1.1
	comp=E,111nm,0.9s,mb5.3						
HNR	Honiara	23.79	303	P	P	14 27 25.3	-0.8
HNR				pmax	pmax		
	comp=Z,19nm,0.4s,mb4.9						
PAE	Paea	29.02	84	*e*P	P	14 28 11.2	-1.1
	comp=Z,42nm,0.9s,mb4.9						
TVO	Taravao	29.28	84	*e*P	P	14 28 13.7	-0.9
	comp=Z,66nm,0.8s,mb5.1						
PMOR	Pomariorio Ree	31.40	80	*e*P	P	14 28 31.9	-0.8
	comp=Z,52nm,1.1s,mb4.9						
CTA	Charters Tower	31.49	270	⇓ *i*P	P	14 28 34.7	+1.2
	comp=Z,62nm,0.3s,mb5.5						
CTA	Charters Tower	31.49	270	P	P	14 28 34.8	+1.3
	comp=Z,80nm,0.4s,mb5.5,baz=94,slow=10,SNR=331						
CTA	Charters Tower	31.49	270	P	P	14 28 34.8	+1.3
CTA				pmax	pmax		
	comp=Z,80nm,0.4s						
CTAO	Charters Tower	31.49	270	⇓ *i*P	P	14 28 34.6	+1.1
	comp=Z,77nm,0.4s,mb5.5						
CTAO	Charters Tower	31.49	270	⇓ *i*P	P	14 28 34.6	+1.1
CTAO				pmax	pmax		
	comp=Z,77nm,0.4s,mb5.5						
VAH	Vaihoa	31.56	81	*e*P	P	14 28 33.0	-1.1
	comp=Z,63nm,1.2s,mb4.9						
PMG	Port Moresby	34.40	289	P	P	14 28 58.9	+0.9
	comp=Z,48nm,0.9s,mb4.9,baz=122,slow=5.0,SNR=13						
PMG	Port Moresby	34.40	289	⇓ *e*P	P	14 28 58.5	+0.5
	comp=Z,65nm,1.0s,mb5.0						
PMG	Port Moresby	34.40	289	P	P	14 28 58.9	+0.9
PMG				pmax	pmax		
	comp=Z,48nm,0.9s						
STKA	Stephens Creek	34.87	248	*e*P	P	14 29 02.9	+1.2
	comp=Z,3.6nm,0.3s,mb4.3						
STKA	Stephens Creek	34.87	248	P	P	14 29 02.8	+1.1
	comp=Z,6.8nm,0.5s,mb4.3,baz=96,slow=11,SNR=15						
WB2	Warramunga Arr	42.44	266	⇓ *i*P	P	14 30 03.2	-0.3
WB2				*e*SCP		14 34 47.8	
WB2				*e*S	S	14 35 43.8	-4.9
WRAB	Tennant Creek	42.44	266	*e*P	P	14 30 03.1	-0.4
	comp=Z,34nm,0.3s,mb5.2						
WRAB	Tennant Creek	42.44	266	*d* *i*P	P	14 30 03.2	-0.3
WRA	Warramunga Arr	42.45	266	P	P	14 30 03.4	-0.1
	comp=Z,20nm,0.3s,mb5.0,baz=92,slow=8.4,SNR=361						
WRA				ScP		14 34 44.5	
	comp=Z,4.4nm,1.1s,baz=100,slow=4.2,SNR=9.7						
WRA				S	S	14 35 43.5	-5.4
	comp=Z,2.5nm,0.7s,baz=103,slow=14,SNR=8.3						
WRA	Warramunga Arr	42.45	266	P	P	14 30 03.4	-0.2
WRA				S	S	14 35 43.5	-5.4
FORT	Forrest	46.45	249	*e*P	P	14 30 34.1	-0.5
	comp=Z,31nm,0.6s,mb4.9						
FITZ	Fitzroy Crossi	50.87	265	*e*P	P	14 31 07.7	-0.2
	comp=Z,8.4nm,0.4s,mb4.4						
FITZ				*e*pP	pP	14 32 55.6	+10
FITZ	Fitzroy Crossi	50.87	265	P	P	14 31 07.4	-0.5
	comp=Z,14nm,0.5s,mb4.5,baz=94,slow=7.6,SNR=49						
FITZ				S	S	14 37 44.9	-0.7
	comp=Z,2.3nm,0.9s,baz=265,slow=17,SNR=2.5						
KLBR	Kellerberrin	55.13	247	*e*P	P	14 31 37.4	-0.8
	comp=Z,4.7nm,0.4s,mb4.2						
NWAO	Narrogin (SRO)	55.39	245	P	P	14 31 39.1	-0.9
	comp=Z,4.9nm,0.6s,mb4.0,baz=25,slow=22,SNR=5.6						
QSPA	South Pole Qui	66.52	180	*e*P	P	14 32 52.7	+0.5
	comp=Z,46nm,1.0s,mb5.1						
JOW	Kunigami	70.78	312	P	P	14 33 18.4	-0.4
	comp=Z,12nm,0.7s,mb4.6,baz=198,slow=9.0,SNR=7.5						

MJAR	Matsushiro Arr	71.63	326	P	P	14 33 22.9	-0.7
	comp=Z,4.0nm,0.8s,mb4.0,baz=159,slow=6.5,SNR=9.9						
YSS	Yuzh-Sakhalins	77.84	335	*i* P	P	14 33 59.8	+1.8
YSS				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.3						
MAW	Mawson	78.07	200	P	P	14 33 59.1	+0.4
	comp=Z,6.3nm,0.6s,mb4.2,baz=124,slow=8.3,SNR=11						
SSE	Sheshan	78.28	311	P	P	14 33 59.8	-0.9
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.3						
SSE				AMB	AMB		
	comp=Z,10.0nm,5.0s						
SSE	Sheshan	78.28	311	P	P	14 33 59.8	-0.9
	comp=Z,17nm,0.8s,mb4.5						
NJ2	Nanjing	80.45	311	*e*P	P	14 34 14.3	+2.3
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.6						
CMB	Columbia Colle	82.94	43	*e*P	P	14 34 24.4	-0.1
	comp=Z,40nm,1.3s,mb4.8						
CMB	Columbia Colle	82.94	43	*e*P	P	14 34 24.5	-0.1
CMB				pmax	pmax		
	comp=Z,40nm,1.3s,mb4.8						
SYO	Syowa Base	83.34	193	⇑P	P	14 34 25.2	-0.7
SYO	Syowa Base	83.34	193	⇓PcP	PcP	14 34 29.5	0.0
SYO	Syowa Base	83.34	193	⇑*e*P	P	14 34 25.2	-0.7
SYO				⇓*e*PcP	PcP	14 34 29.5	0.0
MTUM	Tungsten Hills	83.70	45	*e*P	P	14 34 28.6	+0.3
NVAR	Mina Array Bea	84.50	44	P	P	14 34 32.9	+0.6
	comp=Z,8.1nm,1.0s,mb4.2,baz=209,slow=6.4,SNR=26						
SNAA	Sanae	85.00	179	⇑*i*P	P	14 34 32.8	-1.1
SNAA	Sanae	85.00	179	⇑*i*	P	14 34 34.7	+0.8
SNAA	Sanae	85.00	179	⇑*i*P	P	14 34 34.7	+0.8
VNA3	Neumayer Olymp	85.21	177	⇑*i*P	P	14 34 35.2	+0.3
VNA3	Neumayer Olymp	85.21	177		P	14 34 37.8	+2.9
VNA2	Neumayer--Watz	85.62	178	⇑*i*P	P	14 34 37.5	+0.6
VNA2	Neumayer--Watz	85.62	178	⇑*i*	P	14 34 39.2	+2.3
TUC	Tucson	86.30	52	*e*P	P	14 34 42.1	+1.0
	comp=Z,20nm,1.0s,mb4.7						
TUC	Tucson	86.30	52	*e*P	P	14 34 42.1	+1.0
TUC				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.7						
VTHM	Trough	87.18	38	P	P	14 34 45.7	+0.8
ELK	Elko	87.76	43	*e*P	P	14 34 47.6	-0.2
	comp=Z,15nm,1.5s,mb4.5						
ELK	Elko	87.76	43	*e*P	P	14 34 47.6	-0.2
ELK				pmax	pmax		
	comp=Z,15nm,1.5s						
PMR	Palmer	88.42	14	P	P	14 34 49.0	-1.3
	comp=Z,48nm,1.9s,mb4.9						
PMR	Palmer	88.42	14	P	P	14 34 49.0	-1.3
PMR				pmax	pmax		
	comp=Z,48nm,1.9s,mb4.9						
RSW	Rattlesnake Hi	88.46	37	P	P	14 34 51.8	+0.9
PLCA	Paso Flores	88.48	134	P	P	14 34 52.0	+0.9
	comp=Z,7.2nm,1.1s,mb4.3,baz=214,slow=7.2,SNR=3.6						
MSU	Marysvale	88.54	47	*e*P	P	14 34 52.2	+0.7
EPH	Ephrata	89.04	36	P	P	14 34 53.9	+0.4
OD2	Odessa Site #2	89.54	37	P	P	14 34 56.3	+0.4
MPU	Maple Canyon	89.69	46	*e*P	P	14 34 57.0	+0.2
	comp=Z,15nm,1.1s,mb4.7						
HVU	Hansel Valley	89.88	44	*e*P	P	14 34 57.7	+0.1
	comp=Z,24nm,1.2s,mb4.9						
HVU	Hansel Valley	89.88	44	*e*P	P	14 34 57.7	+0.1
HVU				pmax	pmax		
	comp=Z,24nm,1.2s,mb4.9						
SRU	San Rafael	89.96	47	*e*P	P	14 34 58.1	+0.1
	comp=Z,28nm,1.0s,mb5.0						
SRU	San Rafael	89.96	47	*e*P	P	14 34 58.1	+0.1
SRU				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.0						
CTU	Camp Tracy	89.97	45	*e*P	P	14 34 58.5	+0.5
	comp=Z,10nm,1.0s,mb4.6						
LAZ	Ladron	89.98	52	*e*P	P	14 34 58.8	+0.5
LTX	Lajitas	90.24	58	*e*P	P	14 35 00.1	+0.5
	comp=Z,29nm,1.4s,mb4.9						
LTX	Lajitas	90.24	58	*e*P	P	14 35 00.1	+0.5
LTX				pmax	pmax		
	comp=Z,29nm,1.4s,mb4.9						
TXAR	Lajitas Array	90.24	58	P	P	14 35 00.3	+0.8
	comp=Z,7.6nm,0.8s,mb4.6,baz=211,slow=6.6,SNR=54						
LPM	Los Pinos Moun	90.31	52	*e*P	P	14 34 59.5	-0.3
TCUT	Toone Canyon	90.41	45	*e*P	P	14 35 00.4	+0.3
HWUT	Hardware Ranch	90.56	44	*e*P	P	14 35 00.5	-0.2
	comp=Z,5.2nm,0.7s,mb4.6						
ANMO	Albuquerque	90.74	52	*e*P	P	14 35 01.9	+0.1
	comp=Z,13nm,1.2s,mb4.7						
ANMO	Albuquerque	90.74	52	*e*P	P	14 35 01.9	+0.2
ANMO				pmax	pmax		
	comp=Z,13nm,1.2s						
GDL2	Guadalupe Moun	91.01	55	*e*P	P	14 35 03.3	+0.3
COLA	College	91.59	13	*i* P	P	14 35 04.4	-0.5
ILAR	Eielson Array	91.70	14	P	P	14 35 04.0	-1.5
	comp=Z,1.0nm,0.9s,mb3.8,baz=217,slow=5.4,SNR=11						
ILAR				pP	pP	14 36 59.1	-0.3
	comp=Z,0.9nm,1.1s,baz=214,slow=9.8,SNR=2.9						
SMCO	Snowmass	92.39	48	*e*P	P	14 35 09.4	+0.2
	comp=Z,5.0nm,0.8s,mb4.5						
PDAR	Pinedale Array	92.44	44	P	P	14 35 09.2	-0.1
	comp=Z,3.4nm,0.8s,mb4.3,baz=219,slow=3.4,SNR=23						
ULN	Ulaanbaatar	96.48	320	*i* P	P	14 35 24.4	-3.2
MKAR	Makanchi Array	111.94	313	PKiKP		14 40 27.8	
	comp=Z,0.5nm,0.4s,baz=151,slow=0.7,SNR=17						
AAK	Ala-Archa	116.71	307	*i* PKIKP	PKPdf	14 40 37.2	-1.2
ARCES	ARCESS Array B	131.56	348	PKP	PKPdf	14 41 05.3	-0.9
	comp=Z,2.1nm,0.5s,baz=92,slow=2.0,SNR=17						
JOF	Joensuu	135.43	340	*e*p	PKPdf	14 41 12.8	-0.7
KAF	Kangasniemi	137.53	342	*e*p	PKPdf	14 41 08.1	-9.3
FINES	FINESS Array B	138.14	342	PKhKP		14 41 09.6	
	comp=Z,0.4nm,0.3s,baz=56,slow=4.8,SNR=11						
FINES	FINESS Array B	138.14	342	PKP	PKPdf	14 41 09.6	-9.0
KIV	Kislovodsk	139.66	311	*i* PKIKP	PKPdf	14 41 21.5	-0.3
NB2	NORSAR Subarra	141.75	351	PKPabc	PKPdf	14 41 20.9	-4.0
	comp=Z,2.2nm,0.8s,baz=21,slow=3.5						
NOA	NORSAR Array B	141.75	351	PKhKP		14 41 20.7	
	comp=Z,3.7nm,0.9s,baz=16,slow=4.6,SNR=9.2						
NOA	NORSAR Array B	141.75	351	PKP	PKPdf	14 41 20.7	-4.2
NAO	NORSAR Subarra	142.02	351	PKPab	PKPdf	14 41 20.9	-4.4
ANN	Anapa	142.94	314	*i* PKIKP	PKPdf	14 41 33.8	+6.4
ANN				pmax	pmax		
	comp=Z,28nm,0.8s						
AKASG	Malin Array Be	144.70	328	PKP	PKPdf	14 41 30.3	0.0
	comp=Z,3.4nm,0.4s,baz=45,slow=4.0,SNR=29						
SUW	Suwalki	144.97	336	*e*PKP	PKPdf	14 41 30.7	+0.1
SUW	Suwalki	144.97	336	*e*PKP	PKPdf	14 41 30.7	+0.1
KWP	Kalwaria	148.49	331	*e*PKP	PKPdf	14 41 42.1	+5.6
KWP	Kalwaria	148.49	331	*e*PKP	PKPdf	14 41 42.1	+5.6
BSEG	Bad Segeberg	148.70	348	*e*PKPbc	PKPdf	14 41 42.4	+5.7
BSEG				*e*pPKPbc		14 43 50.1	
KOLS	Kolonicke sedl	149.19	331	*e*PKP	PKPdf	14 41 43.6	+5.9
STHS	Stebnicka Huta	149.28	332	*e*PKP	PKPdf	14 41 44.3	+6.5
CRVS	Cervenica-Dubn	149.57	332	*e*PKP	PKPdf	14 41 44.5	+6.2
NIE	Niedzica	149.67	333	*e*PKP	PKPdf	14 41 45.5	+7.1
KSP	Ksiaz	149.98	339	*e*PKP	PKPdf	14 41 45.8	+7.0
KSP	Ksiaz	149.98	339	*e*PKPdf	PKPdf	14 41 45.5	+6.6
KSP				*e*pPKP		14 43 53.5	
OKC	Ostrava-Krasne	150.18	336	*e*PKPbc	PKPdf	14 41 45.4	+6.2
OKC				*e*pPKP		14 43 54.3	
OKC	Ostrava-Krasne	150.18	336	*e*PKP	PKPdf	14 41 45.4	+6.2
OKC				*e*		14 43 54.3	
UPC	Upice	150.36	339	*e*PKPbc	PKPdf	14 41 46.3	+6.8
UPC				*e*pPKP		14 43 54.6	
UPC	Upice	150.36	339	*e*PKP	PKPdf	14 41 46.3	+6.8
UPC				*e*		14 43 54.6	
DPC	Dobruska-Polom	150.40	339	*e*PKPbc	PKPdf	14 41 46.6	+7.1
DPC				*e*pPKP		14 43 54.5	
MORC	Moravsky Berou	150.45	337	*e*PKPbc	PKPdf	14 41 46.1	+6.5
CLL	Collm	150.54	343	⇑*i*PKP1	PKPdf	14 41 46.3	+6.6
CLL				*e**PPKP		14 43 49.0	
CLL				*i* *PPKP2		14 43 54.2	
CLL	Collm	150.54	343	⇑*i*P	PKPdf	14 41 46.3	+6.6
CLL				*i* pP		14 43 54.2	
CLZ	Clausthal	150.67	347	*e*PKPbc	PKPdf	14 41 47.2	+7.3
CLZ				*e*pPKPbc		14 43 55.0	
BRG	Berggiesshubel	150.68	342	*e*PKP	PKPdf	14 41 39.8	-0.1
BRG				*i*		14 41 46.8	
BRG				*e*		14 43 54.8	
PVCC	Panska Ves	150.80	341	*e*PKPbc	PKPdf	14 41 47.5	+7.4
PVCC				*e*pPKP		14 43 55.8	
PSZ	Piszkesteto	151.00	332	*e*PKPbc	PKPdf	14 41 47.6	+7.1
PRU	Pruhonice	151.28	340	*e*PKPbc	PKPdf	14 41 48.1	+7.3
PRU				*e*pPKP		14 43 56.4	
PRU	Pruhonice	151.28	340	*e*PKP	PKPdf	14 41 48.1	+7.3
PRU				*e*		14 43 56.4	
MOX	Moxa	151.50	344	*e*PKP	PKPdf	14 41 49.0	+7.9
TREC	Trest	151.58	338	*e*PKPbc	PKPdf	14 41 49.0	+7.7
TREC				*e*pPKP		14 43 55.0	
NKC	Novy Kostel	151.67	343	*e*PKPbc	PKPdf	14 41 47.8	+6.4
NKC				*e*pPKP		14 43 57.7	
KHC	Kasperske Hory	152.34	341	*e*PKPbc	PKPdf	14 41 50.6	+8.3
KHC				*e*pPKP		14 43 54.7	
KHC	Kasperske Hory	152.34	341	*e*PKP	PKPdf	14 41 50.6	+8.3
KHC				*e*		14 43 54.7	
KHC	Kasperske Hory	152.34	341	*i* PKIKP	PKPdf	14 41 49.7	+7.4
GRA1	Grafenberg Arr	152.48	344	*e*PKPbc	PKPdf	14 41 51.7	+9.2
GRF	Grafenberg Arr	152.48	344	*e*PKIKP	PKPdf	14 41 51.7	+9.2
GERES	GERESS Array B	152.55	340	PKP	PKPdf	14 41 43.0	+0.3
	comp=Z,0.3nm,0.7s,baz=333,slow=3.0,SNR=5.0						
GERES				PKPbc	PKPdf	14 41 51.0	+8.3
	comp=Z,0.8nm,0.6s,baz=45,slow=1.9,SNR=12						
DBIC	Dimbokro	162.56	164	PKP	PKPdf	14 41 55.1	-0.6
	comp=Z,4.2nm,1.0s,baz=97,slow=7.8,SNR=4.5						
DBIC				PKPab	PKPab	14 42 47.3	-2.1
	comp=Z,3.1nm,0.8s,baz=183,slow=10.0,SNR=4.1						
ESDC	Sonseca Array	163.59	11	PKPab	PKPab	14 42 50.7	-2.4
	comp=Z,1.3nm,0.8s,baz=326,slow=5.3,SNR=5.3						

KRSC 27 14:48:14.1±1.3**, 52.47N**×**159.59E, h7^{km}**±3^{km}**, ML3.9, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUS	Russkaya	0.66	267	*i* P	Pg	14 48 28.2	+0.9
RUS				*e*S	Sg	14 48 38.2	+2.0
SPN	Mys Shipunski	0.68	23	*e*P	Pg	14 48 28.2	+0.4
SPN				*e*S	Sg	14 48 38.2	+1.3
NLC	Nalytchevo	0.72	348	*i* P	Pg	14 48 29.1	+0.6
NLC				*e*S	Sg	14 48 39.8	+1.7
PET	Petropavlovsk	0.80	315	*i* P	Pb	14 48 30.5	+0.7
PET				*e*S	Sb	14 48 42.0	+1.4
UGLR	Uglovaya	0.87	328	*i* P	Pb	14 48 32.2	+1.0
UGLR				*i* S	Sb	14 48 44.9	+2.1
SMAR	Somma	0.93	329	*e*P	Pb	14 48 32.5	+0.4
SMAR				*e*S	Sb	14 48 48.2	+3.8
GRL	Gorelyy	0.93	276	*i* P	Pb	14 48 33.3	+1.2
GRL				*e*S	Sb	14 48 47.0	+2.5
AVH	Avacha	0.95	327	*i* P	Pb	14 48 33.3	+0.8
KRMR	Karymshinskiy	0.96	293	*i* P	Pb	14 48 33.0	+0.4
KRMR				*i* S	Sb	14 48 46.0	+0.7
KOK	Koryaka	1.01	325	*e*P	Pb	14 48 34.1	+0.7
APC	Apacha	1.55	288	*e*P	Pn	14 48 42.4	+0.1
APC				*e*S	Sb	14 49 03.7	+1.3
APC				Smax			
	120nm,0.8s						
KII	Karymskiy	1.57	357	*e*P	Pn	14 48 42.9	+0.3
KII				*e*S	Sb	14 49 04.1	+1.0
GNL	Ganaly	1.58	322	*i* P	Pn	14 48 42.6	-0.1
GNL				*i* S	Sb	14 49 04.9	+1.6
MKZ	Mys Kozlova	2.45	31	*e*P	Pn	14 48 53.8	-1.4
TUMR	Tumrok	2.84	6	*e*P	Pn	14 49 01.2	+0.5
KMNR	Kamenistaya	3.31	6	*e*P	Pn	14 49 08.3	+0.8
ESO	Esso	3.50	352	*e*P	Pn	14 49 11.8	+1.7
KPT	Kopyto	3.52	6	*e*P	Pn	14 49 11.3	+0.9
KOZ	Kozyrevsk	3.60	3	*e*P	Pn	14 49 12.1	+0.6
ZLN	Zelenaya	3.62	11	*e*P	Pn	14 49 13.2	+1.3
LGNR	Loginova	3.68	10	*e*P	Pn	14 49 13.7	+1.1
LGNR				*e*S	Sn	14 49 56.1	-0.7
CIRR	Tsirk	3.71	10	*e*P	Pn	14 49 13.9	+0.7
KLY	Klyuchi	3.90	9	*e*P	Pn	14 49 17.0	+1.2
KBTR	Krutoberegovo	4.20	25	*e*P	Pn	14 49 18.7	-1.3

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*IDC **27** 14:50:41.7±1.0, 26.86N×55.78E, mb3.9/16, mb1 4.1/16, mb1mx4.0/22, mbtmp4.0/16, MS3.2/1, Ms1 3.3/1, ms1mx2.8/20, Error ellipse: s-maj=24.5km s-min=17.3km az=127.0*

*NEIC **27** 14:50:42.9±0.6, 26.78N×55.87E, h10^{km}, mb4.0/9, ML3.7(THR), MN3.9(TEH), Error ellipse: s-maj=11.7km s-min=9.4km az=146.0*

*THR **27** 14:50:43.4±1.1, 26.80N×55.88E, h10^{km}, ML3.7*

*TEH **27** 14:50:44.7, 26.68N×55.83E, h10^{km}, Mn3.9*

*MOS **27** 14:50:44.6±1.0, 26.78N×55.83E, h33^{km}, mb4.4/7, Error ellipse: s-maj=16.1km s-min=9.1km az=100.8*

*CSEM **27** 14:50:45.2±0.1, 26.73N×55.69E, h35^{km}, mb4.0/8, Error ellipse: s-maj=3.0km s-min=1.9km az=76.0*

ISC 27 14:50:42.2±0.3**, 26.79N**±0.03×**55.74E**±0.04**, h10^{km}, n87, σ1^{s}23**/93**, mb3.9**/21**, MS3.2**/1**, 7C-3D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.72	32	*e*PG	Pg	14 50 56.4	-0.3
BANOM	Banah	1.00	149	P	Pb	14 51 02.8	+1.7
	SNR=38						
BANOM				⇓S	Sb	14 51 19.9	+5.8
ASHO	Ashiyiah	2.12	172	P	Pn	14 51 21.8	+3.7
	SNR=24						
ASHO				⇑S	Sn	14 51 57.8	+13
GHIR	Ghir-Karzin	2.86	302	*e*Pn	Pn	14 51 31.8	+3.0
GHIR				Sn	Sn	14 52 09.1	+5.5
GHIR				AML	AML	14 52 49.3	
	comp=N,267nm,0.4s						
KRBR	Kerman	3.31	16	*e*PN	Pn	14 51 37.5	+2.4
KRBR				Sn	Sn	14 52 15.7	+0.8
KRBR				AML	AML	14 52 30.8	
	comp=N,158nm,0.8s						
ISRV	Sarvestan	3.47	319	Pn	Pn	14 51 40.0	+2.6
IMOK	Mook	3.49	311	Pn	Pn	14 51 40.3	+2.6
HOQ	Hoqain	3.50	156	⇑P	Pn	14 51 38.8	+1.0
ARQ	Araqi	3.51	168	⇑P	Pn	14 51 40.7	+2.8
IPAR	Pars	3.86	323	Pn	Pn	14 51 45.2	+2.3
BIDO	Bidbid	3.91	146	⇓P	Pn	14 51 44.1	+0.5
SMDO	Samad	4.26	150	⇓P	Pn	14 51 50.2	+1.5
IMEH	Mehriz	4.69	348	Pn	Pn	14 51 56.4	+1.7
IBAF	Bafgh	4.79	358	Pn	Pn	14 51 57.1	+1.0
JMDO	Jabal Madar	4.90	153	⇑P	Pn	14 51 58.0	+0.3
WBK	Wadi Bani Khal	5.09	144	P	Pn	14 52 00.3	-0.1
	SNR=7.1						
ZHSF	Zahedan	5.26	57	*e*PN	Pn	14 52 03.1	+0.3
ISAD	Sadrabad	5.41	341	Pn	Pn	14 52 06.6	+1.7
ICHK	Chekchek	5.56	348	Pn	Pn	14 52 08.1	+1.1
QRN	Al-Qurain	7.20	288	*e*P	Pn	14 52 30.4	+0.3
QRN				AML	AML	14 53 50.7	
	comp=Z,31nm,0.3s						
RDF	Al-Radifah	7.55	288	*e*P	Pn	14 52 34.9	-0.1
RDF				AML	AML	14 53 60.0	
	comp=Z,18nm,0.3s						
UMR	Umm Al-Rimmam	7.59	293	*e*P	Pn	14 52 35.6	0.0
UMR				AML	AML	14 54 00.5	
	comp=Z,16nm,0.2s						
NAY	Al-Naaiem	7.90	290	*e*P	Pn	14 52 39.9	0.0
NAY				AML	AML	14 54 07.0	
	comp=Z,16nm,0.5s						
MIB	Mutribah	7.99	294	*e*P	Pn	14 52 40.6	-0.5
MIB				AML	AML	14 54 11.1	
	comp=Z,40nm,0.5s						
ISFB	Sefidab	8.12	339	Pn	P	14 52 42.9	-0.1
RYDS	Riyadh	8.62	255	P	P	14 52 46.1	-3.8
WHFO	Wadi Hawf	9.01	192	⇑P	P	14 52 55.2	-0.2
IDMV	Damavand	9.32	341	Pn	P	14 52 59.8	+0.2
IDMV				Sn	Sn	14 54 40.1	-5.4
ABTO	Aybut	9.66	194	⇑P	P	14 53 02.4	-1.9
IAFJ	Afjeh	9.67	340	Pn	P	14 53 05.1	+0.6
IAFJ				Sn	Sn	14 54 47.1	-7.2
IRAZ	Razeghan	9.92	331	Pn	P	14 53 06.6	-1.4
KAMS	Al Khamasin	12.09	240	P	P	14 53 32.9	-4.6
HILS	Ha’il	12.44	276	P	P	14 53 40.9	-1.4
DJNS	Zahran al Janu	14.45	234	P	P	14 54 05.2	-3.7
KBRS	Khaybar	14.81	270	P	P	14 54 12.4	-1.2
GNI	Garni	16.16	328	*e*P	P	14 54 32.6	+1.7
	comp=Z,7.7nm,0.8s						
GNI	Garni	16.16	328	*e*P	P	14 54 32.6	+1.7
GNI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GNI	Garni	16.16	328	*e*P	P	14 54 32.6	+1.7
	comp=Z,7.7nm,0.8s						
UMJS	Umm Lajj	16.64	269	P	P	14 54 36.5	-0.6
TBKS	Tabuk	17.09	279	P	P	14 54 43.6	+0.9
AYUS	‘Aynunah	18.21	279	P	P	14 54 57.7	+0.8
BDAS	Al Bad‘	18.36	280	P	P	14 54 59.7	+0.9
KIV	Kislovodsk	20.12	332	*e*P	P	14 55 19.6	+0.6
	comp=Z,23nm,0.8s						
KIV	Kislovodsk	20.12	332c	*i*P	P	14 55 19.9	+0.9
KIV				pmax	pmax		
	comp=Z,18nm,0.5s						
KIV	Kislovodsk	20.12	332	*e*P	P	14 55 19.6	+0.6
	comp=Z,23nm,0.8s						
GOF	Gofitskoye	20.89	334	*e*P	P	14 55 25.8	-1.2
AAK	Ala-Archa	22.01	39	*e*P	P	14 55 36.1	-2.1
	comp=Z,7.5nm,1.0s,mb4.1						
AAK	Ala-Archa	22.01	39	*i* P	P	14 55 36.7	-1.6
AAK				pmax	pmax		
	comp=Z,6.0nm,1.8s,mb3.7						
AAK	Ala-Archa	22.01	39	*i* P	P	14 55 36.7	-1.6
	comp=Z,6.0nm,1.8s,mb3.7						
BR131	Keskin Array S	22.46	311	*e*P	P	14 55 43.8	+0.9
	comp=Z,2.6nm,0.8s,mb3.7						
BRTR	Keskin Array B	22.46	311	P	P	14 55 43.3	+0.4
	comp=Z,0.7nm,0.5s,mb3.4,baz=128,slow=16,SNR=3.6						
AKTO	Aktyubinsk	23.68	4	P	P	14 55 54.3	-0.3
	comp=Z,2.5nm,0.8s,mb3.7,baz=186,slow=9.9,SNR=8.0						
BRVK	Borovoye	28.40	19	*e*P	P	14 56 37.2	-1.4
	comp=Z,1.3nm,0.8s,mb3.6						
BRVK	Borovoye	28.40	19	*e*P	P	14 56 37.2	-1.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.5						
BRVK	Borovoye	28.40	19	*e*P	P	14 56 37.2	-1.5
	comp=Z,1.3nm,0.8s,mb3.6						
BVAR	Borovoye Array	28.40	19	P	P	14 56 36.7	-1.9
	comp=Z,4.8nm,0.9s,mb4.1,baz=202,slow=8.0,SNR=26						
MKAR	Makanchi Array	28.95	39	P	P	14 56 41.4	-2.3
	comp=Z,0.8nm,0.8s,mb3.5,baz=230,slow=9.0,SNR=8.5						
KURK	Kurchatov	29.59	30	P	P	14 56 47.5	-1.9
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s,mb3.5						
KURK	Kurchatov	29.59	30	P	P	14 56 47.5	-1.9
	comp=Z,1.5nm,0.9s,mb3.7						
AKASG	Malin Array Be	31.28	327	P	P	14 57 02.4	-2.0
	comp=Z,2.2nm,0.6s,mb4.2,baz=134,slow=8.5,SNR=19						
OBN	Obninsk	31.57	339	*i* P	P	14 57 06.3	-0.5
OBN				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.6						
OBN	Obninsk	31.57	339	*i* P	P	14 57 06.3	-0.5
	comp=Z,6.0nm,0.6s,mb4.6						
KMBO	Kilima Mbogo	32.98	216	P	P	14 57 19.6	0.0
	comp=Z,1.0nm,0.6s,mb4.0,baz=38,slow=16,SNR=5.1						
MORC	Moravsky Berou	37.18	318	*e*P	P	14 57 53.6	-1.5
	comp=Z,2.4nm,0.8s,mb4.1						
MORC	Moravsky Berou	37.18	318	*e*P	P	14 57 53.6	-1.5
MORC				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
MORC	Moravsky Berou	37.18	318	*e*P	P	14 57 53.6	-1.5
	comp=Z,2.4nm,0.8s,mb4.1						
GERES	GERESS Array B	39.18	316	P	P	14 58 11.3	-0.6
	comp=Z,0.2nm,0.4s,mb3.2,baz=101,slow=6.8,SNR=4.8						
KHC	Kasperske Hory	39.35	316	*i* P	P	14 58 13.9	+0.6
FINES	FINESS Array B	39.97	338	P	P	14 58 17.4	-0.9
	comp=Z,1.6nm,0.5s,mb4.0,baz=139,slow=10.0,SNR=19						
FINES	FINESS Array B	39.97	338	P	P	14 58 17.4	-0.9
SONM	Songino Array	44.52	48	P	P	14 58 55.6	0.0
	comp=Z,1.6nm,1.0s,mb3.8,baz=255,slow=7.0,SNR=9.5						
NB2	NORSAR Subarra	45.43	331	P	P	14 59 01.4	-1.3
	comp=Z,1.2nm,0.7s,mb3.8,baz=115,slow=7.9						
NOA	NORSAR Array B	45.43	331	P	P	14 59 01.6	-1.1
	comp=Z,1.7nm,0.7s,mb4.0,baz=118,slow=7.9,SNR=6.8						
NOA				LR	LR	15 19 25.3	
	comp=Z,25nm,18.7s,MS3.2,baz=135,slow=38						
ARCES	ARCESS Array B	46.27	346	P	P	14 59 08.4	-0.8
	comp=Z,3.8nm,1.0s,mb4.3,baz=158,slow=6.5,SNR=3.9						
ESDC	Sonseca Array	50.72	301	P	P	14 59 43.5	-0.6
	comp=Z,0.3nm,0.4s,mb3.6,baz=73,slow=6.8,SNR=4.2						
DBIC	Dimbokro	60.81	262	P	P	15 00 56.0	-1.2
	comp=Z,3.8nm,1.0s,mb4.5,baz=83,slow=1.6,SNR=4.0						
DBIC	Dimbokro	60.81	262	*e*P	P	15 00 55.9	-1.3
	comp=Z,13nm,1.4s,mb4.9						
DBIC	Dimbokro	60.81	262	*e*P	P	15 00 55.9	-1.3
DBIC				pmax	pmax		
	comp=Z,13nm,1.4s						
DBIC	Dimbokro	60.81	262	*e*P	P	15 00 55.9	-1.3
	comp=Z,13nm,1.4s,mb4.9						
BOSA	Boshof	62.37	210	P	P	15 01 07.0	-0.5
	comp=Z,2.8nm,1.0s,mb4.3,baz=135,slow=16,SNR=3.9						
BOSA	Boshof	62.37	210	*e*P	P	15 01 06.8	-0.7
	comp=Z,0.7nm,0.5s,mb4.0						
BOSA	Boshof	62.37	210	*e*P	P	15 01 06.8	-0.7
BOSA				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.2						
BOSA	Boshof	62.37	210	*e*P	P	15 01 06.8	-0.7
	comp=Z,0.7nm,0.5s,mb4.0						
INK	Inuvik	84.94	3	P	P	15 03 17.4	-0.7
	comp=Z,0.9nm,0.8s,mb4.0,baz=315,slow=2.2,SNR=5.8						
INK	Inuvik	84.94	3	*e*P	P	15 03 18.2	0.0
INK	Inuvik	84.94	3	*e*P	P	15 03 18.2	0.0
ILAR	Eielson Array	87.06	10	P	P	15 03 27.9	-0.7
	comp=Z,0.8nm,0.6s,mb4.1,baz=319,slow=4.4,SNR=18						

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*ATH **27** 14:56:15.6, 38.16N×26.98E, h39^{km}±4^{km}, MD3.1/3*

*ISK **27** 14:56:16.9, 38.18N×26.57E, h30^{km}, MD3.1*

*CSEM **27** 14:56:17.2±0.2, 38.19N×26.74E, h20^{km}, MD3.1, Error ellipse: s-maj=5.3km s-min=3.4km az=83.0*

ISC 27 14:56:16.2±0.8**, 38.19N**±0.03×**26.70E**±0.05**, h7^{km}**±6^{km}**, n13, σ0^{s}79**/22**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.18	333	*i* P	Pg	14 56 20.0	-0.1
URLA				*i* S	Sg	14 56 23.4	+0.7
KDAG	Bornova	0.49	65	*i* P	Pg	14 56 25.5	-0.6
KDAG				*i* S	Sg	14 56 32.3	-0.3
SMG	Samos	0.50	167	*e*PB	Pb	14 56 26.5	-0.3
SMG				*e*SB	Sb	14 56 34.0	0.0
AYDN	Tasoluk	1.07	119	*i* P	Pb	14 56 36.0	-0.6
AYDN				*i* S	Sb	14 56 51.1	+0.4
PRK	Paraskevi	1.10	342	*e*PN	Pn	14 56 37.6	-0.4
PRK				*e*SN	Sn	14 56 54.1	+0.6
AKS	Akhisar	1.11	52	PN	Pn	14 56 37.8	-0.2
AKS				SN	Sn	14 56 53.9	+0.2
MLSB	Milas	1.24	136	PN	Pn	14 56 40.1	+0.2
MLSB				SN	Sn	14 56 55.6	-1.4
BDRM	Kayabasi	1.27	152	*i* P	Pb	14 56 42.0	+1.9
BDRM				*i* S	Sb	14 56 57.6	+1.1
APE	Apeiranthos	1.46	220	*e*PN	Pn	14 56 40.9	-2.1
APE	Apeiranthos	1.46	220	*e*Pn	Pn	14 56 42.9	-0.1
MANT	Manisa	1.49	78	*i* P	Pn	14 56 44.6	+1.1
MANT				*i* S	Sb	14 57 03.3	+0.5
YER	Yerkesik	1.64	130	*e*PN	Pn	14 56 45.2	-0.5
BALB	Balikesir	1.71	32	*e*PN	Pn	14 56 45.5	-1.2

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*NIED **27** 14:57:00, 38.40N×144.70E, h5^{km}, Mw3.9 Best double couple: M$_0$7.05×10^{14} NP1:φ$_s$189°, δ74°, λ-87°. NP2: φ$_s$358°, δ16°, λ-101°.*

*IDC **27** 14:57:54.5±1.0, 38.28N×144.99E, mb3.8/7, mb1 4.0/10, mb1mx3.8/23, mbtmp3.9/10, ML3.7/3, MS2.8/1, Ms1 2.8/1, ms1mx2.4/30, Error ellipse: s-maj=26.6km s-min=19.7km az=124.0*

*NEIC **27** 14:57:55.9±0.6, 38.25N×145.05E, h10^{km}, mb4.0/2, Error ellipse: s-maj=18.1km s-min=7.7km az=150.0*

*MOS **27** 14:57:56.7±2.2, 38.47N×145.01E, h33^{km}, mb4.0/6, Error ellipse: s-maj=28.5km s-min=16.2km az=92.6*

*JMA **27** 14:57:59.4±0.1, 38.36N×144.74E, h56^{km}, M4.5*

ISC 27 14:57:57.7±1.6**, 38.44N**±0.04×**144.82E**±0.05**, h33^{km}**±13^{km}**, n39, σ1^{s}21**/56**, mb3.8**/8**, 1D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.54	285	P	Pn	14 58 39.0	+1.3
OFUJ				S	Sn	14 59 08.4	+0.5
MIYJ	Miyakonagasawa	2.60	297	P	Pn	14 58 39.6	+1.1
MIYJ				S	Sn	14 59 09.1	-0.2
JIO	Ouri	2.73	271	P	Pn	14 58 41.0	+0.7
JIO				S	Sn	14 59 12.0	-0.5
JMK	Ichinoseki	2.86	281	P	Pn	14 58 43.5	+1.2
JMK				*e*S	Sn	14 59 16.3	+0.3
JOT	Ohata	4.13	317	P	Pn	14 59 01.5	+1.3
JOT				*e*S	Sn	14 59 47.4	-0.6
JCH	Churui	4.31	346	P	Pn	14 59 02.3	-0.6
JCH				*e*S	Sn	14 59 49.7	-3.0
JKB	Kayabe	4.50	321	P	Pn	14 59 07.2	+1.7
JKB				*e*S	Sn	14 59 55.9	-1.5
NEM2	Nemuro 2	4.97	8	P	Pn	14 59 09.3	-2.8
NEM2				*e*S	Sn	15 00 03.5	-5.7
JRY	Ryogami san	5.31	245	P	Pn	14 59 15.8	-1.1
JRY				S	Sn	15 00 13.5	-4.1
JOSM	Okushiri--Mats	5.47	313	P	Pn	14 59 19.6	+0.4
JTKR	Abashiri--Toko	5.57	353	P	Pn	14 59 19.6	-0.9
JTKR				S	Sn	15 00 19.9	-4.3
JOD2	Odawara 2	5.58	237	P	Pn	14 59 19.6	-1.2

JOD2				*e*S	**Sn**	**15 00 18.4**	**-6.2**
MJAR	**Matsushiro Arr**	**5.59**	**252**	Pn	**Pn**	**14 59 20.5**	**-0.4**
	2.2nm,0.3s,baz=89,slow=16,SNR=22						
MJAR				Sn	**Sn**	**15 00 24.7**	**0.0**
	1.2nm,0.3s,baz=79,slow=17,SNR=4.6						
MJAR	**Matsushiro Arr**	**5.59**	**252**	P	**Pn**	**14 59 20.5**	**-0.3**
MJAR						15 00 24.7	
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MAJO	**Matsushiro**	**5.59**	**252**	*e*P	**Pn**	**14 59 21.2**	**+0.4**
	comp=Z,14nm,0.6s						
MAT	**Matsushiro**	**5.59**	**252**	P	**Pn**	**14 59 21.2**	**+0.3**
MAT				S	**Sn**	**15 00 23.8**	**-0.9**
MAT	**Matsushiro**	**5.59**	**252**	*e*P	**Pn**	**14 59 21.0**	**+0.1**
	comp=Z,10nm,0.7s						
MAT				*e*S	**Sn**	**15 00 24.0**	**-0.7**
YUK	**Yuzh-Kuril'sk**	**5.64**	**8**	⇓*i*P	**Pn**	**14 59 15.5**	**-6.1**
YUK				*e*S	**Sn**	**15 00 18.6**	**-7.5**
YUK				smax			
	comp=N,190nm,0.4s						
YUK				smax			
	comp=E,420nm,0.6s						
YUK				smax			
	comp=E,1μm,0.7s						
JHR	**Hokuryu**	**5.79**	**337**	P	**Pn**	**14 59 25.3**	**+1.6**
JHR				*e*S	**Sn**	**15 00 30.0**	**+0.3**
ASAJ	**Asahikawa**	**5.91**	**344**	Pn	**Pn**	**14 59 24.6**	**-0.9**
	comp=E,1.0nm,0.3s,baz=298,slow=16,SNR=14						
ASAJ				Sn	**Sn**	**15 00 29.7**	**-3.1**
	comp=E,0.5nm,0.3s,baz=280,slow=3.1,SNR=3.6						
ASAJ	**Asahikawa**	**5.91**	**344**	P	**Pn**	**14 59 24.6**	**-0.8**
ASAJ						15 00 29.7	
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JHJ	**Hachijo jima 2**	**6.70**	**219**	Pn	**Pn**	**14 59 34.0**	**-2.6**
	comp=Z,10.0nm,0.3s,baz=238,slow=23,SNR=3.0						
JHJ				Sn	**Sn**	**15 00 41.6**	**-11**
	comp=Z,9.5nm,0.3s,baz=55,slow=21,SNR=2.2						
CBIJ	**Chichi jima**	**11.53**	**192**	LR	LR	15 03 44.6	
	comp=Z,55nm,21.3s,baz=170,slow=31						
MKAR	**Makanchi Array**	**45.67**	**302**	P	**P**	**15 06 18.5**	**+1.5**
	comp=Z,0.5nm,0.8s,mb3.5,baz=100,slow=7.4,SNR=4.4						
MKAR	**Makanchi Array**	**45.67**	**302**	P	**P**	**15 06 18.5**	**+1.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR	**Eielson Array**	**46.85**	**33**	P	**P**	**15 06 25.8**	**-0.3**
	comp=Z,0.7nm,0.9s,mb3.6,baz=261,slow=6.8,SNR=6.0						
ILAR	**Eielson Array**	**46.85**	**33**	P	**P**	**15 06 25.8**	**-0.3**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BVAR	**Borovoye Array**	**51.63**	**312**	P	**P**	**15 07 04.0**	**+1.0**
	comp=Z,0.6nm,0.6s,mb3.7,baz=79,slow=7.6,SNR=4.7						
BVAR				PcP	PcP	15 08 17.3	+0.8
	comp=Z,0.7nm,0.7s,baz=63,slow=3.2,SNR=3.8						
BVAR	**Borovoye Array**	**51.63**	**312**	P	**P**	**15 07 04.0**	**+1.0**
	comp=Z,1.0nm,0.6s,mb3.9						
BVAR				*e*		15 08 17.3	
BVAR	**Borovoye Array**	**51.63**	**312**	P	**P**	**15 07 04.0**	**+1.0**
BVAR						15 08 17.3	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
INK	**Inuvik**	**51.90**	**28**	*e*P	**P**	**15 07 05.4**	**+0.6**
WRA	**Warramunga Arr**	**58.90**	**192**	P	**P**	**15 07 53.8**	**-2.3**
	comp=Z,1.3nm,0.7s,mb4.0,baz=13,slow=7.3,SNR=11						
WRA	**Warramunga Arr**	**58.90**	**192**	P	**P**	**15 07 53.8**	**-2.3**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**68.81**	**333**	P	**P**	**15 09 01.4**	**+1.0**
	comp=Z,1.8nm,0.7s,mb4.1,baz=45,slow=11,SNR=7.4						
FINES	**FINESS Array B**	**68.81**	**333**	P	**P**	**15 09 01.4**	**+1.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NOA	**NORSAR Array B**	**73.90**	**338**	P	**P**	**15 09 32.5**	**+1.8**
	comp=Z,0.9nm,0.9s,mb3.7,baz=39,slow=5.7,SNR=3.0						
NOA	**NORSAR Array B**	**73.90**	**338**	P	**P**	**15 09 32.5**	**+1.8**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BW06	**Boulder Array**	**74.74**	**47**	P	**P**	**15 09 35.7**	**-0.3**
	comp=Z,1.0nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**74.74**	**47**	P	**P**	**15 09 37.1**	**+1.1**
	comp=Z,0.8nm,0.5s,mb3.9,baz=299,slow=1.8,SNR=8.8						

ISK ***27*** *15:07:01.8, 38.18N×26.61E, h22^{km}, MD3.1*

ATH ***27*** *15:07:01.9, 38.15N×26.68E, h34^{km}±16^{km}, MD3.0/3*

CSEM ***27*** *15:07:03.0±0.2, 38.16N×26.68E, h27^{km}±2^{km}, MD3.1, Error ellipse: s-maj=5.3km s-min=3.5km az=73.0*

ISC 27 15:07:01.3±0.9**, 38.17N**±0.03×**26.69E**±0.05**, h3**^{km}±6^{km}**, n14,** σ**0**$\overset{s}{.}$**93**/23**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.20**	**339**	*i* P	**Pg**	**15 07 05.5**	**+0.1**
URLA				*i* S	**Sg**	**15 07 08.9**	**+0.9**
SMG	**Samos**	**0.48**	**166**	⇑*i*PB	**Pb**	**15 07 12.1**	**+0.1**
SMG				*e*SB	**Sb**	**15 07 19.7**	**+0.5**
KDAG	**Bornova**	**0.51**	**63**	*i* P	**Pg**	**15 07 10.8**	**-0.7**
KDAG				*i* S	**Sg**	**15 07 17.2**	**-1.1**
AYDN	**Tasoluk**	**1.07**	**118**	*i* P	**Pb**	**15 07 22.7**	**+0.5**
AYDN				*i* S	**Sb**	**15 07 36.5**	**0.0**
PRK	**Paraskevi**	**1.12**	**343**	*e*PN	**Pn**	**15 07 23.5**	**-0.3**
PRK				*e*SN	**Sn**	**15 07 38.6**	**-1.3**
AKS	**Akhisar**	**1.13**	**51**	*e*PN	**Pn**	**15 07 23.4**	**-0.5**
AKS				*e*SN	**Sn**	**15 07 39.3**	**-0.9**
BODT	**Bodrum**	**1.22**	**156**	*e*PN	**Pn**	**15 07 24.7**	**-0.5**
MLSB	**Milas**	**1.23**	**135**	*e*PN	**Pn**	**15 07 25.2**	**-0.2**
BDRM	**Kayabasi**	**1.26**	**151**	*i* P	**Pb**	**15 07 28.5**	**+3.1**
BDRM				*i* S	**Sb**	**15 07 42.0**	**+0.2**
APE	**Apeiranthos**	**1.44**	**220**	*e*PN	**Pn**	**15 07 26.8**	**-1.5**
APE	**Apeiranthos**	**1.44**	**220**	*e*Pn	**Pn**	**15 07 27.3**	**-1.0**
MANT	**Manisa**	**1.50**	**77**	*i* P	**Pn**	**15 07 30.2**	**+0.9**
MANT				*i* S	**Sb**	**15 07 48.9**	**0.0**
YER	**Yerkesik**	**1.64**	**129**	*e*PN	**Pn**	**15 07 30.3**	**-0.9**
BTOK	**Tokmak**	**1.90**	**33**	*i* P	**Pn**	**15 07 36.6**	**+1.7**
BTOK				*i* S	**Sn**	**15 08 01.6**	**+1.8**

IDC 27 15:17:03.8±6.5**, 0.67S**×**100.40E, mb4.0**/6**, mb1 4.1**/6**, mb1mx3.8**/16**, mbtmp4.0**/6**, Error ellipse: s-maj=156.4km s-min=96.6km az=135.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**48.59**	**5**	P	P	15 25 49.1	-1.9
	0.2nm,0.4s,baz=191,slow=9.2,SNR=4.9						
MKAR	**Makanchi Array**	**49.87**	**344**	P	P	15 25 58.9	-2.0
	1.6nm,0.3s,baz=157,slow=8.3,SNR=44						
BVAR	**Borovoye Array**	**59.08**	**339**	P	P	15 27 05.6	-2.6
	1.9nm,0.5s,baz=140,slow=9.5,SNR=14						
AKTO	**Aktyubinsk**	**62.39**	**331**	P	P	15 27 28.5	-2.2
	0.3nm,0.3s,baz=127,slow=10,SNR=3.8						
FINES	**FINESS Array B**	**83.13**	**332**	P	P	15 29 31.2	-1.5
	2.3nm,1.0s,baz=90,slow=6.9,SNR=6.2						
ARCES	**ARCESS Array B**	**85.36**	**340**	P	P	15 29 42.8	-1.0
	1.4nm,0.8s,baz=107,slow=6.0,SNR=4.9						

CSEM ***27*** *15:29:05.7, 26.96N×55.96E, h24^{km}, ML3.5, After THR*

THR 27 15:29:05.7±0.7**, 26.96N**×**55.96E, h24**^{km}±5^{km}**, ML3.5, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.48**	**23**	*e*Pg	Pb	15 29 15.5	0.0
BNDS				AML	AML	15 29 37.4	
	comp=N,3μm,0.3s						
GHIR	**Ghir-Karzin**	**2.95**	**297**	*e*Pn	Pn	15 29 53.3	+1.1
GHIR				Sn	Sn	15 30 28.0	+0.8
KRBR	**Kerman**	**3.09**	**13**	*e*Pn	Pn	15 29 56.0	+1.8
KRBR				Sn	Sn	15 30 31.7	+0.8
KRBR				AML	AML	15 30 57.2	
	comp=N,170nm,0.6s						
KRBR	**Kerman**	**3.09**	**13**	*e*Pn	Pn	15 29 56.0	+1.8
	SNR=54						
KRBR				Sn	Sn	15 30 31.7	+0.8
	comp=N,170nm,0.6s,SNR=54						
ZHSF	**Zahedan**	**5.00**	**57**	*e*Pn	Pn	15 30 21.4	+0.1

NEIC 27 15:33:18.0, 63.05N×**151.42W, h14**^{km}**, ML3.7**(PMR)**, ML3.4**(AEIC)**, After AEIC., Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTH	**Kantishna Hill**	**0.55**	**24**	P	Pb	15 33 28.9	+0.1
KTH				S	Sb	15 33 36.7	+0.4
TRF	**Thorofare Moun**	**0.65**	**52**	P	Pb	15 33 30.6	0.0
TRF				S	Sb	15 33 40.2	+1.0
HUR	**Hurricane**	**0.82**	**94**	P	Pb	15 33 33.0	-0.4
CUT	**Chulitna**	**0.84**	**140**	P	Pb	15 33 33.3	-0.5
RND	**Reindeer**	**1.22**	**72**	P	Pb	15 33 40.0	-0.2
MCK	**McKinley**	**1.31**	**58**	P	Pb	15 33 41.9	0.0
MCK				S	Sb	15 33 59.2	+0.8
BWN	**Browne**	**1.42**	**37**	P	Pn	15 33 44.0	+0.4
STLK	**Strandline Lak**	**1.57**	**187**	P	Pn	15 33 45.1	-0.6
STLK				S	Sn	15 34 05.3	-0.5
NCG	**North Capps Gl**	**1.69**	**192**	P	Pn	15 33 46.7	-0.7
GHO	**Glory Hole Cre**	**1.73**	**137**	P	Pn	15 33 47.4	-0.5
PMR	**Palmer**	**1.81**	**143**	P	Pn	15 33 48.5	-0.6
PMR				*e*P		15 33 48.7	
PMR				S	Sn	15 34 11.9	-0.1
NEA	**Nenana**	**1.85**	**33**	P	Pn	15 33 48.5	-1.2
SPU	**Mount Spurr**	**1.90**	**189**	P	Pn	15 33 50.3	0.0
SML	**Sawmill**	**1.90**	**130**	P	Pn	15 33 49.6	-0.8
SML				S	Sn	15 34 13.7	-0.6
CKL	**Chakachamna La**	**1.91**	**193**	P	Pn	15 33 50.5	-0.1
FIB	**Fire Island**	**1.98**	**162**	P	Pn	15 33 52.1	+0.6
WRH	**Wood River Hil**	**2.06**	**45**	P	Pn	15 33 51.7	-0.9
TT01	**Tatalina**	**2.10**	**268**	P	Pn	15 33 52.1	-1.1
RC01	**Rabbit Creek A**	**2.12**	**157**	P	Pn	15 33 52.8	-0.7
RC01				S	Sn	15 34 20.9	+1.1
SCM	**Sheep Creek Mo**	**2.26**	**121**	P	Pn	15 33 54.4	-1.1
CCB	**Clear Creek Bu**	**2.27**	**43**	P	Pn	15 33 54.4	-1.2
NKA	**Nikishka**	**2.32**	**178**	P	Pn	15 33 59.6	+3.2
MDM	**Murphy Dome**	**2.38**	**35**	P	Pn	15 33 56.0	-1.2
COLA	**College**	**2.41**	**39**	P	Pn	15 33 56.6	-1.2
RDT	**Redoubt**	**2.53**	**191**	P	Pn	15 34 00.3	+0.9
THY	**Trims Highway**	**2.59**	**79**	P	Pn	15 34 00.5	+0.3
DDM	**Donnelly Dome**	**2.61**	**71**	P	Pn	15 34 00.3	-0.2
SLKM	**Skilak Lake**	**2.62**	**167**	P	Pn	15 34 00.4	-0.2
IL1	**Eielson Array**	**2.65**	**47**	P	Pn	15 33 59.9	-1.2
RSO	**Redoubt South**	**2.67**	**194**	P	Pn	15 34 00.4	-1.1
PAX	**Paxson**	**2.72**	**89**	P	Pn	15 34 01.3	-0.7
MPA	**Moose Pass**	**2.75**	**158**	P	Pn	15 34 01.8	-0.7
SDG	**Sourdough**	**2.75**	**98**	P	Pn	15 34 02.0	-0.5
SVW2	**Sparrevohn**	**2.77**	**227**	P	Pn	15 34 02.2	-0.6
GCSA	**Galena City Sc**	**2.95**	**308**	P	Pn	15 34 05.9	+0.5
GLI	**Glacier Island**	**2.99**	**135**	P	Pn	15 34 06.3	+0.3
KLU	**Klutina**	**3.01**	**119**	P	Pn	15 34 06.4	+0.1
KLU				S	Sn	15 34 43.4	+1.0
VLZ	**Valdez**	**3.07**	**127**	P	Pn	15 34 06.9	-0.2
VLZ				S	Sn	15 34 45.6	+1.6
SEW	**Seward**	**3.11**	**161**	P	Pn	15 34 08.7	+1.1
IM3	**Indian Mountai**	**3.11**	**342**	P	Pn	15 34 06.8	-0.8
ILW	**Iliamna West**	**3.11**	**196**	P	Pn	15 34 08.0	+0.3
IMA2	**Indian Mountai**	**3.18**	**343**	*e*P	Pn	15 34 08.0	-0.7
DIV	**Divide**	**3.28**	**123**	P	Pn	15 34 09.8	-0.3
DIV				S	Sn	15 34 49.2	0.0
FID	**Port Fidalgo**	**3.29**	**132**	P	Pn	15 34 10.1	0.0
DOT	**Dot Lake**	**3.37**	**76**	P	Pn	15 34 10.7	-0.6
MENT	**Mentasta**	**3.52**	**88**	P	Pn	15 34 14.0	+0.6
CNPM	**China Poot**	**3.54**	**178**	P	Pn	15 34 13.4	-0.4
EYAK	**Cordova Ski Ar**	**3.68**	**130**	P	Pn	15 34 14.1	-1.7
AUE	**Augustine Isla**	**3.82**	**195**	P	Pn	15 34 17.7	-0.1
BMRM	**Bremner River**	**3.83**	**120**	P	Pn	15 34 16.9	-1.0
GLB	**Gilahina Butte**	**3.91**	**111**	P	Pn	15 34 18.7	-0.3
RAGM	**Ragged Mountai**	**4.18**	**127**	P	Pn	15 34 22.5	-0.3
BALM	**Baldy**	**4.73**	**111**	P	Pn	15 34 29.7	-0.9
KAHC	**Katmai Hardscr**	**4.75**	**203**	P	Pn	15 34 29.7	-1.3
BM3	**Burnt Mountain**	**5.24**	**30**	P	Pn	15 34 35.3	-2.5
DAWY	**Dawson**	**5.47**	**74**	P	Pn	15 34 39.2	-1.9

NEIC ***27*** *15:37:52.6±1.4, 20.30S×69.13W, h100^{km}±13^{km}, mb4.1/1, Error ellipse: s-maj=21.0km s-min=11.3km az=100.0*

IDC ***27*** *15:37:53.0±2.5, 20.36S×68.99W, h102^{km}±22^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.5/16, mbtmp4.1/5, Error ellipse: s-maj=39.8km s-min=20.9km az=109.0*

ISC 27 15:37:51.9±1.7**, 20.3S**±0.1×**69.2W**±0.2**, h118**^{km}±21^{km}**, n12,** σ**1**$\overset{s}{.}$**01**/10**, mb4.0**/1**, 1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**4.09**	**14**	P	**P**	**15 38 54.6**	**+0.9**
	4.3nm,0.3s,baz=204,slow=6.9,SNR=85						
LPAZ	**La Paz**	**4.09**	**14**	⇓*e*P	**P**	**15 38 54.4**	**+0.7**
SIV	**San Ignacio**	**8.78**	**62**	P	**P**	**15 39 55.3**	**-1.9**
	1.5nm,0.3s,baz=255,slow=11,SNR=83						
CFAA	**Coronel Fontan**	**11.30**	**176**	P	**P**	**15 40 30.3**	**-0.6**
	0.0nm,0.3s,slow=17,SNR=3.3						
CFAA	**Coronel Fontan**	**11.30**	**176**	P	**P**	**15 40 30.3**	**-0.6**
CPUP	**Villa Florida**	**12.41**	**121**	*e*P	**P**	**15 40 47.1**	**+1.6**
	16nm,0.8s						
PLCA	**Paso Flores**	**20.42**	**183**	P	**P**	**15 42 21.3**	**-0.2**
	2.6nm,1.0s,baz=187,slow=8.1,SNR=2.2						
BDFB	**Brasilia**	**20.62**	**80**	P	**P**	**15 42 23.6**	**-0.1**
	3.3nm,0.3s,baz=269,slow=11,SNR=7.2						
DBIC	**Dimbokro**	**68.61**	**74**	P	**P**	**15 48 44.5**	**-0.2**
	2.0nm,0.8s,mb4.0,baz=152,slow=10,SNR=4.3						
DBIC	**Dimbokro**	**68.61**	**74**	*e*P	**P**	**15 48 45.4**	**+0.7**
	1.2nm,0.4s,mb4.1						
MKAR	**Makanchi Array**	**144.77**	**35**	PKP	PKPdf	15 57 16.9	+2.2
	0.3nm,0.4s,baz=328,slow=2.9,SNR=8.8						
SONM	**Songino Array**	**152.28**	**6**	PKPbc	PKPdf	15 57 37.3	+11
	0.3nm,0.5s,baz=246,slow=1.6,SNR=4.2						

NEIC ***27*** *15:45:25.2, 16.46N×98.20W, h20^{km}, MD3.9(MEX), After MEX.*

MEX 27 15:45:25.2±0.9**, 16.46N**×**98.20W, h20**^{km}±14^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.10**	**134**	*i* P	Pb	15 45 28.0	-1.1
PNIG				*i* S	Sb	15 45 30.9	-0.9
VHO	**Vista Hermosa**	**1.53**	**66**	*i* P	Pn	15 45 48.5	-3.3
VHO				*i* S	Sn	15 46 06.5	-4.7
OXX	**Oaxaca**	**1.54**	**66**	*i* P	Pn	15 45 47.5	-4.5
OXX				*i* S	Sn	15 46 07.5	-4.1
ACX	**Acapulco**	**1.69**	**284**	*e*P	Pn	15 45 51.0	-3.1
CAIG	**El Cayaco**	**2.06**	**287**	*i* P	Pn	15 45 58.2	-1.3
CAIG				*i* S	Sn	15 46 21.0	-3.8
HUIG	**Huatulco**	**2.12**	**109**	*i* P	Pn	15 45 59.1	-1.2
HUIG				*i* S	Sn	15 46 23.1	-3.3
PLIG	**Platanillo**	**2.29**	**327**	*i* P	Pn	15 46 00.9	-1.8
PLIG				*i* S	Sn	15 46 26.7	-3.8
YAIG	**Yautepec**	**2.53**	**341**	*i* P	Pn	15 46 01.3	-4.7
YAIG				*i* S	Sn	15 46 32.9	-3.7
PPM	**Popocatepetl**	**2.62**	**351**	*i* P	Pn	15 46 01.3	-6.1
PPM				*i* S	Sn	15 46 37.2	-1.8
PPM	**Popocatepetl**	**2.62**	**351**	*e*P	Pn	15 46 12.0	+4.6
PPM				*i* S	Sn	15 46 37.2	-1.8
CMIG	**Matias Romero**	**3.24**	**78**	*e*P	Pn	15 46 13.9	-2.3
CMIG				*i* S	Sn	15 46 50.7	-3.8

BJI ***27*** *15:53:52.8, 33.74N×24.97E, h43^{km}, mB4.4, mb4.6, Ms4.5, Msz4.2*

ATH ***27*** *15:53:58.0, 34.16N×25.97E, h28^{km}±11^{km}, MD4.0/8, ML4.3*

MOS ***27*** *15:53:59.2±1.2, 34.28N×25.87E, h33^{km}, mb4.4/15, Error ellipse: s-maj=8.2km s-min=4.4km az=112.7*

CSEM ***27*** *15:53:59.4±0.0, 34.21N×26.04E, h51^{km}, mb4.2/22, Error ellipse: s-maj=1.5km s-min=0.8km az=43.0*

NEIC ***27*** *15:54:01.7±0.5, 34.29N×25.94E, h43^{km}±4^{km}, mb4.3/25, Error ellipse: s-maj=7.6km s-min=3.3km az=188.0*

HLW ***27*** *15:54:02.1, 34.11N×26.03E, h20^{km}, Mb4.2*

IDC ***27*** *15:54:04.9±1.8, 34.43N×25.80E, h66^{km}±13^{km}, mb3.8/17, mb1 3.9/23, mb1mx3.8/29, mbtmp4.1/23, Error ellipse: s-maj=17.9km s-min=13.9km az=156.0*

NIC ***27*** *15:54:05.3±0.2, 34.77N×26.32E, h25^{km}*

ISC 27 15:53:58.9±0.3**, 34.20N**±0.02×**25.98E**±0.03**, h41**^{km}±4^{km}**, n178,** σ**1**$\overset{s}{.}$**22**/189**, mb4.2**/41**, 2C-3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NPS	**Neapolis**	**1.10**	**344**	*e*P	**P**	**15 54 20.9**	**+2.8**
NPS				*e*S	**S**	**15 54 37.2**	**+4.9**
IDI	**Anoyia**	**1.41**	**321**	P	**P**	**15 54 25.1**	**+2.5**
	19nm,0.3s,baz=150,slow=18,SNR=133						
IDI				S	**S**	**15 54 40.3**	**+0.2**
	43nm,0.3s,baz=323,slow=20,SNR=11						
KARP	**Karpathos**	**1.66**	**36**	⇑*i*PB	**P**	**15 54 27.5**	**+1.4**
KARP				*e*SN	**S**	**15 54 49.6**	**+3.3**
GVD	**Gavdhos**	**1.69**	**293**	⇓*i*PN	**P**	**15 54 28.9**	**+2.4**
VAM	**Vamos**	**1.90**	**310**	*e*PN	**P**	**15 54 31.9**	**+2.5**
SANT	**Santorini**	**2.21**	**349**	*e*P	**P**	**15 54 34.9**	**+1.0**
SANT	**Santorini**	**2.21**	**349**	*e*P	**P**	**15 54 34.8**	**+0.9**
SLUM		**2.78**	**194**	P	**P**	**15 54 43.5**	**+1.5**
SLUM				S	**S**	**15 55 13.5**	**-1.1**
APE	**Apeiranthos**	**2.89**	**353**	*e*PN	**P**	**15 54 44.4**	**+0.8**
KYTH	**Kithira**	**3.18**	**312**	*e*PN	**P**	**15 54 48.1**	**+0.4**
HMAT	**Matruh**	**3.24**	**163**	P	**P**	**15 54 49.4**	**+0.8**
VLI	**Veliai**	**3.53**	**316**	*e*PN	**P**	**15 54 52.7**	**0.0**
KSL	**Kastellorizon**	**3.54**	**56**	*e*PN	**P**	**15 54 54.3**	**+1.5**
DABA	**Dabaa**	**3.73**	**148**	P	**P**	**15 54 56.6**	**+1.1**
ATH	**Athens Observa**	**4.19**	**335**	*e*PN	**P**	**15 55 02.0**	**0.0**
MPAR	**Parnis Oros**	**4.34**	**336**	*e*PN	**P**	**15 55 05.0**	**+0.8**
ITM	**Ithomi**	**4.44**	**313**	*e*PN	**P**	**15 55 05.5**	**-0.1**
HBRG	**Burj al 'Arab**	**4.87**	**137**	P	**P**	**15 55 12.8**	**+1.1**
HBRG				S	**S**	**15 56 03.5**	**-4.0**
SWA1		**4.93**	**183**	P	**P**	**15 55 13.0**	**+0.6**
SWA1				S	**S**	**15 56 04.8**	**-4.2**
SWA2		**4.96**	**185**	P	**P**	**15 55 13.5**	**+0.6**
LKR	**Lokris**	**5.05**	**332**	*e*PN	**P**	**15 55 13.4**	**-0.8**
ISP	**Isparta**	**5.17**	**44**	*i* P	**P**	**15 55 18.5**	**+2.7**
ISP	**Isparta**	**5.17**	**44**	*e*P	**P**	**15 55 17.2**	**+1.4**
PPCY	**Paphos**	**5.30**	**81**	P	**P**	**15 55 17.3**	**-0.3**
ALFC	**Alevga**	**5.54**	**78**	P	**P**	**15 55 20.4**	**-0.6**
	5.6nm,0.2s						
ALFC				S	**S**	**15 56 18.9**	**-5.4**
SZAC	**Souni-Zanaja**	**5.73**	**82**	P	**P**	**15 55 23.4**	**-0.2**
EVR	**Evrytania**	**5.78**	**326**	*e*PN	**P**	**15 55 25.0**	**+0.6**
HMYD	**Mayadein**	**6.00**	**136**	P	**P**	**15 55 28.1**	**+0.6**
MAMC	**Mammari**	**6.04**	**79**	P	**P**	**15 55 27.7**	**-0.3**
CSS	**Prodhromos**	**6.11**	**81**	P	**P**	**15 55 28.8**	**-0.2**
	1.1nm,0.3s						
CSS				S	**S**	**15 56 34.6**	**-4.0**
FYM	**Al Fayyum**	**6.22**	**135**	P	**P**	**15 55 31.4**	**+0.8**
FYM				S	**S**	**15 56 35.8**	**-5.5**
AWBH		**6.37**	**156**	P	**P**	**15 55 32.9**	**+0.2**
KOT	**Kottamia**	**6.54**	**129**	P	**P**	**15 55 35.0**	**-0.1**
HSAF	**As Saff**	**6.58**	**132**	P	**P**	**15 55 35.7**	**0.0**
IKL	**Isikli**	**6.63**	**70**	*e*PN	**P**	**15 55 35.9**	**-0.4**
HHAG	**Hagoal**	**6.70**	**128**	P	**P**	**15 55 38.1**	**+0.8**
GLL	**Jalalah**	**6.71**	**132**	P	**P**	**15 55 37.4**	**0.0**
GLL	**Jalalah**	**6.71**	**132**	P	**P**	**15 55 37.3**	**-0.1**
HFRF	**Wahat Farafira**	**7.31**	**163**	P	**P**	**15 55 45.5**	**-0.3**
MERS	**Mersin**	**7.46**	**67**	*e*PN	**P**	**15 55 46.5**	**-1.3**
OFRI	**'Ofer**	**7.69**	**99**	P	**P**	**15 55 51.0**	**-0.1**
KZIT	**Kziot**	**7.83**	**112**	P	**P**	**15 55 51.1**	**-1.9**
KARA	**Karaisali**	**7.99**	**65**	*e*PN	**P**	**15 55 55.5**	**+0.3**
MMLI	**Mount Malkishu**	**8.10**	**100**	P	**P**	**15 55 55.1**	**-1.6**
BRTR	**Keskin Array B**	**8.24**	**46**	P	**P**	**15 56 00.5**	**+1.7**
	0.2nm,0.3s,baz=220,slow=13,SNR=6.9						
BR131	**Keskin Array S**	**8.24**	**46**	*e*P	**P**	**15 55 57.5**	**-1.3**
BR131	**Keskin Array S**	**8.24**	**46**	*e*P	**P**	**15 55 57.5**	**-1.3**
ASUT		**8.31**	**143**	P	**P**	**15 55 59.5**	**-0.1**
MZDA	**Masada**	**8.41**	**107**	P	**P**	**15 55 59.3**	**-1.8**
HTY	**Hatay**	**8.54**	**74**	*e*PN	**P**	**15 55 59.7**	**-3.1**
MKRJ	**Makawir**	**8.54**	**105**	P	**P**	**15 56 01.8**	**-1.1**
PRNI	**Paran**	**8.55**	**114**	P	**P**	**15 56 02.6**	**-0.4**
KOZT	**Kozan**	**8.64**	**65**	*e*PN	**P**	**15 56 03.8**	**-0.5**
MBH	**Mount Berech**	**8.77**	**118**	P	**P**	**15 56 05.6**	**-0.4**
EIL	**Elat**	**8.86**	**118**	P	**P**	**15 56 06.4**	**-0.9**
SOI	**Samo**	**8.91**	**299**	P	**P**	**15 56 06.2**	**-1.8**
SOI				pmax	pmax		
	comp=Z,26nm,0.4s						
SOI	**Samo**	**8.91**	**299**	Pn	**P**	**15 56 06.2**	**-1.8**
	comp=Z,26nm,0.4s						
GRI	**Girifalco**	**8.97**	**304**	P	**P**	**15 56 07.1**	**-1.7**
GRI				pmax	pmax		
	comp=Z,696nm,2.8s						
GRI	**Girifalco**	**8.97**	**304**	Pn	**P**	**15 56 07.1**	**-1.7**
	comp=Z,696nm,2.8s						
CEL	**Celeste**	**9.10**	**299**	Pn	**P**	**15 56 08.8**	**-1.8**
HDK1	**Dakhla**	**9.12**	**160**	P	**P**	**15 56 11.3**	**+0.3**
ALWS	**Ilw as Safayha**	**9.14**	**120**	P	**P**	**15 56 10.9**	**-0.2**
ALWS				S	**S**	**15 57 49.7**	**-4.2**
MTTG	**Motta San Giov**	**9.15**	**297**	Pn	**P**	**15 56 09.5**	**-1.7**
HAQS	**Haql**	**9.19**	**121**	S	**S**	**15 57 49.8**	**-5.4**
HAQS				P		15 56 11.0	
JMOS	**Jabal al Moall**	**9.25**	**120**	P	**P**	**15 56 12.2**	**-0.5**
JMOS				S	**S**	**15 57 51.4**	**-5.3**
AGST	**Augusta-Monte**	**9.26**	**292**	Pn	**P**	**15 56 09.7**	**-3.1**
PZI	**Palazzolo**	**9.42**	**291**	Pn	**P**	**15 56 12.5**	**-2.5**
	comp=Z,56nm,0.1s						
PZI	**Palazzolo**	**9.42**	**291**	P	**P**	**15 56 12.5**	**-2.5**
PZI				pmax	pmax		
	comp=Z,56nm,0.1s						
GTR	**Jabal at Tayr**	**9.53**	**154**	P	**P**	**15 56 16.1**	**-0.5**
BDAS	**Al Bad'**	**9.69**	**124**	P	**P**	**15 56 16.7**	**-2.0**
VAE	**Valguarnera**	**9.94**	**293**	P	**P**	**15 56 21.9**	**-0.3**
	comp=Z,3.1nm,0.3s,baz=62,slow=13,SNR=5.0						
AYUS	**'Aynunah**	**9.96**	**124**	P	**P**	**15 56 20.1**	**-2.3**
TIRR	**Tirgusor**	**10.42**	**10**	*e*P	**P**	**15 56 26.4**	**-2.3**
TIRR	**Tirgusor**	**10.42**	**10**	*e*P	**P**	**15 56 26.4**	**-2.3**
VYHS	**Vyhne**	**15.24**	**342**	*e*S	**S**	**16 00 31.7**	**+11**
STHS	**Stebnicka Huta**	**15.60**	**348**	*i* P	**P**	**15 57 41.9**	**+4.5**
STHS				*e*S	S	16 00 50.1	+21
KIV	**Kislovodsk**	**16.20**	**48**	P	**P**	**15 57 46.9**	**+1.9**
	comp=Z,9.3nm,0.8s						
KIV	**Kislovodsk**	**16.20**	**48**	⇓*e*P	**P**	**15 57 50.4**	**+5.4**
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV	**Kislovodsk**	**16.20**	**48**	P	**P**	**15 57 46.9**	**+1.9**
	comp=Z,9.3nm,0.8s						
VRAC	**Vranov**	**16.62**	**338**	P	**P**	**15 57 48.7**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=153,slow=14,SNR=2.4						
AKASG	**Malin Array Be**	**16.66**	**7**	P	**P**	**15 57 51.6**	**+0.8**
	comp=Z,3.7nm,0.3s,baz=196,slow=11,SNR=24						
MORC	**Moravsky Berou**	**16.76**	**341**	*e*P	**P**	**15 57 50.7**	**-1.3**
MORC	**Moravsky Berou**	**16.76**	**341**	*e*P	**P**	**15 57 50.7**	**-1.3**
GERES	**GERESS Array B**	**17.25**	**332**	P	**P**	**15 57 59.3**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=145,slow=12,SNR=28						
GERES				pP		15 58 09.9	
	comp=Z,0.8nm,0.3s,baz=141,slow=9.9,SNR=9.1						
DAVOX	**Davos**	**17.50**	**321**	P	**P**	**15 58 02.1**	**+0.7**
	comp=Z,0.4nm,0.3s,baz=139,slow=9.3,SNR=4.4						
KHC	**Kasperske Hory**	**17.52**	**332**	*e*P	**P**	**15 58 02.0**	**+0.4**
MBDF	**Montbardon**	**18.14**	**311**	*e*P	**P**	**15 58 09.8**	**+0.5**
	comp=Z,15nm,0.8s						
MBDF	**Montbardon**	**18.14**	**311**	*e*P	**P**	**15 58 09.8**	**+0.5**
MBDF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LPG	**La Plagne**	**18.53**	**313**	*e*P	**P**	**15 58 13.6**	**-0.6**
	comp=Z,4.4nm,0.5s						
LPG	**La Plagne**	**18.53**	**313**	*e*P	**P**	**15 58 13.6**	**-0.6**
LPG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
LPL	**La Plagne**	**18.55**	**313**	*e*P	**P**	**15 58 13.7**	**-0.7**
ORIF	**Oris-en-Rattie**	**18.79**	**311**	*e*P	**P**	**15 58 16.4**	**-0.8**
CABF	**La Chapelle**	**19.51**	**315**	*e*P	**P**	**15 58 22.9**	**-2.4**
CDF	**Champ du Feu**	**19.90**	**321**	*e*P	**P**	**15 58 27.1**	**-2.5**
	comp=Z,12nm,0.7s						
CDF	**Champ du Feu**	**19.90**	**321**	*e*P	**P**	**15 58 27.1**	**-2.5**
CDF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SUW	**Suwalki**	**19.91**	**355**	*e*P	**P**	**15 58 28.2**	**-1.4**
	comp=Z,32nm,0.6s						
SUW	**Suwalki**	**19.91**	**355**	*e*P	**P**	**15 58 28.2**	**-1.4**
SUW				pmax	pmax		
	comp=Z,32nm,0.6s						
SUW	**Suwalki**	**19.91**	**355**	*e*P	**P**	**15 58 28.2**	**-1.4**
	comp=Z,32nm,0.6s						
SMF	**Signal de Mont**	**20.86**	**313**	*e*P	**P**	**15 58 39.2**	**-0.4**
MEZF	**Maizieres J'vi**	**21.14**	**319**	*e*P	**P**	**15 58 42.4**	**0.0**
	comp=Z,18nm,0.7s,mb4.2						
LOR	**Lormes**	**21.16**	**315**	*e*P	**P**	**15 58 41.9**	**-0.7**
	comp=Z,4.9nm,0.6s,mb3.7						
LOR	**Lormes**	**21.16**	**315**	*e*P	**P**	**15 58 41.9**	**-0.7**
LOR				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.6						
AVF	**Avril sur Loir**	**21.22**	**313**	*e*P	**P**	**15 58 43.3**	**0.0**
CAF	**Calviac**	**21.25**	**307**	*e*P	**P**	**15 58 42.7**	**-0.8**
SSF	**Saint Saulge**	**21.26**	**314**	*e*P	**P**	**15 58 44.4**	**+0.7**
SSF				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb3.7						
SSF	**Saint Saulge**	**21.26**	**314**	*e*P	**P**	**15 58 44.4**	**+0.7**
	comp=Z,2.1nm,0.5s,mb3.7						
BGF	**Bois d'Agland**	**21.43**	**312**	*e*P	**P**	**15 58 46.0**	**+0.7**
	comp=Z,20nm,0.6s,mb4.3						
BGF	**Bois d'Agland**	**21.43**	**312**	*e*P	**P**	**15 58 46.0**	**+0.7**
BGF				pmax	pmax		

	comp=Z,10.0nm,0.6s,mb4.3						
RJF	Les Rejaudoux	21.75	308	eP	P	15 58 48.5	0.0
	comp=Z,11nm,0.6s,mb4.2						
RJF	Les Rejaudoux	21.75	308	eP	P	15 58 48.5	0.0
RJF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
LFF	La Frestale	22.13	306	eP	P	15 58 53.4	+1.1
OBN	Obninsk	22.18	16	eP	P	15 58 51.8	-0.9
OBN				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.4						
OBN	Obninsk	22.18	16	eP	P	15 58 51.8	-0.9
	comp=Z,18nm,1.1s,mb4.4						
BAIF	Baives	22.50	321	eP	P	15 58 56.0	+0.1
	comp=Z,20nm,0.5s,mb4.5						
BAIF	Baives	22.50	321	eP	P	15 58 56.0	+0.1
BAIF				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb4.5						
MFF	Saint Martin d	23.32	310	eP	P	15 59 03.6	-0.3
LDF	La Druitiere	24.14	314	eP	P	15 59 11.9	0.0
	comp=Z,13nm,0.6s,mb4.2						
LDF	La Druitiere	24.14	314	eP	P	15 59 11.9	0.0
LDF				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.2						
FLN	La Foliniere	24.43	315	eP	P	15 59 14.6	-0.1
	comp=Z,8.2nm,0.4s,mb4.2						
FLN	La Foliniere	24.43	315	eP	P	15 59 14.6	-0.1
FLN				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.2						
ESDC	Sonseca Array	24.48	292	P	P	15 59 16.4	+1.1
	comp=Z,1.6nm,0.5s,mb3.7,baz=79,slow=9.2,SNR=8.5						
GRR	Gorron	24.49	313	eP	P	15 59 15.4	+0.1
	comp=Z,8.5nm,0.6s,mb4.1						
GRR	Gorron	24.49	313	eP	P	15 59 15.4	+0.1
GRR				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.0						
SGMF	Saint Gilles	25.47	312	eP	P	15 59 26.2	+1.6
QUIF	Quistinic	25.72	311	eP	P	15 59 28.2	+1.2
	comp=Z,13nm,0.5s,mb4.4						
QUIF	Quistinic	25.72	311	eP	P	15 59 28.2	+1.2
QUIF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.4						
ROSF	Rostrenen	25.94	312	eP	P	15 59 29.5	+0.4
HFS	Hagfors	27.16	347	P	P	15 59 39.0	-1.2
	comp=Z,1.8nm,0.4s,mb4.0,baz=121,slow=8.6,SNR=18						
FINES	FINESS Array B	27.26	0	P	P	15 59 39.7	-1.4
	comp=Z,2.7nm,0.3s,mb4.2,baz=162,slow=10,SNR=66						
FINES	FINESS Array B	27.26	0	P	P	15 59 39.7	-1.4
KAF	Kangasniemi	27.93	0	ep	P	15 59 45.6	-1.6
NAO	NORSAR Subarra	28.39	344	P	P	15 59 50.3	-0.9
NAO				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.8						
NAO	NORSAR Subarra	28.39	344	P	P	15 59 50.3	-0.9
	comp=Z,0.6nm,0.4s,mb3.6						
AKTK	Aktyubinsk	28.43	45	P	P	15 59 51.6	-0.1
	comp=Z,2.0nm,0.5s,mb4.0						
AKTO	Aktyubinsk	28.43	45	P	P	15 59 51.6	-0.1
	comp=Z,2.0nm,0.5s,mb4.0						
AKTO	Aktyubinsk	28.43	45	P	P	15 59 51.6	-0.1
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
NB2	NORSAR Subarra	28.50	345	P	P	15 59 50.3	-1.9
	comp=Z,0.6nm,0.4s,mb3.6,baz=156,slow=9.3						
NOA	NORSAR Array B	28.50	345	P	P	15 59 50.9	-1.3
	comp=Z,0.8nm,0.5s,mb3.6,baz=157,slow=10,SNR=5.1						
NOA	NORSAR Array B	28.50	345	P	P	15 59 50.9	-1.3
JOF	Joensuu	28.94	5	ep	P	15 59 54.6	-1.5
EKA	Eskdalemuir Ar	29.21	325	P	P	15 59 56.8	-1.9
	comp=Z,2.3nm,0.9s,mb3.9,baz=117,slow=11,SNR=5.2						
ARCES	ARCESS Array B	35.39	360	P	P	16 00 50.9	-1.5
	comp=Z,2.4nm,0.4s,mb4.5,baz=183,slow=8.3,SNR=54						
ARE0	ARCESS Array S	35.39	360	eP	P	16 00 50.6	-1.8
ARE0	ARCESS Array S	35.39	360	eP	P	16 00 50.6	-1.8
KEV	Kevo	35.61	1	ep	P	16 00 53.3	-1.0
BVAR	Borovoye Array	36.53	45	P	P	16 01 03.5	+1.3
	comp=Z,1.1nm,0.5s,mb3.9,baz=270,slow=5.1,SNR=8.2						
CHKZ	Chkalovo	36.81	44	eP	P	16 01 05.8	+1.2
	comp=Z,3.1nm,0.6s,mb4.3						
CHKZ	Chkalovo	36.81	44	eP	P	16 01 05.8	+1.2
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
CHKZ	Chkalovo	36.81	44	eP	P	16 01 05.8	+1.2
	comp=Z,3.1nm,0.6s,mb4.3						
DBIC	Dimbokro	39.51	233	P	P	16 01 28.3	+0.9
	comp=Z,0.7nm,0.4s,mb3.7,baz=24,slow=7.7,SNR=4.5						
KURK	Kurchatov	41.27	50	eP	P	16 01 43.0	+1.4
	comp=Z,5.1nm,0.9s,mb4.2						
KURK	Kurchatov	41.27	50	⇑eP	P	16 01 43.4	+1.8
KURK	Kurchatov	41.27	50	eP	P	16 01 43.0	+1.4
	comp=Z,5.1nm,0.9s,mb4.2						
MKAR	Makanchi Array	43.75	56	P	P	16 02 03.8	+1.9
	comp=Z,4.2nm,0.5s,mb4.4,baz=271,slow=7.9,SNR=83						
WMQ	Urumqi	47.91	59	eP	P	16 02 37.0	+2.0
KOLN	Koldanda	49.26	81	eP	P	16 02 46.0	+0.4
	comp=Z,5.7nm,0.8s,mb4.6						
GKN	Gorkha	50.02	80	eP	P	16 02 52.7	+1.2
	comp=Z,5.2nm,0.6s,mb4.7						
DMN	Daman	50.56	81	eP	P	16 02 56.6	+1.1
	comp=Z,9.3nm,0.7s,mb4.8						
KKN	Kakani	50.63	80	eP	P	16 02 57.4	+1.3
	comp=Z,6.2nm,0.7s,mb4.7						
KKN	Kakani	50.63	80	eP	P	16 02 57.4	+1.3
KKN				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
GUN	Gumba	51.07	80	eP	P	16 03 01.1	+1.7
	comp=Z,34nm,1.2s,mb5.1						
MATP	Matopo	54.37	177	P	P	16 03 26.2	+2.1
	comp=Z,1.1nm,0.8s,mb3.9,baz=18,slow=7.6,SNR=3.2						
MATP	Matopo	54.37	177	P	P	16 03 26.2	+2.1
ZAK	Zakamensk	56.88	48	eP	P	16 03 41.7	-0.1
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.8						
ZAK	Zakamensk	56.88	48	eP	P	16 03 41.7	-0.1
	comp=Z,1.0nm,1.1s,mb3.8						
GTA	Gaotai	57.82	62	eP	P	16 03 49.3	+0.7
GTA				AP	pP	16 04 00.5	+0.1
GTA				XP	sP	16 04 06.0	+0.8
SONM	Songino Array	59.58	50	P	P	16 04 02.3	+1.7
	comp=Z,2.2nm,0.5s,mb4.4,baz=285,slow=7.8,SNR=27						
ULN	Ulaanbaatar	59.98	50	d iP	P	16 04 05.1	+1.6
ULN	Ulaanbaatar	59.98	50	eP	P	16 04 04.8	+1.3
	comp=Z,1.7nm,0.6s,mb4.2						
SCHQ	Schefferville	64.35	320	P	P	16 04 31.4	-1.0
	comp=Z,2.4nm,0.5s,mb4.5,baz=224,slow=11,SNR=6.5						
NJ2	Nanjing	74.92	61	eP	P	16 05 38.5	+1.1
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.8						
INK	Inuvik	76.66	352	P	P	16 05 47.1	+0.5
	comp=Z,0.5nm,0.6s,mb3.6,baz=287,slow=24,SNR=5.7						
SSE	Sheshan	77.12	61	P	P	16 05 47.3	-2.6
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
SSE				AMB	AMB		
	comp=Z,30nm,4.1s						
SSE	Sheshan	77.12	61	P	P	16 05 47.2	-2.7
	comp=Z,17nm,0.7s,mb5.1						
YKA	Yellowknife Ar	78.57	342	P	P	16 05 58.3	+1.1
	comp=Z,1.4nm,0.5s,mb4.1,baz=33,slow=5.2,SNR=7.2						
ILAR	Eielson Array	81.20	357	P	P	16 06 12.1	+0.8
	comp=Z,0.2nm,0.6s,mb3.2,baz=345,slow=2.8,SNR=6.2						
DAWY	Dawson	81.38	354	eP	P	16 06 14.0	+1.7
BDFB	Brasilia	85.97	248	P	P	16 06 39.7	+3.3
	comp=Z,1.8nm,0.6s,mb4.5,baz=63,slow=6.8,SNR=2.9						

NEIC ***27*** *16:10:09.5±0.3,51.55N×16.20E,h5^{km},ML3.0(CLL), ML2.6(BRG),Error ellipse: s-maj=4.1km s-min=3.7km az=99.0*

PRU ***27*** *16:10:10.8,51.43N×16.20E,Felt In Harrachov*

IPEC ***27*** *16:10:10.5±0.3,51.46N×16.43E,ML2.7/4,Error ellipse: s-maj=3.3km s-min=1.9km az=93.0*

WAR ***27*** *16:10:11.4,51.45N×16.17E,h1^{km},ML3.2,Mining Induced*

IDC ***27*** *16:10:11.3±0.7,51.46N×15.96E,mb1 3.5/9, mb1mx3.3/25,mbtmp3.4/9,ML3.4/9,Error ellipse: s-maj=11.6km s-min=6.9km az=105.0*

CSEM ***27*** *16:10:12.3±0.1,51.38N×16.12E,h2^{km},ML3.8/7,Error ellipse: s-maj=2.3km s-min=1.5km az=170.0*

VIE ***27*** *16:10:12.5±0.6,51.28N×16.06E,mb2.7/3,ML3.2/3,Error ellipse: s-maj=6.6km s-min=4.2km az=131.0,Suspected Mining induced.*

ISC 27 16:10:07.4±0.3,**51.51N**±0.02×**16.21E**±0.03,**n59,** σ**1^{s}40**/102,**2C-9D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.67	175	⇓iPG	Pg	16 10 22.6	+1.9
KSP				⇓eSG	Sg	16 10 31.6	+2.0
KSP	Ksiaz	0.67	175	ePg	Pg	16 10 22.5	+1.8
KSP				eSg	Sg	16 10 31.1	+1.6
KSP	Ksiaz	0.67	175	⇓iPg	Pg	16 10 22.6	+1.9
KSP				i		16 10 23.9	
KSP				eSg	Sg	16 10 30.9	+1.3
KSP				e		16 10 35.4	
KSP	Ksiaz	0.67	175	⇓iPg	Pg	16 10 22.6	+1.9
KSP				eSg	Sg	16 10 29.9	+0.3
UPC	Upice	1.01	187	ePG	Pg	16 10 28.8	+1.3
DPC	Dobruska-Polom	1.16	176	ePG	Pg	16 10 31.4	+0.8
DPC				eSG	Sg	16 10 45.6	-0.4
	85nm,0.3s						
DPC	Dobruska-Polom	1.16	176	ePg	Pg	16 10 31.4	+0.8
DPC				eSg	Sg	16 10 45.1	-0.9
PVCC	Panska Ves	1.43	227	ePG	Pg	16 10 36.4	+0.6
PVCC				eSG	Sg	16 10 54.1	-0.7
	316nm,0.3s						
BRG	Berggiesshubel	1.56	247	Pn	Pn	16 10 37.7	+1.2
BRG				Pg	Pg	16 10 39.2	+0.7
BRG				Sg	Sg	16 10 59.7	+0.4
BRG	Berggiesshubel	1.56	247	Pg	Pg	16 10 39.2	+0.7
RUE	Ruedersdorf	1.79	304	eP	Pn	16 10 40.0	+0.1
RUE	Ruedersdorf	1.79	304	eP	Pn	16 10 40.0	+0.2
PRU	Pruhonice	1.85	216	ePN	Pn	16 10 41.7	+1.0
PRU				ePG	Pg	16 10 43.7	-0.7
PRU				eSG	Sg	16 11 07.3	-1.8
	80nm,0.4s						
RAC	Raciborz	1.90	138	eP	Pn	16 10 46.0	+4.6
RAC				eS	Sn	16 11 09.0	+2.6
MORC	Moravsky Berou	1.93	153	⇑P	Pn	16 10 43.7	+1.9
MORC	Moravsky Berou	1.93	153	ePn	Pn	16 10 43.2	+1.4
MORC				eSg	Sg	16 11 07.7	-3.9
CLL	Collm	2.02	266	ePN	Pn	16 10 44.0	+0.9
CLL				i PG	Pg	16 10 47.8	+0.1
CLL				i SG	Sg	16 11 15.2	+0.6
OKC	Ostrava-Krasne	2.08	143	ePN	Pn	16 10 45.1	+1.2
OKC				ePG	Pg	16 10 48.7	-0.2
OKC				eSG	Sg	16 11 14.1	-2.4
	242nm,1.4s						
VRAC	Vranov	2.21	173	Pn	Pn	16 10 47.7	+1.8
	7.6nm,0.3s,baz=344,slow=16,SNR=27						
VRAC				Lg		16 11 19.7	
	11nm,0.3s,baz=257,slow=23,SNR=13						
VRAC	Vranov	2.21	173	⇓P	Pn	16 10 48.2	+2.3
VRAC	Vranov	2.21	173	ePn	Pn	16 10 47.4	+1.5
VRAC	Vranov	2.21	173	⇓P	Pn	16 10 48.2	+2.3
VRAC				eSg	Sg	16 11 18.3	-2.8
	54nm,0.5s						
TREC	Trest	2.26	192	ePG	Pg	16 10 51.5	-1.0
KRUC	Moravsky	2.45	177	ePn	Pn	16 10 51.6	+2.3
KRUC				eSg	Sg	16 11 25.8	-3.2
	21nm,0.3s						
OJC	Ojcow	2.61	118	ePN	Pn	16 10 52.0	+0.4
OJC				ePG	Pg	16 10 59.0	-0.6
OJC				eSG	Sg	16 11 34.0	-0.4
OJC	Ojcow	2.61	118	ePg	Pg	16 10 58.8	-0.8
OJC				eSg	Sg	16 11 33.8	-0.6
NKC	Novy Kostel	2.70	243	ePN	Pn	16 10 54.3	+1.5
NKC				ePG	Pg	16 11 00.5	-0.8
NKC				eSG	Sg	16 11 35.5	-1.8
	97nm,0.3s						
KHC	Kasperske Hory	2.91	216	ePN	Pn	16 10 56.8	+0.9
KHC				ePG	Pg	16 11 03.0	-2.6
KHC				eSN	Sn	16 11 30.0	-2.1
KHC				eSG	Sg	16 11 40.5	-3.9
KHC	Kasperske Hory	2.91	216	ePn	Pn	16 10 56.8	+0.9
KHC				ePg	Pg	16 11 03.0	-2.6
KHC				eSn	Sn	16 11 32.2	+0.1
KHC				eSg	Sg	16 11 40.5	-3.9
KHC	Kasperske Hory	2.91	216	ePg	Pg	16 11 03.0	-2.6
KHC				eSn	Sn	16 11 32.2	+0.1
KHC				eSg	Sg	16 11 40.5	-3.9
MOX	Moxa	3.02	255	i P	Pn	16 10 58.5	+1.1
MOX				Pg	Pg	16 11 07.0	-0.7
MOX				Sg	Sg	16 11 47.0	-1.0
MOX	Moxa	3.02	255	ePn	Pn	16 10 58.5	+1.1
MOX				ePg	Pg	16 11 07.0	-0.7
MOX				eSg	Sg	16 11 47.2	-0.8
SMOL	Smolenice	3.10	165	e	Pn	16 11 08.8	+10
GEC2	GERESS Array S	3.11	212	ePn	Pn	16 11 00.1	+1.4
GEC2				eSg	Sg	16 11 45.6	-5.4
GERES	GERESS Array B	3.11	212	Pn	Pn	16 11 00.5	+1.8
	1.4nm,0.3s,baz=28,slow=13,SNR=49						
GERES				Pg	Pg	16 11 06.7	-2.9
	7.2nm,0.3s,baz=32,slow=17,SNR=63						
GERES				Lg		16 11 45.5	
	9.2nm,0.3s,baz=31,slow=26,SNR=10						
GERES	GERESS Array B	3.11	212	Pg	Pg	16 11 06.7	-2.9
WET	Wettzell	3.19	223	ePn	Pn	16 11 00.6	+0.9
NIE	Niedzica	3.35	127	eP	Pg	16 11 14.0	-0.3
NIE				eS	Sg	16 11 57.0	-2.0
VYHS	Vyhne	3.46	150	ePN	Pn	16 11 05.0	+1.4
GRA1	Grafenberg Arr	3.66	242	ePn	Pn	16 11 07.9	+1.4
GRA1				eSg	Sg	16 12 04.8	-4.4
GRF	Grafenberg Arr	3.66	242	ePn	Pn	16 11 07.9	+1.4
GRF				eSg	Sg	16 12 04.8	-4.4
BSD	Bornholm Skovb	3.70	348	i P	Pn	16 11 07.6	+0.6
BSD				i		16 11 51.1	
STHS	Stebnicka Huta	3.84	121	ePN	Pn	16 11 10.5	+1.5
MOA	Molln	3.87	200	⇓iPn	Pn	16 11 10.2	+0.8
	comp=Z,3.2nm,0.2s,SNR=15						
MOA				⇑iSg	Sg	16 12 12.3	-3.9
	comp=E,50nm,0.8s						
MOA	Molln	3.87	200	Pn	Pn	16 11 10.2	+0.7
	3.2nm,0.2s,SNR=15						
MOA				Sg	Sg	16 12 12.3	-4.0
	50nm,0.8s						
HROE	Hohe Rhon--Fla	3.94	258	⇓iPn	Pn	16 11 11.5	+1.0
KECS	Kecovo	4.09	136	ePN	Pn	16 11 12.3	-0.4
KOLS	Kolonicke sedl	4.67	121	ePN	Pn	16 11 21.7	+0.9
DAVOX	Davos	6.29	224	Pn	Pn	16 11 43.8	0.0
	0.3nm,0.3s,baz=220,slow=14,SNR=4.5						
DAVOX				Lg		16 13 28.6	
	0.5nm,0.3s,baz=358,slow=22,SNR=3.6						
BURAR	Bucovina Array	7.03	120	⇓P	Pn	16 11 54.6	+0.5
AKASG	Malin Array Be	8.23	91	Pn	P	16 12 11.1	+0.1
	0.9nm,0.3s,baz=279,slow=12,SNR=6.1						
AKASG				Lg		16 14 42.4	
	0.3nm,0.3s,baz=274,slow=28,SNR=4.0						
HFS	Hagfors	8.76	352	Pn	P	16 12 16.1	-2.2
	0.1nm,0.3s,baz=174,slow=13,SNR=7.6						
NOA	NORSAR Array B	9.95	346	Pn	P	16 12 33.1	-1.4
	0.2nm,0.3s,baz=174,slow=12,SNR=2.6						
FINES	FINESS Array B	11.34	25	Pn	P	16 12 51.7	-1.9
	0.3nm,0.3s,baz=209,slow=10,SNR=12						
KAF	Kangasniemi	11.97	23	ep	P	16 12 59.9	-2.2
	0.5nm,0.4s						
EKA	Eskdalemuir Ar	12.16	296	Pn	P	16 13 01.9	-2.8
	0.2nm,0.3s,baz=100,slow=13,SNR=4.0						
JOF	Joensuu	14.01	30	ep	P	16 13 25.7	-3.5
	1.3nm,0.4s						
ARCES	ARCESS Array B	18.62	10	Pn	P	16 14 25.4	-2.5
	0.4nm,0.3s,baz=196,slow=13,SNR=12						
ARCES	ARCESS Array B	18.62	10	Pn	P	16 14 25.4	-2.5

IDC ***27*** *16:14:43.6±1.4,20.32S×16.32E,mb3.9/4,mb1 4.1/8, mb1mx3.8/19,mbtmp4.0/8,ML4.0/4,MS3.2/2,Ms1 3.2/2, ms1mx2.8/22,Error ellipse: s-maj=24.6km s-min=17.0km az=156.0*

NEIC ***27*** *16:14:45.7±0.6,20.27S×16.45E,h10^{km},mb4.1/2,Error ellipse: s-maj=11.6km s-min=10.7km az=67.0*

ISC 27 16:14:44.0±0.8,**20.34S**±0.09×**16.5E**±0.1,**h10^{km},n23,** σ**1^{s}08**/29,**mb3.9**/5,**Namibia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSUM	Tsumeb	1.51	42	Pn	Pn	16 15 13.8	+2.6
	354nm,0.3s,baz=208,slow=16,SNR=2219						
TSUM				Lg		16 15 35.6	
	2µm,0.3s,baz=306,slow=23,SNR=31						
TSUM	Tsumeb	1.51	42	ePn	Pn	16 15 13.5	+2.3
TSUM				eSn	Sn	16 15 34.4	+3.4
TSUM				Lg		16 15 35.6	
LBTB	Lobatse	9.58	121	Pn	P	16 17 05.8	+0.7
	0.6nm,0.3s,baz=317,slow=14,SNR=7.6						
LBTB				Sn	Sn	16 18 41.5	-13
	2.0nm,0.3s,baz=282,slow=13,SNR=3.6						
LBTB				Lg		16 19 50.8	
	7.6nm,0.3s,baz=229,slow=13,SNR=11						
LBTB				LR	LR	16 20 54.2	
	comp=Z,135nm,18.3s,baz=111,slow=38						
LBTB	Lobatse	9.58	121	ePn	P	16 17 04.1	-1.1
LBTB				Sn	Sn	16 18 41.5	-13
LBTB				Lg		16 19 50.8	
LBTB				LR	LR	16 20 54.2	
MATP	Matopo	11.23	93	Pn	P	16 17 27.4	-0.4
	2.2nm,0.3s,baz=269,slow=13,SNR=18						
MATP				Sn	S	16 19 25.4	-9.1
	1.9nm,0.3s,baz=278,slow=9.1,SNR=3.8						
MATP				Lg		16 20 36.7	
	3.9nm,0.3s,baz=195,slow=14,SNR=5.1						
MATP	Matopo	11.23	93	Pn	P	16 17 27.4	-0.4
MATP				Sn	S	16 19 25.4	-9.1
MATP				Lg		16 20 36.7	
BOSA	Boshof	11.45	138	Pn	P	16 17 30.6	-0.1
	0.6nm,0.3s,baz=310,slow=16,SNR=8.6						
BOSA				Lg		16 20 47.9	
	2.4nm,0.3s,baz=45,slow=20,SNR=5.3						
BOSA	Boshof	11.45	138	ePn	P	16 17 30.7	0.0
BOSA				Lg		16 20 47.9	
LSZ	Lusaka	12.19	68	Pn	P	16 17 40.0	-0.8
	1.4nm,0.3s,baz=241,slow=15,SNR=12						
LSZ				Sn	S	16 19 50.3	-7.6
	2.0nm,0.3s,baz=267,slow=16,SNR=3.6						
LSZ				Lg		16 21 22.6	
	2.7nm,0.3s,baz=350,slow=23,SNR=5.8						
LSZ				LR	LR	16 22 53.5	
	comp=Z,111nm,19.4s,baz=299,slow=40						
LSZ	Lusaka	12.19	68	ePn	P	16 17 40.1	-0.7
LSZ				Sn	S	16 19 50.3	-7.6
LSZ				Lg		16 21 22.6	
LSZ				LR	LR	16 22 53.5	
SUR	Sutherland	12.59	163	Lg		16 21 23.5	
	2.6nm,0.3s,baz=207,slow=13,SNR=7.7						
DBIC	Dimbokro	34.09	320	P	P	16 21 27.9	-3.1
	2.1nm,0.8s,mb4.2,baz=127,slow=9.4,SNR=4.7						
DBIC	Dimbokro	34.09	320	eP	P	16 21 28.2	-2.8
	2.6nm,0.8s,mb4.2						
VNA2	Neumayer--Watz	52.53	190		P	16 24 00.7	+1.4
VNA2	Neumayer--Watz	52.53	190		P	16 24 05.0	+5.7
SNAA	Sanae	52.57	188		P	16 23 59.9	+0.3
SNAA	Sanae	52.57	188		P	16 24 04.2	+4.6
SNAA	Sanae	52.57	188	eP	P	16 23 58.3	-1.3
	1.1nm,0.6s,mb4.0						
VNA3	Neumayer Olymp	53.18	190		P	16 24 05.1	+1.0
VNA3	Neumayer Olymp	53.18	190		P	16 24 08.9	+4.8
GERES	GERESS Array B	68.91	358	P	P	16 25 50.3	-0.8
	0.6nm,0.8s,mb3.6,baz=169,slow=6.8,SNR=4.3						
NOA	NORSAR Array B	81.20	357	P	P	16 27 01.4	+0.3
	0.9nm,0.8s,mb3.8,baz=167,slow=6.0,SNR=3.6						
FINES	FINESS Array B	81.85	5	P	P	16 27 04.8	+0.3
	2.8nm,0.9s,mb4.2,baz=153,slow=6.2,SNR=7.6						

BJI ***27*** *16:30:33.3,27.16N×55.17E,h10^{km},mB5.2,mb5.3,Ms5.6, Msz5.3*

DHMR ***27*** *16:30:34.1±2.3,26.86N×55.82E,h14^{km}±246^{km},mb5.5*

IDC ***27*** *16:30:36.1±0.5,26.90N×55.83E,mb5.1/22,mb1 5.2/23, mb1mx5.2/24,mbtmp5.1/23,ML5.0/1,MS5.2/26,Ms1 5.2/26, ms1mx5.1/31,Error ellipse: s-maj=12.1km s-min=8.5km az=108.0*

BGS ***27*** *16:30:37.0±1.9,26.84N×55.81E,h10^{km},mb5.3*

NEIC ***27*** *16:30:37.6±0.2,26.84N×55.81E,h10^{km},mb5.4/163, MS5.3/18,MN5.5(TEH),Error ellipse: s-maj=4.4km s-min=3.1km az=198.0*

HRVD ***27*** *16:30:37.6±0.2,26.65N×55.89E,h12^{km},MW5.5/84, Centroid moment Tensor Solution. LP body waves: s65,c115;Mantle waves: s84,c171; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.31±.03; M$_{\theta\theta}$-2.22±.03; M$_{\phi\phi}$1.91±.04; M$_{r\theta}$0.14±.08; M$_{\theta\phi}$-0.48±.03; M$_{\phi r}$0.00±.09; Best double couple: M$_{0}$2.125×10^{17} NP1: ϕ_s218°,δ87°,λ-2°. NP2:ϕ_s308°,δ88°,λ-177°. Principal axes: T 1.966, Plg0°, Azm83°; N .318, Plg87°, Azm345°; P -2.284, Plg3°, Azm173°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

CSEM ***27*** *16:30:38.9,26.90N×55.81E,h30^{km},mb5.5*

CRAAG ***27*** *16:30:38.9,26.90N×55.81E,Mb5.5*

MOS ***27*** *16:30:39.4±1.0,26.90N×55.74E,h33^{km},mb5.6/107, MS5.3/39,Error ellipse: s-maj=5.4km s-min=2.6km az=128.0*

THR ***27*** *16:30:39.1±0.9,27.00N×55.79E,h14^{km}±11^{km},mb5.8, ML5.2*

TEH ***27*** *16:30:40.5,26.81N×55.69E,h10^{km},Mn5.5*

ISC 27 16:30:36.0±0.1,**26.81N**±0.01×**55.77E**±0.01,**h11^{km}, h11^{km}**±1.4^{km}**:pP-P,n992,**σ**1^{s}17**/1033,**mb5.3**/245,**MS5.3**/77, **134C-38D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.69	31	ePg	Pg	16 30 49.3	-0.5
BNDS				eSg	Sg	16 30 56.9	-2.3
BANOM	Banah	1.00	152	⇓P	Pb	16 30 55.7	+0.8
	SNR=4735						
BANOM				⇑S	Sb	16 31 12.8	+5.0
ASHO	Ashiyiah	2.13	173	⇑P	Pn	16 31 14.8	+2.8
	SNR=443						
GHIR	Ghir-Karzin	2.88	301	ePN	Pn	16 31 25.3	+2.6
GHIR				Sn	Sn	16 31 59.5	+1.9
GHIR				AML	AML	16 32 29.5	
	comp=N,10µm,0.7s						
GHIR	Ghir-Karzin	2.88	301	ePn	Pn	16 31 25.3	+2.6
	SNR=52						
GHIR				Sn	Sn	16 31 59.5	+1.9
	comp=N,10µm,0.7s,SNR=52						
KRBR	Kerman	3.28	15	ePN	Pn	16 31 30.6	+2.2
KRBR				AML	AML	16 32 28.3	
	comp=N,6µm,0.5s						
ISRV	Sarvestan	3.48	318	Pn	Pn	16 31 33.9	+2.7
HOQ	Hoqain	3.50	156	⇑P	Pn	16 31 31.0	-0.5
	SNR=49						
IMOK	Mook	3.50	310	Pn	Pn	16 31 34.0	+2.4
ARQ	Araqi	3.52	169	⇑P	Pn	16 31 33.5	+1.7
	SNR=197						
IPAR	Pars	3.86	322	Pn	Pn	16 31 39.1	+2.5
BIDO	Bidbid	3.91	146	⇑P	Pn	16 31 36.9	-0.4
	SNR=75						
BSY	Bisya	4.25	162	P	Pn	16 31 43.1	+0.9
	SNR=213						
SMDO	Samad	4.27	151	⇑P	Pn	16 31 43.1	+0.7
	SNR=366						
BSYO	Bisya	4.27	161	P	Pn	16 31 43.1	+0.6
	SNR=213						
IMEH	Mehriz	4.68	348	Pn	Pn	16 31 49.9	+1.6
IBAF	Bafgh	4.77	358	Pn	Pn	16 31 50.3	+0.7
JMDO	Jabal Madar	4.90	154	⇑P	Pn	16 31 51.4	-0.1
	SNR=124						
WBK	Wadi Bani Khal	5.09	144	⇑P	Pn	16 31 53.4	-0.7
	SNR=135						
ZHSF	Zahedan	5.22	57	ePN	Pn	16 31 57.4	+1.4
ZHSF				eSg	Sg	16 33 17.1	-13
ISAD	Sadrabad	5.40	341	Pn	Pn	16 32 00.4	+1.9
ICHK	Chekchek	5.55	348	Pn	Pn	16 32 01.5	+1.0
HASS	Wahat al Ahsa’	5.70	255	P	Pn	16 31 59.4	-3.3
NASN	Na’in	6.50	337	ePn	Pn	16 32 14.4	+0.4
QRN	Al-Qurain	7.22	287	eP	Pn	16 32 23.8	-0.3
QRN				AML	AML	16 33 46.0	
	comp=Z,733nm,0.5s						
KBD	Kabd	7.52	290	eP	Pn	16 32 28.4	+0.1
KBD	Kabd	7.52	290	eP	Pn	16 32 27.2	-1.1
RDF	Al-Radifah	7.58	288	eP	Pn	16 32 28.6	-0.5
RDF				AML	AML	16 33 55.6	
	comp=Z,345nm,0.4s						
RDF	Al-Radifah	7.58	288	eP	Pn	16 32 27.9	-1.2
UMR	Umm Al-Rimmam	7.62	293	eP	Pn	16 32 30.4	+0.8
UMR				AML	AML	16 33 54.2	
	comp=Z,556nm,0.5s						
UMR	Umm Al-Rimmam	7.62	293	eP	Pn	16 32 29.1	-0.5
NAY	Al-Naaiem	7.92	290	eP	Pn	16 32 33.8	-0.1
NAY	Al-Naaiem	7.92	290	eP	Pn	16 32 32.9	-1.0
MIB	Mutribah	8.01	294	eP	P	16 32 35.6	+0.4
MIB				AML	AML	16 34 05.2	
	comp=Z,934nm,0.6s						
MIB	Mutribah	8.01	294	eP	P	16 32 34.9	-0.2
ISFB	Sefidab	8.11	339	Pn	P	16 32 36.3	-0.3
ISFB				Sn	Sn	16 34 03.2	-6.1
RYDS	Riyadh	8.65	254	P	P	16 32 40.3	-3.8

SHAO	**Shalim**	8.74	181	⇓P	P	16 32 43.5	-1.9
	SNR=82						
WHFO	**Wadi Hawf**	9.04	192	⇓P	P	16 32 47.7	-1.7
	SNR=150						
ASAO	**Ashtian**	9.16	329	*e*Pn	P	16 32 50.5	-0.7
IFIR	**Firoozkooh**	9.18	344	Pn	P	16 32 50.7	-0.6
IFIR				Lg		16 35 25.9	
IDMV	**Damavand**	9.31	341	Pn	P	16 32 53.2	0.0
IDMV				Lg		16 35 29.6	
RBK	**Rabkut**	9.37	189	⇓P	P	16 32 52.2	-1.9
	SNR=192						
DAMV	**Damavand**	9.38	341	*e*Pn	P	16 32 54.1	+0.1
IAFJ	**Afjeh**	9.66	340	Pn	P	16 32 58.3	+0.2
ABTO	**Aybut**	9.68	194	⇑P	P	16 32 56.0	-2.4
	SNR=58						
IMOG	**Moghan**	9.76	17	Pn	P	16 32 59.9	+0.5
IMHD	**Mahdasht**	9.87	335	Pn	P	16 32 59.9	-1.0
IRAZ	**Razeghan**	9.92	331	Pn	P	16 33 02.4	+0.8
IRAZ				Sn	Sn	16 34 45.4	-8.7
MZLS	**Mizel**	9.94	256	P	P	16 32 58.7	-3.3
MHI	**Mashhad**	9.98	18	Pn	P	16 33 05.1	+2.6
THKV	**Tehran--Karaj**	9.99	336	*e*Pn	P	16 33 02.9	+0.3
IPAY	**Payeh**	10.00	15	Pn	P	16 33 03.2	+0.5
IMYA	**Miamay**	10.20	20	Pn	P	16 33 05.7	+0.3
IKRD	**Kardeh**	10.21	13	Pn	P	16 33 11.4	+5.9
IKOM	**Komasi**	10.23	318	Pn	P	16 33 04.3	-1.5
IGHG	**Ghaleghazi**	10.91	316	Pn	P	16 33 13.4	-1.8
IDHR	**Dehrash**	11.27	317	Pn	P	16 33 16.0	-4.0
VAN	**Vannovskaya**	11.28	9	P	P	16 33 19.3	-1.0
VAN				S	S	16 35 29.0	+1.6
BHD	**Baghdad**	11.78	306	*e*x	x	16 33 23.5	
BHD				*e*x	x	16 35 27.5	
AFFS	**‘Afif**	11.90	259	P	P	16 33 25.1	-3.5
KAMS	**Al Khamasin**	12.13	240	P	P	16 33 26.6	-5.2
BHJ	**Bhuj**	13.07	103	*e*x	x	16 33 41.9	
BHJ				AMb	AMB	16 33 47.1	
	comp=Z,242nm,1.0s						
BHJ				*e*x	x	16 35 58.9	
BHJ				*e*x	x	16 36 05.8	
DRP	**Derazinda**	13.52	65	P	P	16 33 48.8	-1.5
GRMI	**Germi**	13.67	333	*e*Pn	P	16 33 52.6	+0.4
GRMI				AMb	AMB	16 33 58.7	
	comp=Z,315nm,1.7s						
MUKL	**Al Mukalla**	13.79	208	⇑*e*P	P	16 33 50.2	-3.7
MSL	**Mosul**	14.35	314	*e*x	x	16 33 58.0	
MSL				*e*x	x	16 33 58.0	
MSL				*i*		16 36 28.0	
MSL				*e*x	x	16 38 47.0	
MSL				*e*x	x	16 39 33.0	
MSL				*e*x	x	16 41 14.0	
BLJS	**Baljurashi**	14.72	245	P	P	16 34 02.3	-3.8
HKR	**Hakkari**	14.78	320	P	P	16 34 03.0	-3.9
HAKT	**HAKKARI**	14.79	319	*i* P	P	16 34 02.3	-4.7
KBRS	**Khaybar**	14.84	270	P	P	16 34 06.7	-1.0
THW	**Thamme Wali**	15.09	63	P	P	16 34 07.8	-3.1
CEP	**Cherat**	15.58	59	P	P	16 34 15.4	-1.9
TVAN	**Van**	15.63	321	*i* P	P	16 34 17.2	-0.7
SANA	**San‘a**	15.66	226	*i* S	S	16 37 10.8	-1.4
VANB	**Van**	15.69	322	P	P	16 34 17.1	-1.5
VANB	**Van**	15.69	322	P	P	16 34 20.3	+1.7
CLDR	**Caldiran**	15.80	324	P	P	16 34 19.6	-0.5
CLDR	**Caldiran**	15.80	324	P	P	16 34 21.7	+1.6
HAJJ	**Hajjah**	15.82	228	⇑*e*P	P	16 34 17.4	-3.1
HAJJ				*i* S	S	16 37 14.7	-1.4
BDHA	**Al Bayda’**	15.94	219	⇓*e*P	P	16 34 18.8	-3.2
BDHA				AMb	AMB	16 34 20.1	
	comp=Z,142nm,1.0s						
BDHA				*i* S	S	16 37 17.2	-1.7
BDHA	**Al Bayda’**	15.94	219	⇓*e*P	P	16 34 18.8	-3.2
	comp=Z,71nm,1.0s						
FRSS	**Farasan al Kab**	16.15	234	P	P	16 34 19.4	-5.3
GNI	**Garni**	16.16	328	P	P	16 34 26.1	+1.5
GNI	**Garni**	16.16	328	*e*P	P	16 34 26.5	+1.9
	comp=Z,319nm,0.9s						
GNI	**Garni**	16.16	328	*c i*P	P	16 34 27.1	+2.5
GNI				pmax	pmax		
	comp=Z,207nm,1.2s						
GNI				MLR	MLR		
	comp=Z,16µm,15.0s						
GNI	**Garni**	16.16	328	*e*P	P	16 34 26.5	+1.9
	comp=Z,319nm,0.9s						
LBOS		16.20	219	⇓*e*P	P	16 34 22.6	-2.8
LBOS				AMb	AMB	16 34 23.4	
	comp=Z,161nm,1.5s						
LBOS				*i* S	S	16 37 24.6	-0.3
BSHR	**Al Beshri**	16.24	307	⇑*i*P	P	16 34 25.7	0.0
SFNV	**Sufian**	16.40	310	⇑*i*P	P	16 34 27.0	-0.8
MARD	**Mardin**	16.45	313	*i* P	P	16 34 23.9	-4.5
BTMT	**Batman**	16.53	317	P	P	16 34 25.3	-4.1
CHCP	**Chirah Chowk**	16.58	61	P	P	16 34 28.5	-1.5
AJM	**Ajmer**	16.88	87	*e*P	P	16 34 33.5	-0.4
AJM				AMb	AMB	16 34 39.6	
	comp=Z,208nm,1.8s						
AJM				*e*x	x	16 34 40.0	
AJM				*e*S	S	16 37 40.1	-0.4
UDYN	**Al ‘Udayn**	16.88	223	*i* S	S	16 37 40.0	-0.7
DGRG	**David-gareji**	16.93	332	P	P	16 34 34.2	-0.3
ZALF	**Zalf**	17.11	295	⇑*i*P	P	16 34 36.1	-0.6
TBKS	**Tabuk**	17.11	279	P	P	16 34 36.9	+0.1
DIY	**Diyarbakir**	17.14	314	P	P	16 34 37.7	+0.6
DIY	**Diyarbakir**	17.14	314	P	P	16 34 39.2	+2.1
BNGL	**BINGOL**	17.22	318	*i* P	P	16 34 37.2	-0.9
JHLN	**Al Jahlan**	17.23	305	⇑*i*P	P	16 34 37.6	-0.7
TRBA	**At Turbah**	17.37	221	*e*P	P	16 34 37.1	-3.0
TRBA				*i* S	S	16 37 51.4	-0.3
MTA	**Mtatsminda**	17.38	331	P	P	16 34 41.5	+1.4
TI2	**Plekhanov**	17.43	331	κ *i*P	P	16 34 43.0	+2.3
TI2				pmax	pmax		
	comp=Z,50nm,0.6s						
TI2				MLR	MLR		
	comp=E,6µm,15.0s						
TI2				MLR	MLR		
	comp=Z,14µm,15.0s						
TI2	**Plekhanov**	17.43	331	*i* P	P	16 34 42.1	+1.4
TBLG	**Delisi**	17.43	331	P	P	16 34 42.6	+1.9
MAK	**Makhachkala**	17.47	339	*i* P	P	16 34 44.8	+3.6
MAK	**Makhachkala**	17.47	339	*c i*P	P	16 34 44.0	+2.9
MAK				*i* S	S	16 37 59.0	+5.2
MAK				pmax	pmax		
	comp=Z,825nm,1.0s						
MAK				pmax	pmax		
	comp=Z,2µm,4.0s						
MAK				smax			
	comp=N,14µm,7.0s						
MAK				smax			
	comp=E,7µm,7.0s						
MAK				MLR	MLR		
	comp=Z,9µm,13.0s						
MAK	**Makhachkala**	17.47	339	*i* P	P	16 34 44.0	+2.9
	comp=Z,2µm,4.0s						
ROOS	**tl_alroos**	17.52	299	⇑*i*P	P	16 34 42.8	+0.9
SALA	**Sala**	17.54	294	⇑*i*P	P	16 34 40.5	-1.6
BOM	**Bombay**	17.56	113	*e*P	P	16 34 42.9	+0.5
BOM				*e*S	S	16 37 57.7	+1.7
ERZM	**Erzurum**	17.73	321	*i* P	P	16 34 44.4	-0.1
EZM	**Erzurum**	17.73	321	P	P	16 34 45.2	+0.8
EZM	**Erzurum**	17.73	321	P	P	16 34 44.8	+0.4
AKH	**Akhalkalaki**	17.73	328	P	P	16 34 44.1	-0.4
URFA	**Urfa**	17.82	311	P	P	16 34 45.1	-0.4
URFA	**Urfa**	17.82	311	P	P	16 34 46.4	+0.8
QASN	**Qassioun**	18.13	296	⇑*i*P	P	16 34 49.0	-0.5
TCHB	**Talchebab**	18.15	293	⇑*i*P	P	16 34 50.6	+0.8
ATAB	**Bozova**	18.19	310	*i* P	P	16 34 50.7	+0.5
MKRJ	**Makawir**	18.20	290	P	P	16 34 50.5	+0.2
THN	**Thein Dam**	18.22	67	*e*P	P	16 34 49.2	-1.4
FKH	**Fakeheh**	18.24	299	*e*Pn	P	16 34 51.0	+0.2
AYUS	**‘Aynunah**	18.24	279	P	P	16 34 51.7	+0.8
PTK	**Pertek**	18.26	315	P	P	16 34 50.5	-0.6
PTK	**Pertek**	18.26	315	P	P	16 34 52.1	+1.1
TAS	**Tashkent**	18.27	34	*e*P	P	16 34 49.0	-2.3
ELZG	**Elazig**	18.29	314	*i* P	P	16 34 51.5	+0.1
BRBR	**Barbar**	18.35	296	⇑*i*P	P	16 34 53.9	+1.6
BDAS	**Al Bad‘**	18.39	280	P	P	16 34 53.3	+0.5
MZDA	**Masada**	18.39	289	P	P	16 34 53.1	+0.3
MZDA	**Masada**	18.39	289	P	P	16 34 53.7	+0.9
JMOS	**Jabal al Moall**	18.40	282	P	P	16 34 53.6	+0.7
ALWS	**Ilw as Safayha**	18.44	283	P	P	16 34 53.9	+0.5
ZFRI	**Zfri**	18.45	286	P	P	16 34 53.5	+0.1
ZFRI	**Zfri**	18.45	286	P	P	16 34 53.6	+0.2
AQBJ	**Aqaba**	18.48	284	P	P	16 34 53.9	0.0
KSDI	**Kefar Szold**	18.53	295	P	P	16 34 54.8	+0.3
KSDI	**Kefar Szold**	18.53	295	P	P	16 34 54.3	-0.2
MMLI	**Mount Malkishu**	18.55	292	P	P	16 34 55.3	+0.6
MMLI	**Mount Malkishu**	18.55	292	P	P	16 34 55.9	+1.2
HAQS	**Haql**	18.55	282	P	P	16 34 55.5	+0.7
MYA	**Malataya**	18.56	313	P	P	16 34 55.1	+0.4
MYA	**Malataya**	18.56	313	P	P	16 34 56.2	+1.5
EIL	**Elat**	18.56	284	P	P	16 34 54.3	-0.6
EIL	**Elat**	18.56	284	P	P	16 34 54.7	-0.2
PRNI	**Paran**	18.57	286	P	P	16 34 55.5	+0.5
PRNI	**Paran**	18.57	286	P	P	16 34 55.4	+0.4
POO	**Poona**	18.59	113	*e*x	x	16 35 04.2	
POO				AMb	AMB	16 35 05.1	
	comp=Z,64nm,0.8s						
POO				*e*x	x	16 38 24.4	
MBH	**Mount Berech**	18.60	284	P	P	16 34 55.0	-0.4
MBH	**Mount Berech**	18.60	284	P	P	16 34 55.5	+0.1
BHK	**Bhakra**	18.61	71	*e*x	x	16 34 58.9	
BHK				*e*x	x	16 38 31.7	
HWQ	**Hawqa**	18.61	298	*e*Pn	P	16 34 57.6	+2.1
GZT	**Gaziantep**	18.64	309	*i* P	P	16 34 54.4	-1.4
WRDH	**Warideh**	18.68	302	⇑*i*P	P	16 34 57.3	+1.1
BHL	**Bhannes**	18.73	297	*e*Pn	P	16 34 58.6	+1.7
GAZ	**Gaziantep**	18.80	308	P	P	16 34 56.3	-1.4
MASH	**Mash‘abbe Sade**	18.84	288	P	P	16 34 57.7	-0.5
MASH	**Mash‘abbe Sade**	18.84	288	P	P	16 34 59.1	+0.9
BTCH	**Batrach**	18.85	304	⇑*i*P	P	16 35 00.0	+1.7
SLNF	**Slenfeh**	18.85	302	⇑*i*P	P	16 34 59.7	+1.4
MATL	**Matirih**	18.88	296	*e*Pn	P	16 35 01.5	+2.9
HNTI	**Hanita**	18.90	294	P	P	16 35 01.0	+2.1
HNTI	**Hanita**	18.90	294	P	P	16 34 59.6	+0.7
RTMM	**Retamin**	18.93	288	P	P	16 35 01.2	+1.9
DRWC	**Darouich**	18.94	306	⇑*i*P	P	16 34 59.0	-0.4
OFRI	**‘Ofer**	18.95	293	P	P	16 34 59.7	+0.2
OFRI	**‘Ofer**	18.95	293	P	P	16 35 02.2	+2.7
HAF	**Haifa**	18.95	293	P	P	16 35 01.6	+2.1
NDI	**New Delhi**	19.07	79	*e*P	P	16 34 59.5	-1.5
NDI				*e*x	x	16 38 23.0	
HTY	**Hatay**	19.12	304	P	P	16 35 00.8	-0.7
ARNB	**Al Arnab**	19.14	303	⇑*i*P	P	16 35 03.3	+1.5
KZIT	**Kziot**	19.16	287	P	P	16 35 02.6	+0.6
KZIT	**Kziot**	19.16	287	P	P	16 35 02.4	+0.4
GUMT	**Gumushane**	19.18	319	P	P	16 35 03.1	+1.0
GUMT	**Gumushane**	19.18	319	P	P	16 35 04.2	+2.0
COBT	**Iskenderun**	19.20	305	*i* P	P	16 35 02.7	+0.3
SMLA	**Simla**	19.20	72	*e*P	P	16 34 59.3	-3.2
SMLA				*e*x	x	16 38 21.6	
MACK	**Trabzon**	19.33	321	*i* P	P	16 35 05.6	+1.7
ATD	**Arta Tunnel**	19.47	221	P	P	16 35 07.1	+1.4
	comp=Z,4.7nm,0.3s,baz=39,slow=8.0,SNR=17						
ATD				S	S	16 38 48.4	+9.2
	comp=Z,0.8nm,0.3s,baz=256,slow=21,SNR=2.2						
ATD				LR	LR	16 43 04.3	
	comp=Z,11µm,18.4s,baz=42,slow=38						
KAD	**Karad**	19.49	115	*e*P	P	16 35 06.9	+1.0
KAD				*e*S	S	16 38 41.4	+1.7
CEYT	**Ceyhan**	19.77	306	P	P	16 35 10.8	+1.8
DDI	**Dehra Dun**	19.88	75	*e*P	P	16 35 10.2	0.0
DDI				*e*x	x	16 39 01.2	
KOZT	**Kozan**	19.92	307	P	P	16 35 11.5	+0.9
BHPL	**Bhopal**	19.94	96	*e*P	P	16 35 10.9	0.0
BHPL				AMb	AMB	16 35 16.2	
	comp=Z,214nm,1.7s						
KIV	**Kislovodsk**	20.12	332	*e*P	P	16 35 12.7	0.0
	comp=Z,792nm,0.9s						
KIV	**Kislovodsk**	20.12	332	*d i*P	P	16 35 12.0	-0.7
KIV				*i* S	S	16 38 59.8	+6.8
KIV				pmax	pmax		
	comp=Z,935nm,1.1s						
KIV				pmax	pmax		
	comp=Z,271nm,5.2s						
KIV				MLR	MLR		
	comp=Z,3µm,16.0s,MS4.7						
KIV	**Kislovodsk**	20.12	332	*e*P	P	16 35 12.7	0.0
	comp=Z,792nm,0.9s						
GRSN	**GIRESUNGRSN**	20.18	319	*i* P	P	16 35 12.4	-0.9
GOA	**Goa**	20.23	120	*e*P	P	16 35 16.0	+2.0
SVST	**Sivas**	20.31	314	*i* P	P	16 35 15.8	+1.1
PHNC	**Paralimni**	20.34	299	P	P	16 35 15.7	+0.7
	comp=Z,3.7nm,0.9s						
AKL	**Akola**	20.36	103	⇑*i*x	x	16 34 28.8	
AKL				*i* x	x	16 38 08.8	
KARA	**Karaisali**	20.38	306	*e*P	P	16 35 18.4	+3.0
BNN	**Bunyan**	20.55	311	*e*P	P	16 35 15.6	-1.7
MERS	**Mersin**	20.61	304	*e*P	P	16 35 17.7	-0.2
CSS	**Prodhromos**	20.87	298	P	P	16 35 22.4	+1.8
	comp=Z,3.8nm,1.0s						
GOF	**Gofitskoye**	20.88	334	*e*P	P	16 35 22.8	+2.2
GOF				*e*S	S	16 39 15.1	+6.7
GOF				pmax	pmax		
	comp=Z,1µm,1.0s						
GOF	**Gofitskoye**	20.88	334	*e*P	P	16 35 22.8	+2.2
	comp=Z,1µm,1.0s						
LATR	**Latur**	20.91	109	*e*P	P	16 35 22.0	+1.0
IKL	**Isikli**	21.00	302	*e*P	P	16 35 24.0	+2.1
MAMC	**Mammari**	21.02	299	P	P	16 35 24.6	+2.5
KSH	**Kashi**	21.08	48	*e*P	P	16 35 20.8	-1.8
KSH				*e*AP		16 35 25.0	
KSH				*e*XP		16 35 28.0	
KSH				*e*PP	PP	16 35 43.3	-2.4
KSH				*e*PPP	PPP	16 35 52.3	-2.5
KSH				*e*S	S	16 39 06.0	-6.2
KSH				*e*PCP	PcP	16 39 30.0	+0.7
KSH				AMB	AMB		
	comp=Z,110nm,0.9s,mb5.2						
KSH				LR	LR		
	comp=N,19µm,9.9s						
KSH				LR	LR		
	comp=E,17µm,11.5s						
SZAC	**Souni-Zanaja**	21.17	298	P	P	16 35 26.0	+2.4
AML	**Almayashu**	21.20	39	P	P	16 35 22.6	-1.2
	SNR=103						
AVNT	**Avonos**	21.20	309	*i* P	P	16 35 24.7	+0.9
SOC	**Sochi**	21.20	326	*c i*P	P	16 35 23.1	-0.8
SOC				*e*		16 35 43.3	
SOC				*i* S	S	16 39 19.3	+4.7
SOC				*e*SS	SS	16 39 43.4	-4.7
SOC				*e*SSS	SSS	16 39 55.0	-7.4
SOC				pmax	pmax		
	comp=Z,32nm,0.6s,mb4.8						
SOC				MLR	MLR		
	comp=Z,11µm,19.0s,MS5.3						
SOC	**Sochi**	21.20	326	*i* P	P	16 35 23.1	-0.8
	comp=Z,32nm,0.6s,mb4.8						
ALFC	**Alevga**	21.50	298	P	P	16 35 29.4	+2.4
	comp=Z,6.2nm,0.7s						
EKS2	**Erkin-Say**	21.59	38	P	P	16 35 27.2	-0.6
	SNR=162						
KVT	**Kavak**	21.62	316	*e*P	P	16 35 27.0	-1.1
KVT	**Kavak**	21.62	316	P	P	16 35 26.9	-1.2
PPCY	**Paphos**	21.63	298	P	P	16 35 29.8	+1.6
PTH	**Pithoragarh**	21.71	77	*e*P	P	16 35 31.0	+1.9
PTH				*e*x	x	16 39 49.0	
UCH	**Uchtor**	21.73	40	P	P	16 35 28.7	-0.4
	SNR=33						
ERMK	**Ermenek**	21.73	302	*i* P	P	16 35 28.8	-0.4
CDAG	**Cicekdag**	21.93	311	*i* P	P	16 35 30.9	-0.4
AAK	**Ala-Archa**	21.97	39	P	P	16 35 31.5	-0.1
	SNR=92						
AAK	**Ala-Archa**	21.97	39	*e*P	P	16 35 30.1	-1.5
	comp=Z,263nm,1.0s,mb5.6						
AAK	**Ala-Archa**	21.97	39	*d i*P	P	16 35 30.2	-1.4
AAK				pmax	pmax		
	comp=Z,116nm,1.2s,mb5.2						
AAK				MLR	MLR		
	comp=Z,5µm,12.0s,MS5.1						
CORM	**Corum**	22.04	313	*e*P	P	16 35 34.6	+2.4
KZA	**Kyzart**	22.06	41	P	P	16 35 34.9	+2.4
	SNR=127						
CTKT	**Corum**	22.16	314	*i* P	P	16 35 34.0	+0.4
FRU	**Bishkek**	22.17	39	*i* P	P	16 35 34.0	+0.4
FRU				*e*		16 36 01.0	
FRU				*i*		16 40 14.0	
FRU				pmax	pmax		
	comp=Z,120nm,2.0s,mb5.0						
FRU	**Bishkek**	22.17	39	*i* P	P	16 35 34.0	+0.4
	comp=Z,120nm,2.0s,mb5.0						
KBK	**Karagaybulak**	22.25	40	P	P	16 35 34.3	0.0
	SNR=48						
KAMT	**Kaman**	22.26	310	*e*P	P	16 35 35.8	+1.3
KAMT	**Kaman**	22.26	310	P	P	16 35 35.7	+1.2
CHMS	**Chumysh**	22.35	39	P	P	16 35 37.1	+1.7
	SNR=85						
USP	**Ospenovka**	22.39	38	P	P	16 35 36.4	+0.6
	SNR=66						
BRTR	**Keskin Array B**	22.48	311	P	P	16 35 37.9	+1.2
	comp=Z,32nm,0.6s,mb4.9,baz=128,slow=13,SNR=78						
BRTR				S	S	16 39 47.0	+8.8
	comp=Z,8.7nm,1.1s,baz=141,slow=18,SNR=4.4						
BRTR				ScP		16 43 10.1	
	comp=Z,2.4nm,0.6s,baz=140,slow=4.4,SNR=6.7						
BRTR	**Keskin Array B**	22.48	311	P	P	16 35 37.8	+1.1
BR131	**Keskin Array S**	22.48	311	*e*P	P	16 35 36.9	+0.2
	comp=Z,78nm,0.8s,mb5.2						
BR131	**Keskin Array S**	22.48	311	*e*P	P	16 35 36.9	+0.2
	comp=Z,78nm,0.8s,mb5.2						
BOYT	**Boyabat**	22.52	316	*i* P	P	16 35 37.4	+0.2
MNGI	**Mangalore**	22.57	124	*e*P	P	16 35 40.3	+2.5
MNGI				*e*x	x	16 39 50.3	
KONT	**Konya--Tatoy**	22.61	305	*e*P	P	16 35 40.6	+2.6
KONT	**Konya--Tatoy**	22.61	305	P	P	16 35 40.6	+2.5
BYBT	**Boyabat**	22.64	316	*e*P	P	16 35 37.2	-1.0
ULHL	**Ulahol**	22.75	42	P	P	16 35 41.0	+1.6
	SNR=13						
TKM2	**Tokmak 2**	22.78	40	P	P	16 35 40.6	+0.9
	SNR=78						
CANT	**Cankiri**	22.92	313	*e*P	P	16 35 41.8	+0.7
CANT	**Cankiri**	22.92	313	P	P	16 35 41.7	+0.7
ELDT	**Eldivan**	22.99	312	*i* P	P	16 35 41.6	-0.1
KDHN	**Kadinhani**	23.02	306	*i* P	P	16 35 44.4	+2.4
HYB	**Hyderabad**	23.05	109	*i* P	P	16 35 43.0	+0.5
	comp=Z,60nm,1.0s,mb5.0						
HYB				*e*S	S	16 39 56.0	+7.2
HYB				LR	LR	16 46 24.0	
	comp=Z,6.8nm,18.0s						
HYB	**Hyderabad**	23.05	109	*e*P	P	16 35 43.0	+0.5
	comp=Z,60nm,1.0s,mb5.0						
HYB				*e*S	S	16 39 56.0	+7.2
HYB	**Hyderabad**	23.05	109	*e*P	P	16 35 43.0	+0.5
HYB				*e*S	S	16 39 56.0	+7.2
HYB				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.0						
ANTO	**Ankara**	23.12	310	*e*P	P	16 35 45.2	+2.2
ANTO	**Ankara**	23.12	310	*e*P	P	16 35 43.5	+0.6
	comp=Z,287nm,0.9s,mb5.7						
ANTO	**Ankara**	23.12	310	*e*P	P	16 35 43.5	+0.5
ANTO				pmax	pmax		
	comp=Z,287nm,0.9s,mb5.7						
ANTO	**Ankara**	23.12	310	*e*P	P	16 35 43.5	+0.5
	comp=Z,287nm,0.9s,mb5.7						
LOD	**Lodumlu**	23.15	310	*e*P	P	16 35 44.0	+0.8
ANN	**Anapa**	23.22	325	*e*P	P	16 35 47.2	+3.3
ANN	**Anapa**	23.22	325	*d i*P	P	16 35 46.5	+2.6
ANN				*e*		16 35 55.5	
ANN				*i*		16 36 22.4	
ANN				pmax	pmax		
	comp=Z,158nm,1.2s,mb5.3						
ANN				MLR	MLR		
	comp=Z,4µm,15.0s,MS5.0						
ANN	**Anapa**	23.22	325	*i* P	P	16 35 46.5	+2.6
	comp=Z,158nm,1.2s,mb5.3						
KIZT	**Kizilcal**	23.33	307	*e*P	P	16 35 49.0	+4.0
BZK	**Bozkurt**	23.38	316	*e*P	P	16 35 45.2	-0.3
BZK	**Bozkurt**	23.38	316	P	P	16 35 45.1	-0.4
BALT	**Daday**	23.54	314	*i* P	P	16 35 47.7	+0.7
AKTO	**Aktyubinsk**	23.66	4	P	P	16 35 48.7	+0.7
	comp=Z,54nm,0.8s,mb5.0,baz=182,slow=9.2,SNR=50						
AKTO				S	S	16 40 03.3	+4.2
	comp=Z,8.7nm,1.1s,baz=102,slow=21,SNR=2.8						
AKTO				LR	LR	16 46 16.2	
	comp=Z,8µm,20.1s,MS5.2,slow=40						
AAA	**Alma-Ata**	23.78	41	*e*P	P	16 35 50.0	+0.7
AAA				*e*S	S	16 40 02.0	+0.7
AAA				pmax	pmax		
	comp=Z,1µm,3.6s						
AAA				smax			
	comp=N,7µm,9.6s						
AAA				MLR	MLR		
	comp=Z,25µm,14.5s,MS5.8						
AAA	**Alma-Ata**	23.78	41	*e*P	P	16 35 50.0	+0.7
	comp=Z,1µm,3.6s						
SAFT	**Safranbolu**	23.85	313	*e*P	P	16 35 52.0	+2.0
SAFT	**Safranbolu**	23.85	313	P	P	16 35 51.9	+1.9
ISP	**Isparta**	23.94	304	*e*P	P	16 35 52.0	+1.0
ISP	**Isparta**	23.94	304	*e*P	P	16 35 52.3	+1.3
	comp=Z,93nm,0.7s,mb5.3						
ISP	**Isparta**	23.94	304	*e*P	P	16 35 52.3	+1.3
ISP				pmax	pmax		
	comp=Z,93nm,0.7s,mb5.3						
SGKT	**Sivrigoynuk**	23.94	311	*i* P	P	16 35 51.8	+0.8
ELL	**Elmali**	24.05	301	*e*P	P	16 35 54.3	+2.2
ELL	**Elmali**	24.05	301	P	P	16 35 54.2	+2.1
KSL	**Kastellorizon**	24.14	299	*e*P	P	16 35 56.0	+3.1
TKTP	**Tekketepe**	24.15	304	*i* P	P	16 35 54.2	+1.2
ESKT	**Eskisehir**	24.32	308	*e*P	P	16 35 55.4	+0.7
ESKT	**Eskisehir**	24.32	308	*i* P	P	16 35 55.0	+0.4
GOLH	**Golhisar**	24.46	302	*i* P	P	16 35 57.5	+1.5
MDU	**Mudurnu**	24.47	310	*e*P	P	16 35 55.4	-0.7
ALT	**Altintas**	24.67	306	*e*P	P	16 36 01.1	+3.0
ALT	**Altintas**	24.67	306	P	P	16 36 01.0	+3.0
KOLN	**Koldanda**	24.73	81	*e*P	P	16 35 59.9	+1.1
	comp=Z,199nm,1.1s,mb5.6						
BORA	**Eskisehir**	24.75	308	*i* P	P	16 35 59.4	+0.7
HENT	**Hendek**	24.84	311	*i* P	P	16 35 59.5	-0.1
DNZL	**Cakiroluk**	24.99	302	*i* P	P	16 36 03.8	+2.7
GPA	**Golpazari**	25.02	309	*e*P	P	16 36 02.2	+0.9
DENT	**Denizli**	25.02	303	*e*P	P	16 36 02.2	+0.8
SIM	**Simferopol’**	25.08	322	P	P	16 36 03.0	+1.1
SIM	**Simferopol’**	25.08	322	*de*P	P	16 36 02.8	+0.9
SIM				*e*S	S	16 40 24.0	+0.6
SIM				pmax	pmax		
	comp=Z,92nm,1.1s,mb5.2						
SIM				MLR	MLR		
	comp=Z,3µm,15.0s,MS4.9						
GDZ	**Gediz**	25.14	306	*i* P	P	16 36 02.5	0.0
YER	**Yerkesik**	25.41	301	*e*P	P	16 36 02.2	-2.9
MANT	**Manisa**	25.61	304	*i* P	P	16 36 08.8	+1.8
GKN	**Gorkha**	25.63	81	*e*P	P	16 36 08.3	+1.0
	comp=Z,187nm,1.1s,mb5.5						
HRT	**Hereke**	25.68	310	*e*P	P	16 36 06.9	-0.7
HRT	**Hereke**	25.68	310	P	P	16 36 07.9	+0.3
ULDT	**Uludag**	25.78	308	*i* P	P	16 36 08.5	0.0
YLV	**Yalova**	25.78	309	*e*P	P	16 36 09.0	+0.5
AYDN	**Tasoluk**	25.86	302	*i* P	P	16 36 10.8	+1.5
BDRM	**Kayabasi**	26.04	300	*i* P	P	16 36 14.8	+3.9
DMN	**Daman**	26.08	81	*e*P	P	16 36 12.3	+0.9
	comp=Z,184nm,0.9s,mb5.6						
KKN	**Kakani**	26.22	81	*e*P	P	16 36 13.7	+1.0
	comp=Z,215nm,1.0s,mb5.6						
KKN	**Kakani**	26.22	81	*e*P	P	16 36 13.7	+1.0
KKN				pmax	pmax		
	comp=Z,108nm,1.0s,mb5.3						
AKS	**Akhisar**	26.29	304	*e*P	P	16 36 15.9	+2.6
AKS	**Akhisar**	26.29	304	P	P	16 36 15.8	+2.6
PKI	**Pulchoki**	26.35	82	*e*P	P	16 36 14.5	+0.6
	comp=Z,265nm,1.3s,mb5.6						
PKI	**Pulchoki**	26.35	82	*e*P	P	16 36 14.5	+0.6
PKI				pmax	pmax		
	comp=Z,132nm,1.3s,mb5.3						
BTOK	**Tokmak**	26.43	306	*i* P	P	16 36 15.0	+0.5
VRHR	**Novokhopersk**	26.54	340	*e*P	P	16 36 15.0	-0.4
VRHR				pmax	pmax		
	comp=Z,150nm,0.7s,mb5.6						
VRHR				pmax	pmax		
	comp=N,90nm,1.0s						
VRHR				pmax	pmax		
	comp=E,30nm,0.6s						
KDAG	**Bornova**	26.54	303	*i* P	P	16 36 17.9	+2.3
ZKR	**Zakros**	26.59	295	*e*P	P	16 36 19.9	+3.8
ELBA	**Catalca**	26.67	309	*i* P	P	16 36 18.3	+1.6
MDRS	**Chennai**	26.70	116	*e*x	x	16 33 29.7	
BNT	**Bandirma**	26.72	307	*e*P	P	16 36 13.6	-3.6
GUN	**Gumba**	26.73	81	*e*P	P	16 36 18.1	+0.6
	comp=E,219nm,0.9s,mb5.7						
MRMT	**Marmara Adasi**	27.04	308	*e*P	P	16 36 18.6	-1.6
NPS	**Neapolis**	27.10	296	*e*P	P	16 36 24.0	+3.2
TRD	**Trivandrum**	27.10	128	*e*x	x	16 37 03.6	
TRD				*e*x	x	16 41 19.6	
AYVA	**Ayvalik**	27.25	305	*i* P	P	16 36 24.5	+2.4
BOK	**Bokaro**	27.36	90	*e*P	P	16 36 25.0	+1.8
BOK				AMb	AMB	16 36 28.6	
	comp=Z,117nm,2.1s,mb5.0						
SANT	**Santorini**	27.43	298	*e*P	P	16 36 25.1	+1.4
VRSR	**Storozhevoye**	27.44	337	*e*P	P	16 36 24.5	+0.8
VRSR				*e*S	S	16 41 02.5	+0.3
VRSR				*e*SS	SS	16 42 20.9	+1.4
VRSR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VRSR				pmax	pmax		

	comp=N,10.0nm,0.9s						
VRSR				pmax	pmax		
	comp=E,7.0nm,0.9s						
VRSR				smax			
	comp=N,10.0nm,1.4s						
VRSR				smax			
	comp=Z,7.0nm,1.7s						
VRSR				smax			
	comp=E,10.0nm,1.2s						
VRSR				MLR	MLR		
	comp=Z,460nm,19.0s						
VRSR				MLR	MLR		
	comp=N,400nm,20.0s						
VRSR				MLR	MLR		
	comp=E,110nm,11.0s						
APE	**Apeiranthos**	**27.52**	**299**	*e*P	**P**	**16 36 27.1**	**+2.5**
APE	**Apeiranthos**	**27.52**	**299**	⇑P	**P**	**16 36 27.1**	**+2.5**
IDI	**Anoyia**	**27.69**	**295**	P	**P**	**16 36 26.6**	**+0.5**
	comp=E,98nm,0.7s,mb5.6,baz=95,slow=9.3,SNR=50						
SIVA	**Sivas**	**27.71**	**295**	*e*P	**P**	**16 36 29.9**	**+3.5**
VOR	**Voronezh**	**27.87**	**338**	*e*P	**P**	**16 36 26.5**	**-1.1**
VOR				*e*		16 36 43.0	
VOR				*e*S	**S**	**16 41 08.5**	**-0.6**
VOR				pmax	pmax		
	comp=Z,150nm,1.0s,mb5.6						
VOR				pmax	pmax		
	comp=N,100nm,1.3s						
VOR				smax			
	comp=E,170nm,1.7s						
VOR				smax			
	comp=N,200nm,1.5s						
PSN	**Preselentsi**	**27.94**	**314**	*i* P	**P**	**16 36 28.0**	**-0.3**
EDRB	**Edirne**	**28.11**	**310**	*e*P	**P**	**16 36 28.8**	**-1.0**
EDRB	**Edirne**	**28.11**	**310**	P	**P**	**16 36 28.3**	**-1.6**
TIRR	**Tirgusor**	**28.17**	**316**	⇑P	**P**	**16 36 31.1**	**+0.7**
TIRR	**Tirgusor**	**28.17**	**316**	⇑P	**P**	**16 36 31.1**	**+0.7**
PRD	**Provadia**	**28.23**	**313**	P	**P**	**16 36 32.5**	**+1.6**
ALN	**Alexandroupoli**	**28.25**	**307**	*e*P	**P**	**16 36 31.7**	**+0.6**
GVD	**Gavdhos**	**28.27**	**294**	*e*P	**P**	**16 36 28.6**	**-2.8**
BRVK	**Borovoye**	**28.37**	**19**	*e*P	**P**	**16 36 31.2**	**-0.8**
	comp=N,37nm,0.9s,mb5.0						
BRVK				LR	LR		
	comp=Z,796nm,19.0s,MS4.3						
BRVK	**Borovoye**	**28.37**	**19**	*e*P	**P**	**16 36 31.2**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.0						
BRVK				MLR	MLR		
	comp=Z,796nm,19.0s,MS4.3						
BVAR	**Borovoye Array**	**28.37**	**19**	P	**P**	**16 36 31.2**	**-0.9**
	comp=Z,71nm,0.8s,mb5.3,baz=202,slow=8.0,SNR=88						
BVAR				PcP	PcP	16 39 43.6	-1.3
	comp=Z,2.2nm,0.4s,baz=201,slow=3.0,SNR=4.3						
BVAR				ScP		16 43 25.5	
	comp=Z,2.9nm,0.8s,baz=225,slow=4.2,SNR=3.6						
RDO	**Rodhopi**	**28.69**	**308**	P	**P**	**16 36 36.0**	**+0.9**
CFR	**Carcaliu**	**28.70**	**317**	⇓P	**P**	**16 36 33.1**	**-2.0**
CFR	**Carcaliu**	**28.70**	**317**	⇓P	**P**	**16 36 33.1**	**-2.1**
MKAR	**Makanchi Array**	**28.91**	**39**	P	**P**	**16 36 35.9**	**-1.1**
	comp=Z,17nm,0.9s,mb4.8,baz=223,slow=7.0,SNR=67						
MKAR				LR	LR	16 49 30.5	
	comp=Z,5µm,20.3s,MS5.1,baz=256,slow=39						
CHKZ	**Chkalovo**	**29.01**	**18**	*e*P	**P**	**16 36 36.9**	**-1.0**
	comp=Z,30nm,0.9s,mb5.0						
CHKZ	**Chkalovo**	**29.01**	**18**	*e*P	**P**	**16 36 36.9**	**-0.9**
CHKZ				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.0						
KIS	**Kishinev**	**29.27**	**321**	*e*P	**P**	**16 36 40.0**	**-0.2**
KIS				*e*		16 37 50.0	
KIS				*e*S	**S**	**16 41 30.0**	**-1.7**
AOS	**Alonnisos**	**29.30**	**303**	*e*P	**P**	**16 36 41.8**	**+1.2**
VLI	**Veliai**	**29.49**	**298**	*e*P	**P**	**16 36 43.1**	**+0.8**
KURK	**Kurchatov**	**29.56**	**30**	*e*P	**P**	**16 36 41.5**	**-1.4**
	comp=Z,30nm,0.9s,mb5.0						
KURK	**Kurchatov**	**29.56**	**30**	*d* *i*P	**P**	**16 36 41.8**	**-1.0**
ARU	**Arti**	**29.67**	**3**	*e*P	**P**	**16 36 42.5**	**-1.3**
	comp=Z,32nm,0.9s,mb5.0						
ARU				LR	LR		
	comp=Z,1µm,19.0s,MS4.6						
ARU	**Arti**	**29.67**	**3**	⇓*i*P	**P**	**16 36 45.6**	**+1.9**
ARU				*e*		16 37 39.6	
ARU				*e*PPP	PPP	16 37 49.3	-4.6
ARU				*e*		16 39 46.7	
ARU				*e*S	**S**	**16 41 42.4**	**+4.5**
ARU				*e*SS	SS	16 43 15.0	+3.1
ARU				*e*SSS	SSS	16 43 30.5	-2.1
ARU				*e*		16 47 21.3	
ARU				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
ARU				MLR	MLR		
	comp=Z,4µm,18.0s,MS5.1						
ARU				MLR	MLR		
	comp=N,4µm,17.0s,MS5.2						
ARU				MLR	MLR		
	comp=E,3µm,17.0s,MS5.2						
CAL	**Calcutta**	**29.84**	**91**	*e*x	x	16 37 58.8	
CAL				*e*x	x	16 43 14.7	
XOR	**Xorichti**	**29.87**	**303**	*e*P	**P**	**16 36 47.9**	**+2.2**
NVR	**Nevrokopi**	**29.95**	**307**	*e*P	**P**	**16 36 46.5**	**+0.1**
MMB	**Musomiste**	**30.12**	**308**	*i* P	**P**	**16 36 47.3**	**-0.7**
SOH	**Sokhos**	**30.15**	**306**	*e*P	**P**	**16 36 51.0**	**+2.8**
SVE	**Sverdlovsk**	**30.20**	**5**	*e*P	**P**	**16 36 48.4**	**0.0**
SVE				*e*		16 37 41.6	
SVE				*e*PPP	PPP	16 38 00.0	-1.3
SVE				*e*		16 43 26.0	
SVE				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.1						
SVE				MLR	MLR		
	comp=E,2µm,12.0s						
SVE				MLR	MLR		
	comp=Z,7µm,12.0s,MS5.5						
MLR	**Muntele Rosu**	**30.20**	**316**	⇓P	**P**	**16 36 49.6**	**+1.0**
MLR	**Muntele Rosu**	**30.20**	**316**	⇓P	**P**	**16 36 49.6**	**+1.0**
ITM	**Ithomi**	**30.37**	**298**	*e*P	**P**	**16 36 49.6**	**-0.5**
THE	**Thessaloniki**	**30.38**	**305**	*e*P	**P**	**16 36 52.3**	**+2.1**
AGG	**Agios Georgios**	**30.43**	**302**	*e*P	**P**	**16 36 50.3**	**-0.4**
KNT	**Kendrikon**	**30.58**	**306**	*e*P	**P**	**16 36 52.3**	**+0.3**
PECR	**Pechory**	**30.67**	**347**	*i* P	**P**	**16 36 50.0**	**-2.5**
PECR				*e*S	**S**	**16 41 52.4**	**-1.3**
PECR				*e*SSS	SSS	16 44 00.0	+3.1
PECR				MLR	MLR		
	comp=N,4µm,16.0s,MS5.2						
PECR				MLR	MLR		
	comp=E,2µm,16.0s,MS5.2						
PECR				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.0						
KKB	**Krupnik**	**30.67**	**308**	*i* P	**P**	**16 36 52.5**	**-0.3**
VOIR		**30.74**	**315**	⇓P	**P**	**16 36 53.9**	**+0.6**
VOIR		**30.74**	**315**	⇓P	**P**	**16 36 53.9**	**+0.6**
EVR	**Evrytania**	**30.80**	**302**	*e*P	**P**	**16 36 53.1**	**-0.8**
VTS	**Vitosha**	**30.83**	**309**	P	**P**	**16 36 54.0**	**-0.1**
WMQ	**Urumqi**	**30.84**	**48**	P	**P**	**16 36 54.5**	**+0.3**
WMQ				XP	sP	16 37 01.3	+2.5
WMQ				PP	PP	16 37 56.0	+0.4
WMQ				PCP	PcP	16 39 52.0	+0.7
WMQ				S	**S**	**16 41 57.0**	**+0.4**
WMQ				XS		16 42 07.0	
WMQ				SS	SS	16 43 40.0	+0.6
WMQ				SCS	ScS	16 47 31.0	+3.0
WMQ				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.1						
WMQ				AMB	AMB		
	comp=Z,380nm,4.0s						
WMQ				LR	LR		
	comp=N,8µm,18.2s,MS5.5						
WMQ				LR	LR		
	comp=E,7µm,18.8s,MS5.5						
WMQ				LR	LR		
	comp=Z,7µm,20.2s,MS5.3						
VAY	**Valandovo**	**30.87**	**306**	*e*P	**P**	**16 36 54.4**	**-0.1**
VAY				*i*	pP	16 36 55.8	-1.9
VAY	**Valandovo**	**30.87**	**306**	*e*P	**P**	**16 36 54.4**	**-0.1**
VAY				*i*	pP	16 36 55.8	-1.8
GRG	**Griva**	**30.88**	**306**	*e*P	**P**	**16 36 56.7**	**+2.1**
RLS	**Riolos of Patr**	**30.89**	**300**	*e*P	**P**	**16 36 56.3**	**+1.6**
LSA	**Lhasa**	**31.23**	**76**	P	**P**	**16 36 58.5**	**+0.7**
LSA				AP	pP	16 37 07.3	+6.4
LSA				XP	sP	16 37 11.5	+9.2
LSA				PCP	PcP	16 39 52.0	-0.5
LSA				S	**S**	**16 42 01.0**	**-1.8**
LSA				XS		16 42 18.8	
LSA				SCP		16 43 33.0	
LSA				PCS		16 43 36.0	
LSA				SCS	ScS	16 47 30.5	+0.4
LSA				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
LSA				LR	LR		
	comp=N,4µm,26.9s						
LSA				LR	LR		
	comp=E,7µm,15.8s						
LSA				LR	LR		
	comp=Z,8µm,18.2s						
LSA	**Lhasa**	**31.23**	**76**	*e*P	**P**	**16 36 58.0**	**+0.2**
	comp=Z,31nm,1.0s,mb5.1						
LSA	**Lhasa**	**31.23**	**76**	*e*P	**P**	**16 36 58.0**	**+0.2**
LSA				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.1						
AKASG	**Malin Array Be**	**31.28**	**327**	P	**P**	**16 36 56.2**	**-1.8**
	comp=Z,27nm,0.5s,mb5.3,baz=133,slow=8.6,SNR=218						
AKASG				PcP	PcP	16 39 52.5	+0.1
	comp=Z,4.3nm,0.7s,baz=120,slow=2.2,SNR=4.5						
AKASG	**Malin Array Be**	**31.28**	**327**	P	**P**	**16 36 56.2**	**-1.8**
AKASG				PcP	PcP	16 39 52.5	+0.1
MSEY	**Mahe Island**	**31.30**	**181**	*e*P	**P**	**16 36 58.8**	**+0.2**
	comp=Z,22nm,0.6s,mb5.2						
OBN	**Obninsk**	**31.56**	**339**	*e*P	**P**	**16 36 59.3**	**-1.1**
	comp=Z,115nm,0.8s,mb5.8						
OBN	**Obninsk**	**31.56**	**339**	*d* *i*P	**P**	**16 36 59.5**	**-1.0**
OBN				pmax	pmax		
	comp=Z,31nm,0.5s,mb5.4						
FNA	**Florina**	**31.58**	**305**	*e*P	**P**	**16 37 01.6**	**+0.8**
BURAR	**Bucovina Array**	**31.67**	**319**	⇑P	**P**	**16 37 01.3**	**-0.2**
BURAR	**Bucovina Array**	**31.67**	**319**	⇑P	**P**	**16 37 01.2**	**-0.3**
BIA	**Bitola**	**31.68**	**305**	*e*P	**P**	**16 37 02.1**	**+0.4**
BIA				*i*	pP	16 37 03.6	-1.3
BIA	**Bitola**	**31.68**	**305**	*e*P	**P**	**16 37 02.1**	**+0.4**
BIA				*i*	pP	16 37 03.6	-1.2
MOS	**Moscow**	**31.76**	**340**	*e*P	**P**	**16 37 00.4**	**-1.8**
MOS	**Moscow**	**31.76**	**340**	*e*P	**P**	**16 37 01.4**	**-0.8**
MOS				*e*S	**S**	**16 42 10.7**	**-0.1**
MOS				pmax	pmax		
	comp=Z,105nm,1.4s,mb5.5						
MOS				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.1						
SKO	**Skopje**	**31.87**	**307**	*e*P	**P**	**16 37 03.5**	**+0.2**
SKO				*i*	pP	16 37 05.4	-1.0
SKO	**Skopje**	**31.87**	**307**	*e*P	**P**	**16 37 03.5**	**+0.2**
SKO				*i*	pP	16 37 05.4	-1.1
OHR	**Ohrid**	**32.09**	**305**	*e*P	**P**	**16 37 04.7**	**-0.5**
OHR				*i*		16 37 05.8	
OHR	**Ohrid**	**32.09**	**305**	*e*P	**P**	**16 37 04.7**	**-0.5**
OHR				*i*	pP	16 37 05.9	-2.5
SHL	**Shillong**	**32.37**	**84**	*e*P	**P**	**16 37 08.0**	**+0.2**
SHL				*e*x	x	16 42 18.0	
SOKR	**Solikamsk**	**32.76**	**1**	*d* *i*P	**P**	**16 37 11.6**	**+0.8**
SOKR						16 38 19.7	
SOKR				S	**S**	**16 42 28.6**	**+2.3**
SOKR				SSS	SSS	16 44 41.5	-6.5
SOKR				pmax	pmax		
	comp=Z,90nm,0.9s,mb5.7						
SOKR				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.2						
DRGR		**32.80**	**316**	⇓P	**P**	**16 37 10.0**	**-1.3**
DRGR		**32.80**	**316**	⇓P	**P**	**16 37 10.0**	**-1.3**
DRGR		**32.80**	**316**	P	**P**	**16 37 10.8**	**-0.5**
QSH	**Qafa e Shtames**	**32.85**	**306**	*i* p	**P**	**16 37 10.3**	**-1.5**
QSH	**Qafa e Shtames**	**32.85**	**306**	*e*P	**P**	**16 37 10.3**	**-1.5**
PUK	**Puka**	**32.99**	**307**	*i* p	**P**	**16 37 10.2**	**-2.9**
BZS	**Buzias**	**33.01**	**314**	⇑P	**P**	**16 37 12.9**	**-0.2**
BZS	**Buzias**	**33.01**	**314**	⇑P	**P**	**16 37 12.9**	**-0.3**
BZS	**Buzias**	**33.01**	**314**	P	**P**	**16 37 13.7**	**+0.6**
KMBO	**Kilima Mbogo**	**33.01**	**216**	P	**P**	**16 37 14.2**	**+0.7**
	comp=Z,27nm,0.9s,mb5.2,baz=28,slow=12,SNR=32						
KMBO				LR	LR	16 50 45.3	
	comp=Z,6µm,18.3s,MS5.3,baz=27,slow=36						
SDA	**Shkodra**	**33.28**	**307**	*e*p	**P**	**16 37 18.0**	**+2.4**
BEO	**Belgrade**	**33.47**	**312**	⇑*i*P	**P**	**16 37 18.5**	**+1.2**
LVV	**L'vov**	**33.48**	**322**	*e*P	**P**	**16 37 15.3**	**-1.9**
LVV				*e*S	**S**	**16 42 32.7**	**-5.0**
NVSS	**Nova Varos 2**	**33.55**	**309**	⇑*i*P	**P**	**16 37 18.4**	**+0.4**
UZH	**Uzhgorod**	**33.88**	**319**	*e*P	**P**	**16 37 21.0**	**+0.3**
UZH				*e*S	**S**	**16 42 43.0**	**-0.9**
KOLS	**Kolonicke sedl**	**34.03**	**319**	*i* P	**P**	**16 37 22.5**	**+0.4**
KWP	**Kalwaria**	**34.12**	**321**	*e*P	**P**	**16 37 22.1**	**-0.7**
KWP				*e*pP	pP	16 37 24.5	-1.5
KWP				MLR	MLR	16 54 31.3	
	comp=Z,4µm,20.8s,MS5.1						
KWP	**Kalwaria**	**34.12**	**321**	*e*P	**P**	**16 37 22.1**	**-0.7**
KWP				*e*pP	pP	16 37 24.5	-1.5
MNK	**Minsk**	**34.42**	**331**	⇑*i*P	**P**	**16 37 21.0**	**-4.3**
MNK				*e*S	**S**	**16 42 48.0**	**-4.2**
MNK				pmax	pmax		
	comp=Z,470nm,1.0s,mb6.4						
NVS	**Novosibirsk**	**34.45**	**28**	⇑*i*P	**P**	**16 37 23.8**	**-1.8**
NVS				*i* S	**S**	**16 42 50.6**	**-2.0**
NVS				pmax	pmax		
	comp=E,23nm,1.0s						
NVS				pmax	pmax		
	comp=Z,66nm,1.0s,mb5.5						
NVS				pmax	pmax		
	comp=N,48nm,1.2s						
NVS				smax			
	comp=N,213nm,1.9s						
CRVS	**Cervenica-Dubn**	**34.49**	**319**	*i* P	**P**	**16 37 26.0**	**0.0**
CRVS				*e*S	**S**	**16 42 45.9**	**-7.5**
CRVS				*e*L		16 52 37.4	
STHS	**Stebnicka Huta**	**34.86**	**320**	*e*P	**P**	**16 37 29.5**	**+0.4**
KECS	**Kecovo**	**34.89**	**318**	*i* P	**P**	**16 37 29.2**	**-0.2**
PSZ	**Piszkesteto**	**35.01**	**317**	⇑*i*P	**P**	**16 37 30.2**	**-0.2**
PSZ	**Piszkesteto**	**35.01**	**317**	⇑*i*P	**P**	**16 37 30.1**	**-0.3**
PSZ	**Piszkesteto**	**35.01**	**317**	P	**P**	**16 37 30.3**	**-0.1**
PKSM	**Moragy**	**35.16**	**313**	⇑*i*P	**P**	**16 37 31.4**	**-0.3**
PKSM	**Moragy**	**35.16**	**313**	P	**P**	**16 37 31.5**	**-0.2**
PKS8	**Sarbogard**	**35.37**	**314**	*e*P	**P**	**16 37 33.1**	**-0.4**
MTTG	**Motta San Giov**	**35.38**	**299**	P	**P**	**16 37 36.8**	**+3.1**
NIE	**Niedzica**	**35.40**	**319**	*e*P	**P**	**16 37 33.8**	**0.0**
RHK1	**Bakonya**	**35.49**	**313**	⇓*e*P	**P**	**16 37 33.9**	**-0.6**
CUC	**Castrocucco**	**35.56**	**302**	P	**P**	**16 37 39.1**	**+3.9**
AGST	**Augusta-Monte**	**35.68**	**297**	P	**P**	**16 37 38.5**	**+2.2**
MGR	**Morigerati**	**35.78**	**302**	P	**P**	**16 37 39.9**	**+2.8**
	comp=N,64nm,0.7s,mb5.7						
KLMR	**Klimovskoe**	**35.79**	**346**	*d* *i*P	**P**	**16 37 35.4**	**-1.5**
KLMR				*e*S	**S**	**16 43 12.6**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,200nm,1.3s,mb5.9						
KLMR				pmax	pmax		
	comp=Z,100nm,6.8s						
KLMR				smax			
	comp=E,800nm,4.6s						
KLMR				MLR	MLR		
	comp=Z,4µm,17.0s,MS5.2						
VYHS	**Vyhne**	**35.89**	**317**	*e*P	**P**	**16 37 36.9**	**-1.0**
VYHS				*i* S	**S**	**16 43 19.3**	**+4.3**
VYHS				*e*L		16 53 46.0	
SRO	**Srobarova**	**35.95**	**316**	*i* P	**P**	**16 37 38.5**	**+0.1**
LIKS	**Likavka**	**35.95**	**318**	*e*P	**P**	**16 37 38.0**	**-0.5**
OJC	**Ojcow**	**36.06**	**320**	*e*P	**P**	**16 37 38.7**	**-0.6**
SUW	**Suwalki**	**36.24**	**327**	*e*P	**P**	**16 37 39.9**	**-0.9**
SUW				*e*pP	pP	16 37 42.2	-1.8
SUW				MLR	MLR	16 56 02.6	
	comp=Z,3µm,20.2s,MS5.1						
WAR	**Warsaw**	**36.36**	**324**	*e*P	**P**	**16 37 41.8**	**0.0**
WAR				*e*PcP	PcP	16 40 06.7	0.0
WAR				MLR	MLR	16 54 59.9	
	comp=Z,8µm,22.7s,MS5.5						
WAR	**Warsaw**	**36.36**	**324**	*e*P	**P**	**16 37 41.8**	**0.0**
WAR				*e*PcP	PcP	16 40 06.7	0.0
WAR				LR	LR		
	comp=Z,8µm,22.7s,MS5.5						
JAVC	**Velka Javorina**	**36.74**	**317**	P	**P**	**16 37 46.0**	**+0.9**
SMOL	**Smolenice**	**36.76**	**316**	*e*P	**P**	**16 37 45.4**	**+0.2**
KOGS	**Kog**	**36.80**	**313**	*i* P	**P**	**16 37 45.4**	**-0.2**
OKC	**Ostrava-Krasne**	**36.85**	**319**	⇑*i*P	**P**	**16 37 45.4**	**-0.6**
OKC				AMS	AMS	16 55 20.0	
	comp=Z,5µm,16.9s						
SGG	**Gregorio Mates**	**36.87**	**304**	P	**P**	**16 37 47.6**	**+1.3**
RAC	**Raciborz**	**36.93**	**319**	*e*P	**P**	**16 37 46.2**	**-0.4**
RAC				LMN		16 53 19.5	
RAC				LME		16 54 03.5	
RAC				MLR	MLR	16 55 40.4	
	comp=Z,5µm,16.6s,MS5.3						
RAC	**Raciborz**	**36.93**	**319**	*e*P	**P**	**16 37 46.2**	**-0.4**
RAC				LR	LR		
	comp=Z,4µm,23.7s,MS5.2						
CII	**Carovilli**	**36.99**	**305**	P	**P**	**16 37 51.1**	**+3.9**
SOP	**Sopron**	**37.00**	**315**	P	**P**	**16 37 46.7**	**-0.6**
MORC	**Moravsky Berou**	**37.18**	**318**	P	**P**	**16 37 47.9**	**-0.9**
MORC	**Moravsky Berou**	**37.18**	**318**	⇑P	**P**	**16 37 48.4**	**-0.4**
MORC	**Moravsky Berou**	**37.18**	**318**	*e*P	**P**	**16 37 47.9**	**-0.9**
CRJA	**Costa Raja**	**37.48**	**298**	P	**P**	**16 37 55.3**	**+3.9**
	comp=Z,297nm,1.0s,mb6.1						
MMGO	**Monte Magaggia**	**37.49**	**298**	P	**P**	**16 37 54.9**	**+3.4**
	comp=Z,96nm,0.7s,mb5.7						
ARSA	**Arzberg**	**37.52**	**314**	*i* P	**P**	**16 37 51.6**	**-0.1**
	comp=Z,12nm,0.6s,mb4.8,SNR=7.4						
VISS	**Visnje**	**37.54**	**311**	*e*P	**P**	**16 37 52.0**	**+0.2**
VRAC	**Vranov**	**37.57**	**317**	P	**P**	**16 37 52.4**	**+0.4**
VRAC	**Vranov**	**37.57**	**317**	*e*P	**P**	**16 37 51.6**	**-0.4**
VSU	**Vasula**	**37.59**	**335**	⇑*i*P	**P**	**16 37 51.3**	**-0.8**
KRUC	**Moravsky**	**37.60**	**317**	P	**P**	**16 37 52.0**	**-0.3**
TERO	**Teramo**	**37.66**	**306**	P	**P**	**16 37 55.8**	**+2.9**
PTQR	**Pietraquaria**	**37.70**	**305**	P	**P**	**16 37 56.1**	**+2.9**
AQU	**L'Aquila**	**37.76**	**305**	P	**P**	**16 37 55.9**	**+2.2**
	comp=Z,107nm,0.9s,mb5.6						
AQU	**L'Aquila**	**37.76**	**305**	P	**P**	**16 37 55.9**	**+2.2**
AQU				pmax	pmax		
	comp=Z,107nm,0.9s,mb5.6						
CEY	**Cerknica**	**37.80**	**311**	*e*P	**P**	**16 37 54.4**	**+0.4**
LJU	**Ljubljana**	**37.82**	**312**	*e*P	**P**	**16 37 54.0**	**-0.2**
DPC	**Dobruska-Polom**	**38.13**	**319**	⇑*i*P	**P**	**16 37 56.4**	**-0.4**
DPC				AMS	AMS	16 53 50.0	
	comp=Z,5µm,26.3s						
TREC	**Trest**	**38.24**	**317**	⇑*i*P	**P**	**16 37 57.5**	**-0.2**
TREC				*e*S	**S**	**16 43 50.1**	**-0.8**
VOY	**Vojsko**	**38.24**	**311**	*e*P	**P**	**16 37 57.7**	**0.0**
VOY				*e*	pP	16 37 59.9	-1.0
VOY				*e*		16 38 18.2	
TRI	**Trieste**	**38.24**	**311**	P	**P**	**16 37 57.2**	**-0.5**
	comp=Z,426nm,0.8s,mb6.2						
TRI	**Trieste**	**38.24**	**311**	P	**P**	**16 37 57.2**	**-0.5**
TRI				pmax	pmax		
	comp=Z,426nm,0.8s,mb6.2						
ARV	**Arcevia**	**38.31**	**307**	P	**P**	**16 37 58.9**	**+0.6**
	comp=Z,124nm,1.4s,mb5.5						
KSP	**Ksiaz**	**38.35**	**319**	*e*P	**P**	**16 37 58.2**	**-0.4**
KSP				*e*pP	pP	16 38 00.4	-1.3
KSP				MLR	MLR	16 54 31.7	
	comp=Z,11µm,24.3s,MS5.6						
KSP	**Ksiaz**	**38.35**	**319**	⇓*e*P	**P**	**16 37 58.0**	**-0.5**
KSP				*e*pP	pP	16 38 00.2	-1.6
KSP				*e*S	**S**	**16 43 48.0**	**-4.5**
KSP				*e*SS	SS	16 46 47.0	+15
KSP				LR	LR		
	comp=Z,13µm,24.3s,MS5.7						
KSP	**Ksiaz**	**38.35**	**319**	⇓*e*P	**P**	**16 37 58.0**	**-0.5**
KSP				*e*S	**S**	**16 43 48.0**	**-4.5**
KSP				MLR	MLR		
	comp=Z,13µm,24.3s,MS5.7						
UPC	**Upice**	**38.38**	**319**	⇑*i*P	**P**	**16 37 58.4**	**-0.4**
FSSB	**Fossombrone**	**38.47**	**307**	P	**P**	**16 38 00.5**	**+0.9**
MOA	**Molln**	**38.52**	**314**	⇑*i*P	**P**	**16 37 59.9**	**-0.2**
	comp=Z,33nm,0.7s,mb5.2,SNR=40						
MOA	**Molln**	**38.52**	**314**	P	**P**	**16 37 59.0**	**-1.0**
PIEI	**Pieia**	**38.61**	**307**	P	**P**	**16 38 02.8**	**+2.0**
GTA	**Gaotai**	**38.62**	**60**	*e*P	**P**	**16 38 01.3**	**+0.4**
GTA				AP	pP	16 38 06.3	+2.1
GTA				XP	sP	16 38 08.5	+3.0
GTA				PP	PP	16 39 33.8	+0.8
GTA				PCP	PcP	16 40 15.5	+1.7
GTA				S	**S**	**16 43 57.3**	**+0.6**
GTA				SCP		16 43 59.5	
GTA				PCS		16 44 00.3	
GTA				SS	SS	16 46 37.5	-0.1
GTA				SCS	ScS	16 48 10.0	+0.4
GTA				AMB	AMB		
	comp=Z,70nm,1.4s,mb5.2						
GTA				AMB	AMB		
	comp=Z,380nm,6.5s						
GTA				LR	LR		
	comp=N,5µm,17.9s,MS5.4						
GTA				LR	LR		
	comp=E,3µm,19.0s,MS5.4						
GTA				LR	LR		
	comp=Z,6µm,17.1s,MS5.5						
PTCC	**Patocco-Chiusa**	**38.70**	**312**	P	**P**	**16 38 01.4**	**-0.2**
GMNA	**Gemona**	**38.74**	**311**	P	**P**	**16 38 01.3**	**-0.6**
BADI	**Badiali**	**38.81**	**307**	P	**P**	**16 38 04.4**	**+1.9**
KBA	**Koelnbreinsper**	**38.89**	**313**	*i* P	**P**	**16 38 03.0**	**-0.1**
	comp=Z,52nm,0.6s,mb5.4,SNR=29						
CRE	**Caprese Michel**	**39.04**	**307**	P	**P**	**16 38 05.0**	**+0.6**
	comp=Z,28nm,0.6s,mb5.2						
CRE	**Caprese Michel**	**39.04**	**307**	P	**P**	**16 38 05.0**	**+0.6**
CRE				pmax	pmax		
	comp=Z,29nm,0.6s,mb5.2						
PRU	**Pruhonice**	**39.06**	**318**	⇑*i*P	**P**	**16 38 03.7**	**-0.8**
PRU				*e*x	x	16 38 14.2	
PRU				*e*S	**S**	**16 44 00.5**	**-2.8**
PRU				AMS	AMS	16 56 00.0	
	comp=Z,4µm,19.2s						
FVI	**Forni Avoltri**	**39.13**	**312**	P	**P**	**16 38 03.4**	**-1.8**
SFI	**Santa Sofia**	**39.17**	**307**	P	**P**	**16 38 07.0**	**+1.5**
GEC2	**GERESS Array S**	**39.19**	**316**	*e*P	**P**	**16 38 04.9**	**-0.7**
	comp=Z,30nm,1.2s,mb4.9						
GEC2	**GERESS Array S**	**39.19**	**316**	*e*P	**P**	**16 38 04.9**	**-0.7**
GEC2				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.9						
GERES	**GERESS Array B**	**39.19**	**316**	P	**P**	**16 38 04.9**	**-0.7**
	comp=Z,8.5nm,0.5s,mb4.7,baz=104,slow=7.2,SNR=88						
GERES				LR	LR	16 58 30.8	
	comp=Z,3µm,18.1s,MS5.1,baz=112,slow=43						
PVCC	**Panska Ves**	**39.24**	**318**	⇑*e*P	**P**	**16 38 04.9**	**-1.1**
PVCC				AMS	AMS	16 56 20.0	
	comp=Z,4µm,18.0s						
PGD	**Poggio Sodo**	**39.25**	**307**	P	**P**	**16 38 07.8**	**+1.6**
	comp=Z,88nm,0.6s,mb5.7						
PGD	**Poggio Sodo**	**39.25**	**307**	P	**P**	**16 38 07.8**	**+1.6**
PGD				pmax	pmax		
	comp=Z,88nm,0.6s,mb5.7						
KHC	**Kasperske Hory**	**39.36**	**316**	⇑*i*P	**P**	**16 38 06.5**	**-0.5**
KHC				*e*x	x	16 38 16.6	
KHC				x	x	16 38 36.0	
KHC				*e*S	**S**	**16 44 04.7**	**-3.2**
KHC				AMS	AMS	16 56 00.0	
	comp=Z,4µm,19.1s						
KHC	**Kasperske Hory**	**39.36**	**316**	⇑*i*P	**P**	**16 38 06.5**	**-0.5**
KHC				*e*		16 38 16.6	
KHC				*e*S	**S**	**16 44 04.7**	**-3.2**
KHC				LR	LR		
	comp=Z,4µm,19.1s,MS5.2						
KHC	**Kasperske Hory**	**39.36**	**316**	⇑*i*P	**P**	**16 38 06.5**	**-0.5**
KHC				*e*		16 38 16.6	
KHC				*e*S	**S**	**16 44 04.7**	**-3.2**
KHC				MLR	MLR		
	comp=Z,4µm,19.1s,MS5.2						
VMG	**Vicchio**	**39.40**	**307**	P	**P**	**16 38 09.1**	**+1.7**
CSNT	**Castellina Chi**	**39.49**	**307**	P	**P**	**16 38 10.4**	**+2.2**
KRAR	**Krasnoyarsk**	**39.51**	**32**	*e*P	**P**	**16 38 08.5**	**+0.3**
JOF	**Joensuu**	**39.54**	**343**	*e*p	**P**	**16 38 07.7**	**-0.7**
SEI	**Scarperia**	**39.55**	**308**	P	**P**	**16 38 09.7**	**+1.1**
SEST	**Monte Rota**	**39.55**	**312**	P	**P**	**16 38 08.8**	**+0.2**
FNVD	**Fontana Vidola**	**39.73**	**308**	P	**P**	**16 38 12.4**	**+2.2**
BRG	**Berggiesshubel**	**39.73**	**319**	*i* P	**P**	**16 38 09.6**	**-0.5**
	comp=Z,9.8nm,0.9s,mb4.5						
BRG				S	**S**	**16 44 11.0**	**-2.5**
BRG				LR	LR		
	comp=Z,5µm,14.8s,MS5.4						
BRG	**Berggiesshubel**	**39.73**	**319**	*i* P	**P**	**16 38 09.6**	**-0.5**
BRG				S	**S**	**16 44 11.0**	**-2.5**
BRG				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.5						
BRG				MLR	MLR		
	comp=Z,5µm,14.8s,MS5.4						
CTI	**Castel Tesino**	**39.76**	**311**	P	**P**	**16 38 09.9**	**-0.5**
WET	**Wettzell**	**39.80**	**316**	*e*P	**P**	**16 38 09.5**	**-1.2**
BRES	**Bressanone**	**39.86**	**312**	P	**P**	**16 38 11.4**	**+0.2**
FINES	**FINESS Array B**	**39.96**	**338**	P	**P**	**16 38 11.1**	**-0.8**
	comp=Z,19nm,0.5s,mb5.1,baz=137,slow=10,SNR=212						
FINES				LR	LR	16 58 31.7	
	comp=Z,2µm,19.2s,MS5.0,baz=353,slow=42						
WTTA	**Wattenberg**	**40.06**	**313**	*i* P	**P**	**16 38 12.3**	**-0.5**
	comp=Z,104nm,0.6s,mb5.7,SNR=82						
WATA	**Walderalm**	**40.12**	**313**	⇑*i*P	**P**	**16 38 12.5**	**-0.8**
	comp=Z,53nm,0.8s,mb5.3,SNR=43						
MAIM		**40.13**	**307**	P	**P**	**16 38 14.2**	**+0.7**
MAIM		**40.13**	**307**	P	**P**	**16 38 14.1**	**+0.6**
APPI	**Appiano**	**40.14**	**311**	P	**P**	**16 38 13.4**	**-0.1**
GSCL	**Gusciola**	**40.14**	**308**	P	**P**	**16 38 15.3**	**+1.7**
SARO	**Sassorosso**	**40.24**	**308**	P	**P**	**16 38 14.8**	**+0.4**
SARO	**Sassorosso**	**40.24**	**308**	P	**P**	**16 38 14.8**	**+0.4**
SQTA	**Sankt Quirin**	**40.33**	**312**	*i* P	**P**	**16 38 14.4**	**-0.7**
	comp=Z,52nm,0.7s,mb5.4,SNR=147						
SQTA	**Sankt Quirin**	**40.33**	**312**	P	**P**	**16 38 14.3**	**-0.8**

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BERN  Bernov           40.37 317 ⇑P     P      16 38 20.3 +4.9
KAF   Kangasniemi      40.38 339 ep     P      16 38 14.7 -0.6
      comp=Z,5.4nm,0.5s,mb4.5
KAF   Kangasniemi      40.38 339 eP     P      16 38 14.7 -0.6
KAF                               pmax  pmax
      comp=Z,5.0nm,0.5s,mb4.5
VALM                   40.38 308  P     P      16 38 16.1 +0.5
VALM                   40.38 308  P     P      16 38 16.1 +0.6
NKC   Novy Kostel      40.41 317⇑eP     P      16 38 15.5 -0.2
NKC                              eS     S      16 44 21.6 -2.0
NKC                               AMS   AMS    16 56 50.0
      comp=Z,5μm,18.9s
VINC  Vinca            40.41 307  P     P      16 38 15.8  0.0
VINC  Vinca            40.41 307  P     P      16 38 15.8  0.0
SAL   Salo             40.43 310  P     P      16 38 17.4 +1.5
      comp=Z,179nm,1.0s,mb5.8
SAL   Salo             40.43 310  P     P      16 38 17.4 +1.5
SAL                               pmax  pmax
      comp=Z,179nm,1.0s,mb5.8
CHG   Chiang Mai       40.43  92  P     P      16 38 16.5 +0.3
      comp=Z,32nm,1.3s,mb4.9
RUE   Ruedersdorf      40.43 321 eP     P      16 38 15.1 -0.8
      comp=Z,34nm,0.6s,mb5.2
MOTA  Moosalm          40.44 313⇑iP     P      16 38 14.9 -1.0
      comp=Z,46nm,0.9s,mb5.2,SNR=78
MOTA  Moosalm          40.44 313  P     P      16 38 15.0 -0.9
VSL   Villasalto       40.44 300  P     P      16 38 19.1 +3.1
CLL   Collm            40.44 319  P     P      16 38 15.4 -0.6
      comp=Z,logA/T=1.8,mb5.3
CLL                              e*PP   pP     16 38 26.0 +6.8
CLL                              i *SP  sP     16 38 31.8  +11
CLL                              e*SPP         16 39 54.0
CLL                              eS     S      16 44 21.0 -3.1
CLL                              eSS    SS     16 47 29.0  +11
CLL                              eSCS   ScS    16 48 23.0 +2.9
CLL   Collm            40.44 319 i P    P      16 38 15.4 -0.6
      comp=Z,112nm,1.6s,mb5.3
CLL                              epP    pP     16 38 26.0 +6.8
CLL                              i sP   sP     16 38 31.8  +11
CLL                              eS     S      16 44 21.0 -3.1
CLL                               LR    LR
      comp=Z,4μm,18.3s,MS5.3
CLL   Collm            40.44 319 i P    P      16 38 15.4 -0.6
CLL                              e*PP   pP     16 38 26.0 +6.8
CLL                              i *SP  sP     16 38 31.8  +11
CLL                              eS     S      16 44 21.0 -3.1
CLL                               pmax  pmax
      comp=Z,112nm,1.6s,mb5.3
CLL                               MLR   MLR
      comp=Z,4μm,18.3s,MS5.3
MABI  Malga Bissina    40.53 310  P     P      16 38 17.2 +0.5
FUR   Furstenfeldbru   40.53 314 eP     P      16 38 15.8 -0.9
      comp=Z,64nm,1.0s,mb5.2
FUR   Furstenfeldbru   40.53 314 eP     P      16 38 15.8 -0.9
FUR                               pmax  pmax
      comp=Z,64nm,1.0s,mb5.2
GRAM                   40.54 308  P     P      16 38 17.0 +0.2
GRAM                   40.54 308  P     P      16 38 17.0 +0.2
CODM                   40.67 308  P     P      16 38 17.6 -0.3
BRMO  Bormio           40.72 311  P     P      16 38 18.4 +0.1
SC2M  Scurtabr         40.90 308  P     P      16 38 18.7 -1.0
BSD   Bornholm Skovb   40.93 325⇑iP     P      16 38 18.2 -1.7
      comp=Z,106nm,0.6s,mb5.7
BSD   Bornholm Skovb   40.93 325⇑iP     P      16 38 18.2 -1.7
BSD                               pmax  pmax
      comp=Z,106nm,0.6s,mb5.7
GRA1  Grafenberg Arr   41.00 316 eP     P      16 38 20.4 -0.1
      comp=Z,77nm,0.8s,mb5.4
GRA1                              LR    LR
      comp=Z,3μm,21.4s,MS5.2
GRF   Grafenberg Arr   41.00 316 eP     P      16 38 20.4 -0.1
      comp=Z,77nm,0.8s,mb5.4
GRF                               LR    LR
      comp=Z,3μm,21.4s,MS5.2
GRF   Grafenberg Arr   41.00 316 eP     P      16 38 20.4 -0.1
GRF                               pmax  pmax
      comp=Z,77nm,0.8s,mb5.4
GRF                               MLR   MLR
      comp=Z,3μm,21.4s,MS5.2
GRF   Grafenberg Arr   41.00 316 eP     P      16 38 20.4 -0.1
GRF                               pmax  pmax
      comp=Z,77nm,0.8s,mb5.4
GRF                               MLR   MLR
      comp=Z,3μm,21.4s,MS5.2
PGF   Pioggiola        41.01 305 eP     P      16 38 20.2 -0.5
      comp=Z,48nm,0.6s,mb5.0
PGF   Pioggiola        41.01 305 eP     P      16 38 20.2 -0.5
PGF                               pmax  pmax
      comp=Z,24nm,0.6s,mb5.0
BOB   Bobbio (Coli)    41.02 308  P     P      16 38 21.5 +0.8
      comp=Z,63nm,0.8s,mb5.3
BOB   Bobbio (Coli)    41.02 308  P     P      16 38 21.5 +0.8
BOB                               pmax  pmax
      comp=Z,63nm,0.8s,mb5.3
MOX   Moxa             41.05 318 i P    P      16 38 20.4 -0.5
      comp=Z,logA/T=1.6,mb5.0
MOX                              i             16 38 37.0
MOX                               S     S      16 44 31.0 -2.1
MOX                               SS    SS     16 47 47.0  +16
MOX                               L            16 57 31.0
MOX   Moxa             41.05 318 eP     P      16 38 20.4 -0.5
DAVOX Davos            41.12 311  P     P      16 38 21.6 +0.1
DAVA  Damuels          41.23 312 i P    P      16 38 22.0 -0.5
      comp=Z,300nm,0.6s,mb6.1,SNR=106
DAVA  Damuels          41.23 312  P     P      16 38 21.9 -0.5
VDL   Val di Lei       41.33 311 ⇑P     P      16 38 23.3  0.0
TUE   Stuetta          41.41 311  P     P      16 38 24.8 +0.9
MUGIO Muggio           41.51 310  P     P      16 38 23.9 -0.8
PCP   Pian Castagno    41.62 308  P     P      16 38 23.5 -2.1
PCP   Pian Castagno    41.62 308  P     P      16 38 23.5 -2.1
VAI   Varese           41.69 310  P     P      16 38 25.1 -1.1
      comp=Z,49nm,0.5s,mb5.4
VAI   Varese           41.69 310  P     P      16 38 25.1 -1.1
VAI                               pmax  pmax
      comp=Z,49nm,0.5s,mb5.4
LZH   Lanzhou          41.69  65 ⇑P     P      16 38 28.5 +2.1
LZH                               PP    PP     16 40 08.3 +2.3
LZH                               S     S      16 44 41.0 -1.8
LZH                               XS           16 45 02.0
LZH                               SS    SS     16 47 42.5 -0.5
LZH                               AMB   AMB
      comp=Z,100nm,1.2s,mb5.3
LZH                               AMB   AMB
      comp=Z,390nm,5.6s
LZH                               LR    LR
      comp=E,4μm,15.2s
LZH                               LR    LR
      comp=Z,5μm,18.7s,MS5.4
LZH   Lanzhou          41.69  65 ⇑P     P      16 38 28.5 +2.1
      comp=Z,106nm,1.2s,mb5.3
LZH                               pP    pP     16 38 40.5  +11
LZH                               sP    sP     16 38 46.0  +15
LZH                               PP    PP     16 40 08.3 +2.3
LZH                               S     S      16 44 41.0 -1.8
LZH                               sS           16 45 02.1
LZH                               SS    SS     16 47 42.5 -0.5
LZH                               LR    LR
      comp=Z,5μm,18.7s,MS5.4
LZH   Lanzhou          41.69  65 ⇑P     P      16 38 28.5 +2.1
LZH                               *PP   pP     16 38 40.5  +11
LZH                                            16 40 08.3
LZH                               S     S      16 44 41.0 -1.8
LZH                               SS    SS     16 47 42.5 -0.5
LZH                               pmax  pmax
      comp=Z,106nm,1.2s,mb5.3
LZH                               MLR   MLR
      comp=Z,5μm,18.7s,MS5.4
LLS   Linth-Limmern    41.72 311 ⇓P     P      16 38 25.4 -1.0
FIN   Finale Ligure    41.81 307  P     P      16 38 24.8 -2.4
FIN   Finale Ligure    41.81 307  P     P      16 38 24.8 -2.4
CMAH  Djebel Manchou   41.90 296  P     P      16 38 32.0 +3.9
WILA  Wila             41.90 312 ⇓P     P      16 38 27.2 -0.7
CD2   Chengdu          41.98  73⇓iP     P      16 38 30.0 +1.2
CD2                               XP    sP     16 38 36.5 +3.2
CD2                               PP    PP     16 40 08.5 -0.8
CD2                               S     S      16 44 49.3 +2.2
CD2                               XS           16 44 58.5
CD2                               SS    SS     16 47 55.5 +7.0
CD2                               AMB   AMB
      comp=Z,30nm,0.8s,mb5.0
CD2                               AMB   AMB
      comp=Z,100nm,5.1s
CD2                               LR    LR
      comp=N,4μm,22.2s
CD2                               LR    LR
      comp=Z,3μm,15.6s
MUO   Muotathal        41.99 311 ⇑P     P      16 38 28.0 -0.7
IMI   Imperia          41.99 307  P     P      16 38 30.1 +1.4
MOY   Mondy            42.01  41 eP     P      16 38 29.6 +0.8
STU   Stuttgart        42.03 314 eP     P      16 38 27.4 -1.6
      comp=Z,25nm,0.8s,mb4.9
STU   Stuttgart        42.03 314 eP     P      16 38 27.4 -1.5
STU                               pmax  pmax
      comp=Z,25nm,0.8s,mb4.9
ROB   Roburent         42.06 307  P     P      16 38 26.4 -2.8
KMI   Kunming          42.08  81 ⇑P     P      16 38 31.3 +1.6
KMI                               AP    pP     16 38 34.0 +1.1
KMI                               XP    sP     16 38 35.5 +1.3
KMI                               PP    PP     16 40 11.8 +1.5
KMI                               PCP   PcP    16 40 26.8 +1.7
KMI                               SCP          16 44 16.0
KMI                               S     S      16 44 51.5 +2.8
KMI                               SS    SS     16 47 53.0 +2.6
KMI                               SCS   ScS    16 48 33.8 +3.6
KMI                               AMB   AMB
      comp=Z,30nm,1.5s,mb4.7
KMI                               LR    LR
      comp=N,2μm,21.9s,MS5.1
KMI                               LR    LR
      comp=E,2μm,18.1s,MS5.1
KMI                               LR    LR
      comp=Z,2μm,18.9s,MS5.1
KMI   Kunming          42.08  81 ⇑P     P      16 38 31.3 +1.6
      comp=Z,31nm,1.5s,mb4.7
KMI                               pP    pP     16 38 34.0 +1.1
KMI                               sP    sP     16 38 35.5 +1.3
KMI                               PP    PP     16 40 11.7 +1.4
KMI                               PcP   PcP    16 40 26.7 +1.6
KMI                               PPP   PPP    16 40 43.7 +1.8
KMI                               ScP          16 44 15.9
KMI                               PcS          16 44 17.1
KMI                               S     S      16 44 51.6 +2.9
KMI                               sS           16 44 58.2
KMI                               SS    SS     16 47 53.1 +2.7
KMI                               SSS   SSS    16 48 33.6 -0.5
KMI                               LR    LR
      comp=Z,2μm,18.9s,MS5.1
KMI   Kunming          42.08  81 ⇑P     P      16 38 31.3 +1.6
KMI                                            16 40 11.7
KMI                                            16 40 26.7
KMI                               PPP   PPP    16 40 43.7 +1.8
KMI                               S     S      16 44 51.6 +2.9
KMI                               SS    SS     16 47 53.1 +2.7
KMI                               SSS   SSS    16 48 33.6 -0.5
KMI                               pmax  pmax
      comp=Z,31nm,1.5s,mb4.7
KMI                               MLR   MLR
      comp=Z,2μm,18.9s,MS5.1
ZUR   Zurich           42.11 312 ⇑P     P      16 38 29.1 -0.5
MONE  Monesi           42.11 307  P     P      16 38 26.7 -3.0
NEGI  Negi             42.12 307  P     P      16 38 26.5 -3.2
CLZ   Clausthal        42.17 319 eP     P      16 38 30.2 +0.1
      comp=Z,66nm,0.7s,mb5.4
CLZ   Clausthal        42.17 319 eP     P      16 38 30.2 +0.1
CLZ                               pmax  pmax
      comp=Z,66nm,0.7s,mb5.4
ORO   Oropa            42.19 309  P     P      16 38 30.2 -0.1
ORX   Oropa            42.19 309  P     P      16 38 27.4 -2.9
SAOF  Saorge           42.24 307 eP     P      16 38 31.7 +0.9
SLE   Schleitheim      42.25 313 ⇑P     P      16 38 29.7 -1.1
MMK   Mattmark         42.27 310  P     P      16 38 31.1 +0.1
SBF   Sospel           42.31 307⇑iP     P      16 38 31.0 -0.4
      comp=Z,209nm,0.8s,mb5.5
SBF   Sospel           42.31 307⇑iP     P      16 38 31.0 -0.4
SBF                               pmax  pmax
      comp=Z,104nm,0.8s,mb5.5
TRAV                   42.33 309  P     P      16 38 28.4 -3.1
AUTN  L'Aution         42.33 307 eP     P      16 38 34.9 +3.4
CAEH  'Ain El Ouahch   42.36 296  P     P      16 38 34.5 +2.6
ENR   Entracque        42.37 307  P     P      16 38 27.6 -4.2
STV2  Anna di Valdie   42.44 307  P     P      16 38 28.3 -4.1
STV   Sta Anna Valdi   42.44 307  P     P      16 38 28.1 -4.3
SULZ  Sulz-Cheisache   42.45 312 ⇑P     P      16 38 31.5 -1.0
TOUF  Mont Tournerai   42.46 307 eP     P      16 38 34.2 +1.6
CKFL  Kef-Lekhel       42.47 296  P     P      16 38 36.0 +3.2
BFO   Black Forest     42.48 313 eP     P      16 38 32.1 -0.6
      comp=Z,28nm,1.4s,mb4.7
BFO   Black Forest     42.48 313 eP     P      16 38 32.1 -0.6
BFO                               pmax  pmax
      comp=Z,28nm,1.4s,mb4.7
TOD   Tromm            42.48 315 eP     P      16 38 31.1 -1.6
MVIF  Mont Vial        42.52 307 eP     P      16 38 33.0 -0.1
LKBD  Leukerbad        42.56 310 ⇑P     P      16 38 32.2 -1.2
BHB   Bricherasio      42.57 308  P     P      16 38 28.8 -4.6
RSP   Reno Superiore   42.62 308  P     P      16 38 28.8 -5.0
PZZ   Prazzo           42.63 308  P     P      16 38 28.5 -5.5
DIX   Grande Dixence   42.66 310  P     P      16 38 34.9 +0.7
CASM  Ain Smara        42.66 295  P     P      16 38 38.0 +3.7
LSD   Ceresole Reale   42.73 309  P     P      16 38 30.1 -4.7
CTEI  Djebel Teioual   42.73 295  P     P      16 38 39.0 +4.1
FENE  Fenestrelle      42.73 308  P     P      16 38 30.1 -4.7
SURF  Saint Ours       42.84 307 eP     P      16 38 35.7 +0.1
BBS   Basel-Blauen     42.84 312 eP     P      16 38 34.4 -1.2
FRF   La Foret Royal   42.84 306 eP     P      16 38 35.1 -0.6
      comp=Z,52nm,1.0s,mb4.9
FRF   La Foret Royal   42.84 306 eP     P      16 38 35.1 -0.6
FRF                               pmax  pmax
      comp=Z,26nm,1.0s,mb4.9
TNS   Taunus Mts       42.87 316 eP     P      16 38 35.2 -0.6
      comp=Z,48nm,1.3s,mb5.1
TNS   Taunus Mts       42.87 316 eP     P      16 38 35.2 -0.6
TNS                               pmax  pmax
      comp=Z,48nm,1.3s,mb5.1
MBDF  Montbardon       42.90 308⇑iP     P      16 38 35.3 -0.8
      comp=Z,82nm,0.7s,mb5.2
MBDF  Montbardon       42.90 308⇑iP     P      16 38 35.3 -0.8
MBDF                              pmax  pmax
      comp=Z,41nm,0.7s,mb5.3
BSEG  Bad Segeberg     42.91 322 eP     P      16 38 36.0 -0.1
LMR   La Mourre        42.92 306 eP     P      16 38 35.5 -0.8
APA   Apatity          42.99 348⇑iP     P      16 38 37.0 +0.4
APA                              i             16 38 47.0
APA                              i             16 40 20.0
APA                              eS     S      16 45 00.0 -1.6
APA                              i             16 45 14.0
APA                              i SS   SS     16 48 11.0 +3.8
APA                               pmax  pmax
      comp=Z,59nm,0.9s,mb5.3
APA                               MLR   MLR
      comp=Z,5μm,16.0s,MS5.5
EMV   Vieux Emosson    43.01 310  P     P      16 38 36.8 -0.2
BNI   Bardonecchia     43.01 308  P     P      16 38 38.2 +1.2
LPG   La Plagne        43.02 309 eP     P      16 38 36.4 -0.7
      comp=Z,112nm,0.7s,mb5.4
LPG   La Plagne        43.02 309 eP     P      16 38 36.4 -0.7
LPG                               pmax  pmax
      comp=Z,56nm,0.7s,mb5.4
ZAK   Zakamensk        43.02  44 eP     P      16 38 37.4 +0.3
ZAK                              e             16 40 26.6
ZAK                               pmax  pmax
      comp=Z,9.0nm,1.3s,mb4.3
LPL   La Plagne        43.04 309⇑iP     P      16 38 36.4 -0.9
      comp=Z,80nm,0.7s,mb5.3
LPL   La Plagne        43.04 309⇑iP     P      16 38 36.4 -0.9
LPL                               pmax  pmax
      comp=Z,40nm,0.7s,mb5.3
RSL   Roselend         43.14 309 eP     P      16 38 36.6 -1.5
WLS   Welschbruch      43.14 313 eP     P      16 38 36.3 -1.7
DFRA  Djebel Bou Aff   43.15 296  P     P      16 38 42.0 +3.7
CMER  Merouana         43.16 294  P     P      16 38 43.0 +4.6
MOF   Molkenrain       43.17 312 eP     P      16 38 37.4 -0.9
CDF   Champ du Feu     43.19 313⇑iP     P      16 38 37.0 -1.4
      comp=Z,48nm,0.8s,mb5.0
CDF   Champ du Feu     43.19 313⇑iP     P      16 38 37.0 -1.4
CDF                               pmax  pmax
      comp=Z,24nm,0.8s,mb5.0
OG01  Vacheresse       43.20 310 eP     P      16 38 37.6 -0.9
ECH   Echery           43.22 313 eP     P      16 38 37.7 -1.0
LOMF  Lomont           43.27 312 eP     P      16 38 38.7 -0.5
ABH   Alteburg         43.34 315 eP     P      16 38 38.6 -1.1
HINF  Hinteralfeld     43.34 312⇑iP     P      16 38 38.6 -1.1
      comp=Z,59nm,0.9s,mb5.0
HINF  Hinteralfeld     43.34 312⇑iP     P      16 38 38.6 -1.1
HINF                              pmax  pmax
      comp=Z,29nm,0.9s,mb5.0
CKHR  Kef el Ahmar     43.46 295  P     P      16 38 44.0 +3.2
SET   Setif            43.54 295  P     P      16 38 45.0 +3.5
ORIF  Oris-en-Rattie   43.55 308 eP     P      16 38 39.7 -1.7
      comp=Z,33nm,0.8s,mb4.8
ORIF                             eR
      comp=Z,3μm,20.8s
CABF  La Chapelle      43.65 310⇑iP     P      16 38 41.7 -0.5
      comp=Z,97nm,0.7s,mb5.3
CABF  La Chapelle      43.65 310⇑iP     P      16 38 41.7 -0.5
CABF                              pmax  pmax
      comp=Z,49nm,0.7s,mb5.3
SMRF  Simiane la Rot   43.66 307 eP     P      16 38 42.0 -0.3
      comp=Z,46nm,1.0s,mb4.9
HAU   Haudompre        43.72 312⇑iP     P      16 38 41.5 -1.2
      comp=Z,64nm,0.7s,mb5.1
HAU                              eR
      comp=Z,3μm,19.2s
HAU   Haudompre        43.72 312⇑iP     P      16 38 41.5 -1.2
HAU                               pmax  pmax
      comp=Z,32nm,0.7s,mb5.2
HAU                               MLR   MLR
      comp=Z,3μm,19.3s,MS5.2
HFA0  Hagfors New Ar   43.92 331  P     P      16 38 42.9 -1.3
PRAF  Pradon           43.93 306 eP     P      16 38 45.9 +1.3
OG05  Jujurieux        43.99 309 eP     P      16 38 43.8 -1.2
THEF  They Montfort    43.99 313 eP     P      16 38 44.0 -1.0
IRK   Irkutsk          44.12  41 eP     P      16 38 44.2 -1.7
IRK                              e             16 40 31.4
IRK                               pmax  pmax
      comp=Z,59nm,2.8s,mb4.8
WLF   Walferdange      44.17 315 eP     P      16 38 45.5 -1.0
      comp=Z,42nm,0.8s,mb5.2
WLF   Walferdange      44.17 315 eP     P      16 38 45.5 -0.9
WLF                               pmax  pmax
      comp=Z,42nm,0.8s,mb5.2
WTSB  Winterswijk      44.32 318⇑eP     P      16 38 47.9 +0.3
      comp=Z,69nm,0.9s,mb5.4
VIVF  Saint-Julien-l   44.40 308⇑iP     P      16 38 47.2 -1.1
      comp=Z,66nm,0.8s,mb5.1
VIVF  Saint-Julien-l   44.40 308⇑iP     P      16 38 47.2 -1.1
VIVF                              pmax  pmax
      comp=Z,33nm,0.8s,mb5.1
SONM  Songino Array    44.48  48  P     P      16 38 49.4 +0.5
      comp=Z,45nm,0.9s,mb5.2,baz=258,slow=6.1,SNR=156
SONM                              LR    LR     16 59 26.9
      comp=Z,9μm,20.2s,MS5.7,baz=265,slow=39
HGN   Heimansgroeve    44.56 316⇑eP     P      16 38 50.0 +0.5
      comp=Z,75nm,1.0s,mb5.5
HGN                              ePP    PP     16 40 42.5 +7.7
HGN                              eS     S      16 45 15.9 -8.5
WIT   Witteveen        44.63 319 eP     P      16 38 52.5 +2.5
MEZF  Maizieres J'vi   44.66 313⇑iP     P      16 38 49.8 -0.6
      comp=Z,205nm,1.1s,mb5.6
LASF  Ste Croix        44.90 307⇑iP     P      16 38 51.7 -0.7
      comp=Z,93nm,0.7s,mb5.4
ULN   Ulaanbaatar      44.92  48 eP     P      16 38 52.5  0.0
      comp=Z,58nm,1.0s,mb5.4
ULN                               LR    LR
      comp=Z,8μm,20.0s,MS5.7
ULN   Ulaanbaatar      44.92  48 eP     P      16 38 52.5  0.0
ULN                               pmax  pmax
      comp=Z,58nm,1.0s,mb5.4
ULN                               MLR   MLR
      comp=Z,8μm,20.0s,MS5.7
OSL   Oslo             45.13 330 eP     P      16 38 53.3 -0.7
SMF   Signal de Mont   45.19 310⇑iP     P      16 38 53.6 -1.0
      comp=Z,159nm,0.8s,mb5.6
SMF   Signal de Mont   45.19 310⇑iP     P      16 38 53.6 -1.0
SMF                               pmax  pmax
      comp=Z,80nm,0.8s,mb5.6
GYA   Guiyang          45.24  78⇑iP     P      16 38 55.8 +0.5
GYA                               AP    pP     16 38 59.8 +1.3
GYA                               XP    sP     16 39 02.8 +2.9
GYA                               PP    PP     16 40 39.5 -2.5
GYA                               AMB   AMB
      comp=Z,40nm,0.8s,mb5.3
GYA                               LR    LR
      comp=N,970nm,14.2s,MS5.2
GYA                               LR    LR
      comp=E,2μm,12.9s,MS5.2
GYA                               LR    LR
      comp=Z,690nm,13.0s,MS4.8
PLDF  La Plantade      45.26 309 eP     P      16 38 54.0 -1.2
LOR   Lormes           45.26 311⇑iP     P      16 38 54.1 -1.0
      comp=Z,54nm,0.8s,mb5.1
LOR                              eR
      comp=Z,6μm,20.5s
LOR   Lormes           45.26 311⇑iP     P      16 38 54.1 -1.0
LOR                               pmax  pmax
      comp=Z,27nm,0.8s,mb5.1
LOR                               MLR   MLR
      comp=Z,6μm,20.5s,MS5.5
NB2   NORSAR Subarra   45.43 331  P     P      16 38 54.6 -1.7
      comp=Z,53nm,1.0s,mb5.3,baz=117,slow=7.9
NB2   NORSAR Subarra   45.43 331  P     P      16 38 54.6 -1.7
      baz=117,slow=7.9
NB2   NORSAR Subarra   45.43 331  P     P      16 38 55.2 -1.1
NOA   NORSAR Array B   45.43 331  P     P      16 38 54.9 -1.4
      comp=Z,31nm,0.9s,mb5.1,baz=118,slow=8.0,SNR=42
NOA                               S     S      16 45 41.1 +4.3
      comp=Z,10.0nm,1.2s,baz=122,slow=15,SNR=3.3
NOA                               LR    LR     17 00 58.6
      comp=Z,2μm,20.2s,MS5.1,baz=130,slow=40
LBL   Lubilhac         45.44 308 eP     P      16 38 56.4 -0.2
SSF   Saint Saulge     45.47 311⇑iP     P      16 38 55.9 -0.9
SSF                               pmax  pmax
      comp=Z,64nm,0.8s,mb5.5
SSF   Saint Saulge     45.47 311⇑iP     P      16 38 55.9 -0.9
      comp=Z,64nm,0.8s,mb5.5
NAO01 NORSAR Array S   45.48 331 eP     P      16 38 55.1 -1.6
      comp=Z,49nm,1.0s,mb5.3
BAIF  Baives           45.49 315⇑iP     P      16 38 57.2 +0.3
      comp=Z,190nm,1.0s,mb5.6
BAIF  Baives           45.49 315⇑iP     P      16 38 57.2 +0.3
BAIF                              pmax  pmax
      comp=Z,95nm,1.0s,mb5.6
NAO   NORSAR Subarra   45.49 331  P     P      16 38 54.6 -2.2
      comp=Z,53nm,1.0s,mb5.3
NAO   NORSAR Subarra   45.49 331  P     P      16 38 54.6 -2.2
NAO                               pmax  pmax
      comp=Z,53nm,1.0s,mb5.3
EJON  La Jonquera      45.51 304  P     P      16 38 58.5 +1.3
      comp=Z,18nm,1.0s,mb5.0
ETOS  Mallorca         45.51 300  P     P      16 38 59.2 +1.9
      comp=Z,70nm,0.9s,mb5.6
KONO  Kongsberg        45.51 329 eP     P      16 38 55.3 -1.7
      comp=Z,31nm,0.8s,mb5.3
KONO  Kongsberg        45.51 329 i P    P      16 38 57.9 +0.9
AVF   Avril sur Loir   45.54 310⇑iP     P      16 38 56.2 -1.2
      comp=Z,65nm,0.7s,mb5.3
AVF   Avril sur Loir   45.54 310⇑iP     P      16 38 56.2 -1.2
AVF                               pmax  pmax
      comp=Z,32nm,0.7s,mb5.4
BGF   Bois d'Agland    45.85 310⇑iP     P      16 38 59.1 -0.8
      comp=Z,123nm,0.7s,mb5.7
BGF   Bois d'Agland    45.85 310⇑iP     P      16 38 59.1 -0.8
BGF                               pmax  pmax
      comp=Z,62nm,0.7s,mb5.7
OPO   Ambohidratompo   45.87 191  P     P      16 39 02.1 +1.7
      comp=Z,7.5nm,0.7s,mb4.7,baz=4.7,slow=6.3,SNR=17
FRNF  Fournols         45.94 308 eP     P      16 39 00.5  0.0
VERF  Verneugheol      46.02 309 eP     P      16 39 00.8 -0.4
MTLF  Montolieu        46.04 305⇑iP     P      16 39 01.5 +0.1
      comp=Z,130nm,0.8s,mb5.6
MTLF  Montolieu        46.04 305⇑iP     P      16 39 01.5 +0.1
MTLF                              pmax  pmax
      comp=Z,65nm,0.8s,mb5.6
HYF   Humbligny        46.08 311 eP     P      16 39 01.5 -0.2
KEV   Kevo             46.11 347 ep     P      16 39 01.1 -0.5
      comp=Z,54nm,0.8s,mb5.5
KEV   Kevo             46.11 347 eP     P      16 39 01.1 -0.5
KEV                               pmax  pmax
      comp=Z,54nm,0.8s,mb5.5
VALF  Valcebollere     46.15 304 eP     P      16 39 02.6 +0.3
CAF   Calviac          46.25 308⇑iP     P      16 39 02.6 -0.4
      comp=Z,125nm,0.8s,mb5.6
CAF   Calviac          46.25 308⇑iP     P      16 39 02.6 -0.4
CAF                               pmax  pmax
      comp=Z,62nm,0.8s,mb5.6
LPEF  Le Peyrat        46.25 305 eP     P      16 39 03.3 +0.2
ARCES ARCESS Array B   46.26 346  P     P      16 39 02.3 -0.5
      comp=Z,7.6nm,0.5s,mb4.9,baz=141,slow=8.5,SNR=46
ARCES                             ScP          16 44 30.4
      comp=Z,5.9nm,0.7s,baz=135,slow=3.4,SNR=8.2
ARCES                             LR    LR     17 01 21.8
      comp=Z,3μm,20.4s,MS5.2,baz=47,slow=40
ARCES ARCESS Array B   46.26 346  P     P      16 39 02.3 -0.4
ARCES                             ScP          16 44 30.4
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ARCES				LR	LR	17 01 21.8	
ARE0	**ARCESS Array S**	**46.26**	**346**	*e*P	**P**	**16 39 02.3**	**-0.5**
TCF	**Toulx Ste Croi**	**46.27**	**309**	⇑*i*P	**P**	**16 39 02.5**	**-0.6**
	comp=Z,97nm,0.7s,mb5.5						
TCF	**Toulx Ste Croi**	**46.27**	**309**	⇑*i*P	**P**	**16 39 02.5**	**-0.6**
TCF				pmax	pmax		
	comp=Z,48nm,0.7s,mb5.5						
KTK1	**Kautokeino**	**46.38**	**344**	*e*P	**P**	**16 39 03.4**	**-0.3**
BTO	**Baotou**	**46.50**	**58**	*e*P	**P**	**16 39 05.8**	**+0.7**
BTO				AMB	AMB		
	comp=Z,80nm,1.4s,mb5.5						
EMIR	**Miracle**	**46.50**	**303**	P	**P**	**16 39 06.1**	**+1.1**
	comp=Z,91nm,0.8s,mb5.8						
RJF	**Les Rejaudoux**	**46.66**	**308**	⇑*i*P	**P**	**16 39 06.1**	**-0.2**
	comp=Z,142nm,0.9s,mb5.6						
RJF				*e*R			
	comp=Z,3µm,19.5s						
RJF	**Les Rejaudoux**	**46.66**	**308**	⇑*i*P	**P**	**16 39 06.1**	**-0.2**
RJF				pmax	pmax		
	comp=Z,71nm,0.9s,mb5.6						
RJF				MLR	MLR		
	comp=Z,3µm,19.5s,MS5.3						
DOMB	**Dombas**	**46.81**	**332**	*e*P	**P**	**16 39 07.9**	**+0.7**
DOMB				AMb	AMB	16 39 10.7	
	comp=Z,49nm,1.3s,mb5.3						
DOMB	**Dombas**	**46.81**	**332**	*e*P	**P**	**16 39 07.9**	**+0.7**
	comp=Z,49nm,1.3s,mb5.3,SNR=24						
EPOB	**Poblet**	**46.83**	**303**	P	**P**	**16 39 07.4**	**-0.3**
	comp=Z,42nm,0.9s,mb5.4						
MLS	**Moulis**	**46.85**	**305**	*e*P	**P**	**16 39 06.9**	**-0.9**
BLS5	**Blasjo**	**46.89**	**328**	*e*P	**P**	**16 39 08.7**	**+0.8**
BLS5				AMb	AMB	16 39 18.7	
	comp=Z,36nm,1.4s,mb5.1						
BLS5	**Blasjo**	**46.89**	**328**	*e*P	**P**	**16 39 08.7**	**+0.8**
	comp=Z,36nm,1.4s,mb5.1,SNR=24						
NSS	**Namsos**	**46.89**	**336**	*e*P	**P**	**16 39 06.8**	**-1.1**
NSS				AMb	AMB	17 02 36.7	
	comp=Z,3µm,18.5s						
MOR8	**Moi Rana**	**46.96**	**338**	*e*P	**P**	**16 39 07.2**	**-1.1**
MOR8				AMb	AMB	16 39 11.2	
	comp=Z,43nm,1.3s,mb5.2						
MOR8	**Moi Rana**	**46.96**	**338**	*e*P	**P**	**16 39 07.2**	**-1.1**
	comp=Z,43nm,1.3s,mb5.2,SNR=24						
ENH	**Enshi**	**46.96**	**73**	*e*P	**P**	**16 39 08.1**	**-0.7**
	comp=Z,23nm,0.7s,mb5.2						
LFF	**La Frestale**	**47.19**	**307**	⇑*i*P	**P**	**16 39 10.1**	**-0.4**
	comp=Z,144nm,0.8s,mb5.7						
LFF	**La Frestale**	**47.19**	**307**	⇑*i*P	**P**	**16 39 10.1**	**-0.4**
LFF				pmax	pmax		
	comp=Z,72nm,0.8s,mb5.7						
EBR	**Ebro Roquetas**	**47.28**	**302**	*e*P	**P**	**16 39 13.5**	**+2.3**
ERTA	**Horta de San J**	**47.40**	**302**	P	**P**	**16 39 11.7**	**-0.5**
	comp=Z,44nm,0.7s,mb5.5						
RESF	**Ens**	**47.40**	**305**	*e*P	**P**	**16 39 12.2**	**0.0**
EPF	**Esparros**	**47.40**	**305**	*e*P	**P**	**16 39 10.6**	**-1.6**
	comp=Z,15nm,0.6s,mb4.8						
EPF	**Esparros**	**47.40**	**305**	*e*P	**P**	**16 39 10.6**	**-1.6**
EPF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
EGRA	**Graus**	**47.41**	**304**	P	**P**	**16 39 12.9**	**+0.6**
	comp=Z,30nm,0.6s,mb5.4						
STOK	**Stokkvaagen**	**47.52**	**338**	*e*P	**P**	**16 39 11.6**	**-1.2**
EBIE	**Bielsa**	**47.54**	**304**	P	**P**	**16 39 13.2**	**-0.1**
	comp=Z,12nm,0.5s,mb5.2						
MELSS	**Ber_school_2**	**47.60**	**339**	*e*P	**P**	**16 39 12.4**	**-1.0**
HHC	**Hu-ho-hao-te**	**47.67**	**58**	⇑P	**P**	**16 39 15.5**	**+1.2**
HHC				AP	pP	16 39 20.0	+2.4
HHC				XP	sP	16 39 22.5	+3.6
HHC				PCP	PcP	16 40 42.5	-1.7
HHC				PP	PP	16 41 07.8	+2.4
HHC				SCP		16 44 35.3	
HHC				PCS		16 44 38.8	
HHC				S	**S**	**16 46 13.5**	**+4.5**
HHC				XS		16 46 19.5	
HHC				SCS	ScS	16 49 06.0	+0.6
HHC				SS	SS	16 49 36.0	+4.6
HHC				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.5						
HHC				AMB	AMB		
	comp=Z,240nm,7.2s						
HHC				LR	LR		
	comp=N,4µm,20.4s,MS5.5						
HHC				LR	LR		
	comp=E,3µm,15.6s,MS5.5						
HHC				LR	LR		
	comp=Z,3µm,15.6s,MS5.4						
RUND	**Rundenannen**	**47.77**	**329**	*e*P	**P**	**16 39 14.4**	**-0.4**
RUND				AMb	AMB	16 39 15.7	
	comp=Z,93nm,1.5s,mb5.6						
RUND	**Rundenannen**	**47.77**	**329**	*e*P	**P**	**16 39 14.4**	**-0.4**
	comp=Z,93nm,1.5s,mb5.6,SNR=24						
BER	**Bergen**	**47.77**	**329**	*e*P	**P**	**16 39 14.8**	**-0.1**
BER				AMb	AMB	16 39 17.4	
	comp=Z,108nm,1.8s,mb5.6						
BER				*e*P		16 39 23.8	
BER				*e*S	**S**	**16 46 10.8**	**+0.6**
BER				AMS	AMS	17 04 56.6	
	comp=Z,2µm,18.2s,MS5.2						
BER	**Bergen**	**47.77**	**329**	*e*P	**P**	**16 39 14.8**	**-0.1**
	comp=Z,108nm,1.8s,mb5.6,SNR=24						
BER				*e*S	**S**	**16 46 10.8**	**+0.6**
	SNR=25						
EGD	**Espegrend**	**47.78**	**329**	*e*P	**P**	**16 39 15.8**	**+0.8**
ASK	**Askoy**	**47.87**	**329**	*e*P	**P**	**16 39 15.2**	**-0.4**
ASK				AMb	AMB	16 39 17.8	
	comp=Z,200nm,1.6s,mb5.9						
ASK	**Askoy**	**47.87**	**329**	*e*P	**P**	**16 39 15.2**	**-0.4**
	comp=Z,200nm,1.6s,mb5.9,SNR=24						
TRO	**Tromso**	**47.89**	**344**	*e*P	**P**	**16 39 13.8**	**-1.9**
TRO				AMb	AMB	16 39 37.4	
	comp=Z,108nm,1.6s,mb5.6						
TRO				*e*S	**S**	**16 46 13.0**	**+1.3**
TRO				*e*SS	SS	16 49 43.6	+8.7
TRO				AMS	AMS	17 03 26.9	
	comp=Z,2µm,18.3s,MS5.2						
TRO	**Tromso**	**47.89**	**344**	*e*P	**P**	**16 39 13.8**	**-1.8**
	comp=Z,108nm,1.6s,mb5.6,SNR=24						
TRO				*e*S	**S**	**16 46 13.0**	**+1.3**
	SNR=25						
TRO				*e*SS	SS	16 49 43.6	+8.6
	SNR=29						
EBEN	**Beniarda**	**47.90**	**299**	P	**P**	**16 39 15.9**	**-0.2**
	comp=Z,25nm,0.7s,mb5.3						
MFF	**Saint Martin d**	**47.91**	**310**	*e*P	**P**	**16 39 14.6**	**-1.6**
	comp=Z,40nm,0.9s,mb5.1						
MFF	**Saint Martin d**	**47.91**	**310**	*e*P	**P**	**16 39 14.6**	**-1.6**
MFF				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
ESAC	**San Caprasio**	**47.99**	**303**	P	**P**	**16 39 16.6**	**-0.2**
	comp=Z,135nm,0.7s,mb6.1						
EMOS	**Mosqueruela**	**48.02**	**301**	P	**P**	**16 39 18.3**	**+1.2**
	comp=Z,44nm,0.7s,mb5.6						
ETSF	**Etsaut**	**48.06**	**305**	*e*P	**P**	**16 39 17.3**	**0.0**
	comp=Z,141nm,0.7s,mb5.8						
ETSF	**Etsaut**	**48.06**	**305**	*e*P	**P**	**16 39 17.3**	**0.0**
ETSF				pmax	pmax		
	comp=Z,70nm,0.7s,mb5.8						
LDF	**La Druitiere**	**48.07**	**312**	⇑*i*P	**P**	**16 39 15.9**	**-1.5**
	comp=Z,65nm,0.7s,mb5.5						
LDF	**La Druitiere**	**48.07**	**312**	⇑*i*P	**P**	**16 39 15.9**	**-1.5**
LDF				pmax	pmax		
	comp=Z,33nm,0.7s,mb5.5						
ATE	**Arette**	**48.16**	**305**	*e*P	**P**	**16 39 18.2**	**+0.1**
FLN	**La Foliniere**	**48.33**	**313**	⇑*i*P	**P**	**16 39 18.0**	**-1.3**
	comp=Z,93nm,0.8s,mb5.6						
FLN				*e*R			
	comp=Z,3µm,21.0s						
FLN	**La Foliniere**	**48.33**	**313**	⇑*i*P	**P**	**16 39 18.0**	**-1.3**
FLN				pmax	pmax		
	comp=Z,46nm,0.8s,mb5.6						
FLN				MLR	MLR		
	comp=Z,3µm,21.0s,MS5.2						
LCHF	**La Chataignera**	**48.33**	**310**	*e*P	**P**	**16 39 18.3**	**-1.1**
LARF	**Larrau**	**48.38**	**305**	*e*P	**P**	**16 39 19.7**	**-0.1**
LOF	**Lofoten**	**48.41**	**340**	*e*P	**P**	**16 39 19.0**	**-0.6**
LOF				*e*pP	pP	16 39 22.6	-0.4
ECHE	**Chera**	**48.43**	**300**	P	**P**	**16 39 20.2**	**0.0**
	comp=Z,14nm,0.6s,mb5.2						
ECHE	**Chera**	**48.43**	**300**	P	**P**	**16 39 20.2**	**-0.1**
ECHE				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.2						
GRR	**Gorron**	**48.54**	**312**	*e*P	**P**	**16 39 19.8**	**-1.2**
EMUR	**La Murta**	**48.75**	**298**	P	**P**	**16 39 23.5**	**+0.7**
	comp=Z,24nm,1.0s,mb5.2						
EALK	**Alkurruntz**	**48.76**	**305**	P	**P**	**16 39 23.0**	**+0.3**
	comp=Z,21nm,0.7s,mb5.3						
SKP1	**Kophill**	**48.90**	**316**	⇑*e*P	**P**	**16 39 22.9**	**-0.8**
ETOB	**Tobarra**	**48.94**	**299**	P	**P**	**16 39 24.1**	**-0.1**
	comp=Z,46nm,0.9s,mb5.5						
SWN1	**Swindon**	**49.48**	**316**	*e*P	**P**	**16 39 27.4**	**-0.7**
ECRI	**Cripan**	**49.50**	**304**	P	**P**	**16 39 28.5**	**0.0**
	comp=Z,34nm,0.6s,mb5.5						
ECRI	**Cripan**	**49.50**	**304**	P	**P**	**16 39 28.5**	**+0.1**
ECRI				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.5						
SSW	**Stow on the Wo**	**49.57**	**317**	⇑*e*P	**P**	**16 39 27.9**	**-0.9**
SGMF	**Saint Gilles**	**49.66**	**312**	⇑*i*P	**P**	**16 39 28.5**	**-1.1**
	comp=Z,101nm,0.8s,mb5.6						
SGMF	**Saint Gilles**	**49.66**	**312**	⇑*i*P	**P**	**16 39 28.5**	**-1.1**
SGMF				pmax	pmax		
	comp=Z,51nm,0.8s,mb5.6						
CIT	**Chita**	**49.67**	**43**	*e*P	**P**	**16 39 28.9**	**-0.8**
CIT				*e*		16 41 31.6	
CIT				pmax	pmax		
	comp=Z,94nm,2.0s,mb5.5						
LSZ	**Lusaka**	**49.68**	**216**	*e*P	**P**	**16 39 30.3**	**+0.1**
	comp=Z,9.5nm,0.8s,mb4.9						
LSZ	**Lusaka**	**49.68**	**216**	*e*P	**P**	**16 39 30.3**	**+0.2**
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.9						
EVIA	**Vianos**	**49.68**	**299**	P	**P**	**16 39 29.9**	**-0.1**
	comp=Z,61nm,0.5s,mb5.9						
EVIA	**Vianos**	**49.68**	**299**	P	**P**	**16 39 29.9**	**0.0**
EVIA				pmax	pmax		
	comp=Z,61nm,0.5s,mb5.9						
SWK	**Warminster**	**49.72**	**316**	⇑*e*P	**P**	**16 39 29.2**	**-0.8**
EHUE	**Huescar**	**49.82**	**298**	P	**P**	**16 39 30.9**	**-0.1**
	comp=Z,12nm,0.4s,mb5.3						
EHUE	**Huescar**	**49.82**	**298**	P	**P**	**16 39 30.9**	**-0.1**
EHUE				pmax	pmax		
	comp=Z,12nm,0.4s,mb5.3						
QUIF	**Quistinic**	**50.05**	**311**	⇑*i*P	**P**	**16 39 31.2**	**-1.4**
	comp=Z,93nm,0.8s,mb5.6						
QUIF	**Quistinic**	**50.05**	**311**	⇑*i*P	**P**	**16 39 31.2**	**-1.4**
QUIF				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.6						
QIZ	**Qiongzhong**	**50.10**	**87**	P	**P**	**16 39 35.0**	**+1.7**
QIZ				XS		16 46 58.5	
QIZ				SS	SS	16 50 21.5	+8.2
QIZ				LR	LR		
	comp=N,2µm,24.8s						
QIZ				LR	LR		
	comp=Z,1µm,23.8s,MS4.8						
HGH	**Gray Hill**	**50.12**	**316**	⇑*e*P	**P**	**16 39 31.2**	**-1.8**
HGH				AMb	AMB	16 39 38.5	
	comp=Z,82nm,1.8s,mb5.5						
ROSF	**Rostrenen**	**50.14**	**312**	⇑*i*P	**P**	**16 39 32.1**	**-1.2**
	comp=Z,73nm,0.8s,mb5.4						
ROSF	**Rostrenen**	**50.14**	**312**	⇑*i*P	**P**	**16 39 32.1**	**-1.2**
ROSF				pmax	pmax		
	comp=Z,37nm,0.8s,mb5.5						
EBER	**Berja**	**50.15**	**297**	P	**P**	**16 39 33.9**	**+0.4**
	comp=Z,53nm,0.5s,mb5.8						
EQES	**Quesada**	**50.20**	**298**	P	**P**	**16 39 33.5**	**-0.4**
	comp=Z,60nm,0.8s,mb5.7						
HLM1	**Long Mynd**	**50.27**	**317**	*e*P	**P**	**16 39 33.1**	**-1.1**
MCH1	**Michaelchurch**	**50.28**	**317**	⇑*e*P	**P**	**16 39 32.9**	**-1.3**
SSP1	**Stoney Pound**	**50.40**	**317**	⇑*e*P	**P**	**16 39 34.2**	**-1.0**
SSP1				AMb	AMB	16 39 37.5	
	comp=Z,65nm,1.5s,mb5.4						
HTR	**Trewern Hill**	**50.45**	**317**	⇑*e*P	**P**	**16 39 34.2**	**-1.4**
HTR				AMb	AMB	16 39 37.0	
	comp=Z,57nm,0.7s,mb5.7						
SBD1	**Bryn Du**	**50.54**	**318**	⇑*e*P	**P**	**16 39 35.5**	**-0.8**
SBD1				AMb	AMB	16 39 41.8	
	comp=Z,96nm,1.8s,mb5.4						
ECOG	**Cogollos-Vega**	**50.65**	**297**	P	**P**	**16 39 36.9**	**-0.4**
	comp=Z,11nm,0.3s,mb5.3						
ECOG	**Cogollos-Vega**	**50.65**	**297**	P	**P**	**16 39 36.9**	**-0.4**
ECOG				pmax	pmax		
	comp=Z,11nm,0.3s,mb5.3						
EGUA	**Guajares**	**50.69**	**297**	P	**P**	**16 39 37.6**	**-0.1**
	comp=Z,3.6nm,0.4s,mb4.7						
EGUA	**Guajares**	**50.69**	**297**	P	**P**	**16 39 37.6**	**-0.1**
EGUA				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
EBAN	**Banos Encina**	**50.73**	**299**	P	**P**	**16 39 37.5**	**-0.4**
	comp=Z,45nm,0.7s,mb5.5						
EBAN	**Banos Encina**	**50.73**	**299**	P	**P**	**16 39 37.5**	**-0.4**
EBAN				pmax	pmax		
	comp=Z,45nm,0.7s,mb5.5						
ESDC	**Sonseca Array**	**50.73**	**301**	P	**P**	**16 39 37.5**	**-0.4**
	comp=Z,18nm,0.5s,mb5.3,baz=73,slow=6.9,SNR=72						
ESDC	**Sonseca Array**	**50.73**	**301**	P	**P**	**16 39 37.4**	**-0.5**
	comp=Z,34nm,0.4s,mb5.6						
ESLA	**Sonseca Array**	**50.73**	**301**	*e*P	**P**	**16 39 37.0**	**-0.9**
	comp=Z,16nm,1.0s,mb4.9						
GUD	**Guadarrama**	**50.81**	**302**	P	**P**	**16 39 38.1**	**-0.4**
	comp=Z,20nm,0.7s,mb5.2						
GUD	**Guadarrama**	**50.81**	**302**	P	**P**	**16 39 38.1**	**-0.4**
GUD				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.2						
ESK	**Eskdalemuir**	**50.85**	**321**	*e*P	**P**	**16 39 37.5**	**-1.1**
	comp=Z,6.3nm,0.5s,mb4.8						
ESK	**Eskdalemuir**	**50.85**	**321**	*e*P	**P**	**16 39 37.5**	**-1.0**
ESK				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.8						
ERON	**Agron**	**50.86**	**297**	P	**P**	**16 39 38.0**	**-0.9**
	comp=Z,54nm,0.8s,mb5.5						
BOD	**Bodaibo**	**50.90**	**36**	*e*P	**P**	**16 39 37.5**	**-1.4**
BOD				pmax	pmax		
	comp=Z,95nm,1.0s,mb5.7						
WPM1	**Penmaenmawr**	**50.97**	**318**	*e*P	**P**	**16 39 38.9**	**-0.6**
WHN	**Wuhan**	**51.04**	**71**	⇓P	**P**	**16 39 42.0**	**+1.6**
WHN				S	**S**	**16 46 54.0**	**-2.2**
WHN				LR	LR		
	comp=Z,6µm,17.8s,MS5.6						
ELOJ	**Sierra Loja**	**51.12**	**297**	P	**P**	**16 39 39.9**	**-1.1**
	comp=Z,12nm,0.4s,mb5.2						
ELOJ	**Sierra Loja**	**51.12**	**297**	P	**P**	**16 39 39.9**	**-1.0**
ELOJ				pmax	pmax		
	comp=Z,12nm,0.4s,mb5.2						
ELUQ	**Luque**	**51.17**	**298**	P	**P**	**16 39 39.9**	**-1.3**
	comp=Z,22nm,0.4s,mb5.4						
ELUQ	**Luque**	**51.17**	**298**	P	**P**	**16 39 39.9**	**-1.3**
ELUQ				pmax	pmax		
	comp=Z,22nm,0.4s,mb5.4						
WME	**Myndd Eilian**	**51.23**	**318**	⇑*e*P	**P**	**16 39 40.4**	**-1.0**
WLF1	**Llynfaes**	**51.27**	**318**	⇑*e*P	**P**	**16 39 41.2**	**-0.5**
WLF1				AMb	AMB	16 39 45.3	
	comp=Z,51nm,1.9s,mb5.1						
EADA	**Adamuz**	**51.35**	**299**	P	**P**	**16 39 42.0**	**-0.6**
	comp=Z,36nm,0.8s,mb5.4						
YRC	**Rhoscolyn**	**51.37**	**318**	⇑*e*P	**P**	**16 39 41.8**	**-0.7**
YRC				AMb	AMB	16 39 45.0	
	comp=Z,106nm,1.8s,mb5.5						
EARI	**Arriondas**	**51.46**	**305**	P	**P**	**16 39 44.4**	**+1.0**
	comp=Z,31nm,0.7s,mb5.3						
EMIJ	**Mijas**	**51.69**	**297**	P	**P**	**16 39 43.6**	**-1.6**
	comp=Z,55nm,0.8s,mb5.5						
ECAB	**El Cabril**	**52.02**	**299**	P	**P**	**16 39 47.0**	**-0.7**
	comp=Z,74nm,0.5s,mb5.9						
REAL	**Reales**	**52.05**	**297**	*e*P	**P**	**16 39 49.0**	**+1.1**
ZFT	**Errachidia**	**52.05**	**291**	*i* P	**P**	**16 39 49.0**	**+1.0**
MDT	**Midelt**	**52.13**	**292**	LR	LR	17 06 41.0	
	comp=Z,3µm,19.8s,MS5.3,baz=85,slow=42						
LIJA	**Lijar**	**52.15**	**297**	*e*P	**P**	**16 39 47.0**	**-1.7**
EJIF	**Jimena Fronter**	**52.26**	**297**	P	**P**	**16 39 48.5**	**-1.0**
	comp=Z,12nm,0.6s,mb5.0						
EJIF	**Jimena Fronter**	**52.26**	**297**	P	**P**	**16 39 48.5**	**-1.0**
EJIF				pmax	pmax		
	comp=Z,12nm,0.6s,mb5.0						
TIA	**Tai’an**	**52.38**	**64**	*e*P	**P**	**16 39 51.0**	**+0.5**
MOMI	**Momias**	**52.48**	**297**	*e*P	**P**	**16 39 52.0**	**+0.8**
ESPR	**Espera**	**52.51**	**297**	P	**P**	**16 39 50.0**	**-1.4**
	comp=Z,35nm,0.5s,mb5.5						
DLF	**Lyons Farm**	**52.55**	**318**	*e*P	**P**	**16 39 49.2**	**-2.2**
GIBL	**Gibalbin**	**52.61**	**297**	*e*P	**P**	**16 39 52.0**	**-0.1**
ECAL	**Calabor**	**52.66**	**304**	P	**P**	**16 39 52.2**	**-0.2**
	comp=Z,24nm,0.6s,mb5.3						
PBRG	**Braganca**	**52.68**	**303**	*e*P	**P**	**16 39 52.3**	**-0.3**
	comp=Z,49nm,0.9s,mb5.4						
CNIL	**Conil**	**52.74**	**297**	*e*P	**P**	**16 39 54.0**	**+0.9**
SCRT	**Cerro San Cris**	**52.80**	**297**	*e*P	**P**	**16 39 52.5**	**-1.1**
EPON	**Pontenova**	**52.87**	**305**	P	**P**	**16 39 54.4**	**+0.4**
	comp=Z,31nm,0.9s,mb5.2						
ERUA	**La Rua**	**52.93**	**304**	P	**P**	**16 39 53.4**	**-1.1**
	comp=Z,20nm,0.9s,mb5.0						
ERUA	**La Rua**	**52.93**	**304**	P	**P**	**16 39 53.4**	**-1.1**
ERUA				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.0						
DCN	**Croghan**	**52.99**	**318**	*e*P	**P**	**16 39 52.5**	**-2.3**
EMIN	**Mina Concepcio**	**53.04**	**298**	P	**P**	**16 39 53.9**	**-1.5**
	comp=Z,5.2nm,0.4s,mb4.8						
EBAD	**Badajoz**	**53.18**	**300**	P	**P**	**16 39 55.0**	**-1.4**
	comp=Z,18nm,0.7s,mb5.1						
MTE	**Manteigas**	**53.41**	**302**	*e*P	**P**	**16 39 57.6**	**-0.4**
	comp=Z,53nm,1.3s,mb5.3						
MTE				*e*S	**S**	**16 47 28.7**	**+0.3**
MTE				*e*LQ		16 53 26.5	
MTE				*e*LR	LR	16 54 35.6	
	comp=Z,2µm,18.0s						
MTE	**Manteigas**	**53.41**	**302**	*e*P	**P**	**16 39 57.9**	**-0.1**
	comp=Z,16nm,0.8s,mb5.0						
PCBR	**Castelo Branco**	**53.42**	**301**	*e*P	**P**	**16 39 58.3**	**+0.2**
	comp=Z,62nm,0.9s,mb5.5						
HIA	**Hailar**	**53.43**	**47**	*e*P	**P**	**16 39 57.5**	**-0.5**
	comp=Z,55nm,0.9s,mb5.5						
HIA	**Hailar**	**53.43**	**47**	*e*P	**P**	**16 39 57.5**	**-0.5**
HIA				pmax	pmax		
	comp=Z,55nm,0.9s						
PVRL	**Vila Real**	**53.45**	**303**	*e*P	**P**	**16 39 58.1**	**-0.2**
	comp=Z,74nm,0.9s,mb5.6						
PVIS	**Viseu**	**53.64**	**302**	*e*P	**P**	**16 39 59.2**	**-0.5**
	comp=Z,97nm,1.5s,mb5.5						
PCAB	**Cabril**	**53.64**	**303**	*e*P	**P**	**16 40 00.1**	**+0.4**
	comp=Z,48nm,1.3s,mb5.3						
ELOB	**Lobios**	**53.65**	**304**	P	**P**	**16 40 00.7**	**+0.9**
	comp=Z,27nm,0.7s,mb5.3						
EGRO	**El Granado**	**53.71**	**298**	P	**P**	**16 39 58.6**	**-1.6**
	comp=Z,10.0nm,0.5s,mb5.0						
STS	**Santiago**	**53.93**	**305**	P	**P**	**16 40 02.7**	**+1.0**
	comp=Z,31nm,0.7s,mb5.3						
STS	**Santiago**	**53.93**	**305**	P	**P**	**16 40 02.7**	**+1.0**
STS				pmax	pmax		
	comp=Z,31nm,0.7s,mb5.3						
PBEJ	**Beja**	**53.94**	**299**	*e*P	**P**	**16 40 01.3**	**-0.6**
	comp=Z,37nm,1.3s,mb5.2						
EVO	**Evora**	**53.99**	**300**	*e*P	**P**	**16 40 02.3**	**+0.1**
	comp=Z,72nm,0.8s,mb5.3						
EVO				*e*R			
	comp=Z,3µm,22.2s						
EZAM	**Zamans**	**54.10**	**304**	P	**P**	**16 40 04.1**	**+1.1**
	comp=Z,25nm,0.8s,mb5.2						
EZAM	**Zamans**	**54.10**	**304**	P	**P**	**16 40 04.1**	**+1.1**
EZAM				pmax	pmax		
	comp=Z,25nm,0.8s,mb5.2						
PTOM	**Tomar**	**54.16**	**301**	*e*P	**P**	**16 40 03.6**	**+0.1**
	comp=Z,70nm,0.9s,mb5.6						
EMAZ	**Mazaricos**	**54.23**	**305**	P	**P**	**16 40 03.7**	**-0.3**
	comp=Z,48nm,1.0s,mb5.4						
NJ2	**Nanjing**	**54.52**	**68**	*e*P	**P**	**16 40 07.0**	**+0.8**
NJ2				AP	pP	16 40 11.8	+2.3
NJ2				XP	sP	16 40 14.3	+3.5
NJ2				PP	PP	16 42 10.8	+0.7
NJ2				S	**S**	**16 47 44.0**	**+0.5**
NJ2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,180nm,4.7s						
NJ2				LR	LR		
	comp=N,740nm,17.3s,MS4.9						
NJ2				LR	LR		
	comp=E,640nm,17.5s,MS4.9						
PLOU	**Loures**	**54.82**	**300**	*e*P	**P**	**16 40 08.5**	**+0.1**
	comp=E,97nm,1.8s,mb5.5						
DL2	**Dalian**	**55.54**	**60**	P	**P**	**16 40 16.5**	**+2.8**
DL2				S	**S**	**16 47 59.0**	**+1.8**
DL2				PS	PS	16 48 14.3	+4.6
DL2				AMB	AMB		
	comp=Z,30nm,1.2s,mb5.2						
DL2				AMB	AMB		
	comp=Z,150nm,4.8s						
DL2				LR	LR		
	comp=N,3µm,19.6s,MS5.4						
DL2				LR	LR		
	comp=E,1µm,19.2s,MS5.4						
DL2				LR	LR		
	comp=Z,2µm,14.5s,MS5.3						
KBS	**Kingsbay**	**55.61**	**351**	*e*P	**P**	**16 40 13.2**	**-0.4**
KBS				*e*S	**S**	**16 47 54.4**	**-3.2**
KBS				*e*SS	SS	16 51 45.9	+3.2
KBS				AMS	AMS	17 09 10.5	
	comp=Z,808nm,15.8s,MS4.9						
KBS	**Kingsbay**	**55.61**	**351**	*e*P	**P**	**16 40 13.0**	**-0.7**
	comp=Z,40nm,0.8s,mb5.5						
KBS	**Kingsbay**	**55.61**	**351**	*e*P	**P**	**16 40 13.0**	**-0.7**
KBS				pmax	pmax		
	comp=Z,40nm,0.8s,mb5.5						
KBS	**Kingsbay**	**55.61**	**351**	*e*P	**P**	**16 40 13.2**	**-0.5**
	SNR=22						
KBS				*e*S	**S**	**16 47 54.4**	**-3.2**
	SNR=24						
KBS				*e*SS	SS	16 51 45.9	+3.1
	SNR=28						
SNY	**Shenyang**	**56.61**	**56**	⇓P	**P**	**16 40 21.3**	**0.0**
SNY				S	**S**	**16 48 08.5**	**-2.8**
SNY				SS	SS	16 51 58.0	-1.8
SNY				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
SNY				AMB	AMB		
	comp=Z,130nm,5.7s						
SNY				LR	LR		
	comp=E,3µm,14.8s						
SNY				LR	LR		
	comp=Z,4µm,15.5s,MS5.6						
CLNS	**Chul’man**	**56.65**	**38**	*e*P	**P**	**16 40 21.5**	**+0.2**
CLNS				*e**PP	pP	16 40 28.5	+3.9
CLNS				*e*PS	PS	16 48 35.3	+10
CLNS				*e*		16 50 10.8	
CLNS				pmax	pmax		
	comp=Z,54nm,1.0s,mb5.5						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,30nm,0.9s						
CLNS				MLR	MLR		
	comp=N,1µm,16.0s,MS5.6						
CLNS				MLR	MLR		
	comp=Z,5µm,16.0s,MS5.7						
CLNS				MLR	MLR		
	comp=E,3µm,15.0s,MS5.6						
SSE	**Sheshan**	**56.67**	**69**	P	**P**	**16 40 21.8**	**0.0**
SSE				XP	sP	16 40 26.5	+0.1
SSE				PCP	PcP	16 41 19.3	+1.4
SSE				PP	PP	16 42 26.8	-2.7
SSE				S	**S**	**16 48 10.5**	**-1.7**
SSE				SCS	ScS	16 50 10.3	+2.7
SSE				AMB	AMB		
	comp=Z,50nm,0.8s,mb5.6						
SSE				AMB	AMB		
	comp=Z,60nm,3.8s						
SSE				LR	LR		
	comp=N,3µm,18.7s,MS5.4						
SSE				LR	LR		
	comp=E,1µm,18.8s,MS5.4						
SSE				LR	LR		
	comp=Z,3µm,17.8s,MS5.4						
SSE	**Sheshan**	**56.67**	**69**	P	**P**	**16 40 21.7**	**-0.1**
	comp=Z,51nm,0.8s,mb5.6						
SSE				sP	sP	16 40 26.4	0.0
SSE				PcP	PcP	16 41 19.3	+1.4
SSE				PP	PP	16 42 26.7	-2.8
SSE				S	**S**	**16 48 10.5**	**-1.7**
SSE				sS		16 48 16.7	
SSE				ScS	ScS	16 50 10.2	+2.6
SSE				SS	SS	16 51 57.4	-3.5
SSE				LR	LR		
	comp=Z,3µm,17.8s,MS5.4						
CN2	**Changchun**	**57.71**	**53**	*e*P	**P**	**16 40 29.0**	**-0.1**
CN2				*e*AP	pP	16 40 33.5	+1.1
CN2				*e*XP	sP	16 40 36.0	+2.4
CN2				*e*S	**S**	**16 48 24.3**	**-1.5**
CN2				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.6						
CN2				LR	LR		
	comp=N,8µm,21.0s,MS5.8						
CN2				LR	LR		
	comp=E,3µm,21.0s,MS5.8						
CN2				LR	LR		
	comp=Z,900nm,18.0s,MS4.9						
YHNB	**Yeheng**	**58.53**	**76**	*e*P	**P**	**16 40 35.8**	**+0.8**
TSUM	**Tsumeb**	**58.85**	**223**	*e*P	**P**	**16 40 37.1**	**-0.2**
	comp=Z,33nm,1.1s,mb5.3						
LBTB	**Lobatse**	**59.18**	**212**	*e*P	**P**	**16 40 38.9**	**-0.6**
	comp=Z,71nm,0.8s,mb5.8						
LBTB				LR	LR		
	comp=Z,3µm,20.0s,MS5.4						

LBTB	**Lobatse**	**59.18**	**212**	eP	**P**	**16 40 38.9**	**-0.6**
LBTB				pmax	pmax		
	comp=Z,71nm,0.8s,mb5.8						
LBTB				MLR	MLR		
	comp=Z,3µm,20.0s,MS5.4						
YAK	**Yakutsk**	**59.18**	**32**	eP	**P**	**16 40 37.3**	**-1.7**
	comp=Z,45nm,0.9s,mb5.5						
YAK	**Yakutsk**	**59.18**	**32**	eP	**P**	**16 40 37.3**	**-1.7**
YAK				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.5						
TIXI	**Tiksi**	**59.48**	**21**	⇑eP	**P**	**16 40 39.3**	**-1.7**
TIXI	**Tiksi**	**59.48**	**21**	eP	**P**	**16 40 37.3**	**-3.7**
TIXI				e		16 42 52.5	
TIXI				eS	**S**	**16 48 37.8**	**-11**
TIXI				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.2						
TIXI				MLR	MLR		
	comp=Z,3µm,16.0s,MS5.6						
INCN	**Inchon**	**59.68**	**61**	eP	**P**	**16 40 42.5**	**-0.3**
	comp=Z,38nm,0.9s,mb5.4						
EFAM	**Famara**	**60.42**	**290**	P	**P**	**16 40 49.1**	**+1.1**
	comp=Z,36nm,0.7s,mb5.5						
MDJ	**Mudanjiang**	**60.54**	**52**	P	**P**	**16 40 48.0**	**-0.6**
MDJ				AP	pP	16 40 51.3	-0.7
MDJ				PP	PP	16 43 01.5	-2.7
MDJ				PCS		16 45 35.0	
MDJ				S	**S**	**16 49 02.8**	**+0.3**
MDJ				XS		16 49 09.8	
MDJ				SCS	ScS	16 50 38.8	+3.0
MDJ				SS	SS	16 53 03.5	+1.5
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.7						
MDJ				AMB	AMB		
	comp=Z,90nm,7.1s						
MDJ				LR	LR		
	comp=N,5µm,25.9s,MS5.5						
MDJ				LR	LR		
	comp=E,2µm,25.9s,MS5.5						
MDJ				LR	LR		
	comp=Z,3µm,22.6s,MS5.3						
DAG	**Danmarks Havn**	**60.54**	**345**	⇑iP	**P**	**16 40 46.3**	**-1.9**
	comp=Z,17nm,0.6s,mb5.3						
DAG	**Danmarks Havn**	**60.54**	**345**	⇑eP	**P**	**16 40 46.3**	**-1.9**
	comp=Z,17nm,0.6s,mb5.3						
DAG	**Danmarks Havn**	**60.54**	**345**	⇑eP	**P**	**16 40 46.3**	**-1.9**
DAG				pmax	pmax		
	comp=Z,17nm,0.6s,mb5.3						
BORG	**Borgarnes**	**60.61**	**331**	LR	LR	17 10 45.0	
	comp=Z,1µm,20.9s,MS5.1,baz=321,slow=40						
KS15	**Wonju Array Si**	**60.66**	**60**	eP	**P**	**16 40 48.5**	**-1.0**
DBIC	**Dimbokro**	**60.84**	**262**	P	**P**	**16 40 50.0**	**-1.1**
	comp=Z,34nm,0.9s,mb5.5,baz=49,slow=7.9,SNR=30						
DBIC				LR	LR	17 08 19.3	
	comp=Z,2µm,21.8s,MS5.3,baz=41,slow=37						
DBIC	**Dimbokro**	**60.84**	**262**	eP	**P**	**16 40 49.4**	**-1.6**
	comp=Z,55nm,0.8s,mb5.7						
DBIC	**Dimbokro**	**60.84**	**262**	eP	**P**	**16 40 49.4**	**-1.7**
DBIC				pmax	pmax		
	comp=Z,55nm,0.8s						
SCO	**Scoresbysund**	**60.90**	**338**	eP	**P**	**16 40 50.5**	**-0.2**
	comp=Z,9.3nm,0.9s,mb4.9						
KKM	**Kota Kinabalu**	**60.97**	**98**	eP	**P**	**16 40 49.2**	**-2.7**
CFTV	**Fuerteventura**	**61.09**	**289**	P	**P**	**16 40 53.7**	**+1.2**
	comp=Z,24nm,0.6s,mb5.5						
LIC	**Lamto**	**61.20**	**262**	eP	**P**	**16 40 52.1**	**-1.4**
	comp=Z,44nm,0.7s,mb5.4						
LIC				eR			
	comp=Z,4µm,17.0s						
KLR	**Kul'dur**	**61.27**	**46**	eP	**P**	**16 40 48.7**	**-4.8**
KLR				eS	**S**	**16 49 07.5**	**-4.2**
KLR				pmax	pmax		
	comp=E,40nm,1.0s						
KLR				pmax	pmax		
	comp=Z,44nm,1.0s,mb5.5						
KLR				MLR	MLR		
	comp=N,5µm,13.5s						
KLR				MLR	MLR		
	comp=Z,10µm,13.5s,MS6.2						
BOSA	**Boshof**	**62.40**	**210**	P	**P**	**16 40 59.9**	**-1.5**
	comp=Z,50nm,0.5s,mb5.9,baz=30,slow=7.1,SNR=135						
BOSA				LR	LR	17 08 41.6	
	comp=Z,2µm,18.4s,MS5.4,baz=31,slow=37						
BOSA	**Boshof**	**62.40**	**210**	eP	**P**	**16 41 00.1**	**-1.4**
	comp=Z,43nm,0.6s,mb5.8						
BOSA	**Boshof**	**62.40**	**210**	eP	**P**	**16 41 00.1**	**-1.3**
BOSA				pmax	pmax		
	comp=Z,43nm,0.6s,mb5.8						
EBAJ	**Bajamar**	**62.95**	**290**	P	**P**	**16 41 06.2**	**+1.1**
	comp=Z,39nm,0.7s,mb5.7						
CCAN	**Las Canadas**	**63.27**	**290**	P	**P**	**16 41 08.3**	**+1.2**
	comp=Z,9.4nm,1.3s,mb4.8						
EGOM	**La Gomera**	**63.80**	**290**	P	**P**	**16 41 11.9**	**+1.3**
	comp=Z,15nm,0.6s,mb5.2						
JNU	**Nakatsue**	**64.11**	**64**	LR	LR	17 12 38.8	
	comp=Z,3µm,18.9s,MS5.5,baz=287,slow=39						
SUMG	**Summit**	**65.93**	**341**	eP	**P**	**16 41 23.6**	**-0.1**
	comp=Z,40nm,0.8s,mb5.5						
MAT	**Matsushiro**	**68.86**	**59**	eP	**P**	**16 41 41.0**	**-1.8**
	comp=Z,9.2nm,0.9s,mb4.7						
MAT				eS	S	16 50 48.0	+2.8
MAT	**Matsushiro**	**68.86**	**59**	eP	**P**	**16 41 41.0**	**-1.8**
MAT				eS	S	16 50 48.0	+2.8
MAT				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.7						
MJAR	**Matsushiro Arr**	**68.86**	**59**	P	**P**	**16 41 42.9**	**+0.1**
	comp=Z,6.3nm,1.0s,mb4.5,baz=292,slow=9.3,SNR=12						
MJAR				LR	LR	17 13 52.0	
	comp=Z,1µm,21.2s,MS5.1,baz=290,slow=38						
MJAR	**Matsushiro Arr**	**68.86**	**59**	P	**P**	**16 41 42.9**	**+0.1**
MJAR				LR	LR	17 13 52.0	
YSS	**Yuzh-Sakhalins**	**68.96**	**47**	eP	**P**	**16 41 42.2**	**-1.0**
	comp=Z,57nm,0.9s,mb5.5						
YSS	**Yuzh-Sakhalins**	**68.96**	**47**	⇑iP	**P**	**16 41 42.1**	**-1.1**
YSS				e		16 41 52.0	
YSS				e		16 41 58.8	
YSS				e		16 55 10.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.0s,mb5.5						
YSS				MLR	MLR		
	comp=Z,2µm,19.0s,MS5.4						
YSS				MLR	MLR		
	comp=N,2µm,16.0s						
SEY	**Seymchan**	**69.40**	**29**	i P	**P**	**16 41 45.5**	**-0.1**
SEY	**Seymchan**	**69.40**	**29**	i P	**P**	**16 41 45.4**	**-0.2**
ASAJ	**Asahikawa**	**69.71**	**50**	LR	LR	17 14 17.2	
	comp=N,3µm,19.7s,MS5.5,baz=137,slow=38						
MA2	**Magadan**	**69.73**	**33**	eP	**P**	**16 41 48.8**	**+1.1**
MA2				eS	S	16 50 54.1	-0.9
MA2				ePS	PS	16 51 20.2	-2.6
MA2				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.0						
MA2				MLR	MLR		
	comp=E,6µm,24.0s						
JHJ	**Hachijo jima 2**	**71.21**	**62**	LR	LR	17 17 10.6	
	comp=E,2µm,18.6s,MS5.3,baz=109,slow=39						
SFJD	**Kangerlussuaq**	**71.74**	**337**	LR	LR	17 16 47.4	
	comp=E,1µm,18.3s,MS5.2,baz=147,slow=39						
SFJD	**Kangerlussuaq**	**71.74**	**337**	eP	**P**	**16 41 59.1**	**-0.7**
CBIJ	**Chichi jima**	**75.34**	**67**	LR	LR	17 18 59.8	
	comp=E,1µm,21.7s,MS5.2,baz=274,slow=39						
FITZ	**Fitzroy Crossi**	**81.14**	**115**	eP	**P**	**16 42 54.3**	**+0.9**
	comp=E,26nm,0.8s,mb5.2						
TNA	**Tin City**	**82.01**	**17**	eP	**P**	**16 42 56.8**	**-0.2**
	comp=E,8.7nm,0.8s,mb4.7						
MUN	**Mundaring**	**82.05**	**132**	eP	**P**	**16 42 58.3**	**+0.4**
KLBR	**Kellerberrin**	**82.85**	**131**	eP	**P**	**16 43 02.7**	**+0.6**
	comp=E,38nm,1.1s,mb5.3						
GUMO	**Guam**	**83.20**	**78**	LR	LR	17 19 36.0	
	comp=E,453nm,20.3s,MS4.8,baz=266,slow=35						
FX1	**Attu Island--F**	**83.82**	**33**	eP	**P**	**16 43 06.2**	**-0.4**
IMA2	**Indian Mountai**	**84.72**	**12**	eP	**P**	**16 43 11.3**	**+0.6**
INK	**Inuvik**	**84.92**	**3**	eP	**P**	**16 43 11.5**	**-0.2**
	comp=E,16nm,0.9s,mb5.2						
INK	**Inuvik**	**84.92**	**3**	eP	**P**	**16 43 11.5**	**-0.2**
INK				pmax	pmax		
	comp=Z,17nm,0.9s						
SCHQ	**Schefferville**	**85.00**	**331**	P	**P**	**16 43 12.6**	**+0.2**
	comp=Z,5.0nm,0.8s,mb4.7,baz=62,slow=4.4,SNR=8.3						
SCHQ				LR	LR	17 23 55.1	
	comp=Z,1µm,19.4s,MS5.3,baz=44,slow=38						
SCHQ	**Schefferville**	**85.00**	**331**	P	**P**	**16 43 11.9**	**-0.5**
	comp=Z,17nm,0.8s,mb5.2						
COLA	**College**	**86.79**	**10**	eP	**P**	**16 43 20.8**	**-0.2**
	comp=Z,19nm,0.9s,mb5.3						
COLA				LR	LR		
	comp=Z,1µm,20.0s,MS5.4						
COLA	**College**	**86.79**	**10**	eP	**P**	**16 43 20.8**	**-0.2**
COLA				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.3						
COLA				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.4						
ILAR	**Eielson Array**	**87.03**	**10**	P	**P**	**16 43 21.6**	**-0.7**
	comp=Z,7.1nm,0.7s,mb5.0,baz=319,slow=4.9,SNR=90						
ILAR				PKKPbc		17 01 15.1	
	comp=Z,0.5nm,0.6s,baz=180,slow=2.0,SNR=12						
ILAR				LR	LR	17 24 44.5	
	comp=Z,2µm,21.5s,MS5.4,baz=195,slow=37						
MCK	**McKinley**	**87.68**	**11**	eP	**P**	**16 43 24.9**	**-0.5**
	comp=Z,20nm,0.9s,mb5.3						
MCK	**McKinley**	**87.68**	**11**	eP	**P**	**16 43 24.9**	**-0.5**
MCK				pmax	pmax		
	comp=Z,20nm,0.9s,mb5.3						
THY	**Trims Highway**	**88.48**	**10**	eP	**P**	**16 43 28.2**	**-1.0**
DAWY	**Dawson**	**88.65**	**7**	eP	**P**	**16 43 29.9**	**-0.1**
WRA	**Warramunga Arr**	**89.17**	**113**	P	**P**	**16 43 34.1**	**+0.6**
	comp=Z,6.3nm,0.9s,mb5.0,baz=304,slow=4.1,SNR=18						
WRAB	**Tennant Creek**	**89.17**	**113**	eP	**P**	**16 43 33.9**	**+0.3**
	comp=Z,26nm,0.9s,mb5.6						
WRAB	**Tennant Creek**	**89.17**	**113**	eP	**P**	**16 43 33.9**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.6						
WB2	**Warramunga Arr**	**89.18**	**113**	eP	**P**	**16 43 34.0**	**+0.5**
PMR	**Palmer**	**89.64**	**12**	eP	**P**	**16 43 36.6**	**+1.9**
	comp=Z,23nm,1.0s,mb5.5						
PMR				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
PMR	**Palmer**	**89.64**	**12**	eP	**P**	**16 43 36.6**	**+1.9**
PMR				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.5						
PMR				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
FIB	**Fire Island**	**89.84**	**12**	eP	**P**	**16 43 36.8**	**+1.1**
	comp=Z,18nm,0.7s,mb5.5						
FIB	**Fire Island**	**89.84**	**12**	eP	**P**	**16 43 36.8**	**+1.1**
FIB				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.5						
YKA	**Yellowknife Ar**	**90.68**	**356**	P	**P**	**16 43 40.6**	**+1.1**
	comp=Z,6.6nm,1.1s,mb4.9,baz=6.2,slow=5.3,SNR=8.2						
YKA				LR	LR	17 28 20.7	
	comp=Z,1µm,21.8s,MS5.3,baz=350,slow=38						
MAW	**Mawson**	**94.27**	**177**	P	**P**	**16 43 58.5**	**+2.6**
	comp=Z,7.7nm,0.8s,mb5.2,baz=26,slow=4.3,SNR=8.3						
MAW				LR	LR	17 20 36.6	
	comp=Z,1µm,19.7s,MS5.4,baz=353,slow=32						
MAW	**Mawson**	**94.27**	**177**	eP	**P**	**16 43 57.6**	**+1.6**
	comp=Z,12nm,1.0s,mb5.3						
MAW	**Mawson**	**94.27**	**177**	eP	**P**	**16 43 57.6**	**+1.7**
MAW				pmax	pmax		
	comp=Z,12nm,1.0s						
PMG	**Port Moresby**	**95.41**	**98**	⇑eP	**P**	**16 44 07.0**	**+4.6**
SYO	**Syowa Base**	**96.27**	**186**	⇓P	**P**	**16 44 06.7**	**+1.6**
SYO	**Syowa Base**	**96.27**	**186**	⇑PcP	PcP	16 44 08.0	+2.5
SYO	**Syowa Base**	**96.27**	**186**	⇓pP	pP	16 44 10.3	+1.8
SYO	**Syowa Base**	**96.27**	**186**	⇓eP	**P**	**16 44 06.7**	**+1.6**
SYO				⇑ePcP	PcP	16 44 08.0	+2.5
SYO				⇓epP	pP	16 44 10.3	+1.8
CTA	**Charters Tower**	**99.22**	**108**	LR	LR	17 27 10.9	
	comp=Z,358nm,21.2s,MS4.8,baz=94,slow=34						
ULM	**Lac du Bonnet**	**99.27**	**342**	LR	LR	17 32 13.7	
	comp=Z,1µm,21.9s,MS5.3,baz=180,slow=37						
EDM	**Edmonton**	**99.75**	**353**	ePdif	**P**	**16 44 21.1**	**0.0**
SNAA	**Sanae**	**106.16**	**196**	P		16 49 02.9	
SNAA	**Sanae**	**106.16**	**196**		tx	16 49 21.8	
SNAA	**Sanae**	**106.16**	**196**		tx	16 49 26.9	
VNA2	**Neumayer--Watz**	**106.92**	**198**	⇑iP		16 49 03.8	
VNA2	**Neumayer--Watz**	**106.92**	**198**		tx	16 49 24.5	
VNA2	**Neumayer--Watz**	**106.92**	**198**		tx	16 49 28.7	
VNA3	**Neumayer Olymp**	**107.71**	**198**	P		16 49 05.7	
VNA3	**Neumayer Olymp**	**107.71**	**198**		tx	16 49 08.8	
VNA3	**Neumayer Olymp**	**107.71**	**198**		tx	16 49 24.9	
VNA3	**Neumayer Olymp**	**107.71**	**198**		tx	16 49 30.5	
PDAR	**Pinedale Array**	**109.46**	**349**	PKiKP		16 49 08.4	
	comp=Z,0.5nm,0.5s,baz=71,slow=3.9,SNR=3.5						
PDAR				PKKPab		17 00 25.1	
	comp=Z,1.1nm,0.8s,baz=154,slow=3.4,SNR=8.4						
NVAR	**Mina Array Bea**	**114.87**	**355**	PKP	PKPdf	16 49 19.6	-0.5
	comp=Z,0.9nm,0.6s,baz=25,slow=1.3,SNR=8.2						
NVAR				PKKPab		17 00 02.6	
	comp=Z,1.0nm,0.9s,baz=188,slow=6.1,SNR=4.6						
ANMO	**Albuquerque**	**116.32**	**344**	PKKPab		16 59 56.6	
	comp=Z,1.7nm,0.8s,baz=158,slow=4.7,SNR=5.3						
SIV	**San Ignacio**	**120.73**	**267**	PKP	PKPdf	16 49 30.1	-1.9
	comp=Z,1.0nm,0.7s,baz=126,slow=2.8,SNR=6.3						
TXAR	**Lajitas Array**	**120.80**	**339**	PKP	PKPdf	16 49 30.9	-1.0
	comp=Z,1.3nm,0.6s,baz=185,slow=1.6,SNR=8.9						
LPAZ	**La Paz**	**127.14**	**269**	PKP	PKPdf	16 49 44.8	+0.4
	comp=Z,1.2nm,0.6s,baz=165,slow=8.5,SNR=6.8						
TRQA	**Tornquist**	**127.15**	**241**	ePKPdf	PKPdf	16 49 42.0	-1.9
OTAV	**Otavalo**	**128.42**	**294**	ePKPdf	PKPdf	16 49 47.9	+0.9
CFAA	**Coronel Fontan**	**131.33**	**250**	PKP	PKPdf	16 49 52.2	+0.1
	comp=Z,0.4nm,0.5s,baz=135,slow=3.5,SNR=6.3						
CFAA				SKPbc		16 53 15.3	
	comp=Z,2.1nm,1.1s,baz=82,slow=8.4,SNR=10						
CFAA	**Coronel Fontan**	**131.33**	**250**	PKP	PKPdf	16 49 52.2	+0.1
CFAA				SKPbc		16 53 15.3	
PPT	**Papeete**	**154.83**	**74**	ePP	PP	16 54 49.7	+17
PPT	**Papeete**	**154.83**	**74**	eLR	LR	17 42 28.7	
	comp=Z,755nm,22.8s						
TAOE	**Nuku Hiva Isla**	**156.63**	**43**	eLR	LR	17 43 16.7	
	comp=Z,4µm,22.5s						
TBI	**Tubuai**	**156.90**	**87**	eLR	LR	17 43 27.6	
	comp=Z,646nm,22.5s						
RKT	**Rikitea**	**169.59**	**72**	eLR	LR	17 49 18.7	
	comp=Z,1µm,28.5s						

IDC 27 16:59:49.0±1.9**, 18.40S**×**173.19E, mb4.0**/3**, mb1 4.3**/3**, mb1mx3.9**/12**, mbtmp4.0**/3**, Error ellipse: s-maj=135.6km s-min=35.1km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**31.46**	**239**	P	P	17 06 12.7	-1.9
	1.2nm,0.4s,baz=92,slow=12,SNR=9.6						
WRA	**Warramunga Arr**	**36.67**	**261**	P	P	17 06 57.5	-2.0
	0.4nm,0.4s,baz=95,slow=7.9,SNR=7.9						
TXAR	**Lajitas Array**	**93.09**	**60**	P	P	17 13 05.2	-1.2
	0.7nm,0.7s,baz=225,slow=6.4,SNR=4.7						

IDC ***27*** *17:12:58.7±2.2, 24.88N×122.94E,* $h121^{km}\pm20^{km}$*, mb4.1/19, mb1 4.2/22, mb1mx4.1/27, mbtmp4.5/22, Error ellipse: s-maj=16.6km s-min=9.7km az=68.0*
BJI ***27*** *17:12:59.5, 24.68N×122.88E,* $h161^{km}$*, mB4.9, mb4.4*
MOS ***27*** *17:12:59.1±0.9, 24.94N×122.98E,* $h142^{km}$*, mb4.5/14, Error ellipse: s-maj=13.5km s-min=7.2km az=112.2*
NEIC ***27*** *17:12:59.7±0.5, 24.87N×122.92E,* $h132^{km}\pm4^{km}$*, mb4.5/22, Error ellipse: s-maj=6.5km s-min=5.4km az=92.0*
NEIC Recorded [1 JMA] on Ishigaki-jima, Ryukyu Islands.
NIED ***27*** *17:13:00, 24.90N×123.00E,* $h145^{km}$*, Mw5.2 Best double couple:* $M_0 6.58\times10^{16}$ *NP1:* $\phi_s 118°, \delta 80°, \lambda -39°$*. NP2:* $\phi_s 216°, \delta 52°, \lambda -167°$*.*
JMA ***27*** *17:13:01.8±0.1, 24.86N×122.98E,* $h111^{km}\pm2^{km}$*, M4.6*
JMA Felt I J1.
ISC 27 17:12:58.4±0.2**, 24.88N**±0.03×**122.96E**±0.03**,** $h134^{km}\pm2^{km}$**,** $h144^{km}\pm8.6^{km}$**:pP-P, n112,** $\sigma 1^{s}06$/139**, mb4.3**/38**, 8C-6D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.42**	**173**	P	**P**	**17 13 18.3**	**+0.2**
YOJ				eS	**S**	**17 13 30.3**	**-2.9**
IRIF	**Iriomote-Funau**	**0.89**	**128**	P	**P**	**17 13 21.6**	**+0.6**
IRIF				eS	**S**	**17 13 36.8**	**-1.6**
HATJ	**Hateruma jima**	**1.13**	**137**	P	**P**	**17 13 24.2**	**+1.0**
HATJ				S	**S**	**17 13 41.5**	**-0.7**
JKRS	**Kuro-shima**	**1.15**	**124**	P	**P**	**17 13 24.7**	**+1.2**
JKRS				eS	**S**	**17 13 41.9**	**-0.8**
JIJ	**Ishigaki jima**	**1.20**	**115**	P	**P**	**17 13 24.8**	**+0.9**
JIJ				S	**S**	**17 13 41.8**	**-1.7**
TATO	**Taipei**	**1.34**	**274**	eP	**P**	**17 13 26.1**	**+0.8**
NACB	**Ninganchiao**	**1.43**	**241**	⇑eP	**P**	**17 13 25.5**	**-0.9**
NACB				eS	**S**	**17 13 40.1**	**-7.7**
YHNB	**Yeheng**	**1.45**	**262**	eP	**P**	**17 13 27.4**	**+0.8**
YHNB				eS	**S**	**17 13 47.2**	**-1.1**
JTJ	**Tarama**	**1.61**	**98**	P	**P**	**17 13 30.0**	**+1.6**
JTJ				eS	**S**	**17 13 50.9**	**-0.4**
JMJ	**Miyako jima 2**	**2.12**	**91**	P	**P**	**17 13 36.4**	**+1.8**
JMJ				eS	**S**	**17 14 02.7**	**+0.6**
JOGS	**Gusukube**	**2.23**	**93**	P	**P**	**17 13 38.0**	**+2.1**
JOGS				eS	**S**	**17 14 05.4**	**+0.9**
JKE	**Kume jima 2**	**3.75**	**67**	P	**P**	**17 13 56.9**	**+1.1**
JKE				eS	**S**	**17 14 41.9**	**+2.1**
QZH	**Quanzhou**	**3.96**	**272**	⇓iP	**P**	**17 13 58.8**	**+0.1**
QZH				S	**S**	**17 14 39.5**	**-5.4**
QZH				Smax			
	comp=N,220nm,0.6s						
QZH				Smax			
	comp=E,220nm,1.0s						
JAGN	**Aguni-jima**	**4.22**	**65**	P	**P**	**17 14 03.1**	**+0.9**
JAGN				S	**S**	**17 14 52.0**	**+0.9**
NAH1	**Naha**	**4.47**	**72**	P	**P**	**17 14 06.3**	**+0.8**
NAH1				eS	**S**	**17 14 57.1**	**0.0**
JJT2	**Tamagusuku 2**	**4.51**	**73**	P	**P**	**17 14 06.8**	**+0.8**
JIH	**Iheya**	**4.99**	**64**	P	**P**	**17 14 12.6**	**+0.1**
JIH				eS	**S**	**17 15 09.0**	**-0.6**
JOW	**Kunigami**	**5.17**	**67**	P	**P**	**17 14 14.5**	**-0.3**
	comp=E,56nm,0.3s,baz=217,slow=8.9,SNR=189						
JOW				S	**S**	**17 15 12.7**	**-1.2**
	comp=E,49nm,0.3s,baz=120,slow=26,SNR=13						
JOW	**Kunigami**	**5.17**	**67**	P	**P**	**17 14 14.4**	**-0.4**
JOW				eS	**S**	**17 15 12.4**	**-1.5**
JTK	**Tokunoshima**	**6.11**	**60**	P	**P**	**17 14 26.3**	**-1.1**
JTK				eS	**S**	**17 15 33.2**	**-3.3**
SSE	**Sheshan**	**6.38**	**346**	P	**P**	**17 14 35.3**	**+4.1**
SSE				S	**S**	**17 15 49.5**	**+6.3**
SSE				Smax			
	comp=N,50nm,1.1s						
SSE				Smax			
	comp=E,30nm,1.0s						
SSE	**Sheshan**	**6.38**	**346**	Pn	**P**	**17 14 35.3**	**+4.1**
	comp=E,37nm,1.0s						
SSE				Sn	**S**	**17 15 49.4**	**+6.2**
JAM	**Amami Oshima**	**6.91**	**58**	P	**P**	**17 14 36.8**	**-1.5**
JAM				eS	**S**	**17 15 52.7**	**-3.2**
JZK	**Kikaishima**	**7.15**	**60**	P	**P**	**17 14 40.6**	**-0.9**
JZK				eS	**S**	**17 15 59.4**	**-2.3**
JMZ	**Minamidaito 2**	**7.54**	**81**	P	**P**	**17 14 44.9**	**-1.8**
JMZ				eS	**S**	**17 16 03.2**	**-7.8**
NJ2	**Nanjing**	**8.00**	**334**	eP	**P**	**17 14 58.0**	**+5.0**
NJ2				S	**S**	**17 16 27.0**	**+4.7**
NJ2				Smax			
	comp=N,190nm,1.2s						
NJ2				Smax			
	comp=E,260nm,1.1s						
NJ2				LR	LR		
	comp=N,550nm,15.7s						
NJ2				LR	LR		
	comp=E,810nm,15.4s						
NJ2				LR	LR		
	comp=Z,410nm,17.8s						
GZH	**Guangzhou**	**8.97**	**260**	P	**P**	**17 15 02.0**	**-3.9**
GZH				Smax			
	comp=N,50nm,1.2s						
GZH				Smax			
	comp=E,30nm,1.1s						
WHN	**Wuhan**	**9.48**	**308**	P	**P**	**17 15 14.0**	**+1.3**
WHN				S	**S**	**17 16 57.0**	**-0.7**
WHN				LR	LR		
	comp=N,1µm,13.4s						
WHN				LR	LR		
	comp=E,4µm,24.6s						
JNU	**Nakatsue**	**10.74**	**38**	P	**P**	**17 15 29.3**	**-0.1**
	comp=E,0.2nm,0.3s,baz=220,slow=16,SNR=2.5						
KS15	**Wonju Array Si**	**13.21**	**17**	eP	**P**	**17 16 05.0**	**+3.4**
MAJO	**Matsushiro**	**17.50**	**45**	eP	**P**	**17 16 54.6**	**-0.7**
MJAR	**Matsushiro Arr**	**17.50**	**45**	P	**P**	**17 16 55.8**	**+0.5**
	comp=E,0.6nm,0.3s,baz=238,slow=7.3,SNR=8.7						
CD2	**Chengdu**	**17.99**	**294**	P	**P**	**17 17 01.5**	**+0.3**
KMI	**Kunming**	**18.33**	**275**	P	**P**	**17 17 05.3**	**+0.4**
	comp=E,4.0nm,0.8s						
KMI	**Kunming**	**18.33**	**275**	P	**P**	**17 17 05.3**	**+0.4**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CN2	**Changchun**	**18.98**	**6**	eP	**P**	**17 17 16.0**	**+4.2**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.5s						
BTO	**Baotou**	**19.05**	**329**	eP	**P**	**17 17 13.5**	**+1.0**
KKM	**Kota Kinabalu**	**19.82**	**200**	eP	**P**	**17 17 20.2**	**-0.4**
LZH	**Lanzhou**	**19.86**	**309**	eP	**P**	**17 17 22.0**	**+1.0**
LZH				AP		17 17 47.5	
LZH				AMB	AMB		
	comp=Z,50nm,1.5s						
LZH				AMB	AMB		
	comp=Z,90nm,6.1s						
LZH				LR	LR		
	comp=N,530nm,14.9s						
LZH				LR	LR		
	comp=Z,1µm,17.8s						
LZH	**Lanzhou**	**19.86**	**309**	eP	**P**	**17 17 22.1**	**+1.1**
	comp=Z,58nm,1.5s						
LZH				pP		17 17 47.5	
LZH				sP		17 18 04.6	
LZH				PP	PP	17 18 35.0	+51
LZH	**Lanzhou**	**19.86**	**309**	eP	**P**	**17 17 22.1**	**+1.1**
LZH				pmax	pmax		
	comp=Z,58nm,1.5s						
MDJ	**Mudanjiang**	**20.41**	**14**	P	**P**	**17 17 28.0**	**+1.5**
MDJ				AMB	AMB		
	comp=Z,10.0nm,0.7s						
MDJ	**Mudanjiang**	**20.41**	**14**	eP	**P**	**17 17 27.4**	**+0.8**
	comp=Z,8.7nm,0.6s						
GTA	**Gaotai**	**24.27**	**312**	eP	**P**	**17 18 04.8**	**+0.6**
GTA				AP		17 18 34.3	
GTA				PP	PP	17 18 49.5	+5.3
GTA				PCP	PcP	17 21 38.8	-3.1
GTA				S	**S**	**17 22 14.8**	**+4.5**
GTA				XS		17 23 04.8	
GTA				AMB	AMB		
	comp=Z,230nm,5.3s						
GTA				LR	LR		
	comp=N,520nm,15.6s						
GTA				LR	LR		
	comp=E,420nm,19.4s						
GTA				LR	LR		
	comp=Z,390nm,15.6s						
HIA	**Hailar**	**24.47**	**355**	eP	**P**	**17 18 05.9**	**-0.1**
	comp=Z,10nm,0.4s,mb4.7						
HIA	**Hailar**	**24.47**	**355**	eP	**P**	**17 18 05.9**	**-0.1**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ASAJ	**Asahikawa**	**24.99**	**35**	P	**P**	**17 18 10.7**	**-0.3**
	comp=Z,11nm,0.4s,mb4.7,baz=224,slow=6.9,SNR=21						
KLR	**Kul'dur**	**25.26**	**14**	eP	**P**	**17 18 10.6**	**-2.8**
KLR				e	pP	17 18 41.5	+0.1
ULN	**Ulaanbaatar**	**26.17**	**335**	eP	**P**	**17 18 21.4**	**-0.5**
	comp=Z,2.7nm,0.6s,mb4.0						
ULN	**Ulaanbaatar**	**26.17**	**335**	c iP	**P**	**17 18 21.9**	**+0.1**
SONM	**Songino Array**	**26.39**	**334**	P	**P**	**17 18 24.4**	**+0.4**
	comp=Z,4.0nm,0.5s,mb4.3,baz=153,slow=9.4,SNR=44						
SONM				ScP		17 25 12.8	
	comp=Z,0.4nm,0.7s,baz=168,slow=5.3,SNR=3.8						
WMQ	**Urumqi**	**34.36**	**312**	eP	**P**	**17 19 34.0**	**-0.2**
YAK	**Yakutsk**	**37.41**	**5**	eP	**P**	**17 19 58.8**	**-0.9**
	comp=Z,15nm,0.6s,mb4.8						
YAK	**Yakutsk**	**37.41**	**5**	⇓eP	**P**	**17 19 59.3**	**-0.4**
YAK				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.8						
MKAR	**Makanchi Array**	**38.98**	**315**	P	**P**	**17 20 13.4**	**+0.5**
	comp=Z,2.0nm,0.4s,mb4.1,baz=100,slow=10.0,SNR=88						
PMG	**Port Moresby**	**41.45**	**142**	P	**P**	**17 20 34.4**	**+0.8**
	comp=Z,3.2nm,0.6s,mb4.2,baz=298,slow=0.5,SNR=7.0						
NVS	**Novosibirsk**	**41.80**	**326**	eP	**P**	**17 20 34.0**	**-2.0**
KURK	**Kurchatov**	**42.61**	**319**	eP	**P**	**17 20 42.0**	**-0.6**
	comp=Z,3.8nm,0.6s,mb4.2						
KURK	**Kurchatov**	**42.61**	**319**	⇑eP	**P**	**17 20 42.3**	**-0.3**
FITZ	**Fitzroy Crossi**	**42.80**	**176**	⇓iP	**P**	**17 20 43.6**	**-1.0**
	comp=Z,7.4nm,0.9s,mb4.3						
FITZ	**Fitzroy Crossi**	**42.80**	**176**	P	**P**	**17 20 43.8**	**-0.8**
	comp=Z,6.4nm,0.4s,mb4.6,baz=17,slow=6.9,SNR=27						
AAK	**Ala-Archa**	**43.38**	**306**	eP	**P**	**17 20 49.0**	**+0.1**
	comp=Z,0.9nm,0.5s,mb3.7						
AAK	**Ala-Archa**	**43.38**	**306**	eP	**P**	**17 20 49.0**	**+0.1**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.7						
WRAB	**Tennant Creek**	**45.90**	**165**	eP	**P**	**17 21 08.7**	**-0.6**
	comp=Z,20nm,0.6s,mb4.9						
WRAB	**Tennant Creek**	**45.90**	**165**	d iP	**P**	**17 21 08.9**	**-0.5**
WRA	**Warramunga Arr**	**45.91**	**165**	P	**P**	**17 21 09.2**	**-0.2**
	comp=Z,11nm,0.4s,mb4.8,baz=348,slow=8.5,SNR=151						
WB2	**Warramunga Arr**	**45.91**	**165**	⇓iP	**P**	**17 21 09.3**	**-0.1**
TIXI	**Tiksi**	**46.92**	**3**	⇓eP	**P**	**17 21 16.0**	**-0.7**
TIXI				i *PP	pP	17 21 49.8	+2.4

TIXI				*i* *SP	sP	17 22 06.8	+4.2
TIXI				*i*		17 22 46.1	
TIXI				*i*		17 23 08.0	
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.4						
BVAR	**Borovoye Array**	48.17	320	P	P	17 21 26.6	-0.1
	comp=Z,7.1nm,0.5s,mb4.6,baz=105,slow=8.0,SNR=79						
BVAR				PcP	PcP	17 22 51.6	-0.6
	comp=Z,1.3nm,0.5s,baz=116,slow=3.1,SNR=5.7						
CHKZ	**Chkalovo**	48.21	321	*e*P	P	17 21 25.7	-1.2
	comp=Z,9.1nm,0.6s,mb4.6						
CHKZ	**Chkalovo**	48.21	321	*e*P	P	17 21 25.7	-1.2
CHKZ				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
BRVK	**Borovoye**	48.24	320	*e*P	P	17 21 26.6	-0.6
	comp=Z,3.9nm,0.5s,mb4.3						
BRVK	**Borovoye**	48.24	320	*e*P	P	17 21 26.6	-0.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.3						
CTA	**Charters Tower**	50.12	151	*e*P	P	17 21 42.7	+0.7
	comp=Z,5.3nm,1.2s,mb4.0						
CTA	**Charters Tower**	50.12	151	P	P	17 21 41.4	-0.6
	comp=Z,2.3nm,0.7s,mb4.0,baz=336,slow=8.1,SNR=6.1						
CTA	**Charters Tower**	50.12	151	*e*P	P	17 21 42.7	+0.7
CTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ARU	**Arti**	55.53	323	*e*P	P	17 22 21.0	-0.6
ARU				*e*		17 24 35.4	
ARU				*e*S	S	17 29 56.8	+2.4
ARU				*e*SS	SS	17 33 34.7	-6.6
ARU				*e*SSS	SSS	17 35 56.4	+2.5
KLBR	**Kellerberrin**	56.37	185	*e*P	P	17 22 26.8	-1.2
	comp=Z,13nm,0.6s,mb4.9						
MUN	**Mundaring**	56.91	187	*e*P	P	17 22 31.7	0.0
STKA	**Stephens Creek**	59.18	162	*e*P	P	17 22 47.0	-0.6
	comp=Z,4.8nm,0.4s,mb4.7						
STKA	**Stephens Creek**	59.18	162	P	P	17 22 47.1	-0.5
	comp=Z,4.7nm,0.4s,mb4.6,baz=347,slow=5.7,SNR=29						
GOF	**Gofitskoye**	65.93	310	*e*P	P	17 23 40.2	+8.1
KIV	**Kislovodsk**	66.41	309	⇑*e*P	P	17 23 36.5	+1.4
KIV				pmax	pmax		
	comp=Z,11nm,1.1s,mb4.6						
ILAR	**Eielson Array**	67.85	28	P	P	17 23 43.7	-0.1
	comp=Z,0.6nm,0.6s,mb3.5,baz=252,slow=4.8,SNR=19						
OBN	**Obninsk**	67.95	322	*e*P	P	17 23 43.2	-1.4
OBN				pmax	pmax		
	comp=Z,20nm,1.7s,mb4.6						
SOC	**Sochi**	68.58	309	*e*P	P	17 23 49.1	+0.5
SOC				*e*	pP	17 24 18.6	-3.0
SOC				*e*		17 26 21.7	
SOC				*e*S	S	17 32 42.6	+4.0
SOC				*e*		17 33 33.6	
SOC				*e*SS	SS	17 37 08.5	+1.4
SOC				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.7						
JOF	**Joensuu**	68.89	331	*e*p	P	17 23 49.5	-0.7
KEV	**Kevo**	68.93	338	*e*p	P	17 23 50.4	+0.1
ARCES	**ARCESS Array B**	69.50	338	P	P	17 23 53.2	-0.6
	comp=Z,4.2nm,1.0s,mb4.1,baz=67,slow=9.2,SNR=7.1						
ARCES				PcP	PcP	17 24 16.4	+0.3
	comp=Z,1.9nm,0.7s,baz=72,slow=3.8,SNR=7.8						
ARCES	**ARCESS Array B**	69.50	338	P	P	17 23 53.2	-0.6
ARCES				PcP	PcP	17 24 16.4	+0.3
KAF	**Kangasniemi**	71.35	330	*e*p	P	17 24 04.5	-0.5
	comp=Z,1.4nm,0.5s,mb4.0						
KAF	**Kangasniemi**	71.35	330	*e*P	P	17 24 04.5	-0.5
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
FINES	**FINESS Array B**	71.66	330	P	P	17 24 06.4	-0.5
	comp=Z,2.3nm,0.5s,mb4.2,baz=64,slow=6.3,SNR=39						
INK	**Inuvik**	71.97	22	*e*P	P	17 24 08.1	-0.5
	comp=Z,1.4nm,0.5s,mb4.0						
INK	**Inuvik**	71.97	22	*e*P	P	17 24 08.1	-0.5
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	73.42	319	P	P	17 24 16.8	-0.6
	comp=Z,1.1nm,0.7s,mb3.7,baz=56,slow=4.4,SNR=6.3						
BRTR	**Keskin Array B**	74.06	307	P	P	17 24 22.0	+0.6
	comp=Z,0.8nm,0.4s,mb3.8,baz=88,slow=3.8,SNR=8.2						
NB2	**NORSAR Subarra**	78.36	333	P	P	17 24 44.5	-0.4
	comp=Z,2.0nm,0.5s,mb4.0,baz=57,slow=5.3						
NOA	**NORSAR Array B**	78.36	333	P	P	17 24 44.9	-0.1
	comp=Z,1.7nm,0.5s,mb4.0,baz=53,slow=5.6,SNR=19						
NAO	**NORSAR Subarra**	78.63	332	P	P	17 24 44.5	-1.9
	comp=Z,2.0nm,0.5s,mb4.0						
NAO	**NORSAR Subarra**	78.63	332	P	P	17 24 44.5	-1.9
NAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
RPZ	**Rata Peaks**	81.28	147	P	P	17 25 01.4	+0.5
	comp=Z,12nm,0.8s,mb4.6,baz=294,slow=6.7,SNR=7.7						
YKA	**Yellowknife Ar**	81.70	23	P	P	17 25 04.2	+1.5
	comp=Z,2.5nm,0.7s,mb3.9,baz=305,slow=5.5,SNR=14						
CLL	**Collm**	82.46	323	P	P	17 25 07.1	+0.2
GERES	**GERESS Array B**	83.32	321	P	P	17 25 12.2	+0.9
	comp=Z,1.4nm,0.7s,mb3.8,baz=56,slow=4.8,SNR=14						
HAU	**Haudompre**	87.89	323	*e*P	P	17 25 32.7	-1.0
LPG	**La Plagne**	89.12	321	⇑*i*P	P	17 25 40.5	+1.0
	comp=Z,16nm,1.0s,mb4.6						
LPG	**La Plagne**	89.12	321	⇑*i*P	P	17 25 40.5	+1.0
LPG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.6						
LPL	**La Plagne**	89.12	321	⇑*i*P	P	17 25 40.4	+0.9
	comp=Z,16nm,1.1s,mb4.6						
LPL	**La Plagne**	89.12	321	⇑*i*P	P	17 25 40.4	+0.9
LPL				pmax	pmax		
	comp=Z,8.0nm,1.1s,mb4.6						
HLID	**Hailey**	93.94	38	*e*P	P	17 26 04.5	+2.7
	comp=Z,1.2nm,0.6s,mb4.2						
NVAR	**Mina Array Bea**	94.82	44	P	P	17 26 08.7	+2.7
	comp=Z,1.4nm,0.6s,mb4.4,baz=294,slow=6.6,SNR=20						

WEL 27 17:35:02.0±0.6**, 38.50S**×**176.02E, h160**^{km}±5^{km}**, ML3.5**/11**, Error ellipse: s-maj=9.8km s-min=5.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKZ	**Black Stump Fm**	0.76	151	PN	P	17 35 26.5	+0.2
BKZ				SN	S	17 35 44.7	-0.3
URZ	**Urewera**	0.89	75	PN	P	17 35 26.8	-0.3
URZ				SN	S	17 35 45.6	-0.8
URZ				SN	S	17 35 45.6	-0.8
WNVZ	**Wahianoa**	0.89	202	PN	P	17 35 27.0	-0.1
MOVZ	**Moawhango**	0.93	193	PN	P	17 35 27.1	-0.3
MOVZ				SN	S	17 35 45.8	-1.1
TSZ	**Takapari Road**	1.56	182	PN	P	17 35 32.8	-0.5
TSZ				SN	S	17 35 56.6	-0.9
MRZ	**Mangatainoka R**	2.19	189	PN	P	17 35 38.5	-1.9
KIW	**Kapiti Island**	2.51	200	PN	P	17 35 41.6	-2.7
KIW				SN	S	17 36 12.1	-4.8
MTW	**Mount Morrison**	2.69	188	PN	P	17 35 43.7	-2.8
CAW	**Cannon Point**	2.71	195	PN	P	17 35 44.1	-2.7
CAW				SN	S	17 36 16.3	-4.8
MRW	**Makara Radio**	2.91	200	PN	P	17 35 46.1	-3.2
MSWZ	**Moikau Station**	2.98	191	PN	P	17 35 46.8	-3.3
TCW	**Tory Channel**	3.03	206	SN	S	17 36 23.4	-4.8
TUWZ	**Tuamarina**	3.34	208	PN	P	17 35 50.9	-3.9
NNZ	**Nelson**	3.39	216	PN	P	17 35 51.1	-4.4
NNZ				SN	S	17 36 31.0	-5.6
THZ	**Tophouse**	4.04	215	PN	P	17 35 59.5	-4.4
KHZ	**Kahutara**	4.35	205	PN	P	17 36 03.6	-4.3
DSZ	**Denniston Nort**	4.58	224	SN	S	17 36 55.9	-8.2
MQZ	**McQueen’s Vall**	5.79	205	SN	S	17 37 22.0	-11

*IDC **27** 17:38:58.8±1.8, 4.46N×126.29E, mb4.3/3, mb1 4.5/3, mb1mx3.9/15, mbtmp4.4/3, Error ellipse: s-maj=103.6km s-min=25.2km az=68.0*

*NEIC **27** 17:39:07.7±4.7, 4.44N×126.32E, h78^{km}±43^{km}, mb4.7/4, Error ellipse: s-maj=53.0km s-min=11.0km az=66.0*

ISC 27 17:39:00.9±1.0**, 4.6N**±0.1×**126.6E**±0.2**, h33**^{km}**, n11, σ0^{s}66**/11**, mb4.3**/7**, 2D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKM	**Kota Kinabalu**	10.39	279	*e*P	P	17 41 31.6	+0.7
FITZ	**Fitzroy Crossi**	22.55	182	⇓*i*P	P	17 43 58.7	-0.9
	7.1nm,0.5s,mb4.3						
FITZ	**Fitzroy Crossi**	22.55	182	P	P	17 43 58.8	-0.8
	12nm,0.6s,mb4.5,baz=2.9,slow=9.6,SNR=32						
WRAB	**Tennant Creek**	25.53	163	*e*P	P	17 44 28.7	+0.2
	7.4nm,0.5s,mb4.5						
WRA	**Warramunga Arr**	25.54	163	P	P	17 44 28.9	+0.4
	2.9nm,0.3s,mb4.2,baz=343,slow=9.7,SNR=56						
WB2	**Warramunga Arr**	25.54	163	⇓*i*P	P	17 44 28.7	+0.1
ENH	**Enshi**	30.21	330	*e*P	P	17 45 10.1	-0.6
FORT	**Forrest**	35.18	178	*e*P	P	17 45 53.8	-0.2
	8.4nm,0.5s,mb4.9						
KLBR	**Kellerberrin**	36.92	193	*e*P	P	17 46 07.7	-1.0
	24nm,1.1s,mb4.9						
STKA	**Stephens Creek**	38.98	159	P	P	17 46 27.1	+1.2
	1.1nm,0.3s,mb4.0,baz=328,slow=6.5,SNR=8.3						
MKAR	**Makanchi Array**	56.76	325	P	P	17 48 44.2	+0.1
	0.2nm,0.6s,mb3.3,baz=134,slow=8.0,SNR=4.8						

*NEIC **27** 17:41:38.5, 20.77N×106.13W, h20^{km}, MD3.9(MEX), After MEX.*

MEX 27 17:41:38.7±0.4**, 20.76N**×**106.14W, h16**^{km}±10^{km}**, MD3.9, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	1.62	140	*i* P	Pn	17 42 03.0	-3.9
CJM				*i* S	Sn	17 42 22.1	-5.5
MAIG	**Mazatlaan**	2.43	354	*i* P	Pn	17 42 14.5	-4.0
MAIG				*i* S	Sn	17 42 42.7	-5.5
SFJM	**Santa Fe**	2.92	95	*i* P	Pn	17 42 21.5	-4.0
ZAIG	**Zacatecas**	3.88	58	*i* P	Pn	17 42 37.1	-2.0
ZAIG				*i* S	Sn	17 43 19.1	-5.8
ZAIG	**Zacatecas**	3.88	58	*i* P	Pn	17 42 40.9	+1.8
ZAIG				*i* S	Sn	17 43 19.1	-5.8

MAN 27 17:45:08.5, 16.92N×**119.84E, h8**^{km}**, mb3.8, ML2.6, MS2.2, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	**Bolinao**	0.54	173	*e*P	Pg	17 45 20.2	+0.7
BCPH	**Baguio City Da**	0.89	127	⇑*i*P	Pb	17 45 24.8	-1.0
BCPH				*i* S	Sb	17 45 37.0	-0.6
ABRA	**Dolores**	1.10	49	*e*P	Pb	17 45 29.1	-0.3
SCZP	**Santa Cruz**	1.14	177	*e*P	Pb	17 45 29.0	-1.1
APYP	**Conner**	1.63	55	*e*P	Pn	17 45 36.7	-1.0
APYP				*e*S	Sn	17 45 56.9	-2.2
CAUP	**Cauayan**	1.90	89	*e*P	Pn	17 45 42.8	+1.3

MAN 27 18:18:20.2, 13.07N×**120.60E, h19**^{km}**, mb4.3, ML3.2, MS2.9, 2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	0.55	39	⇓*i*P	Pb	18 18 29.6	-1.5
PGP				*i* S	Sb	18 18 37.4	-1.0
LUBP	**Lubang**	0.74	333	*e*P	Pb	18 18 33.9	-0.4
SJMP	**San Jose**	0.79	140	*e*P	Pb	18 18 36.0	+0.9
SJMP				*e*S	Sb	18 18 48.2	+2.7
TGY	**Tagaytay City**	1.07	18	*e*P	Pb	18 18 39.7	-0.3
TGY				*i* S	Sb	18 18 55.2	+1.6
BUSP	**Coron**	1.13	200	*e*P	Pb	18 18 40.6	-0.3
BUSP				*e*S	Sb	18 18 57.5	+2.2
BOAC	**Boac**	1.27	72	*e*P	Pn	18 18 42.3	-0.9
OTRP	**Odiongan**	1.56	117	*e*P	Pn	18 18 46.6	-0.7
GQP	**Guinayangan**	1.98	65	⇓*e*P	Pn	18 18 52.9	-0.4
GQP				*e*S	Sn	18 19 18.1	+0.3
AUQP	**San Andres**	2.04	83	*e*P	Pn	18 18 55.0	+0.8
ENPP	**El Nido**	2.18	212	*e*P	Pn	18 18 55.2	-1.0
CUYO	**Cuyo Island**	2.25	169	*e*P	Pn	18 18 55.6	-1.5
BALP	**Baler**	2.82	20	*e*P	Pn	18 19 05.6	+0.3
GUIM	**Jordan**	3.12	141	*e*P	Pn	18 19 08.6	-0.9

*KNET **27** 18:24:05.4±0.4, 42.12N×75.61E, h8^{km}±3^{km}, ml1.8, Error ellipse: s-maj=3.0km s-min=1.6km az=170.0*

*NNC **27** 18:24:06.7±1.2, 42.23N×75.63E, mpv2.6, Error ellipse: s-maj=33.4km s-min=8.2km az=28.0*

ISC 27 18:24:05.6±0.9**, 42.10N**±0.05×**75.63E**±0.04**, h1**^{km}±7^{km}**, n12, σ0^{s}59**/23**, 12C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	**Kyzart**	0.28	266	⇑P	Pg	18 24 11.4	+0.1
	65nm,0.1s,SNR=62						
KZA				⇑S	Sg	18 24 15.7	+0.6
	284nm,0.3s						
ULHL	**Ulahol**	0.48	72	P	Pg	18 24 15.2	0.0
	35nm,0.1s,SNR=270						
ULHL				⇑S	Sg	18 24 22.0	+0.5
	49nm,0.1s						
KBK	**Karagaybulak**	0.75	318	P	Pg	18 24 20.6	0.0
	23nm,0.1s,SNR=178						
KBK				⇑S	Sg	18 24 31.1	+0.5
	58nm,0.2s						
TKM2	**Tokmak 2**	0.82	358	⇑P	Pg	18 24 21.9	-0.1
	21nm,0.2s,SNR=61						
TKM2				⇑S	Sg	18 24 33.1	+0.1
	205nm,0.2s						
UCH	**Uchtor**	0.84	279	⇓P	Pg	18 24 21.5	-0.9
	4.8nm,0.2s,SNR=13						
UCH				⇑S	Sg	18 24 33.2	-0.4
	6.3nm,0.1s						
AAK	**Ala-Archa**	1.00	303	⇓P	Pb	18 24 24.6	-0.7
	20nm,0.2s,SNR=54						
AAK				⇓S	Sb	18 24 38.0	-0.8
	12nm,0.2s						
AAK	**Ala-Archa**	1.00	303	⇓P	Pb	18 24 24.6	-0.7
	3.6nm,0.2s						
AAK				⇑S	Sb	18 24 37.7	-1.1
	8.9nm,0.5s						
CHMS	**Chumysh**	1.11	324	⇓P	Pb	18 24 26.8	-0.5
	8.0nm,0.1s,SNR=16						
CHMS				⇓S	Sb	18 24 41.6	-0.4
	22nm,0.1s						
USP	**Ospenovka**	1.43	325	⇓P	Pn	18 24 32.6	-0.2
	5.4nm,0.2s,SNR=27						
USP				⇑S	Sb	18 24 51.8	+0.3
	16nm,0.1s						
AML	**Almayashu**	1.44	272	⇓P	Pn	18 24 32.8	-0.2
	7.1nm,0.1s,SNR=17						
AML				⇑S	Sb	18 24 52.0	+0.3
	14nm,0.2s						
EKS2	**Erkin-Say**	1.48	293	⇓P	Pn	18 24 33.8	+0.3
	8.9nm,0.2s,SNR=42						
EKS2				⇑S	Sb	18 24 54.8	+1.8
	6.7nm,0.3s						
KK31	**Karatay Array**	3.91	287	⇑Pg	Pg	18 25 17.4	-6.3
	0.2nm,0.2s,baz=100,slow=16,SNR=5.4						
KK31				⇓Lg		18 26 06.2	
	1.4nm,0.6s,baz=101,slow=29,SNR=4.4						

*TIR **27** 18:46:58.9, 42.46N×19.74E, h5^{km}*

*PDG **27** 18:46:59.5±0.1, 42.41N×19.81E, h10^{km}±1^{km}*

*NEIC **27** 18:46:59.5, 42.41N×19.81E, h10^{km}, MD2.5(PDG), After PDG.*

ISC 27 18:46:59.1±0.6**, 42.41N**±0.03×**19.82E**±0.04**, h10**^{km}**, n15, σ1^{s}04**/28**, 6C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVY	**Plav**	0.22	32	⇑*i*Pg	Pg	18 47 03.4	-0.5
PVY				*e*Sg	Sg	18 47 06.9	-0.1
TTG	**Podgorica**	0.41	273	⇑*i*Pg	Pg	18 47 06.5	-1.0
TTG				*e*Sg	Sg	18 47 13.2	+0.1
SDA	**Shkodra**	0.42	214	*e*Pg	Pg	18 47 07.5	-0.3
IVA	**Berane**	0.47	7	⇓*i*Pg	Pg	18 47 08.2	-0.4
IVA				*e*Sg	Sg	18 47 15.3	+0.3
ULC	**Ulcinj**	0.61	224	⇑*i*Pg	Pg	18 47 11.0	-0.4
ULC				*e*Sg	Sg	18 47 20.2	+0.5
BUM	**Brajici-Budva**	0.69	261	⇑*i*Pg	Pg	18 47 12.1	-0.9
BUM				*e*Sg	Sg	18 47 23.1	+0.9
NKY	**Niksic**	0.73	304	⇑*i*Pg	Pg	18 47 12.1	-1.6
NKY				*e*Sg	Sg	18 47 23.9	+0.5
QSH	**Qafa e Shtames**	0.89	176	*i* Pg	Pg	18 47 18.0	+1.1
PLE	**Pljevlja**	0.97	342	⇓*i*Pg	Pg	18 47 17.3	-1.3
PLE				*e*Sg	Sg	18 47 32.4	+0.7
HCY	**Herceg Novi**	0.98	273	⇓*i*Pg	Pg	18 47 17.4	-1.3
HCY				*e*Sg	Sg	18 47 32.9	+1.2
UPM	**Unac-Piva**	1.04	320	⇑*i*Pg	Pg	18 47 18.5	-1.4
UPM				*e*Sg	Sg	18 47 34.4	+0.6
BRY	**Bratogost**	1.06	298	⇓*i*Pg	Pg	18 47 18.7	-1.6
BRY				*e*Sg	Sg	18 47 35.2	+0.7
NVSS	**Nova Varos 2**	1.10	356	⇓*i*Pg	Pg	18 47 22.9	+1.7
NVSS				Sg	Sg	18 47 40.5	+4.5
GRUS	**Gruza**	1.62	24	*e*Pn	Pn	18 47 29.7	+1.8
GRUS				Sn	Sn	18 47 52.4	+3.4
DIVS	**Divcibare**	1.70	4	*i* Pn	Pn	18 47 29.8	+0.8
DIVS				Sg	Sg	18 47 54.5	-1.1

*THR **27** 18:48:34.5±0.4, 26.44N×56.03E, h14^{km}±6^{km}, ML3.5*

*KISR **27** 18:48:38.8±1.3, 26.78N×55.58E, h33^{km}, ML3.8*

*CSEM **27** 18:48:39.2±0.6, 26.91N×55.59E, h10^{km}, ML4.2/1, Error ellipse: s-maj=17.1km s-min=5.2km az=159.0*

ISC 27 18:48:39.5±2.2**, 27.0N**±0.1×**55.5E**±0.2**, h6**^{km}±23^{km}**, n10, σ0^{s}75**/18**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	0.73	53	*e*PG	Pg	18 48 52.8	-1.3
GHIR	**Ghir-Karzin**	2.61	301	*e*PN	Pn	18 49 27.6	+4.6
GHIR				AML	AML	18 50 37.7	
	comp=N,103nm,0.6s						
KRBR	**Kerman**	3.21	20	*e*PN	Pn	18 49 32.2	+0.7
KRBR				*e*SG	Sg	18 50 26.5	+0.3
KRBR				AML	AML	18 50 27.4	
	comp=N,109nm,0.4s						
KRBR	**Kerman**	3.21	20	*e*Pn	Pn	18 49 32.2	+0.7
	SNR=52						
KRBR				*e*Sg	Sg	18 50 26.5	+0.2
	comp=N,109nm,0.4s,SNR=90						
QRN	**Al-Qurain**	6.96	287	*e*P	Pn	18 50 25.4	+0.7
QRN				*e*S	Sn	18 51 44.5	-0.5
RDF	**Al-Radifah**	7.32	287	*e*P	Pn	18 50 30.2	+0.6
RDF				*e*S	Sn	18 51 54.1	+0.1
NAY	**Al-Naaiem**	7.66	289	*e*P	Pn	18 50 34.2	-0.2
NAY				*e*S	Sn	18 52 01.1	-1.4
NAY				AML	AML	18 52 02.3	
	comp=Z,12nm,0.5s						
NAY	**Al-Naaiem**	7.66	289	*e*P	Pn	18 50 34.2	-0.2
NAY				*e*S	Sn	18 52 01.1	-1.4
MIB	**Mutribah**	7.75	293	*e*P	Pn	18 50 36.4	+0.8
MIB				AML	AML	18 52 03.5	
	comp=Z,7.9nm,0.4s						
MIB				*e*S	Sn	18 52 04.8	+0.2
MIB	**Mutribah**	7.75	293	*e*P	Pn	18 50 36.4	+0.8
MIB				*e*S	Sn	18 52 04.8	+0.2

MEX 27 18:53:29.8±1.0**, 17.22N**×**100.15W, h33**^{km}±16^{km}**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.20	213	*i* P	Pn	18 53 34.5	-1.8
CAIG				*i* S	Sn	18 53 39.4	-1.0
ACX	**Acapulco**	0.42	147	*i* P	Pb	18 53 37.0	-2.1
ACX				*i* S	Sb	18 53 44.0	-1.5
YAIG	**Yautepec**	1.94	32	*i* P	Pn	18 53 58.9	-2.2
YAIG				*i* S	Sn	18 54 20.9	-3.6

*BJI **27** 18:55:58.7, 25.50N×109.60W, h10^{km}, mB4.5, mb4.5, Ms4.4, Msz4.2*

*NEIC **27** 18:56:01.7±0.7, 25.54N×109.64W, h10^{km}, mb4.0/7, Error ellipse: s-maj=12.0km s-min=6.7km az=49.0*

*IDC **27** 18:56:04.2±2.5, 25.96N×109.76W, mb4.2/3, mb1 4.3/7, mb1mx4.0/22, mbtmp4.1/7, ML3.8/4, MS3.8/12, Ms1 3.8/12, ms1mx3.7/26, Error ellipse: s-maj=48.0km s-min=22.4km az=39.0*

ISC 27 18:56:00.0±0.4**, 25.57N**±0.04×**109.58W**±0.07**, h10**^{km}**, n51, σ1^{s}18**/47**, mb4.4**/5**, MS3.9**/8**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	**La Paz**	1.60	204	*i* P	Pn	18 56 29.4	+0.9
LPIG				*i* S	Sb	18 56 48.5	-0.9
LTX	**Lajitas**	6.46	53	Pn	Pn	18 57 35.1	-2.5
	54nm,1.0s						
TXAR	**Lajitas Array**	6.46	53	Pn	Pn	18 57 39.3	+1.7
	0.7nm,0.3s,baz=235,slow=13,SNR=16						
TXAR				Pg	Pg	18 58 08.6	-0.4
	1.2nm,0.3s,baz=225,slow=15,SNR=21						
TXAR				Lg		18 59 31.7	
	4.3nm,0.3s,baz=190,slow=32,SNR=6.6						
TUC	**Tucson**	6.80	351	*e*P	Pn	18 57 39.5	-2.9
	29nm,0.9s						
MNTX	**Cornudas Mount**	7.14	30	Pn	Pn	18 57 45.0	-2.2
	18nm,0.7s						
GDL2	**Guadalupe Moun**	8.04	33	*e*P	P	18 57 51.9	-7.8
GLA	**Glamis**	8.75	330	*e*P	P	18 58 04.7	-4.9
LENM	**Lemitar**	8.86	14	P	P	18 58 10.2	-0.9
LAZ	**Ladron**	9.06	13	P	P	18 58 12.8	-1.0
BAR	**Barrett**	9.41	320	P	P	18 58 15.7	-3.0
ANMO	**Albuquerque**	9.73	15	Pn	P	18 58 24.6	+1.4
	baz=193,slow=11,SNR=7.5						
ANMO				Lg		19 01 05.8	
	baz=188,slow=8.8,SNR=4.6						
ANMO				LR	LR	19 02 49.4	
	comp=Z,313nm,18.6s,slow=43						
ANMO	**Albuquerque**	9.73	15	Pn	P	18 58 21.3	-1.9
	9.5nm,0.9s						
ANMO				Pn	P	18 58 24.6	+1.4
ANMO				Lg		19 01 05.8	
ANMO				LR	LR	19 02 49.5	
WUAZ	**Wupatki**	10.04	352	*e*Pn	P	18 58 25.9	-1.4
SDCO	**Great Sand Dun**	12.63	15	*e*P	P	18 59 01.1	-1.5
MSU	**Marysvale**	13.09	351	P	P	18 59 07.8	-0.9
SRU	**San Rafael**	13.53	357	*e*P	P	18 59 14.4	-0.1
	47nm,1.5s						
NVAR	**Mina Array Bea**	14.79	332	Pn	P	18 59 31.7	+0.6
	0.1nm,0.3s,baz=152,slow=15,SNR=9.2						
NVAR				LR	LR	19 04 32.9	
	comp=Z,166nm,20.1s,baz=155,slow=35						
NVAR	**Mina Array Bea**	14.79	332	Pn	P	18 59 31.7	+0.6
NVAR				LR	LR	19 04 32.9	
DUG	**Dugway**	14.84	350	*e*P	P	18 59 33.0	+1.3
	17nm,1.0s						
ELK	**Elko**	15.85	344	Pn	P	18 59 46.0	+1.0
	0.2nm,0.3s,baz=170,slow=9.1,SNR=8.8						
ELK				LR	LR	19 05 18.0	
	comp=Z,358nm,18.6s,baz=189,slow=36						
HWUT	**Hardware Ranch**	16.08	355	*e*P	P	18 59 49.1	+1.2
	19nm,1.1s						
MIAR	**Mount Ida**	16.48	53	P	P	18 59 53.1	+0.1
PDAR	**Pinedale Array**	17.16	0	Pn	P	19 00 02.2	+0.8
	0.1nm,0.3s,baz=168,slow=9.7,SNR=24						
PDAR				LR	LR	19 06 53.4	
	comp=Z,607nm,18.1s,baz=177,slow=39						
REDW	**Red Top Meadow**	17.78	357	*e*P	P	19 00 09.2	0.0
	20nm,1.3s						
MOOW	**Moose Ponds**	18.16	357	*e*P	P	19 00 13.9	-0.2
	7.3nm,1.1s						
IMW	**Indian Meadow**	18.32	357	*e*P	P	19 00 17.1	+1.1
	7.4nm,0.8s						
HLID	**Hailey**	18.38	349	*e*P	P	19 00 18.1	+1.4
	4.7nm,1.0s						
MCMT	**McKenzie Canyo**	19.40	353	*e*P	P	19 00 30.1	+1.2
DLMT	**Dillon**	19.90	354	*e*P	P	19 00 34.2	-0.3
BMO	**Blue Mountains**	20.23	344	*e*P	P	19 00 37.2	-0.9
	12nm,1.2s						
MSO	**Missoula**	21.50	352	*e*P	P	19 00 51.0	0.0
	14nm,1.2s,mb4.3						
CHMT	**Chamberlain Mo**	21.50	353	*e*P	P	19 00 51.2	+0.1
EGMT	**Eagleton**	22.42	360	*e*P	P	19 01 00.5	+0.3
NEW	**Newport**	23.42	347	P	P	19 01 10.1	+0.1
	197nm,1.2s,mb5.4						
CPCT	**Cooper Cave**	23.68	59	P	P	19 01 16.0	+3.4
ULM	**Lac du Bonnet**	26.82	20	P	P	19 01 45.0	+2.8
	2.2nm,0.6s,mb3.9,baz=185,slow=11,SNR=5.1						
ULM				LR	LR	19 12 15.6	
	comp=Z,174nm,18.5s,MS3.6,baz=301,slow=37						
EDM	**Edmonton**	27.77	355	*e*P	P	19 01 50.6	-0.2
JTS	**JuntasAbangare**	27.85	119	P	P	19 01 52.2	+0.3
BBB	**Bella Bella**	30.06	337	LR	LR	19 13 32.3	
	comp=Z,212nm,20.9s,MS3.8,baz=300,slow=35						
YKA	**Yellowknife Ar**	37.07	356	LR	LR	19 18 48.0	
	comp=Z,259nm,18.9s,MS4.0,baz=165,slow=37						
ROSC	**El Rosal**	39.55	115	LR	LR	19 22 21.1	
	comp=Z,64nm,19.6s,MS3.5,baz=78,slow=40						
SDV	**Santo Domingo**	40.54	107	P	P	19 03 47.5	+6.1
	3.1nm,0.7s,mb4.0,baz=22,slow=6.2,SNR=3.9						
SDV	**Santo Domingo**	40.54	107	P	P	19 03 42.1	+0.8
SDV				P		19 03 47.5	
DAWY	**Dawson**	43.11	341	*e*P	P	19 04 02.3	+0.6
ILAR	**Eielson Array**	45.92	339	P	P	19 04 24.9	+0.5
	3.1nm,0.7s,mb4.3,baz=153,slow=6.7,SNR=28						
SAML	**Samuel**	56.70	121	P	P	19 05 45.2	-1.3
PPT	**Papeete**	57.90	226	LR	LR	19 23 57.6	

	comp=Z,114nm,18.6s,MS4.0,baz=11,slow=29						
ARCES	ARCESS Array B	79.82	15	LR	LR	19 42 40.2	
	comp=Z,73nm,18.6s,MS4.0,baz=195,slow=35						
NOA	NORSAR Array B	81.38	25	LR	LR	19 42 44.7	
	comp=Z,48nm,18.9s,MS3.9,baz=95,slow=34						
CN2	Changchun	94.52	323	eP	P	19 09 21.5	-0.4
GUMO	Guam	97.77	289	LR	LR	19 44 12.7	
	comp=Z,70nm,21.4s,MS4.1,baz=87,slow=30						

IDC 27 18:58:56.9±12.0, 6.57S×127.75E, h381^{km}±150^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.1/11, mbtmp4.0/3, Error ellipse: s-maj=133.7km s-min=42.1km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	14.75	155	P	P	19 02 07.6	-2.6
	1.3nm,0.3s,baz=333,slow=11,SNR=61						
STKA	Stephens Creek	28.31	155	P	P	19 04 17.2	-1.9
	1.9nm,0.3s,baz=328,slow=10,SNR=17						
MKAR	Makanchi Array	66.66	328	P	P	19 09 08.0	-1.6
	0.1nm,0.4s,baz=119,slow=10,SNR=4.4						

WAR 27 19:07:39.2, 50.27N×18.88E, h0^{km}, ML2.5, Mining Induced
PRU 27 19:07:40.7, 50.26N×18.78E
NEIC 27 19:07:40.0±0.8, 50.22N×18.83E, h5^{km}, MG2.6(WAR), Error ellipse: s-maj=14.5km s-min=6.9km az=180.0
ISC 27 19:07:38.2±0.6, 50.36N±0.05×18.83E±0.04, n16, σ1§36/28, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	Raciborz	0.50	236	ePG	Pg	19 07 49.0	+0.9
RAC				eSG	Sg	19 07 56.0	+1.3
OJC	Ojcow	0.64	103	ePG	Pg	19 07 51.0	+0.1
OJC				eSG	Sg	19 07 59.0	-0.4
OKC	Ostrava-Krasne	0.69	220	ePG	Pg	19 07 51.6	-0.3
OKC				eSG	Sg	19 08 02.7	+1.6
	29nm,0.5s						
MORC	Moravsky Berou	1.02	235	eP	Pb	19 07 57.5	-0.9
NIE	Niedzica	1.34	134	ePG	Pg	19 08 04.0	-1.0
NIE				eSG	Sg	19 08 21.0	-2.0
DPC	Dobruska-Polom	1.61	271	ePG	Pg	19 08 08.4	-1.9
DPC				eSG	Sg	19 08 29.9	-1.9
	24nm,0.4s						
KSP	Ksiaz	1.69	288	ePG	Pg	19 08 12.0	+0.1
KSP				eSG	Sg	19 08 35.0	+0.6
KSP	Ksiaz	1.69	288	⇓iPg	Pg	19 08 11.7	-0.2
KSP				eSg	Sg	19 08 34.7	+0.3
STHS	Stebnicka Huta	1.82	120	ePN	Pn	19 08 12.4	+1.3
STHS				eSN	Sn	19 08 37.2	+2.0
VYHS	Vyhne	1.87	180	ePN	Pn	19 08 10.1	-1.6
VYHS				eSN	Sn	19 08 36.0	-0.4
KECS	Kecovo	2.17	150	ePN	Pn	19 08 18.0	+2.0
KECS				e		19 08 39.5	
CRVS	Cervenica-Dubn	2.25	130	ePN	Pn	19 08 17.1	-0.1
CRVS				e		19 08 48.4	
KOLS	Kolonicke sedl	2.65	121	ePN	Pn	19 08 25.2	+2.2
KOLS				ePG	Pg	19 08 30.5	-0.7
KOLS				e		19 08 51.7	
PRU	Pruhonice	2.78	264	eSG	Sg	19 09 05.6	-5.3
KHC	Kasperske Hory	3.62	252	ePN	Pn	19 08 41.5	+4.7
KHC				ePG	Pg	19 08 48.0	-2.6
KHC				eSG	Sg	19 09 33.0	-5.9
CLL	Collm	3.82	287	eSG	Sg	19 09 47.0	+1.7

IDC 27 19:45:59.6±0.9, 37.85N×144.98E, mb3.7/9, mb1 4.1/12, mb1mx3.9/24, mbtmp3.9/12, ML4.3/3, MS2.8/2, Ms1 2.8/2, ms1mx2.4/28, Error ellipse: s-maj=24.3km s-min=18.7km az=145.0
NIED 27 19:46:00, 38.00N×144.60E, h23^{km}, Mw3.8 Best double couple: $M_0$5.98×10^{14} NP1:ϕ_s173°, δ87°, λ174°. NP2: ϕ_s263°, δ84°, λ3°.
MOS 27 19:46:01.7±1.5, 38.00N×144.98E, h33^{km}, mb4.8/2, Error ellipse: s-maj=15.8km s-min=11.6km az=86.4
NEIC 27 19:46:03.8±3.9, 37.80N×144.95E, h29^{km}±27^{km}, mb4.7/1, MW3.8(NIED), Error ellipse: s-maj=14.7km s-min=10.5km az=118.0
JMA 27 19:46:04.3±0.2, 38.02N×144.65E, h54^{km}, M4.5
ISC 27 19:46:02.7±0.5, 38.05N±0.04×144.73E±0.05, h33^{km}, n49, σ1§41/60, mb3.8/11, 1C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.61	294	P	P	19 46 44.7	+1.3
OFUJ				eS	S	19 47 14.7	+0.4
JIO	Ouri	2.69	280	P	P	19 46 45.6	+1.0
JIO				S	S	19 47 16.1	-0.3
MIYJ	Miyakonagasawa	2.74	305	P	P	19 46 46.2	+1.0
MIYJ				eS	S	19 47 17.9	+0.4
JMK	Ichinoseki	2.90	289	P	P	19 46 48.7	+1.2
JMK				eS	S	19 47 22.5	+0.9
JOT	Ohata	4.37	321	P	P	19 47 08.9	+0.4
JOT				S	S	19 47 56.4	-2.6
BSO1	Boso 1	4.55	223	P	P	19 47 08.9	-2.1
BSO1				eS	S	19 47 59.8	-3.6
JCH	Churui	4.67	347	P	P	19 47 11.8	-1.0
JCH				S	S	19 48 03.5	-3.1
JKB	Kayabe	4.77	325	P	P	19 47 15.5	+1.4
JRY	Ryogami san	5.09	248	P	P	19 47 18.1	-0.5
JRY				S	S	19 48 12.6	-4.4
JOD2	Odawara 2	5.32	240	eS	S	19 48 16.8	-6.1
NEM2	Nemuro 2	5.36	8	P	P	19 47 19.3	-3.1
NEM2				S	S	19 48 16.6	-7.2
MJAR	Matsushiro Arr	5.42	256	Pn	Pn	19 47 24.0	+0.7
	6.3nm,0.3s,baz=78,slow=15,SNR=62						
MJAR				Sn	Sn	19 48 24.7	-0.6
	3.3nm,0.3s,baz=91,slow=28,SNR=7.4						
MAJO	Matsushiro	5.42	256	eP	P	19 47 24.3	+1.1
	38nm,0.4s						
MAJO	Matsushiro	5.42	256	eP	P	19 47 24.3	+1.1
MAJO				pmax	pmax		
	comp=Z,38nm,0.4s						
MAT	Matsushiro	5.42	256	P	P	19 47 23.6	+0.4
MAT				S	S	19 48 24.0	-1.2
MAT	Matsushiro	5.42	256	eP	P	19 47 24.0	+0.8
	comp=Z,21nm,0.7s						
MAT				eS	S	19 48 24.0	-1.2
MAT	Matsushiro	5.42	256	eP	P	19 47 24.0	+0.8
MAT				eS	S	19 48 24.0	-1.2
MAT				pmax	pmax		
	comp=Z,21nm,0.7s						
JOSM	Okushiri--Mats	5.70	317	P	P	19 47 27.6	+0.5
JTKR	Abashiri--Toko	5.94	354	P	P	19 47 29.3	-1.3
JTKR				eS	S	19 48 32.8	-5.7
YUK	Yuzh-Kuril'sk	6.04	8	P	P	19 47 27.3	-4.6
YUK				eS	S	19 48 32.6	-8.2
YUK				smax			
	comp=N,1µm,0.6s						
YUK				smax			
	comp=E,2µm,0.6s						
YUK				smax			
	comp=N,730nm,0.5s						
YUK				smax			
	comp=E,1µm,0.5s						
JHR	Hokuryu	6.12	339	P	P	19 47 34.1	+1.0
JHR				S	S	19 48 41.3	-1.6
ASAJ	Asahikawa	6.27	346	Pn	Pn	19 47 35.2	-0.1
	comp=E,12nm,0.3s,baz=206,slow=13,SNR=73						
ASAJ				Sn	Sn	19 48 43.6	-3.0
	comp=E,2.2nm,0.3s,baz=37,slow=33,SNR=3.5						
ASAJ				LR	LR	19 50 20.2	
	comp=E,47nm,18.2s,baz=125,slow=40						
ASAJ	Asahikawa	6.27	346	P	P	19 47 35.3	+0.1
ASAJ						19 48 43.6	
ASAJ				pmax	pmax		
	comp=Z,12nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,47nm,18.2s						
JHJ2	Mitsune	6.35	221	eS	S	19 48 39.7	-8.9
JHJ	Hachijo jima 2	6.36	221	Pn	Pn	19 47 33.6	-3.0
	comp=Z,9.4nm,0.3s,baz=205,slow=16,SNR=4.9						
JHJ				Sn	Sn	19 48 40.2	-8.8
	comp=Z,34nm,0.3s,baz=256,slow=23,SNR=8.3						
YSS	Yuzh-Sakhalins	9.01	351	eP	P	19 48 12.2	-1.2
YSS	Yuzh-Sakhalins	9.01	351	eP	P	19 48 12.0	-1.4
JOW	Kunigami	17.81	236	LR	LR	19 56 32.2	
	comp=Z,46nm,18.1s,baz=349,slow=35						
BOD	Bodaibo	28.15	325	eP	P	19 52 01.4	+7.8
BOD				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
SONM	Songino Array	29.45	302	P	P	19 52 08.4	+3.1
	comp=Z,0.3nm,0.6s,mb3.2,baz=80,slow=8.8,SNR=3.1						
MKAR	Makanchi Array	45.82	302	P	P	19 54 25.2	+2.2
	comp=Z,0.4nm,0.8s,mb3.4,baz=84,slow=9.9,SNR=3.3						
ILAR	Eielson Array	47.22	33	P	P	19 54 34.0	+0.2
	comp=Z,1.0nm,0.7s,mb3.9,baz=259,slow=6.6,SNR=16						
BVAR	Borovoye Array	51.84	312	P	P	19 55 11.6	+2.3
	comp=Z,0.6nm,0.7s,mb3.6,baz=90,slow=13,SNR=3.2						
INK	Inuvik	52.27	28	P	P	19 55 12.8	+0.4
	comp=Z,0.7nm,0.8s,mb3.6,baz=282,slow=5.4,SNR=5.0						
INK	Inuvik	52.27	28	P	P	19 55 12.8	+0.4
WRAB	Tennant Creek	58.50	191	eP	P	19 55 56.1	-2.0
	comp=Z,5.2nm,0.8s,mb4.6						
WRAB	Tennant Creek	58.50	191	eP	P	19 55 56.1	-2.0
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
WRA	Warramunga Arr	58.51	191	P	P	19 55 56.1	-2.1
	comp=Z,2.8nm,0.6s,mb4.5,baz=13,slow=7.3,SNR=10						
NVAR	Mina Array Bea	72.26	55	P	P	19 57 28.1	+1.8
	comp=Z,0.3nm,0.5s,mb3.5,baz=284,slow=3.7,SNR=3.5						
BW06	Boulder Array	75.06	47	eP	P	19 57 43.4	+0.8
PDAR	Pinedale Array	75.06	47	P	P	19 57 43.2	+0.7
	comp=Z,0.9nm,0.6s,mb3.9,baz=280,slow=1.9,SNR=9.2						
AKASG	Malin Array Be	75.08	324	P	P	19 57 43.7	+1.2
	comp=Z,0.1nm,0.3s,mb3.3,baz=43,slow=6.3,SNR=5.1						
AKASG	Malin Array Be	75.08	324	P	P	19 57 43.7	+1.2
VNA2	Neumayer--Watz	144.01	195		PKPbc	20 05 34.7	+2.0
VNA2	Neumayer--Watz	144.01	195	⇑i	PKPbc	20 05 46.3	+14
VNA3	Neumayer Olymp	144.21	194		PKPbc	20 05 34.9	+1.6
VNA3	Neumayer Olymp	144.21	194		PKPbc	20 05 46.7	+13
VNA1	Neumayer--Stat	144.41	195		PKPbc	20 05 35.8	+2.0
VNA1	Neumayer--Stat	144.41	195		PKPbc	20 05 47.2	+13

MAN 27 20:09:14.5, 8.68N×126.62E, h15^{km}, mb4.4, ML3.3, MS3.1, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.55	208	⇓eP	Pb	20 09 26.4	+1.0
BIPH				eS	Sb	20 09 34.3	+1.5
BUTP	Butuan	1.03	286	eP	Pb	20 09 32.8	-0.8
BUTP				eS	Sb	20 09 47.0	+0.3
SCPH	Surigao	1.57	315	⇑eP	Pn	20 09 40.9	-1.2
BUKP	Musuan	1.74	243	eP	Pn	20 09 44.8	+0.4
MATI	Mati	1.76	192	eP	Pn	20 09 44.1	-0.7
MATI				eS	Sn	20 10 07.6	+0.6
MSLP	Maasin	2.26	310	eP	Pn	20 09 53.1	+1.1

THR 27 20:29:24.5±0.6, 26.65N×56.08E, h15^{km}, ML3.8
BJI 27 20:29:25.8, 27.10N×55.80E, h10^{km}, mB5.2, mb4.4
NEIC 27 20:29:26.9±0.9, 26.97N×55.81E, h10^{km}, mb4.1/9, ML3.8(THR), Error ellipse: s-maj=17.0km s-min=8.6km az=184.0
IDC 27 20:29:26.9±3.3, 27.22N×55.78E, mb3.8/11, mb1 3.9/11, mb1mx3.8/22, mbtmp3.8/11, MS3.6/7, Ms1 3.6/7, ms1mx3.3/25, Error ellipse: s-maj=66.8km s-min=21.6km az=172.0
CSEM 27 20:29:27.6±0.1, 26.73N×55.70E, h40^{km}, mb4.3/2, Error ellipse: s-maj=3.1km s-min=2.1km az=69.0
MOS 27 20:29:28.2±1.5, 26.97N×55.83E, h33^{km}, mb4.6/7, Error ellipse: s-maj=16.4km s-min=9.5km az=102.0
TEH 27 20:29:30.0, 26.87N×56.10E, h10^{km}, Mn3.8
ISC 27 20:29:24.5±0.3, 26.78N±0.03×55.77E±0.04, h10^{km}, n95, σ1§40/96, mb4.0/21, MS3.5/9, 1C-3D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.71	30	ePg	Pg	20 29 38.9	0.0
BNDS	Bandar-Abbas	0.71	30	ePg	Pg	20 29 38.0	-0.8
BANOM	Banah	0.98	151	P	Pb	20 29 43.7	+0.6
	SNR=110						
ASHO	Ashiyiah	2.11	173	P	Pn	20 30 02.5	+2.2
	SNR=43						
GHIR	Ghir-Karzin	2.89	302	ePn	Pn	20 30 16.4	+4.9
GHIR				eSg	Sg	20 31 04.1	+3.4
GHIR				AML	AML	20 31 35.2	
	comp=N,236nm,0.5s						
GHIR	Ghir-Karzin	2.89	302	ePn	Pn	20 30 16.0	+4.5
GHIR				eSg	Sg	20 31 04.0	+3.3
KRBR	Kerman	3.31	15	ePn	Pn	20 30 19.5	+2.1
KRBR				AML	AML	20 31 25.3	
	comp=N,264nm,0.6s						
KRBR	Kerman	3.31	15	ePn	Pn	20 30 19.0	+1.6
ISRV	Sarvestan	3.49	318	Pn	Pn	20 30 22.7	+2.6
ARQ	Araqi	3.50	169	⇓P	Pn	20 30 20.9	+0.8
	SNR=16						
IMOK	Mook	3.52	311	Pn	Pn	20 30 23.7	+3.2
IPAR	Pars	3.88	322	Pn	Pn	20 30 27.6	+2.1
BIDO	Bidbid	3.89	146	⇓P	Pn	20 30 24.6	-1.1
	SNR=6.7						
BSY	Bisya	4.23	162	⇑P	Pn	20 30 31.8	+1.3
SMDO	Samad	4.25	150	P	Pn	20 30 31.1	+0.3
	SNR=14						
BSYO	Bisya	4.25	161	P	Pn	20 30 31.8	+1.0
IMEH	Mehriz	4.70	348	Pn	Pn	20 30 38.6	+1.4
IBAF	Bafgh	4.79	358	Pn	Pn	20 30 39.5	+1.0
WBK	Wadi Bani Khal	5.07	144	P	Pn	20 30 41.5	-1.0
	SNR=27						
ZHSF	Zahedan	5.24	56	ePn	Pn	20 30 42.3	-2.5
ZHSF	Zahedan	5.24	56	ePn	Pn	20 30 42.0	-2.8
ISAD	Sadrabad	5.43	341	Pn	Pn	20 30 48.5	+1.0
ICHK	Chekchek	5.57	348	Pn	Pn	20 30 50.2	+0.7
HASS	Wahat al Ahsa'	5.69	255	P	Pn	20 30 53.2	+2.0
QRN	Al-Qurain	7.22	287	eP	Pn	20 31 12.9	+0.1
QRN				AML	AML	20 32 33.7	
	comp=Z,23nm,0.3s						
KBD	Kabd	7.53	290	eP	Pn	20 31 17.4	+0.4
KBD				AML	AML	20 32 41.2	
	comp=Z,45nm,0.2s						
KBD	Kabd	7.53	290	eP	Pn	20 31 17.4	+0.4
KBD				eS	Sn	20 32 39.4	-3.9
RDF	Al-Radifah	7.58	288	eP	Pn	20 31 17.9	0.0
RDF				AML	AML	20 32 44.1	
	comp=Z,26nm,0.3s						
RDF	Al-Radifah	7.58	288	eP	Pn	20 31 17.9	+0.1
RDF				eS	Sn	20 32 41.5	-3.2
UMR	Umm Al-Rimmam	7.62	293	eP	Pn	20 31 18.4	0.0
UMR				AML	AML	20 32 44.8	
	comp=Z,17nm,0.3s						
NAY	Al-Naaiem	7.93	290	eP	Pn	20 31 22.4	-0.3
NAY				AML	AML	20 32 52.1	
	comp=Z,12nm,0.5s						
NAY	Al-Naaiem	7.93	290	eP	Pn	20 31 22.4	-0.2
NAY				eS	Sn	20 32 49.0	-4.3
MIB	Mutribah	8.02	294	eP	P	20 31 24.0	+0.1
MIB				AML	AML	20 32 52.8	
	comp=Z,21nm,0.4s						
MIB	Mutribah	8.02	294	eP	P	20 31 24.0	+0.1
MIB				eS	Sn	20 32 51.2	-4.4
ISFB	Sefidab	8.14	339	Pn	P	20 31 27.7	+2.1
WHFO	Wadi Hawf	9.01	192	P	P	20 31 36.7	-1.0
	SNR=11						
IFIR	Firoozkooh	9.20	344	Lg		20 34 12.5	
IDMV	Damavand	9.33	341	Lg		20 34 16.7	
IDMV	Damavand	9.33	341	Pn	P	20 31 40.5	-1.6
RBK	Rabkut	9.35	189	P	P	20 31 41.6	-0.7
	SNR=9.6						
IAFJ	Afjeh	9.69	340	Pn	P	20 31 46.3	-0.7
MZLS	Mizel	9.94	256	P	P	20 31 47.4	-3.1
IRAZ	Razeghan	9.94	331	Pn	P	20 31 56.5	+5.9
BHD	Baghdad	11.79	306	ex	x	20 32 15.5	
BHD				ex	x	20 34 18.0	
AFFS	'Afif	11.89	259	P	P	20 32 14.8	-2.5
HILS	Ha'il	12.47	276	P	P	20 32 22.6	-2.3
TATS	Tathlith	13.40	240	P	P	20 32 33.3	-4.0
MSL	Mosul	14.36	314	ex	x	20 32 47.0	
MSL				ex	x	20 35 23.0	
GNI	Garni	16.18	328	P	P	20 33 12.0	-1.5
	comp=Z,16nm,1.0s						
GNI	Garni	16.18	328	P	P	20 33 12.0	-1.5
GNI				pmax	pmax		
	comp=Z,15nm,1.0s						
GNI	Garni	16.18	328	P	P	20 33 12.0	-1.5
	comp=Z,15nm,1.0s						
ATD	Arta Tunnel	19.45	221	LR	LR	20 41 51.0	
	comp=Z,146nm,19.9s,baz=74,slow=38						
KIV	Kislovodsk	20.14	332	eP	P	20 34 01.5	-0.1
	comp=Z,14nm,0.8s						
KIV	Kislovodsk	20.14	332	eP	P	20 34 02.3	+0.8
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				MLR	MLR		
	comp=Z,128nm,14.0s,MS3.4						
KIV	Kislovodsk	20.14	332	eP	P	20 34 01.5	0.0
	comp=Z,14nm,0.8s						
GOF	Gofitskoye	20.90	334	eP	P	20 34 10.6	+1.1
SOC	Sochi	21.22	326	eP	P	20 34 16.1	+3.4
SOC				eS	S	20 38 16.7	+13
SOC				eSS	SS	20 38 44.2	+6.9
SOC				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.4						
SOC				MLR	MLR		
	comp=Z,162nm,14.0s,MS3.6						
AAK	Ala-Archa	21.99	39	eP	P	20 34 18.2	-2.2
	comp=Z,8.4nm,0.8s,mb4.2						
AAK	Ala-Archa	21.99	39	eP	P	20 34 18.3	-2.2
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
AAK	Ala-Archa	21.99	39	eP	P	20 34 18.3	-2.2
	comp=Z,8.0nm,0.8s,mb4.2						
BR131	Keskin Array S	22.49	311	P	P	20 34 24.9	-0.5
	comp=Z,2.4nm,0.7s,mb3.7						
BR131	Keskin Array S	22.49	311	P	P	20 34 24.9	-0.6
	comp=Z,2.4nm,0.7s,mb3.7						
BRTR	Keskin Array B	22.49	311	P	P	20 34 26.2	+0.8
	comp=Z,1.5nm,0.9s,mb3.4,baz=131,slow=12,SNR=7.8						
ANN	Anapa	23.24	325	eP	P	20 34 30.9	-1.9
ANN				i *PP		20 34 39.6	
ANN				eS	S	20 38 40.0	-0.6
ANN				i		20 38 59.5	
ANN				pmax	pmax		
	comp=Z,36nm,0.8s,mb4.8						
ANN	Anapa	23.24	325	eP	P	20 34 30.9	-1.9
	comp=Z,36nm,0.8s,mb4.8						
AKTO	Aktyubinsk	23.68	4	P	P	20 34 36.3	-0.7
	comp=Z,1.5nm,0.6s,mb3.6,baz=201,slow=12,SNR=3.7						
AKTO				LR	LR	20 45 02.2	
	comp=Z,123nm,18.2s,MS3.4,slow=40						
ISP	Isparta	23.95	304	i P	P	20 34 46.5	+6.7
KOLN	Koldanda	24.74	81	eP	P	20 34 49.2	+1.7
	comp=Z,13nm,1.1s,mb4.4						
GKN	Gorkha	25.64	81	eP	P	20 34 57.7	+1.7
KKN	Kakani	26.22	81	eP	P	20 35 01.6	+0.2
	comp=Z,12nm,0.9s,mb4.4						
KKN	Kakani	26.22	81	eP	P	20 35 01.6	+0.2
KKN				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.1						
GUN	Gumba	26.74	81	eP	P	20 35 06.9	+0.7
	comp=Z,2.9nm,0.4s,mb4.2						
IDI	Anoyia	27.70	295	P	P	20 35 15.6	+0.8
	comp=Z,6.5nm,0.8s,mb4.3,baz=90,slow=8.1,SNR=3.7						
BRVK	Borovoye	28.39	19	eP	P	20 35 17.6	-3.4
	comp=Z,4.0nm,1.0s,mb4.0						
BRVK	Borovoye	28.39	19	eP	P	20 35 17.6	-3.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.9						
BVAR	Borovoye Array	28.39	19	P	P	20 35 18.3	-2.7
	comp=Z,1.8nm,0.6s,mb3.9,baz=198,slow=8.2,SNR=15						
MKAR	Makanchi Array	28.93	39	P	P	20 35 25.1	-0.7
	comp=Z,1.1nm,0.8s,mb3.7,baz=219,slow=7.8,SNR=5.9						
CHKZ	Chkalovo	29.03	18	eP	P	20 35 25.0	-1.7
	comp=Z,0.6nm,0.6s,mb3.5						
CHKZ	Chkalovo	29.03	18	eP	P	20 35 25.0	-1.7
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.7						
ARU	Arti	29.69	3	⇓iP	P	20 35 33.9	+1.3
ARU				e		20 36 26.1	
ARU				ePPP	PPP	20 36 37.2	-5.6
ARU				e		20 38 35.1	
ARU				eS	S	20 40 28.6	+1.5
ARU				eSS	SS	20 41 59.1	-2.1
ARU				e		20 46 04.0	
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
ARU				MLR	MLR		
	comp=Z,70nm,17.0s,MS3.4						
ARU				MLR	MLR		
	comp=N,50nm,18.0s,MS3.4						
ARU				MLR	MLR		
	comp=E,50nm,17.0s,MS3.4						
AKASG	Malin Array Be	31.30	327	P	P	20 35 44.8	-2.1
	comp=E,0.9nm,0.5s,mb3.9,baz=135,slow=8.3,SNR=12						
KMBO	Kilima Mbogo	32.99	216	LR	LR	20 49 12.8	
	comp=E,67nm,18.7s,MS3.4,baz=82,slow=36						
NVS	Novosibirsk	34.47	28	eP	P	20 36 12.5	-1.9
GERES	GERESS Array B	39.21	316	P	P	20 36 53.4	-1.0
	comp=E,0.2nm,0.4s,mb3.2,baz=113,slow=7.5,SNR=4.0						
KHC	Kasperske Hory	39.38	316	eP	P	20 36 57.0	+1.2
KHC	Kasperske Hory	39.38	316	i P	P	20 36 54.8	-1.0
FINES	FINESS Array B	39.98	338	P	P	20 36 59.7	-1.0
	comp=E,0.8nm,0.5s,mb3.7,baz=134,slow=11,SNR=9.6						
FINES	FINESS Array B	39.98	338	P	P	20 36 59.7	-1.0
SONM	Songino Array	44.50	48	P	P	20 37 37.9	+0.1
	comp=E,1.4nm,1.0s,mb3.6,baz=248,slow=8.0,SNR=6.5						
SONM				LR	LR	20 58 22.8	
	comp=E,174nm,18.9s,MS4.0,baz=183,slow=39						
NOA	NORSAR Array B	45.45	331	P	P	20 37 45.5	+0.3
	comp=E,1.2nm,0.8s,mb3.8,baz=119,slow=7.9,SNR=3.7						
NOA				LR	LR	20 59 36.0	
	comp=E,38nm,20.8s,MS3.3,baz=355,slow=40						
NOA	NORSAR Array B	45.45	331	P	P	20 37 45.5	+0.3
NOA				LR	LR	20 59 36.0	
ARCES	ARCESS Array B	46.28	346	LR	LR	21 03 10.8	
	comp=E,47nm,18.7s,MS3.5,baz=356,slow=44						
ESDC	Sonseca Array	50.75	301	P	P	20 38 26.9	+0.2
	comp=E,1.0nm,0.8s,mb3.8,baz=76,slow=6.6,SNR=4.3						
NJ2	Nanjing	54.53	68	eP	P	20 38 54.8	-0.2
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.1						
YKA	Yellowknife Ar	90.70	356	LR	LR	21 28 33.8	
	comp=Z,53nm,19.6s,MS4.0,baz=270,slow=39						

NEIC 27 20:47:16.8±0.7, 26.66N×55.88E, h10^{km}, mb4.1/5, ML4.0(THR), MN4.1(TEH), Error ellipse: s-maj=10.4km s-min=9.2km az=216.0
IDC 27 20:47:16.3±1.3, 26.88N×55.80E, mb3.9/13, mb1 4.0/13, mb1mx3.9/22, mbtmp3.9/13, MS3.3/4, Ms1 3.3/4, ms1mx3.0/20, Error ellipse: s-maj=27.5km s-min=20.7km az=156.0
MOS 27 20:47:19.1±1.1, 26.76N×55.78E, h33^{km}, mb4.0/2, Error ellipse: s-maj=18.6km s-min=10.8km az=100.3
CSEM 27 20:47:19.4±0.1, 26.75N×55.69E, h35^{km}, mb3.8/3, ML4.7/1, Error ellipse: s-maj=2.6km s-min=1.8km az=55.0
THR 27 20:47:19.0±0.4, 26.86N×55.78E, h15^{km}±5^{km}, ML4.0
TEH 27 20:47:21.0, 26.90N×56.03E, h20^{km}, Mn4.1
ISC 27 20:47:16.4±0.3, 26.77N±0.03×55.65E±0.03, h10^{km}, n83, σ1§28/91, mb3.8/15, MS3.3/5, 6C-2D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.78	36	ePG	Pg	20 47 31.5	-0.7
BNDS				AML	AML	20 48 08.3	
	comp=N,12µm,0.7s						
BANOM	Banah	1.02	145	⇑P	Pb	20 47 36.6	+0.8
BANOM				⇓S	Sb	20 47 53.1	+4.1
ASHO	Ashiyiah	2.11	170	P	Pn	20 47 54.5	+2.2
	SNR=16						
GHIR	Ghir-Karzin	2.81	303	ePN	Pn	20 48 06.2	+3.9
GHIR				AML	AML	20 49 09.9	
	comp=N,407nm,0.6s						
KRBR	Kerman	3.35	17	ePN	Pn	20 48 11.4	+1.4
KRBR				eSG	Sg	20 48 59.9	-8.1
KRBR				AML	AML	20 49 02.5	
	comp=N,355nm,0.5s						
KRBR	Kerman	3.35	17	ePn	Pn	20 48 11.4	+1.4
	SNR=52						
KRBR				eSg	Sg	20 48 59.8	-8.2
	comp=N,355nm,0.5s,SNR=90						
ISRV	Sarvestan	3.44	320	Pn	Pn	20 48 13.9	+2.7
IMOK	Mook	3.45	312	Pn	Pn	20 48 15.0	+3.6
HOQ	Hoqain	3.51	154	⇑P	Pn	20 48 13.3	+1.1
IPAR	Pars	3.83	324	Pn	Pn	20 48 18.9	+2.1
BIDO	Bidbid	3.93	145	⇓P	Pn	20 48 16.9	-1.3
BSY	Bisya	4.24	160	⇑P	Pn	20 48 23.8	+1.1
BSYO	Bisya	4.27	160	P	Pn	20 48 23.8	+0.8
SMDO	Samad	4.29	149	⇑P	Pn	20 48 23.3	0.0
IMEH	Mehriz	4.70	349	Pn	Pn	20 48 30.4	+1.3
IBAF	Bafgh	4.81	359	Pn	Pn	20 48 31.2	+0.5
JMDO	Jabal Madar	4.91	152	⇑P	Pn	20 48 32.3	+0.1
WBK	Wadi Bani Khal	5.12	143	P	Pn	20 48 33.5	-1.6

	SNR=12						
ZHSF	Zahedan	5.34	57	ePN	Pn	20 48 38.6	+0.4
ISAD	Sadrabad	5.41	342	Pn	Pn	20 48 40.5	+1.4
ICHK	Chekchek	5.56	349	Pn	Pn	20 48 42.1	+0.7
HASS	Wahat al Ahsa’	5.59	255	P	Pn	20 48 46.5	+4.8
QRN	Al-Qurain	7.13	288	eP	Pn	20 49 04.6	+1.2
KBD	Kabd	7.43	291	eP	Pn	20 49 09.3	+1.6
KBD				AML	AML	20 50 35.4	
	comp=Z,116nm,0.3s						
KBD	Kabd	7.43	291	eP	Pn	20 49 09.3	+1.6
KBD				eS	Sn	20 50 31.3	-1.6
RDF	Al-Radifah	7.49	289	eP	Pn	20 49 09.4	+0.9
RDF				AML	AML	20 50 34.0	
	comp=Z,27nm,0.3s						
RDF	Al-Radifah	7.49	289	eP	Pn	20 49 09.4	+1.0
RDF				eS	Sn	20 50 33.2	-1.1
UMR	Umm Al-Rimmam	7.53	293	eP	Pn	20 49 10.2	+1.1
UMR				AML	AML	20 50 34.8	
	comp=Z,30nm,0.4s						
NAY	Al-Naaiem	7.83	290	eP	Pn	20 49 14.5	+1.2
NAY				AML	AML	20 50 43.0	
	comp=Z,22nm,0.5s						
NAY	Al-Naaiem	7.83	290	eP	Pn	20 49 14.5	+1.3
NAY				eS	Sn	20 50 41.5	-1.4
MIB	Mutribah	7.93	294	eP	Pn	20 49 15.5	+0.9
MIB				AML	AML	20 50 48.0	
	comp=Z,93nm,0.7s						
MIB	Mutribah	7.93	294	eP	Pn	20 49 15.5	+0.9
MIB				eS	Sn	20 50 44.2	-1.1
ISFB	Sefidab	8.12	340	Pn	P	20 49 17.5	+0.3
IVRN	Varamin	8.87	339	Pn	P	20 49 25.0	-2.6
IQOM	Qom	8.96	335	Pn	P	20 49 29.8	+0.9
IQOM				Sn	Sn	20 51 02.7	-8.2
IFIR	Firoozkooh	9.19	345	Pn	P	20 49 32.7	+0.6
IFIR				Sn	Sn	20 51 08.0	-8.6
IDMV	Damavand	9.31	341	Pn	P	20 49 34.0	+0.2
IDMV				Lg		20 52 11.1	
IAFJ	Afjeh	9.67	341	Pn	P	20 49 38.7	0.0
IRAZ	Razeghan	9.91	332	Pn	P	20 49 50.7	+8.7
BHD	Baghdad	11.72	306	ex	x	20 49 10.0	
BHD				ex	x	20 51 09.0	
AFFS	‘Afif	11.79	259	P	P	20 50 06.3	-1.4
KAMS	Al Khamasin	12.01	240	P	P	20 50 07.4	-3.4
HILS	Ha’il	12.37	276	P	P	20 50 14.4	-1.1
HILS				S	S	20 52 28.0	-6.4
TATS	Tathlith	13.30	240	P	P	20 50 24.8	-3.1
TATS				S	S	20 52 48.1	-8.9
DJNS	Zahran al Janu	14.38	234	P	P	20 50 38.5	-3.6
GNI	Garni	16.14	329	eP	P	20 51 07.0	+2.1
	comp=Z,24nm,1.0s						
GNI	Garni	16.14	329	eP	P	20 51 07.0	+2.1
GNI				pmax	pmax		
	comp=Z,24nm,1.0s						
GNI	Garni	16.14	329	eP	P	20 51 07.0	+2.1
	comp=Z,24nm,1.0s						
ATD	Arta Tunnel	19.36	221	LR	LR	20 59 35.5	
	comp=Z,57nm,19.9s,baz=105,slow=38						
KIV	Kislovodsk	20.10	332	eP	P	20 51 53.4	+0.3
	comp=Z,14nm,0.6s						
KIV	Kislovodsk	20.10	332	eP	P	20 51 54.0	+0.9
KIV	Kislovodsk	20.10	332	eP	P	20 51 53.4	+0.3
	comp=Z,14nm,0.6s						
GOF	Gofitskoye	20.87	334	eP	P	20 51 59.7	-1.4
SOC	Sochi	21.18	326	eP	P	20 52 08.5	+4.3
SOC				eS	S	20 56 04.6	+10
SOC				eSS	SS	20 56 32.8	+4.7
SOC				MLR	MLR		
	comp=Z,249nm,20.0s,MS3.6						
SOC	Sochi	21.18	326	ePcP	PcP	20 56 04.6	-5.4
AAK	Ala-Archa	22.07	39	eP	P	20 52 11.8	-1.4
	comp=Z,6.0nm,1.0s,mb4.0						
AAK	Ala-Archa	22.07	39	⇑eP	P	20 52 11.7	-1.5
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s,mb3.6						
AAK				MLR	MLR		
	comp=Z,100nm,24.0s,MS3.1						
AAK	Ala-Archa	22.07	39	eP	P	20 52 11.8	-1.4
	comp=Z,6.0nm,1.0s,mb4.0						
BRTR	Keskin Array B	22.42	311	P	P	20 52 18.6	+1.9
	comp=Z,1.9nm,0.8s,mb3.6,baz=133,slow=11,SNR=8.3						
BR131	Keskin Array S	22.42	311	eP	P	20 52 18.7	+2.0
	comp=Z,2.2nm,0.7s,mb3.7						
BR131	Keskin Array S	22.42	311	eP	P	20 52 18.7	+2.0
	comp=Z,2.2nm,0.7s,mb3.7						
AKTO	Aktyubinsk	23.70	4	P	P	20 52 27.8	-1.4
	comp=Z,1.2nm,0.6s,mb3.5,baz=176,slow=12,SNR=5.6						
AKTO				LR	LR	21 04 05.7	
	comp=Z,40nm,19.7s,MS2.9,slow=43						
IDI	Anoyia	27.61	295	P	P	20 53 06.6	+0.6
	comp=Z,5.5nm,0.8s,mb4.2,baz=59,slow=5.9,SNR=3.3						
BVAR	Borovoye Array	28.45	19	P	P	20 53 11.1	-2.2
	comp=Z,2.1nm,0.8s,mb3.8,baz=198,slow=9.4,SNR=13						
MKAR	Makanchi Array	29.01	39	P	P	20 53 17.0	-1.4
	comp=Z,0.7nm,0.8s,mb3.5,baz=220,slow=8.8,SNR=7.1						
MKAR	Makanchi Array	29.01	39	P	P	20 53 17.0	-1.5
KURK	Kurchatov	29.65	30	eP	P	20 53 22.4	-1.8
AKASG	Malin Array Be	31.26	327	P	P	20 53 37.0	-1.5
	comp=Z,1.2nm,0.5s,mb4.0,baz=134,slow=8.4,SNR=18						
KMBO	Kilima Mbogo	32.92	216	LR	LR	21 07 24.0	
	comp=Z,43nm,18.6s,MS3.2,baz=82,slow=36						
GERES	GERESS Array B	39.15	316	P	P	20 54 45.7	-0.2
	comp=Z,0.4nm,0.5s,mb3.5,baz=90,slow=8.0,SNR=4.7						
KHC	Kasperske Hory	39.31	316	eP	P	20 54 46.5	-0.8
KHC	Kasperske Hory	39.31	316	i P	P	20 54 50.9	+3.6
FINES	FINESS Array B	39.96	338	P	P	20 54 52.1	-0.3
	comp=Z,1.3nm,0.6s,mb3.8,baz=141,slow=12,SNR=8.3						
SONM	Songino Array	44.59	48	P	P	20 55 29.5	-0.9
	comp=Z,1.5nm,1.1s,mb3.7,baz=250,slow=8.4,SNR=5.9						
SONM				LR	LR	21 16 05.2	
	comp=Z,79nm,20.6s,MS3.6,baz=134,slow=39						
ULN	Ulaanbaatar	45.03	48	i P	P	20 55 34.2	+0.3
NB2	NORSAR Subarra	45.41	331	P	P	20 55 36.0	-0.8
	comp=Z,1.2nm,0.7s,mb3.8,baz=118,slow=7.9						
NOA	NORSAR Array B	45.41	331	P	P	20 55 36.6	-0.2
	comp=Z,1.3nm,0.8s,mb3.8,baz=119,slow=7.9,SNR=3.4						
NAO	NORSAR Subarra	45.47	331	P	P	20 55 36.0	-1.3
NAO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.8						
NAO	NORSAR Subarra	45.47	331	P	P	20 55 36.0	-1.3
	comp=Z,1.2nm,0.7s,mb3.8						
ESDC	Sonseca Array	50.66	301	P	P	20 56 17.3	-0.7
	comp=Z,0.4nm,0.5s,mb3.6,baz=80,slow=6.8,SNR=5.4						
BOSA	Boshof	62.31	210	P	P	20 57 41.7	+0.3
	comp=Z,2.8nm,0.8s,mb4.5,baz=16,slow=8.3,SNR=4.7						
BOSA	Boshof	62.31	210	eP	P	20 57 40.9	-0.5
ILAR	Eielson Array	87.09	9	P	P	21 00 02.1	-0.9
	comp=Z,0.3nm,0.7s,mb3.7,baz=320,slow=4.9,SNR=6.5						

*NEIC **27** 20:50:49.2±2.4, 22.00N×143.24E, h208^{km}±22^{km}, mb3.8/2, Error ellipse: s-maj=22.3km s-min=10.6km az=83.0*

*IDC **27** 20:50:51.7±2.3, 21.99N×143.20E, h230^{km}±19^{km}, mb3.3/7, mb1 3.4/9, mb1mx3.3/21, mbtmp3.9/9, Error ellipse: s-maj=26.8km s-min=17.8km az=83.0*

ISC 27 20:50:50.8±1.8**, 22.0N**±0.1×**143.2E**±0.3**, h242**^{km}±15^{km}**, n14, σ$0\overset{s}{.}59$**/13**, mb3.6**/9**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	5.18	350	P	P	20 52 09.3	+0.2
	18nm,0.3s,baz=306,slow=18,SNR=12						
CBIJ				S	S	20 53 10.8	+0.6
	9.6nm,0.3s,baz=311,slow=19,SNR=4.8						
MJAR	Matsushiro Arr	15.16	344	P	P	20 54 12.7	-1.9
	0.1nm,0.3s,baz=169,slow=12,SNR=3.4						
SONM	Songino Array	39.16	320	P	P	20 57 57.2	+0.5
	0.4nm,0.5s,mb3.2,baz=126,slow=7.3,SNR=9.7						
WRAB	Tennant Creek	42.55	192	eP	P	20 58 24.8	+0.1
WRA	Warramunga Arr	42.56	192	P	P	20 58 24.8	0.0
	0.4nm,0.5s,mb3.1,baz=11,slow=8.5,SNR=3.0						
MKAR	Makanchi Array	54.55	312	P	P	20 59 55.9	+0.1
	0.6nm,0.6s,mb3.3,baz=93,slow=8.0,SNR=11						
KURK	Kurchatov	57.31	317	eP	P	21 00 15.0	-0.3
	0.8nm,0.3s,mb3.8						
ILAR	Eielson Array	61.76	27	P	P	21 00 45.4	-0.1
	0.6nm,0.7s,mb3.4,baz=266,slow=5.1,SNR=9.8						
BVAR	Borovoye Array	62.49	319	P	P	21 00 50.5	0.0
	1.3nm,0.4s,mb4.0,baz=95,slow=7.5,SNR=16						
BRVK	Borovoye	62.56	319	eP	P	21 00 50.7	-0.3
	1.0nm,0.6s,mb3.6						
ARCES	ARCESS Array B	78.67	341	P	P	21 02 27.9	+0.8
	4.2nm,0.9s,mb4.1,baz=45,slow=8.6,SNR=4.4						
FINES	FINESS Array B	82.95	334	P	P	21 02 49.8	+0.2
	0.5nm,0.4s,mb3.6,baz=72,slow=4.2,SNR=8.8						
LPAZ	La Paz	149.86	85	PKPbc	PKPdf	21 10 17.0	+9.3
	0.7nm,0.5s,baz=261,slow=2.1,SNR=4.5						
LPAZ	La Paz	149.86	85	ePKPbc	PKPdf	21 10 16.5	+8.8

*IDC **27** 21:02:02.6±2.2, 43.54N×105.34W, mb4.2/1, mb1 4.0/3, mb1mx3.5/20, mbtmp3.9/3, ML3.4/2, Error ellipse: s-maj=59.0km s-min=9.1km az=154.0*

*NEIC **27** 21:02:03.6±0.6, 43.80N×105.35W, ML3.0, Error ellipse: s-maj=7.9km s-min=6.2km az=135.0, Suspected Mining explosion.*

NEIC 55 km [35 miles] SSE of Gillette.

ISC 27 21:02:02.0±0.6**, 43.81N**±0.05×**105.35W**±0.07**, n29, σ$1\overset{s}{.}19$**/30**, mb4.4**/1**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	Black Hills	1.00	71	eP	Pb	21 02 22.9	+1.0
RWWY	Rawlins	2.52	213	eP	Pn	21 02 46.5	+1.6
LAO	LASA Array	2.94	348	P	Pn	21 02 52.9	+2.0
PDAR	Pinedale Array	3.24	253	Pn	Pn	21 02 57.0	+1.9
	2.0nm,0.3s,baz=78,slow=16,SNR=26						
PDAR				Pg	Pg	21 02 59.8	-7.0
	2.0nm,0.3s,baz=80,slow=16,SNR=31						
PDAR				Lg		21 03 42.0	
	6.3nm,0.3s,baz=78,slow=30,SNR=12						
LOHW	Long Hollow	3.81	269	eP	Pn	21 03 03.9	+0.7
MOOW	Moose Ponds	3.91	271	P	Pn	21 03 03.8	-0.8
SNOW	Snow King Moun	3.94	267	P	Pn	21 03 04.0	-1.1
YFT	Old Faithful	4.00	281	P	Pn	21 03 06.3	+0.4
ISCO	Idaho Springs	4.01	183	eP	Pn	21 03 03.2	-2.9
REDW	Red Top Meadow	4.02	266	eP	Pn	21 03 07.3	+1.1
IMW	Indian Meadow	4.04	273	eP	Pn	21 03 07.6	+1.1
TPAW	Teton Pass	4.07	267	eP	Pn	21 03 09.2	+2.2
YMR	Madison River	4.12	284	eP	Pn	21 03 07.0	-0.6
SMCO	Snowmass	4.79	195	P	Pn	21 03 18.3	+1.2
BOZ	Bozeman (W)	4.83	295	eP	Pn	21 03 17.1	-0.7
HWUT	Hardware Ranch	5.08	246	eP	Pn	21 03 21.4	+0.1
EGMT	Eagleton	5.21	325	P	Pn	21 03 22.6	-0.6
TCUT	Toone Canyon	5.22	241	eP	Pn	21 03 22.1	-1.2
DLMT	Dillon	5.40	289	P	Pn	21 03 23.3	-2.5
HRY	Holter Researc	5.41	305	P	Pn	21 03 26.4	+0.5
MCMT	McKenzie Canyo	5.47	283	P	Pn	21 03 26.9	+0.1
HVU	Hansel Valley	5.82	252	P	Pn	21 03 30.6	-1.1
MPU	Maple Canyon	6.03	233	P	Pn	21 03 34.1	-0.5
SRU	San Rafael	6.09	221	P	Pn	21 03 34.8	-0.8
TMUT	Trail Mountain	6.29	226	P	Pn	21 03 39.2	+0.8
DUG	Dugway	6.63	240	eP	Pn	21 03 42.1	-0.9
MSU	Marysvale	7.38	227	P	Pn	21 03 53.3	-0.4
ULM	Lac du Bonnet	9.13	42	Pn	P	21 04 15.9	-2.1
	1.4nm,0.3s,baz=232,slow=11,SNR=17						
ARCES	ARCESS Array B	61.37	18	P	P	21 12 21.4	-0.1
	2.8nm,0.8s,mb4.4,baz=326,slow=6.5,SNR=4.3						

*LDG **27** 21:25:31.5±0.2, 51.58N×6.85E, h1^{km}, Ml2.8/10, Error ellipse: s-maj=4.4km s-min=2.7km az=32.0, Suspected Mining induced.*

*BUG **27** 21:25:31.2, 51.53N×6.84E, h1^{km}, ML1.9*

*BNS **27** 21:25:31.9±1.2, 51.57N×6.85E, h1^{km}, ML2.1*

*CSEM **27** 21:25:31.8±0.2, 51.56N×6.84E, h2^{km}, ML2.8/9, Error ellipse: s-maj=3.9km s-min=2.5km az=97.0*

*BGR **27** 21:25:32.5±1.0, 51.51N×6.86E, h1^{km}, ML2.1/1, Error ellipse: s-maj=11.1km s-min=4.4km az=140.0*

ISC 27 21:25:29.6±0.5**, 51.52N**±0.02×**6.73E**±0.04**, n37, σ$1\overset{s}{.}58$**/61**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAUG	Laupendahl	0.22	141	ePg	Pg	21 25 35.9	+2.0
LAUG				eSg	Sg	21 25 39.8	+3.0
	208nm,0.4s						
BUG	Bochum--Univer	0.35	103	ePg	Pg	21 25 37.5	+1.0
WTSB	Winterswijk	0.45	6	ePg	Pg	21 25 39.4	+0.8
	34nm,0.3s						
WTSB				eSg	Sg	21 25 47.1	+2.5
RODG	Roetgen-Dahlhe	0.51	223	ePg	Pg	21 25 43.0	+3.3
BNS	Bensberg	0.62	153	ePg	Pg	21 25 44.2	+2.2
BNS				eSg	Sg	21 25 53.4	+3.1
HOBG	Hohbusch	0.66	144	ePg	Pg	21 25 44.2	+1.5
HOBG				eSg	Sg	21 25 53.3	+1.8
HGN	Heimansgroeve	0.91	214	ePg	Pg	21 25 51.2	+3.6
	18nm,0.3s						
HGN				eSg	Sg	21 26 05.3	+5.6
HGN	Heimansgroeve	0.91	214	ePg	Pg	21 25 51.2	+3.5
	18nm,0.3s						
HGN				eSg	Sg	21 26 05.3	+5.5
STB	Steinbach	0.93	176	ePg	Pg	21 25 50.6	+2.5
STB				eSg	Sg	21 26 03.3	+2.8
	73nm,0.5s						
HILG	Hillesheim	1.23	181	eSg	Sg	21 26 13.4	+2.9
BGG	Burgeitz	1.37	163	ePg	Pg	21 25 57.2	+0.2
BGG				eSg	Sg	21 26 16.1	+0.9
	44nm,0.2s						
TNS	Taunus Mts	1.69	139	ePg	Pg	21 26 03.1	-0.3
	SNR=3.9						
TNS				eSg	Sg	21 26 24.8	-1.2
	SNR=2.7						
GIVF	Givet	1.86	221	ePn	Pn	21 26 03.6	+0.6
GIVF	Givet	1.86	221	ePg	Pg	21 26 08.2	+1.4
GIVF				eSg	Sg	21 26 33.0	+1.4
	30nm,0.3s						
GIVF	Givet	1.86	221	ePg	Pg	21 26 08.2	+1.4
GIVF				eSg	Sg	21 26 33.0	+1.4
	15nm,0.3s						
WLF	Walferdange	1.89	191	ePg	Pg	21 26 08.9	+1.5
	SNR=3.9						
WLF				eSg	Sg	21 26 32.5	-0.1
	SNR=3.9						
BAIF	Baives	2.17	229	ePn	Pn	21 26 08.1	+0.7
BAIF	Baives	2.17	229	ePg	Pg	21 26 13.0	+0.2
BAIF				eSg	Sg	21 26 41.9	+0.2
	10.0nm,0.3s						
BAIF	Baives	2.17	229	ePg	Pg	21 26 13.0	+0.2
BAIF				eSg	Sg	21 26 41.9	+0.2
	5.0nm,0.3s						
UBBA	Unterbreizbach	2.18	108	eSg	Sg	21 26 38.8	-3.2
	SNR=2.5						
CLZ	Clausthal	2.29	80	ePg	Pg	21 26 13.8	-1.5
	SNR=3.3						
CLZ				eSg	Sg	21 26 43.1	-2.8
	SNR=2.6						
RFYF	Reffroy	3.00	196	eSg	Sg	21 27 08.1	-1.5
	7.8nm,0.3s						
CDF	Champ du Feu	3.13	173	ePn	Pn	21 26 20.7	-0.4
CDF				eSg	Sg	21 27 11.3	-2.5
	5.5nm,0.4s						
MOX	Moxa	3.20	104	eSg	Sg	21 27 12.5	-3.7
MEZF	Maizieres J’vi	3.21	200	ePn	Pn	21 26 22.1	-0.1
	baz=32						
MEZF				eSg	Sg	21 27 14.5	-1.9
	4.7nm,0.3s						
SFTF	Sexfontaines	3.49	199	ePg	Pg	21 26 37.6	-1.7
	baz=8.2						
SFTF				eSg	Sg	21 27 23.7	-2.1
	5.1nm,0.3s						
HAU	Haudompre	3.52	184	eSg	Sg	21 27 23.5	-3.4
	5.2nm,0.3s						
CLL	Collm	3.93	91	eSG	Sg	21 27 40.0	-0.6
LOR	Lormes	4.65	205	ePn	Pn	21 26 42.3	-0.4
	baz=29						
LOR				eSn	Sn	21 27 34.9	-3.3
LOR				eSg	Sg	21 27 59.0	-5.3
	2.6nm,0.3s						
SSF	Saint Saulge	4.93	207	ePn	Pn	21 26 46.3	-0.4
SSF				eSg	Sg	21 28 09.0	-4.8
	1.5nm,0.3s						
AVF	Avril sur Loir	5.22	206	ePn	Pn	21 26 49.2	-1.6
SMF	Signal de Mont	5.23	202	ePn	Pn	21 26 49.3	-1.7
LDF	La Druitiere	5.29	239	ePn	Pn	21 26 51.5	-0.3
LDF				eSn	Sn	21 27 49.7	-4.8
FLN	La Foliniere	5.39	242	ePn	Pn	21 26 52.8	-0.4
	baz=58						
FLN				eSn	Sn	21 27 52.7	-4.3
BGF	Bois d’Agland	5.58	209	ePn	Pn	21 26 55.0	-0.9
GRR	Gorron	5.81	240	ePn	Pn	21 26 58.4	-0.7
GRR				eSn	Sn	21 28 01.7	-5.8
SGMF	Saint Gilles	6.83	245	ePn	Pn	21 27 10.5	-3.0

*KISR **27** 22:32:58.7±0.3, 26.34N×55.22E, h33^{km}, ML3.5*

*CSEM **27** 22:33:00.7±0.3, 27.16N×55.55E, h20^{km}, ML3.1, Error ellipse: s-maj=8.8km s-min=3.2km az=171.0*

*THR **27** 22:33:02.5±0.5, 27.29N×55.62E, h14^{km}±8^{km}, ML3.1*

ISC 27 22:33:01.2±1.1**, 27.45N**±0.08×**55.54E**±0.05**, h10**^{km}**, n6, σ$0\overset{s}{.}72$**/10**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.57	95	ePG	Pg	22 33 12.6	0.0
BNDS				AML	AML	22 33 35.3	
	comp=N,2µm,0.3s						
GHIR	Ghir-Karzin	2.41	291	ePN	Pn	22 33 45.2	+4.0
KRBR	Kerman	2.74	23	ePN	Pn	22 33 50.3	+4.3
KRBR				eSG	Sg	22 34 32.3	-0.1
KRBR				AML	AML	22 34 35.0	
	comp=N,64nm,0.3s						
UMR	Umm Al-Rimmam	7.19	289	eP	Pn	22 34 49.1	0.0
UMR				eS	Sn	22 36 11.9	+0.3
UMR				AML	AML	22 36 14.9	
	comp=Z,7.6nm,0.3s						
NAY	Al-Naaiem	7.53	286	eP	Pn	22 34 53.1	-0.6
NAY				eS	Sn	22 36 18.6	-1.3
NAY				AML	AML	22 36 19.1	
	comp=Z,4.1nm,0.4s						
MIB	Mutribah	7.58	290	eP	Pn	22 34 54.8	+0.4
MIB				eS	Sn	22 36 22.1	+0.9
MIB				AML	AML	22 36 23.0	
	comp=Z,7.4nm,0.5s						

IDC 27 22:46:13.6±2.0**, 4.77S**×**153.21E, mb4.0**/6**, mb1 4.2**/6**, mb1mx4.0**/13**, mbtmp4.0**/6**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.9**/19**, Error ellipse: s-maj=67.4km s-min=24.2km az=105.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	16.66	203	LR	LR	22 55 57.0	
	comp=Z,47nm,18.5s,baz=228,slow=35						
WB2	Warramunga Arr	23.76	229	eP	P	22 51 27.9	-0.9
WRA	Warramunga Arr	23.77	229	P	P	22 51 27.9	-1.0
	1.1nm,0.6s,baz=54,slow=9.1,SNR=5.1						
STKA	Stephens Creek	29.08	201	P	P	22 52 16.7	-1.4
	1.6nm,0.8s,baz=27,slow=4.5,SNR=2.2						
FITZ	Fitzroy Crossi	30.03	242	eP	P	22 52 24.0	-2.8
	8.5nm,1.5s						
FITZ	Fitzroy Crossi	30.03	242	P	P	22 52 23.8	-2.9
	2.6nm,0.3s,baz=52,slow=10,SNR=12						
JNU	Nakatsue	43.23	332	LR	LR	23 10 05.3	
	comp=Z,27nm,21.8s,baz=236,slow=33						
SONM	Songino Array	66.52	328	P	P	22 57 06.1	-1.4
	0.2nm,0.5s,baz=145,slow=5.1,SNR=4.8						
MKAR	Makanchi Array	80.58	319	P	P	22 58 28.7	-0.8
	0.9nm,0.5s,baz=95,slow=7.7,SNR=21						
BVAR	Borovoye Array	89.47	323	P	P	22 59 11.9	-1.9
	1.4nm,0.7s,baz=117,slow=6.4,SNR=8.0						
GERES	GERESS Array B	124.25	329	PKP	PKPdf	23 05 13.8	-2.8
	0.5nm,0.5s,baz=45,slow=1.4,SNR=4.1						

*NEIC **27** 22:51:59.5, 38.14S×176.09E, h179^{km}, MG4.1(WEL), After WEL.*

WEL 27 22:51:59.7±0.3**, 38.10S**×**176.08E, h174**^{km}±2^{km}**, ML4.0**/6**, 2C, Error ellipse: s-maj=2.9km s-min=2.7km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	0.83	101	P	P	22 52 25.7	-0.2
URZ	Urewera	0.83	101	PN	P	22 52 25.6	-0.2
URZ				SN	S	22 52 45.6	-0.4
BKZ	Black Stump Fm	1.11	163	P	P	22 52 27.9	0.0
BKZ				S	S	22 52 49.4	-0.3
BKZ	Black Stump Fm	1.11	163	⇑PN	P	22 52 27.9	0.0
BKZ				SN	S	22 52 49.4	-0.3
MWZ	Matawai	1.17	102	P	P	22 52 28.3	-0.1
MWZ				S	S	22 52 50.5	-0.1
MWZ	Matawai	1.17	102	PN	P	22 52 28.0	-0.4
MWZ				SN	S	22 52 50.0	-0.5
CNZ	Chateau	1.17	201	PN	P	22 52 28.4	0.0
WNVZ	Wahianoa	1.28	197	P	P	22 52 29.4	-0.1
WNVZ	Wahianoa	1.28	197	PN	P	22 52 29.3	-0.1
PKVZ	Pokaka	1.32	206	PN	P	22 52 29.5	-0.3
MOVZ	Moawhango	1.33	191	P	P	22 52 29.3	-0.6
MOVZ	Moawhango	1.33	191	PN	P	22 52 29.3	-0.6
MOVZ				SN	S	22 52 51.9	-1.3
VRZ	Vera Road	1.45	225	P	P	22 52 31.0	-0.1
VRZ	Vera Road	1.45	225	PN	P	22 52 30.9	-0.2
KNZ	Kokohu	1.55	127	PN	P	22 52 32.1	+0.1
MXZ	Matakaoa Point	1.84	74	PN	P	22 52 34.8	-0.3
WAZ	Wanganui	1.86	207	P	P	22 52 34.4	-0.8
WAZ	Wanganui	1.86	207	ePN	P	22 52 34.1	-1.1
TSZ	Takapari Road	1.96	183	P	P	22 52 35.1	-1.1
TSZ	Takapari Road	1.96	183	⇑PN	P	22 52 35.1	-1.1
TSZ				SN	S	22 53 02.0	-2.4
PXZ	Pawanui	2.02	163	PN	P	22 52 36.1	-0.8
BFZ	Birch Farm	2.58	177	eP	P	22 52 41.2	-2.3
BFZ	Birch Farm	2.58	177	PN	P	22 52 41.2	-2.4
BFZ				SN	S	22 53 13.6	-3.6
MRZ	Mangatainoka R	2.58	188	eP	P	22 52 41.1	-2.5
MRZ	Mangatainoka R	2.58	188	PN	P	22 52 41.0	-2.6
MRZ				SN	S	22 53 14.4	-3.0
KIW	Kapiti Island	2.90	198	P	P	22 52 44.2	-3.3
KIW	Kapiti Island	2.90	198	PN	P	22 52 44.2	-3.3
MTW	Mount Morrison	3.08	188	P	P	22 52 46.1	-3.6
MTW	Mount Morrison	3.08	188	PN	P	22 52 46.1	-3.7
DUWZ	D’Urville Isla	3.17	211	PN	P	22 52 47.1	-3.7
MRW	Makara Radio	3.30	198	P	P	22 52 48.7	-3.7
MRW	Makara Radio	3.30	198	PN	P	22 52 48.6	-3.8
TRWZ	Traveller	3.31	185	PN	P	22 52 48.7	-3.8
PAWZ	Paruwai Farm	3.31	189	PN	P	22 52 48.7	-4.0
MSWZ	Moikau Station	3.37	191	P	P	22 52 49.3	-4.0
MSWZ	Moikau Station	3.37	191	PN	P	22 52 49.3	-4.1
SNZO	South Karori	3.37	198	P	P	22 52 49.3	-4.1
SNZO	South Karori	3.37	198	PN	P	22 52 49.2	-4.2
TCW	Tory Channel	3.40	204	PN	P	22 52 49.7	-4.1
BHW	Baring Head	3.43	195	P	P	22 52 50.0	-4.1
BHW	Baring Head	3.43	195	PN	P	22 52 49.9	-4.2
TUWZ	Tuamarina	3.71	206	PN	P	22 52 53.2	-4.5
NNZ	Nelson	3.74	213	eP	P	22 52 53.5	-4.6
NNZ	Nelson	3.74	213	PN	P	22 52 53.0	-5.1
QRZ	Quartz Range	3.87	224	P	P	22 52 55.2	-4.4
QRZ	Quartz Range	3.87	224	PN	P	22 52 55.0	-4.6
BSWZ	Blackbirch Sta	3.98	204	P	P	22 52 57.2	-4.0
BSWZ	Blackbirch Sta	3.98	204	PN	P	22 52 56.8	-4.3
THZ	Tophouse	4.39	213	eP	P	22 53 02.2	-4.3
THZ	Tophouse	4.39	213	PN	P	22 53 02.1	-4.3
KHZ	Kahutara	4.73	203	P	P	22 53 06.0	-4.8
KHZ	Kahutara	4.73	203	PN	P	22 53 06.0	-4.8
DSZ	Denniston Nort	4.90	221	PN	P	22 53 08.3	-4.7
LTZ	Lake Taylor	5.50	211	eP	P	22 53 15.0	-5.9
LTZ	Lake Taylor	5.50	211	PN	P	22 53 14.8	-6.1
MQZ	McQueen’s Vall	6.17	204	eP	P	22 53 22.6	-7.1
MQZ	McQueen’s Vall	6.17	204	PN	P	22 53 22.5	-7.2
RPZ	Rata Peaks	6.78	213	SN	S	22 54 42.8	-11
LBZ	Lake Benmore	7.69	213	ePN	P	22 53 42.7	-7.1
ODZ	Otahua Downs	8.04	209	eP	P	22 53 48.4	-6.0
ODZ	Otahua Downs	8.04	209	ePN	P	22 53 47.9	-6.5
JCZ	Jackson Bay	8.13	220	SN	S	22 55 13.5	-13

*NEIC **27** 22:58:01.9, 32.32S×71.81W, h24^{km}, ML3.5(GUC), After GUC.*

GUC 27 22:58:01.9±0.7**, 32.32S**×**71.81W, h24**^{km}±3^{km}**, MD4.0, ML3.5, 8C-5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHNG	Los Chungos	0.51	31	⇓iP	Pb	22 58 12.0	-0.1
CHNG				i S	Sb	22 58 19.6	+0.5
CHNG				AMP		22 58 20.5	
	comp=E,2µm,0.4s						
IHA	Instituto Hidr	0.72	169	⇓iP	Pb	22 58 15.3	-0.4
IHA				i S	Sb	22 58 25.6	+0.5
ILCH	Illapel	0.87	39	⇓iP	Pb	22 58 17.9	-0.4
ILCH				i S	Sb	22 58 29.9	+0.4
ILCH				AMP		22 58 30.9	
	comp=E,2µm,0.2s						
ROCH	El Roble	0.94	134	⇑iP	Pb	22 58 18.7	-0.7
ROCH				i S	Sb	22 58 31.9	+0.6
JACH	Jahuel	1.09	110	⇑iP	Pn	22 58 21.1	-0.7
JACH				i S	Sb	22 58 35.7	0.0
LCCH	Las Cruces	1.17	170	⇑iP	Pn	22 58 22.2	-0.8
LCCH				i S	Sb	22 58 37.6	-0.5
PEL	Peldehue	1.25	131	⇑iP	Pn	22 58 23.8	-0.4

PEL				*i*S	Sn	22 58 40.4	0.0
PEL				AMP		22 58 43.2	
	comp=N,3µm,0.2s						
CMCH	**Combarbala**	**1.33**	**31**	⇓*i*P	Pn	22 58 24.8	-0.5
CMCH				*i*S	Sn	22 58 42.7	+0.2
CMCH				AMP		22 58 45.0	
	comp=E,4µm,0.5s						
RCDM	**Rinconada Maip**	**1.44**	**144**	⇑*i*P	Pn	22 58 26.8	-0.1
RCDM				*i*S	Sn	22 58 45.2	+0.1
RCDM				AMP		22 58 47.6	
	comp=N,1µm,0.1s						
SAN	**Santiago**	**1.49**	**140**	*e*P	Pn	22 58 27.6	+0.1
SAN				*i*S	Sn	22 58 47.0	+0.6
SAN				AMP		22 58 54.3	
	comp=E,985nm,0.8s						
TACH	**Talagante**	**1.52**	**151**	⇑*i*P	Pn	22 58 28.1	+0.1
TACH				*i*S	Sn	22 58 47.5	+0.4
FSR	**Penalolen**	**1.58**	**137**	*e*P	Pn	22 58 28.6	-0.3
FSR				*i*S	Sn	22 58 49.8	+1.0
FSR				AMP		22 58 59.1	
	comp=E,1µm,0.4s						
ANTU	**Antumapu**	**1.59**	**142**	*e*P	Pn	22 58 29.0	0.0
ANTU				*i*S	Sn	22 58 49.8	+0.8
ANTU				AMP		22 58 56.3	
	comp=N,1µm,0.4s						
FCH	**Farellones**	**1.63**	**129**	*e*P	Pn	22 58 29.4	-0.1
FCH				*i*S	Sn	22 58 51.2	+1.3
FCH				AMP		22 58 54.7	
	comp=E,629nm,0.2s						
PCH	**Pirque**	**1.69**	**140**	*e*P	Pn	22 58 31.1	+0.6
PCH				*i*S	Sn	22 58 53.2	+1.6
CHCH	**Chadas Angostu**	**1.88**	**149**	*e*P	Pn	22 58 33.6	+0.5
LMEL	**Las Melosas**	**2.04**	**139**	⇓*i*P	Pn	22 58 36.4	+1.1
LMEL				*i*S	Sn	22 59 02.4	+2.2
LMEL				AMP		22 59 08.9	
	comp=N,596nm,0.4s						
CACH	**El Canelo**	**2.06**	**151**	⇑*i*P	Pn	22 58 37.1	+1.4
CACH				*i*S	Sn	22 59 04.2	+3.4
CICH	**Cipreses**	**2.31**	**150**	⇑*i*P	Pn	22 58 40.0	+0.7
TLL	**Tololo Astrono**	**2.31**	**22**	*e*P	Pn	22 58 40.8	+1.5
TLL				AMP		22 59 18.0	
	comp=N,1µm,0.6s						
SFDO	**San Fernando**	**2.38**	**164**	*e*P	Pn	22 58 40.0	-0.3

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*NEIC **27** 23:13:55.1±0.6,50.11N×18.45E,h5^{km},ML2.9(CLL), ML2.8(SZGRF),Error ellipse: s-maj=9.9km s-min=4.5km az=197.0*

*IPEC **27** 23:13:55.7±0.1,50.05N×18.43E,ML2.3/4,Error ellipse: s-maj=1.7km s-min=0.7km az=160.0*

*PRU **27** 23:13:56.8,50.04N×18.36E*

*CSEM **27** 23:13:56.3±0.3,50.10N×18.39E,h2^{km},ML3.5/2,Error ellipse: s-maj=5.9km s-min=3.6km az=15.0*

*VIE **27** 23:13:57.0±0.7,49.87N×18.43E,mb1.9/2,ML2.6/3,Error ellipse: s-maj=9.5km s-min=5.1km az=159.0,Suspected Mining induced.*

WAR 27 23:13:55.6,50.04N×18.44E,h0^{km},ML2.5,7C-3D,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAC	**Raciborz**	**0.17**	**286**	⇑*i*PG	Pg	23 14 00.0	+1.1
RAC				⇑*e*SG	Sg	23 14 03.0	+1.8
RAC	**Raciborz**	**0.17**	**286**	⇑*i*Pg	Pg	23 14 00.0	+1.1
RAC				*e*Sg	Sg	23 14 03.1	+1.9
OKC	**Ostrava-Krasne**	**0.28**	**224**	*e*PG	Pg	23 14 01.6	+0.5
OKC				*e*SG	Sg	23 14 05.1	+0.3
	78nm,0.2s						
OKC	**Ostrava-Krasne**	**0.28**	**224**	*e*Pg	Pg	23 14 01.5	+0.4
OKC				*e*Sg	Sg	23 14 05.1	+0.3
	78nm,0.2s						
MORC	**Moravsky Berou**	**0.64**	**246**	⇑P	Pg	23 14 07.9	-0.5
MORC	**Moravsky Berou**	**0.64**	**246**	*e*Pg	Pg	23 14 07.8	-0.5
MORC				*e*Sg	Sg	23 14 15.6	-1.2
	37nm,0.2s						
OJC	**Ojcow**	**0.89**	**78**	*e*PG	Pg	23 14 12.0	-1.4
OJC				*e*SG	Sg	23 14 24.0	-1.3
LIKS	**Likavka**	**1.08**	**156**	*e*SN	Sn	23 14 34.8	+1.2
NIE	**Niedzica**	**1.36**	**116**	*e*PG	Pg	23 14 22.0	-0.8
NIE				*e*SG	Sg	23 14 41.0	0.0
DPC	**Dobruska-Polom**	**1.40**	**284**	*e*PG	Pg	23 14 21.6	-1.9
DPC				*e*SG	Sg	23 14 40.0	-2.2
	50nm,0.4s						
DPC	**Dobruska-Polom**	**1.40**	**284**	*e*Pn	Pn	23 14 21.7	-0.6
DPC				*e*Sg	Sg	23 14 39.8	-2.4
VRAC	**Vranov**	**1.41**	**239**	⇑P	Pb	23 14 21.9	-0.5
VRAC	**Vranov**	**1.41**	**239**	*e*Pn	Pn	23 14 21.8	-0.6
VRAC				*e*Sg	Sg	23 14 40.2	-2.2
	37nm,0.2s						
VYHS	**Vyhne**	**1.57**	**170**	*e*PN	Pn	23 14 24.5	-0.2
VYHS				*e*SN	Sn	23 14 45.2	-0.8
KSP	**Ksiaz**	**1.59**	**301**	*e*PN	Pn	23 14 24.0	-1.1
KSP				*e*SG	Sg	23 14 46.0	-2.7
KSP	**Ksiaz**	**1.59**	**301**	*e*Pg	Pg	23 14 24.1	-3.3
KSP				*e*Sg	Sg	23 14 45.7	-3.0
UPC	**Upice**	**1.63**	**288**	*e*PG	Pg	23 14 26.5	-1.6
UPC				*e*SG	Sg	23 14 47.5	-2.3
KRUC	**Moravsky**	**1.65**	**235**	*e*Pn	Pn	23 14 25.6	-0.4
KRUC				*e*Sg	Sg	23 14 46.7	-3.9
	35nm,0.2s						
STHS	**Stebnicka Huta**	**1.92**	**108**	*e*PN	Pn	23 14 32.4	+2.6
STHS				*e*SN	Sn	23 14 59.5	+4.5
KECS	**Kecovo**	**2.05**	**139**	*e*PN	Pn	23 14 30.8	-0.9
KECS				*e*		23 14 56.0	
CRVS	**Cervenica-Dubn**	**2.27**	**119**	*e*PG	Pg	23 14 37.9	-3.1
CRVS				*e*SG	Sg	23 15 10.9	-0.4
PRU	**Pruhonice**	**2.52**	**270**	*e*PG	Pg	23 14 41.9	-4.0
PRU				*e*SG	Sg	23 15 13.9	-5.5
PVCC	**Panska Ves**	**2.53**	**283**	*e*SG	Sg	23 15 15.3	-4.6
BRG	**Berggiesshubel**	**3.00**	**288**	Pg	Pg	23 14 50.6	-4.8
BRG				*i*		23 15 23.4	
BRG				Sg	Sg	23 15 30.8	-4.6
KHC	**Kasperske Hory**	**3.29**	**256**	*e*PN	Pn	23 14 49.3	-0.1
KHC				*e*PG	Pg	23 14 56.8	-4.5
KHC				*e*SG	Sg	23 15 37.9	-7.3
KHC	**Kasperske Hory**	**3.29**	**256**	*e*Pg	Pg	23 14 56.8	-4.5
KHC				*e*Sg	Sg	23 15 37.9	-7.3
MOA	**Molln**	**3.52**	**233**	⇓*i*Pn	Pn	23 14 50.9	-1.7
CLL	**Collm**	**3.69**	**292**	*e*PG	Pg	23 15 06.0	-3.2
CLL				*e*SG	Sg	23 15 54.0	-4.4
WET	**Wettzell**	**3.73**	**258**	*e*Pg	Pg	23 15 04.2	-5.8
WET				*e*Sg	Sg	23 15 52.6	-7.2
DRGR		**4.32**	**137**	⇑P	Pn	23 15 01.5	-2.4
DRGR		**4.32**	**137**	⇑P	Pn	23 15 01.5	-2.4
BURAR	**Bucovina Array**	**5.09**	**116**	⇓P	Pn	23 15 13.9	-1.0
BURAR	**Bucovina Array**	**5.09**	**116**	⇓P	Pn	23 15 13.9	-0.9

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*NEIC **27** 23:26:02.8±1.1,26.66N×55.73E,h10^{km},ML3.5(THR), Error ellipse: s-maj=23.5km s-min=12.5km az=133.0*

*IDC **27** 23:26:02.4±1.5,26.80N×55.68E,mb3.6/8,mb1 3.7/8, mb1mx3.6/21,mbtmp3.6/8,Error ellipse: s-maj=32.9km s-min=26.1km az=121.0*

*KISR **27** 23:26:04.5±0.7,26.64N×55.53E,h33^{km},ML3.9*

*CSEM **27** 23:26:04.1±0.1,26.76N×55.69E,h25^{km},mb2.8,Error ellipse: s-maj=3.8km s-min=2.4km az=80.0*

*THR **27** 23:26:05.2±0.4,26.76N×55.87E,h18^{km}±6^{km},ML3.5*

ISC 27 23:26:02.7±0.4**,26.78N**±0.04×**55.66E**±0.04**,h10^{km},n35, σ1^{s}12**/41**,mb3.5**/8**,7C,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.77**	**36**	*e*PG	**Pg**	**23 26 18.7**	**+0.5**
BNDS				AML	AML	23 26 32.7	
	comp=N,2µm,0.4s						
BNDS	**Bandar-Abbas**	**0.77**	**36**	*e*Pg	**Pg**	**23 26 18.0**	**-0.2**
BANOM	**Banah**	**1.02**	**146**	P	**Pb**	**23 26 22.4**	**+0.3**
	SNR=55						
ASHO	**Ashiyiah**	**2.11**	**170**	P	**Pn**	**23 26 40.6**	**+2.0**
	SNR=19						
GHIR	**Ghir-Karzin**	**2.81**	**303**	*e*PN	**Pn**	**23 26 53.8**	**+5.2**
GHIR				*e*SG	**Sg**	**23 27 38.3**	**+1.9**
GHIR	**Ghir-Karzin**	**2.81**	**303**	*e*Pn	**Pn**	**23 26 53.0**	**+4.4**
GHIR				*e*Sg	**Sg**	**23 27 38.0**	**+1.7**
KRBR	**Kerman**	**3.34**	**17**	*e*PN	**Pn**	**23 26 58.3**	**+2.3**
KRBR				AML	AML	23 27 49.1	
	comp=N,97nm,0.7s						
KRBR	**Kerman**	**3.34**	**17**	*e*Pn	**Pn**	**23 26 58.0**	**+1.9**
ARQ	**Araqi**	**3.51**	**167**	⇑P	**Pn**	**23 26 59.9**	**+1.4**
HOQ	**Hoqain**	**3.51**	**154**	⇑P	**Pn**	**23 26 58.1**	**-0.5**
BIDO	**Bidbid**	**3.94**	**145**	⇑P	**Pn**	**23 27 04.4**	**-0.1**
BSY	**Bisya**	**4.25**	**160**	⇑P	**Pn**	**23 27 09.3**	**+0.3**
BSYO	**Bisya**	**4.28**	**160**	P	**Pn**	**23 27 09.3**	**-0.1**
SMDO	**Samad**	**4.29**	**149**	P	**Pn**	**23 27 10.3**	**+0.7**
	SNR=9.6						
WBK	**Wadi Bani Khal**	**5.12**	**143**	⇑P	**Pn**	**23 27 19.8**	**-1.6**
UMR	**Umm Al-Rimmam**	**7.54**	**293**	*e*P	**Pn**	**23 27 56.8**	**+1.4**
UMR				*e*S	**Sn**	**23 29 20.4**	**-1.4**
UMR				AML	AML	23 29 23.7	
	comp=Z,10.0nm,0.3s						
NAY	**Al-Naaiem**	**7.84**	**290**	*e*P	**Pn**	**23 28 00.9**	**+1.4**
NAY				*e*S	**Sn**	**23 29 27.9**	**-1.4**
NAY	**Al-Naaiem**	**7.84**	**290**	*e*P	**Pn**	**23 28 00.9**	**+1.3**
NAY				*e*S	**Sn**	**23 29 27.9**	**-1.4**
MIB	**Mutribah**	**7.93**	**294**	*e*P	**Pn**	**23 28 01.9**	**+1.0**
MIB				*e*S	**Sn**	**23 29 30.9**	**-0.7**
MIB				AML	AML	23 29 31.5	
	comp=Z,16nm,0.5s						
WHFO	**Wadi Hawf**	**8.99**	**192**	⇑P	**P**	**23 28 14.9**	**-0.6**
RBK	**Rabkut**	**9.33**	**189**	⇑P	**P**	**23 28 19.9**	**-0.4**
BRTR	**Keskin Array B**	**22.42**	**311**	P	**P**	**23 31 03.3**	**+0.4**
	comp=Z,0.3nm,0.5s,mb3.0,baz=126,slow=12,SNR=3.3						
AKTO	**Aktyubinsk**	**23.69**	**4**	P	**P**	**23 31 15.9**	**+0.7**
	comp=Z,0.8nm,0.6s,mb3.3,baz=166,slow=12,SNR=4.0						
BRVK	**Borovoye**	**28.43**	**19**	P	**P**	**23 31 57.9**	**-1.6**
BRVK	**Borovoye**	**28.43**	**19**	P	**P**	**23 31 57.9**	**-1.6**
BVAR	**Borovoye Array**	**28.43**	**19**	P	**P**	**23 31 58.9**	**-0.6**
	comp=Z,0.7nm,0.7s,mb3.4,baz=207,slow=6.6,SNR=5.1						
AKASG	**Malin Array Be**	**31.25**	**327**	P	**P**	**23 32 24.1**	**-0.5**
	comp=Z,0.3nm,0.4s,mb3.4,baz=130,slow=8.8,SNR=4.3						
AKASG	**Malin Array Be**	**31.25**	**327**	P	**P**	**23 32 24.1**	**-0.6**
FINES	**FINESS Array B**	**39.96**	**338**	P	**P**	**23 33 36.0**	**-2.7**
	comp=Z,2.0nm,0.9s,mb3.8,baz=143,slow=9.5,SNR=3.9						
NST	**Nakhon Sawan**	**42.71**	**96**	P	**P**	**23 34 02.0**	**+0.2**
	comp=Z,82nm,0.8s						
SONM	**Songino Array**	**44.57**	**48**	P	**P**	**23 34 15.9**	**-0.7**
	comp=Z,0.2nm,0.7s,mb3.0,baz=270,slow=4.4,SNR=3.7						
ESDC	**Sonseca Array**	**50.67**	**301**	P	**P**	**23 35 04.0**	**-0.3**
	comp=Z,0.6nm,0.6s,mb3.7,baz=74,slow=6.8,SNR=5.3						
BOSA	**Boshof**	**62.33**	**210**	P	**P**	**23 36 27.0**	**-0.8**
	comp=Z,4.1nm,1.1s,mb4.5,baz=9.7,slow=7.0,SNR=4.3						
BOSA	**Boshof**	**62.33**	**210**	*e*P	**P**	**23 36 24.8**	**-2.9**
BOSA	**Boshof**	**62.33**	**210**	*e*P	**P**	**23 36 24.8**	**-3.0**

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*CSEM **27** 23:31:32.5,1.25N×97.40E,h2^{km},mb5.5*

*BJI **27** 23:31:35.5,0.91N×97.42E,h39^{km},mB6.0,mb5.5,Ms5.8, Msz5.8*

*IDC **27** 23:31:36.7±0.5,1.12N×97.27E,h23^{km}±3^{km},mb4.8/25, mb1 4.9/25,mb1mx4.8/26,mbtmp5.0/25,MS5.4/12, Ms1 5.4/12,ms1mx5.2/18,Error ellipse: s-maj=13.9km s-min=9.4km az=50.0*

*MOS **27** 23:31:37.3±1.0,1.19N×97.39E,h39^{km},mb5.5/65, MS5.4/24,Error ellipse: s-maj=8.7km s-min=4.5km az=118.9*

*HRVD **27** 23:31:37.3±0.2,0.92N×96.98E,h22^{km},MW5.6/84, Centroid moment Tensor Solution. LP body waves: s83,c156;Mantle waves: s84,c159; Half duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}1.64±.04; $M_{\theta\theta}$-0.56±.03; $M_{\phi\phi}$-1.08±.04; $M_{r\theta}$1.83±.07; $M_{\theta\phi}$0.94±.03; $M_{\phi r}$-1.73±.07; Best double couple: $M_0$3.05×10^{17} NP1: ϕ_s332°,δ18°,λ106°. NP2:ϕ_s135°,δ73°,λ85°. Principal axes: T 2.989, Plg62°, Azm37°; N .119, Plg5°, Azm136°; P -3.111, Plg28°, Azm229°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **27** 23:31:37.3±0.1,1.16N×97.27E,mb5.3/78,MS5.3/14, MW5.6 Error ellipse: s-maj=5.0km s-min=3.8km az=211.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^{17} Nm; M_{rr}2.50; $M_{\theta\theta}$-1.18; $M_{\phi\phi}$-1.33; $M_{r\theta}$1.52; $M_{\theta\phi}$1.06; $M_{\phi r}$-1.88; Best double couple: $M_0$3.4×10^{17} NP1:ϕ_s315°, δ22°,λ86°. NP2:ϕ_s140°,δ68°,λ92°. Principal axes: T 3.51, Plg67°, Azm53°; N -.19, Plg2°, Azm319°; P -3.31, Plg23°, Azm228°;*

NEIC Felt [IV] at Gunungsitoli.

ISC 27 23:31:35.4±0.2**,1.14N**±0.03×**97.29E**±0.03**,h25^{km}, h25^{km}**±.8^{km}**:pP-P,n452,**σ**1^{s}02**/414**,mb5.2**/139**,MS5.5**/61**, 67C-17D,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**5.06**	**47**	P	**Pn**	**23 32 53.2**	**+1.5**
KGM	**Kluang**	**6.09**	**82**	P	**Pn**	**23 33 08.0**	**+1.8**
SNG	**Songkhla**	**6.85**	**29**	P	**Pn**	**23 33 16.5**	**-0.5**
PKT	**Phuket**	**6.95**	**7**	P	**Pn**	**23 33 18.5**	**+0.1**
PBA	**Port Blair**	**11.38**	**337**	*e*x	x	23 35 37.2	
PBA				*e*x	x	23 38 18.1	
KKTK	**Khon Kaen**	**16.05**	**20**	P	**P**	**23 35 21.0**	**-0.4**
	1µm,0.9s						
PALK	**Pallekele**	**17.62**	**291**	*e*P	**P**	**23 35 42.0**	**+0.8**
	92nm,1.1s						
CHG	**Chiang Mai**	**17.64**	**5**	P	**P**	**23 35 40.3**	**-1.0**
	39nm,0.8s						
CHRT	**Chiangrai**	**18.77**	**7**	PG	**P**	**23 35 53.0**	**-2.3**
KKM	**Kota Kinabalu**	**19.50**	**75**	*e*P	**P**	**23 36 03.3**	**-0.6**
KKM	**Kota Kinabalu**	**19.50**	**75**	P	**P**	**23 36 04.0**	**+0.1**
TSM	**Tawau**	**20.79**	**81**	P	**P**	**23 36 17.3**	**-0.2**
VIS	**Vishakhapatnam**	**21.44**	**321**	*e*P	**P**	**23 36 25.2**	**+1.1**
VIS				*e*P		23 36 25.3	
VIS				*e*P		23 36 26.0	
VIS				AMb	AMB	23 36 43.0	
	comp=E,162nm,1.4s						
VIS				AML	AML	23 36 51.1	
	comp=N,144nm,0.9s						
VIS				*e*S	**S**	**23 40 15.3**	**-0.4**
TRD	**Trivandrum**	**21.53**	**291**	*e*P	**P**	**23 36 27.6**	**+2.6**
TRD				*e*S	**S**	**23 40 25.6**	**+8.3**
QIZ	**Qiongzhong**	**21.62**	**34**	⇑*i*P	**P**	**23 36 25.0**	**-0.9**
QIZ				S	**S**	**23 40 24.8**	**+5.8**
QIZ				AMB	AMB		
	comp=Z,70nm,1.6s,mb4.8						
QIZ				LR	LR		
	comp=E,17µm,15.1s						
QIZ				LR	LR		
	comp=Z,14µm,12.9s,MS5.6						
QIZ	**Qiongzhong**	**21.62**	**34**	*e*P	**P**	**23 36 25.0**	**-0.9**
	comp=Z,65nm,0.8s,mb5.1						
CAL	**Calcutta**	**22.98**	**338**	*e*P	**P**	**23 36 39.5**	**0.0**
CAL				*e*x	x	23 40 55.8	
KMI	**Kunming**	**24.41**	**12**	⇑P	**P**	**23 36 55.5**	**+2.1**
KMI				AP		23 37 01.5	
KMI				PP	PP	23 37 31.5	+2.4
KMI				S	**S**	**23 41 14.8**	**+6.1**
KMI				XS		23 41 23.5	
KMI				AMB	AMB		
	comp=Z,260nm,1.3s,mb5.5						
KMI				LR	LR		
	comp=N,32µm,14.4s,MS6.0						
KMI				LR	LR		
	comp=E,13µm,13.4s,MS6.0						
KMI				LR	LR		
	comp=Z,36µm,15.5s,MS6.0						
KMI	**Kunming**	**24.41**	**12**	⇑P	**P**	**23 36 55.5**	**+2.1**
	comp=Z,263nm,1.3s,mb5.5						
KMI				pP		23 37 01.6	
KMI				sP		23 37 02.5	
KMI				PP	PP	23 37 31.6	+2.5
KMI				PPP	PPP	23 37 42.6	+3.1
KMI				PcP	PcP	23 40 13.0	-20
KMI				S	**S**	**23 41 14.8**	**+6.1**
KMI				sS		23 41 23.5	
KMI				SS	SS	23 42 18.8	+15
KMI				ScP		23 43 32.8	
KMI				PcS		23 43 57.0	
KMI				LR	LR		
	comp=Z,36µm,15.5s,MS6.0						
KMI	**Kunming**	**24.41**	**12**	⇑P	**P**	**23 36 55.5**	**+2.1**
KMI				*SP		23 37 02.5	
KMI						23 37 31.6	
KMI				PPP	PPP	23 37 42.6	+3.1
KMI				S	**S**	**23 41 14.8**	**+6.1**
KMI				SS	SS	23 42 18.8	+15
KMI				pmax	pmax		
	comp=Z,263nm,1.3s,mb5.5						
KMI				MLR	MLR		
	comp=Z,36µm,15.5s,MS6.0						
HYB	**Hyderabad**	**24.52**	**312**	*i* P	**P**	**23 36 56.5**	**+2.1**
	comp=Z,250nm,1.4s,mb5.5						
HYB				*e*sP		23 37 07.0	
HYB				*e*S	**S**	**23 41 16.0**	**+5.5**
HYB				LR	LR	23 49 00.0	
	comp=Z,6.8nm,18.0s						
HYB	**Hyderabad**	**24.52**	**312**	*e*P	**P**	**23 36 56.5**	**+2.1**
	comp=Z,250nm,1.4s,mb5.5						
HYB				*e*		23 37 05.0	
HYB				*e*S	**S**	**23 41 16.0**	**+5.5**
HYB	**Hyderabad**	**24.52**	**312**	*e*P	**P**	**23 36 56.5**	**+2.1**
HYB				*e*		23 37 05.0	
HYB				*e*S	**S**	**23 41 16.0**	**+5.5**
HYB				pmax	pmax		
	comp=Z,250nm,1.4s,mb5.5						
SHL	**Shillong**	**24.84**	**348**	*e*P	**P**	**23 36 59.0**	**+1.6**
SHL				*e*x	x	23 41 18.0	
BOK	**Bokaro**	**25.09**	**335**	*e*P	**P**	**23 37 00.4**	**+0.6**
BOK				AMb	AMB	23 37 15.7	
	comp=E,146nm,1.1s						
BOK				AMb	AMB	23 37 17.4	
	comp=N,191nm,2.1s						
BOK				AMb	AMB	23 37 25.9	
	comp=Z,303nm,1.3s,mb5.7						
BOK				*e*S	**S**	**23 41 15.9**	**-4.1**
MNGI	**Mangalore**	**25.16**	**299**	*e*P	**P**	**23 37 04.7**	**+4.2**
MNGI				*e*x	x	23 41 30.6	
LATR	**Latur**	**26.62**	**311**	*e*x	x	23 37 25.0	
HKC	**Hong Kong**	**26.69**	**37**	⇓*i*P	**P**	**23 37 15.0**	**+0.3**
HKC				S	**S**	**23 41 56.0**	**+9.4**
TGY	**Tagaytay City**	**26.70**	**60**	P	**P**	**23 37 15.8**	**+0.9**
	comp=Z,102nm,0.4s,mb5.8,baz=194,slow=9.7,SNR=3.1						
GYA	**Guiyang**	**26.74**	**19**	⇑*i*P	**P**	**23 37 14.5**	**-0.6**
GYA				AP	pP	23 37 23.8	+1.3
GYA				XP	sP	23 37 28.0	+2.2
GYA				PP	PP	23 38 01.5	+1.5
GYA				S	**S**	**23 41 48.5**	**+1.1**
GYA				SCP		23 44 11.0	
GYA				SCS	ScS	23 48 01.0	-3.9
GYA				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.2						
GYA				AMB	AMB		
	comp=Z,1µm,5.7s						
GYA				LR	LR		
	comp=N,12µm,12.4s,MS5.8						
GYA				LR	LR		
	comp=E,13µm,14.0s,MS5.8						
GYA				LR	LR		
	comp=Z,13µm,13.4s,MS5.7						
AKL	**Akola**	**27.75**	**316**	⇓*i*x	x	23 36 37.9	
AKL				*i* x	x	23 41 06.1	
TBP	**Tagbilaran**	**27.76**	**71**	*e*P	**P**	**23 37 24.4**	**-0.1**
ALBI	**Allahabad**	**28.29**	**329**	*e*P	**P**	**23 37 28.0**	**-1.3**
PKI	**Pulchoki**	**28.64**	**338**	*e*P	**P**	**23 37 32.8**	**+0.4**
POO	**Poona**	**28.77**	**308**	*e*x	x	23 37 25.8	
GUN	**Gumba**	**28.77**	**339**	*e*P	**P**	**23 37 34.6**	**+1.0**
	comp=Z,174nm,0.8s,mb5.8						
DMN	**Daman**	**28.79**	**337**	*e*P	**P**	**23 37 34.4**	**+0.7**
KKN	**Kakani**	**28.89**	**338**	*e*P	**P**	**23 37 35.2**	**+0.6**
	comp=Z,168nm,0.9s,mb5.8						
KKN	**Kakani**	**28.89**	**338**	*e*P	**P**	**23 37 35.2**	**+0.6**
KKN				pmax	pmax		
	comp=Z,84nm,0.9s,mb5.5						
LSA	**Lhasa**	**29.00**	**349**	P	**P**	**23 37 36.3**	**+0.8**
LSA				AP	pP	23 37 44.5	+1.6
LSA				XP	sP	23 37 48.5	+2.3
LSA				PCP	PcP	23 40 40.8	-3.2
LSA				S	**S**	**23 42 25.0**	**+1.3**
LSA				XS		23 42 43.5	
LSA				SCP		23 44 19.5	
LSA				PCS		23 44 23.3	
LSA				SCS	ScS	23 48 14.5	-0.5
LSA				AMB	AMB		
	comp=Z,60nm,0.9s,mb5.3						
LSA				LR	LR		
	comp=N,4µm,24.9s,MS5.3						
LSA				LR	LR		
	comp=E,7µm,23.0s,MS5.3						
LSA				LR	LR		
	comp=Z,7µm,17.5s						
LSA	**Lhasa**	**29.00**	**349**	*e*P	**P**	**23 37 35.4**	**-0.1**
	comp=Z,47nm,0.8s,mb5.3						
LSA				LR	LR		
	comp=Z,6µm,20.0s,MS5.2						
LSA	**Lhasa**	**29.00**	**349**	*e*P	**P**	**23 37 35.4**	**-0.1**
LSA				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.3						
LSA				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.2						
BHPL	**Bhopal**	**29.23**	**320**	*e*P	**P**	**23 37 37.7**	**-0.1**
BHPL				AMb	AMB	23 38 09.7	
	comp=Z,47nm,1.7s,mb5.0						
GKN	**Gorkha**	**29.33**	**337**	*e*P	**P**	**23 37 38.9**	**+0.3**
	comp=Z,204nm,1.0s,mb5.8						
KOLN	**Koldanda**	**29.55**	**335**	*e*P	**P**	**23 37 41.4**	**+0.8**
	comp=Z,129nm,0.8s,mb5.7						
BOM	**Bombay**	**29.79**	**308**	*e*x	x	23 30 50.6	
BOM				*e*x	x	23 37 13.4	
CD2	**Chengdu**	**30.23**	**11**	⇑*i*P	**P**	**23 37 45.8**	**-0.8**
CD2				S	**S**	**23 42 36.3**	**-7.1**
CD2				AMB	AMB		
	comp=Z,60nm,0.7s,mb5.4						
CD2				LR	LR		
	comp=N,13µm,15.0s						
CD2				LR	LR		
	comp=Z,16µm,15.0s,MS5.8						
ENH	**Enshi**	**31.20**	**21**	*e*P	**P**	**23 37 53.6**	**-1.5**
	comp=Z,123nm,0.6s,mb5.9						
QZH	**Quanzhou**	**31.36**	**39**	*i* PR		23 37 55.8	
QZH				S	**S**	**23 42 56.8**	**-4.3**
QZH				AMB	AMB		
	comp=Z,2µm,4.0s						
QZH				AMB	AMB		
	comp=Z,250nm,1.4s,mb5.8						
QZH				LR	LR		
	comp=Z,33µm,15.0s,MS6.1						
PTH	**Pithoragarh**	**32.60**	**332**	*e*P	**P**	**23 38 04.8**	**-2.5**
PTH				*e*x	x	23 43 33.0	
YHNB	**Yeheng**	**33.00**	**43**	*e*P	**P**	**23 38 12.3**	**+1.3**
WHN	**Wuhan**	**33.42**	**27**	P	**P**	**23 38 14.5**	**0.0**
WHN				S	**S**	**23 43 37.0**	**+3.8**
WHN				AMB	AMB		
	comp=Z,2µm,6.2s						
WHN				LR	LR		
	comp=N,8µm,15.5s,MS6.0						
WHN				LR	LR		
	comp=E,18µm,14.2s,MS6.0						
WHN				LR	LR		
	comp=Z,24µm,13.5s,MS6.1						
NDI	**New Delhi**	**33.43**	**327**	*e*P	**P**	**23 38 13.5**	**-1.1**
FITZ	**Fitzroy Crossi**	**33.82**	**126**	*e*P	**P**	**23 38 16.6**	**-1.5**
	comp=Z,34nm,0.9s,mb5.3						
FITZ	**Fitzroy Crossi**	**33.82**	**126**	P	**P**	**23 38 16.7**	**-1.4**
	comp=Z,23nm,0.6s,mb5.3,baz=315,slow=7.6,SNR=43						
DDI	**Dehra Dun**	**34.29**	**330**	*e*P	**P**	**23 38 21.0**	**-1.0**
DDI				*e*x	x	23 44 26.6	
LZH	**Lanzhou**	**35.30**	**9**	⇑P	**P**	**23 38 30.5**	**-0.1**
LZH				AP	pP	23 38 37.5	-0.6
LZH				XP	sP	23 38 41.0	-0.3
LZH				PP	PP	23 39 50.5	+0.4
LZH				S	**S**	**23 44 02.8**	**+0.6**
LZH				XS		23 44 16.5	
LZH				SS	SS	23 46 24.3	+4.4
LZH				AMB	AMB		
	comp=Z,180nm,1.0s,mb6.0						
LZH				AMB	AMB		
	comp=Z,1µm,4.7s						
LZH				LR	LR		
	comp=E,19µm,15.6s						
LZH				LR	LR		
	comp=Z,25µm,18.7s,MS6.0						
LZH	**Lanzhou**	**35.30**	**9**	⇑P	**P**	**23 38 30.5**	**-0.1**
	comp=Z,187nm,1.0s,mb6.0						
LZH				pP	pP	23 38 37.5	-0.6
LZH				sP	sP	23 38 41.0	-0.3
LZH				PP	PP	23 39 50.6	+0.5
LZH				S	**S**	**23 44 02.7**	**+0.5**
LZH				sS		23 44 16.5	
LZH				SS	SS	23 46 24.3	+4.4
LZH				LR	LR		
	comp=Z,25µm,18.7s,MS6.0						
LZH	**Lanzhou**	**35.30**	**9**	⇑P	**P**	**23 38 30.5**	**-0.1**
LZH				*SP	sP	23 38 41.0	-0.3
LZH						23 39 50.6	
LZH				S	**S**	**23 44 02.7**	**+0.5**
LZH				*SS		23 44 16.5	
LZH				SS	SS	23 46 24.3	+4.4
LZH				pmax	pmax		
	comp=Z,187nm,1.0s,mb6.0						

LZH				MLR	MLR		
	comp=Z,25µm,18.7s,MS6.0						
SMLA	**Simla**	**35.39**	**329**	*e*P	**P**	**23 38 29.9**	**-1.5**
SMLA				*e*x	x	23 43 50.8	
BHK	**Bhakra**	**36.01**	**329**	*e*x	x	23 38 41.1	
NJ2	**Nanjing**	**36.87**	**31**	*e*P	**P**	**23 38 43.5**	**-0.4**
NJ2				AP	pP	23 38 49.5	-1.9
NJ2				PP	PP	23 40 09.3	-0.6
NJ2				S	**S**	**23 44 26.0**	**-0.4**
NJ2				XS		23 44 41.0	
NJ2				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.3						
NJ2				AMB	AMB		
	comp=Z,970nm,6.5s						
NJ2				LR	LR		
	comp=Z,11µm,14.3s,MS5.8						
THN	**Thein Dam**	**37.17**	**329**	*e*P	**P**	**23 38 45.7**	**-0.7**
SSE	**Sheshan**	**37.41**	**35**	P	**P**	**23 38 48.8**	**+0.4**
SSE				AP	pP	23 38 55.0	-0.9
SSE				PP	PP	23 40 14.8	-1.7
SSE				S	**S**	**23 44 36.3**	**+1.6**
SSE				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.3						
SSE				AMB	AMB		
	comp=Z,820nm,8.4s						
SSE				LR	LR		
	comp=N,5µm,14.7s,MS5.8						
SSE				LR	LR		
	comp=E,9µm,14.7s,MS5.8						
SSE				LR	LR		
	comp=Z,13µm,15.1s,MS5.8						
SSE	**Sheshan**	**37.41**	**35**	P	**P**	**23 38 48.7**	**+0.3**
	comp=Z,57nm,0.9s,mb5.4						
SSE				pP	pP	23 38 55.0	-0.9
SSE				sP	sP	23 38 57.2	-1.9
SSE				PP	PP	23 40 14.8	-1.7
SSE				S	**S**	**23 44 36.2**	**+1.5**
SSE				sS		23 44 45.8	
SSE				SS	SS	23 47 19.6	+12
SSE				ScS	ScS	23 49 01.4	+3.0
SSE				LR	LR		
	comp=Z,13µm,15.1s,MS5.8						
MUN	**Mundaring**	**37.50**	**153**	*e*P	**P**	**23 38 58.6**	**+9.4**
KLBR	**Kellerberrin**	**37.90**	**151**	*e*P	**P**	**23 39 00.8**	**+8.2**
	comp=Z,76nm,1.4s,mb5.2						
GTA	**Gaotai**	**38.16**	**3**	⇑*i*P	**P**	**23 38 54.8**	**+0.2**
GTA				AP	pP	23 39 01.5	-0.7
GTA				XP	sP	23 39 05.5	+0.2
GTA				PP	PP	23 40 25.8	+0.4
GTA				PCP	PcP	23 41 10.5	+0.9
GTA				S	**S**	**23 44 45.5**	**-0.5**
GTA				SCP		23 44 55.5	
GTA				PCS		23 44 58.0	
GTA				SS	SS	23 47 23.5	-1.0
GTA				SCS	ScS	23 49 02.8	+0.2
GTA				AMB	AMB		
	comp=Z,50nm,1.0s,mb5.2						
GTA				AMB	AMB		
	comp=Z,2µm,6.5s						
GTA				LR	LR		
	comp=N,7µm,18.3s,MS5.7						
GTA				LR	LR		
	comp=E,6µm,14.4s,MS5.7						
GTA				LR	LR		
	comp=Z,8µm,17.5s,MS5.6						
NWAO	**Narrogin (SRO)**	**38.76**	**153**	P	**P**	**23 38 58.2**	**-1.6**
	comp=Z,5.3nm,0.7s,mb4.4,baz=254,slow=7.4,SNR=2.8						
JOW	**Kunigami**	**39.21**	**47**	P	**P**	**23 39 04.5**	**+0.8**
	comp=Z,39nm,0.7s,mb5.2,baz=262,slow=8.7,SNR=14						
TIA	**Tai’an**	**39.44**	**26**	⇑P	**P**	**23 39 05.0**	**-0.4**
TIA				S	**S**	**23 45 08.0**	**+2.5**
TIA				AMB	AMB		
	comp=Z,670nm,5.0s						
TIA				LR	LR		
	comp=N,4µm,16.5s,MS5.4						
TIA				LR	LR		
	comp=E,3µm,14.7s,MS5.4						
BTO	**Baotou**	**40.95**	**15**	*e*P	**P**	**23 39 18.3**	**+0.6**
BTO				AMB	AMB		
	comp=Z,70nm,1.7s,mb5.0						
HHC	**Hu-ho-hao-te**	**41.59**	**16**	*e*P	**P**	**23 39 24.5**	**+1.5**
HHC				AP	pP	23 39 34.0	+3.4
HHC				XP	sP	23 39 38.0	+4.3
HHC				PP	PP	23 41 05.5	+3.2
HHC				PCP	PcP	23 41 21.0	+0.4
HHC				SCP		23 45 05.3	
HHC				PCS		23 45 09.5	
HHC				S	**S**	**23 45 41.0**	**+3.6**
HHC				XS		23 45 55.5	
HHC				SS	SS	23 48 43.5	+5.8
HHC				SCS	ScS	23 49 21.8	-0.9
HHC				AMB	AMB		
	comp=Z,2µm,5.4s						
HHC				LR	LR		
	comp=Z,12µm,16.8s,MS5.9						
WRA	**Warramunga Arr**	**41.93**	**122**	P	**P**	**23 39 25.5**	**-0.6**
	comp=Z,34nm,0.6s,mb5.1,baz=300,slow=9.1,SNR=85						
WRA				S	**S**	**23 45 39.4**	**-3.3**
	comp=Z,2.9nm,0.4s,baz=292,slow=18,SNR=5.3						
WRAB	**Tennant Creek**	**41.93**	**122**	*e*P	**P**	**23 39 25.3**	**-0.8**
	comp=Z,51nm,0.7s,mb5.3						
WRAB				LR	LR		
	comp=Z,2µm,19.0s,MS4.9						
WRAB	**Tennant Creek**	**41.93**	**122**	*c* *i*P	**P**	**23 39 25.5**	**-0.6**
WB2	**Warramunga Arr**	**41.94**	**122**	*e*P	**P**	**23 39 25.3**	**-0.9**
KSH	**Kashi**	**42.86**	**336**	⇑*i*P	**P**	**23 39 34.8**	**+1.3**
KSH				AP	pP	23 39 44.0	+3.0
KSH				XP	sP	23 39 48.0	+3.8
KSH				PP	PP	23 41 18.0	+2.6
KSH				PCP	PcP	23 41 23.3	-1.5
KSH				PPP	PPP	23 41 54.0	+4.2
KSH				SCP		23 45 11.5	
KSH				PCS		23 45 15.0	
KSH				S	**S**	**23 45 59.0**	**+2.8**
KSH				SS	SS	23 49 07.0	+5.5
KSH				SCS	ScS	23 49 29.3	-1.2
KSH				AMB	AMB		
	comp=Z,1µm,4.0s						
KSH				LR	LR		
	comp=N,5µm,14.6s,MS5.7						
KSH				LR	LR		
	comp=E,5µm,15.2s,MS5.7						
FORT	**Forrest**	**43.17**	**140**	*e*P	**P**	**23 39 37.8**	**+1.6**
	comp=E,73nm,0.6s,mb5.6						
WMQ	**Urumqi**	**43.35**	**350**	⇑*i*P	**P**	**23 39 38.3**	**+0.9**
WMQ				AP	pP	23 39 46.0	+1.1
WMQ				XP	sP	23 39 49.0	+1.0
WMQ				PP	PP	23 41 21.0	+0.8
WMQ				PPP	PPP	23 41 56.0	0.0
WMQ				SCP		23 45 14.0	
WMQ				S	**S**	**23 46 03.0**	**-0.1**
WMQ				SS	SS	23 49 11.0	+0.8
WMQ				SCS	ScS	23 49 35.5	+2.1
WMQ				AMB	AMB		
	comp=Z,90nm,1.0s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,1µm,4.7s						
WMQ				LR	LR		
	comp=N,2µm,24.2s,MS5.4						
WMQ				LR	LR		
	comp=E,5µm,21.4s,MS5.4						
WMQ				LR	LR		
	comp=Z,3µm,27.5s						
DL2	**Dalian**	**43.69**	**28**	⇑*i*P	**P**	**23 39 40.5**	**+0.3**
DL2				S	**S**	**23 46 12.3**	**+4.2**
DL2				XS		23 46 23.0	
DL2				AMB	AMB		
	comp=Z,100nm,0.7s,mb5.7						
DL2				AMB	AMB		
	comp=Z,710nm,4.9s						
DL2				LR	LR		
	comp=N,3µm,14.0s,MS5.5						
DL2				LR	LR		
	comp=E,2µm,13.0s,MS5.5						
DL2				LR	LR		
	comp=Z,3µm,14.5s,MS5.4						
JNU	**Nakatsue**	**44.79**	**41**	P	**P**	**23 39 49.6**	**+0.4**
	comp=Z,37nm,0.8s,mb5.2,baz=199,slow=5.4,SNR=10						
JNU				LR	LR	00 01 09.7	
	comp=Z,6µm,18.0s,MS5.6,baz=55,slow=40						
AAA	**Alma-Ata**	**45.71**	**339**	*e*P	**P**	**23 39 56.5**	**+0.1**
AAA				*e*S	**S**	**23 46 39.0**	**+1.7**
AAA				pmax	pmax		
	comp=Z,2µm,2.5s						
AAA				smax			
	comp=E,4µm,5.0s						
AAA				MLR	MLR		
	comp=Z,5µm,17.0s,MS5.5						
UCH	**Uchtor**	**45.74**	**336**	P	**P**	**23 39 58.0**	**+1.4**
	SNR=19						
KS15	**Wonju Array Si**	**45.81**	**34**	*e*P	**P**	**23 39 56.9**	**-0.4**
TKM2	**Tokmak 2**	**45.91**	**338**	P	**P**	**23 39 58.9**	**+0.9**
	SNR=16						
KBK	**Karagaybulak**	**45.93**	**337**	P	**P**	**23 39 59.6**	**+1.5**
	SNR=23						
AML	**Almayashu**	**45.99**	**336**	P	**P**	**23 39 60.0**	**+1.4**
	SNR=12						
AAK	**Ala-Archa**	**46.09**	**337**	*e*P	**P**	**23 39 58.5**	**-0.8**
	comp=Z,36nm,0.9s,mb5.3						
AAK	**Ala-Archa**	**46.09**	**337**	*c* *i*P	**P**	**23 39 59.3**	**-0.1**
AAK				pmax	pmax		
	comp=Z,100nm,3.0s						
AAK				MLR	MLR		
	comp=Z,6µm,24.0s,MS5.5						
FRU	**Bishkek**	**46.21**	**337**	*i* P	**P**	**23 40 01.0**	**+0.7**
FRU				*e*		23 40 14.0	
FRU				*e*		23 46 46.0	
FRU				*e*		23 50 08.0	
FRU				pmax	pmax		
	comp=Z,140nm,2.8s,mb5.4						
FRU				MLR	MLR		
	comp=N,4µm,18.0s						
EKS2	**Erkin-Say**	**46.40**	**336**	P	**P**	**23 40 03.2**	**+1.4**
	SNR=14						
USP	**Ospenovka**	**46.62**	**337**	P	**P**	**23 40 04.2**	**+0.6**
	SNR=28						
SNY	**Shenyang**	**46.91**	**27**	⇓P	**P**	**23 40 04.3**	**-1.6**
SNY				S	**S**	**23 46 56.3**	**+1.8**
SNY				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.5						
SNY				AMB	AMB		
	comp=Z,1µm,5.1s						
SNY				LR	LR		
	comp=E,3µm,16.2s						
SNY				LR	LR		
	comp=Z,3µm,21.1s,MS5.2						
SONM	**Songino Array**	**47.17**	**8**	P	**P**	**23 40 08.4**	**+0.5**
	comp=Z,58nm,0.6s,mb5.7,baz=189,slow=9.9,SNR=122						
SONM				PcP	PcP	23 41 40.0	+0.4
	comp=Z,11nm,0.7s,baz=195,slow=3.0,SNR=4.3						
SONM				LR	LR	00 02 44.7	
	comp=Z,16µm,18.8s,MS6.0,baz=189,slow=40						
ULN	**Ulaanbaatar**	**47.30**	**9**	⇑*e*P	**P**	**23 40 08.8**	**-0.2**
	comp=Z,61nm,0.8s,mb5.6						
ULN				LR	LR		
	comp=Z,13µm,19.0s,MS5.9						
ULN	**Ulaanbaatar**	**47.30**	**9**	⇑*i*P	**P**	**23 40 09.4**	**+0.5**
MKAR	**Makanchi Array**	**47.32**	**346**	P	**P**	**23 40 09.1**	**+0.1**
	comp=Z,31nm,0.8s,mb5.3,baz=158,slow=7.7,SNR=129						
MKAR				LR	LR	00 04 12.4	
	comp=Z,3µm,21.2s,MS5.2,baz=143,slow=41						
CN2	**Changchun**	**49.31**	**27**	*e*P	**P**	**23 40 24.5**	**-0.1**
CN2				*e*XP	sP	23 40 38.3	+3.1
CN2				PP	PP	23 42 19.0	+0.1
CN2				*e*S	**S**	**23 47 28.0**	**-0.2**
CN2				AMB	AMB		
	comp=Z,80nm,0.8s,mb5.8						
CN2				LR	LR		
	comp=N,7µm,14.0s,MS5.9						
CN2				LR	LR		
	comp=E,6µm,14.0s,MS5.9						
CN2				LR	LR		
	comp=Z,11µm,15.0s,MS6.0						
ZAK	**Zakamensk**	**49.32**	**5**	*e*P	**P**	**23 40 24.4**	**-0.1**
ZAK				*e*		23 41 47.2	
ZAK				pmax	pmax		
	comp=Z,18nm,0.9s,mb5.1						
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
MOY	**Mondy**	**50.44**	**3**	*e*P	**P**	**23 40 32.2**	**-0.9**
MOY				pmax	pmax		
	comp=Z,145nm,3.6s						
PMG	**Port Moresby**	**50.75**	**103**	P	**P**	**23 40 35.7**	**-0.2**
	comp=Z,23nm,0.5s,mb5.4,baz=325,slow=6.1,SNR=4.8						
PMG	**Port Moresby**	**50.75**	**103**	*c* *i*P	**P**	**23 40 35.5**	**-0.4**
JHJ	**Hachijo jima 2**	**50.99**	**47**	LR	LR	00 02 00.9	
	comp=Z,1µm,21.1s,MS4.9,baz=217,slow=36						
IRK	**Irkutsk**	**51.26**	**5**	*e*P	**P**	**23 40 37.5**	**-1.7**
IRK				pmax	pmax		
	comp=Z,133nm,2.6s,mb5.4						
HIA	**Hailar**	**51.67**	**19**	*e*P	**P**	**23 40 42.1**	**-0.3**
	comp=Z,52nm,0.7s,mb5.6						
HIA	**Hailar**	**51.67**	**19**	*e*P	**P**	**23 40 42.1**	**-0.3**
HIA				pmax	pmax		
	comp=Z,52nm,0.7s						
MAT	**Matsushiro**	**51.67**	**42**	P	**P**	**23 40 39.9**	**-2.7**
MAT				S	**S**	**23 48 06.0**	**+5.1**
MAT	**Matsushiro**	**51.67**	**42**	*e*P	**P**	**23 40 40.0**	**-2.6**
	comp=Z,18nm,1.0s,mb5.0						
MAT				*e*S	**S**	**23 48 06.0**	**+5.1**
MAT	**Matsushiro**	**51.67**	**42**	*e*P	**P**	**23 40 40.0**	**-2.6**
MAT				*e*S	**S**	**23 48 06.0**	**+5.1**
MAT				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.0						
MJAR	**Matsushiro Arr**	**51.67**	**42**	P	**P**	**23 40 41.8**	**-0.9**
	comp=Z,4.9nm,0.4s,mb4.8,baz=217,slow=7.6,SNR=15						
MJAR				LR	LR	00 02 50.1	
	comp=Z,2µm,21.2s,MS5.2,baz=240,slow=36						
HASS	**Wahat al Ahsa’**	**51.74**	**302**	P	**P**	**23 40 45.2**	**+1.9**
KURK	**Kurchatov**	**51.87**	**345**	⇑*i*P	**P**	**23 40 43.5**	**-0.4**
	comp=Z,71nm,1.2s,mb5.5						
KURK				LR	LR		
	comp=Z,939nm,20.0s,MS4.8						
KURK	**Kurchatov**	**51.87**	**345**	⇑*i*P	**P**	**23 40 43.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,71nm,1.2s,mb5.5						
KURK				MLR	MLR		
	comp=Z,939nm,20.0s,MS4.8						
MDJ	**Mudanjiang**	**51.87**	**29**	P	**P**	**23 40 44.5**	**+0.5**
MDJ				PP	PP	23 42 43.0	+0.4
MDJ				S	**S**	**23 48 11.5**	**+7.9**
MDJ				AMB	AMB		
	comp=Z,60nm,1.2s,mb5.4						
MDJ				AMB	AMB		
	comp=Z,1µm,7.2s						
MDJ				LR	LR		
	comp=N,3µm,21.7s,MS5.4						
MDJ				LR	LR		
	comp=E,1µm,20.7s,MS5.4						
MDJ				LR	LR		
	comp=Z,6µm,18.7s,MS5.6						
MDJ	**Mudanjiang**	**51.87**	**29**	*e*P	**P**	**23 40 44.0**	**-0.1**
	comp=Z,47nm,0.9s,mb5.4						
CTA	**Charters Tower**	**52.40**	**117**	*e*P	**P**	**23 40 48.1**	**-0.2**
	comp=Z,13nm,0.8s,mb4.9						
CTA	**Charters Tower**	**52.40**	**117**	P	**P**	**23 40 48.2**	**-0.1**
	comp=Z,14nm,0.9s,mb4.9,baz=295,slow=9.3,SNR=14						
CTA	**Charters Tower**	**52.40**	**117**	*e*P	**P**	**23 40 48.1**	**-0.2**
CTA				pmax	pmax		
	comp=Z,13nm,0.8s						
CTAO	**Charters Tower**	**52.40**	**117**	*e*P	**P**	**23 40 47.9**	**-0.4**
	comp=Z,36nm,1.1s,mb5.2						
CTAO				LR	LR		
	comp=Z,4µm,19.0s,MS5.5						
CTAO	**Charters Tower**	**52.40**	**117**	*e*P	**P**	**23 40 47.9**	**-0.4**
CTAO				pmax	pmax		
	comp=Z,36nm,1.1s,mb5.2						
CTAO				MLR	MLR		
	comp=Z,4µm,19.0s,MS5.5						
CIT	**Chita**	**52.51**	**13**	*e*P	**P**	**23 40 49.0**	**+0.3**
CIT				*e*		23 41 08.2	
CIT				pmax	pmax		
	comp=Z,262nm,2.5s,mb5.7						
STKA	**Stephens Creek**	**53.25**	**132**	⇑*i*P	**P**	**23 40 54.8**	**+0.3**
	comp=Z,34nm,0.6s,mb5.5						
STKA	**Stephens Creek**	**53.25**	**132**	P	**P**	**23 40 54.8**	**+0.3**
	comp=Z,42nm,0.7s,mb5.5,baz=304,slow=6.6,SNR=60						
STKA				LR	LR	00 05 57.1	
	comp=Z,7µm,21.6s,MS5.7,baz=296,slow=39						
QRN	**Al-Qurain**	**54.47**	**305**	*e*P	**P**	**23 41 03.5**	**+0.1**
QRN				AMb	AMB	23 41 05.4	
	comp=Z,96nm,0.7s,mb5.9						
NVS	**Novosibirsk**	**54.75**	**350**	⇑*i*P	**P**	**23 41 03.4**	**-1.8**
NVS				*e*S	**S**	**23 48 41.2**	**-1.2**
NVS				pmax	pmax		
	comp=Z,284nm,2.8s,mb5.8						
NVS				pmax	pmax		
	comp=N,171nm,2.5s						
NVS				smax			
	comp=E,291nm,3.2s						
KBD	**Kabd**	**54.81**	**305**	*e*P	**P**	**23 41 06.3**	**+0.3**
RDF	**Al-Radifah**	**54.84**	**305**	*e*P	**P**	**23 41 05.7**	**-0.5**
RDF				AMb	AMB	23 41 08.2	
	comp=Z,76nm,0.7s,mb5.8						
NAY	**Al-Naaiem**	**55.20**	**305**	*e*P	**P**	**23 41 07.7**	**-1.1**
NAY				AMb	AMB	23 41 10.6	
	comp=Z,42nm,0.5s,mb5.7						
MZLS	**Mizel**	**55.26**	**299**	P	**P**	**23 41 09.1**	**-0.3**
DJNS	**Zahran al Janu**	**55.28**	**291**	P	**P**	**23 41 10.2**	**+0.7**
MIB	**Mutribah**	**55.32**	**306**	*e*P	**P**	**23 41 09.4**	**-0.3**
MIB				AMb	AMB	23 41 11.8	
	comp=Z,100nm,0.6s,mb6.0						
KLR	**Kul’dur**	**56.27**	**26**	⇓*i*P	**P**	**23 41 13.2**	**-3.0**
KLR				*e*S	**S**	**23 49 05.0**	**+2.3**
KLR				*e*SS	SS	23 52 54.0	+4.1
KLR				pmax	pmax		
	comp=E,240nm,2.6s						
KLR				pmax	pmax		
	comp=Z,360nm,2.6s,mb5.9						
KLR				pmax	pmax		
	comp=E,800nm,6.0s						
KLR				pmax	pmax		
	comp=Z,2µm,6.0s						
KLR				smax			
	comp=N,2µm,10.0s						
KLR				smax			
	comp=E,1µm,10.0s						
BVAR	**Borovoye Array**	**56.33**	**341**	P	**P**	**23 41 15.2**	**-1.4**
	comp=E,7.7nm,0.6s,mb4.9,baz=143,slow=8.8,SNR=87						
BVAR				pP	pP	23 41 22.5	-1.9
	comp=E,23nm,0.6s,baz=145,slow=8.5,SNR=31						
BRVK	**Borovoye**	**56.40**	**341**	*e*P	**P**	**23 41 15.6**	**-1.5**
	comp=E,21nm,0.8s,mb5.2						
BRVK				LR	LR		
	comp=Z,639nm,20.0s,MS4.7						
BRVK	**Borovoye**	**56.40**	**341**	*e*P	**P**	**23 41 15.6**	**-1.5**
BRVK				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.2						
BRVK				MLR	MLR		
	comp=Z,639nm,20.0s,MS4.7						
CHKZ	**Chkalovo**	**56.81**	**341**	*e*P	**P**	**23 41 18.9**	**-1.2**
	comp=Z,67nm,0.9s,mb5.7						
CHKZ	**Chkalovo**	**56.81**	**341**	*e*P	**P**	**23 41 18.9**	**-1.2**
CHKZ				pmax	pmax		
	comp=Z,67nm,0.9s,mb5.7						
AFFS	**‘Afif**	**57.18**	**298**	P	**P**	**23 41 22.9**	**-0.2**
BLJS	**Baljurashi**	**57.52**	**293**	P	**P**	**23 41 26.3**	**+0.8**
BOD	**Bodaibo**	**58.05**	**10**	*e*P	**P**	**23 41 28.2**	**-0.5**
BOD				*e*		23 41 46.7	
BOD				pmax	pmax		
	comp=Z,46nm,1.6s,mb5.3						
BOD				pmax	pmax		
	comp=Z,61nm,1.4s,mb5.4						
BHD	**Baghdad**	**58.94**	**309**	*e*x	x	23 41 36.0	
BHD				*e*x	x	23 49 37.0	
HILS	**Ha’il**	**59.16**	**301**	P	**P**	**23 41 37.4**	**+0.5**
AKTO	**Aktyubinsk**	**59.32**	**332**	P	**P**	**23 41 36.0**	**-1.7**
	comp=Z,11nm,0.9s,mb4.9,baz=138,slow=6.7,SNR=25						
CLNS	**Chul’man**	**59.77**	**17**	*e*P	**P**	**23 41 39.8**	**-0.9**
CLNS				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.5						
CLNS				pmax	pmax		
	comp=N,15nm,0.7s						
CLNS				pmax	pmax		
	comp=E,13nm,0.7s						
KMBO	**Kilima Mbogo**	**60.08**	**268**	P	**P**	**23 41 43.5**	**+0.2**
	comp=E,3.4nm,0.8s,mb4.4,baz=64,slow=8.9,SNR=16						
KMBO				LR	LR	00 06 39.8	
	comp=E,3µm,18.0s,MS5.5,baz=92,slow=35						
KMBO	**Kilima Mbogo**	**60.08**	**268**	*i* P	**P**	**23 41 44.7**	**+1.3**
KMBO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YSS	**Yuzh-Sakhalins**	**60.34**	**34**	*e*P	**P**	**23 41 44.8**	**+0.1**
	comp=Z,111nm,1.2s,mb5.8						
YSS	**Yuzh-Sakhalins**	**60.34**	**34**	α*e*P	**P**	**23 41 44.0**	**-0.8**
YSS				*e**PP	pP	23 41 56.0	+3.4
YSS				*e**SP	sP	23 42 02.9	+7.5
YSS				*e*		23 44 05.0	
YSS				*e*S	**S**	**23 49 57.0**	**+1.0**
YSS				pmax	pmax		
	comp=N,40nm,1.1s						
YSS				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.6						
YSS				pmax	pmax		
	comp=Z,900nm,6.0s						
YSS				pmax	pmax		
	comp=N,400nm,5.0s						
YSS				pmax	pmax		
	comp=E,400nm,6.0s						
YSS				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.6						
YSS				pmax	pmax		
	comp=N,40µm,1.1s						
YSS				smax			
	comp=N,600nm,6.0s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s,MS5.6						
YSS				MLR	MLR		
	comp=N,4µm,16.0s,MS5.7						
YSS				MLR	MLR		
	comp=E,3µm,15.0s,MS5.7						
MSL	**Mosul**	**61.04**	**312**	*e*x	x	23 41 47.5	
MSL				*e*x	x	23 50 01.0	
MSL				*e*x	x	23 51 37.0	
HAKT	**HAKKARI**	**61.07**	**313**	*i* P	**P**	**23 41 47.8**	**-2.0**
GNI	**Garni**	**61.40**	**316**	*e*P	**P**	**23 41 50.9**	**-1.1**
	comp=E,60nm,1.1s,mb5.6						
GNI	**Garni**	**61.40**	**316**	*c* *i*P	**P**	**23 41 51.3**	**-0.7**
GNI				pmax	pmax		
	comp=Z,25nm,1.6s						
GNI				MLR	MLR		
	comp=Z,2µm,22.0s						
DGRG	**David-gareji**	**61.53**	**318**	P	**P**	**23 41 51.1**	**-1.8**
MTA	**Mtatsminda**	**62.03**	**318**	P	**P**	**23 41 55.5**	**-0.7**
TI2	**Plekhanov**	**62.08**	**318**	⇑*i*P	**P**	**23 41 55.2**	**-1.4**
TBLG	**Delisi**	**62.09**	**318**	P	**P**	**23 41 56.0**	**-0.6**
UMJS	**Umm Lajj**	**62.52**	**298**	P	**P**	**23 42 00.3**	**+0.5**
SVE	**Sverdlovsk**	**62.77**	**338**	*e*P	**P**	**23 42 00.0**	**-1.0**
SVE				*e*		23 42 19.4	
SVE				*e*		23 42 39.7	
SVE				*e*		23 44 21.0	
SVE				*e*PPP	PPP	23 45 51.0	-0.3
SVE				*e*		23 50 22.0	
SVE				*e*S	**S**	**23 50 40.0**	**+13**
SVE				*e*		23 51 48.0	
SVE				MLR	MLR		
	comp=E,2µm,16.0s						
SVE				MLR	MLR		
	comp=Z,4µm,16.0s,MS5.6						
MARD	**Mardin**	**63.14**	**312**	*i* P	**P**	**23 42 01.2**	**-2.5**
ARU	**Arti**	**63.27**	**337**	P	**P**	**23 42 02.9**	**-1.4**
	comp=Z,46nm,1.5s,mb5.4						
ARU	**Arti**	**63.27**	**337**	⇑*i*P	**P**	**23 42 03.4**	**-0.8**
ARU				*e*		23 42 39.2	
ARU				*e*		23 44 20.9	
ARU				*e*PPP	PPP	23 45 51.2	-5.1
ARU				*e*S	**S**	**23 50 35.2**	**+2.3**
ARU				*e*		23 51 53.6	
ARU				*e*SS	SS	23 54 39.0	-2.4
ARU				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.4						
ARU				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.4						
ARU				MLR	MLR		
	comp=N,1µm,17.0s,MS5.4						
ARU				MLR	MLR		
	comp=E,2µm,19.0s,MS5.4						
TBKS	**Tabuk**	**63.86**	**301**	P	**P**	**23 42 09.1**	**+0.5**
QURS	**Qurayyt al Mil**	**64.01**	**305**	P	**P**	**23 42 09.5**	**-0.1**
KIV	**Kislovodsk**	**64.41**	**319**	*e*P	**P**	**23 42 10.2**	**-1.7**
	comp=E,36nm,0.9s,mb5.4						
KIV				LR	LR		
	comp=Z,1µm,19.0s,MS5.1						
KIV	**Kislovodsk**	**64.41**	**319**	*c* *i*P	**P**	**23 42 11.1**	**-0.8**
KIV				*e*		23 44 32.4	
KIV				*i* S	**S**	**23 50 46.2**	**-1.1**
KIV				*e*SS	SS	23 54 52.2	-6.9
KIV				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.4						
GOF	**Gofitskoye**	**64.67**	**320**	⇑*i*P	**P**	**23 42 13.7**	**+0.1**
GOF				pmax	pmax		
	comp=Z,23nm,0.8s,mb5.3						
ELZG	**Elazig**	**64.89**	**312**	*i* P	**P**	**23 42 13.8**	**-1.3**
AYUS	**‘Aynunah**	**64.95**	**301**	P	**P**	**23 42 15.4**	**-0.3**
ATAB	**Bozova**	**65.06**	**311**	*i* P	**P**	**23 42 14.1**	**-2.1**

BDAS	**Al Bad‘**	**65.15**	**301**	P	**P**	**23 42 16.9**	**-0.1**
MACK	**Trabzon**	**65.19**	**315**	i P	**P**	**23 42 14.3**	**-2.7**
JMOS	**Jabal al Moall**	**65.31**	**302**	P	**P**	**23 42 18.1**	**+0.1**
ALWS	**Ilw as Safayha**	**65.38**	**302**	P	**P**	**23 42 18.6**	**+0.1**
HAQS	**Haql**	**65.44**	**301**	P	**P**	**23 42 19.3**	**+0.5**
YAK	**Yakutsk**	**65.45**	**16**	eP	**P**	**23 42 17.4**	**-1.0**
	comp=Z,62nm,0.8s,mb5.7						
YAK	**Yakutsk**	**65.45**	**16**	eP	**P**	**23 42 17.7**	**-0.6**
YAK				e		23 42 49.0	
YAK				e		23 44 42.1	
YAK				ePPP	PPP	23 46 15.7	-3.3
YAK				eS	S	23 51 01.5	+1.8
YAK				e		23 52 06.1	
YAK				eSS	SS	23 55 16.4	+1.4
YAK				pmax	pmax		
	comp=Z,43nm,0.9s,mb5.5						
YAK				pmax	pmax		
	comp=N,18nm,1.0s						
YAK				pmax	pmax		
	comp=E,14nm,1.2s						
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				smax			
	comp=N,368nm,11.1s						
YAK				smax			
	comp=E,212nm,14.1s						
YAK				MLR	MLR		
	comp=Z,5µm,14.0s,MS5.8						
YAK				MLR	MLR		
	comp=N,3µm,13.0s,MS5.8						
YAK				MLR	MLR		
	comp=E,2µm,13.0s,MS5.8						
GZT	**Gaziantep**	**65.57**	**311**	i P	**P**	**23 42 18.5**	**-1.0**
BHL	**Bhannes**	**66.05**	**307**	eP	**P**	**23 42 22.7**	**+0.1**
SOKR	**Solikamsk**	**66.17**	**339**	c iP	**P**	**23 42 22.2**	**-0.7**
SOKR				S	S	23 51 08.2	-0.4
SOKR				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.6						
SOKR				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.6						
SOC	**Sochi**	**66.22**	**318**	c iP	**P**	**23 42 21.7**	**-1.9**
SOC				e		23 42 50.4	
SOC				e		23 44 52.4	
SOC				eS	S	23 51 06.0	-3.5
SOC				e		23 52 15.7	
SOC				eSS	SS	23 55 30.2	+3.1
SOC				pmax	pmax		
	comp=Z,76nm,1.0s,mb5.7						
SOC				MLR	MLR		
	comp=Z,902nm,22.0s,MS4.9						
GRSN	**GIRESUNGRSN**	**66.24**	**315**	i P	**P**	**23 42 21.6**	**-2.2**
CASY	**Casey**	**67.94**	**174**	eP	**P**	**23 42 41.9**	**+7.8**
ANN	**Anapa**	**68.20**	**318**	eP	**P**	**23 42 33.0**	**-3.1**
ANN				e		23 42 52.3	
ANN				eS	S	23 51 32.0	-1.3
ANN				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.4						
ANN				MLR	MLR		
	comp=Z,1µm,20.0s,MS5.1						
VRHR	**Novokhopersk**	**68.23**	**326**	eP	**P**	**23 42 34.3**	**-1.8**
VRHR				pmax	pmax		
	comp=Z,40nm,1.1s,mb5.4						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
CTKT	**Corum**	**68.64**	**314**	i P	**P**	**23 42 38.0**	**-0.9**
CDAG	**Cicekdag**	**68.65**	**312**	i P	**P**	**23 42 36.1**	**-2.8**
BOYT	**Boyabat**	**68.80**	**314**	i P	**P**	**23 42 38.2**	**-1.7**
ERMK	**Ermenek**	**68.93**	**309**	i P	**P**	**23 42 37.4**	**-3.3**
BRTR	**Keskin Array B**	**69.22**	**312**	P	**P**	**23 42 41.0**	**-1.4**
	comp=E,6.3nm,0.8s,mb4.6,baz=132,slow=6.8,SNR=40						
BRTR				pP	pP	23 42 48.5	-1.7
	comp=E,6.5nm,0.8s,baz=132,slow=7.7,SNR=14						
ELDT	**Eldivan**	**69.59**	**313**	i P	**P**	**23 42 44.5**	**-0.2**
VRSR	**Storozhevoye**	**69.65**	**325**	eP	**P**	**23 42 43.1**	**-1.8**
VRSR				pmax	pmax		
	comp=N,2.0nm,0.9s						
VRSR				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb4.2						
VRSR				pmax	pmax		
	comp=E,2.0nm,0.8s						
VOR	**Voronezh**	**69.87**	**326**	P	**P**	**23 42 46.0**	**-0.2**
VOR				e	pP	23 42 55.5	+1.5
VOR				pmax	pmax		
	comp=Z,100nm,2.5s,mb5.3						
ANTO	**Ankara**	**69.88**	**312**	eP	**P**	**23 42 45.0**	**-1.5**
	comp=Z,40nm,1.3s,mb5.2						
ANTO	**Ankara**	**69.88**	**312**	⇑P	**P**	**23 42 46.0**	**-0.5**
BALT	**Daday**	**69.92**	**314**	i P	**P**	**23 42 46.6**	**-0.1**
LSZ	**Lusaka**	**70.18**	**253**	eP	**P**	**23 42 47.1**	**-1.5**
	comp=Z,11nm,0.9s,mb4.8						
LSZ				epP	pP	23 42 56.7	+0.2
LSZ	**Lusaka**	**70.18**	**253**	eP	**P**	**23 42 47.1**	**-1.6**
LSZ				e*PP	pP	23 42 56.7	+0.2
LSZ				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.8						
SIM	**Simferopol’**	**70.47**	**318**	eP	**P**	**23 42 49.2**	**-0.8**
SIM				eS	S	23 51 55.4	-4.6
SIM				pmax	pmax		
	comp=Z,31nm,1.0s,mb5.2						
SGKT	**Sivrigoynuk**	**70.62**	**313**	i P	**P**	**23 42 54.0**	**+3.0**
ISP	**Isparta**	**71.09**	**310**	eP	**P**	**23 42 53.4**	**-0.5**
	comp=Z,48nm,1.5s,mb5.2						
ISP	**Isparta**	**71.09**	**310**	i P	**P**	**23 42 55.8**	**+2.0**
ESKT	**Eskisehir**	**71.24**	**312**	i P	**P**	**23 42 54.1**	**-0.7**
TKTP	**Tekketepe**	**71.28**	**310**	i P	**P**	**23 42 52.5**	**-2.5**
MA2	**Magadan**	**71.34**	**26**	eP	**P**	**23 42 55.5**	**+0.5**
MA2				e		23 45 33.3	
MA2				ePS	PS	23 52 49.7	+7.6
MA2				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.8						
MA2				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.6						
BORA	**Eskisehir**	**71.62**	**312**	i P	**P**	**23 42 55.5**	**-1.5**
PET	**Petropavlovsk**	**72.23**	**34**	eP	**P**	**23 42 58.1**	**-2.3**
PET				eS	S	23 52 26.0	+5.8
PET				ePPS	PPS	23 53 12.3	+4.7
PET				pmax	pmax		
	comp=Z,1µm,14.8s						
PET				smax			
	comp=N,1µm,21.5s						
PET				smax			
	comp=E,2µm,20.5s						
PET				MLR	MLR		
	comp=Z,3µm,17.0s,MS5.6						
MOS	**Moscow**	**72.43**	**329**	eP	**P**	**23 42 58.8**	**-2.7**
MOS				i		23 43 12.5	
MOS				i S	S	23 52 16.7	-5.7
MOS				pmax	pmax		
	comp=Z,600nm,3.7s						
MOS				pmax	pmax		
	comp=Z,51nm,1.2s,mb5.3						
MOS				smax			
	comp=N,1µm,4.4s						
MOS				MLR	MLR		
	comp=Z,2µm,22.0s,MS5.4						
MOS				MLR	MLR		
	comp=N,2µm,20.5s						
MAW	**Mawson**	**72.68**	**193**	eP	**P**	**23 43 03.3**	**+0.5**
	comp=N,12nm,0.8s,mb4.9						
MAW	**Mawson**	**72.68**	**193**	P	**P**	**23 43 03.7**	**+1.0**
	comp=N,6.2nm,0.9s,mb4.5,baz=12,slow=11,SNR=4.1						
MAW				pP	pP	23 43 11.0	+0.3
	comp=N,15nm,0.8s,baz=14,slow=6.1,SNR=8.7						
MAW				LR	LR	00 11 34.2	
	comp=N,3µm,18.6s,MS5.5,baz=31,slow=33						
MAW	**Mawson**	**72.68**	**193**	eP	**P**	**23 43 03.3**	**+0.5**
MAW				pmax	pmax		
	comp=Z,12nm,0.8s						
OBN	**Obninsk**	**72.72**	**328**	i P	**P**	**23 43 02.5**	**-0.7**
OBN				LR	LR		
	comp=Z,1µm,15.0s,MS5.3						
OBN	**Obninsk**	**72.72**	**328**	⇑iP	**P**	**23 43 02.4**	**-0.8**
OBN				e		23 43 16.6	
OBN				e		23 45 44.8	
OBN				i S	S	23 52 24.2	-1.5
OBN				eSS	SS	23 57 07.2	-0.6
OBN				pmax	pmax		
	comp=Z,32nm,1.2s,mb5.1						
OBN				MLR	MLR		
	comp=Z,2µm,18.0s,MS5.3						
TIXI	**Tiksi**	**73.23**	**10**	⇑eP	**P**	**23 43 04.9**	**-1.0**
SEY	**Seymchan**	**73.78**	**23**	⇓eP	**P**	**23 43 09.7**	**+0.4**
KLMR	**Klimovskoe**	**73.84**	**334**	c iP	**P**	**23 43 08.7**	**-1.0**
KLMR				eS	S	23 52 30.1	-8.1
KLMR				pmax	pmax		
	comp=Z,60nm,1.6s,mb5.3						
KLMR				pmax	pmax		
	comp=Z,110nm,3.6s						
KLMR				smax			
	comp=E,950nm,5.9s						
LBTB	**Lobatse**	**73.94**	**244**	eP	**P**	**23 43 11.2**	**+0.2**
	comp=E,22nm,0.9s,mb5.1						
LBTB				epP	pP	23 43 19.1	+0.2
LBTB	**Lobatse**	**73.94**	**244**	eP	**P**	**23 43 11.2**	**+0.2**
LBTB				e*PP	pP	23 43 19.1	+0.2
LBTB				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.1						
DRV	**Dumont d’Urvil**	**74.07**	**164**	S	S	23 52 52.0	+11
DRV				L		00 02 00.0	
TIRR	**Tirgusor**	**74.23**	**316**	⇑P	**P**	**23 43 11.6**	**-0.6**
TIRR	**Tirgusor**	**74.23**	**316**	⇑P	**P**	**23 43 11.7**	**-0.6**
CFR	**Carcaliu**	**74.59**	**317**	⇓P	**P**	**23 43 13.1**	**-1.3**
CFR	**Carcaliu**	**74.59**	**317**	⇓P	**P**	**23 43 13.1**	**-1.3**
HARR	**Harsova**	**74.62**	**316**	⇑P	**P**	**23 43 13.9**	**-0.6**
HARR	**Harsova**	**74.62**	**316**	⇑P	**P**	**23 43 13.9**	**-0.6**
BOSA	**Boshof**	**74.83**	**240**	P	**P**	**23 43 16.1**	**0.0**
	comp=Z,9.5nm,0.8s,mb4.8,baz=80,slow=7.6,SNR=17						
BOSA				pP	pP	23 43 23.3	-0.7
	comp=Z,14nm,0.9s,baz=78,slow=4.4,SNR=9.1						
BOSA				LR	LR	00 14 17.4	
	comp=Z,2µm,18.0s,MS5.5,baz=58,slow=34						
BOSA	**Boshof**	**74.83**	**240**	eP	**P**	**23 43 16.1**	**+0.1**
	comp=Z,17nm,0.9s,mb5.0						
BOSA	**Boshof**	**74.83**	**240**	eP	**P**	**23 43 16.1**	**0.0**
BOSA				pmax	pmax		
	comp=Z,17nm,0.9s,mb5.0						
IDI	**Anoyia**	**75.01**	**306**	P	**P**	**23 43 16.4**	**-0.6**
	comp=Z,12nm,0.7s,mb4.9,baz=104,slow=8.5,SNR=9.2						
AKASG	**Malin Array Be**	**75.36**	**322**	P	**P**	**23 43 16.9**	**-1.7**
	comp=Z,3.4nm,0.5s,mb4.5,baz=90,slow=5.3,SNR=26						
AKASG	**Malin Array Be**	**75.36**	**322**	P	**P**	**23 43 16.9**	**-1.7**
MLR	**Muntele Rosu**	**76.17**	**317**	⇓P	**P**	**23 43 23.9**	**+0.5**
MLR	**Muntele Rosu**	**76.17**	**317**	⇓P	**P**	**23 43 23.9**	**+0.5**
VOIR		**76.78**	**316**	⇑P	**P**	**23 43 26.8**	**+0.1**
BURAR	**Bucovina Array**	**77.13**	**319**	⇓P	**P**	**23 43 29.2**	**+0.6**
BURAR	**Bucovina Array**	**77.13**	**319**	⇓P	**P**	**23 43 29.2**	**+0.6**
MNK	**Minsk**	**77.25**	**326**	eP	**P**	**23 43 28.0**	**-1.2**
JOF	**Joensuu**	**78.24**	**335**	ep	**P**	**23 43 34.1**	**-0.3**
	comp=Z,2.4nm,0.5s,mb4.4						
DRGR		**78.64**	**317**	⇑P	**P**	**23 43 36.9**	**0.0**
DRGR		**78.64**	**317**	⇑P	**P**	**23 43 36.9**	**-0.1**
RPZ	**Rata Peaks**	**79.10**	**135**	P	**P**	**23 43 40.2**	**+0.6**
	comp=Z,22nm,0.7s,mb5.2,baz=254,slow=3.5,SNR=18						
KWP	**Kalwaria**	**79.17**	**320**	eP	**P**	**23 43 42.4**	**+2.6**
KWP	**Kalwaria**	**79.17**	**320**	eP	**P**	**23 43 42.4**	**+2.6**
BZS	**Buzias**	**79.18**	**316**	⇑P	**P**	**23 43 40.2**	**+0.3**
BZS	**Buzias**	**79.18**	**316**	⇑P	**P**	**23 43 40.2**	**+0.3**
SUR	**Sutherland**	**79.21**	**237**	eP	**P**	**23 43 41.4**	**+1.0**
	comp=Z,28nm,1.0s,mb5.1						
SUR				epP	pP	23 43 49.9	+1.6
APA	**Apatity**	**79.21**	**339**	⇑eP	**P**	**23 43 45.0**	**+5.3**
APA				i		23 43 46.5	
APA				eS	S	23 53 36.0	-0.7
APA				pmax	pmax		
	comp=Z,30nm,1.1s,mb5.1						
KOLS	**Kolonicke sedl**	**79.32**	**320**	eP	**P**	**23 43 41.2**	**+0.6**
KOLS				e		23 43 56.3	
SUW	**Suwalki**	**79.77**	**325**	eP	**P**	**23 43 42.8**	**-0.2**
SUW	**Suwalki**	**79.77**	**325**	eP	**P**	**23 43 42.8**	**-0.2**
CRVS	**Cervenica-Dubn**	**79.84**	**319**	eP	**P**	**23 43 44.5**	**+1.1**
CRVS				e		23 43 58.4	
SYO	**Syowa Base**	**79.98**	**198**	⇑P	**P**	**23 43 43.0**	**-0.8**
SYO	**Syowa Base**	**79.98**	**198**	⇑PcP	PcP	23 43 52.6	+1.0
SYO	**Syowa Base**	**79.98**	**198**	⇑eP	**P**	**23 43 43.0**	**-0.8**
SYO				⇑ePcP	PcP	23 43 52.6	+1.0
SYO				eS	S	23 53 48.6	+4.0
STHS	**Stebnicka Huta**	**80.07**	**320**	eP	**P**	**23 43 45.2**	**+0.5**
FINES	**FINESS Array B**	**80.09**	**332**	P	**P**	**23 43 44.2**	**-0.3**
	comp=Z,7.1nm,0.7s,mb4.7,baz=100,slow=6.4,SNR=35						
FINES				LR	LR	00 26 07.7	
	comp=Z,1µm,19.1s,MS5.3,baz=294,slow=41						
KAF	**Kangasniemi**	**80.17**	**333**	ep	**P**	**23 43 44.7**	**-0.2**
	comp=Z,6.6nm,0.6s,mb4.7						
KAF	**Kangasniemi**	**80.17**	**333**	eP	**P**	**23 43 44.7**	**-0.2**
KAF				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
KECS	**Kecovo**	**80.41**	**319**	eP	**P**	**23 43 46.2**	**-0.3**
KECS				e		23 44 00.6	
FX1	**Attu Island--F**	**80.58**	**37**	P	**P**	**23 43 48.7**	**+1.5**
	comp=Z,23nm,0.8s,mb5.2,baz=237,slow=17,SNR=3.1						
TSUM	**Tsumeb**	**80.66**	**250**	eP	**P**	**23 43 49.7**	**+1.4**
	comp=Z,18nm,1.1s,mb4.9						
TSUM				pP	pP	23 43 58.7	+2.3
NIE	**Niedzica**	**80.67**	**320**	eP	sP	23 44 02.6	+4.1
PKSM	**Moragy**	**81.32**	**316**	⇓iP	**P**	**23 43 51.4**	**+0.1**
PKS8	**Sarbogard**	**81.39**	**317**	eP	**P**	**23 43 51.7**	**+0.1**
VYHS	**Vyhne**	**81.50**	**319**	eP	**P**	**23 43 51.9**	**-0.3**
VYHS				e		23 44 06.4	
VYHS				eS	S	23 54 02.6	+1.8
SRO	**Srobarova**	**81.75**	**318**	eP	**P**	**23 43 54.2**	**+0.7**
SRO				epP	pP	23 44 01.6	+0.1
OKC	**Ostrava-Krasne**	**82.12**	**320**	eP	**P**	**23 43 54.7**	**-0.7**
OKC				epP	pP	23 44 03.4	0.0
OKC				esP	sP	23 44 09.1	+3.0
OKC				eS	S	23 54 03.5	-3.7
OKC				AMS	AMS	00 28 50.0	
	comp=Z,900nm,16.7s						
KEV	**Kevo**	**82.19**	**341**	ep	**P**	**23 43 55.4**	**+0.1**
SMOL	**Smolenice**	**82.43**	**319**	eP	**P**	**23 43 59.3**	**+2.3**
MORC	**Moravsky Berou**	**82.51**	**320**	eP	**P**	**23 43 57.2**	**-0.1**
	comp=Z,20nm,1.1s,mb5.1						
MORC	**Moravsky Berou**	**82.51**	**320**	⇑P	**P**	**23 43 58.5**	**+1.1**
ZST	**Bratislava**	**82.61**	**318**	eP	**P**	**23 43 58.6**	**+0.7**
ARCES	**ARCESS Array B**	**82.62**	**340**	P	**P**	**23 43 58.0**	**+0.4**
	comp=Z,3.5nm,0.4s,mb4.7,baz=101,slow=4.7,SNR=42						
ARCES				pP	pP	23 44 05.6	0.0
	comp=Z,12nm,0.7s,baz=95,slow=5.8,SNR=8.4						
ARCES				LR	LR	00 25 08.2	
	comp=Z,3µm,20.1s,MS5.6,baz=223,slow=39						
ARCES	**ARCESS Array B**	**82.62**	**340**	P	**P**	**23 43 58.0**	**+0.4**
ARCES				pP	pP	23 44 05.6	0.0
ARCES				LR	LR	00 25 08.2	
ARE0	**ARCESS Array S**	**82.62**	**340**	eP	**P**	**23 43 57.9**	**+0.3**
VRAC	**Vranov**	**83.06**	**319**	⇑P	**P**	**23 44 01.1**	**+0.8**
DPC	**Dobruska-Polom**	**83.35**	**320**	eP	**P**	**23 44 02.5**	**+0.7**
DPC				epP	pP	23 44 09.2	-0.6
DPC				ex	x	23 44 16.3	
DPC				eS	S	23 54 21.3	+1.6
DPC				AMS	AMS	00 26 50.0	
	comp=Z,1µm,20.8s						
DPC	**Dobruska-Polom**	**83.35**	**320**	eP	**P**	**23 44 02.5**	**+0.7**
DPC				e		23 44 16.3	
DPC				eS	S	23 54 21.3	+1.6
GOLS	**Golise**	**83.39**	**316**	eP	**P**	**23 44 02.7**	**+0.7**
KSP	**Ksiaz**	**83.43**	**321**	eP	**P**	**23 44 02.8**	**+0.7**
KSP	**Ksiaz**	**83.43**	**321**	eP	**P**	**23 44 02.5**	**+0.4**
KSP				epP	pP	23 44 09.5	-0.7
KSP				e		23 44 17.2	
KSP				eSKS	SKS	23 54 19.0	-7.5
KSP				LR	LR		
	comp=Z,2µm,21.2s,MS5.6						
GROS	**Grobnik**	**83.51**	**316**	eP	**P**	**23 44 03.5**	**+0.9**
UPC	**Upice**	**83.57**	**321**	eP	**P**	**23 44 04.6**	**+1.7**
UPC				epP	pP	23 44 10.6	-0.3
TREC	**Trest**	**83.78**	**319**	eP	**P**	**23 44 04.4**	**+0.4**
PERS	**Pernice**	**83.79**	**317**	eP	**P**	**23 44 05.0**	**+1.0**
PRU	**Pruhonice**	**84.46**	**320**	eP	**P**	**23 44 07.6**	**+0.2**
PRU				epP	pP	23 44 15.2	-0.2
PRU				eS	S	23 54 31.6	+0.9
PRU				AMS	AMS	00 27 30.0	
	comp=Z,1µm,20.3s						
PVCC	**Panska Ves**	**84.49**	**321**	eP	**P**	**23 44 08.4**	**+0.9**
AQU	**L’Aquila**	**84.71**	**312**	eP	**P**	**23 44 08.8**	**0.0**
	comp=Z,45nm,0.9s,mb5.6						
AQU				epP	pP	23 44 15.9	-1.0
AQU	**L’Aquila**	**84.71**	**312**	eP	**P**	**23 44 08.8**	**0.0**
AQU				e*PP	pP	23 44 15.9	-1.0
AQU				pmax	pmax		
	comp=Z,45nm,0.9s,mb5.6						
TRO	**Tromso**	**84.89**	**340**	eP	**P**	**23 44 09.2**	**+0.2**
TRO				eSKSa		23 54 30.0	
TRO				eSS	SS	00 00 09.6	-0.7
TRO				AMS	AMS	00 26 31.5	
	comp=Z,2µm,16.8s,MS5.6						
BRG	**Berggiesshubel**	**84.91**	**321**	eP	**P**	**23 44 09.7**	**+0.1**
	comp=Z,6.1nm,1.0s,mb4.7						
BRG				e	pP	23 44 17.5	-0.2
BRG				e		23 44 24.8	
BRG				S	S	23 54 39.0	+3.9
BRG				LR	LR		
	comp=Z,1µm,17.8s,MS5.3						
BRG	**Berggiesshubel**	**84.91**	**321**	eP	**P**	**23 44 09.7**	**+0.1**
BRG				e	pP	23 44 17.5	-0.2
BRG				e		23 44 24.8	
BRG				S	S	23 54 39.0	+3.9
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.7						
BRG				MLR	MLR		
	comp=Z,1µm,17.8s,MS5.3						
GERES	**GERESS Array B**	**84.92**	**319**	P	**P**	**23 44 09.9**	**+0.2**
	comp=Z,6.6nm,0.8s,mb4.8,baz=90,slow=4.0,SNR=26						
GERES				pP	pP	23 44 17.7	-0.1
	comp=Z,11nm,0.9s,baz=112,slow=5.3,SNR=14						
PTCC	**Patocco-Chiusa**	**84.99**	**316**	P	**P**	**23 44 10.7**	**+0.6**
KHC	**Kasperske Hory**	**85.02**	**319**	eP	**P**	**23 44 10.5**	**+0.3**
KHC				epP	pP	23 44 16.6	-1.6
KHC				eS	S	23 54 36.0	-0.2
KHC				AMS	AMS	00 28 10.0	
	comp=Z,1µm,16.9s						
KHC	**Kasperske Hory**	**85.02**	**319**	eP	**P**	**23 44 10.5**	**+0.3**
KHC				eS	S	23 54 36.0	-0.2
ARV	**Arcevia**	**85.11**	**313**	P	**P**	**23 44 12.0**	**+1.2**
WET	**Wettzell**	**85.48**	**319**	eP	**P**	**23 44 13.1**	**+0.6**
	comp=Z,14nm,1.0s,mb5.0						
WET	**Wettzell**	**85.48**	**319**	eP	**P**	**23 44 13.1**	**+0.6**
WET				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
CLL	**Collm**	**85.53**	**321**	P	**P**	**23 44 13.0**	**+0.3**
	comp=Z,logA/T=1.0,mb5.0						
CLL				e*PP	pP	23 44 21.0	+0.2
CLL				e*SP	sP	23 44 26.0	+2.6
CLL				eS	S	23 54 41.0	-0.2
CLL				ePS	PS	23 55 43.0	+0.6
CLL				e		00 07 00.0	
CLL	**Collm**	**85.53**	**321**	eP	**P**	**23 44 13.0**	**+0.3**
	comp=Z,12nm,1.1s,mb5.0						
CLL				epP	pP	23 44 21.0	+0.2
CLL				esP	sP	23 44 26.0	+2.6
CLL				eS	S	23 54 41.0	-0.2
CLL				LR	LR		
	comp=Z,1µm,21.7s,MS5.3						
CLL	**Collm**	**85.53**	**321**	eP	**P**	**23 44 13.0**	**+0.3**
CLL				e*SP	sP	23 44 26.0	+2.6
CLL				eS	S	23 54 41.0	-0.2
CLL				pmax	pmax		
	comp=Z,12nm,1.1s,mb5.0						
CLL				MLR	MLR		
	comp=Z,1µm,21.7s,MS5.3						
NKC	**Novy Kostel**	**85.82**	**320**	AMS	AMS	00 29 50.0	
	comp=Z,1µm,20.3s						
CTI	**Castel Tesino**	**86.15**	**316**	P	**P**	**23 44 16.6**	**+0.7**
	comp=Z,32nm,1.0s,mb5.5						
CTI	**Castel Tesino**	**86.15**	**316**	P	**P**	**23 44 16.6**	**+0.7**
CTI				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.5						
WTTA	**Wattenberg**	**86.21**	**317**	⇑iP	**P**	**23 44 16.1**	**-0.1**
	comp=Z,14nm,0.9s,mb5.2						
WATA	**Walderalm**	**86.25**	**317**	⇓iP	**P**	**23 44 16.3**	**-0.1**
	comp=Z,6.8nm,1.0s,mb4.8						
MOX	**Moxa**	**86.37**	**320**	i P	**P**	**23 44 19.3**	**+2.4**
	comp=Z,logA/T=1.1,mb5.1						
MOX				S	S	23 54 50.0	+0.7
MOX				L		00 31 20.0	
MOX	**Moxa**	**86.37**	**320**	eP	**P**	**23 44 19.3**	**+2.4**
	comp=Z,22nm,1.6s,mb5.1						
MOX				eS	S	23 54 50.0	+0.7
MOX				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
MOX	**Moxa**	**86.37**	**320**	eP	**P**	**23 44 19.3**	**+2.4**
MOX				eS	S	23 54 50.0	+0.7
MOX				pmax	pmax		
	comp=Z,22nm,1.6s,mb5.1						
MOX				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.2						
SQTA	**Sankt Quirin**	**86.50**	**317**	⇓iP	**P**	**23 44 17.9**	**+0.3**
	comp=Z,8.4nm,1.0s,mb4.9						
GRA1	**Grafenberg Arr**	**86.58**	**320**	eP	**P**	**23 44 19.2**	**+1.3**
	comp=Z,20nm,1.1s,mb5.3						
GRF	**Grafenberg Arr**	**86.58**	**320**	eP	**P**	**23 44 19.2**	**+1.3**
	comp=Z,20nm,1.1s,mb5.3						
GRF	**Grafenberg Arr**	**86.58**	**320**	eP	**P**	**23 44 19.2**	**+1.3**
GRF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.3						
GRF	**Grafenberg Arr**	**86.58**	**320**	eP	**P**	**23 44 19.2**	**+1.3**
GRF				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.3						
NSS	**Namsos**	**86.96**	**334**	eP	**P**	**23 44 19.0**	**-0.4**
NSS				AMS	AMS	00 29 44.7	
	comp=Z,2µm,20.4s,MS5.5						
BRMO	**Bormio**	**87.05**	**316**	P	**P**	**23 44 21.8**	**+1.5**
NB2	**NORSAR Subarra**	**87.10**	**331**	P	**P**	**23 44 20.1**	**-0.1**
	comp=Z,15nm,0.9s,mb5.2,baz=95,slow=4.6						
NB2	**NORSAR Subarra**	**87.10**	**331**	P	**P**	**23 44 20.1**	**-0.1**
	baz=95,slow=4.8						
NOA	**NORSAR Array B**	**87.10**	**331**	P	**P**	**23 44 20.1**	**0.0**
	comp=Z,6.7nm,0.7s,mb5.0,baz=94,slow=4.9,SNR=28						
NOA				LR	LR	00 29 13.3	
	comp=Z,1µm,20.7s,MS5.3,baz=80,slow=40						
CLZ	**Clausthal**	**87.20**	**322**	eP	**P**	**23 44 21.8**	**+0.9**
	comp=Z,22nm,1.2s,mb5.3						
CLZ	**Clausthal**	**87.20**	**322**	eP	**P**	**23 44 21.8**	**+0.9**
CLZ				pmax	pmax		
	comp=Z,22nm,1.2s,mb5.3						
NAO01	**NORSAR Array S**	**87.25**	**331**	P	**P**	**23 44 21.3**	**+0.4**
	comp=Z,7.6nm,0.8s,mb5.0						
NAO	**NORSAR Subarra**	**87.28**	**331**	P	**P**	**23 44 20.1**	**-0.9**
	comp=Z,15nm,0.9s,mb5.2						
NAO	**NORSAR Subarra**	**87.28**	**331**	P	**P**	**23 44 20.1**	**-0.9**
NAO				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.2						
BSEG	**Bad Segeberg**	**87.30**	**324**	eP	**P**	**23 44 22.0**	**+0.7**
DAVOX	**Davos**	**87.40**	**317**	P	**P**	**23 44 22.9**	**+1.0**
KONO	**Kongsberg**	**87.85**	**329**	eSKSa		23 54 58.9	
PGF	**Pioggiola**	**87.97**	**312**	eP	**P**	**23 44 24.8**	**0.0**
KBS	**Kingsbay**	**87.99**	**349**	eP	**P**	**23 44 23.8**	**-0.4**
KBS				AMS	AMS	00 32 44.1	
	comp=Z,1µm,17.7s,MS5.4						
TNS	**Taunus Mts**	**88.39**	**320**	eP	**P**	**23 44 27.9**	**+1.3**
	comp=Z,52nm,1.8s,mb5.5						
TNS	**Taunus Mts**	**88.39**	**320**	eP	**P**	**23 44 27.9**	**+1.3**
TNS				pmax	pmax		
	comp=Z,52nm,1.8s,mb5.5						
BFO	**Black Forest**	**88.46**	**318**	eP	**P**	**23 44 27.3**	**+0.3**
	comp=Z,6.0nm,0.8s,mb4.9						
BFO	**Black Forest**	**88.46**	**318**	eP	**P**	**23 44 27.3**	**+0.3**
BFO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.9						
SBF	**Sospel**	**89.11**	**314**	eP	**P**	**23 44 30.3**	**+0.1**
	comp=Z,41nm,0.8s,mb5.5						
SBF	**Sospel**	**89.11**	**314**	eP	**P**	**23 44 30.3**	**+0.1**
SBF				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.5						
CDF	**Champ du Feu**	**89.16**	**318**	eP	**P**	**23 44 30.1**	**-0.3**
	comp=Z,12nm,0.9s,mb4.9						
CDF	**Champ du Feu**	**89.16**	**318**	eP	**P**	**23 44 30.1**	**-0.3**
CDF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
HINF	**Hinteralfeld**	**89.46**	**318**	eP	**P**	**23 44 31.5**	**-0.3**
NVL	**N’lazarevskaya**	**89.57**	**199**	eP	**P**	**23 44 50.8**	**+19**
NVL				e*PP	pP	23 45 03.0	+23
NVL				e*SP	sP	23 45 07.8	+25
NVL				eS		23 55 03.1	
NVL				e		23 55 20.7	
NVL				eSS	SS	00 01 17.5	-1.0
NVL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.5						
NVL				MLR	MLR		
	comp=Z,136nm,17.8s						
LPG	**La Plagne**	**89.57**	**315**	⇑iP	**P**	**23 44 32.7**	**+0.3**
	comp=Z,30nm,0.9s,mb5.3						
LPG	**La Plagne**	**89.57**	**315**	⇑iP	**P**	**23 44 32.7**	**+0.3**
LPG				pmax	pmax		
	comp=Z,15nm,0.9s,mb5.3						
MBDF	**Montbardon**	**89.58**	**315**	eP	**P**	**23 44 32.7**	**+0.3**
	comp=Z,15nm,0.8s,mb5.0						
MBDF	**Montbardon**	**89.58**	**315**	eP	**P**	**23 44 32.7**	**+0.3**
MBDF				pmax	pmax		

	comp=Z,7.0nm,0.8s,mb5.0						
LPL	La Plagne	89.59	315	⇑iP	P	23 44 32.8	+0.4
	comp=Z,23nm,0.8s,mb5.3						
LPL	La Plagne	89.59	315	⇑iP	P	23 44 32.8	+0.4
LPL				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.3						
FRF	La Foret Royal	89.69	313	eP	P	23 44 33.2	+0.2
	comp=Z,25nm,0.8s,mb5.3						
FRF	La Foret Royal	89.69	313	eP	P	23 44 33.2	+0.2
FRF				pmax	pmax		
	comp=Z,13nm,0.8s,mb5.3						
HAU	Haudompre	89.79	318	⇑iP	P	23 44 33.2	-0.1
	comp=Z,26nm,1.0s,mb5.2						
HAU				eR			
	comp=Z,1µm,21.5s						
HAU	Haudompre	89.79	318	⇑iP	P	23 44 33.2	-0.1
HAU				pmax	pmax		
	comp=Z,13nm,1.0s,mb5.2						
HAU				MLR	MLR		
	comp=Z,1µm,21.5s,MS5.3						
LMR	La Mourre	89.80	313	eP	P	23 44 34.3	+0.8
BER	Bergen	89.99	330	AMS	AMS	00 35 54.6	
	comp=Z,1µm,14.3s,MS5.5						
CABF	La Chapelle	90.01	316	⇑iP	P	23 44 34.8	+0.4
	comp=Z,41nm,1.0s,mb5.4						
CABF	La Chapelle	90.01	316	⇑iP	P	23 44 34.8	+0.4
CABF				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.4						
ORIF	Oris-en-Rattie	90.20	315	eP	P	23 44 35.8	+0.5
	comp=Z,16nm,0.8s,mb5.1						
ORIF				eR			
	comp=Z,2µm,19.8s						
SMRF	Simiane la Rot	90.45	314	eP	P	23 44 37.2	+0.7
	comp=Z,28nm,0.9s,mb5.3						
MEZF	Maizieres J'vi	90.64	318	eP	P	23 44 37.5	+0.3
	comp=Z,24nm,0.9s,mb5.2						
GIVF	Givet	90.72	320	eP	P	23 44 37.9	+0.3
TNA	Tin City	90.96	24	eP	P	23 44 39.3	+1.0
	comp=Z,7.7nm,0.8s,mb5.1						
TNA				epP	pP	23 44 46.4	0.0
VIVF	Saint-Julien-l	91.06	315	eP	P	23 44 39.6	+0.3
	comp=Z,30nm,1.1s,mb5.2						
VIVF	Saint-Julien-l	91.06	315	eP	P	23 44 39.6	+0.3
VIVF				pmax	pmax		
	comp=Z,15nm,1.1s,mb5.2						
QSPA	South Pole Qui	91.08	180	eP	P	23 44 41.7	+3.1
	comp=Z,6.2nm,0.7s,mb5.0						
LOR	Lormes	91.50	317	⇑iP	P	23 44 41.5	+0.3
	comp=Z,37nm,0.9s,mb5.4						
LOR				eR			
	comp=Z,2µm,20.8s						
LOR	Lormes	91.50	317	⇑iP	P	23 44 41.5	+0.3
LOR				pmax	pmax		
	comp=Z,19nm,0.9s,mb5.4						
LOR				MLR	MLR		
	comp=Z,2µm,20.8s,MS5.4						
SMF	Signal de Mont	91.55	317	⇑iP	P	23 44 41.6	+0.1
	comp=Z,33nm,0.9s,mb5.3						
SMF	Signal de Mont	91.55	317	⇑iP	P	23 44 41.6	+0.1
SMF				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.3						
LASF	Ste Croix	91.69	314	eP	P	23 44 42.7	+0.6
	comp=Z,13nm,0.8s,mb5.0						
SSF	Saint Saulge	91.76	317	eP	P	23 44 42.7	+0.3
	comp=Z,11nm,1.1s,mb5.1						
SSF	Saint Saulge	91.76	317	eP	P	23 44 42.7	+0.3
SSF				pmax	pmax		
	comp=Z,11nm,1.1s,mb5.1						
AVF	Avril sur Loir	91.88	317	⇑iP	P	23 44 43.2	+0.2
	comp=Z,36nm,1.0s,mb5.3						
AVF	Avril sur Loir	91.88	317	⇑iP	P	23 44 43.2	+0.2
AVF				pmax	pmax		
	comp=Z,18nm,1.0s,mb5.4						
BGF	Bois d'Agland	92.24	316	⇑iP	P	23 44 45.4	+0.8
	comp=Z,41nm,1.0s,mb5.4						
BGF	Bois d'Agland	92.24	316	⇑iP	P	23 44 45.4	+0.8
BGF				pmax	pmax		
	comp=Z,21nm,1.0s,mb5.4						
HYF	Humbligny	92.33	317	eP	P	23 44 45.2	+0.2
TCF	Toulx Ste Croi	92.70	316	eP	P	23 44 47.2	+0.4
CAF	Calviac	92.91	315	eP	P	23 44 48.4	+0.6
	comp=Z,22nm,1.0s,mb5.2						
CAF	Calviac	92.91	315	eP	P	23 44 48.4	+0.6
CAF				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.2						
MTLF	Montolieu	92.92	313	eP	P	23 44 48.4	+0.6
	comp=Z,11nm,0.8s,mb5.0						
MTLF	Montolieu	92.92	313	eP	P	23 44 48.4	+0.6
MTLF				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb5.0						
RJF	Les Rejaudoux	93.27	315	eP	P	23 44 50.2	+0.8
RJF				eR			
	comp=Z,918nm,21.0s						
JMIC	Jan Mayen	94.05	342	AMS	AMS	00 31 34.8	
	comp=Z,752nm,18.5s,MS5.2						
MFF	Saint Martin d	94.30	317	eP	P	23 44 54.3	+0.2
	comp=Z,13nm,0.9s,mb5.1						
MFF	Saint Martin d	94.30	317	eP	P	23 44 54.3	+0.2
MFF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb5.1						
GRR	Gorron	94.57	319	eP	P	23 44 55.6	+0.3
DAG	Danmarks Havn	94.67	348	⇓iP	P	23 44 54.4	-0.8
	comp=Z,1.3nm,0.6s,mb4.5						
DAG	Danmarks Havn	94.67	348	⇓eP	P	23 44 54.4	-0.8
	comp=Z,1.3nm,0.6s,mb4.5						
DAG	Danmarks Havn	94.67	348	⇓eP	P	23 44 54.4	-0.8
DAG				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.4						
ETSF	Etsaut	94.99	313	eP	P	23 44 58.7	+1.3
IMA2	Indian Mountai	96.60	23	eP	P	23 45 05.0	+0.8
ILAR	Eielson Array	99.72	23	PP	PP	23 49 23.8	-1.3
	comp=Z,1.2nm,0.7s,baz=286,slow=6.8,SNR=6.9						
INK	Inuvik	102.50	17	P	Pdif	23 45 31.7	+1.0
	comp=Z,3.4nm,1.1s,baz=270,slow=7.1,SNR=4.1						
TBI	Tubuai	111.75	115	ePP	PP	23 50 49.0	-6.6
TBI	Tubuai	111.75	115	ePS	PS	00 00 24.2	+1.1
YKA	Yellowknife Ar	112.12	15	PP	PP	23 50 55.5	-1.9
	comp=Z,2.8nm,0.8s,baz=332,slow=7.4,SNR=4.1						
PPT	Papeete	112.37	108	ePP	PP	23 50 47.8	-13
PPT	Papeete	112.37	108	ePS	PS	00 00 31.6	+2.4
EDM	Edmonton	120.10	21	ePKPdf	PKPdf	23 50 25.6	-3.2
TAOE	Nuku Hiva Isla	122.33	100	ePP	PP	23 51 57.2	-13
TAOE	Nuku Hiva Isla	122.33	100	ePS	PS	00 01 55.3	-5.2
TAOE	Nuku Hiva Isla	122.33	100	eLR	LR	00 28 25.1	
	comp=Z,3µm,23.5s						
HAWA	Hanford	122.66	30	PKPdf	PKPdf	23 50 32.1	-1.9
SCHQ	Schefferville	122.70	349	PKP	PKPdf	23 50 31.1	-2.7
	comp=Z,4.3nm,0.8s,baz=16,slow=3.4,SNR=6.7						
HUMO	Hull Mountain	123.37	35	PKPdf	PKPdf	23 50 33.5	-1.9
BSMT	Bassoo Peak	123.78	25	PKPdf	PKPdf	23 50 34.1	-2.0
RKT	Rikitea	124.83	118	ePP	PP	23 52 18.7	-7.7
RKT	Rikitea	124.83	118	ePS	PS	00 02 33.5	+12
RKT	Rikitea	124.83	118	eSS	SS	00 09 11.8	-5.1
RKT				eLR	LR	00 29 31.4	
	comp=Z,2µm,24.2s						
MSO	Missoula	124.93	26	PKPdf	PKPdf	23 50 35.3	-3.1
CHMT	Chamberlain Mo	125.16	25	ePKPdf	PKPdf	23 50 35.7	-3.1
MOD	Modoc	125.33	34	ePKPdf	PKPdf	23 50 36.5	-2.9
MOD				PKPdf	PKPdf	23 50 37.5	-1.8
DLMT	Dillon	126.66	26	ePKPdf	PKPdf	23 50 39.4	-2.3
BOZ	Bozeman (W)	126.85	25	PKPdf	PKPdf	23 50 40.2	-1.8
MCMT	McKenzie Canyo	126.97	27	ePKPdf	PKPdf	23 50 40.9	-1.4
HLID	Hailey	127.21	29	PKPdf	PKPdf	23 50 40.9	-1.9
ULM	Lac du Bonnet	127.58	11	PKP	PKPdf	23 50 39.8	-3.6
	comp=Z,4.8nm,0.6s,baz=53,slow=1.9,SNR=10						
QLMT	Earthquake Lak	127.59	26	PKPdf	PKPdf	23 50 41.0	-2.6
YMR	Madison River	127.92	25	ePKPdf	PKPdf	23 50 41.6	-2.6
NVAR	Mina Array Bea	128.78	36	PKP	PKPdf	23 50 44.0	-2.1
	comp=Z,2.9nm,0.9s,baz=319,slow=1.5,SNR=12						
MNV	Mina	128.86	36	PKPdf	PKPdf	23 50 46.6	+0.4
LOHW	Long Hollow	128.92	26	PKPdf	PKPdf	23 50 44.8	-1.4
SNOW	Snow King Moun	128.97	26	PKPdf	PKPdf	23 50 45.1	-1.2
REDW	Red Top Meadow	129.01	26	PKPdf	PKPdf	23 50 44.0	-2.3
BW06	Boulder Array	130.05	26	PKPdf	PKPdf	23 50 46.1	-2.2
PDAR	Pinedale Array	130.05	26	PKhKP		23 50 41.8	
	comp=Z,1.5nm,0.6s,baz=108,slow=2.9,SNR=6.0						
PDAR				PKP	PKPdf	23 50 46.1	-2.2
	comp=Z,2.1nm,0.6s,baz=222,slow=1.5,SNR=17						
HWUT	Hardware Ranch	130.06	28	ePKPdf	PKPdf	23 50 46.4	-2.0
DUG	Dugway	130.53	30	PKPdf	PKPdf	23 50 47.6	-1.8
DAC	Darwin (Calif)	130.62	38	PKPdf	PKPdf	23 50 48.8	-0.9
NLU	North Lily Min	131.08	30	PKPdf	PKPdf	23 50 49.6	-0.8
MSU	Marysvale	132.12	31	PKPdf	PKPdf	23 50 50.0	-2.4
MSU				ePKPdf	PKPdf	23 50 50.7	-1.7
SRU	San Rafael	132.50	29	ePKPdf	PKPdf	23 50 50.9	-2.2
SRU				PKPdf	PKPdf	23 50 51.6	-1.5
NEN	Nelson	132.69	36	ePKPdf	PKPdf	23 50 52.5	-1.1
ANMO	Albuquerque	137.77	29	PKPdf	PKPdf	23 51 02.4	-0.5
BNM	Barren Site	138.32	30	PKPdf	PKPdf	23 50 55.5	-8.5
ACSO	Alum Creek Sta	138.82	0	ePKPdf	PKPdf	23 51 02.3	-2.5
ACSO				PKPdf	PKPdf	23 51 03.5	-1.2
MNTX	Cornudas Mount	140.90	31	PKPdf	PKPdf	23 51 06.6	-2.2
WMOK	Wichita Mounta	141.26	21	ePKPpre		23 50 59.0	
TZTN	Tazewell	142.50	1	ePKPpre		23 51 03.4	
WVT	Waverly	142.61	7	ePKPpre		23 51 04.9	
BAO	Brasilia Array	142.85	245	PKPdf	PKPdf	23 51 06.5	-6.0
BDFB	Brasilia	142.87	245	PKP	PKPdf	23 51 07.8	-4.7
	comp=Z,1.9nm,0.8s,baz=35,slow=15,SNR=3.1						
BDFB				pPKP		23 51 15.8	
	comp=Z,6.9nm,0.8s,baz=193,slow=3.4,SNR=6.3						
MIAR	Mount Ida	143.07	15	ePKPpre		23 51 05.8	
LTX	Lajitas	143.67	32	ePKPpre		23 51 08.2	
TXAR	Lajitas Array	143.67	32	PKP	PKPdf	23 51 08.8	-4.8
	comp=Z,4.6nm,0.8s,baz=94,slow=0.1,SNR=20						
CPUP	Villa Florida	145.02	222	ePKP	PKPdf	23 51 12.3	-3.7
CPUP				PKPab	PKPab	23 51 12.8	0.0
NATX	Nacogdoches	145.37	18	ePKP	PKPdf	23 51 13.4	-3.1
NATX				PKPab	PKPab	23 51 14.2	+0.3
GOGA	Godfrey	145.62	1	ePKP	PKPdf	23 51 13.8	-3.0
GOGA				PKPdf	PKPdf	23 51 14.3	-2.6
LRAL	Lakeview Retre	145.77	6	ePKP	PKPdf	23 51 14.5	-2.6
SAML	Samuel	159.07	248	ePKPdf	PKPdf	23 51 35.3	-1.7
SAML				PKPdf	PKPdf	23 51 36.3	-0.6
LPAZ	La Paz	159.19	223	PKP	PKPdf	23 51 35.0	-1.9
	comp=Z,1.3nm,0.8s,baz=170,slow=2.2,SNR=7.1						
LPAZ	La Paz	159.19	223	ePKPdf	PKPdf	23 51 35.7	-1.2
LPAZ				PKPdf	PKPdf	23 51 36.3	-0.7
ROSC	El Rosal	169.72	306	PKP	PKPdf	23 51 44.5	-1.7
	comp=Z,2.9nm,0.5s,baz=105,slow=15,SNR=3.8						
OTAV	Otavalo	175.53	288	ePKPdf	PKPdf	23 51 46.1	-2.7

NEIC ***27*** *23:38:04.8±0.8, 5.25S×140.17E, h10^{km}, mb4.2/2, Error ellipse: s-maj=20.1km s-min=14.9km az=101.0*

IDC ***27*** *23:38:04.2±1.0, 5.11S×140.22E, mb4.3/4, mb1 4.4/6, mb1mx4.2/10, mbtmp4.3/6, ML3.9/2, MS4.1/2, Ms1 4.1/2, ms1mx3.5/18, Error ellipse: s-maj=37.5km s-min=24.5km az=75.0*

ISC 27 23:38:06.5±0.7**, 5.34S**±0.09×**140.2E**±0.1**, h33**^{km}**, n14, σ1**^{s}**17**/12**, mb4.2**/5**, MS4.7**/1**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.03	121	Pn	P	23 40 04.7	+1.2
	2.7nm,0.3s,baz=328,slow=9.4,SNR=6.1						
PMG				LR	LR	23 42 33.9	
	comp=Z,312nm,20.1s,baz=72,slow=33						
PMG	Port Moresby	8.03	121	eP	P	23 40 03.0	-0.6
PMG				LR	LR	23 42 33.9	
WB2	Warramunga Arr	15.58	201	eP	P	23 41 45.2	-0.3
WRA	Warramunga Arr	15.59	201	Pn	P	23 41 44.0	-1.5
	2.5nm,0.3s,baz=18,slow=12,SNR=5.7						
FITZ	Fitzroy Crossi	19.04	227	eP	P	23 42 28.8	+0.1
	6.4nm,0.4s						
FITZ	Fitzroy Crossi	19.04	227	P	P	23 42 28.9	+0.2
	1.0nm,0.3s,baz=51,slow=16,SNR=8.2						
STKA	Stephens Creek	26.44	177	P	P	23 43 45.0	+2.6
	11nm,0.9s,mb4.4,baz=348,slow=12,SNR=4.5						
STKA	Stephens Creek	26.44	177	eP	P	23 43 44.4	+2.1
ASAJ	Asahikawa	49.27	2	LR	LR	00 03 12.4	
	comp=Z,766nm,21.9s,MS4.7,baz=344,slow=31						
MKAR	Makanchi Array	72.74	322	P	P	23 49 34.4	+1.1
	2.5nm,0.8s,mb4.2,baz=108,slow=7.2,SNR=17						
BVAR	Borovoye Array	82.28	325	P	P	23 50 26.9	+0.8
	1.1nm,0.6s,mb4.0,baz=112,slow=7.3,SNR=7.1						
MCK	McKinley	86.43	25	eP	P	23 50 45.4	-1.2
	1.2nm,0.7s,mb4.2						
ILAR	Eielson Array	87.61	24	P	P	23 50 51.1	-1.2
	0.9nm,0.7s,mb4.1,baz=260,slow=4.1,SNR=4.8						
DBIC	Dimbokro	145.19	274	PKPbc	PKPbc	23 57 44.0	+1.7
	3.4nm,0.8s,baz=93,slow=5.9,SNR=6.2						

IDC ***27*** *23:58:12.7±1.8, 25.70N×109.92W, mb4.3/2, mb1 4.2/7, mb1mx3.9/22, mbtmp3.9/7, ML3.7/4, MS4.3/10, Ms1 4.3/10, ms1mx4.1/27, Error ellipse: s-maj=24.6km s-min=19.7km az=12.0*

NEIC ***27*** *23:58:14.5±1.7, 25.69N×109.82W, h10^{km}, mb4.4/2, Error ellipse: s-maj=26.0km s-min=14.1km az=217.0*

ISC 27 23:58:10.6±0.7**, 25.55N**±0.06×**109.74W**±0.09**, h10**^{km}**, n24, σ1**^{s}**17**/25**, mb4.2**/4**, MS4.2**/6**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPIG	La Paz	1.53	200	eP	Pn	23 58 37.8	-0.3
LPIG				iS	Sb	23 58 48.0	-10
LPIG				iS	Sb	23 58 57.7	-0.2
MAIG	Mazatlaan	3.82	127	eP	Pn	23 59 22.9	+12
TXAR	Lajitas Array	6.58	54	Pn	Pn	23 59 50.2	+0.4
	0.7nm,0.3s,baz=230,slow=13,SNR=17						
TXAR				Pg	Pg	00 00 16.5	-5.5
	2.9nm,0.3s,baz=232,slow=16,SNR=8.3						
TXAR				Sn	Sn	00 01 04.8	-0.9
	4.1nm,0.3s,baz=235,slow=22,SNR=4.4						
TXAR				Lg		00 01 42.9	
	10nm,0.3s,baz=230,slow=29,SNR=7.0						
TXAR				LR	LR	00 02 47.8	
	comp=Z,3µm,19.3s,baz=205,slow=42						
TXAR	Lajitas Array	6.58	54	Pn	Pn	23 59 50.2	+0.4
TXAR				Pg	Pg	00 00 16.5	-5.5
TXAR				Sn	Sn	00 01 04.8	-0.9
TXAR				Lg		00 01 42.9	
TXAR				LR	LR	00 02 47.8	
GLA	Glamis	8.70	330	eP	P	00 00 15.2	-4.3
ANMO	Albuquerque	9.79	16	Pn	P	00 00 34.3	-0.2
	baz=189,slow=13,SNR=9.5						
ANMO				Pg	P	00 01 21.6	+47
	baz=178,slow=14,SNR=6.0						
ANMO				Lg		00 03 24.1	
	baz=317,slow=14,SNR=5.6						
ANMO				LR	LR	00 03 57.5	
	comp=Z,2µm,18.4s,slow=36						
WUAZ	Wupatki	10.04	352	P	P	00 00 35.1	-2.8
LDFC	Landfair	10.57	335	P	P	00 00 43.5	-1.8
SDCO	Great Sand Dun	12.68	15	eP	P	00 01 15.6	+1.7
NVAR	Mina Array Bea	14.75	333	Pn	P	00 01 42.0	+1.0
	0.0nm,0.3s,baz=149,slow=15,SNR=4.9						
ELK	Elko	15.84	345	Pn	P	00 01 57.5	+2.2
	0.1nm,0.3s,baz=176,slow=11,SNR=9.9						
ELK				LR	LR	00 07 30.9	
	comp=Z,1µm,18.7s,baz=167,slow=36						
PDAR	Pinedale Array	17.18	0	P	P	00 02 12.7	+0.4
	0.1nm,0.3s,baz=171,slow=12,SNR=18						
PDAR				LR	LR	00 08 56.8	
	comp=Z,1µm,19.7s,baz=218,slow=38						
PDAR	Pinedale Array	17.18	0	P	P	00 02 12.7	+0.4
PDAR				LR	LR	00 08 56.8	
QLMT	Earthquake Lak	19.29	356	eP	P	00 02 37.2	-1.0
EYMN	Ely	26.58	28	P	P	00 03 51.2	+0.6
	5.1nm,0.8s,mb4.1						
ULM	Lac du Bonnet	26.89	20	LR	LR	00 13 55.7	
	comp=Z,174nm,20.5s,MS3.6,baz=236,slow=35						
YKA	Yellowknife Ar	37.08	356	LR	LR	00 21 10.7	
	comp=Z,993nm,20.2s,MS4.6,baz=130,slow=37						
ROSC	El Rosal	39.67	115	LR	LR	00 24 21.5	
	comp=Z,397nm,18.5s,MS4.3,baz=197,slow=39						
SDV	Santo Domingo	40.66	107	P	P	00 05 57.6	+4.7
	4.9nm,0.7s,mb4.2,baz=344,slow=6.9,SNR=6.4						
SDV				LR	LR	00 25 07.8	
	comp=Z,342nm,21.2s,MS4.2,baz=52,slow=40						
SDV	Santo Domingo	40.66	107	P	P	00 05 57.6	+4.7
SDV				LR	LR	00 25 07.8	
SJG	San Juan	40.99	91	LR	LR	00 23 53.7	
	comp=Z,205nm,21.4s,MS4.0,baz=144,slow=37						
ILAR	Eielson Array	45.89	339	P	P	00 06 34.8	+0.1
	2.6nm,0.9s,mb4.2,baz=147,slow=7.0,SNR=33						
RPN	Rapa Nui	52.37	180	LR	LR	00 24 54.8	
	comp=Z,287nm,18.9s,MS4.3,baz=264,slow=30						
SUMG	Summit	60.25	19	eP	P	00 08 21.2	+0.2
	2.5nm,0.7s,mb4.3						

NEIC ***28*** *00:02:15.5, 16.73N×99.87W, h8^{km}, MD3.6(MEX), After MEX.*

MEX 28 00:02:15.5±0.7**, 16.73N**×**99.86W, h5**^{km}**, MD3.6, 2C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.15	336	iP	Pg	00 02 17.5	-1.1
ACX				iS	Sg	00 02 20.0	-0.6
CAIG	El Cayaco	0.50	309	⇑iP	Pg	00 02 24.9	-0.7
CAIG				iS	Sg	00 02 32.6	+0.3
CAIG	El Cayaco	0.50	309	⇑iP	Pg	00 02 24.9	-0.7
CAIG				eS	Sg	00 02 32.6	+0.3
PLIG	Platanillo	1.69	11	iP	Pn	00 02 43.3	-2.5
PLIG				iS	Sn	00 03 02.8	-5.2
YAIG	Yautepec	2.25	19	iP	Pn	00 02 49.8	-4.1
YAIG				iS	Sn	00 03 18.7	-3.6
YAIG	Yautepec	2.25	19	eP	Pn	00 02 52.9	-1.0
YAIG				iS	Sn	00 03 18.7	-3.6
VHO	Vista Hermosa	3.01	83	iP	Pn	00 03 02.4	-2.4
VHO				iS	Sn	00 03 35.5	-6.1
VHO	Vista Hermosa	3.01	83	iP	Pn	00 03 03.5	-1.3
VHO				iS	Sn	00 03 35.5	-6.1

IDC ***28*** *00:16:42.0±0.5, 1.13N×97.35E, mb4.5/19, mb1 4.6/19, mb1mx4.6/22, mbtmp4.5/19, MS5.0/10, Ms1 5.0/10, ms1mx4.8/14, Error ellipse: s-maj=17.3km s-min=11.8km az=38.0*

BJI ***28*** *00:16:44.8, 1.01N×97.35E, h34^{km}, mB5.6, mb5.1, Ms5.4, Msz5.3*

MOS ***28*** *00:16:46.0±0.9, 1.25N×97.33E, h35^{km}, mb5.4/33, MS5.2/8, Error ellipse: s-maj=12.1km s-min=6.4km az=110.3*

HRVD ***28*** *00:16:47.1±0.3, 0.80N×96.98E, h37^{km}±1^{km}, MW5.2/66, Centroid moment Tensor Solution. LP body waves: s57,c92;Mantle waves: s66,c105; Half duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.61±.04; $M_{\theta\theta}$-0.46±.02; $M_{\phi\phi}$-0.14±.03; $M_{r\theta}$0.42±.03; $M_{\theta\phi}$0.55±.02; $M_{\phi r}$-0.30±.04; Best double couple: M_0.903×10^{17} NP1: ϕ_s309°,δ28°,λ93°. NP2:ϕ_s126°,δ62°,λ89°. Principal axes: T .769, Plg73°, Azm33°; N .269, Plg1°, Azm127°; P -1.038, Plg17°, Azm217°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***28*** *00:16:47.1±0.2, 1.15N×97.24E, h30^{km}, mb5.1/32 Error ellipse: s-maj=7.0km s-min=5.8km az=222.0*

NEIC Felt [II] at Gunungsitoli.

ISC 28 00:16:45.0±0.3**, 1.12N**±0.04×**97.25E**±0.04**, h30**^{km}**, h30**^{km}±1.8^{km}**:pP-P, n201, σ1**^{s}**06**/203**, mb5.0**/75**, MS5.2**/31**, 10C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IPM	Ipoh	5.10	48	P	Pn	00 18 02.2	+0.7
KULM	Kulim	5.35	39	ePn	Pn	00 18 05.5	+0.4
KGM	Kluang	6.13	82	P	Pn	00 18 17.5	+1.4
PBA	Port Blair	11.39	337	ex	x	00 20 58.4	
PBA				ex	x	00 23 34.1	
NNT	Nongplab	11.66	12	P	P	00 19 30.0	-2.7
PALK	Pallekele	17.60	291	Pn	P	00 20 48.3	-1.7
CHG	Chiang Mai	17.66	5	P	P	00 20 49.1	-1.7
KKM	Kota Kinabalu	19.54	75	eP	P	00 21 12.7	-0.8
KKM	Kota Kinabalu	19.54	75	P	P	00 21 13.3	-0.1
TSM	Tawau	20.83	81	P	P	00 21 27.8	+0.7
VIS	Vishakhapatnam	21.44	321	eP	P	00 21 32.0	-1.1
VIS				AMb	AMB	00 21 40.3	
	comp=Z,116nm,1.4s,mb5.0						
VIS				eS	S	00 25 20.3	-4.0
KOD	Kodaikanal	21.65	295	iP	P	00 21 35.0	-0.3
QIZ	Qiongzhong	21.66	34	⇓iP	P	00 21 35.0	-0.4
QIZ				S	S	00 25 36.5	+8.0
QIZ				AMB	AMB		
	comp=Z,50nm,1.7s,mb4.7						
QIZ				LR	LR		
	comp=N,4µm,13.8s,MS5.2						
QIZ				LR	LR		
	comp=E,6µm,13.1s,MS5.2						
QIZ				LR	LR		
	comp=Z,5µm,13.1s,MS5.1						
QIZ	Qiongzhong	21.66	34	eP	P	00 21 35.0	-0.3
	comp=Z,313nm,2.0s,mb5.4						
KMI	Kunming	24.45	12	⇑P	P	00 22 04.5	+1.7
KMI				AP		00 22 10.5	
KMI				XP		00 22 12.5	
KMI				PP	PP	00 22 43.5	+4.9
KMI				PPP	PPP	00 22 51.5	+2.5
KMI				PCP	PcP	00 25 45.3	+2.9
KMI				S	S	00 26 23.0	+5.1
KMI				XS		00 26 32.0	
KMI				PCS		00 29 20.5	
KMI				AMB	AMB		
	comp=Z,240nm,1.6s,mb5.4						
KMI				AMB	AMB		
	comp=Z,2µm,3.9s						
KMI				LR	LR		
	comp=N,11µm,15.3s,MS5.5						
KMI				LR	LR		
	comp=E,4µm,12.9s,MS5.5						
KMI				LR	LR		
	comp=Z,12µm,16.1s,MS5.5						
KMI	Kunming	24.45	12	⇑P	P	00 22 04.4	+1.6
	comp=Z,248nm,1.6s,mb5.4						
KMI				pP		00 22 10.5	
KMI				sP		00 22 12.5	
KMI				PP	PP	00 22 43.5	+4.9
KMI				PPP	PPP	00 22 51.5	+2.5
KMI				PcP	PcP	00 25 45.3	+2.9
KMI				S	S	00 26 23.1	+5.2
KMI				sS		00 26 32.0	
KMI				SS	SS	00 27 20.5	+7.4
KMI				PcS		00 29 20.6	
KMI				LR	LR		
	comp=Z,12µm,16.1s,MS5.5						
KMI	Kunming	24.45	12	⇑P	P	00 22 04.4	+1.6
KMI				*SP		00 22 12.5	
KMI						00 22 43.5	
KMI						00 25 45.3	
KMI				S	S	00 26 23.1	+5.2
KMI				SS	SS	00 27 20.5	+7.4
KMI				pmax	pmax		
	comp=Z,248nm,1.6s,mb5.4						
KMI				MLR	MLR		
	comp=Z,12µm,16.1s,MS5.5						
HYB	Hyderabad	24.51	312	iP	P	00 22 07.0	+3.6
HYB				eS	S	00 26 26.0	+7.0
HYB	Hyderabad	24.51	312	eP	P	00 22 07.0	+3.6
HYB				eS	S	00 26 36.0	+17
SHL	Shillong	24.85	348	eP	P	00 22 08.0	+1.4
SHL				eS	S	00 26 28.0	+3.2
BOK	Bokaro	25.09	335	eP	P	00 22 10.7	+1.7
BOK				AMb	AMB	00 22 18.8	
	comp=Z,99nm,2.3s,mb4.9						
BOK				eS	S	00 26 29.3	+0.5
KAD	Karad	27.82	307	eP	P	00 22 33.8	-0.3
ALBI	Allahabad	28.30	329	eP	P	00 22 37.0	-1.3
PKI	Pulchoki	28.65	338	eP	P	00 22 42.0	+0.5
	comp=Z,260nm,1.5s,mb5.7						
PKI	Pulchoki	28.65	338	eP	P	00 22 42.0	+0.5
PKI				pmax	pmax		
	comp=Z,130nm,1.5s,mb5.4						
GUN	Gumba	28.78	339	eP	P	00 22 43.6	+0.9
	comp=Z,811nm,1.6s						
DMN	Daman	28.80	337	eP	P	00 22 43.4	+0.6
KKN	Kakani	28.90	338	eP	P	00 22 43.0	-0.7
	comp=Z,279nm,1.5s,mb5.8						
KKN	Kakani	28.90	338	eP	P	00 22 43.0	-0.7
KKN				pmax	pmax		
	comp=Z,140nm,1.5s,mb5.5						
LSA	Lhasa	29.01	349	P	P	00 22 44.0	-0.8
LSA				AP	pP	00 22 54.0	+0.6
LSA				XP	sP	00 22 57.3	0.0
LSA				PCP	PcP	00 25 48.8	-4.2
LSA				S	S	00 27 34.3	+1.7
LSA				XS		00 27 54.0	
LSA				AMB	AMB		
	comp=Z,20nm,1.3s,mb4.7						
LSA				LR	LR		
	comp=N,1µm,26.8s,MS4.7						
LSA				LR	LR		
	comp=E,2µm,24.6s,MS4.7						
LSA				LR	LR		
	comp=Z,3µm,18.6s						
LSA	Lhasa	29.01	349	eP	P	00 22 45.8	+1.0
	comp=Z,18nm,0.8s,mb4.8						
LSA				eS	S	00 27 36.5	+3.9
LSA	Lhasa	29.01	349	eP	P	00 22 45.8	+1.0
LSA				eS	S	00 27 36.5	+3.9

LSA				pmax	pmax		
	comp=Z,18nm,0.8s,mb4.8						
BHPL	**Bhopal**	29.23	320	*e*P	P	00 22 47.5	+0.7
BHPL				AMb	AMB	00 23 03.4	
	comp=Z,27nm,1.0s,mb4.9						
GKN	**Gorkha**	29.34	337	*e*P	P	00 22 48.0	+0.3
	comp=Z,270nm,1.4s,mb5.8						
KOLN	**Koldanda**	29.55	335	*e*P	P	00 22 50.4	+0.7
	comp=Z,718nm,1.9s,mb6.1						
CD2	**Chengdu**	30.27	11	P	P	00 22 54.5	-1.4
CD2				AP	pP	00 23 04.0	-0.6
CD2				PP	PP	00 23 57.3	+2.1
CD2				S	S	00 27 59.8	+7.3
CD2				AMB	AMB		
	comp=Z,30nm,1.8s,mb4.7						
CD2				AMB	AMB		
	comp=Z,210nm,5.5s						
CD2				LR	LR		
	comp=N,4μm,15.3s						
CD2				LR	LR		
	comp=Z,5μm,15.3s,MS5.3						
ENH	**Enshi**	31.24	21	*e*P	P	00 23 02.9	-1.6
	comp=Z,30nm,0.5s,mb5.4						
PTH	**Pithoragarh**	32.60	332	*e*P	P	00 23 17.0	+0.6
AJM	**Ajmer**	33.30	321	*e*P	P	00 23 24.2	+1.7
NDI	**New Delhi**	33.43	327	*e*P	P	00 23 23.0	-0.7
WHN	**Wuhan**	33.46	27	P	P	00 23 23.3	-0.6
WHN				LR	LR		
	comp=N,2μm,10.9s,MS5.6						
WHN				LR	LR		
	comp=E,7μm,14.2s,MS5.6						
WHN				LR	LR		
	comp=Z,8μm,14.2s,MS5.6						
FITZ	**Fitzroy Crossi**	33.84	126	*e*P	P	00 23 26.1	-1.2
	comp=Z,14nm,0.8s,mb5.0						
FITZ	**Fitzroy Crossi**	33.84	126	P	P	00 23 26.2	-1.1
	comp=Z,14nm,0.7s,mb5.0,baz=285,slow=5.5,SNR=20						
DDI	**Dehra Dun**	34.29	330	*e*P	P	00 23 30.0	-1.1
DDI				*e*x	x	00 29 27.6	
LZH	**Lanzhou**	35.33	9	*e*P	P	00 23 39.8	-0.1
LZH				AP	pP	00 23 48.0	-0.7
LZH				XP	sP	00 23 53.5	+1.1
LZH				AMB	AMB		
	comp=Z,30nm,1.6s,mb5.0						
LZH				AMB	AMB		
	comp=Z,90nm,4.5s						
LZH				LR	LR		
	comp=E,5μm,15.3s						
LZH				LR	LR		
	comp=Z,6μm,18.1s,MS5.4						
LZH	**Lanzhou**	35.33	9	*e*P	P	00 23 39.7	-0.2
	comp=Z,33nm,1.6s,mb5.0						
LZH				pP	pP	00 23 48.0	-0.7
LZH				sP	sP	00 23 53.5	+1.1
LZH				PP	PP	00 24 45.5	-14
LZH				*e*S	S	00 28 46.4	-25
LZH				sS		00 29 02.6	
LZH				*e*SS	SS	00 30 38.5	-51
LZH				LR	LR		
	comp=Z,6μm,18.1s,MS5.4						
LZH	**Lanzhou**	35.33	9	*e*P	P	00 23 39.7	-0.2
LZH				*PP	pP	00 23 48.0	-0.7
LZH				*SP	sP	00 23 53.5	+1.1
LZH				*SS		00 29 02.6	
LZH				pmax	pmax		
	comp=Z,33nm,1.6s,mb5.0						
LZH				MLR	MLR		
	comp=Z,6μm,18.1s,MS5.4						
NJ2	**Nanjing**	36.91	31	*e*P	P	00 23 53.3	+0.1
NJ2				AP	pP	00 24 06.3	+4.2
NJ2				XP	sP	00 24 09.5	+3.7
NJ2				PP	PP	00 25 21.0	+1.5
NJ2				S	S	00 29 38.0	+2.4
NJ2				XS		00 29 55.0	
NJ2				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,190nm,3.7s						
NJ2				LR	LR		
	comp=N,8μm,13.4s,MS5.8						
NJ2				LR	LR		
	comp=E,6μm,12.9s,MS5.8						
NJ2				LR	LR		
	comp=Z,3μm,14.6s,MS5.3						
SSE	**Sheshan**	37.45	35	P	P	00 23 58.5	+0.7
SSE				AP	pP	00 24 04.5	-2.1
SSE				XP	sP	00 24 07.3	-3.1
SSE				PP	PP	00 25 23.8	-2.3
SSE				S	S	00 29 47.0	+3.1
SSE				XS		00 29 57.5	
SSE				SCS	ScS	00 34 10.5	+3.5
SSE				AMB	AMB		
	comp=Z,50nm,0.9s,mb5.3						
SSE				AMB	AMB		
	comp=Z,270nm,5.0s						
SSE				LR	LR		
	comp=N,2μm,14.9s,MS5.3						
SSE				LR	LR		
	comp=E,3μm,14.9s,MS5.3						
SSE				LR	LR		
	comp=Z,4μm,15.1s,MS5.3						
SSE	**Sheshan**	37.45	35	P	P	00 23 58.4	+0.6
	comp=Z,56nm,0.9s,mb5.4						
SSE				pP	pP	00 24 04.5	-2.1
SSE				sP	sP	00 24 07.3	-3.1
SSE				PP	PP	00 25 23.8	-2.3
SSE				S	S	00 29 47.0	+3.1
SSE				sS		00 29 57.5	
SSE				SS	SS	00 32 32.5	+15
SSE				ScS	ScS	00 34 10.5	+3.5
SSE				LR	LR		
	comp=Z,4μm,15.1s,MS5.3						
GTA	**Gaotai**	38.18	3	*e*P	P	00 24 03.8	-0.1
GTA				AP	pP	00 24 15.3	+2.6
GTA				XP	sP	00 24 20.0	+3.5
GTA				PP	PP	00 25 33.8	-0.9
GTA				PPP	PPP	00 25 56.3	-0.7
GTA				PCP	PcP	00 26 19.5	+0.9
GTA				S	S	00 29 54.0	-1.0
GTA				SCP		00 30 03.8	
GTA				PCS		00 30 07.0	
GTA				SS	SS	00 32 31.8	-2.1
GTA				SCS	ScS	00 34 12.0	+0.9
GTA				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.9						
GTA				AMB	AMB		
	comp=Z,480nm,8.0s						
GTA				LR	LR		
	comp=N,2μm,18.3s,MS5.2						
GTA				LR	LR		
	comp=E,2μm,15.6s,MS5.2						
GTA				LR	LR		
	comp=Z,3μm,17.9s,MS5.1						
NWAO	**Narrogin (SRO)**	38.76	153	P	P	00 24 08.7	-0.1
	comp=Z,9.4nm,0.9s,mb4.5,baz=270,slow=3.0,SNR=2.9						
JOW	**Kunigami**	39.26	47	P	P	00 24 11.8	-1.1
	comp=Z,9.1nm,0.2s,mb5.1,baz=233,slow=8.5,SNR=5.9						
BTO	**Baotou**	40.98	15	*e*P	P	00 24 27.3	+0.3
BTO				AMB	AMB		
	comp=Z,50nm,2.2s,mb4.8						
HHC	**Hu-ho-hao-te**	41.62	16	*e*P	P	00 24 33.5	+1.2
HHC				AP	pP	00 24 43.0	+1.8
HHC				XP	sP	00 24 46.5	+1.6
HHC				PP	PP	00 26 17.5	+5.9
HHC				PCP	PcP	00 26 29.5	-0.1
HHC				SCP		00 30 16.0	
HHC				PCS		00 30 20.8	
HHC				S	S	00 30 48.3	+1.8
HHC				XS		00 31 04.0	
HHC				SS	SS	00 33 50.3	+3.2
HHC				SCS	ScS	00 34 32.5	+1.2
HHC				AMB	AMB		
	comp=Z,30nm,2.2s,mb4.5						
HHC				AMB	AMB		
	comp=Z,670nm,8.4s						
HHC				LR	LR		
	comp=N,4μm,16.8s,MS5.5						
HHC				LR	LR		
	comp=E,4μm,16.8s,MS5.5						
HHC				LR	LR		
	comp=Z,4μm,15.6s,MS5.4						
WRA	**Warramunga Arr**	41.95	122	P	P	00 24 35.6	+0.3
	comp=Z,12nm,0.7s,mb4.7,baz=300,slow=9.1,SNR=38						
WRA				ScP		00 30 21.5	
	comp=Z,1.8nm,1.2s,baz=301,slow=4.9,SNR=5.1						
WRA				S	S	00 30 50.6	-1.0
	comp=Z,1.1nm,1.0s,baz=294,slow=15,SNR=6.1						
WRA	**Warramunga Arr**	41.95	122	P	P	00 24 35.6	+0.3
WRA				S	S	00 30 50.6	-1.0
WRAB	**Tennant Creek**	41.95	122	P	P	00 24 35.6	+0.3
	comp=Z,51nm,1.1s,mb5.1						
WRAB	**Tennant Creek**	41.95	122	P	P	00 24 35.6	+0.3
WRAB				pmax	pmax		
	comp=Z,51nm,1.1s,mb5.1						
WB2	**Warramunga Arr**	41.96	122	*e*P	P	00 24 35.5	+0.2
KSH	**Kashi**	42.87	336	*e*P	P	00 24 44.3	+1.7
KSH				*e*AP	pP	00 24 54.0	+2.5
KSH				*e*XP	sP	00 24 58.0	+2.9
KSH				*e*PP	PP	00 26 28.0	+3.5
KSH				*e*PCP	PcP	00 26 32.0	-1.8
KSH				*e*PPP	PPP	00 27 05.3	+6.4
KSH				*e*SCP		00 30 20.0	
KSH				*e*PCS		00 30 24.3	
KSH				*e*S	S	00 31 08.5	+3.6
KSH				*e*XS		00 31 28.3	
KSH				*e*SCS	ScS	00 34 39.0	+0.1
KSH				LR	LR		
	comp=N,2μm,11.0s,MS5.3						
KSH				LR	LR		
	comp=E,2μm,14.4s,MS5.3						
WMQ	**Urumqi**	43.36	350⇑	*i*P	P	00 24 47.3	+0.8
WMQ				AP	pP	00 24 57.0	+1.6
WMQ				XP	sP	00 25 01.0	+1.9
WMQ				PP	PP	00 26 30.0	+0.7
WMQ				PPP	PPP	00 27 06.0	+0.7
WMQ				SCP		00 30 24.0	
WMQ				S	S	00 31 12.5	+0.5
WMQ				XS		00 31 29.0	
WMQ				SCS	ScS	00 34 43.0	+1.1
WMQ				AMB	AMB		
	comp=Z,50nm,1.8s,mb4.9						
WMQ				AMB	AMB		
	comp=Z,560nm,4.4s						
WMQ				LR	LR		
	comp=N,1μm,16.3s						
WMQ				LR	LR		
	comp=E,2μm,21.6s						
WMQ				LR	LR		
	comp=Z,2μm,25.6s						
DL2	**Dalian**	43.72	28⇑	*i*P	P	00 24 50.3	+0.8
DL2				S	S	00 31 21.8	+4.5
DL2				AMB	AMB		
	comp=Z,80nm,0.5s,mb5.7						
DL2				AMB	AMB		
	comp=Z,430nm,4.8s						
DL2				LR	LR		
	comp=N,1μm,13.0s,MS5.0						
DL2				LR	LR		
	comp=E,550nm,14.4s,MS5.0						
DL2				LR	LR		
	comp=Z,1μm,15.4s,MS4.9						
JNU	**Nakatsue**	44.83	41	P	P	00 24 57.7	-0.9
	comp=Z,34nm,1.2s,mb5.0,baz=252,slow=6.3,SNR=6.1						
UCH	**Uchtor**	45.75	336	P	P	00 25 07.2	+1.5
	SNR=8.3						
KS15	**Wonju Array Si**	45.85	34	P	P	00 25 07.1	+0.5
TKM2	**Tokmak 2**	45.91	338	P	P	00 25 08.0	+1.0
	SNR=10						
KBK	**Karagaybulak**	45.94	337	P	P	00 25 08.8	+1.6
	SNR=16						
AML	**Almayashu**	46.00	336	P	P	00 25 09.2	+1.5
	SNR=9.3						
AAK	**Ala-Archa**	46.10	337	P	P	00 25 09.5	+1.0
	SNR=5.5						
AAK	**Ala-Archa**	46.10	337	P	P	00 25 08.7	+0.3
	comp=Z,19nm,1.1s,mb4.9						
AAK	**Ala-Archa**	46.10	337	P	P	00 25 08.7	+0.3
AAK				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.9						
FRU	**Bishkek**	46.22	337	*e*P	P	00 25 10.0	+0.6
FRU				*e*		00 25 23.0	
FRU				pmax	pmax		
	comp=Z,60nm,2.0s,mb5.2						
EKS2	**Erkin-Say**	46.41	336	P	P	00 25 12.2	+1.3
	SNR=7.8						
USP	**Ospenovka**	46.63	337	P	P	00 25 13.4	+0.8
	SNR=12						
SNY	**Shenyang**	46.95	27	⇑P	P	00 25 14.5	-0.7
SNY				AMB	AMB		
	comp=Z,40nm,1.7s,mb5.1						
SNY				LR	LR		
	comp=N,2μm,15.0s,MS5.3						
SNY				LR	LR		
	comp=E,2μm,15.3s,MS5.3						
SNY				LR	LR		
	comp=Z,3μm,15.3s,MS5.4						
SONM	**Songino Array**	47.20	8	P	P	00 25 17.5	+0.3
	comp=Z,8.3nm,0.5s,mb4.9,baz=194,slow=6.1,SNR=50						
SONM				PcP	PcP	00 26 49.0	+0.4
	comp=Z,3.2nm,0.8s,baz=191,slow=3.6,SNR=3.3						
SONM				LR	LR	00 47 52.4	
	comp=Z,5μm,18.5s,MS5.5,baz=189,slow=40						
ULN	**Ulaanbaatar**	47.33	9	P	P	00 25 18.3	+0.2
MKAR	**Makanchi Array**	47.33	346	P	P	00 25 18.3	+0.1
	comp=Z,5.1nm,0.5s,mb4.7,baz=160,slow=8.4,SNR=54						
MKAR				LR	LR	00 49 09.6	
	comp=Z,1μm,20.1s,MS4.8,baz=141,slow=41						
ZAK	**Zakamensk**	49.35	5	*e*P	P	00 25 33.3	-0.4
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.8s,mb4.4						
CN2	**Changchun**	49.35	27	*e*P	P	00 25 33.5	-0.4
CN2				*e*AP	pP	00 25 44.0	+1.1
CN2				*e*S	S	00 32 37.3	-0.1
CN2				AMB	AMB		
	comp=Z,50nm,1.4s,mb5.3						
CN2				LR	LR		
	comp=N,3μm,13.0s,MS5.5						
CN2				LR	LR		
	comp=E,2μm,13.0s,MS5.5						
CN2				LR	LR		
	comp=Z,4μm,13.0s,MS5.5						
IRK	**Irkutsk**	51.28	6	*e*P	P	00 25 46.9	-1.6
IRK				*e*		00 27 49.5	
IRK				pmax	pmax		
	comp=Z,100nm,1.8s,mb5.4						
HIA	**Hailar**	51.70	19	*e*P	P	00 25 51.3	-0.4
	comp=Z,21nm,1.0s,mb5.0						
HIA				*e*pP	pP	00 26 03.6	+2.9
HIA	**Hailar**	51.70	19	*e*P	P	00 25 51.3	-0.4
HIA				*e**PP	pP	00 26 03.6	+2.9
HIA				pmax	pmax		
	comp=Z,21nm,1.0s						
MJAR	**Matsushiro Arr**	51.72	42	P	P	00 25 51.0	-1.0
	comp=Z,2.9nm,0.4s,mb4.5,baz=219,slow=8.2,SNR=8.4						
MJAR				LR	LR	00 47 58.5	
	comp=Z,846nm,20.9s,MS4.8,baz=245,slow=36						
KURK	**Kurchatov**	51.88	345	P	P	00 25 52.8	-0.2
KURK	**Kurchatov**	51.88	345*c*	*i*P	P	00 25 53.0	0.0
MDJ	**Mudanjiang**	51.91	29	P	P	00 25 53.5	+0.2
MDJ				AP	pP	00 26 03.8	+1.4
MDJ				XP	sP	00 26 07.0	+1.1
MDJ				PP	PP	00 27 51.8	-0.1
MDJ				PCS		00 31 03.3	
MDJ				S	S	00 33 14.0	+1.3
MDJ				XS		00 33 31.0	
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,190nm,3.5s						
MDJ				LR	LR		
	comp=N,2μm,13.9s,MS5.3						
MDJ				LR	LR		
	comp=E,1μm,15.0s,MS5.3						
MDJ				LR	LR		
	comp=Z,3μm,15.6s,MS5.5						
MDJ	**Mudanjiang**	51.91	29	*e*P	P	00 25 54.1	+0.7
	comp=Z,12nm,0.8s,mb4.9						
CTA	**Charters Tower**	52.42	116	*e*P	P	00 25 57.5	0.0
	comp=Z,8.0nm,1.0s,mb4.6						
CTA	**Charters Tower**	52.42	116	*e*P	P	00 25 57.5	0.0
CTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CTAO	**Charters Tower**	52.42	116	P	P	00 25 57.3	-0.1
CIT	**Chita**	52.54	13	*e*P	P	00 25 57.7	-0.2
CIT				pmax	pmax		
	comp=Z,167nm,1.9s,mb5.6						
OPO	**Ambohidratompo**	52.94	246	P	P	00 26 02.0	+0.6
	comp=Z,14nm,1.1s,mb4.8,baz=73,slow=7.1,SNR=8.4						
STKA	**Stephens Creek**	53.26	132	*e*P	P	00 26 04.4	+0.8
	comp=Z,11nm,0.8s,mb4.8						
STKA	**Stephens Creek**	53.26	132	P	P	00 26 03.7	+0.1
	comp=Z,16nm,0.9s,mb5.0,baz=311,slow=6.9,SNR=23						
STKA				LR	LR	00 51 08.1	
	comp=Z,2μm,21.4s,MS5.2,baz=288,slow=39						
NVS	**Novosibirsk**	54.77	350⇑	*i*P	P	00 26 12.3	-2.0
NVS				*e*S	S	00 33 46.9	-4.3
NVS				pmax	pmax		
	comp=Z,206nm,3.0s						
NVS				pmax	pmax		
	comp=N,111nm,2.6s						
NVS				pmax	pmax		
	comp=E,35nm,2.0s						
NVS				smax			
	comp=N,36nm,1.9s						
NVS				smax			
	comp=E,24nm,1.8s						
KBD	**Kabd**	54.79	305	*e*P	P	00 26 15.5	+0.6
ATD	**Arta Tunnel**	54.96	283	P	P	00 26 16.0	-0.2
	comp=E,3.3nm,0.5s,mb4.6,baz=270,slow=20,SNR=3.1						
ATD	**Arta Tunnel**	54.96	283	P	P	00 26 16.0	-0.2
NAY	**Al-Naaiem**	55.19	305	*e*P	P	00 26 17.2	-0.5
NAY				AMb	AMB	00 26 29.3	
	comp=Z,22nm,1.1s,mb5.1						
MIB	**Mutribah**	55.31	306	*e*P	P	00 26 18.4	-0.3
MIB				AMb	AMB	00 26 31.5	
	comp=Z,50nm,0.9s,mb5.5						
KLR	**Kul'dur**	56.30	27⇓	*i*P	P	00 26 22.5	-3.0
KLR				*e*S	S	00 34 11.0	-0.8
KLR				pmax	pmax		
	comp=E,130nm,2.4s						
KLR				pmax	pmax		
	comp=Z,160nm,2.4s,mb5.6						
BRVK	**Borovoye**	56.41	341	P	P	00 26 25.1	-1.1
CHKZ	**Chkalovo**	56.82	341	P	P	00 26 28.0	-1.2
	comp=Z,63nm,1.5s,mb5.4						
CHKZ	**Chkalovo**	56.82	341	P	P	00 26 28.0	-1.1
CHKZ				pmax	pmax		
	comp=Z,63nm,1.5s,mb5.4						
BOD	**Bodaibo**	58.08	10	*e*P	P	00 26 37.3	-0.6
BOD				pmax	pmax		
	comp=Z,37nm,1.6s,mb5.2						
BHD	**Baghdad**	58.93	309	*e*x	x	00 26 42.0	
BHD				*e*x	x	00 34 47.0	
KMBO	**Kilima Mbogo**	60.04	268	P	P	00 26 52.2	+0.1
	comp=Z,2.1nm,1.0s,mb4.1,baz=71,slow=6.0,SNR=5.0						
KMBO				LR	LR	00 51 11.3	
	comp=Z,866nm,18.1s,MS4.9,baz=278,slow=34						
YSS	**Yuzh-Sakhalins**	60.38	34	P	P	00 26 55.1	+1.1
YSS	**Yuzh-Sakhalins**	60.38	34	*e*P	P	00 26 53.5	-0.5
YSS				*e**SP	sP	00 27 08.2	+1.6
YSS				S	S	00 35 12.0	+6.9
YSS				*e*PS	PS	00 35 24.0	-0.4
YSS				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.5						
YSS				MLR	MLR		
	comp=E,1μm,15.0s,MS5.3						
YSS				MLR	MLR		
	comp=N,1μm,16.0s,MS5.3						
YSS				MLR	MLR		
	comp=E,1μm,15.0s						
MSL	**Mosul**	61.03	312	*e*x	x	00 26 57.0	
MSL				*e*x	x	00 35 10.0	
GNI	**Garni**	61.39	316	P	P	00 27 05.1	+4.2
	comp=E,23nm,1.3s,mb5.2						
GNI	**Garni**	61.39	316	P	P	00 27 05.1	+4.2
GNI				pmax	pmax		
	comp=Z,23nm,1.3s						
TI2	**Plekhanov**	62.07	318⇑	*i*P	P	00 27 04.2	-1.3
TI2				*i*		00 27 17.2	
SVE	**Sverdlovsk**	62.78	338	*e*P	P	00 27 08.3	-1.7
SVE				*e*		00 27 20.4	
SVE				*e*		00 27 45.6	
SVE				pmax	pmax		
	comp=Z,100nm,2.0s,mb5.6						
SVE				MLR	MLR		
	comp=E,500nm,14.0s						
SVE				MLR	MLR		
	comp=Z,2μm,14.0s,MS5.3						
ARU	**Arti**	63.28	337	*e*P	P	00 27 10.6	-2.7
ARU	**Arti**	63.28	337⇑	*i*P	P	00 27 12.0	-1.3
ARU				*e*		00 27 47.6	
ARU				*e*		00 29 28.6	
ARU				*e*S	S	00 35 45.2	+3.6
ARU				*e*SS	SS	00 39 53.8	+3.8
ARU				pmax	pmax		
	comp=Z,16nm,1.4s,mb5.0						
ARU				MLR	MLR		
	comp=Z,1μm,19.0s,MS5.0						
ARU				MLR	MLR		
	comp=N,200nm,17.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,800nm,20.0s,MS4.9						
HNR	**Honiara**	63.30	101	*e*P	P	00 27 13.2	-0.8
	comp=E,20nm,0.3s,mb5.7						
HNR	**Honiara**	63.30	101	*e*P	P	00 27 13.2	-0.7
HNR				pmax	pmax		
	comp=Z,21nm,0.3s,mb5.8						
KIV	**Kislovodsk**	64.40	319	*e*P	P	00 27 16.2	-4.7
	comp=Z,12nm,0.9s,mb4.9						
KIV	**Kislovodsk**	64.40	319	*i* P	P	00 27 19.7	-1.2
KIV				pmax	pmax		
	comp=Z,14nm,1.3s,mb4.8						
GOF	**Gofitskoye**	64.66	320	*e*P	P	00 27 21.5	-1.0
YAK	**Yakutsk**	65.48	16	*e*P	P	00 27 26.7	-0.8
	comp=Z,117nm,1.4s,mb5.7						
YAK	**Yakutsk**	65.48	16	*e*P	P	00 27 26.7	-0.8
YAK				pmax	pmax		
	comp=Z,117nm,1.4s,mb5.7						
SOC	**Sochi**	66.22	318	*e*P	P	00 27 31.5	-1.0
SOC				*e*		00 27 59.2	
SOC				*e*		00 29 56.0	
SOC				*i* S	S	00 36 15.8	-2.2
SOC				*e*SSS	SSS	00 43 28.7	-2.3
SOC				pmax	pmax		
	comp=Z,23nm,1.0s,mb5.2						
SOC				MLR	MLR		
	comp=Z,466nm,16.0s,MS4.8						
ANN	**Anapa**	68.20	318	*e*P	P	00 27 53.0	+8.0
ANN				pmax	pmax		
	comp=Z,46nm,0.9s,mb5.5						
BRTR	**Keskin Array B**	69.21	312	P	P	00 27 50.2	-1.1
	comp=Z,1.4nm,0.8s,baz=131,slow=7.3,SNR=13						
VOR	**Voronezh**	69.87	326	P	P	00 27 54.0	-1.1
VOR				pmax	pmax		
	comp=Z,50nm,2.0s,mb5.1						
ANTO	**Ankara**	69.87	312	*e*P	P	00 28 02.6	+7.3
	comp=Z,6.2nm,0.8s,mb4.6						
ANTO	**Ankara**	69.87	312	*e*P	P	00 28 02.7	+7.3
ANTO				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.6						
MOS	**Moscow**	72.43	329	*e*P	P	00 28 07.9	-2.6
MOS				*i*		00 28 28.7	
MOS				*e*S	S	00 37 26.8	-4.2
MOS				pmax	pmax		
	comp=Z,52nm,1.6s,mb5.2						
MAW	**Mawson**	72.64	193	LR	LR	00 56 44.5	
	comp=Z,957nm,19.0s,MS5.1,baz=51,slow=33						
OBN	**Obninsk**	72.72	328	*i* P	P	00 28 11.8	-0.4
OBN				*e*		00 30 52.7	
OBN				*e*S	S	00 37 30.9	-3.3
OBN				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
OBN				MLR	MLR		
	comp=Z,400nm,14.0s,MS4.8						
TIXI	**Tiksi**	73.26	10	P	P	00 28 14.0	-1.1
TIXI	**Tiksi**	73.26	10*c*	*i*P	P	00 28 14.1	-1.0
TIXI				pmax	pmax		
	comp=Z,65nm,2.5s,mb5.1						
TIXI				MLR	MLR		
	comp=Z,4μm,24.0s,MS5.6						
KLMR	**Klimovskoe**	73.85	334	*e*P	P	00 28 23.5	+4.8
KLMR				pmax	pmax		
	comp=Z,40nm,1.6s,mb5.1						
LBTB	**Lobatse**	73.90	244	*e*P	P	00 28 20.7	+0.9
	comp=Z,11nm,1.4s,mb4.6						
LBTB	**Lobatse**	73.90	244	*e*P	P	00 28 20.7	+1.0
LBTB				pmax	pmax		
	comp=Z,11nm,1.4s,mb4.6						
BOSA	**Boshof**	74.78	240	P	P	00 28 25.4	+0.6
	comp=Z,4.2nm,0.8s,mb4.5,baz=95,slow=5.9,SNR=7.4						
BOSA				LR	LR	00 56 29.7	
	comp=Z,871nm,18.9s,MS5.1,baz=37,slow=32						
BOSA	**Boshof**	74.78	240	*e*P	P	00 28 26.4	+1.6
BOSA				LR	LR	00 56 29.8	
AKASG	**Malin Array Be**	75.36	322	P	P	00 28 26.1	-1.5

	comp=Z,0.7nm,0.4s,baz=82,slow=5.4,SNR=9.4						
JOF	**Joensuu**	**78.24**	**335**	*e*p	**P**	**00 28 42.0**	**-1.4**
	comp=Z,1.0nm,0.5s,mb4.0						
KWP	**Kalwaria**	**79.17**	**320**	*e*P	**P**	**00 28 48.2**	**-0.5**
KWP	**Kalwaria**	**79.17**	**320**	*e*P	**P**	**00 28 48.7**	**-0.1**
FINES	**FINESS Array B**	**80.10**	**333**	P	**P**	**00 28 53.0**	**-0.5**
	comp=Z,1.2nm,0.5s,mb4.1,baz=98,slow=6.3,SNR=16						
KAF	**Kangasniemi**	**80.18**	**333**	*e*p	**P**	**00 28 53.2**	**-0.7**
	comp=Z,3.5nm,0.7s,mb4.4						
KAF	**Kangasniemi**	**80.18**	**333**	*e*P	**P**	**00 28 53.2**	**-0.7**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.5						
PSZ	**Piszkesteto**	**80.71**	**318**	P	**P**	**00 28 57.9**	**+0.9**
OKC	**Ostrava-Krasne**	**82.12**	**320**	*e*P	**P**	**00 29 06.7**	**+2.4**
OKC				*e*pP	pP	00 29 14.6	+0.8
MORC	**Moravsky Berou**	**82.50**	**320**	*e*P	**P**	**00 29 06.3**	**-0.1**
	comp=Z,1.1nm,0.8s						
MORC				*e*	pP	00 29 14.2	-1.6
MORC	**Moravsky Berou**	**82.50**	**320**	*e*P	**P**	**00 29 06.3**	**0.0**
MORC				*e*	pP	00 29 14.2	-1.6
MORC				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARCES	**ARCESS Array B**	**82.63**	**340**	P	**P**	**00 29 07.2**	**+0.6**
	comp=Z,1.6nm,0.5s,mb4.3,baz=101,slow=4.7,SNR=19						
ARCES				LR	LR	01 10 15.9	
	comp=Z,963nm,20.0s,MS5.2,baz=111,slow=39						
DPC	**Dobruska-Polom**	**83.35**	**320**	*e*P	**P**	**00 29 11.6**	**+0.9**
DPC				*e*pP	pP	00 29 20.0	-0.2
BOJS	**Bojanci**	**83.59**	**316**	*e*P	**P**	**00 29 11.0**	**-1.1**
TREC	**Trest**	**83.78**	**319**	*e*P	**P**	**00 29 13.3**	**+0.4**
PERS	**Pernice**	**83.78**	**317**	*e*P	**P**	**00 29 21.6**	**+8.6**
PRU	**Pruhonice**	**84.45**	**320**	*e*P	**P**	**00 29 18.2**	**+1.9**
PRU				*e*pP	pP	00 29 26.2	+0.4
BRG	**Berggiesshubel**	**84.91**	**321**	*e*P	**P**	**00 29 29.3**	**+11**
GERES	**GERESS Array B**	**84.91**	**319**	P	**P**	**00 29 19.3**	**+0.7**
	comp=Z,1.4nm,0.9s,mb4.1,baz=72,slow=4.2,SNR=9.4						
KHC	**Kasperske Hory**	**85.01**	**319**	*e*P	**P**	**00 29 18.9**	**-0.2**
KHC				*e*pP	pP	00 29 27.8	-0.8
RUE	**Ruedersdorf**	**85.13**	**322**	*e*P	**P**	**00 29 20.9**	**+1.3**
CLL	**Collm**	**85.53**	**321**	P	**P**	**00 29 22.0**	**+0.4**
CLL				*e**PP	pP	00 29 32.0	+0.8
CLL				*e**SP	sP	00 29 37.0	+2.8
CLL	**Collm**	**85.53**	**321**	*e*P	**P**	**00 29 22.0**	**+0.4**
CLL				*e*pP	pP	00 29 32.0	+0.8
CLL				*e*sP	sP	00 29 37.0	+2.8
VNDA	**Vanda**	**85.73**	**169**	P	**P**	**00 29 23.9**	**+1.8**
MOX	**Moxa**	**86.37**	**320**	P	**P**	**00 29 34.6**	**+8.8**
	comp=Z,26nm,1.9s,mb5.1						
MOX	**Moxa**	**86.37**	**320**	P	**P**	**00 29 34.6**	**+8.8**
MOX				pmax	pmax		
	comp=Z,26nm,1.9s,mb5.1						
GRA1	**Grafenberg Arr**	**86.58**	**320**	*e*P	**P**	**00 29 21.5**	**-5.4**
	comp=Z,26nm,2.3s,mb5.0						
GRA1				*e*pP	pP	00 29 27.9	-8.5
GRA1				*e*		00 29 37.8	
GRA1				*e*		00 29 49.3	
GRF	**Grafenberg Arr**	**86.58**	**320**	*e*P	**P**	**00 29 21.5**	**-5.4**
	comp=Z,26nm,2.3s,mb5.0						
GRF				*e*pP	pP	00 29 27.9	-8.5
GRF				*e*		00 29 37.8	
GRF				*e*		00 29 49.3	
GRF	**Grafenberg Arr**	**86.58**	**320**	*e*P	**P**	**00 29 21.5**	**-5.4**
GRF				*e**PP	pP	00 29 27.9	-8.5
GRF				*e*		00 29 37.8	
GRF				pmax	pmax		
	comp=Z,26nm,2.3s,mb5.0						
GRF	**Grafenberg Arr**	**86.58**	**320**	*e*P	**P**	**00 29 21.5**	**-5.4**
GRF				*e**PP	pP	00 29 27.9	-8.5
GRF				*e*		00 29 37.8	
GRF				pmax	pmax		
	comp=Z,26nm,2.3s,mb5.0						
NB2	**NORSAR Subarra**	**87.10**	**331**	P	**P**	**00 29 28.9**	**-0.2**
	comp=Z,8.2nm,1.0s,mb4.9,baz=92,slow=5.0						
NOA	**NORSAR Array B**	**87.10**	**331**	P	**P**	**00 29 29.4**	**+0.2**
	comp=Z,1.4nm,0.8s,mb4.3,baz=94,slow=5.0,SNR=5.2						
NOA				LR	LR	01 14 31.0	
	comp=Z,417nm,19.7s,MS4.8,baz=60,slow=40						
NAO	**NORSAR Subarra**	**87.28**	**331**	P	**P**	**00 29 28.9**	**-1.1**
	comp=Z,8.2nm,1.0s,mb4.9						
NAO	**NORSAR Subarra**	**87.28**	**331**	P	**P**	**00 29 28.9**	**-1.1**
NAO				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.9						
KONO	**Kongsberg**	**87.85**	**329**	*i* P	**P**	**00 29 37.6**	**+4.8**
LPG	**La Plagne**	**89.56**	**315**	*e*P	**P**	**00 29 42.3**	**+1.0**
	comp=Z,33nm,1.2s,mb5.2						
LPG	**La Plagne**	**89.56**	**315**	*e*P	**P**	**00 29 42.3**	**+1.0**
LPG				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.2						
ILAR	**Eielson Array**	**99.75**	**23**	PP	PP	00 34 30.8	-3.6
	comp=Z,0.8nm,1.1s,baz=290,slow=6.7,SNR=4.2						
ILAR				LR	LR	01 21 59.8	
	comp=Z,594nm,18.3s,MS5.1,baz=242,slow=39						
PMR	**Palmer**	**100.05**	**26**	*e*P	P	00 30 32.3	+3.5
TBI	**Tubuai**	**111.77**	**115**	*e*LR	LR	01 08 39.5	
	comp=Z,683nm,24.0s						
PPT	**Papeete**	**112.40**	**108**	*e*LR	LR	01 08 57.7	
	comp=Z,553nm,23.0s						
RKT	**Rikitea**	**124.85**	**118**	*e*LR	LR	01 14 42.7	
	comp=Z,530nm,24.2s						
CHMT	**Chamberlain Mo**	**125.20**	**25**	*e*PKPdf	PKPdf	00 35 45.8	-2.5
HLID	**Hailey**	**127.25**	**29**	*e*PKPdf	PKPdf	00 35 49.6	-2.7
ULM	**Lac du Bonnet**	**127.61**	**11**	PKP	PKPdf	00 35 49.4	-3.4
	comp=Z,2.9nm,1.1s,baz=301,slow=5.9,SNR=3.1						
NVAR	**Mina Array Bea**	**128.82**	**36**	PKP	PKPdf	00 35 51.8	-3.7
	comp=Z,1.1nm,0.8s,baz=236,slow=1.3,SNR=6.8						
MNV	**Mina**	**128.90**	**36**	PKPdf	PKPdf	00 35 55.0	-0.7
REDW	**Red Top Meadow**	**129.05**	**26**	PKPdf	PKPdf	00 35 53.9	-1.9
PDAR	**Pinedale Array**	**130.09**	**26**	PKP	PKPdf	00 35 54.8	-3.0
	comp=Z,0.4nm,0.5s,baz=90,slow=1.5,SNR=6.4						
DUG	**Dugway**	**130.57**	**30**	PKPdf	PKPdf	00 35 57.6	-1.2
LPM	**Los Pinos Moun**	**138.23**	**30**	PKPdf	PKPdf	00 36 14.5	+1.4
BNM	**Barren Site**	**138.36**	**30**	PKPdf	PKPdf	00 36 06.3	-7.1
LTX	**Lajitas**	**143.71**	**32**	PKPdf	PKPdf	00 36 18.4	-4.5
TXAR	**Lajitas Array**	**143.71**	**32**	PKP	PKPdf	00 36 17.9	-5.1
	comp=Z,0.8nm,0.5s,baz=139,slow=0.8,SNR=14						
TXAR	**Lajitas Array**	**143.71**	**32**	PKP	PKPdf	00 36 17.9	-5.1
CPUP	**Villa Florida**	**144.98**	**222**	*e*PKPdf	PKPdf	00 36 22.1	-3.3
NATX	**Nacogdoches**	**145.41**	**18**	*e*PKPdf	PKPdf	00 36 23.6	-2.3
GOGA	**Godfrey**	**145.65**	**1**	PKPdf	PKPdf	00 36 25.0	-1.3
LPAZ	**La Paz**	**159.15**	**223**	PKP	PKPdf	00 36 44.7	-1.6
	comp=Z,1.0nm,1.1s,baz=214,slow=15,SNR=2.2						
LPAZ	**La Paz**	**159.15**	**223**	PKP	PKPdf	00 36 44.7	-1.6
LPAZ				PKPdf	PKPdf	00 36 49.8	+3.5

*ISK **28** 01:14:54.4, 36.89N×44.73E, h33^{km}, MD3.5*
*CSEM **28** 01:14:54.4, 36.89N×44.73E, h33^{km}, MD3.5, After ISK*
ISC 28 01:14:51.2±1.7**, 36.65N**±0.09×**44.62E**±0.08**, h10**^{km}**, n10, σ1**^{s}**23**/14**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HKR	**Hakkari**	**1.17**	**323**	PG	**Pb**	**01 15 12.3**	**-0.7**
HKR				SG	**Sb**	**01 15 27.0**	**-0.9**
HAKT	**HAKKARI**	**1.17**	**321**	*i* P	**Pb**	**01 15 12.0**	**-1.0**
HAKT				*i* S	**Sb**	**01 15 29.4**	**+1.4**
MSL	**Mosul**	**1.29**	**254**	*e*x	x	01 15 23.5	
MSL				*e*x	x	01 15 45.5	
MSL				*i* x	x	01 15 47.3	
VANT	**Van**	**2.04**	**332**	*e*PN	**Pn**	**01 15 26.5**	**+0.4**
TVAN	**Van**	**2.11**	**333**	*i* P	**Pn**	**01 15 27.3**	**+0.3**
TVAN				*i* S	**Sn**	**01 15 55.2**	**+1.6**
VANB	**Van**	**2.18**	**334**	*e*PN	**Pn**	**01 15 27.8**	**-0.2**
CLDR	**Caldiran**	**2.55**	**348**	*e*PN	**Pn**	**01 15 31.3**	**-2.1**
BTMT	**Batman**	**2.93**	**303**	*e*PN	**Pn**	**01 15 41.4**	**+2.6**
BEST	**Besiri**	**2.95**	**296**	*i* P	**Pg**	**01 15 48.6**	**-1.5**
BEST				*i* S	**Sg**	**01 16 28.8**	**-0.6**
MARD	**Mardin**	**3.15**	**283**	*i* P	**Pn**	**01 15 43.5**	**+1.7**
MARD				*i* S	**Sg**	**01 16 35.8**	**-0.2**

*IDC **28** 01:26:21.0±22.0, 20.03S×68.33W, h162^{km}±143^{km}, mb3.9/1, mb1 3.4/4, mb1mx3.2/17, mbtmp3.9/4, ML3.9/2, MS3.2/1, Ms1 3.3/1, ms1mx2.9/20, Error ellipse: s-maj=310.1km s-min=41.3km az=19.0*
*NEIC **28** 01:26:23.3±4.1, 19.81S×68.24W, h179^{km}±24^{km}, mb3.9/1, Error ellipse: s-maj=53.5km s-min=19.1km az=210.0*
ISC 28 01:26:23.6±5.2**, 19.8S**±0.4×**68.2W**±0.3**, h194**^{km}±29^{km}**, n8, σ0**^{s}**79**/8**, mb3.9**/2**, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.47**	**1**	P	**P**	**01 27 19.2**	**+0.1**
	3.3nm,0.3s,baz=190,slow=8.6,SNR=57						
LPAZ				LR	LR	01 29 05.2	
	comp=Z,326nm,21.2s,baz=1.2,slow=44						
LPAZ	**La Paz**	**3.47**	**1**	*e*Pn	**P**	**01 27 19.3**	**+0.1**
LPAZ				*e*Sn	**S**	**01 28 02.4**	**+0.4**
SIV	**San Ignacio**	**7.74**	**62**	P	**P**	**01 28 13.2**	**-0.9**
	2.0nm,0.3s,baz=250,slow=12,SNR=30						
SAML	**Samuel**	**11.79**	**25**	*e*Pn	**P**	**01 29 07.0**	**+0.1**
BDFB	**Brasilia**	**19.64**	**81**	P	**P**	**01 30 40.0**	**+0.8**
	0.3nm,0.3s,baz=232,slow=9.0,SNR=3.3						
SDV	**Santo Domingo**	**28.58**	**355**	*e*P	**P**	**01 32 03.2**	**-0.7**
	1.3nm,0.6s,mb3.7						
DBIC	**Dimbokro**	**67.59**	**74**	P	**P**	**01 37 02.0**	**+0.3**
	3.3nm,0.8s,mb4.0,baz=198,slow=8.9,SNR=4.8						
MKAR	**Makanchi Array**	**143.84**	**35**	PKP	PKPdf	01 45 36.6	+1.1
	0.8nm,0.8s,baz=323,slow=3.0,SNR=7.5						

*IDC **28** 01:30:50.9±1.6, 17.61S×178.61W, h558^{km}±23^{km}, mb3.7/5, mb1 3.7/6, mb1mx3.3/17, mbtmp4.6/6, Error ellipse: s-maj=57.7km s-min=17.0km az=153.0*
*NEIC **28** 01:30:51.7±1.1, 17.74S×178.52W, h578^{km}±14^{km}, mb4.3/4, Error ellipse: s-maj=25.4km s-min=14.0km az=168.0*
ISC 28 01:30:51.8±1.7**, 17.5S**±0.5×**178.5W**±0.1**, h614**^{km}±46^{km}**, n21, σ0**^{s}**93**/20**, mb4.3**/6**, 2C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.38**	**62**	P	**P**	**01 32 44.2**	**-2.0**
	4.8nm,0.3s,baz=117,slow=12,SNR=8.6						
AFI				S	**S**	**01 34 18.1**	**+0.7**
	1.6nm,0.3s,baz=287,slow=19,SNR=3.1						
AFI	**Afiamalu**	**7.38**	**62**	*e*P	**P**	**01 32 45.9**	**-0.2**
	9.4nm,0.4s						
AFI				S	**S**	**01 34 18.1**	**+0.7**
CTA	**Charters Tower**	**33.45**	**260**	P	**P**	**01 36 43.7**	**+0.3**
	3.1nm,0.4s,mb4.3,baz=80,slow=12,SNR=9.9						
CTA	**Charters Tower**	**33.45**	**260**	P	**P**	**01 36 43.7**	**+0.3**
CTAO	**Charters Tower**	**33.45**	**260**	*e*P	**P**	**01 36 43.8**	**+0.4**
	8.7nm,0.8s,mb4.4						
PMG	**Port Moresby**	**34.33**	**279**	P	**P**	**01 36 51.2**	**+0.5**
	20nm,0.9s,mb4.8,baz=102,slow=5.8,SNR=5.9						
STKA	**Stephens Creek**	**38.77**	**241**	*e*P	**P**	**01 37 27.2**	**+0.2**
	6.2nm,1.1s,mb4.0						
STKA	**Stephens Creek**	**38.77**	**241**	P	**P**	**01 37 27.2**	**+0.3**
	4.8nm,0.6s,mb4.2,baz=87,slow=8.6,SNR=17						
STKA	**Stephens Creek**	**38.77**	**241**	*e*P	**P**	**01 37 27.3**	**+0.4**
WB2	**Warramunga Arr**	**44.63**	**259**	*e*P	**P**	**01 38 13.1**	**-0.3**
WRAB	**Tennant Creek**	**44.63**	**259**	*e*P	**P**	**01 38 13.3**	**-0.1**
WRA	**Warramunga Arr**	**44.64**	**259**	P	**P**	**01 38 12.1**	**-1.3**
	3.3nm,0.3s,mb4.3,baz=96,slow=7.1,SNR=32						
FITZ	**Fitzroy Crossi**	**53.03**	**260**	*e*P	**P**	**01 39 15.9**	**+0.5**
	4.6nm,1.1s,mb3.7						
FITZ	**Fitzroy Crossi**	**53.03**	**260**	P	**P**	**01 39 15.9**	**+0.5**
	3.4nm,0.4s,mb4.0,baz=61,slow=4.9,SNR=9.1						
CASY	**Casey**	**66.48**	**205**	*e*P	**P**	**01 40 44.3**	**+1.0**
	17nm,1.1s,mb4.4						
VNA3	**Neumayer Olymp**	**91.15**	**176**	⇑*i*	**P**	**01 42 52.7**	**-0.3**
VNA2	**Neumayer--Watz**	**91.59**	**177**		**P**	**01 42 56.0**	**+1.0**
VNA1	**Neumayer--Stat**	**91.82**	**177**	⇑*i*	**P**	**01 42 53.2**	**-2.9**
MKAR	**Makanchi Array**	**108.80**	**314**	PKiKP		01 48 15.7	
	0.3nm,0.4s,baz=152,slow=1.1,SNR=7.6						
FINES	**FINESS Array B**	**132.78**	**344**	PKP	PKPdf	01 49 02.3	+4.5
	1.1nm,0.8s,baz=90,slow=5.6,SNR=4.5						
GERES	**GERESS Array B**	**147.20**	**345**	PKPbc	PKPdf	01 49 32.1	+8.4
	0.8nm,0.4s,baz=45,slow=1.4,SNR=8.6						

*IDC **28** 01:32:00.4±4.8, 12.23N×141.03E, h50^{km}±44^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/16, mbtmp4.1/7, ML4.0/1, MS3.4/1, Ms1 3.4/1, ms1mx2.4/25, Error ellipse: s-maj=39.4km s-min=21.3km az=96.0*
*NEIC **28** 01:32:01.5±2.5, 12.19N×141.05E, h58^{km}±25^{km}, mb4.4/3, Error ellipse: s-maj=26.1km s-min=10.7km az=87.0*
ISC 28 01:32:00.3±4.3**, 12.21N**±0.09×**141.1E**±0.3**, h66**^{km}±42^{km}**, n15, σ0**^{s}**49**/13**, mb4.1**/9**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.94**	**69**	P	**P**	**01 32 59.4**	**-0.3**
	11nm,0.3s,baz=215,slow=18,SNR=3.2						
GUMO	**Guam**	**3.94**	**69**	*e*Pn	**P**	**01 33 00.0**	**+0.3**
PMG	**Port Moresby**	**22.30**	**164**	*e*P	**P**	**01 36 54.2**	**+0.8**
	16nm,0.9s,mb4.3						
JNU	**Nakatsue**	**22.82**	**337**	LR	LR	01 45 54.6	
	comp=Z,86nm,18.0s,baz=298,slow=37						
CTAO	**Charters Tower**	**32.49**	**171**	*e*P	**P**	**01 38 27.1**	**+0.2**
WRA	**Warramunga Arr**	**32.63**	**192**	P	**P**	**01 38 27.9**	**-0.3**
	1.8nm,0.6s,mb4.1,baz=11,slow=9.9,SNR=8.8						
STKA	**Stephens Creek**	**43.84**	**179**	P	**P**	**01 40 00.7**	**-1.1**
	4.7nm,1.1s,mb4.2,baz=12,slow=8.6,SNR=3.6						
MKAR	**Makanchi Array**	**59.95**	**317**	P	**P**	**01 42 02.1**	**0.0**
	1.0nm,0.8s,mb3.9,baz=98,slow=8.6,SNR=6.7						
KURK	**Kurchatov**	**63.29**	**321**	*e*P	**P**	**01 42 24.3**	**-0.1**
	3.0nm,0.7s,mb4.3						
BRVK	**Borovoye**	**68.80**	**322**	*e*P	**P**	**01 42 59.6**	**+0.2**
	3.9nm,1.0s,mb4.2						
ILAR	**Eielson Array**	**71.39**	**25**	P	**P**	**01 43 14.4**	**-0.5**
	0.4nm,0.6s,mb3.4,baz=247,slow=6.0,SNR=9.3						
CASY	**Casey**	**81.46**	**192**	*e*P	**P**	**01 44 11.8**	**+0.4**
ARCES	**ARCESS Array B**	**87.24**	**341**	P	**P**	**01 44 40.8**	**+0.6**
	1.4nm,0.6s,mb4.1,baz=63,slow=5.4,SNR=8.6						
FINES	**FINESS Array B**	**90.82**	**334**	P	**P**	**01 44 57.0**	**-0.3**
	1.2nm,0.6s,mb4.2,baz=78,slow=6.2,SNR=15						
LPAZ	**La Paz**	**151.41**	**102**	PKPbc	PKPdf	01 51 51.6	+10
	1.3nm,0.6s,baz=242,slow=4.0,SNR=9.9						

NNC 28 01:47:26.4±3.2**, 37.14N×70.58E, mpv3.2, 3C, Error ellipse: s-maj=35.6km s-min=16.2km az=163.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.95**	**360**	Pn	Pn	01 48 58.5	+0.6
	0.5nm,0.3s,baz=178,slow=12,SNR=33						
KK31				⇑Sn	Sn	01 50 09.5	+1.7
	2.7nm,0.5s,baz=185,slow=23,SNR=7.9						
AAK	**Ala-Archa**	**6.26**	**28**	Pn	Pn	01 48 59.7	-2.5
	1.8nm,0.5s						
AAK				⇑Sn	Sn	01 50 14.7	-0.7
	4.9nm,1.1s						
AB31	**Akbulak array**	**14.36**	**331**	⇑P	P	01 50 50.9	-1.9
	0.6nm,0.7s,baz=159,slow=11,SNR=5.1						

*BJI **28** 01:51:34.5, 15.60N×147.30E, h35^{km}, mB5.1, mb4.7*
*MOS **28** 01:51:34.3±1.2, 15.58N×147.29E, h33^{km}, mb4.7/7, Error ellipse: s-maj=17.3km s-min=12.1km az=102.3*
*NEIC **28** 01:51:36.6±0.4, 15.57N×147.28E, h35^{km}, mb4.7/10, Error ellipse: s-maj=11.1km s-min=8.2km az=90.0*
*IDC **28** 01:51:37.5±4.2, 15.59N×147.16E, h42^{km}±40^{km}, mb3.8/10, mb1 4.0/11, mb1mx3.9/18, mbtmp4.0/11, ML3.5/1, MS3.2/1, Ms1 3.2/1, ms1mx2.4/24, Error ellipse: s-maj=30.3km s-min=18.8km az=90.0*
ISC 28 01:51:37.0±2.6**, 15.52N**±0.08×**147.2E**±0.1**, h55**^{km}±22^{km}**, n39, σ0**^{s}**85**/36**, mb4.4**/21**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.96**	**230**	P	**P**	**01 52 23.1**	**+0.4**
	6.5nm,0.3s,baz=184,slow=19,SNR=2.2						
GUMO				S	**S**	**01 52 57.0**	**-0.2**
	30nm,0.3s,baz=3.2,slow=21,SNR=4.3						
MJAR	**Matsushiro Arr**	**22.42**	**341**	P	**P**	**01 56 32.0**	**-0.1**
	1.4nm,0.4s,mb3.8,baz=165,slow=11,SNR=3.7						
JNU	**Nakatsue**	**22.93**	**323**	LR	LR	02 03 46.9	
	comp=Z,55nm,20.3s,baz=76,slow=32						
WRAB	**Tennant Creek**	**37.42**	**200**	*e*P	**P**	**01 58 45.4**	**-1.4**
	12nm,1.3s,mb4.6						
WRAB	**Tennant Creek**	**37.42**	**200**	*e*P	**P**	**01 58 45.4**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,12nm,1.3s,mb4.6						
WRA	**Warramunga Arr**	**37.44**	**200**	P	**P**	**01 58 47.6**	**+0.7**
	comp=Z,0.7nm,0.5s,mb3.8,baz=24,slow=9.4,SNR=3.1						
ULN	**Ulaanbaatar**	**46.15**	**323**	*e*P	**P**	**01 59 57.7**	**-0.2**
	comp=Z,1.5nm,0.6s,mb4.1						
ULN	**Ulaanbaatar**	**46.15**	**323**	*e*P	**P**	**01 59 57.7**	**-0.2**
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.9						
SONM	**Songino Array**	**46.52**	**323**	P	**P**	**02 00 00.4**	**-0.3**
	comp=Z,1.1nm,0.6s,mb4.0,baz=135,slow=6.8,SNR=6.5						
STKA	**Stephens Creek**	**47.43**	**186**	P	**P**	**02 00 07.8**	**-0.4**
	comp=Z,1.5nm,0.6s,mb4.1,baz=11,slow=13,SNR=4.3						
STKA	**Stephens Creek**	**47.43**	**186**	*e*P	**P**	**02 00 08.0**	**-0.2**
LSA	**Lhasa**	**53.17**	**296**	*e*P	**P**	**02 00 53.9**	**+1.9**
	comp=Z,6.9nm,0.6s,mb4.8						
LSA	**Lhasa**	**53.17**	**296**	*e*P	**P**	**02 00 53.9**	**+2.0**
LSA				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.8						
TIXI	**Tiksi**	**57.18**	**353**	*e*P	**P**	**02 01 20.5**	**+0.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
WMQ	**Urumqi**	**57.48**	**312**	*e*P	**P**	**02 01 23.5**	**+0.6**
JIRN	**Jiri**	**57.51**	**293**	*e*P	**P**	**02 01 23.8**	**+0.5**
	comp=Z,12nm,0.5s,mb5.2						
GUN	**Gumba**	**57.78**	**293**	*e*P	**P**	**02 01 25.3**	**+0.1**
	comp=Z,12nm,0.5s,mb5.1						
TAU	**Tasmania Unive**	**58.13**	**180**	*e*P	**P**	**02 01 27.2**	**-0.2**
KKN	**Kakani**	**58.31**	**293**	*e*P	**P**	**02 01 29.1**	**+0.2**
DMN	**Daman**	**58.47**	**293**	*e*P	**P**	**02 01 30.3**	**+0.3**
GKN	**Gorkha**	**58.87**	**294**	*e*P	**P**	**02 01 33.2**	**+0.4**
	comp=Z,19nm,0.8s,mb5.2						
KOLN	**Koldanda**	**59.80**	**293**	*e*P	**P**	**02 01 39.2**	**0.0**
	comp=Z,9.2nm,0.9s,mb4.8						
MKAR	**Makanchi Array**	**61.70**	**315**	P	**P**	**02 01 51.5**	**-0.3**
	comp=Z,2.8nm,0.6s,mb4.6,baz=90,slow=8.5,SNR=21						
MKAR	**Makanchi Array**	**61.70**	**315**	P	**P**	**02 01 51.5**	**-0.4**
NVS	**Novosibirsk**	**62.51**	**324**	*e*P	**P**	**02 01 54.4**	**-2.7**
KURK	**Kurchatov**	**64.59**	**319**	*e*P	**P**	**02 02 10.4**	**-0.4**
	comp=Z,17nm,1.1s,mb5.0						
KURK	**Kurchatov**	**64.59**	**319**	*e*P	**P**	**02 02 10.4**	**-0.4**
KURK				pmax	pmax		
	comp=Z,17nm,1.1s,mb5.0						
ILAR	**Eielson Array**	**65.87**	**25**	P	**P**	**02 02 17.2**	**-1.6**
	comp=Z,1.0nm,0.6s,mb4.0,baz=253,slow=6.2,SNR=16						
CHKZ	**Chkalovo**	**69.71**	**322**	*e*P	**P**	**02 02 41.8**	**-1.2**
	comp=Z,6.0nm,1.4s,mb4.3						
CHKZ	**Chkalovo**	**69.71**	**322**	*e*P	**P**	**02 02 41.8**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.4s,mb4.3						
BRVK	**Borovoye**	**69.90**	**321**	*e*P	**P**	**02 02 44.0**	**0.0**
	comp=Z,4.0nm,1.0s,mb4.3						
BRVK	**Borovoye**	**69.90**	**321**	*e*P	**P**	**02 02 44.0**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.3						
NVAR	**Mina Array Bea**	**83.96**	**52**	P	**P**	**02 04 03.8**	**+1.0**
	comp=Z,0.5nm,0.9s,mb3.7,baz=239,slow=5.3,SNR=3.9						
ELK	**Elko**	**85.61**	**49**	P	**P**	**02 04 12.6**	**+1.7**
	comp=Z,0.6nm,0.5s,mb4.0,baz=239,slow=13,SNR=4.5						
ARCES	**ARCESS Array B**	**85.94**	**343**	P	**P**	**02 04 12.6**	**+0.7**
	comp=Z,2.2nm,0.8s,mb4.4,baz=59,slow=7.1,SNR=7.6						
FINES	**FINESS Array B**	**90.36**	**336**	P	**P**	**02 04 32.5**	**-0.6**
	comp=Z,1.0nm,0.5s,mb4.4,baz=63,slow=3.1,SNR=10						
DBIC	**Dimbokro**	**144.61**	**307**	PKP	PKPdf	02 11 09.1	+0.7
	comp=Z,2.8nm,0.5s,baz=35,slow=7.9,SNR=9.5						
LPAZ	**La Paz**	**146.04**	**96**	PKPbc	PKPbc	02 11 15.3	+3.5
	comp=Z,1.6nm,0.6s,baz=270,slow=3.9,SNR=11						
SAML	**Samuel**	**149.62**	**81**	*e*PKPbc	PKPdf	02 11 24.0	+7.2

*IDC **28** 02:30:06.1±1.4, 26.81N×55.86E, mb3.9/12, mb1 4.0/12, mb1mx3.9/21, mbtmp3.9/12, Error ellipse: s-maj=31.3km s-min=22.5km az=122.0*
*NEIC **28** 02:30:07.2±1.0, 26.74N×55.94E, h10^{km}, mb4.2/3, Error ellipse: s-maj=19.1km s-min=17.7km az=119.0*
*MOS **28** 02:30:08.9±1.0, 26.74N×55.81E, h33^{km}, mb4.2/2, Error ellipse: s-maj=31.9km s-min=12.4km az=106.4*
*THR **28** 02:30:09.6±0.4, 26.81N×55.93E, h19^{km}±5^{km}, ML3.5*
*CSEM **28** 02:30:09.5±0.1, 26.75N×55.77E, h30^{km}, mb4.1/3, Error ellipse: s-maj=3.1km s-min=2.6km az=81.0*
*TEH **28** 02:30:11.4, 26.83N×55.79E, h10^{km}, Mn3.5*
ISC 28 02:30:07.4±0.3**, 26.82N**±0.03×**55.78E**±0.05**, h10**^{km}**, n48, σ1**^{s}**25**/54**, mb3.9**/15**, 3C-2D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.68**	**31**	*e*Pg	**Pg**	**02 30 21.7**	**+0.7**
BNDS				*e*Sg	**Sg**	**02 30 30.7**	**+0.6**
BNDS				AML	AML	02 30 35.5	
	comp=N,2μm,0.4s						
BNDS	**Bandar-Abbas**	**0.68**	**31**	*e*Pg	**Pg**	**02 30 21.7**	**+0.7**
	SNR=93						
BNDS				*e*Sg	**Sg**	**02 30 30.7**	**+0.6**
	comp=N,2μm,0.4s,SNR=93						
BANOM	**Banah**	**1.00**	**152**	P	**Pb**	**02 30 27.3**	**+0.9**
	SNR=227						
BANOM				⇑S	**Sb**	**02 30 41.5**	**+2.1**
ASHO	**Ashiyiah**	**2.14**	**173**	P	**Pn**	**02 30 45.6**	**+2.0**
	SNR=17						
GHIR	**Ghir-Karzin**	**2.88**	**301**	*e*Pn	**Pn**	**02 30 58.4**	**+4.2**
GHIR				Sn	**Sn**	**02 31 33.8**	**+4.5**
GHIR				AML	AML	02 31 58.6	
	comp=N,187nm,0.7s						
KRBR	**Kerman**	**3.27**	**15**	*e*Pn	**Pn**	**02 31 01.9**	**+2.1**
ISRV	**Sarvestan**	**3.48**	**318**	Pn	**Pn**	**02 31 04.8**	**+2.1**
IMOK	**Mook**	**3.51**	**310**	Pn	**Pn**	**02 31 05.3**	**+2.2**
ARQ	**Araqi**	**3.53**	**169**	⇑P	**Pn**	**02 31 04.4**	**+1.0**
	SNR=11						
IPAR	**Pars**	**3.86**	**322**	Pn	**Pn**	**02 31 10.1**	**+2.0**
SMDO	**Samad**	**4.27**	**151**	⇑P	**Pn**	**02 31 13.6**	**-0.3**
IMEH	**Mehriz**	**4.67**	**348**	Pn	**Pn**	**02 31 21.0**	**+1.3**
IBAF	**Bafgh**	**4.76**	**358**	Pn	**Pn**	**02 31 21.7**	**+0.8**
JMDO	**Jabal Madar**	**4.90**	**154**	⇓P	**Pn**	**02 31 22.3**	**-0.7**
WBK	**Wadi Bani Khal**	**5.09**	**145**	⇓P	**Pn**	**02 31 24.6**	**-1.0**
	SNR=8.2						
ISAD	**Sadrabad**	**5.40**	**341**	Pn	**Pn**	**02 31 31.9**	**+2.0**
ICHK	**Chekchek**	**5.54**	**348**	Pn	**Pn**	**02 31 32.7**	**+0.8**
QRN	**Al-Qurain**	**7.23**	**287**	*e*P	**Pn**	**02 31 55.8**	**+0.1**
QRN				AML	AML	02 33 16.4	
	comp=Z,23nm,0.3s						
RDF	**Al-Radifah**	**7.58**	**288**	*e*P	**Pn**	**02 32 00.8**	**+0.1**
RDF				AML	AML	02 33 23.9	
	comp=Z,13nm,0.4s						
UMR	**Umm Al-Rimmam**	**7.62**	**293**	*e*P	**Pn**	**02 32 01.5**	**+0.3**
UMR				AML	AML	02 33 25.6	
	comp=Z,22nm,0.4s						
NAY	**Al-Naaiem**	**7.93**	**290**	*e*P	**Pn**	**02 32 05.5**	**0.0**
NAY				AML	AML	02 33 30.8	
	comp=Z,4.6nm,0.4s						
MIB	**Mutribah**	**8.01**	**294**	*e*P	**P**	**02 32 06.7**	**0.0**
MIB				AML	AML	02 33 35.0	
	comp=Z,14nm,0.4s						
ISFB	**Sefidab**	**8.11**	**339**	Pn	**P**	**02 32 07.9**	**-0.1**
IVRN	**Varamin**	**8.87**	**338**	Pn	**P**	**02 32 18.3**	**-0.2**
IVRN				Sn	**Sn**	**02 33 52.0**	**-7.5**
IDMV	**Damavand**	**9.30**	**341**	Pn	**P**	**02 32 24.6**	**0.0**
IDMV				Sn	**Sn**	**02 34 02.5**	**-7.9**
IAFJ	**Afjeh**	**9.66**	**340**	Pn	**P**	**02 32 28.7**	**-0.8**
GNI	**Garni**	**16.16**	**328**	*e*Pn	**P**	**02 33 57.2**	**+1.1**
GNI	**Garni**	**16.16**	**328**	*e*P	**P**	**02 33 57.2**	**+1.1**
KIV	**Kislovodsk**	**20.12**	**332**	*e*P	**P**	**02 34 44.8**	**+0.6**
	comp=Z,8.6nm,0.8s						
KIV	**Kislovodsk**	**20.12**	**332**	*e*P	**P**	**02 34 44.3**	**+0.1**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV	**Kislovodsk**	**20.12**	**332**	*e*P	**P**	**02 34 44.3**	**+0.1**
	comp=Z,12nm,1.0s						
AKTO	**Aktyubinsk**	**23.65**	**4**	P	**P**	**02 35 19.6**	**+0.1**
	comp=Z,1.0nm,0.6s,mb3.5,baz=160,slow=9.6,SNR=8.3						
IDI	**Anoyia**	**27.69**	**295**	P	**P**	**02 35 57.7**	**0.0**
	comp=Z,4.7nm,0.8s,mb4.2,baz=61,slow=19,SNR=4.0						
BVAR	**Borovoye Array**	**28.36**	**19**	P	**P**	**02 36 02.1**	**-1.4**
	comp=Z,1.7nm,0.7s,mb3.8,baz=195,slow=8.9,SNR=13						
MKAR	**Makanchi Array**	**28.90**	**39**	P	**P**	**02 36 06.5**	**-1.9**
	comp=Z,0.5nm,0.7s,mb3.4,baz=227,slow=9.0,SNR=3.3						
AKASG	**Malin Array Be**	**31.28**	**327**	P	**P**	**02 36 27.4**	**-2.2**
	comp=Z,1.3nm,0.5s,mb4.0,baz=134,slow=8.4,SNR=8.3						
OBN	**Obninsk**	**31.56**	**339**	*e*P	**P**	**02 36 31.9**	**0.0**
	comp=Z,9.9nm,0.6s,mb4.8						
OBN	**Obninsk**	**31.56**	**339**	*e*P	**P**	**02 36 31.9**	**0.0**
	comp=Z,9.9nm,0.6s,mb4.8						
GERES	**GERESS Array B**	**39.19**	**316**	P	**P**	**02 37 35.9**	**-1.2**
	comp=Z,0.3nm,0.4s,mb3.4,baz=104,slow=5.5,SNR=5.5						
JOF	**Joensuu**	**39.53**	**343**	*e*p	**P**	**02 37 38.5**	**-1.4**
	comp=Z,0.8nm,0.4s,mb3.8						
FINES	**FINESS Array B**	**39.96**	**338**	P	**P**	**02 37 42.1**	**-1.3**
	comp=Z,1.2nm,0.5s,mb3.9,baz=136,slow=11,SNR=13						
KAF	**Kangasniemi**	**40.38**	**339**	*e*p	**P**	**02 37 44.6**	**-2.2**
	comp=Z,0.6nm,0.4s,mb3.7						
KAF	**Kangasniemi**	**40.38**	**339**	*e*P	**P**	**02 37 44.6**	**-2.2**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
NOA	**NORSAR Array B**	**45.42**	**331**	P	**P**	**02 38 25.5**	**-2.3**
	comp=Z,0.5nm,0.7s,mb3.5,baz=120,slow=7.2,SNR=2.9						
ARCES	**ARCESS Array B**	**46.25**	**346**	P	**P**	**02 38 33.0**	**-1.3**
	comp=Z,4.5nm,1.1s,mb4.3,baz=140,slow=9.5,SNR=5.3						
ESDC	**Sonseca Array**	**50.74**	**301**	P	**P**	**02 39 08.6**	**-0.9**
	comp=Z,0.3nm,0.4s,mb3.6,baz=77,slow=7.0,SNR=8.6						

BOSA	**Boshof**	62.41	210	P	P	02 40 31.4	-1.7
	comp=Z,2.8nm,0.9s,mb4.4,baz=14,slow=7.6,SNR=6.8						
ILAR	**Eielson Array**	87.02	10	P	P	02 42 52.4	-1.3
	comp=Z,0.4nm,0.8s,mb3.7,baz=317,slow=4.3,SNR=7.6						

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*KISR **28** 02:38:30.3±0.3, 26.87N×55.57E, h33^{km}, ML3.3*
*CSEM **28** 02:38:31.1±0.6, 27.17N×55.57E, h5^{km}, ML3.0, Error ellipse: s-maj=22.1km s-min=6.4km az=171.0*
*THR **28** 02:38:33.5±0.3, 27.15N×55.79E, h18^{km}±16^{km}, ML3.0*
ISC 28 02:38:29.2±1.3, **26.85N**±0.05×**55.70E**±0.07, **h24**^{km}±15^{km}, **n10**, σ1^{s}**12**/17, **2C-3D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	0.69	38	ePg	Pb	02 38 42.3	-0.2
BNDS				AML	AML	02 38 59.0	
	comp=N,1µm,0.6s						
BANOM	**Banah**	1.07	150	⇑P	Pn	02 38 48.1	-0.7
BANOM				⇓S	Sb	02 39 01.4	-1.2
ASHO	**Ashiyiah**	2.18	171	⇑P	Pn	02 39 06.2	+1.5
ASHO				⇓S	Sn	02 39 38.9	+7.7
GHIR	**Ghir-Karzin**	2.80	301	ePn	Pn	02 39 18.6	+5.1
GHIR				AML	AML	02 40 18.9	
	comp=N,66nm,0.5s						
KRBR	**Kerman**	3.26	16	ePn	Pn	02 39 21.9	+1.9
KRBR				Sn	Sn	02 39 57.2	-1.2
SMDO	**Samad**	4.34	150	⇓P	Pn	02 39 35.5	+0.1
NAY	**Al-Naaiem**	7.84	290	eP	Pn	02 40 25.8	+1.1
NAY				AML	AML	02 41 52.5	
	comp=Z,2.5nm,0.4s						
NAY				eS	Sn	02 41 52.5	-1.1
NAY	**Al-Naaiem**	7.84	290	eP	Pn	02 40 25.8	+1.1
NAY				eS	Sn	02 41 52.5	-1.1
MIB	**Mutribah**	7.93	294	eP	Pn	02 40 27.1	+1.2
MIB				AML	AML	02 41 53.2	
	comp=Z,4.4nm,0.4s						
MIB				eS	Sn	02 41 54.7	-1.1
MIB	**Mutribah**	7.93	294	eP	Pn	02 40 27.1	+1.2
MIB				eS	Sn	02 41 54.7	-1.1

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*BJI **28** 03:12:13.3, 51.13N×156.62E, h144^{km}, mB4.6, mb4.2*
*MOS **28** 03:12:13.5±0.9, 51.27N×156.64E, h144^{km}, mb4.1/8, Error ellipse: s-maj=16.1km s-min=7.5km az=70.9*
*KRSC **28** 03:12:13.9±1.0, 50.95N×157.35E, h123^{km}±7^{km}, ML4.4*
*IDC **28** 03:12:13.2±2.9, 51.41N×156.60E, h122^{km}±31^{km}, mb3.5/12, mb1 3.9/15, mb1mx3.7/23, mbtmp4.0/15, Error ellipse: s-maj=27.7km s-min=12.3km az=167.0*
*NEIC **28** 03:12:15.1±2.4, 51.27N×156.59E, h147^{km}±23^{km}, mb4.3/10, Error ellipse: s-maj=13.0km s-min=10.0km az=136.0*
ISC 28 03:12:13.5±0.5, **51.11N**±0.05×**156.83E**±0.08, **h150**^{km}±3^{km}, **n86**, σ1^{s}**14**/112, **mb3.9**/21, **Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	0.36	358	eP	P	03 12 34.3	-0.4
PAU				eS	S	03 12 49.8	-1.1
ALID	**Alaid**	0.84	254	i P	P	03 12 37.8	+0.5
ALID				i S	S	03 12 55.0	-0.6
MIPR	**Malaya Ipel'ka**	1.17	358	i P	P	03 12 40.9	+0.9
MIPR				i S	S	03 13 00.6	+0.2
GRL	**Gorelyy**	1.64	28	i P	P	03 12 45.6	+0.8
GRL				eS	S	03 13 07.1	-1.9
RUS	**Russkaya**	1.69	38	i P	P	03 12 44.7	-0.7
RUS				eS	S	03 13 07.3	-2.7
APC	**Apacha**	1.83	6	i P	P	03 12 48.3	+1.3
APC				i S	S	03 13 13.1	+0.4
APC				Smax			
	270nm,1.0s						
KRMR	**Karymshinskiy**	1.90	25	i P	P	03 12 48.4	+0.6
KRMR				i S	S	03 13 14.7	+0.5
PET	**Petropavlovsk**	2.22	30	P	P	03 12 51.7	0.0
PET				S	S	03 13 19.3	-1.7
PET	**Petropavlovsk**	2.22	30	i P	P	03 12 51.7	0.0
PET				eS	S	03 13 19.4	-1.6
UGLR	**Uglovaya**	2.44	30	i P	P	03 12 55.4	+1.0
UGLR				i S	S	03 13 25.6	0.0
KOK	**Koryaka**	2.45	26	i P	P	03 12 55.9	+1.3
KOK				i S	S	03 13 25.3	-0.7
AVH	**Avacha**	2.46	28	i P	P	03 12 55.7	+1.1
AVH				eS	S	03 13 27.1	+1.0
SMAR	**Somma**	2.47	29	i P	P	03 12 55.7	+0.8
SMAR				eS	S	03 13 25.3	-1.2
SDLR	**Sedlovina**	2.51	29	i P	P	03 12 55.8	+0.5
SDLR				eS	S	03 13 25.6	-1.8
NLC	**Nalytchevo**	2.58	36	P	P	03 12 54.8	-1.4
NLC				S	S	03 13 24.4	-4.5
NLC	**Nalytchevo**	2.58	36	eP	P	03 12 54.6	-1.6
NLC				i S	S	03 13 25.0	-3.9
GNL	**Ganaly**	2.68	14	i P	P	03 12 58.3	+0.9
GNL				i S	S	03 13 31.3	+0.3
SPN	**Mys Shipunski**	2.80	43	P	P	03 12 58.1	-0.9
SPN				S	S	03 13 29.5	-4.3
SPN	**Mys Shipunski**	2.80	43	i P	P	03 12 58.0	-1.0
SPN				i S	S	03 13 29.5	-4.3
KII	**Karymskiy**	3.34	28	P	P	03 13 06.8	+0.9
KII				S	S	03 13 45.9	-0.2
KII	**Karymskiy**	3.34	28	i P	P	03 13 06.9	+1.0
KII				eS	S	03 13 46.6	+0.5
MKZ	**Mys Kozlova**	4.55	39	P	P	03 13 20.2	-1.7
MKZ				S	S	03 14 08.0	-6.6
MKZ	**Mys Kozlova**	4.55	39	i P	P	03 13 20.2	-1.7
MKZ				i S	S	03 14 08.3	-6.3
TUMR	**Tumrok**	4.63	24	i P	P	03 13 24.1	+1.2
KMNR	**Kamenistaya**	5.08	22	eP	P	03 13 30.4	+1.6
KPT	**Kopyto**	5.27	21	P	P	03 13 32.8	+1.5
ZLN	**Zelenaya**	5.46	24	eP	P	03 13 34.6	+0.8
LGNR	**Loginova**	5.49	23	P	P	03 13 35.3	+1.1
SRDR	**Sredinnyy**	5.49	17	eP	P	03 13 36.0	+1.7
CIRR	**Tsirk**	5.53	23	eP	P	03 13 36.4	+1.6
SRKR	**Sorokina**	6.12	23	eP	P	03 13 45.1	+2.5
KBTR	**Krutoberegovo**	6.22	33	P	P	03 13 42.9	-1.2
KBTR				S	S	03 14 47.6	-6.9
KBTR	**Krutoberegovo**	6.22	33	eP	P	03 13 42.6	-1.5
KBTR				eS	S	03 14 48.5	-6.0
BKI	**Bering**	6.86	50	eS	S	03 14 58.7	-11
BKI				Smax			
	170nm,0.6s						
FX1	**Attu Island--F**	10.23	74	P	P	03 14 37.7	+0.5
	2.7nm,0.3s,baz=95,slow=13,SNR=9.2						
FX1				S	S	03 16 27.0	-2.9
	2.0nm,0.3s,baz=270,slow=23,SNR=5.5						
ASAJ	**Asahikawa**	11.87	239	P	P	03 15 00.1	+1.3
	2.0nm,0.3s,baz=69,slow=13,SNR=15						
ASAJ	**Asahikawa**	11.87	239	PN	P	03 15 00.1	+1.4
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YAK	**Yakutsk**	18.37	317	ePn	P	03 16 17.0	-1.9
	comp=Z,16nm,0.4s						
YAK	**Yakutsk**	18.37	317	eP	P	03 16 17.0	-1.9
YAK				pmax	pmax		
	comp=Z,16nm,0.4s						
MDJ	**Mudanjiang**	19.33	261	P	P	03 16 27.5	-1.6
MDJ				AP		03 16 54.8	
MDJ				XP		03 17 10.0	
MDJ	**Mudanjiang**	19.33	261	eP	P	03 16 27.4	-1.6
MAJO	**Matsushiro**	19.73	230	eP	P	03 16 33.7	+0.4
	comp=Z,16nm,0.7s						
MAJO	**Matsushiro**	19.73	230	eP	P	03 16 33.7	+0.4
MAJO				pmax	pmax		
	comp=Z,16nm,0.7s						
MAT	**Matsushiro**	19.73	230	P	P	03 16 33.4	+0.1
MAT	**Matsushiro**	19.73	230	eP	P	03 16 33.0	-0.3
	comp=Z,14nm,0.5s						
MAT	**Matsushiro**	19.73	230	eP	P	03 16 33.0	-0.3
MAT				pmax	pmax		
	comp=Z,14nm,0.5s						
MJAR	**Matsushiro Arr**	19.73	230	P	P	03 16 33.9	+0.6
	comp=Z,1.3nm,0.3s,baz=21,slow=11,SNR=30						
MJAR	**Matsushiro Arr**	19.73	230	P	P	03 16 33.9	+0.6
ILAR	**Eielson Array**	31.64	43	P	P	03 18 23.0	-1.0
	comp=Z,0.5nm,0.5s,mb3.5,baz=264,slow=6.3,SNR=20						
INK	**Inuvik**	36.66	36	P	P	03 19 06.9	+0.2
	comp=Z,2.4nm,0.5s,mb4.1,baz=300,slow=6.4,SNR=22						
WMQ	**Urumqi**	45.72	289	eP	P	03 20 21.0	+0.2
YKA	**Yellowknife Ar**	45.98	40	P	P	03 20 23.2	+0.6
	comp=Z,0.6nm,0.5s,mb3.5,baz=292,slow=6.9,SNR=3.0						
KURK	**Kurchatov**	47.07	302	eP	P	03 20 30.6	-0.7
	comp=Z,4.0nm,0.3s,mb4.5						
KURK	**Kurchatov**	47.07	302	eP	P	03 20 30.6	-0.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.3s,mb4.5						
MKAR	**Makanchi Array**	47.20	295	P	P	03 20 31.1	-1.3
	comp=Z,0.2nm,0.3s,mb3.2,baz=61,slow=6.6,SNR=9.9						
CHKZ	**Chkalovo**	49.56	309	eP	P	03 20 48.4	-2.1
	comp=Z,1.6nm,0.3s,mb4.1						
CHKZ	**Chkalovo**	49.56	309	eP	P	03 20 48.4	-2.0
CHKZ				pmax	pmax		
	comp=Z,2.0nm,0.3s,mb4.2						
BVAR	**Borovoye Array**	50.04	308	P	P	03 20 52.4	-1.7
	comp=Z,0.7nm,0.4s,mb3.7,baz=62,slow=7.3,SNR=6.8						
ARCES	**ARCESS Array B**	54.53	341	P	P	03 21 25.5	-1.8
	comp=Z,5.1nm,0.9s,mb4.2,baz=42,slow=7.5,SNR=9.9						
ARCES	**ARCESS Array B**	54.53	341	P	P	03 21 25.5	-1.8
NVAR	**Mina Array Bea**	58.34	67	P	P	03 21 55.8	+1.0
	comp=Z,0.5nm,0.5s,mb3.6,baz=291,slow=8.2,SNR=5.8						
PDAR	**Pinedale Array**	60.27	58	P	P	03 22 08.6	+0.7
	comp=Z,1.7nm,0.7s,mb4.0,baz=312,slow=1.7,SNR=18						
FINES	**FINESS Array B**	61.12	335	P	P	03 22 10.8	-2.6
	comp=Z,1.0nm,0.6s,mb3.9,baz=45,slow=8.1,SNR=7.6						
NB2	**NORSAR Subarra**	64.85	342	P	P	03 22 35.7	-2.2
	comp=Z,1.3nm,0.6s,mb3.9,baz=27,slow=6.5						
NOA	**NORSAR Array B**	64.85	342	P	P	03 22 36.1	-1.7
	comp=Z,0.7nm,0.4s,mb3.8,baz=28,slow=6.6,SNR=3.9						
NAO	**NORSAR Subarra**	65.13	342	P	P	03 22 35.7	-3.9
	comp=Z,1.3nm,0.6s,mb3.9						
NAO	**NORSAR Subarra**	65.13	342	P	P	03 22 35.7	-3.9
NAO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.8						
TXAR	**Lajitas Array**	73.29	64	P	P	03 23 30.9	+1.0
	comp=Z,0.9nm,0.6s,mb3.7,baz=300,slow=5.0,SNR=14						
TXAR	**Lajitas Array**	73.29	64	P	P	03 23 31.0	+1.1
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	**GERESS Array B**	75.55	336	P	P	03 23 42.1	-0.3
	comp=Z,0.3nm,0.6s,mb3.1,baz=27,slow=9.0,SNR=4.9						
MEZF	**Maizieres J'vi**	77.86	341	eP	P	03 23 55.4	+0.1
	comp=Z,5.0nm,0.4s,mb4.2						
FLN	**La Foliniere**	78.63	345	eP	P	03 23 59.7	+0.3
GRR	**Gorron**	79.05	345	eP	P	03 24 02.0	+0.3
LOR	**Lormes**	79.28	342	eP	P	03 24 03.0	0.0
	comp=Z,3.0nm,0.4s,mb4.0						
SGMF	**Saint Gilles**	79.45	346	eP	P	03 24 04.2	+0.3
SSF	**Saint Saulge**	79.55	342	eP	P	03 24 04.5	0.0
	comp=Z,1.6nm,0.6s,mb3.8						
SSF	**Saint Saulge**	79.55	342	eP	P	03 24 04.5	0.0
SSF				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb3.9						
AVF	**Avril sur Loir**	79.84	342	eP	P	03 24 06.3	+0.3
	comp=Z,5.4nm,0.8s,mb3.9						
AVF	**Avril sur Loir**	79.84	342	eP	P	03 24 06.3	+0.3
AVF				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.0						
SMF	**Signal de Mont**	79.88	341	eP	P	03 24 06.9	+0.6
LPL	**La Plagne**	80.34	339	eP	P	03 24 09.8	+1.0
	comp=Z,5.3nm,0.6s,mb4.0						
LPL	**La Plagne**	80.34	339	eP	P	03 24 09.8	+1.0
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.1						
LPG	**La Plagne**	80.36	339	eP	P	03 24 10.0	+1.2
	comp=Z,14nm,0.9s,mb4.3						
LPG	**La Plagne**	80.36	339	eP	P	03 24 10.0	+1.2
LPG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.3						
TCF	**Toulx Ste Croi**	80.54	342	eP	P	03 24 10.1	+0.3
STKA	**Stephens Creek**	83.71	193	P	P	03 24 25.4	-1.0

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*PRU **28** 03:14:12.6, 51.13N×7.25E*
*BGR **28** 03:14:12.8±1.1, 51.70N×7.59E, h1^{km}, ML2.2/1, Error ellipse: s-maj=10.0km s-min=4.4km az=142.0*
*NEIC **28** 03:14:13.5±1.7, 51.71N×7.82E, h5^{km}, ML2.8(LDG), Error ellipse: s-maj=23.7km s-min=9.1km az=178.0*
*LDG **28** 03:14:15.7±0.3, 51.70N×7.74E, h1^{km}, Ml2.8/8, Error ellipse: s-maj=4.3km s-min=3.9km az=60.0, Suspected Mining induced.*
*BUG **28** 03:14:15.5, 51.59N×7.73E, h1^{km}, ML2.1*
*BNS **28** 03:14:15.5±1.5, 51.72N×7.73E, h1^{km}, ML2.3*
*CSEM **28** 03:14:16.2±0.1, 51.68N×7.73E, h2^{km}, ML2.7/7, Error ellipse: s-maj=2.1km s-min=1.5km az=179.0*
ISC 28 03:14:13.3±0.5, **51.61N**±0.03×**7.73E**±0.03, **n35**, σ1^{s}**31**/66, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUG	**Bochum--Univer**	0.33	239	ePg	Pg	03 14 22.7	+2.8
HOBG	**Hohbusch**	0.68	202	ePg	Pg	03 14 30.1	+3.3
WTSB	**Winterswijk**	0.68	302	ePg	Pg	03 14 29.9	+3.1
	28nm,0.5s						
BNS	**Bensberg**	0.74	208	ePg	Pg	03 14 32.0	+4.0
BNS				eSg	Sg	03 14 43.4	+5.6
RODG	**Roetgen-Dahlhe**	1.08	245	ePg	Pg	03 14 36.7	+1.9
RODG				eSg	Sg	03 14 52.0	+2.9
STB	**Steinbach**	1.16	209	ePg	Pg	03 14 38.1	+1.6
STB				eSg	Sg	03 14 53.7	+1.7
	59nm,0.5s						
HGN	**Heimansgroeve**	1.41	234	ePg	Pg	03 14 41.6	+0.1
	13nm,0.2s						
HGN				eSg	Sg	03 15 00.7	+0.3
BGG	**Burgeitz**	1.43	190	ePg	Pg	03 14 42.7	+0.8
BGG				eSg	Sg	03 15 02.5	+1.6
	18nm,0.5s						
TNS	**Taunus Mts**	1.46	162	ePg	Pg	03 14 42.6	+0.1
	SNR=5.7						
TNS				eSg	Sg	03 15 02.6	+0.6
	SNR=3.2						
HILG	**Hillesheim**	1.48	207	eSg	Sg	03 15 03.3	+0.7
UBBA	**Unterbreizbach**	1.64	118	ePg	Pg	03 14 46.4	+0.4
	SNR=5.6						
UBBA				eSg	Sg	03 15 08.5	+0.8
	SNR=3.5						
CLZ	**Clausthal**	1.66	81	ePg	Pg	03 14 45.3	-1.1
	SNR=11						
CLZ				eSg	Sg	03 15 07.4	-1.1
	SNR=3.4						
WLF	**Walferdange**	2.19	208	eSg	Sg	03 15 23.2	-3.0
	SNR=2.8						
GIVF	**Givet**	2.38	232	ePg	Pg	03 15 00.7	-0.1
GIVF				eSn	Sn	03 15 23.6	-0.9
GIVF				eSg	Sg	03 15 32.3	-0.3
	11nm,0.2s						
GIVF	**Givet**	2.38	232	ePn	Pn	03 14 54.8	+0.6
GIVF				ePg	Pg	03 15 00.7	-0.1
GIVF				eSn	Sn	03 15 23.6	-0.9
GIVF				eSg	Sg	03 15 32.3	-0.3
GIVF	**Givet**	2.38	232	ePg	Pg	03 15 00.7	-0.1
GIVF				eSn	Sn	03 15 23.6	-0.9
GIVF				eSg	Sg	03 15 32.3	-0.3
	5.3nm,0.2s						
NEUB	**Neuenburg**	2.57	97	eSg	Sg	03 15 37.2	-1.6
	SNR=2.5						
MOX	**Moxa**	2.63	110	i P	Pn	03 14 58.3	+0.5
MOX				Pg	Pg	03 15 06.0	+0.1
MOX				Sg	Sg	03 15 42.0	+1.0
MOX	**Moxa**	2.63	110	ePn	Pn	03 14 58.3	+0.5
MOX				ePg	Pg	03 15 06.5	+0.6
MOX				eSg	Sg	03 15 42.5	+1.5
GUNZ	**Gunzen**	3.17	111	ePg	Pg	03 15 14.8	-1.7
	SNR=1.6						
CDF	**Champ du Feu**	3.22	185	ePn	Pn	03 15 06.5	+0.4
CDF				eSg	Sg	03 15 59.7	-0.7
	9.3nm,0.6s						
NKC	**Novy Kostel**	3.29	113	ePG	Pg	03 15 17.9	-1.1
NKC				eSG	Sg	03 16 02.3	-0.5
CLL	**Collm**	3.31	93	ePG	Pg	03 15 21.0	+1.6
CLL				eSG	Sg	03 16 06.0	+2.4
RFYF	**Reffroy**	3.32	207	eSg	Sg	03 16 02.8	-1.0
	7.8nm,0.3s						
MEZF	**Maizieres J'vi**	3.56	210	ePn	Pn	03 15 11.5	+0.6
MEZF				eSg	Sg	03 16 09.1	-2.7
	6.5nm,0.5s						
HAU	**Haudompre**	3.72	194	ePn	Pn	03 15 13.3	+0.1
SFTF	**Sexfontaines**	3.83	208	ePn	Pn	03 15 15.0	+0.3
SFTF				eSg	Sg	03 16 18.7	-2.0
	3.3nm,0.4s						
KHC	**Kasperske Hory**	4.49	121	ePN	Pn	03 15 20.0	-4.2
KHC				ePG	Pg	03 15 35.0	-8.0
KHC				eSG	Sg	03 16 37.6	-5.3
KHC	**Kasperske Hory**	4.49	121	ePn	Pn	03 15 20.0	-4.2
KHC				eSg	Sg	03 16 37.6	-5.3
LOR	**Lormes**	5.03	212	ePn	Pn	03 15 30.3	-1.5
	baz=41						
LOR				eSn	Sn	03 16 27.2	-4.3
LOR				eSg	Sg	03 16 55.8	-4.8
	2.6nm,0.5s						
CABF	**La Chapelle**	5.12	193	ePn	Pn	03 15 32.6	-0.5
SSF	**Saint Saulge**	5.32	213	ePn	Pn	03 15 34.5	-1.5
SSF				eSg	Sg	03 17 05.1	-5.4
	1.1nm,0.5s						
LDF	**La Druitiere**	5.88	242	ePn	Pn	03 15 42.4	-1.5
FLN	**La Foliniere**	5.99	245	ePn	Pn	03 15 44.2	-1.2
	baz=62						
GRR	**Gorron**	6.41	243	ePn	Pn	03 15 49.5	-1.7
GRR				eSn	Sn	03 16 59.3	-6.7

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*IDC **28** 03:14:17.0±0.6, 8.76S×124.01E, mb4.3/11, mb1 4.3/11, mb1mx4.3/14, mbtmp4.3/11, ML5.6/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/25, Error ellipse: s-maj=23.5km s-min=16.7km az=62.0*
*MOS **28** 03:14:21.0±1.0, 8.64S×124.14E, h33^{km}, mb4.9/8, Error ellipse: s-maj=17.4km s-min=10.1km az=122.6*
*NEIC **28** 03:14:22.5±0.3, 8.75S×124.17E, h35^{km}, mb5.0/12, Error ellipse: s-maj=12.8km s-min=5.9km az=64.0*
*BJI **28** 03:14:23.5, 8.80S×124.20E, h35^{km}, mB5.0, mb4.9, Ms4.8, Msz4.4*
ISC 28 03:14:19.9±0.3, **8.77S**±0.06×**124.39E**±0.10, **h33**^{km}, **(h34**^{km}±2.2^{km}**:pP-P)**, **n71**, σ1^{s}**14**/75, **mb4.7**/28, **MS3.9**/4, **7C-3D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	9.36	173	eP	P	03 16 34.8	-0.7
	103nm,0.3s						
FITZ				eS	S	03 18 11.0	-10
FITZ	**Fitzroy Crossi**	9.36	173	Pn	P	03 16 34.9	-0.6
	46nm,0.3s,baz=4.9,slow=8.9,SNR=229						
FITZ				Sn	Sn	03 18 12.8	-8.0
	153nm,0.3s,baz=266,slow=17,SNR=26						
FITZ				LR	LR	03 21 13.5	
	comp=Z,162nm,20.1s,baz=13,slow=44						
WRA	**Warramunga Arr**	14.70	140	Pn	P	03 17 45.6	-1.8
	5.8nm,0.3s,baz=318,slow=13,SNR=130						
WRA				Sn	S	03 20 18.6	-11
	8.7nm,0.3s,baz=306,slow=24,SNR=5.7						
WRAB	**Tennant Creek**	14.70	140	ePn	P	03 17 46.1	-1.4
	88nm,0.8s						
WRAB				eSn	S	03 20 21.8	-8.2
WRAB	**Tennant Creek**	14.70	140	eP	P	03 17 46.1	-1.3
WRAB				pmax	pmax		
	comp=Z,88nm,0.8s						
WB2	**Warramunga Arr**	14.71	140	eP	P	03 17 45.8	-1.7
WB2				eS	S	03 20 18.7	-11
FORT	**Forrest**	22.17	172	eP	P	03 19 15.4	+0.7
	comp=Z,79nm,0.7s,mb5.2						
PMG	**Port Moresby**	22.49	93	P	P	03 19 23.2	+5.2
	comp=Z,1.9nm,0.3s,mb4.0,baz=301,slow=12,SNR=2.0						
PMG	**Port Moresby**	22.49	93	eP	P	03 19 29.4	+11
	comp=Z,73nm,0.8s,mb5.2						
PMG	**Port Moresby**	22.49	93	P	P	03 19 23.2	+5.2
PMG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
CTA	**Charters Tower**	23.94	120	eP	P	03 19 35.9	+3.7
	comp=Z,18nm,1.0s,mb4.5						
CTA	**Charters Tower**	23.94	120	P	P	03 19 36.1	+3.9
	comp=Z,24nm,1.0s,mb4.6,baz=292,slow=11,SNR=20						
CTA				LR	LR	03 27 41.0	
	comp=Z,113nm,20.2s,MS3.3,baz=225,slow=33						
CTA	**Charters Tower**	23.94	120	eP	P	03 19 35.9	+3.7
CTA				pmax	pmax		
	comp=Z,18nm,1.0s						
CTAO	**Charters Tower**	23.94	120	eP	P	03 19 36.1	+3.8
	comp=Z,31nm,1.0s,mb4.7						
CTAO	**Charters Tower**	23.94	120	eP	P	03 19 36.1	+3.9
CTAO				pmax	pmax		
	comp=Z,31nm,1.0s,mb4.7						
PSI	**Prapat**	27.87	293	P	P	03 20 08.3	-0.8
	comp=Z,3.7nm,0.4s,mb4.3,baz=151,slow=8.0,SNR=5.4						
PSI				LR	LR	03 33 18.0	
	comp=Z,112nm,18.5s,MS3.5,baz=84,slow=42						
PSI	**Prapat**	27.87	293	P	P	03 20 08.3	-0.8
PSI				LR	LR	03 33 18.0	
STKA	**Stephens Creek**	28.00	148	eP	P	03 20 11.3	+1.2
	comp=Z,5.6nm,1.1s,mb4.1						
STKA	**Stephens Creek**	28.00	148	P	P	03 20 11.1	+0.9
	comp=Z,3.4nm,0.6s,mb4.1,baz=319,slow=4.3,SNR=8.4						
STKA	**Stephens Creek**	28.00	148	eP	P	03 20 11.3	+1.2
STKA				epP	pP	03 20 20.5	+0.9
TAU	**Tasmania Unive**	39.51	153	eP	P	03 21 50.5	+1.3
KMI	**Kunming**	39.74	328	P	P	03 21 55.0	+3.7
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.5						
KMI	**Kunming**	39.74	328	P	P	03 21 55.1	+3.8
	comp=Z,11nm,0.9s,mb4.6						
WHN	**Wuhan**	40.26	347	eP	P	03 21 57.5	+2.0
NJ2	**Nanjing**	40.93	353	eP	P	03 22 09.0	+7.9
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
NJ2				AMB	AMB		
	comp=Z,170nm,6.0s						
NJ2				LR	LR		
	comp=N,2µm,18.0s						
NJ2				LR	LR		
	comp=E,2µm,24.0s						
NJ2				LR	LR		
	comp=Z,550nm,35.2s						
MJAR	**Matsushiro Arr**	46.90	15	P	P	03 22 49.8	+0.6
	comp=Z,3.0nm,0.7s,mb4.3,baz=189,slow=9.3,SNR=8.9						
LSA	**Lhasa**	49.86	321	eP	P	03 23 13.5	+1.2
	comp=Z,7.9nm,0.5s,mb5.0						
LSA	**Lhasa**	49.86	321	eP	P	03 23 13.5	+1.2
LSA				pmax	pmax		
	comp=Z,8.0nm,0.5s,mb5.0						
GUN	**Gumba**	52.12	316	eP	P	03 23 29.3	-0.1
	comp=Z,23nm,0.5s,mb5.4						
PKI	**Pulchoki**	52.24	315	eP	P	03 23 29.4	-0.9
	comp=Z,23nm,0.4s,mb5.5						
CN2	**Changchun**	52.33	1	eP	P	03 23 35.5	+4.8
KKN	**Kakani**	52.46	315	eP	P	03 23 31.3	-0.7
DMN	**Daman**	52.47	315	eP	P	03 23 31.8	-0.3
	comp=Z,33nm,0.9s,mb5.3						
GKN	**Gorkha**	53.04	315	eP	P	03 23 35.6	-0.7
	comp=Z,19nm,0.3s,mb5.5						
GTA	**Gaotai**	53.08	336	eP	P	03 23 36.3	-0.2
GTA				AP	pP	03 23 45.8	-0.7
GTA				XP	sP	03 23 51.5	+1.0
GTA				PP	PP	03 25 39.3	+1.4
GTA				PPP	PPP	03 26 46.5	+2.3
GTA				S	S	03 31 05.0	+2.2
GTA				PS	PS	03 31 19.0	+1.7
GTA				SS	SS	03 34 44.0	+2.5
GTA				AMB	AMB		
	comp=Z,50nm,4.9s						
GTA				LR	LR		
	comp=N,90nm,10.3s,MS4.1						
GTA				LR	LR		
	comp=E,50nm,12.2s,MS4.1						
GTA				LR	LR		
	comp=Z,150nm,11.0s,MS4.3						
MDJ	**Mudanjiang**	53.34	5	P	P	03 23 38.8	+0.5
MDJ				AP	pP	03 23 50.0	+1.7
MDJ				XP	sP	03 23 55.0	+2.7
MDJ				S	S	03 31 13.3	+7.1
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.0						
MDJ				AMB	AMB		
	comp=Z,70nm,3.6s						
MDJ	**Mudanjiang**	53.34	5	eP	P	03 23 39.1	+0.8
	comp=Z,20nm,0.9s,mb5.0						
KOLN	**Koldanda**	53.63	314	eP	P	03 23 40.0	-0.7
	comp=Z,56nm,0.7s,mb5.6						
ULN	**Ulaanbaatar**	58.44	346	⇓eP	P	03 24 14.9	0.0
SONM	**Songino Array**	58.56	346	P	P	03 24 14.8	-0.9
	comp=Z,1.3nm,0.5s,mb4.2,baz=157,slow=10,SNR=7.7						
WMQ	**Urumqi**	62.02	331	eP	P	03 24 39.8	+0.4
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,190nm,5.2s						
WMQ				LR	LR		
	comp=N,260nm,24.0s,MS4.4						
WMQ				LR	LR		
	comp=E,260nm,27.2s,MS4.4						
WMQ				LR	LR		
	comp=Z,400nm,22.0s						
MKAR	**Makanchi Array**	66.80	330	P	P	03 25 09.7	-0.8

	comp=Z,3.9nm,0.5s,mb4.7,baz=134,slow=7.5,SNR=82						
BOD	**Bodaibo**	**66.89**	**354**	*e*P	**P**	**03 25 10.4**	**-0.4**
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s,mb4.6						
AAK	**Ala-Archa**	**68.42**	**323**	*e*P	**P**	**03 25 19.5**	**-1.2**
	comp=Z,4.0nm,0.6s,mb4.6						
AAK	**Ala-Archa**	**68.42**	**323**	*e*P	**P**	**03 25 19.5**	**-1.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
YAK	**Yakutsk**	**70.70**	**3**	⇓*e*P	**P**	**03 25 34.4**	**+0.1**
YAK				pmax	pmax		
	comp=Z,15nm,0.5s,mb5.2						
KURK	**Kurchatov**	**71.25**	**331**	*e*P	**P**	**03 25 36.7**	**-1.1**
	comp=Z,7.5nm,0.8s,mb4.7						
KURK	**Kurchatov**	**71.25**	**331**	*e*P	**P**	**03 25 36.7**	**-1.1**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.6						
MAW	**Mawson**	**71.31**	**201**	P	**P**	**03 25 37.5**	**-0.4**
	comp=Z,1.7nm,0.7s,mb4.1,baz=41,slow=9.3,SNR=3.0						
SBA	**Scott Base**	**72.38**	**171**	*e*P	**P**	**03 25 46.5**	**+2.4**
SEY	**Seymchan**	**74.65**	**13**	⇓*e*P	**P**	**03 25 59.4**	**+1.9**
OPO	**Ambohidratompo**	**75.19**	**253**	P	**P**	**03 25 59.9**	**-1.7**
	comp=Z,3.9nm,0.7s,mb4.5,baz=94,slow=7.8,SNR=7.5						
BVAR	**Borovoye Array**	**76.69**	**330**	P	**P**	**03 26 08.0**	**-1.3**
	comp=Z,0.7nm,0.6s,mb3.8,baz=143,slow=7.4,SNR=5.2						
BRVK	**Borovoye**	**76.76**	**330**	*e*P	**P**	**03 26 08.7**	**-1.1**
CHKZ	**Chkalovo**	**76.95**	**330**	*e*P	**P**	**03 26 09.9**	**-0.9**
SYO	**Syowa Base**	**80.01**	**201**	⇑P	**P**	**03 26 29.6**	**+2.3**
SYO	**Syowa Base**	**80.01**	**201**	⇑*e*P	**P**	**03 26 29.6**	**+2.3**
TIXI	**Tiksi**	**80.30**	**1**	*i* P	**P**	**03 26 27.9**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.6						
SVE	**Sverdlovsk**	**83.46**	**330**	*e*P	**P**	**03 26 46.5**	**+1.1**
KMBO	**Kilima Mbogo**	**87.00**	**269**	P	**P**	**03 27 04.4**	**+0.4**
	comp=Z,1.3nm,0.7s,mb4.2,baz=59,slow=7.3,SNR=4.8						
KMBO	**Kilima Mbogo**	**87.00**	**269**	⇑*e*P	**P**	**03 27 05.3**	**+1.3**
GNI	**Garni**	**87.77**	**311**	*i* P	**P**	**03 27 07.8**	**+0.7**
KIV	**Kislovodsk**	**90.10**	**314**	*i* P	**P**	**03 27 14.2**	**-3.9**
SNAA	**Sanae**	**92.61**	**195**	⇑*i*P	**P**	**03 27 29.9**	**+0.8**
SNAA				*e*		03 28 10.3	
SNAA				*e*		03 28 15.1	
BOSA	**Boshof**	**93.78**	**240**	P	**P**	**03 27 35.7**	**+0.3**
	comp=Z,1.6nm,0.8s,mb4.5,baz=148,slow=3.8,SNR=4.5						
VNA2	**Neumayer--Watz**	**94.22**	**194**	⇑*i*P	**P**	**03 27 37.6**	**+1.2**
VNA2				*e*		03 28 22.4	
VNA2				*e*		03 28 28.4	
VNA2				*e*		03 28 37.1	
VNA3	**Neumayer Olymp**	**94.54**	**193**	⇑*i*P	**P**	**03 27 38.8**	**+1.0**
VNA3				*e*		03 28 21.0	
VNA3				*e*		03 28 26.0	
VNA3				*e*		03 28 35.4	
VNA1	**Neumayer--Stat**	**94.62**	**194**	⇑*i*P	**P**	**03 27 44.3**	**+6.1**
VNA1				*e*		03 28 25.9	
VNA1				*e*		03 28 31.2	
VNA1				*e*		03 28 40.4	
DBIC	**Dimbokro**	**129.69**	**271**	PKP	PKPdf	03 33 28.4	+1.4
	comp=Z,1.6nm,0.6s,baz=33,slow=4.0,SNR=5.9						
LPAZ	**La Paz**	**152.19**	**153**	PKPbc	PKPdf	03 34 16.2	+10
	comp=Z,1.1nm,0.6s,baz=158,slow=6.0,SNR=4.1						
LPAZ	**La Paz**	**152.19**	**153**	PKPbc	PKPdf	03 34 16.2	+10

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*NEIC **28** 03:15:55.5,31.58S×69.52W,h140^{km},MD3.6(GUC),After GUC.*

GUC 28 03:15:55.5±0.9**,31.58S×69.52W,h140**^{km}±11^{km}**,MD3.6, ML3.3,2C-8D,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**1.33**	**287**	⇓*i*P	P	03 16 22.8	-0.1
CMCH				*i* S	S	03 16 44.0	0.0
CMCH				AMP		03 16 46.2	
	comp=N,924nm,0.4s						
ILCH	**Illapel**	**1.41**	**267**	⇓*i*P	P	03 16 24.0	+0.2
ILCH				*i* S	S	03 16 45.3	-0.1
ILCH				AMP		03 16 46.0	
	comp=N,729nm,0.2s						
MDZ	**Mendoza**	**1.42**	**157**	⇓*i*P	P	03 16 20.2	-3.6
MDZ				*i* S	S	03 16 40.3	-5.2
JACH	**Jahuel**	**1.43**	**219**	*e*P	P	03 16 23.6	-0.3
JACH				*e*S	S	03 16 45.9	+0.2
CHNG	**Los Chungos**	**1.72**	**259**	*e*P	P	03 16 27.2	+0.1
CHNG				*i* S	S	03 16 50.6	-0.7
CHNG				AMP		03 16 56.6	
	comp=E,120nm,0.4s						
TLL	**Tololo Astrono**	**1.79**	**321**	⇓*i*P	P	03 16 28.9	+0.9
TLL				*i* S	S	03 16 53.3	+0.5
TLL				AMP		03 16 59.4	
	comp=E,246nm,0.4s						
PEL	**Peldehue**	**1.85**	**212**	⇓*i*P	P	03 16 28.8	+0.2
PEL				*i* S	S	03 16 54.0	0.0
PEL				AMP		03 16 55.4	
	comp=E,148nm,0.3s						
FCH	**Farellones**	**1.86**	**200**	⇑*i*P	P	03 16 29.3	+0.6
FCH				*i* S	S	03 16 55.3	+1.1
FCH				AMP		03 16 59.8	
	comp=E,89nm,0.2s						
ROCH	**El Roble**	**1.88**	**222**	*e*P	P	03 16 29.1	+0.1
ROCH				*e*S	S	03 16 54.6	0.0
RCDM	**Rinconada Maip**	**2.19**	**209**	⇓*i*P	P	03 16 32.7	-0.1
RCDM				*i* S	S	03 17 01.2	-0.2
RCDM				AMP		03 17 05.2	
	comp=E,219nm,0.1s						
ANTU	**Antumapu**	**2.19**	**205**	*i* S	S	03 17 01.8	+0.4
ANTU				AMP		03 17 02.3	
	comp=E,123nm,0.3s						
LSCH	**La Serena**	**2.23**	**318**	⇓*i*P	P	03 16 33.3	-0.1
LSCH				*i* S	S	03 17 01.4	-0.9
LSCH				AMP		03 17 02.4	
	comp=N,332nm,0.3s						
TACH	**Talagante**	**2.39**	**210**	⇑*i*P	P	03 16 34.7	-0.6
CHCH	**Chadas Angostu**	**2.53**	**202**	⇓*i*P	P	03 16 37.0	-0.2
CHCH				*i* S	S	03 17 08.7	-0.3
LCCH	**Las Cruces**	**2.56**	**222**	*e*P	P	03 16 38.0	+0.4
LCCH				*i* S	S	03 17 09.1	-0.6

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*NEIC **28** 03:26:46.9,25.22S×69.11W,h103^{km},mb3.9/1,After GUC.*

GUC 28 03:26:46.9±0.6**,25.22S×69.11W,h103**^{km}±13^{km}**,ML3.2, 4C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPN1	**Cerro Paranal**	**1.31**	**296**	*e*P	P	03 27 12.3	+0.8
CPN1				*i* S	S	03 27 31.3	+1.3
CPN1				AMP		03 27 31.9	
	comp=E,292nm,0.2s						
CRCH	**Chaqaral**	**1.76**	**230**	⇑*i*P	P	03 27 17.8	+0.8
CRCH				*i* S	S	03 27 40.8	+1.3
CRCH				AMP		03 27 41.4	
	comp=N,628nm,0.2s						
ANCH	**Antofagasta**	**1.93**	**322**	⇑*i*P	P	03 27 19.4	+0.2
ANCH				*i* S	S	03 27 43.1	-0.1
CEN1	**Los Morros**	**2.07**	**331**	⇓*i*P	P	03 27 20.0	-1.1
CEN1				*i* S	S	03 27 44.4	-2.1
CEN1				AMP		03 27 45.6	
	comp=E,131nm,0.2s						
CPCH	**Copiapo**	**2.41**	**207**	*e*P	P	03 27 25.2	-0.4
CPCH				*i* S	S	03 27 54.8	+0.2
CPCH				AMP		03 27 59.1	
	comp=E,1µm,0.1s						
CDCH	**Caldera**	**2.41**	**220**	⇑*i*P	P	03 27 25.2	-0.5
CDCH				*i* S	S	03 27 54.0	-0.6
CDCH				AMP		03 27 57.4	
	comp=E,7.3nm,0.3s						
SPCH	**San Pedro de A**	**2.45**	**20**	⇑*i*P	P	03 27 26.5	+0.4
SPCH				*i* S	S	03 27 56.5	+0.9
SPCH				AMP		03 27 57.0	
	comp=N,227nm,0.5s						
LPAZ	**La Paz**	**8.93**	**6**	*e*Pn	P	03 28 52.0	-2.5
CPUP	**Villa Florida**	**10.68**	**98**	*e*Pn	P	03 29 16.2	-1.8
SDV	**Santo Domingo**	**33.93**	**357**	*e*Pn	P	03 33 21.9	-0.4
	comp=N,1.1nm,0.6s						
RCBR	**Riachuelo**	**37.18**	**64**	*e*P	P	03 33 48.0	-1.8
	comp=N,18nm,1.2s						

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*BJI **28** 03:28:11.3,62.30S×155.00E,h10^{km},mB5.8,mb5.2, Ms5.5,Msz5.3*

*IDC **28** 03:28:11.1±0.5,62.35S×155.02E,mb4.8/13,mb1 4.9/13, mb1mx4.8/15,mbtmp4.8/13,MS5.4/13,Ms1 5.4/13, ms1mx5.3/16,Error ellipse: s-maj=22.3km s-min=15.5km az=93.0*

*HRVD **28** 03:28:13.3±0.1,62.33S×155.02E,h12^{km},MW5.7/85, Centroid moment Tensor Solution. LP body waves: s79,c163;Mantle waves: s85,c183; Half duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.22±.06; $M_{\theta\theta}$4.10±.06; $M_{\phi\phi}$-3.88±.06; $M_{r\theta}$-0.63±.15; $M_{\theta\phi}$-2.92±.06; $M_{\phi r}$0.04±.17; Best double couple: $M_0$4.982×10^{17} NP1: ϕ_s333°,δ84°,λ3°. NP2:ϕ_s243°,δ87°,λ174°. Principal axes: T 5.125, Plg7°, Azm198°; N -.285, Plg83°, Azm35°; P -4.84, Plg2°, Azm288°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **28** 03:28:13.3±0.2,62.33S×155.02E,h10^{km},mb5.2/22, MS5.4/128,MW5.7 Error ellipse: s-maj=12.6km s-min=8.9km az=84.0,Moment Tensor Solution. s4 Moment tensor: Scale 10^{17}Nm; M_{rr}1.31; $M_{\theta\theta}$3.07; $M_{\phi\phi}$-4.38; $M_{r\theta}$0.08; $M_{\theta\phi}$-1.42; $M_{\phi r}$-1.24; Best double couple: $M_0$4.1×10^{17} NP1:ϕ_s56°,δ76°,λ-179°. NP2:ϕ_s326°, δ89°,λ-14°. Principal axes: T 3.38, Plg9°, Azm12°; N 1.5, Plg76°, Azm140°; P -4.88, Plg11°, Azm280°;*

*MOS **28** 03:28:14.4±2.7,62.08S×154.43E,h10^{km},mb5.4/10, MS5.4/22 Error ellipse: s-maj=30.0km s-min=10.7km az=91.8*

ISC 28 03:28:11.0±0.3**,62.31S**±0.05×**154.9E**±0.1**,h10**^{km}**, (h14**^{km}±4.5^{km}**:pP-P),n347,**σ**1^{s}30**/80**,mb5.0**/26**,MS5.4**/145**, 16C-17D,Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRV	**Dumont d'Urvil**	**7.77**	**229**	P	**Pn**	**03 30 07.0**	**+0.1**
DRV				R		03 32 00.0	
SBA	**Scott Base**	**16.06**	**171**	*e*Pn	**P**	**03 31 51.4**	**-6.6**
	86nm,1.2s						
CASY	**Casey**	**19.33**	**239**	*e*Pn	**P**	**03 32 44.0**	**+5.4**
	255nm,1.6s						
TAU	**Tasmania Unive**	**19.95**	**343**	*e*P	**P**	**03 32 47.0**	**+1.2**
	313nm,1.6s						
TAU	**Tasmania Unive**	**19.95**	**343**	*e*P	**P**	**03 32 47.0**	**+1.3**
TAU				pmax	pmax		
	comp=Z,313nm,1.6s						
RPZ	**Rata Peaks**	**20.89**	**34**	P	**P**	**03 32 54.3**	**-1.2**
	comp=Z,21nm,1.0s,baz=243,slow=2.3,SNR=4.7						
RPZ				LR	LR	03 39 37.0	
	comp=Z,24µm,18.4s,MS5.6,baz=183,slow=33						
SNZO	**South Karori**	**24.13**	**39**	*e*P	**P**	**03 33 35.1**	**+7.6**
	comp=Z,223nm,1.4s,mb5.4						
SNZO				LR	LR		
	comp=Z,17µm,20.0s,MS5.5						
TOO	**Toolangi**	**25.45**	**342**	*e*P	**P**	**03 33 43.3**	**+3.1**
	comp=Z,22nm,1.1s,mb4.6						
TOO	**Toolangi**	**25.45**	**342**	*e*P	**P**	**03 33 43.3**	**+3.1**
TOO				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.6						
MIR	**Mirnyy**	**26.06**	**233**	*e*P	**P**	**03 33 48.0**	**+2.4**
MIR				*e*S	**S**	**03 38 26.0**	**+12**
MIR				pmax	pmax		
	comp=Z,1µm,8.0s						
MIR				smax			
	comp=N,6µm,14.0s						
MIR				MLR	MLR		
	comp=N,5µm,14.0s,MS5.3						
MIR				MLR	MLR		
	comp=E,4µm,14.0s,MS5.3						
MIR				MLR	MLR		
	comp=Z,12µm,14.0s,MS5.6						
MIR				MLR	MLR		
	comp=N,2µm,18.0s						
MIR				MLR	MLR		
	comp=Z,3µm,18.0s						
URZ	**Urewera**	**27.65**	**40**	P	**P**	**03 34 01.0**	**+0.5**
	comp=Z,14nm,0.9s,mb4.6,baz=309,slow=14,SNR=3.1						
URZ				LR	LR	03 44 03.3	
	comp=Z,9µm,18.3s,MS5.4,baz=338,slow=34						
QSPA	**South Pole Qui**	**27.78**	**180**	*e*P	**P**	**03 33 59.0**	**-2.2**
	comp=Z,44nm,1.2s,mb5.0						
STKA	**Stephens Creek**	**31.64**	**338**	*e*P	**P**	**03 34 36.7**	**+0.6**
	comp=Z,17nm,1.1s,mb4.8						
STKA	**Stephens Creek**	**31.64**	**338**	P	**P**	**03 34 37.1**	**+1.0**
	comp=Z,18nm,1.1s,mb4.8,baz=160,slow=11,SNR=11						
STKA				LR	LR	03 44 17.8	
	comp=Z,5µm,21.4s,MS5.2,baz=159,slow=30						
MAW	**Mawson**	**35.88**	**221**	P	**P**	**03 35 12.9**	**+0.5**
	comp=Z,10nm,1.0s,mb4.7,baz=132,slow=18,SNR=4.1						
MAW				LR	LR	03 50 05.0	
	comp=Z,16µm,19.1s,MS5.8,baz=118,slow=37						
FORT	**Forrest**	**36.02**	**319**	*e*P	**P**	**03 35 13.2**	**-0.7**
	comp=Z,36nm,0.8s,mb5.3						
RAO	**Raoul Island**	**37.53**	**41**	LR	LR	03 49 10.2	
	comp=Z,7µm,18.9s,MS5.5,baz=350,slow=34						
RAO	**Raoul Island**	**37.53**	**41**	PFAKE		03 35 40.0	+13
RAO				LR	LR		
	comp=Z,8µm,21.0s,MS5.5						
NWAO	**Narrogin (SRO)**	**37.89**	**303**	P	**P**	**03 35 29.1**	**-0.5**
	comp=Z,18nm,1.0s,mb4.8,baz=178,slow=7.9,SNR=3.6						
KLBR	**Kellerberrin**	**38.87**	**305**	*e*P	**P**	**03 35 38.2**	**+0.3**
	comp=Z,7.5nm,0.3s,mb4.9						
DZM	**Mont Dzumac**	**40.98**	**16**	P	**P**	**03 35 55.8**	**+0.4**
	comp=Z,28nm,0.9s,mb4.9,baz=143,slow=9.2,SNR=6.3						
SYO	**Syowa Base**	**41.17**	**210**	⇑P	**P**	**03 35 56.0**	**-0.5**
SYO	**Syowa Base**	**41.17**	**210**	⇓PnPn		03 37 37.2	
SYO	**Syowa Base**	**41.17**	**210**	⇑*e*P	**P**	**03 35 56.0**	**-0.5**
SYO				⇓*e*PnPn		03 37 37.2	
CTA	**Charters Tower**	**42.62**	**348**	*e*P	**P**	**03 36 09.1**	**+0.3**
	comp=Z,14nm,1.0s,mb4.6						
CTA	**Charters Tower**	**42.62**	**348**	P	**P**	**03 36 08.8**	**+0.1**
	comp=Z,14nm,0.9s,mb4.7,baz=182,slow=6.9,SNR=13						
CTA				LR	LR	03 50 48.0	
	comp=Z,6µm,20.7s,MS5.5,baz=176,slow=32						
CTA	**Charters Tower**	**42.62**	**348**	*e*P	**P**	**03 36 09.1**	**+0.3**
CTA				pmax	pmax		
	comp=Z,14nm,1.0s						
CTAO	**Charters Tower**	**42.62**	**348**	*e*P	**P**	**03 36 09.2**	**+0.5**
	comp=Z,59nm,1.4s,mb5.1						
CTAO				LR	LR		
	comp=Z,5µm,21.0s,MS5.4						
CTAO	**Charters Tower**	**42.62**	**348**	*e*P	**P**	**03 36 09.2**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,59nm,1.4s,mb5.1						
CTAO				MLR	MLR		
	comp=Z,5µm,21.0s,MS5.4						
WB2	**Warramunga Arr**	**44.67**	**332**	*e*P	**P**	**03 36 23.5**	**-1.9**
WRA	**Warramunga Arr**	**44.67**	**332**	P	**P**	**03 36 24.3**	**-1.2**
	comp=Z,11nm,0.6s,mb4.8,baz=164,slow=7.1,SNR=48						
WRA				PcP	PcP	03 38 07.5	-1.0
	comp=Z,5.7nm,0.9s,baz=169,slow=2.9,SNR=4.8						
WRAB	**Tennant Creek**	**44.68**	**332**	*e*P	**P**	**03 36 23.7**	**-1.8**
	comp=Z,57nm,1.1s,mb5.3						
WRAB				*e*		03 38 11.3	
WRAB				LR	LR		
	comp=Z,1µm,20.0s,MS4.9						
WRAB	**Tennant Creek**	**44.68**	**332**	*e*P	**P**	**03 36 23.7**	**-1.8**
WRAB				*e*		03 38 11.3	
WRAB				pmax	pmax		
	comp=Z,57nm,1.1s,mb5.3						
WRAB				MLR	MLR		
	comp=Z,1µm,20.0s,MS4.9						
NVL	**N'lazarevskaya**	**44.73**	**196**	⇓*i*P	**P**	**03 36 20.2**	**-5.1**
NVL				*e*		03 38 17.5	
NVL				pmax	pmax		
	comp=Z,3.0nm,1.2s,mb4.0						
NVL				MLR	MLR		
	comp=Z,880nm,15.5s,MS4.8						
SNAA	**Sanae**	**45.42**	**190**	⇑*i*P	**P**	**03 36 29.9**	**-0.8**
SNAA	**Sanae**	**45.42**	**190**	*e*	**P**	**03 36 32.9**	**+2.2**
SNAA	**Sanae**	**45.42**	**190**	*e*	**P**	**03 36 34.8**	**+4.1**
VNA3	**Neumayer Olymp**	**46.30**	**187**	⇑*i*P	**P**	**03 36 34.8**	**-2.9**
VNA3	**Neumayer Olymp**	**46.30**	**187**	*e*	**P**	**03 36 37.8**	**+0.1**
VNA3	**Neumayer Olymp**	**46.30**	**187**	*e*	**P**	**03 36 39.8**	**+2.1**
VNA2	**Neumayer--Watz**	**46.47**	**188**	⇑*i*P	**P**	**03 36 36.4**	**-2.7**
VNA2	**Neumayer--Watz**	**46.47**	**188**	*e*	**P**	**03 36 39.3**	**+0.2**
VNA2	**Neumayer--Watz**	**46.47**	**188**	*e*	**P**	**03 36 41.2**	**+2.1**
VNA1	**Neumayer--Stat**	**46.80**	**188**	⇑*i*P	**P**	**03 36 41.2**	**-0.4**
VNA1	**Neumayer--Stat**	**46.80**	**188**	*e*	**P**	**03 36 44.6**	**+3.0**
VNA1	**Neumayer--Stat**	**46.80**	**188**	*e*	**P**	**03 36 46.0**	**+4.4**
FITZ	**Fitzroy Crossi**	**48.66**	**322**	*e*P	**P**	**03 36 56.0**	**-0.9**
	comp=Z,36nm,0.9s,mb5.4						
PMSA	**Palmer Station**	**49.97**	**159**	*e*P	**P**	**03 37 06.6**	**+0.3**
PMSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.1						
HNR	**Honiara**	**52.91**	**6**	LR	LR	03 55 40.8	
	comp=Z,6µm,19.1s,MS5.7,baz=257,slow=31						
HNR	**Honiara**	**52.91**	**6**	PFAKE		03 37 40.0	+11
HNR				LR	LR		
	comp=Z,7µm,21.0s,MS5.7						
PMG	**Port Moresby**	**53.11**	**350**	P	**P**	**03 37 30.5**	**-0.3**
	comp=Z,21nm,1.0s,mb5.0,baz=126,slow=8.7,SNR=4.3						
PMG				LR	LR	03 55 20.2	
	comp=Z,6µm,21.6s,MS5.6,baz=164,slow=31						
PMG	**Port Moresby**	**53.11**	**350**	*e*P	**P**	**03 37 32.0**	**+1.2**
	comp=Z,32nm,1.0s,mb5.2						
PMG				LR	LR		
	comp=Z,5µm,21.0s,MS5.5						
PMG	**Port Moresby**	**53.11**	**350**	*i* P	**P**	**03 37 32.3**	**+1.5**
TBI	**Tubuai**	**53.78**	**70**	*e*S	**S**	**03 45 09.0**	**+0.7**
TBI				*e*LQ		03 50 09.2	
TBI				*e*LR	LR	03 52 48.9	
	comp=Z,2µm,28.5s						
AFI	**Afiamalu**	**53.82**	**41**	P	**P**	**03 37 35.6**	**-0.3**
	comp=Z,18nm,0.8s,mb5.1,baz=117,slow=18,SNR=3.0						
AFI	**Afiamalu**	**53.82**	**41**	*e*P	**P**	**03 37 35.7**	**-0.2**
	comp=Z,24nm,0.9s,mb5.1						
AFI				LR	LR		
	comp=Z,4µm,22.0s,MS5.5						
AFI	**Afiamalu**	**53.82**	**41**	*e*P	**P**	**03 37 35.7**	**-0.2**
AFI				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
AFI				MLR	MLR		
	comp=Z,4µm,22.0s,MS5.5						
PPT	**Papeete**	**58.82**	**67**	*e*S	**S**	**03 46 15.4**	**0.0**
PPT				*e*LQ		03 52 26.5	
PPT				*e*LR	LR	03 55 06.4	
	comp=Z,3µm,28.2s,baz=213						
RKT	**Rikitea**	**60.55**	**84**	*e*S	**S**	**03 46 39.0**	**+1.4**
RKT				*e*LQ		03 53 09.0	
RKT				*e*LR	LR	03 56 01.0	
	comp=Z,4µm,29.5s,baz=205						
COCO	**West Island**	**64.73**	**293**	PFAKE		03 39 00.0	+8.6
COCO				LR	LR		
	comp=Z,590nm,20.0s,MS4.8						
RPN	**Rapa Nui**	**68.94**	**108**	LR	LR	04 02 25.4	
	comp=Z,1µm,21.4s,MS5.1,baz=213,slow=30						
RPN	**Rapa Nui**	**68.94**	**108**	PFAKE		03 39 30.0	+12
RPN				LR	LR		
	comp=Z,771nm,22.0s,MS4.9						
PLCA	**Paso Flores**	**70.98**	**145**	P	**P**	**03 39 28.6**	**-1.5**
	comp=Z,6.1nm,0.7s,mb4.6,baz=206,slow=5.1,SNR=14						
PLCA	**Paso Flores**	**70.98**	**145**	*e*P	**P**	**03 39 28.9**	**-1.3**
	comp=Z,9.5nm,0.9s,mb4.7						
PLCA				LR	LR		
	comp=Z,2µm,20.0s,MS5.3						
PLCA	**Paso Flores**	**70.98**	**145**	*e*P	**P**	**03 39 28.9**	**-1.3**
PLCA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PLCA				MLR	MLR		
	comp=Z,2µm,20.0s						
DAV	**Davao City (W)**	**72.78**	**329**	PFAKE		03 39 50.0	+8.7
DAV				LR	LR		
	comp=Z,421nm,20.0s,MS4.7						
KKM	**Kota Kinabalu**	**74.34**	**320**	*e*P	**P**	**03 39 50.0**	**-0.4**
GUMO	**Guam**	**76.07**	**350**	PFAKE		03 40 10.0	+10
GUMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.2						
PSI	**Prapat**	**77.41**	**302**	P	**P**	**03 40 04.7**	**-3.0**
	comp=Z,9.6nm,1.0s,mb4.7,baz=177,slow=4.7,SNR=7.0						
SUR	**Sutherland**	**78.69**	**218**	PFAKE		03 40 30.0	+16
SUR				LR	LR		
	comp=Z,895nm,20.0s,MS5.1						
KULM	**Kulim**	**79.01**	**305**	*e*P	**P**	**03 40 16.2**	**-0.4**
KULM				*e*PcP	PcP	03 40 24.9	-0.6
DGAR	**Diego Garcia**	**79.98**	**273**	PFAKE		03 40 30.0	+8.3
DGAR				LR	LR		
	comp=Z,594nm,19.0s,MS5.0						
TRIS	**Tristan da Cun**	**80.43**	**190**	PFAKE		03 40 40.0	+16
TRIS				LR	LR		
	comp=Z,5µm,21.0s,MS5.9						
BOSA	**Boshof**	**80.85**	**223**	P	**P**	**03 40 27.5**	**+1.4**
	comp=Z,12nm,0.8s,mb4.9,baz=146,slow=3.7,SNR=20						
BOSA				LR	LR	04 12 29.6	
	comp=Z,2µm,20.3s,MS5.4,baz=159,slow=33						
BOSA	**Boshof**	**80.85**	**223**	*e*P	**P**	**03 40 27.5**	**+1.4**
	comp=Z,77nm,1.6s,mb5.4						
BOSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.4						
BOSA	**Boshof**	**80.85**	**223**	*e*P	**P**	**03 40 27.5**	**+1.4**
BOSA				pmax	pmax		
	comp=Z,77nm,1.6s,mb5.4						
BOSA				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.4						
LBTB	**Lobatse**	**84.08**	**225**	*e*P	**P**	**03 40 42.6**	**-0.2**
	comp=Z,19nm,1.0s,mb5.2						
LBTB				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
LBTB	**Lobatse**	**84.08**	**225**	*e*P	**P**	**03 40 42.6**	**-0.2**
LBTB				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
LBTB				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.5						
MATP	**Matopo**	**87.33**	**229**	LR	LR	04 19 03.0	
	comp=Z,807nm,18.1s,MS5.2,baz=162,slow=35						
CPUP	**Villa Florida**	**87.96**	**151**	*e*P	**P**	**03 40 59.5**	**-2.4**
	comp=Z,24nm,1.0s,mb5.4						
CPUP				LR	LR		
	comp=Z,221nm,19.0s,MS4.6						
CPUP	**Villa Florida**	**87.96**	**151**	*e*P	**P**	**03 40 59.5**	**-2.4**
CPUP				pmax	pmax		
	comp=Z,24nm,1.0s						
CPUP				MLR	MLR		
	comp=Z,221nm,19.0s						
QIZ	**Qiongzhong**	**88.54**	**318**	*e*P	**P**	**03 41 08.0**	**+3.2**
QIZ				S	S	03 51 53.3	+4.5
QIZ				LR	LR		
	comp=N,470nm,29.4s,MS5.2						
QIZ				LR	LR		
	comp=E,1µm,25.6s,MS5.2						
QIZ				LR	LR		
	comp=Z,1µm,29.0s,MS5.1						
QIZ	**Qiongzhong**	**88.54**	**318**	PFAKE		03 41 20.0	+15
QIZ				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
PALK	**Pallekele**	**89.15**	**287**	PFAKE		03 41 20.0	+12
PALK				LR	LR		
	comp=Z,602nm,20.0s,MS5.0						
MSEY	**Mahe Island**	**90.28**	**259**	PFAKE		03 41 30.0	+17
MSEY				LR	LR		
	comp=Z,684nm,22.0s,MS5.0						
TATO	**Taipei**	**91.00**	**330**	PFAKE		03 41 30.0	+14
TATO				LR	LR		
	comp=Z,1µm,20.0s,MS5.3						
TSUM	**Tsumeb**	**92.04**	**220**	PFAKE		03 41 30.0	+9.0
TSUM				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
LSZ	**Lusaka**	**92.19**	**231**	PFAKE		03 41 30.0	+8.2
LSZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.5						
LPAZ	**La Paz**	**94.67**	**139**	P	**P**	**03 41 34.5**	**+1.4**
	comp=Z,4.1nm,0.9s,mb4.9,baz=196,slow=5.8,SNR=14						
LPAZ				LR	LR	04 17 26.0	
	comp=Z,658nm,20.0s,MS5.1,baz=279,slow=31						
LPAZ	**La Paz**	**94.67**	**139**	*e*P	**P**	**03 41 34.0**	**+0.9**
	comp=Z,5.4nm,0.9s,mb5.0						
LPAZ				LR	LR		
	comp=Z,664nm,20.0s,MS5.1						
LPAZ	**La Paz**	**94.67**	**139**	*e*P	**P**	**03 41 34.0**	**+0.8**
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
LPAZ				MLR	MLR		
	comp=Z,664nm,20.0s						
NNA	**Nana**	**95.76**	**129**	PFAKE		03 41 50.0	+12
NNA				LR	LR		
	comp=Z,430nm,20.0s,MS4.9						
GYA	**Guiyang**	**96.49**	**318**	⇑*i*P	**P**	**03 41 47.5**	**+6.2**
GYA				AP	pP	03 41 51.8	+7.2
GYA				XP	sP	03 41 54.5	+8.9
GYA				S	S	03 53 07.0	+8.5
GYA				LR	LR		
	comp=N,2µm,23.7s,MS5.5						
GYA				LR	LR		
	comp=E,540nm,20.4s,MS5.5						
GYA				LR	LR		
	comp=Z,2µm,25.2s,MS5.4						
KMI	**Kunming**	**96.53**	**314**	P	**P**	**03 41 46.0**	**+4.5**
KMI				AP	pP	03 41 49.3	+4.5
KMI				PP	PP	03 45 43.8	+5.6
KMI				PPP	PPP	03 47 50.0	+6.2
KMI				SKS	SKS	03 52 22.8	+0.9
KMI				S	S	03 53 06.3	+7.5
KMI				XS		03 53 10.3	
KMI				PS	PS	03 54 32.3	+6.3
KMI				SS	SS	03 59 41.0	+4.5
KMI				SSS	SSS	04 03 28.3	+7.3

KMI				LR	LR		
	comp=N,670nm,27.5s,MS5.1						
KMI				LR	LR		
	comp=E,660nm,31.4s,MS5.1						
KMI				LR	LR		
	comp=Z,2µm,31.4s,MS5.3						
KMI	**Kunming**	**96.53**	**314**	P	**P**	**03 41 45.9**	**+4.4**
	comp=Z,10.0nm,0.5s,mb5.5						
KMI				pP	pP	03 41 49.3	+4.5
KMI				sP	sP	03 41 50.6	+4.8
KMI				PP	PP	03 45 43.8	+5.6
KMI				PPP	PPP	03 47 49.9	+6.1
KMI				SKS	SKS	03 52 22.8	+0.9
KMI				S	S	03 53 06.2	+7.4
KMI				sS		03 53 10.3	
KMI				PS	PS	03 54 32.3	+6.3
KMI				SS	SS	03 59 41.1	+4.6
KMI				SSS	SSS	04 03 28.2	+7.2
KMI				LR	LR		
	comp=Z,2µm,31.4s,MS5.3						
KMI	**Kunming**	**96.53**	**314**	P	**P**	**03 41 45.9**	**+4.4**
KMI				*PP	pP	03 41 49.3	+4.5
KMI				*SP	sP	03 41 50.6	+4.8
KMI						03 45 43.8	
KMI				PPP	PPP	03 47 49.9	+6.1
KMI						03 52 22.8	
KMI				S	S	03 53 06.2	+7.4
KMI				PS	PS	03 54 32.3	+6.3
KMI				SS	SS	03 59 41.1	+4.6
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.5						
KMI				MLR	MLR		
	comp=Z,2µm,31.4s,MS5.3						
SSE	**Sheshan**	**96.96**	**331**	P	**P**	**03 41 46.5**	**+3.2**
SSE				AP	pP	03 41 56.3	+10
SSE				S	S	03 53 00.8	-1.5
SSE				XS		03 53 16.5	
SSE				AMB	AMB		
	comp=Z,90nm,4.9s						
SSE				LR	LR		
	comp=N,590nm,25.7s,MS5.0						
SSE				LR	LR		
	comp=E,270nm,25.7s,MS5.0						
SSE				LR	LR		
	comp=Z,980nm,23.0s,MS5.2						
SSE	**Sheshan**	**96.96**	**331**	P	**P**	**03 41 46.6**	**+3.3**
	comp=Z,42nm,0.7s,mb6.0						
SSE				pP	pP	03 41 56.2	+10
SSE				sP	sP	03 42 00.0	+12
SSE				PP	PP	03 45 36.2	-5.3
SSE				S	S	03 53 00.8	-1.5
SSE				ScS	ScS	03 53 01.5	-1.6
SSE				sS		03 53 16.4	
SSE				SS	SS	03 59 32.6	-10
SSE				LR	LR		
	comp=Z,990nm,23.0s,MS5.2						
NJ2	**Nanjing**	**98.42**	**330**	*e*P	**P**	**03 41 50.8**	**+0.9**
NJ2				AP	pP	03 41 55.5	+2.4
NJ2				XP	sP	03 41 58.5	+4.4
NJ2				PP	PP	03 45 52.8	+0.1
NJ2				S	S	03 53 16.0	+1.5
NJ2				XS		03 53 25.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.5						
NJ2				AMB	AMB		
	comp=Z,100nm,10.8s						
NJ2				LR	LR		
	comp=N,2µm,22.0s,MS5.7						
NJ2				LR	LR		
	comp=E,2µm,25.0s,MS5.7						
NJ2				LR	LR		
	comp=Z,2µm,34.0s						
ENH	**Enshi**	**99.20**	**321**	*e*P	**P**	**03 41 52.6**	**-0.9**
ENH				LR	LR		
	comp=Z,791nm,20.0s,MS5.2						
MJAR	**Matsushiro Arr**	**99.43**	**346**	LR	LR	04 23 42.3	
	comp=Z,596nm,21.9s,MS5.0,baz=180,slow=34						
MAJO	**Matsushiro**	**99.43**	**346**	PFAKE		03 42 10.0	+16
MAJO				LR	LR		
	comp=Z,784nm,21.0s,MS5.2						
PAYG	**Puerto Ayora**	**100.69**	**113**	PFAKE		03 42 10.0	+9.4
PAYG				LR	LR		
	comp=Z,3µm,20.0s,MS5.7						
KMBO	**Kilima Mbogo**	**101.52**	**245**	PFAKE		03 42 20.0	+16
KMBO				LR	LR		
	comp=Z,532nm,19.0s,MS5.1						
CD2	**Chengdu**	**101.55**	**317**	*e*P	P	03 42 08.0	+3.9
CD2				PP	PP	03 46 21.8	+5.1
CD2				PPP	PPP	03 48 33.8	+6.0
CD2				SKS	SKS	03 52 45.5	-1.5
CD2				S	S	03 53 46.0	+5.1
INCN	**Inchon**	**102.04**	**337**	PFAKE		03 42 20.0	+14
INCN				LR	LR		
	comp=Z,744nm,19.0s,MS5.2						
SAML	**Samuel**	**103.09**	**141**	PFAKE		03 42 20.0	+8.7
SAML				LR	LR		
	comp=Z,696nm,19.0s,MS5.2						
LSA	**Lhasa**	**104.85**	**306**	PFAKE		03 42 30.0	+11
LSA				LR	LR		
	comp=Z,844nm,19.0s,MS5.3						
OTAV	**Otavalo**	**106.40**	**123**	*e*PKiKP		03 46 37.7	
OTAV				LR	LR		
	comp=Z,520nm,22.0s,MS5.0						
MDJ	**Mudanjiang**	**108.50**	**341**	PDIF	Pdif	03 42 37.5	+3.1
MDJ				PP	PP	03 47 08.8	+0.2
MDJ				S		03 54 47.8	
MDJ				LR	LR		
	comp=N,330nm,36.0s						
MDJ				LR	LR		
	comp=E,690nm,29.0s						
MDJ				LR	LR		
	comp=Z,680nm,31.3s,MS5.0						
MDJ	**Mudanjiang**	**108.50**	**341**	PFAKE		03 46 50.0	
MDJ				LR	LR		
	comp=Z,556nm,22.0s,MS5.1						
YSS	**Yuzh-Sakhalins**	**109.35**	**351**	PFAKE		03 46 50.0	
YSS				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
GTA	**Gaotai**	**110.62**	**317**	PKP	PKPdf	03 46 45.0	-0.9
GTA				PP	PP	03 47 25.5	+1.5
GTA				SKS	SKS	03 53 51.0	+24
GTA				SKKS		03 54 15.8	
GTA				PP	PP		
	comp=Z,70nm,8.4s						
GTA				LR	LR		
	comp=N,590nm,23.2s						
GTA				LR	LR		
	comp=E,340nm,16.0s						
GTA				LR	LR		
	comp=Z,760nm,21.3s,MS5.2						
RCBR	**Riachuelo**	**111.55**	**168**	PFAKE		03 47 00.0	+12
RCBR				LR	LR		
	comp=Z,663nm,22.0s,MS5.2						
JTS	**JuntasAbangare**	**112.81**	**113**	PFAKE		03 47 00.0	+9.3
JTS				LR	LR		
	comp=Z,582nm,20.0s,MS5.2						
HIA	**Hailar**	**114.71**	**335**	PFAKE		03 47 00.0	+6.4
HIA				LR	LR		
	comp=Z,1µm,21.0s,MS5.4						
SMY	**Shemya**	**115.69**	**13**	PFAKE		03 47 10.0	+14
SMY				LR	LR		
	comp=Z,13µm,22.0s						
ULN	**Ulaanbaatar**	**116.28**	**326**	PFAKE		03 47 10.0	+13
ULN				LR	LR		
	comp=Z,823nm,22.0s,MS5.3						
ULN	**Ulaanbaatar**	**116.28**	**326**	⇑*i*PKIKP	PKPdf	03 46 57.5	+0.7
SONM	**Songino Array**	**116.42**	**326**	PKP	PKPdf	03 46 56.4	-0.7
	comp=Z,0.3nm,0.5s,baz=135,slow=2.0,SNR=3.5						
SNCC	**San Nicolas Is**	**116.88**	**69**	PFAKE		03 47 10.0	+12
SNCC				LR	LR		
	comp=Z,882nm,19.0s,MS5.4						
SDV	**Santo Domingo**	**117.31**	**127**	PFAKE		03 47 10.0	+10
SDV				LR	LR		
	comp=Z,912nm,20.0s,MS5.4						
PFO	**Pinyon Flat Ob**	**118.53**	**72**	PFAKE		03 47 10.0	+8.5
PFO				LR	LR		
	comp=Z,297nm,20.0s,MS4.9						
WMQ	**Urumqi**	**118.64**	**310**	*e*PKP	PKPdf	03 47 00.0	-1.5
WMQ				PP	PP	03 48 24.0	+3.0
WMQ				PKS	PKS	03 50 35.0	+0.9
WMQ				PPP	PPP	03 50 54.0	+2.4
WMQ				SKS	SKS	03 54 09.0	+12
WMQ				SKKS		03 55 14.0	
WMQ				SS	SS	04 04 38.0	+3.1
WMQ				PP	PP		
	comp=Z,240nm,6.6s						
WMQ				LR	LR		
	comp=N,540nm,23.0s,MS5.3						
WMQ				LR	LR		
	comp=E,480nm,20.7s,MS5.3						
WMQ				LR	LR		
	comp=Z,720nm,36.8s						
SAO	**San Andreas Ge**	**119.03**	**66**	PFAKE		03 47 10.0	+7.6
SAO				LR	LR		
	comp=Z,750nm,20.0s,MS5.3						
ISA	**Isabella**	**119.38**	**69**	PFAKE		03 47 10.0	+7.0
ISA				LR	LR		
	comp=Z,261nm,19.0s,MS4.9						
ZAK	**Zakamensk**	**119.58**	**325**	*e*PKIKP	PKPdf	03 47 02.2	-0.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.7s						
UNV	**Unalaska Valle**	**119.72**	**25**	PFAKE		03 47 10.0	+6.8
UNV				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
TUC	**Tucson**	**119.99**	**77**	PFAKE		03 47 10.0	+5.7
TUC				LR	LR		
	comp=Z,679nm,20.0s,MS5.3						
HOPS	**Hopland**	**120.23**	**63**	PFAKE		03 47 20.0	+15
HOPS				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
DAC	**Darwin (Calif)**	**120.28**	**69**	PFAKE		03 47 20.0	+15
DAC				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
CMB	**Columbia Colle**	**120.55**	**66**	PFAKE		03 47 20.0	+15
CMB				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
LTX	**Lajitas**	**120.77**	**85**	PFAKE		03 47 20.0	+14
LTX				LR	LR		
	comp=Z,935nm,20.0s,MS5.4						
TXAR	**Lajitas Array**	**120.77**	**85**	PKP	PKPdf	03 47 06.3	+0.4
	comp=Z,0.6nm,1.0s,baz=236,slow=4.5,SNR=3.5						
TPNV	**Topopah Spring**	**121.43**	**70**	PFAKE		03 47 20.0	+13
TPNV				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
NVAR	**Mina Array Bea**	**121.78**	**67**	PKP	PKPdf	03 47 06.6	-1.1
	comp=Z,1.9nm,0.9s,baz=182,slow=4.4,SNR=10						
WDC	**Whiskeytown Da**	**121.78**	**63**	PFAKE		03 47 20.0	+12
WDC				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
MNV	**Mina**	**121.84**	**67**	PFAKE		03 47 20.0	+12
MNV				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
TPH	**Tonopah**	**121.95**	**68**	PFAKE		03 47 20.0	+12
TPH				LR	LR		
	comp=Z,701nm,19.0s,MS5.3						
MNTX	**Cornudas Mount**	**121.96**	**82**	PFAKE		03 47 20.0	+12
MNTX				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
WUAZ	**Wupatki**	**122.41**	**75**	PFAKE		03 47 20.0	+11
WUAZ				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
DBIC	**Dimbokro**	**122.51**	**204**	PKP	PKPdf	03 47 05.6	-4.0
	comp=Z,1.3nm,0.7s,baz=244,slow=5.9,SNR=3.0						
DBIC	**Dimbokro**	**122.51**	**204**	PKP	PKPdf	03 47 05.6	-4.0
DBIC				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
AAK	**Ala-Archa**	**122.64**	**300**	*e*PKPdf	PKPdf	03 47 10.1	+0.9
AAK				LR	LR		
	comp=Z,272nm,20.0s,MS4.9						
AAK	**Ala-Archa**	**122.64**	**300**	⇑*i*PKIKP	PKPdf	03 47 09.4	+0.3
YBH	**Yreka Blue Hor**	**122.67**	**62**	PFAKE		03 47 20.0	+11
YBH				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
FRU	**Bishkek**	**122.76**	**300**	*e*PKIKP	PKPdf	03 47 07.0	-2.4
MKAR	**Makanchi Array**	**123.14**	**308**	PKP	PKPdf	03 47 10.2	+0.1
	comp=Z,1.6nm,0.9s,baz=135,slow=2.0,SNR=12						
HUMO	**Hull Mountain**	**123.30**	**61**	*e*PKPdf	PKPdf	03 47 11.5	+1.0
HUMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
BNM	**Barren Site**	**123.43**	**79**	*e*PKPdf	PKPdf	03 47 10.0	-0.9
MOD	**Modoc**	**123.81**	**63**	PFAKE		03 47 20.0	+8.4
MOD				LR	LR		
	comp=Z,936nm,20.0s,MS5.4						
ANMO	**Albuquerque**	**124.17**	**79**	PFAKE		03 47 20.0	+7.6
ANMO				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
MVU	**Marysvale**	**124.50**	**72**	PFAKE		03 47 20.0	+7.1
MVU				LR	LR		
	comp=Z,809nm,19.0s,MS5.4						
MSU	**Marysvale**	**124.53**	**72**	*e*PKPdf	PKPdf	03 47 13.4	+0.5
COR	**Corvallis**	**124.80**	**59**	PFAKE		03 47 20.0	+6.7
COR				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
WVOR	**Wild Horse Val**	**124.95**	**64**	PFAKE		03 47 20.0	+6.4
WVOR				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
YAK	**Yakutsk**	**125.49**	**346**	PFAKE		03 47 20.0	+5.9
YAK				LR	LR		
	comp=Z,681nm,21.0s,MS5.3						
DUG	**Dugway**	**125.62**	**70**	PFAKE		03 47 30.0	+15
DUG				LR	LR		
	comp=Z,894nm,19.0s,MS5.5						
MPU	**Maple Canyon**	**126.00**	**71**	PFAKE		03 47 30.0	+14
MPU				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
AMTX	**Amarillo**	**126.32**	**83**	PFAKE		03 47 30.0	+14
AMTX				LR	LR		
	comp=Z,954nm,20.0s,MS5.5						
SDCO	**Great Sand Dun**	**126.91**	**78**	*e*PKPdf	PKPdf	03 47 16.7	-0.7
SDCO				LR	LR		
	comp=Z,977nm,20.0s,MS5.5						
OCWA	**Octopus Mounta**	**127.05**	**57**	PFAKE		03 47 30.0	+13
OCWA				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
HWUT	**Hardware Ranch**	**127.32**	**70**	*e*PKPdf	PKPdf	03 47 16.8	-1.3
HWUT				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
SJG	**San Juan**	**127.45**	**128**	PFAKE		03 47 30.0	+11
SJG				LR	LR		
	comp=Z,661nm,20.0s,MS5.3						
BMO	**Blue Mountains**	**127.48**	**64**	PFAKE		03 47 30.0	+12
BMO				LR	LR		
	comp=Z,928nm,19.0s,MS5.5						
WMOK	**Wichita Mounta**	**127.55**	**86**	PFAKE		03 47 30.0	+11
WMOK				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
HLID	**Hailey**	**127.67**	**67**	*e*PKPdf	PKPdf	03 47 19.0	+0.2
HLID				LR	LR		
	comp=Z,967nm,21.0s,MS5.5						
KURK	**Kurchatov**	**127.75**	**309**	*e*PKPdf	PKPdf	03 47 14.6	-4.1
KURK				LR	LR		
	comp=Z,168nm,19.0s,MS4.7						
HAWA	**Hanford**	**127.81**	**61**	PFAKE		03 47 30.0	+11
HAWA				LR	LR		
	comp=Z,101nm,21.0s,MS4.5						
ISCO	**Idaho Springs**	**128.52**	**76**	PFAKE		03 47 30.0	+9.4
ISCO				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
REDW	**Red Top Meadow**	**129.05**	**69**	*e*PKPdf	PKPdf	03 47 19.9	-1.5
BW06	**Boulder Array**	**129.14**	**71**	PFAKE		03 47 30.0	+8.4
BW06				LR	LR		
	comp=Z,877nm,20.0s,MS5.5						
PDAR	**Pinedale Array**	**129.14**	**71**	PKP	PKPdf	03 47 18.9	-2.7
	comp=Z,1.0nm,1.0s,baz=252,slow=4.7,SNR=3.8						
LOHW	**Long Hollow**	**129.36**	**69**	*e*PKPdf	PKPdf	03 47 18.4	-3.7
IMW	**Indian Meadow**	**129.44**	**69**	*e*PKPdf	PKPdf	03 47 21.9	-0.3
MIAR	**Mount Ida**	**129.82**	**90**	PFAKE		03 47 30.0	+6.8
MIAR				LR	LR		
	comp=Z,902nm,22.0s,MS5.4						
DLMT	**Dillon**	**129.89**	**67**	*e*PKPdf	PKPdf	03 47 25.1	+2.2
DWPF	**Disney**	**130.01**	**106**	PFAKE		03 47 30.0	+6.3
DWPF				LR	LR		
	comp=Z,899nm,22.0s,MS5.4						
FIB	**Fire Island**	**130.02**	**31**	PFAKE		03 47 30.0	+7.2
FIB				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
YMR	**Madison River**	**130.04**	**68**	*e*PKPdf	PKPdf	03 47 22.8	-0.5
YMR				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
LKWY	**Lake**	**130.20**	**69**	PFAKE		03 47 30.0	+6.4
LKWY				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
NEW	**Newport**	**130.29**	**61**	PFAKE		03 47 30.0	+6.3
NEW				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
BILL	**Bilibino**	**130.31**	**6**	PFAKE		03 47 30.0	+6.8
BILL				LR	LR		
	comp=Z,5.0nm,20.0s						
TNA	**Tin City**	**130.47**	**19**	PFAKE		03 47 30.0	+6.5
TNA				LR	LR		
	comp=Z,1µm,21.0s,MS5.5						
MSO	**Missoula**	**130.48**	**64**	PFAKE		03 47 30.0	+5.9
MSO				LR	LR		
	comp=Z,540nm,19.0s,MS5.3						
BOZ	**Bozeman (W)**	**130.53**	**67**	PFAKE		03 47 30.0	+5.8
BOZ				LR	LR		
	comp=Z,981nm,20.0s,MS5.5						
PMR	**Palmer**	**130.65**	**31**	PFAKE		03 47 30.0	+6.0
PMR				LR	LR		
	comp=Z,1µm,22.0s,MS5.5						
DIV	**Divide**	**131.09**	**34**	PFAKE		03 47 40.0	+15
DIV				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
OXF	**Oxford**	**131.74**	**94**	PFAKE		03 47 40.0	+13
OXF				LR	LR		
	comp=Z,590nm,20.0s,MS5.3						
MCK	**McKinley**	**132.53**	**30**	*e*PKPdf	PKPdf	03 47 25.8	-1.8
MCK				LR	LR		
	comp=Z,579nm,20.0s,MS5.3						
RSSD	**Black Hills**	**132.67**	**74**	PFAKE		03 47 40.0	+12
RSSD				LR	LR		
	comp=Z,685nm,21.0s,MS5.3						
BRVK	**Borovoye**	**132.74**	**305**	*e*PKPdf	PKPdf	03 47 26.3	-1.9
BRVK				LR	LR		
	comp=Z,186nm,22.0s,MS4.8						
CHKZ	**Chkalovo**	**133.09**	**306**	*e*PKPdf	PKPdf	03 47 28.5	-0.3
IMA2	**Indian Mountai**	**133.50**	**26**	*e*PKPdf	PKPdf	03 47 28.1	-1.0
GOGA	**Godfrey**	**133.58**	**100**	PFAKE		03 47 40.0	+10
GOGA				LR	LR		
	comp=Z,763nm,22.0s,MS5.4						
LAO	**LASA Array**	**133.69**	**70**	PFAKE		03 47 40.0	+10
LAO				LR	LR		
	comp=Z,744nm,21.0s,MS5.4						
GNI	**Garni**	**133.74**	**275**	PFAKE		03 47 40.0	+10
GNI				LR	LR		
	comp=Z,1µm,20.0s,MS5.7						
COLA	**College**	**133.75**	**30**	*e*PKPdf	PKPdf	03 47 28.3	-1.3
COLA				LR	LR		
	comp=Z,966nm,20.0s,MS5.5						
WVT	**Waverly**	**133.80**	**94**	PFAKE		03 47 40.0	+9.5
WVT				LR	LR		
	comp=Z,624nm,19.0s,MS5.3						
ILAR	**Eielson Array**	**133.89**	**30**	PKP	PKPdf	03 47 27.6	-2.3
	comp=Z,1.4nm,0.8s,baz=278,slow=2.4,SNR=12						
NHSC	**New Hope**	**134.82**	**104**	PFAKE		03 47 40.0	+7.4
NHSC				LR	LR		
	comp=Z,697nm,20.0s,MS5.4						
TIXI	**Tiksi**	**134.89**	**349**	PFAKE		03 47 40.0	+8.3
TIXI				LR	LR		
	comp=Z,970nm,20.0s,MS5.5						
TIXI	**Tiksi**	**134.89**	**349**	*i* PKIKP	PKPdf	03 47 32.1	+0.4
TIXI				MLR	MLR		
	comp=Z,700nm,16.0s,MS5.5						
DAWY	**Dawson**	**135.19**	**35**	*e*PKPdf	PKPdf	03 47 31.4	-1.0
DGMT	**Dagmar**	**135.94**	**70**	PFAKE		03 47 40.0	+5.8
DGMT				LR	LR		
	comp=Z,1µm,22.0s,MS5.6						
WCI	**Wyandotte Cave**	**136.22**	**94**	*e*PKPdf	PKPdf	03 47 32.6	-2.4
WCI				LR	LR		
	comp=Z,631nm,19.0s,MS5.4						
KIV	**Kislovodsk**	**137.67**	**277**	PFAKE		03 47 50.0	+12
KIV				LR	LR		
	comp=Z,982nm,22.0s,MS5.5						
KIV	**Kislovodsk**	**137.67**	**277**	⇑*i*PKIKP	PKPdf	03 47 39.2	+1.7
BLA	**Blacksburg**	**138.11**	**100**	PFAKE		03 47 50.0	+11
BLA				LR	LR		
	comp=Z,731nm,20.0s,MS5.4						
FWV	**Forest Hill**	**138.24**	**100**	*e*PKPdf	PKPdf	03 47 37.6	-1.2
ANTO	**Ankara**	**139.09**	**264**	*e*PKPdf	PKPdf	03 47 38.9	-1.3
ANTO				LR	LR		
	comp=Z,789nm,19.0s,MS5.5						
SVE	**Sverdlovsk**	**139.27**	**303**	*e*PKIKP	PKPdf	03 47 38.2	-1.9
SVE				MLR	MLR		
	comp=E,200nm,12.0s						
SVE				MLR	MLR		
	comp=Z,500nm,12.0s,MS5.5						
ACSO	**Alum Creek Sta**	**139.36**	**95**	PFAKE		03 47 50.0	+9.3
ACSO				LR	LR		
	comp=Z,418nm,21.0s,MS5.2						
ARU	**Arti**	**139.82**	**301**	PFAKE		03 47 50.0	+9.0
ARU				LR	LR		
	comp=Z,215nm,21.0s,MS4.9						
ARU	**Arti**	**139.82**	**301**	*i* PKIKP	PKPdf	03 47 41.2	+0.2
INK	**Inuvik**	**139.98**	**33**	*e*PKPdf	PKPdf	03 47 37.5	-3.5
CBN	**Corbin**	**140.32**	**103**	PFAKE		03 47 50.0	+7.5
CBN				LR	LR		
	comp=Z,1µm,21.0s,MS5.6						
MCWV	**Mont Chateau**	**140.36**	**99**	PFAKE		03 47 50.0	+7.5
MCWV				LR	LR		
	comp=Z,892nm,19.0s,MS5.5						
AAM	**Ann Arbor**	**140.67**	**93**	PFAKE		03 47 50.0	+7.1
AAM				LR	LR		
	comp=Z,654nm,20.0s,MS5.4						
BBSR	**BB Station**	**140.86**	**121**	PFAKE		03 47 50.0	+6.5
BBSR				LR	LR		
	comp=Z,599nm,20.0s,MS5.3						
EYMN	**Ely**	**141.27**	**80**	PFAKE		03 47 50.0	+6.3
EYMN				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
FFC	**Flin Flon**	**141.41**	**65**	PFAKE		03 47 50.0	+6.2
FFC				LR	LR		
	comp=Z,284nm,19.0s,MS5.0						
ERPA	**Erie**	**142.24**	**96**	PFAKE		03 48 00.0	+14
ERPA				LR	LR		
	comp=Z,796nm,19.0s,MS5.5						
KDZ	**Kurdzhali**	**143.91**	**259**	P	PKPbc	03 47 44.5	0.0
PSN	**Preselentsi**	**144.22**	**264**	P	PKPbc	03 47 47.0	+1.7
RZN	**Rozhen**	**144.27**	**258**	*i* P	PKPbc	03 47 45.0	-0.5
MMB	**Musomiste**	**144.64**	**257**	*i* P	PKPbc	03 47 45.7	-0.9
SADO	**Sadowa**	**144.67**	**94**	PKP	PKPdf	03 47 47.1	-2.6
	comp=Z,9.8nm,0.8s,baz=94,slow=1.3,SNR=4.2						
TIRR	**Tirgusor**	**144.71**	**265**	⇓P	PKPbc	03 47 46.6	-0.1
TIRR	**Tirgusor**	**144.71**	**265**	*e*PKPdf	PKPdf	03 47 46.4	-3.4
VOR	**Voronezh**	**144.94**	**283**	*e*PKHKP		03 47 46.0	
VOR				pmax	pmax		
	comp=Z,150nm,1.0s						
VAY	**Valandovo**	**144.95**	**256**	*e*P	PKPbc	03 47 47.9	+0.5
VAY	**Valandovo**	**144.95**	**256**	*e*P	PKPbc	03 47 47.9	+0.5
HARR	**Harsova**	**145.11**	**265**	⇓P	PKPbc	03 47 49.3	+1.6
HARR	**Harsova**	**145.11**	**265**	⇓P	PKPbc	03 47 49.4	+1.6
KKB	**Krupnik**	**145.15**	**257**	P	PKPbc	03 47 49.0	+1.1
EOSO	**Osorio**	**145.19**	**195**	PKP	PKPdf	03 47 52.0	+0.9
BIA	**Bitola**	**145.27**	**254**	*e*P	PKPbc	03 47 54.8	+6.6
BIA	**Bitola**	**145.27**	**254**	*e*P	PKPbc	03 47 54.8	+6.5
CFTV	**Fuerteventura**	**145.33**	**197**	PKP	PKPdf	03 47 49.6	-1.8
CFR	**Carcaliu**	**145.38**	**266**	⇓P	PKPbc	03 47 47.6	-0.8
CFR	**Carcaliu**	**145.38**	**266**	⇓P	PKPbc	03 47 47.6	-0.8
CCAN	**Las Canadas**	**145.45**	**193**	PKP	PKPdf	03 47 54.1	+2.5
ZIMR		**145.51**	**261**	⇑P	PKPbc	03 47 50.7	+1.9
ZIMR		**145.51**	**261**	⇑P	PKPbc	03 47 50.7	+1.9
OHR	**Ohrid**	**145.58**	**254**	*e*P	PKPbc	03 47 52.9	+3.8
OHR	**Ohrid**	**145.58**	**254**	*e*P	PKPbc	03 47 52.9	+3.9
VTS	**Vitosha**	**145.67**	**258**	P	PKPbc	03 47 51.0	+1.8
QUA2	**Belchertown**	**145.87**	**104**	*e*PKPdf	PKPdf	03 47 49.5	-2.4
SKO	**Skopje**	**145.98**	**255**	*e*P	PKPbc	03 47 51.1	+1.1
SKO	**Skopje**	**145.98**	**255**	*e*P	PKPbc	03 47 51.1	+1.1
NCB	**Newcomb**	**146.34**	**100**	*e*PKPdf	PKPdf	03 47 50.5	-2.1
NCB				LR	LR		
	comp=Z,758nm,22.0s,MS5.4						
KIS	**Kishinev**	**146.41**	**268**	*e*PKP2	PKPab	03 47 57.0	+3.1
HRV	**Harvard--Oak R**	**146.41**	**104**	*e*PKPdf	PKPdf	03 47 51.9	-0.9
HRV				LR	LR		
	comp=Z,689nm,19.0s,MS5.5						
WES	**Weston**	**146.42**	**105**	*e*PKPdf	PKPdf	03 47 51.1	-1.7
WES				LR	LR		
	comp=Z,429nm,20.0s,MS5.2						
LOZ	**Lake Ozonia**	**146.67**	**99**	*e*PKPdf	PKPdf	03 47 52.4	-0.8
MIV	**Mineville/With**	**146.74**	**100**	*e*PKPdf	PKPdf	03 47 52.6	-0.7
VOIR		**147.01**	**263**	⇓P	PKPdf	03 47 55.9	+2.2
VOIR		**147.01**	**263**	⇓P	PKPdf	03 47 55.9	+2.2
HNH	**Hanover**	**147.02**	**102**	*e*PKPdf	PKPdf	03 47 53.1	-0.7
FFD	**Franklin Falls**	**147.13**	**103**	*e*PKPdf	PKPdf	03 47 54.9	+1.0
FRNY	**Flat Rock**	**147.29**	**99**	*e*PKPdf	PKPdf	03 47 51.4	-2.7
FCC	**Fort Churchill**	**147.33**	**64**	*e*PKPdf	PKPdf	03 47 53.7	-0.1
LBNH	**Lisbon**	**147.60**	**102**	*e*PKPdf	PKPdf	03 47 55.8	+1.1
LBNH				LR	LR		
	comp=Z,830nm,20.0s,MS5.5						
MOS	**Moscow**	**148.25**	**287**	*e*PKP2	PKPab	03 47 58.8	-2.0
DIVS	**Divcibare**	**148.31**	**256**	⇓*i*PKP	PKPdf	03 47 58.4	+2.6
OBN	**Obninsk**	**148.34**	**286**	*e*PKPdf	PKPdf	03 47 56.8	+1.3
OBN				LR	LR		
	comp=Z,298nm,19.0s,MS5.1						
OBN	**Obninsk**	**148.34**	**286**	⇑*i*PKIKP	PKPdf	03 47 57.4	+1.9

OBN				pmax	pmax		
	comp=Z,80nm,1.4s						
BURAR	**Bucovina Array**	**148.54**	**266**	⇓P	PKPdf	03 47 57.5	+1.4
BURAR	**Bucovina Array**	**148.54**	**266**	⇓P	PKPdf	03 47 57.5	+1.5
BZS	**Buzias**	**148.73**	**260**	⇑P	PKPdf	03 47 57.3	+0.9
BZS	**Buzias**	**148.73**	**260**	⇑P	PKPdf	03 47 57.3	+0.9
AKASG	**Malin Array Be**	**148.84**	**274**	PKPbc	PKPdf	03 47 57.1	+0.7
	comp=Z,5.8nm,1.0s,baz=106,slow=2.1,SNR=17						
DRGR		**149.10**	**262**	⇓P	PKPdf	03 47 57.7	+0.7
DRGR		**149.10**	**262**	⇓P	PKPdf	03 47 57.6	+0.7
KLMR	**Klimovskoe**	**150.36**	**297**	d *i*PKIKP	PKPdf	03 48 01.7	+3.2
KLMR				pmax	pmax		
	comp=Z,180nm,1.5s						
KOLS	**Kolonicke sedl**	**150.86**	**265**	*e*PKP	PKPdf	03 48 07.0	+7.4
KOLS				*e*		03 48 19.1	
EBER	**Berja**	**151.09**	**219**	PKP	PKPdf	03 48 07.1	+6.7
KWP	**Kalwaria**	**151.15**	**266**	*e*PKP	PKPdf	03 48 06.3	+6.3
CRVS	**Cervenica-Dubn**	**151.22**	**264**	*e*PKP	PKPdf	03 48 05.9	+5.7
CRVS				*e*PP	PP	03 51 43.8	-1.4
PSZ	**Piszkesteto**	**151.23**	**261**	⇑*i*P	PKPdf	03 48 04.7	+4.5
EMIJ	**Mijas**	**151.30**	**216**	PKP	PKPdf	03 48 06.2	+5.5
KECS	**Kecovo**	**151.37**	**262**	*e*PKP	PKPdf	03 48 07.9	+7.5
EJIF	**Jimena Fronter**	**151.38**	**214**	PKP	PKPdf	03 48 07.3	+6.4
EMUR	**La Murta**	**151.46**	**222**	PKP	PKPdf	03 48 08.6	+7.7
ERON	**Agron**	**151.46**	**217**	PKP	PKPdf	03 48 10.7	+10
ECOG	**Cogollos-Vega**	**151.63**	**218**	PKP	PKPdf	03 48 13.3	+12
ELOJ	**Sierra Loja**	**151.68**	**217**	PKP	PKPdf	03 48 06.4	+5.2
STHS	**Stebnicka Huta**	**151.68**	**265**	*e*PKP	PKPdf	03 48 02.6	+1.7
STHS				*e*		03 48 06.7	
PGF	**Pioggiola**	**151.84**	**241**	*e*PKIKP	PKPdf	03 48 04.9	+3.6
	comp=Z,192nm,1.5s						
EHUE	**Huescar**	**151.85**	**220**	PKP	PKPdf	03 48 05.7	+4.2
ESPR	**Espera**	**151.88**	**214**	PKP	PKPdf	03 48 04.2	+2.6
MNK	**Minsk**	**151.95**	**278**	*e*PKIKP	PKPdf	03 48 05.0	+3.9
EQES	**Quesada**	**151.98**	**219**	PKP	PKPdf	03 48 07.8	+6.1
ELUQ	**Luque**	**152.10**	**217**	PKP	PKPdf	03 48 05.2	+3.3
VYHS	**Vyhne**	**152.14**	**261**	*e*PKP	PKPdf	03 48 01.5	-0.1
VYHS				*e*		03 48 07.8	
VYHS				*e*		03 48 28.9	
VYHS				*e*		03 48 43.5	
ETOB	**Tobarra**	**152.29**	**222**	PKP	PKPdf	03 48 09.0	+6.9
EBAN	**Banos Encina**	**152.52**	**218**	PKP	PKPdf	03 48 06.0	+3.6
EVIA	**Vianos**	**152.58**	**221**	PKP	PKPdf	03 48 11.2	+8.6
EADA	**Adamuz**	**152.75**	**217**	PKP	PKPdf	03 48 09.8	+7.0
EGRO	**El Granado**	**152.92**	**212**	PKP	PKPdf	03 48 03.6	+0.5
EMIN	**Mina Concepcio**	**152.94**	**213**	PKP	PKPdf	03 48 04.8	+1.8
OKC	**Ostrava-Krasne**	**153.41**	**262**	*e*PKPdf	PKPdf	03 48 03.4	+0.1
LMR	**La Mourre**	**153.51**	**239**	*e*PKIKP	PKPdf	03 48 07.2	+3.6
SBF	**Sospel**	**153.57**	**241**	*e*PKIKP	PKPdf	03 48 07.2	+3.5
	comp=Z,41nm,0.9s						
FRF	**La Foret Royal**	**153.64**	**239**	*e*PKIKP	PKPdf	03 48 07.4	+3.6
	comp=Z,32nm,1.0s						
MORC	**Moravsky Berou**	**153.65**	**261**	*e*PKPbc	PKPdf	03 48 10.5	+6.8
SUW	**Suwalki**	**153.81**	**274**	*e*PKP	PKPdf	03 47 56.7	-7.0
SUW	**Suwalki**	**153.81**	**274**	*e*PKP	PKPdf	03 47 56.7	-7.0
ESDC	**Sonseca Array**	**153.97**	**219**	PKP	PKPdf	03 48 04.2	-0.2
	comp=Z,2.4nm,1.0s,baz=221,slow=0.9,SNR=7.2						
ESDC				PKPbc	PKPdf	03 48 11.4	+7.0
	comp=Z,5.2nm,0.9s,baz=144,slow=2.4,SNR=8.3						
ESDC	**Sonseca Array**	**153.97**	**219**	PKP	PKPdf	03 48 04.0	-0.4
ESLA	**Sonseca Array**	**153.97**	**219**	PFAKE		03 48 20.0	+16
ESLA				LR	LR		
	comp=Z,7µm,20.0s						
TREC	**Trest**	**154.25**	**258**	*e*PKPbc	PKPdf	03 48 19.7	+15
SMRF	**Simiane la Rot**	**154.42**	**238**	*e*PKIKP	PKPdf	03 48 08.6	+3.8
	comp=Z,29nm,1.2s						
MBDF	**Montbardon**	**154.55**	**241**	*e*PKIKP	PKPdf	03 48 08.7	+3.7
	comp=Z,30nm,1.3s						
DPC	**Dobruska-Polom**	**154.61**	**261**	*e*PKPdf	PKPdf	03 48 08.4	+3.5
GERES	**GERESS Array B**	**154.74**	**256**	PKP	PKPdf	03 48 02.0	-3.2
	comp=Z,0.4nm,0.5s,baz=326,slow=11,SNR=3.8						
GERES				PKPbc	PKPdf	03 48 14.9	+10
	comp=Z,1.2nm,0.8s,SNR=6.0						
GERES	**GERESS Array B**	**154.74**	**256**	PKIKP	PKPdf	03 48 02.0	-3.1
GERES						03 48 15.0	
UPC	**Upice**	**154.86**	**261**	*e*PKPab	PKPab	03 48 28.9	+0.3
KSP	**Ksiaz**	**154.97**	**262**	*e*PKP	PKPdf	03 48 15.9	+11
KSP	**Ksiaz**	**154.97**	**262**	*e*PKP	PKPdf	03 48 15.3	+10
KSP				*e*SS	SS	04 11 53.0	+6.5
KHC	**Kasperske Hory**	**155.00**	**256**	*e*PKPbc	PKPdf	03 48 13.6	+8.2
KHC				*e*PKPab	PKPab	03 48 32.4	+3.2
KHC				AMS	AMS	05 06 00.0	
	comp=Z,1µm,18.9s						
ORIF	**Oris-en-Rattie**	**155.07**	**240**	*e*PKIKP	PKPdf	03 48 09.3	+3.6
PRU	**Pruhonice**	**155.18**	**259**	*e*PKPbc	PKPdf	03 48 13.3	+7.7
PRU				*e*PKPab	PKPab	03 48 30.7	+0.7
PRU				AMS	AMS	05 05 00.0	
	comp=Z,900nm,19.9s						
LPG	**La Plagne**	**155.19**	**242**	*e*PKIKP	PKPdf	03 48 09.8	+4.0
	comp=Z,33nm,1.4s						
LPL	**La Plagne**	**155.21**	**242**	*e*PKIKP	PKPdf	03 48 09.6	+3.8
BRG	**Berggiesshubel**	**156.07**	**260**	*e*PKP2	PKPab	03 48 38.0	+4.2
BRG				*e*		04 11 58.0	
BRG				pmax	pmax		
	comp=Z,25nm,1.8s						
BRG				MLR	MLR		
	comp=N,664nm,18.6s,MS5.6						
BRG				MLR	MLR		
	comp=E,595nm,23.0s,MS5.6						
BRG				MLR	MLR		
	comp=Z,1µm,20.4s,MS5.7						
GRA1	**Grafenberg Arr**	**156.47**	**254**	*e*PKPab	PKPab	03 48 36.0	+0.5
GRA1				LR	LR		
	comp=Z,1µm,20.2s,MS5.7						
GRF	**Grafenberg Arr**	**156.47**	**254**	*e*PKP2	PKPab	03 48 36.0	+0.5
CLL	**Collm**	**156.80**	**259**	*e*	PKPdf	03 48 21.0	+13
CLL				*e*PKP2	PKPab	03 48 41.0	+4.1
CLL				*e**PPKP2		03 48 50.0	
CLL	**Collm**	**156.80**	**259**	*e*PKP2	PKPab	03 48 41.0	+4.1
CLL				pmax	pmax		
	comp=Z,23nm,1.7s						
CLL				MLR	MLR		
	comp=Z,1µm,19.9s,MS5.7						
MOX	**Moxa**	**156.97**	**257**	*e*PKP2	PKPab	03 48 39.2	+1.5
MOX				pmax	pmax		
	comp=Z,24nm,1.6s						
MOX				MLR	MLR		
	comp=Z,900nm,21.0s,MS5.6						
HINF	**Hinteralfeld**	**156.99**	**246**	*e*PKIKP	PKPdf	03 48 12.0	+3.9
CDF	**Champ du Feu**	**157.26**	**247**	*e*PKIKP	PKPdf	03 48 12.0	+3.5
SCHQ	**Schefferville**	**157.33**	**90**	PFAKE		03 48 20.0	+12
SCHQ				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
HAU	**Haudompre**	**157.35**	**245**	*e*PKIKP	PKPdf	03 48 12.5	+3.9
BGF	**Bois d'Agland**	**157.63**	**238**	*e*PKIKP	PKPdf	03 48 12.7	+3.7
SSF	**Saint Saulge**	**157.78**	**240**	*e*PKIKP	PKPdf	03 48 12.8	+3.6
	comp=Z,6.1nm,0.9s						
LOR	**Lormes**	**157.80**	**241**	*e*PKIKP	PKPdf	03 48 13.0	+3.8
KEV	**Kevo**	**158.25**	**312**	PFAKE		03 48 20.0	+11
KEV				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
KBS	**Kingsbay**	**159.99**	**340**	PFAKE		03 48 20.0	+9.1
KBS				LR	LR		
	comp=Z,685nm,19.0s,MS5.5						
SGMF	**Saint Gilles**	**161.11**	**232**	*e*PKIKP	PKPdf	03 48 16.4	+3.5
	comp=Z,63nm,1.2s						
ROSF	**Rostrenen**	**161.44**	**231**	*e*PKIKP	PKPdf	03 48 17.1	+3.9
	comp=Z,99nm,1.5s						
KONO	**Kongsberg**	**163.10**	**277**	PFAKE		03 48 30.0	+16
KONO				LR	LR		
	comp=Z,2µm,20.0s						
DAG	**Danmarks Havn**	**165.31**	**354**	⇓*i*P	PKPab	03 49 14.2	+1.1
	comp=Z,7.0nm,1.0s						
ESK	**Eskdalemuir**	**166.73**	**248**	PFAKE		03 48 30.0	+12
ESK				LR	LR		
	comp=Z,491nm,21.0s						
BORG	**Borgarnes**	**177.03**	**327**	PFAKE		03 48 30.0	+7.6
BORG				LR	LR		
	comp=Z,628nm,20.0s						

ISK 28 04:01:47.1, 37.66N×44.19E, h12^{km}, ML3.7, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HKR	**Hakkari**	**0.36**	**258**	PG	Pg	04 01 54.6	-0.1
VANB	**Van**	**1.13**	**326**	PN	Pn	04 02 09.3	+0.6
CLDR	**Caldiran**	**1.50**	**352**	*e*PN	Pn	04 02 14.0	0.0
CLDR				*e*SN	Sn	04 02 33.9	+0.3
MSL	**Mosul**	**1.62**	**213**	*i* x	x	04 02 04.5	
MSL				*i* x	x	04 02 27.0	
MSL				*i* x	x	04 02 28.5	
BTMT	**Batman**	**2.20**	**285**	*e*PN	Pn	04 02 26.8	+2.8
GNI	**Garni**	**2.53**	**10**	*e*PN	Pn	04 02 29.6	+0.9
PTK	**Pertek**	**3.97**	**290**	*e*PN	Pn	04 02 50.6	+1.4
URFA	**Urfa**	**4.27**	**269**	*e*PN	Pn	04 02 53.7	+0.2

IDC ***28*** *04:32:09.9±0.8, 9.20S×113.77E, mb4.4/8, mb1 4.4/9, mb1mx4.2/16, mbtmp4.4/9, ML4.3/1, Error ellipse: s-maj=43.2km s-min=17.9km az=51.0*

NEIC ***28*** *04:32:14.3±0.3, 9.20S×113.87E, h30^{km}, mb4.4/3, Error ellipse: s-maj=19.6km s-min=6.0km az=224.0*

ISC 28 04:32:09.5±3.2**, 9.2S**±0.2×**113.9E**±0.1**, h8^{km}**±19^{km}**, n24, σ0^{s}66**/27**, mb4.4**/13**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.47**	**129**	*e*P	**P**	**04 35 36.2**	**-0.7**
	6.7nm,0.6s						
FITZ				*e*S	**S**	**04 38 02.3**	**-16**
FITZ	**Fitzroy Crossi**	**14.47**	**129**	Pn	**P**	**04 35 36.2**	**-0.7**
	1.0nm,0.3s,baz=309,slow=8.4,SNR=8.2						
FITZ				Sn	**S**	**04 38 03.8**	**-15**
	2.0nm,0.3s,baz=163,slow=16,SNR=7.8						
WRA	**Warramunga Arr**	**22.49**	**121**	P	**P**	**04 37 11.7**	**+0.7**
	3.5nm,0.6s,mb4.0,baz=295,slow=11,SNR=32						
WRA				S	**S**	**04 41 12.4**	**-0.6**
	0.5nm,0.6s,baz=286,slow=24,SNR=4.1						
WRAB	**Tennant Creek**	**22.50**	**121**	*e*P	**P**	**04 37 11.9**	**+0.9**
	4.8nm,0.6s,mb4.1						
WRAB				*e*S	**S**	**04 41 14.0**	**+0.9**
WB2	**Warramunga Arr**	**22.50**	**121**	*e*P	**P**	**04 37 11.7**	**+0.5**
PMG	**Port Moresby**	**32.84**	**93**	*e*P	**P**	**04 38 41.5**	**-4.6**
	7.0nm,0.7s,mb4.7						
CTAO	**Charters Tower**	**33.09**	**113**	P	**P**	**04 38 46.7**	**-1.5**
STKA	**Stephens Creek**	**34.23**	**135**	P	**P**	**04 38 58.2**	**+0.2**
	5.5nm,0.4s,mb4.8,baz=320,slow=8.6,SNR=30						
STKA	**Stephens Creek**	**34.23**	**135**	*e*P	**P**	**04 38 58.1**	**+0.1**
STKA				*e*PP	PP	04 40 14.2	+1.4
JIRN	**Jiri**	**45.37**	**325**	*e*P	**P**	**04 40 31.2**	**+0.7**
GUN	**Gumba**	**45.74**	**325**	*e*P	**P**	**04 40 34.3**	**+0.9**
	8.2nm,0.4s,mb5.0						
PKI	**Pulchoki**	**45.75**	**324**	*e*P	**P**	**04 40 33.9**	**+0.4**
DMN	**Daman**	**45.96**	**324**	*e*P	**P**	**04 40 35.4**	**+0.3**
KKN	**Kakani**	**45.99**	**324**	*e*P	**P**	**04 40 35.3**	**-0.1**
GKN	**Gorkha**	**46.53**	**323**	*e*P	**P**	**04 40 39.6**	**0.0**
KOLN	**Koldanda**	**46.97**	**322**	*e*P	**P**	**04 40 43.0**	**-0.1**
	7.8nm,0.4s,mb5.0						
SONM	**Songino Array**	**57.12**	**354**	P	**P**	**04 41 59.1**	**+0.1**
	1.6nm,0.5s,mb4.3,baz=174,slow=9.2,SNR=9.9						
MKAR	**Makanchi Array**	**62.41**	**336**	P	**P**	**04 42 34.8**	**-0.6**
	2.9nm,0.5s,mb4.6,baz=146,slow=7.6,SNR=54						
BVAR	**Borovoye Array**	**72.14**	**334**	P	**P**	**04 43 36.2**	**-0.4**
	1.8nm,0.7s,mb4.1,baz=143,slow=8.7,SNR=8.9						
AKTO	**Aktyubinsk**	**76.54**	**327**	P	**P**	**04 44 01.9**	**-0.1**
	1.9nm,0.4s,mb4.4,baz=115,slow=5.5,SNR=8.1						
MATP	**Matopo**	**82.56**	**251**	P	**P**	**04 44 35.1**	**0.0**
	1.2nm,0.9s,mb3.9,baz=90,slow=3.6,SNR=5.1						
SNAA	**Sanae**	**89.46**	**196**	*e*P	**P**	**04 45 07.8**	**-0.2**
	1.7nm,0.9s,mb4.4						
FINES	**FINESS Array B**	**96.92**	**331**	P	**P**	**04 45 41.0**	**-1.4**
	1.6nm,1.0s,mb4.4,baz=180,slow=1.9,SNR=3.4						
BDFB	**Brasilia**	**149.53**	**216**	PKPbc	PKPdf	04 52 02.3	+3.6
	2.2nm,0.9s,baz=146,slow=7.3,SNR=3.3						

NEIC ***28*** *04:43:21.8, 24.34S×69.15W, h88^{km}, mb3.7/3, After GUC.*

GUC 28 04:43:21.8±0.9**, 24.34S**×**69.15W, h88^{km}**±22^{km}**, ML3.2, 1C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	**1.18**	**256**	*i* P	P	04 43 44.9	+1.0
CPN1				*i* S	S	04 44 01.9	+1.6
CPN1				AMP		04 44 07.2	
	comp=E,523nm,0.2s						
ANCH	**Antofagasta**	**1.33**	**299**	*e*P	P	04 43 46.0	+0.3
ANCH				*i* S	S	04 44 03.9	+0.4
ANCH				AMP		04 44 06.3	
	comp=N,782nm,0.1s						
CEN1	**Los Morros**	**1.35**	**314**	⇓*i*P	P	04 43 45.9	-0.2
CEN1				*i* S	S	04 44 03.5	-0.5
CEN1				AMP		04 44 04.2	
	comp=E,313nm,0.6s						
SPCH	**San Pedro de A**	**1.67**	**32**	⇑*i*P	P	04 43 50.7	+0.6
SPCH				*i* S	S	04 44 12.9	+2.0
SPCH				AMP		04 44 13.7	
	comp=N,1µm,0.3s						
CRCH	**Chaqaral**	**2.40**	**213**	*e*P	P	04 44 00.6	+0.5
CRCH				AMP		04 44 37.7	
	comp=N,403nm,0.4s						
CDCH	**Caldera**	**3.12**	**209**	AMP		04 44 56.0	
	comp=E,7.2nm,0.3s						
CPCH	**Copiapo**	**3.20**	**200**	*e*P	P	04 44 10.6	-0.5
LPAZ	**La Paz**	**8.07**	**7**	Pn	P	04 45 18.2	+0.2
SAML	**Samuel**	**16.33**	**21**	Pn	P	04 47 06.6	-0.5
	comp=E,39nm,2.8s						
PLCA	**Paso Flores**	**16.39**	**184**	Pn	P	04 47 05.1	-2.5
	comp=E,6.3nm,1.1s						
OTAV	**Otavalo**	**26.04**	**338**	*e*P	P	04 48 47.2	-1.5
	comp=E,0.9nm,0.7s						

KRSC ***28*** *04:51:17.3±1.9, 53.82N×161.80E, h13^{km}±3^{km}, ML4.9*

MOS ***28*** *04:51:18.7±1.0, 53.85N×161.88E, h33^{km}, mb4.7/7, Error ellipse: s-maj=14.1km s-min=8.6km az=70.8*

BJI ***28*** *04:51:19.5, 53.80N×161.49E, h24^{km}, mB4.6, mb4.4, Ms4.3, Msz4.0*

NEIC ***28*** *04:51:20.7±0.5, 53.93N×161.66E, h35^{km}, mb4.5/7, Error ellipse: s-maj=18.1km s-min=9.3km az=157.0*

IDC ***28*** *04:51:21.4±0.8, 53.88N×161.71E, h38^{km}±6^{km}, mb3.9/11, mb1 4.2/13, mb1mx4.1/21, mbtmp4.2/13, ML4.1/2, MS3.8/1, Ms1 3.8/1, ms1mx2.7/32, Error ellipse: s-maj=21.6km s-min=12.3km az=1.0*

ISC 28 04:51:17.4±0.8**, 53.79N**±0.02×**161.93E**±0.04**, h20^{km}**±6^{km}**, h36^{km}**±2.3^{km}**:pP-P, n103, σ1^{s}06**/141**, mb4.4**/32**, MS4.1**/1**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.78**	**351**	P	**Pb**	**04 51 31.4**	**-0.8**
MKZ				S	**Sb**	**04 51 41.1**	**-1.2**
MKZ	**Mys Kozlova**	**0.78**	**351**	*i* P	**Pb**	**04 51 31.4**	**-0.8**
MKZ				*e*S	**Sb**	**04 51 41.2**	**-1.1**
SPN	**Mys Shipunski**	**1.34**	**240**	P	**Pn**	**04 51 40.5**	**-0.7**
SPN				S	**Sb**	**04 51 56.5**	**-1.8**
SPN	**Mys Shipunski**	**1.34**	**240**	*e*P	**Pn**	**04 51 40.4**	**-0.8**
SPN				*e*S	**Sb**	**04 51 58.5**	**+0.2**
KII	**Karymskiy**	**1.49**	**281**	P	**Pn**	**04 51 42.4**	**-1.0**
KII				S	**Sn**	**04 52 00.7**	**-1.7**
KII	**Karymskiy**	**1.49**	**281**	*e*P	**Pn**	**04 51 42.3**	**-1.1**
KII				*i* S	**Sn**	**04 52 00.7**	**-1.7**
NLC	**Nalytchevo**	**1.67**	**249**	P	**Pn**	**04 51 45.4**	**-0.5**
NLC				S	**Sn**	**04 52 05.9**	**-1.0**
NLC	**Nalytchevo**	**1.67**	**249**	*e*P	**Pn**	**04 51 45.1**	**-0.8**
NLC				*e*S	**Sn**	**04 52 06.0**	**-0.9**
TUMR	**Tumrok**	**1.83**	**326**	*i* P	**Pn**	**04 51 48.1**	**-0.1**
TUMR				*e*S	**Sn**	**04 52 11.6**	**+0.7**
SDLR	**Sedlovina**	**1.89**	**256**	*e*P	**Pn**	**04 51 48.7**	**-0.4**
SMAR	**Somma**	**1.94**	**256**	*e*P	**Pn**	**04 51 49.4**	**-0.5**
SMAR				*e*S	**Sn**	**04 52 12.5**	**-1.4**
UGLR	**Uglovaya**	**1.95**	**254**	*e*P	**Pn**	**04 51 49.7**	**-0.2**
UGLR				*e*S	**Sn**	**04 52 15.3**	**+1.3**
AVH	**Avacha**	**1.98**	**256**	*i* P	**Pn**	**04 51 50.3**	**-0.1**
AVH				*e*S	**Sn**	**04 52 14.5**	**-0.3**
KOK	**Koryaka**	**2.03**	**257**	*e*P	**Pn**	**04 51 51.1**	**0.0**
KOK				*e*S	**Sn**	**04 52 16.4**	**+0.3**
PET	**Petropavlovsk**	**2.11**	**250**	P	**Pn**	**04 51 52.5**	**+0.3**
PET				S	**Sn**	**04 52 18.1**	**0.0**
PET	**Petropavlovsk**	**2.11**	**250**	*e*P	**Pn**	**04 51 52.5**	**+0.3**
PET				*e*S	**Sn**	**04 52 17.2**	**-0.9**
PET	**Petropavlovsk**	**2.11**	**250**	*e*PN	**Pn**	**04 51 51.9**	**-0.3**
PET				*e*S	**Sn**	**04 52 16.4**	**-1.7**
PET				pmax	pmax		
	comp=Z,319nm,0.6s						
PET				smax			
	comp=E,3µm,1.1s						
PET				smax			
	comp=N,3µm,0.9s						
PET				smax			
	comp=E,3µm,1.0s						
PET				MLR	MLR		
	comp=Z,2µm,16.0s						
PET				MLR	MLR		
	comp=Z,2µm,8.0s						
KMNR	**Kamenistaya**	**2.21**	**334**	*i* P	**Pn**	**04 51 54.0**	**+0.4**
KMNR				*e*S	**Sn**	**04 52 20.5**	**0.0**
ZLN	**Zelenaya**	**2.33**	**344**	*i* P	**Pn**	**04 51 56.9**	**+1.5**
ZLN				*i* S	**Sn**	**04 52 24.8**	**+1.1**
GNL	**Ganaly**	**2.37**	**269**	*i* P	**Pn**	**04 51 56.4**	**+0.4**
GNL				*e*S	**Sn**	**04 52 25.1**	**+0.3**
KPT	**Kopyto**	**2.40**	**336**	*i* P	**Pn**	**04 51 57.0**	**+0.6**
KPT				*i* S	**Sn**	**04 52 25.5**	**+0.1**
LGNR	**Loginova**	**2.41**	**343**	*e*P	**Pn**	**04 51 57.1**	**+0.5**
LGNR				*e*S	**Sn**	**04 52 25.9**	**+0.1**
CIRR	**Tsirk**	**2.43**	**344**	*e*P	**Pn**	**04 51 57.3**	**+0.4**
CIRR				*e*S	**Sn**	**04 52 24.6**	**-1.7**
RUS	**Russkaya**	**2.47**	**238**	P	**Pn**	**04 51 57.6**	**+0.2**
RUS				S	**Sn**	**04 52 26.3**	**-0.9**
RUS	**Russkaya**	**2.47**	**238**	*e*P	**Pn**	**04 51 57.6**	**+0.2**
RUS				*e*S	**Sn**	**04 52 26.4**	**-0.8**
KRMR	**Karymshinskiy**	**2.48**	**249**	*e*P	**Pn**	**04 51 58.7**	**+1.2**
KRMR				*e*S	**Sn**	**04 52 27.2**	**-0.2**
KBTR	**Krutoberegovo**	**2.48**	**12**	P	**Pn**	**04 51 57.5**	**0.0**
KBTR				S	**Sn**	**04 52 26.5**	**-1.0**
KBTR	**Krutoberegovo**	**2.48**	**12**	*e*P	**Pn**	**04 51 57.5**	**0.0**
KBTR				*e*S	**Sn**	**04 52 28.2**	**+0.7**
KRSR	**Krestovskiy**	**2.56**	**343**	*e*P	**Pn**	**04 51 59.0**	**+0.3**
KRSR				*e*S	**Sn**	**04 52 30.8**	**+1.2**
KOZ	**Kozyrevsk**	**2.57**	**333**	P	**Pn**	**04 51 59.3**	**+0.5**
KOZ				S	**Sn**	**04 52 30.4**	**+0.6**
KOZ	**Kozyrevsk**	**2.57**	**333**	*e*P	**Pn**	**04 51 59.5**	**+0.7**
KOZ				*e*S	**Sn**	**04 52 30.3**	**+0.5**
KOZR	**Kozyr**	**2.57**	**334**	PN	**Pn**	**04 51 59.3**	**+0.5**
KOZR				S	**Sn**	**04 52 30.4**	**+0.6**
GRL	**Gorelyy**	**2.63**	**244**	*e*P	**Pn**	**04 52 01.5**	**+1.8**
GRL				*e*S	**Sn**	**04 52 30.0**	**-1.4**
KLY	**Klyuchi**	**2.64**	**344**	P	**Pn**	**04 51 58.9**	**-0.9**
KLY				S	**Sn**	**04 52 29.2**	**-2.3**
KLY	**Klyuchi**	**2.64**	**344**	*e*P	**Pn**	**04 51 59.4**	**-0.4**
KLY				*e*S	**Sn**	**04 52 29.4**	**-2.1**
BKI	**Bering**	**2.75**	**57**	*e*S	**Sn**	**04 52 31.8**	**-2.6**
BKI				Smax			
	comp=Z,380nm,1.1s						
SRDR	**Sredinnyy**	**2.84**	**334**	*e*P	**Pn**	**04 52 02.1**	**-0.6**
SRDR				*i* S	**Sn**	**04 52 37.7**	**+1.1**
ESO	**Esso**	**2.84**	**320**	*e*P	**Pn**	**04 52 03.0**	**+0.3**
ESO				*e*S	**Sn**	**04 52 36.1**	**-0.7**
ESO				Smax			
	comp=Z,570nm,1.0s						
APC	**Apacha**	**2.99**	**255**	*e*P	**Pn**	**04 52 06.8**	**+2.0**
APC				*e*S	**Sn**	**04 52 40.9**	**+0.4**
APC				Smax			
	comp=Z,760nm,0.9s						
MIPR	**Malaya Ipel'ka**	**3.47**	**246**	*e*P	**Pn**	**04 52 13.5**	**+1.8**
PAU	**Pauzhetka**	**3.89**	**235**	P	**Pn**	**04 52 19.2**	**+1.6**
FX1	**Attu Island--F**	**6.79**	**93**	Pn	**Pn**	**04 52 58.0**	**-0.6**
	comp=Z,13nm,0.3s,baz=197,slow=0.4,SNR=30						
FX1				Sn	**Sn**	**04 54 10.3**	**-5.8**
	comp=Z,8.5nm,0.3s,baz=102,slow=20,SNR=4.8						
FX1	**Attu Island--F**	**6.79**	**93**	*e*Pn	**Pn**	**04 52 58.0**	**-0.6**
FX1				*e*Sn	**Sn**	**04 54 12.4**	**-3.7**
ASAJ	**Asahikawa**	**15.92**	**240**	Pn	**P**	**04 55 01.1**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=111,slow=9.3,SNR=7.8						
ASAJ				LR	LR	05 01 03.7	
	comp=Z,297nm,18.2s,baz=114,slow=37						
ASAJ	**Asahikawa**	**15.92**	**240**	P	**P**	**04 55 01.1**	**-0.6**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,297nm,18.2s						
TNA	**Tin City**	**19.01**	**40**	*e*P	**P**	**04 55 41.1**	**+0.9**
	comp=Z,3.4nm,1.0s						
MAJO	**Matsushiro**	**23.84**	**233**	*e*P	**P**	**04 56 30.6**	**+0.7**
	comp=Z,54nm,1.2s,mb4.8						
MAJO	**Matsushiro**	**23.84**	**233**	*e*P	**P**	**04 56 30.6**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,54nm,1.2s,mb4.8						
MAT	**Matsushiro**	**23.84**	**233**	P	**P**	**04 56 30.1**	**+0.2**
MAT	**Matsushiro**	**23.84**	**233**	*e*P	**P**	**04 56 30.0**	**+0.1**
	comp=Z,15nm,0.7s,mb4.5						
MAT	**Matsushiro**	**23.84**	**233**	*e*P	**P**	**04 56 30.0**	**+0.1**
MAT				pmax	pmax		
	comp=Z,15nm,0.7s,mb4.5						
MJAR	**Matsushiro Arr**	**23.84**	**233**	P	**P**	**04 56 30.6**	**+0.7**
	comp=Z,13nm,0.7s,mb4.5,baz=20,slow=12,SNR=17						
IMA2	**Indian Mountai**	**24.78**	**43**	*e*P	**P**	**04 56 39.2**	**+0.5**
CN2	**Changchun**	**25.76**	**262**	*e*P	**P**	**04 56 50.5**	**+2.3**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
CN2				LR	LR		
	comp=N,400nm,15.0s,MS4.2						
CN2				LR	LR		
	comp=E,400nm,15.0s,MS4.2						
CN2				LR	LR		
	comp=Z,300nm,13.0s,MS4.0						
HIA	**Hailar**	**26.34**	**277**	*e*P	**P**	**04 56 55.5**	**+2.0**
	comp=Z,9.6nm,0.9s,mb4.3						
HIA	**Hailar**	**26.34**	**277**	*e*P	**P**	**04 56 55.5**	**+2.0**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ILAR	**Eielson Array**	**27.54**	**46**	P	**P**	**04 57 03.7**	**-0.6**
	comp=Z,2.9nm,0.9s,mb3.9,baz=264,slow=7.3,SNR=26						
ILAR	**Eielson Array**	**27.54**	**46**	P	**P**	**04 57 03.7**	**-0.6**
JNU	**Nakatsue**	**30.19**	**239**	P	**P**	**04 57 26.8**	**-1.7**
	comp=Z,2.7nm,0.7s,mb4.1,baz=109,slow=4.2,SNR=3.5						
INK	**Inuvik**	**32.64**	**38**	P	**P**	**04 57 48.9**	**-0.7**
	comp=Z,1.3nm,0.8s,mb3.9,baz=261,slow=7.5,SNR=6.7						
SONM	**Songino Array**	**34.81**	**283**	P	**P**	**04 58 09.2**	**+0.6**
	comp=Z,0.5nm,0.6s,mb3.6,baz=54,slow=9.1,SNR=2.6						
GTA	**Gaotai**	**43.62**	**277**	*e*P	**P**	**04 59 22.0**	**+0.2**
GTA				AP	pP	04 59 31.0	+3.2
GTA				XP	sP	04 59 35.3	+4.9
EDM	**Edmonton**	**47.47**	**54**	*e*P	**P**	**04 59 51.3**	**-1.0**
MKAR	**Makanchi Array**	**48.84**	**296**	P	**P**	**04 59 58.5**	**-4.5**
	comp=Z,0.6nm,0.6s,mb3.8,baz=55,slow=6.1,SNR=5.7						
CHKZ	**Chkalovo**	**50.29**	**309**	*e*P	**P**	**05 00 07.3**	**-6.8**
	comp=Z,1.3nm,0.6s,mb4.1						
CHKZ	**Chkalovo**	**50.29**	**309**	*e*P	**P**	**05 00 07.3**	**-6.7**
CHKZ				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
BVAR	**Borovoye Array**	**50.82**	**309**	P	**P**	**05 00 15.3**	**-2.7**
	comp=Z,0.9nm,0.5s,mb4.0,baz=55,slow=8.1,SNR=7.2						
NVAR	**Mina Array Bea**	**54.48**	**72**	P	**P**	**05 00 46.9**	**+1.4**
	comp=Z,3.3nm,0.7s,mb4.4,baz=307,slow=6.2,SNR=34						
PDAR	**Pinedale Array**	**56.22**	**62**	P	**P**	**05 00 58.5**	**+0.4**
	comp=Z,1.8nm,0.9s,mb4.1,baz=312,slow=2.7,SNR=11						
DUG	**Dugway**	**56.28**	**67**	*e*P	**P**	**05 00 59.2**	**+0.6**
	comp=Z,5.9nm,1.0s,mb4.6						
DUG				*e*pP	pP	05 01 11.5	+6.6
DUG	**Dugway**	**56.28**	**67**	*e*P	**P**	**05 00 59.2**	**+0.6**
DUG				*e**PP	pP	05 01 11.5	+6.7
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.6						
FINES	**FINESS Array B**	**59.91**	**337**	P	**P**	**05 01 20.8**	**-2.9**
	comp=Z,2.2nm,0.9s,mb4.2,baz=342,slow=6.0,SNR=4.1						
FINES	**FINESS Array B**	**59.91**	**337**	P	**P**	**05 01 20.8**	**-2.9**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NB2	**NORSAR Subarra**	**63.18**	**345**	P	**P**	**05 01 42.9**	**-2.8**
	comp=Z,5.1nm,0.9s,mb4.7,baz=19,slow=6.5						
NOA	**NORSAR Array B**	**63.18**	**345**	P	**P**	**05 01 43.0**	**-2.6**
	comp=Z,1.4nm,0.7s,mb4.2,baz=20,slow=6.6,SNR=5.6						
NOA				pP	pP	05 01 55.3	+3.3
	comp=Z,4.4nm,0.8s,baz=20,slow=6.7,SNR=8.7						
NAO	**NORSAR Subarra**	**63.44**	**345**	P	**P**	**05 01 42.9**	**-4.5**
AKASG	**Malin Array Be**	**68.58**	**330**	pP	pP	05 02 29.6	+3.0
	comp=Z,2.0nm,0.6s,baz=29,slow=6.4,SNR=8.1						
TXAR	**Lajitas Array**	**69.36**	**68**	P	**P**	**05 02 25.8**	**+0.3**
	comp=Z,1.0nm,0.6s,mb3.9,baz=296,slow=4.3,SNR=17						
TXAR				pP	pP	05 02 38.0	+6.2
	comp=Z,1.2nm,0.7s,baz=301,slow=4.2,SNR=6.8						
GERES	**GERESS Array B**	**74.28**	**339**	P	**P**	**05 02 55.1**	**+0.8**
	comp=Z,0.3nm,0.6s,mb3.4,baz=63,slow=4.4,SNR=3.3						
GERES				pP	pP	05 03 05.5	+4.8
	comp=Z,1.2nm,0.7s,baz=37,slow=6.7,SNR=4.3						
CDF	**Champ du Feu**	**75.94**	**343**	*e*P	**P**	**05 03 15.2**	**+11**
	comp=Z,12nm,0.9s,mb4.5						
FLN	**La Foliniere**	**76.75**	**348**	*e*P	**P**	**05 03 19.4**	**+11**
LDF	**La Druitiere**	**76.87**	**348**	*e*P	**P**	**05 03 20.1**	**+11**
ANTO	**Ankara**	**76.96**	**322**	*e*P	**P**	**05 03 07.1**	**-2.7**
	comp=Z,9.2nm,0.7s,mb4.8						
ANTO	**Ankara**	**76.96**	**322**	*e*P	**P**	**05 03 07.1**	**-2.7**
ANTO				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.8						
GRR	**Gorron**	**77.16**	**348**	*e*P	**P**	**05 03 21.3**	**+11**
	comp=Z,21nm,0.9s,mb4.8						
ROSF	**Rostrenen**	**77.48**	**350**	*e*P	**P**	**05 03 23.6**	**+11**

SGMF	**Saint Gilles**	77.49	349	*e*P	P	05 03 23.5	+11
LOR	**Lormes**	77.61	345	*e*P	P	05 03 23.0	+10
	comp=Z,9.0nm,0.7s,mb4.5						
SSF	**Saint Saulge**	77.87	345	*e*P	P	05 03 25.0	+10
	comp=Z,13nm,0.9s,mb4.5						
AVF	**Avril sur Loir**	78.16	345	*e*P	P	05 03 27.0	+11
	comp=Z,9.9nm,0.8s,mb4.5						
SMF	**Signal de Mont**	78.22	345	*e*P	P	05 03 27.5	+11
	comp=Z,16nm,1.1s,mb4.6						
BGF	**Bois d'Agland**	78.46	345	*e*P	P	05 03 28.9	+11
TCF	**Toulx Ste Croi**	78.82	346	*e*P	P	05 03 30.7	+11
	comp=Z,59nm,1.5s,mb5.0						
LPL	**La Plagne**	78.83	343	*e*P	P	05 03 31.1	+11
	comp=Z,26nm,1.1s,mb4.8						
LPG	**La Plagne**	78.85	342	*e*P	P	05 03 31.2	+11
	comp=Z,15nm,0.9s,mb4.7						
ORIF	**Oris-en-Rattie**	79.56	343	*e*P	P	05 03 34.5	+11
	comp=Z,12nm,0.9s,mb4.5						
MBDF	**Montbardon**	79.59	342	*e*P	P	05 03 34.6	+11
	comp=Z,5.0nm,0.7s,mb4.3						
VIVF	**Saint-Julien-l**	79.83	344	*e*P	P	05 03 35.7	+10
CAF	**Calviac**	80.17	346	*e*P	P	05 03 37.8	+11
LASF	**Ste Croix**	80.72	344	*e*P	P	05 03 40.6	+10
LMR	**La Mourre**	80.99	342	*e*P	P	05 03 42.0	+10
	comp=Z,75nm,1.2s,mb5.2						
MTLF	**Montolieu**	81.70	345	*e*P	P	05 03 45.9	+11
EPF	**Esparros**	82.27	346	*e*P	P	05 03 48.1	+10

KRSC 28 04:55:05.5±1.3, 53.87N×161.60E, h1km±4km, ML4.1, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	0.69	6	*e*P	Pg	04 55 19.9	+0.6
MKZ				*e*S	Sg	04 55 31.1	+2.6
SPN	**Mys Shipunski**	1.22	231	*e*P	Pb	04 55 29.3	+0.3
SPN				*e*S	Sb	04 55 47.2	+2.1
KII	**Karymskiy**	1.28	278	*e*P	Pb	04 55 30.8	+0.7
KII				*e*S	Sb	04 55 48.9	+1.9
NLC	**Nalytchevo**	1.52	243	*e*P	Pn	04 55 33.7	-0.2
NLC				*e*S	Sb	04 55 54.6	+0.8
TUMR	**Tumrok**	1.65	330	*e*P	Pn	04 55 36.3	+0.5
TUMR				*e*S	Sb	04 55 59.9	+2.3
SDLR	**Sedlovina**	1.73	251	*e*P	Pn	04 55 37.3	+0.4
SDLR				*e*S	Sn	04 55 59.4	-0.4
SMAR	**Somma**	1.78	251	*e*P	Pn	04 55 38.0	+0.4
UGLR	**Uglovaya**	1.78	249	*e*P	Pn	04 55 38.4	+0.7
UGLR				*e*S	Sn	04 56 03.5	+2.2
AVH	**Avacha**	1.81	252	*i* P	Pn	04 55 38.8	+0.7
AVH				*e*S	Sn	04 56 03.2	+1.2
KOK	**Koryaka**	1.86	253	*e*P	Pn	04 55 41.3	+2.5
PET	**Petropavlovsk**	1.96	246	*e*P	Pn	04 55 41.2	+1.0
PET				*e*S	Sn	04 56 06.6	+0.9
KMNR	**Kamenistaya**	2.05	338	*i* P	Pn	04 55 42.6	+1.1
KMNR				*i* S	Sn	04 56 10.1	+2.1
GNL	**Ganaly**	2.18	267	*i* P	Pn	04 55 44.9	+1.6
GNL				*e*S	Sn	04 56 13.1	+1.8
ZLN	**Zelenaya**	2.20	348	*e*P	Pn	04 55 44.8	+1.1
ZLN				*e*S	Sn	04 56 13.1	+1.2
KPT	**Kopyto**	2.25	340	*e*P	Pn	04 55 44.4	+0.1
KPT				*e*S	Sn	04 56 13.9	+0.8
LGNR	**Loginova**	2.28	347	*e*P	Pn	04 55 46.8	+2.0
LGNR				*e*S	Sn	04 56 16.3	+2.4
CIRR	**Tsirk**	2.30	348	*e*P	Pn	04 55 46.4	+1.3
CIRR				*e*S	Sn	04 56 16.3	+1.8
KRMR	**Karymshinskiy**	2.33	245	*e*P	Pn	04 55 47.6	+2.1
KRMR				*e*S	Sn	04 56 17.0	+1.9
RUS	**Russkaya**	2.35	233	*e*P	Pn	04 55 46.3	+0.5
RUS				*e*S	Sn	04 56 15.3	-0.4
KOZ	**Kozyrevsk**	2.41	336	*e*P	Pn	04 55 47.5	+0.9
KOZ				*e*S	Sn	04 56 18.5	+1.3
KRSR	**Krestovskiy**	2.43	346	*e*P	Pn	04 55 47.3	+0.4
KRSR				*e*S	Sn	04 56 18.8	+1.1
KBTR	**Krutoberegovo**	2.45	16	*e*P	Pn	04 55 47.2	0.0
KBTR				*e*S	Sn	04 56 17.5	-0.7
GRL	**Gorelyy**	2.50	240	*e*P	Pn	04 55 49.7	+1.8
GRL				*e*S	Sn	04 56 21.8	+2.3
KLY	**Klyuchi**	2.51	348	*e*P	Pn	04 55 49.9	+1.8
KLY				*e*S	Sn	04 56 19.7	0.0
SRDR	**Sredinnyy**	2.68	337	*e*P	Pn	04 55 50.8	+0.3
SRDR				*e*S	Sn	04 56 26.0	+1.9
APC	**Apacha**	2.82	252	P	Pn	04 55 51.9	-0.7
APC				*e*S	Sn	04 56 28.3	+0.6
APC				Smax			
	70nm,1.6s						
MIPR	**Malaya Ipel'ka**	3.33	243	P	Pn	04 56 01.8	+2.0

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*NEIC **28** 04:57:43.0, 20.07S×133.86E, h14km, ML3.4(AUST), After AUST.*

AUST 28 04:57:43.2, 20.07S×133.86E, h14km, ML3.4, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WB2	**Warramunga Arr**	0.48	74	*e*P	Pb	04 57 53.0	+0.1
WB2				*e*S	Sb	04 57 57.5	-2.0
WRAB	**Tennant Creek**	0.48	73	*e*Pg	Pg	04 57 53.4	+0.2
WRAB				*e*Sg	Sg	04 57 59.4	-0.4
QIS	**Mount Isa**	5.41	96	*e*P	Pn	04 59 06.8	+1.2
QIS				*e*S	Sn	05 00 05.6	-2.8
	0.5nm,0.5s						
QIS	**Mount Isa**	5.41	96	*e*P	Pn	04 59 06.8	+1.2
	0.5nm,0.5s						
QIS				*e*S	Sn	05 00 05.6	-2.8
KNA	**Kununurra**	6.48	311	*e*P	Pn	04 59 19.1	-1.5
KNA				*e*S	Sn	05 00 30.8	-4.3
	6.9nm,0.2s						
KNA	**Kununurra**	6.48	311	*e*P	Pn	04 59 19.1	-1.5
	6.9nm,0.2s						
KNA				*e*S	Sn	05 00 30.8	-4.3
FITZ	**Fitzroy Crossi**	8.02	283	*e*P	P	04 59 42.3	+0.1
FITZ				*e*S	Sn	05 01 08.0	-5.5
	52nm,0.3s						
FITZ	**Fitzroy Crossi**	8.02	283	*e*P	P	04 59 42.3	+0.1
	52nm,0.3s						
FITZ				*e*S	Sn	05 01 08.0	-5.5
MTSU	**Mount Surprise**	10.07	81	*e*P	P	05 00 10.3	-0.4
MTSU				*e*S	S	05 01 54.9	-10
	11nm,0.2s						
MTSU	**Mount Surprise**	10.07	81	*e*P	P	05 00 10.3	-0.4
	11nm,0.2s						
MTSU				*e*S	S	05 01 54.9	-10
COEN	**Coen**	10.79	57	*e*P	P	05 00 16.1	-4.4
COEN				*e*S	S	05 02 06.9	-15
	10nm,0.3s						
COEN	**Coen**	10.79	57	*e*P	P	05 00 16.1	-4.4
	10nm,0.3s						
COEN				*e*S	S	05 02 06.9	-15
FORT	**Forrest**	11.88	205	*e*P	P	05 00 36.9	+1.7
STKA	**Stephens Creek**	13.65	151	*e*P	P	05 00 58.6	-0.4
STKA				*e*S	S	05 03 27.3	-4.0
	2.2nm,0.3s						
STKA	**Stephens Creek**	13.65	151	*e*P	P	05 00 58.6	-0.4
	2.2nm,0.3s						
STKA				*e*S	S	05 03 27.3	-4.0
MEEK	**Meekatharra**	15.44	242	*e*P	P	05 01 21.6	-0.9
MEEK				*e*S	S	05 04 06.5	-7.3
	2.5nm,0.2s						
KMBL	**Kambalda**	15.57	221	*e*P	P	05 01 22.6	-1.5
KLBR	**Kellerberrin**	18.46	228	*e*P	P	05 02 00.4	-0.1
MORW	**Morawa**	18.50	238	*e*P	P	05 02 00.7	-0.3
BLDU	**Ballidu**	18.70	232	*e*P	P	05 02 03.4	0.0
NWAO	**Narrogin (SRO)**	19.59	226	*e*P	P	05 02 14.5	+0.6
MUN	**Mundaring**	19.77	230	*e*P	P	05 02 16.9	+1.0

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*ISK **28** 05:01:36.3, 38.37N×38.73E, h29km, MD3.6*

*CSEM **28** 05:01:36.3, 38.37N×38.73E, h29km, MD3.6, After ISK*

ISC 28 05:01:37.0±0.4, 38.34N±0.04×38.75E±0.04, h21km±5km, n23, σ0ˢ79/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	0.24	50	*i* P	**Pb**	**05 01 41.6**	**-1.2**
ELZG				*i* S	**Sb**	**05 01 47.5**	**+0.7**
MYA	**Malataya**	0.26	266	*i* PG	**Pb**	**05 01 43.1**	**0.0**
PTK	**Pertek**	0.74	42	PG	**Pb**	**05 01 50.5**	**-0.6**
PTK				SG	**Sb**	**05 02 01.3**	**+0.5**
URFA	**Urfa**	0.90	176	PG	**Pb**	**05 01 53.2**	**-0.6**
ATAB	**Bozova**	0.94	203	*i* P	**Pb**	**05 01 54.1**	**-0.4**
ATAB				*i* S	**Sb**	**05 02 06.1**	**-0.5**
DIY	**Diyarbakir**	1.25	111	PN	**Pn**	**05 01 59.3**	**-0.1**
GZT	**Gaziantep**	1.36	224	*i* P	**Pn**	**05 02 01.0**	**0.0**
GZT				*i* S	**Sn**	**05 02 20.1**	**+1.6**
GAZ	**Gaziantep**	1.69	227	*e*PN	**Pn**	**05 02 05.0**	**-0.7**
MARD	**Mardin**	1.91	122	*i* P	**Pn**	**05 02 09.6**	**+0.8**
MARD				*i* S	**Sn**	**05 02 32.9**	**+0.5**
BNGL	**BINGOL**	1.97	71	*i* P	**Pb**	**05 02 12.8**	**+0.7**
BNGL				*i* S	**Sb**	**05 02 46.4**	**+10**
SVST	**Sivas**	2.00	316	*i* P	**Pb**	**05 02 14.5**	**+2.1**
SVST				*i* S	**Sb**	**05 02 42.8**	**+5.7**
BEST	**Besiri**	2.04	102	*i* P	**Pn**	**05 02 11.4**	**+0.7**
BEST				*i* S	**Sn**	**05 02 40.4**	**+4.7**
GUMT	**Gumushane**	2.19	15	*e*PN	**Pn**	**05 02 12.1**	**-0.7**
EZM	**Erzurum**	2.56	52	*e*PN	**Pn**	**05 02 17.9**	**-0.3**
GRSN	**GIRESUNGRSN**	2.60	352	*i* P	**Pb**	**05 02 22.7**	**-0.1**
GRSN				*i* S	**Sb**	**05 03 00.0**	**+5.4**
TOKT	**Tokat**	2.61	320	*e*PN	**Pn**	**05 02 18.0**	**-0.9**
COBT	**Iskenderun**	2.69	228	*i* P	**Pn**	**05 02 19.5**	**-0.5**
COBT				*i* S	**Sn**	**05 02 51.5**	**-0.9**
VANB	**Van**	3.65	85	*e*PN	**Pn**	**05 02 32.7**	**-0.9**
HAKT	**HAKKARI**	4.00	100	*i* P	**Pn**	**05 02 37.7**	**-0.9**
HAKT				*i* S	**Sn**	**05 03 31.4**	**+6.1**
MSL	**Mosul**	4.02	119	*e*x	x	05 02 51.0	
MSL				*e*x	x	05 03 45.0	
FKH	**Fakeheh**	4.52	206	*e*Pn	**Pn**	**05 02 46.4**	**+0.4**
HWQ	**Hawqa**	4.65	210	*e*Pn	**Pn**	**05 02 48.3**	**+0.5**
BHL	**Bhannes**	5.09	210	*e*Pn	**Pn**	**05 02 55.0**	**+0.9**

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*TIF **28** 05:10:56.0, 43.55N×45.03E, h7km±2km*

MOS 28 05:11:00.6±0.5, 43.36N×44.76E, h16km, mb3.9/1, 2C-1D, Error ellipse: s-maj=14.0km s-min=11.8km az=112.5, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLKR	**Vladikavkaz**	0.32	191	*e*PG	Pb	05 11 07.9	+0.5
VLKR				*i* S	Sb	05 11 17.0	+5.0
ARNR	**Ardon**	0.39	245	⇑*i*PG	Pb	05 11 10.1	+1.5
ARNR				*i* S	Sb	05 11 20.6	+6.5
LACR	**Lac**	0.63	213	⇓*i*PG	Pb	05 11 14.1	+1.3
LACR				*i* S	Sb	05 11 27.8	+6.7
LSNR	**Lesken**	0.69	263	⇑*i*PG	Pb	05 11 15.1	+1.3
LSNR				*i* S	Sb	05 11 29.1	+6.2
KUBR	**Kubataba**	1.08	295	*e*PG	Pb	05 11 20.9	+0.6
KUBR				*e*S	Sb	05 11 37.6	+3.6
SHAR	**Shatzhatmas**	1.57	285	*e*PG	Pn	05 11 28.2	+0.2
SHAR				*e*S	Sn	05 11 50.3	+2.2
KIV0	**Kislovodsk Arr**	1.61	292	*e*PG	Pn	05 11 28.3	-0.4
KIV0				*e*S	Sn	05 11 50.5	+1.3
KIV	**Kislovodsk**	1.62	292	*e*PG	Pn	05 11 28.4	-0.4
KIV				*e*S	Sn	05 11 50.4	+1.0
TI2	**Plekhanov**	1.62	180	*e*PN	Pn	05 11 30.0	+1.2
GOF	**Gofitskoye**	2.10	324	*e*PN	Pn	05 11 36.9	+1.2
GOF				pmax	pmax		
	comp=Z,28nm,0.7s						

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*ATH **28** 05:20:49.6, 39.07N×23.06E, h23km±1km, MD2.9/5, ML3.1*

*NEIC **28** 05:20:49.6, 39.07N×23.07E, h23km, ML3.1(ATH), After ATH.*

*THE **28** 05:20:50.8, 39.00N×23.23E, h10km, ML2.6*

*CSEM **28** 05:20:50.6±0.1, 39.00N×23.22E, h5km, ML3.1, Error ellipse: s-maj=2.5km s-min=2.0km az=118.0*

ISC 28 05:20:50.1±0.7, 39.02N±0.04×23.23E±0.05, h8km±6km, n15, σ0ˢ85/21, 1C, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEO	**Neokhori**	0.29	360	⇑*i*PB	**Pb**	**05 20 56.2**	**-0.9**
NEO				*e*SB	**Sb**	**05 21 00.8**	**-0.9**
XOR	**Xorichti**	0.35	356	*e*Pg	**Pg**	**05 20 57.5**	**+0.2**
XOR				*e*Sg	**Sg**	**05 21 02.8**	**+0.8**
LKR	**Lokris**	0.41	206	*e*PB	**Pb**	**05 20 58.5**	**-0.5**
AOS	**Alonnisos**	0.53	73	*e*Pg	**Pg**	**05 21 00.7**	**-0.1**
AOS				*e*Sg	**Sg**	**05 21 08.4**	**+0.5**
AGG	**Agios Georgios**	0.70	271	*e*Pg	**Pg**	**05 21 03.4**	**-0.7**
AGG				*e*Sg	**Sg**	**05 21 13.6**	**+0.2**
AGG	**Agios Georgios**	0.70	271	*e*Pg	**Pg**	**05 21 03.3**	**-0.7**
AGG				*e*Sg	**Sg**	**05 21 13.6**	**+0.2**
MPAR	**Parnis Oros**	0.95	155	*e*PN	**Pn**	**05 21 10.0**	**+0.4**
PAIG	**Paliouri**	0.98	21	*e*Pg	**Pg**	**05 21 09.0**	**-0.6**
PAIG				*e*Sg	**Sg**	**05 21 23.3**	**+0.7**
ATH	**Athens Observa**	1.11	160	*e*PN	**Pn**	**05 21 12.2**	**+0.4**
PLG	**Polygyros**	1.37	7	*e*PN	**Pn**	**05 21 14.4**	**-1.1**
OUR	**Ouranopolis**	1.44	24	*e*Pg	**Pg**	**05 21 17.1**	**-1.8**
SOH	**Sokhos**	1.81	3	*e*Pb	**Pb**	**05 21 22.7**	**-0.3**
GRG	**Griva**	2.04	342	*e*Pn	**Pn**	**05 21 27.1**	**+2.0**
KNT	**Kendrikon**	2.16	353	*e*Pn	**Pn**	**05 21 27.8**	**+1.0**
FNA	**Florina**	2.27	322	*e*Pn	**Pn**	**05 21 29.2**	**+0.8**

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*NEIC **28** 05:23:38.7±2.2, 11.61N×142.94E, h40km±21km, mb4.3/1, Error ellipse: s-maj=27.7km s-min=13.8km az=105.0*

*IDC **28** 05:23:39.4±3.0, 11.63N×142.98E, h45km±27km, mb3.9/9, mb1 4.2/10, mb1mx4.0/18, mbtmp4.2/10, ML4.2/1, Error ellipse: s-maj=31.9km s-min=20.3km az=117.0*

ISC 28 05:23:36.4±2.8, 11.6N±0.1×142.9E±0.2, h33km±26km, n12, σ0ˢ90/14, mb4.2/10, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	2.76	44	P	**P**	**05 24 19.9**	**+0.7**
	37nm,0.3s,baz=178,slow=12,SNR=11						
GUMO				S	**S**	**05 24 52.0**	**+0.3**
	15nm,0.3s,baz=257,slow=18,SNR=2.9						
GUMO	**Guam**	2.76	44	*e*Pn	**P**	**05 24 19.9**	**+0.7**
GUMO				*e*Sn	**S**	**05 24 49.6**	**-2.1**
WRAB	**Tennant Creek**	32.44	195	*e*P	**P**	**05 30 05.3**	**-0.5**
	2.6nm,0.6s,mb4.2						
WRA	**Warramunga Arr**	32.45	195	P	**P**	**05 30 05.8**	**-0.1**
	1.8nm,0.7s,mb4.0,baz=17,slow=9.8,SNR=13						
SONM	**Songino Array**	47.31	327	P	**P**	**05 32 09.0**	**+0.3**
	0.3nm,0.5s,mb3.5,baz=153,slow=9.7,SNR=3.2						
MKAR	**Makanchi Array**	61.63	317	P	**P**	**05 33 53.1**	**0.0**
	0.9nm,0.5s,mb4.2,baz=92,slow=9.8,SNR=18						
ILAR	**Eielson Array**	71.18	25	P	**P**	**05 34 51.8**	**-1.8**
	2.1nm,0.6s,mb4.2,baz=250,slow=5.8,SNR=65						
AKTO	**Aktyubinsk**	77.93	319	P	**P**	**05 35 32.5**	**-0.2**
	0.8nm,0.5s,mb3.9,baz=106,slow=5.8,SNR=4.7						
YKA	**Yellowknife Ar**	85.50	27	P	**P**	**05 36 12.6**	**+0.8**
	1.5nm,0.5s,mb4.5,baz=286,slow=5.1,SNR=10						
ARCES	**ARCESS Array B**	88.39	342	P	**P**	**05 36 26.2**	**+0.5**
	1.8nm,0.7s,mb4.4,baz=67,slow=6.9,SNR=12						
NVAR	**Mina Array Bea**	89.66	51	P	**P**	**05 36 34.1**	**+1.7**
	0.6nm,0.7s,mb4.0,baz=262,slow=7.4,SNR=5.4						
FINES	**FINESS Array B**	92.15	335	P	**P**	**05 36 42.8**	**-0.7**
	2.2nm,0.7s,mb4.6,baz=34,slow=6.9,SNR=7.1						

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*NEIC **28** 05:36:18.9±0.3, 30.26N×68.29E, h10km, mb4.7/29, Error ellipse: s-maj=9.9km s-min=4.5km az=194.0*

*IDC **28** 05:36:18.6±0.8, 30.33N×68.12E, mb4.3/15, mb1 4.5/16, mb1mx4.4/21, mbtmp4.3/16, ML4.6/1, MS4.3/9, Ms1 4.3/9, ms1mx4.1/18, Error ellipse: s-maj=19.9km s-min=18.6km az=30.0*

*BJI **28** 05:36:19.9, 30.30N×68.30E, h10km, mB5.0, mb4.7, Ms4.8, Msz4.4*

*MOS **28** 05:36:19.8±1.1, 30.33N×68.12E, h21km, mb4.9/31, MS4.4/8, Error ellipse: s-maj=9.4km s-min=4.8km az=122.1*

*NNC **28** 05:36:26.5±6.7, 30.65N×68.31E, h38km±51km, Error ellipse: s-maj=62.7km s-min=42.8km az=140.0*

ISC 28 05:36:16.9±1.4, 30.12N±0.04×68.26E±0.03, h12km±9km, n179, σ1ˢ20/186, mb4.6/59, MS4.3/19, 13C-9D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THW	**Thamme Wali**	3.99	47	P	**Pn**	**05 37 11.4**	**-7.9**
AJM	**Ajmer**	6.69	121	*e*P	**Pn**	**05 38 00.1**	**+2.6**
AJM				*e*S	**Sn**	**05 39 17.0**	**+2.5**
AJM				AML	AML	05 39 21.9	
	comp=N,170nm,0.5s						
AJM				AML	AML	05 39 22.1	
	comp=E,156nm,0.1s						
THN	**Thein Dam**	6.78	68	*e*x	x	05 38 05.6	
THN				*e*x	x	05 39 19.7	
SRNI	**Srinagar**	6.85	53	*i* x	x	05 36 24.5	
SRNI				*e*x	x	05 36 26.5	
	comp=E,867nm,0.4s						
KHET	**Khetri**	6.91	105	*e*P	**Pn**	**05 37 59.4**	**-1.1**
KHET				*e*S	**Sn**	**05 39 18.0**	**-1.9**
KHET				AML	AML	05 39 33.9	
	comp=N,125nm,0.6s						
KHET				AML	AML	05 39 37.5	
	comp=E,166nm,1.4s						
BHJ	**Bhuj**	6.96	169	*e*P	**Pn**	**05 38 01.4**	**+0.3**
BHJ				*e*S	**Sn**	**05 39 19.4**	**-1.5**
BHJ				AML	AML	05 39 27.2	
	comp=E,103nm,0.5s						
BHJ				AML	AML	05 39 29.1	
	comp=N,147nm,0.4s						
NDI	**New Delhi**	7.94	98	*e*P	**Pn**	**05 38 15.5**	**+0.5**
NDI				*e*S	**Sn**	**05 39 45.5**	**-0.1**
KLP	**Kalpa**	8.70	78	*e*x	x	05 37 26.8	
KLP				*e*x	x	05 38 13.0	
KLP				AML	AML	05 38 19.5	
	comp=N,333nm,0.8s						
KLP				AML	AML	05 38 22.9	
	comp=E,270nm,0.7s						
PTH	**Pithoragarh**	10.40	90	*e*x	x	05 40 45.0	
PTH				*e*x	x	05 42 09.0	
BHPL	**Bhopal**	10.68	128	*e*P	**P**	**05 38 53.9**	**+1.1**
BHPL				*e*S	**S**	**05 40 51.2**	**-2.1**
BHPL				AML	AML	05 41 26.9	
	comp=E,80nm,0.7s						
BHPL				AML	AML	05 41 27.5	
	comp=N,65nm,0.5s						
KSH	**Kashi**	11.30	32	*e*P	**P**	**05 39 04.0**	**+2.7**
KSH				*e*AP		05 39 07.0	
KSH				*e*XP		05 39 10.0	
KSH				*e*PP	PP	05 39 12.0	+2.0
KSH				*e*PPP	PPP	05 39 20.3	+2.6
KSH				*e*S	**S**	**05 41 07.5**	**-1.1**
KSH				*e*XS		05 41 13.0	
KSH				*e*SS	SS	05 41 21.3	-1.3
KSH				AMB	AMB		
	comp=Z,100nm,0.9s						
KSH				LR	LR		
	comp=N,10µm,7.8s						
KSH				LR	LR		
	comp=E,7µm,5.5s						
BOM	**Bombay**	11.92	159	*e*x	x	05 37 57.7	
BOM				*e*x	x	05 39 34.0	
BOM				*e*x	x	05 41 24.8	
BOM				*e*x	x	05 41 43.0	
AKL	**Akola**	12.26	138	*e*x	x	05 38 30.2	
AKL				*e*x	x	05 40 42.2	
	comp=E,57nm,1.9s						
KK31	**Karatay Array**	13.08	7	⇓P	**P**	**05 39 21.6**	**-3.6**
	comp=E,12nm,0.8s,baz=180,slow=13,SNR=20						
KK31				⇓S	**S**	**05 41 41.5**	**-10**
	comp=E,7.2nm,0.6s,baz=194,slow=24,SNR=5.6						
AAK	**Ala-Archa**	13.45	20	⇓P	**P**	**05 39 28.4**	**-1.7**
	comp=E,21nm,1.0s						
AAK				⇑S	**S**	**05 41 51.5**	**-8.9**
	comp=E,37nm,1.3s						
AAK	**Ala-Archa**	13.45	20	*e*Pn	**P**	**05 39 26.8**	**-3.2**
	comp=E,23nm,0.9s						
AAK	**Ala-Archa**	13.45	20	*i* P	**P**	**05 39 27.1**	**-2.9**
AAK				pmax	pmax		
	comp=Z,2µm,15.0s						
KOLN	**Koldanda**	13.63	96	*e*P	**P**	**05 39 32.3**	**-0.3**
FRU	**Bishkek**	13.67	20	*e*P	**P**	**05 39 34.0**	**+1.1**
FRU				*i*		05 42 02.0	
FRU				pmax	pmax		
	comp=Z,60nm,1.8s						
FRU				pmax	pmax		
	comp=E,120nm,1.8s						
KAD	**Karad**	13.86	156	*e*x	x	05 42 21.3	
KAD				*e*x	x	05 42 31.9	
GKN	**Gorkha**	14.48	94	*e*P	**P**	**05 39 42.4**	**-1.3**
GKN				*e*S	**S**	**05 42 19.1**	**-5.9**
DMN	**Daman**	14.97	95	*e*P	**P**	**05 39 50.4**	**+0.3**
KKN	**Kakani**	15.08	95	*e*P	**P**	**05 39 51.4**	**-0.1**
PKI	**Pulchoki**	15.24	95	*e*P	**P**	**05 39 53.6**	**0.0**
GUN	**Gumba**	15.57	94	*e*P	**P**	**05 39 57.5**	**-0.4**
HYB	**Hyderabad**	15.76	141	*i* P	**P**	**05 40 05.0**	**+4.6**
HYB				*e*S	**S**	**05 42 52.0**	**-3.2**
HYB	**Hyderabad**	15.76	141	*e*P	**P**	**05 40 05.0**	**+4.6**
HYB				*e*S	**S**	**05 42 52.0**	**-3.2**
JIRN	**Jiri**	15.89	94	*e*P	**P**	**05 40 01.3**	**-0.8**
BOK	**Bokaro**	16.92	108	*e*P	**P**	**05 40 14.4**	**-0.8**
CAL	**Calcutta**	19.49	108	*e*S	**S**	**05 44 35.8**	**+15**
LSA	**Lhasa**	19.84	85	P	**P**	**05 40 54.0**	**+3.4**
LSA				AP		05 41 02.0	
LSA				XP		05 41 06.0	
LSA				S	**S**	**05 44 36.0**	**+8.0**
LSA				LR	LR		
	comp=E,680nm,15.2s						
LSA				LR	LR		
	comp=Z,830nm,15.2s						
LSA	**Lhasa**	19.84	85	*e*P	**P**	**05 40 55.2**	**+4.6**
	comp=Z,26nm,1.0s						
LSA	**Lhasa**	19.84	85	*e*P	**P**	**05 40 55.2**	**+4.6**
LSA				pmax	pmax		
	comp=Z,26nm,1.0s						
MKAR	**Makanchi Array**	19.89	29	P	**P**	**05 40 48.9**	**-2.0**
	comp=Z,1.7nm,0.3s,baz=211,slow=9.9,SNR=27						
MKAR				LR	LR	05 50 08.7	
	comp=Z,2µm,19.0s,baz=223,slow=42						
MKAR	**Makanchi Array**	19.89	29	P	**P**	**05 40 48.9**	**-2.0**
MKAR				LR	LR	05 50 08.7	
MK31	**Makanchi Array**	19.89	29	⇑P	**P**	**05 40 48.7**	**-2.3**
	comp=Z,3.5nm,0.5s,baz=205,slow=9.4,SNR=57						
AB31	**Akbulak array**	20.13	344	⇑P	**P**	**05 40 50.7**	**-2.8**
	comp=Z,8.7nm,0.7s						
WMQ	**Urumqi**	20.62	43	*e*P	**P**	**05 41 02.3**	**+3.7**
WMQ				XP		05 41 09.0	
WMQ				PP	PP	05 41 23.0	+2.9
WMQ				S	**S**	**05 44 46.0**	**+2.2**
WMQ				XS		05 44 53.0	
WMQ				SS	SS	05 45 16.0	+1.5
WMQ				AMB	AMB		
	comp=Z,20nm,1.3s						
WMQ				AMB	AMB		
	comp=Z,330nm,5.2s						
WMQ				LR	LR		
	comp=N,1µm,18.0s,MS4.6						
WMQ				LR	LR		
	comp=E,2µm,17.4s,MS4.6						
WMQ				LR	LR		
	comp=Z,1µm,19.0s,MS4.3						
SHL	**Shillong**	21.36	97	*e*x	x	05 46 06.0	
SHL				*e*x	x	05 48 06.0	
GNI	**Garni**	21.62	304	*e*P	**P**	**05 41 09.6**	**+0.8**
	comp=Z,27nm,0.9s,mb4.7						
GNI	**Garni**	21.62	304	⇓*e*P	**P**	**05 41 10.0**	**+1.1**
GNI				pmax	pmax		
	comp=Z,12nm,0.7s						
AKTO	**Aktyubinsk**	21.70	342	⇓P	**P**	**05 41 09.8**	**+0.3**
	comp=Z,4.8nm,1.0s,mb3.9						
AKTO	**Aktyubinsk**	21.70	342	P	**P**	**05 41 09.0**	**-0.6**
	comp=Z,16nm,0.9s,mb4.5,baz=161,slow=11,SNR=19						
AKTO	**Aktyubinsk**	21.70	342	P	**P**	**05 41 09.0**	**-0.6**
AKTO				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.5						
KURK	**Kurchatov**	21.99	18	⇑P	**P**	**05 41 10.2**	**-2.2**
	comp=Z,14nm,1.1s,mb4.3						
KURK	**Kurchatov**	21.99	18	*e*P	**P**	**05 41 10.2**	**-2.2**
	comp=Z,25nm,1.0s,mb4.6						
KURK	**Kurchatov**	21.99	18	*e*P	**P**	**05 41 10.2**	**-2.2**
KURK				pmax	pmax		
	comp=Z,25nm,1.0s,mb4.6						
TI2	**Plekhanov**	22.21	308	*i* P	**P**	**05 41 15.2**	**+0.5**
TI2				pmax	pmax		
	comp=Z,30nm,0.6s,mb4.9						
VOSK	**Vostochnaya**	22.67	4	⇑P	**P**	**05 41 21.2**	**+2.0**
	comp=Z,20nm,1.6s,mb4.3						
BVA0	**Borovoye Array**	22.93	3	⇑P	**P**	**05 41 21.9**	**+0.1**
	comp=Z,3.3nm,1.4s,mb3.6,baz=253,slow=142,SNR=20						
BVAR	**Borovoye Array**	22.93	3	P	**P**	**05 41 21.1**	**-0.6**
	comp=Z,4.6nm,0.5s,mb4.2,baz=174,slow=11,SNR=15						
BRVK	**Borovoye**	22.96	3	*e*P	**P**	**05 41 23.0**	**+0.9**
	comp=Z,12nm,0.8s,mb4.4						
BRVK	**Borovoye**	22.96	3	*e*P	**P**	**05 41 23.0**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.4						
CHKZ	**Chkalovo**	23.60	3	⇑P	**P**	**05 41 27.8**	**-0.4**
	comp=Z,17nm,1.4s,mb4.3						
CHKZ	**Chkalovo**	23.60	3	*e*P	**P**	**05 41 27.8**	**-0.4**
	comp=Z,6.5nm,0.8s,mb4.1						
CHKZ	**Chkalovo**	23.60	3	*e*P	**P**	**05 41 27.8**	**-0.4**
CHKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.1						

KIV	**Kislovodsk**	**24.52**	**311**	*e*P	**P**	**05 41 38.6**	**+1.3**
	comp=Z,16nm,0.8s,mb4.6						
KIV	**Kislovodsk**	**24.52**	**311**	*e*P	**P**	**05 41 36.9**	**-0.4**
KIV				*e*S	**S**	**05 45 56.7**	**+2.1**
KIV				pmax	pmax		
	comp=Z,24nm,1.0s,mb4.7						
KIV				MLR	MLR		
	comp=Z,179nm,17.0s,MS3.6						
NVS	**Novosibirsk**	**26.94**	**19**	*e*P	**P**	**05 41 59.2**	**-0.6**
NVS				pmax	pmax		
	comp=Z,16nm,1.1s,mb4.5						
NVS				pmax	pmax		
	comp=N,27nm,1.4s						
ARU	**Arti**	**27.17**	**348**	⇓*i*P	**P**	**05 42 03.3**	**+1.4**
ARU				*e*PPP	PPP	05 42 51.8	-8.7
ARU				*e*		05 45 21.7	
ARU				*e*S	**S**	**05 46 37.1**	**-1.3**
ARU				*e*		05 52 49.2	
ARU				pmax	pmax		
	comp=Z,13nm,1.1s,mb4.4						
ARU				MLR	MLR		
	comp=N,400nm,17.0s,MS4.1						
ARU				MLR	MLR		
	comp=Z,500nm,17.0s,MS4.2						
ARU				MLR	MLR		
	comp=E,300nm,19.0s,MS4.1						
SVE	**Sverdlovsk**	**27.23**	**351**	*e*P	**P**	**05 42 03.9**	**+1.5**
SVE				MLR	MLR		
	comp=Z,600nm,12.0s,MS4.4						
SVE				MLR	MLR		
	comp=E,300nm,15.0s						
GTA	**Gaotai**	**27.41**	**62**	*e*P	**P**	**05 42 08.8**	**+4.6**
GTA				AP	pP	05 42 15.5	+7.7
GTA				XP	sP	05 42 18.5	+9.1
GTA				PP	PP	05 42 57.0	+5.2
GTA				PPP	PPP	05 43 09.5	+5.7
GTA				PCP	PcP	05 45 28.0	+4.6
GTA				S	**S**	**05 46 49.0**	**+6.6**
GTA				XS		05 46 56.0	
GTA				AMB	AMB		
	comp=Z,60nm,4.9s						
GTA				LR	LR		
	comp=N,290nm,14.5s,MS4.1						
GTA				LR	LR		
	comp=E,320nm,16.7s,MS4.1						
GTA				LR	LR		
	comp=Z,350nm,16.4s,MS4.0						
SIM	**Simferopol’**	**30.60**	**308**	⇑*e*P	**P**	**05 42 34.7**	**+1.9**
SIM				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.7						
KMI	**Kunming**	**30.88**	**91**	P	**P**	**05 42 41.3**	**+5.9**
KMI				AP	pP	05 42 45.3	+6.3
KMI				XP	sP	05 42 47.3	+6.7
KMI				S	**S**	**05 47 47.5**	**+10**
KMI				XS		05 47 54.5	
KMI				AMB	AMB		
	comp=Z,20nm,0.7s,mb5.1						
KMI				LR	LR		
	comp=N,140nm,11.0s,MS4.2						
KMI				LR	LR		
	comp=E,280nm,14.0s,MS4.2						
KMI				LR	LR		
	comp=Z,270nm,14.3s,MS4.0						
KMI	**Kunming**	**30.88**	**91**	P	**P**	**05 42 41.3**	**+5.9**
	comp=Z,23nm,0.7s,mb5.1						
KMI				pP	pP	05 42 45.3	+6.3
KMI				sP	sP	05 42 47.2	+6.6
KMI				PP	PP	05 43 45.1	+8.1
KMI				PPP	PPP	05 44 00.3	+8.4
KMI				S	**S**	**05 47 47.4**	**+9.5**
KMI				sS		05 47 54.4	
KMI				SS	SS	05 49 35.1	+14
KMI				SSS	SSS	05 49 57.5	+15
KMI				LR	LR		
	comp=Z,270nm,14.3s,MS4.0						
KMI	**Kunming**	**30.88**	**91**	P	**P**	**05 42 41.3**	**+5.9**
KMI				*SP	sP	05 42 47.2	+6.6
KMI						05 43 45.1	
KMI				PPP	PPP	05 44 00.3	+8.4
KMI				S	**S**	**05 47 47.4**	**+9.5**
KMI				*SS		05 47 54.4	
KMI				pmax	pmax		
	comp=Z,23nm,0.7s,mb5.1						
KMI				MLR	MLR		
	comp=Z,270nm,14.3s,MS4.0						
ZAK	**Zakamensk**	**33.08**	**42**	*e*P	**P**	**05 42 53.4**	**-1.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
OBN	**Obninsk**	**33.67**	**327**	⇓*e*P	**P**	**05 42 59.4**	**-0.1**
OBN				*e*		05 44 09.8	
OBN				*e*S	**S**	**05 48 13.4**	**-7.7**
OBN				pmax	pmax		
	comp=Z,28nm,0.8s,mb5.2						
OBN				MLR	MLR		
	comp=Z,600nm,18.0s,MS4.4						
SONM	**Songino Array**	**34.09**	**48**	P	**P**	**05 43 04.5**	**+1.2**
	comp=Z,0.6nm,0.5s,mb3.8,baz=249,slow=9.0,SNR=8.2						
SONM				LR	LR	05 59 32.6	
	comp=Z,816nm,18.6s,MS4.5,baz=219,slow=41						
ENH	**Enshi**	**35.49**	**79**	*e*P	**P**	**05 43 21.4**	**+5.9**
	comp=Z,3.5nm,0.5s,mb4.5						
AKASG	**Malin Array Be**	**35.58**	**316**	P	**P**	**05 43 15.7**	**-0.3**
	comp=Z,4.8nm,0.8s,mb4.5,baz=100,slow=7.3,SNR=18						
AKASG				PP	PP	05 44 34.4	-1.9
	comp=Z,0.5nm,0.5s,baz=108,slow=11,SNR=4.0						
KLMR	**Klimovskoe**	**36.17**	**336**	*e*P	**P**	**05 43 19.8**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,50nm,2.7s,mb5.0						
KLMR				MLR	MLR		
	comp=Z,950nm,20.0s,MS4.6						
MLR	**Muntele Rosu**	**36.34**	**307**	⇑*i*P	**P**	**05 43 24.0**	**+1.6**
BURAR	**Bucovina Array**	**37.24**	**310**	⇓*i*P	**P**	**05 43 30.8**	**+0.8**
KOLS	**Kolonicke sedl**	**39.43**	**312**	*e*P	**P**	**05 43 49.7**	**+1.3**
CRVS	**Cervenica-Dubn**	**39.95**	**311**	*e*P	**P**	**05 43 53.6**	**+0.9**
VSU	**Vasula**	**40.03**	**327**	*d* *i*P	**P**	**05 43 53.4**	**+0.2**
JOF	**Joensuu**	**40.46**	**335**	*e*p	**P**	**05 43 55.4**	**-1.2**
	comp=Z,13nm,0.7s,mb4.8						
KECS	**Kecovo**	**40.52**	**311**	*e*P	**P**	**05 43 57.9**	**+0.6**
KECS				*e*		05 44 13.1	
PSZ	**Piszkesteto**	**40.83**	**310**	*e*P	**P**	**05 44 01.3**	**+1.4**
	comp=Z,9.0nm,0.7s,mb4.5						
PSZ	**Piszkesteto**	**40.83**	**310**	*e*P	**P**	**05 44 01.3**	**+1.5**
PSZ				pmax	pmax		
	comp=Z,9.0nm,0.7s,mb4.5						
VYHS	**Vyhne**	**41.61**	**310**	*e*P	**P**	**05 44 06.4**	**+0.2**
FINES	**FINESS Array B**	**41.72**	**331**	P	**P**	**05 44 07.2**	**+0.2**
	comp=Z,6.9nm,0.8s,mb4.4,baz=124,slow=8.3,SNR=18						
KAF	**Kangasniemi**	**41.96**	**332**	*e*p	**P**	**05 44 08.3**	**-0.6**
	comp=Z,8.9nm,0.5s,mb4.7,baz=119,slow=8.1						
KAF	**Kangasniemi**	**41.96**	**332**	*e*P	**P**	**05 44 08.3**	**-0.6**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.7						
OKC	**Ostrava-Krasne**	**42.25**	**312**	*e*P	**P**	**05 44 12.0**	**+0.6**
ZST	**Bratislava**	**42.72**	**310**	*e*P	**P**	**05 44 15.9**	**+0.6**
KMBO	**Kilima Mbogo**	**42.89**	**229**	LR	LR	06 04 09.2	
	comp=Z,187nm,18.1s,MS4.0,baz=90,slow=39						
NJ2	**Nanjing**	**43.05**	**74**	*e*P	**P**	**05 44 23.5**	**+5.3**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.7						
DPC	**Dobruska-Polom**	**43.48**	**313**	*e*P	**P**	**05 44 22.8**	**+1.3**
UPC	**Upice**	**43.70**	**313**	*e*P	**P**	**05 44 24.0**	**+0.8**
GERES	**GERESS Array B**	**45.03**	**310**	P	**P**	**05 44 34.4**	**+0.4**
	comp=Z,2.4nm,0.8s,mb4.1,baz=108,slow=8.4,SNR=7.3						
BRG	**Berggiesshubel**	**45.05**	**313**	*e*P	**P**	**05 44 35.4**	**+1.2**
	comp=Z,8.2nm,1.0s,mb4.5						
BRG	**Berggiesshubel**	**45.05**	**313**	*e*P	**P**	**05 44 35.4**	**+1.3**
BRG				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.5						
KHC	**Kasperske Hory**	**45.13**	**311**	*e*P	**P**	**05 44 28.1**	**-6.7**
KHC	**Kasperske Hory**	**45.13**	**311**	*i* P	**P**	**05 44 28.4**	**-6.4**
SSE	**Sheshan**	**45.20**	**75**	P	**P**	**05 44 36.8**	**+1.2**
SSE				AMB	AMB		
	comp=Z,40nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,50nm,6.0s						
SSE	**Sheshan**	**45.20**	**75**	P	**P**	**05 44 36.8**	**+1.2**
	comp=Z,41nm,0.8s,mb5.3						
CLL	**Collm**	**45.68**	**314**	P	**P**	**05 44 39.0**	**-0.1**
CLL				*e*		05 45 03.0	
CLL	**Collm**	**45.68**	**314**	*e*P	**P**	**05 44 39.0**	**-0.1**
CLL				*e*		05 45 03.0	
KEV	**Kevo**	**45.98**	**341**	*e*p	**P**	**05 44 41.6**	**+0.3**
ARCES	**ARCESS Array B**	**46.28**	**341**	P	**P**	**05 44 44.2**	**+0.6**
	comp=Z,7.4nm,0.6s,mb4.8,baz=80,slow=7.4,SNR=5.0						
ARCES	**ARCESS Array B**	**46.28**	**341**	P	**P**	**05 44 44.2**	**+0.6**
MOX	**Moxa**	**46.50**	**313**	*i* P	**P**	**05 44 46.1**	**+0.5**
	comp=Z,logA/T=1.2,mb4.9						
MOX	**Moxa**	**46.50**	**313**	*e*P	**P**	**05 44 46.1**	**+0.5**
	comp=Z,25nm,1.5s,mb4.9						
MOX	**Moxa**	**46.50**	**313**	*e*P	**P**	**05 44 46.1**	**+0.5**
MOX				pmax	pmax		
	comp=Z,25nm,1.5s,mb4.9						
CN2	**Changchun**	**46.81**	**57**	*e*P	**P**	**05 44 51.8**	**+3.6**
NB2	**NORSAR Subarra**	**48.27**	**327**	P	**P**	**05 44 58.3**	**-1.1**
	comp=Z,9.7nm,0.7s,mb4.9,baz=106,slow=7.4						
NOA	**NORSAR Array B**	**48.27**	**327**	P	**P**	**05 44 58.9**	**-0.5**
	comp=Z,8.5nm,0.7s,mb4.9,baz=106,slow=7.7,SNR=28						
NOA	**NORSAR Array B**	**48.27**	**327**	P	**P**	**05 44 58.9**	**-0.5**
NAO	**NORSAR Subarra**	**48.41**	**326**	P	**P**	**05 44 58.3**	**-2.1**
	comp=Z,9.7nm,0.7s,mb4.9						
NAO	**NORSAR Subarra**	**48.41**	**326**	P	**P**	**05 44 58.3**	**-2.1**
NAO				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb5.0						
PGF	**Pioggiola**	**48.42**	**302**	*e*P	**P**	**05 45 00.4**	**-0.4**
CDF	**Champ du Feu**	**49.28**	**310**	*e*P	**P**	**05 45 07.1**	**-0.3**
SBF	**Sospel**	**49.44**	**304**	*e*P	**P**	**05 45 08.2**	**-0.4**
	comp=Z,52nm,0.7s,mb5.4						
SBF	**Sospel**	**49.44**	**304**	*e*P	**P**	**05 45 08.2**	**-0.4**
SBF				pmax	pmax		
	comp=Z,26nm,0.7s,mb5.4						
HINF	**Hinteralfeld**	**49.58**	**309**	*e*P	**P**	**05 45 09.0**	**-0.7**
MDJ	**Mudanjiang**	**49.73**	**55**	P	**P**	**05 45 10.5**	**-0.4**
LPG	**La Plagne**	**49.79**	**306**	*e*P	**P**	**05 45 10.9**	**-0.4**
	comp=Z,15nm,0.9s,mb4.7						
LPG	**La Plagne**	**49.79**	**306**	*e*P	**P**	**05 45 10.9**	**-0.4**
LPG				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
LPL	**La Plagne**	**49.80**	**306**	*e*P	**P**	**05 45 10.8**	**-0.6**
	comp=Z,13nm,0.9s,mb4.7						
LPL	**La Plagne**	**49.80**	**306**	*e*P	**P**	**05 45 10.8**	**-0.6**
LPL				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
MBDF	**Montbardon**	**49.84**	**305**	*e*P	**P**	**05 45 11.0**	**-0.7**
	comp=Z,23nm,0.9s,mb4.9						
MBDF	**Montbardon**	**49.84**	**305**	*e*P	**P**	**05 45 11.0**	**-0.7**
MBDF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.9						
HAU	**Haudompre**	**49.92**	**309**	*e*P	**P**	**05 45 11.3**	**-0.9**
FRF	**La Foret Royal**	**50.04**	**303**	*e*P	**P**	**05 45 12.7**	**-0.5**
CABF	**La Chapelle**	**50.17**	**307**	*e*P	**P**	**05 45 13.5**	**-0.7**
	comp=Z,26nm,1.0s,mb4.9						
CABF	**La Chapelle**	**50.17**	**307**	*e*P	**P**	**05 45 13.5**	**-0.7**
CABF				pmax	pmax		
	comp=Z,13nm,1.0s,mb4.9						
ORIF	**Oris-en-Rattie**	**50.45**	**305**	*e*P	**P**	**05 45 15.2**	**-1.2**
	comp=Z,18nm,1.1s,mb4.7						
ORIF	**Oris-en-Rattie**	**50.45**	**305**	*e*P	**P**	**05 45 15.2**	**-1.2**
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.1s,mb4.7						
YAK	**Yakutsk**	**50.52**	**32**	*i* P	**P**	**05 45 22.2**	**+5.5**
YAK				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.0						
YAK				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.7						
VIVF	**Saint-Julien-l**	**51.31**	**305**	*e*P	**P**	**05 45 22.4**	**-0.5**
	comp=Z,18nm,0.8s,mb4.7						
VIVF	**Saint-Julien-l**	**51.31**	**305**	*e*P	**P**	**05 45 22.4**	**-0.5**
VIVF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.8						
LOR	**Lormes**	**51.64**	**308**	*e*P	**P**	**05 45 24.5**	**-0.9**
	comp=Z,20nm,1.1s,mb4.7						
LOR	**Lormes**	**51.64**	**308**	*e*P	**P**	**05 45 24.5**	**-0.9**
LOR				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.7						
SMF	**Signal de Mont**	**51.71**	**308**	*e*P	**P**	**05 45 24.9**	**-1.0**
	comp=Z,22nm,0.8s,mb4.8						
SMF	**Signal de Mont**	**51.71**	**308**	*e*P	**P**	**05 45 24.9**	**-1.0**
SMF				pmax	pmax		
	comp=Z,11nm,0.8s,mb4.8						
SSF	**Saint Saulge**	**51.90**	**308**	*e*P	**P**	**05 45 26.4**	**-0.9**
	comp=Z,6.3nm,0.9s,mb4.5						
SSF	**Saint Saulge**	**51.90**	**308**	*e*P	**P**	**05 45 26.4**	**-0.9**
SSF				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.5						
LASF	**Ste Croix**	**51.98**	**304**	*e*P	**P**	**05 45 27.5**	**-0.5**
	comp=Z,25nm,1.0s,mb4.8						
AVF	**Avril sur Loir**	**52.03**	**308**	*e*P	**P**	**05 45 27.3**	**-1.0**
BGF	**Bois d’Agland**	**52.40**	**308**	*e*P	**P**	**05 45 30.6**	**-0.5**
TIXI	**Tiksi**	**52.53**	**20**	*e*P	**P**	**05 45 30.3**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
TIXI				MLR	MLR		
	comp=Z,504nm,15.0s,MS4.7						
TCF	**Toulx Ste Croi**	**52.87**	**307**	*e*P	**P**	**05 45 33.7**	**-0.9**
CAF	**Calviac**	**53.14**	**306**	*e*P	**P**	**05 45 36.0**	**-0.7**
	comp=Z,28nm,1.0s,mb4.8						
CAF	**Calviac**	**53.14**	**306**	*e*P	**P**	**05 45 36.0**	**-0.7**
CAF				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
MTLF	**Montolieu**	**53.26**	**304**	*e*P	**P**	**05 45 37.1**	**-0.5**
LDF	**La Druitiere**	**54.17**	**310**	*e*P	**P**	**05 45 43.3**	**-0.9**
FLN	**La Foliniere**	**54.39**	**311**	*e*P	**P**	**05 45 44.9**	**-0.9**
MFF	**Saint Martin d**	**54.44**	**308**	*e*P	**P**	**05 45 45.4**	**-0.8**
GRR	**Gorron**	**54.69**	**310**	*e*P	**P**	**05 45 47.1**	**-0.8**
ETSF	**Etsaut**	**55.34**	**304**	*e*P	**P**	**05 45 52.6**	**-0.2**
SGMF	**Saint Gilles**	**55.83**	**310**	*e*P	**P**	**05 45 55.1**	**-1.1**
	comp=Z,74nm,1.2s,mb5.3						
SGMF	**Saint Gilles**	**55.83**	**310**	*e*P	**P**	**05 45 55.1**	**-1.1**
SGMF				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.2						
ROSF	**Rostrenen**	**56.29**	**310**	*e*P	**P**	**05 45 59.0**	**-0.5**
MJAR	**Matsushiro Arr**	**57.64**	**64**	P	**P**	**05 46 10.7**	**+1.4**
	comp=Z,0.7nm,0.3s,mb4.1,baz=300,slow=10,SNR=4.4						
YSS	**Yuzh-Sakhalins**	**58.50**	**51**	⇑*e*P	**P**	**05 46 17.0**	**+1.8**
YSS				*e**SP	sP	05 46 30.0	+10
YSS				S	**S**	**05 54 11.0**	**-5.7**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s,mb5.3						
YSS				MLR	MLR		
	comp=E,500nm,14.0s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s,MS4.8						
ESDC	**Sonseca Array**	**58.56**	**301**	P	**P**	**05 46 15.2**	**-0.5**
	comp=Z,0.8nm,0.5s,mb4.0,baz=55,slow=7.8,SNR=5.4						
DAG	**Danmarks Havn**	**60.22**	**345**	⇑*i*P	**P**	**05 46 27.2**	**+0.5**
	comp=Z,4.8nm,0.7s,mb4.6						
DAG	**Danmarks Havn**	**60.22**	**345**	⇑*i*P	**P**	**05 46 27.2**	**+0.5**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
EVO	**Evora**	**61.90**	**300**	*e*P	**P**	**05 46 37.3**	**-1.3**
	comp=Z,32nm,1.3s,mb5.0						
SUMG	**Summit**	**66.36**	**342**	*e*P	**P**	**05 47 08.9**	**+1.8**
	comp=Z,13nm,0.8s,mb5.0						
BOSA	**Boshof**	**71.39**	**219**	P	**P**	**05 47 40.9**	**+1.9**
	comp=Z,3.0nm,0.8s,mb4.2,baz=356,slow=9.5,SNR=4.4						
BOSA				LR	LR	06 17 22.9	
	comp=Z,173nm,19.2s,MS4.3,baz=0.1,slow=34						
DBIC	**Dimbokro**	**72.09**	**267**	P	**P**	**05 47 43.2**	**-0.2**
	comp=Z,2.8nm,0.9s,mb4.2,baz=100,slow=7.6,SNR=3.3						
DBIC				LR	LR	06 24 52.1	
	comp=Z,116nm,18.2s,MS4.2,baz=311,slow=40						
DBIC	**Dimbokro**	**72.09**	**267**	P	**P**	**05 47 43.2**	**-0.2**
DBIC				LR	LR	06 24 52.1	
IMA2	**Indian Mountai**	**78.87**	**16**	*e*P	**P**	**05 48 23.6**	**+2.7**
INK	**Inuvik**	**80.54**	**8**	*e*P	**P**	**05 48 32.6**	**+2.8**
	comp=Z,5.9nm,0.8s,mb4.6						
INK	**Inuvik**	**80.54**	**8**	*e*P	**P**	**05 48 32.6**	**+2.7**
INK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**80.72**	**119**	P	**P**	**05 48 35.5**	**+3.6**
	comp=Z,2.3nm,0.7s,mb4.2,baz=320,slow=4.9,SNR=23						
ILAR	**Eielson Array**	**81.52**	**14**	P	**P**	**05 48 37.0**	**+1.9**
	comp=Z,2.4nm,0.9s,mb4.1,baz=320,slow=3.9,SNR=20						
ILAR				LR	LR	06 33 29.0	
	comp=Z,118nm,18.5s,MS4.3,baz=197,slow=42						
DAWY	**Dawson**	**83.63**	**12**	*e*P	**P**	**05 48 48.0**	**+2.1**
SCHQ	**Schefferville**	**87.01**	**336**	LR	LR	06 28 19.1	
	comp=Z,93nm,19.9s,MS4.2,baz=352,slow=36						
YKA	**Yellowknife Ar**	**87.68**	**1**	P	**P**	**05 49 08.2**	**+2.2**
	comp=Z,4.4nm,0.6s,mb4.8,baz=354,slow=5.0,SNR=20						
YKA				LR	LR	06 33 17.6	
	comp=Z,234nm,18.6s,MS4.6,baz=330,slow=39						
YKA	**Yellowknife Ar**	**87.68**	**1**	P	**P**	**05 49 08.2**	**+2.2**
YKA				LR	LR	06 33 17.6	
YKA	**Yellowknife Ar**	**87.68**	**1**	⇑*e*P	**P**	**05 49 08.1**	**+2.1**
ULM	**Lac du Bonnet**	**98.75**	**350**	LR	LR	06 37 32.1	
	comp=Z,128nm,20.0s,MS4.4,baz=216,slow=37						
TXAR	**Lajitas Array**	**120.38**	**352**	PKP	PKPdf	05 55 12.5	+0.7
	comp=Z,0.4nm,0.8s,baz=225,slow=1.8,SNR=4.9						
TXAR	**Lajitas Array**	**120.38**	**352**	PKP	PKPdf	05 55 12.5	+0.7
PLCA	**Paso Flores**	**145.09**	**241**	PKPbc	PKPbc	05 55 57.3	+2.9
	comp=Z,3.8nm,0.9s,baz=150,slow=3.1,SNR=5.2						

*IDC **28** 05:36:21.1±1.9, 33.55N×74.00E, mb3.5/4, mb1 3.7/6, mb1mx3.6/20, mbtmp3.6/6, ML4.4/1, MS2.3/1, Ms1 2.3/1, ms1mx2.1/16, Error ellipse: s-maj=51.2km s-min=27.1km az=55.0*

ISC 28 05:36:22.7±0.6**, 33.37N**±0.09×**74.20E**±0.07**, h33**^{km}**, n15, σ1**^{s}**01**/14**, mb3.4**/3**, MS2.3**/1**, Southwestern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**0.83**	**291**	P	**S**	**05 36 49.1**	**-0.1**
SBDP	**Sheikh Budin**	**3.04**	**250**	P	**P**	**05 37 10.2**	**+0.5**
KOLN	**Koldanda**	**9.84**	**122**	*e*P	**P**	**05 38 45.6**	**+0.7**
GKN	**Gorkha**	**10.46**	**118**	*e*P	**P**	**05 38 52.3**	**-1.1**
DMN	**Daman**	**11.02**	**119**	*e*P	**P**	**05 39 01.0**	**-0.1**
PKI	**Pulchoki**	**11.26**	**118**	*e*P	**P**	**05 39 04.1**	**-0.3**
GUN	**Gumba**	**11.43**	**115**	*e*P	**P**	**05 39 06.4**	**-0.3**
JIRN	**Jiri**	**11.80**	**116**	*e*P	**P**	**05 39 11.1**	**-0.6**
MKAR	**Makanchi Array**	**14.76**	**22**	Pn	**P**	**05 39 51.0**	**+0.3**
	0.1nm,0.3s,baz=202,slow=10,SNR=5.0						
BVAR	**Borovoye Array**	**19.84**	**353**	P	**P**	**05 40 49.3**	**-4.1**
	1.0nm,0.3s,baz=155,slow=9.2,SNR=14						
AKTO	**Aktyubinsk**	**20.80**	**330**	P	**P**	**05 41 01.7**	**-1.8**
	0.6nm,0.3s,baz=151,slow=13,SNR=2.9						
SONM	**Songino Array**	**28.16**	**50**	P	**P**	**05 42 15.7**	**+1.7**
	0.2nm,0.5s,mb3.0,baz=258,slow=13,SNR=2.5						
ARCES	**ARCESS Array B**	**45.03**	**338**	P	**P**	**05 44 36.5**	**0.0**
	1.5nm,0.7s,mb3.9,baz=104,slow=7.4,SNR=4.6						
TGY	**Tagaytay City**	**46.45**	**103**	LR	LR	06 06 19.7	
	comp=Z,3.7nm,21.1s,MS2.3,baz=264,slow=39						
WRA	**Warramunga Arr**	**78.09**	**124**	P	**P**	**05 48 23.3**	**+3.1**
	0.2nm,0.5s,mb3.3,baz=320,slow=5.4,SNR=5.4						

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*IDC **28** 05:39:58.8±2.0, 26.43N×55.44E, mb3.9/8, mb1 4.0/8, mb1mx3.8/20, mbtmp3.9/8, MS3.7/1, Ms1 3.7/1, ms1mx3.1/19, Error ellipse: s-maj=45.8km s-min=30.4km az=41.0*

*CSEM **28** 05:40:01.2±0.3, 26.75N×55.77E, h12^{km}±1^{km}, ML3.5, Error ellipse: s-maj=6.3km s-min=2.5km az=157.0*

*NEIC **28** 05:40:02.3±1.3, 26.69N×55.77E, h10^{km}, mb4.1/3, MN3.8(TEH), Error ellipse: s-maj=19.1km s-min=14.7km az=13.0*

*TEH **28** 05:40:06.0, 26.88N×56.07E, h10^{km}, Mn3.8*

*THR **28** 05:40:06.2±1.4, 26.96N×55.92E, h14^{km}±10^{km}, ML3.5*

ISC 28 05:40:01.3±0.4**, 26.76N**±0.03×**55.67E**±0.04**, h10**^{km}**, n44, σ1**^{s}**47**/50**, mb3.8**/10**, MS3.7**/1**, 1C-7D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.78**	**35**	*e*Pg	**Pg**	**05 40 15.8**	**-1.2**
BNDS				AML	AML	05 40 44.6	
	comp=N,4μm,0.9s						
BNDS	**Bandar-Abbas**	**0.78**	**35**	*e*Pg	**Pg**	**05 40 15.0**	**-2.0**
BANOM	**Banah**	**1.01**	**146**	⇓P	**Pb**	**05 40 20.5**	**+0.1**
BANOM				⇑S	**Sb**	**05 40 36.6**	**+3.1**
ASHO	**Ashiyiah**	**2.10**	**170**	P	**Pn**	**05 40 39.0**	**+2.0**
	SNR=22						
GHIR	**Ghir-Karzin**	**2.83**	**303**	*e*Pn	**Pn**	**05 40 54.9**	**+7.5**
GHIR				*e*Sg	**Sg**	**05 41 37.0**	**+1.6**
GHIR				AML	AML	05 41 59.8	
	comp=N,175nm,0.5s						
GHIR	**Ghir-Karzin**	**2.83**	**303**	*e*Pn	**Pn**	**05 40 54.0**	**+6.6**
GHIR				*e*Sg	**Sg**	**05 41 36.0**	**+0.6**
KRBR	**Kerman**	**3.35**	**16**	*e*Pn	**Pn**	**05 40 56.4**	**+1.5**
KRBR				Sn	**Sn**	**05 41 34.6**	**-0.5**
KRBR	**Kerman**	**3.35**	**16**	*e*Pn	**Pn**	**05 40 56.0**	**+1.1**
KRBR				Sn	**Sn**	**05 41 34.0**	**-1.2**
ISRV	**Sarvestan**	**3.45**	**320**	Pn	**Pn**	**05 40 57.9**	**+1.6**
IMOK	**Mook**	**3.47**	**312**	Pn	**Pn**	**05 40 58.6**	**+2.1**
ARQ	**Araqi**	**3.50**	**167**	⇓P	**Pn**	**05 40 58.4**	**+1.5**
HOQ	**Hoqain**	**3.50**	**154**	⇓P	**Pn**	**05 40 53.2**	**-3.8**
IPAR	**Pars**	**3.84**	**324**	Pn	**Pn**	**05 41 03.0**	**+1.1**
BSY	**Bisya**	**4.23**	**160**	⇓P	**Pn**	**05 41 06.0**	**-1.4**
SMDO	**Samad**	**4.27**	**149**	⇓P	**Pn**	**05 40 59.2**	**-8.8**
IMEH	**Mehriz**	**4.71**	**349**	Pn	**Pn**	**05 41 16.4**	**+2.3**
IBAF	**Bafgh**	**4.81**	**359**	Pn	**Pn**	**05 41 17.4**	**+1.7**
ICHK	**Chekchek**	**5.57**	**349**	Pn	**Pn**	**05 41 27.9**	**+1.5**
RDF	**Al-Radifah**	**7.50**	**289**	*e*P	**Pn**	**05 41 54.5**	**+1.0**
RDF				AML	AML	05 43 18.8	
	comp=Z,17nm,0.4s						
RDF	**Al-Radifah**	**7.50**	**289**	*e*P	**Pn**	**05 41 54.5**	**+1.0**
RDF				*e*S	**Sn**	**05 43 17.4**	**-2.2**
UMR	**Umm Al-Rimmam**	**7.55**	**293**	*e*P	**Pn**	**05 41 55.0**	**+0.8**
UMR				AML	AML	05 43 22.0	
	comp=Z,18nm,0.4s						
NAY	**Al-Naaiem**	**7.85**	**290**	*e*P	**Pn**	**05 41 59.6**	**+1.2**
NAY				AML	AML	05 43 29.8	
	comp=Z,4.4nm,0.3s						
NAY	**Al-Naaiem**	**7.85**	**290**	*e*P	**Pn**	**05 41 59.6**	**+1.2**
NAY				*e*S	**Sn**	**05 43 26.3**	**-1.9**
MIB	**Mutribah**	**7.94**	**294**	*e*P	**Pn**	**05 42 00.8**	**+1.1**
MIB				AML	AML	05 43 27.9	
	comp=Z,18nm,0.5s						
ISFB	**Sefidab**	**8.13**	**339**	Pn	**P**	**05 42 01.2**	**-1.0**
IVRN	**Varamin**	**8.88**	**339**	Pn	**P**	**05 42 11.3**	**-1.4**
IQOM	**Qom**	**8.97**	**335**	Pn	**P**	**05 42 12.1**	**-1.9**
WHFO	**Wadi Hawf**	**8.97**	**192**	⇓P	**P**	**05 42 13.1**	**-0.9**
	SNR=7.2						
IDMV	**Damavand**	**9.32**	**341**	Sn	**Sn**	**05 43 56.1**	**-8.7**
IDMV	**Damavand**	**9.32**	**341**	Pn	**P**	**05 42 17.3**	**-1.5**
ABTO	**Aybut**	**9.62**	**194**	⇓P	**P**	**05 42 20.2**	**-2.8**
	SNR=14						
IAFJ	**Afjeh**	**9.68**	**341**	Pn	**P**	**05 42 22.0**	**-1.7**
CSS	**Prodhromos**	**20.82**	**299**	*e*P	**P**	**05 44 40.1**	**-5.3**
	comp=Z,8.4nm,0.6s						
AAK	**Ala-Archa**	**22.07**	**39**	*e*P	**P**	**05 44 57.8**	**-0.3**
	comp=Z,5.4nm,0.8s,mb4.0						
AKTO	**Aktyubinsk**	**23.71**	**4**	P	**P**	**05 45 15.4**	**+1.4**
	comp=Z,1.5nm,0.6s,mb3.6,baz=185,slow=11,SNR=3.1						
BVAR	**Borovoye Array**	**28.45**	**19**	P	**P**	**05 45 59.0**	**+0.8**
	comp=Z,3.7nm,0.8s,mb4.1,baz=207,slow=6.6,SNR=8.9						
MKAR	**Makanchi Array**	**29.00**	**39**	P	**P**	**05 46 04.3**	**+1.0**
	comp=Z,1.3nm,0.9s,mb3.7,baz=222,slow=9.3,SNR=3.6						
AKASG	**Malin Array Be**	**31.27**	**327**	P	**P**	**05 46 21.2**	**-2.2**
	comp=Z,0.3nm,0.3s,mb3.6,baz=136,slow=8.4,SNR=5.0						
MORC	**Moravsky Berou**	**37.16**	**318**	*e*P	**P**	**05 47 10.1**	**-4.0**
	comp=Z,1.2nm,0.5s,mb4.0						
GERES	**GERESS Array B**	**39.16**	**316**	LR	LR	06 03 45.2	
	comp=Z,106nm,18.7s,MS3.7,baz=86,slow=36						
FINES	**FINESS Array B**	**39.97**	**338**	P	**P**	**05 47 37.0**	**-0.5**
	comp=Z,1.1nm,0.5s,mb3.8,baz=153,slow=13,SNR=5.2						
SONM	**Songino Array**	**44.58**	**48**	P	**P**	**05 48 14.6**	**-0.7**
	comp=Z,2.0nm,0.8s,mb4.0,baz=254,slow=7.1,SNR=10						
ILAR	**Eielson Array**	**87.09**	**9**	P	**P**	**05 52 47.4**	**-0.6**
	comp=Z,0.3nm,0.8s,mb3.6,baz=308,slow=3.8,SNR=5.4						
WRA	**Warramunga Arr**	**89.23**	**113**	P	**P**	**05 52 57.7**	**-1.6**
	comp=Z,0.3nm,0.8s,mb3.7,baz=308,slow=4.2,SNR=3.7						

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*BJI **28** 05:53:00.3, 5.15N×123.59E, h584^{km}, mB4.9, mb4.8*

*NEIC **28** 05:53:00.6±0.8, 5.15N×123.61E, h578^{km}±10^{km}, mb4.7/19, Error ellipse: s-maj=10.5km s-min=6.2km az=59.0*

*IDC **28** 05:53:00.9±1.2, 5.18N×123.69E, h581^{km}±15^{km}, mb3.6/15, mb1 3.6/15, mb1mx3.6/21, mbtmp4.5/15, Error ellipse: s-maj=13.4km s-min=8.0km az=77.0*

*MOS **28** 05:53:01.3±0.9, 5.17N×123.70E, h612^{km}, mb4.7/17, Error ellipse: s-maj=18.3km s-min=8.0km az=120.2*

ISC 28 05:52:59.1±0.7**, 5.13N**±0.05×**123.64E**±0.07**, h575**^{km}±9^{km}**, n95, σ0**^{s}**89**/101**, mb4.5**/45**, 2C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSM	**Tawau**	**5.80**	**262**	P	**P**	**05 54 36.7**	**-1.1**
KKM	**Kota Kinabalu**	**7.44**	**277**	*e*P	**P**	**05 54 51.9**	**-1.0**
KKM	**Kota Kinabalu**	**7.44**	**277**	P	**P**	**05 54 51.9**	**-1.0**
KKM	**Kota Kinabalu**	**7.44**	**277**	P	**P**	**05 54 52.0**	**-0.9**
KSM	**Kuching**	**13.79**	**255**	*e*P	**P**	**05 55 56.2**	**+0.3**
NACB	**Ninganchiao**	**19.04**	**354**	*e*P	**P**	**05 56 47.1**	**+0.8**
QIZ	**Qiongzhong**	**19.28**	**317**	P	**P**	**05 56 48.5**	**-0.1**
YHNB	**Yeheng**	**19.55**	**354**	*e*P	**P**	**05 56 51.2**	**+0.2**
FITZ	**Fitzroy Crossi**	**23.17**	**175**	*e*P	**P**	**05 57 24.1**	**0.0**
FITZ	**Fitzroy Crossi**	**23.17**	**175**	P	**P**	**05 57 24.2**	**+0.1**
	1.7nm,0.3s,mb4.1,baz=27,slow=6.1,SNR=12						
FITZ				ScP		06 03 36.3	
	2.4nm,0.8s,baz=298,slow=16,SNR=6.4						
KKTK	**Khon Kaen**	**23.25**	**300**	P	**P**	**05 57 24.0**	**-0.9**
PSI	**Prapat**	**24.76**	**266**	P	**P**	**05 57 37.8**	**-0.5**
	6.6nm,0.7s,mb4.4,baz=148,slow=1.9,SNR=5.4						
WHN	**Wuhan**	**26.75**	**342**	*e*P	**P**	**05 57 56.5**	**+0.9**

WRAB	**Tennant Creek**	**27.04**	**157**	*e*P	**P**	**05 57 58.6**	**+0.3**
	4.2nm,0.4s,mb4.4						
WRAB	**Tennant Creek**	**27.04**	**157**	*e*P	**P**	**05 57 58.6**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.4						
WRA	**Warramunga Arr**	**27.05**	**157**	P	**P**	**05 57 58.4**	**+0.1**
	comp=Z,2.7nm,0.5s,mb4.1,baz=334,slow=10,SNR=40						
WRA				S	**S**	**06 01 53.3**	**-3.9**
	comp=Z,1.2nm,0.7s,baz=338,slow=16,SNR=3.5						
WRA				ScP		06 03 47.2	
	comp=Z,1.1nm,0.6s,baz=341,slow=3.2,SNR=9.9						
WB2	**Warramunga Arr**	**27.05**	**157**	*e*P	**P**	**05 57 58.4**	**+0.1**
PMG	**Port Moresby**	**27.53**	**122**	P	**P**	**05 58 02.5**	**-0.1**
	comp=Z,4.3nm,0.5s,mb4.3,baz=324,slow=11,SNR=4.6						
CHG	**Chiang Mai**	**27.66**	**302**	P	**P**	**05 58 03.8**	**+0.1**
CBIJ	**Chichi jima**	**28.11**	**37**	P	**P**	**05 58 07.1**	**-0.3**
	comp=Z,74nm,0.6s,mb5.5,baz=132,slow=23,SNR=6.4						
CBIJ				S	**S**	**06 02 09.8**	**-3.9**
	comp=Z,68nm,0.7s,baz=109,slow=23,SNR=6.5						
KMI	**Kunming**	**28.23**	**317**	P	**P**	**05 58 09.5**	**+0.9**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.5s,mb4.2						
KMI	**Kunming**	**28.23**	**317**	P	**P**	**05 58 09.5**	**+0.9**
	comp=Z,18nm,1.5s,mb4.5						
ENH	**Enshi**	**28.35**	**334**	*e*P	**P**	**05 58 09.6**	**+0.1**
	comp=Z,43nm,0.9s,mb5.1						
CD2	**Chengdu**	**31.74**	**326**	⇓*i*P	**P**	**05 58 38.5**	**+0.2**
CD2				AMB	AMB		
	comp=Z,20nm,0.6s,mb4.9						
CTAO	**Charters Tower**	**33.50**	**139**	*e*P	**P**	**05 58 54.0**	**+0.7**
	comp=Z,2.1nm,0.5s,mb4.0						
CTAO	**Charters Tower**	**33.50**	**139**	*e*P	**P**	**05 58 54.0**	**+0.7**
CTAO				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.0						
MAJO	**Matsushiro**	**34.00**	**21**	P	**P**	**05 58 56.8**	**-0.5**
MJAR	**Matsushiro Arr**	**34.00**	**21**	P	**P**	**05 58 57.1**	**-0.2**
	comp=Z,4.4nm,0.7s,mb4.2,baz=192,slow=9.5,SNR=9.0						
LZH	**Lanzhou**	**35.78**	**332**	*e*P	**P**	**05 59 13.5**	**+1.5**
LZH				AMB	AMB		
	comp=Z,50nm,1.4s,mb4.8						
LZH				AMB	AMB		
	comp=Z,200nm,4.6s						
HHC	**Hu-ho-hao-te**	**37.18**	**345**	*e*P	**P**	**05 59 24.3**	**+0.9**
HHC				AMB	AMB		
	comp=Z,270nm,1.3s,mb5.6						
CN2	**Changchun**	**38.55**	**2**	*e*P	**P**	**05 59 38.5**	**+4.0**
LSA	**Lhasa**	**39.21**	**312**	P	**P**	**05 59 41.8**	**+1.7**
LSA				AMB	AMB		
	comp=Z,40nm,0.7s,mb5.1						
LSA	**Lhasa**	**39.21**	**312**	*e*P	**P**	**05 59 42.0**	**+2.0**
	comp=Z,34nm,0.6s,mb5.0						
LSA	**Lhasa**	**39.21**	**312**	*e*P	**P**	**05 59 42.0**	**+1.9**
LSA				pmax	pmax		
	comp=Z,34nm,0.6s,mb5.0						
MDJ	**Mudanjiang**	**39.67**	**7**	P	**P**	**05 59 44.8**	**+1.2**
MDJ				PP	PP	06 01 33.0	+4.9
MDJ				XP	sP	06 02 28.5	+1.1
MDJ				S	**S**	**06 05 09.0**	**+1.4**
GTA	**Gaotai**	**40.35**	**331**	*e*P	**P**	**05 59 50.0**	**+0.9**
GTA				AP	pP	06 01 26.0	-4.2
GTA				PP	PP	06 01 37.3	+2.8
GTA				PCP	PcP	06 01 39.5	+0.8
GTA				S	**S**	**06 05 18.0**	**+0.5**
GTA				SS	SS	06 08 31.8	-4.1
GTA				AMB	AMB		
	comp=Z,30nm,0.7s,mb4.9						
GTA				AMB	AMB		
	comp=Z,150nm,4.2s						
STKA	**Stephens Creek**	**40.58**	**156**	P	**P**	**05 59 52.9**	**+1.8**
	comp=Z,3.7nm,0.4s,mb4.3,baz=330,slow=9.7,SNR=15						
STKA				S	**S**	**06 05 21.9**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=89,slow=22,SNR=3.2						
JIRN	**Jiri**	**42.06**	**306**	*e*P	**P**	**06 00 03.3**	**+0.4**
GUN	**Gumba**	**42.42**	**307**	*e*P	**P**	**06 00 06.2**	**+0.5**
PKI	**Pulchoki**	**42.65**	**306**	*e*P	**P**	**06 00 07.6**	**0.0**
KKN	**Kakani**	**42.85**	**306**	*e*P	**P**	**06 00 08.8**	**-0.3**
	comp=Z,76nm,0.8s,mb5.3						
KKN	**Kakani**	**42.85**	**306**	*e*P	**P**	**06 00 08.8**	**-0.3**
KKN				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.0						
DMN	**Daman**	**42.91**	**306**	*e*P	**P**	**06 00 09.5**	**-0.1**
	comp=Z,71nm,0.8s,mb5.2						
GKN	**Gorkha**	**43.45**	**306**	*e*P	**P**	**06 00 13.6**	**-0.2**
	comp=Z,65nm,0.8s,mb5.2						
HIA	**Hailar**	**44.10**	**356**	*e*P	**P**	**06 00 15.3**	**-3.3**
	comp=Z,17nm,1.3s,mb4.4						
HIA	**Hailar**	**44.10**	**356**	*e*P	**P**	**06 00 15.3**	**-3.3**
HIA				pmax	pmax		
	comp=Z,17nm,1.3s						
KOLN	**Koldanda**	**44.20**	**305**	*e*P	**P**	**06 00 20.1**	**+0.4**
	comp=Z,196nm,0.7s						
ULN	**Ulaanbaatar**	**44.89**	**344**	*e*P	**P**	**06 00 25.1**	**+0.4**
	comp=Z,12nm,0.8s,mb4.5						
ULN	**Ulaanbaatar**	**44.89**	**344**	*e*P	**P**	**06 00 25.1**	**+0.4**
ULN				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.5						
SONM	**Songino Array**	**45.04**	**344**	P	**P**	**06 00 26.2**	**+0.3**
	comp=Z,9.5nm,0.8s,mb4.4,baz=156,slow=8.9,SNR=78						
SONM				PcP	PcP	06 01 53.9	-0.7
	comp=Z,1.9nm,0.8s,baz=180,slow=3.7,SNR=4.4						
ZAK	**Zakamensk**	**48.23**	**343**	*e*P	**P**	**06 00 49.1**	**-1.0**
ZAK				*e*		06 02 05.4	
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.9s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb3.7						
WMQ	**Urumqi**	**49.84**	**326**	⇑*i*P	**P**	**06 01 02.8**	**+0.8**
WMQ				PCP	PcP	06 02 13.5	+1.4
WMQ				AP	pP	06 02 45.0	-3.7
WMQ				S	**S**	**06 07 32.0**	**+2.4**
WMQ				AMB	AMB		
	comp=Z,20nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,170nm,4.2s						
MKAR	**Makanchi Array**	**54.67**	**326**	P	**P**	**06 01 36.5**	**0.0**
	comp=Z,18nm,0.4s,mb4.7,baz=121,slow=7.9,SNR=250						
MKAR				PcP	PcP	06 02 29.7	-0.7
	comp=Z,6.0nm,0.7s,baz=120,slow=3.9,SNR=9.7						
MKAR				ScP		06 05 33.9	
	comp=Z,1.5nm,0.7s,baz=108,slow=3.8,SNR=5.8						
MKAR	**Makanchi Array**	**54.67**	**326**	P	**P**	**06 01 36.5**	**0.0**
MKAR				PcP	PcP	06 02 29.7	-0.7
MKAR				ScP		06 05 33.9	
KZA	**Kyzart**	**56.51**	**318**	P	**P**	**06 01 50.7**	**+1.4**
	SNR=9.4						
TKM2	**Tokmak 2**	**56.67**	**319**	P	**P**	**06 01 51.0**	**+0.6**
	SNR=13						
YAK	**Yakutsk**	**56.95**	**3**	*e*P	**P**	**06 01 50.1**	**-2.0**
UCH	**Uchtor**	**57.07**	**318**	P	**P**	**06 01 54.4**	**+1.3**
	SNR=22						
AAK	**Ala-Archa**	**57.26**	**318**	P	**P**	**06 01 55.1**	**+0.7**
	SNR=6.7						
AAK	**Ala-Archa**	**57.26**	**318**	*e*P	**P**	**06 01 54.0**	**-0.4**
	comp=Z,5.2nm,0.7s,mb3.9						
AAK	**Ala-Archa**	**57.26**	**318**	*e*P	**P**	**06 01 54.0**	**-0.4**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb3.9						
USP	**Ospenovka**	**57.54**	**319**	P	**P**	**06 01 56.5**	**+0.2**
	SNR=17						
AML	**Almayashu**	**57.58**	**318**	P	**P**	**06 01 57.6**	**+1.0**
	SNR=20						
EKS2	**Erkin-Say**	**57.75**	**318**	P	**P**	**06 01 58.5**	**+0.8**
	SNR=13						
KURK	**Kurchatov**	**58.92**	**328**	*e*P	**P**	**06 02 05.2**	**-0.3**
	comp=Z,63nm,0.6s,mb4.9						
KURK	**Kurchatov**	**58.92**	**328**	*e*P	**P**	**06 02 05.2**	**-0.3**
KURK				pmax	pmax		
	comp=Z,63nm,0.6s,mb4.9						
NVS	**Novosibirsk**	**59.26**	**334**	⇓*i*P	**P**	**06 02 05.8**	**-1.9**
NVS				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.2						
NVS				pmax	pmax		
	comp=N,10.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,7.0nm,0.6s						
BRVK	**Borovoye**	**64.55**	**328**	*e*P	**P**	**06 02 41.5**	**-0.4**
	comp=E,20nm,1.1s,mb4.5						
BRVK	**Borovoye**	**64.55**	**328**	*e*P	**P**	**06 02 41.5**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,20nm,1.1s,mb4.5						
CHKZ	**Chkalovo**	**64.67**	**328**	*e*P	**P**	**06 02 41.9**	**-0.7**
	comp=Z,15nm,0.9s,mb4.4						
CHKZ	**Chkalovo**	**64.67**	**328**	*e*P	**P**	**06 02 41.9**	**-0.7**
CHKZ				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.4						
TIXI	**Tiksi**	**66.52**	**2**	*i* P	**P**	**06 02 52.9**	**-0.9**
ARU	**Arti**	**72.12**	**328**	*e*P	**P**	**06 03 26.8**	**-0.5**
	comp=Z,10nm,0.4s,mb4.7						
ARU	**Arti**	**72.12**	**328**	⇓*i*P	**P**	**06 03 26.2**	**-1.0**
ARU				*e*S	S	06 12 22.2	+18
ARU				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.6						
QRN	**Al-Qurain**	**75.03**	**298**	*e*P	**P**	**06 03 43.5**	**-0.7**
RDF	**Al-Radifah**	**75.36**	**298**	*e*P	**P**	**06 03 45.4**	**-0.7**
RDF				AMb	AMB	06 03 46.0	
	comp=Z,39nm,0.6s,mb5.2						
MIB	**Mutribah**	**75.58**	**299**	*e*P	**P**	**06 03 46.5**	**-0.8**
MIB				AMb	AMB	06 03 47.9	
	comp=Z,60nm,0.8s,mb5.1						
NAY	**Al-Naaiem**	**75.64**	**299**	*e*P	**P**	**06 03 46.8**	**-0.8**
NAY				AMb	AMB	06 03 47.5	
	comp=Z,21nm,0.6s,mb4.7						
GNI	**Garni**	**78.22**	**310**	*e*P	**P**	**06 04 02.3**	**+1.0**
OPO	**Ambohidratompo**	**78.86**	**250**	P	**P**	**06 04 05.0**	**0.0**
	comp=Z,1.2nm,0.5s,mb3.5,baz=59,slow=5.9,SNR=3.7						
SOC	**Sochi**	**82.09**	**313**	*e*P	**P**	**06 04 21.0**	**-0.1**
SOC				pmax	pmax		
	comp=Z,32nm,1.0s,mb4.8						
KLMR	**Klimovskoe**	**82.68**	**331**	*e*P	**P**	**06 04 22.7**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,40nm,1.9s,mb4.6						
OBN	**Obninsk**	**84.15**	**325**	*c i*P	**P**	**06 04 31.4**	**+0.3**
OBN				*e*		06 07 54.7	
OBN				pmax	pmax		
	comp=Z,37nm,1.1s,mb4.8						
ILAR	**Eielson Array**	**85.17**	**25**	P	**P**	**06 04 35.5**	**-0.4**
	comp=Z,0.3nm,0.5s,baz=262,slow=4.6,SNR=8.9						
KMBO	**Kilima Mbogo**	**86.50**	**269**	P	**P**	**06 04 44.5**	**+1.1**
	comp=Z,1.7nm,0.7s,mb3.8,baz=43,slow=8.8,SNR=7.3						
JOF	**Joensuu**	**86.53**	**333**	*e*p	**P**	**06 04 41.2**	**-1.2**
	comp=Z,3.9nm,0.5s,mb4.4						
KEV	**Kevo**	**87.52**	**340**	*e*P	**P**	**06 04 46.8**	**-0.2**
ARCES	**ARCESS Array B**	**88.08**	**340**	P	**P**	**06 04 49.0**	**-0.6**
	comp=Z,1.6nm,0.7s,mb3.9,baz=79,slow=6.2,SNR=8.1						
KAF	**Kangasniemi**	**88.93**	**332**	*e*p	**P**	**06 04 52.4**	**-1.3**
	comp=Z,3.5nm,0.5s,mb4.5,baz=71,slow=4.1						
KAF	**Kangasniemi**	**88.93**	**332**	*e*P	**P**	**06 04 52.4**	**-1.3**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.5s,mb4.5						
FINES	**FINESS Array B**	**89.14**	**332**	P	**P**	**06 04 53.8**	**-0.9**
	comp=Z,3.5nm,0.7s,mb4.3,baz=44,slow=5.1,SNR=18						
NB2	**NORSAR Subarra**	**96.16**	**333**	P	**P**	**06 05 25.6**	**-1.0**
	comp=Z,1.2nm,0.6s,mb4.3,baz=69,slow=4.6						
NOA	**NORSAR Array B**	**96.16**	**333**	P	**P**	**06 05 25.9**	**-0.7**
	comp=Z,1.2nm,0.6s,mb4.3,baz=69,slow=4.6,SNR=5.0						
NAO	**NORSAR Subarra**	**96.42**	**333**	P	**P**	**06 05 25.6**	**-2.2**
	comp=Z,1.2nm,0.6s,mb4.3						
NAO	**NORSAR Subarra**	**96.42**	**333**	P	**P**	**06 05 25.6**	**-2.2**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.2						

IDC ***28*** *06:14:42.2±1.8, 19.40S×23.52E, mb4.0/2, mb1 4.2/3, mb1mx3.8/15, mbtmp4.2/3, ML4.2/1, MS3.4/1, Ms1 3.4/1, ms1mx3.0/16, Error ellipse: s-maj=51.6km s-min=30.2km az=84.0*

NEIC ***28*** *06:14:44.0±4.1, 19.36S×23.59E, h13^{km}±28^{km}, mb3.8/2, Error ellipse: s-maj=12.8km s-min=10.2km az=108.0*

ISC 28 06:14:41.3±0.6**, 19.41S**±0.05×**23.59E**±0.05**, h10**^{km}**, n18, σ0**^{s}**.93**/22**, mb3.8**/4**, MS3.2**/1**, Botswana**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TSUM	**Tsumeb**	**5.67**	**271**	*e*Pn	**Pn**	**06 16 08.8**	**+1.1**
	31nm,0.4s						
TSUM				*e*Sn	**Sn**	**06 17 12.5**	**-1.2**
LBTB	**Lobatse**	**5.88**	**162**	*e*P	**Pn**	**06 16 10.6**	**0.0**
LBTB				*e*S	**Sn**	**06 16 58.4**	**-20**
LBTB	**Lobatse**	**5.88**	**162**	*e*Pn	**Pn**	**06 16 12.4**	**+1.7**
	39nm,0.5s						
LBTB				*e*Sn	**Sn**	**06 17 16.8**	**-2.1**
LSZ	**Lusaka**	**6.02**	**48**	*e*Pn	**Pn**	**06 16 12.0**	**-0.6**
	35nm,0.6s						
LSZ				*e*Sn	**Sn**	**06 17 22.2**	**-0.1**
KSR	**Koster**	**7.10**	**155**	*e*P	**Pn**	**06 16 28.6**	**+0.7**
UPI	**Upington**	**9.16**	**193**	*e*P	**P**	**06 16 56.7**	**+0.2**
BOSA	**Boshof**	**9.29**	**171**	Pn	**P**	**06 16 58.8**	**+0.5**
	1.5nm,0.3s,baz=355,slow=15,SNR=33						
BOSA				Sn	**Sn**	**06 18 34.3**	**-10**
	5.0nm,0.3s,baz=62,slow=12,SNR=4.2						
BOSA				Lg		06 19 36.3	
	9.5nm,0.3s,baz=90,slow=21,SNR=4.4						
BOSA	**Boshof**	**9.29**	**171**	*e*P	**P**	**06 16 59.0**	**+0.7**
BOSA				*e*S	Sn	06 19 05.2	+21
BOSA				AML	AML	06 20 08.2	
	comp=Z,44nm,0.7s						
SEK	**Senekal**	**9.61**	**158**	*e*S	Sx	06 19 41.0	
SEK				AML	AML	06 19 50.9	
	comp=Z,329nm,0.7s						
PKA	**Prieska**	**10.24**	**184**	*e*P	**P**	**06 16 58.0**	**-13**
POGA	**Pongola**	**10.82**	**139**	*e*P	**P**	**06 17 18.0**	**-1.4**
SUR	**Sutherland**	**13.15**	**190**	*e*P	**P**	**06 17 47.0**	**-3.8**
SUR				*e*S	S	06 19 52.2	-26
SUR	**Sutherland**	**13.15**	**190**	*e*Pn	**P**	**06 17 50.4**	**-0.5**
SUR				*e*Sn	**S**	**06 20 23.5**	**+5.3**
KMBO	**Kilima Mbogo**	**22.57**	**38**	LR	LR	06 28 46.1	
	comp=Z,79nm,18.3s,MS3.2,baz=44,slow=37						
SNAA	**Sanae**	**54.49**	**190**	*e*P	**P**	**06 24 11.4**	**+0.4**
	comp=Z,0.7nm,0.5s,mb3.9						
ESLA	**Sonseca Array**	**64.16**	**337**	P	**P**	**06 25 17.7**	**-0.7**
	comp=Z,0.3nm,0.6s,mb3.5						
BDFB	**Brasilia**	**67.94**	**261**	P	**P**	**06 25 43.2**	**+0.2**
	comp=Z,1.5nm,0.7s,mb4.2,baz=121,slow=5.9,SNR=3.8						
BDFB				pP	pP	06 25 51.7	+5.7
	comp=Z,2.5nm,0.8s,baz=203,slow=3.8,SNR=3.6						
MKAR	**Makanchi Array**	**84.44**	**36**	P	**P**	**06 27 16.7**	**+1.3**
	comp=Z,0.6nm,0.8s,mb3.8,baz=239,slow=8.4,SNR=3.0						
MKAR				pP	pP	06 27 25.3	+6.7
	comp=Z,0.7nm,0.8s,baz=234,slow=3.8,SNR=3.9						

MOS ***28*** *06:37:43.1±0.6, 12.15N×140.99E, h43^{km}, mb4.4/5, Error ellipse: s-maj=20.4km s-min=14.3km az=105.9*

NEIC ***28*** *06:37:46.9±1.9, 12.20N×141.07E, h62^{km}±19^{km}, mb4.3/5, Error ellipse: s-maj=19.1km s-min=10.1km az=83.0*

IDC ***28*** *06:37:47.1±4.1, 12.23N×141.12E, h63^{km}±38^{km}, mb3.8/7, mb1 4.0/8, mb1mx3.8/16, mbtmp4.1/8, ML4.2/1, MS3.3/6, Ms1 3.3/6, ms1mx3.0/29, Error ellipse: s-maj=33.3km s-min=19.5km az=90.0*

ISC 28 06:37:45.6±3.0**, 12.18N**±0.09×**141.1E**±0.2**, h69**^{km}±31^{km}**, n29, σ0**^{s}**.49**/24**, mb4.2**/15**, 2D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.92**	**69**	P	**P**	**06 38 44.9**	**+0.1**
	16nm,0.3s,baz=241,slow=9.9,SNR=5.1						
GUMO				LR	LR	06 40 11.8	
	comp=Z,126nm,18.8s,baz=280,slow=37						
GUMO	**Guam**	**3.92**	**69**	*e*Pn	**P**	**06 38 45.2**	**+0.3**
GUMO				LR	LR	06 40 11.8	
GUMO	**Guam**	**3.92**	**69**	P	**P**	**06 38 44.9**	**+0.1**
GUMO				pmax	pmax		
	comp=Z,16nm,0.3s						
GUMO				MLR	MLR		
	comp=Z,126nm,18.8s						
JHJ	**Hachijo jima 2**	**20.88**	**357**	LR	LR	06 48 26.6	
	comp=Z,119nm,20.8s,baz=303,slow=31						
PMG	**Port Moresby**	**22.27**	**164**	LR	LR	06 49 59.7	
	comp=Z,93nm,19.1s,baz=15,slow=33						
JNU	**Nakatsue**	**22.85**	**337**	LR	LR	06 49 37.8	
	comp=Z,72nm,21.1s,baz=236,slow=31						
SSE	**Sheshan**	**26.32**	**319**	P	**P**	**06 43 16.3**	**-0.7**
	comp=Z,33nm,0.8s,mb4.8						
ASAJ	**Asahikawa**	**31.85**	**2**	LR	LR	06 55 29.3	
	comp=Z,44nm,20.2s,baz=178,slow=33						
WRAB	**Tennant Creek**	**32.60**	**192**	*e*P	**P**	**06 44 12.6**	**-0.4**
	comp=Z,3.1nm,0.8s,mb4.2						
WRAB	**Tennant Creek**	**32.60**	**192**	*e*P	**P**	**06 44 12.6**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.2						
WRA	**Warramunga Arr**	**32.61**	**192**	P	**P**	**06 44 12.7**	**-0.4**
	comp=Z,2.6nm,0.9s,mb4.1,baz=11,slow=10.0,SNR=13						
STKA	**Stephens Creek**	**43.81**	**179**	P	**P**	**06 45 47.2**	**+0.6**
	comp=Z,2.0nm,0.8s,mb3.9,slow=10,SNR=3.5						
STKA	**Stephens Creek**	**43.81**	**179**	P	**P**	**06 45 47.2**	**+0.6**
ULN	**Ulaanbaatar**	**45.54**	**328**	*i* P	**P**	**06 46 00.7**	**+0.5**
SONM	**Songino Array**	**45.86**	**328**	P	**P**	**06 46 03.0**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.4,baz=108,slow=4.7,SNR=4.0						
SONM				LR	LR	07 04 56.1	
	comp=Z,61nm,19.9s,baz=149,slow=36						
YAK	**Yakutsk**	**50.45**	**353**	*i* P	**P**	**06 46 37.8**	**-0.4**
YAK				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.1						
TIXI	**Tiksi**	**59.90**	**356**	*e*P	**P**	**06 47 46.0**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.0						
MKAR	**Makanchi Array**	**59.99**	**317**	P	**P**	**06 47 47.6**	**+0.3**
	comp=Z,1.4nm,0.7s,mb4.1,baz=97,slow=9.0,SNR=12						
KURK	**Kurchatov**	**63.33**	**321**	*e*P	**P**	**06 48 08.7**	**-1.1**
	comp=Z,3.9nm,0.6s,mb4.5						
KURK	**Kurchatov**	**63.33**	**321**	*d i*P	**P**	**06 48 09.5**	**-0.2**
CHKZ	**Chkalovo**	**68.73**	**323**	*e*P	**P**	**06 48 44.0**	**+0.1**
	comp=Z,3.8nm,1.1s,mb4.1						
CHKZ	**Chkalovo**	**68.73**	**323**	*e*P	**P**	**06 48 44.1**	**+0.1**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
BRVK	**Borovoye**	**68.84**	**322**	*e*P	**P**	**06 48 45.2**	**+0.6**
	comp=Z,1.5nm,0.8s,mb3.9						
BRVK	**Borovoye**	**68.84**	**322**	*e*P	**P**	**06 48 45.3**	**+0.6**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
ILAR	**Eielson Array**	**71.40**	**25**	P	**P**	**06 48 59.4**	**-0.7**
	comp=Z,0.5nm,0.6s,mb3.5,baz=248,slow=6.0,SNR=14						
ARU	**Arti**	**75.83**	**325**	⇓*i*P	**P**	**06 49 26.2**	**+0.3**
ARU				*e*		06 52 16.6	
ARU				*e*PPP	PPP	06 54 04.4	-1.1
ARU				*e*S	S	06 59 07.0	+5.8
ARU				*e*SS	SS	07 03 58.5	+1.2
ARU				pmax	pmax		
	comp=Z,4.0nm,1.3s,mb4.0						
ARCES	**ARCESS Array B**	**87.27**	**341**	P	**P**	**06 50 26.3**	**+0.9**
	comp=Z,3.2nm,0.9s,mb4.2,baz=63,slow=8.1,SNR=8.5						
FINES	**FINESS Array B**	**90.86**	**334**	P	**P**	**06 50 42.4**	**-0.1**
	comp=Z,2.2nm,0.6s,mb4.5,baz=72,slow=6.0,SNR=10						
LPAZ	**La Paz**	**151.38**	**102**	PKPbc	PKPdf	06 57 36.5	+10
	comp=Z,0.7nm,0.5s,baz=257,slow=4.0,SNR=8.2						

GUC 28 06:40:31.8±0.7**, 25.25S**×**70.10W, h60**^{km}**, MD3.6, ML2.6, 1C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRCH	**Chaqaral**	**1.19**	**203**	*e*P	P	06 40 53.0	+0.4
CRCH				*i* S	S	06 41 08.0	-0.1
CRCH				AMP		06 41 12.9	
	comp=E,264nm,0.2s						
ANCH	**Antofagasta**	**1.58**	**350**	*e*P	P	06 40 58.0	-0.1
ANCH				*i* S	S	06 41 18.2	+0.5
CEN1	**Los Morros**	**1.85**	**357**	⇑*i*P	P	06 40 59.3	-2.6
CEN1				*i* S	S	06 41 20.1	-4.0
CEN1				AMP		06 41 31.7	
	comp=N,68nm,0.3s						
CDCH	**Caldera**	**1.93**	**200**	*e*P	P	06 41 02.5	-0.5
CDCH				*i* S	S	06 41 26.5	+0.5

ISK ***28*** *06:51:14.3, 38.99N×26.18E, h28^{km}, MD3.2*

ATH ***28*** *06:51:14.6, 39.09N×26.05E, h10^{km}, MD3.0/3*

NEIC ***28*** *06:51:14.2, 39.00N×26.20E, h28^{km}, MD3.2(ISK), MD3.0(ATH), After ISK.*

CSEM ***28*** *06:51:15.9±0.2, 39.12N×26.36E, h20^{km}, MD3.0, Error ellipse: s-maj=4.2km s-min=3.3km az=88.0*

ISC 28 06:51:16.1±0.6**, 39.14N**±0.03×**26.41E**±0.06**, h10**^{km}±4^{km}**, n20, σ0**^{s}**.80**/29**, 1C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.15**	**315**	⇑*i*PG	**Pg**	**06 51 19.7**	**0.0**
PRK				*e*SG	**Sg**	**06 51 22.6**	**+0.5**
AYVA	**Ayvalik**	**0.28**	**52**	*i* P	**Pg**	**06 51 21.7**	**-0.2**
AYVA				*i* S	**Sg**	**06 51 25.7**	**0.0**
EZN	**Ezine**	**0.69**	**354**	PG	**Pg**	**06 51 30.5**	**+0.5**
URLA	**Izmir**	**0.79**	**170**	*i* P	**Pb**	**06 51 30.2**	**-1.3**
URLA				*i* S	**Sb**	**06 51 42.0**	**+0.1**
KDAG	**Bornova**	**0.99**	**137**	*i* P	**Pb**	**06 51 34.8**	**0.0**
KDAG				*i* S	**Sb**	**06 51 47.9**	**+0.1**
AKS	**Akhisar**	**1.12**	**103**	PN	**Pn**	**06 51 36.8**	**-1.0**
AKS				SN	**Sn**	**06 51 53.0**	**-0.2**
BALB	**Balikesir**	**1.24**	**66**	PN	**Pn**	**06 51 39.5**	**0.0**
LPK	**Lapseki**	**1.26**	**12**	PN	**Pn**	**06 51 39.1**	**-0.7**
LPK				SN	**Sn**	**06 51 57.6**	**+0.8**
SMG	**Samos**	**1.47**	**167**	*e*PB	**Pb**	**06 51 43.0**	**0.0**
SMG				*e*SB	**Sb**	**06 52 04.4**	**+2.9**
SART	**Tekirdag**	**1.66**	**21**	*i* P	**Pn**	**06 51 44.9**	**-0.5**
SART				*i* S	**Sn**	**06 52 07.0**	**+0.1**
BNT	**Bandirma**	**1.68**	**43**	PN	**Pn**	**06 51 45.5**	**-0.3**
MRMT	**Marmara Adasi**	**1.72**	**31**	PN	**Pn**	**06 51 46.1**	**-0.3**
MFT	**Murefte**	**1.78**	**22**	*e*PN	**Pn**	**06 51 47.2**	**+0.1**
DST	**Dursunbey**	**1.78**	**74**	*e*PN	**Pn**	**06 51 46.8**	**-0.4**
AYDN	**Tasoluk**	**1.87**	**142**	*i* P	**Pn**	**06 51 51.1**	**+2.6**
AYDN				*i* S	**Sn**	**06 52 16.3**	**+4.0**
KCT	**Karacabey**	**1.88**	**52**	*e*PN	**Pn**	**06 51 48.4**	**-0.1**
RDO	**Rodhopi**	**2.12**	**342**	*e*PN	**Pn**	**06 51 52.2**	**+0.2**
ORLT	**Orhaneli**	**2.12**	**64**	*e*PN	**Pn**	**06 51 52.5**	**+0.4**
APE	**Apeiranthos**	**2.18**	**199**	*e*PN	**Pn**	**06 51 51.1**	**-1.8**
YLV	**Yalova**	**2.69**	**57**	*e*PN	**Pn**	**06 52 00.6**	**+0.4**

BJI ***28*** *06:58:03.6, 7.95S×158.77E, h91^{km}, mB5.1, mb4.9*

MOS ***28*** *06:58:03.9±1.2, 8.10S×158.47E, h83^{km}, mb5.2/17, Error ellipse: s-maj=10.5km s-min=9.8km az=113.6*

HRVD ***28*** *06:58:05.9±0.4, 8.08S×158.59E, h74^{km}±4^{km}, MW4.9/52, Centroid moment Tensor Solution. LP body waves: s27,c30;Mantle waves: s52,c71; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.13±.16; M$_{\theta\theta}$0.30±.20; M$_{\phi\phi}$-2.44±.20; M$_{r\theta}$-0.20±.10; M$_{\theta\phi}$0.02±.20; M$_{\phi r}$-0.98±.11; Best double couple: M$_{0}$2.496×10^{16} NP1:ϕ_{s}354°,δ34°,λ81°. NP2:ϕ_{s}185°,δ57°,λ96°. Principal axes: T 2.35, Plg77°, Azm115°; N .283, Plg5°, Azm1°; P -2.641, Plg12°, Azm270°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***28*** *06:58:05.9±0.2, 8.19S×158.49E, mb4.9/33 Error ellipse: s-maj=7.4km s-min=6.8km az=143.0*

IDC ***28*** *06:58:05.7±0.5, 8.16S×158.49E, h92^{km}±4^{km}, mb4.7/15, mb1 4.8/15, mb1mx4.8/15, mbtmp5.0/15, MS3.6/9, Ms1 3.6/9, ms1mx3.5/16, Error ellipse: s-maj=12.4km s-min=6.8km az=44.0*

ISC 28 06:58:04.9±0.2**, 8.20S**±0.05×**158.47E**±0.04**, h95**^{km}**, h95**^{km}±1.4^{km}**:pP-P, n179, σ0**^{s}**.97**/129**, mb5.0**/58**, 6C, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.90**	**130**	P	**P**	**06 58 36.6**	**+0.2**
	2μm,0.3s,baz=236,slow=1.8,SNR=302						
HNR				S	**S**	**06 59 01.2**	**+1.4**
	3μm,0.3s,baz=64,slow=22,SNR=40						
HNR	**Honiara**	**1.90**	**130**	*e*Pn	**P**	**06 58 36.2**	**-0.3**
HNR				*e*Sn	**S**	**06 59 00.4**	**+0.6**
PMG	**Port Moresby**	**11.24**	**263**	P	**P**	**07 00 48.5**	**+4.5**
	0.2nm,0.3s,baz=79,slow=6.0,SNR=9.0						
PMG				LR	LR	07 04 57.9	
	comp=Z,138nm,18.3s,baz=79,slow=37						
PMG	**Port Moresby**	**11.24**	**263**	*e*Pn	**P**	**07 00 48.6**	**+4.6**
	73nm,0.9s						
PMG	**Port Moresby**	**11.24**	**263**	*e*P	**P**	**07 00 48.6**	**+4.7**
PMG				pmax	pmax		
	comp=Z,73nm,0.9s						
DZM	**Mont Dzumac**	**15.78**	**152**	P	**P**	**07 01 47.0**	**+4.1**
	comp=Z,1.6nm,0.3s,baz=330,slow=23,SNR=9.8						
DZM				LR	LR	07 06 45.3	
	comp=Z,153nm,19.1s,baz=19,slow=33						
CTA	**Charters Tower**	**16.72**	**224**	*e*P	**P**	**07 02 00.5**	**+5.9**
	comp=Z,6.2nm,0.6s						
CTA	**Charters Tower**	**16.72**	**224**	P	**P**	**07 01 56.0**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=64,slow=12,SNR=8.7						
CTA				LR	LR	07 06 04.3	
	comp=Z,200nm,19.8s,baz=46,slow=28						
CTAO	**Charters Tower**	**16.72**	**224**	*e*Pn	**P**	**07 02 01.0**	**+6.4**
	comp=Z,14nm,0.9s						
CTAO	**Charters Tower**	**16.72**	**224**	*e*P	**P**	**07 02 01.0**	**+6.4**
CTAO				pmax	pmax		
	comp=Z,14nm,0.9s						
GUMO	**Guam**	**25.52**	**328**	LR	LR	07 12 04.5	
	comp=Z,100nm,19.5s,baz=79,slow=33						
WRAB	**Tennant Creek**	**26.10**	**241**	*e*P	**P**	**07 03 31.8**	**0.0**
	comp=Z,22nm,0.6s,mb4.8						
WRAB				*e*pP	pP	07 03 56.1	+3.3
WRAB	**Tennant Creek**	**26.10**	**241**	*e*P	**P**	**07 03 31.8**	**0.0**
WRAB				*e**PP	pP	07 03 56.1	+3.3

WRAB				pmax	pmax		
	comp=Z,23nm,0.6s,mb4.8						
WB2	Warramunga Arr	26.10	241	eP	P	07 03 31.8	0.0
WRA	Warramunga Arr	26.11	241	P	P	07 03 31.9	-0.1
	comp=Z,11nm,0.6s,mb4.5,baz=66,slow=9.0,SNR=165						
WRA				PcP	PcP	07 06 56.3	-1.3
	comp=Z,2.1nm,0.4s,baz=66,slow=3.1,SNR=9.6						
WRA				S	S	07 07 56.4	+2.2
	comp=Z,1.5nm,1.0s,baz=63,slow=16,SNR=4.8						
WRA				ScP		07 10 28.2	
	comp=Z,1.0nm,0.9s,baz=70,slow=3.9,SNR=4.7						
STKA	Stephens Creek	28.31	211	eP	P	07 03 51.7	-0.1
	comp=Z,6.9nm,0.4s,mb4.5						
STKA	Stephens Creek	28.31	211	P	P	07 03 51.4	-0.4
	comp=Z,7.5nm,0.5s,mb4.5,baz=45,slow=16,SNR=34						
STKA				LR	LR	07 12 59.1	
	comp=Z,157nm,21.6s,baz=26,slow=32						
AFI	Afiamalu	29.73	104	P	P	07 04 02.8	-1.8
	comp=Z,39nm,0.7s,mb5.1,baz=101,slow=3.6,SNR=6.2						
AFI				LR	LR	07 14 25.8	
	comp=Z,129nm,18.1s,baz=265,slow=33						
AFI	Afiamalu	29.73	104	eP	P	07 04 02.8	-1.8
	comp=Z,63nm,1.2s,mb5.1						
AFI	Afiamalu	29.73	104	eP	P	07 04 02.8	-1.8
AFI				pmax	pmax		
	comp=Z,63nm,1.2s,mb5.1						
TOO	Toolangi	31.51	200	eP	P	07 04 20.9	+0.8
	comp=Z,16nm,0.7s,mb4.9						
TOO	Toolangi	31.51	200	eP	P	07 04 20.9	+0.8
TOO				pmax	pmax		
	comp=Z,16nm,0.7s,mb4.9						
FITZ	Fitzroy Crossi	33.40	250	eP	P	07 04 35.3	-1.3
	comp=Z,5.7nm,0.4s,mb4.8						
URZ	Urewera	34.33	154	P	P	07 04 42.1	-2.3
	comp=Z,11nm,0.9s,mb4.7,baz=96,slow=8.9,SNR=3.0						
FORT	Forrest	36.20	228	eP	P	07 05 00.3	-0.1
	comp=Z,12nm,0.6s,mb5.0						
RPZ	Rata Peaks	37.05	165	P	P	07 05 07.3	0.0
	comp=Z,31nm,0.6s,mb5.4,baz=243,slow=2.2,SNR=12						
RAR	Rarotonga	42.27	113	P	P	07 05 50.3	-0.5
	comp=Z,31nm,0.7s,mb5.1,baz=231,slow=4.3,SNR=8.0						
KLBR	Kellerberrin	44.42	233	eP	P	07 06 07.4	-0.8
	comp=Z,19nm,1.0s,mb4.8						
MJAR	Matsushiro Arr	48.41	338	P	P	07 06 37.2	-2.2
	comp=Z,2.0nm,0.5s,mb4.2,baz=167,slow=9.2,SNR=4.3						
MJAR				PcP	PcP	07 08 03.5	-1.2
	comp=Z,1.8nm,0.5s,baz=151,slow=3.8,SNR=5.6						
PPT	Papeete	51.35	106	eLR	LR	07 21 45.2	
	comp=Z,187nm,32.5s						
PPT	Papeete	51.35	106	P	P	07 07 01.5	-0.7
	comp=Z,16nm,0.6s,mb5.2,baz=266,slow=2.7,SNR=3.9						
PPT				LR	LR	07 25 28.6	
	comp=Z,101nm,21.3s,baz=274,slow=32						
PAE	Paea	51.36	106	eP	P	07 07 01.6	-0.6
	comp=Z,88nm,1.3s,mb5.6						
TVO	Taravao	51.68	106	eP	P	07 07 04.5	-0.1
	comp=Z,106nm,0.8s,mb5.9						
TBI	Tubuai	52.04	113	eP	P	07 07 06.4	-0.9
	comp=Z,68nm,0.8s,mb5.7						
TBI	Tubuai	52.04	113	eLR	LR	07 22 15.7	
	comp=Z,345nm,35.5s						
PMOR	Pomariorio Ree	52.87	103	eP	P	07 07 13.4	-0.2
	comp=Z,136nm,1.1s,mb5.9						
VAH	Vaihoa	53.13	103	eP	P	07 07 14.9	-0.6
	comp=Z,55nm,0.9s,mb5.6						
NJ2	Nanjing	55.06	319	eP	P	07 07 30.0	+0.6
NJ2				AP	pP	07 07 55.3	+2.5
NJ2				XP	sP	07 08 05.3	+1.8
NJ2				PP	PP	07 09 36.8	+1.9
NJ2				S	S	07 15 05.0	+2.4
NJ2				XS		07 15 47.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,120nm,10.0s						
NJ2				LR	LR		
	comp=N,800nm,29.1s						
NJ2				LR	LR		
	comp=E,810nm,30.0s						
NJ2				LR	LR		
	comp=Z,460nm,25.0s						
MDJ	Mudanjiang	58.68	336	P	P	07 07 54.0	-0.8
MDJ				AP	pP	07 08 19.0	+0.5
MDJ				XP	sP	07 08 29.8	+0.6
MDJ				PP	PP	07 10 06.5	-0.8
MDJ				S	S	07 15 52.5	+2.5
MDJ				LR	LR		
	comp=N,20nm,28.2s						
MDJ				LR	LR		
	comp=E,30nm,28.2s						
MDJ				LR	LR		
	comp=Z,50nm,23.1s						
CN2	Changchun	59.79	333	eP	P	07 08 01.5	-0.9
CN2				eAP	pP	07 08 25.8	-0.4
CN2				eXP	sP	07 08 36.8	-0.2
CN2				eS	S	07 16 04.8	+0.4
CN2				AMB	AMB		
	comp=Z,20nm,0.8s,mb5.2						
ENH	Enshi	60.60	311	eP	P	07 08 07.5	-0.7
	comp=Z,6.4nm,0.8s,mb4.7						
ENH				epP	pP	07 08 34.5	+2.5
KLR	Kul'dur	61.80	340	eP	P	07 08 12.3	-3.7
KMI	Kunming	63.55	303	P	P	07 08 29.0	+0.9
KMI				AP	pP	07 08 53.8	+1.7
KMI				XP	sP	07 09 04.0	+1.3
KMI				PP	PP	07 10 52.3	+1.8
KMI				S	S	07 16 54.5	+2.2
KMI				XS		07 17 38.5	
KMI				SCS	ScS	07 18 09.5	+1.2
KMI				SS	SS	07 20 59.5	-3.4
KMI				SSS	SSS	07 23 53.5	+2.4
KMI				AMB	AMB		
	comp=Z,60nm,3.8s						
KMI				LR	LR		
	comp=Z,30nm,26.3s						
KMI	Kunming	63.55	303	P	P	07 08 29.1	+1.1
	comp=Z,5.0nm,1.0s,mb4.3						
KMI				pP	pP	07 08 53.7	+1.6
KMI				sP	sP	07 09 04.0	+1.3
KMI				PcP	PcP	07 09 04.3	+0.8
KMI				PP	PP	07 10 52.2	+1.7
KMI				S	S	07 16 54.4	+2.1
KMI				sS		07 17 38.4	
KMI				ScS	ScS	07 18 09.5	+1.2
KMI				SKS	SKS	07 18 10.2	+1.9
KMI				SS	SS	07 20 59.5	-3.4
KMI				SSS	SSS	07 23 53.5	+2.4
KMI				LR	LR		
	comp=Z,30nm,26.3s						
KMI	Kunming	63.55	303	P	P	07 08 29.1	+1.1
KMI				*PP	pP	07 08 53.7	+1.6
KMI				*SP	sP	07 09 04.0	+1.3
KMI						07 09 04.3	
KMI						07 10 52.2	
KMI				S	S	07 16 54.4	+2.1
KMI				*SS		07 17 38.4	
KMI						07 18 09.5	
KMI				SS	SS	07 20 59.5	-3.4
KMI				SSS	SSS	07 23 53.5	+2.4
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.3						
KMI				MLR	MLR		
	comp=Z,30nm,26.3s						
CD2	Chengdu	65.23	309	P	P	07 08 38.3	-0.5
CD2				AP	pP	07 09 02.5	-0.4
CD2				PP	PP	07 11 04.8	-0.7
CD2				eS	S	07 17 12.0	-0.8
CD2				SS	SS	07 21 28.3	-0.6
CD2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
RKT	Rikitea	65.30	112	eLR	LR	07 28 22.8	
	comp=Z,220nm,30.0s						
HIA	Hailar	66.50	333	eP	P	07 08 46.1	-0.5
	comp=Z,6.7nm,0.7s,mb4.6						
HIA				epP	pP	07 09 11.8	+1.0
HIA	Hailar	66.50	333	eP	P	07 08 46.1	-0.5
HIA				e*PP	pP	07 09 11.8	+1.0
HIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LZH	Lanzhou	67.60	314	eP	P	07 08 54.3	+0.6
LZH				AP	pP	07 09 18.8	+0.8
LZH				XP	sP	07 09 29.8	+1.5
LZH				PP	PP	07 11 26.8	+1.0
LZH				XS		07 18 25.3	
LZH				eSS	SS	07 22 06.3	+0.8
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.7						
LZH				AMB	AMB		
	comp=Z,90nm,4.6s						
LZH				LR	LR		
	comp=E,250nm,13.2s						
LZH				LR	LR		
	comp=Z,450nm,15.8s						
LZH	Lanzhou	67.60	314	eP	P	07 08 54.2	+0.5
	comp=Z,26nm,1.6s,mb4.8						
LZH				pP	pP	07 09 18.8	+0.8
LZH				sP	sP	07 09 29.8	+1.5
LZH				PP	PP	07 11 26.7	+0.9
LZH				eS	S	07 17 54.2	+13
LZH				sS		07 18 25.2	
LZH				eSS	SS	07 22 06.2	+0.7
LZH				LR	LR		
	comp=Z,450nm,15.8s						
LZH	Lanzhou	67.60	314	eP	P	07 08 54.2	+0.5
LZH				*PP	pP	07 09 18.8	+0.8
LZH				*SP	sP	07 09 29.8	+1.5
LZH						07 11 26.7	
LZH				*SS		07 18 25.2	
LZH				eSS	SS	07 22 06.2	+0.7
LZH				pmax	pmax		
	comp=Z,26nm,1.6s,mb4.8						
LZH				MLR	MLR		
	comp=Z,450nm,15.8s						
ULN	Ulaanbaatar	71.89	326	P	P	07 09 19.9	+0.3
	comp=Z,19nm,1.0s,mb4.9						
ULN				epP	pP	07 09 46.5	+2.3
ULN				esP	sP	07 09 55.9	+1.7
ULN	Ulaanbaatar	71.89	326	P	P	07 09 19.9	+0.3
ULN				e*PP	pP	07 09 46.5	+2.3
ULN				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.9						
GTA	Gaotai	71.98	316	eP	P	07 09 21.0	+0.7
GTA				PCP	PcP	07 09 38.0	-0.6
GTA				AP	pP	07 09 46.5	+1.6
GTA				XP	sP	07 09 57.8	+2.8
GTA				PP	PP	07 12 05.5	+2.5
GTA				S	S	07 18 34.8	+2.1
GTA				SKS	SKS	07 19 11.5	+0.7
GTA				SCS	ScS	07 19 13.8	+0.1
GTA				XS		07 19 18.3	
GTA				SS	SS	07 23 16.0	+3.0
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.9						
GTA				AMB	AMB		
	comp=Z,70nm,5.7s						
GTA				LR	LR		
	comp=N,120nm,13.3s						
GTA				LR	LR		
	comp=E,130nm,14.1s						
GTA				LR	LR		
	comp=Z,60nm,12.9s						
SONM	Songino Array	72.23	326	P	P	07 09 21.9	+0.3
	comp=Z,10nm,0.6s,mb4.8,baz=134,slow=5.3,SNR=56						
SONM				pP	pP	07 09 45.0	-1.2
	comp=Z,15nm,0.8s,baz=130,slow=6.0,SNR=8.6						
SONM				LR	LR	07 38 57.8	
	comp=Z,50nm,18.9s,baz=38,slow=34						
SHL	Shillong	72.88	300	eP	P	07 09 25.5	-0.3
BOD	Bodaibo	75.03	337	eP	P	07 09 36.5	-1.1
BOD				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
ZAK	Zakamensk	75.35	327	⇑iP	P	07 09 39.4	-0.2
ZAK				e	pP	07 10 05.8	+1.4
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.1						
JIRN	Jiri	78.36	300	eP	P	07 09 57.0	+0.1
	comp=Z,13nm,0.7s,mb4.8						
GUN	Gumba	78.69	301	eP	P	07 09 58.8	+0.1
	comp=Z,22nm,0.7s,mb5.1						
PKI	Pulchoki	79.00	300	eP	P	07 10 00.0	-0.4
	comp=Z,12nm,0.7s,mb4.9						
PKI	Pulchoki	79.00	300	eP	P	07 10 00.0	-0.4
PKI				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.5						
KKN	Kakani	79.17	300	eP	P	07 10 01.2	-0.1
	comp=Z,13nm,0.5s,mb5.1						
KKN	Kakani	79.17	300	eP	P	07 10 01.2	-0.1
KKN				pmax	pmax		
	comp=Z,7.0nm,0.5s,mb4.8						
DMN	Daman	79.27	300	eP	P	07 10 01.0	-0.9
	comp=Z,19nm,0.6s,mb5.1						
SLKM	Skilak Lake	79.45	23	eP	P	07 10 01.3	-0.9
SLKM				epP	pP	07 10 27.5	+0.3
GKN	Gorkha	79.78	300	eP	P	07 10 04.2	-0.4
	comp=Z,26nm,0.5s,mb5.3						
PMR	Palmer	80.54	23	eP	P	07 10 06.6	-1.4
	comp=Z,18nm,0.9s,mb4.9						
PMR				epP	pP	07 10 32.7	-0.3
PMR	Palmer	80.54	23	eP	P	07 10 06.6	-1.4
PMR				e*PP	pP	07 10 32.7	-0.3
PMR				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
KOLN	Koldanda	80.61	300	eP	P	07 10 08.6	-0.4
	comp=Z,24nm,0.9s,mb5.0						
QSPA	South Pole Qui	81.78	180	eP	P	07 10 14.1	-0.1
	comp=Z,15nm,0.6s,mb5.0						
IMA2	Indian Mountai	81.86	18	eP	P	07 10 14.2	-0.6
IMA2				epP	pP	07 10 38.0	-1.9
MCK	McKinley	81.92	21	eP	P	07 10 14.1	-1.0
	comp=Z,18nm,1.1s,mb4.8						
MCK				epP	pP	07 10 36.9	-3.3
MCK	McKinley	81.92	21	eP	P	07 10 14.1	-1.0
MCK				e*PP	pP	07 10 36.9	-3.3
MCK				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.8						
TIXI	Tiksi	82.06	351	eP	P	07 10 13.3	-2.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.2						
WMQ	Urumqi	82.06	316	⇑iP	P	07 10 16.8	+0.5
WMQ				AP	pP	07 10 42.0	+0.6
WMQ				XP	sP	07 10 53.0	+1.1
WMQ				PP	PP	07 13 30.5	+3.7
WMQ				PPP	PPP	07 15 25.0	+5.2
WMQ				eS	S	07 20 22.5	+1.2
WMQ				XS		07 21 05.0	
WMQ				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.0						
WMQ				AMB	AMB		
	comp=Z,210nm,5.9s						
COLA	College	82.98	20	eP	P	07 10 19.2	-1.3
	comp=Z,17nm,0.9s,mb4.9						
COLA	College	82.98	20	eP	P	07 10 19.3	-1.2
COLA				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
ILAR	Eielson Array	83.25	21	P	P	07 10 20.4	-1.5
	comp=Z,4.9nm,0.7s,mb4.5,baz=268,slow=5.8,SNR=38						
ILAR				pP	pP	07 10 44.6	-2.4
	comp=Z,3.7nm,0.9s,baz=252,slow=4.5,SNR=5.0						
MAW	Mawson	84.61	203	P	P	07 10 29.5	+0.9
	comp=Z,15nm,0.9s,mb4.9,baz=92,slow=6.1,SNR=9.5						
DAWY	Dawson	85.63	23	eP	P	07 10 34.2	+0.4
DAWY				epP	pP	07 10 57.0	-2.0
MKAR	Makanchi Array	86.59	318	P	P	07 10 39.0	+0.1
	comp=Z,22nm,0.6s,mb5.3,baz=98,slow=5.9,SNR=196						
MKAR				pP	pP	07 11 02.9	-1.3
	comp=Z,8.5nm,0.6s,baz=100,slow=6.5,SNR=7.2						
DLBC	Dease Lake	87.44	30	LR	LR	07 50 18.1	
	comp=Z,66nm,18.8s,baz=358,slow=36						
DLBC	Dease Lake	87.44	30	eP	P	07 10 43.0	+0.3
DLBC				epP	pP	07 11 09.3	+1.2
DLBC				esP	sP	07 11 19.9	+1.7
MWC	Mount Wilson	89.20	55	eP	P	07 10 52.6	+1.0
MWC				epP	pP	07 11 18.5	+1.3
MTUM	Tungsten Hills	89.37	52	eP	P	07 10 53.9	+1.6
MTUM				epP	pP	07 11 19.1	+1.2
NVAR	Mina Array Bea	89.77	51	P	P	07 10 55.5	+1.3
	comp=Z,9.3nm,0.9s,mb4.9,baz=234,slow=5.5,SNR=40						
MNV	Mina	89.89	51	eP	P	07 10 55.7	+1.0
	comp=Z,19nm,1.0s,mb5.2						
MNV				epP	pP	07 11 20.9	+0.5
MNV	Mina	89.89	51	eP	P	07 10 55.7	+1.0
MNV				e*PP	pP	07 11 20.9	+0.6
MNV				pmax	pmax		
	comp=Z,19nm,1.0s,mb5.2						
KURK	Kurchatov	89.92	321	eP	P	07 10 53.9	-0.7
	comp=Z,22nm,1.4s,mb5.1						
KURK				epP	pP	07 11 17.0	-3.1
KURK	Kurchatov	89.92	321	eP	P	07 10 53.9	-0.6
KURK				e*PP	pP	07 11 17.0	-3.1
KURK				pmax	pmax		
	comp=Z,22nm,1.4s,mb5.1						
DAC	Darwin (Calif)	89.94	53	eP	P	07 10 56.0	+0.9
	comp=Z,34nm,1.3s,mb5.3						
DAC				epP	pP	07 11 21.6	+1.0
DAC	Darwin (Calif)	89.94	53	eP	P	07 10 56.0	+1.0
DAC				e*PP	pP	07 11 21.6	+1.0
DAC				pmax	pmax		
	comp=Z,34nm,1.3s,mb5.3						
TKM2	Tokmak 2	90.34	313	P	P	07 10 57.0	+0.3
	SNR=8.7						
KZA	Kyzart	90.44	312	P	P	07 10 58.9	+1.6
	SNR=5.2						
TPH	Tonopah	90.55	52	eP	P	07 10 59.0	+1.2
	comp=Z,22nm,1.1s,mb5.2						
TPH				epP	pP	07 11 23.1	-0.3
TPH	Tonopah	90.55	52	eP	P	07 10 59.1	+1.3
TPH				e*PP	pP	07 11 23.1	-0.3
TPH				pmax	pmax		
	comp=Z,22nm,1.1s,mb5.2						
CHMS	Chumysh	90.97	313	P	P	07 10 59.7	0.0
	SNR=6.6						
UCH	Uchtor	91.00	312	P	P	07 11 01.3	+1.4
	SNR=6.0						
AAK	Ala-Archa	91.09	313	P	P	07 11 00.8	+0.6
	SNR=8.0						
AAK	Ala-Archa	91.09	313	eP	P	07 10 59.6	-0.6
	comp=Z,9.5nm,0.9s,mb4.9						
AAK				epP	pP	07 11 22.5	-3.3
AAK	Ala-Archa	91.09	313	eP	P	07 10 59.6	-0.7
AAK				e*PP	pP	07 11 22.5	-3.4
AAK				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.9						
TPNV	Topopah Spring	91.12	53	eP	P	07 11 01.7	+1.1
	comp=Z,30nm,1.4s,mb5.2						
TPNV	Topopah Spring	91.12	53	eP	P	07 11 01.7	+1.1
TPNV				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.2						
USP	Ospenovka	91.19	313	P	P	07 11 00.7	-0.1
	SNR=7.2						
AML	Almayashu	91.59	312	P	P	07 11 03.4	+0.8
	SNR=8.1						
EKS2	Erkin-Say	91.61	313	P	P	07 11 03.3	+0.7
	SNR=5.2						
BMO	Blue Mountains	91.65	45	eP	P	07 11 02.3	-0.5
	comp=Z,11nm,1.0s,mb5.1						
BMO				epP	pP	07 11 30.1	+1.7
BMO	Blue Mountains	91.65	45	eP	P	07 11 02.3	-0.5
BMO				e*PP	pP	07 11 30.1	+1.7
BMO				pmax	pmax		
	comp=Z,11nm,1.0s,mb5.0						
LDFC	Landfair	91.74	55	eP	P	07 11 04.3	+0.9
LDFC				epP	pP	07 11 30.6	+1.5
NEN	Nelson	92.04	54	eP	P	07 11 05.8	+1.0
NEN				epP	pP	07 11 31.9	+1.5
SYO	Syowa Base	92.30	198	⇑P	P	07 11 05.3	+0.1
SYO	Syowa Base	92.30	198	⇑eP	P	07 11 05.3	+0.1
ARUT	Antelope Range	93.46	52	eP	P	07 11 12.7	+1.5
ARUT				epP	pP	07 11 37.9	+0.9
MSU	Marysvale	94.54	52	eP	P	07 11 18.3	+2.2
MSU				epP	pP	07 11 43.3	+1.5
NLU	North Lily Min	94.78	50	eP	P	07 11 19.0	+1.8
NLU				epP	pP	07 11 43.0	+0.2
CHKZ	Chkalovo	95.27	323	eP	P	07 11 17.5	-1.6
	comp=Z,16nm,0.8s,mb5.5						
CHKZ				epP	pP	07 11 43.7	-1.1
CHKZ	Chkalovo	95.27	323	eP	P	07 11 17.5	-1.6
CHKZ				e*PP	pP	07 11 43.7	-1.1
CHKZ				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.5						
BRVK	Borovoye	95.40	323	eP	P	07 11 18.8	-0.9
	comp=Z,9.2nm,0.8s,mb5.3						
BRVK	Borovoye	95.40	323	eP	P	07 11 18.8	-0.9
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
YKA	Yellowknife Ar	95.79	28	P	P	07 11 21.0	-0.2
	comp=Z,5.3nm,0.8s,mb5.0,baz=262,slow=4.5,SNR=14						
YKA				pP	pP	07 11 44.4	-2.5
	comp=Z,3.5nm,0.9s,baz=263,slow=4.4,SNR=4.2						
PDAR	Pinedale Array	96.95	48	P	P	07 11 27.2	+0.2
	comp=Z,1.8nm,0.6s,mb4.7,baz=242,slow=2.7,SNR=18						
PDAR				pP	pP	07 11 52.5	-0.1
	comp=Z,3.4nm,1.2s,baz=333,slow=3.3,SNR=2.2						
SNAA	Sanae	99.34	186	P	P	07 11 37.2	0.0
SNAA	Sanae	99.34	186	e	P	07 11 42.0	+4.8
VNA3	Neumayer Olymp	100.33	184	e	P	07 11 45.4	+3.7
VNA3	Neumayer Olymp	100.33	184	⇑iPdif	P	07 11 41.1	-0.6
VNA3				e		07 11 45.4	
VNA2	Neumayer--Watz	100.47	185	e	P	07 11 46.4	+4.1
VNA2	Neumayer--Watz	100.47	185	⇑iPdif	P	07 11 41.5	-0.8
VNA2				e		07 11 46.4	
TXAR	Lajitas Array	100.80	62	P	P	07 11 45.4	+0.6
	comp=Z,0.3nm,0.7s,baz=254,slow=6.6,SNR=3.4						
TXAR				PP	PP	07 15 49.5	-6.5
	comp=Z,0.3nm,1.0s,baz=236,slow=4.5,SNR=3.7						
VNA1	Neumayer--Stat	100.81	184	e	P	07 11 49.2	+5.4
VNA1	Neumayer--Stat	100.81	184	Pdif	P	07 11 43.5	-0.3
VNA1				e		07 11 49.2	
ARCES	ARCESS Array B	111.71	344	PKiKP		07 16 29.3	
	comp=Z,5.3nm,1.0s,baz=90,slow=4.5,SNR=4.1						
FINES	FINESS Array B	116.42	337	PKP	PKPdf	07 16 38.0	+0.7
	comp=Z,2.7nm,0.9s,baz=127,slow=9.5,SNR=3.7						
AKASG	Malin Array Be	120.51	325	PKP	PKPdf	07 16 45.5	0.0
	comp=Z,2.1nm,0.6s,baz=48,slow=2.6,SNR=12						
AKASG				pPKP		07 17 11.8	
	comp=Z,0.9nm,0.5s,baz=48,slow=2.6,SNR=4.3						
NB2	NORSAR Subarra	121.94	342	PKPdf	PKPdf	07 16 48.0	0.0
	comp=Z,1.7nm,0.7s,baz=39,slow=1.7						
NOA	NORSAR Array B	121.94	342	PKP	PKPdf	07 16 48.4	+0.4
	comp=Z,2.4nm,0.7s,baz=45,slow=1.9,SNR=8.6						
NOA				pPKP		07 17 14.1	
	comp=Z,1.3nm,0.6s,baz=43,slow=1.9,SNR=3.1						
NAO	NORSAR Subarra	122.23	342	PKPdf	PKPdf	07 16 48.0	-0.5
KOLS	Kolonicke sedl	125.29	326	ePKP	PKPdf	07 16 56.5	+1.7
STHS	Stebnicka Huta	125.58	327	ePKP	PKPdf	07 16 57.0	+1.7
ROSC	El Rosal	127.47	90	PKP	PKPdf	07 17 01.3	+1.4
	comp=Z,7.7nm,0.6s,baz=73,slow=22,SNR=10						
LPAZ	La Paz	127.86	118	PKP	PKPdf	07 17 02.0	+1.4
	comp=Z,3.4nm,1.0s,baz=352,slow=3.3,SNR=11						
LPAZ	La Paz	127.86	118	ePKPdf	PKPdf	07 17 01.7	+1.2
BRG	Berggiesshubel	128.35	332	eP	PKPdf	07 17 02.4	+1.8
BRG				e		07 17 27.9	
CLL	Collm	128.48	333	i PKIKP	PKPdf	07 17 01.9	+1.1
	comp=Z,logA/T=0.9						
CLL				i *PPKP		07 17 28.2	
CLL				i		07 20 23.7	
KHC	Kasperske Hory	129.70	331	ePKPdf	PKPdf	07 17 04.0	+0.8
GERES	GERESS Array B	129.83	330	PKP	PKPdf	07 17 04.8	+1.3
	comp=Z,1.2nm,0.6s,baz=90,slow=1.3,SNR=4.8						
GERES				pPKP		07 17 31.4	
	comp=Z,1.7nm,0.7s,SNR=3.8						
SDV	Santo Domingo	131.46	85	ePKPdf	PKPdf	07 17 07.7	+0.2
SAML	Samuel	135.14	111	ePKPdf	PKPdf	07 17 14.6	+0.2
EMOS	Mosqueruela	142.87	333	P	PKPdf	07 17 21.2	-6.4
ECAL	Calabor	143.94	341	P	PKPbc	07 17 26.0	-2.6
EBEN	Beniarda	144.08	331	P	PKPbc	07 17 26.6	-2.5
GUD	Guadarrama	144.18	337	P	PKPbc	07 17 28.8	-0.5
BDFB	Brasilia	144.65	132	PKP	PKPdf	07 17 30.7	-0.7
	comp=Z,32nm,0.7s,baz=248,slow=1.7,SNR=43						
BAO	Brasilia Array	144.67	132	PKPdf	PKPdf	07 17 31.0	-0.4
ETOB	Tobarra	144.75	332	P	PKPdf	07 17 29.4	-1.5
ESDC	Sonseca Array	144.94	336	PKP	PKPdf	07 17 32.3	+1.0
	comp=Z,14nm,0.9s,baz=19,slow=3.5,SNR=40						
ESDC				pPKP		07 17 58.5	
	comp=Z,5.5nm,0.9s,baz=30,slow=3.3,SNR=4.3						
ESDC	Sonseca Array	144.94	336	P	PKPdf	07 17 30.9	-0.3
EVIA	Vianos	145.19	333	P	PKPdf	07 17 31.9	+0.2
EMUR	La Murta	145.25	331	P	PKPdf	07 17 32.3	+0.5
MTE	Manteigas	145.60	341	ePKPdf	PKPdf	07 17 34.5	+2.1
MTE				epPKPdf		07 17 59.5	
EHUE	Huescar	145.90	333	P	PKPdf	07 17 34.5	+1.5
EQES	Quesada	146.13	333	P	PKPdf	07 17 35.3	+1.9
EBAN	Banos Encina	146.14	334	P	PKPdf	07 17 35.6	+2.2
EADA	Adamuz	146.47	335	P	PKPdf	07 17 36.6	+2.7
ECOG	Cogollos-Vega	146.78	333	P	PKPdf	07 17 36.5	+2.0
EBER	Berja	146.79	332	P	PKPdf	07 17 36.8	+2.3
ELUQ	Luque	146.85	334	P	PKPdf	07 17 38.0	+3.4
ECAB	El Cabril	146.89	336	P	PKPdf	07 17 37.7	+3.1
EBAD	Badajoz	146.89	339	P	PKPdf	07 17 37.6	+3.0
ERON	Agron	147.10	333	P	PKPdf	07 17 37.7	+2.7
ELOJ	Sierra Loja	147.15	334	P	PKPdf	07 17 38.0	+2.9
EGUA	Guajares	147.15	333	P	PKPdf	07 17 38.3	+3.2
EMIN	Mina Concepcio	147.64	338	P	PKPdf	07 17 40.3	+4.5

EMIJ	Mijas	147.91	334	P	PKPdf	07 17 41.9	+5.6
ESPR	Espera	148.10	336	P	PKPdf	07 17 42.0	+5.4
EGRO	El Granado	148.15	339	P	PKPdf	07 17 41.7	+5.0
EJIF	Jimena Fronter	148.30	335	P	PKPdf	07 17 43.8	+6.9
DBIC	Dimbokro	163.40	266	PKPab	PKPab	07 18 50.0	-0.8
	comp=Z,2.7nm,0.9s,baz=98,slow=3.4,SNR=3.0						

*NNC **28** 07:21:27.2±5.5, 40.36N×69.33E, h29^{km}±25^{km}, mpv3.2, Error ellipse: s-maj=40.5km s-min=19.2km az=6.0*

ISC 28 07:21:22.3±2.4, **40.0N**±0.2×**69.3E**±0.1, **h33**^{km}**, n13, σ0^{s}65**/16**, 3C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	3.23	15	⇓Pn	Pn	07 22 13.9	+1.9
	0.7nm,0.2s,baz=206,slow=16,SNR=326						
KK31				⇑Pg	P	07 22 20.1	+8.2
	4.0nm,0.2s,baz=194,slow=18,SNR=42						
KK31				⇓Lg		07 22 59.9	
	36nm,0.3s,baz=193,slow=31,SNR=14						
AML	Almayashu	3.93	56	P	P	07 22 22.2	+0.5
	SNR=69						
EKS2	Erkin-Say	4.28	50	P	P	07 22 26.9	+0.1
	SNR=16						
UCH	Uchtor	4.50	59	P	P	07 22 30.0	0.0
	SNR=14						
AAK	Ala-Archa	4.70	54	P	P	07 22 32.9	+0.2
	SNR=14						
AAK	Ala-Archa	4.70	54	⇑Pn	Pn	07 22 32.7	-0.1
	4.3nm,0.3s						
AAK				⇓Sn	Sn	07 23 26.1	-0.7
	11nm,0.6s						
AAK				⇓Lg		07 23 45.4	
	26nm,0.6s						
KZA	Kyzart	4.93	63	P	P	07 22 36.2	+0.2
	SNR=22						
KBK	Karagaybulak	4.99	56	P	P	07 22 37.5	+0.5
	SNR=24						
CHMS	Chumysh	5.05	52	P	P	07 22 37.5	-0.3
	SNR=5.7						
USP	Ospenovka	5.07	48	P	P	07 22 37.4	-0.5
	SNR=8.6						
TKM2	Tokmak 2	5.54	56	P	P	07 22 44.0	-0.5
	SNR=12						
ULHL	Ulahol	5.68	64	P	P	07 22 46.5	0.0
	SNR=12						
AB31	Akbulak array	11.42	327	⇓P	P	07 24 05.1	-1.0
	0.5nm,0.4s,baz=182,slow=8.0,SNR=22						
AB31				⇑S	S	07 26 04.2	-9.3
	1.1nm,0.5s,baz=149,slow=23,SNR=4.2						

*NDI **28** 07:39:52.8±1.6, 34.26N×72.85E, h10^{km}, MD3.7, ML3.6*

*NNC **28** 07:39:55.8±15.0, 34.99N×72.82E, h78^{km}±140^{km}, mpv3.8, Error ellipse: s-maj=162.1km s-min=90.9km az=111.0*

ISC 28 07:39:49.1±1.0, **34.88N**±0.08×**73.1E**±0.2, **h33**^{km}**, n11, σ1^{s}39**/12**, 1C-1D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.26	138	*e*P	P	07 40 41.8	+2.7
THN				*e*SB	Sb	07 41 24.8	-0.9
BHK	Bhakra	4.42	140	*e*S	S	07 41 42.4	-4.2
SDNR	Sundarnagar	4.66	135	*e*P	P	07 41 00.0	+0.9
SDNR				*e*x	x	07 41 54.0	
SMLA	Simla	5.05	137	*e*P	P	07 41 04.6	+0.1
SMLA				*e*x	x	07 42 03.8	
KLP	Kalpa	5.44	126	*e*P	P	07 41 11.4	+1.5
KLP				*e*S	S	07 42 10.5	-1.8
KLP				AML	AML	07 42 44.5	
	comp=N,90nm,0.4s						
KLP				AML	AML	07 42 45.0	
	comp=E,136nm,0.4s						
NDI	New Delhi	7.09	149	*e*x	x	07 42 48.0	
AAK	Ala-Archa	7.82	7	⇓Sn	Sn	07 43 12.8	+1.0
	comp=E,7.4nm,1.1s						
KK31	Karatay Array	8.46	347	P	P	07 41 53.2	+1.0
	comp=E,1.6nm,0.3s,baz=174,slow=17,SNR=34						
KK31				⇑S	S	07 43 26.0	-1.7
	comp=E,1.6nm,0.4s,baz=143,slow=22,SNR=11						
ALBI	Allahabad	12.14	139	*e*x	x	07 47 37.0	
AB31	Akbulak array	17.35	330	P	P	07 43 50.5	+0.4
	comp=E,0.3nm,0.4s,baz=149,slow=12,SNR=8.4						
AKTO	Aktyubinsk	19.05	329	P	P	07 44 09.0	-2.1

JMA 28 07:59:25.6±0.2**, 38.18N×144.65E, h56**^{km}**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.50	292	P	P	08 00 05.0	+0.2
JIO	Ouri	2.61	277	P	P	08 00 06.5	+0.1
JIO				S	S	08 00 36.8	-0.2
MIYJ	Miyakonagasawa	2.61	303	P	P	08 00 06.3	-0.1
MIYJ				*e*S	S	08 00 36.6	-0.4
JMK	Ichinoseki	2.80	287	P	P	08 00 09.3	+0.3
JMK				*e*S	S	08 00 42.1	+0.4
JOT	Ohata	4.23	320	*e*S	S	08 01 15.1	-2.8
JCH	Churui	4.54	348	P	P	08 00 31.2	-2.3
JCH				*e*S	S	08 01 20.4	-5.1
JRY	Ryogami san	5.08	247	P	P	08 00 40.2	-0.8
JRY				S	S	08 01 35.3	-3.8
NEM2	Nemuro 2	5.25	9	P	P	08 00 38.3	-5.1
NEM2				*e*S	S	08 01 35.2	-8.1
MAT	Matsushiro	5.39	254	P	P	08 00 46.0	+0.7
MAT				*e*S	S	08 01 49.1	+2.3
JTKR	Abashiri--Toko	5.81	355	P	P	08 00 48.9	-2.3
JTKR				*e*S	S	08 01 51.1	-6.3

*IDC **28** 08:16:01.7±1.7, 55.79N×113.28E, mb3.3/4, mb1 3.4/5, mb1mx3.3/22, mbtmp3.3/5, ML3.0/1, MS3.5/1, Ms1 3.5/1, ms1mx2.6/12, Error ellipse: s-maj=33.3km s-min=25.1km az=81.0*

*MOS **28** 08:16:04.4±2.0, 55.74N×112.95E, h18^{km}, mb3.9/1, Error ellipse: s-maj=13.4km s-min=11.2km az=58.6*

BYKL 28 08:16:05.5±0.3**, 55.74N×113.00E, h17**^{km}±5^{km}**, 11C-6D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UKT	Uakit	0.44	125	⇓*i*Pg	Pb	08 16 14.0	-0.3
	2μm,0.5s						
UKT				⇑*i*Pg	Pb	08 16 14.0	-0.3
	2μm,0.5s						
UKT				⇑*i*Pg	Pb	08 16 14.0	-0.3
	2μm,0.5s						
UKT				*e*Sg	Sb	08 16 20.2	-0.1
UKT				Pmax			
	2μm,0.3s						
UKT				Smax			
	7μm,0.5s						
UKT	Uakit	0.44	125	⇑*i*PG	Pb	08 16 14.0	-0.3
UKT				*e*		08 16 20.2	
UKT				pmax	pmax		
	comp=Z,1μm,0.2s						
UKT				smax			
	comp=E,6μm,0.2s						
SVKR	Severomuysk	0.49	40	⇑*i*Pg	Pb	08 16 16.1	+0.8
SVKR				*e*Sg	Sb	08 16 23.7	+1.7
SVKR				Pmax			
	comp=E,919nm,0.2s						
SVKR				Smax			
	comp=E,4μm,0.7s						
YOA	Uoyan	0.82	299	⇑*i*Pg	Pb	08 16 20.9	0.0
YOA				*e*Sg	Sb	08 16 32.4	+1.0
YOA				Pmax			
	comp=E,3μm,0.2s						
YOA				Smax			
	comp=E,13μm,0.3s						
YOA	Uoyan	0.82	299	⇑*i*PG	Pb	08 16 21.1	+0.2
YOA				*e*		08 16 32.6	
YOA				pmax	pmax		
	comp=Z,2μm,0.3s						
YOA				smax			
	comp=N,10μm,0.5s						
KMO	Kumora	1.03	279	⇑*i*Pg	Pb	08 16 24.2	-0.2
	comp=N,83nm,0.4s						
KMO				⇓*i*Pg	Pb	08 16 24.2	-0.2
	comp=N,60nm,0.4s						
KMO				⇑*i*Pg	Pb	08 16 24.2	-0.2
	comp=N,491nm,0.4s						
KMO				*e*Sg	Sb	08 16 37.8	+0.4
KMO				Pmax			
	comp=N,396nm,0.3s						
KMO				Smax			
	comp=N,2μm,1.0s						
KMO	Kumora	1.03	279	⇑*i*PG	Pb	08 16 24.2	-0.2
KMO				*e*		08 16 37.6	
KMO				pmax	pmax		
	comp=Z,246nm,0.2s						
KMO				smax			
	comp=E,2μm,0.3s						
YLYR	Ulyunkhan	1.36	231	⇓*i*Pg	Pn	08 16 29.9	0.0
	comp=E,84nm,0.5s						
YLYR				⇓*i*Pg	Pn	08 16 29.9	0.0
	comp=E,60nm,0.5s						
YLYR				⇑*i*Pg	Pn	08 16 29.9	0.0
	comp=E,492nm,0.5s						
YLYR				*e*Sg	Sb	08 16 48.2	+1.0
YLYR				Pmax			
	comp=E,222nm,0.3s						
YLYR				Smax			
	comp=E,2μm,0.2s						
YLYR	Ulyunkhan	1.36	231	⇑*i*PG	Pn	08 16 29.9	0.0
YLYR				*e*		08 16 47.3	
YLYR				pmax	pmax		
	comp=Z,220nm,0.3s						
YLYR				smax			
	comp=E,2μm,0.2s						
NLYR	Nelyaty	1.69	62	⇓*i*Pg	Pn	08 16 35.2	+0.6
NLYR				*e*Sg	Sn	08 16 57.9	+1.9
NLYR				Pmax			
	comp=E,229nm,0.5s						
NLYR				Smax			
	comp=E,721nm,1.4s						
NLYR	Nelyaty	1.69	62	*e*PN	Pn	08 16 36.0	+1.4
NLYR				*e*		08 16 58.7	
NLYR				pmax	pmax		
	comp=Z,228nm,0.4s						
NLYR				smax			
	comp=N,717nm,1.4s						
NIZ	Nizh Angarsk	1.96	272	*e*Pg	Pn	08 16 39.6	+1.2
NIZ				*e*Sg	Sn	08 17 05.3	+2.6
NIZ				Pmax			
	comp=N,121nm,0.6s						
NIZ				Smax			
	comp=N,1μm,0.4s						
NIZ	Nizh Angarsk	1.96	272	*e*PN	Pn	08 16 39.5	+1.1
NIZ				*e*		08 17 06.1	
NIZ				pmax	pmax		
	comp=Z,117nm,0.5s						
NIZ				smax			
	comp=N,1μm,0.3s						
BOD	Bodaibo	2.16	14	*e*Pn	Pn	08 16 41.1	-0.2
BOD				*e*Pg	Pn	08 16 43.4	+2.1
BOD				*e*Sn	Sn	08 17 08.0	+0.2
BOD				*e*Sg	Sn	08 17 11.4	+3.6
BOD				Pmax			
	comp=N,165nm,0.9s						
BOD				Smax			
	comp=N,1μm,0.8s						
BOD	Bodaibo	2.16	14	*e*PN	Pn	08 16 40.8	-0.5
BOD				*e*		08 16 42.9	
BOD				*e*		08 17 11.2	
BOD				pmax	pmax		
	comp=Z,109nm,0.4s						
BOD				smax			
	comp=E,1μm,0.4s						
SYVR	Suvo	2.72	221	*e*Pn	Pn	08 16 49.2	-0.1
SYVR				*e*Pg	Pn	08 16 53.8	+4.5
SYVR				*e*Sg	Sn	08 17 28.6	+6.5
SYVR				Pmax			
	comp=E,38nm,0.6s						
SYVR				Smax			
	comp=E,499nm,0.8s						
CRS	Chara	3.16	66	*e*Pn	Pn	08 16 55.1	-0.4
CRS				*e*Pg	Pn	08 17 01.9	+6.4
CRS				*e*Sg	Sn	08 17 43.5	+10
CRS				Pmax			
	comp=E,127nm,0.8s						
CRS				Smax			
	comp=E,293nm,1.3s						
CRS	Chara	3.16	66	*e*PN	Pn	08 16 55.8	+0.3
CRS				*e*		08 17 03.8	
CRS				*e*		08 17 44.1	
CRS				pmax	pmax		
	comp=Z,125nm,0.8s						
CRS				smax			
	comp=E,272nm,0.9s						
MXMB	Maximikha	3.51	227	*e*Pg	Pn	08 17 08.0	+7.5
MXMB				*e*Sg	Sn	08 17 53.8	+12
MXMB				Pmax			
	comp=E,18nm,0.2s						
MXMB				Smax			
	comp=E,695nm,0.8s						
CIT	Chita	3.74	175	*e*Pg	Pn	08 17 12.0	+8.2
CIT				*e*Sg	Sn	08 18 00.2	+12
CIT				Pmax			
	comp=E,178nm,0.5s						
CIT				Smax			
	comp=E,496nm,0.5s						
CIT	Chita	3.74	175	*e*PN	Pn	08 17 12.2	+8.4
CIT				*e*		08 18 00.9	
CIT				pmax	pmax		
	comp=Z,77nm,0.8s						
CIT				smax			
	comp=E,462nm,0.5s						
OGRR	Ongureny	3.77	238	*e*Pn	Pn	08 17 03.5	-0.8
OGRR				*e*Pg	Pn	08 17 11.9	+7.6
OGRR				*e*Sn	Sn	08 17 47.9	-0.9
OGRR				*e*Sg	Sn	08 18 01.1	+12
OGRR				Pmax			
	comp=E,35nm,0.7s						
OGRR				Smax			
	comp=E,128nm,0.3s						
TUP	Tupik	4.21	105	⇓*i*Pn	Pn	08 17 09.3	-1.2
TUP				*e*Pg	Pn	08 17 20.3	+10
TUP				*e*Sn	Sn	08 17 56.2	-3.6
TUP				*e*Sg	Sn	08 18 16.0	+16
TUP				Pmax			
	comp=E,38nm,0.5s						
TUP				Smax			
	comp=E,428nm,0.9s						
TUP	Tupik	4.21	105	*e*PN	Pn	08 17 20.2	+10
TUP				*e*		08 18 15.2	
TUP				pmax	pmax		
	comp=Z,38nm,0.4s						
TUP				smax			
	comp=E,392nm,0.6s						
TRTB	Turuntaevo	4.73	224	*e*Pg	Pn	08 17 30.4	+12
TRTB				*e*Sg	Sn	08 18 32.8	+20
TRTB				Pmax			
	comp=E,18nm,0.5s						
TRTB				Smax			
	comp=E,164nm,1.1s						
TRG	Tyrgan	4.91	235	*e*Pn	Pn	08 17 19.5	-1.0
TRG				*e*Pg	Pn	08 17 32.3	+12
TRG				*e*Sg	Sn	08 18 35.8	+18
TRG				Pmax			
	comp=E,15nm,0.5s						
TRG				Smax			
	comp=E,94nm,0.8s						
HRMR	Khuramsha	5.46	224	*e*	Pn	08 17 38.3	+10
HRMR				*e*Pg	Pn	08 17 44.8	+17
HRMR				*e*Sg	Sn	08 18 56.2	+25
HRMR				Pmax			
	comp=E,33nm,0.5s						
HRMR				Smax			
	comp=E,510nm,0.9s						
KPC	Khapcheranga	6.06	184	*e*Pn	Pn	08 17 37.4	+0.8
KPC				*e*Pg	Pn	08 17 54.8	+18
KPC				*e*Sg	Sn	08 19 13.6	+27
KPC				Pmax			
	comp=E,13nm,1.0s						
KPC				Smax			
	comp=E,199nm,1.0s						
KPC	Khapcheranga	6.06	184	*e*PG	Pn	08 17 54.4	+18
KPC				*e*		08 19 13.5	
KPC				pmax	pmax		
	comp=Z,15nm,0.6s						
KPC				smax			
	comp=E,148nm,0.9s						
LSTR	Listvyanka	6.20	235	*e*	Sn	08 18 45.9	-4.0
LSTR				*e*Sg	Sn	08 19 19.0	+29
LSTR				Smax			
	comp=E,74nm,1.4s						
TLY	Talaya	6.88	238	*e*	Pn	08 18 12.8	+25
TLY				*e*Sg	Sn	08 19 40.3	+33
TLY				Smax			
	comp=E,48nm,1.3s						
TLY	Talaya	6.88	238	*e*PN	Pn	08 17 46.3	-1.9
TLY				*e*		08 18 07.8	
ARS	Arshan	7.33	243	*e*	Pn	08 18 20.3	+26
ARS				*e*Sg	Sn	08 19 52.4	+34
ARS				Smax			
	comp=E,198nm,1.0s						
ZAK	Zakamensk	7.94	232	*e*PG	Pn	08 18 31.8	+29
ZAK				*e*S	Sn	08 20 13.3	+40
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZAK				smax			
	comp=E,21nm,1.1s						
ORL	Orlik	8.38	253	*e*	P	08 18 05.7	-3.5
ORL				*e*		08 19 45.8	
ORL				*e*Sg	Sn	08 20 23.7	+39
ORL				Smax			
	comp=E,47nm,1.4s						
ORL	Orlik	8.38	253	*e*PN	P	08 18 08.4	-0.8
ORL				*e*		08 18 36.5	
ORL				*e*		08 20 24.6	
ORL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ORL				smax			
	comp=N,16nm,0.8s						
SONM	Songino Array	8.91	210	Pn	P	08 18 14.3	-2.1
	comp=N,0.2nm,0.3s,baz=22,slow=14,SNR=4.6						
SONM				Sn	Sn	08 19 55.9	-1.6
	comp=N,0.7nm,0.3s,baz=24,slow=26,SNR=3.8						
SONM				Lg		08 20 44.3	
	comp=N,2.4nm,0.3s,baz=21,slow=25,SNR=8.1						
KRAR	Krasnoyarsk	11.31	280	*i* P	P	08 18 43.9	-5.4
MKAR	Makanchi Array	21.04	258	P	P	08 20 49.1	-1.6
	comp=N,0.3nm,0.6s,baz=62,slow=10.0,SNR=4.7						
MKAR	Makanchi Array	21.04	258	*i* P	P	08 20 51.9	+1.2
BVAR	Borovoye Array	24.68	282	P	P	08 21 26.6	+0.2
	comp=N,0.4nm,0.5s,baz=63,slow=9.7,SNR=3.0						
ARU	Arti	29.72	294	*i* P	P	08 22 07.4	-5.1
FINES	FINESS Array B	42.45	315	P	P	08 23 56.9	-3.5
	comp=N,0.3nm,0.6s,baz=56,slow=10.0,SNR=2.4						
GERES	GERESS Array B	56.03	308	LR	LR	08 51 18.7	
	comp=N,42nm,19.9s,baz=103,slow=38						
WRA	Warramunga Arr	77.53	159	P	P	08 27 59.3	-2.5
	comp=N,0.5nm,0.8s,baz=352,slow=6.6,SNR=6.9						
WRA	Warramunga Arr	77.53	159	*i* P	P	08 27 59.7	-2.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						

*NEIC **28** 08:23:56.1, 45.38S×166.74E, h13^{km}, ML3.9(WEL), After WEL.*

WEL 28 08:23:56.6±0.6**, 45.45S×166.77E, h22**^{km}±2^{km}**, ML3.8**/8**, 3D, Error ellipse: s-maj=5.7km s-min=2.2km az=90.0, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.27	96	P	Pb	08 24 02.8	-0.2
DCZ				S	Sb	08 24 07.7	+0.4
DCZ	Deep Cove	0.27	96	⇓P*	Pb	08 24 02.8	-0.2
DCZ				S*	Sb	08 24 07.7	+0.3
WHZ	Wether Hill Ro	0.94	119	P	Pb	08 24 14.0	-0.1
WHZ	Wether Hill Ro	0.94	119	⇓P*	Pb	08 24 14.0	-0.1
MLZ	Mavora Lakes	0.99	85	*e*P	Pb	08 24 13.7	-1.3
MLZ				S	Sb	08 24 27.0	-0.7
MLZ	Mavora Lakes	0.99	85	⇓*e*P*	Pb	08 24 13.7	-1.3
MLZ				S*	Sb	08 24 27.0	-0.7
MSZ	Milford Sound	1.13	47	PN	Pn	08 24 14.2	-3.1
MSZ				SN	Sn	08 24 31.5	-0.8
MSZ				SN	Sn	08 24 31.5	-0.7
WKZ	Wanaka	1.71	69	*e*P	Pn	08 24 25.1	-0.5
WKZ	Wanaka	1.71	69	*e*PN	Pn	08 24 25.1	-0.5
EAZ	Earnscleugh	1.80	84	P	Pn	08 24 27.0	+0.1
EAZ	Earnscleugh	1.80	84	PN	Pn	08 24 26.8	-0.1
JCZ	Jackson Bay	1.98	47	*e*P	Pn	08 24 28.3	-1.1
JCZ	Jackson Bay	1.98	47	*e*PN	Pn	08 24 27.9	-1.5
TUZ	Tuapeka	2.07	105	*e*P	Pn	08 24 30.6	-0.1
TUZ	Tuapeka	2.07	105	*e*PN	Pn	08 24 30.6	-0.2
LBZ	Lake Benmore	2.65	68	*e*P	Pn	08 24 37.4	-1.6
LBZ	Lake Benmore	2.65	68	*e*PN	Pn	08 24 37.3	-1.7
ODZ	Otahua Downs	2.77	83	P	Pn	08 24 39.2	-1.5
ODZ	Otahua Downs	2.77	83	PN	Pn	08 24 39.2	-1.5
FOZ	Fox Glacier	2.81	49	*e*P	Pn	08 24 41.3	-0.1
FOZ	Fox Glacier	2.81	49	*e*PN	Pn	08 24 40.4	-0.9
RPZ	Rata Peaks	3.52	62	*e*P	Pn	08 24 49.9	-1.5
RPZ	Rata Peaks	3.52	62	PN	Pn	08 24 48.6	-2.8
WVZ	Waitaha Valley	3.71	52	*e*PN	Pn	08 24 51.6	-2.5
LTZ	Lake Taylor	4.77	58	*e*P	Pn	08 25 07.4	-1.8
LTZ	Lake Taylor	4.77	58	*e*PN	Pn	08 25 07.0	-2.2
DSZ	Denniston Nort	5.20	46	*e*PN	Pn	08 25 12.3	-2.9
QRZ	Quartz Range	6.25	44	*e*PN	Pn	08 25 25.6	-4.4

*IDC **28** 08:45:45.8±1.6, 20.69N×121.23E, mb3.9/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.9/3, MS3.4/3, Ms1 3.5/3, ms1mx2.9/22, Error ellipse: s-maj=145.4km s-min=24.1km az=66.0*

*NEIC **28** 08:45:50.9±0.7, 20.74N×121.43E, h35^{km}, mb4.6/5, Error ellipse: s-maj=26.7km s-min=10.2km az=73.0*

*MAN **28** 08:46:28.0, 17.52N×121.24E, h1^{km}*

ISC 28 08:45:50.5±0.8**, 20.75N**±0.04×**121.3E**±0.2**, h47**^{km}±11^{km}**, n21, σ1^{s}02**/21**, mb4.3**/8**, MS3.7**/2**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	2.88	182	*e*P	P	08 46 34.4	-0.6
APYP				*e*S	S	08 47 09.4	+0.8
CVP	Callao Caves	3.07	171	*e*P	P	08 46 38.5	+0.7
ABRA	Dolores	3.14	191	*e*P	P	08 46 38.7	-0.1
NACB	Ninganchiao	3.41	4	*e*Pn	P	08 46 42.0	-0.7
NACB				*e*Sn	S	08 47 25.4	+3.1
CAUP	Cauayan	3.82	173	*e*P	P	08 46 44.3	-4.0
YHNB	Yeheng	3.90	1	*e*Pn	P	08 46 48.6	-0.8
YHNB				*e*Sn	S	08 47 41.9	+7.4
JOW	Kunigami	8.78	45	LR	LR	08 51 46.9	
	comp=Z,67nm,20.4s,baz=94,slow=41						
MAJO	Matsushiro	21.56	40	P	P	08 50 33.6	-4.2
	28nm,2.0s,mb4.3						
GUMO	Guam	23.58	104	*e*P	P	08 50 55.6	-2.3
	146nm,1.1s,mb5.3						
SONM	Songino Array	29.59	339	P	P	08 51 53.0	-0.2
	0.9nm,0.6s,mb3.7,baz=153,slow=10,SNR=9.2						
SONM				LR	LR	09 05 31.3	
	comp=Z,55nm,20.1s,MS3.2,baz=261,slow=40						
MKAR	Makanchi Array	40.94	319	P	P	08 53 29.7	-0.3
	0.6nm,0.6s,mb3.4,baz=129,slow=9.2,SNR=6.8						
MKAR	Makanchi Array	40.94	319	P	P	08 53 29.7	-0.3
WRAB	Tennant Creek	42.40	162	*e*P	P	08 53 42.0	-0.4
	5.9nm,0.9s,mb4.2						
WRA	Warramunga Arr	42.40	162	P	P	08 53 41.9	-0.5
	1.7nm,0.5s,mb3.9,baz=343,slow=9.2,SNR=25						
MA2	Magadan	44.11	21	*e*P	P	08 53 56.7	+0.9
CTAO	Charters Tower	47.36	147	*e*P	P	08 54 22.6	+0.5
	2.2nm,0.4s,mb4.4						
HNR	Honiara	48.39	125	P	P	08 54 31.5	+1.3
	11nm,0.4s,mb5.2						
TAU	Tasmania Unive	67.72	160	P	P	08 56 40.8	-4.4
AFI	Afiamalu	74.19	112	P	P	08 57 25.0	+0.3
NOA	NORSAR Array B	81.31	332	LR	LR	09 37 34.7	
	comp=Z,91nm,18.3s,MS4.2,baz=335,slow=38						
PLCA	Paso Flores	157.66	156	*e*PKPdf	PKPdf	09 05 43.5	+1.8

*NEIC **28** 08:48:29.8, 18.21N×100.49W, h48^{km}, MD3.8(MEX), After MEX.*

MEX 28 08:48:29.7±0.7**, 18.16N×100.38W, h72**^{km}±38^{km}**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIG	Platanillo	0.86	74	*i* P	P	08 48 45.5	-1.3
PLIG				*i* S	S	08 48 57.5	-2.0
CAIG	El Cayaco	1.11	175	*i* P	P	08 48 47.7	-2.3
CAIG				*i* S	S	08 49 03.0	-2.1
ACX	Acapulco	1.36	161	*e*P	P	08 48 51.5	-1.9
PPM	Popocatepetl	1.89	61	*i* P	P	08 49 01.1	+0.6
PPM				*i* S	S	08 49 19.9	-3.2
PPM	Popocatepetl	1.89	61	*i* P	P	08 49 00.8	+0.3
PPM				*i* S	S	08 49 25.2	+2.0

*CSEM **28** 09:00:56.7±0.1, 36.55N×30.50E, h60^{km}, MD3.3, Error ellipse: s-maj=2.3km s-min=1.7km az=72.0*
*ISK **28** 09:00:57.5, 36.49N×30.52E, h68^{km}, MD3.3*
*HLW **28** 09:01:02.2, 36.19N×30.44E, h16^{km}, Mb3.8*
ISC 28 09:00:57.8±0.4**, 36.50N**±0.03×**30.51E**±0.05**, h72**^{km}±8^{km}**, n31, σ0^{s}84**/41**, 5C-6D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELL	Elmali	0.55	298	*i* PG	P	09 01 10.9	-0.5
ELL				*i* SG	S	09 01 20.8	-0.5
AKAS	Kas	0.78	251	*i* P	P	09 01 14.2	+0.3
AKAS				*i* S	S	09 01 25.7	-0.1
BCK	Bucak	0.96	4	PG	P	09 01 16.0	-0.1
BCK				SG	S	09 01 30.1	+0.3
FETY	Fethiye	1.16	277	PN	P	09 01 18.6	-0.1
ISP	Isparta	1.34	360	PN	P	09 01 20.8	-0.5
DALT	Dalyan (Mudla)	1.53	281	PN	P	09 01 24.0	+0.2
TKTP	Tekketepe	1.55	354	*i* P	P	09 01 21.8	-2.2
TKTP				*i* S	S	09 01 41.6	-1.7
DNZL	Cakiroluk	1.67	316	*i* P	P	09 01 28.1	+2.5
DNZL				*i* S	S	09 01 48.3	+2.2
YER	Yerkesik	1.90	290	*e*PN	P	09 01 29.3	+0.6
ERMK	Ermenek	1.94	85	*i* P	P	09 01 30.8	+1.6
ERMK				*i* S	S	09 01 56.4	+4.1
DAT	Datca	2.37	276	*e*PN	P	09 01 35.9	+0.5
AYDN	Tasoluk	2.41	300	*i* P	P	09 01 36.7	+0.9
AYDN				*i* S	S	09 02 03.5	-0.7
MANT	Manisa	2.53	323	*i* P	P	09 01 37.7	+0.2
MANT				*i* S	S	09 02 06.9	-0.3
IKL	Isikli	2.57	95	*e*PN	P	09 01 38.8	+0.6
KIZT	Kizilcal	2.62	24	*e*PN	P	09 01 38.2	-0.6
BODT	Bodrum	2.63	283	*e*PN	P	09 01 38.7	-0.3
DABA	Dabaa	5.78	199	⇑P	P	09 02 22.5	-0.2
HBRG	Burj al ‘Arab	5.93	186	⇓P	P	09 02 25.2	+0.4
HMAT	Matruh	6.09	209	⇑P	P	09 02 26.8	-0.3
HMAT				S	S	09 03 28.9	-7.2
AMAG	Maghara	6.25	158	⇓P	P	09 02 29.8	+0.4
KOT	Kottamia	6.64	170	P	P	09 02 34.7	-0.1
SLUM		6.66	223	P	P	09 02 34.9	0.0
SLUM				S	S	09 03 43.0	-7.0
HHAG	Hagoal	6.66	168	⇓P	P	09 02 34.7	-0.4
HNAT	Natroun	6.84	179	⇑P	P	09 02 38.1	+0.5
HSAF	As Saff	6.91	172	⇓P	P	09 02 38.3	-0.3
SUZ		6.92	163	⇓P	P	09 02 38.6	0.0
GLL	Jalalah	6.97	171	⇑P	P	09 02 39.1	-0.3
SWA1		8.27	211	⇓P	P	09 02 56.8	-0.3
SWA2		8.39	212	⇑P	P	09 02 59.5	+0.7
GRB	Gharib	8.42	166	P	P	09 02 58.2	-1.1
HFRF	Wahat Farafira	9.51	192	P	P	09 03 13.0	-1.1

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*IDC **28** 09:10:07.1±1.1, 34.58N×72.95E, mb4.0/4, mb1 4.0/7, mb1mx3.7/21, mbtmp3.9/7, ML4.2/2, Error ellipse: s-maj=39.3km s-min=23.1km az=70.0*
*NEIC **28** 09:10:09.0±0.9, 34.60N×72.89E, h10^{km}, mb4.3/2, Error ellipse: s-maj=23.2km s-min=14.0km az=108.0*
*NNC **28** 09:10:19.2±3.5, 35.45N×72.08E, mpv3.8, Error ellipse: s-maj=45.2km s-min=23.7km az=123.0*
ISC 28 09:10:08.2±0.4**, 34.81N**±0.04×**73.08E**±0.07**, h10**^{km}**, n27, σ1^{s}33**/30**, mb4.2**/5**, 4C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.16	172	P	Pb	09 10 26.9	-3.0
CEP	Cherat	1.38	225	P	Pn	09 10 33.2	-0.4
THW	Thamme Wali	2.30	209	P	Pn	09 10 48.4	+1.7
SARP	Sargodha	2.90	187	P	Pn	09 10 55.4	+0.1
SBDP	Sheikh Budin	3.14	218	P	Pn	09 11 00.0	+1.2
DLH	Dalhousie	3.30	132	*e*P	Pn	09 11 05.0	+3.9
DLH				*e*S	Sn	09 11 46.0	+5.2
BHK	Bhakra	4.39	139	*e*S	Sn	09 12 09.0	+0.6
SDNR	Sundarnagar	4.64	134	*e*P	Pn	09 11 21.8	+1.7
SDNR				*e*S	Sn	09 12 15.5	+0.8
SMLA	Simla	5.03	136	*e*P	Pn	09 11 23.6	-1.9
SMLA				*e*x	x	09 12 30.5	
KLP	Kalpa	5.43	126	*e*P	Pn	09 11 30.8	-0.4
KLP				*e*S	Sn	09 12 31.9	-2.6
KLP				AML	AML	09 12 37.6	
	comp=N,129nm,0.3s						
KLP				AML	AML	09 13 01.5	
	comp=E,159nm,0.5s						
DDI	Dehra Dun	6.14	135	*e*x	x	09 13 10.0	
NDI	New Delhi	7.05	149	*e*x	x	09 13 13.0	
AAK	Ala-Archa	7.89	8	⇑Pn	Pn	09 12 09.7	+3.9
	comp=E,3.6nm,1.1s						
AAK				⇑Sn	Sn	09 13 35.1	-0.9
	comp=E,6.5nm,0.9s						
AAK	Ala-Archa	7.89	8	*e*Pn	Pn	09 12 07.2	+1.4
	comp=E,2.3nm,0.4s						
KK31	Karatay Array	8.52	347	Pn	P	09 12 15.4	+0.9
	comp=E,5.9nm,0.6s,baz=153,slow=11,SNR=58						
KK31				⇑Sn	Sn	09 13 48.4	-3.3
	comp=E,1.0nm,0.3s,baz=321,slow=66,SNR=8.1						
MKAR	Makanchi Array	13.84	27	Pn	P	09 13 30.4	+3.7
	baz=213,slow=12,SNR=3.0						
KURK	Kurchatov	16.40	13	*e*Pn	P	09 14 01.7	+1.8
	comp=E,0.7nm,0.4s						
AB31	Akbulak array	17.39	330	P	P	09 14 11.6	-0.8
	comp=E,0.5nm,0.3s,baz=144,slow=12,SNR=23						
BVAR	Borovoye Array	18.31	355	P	P	09 14 24.4	+0.5
	comp=E,0.5nm,0.3s,baz=160,slow=10,SNR=7.3						
AKTO	Aktyubinsk	19.09	329	⇑P	P	09 14 32.9	-0.4
	comp=E,0.5nm,0.6s						
AKTO	Aktyubinsk	19.09	329	P	P	09 14 33.2	-0.2
	comp=E,1.0nm,0.3s,baz=135,slow=15,SNR=15						
ARCES	ARCESS Array B	43.35	338	P	P	09 18 11.8	+0.1
	comp=E,4.5nm,0.9s,mb4.2,baz=119,slow=8.1,SNR=16						
ARCES	ARCESS Array B	43.35	338	P	P	09 18 11.8	+0.1
NOA	NORSAR Array B	46.74	324	P	P	09 18 38.0	-0.9
	comp=E,0.8nm,0.7s,mb3.8,baz=95,slow=7.6,SNR=2.9						
STU	Stuttgart	48.26	307	*e*P	P	09 18 51.2	+0.2
	comp=E,19nm,0.4s,mb5.5						
BOSA	Boshof	77.58	222	P	P	09 22 04.7	-1.6
	comp=E,1.4nm,0.5s,mb4.1,baz=7.1,slow=8.4,SNR=3.5						
WRA	Warramunga Arr	79.66	123	P	P	09 22 16.2	-1.5
	comp=E,0.5nm,0.8s,mb3.5,baz=322,slow=4.9,SNR=9.4						

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*BUG **28** 09:17:20.8, 51.53N×6.82E, h1^{km}, ML1.9*
*LDG **28** 09:17:22.4±0.2, 51.58N×6.89E, h1^{km}, Ml2.8/3, Error ellipse: s-maj=3.8km s-min=2.1km az=40.0, Suspected Mining induced.*
*BNS **28** 09:17:22.8±0.8, 51.55N×6.90E, h1^{km}, ML2.1*
*CSEM **28** 09:17:22.0±0.1, 51.60N×6.92E, h2^{km}, ML2.7/3, Error ellipse: s-maj=3.9km s-min=1.9km az=89.0*
*NEIC **28** 09:17:22.4, 51.58N×6.89E, h1^{km}, ML2.8(LDG), After LDG.*
BGR 28 09:17:21.6±1.0**, 51.54N×6.85E, h1**^{km}**, ML2.1**/4**, 2D, Error ellipse: s-maj=11.1km s-min=4.4km az=139.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BZER	Hlnxe	0.08	10	Pg	Pg	09 17 22.4	-0.8
BZER				Sg	Sg	09 17 23.8	-0.4
BUG	Bochum--Univer	0.28	111	*e*Pg	Pg	09 17 27.7	+0.4
	SNR=5.3						
BUG				*e*Sg	Sg	09 17 30.7	-0.3
WTSB	Winterswijk	0.42	356	⇓*e*Pg	Pg	09 17 29.6	-0.5
	30nm,0.3s						
BNS	Bensberg	0.62	160	*e*Pg	Pg	09 17 34.0	+0.1
BNS				*e*Sg	Sg	09 17 43.2	+1.1
HOBG	Hohbusch	0.64	151	⇓*e*Pg	Pg	09 17 35.1	+0.7
HOBG				*e*Sg	Sg	09 17 43.5	+0.6
STB	Steinbach	0.95	180	*e*Pg	Pg	09 17 41.2	+0.6
STB				*e*Sg	Sg	09 17 54.3	+1.0
	48nm,0.3s						
KLL	Kalltalsperre	0.96	201	*e*Pg	Pg	09 17 40.9	+0.2
KLL				*e*Sg	Sg	09 17 54.9	+1.4
HGN	Heimansgroeve	0.97	217	*e*Pg	Pg	09 17 41.3	+0.3
	20nm,0.2s						
HGN				*e*Sg	Sg	09 17 55.5	+1.6
HILG	Hillesheim	1.26	185	*e*Pg	Pg	09 17 46.1	-0.6
HILG				*e*Sg	Sg	09 18 03.4	-0.1
BGG	Burgeitz	1.38	167	*e*Pg	Pg	09 17 47.4	-1.7
BGG				*e*Sg	Sg	09 18 06.7	-0.7
	44nm,0.4s						
TNS	Taunus Mts	1.67	142	*e*Pg	Pg	09 17 52.7	-2.2
	SNR=2.8						
TNS				*e*Sg	Sg	09 18 14.6	-2.5
GIVF	Givet	1.93	222	*e*Pn	Pn	09 17 55.3	-0.6
GIVF				*e*Sn	Sn	09 18 19.1	-2.1
	30nm,0.4s						
WLF	Walferdange	1.93	194	*e*Pg	Pg	09 17 58.4	-1.8
	SNR=1.7						
WLF				*e*Sg	Sg	09 18 22.5	-3.4
CLZ	Clausthal	2.21	81	*e*Pg	Pg	09 18 03.1	-2.7
	SNR=2.8						
CLZ				*e*Sg	Sg	09 18 31.5	-3.8
BAIF	Baives	2.24	229	*e*Pn	Pn	09 17 59.1	-1.2
BAIF				*e*Sn	Sn	09 18 26.1	-2.9
	7.9nm,0.3s						
CDF	Champ du Feu	3.15	175	*e*Pn	Pn	09 18 11.7	-1.6
CDF				*e*Sg	Sg	09 19 01.8	-4.6
	2.8nm,0.3s						
LOR	Lormes	4.70	206	*e*Pn	Pn	09 18 32.9	-2.5
	baz=30						
LOR				*e*Sn	Sn	09 19 25.2	-6.2
CABF	La Chapelle	4.96	186	*e*Pn	Pn	09 18 36.5	-2.6
SSF	Saint Saulge	4.99	207	*e*Pn	Pn	09 18 36.4	-3.1
AVF	Avril sur Loir	5.28	207	*e*Sn	Sn	09 19 38.7	-7.3
LDF	La Druitiere	5.37	239	*e*Pn	Pn	09 18 42.2	-2.6
FLN	La Foliniere	5.47	242	*e*Pn	Pn	09 18 43.5	-2.7
	baz=61						
BGF	Bois d’Agland	5.64	209	*e*Pn	Pn	09 18 45.7	-2.9
GRR	Gorron	5.89	241	*e*Pn	Pn	09 18 49.0	-3.1
GRR				*e*Sn	Sn	09 19 53.7	-7.5

NNC 28 10:15:13.0±5.3**, 50.24N×87.20E, h12**^{km}±36^{km}**, mpv3.5, 7C-5D, Error ellipse: s-maj=47.7km s-min=20.2km az=72.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.75	225	⇓Pn	Pn	10 16 27.0	+0.8
	7.6nm,0.5s,baz=47,slow=13,SNR=370						
MK31				⇑Sn	Sn	10 17 25.2	+3.5
	3.7nm,0.3s,baz=54,slow=29,SNR=3.8						
MK31				⇓Lg		10 17 44.0	
	16nm,0.5s,baz=39,slow=29,SNR=12						
KURK	Kurchatov	5.50	278	⇓Pn	Pn	10 16 36.0	-0.7
	1.7nm,0.6s						
KURK				⇑Sn	Sn	10 17 42.6	+2.0
	7.8nm,0.6s						
KURK				⇑Lg		10 18 05.6	
	19nm,0.7s						
VOSK	Vostochnaya	10.42	290	⇑Pn	P	10 17 42.0	-3.2
	1.4nm,0.8s						
VOSK				⇓Sn	S	10 19 34.4	-8.4
	1.9nm,0.6s						
CHKZ	Chkalovo	10.79	295	⇑Pn	P	10 17 46.9	-3.4
	0.7nm,0.5s						
CHKZ				⇑Sn	S	10 19 45.9	-6.1
	1.8nm,0.8s						
BVA0	Borovoye Array	10.81	291	⇑Pn	P	10 17 47.2	-3.4
	0.4nm,0.9s,baz=114,slow=16,SNR=9.1						
BVA0				⇓Sn	S	10 19 45.7	-6.8
	0.6nm,0.7s						

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*NNC **28** 10:35:10.2±3.6, 42.78N×75.24E, mpv2.8, Error ellipse: s-maj=73.8km s-min=13.2km az=155.0*
*KNET **28** 10:35:11.4±0.4, 43.03N×74.91E, h12^{km}±3^{km}, ml1.8, Error ellipse: s-maj=2.6km s-min=1.5km az=175.0*
ISC 28 10:35:11.8±0.6**, 43.06N**±0.03×**74.91E**±0.04**, h6**^{km}±4^{km}**, n13, σ0^{s}41**/25**, 14C-8D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMS	Chumysh	0.13	243	⇑P	Pg	10 35 14.5	-0.2
	114nm,0.1s,SNR=258						
CHMS				⇑S	Sg	10 35 16.5	-0.2
	220nm,0.2s						
USP	Ospenovka	0.37	305	P	Pg	10 35 19.4	+0.1
	73nm,0.1s,SNR=47						
USP				⇑S	Sg	10 35 24.7	+0.6
	128nm,0.3s						
KBK	Karagaybulak	0.40	176	P	Pg	10 35 20.1	+0.1
	116nm,0.1s,SNR=165						
KBK				⇓S	Sg	10 35 26.3	+0.9
	259nm,0.2s						
TKM2	Tokmak 2	0.52	105	⇓P	Pg	10 35 22.0	-0.3
	20nm,0.1s,SNR=127						
TKM2				⇑S	Sg	10 35 29.5	+0.2
	37nm,0.1s						
AAK	Ala-Archa	0.53	216	⇑P	Pg	10 35 22.0	-0.4
	23nm,0.2s,SNR=50						
AAK				⇑S	Sg	10 35 29.2	-0.2
	59nm,0.3s						
AAK	Ala-Archa	0.53	216	⇓P	Pg	10 35 21.9	-0.5
	6.5nm,0.2s						
AAK				⇑S	Sg	10 35 29.1	-0.4
	21nm,0.3s						
UCH	Uchtor	0.88	200	⇑P	Pb	10 35 28.5	-0.6
	5.5nm,0.1s,SNR=22						
UCH				⇓S	Sb	10 35 40.3	-0.6
	14nm,0.3s						
EKS2	Erkin-Say	0.93	245	⇑P	Pb	10 35 29.6	-0.3
	10nm,0.1s,SNR=31						
EKS2				⇑S	Sb	10 35 42.6	+0.4
	8.8nm,0.1s						
KZA	Kyzart	1.01	166	⇑P	Pb	10 35 31.3	-0.1
	9.0nm,0.2s,SNR=18						
KZA				⇓S	Sb	10 35 45.5	+0.7
	16nm,0.2s						
ULHL	Ulahol	1.27	129	⇑P	Pb	10 35 35.6	-0.3
	4.4nm,0.2s,SNR=24						
AML	Almayashu	1.29	225	⇑P	Pb	10 35 36.1	0.0
	4.6nm,0.2s,SNR=8.1						
AML				⇓S	Sb	10 35 53.3	+0.4
	15nm,0.3s						
KK31	Karatay Array	3.22	272	Pn	Pn	10 36 12.4	+8.4
	0.5nm,0.3s,baz=93,slow=16,SNR=13						
KK31				Sn	Sn	10 36 51.6	+8.4
	1.5nm,0.3s,baz=89,slow=29,SNR=7.9						
MK31	Makanchi Array	6.43	52	⇑Pn	Pn	10 36 49.4	0.0
	1.0nm,0.6s,baz=234,slow=14,SNR=12						
MK31				⇓Sn	Sn	10 38 04.0	0.0
	0.5nm,0.5s,baz=232,slow=24						
MK31				⇓Lg		10 38 33.1	
	1.5nm,0.7s,baz=223,slow=27						

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*NEIC **28** 10:53:34.7, 18.03N×101.07W, h38^{km}, MD3.7(MEX), After MEX.*
MEX 28 10:53:35.2±0.5**, 17.99N×101.06W, h37**^{km}**, MD3.6, 1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.54	226	⇓*i*P	P	10 53 44.6	-1.8
ZIIG				*i* S	S	10 53 52.5	-2.0
ZIIG	Zihuatanejo	0.54	226	*i* P	P	10 53 44.6	-1.9
ZIIG				*i* S	S	10 53 52.5	-2.0
CAIG	El Cayaco	1.20	141	*e*P	P	10 53 53.9	-1.8
CAIG				*i* S	S	10 54 08.1	-3.0
CAIG	El Cayaco	1.20	141	*i* P	P	10 53 53.2	-2.5
CAIG				*i* S	S	10 54 08.1	-3.0
ACX	Acapulco	1.56	136	*e*P	P	10 54 00.5	-0.4
CPRX	Cap Rock	15.19	351	P	P	10 57 05.8	-3.0
WMOK	Wichita Mounta	16.80	6	P	P	10 57 26.9	-2.4
ANMO	Albuquerque	17.57	345	*e*P	P	10 57 35.0	-3.9
	1.4nm,1.0s						

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*CSEM **28** 11:26:04.8±0.1, 46.01N×6.96E, h8^{km}, ML2.7/12, Error ellipse: s-maj=2.0km s-min=1.4km az=111.0*
*LDG **28** 11:26:05.2±0.1, 46.01N×6.92E, h2^{km}, Md2.8/2, Ml2.7/13, Error ellipse: s-maj=2.4km s-min=1.7km az=111.0*
*STR **28** 11:26:05.0±0.2, 46.01N×6.91E, h5^{km}±1^{km}, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*ZUR **28** 11:26:05.1, 46.04N×6.90E, h5^{km}±1^{km}, ML2.0/11*
*NEIC **28** 11:26:05.2, 46.01N×6.92E, h2^{km}, ML2.7(LDG), ML2.5(STR), After LDG.*
ISC 28 11:26:03.6±0.3**, 46.04N**±0.02×**6.76E**±0.03**, h0**^{km}±4^{km}**, n52, σ1^{s}21**/97**, 7C-1D, Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMV	Vieux Emosson	0.10	77	*i* Sg	Sg	11 26 07.4	+0.4
EMV	Vieux Emosson	0.10	77	⇑*i*Pg	Pg	11 26 06.5	+0.9
EMV	Vieux Emosson	0.10	77	⇑*i*Pg	Pg	11 26 06.5	+0.9
EMV				*i* Sg	Sg	11 26 07.4	+0.4
SALAN	Lac Salanfe	0.18	55	⇑*i*Pg	Pg	11 26 07.8	+0.5
GRYON	Gryon	0.33	49	⇑*i*Pg	Pg	11 26 10.3	+0.2
AIGLE	Aigle	0.33	24	⇑*i*Pg	Pg	11 26 11.0	+0.8
DIX	Grande Dixence	0.46	85	⇓*i*Pg	Pg	11 26 12.3	-0.4
SENIN	Lac Senin	0.50	49	⇑*i*Pg	Pg	11 26 13.4	-0.1
LPL	La Plagne	0.52	182	*e*Pg	Pg	11 26 15.1	+1.1
LPL				*e*Sg	Sg	11 26 21.9	+0.9
	31nm,0.4s						
LPG	La Plagne	0.54	180	*e*Pg	Pg	11 26 15.4	+1.0
LPG				*e*Sg	Sg	11 26 22.9	+1.3
	20nm,0.2s						
GIMEL	Gimel	0.60	326	*e*P	Pg	11 26 17.9	+2.3
LKBD	Leukerbad	0.70	60	*e*Pg	Pg	11 26 16.9	-0.6
CABF	La Chapelle	0.74	321	*e*Pg	Pg	11 26 20.4	+2.1
CABF				*e*Sg	Sg	11 26 30.4	+2.3
	41nm,0.3s						
MMK	Mattmark	0.84	89	⇑*i*P	Pg	11 26 18.8	-1.6
WIMIS	Wimmis	0.87	44	*e*P	Pg	11 26 20.3	-0.6
OG05	Jujurieux	0.90	271	Pg	Pg	11 26 24.0	+2.4
OG05				Sg	Sg	11 26 38.3	+4.6
GRN	Grenoble	1.07	222	Pn	Pn	11 26 26.2	+0.6
ORIF	Oris-en-Rattie	1.28	209	*e*Pg	Pg	11 26 29.4	+0.3
ORIF				*e*Sn	Sn	11 26 45.0	-1.7
ORIF				*e*Sg	Sg	11 26 46.0	-0.2
	24nm,0.3s						
ORIF	Oris-en-Rattie	1.28	209	*e*Pn	Pn	11 26 28.4	-0.2
ORIF				*e*Pg	Pg	11 26 29.4	+0.3
ORIF				*e*Sn	Sn	11 26 45.0	-1.7
ORIF				*e*Sg	Sg	11 26 46.0	-0.2
ORIF	Oris-en-Rattie	1.28	209	*e*Pg	Pg	11 26 29.4	+0.3
ORIF				*e*Sn	Sn	11 26 45.0	-1.7
ORIF				*e*Sg	Sg	11 26 46.0	-0.2
	12nm,0.3s						
LOMF	Lomont	1.31	2	Pn	Pn	11 26 29.7	+0.6
LOMF				Sg	Sg	11 26 49.4	+2.1
MBDF	Montbardon	1.31	180	*e*Pn	Pn	11 26 28.9	-0.2
MBDF				*e*Sg	Sg	11 26 46.0	-1.3
	8.8nm,0.3s						
BBS	Basel-Blauen	1.52	20	Pn	Pn	11 26 31.5	-0.5
BBS				Pg	Pg	11 26 33.6	-0.3
BBS				Sg	Sg	11 26 54.3	+0.2
BBS	Basel-Blauen	1.52	20	Pg	Pg	11 26 33.6	-0.3
BBS				Sg	Sg	11 26 54.3	+0.2
HINF	Hinteralfeld	1.78	2	*e*Pn	Pn	11 26 34.9	-0.9
HINF				*e*Sn	Sn	11 26 59.6	+0.2
	9.8nm,0.2s						
MOF	Molkenrain	1.83	8	Pn	Pn	11 26 35.9	-0.6
VIVF	Saint-Julien-l	1.88	232	*e*Pg	Pg	11 26 41.6	+0.4
VIVF				*e*Sn	Sn	11 27 01.1	-1.0
	25nm,0.2s						
VIVF	Saint-Julien-l	1.88	232	*e*Pn	Pn	11 26 38.5	+1.2
VIVF				*e*Pg	Pg	11 26 41.6	+0.4
VIVF				*e*Sn	Sn	11 27 01.1	-1.0
VIVF	Saint-Julien-l	1.88	232	*e*Pg	Pg	11 26 41.6	+0.4
VIVF				*e*Sn	Sn	11 27 01.1	-1.0
	13nm,0.2s						
HAU	Haudompre	1.99	352	*e*Pg	Pg	11 26 42.5	-0.7
HAU				*e*Sg	Sg	11 27 09.1	-0.6
	12nm,0.3s						
HAU	Haudompre	1.99	352	*e*Pn	Pn	11 26 39.5	+0.8
HAU				*e*Pg	Pg	11 26 42.5	-0.7
HAU				*e*Sg	Sg	11 27 09.1	-0.6
HAU	Haudompre	1.99	352	*e*Pg	Pg	11 26 42.5	-0.7
HAU				*e*Sg	Sg	11 27 09.1	-0.6
	5.8nm,0.3s						
SBF	Sospel	2.23	167	*e*Sg	Sg	11 27 14.2	-3.6
	16nm,0.5s						
LOR	Lormes	2.34	303	*e*Pn	Pn	11 26 45.5	+1.6
LOR				*e*Pg	Pg	11 26 49.0	-1.4
LOR				*e*Sg	Sg	11 27 20.2	-1.4
LOR	Lormes	2.34	303	*e*Pg	Pg	11 26 49.0	-1.4
LOR				*e*Sg	Sg	11 27 20.2	-1.4
	2.5nm,0.2s						
CDF	Champ du Feu	2.40	8	*e*Pg	Pg	11 26 50.5	-1.0
CDF				*e*Sg	Sg	11 27 20.2	-3.3
	3.8nm,0.3s						
CDF	Champ du Feu	2.40	8	*e*Pn	Pn	11 26 42.5	-2.2
CDF				*e*Pg	Pg	11 26 50.5	-1.0
CDF				*e*Sg	Sg	11 27 20.2	-3.3
CDF	Champ du Feu	2.40	8	*e*Pg	Pg	11 26 50.5	-1.0
CDF				*e*Sg	Sg	11 27 20.2	-3.3
	1.9nm,0.3s						
SSF	Saint Saulge	2.46	296	*e*Pg	Pg	11 26 53.5	+0.7
SSF				*e*Sg	Sg	11 27 24.7	-0.9
	1.4nm,0.2s						
AVF	Avril sur Loir	2.47	289	*e*Pg	Pg	11 26 53.5	+0.6
AVF				*e*Sn	Sn	11 27 17.7	+0.7
AVF				*e*Sg	Sg	11 27 23.7	-2.2
	2.0nm,0.2s						
AVF	Avril sur Loir	2.47	289	*e*Pn	Pn	11 26 46.0	+0.3
AVF				*e*Pg	Pg	11 26 53.5	+0.6
AVF				*e*Sn	Sn	11 27 17.7	+0.7
AVF				*e*Sg	Sg	11 27 23.7	-2.2
AVF	Avril sur Loir	2.47	289	*e*Pg	Pg	11 26 53.5	+0.6
AVF				*e*Sn	Sn	11 27 17.7	+0.7
AVF				*e*Sg	Sg	11 27 23.7	-2.2
	1.0nm,0.2s						
FRF	La Foret Royal	2.48	182	*e*Pg	Pg	11 26 49.0	-4.1
FRF	La Foret Royal	2.48	182	*e*Pn	Pn	11 26 45.5	-0.3
FRF				*e*Pg	Pg	11 26 49.0	-4.1
FRF	La Foret Royal	2.48	182	*e*Pg	Pg	11 26 49.0	-4.1
MEZF	Maizieres J’vi	2.72	335	*e*Sg	Sg	11 27 31.8	-2.4
	20nm,0.6s						
BGF	Bois d’Agland	2.76	282	*e*Pg	Pg	11 26 58.6	-0.1
BGF	Bois d’Agland	2.76	282	*e*Pn	Pn	11 26 51.0	+1.2
BGF				*e*Pg	Pg	11 26 58.6	-0.1
BGF	Bois d’Agland	2.76	282	*e*Pg	Pg	11 26 58.6	-0.1
LASF	Ste Croix	2.84	227	*e*Pg	Pg	11 26 57.6	-2.7
LASF				*e*Sg	Sg	11 27 34.3	-3.9
	4.5nm,0.2s						
CAF	Calviac	3.48	253	*e*Pn	Pn	11 27 01.6	+1.5
CAF				*e*Sg	Sg	11 27 58.9	-0.6
	5.0nm,0.5s						
BAIF	Baives	4.37	338	*e*Pg	Pg	11 27 28.2	-2.6

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*NNC **28** 11:37:04.7±15.0, 31.13N×68.00E, h4^{km}±256^{km}, Error ellipse: s-maj=455.8km s-min=245.5km az=129.0*
*NEIC **28** 11:37:14.2±7.7, 32.10N×70.35E, h10^{km}, mb3.2/2, Error ellipse: s-maj=142.0km s-min=10.3km az=50.0*
ISC 28 11:37:06.8±1.8**, 31.4N**±0.2×**69.7E**±0.2**, h10**^{km}**, n15, σ1^{s}25**/17**, mb3.2**/1**, 2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHET	Khetri	6.24	120	*e*x	Sn	11 39 56.2	+2.9
KUDL	Kundal	6.71	117	*e*x	Sn	11 40 02.1	-3.2
SONA	Sohna	7.12	114	*e*S	Sn	11 40 06.8	-8.7
DDI	Dehra Dun	7.25	96	*e*x	Sb	11 40 40.0	-0.1
KLP	Kalpa	7.29	87	*e*x	Pn	11 39 06.3	+10
KLP				*e*x	x	11 39 34.5	
KK31	Karatay Array	11.72	3	⇑P	P	11 39 58.2	+1.2
	0.4nm,0.4s,baz=178,slow=12,SNR=5.4						
KK31				⇑S	S	11 42 15.1	+6.2
	2.6nm,1.0s						
KOLN	Koldanda	12.61	103	*e*P	P	11 40 09.8	+0.7
	8.3nm,0.7s						
KOLN				*e*S	S	11 42 24.7	-5.9
GKN	Gorkha	13.40	101	*e*P	P	11 40 19.7	+0.1
KKN	Kakani	14.01	101	*e*P	P	11 40 27.4	-0.2
	4.0nm,0.3s						
GUN	Gumba	14.48	100	*e*P	P	11 40 34.2	+0.4
	12nm,0.3s						
JIRN	Jiri	14.81	100	*e*P	P	11 40 38.5	+0.3
	6.4nm,0.4s						
MK31	Makanchi Array	18.18	29	P	P	11 41 28.9	+8.0
	0.2nm,0.5s,baz=213,slow=9.8,SNR=3.6						
AB31	Akbulak array	19.31	340	P	P	11 41 28.4	-6.2
	0.9nm,0.6s,baz=150,slow=10,SNR=8.5						
KURK	Kurchatov	20.42	16	P	P	11 41 42.4	-4.3
	0.8nm,0.6s						
CHKZ	Chkalovo	22.29	1	P	P	11 42 03.5	-2.1
	0.5nm,0.5s,mb3.2						

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*BER **28** 11:43:56.2±3.2, 59.27N×27.89E, ML2.0(NAO), Suspected explosion*
*IDC **28** 11:43:57.1±2.2, 59.28N×27.78E, mb1 3.2/4, mb1mx3.1/20, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=19.6km s-min=13.7km az=118.0*
*NAO **28** 11:43:58.5±3.3, 59.39N×27.54E, ML2.0*
HEL 28 11:43:56.3, 59.23N×27.78E, ML1.7(FIA0)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIA0	**FINESS Array S**	**2.38**	**340**	*e*P	Pn	11 44 36.5	-0.6
FIA0				*e*SG		11 45 10.4	
FIA0	**FINESS Array S**	**2.38**	**340**	Pn	Pn	11 44 36.5	-0.6
	baz=156,slow=16						
FIA0				Lg		11 45 07.7	
	baz=167,slow=28						
FINES	**FINESS Array B**	**2.38**	**340**	Pn	Pn	11 44 36.4	-0.6
	0.7nm,0.3s,baz=156,slow=16,SNR=12						
FINES				Pg	Pg	11 44 38.2	-5.5
	0.7nm,0.3s,baz=156,slow=16,SNR=13						
FINES				Sn	Sn	11 45 07.0	-0.4
	1.0nm,0.3s,baz=159,slow=24,SNR=13						
FINES				Lg		11 45 12.0	
	2.1nm,0.3s,baz=160,slow=28,SNR=12						
HFS	**Hagfors**	**7.19**	**283**	Pn	Pn	11 45 40.5	-4.8
	baz=81,slow=14						
HFS				Sn	Sn	11 46 59.6	-9.0
	baz=96,slow=28						
HFS				Lg		11 47 40.0	
	baz=94,slow=37						
HFS	**Hagfors**	**7.19**	**283**	*e*P	Pn	11 45 40.5	-4.8
HFS				*e*S	Sn	11 46 59.6	-9.0
HFS				*e*SG		11 47 40.0	
HFS	**Hagfors**	**7.19**	**283**	Pn	Pn	11 45 40.7	-4.6
	0.1nm,0.3s,baz=85,slow=16,SNR=3.9						
HFS				Lg		11 47 40.8	
	0.1nm,0.3s,baz=90,slow=33,SNR=4.1						
NB2	**NORSAR Subarra**	**8.46**	**289**	Pn	P	11 45 58.6	-4.4
	baz=91,slow=14						
NB2	**NORSAR Subarra**	**8.46**	**289**	*e*P	P	11 45 58.6	-4.4
NOA	**NORSAR Array B**	**8.46**	**289**	Pn	P	11 45 58.9	-4.1
	0.2nm,0.3s,baz=93,slow=11,SNR=3.1						
NOA				Lg		11 48 20.4	
	0.3nm,0.3s,baz=65,slow=17,SNR=2.8						
ARA0	**ARCESS Array S**	**10.39**	**356**	Pn	P	11 46 23.1	-6.4
	baz=175,slow=14						
ARA0				Sn	S	11 48 14.0	-14
	baz=177,slow=28						
ARA0				Lg		11 49 16.4	
	baz=155,slow=37						
ARA0	**ARCESS Array S**	**10.39**	**356**	*e*P	P	11 46 23.1	-6.4
ARA0				*e*S	S	11 48 14.0	-14
ARA0				*e*SG		11 49 16.4	
ARCES	**ARCESS Array B**	**10.39**	**356**	Pn	P	11 46 23.9	-5.5
	0.2nm,0.3s,baz=169,slow=12,SNR=3.6						

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*NEIC **28** 11:47:37.8±2.1, 24.69S×179.93E, h508^{km}±21^{km}, mb4.3/3, Error ellipse: s-maj=27.5km s-min=16.1km az=53.0*

*IDC **28** 11:47:43.1±2.9, 24.44S×179.55E, h543^{km}±27^{km}, mb3.6/6, mb1 3.6/7, mb1mx3.4/15, mbtmp4.5/7, Error ellipse: s-maj=40.1km s-min=21.4km az=154.0*

ISC 28 11:47:38.9±2.2**, 24.7S**±0.1×**179.8E**±0.3**, h537**^{km}±27^{km}**, n16, σ0^{s}79**/14**, mb4.2**/7**, 1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.58**	**279**	P	**P**	**11 50 24.1**	**+0.3**
	0.5nm,0.3s,baz=95,slow=18,SNR=5.5						
URZ	**Urewera**	**13.68**	**189**	P	**P**	**11 50 34.2**	**-0.9**
	0.8nm,0.3s,baz=27,slow=16,SNR=3.5						
URZ				S	**S**	**11 52 56.9**	**+0.1**
	0.5nm,0.3s,baz=313,slow=13,SNR=3.5						
HNR	**Honiara**	**24.30**	**305**	P	**P**	**11 52 14.2**	**-1.6**
	13nm,0.5s,mb4.9,baz=146,slow=5.0,SNR=4.1						
CTA	**Charters Tower**	**31.34**	**272**	⇓*i*P	**P**	**11 53 17.9**	**+1.0**
	6.7nm,0.3s,mb4.7						
CTA	**Charters Tower**	**31.34**	**272**	P	**P**	**11 53 17.9**	**+1.0**
	10nm,0.4s,mb4.7,baz=96,slow=10,SNR=32						
STKA	**Stephens Creek**	**34.28**	**249**	*e*P	**P**	**11 53 42.7**	**+1.2**
	1.2nm,0.3s,mb3.9						
STKA	**Stephens Creek**	**34.28**	**249**	P	**P**	**11 53 42.7**	**+1.2**
	1.3nm,0.4s,mb3.8,baz=92,slow=10,SNR=7.2						
PMG	**Port Moresby**	**34.63**	**290**	P	**P**	**11 53 45.0**	**+0.4**
	1.3nm,0.4s,mb3.8,baz=101,slow=8.3,SNR=3.7						
WB2	**Warramunga Arr**	**42.20**	**267**	*e*P	**P**	**11 54 45.5**	**-0.6**
WRA	**Warramunga Arr**	**42.21**	**267**	P	**P**	**11 54 46.2**	**0.0**
	4.8nm,0.5s,mb4.3,baz=100,slow=7.1,SNR=174						
WRA				S	**S**	**12 00 26.9**	**-1.5**
	0.9nm,1.1s,baz=101,slow=14,SNR=3.1						
FITZ	**Fitzroy Crossi**	**50.62**	**266**	*e*P	**P**	**11 55 50.7**	**+0.3**
	7.1nm,0.6s,mb4.2						
MJAR	**Matsushiro Arr**	**72.50**	**326**	P	**P**	**11 58 13.0**	**+0.4**
	0.7nm,0.4s,mb3.4,baz=158,slow=5.1,SNR=4.4						
BVAR	**Borovoye Array**	**120.96**	**318**	PKP	PKPdf	12 05 32.1	+2.3
	0.8nm,0.4s,baz=90,slow=1.4,SNR=6.3						
ARCES	**ARCESS Array B**	**132.67**	**348**	PKP	PKPdf	12 05 54.2	+2.3
	2.9nm,0.9s,baz=63,slow=2.7,SNR=5.5						
ARCES	**ARCESS Array B**	**132.67**	**348**	PKP	PKPdf	12 05 54.2	+2.3
AKASG	**Malin Array Be**	**145.59**	**326**	PKPbc	PKPbc	12 06 19.0	+2.4
	1.9nm,0.5s,baz=46,slow=4.1,SNR=11						

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*IDC **28** 12:00:05.3±8.4, 37.73N×72.33E, h218^{km}±58^{km}, mb3.2/6, mb1 3.3/9, mb1mx3.2/22, mbtmp3.7/9, Error ellipse: s-maj=78.3km s-min=24.4km az=11.0*

*NNC **28** 12:00:07.4±6.1, 38.03N×72.02E, h227^{km}±68^{km}, mpv4.1, Error ellipse: s-maj=67.9km s-min=37.5km az=20.0*

*MOS **28** 12:00:07.0±1.2, 38.07N×72.25E, h229^{km}, mb3.7/1, Error ellipse: s-maj=20.8km s-min=9.0km az=90.5*

*NEIC **28** 12:00:07.6±2.3, 38.07N×72.33E, h220^{km}±17^{km}, mb3.5/5, Error ellipse: s-maj=26.7km s-min=12.4km az=199.0*

ISC 28 12:00:05.2±1.9**, 37.9N**±0.1×**72.2E**±0.1**, h221**^{km}±13^{km}**, n44, σ0^{s}78**/53**, mb3.7**/8**, 7C-1D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**4.35**	**15**	P	**P**	**12 01 12.7**	**0.0**
	SNR=115						
UCH	**Uchtor**	**4.64**	**21**	P	**P**	**12 01 16.4**	**0.0**
	SNR=58						
KZA	**Kyzart**	**4.76**	**28**	P	**P**	**12 01 16.9**	**-0.8**
	SNR=21						
EKS2	**Erkin-Say**	**4.88**	**14**	P	**P**	**12 01 19.2**	**-0.1**
	SNR=34						
AAK	**Ala-Archa**	**5.02**	**20**	P	**P**	**12 01 21.4**	**+0.4**
	SNR=67						
AAK	**Ala-Archa**	**5.02**	**20**	P	**P**	**12 01 21.4**	**+0.4**
	27nm,0.5s						
AAK				⇓S	**S**	**12 02 22.5**	**+2.6**
	15nm,0.7s						
AAK	**Ala-Archa**	**5.02**	**20**	*e*Pn	**P**	**12 01 20.4**	**-0.6**
AAK				*e*Sn	**S**	**12 02 21.7**	**+1.8**
KBK	**Karagaybulak**	**5.17**	**23**	P	**P**	**12 01 23.6**	**+0.7**
	SNR=18						
ULHL	**Ulahol**	**5.30**	**34**	P	**P**	**12 01 23.7**	**-0.9**
	SNR=35						
KK31	**Karatay Array**	**5.34**	**346**	⇑P	**P**	**12 01 24.8**	**-0.3**
	6.4nm,0.4s,baz=22,slow=0.6,SNR=54						
KK31				S	**S**	**12 02 27.0**	**-0.2**
	7.8nm,0.3s,baz=163,slow=20,SNR=14						
KK31	**Karatay Array**	**5.34**	**346**	⇑P	**P**	**12 01 24.8**	**-0.3**
	6.4nm,0.4s						
KK31				S	**S**	**12 02 27.0**	**-0.2**
KK31	**Karatay Array**	**5.34**	**346**	⇑PN	**P**	**12 01 24.8**	**-0.3**
KK31				S	**S**	**12 02 27.0**	**-0.2**
KK31				pmax	pmax		
	comp=Z,6.0nm,0.4s						
CHMS	**Chumysh**	**5.42**	**20**	P	**P**	**12 01 26.1**	**0.0**
	SNR=14						
USP	**Ospenovka**	**5.61**	**17**	P	**P**	**12 01 28.0**	**-0.5**
	SNR=13						
TKM2	**Tokmak 2**	**5.62**	**26**	P	**P**	**12 01 28.5**	**-0.1**
	SNR=19						
KLP	**Kalpa**	**8.07**	**140**	*e*S	**S**	**12 03 11.8**	**-18**
KUDL	**Kundal**	**10.38**	**159**	*e*S	**S**	**12 04 01.5**	**-22**
MK02	**Makanchi Array**	**11.56**	**37**	P	**P**	**12 02 45.1**	**+0.3**
MK31	**Makanchi Array**	**11.57**	**37**	P	**P**	**12 02 45.1**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=226,slow=18,SNR=7.4						
MK31	**Makanchi Array**	**11.57**	**37**	P	**P**	**12 02 45.1**	**+0.2**
	comp=Z,0.3nm,0.4s						
MKAR	**Makanchi Array**	**11.57**	**37**	P	**P**	**12 02 44.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=226,slow=17,SNR=6.5						
MKAR	**Makanchi Array**	**11.57**	**37**	P	**P**	**12 02 44.5**	**-0.4**
KURK	**Kurchatov**	**13.58**	**18**	*e*Pn	**P**	**12 03 08.4**	**-1.5**
AB31	**Akbulak array**	**14.38**	**326**	⇑P	**P**	**12 03 20.0**	**0.0**
	comp=Z,0.7nm,0.5s,baz=130,slow=10,SNR=22						
AB31				⇑S	**S**	**12 05 52.9**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=152,slow=23,SNR=5.6						
AB31	**Akbulak array**	**14.38**	**326**	⇑P	**P**	**12 03 20.0**	**0.0**
	comp=Z,0.7nm,0.4s						
AB31				S	**S**	**12 05 52.9**	**-1.2**
AB31	**Akbulak array**	**14.38**	**326**	⇑P	**P**	**12 03 20.0**	**+0.1**
AB31				S	**S**	**12 05 52.9**	**-1.2**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**15.16**	**356**	P	**P**	**12 03 30.8**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=170,slow=9.0,SNR=5.8						
BVAR				S	**S**	**12 06 20.7**	**+9.3**
	comp=Z,0.1nm,0.3s,baz=163,slow=24,SNR=3.3						
BRVK	**Borovoye**	**15.20**	**356**	*e*Pn	**P**	**12 03 29.1**	**-0.7**
	comp=Z,0.6nm,0.6s						
BRVK	**Borovoye**	**15.20**	**356**	*e*P	**P**	**12 03 29.2**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTK	**Aktyubinsk**	**16.10**	**326**	P	**P**	**12 03 41.6**	**+0.8**
AKTO	**Aktyubinsk**	**16.10**	**326**	P	**P**	**12 03 41.6**	**+0.8**
	comp=Z,0.3nm,0.5s						
AKTO	**Aktyubinsk**	**16.10**	**326**	P	**P**	**12 03 41.8**	**+1.0**
	comp=Z,0.8nm,0.3s,baz=132,slow=9.8,SNR=9.2						
AKTO	**Aktyubinsk**	**16.10**	**326**	P	**P**	**12 03 41.8**	**+1.0**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
SONM	**Songino Array**	**26.73**	**57**	P	**P**	**12 05 25.6**	**-0.4**
	comp=Z,0.2nm,0.4s,mb3.1,baz=280,slow=9.2,SNR=3.6						
FINES	**FINESS Array B**	**36.87**	**325**	P	**P**	**12 06 53.9**	**+0.2**
	comp=Z,3.0nm,1.0s,mb3.8,baz=127,slow=9.5,SNR=4.6						
ARCES	**ARCESS Array B**	**40.22**	**337**	P	**P**	**12 07 22.2**	**+0.8**
	comp=Z,2.8nm,0.9s,mb3.7,baz=108,slow=7.7,SNR=11						
ARCES	**ARCESS Array B**	**40.22**	**337**	P	**P**	**12 07 22.2**	**+0.8**
NB2	**NORSAR Subarra**	**43.85**	**322**	P	**P**	**12 07 50.1**	**-0.6**
	comp=Z,1.1nm,0.5s,mb3.4,baz=97,slow=7.4						
NOA	**NORSAR Array B**	**43.85**	**322**	P	**P**	**12 07 50.5**	**-0.2**
	comp=Z,0.9nm,0.5s,mb3.4,baz=96,slow=7.7,SNR=4.3						
NOA	**NORSAR Array B**	**43.85**	**322**	P	**P**	**12 07 50.5**	**-0.2**
ILAR	**Eielson Array**	**73.14**	**16**	P	**P**	**12 11 11.9**	**-0.7**
	comp=Z,0.2nm,0.6s,mb2.9,baz=304,slow=4.6,SNR=4.6						
YKA	**Yellowknife Ar**	**79.78**	**3**	P	**P**	**12 11 49.6**	**+0.2**
	comp=Z,0.6nm,0.4s,mb3.5,baz=350,slow=5.5,SNR=7.6						
WRAB	**Tennant Creek**	**81.92**	**123**	*e*P	**P**	**12 12 04.6**	**+3.1**
	comp=Z,65nm,2.2s,mb4.9						
CTAO	**Charters Tower**	**90.25**	**115**	*e*P	**P**	**12 12 42.0**	**-0.1**
	comp=Z,4.8nm,1.0s,mb4.3						

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*NEIC **28** 12:05:03.4±1.1, 35.61N×78.84E, h35^{km}, mb3.6/5, Error ellipse: s-maj=19.7km s-min=16.1km az=58.0*

*IDC **28** 12:05:07.0±11.0, 35.76N×78.88E, h67^{km}±107^{km}, mb3.8/3, mb1 3.7/5, mb1mx3.3/20, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=191.0km s-min=83.0km az=108.0*

*NNC **28** 12:05:21.1±18.0, 36.82N×80.79E, mpv3.7, Error ellipse: s-maj=179.4km s-min=123.6km az=167.0*

ISC 28 12:05:02.5±1.0**, 35.78N**±0.08×**78.9E**±0.1**, h33**^{km}**, n14, σ1^{s}21**/15**, mb3.9**/6**, 1C-3D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**7.66**	**335**	⇓Pn	Px	12 07 15.4	
	3.1nm,0.7s						
AAK				⇓Sn	Sx	12 08 37.6	
	11nm,1.3s						
AAK	**Ala-Archa**	**7.66**	**335**	*e*P	**P**	**12 06 55.1**	**+0.7**
	2.3nm,0.6s						
MK31	**Makanchi Array**	**11.29**	**12**	⇑Pn	**P**	**12 07 46.9**	**+2.4**
	0.4nm,0.5s,baz=198,slow=13,SNR=7.9						
MK31				⇓Sn	**S**	**12 09 49.2**	**-1.5**
	0.7nm,0.6s,baz=194,slow=24,SNR=5.3						
MKAR	**Makanchi Array**	**11.29**	**12**	P	**P**	**12 07 45.8**	**+1.3**
	0.1nm,0.3s,baz=200,slow=12,SNR=7.4						
MKAR				S	**S**	**12 09 49.4**	**-1.3**
	0.2nm,0.3s,baz=194,slow=24,SNR=5.1						
KURK	**Kurchatov**	**14.93**	**359**	*e*Pn	**P**	**12 08 32.8**	**0.0**
	1.2nm,0.5s						
BVAR	**Borovoye Array**	**18.26**	**343**	P	**P**	**12 09 16.8**	**+1.8**
	0.3nm,0.3s,baz=141,slow=9.5,SNR=7.2						
BRVK	**Borovoye**	**18.32**	**343**	*e*Pn	**P**	**12 09 15.7**	**0.0**
	1.3nm,0.6s						
ULN	**Ulaanbaatar**	**24.06**	**51**	*e*P	**P**	**12 10 16.5**	**+1.1**
	0.4nm,0.3s,mb3.3						
BR131	**Keskin Array S**	**35.72**	**290**	*e*P	**P**	**12 11 59.9**	**0.0**
	0.7nm,0.4s,mb3.9						
FINES	**FINESS Array B**	**41.71**	**325**	P	**P**	**12 12 48.2**	**-1.2**
	1.7nm,0.8s,mb3.7,baz=113,slow=11,SNR=3.5						
ARCES	**ARCESS Array B**	**44.33**	**336**	P	**P**	**12 13 10.8**	**+0.1**
	3.4nm,0.8s,mb4.1,baz=96,slow=9.1,SNR=5.0						
ARCES	**ARCESS Array B**	**44.33**	**336**	P	**P**	**12 13 10.8**	**+0.1**
NOA	**NORSAR Array B**	**48.80**	**323**	P	**P**	**12 13 44.2**	**-1.8**
	1.0nm,0.9s,mb3.9,baz=92,slow=7.6,SNR=2.5						
WRAB	**Tennant Creek**	**76.31**	**127**	P	**P**	**12 16 48.8**	**-1.2**
	4.1nm,0.9s,mb4.4						

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*IDC **28** 12:40:25.4±0.6, 15.41S×172.56W, mb4.5/12, mb1 4.8/13, mb1mx4.7/18, mbtmp4.6/13, ML4.9/1, MS4.5/14, Ms1 4.5/14, ms1mx4.5/17, Error ellipse: s-maj=27.8km s-min=14.3km az=141.0*

*MOS **28** 12:40:31.4±1.9, 15.15S×172.22W, h33^{km}, mb5.3/9, Error ellipse: s-maj=15.8km s-min=11.9km az=82.9*

*BJI **28** 12:40:32.9, 15.00S×172.50W, h35^{km}, mB5.3, mb5.0, Ms4.9, Msz4.6*

*HRVD **28** 12:40:32.9±0.2, 15.34S×172.51W, h41^{km}±1^{km}, MW5.3/79, Centroid moment Tensor Solution. LP body waves: s69,c117;Mantle waves: s79,c148; Half duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.78±.03; M$_{\theta\theta}$0.84±.02; M$_{\phi\phi}$-0.05±.03; M$_{r\theta}$-0.52±.02; M$_{\theta\phi}$-0.36±.02; M$_{\phi r}$0.38±.03; Best double couple: M$_0$1.09×10^{17} NP1: φ$_s$275°, δ29°, λ-113°. NP2:φ$_s$121°, δ64°, λ-78°. Principal axes: T 1.165, Plg18°, Azm202°; N -.15, Plg11°, Azm296°; P -1.015, Plg69°, Azm55°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **28** 12:40:32.9±0.3, 15.04S×172.52W, h35^{km}, mb5.1/19, MS5.0/2 Error ellipse: s-maj=14.4km s-min=8.3km az=132.0*

ISC 28 12:40:32.5±0.4**, 15.09S**±0.09×**172.45W**±0.08**, h45**^{km}**, h45**^{km}±3.3^{km}**:pP-P, n165, σ0^{s}96**/100**, mb4.8**/36**, MS4.6**/23**, 11C-2D, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.34**	**29**	Pn	**P**	**12 40 56.0**	**+0.7**
	2μm,0.3s,baz=162,slow=0.7,SNR=1772						
AFI				Sn	**S**	**12 41 15.7**	**+3.5**
	2μm,0.3s,slow=20,SNR=16						
AFI	**Afiamalu**	**1.34**	**29**	*e*Pn	**P**	**12 40 56.1**	**+0.8**
AFI				*e*Sn	**S**	**12 41 19.0**	**+6.8**
RAR	**Rarotonga**	**13.49**	**119**	Pn	**P**	**12 43 38.2**	**-5.3**
	5.4nm,0.3s,baz=254,slow=8.5,SNR=15						
RAR				Sn	**S**	**12 46 01.3**	**-12**
	2.0nm,0.3s,baz=25,slow=16,SNR=5.0						
RAR				LR	LR	12 47 24.2	
	comp=Z,1μm,20.8s,baz=341,slow=31						
DZM	**Mont Dzumac**	**21.16**	**248**	*e*P	**P**	**12 45 11.7**	**-4.5**
DZM	**Mont Dzumac**	**21.16**	**248**	P	**P**	**12 45 11.8**	**-4.4**
	25nm,1.0s,mb4.5,baz=73,slow=19,SNR=7.3						
DZM	**Mont Dzumac**	**21.16**	**248**	*e*P	**P**	**12 45 11.7**	**-4.6**
NOUC	**Port Laguerre**	**21.30**	**248**	*e*P	**P**	**12 45 16.8**	**-0.7**
NOUC	**Port Laguerre**	**21.30**	**248**	*e*P	**P**	**12 45 16.8**	**-0.7**
PPT	**Papeete**	**22.08**	**100**	*e*LQ		12 49 37.9	
PPT	**Papeete**	**22.08**	**100**	*e*P	**P**	**12 45 30.6**	**+5.2**
PPT				*e*LR	LR	12 50 31.5	
	2μm,26.8s						
PPT	**Papeete**	**22.08**	**100**	LR	LR	12 51 45.1	
	comp=Z,754nm,18.5s,MS4.1,baz=271,slow=31						
TVO	**Taravao**	**22.40**	**100**	*e*P	**P**	**12 45 33.5**	**+4.9**
	76nm,1.0s,mb5.1						
TBI	**Tubuai**	**23.18**	**114**	*e*LQ		12 50 03.8	
TBI	**Tubuai**	**23.18**	**114**	*e*P	**P**	**12 45 41.9**	**+5.7**
TBI				*e*LR	LR	12 51 03.3	
	2μm,27.8s,baz=285						
VAH	**Vaihoa**	**23.95**	**94**	*e*P	**P**	**12 45 49.1**	**+5.3**
	67nm,1.1s,mb5.0						
URZ	**Urewera**	**24.85**	**200**	P	**P**	**12 45 46.5**	**-5.8**
	46nm,0.6s,mb5.2,baz=308,slow=22,SNR=17						
URZ				LR	LR	12 52 13.8	
	comp=Z,380nm,21.7s,MS3.9,baz=286,slow=29						
HNR	**Honiara**	**27.54**	**279**	LR	LR	12 55 32.8	
	comp=Z,1μm,20.8s,MS4.5,baz=307,slow=33						
TAOE	**Nuku Hiva Isla**	**32.17**	**83**	*e*LR	LR	12 55 10.5	
	5μm,27.9s						
RKT	**Rikitea**	**36.22**	**109**	*e*LQ		12 56 05.6	
RKT				*e*LR	LR	12 57 04.6	
	1μm,28.2s,baz=279						
PMG	**Port Moresby**	**39.83**	**273**	P	**P**	**12 48 00.2**	**-3.3**
	3.2nm,0.6s,mb4.2,baz=80,slow=6.1,SNR=3.5						
PMG	**Port Moresby**	**39.83**	**273**	*e*P	**P**	**12 48 08.7**	**+5.2**
	118nm,0.8s,mb5.7						
PMG	**Port Moresby**	**39.83**	**273*c***	*i*P	**P**	**12 48 08.0**	**+4.5**
STKA	**Stephens Creek**	**44.98**	**240**	P	**P**	**12 48 40.0**	**-5.4**
	7.5nm,0.7s,mb4.6,baz=94,slow=9.4,SNR=15						
STKA	**Stephens Creek**	**44.98**	**240**	*e*P	**P**	**12 48 40.3**	**-5.1**
STKA				*e*	pP	12 48 55.4	-2.4
WRA	**Warramunga Arr**	**50.81**	**256**	P	**P**	**12 49 25.4**	**-5.6**
	3.0nm,0.8s,mb4.3,baz=85,slow=7.8,SNR=42						
WRA				PcP	PcP	12 50 46.1	-1.4
	4.0nm,0.9s,baz=87,slow=3.8,SNR=6.5						
SBA	**Scott Base**	**63.63**	**185**	*e*P	**P**	**12 51 00.7**	**-0.1**
	34nm,1.4s,mb5.2						
SBA				*e*	pP	12 51 09.3	-4.4
SBA	**Scott Base**	**63.63**	**185**	*e*P	**P**	**12 51 00.7**	**-0.2**
SBA				*e*	pP	12 51 09.3	-4.4
SBA				pmax	pmax		
	comp=Z,34nm,1.4s,mb5.2						
MJAR	**Matsushiro Arr**	**69.30**	**319**	P	**P**	**12 51 37.5**	**+0.1**
	comp=Z,4.7nm,1.0s,mb4.4,baz=156,slow=6.2,SNR=7.3						
MJAR				LR	LR	13 16 03.1	
	comp=Z,388nm,21.5s,MS4.6,baz=115,slow=31						
MTUM	**Tungsten Hills**	**72.70**	**42**	*e*P	**P**	**12 51 57.9**	**0.0**
NVAR	**Mina Array Bea**	**73.49**	**42**	P	**P**	**12 52 03.0**	**+0.5**
	comp=Z,1.8nm,0.8s,mb4.1,baz=229,slow=8.3,SNR=15						
NVAR				LR	LR	13 16 36.4	
	comp=Z,857nm,21.8s,MS5.0,baz=200,slow=29						
LDFC	**Landfair**	**73.77**	**46**	*e*P	**P**	**12 52 04.6**	**+0.4**
TPH	**Tonopah**	**73.98**	**42**	*e*P	**P**	**12 52 00.7**	**-4.7**
	comp=Z,6.6nm,0.9s,mb4.6						
TPH	**Tonopah**	**73.98**	**42**	*e*P	**P**	**12 52 00.7**	**-4.7**
TPH				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
TPNV	**Topopah Spring**	**74.00**	**44**	*e*P	**P**	**12 51 58.1**	**-7.4**
	comp=Z,5.3nm,1.1s,mb4.4						
TPNV	**Topopah Spring**	**74.00**	**44**	*e*P	**P**	**12 51 58.1**	**-7.4**
TPNV				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.4						
NEN	**Nelson**	**74.25**	**46**	*e*P	**P**	**12 52 07.3**	**+0.3**
QSPA	**South Pole Qui**	**74.95**	**180**	*e*P	**P**	**12 52 09.8**	**-0.3**
	comp=Z,53nm,0.8s,mb5.5						
ARUT	**Antelope Range**	**76.34**	**44**	*e*P	**P**	**12 52 19.0**	**+0.2**
MVU	**Marysvale**	**77.54**	**44**	*e*P	**P**	**12 52 25.8**	**+0.2**
	comp=Z,12nm,1.1s,mb4.7						
DUG	**Dugway**	**78.01**	**43**	*e*P	**P**	**12 52 28.3**	**+0.2**
	comp=Z,5.9nm,1.0s,mb4.5						
DUG	**Dugway**	**78.01**	**43**	*e*P	**P**	**12 52 28.3**	**+0.1**
DUG				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.5						
DIV	**Divide**	**78.89**	**13**	*e*P	**P**	**12 52 30.7**	**-1.8**
	comp=Z,65nm,0.8s,mb5.6						
LAZ	**Ladron**	**79.16**	**50**	*e*P	**P**	**12 52 39.0**	**+4.5**
MNTX	**Cornudas Mount**	**79.31**	**53**	*e*P	**P**	**12 52 36.2**	**+0.8**
	comp=Z,42nm,2.0s,mb5.0						
MDJ	**Mudanjiang**	**79.35**	**322**	P	**P**	**12 52 35.0**	**-0.4**
MDJ				AP	pP	12 52 48.3	-0.2
MDJ				XP	sP	12 52 54.0	+0.5
MDJ				PP	PP	12 55 36.0	-1.2
MDJ				S	S	13 02 33.8	+2.6
MDJ				XS		13 02 54.8	
MDJ				SS	SS	13 07 40.5	-1.2
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.6						
MDJ				LR	LR		
	comp=N,130nm,22.9s,MS4.5						
MDJ				LR	LR		
	comp=E,200nm,22.9s,MS4.5						
MDJ				LR	LR		
	comp=Z,330nm,20.2s,MS4.7						
TCUT	**Toone Canyon**	**79.40**	**42**	*e*P	**P**	**12 52 35.4**	**-0.3**
LPM	**Los Pinos Moun**	**79.49**	**50**	*e*P	**P**	**12 52 35.6**	**-0.7**
PV10	**Paradox Valley**	**79.64**	**46**	*e*P	**P**	**12 52 36.9**	**-0.2**
TXAR	**Lajitas Array**	**79.68**	**56**	P	**P**	**12 52 37.9**	**+0.4**
	comp=Z,3.9nm,1.0s,mb4.3,baz=230,slow=4.8,SNR=14						
TXAR				LR	LR	13 22 02.9	
	comp=Z,434nm,18.2s,MS4.8,baz=225,slow=31						
TXAR	**Lajitas Array**	**79.68**	**56**	P	**P**	**12 52 37.9**	**+0.4**
TXAR				LR	LR	13 22 02.9	
PV01	**Paradox Valley**	**79.85**	**46**	*e*P	**P**	**12 52 38.4**	**+0.2**
ANMO	**Albuquerque**	**79.90**	**50**	*i* P	**P**	**12 52 39.0**	**+0.4**
MCMT	**McKenzie Canyo**	**80.44**	**38**	*e*P	**P**	**12 52 41.5**	**+0.3**
MCK	**McKinley**	**80.66**	**10**	*e*P	**P**	**12 52 39.9**	**-2.1**
	comp=Z,12nm,0.8s,mb4.9						
MCK	**McKinley**	**80.66**	**10**	*e*P	**P**	**12 52 39.9**	**-2.1**
MCK				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
NJ2	**Nanjing**	**80.72**	**307**	*e*P	**P**	**12 52 44.5**	**+1.5**
NJ2				AP	pP	12 52 57.0	+0.8
NJ2				XP	sP	12 53 01.3	+0.2
NJ2				PP	PP	12 55 50.3	+1.2
NJ2				S	S	13 02 46.0	+0.2
NJ2				XS		13 03 08.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,120nm,5.4s						
NJ2				LR	LR		
	comp=N,770nm,19.5s,MS5.2						
NJ2				LR	LR		
	comp=E,370nm,15.0s,MS5.2						
NJ2				LR	LR		
	comp=Z,210nm,15.6s,MS4.6						
REDW	**Red Top Meadow**	**80.90**	**41**	*e*P	**P**	**12 52 43.8**	**0.0**
	comp=Z,14nm,1.2s,mb4.8						
SNOW	**Snow King Moun**	**81.02**	**40**	*e*P	**P**	**12 52 44.3**	**0.0**
	comp=Z,18nm,1.0s,mb4.9						
IMW	**Indian Meadow**	**81.12**	**40**	*e*P	**P**	**12 52 45.0**	**+0.2**
	comp=Z,7.2nm,1.0s,mb4.6						
QLMT	**Earthquake Lak**	**81.30**	**39**	*e*P	**P**	**12 52 46.4**	**+0.6**
CHMT	**Chamberlain Mo**	**81.33**	**37**	*e*P	**P**	**12 52 45.4**	**-0.5**
PDAR	**Pinedale Array**	**81.43**	**42**	P	**P**	**12 52 45.9**	**-0.6**
	comp=Z,1.8nm,0.6s,mb4.2,baz=193,slow=3.4,SNR=13						
PDAR				LR	LR	13 23 24.8	
	comp=Z,657nm,18.9s,MS5.0,baz=234,slow=32						
CN2	**Changchun**	**81.45**	**320**	*e*P	**P**	**12 52 46.8**	**+0.3**
COLA	**College**	**81.89**	**10**	*e*P	**P**	**12 52 46.8**	**-1.6**
	comp=Z,30nm,0.9s,mb5.2						
COLA	**College**	**81.89**	**10**	*e*P	**P**	**12 52 46.8**	**-1.6**
COLA				pmax	pmax		
	comp=Z,30nm,0.9s,mb5.2						
ILAR	**Eielson Array**	**81.97**	**11**	P	**P**	**12 52 47.0**	**-1.8**
	comp=Z,3.4nm,0.7s,mb4.4,baz=230,slow=6.5,SNR=18						
HRY	**Holter Researc**	**82.05**	**37**	*e*P	**P**	**12 52 49.3**	**-0.2**
RWWY	**Rawlins**	**82.44**	**43**	*e*P	**P**	**12 52 52.2**	**+0.5**
	comp=Z,37nm,1.4s,mb5.1						
GCMT	**Greycliff**	**82.86**	**39**	*e*P	**P**	**12 52 54.3**	**+0.5**
DAWY	**Dawson**	**82.90**	**14**	*e*P	**P**	**12 52 52.8**	**-0.8**
QIZ	**Qiongzhong**	**83.65**	**292**	P	**P**	**12 53 00.0**	**+1.6**
QIZ				S	S	13 03 17.5	+1.6
QIZ				LR	LR		
	comp=Z,230nm,20.1s,MS4.5						
EDM	**Edmonton**	**84.75**	**31**	*e*P	**P**	**12 53 01.5**	**-1.6**
ENH	**Enshi**	**87.54**	**302**	*e*P	**P**	**12 53 18.1**	**+0.8**
INK	**Inuvik**	**87.76**	**14**	*e*P	**P**	**12 53 16.3**	**-1.2**
	comp=Z,16nm,1.1s,mb5.2						
INK	**Inuvik**	**87.76**	**14**	*e*P	**P**	**12 53 16.3**	**-1.2**
INK				pmax	pmax		
	comp=Z,16nm,1.1s						
GYA	**Guiyang**	**88.72**	**298**	P	**P**	**12 53 28.8**	**+5.7**
GYA				SKS	SKS	13 03 53.0	+6.6
GYA				S	S	13 04 13.3	+8.8
GYA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.4						
GYA				AMB	AMB		
	comp=Z,90nm,3.8s						
GYA				LR	LR		
	comp=N,740nm,18.9s,MS5.3						
GYA				LR	LR		
	comp=E,940nm,20.4s,MS5.3						
GYA				LR	LR		
	comp=Z,670nm,20.8s,MS5.0						
PLCA	**Paso Flores**	**89.03**	**132**	LR	LR	13 25 22.6	
	comp=Z,242nm,20.2s,MS4.6,baz=184,slow=30						
YKA	**Yellowknife Ar**	**89.45**	**23**	P	**P**	**12 53 24.9**	**-0.7**
	comp=Z,5.2nm,0.8s,mb4.9,baz=239,slow=4.6,SNR=10						
YKA				LR	LR	13 27 21.6	
	comp=Z,423nm,19.2s,MS4.9,baz=260,slow=31						
YKA	**Yellowknife Ar**	**89.45**	**23**	P	**P**	**12 53 24.9**	**-0.7**
YKA				LR	LR	13 27 21.6	
HHC	**Hu-ho-hao-te**	**89.50**	**313**	*e*P	**P**	**12 53 28.3**	**+1.9**
HHC				AP	pP	12 53 42.3	+2.4
HHC				XP	sP	12 53 47.3	+2.9
HHC				PP	PP	12 57 06.0	+5.5
HHC				SKS	SKS	13 03 52.5	+1.6
HHC				S	S	13 04 17.8	+6.4
HHC				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb5.0						

HHC				AMB	AMB		
	comp=Z,130nm,8.4s						
HHC				LR	LR		
	comp=N,180nm,14.4s,MS4.9						
HHC				LR	LR		
	comp=E,280nm,16.8s,MS4.9						
JTS	JuntasAbangare	90.25	79	*e*P	P	12 53 30.8	+0.2
	comp=E,13nm,1.1s,mb5.2						
JTS				*e*		12 53 57.9	
JTS	JuntasAbangare	90.25	79	*e*P	P	12 53 30.8	+0.3
JTS				pmax	pmax		
	comp=Z,13nm,1.1s						
KMI	Kunming	91.72	295	P	P	12 53 37.5	+0.3
KMI				AP	pP	12 53 52.0	+1.3
KMI				XP	sP	12 53 57.8	+2.6
KMI				PP	PP	12 57 19.8	+1.1
KMI				SKS	SKS	13 04 04.3	0.0
KMI				S	S	13 04 29.0	-2.6
KMI				XS		13 04 55.8	
KMI				PS	PS	13 05 49.8	-2.1
KMI				SS	SS	13 10 42.5	-0.6
KMI				SSS	SSS	13 14 18.3	-2.7
KMI				AMB	AMB		
	comp=Z,50nm,3.7s						
KMI				LR	LR		
	comp=N,110nm,37.5s						
KMI				LR	LR		
	comp=E,100nm,43.3s						
KMI				LR	LR		
	comp=Z,110nm,35.8s,MS4.0						
KMI	Kunming	91.72	295	P	P	12 53 37.6	+0.4
	comp=Z,6.0nm,0.9s,mb4.9						
KMI				pP	pP	12 53 52.1	+1.4
KMI				sP	sP	12 53 57.7	+2.5
KMI				PP	PP	12 57 19.7	+1.0
KMI				SKS	SKS	13 04 04.2	-0.1
KMI				S	S	13 04 29.1	-2.5
KMI				sS		13 04 55.7	
KMI				PS	PS	13 05 49.8	-2.1
KMI				SS	SS	13 10 42.6	-0.5
KMI				SSS	SSS	13 14 18.2	-2.8
KMI				LR	LR		
	comp=Z,120nm,35.8s,MS4.1						
KMI	Kunming	91.72	295	P	P	12 53 37.6	+0.4
KMI				*PP	pP	12 53 52.1	+1.4
KMI						12 57 19.7	
KMI						13 04 04.2	
KMI				S	S	13 04 29.1	-2.5
KMI				PS	PS	13 05 49.8	-2.1
KMI				SS	SS	13 10 42.6	-0.5
KMI				SSS	SSS	13 14 18.2	-2.8
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.9						
KMI				MLR	MLR		
	comp=Z,120nm,35.8s,MS4.1						
CD2	Chengdu	92.44	301	*e*P	P	12 53 40.5	+0.2
CD2				PP	PP	12 57 23.5	-0.8
CD2				PPP	PPP	12 59 25.5	-0.4
CD2				SKS	SKS	13 04 08.3	0.0
CD2				S	S	13 04 37.0	-0.8
CD2				SS	SS	13 10 51.5	-1.9
CD2				LR	LR		
	comp=E,130nm,14.4s						
CD2				LR	LR		
	comp=Z,100nm,16.8s,MS4.3						
VNA3	Neumayer Olymp	93.07	174	P	P	12 53 44.1	+1.8
VNA3	Neumayer Olymp	93.07	174		P	12 53 53.2	+11
VNA3	Neumayer Olymp	93.07	174		P	12 53 54.8	+12
VNA3	Neumayer Olymp	93.07	174		P	12 54 00.0	+18
SYO	Syowa Base	93.08	191	⇑P	P	12 53 44.4	+2.1
SYO	Syowa Base	93.08	191	⇑pP	pP	12 53 55.1	-0.7
SYO	Syowa Base	93.08	191	⇑*e*P	P	12 53 44.4	+2.1
SYO				⇑*e*pP	pP	12 53 55.1	-0.7
ULM	Lac du Bonnet	93.12	39	LR	LR	13 28 42.4	
	comp=Z,609nm,21.8s,MS5.0,baz=244,slow=31						
SNAA	Sanae	93.16	177	P	P	12 53 41.8	-0.9
SNAA	Sanae	93.16	177		P	12 53 51.8	+9.1
SNAA	Sanae	93.16	177		P	12 54 00.4	+18
VNA2	Neumayer--Watz	93.58	175	P	P	12 53 44.9	+0.3
VNA2	Neumayer--Watz	93.58	175		P	12 53 52.2	+7.6
VNA2	Neumayer--Watz	93.58	175		P	12 53 56.0	+11
VNA2	Neumayer--Watz	93.58	175		P	12 53 57.7	+13
LZH	Lanzhou	93.79	306	*e*P	P	12 53 45.0	-1.3
LZH				AP	pP	12 53 59.0	-0.8
LZH				XP	sP	12 54 06.0	+1.6
LZH				PP	PP	12 57 33.0	-1.9
LZH				*e*SKS	SKS	13 04 14.0	-1.7
LZH				*e*S	S	13 04 47.3	-2.0
LZH				XS		13 05 10.0	
LZH				*e*SS	SS	13 11 09.5	-3.2
LZH				AMB	AMB		
	comp=Z,20nm,1.5s,mb5.3						
LZH				AMB	AMB		
	comp=Z,70nm,4.6s						
LZH				LR	LR		
	comp=N,360nm,18.6s						
LZH				LR	LR		
	comp=Z,560nm,19.8s,MS5.0						
LZH	Lanzhou	93.79	306	*e*P	P	12 53 45.0	-1.3
	comp=Z,20nm,1.5s,mb5.3						
LZH				pP	pP	12 53 59.0	-0.8
LZH				sP	sP	12 54 06.0	+1.6
LZH				PP	PP	12 57 33.0	-1.9
LZH				*e*SKS	SKS	13 04 14.1	-1.6
LZH				*e*S	S	13 04 47.2	-2.1
LZH				sS		13 05 10.1	
LZH				*e*SS	SS	13 11 09.6	-3.1
LZH				LR	LR		
	comp=Z,560nm,19.8s,MS5.0						
LZH	Lanzhou	93.79	306	*e*P	P	12 53 45.0	-1.3
LZH				*PP	pP	12 53 59.0	-0.8
LZH						12 57 33.0	
LZH				*e*		13 04 14.1	
LZH				*e*S	S	13 04 47.2	-2.1
LZH				*e*SS	SS	13 11 09.6	-3.1
LZH				pmax	pmax		
	comp=Z,20nm,1.5s,mb5.3						
LZH				MLR	MLR		
	comp=Z,560nm,19.8s,MS5.0						
SONM	Songino Array	95.23	318	P	P	12 53 52.0	-0.6
	comp=Z,0.3nm,0.6s,mb3.9,baz=63,slow=3.3,SNR=4.1						
SONM				LR	LR	13 31 42.9	
	comp=Z,130nm,21.6s,MS4.4,baz=358,slow=32						
GTA	Gaotai	97.71	309	*e*P	P	12 54 06.0	+1.9
GTA				AP	pP	12 54 20.5	+2.9
GTA				XP	sP	12 54 26.0	+3.9
GTA				PP	PP	12 58 09.5	+4.3
GTA				PPP	PPP	13 00 16.5	+4.4
GTA				SKS	SKS	13 04 38.5	+1.9
GTA				S	S	13 05 27.3	+4.8
GTA				AMB	AMB		
	comp=Z,120nm,4.9s						
GTA				LR	LR		
	comp=N,110nm,17.9s,MS4.6						
GTA				LR	LR		
	comp=E,140nm,21.7s,MS4.6						
GTA				LR	LR		
	comp=Z,190nm,24.3s,MS4.5						
LPAZ	La Paz	99.05	110	LR	LR	13 29 45.9	
	comp=Z,74nm,20.0s,MS4.2,baz=50,slow=30						
ROSC	El Rosal	99.07	87	LR	LR	13 29 17.3	
	comp=Z,135nm,20.9s,MS4.4,baz=14,slow=30						
WMQ	Urumqi	107.35	312	PDIF	Pdif	12 54 48.5	+1.6
WMQ				PP	PP	12 59 19.0	+1.1
WMQ				PP	PP		
	comp=Z,240nm,4.6s						
WMQ				LR	LR		
	comp=N,250nm,30.0s,MS4.7						
WMQ				LR	LR		
	comp=E,180nm,27.0s,MS4.7						
WMQ				LR	LR		
	comp=Z,140nm,25.4s,MS4.4						
MKAR	Makanchi Array	111.27	315	PKiKP		12 59 02.8	
	comp=Z,1.0nm,0.9s,baz=133,slow=0.6,SNR=5.2						
ARCES	ARCESS Array B	124.43	352	PKP	PKPdf	12 59 24.6	-1.9
	comp=Z,8.2nm,1.0s,baz=30,slow=0.4,SNR=8.5						
AKASG	Malin Array Be	140.40	338	PKP	PKPdf	12 59 56.1	-0.7
	comp=Z,0.5nm,0.4s,baz=45,slow=1.3,SNR=9.3						
CLL	Collm	143.61	354	*e*PKIKP	PKPdf	13 00 04.0	+1.6
STHS	Stebnicka Huta	143.99	345	*e*PKP	PKPdf	13 00 02.9	-0.2
DPC	Dobruska-Polom	144.12	350	*e*PKP	PKPdf	13 00 00.8	-2.5
KOLS	Kolonicke sedl	144.16	343	*e*PKP	PKPdf	13 00 01.7	-1.7
PVCC	Panska Ves	144.20	352	*e*PKP	PKPdf	13 00 04.3	+0.9
OKC	Ostrava-Krasne	144.29	348	*e*PKP	PKPdf	13 00 04.9	+1.3
MOX	Moxa	144.39	356	*e*P	PKPbc	13 00 04.0	+0.6
CRVS	Cervenica-Dubn	144.40	344	*e*PKP	PKPdf	13 00 02.8	-1.0
BURAR	Bucovina Array	144.42	339	⇑P	PKPbc	13 00 06.1	+2.5
BURAR	Bucovina Array	144.42	339	⇑P	PKPbc	13 00 06.1	+2.5
PRU	Pruhonice	144.74	352	*e*PKP	PKPdf	13 00 06.2	+1.8
TNS	Taunus Mts	144.96	359	*e*PKP	PKPdf	13 00 07.2	+2.4
GIVF	Givet	145.01	3	*e*PKP1	PKPbc	13 00 06.7	+1.6
BAIF	Baives	145.02	4	*e*PKP1	PKPbc	13 00 07.1	+1.9
	comp=Z,43nm,1.1s						
KECS	Kecovo	145.04	345	*e*PKP	PKPdf	13 00 07.3	+2.3
KECS				*e*		13 00 16.0	
KECS	Kecovo	145.04	345	*e*PKP2	PKPab	13 00 03.5	-3.0
KECS				*e*		13 00 07.3	
KECS				*e*		13 00 16.0	
TREC	Trest	145.28	351	*e*PKP	PKPdf	13 00 07.8	+2.4
GRA1	Grafenberg Arr	145.37	356	*e*PKP	PKPdf	13 00 05.5	0.0
GRF	Grafenberg Arr	145.37	356	*e*PKP	PKPdf	13 00 05.5	0.0
VYHS	Vyhne	145.42	347	*e*PKP	PKPdf	13 00 08.8	+3.2
VYHS				*e*		13 00 20.0	
VYHS	Vyhne	145.42	347	*e*PKIKP	PKPdf	13 00 05.5	-0.1
VYHS				*e*		13 00 08.8	
VYHS				*e*		13 00 20.0	
ROSF	Rostrenen	145.67	13	*e*PKP1	PKPbc	13 00 09.2	+2.4
	comp=Z,41nm,1.0s						
SMOL	Smolenice	145.70	348	*e*PKP	PKPdf	13 00 10.2	+4.1
KHC	Kasperske Hory	145.70	353	*e*PKP	PKPdf	13 00 06.2	+0.1
KHC				*e*pPKP		13 00 20.5	
FLN	La Foliniere	145.78	9	*e*PKP1	PKPbc	13 00 09.5	+2.4
	comp=Z,26nm,0.8s						
FLN				*e*R			
	comp=Z,598nm,23.0s						
MLR	Muntele Rosu	145.96	337	⇑P	PKPdf	13 00 10.3	+3.6
MLR	Muntele Rosu	145.96	337	⇑P	PKPdf	13 00 10.3	+3.6
GEC2	GERESS Array S	145.97	353	*e*PKP	PKPdf	13 00 07.2	+0.7
GERES	GERESS Array B	145.97	353	PKPbc	PKPbc	13 00 06.9	-0.6
	comp=Z,3.7nm,0.8s,baz=45,slow=3.8,SNR=12						
LDF	La Druitiere	146.00	9	*e*PKP1	PKPbc	13 00 09.4	+1.7
	comp=Z,26nm,1.0s						
GRR	Gorron	146.08	10	*e*PKP1	PKPbc	13 00 10.0	+2.2
	comp=Z,54nm,1.2s						
VOIR		146.35	338	⇓P	PKPdf	13 00 11.5	+4.2
VOIR		146.35	338	⇓P	PKPdf	13 00 11.5	+4.2
BR131	Keskin Array S	146.49	322	*e*PKPdf	PKPdf	13 00 08.0	+0.2
BRTR	Keskin Array B	146.49	322	PKPbc	PKPbc	13 00 07.7	-1.4
CDF	Champ du Feu	146.78	0	*e*PKP1	PKPbc	13 00 12.2	+2.8
HAU	Haudompre	147.17	1	*e*PKP1	PKPdf	13 00 13.3	+4.7
	comp=Z,18nm,0.8s						
HAU				*e*R			
	comp=Z,278nm,21.0s						
BZS	Buzias	147.35	342	⇑P	PKPdf	13 00 06.1	-2.9
BZS	Buzias	147.35	342	⇑P	PKPdf	13 00 06.1	-2.9
LOR	Lormes	147.77	5	*e*PKP1	PKPdf	13 00 15.0	+5.4
	comp=Z,10nm,0.7s						
SSF	Saint Saulge	147.95	5	*e*PKP1	PKPdf	13 00 15.5	+5.6
	comp=Z,16nm,0.9s						
AVF	Avril sur Loir	148.21	5	*e*PKP1	PKPdf	13 00 15.8	+5.5
	comp=Z,14nm,0.8s						
BGF	Bois d'Agland	148.39	6	*e*PKP1	PKPdf	13 00 17.2	+6.6
CABF	La Chapelle	148.56	2	*e*PKP1	PKPdf	13 00 17.6	+6.7
	comp=Z,44nm,1.1s						
LPL	La Plagne	149.67	1	*e*PKP1	PKPdf	13 00 20.8	+8.1
LPG	La Plagne	149.69	1	*e*PKP1	PKPdf	13 00 21.0	+8.3
ORIF	Oris-en-Rattie	150.24	2	*e*PKP1	PKPdf	13 00 21.6	+8.0
ORIF				*e*R			
	comp=Z,469nm,23.0s						
MBDF	Montbardon	150.46	1	*e*PKP1	PKPdf	13 00 22.9	+9.0
	comp=Z,11nm,0.8s						
LASF	Ste Croix	150.94	5	*e*PKP1	PKPdf	13 00 23.3	+8.6
	comp=Z,16nm,0.9s						
SMRF	Simiane la Rot	151.16	3	*e*PKP1	PKPdf	13 00 24.3	+9.3
ETSF	Etsaut	151.43	13	*e*PKP1	PKPdf	13 00 24.6	+9.1
	comp=Z,20nm,0.8s						
MTLF	Montolieu	151.48	8	*e*PKP1	PKPdf	13 00 24.2	+8.7
ESDC	Sonseca Array	153.51	20	PKPbc	PKPdf	13 00 26.9	+8.4
	comp=Z,0.3nm,0.4s,baz=342,slow=4.5,SNR=6.0						
ESDC				PKPab	PKPab	13 00 40.0	-1.1
	comp=Z,0.7nm,0.5s,baz=323,slow=3.6,SNR=6.0						

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*IDC **28** 12:46:37.2±0.9,3.34S×146.11E,mb4.2/6,mb1 4.4/8, mb1mx4.3/12,mbtmp4.3/8,ML3.6/2,MS4.1/7,Ms1 4.1/7, ms1mx3.8/20,Error ellipse: s-maj=34.3km s-min=18.3km az=77.0*

*NEIC **28** 12:46:42.3±0.5,3.38S×146.16E,h35^{km},mb4.1/5,Error ellipse: s-maj=13.5km s-min=10.2km az=67.0*

ISC 28 12:46:40.1±0.6,3.43S±0.06×146.1E±0.1,h33^{km},n20, σ0^{s}.79/16,mb4.1/9,MS4.3/5,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.03	170	Pn	Pn	12 48 08.0	-1.5
	2.5nm,0.3s,baz=356,slow=7.6,SNR=24						
PMG				Sn	Sn	12 49 19.0	+0.9
	0.8nm,0.3s,baz=161,slow=16,SNR=3.0						
PMG				LR	LR	12 50 16.5	
	comp=Z,482nm,19.4s,baz=357,slow=36						
HNR	Honiara	14.98	114	Pn	P	12 50 10.1	-1.3
	1.9nm,0.3s,baz=334,slow=18,SNR=3.8						
CTAO	Charters Tower	16.56	180	*e*Pn	P	12 50 37.8	+6.3
	16nm,1.0s						
GUMO	Guam	16.95	356	LR	LR	12 56 20.7	
	comp=Z,142nm,21.4s,baz=136,slow=35						
WRAB	Tennant Creek	20.02	214	*e*P	P	12 51 12.5	-0.5
	147nm,1.3s						
WRA	Warramunga Arr	20.03	214	P	P	12 51 12.6	-0.6
	56nm,1.1s,baz=38,slow=11,SNR=43						
DZM	Mont Dzumac	27.07	135	P	P	12 52 23.3	+1.3
	6.7nm,0.8s,mb4.2,baz=64,slow=13,SNR=3.6						
DZM				LR	LR	13 01 45.2	
	comp=Z,510nm,18.2s,MS4.1,baz=18,slow=34						
STKA	Stephens Creek	28.62	188	P	P	12 52 36.8	+1.0
	6.3nm,0.9s,mb4.3,baz=355,slow=12,SNR=2.0						
AFI	Afiamalu	42.84	107	LR	LR	13 08 32.3	
	comp=Z,259nm,18.2s,MS4.2,baz=42,slow=31						
URZ	Urewera	44.75	145	LR	LR	13 09 19.0	
	comp=Z,360nm,21.4s,MS4.3,baz=338,slow=30						
RPZ	Rata Peaks	45.80	155	LR	LR	13 11 26.6	
	comp=Z,426nm,18.4s,MS4.4,baz=59,slow=32						
ULN	Ulaanbaatar	61.44	331	*e*P	P	12 56 56.1	+0.4
	0.9nm,0.6s,mb4.1						
SONM	Songino Array	61.74	331	P	P	12 56 57.1	-0.6
	0.7nm,0.8s,mb3.9,baz=135,slow=8.4,SNR=5.1						
MKAR	Makanchi Array	74.96	320	P	P	12 58 20.1	+0.2
	1.7nm,0.9s,mb4.0,baz=100,slow=7.4,SNR=13						
KURK	Kurchatov	78.63	323	*e*P	P	12 58 40.5	+0.1
	2.3nm,1.1s,mb4.0						
KURK				*e*PcP	PcP	12 58 47.8	-1.9
AAK	Ala-Archa	78.92	314	*e*P	P	12 58 42.0	-0.1
	0.7nm,0.6s,mb3.8						
ILAR	Eielson Array	83.48	23	P	P	12 59 06.0	+0.4
	1.8nm,0.9s,mb4.1,baz=248,slow=5.4,SNR=11						
BRVK	Borovoye	84.25	324	*e*P	P	12 59 10.0	+0.2
	2.4nm,1.0s,mb4.3						
DAWY	Dawson	86.33	25	*e*P	P	12 59 25.2	+5.5
NVAR	Mina Array Bea	96.49	52	LR	LR	13 33 47.4	
	comp=Z,124nm,20.6s,MS4.4,baz=275,slow=29						

GUC 28 12:59:12.7±0.9,26.26S×70.73W,h44^{km}±9^{km},ML3.5,1C, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRCH	Chaqaral	0.13	131	⇑*i*P	P	12 59 21.9	+2.1
CRCH				*i* S	S	12 59 27.0	+2.2
CRCH				AMP		12 59 27.3	
	comp=N,5μm,0.2s						
CDCH	Caldera	0.82	186	*e*P	P	12 59 28.6	+0.7
CDCH				*i* S	S	12 59 39.5	+0.5
CPCH	Copiapo	1.15	163	*e*P	P	12 59 33.2	+0.7
CPCH				*i* S	S	12 59 48.6	+1.3
CPCH				AMP		12 59 49.7	
	comp=E,3μm,0.1s						
CPN1	Cerro Paranal	1.65	10	*e*P	P	12 59 40.7	+0.9
CPN1				*i* S	S	13 00 00.6	+0.6
CEN1	Los Morros	2.90	10	*e*P	P	12 59 54.2	-3.3

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*ISK **28** 13:03:02.6,35.19N×27.74E,h34^{km},MD3.4*

*CSEM **28** 13:03:04.1±0.1,35.26N×27.90E,h30^{km},MD3.5,Error ellipse: s-maj=2.3km s-min=1.3km az=83.0*

*ATH **28** 13:03:05.9,35.47N×27.74E,h30^{km}±2^{km},MD3.5/5*

*NEIC **28** 13:03:05.9,35.47N×27.74E,h30^{km},MD3.5(ATH),After ATH.*

*HLW **28** 13:03:07.2,35.18N×27.90E,h33^{km},Mb3.7*

ISC 28 13:03:03.5±0.9,35.26N±0.03×27.86E±0.06,h26^{km}±11^{km}, n41,σ0^{s}.67/45,9C-6D,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.64	297	⇓*i*PB	Pb	13 03 15.5	-0.5
KARP				*e*SB	Sb	13 03 24.0	-0.6
ARG	Arkhangelos	0.98	13	*e*PN	Pn	13 03 22.1	+0.4
DAT	Datca	1.49	351	*i* PN	Pn	13 03 28.3	-0.6
DAT				*i* SN	Sn	13 03 47.2	-0.4
DALT	Dalyan (Mudla)	1.64	22	PN	Pn	13 03 31.2	+0.2
FETY	Fethiye	1.70	36	PN	Pn	13 03 32.1	+0.2
XRY	Khrisi	1.82	258	*e*PB	Pb	13 03 36.0	+0.1
NPS	Neapolis	1.84	271	*e*PB	Pb	13 03 37.0	+0.7
BODT	Bodrum	1.85	346	PN	Pn	13 03 33.2	-1.0
YER	Yerkesik	1.91	10	PN	Pn	13 03 35.5	+0.6
MLSB	Milas	2.04	358	*e*PN	Pn	13 03 36.5	-0.2
AYDN	Tasoluk	2.40	0	*i* P	Pn	13 03 42.3	+0.4
SMG	Samos	2.58	342	*e*PN	Pn	13 03 44.6	0.0
DNZL	Cakiroluk	2.61	21	*i* P	Pn	13 03 45.7	+0.7
APE	Apeiranthos	2.61	315	*e*PN	Pn	13 03 43.6	-1.4
APE	Apeiranthos	2.61	315	*e*Pn	Pn	13 03 44.7	-0.3
DENT	Denizli	2.67	20	*e*PN	Pn	13 03 45.8	0.0
VAM	Vamos	3.00	274	*e*PN	Pn	13 03 53.2	+2.8
KDAG	Bornova	3.17	352	*e*P	Pn	13 03 49.2	-3.8
MANT	Manisa	3.28	10	*i* P	Pn	13 03 53.6	-0.8
TKTP	Tekketepe	3.41	35	*i* P	Pn	13 03 56.7	+0.4
HMAT	Matruh	4.20	189	⇓P	Pn	13 04 07.9	+0.4
VLI	Veliai	4.25	291	*e*PN	Pn	13 04 09.0	+0.8
DABA	Dabaa	4.25	175	⇑P	Pn	13 04 08.5	+0.2
ERMK	Ermenek	4.33	70	*i* P	Pn	13 04 09.5	+0.2
SLUM		4.36	211	⇑P	Pn	13 04 10.7	+0.8
SLUM				S	Sn	13 04 57.0	-3.4
SLUM		4.36	211	P	Pn	13 04 10.6	+0.8
SLUM				S	Sn	13 04 57.0	-3.4
HBRG	Burj al ‘Arab	4.96	160	⇑P	Pn	13 04 18.7	+0.4
HNAT	Natroun	6.07	157	⇓P	Pn	13 04 34.3	+0.3
FYM	Al Fayyum	6.17	153	⇑P	Pn	13 04 35.2	-0.1
SWA1		6.25	198	⇓P	Pn	13 04 36.6	+0.1
SWA2		6.33	199	P	Pn	13 04 37.8	+0.1
HHAG	Hagoal	6.38	145	⇑P	Pn	13 04 38.3	-0.1
HSAF	As Saff	6.43	150	⇑P	Pn	13 04 38.9	-0.2
AMAG	Maghara	6.43	134	⇓P	Pn	13 04 39.3	+0.2
GLL	Jalalah	6.53	149	⇑P	Pn	13 04 40.2	-0.2
GLL	Jalalah	6.53	149	P	Pn	13 04 40.2	-0.3
SUZ		6.84	141	⇑P	Pn	13 04 44.5	-0.3
HFRF	Wahat Farafira	8.09	177	P	P	13 05 01.1	-1.2
HBST	Basata	8.38	134	⇓P	P	13 05 06.4	+0.2
HKAT	Jabal Katrina	8.50	140	P	P	13 05 07.4	-0.5
HDK1	Dakhla	9.77	172	⇑P	P	13 05 25.3	-0.3

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*BJI **28** 13:09:39.1,20.30S×178.80W,h608^{km},mB4.5,mb4.2*

*NEIC **28** 13:09:39.2±1.3,20.27S×178.81W,h609^{km}±17^{km},mb4.4/3, Error ellipse: s-maj=22.3km s-min=16.2km az=143.0*

*IDC **28** 13:09:42.8±2.8,20.47S×178.95W,h652^{km}±32^{km},mb3.4/8, mb1 3.7/9,mb1mx3.6/13,mbtmp4.4/9,Error ellipse: s-maj=39.1km s-min=15.2km az=159.0*

ISC 28 13:09:37.5±1.1,20.4S±0.1×178.8W±0.1,h595^{km}±14^{km}, n39,σ0^{s}.97/22,mb4.1/13,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	9.26	47	P	P	13 11 49.5	+0.3
	1.1nm,0.3s,baz=162,slow=6.4,SNR=3.2						
AFI				S	S	13 13 33.7	-1.1
	0.8nm,0.3s,baz=68,slow=19,SNR=2.2						
AFI	Afiamalu	9.26	47	*e*P	P	13 11 50.5	+1.3
AFI				*e*S	S	13 13 34.0	-0.8
DZM	Mont Dzumac	13.88	260	P	P	13 12 36.3	+1.5
	0.7nm,0.3s,baz=85,slow=14,SNR=9.2						
PMG	Port Moresby	34.59	283	P	P	13 15 39.9	+0.2
	8.1nm,0.8s,mb4.4,baz=147,slow=7.6,SNR=8.3						
STKA	Stephens Creek	37.20	244	P	P	13 16 00.7	-0.2
	2.2nm,0.6s,mb3.9,baz=89,slow=9.5,SNR=8.8						
WRAB	Tennant Creek	43.88	262	*e*P	P	13 16 52.9	-1.5
	4.6nm,0.7s,mb4.1						
WRA	Warramunga Arr	43.89	262	P	P	13 16 53.1	-1.4
	2.7nm,0.3s,mb4.2,baz=97,slow=7.4,SNR=204						
WRA				S	S	13 22 39.6	-4.6
	0.8nm,0.9s,baz=96,slow=13,SNR=3.6						
SBA	Scott Base	57.98	184	*e*P	P	13 18 35.4	-0.3
VNDA	Vanda	58.00	185	*e*P	P	13 18 35.7	-0.1
MJAR	Matsushiro Arr	69.65	324	P	P	13 19 49.6	-0.3
	3.0nm,0.6s,mb3.9,baz=153,slow=5.7,SNR=7.2						
MDJ	Mudanjiang	79.97	325	P	P	13 20 45.5	-1.4
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.1						
NVAR	Mina Array Bea	81.42	44	P	P	13 20 55.5	+1.0
	comp=Z,1.9nm,0.8s,mb3.6,baz=228,slow=9.7,SNR=13						
CN2	Changchun	81.73	323	*e*P	P	13 20 57.0	+1.1
ENH	Enshi	85.34	304	*e*P	P	13 21 14.9	+0.8
	comp=Z,7.9nm,0.8s,mb4.4						
TXAR	Lajitas Array	87.59	58	P	P	13 21 25.7	+0.9
	comp=Z,1.6nm,0.8s,mb3.8,baz=218,slow=5.5,SNR=16						
COLA	College	88.22	13	*e*P	P	13 21 26.0	-0.8
	comp=Z,8.0nm,0.9s,mb4.5						
ILAR	Eielson Array	88.33	13	P	P	13 21 26.4	-1.0
	comp=Z,3.1nm,0.9s,mb4.1,baz=223,slow=5.8,SNR=36						
KMI	Kunming	88.62	297	P	P	13 21 31.3	+1.6
KMI				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb4.9						
PDAR	Pinedale Array	89.36	44	P	P	13 21 33.0	+0.2
	comp=Z,1.8nm,0.6s,mb4.0,baz=215,slow=3.6,SNR=18						
MKAR	Makanchi Array	110.56	314	PKiKP		13 27 02.5	
	comp=Z,0.5nm,0.4s,baz=90,slow=1.2,SNR=8.1						
CHKZ	Chkalovo	118.31	321	*e*PKPdf	PKPdf	13 27 16.9	-0.8
ARCES	ARCESS Array B	128.64	349	PKP	PKPdf	13 27 36.8	-0.5
	comp=Z,1.8nm,0.5s,baz=8.4,slow=1.2,SNR=14						
FINES	FINESS Array B	135.42	343	PKP	PKPdf	13 27 47.6	-2.5
	comp=Z,1.7nm,0.8s,baz=90,slow=3.8,SNR=5.8						
AKASG	Malin Array Be	142.52	331	PKP	PKPdf	13 28 00.3	-2.7
	comp=Z,6.2nm,0.4s,baz=43,slow=4.4,SNR=18						
BR131	Keskin Array S	146.19	312	*e*PKPbc	PKPbc	13 28 10.6	-0.9
BRTR	Keskin Array B	146.19	312	PKPbc	PKPbc	13 28 12.6	+1.1
	comp=Z,2.6nm,0.6s,baz=138,slow=4.2,SNR=8.8						
KOLS	Kolonicke sedl	146.86	334	*e*PKP	PKPdf	13 28 14.2	+3.6
STHS	Stebnicka Huta	146.88	336	*e*PKP	PKPdf	13 28 14.7	+4.1
STHS				*e*		13 28 18.6	
CRVS	Cervenica-Dubn	147.21	335	*e*PKP	PKPdf	13 28 16.2	+5.1
UPC	Upice	147.71	342	*e*PKPbc	PKPdf	13 28 17.0	+5.1
CLL	Collm	147.74	346	⇓*i*PKP1	PKPdf	13 28 16.6	+4.7
CLL				*i* PKP2	PKPab	13 28 21.3	-1.5
DPC	Dobruska-Polom	147.75	342	*e*PKPbc	PKPdf	13 28 16.7	+4.7
KECS	Kecovo	147.93	336	*e*PKP	PKPdf	13 28 17.1	+4.8
PVCC	Panska Ves	148.08	344	*e*PKPbc	PKPdf	13 28 17.8	+5.3
VYHS	Vyhne	148.54	337	*e*PKP	PKPdf	13 28 19.0	+5.8
VYHS				*e*		13 28 25.4	
PRU	Pruhonice	148.58	343	*e*PKPbc	PKPdf	13 28 18.3	+5.1
KHC	Kasperske Hory	149.62	344	*e*PKPbc	PKPdf	13 28 21.1	+6.2
KHC				*e*PKPab	PKPab	13 28 29.6	-1.0
GEC2	GERESS Array S	149.85	343	*e*PKPbc	PKPdf	13 28 21.8	+6.5
GERES	GERESS Array B	149.85	343	PKPbc	PKPdf	13 28 21.8	+6.5
	comp=Z,1.8nm,0.5s,baz=45,slow=1.9,SNR=12						

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*IDC **28** 13:48:32.0±1.2,1.14S×126.68E,mb3.9/4,mb1 4.1/4, mb1mx3.9/13,mbtmp4.0/4,Error ellipse: s-maj=129.2km s-min=21.5km az=66.0*

*NEIC **28** 13:48:37.2±0.6,0.99S×127.07E,h35^{km},mb4.5/8,Error ellipse: s-maj=45.5km s-min=10.3km az=57.0*

ISC 28 13:48:34.9±0.7,1.0S±0.2×127.2E±0.3,h33^{km},n14, σ0^{s}.93/14,mb4.5/11,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	20.13	160	P	P	13 53 07.1	-1.9
	3.3nm,1.0s,baz=336,slow=11,SNR=16						
CTAO	Charters Tower	26.65	137	*e*P	P	13 54 14.9	+2.1
	22nm,1.5s,mb4.5						
STKA	Stephens Creek	33.64	157	P	P	13 55 15.0	+0.3
	3.8nm,0.7s,mb4.4,baz=351,slow=9.7,SNR=7.2						
STKA	Stephens Creek	33.64	157	P	P	13 55 15.0	+0.3
JIRN	Jiri	48.56	309	*e*P	P	13 57 17.3	0.0
	6.8nm,0.5s,mb5.0						
GUN	Gumba	48.92	309	*e*P	P	13 57 20.9	+0.8
	9.6nm,0.4s,mb5.2						
GKN	Gorkha	49.93	309	*e*P	P	13 57 28.4	+0.6
	4.7nm,0.6s,mb4.7						
KOLN	Koldanda	50.63	308	*e*P	P	13 57 34.2	+1.0
	7.9nm,0.7s,mb4.8						

SONM	Songino Array	51.86	342	P	P	13 57 41.6	-0.5
	0.4nm,0.6s,mb3.6,baz=163,slow=9.8,SNR=2.2						
MKAR	Makanchi Array	61.66	327	P	P	13 58 51.5	-0.5
	1.2nm,0.3s,mb4.5,baz=115,slow=7.6,SNR=56						
KURK	Kurchatov	65.92	329	eP	P	13 59 18.6	-1.2
	4.0nm,0.8s,mb4.5						
BRVK	Borovoye	71.55	328	eP	P	13 59 54.3	-0.2
	0.6nm,0.5s,mb3.8						
CHKZ	Chkalovo	71.67	328	eP	P	13 59 55.4	+0.2
	3.5nm,1.3s,mb4.1						
BR131	Keskin Array S	93.33	310	eP	P	14 01 47.6	-0.5

MAN 28 13:52:14.7,16.77N×120.00E,h8^{km},mb4.0,ML2.8,MS2.5, 1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.39	192	eP	Pg	13 52 23.2	+0.5
BOLP				eS	Sg	13 52 27.3	-0.6
BCPH	Baguio City Da	0.68	124	⇑eP	Pg	13 52 27.8	-0.4
BCPH				eS	Sg	13 52 37.6	+0.3
SCZP	Santa Cruz	0.99	185	eP	Pb	13 52 30.6	-3.0
SCZP				eS	Sb	13 52 42.4	-4.2
ABRA	Dolores	1.11	38	eP	Pb	13 52 35.3	-0.4
ABRA				eS	Sb	13 52 51.8	+1.6
APYP	Conner	1.61	47	eP	Pn	13 52 42.7	-0.9
APYP				eS	Sb	13 53 03.9	-0.8
CAUP	Cauayan	1.75	84	eP	Pn	13 52 46.6	+0.9
CAUP				eS	Sn	13 53 17.5	+9.1
BALP	Baler	1.83	124	eP	Pn	13 52 45.8	-0.9
BALP				eS	Sn	13 53 11.1	+0.9

*CSEM **28** 14:06:54.4±0.2,26.47N×55.83E,h10^{km},mb4.6/19,Error ellipse: s-maj=6.4km s-min=3.7km az=119.0*
*BJI **28** 14:06:56.2,26.80N×55.90E,h10^{km},mB4.9,mb4.5,Ms3.8, Msz4.0*
*IDC **28** 14:06:57.1±0.8,26.83N×55.83E,mb4.2/17,mb1 4.3/17, mb1mx4.3/21,mbtmp4.2/17,Error ellipse: s-maj=19.1km s-min=16.1km az=118.0*
*NEIC **28** 14:06:58.3±0.5,26.79N×55.86E,h10^{km},mb4.6/19, MN3.9(TEH),Error ellipse: s-maj=9.8km s-min=8.5km az=164.0*
*OMAN **28** 14:06:58.9±6.6,26.89N×55.98E,h6^{km}±22^{km},Error ellipse: s-maj=57.6km s-min=48.3km az=91.0*
*THR **28** 14:06:58.2±0.7,26.68N×55.91E,h18^{km}±9^{km},ML3.6*
*MOS **28** 14:07:00.3±0.8,26.84N×55.78E,h33^{km},mb4.8/15,Error ellipse: s-maj=13.4km s-min=6.2km az=126.5*
*TEH **28** 14:07:03.6,26.90N×55.68E,h10^{km},Mn3.9*
ISC 28 14:06:57.4±0.3,**26.78N**±0.03×**55.70E**±0.04,**h10^{km},n117, σ1^{s}09**/123,**mb4.4**/39,**MS3.9**/1,**2C-2D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.75	34	ePg	Pg	14 07 12.7	+0.2
BNDS				eSg	Sg	14 07 23.4	+0.9
BNDS				AML	AML	14 07 36.5	
	comp=N,3µm,0.4s						
BNDS	Bandar-Abbas	0.75	34	ePg	Pg	14 07 12.6	+0.2
	SNR=95						
BNDS				eSg	Sg	14 07 23.4	+0.9
	comp=N,3µm,0.4s,SNR=95						
BANOM	Banah	1.01	148	⇓P	Pb	14 07 18.2	+1.7
	SNR=485						
BANOM				⇓S	Sb	14 07 32.3	+2.6
ASHO	Ashiyiah	2.11	171	⇑P	Pn	14 07 36.3	+3.0
	SNR=23						
GHIR	Ghir-Karzin	2.83	303	ePn	Pn	14 07 48.0	+4.4
KRBR	Kerman	3.32	16	ePn	Pn	14 07 52.5	+2.0
KRBR				AML	AML	14 08 53.7	
	comp=N,146nm,0.5s						
ISRV	Sarvestan	3.45	319	Pn	Pn	14 07 55.9	+3.5
IMOK	Mook	3.47	311	Pn	Pn	14 07 54.6	+1.9
ARQ	Araqi	3.51	168	⇑P	Pn	14 07 55.0	+1.8
	SNR=23						
IPAR	Pars	3.84	323	Pn	Pn	14 08 01.2	+3.3
IMEH	Mehriz	4.69	349	Pn	Pn	14 08 11.9	+1.9
IBAF	Bafgh	4.79	359	Pn	Pn	14 08 13.0	+1.6
WBK	Wadi Bani Khal	5.11	144	P	Pn	14 08 15.3	-0.5
	SNR=46						
ISAD	Sadrabad	5.41	342	Pn	Pn	14 08 22.0	+1.9
ICHK	Chekchek	5.56	349	Pn	Pn	14 08 23.6	+1.4
NASN	Na'in	6.50	338	ePn	Pn	14 08 37.4	+1.8
ISFB	Sefidab	8.12	339	Pn	P	14 08 58.7	+0.6
ISFB				Sn	Sn	14 10 24.1	-6.8
IVRN	Varamin	8.87	338	Pn	P	14 09 09.0	+0.4
IVRN				Sn	Sn	14 10 41.9	-7.8
IQOM	Qom	8.96	335	Pn	P	14 09 10.2	+0.3
IFIR	Firoozkooh	9.19	345	Pn	P	14 09 13.1	+0.1
IDMV	Damavand	9.31	341	Pn	P	14 09 15.0	+0.3
IAFJ	Afjeh	9.67	340	Pn	P	14 09 20.8	+1.2
IRAZ	Razeghan	9.91	332	Pn	P	14 09 22.9	-0.2
IKOM	Komasi	10.20	318	Pn	P	14 09 25.7	-1.3
IGHG	Ghaleghazi	10.88	316	Pn	P	14 09 35.5	-0.8
IDHR	Dehrash	11.24	317	Pn	P	14 09 40.5	-0.7
GNI	Garni	16.14	328	eP	P	14 10 48.7	+2.7
	comp=N,5.7nm,0.5s						
GNI	Garni	16.14	328	eP	P	14 10 48.7	+2.7
GNI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GNI	Garni	16.14	328	eP	P	14 10 48.7	+2.7
	comp=Z,5.7nm,0.5s						
KIV	Kislovodsk	20.11	332	eP	P	14 11 35.6	+1.5
	comp=Z,22nm,0.6s						
KIV	Kislovodsk	20.11	332	eP	P	14 11 35.5	+1.4
KIV				pmax	pmax		
	comp=Z,24nm,0.7s						
KIV	Kislovodsk	20.11	332	eP	P	14 11 35.5	+1.4
	comp=Z,24nm,0.7s						
CSS	Prodhromos	20.83	298	P	P	14 11 43.1	+1.4
AAK	Ala-Archa	22.03	39	eP	P	14 11 51.3	-2.5
	comp=Z,2.7nm,0.8s,mb3.7						
AAK	Ala-Archa	22.03	39	eP	P	14 11 51.3	-2.5
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb3.8						
AAK	Ala-Archa	22.03	39	eP	P	14 11 51.3	-2.5
	comp=Z,2.7nm,0.8s,mb3.7						
BR131	Keskin Array S	22.44	311	eP	P	14 11 59.9	+2.0
BR131	Keskin Array S	22.44	311	eP	P	14 11 59.9	+2.0
BRTR	Keskin Array B	22.44	311	P	P	14 11 59.6	+1.7
	comp=Z,2.6nm,0.6s,mb3.9,baz=128,slow=12,SNR=13						
AKTO	Aktyubinsk	23.69	4	P	P	14 12 10.7	+0.8
	comp=Z,2.0nm,0.5s,mb3.8,baz=171,slow=9.2,SNR=12						
IDI	Anoyia	27.64	295	P	P	14 12 48.0	+0.8
	comp=Z,11nm,0.5s,mb4.8,baz=88,slow=9.9,SNR=14						
BVAR	Borovoye Array	28.42	19	P	P	14 12 53.3	-0.8
	comp=Z,1.3nm,0.4s,mb3.9,baz=202,slow=6.9,SNR=15						
MKAR	Makanchi Array	28.97	39	P	P	14 12 58.1	-1.0
	comp=Z,0.5nm,0.4s,mb3.6,baz=226,slow=8.8,SNR=9.9						
WMQ	Urumqi	30.91	48	eP	P	14 13 14.0	-2.4
AKASG	Malin Array Be	31.27	327	P	P	14 13 18.5	-0.9
	comp=Z,6.0nm,0.5s,mb4.7,baz=135,slow=8.4,SNR=32						
AKASG	Malin Array Be	31.27	327	P	P	14 13 18.5	-1.0
KMBO	Kilima Mbogo	32.95	216	P	P	14 13 36.4	+1.8
	comp=Z,4.3nm,0.2s,mb5.1,baz=72,slow=23,SNR=4.4						
KWP	Kalwaria	34.10	321	eP	P	14 13 44.4	+0.2
	comp=Z,3.6nm,0.4s,mb4.7						
KWP	Kalwaria	34.10	321	eP	P	14 13 44.4	+0.2
KWP				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.7						
KWP	Kalwaria	34.10	321	eP	P	14 13 44.4	+0.2
	comp=Z,3.6nm,0.4s,mb4.7						
MORC	Moravsky Berou	37.16	318	eP	P	14 14 10.3	+0.2
	comp=Z,3.3nm,0.6s,mb4.3						
MORC	Moravsky Berou	37.16	318	eP	P	14 14 10.4	+0.3
MORC				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.3						
MORC	Moravsky Berou	37.16	318	eP	P	14 14 10.4	+0.3
	comp=Z,3.3nm,0.6s,mb4.3						
DPC	Dobruska-Polom	38.11	319	eP	P	14 14 18.4	+0.3
GTA	Gaotai	38.69	60	eP	P	14 14 23.3	+0.2
GTA				PP	PP	14 15 57.0	+1.6
GTA				S	S	14 20 18.8	-0.6
GTA				AMB	AMB		
	comp=Z,120nm,4.2s						
GTA				LR	LR		
	comp=N,100nm,13.3s,MS4.0						
GTA				LR	LR		
	comp=E,100nm,14.1s,MS4.0						
GTA				LR	LR		
	comp=Z,80nm,11.8s,MS3.8						
GERES	GERESS Array B	39.16	316	P	P	14 14 26.3	-0.7
	comp=Z,1.2nm,0.4s,mb4.0,baz=104,slow=7.7,SNR=14						
KHC	Kasperske Hory	39.33	316	eP	P	14 14 28.5	+0.1
JOF	Joensuu	39.55	343	ep	P	14 14 29.5	-0.5
	comp=Z,0.9nm,0.3s,mb4.0						
FINES	FINESS Array B	39.96	338	P	P	14 14 32.2	-1.3
	comp=Z,2.2nm,0.4s,mb4.2,baz=140,slow=9.8,SNR=33						
FINES				PcP	PcP	14 16 37.4	-2.0
	comp=Z,0.5nm,0.3s,baz=121,slow=3.4,SNR=5.8						
FINES	FINESS Array B	39.96	338	P	P	14 14 32.2	-1.3
FINES				PcP	PcP	14 16 37.4	-2.0
FINES	FINESS Array B	39.96	338	PcP	PcP	14 16 37.4	-2.0
KAF	Kangasniemi	40.38	339	ep	P	14 14 37.2	+0.3
PGF	Pioggiola	40.97	305	eP	P	14 14 41.6	-0.3
SBF	Sospel	42.27	307	eP	P	14 14 52.1	-0.5
FRF	La Foret Royal	42.81	306	eP	P	14 14 56.1	-0.9
MBDF	Montbardon	42.86	308	eP	P	14 14 57.0	-0.4
	comp=Z,11nm,0.7s,mb4.4						
MBDF	Montbardon	42.86	308	eP	P	14 14 57.0	-0.4
MBDF				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.4						
LPG	La Plagne	42.99	309	eP	P	14 14 58.0	-0.4
	comp=Z,8.8nm,0.7s,mb4.3						
LPG	La Plagne	42.99	309	eP	P	14 14 58.0	-0.4
LPG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
LPL	La Plagne	43.00	309	eP	P	14 14 58.2	-0.3
	comp=Z,11nm,0.6s,mb4.5						
LPL	La Plagne	43.00	309	eP	P	14 14 58.2	-0.3
LPL				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.5						
CDF	Champ du Feu	43.16	313	eP	P	14 14 59.3	-0.4
HINF	Hinteralfeld	43.31	312	eP	P	14 15 00.3	-0.7
ORIF	Oris-en-Rattie	43.52	308	eP	P	14 15 02.0	-0.7
CABF	La Chapelle	43.62	310	eP	P	14 15 02.9	-0.6
	comp=Z,9.8nm,0.6s,mb4.4						
CABF	La Chapelle	43.62	310	eP	P	14 15 02.9	-0.6
CABF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.4						
HAU	Haudompre	43.69	312	eP	P	14 15 03.4	-0.6
SONM	Songino Array	44.55	48	P	P	14 15 09.4	-1.6
	comp=Z,0.9nm,0.8s,mb3.6,baz=256,slow=6.1,SNR=3.7						
LASF	Ste Croix	44.87	307	eP	P	14 15 13.5	-0.2
LOR	Lormes	45.22	311	eP	P	14 15 16.4	-0.1
	comp=Z,5.0nm,0.5s,mb4.3						
LOR	Lormes	45.22	311	eP	P	14 15 16.4	-0.1
LOR				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.4						
NB2	NORSAR Subarra	45.42	331	P	P	14 15 16.3	-1.5
	comp=Z,0.9nm,0.5s,mb3.9,baz=120,slow=7.9						
NOA	NORSAR Array B	45.42	331	P	P	14 15 16.3	-1.5
	comp=Z,4.1nm,1.1s,mb4.2,baz=114,slow=7.8,SNR=3.5						
SSF	Saint Saulge	45.43	311	eP	P	14 15 17.7	-0.4
	comp=Z,5.6nm,0.4s,mb4.7						
NAO	NORSAR Subarra	45.48	331	P	P	14 15 16.3	-2.0
NAO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.9						
NAO	NORSAR Subarra	45.48	331	P	P	14 15 16.3	-2.0
	comp=Z,0.9nm,0.5s,mb3.9						
BGF	Bois d'Agland	45.82	310	eP	P	14 15 20.9	-0.3
	comp=Z,16nm,0.6s,mb4.8						
BGF	Bois d'Agland	45.82	310	eP	P	14 15 20.9	-0.3
BGF				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.8						
MTLF	Montolieu	46.00	305	eP	P	14 15 23.1	+0.4
	comp=Z,8.7nm,0.6s,mb4.5						
MTLF	Montolieu	46.00	305	eP	P	14 15 23.1	+0.4
MTLF				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.5						
HYF	Humbligny	46.05	311	eP	P	14 15 23.2	+0.2
KEV	Kevo	46.12	347	ep	P	14 15 22.8	-0.5
CAF	Calviac	46.21	308	eP	P	14 15 24.4	+0.1
	comp=Z,9.8nm,0.5s,mb4.7						
CAF	Calviac	46.21	308	eP	P	14 15 24.4	+0.1
CAF				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.7						
TCF	Toulx Ste Croi	46.23	309	eP	P	14 15 24.2	-0.2
	comp=Z,13nm,0.7s,mb4.7						
TCF	Toulx Ste Croi	46.23	309	eP	P	14 15 24.2	-0.2
TCF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.7						
ARCES	ARCESS Array B	46.27	346	P	P	14 15 23.8	-0.6
	comp=Z,0.6nm,0.3s,mb4.0,baz=143,slow=8.8,SNR=15						
RJF	Les Rejaudoux	46.63	308	eP	P	14 15 27.3	-0.3
LFF	La Frestale	47.15	308	eP	P	14 15 31.7	0.0
ETSF	Etsaut	48.02	305	eP	P	14 15 39.0	+0.4
	comp=Z,14nm,0.7s,mb4.8						
ETSF	Etsaut	48.02	305	eP	P	14 15 39.0	+0.4
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.7s,mb4.8						
LDF	La Druitiere	48.04	312	eP	P	14 15 37.6	-1.1
	comp=Z,7.8nm,0.4s,mb4.8						
FLN	La Foliniere	48.30	313	eP	P	14 15 39.8	-0.8
	comp=Z,17nm,0.8s,mb4.8						
FLN	La Foliniere	48.30	313	eP	P	14 15 39.8	-0.8
FLN				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.8						
SJPF	Ste Jean	48.51	305	eP	P	14 15 42.8	+0.4
	comp=Z,12nm,0.5s,mb4.9						
SJPF	Ste Jean	48.51	305	eP	P	14 15 42.8	+0.4
SJPF				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.9						
SGMF	Saint Gilles	49.63	312	eP	P	14 15 50.2	-0.7
QUIF	Quistinic	50.02	311	eP	P	14 15 52.9	-1.0
ESDC	Sonseca Array	50.69	301	P	P	14 15 59.3	+0.1
	comp=Z,2.3nm,0.4s,mb4.5,baz=73,slow=7.0,SNR=14						
EVO	Evora	53.95	300	eP	P	14 16 23.1	-0.4
	comp=Z,6.8nm,0.5s,mb4.5						
CN2	Changchun	57.78	53	eP	P	14 16 49.0	-2.1
MDJ	Mudanjiang	60.61	52	P	P	14 17 05.5	-5.1
MDJ				S	S	14 25 18.5	-6.5
MDJ				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.9						
MDJ				LR	LR		
	comp=N,20nm,20.7s						
DBIC	Dimbokro	60.77	262	P	P	14 17 11.2	-1.0
	comp=N,3.7nm,0.8s,mb4.6,baz=30,slow=6.9,SNR=5.2						
LIC	Lamto	61.13	262	eP	P	14 17 14.0	-0.6
	comp=N,3.0nm,0.7s,mb4.5						
BOSA	Boshof	62.35	210	P	P	14 17 22.3	-0.3
	comp=N,4.0nm,0.6s,mb4.8,baz=14,slow=6.6,SNR=12						
ILAR	Eielson Array	87.07	9	P	P	14 19 43.1	-0.8
	comp=N,1.0nm,0.6s,mb4.2,baz=323,slow=4.4,SNR=22						
WRA	Warramunga Arr	89.22	113	P	P	14 19 54.6	-0.7
	comp=N,0.5nm,0.6s,mb4.0,baz=311,slow=4.0,SNR=16						

*IDC **28** 14:12:46.8±1.2,26.79N×55.82E,mb3.9/10,mb1 4.0/10, mb1mx3.9/20,mbtmp3.9/10,Error ellipse: s-maj=28.4km s-min=23.1km az=125.0*
*NEIC **28** 14:12:47.8±1.0,26.68N×55.83E,h10^{km},mb4.1/4, MN3.8(TEH),Error ellipse: s-maj=19.4km s-min=13.0km az=176.0*
*OMAN **28** 14:12:48.1±3.2,26.91N×55.99E,h1^{km}±11^{km},Error ellipse: s-maj=35.6km s-min=23.8km az=72.0*
*MOS **28** 14:12:49.5±1.3,26.71N×55.89E,h33^{km},mb4.4/3,Error ellipse: s-maj=21.0km s-min=12.5km az=99.8*
*CSEM **28** 14:12:49.8±0.1,26.78N×55.76E,h25^{km},ML3.4,Error ellipse: s-maj=2.9km s-min=1.4km az=59.0*
*TEH **28** 14:12:53.0,26.82N×55.87E,h10^{km},Mn3.8*
*THR **28** 14:12:55.0±1.3,27.34N×55.75E,h14^{km}±12^{km},ML3.4*
ISC 28 14:12:48.2±0.3,**26.84N**±0.03×**55.73E**±0.06,**h14^{km},n56, σ1^{s}32**/59,**mb3.9**/12,**2C-5D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.68	35	ePG	Pg	14 13 02.4	+0.3
BNDS				AML	AML	14 13 18.6	
	comp=N,3µm,0.4s						
BANOM	Banah	1.04	151	P	Pb	14 13 07.8	+0.3
	SNR=388						
BANOM				⇑S	Sb	14 13 22.3	+1.4
ASHO	Ashiyiah	2.17	172	P	Pn	14 13 26.3	+1.9
	SNR=50						
GHIR	Ghir-Karzin	2.83	301	ePn	Pn	14 13 39.1	+5.2
GHIR				eSg	Sg	14 14 16.8	-5.8
GHIR				AML	AML	14 14 49.9	
	comp=N,195nm,0.3s						
KRBR	Kerman	3.26	16	ePn	Pn	14 13 42.2	+2.2
KRBR				eSg	Sg	14 14 21.8	-15
ISRV	Sarvestan	3.43	318	Pn	Pn	14 13 40.7	-1.7
IMOK	Mook	3.46	310	Pn	Pn	14 13 40.6	-2.2
ARQ	Araqi	3.56	168	⇓P	Pn	14 13 44.8	+0.5
	SNR=16						
IPAR	Pars	3.81	322	Pn	Pn	14 13 44.4	-3.5
BIDO	Bidbid	3.95	146	⇓P	Pn	14 13 49.6	-0.2
	SNR=6.8						
BSY	Bisya	4.29	162	⇓P	Pn	14 13 54.6	0.0
SMDO	Samad	4.31	150	⇓P	Pn	14 13 54.7	-0.3
	SNR=12						
BSYO	Bisya	4.31	161	P	Pn	14 13 54.6	-0.4
IMEH	Mehriz	4.64	348	Pn	Pn	14 14 02.2	+2.6
IBAF	Bafgh	4.74	358	Pn	Pn	14 14 02.8	+1.8
JMDO	Jabal Madar	4.94	154	⇓P	Pn	14 14 03.6	-0.3
WBK	Wadi Bani Khal	5.14	144	⇑P	Pn	14 14 04.9	-1.7
	SNR=10						
ISAD	Sadrabad	5.36	341	Pn	Pn	14 14 12.2	+2.4
ICHK	Chekchek	5.51	348	Pn	Pn	14 14 13.3	+1.4
NASN	Na'in	6.46	338	ePn	Pn	14 14 26.2	+0.9
QRN	Al-Qurain	7.18	287	eP	Pn	14 14 36.6	+1.3
QRN				AML	AML	14 15 55.2	
	comp=Z,9.2nm,0.3s						
RDF	Al-Radifah	7.53	288	eP	Pn	14 14 40.7	+0.3
RDF				AML	AML	14 16 05.0	
	comp=Z,10.0nm,0.4s						
UMR	Umm Al-Rimmam	7.57	293	eP	Pn	14 14 42.0	+1.1
UMR				AML	AML	14 16 04.1	
	comp=Z,10nm,0.3s						
MIB	Mutribah	7.96	294	eP	Pn	14 14 47.6	+1.3
ISFB	Sefidab	8.07	339	Sn	Sn	14 16 16.9	-2.9
ISFB	Sefidab	8.07	339	Pn	P	14 14 49.2	+1.3
IVRN	Varamin	8.83	338	Pn	P	14 14 58.6	+0.2
IQOM	Qom	8.93	334	Pn	P	14 14 59.0	-0.7
IDMV	Damavand	9.27	341	Pn	P	14 15 04.2	-0.3
IAFJ	Afjeh	9.62	340	Pn	P	14 15 09.2	-0.2
IRAZ	Razeghan	9.88	331	Pn	P	14 15 01.3	-12
GNI	Garni	16.11	328	ePn	P	14 16 37.6	+1.7
	comp=Z,19nm,1.6s						
GNI	Garni	16.11	328	eP	P	14 16 37.6	+1.7
GNI				pmax	pmax		
	comp=Z,19nm,1.6s						
GNI	Garni	16.11	328	eP	P	14 16 37.6	+1.7
	comp=Z,19nm,1.6s						
KIV	Kislovodsk	20.07	332	eP	P	14 17 25.5	+1.5
	comp=Z,8.4nm,0.4s						
KIV	Kislovodsk	20.07	332	eP	P	14 17 25.5	+1.5
KIV				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KIV	Kislovodsk	20.07	332	eP	P	14 17 25.5	+1.5
	comp=Z,8.4nm,0.4s						
CSS	Prodhromos	20.83	298	eP	P	14 17 29.8	-2.1
	comp=Z,5.4nm,0.5s						
AAK	Ala-Archa	21.97	39	eP	P	14 17 42.3	-1.1
	comp=Z,3.5nm,0.9s,mb3.8						
AAK	Ala-Archa	21.97	39	eP	P	14 17 42.3	-1.1
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb3.9						
BRTR	Keskin Array B	22.43	311	P	P	14 17 49.8	+1.9
	comp=Z,1.2nm,0.6s,mb3.5,baz=101,slow=10,SNR=3.1						
BR131	Keskin Array S	22.43	311	eP	P	14 17 49.8	+1.9
BR131	Keskin Array S	22.43	311	eP	P	14 17 49.8	+1.9
AKTO	Aktyubinsk	23.63	4	P	P	14 17 59.6	+0.1
	comp=Z,2.1nm,0.5s,mb3.8,baz=171,slow=9.5,SNR=9.3						
GVD	Gavdhos	28.23	294	eP	P	14 18 40.8	-2.0
GVD	Gavdhos	28.23	294	eP	P	14 18 40.8	-1.9
BVAR	Borovoye Array	28.35	19	P	P	14 18 42.3	-1.4
	comp=Z,2.6nm,0.6s,mb4.0,baz=204,slow=8.6,SNR=22						
MKAR	Makanchi Array	28.91	39	P	P	14 18 47.7	-1.0
	comp=Z,0.5nm,0.6s,mb3.4,baz=221,slow=8.9,SNR=10						
AKASG	Malin Array Be	31.24	327	P	P	14 19 07.9	-1.5
	comp=Z,0.4nm,0.3s,mb3.8,baz=136,slow=8.5,SNR=8.3						
KHC	Kasperske Hory	39.31	316	eP	P	14 20 17.5	-0.9
FINES	FINESS Array B	39.92	338	P	P	14 20 22.9	-0.4
	comp=Z,1.2nm,0.5s,mb3.9,baz=146,slow=10,SNR=9.7						
SONM	Songino Array	44.49	48	P	P	14 21 00.5	-0.2
	comp=Z,1.6nm,0.8s,mb3.8,baz=253,slow=8.2,SNR=4.3						
NOA	NORSAR Array B	45.38	331	P	P	14 21 07.4	-0.3
	comp=Z,0.6nm,0.6s,mb3.6,baz=146,slow=6.4,SNR=2.3						
BOD	Bodaibo	50.89	36	eP	P	14 21 46.8	-3.8
BOD				pmax	pmax		
	comp=Z,8.0nm,2.2s,mb4.3						
BOSA	Boshof	62.41	210	P	P	14 23 11.7	-1.5
	comp=Z,2.0nm,0.5s,mb4.5,baz=61,slow=3.6,SNR=6.9						
ILAR	Eielson Array	87.01	10	P	P	14 25 33.1	-0.6
	comp=Z,0.6nm,0.7s,mb4.0,baz=322,slow=4.5,SNR=14						

*PRU **28** 15:49:29.0,50.35N×18.71E*
WAR 28 15:49:28.5,50.26N×18.86E,h0^{km},ML2.4,Mining Induced,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.60	93	ePG	Pg	15 49 40.0	-0.6
OJC				i SG	Sg	15 49 48.7	+0.1
OJC	Ojcow	0.60	93	ePg	Pg	15 49 40.3	-0.3
OJC				eSg	Sg	15 49 48.7	+0.1
OKC	Ostrava-Krasne	0.62	228	ePG	Pg	15 49 40.5	-0.4
OKC				eSG	Sg	15 49 49.1	-0.1
	19nm,0.4s						
NIE	Niedzica	1.26	131	ePG	Pg	15 49 53.0	-0.6
NIE				eSG	Sg	15 50 11.0	+0.6
DPC	Dobruska-Polom	1.63	274	ePG	Pg	15 49 57.1	-3.9
DPC				eSG	Sg	15 50 18.8	-4.0
	23nm,0.6s						
KSP	Ksiaz	1.74	291	ePG	Pg	15 50 01.0	-2.2
KSP				eSG	Sg	15 50 23.0	-3.4
STHS	Stebnicka Huta	1.76	118	ePN	Pn	15 50 01.6	+1.2
STHS				eSN	Sn	15 50 27.2	+3.5
UPC	Upice	1.84	279	eSG	Sg	15 50 25.5	-4.3
KECS	Kecovo	2.07	148	ePN	Pn	15 50 06.4	+1.6
KECS				eSN	Sn	15 50 33.0	+1.4
CRVS	Cervenica-Dubn	2.17	128	ePN	Pn	15 50 10.6	+4.3
CRVS				eSN	Sn	15 50 36.9	+2.7
PRU	Pruhonice	2.79	266	eSG	Sg	15 50 53.3	-8.2
KHC	Kasperske Hory	3.61	254	ePG	Pg	15 50 35.0	-5.5
KHC				eSG	Sg	15 51 20.9	-7.8
CLL	Collm	3.86	288	i SG	Sg	15 51 34.5	-2.6

*IDC **28** 16:01:14.8±1.4,52.26N×169.48W,mb3.9/10,mb1 4.1/12, mb1mx3.9/24,mbtmp3.9/12,ML3.7/2,Error ellipse: s-maj=38.6km s-min=14.3km az=179.0*
*NEIC **28** 16:01:19.8±0.8,52.12N×169.59W,h40^{km}±5^{km}, ML3.4(AEIC),Error ellipse: s-maj=16.0km s-min=4.4km az=159.0*
ISC 28 16:01:18.5±1.3,**52.1N**±0.2×**169.6W**±0.1,**h49^{km}**±8^{km},**n27, σ0^{s}56**/27,**mb3.9**/10,**Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKO	Nikolski	1.00	28	P	P	16 01 36.0	-0.4
OKCE	Okmok Cone E	1.61	33	P	P	16 01 45.4	+0.4
OKCD	Okmok Cone D	1.63	34	P	P	16 01 46.1	+0.8
MSW	Makushin Switc	2.51	42	P	P	16 01 57.8	0.0
UNV	Unalaska Valle	2.58	46	P	P	16 01 58.4	-0.5
UNV				S	S	16 02 29.7	+0.6
MTBL	Makushin Table	2.59	42	P	P	16 01 59.4	+0.4
ATKA	Atka Island	2.81	274	P	P	16 02 01.9	-0.2
GSMY	Great Sitkin M	3.97	272	P	P	16 02 18.3	-0.1
GSCK	Great Sitkin C	4.03	271	P	P	16 02 19.4	0.0
ADAG	Mount Adagdak	4.31	271	P	P	16 02 23.4	+0.2
FX1	Attu Island--F	10.53	281	Pn	P	16 03 49.1	-0.3
	1.9nm,0.3s,baz=120,slow=3.0,SNR=11						
KDAK	Kodiak Island	11.32	53	Pn	P	16 03 56.0	-4.2
	0.7nm,0.3s,baz=170,slow=8.8,SNR=9.8						
ILAR	Eielson Array	17.27	34	P	P	16 05 15.2	-2.1
	0.1nm,0.3s,baz=210,slow=9.9,SNR=12						
INK	Inuvik	23.67	33	P	P	16 06 25.7	0.0
	1.3nm,0.5s,mb3.6,baz=238,slow=5.9,SNR=17						
INK	Inuvik	23.67	33	P	P	16 06 25.7	0.0
YKA	Yellowknife Ar	30.55	48	P	P	16 07 28.4	-0.6
	0.4nm,0.4s,mb3.6,baz=273,slow=8.1,SNR=4.4						
PDAR	Pinedale Array	40.61	79	P	P	16 08 55.2	+0.3
	0.9nm,0.7s,mb3.5,baz=325,slow=3.2,SNR=8.2						
SONM	Songino Array	51.30	301	P	P	16 10 20.2	+0.8
	1.0nm,1.0s,mb3.7,baz=90,slow=4.3,SNR=3.3						
TXAR	Lajitas Array	52.91	89	P	P	16 10 31.8	+0.1
	1.1nm,0.6s,mb4.0,baz=300,slow=5.5,SNR=10						
ARCES	ARCESS Array B	58.18	354	P	P	16 11 08.9	-0.2
	2.3nm,0.8s,mb4.3,baz=5.8,slow=7.2,SNR=6.7						
BVAR	Borovoye Array	63.84	324	P	P	16 11 47.9	+0.5
	2.8nm,0.5s,mb4.6,baz=53,slow=6.8,SNR=29						
MKAR	Makanchi Array	63.88	313	P	P	16 11 47.8	-0.1
	0.2nm,0.3s,mb3.6,baz=48,slow=6.9,SNR=9.8						
FINES	FINESS Array B	66.12	352	P	P	16 12 02.2	+0.1
	6.3nm,1.1s,mb4.5,slow=7.6,SNR=7.8						
FINES	FINESS Array B	66.12	352	P	P	16 12 02.2	+0.1
NOA	NORSAR Array B	67.22	360	P	P	16 12 09.1	+0.2

	0.9nm,0.8s,mb3.8,baz=10,slow=9.9,SNR=3.3						
NOA	NORSAR Array B	67.22	360	P	P	16 12 09.1	+0.1
MATP	Matopo	145.38	329	PKPbc	PKPbc	16 20 54.0	+2.7
	3.2nm,0.8s,baz=60,slow=3.5,SNR=4.9						

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*IDC **28** 16:07:49.5±0.8, 2.64N×128.29E, mb4.4/11, mb1 4.5/11, mb1mx4.3/17, mbtmp4.4/11, MS3.3/3, Ms1 3.3/3, ms1mx2.8/30, Error ellipse: s-maj=40.6km s-min=17.4km az=77.0*

*BJI **28** 16:07:52.1, 2.59N×129.01E, h47^{km}, mB4.7, mb4.9*

*NEIC **28** 16:07:55.1±0.4, 2.64N×128.47E, h35^{km}, mb4.9/10, Error ellipse: s-maj=14.4km s-min=8.1km az=64.0*

ISC 28 16:07:53.4±0.5**, 2.67N**±0.08×**128.5E**±0.1**, h33**^{km}**, n33, σ0^{s}98**/31**, mb4.7**/24**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	19.52	55	LR	LR	16 19 05.8	
	comp=Z,64nm,20.4s,baz=78,slow=34						
WRAB	Tennant Creek	23.20	166	*e*P	P	16 12 58.9	+0.4
	19nm,0.6s,mb4.7						
WRA	Warramunga Arr	23.20	166	P	P	16 12 58.9	+0.4
	15nm,0.7s,mb4.5,baz=346,slow=10,SNR=122						
JHJ	Hachijo jima 2	32.10	18	LR	LR	16 27 17.3	
	comp=Z,156nm,18.3s,baz=116,slow=36						
ENH	Enshi	32.81	329	*e*P	P	16 14 25.9	-0.2
	10nm,0.8s,mb4.8						
MJAR	Matsushiro Arr	34.89	14	P	P	16 14 42.9	-1.0
	4.5nm,0.6s,mb4.6,baz=184,slow=9.8,SNR=12						
STKA	Stephens Creek	36.56	161	P	P	16 14 57.0	-1.1
	7.4nm,0.7s,mb4.7,baz=333,slow=6.7,SNR=15						
STKA				LR	LR	16 30 05.3	
	comp=Z,26nm,20.7s,baz=276,slow=36						
LZH	Lanzhou	40.29	329	*e*P	P	16 15 30.5	+1.3
LZH				AP	pP	16 15 37.5	-1.5
LZH				AMB	AMB		
	comp=Z,30nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,100nm,4.5s						
LZH	Lanzhou	40.29	329	*e*P	P	16 15 30.5	+1.3
	comp=Z,30nm,1.2s,mb4.9						
LZH				pP	pP	16 15 37.5	-1.5
LZH				sP	sP	16 15 41.0	-2.2
ASAJ	Asahikawa	43.13	15	P	P	16 15 53.2	+0.7
	comp=Z,3.1nm,0.6s,mb4.2,baz=248,slow=5.4,SNR=5.7						
LSA	Lhasa	44.42	311	P	P	16 16 05.0	+1.9
LSA	Lhasa	44.42	311	*e*P	P	16 16 05.1	+2.0
	comp=Z,7.0nm,0.6s,mb4.6						
GTA	Gaotai	44.89	328	*e*P	P	16 16 07.8	+1.1
GTA				AP	pP	16 16 17.8	+1.2
GTA				XP	sP	16 16 24.0	+3.3
JIRN	Jiri	47.38	306	*e*P	P	16 16 27.2	+0.6
	comp=Z,25nm,0.7s,mb5.3						
GUN	Gumba	47.73	306	*e*P	P	16 16 29.8	+0.4
	comp=Z,39nm,0.7s,mb5.6						
KKN	Kakani	48.17	306	*e*P	P	16 16 32.8	0.0
	comp=Z,14nm,0.6s,mb5.2						
DMN	Daman	48.24	305	*e*P	P	16 16 33.5	+0.2
	comp=Z,26nm,0.8s,mb5.3						
ULN	Ulaanbaatar	48.66	341	*e*P	P	16 16 36.4	+0.1
	comp=Z,3.8nm,0.7s,mb4.5						
GKN	Gorkha	48.78	306	*e*P	P	16 16 37.4	0.0
	comp=Z,12nm,0.6s,mb5.1						
SONM	Songino Array	48.85	340	P	P	16 16 36.8	-1.0
	comp=Z,2.2nm,0.6s,mb4.4,baz=156,slow=8.1,SNR=11						
KOLN	Koldanda	49.53	305	*e*P	P	16 16 43.7	+0.4
	comp=Z,57nm,0.7s,mb5.7						
HYB	Hyderabad	51.09	290	*i* P	P	16 16 54.0	-1.2
HYB	Hyderabad	51.09	290	*e*P	P	16 16 54.0	-1.2
YAK	Yakutsk	59.23	1	*e*P	P	16 17 52.4	-1.3
	comp=Z,8.6nm,0.6s,mb5.0						
MKAR	Makanchi Array	59.40	325	P	P	16 17 54.0	-1.1
	comp=Z,2.1nm,0.6s,mb4.3,baz=121,slow=8.2,SNR=17						
MKAR	Makanchi Array	59.40	325	P	P	16 17 54.0	-1.1
KURK	Kurchatov	63.55	327	*e*P	P	16 18 21.7	-1.3
	comp=Z,4.1nm,0.6s,mb4.6						
BVAR	Borovoye Array	69.14	327	P	P	16 18 56.8	-1.6
	comp=Z,1.0nm,0.5s,mb4.0,baz=124,slow=5.3,SNR=8.5						
KDAK	Kodiak Island	81.87	32	P	P	16 20 12.3	+1.6
	comp=Z,5.8nm,0.8s,mb4.6,baz=236,slow=3.6,SNR=4.9						
IMA2	Indian Mountai	82.65	24	*e*P	P	16 20 16.6	+2.0
ILAR	Eielson Array	85.32	25	P	P	16 20 27.6	-0.5
	comp=Z,0.4nm,0.5s,mb3.8,baz=251,slow=4.9,SNR=13						
INK	Inuvik	90.51	22	P	P	16 20 52.7	-0.2
	comp=Z,0.4nm,0.4s,mb4.1,baz=297,slow=6.7,SNR=3.7						
ARCES	ARCESS Array B	92.03	340	P	P	16 20 59.5	-0.4
	comp=Z,2.9nm,1.0s,mb4.6,baz=100,slow=7.4,SNR=4.0						

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*IDC **28** 16:33:14.5±0.5, 29.30S×70.98W, mb5.2/18, mb1 5.1/21, mb1mx5.1/21, mbtmp5.0/21, ML4.7/2, MS4.9/6, Ms1 4.9/6, ms1mx4.6/15, Error ellipse: s-maj=18.4km s-min=14.5km az=85.0*

*GUC **28** 16:33:20.1±0.8, 29.30S×71.12W, h53^{km}±9^{km}, ML5.6*

*BJI **28** 16:33:21.8, 29.30S×71.00W, h48^{km}, mB5.9, Ms5.7, Msz5.5*

*HRVD **28** 16:33:21.8±0.2, 29.45S×71.54W, h39^{km}±2^{km}, MW5.5/73, Centroid moment Tensor Solution. LP body waves: s55,c84;Mantle waves: s73,c122; Half duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.20±.06; $M_{\theta\theta}$0.40±.05; $M_{\phi\phi}$-0.20±.05; $M_{r\theta}$-1.01±.07; $M_{\theta\phi}$-0.20±.04; $M_{\phi r}$2.06±.13; Best double couple: $M_0$2.326×10^{17} NP1: ϕ_s254°, δ9°, λ-169°. NP2:ϕ_s153°, δ88°, λ-81°. Principal axes: T 2.266, Plg43°, Azm234°; N .121, Plg9°, Azm333°; P -2.387, Plg46°, Azm72°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **28** 16:33:21.8±0.1, 29.31S×70.96W, mb5.2/36, MS5.6/120 Error ellipse: s-maj=6.2km s-min=2.8km az=81.0*

NEIC Felt [V] at La Higuera; [IV] at Andacollo, Copiapo, Coquimbo, Illapel, La Serena, Los Vilos, Monte Patria, Ovalle, Salamanca and Vallenar; [III] at Vicuna; [II] at Santiago, Valparaiso and Vina del Mar.

*MOS **28** 16:33:21.0±1.0, 29.28S×70.91W, h55^{km}, mb5.4/15, MS5.2/11, Error ellipse: s-maj=15.2km s-min=6.3km az=107.5*

ISC 28 16:33:20.2±0.1**, 29.30S**±0.02×**70.94W**±0.04**, h48**^{km}**, h48**^{km}±.5^{km}**:pP-P, n318, σ1^{s}05**/233**, mb5.2**/59**, MS5.5**/126**, 13C-10D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.66	203	⇓*i*P	P	16 33 33.5	+0.1
LSCH				*i* S	S	16 33 42.6	-0.5
LSCH				AMP		16 33 44.1	
	comp=E,454μm,0.3s						
TLL	Tololo Astrono	0.88	172	*e*P	P	16 33 38.0	+1.6
TLL				*i* PG	P	16 33 38.0	+1.6
TLL				*i* S	S	16 33 50.8	+2.6
TLL				AMP		16 33 53.6	
	comp=E,293μm,0.4s						
TLL	Tololo Astrono	0.88	172	*i* P	P	16 33 38.0	+1.7
TLL				*i* S	S	16 33 50.8	+2.5
CMCH	Combarbala	1.87	182	⇓*i*P	P	16 33 50.3	-0.1
CMCH				*i* S	S	16 34 13.1	+0.2
CPCH	Copiapo	2.00	15	*e*P	P	16 33 54.8	+2.6
CPCH				*i* S	S	16 34 17.6	+1.5
CDCH	Caldera	2.22	3	⇑*i*P	P	16 33 55.2	-0.1
CDCH				*i* S	S	16 34 21.6	0.0
ILCH	Illapel	2.34	185	*e*P	P	16 33 56.5	-0.5
ILCH				*i* S	S	16 34 23.9	-0.8
ILCH				AMP		16 34 38.6	
	comp=E,55μm,0.5s						
CHNG	Los Chungos	2.62	190	⇑*i*P	P	16 34 00.2	-0.9
CHNG				*i* S	S	16 34 30.3	-1.6
CHNG				AMP		16 34 47.0	
	comp=N,35μm,0.5s						
CRCH	Chaqaral	2.95	6	⇓*i*P	P	16 34 05.5	-0.4
CRCH				*i* S	S	16 34 39.6	-0.7
PACH	Papudo	3.26	187	*i* P	P	16 34 09.1	-1.0
CFAA	Coronel Fontan	3.28	135	Pn	P	16 34 14.6	+4.1
	comp=N,75nm,0.3s,baz=314,slow=12,SNR=1442						
CFAA				Sn	S	16 34 55.3	+6.8
	comp=N,165nm,0.3s,baz=310,slow=12,SNR=12						
JACH	Jahuel	3.39	175	*e*P	P	16 34 12.6	+0.7
PEL	Peldehue	3.84	177	⇓*i*P	P	16 34 18.8	+0.5
MDZ	Mendoza	4.00	154	*i* P	P	16 34 23.3	+2.7
MDZ				*i*		16 34 28.0	
MDZ				*i* S	S	16 35 10.1	+3.4
MDZ	Mendoza	4.00	154	*i* P	P	16 34 23.3	+2.7
MDZ				*i* S	S	16 35 10.1	+3.4
FCH	Farellones	4.06	172	⇑*i*P	P	16 34 23.3	+1.9
FCH				*i* S	S	16 35 11.7	+3.5
CLCH	Cerro Calan	4.10	175	*e*P	P	16 34 21.3	-0.7
ANTU	Antumapu	4.27	177	*e*P	P	16 34 24.7	+0.4
PCH	Pirque	4.33	175	*e*P	P	16 34 25.3	+0.1
TACH	Talagante	4.34	180	*e*P	P	16 34 24.7	-0.7
CPN1	Cerro Paranal	4.68	6	*e*P	P	16 34 27.8	-2.3
ANCH	Antofagasta	5.61	5	*e*P	P	16 34 40.2	-3.0
CEN1	Los Morros	5.92	7	*e*P	P	16 34 40.8	-6.6
SPCH	San Pedro de A	6.82	22	*e*P	P	16 34 59.3	-0.9
PLCA	Paso Flores	11.41	178	Pn	P	16 36 00.2	-3.0
	comp=N,2.2nm,0.3s,baz=351,slow=14,SNR=38						
PLCA				Sn	S	16 38 16.9	+6.7
	comp=N,1.9nm,0.3s,baz=14,slow=14,SNR=2.0						
PLCA				LR	LR	16 40 53.3	
	comp=N,6μm,20.3s,baz=347,slow=40						
PLCA	Paso Flores	11.41	178	Pn	P	16 36 00.6	-2.6
TRQA	Tornquist	11.48	142	Pn	P	16 36 04.0	-0.2
LPA	La Plata	12.37	120	*de*P	P	16 36 13.0	-3.0
LPA				*e*pP		16 36 20.4	
LPA				*e*S	S	16 38 31.0	-2.2
LPA				*e*SS	SS	16 38 47.0	-1.7
CPUP	Villa Florida	12.41	79	Pn	P	16 36 15.8	-0.8
ARE	Arequipa	12.79	358	*e*P	P	16 36 22.0	+0.3
ARE				*i*		16 36 52.2	
ARE				*e*		16 39 39.0	
ARE				*i*		16 39 45.2	
LPAZ	La Paz	13.20	12	Pn	P	16 36 23.6	-3.6
	comp=N,0.8nm,0.3s,baz=203,slow=6.7,SNR=23						
LPAZ				Sn	S	16 38 34.5	-19
	baz=112,slow=11,SNR=1.7						
LPAZ	La Paz	13.20	12	Pn	P	16 36 24.1	-3.1
SIV	San Ignacio	16.06	37	Pn	P	16 37 00.4	-3.9
	comp=N,1.9nm,0.3s,baz=231,slow=14,SNR=20						
NNA	Nana	18.08	341	Pn	P	16 37 30.9	+1.3
SAML	Samuel	21.51	21	P	P	16 38 06.6	-0.4
	comp=N,70nm,0.8s,mb5.1						
SAML				LR	LR		
	comp=Z,2μm,21.6s,MS4.5						
EFI	East Falkland	24.33	160	P	P	16 38 34.2	-0.1
EFI				LR	LR		
	comp=Z,467nm,19.0s						
BDFB	Brasilia	25.11	62	P	P	16 38 42.8	+0.6
	comp=Z,87nm,0.8s,mb5.3,baz=237,slow=9.4,SNR=74						
BDFB				LR	LR	16 49 47.1	
	comp=Z,5μm,18.1s,MS5.0,baz=238,slow=40						
BAO	Brasilia Array	25.13	62	P	P	16 38 43.0	+0.6
USHA	Ushuaia	25.58	177	P	P	16 38 45.5	-0.7
	comp=Z,117nm,0.9s,mb5.4,baz=334,slow=5.7,SNR=45						
USHA				LR	LR	16 49 34.4	
	comp=Z,4μm,19.3s,MS4.9,baz=340,slow=38						
CAM3	Guarapari	28.79	80	*e*P	P	16 39 16.1	+0.2
CAM3				*i*		16 39 19.1	
CAM3				*i*	pP	16 39 30.0	+1.7
CAM3				*i*		16 39 38.4	
CAM3				*i*		16 39 51.1	
OTAV	Otavalo	30.23	345	*e*P	P	16 39 28.1	-0.6
	comp=Z,76nm,1.4s,mb5.2						
OTAV				*e*pP	pP	16 39 40.0	-1.4
OTAV				*e*sP	sP	16 39 47.1	-0.3
OTAV				LR	LR		
	comp=Z,643nm,22.0s						
RPN	Rapa Nui	33.80	264	P	P	16 39 58.3	-1.5
	comp=Z,57nm,0.9s,mb5.5,baz=127,slow=5.1,SNR=3.6						
RPN				LR	LR	16 50 18.2	
	comp=Z,1μm,20.3s,MS4.6,baz=119,slow=30						
ROSC	El Rosal	34.11	354	P	P	16 40 02.0	-0.6
	comp=Z,7.5nm,0.4s,mb4.9,baz=127,slow=18,SNR=6.5						
PMSA	Palmer Station	35.76	175	*e*P	P	16 40 14.4	-1.7
	comp=Z,282nm,1.4s,mb6.0						
PMSA				*e*pP	pP	16 40 28.7	-0.3
PMSA				*e*sP	sP	16 40 34.9	-0.2
PMSA				LR	LR		
	comp=Z,3μm,19.0s,MS5.1						
SDV	Santo Domingo	37.96	0	LR	LR	16 57 48.5	
	comp=Z,1μm,19.3s,MS4.8,baz=354,slow=39						
SDV	Santo Domingo	37.96	0	P	P	16 40 33.6	-1.5
	comp=Z,17nm,0.8s,mb4.8						
SDV				LR	LR		
	comp=Z,1μm,20.0s,MS4.7						
RCBR	Riachuelo	40.48	62	P	P	16 40 57.6	+1.6
	comp=Z,52nm,0.9s,mb5.3						
RCBR				pP	pP	16 41 10.9	+1.9
RCBR				LR	LR		
	comp=Z,2μm,19.0s,MS5.0						
JTS	JuntasAbangare	41.61	339	P	P	16 41 05.8	+0.4
JTS				LR	LR		
	comp=Z,190nm,21.0s						
CPD	Cerro la Pandu	47.31	7	P	P	16 41 41.2	-10
SJG	San Juan	47.36	6	P	P	16 41 49.4	-2.1
SJG				pP	pP	16 42 04.1	-0.6
SJG				LR	LR		
	comp=Z,1μm,19.0s,MS4.8						
VNA3	Neumayer Olymp	53.38	159	⇑*i*P	P	16 42 36.9	+0.2
VNA3	Neumayer Olymp	53.38	159	⇑*i*	P	16 42 47.7	+11
VNA3	Neumayer Olymp	53.38	159	⇑*i*	P	16 42 56.1	+19
VNA1	Neumayer--Stat	53.66	158	P	P	16 42 38.9	+0.2
VNA1	Neumayer--Stat	53.66	158		P	16 42 50.0	+11
VNA1	Neumayer--Stat	53.66	158		P	16 42 53.8	+15
VNA1	Neumayer--Stat	53.66	158		P	16 42 58.6	+20
VNA2	Neumayer--Watz	54.01	159	⇑*i*P	P	16 42 41.4	+0.1
VNA2	Neumayer--Watz	54.01	159	⇑*i*	P	16 42 52.8	+12
VNA2	Neumayer--Watz	54.01	159	⇑*i*	P	16 43 00.8	+20
VNA2	Neumayer--Watz	54.01	159	S	S	16 50 15.5	+3.5
SNAA	Sanae	55.61	159	⇑*i*P	P	16 42 51.9	-1.0
SNAA	Sanae	55.61	159		P	16 43 06.5	+14
SNAA	Sanae	55.61	159		P	16 43 11.2	+18
SNAA	Sanae	55.61	159	S	S	16 50 34.8	+1.4
SNAA	Sanae	55.61	159	P	P	16 42 52.0	-1.0
	comp=Z,15nm,0.7s,mb5.1,baz=281,slow=7.2,SNR=236						
RKT	Rikitea	57.17	260	*e*P	P	16 43 02.9	-1.8
	comp=Z,114nm,1.4s,mb5.7						
RKT	Rikitea	57.17	260	*e*LR	LR	16 59 45.9	
	comp=Z,2μm,25.5s						
DWPF	Disney	57.96	349	PFAKE		16 43 20.0	+10
DWPF				LR	LR		
	comp=Z,753nm,21.0s,MS4.8						
MAIT	Maitri	60.25	158	⇑*i*P	P	16 43 24.7	-0.8
NVL	N'lazarevskaya	60.28	158	⇓*i*P	P	16 43 22.6	-3.1
NVL				*e**PP	pP	16 43 34.7	-4.6
NVL				*e*		16 44 03.6	
NVL				*i* S	S	16 51 24.6	-10
NVL				pmax	pmax		
	comp=Z,8.0nm,1.5s,mb4.5						
NVL				MLR	MLR		
	comp=Z,31nm,16.0s						
QSPA	South Pole Qui	60.93	180	P	P	16 43 29.0	-1.0
QSPA				LR	LR		
	comp=Z,866nm,22.0s,MS4.9						
BBSR	BB Station	61.62	6	PFAKE		16 43 50.0	+15
BBSR				LR	LR		
	comp=Z,865nm,21.0s,MS4.9						
NHSC	New Hope	62.68	351	PFAKE		16 43 50.0	+7.7
NHSC				LR	LR		
	comp=Z,734nm,20.0s,MS4.8						
GOGA	Godfrey	63.48	348	PFAKE		16 44 00.0	+12
GOGA				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
NATX	Nacogdoches	64.77	338	*e*P	P	16 43 55.5	-0.6
	comp=Z,36nm,0.7s,mb5.5						
NATX				*e*pP	pP	16 44 09.6	-0.2
NATX				LR	LR		
	comp=Z,1μm,20.0s,MS5.1						
MYNC	Murphy	65.22	348	PFAKE		16 44 10.0	+11
MYNC				LR	LR		
	comp=Z,904nm,20.0s,MS5.0						
CPCT	Cooper Cave	65.66	348	P	P	16 44 00.3	-1.4
CPCT				pP	pP	16 44 13.6	-1.9
SWET	Sewanee	65.71	347	P	P	16 43 59.2	-2.8
SWET				pP	pP	16 44 12.7	-3.1
OXF	Oxford	65.82	343	P	P	16 44 01.1	-1.7
OXF				pP	pP	16 44 15.5	-1.0
OXF				LR	LR		
	comp=Z,705nm,21.0s,MS4.8						
LTX	Lajitas	66.15	329	P	P	16 44 04.4	-0.6
	comp=Z,15nm,0.7s,mb5.1						
LTX				pP	pP	16 44 16.9	-1.8
LTX				LR	LR		
	comp=Z,989nm,22.0s,MS5.0						
LTX	Lajitas	66.15	329	P	P	16 44 04.4	-0.5
LTX				*PP	pP	16 44 16.9	-1.8
LTX				pmax	pmax		
	comp=Z,15nm,0.7s,mb5.1						
LTX				MLR	MLR		
	comp=Z,989nm,22.0s,MS5.0						
TXAR	Lajitas Array	66.15	329	P	P	16 44 03.9	-1.0
	comp=Z,12nm,0.7s,mb5.1,baz=152,slow=8.1,SNR=83						
TXAR	Lajitas Array	66.15	329	P	P	16 44 03.9	-1.0
TZTN	Tazewell	66.56	349	P	P	16 44 05.8	-1.6
BLA	Blacksburg	66.75	352	PFAKE		16 44 20.0	+11
BLA				LR	LR		
	comp=Z,837nm,19.0s,MS5.0						
ELN	Prospectdale	66.81	351	*e*P	P	16 44 08.0	-1.0
ELN				*e*pP	pP	16 44 21.5	-1.3
WVT	Waverly	66.99	345	*e*P	P	16 44 08.3	-1.9
	comp=Z,39nm,0.8s,mb5.5						
WVT				*e*pP	pP	16 44 20.5	-3.4
WVT				LR	LR		
	comp=Z,728nm,19.0s,MS4.9						
WVT	Waverly	66.99	345	*e*P	P	16 44 08.3	-1.8
WVT				*e**PP	pP	16 44 20.5	-3.4
WVT				pmax	pmax		
	comp=Z,39nm,0.8s,mb5.5						
WVT				MLR	MLR		
	comp=Z,728nm,19.0s,MS4.9						
MIAR	Mount Ida	67.00	340	PFAKE		16 44 20.0	+10
MIAR				LR	LR		
	comp=Z,2μm,19.0s,MS5.4						
CBN	Corbin	67.42	355	*e*P	P	16 44 10.3	-2.5
	comp=Z,92nm,1.8s,mb5.5						
CBN				LR	LR		
	comp=Z,2μm,21.0s,MS5.3						
TAOE	Nuku Hiva Isla	67.61	272	*e*LR	LR	17 04 12.9	
	comp=Z,6μm,29.1s						
SBA	Scott Base	67.86	191	P	P	16 44 14.6	-0.3
	comp=Z,36nm,1.3s,mb5.2						
SBA				LR	LR		
	comp=Z,708nm,22.0s,MS4.8						
SBA	Scott Base	67.86	191	P	P	16 44 14.6	-0.3
SBA				pmax	pmax		
	comp=Z,36nm,1.3s,mb5.2						
SBA				MLR	MLR		
	comp=Z,708nm,22.0s,MS4.8						
PARMO	Parma	67.95	344	*e*P	P	16 44 15.6	-0.5
PARMO				*e*pP	pP	16 44 28.9	-1.1
SDMD	Soldier's Deli	68.57	355	P	P	16 44 12.2	-7.7
WCI	Wyandotte Cave	68.69	347	P	P	16 44 18.5	-2.2
	comp=Z,27nm,0.7s,mb5.3						
WCI				LR	LR		
	comp=Z,680nm,19.0s,MS4.9						
WCI	Wyandotte Cave	68.69	347	P	P	16 44 18.5	-2.2
WCI				pmax	pmax		
	comp=Z,27nm,0.7s,mb5.3						
WCI				MLR	MLR		
	comp=Z,680nm,19.0s,MS4.9						
USIN	University of	68.72	346	P	P	16 44 20.5	-0.3
USIN				pP	pP	16 44 33.5	-1.3
SIUC	Southern Illin	68.82	345	P	P	16 44 20.2	-1.4
SIUC				pP	pP	16 44 33.6	-1.8
VNDA	Vanda	68.88	191	P	P	16 44 21.0	-0.3
	comp=Z,26nm,1.3s,mb5.0						
VNDA				LR	LR		
	comp=Z,597nm,20.0s,MS4.8						
VNDA	Vanda	68.88	191	P	P	16 44 21.0	-0.3
VNDA				pmax	pmax		
	comp=Z,26nm,1.3s						
VNDA				MLR	MLR		
	comp=Z,597nm,20.0s						
WMOK	Wichita Mounta	68.90	336	P	P	16 44 20.5	-1.6
WMOK				pP	pP	16 44 33.1	-2.9
WMOK				LR	LR		
	comp=Z,682nm,19.0s,MS4.9						
GDL2	Guadalupe Moun	68.90	330	*e*P	P	16 44 21.7	-0.5
GDL2				*e*pP	pP	16 44 35.1	-0.9
MNTX	Cornudas Mount	68.93	329	P	P	16 44 20.8	-1.6
	comp=Z,21nm,0.7s,mb5.2						
MNTX				LR	LR		
	comp=Z,763nm,20.0s,MS4.9						
MCWV	Mont Chateau	69.10	353	P	P	16 44 22.5	-0.7
	comp=Z,32nm,0.7s,mb5.4						
MCWV				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
MVL	Millersville	69.12	356	P	P	16 44 22.2	-1.1
MVL				pP	pP	16 44 37.5	+0.3
FVM	French Village	69.37	344	P	P	16 44 23.4	-1.5
FVM				pP	pP	16 44 37.6	-1.2
TBI	Tubuai	69.41	254	*e*LR	LR	17 05 23.9	
	comp=Z,2μm,27.8s						
SYO	Syowa Base	69.90	159	⇑P	P	16 44 25.8	-1.8
SYO	Syowa Base	69.90	159	⇓pP	pP	16 44 40.9	-0.5
SYO	Syowa Base	69.90	159	⇓sP	sP	16 44 45.1	-1.6
SYO	Syowa Base	69.90	159	⇑*i*P	P	16 44 25.8	-1.8
SYO				⇓*e*pP	pP	16 44 40.9	-0.5
SYO				⇓*i*sP	sP	16 44 45.1	-1.6
SYO				*e*S	S	16 53 30.6	-1.9
SLM	Saint Louis	69.94	344	P	P	16 44 27.5	-0.9
ACSO	Alum Creek Sta	70.07	350	P	P	16 44 27.9	-1.3
ACSO				*e*pP	pP	16 44 41.5	-1.5
ACSO				LR	LR		
	comp=Z,524nm,21.0s,MS4.8						
QUA2	Belchertown	71.23	359	*e*P	P	16 44 36.1	0.0
	comp=Z,27nm,1.0s,mb5.1						
QUA2				*e*pP	pP	16 44 50.0	0.0
VAH	Vaihoa	71.26	263	*e*P	P	16 44 36.0	-0.7
	comp=Z,141nm,1.5s,mb5.7						
HRV	Harvard--Oak R	71.45	360	PFAKE		16 44 50.0	+13
HRV				LR	LR		
	comp=Z,1μm,20.0s,MS5.2						
ERPA	Erie	71.55	353	PFAKE		16 44 50.0	+12
ERPA				LR	LR		
	comp=Z,837nm,21.0s,MS5.0						
TVO	Taravao	71.55	260	*e*P	P	16 44 38.0	-0.4
	comp=Z,190nm,1.3s,mb5.8						
BNM	Barren Site	71.56	329	P	P	16 44 39.0	+0.8
PMOR	Pomariorio Ree	71.59	263	*e*P	P	16 44 38.0	-0.6
	comp=Z,110nm,1.4s,mb5.6						
LPM	Los Pinos Moun	71.69	329	P	P	16 44 39.6	+0.7
PAE	Paea	71.89	260	*e*P	P	16 44 39.8	-0.6
	comp=Z,181nm,1.2s,mb5.9						
PPT	Papeete	71.92	260	*e*P	P	16 44 40.3	-0.3
	comp=Z,98nm,1.5s,mb5.5						
PPT	Papeete	71.92	260	*e*LR	LR	17 06 41.8	
	comp=Z,3μm,23.2s						
PPT	Papeete	71.92	260	P	P	16 44 40.4	-0.2
	comp=Z,39nm,0.8s,mb5.4,baz=106,slow=9.5,SNR=6.3						
LAZ	Ladron	72.00	329	*e*P	P	16 44 41.4	+0.6
LAZ				*e*pP	pP	16 44 54.9	+0.2
TUC	Tucson	72.00	325	P	P	16 44 40.3	-0.5
TUC				pP	pP	16 44 54.2	-0.6
TUC				LR	LR		
	comp=Z,4μm,22.0s,MS5.6						
KSU1	Kansas State U	72.13	339	*e*P	P	16 44 40.0	-1.5
ANMO	Albuquerque	72.16	330	P	P	16 44 42.4	+0.6
	comp=Z,3.8nm,0.7s,mb4.5,baz=135,slow=7.2,SNR=7.4						
ANMO	Albuquerque	72.16	330	P	P	16 44 42.1	+0.3
ANMO				LR	LR		
	comp=Z,2μm,20.0s,MS5.4						
AAM	Ann Arbor	72.20	350	PFAKE		16 44 50.0	+8.2
AAM				LR	LR		
	comp=Z,1μm,19.0s,MS5.1						
ACCN	Adirondack Com	72.37	358	P	P	16 44 43.0	+0.2
ACCN				pP	pP	16 44 57.3	+0.6
HNH	Hanover	72.66	359	P	P	16 44 44.9	+0.4
HNH				pP	pP	16 44 59.6	+1.1
DBIC	Dimbokro	72.81	72	P	P	16 44 46.1	+0.1
	comp=Z,69nm,0.7s,mb5.7,baz=213,slow=6.2,SNR=152						
DBIC				LR	LR	17 14 37.8	
	comp=Z,1μm,18.7s,MS5.1,baz=217,slow=34						
NCB	Newcomb	72.97	358	P	P	16 44 46.1	-0.2
NCB				pP	pP	16 45 00.5	+0.2
NCB				LR	LR		
	comp=Z,1μm,21.0s,MS5.2						
MIV	Mineville/With	73.05	358	*e*P	P	16 44 46.4	-0.5
MIV				*e*pP	pP	16 44 59.9	-0.8
LBNH	Lisbon	73.19	359	*e*P	P	16 44 47.8	+0.2
LBNH				*e*pP	pP	16 45 02.2	+0.6
LBNH				LR	LR		
	comp=Z,1μm,19.0s,MS5.2						
LOZ	Lake Ozonia	73.63	357	*e*P	P	16 44 50.0	-0.3
LOZ				*e*pP	pP	16 45 03.4	-0.8
FRNY	Flat Rock	73.81	358	P	P	16 44 51.2	0.0
FRNY				pP	pP	16 45 05.5	+0.3
SADO	Sadowa	74.09	354	P	P	16 44 51.7	-1.1
	comp=Z,25nm,0.8s,mb5.2,baz=187,slow=5.3,SNR=17						
SADO	Sadowa	74.09	354	P	P	16 44 51.7	-1.2
SDCO	Great Sand Dun	74.13	332	P	P	16 44 53.8	+0.6
	comp=Z,15nm,0.7s,mb5.0						
SDCO				pP	pP	16 45 08.0	+0.8
SDCO				LR	LR		

	comp=Z,10µm,20.0s,MS6.1						
WUAZ	**Wupatki**	**74.88**	**327**	P	**P**	**16 44 58.7**	**+1.1**
	comp=Z,26nm,0.8s,mb5.2						
WUAZ				pP	pP	16 45 11.1	-0.5
WUAZ				LR	LR		
	comp=Z,8µm,20.0s,MS6.0						
BAR	**Barrett**	**75.37**	**321**	P	**P**	**16 45 00.9**	**+0.4**
BAR				pP	pP	16 45 13.7	-0.8
RW3	**Ridgway**	**75.47**	**331**	P	**P**	**16 45 02.1**	**+1.2**
PV01	**Paradox Valley**	**75.75**	**330**	P	**P**	**16 45 03.7**	**+1.2**
ISCO	**Idaho Springs**	**75.93**	**333**	P	**P**	**16 45 04.6**	**+1.0**
	comp=Z,15nm,0.8s,mb5.0						
ISCO				pP	pP	16 45 19.0	+1.5
ISCO				LR	LR		
	comp=Z,8µm,20.0s,MS6.0						
ISCO	**Idaho Springs**	**75.93**	**333**	P	**P**	**16 45 04.6**	**+1.0**
ISCO				*PP	pP	16 45 19.0	+1.5
ISCO				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
ISCO				MLR	MLR		
	comp=Z,8µm,20.0s,MS6.0						
PFO	**Pinyon Flat Ob**	**75.96**	**322**	P	**P**	**16 45 04.8**	**+0.9**
PFO				pP	pP	16 45 19.5	+1.7
PFO				LR	LR		
	comp=Z,1µm,21.0s,MS5.2						
PV10	**Paradox Valley**	**76.15**	**330**	*e*P	**P**	**16 45 04.9**	**+0.1**
PV10				*e*pP	pP	16 45 20.6	+1.8
SUR	**Sutherland**	**76.30**	**119**	P	**P**	**16 45 07.5**	**+1.6**
	comp=Z,17nm,0.7s,mb5.1						
SUR				LR	LR		
	comp=Z,306nm,19.0s,MS4.6						
MWC	**Mount Wilson**	**77.29**	**322**	P	**P**	**16 45 12.1**	**+0.8**
MWC				pP	pP	16 45 26.1	+0.8
SNCC	**San Nicolas Is**	**77.37**	**320**	PFAKE		16 45 20.0	+8.2
SNCC				LR	LR		
	comp=Z,6µm,20.0s,MS5.9						
SRU	**San Rafael**	**77.41**	**329**	P	**P**	**16 45 12.6**	**+0.6**
SRU				*e*pP	pP	16 45 26.4	+0.4
GSC	**Goldstone**	**77.44**	**323**	P	**P**	**16 45 13.0**	**+0.9**
SHPR	**Sheep Range**	**77.52**	**325**	P	**P**	**16 45 13.6**	**+1.0**
SHPR				pP	pP	16 45 26.1	-0.5
MSU	**Marysvale**	**77.67**	**328**	P	**P**	**16 45 14.5**	**+1.1**
MVU	**Marysvale**	**77.69**	**328**	*e*P	**P**	**16 45 14.6**	**+1.2**
	comp=Z,19nm,0.7s,mb5.1						
MVU				LR	LR		
	comp=Z,11µm,22.0s,MS6.1						
TMUT	**Trail Mountain**	**77.87**	**329**	P	**P**	**16 45 15.5**	**+1.1**
TMUT				pP	pP	16 45 29.4	+1.0
RWWY	**Rawlins**	**78.17**	**333**	*e*P	**P**	**16 45 16.6**	**+0.6**
TPNV	**Topopah Spring**	**78.42**	**324**	P	**P**	**16 45 18.7**	**+1.2**
TPNV				LR	LR		
	comp=Z,6µm,20.0s,MS5.9						
DAC	**Darwin (Calif)**	**78.60**	**323**	P	**P**	**16 45 19.1**	**+0.6**
	comp=Z,22nm,0.7s,mb5.2						
DAC				pP	pP	16 45 32.7	+0.2
DAC				LR	LR		
	comp=Z,8µm,20.0s,MS6.0						
DAC	**Darwin (Calif)**	**78.60**	**323**	P	**P**	**16 45 19.1**	**+0.6**
DAC				*PP	pP	16 45 32.7	+0.2
DAC				pmax	pmax		
	comp=Z,22nm,0.7s,mb5.2						
DAC				MLR	MLR		
	comp=Z,8µm,20.0s,MS6.0						
ISA	**Isabella**	**78.60**	**322**	P	**P**	**16 45 19.4**	**+0.9**
	comp=Z,24nm,0.8s,mb5.2						
ISA				LR	LR		
	comp=Z,1µm,19.0s,MS5.3						
ISA	**Isabella**	**78.60**	**322**	P	**P**	**16 45 19.4**	**+0.9**
ISA				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
ISA				MLR	MLR		
	comp=Z,1µm,19.0s,MS5.3						
MPU	**Maple Canyon**	**78.65**	**329**	P	**P**	**16 45 19.5**	**+0.9**
NLU	**North Lily Min**	**78.80**	**329**	P	**P**	**16 45 20.8**	**+1.3**
DAU	**Daniels Canyon**	**78.80**	**330**	P	**P**	**16 45 20.6**	**+1.0**
DAU				pP	pP	16 45 35.6	+2.0
EYMN	**Ely**	**79.08**	**346**	PFAKE		16 45 30.0	+9.1
EYMN				LR	LR		
	comp=Z,2µm,21.0s,MS5.4						
RSSD	**Black Hills**	**79.09**	**336**	P	**P**	**16 45 21.2**	**+0.2**
	comp=Z,14nm,0.7s,mb5.0						
RSSD				LR	LR		
	comp=Z,6µm,20.0s,MS5.9						
RSSD	**Black Hills**	**79.09**	**336**	P	**P**	**16 45 21.2**	**+0.2**
RSSD				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.0						
RSSD				MLR	MLR		
	comp=Z,6µm,20.0s,MS5.9						
CTU	**Camp Tracy**	**79.25**	**330**	P	**P**	**16 45 22.4**	**+0.5**
DUG	**Dugway**	**79.32**	**329**	P	**P**	**16 45 22.9**	**+0.6**
	comp=Z,18nm,0.7s,mb5.1						
DUG				pP	pP	16 45 37.4	+1.0
DUG				LR	LR		
	comp=Z,5µm,19.0s,MS5.8						
DUG	**Dugway**	**79.32**	**329**	P	**P**	**16 45 22.9**	**+0.5**
DUG				*PP	pP	16 45 37.4	+1.0
DUG				pmax	pmax		
	comp=Z,18nm,0.7s,mb5.1						
DUG				MLR	MLR		
	comp=Z,5µm,19.0s,MS5.8						
TCUT	**Toone Canyon**	**79.44**	**330**	P	**P**	**16 45 23.8**	**+0.8**
TCUT				pP	pP	16 45 37.7	+0.6
TSUM	**Tsumeb**	**79.61**	**106**	P	**P**	**16 45 25.4**	**+1.1**
	comp=Z,38nm,0.8s,mb5.4						
TSUM				LR	LR		
	comp=Z,1µm,22.0s,MS5.2						
TPH	**Tonopah**	**79.78**	**325**	P	**P**	**16 45 25.8**	**+1.0**
	comp=Z,13nm,0.8s,mb4.9						
TPH	**Tonopah**	**79.78**	**325**	P	**P**	**16 45 25.8**	**+0.9**
TPH				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
HWUT	**Hardware Ranch**	**79.91**	**330**	P	**P**	**16 45 25.7**	**+0.2**
HWUT				pP	pP	16 45 40.2	+0.6
HWUT				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
MTUM	**Tungsten Hills**	**79.92**	**323**	P	**P**	**16 45 26.9**	**+1.2**
BW06	**Boulder Array**	**80.02**	**332**	P	**P**	**16 45 25.6**	**-0.5**
	comp=Z,8.7nm,0.6s,mb4.9						
BW06				pP	pP	16 45 40.4	+0.2
BW06				LR	LR		
	comp=Z,6µm,19.0s,MS5.9						
PDAR	**Pinedale Array**	**80.02**	**332**	P	**P**	**16 45 25.9**	**-0.2**
	comp=Z,9.0nm,0.6s,mb4.9,baz=132,slow=7.0,SNR=55						
SPUT	**South Promonto**	**80.06**	**330**	P	**P**	**16 45 26.9**	**+0.6**
SPUT				pP	pP	16 45 41.0	+0.6
MNV	**Mina**	**80.52**	**324**	P	**P**	**16 45 29.4**	**+0.6**
MNV				LR	LR		
	comp=Z,8µm,19.0s,MS6.1						
LRV	**Little Rabbit**	**80.54**	**321**	*e*P	**P**	**16 45 30.6**	**+1.6**
LRV				*e*pP	pP	16 45 43.7	+0.6
HVU	**Hansel Valley**	**80.58**	**330**	P	**P**	**16 45 29.1**	**0.0**
NVAR	**Mina Array Bea**	**80.60**	**324**	P	**P**	**16 45 29.9**	**+0.7**
	comp=Z,4.6nm,0.8s,mb4.5,baz=148,slow=6.9,SNR=34						
NVAR	**Mina Array Bea**	**80.60**	**324**	P	**P**	**16 45 29.9**	**+0.7**
ELK	**Elko**	**80.88**	**327**	P	**P**	**16 45 31.2**	**+0.6**
	comp=Z,15nm,0.7s,mb5.0,baz=141,slow=3.5,SNR=80						
SAO	**San Andreas Ge**	**81.02**	**321**	PFAKE		16 45 40.0	+8.5
SAO				LR	LR		
	comp=Z,7µm,20.0s,MS6.0						
REDW	**Red Top Meadow**	**81.05**	**332**	P	**P**	**16 45 32.0**	**+0.5**
LOHW	**Long Hollow**	**81.15**	**332**	*e*P	**P**	**16 45 32.4**	**+0.4**
LOHW				*e*pP	pP	16 45 46.2	0.0
LOHW				pP	pP	16 45 46.9	+0.8
TPAW	**Teton Pass**	**81.19**	**332**	P	**P**	**16 45 32.9**	**+0.7**
TPAW				pP	pP	16 45 47.3	+0.9
WAKR	**Walker**	**81.24**	**324**	P	**P**	**16 45 33.9**	**+1.3**
MOOW	**Moose Ponds**	**81.32**	**332**	P	**P**	**16 45 33.2**	**+0.3**
CMB	**Columbia Colle**	**81.39**	**323**	P	**P**	**16 45 33.8**	**+0.4**
CMB				LR	LR		
	comp=Z,9µm,19.0s,MS6.2						
IMW	**Indian Meadow**	**81.52**	**332**	P	**P**	**16 45 34.4**	**+0.5**
LKWY	**Lake**	**81.86**	**333**	PFAKE		16 45 50.0	+14
LKWY				LR	LR		
	comp=Z,9µm,20.0s,MS6.1						
YFT	**Old Faithful**	**81.94**	**332**	P	**P**	**16 45 38.3**	**+2.2**
LAO	**LASA Array**	**82.08**	**336**	P	**P**	**16 45 36.9**	**+0.1**
	comp=Z,31nm,0.8s,mb5.3						
LAO				LR	LR		
	comp=Z,8µm,20.0s,MS6.1						
YMR	**Madison River**	**82.17**	**332**	*e*P	**P**	**16 45 38.3**	**+1.0**
YMR				*e*pP	pP	16 45 52.8	+1.4
YMR				LR	LR		
	comp=Z,8µm,22.0s,MS6.0						
ULM	**Lac du Bonnet**	**82.23**	**344**	P	**P**	**16 45 36.3**	**-1.2**
	comp=Z,20nm,0.8s,mb5.1,baz=157,slow=6.0,SNR=26						
QLMT	**Earthquake Lak**	**82.49**	**332**	pP	pP	16 45 54.6	+1.5
HLID	**Hailey**	**82.73**	**330**	P	**P**	**16 45 40.9**	**+0.7**
	comp=Z,14nm,0.9s,mb5.0						
HLID				pP	pP	16 45 55.7	+1.4
HLID				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
DGMT	**Dagmar**	**82.95**	**338**	P	**P**	**16 45 41.8**	**+0.6**
DGMT				LR	LR		
	comp=Z,6µm,21.0s,MS6.0						
BOZ	**Bozeman (W)**	**83.24**	**333**	P	**P**	**16 45 43.0**	**+0.2**
BOZ				LR	LR		
	comp=Z,8µm,20.0s,MS6.1						
LBTB	**Lobatse**	**83.43**	**115**	P	**P**	**16 45 45.0**	**+0.9**
LBTB				pP	pP	16 45 59.6	+1.3
HOPS	**Hopland**	**83.52**	**322**	PFAKE		16 46 00.0	+16
HOPS				LR	LR		
	comp=Z,9µm,20.0s,MS6.2						
LRM	**Limekiln Ridge**	**83.72**	**332**	P	**P**	**16 45 46.3**	**+1.2**
LRM				pP	pP	16 46 00.4	+1.1
WVOR	**Wild Horse Val**	**83.80**	**327**	P	**P**	**16 45 46.4**	**+0.8**
	comp=Z,18nm,1.3s,mb5.0						
WVOR				LR	LR		
	comp=Z,10µm,20.0s,MS6.2						
WVOR	**Wild Horse Val**	**83.80**	**327**	P	**P**	**16 45 46.4**	**+0.8**
WVOR				pmax	pmax		
	comp=Z,18nm,1.3s,mb5.0						
WVOR				MLR	MLR		
	comp=Z,10µm,20.0s,MS6.2						
SCHQ	**Schefferville**	**83.86**	**2**	P	**P**	**16 45 45.5**	**0.0**
	comp=Z,7.6nm,0.6s,mb5.0,baz=114,slow=4.0,SNR=12						
SCHQ	**Schefferville**	**83.86**	**2**	*e*P	**P**	**16 45 45.4**	**-0.2**
	comp=Z,18nm,1.0s,mb5.2						
SCHQ				*e*pP	pP	16 45 58.6	-1.1
SCHQ				LR	LR		
	comp=Z,6µm,22.0s,MS5.9						
HRY	**Holter Researc**	**84.19**	**333**	P	**P**	**16 45 48.2**	**+0.7**
MOD	**Modoc**	**84.22**	**325**	P	**P**	**16 45 48.8**	**+1.0**
	comp=Z,17nm,0.7s,mb5.3						
MOD				LR	LR		
	comp=Z,8µm,21.0s,MS6.1						
WDC	**Whiskeytown Da**	**84.39**	**323**	P	**P**	**16 45 48.0**	**-0.6**
	comp=Z,5.7nm,0.6s,mb4.9						
WDC				pP	pP	16 46 02.1	-0.7
WDC				LR	LR		
	comp=Z,14µm,21.0s,MS6.3						
WDC	**Whiskeytown Da**	**84.39**	**323**	P	**P**	**16 45 48.0**	**-0.6**
WDC				*PP	pP	16 46 02.1	-0.7
WDC				pmax	pmax		
	comp=Z,6.0nm,0.6s,mb4.9						
WDC				MLR	MLR		
	comp=Z,14µm,21.0s,MS6.3						
CASY	**Casey**	**84.72**	**181**	*e*P	**P**	**16 45 49.6**	**-0.1**
CASY				LR	LR		
	comp=Z,3µm,20.0s,MS5.6						
BMO	**Blue Mountains**	**85.03**	**329**	P	**P**	**16 45 52.1**	**+0.3**
BMO				LR	LR		
	comp=Z,6µm,20.0s,MS6.0						
MSO	**Missoula**	**85.14**	**332**	PFAKE		16 46 00.0	+7.8
MSO				LR	LR		
	comp=Z,6µm,22.0s,MS5.9						
YBH	**Yreka Blue Hor**	**85.31**	**324**	P	**P**	**16 45 52.6**	**-0.5**
	comp=Z,5.2nm,0.7s,mb4.8						
YBH				LR	LR		
	comp=Z,7µm,20.0s,MS6.1						
YBH	**Yreka Blue Hor**	**85.31**	**324**	P	**P**	**16 45 52.6**	**-0.6**
YBH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
YBH				MLR	MLR		
	comp=Z,7µm,20.0s						
HUMO	**Hull Mountain**	**86.07**	**324**	P	**P**	**16 45 57.1**	**+0.3**
	comp=Z,6.7nm,0.7s,mb5.0						
HUMO				LR	LR		
	comp=Z,8µm,20.0s,MS6.1						
BSMT	**Bassoo Peak**	**86.30**	**332**	P	**P**	**16 45 58.6**	**+0.8**
SNZO	**South Karori**	**87.20**	**223**	PFAKE		16 46 10.0	+7.6
SNZO				LR	LR		
	comp=Z,9µm,19.0s,MS6.2						
HAWA	**Hanford**	**87.22**	**329**	P	**P**	**16 46 03.4**	**+1.0**
HAWA				pP	pP	16 46 17.3	+0.7
HAWA				LR	LR		
	comp=Z,451nm,20.0s,MS4.9						
NEW	**Newport**	**87.60**	**331**	*e*P	**P**	**16 46 03.5**	**-0.7**
NEW				*e*pP	pP	16 46 18.4	-0.1
NEW				LR	LR		
	comp=Z,11µm,20.0s,MS6.2						
COR	**Corvallis**	**87.67**	**326**	*e*P	**P**	**16 46 05.8**	**+1.2**
COR				LR	LR		
	comp=Z,10µm,20.0s,MS6.2						
RPZ	**Rata Peaks**	**87.83**	**220**	P	**P**	**16 46 04.7**	**-0.7**
	comp=Z,40nm,1.0s,mb5.6,baz=153,slow=2.8,SNR=7.3						
FFC	**Flin Flon**	**87.84**	**343**	P	**P**	**16 46 04.5**	**-0.7**
FFC				LR	LR		
	comp=Z,1µm,22.0s,MS5.3						
LON	**Longmire**	**88.53**	**328**	P	**P**	**16 46 08.9**	**+0.2**
RAO	**Raoul Island**	**89.21**	**237**	PFAKE		16 46 20.0	+7.7
RAO				LR	LR		
	comp=Z,5µm,19.0s,MS5.9						
FCC	**Fort Churchill**	**89.82**	**348**	P	**P**	**16 46 14.4**	**-0.1**
EDM	**Edmonton**	**90.07**	**336**	P	**P**	**16 46 15.5**	**-0.2**
LSZ	**Lusaka**	**90.36**	**108**	P	**P**	**16 46 19.4**	**+1.4**
	comp=Z,20nm,1.1s,mb5.4						
LSZ				LR	LR		
	comp=Z,1µm,21.0s,MS5.3						
LSZ	**Lusaka**	**90.36**	**108**	P	**P**	**16 46 19.4**	**+1.4**
LSZ				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.4						
LSZ				MLR	MLR		
	comp=Z,1µm,21.0s,MS5.3						
OCWA	**Octopus Mounta**	**90.37**	**327**	PFAKE		16 46 30.0	+13
OCWA				LR	LR		
	comp=Z,8µm,22.0s,MS6.1						
AFI	**Afiamalu**	**92.47**	**253**	PFAKE		16 46 40.0	+12
AFI				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
ESDC	**Sonseca Array**	**92.63**	**45**	P	**P**	**16 46 27.8**	**-0.1**
	comp=Z,0.3nm,0.3s,mb4.2,baz=235,slow=4.1,SNR=6.8						
ESLA	**Sonseca Array**	**92.63**	**45**	PFAKE		16 46 40.0	+12
ESLA				LR	LR		
	comp=Z,7µm,19.0s,MS6.1						
POHA	**Pohakuloa**	**94.93**	**290**	PFAKE		16 46 50.0	+11
POHA				LR	LR		
	comp=Z,5µm,19.0s,MS6.0						
KIP	**Kipapa**	**97.77**	**290**	PFAKE		16 47 00.0	+8.2
KIP				LR	LR		
	comp=Z,7µm,19.0s,MS6.2						
YKA	**Yellowknife Ar**	**97.92**	**341**	P	**P**	**16 46 50.7**	**-0.7**
	comp=Z,2.6nm,0.6s,mb4.9,baz=141,slow=4.1,SNR=15						
YKA	**Yellowknife Ar**	**97.92**	**341**	P	**P**	**16 46 50.7**	**-0.7**
MBAR	**Mbarara**	**99.89**	**96**	PFAKE		16 47 10.0	+8.4
MBAR				LR	LR		
	comp=Z,1.0nm,22.0s						
TAU	**Tasmania Unive**	**100.00**	**208**	PFAKE		16 47 10.0	+8.6
TAU				LR	LR		
	comp=Z,2µm,21.0s,MS5.6						
DLBC	**Dease Lake**	**100.25**	**333**	P	P	16 47 01.4	-0.7
	comp=Z,1.5nm,0.5s,baz=170,slow=21,SNR=4.2						
BORG	**Borgarnes**	**101.36**	**19**	PFAKE		16 47 20.0	+13
BORG				LR	LR		
	comp=Z,452nm,21.0s,MS5.0						
ESK	**Eskdalemuir**	**102.14**	**33**	PFAKE		16 47 20.0	+9.3
ESK				LR	LR		
	comp=Z,581nm,20.0s,MS5.1						
KMBO	**Kilima Mbogo**	**105.26**	**100**	PFAKE		16 51 50.0	
KMBO				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
DIV	**Divide**	**108.34**	**330**	PFAKE		16 52 00.0	
DIV				LR	LR		
	comp=Z,8µm,19.0s,MS6.3						
BRG	**Berggiesshubel**	**109.11**	**42**	*e*P	PP	16 52 11.0	-7.0
PMR	**Palmer**	**110.00**	**330**	PFAKE		16 52 00.0	+14
PMR				LR	LR		
	comp=Z,3µm,19.0s,MS5.8						
KONO	**Kongsberg**	**110.27**	**32**	PFAKE		16 52 00.0	+14
KONO				LR	LR		
	comp=Z,5µm,21.0s,MS6.0						
FIB	**Fire Island**	**110.28**	**329**	PFAKE		16 52 00.0	+14
FIB				LR	LR		
	comp=Z,2µm,20.0s,MS5.6						
ILAR	**Eielson Array**	**110.42**	**334**	Pdiff	Pdif	16 47 45.8	-1.2
	comp=Z,0.4nm,0.7s,baz=154,slow=3.9,SNR=7.8						
ILAR	**Eielson Array**	**110.42**	**334**	Pdif	Pdif	16 47 45.8	-1.2
MCK	**McKinley**	**110.80**	**332**	PFAKE		16 52 00.0	+13
MCK				LR	LR		
	comp=Z,1µm,19.0s,MS5.5						
COLA	**College**	**110.84**	**334**	PFAKE		16 52 00.0	+13
COLA				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
NAO01	**NORSAR Array S**	**111.33**	**31**	PFAKE		16 52 00.0	+12
NAO01				LR	LR		
	comp=Z,5µm,21.0s,MS6.1						
UNV	**Unalaska Valle**	**116.25**	**319**	PFAKE		16 52 10.0	+12
UNV				LR	LR		
	comp=Z,8µm,19.0s,MS6.3						
KBS	**Kingsbay**	**117.18**	**12**	PFAKE		16 52 10.0	+11
KBS				LR	LR		
	comp=Z,3µm,20.0s,MS5.8						
HNR	**Honiara**	**117.67**	**240**	PFAKE		16 52 10.0	+8.4
HNR				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
ANTO	**Ankara**	**118.06**	**58**	PFAKE		16 52 20.0	+18
ANTO				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
AKASG	**Malin Array Be**	**118.28**	**45**	PKP	PKPdf	16 52 01.6	-0.4
	comp=Z,1.5nm,0.6s,baz=263,slow=3.3,SNR=12						
MSEY	**Mahe Island**	**118.52**	**114**	PFAKE		16 52 20.0	+17
MSEY				LR	LR		
	comp=Z,600nm,19.0s,MS5.2						
FINES	**FINESS Array B**	**118.57**	**33**	PKP	PKPdf	16 52 03.1	+0.8
	comp=Z,1.6nm,0.9s,baz=252,slow=6.0,SNR=3.9						
BR131	**Keskin Array S**	**118.65**	**58**	*e*PKPdf	PKPdf	16 52 04.4	+1.5
BR131				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
BRTR	**Keskin Array B**	**118.65**	**58**	PKP	PKPdf	16 52 03.0	0.0
	comp=Z,1.4nm,0.7s,baz=180,slow=2.5,SNR=9.2						
TNA	**Tin City**	**119.14**	**332**	PFAKE		16 52 20.0	+17
TNA				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
CTAO	**Charters Tower**	**119.19**	**221**	PFAKE		16 52 20.0	+16
CTAO				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
ARCES	**ARCESS Array B**	**119.36**	**24**	PKP	PKPdf	16 52 04.7	+1.0
	comp=Z,1.8nm,0.8s,SNR=5.0						
KEV	**Kevo**	**119.90**	**23**	PFAKE		16 52 20.0	+15
KEV				LR	LR		
	comp=Z,6µm,20.0s,MS6.2						
OBN	**Obninsk**	**123.33**	**41**	PFAKE		16 52 20.0	+8.3
OBN				LR	LR		
	comp=Z,2µm,19.0s,MS5.7						
WRA	**Warramunga Arr**	**125.31**	**209**	PKKPbc		17 01 54.9	
	comp=Z,0.8nm,0.6s,baz=335,slow=4.2,SNR=8.2						
WRAB	**Tennant Creek**	**125.31**	**210**	PFAKE		16 52 30.0	+14
WRAB				LR	LR		
	comp=Z,232nm,20.0s,MS4.8						
KIV	**Kislovodsk**	**126.13**	**55**	PFAKE		16 52 30.0	+13
KIV				LR	LR		
	comp=Z,10µm,20.0s,MS6.5						
PMG	**Port Moresby**	**126.81**	**230**	PFAKE		16 52 30.0	+11
PMG				LR	LR		
	comp=Z,791nm,19.0s,MS5.4						
GNI	**Garni**	**127.08**	**60**	PFAKE		16 52 30.0	+11
GNI				LR	LR		
	comp=Z,3µm,19.0s,MS6.0						
SMY	**Shemya**	**127.63**	**316**	PFAKE		16 52 30.0	+10
SMY				LR	LR		
	comp=Z,6µm,19.0s,MS6.3						
MBWA	**Marble Bar**	**128.79**	**193**	PFAKE		16 52 40.0	+17
MBWA				LR	LR		
	comp=Z,1µm,19.0s,MS5.6						
BILL	**Bilibino**	**128.98**	**336**	PFAKE		16 52 40.0	+18
BILL				LR	LR		
	comp=Z,6.0nm,22.0s						
DGAR	**Diego Garcia**	**129.28**	**130**	PFAKE		16 52 40.0	+16
DGAR				LR	LR		
	comp=Z,261nm,20.0s,MS4.9						
ARU	**Arti**	**135.52**	**38**	PFAKE		16 52 50.0	+15
ARU				LR	LR		
	comp=Z,459nm,21.0s,MS5.2						
TIXI	**Tiksi**	**136.23**	**351**	PFAKE		16 52 50.0	+14
TIXI				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
PET	**Petropavlovsk**	**136.88**	**318**	PFAKE		16 52 50.0	+13
PET				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
COCO	**West Island**	**137.10**	**162**	PFAKE		16 52 50.0	+11
COCO				LR	LR		
	comp=Z,201nm,22.0s,MS4.8						
MA2	**Magadan**	**138.67**	**329**	*e*PKPdf	PKPdf	16 52 42.8	+2.3
BRVK	**Borovoye**	**143.05**	**39**	PFAKE		16 53 00.0	+14
BRVK				LR	LR		
	comp=Z,223nm,19.0s,MS5.0						
YAK	**Yakutsk**	**144.56**	**343**	PFAKE		16 53 00.0	+10
YAK				LR	LR		
	comp=Z,866nm,20.0s,MS5.5						
PALK	**Pallekele**	**145.47**	**124**	PFAKE		16 53 10.0	+16
PALK				LR	LR		
	comp=Z,202nm,20.0s,MS4.9						
YSS	**Yuzh-Sakhalins**	**148.48**	**313**	*e*PKPdf	PKPdf	16 52 57.0	-0.6
YSS				LR	LR		
	comp=Z,784nm,19.0s,MS5.5						
KURK	**Kurchatov**	**148.71**	**38**	*e*PKPdf	PKPdf	16 53 00.9	+3.1
KURK				LR	LR		
	comp=Z,350nm,20.0s,MS5.2						
AAK	**Ala-Archa**	**149.25**	**55**	*e*PKPdf	PKPdf	16 53 03.2	+4.2
AAK				LR	LR		
	comp=Z,283nm,20.0s,MS5.1						
DAV	**Davao City (W)**	**152.96**	**218**	PFAKE		16 53 20.0	+15
DAV				LR	LR		
	comp=Z,733nm,21.0s,MS5.5						
MJAR	**Matsushiro Arr**	**154.55**	**294**	PKPbc	PKPdf	16 53 15.9	+9.0
	comp=Z,2.4nm,0.5s,baz=145,slow=1.6,SNR=4.1						
MJAR				PKPab	PKPab	16 53 31.4	-1.1
	comp=Z,11nm,0.8s,baz=108,slow=2.6,SNR=8.0						
MAJO	**Matsushiro**	**154.55**	**294**	PFAKE		16 53 20.0	+13
MAJO				LR	LR		
	comp=Z,1µm,21.0s,MS5.7						
MAT	**Matsushiro**	**154.55**	**294**	PKP	PKPdf	16 53 13.2	+6.3
MAT	**Matsushiro**	**154.55**	**294**	*e*PKP	PKPdf	16 53 13.0	+6.1
WMQ	**Urumqi**	**157.63**	**44**	*e*PKP	PKPdf	16 53 14.5	+3.8
WMQ				PKS	PKS	16 56 49.0	+5.4
WMQ				*e*PP	PP	16 57 30.0	+4.1
WMQ				PP	PP		
	comp=Z,550nm,10.6s						
WMQ				LR	LR		
	comp=N,320nm,20.2s,MS5.4						
WMQ				LR	LR		
	comp=E,380nm,17.6s,MS5.4						
WMQ				LR	LR		
	comp=Z,360nm,17.9s,MS5.2						
MDJ	**Mudanjiang**	**157.66**	**319**	PKP	PKPdf	16 53 14.3	+3.5
MDJ	**Mudanjiang**	**157.66**	**319**	PFAKE		16 53 20.0	+9.2
MDJ				LR	LR		
	comp=Z,1µm,19.0s,MS5.7						
HIA	**Hailar**	**158.45**	**341**	PFAKE		16 53 20.0	+8.4
HIA				LR	LR		
	comp=Z,804nm,20.0s,MS5.6						
SONM	**Songino Array**	**161.38**	**6**	PKPab	PKPab	16 54 01.6	+0.1
	comp=Z,3.9nm,0.7s,baz=342,slow=3.9,SNR=2.9						
ULN	**Ulaanbaatar**	**161.40**	**4**	PFAKE		16 53 30.0	+15
ULN				LR	LR		
	comp=Z,762nm,19.0s						
INCN	**Inchon**	**163.22**	**304**	PFAKE		16 53 30.0	+13
INCN				LR	LR		
	comp=Z,630nm,19.0s						
LSA	**Lhasa**	**164.40**	**84**	PFAKE		16 53 30.0	+12
LSA				LR	LR		
	comp=Z,860nm,22.0s						
TATO	**Taipei**	**168.12**	**252**	PFAKE		16 53 30.0	+8.6
TATO				LR	LR		
	comp=Z,833nm,19.0s						
HHC	**Hu-ho-hao-te**	**168.29**	**351**	*e*PKP	PKPdf	16 53 23.3	+2.3
QIZ	**Qiongzhong**	**169.75**	**184**	PFAKE		16 53 40.0	+18
QIZ				LR	LR		
	comp=Z,535nm,19.0s						
NJ2	**Nanjing**	**171.13**	**290**	*e*PKP	PKPdf	16 53 28.0	+5.0
NJ2				PKP2	PKPab	16 54 48.8	+4.1
NJ2				PKS	PKS	16 56 57.0	+2.4
NJ2				PP	PP	16 58 39.0	+2.8
NJ2				PP	PP		
	comp=Z,3µm,12.0s						
KMI	**Kunming**	**173.01**	**125**	PKP	PKPdf	16 53 25.5	+1.3
KMI	**Kunming**	**173.01**	**125**	PKP	PKPdf	16 53 25.4	+1.2
KMI				PKPab	PKPab	16 54 54.6	+1.4
KMI				PP	PP	16 58 47.4	+1.6
KMI				SKKS		17 05 27.2	
KMI				SS	SS	17 19 56.1	+3.5
KMI				LR	LR		
	comp=Z,520nm,24.6s						
KMI	**Kunming**	**173.01**	**125**	PKIKP	PKPdf	16 53 25.4	+1.2
KMI						16 58 47.4	
KMI				SS	SS	17 19 56.1	+3.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KMI				MLR	MLR		
	comp=Z,520nm,24.6s						
GYA	Guiyang	176.47	143	PKP	PKPdf	16 53 26.0	+0.8
GYA				PP	PP		
	comp=Z,1µm,8.6s						
GYA				LR	LR		
	comp=N,990nm,21.8s						
GYA				LR	LR		
	comp=E,1µm,22.7s						
GYA				LR	LR		
	comp=Z,1µm,22.6s						
ENH	Enshi	178.96	339	*e*PKPdf	PKPdf	16 53 27.5	+2.1
ENH				LR	LR		
	comp=Z,420nm,22.0s						

NEIC ***28*** *16:41:28.1±0.1, 20.29N×146.06E, h11^{km}, mb6.0/127, ME5.9, MS5.9/148, MW5.9, Error ellipse: s-maj=3.8km s-min=3.0km az=197.0 Broadband fault plane solution: P waves. NP1:φ$_s$120°, δ65°, λ-95°. NP2:φ$_s$312°, δ25°, λ-79°. Principal axes: T Plg20°, Azm214°; N Plg0°, Azm0°; P Plg70°, Azm20°; Moment Tensor Solution. s41 Moment tensor: Scale 10^{17} Nm; M$_{rr}$-3.34; M$_{θθ}$0.56; M$_{φφ}$2.78; M$_{rθ}$-6.51; M$_{θφ}$-4.09; M$_{φr}$4.78; Best double couple: M$_0$9.4×10^{17} NP1:φ$_s$352°, δ20°, λ-45°. NP2:φ$_s$125°, δ76°, λ-104°. Principal axes: T 10.4, Plg30°, Azm227°; N -2, Plg14°, Azm129°; P -8.4, Plg56°, Azm17°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

IDC ***28*** *16:41:29.7±1.6, 20.27N×146.02E, h21^{km}±9^{km}, mb5.7/36, mb1 5.7/40, mb1mx5.7/40, mbtmp5.8/40, ML5.3/3, MS5.7/20, Ms1 5.7/20, ms1mx5.6/31 Error ellipse: s-maj=13.9km s-min=7.3km az=77.0*

BGS ***28*** *16:41:31.6, 20.29N×146.04E, h40^{km}*

BJI ***28*** *16:41:31.0, 20.52N×145.83E, h21^{km}, mB5.8, mb5.7, Ms5.9, Msz5.6*

MOS ***28*** *16:41:31.5±0.9, 20.32N×146.02E, h45^{km}, mb6.2/74, MS5.8/79, Error ellipse: s-maj=6.9km s-min=4.0km az=108.2*

SKO ***28*** *16:41:31.5, 20.53N×146.00E, h34^{km}*

HRVD ***28*** *16:41:32.5±0.1, 20.40N×146.30E, h16^{km}, MW6.0/90, Centroid moment Tensor Solution. LP body waves: s77,c165;Mantle waves: s90,c287; Half duration: 2^{s}4 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.76±.01; M$_{θθ}$-0.03±.01; M$_{φφ}$0.78±.01; M$_{rθ}$-0.66±.03; M$_{θφ}$-0.59±.01; M$_{φr}$0.31±.03; Best double couple: M$_0$1.206×10^{18} NP1:φ$_s$0°, δ36°, λ-43°. NP2:φ$_s$128°, δ66°, λ-118°. Principal axes: T 1.269, Plg17°, Azm238°; N -.125, Plg25°, Azm139°; P -1.144, Plg59°, Azm358°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 28 16:41:31.4±0.1**, 20.31N**±0.02×**146.10E**±0.02**, h41**^{km}**, h41**^{km}±1.1^{km}**:pP-P, n785, σ1^{s}06**/693**, mb6.0**/189**, MS5.8**/189**, 32C-78D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	6.79	190	Pn	P	16 43 08.9	-2.2
	21nm,0.3s,baz=352,slow=7.1,SNR=7.0						
GUMO				Sn	S	16 44 34.7	+6.8
	baz=175,slow=23,SNR=1.8						
CBIJ	Chichi jima	7.64	333	Pn	P	16 43 20.4	-2.5
	372nm,0.3s,baz=160,slow=6.0,SNR=54						
CBIJ				Sn	S	16 44 46.9	-2.3
	176nm,0.3s,baz=299,slow=24,SNR=8.1						
JHJ	Hachijo jima 2	13.94	337	Pn	P	16 44 44.3	-4.1
	12nm,0.3s,baz=157,slow=16,SNR=4.5						
JHJ				Sn	S	16 47 23.6	+1.0
	18nm,0.3s,baz=67,slow=20,SNR=3.4						
JOW	Kunigami	17.57	295	P	P	16 45 36.4	+1.5
	26nm,0.3s,baz=130,slow=11,SNR=39						
JOW				S	S	16 48 49.8	+2.8
	baz=193,slow=8.3,SNR=1.7						
JOW				LR	LR	16 51 54.3	
	comp=Z,28µm,19.3s,baz=122,slow=36						
MJAR	Matsushiro Arr	17.58	339	P	P	16 45 32.2	-2.7
	2.6nm,0.3s,baz=166,slow=10,SNR=137						
MJAR				S	S	16 48 47.3	+0.2
	1.2nm,0.3s,baz=272,slow=30,SNR=4.9						
MJAR				ScP		16 53 46.9	
	0.4nm,0.3s,baz=114,slow=2.8,SNR=4.5						
MAJO	Matsushiro	17.58	339	Pn	P	16 45 33.1	-1.9
MAT	Matsushiro	17.58	339	P	P	16 45 31.7	-3.3
MAT				S	S	16 48 47.9	+0.8
MAT	Matsushiro	17.58	339	*e*P	P	16 45 32.0	-3.0
	1µm,1.5s						
MAT				*e*S	S	16 48 48.0	+0.9
MAT	Matsushiro	17.58	339	*e*P	P	16 45 32.0	-3.0
MAT				*e*S	S	16 48 48.0	+0.9
MAT				pmax	pmax		
	comp=Z,1µm,1.5s						
JNU	Nakatsue	18.62	316	P	P	16 45 48.3	+0.5
	comp=Z,33nm,0.3s,baz=124,slow=14,SNR=137						
JNU				S	S	16 49 12.6	+2.1
	baz=93,slow=12,SNR=3.6						
WAKE	Wake Island	19.37	90	Pn	P	16 45 59.8	+3.4
BESP	Borongan	21.65	250	*e*P	P	16 46 24.2	+3.9
CNP	Catarman	21.96	253	*e*P	P	16 46 26.1	+2.8
PVCP	Virac	22.02	256	*e*P	P	16 46 26.1	+2.2
PLP	Palo	22.25	249	*e*P	P	16 46 28.5	+2.3
SCPH	Surigao	22.46	245⇑	*e*P	P	16 46 29.9	+1.6
OCLP	Ormoc	22.62	249	*e*P	P	16 46 32.5	+2.4
BUTP	Butuan	22.77	243	*e*P	P	16 46 33.4	+2.0
SGCP	Mt. Cagua	22.80	269	*e*P	P	16 46 32.1	+0.4
MSLP	Maasin	22.83	247	*e*P	P	16 46 33.7	+1.7
CVP	Callao Caves	23.10	268	*e*P	P	16 46 47.0	+12
TATO	Taipei	23.17	286	P	P	16 46 34.8	-0.5
TATO				LR	LR		
	comp=Z,9µm,21.0s,MS5.2						
CAUP	Cauayan	23.24	266	*e*P	P	16 46 38.1	+2.1
KS15	Wonju Array Si	23.29	321	P	P	16 46 37.0	+0.7
MATI	Mati	23.38	238	*e*P	P	16 46 38.6	+1.2
AUQP	San Andres	23.46	256	*e*P	P	16 46 41.0	+2.9
GQP	Guinayangan	23.47	258	*e*P	P	16 46 40.3	+2.0
LLP	Lapu-Lapu	23.52	248⇑	*e*P	P	16 46 39.9	+1.2
	comp=Z,419µm,0.7s						
APYP	Conner	23.61	268	*e*P	P	16 46 39.2	-0.4
YUK	Yuzh-Kuril'sk	23.66	360	*e*P	P	16 46 39.0	-0.7
	comp=Z,310nm,0.7s,mb5.8						
YUK				*e*		16 47 13.0	
YUK				*e*PPP	PPP	16 47 23.0	-0.3
YUK				*e*S	S	16 50 55.4	+7.1
YUK	Yuzh-Kuril'sk	23.66	360	*e*P	P	16 46 39.0	-0.7
YUK				*e*		16 47 13.0	
YUK				*e*PPP	PPP	16 47 23.0	-0.3
YUK				*e*S	S	16 50 55.4	+7.1
YUK				pmax	pmax		
	comp=Z,310nm,0.7s,mb5.8						
YUK				pmax	pmax		
	comp=N,10µm,5.0s						
YUK				pmax	pmax		
	comp=Z,15µm,5.0s						
YUK				pmax	pmax		
	comp=E,2µm,1.0s						
YUK				smax			
	comp=N,380µm,0.5s						
YUK				smax			
	comp=E,160µm,0.4s						
YUK				smax			
	comp=N,8µm,4.0s						
YUK				smax			
	comp=E,8µm,6.0s						
YUK				MLR	MLR		
	comp=Z,15µm,8.0s						
YUK				MLR	MLR		
	comp=N,8µm,9.0s						
YUK				MLR	MLR		
	comp=E,6µm,7.0s						
POLP	Polilio Island	23.69	260	*e*P	P	16 46 41.6	+1.3
BALP	Baler	23.75	263	*e*P	P	16 46 42.1	+1.2
CGP	Cagayan de Oro	23.82	243⇓	*i*P	P	16 46 42.2	+0.6
BUKP	Musuan	23.82	242	*e*P	P	16 46 42.8	+1.1
DAV	Davao City (W)	23.85	239⇓	*e*P	P	16 46 43.5	+1.6
DAV	Davao City (W)	23.85	239	P	P	16 46 44.0	+2.0
DAV				LR	LR		
	comp=Z,7µm,19.0s,MS5.2						
DMPH	Davao City--Mi	23.90	239⇑	*i*P	P	16 46 45.5	+3.1
DMPH				*i* S	tx	16 46 57.6	
TBP	Tagbilaran	23.90	247⇑	*e*P	P	16 46 42.1	-0.3
ASAJ	Asahikawa	23.91	354	P	P	16 46 43.9	+1.6
	comp=Z,208nm,1.1s,mb5.5,baz=220,slow=13,SNR=51						
ASAJ				PcP	PcP	16 50 25.2	-0.5
	comp=Z,27nm,0.8s,baz=258,slow=9.2,SNR=4.1						
ASAJ				S	S	16 50 59.0	+6.3
	comp=Z,6.6nm,0.6s,baz=160,slow=33,SNR=2.2						
INCN	Inchon	24.07	319	P	P	16 46 43.9	0.0
INCN				LR	LR		
	comp=Z,32µm,19.8s,MS5.8						
ABRA	Dolores	24.15	268	*e*P	P	16 46 45.3	+0.5
BOAC	Boac	24.17	257	*e*P	P	16 46 46.5	+1.4
PCPH	Palayan	24.24	263	*e*P	P	16 46 47.3	+1.6
OTRP	Odiongan	24.40	255	*e*P	P	16 46 48.4	+1.1
BCPH	Baguio City Da	24.53	265⇑	*e*P	P	16 46 50.7	+2.2
GUIM	Jordan	24.59	250	*e*P	P	16 46 49.3	+0.2
TGY	Tagaytay City	24.80	260	P	P	16 46 52.4	+1.2
	comp=Z,815nm,0.6s,mb6.5,baz=312,slow=1.6,SNR=64						
TGY				S	S	16 51 15.0	+6.9
	comp=Z,172nm,0.3s,baz=167,slow=6.9,SNR=2.0						
TGY				LR	LR	16 55 41.0	
	comp=Z,74nm,18.3s,baz=183,slow=34						
SSE	Sheshan	24.83	301	P	P	16 46 49.8	-1.5
SSE				S	S	16 51 06.5	-2.0
SSE				AMB	AMB		
	comp=Z,460nm,1.1s,mb5.9						
SSE				AMB	AMB		
	comp=Z,700nm,4.7s						
SSE				LR	LR		
	comp=N,17µm,24.3s,MS5.5						
SSE				LR	LR		
	comp=E,11µm,24.4s,MS5.5						
SSE				LR	LR		
	comp=Z,9µm,24.0s,MS5.2						
SSE	Sheshan	24.83	301	P	P	16 46 49.8	-1.5
	comp=Z,460nm,1.1s,mb5.9						
SSE				S	S	16 51 06.5	-2.0
SSE				LR	LR		
	comp=Z,9µm,24.0s,MS5.2						
CTBH	Cotabato--PC H	24.85	241	*e*P	P	16 46 52.6	+0.9
CTBH				*i* S	tx	16 47 14.6	
BOLP	Bolinao	25.15	265	*e*P	P	16 46 52.7	-1.8
SJMP	San Jose	25.18	256	*e*P	P	16 46 55.9	+1.1
PAGZ	Pagadian	25.24	244	*e*P	P	16 46 56.6	+1.3
SCZP	Santa Cruz	25.29	264	*e*P	P	16 46 56.0	+0.2
LUBP	Lubang	25.55	259	*e*P	P	16 46 59.0	+0.7
QZH	Quanzhou	25.79	285⇓	*i*P	P	16 46 59.0	-1.4
QZH				S	S	16 51 32.0	+7.6
QZH				LR	LR		
	comp=N,21µm,18.4s,MS6.0						
QZH				LR	LR		
	comp=E,34µm,20.7s,MS6.0						
QZH				LR	LR		
	comp=Z,25µm,19.2s,MS5.8						
CUYO	Cuyo Island	25.89	252	*e*P	P	16 47 01.2	-0.3
IPIL	Ipil	25.95	245	*e*P	P	16 47 01.7	-0.3
BUSP	Coron	26.19	256	*e*P	P	16 47 04.5	+0.3
YSS	Yuzh-Sakhalins	26.71	355	*i* Pdr	P	16 47 08.0	-0.7
	comp=Z,190nm,1.0s,mb5.6						
YSS				*e*sP	sP	16 47 20.5	-4.3
YSS				*e*		16 47 48.8	
YSS				*e*PPP	PPP	16 48 04.8	-1.2
YSS				*e*S	S	16 51 38.0	-1.4
YSS				*e*SSS	SSS	16 52 56.0	-15
YSS				LR	LR		
	comp=Z,10µm,16.0s,MS5.5						
YSS	Yuzh-Sakhalins	26.71	355κ	*i*P	P	16 47 08.0	-0.7
YSS				*e**SP	sP	16 47 20.5	-4.3
YSS				*e*		16 47 48.8	
YSS				*e*PPP	PPP	16 48 04.8	-1.2
YSS				*e*S	S	16 51 38.0	-1.4
YSS				*e*SSS	SSS	16 52 56.0	-15
YSS				pmax	pmax		
	comp=N,120nm,1.0s						
YSS				pmax	pmax		
	comp=Z,190nm,1.0s,mb5.6						
YSS				pmax	pmax		
	comp=E,60nm,1.1s						
YSS				pmax	pmax		
	comp=Z,3µm,12.0s						
YSS				pmax	pmax		
	comp=N,2µm,13.0s						
YSS				pmax	pmax		
	comp=N,2µm,8.0s						
YSS				pmax	pmax		
	comp=E,1µm,8.0s						
YSS				pmax	pmax		
	comp=Z,2µm,8.0s						
YSS				MLR	MLR		
	comp=N,11µm,16.0s,MS5.6						
YSS				MLR	MLR		
	comp=Z,10µm,16.0s,MS5.5						
YSS				MLR	MLR		
	comp=E,9µm,19.0s,MS5.6						
NJ2	Nanjing	27.02	301	*e*P	P	16 47 12.3	+0.6
	comp=E,140nm,1.2s,mb5.4						
NJ2				S	S	16 51 46.0	+1.4
NJ2				LR	LR		
	comp=Z,8µm,16.8s,MS5.4						
ENPP	El Nido	27.19	255	*e*P	P	16 47 12.6	-0.8
MDJ	Mudanjiang	27.84	334	P	P	16 47 19.3	+0.2
	comp=Z,200nm,1.1s,mb5.7						
MDJ				pP	pP	16 47 28.5	-1.7
MDJ				sP	sP	16 47 34.0	-1.3
MDJ				S	S	16 52 00.3	+2.6
MDJ				LR	LR		
	comp=Z,11µm,16.9s,MS5.5						
DL2	Dalian	28.07	317	PR	P	16 47 21.0	-0.2
DL2				AP	pP	16 47 32.3	0.0
DL2				PCP	PcP	16 50 35.0	-0.2
DL2				S	S	16 52 04.5	+3.1
DL2				PCS		16 54 17.0	
DL2				SCS	ScS	16 58 08.8	+6.3
DL2				AMB	AMB		
	comp=Z,340nm,0.8s,mb6.0						
DL2				AMB	AMB		
	comp=Z,870nm,5.4s						
DL2				LR	LR		
	comp=N,6µm,16.2s,MS5.4						
DL2				LR	LR		
	comp=E,7µm,17.9s,MS5.4						
DL2				LR	LR		
	comp=Z,8µm,16.3s,MS5.4						
DL2	Dalian	28.07	317	⇓P	P	16 47 21.0	-0.2
	comp=Z,340nm,0.8s,mb6.0						
DL2				pP	pP	16 47 32.3	0.0
DL2				PcP	PcP	16 50 35.0	-0.2
DL2				S	S	16 52 04.5	+3.1
DL2				PcS		16 54 17.0	
DL2				ScS	ScS	16 58 08.8	+6.3
DL2				LR	LR		
	comp=Z,8µm,16.3s,MS5.4						
SNY	Shenyang	28.69	323	⇓P	P	16 47 25.0	-1.6
SNY				S	S	16 52 12.3	+1.0
SNY				AMB	AMB		
	comp=Z,210nm,1.0s,mb5.8						
SNY				LR	LR		
	comp=N,11µm,12.6s,MS5.7						
SNY				LR	LR		
	comp=E,8µm,13.5s,MS5.7						
SNY				LR	LR		
	comp=Z,11µm,18.6s						
SNY	Shenyang	28.69	323	⇓P	P	16 47 25.0	-1.6
	comp=Z,210nm,1.0s,mb5.8						
SNY				S	S	16 52 12.3	+1.0
SNY				LR	LR		
	comp=Z,11µm,18.6s,MS5.5						
CN2	Changchun	29.08	328	⇓P	P	16 47 31.5	+1.4
CN2				*e*AP	pP	16 47 40.8	-0.5
CN2				PP	PP	16 48 22.0	-3.1
CN2				*e*S	S	16 52 18.3	+0.8
CN2				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.3						
CN2				LR	LR		
	comp=N,17µm,17.0s,MS5.8						
CN2				LR	LR		
	comp=E,11µm,17.0s,MS5.8						
CN2				LR	LR		
	comp=Z,15µm,19.0s,MS5.6						
CN2	Changchun	29.08	328	⇓P	P	16 47 31.5	+1.4
	comp=Z,70nm,1.1s,mb5.3						
CN2				*e*pP	pP	16 47 40.8	-0.5
CN2				PP	PP	16 48 22.0	-3.1
CN2				*e*S	S	16 52 18.3	+0.8
CN2				LR	LR		
	comp=Z,15µm,19.0s,MS5.6						
PMG	Port Moresby	29.55	178	P	P	16 47 31.9	-2.6
	comp=Z,114nm,0.7s,mb5.7,baz=353,slow=6.1,SNR=47						
PMG				S	S	16 52 21.1	-4.1
	comp=Z,14nm,1.1s,baz=108,slow=2.7,SNR=5.5						
PMG				ScP		16 54 19.1	
	comp=Z,13nm,1.0s,baz=261,slow=18,SNR=3.3						
PMG	Port Moresby	29.55	178	P	P	16 47 31.8	-2.8
	comp=Z,187nm,0.9s,mb5.8						
PMG				LR	LR		
	comp=Z,11µm,19.0s,MS5.5						
PMG	Port Moresby	29.55	178	P	P	16 47 31.8	-2.8
PMG				pmax	pmax		
	comp=Z,187nm,0.9s						
PMG				MLR	MLR		
	comp=Z,11µm,19.0s						
BATP	Bataraza	29.63	251	*e*P	P	16 47 35.8	+0.5
HKC	Hong Kong	29.79	280⇑	*i*P	P	16 47 42.0	+5.4
HKC				*i* S	S	16 52 38.0	+9.1
TIA	Tai'an	29.89	308	⇑P	P	16 47 36.0	-1.4
TIA				S	S	16 52 29.3	-1.1
TIA				AMB	AMB		
	comp=Z,450nm,1.4s,mb6.0						
TIA				LR	LR		
	comp=N,8µm,11.0s						
TIA				LR	LR		
	comp=E,12µm,17.0s						
TIA	Tai'an	29.89	308	⇑P	P	16 47 36.0	-1.4
	comp=E,460nm,1.4s,mb6.0						
TIA				S	S	16 52 29.3	-1.1
WHN	Wuhan	30.34	296	P	P	16 47 40.5	-1.0
WHN				S	S	16 52 44.0	+6.4
WHN				SCP		16 54 21.3	
WHN				LR	LR		
	comp=N,7µm,14.8s,MS6.0						
WHN				LR	LR		
	comp=E,30µm,18.2s,MS6.0						
WHN				LR	LR		
	comp=Z,27µm,20.8s,MS5.9						
KLR	Kul'dur	31.05	342⇑	*i*P	P	16 47 43.8	-3.8
KLR				pmax	pmax		
	comp=E,64nm,1.8s						
KLR				pmax	pmax		
	comp=Z,300nm,1.8s,mb5.8						
KLR				pmax	pmax		
	comp=E,800nm,9.0s						
KLR				pmax	pmax		
	comp=Z,4µm,9.0s						
KLR				MLR	MLR		
	comp=Z,27µm,13.5s,MS6.1						
TSM	Tawau	31.75	244	P	P	16 47 54.4	+0.3
KKM	Kota Kinabalu	32.29	248	*e*P	P	16 47 58.8	0.0
KKM				*e*pP	pP	16 48 08.7	-1.3
KKM	Kota Kinabalu	32.29	248	P	P	16 47 59.7	+0.9
HNR	Honiara	32.55	154	P	P	16 47 59.1	-2.0
	comp=Z,201nm,0.8s,mb6.1,baz=210,slow=3.0,SNR=31						
HNR				S	S	16 53 06.6	-5.7
	comp=Z,11nm,0.4s,baz=219,slow=13,SNR=1.8						
HNR				LR	LR	17 00 29.3	
	comp=Z,21µm,19.0s,MS5.9,baz=322,slow=35						
HNR	Honiara	32.55	154	*e*P	P	16 47 59.2	-1.8
	comp=Z,543nm,1.0s,mb6.4						
HNR				*e*pP	pP	16 48 11.7	-0.6
HNR				LR	LR		
	comp=Z,22µm,19.0s,MS5.9						
HNR	Honiara	32.55	154	*e*P	P	16 47 59.2	-1.8
HNR				*e**PP	pP	16 48 11.7	-0.6
HNR				pmax	pmax		
	comp=Z,466nm,1.0s,mb6.4						
HNR				MLR	MLR		
	comp=Z,22µm,19.0s,MS5.9						
PET	Petropavlovsk	34.06	14⇓	*i*P	P	16 48 13.5	-0.2
PET				*e*PP	PP	16 49 22.6	-6.0
PET				*i* S	S	16 53 37.6	+2.1
PET				*e*SS	SS	16 55 42.5	-2.4
PET				pmax	pmax		
	comp=Z,2µm,9.5s						
MIDW	Midway	34.12	69	PFAKE		16 48 20.0	+5.5
MIDW				LR	LR		
	comp=Z,20µm,20.0s,MS5.8						
QIZ	Qiongzhong	34.12	274	P	P	16 48 13.0	-1.6
QIZ				S	S	16 53 30.0	-6.8
QIZ				XS		16 53 53.5	
QIZ				LR	LR		
	comp=E,5µm,18.8s						
QIZ				LR	LR		
	comp=Z,12µm,17.4s,MS5.7						
ENH	Enshi	34.43	294	*e*P	P	16 48 14.8	-2.3
	comp=Z,71nm,0.8s,mb5.7						
ENH				*e*pP	pP	16 48 28.2	-0.2
ENH				*e*PcP	PcP	16 50 52.8	+0.6
ENH				LR	LR		
	comp=Z,18µm,19.0s,MS5.8						
HIA	Hailar	35.74	330	*e*P	P	16 48 27.9	-0.2
	comp=Z,166nm,0.8s,mb6.0						
HIA				*e*pP	pP	16 48 40.1	+0.6
HIA				*e*PcP	PcP	16 50 50.2	-5.5
HIA				LR	LR		
	comp=Z,15µm,20.0s,MS5.8						
HIA	Hailar	35.74	330	*e*P	P	16 48 27.9	-0.2
HIA				*e**PP	pP	16 48 40.1	+0.6
HIA				*e*		16 50 50.3	
HIA				pmax	pmax		
	comp=Z,166nm,0.8s						
HIA				MLR	MLR		
	comp=Z,15µm,20.0s						
HHC	Hu-ho-hao-te	35.77	313⇓	*i*P	P	16 48 27.5	-0.9
	comp=Z,200nm,1.1s,mb6.0						
HHC				pP	pP	16 48 40.5	+0.6
HHC				PP	PP	16 49 51.3	+1.1
HHC				PcP	PcP	16 50 54.8	-1.1
HHC				S	S	16 54 00.5	-1.5
HHC				ScP		16 54 36.5	
HHC				PcS		16 54 41.5	
HHC				SS	SS	16 56 22.0	-2.2
HHC				ScS	ScS	16 58 41.0	0.0
HHC				LR	LR		
	comp=Z,10µm,18.0s,MS5.6						
GYA	Guiyang	36.61	287⇓	*i*P	P	16 48 35.5	-0.1
	comp=Z,100nm,0.8s,mb5.7						
GYA				pP	pP	16 48 48.0	+0.9
GYA				PP	PP	16 49 57.5	-3.4
GYA				PcP	PcP	16 50 59.3	+0.7
GYA				S	S	16 54 12.8	-2.2
GYA				ScP		16 54 41.5	
GYA				ScS	ScS	16 58 45.8	0.0
GYA				LR	LR		
	comp=Z,9µm,17.3s,MS5.6						
BTO	Baotou	36.75	311	*e*P	P	16 48 36.3	-0.4
BTO				AMB	AMB		
	comp=Z,220nm,1.0s,mb5.9						
BTO	Baotou	36.75	311	*e*P	P	16 48 36.3	-0.4
	comp=Z,220nm,1.0s,mb5.9						
FX1	Attu Island--F	38.65	26	P	P	16 48 53.4	+1.0
	comp=Z,199nm,0.8s,mb5.9,baz=201,slow=1.7,SNR=22						
FX1				PcP	PcP	16 51 03.6	-1.0
	comp=Z,59nm,0.7s,baz=307,slow=5.1,SNR=5.1						
FX1	Attu Island--F	38.65	26	P	P	16 48 52.7	+0.3
SMY	Shemya	38.93	27	*e*P	P	16 48 54.6	-0.1
	comp=Z,743nm,1.7s,mb6.1						
SMY				LR	LR		
	comp=Z,17µm,21.0s,MS5.8						
SMY	Shemya	38.93	27	*e*P	P	16 48 54.6	-0.1
SMY				pmax	pmax		
	comp=Z,743nm,1.7s,mb6.1						
SMY				MLR	MLR		
	comp=Z,17µm,21.0s,MS5.8						
MA2	Magadan	39.36	4	*d i*P	P	16 48 58.4	+0.1
MA2				*e*		16 50 30.0	
MA2				*e*PPP	PPP	16 51 09.4	+12
MA2				*e*S	S	16 55 00.9	+4.4
MA2				*e*SS	SS	16 57 39.2	-5.0
MA2				*e*		16 59 06.1	
MA2				pmax	pmax		
	comp=Z,300nm,1.2s,mb5.9						
MA2				pmax	pmax		
	comp=N,100nm,1.1s						
MA2				MLR	MLR		
	comp=Z,5µm,20.0s,MS5.4						
CD2	Chengdu	39.41	294	P	P	16 48 57.8	-1.2
CD2				AP	pP	16 49 10.5	0.0
CD2				PPP	PPP	16 50 52.5	-5.8
CD2				S	S	16 54 51.5	-6.0
CD2				XS		16 55 11.0	
CD2				SS	SS	16 57 40.0	-5.5
CD2				AMB	AMB		
	comp=Z,70nm,1.0s,mb5.3						

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CD2                              AMB     AMB
      comp=Z,680nm,8.8s
CD2                              LR      LR
      comp=N,12µm,22.6s
CD2                              LR      LR
      comp=Z,7µm,19.0s,MS5.5
CD2   Chengdu           39.41 294 P       P       16 48 57.8 -1.2
      comp=Z,70nm,1.0s,mb5.3
CD2                              pP      pP      16 49 10.5  0.0
CD2                              S       S       16 54 51.5 -6.0
CD2                              sS              16 55 11.0
CD2                              SS      SS      16 57 40.0 -5.5
CD2                              LR      LR
      comp=Z,7µm,19.0s,MS5.5
CLNS  Chul'man          39.72 342 eP      P       16 49 01.7 +0.5
CLNS                             e               16 51 11.8
CLNS                             eS      S       16 54 58.6 -3.3
CLNS                             pmax    pmax
      comp=Z,249nm,0.9s,mb5.9
CLNS                             pmax    pmax
      comp=N,125nm,1.1s
CLNS                             pmax    pmax
      comp=E,72nm,1.1s
CLNS                             pmax    pmax
      comp=Z,34nm,0.9s,mb5.1
CLNS                             pmax    pmax
      comp=N,91nm,1.1s
CLNS                             pmax    pmax
      comp=E,59nm,1.0s
CLNS                             smax
      comp=E,2µm,14.1s
CLNS                             smax
      comp=Z,582nm,11.5s
CLNS                             smax
      comp=N,765nm,16.3s
CLNS                             MLR     MLR
      comp=N,2µm,15.0s,MS5.6
CLNS                             MLR     MLR
      comp=Z,7µm,15.0s,MS5.6
CLNS                             MLR     MLR
      comp=E,6µm,14.0s,MS5.6
LZH   Lanzhou           40.09 302 eP      P       16 49 05.0 +0.5
LZH                              AP      pP      16 49 15.0 -1.1
LZH                              S       S       16 55 07.3 -0.3
LZH                              SS      SS      16 57 59.0 -1.3
LZH                              AMB     AMB
      comp=Z,400nm,1.2s,mb6.0
LZH                              AMB     AMB
      comp=Z,2µm,5.0s
LZH                              LR      LR
      comp=N,27µm,15.7s
LZH                              LR      LR
      comp=Z,27µm,18.6s,MS6.1
LZH   Lanzhou           40.09 302 eP      P       16 49 05.0 +0.5
      comp=Z,400nm,1.2s,mb6.0
LZH                              pP      pP      16 49 15.0 -1.1
LZH                              S       S       16 55 07.3 -0.3
LZH                              SS      SS      16 57 59.0 -1.3
LZH                              LR      LR
      comp=Z,27µm,18.6s,MS6.1
LZH   Lanzhou           40.09 302 eP      P       16 49 04.9 +0.4
LZH                              *PP     pP      16 49 14.9 -1.2
LZH                              *SP     sP      16 49 22.2 +1.0
LZH                                              16 50 47.2
LZH                              PPP     PPP     16 51 08.0 +0.8
LZH                              S       S       16 55 07.3 -0.3
LZH                              *SS             16 55 28.0
LZH                              SS      SS      16 57 59.0 -1.3
LZH                              pmax    pmax
      comp=Z,400nm,1.2s,mb6.0
LZH                              MLR     MLR
      comp=Z,27µm,18.6s,MS6.1
CTAO  Charters Tower    40.15 180 eP      P       16 49 03.0 -2.2
      comp=Z,99nm,0.9s,mb5.5
CTAO                             epP     pP      16 49 13.4 -3.3
CTAO                             ePcP    PcP     16 51 09.7  0.0
CTAO                             LR      LR
      comp=Z,10µm,20.0s,MS5.7
CTAO  Charters Tower    40.15 180 eP      P       16 49 03.0 -2.2
CTAO                             e*PP    pP      16 49 13.5 -3.2
CTAO                             e               16 51 09.7
CTAO                             pmax    pmax
      comp=Z,99nm,0.9s,mb5.5
CTAO                             MLR     MLR
      comp=Z,10µm,20.0s,MS5.7
KMI   Kunming           40.16 285 P       P       16 49 05.8 +0.6
      comp=Z,31nm,1.2s,mb4.9
KMI                              S       S       16 55 09.3 +0.5
KMI                              SS      SS      16 58 00.8 -1.1
KMI                              ScS     ScS     16 59 08.3 +2.1
KMI                              LR      LR
      comp=Z,7µm,24.8s,MS5.4
KMI   Kunming           40.16 285 P       P       16 49 05.8 +0.6
KMI                              *PP     pP      16 49 19.9 +3.1
KMI                              *SP     sP      16 49 25.5 +3.6
KMI                                              16 50 46.4
KMI                              PPP     PPP     16 51 10.2 +1.9
KMI                              S       S       16 55 09.3 +0.5
KMI                              *SS             16 55 30.7
KMI                              SS      SS      16 58 00.7 -1.2
KMI                              SSS     SSS     16 58 39.7 +0.9
KMI                                              16 59 08.3
KMI                              pmax    pmax
      comp=Z,31nm,1.2s,mb4.9
KMI                              MLR     MLR
      comp=Z,7µm,24.8s,MS5.4
CIT   Chita             40.52 329 eP      P       16 49 08.5 +0.6
      comp=Z,704nm,1.9s,mb6.0
CIT                              e               16 51 10.8
CIT   Chita             40.52 329 eP      P       16 49 08.5 +0.6
CIT                              e               16 51 10.8
CIT                              pmax    pmax
      comp=Z,704nm,1.9s,mb6.0
WRAB  Tennant Creek     41.62 197 eP      P       16 49 16.0 -1.4
      comp=Z,342nm,0.8s,mb6.0
WRAB                             epP     pP      16 49 25.6 -3.4
WRAB                             LR      LR
      comp=Z,3µm,22.0s,MS5.2
WRAB  Tennant Creek     41.62 197 eP      P       16 49 16.0 -1.4
WRAB                             e*PP    pP      16 49 25.6 -3.4
WRAB                             pmax    pmax
      comp=Z,505nm,0.8s,mb6.2
WRAB                             MLR     MLR
      comp=Z,3µm,22.0s,MS5.2
WRA   Warramunga Arr    41.63 197 P       P       16 49 16.3 -1.2
      comp=Z,119nm,0.7s,mb5.6,baz=18,slow=8.8,SNR=501
WRA                              ScP             16 55 04.1
      comp=Z,9.0nm,1.0s,baz=16,slow=3.7,SNR=2.9
WRA                              S       S       16 55 30.9 +0.1
      comp=Z,3.0nm,0.9s,baz=5.0,slow=14,SNR=4.1
WRA                              PKPPKP          17 21 10.1
      comp=Z,2.1nm,1.0s,baz=144,slow=2.2,SNR=5.1
WRA   Warramunga Arr    41.63 197 P       P       16 49 16.3 -1.2
WRA                              S       S       16 55 30.9 +0.1
ULN   Ulaanbaatar       41.76 320 P       P       16 49 18.3 +0.1
ULN                              epP     pP      16 49 29.6 -0.2
ULN                              esP     sP      16 49 36.0 +1.2
ULN                              ePcP    PcP     16 51 15.6 +0.9
ULN                              eScP            16 54 59.8
ULN                              LR      LR
      comp=Z,14µm,20.0s,MS5.8
ULN   Ulaanbaatar       41.76 320 P       P       16 49 18.3 +0.1
ULN                              e*PP    pP      16 49 29.6 -0.2
ULN                              e*SP    sP      16 49 36.0 +1.2
ULN                              e               16 51 15.6
ULN                              MLR     MLR
      comp=Z,14µm,20.0s,MS5.8
SONM  Songino Array     42.14 320 P       P       16 49 21.2 -0.1
      comp=Z,29nm,0.4s,mb5.3,baz=131,slow=8.0,SNR=94
SONM                             PcP     PcP     16 51 17.5 +1.6
      comp=Z,12nm,0.7s,baz=138,slow=2.8,SNR=5.1
SONM                             ScP             16 55 06.1
      comp=Z,15nm,1.1s,baz=102,slow=3.4,SNR=5.5
SONM                             LR      LR      17 07 39.2
      comp=Z,18µm,19.5s,MS6.0,baz=21,slow=37
SEY   Seymchan          42.81   4 i P     P       16 49 27.1 +0.5
      comp=Z,0.2nm,1.2s
SEY                              e               16 51 03.4
SEY                              eS      S       16 55 47.3 -0.2
SEY                              SS      SS      16 58 53.0  0.0
SEY                              eSSS    SSS     16 59 37.7 -4.2
SEY                              LR      LR
      comp=Z,29µm,18.0s,MS6.2
SEY   Seymchan          42.81   4 i P     P       16 49 27.1 +0.5
SEY                                              16 51 03.4
SEY                              eS      S       16 55 47.3 -0.2
SEY                              SS      SS      16 58 53.0  0.0
SEY                              eSSS    SSS     16 59 37.7 -4.2
SEY                              pmax    pmax
      comp=Z,150nm,1.2s,mb5.6
SEY                              pmax    pmax
      comp=E,40nm,1.1s
SEY                              smax
      comp=N,4µm,10.8s
SEY                              smax
      comp=E,960nm,6.9s
SEY                              MLR     MLR
      comp=N,16µm,18.0s,MS6.0
SEY                              MLR     MLR
      comp=Z,29µm,18.0s,MS6.2
SEY                              MLR     MLR
      comp=E,10µm,16.0s,MS6.0
YAK   Yakutsk           43.22 349 eP      P       16 49 28.3 -1.6
      comp=E,105nm,0.8s,mb5.6
YAK                              i pP    pP      16 49 38.2 -3.3
YAK                              e               16 51 54.1
YAK                              i               16 59 24.0
YAK                              LR      LR
      comp=Z,3µm,20.0s,MS5.2
YAK   Yakutsk           43.22 349 eP      P       16 49 28.3 -1.6
YAK                              i *PP   pP      16 49 38.2 -3.3
YAK                              e               16 51 54.1
YAK                              i               16 59 24.0
YAK                              pmax    pmax
      comp=Z,105nm,0.8s,mb5.6
YAK                              pmax    pmax
      comp=N,38nm,1.0s
YAK                              pmax    pmax
      comp=E,18nm,1.1s
YAK                              pmax    pmax
      comp=N,15nm,0.9s
YAK                              pmax    pmax
      comp=Z,24nm,0.9s,mb4.9
YAK                              pmax    pmax
      comp=E,10.0nm,1.5s
YAK                              MLR     MLR
      comp=Z,3µm,20.0s,MS5.2
YAK                              MLR     MLR
      comp=N,2µm,15.0s,MS5.2
YAK                              MLR     MLR
      comp=E,1µm,15.0s,MS5.2
CHRT  Chiangrai         43.39 278 ⇑PN     P       16 49 32.5 +0.6
CHRT                             PG      P       16 49 33.5 +1.6
CHRT                             SG      pP      16 49 43.5  0.0
GTA   Gaotai            43.89 306 eP      P       16 49 35.8 +0.1
GTA                              AP      pP      16 49 48.3 +1.0
GTA                              PP      PP      16 51 20.5 +0.8
GTA                              PCP     PcP     16 51 23.5 +1.6
GTA                              SCP             16 55 09.3
GTA                              PCS             16 55 14.8
GTA                              S       S       16 56 02.5 -1.1
GTA                              SS      SS      16 59 10.5 -2.1
GTA                              SCS     ScS     16 59 29.0 +0.3
GTA                              AMB     AMB
      comp=Z,190nm,1.4s,mb5.6
GTA                              AMB     AMB
      comp=Z,1µm,7.6s
GTA                              LR      LR
      comp=N,17µm,19.4s,MS6.0
GTA                              LR      LR
      comp=E,8µm,18.2s,MS6.0
GTA                              LR      LR
      comp=Z,6µm,23.6s
GTA   Gaotai            43.89 306 eP      P       16 49 35.8 +0.1
      comp=Z,190nm,1.4s,mb5.6
GTA                              pP      pP      16 49 48.3 +1.0
GTA                              PP      PP      16 51 20.5 +0.8
GTA                              PcP     PcP     16 51 23.5 +1.6
GTA                              ScP             16 55 09.3
GTA                              PcS             16 55 14.8
GTA                              S       S       16 56 02.5 -1.1
GTA                              SS      SS      16 59 10.5 -2.1
GTA                              ScS     ScS     16 59 29.0 +0.3
GTA                              LR      LR
      comp=Z,6µm,23.6s,MS5.5
BOD   Bodaibo           44.19 336 eP      P       16 49 36.7 -1.2
      comp=Z,144nm,1.4s,mb5.5
BOD   Bodaibo           44.19 336 eP      P       16 49 36.7 -1.2
BOD                              pmax    pmax
      comp=Z,144nm,1.4s,mb5.5
CHG   Chiang Mai        44.34 276 ⇑P      P       16 49 39.7 +0.1
      comp=Z,74nm,1.2s,mb5.3
ZAK   Zakamensk         45.10 322 ⇑iP     P       16 49 44.8 -0.5
      comp=Z,67nm,1.1s,mb5.4
ZAK                              e               16 51 26.1
ZAK   Zakamensk         45.10 322 ⇑iP     P       16 49 44.8 -0.5
ZAK                              e               16 51 26.1
ZAK                              pmax    pmax
      comp=Z,67nm,1.1s,mb5.4
ZAK                              pmax    pmax
      comp=Z,28nm,1.1s,mb5.0
IRK   Irkutsk           45.40 325 eP      P       16 49 47.1 -0.5
      comp=Z,253nm,1.4s,mb5.9
IRK                              eS      S       16 56 27.5 +2.4
IRK   Irkutsk           45.40 325 eP      P       16 49 47.1 -0.5
IRK                              eS      S       16 56 27.5 +2.4
IRK                              pmax    pmax
      comp=Z,253nm,1.4s,mb5.9
KGM   Kluang            45.53 252 P       P       16 49 51.1 +1.9
IPM   Ipoh              46.52 257 P       P       16 49 57.9 +0.9
DZM   Mont Dzumac       46.58 154 eP      P       16 49 53.8 -3.5
DZM   Mont Dzumac       46.58 154 P       P       16 49 57.0 -0.3
      comp=Z,217nm,0.9s,mb6.1,baz=4.0,slow=8.2,SNR=51
DZM                              S       S       16 56 41.3 -1.1
      comp=Z,4.0nm,1.0s,baz=59,slow=12,SNR=2.3
MOY   Mondy             46.96 323 eP      P       16 49 59.5 -0.4
      comp=Z,243nm,1.9s,mb5.8
MOY   Mondy             46.96 323 eP      P       16 49 59.5 -0.4
MOY                              pmax    pmax
      comp=Z,243nm,1.9s,mb5.8
NIKO  Nikolski          47.48  35 P       P       16 50 02.9 -1.1
MBWA  Marble Bar        48.62 214 PFAKE           16 50 20.0 +6.7
MBWA                             LR      LR
      comp=Z,3µm,21.0s,MS5.3
UNV   Unalaska Valle    49.12  35 P       P       16 50 15.8 -1.0
UNV                              LR      LR
      comp=Z,32µm,20.0s,MS6.3
PSI   Prapat            49.16 256 S       S       16 57 23.3 +4.5
      comp=Z,1.7nm,0.4s,baz=150,slow=12,SNR=2.8
PSI                              LR      LR      17 10 27.6
      comp=Z,3µm,18.8s,MS5.3,baz=250,slow=35
LSA   Lhasa             50.28 292 P       P       16 50 26.3 +0.3
LSA                              AP      pP      16 50 35.5 -2.1
LSA                              XP      sP      16 50 40.0 -2.6
LSA                              PP      PP      16 52 19.3 -3.0
LSA                              SCS     ScS     17 00 16.3 +5.9
LSA                              SS      SS      17 00 59.3 -5.6
LSA                              AMB     AMB
      comp=Z,170nm,0.7s,mb6.2
LSA                              AMB     AMB
      comp=Z,1µm,9.6s
LSA                              LR      LR
      comp=N,9µm,31.6s
LSA   Lhasa             50.28 292 P       P       16 50 26.3 +0.3
      comp=N,170nm,0.7s,mb6.2
LSA                              pP      pP      16 50 35.5 -2.1
LSA                              sP      sP      16 50 40.0 -2.6
LSA                              PP      PP      16 52 19.3 -3.0
LSA                              ScS     ScS     17 00 16.3 +5.9
LSA                              SS      SS      17 00 59.3 -5.6
LSA   Lhasa             50.28 292 eP      P       16 50 27.0 +1.0
LSA                              e*PP    pP      16 50 37.7 +0.1
LSA                              pmax    pmax
      comp=Z,253nm,0.8s,mb6.3
LSA                              MLR     MLR
      comp=Z,6µm,19.0s,MS5.6
KIP   Kipapa            51.99  78 P       P       16 50 38.2 -0.8
      comp=Z,304nm,1.3s,mb6.1
HON   Honolulu          52.02  78 P       P       16 50 38.2 -1.0
STKA  Stephens Creek    52.07 185 P       P       16 50 36.5 -3.0
      comp=Z,36nm,0.7s,mb5.4,baz=349,slow=8.1,SNR=60
STKA                             S       S       16 57 54.4 -4.4
      comp=Z,6.0nm,1.1s,baz=141,slow=19,SNR=2.3
STKA                             LR      LR      17 13 31.9
      comp=Z,7µm,18.8s,MS5.7,baz=2.9,slow=37
STKA  Stephens Creek    52.07 185 P       P       16 50 36.5 -3.0
STKA                             S       S       16 57 54.4 -4.4
STKA                             LR      LR      17 13 31.9
TIXI  Tiksi             52.32 353 eP      P       16 50 32.8 -8.0
      comp=Z,60nm,0.8s,mb5.6
TIXI                             i P             16 50 39.4
TIXI                             e               16 52 37.2
TIXI                             eS      S       16 57 56.9 -4.8
TIXI                             e               17 00 16.5
TIXI                             LR      LR
      comp=Z,5µm,16.0s,MS5.6
TIXI  Tiksi             52.32 353 eP      P       16 50 32.8 -8.0
TIXI                             e               16 52 37.2
TIXI                             eS      S       16 57 56.9 -4.8
TIXI                             e               17 00 16.5
TIXI                             pmax    pmax
      comp=Z,60nm,0.8s,mb5.6
TIXI                             MLR     MLR
      comp=Z,5µm,16.0s,MS5.6
SDPT  Sand Point        52.94  35 eP      P       16 50 43.8 -1.8
      comp=Z,1µm,1.7s,mb6.5
SDPT                             LR      LR
      comp=Z,7µm,20.0s,MS5.7
KRAR  Krasnoyarsk       53.05 326 i P     P       16 50 45.3 -1.1
CAL   Calcutta          53.54 283 ex      x       16 50 37.1
CAL                              ex      x       16 57 43.6
WMQ   Urumqi            53.56 310 ⇓iP     P       16 50 50.5 +0.1
      comp=Z,380nm,1.5s,mb6.1
WMQ                              pP      pP      16 51 03.0 +0.8
WMQ                              sP      sP      16 51 04.0 -3.0
WMQ                              PcP     PcP     16 51 57.0 +0.4
WMQ                              PcS             16 55 54.0
WMQ                              S       S       16 58 18.0 -0.9
WMQ                              ScS     ScS     17 00 35.0 +2.2
WMQ                              SS      SS      17 01 57.0 -1.9
WMQ                              LR      LR
      comp=Z,6µm,18.8s,MS5.7
AFI   Afiamalu          53.59 126 P       P       16 50 49.8 -1.2
      comp=Z,23nm,0.8s,mb5.1,baz=276,slow=17,SNR=4.1
AFI   Afiamalu          53.59 126 eP      P       16 50 48.0 -3.0
      comp=Z,34nm,0.8s,mb5.3
AFI                              epP     pP      16 50 58.3 -4.4
AFI                              LR      LR
      comp=Z,6µm,20.0s,MS5.7
AFI   Afiamalu          53.59 126 eP      P       16 50 48.0 -3.0
AFI                              e*PP    pP      16 50 58.3 -4.5
AFI                              pmax    pmax
      comp=Z,34nm,0.8s,mb5.3
AFI                              MLR     MLR
      comp=Z,6µm,20.0s,MS5.7
TNA   Tin City          54.18  22 P       P       16 50 54.1 -0.6
      comp=Z,155nm,1.0s,mb5.9
TNA                              epP     pP      16 51 07.0 +0.4
TNA                              LR      LR
      comp=Z,5µm,20.0s,MS5.6
POHA  Pohakuloa         54.58  80 eP      P       16 50 57.1 -1.1
      comp=Z,136nm,1.1s,mb5.9
POHA                             epP     pP      16 51 09.2 -0.8
POHA                             LR      LR
      comp=Z,9µm,21.0s,MS5.8
JIRN  Jiri              54.78 290 eP      P       16 50 59.9 +0.4
      comp=Z,321nm,0.5s,mb6.6
GUN   Gumba             55.03 290 eP      P       16 51 01.6 +0.3
      comp=Z,1µm,1.0s,mb6.8
ADE   Adelaide          55.42 187 P       P       16 51 03.4 -0.7
PKI   Pulchoki          55.48 290 eP      P       16 51 04.3 -0.3
      comp=Z,144nm,0.5s,mb6.3
PKI   Pulchoki          55.48 290 eP      P       16 51 04.3 -0.3
PKI                              pmax    pmax
      comp=Z,72nm,0.5s,mb6.0
BOK   Bokaro            55.56 285 eP      P       16 51 05.0 -0.3
BOK                              AMb     AMB     16 51 08.9
      comp=Z,362nm,1.6s,mb6.2
KKN   Kakani            55.57 290 eP      P       16 51 04.9 -0.3
      comp=Z,314nm,0.7s,mb6.5
KKN   Kakani            55.57 290 eP      P       16 51 04.9 -0.3
KKN                              pmax    pmax
      comp=Z,157nm,0.7s,mb6.2
DMN   Daman             55.74 290 eP      P       16 51 06.4 -0.1
      comp=Z,180nm,0.4s,mb6.4
GKN   Gorkha            56.11 291 eP      P       16 51 08.9 -0.2
      comp=Z,581nm,0.7s,mb6.7
KOLN  Koldanda          57.05 290 eP      P       16 51 15.5 -0.4
      comp=Z,634nm,0.9s,mb6.7
MKAR  Makanchi Array    57.63 313 P       P       16 51 19.2 -0.5
      comp=Z,48nm,0.5s,mb5.8,baz=92,slow=9.2,SNR=270
MKAR                             PcP     PcP     16 52 10.8 -1.5
      comp=Z,33nm,0.8s,baz=73,slow=4.9,SNR=7.2
MKAR                             ScP             16 56 11.7
      comp=Z,11nm,0.9s,baz=90,slow=7.2,SNR=3.3
MKAR                             S       S       16 59 15.0 +1.9
      comp=Z,0.9nm,0.8s,baz=315,slow=1.7,SNR=2.1
MKAR                             LR      LR      17 19 01.8
      comp=Z,6µm,18.4s,MS5.7,baz=92,slow=39
MKAR                             PKPPKP          17 20 60.0
      comp=Z,0.6nm,0.8s,baz=195,slow=29,SNR=3.8
MKAR  Makanchi Array    57.63 313 P       P       16 51 19.2 -0.5
MKAR                             e               16 52 10.8
MKAR                             S       S       16 59 15.0 +1.9
KDAK  Kodiak Island     57.81  34 P       P       16 51 19.6 -1.2
      comp=Z,231nm,0.8s,mb6.2,baz=262,slow=4.0,SNR=83
NVS   Novosibirsk       58.05 323 ⇓iP     P       16 51 20.8 -1.7
      comp=Z,475nm,1.7s,mb6.2
NVS                              eS      S       16 59 19.5 +1.0
NVS                              e               17 01 06.9
NVS                              eSS     SS      17 03 14.4 +2.7
NVS   Novosibirsk       58.05 323 ⇓iP     P       16 51 20.8 -1.7
NVS                              eS      S       16 59 19.5 +1.0
NVS                              e               17 01 06.9
NVS                              eSS     SS      17 03 14.4 +2.7
NVS                              pmax    pmax
      comp=Z,475nm,1.7s,mb6.2
NVS                              pmax    pmax
      comp=N,121nm,1.4s
NVS                              pmax    pmax
      comp=E,349nm,1.4s
NVS                              pmax    pmax
      comp=N,57nm,2.0s
NVS                              pmax    pmax
      comp=Z,135nm,2.0s,mb5.6
NVS                              pmax    pmax
      comp=E,80nm,2.2s
NVS                              smax
      comp=N,114nm,2.0s
NVS                              smax
      comp=E,80nm,2.0s
COCO  West Island       58.23 241 P       P       16 51 24.6 +0.3
COCO                             epP     pP      16 51 35.2 -1.1
ALBI  Allahabad         58.99 288 eP      P       16 51 27.5 -2.0
VIS   Vishakhapatnam    59.09 279 eP      P       16 51 29.7 -0.5
VIS                              AMb     AMB     16 51 32.7
      comp=Z,200nm,0.8s,mb6.2
SLKM  Skilak Lake       59.61  31 P       P       16 51 31.4 -1.9
IMA2  Indian Mountai    59.65  24 eP      P       16 51 32.6 -0.9
PTH   Pithoragarh       59.77 293 eP      P       16 51 35.0 +0.2
PTH                              ex      x       16 54 06.0
PTH                              ex      x       16 59 47.0
FIB   Fire Island       59.78  30 P       P       16 51 33.5 -0.9
FIB                              LR      LR
      comp=Z,7µm,22.0s,MS5.8
RAO   Raoul Island      60.27 144 P       P       16 51 36.1 -2.1
      comp=Z,485nm,0.8s,mb6.6,baz=110,slow=22,SNR=4.4
RAO   Raoul Island      60.27 144 P       P       16 51 36.1 -2.1
RAO                              LR      LR
      comp=Z,5µm,19.0s,MS5.7
KURK  Kurchatov         60.34 317 P       P       16 51 37.4 -1.0
PMR   Palmer            60.37  30 eP      P       16 51 36.5 -2.0
      comp=Z,403nm,1.0s,mb6.4
PMR                              LR      LR
      comp=Z,16µm,22.0s,MS6.1
PMR   Palmer            60.37  30 eP      P       16 51 36.5 -2.0
PMR                              pmax    pmax
      comp=Z,403nm,1.0s,mb6.4
PMR                              MLR     MLR
      comp=Z,16µm,22.0s,MS6.1
SML   Sawmill           60.79  30 eP      P       16 51 40.3 -1.0
MCK   McKinley          60.94  27 P       P       16 51 40.6 -1.7
      comp=Z,162nm,1.0s,mb6.1
MCK                              LR      LR
      comp=Z,3µm,20.0s,MS5.4
MCK   McKinley          60.94  27 P       P       16 51 40.6 -1.7
MCK                              pmax    pmax
      comp=Z,162nm,1.0s,mb6.1
MCK                              MLR     MLR
      comp=Z,3µm,20.0s,MS5.4
AAA   Alma-Ata          61.34 309 i P     P       16 51 46.4 +1.1
AAA                              i S     S       17 00 05.7 +4.6
AAA                              pmax    pmax
      comp=Z,3µm,1.9s,mb7.0
AAA                              smax
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      comp=N,3µm,8.0s
AAA                                MLR      MLR
      comp=Z,8µm,16.8s,MS5.9
DDI   Dehra Dun        61.52 294  eP       P        16 51 45.2  -1.5
COLA  College          61.66  26d iP       P        16 51 45.1  -2.0
DIV   Divide           61.87  31   P       P        16 51 48.0  -0.6
DIV                                LR       LR
      comp=Z,19µm,20.0s,MS6.2
ULHL  Ulahol           61.89 308   P       P        16 51 49.7  +0.7
      SNR=11
ILAR  Eielson Array    62.04  27   P       P        16 51 47.3  -2.4
      comp=Z,236nm,0.8s,mb6.3,baz=259,slow=5.5,SNR=1084
ILAR                               LR       LR      17 18 23.6
      comp=Z,8µm,18.9s,MS5.9,baz=110,slow=36
ILAR                               PKPPKP           17 20 44.4
      comp=Z,2.9nm,0.9s,baz=168,slow=2.2,SNR=11
SMLA  Simla            62.17 295  eP       P        16 51 49.6  -1.4
SMLA                              ex       x        17 00 10.8
KSH   Kashi            62.26 305  i PR              16 51 53.3
KSH                                AP       pP      16 52 06.0  +2.5
KSH                                PCP      PcP     16 52 32.0  +1.2
KSH                                PP       PP      16 54 13.0  +2.2
KSH                                SCP              16 56 29.0
KSH                                PCS              16 56 34.0
KSH                                S        S       17 00 12.5  -0.3
KSH                                SCS      ScS     17 01 38.0  +1.7
KSH                                SS       SS      17 04 21.0  +2.8
KSH                                AMB      AMB
      comp=Z,2µm,3.6s
KSH                                LR       LR
      comp=N,6µm,13.8s
KSH                                LR       LR
      comp=E,18µm,19.5s
KSH   Kashi            62.26 305⇓ iP       P        16 51 53.3  +1.8
KSH                                pP       pP      16 52 06.0  +2.5
KSH                                PcP      PcP     16 52 32.0  +1.2
KSH                                PP       PP      16 54 13.0  +2.2
KSH                                ScP              16 56 29.0
KSH                                PcS              16 56 34.0
KSH                                S        S       17 00 12.5  -0.3
KSH                                ScS      ScS     17 01 38.0  +1.7
KSH                                SS       SS      17 04 21.0  +2.8
THY   Trims Highway    62.27  28   P       P        16 51 50.4  -0.8
SDNR  Sundarnagar      62.29 296  eP       P        16 51 51.0  -0.8
TKM2  Tokmak 2         62.34 309   P       P        16 51 52.5  +0.6
      SNR=78
NDI   New Delhi        62.49 292  eP       P        16 51 51.8  -1.4
NDI                               ex       x        17 00 11.5
KZA   Kyzart           62.64 308   P       P        16 51 55.5  +1.5
      SNR=89
BHK   Bhakra           62.77 296  eP       P        16 51 56.9  +1.9
KBK   Karagaybulak     62.83 308   P       P        16 51 55.7  +0.4
      SNR=53
TAU   Tasmania Unive   62.91 179   P       P        16 51 54.7  -1.1
TAU                                LR       LR
      comp=Z,2µm,22.0s,MS5.3
CHMS  Chumysh          62.95 309   P       P        16 51 55.9  -0.2
      SNR=37
DLH   Dalhousie        62.99 297  eP       P        16 51 56.0  -0.5
DLH                               ex       x        16 52 09.0
FRU   Bishkek          63.06 309  i P      P        16 51 56.5  -0.3
      comp=Z,480nm,2.0s,mb6.3
FRU                               e        pP       16 52 11.0  +2.1
FRU                               e                 16 52 38.0
FRU                               eS       S        17 00 20.0  -2.8
FRU                                LR       LR
      comp=Z,6µm,17.0s,MS5.8
FRU   Bishkek          63.06 309  i P      P        16 51 56.5  -0.3
FRU                               e        pP       16 52 11.0  +2.1
FRU                               e                 16 52 38.0
FRU                               eS       S        17 00 20.0  -2.8
FRU                                pmax     pmax
      comp=Z,480nm,2.0s,mb6.3
FRU                                MLR      MLR
      comp=E,6µm,17.0s
FRU                                MLR      MLR
      comp=Z,6µm,17.0s,MS5.8
USP   Ospenovka        63.12 309   P       P        16 51 57.1  -0.1
      SNR=59
AAK   Ala-Archa        63.16 308   P       P        16 51 57.7  +0.2
      SNR=39
AAK   Ala-Archa        63.16 308  i P      P        16 51 56.5  -1.0
      comp=Z,169nm,2.7s,mb5.7
AAK                                LR       LR
      comp=Z,4µm,18.0s,MS5.7
AAK   Ala-Archa        63.16 308d iP       P        16 51 56.5  -1.0
AAK                                pmax     pmax
      comp=Z,169nm,2.7s,mb5.7
AAK                                MLR      MLR
      comp=Z,4µm,18.0s,MS5.7
UCH   Uchtor           63.18 308   P       P        16 51 58.9  +1.3
      SNR=86
BHPL  Bhopal           63.30 286  eP       P        16 51 57.8  -0.8
BHPL                               AMb      AMB     16 52 01.7
      comp=Z,293nm,0.7s,mb6.5
HYB   Hyderabad        63.58 280  i P      P        16 52 01.0  +0.4
      comp=Z,100nm,1.0s,mb5.8
HYB                               eS       S        17 00 32.0  +2.3
HYB                                LR       LR      17 19 28.0
      comp=Z,4.9nm,20.0s
HYB   Hyderabad        63.58 280  eP       P        16 52 01.0  +0.4
      comp=Z,100nm,1.0s,mb5.8
HYB                               eS       S        17 00 32.0  +2.3
HYB   Hyderabad        63.58 280  eP       P        16 52 01.0  +0.4
HYB                               eS       S        17 00 32.0  +2.3
HYB                                pmax     pmax
      comp=Z,100nm,1.0s,mb5.8
EKS2  Erkin-Say        63.69 308   P       P        16 52 01.3  +0.3
      SNR=40
AML   Almayashu        63.79 308   P       P        16 52 02.6  +1.0
      SNR=48
PALK  Pallekele        64.47 268  eP       P        16 52 05.8  -0.7
      comp=Z,38nm,0.9s,mb5.4
PALK                              epP      pP       16 52 16.1  -2.5
PALK                               LR       LR
      comp=Z,901nm,20.0s,MS5.0
URZ   Urewera          65.14 153   P       P        16 52 08.7  -1.7
      comp=Z,64nm,1.0s,mb5.6,baz=337,slow=5.5,SNR=7.2
DAWY  Dawson           65.15  28   P       P        16 52 09.6  -0.5
LATR  Latur            65.18 281  eP       P        16 52 11.0   0.0
CHKZ  Chkalovo         65.33 321   P       P        16 52 10.3  -1.1
BVAR  Borovoye Array   65.48 320   P       P        16 52 12.0  -0.4
      comp=Z,520nm,0.8s,mb6.6,baz=91,slow=7.2,SNR=648
BVAR                               S        S       17 00 55.1  +2.6
      comp=Z,8.9nm,1.0s,baz=98,slow=10,SNR=8.9
BVAR                               PKPPKP           17 20 49.7
      comp=Z,2.2nm,1.0s,baz=225,slow=2.1,SNR=6.0
BVAR  Borovoye Array   65.48 320   P       P        16 52 12.0  -0.4
BVAR                               S        S       17 00 55.1  +2.6
BRVK  Borovoye         65.55 320   P       P        16 52 12.4  -0.4
QRZ   Quartz Range     65.60 158   P*      P        16 52 13.1  -0.2
QRZ   Quartz Range     65.60 158  eP       P        16 52 12.9  -0.4
DUWZ  D'Urville Isla   66.08 157   P*      P        16 52 15.7  -0.6
DSZ   Denniston Nort   66.17 159   P*      P        16 52 16.4  -0.5
THZ   Tophouse         66.56 158   P*      P        16 52 17.6  -1.8
THZ   Tophouse         66.56 158  eP       P        16 52 18.2  -1.2
MRZ   Mangatainoka R   66.57 156   P*      P        16 52 19.6  +0.1
MRZ   Mangatainoka R   66.57 156   P       P        16 52 19.7  +0.2
SNZO  South Karori     66.81 157   P*      P        16 52 19.5  -1.4
RAR   Rarotonga        67.10 125   P       P        16 52 22.9  -0.2
      comp=Z,25nm,0.8s,mb5.3,baz=292,slow=5.4,SNR=5.1
RAR   Rarotonga        67.10 125   P       P        16 52 22.9  -0.2
RAR                                LR       LR
      comp=Z,1.0nm,22.0s
LTZ   Lake Taylor      67.26 159   P*      P        16 52 22.8  -1.0
LTZ   Lake Taylor      67.26 159  eP       P        16 52 22.8  -0.9
JCZ   Jackson Bay      67.35 162   P*      P        16 52 23.8  -0.5
TRD   Trivandrum       67.59 271  eP       P        16 52 25.9  -0.4
TRD                                AMb      AMB     16 52 39.0
      comp=Z,130nm,1.1s,mb5.9
POO   Poona            67.64 282  eP       P        16 52 24.0  -2.5
POO   Poona            67.64 282⇑ iP       P        16 52 24.0  -2.5
      comp=Z,3µm,1.0s
KAD   Karad            67.65 281  eP       P        16 52 26.1  -0.5
KAD                                AMb      AMB     16 52 29.6
      comp=Z,133nm,0.7s,mb6.1
RPZ   Rata Peaks       67.70 161   P       P        16 52 24.5  -2.0
      comp=Z,168nm,0.8s,mb6.1,baz=188,slow=1.7,SNR=28
RPZ   Rata Peaks       67.70 161   P*      P        16 52 24.1  -2.5
RPZ   Rata Peaks       67.70 161  eP       P        16 52 24.6  -1.9
INK   Inuvik           67.75  23   P       P        16 52 25.1  -1.3
      comp=Z,140nm,0.9s,mb6.0,baz=255,slow=5.9,SNR=239
INK   Inuvik           67.75  23   P       P        16 52 25.3  -1.1
      comp=Z,7µm,1.0s
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INK                               epP      pP       16 52 36.0  -2.6
INK   Inuvik           67.75  23   P       P        16 52 25.3  -1.1
INK                               e*PP     pP       16 52 36.0  -2.6
INK                                pmax     pmax
      comp=Z,215nm,1.0s
LBZ   Lake Benmore     68.05 162   P*      P        16 52 27.4  -1.3
LBZ   Lake Benmore     68.05 162  eP       P        16 52 27.5  -1.2
MNGI  Mangalore        68.25 276  eP       P        16 52 30.1  -0.4
MNGI                              eS       S        17 01 25.7  -0.9
BOM   Bombay           68.49 283  eP       P        16 52 27.8  -4.0
BOM                               ex       x        17 01 19.7
DLBC  Dease Lake       69.75  34   P       P        16 52 39.5  +0.6
      comp=Z,204nm,0.9s,mb6.0,baz=280,slow=6.1,SNR=183
DLBC  Dease Lake       69.75  34   P       P        16 52 39.3  +0.4
BHJ   Bhuj             70.26 288  eP       P        16 52 43.6  +1.0
BHJ                                AMb      AMB     16 52 47.3
      comp=Z,439nm,1.0s,mb6.3
SVE   Sverdlovsk       70.79 325⇓ iP       P        16 52 45.3  +0.1
      comp=Z,440nm,2.1s,mb6.0
SVE                               e                 16 55 30.0
SVE                               eS       S        17 01 56.0  +0.3
SVE                               ePS      PS       17 02 37.0  +8.0
SVE                                LR       LR
      comp=Z,5µm,18.0s,MS5.8
SVE   Sverdlovsk       70.79 325⇓ iP       P        16 52 45.3  +0.1
SVE                               e                 16 55 30.0
SVE                               eS       S        17 01 56.0  +0.3
SVE                               ePS      PS       17 02 37.0  +8.0
SVE                                pmax     pmax
      comp=Z,440nm,2.1s,mb6.0
SVE                                MLR      MLR
      comp=N,3µm,18.0s,MS5.8
SVE                                MLR      MLR
      comp=E,4µm,18.0s,MS5.8
SVE                                MLR      MLR
      comp=Z,5µm,18.0s,MS5.8
BBB   Bella Bella      71.68  40   P       P        16 52 50.0  -0.6
      comp=Z,166nm,0.9s,mb6.0,baz=260,slow=2.3,SNR=23
ARU   Arti             71.98 324⇓ iP       P        16 52 52.0  -0.4
      comp=Z,276nm,1.1s,mb6.1
ARU                               e                 16 53 07.9
ARU                               e                 16 55 26.7
ARU                               ePPP     PPP      16 57 11.6  -4.6
ARU                               eS       S        17 02 11.9  +2.4
ARU                               e                 17 02 54.3
ARU                               eSS      SS       17 06 45.0  -3.4
ARU                                LR       LR
      comp=Z,6µm,19.0s,MS5.9
ARU   Arti             71.98 324⇓ iP       P        16 52 52.0  -0.4
ARU                               e                 16 53 07.9
ARU                               e                 16 55 26.7
ARU                               ePPP     PPP      16 57 11.6  -4.6
ARU                               eS       S        17 02 11.9  +2.4
ARU                               e                 17 02 54.3
ARU                               eSS      SS       17 06 45.0  -3.4
ARU                                pmax     pmax
      comp=Z,276nm,1.1s,mb6.1
ARU                                MLR      MLR
      comp=N,900nm,19.0s,MS5.7
ARU                                MLR      MLR
      comp=E,4µm,19.0s,MS5.7
ARU                                MLR      MLR
      comp=Z,6µm,19.0s,MS5.9
SOKR  Solikamsk        72.37 328⇓ iP       P        16 52 54.3  -0.3
      comp=Z,190nm,1.0s,mb6.0
SOKR                               S        S       17 02 14.6  +0.7
SOKR                               SS       SS      17 06 56.9  +2.2
SOKR                               LR       LR
      comp=Z,5µm,18.0s,MS5.9
SOKR  Solikamsk        72.37 328⇓ iP       P        16 52 54.3  -0.3
SOKR                               S        S       17 02 14.6  +0.7
SOKR                               SS       SS      17 06 56.9  +2.2
SOKR                               pmax     pmax
      comp=Z,190nm,1.0s,mb6.0
SOKR                               MLR      MLR
      comp=Z,5µm,18.0s,MS5.9
AKTO  Aktyubinsk       73.42 318   LR       LR      17 27 48.1
      comp=Z,5µm,19.3s,MS5.8,baz=319,slow=38
PPT   Papeete          73.48 116  eP       P        16 53 01.9  -0.1
      comp=Z,125nm,1.4s,mb5.7
PPT   Papeete          73.48 116  eLR      LR       17 15 44.3
      comp=Z,10µm,23.0s,baz=298
PPT   Papeete          73.48 116   P       P        16 53 01.8  -0.2
      comp=Z,18nm,0.6s,mb5.2,baz=225,slow=20,SNR=2.7
PPT                                LR       LR      17 21 43.1
      comp=Z,5µm,19.0s,MS5.8,baz=294,slow=33
PAE   Paea             73.52 116  eP       P        16 53 02.0  -0.2
      comp=Z,242nm,1.3s,mb6.0
PMOR  Pomariorio Ree   73.74 113  eP       P        16 53 03.0  -0.5
      comp=Z,179nm,1.3s,mb5.8
TVO   Taravao          73.85 116  eP       P        16 53 04.2  +0.1
      comp=Z,164nm,1.0s,mb5.9
VAH   Vaihoa           74.07 113  eP       P        16 53 04.6  -0.8
      comp=Z,153nm,1.4s,mb5.8
OOW   Octopus West     75.06  44   P       P        16 53 11.9  +1.4
OCWA  Octopus Mounta   75.06  44   P       P        16 53 11.9  +1.4
      comp=Z,332nm,1.2s,mb6.1
OCWA                               LR       LR
      comp=Z,8µm,22.0s,MS6.0
PGC   Sidney           75.32  43   P       P        16 53 12.9  +0.9
GNW   Green Mountain   76.00  44   P       P        16 53 17.0  +1.1
VAN   Vannovskaya      76.27 306⇑ iP       P        16 53 18.3  +0.6
VAN                               i S      S        17 02 58.3  +0.5
TBI   Tubuai           76.34 121  eP       P        16 53 18.0  -0.3
      comp=Z,116nm,1.0s,mb5.8
TBI   Tubuai           76.34 121  eLR      LR       17 17 02.8
      comp=Z,4µm,22.2s,baz=302
YKW3  Yellowknife Ar   76.37  28   P       P        16 53 17.1  -0.6
YKA   Yellowknife Ar   76.39  28   P       P        16 53 17.2  -0.6
      comp=Z,152nm,0.8s,mb6.0,baz=290,slow=5.5,SNR=294
YKA                                LR       LR      17 25 41.7
      comp=Z,9µm,20.8s,MS6.0,baz=270,slow=35
COR   Corvallis        76.44  47   P       P        16 53 20.0  +1.5
COR                               ePcP     PcP      16 53 30.4   0.0
COR                                LR       LR
      comp=Z,10µm,20.0s,MS6.1
KHMM  Horse Mountain   77.12  51   P       P        16 53 23.7  +1.3
HUMO  Hull Mountain    77.21  49   P       P        16 53 23.5  +0.6
      comp=Z,291nm,1.4s,mb6.0
HUMO                               LR       LR
      comp=Z,8µm,20.0s,MS6.0
HOOD  Mount Hood Mea   77.37  46   P       P        16 53 24.4  +0.7
DGAR  Diego Garcia     77.42 257   P       P        16 53 29.2  +4.7
      comp=Z,180nm,1.3s,mb5.8
DGAR                               LR       LR
      comp=Z,556nm,21.0s,MS4.9
DGAR  Diego Garcia     77.42 257   P       P        16 53 29.2  +4.6
DGAR                               pmax     pmax
      comp=Z,180nm,1.3s,mb5.8
DGAR                               MLR      MLR
      comp=Z,556nm,21.0s,MS4.9
LTY   Liberty          77.49  44   P       P        16 53 24.6  +0.3
VFP   Flag Point       77.50  46   P       P        16 53 24.9  +0.5
BKCOR Black Crater     77.63  47   P       P        16 53 25.6  +0.5
YBH   Yreka Blue Hor   77.63  50   P       P        16 53 26.0  +0.8
      comp=Z,191nm,1.0s,mb6.0
YBH                                LR       LR
      comp=Z,7µm,20.0s,MS6.0
YBH   Yreka Blue Hor   77.63  50   P       P        16 53 26.0  +0.8
YBH                                pmax     pmax
      comp=Z,191nm,1.0s
YBH                                MLR      MLR
      comp=Z,7µm,20.0s
KBS   Kingsbay         77.75 352  eP       P        16 53 25.9  +0.8
KBS                                AMb      AMB     16 53 28.9
      comp=Z,182nm,1.8s,mb5.7
KBS                               ePP      PP       16 56 23.2  +0.5
KBS                                AMS      AMS     17 27 53.8
      comp=Z,1µm,23.0s,MS5.2
KBS   Kingsbay         77.75 352   P       P        16 53 26.1  +0.9
      comp=Z,320nm,1.4s,mb6.1
KBS                                LR       LR
      comp=Z,3µm,20.0s,MS5.5
KBS   Kingsbay         77.75 352   P       P        16 53 26.1  +0.9
KBS                                pmax     pmax
      comp=Z,320nm,1.4s,mb6.1
KBS                                MLR      MLR
      comp=Z,3µm,20.0s,MS5.5
RES   Resolute Bay     77.77  14   P       P        16 53 25.3   0.0
      comp=Z,6µm,1.0s
RES   Resolute Bay     77.77  14   P       P        16 53 25.3  -0.1
RES                                pmax     pmax
      comp=Z,183nm,1.0s,mb6.0
LHEM  Herd Peak        78.01  50   P       P        16 53 27.9  +0.7
WDC   Whiskeytown Da   78.07  51   P       P        16 53 28.0  +0.3
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      comp=Z,183nm,1.2s,mb5.9
WDC                                LR       LR
      comp=Z,14µm,21.0s,MS6.3
WDC   Whiskeytown Da   78.07  51   P       P        16 53 28.0  +0.4
WDC                                pmax     pmax
      comp=Z,181nm,1.2s,mb5.9
WDC                                MLR      MLR
      comp=Z,14µm,21.0s,MS6.3
HOPS  Hopland          78.13  53   P       P        16 53 28.3  +0.3
      comp=Z,166nm,1.0s,mb5.9
HOPS                               LR       LR
      comp=Z,10µm,20.0s,MS6.1
HOG   Hogback Mounta   78.20  49   P       P        16 53 29.1  +0.8
VIPM  Ingram Point     78.31  47   P       P        16 53 29.4  +0.6
PINOR Pine Mountain    78.34  48   P       P        16 53 30.0  +1.0
GBL   Gable Mountain   78.47  45   P       P        16 53 30.3  +0.6
HAWA  Hanford          78.49  45   P       P        16 53 30.2  +0.4
HAWA                               LR       LR
      comp=Z,6µm,20.0s,MS5.9
HSP   Hornsund         78.58 350  eP       P        16 53 30.1  +0.3
NSHM  Saint Helena R   78.61  53  eP       P        16 53 31.2  +0.5
OD2   Odessa Site #2   78.72  44   P       P        16 53 31.1   0.0
SAC   San Andreas      79.03  54   P       P        16 53 32.9  -0.1
LVZ   Lovozero         79.07 339  i P      P        16 53 32.3  -0.3
LVZ                               i S      S        17 03 22.6  -4.7
LVZ                                pmax     pmax
      comp=Z,244nm,1.0s,mb6.1
LVZ                                pmax     pmax
      comp=N,52nm,0.9s
LVZ                                pmax     pmax
      comp=E,68nm,1.3s
LVZ                                pmax     pmax
      comp=Z,1µm,2.0s,mb6.4
LVZ                                pmax     pmax
      comp=N,203nm,1.7s
LVZ                                pmax     pmax
      comp=E,347nm,2.3s
LVZ                                MLR      MLR
      comp=Z,2µm,21.0s,MS5.5
LVZ                                MLR      MLR
      comp=N,1µm,18.0s,MS5.4
LVZ                                MLR      MLR
      comp=E,1µm,21.0s,MS5.4
MOD   Modoc            79.30  49   P       P        16 53 34.7  +0.3
      comp=E,156nm,0.9s,mb5.9
MOD                               epP      pP       16 53 48.4  +1.7
MOD                                LR       LR
      comp=Z,8µm,21.0s,MS6.0
NEW   Newport          79.47  42   P       P        16 53 35.3  +0.1
      comp=Z,285nm,1.1s,mb6.1
NEW                                LR       LR
      comp=Z,9µm,20.0s,MS6.1
NEW   Newport          79.47  42   P       P        16 53 35.3  +0.2
NEW                                pmax     pmax
      comp=Z,293nm,1.1s
NEW                                MLR      MLR
      comp=Z,11µm,20.0s
BJO   Bjornoya         79.58 347  eP       P        16 53 34.8  -0.4
APA   Apatity          79.65 339⇑ iP       P        16 53 35.2  -0.5
      comp=Z,260nm,1.0s,mb6.1
APA                               i                 16 53 43.0
APA                               i                 16 56 33.0
APA                               i S      S        17 03 32.0  -1.4
APA                                LR       LR
      comp=Z,3µm,16.0s,MS5.7
APA   Apatity          79.65 339⇑ iP       P        16 53 35.2  -0.5
APA                               i                 16 53 43.0
APA                               i                 16 56 33.0
APA                               i S      S        17 03 32.0  -1.4
APA                                pmax     pmax
      comp=Z,260nm,1.0s,mb6.1
APA                                pmax     pmax
      comp=Z,2µm,7.0s
APA                                smax
      comp=N,2µm,7.0s
APA                                smax
      comp=E,2µm,7.0s
APA                                MLR      MLR
      comp=Z,3µm,16.0s,MS5.7
PECR  Pechory          79.77 326  i P      P        16 53 35.6  -0.9
PECR                              e                 16 56 37.0
PECR                              eS       S        17 03 46.0  +11
PECR                               pmax     pmax
      comp=Z,2µm,12.0s
PECR                               smax
      comp=E,1µm,12.0s
PECR                               MLR      MLR
      comp=Z,5µm,17.0s,MS5.9
PECR                               MLR      MLR
      comp=E,3µm,16.0s
SAO   San Andreas Ge   80.01  55   P       P        16 53 38.5  +0.2
SAO                                LR       LR
      comp=Z,7µm,20.0s,MS6.0
EDM   Edmonton         80.07  37   P       P        16 53 38.3  +0.1
KLMR  Klimovskoe       80.22 332d iP       P        16 53 37.9  -1.0
KLMR                               pmax     pmax
      comp=Z,290nm,1.1s,mb6.1
KLMR                               pmax     pmax
      comp=Z,850nm,10.9s
WVOR  Wild Horse Val   80.31  48  eP       P        16 53 40.2  +0.4
      comp=Z,296nm,1.1s,mb6.1
WVOR                              ePcP     PcP      16 53 48.0  +0.9
WVOR                               LR       LR
      comp=Z,8µm,20.0s,MS6.0
WVOR  Wild Horse Val   80.31  48  eP       P        16 53 40.2  +0.4
WVOR                              e                 16 53 48.0
WVOR                               pmax     pmax
      comp=Z,319nm,1.1s,mb6.2
WVOR                               MLR      MLR
      comp=Z,10µm,20.0s,MS6.2
CMB   Columbia Colle   80.43  53   P       P        16 53 40.2  -0.3
      comp=Z,308nm,1.1s,mb6.2
CMB                                LR       LR
      comp=Z,9µm,19.0s,MS6.2
CMB   Columbia Colle   80.43  53   P       P        16 53 40.2  -0.3
CMB                                pmax     pmax
      comp=Z,308nm,1.1s,mb6.2
CMB                                MLR      MLR
      comp=Z,9µm,19.0s,MS6.2
LRV   Little Rabbit    80.45  55  eP       P        16 53 41.4  +0.7
LRV                               ePcP     PcP      16 53 48.6  +0.7
BMO   Blue Mountains   80.45  46   P       P        16 53 40.5   0.0
      comp=Z,370nm,1.1s,mb6.2
BMO                                LR       LR
      comp=Z,6µm,20.0s,MS5.9
BMO   Blue Mountains   80.45  46   P       P        16 53 40.5  +0.1
BMO                                pmax     pmax
      comp=Z,370nm,1.1s,mb6.2
BMO                                MLR      MLR
      comp=Z,6µm,20.0s,MS5.9
KEV   Kevo             80.52 342  ep       P        16 53 38.3  -2.0
      comp=Z,88nm,0.6s,mb5.9
KEV   Kevo             80.52 342  eP       P        16 53 38.3  -2.0
KEV                                pmax     pmax
      comp=Z,88nm,0.6s,mb5.9
WAKR  Walker           80.99  52   P       P        16 53 44.2  +0.7
ARCES ARCESS Array B   81.08 342   P       P        16 53 43.6  +0.3
      comp=Z,152nm,0.7s,mb6.0,baz=62,slow=7.3,SNR=326
ARCES                              LR       LR      17 33 36.5
      comp=Z,5µm,21.4s,MS5.8,baz=63,slow=39
ARE0  ARCESS Array S   81.08 342   P       P        16 53 43.7  +0.4
BSMT  Bassoo Peak      81.08  42   P       P        16 53 44.5  +0.8
PTRM  Twissleman Ran   81.31  55  eP       P        16 53 45.7  +0.5
NVAR  Mina Array Bea   81.85  52   P       P        16 53 48.5  +0.6
      comp=Z,180nm,0.8s,mb6.0,baz=266,slow=4.2,SNR=844
NVAR                               PKPPKP           17 20 19.9
      comp=Z,0.2nm,0.3s,baz=74,slow=4.5,SNR=4.3
NVAR                               LR       LR      17 28 14.0
      comp=Z,7µm,18.9s,MS6.1,baz=225,slow=34
MNV   Mina             81.96  52   P       P        16 53 49.1  +0.7
      comp=Z,246nm,1.0s,mb6.1
MNV                                LR       LR
      comp=Z,8µm,19.0s,MS6.1
MNV   Mina             81.96  52   P       P        16 53 49.2  +0.7
MNV                                pmax     pmax
      comp=Z,247nm,1.0s,mb6.1
MNV                                MLR      MLR
      comp=Z,8µm,19.0s,MS6.1
MSO   Missoula         81.98  43   P       P        16 53 48.2  -0.2
MSO                               epP      pP       16 54 01.1  +0.2
MSO                                LR       LR
      comp=Z,6µm,22.0s,MS5.9
MTUM  Tungsten Hills   82.01  53   P       P        16 53 49.4  +0.6
KTK1  Kautokeino       82.04 342⇓ iP       P        16 53 48.1  -0.2
KTK1                               AMb      AMB     16 53 51.5
      comp=Z,314nm,1.1s,mb6.1
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CHMT  Chamberlain Mo    82.39  43   P       P       16 53 50.2 -0.3
CHMT                               epP      pP      16 54 03.2 +0.2
MAK   Makhachkala       82.45 313  i P      P       16 53 52.7 +1.8
MAK                                i S      S       17 04 07.2 +4.4
MAK                                 pmax    pmax
      comp=Z,1µm,1.7s,mb6.5
SNCC  San Nicolas Is    82.63  57   P       P       16 53 52.7 +0.7
      comp=Z,0.3nm,0.9s
SNCC                                LR      LR
      comp=Z,6µm,20.0s,MS5.9
ISA   Isabella          82.64  55   P       P       16 53 51.6 -0.4
ISA                                 LR      LR
      comp=Z,1µm,19.0s,MS5.4
DAG   Danmarks Havn     82.69 356⇑iP        P       16 53 51.3 -0.2
      comp=Z,80nm,1.0s,mb5.7
      comp=Z,2µm,17.0s
DAG   Danmarks Havn     82.69 356⇑iP        P       16 53 51.3 -0.2
DAG                                 pmax    pmax
      comp=Z,80nm,1.0s,mb5.7
DAG                                 MLR     MLR
      comp=Z,2µm,17.0s,MS5.6
JOF   Joensuu           82.72 335  ep       P       16 53 49.1 -2.8
      comp=Z,89nm,0.5s,mb6.0
TPH   Tonopah           82.77  52   P       P       16 53 53.3 +0.6
      comp=Z,224nm,1.0s,mb6.2
TPH   Tonopah           82.77  52   P       P       16 53 53.3 +0.7
TPH                                 pmax    pmax
      comp=Z,224nm,1.0s,mb6.2
TRO   Tromso            82.84 344  eP       P       16 53 51.1 -1.3
TRO                                 AMb     AMB     16 53 54.3
      comp=Z,264nm,2.2s,mb5.9
TRO                                eS       S       17 04 04.8 -1.4
TRO                                eSS      SS      17 09 29.7 -3.2
TRO                                 AMS     AMS     17 33 10.8
      comp=Z,3µm,17.4s,MS5.7
HLID  Hailey            82.85  46   P       P       16 53 53.5 +0.6
      comp=Z,103nm,1.2s,mb5.7
HLID                                LR      LR
      comp=Z,5µm,20.0s,MS5.9
DAC   Darwin (Calif)    83.11  54   P       P       16 53 54.7 +0.3
      comp=Z,117nm,1.1s,mb5.8
DAC                                 LR      LR
      comp=Z,8µm,20.0s,MS6.1
DAC   Darwin (Calif)    83.11  54   P       P       16 53 54.7 +0.3
DAC                                 pmax    pmax
      comp=Z,117nm,1.1s,mb5.8
DAC                                 MLR     MLR
      comp=Z,8µm,20.0s,MS6.1
ELK   Elko              83.28  49   P       P       16 53 56.0 +0.9
      comp=Z,214nm,0.9s,mb6.2,baz=287,slow=4.3,SNR=404
LRM   Limekiln Ridge    83.31  44   P       P       16 53 55.8 +0.6
MOS   Moscow            83.32 327κ iP       P       16 53 55.2 +0.2
MOS                                eS       S       17 04 11.6 +0.4
MOS                                 pmax    pmax
      comp=Z,2µm,2.0s,mb6.8
MOS                                 MLR     MLR
      comp=Z,7µm,19.0s,MS6.0
HRY   Holter Researc    83.38  43   P       P       16 53 56.1 +0.6
DLMT  Dillon            83.39  44  eP       P       16 53 55.9 +0.2
      comp=Z,593nm,1.9s,mb6.3
MCMT  McKenzie Canyo    83.43  45  eP       P       16 53 56.3 +0.5
MCMT                               epP      pP      16 54 10.3 +2.0
MWC   Mount Wilson      83.45  56   P       P       16 53 56.4 +0.3
TPNV  Topopah Spring    83.89  53   P       P       16 53 59.0 +0.6
TPNV                                LR      LR
      comp=Z,5µm,20.0s,MS5.9
BOZ   Bozeman (W)       83.91  44   P       P       16 53 59.0 +0.7
      comp=Z,182nm,1.3s,mb6.0
BOZ                                 LR      LR
      comp=Z,8µm,20.0s,MS6.1
BOZ   Bozeman (W)       83.91  44   P       P       16 53 59.0 +0.7
BOZ                                 pmax    pmax
      comp=Z,182nm,1.3s,mb6.0
BOZ                                 MLR     MLR
      comp=Z,8µm,20.0s,MS6.1
GSC   Goldstone         84.05  55   P       P       16 53 59.6 +0.4
OBN   Obninsk           84.14 327d iP       P       16 53 59.2  0.0
OBN                                i S      S       17 04 17.0 -2.4
OBN                                 pmax    pmax
      comp=Z,638nm,1.3s,mb6.6
OBN                                 MLR     MLR
      comp=Z,5µm,15.0s,MS6.0
EGMT  Eagleton          84.16  41  eP       P       16 53 59.7 +0.3
      comp=Z,180nm,1.2s,mb6.1
EGMT                               epP      pP      16 54 13.8 +1.9
VOR   Voronezh          84.23 323  eP       P       16 53 59.5 -0.2
VOR                                e                16 54 08.0
VOR                                eS       S       17 04 24.0 +3.6
VOR                                 pmax    pmax
      comp=N,110nm,1.7s
VOR                                 pmax    pmax
      comp=Z,440nm,1.7s,mb6.3
VOR                                 pmax    pmax
      comp=E,170nm,1.6s
VOR                                 smax
      comp=N,230nm,1.7s
VOR                                 smax
      comp=E,110nm,1.7s
VOR                                 smax
      comp=Z,40nm,1.7s
QLMT  Earthquake Lak    84.36  44   P       P       16 54 01.8 +1.2
VRSR  Storozhevoye      84.46 323  i P      P       16 54 00.1 -0.8
      comp=Z,30nm,1.7s,mb5.2
VRSR                               eS       S       17 04 22.2 -0.5
VRSR                               eSS      SS      17 09 55.1 -1.5
VRSR                                LR      LR
      comp=Z,820nm,18.0s,MS5.2
VRSR  Storozhevoye      84.46 323d iP       P       16 54 00.1 -0.8
VRSR                               eS       S       17 04 22.2 -0.5
VRSR                               eSS      SS      17 09 55.1 -1.5
VRSR                                pmax    pmax
      comp=Z,30nm,1.7s,mb5.2
VRSR                                pmax    pmax
      comp=N,10.0nm,1.0s
VRSR                                pmax    pmax
      comp=E,9.0nm,1.6s
VRSR                                smax
      comp=N,280nm,4.2s
VRSR                                smax
      comp=Z,130nm,4.9s
VRSR                                smax
      comp=E,250nm,5.9s
VRSR                                MLR     MLR
      comp=N,500nm,18.0s,MS5.0
VRSR                                MLR     MLR
      comp=E,400nm,18.0s,MS5.0
VRSR                                MLR     MLR
      comp=Z,820nm,18.0s,MS5.2
DGRG  David-gareji      84.48 312   P       P       16 54 00.9 -0.4
HVU   Hansel Valley     84.63  47   P       P       16 54 03.0 +1.0
GOF   Gofitskoye        84.66 316  eP       P       16 53 59.5 -2.6
      comp=Z,126nm,1.5s,mb5.8
GOF   Gofitskoye        84.66 316  eP       P       16 53 59.5 -2.6
GOF                                 pmax    pmax
      comp=Z,126nm,1.5s,mb5.8
YMR   Madison River     84.73  44  eP       P       16 54 04.1 +1.7
      comp=Z,381nm,0.9s,mb6.5
YMR                                 LR      LR
      comp=Z,8µm,22.0s,MS6.0
BGU   Big Grassy Mou    84.77  48  eP       P       16 54 02.5 -0.3
BGU                                epP      pP      16 54 16.1 +0.9
PUL   Pulkovo           84.78 333  i P      P       16 54 01.0 -1.3
MTA   Mtatsminda        84.79 312   P       P       16 54 03.2 +0.4
TI2   Plekhanov         84.80 313κ iP       P       16 54 02.4 -0.4
TI2                                i S      S       17 04 24.4 -1.9
TI2                                 pmax    pmax
      comp=Z,30nm,1.0s,mb5.4
TI2                                 pmax    pmax
      comp=Z,800nm,2.0s,mb6.5
TI2                                 smax
      comp=E,1µm,7.0s
TI2                                 MLR     MLR
      comp=E,2µm,19.0s
TI2                                 MLR     MLR
      comp=Z,7µm,19.0s,MS6.1
TBLG  Delisi            84.81 313  i Pdr            16 54 02.4
      comp=Z,30nm,1.0s
TBLG                               i S      S       17 04 24.4 -2.0
TBLG                                LR      LR
      comp=Z,7µm,19.0s,MS6.1
TBLG  Delisi            84.81 313   P       P       16 54 03.6 +0.7
SHPR  Sheep Range       84.86  53   P       P       16 54 04.1 +0.8
SHPR                                PP      PP      16 57 20.2 -1.5
YFT   Old Faithful      84.90  44   P       P       16 54 06.2 +2.9
PFO   Pinyon Flat Ob    84.91  56   P       P       16 54 03.7 +0.1
      comp=Z,148nm,1.0s,mb6.1
PFO                                 LR      LR
      comp=Z,1µm,21.0s,MS5.2
PFO   Pinyon Flat Ob    84.91  56   P       P       16 54 03.7 +0.1
PFO                                 pmax    pmax
      comp=Z,151nm,1.0s,mb6.1
PFO                                 MLR     MLR
      comp=Z,1µm,21.0s,MS5.2
SPUT  South Promonto    85.03  48   P       P       16 54 05.0 +1.0
IMW   Indian Meadow     85.05  45   P       P       16 54 05.4 +1.4
BAR   Barrett           85.07  57   P       P       16 54 03.8 -0.6
KAF   Kangasniemi       85.11 336  ep       P       16 54 01.6 -2.2
      comp=Z,69nm,0.7s,mb5.9,baz=54,slow=4.6
KAF   Kangasniemi       85.11 336  eP       P       16 54 01.6 -2.2
KAF                                 pmax    pmax
      comp=Z,69nm,0.7s,mb5.9
GCMT  Greycliff         85.12  43  eP       P       16 54 05.4 +1.1
GCMT                               epP      pP      16 54 18.9 +2.0
LKWY  Lake              85.14  44   P       P       16 54 07.4 +2.9
LKWY                                LR      LR
      comp=Z,7µm,20.0s,MS6.1
DUG   Dugway            85.20  49   P       P       16 54 05.5 +0.6
DUG                                 LR      LR
      comp=Z,5µm,19.0s,MS5.9
TPAW  Teton Pass        85.20  45   P       P       16 54 06.0 +1.2
MOOW  Moose Ponds       85.24  45   P       P       16 54 06.1 +1.1
LOF   Lofoten           85.29 344⇓iP        P       16 54 05.8 +1.2
LOF                                 AMb     AMB     16 54 09.5
      comp=Z,330nm,1.7s,mb6.2
REDW  Red Top Meadow    85.32  45   P       P       16 54 06.2 +0.8
REDW                               epP      pP      16 54 18.6 +0.7
KIV   Kislovodsk        85.33 315d iP       P       16 54 05.7 +0.3
KIV                                e                16 57 23.2
KIV                                e                17 04 28.3
KIV                                eSS      SS      17 10 10.8 +1.0
KIV                                 pmax    pmax
      comp=Z,86nm,1.0s,mb5.8
KIV                                 pmax    pmax
      comp=Z,625nm,9.1s
KIV                                 MLR     MLR
      comp=Z,9µm,18.0s,MS6.2
SNOW  Snow King Moun    85.35  45   P       P       16 54 06.8 +1.3
SNOW                               epP      pP      16 54 20.2 +2.2
ONI   Oni               85.36 314   P       P       16 54 06.6 +1.0
ONI   Oni               85.36 314   S       S       17 04 25.7 -6.1
LOHW  Long Hollow       85.39  45   P       P       16 54 06.6 +0.9
GNI   Garni             85.41 311   P       P       16 54 07.6 +1.7
GNI   Garni             85.41 311  eP       P       16 54 06.2 +0.3
GNI                                e*PP     pP      16 54 17.9 -0.5
GNI                                 pmax    pmax
      comp=Z,334nm,1.3s
GNI                                 MLR     MLR
      comp=Z,3µm,19.0s
NEN   Nelson            85.42  54  eP       P       16 54 06.5 +0.5
NEN                                ePcP     PcP     16 54 09.1 -0.4
NEN                                epP      pP      16 54 19.2 +0.7
NOQ   North Oquirrh     85.52  48   P       P       16 54 06.9 +0.5
HWUT  Hardware Ranch    85.53  47   P       P       16 54 07.1 +0.7
HWUT                                LR      LR
      comp=Z,6µm,20.0s,MS6.0
FFC   Flin Flon         85.54  33   P       P       16 54 06.6 +0.4
FFC                                 LR      LR
      comp=Z,1µm,22.0s,MS5.3
FINES FINESS Array B    85.58 335   P       P       16 54 05.6 -0.6
      comp=Z,76nm,0.6s,mb6.1,baz=68,slow=5.4,SNR=380
FINES                               LR      LR      17 34 30.9
      comp=Z,3µm,20.1s,MS5.6,baz=239,slow=37
FINES FINESS Array B    85.58 335   P       P       16 54 05.6 -0.6
FINES                               LR      LR      17 34 30.9
CTU   Camp Tracy        85.76  48   P       P       16 54 08.3 +0.8
NLU   North Lily Min    85.82  49   P       P       16 54 08.8 +0.9
TCUT  Toone Canyon      85.83  48   P       P       16 54 08.8 +0.9
MPU   Maple Canyon      86.11  49   P       P       16 54 09.9 +0.6
MELSS Ber_school_2      86.16 343⇓iP        P       16 54 08.7 -0.1
DAU   Daniels Canyon    86.22  48   P       P       16 54 10.8 +1.0
MVU   Marysvale         86.28  50  eP       P       16 54 11.9 +1.7
      comp=Z,139nm,1.1s,mb6.1
MVU                                epP      pP      16 54 23.2 +0.5
MVU                                 LR      LR
      comp=Z,11µm,22.0s,MS6.2
MSU   Marysvale         86.31  50   P       P       16 54 11.4 +1.1
GLA   Glamis            86.39  56   P       P       16 54 11.4 +0.5
CLDR  Caldiran          86.39 310   P       P       16 54 11.2 +0.4
BW06  Boulder Array     86.43  46   P       P       16 54 11.0 +0.2
BW06                                LR      LR
      comp=Z,6µm,19.0s,MS6.0
PDAR  Pinedale Array    86.43  46   P       P       16 54 11.1 +0.3
      comp=Z,44nm,0.8s,mb5.7,baz=263,slow=2.9,SNR=162
PDAR                                PKKPbc          17 12 09.9
      comp=Z,0.7nm,0.6s,baz=76,slow=6.1,SNR=3.9
PDAR                                LR      LR      17 31 16.8
      comp=Z,5µm,18.7s,MS5.9,baz=309,slow=34
MOR8  Moi Rana          86.45 342⇓iP        P       16 54 09.2 -1.1
MOR8                                AMb     AMB     16 54 12.4
      comp=Z,451nm,1.3s,mb6.5
TMUT  Trail Mountain    86.69  49   P       P       16 54 13.2 +1.0
DRV   Dumont d'Urvil    86.83 182   P       P       16 54 10.0 -2.2
LAO   LASA Array        86.90  41   P       P       16 54 13.8 +0.8
LAO                                 LR      LR
      comp=Z,8µm,20.0s,MS6.1
VANB  Van               86.99 310   P       P       16 54 16.2 +2.5
TVAN  Van               87.00 310  i P      P       16 54 14.5 +0.7
VSU   Vasula            87.04 333  i P      P       16 54 12.8 -0.6
FCC   Fort Churchill    87.06  27   P       P       16 54 13.5  0.0
UMR   Umm Al-Rimmam     87.13 300  eP       P       16 54 14.4 -0.2
UMR                                 AMb     AMB     16 54 19.2
      comp=Z,438nm,0.8s,mb6.7
HKR   Hakkari           87.14 309   P       P       16 54 14.9 +0.5
HAKT  HAKKARI           87.17 309  i P      P       16 54 14.1 -0.5
JMIC  Jan Mayen         87.24 352  eP       P       16 54 16.6 +2.5
JMIC                                AMS     AMS     17 30 48.0
      comp=Z,899nm,19.9s,MS5.2
SRU   San Rafael        87.25  49   P       P       16 54 15.5 +0.6
QRN   Al-Qurain         87.26 300  eP       P       16 54 14.7 -0.5
QRN                                 AMb     AMB     16 54 20.6
      comp=Z,560nm,0.7s,mb6.9
KBD   Kabd              87.29 300  eP       P       16 54 15.2 -0.1
KBD                                 AMb     AMB     16 54 18.9
      comp=Z,855nm,0.9s,mb7.0
SUMG  Summit            87.30   1   P       P       16 54 16.2 +1.9
      comp=Z,174nm,1.2s,mb6.2
DGMT  Dagmar            87.31  39  eP       P       16 54 15.1 +0.2
      comp=Z,223nm,1.1s,mb6.3
DGMT                                LR      LR
      comp=Z,8µm,21.0s,MS6.1
MIB   Mutribah          87.34 301  eP       P       16 54 15.3 -0.3
MIB                                 AMb     AMB     16 54 19.1
      comp=Z,1µm,0.7s
SOC   Sochi             87.44 316  eP       P       16 54 16.3 +0.6
      comp=Z,52nm,1.3s,mb5.6
SOC                                esP      sP      16 54 30.0 -2.6
SOC                                eS       S       17 04 41.2  -10
SOC                                eSS      SS      17 10 34.5 -6.0
SOC   Sochi             87.44 316deP        P       16 54 16.3 +0.6
SOC                                e*SP     sP      16 54 30.0 -2.6
SOC                                eS       S       17 04 41.2  -10
SOC                                eSS      SS      17 10 34.5 -6.0
SOC                                 pmax    pmax
      comp=Z,52nm,1.3s,mb5.6
SOC                                 pmax    pmax
      comp=Z,661nm,4.6s
RDF   Al-Radifah        87.50 300  eP       P       16 54 15.6 -0.7
RDF                                 AMb     AMB     16 54 21.8
      comp=Z,448nm,0.8s,mb6.7
NAY   Al-Naaiem         87.62 300  eP       P       16 54 16.6 -0.3
NAY                                 AMb     AMB     16 54 20.3
      comp=Z,438nm,0.9s,mb6.7
ERZM  Erzurum           87.89 312  i P      P       16 54 17.6 -0.4
WUAZ  Wupatki           88.08  53   P       P       16 54 20.2 +1.2
WUAZ                                LR      LR
      comp=Z,6µm,20.0s,MS6.0
MSL   Mosul             88.13 308  ex       x       16 54 19.5
MSL                                i x      x       16 54 21.0
MSL                                i x      x       16 54 28.5
MSL                                e                16 57 14.5
MSL                                ex       x       17 04 45.0
MSL                                ex       x       17 04 57.0
RKT   Rikitea           88.21 115  eP       P       16 54 19.0 -0.9
      comp=Z,69nm,1.0s,mb5.8
RKT   Rikitea           88.21 115  eSS      SS      17 10 49.8 -2.5
RKT                                eLR      LR      17 22 35.8
      comp=Z,3µm,21.2s,baz=290
BHD   Baghdad           88.36 305  ex       x       16 54 20.0
BHD   Baghdad           88.36 305  ex       x       17 04 48.0
BHD                                ex       x       17 05 02.0
NSS   Namsos            88.36 342  eP       P       16 54 17.9 -1.7
NSS                                 AMb     AMB     16 54 23.1
      comp=Z,271nm,2.2s,mb6.1
NSS                                 AMS     AMS     17 37 40.7
      comp=Z,3µm,22.3s,MS5.6
ANN   Anapa             88.37 318  i P      P       16 54 20.5 +0.4
      comp=Z,221nm,1.3s,mb6.2
ANN                                e                16 57 51.2
ANN                                eS       S       17 04 46.7  -14
ANN   Anapa             88.37 318d iP       P       16 54 20.5 +0.4
ANN                                e                16 57 51.2
ANN                                eS       S       17 04 46.7  -14
ANN                                 pmax    pmax
      comp=Z,221nm,1.3s,mb6.2
BNGL  BINGOL            88.44 311  i P      P       16 54 23.4 +2.8
BNGL  BINGOL            88.44 311  i P      P       16 54 21.9 +1.3
RWWY  Rawlins           88.47  46  eP       P       16 54 21.3 +0.6
RWWY                               epP      pP      16 54 35.5 +2.3
BTMT  Batman            88.52 310  eP       P       16 54 22.1 +1.2
PV10  Paradox Valley    88.61  49  eP       P       16 54 22.3 +0.8
PV10                               epP      pP      16 54 34.0  0.0
MNK   Minsk             88.80 329⇓iP        P       16 54 19.0 -2.9
      comp=Z,1µm,1.0s
MNK   Minsk             88.80 329⇓iP        P       16 54 19.0 -2.9
MNK                                 pmax    pmax
      comp=Z,1µm,1.0s
MNK                                 pmax    pmax
      comp=N,690nm,1.5s
BEST  Besiri            88.80 310  i P      P       16 54 23.3 +1.0
IZAR  Zarasai           88.83 331  eP       P       16 54 21.9 -0.2
IZAR                                AMb     AMB     16 54 25.6
      comp=Z,81nm,1.2s,mb5.9
IDID  Didziasalis       88.85 330  eP       P       16 54 22.0 -0.2
IDID                                AMb     AMB     16 54 25.8
      comp=Z,70nm,1.1s,mb5.9
GUMT  Gumushane         88.96 313   P       P       16 54 22.1 -0.9
ISAL  Salakas           88.99 331  eP       P       16 54 22.6 -0.2
ISAL                                AMb     AMB     16 54 26.4
      comp=Z,75nm,1.1s,mb5.9
PV01  Paradox Valley    89.05  50   P       P       16 54 24.0 +0.5
SCO   Scoresbysund      89.06 356  i P      P       16 54 23.7 +0.9
      comp=Z,37nm,0.9s,mb5.7
SCO                                i S      S       17 04 58.3 -7.8
MARD  Mardin            89.39 310  i P      P       16 54 24.2 -0.9
RSSD  Black Hills       89.44  43   P       P       16 54 25.3  0.0
      comp=Z,122nm,1.2s,mb6.1
RSSD                                LR      LR
      comp=Z,6µm,20.0s,MS6.0
RSSD  Black Hills       89.44  43   P       P       16 54 25.3 +0.1
RSSD                                pmax    pmax
      comp=Z,136nm,1.2s,mb6.2
RSSD                                MLR     MLR
      comp=Z,6µm,20.0s,MS6.0
GRSN  GIRESUNGRSN       89.58 314  i P      P       16 54 22.9 -3.1
RW3   Ridgway           89.63  49  eP       P       16 54 27.9 +1.7
PTK   Pertek            89.70 312   P       P       16 54 24.1 -2.5
TUC   Tucson            89.81  56   P       P       16 54 27.9 +0.6
      comp=Z,137nm,1.2s,mb6.2
TUC                                 PP      PP      16 57 58.8 -3.6
TUC                                 LR      LR
      comp=Z,4µm,22.0s,MS5.8
TUC   Tucson            89.81  56   P       P       16 54 27.9 +0.6
TUC                                                 16 57 58.8
TUC                                 pmax    pmax
      comp=Z,137nm,1.2s,mb6.2
TUC                                 MLR     MLR
      comp=Z,4µm,22.0s,MS5.8
PHWY  Pilot Hill        89.82  46   P       P       16 54 28.5 +1.4
AKASG Malin Array Be    90.20 325   P       P       16 54 27.4 -1.2
      comp=Z,5.3nm,0.5s,mb5.2,baz=47,slow=5.2,SNR=55
AKASG                               PP      PP      16 58 01.8 -3.2
      comp=Z,6.9nm,0.9s,baz=49,slow=8.5,SNR=4.4
AKASG                               S       S       17 04 57.0  -20
      comp=Z,0.2nm,0.3s,baz=27,slow=4.1,SNR=3.3
AKASG Malin Array Be    90.20 325   P       P       16 54 27.4 -1.2
AKASG                              e                16 58 01.8
AKASG                               S       S       17 04 57.0  -20
SIM   Simferopol'       90.37 319⇑eP        P       16 54 30.6 +1.0
      comp=Z,54nm,0.8s,mb5.9
SIM                                e                16 58 10.0
SIM                                e                17 05 02.0
SIM                                 S       S       17 05 25.0 +6.3
SIM                                i PS     PS      17 06 31.0 -3.3
SIM                                eSS      SS      17 11 27.0 +3.9
SIM   Simferopol'       90.37 319⇑eP        P       16 54 30.6 +1.0
SIM                                e                16 58 10.0
SIM                                e                17 05 02.0
SIM                                 S       S       17 05 25.0 +6.3
SIM                                i PS     PS      17 06 31.0 -3.3
SIM                                eSS      SS      17 11 27.0 +3.9
SIM                                 pmax    pmax
      comp=Z,54nm,0.8s,mb5.9
CASY  Casey             90.39 194   PFAKE           16 54 40.0  +11
CASY                                LR      LR
      comp=Z,3µm,20.0s,MS5.7
ISCO  Idaho Springs     90.39  47   P       P       16 54 31.0 +1.2
      comp=Z,113nm,0.9s,mb6.2
ISCO                                LR      LR
      comp=Z,6µm,20.0s,MS6.0
ISCO  Idaho Springs     90.39  47   P       P       16 54 31.0 +1.2
ISCO                                pmax    pmax
      comp=Z,122nm,0.9s,mb6.2
ISCO                                MLR     MLR
      comp=Z,8µm,20.0s,MS6.2
URFA  Urfa              90.75 311   P       P       16 54 30.7 -0.8
ULM   Lac du Bonnet     91.06  35   P       P       16 54 32.4 -0.2
      comp=Z,88nm,0.9s,mb6.1,baz=304,slow=5.1,SNR=90
ULM                                 LR      LR      17 32 44.1
      comp=Z,5µm,21.2s,MS5.9,baz=310,slow=34
ULM   Lac du Bonnet     91.06  35   P       P       16 54 32.4 -0.2
ULM                                 LR      LR      17 32 44.1
DOMB  Dombas            91.11 341⇓iP        P       16 54 32.1 -0.5
DOMB                                AMb     AMB     16 54 35.6
      comp=Z,174nm,1.3s,mb6.2
MOL   Molde             91.14 342⇓iP        P       16 54 33.0 +0.2
MOL                                 AMb     AMB     16 54 38.2
      comp=Z,245nm,1.7s,mb6.2
NB2   NORSAR Subarra    91.20 340   P       P       16 54 32.0 -1.0
      comp=Z,89nm,1.0s,mb6.0,baz=45,slow=4.6
NB2   NORSAR Subarra    91.20 340   P       P       16 54 32.0 -1.0
      baz=45,slow=4.6
NOA   NORSAR Array B    91.20 340   P       P       16 54 32.2 -0.8
      comp=Z,49nm,1.0s,mb5.8,baz=45,slow=4.4,SNR=59
NOA                                 PP      PP      16 58 06.2 -6.5
      comp=Z,15nm,0.9s,baz=38,slow=7.9,SNR=5.1
NOA                                 LR      LR      17 38 22.5
      comp=Z,3µm,21.2s,MS5.7,baz=5.0,slow=37
SUW   Suwalki           91.29 330⇓iP        P       16 54 33.1 -0.6
SUW                                ePcP     PcP     16 54 34.5 -0.3
SUW                                eSKS     SKS     17 05 01.8 +1.1
SUW                                 MLR     MLR     17 39 09.8
      comp=Z,4µm,19.0s,MS5.9
SUW   Suwalki           91.29 330⇓iP        P       16 54 33.1 -0.5
SUW                                ePcP     PcP     16 54 34.5 -0.3
SUW                                eSKS     SKS     17 05 01.8 +1.2
SUW   Suwalki           91.29 330⇓iP        P       16 54 33.1 -0.5
SUW                                e                17 05 01.8
SDCO  Great Sand Dun    91.40  49   P       P       16 54 35.5 +0.9
      comp=Z,105nm,1.0s,mb6.1
SDCO                                LR      LR
      comp=Z,11µm,20.0s,MS6.3
NAO01 NORSAR Array S    91.45 340   P       P       16 54 33.7 -0.6
NAO01                               LR      LR
      comp=Z,5µm,21.0s,MS5.9
NAO   NORSAR Subarra    91.48 340   P       P       16 54 32.0 -2.4
      comp=Z,89nm,1.0s,mb6.0
NAO   NORSAR Subarra    91.48 340   P       P       16 54 32.0 -2.4
NAO                                 pmax    pmax
      comp=Z,89nm,1.0s,mb6.0
BOYT  Boyabat           91.59 315  i P      P       16 54 32.9 -2.5
GZT   Gaziantep         91.68 311  i P      P       16 54 35.4 -0.5
LAZ   Ladron            91.70  52  eP       P       16 54 37.5 +1.4
LAZ                                epP      pP      16 54 50.7 +2.0
ANMO  Albuquerque       91.96  52   P       P       16 54 38.2 +1.0
      comp=Z,60nm,0.9s,mb5.9,baz=284,slow=4.4,SNR=85
ANMO  Albuquerque       91.96  52   P       P       16 54 38.1 +0.9
      comp=Z,104nm,1.1s,mb6.1
ANMO                                LR      LR
      comp=Z,4µm,20.0s,MS5.8
ANMO  Albuquerque       91.96  52   P       P       16 54 38.1 +0.9
ANMO                                pmax    pmax
      comp=Z,104nm,1.1s
ANMO                                MLR     MLR
      comp=Z,4µm,20.0s
FRB   Frobisher Bay     91.97  15   P       pP      16 54 49.1  0.0
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      comp=Z,31nm,0.8s,baz=327,slow=4.6,SNR=9.3
GAZ   Gaziantep          92.01 311  eP       P        16 54 34.0 -3.3
SFJD  Kangerlussuaq      92.06   6   P       P        16 54 37.2 +0.3
      comp=Z,52nm,0.9s,mb5.9,baz=351,slow=4.0,SNR=17
SFJD  Kangerlussuaq      92.06   6⇓iP       P        16 54 37.0 +0.1
      comp=Z,56nm,0.8s,mb6.0
SFJD                            i                     16 58 14.1
SFJD                            i S      S            17 05 08.8  -24
      comp=Z,4µm,22.0s
SFJD  Kangerlussuaq      92.06   6⇓iP       P        16 54 37.0 +0.1
SFJD                            i                     16 58 14.1
SFJD                            i S      S            17 05 08.8  -24
SFJD                              pmax   pmax
      comp=Z,56nm,0.8s,mb6.0
SFJD                              MLR    MLR
      comp=Z,4µm,22.0s,MS5.8
LPM   Los Pinos Moun     92.12  52   P       P        16 54 38.7 +0.8
MSEY  Mahe Island        92.18 266  eP       P        16 54 37.1 -1.6
MSEY                              LR     LR
      comp=Z,600nm,19.0s,MS5.1
BNM   Barren Site        92.19  52   P       P        16 54 39.3 +1.0
KIS   Kishinev           92.46 322  eP       P        16 54 39.0 -0.2
KIS                             e                     16 58 20.0
KIS                             e                     17 05 10.0
KIS                             eS       S            17 05 36.0 -1.0
KIS                             ePS      PS           17 07 00.0 +1.2
KIS                             ePPS     PPS          17 07 34.0 +2.5
KONO  Kongsberg          92.78 340  eP       P        16 54 40.1 -0.3
KONO  Kongsberg          92.78 340   P       P        16 54 41.3 +1.0
KONO                              PP     PP           16 58 21.9 -3.5
KONO                              LR     LR
      comp=Z,5µm,21.0s,MS5.9
CDAG  Cicekdag           92.82 314  i P      P        16 54 40.2 -0.8
AVNT  Avonos             92.90 313  i P      P        16 54 40.2 -1.3
COBT  Iskenderun         92.99 311  i P      P        16 54 40.6 -1.3
PTCN  Pitcairn Islan     93.07 115   PFAKE                16 54 50.0 +7.5
PTCN                              LR     LR
      comp=Z,1.0nm,20.0s
SUE   Sulen              93.15 342  eP       P        16 54 42.1 +0.1
BR131 Keskin Array S     93.26 314  eP       P        16 54 42.3 -0.7
      comp=Z,27nm,0.9s,mb5.7
BR131                           epP      pP           16 54 55.2 -0.5
BR131                             LR     LR
      comp=Z,2µm,20.0s,MS5.6
BRTR  Keskin Array B     93.26 314   P       P        16 54 42.7 -0.3
      comp=Z,26nm,1.0s,mb5.6,baz=88,slow=3.8,SNR=28
BRTR                              PP     PP           16 58 27.4 -2.3
      comp=Z,5.6nm,0.9s,baz=77,slow=7.2,SNR=4.1
BRTR                              PKKPbc              17 11 52.5
      comp=Z,1.0nm,0.8s,baz=180,slow=2.5,SNR=4.0
WAR   Warsaw             93.41 330  eP       P        16 54 42.3 -1.1
WAR                             eSKS     SKS          17 05 12.5 -0.2
WAR   Warsaw             93.41 330  eP       P        16 54 42.3 -1.1
WAR                             eSKS     SKS          17 05 12.5 -0.2
LVV   L'vov              93.43 327⇑iP       P        16 54 34.6 -9.0
LVV                             eS                    17 05 19.2
LVV   L'vov              93.43 327c iP      P        16 54 34.6 -9.0
LVV                             eS                    17 05 19.2
ASK   Askoy              93.49 342  eP       P        16 54 44.6 +1.1
ASK                               AMb    AMB          16 54 49.2
      comp=Z,565nm,1.6s,mb6.7
BER   Bergen             93.53 342  eP       P        16 54 45.5 +1.8
BER                             eP                    16 54 46.7
BER                               AMb    AMB          16 54 47.2
      comp=Z,220nm,1.5s,mb6.4
BER                             eSS      SS           17 12 02.6 -5.3
BER                               AMS    AMS          17 39 09.8
      comp=Z,3µm,19.2s,MS5.8
EGD   Espegrend          93.65 342  eP       P        16 54 45.7 +1.4
EGD                               AMb    AMB          16 54 47.9
      comp=Z,340nm,1.5s,mb6.5
ANTO  Ankara             93.75 315  eP       P        16 54 44.5 -0.7
      comp=Z,47nm,1.2s,mb5.8
ANTO                              LR     LR
      comp=Z,4µm,20.0s,MS5.8
ANTO  Ankara             93.75 315  eP       P        16 54 44.5 -0.8
ANTO                              pmax   pmax
      comp=Z,47nm,1.2s,mb5.8
ANTO                              MLR    MLR
      comp=Z,4µm,20.0s,MS5.8
SGKT  Sivrigoynuk        93.88 316  i P      P        16 54 44.1 -1.7
BLS5  Blasjo             93.96 341  eP       P        16 54 47.0 +1.3
BLS5                              AMb    AMB          16 54 51.0
      comp=Z,54nm,1.2s,mb5.9
TIRR  Tirgusor           94.10 321  eP       P        16 54 45.9 -0.8
      comp=Z,86nm,1.7s,mb5.9
TIRR                            epP      pP           16 55 00.6 +1.2
BSD   Bornholm Skovb     94.17 334⇑iP       P        16 54 45.9 -0.8
      comp=Z,67nm,0.9s,mb6.1
BSD   Bornholm Skovb     94.17 334⇑iP       P        16 54 45.9 -0.8
BSD                               pmax   pmax
      comp=Z,67nm,0.9s,mb6.1
MNTX  Cornudas Mount     94.22  54   P       P        16 54 48.5 +0.9
      comp=Z,113nm,1.0s,mb6.2
MNTX                              LR     LR
      comp=Z,3µm,20.0s,MS5.8
KWP   Kalwaria           94.23 327⇓eP       P        16 54 47.1  0.0
KWP                             epP      pP           16 54 59.9 +0.1
KWP                             ePP      PP           16 58 35.1 -1.9
KWP                             eSKS     SKS          17 05 16.6 -0.6
KWP                             eS       S            17 05 54.8 +2.5
KWP                               MLR    MLR          17 39 59.0
      comp=Z,7µm,20.0s,MS6.2
KWP   Kalwaria           94.23 327⇓eP       P        16 54 47.2 +0.1
KWP                             epP      pP           16 54 59.9 +0.1
KWP                             ePP      PP           16 58 35.1 -1.9
KWP                             eSKS     SKS          17 05 16.6 -0.6
KWP                             eS       S            17 05 54.8 +2.6
MEST  Erdemli            94.45 312  i P      P        16 54 44.2 -4.3
HENT  Hendek             94.51 316  i P      P        16 54 46.0 -2.6
BORG  Borgarnes          94.66 355   P       P        16 54 50.8 +2.0
BORG                              LR     LR
      comp=Z,452nm,21.0s,MS4.9
COP   Copenhagen         94.74 336  i P      P        16 54 51.2 +1.9
      comp=Z,60nm,1.1s,mb5.9
COP                             i        PP           16 58 33.2 -7.2
COP                             i S                   17 05 23.9
COP                             i                     17 07 44.4
      comp=Z,1µm,22.0s
COP   Copenhagen         94.74 336  i P      P        16 54 51.2 +1.9
COP                             i        PP           16 58 33.2 -7.2
COP                             i S                   17 05 23.9
COP                               pmax   x
      comp=Z,60nm,1.1s
COP                               MLR    MLR
      comp=Z,1µm,22.0s,MS5.3
EYMN  Ely                94.74  35   P       P        16 54 49.7 +0.1
      comp=Z,1µm,1.3s
EYMN                              LR     LR
      comp=Z,83µm,22.0s
CPRX  Cap Rock           94.75  52  eP       P        16 54 50.6 +0.7
GDL2  Guadalupe Moun     94.77  53   P       P        16 54 51.1 +1.0
GDL2                            epP      pP           16 55 00.4 -2.3
KOLS  Kolonicke sedl     94.88 327  eP       P        16 54 48.7 -1.5
KOLS                            ePP      PP           16 58 37.5 -4.1
KDHN  Kadinhani          94.89 314  i P      P        16 54 51.8 +1.3
MLR   Muntele Rosu       94.95 322   P       P        16 54 51.4 +0.8
      comp=Z,3.7nm,0.8s,baz=55,slow=6.0,SNR=4.4
MLR                               LR     LR           17 41 04.9
      comp=Z,4µm,18.6s,MS5.9,baz=245,slow=38
MLR   Muntele Rosu       94.95 322  ⇓P       P        16 54 52.6 +2.0
STHS  Stebnicka Huta     95.11 327  eP       P        16 54 51.4 +0.2
STHS                            epP      pP           16 55 04.1 +0.2
STHS                            ePP      PP           16 58 42.9 -0.3
ESKT  Eskisehir          95.22 315  i P      P        16 54 50.3 -1.6
ERMK  Ermenek            95.29 312  i P      P        16 54 50.6 -1.7
BORA  Eskisehir          95.29 316  i P      P        16 54 50.9 -1.4
OJC   Ojcow              95.31 329  eP       P        16 54 51.4 -0.7
OJC                             ePP      PP           16 58 41.4 -3.4
OJC                            ⇑eSKSa                 17 05 23.6
CRVS  Cervenica-Dubn     95.32 327  eP       P        16 54 51.8 -0.4
CRVS                            ePP      PP           16 58 47.7 +2.7
MUD   Monsted U'grnd     95.37 338  i P      P        16 54 51.2 -1.0
      comp=Z,39nm,1.2s,mb5.7
MUD                             i                     16 58 32.1
MUD                             i S      S            17 06 09.1 +7.3
MUD                             i                     17 07 36.8
MUD                             i                     17 12 38.8
      comp=Z,3µm,20.0s
MUD   Monsted U'grnd     95.37 338  i P      P        16 54 51.2 -1.0
MUD                             i S      S            17 06 09.1 +7.3
MUD                             i                     17 07 36.8
MUD                             i                     17 12 38.8
MUD                               pmax   pmax
      comp=Z,39nm,1.2s,mb5.7
HNTI  Hanita             95.39 308   P       P        16 54 52.4 -0.5
MMLI  Mount Malkishu     95.51 307   P       P        16 54 53.3 -0.2
NIE   Niedzica           95.57 328  eP       P        16 54 53.6 +0.3
HAF   Haifa              95.65 308   P       P        16 54 53.2 -0.9
OFRI  'Ofer              95.75 308   P       P        16 54 53.8 -0.7
MKRJ  Makawir            95.76 306   P       P        16 54 54.7 +0.1
CSS   Prodhromos         95.83 310  eP       P        16 54 54.3 -0.5
      comp=Z,67nm,1.0s,mb6.0
CSS                             epP      pP           16 55 08.2 +0.8
MZDA  Masada             96.08 306   P       P        16 54 56.1  0.0
KECS  Kecovo             96.09 327  eP       P        16 54 55.2 -0.4
OKC   Ostrava-Krasne     96.36 329⇓iP       P        16 54 56.1 -0.7
OKC                             ePP      PP           16 58 50.7 -2.6
OKC                               AMS    AMS          17 44 30.0
      comp=Z,6µm,17.3s
KSP   Ksiaz              96.55 331⇓iP       P        16 54 57.7  0.0
KSP                             ePcP     PcP          16 54 59.0 +0.8
KSP                             epP      pP           16 55 10.0 -0.3
KSP                             ePP      PP           16 58 52.2 -2.5
KSP                             eSKS     SKS          17 05 29.7 -0.1
KSP                               MLR    MLR          17 43 14.9
      comp=Z,8µm,20.2s,MS6.2
KSP   Ksiaz              96.55 331⇓eP       P        16 54 57.5 -0.2
KSP                             epP      pP           16 55 10.0 -0.4
KSP                             ePP      PP           16 58 51.0 -3.8
KSP                             eSKS     SKS          17 05 27.0 -2.8
KSP                             eSP      SP           17 07 30.0 -7.6
KSP                             eSS      SS           17 12 38.0  -12
KSP                               LR     LR
      comp=Z,11µm,19.0s,MS6.4
KSP   Ksiaz              96.55 331⇓eP       P        16 54 57.5 -0.2
KSP                             e*PP     pP           16 55 10.0 -0.4
KSP                             e                     16 58 51.0
KSP                             e                     17 05 27.0
KSP                             eSP      SP           17 07 30.0 -7.6
KSP                               MLR    MLR
      comp=Z,11µm,19.0s,MS6.4
LTX   Lajitas            96.62  56   P       P        16 54 59.2 +0.7
      comp=Z,85nm,1.5s,mb6.0
LTX                               LR     LR
      comp=Z,5µm,19.0s,MS6.0
LTX   Lajitas            96.62  56   P       P        16 54 59.2 +0.7
LTX                               pmax   pmax
      comp=Z,85nm,1.5s,mb6.0
LTX                               MLR    MLR
      comp=Z,4µm,19.0s,MS5.9
TXAR  Lajitas Array      96.62  56   P       P        16 54 59.4 +0.9
      comp=Z,13nm,0.9s,mb5.4,baz=297,slow=2.8,SNR=56
TXAR                              PKKPbc              17 11 42.2
      comp=Z,0.5nm,0.7s,baz=14,slow=3.7,SNR=3.2
TXAR                              LR     LR           17 39 14.6
      comp=Z,4µm,18.0s,MS5.9,baz=330,slow=36
MORC  Moravsky Berou     96.69 329   P       P        16 54 57.9 -0.4
      comp=Z,89nm,1.8s,mb5.9
MORC  Moravsky Berou     96.69 329   P       P        16 54 57.9 -0.5
MORC                              pmax   pmax
      comp=Z,89nm,1.8s,mb5.9
PSZ   Piszkesteto        96.75 327⇑iPPP     P        16 54 58.8 +0.1
KSU1  Kansas State U     96.78  44   P       P        16 54 58.5 -0.5
PRNI  Paran              96.81 306   P       P        16 54 58.7 -0.7
BSEG  Bad Segeberg       96.86 335  ePdif    P        16 54 58.7 -0.3
BSEG                            ePP      PP           16 58 55.5 -1.7
DPC   Dobruska-Polom     96.88 330⇓iP       P        16 54 59.0 -0.2
DPC                             ePP      PP           16 58 54.3 -3.1
DPC                               AMS    AMS          17 42 30.0
      comp=Z,8µm,17.5s
UPC   Upice              96.91 331⇓iP       P        16 54 59.0 -0.4
UPC                             epP      pP           16 55 11.3 -0.7
UPC                             ePP      PP           16 58 55.0 -2.7
VYHS  Vyhne              96.91 328  eP       P        16 54 59.1 -0.3
VYHS                            ePP      PP           16 58 56.2 -1.5
KZIT  Kziot              97.00 306   P       P        16 55 00.2 -0.1
AQBJ  Aqaba              97.06 305   P       P        16 55 00.3 -0.3
MBH   Mount Berech       97.14 305   P       P        16 55 00.1 -0.8
EIL   Elat               97.17 305   P       P        16 55 00.2 -0.9
VRAC  Vranov             97.46 329 ⇑P       P        16 55 01.6 -0.3
PVCC  Panska Ves         97.56 331⇓iP       P        16 55 02.0 -0.3
PVCC                            epP      pP           16 55 11.7 -3.3
PVCC                            ePP      PP           16 58 58.0 -4.8
PVCC                              AMS    AMS          17 43 00.0
      comp=Z,5µm,18.0s
BRG   Berggiesshubel     97.59 332⇓iP       P        16 55 01.9 -0.5
      comp=Z,78nm,1.5s,mb6.0
BRG                               PP     PP           16 58 58.0 -5.1
BRG                               SKS    SKS          17 05 42.0 +6.8
BRG                               S      S            17 06 31.0  +10
BRG                               PS     PS           17 07 51.0 -3.0
BRG                             ePKKP    PKKP         17 11 41.7 +9.0
BRG                               SS     SS           17 13 04.0 -1.0
BRG                               LR     LR
      comp=Z,5µm,19.0s,MS6.0
BRG   Berggiesshubel     97.59 332⇓iP       P        16 55 02.0 -0.5
BRG                                                   16 58 58.0
BRG                                                   17 05 42.0
BRG                               PS     PS           17 07 51.0 -3.0
BRG                               SS     SS           17 13 04.0 -1.0
BRG                               pmax   pmax
      comp=Z,78nm,1.5s,mb6.0
BRG                               MLR    MLR
      comp=Z,5µm,19.0s,MS6.0
SMOL  Smolenice          97.60 328  eP       P        16 55 02.9 +0.4
SMOL                            ePP      PP           16 59 01.2 -2.0
WMOK  Wichita Mounta     97.61  49   P       P        16 55 02.8 -0.1
      comp=Z,51nm,1.0s,mb6.0
WMOK                              LR     LR
      comp=Z,6µm,22.0s,MS6.0
WMOK  Wichita Mounta     97.61  49   P       P        16 55 02.8 -0.1
WMOK                              pmax   pmax
      comp=Z,51nm,1.0s,mb6.0
WMOK                              MLR    MLR
      comp=Z,6µm,22.0s,MS6.0
CLL   Collm              97.69 332⇓iPDIF    P        16 55 02.0 -0.9
CLL                             i                     16 55 04.2
CLL                             e                     16 58 01.0
CLL                             e                     16 58 38.0
CLL                             i PP     PP           16 59 00.6 -3.3
CLL                             i                     16 59 08.2
CLL                             i *SPP                16 59 16.9
CLL                             ePPP     PPP          17 01 18.0 +7.3
CLL                             e                     17 05 46.0
CLL                             e                     17 06 17.0
CLL                             ePS      PS           17 07 48.0 -7.0
CLL                             e                     17 09 12.0
CLL                             eSS      SS           17 13 01.0 -5.4
CLL                             e*SSS                 17 13 31.0
CLL                             e                     17 20 48.0
CLL   Collm              97.69 332⇓iP       P        16 55 02.0 -0.9
      comp=Z,32nm,1.0s,mb5.8
CLL                             i                     16 55 04.2
CLL                             i PP     PP           16 59 00.6 -3.3
CLL                             eSKS     SKS          17 05 46.0  +10
CLL                             eS       S            17 06 17.0 -4.6
CLL                               LR     LR
      comp=Z,4µm,18.2s,MS5.9
CLL   Collm              97.69 332⇓iP       P        16 55 02.0 -0.9
CLL                             i                     16 59 00.6
CLL                             eS       S            17 06 17.0 -4.6
CLL                               pmax   pmax
      comp=Z,32nm,1.0s,mb5.8
CLL                               MLR    MLR
      comp=Z,4µm,18.2s,MS5.9
PRA   Prague             97.94 331 ⇓PP      PP           16 59 03.0 -2.9
PRU   Pruhonice          97.95 331⇓iP       P        16 55 03.3 -0.8
PRU                             ePP      PP           16 59 01.7 -4.3
PRU                               AMS    AMS          17 43 20.0
      comp=Z,6µm,18.7s
ZST   Bratislava         97.97 328  eP       P        16 55 05.3 +1.1
ZST                             ePP      PP           16 59 04.0 -2.2
TREC  Trest              98.00 330⇓iP       P        16 55 03.8 -0.5
VNDA  Vanda              98.07 177   P       P        16 55 04.4 +0.4
VNDA                              LR     LR
      comp=Z,2µm,19.0s,MS5.6
ATD   Arta Tunnel        98.19 285   LR      LR           17 38 05.3
      comp=Z,700nm,21.6s,MS5.1,baz=59,slow=35
CLZ   Clausthal          98.41 334  eP       P        16 55 06.1  0.0
CLZ                             e                     16 59 07.6
CLZ                             eS       S            17 06 32.0 +4.4
SBA   Scott Base         98.70 176   P       P        16 55 10.2 +3.4
SBA                               LR     LR
      comp=Z,2µm,20.0s,MS5.5
NKC   Novy Kostel        98.72 332⇓iP       P        16 55 07.0 -0.5
NKC                             ex       x            16 59 19.9
NKC                               AMS    AMS          17 43 20.0
      comp=Z,5µm,18.3s
MOX   Moxa               98.78 333  i P      P        16 55 07.5 -0.3
      comp=Z,logA/T=1.7,mb6.0
MOX                               PP     PP           16 59 10.0 -1.8
MOX                               SKS    SKS          17 05 50.0 +8.7
MOX                               S      S            17 06 34.0 +3.3
MOX                               SS     SS           17 13 20.0 -1.6
MOX                               L                   17 45 22.0
MOX   Moxa               98.78 333  eP       P        16 55 07.5 -0.3
      comp=Z,88nm,1.8s,mb6.0
MOX                             ePP      PP           16 59 09.9 -1.9
MOX                             eSKS     SKS          17 05 50.0 +8.7
MOX                             eSS      SS           17 13 20.0 -1.6
MOX                               LR     LR
      comp=Z,3µm,20.0s,MS5.8
MOX   Moxa               98.78 333  eP       P        16 55 07.5 -0.3
MOX                             e                     16 59 09.9
MOX                             eSS      SS           17 13 20.0 -1.6
MOX                               pmax   pmax
      comp=Z,88nm,1.8s,mb6.0
MOX                               MLR    MLR
      comp=Z,3µm,20.0s,MS5.8
KHC   Kasperske Hory     99.00 331⇓iP       P        16 55 08.3 -0.5
KHC                             epP      pP           16 55 20.0 -1.5
KHC                             ePP      PP           16 59 07.3 -6.1
KHC                               x      x            16 59 19.5
KHC                               AMS    AMS          17 43 50.0
      comp=Z,6µm,18.8s
KHC   Kasperske Hory     99.00 331⇓iP       P        16 55 08.3 -0.5
KHC                             e        pP           16 55 20.0 -1.5
KHC                             ePP      PP           16 59 07.3 -6.1
KHC                             e                     16 59 19.5
KHC                               LR     LR
      comp=Z,6µm,18.8s,MS6.2
KHC   Kasperske Hory     99.00 331⇓iP       P        16 55 08.3 -0.5
KHC                             e        pP           16 55 20.0 -1.5
KHC                             e                     16 59 07.3
KHC                               MLR    MLR
      comp=Z,6µm,18.8s,MS6.2
GEC2  GERESS Array S     99.15 330  eP       P        16 55 09.0 -0.5
GEC2                            e                     16 59 12.4
GEC2                            eS       S            17 06 35.9 +2.0
GERES GERESS Array B     99.15 330   P       P        16 55 07.9 -1.7
      comp=Z,6.0nm,0.8s,mb5.2,baz=45,slow=3.8,SNR=24
GERES                             PP     PP           16 59 09.3 -5.3
      comp=Z,8.5nm,1.0s,baz=59,slow=7.8,SNR=5.6
GERES                             LR     LR           17 44 18.9
      comp=Z,6µm,19.0s,MS6.1,baz=195,slow=38
DIVS  Divcibare          99.16 324  eP       P        16 55 08.7 -1.0
WET   Wettzell           99.31 331  eP       P        16 55 10.1 -0.2
WET                             e                     16 59 13.7
WET                             eS       S            17 06 39.7 +4.4
VAY   Valandovo          99.41 320  i P      P        16 55 09.8 -1.1
VAY   Valandovo          99.41 320  i P      P        16 55 10.1 -0.8
VAY   Valandovo          99.41 320  i P      P        16 55 09.9 -1.0
GRA1  Grafenberg Arr     99.65 332  ePdif    P        16 55 11.9 +0.1
GRA1                            ePP      PP           16 59 15.6 -3.0
GRA1                            eSdif                 17 06 40.9
GRA1                            eSS      SS           17 13 36.9 +3.0
GRA1                              LR     LR
      comp=Z,4µm,21.2s,MS5.9
GRF   Grafenberg Arr     99.65 332  eP       P        16 55 11.9 +0.1
GRF                             e                     16 59 15.6
GRF                             eS       S            17 06 40.9 +2.8
GRF                             eSS      SS           17 13 36.9 +3.0
GRF                               MLR    MLR
      comp=Z,4µm,21.2s,MS5.9
GRF   Grafenberg Arr     99.65 332  eP       P        16 55 11.9 +0.1
GRF                             e                     16 59 15.6
GRF                               S      S            17 06 40.9 +2.8
GRF                             eSS      SS           17 13 36.9 +3.0
GRF                               MLR    MLR
      comp=Z,4µm,21.2s,MS5.9
SKO   Skopje             99.68 322  i P      P        16 55 12.9 +0.8
SKO   Skopje             99.68 322  i P      P        16 55 12.8 +0.7
SKO   Skopje             99.68 322  i P      P        16 55 13.0 +0.9
NVSS  Nova Varos 2       99.70 324⇑iP       P        16 55 12.7 +0.5
WTSB  Winterswijk        99.74 336⇓eP       P        16 55 10.9 -1.2
      comp=Z,29nm,2.4s,mb5.3
WTSB                            eP                    16 59 11.3
      comp=Z,95nm,1.4s
EAB   Aberfoyle          99.81 344  eP       P        16 55 11.6 -0.7
EAB                               AMb    AMB          16 55 15.1
      comp=Z,97nm,1.4s,mb6.0
EAU   Auchinoon          99.87 343  eP       P        16 55 12.5 -0.1
EAU                               AMb    AMB          16 55 14.9
      comp=Z,124nm,2.2s,mb6.0
SCHQ  Schefferville     100.04  19   P       P        16 55 13.3 -0.1
      comp=Z,11nm,0.8s,baz=317,slow=4.6,SNR=9.8
SCHQ  Schefferville     100.04  19  ePdif    P        16 55 13.7 +0.2
      comp=Z,40nm,1.3s
SCHQ                            ePP      PP           16 59 19.3 -2.3
SCHQ                              LR     LR
      comp=Z,6µm,22.0s,MS6.0
ESK   Eskdalemuir       100.27 343   PFAKE                16 55 20.0 +5.5
ESK                               LR     LR
      comp=Z,581nm,20.0s,MS5.1
BIA   Bitola            100.34 321  eP       P        16 55 14.3 -0.9
BIA   Bitola            100.34 321  i P      P        16 55 14.4 -0.8
BIA   Bitola            100.34 321  eP       P        16 55 14.3 -0.9
ECK   Cauldkaine Hil    100.36 343  eP       P        16 55 13.1 -1.8
ECK                               AMb    AMB          16 55 18.5
      comp=Z,91nm,1.9s
TNS   Taunus Mts        100.43 334  eP       P        16 55 15.0 -0.4
TNS                             eS       S            17 06 50.6 +6.0
TNS                             eSS      SS           17 13 49.8 +5.0
OHR   Ohrid             100.59 321  eP       P        16 55 16.2 -0.1
OHR   Ohrid             100.59 321  i P      P        16 55 16.3  0.0
OHR   Ohrid             100.59 321  eP       P        16 55 16.2 -0.1
FUR   Furstenfeldbru    100.75 331  ePdif    P        16 55 16.7 -0.1
FUR                             ePP      PP           16 59 23.3 -4.2
TOD   Tromm             100.76 333  eP       P        16 55 16.5 -0.3
HGN   Heimansgroeve     101.02 336⇓eP       P        16 55 17.1 -0.8
      comp=Z,42nm,1.9s
HGN                             ePP      PP           16 59 02.3  -27
HGN                             eP                    16 59 25.2
      comp=Z,41nm,2.0s
HGN                             eSKS     SKS          17 06 06.3  +14
HGN                             eScSP                 17 08 27.2
HGN                             eSS      SS           17 13 19.0  -34
ABH   Alteburg          101.07 334  eP       P        16 55 16.0 -2.2
MIAR  Mount Ida         101.33  47   Pdif    P        16 55 24.6 +4.8
MIAR                              LR     LR
      comp=Z,5µm,22.0s,MS5.9
LHO   Holmfirth         101.41 341  eP       P        16 55 18.2 -1.4
WLF   Walferdange       101.80 335   Pdif    P        16 55 21.9 +0.4
BFO   Black Forest      101.93 333  ePdif    P        16 55 21.5 -0.6
BFO                             eSKSac                17 06 33.8
BFO                             eSdif                 17 07 01.2
BFO                             eSS      SS           17 14 04.0 -1.8
BFO   Black Forest      101.93 333  eP       P        16 55 21.5 -0.6
BFO                             eS       S            17 07 01.2 +4.0
BFO                             eSS      SS           17 14 04.0 -1.8
GIVF  Givet             101.98 336  eP       P        16 55 21.2 -1.1
NATX  Nacogdoches       102.11  49  ePdif    Pdif     16 55 24.0 +0.6
NATX                              LR     LR
      comp=Z,6µm,20.0s,MS6.1
BAIF  Baives            102.25 336  eP       Pdif     16 55 22.2 -1.3
WLS   Welschbruch       102.28 333  eP       Pdif     16 55 22.9 -0.8
CDF   Champ du Feu      102.32 333  eP       Pdif     16 55 22.9 -0.9
      comp=Z,151nm,1.6s
CDF   Champ du Feu      102.32 333  eP       Pdif     16 55 22.9 -0.9
CDF                               pmax   pmax
      comp=Z,76nm,1.6s
ECH   Echery            102.52 333  eP       Pdif     16 55 24.1 -0.6
AAM   Ann Arbor         102.62  35   PFAKE                16 55 40.0  +15
AAM                               LR     LR
      comp=Z,4µm,21.0s,MS6.0
MOF   Molkenrain        102.81 333  eP       Pdif     16 55 25.7 -0.3
BBS   Basel-Blauen      102.95 333  eP       Pdif     16 55 22.8 -3.8
HINF  Hinteralfeld      102.96 333  eP       Pdif     16 55 25.3 -1.4
      comp=Z,27nm,1.1s
HINF  Hinteralfeld      102.96 333  eP       Pdif     16 55 25.3 -1.4
HINF                              pmax   pmax
      comp=Z,14nm,1.1s
HAU   Haudompre         103.03 334  eP       Pdif     16 55 25.7 -1.3
HAU                             eR
      comp=Z,4µm,19.8s
MEZF  Maizieres J'vi    103.17 335  eP       Pdif     16 55 26.8 -0.8
      comp=Z,63nm,1.2s
LOMF  Lomont            103.33 333  eP       Pdif     16 55 28.1 -0.2
WCI   Wyandotte Cave    103.79  40   PFAKE                16 55 40.0 +9.4
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WCI				LR	LR		
	comp=Z,6µm,22.0s,MS6.1						
VLC	**Villacollemand**	**104.12**	**329**	PP	PP	16 59 46.6	-5.9
OXF	**Oxford**	**104.14**	**45**	Pdif	Pdif	16 55 35.0	+2.8
OXF				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
WVT	**Waverly**	**104.17**	**42**	*e*Pdif	Pdif	16 55 33.2	+0.9
	comp=Z,12nm,1.1s						
WVT				LR	LR		
	comp=Z,4µm,20.0s,MS5.9						
WVT	**Waverly**	**104.17**	**42**	*e*P	Pdif	16 55 33.2	+0.9
WVT				pmax	pmax		
	comp=Z,12nm,1.1s						
WVT				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.9						
CABF	**La Chapelle**	**104.23**	**333**	*e*P	Pdif	16 55 31.1	-1.2
	comp=Z,16nm,0.9s						
CABF	**La Chapelle**	**104.23**	**333**	*e*P	Pdif	16 55 31.1	-1.2
CABF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ACSO	**Alum Creek Sta**	**104.39**	**37**	PFAKE		16 55 40.0	+6.8
ACSO				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
LOR	**Lormes**	**104.64**	**334**	*e*P	Pdif	16 55 33.1	-1.0
	comp=Z,75nm,1.5s						
LOR				*e*R			
	comp=Z,3µm,20.8s						
LOR	**Lormes**	**104.64**	**334**	*e*P	Pdif	16 55 33.1	-1.0
LOR				pmax	pmax		
	comp=Z,37nm,1.5s						
LOR				MLR	MLR		
	comp=Z,3µm,20.8s,MS5.8						
ERPA	**Erie**	**104.70**	**34**	PFAKE		16 55 40.0	+5.5
ERPA				LR	LR		
	comp=Z,6µm,20.0s,MS6.1						
LPL	**La Plagne**	**104.80**	**332**	*e*P	Pdif	16 55 34.0	-0.8
	comp=Z,52nm,1.6s						
LPL	**La Plagne**	**104.80**	**332**	*e*P	Pdif	16 55 34.0	-0.8
LPL				pmax	pmax		
	comp=Z,26nm,1.5s						
LPG	**La Plagne**	**104.81**	**332**	*e*P	Pdif	16 55 34.2	-0.7
	comp=Z,5.5nm,0.7s						
LPG	**La Plagne**	**104.81**	**332**	*e*P	Pdif	16 55 34.2	-0.7
LPG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SSF	**Saint Saulge**	**104.94**	**335**	*e*P	Pdif	16 55 34.7	-0.7
FLN	**La Foliniere**	**105.05**	**338**	*e*P	Pdif	16 55 35.0	-0.8
FLN				*e*R			
	comp=Z,5µm,22.2s						
LDF	**La Druitiere**	**105.06**	**338**	*e*P	Pdif	16 55 34.9	-1.0
SMF	**Signal de Mont**	**105.14**	**334**	*e*P	Pdif	16 55 35.5	-0.8
	comp=Z,55nm,1.3s						
SMF	**Signal de Mont**	**105.14**	**334**	*e*P	Pdif	16 55 35.5	-0.8
SMF				pmax	pmax		
	comp=Z,28nm,1.3s						
AVF	**Avril sur Loir**	**105.22**	**334**	*e*P	Pdif	16 55 35.8	-0.9
	comp=Z,28nm,1.1s						
AVF	**Avril sur Loir**	**105.22**	**334**	*e*P	Pdif	16 55 35.8	-0.9
AVF				pmax	pmax		
	comp=Z,14nm,1.1s						
MBDF	**Montbardon**	**105.39**	**331**	*e*P	Pdif	16 55 35.8	-1.7
	comp=Z,42nm,1.5s						
MBDF	**Montbardon**	**105.39**	**331**	*e*P	Pdif	16 55 35.8	-1.7
MBDF				pmax	pmax		
	comp=Z,21nm,1.5s						
GRR	**Gorron**	**105.50**	**338**	*e*P	Pdif	16 55 37.3	-0.5
	comp=Z,51nm,1.2s						
GRR	**Gorron**	**105.50**	**338**	*e*P	Pdif	16 55 37.3	-0.5
GRR				pmax	pmax		
	comp=Z,25nm,1.2s						
BGF	**Bois d'Agland**	**105.62**	**335**	*e*P	Pdif	16 55 37.7	-0.7
ORIF	**Oris-en-Rattie**	**105.64**	**332**	*e*P	Pdif	16 55 37.6	-1.0
	comp=Z,15nm,0.9s						
ORIF				*e*R			
	comp=Z,8µm,20.2s						
PLDF	**La Plantade**	**105.78**	**334**	*e*P	Pdif	16 55 39.6	+0.5
TCF	**Toulx Ste Croi**	**106.09**	**335**	*e*P	Pdif	16 55 40.0	-0.5
NCB	**Newcomb**	**106.14**	**29**	PFAKE		17 00 00.0	
NCB				LR	LR		
	comp=Z,4µm,19.0s,MS6.0						
SGMF	**Saint Gilles**	**106.20**	**339**	*e*P	Pdif	16 55 40.5	-0.4
VIVF	**Saint-Julien-l**	**106.22**	**332**	*e*P	Pdif	16 55 40.3	-0.8
	comp=Z,30nm,1.2s						
VIVF	**Saint-Julien-l**	**106.22**	**332**	*e*P	Pdif	16 55 40.3	-0.8
VIVF				pmax	pmax		
	comp=Z,15nm,1.2s						
FRF	**La Foret Royal**	**106.35**	**330**	*e*P	Pdif	16 55 40.8	-0.9
	comp=Z,26nm,1.0s						
FRF	**La Foret Royal**	**106.35**	**330**	*e*P	Pdif	16 55 40.8	-0.9
FRF				pmax	pmax		
	comp=Z,13nm,1.0s						
ROSF	**Rostrenen**	**106.37**	**339**	*e*P	Pdif	16 55 41.2	-0.5
MCWV	**Mont Chateau**	**106.53**	**35**	PFAKE		17 00 00.0	
MCWV				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
LBL	**Lubilhac**	**106.53**	**334**	*e*P	Pdif	16 55 42.2	-0.2
MFF	**Saint Martin d**	**106.75**	**336**	*e*P	Pdif	16 55 42.7	-0.7
LBNH	**Lisbon**	**106.95**	**28**	PFAKE		17 00 00.0	
LBNH				LR	LR		
	comp=Z,4µm,20.0s,MS6.0						
MYNC	**Murphy**	**107.16**	**41**	PFAKE		17 00 10.0	
MYNC				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
RJF	**Les Rejaudoux**	**107.18**	**335**	*e*P	Pdif	16 55 44.9	-0.4
RJF				*e*R			
	comp=Z,3µm,23.0s						
LASF	**Ste Croix**	**107.19**	**332**	*e*P	Pdif	16 55 44.8	-0.6
LFF	**La Frestale**	**107.79**	**335**	*e*P	Pdif	16 55 47.1	-0.9
	comp=Z,34nm,1.1s						
LFF	**La Frestale**	**107.79**	**335**	*e*P	Pdif	16 55 47.1	-0.9
LFF				pmax	pmax		
	comp=Z,17nm,1.1s						
BLA	**Blacksburg**	**107.93**	**38**	PFAKE		17 00 10.0	
BLA				LR	LR		
	comp=Z,96µm,21.0s						
KMBO	**Kilima Mbogo**	**108.05**	**276**	PFAKE		17 00 10.0	
KMBO				LR	LR		
	comp=Z,1µm,20.0s,MS5.5						
HRV	**Harvard--Oak R**	**108.49**	**28**	PP	PP	17 00 15.1	-10
HRV				LR	LR		
	comp=Z,3µm,20.0s,MS5.9						
MTLF	**Montolieu**	**108.49**	**333**	*e*P	Pdif	16 55 50.8	-0.3
GOGA	**Godfrey**	**108.66**	**42**	PFAKE		17 00 10.0	
GOGA				LR	LR		
	comp=Z,380nm,21.0s,MS4.9						
WES	**Weston**	**108.69**	**28**	PP	PP	17 00 22.7	-4.4
CBN	**Corbin**	**108.91**	**35**	PFAKE		17 00 10.0	
CBN				LR	LR		
	comp=Z,6µm,20.0s,MS6.2						
ETSF	**Etsaut**	**110.01**	**335**	*e*P	Pdif	16 55 58.0	+0.2
QSPA	**South Pole Qui**	**110.11**	**180**	*e*PKiKP		16 59 58.9	
QSPA				*e*PP	PP	17 00 34.6	-2.0
QSPA				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
NHSC	**New Hope**	**110.91**	**40**	PFAKE		17 00 10.0	+10
NHSC				LR	LR		
	comp=Z,8µm,21.0s,MS6.2						
RPN	**Rapa Nui**	**111.52**	**112**	PFAKE		17 00 10.0	+8.3
RPN				LR	LR		
	comp=Z,525nm,20.0s,MS5.1						
DWPF	**Disney**	**113.45**	**45**	PFAKE		17 00 20.0	+15
DWPF				LR	LR		
	comp=Z,5µm,20.0s,MS6.1						
ESDC	**Sonseca Array**	**114.10**	**335**	PKP	PKPdf	17 00 08.1	+1.7
	comp=Z,0.5nm,0.5s,baz=357,slow=4.1,SNR=4.7						
ESDC				PP	PP	17 00 51.0	-15
	comp=Z,4.6nm,0.8s,baz=30,slow=7.6,SNR=8.3						
ESDC				PKKPbc		17 10 57.4	
	comp=Z,0.3nm,0.3s,baz=221,slow=4.3,SNR=6.6						
ESDC				SKKP		17 14 40.7	
	comp=Z,0.5nm,0.4s,baz=243,slow=3.3,SNR=4.0						
ESLA	**Sonseca Array**	**114.10**	**335**	PFAKE		17 00 20.0	+14
ESLA				LR	LR		
	comp=Z,18µm,20.0s,MS6.7						
SYO	**Syowa Base**	**114.71**	**202**	⇓Pdiff	Pdif	16 56 17.0	-0.9
SYO	**Syowa Base**	**114.71**	**202**	⇓*e*Pdif	Pdif	16 56 17.0	-0.9
BBSR	**BB Station**	**119.89**	**30**	PFAKE		17 00 30.0	+12
BBSR				LR	LR		
	comp=Z,3µm,22.0s,MS5.9						
LSZ	**Lusaka**	**120.96**	**264**	*e*PKPdf	PKPdf	17 00 21.3	+1.1
LSZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.7						
JTS	**JuntasAbangare**	**121.29**	**64**	PKP	PKPdf	17 00 21.8	+0.9
	comp=Z,17nm,0.8s,baz=296,slow=3.7,SNR=12						
JTS	**JuntasAbangare**	**121.29**	**64**	*e*PKPdf	PKPdf	17 00 21.6	+0.7
JTS				*e*pPKPdf		17 00 35.4	
JTS				LR	LR		
	comp=Z,668nm,22.0s,MS5.2						
NVL	**N'lazarevskaya**	**122.87**	**196**	⇓*i*PKIKP	PKPdf	17 00 22.1	-0.6
NVL				e*SP		17 00 35.1	
NVL				*i*		17 07 20.8	
NVL				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MAIT	**Maitri**	**122.89**	**196**	*e*P	PKPdf	17 00 23.6	+0.9
LBTB	**Lobatse**	**125.27**	**253**	PKPdf	PKPdf	17 00 30.2	+1.7
SNAA	**Sanae**	**125.57**	**192**		PKPdf	17 00 31.3	+3.5
SNAA	**Sanae**	**125.57**	**192**		PKPdf	17 00 38.4	+11
SNAA	**Sanae**	**125.57**	**192**		PKPdf	17 00 46.4	+19
SNAA	**Sanae**	**125.57**	**192**	PKPdf	PKPdf	17 00 28.2	+0.4
VNA2	**Neumayer--Watz**	**127.02**	**191**	⇑*i*	PKPdf	17 00 43.6	+13
VNA2	**Neumayer--Watz**	**127.02**	**191**	⇑*i*	PKPdf	17 00 50.3	+20
VNA3	**Neumayer Olymp**	**127.11**	**190**		PKPdf	17 00 46.2	+15
SUR	**Sutherland**	**129.99**	**244**	*e*PKPdf	PKPdf	17 00 36.2	-1.1
SUR				LR	LR		
	comp=Z,430nm,21.0s,MS5.1						
SJG	**San Juan**	**130.41**	**42**	PKP	PKPdf	17 00 38.0	-0.4
	comp=Z,17nm,0.2s,baz=208,slow=22,SNR=4.0						
SJG	**San Juan**	**130.41**	**42**	*e*PKPdf	PKPdf	17 00 39.4	+0.9
SJG				*e*PP	PP	17 02 52.3	-4.8
SJG				LR	LR		
	comp=Z,4µm,20.0s,MS6.1						
HUMP	**Col San Antoni**	**130.58**	**41**	PKPdf	PKPdf	17 00 40.0	+1.2
MTP	**Monte Pirata**	**130.80**	**41**	PKPdf	PKPdf	17 00 40.7	+1.5
PMSA	**Palmer Station**	**131.27**	**163**	*e*PKPdf	PKPdf	17 00 39.2	+0.4
PMSA				LR	LR		
	comp=Z,2µm,20.0s,MS5.8						
TSUM	**Tsumeb**	**131.70**	**262**	*e*SKPbc		17 04 03.6	
TSUM				LR	LR		
	comp=Z,2µm,22.0s,MS5.8						
OTAV	**Otavalo**	**131.87**	**70**	*e*PKPdf	PKPdf	17 00 43.4	+2.0
OTAV				*e*pPKPdf		17 00 55.1	
OTAV				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
ROSC	**El Rosal**	**133.07**	**62**	PKP	PKPdf	17 00 45.7	+2.1
	comp=Z,15nm,0.6s,baz=225,slow=6.0,SNR=11						
SDV	**Santo Domingo**	**133.66**	**55**	PKhKP		17 00 30.5	
	comp=Z,2.3nm,0.5s,baz=5.1,slow=6.8,SNR=4.4						
SDV				PKP	PKPdf	17 00 46.2	+1.4
	comp=Z,56nm,0.8s,baz=284,slow=2.2,SNR=36						
SDV	**Santo Domingo**	**133.66**	**55**	PKP		17 00 30.5	
SDV				*e*PKPdf	PKPdf	17 00 45.5	+0.8
SDV				LR	LR		
	comp=Z,1µm,20.0s,MS5.6						
USHA	**Ushuaia**	**136.79**	**151**	PKP	PKPdf	17 00 49.9	+0.5
	comp=Z,5.7nm,0.7s,baz=180,slow=4.0,SNR=2.8						
NNA	**Nana**	**138.03**	**85**	PFAKE		17 01 00.0	+7.3
NNA				LR	LR		
	comp=Z,655nm,19.0s,MS5.4						
DBIC	**Dimbokro**	**140.83**	**310**	PKhKP		17 00 51.6	
	comp=Z,8.8nm,0.5s,baz=17,slow=3.5,SNR=23						
DBIC	**Dimbokro**	**140.83**	**310**	*e*PKPdf	PKPdf	17 00 51.1	-6.8
DBIC				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
LIC	**Lamto**	**141.26**	**310**	*e*PKIKP	PKPdf	17 00 51.4	-7.3
	comp=Z,82nm,0.8s						
LIC				*e*R			
	comp=Z,3µm,22.0s						
PLCA	**Paso Flores**	**142.80**	**131**	PKhKP		17 00 58.0	
	comp=Z,17nm,0.8s,baz=236,slow=4.4,SNR=21						
PLCA				PKP	PKPdf	17 01 03.2	+2.7
	comp=Z,17nm,0.8s,baz=231,slow=4.7,SNR=21						
PLCA	**Paso Flores**	**142.80**	**131**	*e*PKPdf	PKPdf	17 01 00.1	-0.4
PLCA				PKP	PKPdf	17 01 03.2	+2.7
PLCA				LR	LR		
	comp=Z,2µm,19.0s,MS5.8						
PLCA	**Paso Flores**	**142.80**	**131**	*e*PKIKP	PKPdf	17 01 00.1	-0.4
PLCA				MLR	MLR		
	comp=Z,2µm,19.0s						
EFI	**East Falkland**	**143.44**	**155**	*e*PKPdf	PKPdf	17 01 01.3	+0.1
EFI				LR	LR		
	comp=Z,540nm,20.0s,MS5.3						
ARE	**Arequipa**	**144.17**	**90**	*e*P	PKPbc	17 01 05.0	+2.1
PEL	**Peldehue**	**144.93**	**119**	⇑*e*P	PKPdf	17 01 04.4	-0.1
FCH	**Farellones**	**145.21**	**119**	⇓*e*P	PKPdf	17 01 07.0	+2.0
TLL	**Tololo Astrono**	**145.34**	**114**	*e*P	PKPdf	17 01 06.6	+1.4
LPAZ	**La Paz**	**147.29**	**89**	PKP	PKPdf	17 01 11.6	+2.8
	comp=Z,118nm,0.6s,baz=338,slow=4.7,SNR=360						
LPAZ				PKPbc	PKPdf	17 01 14.3	+5.5
	comp=Z,118nm,0.6s,baz=298,slow=2.6,SNR=56						
LPAZ	**La Paz**	**147.29**	**89**	*e*PKPdf	PKPdf	17 01 11.6	+2.8
LPAZ				LR	LR		
	comp=Z,2µm,20.0s,MS5.9						
SAML	**Samuel**	**149.56**	**73**	*e*PKPdf	PKPdf	17 01 14.1	+1.5
SAML				LR	LR		
	comp=Z,3µm,21.0s,MS6.1						
TRQA	**Tornquist**	**149.94**	**132**	*e*PKPdf	PKPdf	17 01 14.2	+1.7
TRQA				*e*pPKPdf		17 01 27.2	
TRQA				LR	LR		
	comp=Z,2µm,19.0s,MS6.0						
SIV	**San Ignacio**	**153.84**	**85**	PKP	PKPdf	17 01 20.7	+1.9
	comp=Z,17nm,0.9s,baz=261,slow=1.4,SNR=41						
SIV				PKPbc	PKPdf	17 01 28.6	+10
	comp=Z,22nm,0.9s,baz=268,slow=4.2,SNR=28						
LPA	**La Plata**	**154.30**	**129**	*de*PKP	PKPdf	17 01 26.0	+7.1
LPA	**La Plata**	**154.30**	**129**	*e*PKP	PKPab	17 01 46.0	+2.2
LPA				*e*SKKP		17 13 27.0	
LPA	**La Plata**	**154.30**	**129**	*e*PKPr	PKPdf	17 01 26.0	+7.1
LPA				*e*PKP	PKPab	17 01 46.0	+2.2
LPA				*e*SKKP		17 13 27.0	
CPUP	**Villa Florida**	**157.68**	**110**	*e*PKPdf	PKPdf	17 01 23.2	-0.5
CPUP				*e*pPKPdf		17 01 39.5	
CPUP				LR	LR		
	comp=Z,492nm,19.0s,MS5.4						
RCBR	**Riachuelo**	**165.47**	**8**	PFAKE		17 01 40.0	+7.8
RCBR				LR	LR		
	comp=Z,2µm,20.0s						
BDFB	**Brasilia**	**165.79**	**73**	PKP	PKPdf	17 01 34.2	+1.8
	comp=Z,20nm,1.0s,baz=32,slow=6.6,SNR=11						
BDFB				PKPab	PKPab	17 02 33.4	-0.5
	comp=Z,10.0nm,0.8s,baz=165,slow=3.6,SNR=3.7						

NDI ***28*** *16:57:07.0±4.7,21.12N×88.50E,h10*^{km}*,ML4.3, mb4.7(NEIC)*

IDC ***28*** *16:57:11.4±1.0,20.99N×89.17E,mb4.0/11,mb1 4.2/11, mb1mx4.1/18,mbtmp4.0/11,Error ellipse: s-maj=44.4km s-min=18.7km az=48.0*

NEIC ***28*** *16:57:13.0±0.6,21.02N×89.16E,h10*^{km}*,mb4.7/2,Error ellipse: s-maj=19.2km s-min=11.0km az=55.0*

MOS ***28*** *16:57:14.6±1.2,21.07N×89.21E,h33*^{km}*,mb5.2/1,Error ellipse: s-maj=26.2km s-min=14.2km az=107.3*

BJI ***28*** *16:57:15.0,21.00N×89.20E,h10*^{km}*,mb4.5*

ISC 28 16:57:07.4±0.5**,21.02N**±0.05×**88.13E**±0.05**,h10**^{km}**,n42,** σ**1**^{s}**34**/42**,mb4.2**/14**,1C,Southern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAL	**Calcutta**	**1.52**	**7**	*e*x	x	16 57 38.1	
CAL				*e*x	x	16 57 57.4	
BWNR	**Bhubaneshwar**	**2.29**	**252**	*e*P	Px	16 57 07.4	
BWNR				*e*S	Sx	16 57 39.0	
BWNR				AML	AML	16 57 42.7	
	comp=E,5µm,0.3s						
BWNR				AML	AML	16 57 42.8	
	comp=N,5µm,0.4s						
BOK	**Bokaro**	**3.45**	**323**	*e*P	**Pn**	**16 58 00.7**	**-1.7**
BOK				*e*S	**Sn**	**16 58 45.3**	**+1.5**
BOK				AML	AML	16 59 06.6	
	comp=N,801nm,0.3s						
BOK				AML	AML	16 59 07.5	
	comp=E,654nm,0.4s						
VIS	**Vishakhapatnam**	**5.60**	**235**	*e*P	**Pn**	**16 58 33.2**	**+0.4**
VIS				*e*S	**Sn**	**16 59 40.0**	**+2.1**
SHL	**Shillong**	**5.69**	**37**	*e*x	x	16 58 50.5	
SHL				*e*x	x	16 59 32.5	
ALBI	**Allahabad**	**7.21**	**307**	*e*P	**Pn**	**16 58 54.0**	**-1.5**
LSA	**Lhasa**	**9.06**	**17**	*e*Pn	**P**	**16 59 21.6**	**+0.3**
LSA				*e*Sn	**Sn**	**17 00 59.8**	**-4.5**
HYB	**Hyderabad**	**9.73**	**250**	*e*P	**P**	**16 59 28.0**	**-2.6**
HYB				*e*		16 59 35.5	
HYB				*e*S	**Sn**	**17 01 11.0**	**-10**
HYB	**Hyderabad**	**9.73**	**250**	*e*P	**P**	**16 59 28.0**	**-2.6**
HYB				*e*S	**Sn**	**17 01 11.0**	**-10**
BHPL	**Bhopal**	**10.17**	**285**	*e*x	x	16 59 41.9	
BHPL				*e*x	x	17 01 21.8	
AGRA	**Agra**	**11.16**	**306**	*e*P	**P**	**16 59 48.9**	**-1.3**
AGRA				*e*S	**S**	**17 01 47.4**	**-8.8**
LATR	**Latur**	**11.20**	**259**	*e*P	**P**	**16 59 49.5**	**-1.3**
LATR				*e*x	x	17 01 47.0	
SONA	**Sohna**	**12.35**	**308**	*e*P	**P**	**17 00 06.3**	**+0.1**
SONA				*e*S	**S**	**17 02 15.5**	**-10**
AYAN	**Aya Nagar**	**12.45**	**309**	*e*P	**P**	**17 00 07.5**	**-0.1**
AYAN				*e*S	**S**	**17 02 16.2**	**-11**
NDI	**New Delhi**	**12.50**	**310**	*e*x	x	16 59 58.0	
NDI				*e*x	x	17 02 17.0	
KUDL	**Kundal**	**12.74**	**306**	*e*P	**P**	**17 00 11.4**	**0.0**
KUDL				*e*S	**S**	**17 02 21.1**	**-13**
DDI	**Dehra Dun**	**12.96**	**318**	*e*x	x	17 00 10.0	
DDI				*e*x	x	17 03 15.0	
KHET	**Khetri**	**13.22**	**304**	*e*P	**P**	**17 00 17.9**	**0.0**
KLP	**Kalpa**	**13.71**	**322**	*e*x	x	16 59 59.4	
BOM	**Bombay**	**14.56**	**264**	*i* x	x	16 52 24.0	
BHK	**Bhakra**	**14.74**	**317**	*e*x	x	17 00 24.9	
TRD	**Trivandrum**	**16.46**	**223**	*e*P	**P**	**17 01 02.6**	**+2.3**
TRD				*e*x	x	17 05 52.6	
GYA	**Guiyang**	**17.80**	**69**	⇑*i*P	**P**	**17 01 17.8**	**+0.8**
GYA				AMB	AMB		
	comp=Z,10.0nm,0.8s						
ENH	**Enshi**	**21.31**	**60**	*e*P	**P**	**17 01 56.5**	**-0.1**
	comp=Z,14nm,0.8s,mb4.3						
MKAR	**Makanchi Array**	**26.14**	**351**	P	**P**	**17 02 45.5**	**+2.0**
	comp=Z,2.8nm,0.6s,mb4.0,baz=179,slow=11,SNR=12						
MKAR	**Makanchi Array**	**26.14**	**351**	P	**P**	**17 02 45.5**	**+2.0**
SONM	**Songino Array**	**30.54**	**25**	P	**P**	**17 03 23.9**	**+0.8**
	comp=Z,2.7nm,0.7s,mb4.2,baz=204,slow=9.8,SNR=6.3						
BVAR	**Borovoye Array**	**34.74**	**341**	P	**P**	**17 04 04.9**	**+5.2**
	comp=Z,1.0nm,0.6s,mb4.0,baz=144,slow=10.0,SNR=4.8						
AKTO	**Aktyubinsk**	**37.72**	**328**	P	**P**	**17 04 33.4**	**+8.5**
	comp=Z,2.0nm,0.7s,mb4.0,baz=135,slow=5.7,SNR=3.0						
ARU	**Arti**	**41.59**	**336**	*e*P	**P**	**17 05 06.2**	**+9.4**
AKASG	**Malin Array Be**	**54.40**	**318**	P	**P**	**17 06 44.5**	**+7.8**
	comp=Z,0.3nm,0.2s,mb3.8,baz=80,slow=6.0,SNR=4.4						
GUMO	**Guam**	**54.44**	**88**	*e*P	**P**	**17 06 33.1**	**-4.4**
	comp=Z,190nm,1.1s						
MLR	**Muntele Rosu**	**55.94**	**311**	P	**P**	**17 06 57.4**	**+9.4**
	comp=Z,5.0nm,0.7s,mb4.7,baz=120,slow=8.1,SNR=5.7						
FINES	**FINESS Array B**	**58.45**	**330**	P	**P**	**17 07 13.2**	**+7.6**
	comp=Z,2.8nm,0.8s,mb4.4,baz=104,slow=7.9,SNR=6.5						
WRA	**Warramunga Arr**	**60.84**	**129**	P	**P**	**17 07 20.9**	**-1.7**
	comp=Z,6.2nm,0.7s,mb4.8,baz=318,slow=7.3,SNR=51						
WRAB	**Tennant Creek**	**60.84**	**129**	*e*P	**P**	**17 07 22.2**	**-0.4**
	comp=Z,17nm,1.0s,mb5.1						
WRAB	**Tennant Creek**	**60.84**	**129**	*e*P	**P**	**17 07 22.2**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,17nm,1.0s,mb5.1						
GERES	**GERESS Array B**	**64.31**	**315**	P	**P**	**17 07 53.7**	**+8.3**
	comp=Z,0.7nm,0.8s,mb3.8,baz=74,slow=9.7,SNR=4.3						
NOA	**NORSAR Array B**	**65.51**	**329**	P	**P**	**17 07 59.0**	**+6.1**
	comp=Z,0.9nm,0.8s,mb3.9,baz=90,slow=8.8,SNR=3.3						
STKA	**Stephens Creek**	**73.40**	**134**	P	**P**	**17 08 40.5**	**-1.3**
	comp=Z,2.2nm,0.9s,mb4.1,baz=297,slow=14,SNR=2.7						
TAU	**Tasmania Unive**	**83.71**	**141**	P	**P**	**17 09 31.6**	**-6.2**
	comp=Z,82nm,1.5s						
ILAR	**Eielson Array**	**84.68**	**21**	P	**P**	**17 09 45.1**	**+2.8**
	comp=Z,0.3nm,0.9s,mb3.4,baz=280,slow=5.5,SNR=3.4						

CSEM ***28*** *17:15:23.6±0.1,26.78N×55.77E,h2*^{km}*,ML4.4/2,Error ellipse: s-maj=2.9km s-min=2.3km az=90.0*

IDC ***28*** *17:15:24.6±1.4,27.00N×56.15E,mb3.8/9,mb1 4.0/9, mb1mx3.9/19,mbtmp3.9/9,Error ellipse: s-maj=32.6km s-min=27.9km az=28.0*

THR ***28*** *17:15:25.7±0.8,26.79N×55.89E,h14*^{km}*±5*^{km}*,ML3.7*

NEIC ***28*** *17:15:26.1±1.0,26.95N×56.16E,h10*^{km}*,mb4.3/3,Error ellipse: s-maj=21.7km s-min=16.6km az=199.0*

MOS ***28*** *17:15:28.0±1.1,27.01N×56.14E,h33*^{km}*,mb4.2/1,Error ellipse: s-maj=30.0km s-min=15.2km az=107.2*

ISC 28 17:15:24.2±0.9**,26.81N**±0.03×**55.75E**±0.04**,h7**^{km}±7^{km}**, n35,** σ**1**^{s}**34**/43**,mb3.8**/10**,4C-7D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.70**	**33**	*e*Pg	**Pg**	**17 15 38.1**	**-0.1**
BNDS				*e*Sg	**Sg**	**17 15 47.9**	**+0.4**
BNDS				AML	AML	17 15 55.8	
	comp=N,3µm,0.4s						
BNDS	**Bandar-Abbas**	**0.70**	**33**	*e*Pg	**Pg**	**17 15 38.1**	**-0.1**
	SNR=90						
BNDS				*e*Sg	**Sg**	**17 15 47.9**	**+0.4**
	comp=N,3µm,0.4s,SNR=90						
BANOM	**Banah**	**1.01**	**151**	⇓P	**Pb**	**17 15 43.7**	**0.0**
	SNR=311						
BANOM				⇓S	**Sb**	**17 15 58.1**	**+1.0**
ASHO	**Ashiyiah**	**2.14**	**172**	P	**Pn**	**17 16 02.7**	**+1.9**
	SNR=34						
ASHO				⇑S	**Sn**	**17 16 37.2**	**+9.2**
GHIR	**Ghir-Karzin**	**2.85**	**302**	*e*Pn	**Pn**	**17 16 15.0**	**+3.9**
GHIR				*e*Sg	**Sg**	**17 16 58.6**	**-0.7**
GHIR				AML	AML	17 17 26.3	
	comp=N,283nm,0.7s						
GHIR	**Ghir-Karzin**	**2.85**	**302**	*e*Pn	**Pn**	**17 16 15.0**	**+3.9**
	SNR=52						
GHIR				*e*Sg	**Sg**	**17 16 58.6**	**-0.7**
	comp=N,283nm,0.7s,SNR=90						
KRBR	**Kerman**	**3.28**	**16**	*e*Pn	**Pn**	**17 16 18.8**	**+1.7**
KRBR				Sn	**Sn**	**17 16 58.2**	**+1.2**
ARQ	**Araqi**	**3.53**	**168**	P	**Pn**	**17 16 22.3**	**+1.6**
	SNR=9.8						
BIDO	**Bidbid**	**3.92**	**146**	⇓P	**Pn**	**17 16 25.4**	**-0.9**
BSY	**Bisya**	**4.26**	**162**	⇓P	**Pn**	**17 16 31.2**	**+0.1**
SMDO	**Samad**	**4.28**	**150**	P	**Pn**	**17 16 32.0**	**+0.6**
	SNR=14						
BSYO	**Bisya**	**4.28**	**161**	P	**Pn**	**17 16 31.2**	**-0.2**
JMDO	**Jabal Madar**	**4.92**	**154**	⇓P	**Pn**	**17 16 40.5**	**+0.2**
WBK	**Wadi Bani Khal**	**5.11**	**144**	⇑P	**Pn**	**17 16 41.2**	**-1.8**
RDF	**Al-Radifah**	**7.55**	**288**	*e*P	**Pn**	**17 17 17.3**	**-0.2**
NAY	**Al-Naaiem**	**7.90**	**290**	*e*P	**Pn**	**17 17 22.9**	**+0.6**
NAY				AML	AML	17 18 49.4	
	comp=Z,5.7nm,0.6s						
MIB	**Mutribah**	**7.99**	**294**	*e*P	**Pn**	**17 17 23.9**	**+0.3**
MIB				AML	AML	17 18 57.1	
	comp=Z,29nm,0.7s						
WHFO	**Wadi Hawf**	**9.04**	**192**	⇑P	**P**	**17 17 37.5**	**-0.6**
RBK	**Rabkut**	**9.37**	**189**	⇓S	**Sn**	**17 19 20.9**	**-8.7**
ABTO	**Aybut**	**9.68**	**194**	⇓P	**P**	**17 17 44.3**	**-2.9**
ABTO				⇑S	**Sn**	**17 19 28.5**	**-8.8**
KIV	**Kislovodsk**	**20.10**	**332**	*e*Pn	**P**	**17 20 02.8**	**+1.4**
	comp=Z,93nm,1.6s						
KIV	**Kislovodsk**	**20.10**	**332**	*e*P	**P**	**17 20 02.8**	**+1.4**
BR131	**Keskin Array S**	**22.46**	**311**	*e*P	**P**	**17 20 28.6**	**+3.3**
	comp=Z,3.4nm,0.8s,mb3.8						
BRTR	**Keskin Array B**	**22.46**	**311**	P	**P**	**17 20 27.4**	**+2.0**
	comp=Z,1.9nm,0.9s,mb3.5,baz=129,slow=10,SNR=7.5						
AKTO	**Aktyubinsk**	**23.65**	**4**	P	**P**	**17 20 34.2**	**-2.7**
	comp=Z,0.6nm,0.3s,mb3.5,baz=187,slow=8.1,SNR=3.0						
AKTO	**Aktyubinsk**	**23.65**	**4**	P	**P**	**17 20 34.2**	**-2.7**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb3.7						
BRVK	**Borovoye**	**28.37**	**19**	*e*P	**P**	**17 21 18.0**	**-2.9**
	comp=Z,7.1nm,1.3s,mb4.1						
BRVK	**Borovoye**	**28.37**	**19**	*e*P	**P**	**17 21 18.0**	**-3.0**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s,mb4.1						
BVAR	**Borovoye Array**	**28.38**	**19**	P	**P**	**17 21 19.0**	**-1.9**
	comp=Z,4.4nm,0.8s,mb4.2,baz=198,slow=9.4,SNR=10						
AKASG	**Malin Array Be**	**31.27**	**327**	P	**P**	**17 21 45.2**	**-1.5**
	comp=Z,0.2nm,0.3s,mb3.4,baz=111,slow=7.0,SNR=4.3						
GERES	**GERESS Array B**	**39.17**	**316**	P	**P**	**17 22 56.7**	**+2.3**
	comp=Z,0.4nm,0.6s,mb3.3,baz=135,slow=14,SNR=4.3						
FINES	**FINESS Array B**	**39.95**	**338**	P	**P**	**17 22 59.6**	**-1.1**
	comp=Z,1.6nm,0.9s,mb3.8,baz=135,slow=8.1,SNR=4.8						
DBIC	**Dimbokro**	**60.82**	**262**	P	**P**	**17 25 41.3**	**+1.5**
	comp=Z,1.9nm,0.9s,mb4.2,baz=53,slow=20,SNR=3.3						
ILAR	**Eielson Array**	**87.03**	**10**	P	**P**	**17 28 09.6**	**-1.5**
	comp=Z,0.8nm,0.7s,mb4.1,baz=333,slow=4.0,SNR=8.2						
WRA	**Warramunga Arr**	**89.19**	**113**	P	**P**	**17 28 21.6**	**-1.0**
	comp=Z,0.2nm,0.7s,mb3.6,baz=306,slow=4.5,SNR=4.2						

GUC ***28*** *17:28:10.6±1.0,29.38S×70.99W,h46*^{km}*±3*^{km}*,ML5.0*

NEIC ***28*** *17:28:10.6,29.38S×70.99W,h46*^{km}*,mb4.8/12,After GUC.*

IDC ***28*** *17:28:11.1±0.7,29.12S×71.07W,h47*^{km}*±6*^{km}*,mb4.3/7, mb1 4.4/9,mb1mx4.2/14,mbtmp4.4/9,MS3.5/2,Ms1 3.5/2, ms1mx3.4/17,Error ellipse: s-maj=25.9km s-min=10.3km az=50.0*

BJI ***28*** *17:28:14.6,29.40S×71.00W,h45*^{km}*,Msz4.9*

ISC 28 17:28:09.4±0.4**,29.29S**±0.02×**71.16W**±0.07**,h49**^{km}±4^{km}**, h46**^{km}±.6^{km}**:pP-P,n80,** σ**1**^{s}**17**/80**,mb4.6**/17**,6C-5D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LSCH	**La Serena**	**0.62**	**187**	⇑iP	**P**	**17 28 22.7**	**+0.6**
LSCH				iS	**S**	**17 28 31.6**	**+0.3**
LSCH				AMP		17 28 32.9	
	comp=N,81μm,0.3s						
TLL	**Tololo Astrono**	**0.92**	**161**	eP	**P**	**17 28 27.1**	**+0.9**
TLL				iS	**S**	**17 28 38.5**	**-0.2**
TLL				AMP		17 28 41.4	
	comp=E,55μm,0.2s						
CMCH	**Combarbala**	**1.88**	**176**	⇓iP	**P**	**17 28 39.8**	**+0.1**
CMCH				iS	**S**	**17 29 01.8**	**-0.5**
CMCH				AMP		17 29 10.4	
	comp=E,50μm,0.6s						
CPCH	**Copiapo**	**2.06**	**20**	⇓iP	**P**	**17 28 43.5**	**+1.3**
CPCH				iS	**S**	**17 29 09.3**	**+2.6**
CDCH	**Caldera**	**2.23**	**8**	eP	**P**	**17 28 44.2**	**-0.5**
CDCH				iS	**S**	**17 29 12.0**	**+0.9**
ILCH	**Illapel**	**2.33**	**180**	eP	**P**	**17 28 46.5**	**+0.2**
ILCH				iS	**S**	**17 29 12.9**	**-0.9**
ILCH				AMP		17 29 25.8	
	comp=E,10μm,0.3s						
CHNG	**Los Chungos**	**2.60**	**186**	⇑iP	**P**	**17 28 49.6**	**-0.3**
CHNG				iS	**S**	**17 29 19.7**	**-0.7**
CHNG				AMP		17 29 33.1	
	comp=E,5μm,0.6s						
CRCH	**Chaqaral**	**2.98**	**9**	⇑iP	**P**	**17 28 54.6**	**-0.7**
CRCH				iS	**S**	**17 29 29.1**	**-1.0**
CRCH				AMP		17 29 47.5	
	comp=N,15μm,0.5s						
PACH	**Papudo**	**3.24**	**184**	⇓iP	**P**	**17 28 58.4**	**-0.7**
CFAA	**Coronel Fontan**	**3.42**	**133**	P	**P**	**17 29 03.1**	**+1.6**
	comp=N,19nm,0.3s,baz=315,slow=12,SNR=173						
CFAA				S	**S**	**17 29 43.5**	**+2.3**
	comp=N,23nm,0.3s,baz=221,slow=22,SNR=7.8						
CFAA				LR	LR	17 30 30.9	
	comp=N,359nm,20.1s,baz=298,slow=40						
FCH	**Farellones**	**4.09**	**170**	eP	**P**	**17 29 12.2**	**+1.1**
FCH				iS	**S**	**17 29 57.8**	**-0.4**
MDZ	**Mendoza**	**4.09**	**152**	eP	**P**	**17 29 12.3**	**+1.2**
MDZ				i		17 29 16.3	
MDZ				iS	**S**	**17 30 03.1**	**+4.9**
RCDM	**Rinconada Maip**	**4.19**	**176**	eP	**P**	**17 29 12.3**	**-0.3**
CPN1	**Cerro Paranal**	**4.70**	**8**	eP	**P**	**17 29 17.2**	**-2.4**
ANCH	**Antofagasta**	**5.63**	**7**	eP	**P**	**17 29 26.3**	**-6.3**
CEN1	**Los Morros**	**5.94**	**9**	⇓iP	**P**	**17 29 30.0**	**-7.0**
PLCA	**Paso Flores**	**11.42**	**178**	P	**P**	**17 30 50.0**	**-2.6**
	comp=N,0.2nm,0.3s,baz=6.5,slow=12,SNR=4.6						
PLCA				LR	LR	17 35 55.0	
	comp=N,435nm,20.3s,baz=167,slow=40						
PLCA	**Paso Flores**	**11.42**	**178**	ePn	**P**	**17 30 50.5**	**-2.0**
	comp=N,17nm,1.2s						
PLCA				eSn	**S**	**17 32 53.7**	**-6.0**
TRQA	**Tornquist**	**11.61**	**141**	ePn	**P**	**17 30 53.1**	**-1.9**
	comp=N,153nm,1.0s						
TRQA				epPn		17 31 02.6	
TRQA				eSn	**S**	**17 33 01.1**	**-2.9**
CPUP	**Villa Florida**	**12.59**	**80**	ePn	**P**	**17 31 06.0**	**-2.3**
	comp=N,3.8nm,0.3s						
CPUP				epPn		17 31 14.5	
ARE	**Arequipa**	**12.78**	**359**	eP	**P**	**17 31 16.0**	**+5.2**
ARE				e		17 34 35.0	
LPAZ	**La Paz**	**13.24**	**13**	P	**P**	**17 31 12.8**	**-4.1**
	comp=N,0.1nm,0.3s,baz=210,slow=8.9,SNR=2.8						
LPAZ	**La Paz**	**13.24**	**13**	ePn	**P**	**17 31 13.1**	**-3.8**
	comp=N,20nm,0.7s						
LPAZ				eSn	**S**	**17 33 28.6**	**-15**
SIV	**San Ignacio**	**16.17**	**37**	P	**P**	**17 31 49.8**	**-5.1**
	comp=N,0.2nm,0.3s,baz=235,slow=11,SNR=7.4						
NNA	**Nana**	**18.02**	**342**	Pn	**P**	**17 32 22.2**	**+4.2**
	comp=N,21nm,0.9s						
SAML	**Samuel**	**21.58**	**22**	eP	**P**	**17 32 57.8**	**+0.9**
	comp=N,39nm,1.0s,mb4.8						
SAML				epP		17 33 08.2	
EFI	**East Falkland**	**24.40**	**160**	eP	**P**	**17 33 25.1**	**+0.9**
EFI				epP		17 33 37.6	
BDFB	**Brasilia**	**25.27**	**62**	P	**P**	**17 33 32.0**	**-0.9**
	comp=N,20nm,0.8s,mb4.7,baz=240,slow=8.1,SNR=19						
BAO	**Brasilia Array**	**25.30**	**63**	P	**P**	**17 33 32.5**	**-0.6**
USHA	**Ushuaia**	**25.60**	**176**	P	**P**	**17 33 37.7**	**+2.1**
	comp=N,11nm,0.8s,mb4.4,baz=306,slow=2.5,SNR=4.9						
OTAV	**Otavalo**	**30.18**	**345**	eP	**P**	**17 34 19.0**	**+1.6**
	comp=N,32nm,1.6s,mb4.8						
SDV	**Santo Domingo**	**37.96**	**1**	eP	**P**	**17 35 23.1**	**-1.2**
	comp=N,5.6nm,0.7s,mb4.4						
RCBR	**Riachuelo**	**40.65**	**62**	eP	**P**	**17 35 46.5**	**-0.1**
JTS	**JuntasAbangare**	**41.54**	**339**	eP	**P**	**17 35 53.2**	**-0.9**
JTS				epP	pP	17 36 05.2	-2.0
VNA3	**Neumayer Olymp**	**53.45**	**159**	⇑i	**P**	**17 37 26.7**	**+0.3**
VNA3	**Neumayer Olymp**	**53.45**	**159**	⇑i	**P**	**17 37 44.7**	**+18**
VNA1	**Neumayer--Stat**	**53.73**	**158**		**P**	**17 37 45.9**	**+17**
VNA2	**Neumayer--Watz**	**54.08**	**159**	⇓i	**P**	**17 37 30.9**	**-0.1**
VNA2	**Neumayer--Watz**	**54.08**	**159**	⇑i	**P**	**17 37 43.9**	**+13**
VNA2	**Neumayer--Watz**	**54.08**	**159**		**P**	**17 37 49.7**	**+19**
SNAA	**Sanae**	**55.68**	**159**		**P**	**17 37 41.0**	**-1.6**
SNAA	**Sanae**	**55.68**	**159**		**P**	**17 37 55.0**	**+12**
SNAA	**Sanae**	**55.68**	**159**		**P**	**17 38 00.1**	**+18**
QSPA	**South Pole Qui**	**60.93**	**180**	eP	**P**	**17 38 18.9**	**-0.3**
	comp=N,7.5nm,0.8s,mb4.9						
QSPA				epP	pP	17 38 32.5	-0.4
SWET	**Sewanee**	**65.66**	**347**	eP	**P**	**17 38 48.7**	**-2.2**
SWET				epP	pP	17 39 02.0	-2.8
TXAR	**Lajitas Array**	**66.05**	**329**	P	**P**	**17 38 52.6**	**-0.9**
	comp=N,2.6nm,0.9s,mb4.3,baz=151,slow=8.6,SNR=14						
TXAR				pP	pP	17 39 06.3	-1.1
	comp=N,2.4nm,0.7s,baz=146,slow=9.0,SNR=10						
WVT	**Waverly**	**66.94**	**345**	eP	**P**	**17 38 57.9**	**-1.1**
	comp=N,5.2nm,0.8s,mb4.6						
WVT				epP	pP	17 39 11.0	-1.9
SBA	**Scott Base**	**67.83**	**191**	eP	**P**	**17 39 02.8**	**-1.0**
VNDA	**Vanda**	**68.85**	**191**	eP	**P**	**17 39 11.2**	**+0.9**
FVM	**French Village**	**69.31**	**344**	eP	**P**	**17 39 12.8**	**-1.0**
	comp=N,16nm,0.9s,mb4.9						
FVM				epP	pP	17 39 26.6	-1.1
LAZ	**Ladron**	**71.90**	**329**	eP	**P**	**17 39 30.3**	**+0.9**
LAZ				epP	pP	17 39 44.0	+0.6
DBIC	**Dimbokro**	**72.99**	**72**	P	**P**	**17 39 35.4**	**-0.8**
	comp=N,15nm,0.8s,mb5.0,baz=211,slow=5.9,SNR=23						
DBIC	**Dimbokro**	**72.99**	**72**	eP	**P**	**17 39 35.4**	**-0.9**
	comp=N,15nm,0.8s,mb5.0						
DBIC				epP	pP	17 39 48.6	-1.6
PV01	**Paradox Valley**	**75.65**	**330**	eP	**P**	**17 39 52.4**	**+1.2**
PV01				ePcP	PcP	17 40 05.5	+1.3
MSU	**Marysvale**	**77.57**	**328**	eP	**P**	**17 40 02.8**	**+0.8**
MSU				epP	pP	17 40 16.7	+0.6
ARUT	**Antelope Range**	**77.58**	**327**	eP	**P**	**17 40 03.6**	**+1.6**
DAU	**Daniels Canyon**	**78.70**	**330**	eP	**P**	**17 40 08.5**	**+0.3**
DAU				epP	pP	17 40 22.8	+0.5
DUG	**Dugway**	**79.22**	**329**	eP	**P**	**17 40 12.2**	**+1.2**
	comp=N,6.6nm,1.2s,mb4.4						
DUG				epP	pP	17 40 25.9	+0.7
TSUM	**Tsumeb**	**79.79**	**106**	eP	**P**	**17 40 14.3**	**-0.1**
	comp=N,19nm,1.1s,mb4.9						
PDAR	**Pinedale Array**	**79.93**	**332**	P	**P**	**17 40 14.5**	**-0.3**
	comp=N,1.9nm,0.8s,mb4.0,baz=146,slow=5.3,SNR=9.0						
PDAR				pP	pP	17 40 27.4	-1.5
	comp=N,1.6nm,0.6s,baz=146,slow=5.3,SNR=4.8						
NVAR	**Mina Array Bea**	**80.48**	**324**	P	**P**	**17 40 18.5**	**+0.7**
	comp=N,1.5nm,0.9s,mb3.9,baz=136,slow=6.5,SNR=8.6						
NVAR				pP	pP	17 40 32.3	+0.3
	comp=N,1.1nm,0.9s,baz=141,slow=8.2,SNR=4.0						
ULM	**Lac du Bonnet**	**82.17**	**344**	P	**P**	**17 40 25.3**	**-1.1**
	comp=N,3.9nm,0.9s,mb4.3,baz=283,slow=1.8,SNR=4.3						
ULM	**Lac du Bonnet**	**82.17**	**344**	P	**P**	**17 40 25.3**	**-1.1**
MCMT	**McKenzie Canyo**	**82.98**	**332**	eP	**P**	**17 40 32.1**	**+1.5**
MCMT				epP	pP	17 40 44.8	-0.1
LBTB	**Lobatse**	**83.60**	**115**	eP	**P**	**17 40 34.2**	**0.0**
	comp=N,18nm,0.9s,mb5.2						
LBTB				epP	pP	17 40 47.6	-0.9
LBTB				esP	sP	17 40 53.3	-0.5
LSZ	**Lusaka**	**90.54**	**108**	eP	**P**	**17 41 09.7**	**+1.7**
	comp=N,1.5nm,0.8s,mb4.4						
WRA	**Warramunga Arr**	**125.22**	**210**	PKP	PKPdf	17 47 05.6	+0.2
	comp=N,1.3nm,1.1s,baz=156,slow=1.7,SNR=4.8						
YAK	**Yakutsk**	**144.51**	**343**	ePKPdf	PKPdf	17 47 40.4	+0.7
YAK				epPKPdf		17 47 54.2	
AML	**Almayashu**	**148.94**	**56**	P	PKPdf	17 47 54.9	+7.2
	SNR=5.3						
AAK	**Ala-Archa**	**149.40**	**55**	P	PKPdf	17 47 55.5	+7.1
	SNR=10						
AAK	**Ala-Archa**	**149.40**	**55**	ePKPdf	PKPdf	17 47 54.0	+5.6
HYB	**Hyderabad**	**149.88**	**106**	iPKP	PKPdf	17 47 56.0	+6.1
TKM2	**Tokmak 2**	**150.10**	**54**	P	PKPdf	17 47 57.2	+7.7
	SNR=7.0						
KSH	**Kashi**	**151.17**	**61**	ePKP	PKPdf	17 48 01.0	+10
KSH				eAPKP		17 48 11.0	
KSH				eXPKP		17 48 15.3	
MKAR	**Makanchi Array**	**152.94**	**42**	PKPbc	PKPdf	17 48 01.4	+7.9
	comp=N,2.5nm,0.7s,baz=336,slow=2.2,SNR=19						
MKAR				PKPab	PKPab	17 48 14.3	-0.3
	comp=N,2.7nm,0.9s,baz=304,slow=4.4,SNR=6.8						
CN2	**Changchun**	**160.37**	**322**	ePKP	PKPdf	17 48 06.8	+3.7
SONM	**Songino Array**	**161.39**	**5**	PKPab	PKPab	17 48 51.0	+0.3
	comp=N,1.0nm,0.8s,baz=323,slow=7.2,SNR=2.4						
HHC	**Hu-ho-hao-te**	**168.26**	**350**	ePKP	PKPdf	17 48 12.0	+1.9
TIY	**Taiyuan**	**171.09**	**341**	ePKP	PKPdf	17 48 14.0	+2.1
GYA	**Guiyang**	**176.58**	**145**	ePKP	PKPdf	17 48 14.5	+0.1

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*NIED **28** 17:36:00,23.70N×126.00E,h5^{km},Mw4.8 Best double couple: M$_0$1.53×10^{16} NP1:φ$_s$109°,δ89°,λ86°. NP2:φ$_s$5°, δ4°,λ166°.*
*IDC **28** 17:36:30.0±0.9,23.95N×125.96E,mb3.9/11,mb1 3.9/13, mb1mx3.9/24,mbtmp3.9/13,ML3.6/2,Error ellipse: s-maj=26.3km s-min=18.7km az=100.0*
*JMA **28** 17:36:31.0±0.3,23.74N×126.00E,h55^{km},M4.8*
*MOS **28** 17:36:32.9±1.3,23.92N×125.91E,h33^{km},mb4.6/8,Error ellipse: s-maj=16.2km s-min=11.0km az=104.2*
*NEIC **28** 17:36:35.0±0.5,23.95N×125.90E,h35^{km},mb4.6/12, MW4.7(NIED),Error ellipse: s-maj=10.3km s-min=8.4km az=138.0*
*BJI **28** 17:36:38.0,23.91N×126.16E,h64^{km},mb4.1*
*MAN **28** 17:38:07.1,17.93N×121.70E,h35^{km},mb4.9,ML3.8, MS3.9*
ISC 28 17:36:30.5±1.0,**23.80N**±0.03×**126.01E**±0.03,**h23**^{km}±7^{km}, **n70,**σ**1**^{s}**24**/81,**mb4.3**/27,**Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.10**	**330**	P	**Pn**	**17 36 51.2**	**+0.6**
JOGS				eS	**Sb**	**17 37 06.3**	**+1.7**
JMJ	**Miyako jima 2**	**1.20**	**327**	P	**Pn**	**17 36 52.7**	**+0.6**
JMJ				eS	**Sb**	**17 37 09.4**	**+1.9**
JTJ	**Tarama**	**1.46**	**305**	P	**Pn**	**17 36 55.5**	**-0.2**
JTJ				eS	**Sn**	**17 37 13.2**	**-1.0**
JIJ	**Ishigaki jima**	**1.79**	**289**	P	**Pn**	**17 37 00.7**	**+0.2**
JIJ				eS	**Sn**	**17 37 20.5**	**-2.3**
JKRS	**Kuro-shima**	**1.88**	**284**	P	**Pn**	**17 37 02.0**	**+0.3**
JKRS				eS	**Sn**	**17 37 24.4**	**-0.5**
HATJ	**Hateruma jima**	**2.03**	**278**	P	**Pn**	**17 37 03.6**	**-0.4**
HATJ				eS	**Sn**	**17 37 27.4**	**-1.5**
IRIF	**Iriomote-Funau**	**2.15**	**285**	P	**Pn**	**17 37 05.7**	**+0.1**
JKE	**Kume jima 2**	**2.61**	**15**	P	**Pn**	**17 37 12.2**	**0.0**
JJT2	**Tamagusuku 2**	**2.81**	**34**	P	**Pn**	**17 37 15.5**	**+0.4**
YOJ	**Yonaguni jima**	**2.82**	**284**	P	**Pn**	**17 37 16.3**	**+1.1**
YOJ				eS	**Sn**	**17 37 48.8**	**0.0**
NAH1	**Naha**	**2.84**	**32**	P	**Pn**	**17 37 15.8**	**+0.4**
JAGN	**Aguni-jima**	**2.99**	**22**	P	**Pn**	**17 37 17.6**	**0.0**
JOW	**Kunigami**	**3.65**	**34**	Pn	**Pn**	**17 37 26.9**	**-0.1**
	12nm,0.3s,baz=184,slow=13,SNR=73						
JOW	**Kunigami**	**3.65**	**34**	P	**Pn**	**17 37 26.3**	**-0.6**
JIH	**Iheya**	**3.67**	**28**	P	**Pn**	**17 37 26.8**	**-0.5**
NACB	**Ninganchiao**	**4.05**	**276**	ePn	**Pn**	**17 37 30.9**	**-1.8**
TATO	**Taipei**	**4.29**	**287**	ePn	**Pn**	**17 37 35.2**	**-0.8**
YHNB	**Yeheng**	**4.32**	**282**	ePn	**Pn**	**17 37 36.4**	**-0.1**
YHNB				eSn	**Sn**	**17 38 21.3**	**-5.5**
JTK	**Tokunoshima**	**4.77**	**33**	P	**Pn**	**17 37 41.4**	**-1.5**
JMZ	**Minamidaito 2**	**5.14**	**66**	P	**Pn**	**17 37 46.0**	**-2.1**
JAM	**Amami Oshima**	**5.61**	**34**	P	**Pn**	**17 37 53.0**	**-1.8**
JAM				eS	**Sn**	**17 38 52.6**	**-6.7**
JZK	**Kikaishima**	**5.74**	**38**	P	**Pn**	**17 37 54.9**	**-1.6**
CVP	**Callao Caves**	**7.22**	**214**	eP	**Pn**	**17 38 16.0**	**-1.4**
APYP	**Conner**	**7.40**	**218**	eP	**Pn**	**17 38 18.1**	**-1.9**
APYP				eS	**Sn**	**17 39 38.5**	**-5.5**
CAUP	**Cauayan**	**7.87**	**211**	eP	**Pn**	**17 38 26.9**	**+0.4**
CAUP				eS	**Sn**	**17 39 55.1**	**-0.7**
ABRA	**Dolores**	**7.88**	**220**	eP	**Pn**	**17 38 24.9**	**-1.7**
ABRA				eS	**Sn**	**17 39 50.2**	**-5.7**
BALP	**Baler**	**9.04**	**208**	eP	**P**	**17 38 41.9**	**-0.8**
POLP	**Polilio Island**	**9.81**	**204**	eP	**P**	**17 38 55.4**	**+2.0**
TGY	**Tagaytay City**	**10.77**	**207**	Pn	**P**	**17 39 07.7**	**+1.1**
	16nm,0.3s,baz=311,slow=3.1,SNR=3.8						
MAT	**Matsushiro**	**16.49**	**37**	P	**P**	**17 40 18.8**	**-3.2**
MJAR	**Matsushiro Arr**	**16.49**	**37**	Pn	**P**	**17 40 23.1**	**+1.1**
	0.1nm,0.3s,baz=270,slow=9.7,SNR=3.2						
CD2	**Chengdu**	**20.97**	**295**	P	**P**	**17 41 20.3**	**+5.8**
KMI	**Kunming**	**21.22**	**278**	P	**P**	**17 41 25.0**	**+8.0**
KMI				AMB	AMB		
	comp=Z,10.0nm,1.6s,mb3.9						
KMI	**Kunming**	**21.22**	**278**	P	**P**	**17 41 25.0**	**+8.0**
	comp=Z,16nm,1.6s,mb4.1						
LZH	**Lanzhou**	**22.72**	**308**	eP	**P**	**17 41 41.0**	**+9.1**
LZH				AP		17 41 47.5	
LZH				XP		17 41 52.5	
LZH				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.1						
ASAJ	**Asahikawa**	**24.41**	**30**	P	**P**	**17 41 47.8**	**-0.5**
	comp=Z,6.9nm,1.0s,mb4.0,baz=288,slow=13,SNR=2.5						
GTA	**Gaotai**	**27.07**	**311**	eP	**P**	**17 42 17.5**	**+4.3**
SONM	**Songino Array**	**28.61**	**332**	P	**P**	**17 42 26.3**	**-0.9**
	comp=Z,0.3nm,0.4s,mb3.4,baz=149,slow=8.4,SNR=3.2						
PSI	**Prapat**	**33.49**	**236**	P	**P**	**17 43 12.2**	**+1.7**
	comp=Z,2.5nm,0.5s,mb4.4,baz=129,slow=14,SNR=2.9						
JIRN	**Jiri**	**35.97**	**285**	eP	**P**	**17 43 32.5**	**+0.9**
	comp=Z,42nm,0.8s,mb5.4						
GUN	**Gumba**	**36.23**	**285**	eP	**P**	**17 43 35.2**	**+1.4**
	comp=Z,43nm,0.9s,mb5.4						
PKI	**Pulchoki**	**36.67**	**285**	eP	**P**	**17 43 38.5**	**+1.1**
	comp=Z,27nm,1.0s,mb5.0						
PKI	**Pulchoki**	**36.67**	**285**	eP	**P**	**17 43 38.5**	**+1.1**
PKI				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.8						
KKN	**Kakani**	**36.77**	**285**	eP	**P**	**17 43 39.3**	**+1.0**
	comp=Z,35nm,0.9s,mb5.2						
KKN	**Kakani**	**36.77**	**285**	eP	**P**	**17 43 39.3**	**+1.0**
KKN				pmax	pmax		
	comp=Z,17nm,0.9s,mb4.9						
GKN	**Gorkha**	**37.33**	**285**	eP	**P**	**17 43 43.5**	**+0.5**
	comp=Z,36nm,0.9s,mb5.2						
KOLN	**Koldanda**	**38.26**	**285**	eP	**P**	**17 43 47.8**	**-3.0**
	comp=Z,33nm,0.9s,mb5.1						
MKAR	**Makanchi Array**	**41.72**	**314**	P	**P**	**17 44 18.4**	**-0.7**
	comp=Z,0.4nm,0.4s,mb3.4,baz=102,slow=9.9,SNR=14						
WRAB	**Tennant Creek**	**44.22**	**169**	eP	**P**	**17 44 42.2**	**+2.2**
	comp=Z,4.8nm,0.7s,mb4.3						
WRAB	**Tennant Creek**	**44.22**	**169**	eP	**P**	**17 44 42.2**	**+2.2**
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.3						
WRA	**Warramunga Arr**	**44.23**	**169**	P	**P**	**17 44 42.3**	**+2.3**
	comp=Z,3.8nm,0.8s,mb4.2,baz=349,slow=8.6,SNR=23						
KURK	**Kurchatov**	**45.25**	**319**	eP	**P**	**17 44 49.0**	**+1.2**
	comp=Z,2.3nm,0.8s,mb4.1						
KURK	**Kurchatov**	**45.25**	**319**	eP	**P**	**17 44 49.0**	**+1.2**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.0						
TIXI	**Tiksi**	**47.90**	**1**	eP	**P**	**17 45 07.4**	**-1.1**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s,mb4.3						
BVAR	**Borovoye Array**	**50.78**	**320**	P	**P**	**17 45 32.1**	**+1.2**
	comp=Z,0.5nm,0.4s,mb3.8,baz=108,slow=8.7,SNR=4.0						
CHKZ	**Chkalovo**	**50.80**	**321**	eP	**P**	**17 45 28.6**	**-2.3**
	comp=Z,3.7nm,0.9s,mb4.3						
CHKZ	**Chkalovo**	**50.80**	**321**	eP	**P**	**17 45 28.6**	**-2.3**
CHKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.3						
BRVK	**Borovoye**	**50.85**	**320**	P	**P**	**17 45 30.4**	**-0.9**
	comp=Z,0.8nm,0.7s,mb3.8						
BRVK	**Borovoye**	**50.85**	**320**	P	**P**	**17 45 30.4**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
AKTO	**Aktyubinsk**	**58.13**	**316**	P	**P**	**17 46 26.1**	**+1.6**
	comp=Z,0.6nm,0.5s,mb3.9,baz=34,slow=15,SNR=2.4						
KIV	**Kislovodsk**	**69.24**	**310**	eP	**P**	**17 47 40.2**	**+2.6**
KIV				pmax	pmax		
	comp=Z,21nm,1.1s,mb5.0						
INK	**Inuvik**	**71.90**	**23**	P	**P**	**17 47 54.4**	**+1.0**
	comp=Z,0.4nm,0.5s,mb3.6,baz=297,slow=11,SNR=3.0						
FINES	**FINESS Array B**	**73.98**	**330**	P	**P**	**17 48 06.3**	**+0.8**
	comp=Z,2.0nm,0.8s,mb4.1,baz=45,slow=5.4,SNR=4.7						
FINES	**FINESS Array B**	**73.98**	**330**	P	**P**	**17 48 06.3**	**+0.8**
AKASG	**Malin Array Be**	**76.06**	**319**	P	**P**	**17 48 17.4**	**-0.3**
	comp=Z,0.4nm,0.5s,mb3.6,baz=58,slow=6.5,SNR=4.0						
BRTR	**Keskin Array B**	**76.92**	**308**	P	**P**	**17 48 24.0**	**+1.2**
	comp=Z,0.8nm,0.8s,mb3.7,slow=2.9,SNR=4.3						
NB2	**NORSAR Subarra**	**80.58**	**333**	P	**P**	**17 48 42.8**	**+0.6**
	comp=Z,5.3nm,1.2s,mb4.3,baz=57,slow=5.3						
NAO	**NORSAR Subarra**	**80.86**	**333**	P	**P**	**17 48 42.8**	**-0.9**
	comp=Z,5.3nm,1.2s,mb4.3						
NAO	**NORSAR Subarra**	**80.86**	**333**	P	**P**	**17 48 42.8**	**-0.9**
NAO				pmax	pmax		
	comp=Z,5.0nm,1.2s,mb4.3						
BLA	**Blacksburg**	**114.41**	**23**	ePdif	Pdif	17 51 16.3	-2.7

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*NEIC **28** 17:46:52.7,32.30S×71.01W,h62^{km},MD3.5(GUC),After GUC.*
GUC 28 17:46:52.7±0.6,**32.30S**×**71.01W,h62**^{km}±2^{km},**MD3.5, ML3.5,10C-7D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PACH	**Papudo**	**0.43**	**237**	⇓iP	P	17 47 04.6	+0.3
PACH				iS	S	17 47 13.5	+0.8
JACH	**Jahuel**	**0.51**	**137**	⇑iP	P	17 47 05.7	+0.6
JACH				iS	S	17 47 15.2	+1.1
CHNG	**Los Chungos**	**0.59**	**315**	⇓iP	P	17 47 06.7	+0.8
CHNG				iS	S	17 47 16.8	+1.1
CHNG				AMP		17 47 19.6	
	comp=E,1μm,0.3s						
ROCH	**El Roble**	**0.67**	**180**	⇑iP	P	17 47 07.2	+0.4
ROCH				iS	S	17 47 18.6	+1.4
ILCH	**Illapel**	**0.68**	**348**	⇑iP	P	17 47 07.6	+0.7
ILCH				iS	S	17 47 18.2	+0.7
ILCH				AMP		17 47 24.9	
	comp=N,2μm,0.1s						
PEL	**Peldehue**	**0.88**	**162**	⇑iP	P	17 47 09.8	+0.4
PEL				iS	S	17 47 22.4	+0.5
PEL				AMP		17 47 23.8	
	comp=E,8μm,0.3s						
CMCH	**Combarbala**	**1.13**	**0**	eP	P	17 47 12.8	0.0
CMCH				iS	S	17 47 28.4	+0.8
CMCH				AMP		17 47 34.0	
	comp=N,2μm,0.3s						
CLCH	**Cerro Calan**	**1.16**	**160**	⇑iP	P	17 47 13.5	+0.4
CLCH				iS	S	17 47 29.1	+0.7
CLCH				AMP		17 47 32.6	
	comp=E,2μm,0.3s						
SAN	**Santiago**	**1.18**	**166**	AMP		17 47 30.9	
	comp=E,2μm,0.4s						
FCH	**Farellones**	**1.19**	**150**	⇓iP	P	17 47 14.4	+0.9
FCH				iS	S	17 47 31.0	+1.9
FCH				AMP		17 47 31.7	
	comp=E,2μm,0.2s						
RCDM	**Rinconada Maip**	**1.19**	**172**	⇑iP	P	17 47 13.5	-0.2
RCDM				iS	S	17 47 29.9	+0.6
FSR	**Penalolen**	**1.24**	**161**	AMP		17 47 33.9	
	comp=E,2μm,0.7s						
LCCH	**Las Cruces**	**1.26**	**202**	eP	P	17 47 14.8	+0.2
LCCH				iS	S	17 47 31.1	+0.2
ANTU	**Antumapu**	**1.30**	**166**	⇓iP	P	17 47 15.1	-0.2
ANTU				iS	S	17 47 32.3	+0.3
ANTU				AMP		17 47 34.2	
	comp=E,2μm,0.4s						
TACH	**Talagante**	**1.35**	**178**	⇓eP	P	17 47 15.7	-0.2
TACH				iS	S	17 47 33.6	+0.5
PCH	**Pirque**	**1.38**	**163**	⇑iP	P	17 47 16.4	+0.1
PCH				iS	S	17 47 34.7	+0.9
SJCH	**San Jose de Ma**	**1.44**	**158**	iP	P	17 47 16.9	-0.3
SJCH				iS	S	17 47 36.1	+0.8
SJCH				AMP		17 47 40.4	
	comp=N,605nm,0.4s						
CHCH	**Chadas Angostu**	**1.65**	**170**	⇓iP	P	17 47 20.1	+0.1
CHCH				iS	S	17 47 40.8	+0.6
CACH	**El Canelo**	**1.84**	**169**	⇑iP	P	17 47 23.4	+0.8
CACH				iS	S	17 47 46.7	+2.0
CICH	**Cipreses**	**2.07**	**166**	⇓iP	P	17 47 26.1	+0.3
CICH				iS	S	17 47 51.3	+0.9
TLL	**Tololo Astrono**	**2.14**	**5**	⇑iP	P	17 47 27.4	+0.6
TLL				iS	S	17 47 53.4	+1.2
TLL				AMP		17 48 01.3	
	comp=E,581nm,0.5s						
SFDO	**San Fernando**	**2.30**	**180**	⇑iP	P	17 47 29.1	-0.1
SFDO				iS	S	17 47 56.5	+0.1
LSCH	**La Serena**	**2.40**	**355**	AMP		17 48 12.0	
	comp=N,402nm,0.5s						

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*SOF **28** 17:49:10.1,40.05N×24.59E,h4^{km},MD2.7*
*ATH **28** 17:49:13.0,40.07N×24.53E,h37^{km}±3^{km},MD3.1/5*
*NEIC **28** 17:49:13.0,40.07N×24.53E,h37^{km},MD3.1(ATH),After ATH.*
*CSEM **28** 17:49:14.0±0.1,40.15N×24.52E,h19^{km}±1^{km},ML2.6, Error ellipse: s-maj=3.7km s-min=2.4km az=176.0*
*THE **28** 17:49:15.0,40.09N×24.46E,h12^{km},ML2.6*
ISC 28 17:49:13.5±0.8,**40.04N**±0.05×**24.51E**±0.05,**h23**^{km}±7^{km}, **n18,**σ**0**^{s}**81**/25,**1D,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.50**	**306**	ePg	**Pb**	**17 49 23.7**	**0.0**
OUR				eSg	**Sb**	**17 49 30.1**	**-0.5**
LIA	**Limnos Island**	**0.53**	**105**	ePN	**Pb**	**17 49 24.6**	**+0.4**
PAIG	**Paliouri**	**0.65**	**261**	ePg	**Pb**	**17 49 26.7**	**+0.6**
PAIG				eSg	**Sb**	**17 49 35.8**	**+1.0**
PLG	**Polygyros**	**0.88**	**293**	⇓iPN	**Pn**	**17 49 30.6**	**0.0**
PLG				eSN	**Sn**	**17 49 41.6**	**-1.2**
SOH	**Sokhos**	**1.18**	**312**	ePg	**Pn**	**17 49 35.2**	**+0.4**
SOH				eSg	**Sb**	**17 49 51.2**	**+1.2**
SOH	**Sokhos**	**1.18**	**312**	ePg	**Pn**	**17 49 35.2**	**+0.3**
SOH				eSg	**Sb**	**17 49 51.2**	**+1.1**
NEO	**Neokhori**	**1.23**	**234**	ePN	**Pn**	**17 49 35.8**	**+0.2**
THE	**Thessaloniki**	**1.32**	**297**	ePg	**Pn**	**17 49 37.3**	**+0.4**
THE				eSg	**Sn**	**17 49 55.0**	**+1.1**
RDO	**Rodhopi**	**1.35**	**35**	ePN	**Pn**	**17 49 36.4**	**-1.0**
NVR	**Nevrokopi**	**1.40**	**340**	ePN	**Pn**	**17 49 37.9**	**-0.1**
ALN	**Alexandroupoli**	**1.45**	**53**	ePg	**Pn**	**17 49 40.0**	**+1.3**
RZN	**Rozhen**	**1.66**	**5**	iP	**Pn**	**17 49 41.5**	**-0.2**
MMB	**Musomiste**	**1.66**	**339**	iP	**Pn**	**17 49 41.0**	**-0.7**
GRG	**Griva**	**1.85**	**300**	ePb	**Pb**	**17 49 45.2**	**-1.4**
GRG	**Griva**	**1.85**	**300**	ePb	**Pb**	**17 49 45.2**	**-1.4**
AGG	**Agios Georgios**	**1.97**	**240**	ePb	**Pb**	**17 49 47.2**	**-1.4**
AGG				eSb	**Sb**	**17 50 12.3**	**-0.5**
KKB	**Krupnik**	**2.12**	**330**	iP	**Pn**	**17 49 47.8**	**-0.6**
FNA	**Florina**	**2.51**	**288**	ePn	**Pn**	**17 49 55.0**	**+1.1**

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*CSEM **28** 17:52:48.4±0.2,77.19N×17.92E,h20^{km},ML2.7,Error ellipse: s-maj=29.9km s-min=3.7km az=66.0*
*NAO **28** 17:52:50.9±2.8,77.32N×18.27E,h21^{km}±33^{km},ML2.4*
*HEL **28** 17:52:50.4±0.4,77.26N×18.26E,h10^{km},ML2.7, MD1.6(BER),ML2.4(NAO)*
*BER **28** 17:52:50.7±3.8,77.23N×17.94E,h3^{km}±40^{km},MD1.6, ML2.4(NAO)*
ISC 28 17:52:46.5±0.7,**77.30N**±0.05×**19.2E**±0.3,**h10**^{km}**,n15,** σ**0**^{s}**98**/28,**Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**0.86**	**252**	ePg	**Pg**	**17 53 03.4**	**-0.5**
HSP				eSg	**Sg**	**17 53 15.7**	**+0.3**
SPA0	**Spitsbergen Ar**	**1.07**	**327**	eP	**Pg**	**17 53 08.1**	**+0.2**
SPA0				eS	**Sb**	**17 53 20.9**	**+0.4**
SPA0	**Spitsbergen Ar**	**1.07**	**327**	Pg	**Pg**	**17 53 08.1**	**+0.2**
	baz=151,slow=22						
SPA0				Lg		17 53 20.9	
	baz=154,slow=22						
HOPEN	**Hopen**	**1.54**	**118**	eP	**Pn**	**17 53 22.0**	**+7.8**
HOPEN				eS	**Sb**	**17 53 43.5**	**+9.2**
KBS	**Kingsbay**	**2.22**	**321**	eP	**Pn**	**17 53 25.2**	**+1.3**
KBS				ePG	**Pg**	**17 53 28.9**	**-1.9**
KBS				eSG	**Sg**	**17 53 55.7**	**-4.8**
KBS	**Kingsbay**	**2.22**	**321**	P	**Pn**	**17 53 25.1**	**+1.2**
KBS	**Kingsbay**	**2.22**	**321**	Pg	**Pg**	**17 53 28.8**	**-2.0**
KBS				Sg	**Sg**	**17 53 55.6**	**-4.8**
KEV	**Kevo**	**7.89**	**160**	eP	**Pn**	**17 54 45.3**	**+1.3**
KEV				eS	**Sn**	**17 56 09.3**	**-5.0**
KEV				MSN		17 56 13.9	
	comp=Z,1.3nm,0.2s						
ARA0	**ARCESS Array S**	**8.00**	**164**	Pn	**P**	**17 54 46.9**	**+1.2**
	baz=348,slow=14						
ARA0				Sn	**Sn**	**17 56 09.7**	**-7.5**
	baz=2.6,slow=22						
ARA0	**ARCESS Array S**	**8.00**	**164**	eP	**P**	**17 54 46.7**	**+1.1**
ARA0				eS	**Sn**	**17 56 11.4**	**-5.7**
KIF	**Kilpisjarvi**	**8.35**	**176**	eP	**P**	**17 54 50.0**	**-0.5**
KIF				eS	**Sn**	**17 56 18.8**	**-7.1**
KIF				MSN		17 56 24.1	

	comp=Z,1.0nm,0.3s						
KIF	**Kilpisjarvi**	**8.35**	**176**	P	**P**	**17 54 50.0**	**-0.5**
SGF	**Sodankyl**	**10.14**	**164**	*e*P	**P**	**17 55 15.4**	**+0.5**
SGF				*e*S	**S**	**17 57 01.4**	**-8.4**
KU4	**Liikasenvaara**	**11.42**	**158**	*e*P	**P**	**17 55 31.5**	**-1.0**
KU4				*e*S	**S**	**17 57 31.4**	**-10**
JOF	**Joensuu**	**14.96**	**158**	*e*P	**P**	**17 56 18.1**	**-1.2**
JOF				*e*S	**S**	**17 58 54.4**	**-11**

*NEIC **28** 17:55:26.8±0.9, 44.35N×148.42E, h35^{km}, mb3.6/2, Error ellipse: s-maj=23.3km s-min=16.8km az=75.0*
*MOS **28** 17:55:27.2±1.5, 44.39N×148.31E, h59^{km}, mb4.1/1, Error ellipse: s-maj=23.2km s-min=18.6km az=40.8*
*JMA **28** 17:55:27.8±0.3, 43.99N×148.04E, M4.4*
*IDC **28** 17:55:31.3±4.4, 44.48N×148.21E, h75^{km}±38^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.3/20, mbtmp3.6/5, ML3.6/1, Error ellipse: s-maj=34.1km s-min=25.0km az=115.0*
ISC 28 17:55:29.1±1.2**, 44.22N**±0.08×**148.2E**±0.1**, h72**^{km}±9^{km}**, n36, σ1§07**/45**, mb4.2**/11**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.68**	**264**	*e*PN	**P**	**17 55 55.1**	**-1.9**
YUK				*e*S	**S**	**17 56 18.5**	**+0.9**
YUK				pmax	pmax		
	comp=Z,420nm,0.4s						
YUK				smax			
	comp=E,540nm,0.3s						
YUK				smax			
	comp=N,2µm,0.5s						
YUK				smax			
	comp=N,2µm,1.0s						
YUK				smax			
	comp=E,3µm,1.0s						
NEM2	**Nemuro 2**	**1.96**	**245**	P	**P**	**17 56 00.1**	**-0.7**
NEM2				*e*S	**S**	**17 56 24.0**	**-0.2**
JRA	**Rausu**	**2.22**	**264**	P	**P**	**17 56 05.1**	**+0.6**
JRA				*e*S	**S**	**17 56 32.5**	**+1.7**
JNK	**Nakash**	**2.58**	**257**	P	**P**	**17 56 09.8**	**+0.2**
JNK				*e*S	**S**	**17 56 39.6**	**-0.2**
JAK	**Akkeshi**	**2.81**	**245**	P	**P**	**17 56 12.5**	**-0.3**
JAK				*e*S	**S**	**17 56 45.0**	**-0.6**
JTKR	**Abashiri--Toko**	**3.09**	**267**	P	**P**	**17 56 17.0**	**+0.3**
JAR	**Ashorobuto**	**3.33**	**255**	P	**P**	**17 56 20.4**	**+0.4**
JAR				*e*S	**S**	**17 57 00.2**	**+1.7**
JCH	**Churui**	**3.86**	**247**	P	**P**	**17 56 27.2**	**-0.2**
JCH				*e*S	**S**	**17 57 09.7**	**-2.1**
JKK2	**Kamakawa 2**	**3.93**	**267**	P	**P**	**17 56 29.8**	**+1.4**
ASAJ	**Asahikawa**	**4.02**	**270**	P	**P**	**17 56 30.5**	**+0.9**
	comp=E,3.3nm,0.3s,baz=62,slow=19,SNR=31						
ASAJ	**Asahikawa**	**4.02**	**270**	PN	**P**	**17 56 30.5**	**+0.9**
ASAJ				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JFR	**Furan**	**4.19**	**257**	P	**P**	**17 56 33.6**	**+1.6**
JNBK	**Urakawa-nobuka**	**4.41**	**246**	P	**P**	**17 56 35.5**	**+0.3**
YSS	**Yuzh-Sakhalins**	**4.69**	**308**	*e*Pn	**P**	**17 56 37.3**	**-1.7**
JKB	**Kayabe**	**5.73**	**248**	P	**P**	**17 56 53.6**	**+0.3**
JKB				*e*S	**S**	**17 57 56.3**	**-2.2**
JOT	**Ohata**	**5.96**	**244**	P	**P**	**17 56 56.2**	**-0.3**
JOT				*e*S	**S**	**17 58 01.8**	**-2.5**
ULN	**Ulaanbaatar**	**28.54**	**292**	*e*P	**P**	**18 01 25.0**	**+5.2**
	comp=Z,0.3nm,0.4s,mb3.3						
YHNB	**Yeheng**	**29.27**	**237**	*e*P	**P**	**18 01 26.2**	**-0.4**
GUMO	**Guam**	**30.66**	**186**	*e*P	**P**	**18 01 40.1**	**+1.1**
ILAR	**Eielson Array**	**40.67**	**37**	P	**P**	**18 03 02.2**	**-1.2**
	comp=Z,0.6nm,0.8s,mb3.5,baz=266,slow=8.6,SNR=8.9						
MKAR	**Makanchi Array**	**45.02**	**298**	P	**P**	**18 03 38.9**	**-0.1**
	comp=Z,0.6nm,0.5s,mb3.5,baz=77,slow=8.1,SNR=12						
MKAR				PcP	PcP	18 05 19.0	-0.3
	comp=Z,0.5nm,0.7s,baz=63,slow=3.2,SNR=4.2						
MKAR	**Makanchi Array**	**45.02**	**298**	P	**P**	**18 03 38.9**	**-0.1**
MKAR				PcP	PcP	18 05 19.0	-0.3
KURK	**Kurchatov**	**45.88**	**304**	P	**P**	**18 03 47.0**	**+1.3**
	comp=Z,0.8nm,0.5s,mb3.7						
KURK	**Kurchatov**	**45.88**	**304**	P	**P**	**18 03 47.0**	**+1.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.8						
BRVK	**Borovoye**	**49.83**	**309**	P	**P**	**18 04 16.0**	**-0.3**
JIRN	**Jiri**	**51.65**	**273**	*e*P	**P**	**18 04 31.2**	**+0.7**
	comp=Z,7.9nm,0.7s,mb4.8						
GUN	**Gumba**	**51.73**	**274**	*e*P	**P**	**18 04 31.4**	**+0.3**
	comp=Z,9.2nm,0.5s,mb5.0						
KKN	**Kakani**	**52.23**	**274**	*e*P	**P**	**18 04 35.5**	**+0.6**
	comp=Z,11nm,0.9s,mb4.9						
DMN	**Daman**	**52.46**	**274**	*e*P	**P**	**18 04 37.2**	**+0.6**
	comp=Z,8.6nm,0.5s,mb5.0						
GKN	**Gorkha**	**52.56**	**274**	*e*P	**P**	**18 04 37.6**	**+0.2**
KOLN	**Koldanda**	**53.44**	**275**	*e*P	**P**	**18 04 44.1**	**+0.2**
	comp=Z,8.8nm,0.8s,mb4.8						
DLH	**Dalhousie**	**56.11**	**284**	*e*P	**P**	**18 05 02.0**	**-1.2**
WRA	**Warramunga Arr**	**65.09**	**194**	P	**P**	**18 06 05.3**	**+0.9**
	comp=Z,0.6nm,1.1s,mb3.3,baz=14,slow=6.6,SNR=3.3						
NB2	**NORSAR Subarra**	**69.43**	**339**	P	**P**	**18 06 28.5**	**-2.3**
	comp=Z,1.1nm,0.5s,mb3.9,baz=30,slow=6.2						
NOA	**NORSAR Array B**	**69.43**	**339**	P	**P**	**18 06 28.5**	**-2.3**
	comp=Z,0.7nm,0.7s,mb3.6,baz=33,slow=7.4,SNR=2.9						
NOA	**NORSAR Array B**	**69.43**	**339**	P	**P**	**18 06 28.5**	**-2.3**

MAN 28 18:39:05.2, 13.59N×120.76E, h8^{km}, mb3.7, ML2.4, MS1.9, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.21**	**116**	*e*P	Pg	18 39 10.3	+0.7
PGP				*e*S	Sg	18 39 13.7	+1.1
LUBP	**Lubang**	**0.52**	**286**	*e*P	Pg	18 39 15.9	+0.2
LUBP				*e*S	Sg	18 39 22.9	+0.2
BOAC	**Boac**	**1.06**	**97**	*e*P	Pb	18 39 24.8	-0.6
BOAC				*e*S	Sb	18 39 39.3	0.0
SJMP	**San Jose**	**1.18**	**163**	*e*P	Pb	18 39 27.6	+0.2
SJMP				*e*S	Sb	18 39 43.1	+0.5
BUSP	**Coron**	**1.67**	**199**	*e*P	Pn	18 39 33.8	-1.2
BUSP				*e*S	Sn	18 39 54.6	-2.2

NNC 28 18:41:20.6±5.4**, 36.96N×71.30E, h153**^{km}±114^{km}**, mpv3.6, 4D, Error ellipse: s-maj=54.9km s-min=40.7km az=24.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.17**	**355**	⇓P	P	18 42 49.3	-1.1
	2.7nm,0.3s,baz=181,slow=13,SNR=111						
KK31				⇓S	S	18 44 00.0	-0.2
	1.5nm,0.3s,baz=182,slow=22,SNR=15						
AAK	**Ala-Archa**	**6.18**	**22**	⇓P	P	18 42 50.0	-0.5
	4.9nm,1.4s						
AAK				⇓S	S	18 43 59.8	-0.7
	4.1nm,1.4s						
AB31	**Akbulak array**	**14.80**	**330**	P	P	18 44 42.2	-1.0
	0.3nm,0.3s,baz=158,slow=11,SNR=18						

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*NEIC **28** 18:42:14.0, 28.26S×70.63W, h86^{km}, MD3.5(GUC), After GUC.*
GUC 28 18:42:14.0±0.9**, 28.26S×70.63W, h86**^{km}±11^{km}**, MD3.5, ML3.5, 1C-3D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	**0.93**	**16**	⇓*i*P	P	18 42 33.5	+0.6
CPCH				*i* S	S	18 42 47.0	-0.1
CDCH	**Caldera**	**1.20**	**352**	⇓*i*P	P	18 42 35.5	-0.7
CDCH				*i* S	S	18 42 52.9	+0.2
LSCH	**La Serena**	**1.73**	**198**	⇑*i*P	P	18 42 42.9	0.0
LSCH				*i* S	S	18 43 04.5	+0.2
LSCH				AMP		18 43 08.8	
	comp=E,767nm,0.4s						
TLL	**Tololo Astrono**	**1.90**	**184**	*e*P	P	18 42 46.7	+1.4
TLL				*i* S	S	18 43 10.7	+2.3
TLL				AMP		18 43 14.2	
	comp=N,692nm,0.3s						
CRCH	**Chaqaral**	**1.91**	**0**	⇓*i*P	P	18 42 45.1	-0.3
CRCH				*i* S	S	18 43 08.8	+0.3
CRCH				AMP		18 43 16.1	
	comp=N,445nm,0.5s						
CMCH	**Combarbala**	**2.92**	**186**	*i* P	P	18 42 59.0	-0.5
CMCH				*i* S	S	18 43 33.3	-0.2

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*KISR **28** 18:46:34.7±1.0, 26.75N×55.59E, h33^{km}, ML3.5*
*TEH **28** 18:46:35.9, 26.74N×55.84E, h10^{km}, Mn3.4*
*CSEM **28** 18:46:37.4±0.5, 26.97N×55.47E, h10^{km}, ML3.4, Error ellipse: s-maj=11.8km s-min=4.1km az=152.0*
*THR **28** 18:46:41.2±0.3, 27.36N×55.87E, h14^{km}±5^{km}, ML2.9*
ISC 28 18:46:38.6±2.0**, 27.2N**±0.1×**55.42E**±0.09**, h3**^{km}±11^{km}**, n17, σ1§18**/21**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	**0.71**	**69**	*e*PG	**Pg**	**18 46 47.2**	**-5.7**
BNDS				AML	AML	18 47 12.3	
	comp=N,1µm,0.6s						
GHIR	**Ghir-Karzin**	**2.44**	**298**	*e*PN	**Pg**	**18 47 26.4**	**-1.0**
ISRV	**Sarvestan**	**3.02**	**318**	Pn	**Pn**	**18 47 29.9**	**+1.6**
IMOK	**Mook**	**3.05**	**309**	Pn	**Pn**	**18 47 31.2**	**+2.5**
KRBR	**Kerman**	**3.06**	**22**	*e*PN	**Pn**	**18 47 26.8**	**-2.0**
KRBR				*e*SG	**Sn**	**18 48 06.7**	**+0.3**
KRBR				AML	AML	18 48 30.4	
	comp=N,49nm,0.4s						
IPAR	**Pars**	**3.40**	**323**	Pn	**Pn**	**18 47 35.5**	**+1.8**
IMEH	**Mehriz**	**4.29**	**351**	Pn	**Pn**	**18 47 47.3**	**+1.0**
IBAF	**Bafgh**	**4.43**	**2**	Pn	**Pn**	**18 47 47.7**	**-0.6**
ISAD	**Sadrabad**	**4.99**	**343**	Pn	**Pn**	**18 47 57.8**	**+1.6**
ICHK	**Chekchek**	**5.16**	**350**	Pn	**Pn**	**18 47 58.9**	**+0.3**
NASN	**Na'in**	**6.07**	**339**	*e*PN	**Pn**	**18 48 12.6**	**+1.1**
RDF	**Al-Radifah**	**7.18**	**286**	*e*P	**Pn**	**18 48 26.5**	**-0.7**
RDF				*e*S	**Sn**	**18 49 50.1**	**-0.1**
RDF				AML	AML	18 49 53.5	
	comp=Z,7.3nm,0.4s						
NAY	**Al-Naaiem**	**7.52**	**288**	*e*P	**Pn**	**18 48 31.2**	**-0.6**
NAY				*e*S	**Sn**	**18 49 57.7**	**-0.8**
NAY				AML	AML	18 50 00.0	
	comp=Z,3.5nm,0.5s						
MIB	**Mutribah**	**7.59**	**292**	*e*P	**Pn**	**18 48 32.1**	**-0.8**
MIB				*e*S	**Sn**	**18 50 01.2**	**+0.7**
MIB				AML	AML	18 50 01.7	
	comp=Z,7.4nm,0.5s						
ISFB	**Sefidab**	**7.69**	**340**	Sn	**Sn**	**18 50 01.2**	**-1.7**
ISFB	**Sefidab**	**7.69**	**340**	Pn	**Pn**	**18 48 33.6**	**-0.7**
IDMV	**Damavand**	**8.89**	**342**	Pn	**P**	**18 48 49.8**	**-1.2**

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*BJI **28** 20:15:31.7, 61.40N×150.50W, h61^{km}, mB5.0, mb4.5, Ms4.3, Msz4.1*
*MOS **28** 20:15:32.1±1.1, 61.46N×150.81W, h67^{km}, mb4.6/8, Error ellipse: s-maj=14.7km s-min=6.9km az=82.1*
*IDC **28** 20:15:32.8±2.1, 61.50N×150.94W, h51^{km}±21^{km}, mb4.1/18, mb1 4.2/23, mb1mx4.1/29, mbtmp4.3/23, ML3.9/5, MS3.5/3, Ms1 3.5/3, ms1mx3.1/23, Error ellipse: s-maj=17.1km s-min=12.2km az=39.0*
*NEIC **28** 20:15:34.7, 61.38N×150.54W, h62^{km}, mb4.3/7, ML4.2(PMR), ML4.1(AEIC), After AEIC.*
NEIC Felt [III] at Anchorage, Chugiak, Eagle River, Elmendorf AFB, Fort Richardson, Wasilla and Willow; [II] at Palmer.
ISC 28 20:15:32.9±0.2**, 61.41N**±0.02×**150.52W**±0.05**, h73**^{km}±2^{km}**, h57**^{km}±3.9^{km}**:pP-P, n131, σ1§01**/136**, mb4.4**/40**, 1C-1D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FIB	**Fire Island**	**0.29**	**145**	P	**P**	**20 15 45.2**	**+0.6**
RC01	**Rabbit Creek A**	**0.49**	**130**	P	**P**	**20 15 46.2**	**+0.1**
RC01				S	**S**	**20 15 55.5**	**-0.3**
STLK	**Strandline Lak**	**0.64**	**279**	P	**P**	**20 15 47.8**	**+0.3**
PMR	**Palmer**	**0.69**	**74**	P	**P**	**20 15 48.5**	**+0.3**
PMR				S	**S**	**20 15 59.5**	**0.0**
NKA	**Nikishka**	**0.75**	**208**	P	**P**	**20 15 50.4**	**+1.5**
SPU	**Mount Spurr**	**0.77**	**254**	P	**P**	**20 15 49.0**	**0.0**
GHO	**Glory Hole Cre**	**0.85**	**64**	P	**P**	**20 15 50.7**	**+0.8**
CKL	**Chakachamna La**	**0.90**	**257**	P	**P**	**20 15 50.7**	**+0.1**
SLKM	**Skilak Lake**	**0.91**	**171**	*e*P	**P**	**20 15 50.4**	**-0.3**
MPA	**Moose Pass**	**1.08**	**148**	P	**P**	**20 15 53.0**	**+0.1**
SML	**Sawmill**	**1.12**	**68**	P	**P**	**20 15 54.8**	**+1.4**
RDT	**Redoubt**	**1.24**	**229**	P	**P**	**20 15 55.2**	**+0.2**
SEW	**Seward**	**1.41**	**158**	P	**P**	**20 15 56.6**	**-0.7**
SEW				S	**S**	**20 16 15.1**	**-0.2**
RSO	**Redoubt South**	**1.44**	**230**	P	**P**	**20 15 58.2**	**+0.4**
SCM	**Sheep Creek Mo**	**1.58**	**73**	P	**P**	**20 16 00.2**	**+0.5**
HUR	**Hurricane**	**1.63**	**14**	P	**P**	**20 16 01.4**	**+1.1**
GLI	**Glacier Island**	**1.75**	**106**	P	**P**	**20 16 01.2**	**-0.6**
INE	**Iliamna NE**	**1.84**	**224**	P	**P**	**20 16 03.6**	**+0.6**
HOM	**Homer**	**1.84**	**198**	P	**P**	**20 16 03.2**	**+0.2**
ILW	**Iliamna West**	**1.86**	**225**	P	**P**	**20 16 04.0**	**+0.6**
CNPM	**China Poot**	**1.92**	**191**	P	**P**	**20 16 03.9**	**-0.2**
VLZ	**Valdez**	**2.04**	**96**	P	**P**	**20 16 05.7**	**-0.1**
XLV	**Seldovia**	**2.05**	**197**	P	**P**	**20 16 05.4**	**-0.5**
TRF	**Thorofare Moun**	**2.06**	**3**	P	**P**	**20 16 06.7**	**+0.7**
FID	**Port Fidalgo**	**2.07**	**107**	P	**P**	**20 16 05.5**	**-0.8**
RND	**Reindeer**	**2.15**	**20**	P	**P**	**20 16 08.2**	**+0.8**
KTH	**Kantishna Hill**	**2.16**	**355**	P	**P**	**20 16 08.3**	**+0.8**
HIN	**Hinchinbrook I**	**2.21**	**116**	P	**P**	**20 16 07.5**	**-0.7**
OPT	**Oil Point**	**2.21**	**218**	P	**P**	**20 16 08.4**	**+0.2**
KLU	**Klutina**	**2.21**	**86**	P	**P**	**20 16 08.1**	**-0.1**
DIV	**Divide**	**2.31**	**95**	P	**P**	**20 16 09.3**	**-0.3**
PDB	**Pedro Bay**	**2.43**	**230**	P	**P**	**20 16 11.3**	**0.0**
MCK	**McKinley**	**2.45**	**17**	P	**P**	**20 16 12.5**	**+0.9**
SVW2	**Sparrevohn**	**2.46**	**265**	P	**P**	**20 16 11.6**	**-0.2**
EYAK	**Cordova Ski Ar**	**2.48**	**108**	P	**P**	**20 16 11.1**	**-0.9**
AUH	**Augustine H**	**2.51**	**217**	P	**P**	**20 16 12.8**	**+0.3**
AUW	**Augustine West**	**2.51**	**217**	P	**P**	**20 16 12.6**	**+0.1**
PAX	**Paxson**	**2.84**	**54**	P	**P**	**20 16 17.3**	**+0.1**
BMRM	**Bremner River**	**2.90**	**96**	P	**P**	**20 16 16.9**	**-1.0**
TT01	**Tatalina**	**2.99**	**303**	P	**P**	**20 16 19.0**	**-0.2**
TTA	**Tatalina**	**3.00**	**303**	*e*P	**P**	**20 16 21.1**	**+1.8**
THY	**Trims Highway**	**3.00**	**46**	*e*P	**P**	**20 16 20.5**	**+1.1**
GLB	**Gilahina Butte**	**3.23**	**86**	P	**P**	**20 16 21.6**	**-0.9**
WRH	**Wood River Hil**	**3.27**	**19**	P	**P**	**20 16 23.1**	**0.0**
CCB	**Clear Creek Bu**	**3.48**	**20**	P	**P**	**20 16 25.8**	**-0.2**
MENT	**Mentasta**	**3.54**	**61**	P	**P**	**20 16 27.2**	**+0.3**
COLA	**College**	**3.69**	**18**	P	**P**	**20 16 28.9**	**0.0**
MDM	**Murphy Dome**	**3.71**	**15**	P	**P**	**20 16 29.2**	**0.0**
DOT	**Dot Lake**	**3.75**	**50**	P	**P**	**20 16 29.9**	**+0.2**
IL1	**Eielson Array**	**3.76**	**24**	P	**P**	**20 16 29.9**	**-0.1**
ILAR	**Eielson Array**	**3.76**	**24**	P	**P**	**20 16 29.6**	**-0.3**
	9.4nm,0.3s,baz=209,slow=13,SNR=281						
KDAK	**Kodiak Island**	**3.78**	**197**	P	**P**	**20 16 28.1**	**-2.1**
	1.6nm,0.3s,baz=60,slow=12,SNR=23						
KDAK	**Kodiak Island**	**3.78**	**197**	P	**P**	**20 16 28.3**	**-1.9**
BALM	**Baldy**	**3.97**	**92**	P	**P**	**20 16 31.7**	**-1.1**
KABR	**Katmai Barrier**	**3.98**	**216**	P	**P**	**20 16 32.2**	**-0.7**
MGLS	**Mageik LS**	**4.02**	**219**	P	**P**	**20 16 33.0**	**-0.5**
GCSA	**Galena City Sc**	**4.42**	**322**	P	**P**	**20 16 38.5**	**-0.7**
IM3	**Indian Mountai**	**4.81**	**344**	P	**P**	**20 16 44.1**	**-0.5**
IMA2	**Indian Mountai**	**4.89**	**345**	*e*P	**P**	**20 16 45.6**	**0.0**
PNL	**Peninsula**	**5.76**	**103**	P	**P**	**20 16 56.1**	**-1.5**
DAWY	**Dawson**	**5.77**	**58**	P	**P**	**20 16 56.9**	**-0.8**
BM3	**Burnt Mountain**	**6.55**	**20**	P	**P**	**20 17 07.8**	**-0.9**
WHY	**Whitehorse**	**7.63**	**89**	P	**P**	**20 17 21.2**	**-2.4**
TNA	**Tin City**	**8.81**	**306**	*e*P	**P**	**20 17 39.5**	**-0.2**
	23nm,0.4s						
INK	**Inuvik**	**9.98**	**39**	P	**P**	**20 17 54.5**	**-0.9**
	0.9nm,0.3s,baz=233,slow=16,SNR=30						
INK				LR	LR	20 21 59.4	
	comp=Z,193nm,18.8s,baz=341,slow=38						
DLBC	**Dease Lake**	**10.69**	**97**	P	**P**	**20 18 04.5**	**-0.6**
	0.2nm,0.3s,baz=289,slow=16,SNR=6.6						
DLBC				LR	LR	20 22 41.5	
	comp=Z,234nm,19.0s,baz=246,slow=39						
YKA	**Yellowknife Ar**	**16.79**	**71**	P	**P**	**20 19 24.2**	**0.0**
	0.7nm,0.3s,baz=278,slow=9.9,SNR=22						
YKA	**Yellowknife Ar**	**16.79**	**71**	P	**P**	**20 19 24.2**	**0.0**
FX1	**Attu Island--F**	**21.21**	**263**	P	**P**	**20 20 11.6**	**-2.3**
	20nm,0.7s,mb4.6,baz=304,slow=10.0,SNR=6.0						
FX1	**Attu Island--F**	**21.21**	**263**	P	**P**	**20 20 11.6**	**-2.4**
FX1				pmax	pmax		
	comp=Z,20nm,0.7s						
NEW	**Newport**	**22.98**	**110**	P	**P**	**20 20 34.9**	**+3.5**
	comp=Z,5.9nm,0.7s,mb4.0,baz=355,slow=7.9,SNR=5.3						
NEW				LR	LR	20 29 13.9	
	comp=Z,110nm,18.1s,baz=110,slow=35						
NEW	**Newport**	**22.98**	**110**	*e*P	**P**	**20 20 34.1**	**+2.7**
	comp=Z,6.8nm,1.0s,mb3.9						
NEW	**Newport**	**22.98**	**110**	P	**P**	**20 20 34.9**	**+3.6**
NEW				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NEW				MLR	MLR		
	comp=Z,110nm,18.1s						
EGMT	**Eagleton**	**26.57**	**101**	*e*P	**P**	**20 21 05.7**	**+0.2**
	comp=Z,9.3nm,1.0s,mb4.3						
HLID	**Hailey**	**27.80**	**113**	*e*P	**P**	**20 21 16.3**	**-0.4**
ELK	**Elko**	**29.73**	**118**	P	**P**	**20 21 36.7**	**+2.7**
	comp=Z,4.4nm,0.7s,mb4.2,baz=310,slow=9.8,SNR=26						
ELK	**Elko**	**29.73**	**118**	*e*P	**P**	**20 21 35.3**	**+1.3**
	comp=Z,4.4nm,0.8s,mb4.1						
ELK	**Elko**	**29.73**	**118**	P	**P**	**20 21 36.7**	**+2.7**
ELK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NVAR	**Mina Array Bea**	**30.42**	**124**	P	**P**	**20 21 42.7**	**+2.6**
	comp=Z,2.3nm,0.8s,mb3.9,baz=320,slow=7.5,SNR=15						
NVAR	**Mina Array Bea**	**30.42**	**124**	P	**P**	**20 21 42.7**	**+2.6**
PDAR	**Pinedale Array**	**30.61**	**109**	P	**P**	**20 21 43.6**	**+1.8**
	comp=Z,1.3nm,0.6s,mb3.9,baz=326,slow=5.4,SNR=7.6						
TIXI	**Tiksi**	**31.09**	**323**	*e*P	**P**	**20 21 42.8**	**-2.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.8						
ULM	**Lac du Bonnet**	**31.69**	**85**	P	**P**	**20 21 52.2**	**+1.1**
	comp=Z,3.4nm,0.5s,mb4.3,baz=299,slow=10,SNR=6.8						
RSSD	**Black Hills**	**32.14**	**101**	*e*P	**P**	**20 21 55.4**	**+0.3**
	comp=Z,3.7nm,0.6s,mb4.3						
RSSD	**Black Hills**	**32.14**	**101**	*e*P	**P**	**20 21 55.4**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.3						
MSU	**Marysvale**	**32.90**	**116**	*e*P	**P**	**20 22 03.3**	**+1.6**
PV01	**Paradox Valley**	**34.79**	**112**	*e*P	**P**	**20 22 19.5**	**+1.5**
EYMN	**Ely**	**35.37**	**85**	P	**P**	**20 22 22.5**	**-0.4**
FRB	**Frobisher Bay**	**35.41**	**49**	P	**P**	**20 22 24.4**	**+1.4**
	comp=Z,20nm,0.9s,mb5.0,baz=315,slow=11						
YAK	**Yakutsk**	**35.58**	**307**	*i* P	**P**	**20 22 22.4**	**-2.1**
YAK				pmax	pmax		
	comp=Z,15nm,0.6s,mb5.1						
WUAZ	**Wupatki**	**35.77**	**118**	*e*P	**P**	**20 22 26.7**	**+0.3**
	comp=Z,8.8nm,0.8s,mb4.7						
SDCO	**Great Sand Dun**	**36.49**	**109**	P	**P**	**20 22 32.7**	**+0.2**
	comp=Z,1.7nm,0.6s,mb4.2						
SFJD	**Kangerlussuaq**	**39.32**	**38**	P	**P**	**20 22 57.5**	**+1.8**
	comp=Z,3.8nm,0.5s,mb4.5,baz=288,slow=13,SNR=3.7						
BOD	**Bodaibo**	**44.27**	**310**	*e*P	**P**	**20 23 34.9**	**-1.3**
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.3						
TXAR	**Lajitas Array**	**44.39**	**114**	P	**P**	**20 23 39.6**	**+2.1**
	comp=Z,2.9nm,0.7s,mb4.1,baz=338,slow=6.7,SNR=15						
MDJ	**Mudanjiang**	**47.63**	**288**	P	**P**	**20 24 00.8**	**-2.1**
MDJ				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.7						
ARCES	**ARCESS Array B**	**49.32**	**2**	P	**P**	**20 24 14.8**	**-0.9**
	comp=Z,1.7nm,0.6s,mb4.2,slow=6.1,SNR=7.4						
ARCES	**ARCESS Array B**	**49.32**	**2**	P	**P**	**20 24 14.8**	**-0.9**
CN2	**Changchun**	**50.14**	**290**	*e*P	**P**	**20 24 24.3**	**+2.0**
CN2				*e*AP	pP	20 24 37.3	-3.5
CN2				*e*XP	sP	20 24 44.8	-4.3
CN2				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
ZAK	**Zakamensk**	**54.02**	**311**	*e*P	**P**	**20 24 40.6**	**-11**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.8						
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.2						
ULN	**Ulaanbaatar**	**54.66**	**306**	*i* P	**P**	**20 24 55.7**	**-0.2**
SONM	**Songino Array**	**54.94**	**307**	P	**P**	**20 24 58.1**	**+0.1**
	comp=Z,8.6nm,0.8s,mb4.8,baz=35,slow=7.6,SNR=51						
NB2	**NORSAR Subarra**	**57.08**	**10**	P	**P**	**20 25 11.9**	**-1.2**
	comp=Z,1.6nm,0.7s,mb4.2,baz=352,slow=7.0						
NOA	**NORSAR Array B**	**57.08**	**10**	P	**P**	**20 25 12.6**	**-0.5**
	comp=Z,1.5nm,0.7s,mb4.1,baz=352,slow=7.0,SNR=5.3						
NOA	**NORSAR Array B**	**57.08**	**10**	P	**P**	**20 25 12.6**	**-0.5**
NAO	**NORSAR Subarra**	**57.26**	**11**	P	**P**	**20 25 11.9**	**-2.5**
	comp=Z,1.6nm,0.7s,mb4.2						
NAO	**NORSAR Subarra**	**57.26**	**11**	P	**P**	**20 25 11.9**	**-2.5**
NAO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.3						
FINES	**FINESS Array B**	**57.45**	**2**	P	**P**	**20 25 14.9**	**-0.8**
	comp=Z,1.1nm,0.6s,mb4.1,baz=16,slow=14,SNR=6.5						
HFS	**Hagfors**	**58.18**	**9**	P	**P**	**20 25 19.9**	**-0.9**
	comp=Z,2.3nm,0.8s,mb4.3,baz=63,slow=6.4,SNR=4.7						
HHC	**Hu-ho-hao-te**	**58.60**	**298**	*e*P	**P**	**20 25 24.0**	**0.0**
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.8						
HHC				AMB	AMB		
	comp=Z,160nm,9.5s						
ARU	**Arti**	**60.31**	**342**	⇓*i*P	**P**	**20 25 34.2**	**-1.3**
ARU				*e*		20 26 17.6	
ARU				*e*		20 27 43.4	
ARU				*e*S	**S**	**20 33 36.4**	**-6.0**
ARU				*e*SS	SS	20 37 34.3	-7.8
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s,mb4.9						
BVAR	**Borovoye Array**	**61.38**	**333**	P	**P**	**20 25 41.1**	**-1.7**
	comp=Z,2.3nm,0.6s,mb4.4,baz=36,slow=7.1,SNR=16						
SSE	**Sheshan**	**62.43**	**285**	P	**P**	**20 25 50.8**	**+0.6**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.4						
SSE				AMB	AMB		
	comp=Z,100nm,4.1s						
NJ2	**Nanjing**	**62.71**	**287**	*e*P	**P**	**20 25 55.0**	**+3.0**
OBN	**Obninsk**	**63.69**	**355**	⇑*e*P	**P**	**20 25 56.6**	**-1.4**
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.9						
MKAR	**Makanchi Array**	**64.08**	**323**	P	**P**	**20 25 59.0**	**-1.6**
	comp=Z,1.0nm,0.6s,mb3.8,baz=38,slow=6.3,SNR=17						
GTA	**Gaotai**	**64.60**	**306**	*e*P	**P**	**20 26 04.0**	**-0.2**
GTA				AP	pP	20 26 21.0	-2.5
GTA				XP	sP	20 26 27.8	-3.9
GTA				PCP	PcP	20 26 37.5	+0.1
GTA				SCP		20 30 34.8	
GTA				PCS		20 30 40.8	
GTA				S	**S**	**20 34 37.5**	**+1.0**
GTA				PS	PS	20 35 03.0	-4.2
GTA				SCS	ScS	20 35 49.8	+1.8
GTA				SS	SS	20 38 51.5	+1.5
GTA				AMB	AMB		
	comp=Z,80nm,6.8s						
GTA				LR	LR		
	comp=N,70nm,13.3s						
GTA				LR	LR		
	comp=E,100nm,15.6s						
GTA				LR	LR		
	comp=Z,60nm,14.5s						
WMQ	**Urumqi**	**65.07**	**317**	*e*P	**P**	**20 26 10.5**	**+3.3**
LZH	**Lanzhou**	**65.85**	**301**	*e*P	**P**	**20 26 14.0**	**+1.7**
LZH				AP	pP	20 26 30.0	-1.7
LZH				XP	sP	20 26 37.0	-2.8
LZH				PP	PP	20 28 41.0	+0.7
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.7						
AKASG	**Malin Array Be**	**68.25**	**0**	P	**P**	**20 26 26.2**	**-0.9**
	comp=Z,4.7nm,0.5s,mb4.6,baz=0.1,slow=6.4,SNR=47						
AKASG	**Malin Array Be**	**68.25**	**0**	P	**P**	**20 26 26.2**	**-0.9**
KHC	**Kasperske Hory**	**69.08**	**11**	*e*P	**P**	**20 26 32.5**	**+0.3**
GERES	**GERESS Array B**	**69.37**	**11**	P	**P**	**20 26 34.6**	**+0.6**
	comp=Z,0.6nm,0.6s,mb3.6,slow=5.3,SNR=4.9						
AAK	**Ala-Archa**	**70.08**	**326**	*i* P	**P**	**20 26 37.3**	**-1.2**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s,mb4.2						
LSA	**Lhasa**	**76.50**	**308**	P	**P**	**20 27 17.0**	**+0.9**
GUN	**Gumba**	**80.06**	**312**	*e*P	**P**	**20 27 35.7**	**0.0**
JIRN	**Jiri**	**80.18**	**311**	*e*P	**P**	**20 27 37.3**	**+1.0**
	comp=Z,15nm,0.7s,mb4.9						
KKN	**Kakani**	**80.39**	**312**	*e*P	**P**	**20 27 37.9**	**+0.5**
	comp=Z,9.5nm,0.6s,mb4.8						
GKN	**Gorkha**	**80.42**	**313**	*e*P	**P**	**20 27 38.0**	**+0.4**
	comp=Z,9.7nm,0.5s,mb4.9						
DMN	**Daman**	**80.61**	**312**	*e*P	**P**	**20 27 39.1**	**+0.5**
	comp=Z,7.9nm,0.6s,mb4.7						
KOLN	**Koldanda**	**81.00**	**313**	*e*P	**P**	**20 27 41.0**	**+0.3**
	comp=Z,7.7nm,0.7s,mb4.7						

MAN 28 20:35:03.8, 7.22N×123.92E, h32^{km}, mb3.7, ML2.4, MS2.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.32**	**89**	*e*P	Pb	20 35 12.9	+1.3
CTBH				*i* S	Sb	20 35 20.0	+2.9
PAGZ	**Pagadian**	**0.82**	**319**	*e*P	Pn	20 35 19.4	+0.2
PAGZ				*e*S	Sn	20 35 30.2	-0.1
IPIL	**Ipil**	**1.46**	**293**	*e*P	Pn	20 35 28.2	0.0
IPIL				*e*S	Sn	20 35 46.2	-0.2

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*MOS **28** 20:41:14.4±0.3, 42.58N×43.35E, h11^{km}, mb3.8/1, Error ellipse: s-maj=16.2km s-min=9.4km az=81.7*
*TIF **28** 20:41:14.2, 42.68N×43.34E, h8^{km}±1^{km}*
*CSEM **28** 20:41:14.0±0.2, 42.58N×43.35E, h11^{km}, mb3.8, Error ellipse: s-maj=9.0km s-min=2.3km az=58.0, After OBN*

ISC 28 20:41:14.9±0.6**, 42.67N**±0.03×**43.26E**±0.05**, h8^{km}, n20, σ1$\overset{s}{.}$07**/35**, 2C-2D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONI	Oni	0.17	121	P	Pg	20 41 17.8	-0.6
ONI				S	Sg	20 41 20.0	-0.8
KORR	Kora	0.73	55	⇑iPG	Pg	20 41 29.2	-0.3
KORR				iS	Sg	20 41 39.8	+0.5
KORR	Kora	0.73	55	iPg	Pg	20 41 29.2	-0.3
LSNR	Lesken	0.73	34	⇓iPG	Pg	20 41 29.7	+0.1
LSNR				eS	Sg	20 41 41.1	+1.7
LSNR	Lesken	0.73	34	iPg	Pg	20 41 29.7	+0.1
LACR	Lac	0.78	78	⇓iPG	Pg	20 41 29.3	-1.2
LACR				eS	Sb	20 41 40.1	-0.8
LACR	Lac	0.78	78	iPg	Pg	20 41 29.3	-1.2
ARNR	Ardon	0.92	55	ePG	Pg	20 41 32.1	-1.1
ARNR				eS	Sb	20 41 44.9	+0.2
VLKR	Vladikavkaz	1.11	70	⇑iPG	Pg	20 41 34.6	-2.5
VLKR				eS	Sb	20 41 49.6	-0.8
VLKR	Vladikavkaz	1.11	70	iPg	Pg	20 41 34.6	-2.5
KUBR	Kubataba	1.14	6	iPg	Pg	20 41 37.7	0.0
KUBR				eSg	Sg	20 41 54.6	+1.7
SHAR	Shatzhatmas	1.16	338	iPG	Pg	20 41 37.4	-0.6
SHAR				iS	Sb	20 41 53.1	+1.3
AKH	Akhalkalaki	1.27	172	P	Pb	20 41 38.6	0.0
KIV0	Kislovodsk Arr	1.35	343	iPg	Pg	20 41 40.8	-1.1
KIV0				eSg	Sg	20 41 58.7	-1.3
KIV	Kislovodsk	1.35	342	ePG	Pg	20 41 40.9	-1.0
KIV				eS	Sb	20 41 58.9	+1.4
TBLG	Delisi	1.44	130	P	Pn	20 41 41.6	+0.1
TBLG				S	Sb	20 42 01.7	+1.6
TI2	Plekhanov	1.45	130	ePG	Pg	20 41 39.8	-4.0
TI2				iS	Sb	20 42 00.6	+0.4
TI2				pmax	pmax		
	comp=Z,20nm,0.2s						
TI2				smax			
	comp=E,50nm,0.4s						
TI2	Plekhanov	1.45	130	ePg	Pg	20 41 39.8	-4.0
	comp=E,20nm,0.2s						
TI2				iSg	Sb	20 42 00.6	+0.4
MTA	Mtatsminda	1.50	130	P	Pn	20 41 42.6	+0.3
MTA				S	Sb	20 42 03.0	+1.3
DGRG	David-gareji	1.99	127	P	Pn	20 41 50.6	+1.3
DGRG				S	Sn	20 42 18.8	+4.2

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*ATH **28** 21:03:02.9, 38.16N×26.44E, h10^{km}, MD3.0/3*
*CSEM **28** 21:03:02.7±0.2, 38.13N×26.83E, h25^{km}, MD2.7, Error ellipse: s-maj=6.8km s-min=3.5km az=87.0*
*ISK **28** 21:03:04.0, 38.09N×26.98E, h15^{km}, MD2.7*
ISC 28 21:03:02.6±0.7**, 38.25N**±0.03×**26.63E**±0.05**, h10^{km}, n14, σ1$\overset{s}{.}$16**/20**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URLA	Izmir	0.11	347	iP	Pg	21 03 04.7	-0.7
URLA				iS	Sg	21 03 07.1	-0.2
BLCB	Balcova	0.35	68	iPG	Pg	21 03 10.1	+0.3
BLCB				iSG	Sg	21 03 15.8	+1.1
IZM	Izmir	0.52	74	PG	Pg	21 03 12.1	-1.0
KDAG	Bornova	0.53	73	iP	Pg	21 03 12.3	-0.9
KDAG				iS	Sg	21 03 19.9	-0.3
SMG	Samos	0.57	163	ePB	Pg	21 03 13.4	-0.6
PRK	Paraskevi	1.03	344	ePB	Pb	21 03 23.6	+1.6
AKS	Akhisar	1.12	56	PG	Pg	21 03 24.3	-0.7
AYDN	Tasoluk	1.15	120	iP	Pb	21 03 24.3	+0.2
AYDN				iS	Sb	21 03 39.1	+0.2
BODT	Bodrum	1.31	155	PG	Pg	21 03 25.0	-3.7
BDRM	Kayabasi	1.35	151	iP	Pb	21 03 28.3	+0.8
BDRM				iS	Sb	21 03 45.5	+0.8
APE	Apeiranthos	1.47	217	ePN	Pn	21 03 31.9	+2.7
APE	Apeiranthos	1.47	217	ePb	Pb	21 03 27.5	-2.0
MANT	Manisa	1.54	80	iP	Pn	21 03 32.1	+1.9
MANT				iS	Sb	21 03 49.4	-0.7
YER	Yerkesik	1.72	130	ePN	Pn	21 03 29.4	-3.5

JMA 28 21:14:13.9±0.2**, 38.22N**×**144.64E, h53^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.48	291	P	P	21 14 53.0	+0.2
OFUJ				eS	S	21 15 22.2	+0.3
MIYJ	Miyakonagasawa	2.58	302	P	P	21 14 54.2	-0.1
MIYJ				S	S	21 15 24.0	-0.6
JIO	Ouri	2.60	276	P	P	21 14 54.7	+0.2
JIO				S	S	21 15 24.9	-0.1
JMK	Ichinoseki	2.78	286	P	P	21 14 57.5	+0.5
JMK				S	S	21 15 30.9	+1.4
JOM	Ohasama	2.90	297	P	P	21 14 59.0	+0.3
JOM				S	S	21 15 33.2	+0.7
JMM	Marumori	3.06	265	P	P	21 15 00.8	-0.2
JMM				S	S	21 15 35.9	-0.7
JCH	Churui	4.50	348	eS	S	21 16 08.3	-4.6
JRY	Ryogami san	5.09	246	P	P	21 15 28.5	-1.0
JRY				eS	S	21 16 24.8	-2.8
JTKR	Abashiri--Toko	5.77	355	P	P	21 15 36.5	-2.5
JTKR				eS	S	21 16 38.0	-6.8

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*BJI **28** 21:43:40.7, 25.87N×56.01E, h29^{km}, mB5.0, mb4.7, Ms4.6, Msz4.3*
*MOS **28** 21:43:47.6±1.2, 26.26N×55.84E, h33^{km}, mb4.4/9, Error ellipse: s-maj=22.5km s-min=9.1km az=111.7*
*IDC **28** 21:43:48.6±1.4, 26.83N×55.82E, mb3.9/14, mb1 4.1/14, mb1mx3.9/23, mbtmp3.9/14, Error ellipse: s-maj=29.3km s-min=20.8km az=146.0*
*THR **28** 21:43:49.4±0.7, 26.66N×56.00E, h16^{km}±9^{km}, ML3.9*
*CSEM **28** 21:43:49.1±0.1, 26.70N×55.67E, h10^{km}, mb4.6/5, Error ellipse: s-maj=3.7km s-min=2.2km az=65.0*
*NEIC **28** 21:43:50.0±0.9, 26.83N×55.82E, h10^{km}, mb4.5/8, Error ellipse: s-maj=16.2km s-min=11.8km az=158.0*
*TEH **28** 21:43:53.1, 26.74N×55.79E, h12^{km}, Mn3.8*
ISC 28 21:43:52.2±0.4**, 26.79N**±0.03×**55.77E**±0.05**, h43^{km}**±5^{km}**, n93, σ1$\overset{s}{.}$10**/99**, mb4.1**/22**, 6C-9D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.70	30	ePg	P	21 44 03.8	-1.9
BNDS				AML	AML	21 44 20.6	
	comp=N,4µm,0.5s						
BANOM	Banah	0.99	151	⇑P	P	21 44 09.7	0.0
BANOM				⇑S	S	21 44 23.5	+0.7
ASHO	Ashiyiah	2.12	173	⇓P	P	21 44 27.7	+1.9
	SNR=34						
ASHO				⇓S	S	21 45 02.3	+11
GHIR	Ghir-Karzin	2.89	302	ePn	P	21 44 40.0	+3.2
GHIR				ePg	P	21 44 46.1	+9.2
GHIR				AML	AML	21 45 44.9	
	comp=N,311nm,0.5s						
KRBR	Kerman	3.29	15	ePn	P	21 44 44.2	+1.5
HOQ	Hoqain	3.49	156	⇑P	P	21 44 44.0	-1.4
ISRV	Sarvestan	3.49	318	Pn	P	21 44 47.2	+1.8
ARQ	Araqi	3.51	169	⇓P	P	21 44 46.2	+0.6
	SNR=24						
IMOK	Mook	3.52	310	Pn	P	21 44 47.9	+2.1
IPAR	Pars	3.87	322	Pn	P	21 44 52.6	+1.8
BIDO	Bidbid	3.89	146	⇓P	P	21 44 50.4	-0.7
BSY	Bisya	4.23	162	⇓P	P	21 44 56.4	+0.4
	SNR=14						
SMDO	Samad	4.25	150	⇓P	P	21 44 56.4	+0.2
	SNR=14						
BSYO	Bisya	4.26	161	P	P	21 44 56.4	+0.1
	SNR=14						
IMEH	Mehriz	4.69	348	Pn	P	21 45 03.9	+1.5
IBAF	Bafgh	4.78	358	Pn	P	21 45 04.3	+0.6
JMDO	Jabal Madar	4.89	154	⇓P	P	21 45 05.5	+0.3
	SNR=6.2						
WBK	Wadi Bani Khal	5.08	144	⇑P	P	21 45 06.8	-1.1
	SNR=14						
ZHSF	Zahedan	5.23	56	ePn	P	21 45 08.1	-1.8
ISAD	Sadrabad	5.42	341	Pn	P	21 45 14.2	+1.6
ICHK	Chekchek	5.56	348	Pn	P	21 45 15.7	+1.1
QRN	Al-Qurain	7.22	287	eP	P	21 45 37.7	-0.2
KBD	Kabd	7.53	290	eP	P	21 45 41.7	-0.4
KBD				AML	AML	21 47 04.2	
	comp=Z,61nm,0.4s						
RDF	Al-Radifah	7.58	288	eP	P	21 45 41.8	-1.0
UMR	Umm Al-Rimmam	7.62	293	eP	P	21 45 42.9	-0.6
UMR				AML	AML	21 47 06.6	
	comp=Z,18nm,0.2s						
NAY	Al-Naaiem	7.93	290	eP	P	21 45 46.4	-1.2
MIB	Mutribah	8.02	294	eP	P	21 45 47.7	-1.2
MIB				AML	AML	21 47 15.6	
	comp=Z,19nm,0.4s						
ISFB	Sefidab	8.13	339	Pn	P	21 45 50.4	0.0
ISFB				Sn	S	21 47 17.8	-4.2
IVRN	Varamin	8.88	338	Pn	P	21 46 00.5	-0.4
IVRN				Sn	S	21 47 35.4	-5.3
IQOM	Qom	8.98	334	Pn	P	21 46 01.4	-0.8
WHFO	Wadi Hawf	9.02	192	⇓P	P	21 45 58.8	-3.9
IFIR	Firoozkooh	9.19	344	Pn	P	21 46 04.3	-0.8
IDMV	Damavand	9.32	341	Pn	P	21 46 06.7	-0.2
IDMV				Sn	S	21 47 45.7	-5.9
RBK	Rabkut	9.36	189	⇑P	P	21 46 04.1	-3.3
ABTO	Aybut	9.67	194	⇓P	P	21 46 07.4	-4.4
IAFJ	Afjeh	9.68	340	Pn	P	21 46 11.7	-0.1
IRAZ	Razeghan	9.94	331	Pn	P	21 46 25.2	+10
IKOM	Komasi	10.24	318	Pn	P	21 46 17.3	-2.2
IGHG	Ghaleghazi	10.92	316	Pn	P	21 46 26.7	-2.1
IDHR	Dehrash	11.28	317	Pn	P	21 46 30.9	-2.8
GNI	Garni	16.17	328	eP	P	21 47 41.5	+3.6
GNI				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GNI	Garni	16.17	328	eP	P	21 47 41.5	+3.6
	comp=Z,3.4nm,0.5s						
KIV	Kislovodsk	20.13	332	eP	P	21 48 26.1	+0.8
	comp=Z,9.6nm,0.7s						
KIV	Kislovodsk	20.13	332	eP	P	21 48 26.7	+1.5
KIV				pmax	pmax		
	comp=Z,12nm,0.8s						
KIV	Kislovodsk	20.13	332	eP	P	21 48 26.1	+0.9
	comp=Z,9.6nm,0.7s						
CSS	Prodhromos	20.88	298	eP	P	21 48 33.4	+0.3
	comp=Z,14nm,0.8s						
CSS	Prodhromos	20.88	298	eP	P	21 48 33.4	+0.3
	comp=Z,14nm,0.8s						
BR131	Keskin Array S	22.49	311	eP	P	21 48 49.9	+0.9
BR131	Keskin Array S	22.49	311	eP	P	21 48 49.9	+0.8
BRTR	Keskin Array B	22.49	311	P	P	21 48 50.9	+1.8
	comp=Z,1.3nm,0.6s,mb3.5,baz=139,slow=10,SNR=6.8						
BRTR	Keskin Array B	22.49	311	P	P	21 48 50.9	+1.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKTO	Aktyubinsk	23.67	4	P	P	21 49 01.8	+1.4
	comp=Z,1.4nm,0.6s,mb3.5,baz=170,slow=9.7,SNR=6.9						
AKTO	Aktyubinsk	23.67	4	P	P	21 49 01.8	+1.3
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.4						
BVAR	Borovoye Array	28.39	19	P	P	21 49 44.3	-0.2
	comp=Z,1.4nm,0.6s,mb3.8,baz=196,slow=7.5,SNR=14						
BVAR	Borovoye Array	28.39	19	P	P	21 49 44.3	-0.2
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	28.92	39	P	P	21 49 49.6	+0.3
	comp=Z,0.5nm,0.8s,mb3.3,baz=230,slow=7.2,SNR=4.2						
MKAR	Makanchi Array	28.92	39	P	P	21 49 49.6	+0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MLR	Muntele Rosu	30.22	316	P	P	21 50 01.3	+0.5
	comp=Z,0.9nm,0.4s,mb3.8,baz=83,slow=8.1,SNR=3.0						
MLR	Muntele Rosu	30.22	316	P	P	21 50 01.3	+0.5
MLR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WMQ	Urumqi	30.85	48	eP	P	21 50 01.0	-5.5
WMQ				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
WMQ				AMB	AMB		
	comp=Z,150nm,5.0s						
AKASG	Malin Array Be	31.30	327	P	P	21 50 09.8	-0.6
	comp=Z,2.2nm,0.5s,mb4.2,baz=135,slow=8.3,SNR=12						
AKASG	Malin Array Be	31.30	327	P	P	21 50 09.8	-0.5
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
OBN	Obninsk	31.58	339	eP	P	21 50 11.9	-0.9
	comp=Z,6.5nm,0.4s,mb4.8						
ZAL	Zalesovo	34.54	30	P	P	21 50 37.6	-0.9
	comp=Z,1.3nm,0.3s,mb4.3,baz=187,slow=3.0,SNR=5.0						
ZAL	Zalesovo	34.54	30	P	P	21 50 37.6	-0.9
ZAL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PSZ	Piszkesteto	35.02	317	eP	P	21 50 40.9	-1.7
PSZ	Piszkesteto	35.02	317	eP	P	21 50 40.9	-1.7
MORC	Moravsky Berou	37.20	318	eP	P	21 51 01.2	+0.3
	comp=Z,2.2nm,0.7s,mb4.1						
MORC	Moravsky Berou	37.20	318	eP	P	21 51 01.2	+0.2
MORC				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb4.1						
MORC	Moravsky Berou	37.20	318	eP	P	21 51 01.2	+0.2
	comp=Z,2.2nm,0.7s,mb4.1						
GERES	GERESS Array B	39.20	316	P	P	21 51 17.3	-0.4
	comp=Z,0.4nm,0.5s,mb3.4,baz=112,slow=7.2,SNR=5.0						
KHC	Kasperske Hory	39.37	316	eP	P	21 51 19.5	+0.4
JOF	Joensuu	39.55	343	ep	P	21 51 20.3	-0.2
	comp=Z,7.0nm,1.1s,mb4.3						
FINES	FINESS Array B	39.98	338	P	P	21 51 24.2	+0.2
	comp=Z,2.4nm,0.5s,mb4.2,baz=144,slow=10,SNR=21						
FINES	FINESS Array B	39.98	338	P	P	21 51 24.2	+0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	Kangasniemi	40.39	339	ep	P	21 51 26.9	-0.5
	comp=Z,10nm,1.1s,mb4.5						
KAF	Kangasniemi	40.39	339	eP	P	21 51 26.9	-0.5
KAF				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.5						
LZH	Lanzhou	41.69	65	eP	P	21 51 31.0	-7.4
LZH				AP	pP	21 51 41.0	-9.3
LZH				XP	sP	21 51 45.0	-11
LZH				PP	PP	21 53 11.0	-7.2
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.5						
CD2	Chengdu	41.98	73	eP	P	21 51 32.5	-8.4
STU	Stuttgart	42.04	314	eP	P	21 51 40.9	-0.2
	comp=Z,13nm,0.2s,mb5.2						
STU	Stuttgart	42.04	314	eP	P	21 51 40.9	-0.2
STU				pmax	pmax		
	comp=Z,13nm,0.2s,mb5.2						
STU	Stuttgart	42.04	314	eP	P	21 51 40.9	-0.2
	comp=Z,13nm,0.2s,mb5.2						
KEV	Kevo	46.13	347	ep	P	21 52 13.5	-0.3
	comp=Z,20nm,1.1s,mb5.0						
KEV	Kevo	46.13	347	eP	P	21 52 13.5	-0.3
KEV				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
ARCES	ARCESS Array B	46.27	346	P	P	21 52 15.3	+0.4
	comp=Z,2.6nm,0.8s,mb4.2,baz=142,slow=9.4,SNR=9.0						
ARCES	ARCESS Array B	46.27	346	P	P	21 52 15.4	+0.5
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ESDC	Sonseca Array	50.74	301	P	P	21 52 50.4	+0.4
	comp=Z,0.4nm,0.3s,mb3.8,baz=76,slow=7.0,SNR=6.9						
MDT	Midelt	52.14	292	P	P	21 53 01.7	+1.1
	comp=Z,0.8nm,0.3s,mb4.1,baz=76,slow=5.3,SNR=4.4						
MATP	Matopo	53.87	212	P	P	21 53 14.4	+0.8
	comp=Z,0.5nm,0.3s,mb3.9,baz=31,slow=11,SNR=4.6						
CN2	Changchun	57.72	53	eP	P	21 53 34.8	-6.2
MDJ	Mudanjiang	60.55	52	P	P	21 53 53.5	-7.0
ILAR	Eielson Array	87.05	10	P	P	21 56 34.8	+0.9
	comp=Z,0.3nm,0.7s,mb3.6,baz=315,slow=3.6,SNR=6.2						
SYO	Syowa Base	96.25	186	⇑P	P	21 57 11.6	-4.9

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*NEIC **28** 21:44:37.8, 18.29N×105.17W, h16^{km}, MD3.9(MEX), After MEX.*
MEX 28 21:44:37.9±2.6**, 18.30N**×**105.17W, h15^{km}, MD3.9, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	Chamela	1.20	6	iP	Pb	21 44 56.7	-3.1
CJM				iS	Sb	21 45 10.6	-4.2
CJM	Chamela	1.20	6	iP	Pb	21 44 56.6	-3.2
CJM				iS	Sb	21 45 10.6	-4.2
COLM	Colima	1.65	58	iP	Pn	21 45 02.7	-3.9
COLM				iS	Sn	21 45 22.7	-4.9
SFJM	Santa Fe	2.96	42	eP	Pn	21 45 19.0	-6.3
VHO	Vista Hermosa	8.13	97	iP	P	21 46 33.6	-4.7
CPRX	Cap Rock	14.71	4	Pn	P	21 48 04.4	-3.1
TUC	Tucson	14.84	341	P	P	21 48 07.7	-1.4
ANMO	Albuquerque	16.62	356	ePn	P	21 48 29.0	-3.1
	1.0nm,0.6s						
WMOK	Wichita Mounta	17.33	18	eP	P	21 48 39.2	-1.7
	1.4nm,0.6s						

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*ISK **28** 21:46:32.7, 35.35N×27.19E, h36^{km}, MD3.6*
*HLW **28** 21:46:33.0, 35.89N×27.38E, h26^{km}, Mb3.2*
*CSEM **28** 21:46:34.7±0.1, 35.47N×27.47E, h20^{km}, MD3.6, Error ellipse: s-maj=2.1km s-min=1.6km az=113.0*
*ATH **28** 21:46:36.0, 35.63N×27.30E, h18^{km}±1^{km}, MD3.6/8*
*NEIC **28** 21:46:36.0, 35.63N×27.30E, h18^{km}, MD3.6(ATH), After ATH.*
ISC 28 21:46:34.0±1.3**, 35.46N**±0.02×**27.41E**±0.04**, h13^{km}**±9^{km}**, n39, σ0$\overset{s}{.}$98**/52**, 1C-2D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.22	293	ePB	Pb	21 46 40.0	+0.6
ARG	Arkhangelos	0.95	38	ePN	Pn	21 46 52.9	-0.1
ARG				eSN	Sn	21 47 05.9	-0.5
NISR	Nisiros	1.17	349	ePN	Pn	21 46 55.0	-1.1
DAT	Datca	1.27	6	PN	Pn	21 46 57.2	-0.3
DAT				SN	Sn	21 47 13.9	-0.6
NPS	Neapolis	1.48	263	ePN	Pn	21 47 02.5	+1.9
BODT	Bodrum	1.60	357	PN	Pn	21 47 01.3	-0.9
BDRM	Kayabasi	1.60	1	iP	Pn	21 47 02.8	+0.5
BDRM				iS	Sn	21 47 22.3	-0.5
DALT	Dalyan (Mudla)	1.64	37	PN	Pn	21 47 02.0	-0.8
FETY	Fethiye	1.79	49	ePN	Pn	21 47 04.6	-0.4
YER	Yerkesik	1.81	23	ePN	Pn	21 47 05.7	+0.4
SANT	Santorini	1.82	300	ePb	Pb	21 47 06.5	-0.3
SANT				eSg	Sg	21 47 30.3	-4.6
SANT	Santorini	1.82	300	ePb	Pb	21 47 06.5	-0.3
SANT				eSg	Sg	21 47 30.3	-4.6
MLSB	Milas	1.85	9	PN	Pn	21 47 04.6	-1.3
AKAS	Kas	1.94	66	iP	Pn	21 47 08.0	+0.9
APE	Apeiranthos	2.21	317	ePN	Pn	21 47 07.0	-4.0
AYDN	Tasoluk	2.23	10	iP	Pn	21 47 13.6	+2.4
SMG	Samos	2.29	349	ePN	Pn	21 47 12.4	+0.3
ELL	Elmali	2.40	57	ePN	Pn	21 47 13.8	+0.2
GOLH	Golhisar	2.48	44	iP	Pn	21 47 17.4	+2.5
GOLH				iS	Sn	21 47 45.9	+0.6
DNZL	Cakiroluk	2.58	30	iP	Pn	21 47 23.2	+6.9
DNZL				iS	Sn	21 47 54.5	+6.7
VAM	Vamos	2.62	270	ePB	Pb	21 47 19.8	-0.7
DENT	Denizli	2.63	29	ePN	Pn	21 47 17.1	+0.1
MANT	Manisa	3.16	17	iP	Pn	21 47 30.8	+6.3
AKS	Akhisar	3.43	5	ePN	Pn	21 47 27.7	-0.6
TKTP	Tekketepe	3.48	41	iP	Pn	21 47 37.9	+8.9
VLI	Veliai	3.83	290	ePN	Pn	21 47 35.1	+1.0
HMAT	Matruh	4.36	184	⇓P	Pn	21 47 42.7	+1.1
HMAT				S	Sn	21 48 33.9	+1.0
SLUM		4.37	205	P	Pn	21 47 42.1	+0.5
SLUM				S	Sn	21 48 32.5	-0.4
ERMK	Ermenek	4.61	74	iP	Pn	21 47 43.7	-1.5
ERMK				iS	Sn	21 48 41.6	+2.4
KIZT	Kizilcal	4.94	45	ePN	Pn	21 47 49.8	0.0
SWA1		6.35	194	P	Pn	21 48 10.2	+0.5
SWA1				S	Sn	21 49 21.2	-1.5
SWA1		6.35	194	P	Pn	21 48 10.1	+0.5
SWA1				S	Sn	21 49 21.2	-1.5
SWA2		6.42	195	P	Pn	21 48 11.2	+0.5
AMAG	Maghara	6.84	133	⇑P	Pn	21 48 15.7	-0.9
GLL	Jalalah	6.90	147	P	Pn	21 48 17.5	+0.1
SUZ		7.23	139	P	Pn	21 48 21.4	-0.7
HNKL	Nakhl	7.81	133	⇓P	Pn	21 48 29.2	-1.1
HNKL				S	Sn	21 49 54.2	-5.2
HFRF	Wahat Farafira	8.32	174	P	P	21 48 36.2	-1.1
HFRF	Wahat Farafira	8.32	174	P	P	21 48 36.2	-1.1

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*BUG **28** 22:09:01.8, 51.53N×6.82E, h1^{km}, ML1.7*
*LDG **28** 22:09:03.0±0.1, 51.60N×6.82E, h1^{km}, Ml2.5/4, Error ellipse: s-maj=2.6km s-min=1.7km az=30.0, Suspected Mining induced.*
*BNS **28** 22:09:03.9±0.9, 51.55N×6.87E, h1^{km}, ML1.8*
*BGR **28** 22:09:03.5±1.0, 51.51N×6.92E, h1^{km}, ML1.6/2, Error ellipse: s-maj=11.1km s-min=4.4km az=139.0*
*NEIC **28** 22:09:03.0, 51.60N×6.82E, h1^{km}, ML2.5(LDG), After LDG.*
ISC 28 22:09:00.9±0.5**, 51.55N**±0.03×**6.77E**±0.04**, n26, σ1$\overset{s}{.}$33**/46**, 1D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BZER	Hlnxe	0.10	40	Pg	Pg	22 09 03.4	+0.5
BZER				Sg	Sg	22 09 04.9	+0.7
BUG	Bochum--Univer	0.33	108	ePg	Pg	22 09 08.5	+0.9
	SNR=2.7						
BUG				eSg	Sg	22 09 10.7	-1.2
WTSB	Winterswijk	0.42	3	ePg	Pg	22 09 10.7	+1.3
BNS	Bensberg	0.64	156	ePg	Pg	22 09 15.5	+1.9
HOBG	Hohbusch	0.67	147	ePg	Pg	22 09 16.2	+2.0
HOBG				eSg	Sg	22 09 24.5	+1.5
HGN	Heimansgroeve	0.94	214	⇓ePg	Pg	22 09 22.4	+2.6
	9.5nm,0.1s,baz=30						
HGN				eSg	Sg	22 09 36.9	+4.6
KLL	Kalltalsperre	0.94	198	ePg	Pg	22 09 21.8	+2.0
KLL				eSg	Sg	22 09 35.6	+3.2
	24nm,0.5s						
STB	Steinbach	0.95	177	ePg	Pg	22 09 22.1	+2.1
STB				eSg	Sg	22 09 35.6	+2.9
	27nm,0.6s						
HILG	Hillesheim	1.26	183	eSg	Sg	22 09 44.0	+1.3
BGG	Burgeitz	1.39	165	ePg	Pg	22 09 28.6	0.0
BGG				eSg	Sg	22 09 47.8	+0.6
TNS	Taunus Mts	1.70	141	ePg	Pg	22 09 33.6	-1.2
	SNR=2.1						
TNS				eSg	Sg	22 09 55.5	-2.0
GIVF	Givet	1.90	221	ePg	Pg	22 09 39.3	+0.5
GIVF				eSn	Sn	22 09 59.0	-0.9
GIVF				eSg	Sg	22 10 05.1	+1.0
	11nm,0.3s						
GIVF	Givet	1.90	221	ePn	Pn	22 09 35.6	+0.7
GIVF				ePg	Pg	22 09 39.3	+0.5
GIVF				eSn	Sn	22 09 59.0	-0.9
GIVF				eSg	Sg	22 10 05.1	+1.0
WLF	Walferdange	1.92	192	ePg	Pg	22 09 39.9	+0.5
	SNR=1.4						
WLF				eSg	Sg	22 10 03.6	-1.3
BAIF	Baives	2.20	229	ePn	Pn	22 09 39.4	+0.2
BAIF				eSg	Sg	22 10 14.3	+0.1
	3.5nm,0.2s						
CLZ	Clausthal	2.26	81	ePg	Pg	22 09 45.0	-1.1
	SNR=2.0						
CLZ				eSg	Sg	22 10 12.0	-4.2
CDF	Champ du Feu	3.15	174	ePn	Pn	22 09 52.6	-0.2
CDF				eSg	Sg	22 10 43.6	-2.3
	2.0nm,0.4s						
MEZF	Maizieres J’vi	3.24	201	ePn	Pn	22 09 53.6	-0.4
LOR	Lormes	4.68	205	ePn	Pn	22 10 13.6	-0.9
LOR				eSn	Sn	22 11 06.0	-4.4
LOR				eSg	Sg	22 11 31.9	-4.9
	0.9nm,0.2s						
CABF	La Chapelle	4.96	185	ePn	Pn	22 10 17.2	-1.2
SSF	Saint Saulge	4.97	207	ePn	Pn	22 10 17.1	-1.5
AVF	Avril sur Loir	5.26	207	ePn	Pn	22 10 21.8	-0.9
FLN	La Foliniere	5.43	242	ePn	Pn	22 10 23.8	-1.3
BGF	Bois d’Agland	5.62	209	ePn	Pn	22 10 26.3	-1.4
GRR	Gorron	5.85	240	ePn	Pn	22 10 29.5	-1.5
GRR				eSn	Sn	22 11 33.2	-6.5
TCF	Toulx Ste Croi	6.06	211	ePn	Pn	22 10 32.4	-1.5

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*KNET **28** 22:41:33.5±0.5, 41.24N×73.58E, h10^{km}±2^{km}, ml1.9, Error ellipse: s-maj=4.5km s-min=1.9km az=68.0*
*NNC **28** 22:41:34.1±0.2, 41.22N×73.35E, h9^{km}±1^{km}, mpv2.5, Error ellipse: s-maj=2.9km s-min=1.7km az=107.0*
ISC 28 22:41:33.1±1.7**, 41.13N**±0.09×**73.5E**±0.1**, h10^{km}, n7, σ0$\overset{s}{.}$76**/12**, 11C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	Almayashu	1.01	8	⇑P	Pb	22 41 50.7	-1.6
	9.1nm,0.2s,SNR=9.4						
AML				⇑S	Sb	22 42 05.0	-0.5
	28nm,0.2s						
UCH	Uchtor	1.33	34	⇑P	Pb	22 41 57.0	-0.7
	2.9nm,0.2s,SNR=6.5						
UCH				⇓S	Sb	22 42 15.1	+0.4
	8.2nm,0.2s						
EKS2	Erkin-Say	1.55	7	⇑P	Pn	22 42 00.2	-0.6
	2.0nm,0.1s,SNR=9.5						
EKS2				⇑S	Sb	22 42 21.4	+0.4
	8.5nm,0.2s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KZA	Kyzart	1.62	53	⇑P	Pn	22 42 02.0	+0.2
	5.8nm,0.3s,SNR=8.2						
AAK	Ala-Archa	1.68	26	⇑P	Pn	22 42 03.3	+0.5
	3.2nm,0.2s,SNR=5.4						
AAK				⇓S	Sn	22 42 25.3	+0.9
	9.1nm,0.2s						
AAK	Ala-Archa	1.68	26	⇑P	Pn	22 42 03.3	+0.6
	1.1nm,0.2s						
AAK				⇑S	Sn	22 42 25.4	+0.9
	4.4nm,0.3s						
KK31	Karatay Array	2.98	313	⇑Pn	Pn	22 42 22.3	+0.9
	0.7nm,0.3s,baz=129,slow=14,SNR=31						
KK31				⇑Lg		22 43 04.1	
	3.6nm,0.3s,baz=131,slow=28,SNR=6.8						

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*BER **28** 22:49:35.9±4.6, 80.23N×21.85E, h12km±35km, MD1.5, ML2.4, ML2.5(NAO)*

NAO 28 22:49:40.2±5.1**, 79.94N×19.68E, ML2.5, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.75	238	Pn	Pn	22 50 13.8	+1.7
KBS				Lg		22 50 35.8	
KBS	Kingsbay	1.75	238	*e*P	Pn	22 50 10.3	-1.8
KBS				*e*S	Sn	22 50 35.4	-0.1
KBS				AML	AML	22 50 37.7	
	comp=Z,42nm,0.4s						
SPA0	Spitsbergen Ar	1.88	201	Pn	Pn	22 50 11.7	-2.3
	baz=37,slow=12						
SPA0				Pg	Pg	22 50 15.0	-2.8
	baz=29,slow=16						
SPA0				Sn	Sn	22 50 40.0	+1.2
	baz=40,slow=28						
ARA0	ARCESS Array S	10.57	169	Pn	P	22 52 10.9	-4.8
	baz=3.9,slow=10						

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*NEIC **28** 23:10:58.3, 32.51S×71.98W, h27km, ML3.2(GUC), After GUC.*

GUC 28 23:10:58.3±0.9**, 32.51S×71.98W, h27**km±6km**, MD3.8, ML3.2, 8C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PACH	Papudo	0.46	93	⇑*i*P	Pb	23 11 07.5	-0.4
PACH				*i* S	Sb	23 11 14.5	+0.2
IHA	Instituto Hidr	0.58	151	⇑*i*P	Pb	23 11 09.3	-0.7
IHA				*i* S	Sb	23 11 17.9	-0.1
CHNG	Los Chungos	0.74	33	⇑*i*P	Pb	23 11 12.2	-0.3
CHNG				*i* S	Sb	23 11 22.6	+0.2
CHNG				AMP		23 11 25.0	
	comp=N,685nm,0.7s						
ROCH	El Roble	0.93	120	⇑*i*P	Pn	23 11 15.1	-0.6
ROCH				*i* S	Sb	23 11 28.4	+0.6
LCCH	Las Cruces	1.02	161	⇑*i*P	Pn	23 11 16.2	-0.7
LCCH				*i* S	Sb	23 11 29.8	-0.5
ILCH	Illapel	1.11	38	*i* P	Pn	23 11 18.4	+0.2
ILCH				*i* S	Sn	23 11 33.4	+0.7
ILCH				AMP		23 11 36.0	
	comp=E,536nm,0.2s						
JACH	Jahuel	1.18	99	⇑*i*P	Pn	23 11 18.9	-0.4
JACH				*i* S	Sn	23 11 34.9	+0.3
PEL	Peldehue	1.26	121	⇑*i*P	Pn	23 11 20.4	+0.1
PEL				*i* S	Sn	23 11 37.0	+0.5
PEL				AMP		23 11 38.3	
	comp=E,3µm,0.3s						
RCDM	Rinconada Maip	1.38	135	*i* P	Pn	23 11 22.5	+0.3
RCDM				*i* S	Sn	23 11 40.8	+1.0
RCDM				AMP		23 11 43.5	
	comp=E,438nm,0.3s						
TACH	Talagante	1.43	143	*e*P	Pn	23 11 23.0	+0.1
TACH				*i* S	Sn	23 11 41.5	+0.5
ANTU	Antumapu	1.54	133	*e*P	Pn	23 11 24.9	+0.4
ANTU				*i* S	Sn	23 11 45.3	+1.5
ANTU				AMP		23 11 52.5	
	comp=E,486nm,0.3s						
CMCH	Combarbala	1.57	32	*e*P	Pn	23 11 25.1	+0.2
CMCH				*i* S	Sn	23 11 45.1	+0.6
CMCH				AMP		23 11 54.6	
	comp=E,2µm,0.6s						
FCH	Farellones	1.63	120	⇓*i*P	Pn	23 11 26.3	+0.6
FCH				*i* S	Sn	23 11 48.2	+2.2
FCH				AMP		23 11 50.1	
	comp=N,598nm,0.2s						
PCH	Pirque	1.65	132	⇓*i*P	Pn	23 11 27.0	+1.0
CHCH	Chadas Angostu	1.80	142	*e*P	Pn	23 11 28.8	+0.7
CACH	El Canelo	1.97	145	*e*P	Pn	23 11 32.0	+1.4
CICH	Cipreses	2.22	145	*e*P	Pn	23 11 35.1	+0.9
SFDO	San Fernando	2.25	159	⇑*i*P	Pn	23 11 34.7	+0.2

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*IDC **28** 23:50:01.6±2.2, 34.53N×73.47E, mb3.9/2, mb1 3.9/3, mb1mx3.4/18, mbtmp3.7/3, ML3.0/1, Error ellipse: s-maj=75.5km s-min=35.6km az=66.0*

*NEIC **28** 23:50:03.9±1.1, 34.55N×73.48E, h10km, mb3.3/2, Error ellipse: s-maj=23.8km s-min=6.3km az=61.0*

*BJI **28** 23:50:05.8, 34.50N×73.50E, h10km, ML3.7*

*NDI **28** 23:50:05.8±4.2, 34.46N×73.23E, h10km, ML3.6, mb3.3(NEIC)*

*NNC **28** 23:50:13.7±2.2, 35.26N×72.26E, mpv3.7, Error ellipse: s-maj=27.1km s-min=18.5km az=85.0*

ISC 28 23:50:02.4±0.4**, 34.53N**±0.03×**73.53E**±0.05**, h10**km**, n38, σ1s46**/50**, mb3.9**/2**, 3C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	0.90	194	P	Pb	23 50 20.3	+0.7
CEP	Cherat	1.51	243	P	Pn	23 50 28.6	-1.1
THW	Thamme Wali	2.28	221	P	Pn	23 50 41.4	+0.7
SARP	Sargodha	2.70	196	P	Pn	23 50 47.6	+1.0
DLH	Dalhousie	2.84	133	*e*P	Pn	23 50 55.0	+6.3
DLH				*e*SB	Sb	23 51 38.0	+10
DRP	Derazinda	3.93	226	P	Pn	23 51 04.1	-0.1
BHK	Bhakra	3.94	141	*e*x	x	23 51 59.5	
SDNR	Sundarnagar	4.18	135	*e*P	Pn	23 51 10.4	+2.6
SDNR				*e*S	Sn	23 52 01.0	+3.7
SMLA	Simla	4.57	137	*e*P	Pn	23 51 15.9	+2.6
SMLA				*e*S	Sn	23 52 07.1	0.0
KLP	Kalpa	4.97	126	*e*P	Pn	23 51 22.3	+3.4
KLP				*e*S	Sn	23 52 20.9	+3.8
KLP				AML	AML	23 52 48.3	
	comp=E,398nm,0.6s						
KLP				AML	AML	23 52 49.1	
	comp=N,252nm,0.6s						
KSH	Kashi	5.35	21	*e*P	Pn	23 51 30.0	+5.7
KSH				*e*S	Sn	23 52 30.8	+4.1
KSH				Smax			
	comp=N,60nm,0.3s						
KSH				Smax			
	comp=E,80nm,0.2s						
DDI	Dehra Dun	5.68	136	*e*x	x	23 52 02.0	
DDI				*e*SG	Sg	23 53 16.0	+4.5
NDI	New Delhi	6.62	151	*e*x	x	23 52 55.0	
KHET	Khetri	6.72	163	*e*P	Pn	23 51 43.2	-0.5
KHET				*e*S	Sn	23 52 57.8	-3.3
KHET				AML	AML	23 53 04.6	
	comp=N,16nm,0.1s						
KHET				AML	AML	23 53 40.8	
	comp=E,21nm,0.2s						
KUDL	Kundal	6.85	157	*e*P	Pn	23 51 45.3	-0.1
KUDL				*e*S	Sn	23 53 00.7	-3.5
AML	Almayashu	7.59	1	P	Pn	23 51 57.5	+1.7
	SNR=9.9						
KZA	Kyzart	7.66	10	P	Pn	23 51 58.6	+1.9
	SNR=7.3						
UCH	Uchtor	7.73	5	P	Pn	23 51 59.5	+1.8
	SNR=6.6						
EKS2	Erkin-Say	8.12	1	P	P	23 52 05.1	+1.8
	SNR=7.4						
AAK	Ala-Archa	8.13	5	⇓Pn	P	23 52 05.5	+2.2
	comp=E,1.5nm,0.6s						
AAK				⇓Sn	Sn	23 53 33.2	-3.1
	comp=E,8.5nm,1.0s						
AAK	Ala-Archa	8.13	5	*e*Pn	P	23 52 02.8	-0.5
	comp=E,1.9nm,0.5s						
AAK				*e*Sn	Sn	23 53 33.7	-2.5
TKM2	Tokmak 2	8.53	10	P	P	23 52 10.9	+1.9
	SNR=5.9						
KK31	Karatay Array	8.88	346	⇑Pn	P	23 52 12.7	-1.0
	comp=E,1.8nm,0.3s,baz=151,slow=11,SNR=103						
KK31				Sn	Sn	23 53 47.8	-7.1
	comp=E,2.9nm,0.3s,baz=168,slow=22,SNR=10						
KOLN	Koldanda	10.94	125	*e*P	P	23 52 42.0	-0.2
	comp=E,5.3nm,0.3s						
KOLN				*e*S	S	23 54 43.1	-2.6
GKN	Gorkha	11.51	121	*e*P	P	23 52 49.3	-0.7
	comp=E,13nm,0.3s						
GKN				*e*S	S	23 54 54.0	-5.7
DMN	Daman	12.08	122	*e*P	P	23 52 56.8	-0.8
	comp=E,9.5nm,0.3s						
KKN	Kakani	12.10	121	*e*P	P	23 52 56.8	-1.0
	comp=E,8.4nm,0.3s						
PKI	Pulchoki	12.32	121	*e*P	P	23 53 00.4	-0.4
	comp=E,9.0nm,0.2s						
GUN	Gumba	12.46	119	*e*P	P	23 53 01.8	-0.9
	comp=E,8.9nm,0.3s						
JIRN	Jiri	12.83	119	*e*P	P	23 53 06.3	-1.3
	comp=E,20nm,0.3s						
JIRN				*e*S	S	23 55 24.3	-7.2
MKAR	Makanchi Array	13.93	26	Pn	P	23 53 21.6	-0.4
	comp=E,0.1nm,0.3s,baz=202,slow=13,SNR=4.7						
KURK	Kurchatov	16.60	11	*e*Pn	P	23 53 55.8	-0.8
	comp=E,5.0nm,1.5s						
AB31	Akbulak array	17.81	330	⇑P	P	23 54 11.8	-0.1
	comp=E,0.5nm,0.5s,baz=144,slow=11,SNR=11						
AB31				⇑S	S	23 57 13.4	-15
	comp=E,1.0nm,0.7s,baz=153,slow=23,SNR=4.3						
CHKZ	Chkalovo	19.25	355	*e*P	P	23 54 27.5	-2.0
	comp=E,0.7nm,0.5s						
AKTO	Aktyubinsk	19.52	329	⇓P	P	23 54 29.9	-2.6
	comp=E,3.6nm,2.8s						
ARCES	ARCESS Array B	43.75	338	P	P	23 58 08.1	-1.0
	comp=E,2.3nm,0.8s,mb4.0,baz=112,slow=9.7,SNR=4.0						
WRA	Warramunga Arr	79.19	123	P	P	00 02 09.0	-0.5
	comp=E,0.5nm,0.4s,mb3.8,baz=324,slow=5.0,SNR=5.7						
WRAB	Tennant Creek	79.20	123	*e*P	P	00 02 11.4	+2.0

CASC 28 23:50:05.5±2.5**, 11.74N×87.71W, h23**km±11km**, MD4.0, ML3.5, 8C-5D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEON	Leon	1.04	50	⇑*e*P	Pb	23 50 24.4	-0.3
LEON				*e*S	Sb	23 50 36.8	-1.1
CRIN	San Cristobal	1.15	34	⇓*e*P	Pn	23 50 26.5	+0.2
COPN	Copaltepe	1.18	68	⇓*e*P	Pn	23 50 26.3	-0.4
COPN				*e*S	Sb	23 50 42.0	+0.2
TEL3	Telica 3	1.18	46	⇑*e*P	Pn	23 50 26.3	-0.5
TEL3				*e*S	Sb	23 50 44.0	+2.1
MIRN	Miramar	1.20	54	⇑*e*P	Pn	23 50 26.5	-0.5
TELN	Telica	1.21	45	⇑*e*P	Pn	23 50 26.6	-0.6
TELN				*e*S	Sb	23 50 44.8	+2.0
CNGN	Cerro Negro	1.24	53	⇑*e*P	Pn	23 50 26.9	-0.8
MOMJ	Momotombo	1.32	60	⇑*e*P	Pn	23 50 27.9	-0.9
XAVN	Gruta Xavier	1.41	73	⇑*e*P	Pn	23 50 29.4	-0.7
TICN	Ticuantepe	1.47	79	*e*P	Pn	23 50 30.3	-0.7
MGAN	Managua	1.48	74	*e*P	Pn	23 50 30.3	-0.9
MGAN				*e*S	Sn	23 50 50.5	+0.6
MGAN				*i*		23 50 57.9	
	comp=E,715nm,0.5s						
CNCH	Conchagua	1.53	355	⇓*e*P	Pn	23 50 35.0	+3.2
CNCH				*e*S	Sn	23 50 58.5	+7.4
WILN	Americas 2	1.54	74	*e*P	Pn	23 50 30.6	-1.4
WILN				*e*S	Sn	23 50 52.0	+0.5
APON	Apoyo	1.62	84	*e*P	Pn	23 50 33.9	+0.9
BLLM	Bellamira	1.77	343	*e*P	Pn	23 50 38.5	+3.3
BLLM				*e*S	Sn	23 51 01.1	+4.0
SSNN	San Juan del S	1.88	104	*e*P	Pn	23 50 35.9	-0.8
SSNN				*e*S	Sn	23 50 59.0	-0.9
CONN	Concepcion	2.05	95	⇓*e*P	Pn	23 50 37.7	-1.4
CONN				*e*S	Sn	23 51 04.9	+0.7
MADN	Villa Maderas	2.16	99	⇓*e*P	Pn	23 50 40.3	-0.5
MADN				*e*S	Sn	23 51 05.9	-1.1
LCBS	La Ceiba	2.27	327	⇑*e*P	Pn	23 50 45.6	+3.2
LCBS				*e*S	Sn	23 51 13.1	+3.2
LFRS	El Faro	2.29	325	*e*P	Pn	23 50 45.7	+3.1
LFRS				*e*S	Sn	23 51 13.2	+2.8
SNJE	San Jose	2.81	319	*e*P	Pn	23 50 51.7	+1.7
SNJE				*e*S	Sn	23 51 25.8	+2.2
PRS1	Puriscal	3.77	117	*e*P	Pn	23 51 04.2	+0.5
LAJ	Bijagual	3.99	118	*e*P	Pn	23 51 02.1	-4.7
LAJ				*e*S	Sn	23 51 42.1	-11
LCR2	La Lucha 2	4.15	118	*e*P	Pn	23 51 09.0	-0.1
URSC	Urasca	4.30	116	*e*P	Pn	23 51 12.0	+0.8
BUS	Buena Vista	4.45	119	*e*P	Pn	23 51 13.0	-0.4

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*GUC **28** 23:51:16.8±1.0, 29.35S×71.22W, h54km±13km, MD4.1, ML3.6*

*NEIC **28** 23:51:16.8, 29.35S×71.22W, h54km, MD4.1(GUC), After GUC.*

ISC 28 23:51:16.2±0.9**, 29.34S**±0.05×**71.3W**±0.1**, h67**km±10km**, n8, σ1s00**/12**, 2C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.56	177	⇑*i*P	P	23 51 29.4	-0.1
LSCH				*i* S	S	23 51 38.2	-1.0
LSCH				AMP		23 51 39.6	
	comp=E,4µm,0.4s						
TLL	Tololo Astrono	0.92	154	⇑*i*P	P	23 51 34.6	+0.9
TLL				*i* S	S	23 51 47.1	+0.5
TLL				AMP		23 51 51.4	
	comp=E,2µm,0.5s						
CMCH	Combarbala	1.84	173	*e*P	P	23 51 46.5	+0.4
CMCH				*i* S	S	23 52 08.8	+0.5
CMCH				AMP		23 52 21.7	
	comp=E,2µm,0.5s						
CPCH	Copiapo	2.14	23	*i* P	P	23 51 49.8	-0.5
CPCH				*i* S	S	23 52 16.3	+0.6
TRQA	Tornquist	11.63	141	*e*Pn	P	23 54 00.8	-0.6
CPUP	Villa Florida	12.70	80	*e*Pn	P	23 54 13.8	-1.8
SAML	Samuel	21.66	22	*e*P	P	23 56 05.3	+2.5
PAYG	Puerto Ayora	33.78	324	*e*P	P	23 57 53.0	-0.9

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*IDC **28** 23:55:39.0±0.7, 30.15N×132.05E, mb4.0/12, mb1 4.2/15, mb1mx4.1/22, mbtmp4.0/15, ML3.8/3, MS3.2/3, Ms1 3.2/3, ms1mx2.7/22, Error ellipse: s-maj=24.2km s-min=16.8km az=78.0*

*BJI **28** 23:55:40.9, 30.09N×132.19E, h28km, mB4.4, mb4.2, Ms4.3, Msz4.0*

*MOS **28** 23:55:40.4±1.0, 30.15N×132.06E, h23km, mb4.2/8, Error ellipse: s-maj=23.5km s-min=15.1km az=84.7*

*NEIC **28** 23:55:42.5±2.0, 30.13N×131.99E, h21km±16km, mb4.3/3, Error ellipse: s-maj=9.8km s-min=6.3km az=122.0*

*JMA **28** 23:55:42.4±0.2, 30.16N×132.15E, h41km, M4.2*

ISC 28 23:55:40.9±1.3**, 30.12N**±0.04×**132.14E**±0.05**, h24**km±9km**, n53, σ0s95**/62**, mb4.0**/15**, MS3.3**/3**, 2C-1D, Southeast of Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTN	Tanegashima 3	1.13	298	P	Pn	23 56 02.1	+0.7
JTN				S	Sb	23 56 16.5	+0.5
JTSR	Tashiro 2	1.48	315	P	Pn	23 56 06.7	+0.4
JTSR				S	Sn	23 56 25.3	+0.3
JNAR	Kushima--Naru	1.58	332	⇑P	Pn	23 56 08.4	+0.5
JNAR				S	Sn	23 56 27.4	-0.4
JKC	Kuchinoerabu	1.71	282	P	Pn	23 56 10.6	+0.9
JKC				S	Sn	23 56 31.8	+0.8
JNN	Nakanoshima	1.98	262	P	Pn	23 56 14.5	+0.9
JNN				S	Sn	23 56 38.6	+0.7
JTZ	Takazaki	1.99	333	⇑P	Pn	23 56 14.1	+0.5
JTZ				S	Sn	23 56 37.5	-0.5
JSJ	Shimokoshiki	2.60	307	P	Pn	23 56 21.8	-0.5
JSJ				S	Sn	23 56 52.1	-1.3
JIU2	Izumi 2	2.67	335	P	Pn	23 56 23.8	+0.4
JIU2				S	Sn	23 56 54.0	-1.2
JNU	Nakatsue	3.18	341	Pn	Pn	23 56 31.4	+0.8
	17nm,0.3s,baz=174,slow=2.6,SNR=35						
JNU				Sn	Sn	23 57 07.0	-1.1
	66nm,0.3s,baz=159,slow=32,SNR=18						
JOW	Kunigami	4.72	227	Pn	Pn	23 56 51.0	-1.6
	8.6nm,0.3s,baz=103,slow=23,SNR=9.7						
JOW				Sn	Sn	23 57 42.1	-5.1
	26nm,0.3s,baz=94,slow=29,SNR=9.4						
MAJO	Matsushiro	8.17	37	*e*P	P	23 57 41.3	+0.3
	5.5nm,0.3s						
MAJO	Matsushiro	8.17	37	*e*P	P	23 57 41.3	+0.3
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MJAR	Matsushiro Arr	8.17	37	Pn	P	23 57 40.3	-0.7
	comp=Z,0.9nm,0.3s,baz=226,slow=14,SNR=5.4						
TATO	Taipei	10.75	244	*e*P	P	23 58 13.9	-2.7
NACB	Ninganchiao	11.10	240	*e*P	P	23 58 18.8	-2.6
MDJ	Mudanjiang	14.61	353	P	P	23 59 07.3	-0.6
CN2	Changchun	14.65	341	*e*P	P	23 59 10.0	+1.4
ASAJ	Asahikawa	16.25	28	LR	LR	00 05 49.6	
	comp=Z,77nm,19.8s,baz=168,slow=38						
KLR	Kul'dur	19.09	359	*e*P	P	00 00 13.2	+8.9
GUMO	Guam	20.23	142	LR	LR	00 06 26.7	
	comp=Z,50nm,20.1s,MS2.9,baz=65,slow=32						
LZH	Lanzhou	24.39	292	*e*P	P	00 00 58.5	0.0
LZH				AP		00 01 05.5	
LZH				XP		00 01 09.0	
LZH				PP	PP	00 01 33.5	-0.5
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb4.3						
LZH	Lanzhou	24.39	292	*e*P	P	00 00 58.6	+0.1
	comp=Z,23nm,1.6s,mb4.4						
LZH				pP		00 01 05.6	
LZH				sP		00 01 09.1	
LZH				PP	PP	00 01 33.6	-0.4
SONM	Songino Array	26.52	319	P	P	00 01 17.4	-1.0
	comp=Z,0.7nm,0.5s,mb3.4,baz=137,slow=9.5,SNR=6.7						
SONM				LR	LR	00 11 28.4	
	comp=Z,74nm,18.2s,MS3.3,baz=267,slow=36						
SONM	Songino Array	26.52	319	P	P	00 01 17.4	-0.9
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
SONM				MLR	MLR		
	comp=Z,74nm,18.2s						
GTA	Gaotai	28.00	298	*e*P	P	00 01 33.5	+1.6
GTA				AP	pP	00 01 40.8	+1.8
GTA				XP	sP	00 01 45.0	+2.8
GTA				PP	PP	00 02 22.3	+0.3
GTA				S	S	00 06 14.3	+1.1
GTA				SS	SS	00 07 34.0	-1.5
GTA				AMB	AMB		
	comp=Z,40nm,4.6s						
GTA				LR	LR		
	comp=N,90nm,10.3s,MS4.0						
GTA				LR	LR		
	comp=E,190nm,12.2s,MS4.0						
GTA				LR	LR		
	comp=Z,110nm,14.4s,MS3.6						
LSA	Lhasa	35.40	280	*e*P	P	00 02 35.9	-1.1
WMQ	Urumqi	37.60	304	*e*P	P	00 02 56.5	+1.1
MKAR	Makanchi Array	41.70	308	P	P	00 03 28.8	-0.5
	comp=Z,0.4nm,0.7s,mb3.2,baz=86,slow=11,SNR=11						
MKAR	Makanchi Array	41.70	308	P	P	00 03 28.8	-0.5
WRAB	Tennant Creek	49.81	177	*e*P	P	00 04 33.7	-0.4
	comp=Z,2.5nm,0.7s,mb4.3						
WRA	Warramunga Arr	49.82	177	P	P	00 04 33.8	-0.4
	comp=Z,1.5nm,0.7s,mb4.1,baz=353,slow=8.3,SNR=7.4						
WRA	Warramunga Arr	49.82	177	P	P	00 04 33.8	-0.3
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MBWA	Marble Bar	52.36	195	*e*P	P	00 04 54.1	+0.7
ARU	Arti	56.55	320	*e*P	P	00 05 22.4	-1.1
ILAR	Eielson Array	59.38	29	P	P	00 05 42.3	-1.0
	comp=Z,0.5nm,0.7s,mb3.7,baz=288,slow=7.5,SNR=4.5						
ILAR	Eielson Array	59.38	29	P	P	00 05 42.3	-1.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
STKA	Stephens Creek	62.31	171	P	P	00 06 03.5	-0.1
	comp=Z,1.5nm,0.7s,mb4.2,baz=20,slow=10,SNR=6.2						
STKA	Stephens Creek	62.31	171	*e*P	P	00 06 03.5	-0.1
FINES	FINESS Array B	71.17	331	P	P	00 06 58.7	-0.5
	comp=Z,2.2nm,0.7s,mb4.2,baz=70,slow=5.7,SNR=20						
FINES	FINESS Array B	71.17	331	P	P	00 06 58.7	-0.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKASG	Malin Array Be	74.80	320	P	P	00 07 20.1	-0.6
	comp=Z,1.4nm,0.6s,mb4.0,baz=50,slow=6.6,SNR=8.8						
AKASG	Malin Array Be	74.80	320	P	P	00 07 20.1	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NB2	NORSAR Subarra	77.32	335	P	P	00 07 34.1	-0.6
	comp=Z,1.6nm,0.7s,mb4.1,baz=45,slow=5.3						
NOA	NORSAR Array B	77.32	335	P	P	00 07 34.4	-0.3
	comp=Z,1.2nm,0.6s,mb4.0,baz=48,slow=5.5,SNR=5.6						
NOA	NORSAR Array B	77.32	335	P	P	00 07 34.4	-0.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BR131	Keskin Array S	77.34	309	*e*P	P	00 07 35.9	+0.6
	comp=Z,0.4nm,0.4s,mb3.7						
BRTR	Keskin Array B	77.34	309	P	P	00 07 36.0	+0.7
	comp=Z,1.1nm,0.7s,mb3.9,baz=90,slow=3.7,SNR=9.3						
BRTR	Keskin Array B	77.34	309	P	P	00 07 36.0	+0.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CLL	Collm	82.88	326	⇓P	P	00 08 05.5	+0.9
	comp=Z,logA/T=0.8,mb4.6						
GERES	GERESS Array B	84.13	324	P	P	00 08 12.1	+1.2
	comp=Z,1.0nm,0.7s,mb4.1,baz=48,slow=5.6,SNR=11						
GERES	GERESS Array B	84.13	324	P	P	00 08 12.1	+1.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	Mina Array Bea	85.34	48	P	P	00 08 18.8	+1.5
	comp=Z,1.5nm,0.7s,mb4.3,baz=306,slow=3.6,SNR=13						
PDAR	Pinedale Array	87.98	40	P	P	00 08 31.0	+0.9
	comp=Z,0.4nm,0.7s,mb3.7,baz=344,slow=6.6,SNR=3.4						

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*KISR **29** 00:28:40.3±0.9, 27.00N×55.64E, h33km, ML3.6*

*CSEM **29** 00:28:40.5±0.8, 26.87N×55.59E, h12km, ML3.6, Error ellipse: s-maj=24.2km s-min=6.6km az=164.0*

*THR **29** 00:28:42.0±0.4, 26.83N×55.79E, h18km±5km, ML2.8*

ISC 29 00:28:40.3±1.6**, 26.9N**±0.1×**55.58E**±0.05**, h10**km**, n10, σ1s09**/16**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.74	45	*e*PG	Pg	00 28 55.0	-0.2
BNDS				*e*SG	Sg	00 29 04.1	-1.0
BNDS				AML	AML	00 29 20.4	
	comp=N,406nm,0.5s						
GHIR	Ghir-Karzin	2.70	302	*e*PN	Pn	00 29 29.0	+4.5
GHIR				*e*SG	Sg	00 30 12.0	+1.9
GHIR	Ghir-Karzin	2.70	302	*e*Sg	Sg	00 30 12.0	+1.9
	SNR=91						
KRBR	Kerman	3.27	18	*e*PN	Pn	00 29 34.5	+1.9
KRBR				AML	AML	00 30 16.2	
	comp=N,27nm,0.3s						
QRN	Al-Qurain	7.04	287	*e*P	Pn	00 30 26.6	+0.7
RDF	Al-Radifah	7.39	288	*e*P	Pn	00 30 31.2	+0.3
RDF				AML	AML	00 31 54.4	
	comp=Z,5.0nm,0.3s						
RDF				*e*S	Sn	00 31 55.0	-0.8
RDF	Al-Radifah	7.39	288	*e*P	Pn	00 30 31.2	+0.3
RDF				*e*S	Sn	00 31 55.0	-0.7
UMR	Umm Al-Rimmam	7.43	293	*e*P	Pn	00 30 31.9	+0.4
NAY	Al-Naaiem	7.74	290	*e*P	Pn	00 30 35.8	0.0
NAY				*e*S	Sn	00 32 02.4	-1.9
MIB	Mutribah	7.83	294	*e*P	Pn	00 30 37.1	+0.2
MIB				*e*S	Sn	00 32 05.2	-1.3
MIB				AML	AML	00 32 06.8	
	comp=Z,8.2nm,0.4s						

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*NDI **29** 00:33:36.2±4.2, 34.46N×73.83E, h10km, ML3.0*

*NNC **29** 00:33:43.7±98.0, 34.82N×72.72E, mpv3.5, Error ellipse: s-maj=1007.0km s-min=892.5km az=78.0*

ISC 29 00:33:35.2±1.2**, 34.20N**±0.08×**73.4E**±0.2**, h33**km**, n6, σ1s08**/11**, 1C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLH	Dalhousie	2.73	127	*e*P	P	00 34 21.0	+3.4
DLH				*e*x	x	00 35 35.0	
SDNR	Sundarnagar	4.05	131	*e*P	P	00 34 37.5	+1.1
SDNR				*e*S	S	00 35 23.2	-0.2
KLP	Kalpa	4.89	122	*e*P	P	00 34 47.4	-0.9
KLP				AMb	AMB	00 34 59.0	
	comp=Z,7.3nm,0.2s						
KLP				*e*S	S	00 35 37.4	-7.1
KLP				AML	AML	00 36 09.1	
	comp=E,83nm,0.4s						
KLP				AML	AML	00 36 10.0	
	comp=N,72nm,0.4s						
KHET	Khetri	6.45	160	*e*P	P	00 35 10.8	+0.6
KHET				*e*S	S	00 36 23.4	-0.2
KHET				AML	AML	00 37 15.2	
	comp=E,14nm,0.1s						

KHET				AML	AML	00 37 15.3	
	comp=N,12nm,0.2s						
KUDL	**Kundal**	**6.60**	**155**	*e*P	**P**	**00 35 13.6**	**+1.3**
KUDL				AML	AML	00 35 14.1	
	comp=Z,3.7nm,0.6s						
KUDL				*e*S	**S**	**00 36 25.6**	**-1.7**
KK31	**Karatay Array**	**9.17**	**347**	P	**P**	**00 35 47.4**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=162,slow=12,SNR=27						
KK31				⇑S	**S**	**00 37 24.8**	**-6.5**
	comp=Z,1.5nm,0.4s,baz=169,slow=24,SNR=13						

*NEIC **29** 01:19:24.8, 16.94N×92.84W, h5^{km}, MD4.0(MEX), After MEX.*

MEX 29 01:19:28.2±0.6**, 16.94N×92.62W, h5^{km}, MD3.9, 1D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCX	**San Cristobal**	**0.20**	**185**	*i* P	Pg	01 19 28.5	-3.8
SCX				*i* S	Sg	01 19 34.5	-0.6
CCIG	**Comitan**	**0.80**	**145**	⇓*i*P	Pg	01 19 41.8	-2.3
CCIG				*i* S	Sg	01 19 53.8	-1.0
CCIG	**Comitan**	**0.80**	**145**	*i* P	Pg	01 19 41.7	-2.4
CCIG				*i* S	Sg	01 19 53.9	-0.9
CMIG	**Matias Romero**	**2.17**	**274**	*i* P	Pn	01 20 02.5	-3.1
CMIG				*i* S	Sn	01 20 28.4	-4.8
CMIG	**Matias Romero**	**2.17**	**274**	*e*P	Pn	01 19 55.7	-10
CMIG				*i* S	Sn	01 20 20.4	-13
SCIG		**2.44**	**34**	*i* P	Pn	01 20 05.2	-4.1
SCIG				*i* S	Sn	01 20 34.8	-5.0
OXX	**Oaxaca**	**3.93**	**273**	*e*P	Pn	01 20 27.0	-3.6

*MOS **29** 02:01:47.4±0.7, 53.81N×161.93E, h33^{km}, mb4.0/5, Error ellipse: s-maj=16.1km s-min=9.7km az=77.0*

*KRSC **29** 02:01:47.5±1.5, 53.83N×161.79E, h24^{km}±5^{km}, ML4.5*

*NEIC **29** 02:01:49.8±0.6, 53.91N×161.69E, Error ellipse: s-maj=19.1km s-min=11.2km az=163.0*

*IDC **29** 02:01:49.9±0.8, 53.93N×161.69E, h40^{km}±5^{km}, mb3.5/12, mb1 3.7/12, mb1mx3.6/23, mbtmp3.7/12, ML4.0/1, Error ellipse: s-maj=21.5km s-min=11.8km az=5.0*

ISC 29 02:01:47.9±0.4**, 53.80N**±0.02×**161.89E**±0.04**, h42^{km}, h42^{km}**±1.8^{km}**:pP-P, n65,** σ**1^{s}15**/101**, mb3.6**/12**, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.76**	**353**	*i* P	**P**	**02 02 00.4**	**-1.8**
MKZ				*e*S	**S**	**02 02 10.3**	**-2.5**
SPN	**Mys Shipunski**	**1.32**	**238**	P	**P**	**02 02 10.0**	**-0.3**
SPN				S	**S**	**02 02 25.5**	**-1.5**
SPN	**Mys Shipunski**	**1.32**	**238**	*e*P	**P**	**02 02 09.5**	**-0.8**
SPN				*e*S	**S**	**02 02 26.0**	**-1.0**
KII	**Karymskiy**	**1.47**	**280**	P	**P**	**02 02 11.2**	**-1.1**
KII				S	**S**	**02 02 27.8**	**-2.7**
KII	**Karymskiy**	**1.47**	**280**	*e*P	**P**	**02 02 11.2**	**-1.1**
NLC	**Nalytchevo**	**1.65**	**248**	P	**P**	**02 02 13.9**	**-1.0**
NLC				S	**S**	**02 02 32.3**	**-2.7**
NLC	**Nalytchevo**	**1.65**	**248**	*e*P	**P**	**02 02 14.0**	**-0.9**
TUMR	**Tumrok**	**1.80**	**326**	*i* P	**P**	**02 02 17.0**	**0.0**
TUMR				*e*S	**S**	**02 02 38.5**	**-0.3**
SDLR	**Sedlovina**	**1.87**	**255**	*e*P	**P**	**02 02 17.7**	**-0.3**
SDLR				*e*S	**S**	**02 02 42.1**	**+1.5**
SMAR	**Somma**	**1.92**	**255**	*i* P	**P**	**02 02 18.4**	**-0.4**
SMAR				*e*S	**S**	**02 02 42.1**	**+0.2**
UGLR	**Uglovaya**	**1.93**	**253**	*i* P	**P**	**02 02 18.4**	**-0.4**
UGLR				*e*S	**S**	**02 02 41.9**	**-0.1**
AVH	**Avacha**	**1.96**	**255**	*i* P	**P**	**02 02 19.0**	**-0.3**
AVH				*e*S	**S**	**02 02 43.5**	**+0.7**
KOK	**Koryaka**	**2.01**	**257**	*i* P	**P**	**02 02 19.4**	**-0.6**
PET	**Petropavlovsk**	**2.09**	**249**	P	**P**	**02 02 21.4**	**+0.2**
PET				S	**S**	**02 02 45.2**	**-0.9**
PET	**Petropavlovsk**	**2.09**	**249**	*e*P	**P**	**02 02 21.3**	**+0.1**
PET				*e*S	**S**	**02 02 45.2**	**-0.9**
PET	**Petropavlovsk**	**2.09**	**249**	*e*Pn	**P**	**02 02 20.6**	**-0.6**
PET				*e*Sn	**S**	**02 02 45.6**	**-0.5**
KMNR	**Kamenistaya**	**2.18**	**335**	*i* P	**P**	**02 02 23.2**	**+0.8**
KMNR				*i* S	**S**	**02 02 49.7**	**+1.3**
ZLN	**Zelenaya**	**2.31**	**345**	*e*P	**P**	**02 02 24.9**	**+0.6**
ZLN				*e*S	**S**	**02 02 52.2**	**+0.6**
GNL	**Ganaly**	**2.35**	**269**	*i* P	**P**	**02 02 24.9**	**0.0**
GNL				*e*S	**S**	**02 02 52.5**	**-0.2**
KPT	**Kopyto**	**2.37**	**337**	*i* P	**P**	**02 02 26.3**	**+1.1**
KPT				*e*S	**S**	**02 02 52.2**	**-1.1**
LGNR	**Loginova**	**2.39**	**344**	*e*P	**P**	**02 02 26.6**	**+1.2**
LGNR				*e*S	**S**	**02 02 55.1**	**+1.4**
CIRR	**Tsirk**	**2.41**	**345**	*e*P	**P**	**02 02 26.6**	**+0.9**
CIRR				*e*S	**S**	**02 02 54.9**	**+0.7**
RUS	**Russkaya**	**2.46**	**237**	P	**P**	**02 02 26.5**	**+0.1**
RUS				S	**S**	**02 02 54.3**	**-1.1**
RUS	**Russkaya**	**2.46**	**237**	*e*P	**P**	**02 02 26.1**	**-0.3**
RUS				*e*S	**S**	**02 02 54.1**	**-1.3**
KRMR	**Karymshinskiy**	**2.46**	**248**	*e*P	**P**	**02 02 27.1**	**+0.7**
KRMR				*e*S	**S**	**02 02 56.7**	**+1.2**
KBTR	**Krutoberegovo**	**2.47**	**12**	P	**P**	**02 02 27.1**	**+0.5**
KBTR				S	**S**	**02 02 55.6**	**-0.1**
KBTR	**Krutoberegovo**	**2.47**	**12**	*e*P	**P**	**02 02 27.0**	**+0.4**
KBTR				*e*S	**S**	**02 02 55.6**	**-0.1**
KRSR	**Krestovskiy**	**2.54**	**343**	*e*P	**P**	**02 02 27.5**	**-0.1**
KRSR				*e*S	**S**	**02 02 57.4**	**-0.1**
KOZ	**Kozyrevsk**	**2.54**	**334**	P	**P**	**02 02 28.5**	**+0.9**
KOZ				S	**S**	**02 02 58.5**	**+0.9**
KOZ	**Kozyrevsk**	**2.54**	**334**	*e*P	**P**	**02 02 28.5**	**+0.9**
KOZ				*e*S	**S**	**02 02 58.0**	**+0.4**
KOZR	**Kozyr**	**2.54**	**334**	PN	**P**	**02 02 28.5**	**+0.8**
KOZR				S	**S**	**02 02 58.5**	**+0.9**
KLY	**Klyuchi**	**2.62**	**345**	P	**P**	**02 02 28.3**	**-0.4**
KLY				S	**S**	**02 02 58.5**	**-0.9**
KLY	**Klyuchi**	**2.62**	**345**	*e*P	**P**	**02 02 28.4**	**-0.3**
KLY				*e*S	**S**	**02 02 58.7**	**-0.7**
GRL	**Gorelyy**	**2.62**	**243**	*e*P	**P**	**02 02 30.1**	**+1.4**
GRL				*e*S	**S**	**02 03 00.6**	**+1.1**
BKI	**Bering**	**2.76**	**58**	*e*P	**P**	**02 02 30.1**	**-0.7**
BKI				*i* S	**S**	**02 02 59.7**	**-3.5**
BKI				Smax			
	120nm,0.3s						
SRDR	**Sredinnyy**	**2.81**	**334**	*e*P	**P**	**02 02 31.2**	**-0.3**
SRDR				*e*S	**S**	**02 03 03.1**	**-1.4**
ESO	**Esso**	**2.82**	**320**	*e*P	**P**	**02 02 30.8**	**-0.7**
ESO				*e*S	**S**	**02 03 03.3**	**-1.2**
ESO				Smax			
	170nm,0.9s						
SRKR	**Sorokina**	**2.89**	**352**	*e*P	**P**	**02 02 34.7**	**+2.1**
APC	**Apacha**	**2.97**	**255**	*i* P	**P**	**02 02 35.8**	**+2.1**
APC				*e*S	**S**	**02 03 08.5**	**0.0**
APC				Smax			
	270nm,0.9s						
MIPR	**Malaya Ipel'ka**	**3.46**	**246**	*e*P	**P**	**02 02 42.6**	**+2.0**
PAU	**Pauzhetka**	**3.88**	**235**	*e*P	**P**	**02 02 47.9**	**+1.3**
PAU				Smax			
	270nm,0.7s						
SKR	**Severo-Kuril's**	**4.73**	**231**	*e*P	**P**	**02 02 55.5**	**-3.1**
SKR				*e*S	**S**	**02 03 49.0**	**-3.9**
FX1	**Attu Island--F**	**6.81**	**93**	Pn	**P**	**02 03 26.7**	**-1.1**
	9.5nm,0.3s,baz=215,slow=6.5,SNR=76						
FX1				Sn	**S**	**02 04 37.5**	**-7.5**
	baz=66,slow=19,SNR=1.9						
FX1	**Attu Island--F**	**6.81**	**93**	*e*Pn	**P**	**02 03 26.5**	**-1.3**
FX1				*e*Sn	**S**	**02 04 44.3**	**-0.7**
FX1	**Attu Island--F**	**6.81**	**93**	PN	**P**	**02 03 26.7**	**-1.1**
FX1				pmax	pmax		
	comp=Z,10.0nm,0.3s						
MJAR	**Matsushiro Arr**	**23.83**	**233**	P	**P**	**02 06 59.6**	**+2.0**
	comp=Z,4.7nm,0.7s,mb4.0,baz=21,slow=11,SNR=7.8						
MJAR	**Matsushiro Arr**	**23.83**	**233**	P	**P**	**02 06 59.6**	**+2.0**
MJAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ILAR	**Eielson Array**	**27.55**	**46**	P	**P**	**02 07 32.3**	**0.0**
	comp=Z,0.8nm,0.8s,mb3.4,baz=271,slow=8.5,SNR=7.6						
ILAR				pP	pP	02 07 42.7	-0.9
	comp=Z,0.6nm,0.8s,baz=278,slow=7.0,SNR=3.1						
ILAR	**Eielson Array**	**27.55**	**46**	P	**P**	**02 07 32.3**	**0.0**
ILAR				*PP	pP	02 07 42.7	-0.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**32.65**	**38**	P	**P**	**02 08 16.7**	**-0.7**
	comp=Z,0.5nm,0.8s,mb3.5,baz=300,slow=12,SNR=2.9						
INK	**Inuvik**	**32.65**	**38**	P	**P**	**02 08 16.7**	**-0.7**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**48.81**	**296**	P	**P**	**02 10 27.5**	**-2.9**
	comp=Z,0.2nm,0.5s,mb3.4,baz=50,slow=7.1,SNR=5.2						
MKAR				pP	pP	02 10 39.7	-2.6
	comp=Z,0.2nm,0.5s,baz=57,slow=6.9,SNR=2.8						
BVAR	**Borovoye Array**	**50.79**	**309**	P	**P**	**02 10 42.8**	**-2.7**
	comp=Z,0.1nm,0.3s,mb3.2,baz=45,slow=6.1,SNR=2.2						
BVAR				pP	pP	02 10 56.0	-1.4
	comp=Z,0.6nm,0.6s,baz=60,slow=9.2,SNR=3.4						
BVAR	**Borovoye Array**	**50.79**	**309**	P	**P**	**02 10 42.8**	**-2.6**
BVAR				*PP	pP	02 10 56.0	-1.4
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NVAR	**Mina Array Bea**	**54.49**	**72**	P	**P**	**02 11 15.3**	**+2.0**
	comp=Z,1.1nm,0.6s,mb3.9,baz=300,slow=7.3,SNR=9.5						
FINES	**FINESS Array B**	**59.89**	**337**	P	**P**	**02 11 50.9**	**-0.2**
	comp=Z,3.4nm,1.0s,mb4.3,baz=45,slow=9.8,SNR=2.8						
FINES				pP	pP	02 12 02.1	-1.2
	comp=Z,3.4nm,0.8s,baz=27,slow=8.5,SNR=3.1						
FINES	**FINESS Array B**	**59.89**	**337**	P	**P**	**02 11 50.9**	**-0.2**
FINES				*PP	pP	02 12 02.2	-1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NB2	**NORSAR Subarra**	**63.16**	**345**	P	pP	02 12 23.7	-1.7
	comp=Z,1.0nm,0.7s,baz=19,slow=7.0						
NOA	**NORSAR Array B**	**63.16**	**345**	P	**P**	**02 12 11.5**	**-1.6**
	comp=Z,0.7nm,0.7s,mb3.9,baz=222,slow=13,SNR=2.9						
NOA				pP	pP	02 12 24.0	-1.4
	comp=Z,1.2nm,0.6s,baz=19,slow=6.7,SNR=3.3						
NOA	**NORSAR Array B**	**63.16**	**345**	P	**P**	**02 12 11.5**	**-1.6**
NOA				*PP	pP	02 12 24.0	-1.4
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NAO	**NORSAR Subarra**	**63.42**	**345**	P	pP	02 12 23.7	-3.5
TXAR	**Lajitas Array**	**69.37**	**68**	P	**P**	**02 12 54.6**	**+1.6**
	comp=Z,0.4nm,0.5s,mb3.6,baz=297,slow=4.7,SNR=12						
GERES	**GERESS Array B**	**74.25**	**339**	P	**P**	**02 13 21.8**	**+0.2**
	comp=Z,0.2nm,0.6s,mb3.2,baz=8.7,slow=13,SNR=3.0						
GERES				pP	pP	02 13 34.1	0.0
	comp=Z,0.4nm,0.6s,baz=34,slow=4.8,SNR=3.9						
BRTR	**Keskin Array B**	**76.75**	**322**	P	**P**	**02 13 35.9**	**-0.2**
	comp=Z,0.1nm,0.4s,mb3.1,baz=55,slow=5.7,SNR=2.5						
BRTR				pP	pP	02 13 48.6	+0.1
	comp=Z,0.4nm,0.4s,baz=49,slow=2.9,SNR=3.2						
WRA	**Warramunga Arr**	**77.19**	**207**	P	**P**	**02 13 39.8**	**+0.9**
	comp=Z,0.3nm,0.6s,mb3.4,baz=24,slow=6.1,SNR=5.9						

*MOS **29** 02:24:53.5±1.7, 60.45N×60.15E, h10^{km}, mb4.0/1, Error ellipse: s-maj=13.8km s-min=7.4km az=108.5*

*NEIC **29** 02:24:55.5±0.8, 60.51N×60.27E, h10^{km}, mb3.9/2, Error ellipse: s-maj=18.5km s-min=7.4km az=35.0*

*IDC **29** 02:24:55.9±1.4, 60.42N×60.16E, mb3.7/4, mb1 3.8/10, mb1mx3.7/23, mbtmp3.8/10, ML3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.6/20, Error ellipse: s-maj=30.0km s-min=11.3km az=37.0*

*CSEM **29** 02:24:57.3±0.1, 60.46N×59.99E, h40^{km}, mb3.7/1, ML3.4/2, Error ellipse: s-maj=2.8km s-min=1.6km az=51.0*

*NAO **29** 02:25:00.6±9.1, 60.77N×59.37E*

*NNC **29** 02:25:04.7±3.7, 59.43N×60.39E, mpv3.7, Error ellipse: s-maj=53.1km s-min=28.9km az=44.0*

ISC 29 02:24:53.5±0.4**, 60.23N**±0.04×**59.93E**±0.09**, h10^{km}, n49,** σ**1^{s}18**/63**, mb3.6**/5**, 9C-3D, Ural Mountains region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOKR	**Solikamsk**	**1.71**	**249**	*e*P	**Pg**	**02 25 28.8**	**+1.0**
SVE	**Sverdlovsk**	**3.44**	**173**	⇑*i*P	**Pb**	**02 25 52.8**	**-1.3**
SVE				*e*S	**Sn**	**02 26 30.0**	**+0.5**
ARU	**Arti**	**3.88**	**191**	*e*Pn	**Pb**	**02 25 59.8**	**-2.0**
ARU				*e*Sn	**Sb**	**02 26 47.6**	**-1.5**
ARU	**Arti**	**3.88**	**191**	*e*Pn	**Pb**	**02 25 59.8**	**-1.9**
ARU				*e*S	**Sb**	**02 26 47.6**	**-1.5**
CHKZ	**Chkalovo**	**8.78**	**134**	⇑Pn	**P**	**02 27 03.2**	**-0.3**
	2.6nm,0.5s						
CHKZ				⇑Sn	**Sn**	**02 28 36.4**	**-7.2**
	3.5nm,0.6s						
CHKZ	**Chkalovo**	**8.78**	**134**	*e*Pn	**P**	**02 27 03.3**	**-0.2**
	5.2nm,0.5s						
CHKZ				*e*Sn	**Sn**	**02 28 32.9**	**-11**
CHKZ	**Chkalovo**	**8.78**	**134**	*e*P	**P**	**02 27 03.3**	**-0.2**
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BRVK	**Borovoye**	**9.17**	**137**	*e*Pn	**P**	**02 27 08.9**	**0.0**
	comp=Z,3.3nm,0.6s						
BRVK				*e*Sn	**Sn**	**02 28 44.8**	**-8.4**
BRVK	**Borovoye**	**9.17**	**137**	*e*P	**P**	**02 27 08.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	**Borovoye**	**9.17**	**137**	*e*Pn	**P**	**02 27 08.9**	**0.0**
	comp=Z,3.3nm,0.6s						
BRVK				*e*Sn	**Sn**	**02 28 44.8**	**-8.4**
BVA0	**Borovoye Array**	**9.23**	**137**	⇓Pn	**P**	**02 27 09.8**	**0.0**
	comp=Z,1.0nm,0.5s,baz=326,slow=14,SNR=55						
BVA0				Sn	**Sn**	**02 28 45.7**	**-9.0**
	comp=Z,1.8nm,0.8s,baz=321,slow=24,SNR=7.2						
BVAR	**Borovoye Array**	**9.23**	**137**	Pn	**P**	**02 27 09.8**	**+0.1**
	comp=Z,1.9nm,0.3s,baz=324,slow=15,SNR=43						
BVAR				Sn	**Sn**	**02 28 45.4**	**-9.3**
	comp=Z,1.1nm,0.3s,baz=323,slow=24,SNR=4.6						
VOSK	**Vostochnaya**	**9.68**	**136**	⇑Pn	**P**	**02 27 15.9**	**0.0**
	comp=Z,1.7nm,0.5s						
VOSK				⇑Sn	**Sn**	**02 28 58.2**	**-7.5**
	comp=Z,3.9nm,0.5s						
AKTK	**Aktyubinsk**	**9.88**	**187**	P	**P**	**02 27 19.1**	**+0.6**
AKTO	**Aktyubinsk**	**9.88**	**187**	Pn	**P**	**02 27 19.1**	**+0.6**
	comp=Z,0.4nm,0.3s,slow=9.1,SNR=4.9						
AKTO				Sn	**Sn**	**02 29 05.5**	**-5.1**
	comp=Z,0.2nm,0.3s,baz=36,slow=19,SNR=2.4						
AKTO				Lg		02 30 09.1	
	comp=Z,0.2nm,0.3s,baz=180,slow=20,SNR=2.4						
KLMR	**Klimovskoe**	**10.07**	**282**	*e*P	**P**	**02 27 20.7**	**-0.4**
KLMR				pmax	pmax		
	comp=Z,40nm,2.2s						
KLMR				pmax	pmax		
	comp=E,10.0nm,0.5s						
LVZ	**Lovozero**	**13.37**	**316**	⇑*e*P	**P**	**02 28 06.3**	**+0.6**
OBN	**Obninsk**	**13.47**	**258**	⇑*e*P	**P**	**02 28 07.3**	**+0.3**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
OBN	**Obninsk**	**13.47**	**258**	*e*P	**P**	**02 28 07.3**	**+0.3**
	comp=Z,4.0nm,0.5s						
JOF	**Joensuu**	**13.83**	**294**	*e*p	**P**	**02 28 10.0**	**-1.6**
	comp=Z,1.4nm,0.4s						
KURK	**Kurchatov**	**14.20**	**124**	⇓P	**P**	**02 28 16.1**	**-0.5**
	comp=Z,1.0nm,0.6s						
KURK				⇓S	**S**	**02 30 48.8**	**-6.3**
	comp=Z,2.6nm,1.3s						
KURK	**Kurchatov**	**14.20**	**124**	*e*P	**P**	**02 28 14.8**	**-1.8**
	comp=Z,1.7nm,0.6s						
KURK	**Kurchatov**	**14.20**	**124**	*e*P	**P**	**02 28 14.8**	**-1.7**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURK	**Kurchatov**	**14.20**	**124**	*e*P	**P**	**02 28 14.8**	**-1.7**
	comp=Z,2.0nm,0.6s						
KAF	**Kangasniemi**	**16.22**	**291**	*e*p	**P**	**02 28 43.1**	**+0.4**
	comp=Z,2.3nm,0.4s,baz=85,slow=12						
KAF	**Kangasniemi**	**16.22**	**291**	*e*P	**P**	**02 28 43.1**	**+0.4**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
FIA0	**FINESS Array S**	**16.44**	**289**	P	**P**	**02 28 44.2**	**-1.3**
	baz=85,slow=12						
FIA0				Sn	**S**	**02 31 36.8**	**-11**
	baz=73,slow=28						
FINES	**FINESS Array B**	**16.44**	**289**	Pn	**P**	**02 28 44.1**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=90,slow=11,SNR=10						
FINES				Sn	**S**	**02 31 37.5**	**-10**
	comp=Z,0.3nm,0.3s,baz=76,slow=24,SNR=3.8						
KEV	**Kevo**	**16.62**	**319**	*e*p	**P**	**02 28 44.2**	**-3.6**
	comp=Z,7.6nm,0.7s						
KEV	**Kevo**	**16.62**	**319**	*e*P	**P**	**02 28 44.2**	**-3.6**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ARA0	**ARCESS Array S**	**17.06**	**317**	P	**P**	**02 28 52.7**	**-0.6**
	baz=98,slow=16						
ARCES	**ARCESS Array B**	**17.06**	**317**	P	**P**	**02 28 52.7**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=102,slow=13,SNR=16						
ARCES				LR	LR	02 35 03.4	
	comp=Z,53nm,20.5s,baz=342,slow=36						
ARCES	**ARCESS Array B**	**17.06**	**317**	P	**P**	**02 28 52.7**	**-0.5**
ARCES				LR	LR	02 35 03.4	
MK31	**Makanchi Array**	**18.79**	**126**	⇑P	**P**	**02 29 16.6**	**+1.7**
	comp=Z,1.1nm,0.6s,baz=320,slow=8.2,SNR=13						
MKAR	**Makanchi Array**	**18.79**	**126**	P	**P**	**02 29 16.0**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=320,slow=9.6,SNR=11						
AKASG	**Malin Array Be**	**19.67**	**255**	P	**P**	**02 29 26.5**	**+1.3**
	comp=Z,1.0nm,0.3s,baz=44,slow=10,SNR=13						
AAK	**Ala-Archa**	**19.74**	**147**	⇑*e*P	**P**	**02 29 28.5**	**+2.5**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
AAK	**Ala-Archa**	**19.74**	**147**	*e*P	**P**	**02 29 28.5**	**+2.5**
HFS	**Hagfors**	**22.63**	**290**	P	**P**	**02 29 59.0**	**+3.7**
	baz=96,slow=9.3						
HFS	**Hagfors**	**22.63**	**290**	P	**P**	**02 29 58.6**	**+3.3**
	comp=Z,2.4nm,0.7s,mb3.8,baz=51,slow=9.2,SNR=6.1						
NB2	**NORSAR Subarra**	**23.47**	**293**	P	**P**	**02 30 06.7**	**+3.3**
	comp=Z,3.4nm,1.0s,mb3.7,baz=70,slow=9.3						
NB2	**NORSAR Subarra**	**23.47**	**293**	P	**P**	**02 30 06.8**	**+3.4**
	baz=75,slow=12						
NOA	**NORSAR Array B**	**23.47**	**293**	P	**P**	**02 30 07.1**	**+3.7**
	comp=Z,1.6nm,0.7s,mb3.6,baz=70,slow=11,SNR=5.8						
NAO	**NORSAR Subarra**	**23.72**	**293**	P	**P**	**02 30 06.7**	**+0.8**
NAO				pmax	pmax		
	comp=Z,3.0nm,1.0s,mb3.7						
NAO	**NORSAR Subarra**	**23.72**	**293**	P	**P**	**02 30 06.7**	**+0.8**
	comp=Z,3.0nm,1.0s,mb3.7						
BRTR	**Keskin Array B**	**26.27**	**231**	P	**P**	**02 30 34.6**	**+4.2**
	comp=Z,0.8nm,0.8s,mb3.3,baz=27,slow=5.5,SNR=6.0						
TIXI	**Tiksi**	**28.51**	**38**	*i* P	**P**	**02 30 49.3**	**-1.1**
GERES	**GERESS Array B**	**28.52**	**267**	P	**P**	**02 30 54.1**	**+3.3**
	comp=Z,0.7nm,0.8s,mb3.5,baz=56,slow=9.6,SNR=5.2						
SEY	**Seymchan**	**40.46**	**45**	*i* P	**P**	**02 32 32.4**	**-0.9**

*LDG **29** 03:01:57.4±0.4, 13.99S×167.01E, h10^{km}, Mb5.4/4, Ms3.9/1, Error ellipse: s-maj=65.4km s-min=30.1km az=30.0*

*CSEM **29** 03:02:00.8, 13.46S×167.66E, h33^{km}, mb5.6*

*CRAAG **29** 03:02:01.2, 13.59S×167.67E, Mb5.5*

*BJI **29** 03:02:21.1, 13.21S×167.13E, h191^{km}, mB5.0, mb4.9*

*HRVD **29** 03:02:22.4±0.3, 13.27S×166.93E, h202^{km}±2^{km}, MW5.2/75, Centroid moment Tensor Solution. LP body waves: s51,c64; Mantle waves: s75,c112; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.45±.17; $M_{\theta\theta}$0.57±.20; $M_{\phi\phi}$-6.02±.19; $M_{r\theta}$-2.16±.19; $M_{\theta\phi}$2.72±.23; $M_{\phi r}$-0.52±.20; Best double couple: $M_0$6.726×10^{16} NP1:ϕ_s183°, δ49°, λ123°. NP2:ϕ_s318°, δ51°, λ58°. Principal axes: T 6.45, Plg66°, Azm162°; N .551, Plg24°, Azm339°; P -7.003, Plg1°, Azm70°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **29** 03:02:22.4±0.1, 13.31S×167.20E, mb5.2/30 Error ellipse: s-maj=7.5km s-min=5.4km az=97.0*

*IDC **29** 03:02:22.4±0.6, 13.26S×167.16E, h192^{km}±5^{km}, mb4.5/11, mb1 4.5/14, mb1mx4.5/16, mbtmp5.0/14, MS3.8/5, Ms1 3.8/5, ms1mx3.3/26, Error ellipse: s-maj=13.4km s-min=10.2km az=87.0*

*MOS **29** 03:02:25.5±1.2, 13.26S×166.95E, h224^{km}, mb5.1/19, Error ellipse: s-maj=11.9km s-min=7.9km az=115.9*

ISC 29 03:02:23.6±1.1**, 13.34S**±0.04×**167.09E**±0.06**, h218^{km}**±10^{km}**, h196^{km}**±1.7^{km}**:pP-P, n308,** σ**0^{s}79**/130**, mb5.0**/50**, 23C-14D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**8.01**	**298**	P	**P**	**03 04 16.5**	**-1.3**
	9.6nm,0.3s,baz=192,slow=9.1,SNR=5.0						
HNR				S	**S**	**03 05 46.6**	**-0.4**
	14nm,0.3s,baz=194,slow=14,SNR=2.9						
HNR				LR	LR	03 06 38.8	
	comp=Z,443nm,20.4s,baz=135,slow=32						
HNR	**Honiara**	**8.01**	**298**	*e*Pn	**P**	**03 04 17.8**	**+0.1**
	206nm,1.0s						
HNR	**Honiara**	**8.01**	**298**	*e*P	**P**	**03 04 17.8**	**+0.1**
HNR				pmax	pmax		
	comp=Z,206nm,1.0s						
DZM	**Mont Dzumac**	**8.71**	**184**	*e*P	**P**	**03 04 27.0**	**+0.2**
DZM				*e*S	**S**	**03 06 05.9**	**+2.8**
DZM	**Mont Dzumac**	**8.71**	**184**	P	**P**	**03 04 27.1**	**+0.3**
	comp=Z,4.7nm,0.3s,baz=56,slow=19,SNR=23						
DZM				S	**S**	**03 06 03.5**	**+0.4**
	baz=328,slow=19,SNR=4.3						
DZM				LR	LR	03 07 07.1	
	comp=Z,430nm,20.0s,baz=26,slow=32						
DZM	**Mont Dzumac**	**8.71**	**184**	*e*P	**P**	**03 04 27.0**	**+0.2**
DZM				*e*S	**S**	**03 06 05.9**	**+2.8**
PMG	**Port Moresby**	**19.93**	**279**	P	**P**	**03 06 41.6**	**+1.2**
	comp=Z,1.5nm,0.3s,baz=109,slow=6.2,SNR=11						
PMG				LR	LR	03 12 08.9	
	comp=Z,549nm,21.8s,baz=105,slow=29						
RIV	**Riverview**	**25.02**	**213**	*e*P	**P**	**03 07 30.7**	**+1.3**
URZ	**Urewera**	**26.37**	**162**	P	**P**	**03 07 41.1**	**-0.6**
	comp=Z,19nm,0.4s,mb5.0,baz=336,slow=2.3,SNR=19						
URZ	**Urewera**	**26.37**	**162**	PN	**P**	**03 07 38.1**	**-3.6**
PKVZ	**Pokaka**	**26.86**	**166**	PN	**P**	**03 07 44.6**	**-1.6**
CNB	**Canberra Magne**	**27.11**	**213**	⇑*i*P	**P**	**03 07 49.0**	**+0.6**
	comp=Z,113nm,1.2s,mb5.4						
QRZ	**Quartz Range**	**27.80**	**171**	PN	**P**	**03 07 55.0**	**+0.4**
MRZ	**Mangatainoka R**	**28.22**	**166**	PN	**P**	**03 07 57.4**	**-1.0**
KIW	**Kapiti Island**	**28.26**	**167**	PN	**P**	**03 07 57.7**	**-1.0**
SNZO	**South Karori**	**28.65**	**168**	*e*P	**P**	**03 08 01.5**	**-0.7**
	comp=Z,28nm,0.5s,mb5.2						
THZ	**Tophouse**	**28.77**	**171**	PN	**P**	**03 08 03.0**	**-0.3**
STKA	**Stephens Creek**	**29.78**	**228**	*e*P	**P**	**03 08 12.3**	**0.0**
	comp=Z,26nm,0.4s,mb5.2						
STKA				*e*PCP	PcP	03 11 10.0	-0.2
STKA				*e*SCS	ScS	03 18 28.4	+4.2
STKA	**Stephens Creek**	**29.78**	**228**	P	**P**	**03 08 12.5**	**+0.2**
	comp=Z,33nm,0.5s,mb5.2,baz=46,slow=8.3,SNR=83						
STKA				PcP	PcP	03 11 10.1	-0.2
	comp=Z,20nm,0.7s,baz=36,slow=4.4,SNR=13						
STKA				ScP		03 14 32.8	
	comp=Z,4.7nm,0.8s,baz=40,slow=6.2,SNR=4.7						
RPZ	**Rata Peaks**	**30.46**	**174**	P	**P**	**03 08 18.3**	**+0.2**
	comp=Z,15nm,0.5s,mb4.9,baz=358,slow=2.3,SNR=25						
RPZ				ScP		03 14 36.4	
	comp=Z,17nm,0.8s,baz=6.8,slow=15,SNR=3.9						
TOO	**Toolangi**	**30.88**	**215**	⇑*i*P	**P**	**03 08 22.1**	**+0.3**
	comp=Z,22nm,0.6s,mb5.0						
TOO	**Toolangi**	**30.88**	**215**	⇑*i*P	**P**	**03 08 22.1**	**+0.3**
TOO				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.0						
WB2	**Warramunga Arr**	**32.01**	**254**	⇑*i*P	**P**	**03 08 30.6**	**-1.2**
WB2				*e*PCP	PcP	03 11 16.4	+0.1
WB2				*e*S	**S**	**03 13 23.2**	**-3.1**
WB2				*e*SCP		03 14 42.4	
WB2				*e*PCS		03 14 59.9	
WRAB	**Tennant Creek**	**32.01**	**254**	*e*P	**P**	**03 08 30.4**	**-1.4**
	comp=Z,36nm,1.3s,mb4.8						
WRAB				*e*pP	pP	03 09 10.6	-5.8
WRAB				*e*PcP	PcP	03 11 15.6	-0.7
WRAB	**Tennant Creek**	**32.01**	**254**	*e*P	**P**	**03 08 30.4**	**-1.4**
WRAB				*e*		03 11 15.6	
WRAB				pmax	pmax		
	comp=Z,36nm,1.3s,mb4.7						
WRA	**Warramunga Arr**	**32.02**	**254**	P	**P**	**03 08 30.7**	**-1.2**
	comp=Z,7.5nm,0.6s,mb4.4,baz=85,slow=9.0,SNR=154						
WRA				pP	pP	03 09 10.6	-5.9
	comp=Z,1.9nm,0.5s,baz=88,slow=7.1,SNR=2.0						
WRA				PcP	PcP	03 11 16.0	-0.2
	comp=Z,6.7nm,1.0s,baz=79,slow=2.0,SNR=8.2						
WRA				S	**S**	**03 13 25.3**	**-1.2**
	comp=Z,2.0nm,1.1s,baz=86,slow=12,SNR=4.8						
WRA				ScP		03 14 42.4	
	comp=Z,6.7nm,0.9s,baz=85,slow=3.6,SNR=21						
WRA	**Warramunga Arr**	**32.02**	**254**	P	**P**	**03 08 30.7**	**-1.2**
WRA						03 11 16.0	
WRA				S	**S**	**03 13 25.3**	**-1.1**
WRA						03 14 42.4	
FORT	**Forrest**	**39.87**	**238**	⇑*i*P	**P**	**03 09 37.9**	**+0.1**
	comp=Z,60nm,0.5s,mb5.3						
PPT	**Papeete**	**41.91**	**101**	*e*LQ		03 19 58.3	
PPT				*e*LR	LR	03 21 41.2	
	comp=Z,142nm,26.5s						
TBI	**Tubuai**	**42.28**	**110**	*e*LQ		03 20 13.8	
TBI				*e*LR	LR	03 21 56.2	
	comp=Z,113nm,25.2s						
MBWA	**Marble Bar**	**45.76**	**253**	*e*P	**P**	**03 10 25.7**	**+0.3**
	comp=Z,91nm,1.1s,mb5.0						
KLBR	**Kellerberrin**	**48.64**	**240**	*e*P	**P**	**03 10 46.8**	**-0.7**
	comp=Z,37nm,0.9s,mb4.7						
MUN	**Mundaring**	**50.01**	**239**	⇑*i*P	**P**	**03 10 57.4**	**-0.5**
KKM	**Kota Kinabalu**	**54.07**	**288**	*e*P	**P**	**03 11 28.1**	**0.0**

RKT	**Rikitea**	**55.58**	**109**	*e*LQ		03 25 48.6	
RKT				*e*LR	LR	03 28 08.0	
	comp=Z,87nm,33.5s						
MJAR	**Matsushiro Arr**	**56.60**	**332**	P	**P**	**03 11 44.4**	**-1.5**
	comp=Z,22nm,0.9s,mb4.8,baz=168,slow=7.3,SNR=26						
MAJO	**Matsushiro**	**56.60**	**332**	*e*P	**P**	**03 11 45.1**	**-0.9**
MAJO				*e*pP	pP	03 12 28.2	-6.9
MAT	**Matsushiro**	**56.60**	**332**	P	**P**	**03 11 44.6**	**-1.4**
MAT	**Matsushiro**	**56.60**	**332**	*e*P	**P**	**03 11 45.0**	**-1.0**
	comp=Z,35nm,1.0s,mb4.9						
MAT	**Matsushiro**	**56.60**	**332**	*e*P	**P**	**03 11 45.0**	**-1.0**
MAT				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.9						
SSE	**Sheshan**	**62.40**	**316**	*e*P	**P**	**03 12 26.5**	**+0.8**
SSE				AP	pP	03 13 12.0	-3.9
SSE				XP	sP	03 13 34.5	-4.7
SSE				PP	PP	03 14 45.8	-1.6
SSE				S	**S**	**03 20 38.3**	**+4.8**
SSE				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.8						
SSE				AMB	AMB		
	comp=Z,20nm,3.5s						
SSE				LR	LR		
	comp=N,100nm,23.2s						
SSE				LR	LR		
	comp=E,130nm,23.2s						
SSE				LR	LR		
	comp=Z,140nm,18.7s						
SSE	**Sheshan**	**62.40**	**316**	*e*P	**P**	**03 12 26.4**	**+0.7**
	comp=Z,26nm,0.8s,mb4.9						
SSE				PcP	PcP	03 13 03.0	+0.1
SSE				pP	pP	03 13 11.9	-4.0
SSE				sP	sP	03 13 34.4	-4.8
SSE				PP	PP	03 14 45.8	-1.6
SSE				S	**S**	**03 20 38.3**	**+4.8**
SSE				sS		03 21 59.7	
SSE				SS	SS	03 24 56.7	+13
SSE				LR	LR		
	comp=Z,150nm,18.7s						
YSS	**Yuzh-Sakhalins**	**63.86**	**342**	*i* P	**P**	**03 12 35.5**	**+0.5**
YSS	**Yuzh-Sakhalins**	**63.86**	**342**	*e*P	**P**	**03 12 35.9**	**+0.9**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s,mb5.1						
VNDA	**Vanda**	**64.24**	**181**	*e*P	**P**	**03 12 36.8**	**-0.2**
	comp=Z,77nm,2.0s,mb5.0						
VNDA	**Vanda**	**64.24**	**181**	*e*P	**P**	**03 12 36.8**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,77nm,2.0s						
SBA	**Scott Base**	**64.52**	**180**	*e*P	**P**	**03 12 39.5**	**+0.8**
	comp=Z,39nm,1.1s,mb5.0						
SBA				*e*PcP	PcP	03 13 09.9	-1.1
SBA				*e*pP	pP	03 13 22.3	-7.0
SBA	**Scott Base**	**64.52**	**180**	*e*P	**P**	**03 12 39.5**	**+0.7**
SBA				*e*		03 13 09.9	
SBA				pmax	pmax		
	comp=Z,39nm,1.1s,mb5.0						
NJ2	**Nanjing**	**64.57**	**315**	*e*P	**P**	**03 12 40.0**	**+0.2**
NJ2				PCP	PcP	03 13 11.5	-0.4
NJ2				AMB	AMB		
	comp=Z,190nm,1.1s,mb5.6						
NJ2				AMB	AMB		
	comp=Z,230nm,5.6s						
NJ2				LR	LR		
	comp=N,540nm,16.6s						
NJ2				LR	LR		
	comp=E,550nm,21.9s						
NJ2				LR	LR		
	comp=Z,160nm,19.0s						
FX1	**Attu Island--F**	**66.16**	**4**	*e*P	**P**	**03 12 50.1**	**+0.5**
PET	**Petropavlovsk**	**66.49**	**354**	*i* P	**P**	**03 12 50.7**	**-1.0**
WHN	**Wuhan**	**66.89**	**312**	*e*P	**P**	**03 12 54.5**	**-0.1**
MDJ	**Mudanjiang**	**66.98**	**332**	P	**P**	**03 12 55.5**	**+0.6**
MDJ				AP	pP	03 13 41.5	-4.4
MDJ				XP	sP	03 14 02.5	-6.4
MDJ				PP	PP	03 15 27.5	+1.1
MDJ				S	S	03 21 36.3	+7.1
MDJ				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.0						
MDJ				LR	LR		
	comp=N,30nm,17.3s						
MDJ				LR	LR		
	comp=E,50nm,15.9s						
MDJ				LR	LR		
	comp=Z,40nm,16.4s						
MDJ	**Mudanjiang**	**66.98**	**332**	*e*P	**P**	**03 12 55.4**	**+0.5**
	comp=Z,28nm,1.0s,mb4.8						
CN2	**Changchun**	**68.37**	**329**	*e*P	**P**	**03 13 04.0**	**+0.5**
CN2				*e*AP	pP	03 13 53.0	-1.7
CN2				*e*S	S	03 21 48.8	+3.1
CN2				AMB	AMB		
	comp=Z,40nm,1.1s,mb5.0						
CN2				AMB	AMB		
	comp=Z,200nm,4.0s						
KULM	**Kulim**	**68.51**	**281**	*e*P	**P**	**03 13 04.5**	**-0.4**
KLR	**Kul’dur**	**69.67**	**336**	*e*P	**P**	**03 13 09.2**	**-2.2**
ENH	**Enshi**	**70.36**	**309**	*e*P	**P**	**03 13 15.2**	**-0.6**
	comp=Z,75nm,1.3s,mb5.2						
ENH				*e*pP	pP	03 14 02.5	-4.7
GYA	**Guiyang**	**70.79**	**304**	⇑*i*P	**P**	**03 13 18.8**	**+0.3**
GYA				AP	pP	03 14 04.0	-5.9
GYA				XP	sP	03 14 24.5	-8.4
GYA				PP	PP	03 16 00.0	+0.3
GYA				S	S	03 22 15.5	+1.3
GYA				SKS	SKS	03 22 58.0	+2.9
GYA				XS		03 23 34.5	
GYA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
GYA				AMB	AMB		
	comp=Z,120nm,3.8s						
GYA				LR	LR		
	comp=N,570nm,18.9s						
GYA				LR	LR		
	comp=E,610nm,19.0s						
GYA				LR	LR		
	comp=Z,520nm,19.4s						
NST	**Nakhon Sawan**	**72.22**	**291**	P	**P**	**03 13 17.8**	**-9.4**
KMI	**Kunming**	**73.43**	**302**	P	**P**	**03 13 35.8**	**+1.5**
KMI				PCP	PcP	03 13 46.5	-3.0
KMI				AP	pP	03 14 25.5	-0.5
KMI				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.0						
KMI	**Kunming**	**73.43**	**302**	P	**P**	**03 13 35.7**	**+1.4**
	comp=Z,52nm,1.2s,mb5.0						
KMI				PcP	PcP	03 13 46.6	-2.9
KMI				pP	pP	03 14 25.4	-0.6
KMI	**Kunming**	**73.43**	**302**	P	**P**	**03 13 35.7**	**+1.4**
KMI						03 13 46.6	
KMI				*PP	pP	03 14 25.4	-0.6
KMI				pmax	pmax		
	comp=Z,52nm,1.2s,mb5.0						
CHG	**Chiang Mai**	**74.35**	**294**	P	**P**	**03 13 40.2**	**+0.5**
	comp=Z,34nm,0.9s,mb5.0						
HHC	**Hu-ho-hao-te**	**74.42**	**320**	⇑P	**P**	**03 13 40.3**	**+0.7**
HHC				PCP	PcP	03 13 55.8	+2.4
HHC				AP	pP	03 14 29.0	-2.4
HHC				XP	sP	03 14 50.5	-3.9
HHC				PP	PP	03 16 28.8	-1.4
HHC				S	S	03 22 50.5	-4.2
HHC				SCS	ScS	03 23 26.3	0.0
HHC				XS		03 24 17.3	
HHC				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
HHC				AMB	AMB		
	comp=Z,100nm,7.1s						
HHC				LR	LR		
	comp=N,180nm,13.0s						
HHC				LR	LR		
	comp=E,180nm,13.0s						
HHC				LR	LR		
	comp=Z,120nm,14.2s						
HIA	**Hailar**	**75.00**	**330**	*e*P	**P**	**03 13 43.0**	**+0.2**
	comp=Z,50nm,1.3s,mb5.0						
HIA	**Hailar**	**75.00**	**330**	*e*P	**P**	**03 13 43.0**	**+0.2**
HIA				pmax	pmax		
	comp=Z,50nm,1.3s						
CD2	**Chengdu**	**75.03**	**307**	P	**P**	**03 13 43.5**	**+0.2**
CD2				AP	pP	03 14 29.3	-5.9
CD2				PP	PP	03 16 33.5	-2.3
CD2				PPP	PPP	03 18 23.3	+0.9
CD2				*e*S	S	03 23 04.8	+3.2
CD2				XS		03 24 25.5	
CD2				SS	SS	03 28 01.0	+3.1
CD2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
CD2				AMB	AMB		
	comp=Z,80nm,5.1s						
CD2				LR	LR		
	comp=N,190nm,9.6s						
CD2				LR	LR		
	comp=Z,120nm,12.0s						
QSPA	**South Pole Qui**	**76.68**	**180**	*e*P	**P**	**03 13 52.5**	**+0.9**
	comp=Z,122nm,1.0s,mb5.5						
SEY	**Seymchan**	**76.89**	**353**	*i* P	**P**	**03 13 53.1**	**+0.1**
LZH	**Lanzhou**	**77.26**	**312**	*e*P	**P**	**03 13 56.5**	**+0.9**
LZH				AP	pP	03 14 42.5	-5.3
LZH				XP	sP	03 15 03.5	-7.1
LZH				AMB	AMB		
	comp=Z,70nm,1.5s,mb5.1						
LZH				AMB	AMB		
	comp=Z,230nm,4.6s						
LZH	**Lanzhou**	**77.26**	**312**	*e*P	**P**	**03 13 56.5**	**+0.9**
	comp=Z,70nm,1.5s,mb5.1						
LZH				pP	pP	03 14 42.5	-5.3
LZH				sP	sP	03 15 03.5	-7.1
LZH	**Lanzhou**	**77.26**	**312**	*e*P	**P**	**03 13 56.5**	**+0.9**
LZH				pmax	pmax		
	comp=Z,70nm,1.5s,mb5.1						
CLNS	**Chul’man**	**78.18**	**338**	*e*P	**P**	**03 14 00.4**	**+0.2**
CLNS				pmax	pmax		
	comp=N,11nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,47nm,0.8s,mb5.2						
CLNS				pmax	pmax		
	comp=E,12nm,1.2s						
KDAK	**Kodiak Island**	**78.23**	**21**	P	**P**	**03 14 00.4**	**0.0**
	comp=E,4.1nm,0.5s,mb4.3,baz=162,slow=6.4,SNR=5.4						
CIT	**Chita**	**79.79**	**330**	*e*P	**P**	**03 14 10.2**	**+1.3**
CIT				pmax	pmax		
	comp=Z,80nm,1.3s,mb5.2						
YAK	**Yakutsk**	**80.66**	**343**	*e*P	**P**	**03 14 13.2**	**-0.1**
	comp=Z,86nm,1.1s,mb5.3						
YAK	**Yakutsk**	**80.66**	**343**	*e*P	**P**	**03 14 13.3**	**0.0**
YAK				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.0						
YAK				pmax	pmax		
	comp=N,13nm,1.2s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
SLKM	**Skilak Lake**	**81.09**	**20**	*e*P	**P**	**03 14 15.9**	**+0.3**
SLKM				*e*pP	pP	03 15 04.2	-4.2
SONM	**Songino Array**	**81.28**	**324**	P	**P**	**03 14 17.5**	**+0.6**
	comp=E,6.8nm,0.9s,mb4.3,baz=137,slow=5.8,SNR=34						
GTA	**Gaotai**	**81.59**	**314**	*e*P	**P**	**03 14 19.5**	**+0.9**
GTA				AP	pP	03 15 06.3	-5.1
GTA				XP	sP	03 15 26.8	-7.3
GTA				PP	PP	03 17 31.8	+1.9
GTA				S	S	03 24 16.0	+5.3
GTA				PS	PS	03 25 31.3	+0.4
GTA				XS		03 25 37.0	
GTA				SS	SS	03 29 41.0	+4.6
GTA				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
GTA				AMB	AMB		
	comp=Z,110nm,6.1s						
GTA				LR	LR		
	comp=N,190nm,17.1s						
GTA				LR	LR		
	comp=E,160nm,13.7s						
GTA				LR	LR		
	comp=Z,130nm,15.6s						
SHL	**Shillong**	**82.76**	**298**	⇑*i*P	**P**	**03 14 25.0**	**+0.1**
BOD	**Bodaibo**	**83.15**	**334**	*e*P	**P**	**03 14 25.3**	**-1.0**
BOD				pmax	pmax		
	comp=Z,15nm,1.6s,mb4.5						
MCK	**McKinley**	**83.89**	**18**	*e*P	**P**	**03 14 29.3**	**-0.5**
	comp=Z,19nm,1.3s,mb4.7						
MCK				*e*pP	pP	03 15 18.1	-4.7
MCK	**McKinley**	**83.89**	**18**	*e*P	**P**	**03 14 29.3**	**-0.5**
MCK				pmax	pmax		
	comp=Z,19nm,1.3s,mb4.7						
ZAK	**Zakamensk**	**84.32**	**325**	*e*P	**P**	**03 14 32.7**	**+0.4**
ZAK				*e*	pP	03 15 24.0	-1.3
ZAK				pmax	pmax		
	comp=Z,18nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
IMA2	**Indian Mountai**	**84.36**	**15**	*e*P	**P**	**03 14 32.6**	**+0.5**
IMA2				*e*pP	pP	03 15 21.0	-4.1
LSA	**Lhasa**	**84.68**	**302**	P	**P**	**03 14 35.5**	**+0.9**
LSA	**Lhasa**	**84.68**	**302**	*e*P	**P**	**03 14 35.9**	**+1.3**
	comp=Z,39nm,1.3s,mb5.0						
LSA	**Lhasa**	**84.68**	**302**	*e*P	**P**	**03 14 35.9**	**+1.3**
LSA				pmax	pmax		
	comp=Z,39nm,1.3s,mb5.0						
COLA	**College**	**85.05**	**18**	*e*P	**P**	**03 14 34.9**	**-0.7**
	comp=Z,13nm,0.9s,mb4.7						
COLA				*e*pP	pP	03 15 23.6	-5.1
COLA	**College**	**85.05**	**18**	*e*P	**P**	**03 14 34.9**	**-0.7**
COLA				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.7						
ILAR	**Eielson Array**	**85.26**	**18**	P	**P**	**03 14 36.7**	**+0.1**
	comp=Z,8.7nm,0.6s,mb4.7,baz=243,slow=5.2,SNR=200						
ILAR				pP	pP	03 15 24.1	-5.6
	comp=Z,16nm,1.0s,baz=234,slow=5.8,SNR=7.2						
ILAR				PKKPbc		03 32 40.7	
	comp=Z,0.8nm,0.9s,baz=270,slow=1.8,SNR=5.1						
ILAR				PKPPKP		03 40 43.9	
	comp=Z,0.8nm,1.1s,baz=10,slow=4.6,SNR=4.7						
NVAR	**Mina Array Bea**	**86.50**	**49**	P	**P**	**03 14 43.0**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=249,slow=3.9,SNR=6.0						
NVAR				pP	pP	03 15 31.3	-5.2
	comp=Z,1.1nm,0.9s,baz=225,slow=5.7,SNR=3.3						
NVAR				PKKPbc		03 32 39.4	
	comp=Z,0.4nm,0.7s,baz=93,slow=3.1,SNR=3.7						
NVAR				PKPPKP		03 40 46.4	
	comp=Z,1.1nm,0.9s,baz=83,slow=3.8,SNR=5.7						
NVAR				LR	LR	03 46 12.4	
	comp=Z,40nm,20.2s,baz=305,slow=30						
NVAR	**Mina Array Bea**	**86.50**	**49**	P	**P**	**03 14 43.0**	**-0.3**
NVAR				pP	pP	03 15 31.3	-5.2
NVAR				PKKPbc		03 32 39.4	
NVAR				P’P’		03 40 46.4	
NVAR				LR	LR	03 46 12.4	
JIRN	**Jiri**	**88.24**	**299**	*e*P	**P**	**03 14 52.4**	**+0.6**
	comp=Z,60nm,1.1s,mb5.3						
GUN	**Gumba**	**88.58**	**299**	*e*P	**P**	**03 14 53.9**	**+0.6**
	comp=Z,58nm,1.0s,mb5.4						
TIXI	**Tiksi**	**88.58**	**349**	*i* P	**P**	**03 14 51.7**	**-0.6**
PKI	**Pulchoki**	**88.89**	**299**	*e*P	**P**	**03 14 55.2**	**+0.4**
	comp=Z,85nm,1.1s,mb5.5						
PKI	**Pulchoki**	**88.89**	**299**	*e*P	**P**	**03 14 55.2**	**+0.4**
PKI				pmax	pmax		
	comp=Z,42nm,1.1s,mb5.2						
KKN	**Kakani**	**89.05**	**299**	*e*P	**P**	**03 14 55.9**	**+0.3**
	comp=Z,46nm,0.9s,mb5.3						
KKN	**Kakani**	**89.05**	**299**	*e*P	**P**	**03 14 55.9**	**+0.3**
KKN				pmax	pmax		
	comp=Z,23nm,0.9s,mb5.0						
DMN	**Daman**	**89.16**	**298**	*e*P	**P**	**03 14 56.4**	**+0.3**
	comp=Z,122nm,1.1s,mb5.7						
GKN	**Gorkha**	**89.66**	**299**	*e*P	**P**	**03 14 58.0**	**-0.4**
	comp=Z,66nm,1.1s,mb5.4						
SYO	**Syowa Base**	**89.98**	**197**	⇓P	**P**	**03 14 59.5**	**+0.5**
SYO	**Syowa Base**	**89.98**	**197**	⇓*e*P	**P**	**03 14 59.5**	**+0.5**
KOLN	**Koldanda**	**90.49**	**298**	*e*P	**P**	**03 15 01.7**	**-0.6**
	comp=Z,34nm,1.2s,mb5.0						
WMQ	**Urumqi**	**91.63**	**315**	⇓*i*P	**P**	**03 15 08.3**	**+1.1**
WMQ				AP	pP	03 15 58.8	-2.1
WMQ				XP	sP	03 16 21.0	-2.6
WMQ				*e*S	S	03 25 45.0	-0.5
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.7s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,180nm,4.1s						
HYB	**Hyderabad**	**92.55**	**287**	*i* P	**P**	**03 15 12.0**	**-0.1**
HYB	**Hyderabad**	**92.55**	**287**	*e*P	**P**	**03 15 12.0**	**-0.1**
PDAR	**Pinedale Array**	**94.13**	**47**	PKKPbc		03 32 19.8	
	comp=Z,1.1nm,0.8s,baz=92,slow=5.5,SNR=8.6						
SNAA	**Sanae**	**94.92**	**183**	⇑*i*P	**P**	**03 15 21.2**	**-0.4**
SNAA	**Sanae**	**94.92**	**183**	*e*	**P**	**03 15 23.3**	**+1.7**
VNA3	**Neumayer Olymp**	**95.59**	**181**	⇑*i*P	**P**	**03 15 23.9**	**-0.8**
VNA3	**Neumayer Olymp**	**95.59**	**181**	*e*	**P**	**03 15 25.4**	**+0.7**
TXAR	**Lajitas Array**	**95.77**	**61**	PKKPbc		03 32 14.7	
	comp=Z,0.3nm,0.6s,baz=122,slow=4.7,SNR=6.4						
TXAR				LR	LR	03 52 54.2	
	comp=Z,35nm,18.3s,baz=205,slow=32						
VNA2	**Neumayer--Watz**	**95.86**	**182**	*e*P	**P**	**03 15 24.5**	**-1.4**
VNA2	**Neumayer--Watz**	**95.86**	**182**	*e*	**P**	**03 15 25.9**	**0.0**
MKAR	**Makanchi Array**	**96.08**	**317**	P	**P**	**03 15 27.7**	**+0.3**
	comp=Z,8.7nm,0.7s,mb5.1,baz=95,slow=6.4,SNR=81						
MKAR				pP	pP	03 16 16.9	-4.3
	comp=Z,2.7nm,0.9s,baz=101,slow=6.2,SNR=3.0						
MKAR				PP	PP	03 19 21.6	-3.4
	comp=Z,1.4nm,1.1s,baz=117,slow=5.4,SNR=3.7						
MKAR				PKKPbc		03 32 14.2	
	comp=Z,0.8nm,1.0s,baz=270,slow=1.2,SNR=4.2						
MKAR	**Makanchi Array**	**96.08**	**317**	P	**P**	**03 15 27.7**	**+0.3**
MKAR						03 19 21.6	
VNA1	**Neumayer--Stat**	**96.16**	**182**	⇑*i*P	**P**	**03 15 21.4**	**-5.8**
VNA1	**Neumayer--Stat**	**96.16**	**182**	*e*	**P**	**03 15 22.9**	**-4.3**
VNA1	**Neumayer--Stat**	**96.16**	**182**	*e*	**P**	**03 15 44.3**	**+17**
ZAL	**Zalesovo**	**96.18**	**324**	P	**P**	**03 15 27.2**	**-0.4**
	comp=Z,4.6nm,0.9s,mb4.7,baz=358,slow=5.6,SNR=30						
YKA	**Yellowknife Ar**	**96.40**	**27**	P	**P**	**03 15 27.8**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=259,slow=4.5,SNR=4.7						
YKA				pP	pP	03 16 17.4	-4.7
	comp=Z,2.1nm,0.9s,baz=255,slow=4.6,SNR=5.6						
YKA	**Yellowknife Ar**	**96.40**	**27**	P	**P**	**03 15 27.8**	**-0.7**
YKA				pP	pP	03 16 17.4	-4.7
ARU	**Arti**	**111.25**	**326**	⇑*e*PKP	PKPdf	03 20 32.9	+1.9
ARU	**Arti**	**111.25**	**326**	*i* PKIKP	PKPdf	03 20 32.8	+1.8
ARU				*e*		03 21 16.9	
ARU				*e*PS	PS	03 30 46.6	-2.5
ARU				*e*SS	SS	03 36 46.7	+16
LPAZ	**La Paz**	**117.99**	**117**	PKP	PKPdf	03 20 46.7	+1.7
	comp=Z,1.9nm,1.1s,baz=282,slow=3.5,SNR=4.8						
ARCES	**ARCESS Array B**	**118.87**	**346**	PKP	PKPdf	03 20 46.7	+1.1
	comp=Z,6.4nm,0.5s,baz=73,slow=1.8,SNR=105						
ARCES				PKKPbc		03 31 00.8	
	comp=Z,3.7nm,0.8s,baz=222,slow=3.0,SNR=8.4						
ARCES	**ARCESS Array B**	**118.87**	**346**	PKP	PKPdf	03 20 46.7	+1.1
ARCES				PKKPbc		03 31 00.8	
CPUP	**Villa Florida**	**121.52**	**133**	*e*PKPdf	PKPdf	03 20 51.6	-0.2
JOF	**Joensuu**	**121.54**	**338**	*e*p	PKPdf	03 20 50.7	-0.2
	comp=Z,16nm,0.9s						
QRN	**Al-Qurain**	**121.76**	**296**	*e*P	PKPdf	03 20 54.0	+1.8
RDF	**Al-Radifah**	**122.08**	**296**	*e*P	PKPdf	03 20 54.5	+1.7
RDF				AMb	AMB	03 20 55.5	
	comp=Z,38nm,0.8s						
MIB	**Mutribah**	**122.22**	**297**	*e*P	PKPdf	03 20 54.6	+1.6
MIB				AMb	AMB	03 20 56.6	
	comp=Z,32nm,0.9s						
NAY	**Al-Naaiem**	**122.33**	**296**	*e*P	PKPdf	03 20 54.7	+1.4
NAY				AMb	AMB	03 20 55.7	
	comp=Z,13nm,0.8s						
GNI	**Garni**	**123.12**	**309**	*e*PKPdf	PKPdf	03 20 57.0	+2.4
OBN	**Obninsk**	**123.44**	**328**	*e*PKPdf	PKPdf	03 20 55.9	+1.1
OBN	**Obninsk**	**123.44**	**328**	⇓*i*PKIKP	PKPdf	03 20 56.0	+1.2
OBN				pmax	pmax		
	comp=Z,46nm,1.4s						
VOR	**Voronezh**	**123.46**	**324**	PKIKP	PKPdf	03 20 57.0	+2.1
VOR				pmax	pmax		
	comp=Z,70nm,1.1s						
KIV	**Kislovodsk**	**123.76**	**314**	*i* PKIKP	PKPdf	03 20 57.2	+1.5
KAF	**Kangasniemi**	**123.84**	**339**	*e*p	PKPdf	03 20 55.7	+0.3
	comp=Z,9.1nm,0.7s						
FINES	**FINESS Array B**	**124.37**	**339**	PKP	PKPdf	03 20 57.3	+0.9
	comp=Z,7.1nm,0.6s,baz=34,slow=2.7,SNR=27						
FINES	**FINESS Array B**	**124.37**	**339**	⇑*i*PKIKP	PKPdf	03 20 58.0	+1.6
KAMS	**Al Khamasin**	**124.76**	**286**	P	PKPdf	03 21 00.3	+2.1
TATS	**Tathlith**	**125.76**	**285**	P	PKPdf	03 21 03.0	+2.8
AFFS	**‘Afif**	**126.28**	**290**	P	PKPdf	03 21 03.1	+2.0
ANN	**Anapa**	**127.10**	**317**	*e*PKIKP	PKPdf	03 21 06.4	+4.3
HILS	**Ha’il**	**127.23**	**294**	P	PKPdf	03 21 05.2	+2.4
BLJS	**Baljurashi**	**127.54**	**285**	P	PKPdf	03 21 06.7	+3.1
KMBO	**Kilima Mbogo**	**128.24**	**258**	PKP	PKPdf	03 21 06.8	+1.6
	comp=Z,1.2nm,0.4s,baz=65,slow=24,SNR=3.5						
NB2	**NORSAR Subarra**	**129.24**	**345**	PKPdf	PKPdf	03 21 06.9	+1.1
	comp=Z,6.9nm,0.8s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**129.24**	**345**	PKPd		03 21 06.9	
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**129.24**	**345**	PKP	PKPdf	03 21 06.7	+0.9
	comp=Z,8.9nm,1.0s,baz=35,slow=2.0,SNR=12						
NOA				SKPbc		03 24 11.3	
	comp=Z,6.3nm,1.0s,baz=27,slow=4.0,SNR=6.0						
AKASG	**Malin Array Be**	**129.49**	**326**	PKP	PKPdf	03 21 07.0	+0.5
	comp=Z,7.5nm,0.9s,baz=57,slow=2.1,SNR=34						
AKASG				SKPbc		03 24 12.3	
	comp=Z,0.9nm,0.6s,baz=47,slow=4.1,SNR=5.9						
NAO	**NORSAR Subarra**	**129.53**	**345**	PKPdf	PKPdf	03 21 06.9	+0.6
LSZ	**Lusaka**	**130.39**	**236**	*e*PKPdf	PKPdf	03 21 11.3	+2.2
QURS	**Qurayyt al Mil**	**130.64**	**300**	P	PKPdf	03 21 12.2	+2.9
BR131	**Keskin Array S**	**131.47**	**312**	*e*PKPdf	PKPdf	03 21 12.1	+1.5
BRTR	**Keskin Array B**	**131.47**	**312**	PKP	PKPdf	03 21 12.1	+1.5
	comp=Z,2.0nm,0.9s,baz=121,slow=0.7,SNR=12						
BRTR				SKPbc		03 24 20.0	
	comp=Z,2.3nm,0.6s,baz=87,slow=3.7,SNR=12						
ANTO	**Ankara**	**132.03**	**312**	*e*PKPdf	PKPdf	03 21 13.4	+1.8
AYUS	**‘Aynunah**	**132.90**	**296**	P	PKPdf	03 21 15.6	+2.0
CFR	**Carcaliu**	**132.94**	**321**	⇑P	PKPdf	03 21 15.6	+2.3
CFR	**Carcaliu**	**132.94**	**321**	⇑P	PKPdf	03 21 15.6	+2.3
BDAS	**Al Bad‘**	**133.01**	**296**	P	PKPdf	03 21 16.8	+2.9
HAQS	**Haql**	**133.06**	**297**	P	PKPdf	03 21 16.0	+2.1
TIRR	**Tirgusor**	**133.12**	**320**	⇑P	PKPdf	03 21 15.5	+1.9
TIRR	**Tirgusor**	**133.12**	**320**	⇑P	PKPdf	03 21 15.5	+1.9
HARR	**Harsova**	**133.31**	**320**	⇑P	PKPdf	03 21 15.9	+2.0
HARR	**Harsova**	**133.31**	**320**	⇑P	PKPdf	03 21 15.9	+2.0
BURAR	**Bucovina Array**	**133.38**	**325**	⇓P	PKPdf	03 21 17.0	+3.0
BURAR	**Bucovina Array**	**133.38**	**325**	⇓P	PKPdf	03 21 17.0	+3.1
KWP	**Kalwaria**	**133.53**	**329**	*e*PKP	PKPdf	03 21 14.6	+0.4
KWP	**Kalwaria**	**133.53**	**329**	*e*PKP	PKPdf	03 21 14.6	+0.4
MLR	**Muntele Rosu**	**134.12**	**322**	⇓P	PKPdf	03 21 16.5	+1.1
MLR	**Muntele Rosu**	**134.12**	**322**	⇓P	PKPdf	03 21 16.6	+1.2
KOLS	**Kolonicke sedl**	**134.18**	**328**	*e*PKP	PKPdf	03 21 18.2	+2.8
KOLS				*e*		03 24 30.1	
STHS	**Stebnicka Huta**	**134.40**	**329**	*e*PKP	PKPdf	03 21 17.8	+2.1
STHS				*e*		03 24 31.0	
CRVS	**Cervenica-Dubn**	**134.62**	**328**	*e*PKP	PKPdf	03 21 17.6	+1.5
CRVS				*e*		03 24 31.7	
VOIR		**134.68**	**322**	⇓P	PKPdf	03 21 19.2	+2.8
VOIR		**134.68**	**322**	⇓P	PKPdf	03 21 19.2	+2.8
NIE	**Niedzica**	**134.86**	**330**	*e*PKP	PKPdf	03 21 19.4	+2.8
BDFB	**Brasilia**	**134.89**	**129**	PKP	PKPdf	03 21 17.7	+0.2
	comp=Z,2.6nm,0.7s,baz=220,slow=7.2,SNR=4.5						
DRGR		**135.25**	**325**	⇓P	PKPdf	03 21 17.6	+0.2
DRGR		**135.25**	**325**	⇓P	PKPdf	03 21 17.6	+0.2
KECS	**Kecovo**	**135.38**	**329**	*e*PKP	PKPdf	03 21 19.9	+2.3
KECS				*e*		03 24 33.7	
OKC	**Ostrava-Krasne**	**135.61**	**331**	*e*PKPdf	PKPdf	03 21 20.0	+2.0
KSP	**Ksiaz**	**135.72**	**334**	*e*PKP	PKPdf	03 21 20.3	+2.1
KSP	**Ksiaz**	**135.72**	**334**	*e*PKP	PKPdf	03 21 20.4	+2.2
TSUM	**Tsumeb**	**135.87**	**224**	*e*PKPdf	PKPdf	03 21 20.2	+0.9
PSZ	**Piszkesteto**	**136.05**	**328**	*e*PKPdf	PKPdf	03 21 20.7	+1.8
PSZ				*e*SKPdf		03 24 35.4	
DPC	**Dobruska-Polom**	**136.07**	**333**	*e*PKPdf	PKPdf	03 21 21.3	+2.5
DPC				*e*SKP		03 24 36.0	
UPC	**Upice**	**136.09**	**334**	*e*PKPdf	PKPdf	03 21 21.1	+2.2
UPC				*e*PP	PP	03 24 02.7	-1.5
UPC				*e*SKP		03 24 36.1	
VYHS	**Vyhne**	**136.20**	**330**	*e*PKP	PKPdf	03 21 22.9	+3.8
VYHS				*e*		03 24 36.1	
BZS	**Buzias**	**136.56**	**325**	⇑P	PKPdf	03 21 21.8	+1.9
BZS	**Buzias**	**136.56**	**325**	⇑P	PKPdf	03 21 21.8	+2.0
BRG	**Berggiesshubel**	**136.68**	**335**	*e*PKP	PKPdf	03 21 21.6	+1.7
BRG				*e*pPKP		03 22 09.2	
BRG				*e*SKP		03 24 37.2	
BRG				*e*		03 24 57.4	
BRG				*e*		03 29 28.2	
BRG				*e*P’P’		03 39 30.1	
PVCC	**Panska Ves**	**136.69**	**335**	*e*PKPdf	PKPdf	03 21 21.9	+2.0
PVCC				*e*SKP		03 24 38.0	
CLL	**Collm**	**136.72**	**336**	*e*	PKPdf	03 21 11.0	-9.0
CLL				*i* PKIKP	PKPdf	03 21 23.2	+3.2
CLL				*i*		03 24 37.1	
CLL	**Collm**	**136.72**	**336**	⇓*i*PKP	PKPdf	03 21 23.2	+3.2
CLL				⇑*i*SKPdf		03 24 37.1	
SRO	**Srobarova**	**136.92**	**329**	*e*PKP	PKPdf	03 21 22.9	+2.5
PRU	**Pruhonice**	**137.11**	**334**	*e*PKPdf	PKPdf	03 21 21.9	+1.2
PRU				*e*SKP		03 24 38.9	
TREC	**Trest**	**137.21**	**333**	*e*PKPdf	PKPdf	03 21 18.4	-2.5
TREC				*e*SKP		03 24 39.5	
ZST	**Bratislava**	**137.25**	**330**	*e*PKP	PKPdf	03 21 23.3	+2.3
ZST				*e*		03 24 39.8	
CLZ	**Clausthal**	**137.26**	**339**	*e*PKPdf	PKPdf	03 21 23.5	+2.6
CLZ				*e*SKP		03 24 39.1	
MOX	**Moxa**	**137.78**	**337**	*i* P	PKPdf	03 21 23.8	+1.9
	comp=Z,logA/T=1.1						
MOX				PKS	PKS	03 24 40.0	-17
MOX	**Moxa**	**137.78**	**337**	*e*PKP	PKPdf	03 21 23.8	+1.9
MOX				*e*SP		03 24 40.0	
NKC	**Novy Kostel**	**137.78**	**336**	*e*PKPdf	PKPdf	03 21 24.0	+2.1

NKC				eSKP		03 24 41.2	
KHC	Kasperske Hory	138.17	334	ePKPdf	PKPdf	03 21 24.0	+1.3
KHC				eSKP		03 24 41.7	
KHC	Kasperske Hory	138.17	334	i PKIKP	PKPdf	03 21 24.8	+2.1
GEC2	GERESS Array S	138.33	334	ePKPdf	PKPdf	03 21 24.6	+1.6
GEC2				eSKP		03 24 42.2	
GERES	GERESS Array B	138.33	334	PKhKP		03 21 15.3	
	comp=Z,1.2nm,0.9s,baz=45,slow=3.8,SNR=6.0						
GERES				PKP	PKPdf	03 21 25.4	+2.4
	comp=Z,5.5nm,0.9s,baz=90,slow=1.3,SNR=19						
GERES				SKPbc		03 24 41.7	
	comp=Z,6.3nm,0.9s,baz=27,slow=3.0,SNR=27						
GERES	GERESS Array B	138.33	334	PKP	PKPdf	03 21 25.4	+2.4
GERES				SKPbc		03 24 41.7	
DIVS	Divcibare	138.40	324	⇓iPKP	PKPdf	03 21 24.0	+0.7
WET	Wettzell	138.45	334	ePKPdf	PKPdf	03 21 24.5	+1.3
GRA1	Grafenberg Arr	138.70	336	ePKPdf	PKPdf	03 21 25.5	+1.8
GRF	Grafenberg Arr	138.70	336	ePKP	PKPdf	03 21 25.5	+1.8
TNS	Taunus Mts	139.29	339	ePKPdf	PKPdf	03 21 26.6	+1.9
TOD	Tromm	139.68	338	PKP	PKPdf	03 21 29.9	+4.4
FUR	Furstenfeldbru	139.88	335	ePKPdf	PKPdf	03 21 27.8	+1.9
ABH	Alteburg	139.89	339	PKP	PKPdf	03 21 28.2	+2.4
GIVF	Givet	140.57	342	ePKP1	PKPdf	03 21 28.4	+1.4
BAIF	Baives	140.79	343	ePKP1	PKPdf	03 21 29.0	+1.6
WLS	Welschbruch	141.20	338	PKP	PKPdf	03 21 32.3	+4.2
CDF	Champ du Feu	141.23	338	ePKP1	PKPdf	03 21 29.4	+1.2
ECH	Echery	141.44	338	PKP	PKPdf	03 21 31.2	+2.7
DAVOX	Davos	141.56	335	PKhKP		03 21 24.6	
	comp=Z,3.0nm,0.5s,baz=315,slow=2.9,SNR=4.7						
DAVOX				PKP	PKPdf	03 21 30.8	+2.0
	comp=Z,11nm,0.8s,baz=214,slow=7.7						
DAVOX				SKPbc		03 24 50.4	
	comp=Z,7.3nm,0.8s,baz=334,slow=1.2,SNR=7.4						
DAVOX	Davos	141.56	335	PKP	PKPdf	03 21 30.8	+2.0
DAVOX				SKPbc		03 24 50.4	
MOF	Molkenrain	141.75	338	PKP	PKPdf	03 21 31.4	+2.3
THEF	They Montfort	141.84	339	PKP	PKPdf	03 21 29.7	+0.5
HINF	Hinteralfeld	141.88	338	ePKP1	PKPdf	03 21 30.7	+1.4
HAU	Haudompre	141.90	339	ePKP1	PKPdf	03 21 30.8	+1.5
MEZF	Maizieres J'vi	141.91	341	ePKP1	PKPdf	03 21 31.3	+2.0
LOMF	Lomont	142.29	338	PKP	PKPdf	03 21 30.7	+0.7
CABF	La Chapelle	143.18	338	ePKP1	PKPbc	03 21 31.9	+1.9
	comp=Z,57nm,1.1s						
FLN	La Foliniere	143.21	346	ePKP1	PKPbc	03 21 30.6	+0.6
	comp=Z,239nm,1.5s						
LDF	La Druitiere	143.28	346	ePKP1	PKPbc	03 21 30.8	+0.6
LOR	Lormes	143.38	341	ePKP1	PKPbc	03 21 31.2	+0.7
	comp=Z,30nm,1.1s						
GRR	Gorron	143.65	346	ePKP1	PKPbc	03 21 31.7	+0.4
SSF	Saint Saulge	143.67	341	ePKP1	PKPbc	03 21 32.2	+0.8
	comp=Z,125nm,1.4s						
HYF	Humbligny	143.75	342	ePKP1	PKPbc	03 21 32.6	+0.9
LPL	La Plagne	143.86	336	ePKP1	PKPbc	03 21 33.3	+1.3
	comp=Z,56nm,1.2s						
LPG	La Plagne	143.87	336	ePKP1	PKPbc	03 21 33.5	+1.4
	comp=Z,152nm,1.6s						
SMF	Signal de Mont	143.93	340	ePKP1	PKPbc	03 21 32.8	+0.6
	comp=Z,87nm,1.2s						
AVF	Avril sur Loir	143.96	341	ePKP1	PKPbc	03 21 32.8	+0.5
	comp=Z,95nm,1.2s						
SGMF	Saint Gilles	144.14	348	ePKP1	PKPbc	03 21 33.4	+0.6
	comp=Z,337nm,1.2s						
ROSF	Rostrenen	144.20	349	ePKP1	PKPbc	03 21 33.6	+0.7
	comp=Z,177nm,1.1s						
BGF	Bois d'Agland	144.33	341	ePKP1	PKPbc	03 21 34.3	+1.0
	comp=Z,138nm,1.0s						
GRN	Grenoble	144.47	337	PKP	PKPdf	03 21 35.7	+1.8
MBDF	Montbardon	144.50	336	ePKP1	PKPbc	03 21 34.8	+0.9
	comp=Z,64nm,1.0s						
QUIF	Quistinic	144.58	349	ePKP1	PKPbc	03 21 34.7	+0.7
	comp=Z,86nm,0.8s						
PLDF	La Plantade	144.60	340	PKP	PKPdf	03 21 35.6	+1.5
SURF	Saint Ours	144.68	335	PKP	PKPdf	03 21 36.4	+2.1
AGO	Saint Agoulin	144.69	341	PKP	PKPdf	03 21 35.6	+1.4
ORIF	Oris-en-Rattie	144.69	337	ePKP1	PKPbc	03 21 35.9	+1.5
	comp=Z,234nm,1.0s						
TCF	Toulx Ste Croi	144.76	342	ePKP1	PKPbc	03 21 35.8	+1.2
	comp=Z,229nm,1.2s						
SAOF	Saorge	144.78	334	PKP	PKPdf	03 21 35.9	+1.5
AUTN	L'Aution	144.82	334	PKP	PKPdf	03 21 36.1	+1.6
TOUF	Mont Tournerai	144.89	334	PKP	PKPdf	03 21 35.6	+1.0
SBF	Sospel	144.93	334	ePKP1	PKPbc	03 21 36.0	+0.9
	comp=Z,282nm,1.0s						
MVIF	Mont Vial	145.02	334	PKP	PKPdf	03 21 36.5	+1.6
REVF	Revere	145.06	334	PKP	PKPdf	03 21 36.4	+1.5
MFF	Saint Martin d	145.14	345	ePKP1	PKPbc	03 21 37.0	+1.4
	comp=Z,337nm,1.1s						
VIVF	Saint-Julien-l	145.20	338	ePKP1	PKPbc	03 21 37.7	+1.9
	comp=Z,253nm,1.3s						
CALN	Calern	145.25	334	PKP	PKPdf	03 21 37.8	+2.5
PGF	Pioggiola	145.26	331	ePKP1	PKPbc	03 21 37.5	+1.5
	comp=Z,270nm,1.3s						
LBL	Lubilhac	145.37	340	PKP	PKPdf	03 21 38.2	+2.8
FRF	La Foret Royal	145.51	335	ePKP1	PKPbc	03 21 38.0	+1.4
	comp=Z,215nm,1.2s						
SMRF	Simiane la Rot	145.60	336	ePKP1	PKPbc	03 21 37.8	+1.0
	comp=Z,114nm,1.0s						
LMR	La Mourre	145.75	334	ePKP1	PKPbc	03 21 38.8	+1.6
	comp=Z,173nm,1.0s						
RJF	Les Rejaudoux	145.86	342	ePKP1	PKPbc	03 21 39.4	+2.0
CAF	Calviac	146.03	341	ePKP1	PKPbc	03 21 40.1	+2.2
	comp=Z,92nm,1.1s						
LASF	Ste Croix	146.16	338	ePKP1	PKPbc	03 21 38.7	+0.5
	comp=Z,156nm,1.2s						
LFF	La Frestale	146.43	342	ePKP1	PKPbc	03 21 40.9	+2.1
	comp=Z,68nm,0.9s						
MTLF	Montolieu	147.39	339	ePKP1	PKPdf	03 21 43.9	+5.0
	comp=Z,209nm,1.1s						
LPEF	Le Peyrat	147.84	339	PKP	PKPdf	03 21 45.1	+5.5
FILF	Fillols	147.95	338	PKP	PKPdf	03 21 45.4	+5.6
MLS	Moulis	148.10	340	PKP	PKPdf	03 21 45.2	+5.2
EPF	Esparros	148.28	341	ePKP1	PKPdf	03 21 46.4	+6.1
	comp=Z,45nm,1.1s						
RESF	Ens	148.48	341	PKP	PKPdf	03 21 47.7	+7.1
EBIE	Bielsa	148.65	341	PKP	PKPdf	03 21 47.4	+6.5
SJPF	Ste Jean	148.66	343	ePKP1	PKPdf	03 21 47.2	+6.3
	comp=Z,107nm,1.4s						
ETSF	Etsaut	148.67	342	ePKP1	PKPdf	03 21 47.6	+6.7
	comp=Z,32nm,1.3s						
ELAN	Lanestosa	149.11	346	PKP	PKPdf	03 21 48.3	+6.6
EPOB	Poblet	149.54	339	PKP	PKPdf	03 21 49.2	+6.8
EBR	Ebro Roquetas	150.21	339	ePKPDF	PKPdf	03 21 51.0	+7.5
CMAH	Djebel Manchou	150.51	325	P	PKPdf	03 21 52.0	+8.0
CAEH	'Ain El Ouahch	150.71	326	P	PKPdf	03 21 53.0	+8.7
CKFL	Kef-Lekhel	151.06	326	P	PKPdf	03 21 53.5	+8.6
PBRG	Braganca	151.13	350	ePKPbc	PKPdf	03 21 52.9	+8.1
CASM	Ain Smara	151.29	326	P	PKPdf	03 21 54.0	+8.8
DFRA	Djebel Bou Aff	151.40	327	P	PKPdf	03 21 55.0	+10
PCAB	Cabril	151.41	352	ePKPbc	PKPdf	03 21 53.2	+8.0
CTEI	Djebel Teioual	151.48	326	P	PKPdf	03 21 55.0	+9.5
PVRL	Vila Real	151.80	352	ePKPbc	PKPdf	03 21 54.8	+9.0
SET	Setif	151.91	327	P	PKPdf	03 21 57.0	+11
PVIS	Viseu	152.38	352	ePKPbc	PKPdf	03 21 56.3	+10
ESDC	Sonseca Array	152.61	345	PKP	PKPdf	03 21 48.2	+1.2
	comp=Z,0.7nm,0.8s,baz=18,slow=4.7,SNR=5.1						
ESDC				PKPbc	PKPdf	03 21 56.1	+9.1
	comp=Z,16nm,0.9s,baz=15,slow=2.5,SNR=40						
ESDC				PKPab	PKPab	03 22 07.3	-0.8
	comp=Z,7.5nm,0.8s,baz=333,slow=3.3,SNR=4.7						
ESLA	Sonseca Array	152.61	345	ePKPbc	PKPdf	03 21 56.3	+9.3
MTE	Manteigas	152.63	351	ePKPbc	PKPdf	03 21 56.6	+10
MTE	Manteigas	152.63	351	ePKPbc	PKPdf	03 21 56.5	+9.4
PCBR	Castelo Branco	153.17	351	ePKPbc	PKPdf	03 21 57.4	+10
PTOM	Tomar	153.52	352	ePKPbc	PKPdf	03 21 58.8	+11
EVO	Evora	154.53	351	ePKIKP	PKPdf	03 21 49.6	0.0
	comp=Z,38nm,1.3s						
PBEJ	Beja	155.01	351	ePKPab	PKPab	03 22 18.0	-0.2
DBIC	Dimbokro	169.67	231	PKP	PKPdf	03 22 06.8	+1.4
	comp=Z,7.0nm,1.1s,baz=116,slow=1.3,SNR=5.5						
DBIC				PKPab	PKPab	03 23 22.4	-0.1
	comp=Z,2.3nm,0.7s,baz=94,slow=6.7,SNR=6.1						
DBIC	Dimbokro	169.67	231	PKP	PKPdf	03 22 06.8	+1.4
DBIC				PKPab	PKPab	03 23 22.4	-0.1

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*IDC **29** 03:27:27.6±1.3, 24.79N×123.31E, mb3.7/4, mb1 3.9/4, mb1mx3.6/19, mbtmp3.7/4, MS3.7/2, Ms1 3.7/2, ms1mx2.7/27, Error ellipse: s-maj=63.9km s-min=25.5km az=66.0*

*JMA **29** 03:27:28.7±0.1, 24.82N×123.12E, h24^{km}±4^{km}, M3.4*

*NEIC **29** 03:27:32.7±4.9, 24.75N×123.11E, h35^{km}±45^{km}, mb4.0/1, Error ellipse: s-maj=53.7km s-min=16.1km az=68.0*

ISC 29 03:27:29.3±1.5**, 24.8N**±0.1×**123.17E**±0.05**, h19**^{km}±14^{km}**, n17, σ0ˢ69**/18**, mb3.7**/5**, MS4.0**/1**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.38	202	P	Pb	03 27 36.6	-0.6
YOJ				eS	Sb	03 27 42.1	-0.6
IRIF	Iriomote-Funau	0.70	133	P	Pb	03 27 42.4	-0.2
IRIF				eS	Sb	03 27 52.5	+0.7
HATJ	Hateruma jima	0.95	142	P	Pb	03 27 46.9	0.0
HATJ				eS	Sb	03 28 00.0	+0.9
JKRS	Kuro-shima	0.96	127	P	Pb	03 27 46.6	-0.4
JIJ	Ishigaki jima	0.99	117	P	Pb	03 27 47.1	-0.5
JTJ	Tarama	1.40	97	P	Pn	03 27 54.4	+0.3
TATO	Taipei	1.54	276	ePn	Pn	03 27 56.7	+0.7
TATO				eSn	rx	03 31 15.5	
NACB	Ninganchiao	1.57	246	ePn	Pn	03 27 57.6	+1.1
NACB				eSn	rx	03 31 15.9	
YHNB	Yeheng	1.64	265	ePn	Pn	03 27 57.9	+0.4
YHNB				eSn	rx	03 31 16.8	
JOW	Kunigami	5.02	65	LR	LR	03 30 39.7	
	comp=Z,362nm,18.1s,baz=107,slow=39						
SONM	Songino Array	26.54	334	P	P	03 33 08.3	+0.6
	0.8nm,0.8s,mb3.3,baz=136,slow=10,SNR=4.1						
MKAR	Makanchi Array	39.16	315	P	P	03 34 57.6	0.0
	0.8nm,0.9s,mb3.5,baz=97,slow=7.6,SNR=3.7						
WRA	Warramunga Arr	45.80	165	P	P	03 35 50.7	-1.2
	1.3nm,0.8s,mb3.9,baz=347,slow=8.7,SNR=11						
CHKZ	Chkalovo	48.38	321	eP	P	03 36 10.4	-1.3
	1.7nm,1.0s,mb4.0						
ARCES	ARCESS Array B	69.63	338	LR	LR	04 12 47.5	
	comp=Z,92nm,18.8s,MS4.0,baz=210,slow=39						
YKA	Yellowknife Ar	81.68	23	P	P	03 39 47.4	0.0
	0.6nm,0.7s,mb3.6,baz=304,slow=5.9,SNR=5.4						
YKA	Yellowknife Ar	81.68	23	P	P	03 39 47.4	0.0

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*THR **29** 04:07:39.0±0.3, 28.36N×51.44E, h29^{km}±7^{km}, ML3.5*

*CSEM **29** 04:07:39.0, 28.36N×51.44E, h29^{km}, ML3.5, After THR*

*IDC **29** 04:07:42.3±2.4, 28.80N×51.75E, mb4.0/7, mb1 4.0/8, mb1mx3.7/21, mbtmp3.9/8, ML2.9/1, Error ellipse: s-maj=49.5km s-min=28.1km az=158.0*

ISC 29 04:07:41.2±1.0**, 28.7N**±0.1×**51.68E**±0.08**, h10**^{km}**, n14, σ1ˢ24**/16**, mb3.8**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.21	108	ePG	Pg	04 08 03.9	-1.5
GHIR				eSg	Sg	04 08 22.1	+0.5
GHIR				AML	AML	04 08 34.4	
	comp=N,1μm,0.5s						
GHIR	Ghir-Karzin SNR=96	1.21	108	ePg	Pg	04 08 03.9	-1.5
GHIR				eSg	Sg	04 08 22.1	+0.5
	comp=N,1μm,0.5s,SNR=96						
NASN	Na'in	4.24	13	ePN	Pn	04 08 48.8	+1.4
KRBR	Kerman	4.63	72	ePN	Pn	04 08 53.6	+0.7
KRBR				AML	AML	04 09 52.4	
	comp=N,25nm,0.6s						
SNGE	Sanandaj	7.40	331	ePn	Pn	04 09 30.0	-1.9
BRTR	Keskin Array B	18.53	311	P	P	04 12 00.8	+1.1
	comp=N,0.0nm,0.3s,baz=131,slow=13,SNR=4.7						
AKTO	Aktyubinsk	22.27	11	P	P	04 12 41.1	+1.2
	comp=N,1.0nm,0.7s,mb3.4,baz=228,slow=9.6,SNR=3.9						
MKAR	Makanchi Array	29.96	44	P	P	04 13 49.4	-2.4
	comp=N,0.4nm,0.7s,mb3.2,baz=260,slow=7.4,SNR=3.8						
ZAL	Zalesovo	34.92	34	P	P	04 14 35.7	+0.8
	comp=N,0.8nm,0.3s,mb4.1,baz=239,slow=4.6,SNR=3.6						
FINES	FINESS Array B	36.94	340	P	P	04 14 51.1	-0.8
	comp=N,1.8nm,0.8s,mb4.0,baz=153,slow=8.5,SNR=7.1						
HFS	Hagfors	40.56	332	P	P	04 15 21.7	-0.5
	comp=N,1.8nm,0.4s,mb4.0,baz=117,slow=9.9,SNR=12						
NB2	NORSAR Subarra	42.08	332	P	P	04 15 33.5	-1.1
	comp=N,3.2nm,0.9s,mb4.0,baz=122,slow=7.4						
NOA	NORSAR Array B	42.08	332	P	P	04 15 34.1	-0.5
	comp=N,0.8nm,0.6s,mb3.6,baz=121,slow=8.1,SNR=3.3						
DBIC	Dimbokro	57.56	259	P	P	04 17 35.2	+1.5
	comp=N,2.5nm,0.8s,mb4.3,baz=23,slow=5.9,SNR=3.1						

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*IDC **29** 04:14:20.7±4.8, 37.59N×19.76E, h70^{km}±29^{km}, mb3.6/2, mb1 3.5/6, mb1mx3.3/24, mbtmp3.5/6, Error ellipse: s-maj=74.3km s-min=17.6km az=47.0*

*ATH **29** 04:14:21.5, 38.23N×20.51E, h18^{km}±1^{km}, MD3.7/13, ML3.9*

*HLW **29** 04:14:21.2, 38.18N×20.66E, h33^{km}, Mb3.5*

*NEIC **29** 04:14:21.5, 38.23N×20.51E, h18^{km}, ML3.9(ATH), After ATH.*

*CSEM **29** 04:14:23.2±0.1, 38.25N×20.62E, h15^{km}, ML3.9, Error ellipse: s-maj=2.0km s-min=1.4km az=48.0*

*THE **29** 04:14:24.6, 38.29N×20.60E, h10^{km}, ML3.6*

ISC 29 04:14:21.7±0.6**, 38.17N**±0.03×**20.48E**±0.04**, h15**^{km}±3^{km}**, n62, σ1ˢ32**/77**, mb3.6**/2**, 1C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.09	86	ePB	Pg	04 14 25.5	+0.6
VLS				eSB	Sg	04 14 27.9	+0.9
LKD	Levkas	0.55	14	ePg	Pg	04 14 32.7	-0.4
LKD				eSg	Sg	04 14 39.0	-1.7
RLS	Riolos of Patr	0.79	98	ePN	Pb	04 14 36.0	-0.6
RLS				eSN	Sb	04 14 47.7	+1.0
EVR	Evrytania	1.28	54	ePN	Pn	04 14 44.8	-0.3
IGT	Igoumenitsa	1.36	355	ePg	Pg	04 14 48.2	-0.9
IGT				eSg	Sg	04 15 06.7	-0.7
JAN	Janina	1.51	11	ePN	Pn	04 14 48.5	0.0
ITM	Ithomi	1.51	130	ePN	Pn	04 14 50.0	+1.5
KEK	Kerkira	1.63	341	ePN	Pn	04 14 51.0	+0.8
KEK	Kerkira	1.63	341	Pn	Pn	04 14 51.1	+0.9
AGG	Agios Georgios	1.68	59	ePg	Pg	04 14 52.9	-2.5
SRN	Sarande	1.75	348	ePn	Pn	04 14 52.6	+0.8
SRN				i Sn	Sg	04 15 26.5	+6.4
LKR	Lokris	2.04	76	ePN	Pn	04 14 56.8	+0.8
KZN	Kozani	2.36	25	ePN	Pn	04 15 01.9	+1.3
NEO	Neokhori	2.42	61	ePN	Pn	04 15 02.3	+0.8
XOR	Xorichti	2.43	60	ePn	Pn	04 15 03.5	+1.9
VLI	Veliai	2.43	126	ePB	Pb	04 15 03.9	-0.9
ATH	Athens Observa	2.56	93	ePN	Pn	04 15 04.1	+0.6
FNA	Florina	2.70	15	ePn	Pn	04 15 07.0	+1.5
KYTH	Kithira	2.78	132	ePN	Pn	04 15 07.0	+0.4
LCI	Lecce	2.84	320	Pn	Pn	04 15 07.8	+0.4
AOS	Alonnisos	2.84	68	ePn	Pn	04 15 08.4	+0.9
BIA	Bitola	2.92	13	ePn	Pn	04 15 09.5	+0.9
BIA				eSn	Sn	04 15 44.4	+0.7
OHR	Ohrid	2.95	5	ePn	Pn	04 15 10.9	+1.9
OHR				eSn	Sn	04 15 45.0	+0.6
OHR				eLg		04 15 54.6	
	comp=E,74nm,0.7s						
OHR	Ohrid	2.95	5	ePn	Pn	04 15 10.9	+1.9
OHR				eSn	Sn	04 15 45.0	+0.6
OHR				Lg		04 15 54.6	
THE	Thessaloniki	3.12	37	ePn	Pn	04 15 12.5	+1.0
GRG	Griva	3.15	27	ePn	Pn	04 15 13.0	+1.1
PLG	Polygyros	3.18	45	ePN	Pn	04 15 11.2	-1.1
TIR	Tirane	3.21	352	Pn	Pn	04 15 13.3	+0.6
GRI	Girifalco	3.25	283	Pn	Pn	04 15 14.6	+1.3
QSH	Qafa e Shtames	3.38	353	i Pn	Pn	04 15 16.0	+0.9
QSH	Qafa e Shtames	3.38	353	ePn	Pn	04 15 16.0	+0.9
SOH	Sokhos	3.46	39	ePn	Pn	04 15 17.2	+1.0
VAY	Valandovo	3.53	26	ePn	Pn	04 15 18.2	+0.9
VAY				eSn	Sn	04 15 57.2	-2.0
VAY				eSn	Sn	04 16 03.7	+4.5
VAY				eLg		04 16 11.5	
	comp=E,26nm,0.9s						
VAY				eLg		04 16 13.2	
	comp=N,24nm,0.7s						
VAY	Valandovo	3.53	26	ePn	Pn	04 15 18.2	+0.9
VAY				eSn	Sn	04 15 57.2	-2.0
VAY				Lg		04 16 11.5	
VAY				Lg		04 16 13.2	
BRT	Bari-Castellan	3.71	318	Pn	Pn	04 15 20.0	+0.2
KKB	Krupnik	4.20	28	eP	Pn	04 15 26.0	-0.7
MMB	Musomiste	4.23	35	i P	Pn	04 15 27.0	-0.2
SLCN	Sala Consilina	4.37	302	Pn	Pn	04 15 31.1	+1.9
IDI	Anoyia	4.56	128	P	Pn	04 15 30.6	-1.4
	comp=N,0.3nm,0.3s,baz=221,slow=20,SNR=3.7						
IDI				S	Sn	04 16 23.2	-2.1
	comp=N,4.3nm,0.3s,baz=163,slow=24,SNR=16						
SGO	Sicignano	4.67	302	Pn	Pn	04 15 35.5	+2.1
RZN	Rozhen	4.79	41	i P	Pn	04 15 35.0	-0.1
RDO	Rodhopi	4.90	51	ePN	Pn	04 15 35.9	-0.9
FGMS	Monte Sant'Ang	4.96	317	Pn	Pn	04 15 37.0	-0.5
RGNG	Rignano Grg	5.14	314	Pn	Pn	04 15 39.6	-0.5
KDZ	Kurdzhali	5.14	46	i P	Pn	04 15 38.5	-1.7
FG2	Serracapriola	5.46	313	Pn	Pn	04 15 44.6	-0.1
SGG	Gregorio Mates	5.69	306	Pn	Pn	04 15 49.3	+1.4
SLUM		7.71	148	P	Pn	04 16 10.6	-5.7
MLR	Muntele Rosu	8.37	27	P	P	04 16 30.9	+5.4
	comp=N,0.2nm,0.3s,baz=231,slow=14,SNR=2.3						
HMAT	Matruh	8.92	140	P	P	04 16 27.8	-5.2
HMAT				S	Sn	04 17 59.7	-14
VOY	Vojsko	9.25	330	ePn	P	04 16 34.8	-2.9
VOJS	Vojsko	9.26	330	i Pn	P	04 16 34.6	-3.1
VOJS				i Pg	P	04 16 35.8	-1.9
VOJS	Vojsko	9.26	330	i Pg	P	04 16 35.8	-1.9
OBKA	Obir	9.42	334	⇑iPn	P	04 16 37.2	-2.7
	comp=N,2.6nm,0.5s						
SWA2		9.82	154	P	P	04 16 40.3	-5.2
SWA1		9.89	152	⇓P	P	04 16 42.1	-4.4
SWA1				S	Sn	04 18 24.0	-14
BRTR	Keskin Array B	10.37	77	P	P	04 16 56.7	+3.7
	comp=N,0.1nm,0.3s,baz=259,slow=12,SNR=5.0						
MOA	Molln	10.69	337	⇓iPn	P	04 16 55.1	-2.2
	comp=N,1.5nm,0.5s						
DAVOX	Davos	11.62	321	P	P	04 17 08.5	-1.5
	comp=N,0.1nm,0.3s,baz=183,slow=18,SNR=3.3						
GERES	GERESS Array B	11.74	337	P	P	04 17 08.1	-3.6
	comp=N,0.2nm,0.3s,baz=155,slow=14,SNR=5.8						
HFS	Hagfors	22.40	351	P	P	04 19 18.4	-2.4
	comp=N,3.3nm,0.9s,mb3.8,baz=150,slow=12,SNR=4.7						
MKAR	Makanchi Array	45.33	58	P	P	04 22 37.6	-3.1
	comp=N,0.3nm,0.3s,mb3.5,baz=274,slow=7.7,SNR=12						

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*NEIC **29** 04:21:17.0, 18.93N×68.53W, h136^{km}, MD3.9(RSPR), After RSPR.*

RSPR 29 04:21:17.0, 18.93N×68.53W, h136^{km}±9^{km}**, MD3.9**/12**, MD3.9**/12**, 9C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSP	Las Mesas	1.56	118	⇑eP	P	04 21 45.8	-0.8
LSP				eS	S	04 22 09.3	+0.1
CRPR	Cabo Rojo, PR	1.63	124	⇓eP	P	04 21 45.8	-1.5
CRPR				eS	S	04 22 10.5	-0.1
MGP	Maguayo	1.65	124	⇓eP	P	04 21 46.1	-1.4
MGP				eS	S	04 22 10.1	-0.8
LRS	Lares	1.72	111	⇓eP	P	04 21 47.1	-1.3
LRS				eS	S	04 22 12.1	-0.2
AOPR	Arecibo Observ	1.78	109	⇑eP	P	04 21 48.1	-1.0
AOPR				eS	S	04 22 13.4	-0.2
ICM	Isla Caja Muer	2.17	118	⇑eP	P	04 21 53.8	0.0
SJG	San Juan	2.40	109	⇑eP	P	04 21 56.9	+0.1
CBYP	Canovanas	2.62	104	⇑eP	P	04 21 59.7	+0.1
CPD	Cerro la Pandu	2.63	109	⇑eP	P	04 22 00.0	+0.2
CPD				eS	S	04 22 32.2	-0.3
HUMP	Col San Antoni	2.66	107	⇑eP	P	04 21 59.5	-0.7
HUMP				eS	S	04 22 32.0	-1.0
MTP	Monte Pirata	2.94	106	⇑eP	P	04 22 03.0	-0.8
MTP				eS	S	04 22 39.1	-0.3
STVI	Saint Thomas	3.43	99	⇑eP	P	04 22 10.4	+0.2
STVI				eS	S	04 22 50.5	-0.5

OTT 29 04:33:44.0±0.8**, 72.00N×74.62W, h18**^{km}**, MN3.1**/1**, 140km southeast from Pond Inlet, Nu Baffin Island Seismic Zone, Nt., Baffin Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINU	Pond Inlet	1.24	306	PN	Pn	04 34 06.8	+0.2
PINU				SN	Sn	04 34 22.7	-0.2
PINU				Trac		04 34 26.7	
	comp=Z,51nm,0.1s						
ILON	Igloolik, Nuna	3.56	226	PN	Pn	04 34 38.3	-1.5
ILON				SN	Sn	04 35 18.4	-3.5
ILON				SG	Sn	04 35 30.2	+8.4
ILON				Trac		04 35 34.7	
	comp=Z,12nm,0.1s						
RES	Resolute Bay	6.40	304	PN	Pn	04 35 18.6	-1.3
RES				SN	Sn	04 36 28.3	-5.0
RES				LG		04 37 07.2	
RES				Trac		04 37 19.2	
	comp=Z,1.3nm,0.3s						
QILN	Qililugaq Expl	6.78	223	PN	Pn	04 35 20.8	-4.4
QILN				SN	Sn	04 36 33.4	-9.4
QILN				LG		04 37 05.5	
QILN				Trac		04 37 10.0	
	comp=Z,3.4nm,0.3s						
FRB	Frobisher Bay	8.60	162	PN	P	04 35 47.0	-3.6
FRB				SN	Sn	04 37 16.6	-11
FRB				LG		04 38 04.2	
FRB				Trac		04 38 12.8	
	comp=Z,14nm,1.7s						
YRTN	Rankin Inlet	11.35	225	PN	P	04 36 23.6	-4.6
YRTN				SN	S	04 38 18.4	-17
YRTN				LG		04 39 26.2	
YRTN				Trac		04 39 52.4	
	comp=Z,0.6nm,0.3s						

NEIC 29 04:45:41.0, 39.08N×119.01W, h6^{km}**, ML3.6**(REN)**, After REN., Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNV	Mina	0.93	134	eP	Pb	04 45 58.6	-0.6
MNV				eS	Sb	04 46 10.7	-0.8
CMB	Columbia Colle	1.50	226	eP	Pn	04 46 08.3	-0.2
TPH	Tonopah	1.72	125	eP	Pn	04 46 11.9	+0.2
MTUM	Tungsten Hills	1.76	168	eP	Pn	04 46 12.3	0.0
OHCM	Honcut	1.94	278	Pn	Pn	04 46 13.9	-0.9
MOD	Modoc	2.99	341	Pn	Pn	04 46 28.4	-1.5
SAO	San Andreas Ge	3.01	221	ePn	Pn	04 46 29.2	-0.9
DAC	Darwin (Calif)	3.02	158	ePn	Pn	04 46 29.6	-0.6
TPNV	Topopah Spring	3.05	133	ePn	Pn	04 46 29.9	-0.7
LRV	Little Rabbit	3.09	212	Pn	Pn	04 46 30.7	-0.6
WDC	Whiskeytown Da	3.10	300	ePn	Pn	04 46 29.7	-1.8
ELK	Elko	3.34	59	ePn	Pn	04 46 33.0	-1.8
ISA	Isabella	3.44	173	Pn	Pn	04 46 35.3	-0.9
PTRM	Twissleman Ran	3.55	196	Pn	Pn	04 46 35.4	-2.5
ARUT	Antelope Range	4.56	105	Pn	Pn	04 46 50.7	-1.4
NEN	Nelson	4.77	135	Pn	Pn	04 46 55.3	+0.2
DUG	Dugway	4.91	75	ePn	Pn	04 46 55.7	-1.5
LDFC	Landfair	5.07	141	Pn	Pn	04 46 59.8	+0.4
MVU	Marysvale	5.34	94	Pn	Pn	04 47 03.7	+0.4
MSU	Marysvale	5.37	94	Pn	Pn	04 47 01.9	-1.7
NLU	North Lily Min	5.43	79	Pn	Pn	04 47 03.8	-0.7
SPUT	South Promonto	5.50	64	Pn	Pn	04 47 04.2	-1.2

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*GUC **29** 05:26:41.1±0.4, 26.57S×71.11W, h40^{km}±2^{km}, ML3.7*

ISC 29 05:26:40.4±1.7**, 26.54S**±0.06×**71.2W**±0.2**, h50**^{km}±12^{km}**, n10, σ0ˢ63**/13**, 3C-4D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRCH	Chaqaral	0.52	68	⇓iP	P	05 26 51.9	0.0
CRCH				i S	S	05 26 59.4	-0.7
CRCH				AMP		05 26 59.8	
	comp=E,34μm,0.3s						
CDCH	Caldera	0.60	151	⇓iP	P	05 26 52.7	-0.2
CDCH				i S	S	05 27 01.5	-0.6
CDCH				AMP		05 27 02.1	
	comp=N,359nm,0.4s						
CPCH	Copiapo	1.08	139	⇓iP	P	05 26 60.0	+0.5
CPCH				i S	S	05 27 14.2	+0.6
CPCH				AMP		05 27 15.2	
	comp=E,20μm,0.1s						
TLL	Tololo Astrono	3.63	175	eP	P	05 27 35.9	+0.4
TLL				i S	S	05 28 17.8	+0.4
SPCH	San Pedro de A	4.51	37	⇓iP	P	05 27 48.5	+0.7
SPCH				i S	S	05 28 39.9	+0.3
VNA3	Neumayer Olymp	56.02	160	⇑i	P	05 36 16.7	+0.8
VNA3	Neumayer Olymp	56.02	160	e	x	05 36 21.8	
VNA2	Neumayer--Watz	56.64	159	⇑i	P	05 36 19.1	-1.3
VNA2	Neumayer--Watz	56.64	159	e	x	05 36 25.5	
SNAA	Sanae	58.24	160	⇑i	P	05 36 30.8	-0.8

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*NEIC **29** 05:32:18.2±0.8, 17.79S×69.12W, h131^{km}±12^{km}, mb4.1/6, Error ellipse: s-maj=13.7km s-min=12.2km az=129.0*

*IDC **29** 05:32:18.6±1.6, 17.74S×69.11W, h148^{km}±12^{km}, mb3.8/5, mb1 3.9/7, mb1mx3.5/16, mbtmp4.2/7, Error ellipse:*

s-maj=21.5km s-min=18.1km az=79.0

ISC 29 05:32:17.1±0.7**, 17.67S**±0.08×**69.17W**±0.05**, h147**^{km}±8^{km}**, n18, σ1^{s}17**/22**, mb4.0**/7**, 1C-1D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	1.69	36	P	P	05 32 52.3	+3.4
	77nm,0.3s,baz=237,slow=6.0,SNR=2017						
LPAZ				S	S	05 33 15.9	+2.6
	13nm,0.3s,baz=154,slow=11,SNR=9.0						
LPAZ	La Paz	1.69	36	⇓ iP	P	05 32 52.1	+3.3
LPAZ				eSn	S	05 33 14.5	+1.2
ARE	Arequipa	2.53	298	⇑ iP	P	05 32 59.3	+0.3
ARE				i S	S	05 33 30.4	-0.6
SIV	San Ignacio	7.93	79	P	P	05 34 09.6	-1.0
	18nm,0.3s,baz=270,slow=12,SNR=136						
SIV				S	S	05 35 38.1	-1.0
	0.5nm,0.3s,baz=352,slow=19,SNR=2.9						
NNA	Nana	9.32	306	ePn	P	05 34 26.6	-2.4
	6.6nm,0.6s						
SAML	Samuel	10.44	35	ePn	P	05 34 44.6	+0.7
	1.3nm,0.5s						
SAML				eSn	S	05 36 35.2	-3.6
CFAA	Coronel Fontan	13.90	177	P	P	05 35 28.2	-0.6
	0.1nm,0.3s,baz=353,slow=12,SNR=14						
CFAA	Coronel Fontan	13.90	177	P	P	05 35 28.2	-0.6
BDFB	Brasilia	20.36	87	P	P	05 36 44.0	0.0
	10nm,0.4s,baz=269,slow=8.5,SNR=36						
TRQA	Tornquist	21.27	164	eP	P	05 36 53.2	+0.5
	22nm,1.4s,mb4.3						
PLCA	Paso Flores	23.02	183	P	P	05 37 09.7	-0.1
	2.3nm,0.7s,mb3.7,baz=355,slow=12,SNR=9.2						
PLCA	Paso Flores	23.02	183	eP	P	05 37 10.5	+0.7
	2.4nm,0.7s,mb3.7						
MIAR	Mount Ida	56.88	336	eP	P	05 41 51.1	+2.1
	4.8nm,0.7s,mb4.4						
DBIC	Dimbokro	67.93	75	P	P	05 43 01.9	-0.7
	3.1nm,0.6s,mb4.2,baz=220,slow=6.2,SNR=17						
ULM	Lac du Bonnet	71.61	342	P	P	05 43 23.3	-0.9
	1.5nm,0.4s,mb4.0,baz=206,slow=2.9,SNR=6.1						
VNDA	Vanda	80.56	190	eP	P	05 44 15.1	+1.1
	0.7nm,0.5s,mb3.5						
YKA	Yellowknife Ar	87.51	341	P	P	05 44 49.3	+0.4
	0.4nm,0.6s,mb3.4,baz=133,slow=4.6,SNR=5.2						
SONM	Songino Array	149.69	6	PKPbc	PKPdf	05 51 51.7	+7.4
	0.3nm,0.5s,baz=286,slow=1.3,SNR=4.1						

*NIED **29** 05:40:00, 35.60N×140.10E, h68^{km}, Mw4.0 Best double couple: M₀1.31×10^{15} NP1:φ$_{s}$219°, δ48°, λ98°. NP2:φ$_{s}$27°, δ43°, λ81°.*

*IDC **29** 05:40:47.3±2.0, 35.53N×140.36E, h63^{km}±19^{km}, mb3.6/7, mb1 4.0/10, mb1mx3.8/21, mbtmp4.1/10, Error ellipse: s-maj=25.1km s-min=7.0km az=65.0*

*NEIC **29** 05:40:48.3±2.1, 35.57N×140.28E, h68^{km}±17^{km}, mb4.5/1, MW4.0(NIED), Error ellipse: s-maj=26.8km s-min=14.9km az=90.0*

*JMA **29** 05:40:48.2±0.2, 35.59N×140.15E, h66^{km}±2^{km}, M4.0 Broadband fault plane solution: P waves. NP1:φ$_{s}$249°, δ35°, λ140°. NP2:φ$_{s}$13°, δ69°, λ62°. Principal axes: T Plg57°, Azm245°; N Plg26°, Azm24°; P Plg19°, Azm124°;*

JMA Felt I J1.

*BJI **29** 05:40:49.0, 35.01N×139.56E, h74^{km}, mB5.0, mb4.6*

ISC 29 05:40:47.1±0.6**, 35.53N**±0.05×**140.24E**±0.08**, h75**^{km}±5^{km}**, n29, σ0^{s}82**/34**, mb3.9**/8**, 3C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCN	Nagara	0.12	197	⇑P	P	05 40 58.8	+0.7
TOK	Tokyo	0.42	292	S	S	05 41 08.6	-0.8
BSO3	Boso 3	0.76	163	P	P	05 41 04.1	+0.8
JOD2	Odawara 2	0.98	255	⇓P	P	05 41 05.4	-0.5
JIM2	Oshima 3	1.05	220	P	P	05 41 06.6	-0.1
BSO1	Boso 1	1.06	145	⇑P	P	05 41 07.3	+0.4
JAG	Ashikaga	1.10	325	⇓P	P	05 41 06.8	-0.6
JRY	Ryogami san	1.19	294	⇓P	P	05 41 08.5	-0.1
JIZS	Izushimoda	1.38	235	⇑P	P	05 41 10.9	-0.3
JYN	Shimob	1.39	269	⇓P	P	05 41 10.8	-0.5
JKT	Katashina	1.48	327	P	P	05 41 11.6	-0.9
MJAR	Matsushiro Arr	1.93	302	P	P	05 41 18.2	-0.4
	50nm,0.3s,baz=44,slow=12,SNR=240						
MJAR				S	S	05 41 42.8	+1.0
	42nm,0.3s,baz=142,slow=15,SNR=7.8						
MAJO	Matsushiro	1.94	302	⇓ iP	P	05 41 18.8	+0.2
MAJO				eSn	S	05 41 42.2	+0.3
MAT	Matsushiro	1.94	302	P	P	05 41 18.7	+0.1
MAT				S	S	05 41 41.1	-0.7
MAT	Matsushiro	1.94	302	eP	P	05 41 19.0	+0.4
MAT				eS	S	05 41 41.0	-0.8
JHJ	Hachijo jima 2	2.43	189	P	P	05 41 26.4	+0.8
	150nm,0.3s,baz=295,slow=1.0,SNR=29						
JHJ				S	S	05 41 54.5	+0.2
	220nm,0.3s,baz=236,slow=23,SNR=10						
JNU	Nakatsue	8.11	255	P	P	05 42 45.6	+1.3
	2.3nm,0.3s,baz=103,slow=4.7,SNR=9.2						
CBIJ	Chichi jima	8.57	168	P	P	05 42 47.4	-3.2
	39nm,0.3s,baz=280,slow=17,SNR=18						
CBIJ				S	S	05 44 18.9	-7.6
	11nm,0.3s,baz=246,slow=20,SNR=5.2						
MDJ	Mudanjiang	12.19	321	P	P	05 43 42.5	+3.1
MDJ				AMB	AMB		
	comp=Z,20nm,1.1s						
SONM	Songino Array	27.88	307	P	P	05 46 31.0	-0.7
	comp=Z,0.8nm,0.6s,mb3.4,baz=104,slow=7.8,SNR=7.7						
MKAR	Makanchi Array	44.13	303	P	P	05 48 50.2	+0.6
	comp=Z,1.8nm,0.6s,mb4.0,baz=87,slow=9.9,SNR=21						
MKAR	Makanchi Array	44.13	303	P	P	05 48 50.2	+0.6
ILAR	Eielson Array	51.27	32	P	P	05 49 45.5	+0.5
	comp=Z,0.6nm,0.8s,mb3.6,baz=272,slow=6.2,SNR=6.7						
WRAB	Tennant Creek	55.44	187	eP	P	05 50 15.4	-0.9
	comp=Z,3.4nm,0.7s,mb4.5						
WRA	Warramunga Arr	55.45	187	P	P	05 50 15.6	-0.8
	comp=Z,1.7nm,0.3s,mb4.5,baz=1.3,slow=7.5,SNR=60						
AKASG	Malin Array Be	74.91	322	P	P	05 52 21.4	+0.2
	comp=Z,1.4nm,0.6s,mb3.9,baz=49,slow=6.1,SNR=5.9						
NOA	NORSAR Array B	75.20	337	P	P	05 52 23.5	+0.9
	comp=Z,1.7nm,1.0s,mb3.7,baz=35,slow=5.4,SNR=2.9						
PDAR	Pinedale Array	79.40	45	P	P	05 52 45.5	-0.9
	comp=Z,0.3nm,0.6s,mb3.3,baz=306,slow=7.8,SNR=2.6						
PDAR				pP	pP	05 53 05.6	-1.2
	comp=Z,0.3nm,0.7s,baz=315,slow=2.6,SNR=3.9						
TXAR	Lajitas Array	91.79	52	pP	pP	05 54 06.4	-2.4
	comp=Z,0.3nm,0.8s,baz=307,slow=6.3,SNR=4.2						

*FUNV **29** 05:47:34.7, 10.84N×62.33W, h70^{km}, MW2.4*

*TRN **29** 05:47:41.0, 11.11N×61.94W, h85^{km}, MD3.3*

*NEIC **29** 05:47:41.0, 11.11N×61.94W, h85^{km}, MD3.3(TRN), After TRN.*

ISC 29 05:47:32.9±0.9**, 10.86N**±0.06×**62.40W**±0.04**, h83**^{km}±9^{km}**, n11, σ1^{s}19**/22**, 1C-2D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	Guiria	0.27	140	⇑ iP	P	05 47 45.2	-0.2
GUIV				eS	S	05 47 53.2	-1.6
CRUV	Carupano	0.84	258	⇓ iP	P	05 47 51.7	+1.2
CRUV				eS	S	05 48 04.3	+0.6
GUNV	Guanoco	0.87	218	i P	P	05 47 52.4	+1.5
GUNV				eS	S	05 48 04.0	-0.3
ITEV	Isla Los Testi	0.88	305	⇓ iP	P	05 47 51.9	+1.0
ITEV				eS	S	05 48 04.7	+0.3
TRN	Trinidad (W)	1.00	102	eP	P	05 47 56.8	+4.5
TRN				eS	S	05 48 06.5	-0.4
TPP	Pointe-a-Pierr	1.07	120	eP	P	05 47 58.5	+5.3
TPP				eS	S	05 48 11.4	+2.9
GRW	Mount Saint Ca	1.48	29	eP	P	05 47 59.3	+0.7
GRW				eS	S	05 48 14.9	-2.7
TPR	Prospect	1.62	78	eP	P	05 48 01.0	+0.5
TPR				eS	S	05 48 20.0	-0.7
PCRV	Puerto La Cruz	2.30	253	eP	P	05 48 10.1	+0.4
PCRV				eS	S	05 48 36.2	-0.7
BIRV	Birongo	3.82	265	eP	P	05 48 31.6	+0.8
BIRV				eS	S	05 49 12.2	-2.6
CAOV	Caicara del Or	5.23	228	eP	P	05 48 48.6	-1.5
CAOV				eS	S	05 49 44.6	-5.0

IDC 29 05:51:40.9±4.2**, 2.37N**×**97.91E, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.7**/16**, mbtmp3.6**/4**, Error ellipse: s-maj=167.1km s-min=29.5km az=57.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	42.06	124	P	P	05 59 34.7	-1.8
	0.2nm,0.4s,baz=302,slow=9.1,SNR=5.0						
SONM	Songino Array	45.88	8	P	P	06 00 05.3	-1.6
	0.3nm,0.4s,baz=199,slow=9.1,SNR=3.8						
MKAR	Makanchi Array	46.29	345	P	P	06 00 07.9	-2.2
	0.1nm,0.4s,baz=153,slow=8.4,SNR=4.6						
ZAL	Zalesovo	52.52	350	P	P	06 00 55.9	-2.2
	1.8nm,0.4s,baz=336,slow=5.7,SNR=4.5						

*THR **29** 05:57:03.0±0.5, 37.59N×54.69E, h15^{km}, ML5.0*

*TEH **29** 05:57:08.7, 37.41N×54.45E, h10^{km}, Mn4.8*

*CSEM **29** 05:57:08.4±0.0, 37.31N×54.49E, h29^{km}, mb4.8/20, Error ellipse: s-maj=1.4km s-min=1.1km az=142.0*

*IDC **29** 05:57:08.7±0.8, 37.24N×54.49E, h27^{km}±3^{km}, mb3.9/19, mb1 4.1/22, mb1mx4.0/26, mbtmp4.1/22, ML4.0/3, MS3.8/14, Ms1 3.8/14, ms1mx3.5/26, Error ellipse: s-maj=17.2km s-min=11.8km az=175.0*

*BJI **29** 05:57:09.9, 37.04N×54.19E, h44^{km}, mB4.9, mb4.8, Ms4.6, Msz4.3*

*NEIC **29** 05:57:09.8±0.2, 37.39N×54.43E, mb4.7/18, ML4.8(TEH), Error ellipse: s-maj=4.0km s-min=3.6km az=159.0*

*MOS **29** 05:57:10.5±1.6, 37.73N×54.43E, h32^{km}, mb4.9/14, Error ellipse: s-maj=6.8km s-min=5.0km az=116.8*

*NNC **29** 05:57:16.0±4.4, 38.08N×55.40E, Error ellipse: s-maj=46.5km s-min=35.1km az=19.0*

ISC 29 05:57:08.2±0.2**, 37.43N**±0.02×**54.42E**±0.03**, h27**^{km}**, h27**^{km}±.7^{km}**:pP-P, n224, σ1^{s}33**/227**, mb4.4**/44**, MS3.9**/19**, 17C-12D, Iran-Turkmenistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGLO	Galoogah	1.35	214	Pg	Pn	05 57 26.1	-5.5
IKIA	Kiasar	1.36	206	Pg	Pn	05 57 31.8	0.0
ISHM	Shahmirzad	1.86	210	Pn	Pn	05 57 40.0	+1.1
IANJ	Anjiloo	2.00	192	Pn	Pn	05 57 42.1	+1.1
IPRN	Paran-Amol	2.11	236	Pn	Pn	05 57 41.3	-1.3
IFIR	Firoozkooh	2.24	217	Pn	Pn	05 57 45.2	+0.9
IFIR				Sn	Sn	05 58 14.6	+3.3
ILAS	Lasjerd	2.36	210	Pn	Pn	05 57 47.6	+1.5
DAMV	Damavand	2.67	228	ePN	Pn	05 57 51.3	+0.8
DAMV				AML	AML	05 58 35.7	
	comp=N,5µm,0.5s						
IDMV	Damavand	2.67	227	Pn	Pn	05 57 51.6	+1.1
IDMV				Lg		05 58 29.6	
IAFJ	Afjeh	2.69	235	Pn	Pn	05 57 51.6	+0.9
IAFJ				Sn	Sn	05 58 21.7	-1.1
VAN	Vannovskaya	2.97	79	P	Pn	05 57 56.1	+1.3
VAN				S	Sn	05 58 31.2	+1.3
CHTH	Charan	3.06	241	ePN	Pn	05 57 56.6	+0.7
CHTH				AML	AML	05 58 53.8	
	comp=N,4µm,0.6s						
THKV	Tehran--Karaj	3.23	243	ePN	Pn	05 57 59.0	+0.7
THKV				AML	AML	05 59 00.7	
	comp=N,5µm,0.5s						
IVRN	Varamin	3.27	223	Pn	Pn	05 57 59.3	+0.4
IVRN				Sn	Sn	05 58 36.1	-1.3
IMHD	Mahdasht	3.49	241	Pn	Pn	05 58 02.6	+0.5
ISFB	Sefidab	3.55	211	Pn	Pn	05 58 02.2	-0.8
IQOM	Qom	3.75	227	Pn	Pn	05 58 05.8	0.0
IQOM				Sn	Sn	05 58 55.2	+5.6
IPAY	Payeh	3.79	104	Pn	Pn	05 58 06.4	-0.1
IMOG	Moghan	4.17	107	Pn	Pn	05 58 11.4	-0.3
MHI	Mashhad	4.20	104	Pn	Pn	05 58 12.6	+0.3
IMYA	Miamay	4.68	102	Pn	Pn	05 58 18.1	-1.0
NASN	Na'in	4.81	196	ePN	Pn	05 58 19.8	-1.1
NASN				AML	AML	05 59 45.1	
	comp=E,421nm,0.6s						
ICHK	Chekchek	5.18	180	Pn	Pn	05 58 25.2	-0.9
GRMI	Germi	5.33	287	ePN	Pn	05 58 26.2	-2.0
IBAF	Bafgh	5.91	170	Pn	Pn	05 58 34.9	-1.4
IMEH	Mehriz	6.03	178	Pn	Pn	05 58 36.7	-1.4
SNGE	Sanandaj	6.17	250	ePN	Pn	05 58 40.0	-0.1
SHGR	Shooshtar-Gavs	7.04	223	ePN	Pn	05 58 51.6	-0.7
KRBR	Kerman	7.68	165	ePN	Pn	05 58 58.8	-2.5
MAKU	Maku	7.88	287	ePN	Pn	05 59 02.2	-1.9
GNI	Garni	8.03	293	ePn	P	05 59 05.2	-0.9
	comp=E,56nm,0.6s						
GNI	Garni	8.03	293	eP	P	05 59 05.2	-0.9
GNI				pmax	pmax		
	comp=Z,56nm,0.6s						
GNI	Garni	8.03	293	eP	P	05 59 05.2	-0.9
	comp=Z,56nm,0.6s						
TI2	Plekhanov	8.61	303	eP	P	05 59 09.2	-5.0
TBLG	Delisi	8.62	303	P	P	05 59 03.3	-11
TBLG				S	Sn	06 00 47.9	-3.7
BHD	Baghdad	9.19	246	ex	x	05 59 20.0	
BHD				ex	x	06 01 03.0	
GHIR	Ghir-Karzin	9.20	188	ePN	P	05 59 20.4	-1.9
ZHSF	Zahedan	9.43	144	ePN	P	05 59 21.0	-4.5
BNDS	Bandar-Abbas	10.12	171	ePN	P	05 59 32.1	-2.8
KIV	Kislovodsk	11.03	310	ePn	P	05 59 43.6	-3.8
	comp=Z,40nm,0.6s						
KIV				eSn	S	06 01 48.1	-2.8
KIV	Kislovodsk	11.03	310	eP	P	05 59 43.6	-3.8
KIV				e		06 01 48.1	
KIV				pmax	pmax		
	comp=Z,40nm,0.6s						
KIV	Kislovodsk	11.03	310	eP	P	05 59 43.6	-3.8
	comp=Z,40nm,0.6s						
KIV				eSn	S	06 01 48.1	-2.8
GOF	Gofitskoye	11.46	315	eP	P	05 59 48.3	-4.9
GOF				eS	S	06 01 52.4	-8.9
GOF				pmax	pmax		
	comp=Z,40nm,0.6s						
GOF				smax			
	comp=N,330nm,0.9s						
GOF				smax			
	comp=E,370nm,0.9s						
GOF	Gofitskoye	11.46	315	eP	P	05 59 48.3	-4.9
	comp=E,40nm,0.6s						
AB31	Akbulak array	12.48	17	⇑Pn	P	06 00 02.7	-4.2
	comp=E,8.0nm,0.6s						
AB31				⇑Sn	S	06 02 16.4	-10
	comp=E,14nm,0.7s						
AB31	Akbulak array	12.48	17	P	P	06 00 02.7	-4.2
AB31						06 02 16.3	
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31				smax			
	comp=Z,1.0nm,0.3s						
AB31	Akbulak array	12.48	17	P	P	06 00 02.7	-4.2
	comp=Z,1.0nm,0.3s						
AB31				S	S	06 02 16.3	-10
	comp=Z,1.0nm,0.3s						
AKTK	Aktyubinsk	13.25	10	P	P	06 00 13.8	-3.3
	comp=Z,622nm,18.6s						
AKTO	Aktyubinsk	13.25	10	Pn	P	06 00 13.8	-3.3
	comp=Z,1.9nm,0.3s,baz=191,slow=12,SNR=31						
AKTO				LR	LR	06 06 58.6	
	comp=Z,622nm,18.6s,slow=44						
AKTO	Aktyubinsk	13.25	10	P	P	06 00 13.8	-3.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,622nm,18.6s						
KK31	Karatay Array	13.52	60	⇑Pn	P	06 00 15.6	-5.2
	comp=Z,2.1nm,0.5s,baz=249,slow=11,SNR=6.5						
KK31				⇓Sn	S	06 02 42.7	-8.4
	comp=Z,3.3nm,0.6s						
KKAR	Karatay Array	13.52	60	i P	P	06 00 15.5	-5.2
KKAR						06 02 42.6	
KKAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KKAR				smax			
	comp=Z,5.0nm,0.7s						
KKAR	Karatay Array	13.52	60	i P	P	06 00 15.5	-5.2
	comp=Z,5.0nm,0.7s						
KKAR				S	S	06 02 42.6	-8.5
	comp=Z,5.0nm,0.7s						
ANN	Anapa	14.75	305	eP	P	06 00 37.0	+0.2
ANN				e		06 03 12.3	
ANN				pmax	pmax		
	comp=Z,42nm,1.1s						
ANN	Anapa	14.75	305	eP	P	06 00 37.0	+0.2
	comp=Z,42nm,1.1s						
ANN				eS	S	06 03 12.3	-7.9
QURS	Qurayyt al Mil	15.34	252	P	P	06 00 49.8	+5.2
MZLS	Mizel	15.52	213	P	P	06 00 42.2	-4.8
AAK	Ala-Archa	16.22	65	⇑P	P	06 00 58.7	+2.9
	comp=Z,9.4nm,0.8s						
AAK	Ala-Archa	16.22	65	eP	P	06 00 58.2	+2.4
	comp=Z,10nm,0.8s						
AAK	Ala-Archa	16.22	65	eP	P	06 00 58.2	+2.4
AAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AAK	Ala-Archa	16.22	65	eP	P	06 00 58.2	+2.4
	comp=Z,10nm,0.8s						
FRU	Bishkek	16.35	64	eP	P	06 01 06.0	+8.5
FRU				pmax	pmax		
	comp=Z,50nm,2.2s						
FRU				pmax	pmax		
	comp=E,170nm,2.2s						
FRU	Bishkek	16.35	64	eP	P	06 01 06.0	+8.5
	comp=E,50nm,2.2s						
BR131	Keskin Array S	16.41	284	eP	P	06 01 00.1	+1.8
	comp=E,2.9nm,0.8s						
BR131	Keskin Array S	16.41	284	eP	P	06 01 00.1	+1.8
	comp=E,2.9nm,0.8s						
BRTR	Keskin Array B	16.41	284	Pn	P	06 00 58.6	+0.3
	comp=E,0.1nm,0.3s,baz=96,slow=11,SNR=15						
AFFS	‘Afif	16.64	219	P	P	06 00 57.7	-3.7
KSH	Kashi	17.00	76	eP	P	06 01 09.0	+3.3
KSH				eAP		06 01 16.0	
KSH				eXP		06 01 21.3	
KSH				ePP	PP	06 01 23.0	+3.0
KSH				eS	S	06 04 14.8	+2.2
KSH				eSS	SS	06 04 36.0	+2.4
KSH				AMB	AMB		
	comp=Z,270nm,5.2s						
KSH				LR	LR		
	comp=N,820nm,5.9s						
KSH				LR	LR		
	comp=E,640nm,5.5s						
KBRS	Khaybar	17.34	232	P	P	06 01 10.9	+0.9
VRSR	Storozhevoye	17.51	327	eP	P	06 01 07.6	-4.4
VRSR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VRSR				pmax	pmax		
	comp=N,9.0nm,0.7s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VRSR				MLR	MLR		
	comp=Z,180nm,21.0s						
VRSR				MLR	MLR		
	comp=N,170nm,48.0s						
VRSR				MLR	MLR		
	comp=E,10.0nm,20.0s						
VRSR	Storozhevoye	17.51	327	eP	P	06 01 07.6	-4.4
	comp=E,170nm,48.0s						
ALWS	Ilw as Safayha	18.06	249	P	P	06 01 22.5	+3.4
JMOS	Jabal al Moall	18.10	249	P	P	06 01 21.3	+1.7
BDAS	Al Bad‘	18.51	247	P	P	06 01 24.5	-0.1
AYUS	‘Aynunah	18.52	246	P	P	06 01 24.4	-0.3
DBAS	Duba	18.59	242	P	P	06 01 27.0	+1.4
BRVK	Borovoye	19.14	30	eP	P	06 01 30.8	-1.1
	comp=E,6.0nm,0.7s						
BRVK				epP		06 01 38.5	
BRVK	Borovoye	19.14	30	eP	P	06 01 30.8	-1.1
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BRVK	Borovoye	19.14	30	eP	P	06 01 30.8	-1.1
	comp=Z,6.0nm,0.7s						
BRVK				epP		06 01 38.5	
BVA0	Borovoye Array	19.15	30	P	P	06 01 30.8	-1.3
	comp=Z,2.8nm,0.8s,baz=214,slow=14,SNR=56						
BVA0	Borovoye Array	19.15	30	i P	P	06 01 30.7	-1.4
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BVAR	Borovoye Array	19.15	30	P	P	06 01 30.7	-1.3
	comp=Z,0.8nm,0.3s,baz=214,slow=10,SNR=58						
VOSK	Vostochnaya	19.17	32	⇑P	P	06 01 30.5	-1.8
	comp=Z,10nm,0.8s						
VOSK	Vostochnaya	19.17	32	P	P	06 01 30.5	-1.8
VOSK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARU	Arti	19.21	7	eP	P	06 01 31.9	-0.8
	comp=Z,72nm,1.0s						
ARU				epP		06 01 39.2	
ARU	Arti	19.21	7	⇓ iP	P	06 01 30.9	-1.8
ARU				eS	S	06 05 02.0	-0.5
ARU				pmax	pmax		
	comp=Z,29nm,0.9s						
ARU				MLR	MLR		
	comp=Z,600nm,18.0s						
ARU				MLR	MLR		
	comp=N,400nm,19.0s						
ARU				MLR	MLR		
	comp=E,200nm,18.0s						
ARU	Arti	19.21	7	i P	P	06 01 30.9	-1.8
	comp=E,29nm,0.9s						
ARU				epP		06 01 39.2	
ARU				eS	S	06 05 02.0	-0.5
	comp=E,400nm,19.0s						
CHKZ	Chkalovo	19.73	29	eP	P	06 01 36.7	-1.9
	comp=E,17nm,1.0s						
CHKZ				epP		06 01 44.9	
CHKZ	Chkalovo	19.73	29	eP	P	06 01 36.7	-1.9
CHKZ				pmax	pmax		
	comp=Z,17nm,1.0s						
CHKZ	Chkalovo	19.73	29	eP	P	06 01 36.7	-1.9
	comp=Z,17nm,1.0s						
CHKZ				epP		06 01 44.9	
SVE	Sverdlovsk	19.84	10	eP	P	06 01 34.8	-5.0
SVE				pmax	pmax		
	comp=Z,40nm,1.5s						
SVE				MLR	MLR		
	comp=N,500nm,12.0s						
SVE				MLR	MLR		
	comp=E,500nm,12.0s						
SVE				MLR	MLR		
	comp=Z,600nm,12.0s						
SVE	Sverdlovsk	19.84	10	eP	P	06 01 34.8	-5.0
	comp=Z,40nm,1.5s						
TATS	Tathlith	20.23	211	P	P	06 01 41.3	-2.8
TIRR	Tirgusor	20.81	298	⇑P	P	06 01 49.2	-0.7
TIRR	Tirgusor	20.81	298	eP	P	06 01 48.8	-1.1
TIRR				epP		06 01 56.4	
TIRR	Tirgusor	20.81	298	eP	P	06 01 48.8	-1.1
TIRR				epP		06 01 56.4	
PSN	Preselentsi	20.84	296	eP	P	06 01 50.0	-0.3
NDI	New Delhi	20.97	108	eP	P	06 01 48.0	-3.7
CFR	Carcaliu	21.14	300	⇓P	P	06 01 51.7	-1.6
CFR	Carcaliu	21.14	300	⇓P	P	06 01 51.6	-1.7
KIS	Kishinev	21.15	305	eP	P	06 01 52.0	-1.4
KIS				e		06 02 03.0	
KIS				e		06 02 18.0	
HARR	Harsova	21.19	298	⇑P	P	06 01 53.0	-0.8
OBN	Obninsk	21.45	331	eP	P	06 01 55.6	-0.8
	comp=Z,147nm,1.1s,mb5.2						
OBN				epP		06 02 04.6	
OBN	Obninsk	21.45	331	c iP	P	06 01 55.7	-0.7
OBN				i		06 02 06.4	
OBN				eS	S	06 05 49.9	+2.0
OBN				pmax	pmax		
	comp=Z,117nm,1.6s,mb5.0						
OBN				MLR	MLR		
	comp=Z,200nm,15.0s,MS3.6						
OBN	Obninsk	21.45	331	i P	P	06 01 55.7	-0.7
	comp=Z,117nm,1.6s,mb5.0						
OBN				epP		06 02 04.6	
OBN				eS	S	06 05 49.9	+2.0
MOS	Moscow	21.54	334	eP	P	06 01 56.4	-0.9
MOS				e		06 02 15.0	
MOS				eS	S	06 05 48.9	-0.7
MOS				pmax	pmax		
	comp=Z,185nm,1.2s,mb5.4						
MOS	Moscow	21.54	334	eP	P	06 01 56.4	-0.9
	comp=Z,185nm,1.2s,mb5.4						
MOS				eS	S	06 05 48.9	-0.7
KURK	Kurchatov	21.75	45	⇑P	P	06 01 59.2	-0.2
	comp=Z,13nm,1.2s,mb4.2						
KURK	Kurchatov	21.75	45	eP	P	06 01 59.6	+0.2
	comp=Z,32nm,1.2s,mb4.6						
KURK	Kurchatov	21.75	45	eP	P	06 01 59.6	+0.2
KURK				pmax	pmax		
	comp=Z,32nm,1.2s,mb4.6						
KURK	Kurchatov	21.75	45	eP	P	06 01 59.6	+0.2
	comp=Z,32nm,1.2s,mb4.6						
DJNS	Zahran al Janu	21.86	209	P	P	06 02 01.8	+1.1
JMB	Yambol	21.88	292	eP	P	06 02 02.0	+1.3
SOKR	Solikamsk	22.20	3	⇓ iP	P	06 02 05.2	+1.3
SOKR				pmax	pmax		

	comp=Z,30nm,0.9s,mb4.7						
SOKR				MLR	MLR		
	comp=Z,490nm,15.0s,MS4.0						
SOKR	**Solikamsk**	**22.20**	**3**	*i* P	**P**	**06 02 05.2**	**+1.3**
	comp=Z,490nm,15.0s						
ISR	**Istrita**	**22.24**	**299**	⇓P	**P**	**06 02 14.2**	**+10**
AKASG	**Malin Array Be**	**22.31**	**315**	P	**P**	**06 02 04.1**	**-0.9**
	comp=Z,1.6nm,0.3s,mb3.9,baz=108,slow=9.0,SNR=43						
AKASG				PcP	PcP	06 05 59.0	-2.1
	comp=Z,0.9nm,0.5s,baz=82,slow=2.3,SNR=4.2						
AKASG				pPcP		06 06 08.2	
	comp=Z,1.3nm,0.4s,baz=88,slow=2.6,SNR=5.6						
AKASG	**Malin Array Be**	**22.31**	**315**	PcP	PcP	06 05 59.0	-2.1
AKASG				S	**S**	**06 05 59.0**	**-4.8**
MK31	**Makanchi Array**	**22.59**	**57**	⇑P	**P**	**06 02 08.4**	**+0.7**
	comp=Z,9.8nm,0.8s,mb4.3,baz=251,slow=11,SNR=38						
MKAR	**Makanchi Array**	**22.59**	**57**	P	**P**	**06 02 08.2**	**+0.5**
	comp=Z,1.9nm,0.6s,mb3.7,baz=246,slow=12,SNR=18						
MLR	**Muntele Rosu**	**22.72**	**300**	P	**P**	**06 02 10.7**	**+1.6**
	comp=Z,26nm,1.3s,mb4.5,baz=172,slow=4.0,SNR=9.0						
MLR	**Muntele Rosu**	**22.72**	**300**	⇑P	**P**	**06 02 10.8**	**+1.8**
MLR	**Muntele Rosu**	**22.72**	**300**	⇑P	**P**	**06 02 10.8**	**+1.8**
MLR	**Muntele Rosu**	**22.72**	**300**	P	**P**	**06 02 10.7**	**+1.7**
MLR				pmax	pmax		
	comp=Z,26nm,1.3s						
RZN	**Rozhen**	**23.23**	**290**	*e*P	**P**	**06 02 23.0**	**+8.9**
VOIR		**23.33**	**299**	⇓P	**P**	**06 02 18.0**	**+3.0**
VOIR		**23.33**	**299**	⇓P	**P**	**06 02 18.0**	**+3.1**
BURAR	**Bucovina Array**	**23.68**	**305**	⇓P	**P**	**06 02 21.4**	**+3.1**
BURAR	**Bucovina Array**	**23.68**	**305**	⇓P	**P**	**06 02 21.4**	**+3.1**
IDI	**Anoyia**	**23.84**	**274**	P	**P**	**06 02 20.8**	**+0.9**
	comp=Z,9.9nm,0.6s,mb4.4,baz=67,slow=15,SNR=8.3						
MMB	**Musomiste**	**23.97**	**290**	*e*P	**P**	**06 02 23.0**	**+1.8**
VTS	**Vitosha**	**24.37**	**292**	*e*P	**P**	**06 02 27.0**	**+1.9**
KKB	**Krupnik**	**24.45**	**290**	*e*P	**P**	**06 02 28.0**	**+2.0**
VAY	**Valandovo**	**24.85**	**289**	*e*P	**P**	**06 02 37.6**	**+7.9**
MNK	**Minsk**	**24.93**	**322**	*e*P	**P**	**06 02 30.0**	**-0.3**
DRGR		**25.17**	**302**	⇑P	**P**	**06 02 33.8**	**+1.1**
DRGR		**25.17**	**302**	⇑P	**P**	**06 02 33.8**	**+1.1**
KLMR	**Klimovskoe**	**25.26**	**343**	*e*P	**P**	**06 02 33.7**	**+0.3**
KLMR				*e*S	**S**	**06 06 57.4**	**+2.6**
KLMR				pmax	pmax		
	comp=Z,120nm,1.3s,mb5.3						
KLMR				smax			
	comp=E,970nm,5.3s						
KLMR				MLR	MLR		
	comp=Z,830nm,17.0s,MS4.3						
BOLS	**Boljevac**	**25.34**	**295**	⇓*i*P	**P**	**06 02 37.2**	**+2.9**
SKO	**Skopje**	**25.68**	**290**	*e*P	sP	06 02 53.1	+4.1
KOLS	**Kolonicke sedl**	**25.91**	**307**	*e*pP	pP	06 02 48.2	+0.7
KOLS				*e*sP	sP	06 02 51.8	+0.8
WMQ	**Urumqi**	**25.93**	**65**	*e*P	**P**	**06 02 44.8**	**+4.9**
WMQ				AP	pP	06 02 54.0	+6.3
WMQ				XP	sP	06 02 58.0	+6.8
WMQ				PP	PP	06 03 26.0	+5.1
WMQ				*e*S	**S**	**06 07 11.0**	**+4.9**
WMQ				XS		06 07 26.5	
WMQ				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
WMQ				AMB	AMB		
	comp=Z,90nm,3.5s						
WMQ				LR	LR		
	comp=N,280nm,6.8s						
WMQ				LR	LR		
	comp=E,180nm,6.3s						
WMQ				LR	LR		
	comp=Z,160nm,14.6s,MS3.7						
OHR	**Ohrid**	**26.19**	**289**	*e*P	Px	06 03 00.6	
NVS	**Novosibirsk**	**26.21**	**39**	*e*P	**P**	**06 02 44.4**	**+2.1**
NVS				pmax	pmax		
	comp=Z,11nm,1.9s,mb4.1						
NVS				pmax	pmax		
	comp=N,13nm,1.8s						
NVS				pmax	pmax		
	comp=E,10.0nm,2.0s						
NVS	**Novosibirsk**	**26.21**	**39**	*e*P	**P**	**06 02 44.4**	**+2.1**
	comp=E,13nm,1.8s,mb4.2						
KOLN	**Koldanda**	**26.32**	**103**	*e*P	**P**	**06 02 42.8**	**-0.8**
	comp=E,36nm,1.0s,mb4.9						
CRVS	**Cervenica-Dubn**	**26.43**	**306**	*e*P	**P**	**06 02 45.7**	**+1.3**
CRVS				*e*sP	sP	06 02 59.9	+4.1
ZAL	**Zalesovo**	**26.60**	**42**	P	**P**	**06 02 45.9**	**0.0**
	comp=E,3.3nm,0.7s,mb4.0,baz=183,slow=9.3,SNR=8.5						
ZAL				pP	pP	06 02 54.0	+0.3
	comp=E,3.6nm,0.6s,baz=218,slow=10,SNR=9.1						
ZAL				LR	LR	06 15 42.3	
	comp=E,186nm,20.7s,MS3.6,baz=338,slow=42						
STHS	**Stebnicka Huta**	**26.68**	**307**	*e*P	**P**	**06 02 49.1**	**+2.3**
STHS				*e*		06 03 25.2	
KECS	**Kecovo**	**26.97**	**305**	*e*P	**P**	**06 02 52.6**	**+3.3**
KECS				*e*		06 02 58.2	
GKN	**Gorkha**	**27.01**	**102**	*e*P	**P**	**06 02 49.3**	**-0.7**
	comp=E,54nm,1.0s,mb5.0						
PSZ	**Piszkesteto**	**27.25**	**304**	*e*P	**P**	**06 02 55.0**	**+3.1**
	comp=E,7.4nm,0.9s,mb4.2						
PSZ	**Piszkesteto**	**27.25**	**304**	*e*P	**P**	**06 02 55.0**	**+3.1**
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.2						
PSZ	**Piszkesteto**	**27.25**	**304**	*e*P	**P**	**06 02 55.0**	**+3.1**
	comp=Z,7.0nm,0.9s,mb4.2						
DMN	**Daman**	**27.56**	**102**	*e*P	**P**	**06 02 54.4**	**-0.6**
	comp=Z,34nm,0.9s,mb5.0						
KKN	**Kakani**	**27.61**	**101**	*e*P	**P**	**06 02 55.2**	**-0.2**
	comp=Z,31nm,1.0s,mb4.9						
KKN	**Kakani**	**27.61**	**101**	*e*P	**P**	**06 02 55.2**	**-0.2**
KKN				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.6						
VSU	**Vasula**	**27.70**	**328**	*i* P	**P**	**06 02 56.3**	**+0.4**
ATD	**Arta Tunnel**	**27.81**	**205**	LR	LR	06 15 11.0	
	comp=Z,253nm,19.5s,MS3.8,baz=50,slow=39						
PKI	**Pulchoki**	**27.82**	**102**	*e*P	**P**	**06 02 56.6**	**-0.7**
	comp=Z,66nm,1.1s,mb5.2						
PKI	**Pulchoki**	**27.82**	**102**	*e*P	**P**	**06 02 56.6**	**-0.7**
PKI				pmax	pmax		
	comp=Z,33nm,1.1s,mb4.9						
GUN	**Gumba**	**28.02**	**101**	*e*P	**P**	**06 02 58.9**	**-0.3**
	comp=Z,51nm,1.0s,mb5.1						
JOF	**Joensuu**	**29.16**	**338**	*e*p	**P**	**06 03 08.0**	**-1.0**
	comp=Z,7.2nm,0.5s,mb4.7						
VRAC	**Vranov**	**29.64**	**306**	LR	LR	06 17 28.5	
	comp=Z,162nm,18.7s,MS3.7,baz=271,slow=41						
FINES	**FINESS Array B**	**29.84**	**333**	P	**P**	**06 03 14.5**	**-0.6**
	comp=Z,8.7nm,1.2s,mb4.4,baz=140,slow=15,SNR=5.0						
FINES				pP	pP	06 03 22.9	-0.1
	comp=Z,6.0nm,0.7s,baz=133,slow=10,SNR=4.9						
FINES				LR	LR	06 17 04.6	
	comp=Z,156nm,19.4s,MS3.6,baz=172,slow=40						
FINES	**FINESS Array B**	**29.84**	**333**	P	**P**	**06 03 14.5**	**-0.6**
FINES				pP	pP	06 03 22.9	-0.1
FINES				LR	LR	06 17 04.6	
KAF	**Kangasniemi**	**30.20**	**334**	*e*p	**P**	**06 03 25.6**	**+7.3**
	comp=Z,6.4nm,1.0s,mb4.3						
KAF	**Kangasniemi**	**30.20**	**334**	*e*P	**P**	**06 03 25.6**	**+7.3**
KAF				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
GERES	**GERESS Array B**	**31.47**	**304**	P	**P**	**06 03 30.7**	**+1.1**
	comp=Z,0.2nm,0.3s,mb3.5,baz=113,slow=7.5,SNR=4.5						
GERES				pP	pP	06 03 37.9	+0.4
	comp=Z,1.3nm,0.6s,baz=96,slow=8.9,SNR=6.8						
KHC	**Kasperske Hory**	**31.58**	**305**	*i* P	**P**	**06 03 30.5**	**-0.1**
CLL	**Collm**	**32.23**	**309**	*e*PP	sP	06 03 46.0	-1.7
DAVOX	**Davos**	**33.94**	**300**	LR	LR	06 21 00.7	
	comp=Z,66nm,19.4s,MS3.4,baz=91,slow=42						
HFS	**Hagfors**	**34.32**	**325**	P	**P**	**06 03 54.3**	**0.0**
	comp=Z,2.2nm,0.6s,mb4.2,baz=108,slow=9.4,SNR=7.8						
HFS				pP	pP	06 04 02.1	-0.2
	comp=Z,14nm,0.7s,baz=117,slow=9.9,SNR=14						
HFS				LR	LR	06 20 14.0	
	comp=Z,231nm,18.1s,MS4.0,baz=264,slow=40						
ARCES	**ARCESS Array B**	**35.74**	**343**	P	**P**	**06 04 05.9**	**-0.5**
	comp=Z,1.1nm,0.6s,mb3.9,baz=137,slow=9.8,SNR=10.0						
ARCES				pP	pP	06 04 13.9	-0.4
	comp=Z,2.0nm,0.5s,baz=137,slow=7.5,SNR=2.7						
ARCES				LR	LR	06 21 15.7	
	comp=Z,215nm,18.2s,MS4.0,baz=307,slow=40						
NB2	**NORSAR Subarra**	**35.79**	**325**	P	**P**	**06 04 05.9**	**-1.0**
	comp=Z,5.1nm,0.8s,mb4.5,baz=111,slow=8.6						
NOA	**NORSAR Array B**	**35.79**	**325**	P	**P**	**06 04 06.0**	**-0.9**
	comp=Z,2.9nm,1.0s,mb4.2,baz=114,slow=8.1,SNR=3.2						
NOA				pP	pP	06 04 14.2	-0.7
	comp=Z,3.7nm,0.7s,baz=115,slow=8.2,SNR=9.0						
NOA	**NORSAR Array B**	**35.79**	**325**	pP	pP	06 04 14.2	-0.6
NAO	**NORSAR Subarra**	**35.89**	**325**	P	**P**	**06 04 05.9**	**-1.8**
NAO				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.5						
NAO	**NORSAR Subarra**	**35.89**	**325**	P	**P**	**06 04 05.9**	**-1.8**
	comp=Z,5.1nm,0.8s,mb4.5						
ZAK	**Zakamensk**	**36.85**	**54**	*e*P	**P**	**06 04 13.6**	**-2.2**
ZAK				*e*	pP	06 04 20.0	-3.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
ZAK	**Zakamensk**	**36.85**	**54**	*e*P	**P**	**06 04 13.6**	**-2.2**
	comp=Z,2.0nm,1.2s,mb3.8						
SONM	**Songino Array**	**38.95**	**58**	P	**P**	**06 04 34.0**	**+0.5**
	comp=Z,1.0nm,0.6s,mb3.7,baz=271,slow=9.7,SNR=7.8						
SONM				LR	LR	06 22 07.1	
	comp=Z,128nm,18.3s,MS3.8,baz=238,slow=38						
CD2	**Chengdu**	**40.96**	**84**	*e*P	**P**	**06 04 52.0**	**+1.7**
CD2				PP	PP	06 06 30.0	+2.3
CD2				PPP	PPP	06 06 58.5	+1.1
CD2				S	**S**	**06 11 01.0**	**+0.7**
CD2				SS	SS	06 13 58.0	-0.1
CD2				LR	LR		
	comp=N,140nm,10.8s						
CD2				LR	LR		
	comp=Z,80nm,16.8s						
KMBO	**Kilima Mbogo**	**41.53**	**206**	LR	LR	06 23 44.9	
	comp=Z,94nm,18.0s,MS3.7,baz=78,slow=39						
EKA	**Eskdalemuir Ar**	**42.22**	**314**	P	**P**	**06 05 00.5**	**+0.2**
	comp=Z,6.0nm,1.1s,mb4.1,baz=131,slow=7.7,SNR=4.1						
EKA				pP	pP	06 05 08.9	+0.6
	comp=Z,4.6nm,0.5s,baz=95,slow=8.2,SNR=7.6						
BOD	**Bodaibo**	**43.37**	**42**	*e*P	**P**	**06 05 09.6**	**0.0**
BOD				*e*	pP	06 05 17.7	+0.1
BOD				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
BOD				pmax	pmax		
	comp=Z,17nm,0.8s,mb4.8						
BOD	**Bodaibo**	**43.37**	**42**	*e*P	**P**	**06 05 09.6**	**0.0**
	comp=Z,5.0nm,1.1s,mb4.2						
ESDC	**Sonseca Array**	**45.01**	**292**	P	**P**	**06 05 22.9**	**-0.3**
	comp=Z,0.2nm,0.3s,mb3.5,baz=62,slow=7.7,SNR=3.8						
ESDC				pP	pP	06 05 31.1	-0.1
	comp=Z,3.1nm,0.9s,baz=61,slow=9.0,SNR=4.7						
TIXI	**Tiksi**	**50.08**	**23**	*i* P	**P**	**06 06 02.8**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,10.0nm,1.4s,mb4.7						
TIXI				MLR	MLR		
	comp=Z,500nm,18.0s,MS4.6						
TIXI	**Tiksi**	**50.08**	**23**	*i* P	**P**	**06 06 02.8**	**+0.5**
	comp=Z,500nm,18.0s						
NJ2	**Nanjing**	**52.31**	**75**	*e*P	**P**	**06 06 22.0**	**+2.2**
NJ2				PCP	PcP	06 07 31.5	+0.7
NJ2				S	**S**	**06 13 46.0**	**+4.2**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.9						
NJ2				AMB	AMB		
	comp=Z,150nm,4.9s						
NJ2				LR	LR		
	comp=N,390nm,14.0s,MS4.7						
NJ2				LR	LR		
	comp=E,390nm,14.8s,MS4.7						
NJ2				LR	LR		
	comp=Z,220nm,14.4s,MS4.3						
CN2	**Changchun**	**52.78**	**59**	*e*P	**P**	**06 06 24.8**	**+1.7**
PSI	**Prapat**	**53.38**	**119**	P	**P**	**06 06 24.4**	**-3.5**
	comp=Z,10nm,0.8s,mb4.8,baz=315,slow=7.1,SNR=8.6						
SSE	**Sheshan**	**54.52**	**75**	*e*P	**P**	**06 06 36.5**	**+0.5**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,30nm,3.5s						
SSE	**Sheshan**	**54.52**	**75**	*e*P	**P**	**06 06 36.4**	**+0.4**
	comp=Z,38nm,0.7s,mb5.5						
DBIC	**Dimbokro**	**61.72**	**256**	P	**P**	**06 07 24.5**	**-2.3**
	comp=Z,4.9nm,0.9s,mb4.7,baz=47,slow=8.8,SNR=7.0						
DBIC				pP	pP	06 07 33.9	-1.3
	comp=Z,5.0nm,0.8s,baz=35,slow=8.0,SNR=5.0						
DBIC				LR	LR	06 36 26.9	
	comp=Z,82nm,18.1s,MS3.9,baz=39,slow=38						
DBIC	**Dimbokro**	**61.72**	**256**	*e*P	**P**	**06 07 24.5**	**-2.2**
	comp=Z,5.7nm,0.9s,mb4.7						
DBIC				*e*pP	pP	06 07 33.1	-2.0
DBIC	**Dimbokro**	**61.72**	**256**	*e*P	**P**	**06 07 24.5**	**-2.3**
DBIC				*e**PP	pP	06 07 33.2	-1.9
DBIC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DBIC	**Dimbokro**	**61.72**	**256**	*e*P	**P**	**06 07 24.5**	**-2.3**
	comp=Z,5.7nm,0.9s,mb4.7						
DBIC				*e*pP	pP	06 07 33.2	-1.9
MJAR	**Matsushiro Arr**	**64.65**	**62**	LR	LR	06 39 19.8	
	comp=Z,46nm,21.4s,MS3.6,baz=295,slow=39						
IMA2	**Indian Mountai**	**74.56**	**12**	*e*P	**P**	**06 08 45.6**	**-0.2**
IMA2				*e*pP	pP	06 08 54.6	+0.4
IMA2	**Indian Mountai**	**74.56**	**12**	*e*P	**P**	**06 08 45.6**	**-0.2**
IMA2				*e*pP	pP	06 08 54.7	+0.4
SCHQ	**Schefferville**	**75.24**	**329**	P	**P**	**06 08 50.4**	**+0.4**
	comp=Z,1.4nm,0.8s,mb4.0,baz=74,slow=7.4,SNR=2.5						
SCHQ				pP	pP	06 08 57.4	-1.0
	comp=Z,3.2nm,0.7s,baz=16,slow=6.1,SNR=3.4						
COLA	**College**	**76.54**	**10**	*e*P	**P**	**06 08 58.4**	**+1.4**
	comp=Z,12nm,0.9s,mb4.8						
COLA				*e*pP	pP	06 09 06.1	+0.5
COLA	**College**	**76.54**	**10**	*e*P	**P**	**06 08 58.4**	**+1.3**
COLA				*e**PP	pP	06 09 06.1	+0.5
COLA				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
COLA	**College**	**76.54**	**10**	*e*P	**P**	**06 08 58.4**	**+1.3**
	comp=Z,12nm,0.9s,mb4.8						
COLA	**College**	**76.54**	**10**	*e*PcP	PcP	06 09 06.1	-2.8
COLA				*e*pP	pP	06 09 06.1	+0.5
ILAR	**Eielson Array**	**76.76**	**9**	P	**P**	**06 08 58.6**	**+0.3**
	comp=Z,0.5nm,0.7s,mb3.5,baz=334,slow=4.1,SNR=6.5						
ILAR				pP	pP	06 09 07.2	+0.3
	comp=Z,3.6nm,0.8s,baz=326,slow=2.9,SNR=22						
ILAR	**Eielson Array**	**76.76**	**9**	PcP	PcP	06 09 07.2	-2.7
ILAR				pP	pP	06 09 07.2	+0.4
PMR	**Palmer**	**79.48**	**11**	*e*P	**P**	**06 09 14.2**	**+0.9**
	comp=Z,14nm,0.8s,mb4.9						
PMR	**Palmer**	**79.48**	**11**	*e*P	**P**	**06 09 14.2**	**+0.9**
PMR				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.9						
PMR	**Palmer**	**79.48**	**11**	*e*P	**P**	**06 09 14.2**	**+0.9**
	comp=Z,13nm,0.8s,mb4.9						
YKA	**Yellowknife Ar**	**80.02**	**355**	P	**P**	**06 09 15.7**	**-0.5**
	comp=Z,1.2nm,0.8s,mb3.9,baz=4.3,slow=6.2,SNR=6.6						
YKA				pP	pP	06 09 25.0	+0.2
	comp=Z,2.9nm,0.8s,baz=6.3,slow=6.5,SNR=12						
YKA				LR	LR	06 49 52.6	
	comp=Z,36nm,18.1s,MS3.8,baz=80,slow=39						
YKA	**Yellowknife Ar**	**80.02**	**355**	P	**P**	**06 09 15.7**	**-0.5**
YKA				pP	pP	06 09 25.0	+0.3
YKA				LR	LR	06 49 52.6	
YKA	**Yellowknife Ar**	**80.02**	**355**	PcP	PcP	06 09 25.0	+1.0
YKA				pP	pP	06 09 25.0	+0.3
WRA	**Warramunga Arr**	**94.25**	**112**	P	**P**	**06 10 24.1**	**-2.4**
	comp=Z,0.6nm,0.9s,mb4.0,baz=320,slow=3.9,SNR=4.7						
PDAR	**Pinedale Array**	**98.86**	**348**	LR	LR	07 01 23.6	
	comp=Z,46nm,18.6s,MS4.0,baz=263,slow=39						
SNAA	**Sanae**	**115.97**	**197**	⇑*i*PKPdf	PKPdf	06 15 43.9	-8.7
SNAA				*e*		06 16 00.9	
VNA2	**Neumayer--Watz**	**116.61**	**199**	*e*	PKPdf	06 15 57.9	+4.0
VNA2	**Neumayer--Watz**	**116.61**	**199**	*e*	PKPdf	06 16 06.2	+12
VNA2	**Neumayer--Watz**	**116.61**	**199**	⇑*i*PKPdf	PKPdf	06 15 48.5	-5.4
VNA2				*e*		06 15 57.9	
VNA2				*e*		06 16 06.2	
VNA1	**Neumayer--Stat**	**116.67**	**199**	⇑*i*P	PKPdf	06 15 48.9	-5.1
VNA3	**Neumayer Olymp**	**117.40**	**199**	*e*	PKPdf	06 15 59.7	+4.4
VNA3	**Neumayer Olymp**	**117.40**	**199**	⇓*i*PKPdf	PKPdf	06 15 50.0	-5.3
VNA3				*e*		06 15 59.7	

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*THR **29** 06:04:08.1±0.5, 31.42N×56.23E, h14^{km}±4^{km}, ML3.4*

*CSEM **29** 06:04:08.1±0.2, 31.42N×56.23E, h16^{km}, ML3.3, Error ellipse: s-maj=5.5km s-min=4.3km az=39.0*

*TEH **29** 06:04:10.1, 31.20N×56.08E, h14^{km}, Mn3.3*

ISC 29 06:04:08.6±1.4**, 31.48N**±0.06×**56.22E**±0.07**, h14**^{km}±11^{km}**, n14, σ1§06**/17**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBAF	**Bafgh**	**0.56**	**282**	Pg	**Pg**	**06 04 18.3**	**-1.8**
IMEH	**Mehriz**	**1.37**	**267**	Pg	**Pn**	**06 04 33.4**	**-0.1**
KRBR	**Kerman**	**1.56**	**162**	*e*Pg	**Pn**	**06 04 35.8**	**-0.4**
KRBR				AML	AML	06 05 02.6	
	comp=N,733nm,0.5s						
ICHK	**Chekchek**	**1.72**	**297**	Pn	**Pn**	**06 04 39.6**	**+1.1**
NASN	**Na'in**	**3.18**	**295**	*e*Pn	**Pn**	**06 05 00.7**	**+1.4**
NASN				*e*Pg	**Pg**	**06 05 05.9**	**-6.1**
NASN				AML	AML	06 05 54.3	
	comp=N,55nm,0.4s						
GHIR	**Ghir-Karzin**	**4.24**	**222**	*e*Pn	**Pn**	**06 05 14.1**	**-0.3**
ZHSF	**Zahedan**	**4.35**	**114**	*e*Pn	**Pn**	**06 05 15.6**	**-0.4**
ISFB	**Sefidab**	**4.41**	**312**	Lg		06 06 30.7	
ISFB	**Sefidab**	**4.41**	**312**	Pn	**Pn**	**06 05 17.9**	**+1.1**
IFIR	**Firoozkooh**	**5.06**	**326**	Pn	**Pn**	**06 05 27.2**	**+1.2**
IFIR				Sn	**Sn**	**06 06 25.0**	**0.0**
IVRN	**Varamin**	**5.14**	**314**	Pn	**Pn**	**06 05 28.8**	**+1.6**
IVRN				Sn	**Sn**	**06 06 25.2**	**-1.9**
IMOG	**Moghan**	**5.30**	**29**	Pn	**Pn**	**06 05 28.9**	**-0.5**
IDMV	**Damavand**	**5.38**	**321**	Pn	**Pn**	**06 05 31.1**	**+0.6**
IDMV				Sn	**Sn**	**06 06 31.4**	**-1.5**
IPAY	**Payeh**	**5.47**	**24**	Pn	**Pn**	**06 05 31.5**	**-0.3**

IDC 29 06:08:20.7±1.9**, 1.11N×97.05E, mb3.8**/4**, mb1 3.9**/5**, mb1mx3.7**/17**, mbtmp3.7**/5**, ML3.0**/1**, Error ellipse: s-maj=38.4km s-min=28.9km az=53.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.51**	**48**	Pn	Pn	06 09 02.9	-0.6
	3.5nm,0.3s,baz=236,slow=7.3,SNR=11						
PSI				Sn	Sn	06 09 32.8	-2.4
	3.6nm,0.3s,baz=247,slow=9.7,SNR=5.0						
WRA	**Warramunga Arr**	**42.12**	**122**	P	P	06 16 14.8	-1.8
	0.6nm,0.6s,baz=301,slow=9.1,SNR=6.3						
SONM	**Songino Array**	**47.24**	**9**	P	P	06 16 55.2	-2.2
	0.5nm,0.6s,baz=187,slow=8.9,SNR=4.4						
MKAR	**Makanchi Array**	**47.29**	**346**	P	P	06 16 56.0	-1.8
	0.6nm,0.5s,baz=154,slow=9.0,SNR=5.6						
ZAL	**Zalesovo**	**53.61**	**351**	P	P	06 17 43.4	-2.4
	0.9nm,0.3s,baz=118,slow=13,SNR=3.2						

MAN 29 06:20:20.9, 9.95N×125.84E, h22^{km}**, mb3.9, ML2.7, MS2.6, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.39**	**244**	⇓*e*P	Pb	06 20 30.4	+1.2
SCPH				*e*S	Sb	06 20 40.1	+5.5
MSLP	**Maasin**	**0.99**	**281**	*e*P	Pb	06 20 38.4	-0.8
MSLP				*e*S	Sb	06 20 54.4	+2.6
BUTP	**Butuan**	**1.00**	**193**	*e*P	Pb	06 20 38.1	-1.3
BUTP				*e*S	Sb	06 20 53.8	+1.6
BESP	**Borongan**	**1.69**	**346**	*e*P	Pn	06 20 49.8	+0.3
BESP				*e*S	Sn	06 21 10.2	-0.4
TBP	**Tagbilaran**	**1.97**	**263**	*e*P	Pn	06 20 54.8	+1.2
TBP				*e*S	Sn	06 21 20.8	+3.0
BUKP	**Musuan**	**2.20**	**201**	*e*P	Pn	06 20 57.0	+0.1
BUKP				*e*S	Sn	06 21 26.6	+2.9
CNP	**Catarman**	**2.79**	**336**	*e*P	Pn	06 21 02.1	-3.2
CNP				*e*S	Sn	06 21 36.5	-2.3

IDC 29 07:27:32.3±4.3**, 47.21N×153.33E, h113**^{km}±42^{km}**, mb3.4**/6**, mb1 3.7**/8**, mb1mx3.5**/22**, mbtmp3.9**/8**, MS3.3**/1**, Ms1 3.4**/1**, ms1mx2.7**/20**, Error ellipse: s-maj=35.8km s-min=23.9km az=126.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**8.13**	**252**	P	P	07 29 27.6	-1.3
	0.8nm,0.3s,baz=99,slow=18,SNR=5.4						
MJAR	**Matsushiro Arr**	**15.48**	**232**	P	P	07 31 03.9	-1.4
	0.5nm,0.3s,baz=34,slow=8.8,SNR=6.9						
ILAR	**Eielson Array**	**36.10**	**39**	P	P	07 34 21.9	-2.5
	0.8nm,0.9s,baz=265,slow=8.1,SNR=6.3						
ILAR				LR	LR	07 47 26.8	
	comp=Z,44nm,20.0s,baz=358,slow=33						
YKA	**Yellowknife Ar**	**50.47**	**37**	P	P	07 36 18.7	-1.2
	1.1nm,0.8s,baz=296,slow=7.1,SNR=4.5						
FINES	**FINESS Array B**	**63.69**	**335**	P	P	07 37 50.9	-2.3
	4.5nm,1.1s,baz=45,slow=8.1,SNR=8.3						
NOA	**NORSAR Array B**	**67.84**	**341**	P	P	07 38 18.1	-1.6
	1.0nm,0.8s,baz=27,slow=6.6,SNR=3.9						
WRA	**Warramunga Arr**	**68.99**	**199**	P	P	07 38 25.3	-2.1
	0.4nm,0.9s,baz=13,slow=6.7,SNR=3.6						
TXAR	**Lajitas Array**	**77.14**	**61**	P	P	07 39 13.6	-1.2
	0.2nm,0.6s,baz=295,slow=4.2,SNR=3.8						

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*MOS **29** 07:28:54.4±0.5, 53.83N×161.85E, h16^{km}, mb4.3/1, Error ellipse: s-maj=21.9km s-min=12.3km az=79.2*

KRSC 29 07:28:54.7±1.1**, 53.84N×161.80E, h12**^{km}±2^{km}**, ML4.4, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.72**	**357**	*i* P	Pb	07 29 08.8	+0.1
MKZ				*e*S	Sb	07 29 18.6	+0.4
SPN	**Mys Shipunski**	**1.30**	**236**	P	Pb	07 29 18.0	-0.5
SPN				S	Sb	07 29 35.3	+0.3
SPN	**Mys Shipunski**	**1.30**	**236**	*e*P	Pb	07 29 17.9	-0.6
SPN				*e*S	Sb	07 29 35.3	+0.3
KII	**Karymskiy**	**1.40**	**279**	P	Pn	07 29 19.6	-0.6
KII				S	Sb	07 29 37.6	-0.5
KII	**Karymskiy**	**1.40**	**279**	*e*P	Pn	07 29 19.7	-0.5
KII				*i* S	Sb	07 29 37.7	-0.4
NLC	**Nalytchevo**	**1.61**	**246**	P	Pn	07 29 22.5	-0.7
NLC				S	Sn	07 29 42.9	-1.1
NLC	**Nalytchevo**	**1.61**	**246**	*e*P	Pn	07 29 22.4	-0.8
NLC				*e*S	Sn	07 29 43.4	-0.6
TUMR	**Tumrok**	**1.74**	**327**	*e*P	Pn	07 29 25.2	+0.2
SDLR	**Sedlovina**	**1.83**	**253**	*e*P	Pn	07 29 25.9	-0.4
SMAR	**Somma**	**1.88**	**253**	*e*P	Pn	07 29 26.7	-0.3
SMAR				*e*S	Sn	07 29 52.4	+1.6
UGLR	**Uglovaya**	**1.89**	**252**	*e*P	Pn	07 29 26.9	-0.2
AVH	**Avacha**	**1.92**	**254**	*e*P	Pn	07 29 27.5	0.0
AVH				*e*S	Sn	07 29 52.1	+0.4
KOK	**Koryaka**	**1.96**	**255**	*e*P	Pn	07 29 28.4	+0.1
KOK				*e*S	Sn	07 29 54.6	+1.6
PET	**Petropavlovsk**	**2.05**	**248**	*i* P	Pn	07 29 30.4	+0.9
PET				*i* S	Sn	07 29 56.2	+1.0
KMNR	**Kamenistaya**	**2.12**	**335**	*e*P	Pn	07 29 31.5	+1.0
KMNR				*i* S	Sn	07 29 58.6	+1.6
ZLN	**Zelenaya**	**2.26**	**346**	*e*P	Pn	07 29 34.1	+1.7
ZLN				*e*S	Sn	07 30 00.7	+0.3
GNL	**Ganaly**	**2.29**	**268**	*i* P	Pn	07 29 33.6	+0.6
GNL				*e*S	Sn	07 30 02.1	+0.7
KPT	**Kopyto**	**2.32**	**337**	*e*P	Pn	07 29 34.7	+1.4
LGNR	**Loginova**	**2.34**	**345**	*i* P	Pn	07 29 34.8	+1.2
CIRR	**Tsirk**	**2.36**	**346**	*e*P	Pn	07 29 34.8	+0.9
CIRR				*e*S	Sn	07 30 03.4	+0.4
KRMR	**Karymshinskiy**	**2.42**	**247**	*e*P	Pn	07 29 36.2	+1.4
KRMR				*e*S	Sn	07 30 05.1	+0.5
RUS	**Russkaya**	**2.43**	**236**	P	Pn	07 29 35.4	+0.5
RUS				S	Sn	07 30 04.4	-0.4
RUS	**Russkaya**	**2.43**	**236**	*e*P	Pn	07 29 35.3	+0.4
RUS				*e*S	Sn	07 30 04.3	-0.5
KBTR	**Krutoberegovo**	**2.44**	**13**	P	Pn	07 29 34.8	-0.3
KBTR				S	Sn	07 30 03.7	-1.5
KBTR	**Krutoberegovo**	**2.44**	**13**	*e*P	Pn	07 29 34.8	-0.3
KBTR				*e*S	Sn	07 30 04.1	-1.1
KOZ	**Kozyrevsk**	**2.48**	**334**	P	Pn	07 29 36.5	+0.8
KOZ				S	Sn	07 30 06.7	+0.5
KOZ	**Kozyrevsk**	**2.48**	**334**	*e*P	Pn	07 29 36.5	+0.8
KOZ				*i* S	Sn	07 30 07.7	+1.5
KRSR	**Krestovskiy**	**2.49**	**344**	*e*P	Pn	07 29 36.4	+0.7
KRSR				*e*S	Sn	07 30 08.0	+1.8
KOZR	**Kozyr**	**2.49**	**335**	PN	Pn	07 29 36.5	+0.8
KOZR				S	Sn	07 30 06.7	+0.5
KLY	**Klyuchi**	**2.56**	**346**	P	Pn	07 29 36.7	-0.1
KLY				S	Sn	07 30 07.2	-1.0
KLY	**Klyuchi**	**2.56**	**346**	*e*P	Pn	07 29 37.0	+0.2
KLY				*i* S	Sn	07 30 07.3	-0.9
GRL	**Gorelyy**	**2.59**	**242**	*e*P	Pn	07 29 38.7	+1.6
GRL				*e*S	Sn	07 30 10.4	+1.6
ESO	**Esso**	**2.75**	**321**	*e*P	Pn	07 29 39.2	-0.3
SRDR	**Sredinnyy**	**2.76**	**335**	*e*P	Pn	07 29 39.5	-0.1
SRDR				*e*S	Sn	07 30 11.9	-1.2
BKI	**Bering**	**2.79**	**59**	*e*P	Pn	07 29 38.3	-1.7
BKI				*e*S	Sn	07 30 09.1	-4.8
APC	**Apacha**	**2.93**	**254**	*e*P	Pn	07 29 43.4	+1.4
APC				*e*S	Sn	07 30 18.8	+1.4
APC				Smax			
	160nm,0.9s						
MIPR	**Malaya Ipel'ka**	**3.42**	**245**	*e*P	Pn	07 29 51.2	+2.2

MOS 29 07:30:08.2±1.5**, 53.09N×108.08E, h13**^{km}**, mb4.2**/1**, Error**

ellipse: s-maj=32.2km s-min=16.8km az=47.2, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OGRR	**Ongureny**	**0.63**	**333**	*e*PG	Pg	07 30 20.4	-0.5
OGRR				*e*		07 30 29.4	
OGRR				pmax	pmax		
	comp=Z,70nm,0.1s						
OGRR				smax			
	comp=E,656nm,0.1s						
TRG	**Tyrgan**	**1.10**	**253**	*e*PG	Pg	07 30 28.3	-2.0
TRG				*e*		07 30 43.8	
TRG				pmax	pmax		
	comp=Z,156nm,0.2s						
TRG				smax			
	comp=N,888nm,0.2s						
SYVR	**Suvo**	**1.28**	**63**	*e*PG	Pg	07 30 31.4	-2.5
SYVR				*e*		07 30 47.7	
SYVR				pmax	pmax		
	comp=Z,74nm,0.2s						
SYVR				smax			
	comp=N,560nm,0.2s						
IRK	**Irkutsk**	**2.47**	**251**	*e*PN	Pn	07 30 52.7	+3.8
IRK				*e*		07 31 24.2	
IRK				pmax	pmax		
	comp=Z,191nm,0.2s						
IRK				smax			
	comp=N,541nm,0.6s						
YLYR	**Ulyunkhan**	**2.55**	**44**	*e*PN	Pn	07 30 50.1	+0.1
YLYR				*e*		07 30 52.8	
YLYR				*e*S	Sn	07 31 19.6	-1.6
TLY	**Talaya**	**3.06**	**244**	*e*PN	Pn	07 30 56.6	-0.7
TLY				*e*		07 31 03.9	
TLY				*e*		07 31 42.8	
TLY				pmax	pmax		
	comp=Z,47nm,0.2s						
TLY				smax			
	comp=E,68nm,0.5s						
ARS	**Arshan**	**3.65**	**254**	*e*PN	Pn	07 31 12.7	+7.1
ARS				*e*		07 31 58.6	
ARS				pmax	pmax		
	comp=Z,61nm,0.4s						
ARS				smax			
	comp=E,329nm,0.4s						
NLYR	**Nelyaty**	**5.57**	**49**	*e*PN	Pn	07 31 47.5	+15
NLYR				*e*		07 32 59.7	
NLYR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NLYR				smax			
	comp=N,53nm,1.9s						
TUP	**Tupik**	**7.17**	**75**	*e*PG	Pg	07 32 18.1	-13
TUP				*e*		07 33 50.5	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TUP				smax			
	comp=N,35nm,1.0s						

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*NEIC **29** 08:13:54.6,41.58S×174.20E,h14^{km},ML4.2(WEL),After WEL.*

NEIC Felt at Marlborough and Wellington.

WEL 29 08:13:54.8±0.1**,41.57S×174.22E,h10**^{km}±1^{km}**,ML4.4**/45**, Error ellipse: s-maj=0.8km s-min=0.6km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMWZ	**Cape Campbell**	**0.18**	**181**	P	Pg	08 13 58.9	+0.2
CMWZ				S	Sg	08 14 02.9	+1.5
CMWZ	**Cape Campbell**	**0.18**	**181**	PG	Pg	08 13 58.9	+0.2
CMWZ				SG	Sg	08 14 02.6	+1.2
TUWZ	**Tuamarina**	**0.25**	**305**	PG	Pg	08 14 00.0	-0.1
TUWZ				SG	Sg	08 14 04.0	+0.4
BSWZ	**Blackbirch Sta**	**0.29**	**241**	P	Pg	08 14 00.5	-0.4
BSWZ	**Blackbirch Sta**	**0.29**	**241**	PG	Pg	08 14 00.5	-0.4
BSWZ				SG	Sg	08 14 04.6	-0.4
TCW	**Tory Channel**	**0.36**	**7**	PG	Pg	08 14 02.1	-0.1
TCW				SG	Sg	08 14 07.5	+0.3
SNZO	**South Karori**	**0.45**	**55**	P	Pg	08 14 03.9	-0.1
SNZO				*e*Sn	Sn	08 14 12.1	-2.9
SNZO	**South Karori**	**0.45**	**55**	PG	Pg	08 14 03.9	-0.1
MRW	**Makara Radio**	**0.50**	**47**	P	Pg	08 14 04.7	-0.2
MRW	**Makara Radio**	**0.50**	**47**	PG	Pg	08 14 04.7	-0.2
WEL	**Wellington**	**0.50**	**56**	P	Pg	08 14 04.9	-0.1
WEL	**Wellington**	**0.50**	**56**	PG	Pg	08 14 04.9	-0.1
BHW	**Baring Head**	**0.52**	**72**	P	Pg	08 14 05.2	-0.1
BHW	**Baring Head**	**0.52**	**72**	PG	Pg	08 14 05.2	-0.1
NNZ	**Nelson**	**0.72**	**299**	P	Pb	08 14 08.2	-0.7
NNZ	**Nelson**	**0.72**	**299**	P*	Pb	08 14 08.2	-0.7
CAW	**Cannon Point**	**0.79**	**54**	P	Pb	08 14 09.8	-0.3
CAW	**Cannon Point**	**0.79**	**54**	P*	Pb	08 14 09.8	-0.4
MSWZ	**Moikau Station**	**0.79**	**79**	P*	Pb	08 14 10.3	+0.2
DUWZ	**D'Urville Isla**	**0.80**	**344**	P*	Pb	08 14 09.7	-0.6
KIW	**Kapiti Island**	**0.88**	**37**	P	Pb	08 14 11.2	-0.5
KIW	**Kapiti Island**	**0.88**	**37**	P*	Pb	08 14 11.2	-0.4
PAWZ	**Paruwai Farm**	**0.93**	**79**	P	Pb	08 14 12.7	+0.2
PAWZ	**Paruwai Farm**	**0.93**	**79**	P*	Pb	08 14 12.7	+0.2
KHZ	**Kahutara**	**0.98**	**211**	P	Pb	08 14 13.4	0.0
KHZ	**Kahutara**	**0.98**	**211**	P*	Pb	08 14 13.4	0.0
THZ	**Tophouse**	**1.00**	**259**	P	Pb	08 14 12.8	-0.9
MTW	**Mount Morrison**	**1.05**	**67**	P	Pb	08 14 14.5	-0.1
MTW	**Mount Morrison**	**1.05**	**67**	P*	Pb	08 14 14.5	-0.1
MRZ	**Mangatainoka R**	**1.37**	**49**	P	Pn	08 14 19.4	-0.7
QRZ	**Quartz Range**	**1.48**	**300**	P	Pn	08 14 21.2	-0.3
QRZ	**Quartz Range**	**1.48**	**300**	PN	Pn	08 14 21.2	-0.3
BFZ	**Birch Farm**	**1.77**	**61**	*e*P	Pn	08 14 23.6	-2.2
DSZ	**Denniston Nort**	**1.82**	**264**	P	Pn	08 14 26.0	-0.4
LTZ	**Lake Taylor**	**1.89**	**229**	P	Pn	08 14 25.9	-1.5
LTZ	**Lake Taylor**	**1.89**	**229**	PN	Pn	08 14 25.9	-1.5
WAZ	**Wanganui**	**1.91**	**18**	P	Pn	08 14 29.5	+1.8
TSZ	**Takapari Road**	**2.01**	**42**	P	Pn	08 14 28.0	-1.1
NRZ	**Ngariki Road**	**2.24**	**354**	P	Pn	08 14 35.1	+2.6
RAEZ	**Rainy Point**	**2.29**	**3**	P	Pn	08 14 36.0	+2.9
NWEZ	**Newall Road**	**2.31**	**353**	P	Pn	08 14 37.3	+3.8
PKE	**Pukeiti**	**2.38**	**356**	P	Pn	08 14 35.1	+0.6
PKE	**Pukeiti**	**2.38**	**356**	PN	Pn	08 14 34.9	+0.4
MQZ	**McQueen's Vall**	**2.43**	**208**	*e*P	Pn	08 14 31.2	-3.9
MOVZ	**Moawhango**	**2.46**	**29**	P	Pn	08 14 35.0	-0.6
WNVZ	**Wahianoa**	**2.48**	**26**	P	Pn	08 14 36.1	+0.3
WNVZ	**Wahianoa**	**2.48**	**26**	PN	Pn	08 14 35.6	-0.3
VRZ	**Vera Road**	**2.48**	**10**	P	Pn	08 14 36.8	+0.9
DRZ	**Dome Shelter**	**2.51**	**25**	P	Pn	08 14 39.5	+3.1
FWVZ	**Far West T-bar**	**2.53**	**24**	*e*P	Pn	08 14 36.9	+0.3
FWVZ	**Far West T-bar**	**2.53**	**24**	PN	Pn	08 14 36.9	+0.3
TUVZ	**Tukino**	**2.55**	**26**	P	Pn	08 14 36.9	0.0
TUVZ	**Tukino**	**2.55**	**26**	PN	Pn	08 14 36.9	0.0
WPVZ	**Whakapapa**	**2.57**	**24**	P	Pn	08 14 37.6	+0.4
CNZ	**Chateau**	**2.58**	**24**	P	Pn	08 14 37.8	+0.5
NGZ	**Ngauruhoe**	**2.62**	**24**	P	Pn	08 14 38.1	+0.3
NGZ	**Ngauruhoe**	**2.62**	**24**	PN	Pn	08 14 38.0	+0.1
TWVZ	**Taurewa**	**2.67**	**21**	P	Pn	08 14 39.2	+0.7
WTVZ	**West Tongariro**	**2.67**	**24**	PN	Pn	08 14 38.6	0.0
KATZ	**Kakaramea**	**2.83**	**24**	P	Pn	08 14 41.8	+0.9
RITZ	**Rihia Road**	**2.88**	**26**	P	Pn	08 14 45.2	+3.6
RATZ	**Rangitukua**	**2.95**	**24**	P	Pn	08 14 47.8	+5.2
BKZ	**Black Stump Fm**	**2.97**	**37**	*e*P	Pn	08 14 39.6	-3.2
WVZ	**Waitaha Valley**	**2.99**	**239**	P	Pn	08 14 40.9	-2.2
HATZ	**Hinemaiaia**	**3.04**	**29**	P	Pn	08 14 47.2	+3.4
WATZ	**Wairara**	**3.09**	**23**	P	Pn	08 14 49.8	+5.3
HIZ	**Hauiti**	**3.09**	**9**	P	Pn	08 14 45.6	+1.0
RPZ	**Rata Peaks**	**3.17**	**226**	*e*P	Pn	08 14 42.4	-3.3
WHTZ	**Whakaora**	**3.19**	**25**	P	Pn	08 14 53.7	+7.6
UTU	**Utuhina**	**3.72**	**25**	P	Pn	08 15 01.4	+7.9
TAZ	**Tarawera**	**3.77**	**29**	P	Pn	08 15 03.0	+8.7
MKRZ	**Makatiti**	**3.84**	**28**	P	Pn	08 14 53.5	-1.7
FOZ	**Fox Glacier**	**3.89**	**238**	*e*P	Pn	08 14 51.8	-4.2
TOZ	**Tahuroa Road**	**3.96**	**15**	*e*P	Pn	08 15 01.1	+4.1
URZ	**Urewera**	**3.99**	**35**	*e*P	Pn	08 14 53.2	-4.1
LBZ	**Lake Benmore**	**4.08**	**225**	*e*P	Pn	08 14 55.2	-3.5
ODZ	**Otahua Downs**	**4.34**	**216**	*e*P	Pn	08 14 57.5	-4.8
JCZ	**Jackson Bay**	**4.73**	**236**	*e*P	Pn	08 15 03.6	-4.3
WKZ	**Wanaka**	**5.00**	**228**	*e*P	Pn	08 15 07.1	-4.6
EAZ	**Earnscleugh**	**5.12**	**223**	*e*P	Pn	08 15 08.6	-4.7
TUZ	**Tuapeka**	**5.50**	**216**	*e*P	Pn	08 15 13.7	-5.0

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*IDC **29** 09:12:00.4±0.9,1.27N×96.93E,mb4.4/13,mb1 4.5/14, mb1mx4.4/19,mbtmp4.4/14,ML3.3/1,MS3.9/4,Ms1 3.9/4, ms1mx3.4/25,Error ellipse: s-maj=34.1km s-min=16.5km az=44.0*

*BJI **29** 09:12:02.7,1.40N×97.30E,h23^{km},mB5.0,mb4.8,Ms4.5, Msz4.3*

*MOS **29** 09:12:03.4±0.8,1.30N×97.01E,h33^{km},mb4.8/10,Error ellipse: s-maj=15.2km s-min=8.2km az=102.1*

*NEIC **29** 09:12:05.3±0.4,1.33N×97.06E,h30^{km},mb4.9/14,Error ellipse: s-maj=10.5km s-min=6.3km az=223.0*

ISC 29 09:12:04.1±0.5**,1.39N**±0.07×**97.13E**±0.07**,h33**^{km}**, (h22**^{km}±3.2^{km}**:pP-P),n73,**σ**0**^{s}**85**/72**,mb4.6**/35**,MS4.2**/8**,4C, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**2.27**	**52**	Pn	**Pn**	**09 12 41.7**	**+1.5**
	7.3nm,0.3s,baz=252,slow=5.0,SNR=40						
PSI	**Prapat**	**2.27**	**52**	Pn	**Pn**	**09 12 41.7**	**+1.5**
KULM	**Kulim**	**5.23**	**42**	⇑*e*Pn	**Pn**	**09 13 22.3**	**+0.2**
KKM	**Kota Kinabalu**	**19.59**	**76**	*e*P	**P**	**09 16 32.3**	**-0.2**
KMI	**Kunming**	**24.21**	**12**	⇑P	**P**	**09 17 19.5**	**+0.5**
KMI				AP		09 17 32.3	
KMI				AMB	AMB		
	comp=Z,30nm,1.1s,mb4.6						
KMI				AMB	AMB		
	comp=Z,180nm,6.4s						
KMI				LR	LR		
	comp=N,740nm,13.4s,MS4.4						
KMI				LR	LR		
	comp=E,460nm,13.0s,MS4.4						
KMI				LR	LR		
	comp=Z,780nm,13.8s,MS4.3						
KMI	**Kunming**	**24.21**	**12**	⇑P	**P**	**09 17 19.6**	**+0.6**
	comp=Z,35nm,1.1s,mb4.7						
KMI				pP		09 17 32.3	
KMI				sP		09 17 37.9	
KMI				PP	PP	09 18 04.1	+10
KMI				PPP	PPP	09 18 16.1	+12
KMI				S	**S**	**09 21 47.4**	**+15**
KMI				sS		09 22 09.4	
KMI				SS	SS	09 22 58.9	+33
KMI				SSS	SSS	09 23 17.1	+35
KMI				LR	LR		
	comp=Z,790nm,13.8s,MS4.4						
KMI	**Kunming**	**24.21**	**12**	⇑P	**P**	**09 17 19.6**	**+0.6**
KMI				*PP		09 17 32.3	
KMI						09 18 04.1	
KMI				pmax	pmax		
	comp=Z,35nm,1.1s,mb4.7						
KMI				MLR	MLR		
	comp=Z,790nm,13.8s,MS4.4						
HYB	**Hyderabad**	**24.23**	**312**	*i* P	**P**	**09 17 22.0**	**+2.7**
SHL	**Shillong**	**24.56**	**349**	*e*P	**P**	**09 17 23.0**	**+0.6**
SHL				*e*S	**S**	**09 21 43.0**	**+4.7**
GYA	**Guiyang**	**26.56**	**19**	⇑*i*P	**P**	**09 17 40.8**	**-0.4**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.7						
JIRN	**Jiri**	**28.14**	**339**	*e*P	**P**	**09 17 56.7**	**+1.1**
	comp=Z,59nm,0.9s,mb5.2						
PKI	**Pulchoki**	**28.35**	**338**	*e*P	**P**	**09 17 57.8**	**+0.4**
GUN	**Gumba**	**28.48**	**339**	*e*P	**P**	**09 17 59.6**	**+1.0**
	comp=Z,51nm,0.8s,mb5.2						
DMN	**Daman**	**28.50**	**337**	*e*P	**P**	**09 17 59.3**	**+0.5**
KKN	**Kakani**	**28.60**	**338**	*e*P	**P**	**09 18 00.2**	**+0.6**
	comp=Z,46nm,1.1s,mb5.1						
KKN	**Kakani**	**28.60**	**338**	*e*P	**P**	**09 18 00.2**	**+0.6**
KKN				pmax	pmax		
	comp=Z,23nm,1.1s,mb4.8						
LSA	**Lhasa**	**28.72**	**349**	P	**P**	**09 18 01.8**	**+1.1**
LSA	**Lhasa**	**28.72**	**349**	*e*P	**P**	**09 18 01.9**	**+1.2**
	comp=Z,5.8nm,0.4s,mb4.7						
LSA	**Lhasa**	**28.72**	**349**	*e*P	**P**	**09 18 02.0**	**+1.3**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.4s,mb4.7						
GKN	**Gorkha**	**29.04**	**337**	*e*P	**P**	**09 18 04.2**	**+0.7**
KOLN	**Koldanda**	**29.26**	**335**	*e*P	**P**	**09 18 06.3**	**+0.8**
	comp=Z,47nm,0.8s,mb5.3						
CD2	**Chengdu**	**30.02**	**11**	*e*P	**P**	**09 18 11.3**	**-1.0**
CD2				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
ENH	**Enshi**	**31.03**	**21**	*e*P	**P**	**09 18 20.4**	**-0.8**
	comp=Z,36nm,0.8s,mb5.3						
MBWA	**Marble Bar**	**31.48**	**137**	P	**P**	**09 18 26.2**	**+0.9**
	comp=Z,40nm,1.6s,mb5.0						
NACB	**Ninganchiao**	**32.76**	**44**	*e*P	**P**	**09 18 36.9**	**+0.4**
LZH	**Lanzhou**	**35.08**	**9**	*e*P	**P**	**09 18 56.0**	**-0.3**
LZH				AP	pP	09 19 03.5	-2.5
LZH				XP	sP	09 19 07.5	-2.8
LZH				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.9						
LZH				AMB	AMB		
	comp=Z,100nm,4.3s						
LZH				LR	LR		
	comp=E,620nm,15.0s						
LZH				LR	LR		
	comp=Z,730nm,17.5s,MS4.5						
LZH	**Lanzhou**	**35.08**	**9**	*e*P	**P**	**09 18 56.0**	**-0.3**
	comp=Z,28nm,1.2s,mb5.1						
LZH				pP	pP	09 19 03.5	-2.5
LZH				sP	sP	09 19 07.5	-2.8
LZH				LR	LR		
	comp=Z,730nm,17.5s,MS4.5						
LZH	**Lanzhou**	**35.08**	**9**	*e*P	**P**	**09 18 56.0**	**-0.3**
LZH				*SP	sP	09 19 07.5	-2.8
LZH				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.1						
LZH				MLR	MLR		
	comp=Z,730nm,17.5s,MS4.5						
GTA	**Gaotai**	**37.92**	**3**	*e*P	**P**	**09 19 20.0**	**-0.2**
GTA				AP	pP	09 19 28.0	-2.0
GTA				XP	sP	09 19 31.8	-2.4
GTA				PP	PP	09 20 49.5	-0.8
GTA				PPP	PPP	09 21 10.8	-1.4
GTA				S	**S**	**09 25 08.8**	**-0.5**
GTA				XS		09 25 20.0	
GTA				SS	SS	09 27 45.8	-0.6
GTA				AMB	AMB		
	comp=Z,140nm,4.6s						
GTA				LR	LR		
	comp=N,240nm,12.5s,MS4.3						
GTA				LR	LR		
	comp=E,190nm,14.8s,MS4.3						
GTA				LR	LR		
	comp=Z,250nm,13.3s,MS4.2						
WRA	**Warramunga Arr**	**42.19**	**122**	P	**P**	**09 19 55.2**	**-0.7**
	comp=Z,3.0nm,0.6s,mb4.1,baz=301,slow=9.1,SNR=48						
WRAB	**Tennant Creek**	**42.20**	**122**	*e*P	**P**	**09 19 56.2**	**+0.2**
	comp=Z,16nm,1.0s,mb4.6						
WRAB	**Tennant Creek**	**42.20**	**122**	*e*P	**P**	**09 19 56.2**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.6						
WB2	**Warramunga Arr**	**42.20**	**122**	*e*P	**P**	**09 19 55.8**	**-0.2**
WMQ	**Urumqi**	**43.07**	**350**	*e*P	**P**	**09 20 04.3**	**+1.5**
WMQ				AP	pP	09 20 11.5	-1.2
WMQ				XP	sP	09 20 16.0	-0.8
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,120nm,5.2s						
WMQ				LR	LR		
	comp=N,520nm,11.1s,MS4.8						
WMQ				LR	LR		
	comp=E,420nm,13.2s,MS4.8						
WMQ				LR	LR		
	comp=Z,380nm,18.8s						
KS15	**Wonju Array Si**	**45.70**	**35**	*e*P	**P**	**09 20 24.4**	**+0.3**
AAK	**Ala-Archa**	**45.80**	**337**	P	**P**	**09 20 23.3**	**-1.4**
	comp=Z,3.4nm,0.8s,mb4.3						
AAK	**Ala-Archa**	**45.80**	**337**	P	**P**	**09 20 23.3**	**-1.4**
AAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
SONM	**Songino Array**	**46.95**	**9**	P	**P**	**09 20 34.2**	**+0.5**
	comp=Z,10nm,0.8s,mb4.8,baz=192,slow=8.5,SNR=66						
SONM				PcP	PcP	09 22 06.6	+0.3
	comp=Z,1.4nm,0.8s,baz=195,slow=2.3,SNR=2.7						
SONM				LR	LR	09 42 55.5	
	comp=Z,272nm,18.1s,MS4.2,baz=200,slow=39						
MKAR	**Makanchi Array**	**47.04**	**346**	P	**P**	**09 20 34.8**	**+0.5**
	comp=Z,6.9nm,0.5s,mb4.8,baz=157,slow=8.8,SNR=34						
KKAR	**Karatay Array**	**47.85**	**334**	P	**P**	**09 20 41.2**	**+0.3**
ZAK	**Zakamensk**	**49.09**	**5**	*e*P	**P**	**09 20 50.1**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
CN2	**Changchun**	**49.17**	**27**	*e*P	**P**	**09 20 51.0**	**0.0**
PMG	**Port Moresby**	**50.97**	**103**	P	**P**	**09 21 05.2**	**+0.1**
	comp=Z,7.0nm,0.8s,mb4.6,baz=273,slow=7.0,SNR=5.0						
KURK	**Kurchatov**	**51.59**	**345**	*e*P	**P**	**09 21 09.2**	**-0.2**
ZAL	**Zalesovo**	**53.35**	**351**	P	**P**	**09 21 22.1**	**-0.3**
	comp=Z,6.6nm,0.6s,mb4.7,baz=313,slow=5.7,SNR=25						
STKA	**Stephens Creek**	**53.53**	**132**	P	**P**	**09 21 25.2**	**+1.1**
	comp=Z,5.5nm,0.7s,mb4.6,baz=300,slow=7.0,SNR=7.0						
STKA	**Stephens Creek**	**53.53**	**132**	*e*P	**P**	**09 21 24.8**	**+0.7**
NVS	**Novosibirsk**	**54.48**	**350**	*e*P	**P**	**09 21 29.4**	**-1.3**
ATD	**Arta Tunnel**	**54.78**	**283**	LR	LR	09 41 08.3	
	comp=Z,32nm,18.9s,MS3.4,baz=40,slow=32						
BVA0	**Borovoye Array**	**56.05**	**341**	P	**P**	**09 21 41.0**	**-1.1**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.9						
BVAR	**Borovoye Array**	**56.05**	**341**	P	**P**	**09 21 41.4**	**-0.7**
	comp=Z,3.7nm,0.6s,mb4.6,baz=136,slow=9.0,SNR=4.4						
BRVK	**Borovoye**	**56.11**	**341**	P	**P**	**09 21 38.6**	**-4.0**
	comp=Z,2.7nm,0.7s,mb4.4						
BRVK	**Borovoye**	**56.11**	**341**	P	**P**	**09 21 38.6**	**-3.9**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
KLR	**Kul'dur**	**56.12**	**27**	*e*P	**P**	**09 21 41.4**	**-1.2**
CHKZ	**Chkalovo**	**56.52**	**341**	*e*P	**P**	**09 21 44.7**	**-0.8**
	comp=Z,64nm,1.1s,mb5.6						
CHKZ	**Chkalovo**	**56.52**	**341**	*e*P	**P**	**09 21 44.7**	**-0.8**
CHKZ				pmax	pmax		
	comp=Z,64nm,1.1s,mb5.6						
AB31	**Akbulak array**	**57.31**	**332**	P	**P**	**09 21 50.0**	**-1.2**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.7						
BOD	**Bodaibo**	**57.84**	**11**	*e*P	**P**	**09 21 53.6**	**-1.1**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.6						
KMBO	**Kilima Mbogo**	**59.92**	**268**	LR	LR	09 43 30.1	
	comp=Z,56nm,18.3s,MS3.7,baz=86,slow=32						
YAK	**Yakutsk**	**65.26**	**16**	*e*P	**P**	**09 22 43.0**	**-1.6**
YAK				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.2						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
BRTR	**Keskin Array B**	**68.93**	**312**	P	**P**	**09 23 07.0**	**-1.1**
	comp=E,1.0nm,0.8s,mb3.8,baz=112,slow=6.7,SNR=4.0						
AKASG	**Malin Array Be**	**75.06**	**322**	P	**P**	**09 23 43.4**	**-1.0**
	comp=E,0.7nm,0.4s,mb3.9,baz=86,slow=5.0,SNR=7.2						
RPZ	**Rata Peaks**	**79.39**	**135**	LR	LR	09 58 17.6	
	comp=E,161nm,18.5s,MS4.4,baz=170,slow=35						
FINES	**FINESS Array B**	**79.80**	**332**	P	**P**	**09 24 10.3**	**-0.2**
	comp=E,3.8nm,0.8s,mb4.4,baz=117,slow=4.3,SNR=6.5						
ARCES	**ARCESS Array B**	**82.33**	**340**	P	**P**	**09 24 24.3**	**+0.6**
	comp=E,4.1nm,0.9s,mb4.4,baz=90,slow=4.9,SNR=16						
ARCES	**ARCESS Array B**	**82.33**	**340**	P	**P**	**09 24 24.3**	**+0.6**
GERES	**GERESS Array B**	**84.62**	**319**	P	**P**	**09 24 36.3**	**+0.6**
	comp=E,0.5nm,0.3s,mb4.2,baz=90,slow=5.9,SNR=4.3						
GERES	**GERESS Array B**	**84.62**	**319**	P	**P**	**09 24 36.3**	**+0.6**
NB2	**NORSAR Subarra**	**86.81**	**331**	P	**P**	**09 24 46.6**	**+0.5**
	comp=E,0.9nm,0.7s,mb4.1,baz=93,slow=4.8						
NOA	**NORSAR Array B**	**86.81**	**331**	P	**P**	**09 24 46.7**	**+0.6**
	comp=E,1.9nm,0.8s,mb4.4,baz=95,slow=4.9,SNR=4.7						
NAO	**NORSAR Subarra**	**86.98**	**331**	P	**P**	**09 24 46.6**	**-0.4**
	comp=E,0.9nm,0.7s,mb4.1						
NAO	**NORSAR Subarra**	**86.98**	**331**	P	**P**	**09 24 46.6**	**-0.4**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb4.2						
TXAR	**Lajitas Array**	**143.54**	**31**	PKP	PKPdf	09 31 35.5	-0.6
	comp=Z,0.3nm,0.5s,baz=270,slow=0.9,SNR=8.2						

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*LDG **29** 09:27:16.0±0.1,34.74N×80.11E,h10^{km},Mb4.3/7,Ms3.6/1, Error ellipse: s-maj=3.3km s-min=2.3km az=55.0*

*BJI **29** 09:27:20.1,34.70N×80.28E,h15^{km},mB4.7,mb4.5,ML4.5, Ms4.2,Msz4.1*

*MOS **29** 09:27:20.1±1.3,34.71N×80.07E,h33^{km},mb4.7/8,Error ellipse: s-maj=13.3km s-min=5.7km az=112.3*

*NEIC **29** 09:27:22.8±0.4,34.75N×80.07E,h35^{km},mb4.5/11,Error ellipse: s-maj=10.6km s-min=8.0km az=29.0*

*NNC **29** 09:27:23.3±2.8,35.22N×79.90E,Error ellipse: s-maj=24.4km s-min=18.4km az=158.0*

*IDC **29** 09:27:23.0±4.5,34.77N×80.28E,h38^{km}±38^{km},mb4.1/15, mb1 4.3/18,mb1mx4.2/23,mbtmp4.3/18,ML4.3/2,MS3.5/3, Ms1 3.5/3,ms1mx3.2/22,Error ellipse: s-maj=18.2km s-min=14.6km az=56.0*

ISC 29 09:27:20.7±0.3**,34.75N**±0.02×**80.03E**±0.04**,h33**^{km}**,n115,** σ**1**^{s}**31**/130**,mb4.4**/27**,MS3.7**/4**,4C-6D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLP	**Kalpa**	**3.54**	**205**	*e*P	**P**	**09 28 20.3**	**+5.6**
KLP				*e*S	**S**	**09 29 04.9**	**+9.0**
KLP				AML	AML	09 29 18.5	
	comp=E,516nm,0.9s						
KLP				AML	AML	09 29 18.5	
	comp=N,456nm,0.7s						
DLH	**Dalhousie**	**4.04**	**238**	*e*P	**P**	**09 28 26.0**	**+4.2**
DLH				*e*SB	**Sb**	**09 29 19.0**	**-0.9**
SDNR	**Sundarnagar**	**4.14**	**219**	*e*P	**P**	**09 28 27.5**	**+4.4**
SDNR				*e*SB	**Sb**	**09 29 21.1**	**-1.5**
SMLA	**Simla**	**4.34**	**214**	*e*P	**P**	**09 28 28.5**	**+2.5**
SMLA				*e*P		09 28 29.4	
SMLA				*e*S	**S**	**09 29 19.0**	**+2.8**
SMLA				*e*S	**S**	**09 29 21.3**	**+5.1**
BHK	**Bhakra**	**4.50**	**223**	*e*x	x	09 28 57.1	
BHK				*e*x	x	09 29 49.1	
DDI	**Dehra Dun**	**4.72**	**201**	*e*P	**P**	**09 28 32.8**	**+1.4**
DDI				*e*x	x	09 29 40.0	
LGTI	**Lohaghat**	**5.29**	**178**	*e*P	**P**	**09 28 41.5**	**+2.1**
LGTI				*e*S	**S**	**09 29 46.3**	**+6.2**
KALG	**Kalgarh**	**5.34**	**192**	*e*P	**P**	**09 28 40.2**	**0.0**
KALG				*e*S	**S**	**09 29 41.9**	**+0.5**
KALG				AML	AML	09 29 47.2	
	comp=E,218nm,0.7s						
KSH	**Kashi**	**5.75**	**327**	*i* P	**P**	**09 28 50.8**	**+4.9**
KSH				*e*S	**S**	**09 29 51.8**	**+0.1**
KSH				Smax			
	comp=N,410nm,0.6s						
KSH				Smax			
	comp=E,360nm,0.7s						
NDI	**New Delhi**	**6.51**	**202**	*e*P	**P**	**09 28 57.5**	**+0.9**
NDI				*e*S	**S**	**09 30 13.5**	**+3.0**
AYAN	**Aya Nagar**	**6.72**	**202**	*e*P	**P**	**09 28 59.7**	**+0.1**
KUDL	**Kundal**	**7.25**	**206**	*e*P	**P**	**09 29 07.7**	**+0.8**
KHET	**Khetri**	**7.57**	**210**	*e*P	**P**	**09 29 11.2**	**-0.2**
KHET				*e*S	**S**	**09 30 36.5**	**-0.5**
KZA	**Kyzart**	**8.22**	**334**	P	**P**	**09 29 24.2**	**+3.7**
	SNR=15						
UCH	**Uchtor**	**8.62**	**332**	P	**P**	**09 29 28.6**	**+2.5**
	SNR=47						
KBK	**Karagaybulak**	**8.83**	**335**	P	**P**	**09 29 40.0**	**+11**
	SNR=5.5						
TKM2	**Tokmak 2**	**8.86**	**338**	P	**P**	**09 29 32.0**	**+2.7**
	SNR=15						
AML	**Almayashu**	**8.88**	**328**	P	**P**	**09 29 32.2**	**+2.6**
	SNR=18						
AAK	**Ala-Archa**	**8.98**	**333**	⇑*e*P	**P**	**09 29 32.6**	**+1.6**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FRU	**Bishkek**	**9.11**	**334**	*e*P	**P**	**09 29 37.0**	**+4.2**
FRU				pmax	pmax		
	comp=Z,50nm,1.6s						
FRU				pmax	pmax		
	comp=E,210nm,2.1s						
EKS2	**Erkin-Say**	**9.29**	**330**	P	**P**	**09 29 38.8**	**+3.5**
	SNR=9.3						
AJM	**Ajmer**	**9.46**	**211**	*e*P	**P**	**09 29 35.9**	**-1.7**
AJM				*e*S	**S**	**09 31 21.1**	**-2.9**
ALBI	**Allahabad**	**9.54**	**170**	*e*P	**P**	**09 29 34.5**	**-4.2**
LSA	**Lhasa**	**10.68**	**115**	P	**P**	**09 29 54.8**	**+0.4**
LSA	**Lhasa**	**10.68**	**115**	*e*Pn	**P**	**09 29 54.7**	**+0.3**
	comp=E,11nm,0.8s						
LSA	**Lhasa**	**10.68**	**115**	*e*P	**P**	**09 29 54.7**	**+0.3**
LSA				pmax	pmax		
	comp=Z,11nm,0.8s						
WMQ	**Urumqi**	**10.82**	**31**	*e*P	**P**	**09 29 55.8**	**-0.6**
WMQ				*e*S	**S**	**09 32 02.0**	**+4.6**
WMQ				AMB	AMB		
	comp=Z,60nm,4.1s						
WMQ				LR	LR		
	comp=N,530nm,10.2s						
WMQ				LR	LR		
	comp=E,570nm,9.0s						
KK31	**Karatay Array**	**11.15**	**321**	Pn	**P**	**09 30 00.8**	**0.0**
	comp=E,1.3nm,0.3s,baz=130,slow=13,SNR=32						
KK31				⇓Sn	**S**	**09 32 04.5**	**-0.8**
	comp=E,3.6nm,0.5s,baz=137,slow=24						
KKAR	**Karatay Array**	**11.15**	**321**	*i* P	**P**	**09 30 00.8**	**0.0**
KKAR						09 32 04.5	

KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KKAR				smax			
	comp=Z,3.0nm,0.5s						
BHPL	**Bhopal**	**11.69**	**192**	*e*P	**P**	**09 30 05.4**	**-2.8**
BHPL				*e*S	**S**	**09 32 11.4**	**-7.2**
MK31	**Makanchi Array**	**12.15**	**7**	Pn	**P**	**09 30 12.2**	**-2.1**
	comp=Z,2.5nm,0.5s,baz=186,slow=13,SNR=66						
MK31				⇑Sn	**S**	**09 32 29.8**	**+0.2**
	comp=Z,14nm,1.1s,baz=186,slow=23,SNR=4.4						
MKAR	**Makanchi Array**	**12.15**	**7**	Pn	**P**	**09 30 12.7**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=180,slow=13,SNR=25						
MKAR				Sn	**S**	**09 32 25.2**	**-4.4**
	comp=Z,0.2nm,0.3s,baz=191,slow=24,SNR=2.4						
MKAR	**Makanchi Array**	**12.15**	**7**	Pn	**P**	**09 30 12.7**	**-1.6**
MKAR				Sn	**S**	**09 32 25.2**	**-4.4**
NGP	**Nagpur**	**13.58**	**184**	*e*P	**P**	**09 30 30.4**	**-3.0**
NGP				AMb	AMB	09 30 32.5	
	comp=Z,36nm,0.9s						
NGP				*e*x	x	09 32 51.9	
NGP				AML	AML	09 33 03.1	
	comp=N,12nm,0.5s						
NGP				AML	AML	09 33 03.4	
	comp=E,13nm,0.4s						
SHL	**Shillong**	**13.73**	**129**	*e*x	x	09 30 29.0	
CAL	**Calcutta**	**14.17**	**147**	*e*x	x	09 36 42.6	
KURK	**Kurchatov**	**15.99**	**357**	⇓P	**P**	**09 31 06.1**	**+1.6**
	comp=E,6.4nm,0.7s						
KURK	**Kurchatov**	**15.99**	**357**	*e*P	**P**	**09 31 07.3**	**+2.8**
	comp=E,16nm,0.8s						
KURK	**Kurchatov**	**15.99**	**357**	*e*P	**P**	**09 31 07.3**	**+2.8**
KURK				pmax	pmax		
	comp=Z,16nm,0.8s						
GTA	**Gaotai**	**16.45**	**68**	*e*P	**P**	**09 31 12.5**	**+2.0**
GTA				AP		09 31 20.0	
GTA				XP		09 31 24.3	
HYB	**Hyderabad**	**17.31**	**185**	*i* P	**P**	**09 31 18.0**	**-3.4**
HYB	**Hyderabad**	**17.31**	**185**	*e*P	**P**	**09 31 18.0**	**-3.4**
KAD	**Karad**	**18.14**	**198**	*e*P	**P**	**09 31 31.9**	**+0.1**
KAD				AMb	AMB	09 31 34.3	
	comp=Z,30nm,1.8s						
VOSK	**Vostochnaya**	**19.09**	**343**	⇓P	**P**	**09 31 41.9**	**-1.2**
	comp=Z,9.1nm,1.1s						
VOSK	**Vostochnaya**	**19.09**	**343**	P	**P**	**09 31 41.8**	**-1.3**
VOSK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAL	**Zalesovo**	**19.47**	**8**	P	**P**	**09 31 45.0**	**-2.4**
	baz=278,slow=13,SNR=9.9						
ZAL				LR	LR	09 40 45.6	
	comp=Z,142nm,18.4s,baz=91,slow=41						
ZAL	**Zalesovo**	**19.47**	**8**	P	**P**	**09 31 45.0**	**-2.4**
ZAL				LR	LR	09 40 45.6	
BVA0	**Borovoye Array**	**19.51**	**342**	P	**P**	**09 31 47.1**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=162,slow=14,SNR=47						
BVA0	**Borovoye Array**	**19.51**	**342**	*i* P	**P**	**09 31 47.1**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**19.51**	**342**	P	**P**	**09 31 46.9**	**-0.9**
	comp=Z,2.1nm,0.3s,baz=155,slow=12,SNR=26						
BVAR				S	**S**	**09 35 25.8**	**+5.1**
	comp=Z,0.2nm,0.3s,baz=170,slow=16,SNR=2.5						
BRVK	**Borovoye**	**19.57**	**342**	*e*P	**P**	**09 31 47.8**	**-0.5**
	comp=Z,8.7nm,0.8s						
BRVK	**Borovoye**	**19.57**	**342**	*e*P	**P**	**09 31 47.8**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHKZ	**Chkalovo**	**20.05**	**344**	⇓P	**P**	**09 31 53.0**	**-0.6**
	comp=Z,12nm,0.7s						
CHKZ	**Chkalovo**	**20.05**	**344**	*e*P	**P**	**09 31 53.0**	**-0.6**
	comp=Z,21nm,0.8s						
CHKZ	**Chkalovo**	**20.05**	**344**	*e*P	**P**	**09 31 53.0**	**-0.6**
CHKZ				pmax	pmax		
	comp=Z,21nm,0.8s						
NVS	**Novosibirsk**	**20.21**	**5**	*e*P	**P**	**09 31 53.0**	**-2.3**
AB31	**Akbulak array**	**20.71**	**320**	⇑P	**P**	**09 32 00.8**	**+0.2**
	comp=Z,3.4nm,0.7s						
AB31	**Akbulak array**	**20.71**	**320**	P	**P**	**09 32 00.7**	**+0.1**
AKTO	**Aktyubinsk**	**22.42**	**321**	⇓P	**P**	**09 32 20.1**	**+2.5**
	comp=Z,1.0nm,0.7s,mb3.4						
AKTO	**Aktyubinsk**	**22.42**	**321**	P	**P**	**09 32 19.1**	**+1.5**
	comp=Z,1.4nm,0.5s,mb3.7,baz=113,slow=12,SNR=7.7						
AKTO				LR	LR	09 41 53.1	
	comp=Z,126nm,18.2s,MS3.4,slow=39						
AKTO	**Aktyubinsk**	**22.42**	**321**	P	**P**	**09 32 19.1**	**+1.5**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb3.5						
AKTO				MLR	MLR		
	comp=Z,126nm,18.2s,MS3.4						
ZAK	**Zakamensk**	**23.04**	**40**	*e*P	**P**	**09 32 17.7**	**-6.0**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s,mb3.5						
SONM	**Songino Array**	**23.60**	**48**	P	**P**	**09 32 30.5**	**+1.4**
	comp=Z,3.5nm,0.7s,mb3.9,baz=241,slow=10,SNR=20						
SONM				PcP	PcP	09 36 13.8	-1.4
	comp=Z,0.5nm,0.6s,baz=220,slow=2.9,SNR=4.0						
GYA	**Guiyang**	**24.32**	**103**	⇑*i*P	**P**	**09 32 36.3**	**-0.1**
GYA				AMB	AMB		
	comp=Z,20nm,0.8s,mb4.6						
ARU	**Arti**	**26.17**	**333**	*e*P	**P**	**09 32 55.9**	**+2.3**
	comp=Z,9.3nm,0.7s,mb4.4						
ARU	**Arti**	**26.17**	**333**	⇓*i*P	**P**	**09 32 56.0**	**+2.4**
ARU				*e*		09 33 34.5	
ARU				*e*S	**S**	**09 37 19.5**	**-1.5**
ARU				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.4						
KIV	**Kislovodsk**	**30.09**	**299**	*e*P	**P**	**09 33 38.5**	**+9.4**
KIV				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
KIV				MLR	MLR		
	comp=Z,129nm,18.0s,MS3.6						
NJ2	**Nanjing**	**32.39**	**84**	*e*P	**P**	**09 33 53.5**	**+4.0**
NJ2				PP	PP	09 35 01.3	+3.5
NJ2				S	**S**	**09 39 00.0**	**-0.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb4.8						
NJ2				AMB	AMB		
	comp=Z,160nm,9.1s						
NJ2				LR	LR		
	comp=N,340nm,16.8s,MS4.2						
NJ2				LR	LR		
	comp=E,290nm,21.6s,MS4.2						
NJ2				LR	LR		
	comp=Z,220nm,15.1s						
SSE	**Sheshan**	**34.57**	**84**	*e*P	**P**	**09 34 09.0**	**+0.7**
SSE				AMB	AMB		
	comp=Z,30nm,0.8s,mb5.3						
SSE				AMB	AMB		
	comp=Z,170nm,3.5s						
SSE	**Sheshan**	**34.57**	**84**	*e*P	**P**	**09 34 08.9**	**+0.6**
	comp=Z,33nm,0.8s,mb5.3						
BR131	**Keskin Array S**	**36.95**	**292**	*e*P	**P**	**09 34 30.2**	**+1.9**
	comp=Z,1.2nm,0.5s,mb4.0						
BRTR	**Keskin Array B**	**36.95**	**292**	P	**P**	**09 34 30.6**	**+2.2**
	comp=Z,2.9nm,0.8s,mb4.2,baz=108,slow=9.4,SNR=9.4						
AKASG	**Malin Array Be**	**39.75**	**310**	P	**P**	**09 34 52.3**	**+0.6**
	comp=Z,1.5nm,0.5s,mb4.0,baz=77,slow=8.4,SNR=6.6						
JOF	**Joensuu**	**41.14**	**328**	*e*p	**P**	**09 35 03.7**	**+0.7**
	comp=Z,3.0nm,0.6s,mb4.1						
FINES	**FINESS Array B**	**43.08**	**325**	P	**P**	**09 35 19.3**	**+0.5**
	comp=Z,1.9nm,0.7s,mb3.9,baz=112,slow=10,SNR=6.6						
FINES				LR	LR	09 54 18.9	
	comp=Z,65nm,19.6s,MS3.5,baz=134,slow=37						
ARCES	**ARCESS Array B**	**45.63**	**336**	P	**P**	**09 35 39.6**	**+0.3**
	comp=Z,7.1nm,0.8s,mb4.7,baz=96,slow=8.8,SNR=11						
DPC	**Dobruska-Polom**	**47.98**	**309**	*e*P	**P**	**09 36 02.5**	**+4.5**
UPC	**Upice**	**48.16**	**310**	*e*P	**P**	**09 36 03.4**	**+4.0**
GERES	**GERESS Array B**	**49.88**	**308**	P	**P**	**09 36 15.1**	**+2.4**
	comp=Z,0.7nm,0.2s,mb4.3,baz=90,slow=8.0,SNR=6.3						
KHC	**Kasperske Hory**	**49.91**	**308**	*e*P	**P**	**09 36 17.3**	**+4.4**
NB2	**NORSAR Subarra**	**50.17**	**324**	P	**P**	**09 36 14.3**	**-0.4**
	comp=Z,3.0nm,0.6s,mb4.5,baz=88,slow=7.4						
NOA	**NORSAR Array B**	**50.17**	**324**	P	**P**	**09 36 14.5**	**-0.2**
	comp=Z,4.1nm,0.7s,mb4.6,baz=89,slow=7.5,SNR=12						
NAO	**NORSAR Subarra**	**50.36**	**324**	P	**P**	**09 36 14.3**	**-1.9**
	comp=Z,3.0nm,0.6s,mb4.5						
NAO	**NORSAR Subarra**	**50.36**	**324**	P	**P**	**09 36 14.3**	**-1.9**
NAO				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.5						
KMBO	**Kilima Mbogo**	**53.62**	**238**	P	**P**	**09 36 42.6**	**+1.4**
	comp=Z,2.5nm,0.8s,mb4.2,baz=44,slow=13,SNR=7.7						
PGF	**Pioggiola**	**54.54**	**301**	*e*P	**P**	**09 36 47.5**	**-0.2**
HAU	**Haudompre**	**54.84**	**308**	*e*P	**P**	**09 36 49.2**	**-0.6**
LPG	**La Plagne**	**55.25**	**305**	*e*P	**P**	**09 36 52.5**	**-0.3**
	comp=Z,23nm,1.0s,mb4.9						
LPG	**La Plagne**	**55.25**	**305**	*e*P	**P**	**09 36 52.5**	**-0.3**
LPG				pmax	pmax		
	comp=Z,12nm,1.0s,mb4.9						
LPL	**La Plagne**	**55.26**	**305**	*e*P	**P**	**09 36 52.6**	**-0.2**
	comp=Z,30nm,1.1s,mb5.0						
LPL	**La Plagne**	**55.26**	**305**	*e*P	**P**	**09 36 52.6**	**-0.2**
LPL				pmax	pmax		
	comp=Z,15nm,1.1s,mb4.9						
MBDF	**Montbardon**	**55.46**	**304**	*e*P	**P**	**09 36 54.0**	**-0.3**
ORIF	**Oris-en-Rattie**	**56.01**	**304**	*e*P	**P**	**09 36 57.8**	**-0.4**
LOR	**Lormes**	**56.67**	**308**	*e*P	**P**	**09 37 01.9**	**-1.0**
VIVF	**Saint-Julien-l**	**56.84**	**305**	*e*P	**P**	**09 37 03.8**	**-0.4**
SMF	**Signal de Mont**	**56.86**	**307**	*e*P	**P**	**09 37 03.6**	**-0.7**
	comp=Z,2.3nm,0.3s,mb4.4						
SMF	**Signal de Mont**	**56.86**	**307**	*e*P	**P**	**09 37 03.6**	**-0.7**
SMF				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.3						
SSF	**Saint Saulge**	**56.96**	**308**	*e*P	**P**	**09 37 04.3**	**-0.7**
AVF	**Avril sur Loir**	**57.14**	**307**	*e*P	**P**	**09 37 05.6**	**-0.7**
	comp=Z,5.9nm,0.7s,mb4.4						
AVF	**Avril sur Loir**	**57.14**	**307**	*e*P	**P**	**09 37 05.6**	**-0.7**
AVF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
LASF	**Ste Croix**	**57.65**	**304**	*e*P	**P**	**09 37 09.6**	**-0.3**
TCF	**Toulx Ste Croi**	**58.04**	**307**	*e*P	**P**	**09 37 12.2**	**-0.4**
LDF	**La Druitiere**	**58.81**	**310**	*e*P	**P**	**09 37 17.1**	**-0.9**
FLN	**La Foliniere**	**58.99**	**310**	*e*P	**P**	**09 37 18.3**	**-0.9**
COLA	**College**	**73.90**	**19**	*e*P	**P**	**09 38 53.8**	**+0.3**
ILAR	**Eielson Array**	**74.24**	**19**	P	**P**	**09 38 55.3**	**-0.1**
	comp=Z,4.3nm,0.7s,mb4.5,baz=312,slow=5.2,SNR=77						
INK	**Inuvik**	**74.24**	**12**	P	**P**	**09 38 55.3**	**-0.1**
	comp=Z,3.8nm,0.6s,mb4.5,baz=3.0,slow=7.2,SNR=47						
WRA	**Warramunga Arr**	**74.95**	**128**	P	**P**	**09 38 59.1**	**-1.5**
	comp=Z,2.8nm,0.7s,mb4.3,baz=325,slow=5.6,SNR=43						
WB2	**Warramunga Arr**	**74.96**	**128**	*e*P	**P**	**09 38 59.0**	**-1.6**
YKA	**Yellowknife Ar**	**82.38**	**7**	P	**P**	**09 39 40.1**	**0.0**
	comp=Z,3.6nm,0.6s,mb4.5,baz=339,slow=5.4,SNR=29						
YKA	**Yellowknife Ar**	**82.38**	**7**	P	**P**	**09 39 40.1**	**0.0**
YKA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DLBC	**Dease Lake**	**83.82**	**15**	P	**P**	**09 39 48.7**	**+1.3**
	comp=Z,3.7nm,0.9s,mb4.5,baz=286,slow=26,SNR=4.3						
STKA	**Stephens Creek**	**87.97**	**132**	P	**P**	**09 40 06.8**	**-1.7**
	comp=Z,1.0nm,0.4s,mb4.4,baz=335,slow=3.5,SNR=7.2						
LPAZ	**La Paz**	**146.09**	**295**	PKPbc	PKPbc	09 47 00.2	+2.3
	comp=Z,1.9nm,0.6s,baz=2.0,slow=2.6,SNR=14						
LPAZ	**La Paz**	**146.09**	**295**	PKP2	PKPab	09 47 00.2	-0.3
LPAZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						

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*NEIC **29** 09:35:13.5±1.5, 18.62S×169.38E, h100^{km}, mb4.2/2, Error ellipse: s-maj=28.1km s-min=22.0km az=218.0*

*IDC **29** 09:35:17.9±6.4, 18.94S×169.08E, h126^{km}±49^{km}, mb4.0/3, mb1 4.1/4, mb1mx3.8/13, mbtmp4.5/4, Error ellipse: s-maj=54.1km s-min=29.1km az=20.0*

ISC 29 09:35:21.1±5.4**, 19.2S**±0.3×**168.9E**±0.2**, h159**^{km}±36^{km}**, n9, σ0^{s}91**/9**, mb4.1**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.69**	**219**	*e*P	**P**	**09 36 18.5**	**0.0**
DZM				*e*S	**S**	**09 37 01.7**	**-0.8**
DZM	**Mont Dzumac**	**3.69**	**219**	P	**P**	**09 36 19.0**	**+0.6**
	48nm,0.3s,baz=46,slow=19,SNR=373						
DZM				S	**S**	**09 37 02.7**	**+0.2**
	39nm,0.3s,baz=297,slow=23,SNR=8.1						
URZ	**Urewera**	**20.29**	**161**	P	**P**	**09 39 45.9**	**-0.1**
	19nm,0.7s,baz=329,slow=7.8,SNR=15						
CTAO	**Charters Tower**	**21.38**	**264**	P	**P**	**09 40 00.4**	**+3.4**
	6.4nm,0.6s,mb4.1						
STKA	**Stephens Creek**	**27.63**	**237**	P	**P**	**09 40 56.9**	**+0.9**
	3.8nm,0.6s,mb4.3,baz=80,slow=11,SNR=11						
WRAB	**Tennant Creek**	**32.56**	**263**	*e*P	**P**	**09 41 38.9**	**-0.7**
	3.4nm,0.8s,mb4.1						
WRA	**Warramunga Arr**	**32.57**	**263**	P	**P**	**09 41 38.8**	**-0.8**
	1.2nm,0.5s,mb3.9,baz=92,slow=8.1,SNR=35						
ARCES	**ARCESS Array B**	**124.95**	**345**	PKP	PKPdf	09 54 00.8	-1.0
	8.3nm,1.1s,baz=72,slow=2.9,SNR=4.0						
ARCES	**ARCESS Array B**	**124.95**	**345**	PKP	PKPdf	09 54 00.8	-1.0

MAN 29 09:46:56.6, 11.24N×125.75E, h131^{km}, mb4.2, ML3.0, MS2.7, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.47**	**320**	*e*P	P	09 47 16.0	+0.3
BESP				*e*S	S	09 47 26.4	-3.9
OCLP	**Ormoc**	**1.13**	**260**	*e*P	P	09 47 19.4	-1.7
MSLP	**Maasin**	**1.40**	**218**	*e*P	P	09 47 24.1	0.0
MSLP				*e*S	S	09 47 42.3	-2.8
SCPH	**Surigao**	**1.47**	**190**	⇑*e*P	P	09 47 26.6	+1.8
CNP	**Catarman**	**1.65**	**320**	*e*P	P	09 47 27.6	+0.8
CNP				*e*S	S	09 47 47.0	-2.9
PVCP	**Virac**	**2.81**	**327**	*e*P	P	09 47 43.0	+1.5
PVCP				*e*S	S	09 48 14.2	-1.5
GUIM	**Jordan**	**3.16**	**259**	*e*P	P	09 47 46.0	-0.1
BUKP	**Musuan**	**3.41**	**191**	*e*P	P	09 47 53.0	+3.6
BUKP				*e*S	S	09 48 34.2	+4.3
OTRP	**Odiongan**	**3.81**	**287**	*e*P	P	09 47 55.9	+1.1
IPIL	**Ipil**	**4.64**	**223**	*e*P	P	09 48 09.5	+3.5
BALP	**Baler**	**6.04**	**318**	*e*P	P	09 48 23.6	-1.0
CAUP	**Cauayan**	**6.83**	**327**	*e*P	P	09 48 34.9	-0.5

MAN 29 10:26:18.1, 15.54N×120.59E, h46^{km}, mb3.9, ML2.6, MS2.2, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCPH	**Palayan**	**0.49**	**87**	⇓*e*P	P	10 26 29.7	+0.6
PCPH				*e*S	S	10 26 37.1	+0.3
SCZP	**Santa Cruz**	**0.69**	**290**	*e*P	P	10 26 33.7	+2.0
BALP	**Baler**	**0.97**	**78**	*e*P	P	10 26 37.4	+1.8
BALP				*e*S	S	10 26 50.8	+2.3
BOLP	**Bolinao**	**1.06**	**322**	*e*P	P	10 26 37.1	+0.4
LUBP	**Lubang**	**1.82**	**190**	*e*P	P	10 26 48.0	+0.3

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*NEIC **29** 10:27:18.3, 31.43S×69.44W, h142^{km}, MD3.5(GUC), After GUC.*

GUC 29 10:27:18.3±0.7**, 31.43S×69.44W, h142**^{km}±12^{km}**, MD3.5, ML3.4, 2D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZON	**Zonda**	**0.66**	**100**	⇓*i*P	P	10 27 39.3	-0.9
ZON				*e*S	S	10 27 52.5	-4.4
CMCH	**Combarbala**	**1.36**	**280**	⇓*i*P	P	10 27 46.4	+0.2
CMCH				*i* S	S	10 28 07.6	0.0
CMCH				AMP		10 28 09.4	
	comp=E,1μm,0.7s						
TLL	**Tololo Astrono**	**1.72**	**317**	*e*P	P	10 27 50.6	+0.5
TLL				*i* S	S	10 28 15.1	+0.6
TLL				AMP		10 28 19.9	
	comp=N,227nm,0.6s						
CHNG	**Los Chungos**	**1.81**	**255**	*e*P	P	10 27 51.7	+0.5
CHNG				*i* S	S	10 28 15.4	-1.0
PEL	**Peldehue**	**2.01**	**211**	*i* S	S	10 28 20.5	+0.1
FCH	**Farellones**	**2.03**	**201**	*e*P	P	10 27 54.4	+0.8
FCH				*i* S	S	10 28 21.9	+1.2
FCH				AMP		10 28 27.4	
	comp=E,97nm,0.2s						
RCDM	**Rinconada Maip**	**2.36**	**209**	*i* P	P	10 27 57.9	+0.1
RCDM				*i* S	S	10 28 28.1	0.0
RCDM				AMP		10 28 29.2	
	comp=E,197nm,0.2s						
CHCH	**Chadas Angostu**	**2.70**	**202**	*e*P	P	10 28 01.9	-0.3

MAN 29 10:39:24.5, 8.46N×126.06E, h29^{km}, mb3.6, ML2.3, MS1.8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**0.40**	**133**	⇑*i*P	Pb	10 39 33.2	-0.2
BIPH				*i* S	Sb	10 39 40.6	+1.1
BUTP	**Butuan**	**0.67**	**319**	*e*P	Pb	10 39 37.5	-0.1
BUTP				*e*S	Sb	10 39 52.2	+5.6
BUKP	**Musuan**	**1.15**	**240**	*e*P	Pn	10 39 50.7	+5.9
BUKP				*e*S	Sn	10 40 08.2	+8.5
SCPH	**Surigao**	**1.43**	**337**	⇓*e*P	Pn	10 39 48.6	-0.3
SCPH				*e*S	Sn	10 40 06.5	-0.3
MATI	**Mati**	**1.52**	**173**	*e*P	Pn	10 39 49.6	-0.5
MSLP	**Maasin**	**2.04**	**325**	*e*P	Pn	10 39 57.6	-0.1
MSLP				*e*S	Sn	10 40 24.3	+1.8

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*NEIC **29** 10:52:30.4, 17.28N×100.83W, h16^{km}, MD3.7(MEX), After MEX.*

MEX 29 10:52:30.4±0.6**, 17.28N×100.83W, h16**^{km}±8^{km}**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.59**	**114**	*i* P	Pb	10 52 39.7	-2.1
CAIG				*i* S	Sb	10 52 47.3	-2.2
ZIIG	**Zihuatanejo**	**0.69**	**298**	*i* P	Pb	10 52 41.4	-2.2
ZIIG				*i* S	Sb	10 52 49.8	-2.7
ACX	**Acapulco**	**0.97**	**115**	*e*P	Pb	10 52 45.5	-2.8
ACX				*i* S	Sb	10 52 58.5	-2.1
PLIG	**Platanillo**	**1.68**	**49**	*i* P	Pn	10 52 55.6	-3.8
PLIG				*i* S	Sn	10 53 15.5	-5.2

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*NIED **29** 10:59:00, 46.50N×147.50E, h400^{km}, Mw4.4 Best double couple: M$_0$4.54×10^{15} NP1:φ$_s$230°, δ57°, λ121°. NP2:φ$_s$2°, δ44°, λ52°.*

*SKHL **29** 10:59:16.3±6.1, 47.37N×147.81E, h320^{km}±10^{km}, mb4.6/3, msh5.0/2*

*BJI **29** 10:59:18.4, 47.24N×147.24E, h360^{km}, mB4.7, mb4.5*

*MOS **29** 10:59:19.8±0.9, 47.21N×147.08E, h366^{km}, mb4.2/22, Error ellipse: s-maj=11.9km s-min=7.9km az=78.0*

*JMA **29** 10:59:19.0±0.5, 46.47N×147.54E, h389^{km}, M4.2*

*NEIC **29** 10:59:20.4±0.2, 47.23N×147.18E, mb4.3/31, Error ellipse: s-maj=8.8km s-min=4.7km az=154.0*

*IDC **29** 10:59:20.3±0.7, 47.16N×147.09E, h358^{km}±7^{km}, mb3.7/17, mb1 3.9/20, mb1mx3.8/25, mbtmp4.4/20, Error ellipse: s-maj=13.5km s-min=9.4km az=154.0*

ISC 29 10:59:18.6±0.2**, 47.03N**±0.04×**147.20E**±0.05**, h355**^{km}**, h355**^{km}±2.9^{km}**:pP-P, n155, σ1^{s}26**/158**, mb4.1**/50**, 4C-5D, Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.86**	**165**	⇑*i*P	**P**	**11 00 06.6**	**-3.1**
KUR				AMB	AMB	11 00 07.2	
	98nm,0.4s						
KUR				AMB	AMB	11 00 07.2	
	33nm,0.4s						
KUR				AMB	AMB	11 00 07.2	
	489nm,0.4s						
KUR				*e*S	**S**	**11 00 45.8**	**-4.0**
KUR				A		11 00 48.5	
	415nm,1.0s						
KUR				A		11 00 48.5	
	339nm,1.0s						
YSS	**Yuzh-Sakhalins**	**3.04**	**270**	*e*P	**P**	**11 00 21.0**	**+2.0**
YSS				AMB	AMB	11 00 23.4	
	50nm,0.9s						
YSS				*e*S	**S**	**11 01 07.4**	**+1.0**
YSS				A		11 01 09.7	
	160nm,1.0s						
YSS	**Yuzh-Sakhalins**	**3.04**	**270**	*e*Pn	**P**	**11 00 21.2**	**+2.2**
YSS	**Yuzh-Sakhalins**	**3.04**	**270**	*e*PN	**P**	**11 00 21.0**	**+2.0**
YSS				*e*S	**S**	**11 01 07.4**	**+1.0**
YSS				pmax	pmax		
	comp=Z,50nm,0.9s						
YSS				smax			
	comp=N,160nm,1.0s						
JRA	**Rausu**	**3.42**	**206**	P	**P**	**11 00 22.6**	**0.0**
NEM2	**Nemuro 2**	**3.81**	**196**	P	**P**	**11 00 23.7**	**-2.7**
NEM2				*e*S	**S**	**11 01 15.4**	**-4.2**
JSE	**Soyaes**	**3.83**	**239**	P	**P**	**11 00 28.2**	**+1.7**
JTKR	**Abashiri--Toko**	**3.84**	**218**	P	**P**	**11 00 26.9**	**+0.3**
JWK2	**Keihoku**	**4.06**	**247**	P	**P**	**11 00 31.3**	**+2.4**
ASAJ	**Asahikawa**	**4.35**	**230**	P	**P**	**11 00 33.5**	**+1.6**
	comp=N,7.5nm,0.3s,baz=78,slow=8.9,SNR=51						
ASAJ				S	**S**	**11 01 31.6**	**+2.1**
	comp=N,0.3nm,0.3s,baz=348,slow=32,SNR=2.5						
ASAJ	**Asahikawa**	**4.35**	**230**	PN	**P**	**11 00 33.6**	**+1.6**
ASAJ				S	**S**	**11 01 31.7**	**+2.1**
ASAJ				pmax	pmax		
	comp=Z,8.0nm,0.3s						
JAK	**Akkeshi**	**4.41**	**205**	P	**P**	**11 00 30.4**	**-2.2**
JAK				*e*S	**S**	**11 01 26.6**	**-4.1**
JKK2	**Kamakawa 2**	**4.45**	**226**	P	**P**	**11 00 33.7**	**+0.7**
JAR	**Ashorobuto**	**4.45**	**214**	P	**P**	**11 00 32.9**	**-0.1**
JAR				*e*S	**S**	**11 01 31.1**	**-0.4**
TYV	**Tymovskoe**	**4.86**	**324**	*e*P	**P**	**11 00 31.8**	**-5.6**
TYV				AMB	AMB	11 00 32.8	
	comp=Z,16nm,0.7s						
TYV				AMB	AMB	11 00 32.8	
	comp=Z,21nm,0.7s						
TYV				AMB	AMB	11 00 32.8	
	comp=Z,34nm,0.7s						
JFR	**Furan**	**5.06**	**222**	P	**P**	**11 00 39.9**	**+0.3**
JCH	**Churui**	**5.19**	**213**	P	**P**	**11 00 39.1**	**-1.9**
JCH				*e*S	**S**	**11 01 41.2**	**-4.6**
JNBK	**Urakawa-nobuka**	**5.71**	**215**	P	**P**	**11 00 44.6**	**-2.3**
JNBK				*e*S	**S**	**11 01 52.0**	**-4.2**
JEW	**Eniwo**	**5.85**	**226**	*e*S	**S**	**11 01 58.3**	**-0.7**
JKB	**Kayabe**	**6.78**	**223**	P	**P**	**11 00 56.7**	**-2.5**
JKB				*e*S	**S**	**11 02 12.5**	**-5.7**
JOT	**Ohata**	**7.17**	**220**	P	**P**	**11 01 01.3**	**-2.5**
JOT				*e*S	**S**	**11 02 19.2**	**-7.3**
JANG	**Nango**	**7.83**	**214**	*e*S	**S**	**11 02 33.7**	**-6.7**
JOM	**Ohasama**	**8.70**	**212**	*e*S	**S**	**11 02 53.4**	**-5.6**
PET	**Petropavlovsk**	**9.50**	**47**	P	**P**	**11 01 22.4**	**-9.0**
	comp=Z,31nm,1.0s						
KLR	**Kul'dur**	**10.56**	**288**	*e*PN	**P**	**11 01 42.2**	**-1.8**
MJAR	**Matsushiro Arr**	**12.44**	**216**	P	**P**	**11 02 08.6**	**+2.2**
	comp=Z,1.2nm,0.3s,baz=14,slow=12,SNR=14						
MDJ	**Mudanjiang**	**12.52**	**265**	P	**P**	**11 02 07.8**	**+0.4**
MDJ				AMB	AMB		
	comp=Z,20nm,0.7s						
MDJ				AMB	AMB		
	comp=Z,890nm,4.2s						
MDJ	**Mudanjiang**	**12.52**	**265**	*e*P	**P**	**11 02 08.4**	**+1.1**
	comp=Z,17nm,0.7s						
ZEA	**Zeya**	**14.36**	**305**	*e*P	**P**	**11 02 27.6**	**-0.6**
ZEA				AMB	AMB	11 02 28.9	
	comp=Z,32nm,1.4s						
CN2	**Changchun**	**15.60**	**266**	*e*P	**P**	**11 02 39.5**	**-2.0**
CN2				*e*S	**S**	**11 05 22.8**	**-2.0**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
SEY	**Seymchan**	**16.20**	**9**	⇓*i*P	**P**	**11 02 47.0**	**-0.6**
KS15	**Wonju Array Si**	**17.18**	**243**	P	**P**	**11 02 59.3**	**+1.4**
FX1	**Attu Island--F**	**17.65**	**61**	P	**P**	**11 03 03.5**	**+0.9**
	comp=Z,1.5nm,0.3s,baz=334,slow=7.5,SNR=7.4						
FX1	**Attu Island--F**	**17.65**	**61**	P	**P**	**11 03 03.5**	**+0.9**
FX1				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YAK	**Yakutsk**	**18.04**	**333**	*e*P	**P**	**11 03 05.1**	**-1.4**
	comp=Z,33nm,0.8s						
YAK	**Yakutsk**	**18.04**	**333**	*e*P	**P**	**11 03 05.7**	**-0.7**
YAK				*e*S	**S**	**11 06 11.4**	**+0.6**
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
YAK				smax			
	comp=E,15nm,1.0s						
YAK				smax			
	comp=Z,7.0nm,1.0s						
YAK				smax			
	comp=N,5.0nm,0.9s						
SSE	**Sheshan**	**25.55**	**241**	*e*P	**P**	**11 04 18.5**	**+0.8**
SSE				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.1						
SSE				AMB	AMB		
	comp=Z,160nm,6.9s						
SSE	**Sheshan**	**25.55**	**241**	*e*P	**P**	**11 04 18.5**	**+0.8**
	comp=Z,19nm,0.8s,mb4.4						
HHC	**Hu-ho-hao-te**	**26.23**	**269**	*e*P	**P**	**11 04 24.5**	**+0.7**
HHC				XP	sP	11 06 09.8	+0.1
HHC				PCP	PcP	11 07 39.5	-0.8
HHC				S	**S**	**11 08 33.0**	**+3.9**
HHC				XS		11 10 28.5	
HHC				SCP		11 10 44.5	
HHC				PCS		11 11 19.0	
HHC				AMB	AMB		

	comp=Z,280nm,4.9s						
HHC				LR	LR		
	comp=N,160nm,6.9s						
HHC				LR	LR		
	comp=Z,150nm,5.6s						
NJ2	**Nanjing**	26.30	245	*e*P	P	11 04 27.0	+2.4
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s,mb4.0						
GTA	**Gaotai**	34.91	275	*e*P	P	11 05 40.5	+1.5
GTA				PP	PP	11 07 12.0	+4.9
GTA				XP	sP	11 07 27.5	-0.8
GTA				S	S	11 10 44.0	-0.2
GTA				XS		11 12 43.5	
GTA				SS	SS	11 13 27.3	-1.4
GTA				AMB	AMB		
	comp=Z,110nm,4.9s						
GTA				LR	LR		
	comp=N,100nm,11.0s						
GTA				LR	LR		
	comp=E,120nm,10.6s						
GTA				LR	LR		
	comp=Z,80nm,10.3s						
TTA	**Tatalina**	34.91	42	*e*P	P	11 05 38.7	-0.1
	comp=Z,5.0nm,0.8s,mb3.8						
TTA	**Tatalina**	34.91	42	*e*P	P	11 05 38.7	-0.1
TTA				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb3.8						
IMA2	**Indian Mountai**	35.98	37	*e*P	P	11 05 46.8	-0.9
CD2	**Chengdu**	36.89	260	*e*P	P	11 05 55.3	-0.4
KDAK	**Kodiak Island**	37.06	50	P	P	11 05 56.4	-0.4
	comp=Z,7.8nm,0.5s,mb4.2,baz=300,slow=2.5,SNR=10						
MCK	**McKinley**	38.06	40	*e*P	P	11 06 04.9	-0.2
	comp=Z,3.2nm,0.7s,mb3.7						
MCK	**McKinley**	38.06	40	*e*P	P	11 06 04.9	-0.1
MCK				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.6						
PMR	**Palmer**	38.21	44	*e*P	P	11 06 06.2	-0.1
	comp=Z,5.2nm,0.6s,mb3.9						
PMR	**Palmer**	38.21	44	*e*P	P	11 06 06.2	-0.1
PMR				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb3.9						
COLA	**College**	38.44	38	*e*P	P	11 06 07.8	-0.2
	comp=Z,13nm,0.8s,mb4.2						
COLA	**College**	38.44	38	*e*P	P	11 06 07.8	-0.3
COLA				pmax	pmax		
	comp=Z,13nm,0.8s,mb4.2						
ILAR	**Eielson Array**	38.86	39	P	P	11 06 10.6	-1.0
	comp=Z,5.3nm,0.5s,mb4.0,baz=247,slow=5.4,SNR=146						
ILAR				PcP	PcP	11 08 12.6	-2.6
	comp=Z,0.4nm,0.6s,baz=289,slow=3.8,SNR=4.1						
ZAL	**Zalesovo**	39.13	304	P	P	11 06 13.4	-0.5
	comp=Z,1.0nm,0.4s,mb3.4,baz=11,slow=1.8,SNR=3.3						
ZAL				PcP	PcP	11 08 14.9	-1.3
	comp=Z,1.3nm,0.5s,baz=34,slow=5.9,SNR=5.5						
DIV	**Divide**	39.88	44	*e*P	P	11 06 19.7	-0.2
	comp=Z,13nm,0.5s,mb4.4						
WMQ	**Urumqi**	41.01	288	*e*P	P	11 06 31.0	+1.7
KMI	**Kunming**	41.36	254	P	P	11 06 32.1	-0.2
	comp=Z,9.0nm,0.5s,mb4.3						
KMI				pP	pP	11 07 49.7	+6.8
KMI	**Kunming**	41.36	254	P	P	11 06 32.1	-0.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.3						
DAWY	**Dawson**	42.18	39	*e*P	P	11 06 37.6	-0.8
MKAR	**Makanchi Array**	43.17	295	P	P	11 06 46.8	+0.2
	comp=Z,0.8nm,0.5s,mb3.1,baz=72,slow=7.5,SNR=7.9						
MKAR				pP	pP	11 07 57.1	-0.5
	comp=Z,0.1nm,0.5s,baz=67,slow=8.2,SNR=1.3						
MKAR				PcP	PcP	11 08 28.4	-1.0
	comp=Z,0.9nm,0.6s,baz=72,slow=3.8,SNR=7.0						
INK	**Inuvik**	43.58	32	P	P	11 06 48.6	-0.9
	comp=Z,5.6nm,0.4s,mb4.0,baz=303,slow=6.6,SNR=126						
INK				PcP	PcP	11 08 29.8	-0.8
	comp=Z,1.1nm,0.7s,baz=295,slow=3.0,SNR=3.4						
INK	**Inuvik**	43.58	32	*e*P	P	11 06 48.5	-1.0
	comp=Z,6.0nm,0.5s,mb4.0						
INK	**Inuvik**	43.58	32	P	P	11 06 48.6	-0.9
INK						11 08 29.8	
INK				pmax	pmax		
	comp=Z,6.0nm,0.4s						
INK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	43.79	301	*e*P	P	11 06 51.1	-0.3
	comp=Z,3.1nm,0.5s,mb3.7						
KURK	**Kurchatov**	43.79	301	*e*P	P	11 06 51.2	-0.2
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.7						
BVAR	**Borovoye Array**	47.50	307	PcP	PcP	11 08 43.6	-1.0
	comp=Z,1.5nm,0.7s,baz=25,slow=1.4,SNR=6.3						
DLBC	**Dease Lake**	48.27	44	*e*P	P	11 07 26.6	+0.4
AAK	**Ala-Archa**	50.03	293	⇓*i*P	P	11 07 38.4	-1.3
AAK				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb3.2						
JIRN	**Jiri**	50.88	270	*e*P	P	11 07 48.5	+2.3
GUN	**Gumba**	50.94	271	*e*P	P	11 07 48.5	+2.0
KKN	**Kakani**	51.42	271	*e*P	P	11 07 52.0	+1.9
DMN	**Daman**	51.66	271	*e*P	P	11 07 54.4	+2.5
RES	**Resolute Bay**	51.82	17	*e*P	P	11 07 50.4	-2.1
	comp=Z,2.9nm,0.5s,mb3.9						
RES	**Resolute Bay**	51.82	17	*e*P	P	11 07 50.4	-2.1
RES				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb3.9						
ARU	**Arti**	52.00	315	⇓*i*P	P	11 07 52.7	-1.4
	comp=Z,6.0nm,0.7s,mb4.0						
ARU				*e*		11 09 54.2	
ARU				*e*SS	SS	11 18 28.4	-3.4
ARU	**Arti**	52.00	315	⇓*i*P	P	11 07 52.7	-1.4
ARU				*e*		11 09 54.2	
ARU				*e*SS	SS	11 18 28.4	-3.4
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.0						
ARU	**Arti**	52.00	315	⇓*i*P	P	11 07 52.8	-1.3
ARU				pmax	pmax		
	comp=Z,49nm,5.0s						
KOLN	**Koldanda**	52.58	272	*e*P	P	11 08 00.5	+1.8
YKA	**Yellowknife Ar**	53.07	35	P	P	11 08 00.4	-1.4
	comp=Z,1.4nm,0.5s,mb3.6,baz=302,slow=7.0,SNR=18						
YKA				PcP	PcP	11 09 04.3	-0.7
	comp=Z,1.3nm,0.8s,baz=304,slow=4.1,SNR=6.8						
YKA	**Yellowknife Ar**	53.07	35	P	P	11 08 00.4	-1.4
YKA				PcP	PcP	11 09 04.3	-0.7
ARCES	**ARCESS Array B**	56.19	339	P	P	11 08 21.7	-2.1
	comp=Z,6.1nm,1.1s,mb3.9,baz=45,slow=6.9,SNR=5.4						
ARCES				PcP	PcP	11 09 16.1	-0.9
	comp=Z,5.2nm,1.0s,baz=45,slow=5.1,SNR=6.7						
JOF	**Joensuu**	59.21	331	*e*p	P	11 08 42.3	-2.4
	comp=Z,3.8nm,0.5s,mb4.1						
NEW	**Newport**	60.17	50	*e*P	P	11 08 51.3	0.0
SUMG	**Summit**	60.63	2	*e*P	P	11 08 53.2	-0.8
	comp=Z,6.5nm,0.5s,mb4.3						
FINES	**FINESS Array B**	61.98	332	P	P	11 09 01.4	-1.6
	comp=Z,6.3nm,0.5s,mb4.4,baz=38,slow=8.8,SNR=43						
FINES	**FINESS Array B**	61.98	332	P	P	11 09 01.4	-1.6
CHMT	**Chamberlain Mo**	63.05	49	P	P	11 09 10.5	+0.2
FFC	**Flin Flon**	63.06	37	*e*P	P	11 09 09.6	-0.6
	comp=Z,14nm,1.0s,mb4.5						
FFC	**Flin Flon**	63.06	37	*e*P	P	11 09 09.6	-0.6
FFC				pmax	pmax		
	comp=Z,14nm,1.0s,mb4.5						
FCC	**Fort Churchill**	63.17	31	P	P	11 09 09.8	-1.1
HRY	**Holter Researc**	63.91	49	*e*P	P	11 09 16.4	+0.7
HLID	**Hailey**	64.64	53	P	P	11 09 21.4	+1.0
BOZ	**Bozeman (W)**	64.73	50	*e*P	P	11 09 21.8	+0.9
	comp=Z,8.1nm,1.0s,mb4.3						
BOZ	**Bozeman (W)**	64.73	50	*e*P	P	11 09 21.8	+0.9
BOZ				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
NVAR	**Mina Array Bea**	65.83	59	P	P	11 09 29.2	+1.1
	comp=Z,2.5nm,0.7s,mb4.0,baz=305,slow=4.7,SNR=21						
NVAR	**Mina Array Bea**	65.83	59	P	P	11 09 29.2	+1.1
NB2	**NORSAR Subarra**	66.56	338	P	P	11 09 30.9	-1.3
	comp=Z,4.8nm,0.5s,mb4.5,baz=30,slow=6.5						
NOA	**NORSAR Array B**	66.56	338	P	P	11 09 31.0	-1.2
	comp=Z,6.8nm,0.5s,mb4.7,baz=30,slow=6.4,SNR=19						
NOA	**NORSAR Array B**	66.56	338	P	P	11 09 31.0	-1.2
TPH	**Tonopah**	66.70	59	P	P	11 09 33.2	-0.3
	comp=Z,4.9nm,0.8s,mb4.3						
TPH	**Tonopah**	66.70	59	P	P	11 09 33.2	-0.3
TPH				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
NAO	**NORSAR Subarra**	66.84	338	P	P	11 09 30.9	-3.1
	comp=Z,4.8nm,0.5s,mb4.5						
NAO	**NORSAR Subarra**	66.84	338	P	P	11 09 30.9	-3.1
NAO				pmax	pmax		
	comp=Z,5.0nm,0.5s,mb4.5						
HWUT	**Hardware Ranch**	67.51	53	P	P	11 09 39.5	+1.1
	comp=Z,4.3nm,1.0s,mb4.1						
KIV	**Kislovodsk**	67.62	311	*e*P	P	11 09 40.6	+1.5
KIV				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.6						
WRAB	**Tennant Creek**	67.65	193	*e*P	P	11 09 39.8	+0.1
WRAB	**Tennant Creek**	67.65	193	⇑*i*P	P	11 09 39.6	-0.1
WB2	**Warramunga Arr**	67.66	193	*e*P	P	11 09 39.6	-0.1
WRA	**Warramunga Arr**	67.66	193	P	P	11 09 40.0	+0.2
	comp=Z,2.5nm,0.4s,mb4.2,baz=9.0,slow=6.6,SNR=64						
WRA				pP	pP	11 10 58.8	-0.2
	comp=Z,0.3nm,0.7s,baz=9.9,slow=6.1,SNR=1.8						
BW06	**Boulder Array**	67.78	51	*e*P	P	11 09 40.6	+0.5
	comp=Z,6.2nm,0.8s,mb4.4						
PDAR	**Pinedale Array**	67.78	51	P	P	11 09 40.7	+0.6
	comp=Z,5.1nm,0.6s,mb4.4,baz=37,slow=1.0,SNR=59						
DUG	**Dugway**	67.79	55	*e*P	P	11 09 41.1	+0.9
	comp=Z,3.8nm,0.7s,mb4.2						
DUG	**Dugway**	67.79	55	*e*P	P	11 09 41.1	+0.9
DUG				pmax	pmax		
	comp=Z,4.0nm,0.7s,mb4.3						
TPNV	**Topopah Spring**	68.03	59	*e*P	P	11 09 42.3	+0.6
	comp=Z,6.0nm,0.9s,mb4.3						
TPNV	**Topopah Spring**	68.03	59	*e*P	P	11 09 42.3	+0.6
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.3						
ULM	**Lac du Bonnet**	68.88	38	P	P	11 09 45.8	-0.9
	comp=Z,3.1nm,0.6s,mb4.2,baz=308,slow=6.9,SNR=7.3						
AKASG	**Malin Array Be**	68.97	323	P	P	11 09 46.3	-0.9
	comp=Z,2.4nm,0.5s,mb4.2,baz=37,slow=6.3,SNR=17						
AKASG	**Malin Array Be**	68.97	323	*i* P	P	11 09 46.2	-1.0
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MSU	**Marysvale**	69.31	56	*e*P	P	11 09 50.8	+1.4
ANN	**Anapa**	69.66	314	*e*P	P	11 09 55.0	+3.5
ANN				pmax	pmax		
	comp=Z,46nm,1.6s,mb5.0						
RSSD	**Black Hills**	69.66	47	*e*P	P	11 09 51.5	0.0
	comp=Z,5.3nm,0.8s,mb4.3						
RSSD	**Black Hills**	69.66	47	*e*P	P	11 09 51.5	0.0
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.3						
SRU	**San Rafael**	69.81	54	*e*P	P	11 09 53.3	+0.8
	comp=Z,8.9nm,0.8s,mb4.5						
SRU	**San Rafael**	69.81	54	*e*P	P	11 09 53.3	+0.8
SRU				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb4.5						
LDFC	**Landfair**	69.99	60	*e*P	P	11 09 53.6	-0.1
PV10	**Paradox Valley**	71.15	54	*e*P	P	11 10 01.8	+1.2
PV01	**Paradox Valley**	71.58	54	*e*P	P	11 10 03.9	+0.8
SDCO	**Great Sand Dun**	73.54	52	*e*P	P	11 10 15.2	+0.6
	comp=Z,2.0nm,0.8s,mb3.9						
MORC	**Moravsky Berou**	74.19	329	P	P	11 10 17.4	-0.7
	comp=Z,5.4nm,1.1s,mb4.2						
MORC	**Moravsky Berou**	74.19	329	P	P	11 10 17.4	-0.6
MORC				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.2						
CLL	**Collm**	74.42	332	P	P	11 10 18.5	-0.8
	comp=Z,logA/T=0.9,mb4.4						
CLL	**Collm**	74.42	332	*i* P	P	11 10 18.5	-0.8
	comp=Z,6.0nm,0.8s,mb4.4						
CLL	**Collm**	74.42	332	*i* P	P	11 10 18.5	-0.8
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.4						
ANMO	**Albuquerque**	75.06	55	P	P	11 10 24.4	+1.1
	comp=Z,1.1nm,0.6s,mb3.8						
ANMO	**Albuquerque**	75.06	55	P	P	11 10 24.4	+1.1
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BRTR	**Keskin Array B**	75.31	313	P	P	11 10 25.3	+0.7
	comp=Z,1.1nm,0.8s,mb3.6,baz=45,slow=5.2,SNR=5.6						
KHC	**Kasperske Hory**	76.11	331	*e*P	P	11 10 28.9	0.0
GERES	**GERESS Array B**	76.31	330	P	P	11 10 29.7	-0.3
	comp=Z,0.8nm,0.6s,mb3.6,baz=18,slow=4.2,SNR=6.4						
MNTX	**Cornudas Mount**	78.06	56	*e*P	P	11 10 40.8	+0.9
	comp=Z,2.3nm,0.9s,mb3.9						
WMOK	**Wichita Mounta**	79.37	50	*e*P	P	11 10 46.6	-0.2
	comp=Z,1.4nm,0.3s,mb4.2						
WMOK	**Wichita Mounta**	79.37	50	*e*P	P	11 10 46.6	-0.1
WMOK				pmax	pmax		
	comp=Z,1.0nm,0.3s,mb4.0						
LTX	**Lajitas**	80.81	57	*e*P	P	11 10 55.2	+0.8
	comp=Z,6.4nm,0.8s,mb4.4						
TXAR	**Lajitas Array**	80.81	57	P	P	11 10 55.3	+0.9
	comp=Z,4.6nm,0.6s,mb4.4,baz=286,slow=3.5,SNR=100						
TXAR				pP	pP	11 12 18.0	+1.8
	comp=Z,0.4nm,0.7s,baz=321,slow=5.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	112.60	323	PKiKP		11 17 12.8	
	comp=Z,0.4nm,0.5s,baz=13,slow=2.3,SNR=4.6						
DBIC	**Dimbokro**	121.07	327	PKP	PKPdf	11 17 29.4	-0.1
	comp=Z,1.3nm,0.5s,baz=81,slow=1.0,SNR=4.2						
VNDA	**Vanda**	124.61	176	P	Pdif	11 14 17.2	+5.2
BDFB	**Brasilia**	146.24	27	PKPbc	PKPbc	11 18 19.3	+2.0
	comp=Z,2.8nm,0.5s,baz=229,slow=4.2,SNR=4.8						
CFAA	**Coronel Fontan**	148.87	73	PKPbc	PKPdf	11 18 25.5	+5.9
	comp=Z,0.2nm,0.4s,baz=270,slow=3.0,SNR=3.9						
CFAA	**Coronel Fontan**	148.87	73	PKPbc	PKPdf	11 18 25.5	+5.8
SNAA	**Sanae**	151.58	199	*e*	PKPdf	11 18 30.8	+8.2
SNAA	**Sanae**	151.58	199	⇑*i*PKPdf	PKPdf	11 18 23.1	+0.5
SNAA				*e*		11 18 30.8	
PLCA	**Paso Flores**	152.27	91	PKPbc	PKPdf	11 18 34.0	+9.4
	comp=Z,2.5nm,0.6s,baz=270,slow=3.4,SNR=10						
VNA2	**Neumayer--Watz**	153.13	198	*e*	PKPdf	11 18 34.7	+10
VNA2	**Neumayer--Watz**	153.13	198	PKPdf	PKPdf	11 18 29.0	+4.1
VNA2				*e*		11 18 34.7	
VNA2				*e*		11 20 03.1	
VNA2				*e*		11 22 29.4	
VNA3	**Neumayer Olymp**	153.34	196	⇑*i*PKPdf	PKPdf	11 18 34.9	+10
VNA3				*e*		11 20 00.2	
VNA3				*e*		11 22 26.7	

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*MOS **29** 11:02:05.0±0.9,52.65N×107.14E,h18^{km},mb4.1/2,Error ellipse: s-maj=14.7km s-min=9.6km az=137.5*
MOS Felt (II) at Elantsy.
*BYKL **29** 11:02:05.5±0.2,52.68N×107.06E,h16^{km}±3^{km},FELT I=II MSK at Yelantsy*
*NEIC **29** 11:02:05.0,52.65N×107.14E,h18^{km},mb4.4/3,After MOS.*
NEIC Felt [II] at Yelantsy.

ISC 29 11:02:05.6±0.3,**52.69N**±0.03×**107.12E**±0.04,**h16**^{km}**,n44,** σ**1**^{s}**15**/85**,mb4.3**/2**,12C-3D,Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZRHB	**Zarechye**	0.13	170	⇓*i*Pg	Pb	11 02 09.5	0.0
ZRHB				*e*		11 02 10.1	
ZRHB				*e*Sg	Sb	11 02 12.5	+0.4
ZRHB				*e*		11 02 14.3	
ZRHB				max			
	6μm,0.1s						
ZRHB				max			
	44μm,0.5s						
TRG	**Tyrgan**	0.47	279	⇑*i*Pg	Pb	11 02 14.1	-1.0
TRG				*e*Sg	Sb	11 02 20.3	-1.2
TRG				*e*Sb	Sb	11 02 22.6	+1.1
TRG				Pmax			
	189nm,0.2s						
TRG				max			
	3μm,0.2s						
TRG	**Tyrgan**	0.47	279	*e*PG	Pb	11 02 14.1	-1.0
TRG				*e*		11 02 20.4	
TRG				pmax	pmax		
	comp=Z,464nm,0.2s						
TRG				smax			
	comp=E,3μm,0.1s						
TRTB	**Turuntaevo**	0.55	145	⇓*i*Pg	Pb	11 02 16.4	-0.1
	comp=E,522nm,0.3s						
TRTB				⇑*i*Pg	Pb	11 02 16.4	-0.1
	comp=E,287nm,0.3s						
TRTB				⇑*i*Pg	Pb	11 02 16.4	-0.1
	comp=E,643nm,0.3s						
TRTB				*e*Sg	Sb	11 02 23.9	0.0
TRTB				Pmax			
	comp=E,497nm,0.1s						
TRTB				Smax			
	comp=E,1μm,0.3s						
FFNB	**Fofonovo**	0.68	199	*i* Pg	Pb	11 02 17.9	-0.7
FFNB				*e*Sg	Sb	11 02 26.6	-0.8
FFNB				*e*Sb	Sb	11 02 30.2	+2.8
FFNB				Pmax			
	comp=E,2μm,0.1s						
FFNB				Smax			
	comp=E,5μm,0.1s						
OGRR	**Ongureny**	1.00	17	⇑*i*Pg	Pb	11 02 24.2	+0.1
OGRR				*e*Pb	Pb	11 02 26.5	+2.4
OGRR				*e*Sg	Sb	11 02 37.6	+0.7
OGRR				*e*Sb	Sb	11 02 41.1	+4.2
OGRR				max			
	comp=E,60nm,0.1s						
OGRR				max			
	comp=E,560nm,0.7s						
OGRR	**Ongureny**	1.00	17	*e*PG	Pb	11 02 24.3	+0.2
OGRR				*e*		11 02 37.9	
OGRR				pmax	pmax		
	comp=Z,63nm,0.2s						
OGRR				smax			
	comp=E,560nm,0.7s						
HRMR	**Khuramsha**	1.06	185	⇑*i*Pg	Pb	11 02 24.9	-0.3
HRMR				*e*Sg	Sb	11 02 38.9	+0.3
HRMR				*e*Sb	Sb	11 02 41.1	+2.5
HRMR				Pmax			
	comp=E,554nm,0.2s						
HRMR				max			
	comp=E,5μm,0.3s						
MXMB	**Maximikha**	1.14	59	⇑*i*Pg	Pb	11 02 27.4	+0.9
MXMB				*e*Sg	Sb	11 02 43.0	+2.1
MXMB				Pmax			
	comp=E,122nm,0.1s						
MXMB				Smax			
	comp=E,1μm,0.6s						
BTMB	**Babushkin**	1.26	219	⇑*i*Pg	Pb	11 02 27.7	-0.9
BTMB				*e*Sg	Sb	11 02 44.6	+0.1
BTMB				Pmax			
	comp=E,158nm,0.4s						
BTMB				Smax			
	comp=E,1μm,0.7s						
LSTR	**Listvyanka**	1.62	241	⇑*i*Pg	Pn	11 02 33.7	-0.2
LSTR				⇑*i*Pb	Pb	11 02 34.4	-0.4
LSTR				*e*Sg	Sn	11 02 55.2	+0.6
LSTR				max			
	comp=E,103nm,0.4s						
LSTR				Smax			
	comp=E,958nm,0.3s						
LSTR	**Listvyanka**	1.62	241	*e*PN	Pn	11 02 33.4	-0.5
LSTR				*e*		11 02 54.3	
LSTR				pmax	pmax		
	comp=Z,104nm,0.4s						
LSTR				smax			
	comp=N,958nm,0.4s						
IRK	**Irkutsk**	1.80	257	*e*Pg	Pn	11 02 37.5	+1.2
IRK				*e*Sg	Sn	11 03 00.6	+1.7
IRK				Pmax			
	comp=N,249nm,0.2s						
IRK				Smax			
	comp=N,5μm,0.4s						
IRK	**Irkutsk**	1.80	257	*e*PN	Pn	11 02 36.6	+0.3
IRK				*e*		11 02 59.9	
IRK				pmax	pmax		
	comp=Z,251nm,0.1s						
IRK				smax			
	comp=N,5μm,0.3s						
SYVR	**Suvo**	1.99	60	*e*Pn	Pn	11 02 39.6	+0.5
SYVR				⇑*i*Pg	Pn	11 02 41.9	+2.8
SYVR				*e*Sg	Sn	11 03 09.0	+5.1
SYVR				Pmax			
	comp=N,24nm,0.2s						
SYVR				Smax			
	comp=N,223nm,0.5s						
SYVR	**Suvo**	1.99	60	*e*Pn	Pn	11 02 39.4	+0.3
SYVR				*e*		11 02 41.0	
TLY	**Talaya**	2.36	246	*e*Pn	Pn	11 02 44.5	0.0
TLY				*e*Pg	Pn	11 02 47.0	+2.5
TLY				*e*Sg	Sn	11 03 16.8	+3.5
TLY				Pmax			
	comp=N,112nm,0.3s						
TLY				Smax			
	comp=N,492nm,0.4s						
TLY	**Talaya**	2.36	246	*e*PN	Pn	11 02 45.6	+1.1
TLY				*e*		11 03 16.8	
TLY				pmax	pmax		
	comp=Z,113nm,0.3s						
TLY				smax			
	comp=E,500nm,0.3s						
ARS	**Arshan**	2.98	257	*e*Pn	Pn	11 02 53.4	+0.1
ARS				*e*Pg	Pn	11 02 57.4	+4.1
ARS				*e*Sg	Sn	11 03 35.5	+6.5
ARS				Pmax			
	comp=E,137nm,0.3s						
ARS				Smax			
	comp=E,591nm,0.5s						
ARS	**Arshan**	2.98	257	*e*PN	Pn	11 02 53.4	+0.1
ARS				*e*		11 02 57.5	
ARS				*e*		11 03 35.4	
ARS				pmax	pmax		
	comp=Z,130nm,0.3s						
ARS				smax			
	comp=E,688nm,0.4s						
YLYR	**Ulyunkhan**	3.25	46	*e*Pn	Pn	11 02 57.1	0.0
YLYR				⇑*i*Pg	Pn	11 03 03.4	+6.3
YLYR				*e*Sg	Sn	11 03 46.2	+10
YLYR				Pmax			
	comp=E,12nm,0.5s						
YLYR				Smax			
	comp=E,90nm,1.1s						
YLYR	**Ulyunkhan**	3.25	46	*e*Pn	Pn	11 02 57.3	+0.2
YLYR				*e*		11 03 03.2	
YLYR				*e*S	Sn	11 03 34.6	-1.3
ZAK	**Zakamensk**	3.33	228	*e*Pn	Pn	11 02 58.3	+0.1
ZAK				*e*Pg	Pn	11 03 04.5	+6.3
ZAK				*e*Sg	Sn	11 03 47.6	+10
ZAK				Pmax			
	comp=E,13nm,0.4s						
ZAK				Smax			
	comp=E,76nm,0.4s						
NIZ	**Nizh Angarsk**	3.41	24	*e*Pn	Pn	11 02 59.4	+0.1
NIZ				*e*Pg	Pn	11 03 07.5	+8.2
NIZ				*e*Sn	Sn	11 03 38.6	-1.2
NIZ				*e*Sg	Sn	11 03 52.2	+12
NIZ				*e*SgSg		11 03 55.0	
NIZ				Pmax			
	comp=E,38nm,1.0s						
NIZ				max			
	comp=E,212nm,0.8s						
NIZ	**Nizh Angarsk**	3.41	24	*e*PN	Pn	11 03 07.7	+8.4
NIZ				*e*		11 03 52.8	
NIZ				pmax	pmax		
	comp=Z,33nm,0.9s						
NIZ				smax			
	comp=N,181nm,0.8s						
MOY	**Mondy**	3.91	257	*e*PN	Pn	11 03 15.2	+8.8
MOY				*e*S	Sn	11 03 50.1	-2.3
MOY				*e*		11 04 03.3	
MOY				pmax	pmax		
	comp=Z,27nm,0.4s						
MOY				smax			
	comp=E,344nm,0.7s						
CIT	**Chita**	4.00	97	⇑*i*Pn	Pn	11 03 06.6	-1.2
CIT				*e*Pg	Pn	11 03 18.4	+11
CIT				*e*Sn	Sn	11 03 52.8	-2.0
CIT				*e*Sg	Sn	11 04 10.8	+16
CIT				Pmax			
	comp=E,37nm,0.5s						
CIT				Smax			
	comp=E,131nm,1.0s						
CIT	**Chita**	4.00	97	*e*PN	Pn	11 03 06.7	-1.1
CIT				*e*		11 03 18.5	
CIT				*e*S	Sn	11 03 53.6	-1.2
CIT				*e*		11 04 12.3	
CIT				pmax	pmax		
	comp=Z,52nm,0.7s						
CIT				smax			
	comp=N,196nm,1.5s						
KMO	**Kumora**	4.00	35	*e*Pg	Pn	11 03 17.0	+9.2
KMO				*e*Sg	Sn	11 04 09.5	+15
KMO				Pmax			
	comp=N,24nm,0.7s						
KMO				Smax			
	comp=N,135nm,1.3s						
KMO	**Kumora**	4.00	35	*e*PN	Pn	11 03 08.0	+0.2
KMO				*e*		11 03 18.0	
KMO				*e*		11 04 09.6	
KMO				pmax	pmax		
	comp=Z,19nm,0.6s						
KMO				smax			
	comp=E,135nm,1.0s						
ORL	**Orlik**	4.46	271	⇓*i*Pn	Pn	11 03 13.6	-0.6
ORL				*e*Pg	Pn	11 03 24.0	+10
ORL				*e*Sn	Sn	11 04 01.7	-4.6
ORL				*e*Sg	Sn	11 04 21.0	+15

ORL				Pmax			
	comp=E,15nm,0.5s						
ORL				Smax			
	comp=E,147nm,0.7s						
ORL	**Orlik**	4.46	271	*e*PN	Pn	11 03 13.4	-0.8
ORL				*e*		11 03 25.1	
ORL				*e*		11 04 21.7	
ORL				pmax	pmax		
	comp=Z,14nm,0.6s						
ORL				smax			
	comp=N,146nm,0.8s						
KPC	**Khapcheranga**	4.46	130	*e*Pn	Pn	11 03 12.4	-1.8
KPC				*e*Pg	Pn	11 03 25.9	+12
KPC				*e*		11 03 30.0	
KPC				*e*Sg	Sn	11 04 23.1	+17
KPC				Pmax			
	comp=N,16nm,0.3s						
KPC				Smax			
	comp=N,129nm,1.0s						
KPC	**Khapcheranga**	4.46	130	*e*PN	Pn	11 03 12.4	-1.8
KPC				*e*		11 03 26.5	
KPC				*e*		11 04 25.6	
KPC				pmax	pmax		
	comp=Z,44nm,0.3s						
KPC				smax			
	comp=E,128nm,1.0s						
NLYR	**Nelyaty**	6.28	49	*e*Pn	Pn	11 03 39.7	-0.3
NLYR				*e*		11 03 57.3	
TDJR	**Todzha**	6.73	272	*e*Sg	Sx	11 05 32.7	
CRS	**Chara**	7.70	52	*e*Pg	Px	11 04 22.7	
TUP	**Tupik**	7.84	72	*e*Pn	Pn	11 04 00.1	-1.8
	comp=E,2.0nm,0.4s						
TUP				*e*		11 04 26.8	
TUP				*e*		11 06 10.2	
TUP	**Tupik**	7.84	72	*e*PN	Pn	11 04 00.1	-1.8
TUP				*e*		11 04 26.8	
TUP				*e*		11 06 10.2	
TUP				pmax	pmax		
	comp=Z,2.0nm,0.4s						
TUP				smax			
	comp=N,79nm,1.2s						
KRAR	**Krasnoyarsk**	8.96	297	*e*Pn	P	11 04 13.7	-3.7
KURK	**Kurchatov**	17.73	275	*e*P	P	11 06 11.8	-1.4
BRVK	**Borovoye**	22.09	286	*e*P	P	11 07 01.4	0.0
	comp=N,6.0nm,2.5s,mb3.6						
BRVK	**Borovoye**	22.09	286	*e*P	P	11 07 01.4	0.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,2.5s,mb3.6						
SSE	**Sheshan**	23.90	149	*e*P	P	11 07 20.1	+0.8
	comp=Z,40nm,0.7s,mb5.0						

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*NEIC **29** 11:11:11.2±0.9, 24.12S×66.74W, h190^{km}±18^{km}, mb3.7/1, Error ellipse: s-maj=21.2km s-min=11.0km az=109.0*
*IDC **29** 11:11:11.5±1.8, 24.04S×66.84W, h200^{km}±23^{km}, mb3.3/1, mb1 3.4/6, mb1mx3.2/17, mbtmp3.9/6, Error ellipse: s-maj=32.1km s-min=16.5km az=103.0*
*GUC **29** 11:11:14.2±0.7, 24.25S×67.28W, h220^{km}, ML4.2*
ISC 29 11:11:10.4±0.8, **24.14S**±0.05×**66.8W**±0.1, **h201**^{km}±17^{km}, **n14, σ1^{s}09**/19, **mb3.4**/1, **3C-1D, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEN1	**Los Morros**	3.21	283	⇓*i*P	P	11 12 05.2	+2.1
CEN1				*i* S	S	11 12 44.0	+0.2
CEN1				AMP		11 12 47.3	
	comp=E,200nm,0.8s						
CPN1	**Cerro Paranal**	3.33	261	⇑*e*P	P	11 12 05.7	+1.2
CPN1				*i* S	S	11 12 45.7	-0.7
CPN1				AMP		11 12 46.2	
	comp=E,258nm,0.4s						
ANCH	**Antofagasta**	3.34	277	⇑*i*P	P	11 12 06.0	+1.3
ANCH				*i* S	S	11 12 44.8	-1.9
ANCH				AMP		11 12 47.8	
	comp=N,766nm,0.2s						
CDCH	**Caldera**	4.67	230	⇑*i*P	P	11 12 20.0	-1.3
CDCH				*i* S	S	11 13 11.8	-4.4
CFAA	**Coronel Fontan**	7.54	189	P	P	11 12 58.9	+0.4
	comp=N,0.3nm,0.3s,baz=16,slow=12,SNR=17						
CFAA				S	S	11 14 19.2	-3.7
	comp=N,0.5nm,0.3s,baz=287,slow=23,SNR=12						
LPAZ	**La Paz**	7.91	351	P	P	11 13 04.2	+0.9
	comp=N,1.8nm,0.3s,baz=143,slow=9.6,SNR=27						
LPAZ				S	S	11 14 30.9	-0.6
	comp=N,0.2nm,0.3s,baz=308,slow=15,SNR=4.6						
SIV	**San Ignacio**	9.73	35	P	P	11 13 25.8	-1.1
	comp=N,0.9nm,0.3s,baz=218,slow=14,SNR=10						
TRQA	**Tornquist**	14.47	165	Pn	P	11 14 26.8	-0.2
	comp=N,1.9nm,0.6s						
PLCA	**Paso Flores**	16.84	190	P	P	11 14 57.4	+1.5
	comp=N,0.1nm,0.3s,baz=1.9,slow=11,SNR=3.8						
BDFB	**Brasilia**	19.56	68	P	P	11 15 24.9	+0.3
	comp=N,0.7nm,0.3s,baz=243,slow=9.8,SNR=8.4						
VNA3	**Neumayer Olymp**	56.96	161	*e*	P	11 20 36.2	-0.2
VNA2	**Neumayer--Watz**	57.52	160	*e*	P	11 20 40.2	-0.2
TORD	**Torodi Ar. Bea**	76.44	69	P	P	11 22 39.2	-0.6
	comp=N,0.5nm,0.5s,mb3.4,baz=255,slow=5.7,SNR=11						
WRA	**Warramunga Arr**	131.59	207	PKP	PKPdf	11 30 00.9	+1.1
	comp=N,0.2nm,0.5s,baz=165,slow=1.5,SNR=7.7						

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*MOS **29** 11:11:45.9±1.9, 42.41N×48.15E, h18^{km}, mb4.0/1, Error ellipse: s-maj=20.0km s-min=10.6km az=39.1*
*CSEM **29** 11:11:45.9±0.9, 42.41N×48.15E, h18^{km}, mb4.0, Error ellipse: s-maj=20.8km s-min=9.1km az=49.0, After OBN*
ISC 29 11:11:45.4±1.4, **42.55N**±0.05×**48.33E**±0.09, **h18**^{km}**, n22, σ1^{s}50**/37**, 2C-2D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNSR	**Manas**	0.47	289	⇑*i*PG	Pb	11 11 55.5	+0.6
MNSR				*i* S	Sb	11 12 02.0	+0.7
MNSR				pmax	pmax		
	comp=Z,282nm,0.2s						
MNSR	**Manas**	0.47	289	*i* Pg	Pb	11 11 55.5	+0.6
	comp=Z,282nm,0.2s						
MNSR				*i* Sg	Sb	11 12 02.0	+0.7
DRN	**Derbent**	0.52	180	*e*PG	Pb	11 11 55.5	-0.2
DRN				*e*S	Sb	11 12 04.0	+1.4
DRN				pmax	pmax		
	comp=Z,130nm,0.2s						
DRN	**Derbent**	0.52	180	*e*Pg	Pb	11 11 55.5	-0.2
	comp=Z,130nm,0.2s						
DRN				*e*Sg	Sb	11 12 04.0	+1.4
URKR	**Urkarakh**	0.64	234	⇑*i*PG	Pb	11 11 56.0	-1.7
URKR				*i* S	Sb	11 12 05.5	-0.7
URKR				pmax	pmax		
	comp=Z,465nm,0.2s						
URKR	**Urkarakh**	0.64	234	*i* Pg	Pb	11 11 56.0	-1.7
	comp=Z,465nm,0.2s						
URKR				*i* Sg	Sb	11 12 05.5	-0.7
MAK	**Makhachkala**	0.73	305	*e*PG	Pb	11 12 02.7	+3.4
MAK				*i*		11 12 10.2	
MAK				smax			
	comp=E,265nm,0.4s						
MAK				smax			
	comp=N,79nm,0.3s						
MAK	**Makhachkala**	0.73	305	*e*Pg	Pb	11 12 02.7	+3.4
MAK				*i* Sg	Sb	11 12 10.2	+1.4
	comp=N,79nm,0.3s						
BUJR	**Buynaksk**	0.94	288	*i* Pg	Pb	11 12 04.0	+1.2
BUJR				*i* Sg	Sb	11 12 17.5	+2.7
GNBR	**Gunib**	1.02	261	*e*PG	Pb	11 12 03.8	-0.4
GNBR				*e*S	Sb	11 12 18.0	+0.8
GNBR				pmax	pmax		
	comp=Z,92nm,0.2s						
GNBR	**Gunib**	1.02	261	*e*Pg	Pb	11 12 03.8	-0.4
	comp=Z,92nm,0.2s						
GNBR				*e*Sg	Sb	11 12 18.0	+0.8
KRNR	**Karanay**	1.08	285	⇓*i*PG	Pb	11 12 02.2	-3.1
KRNR				*i* S	Sb	11 12 17.8	-1.2
KRNR				pmax	pmax		
	comp=Z,75nm,0.2s						
KRNR	**Karanay**	1.08	285	*i* Pg	Pb	11 12 02.2	-3.1
	comp=Z,75nm,0.2s						
KRNR				*i* Sg	Sb	11 12 17.8	-1.2
UNCR	**Uncukul**	1.14	279	⇓*i*PG	Pb	11 12 03.8	-2.5
UNCR				*e*S	Sb	11 12 19.3	-1.4
UNCR				pmax	pmax		
	comp=Z,72nm,0.2s						
UNCR	**Uncukul**	1.14	279	*i* Pg	Pb	11 12 03.8	-2.5
	comp=Z,72nm,0.2s						
UNCR				*e*Sg	Sb	11 12 19.3	-1.4
DBC	**Dubki**	1.20	294	*e*PG	Pb	11 12 05.0	-2.2
DBC				*i* S	Sb	11 12 20.5	-1.8
XNZR	**Khunzakh**	1.20	270	*e*PG	Pb	11 12 08.0	+0.8
XNZR				*i* S	Sb	11 12 24.3	+2.0
XNZR				pmax	pmax		
	comp=Z,109nm,0.2s						
XNZR	**Khunzakh**	1.20	270	*e*Pg	Pb	11 12 08.0	+0.8
	comp=Z,109nm,0.2s						
XNZR				*i* Sg	Sb	11 12 24.3	+2.0
TI2	**Plekhanov**	2.78	254	*e*Pn	Pn	11 12 39.6	+10
TBLG	**Delisi**	2.79	254	P	Sn	11 13 09.7	+6.0
KIV	**Kislovodsk**	4.35	291	*e*PG	Px	11 13 27.3	
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV	**Kislovodsk**	4.35	291	*e*Pg	Px	11 13 27.3	
	comp=Z,12nm,1.0s						

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*ATH **29** 11:23:16.2, 39.75N×20.69E, h20^{km}, MD3.3/7*
*SKO **29** 11:23:16.5, 39.73N×20.76E, M2.1, ML2.4*
*NEIC **29** 11:23:16.2, 39.75N×20.69E, h20^{km}, MD3.3(ATH), After ATH.*
*THE **29** 11:23:17.4, 39.73N×20.75E, h10^{km}, ML3.0*
*CSEM **29** 11:23:17.3±0.1, 39.75N×20.69E, h10^{km}, MD3.3, Error ellipse: s-maj=1.7km s-min=1.7km az=92.0*
ISC 29 11:23:16.5±0.5, **39.73N**±0.02×**20.76E**±0.03, **h2**^{km}±5^{km}, **n32, σ0^{s}92**/51**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	0.10	137	⇑*i*PB	Pb	11 23 20.5	-0.4
JAN				*e*SB	Sb	11 23 23.7	+0.1
MEV	**Metsovon**	0.37	82	*e*Pg	Pg	11 23 24.6	+0.8
IGT	**Igoumenitsa**	0.39	239	*e*Pg	Pg	11 23 24.4	+0.2
IGT				*e*Sg	Sg	11 23 30.5	+1.2
LSK	**Leskovik**	0.43	344	*e*Pg	Pg	11 23 25.5	+0.4
LSK				*i* Sg	Sg	11 23 35.4	+4.5
SRN	**Sarande**	0.60	284	*e*Pg	Pg	11 23 27.8	-0.7
SRN				*i* Sg	Sg	11 23 37.4	+0.9
KEK	**Kerkira**	0.74	269	*e*PN	Pg	11 23 29.7	-1.6
KZN	**Kozani**	0.97	53	*e*PN	Pn	11 23 35.4	-1.5
LKD	**Levkas**	1.03	185	*e*Pg	Pg	11 23 36.7	-0.3
LKD				*e*Sg	Sg	11 23 51.7	+1.0
FNA	**Florina**	1.15	24	*e*Pg	Pg	11 23 39.1	-0.4
FNA				*e*Sg	Sg	11 23 56.3	+1.5
EVR	**Evrytania**	1.15	135	*e*PB	Pb	11 23 38.1	-0.7
EVR				*e*SN	Sn	11 23 56.0	-0.1
BIA	**Bitola**	1.36	18	*e*Pn	Pn	11 23 40.7	-1.8
BIA				*e*Sn	Sn	11 23 59.8	-1.5
BIA				*e*Lg		11 24 06.1	
	comp=N,42nm,0.4s						
BIA				*e*Lg		11 24 06.8	
	comp=E,39nm,0.3s						
BIA	**Bitola**	1.36	18	*e*Pn	Pn	11 23 40.7	-1.7
BIA				*e*Sn	Sn	11 23 59.7	-1.5
BIA				Lg		11 24 06.1	
BIA				Lg		11 24 06.8	
OHR	**Ohrid**	1.38	1	*e*Pn	Pn	11 23 42.9	+0.1
OHR				*e*Sn	Sn	11 24 03.1	+1.3
OHR				*e*Lg		11 24 05.5	
	comp=E,79nm,0.6s						
OHR	**Ohrid**	1.38	1	*e*Pn	Pn	11 23 42.9	+0.1
OHR				*e*Sn	Sn	11 24 03.1	+1.3
OHR				Lg		11 24 05.5	
AGG	**Agios Georgios**	1.41	120	*e*Pg	Pg	11 23 43.1	-1.6
AGG				*e*Sg	Sg	11 24 03.8	+0.3
VLS	**Valsamata**	1.56	185	*e*PN	Pn	11 23 45.3	-0.1
GRG	**Griva**	1.75	45	*e*Pb	Pb	11 23 48.5	-0.5
GRG				*e*Sb	Sb	11 24 12.8	+1.3
XOR	**Xorichti**	1.92	100	*e*Pb	Pb	11 23 51.1	-0.8
XOR				*e*Sb	Sb	11 24 17.3	+1.1
NEO	**Neokhori**	1.95	102	*e*PN	Pn	11 23 51.7	+0.7
VAY	**Valandovo**	2.10	40	*e*Pn	Pn	11 23 52.4	-0.7
VAY				*e*Sn	Sn	11 24 20.2	0.0
VAY				*e*Sn	Sn	11 24 23.8	+3.5
VAY				*e*Lg		11 24 31.1	
	comp=E,26nm,0.8s						
VAY				*e*Lg		11 24 31.6	
	comp=N,42nm,1.1s						
VAY				*e*Lg		11 24 32.6	
	comp=N,7.6nm,0.3s						
VAY				*e*Lg		11 24 33.1	
	comp=E,9.7nm,0.6s						
VAY	**Valandovo**	2.10	40	*e*Pn	Pn	11 23 52.4	-0.7
VAY				*e*Sn	Sn	11 24 20.2	0.0
VAY				Lg		11 24 31.1	
VAY				Lg		11 24 31.7	
PLG	**Polygyros**	2.16	72	*e*PB	Pb	11 23 54.7	-1.3
KNT	**Kendrikon**	2.17	48	*e*Pn	Pn	11 23 54.5	+0.4
PAIG	**Paliouri**	2.26	84	*e*Pn	Pn	11 23 55.6	+0.2
PAIG				*e*Sn	Sn	11 24 24.5	+0.3
SOH	**Sokhos**	2.26	60	*e*Pn	Pn	11 23 55.5	+0.1
SKO	**Skopje**	2.30	13	*e*Pn	Pn	11 23 56.7	+0.8
SKO				*e*Lg		11 24 32.1	
	comp=E,22nm,0.5s						
SKO	**Skopje**	2.30	13	*e*Pn	Pn	11 23 56.7	+0.8
SKO				Lg		11 24 32.1	
AOS	**Alonnisos**	2.48	102	*e*Pn	Pn	11 23 58.6	+0.1
AOS				*e*Sn	Sn	11 24 30.8	+0.9
OUR	**Ouranopolis**	2.55	75	*e*Pn	Pn	11 23 59.8	+0.3
KKB	**Krupnik**	2.77	39	*i* P	Pn	11 24 03.0	+0.4
MMB	**Musomiste**	2.92	50	*i* P	Pn	11 24 02.0	-2.9
VTS	**Vitosha**	3.40	32	*i* P	Pn	11 24 12.0	+0.3

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*SKO **29** 11:26:33.5, 39.58N×20.77E, h2^{km}, M2.0, ML2.5*
*ATH **29** 11:26:34.3, 39.70N×20.72E, h25^{km}, MD3.3/5*
*NEIC **29** 11:26:34.3, 39.70N×20.72E, h25^{km}, MD3.3(ATH), After ATH.*
*CSEM **29** 11:26:35.4±0.1, 39.82N×20.69E, h2^{km}, MD3.3, Error ellipse: s-maj=1.9km s-min=1.6km az=126.0*
*THE **29** 11:26:36.0, 39.73N×20.73E, h10^{km}, ML2.9*
ISC 29 11:26:35.2±0.6, **39.72N**±0.02×**20.75E**±0.04, **h3**^{km}±5^{km}, **n25, σ0^{s}99**/39**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	**Janina**	0.10	128	*e*PB	Pb	11 26 39.0	-0.3
JAN				*e*SB	Sb	11 26 42.3	+0.3
IGT	**Igoumenitsa**	0.37	241	*e*Pg	Pg	11 26 42.9	+0.3
IGT				*e*Sg	Sg	11 26 49.0	+1.4
MEV	**Metsovon**	0.37	79	*e*Pg	Pg	11 26 43.4	+0.8
KEK	**Kerkira**	0.74	270	*e*PN	Pg	11 26 48.4	-1.5
KZN	**Kozani**	0.98	53	*e*PN	Pn	11 26 53.9	-1.8
LKD	**Levkas**	1.01	185	*e*Pg	Pg	11 26 55.2	-0.1
LKD				*e*Sg	Sg	11 27 10.5	+1.7
EVR	**Evrytania**	1.14	134	*e*PB	Pb	11 26 54.9	-2.4
FNA	**Florina**	1.17	24	*e*Pg	Pg	11 26 57.7	-0.8
FNA				*e*Sg	Sg	11 27 14.9	+0.8
BIA	**Bitola**	1.37	18	*e*Pn	Pn	11 27 00.2	-1.1
BIA				*e*Sg	Sg	11 27 21.1	+0.2
BIA				*e*Lg		11 27 21.7	
	comp=N,33nm,0.5s						
BIA				*e*Lg		11 27 22.1	
	comp=E,46nm,0.6s						
BIA	**Bitola**	1.37	18	*e*Pn	Pn	11 27 00.2	-1.1
BIA				*e*Sg	Sg	11 27 21.1	+0.2
BIA				Lg		11 27 21.7	
BIA				Lg		11 27 22.1	
OHR	**Ohrid**	1.40	1	*e*Pn	Pn	11 27 01.9	+0.3
OHR				*e*Sn	Sn	11 27 21.9	+1.1
OHR				*e*Lg		11 27 24.9	
	comp=E,73nm,0.7s						
OHR	**Ohrid**	1.40	1	*e*Pn	Pn	11 27 01.9	+0.3
OHR				*e*Sn	Sn	11 27 21.9	+1.1
OHR				Lg		11 27 25.0	
AGG	**Agios Georgios**	1.41	119	*e*Pg	Pg	11 27 01.7	-1.5
AGG				*e*Sg	Sg	11 27 22.8	+0.8
VLS	**Valsamata**	1.54	185	*e*PN	Pn	11 27 02.2	-1.5
GRG	**Griva**	1.77	45	*e*Pb	Pb	11 27 07.1	-0.8
XOR	**Xorichti**	1.92	100	*e*Pb	Pb	11 27 09.8	-0.7
XOR				*e*Sb	Sb	11 27 36.2	+1.3
VAY	**Valandovo**	2.12	40	*e*Pn	Pn	11 27 11.6	-0.4
VAY				*e*Sn	Sn	11 27 38.7	-0.5
VAY				*e*Lg		11 27 49.6	
	comp=E,20nm,0.8s						
VAY				*e*Lg		11 27 49.7	
	comp=N,23nm,0.6s						
VAY	**Valandovo**	2.12	40	*e*Pn	Pn	11 27 11.6	-0.4
VAY				*e*Sn	Sn	11 27 38.7	-0.5
VAY				Lg		11 27 49.6	
KNT	**Kendrikon**	2.18	48	*e*Pn	Pn	11 27 13.3	+0.4
PAIG	**Paliouri**	2.26	84	*e*Pn	Pn	11 27 14.4	+0.3
SOH	**Sokhos**	2.28	60	*e*Pn	Pn	11 27 14.7	+0.4
SKO	**Skopje**	2.31	13	*e*Pn	Pn	11 27 14.8	0.0
SKO				*e*Sn	Sn	11 27 45.6	+1.5
SKO				*e*Lg		11 27 55.2	
	comp=E,20nm,0.6s						
SKO	**Skopje**	2.31	13	*e*Pn	Pn	11 27 14.8	0.0
SKO				*e*Sn	Sn	11 27 45.6	+1.5
SKO				Lg		11 27 55.2	
AOS	**Alonnisos**	2.48	102	*e*Pn	Pn	11 27 17.6	+0.4
OUR	**Ouranopolis**	2.56	75	*e*Pn	Pn	11 27 18.7	+0.5

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*IDC **29** 11:34:43.3±1.6, 17.82S×178.32W, h495^{km}±21^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.3/16, mbtmp4.2/7, Error ellipse: s-maj=33.1km s-min=13.7km az=139.0*
*NEIC **29** 11:34:44.4±1.2, 17.77S×178.48W, h507^{km}±15^{km}, mb3.8/2, Error ellipse: s-maj=23.3km s-min=13.0km az=154.0*
ISC 29 11:34:43.0±1.0, **17.9S**±0.2×**178.3W**±0.1, **h508**^{km}±18^{km}, **n18, σ0^{s}97**/16**, mb3.7**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	7.41	59	P	P	11 36 35.1	+0.6
	4.7nm,0.3s,baz=117,slow=20,SNR=14						
AFI				S	S	11 38 02.4	-0.7
	0.3nm,0.3s,baz=357,slow=21,SNR=1.9						
AFI	**Afiamalu**	7.41	59	P	P	11 36 35.1	+0.6
AFI				S	S	11 38 02.4	-0.7
DZM	**Mont Dzumac**	14.94	251	P	P	11 37 53.1	+0.5
	0.3nm,0.3s,baz=60,slow=20,SNR=3.6						
RAR	**Rarotonga**	17.76	104	P	P	11 38 26.5	+5.9
	0.9nm,0.3s,baz=252,slow=7.5,SNR=4.4						
URZ	**Urewera**	20.70	190	P	P	11 38 48.1	-0.2
	12nm,0.9s,baz=344,slow=22,SNR=4.4						
ARMA	**Armidale**	30.05	240	*e*P	P	11 40 12.9	+1.2
STKA	**Stephens Creek**	38.74	241	*e*P	P	11 41 25.6	+1.4
	5.3nm,0.6s,mb4.2						
STKA	**Stephens Creek**	38.74	241	P	P	11 41 25.5	+1.3
	6.5nm,0.5s,mb4.3,baz=89,slow=11,SNR=23						
WRAB	**Tennant Creek**	44.74	260	*e*P	P	11 42 11.0	-1.1
	2.8nm,0.6s,mb3.9						
WRA	**Warramunga Arr**	44.75	259	P	P	11 42 10.9	-1.3
	1.6nm,0.6s,mb3.7,baz=94,slow=7.0,SNR=13						
WRA				PcP	PcP	11 43 44.2	+0.1
	0.8nm,0.7s,baz=86,slow=3.8,SNR=4.5						
FITZ	**Fitzroy Crossi**	53.15	260	*e*P	P	11 43 14.4	-0.5
	3.8nm,1.0s,mb3.7						
VNDA	**Vanda**	60.48	185	*e*P	P	11 44 03.6	-0.9
NVAR	**Mina Array Bea**	79.32	44	P	P	11 45 58.4	+1.7
	0.5nm,0.7s,mb3.2,baz=230,slow=9.8,SNR=3.9						
ILAR	**Eielson Array**	85.83	13	P	P	11 46 28.2	-0.5
	0.5nm,0.6s,mb3.3,baz=229,slow=4.9,SNR=10						
MKAR	**Makanchi Array**	109.20	314	PKiKP		11 52 15.6	
	0.4nm,0.6s,baz=205,slow=1.4,SNR=5.3						
MKAR	**Makanchi Array**	109.20	314	PKPdf		11 52 15.6	
BRTR	**Keskin Array B**	144.84	315	PKP	PKPdf	11 53 23.4	+1.9
	3.1nm,0.8s,baz=135,slow=3.5,SNR=14						
GERES	**GERESS Array B**	147.61	345	PKPbc	PKPdf	11 53 31.2	+5.4
	0.7nm,0.5s,baz=45,slow=2.8,SNR=6.7						

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*ATH **29** 11:43:55.1, 41.66N×24.67E, h4^{km}, MD3.2/3*
*CSEM **29** 11:43:55.9±0.3, 41.64N×24.67E, h2^{km}, ML2.7, Error ellipse: s-maj=8.2km s-min=2.1km az=2.0*
*THE **29** 11:43:58.6, 41.59N×24.68E, h21^{km}, ML2.7*
ISC 29 11:43:54.6±1.7, **41.6N**±0.1×**24.65E**±0.04, **h4**^{km}**, n9, σ0^{s}31**/15**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NVR	**Nevrokopi**	0.65	246	*e*PG	Pg	11 44 07.8	+0.2
RDO	**Rodhopi**	0.81	125	*e*PB	Pb	11 44 11.1	+0.2
RDO				*e*SG	Sg	11 44 22.1	+0.4
SOH	**Sokhos**	1.26	231	*e*Pg	Pg	11 44 20.1	+0.4
SOH				*e*Sg	Sg	11 44 36.9	+0.3
SOH	**Sokhos**	1.26	231	*e*Pg	Pg	11 44 20.1	+0.3
SOH				*e*Sg	Sg	11 44 36.8	+0.2
ALN	**Alexandroupoli**	1.27	124	*e*Pg	Pg	11 44 19.9	-0.1
ALN				*e*Sg	Sg	11 44 36.7	-0.2
OUR	**Ouranopolis**	1.38	202	*e*Pg	Pg	11 44 21.8	-0.3
KNT	**Kendrikon**	1.40	252	*e*Pg	Pg	11 44 22.0	-0.5
KNT				*e*Sg	Sg	11 44 40.9	-0.2
PLG	**Polygyros**	1.54	217	*e*PG	Pg	11 44 24.8	-0.6
GRG	**Griva**	1.82	250	*e*Pb	Pb	11 44 28.4	+0.3
GRG				*e*Sb	Sb	11 44 51.5	+0.3

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*NEIC **29** 12:48:50.3±1.2, 20.95S×71.07W, h35^{km}, mb3.6/1, Error ellipse: s-maj=40.4km s-min=12.7km az=95.0*
*IDC **29** 12:48:55.0±3.8, 21.21S×69.74W, h70^{km}±34^{km}, mb4.1/1, mb1 3.7/3, mb1mx3.4/15, mbtmp3.9/3, ML3.9/2, MS2.9/3, Ms1 2.9/3, ms1mx2.8/13, Error ellipse: s-maj=104.4km s-min=24.5km az=105.0*
ISC 29 12:48:46.4±1.2, **20.84S**±0.06×**71.4W**±0.2, **h33**^{km}**, n9, σ0^{s}78**/8**, mb4.2**/1**, MS2.9**/2**, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARE	**Arequipa**	4.36	359	*e*P	P	12 49 57.0	+5.0
ARE				*e*S	S	12 50 42.0	-0.3
LPAZ	**La Paz**	5.48	35	P	P	12 50 08.0	+0.1
	2.7nm,0.3s,baz=185,slow=13,SNR=44						
LPAZ				S	S	12 51 09.8	-0.8
	baz=229,slow=20,SNR=2.2						
LPAZ				LR	LR	12 52 14.5	
	comp=Z,98nm,21.6s,baz=179,slow=39						
SAML	**Samuel**	14.23	35	Pn	P	12 52 09.4	+1.7
	0.9nm,0.4s						
TRQA	**Tornquist**	18.99	157	P	P	12 53 07.4	-0.4
	4.6nm,1.0s						
PLCA	**Paso Flores**	19.84	178	P	P	12 53 17.1	-0.1
	0.1nm,0.3s,baz=14,slow=12,SNR=2.2						
BDFB	**Brasilia**	22.78	81	LR	LR	13 03 02.3	
	comp=Z,43nm,21.8s,MS2.9,baz=338,slow=40						
ROSC	**El Rosal**	25.70	353	LR	LR	13 06 15.5	
	comp=Z,31nm,19.2s,MS2.9,baz=229,slow=40						
TORD	**Torodi Ar. Bea**	79.32	72	P	P	13 00 46.3	-4.7
	2.1nm,0.6s,mb4.2,baz=252,slow=5.4,SNR=17						
MKAR	**Makanchi Array**	146.41	33	PKPbc	PKPbc	13 08 25.5	+1.6
	2.1nm,0.8s,baz=319,slow=3.6,SNR=15						

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*NEIC **29** 12:53:01.3, 18.97N×103.54W, h15^{km}, MD3.8(MEX), After MEX.*
MEX 29 12:52:59.6±0.7**, 18.90N×103.49W, h12**^{km}±6^{km}**, MD3.8, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COLM	**Colima**	0.34	325	*i* P	Pg	12 53 06.0	-0.6
COLM				*i* S	Sg	12 53 11.0	-0.3
CJM	**Chamela**	1.58	292	*e*P	Pn	12 53 25.9	-1.7
CJM				*i* S	Sn	12 53 42.0	-6.1
CJM	**Chamela**	1.58	292	*i* P	Pn	12 53 27.2	-0.5
CJM				*i* S	Sn	12 53 48.7	+0.6
SFJM	**Santa Fe**	1.63	15	*i* P	Pn	12 53 24.5	-3.8
SFJM				*i* S	Sn	12 53 44.5	-4.8
MOIG	**Morelia**	2.31	70	*e*P	Pn	12 53 33.5	-4.5
MOIG				*i* S	Sn	12 54 03.0	-3.4
MOIG	**Morelia**	2.31	70	*e*P	Pn	12 53 33.5	-4.5
MOIG				*i* S	Sn	12 54 04.6	-1.8

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*NAO **29** 13:04:03.8±2.2, 59.27N×18.11E, ML2.4*
*BER **29** 13:04:03.9±3.6, 59.13N×18.12E, ML2.4(NAO), Suspected explosion*
*IDC **29** 13:04:04.5±1.8, 59.26N×18.12E, mb1 3.2/4, mb1mx3.0/22, mbtmp3.1/4, ML2.8/4, Error ellipse: s-maj=24.4km s-min=5.9km az=179.0*
HEL 29 13:04:01.3±0.2**, 59.00N×18.16E, ML2.2, ML2.6**(UPP)**, ML2.4**(NAO)**, Explosion, Baltic Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NYNU	**Nynaeshamn**	0.08	275	*i* P	Pg	13 04 02.8	-0.1
NYNU				*i* S	Sg	13 04 04.2	+0.2
NRTU	**Norrtaelje**	0.72	19	*i* P	Pg	13 04 14.0	-1.7
ESKU	**Eskilstuna**	0.94	285	*e*P	Pg	13 04 18.3	-1.8
BACU	**Backbrunna**	1.01	328	*e*P	Pb	13 04 19.6	-1.8
FLYU	**Flymyra**	1.14	353	*e*P	Pb	13 04 21.9	-1.7
FLYU				*e*S	Sb	13 04 37.2	-1.7

OSTU	**Oestervaala**	1.34	338	*e*P	Pb	13 04 25.6	-1.5
FORU	**Forsmark**	1.39	0	*e*P	Pb	13 04 25.4	-2.5
AAL	**Aland**	1.51	37	*e*P	Pn	13 04 28.0	-1.6
FALU	**Falun**	1.91	323	*e*P	Pn	13 04 35.5	+0.1
IGGU	**Iggoen**	1.93	348	*e*P	Pn	13 04 34.9	-0.8
HFS	**Hagfors**	2.54	299	*e*PB	Pb	13 04 44.6	-2.9
HFS				*e*SG	Sg	13 05 18.7	-7.2
HFS	**Hagfors**	2.54	299	Pn	Pn	13 04 44.4	0.0
	0.3nm,0.3s,baz=112,slow=16,SNR=66						
HFS				Lg		13 05 18.6	
	1.3nm,0.3s,baz=110,slow=31,SNR=27						
HFS	**Hagfors**	2.54	299	Pn	Pn	13 04 44.6	+0.2
	baz=114,slow=14						
HFS				Lg		13 05 18.7	
	baz=111,slow=37						
ARNU	**Arnoeviken**	2.73	352	*e*P	Pn	13 04 45.4	-1.7
HEMU	**Hemsoen**	3.69	359	*e*P	Pn	13 04 59.3	-1.5
NB2	**NORSAR Subarra**	4.04	303	*e*P	Pn	13 05 04.3	-1.5
NB2				*e*PG	Pg	13 05 13.4	-8.5
NB2				*e*SG	Sg	13 06 06.2	-10
NB2	**NORSAR Subarra**	4.04	303	Pn	Pn	13 05 04.3	-1.5
	baz=124,slow=14						
NB2				Pg	Pg	13 05 13.4	-8.5
NB2				Lg		13 06 06.2	
	baz=122,slow=28						
NOA	**NORSAR Array B**	4.04	303	Pn	Pn	13 05 04.5	-1.3
	0.3nm,0.3s,baz=121,slow=13,SNR=2.4						
NOA				Pg	Pg	13 05 13.0	-9.0
	0.6nm,0.3s,baz=82,slow=13,SNR=2.8						
NOA				Sn	Sn	13 05 49.2	-5.4
	0.4nm,0.3s,baz=320,slow=24,SNR=2.4						
NOA				Lg		13 06 06.2	
	1.3nm,0.3s,baz=91,slow=19,SNR=5.7						
PVF	**Pernaja**	4.19	65	*e*P	Pn	13 05 06.4	-1.5
PVF				*e*S	Sn	13 05 54.4	-4.0
PVF				*e*SG	Sg	13 06 10.7	-10
SOLU	**Sollefteaa**	4.29	355	*e*P	Pn	13 05 07.5	-1.7
HUSU	**Husum**	4.39	6	*e*P	Pn	13 05 09.3	-1.4
KEF	**Keuruu**	4.59	43	*e*P	Pn	13 05 12.6	-1.0
KEF				*e*S	Sn	13 06 05.2	-3.2
VAF	**Ylistaro**	4.61	26	*e*P	Pn	13 05 13.4	-0.5
VAF				*e*SG	Sg	13 06 23.4	-11
VAF				MSG		13 06 24.7	
	comp=Z,3.5nm,0.2s						
FIA0	**FINESS Array S**	4.65	55	Pn	Pn	13 05 12.8	-1.6
	baz=242,slow=12						
FIA0				Sn	Sn	13 06 06.1	-3.8
	baz=235,slow=22						
FIA0				Lg		13 06 23.3	
	baz=227,slow=28						
FIA0	**FINESS Array S**	4.65	55	*e*P	Pn	13 05 13.3	-1.1
FIA0				*e*S	Sn	13 06 03.9	-6.0
FINES	**FINESS Array B**	4.65	55	Pn	Pn	13 05 12.9	-1.5
	comp=Z,0.4nm,0.3s,baz=251,slow=12,SNR=24						
FINES				Pg	Pg	13 05 23.6	-10
	comp=Z,0.5nm,0.3s,baz=244,slow=15,SNR=7.5						
FINES				Sn	Sn	13 06 06.6	-3.3
	comp=Z,1.2nm,0.3s,baz=245,slow=20,SNR=12						
FINES				Lg		13 06 23.2	
	comp=Z,1.6nm,0.3s,baz=257,slow=24,SNR=14						
BREU	**Bredtraesk**	4.92	2	*e*P	Pn	13 05 15.4	-2.8
UMAU	**Umeaa**	5.05	13	*e*P	Pn	13 05 18.6	-1.5
SUF	**Sumiainen**	5.40	43	*e*P	Pn	13 05 22.7	-2.4
SUF				*e*S	Sn	13 06 23.2	-5.6
SUF				*e*SB	Sb	13 06 41.7	-0.8
SUF				MSG		13 06 48.5	
	comp=Z,2.1nm,0.2s						
BURU	**Burvik**	5.81	14	*e*P	Pn	13 05 28.9	-1.9
LILU	**Lilltraesk**	6.36	6	*e*P	Pn	13 05 35.2	-3.4
APA0	**Apatity Array**	10.88	31	Pn	P	13 06 36.0	-5.1
	baz=241,slow=12						
APA0	**Apatity Array**	10.88	31	*e*P	P	13 06 36.0	-5.1
ARCES	**ARCESS Array B**	11.04	14	Pn	P	13 06 37.0	-6.3
	comp=Z,0.4nm,0.3s,baz=190,slow=13,SNR=21						
ARA0	**ARCESS Array S**	11.04	14	Pn	P	13 06 37.0	-6.3
	baz=194,slow=14						
ARA0				Sn	S	13 08 35.0	-14
	baz=198,slow=22						
ARA0	**ARCESS Array S**	11.04	14	*e*P	P	13 06 37.0	-6.3
ARA0				*e*S	S	13 08 35.0	-14

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*IDC **29** 13:24:30.4±1.6,27.15N×101.05E,mb3.8/3,mb1 4.1/3, mb1mx3.6/18,mbtmp3.9/3,Error ellipse: s-maj=78.6km s-min=25.4km az=65.0*

*NEIC **29** 13:24:31.7±0.6,27.27N×100.99E,h10^{km},mb4.5/2,Error ellipse: s-maj=14.5km s-min=8.5km az=192.0*

*BJI **29** 13:24:33.2,27.38N×101.28E,h16^{km},ML3.7,Ms3.9*

ISC 29 13:24:29.3±0.5**,27.23N**±0.06×**101.03E**±0.05**,h10^{km},n18,** σ**1^{s}06**/26**,mb4.2**/4**,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	**Kunming**	2.60	143	P	**Pn**	**13 25 16.5**	**+4.3**
KMI				PG	**Pg**	**13 25 20.3**	**-1.0**
KMI				S	**Sn**	**13 25 52.0**	**+7.8**
KMI				SG	**Sg**	**13 25 57.3**	**+1.3**
KMI				Smax			
	comp=N,310nm,0.7s						
KMI				Smax			
	comp=E,350nm,1.0s						
KMI				LR	LR		
	comp=N,410nm,3.8s						
KMI				LR	LR		
	comp=E,560nm,3.8s						
KMI				LR	LR		
	comp=Z,410nm,7.3s						
KMI	**Kunming**	2.60	143	Pn	**Pn**	**13 25 16.5**	**+4.3**
KMI				Sn	**Sn**	**13 25 51.9**	**+7.7**
CD2	**Chengdu**	4.38	32	*e*P	**Pn**	**13 25 38.0**	**+0.5**
CD2				*e*PG	**Pg**	**13 25 49.0**	**-7.7**
CD2				SG	**Sg**	**13 26 41.0**	**-14**
CD2				Smax			
	comp=N,590nm,1.2s						
CD2				Smax			
	comp=E,370nm,1.2s						
GYA	**Guiyang**	5.09	97	P	**Pn**	**13 25 51.5**	**+3.9**
GYA				PG	**Pg**	**13 25 58.5**	**-13**
GYA				S	**Sn**	**13 26 47.0**	**-0.2**
GYA				Smax			
	comp=N,90nm,0.9s						
GYA				Smax			
	comp=E,220nm,0.8s						
ENH	**Enshi**	8.02	66	*e*P	**P**	**13 26 26.5**	**-2.3**
	comp=E,27nm,0.7s						
SHL	**Shillong**	8.36	261	*e*P	**P**	**13 26 38.0**	**+4.4**
LSA	**Lhasa**	9.03	288	P	**P**	**13 26 46.8**	**+4.0**
GUN	**Gumba**	13.46	276	*e*P	**P**	**13 27 43.6**	**+0.7**
	comp=E,30nm,0.9s						
PKI	**Pulchoki**	13.88	275	*e*P	**P**	**13 27 48.0**	**-0.5**
KKN	**Kakani**	13.99	276	*e*P	**P**	**13 27 49.7**	**-0.3**
DMN	**Daman**	14.15	275	*e*P	**P**	**13 27 51.9**	**-0.2**
	comp=E,14nm,0.7s						
GKN	**Gorkha**	14.55	277	*e*P	**P**	**13 27 56.7**	**-0.7**
KOLN	**Koldanda**	15.48	276	*e*P	**P**	**13 28 08.5**	**-0.9**
SONM	**Songino Array**	20.99	10	P	**P**	**13 29 15.9**	**+0.7**
	comp=E,0.3nm,0.5s,baz=200,slow=11,SNR=6.4						
MKAR	**Makanchi Array**	24.49	328	P	**P**	**13 29 52.1**	**+2.5**
	comp=E,1.3nm,0.6s,mb3.5,baz=139,slow=8.8,SNR=13						
KURK	**Kurchatov**	29.00	330	*e*P	**P**	**13 30 31.9**	**+0.7**
	comp=E,3.0nm,0.8s,mb4.1						
WRAB	**Tennant Creek**	56.92	142	*e*P	**P**	**13 34 17.2**	**-0.1**
	comp=E,5.6nm,0.6s,mb4.8						
WRA	**Warramunga Arr**	56.92	142	P	**P**	**13 34 17.1**	**-0.3**
	comp=E,2.7nm,0.6s,mb4.5,baz=330,slow=7.9,SNR=26						

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*BUG **29** 13:30:33.3,51.53N×6.82E,h1^{km},ML1.9*

*LDG **29** 13:30:34.7±0.2,51.60N×6.85E,h1^{km},Ml2.8/4,Error ellipse: s-maj=3.0km s-min=2.0km az=34.0,Suspected Mining induced.*

*NEIC **29** 13:30:34.7,51.60N×6.85E,h1^{km},ML2.8(LDG),After LDG.*

*CSEM **29** 13:30:34.6±0.1,51.61N×6.85E,h2^{km},ML2.7/4,Error ellipse: s-maj=3.3km s-min=1.7km az=105.0*

*BGR **29** 13:30:35.1±1.5,51.50N×6.92E,h1^{km},ML2.0/4,Error ellipse: s-maj=16.7km s-min=5.6km az=137.0*

*BNS **29** 13:30:36.0±1.4,51.54N×6.88E,h1^{km},ML2.2*

ISC 29 13:30:32.6±0.6**,51.61N**±0.03×**6.72E**±0.04**,n28,** σ**1^{s}37**/47**,1D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BZER	**Hlnxe**	0.09	81	Pg	**Pg**	**13 30 34.9**	**+0.5**
BZER				Sg	**Sg**	**13 30 36.4**	**+0.8**
LAUG	**Laupendahl**	0.29	152	*e*Pg	**Pg**	**13 30 39.1**	**+0.8**
LAUG				*e*Sg	**Sg**	**13 30 42.9**	**+0.6**
	180nm,0.8s						
WTSB	**Winterswijk**	0.36	7	⇓*i*Pg	**Pg**	**13 30 42.1**	**+2.3**
	58nm,0.3s						
BUG	**Bochum--Univer**	0.38	116	*e*Pg	**Pg**	**13 30 40.3**	**+0.2**
	SNR=3.0						
BUG				*e*Sg	**Sg**	**13 30 42.0**	**-3.2**
RODG	**Roetgen-Dahlhe**	0.57	217	*e*Pg	**Pg**	**13 30 47.8**	**+3.8**
RODG				*e*Sg	**Sg**	**13 30 55.1**	**+3.5**
	317nm,0.7s						
BNS	**Bensberg**	0.70	156	*e*Pg	**Pg**	**13 30 47.9**	**+1.3**
BNS				*e*Sg	**Sg**	**13 30 56.4**	**+0.4**
	85nm,0.6s						
HOBG	**Hohbusch**	0.73	148	*e*Pg	**Pg**	**13 30 47.4**	**+0.2**
HOBG				*e*Sg	**Sg**	**13 30 56.5**	**-0.4**
	122nm,0.6s						
HGN	**Heimansgroeve**	0.98	211	*e*Pg	**Pg**	**13 30 53.9**	**+1.8**
	22nm,0.2s,baz=40						
HGN				*e*Sg	**Sg**	**13 31 07.9**	**+2.8**
KLL	**Kalltalsperre**	0.99	195	*e*Pg	**Pg**	**13 30 53.7**	**+1.3**
KLL				*e*Sg	**Sg**	**13 31 07.7**	**+2.0**
	64nm,0.6s						
STB	**Steinbach**	1.02	176	*e*Pg	**Pg**	**13 30 54.0**	**+1.1**
STB				*e*Sg	**Sg**	**13 31 06.9**	**+0.5**
	51nm,0.4s						
HILG	**Hillesheim**	1.32	181	*e*Pg	**Pg**	**13 30 59.4**	**+0.6**
HILG				*e*Sg	**Sg**	**13 31 16.9**	**+0.5**
	76nm,0.8s						
BGG	**Burgeitz**	1.46	164	*e*Pg	**Pg**	**13 31 00.4**	**-1.2**
BGG				*e*Sg	**Sg**	**13 31 19.3**	**-1.6**
	44nm,0.3s						
TNS	**Taunus Mts**	1.76	141	*e*Pg	**Pg**	**13 31 05.2**	**-2.6**
	SNR=2.8						
TNS				*e*Sg	**Sg**	**13 31 26.6**	**-4.7**
GIVF	**Givet**	1.93	219	*e*Pn	**Pn**	**13 31 07.5**	**+0.6**
GIVF				*e*Sg	**Sg**	**13 31 36.9**	**+0.2**
	24nm,0.3s						
WLF	**Walferdange**	1.98	191	*e*Sg	**Sg**	**13 31 35.2**	**-3.2**
WLF	**Walferdange**	1.98	191	Pn	**Pn**	**13 31 08.2**	**+0.5**
WLF				*e*Sn	**Sn**	**13 31 35.8**	**+2.4**
WLF	**Walferdange**	1.98	191	Pn	**Pn**	**13 31 08.2**	**+0.6**
WLF				*e*Sn	**Sn**	**13 31 35.8**	**+2.3**
BAIF	**Baives**	2.22	227	*e*Sg	**Sg**	**13 31 45.7**	**-0.9**
	8.4nm,0.3s						
CLZ	**Clausthal**	2.28	83	*e*Sg	**Sg**	**13 31 44.0**	**-4.6**
RFYF	**Reffroy**	3.09	196	*e*Pn	**Pn**	**13 31 22.7**	**-0.8**
CDF	**Champ du Feu**	3.22	173	*e*Pn	**Pn**	**13 31 24.5**	**-0.8**
CDF				*e*Sg	**Sg**	**13 32 15.0**	**-4.7**
	4.6nm,0.4s						
SFTF	**Sexfontaines**	3.57	198	*e*Pn	**Pn**	**13 31 29.4**	**-1.0**
LOR	**Lormes**	4.73	204	*e*Pn	**Pn**	**13 31 45.5**	**-1.3**
LOR				*e*Sn	**Sn**	**13 32 38.0**	**-5.2**
LOR				*e*Sg	**Sg**	**13 33 04.2**	**-5.7**
	3.0nm,0.3s						
SSF	**Saint Saulge**	5.01	206	*e*Pn	**Pn**	**13 31 49.0**	**-1.8**
AVF	**Avril sur Loir**	5.30	206	*e*Pn	**Pn**	**13 31 53.7**	**-1.2**
FLN	**La Foliniere**	5.43	241	*e*Pn	**Pn**	**13 31 55.5**	**-1.3**
	baz=58						
BGF	**Bois d’Agland**	5.66	208	*e*Pn	**Pn**	**13 31 57.9**	**-2.0**
GRR	**Gorron**	5.85	240	*e*Pn	**Pn**	**13 32 01.2**	**-1.5**
GRR				*e*Sn	**Sn**	**13 33 05.0**	**-6.5**

JMA 29 13:43:55.5±0.2**,38.03N×144.61E,h59^{km},M3.6,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	2.53	295	P	P	13 44 35.2	0.0
OFUJ				*e*S	S	13 45 04.9	0.0
JIO	**Ouri**	2.60	280	P	P	13 44 36.1	-0.1
JIO				*e*S	S	13 45 06.3	-0.4
MIYJ	**Miyakonagasawa**	2.67	306	P	P	13 44 36.8	-0.4
MIYJ				*e*S	S	13 45 08.6	+0.2
JMK	**Ichinoseki**	2.81	290	P	P	13 44 39.4	+0.2
JMK				*e*S	S	13 45 12.7	+0.7
JCH	**Churui**	4.68	349	P	P	13 45 03.2	-2.1
JCH				*e*S	S	13 45 55.0	-3.9
JKB	**Kayabe**	4.73	326	P	P	13 45 04.6	-1.5
JKB				*e*S	S	13 45 56.4	-3.9
JRY	**Ryogami san**	4.99	248	P	P	13 45 08.4	-1.3
JRY				*e*S	S	13 46 03.2	-3.5
NEM2	**Nemuro 2**	5.40	9	*e*S	S	13 46 08.0	-8.9
JTKR	**Abashiri--Toko**	5.96	355	P	P	13 45 20.8	-2.3
JTKR				*e*S	S	13 46 24.1	-6.8

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*NDI **29** 14:14:32.1±1.7,34.76N×72.61E,h10^{km},MD3.5,ML3.3*

*NNC **29** 14:14:45.0±5.2,35.07N×72.15E,h72^{km}±41^{km},mpv3.6, Error ellipse: s-maj=47.9km s-min=38.5km az=97.0*

ISC 29 14:14:32.6±0.6**,34.77N**±0.05×**73.02E**±0.08**,h10^{km},n13,** σ**1^{s}25**/19**,3C-3D,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHCP	**Chirah Chowk**	1.13	169	P	**Pb**	**14 14 53.7**	**-0.1**
CEP	**Cherat**	1.32	224	P	**Pb**	**14 14 56.7**	**-0.3**
THW	**Thamme Wali**	2.24	209	P	**Pn**	**14 15 12.3**	**+2.0**
SARP	**Sargodha**	2.86	186	⇑P	**Pn**	**14 15 19.7**	**+0.5**
DLH	**Dalhousie**	3.32	131	*e*P	**Pn**	**14 15 30.0**	**+4.3**
DLH				*e*S	**Sn**	**14 16 11.0**	**+5.4**
SDNR	**Sundarnagar**	4.65	133	*e*P	**Pn**	**14 15 46.0**	**+1.3**
SDNR				*e*S	**Sn**	**14 16 38.7**	**-0.7**
KLP	**Kalpa**	5.45	125	*e*P	**Pn**	**14 15 57.6**	**+1.7**
KLP				*e*S	**Sn**	**14 16 59.3**	**-0.2**
KLP				AML	AML	14 17 26.0	
	comp=E,84nm,0.6s						
KLP				AML	AML	14 17 28.3	
	comp=N,60nm,0.7s						
KHET	**Khetri**	7.09	160	*e*P	**Pn**	**14 16 17.7**	**-1.3**
KHET				*e*S	**Sn**	**14 17 33.0**	**-7.5**
KHET				AML	AML	14 17 38.0	
	comp=E,13nm,0.4s						
KHET				AML	AML	14 17 38.3	
	comp=N,13nm,0.6s						
KUDL	**Kundal**	7.24	155	*e*P	**Pn**	**14 16 18.7**	**-2.5**
KUDL				*e*S	**Sn**	**14 17 38.6**	**-5.7**
KK31	**Karatay Array**	8.54	348	⇓P	**P**	**14 16 40.0**	**+0.6**
	comp=N,0.9nm,0.3s,baz=171,slow=12,SNR=20						
KK31				⇓S	**Sn**	**14 18 11.2**	**-5.6**
	comp=N,2.6nm,0.4s,baz=171,slow=23						
AB31	**Akbulak array**	17.39	330	⇑P	**P**	**14 18 36.6**	**-0.2**
	comp=N,0.2nm,0.4s,baz=154,slow=9.9,SNR=7.6						
BVA0	**Borovoye Array**	18.34	355	⇑P	**P**	**14 18 49.3**	**+0.6**
	comp=N,0.2nm,0.9s,baz=240,slow=3.3,SNR=6.9						
AKTO	**Aktyubinsk**	19.10	330	⇓P	**P**	**14 18 55.1**	**-2.7**
	comp=N,1.0nm,1.9s						

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*FUNV **29** 14:18:19.6,10.80N×62.23W,h86^{km},MW2.6*

*TRN **29** 14:18:22.4,10.82N×62.28W,h69^{km},MD2.8*

*NEIC **29** 14:18:22.4,10.82N×62.28W,h69^{km},MD2.8(TRN),After TRN.*

ISC 29 14:18:18.9±0.7**,10.70N**±0.05×**62.37W**±0.03**,h92^{km}**±7^{km}**, n17,** σ**1^{s}09**/32**,3C,Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	0.15	111	*e*P	**P**	**14 18 32.5**	**+0.5**
GUIV				*e*S	**S**	**14 18 40.8**	**-1.0**
GUNV	**Guanoco**	0.78	226	*e*P	**P**	**14 18 39.5**	**+2.9**
CRUV	**Carupano**	0.85	268	*e*P	**P**	**14 18 38.6**	**+1.3**
CRUV				*e*S	**S**	**14 18 51.6**	**+0.6**
TRN	**Trinidad (W)**	0.95	93	⇑*i*P	**P**	**14 18 38.8**	**+0.4**
TRN				*e*S	**S**	**14 18 52.4**	**-0.6**
ITEV	**Isla Los Testi**	0.99	311	*e*P	**P**	**14 18 39.5**	**+0.6**
ITEV				*e*S	**S**	**14 18 52.9**	**-1.0**
GRW	**Mount Saint Ca**	1.61	26	⇑*i*P	**P**	**14 18 47.1**	**+0.5**
GRW				*e*S	**S**	**14 19 01.8**	**-5.1**
TPR	**Prospect**	1.64	73	⇑*i*P	**P**	**14 18 48.5**	**+1.6**
TPR				*e*S	**S**	**14 19 06.0**	**-1.6**
PCRV	**Puerto La Cruz**	2.29	257	*e*P	**P**	**14 18 57.0**	**+1.4**
PCRV				*e*S	**S**	**14 19 24.1**	**+1.1**
IBAV	**Isla La Blanqu**	2.44	297	*e*P	**P**	**14 18 57.4**	**-0.3**
IBAV				*e*S	**S**	**14 19 25.6**	**-1.0**
GURV	**El Guri**	3.01	194	*e*P	**P**	**14 19 06.1**	**+0.5**
GURV				*e*S	**S**	**14 19 40.2**	**-0.5**
CUPV	**Cœpira**	3.42	260	*e*P	**P**	**14 19 11.3**	**0.0**
CUPV				*e*S	**S**	**14 19 51.1**	**+0.1**
BIRV	**Birongo**	3.84	267	*e*P	**P**	**14 19 16.9**	**-0.1**
BIRV				*e*S	**S**	**14 19 59.3**	**-2.0**
MERV	**Las Mercedes**	4.13	250	*e*S	**S**	**14 20 07.6**	**-0.8**
LUEV	**Luepa**	4.91	169	*e*P	**P**	**14 19 30.1**	**-1.7**
LUEV				*e*S	**S**	**14 20 22.6**	**-5.2**
CAOV	**Caicara del Or**	5.15	230	*e*P	**P**	**14 19 35.7**	**+0.7**
CAOV				*e*S	**S**	**14 20 30.1**	**-3.5**
BAUV	**El Baul**	5.86	253	*e*P	**P**	**14 19 45.1**	**+0.4**
BAUV				*e*S	**S**	**14 20 47.7**	**-3.4**
SDV	**Santo Domingo**	8.34	258	*e*P	**P**	**14 20 29.4**	**+11**
	9.1nm,1.1s						
SDV				*e*Sn	**S**	**14 22 10.7**	**+19**

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*NEIC **29** 14:19:08.8,38.97S×174.88E,h227^{km},MG4.0(WEL), After WEL.*

WEL 29 14:19:09.8±0.3**,39.01S×174.91E,h218^{km}**±2^{km}**,ML3.9**/6**, 2C-5D,Error ellipse: s-maj=3.0km s-min=3.0km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKVZ	**Pokaka**	0.44	130	PN	P	14 19 38.7	-0.5
PKVZ				SN	S	14 20 00.8	-1.1
RAEZ	**Rainy Point**	0.49	235	P	P	14 19 38.6	-0.7
RAEZ	**Rainy Point**	0.49	235	PN	P	14 19 38.6	-0.7
HIZ	**Hauiti**	0.50	355	P	P	14 19 38.2	-1.1
HIZ				S	S	14 20 01.0	-1.1
HIZ	**Hauiti**	0.50	355	⇓PN	P	14 19 38.2	-1.1
HIZ				SN	S	14 20 01.0	-1.1
CNZ	**Chateau**	0.53	111	P	P	14 19 39.2	-0.2
CNZ	**Chateau**	0.53	111	PN	P	14 19 39.2	-0.2
WPVZ	**Whakapapa**	0.53	112	P	P	14 19 39.2	-0.2
WPVZ	**Whakapapa**	0.53	112	PN	P	14 19 39.0	-0.4
WPVZ				SN	S	14 20 01.5	-0.9
WTVZ	**West Tongariro**	0.54	102	P	P	14 19 39.1	-0.4
WTVZ	**West Tongariro**	0.54	102	PN	P	14 19 39.1	-0.4
WTVZ				SN	S	14 20 01.6	-0.8
FWVZ	**Far West T-bar**	0.56	116	PN	P	14 19 39.4	-0.1
FWVZ				SN	S	14 20 01.5	-1.0
NGZ	**Ngauruhoe**	0.56	107	P	P	14 19 39.3	-0.3
NGZ	**Ngauruhoe**	0.56	107	PN	P	14 19 39.3	-0.3
NGZ				SN	S	14 20 01.7	-0.9
MTVZ	**Mangateitei**	0.58	131	⇓PN	P	14 19 39.4	-0.2
MTVZ				SN	S	14 20 01.7	-0.9
TRVZ	**Turoa**	0.58	120	PN	P	14 19 39.5	-0.1
TRVZ				SN	S	14 20 01.8	-0.8
WNVZ	**Wahianoa**	0.62	121	PN	P	14 19 39.7	-0.1
WNVZ				SN	S	14 20 01.9	-1.1
TUVZ	**Tukino**	0.64	114	P	P	14 19 39.8	0.0
TUVZ				S	S	14 20 02.2	-0.9
TUVZ	**Tukino**	0.64	114	⇓PN	P	14 19 39.8	0.0
TUVZ				SN	S	14 20 02.2	-0.9
PKE	**Pukeiti**	0.74	255	PN	P	14 19 39.6	-0.7
WAZ	**Wanganui**	0.75	175	P	P	14 19 40.5	+0.2
WAZ				S	S	14 20 03.4	-0.5
WAZ	**Wanganui**	0.75	175	PN	P	14 19 40.5	+0.2
WAZ				SN	S	14 20 03.6	-0.3
MOVZ	**Moawhango**	0.77	121	P	P	14 19 39.9	-0.5
MOVZ	**Moawhango**	0.77	121	PN	P	14 19 39.9	-0.5
MOVZ				SN	S	14 20 02.0	-2.1
NRZ	**Ngariki Road**	0.82	246	P	P	14 19 40.1	-0.6
NRZ	**Ngariki Road**	0.82	246	PN	P	14 19 40.1	-0.6
NWEZ	**Newall Road**	0.85	252	PN	P	14 19 40.2	-0.6
BKZ	**Black Stump Fm**	1.24	98	P	P	14 19 42.6	-0.8
BKZ	**Black Stump Fm**	1.24	98	⇓PN	P	14 19 42.6	-0.8
BKZ				SN	S	14 20 07.2	-2.3
TSZ	**Takapari Road**	1.33	142	P	P	14 19 43.9	-0.2
TSZ	**Takapari Road**	1.33	142	PN	P	14 19 43.7	-0.4
MRZ	**Mangatainoka R**	1.73	163	P	P	14 19 46.7	-0.8
MRZ	**Mangatainoka R**	1.73	163	⇑PN	P	14 19 46.7	-0.9
MRZ				SN	S	14 20 13.9	-2.7
PXZ	**Pawanui**	1.82	125	⇓PN	P	14 19 47.9	-0.5
KIW	**Kapiti Island**	1.85	180	P	P	14 19 47.6	-1.0
KIW	**Kapiti Island**	1.85	180	PN	P	14 19 47.6	-1.0
URZ	**Urewera**	1.88	67	PN	P	14 19 46.7	-2.3
DUWZ	**D’Urville Isla**	1.94	203	PN	P	14 19 48.3	-1.2
BFZ	**Birch Farm**	1.96	149	*e*P	P	14 19 49.0	-0.7
BFZ	**Birch Farm**	1.96	149	PN	P	14 19 49.0	-0.7
CAW	**Cannon Point**	2.10	177	P	P	14 19 50.0	-1.1
CAW	**Cannon Point**	2.10	177	PN	P	14 19 50.0	-1.1
KNZ	**Kokohu**	2.15	91	P	P	14 19 50.6	-1.1
KNZ	**Kokohu**	2.15	91	PN	P	14 19 50.6	-1.1
MWZ	**Matawai**	2.16	73	P	P	14 19 49.7	-2.0
MWZ	**Matawai**	2.16	73	PN	P	14 19 49.7	-2.0
MTW	**Mount Morrison**	2.19	168	P	P	14 19 50.6	-1.5
MTW	**Mount Morrison**	2.19	168	PN	P	14 19 50.6	-1.4
MRW	**Makara Radio**	2.22	184	P	P	14 19 51.0	-1.4
MRW	**Makara Radio**	2.22	184	PN	P	14 19 51.0	-1.3
TCW	**Tory Channel**	2.25	192	P	P	14 19 51.6	-1.1
TCW	**Tory Channel**	2.25	192	PN	P	14 19 51.6	-1.1
WEL	**Wellington**	2.28	183	P	P	14 19 51.6	-1.3
WEL	**Wellington**	2.28	183	PN	P	14 19 51.6	-1.4
SNZO	**South Karori**	2.30	184	P	P	14 19 51.7	-1.5
SNZO	**South Karori**	2.30	184	PN	P	14 19 51.7	-1.6
BHW	**Baring Head**	2.40	181	P	P	14 19 52.5	-1.7
BHW	**Baring Head**	2.40	181	PN	P	14 19 52.5	-1.7
PAWZ	**Paruwai Farm**	2.40	171	P	P	14 19 52.8	-1.5
PAWZ	**Paruwai Farm**	2.40	171	PN	P	14 19 52.8	-1.5
MSWZ	**Moikau Station**	2.42	174	P	P	14 19 52.8	-1.6
MSWZ	**Moikau Station**	2.42	174	PN	P	14 19 52.8	-1.6
TRWZ	**Traveller**	2.46	166	PN	P	14 19 53.5	-1.4
NNZ	**Nelson**	2.50	207	⇑PN	P	14 19 53.3	-2.0
TUWZ	**Tuamarina**	2.53	197	PN	P	14 19 54.0	-1.6
QRZ	**Quartz Range**	2.58	224	P	P	14 19 53.3	-2.9
QRZ	**Quartz Range**	2.58	224	PN	P	14 19 53.3	-2.8
PUZ	**Puketiti**	2.79	71	PN	P	14 19 56.3	-2.2
BSWZ	**Blackbirch Sta**	2.81	196	P	P	14 19 57.5	-1.3
BSWZ	**Blackbirch Sta**	2.81	196	PN	P	14 19 57.5	-1.3
THZ	**Tophouse**	3.15	208	*e*P	P	14 20 00.0	-2.6
THZ	**Tophouse**	3.15	208	PN	P	14 19 60.0	-2.6
KHZ	**Kahutara**	3.56	197	*e*P	P	14 20 04.2	-3.3
KHZ	**Kahutara**	3.56	197	PN	P	14 20 04.2	-3.4
DSZ	**Denniston Nort**	3.62	220	PN	P	14 20 04.6	-3.6
LTZ	**Lake Taylor**	4.27	207	*e*P	P	14 20 12.7	-3.5
LTZ	**Lake Taylor**	4.27	207	PN	P	14 20 12.7	-3.5
CRLZ	**Canterbury Las**	4.88	200	*e*P	P	14 20 19.7	-4.1
MQZ	**McQueen’s Vall**	4.99	199	*e*P	P	14 20 20.7	-4.5
WVZ	**Waitaha Valley**	5.14	216	*e*P	P	14 20 23.1	-4.0
RPZ	**Rata Peaks**	5.52	210	*e*P	P	14 20 27.4	-4.6
FOZ	**Fox Glacier**	6.01	219	*e*P	P	14 20 32.3	-5.9
ODZ	**Otahua Downs**	6.81	206	*e*P	P	14 20 44.7	-3.8
JCZ	**Jackson Bay**	6.85	220	*e*P	P	14 20 43.7	-5.2
WKZ	**Wanaka**	7.29	215	*e*P	P	14 20 48.4	-6.2
EAZ	**Earnscleugh**	7.48	212	*e*P	P	14 20 51.8	-5.3

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*NDI **29** 14:23:51.6±1.5,34.30N×73.43E,h10^{km},ML3.1*

*NNC **29** 14:23:59.2±26.0,34.64N×72.60E,mpv3.2,Error ellipse: s-maj=296.0km s-min=241.5km az=79.0*

ISC 29 14:23:52.3±1.4**,34.4N**±0.1×**73.6E**±0.2**,h33^{km},n5,** σ**1^{s}22**/8**, 1C,Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLH	**Dalhousie**	2.69	133	*e*S	**S**	**14 25 09.0**	**+3.1**
KLP	**Kalpa**	4.82	125	*e*P	**P**	**14 25 05.0**	**+0.5**
KLP				*e*S	**S**	**14 25 59.0**	**-0.8**
KLP				AML	AML	14 26 22.5	
	comp=N,26nm,0.1s						
KLP				AML	AML	14 26 27.7	
	comp=E,44nm,0.7s						
KHET	**Khetri**	6.56	163	*e*S	**S**	**14 26 36.6**	**-7.0**
KUDL	**Kundal**	6.69	158	*e*P	**P**	**14 25 29.9**	**-0.9**
KUDL				*e*S	**S**	**14 26 40.6**	**-6.0**
KK31	**Karatay Array**	9.04	345	P	**P**	**14 26 05.0**	**+1.6**
	comp=E,0.4nm,0.3s,baz=170,slow=12,SNR=7.8						
KK31				⇑S	**S**	**14 27 44.0**	**-1.1**
	comp=E,1.1nm,0.6s,baz=168,slow=23,SNR=3.7						

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*IDC **29** 14:45:23.2±0.9,2.70N×95.98E,mb4.3/13,mb1 4.3/14, mb1mx4.2/22,mbtmp4.2/14,ML3.8/1,MS3.6/5,Ms1 3.6/5, ms1mx3.3/14,Error ellipse: s-maj=41.6km s-min=14.9km az=47.0*

*BJI **29** 14:45:27.5,2.96N×96.40E,h34^{km},mB4.9,mb4.7,Ms3.6*

*MOS **29** 14:45:27.0±1.1,2.88N×96.10E,h33^{km},mb4.6/8,Error ellipse: s-maj=18.8km s-min=8.5km az=114.2*

*NEIC **29** 14:45:30.5±0.5,2.83N×96.17E,mb4.4/10,Error ellipse: s-maj=20.7km s-min=6.3km az=47.0*

ISC 29 14:45:28.2±0.6, 2.81N±0.10×96.12E±0.07, h47^{km}, h47^{km}±3.6^{km}:pP-P, n46, σ0^{s}88/46, mb4.4/28, MS3.6/4, 2C, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	2.80	90	Pn	P	14 46 12.1	+0.5
	12nm,0.3s,baz=299,slow=7.4,SNR=41						
PSI				Sn	S	14 46 44.9	+0.4
	16nm,0.3s,baz=252,slow=20,SNR=5.3						
PSI				LR	LR	14 47 24.1	
	comp=Z,648nm,19.1s,baz=194,slow=41						
PSI	Prapat	2.80	90	Pn	P	14 46 12.1	+0.4
PSI				Sn	S	14 46 44.9	+0.4
PSI				LR	LR	14 47 24.1	
JIRN	Jiri	26.47	340	eP	P	14 51 03.7	+0.8
	15nm,0.7s,mb4.7						
PKI	Pulchoki	26.66	338	eP	P	14 51 05.1	+0.3
GUN	Gumba	26.80	340	eP	P	14 51 06.4	+0.4
	21nm,0.6s,mb4.9						
KKN	Kakani	26.91	338	eP	P	14 51 07.2	+0.2
	18nm,0.9s,mb4.6						
KKN	Kakani	26.91	338	eP	P	14 51 07.2	+0.2
KKN				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.3						
LSA	Lhasa	27.15	350	P	P	14 51 09.0	-0.2
LSA	Lhasa	27.15	350	eP	P	14 51 09.2	0.0
	comp=Z,4.5nm,0.4s,mb4.3						
LSA	Lhasa	27.15	350	eP	P	14 51 09.2	0.0
LSA				pmax	pmax		
	comp=Z,4.0nm,0.4s,mb4.3						
GKN	Gorkha	27.34	337	eP	P	14 51 10.9	-0.1
	comp=Z,7.2nm,0.3s,mb4.7						
KOLN	Koldanda	27.55	335	eP	P	14 51 13.6	+0.7
	comp=Z,17nm,0.8s,mb4.7						
FITZ	Fitzroy Crossi	35.75	127	P	P	14 52 23.1	-1.6
	comp=Z,2.6nm,0.7s,mb4.3,baz=302,slow=9.5,SNR=4.1						
GTA	Gaotai	36.58	5	eP	P	14 52 31.3	-0.2
GTA				AP	pP	14 52 41.5	-2.7
GTA				XP	sP	14 52 45.8	-4.4
GTA				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.8						
WRA	Warramunga Arr	43.80	123	P	P	14 53 31.9	+0.3
	comp=Z,1.8nm,0.5s,mb4.1,baz=301,slow=9.1,SNR=34						
WRAB	Tennant Creek	43.81	123	eP	P	14 53 32.1	+0.5
	comp=Z,9.7nm,1.0s,mb4.5						
WRAB				epP	pP	14 53 45.1	+0.7
WRAB	Tennant Creek	43.81	123	eP	P	14 53 32.1	+0.5
WRAB				e*PP	pP	14 53 45.2	+0.8
WRAB				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.5						
WB2	Warramunga Arr	43.81	123	eP	P	14 53 31.8	+0.2
AAK	Ala-Archa	44.10	337	eP	P	14 53 34.7	+1.1
	comp=Z,2.3nm,0.6s,mb4.1						
AAK				epP	pP	14 53 48.8	+2.3
AAK	Ala-Archa	44.10	337	eP	P	14 53 34.7	+1.1
AAK				e*PP	pP	14 53 48.8	+2.3
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.0						
MKAR	Makanchi Array	45.43	347	P	P	14 53 44.2	+0.1
	comp=Z,5.8nm,0.3s,mb4.8,baz=160,slow=9.1,SNR=207						
MKAR				LR	LR	15 14 08.9	
	comp=Z,53nm,20.7s,MS3.5,baz=150,slow=38						
SONM	Songino Array	45.72	10	P	P	14 53 46.2	-0.3
	comp=Z,3.2nm,0.5s,mb4.5,baz=189,slow=9.3,SNR=32						
SONM				PcP	PcP	14 55 25.1	+0.9
	comp=Z,1.9nm,0.6s,baz=189,slow=3.5,SNR=8.9						
SONM				LR	LR	15 15 08.0	
	comp=Z,102nm,20.2s,MS3.8,baz=192,slow=39						
KKAR	Karatay Array	46.14	334	i P	P	14 53 51.1	+1.2
KURK	Kurchatov	49.97	346	P	P	14 54 19.9	+0.4
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
MJAR	Matsushiro Arr	51.26	44	LR	LR	15 19 46.0	
	comp=Z,52nm,19.1s,MS3.6,baz=320,slow=40						
ZAL	Zalesovo	51.80	352	P	P	14 54 33.3	0.0
	comp=Z,3.4nm,0.6s,mb4.5,baz=302,slow=6.2,SNR=18						
NVS	Novosibirsk	52.92	351	eP	P	14 54 40.1	-1.6
VOSK	Vostochnaya	53.94	341	P	P	14 54 48.9	-0.4
VOSK				pmax	pmax		
	comp=Z,1.0nm,0.5s,mb4.0						
BVA0	Borovoye Array	54.38	341	i P	P	14 54 51.7	-0.8
BVA0				pmax	pmax		
	comp=Z,1.0nm,1.0s,mb3.7						
BVAR	Borovoye Array	54.38	341	P	P	14 54 52.1	-0.4
	comp=Z,3.4nm,0.6s,mb4.5,baz=140,slow=9.2,SNR=34						
BRVK	Borovoye	54.45	341	eP	P	14 54 52.4	-0.6
	comp=Z,1.6nm,0.4s,mb4.3						
BRVK				epP	pP	14 55 05.2	-1.0
BRVK	Borovoye	54.45	341	eP	P	14 54 52.4	-0.6
BRVK				e*PP	pP	14 55 05.2	-1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.4s,mb4.4						
CHKZ	Chkalovo	54.86	342	eP	P	14 54 56.0	0.0
	comp=Z,9.5nm,0.6s,mb5.0						
CHKZ				epP	pP	14 55 10.5	+1.3
CHKZ	Chkalovo	54.86	342	eP	P	14 54 56.0	0.0
CHKZ				e*PP	pP	14 55 10.5	+1.2
CHKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb5.0						
STKA	Stephens Creek	55.23	132	P	P	14 54 59.1	+0.1
	comp=Z,1.1nm,0.6s,mb4.1,baz=280,slow=6.1,SNR=4.4						
AB31	Akbulak array	55.59	332	eP	P	14 55 01.5	+0.2
AKTO	Aktyubinsk	57.31	332	P	P	14 55 13.6	0.0
	comp=Z,0.8nm,0.4s,mb4.1,baz=123,slow=9.6,SNR=5.3						
KMBO	Kilima Mbogo	58.98	267	LR	LR	15 17 42.6	
	comp=Z,62nm,18.3s,MS3.8,baz=94,slow=33						
ARU	Arti	61.29	337	i P	P	14 55 40.7	-0.3
YAK	Yakutsk	64.19	17	⇑eP	P	14 55 57.7	-2.4
BRTR	Keskin Array B	67.23	312	P	P	14 56 18.0	-1.9
	comp=Z,0.4nm,0.4s,mb3.9,baz=135,slow=8.7,SNR=4.3						
TIXI	Tiksi	71.80	10	⇑iP	P	14 56 45.5	-1.8
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s,mb4.2						
AKASG	Malin Array Be	73.33	322	P	P	14 56 56.6	-0.1
	comp=Z,0.3nm,0.3s,mb3.6,baz=90,slow=4.8,SNR=6.3						
FINES	FINESS Array B	78.08	333	P	P	14 57 24.5	+1.1
	comp=Z,2.2nm,0.6s,mb4.3,baz=90,slow=3.8,SNR=9.5						
ARCES	ARCESS Array B	80.66	340	P	P	14 57 38.6	+1.3
	comp=Z,2.0nm,0.7s,mb4.2,baz=91,slow=5.6,SNR=14						
HFS	Hagfors	83.79	330	P	P	14 57 55.6	+2.0
	comp=Z,4.5nm,1.0s,mb4.5,baz=76,slow=5.9,SNR=3.1						

ATH 29 15:01:34.9, 35.76N×29.66E, h10^{km}, MD3.4/3

CSEM 29 15:01:35.0±0.2, 35.91N×29.80E, h30^{km}, MD3.1, Error ellipse: s-maj=5.5km s-min=3.1km az=77.0

ISK 29 15:01:36.4, 35.92N×29.67E, h32^{km}, MD3.1

HLW 29 15:01:44.9, 35.26N×29.74E, h26^{km}, Mb3.4

ISC 29 15:01:34.1±0.5, 35.79N±0.03×29.78E±0.06, h10^{km}, n21, σ1^{s}22/31, 1D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.40	336	ePB	Pb	15 01 42.7	-0.1
AKAS	Kas	0.47	342	i P	Pg	15 01 42.5	-1.1
AKAS				i S	Sg	15 01 49.5	-0.6
ELL	Elmali	0.96	6	PG	Pg	15 01 52.4	-1.1
FETY	Fethiye	1.02	326	PG	Pg	15 01 51.8	-2.7
FETY				SG	Sg	15 02 04.0	-4.2
DALT	Dalyan (Mudla)	1.35	317	ePN	Pn	15 01 57.6	-1.5
DALT				eSN	Sn	15 02 12.7	-4.4
ARG	Arkhangelos	1.41	288	ePB	Pb	15 02 00.0	-0.1
GOLH	Golhisar	1.46	353	i P	Pn	15 02 00.2	-0.4
GOLH				i S	Sb	15 02 19.4	0.0
YER	Yerkesik	1.81	319	ePN	Pn	15 02 03.6	-2.1
DNZL	Cakiroluk	1.99	343	i P	Pn	15 02 10.4	+2.1
DNZL				i S	Sn	15 02 34.4	+1.0
DAT	Datca	2.02	298	ePN	Pn	15 02 07.2	-1.4
KARP	Karpathos	2.15	264	ePN	Pn	15 02 11.5	+1.0
BDRM	Kayabasi	2.28	305	i P	Pn	15 02 13.8	+1.4
BDRM				i S	Sn	15 02 44.6	+3.8
TKTP	Tekketepe	2.29	11	i P	Pn	15 02 13.6	+1.1
TKTP				i S	Sn	15 02 47.1	+6.1
AYDN	Tasoluk	2.42	321	i P	Pn	15 02 16.8	+2.5
AYDN				i S	Sn	15 02 45.9	+1.7
ERMK	Ermenek	2.67	70	i P	Pn	15 02 25.6	+7.6
ERMK				i S	Sn	15 02 51.0	+0.3
HMAT	Matruh	5.19	206	P	Pn	15 02 54.0	+0.2
SLUM		5.73	223	P	Pn	15 03 02.0	+0.6
SLUM				S	Sn	15 03 58.8	-9.3
SLUM		5.73	223	P	Pn	15 03 02.0	+0.6
AMAG	Maghara	5.88	150	P	Pn	15 03 03.7	+0.3
SWA1		7.36	209	P	Pn	15 03 23.9	-0.3
HFRF	Wahat Farafira	8.70	189	⇓P	P	15 03 41.9	-1.1

MAN 29 15:21:08.6, 12.51N×127.67E, h227^{km}, mb3.7, ML2.4, MS1.9

ISC 29 15:21:41.6±2.5, 11.09N±0.07×126.0E±0.2, h33^{km}, n5, σ0^{s}66/8, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.72	315	eP	P	15 21 54.9	-0.3
BESP				eS	S	15 22 05.3	+0.2
OCLP	Ormoc	1.32	268	eP	P	15 22 03.9	0.0
SCPH	Surigao	1.38	199	⇓eP	P	15 22 05.5	+0.8
MSLP	Maasin	1.44	229	eP	P	15 22 04.4	-1.1
MSLP				eS	S	15 22 23.7	+0.2
CNP	Catarman	1.89	318	eP	P	15 21 59.3	-13
CNP				eS	S	15 22 39.1	+4.1

MAN 29 15:26:48.7, 8.48N×123.23E, h32^{km}, mb3.9, ML2.6, MS2.3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	Dipolog City	0.16	48	⇓iP	Pn	15 26 56.2	+1.6
DCPH				i S	Sn	15 27 01.0	+2.6
PAGZ	Pagadian	0.64	167	eP	Pb	15 27 01.9	+0.4
PAGZ				eS	Sb	15 27 10.2	0.0
IPIL	Ipil	0.95	224	eP	Pn	15 27 05.7	-0.2
IPIL				eS	Sn	15 27 17.8	-0.6

SKHL 29 16:11:11.9±0.5, 44.39N×147.54E, h80^{km}±4^{km}, mb5.5/2

MOS 29 16:11:12.8±1.3, 44.44N×147.32E, h111^{km}, mb4.3/3, Error ellipse: s-maj=18.1km s-min=11.8km az=64.0

NEIC 29 16:11:13.7±0.4, 44.52N×147.36E, mb4.3/4, Error ellipse: s-maj=12.7km s-min=6.6km az=132.0

IDC 29 16:11:14.2±0.8, 44.52N×147.28E, h105^{km}±6^{km}, mb3.6/10, mb1 3.9/14, mb1mx3.7/26, mbtmp4.1/14, Error ellipse: s-maj=25.7km s-min=13.0km az=139.0

JMA 29 16:11:15.4±0.5, 44.37N×147.33E, h83^{km}, M4.3

ISC 29 16:11:12.0±0.5, 44.46N±0.05×147.51E±0.08, h97^{km}±5^{km}, h101^{km}±1.5^{km}:pP-P, n43, σ1^{s}00/50, mb4.0/13, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.82	18	i P	P	16 11 29.8	-0.7
KUR				AMB	AMB	16 11 30.2	
	570nm,0.4s						
KUR				AMB	AMB	16 11 30.2	
	410nm,0.4s						
KUR				AMB	AMB	16 11 30.2	
	2μm,0.4s						
KUR				eS	S	16 11 43.6	-0.6
YUK	Yuzh-Kuril'sk	1.26	251	i P	P	16 11 35.0	-0.6
YUK				AMB	AMB	16 11 35.3	
	7μm,0.2s						
YUK				AMB	AMB	16 11 35.5	
	1μm,0.3s						
YUK				AMB	AMB	16 11 35.5	
	3μm,0.3s						
YUK				i S	S	16 11 52.0	-1.2
YUK				A		16 11 53.5	
	5μm,0.5s						
YUK				A		16 11 53.5	
	3μm,0.5s						
YUK				A		16 11 53.6	
	7μm,0.6s						
YUK	Yuzh-Kuril'sk	1.26	251	⇑iPN	P	16 11 35.0	-0.6
YUK				i S	S	16 11 52.0	-1.2
YUK				pmax	pmax		
	comp=Z,7μm,0.2s						
YUK				pmax	pmax		
	comp=Z,3μm,0.3s						
YUK				pmax	pmax		
	comp=E,1μm,0.4s						
YUK				smax			
	comp=N,5μm,0.5s						
YUK				smax			
	comp=E,3μm,0.5s						
YUK				smax			
	comp=N,7μm,0.6s						
NEM2	Nemuro 2	1.68	230	P	P	16 11 41.4	+0.6
NEM2				eS	S	16 12 01.2	-0.8
JRA	Rausu	1.79	254	P	P	16 11 43.0	+0.8
JNK	Nakash	2.19	248	P	P	16 11 48.8	+1.2
JAK	Akkeshi	2.51	235	P	P	16 11 52.4	+0.5
JAK				eS	S	16 12 20.7	-1.0
JTKR	Abashiri--Toko	2.63	261	P	P	16 11 53.9	+0.2
JAR	Ashorobuto	2.94	248	P	P	16 11 59.1	+1.2
JMP	Maruseppu	3.02	263	P	P	16 12 00.0	+1.1
JOB	Onbets	3.08	241	P	P	16 12 00.7	+0.8
JKK2	Kamakawa 2	3.48	262	P	P	16 12 05.8	+0.6
JCH	Churui	3.53	240	P	P	16 12 06.6	+0.6
JCH				eS	S	16 12 45.3	-1.6
ASAJ	Asahikawa	3.54	266	P	P	16 12 06.2	+0.1
	comp=N,14nm,0.3s,baz=108,slow=7.7,SNR=42						
ASAJ	Asahikawa	3.54	266	PN	P	16 12 06.3	+0.2
ASAJ				pmax	pmax		
	comp=Z,14nm,0.3s						
JFR	Furan	3.79	252	P	P	16 12 10.6	+1.2
JNBK	Urakawa-nobuka	4.09	240	P	P	16 12 13.0	-0.7
YSS	Yuzh-Sakhalins	4.16	309	ePn	P	16 12 14.1	-0.5
YSS				eSn	S	16 13 02.4	0.0
JEW	Eniwo	4.68	252	P	P	16 12 23.5	+1.7
MAJO	Matsushiro	10.61	225	ePn	P	16 13 42.2	0.0
MJAR	Matsushiro Arr	10.61	225	P	P	16 13 40.5	-1.7
	comp=Z,0.9nm,0.3s,baz=28,slow=14,SNR=8.7						
JNU	Nakatsue	17.17	234	P	P	16 15 08.1	+1.0
	comp=Z,0.6nm,0.3s,baz=106,slow=19,SNR=5.9						
FX1	Attu Island--F	18.84	54	P	P	16 15 28.3	+1.7
	comp=Z,2.1nm,0.3s,baz=320,slow=7.7,SNR=4.5						
FX1	Attu Island--F	18.84	54	P	P	16 15 28.3	+1.7
FX1				pmax	pmax		
	comp=Z,2.0nm,0.3s						
YAK	Yakutsk	20.46	336	eP	P	16 15 45.6	+2.2
	comp=Z,7.6nm,0.7s						
YAK	Yakutsk	20.46	336	eP	P	16 15 45.6	+2.1
YAK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
IMA2	Indian Mountai	37.95	35	eP	P	16 18 20.7	-0.5
IMA2				epP	pP	16 18 43.0	-0.9
KDAK	Kodiak Island	38.58	48	P	P	16 18 26.6	+0.1
	comp=Z,6.2nm,0.8s,mb4.5,baz=295,slow=9.1,SNR=4.1						
ILAR	Eielson Array	40.77	37	P	P	16 18 44.9	+0.4
	comp=Z,1.2nm,0.7s,mb3.9,baz=282,slow=10,SNR=19						
ILAR				pP	pP	16 19 09.0	+1.6
	comp=Z,0.8nm,0.9s,baz=280,slow=9.3,SNR=3.2						
MKAR	Makanchi Array	44.49	297	P	P	16 19 12.9	-2.1
	comp=Z,0.3nm,0.5s,mb3.2,baz=84,slow=6.0,SNR=3.3						
INK	Inuvik	45.66	31	P	P	16 19 22.9	-1.1
	comp=Z,1.1nm,0.3s,mb4.0,baz=312,slow=3.3,SNR=13						
RES	Resolute Bay	54.22	17	eP	P	16 20 27.5	-1.7
	comp=Z,1.1nm,0.4s,mb4.2						
RES	Resolute Bay	54.22	17	eP	P	16 20 27.5	-1.7
RES				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb4.2						
YKA	Yellowknife Ar	55.07	34	P	P	16 20 34.7	-0.9
	comp=Z,2.5nm,0.9s,mb4.3,baz=299,slow=6.5,SNR=6.1						
YKA	Yellowknife Ar	55.07	34	P	P	16 20 34.7	-0.9
FINES	FINESS Array B	64.36	333	P	P	16 21 37.8	-1.2
	comp=Z,3.2nm,0.9s,mb4.1,baz=27,slow=6.2,SNR=4.0						
WRAB	Tennant Creek	65.19	194	eP	P	16 21 44.7	-0.5
	comp=Z,3.8nm,0.8s,mb4.3						
WRAB	Tennant Creek	65.19	194	eP	P	16 21 44.7	-0.5
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.3						
WRA	Warramunga Arr	65.21	194	P	P	16 21 44.4	-0.9
	comp=Z,2.6nm,0.7s,mb4.2,baz=9.1,slow=6.7,SNR=30						
NVAR	Mina Array Bea	66.99	58	P	P	16 21 57.1	+0.8
	comp=Z,0.2nm,0.4s,mb3.3,baz=289,slow=6.6,SNR=4.3						
NVAR				pP	pP	16 22 23.0	+2.1
	comp=Z,0.3nm,0.6s,baz=300,slow=7.3,SNR=2.7						
PDAR	Pinedale Array	69.26	50	P	P	16 22 10.6	+0.4
	comp=Z,0.5nm,0.6s,mb3.5,baz=304,slow=3.3,SNR=4.3						
PDAR				pP	pP	16 22 36.8	+1.7
	comp=Z,0.9nm,0.8s,baz=276,slow=2.1,SNR=6.6						
MBWA	Marble Bar	70.06	208	eP	P	16 22 15.5	0.0
	comp=Z,14nm,1.2s,mb4.7						
TXAR	Lajitas Array	82.05	57	P	P	16 23 23.6	+0.9
	comp=Z,0.7nm,0.2s,mb4.1,baz=288,slow=2.9,SNR=5.8						
TXAR				pP	pP	16 23 49.8	+1.5
	comp=Z,0.2nm,0.4s,baz=301,slow=5.3,SNR=3.6						

SKHL 29 16:16:26.7±1.6, 54.10N×142.30E, h10^{km}, mb4.1/2, 1D, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKH	Okha	0.67	145	⇓iPg	Pg	16 16 39.3	-0.8
OKH				AMB	AMB	16 16 39.9	
	50nm,0.1s						
OKH				i Sg	Sg	16 16 48.1	-1.0
OKH				A		16 16 49.0	
	500nm,0.5s						
OKH				A		16 16 49.0	
	900nm,0.5s						
NKL	Nikolayevsk	1.35	226	ePg	Pg	16 16 53.5	-0.3
NKL				AMB	AMB	16 16 54.7	
	47nm,0.3s						
NKL				erx	rx	16 16 57.0	
NKL				eSg	Sg	16 17 12.2	+0.3
NKL				A		16 17 14.0	
	190nm,0.3s						
EKMR	Ekimchan	5.67	263	eSg	Sg	16 19 36.9	+1.6
EKMR				A		16 19 44.5	
	4.0nm,0.5s						

THR 29 16:20:55.0±0.6, 36.68N×49.59E, h25^{km}±8^{km}, ML2.7

CSEM 29 16:20:56.1±0.1, 36.57N×49.58E, h20^{km}, ML3.5, Error ellipse: s-maj=3.8km s-min=1.4km az=28.0

TEH 29 16:20:57.6, 36.59N×49.56E, h11^{km}, Mn3.5

ISC 29 16:20:56.0±0.6, 36.50N±0.09×49.49E±0.08, h11^{km}, n24, σ1^{s}29/25, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IRAZ	Razeghan	1.15	162	Pn	Pn	16 21 24.5	+6.5
IMHD	Mahdasht	1.25	130	Pn	Pn	16 21 19.4	0.0
IMHD	Mahdasht	1.25	130	Lg		16 21 37.4	
THKV	Tehran--Karaj	1.27	117	ePg	Pg	16 21 18.9	-2.4
CHTH	Charan	1.45	114	ePg	Pg	16 21 21.4	-3.5
IAFJ	Afjeh	1.91	109	Pn	Pn	16 21 29.3	+0.5
IAFJ				Sn	Sn	16 21 53.5	+0.5
ASAO	Ashtian	2.00	167	ePg	Pg	16 21 33.3	-2.6
ASAO				AML	AML	16 22 07.3	
	comp=N,37nm,0.2s						
IQOM	Qom	2.10	142	Pn	Pn	16 21 33.9	+2.4
IQOM	Qom	2.10	142	Lg		16 22 03.5	
DAMV	Damavand	2.19	113	ePg	Pg	16 21 33.7	-6.0
DAMV				eSg	Sg	16 22 02.5	-6.3
IPRN	Paran-Amol	2.23	96	Pn	Pn	16 21 33.5	0.0
IDMV	Damavand	2.26	113	Pn	Pn	16 21 34.7	+0.9
IDMV				Sn	Sn	16 22 01.8	0.0
IVRN	Varamin	2.36	129	Pn	Pn	16 21 37.0	+1.7
IBST	Bostanabad	2.40	301	Pn	Pn	16 21 36.4	+0.6
IHSH	Hashtroud	2.53	316	Pn	Pn	16 21 30.5	-7.2
GRMI	Germi	2.63	332	ePn	Pn	16 21 36.6	-2.5
IFIR	Firoozkooh	2.78	107	Pn	Pn	16 21 40.8	-0.4
IFIR	Firoozkooh	2.78	107	Lg		16 22 23.5	
IAZR	Azarshahr	3.04	294	Pn	Pn	16 21 45.4	+0.4
ISFB	Sefidab	3.10	133	Pn	Pn	16 21 46.7	+0.9
ISFB				Sn	Sn	16 22 21.9	-1.3
IGLO	Galoogah	3.23	92	Pn	Pn	16 21 50.7	+3.0
IKIA	Kiasar	3.40	94	Pn	Pn	16 21 49.5	-0.5
IMRD	Marand	3.73	307	Pn	Pn	16 21 55.0	+0.2
NASN	Na'in	4.59	143	ePn	Pn	16 22 06.7	-0.4
NASN				AML	AML	16 23 33.2	
	comp=N,6.9nm,0.5s						

NEIC 29 16:55:00.9, 33.86N×26.14E, h12^{km}, MD3.4(ATH), After ATH.

CSEM 29 16:55:00.9, 33.86N×26.14E, h12^{km}, MD3.5/4, After ATH

ATH 29 16:55:00.9, 33.86N×26.14E, h12^{km}±3^{km}, MD3.5/4, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	Khrisi	1.08	340	ePG	Pg	16 55 21.0	-1.5
XRY				eSB	Sb	16 55 36.0	+1.2
NPS	Neapolis	1.47	343	ePG	Pg	16 55 28.2	-2.0
KARP	Karpathos	1.88	26	ePN	Pn	16 55 35.0	+1.7
VAM	Vamos	2.22	315	ePN	Pn	16 55 40.0	+1.9
SANT	Santorini	2.57	348	ePn	Pn	16 55 42.1	-0.9

LDG 29 16:57:28.9±0.1, 49.33N×6.82E, h1^{km}, Md2.8/1, Ml2.5/11, Error ellipse: s-maj=1.7km s-min=1.3km az=61.0, Suspected Mining induced.

NEIC 29 16:57:28.9, 49.33N×6.82E, h1^{km}, ML2.5(LDG), ML2.1(STR), After LDG.

CSEM 29 16:57:28.9±0.1, 49.33N×6.82E, h2^{km}, ML2.5/10, Error ellipse: s-maj=1.6km s-min=1.1km az=61.0

BGR 29 16:57:29.0±0.5, 49.33N×6.78E, h1^{km}, ML1.7/3, Error ellipse: s-maj=7.8km s-min=4.4km az=37.0

BNS 29 16:57:33.4±0.9, 49.47N×6.97E, h1^{km}, ML1.5

ISC 29 16:57:27.5±0.3, 49.31N±0.01×6.76E±0.03, n27, σ0^{s}87/49, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUP	Ruppelstein	0.44	26	Pg	Pg	16 57 36.9	+0.6
RUP				Sg	Sg	16 57 43.9	+1.8
WLF	Walferdange	0.54	312	ePg	Pg	16 57 39.9	+1.7
	SNR=2.4						
WLF				eSg	Sg	16 57 45.2	-0.1
LANF	Langenberg	0.76	115	Pg	Pg	16 57 42.6	0.0
CDF	Champ du Feu	0.96	159	ePn	Pn	16 57 47.8	-0.2
CDF				eSg	Sg	16 57 58.9	-0.4
	18nm,0.2s						
CDF	Champ du Feu	0.96	159	ePg	Pg	16 57 46.9	+0.3
CDF				ePn	Pn	16 57 47.8	-0.2
CDF				eSg	Sg	16 57 58.9	-0.4
CDF	Champ du Feu	0.96	159	ePn	Pn	16 57 47.8	-0.2
CDF				eSg	Sg	16 57 58.9	-0.4
	8.9nm,0.2s						
BGG	Burgeitz	0.97	22	ePg	Pg	16 57 48.3	+1.4
BGG				eSg	Sg	16 57 58.6	-1.3
	16nm,0.4s						
WLS	Welschbruch	0.98	156	Pg	Pg	16 57 46.8	-0.1
HILG	Hillesheim	0.99	357	eSg	Sg	16 58 01.4	+1.1
RFYF	Reffroy	1.09	232	ePg	Pg	16 57 50.5	+1.3
	baz=56						
RFYF				eSg	Sg	16 58 04.6	+0.9
	17nm,0.2s						
ECH	Echery	1.12	166	Pg	Pg	16 57 50.6	+0.7
ECH				Sg	Sg	16 58 05.7	+0.8
THEF	They Montfort	1.20	206	Pg	Pg	16 57 51.7	+0.3
THEF				Sg	Sg	16 58 08.6	+1.3
STB	Steinbach	1.29	2	eSg	Sg	16 58 10.2	-0.2
HAU	Haudompre	1.33	192	ePg	Pg	16 57 54.3	+0.3
HAU				eSg	Sg	16 58 11.9	+0.1
	13nm,0.3s						
KLL	Kalltalsperre	1.37	348	eSg	Sg	16 58 12.4	-0.8
MEZF	Maizieres J'vi	1.39	235	ePn	Pn	16 57 54.2	+0.1
	baz=58						
MEZF				eSg	Sg	16 58 14.0	+0.4
	4.4nm,0.3s						
BFO	Black Forest	1.42	133	ePg	Pg	16 57 55.9	0.0
	SNR=1.6						
BFO				eSg	Sg	16 58 14.2	-0.7
TNS	Taunus Mts	1.43	49	ePg	Pg	16 57 55.8	-0.1
	SNR=2.1						
TNS				eSg	Sg	16 58 13.4	-1.5
MOF	Molkenrain	1.48	170	Pn	Pn	16 57 55.5	+0.1
MOF				Pg	Pg	16 57 57.2	+0.2
MOF				Sg	Sg	16 58 17.1	+0.5
MOF	Molkenrain	1.48	170	Pg	Pg	16 57 57.2	+0.2
GIVF	Givet	1.49	303	ePg	Pg	16 57 56.7	-0.5
GIVF				eSg	Sg	16 58 16.8	-0.3
	6.3nm,0.3s						
HINF	Hinteralfeld	1.49	178	ePg	Pg	16 57 57.1	-0.2
HINF				eSg	Sg	16 58 16.7	-0.5
	17nm,0.2s						
SFTF	Sexfontaines	1.59	227	ePn	Pn	16 57 56.8	-0.2
SFTF				eSg	Sg	16 58 20.1	-0.2
	6.2nm,0.3s						
BAIF	Baives	1.82	295	ePg	Pg	16 58 03.2	-0.7
BAIF				eSg	Sg	16 58 27.4	-0.7
	5.8nm,0.4s						
CABF	La Chapelle	2.73	190	ePn	Pn	16 58 12.9	-0.5

CABF				*e*Sg	**Sg**	**16 58 55.4**	**-3.1**
	2.0nm,0.3s						
LOR	**Lormes**	**2.81**	**225**	*e*Pn	**Pn**	**16 58 13.6**	**-0.9**
	baz=44						
LOR				*e*Sg	**Sg**	**16 58 58.4**	**-2.8**
	3.1nm,0.3s						
SSF	**Saint Saulge**	**3.13**	**225**	*e*Pn	**Pn**	**16 58 17.8**	**-1.2**

IDC 29 17:18:35.4±1.7**,0.03S**×**129.46E,mb3.7**/3**,mb1 4.1**/4**, mb1mx3.8**/15**,mbtmp3.9**/4**,ML4.0**/1**,Error ellipse: s-maj=85.1km s-min=24.5km az=70.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.35**	**192**	P	P	17 22 51.3	-1.9
	0.3nm,0.3s,baz=27,slow=16,SNR=6.3						
WRA	**Warramunga Arr**	**20.36**	**167**	P	P	17 23 13.8	-2.6
	3.4nm,0.8s,baz=347,slow=12,SNR=24						
WB2	**Warramunga Arr**	**20.36**	**167**	*e*P	P	17 23 13.4	-3.0
STKA	**Stephens Creek**	**33.69**	**161**	P	P	17 25 18.2	-2.2
	1.8nm,0.7s,baz=342,slow=6.3,SNR=6.9						
MKAR	**Makanchi Array**	**62.17**	**325**	P	P	17 28 58.6	-2.3
	0.3nm,0.7s,baz=126,slow=6.1,SNR=3.4						

CASC 29 17:19:53.8±2.5**,11.77N**×**88.49W,h3**^{km}±24^{km}**,MD3.9, ML3.2,4C-1D,Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**1.66**	**7**	⇑*e*P	Pn	17 20 34.6	+11
VSM				*e*S	Sb	17 20 57.8	+12
BLLM	**Bellamira**	**1.68**	**8**	*e*P	Pn	17 20 34.4	+10
BLLM				*e*S	Sb	17 20 59.2	+13
CRIN	**San Cristobal**	**1.68**	**57**	*e*P	Pn	17 20 24.1	-0.3
LEON	**Leon**	**1.69**	**68**	*e*P	Pn	17 20 25.1	+0.7
TEL3	**Telica 3**	**1.79**	**64**	*e*P	Pn	17 20 24.6	-1.3
CNGN	**Cerro Negro**	**1.90**	**67**	*e*P	Pn	17 20 26.2	-1.2
CNGN				*e*S	Sn	17 20 52.2	0.0
COPN	**Copaltepe**	**1.90**	**78**	*e*P	Pn	17 20 28.2	+0.7
COPN				*e*S	Sn	17 20 53.2	+0.9
LFRS	**El Faro**	**1.92**	**343**	⇑*e*P	Pn	17 20 39.9	+12
LFRS				*e*S	Sn	17 21 05.3	+12
LCBS	**La Ceiba**	**1.93**	**346**	*e*P	Pn	17 20 39.6	+12
LCBS				*e*S	Sn	17 21 04.7	+12
MOMJ	**Momotombo**	**2.01**	**71**	*e*P	Pn	17 20 27.3	-1.7
LBRS	**Las Brisas**	**2.03**	**345**	*e*P	Pn	17 20 40.6	+11
LBRS				*e*S	Sn	17 21 07.7	+12
BOQS	**Boqueron**	**2.10**	**339**	*e*P	Pn	17 20 43.1	+13
BOQS				*e*S	Sn	17 21 12.5	+15
MGAN	**Managua**	**2.23**	**80**	*i*	Pn	17 21 06.9	+35
	comp=E,184nm,0.3s						
SNJE	**San Jose**	**2.35**	**333**	⇑*e*P	Pn	17 20 45.5	+12
SNJE				*e*S	Sn	17 21 17.6	+14
RTR	**El Retiro**	**2.39**	**332**	⇑*e*P	Pn	17 20 46.8	+12
RTR				*e*S	Sn	17 21 16.6	+12
IXG	**Ixpaco**	**3.06**	**321**	⇓*e*P	Pn	17 20 43.2	-0.8
IXG				*e*S	Sn	17 21 21.7	0.0
TP2	**Tecpan 2**	**3.88**	**321**	*e*P	Pn	17 20 55.2	-0.4
TP2				*e*S	Sn	17 21 42.2	-0.1

IDC 29 18:02:15.2±6.0**,53.65N**×**170.05W,h291**^{km}±53^{km}**, mb2.8**/3**,mb1 3.1**/5**,mb1mx2.9**/23**,mbtmp3.6**/5**,Error ellipse: s-maj=65.1km s-min=28.9km az=10.0,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDAK	**Kodiak Island**	**10.68**	**60**	P	P	18 04 41.7	-0.7
	1.9nm,0.3s,baz=291,slow=20,SNR=7.7						
ILAR	**Eielson Array**	**16.15**	**37**	P	P	18 05 44.5	-3.0
	0.3nm,0.3s,baz=230,slow=10.0,SNR=19						
PDAR	**Pinedale Array**	**40.58**	**80**	P	P	18 09 26.8	-1.1
	0.3nm,0.5s,baz=342,slow=4.7,SNR=4.3						
SONM	**Songino Array**	**50.30**	**300**	P	P	18 10 42.3	-1.5
	0.2nm,0.3s,baz=45,slow=4.8,SNR=3.6						
NOA	**NORSAR Array B**	**65.66**	**359**	P	P	18 12 28.2	-1.2
	0.6nm,0.7s,baz=2.0,slow=6.3,SNR=2.5						

IDC 29 18:21:13.9±4.9**,4.73S**×**102.20E,h89**^{km}±40^{km}**,mb3.4**/6**, mb1 3.5**/7**,mb1mx3.4**/15**,mbtmp3.7**/7**,Error ellipse: s-maj=117.3km s-min=19.6km az=54.0,Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**8.17**	**336**	P	P	18 23 08.5	-3.0
	0.2nm,0.3s,baz=167,slow=14,SNR=7.0						
WRA	**Warramunga Arr**	**34.74**	**119**	P	P	18 27 55.9	-1.8
	0.1nm,0.5s,baz=295,slow=12,SNR=3.8						
STKA	**Stephens Creek**	**45.71**	**131**	P	P	18 29 26.0	-2.0
	1.0nm,0.5s,baz=333,slow=15,SNR=3.6						
SONM	**Songino Array**	**52.47**	**4**	P	P	18 30 18.1	-1.7
	0.3nm,0.5s,baz=190,slow=8.5,SNR=4.7						
MKAR	**Makanchi Array**	**54.24**	**343**	P	P	18 30 30.6	-2.3
	0.9nm,0.5s,baz=146,slow=8.6,SNR=15						
ZAL	**Zalesovo**	**60.25**	**348**	P	P	18 31 13.1	-2.0
	0.5nm,0.5s,baz=334,slow=8.0,SNR=3.4						
BVAR	**Borovoye Array**	**63.49**	**339**	P	P	18 31 33.9	-3.0
	0.6nm,0.4s,baz=139,slow=9.8,SNR=5.9						

IDC 29 18:27:14.8±3.2**,20.37S**×**66.09E,mb3.9**/7**,mb1 4.1**/7**, mb1mx3.9**/18**,mbtmp3.9**/7**,MS3.8**/3**,Ms1 3.8**/3**, ms1mx3.5**/19**,Error ellipse: s-maj=107.6km s-min=32.1km az=45.0,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**63.61**	**103**	P	P	18 37 48.0	-2.2
	1.9nm,0.9s,baz=259,slow=5.9,SNR=11						
MKAR	**Makanchi Array**	**68.43**	**12**	P	P	18 38 17.9	-2.6
	1.2nm,0.9s,baz=188,slow=8.6,SNR=8.0						
MKAR				LR	LR	19 05 44.9	
	comp=Z,51nm,18.8s,baz=190,slow=34						
AKTO	**Aktyubinsk**	**70.85**	**355**	P	P	18 38 33.9	-1.5
	1.2nm,0.9s,baz=203,slow=13,SNR=3.5						
BVAR	**Borovoye Array**	**73.17**	**3**	P	P	18 38 46.4	-2.8
	0.8nm,0.8s,baz=169,slow=7.6,SNR=4.6						
DBIC	**Dimbokro**	**74.68**	**283**	LR	LR	19 10 04.4	
	comp=Z,98nm,18.9s,baz=86,slow=34						
ZAL	**Zalesovo**	**75.73**	**11**	P	P	18 39 02.2	-1.7
	0.6nm,0.5s,baz=148,slow=5.1,SNR=5.9						
SONM	**Songino Array**	**76.91**	**27**	P	P	18 39 09.8	-0.8
	1.8nm,1.1s,baz=243,slow=3.2,SNR=5.4						
AKASG	**Malin Array Be**	**77.86**	**337**	P	P	18 39 14.1	-1.6
	0.1nm,0.3s,baz=144,slow=4.8,SNR=7.5						
FINES	**FINESS Array B**	**87.60**	**342**	LR	LR	19 19 21.7	
	comp=Z,45nm,19.8s,baz=30,slow=36						

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*IDC **29** 18:31:55.0±0.7,20.06S×66.46E,mb4.1/11,mb1 4.2/11, mb1mx4.1/19,mbtmp4.1/11,MS3.7/4,Ms1 3.7/4, ms1mx3.5/20,Error ellipse: s-maj=22.5km s-min=19.2km az=18.0*

*NEIC **29** 18:31:56.2±0.4,20.14S×66.39E,h10^{km},mb4.6/7,Error ellipse: s-maj=11.3km s-min=10.5km az=81.0*

ISC 29 18:31:54.5±0.6**,20.1S**±0.1×**66.5E**±0.1**,h10**^{km}**,n29,** σ**0**^{s}**76**/24**,mb4.2**/18**,MS3.7**/4**,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**34.23**	**300**	P	**P**	**18 38 42.7**	**-0.2**
	0.6nm,0.6s,mb3.7,baz=150,slow=8.1,SNR=2.6						
KMBO	**Kilima Mbogo**	**34.23**	**300**	P	**P**	**18 38 42.7**	**-0.2**
LSZ	**Lusaka**	**36.71**	**271**	LR	LR	18 52 23.3	
	comp=Z,181nm,19.9s,MS3.9,baz=304,slow=33						
LBTB	**Lobatse**	**37.94**	**255**	P	**P**	**18 39 14.0**	**-0.2**
	4.2nm,1.1s,mb4.1,baz=78,slow=9.3,SNR=2.7						
ATD	**Arta Tunnel**	**39.10**	**322**	LR	LR	18 52 02.1	
	comp=Z,38nm,21.7s,MS3.2,baz=148,slow=31						
NWAO	**Narrogin (SRO)**	**46.79**	**117**	LR	LR	18 55 31.1	
	comp=Z,157nm,22.0s,MS3.9,baz=271,slow=30						
MAW	**Mawson**	**47.52**	**182**	P	**P**	**18 40 31.9**	**+0.3**
	3.9nm,0.8s,mb4.5,baz=348,slow=10.0,SNR=3.9						
MAW				LR	LR	18 55 29.2	
	comp=Z,87nm,21.4s,MS3.7,baz=240,slow=30						
KOLN	**Koldanda**	**50.42**	**20**	*e*P	**P**	**18 40 55.6**	**+1.1**
GKN	**Gorkha**	**50.98**	**21**	*e*P	**P**	**18 40 59.4**	**+0.7**
KKN	**Kakani**	**51.00**	**22**	*e*P	**P**	**18 41 00.2**	**+1.4**
JIRN	**Jiri**	**51.20**	**23**	*e*P	**P**	**18 41 01.4**	**+1.0**
LSA	**Lhasa**	**54.96**	**26**	*e*P	**P**	**18 41 27.9**	**-0.4**
	8.2nm,1.7s,mb4.5						
FITZ	**Fitzroy Crossi**	**55.71**	**99**	P	**P**	**18 41 33.6**	**-0.3**
	3.6nm,0.8s,mb4.5,baz=246,slow=7.5,SNR=3.5						
AAK	**Ala-Archa**	**62.88**	**7**	*e*P	**P**	**18 42 22.6**	**-0.5**
	1.0nm,0.7s,mb4.0						
GNI	**Garni**	**63.28**	**341**	*e*P	**P**	**18 42 25.6**	**-0.2**
	8.2nm,0.9s,mb4.9						
WRA	**Warramunga Arr**	**63.34**	**103**	P	**P**	**18 42 26.7**	**+0.2**
	2.7nm,0.8s,mb4.4,baz=259,slow=5.9,SNR=18						
WRAB	**Tennant Creek**	**63.35**	**103**	*e*P	**P**	**18 42 26.1**	**-0.4**
	5.5nm,0.8s,mb4.7						
MKAR	**Makanchi Array**	**68.12**	**12**	P	**P**	**18 42 56.4**	**-0.4**
	0.9nm,0.8s,mb3.9,baz=211,slow=7.1,SNR=11						
MKAR	**Makanchi Array**	**68.12**	**12**	P	**P**	**18 42 56.4**	**-0.4**
KURK	**Kurchatov**	**71.34**	**8**	*e*P	**P**	**18 43 15.0**	**-1.4**
	11nm,1.5s,mb4.6						
TORD	**Torodi Ar. Bea**	**71.75**	**292**	P	**P**	**18 43 20.9**	**+1.4**
	1.8nm,1.1s,mb3.9,baz=73,slow=3.1,SNR=3.4						
BVAR	**Borovoye Array**	**72.92**	**2**	P	**P**	**18 43 25.1**	**-0.7**
	1.4nm,0.8s,mb4.0,baz=166,slow=6.1,SNR=8.7						
BRVK	**Borovoye**	**72.95**	**2**	*e*P	**P**	**18 43 24.4**	**-1.5**
	1.0nm,0.7s,mb3.9						
ZAL	**Zalesovo**	**75.43**	**11**	P	**P**	**18 43 39.8**	**-0.4**
	1.4nm,0.7s,mb4.0,baz=259,slow=5.9,SNR=6.9						
ARU	**Arti**	**76.54**	**356**	*e*P	**P**	**18 43 47.0**	**+0.5**
	8.6nm,1.2s,mb4.6						
SONM	**Songino Array**	**76.55**	**26**	P	**P**	**18 43 46.8**	**+0.2**
	1.3nm,0.7s,mb4.0,baz=206,slow=5.8,SNR=6.5						
AKASG	**Malin Array Be**	**77.77**	**337**	P	**P**	**18 43 53.2**	**-0.2**
	1.3nm,0.7s,mb4.0,baz=141,slow=4.9,SNR=4.5						
BILL	**Bilibino**	**112.16**	**24**	*e*PKPdf	PKPdf	18 50 30.9	-1.8
ULM	**Lac du Bonnet**	**146.83**	**339**	PKPbc	PKPbc	18 51 37.8	+1.2
	0.8nm,0.3s,baz=56,slow=4.2,SNR=4.2						

IDC 29 18:36:35.9±1.4**,19.77S**×**66.77E,mb4.0**/7**,mb1 4.1**/7**, mb1mx3.9**/17**,mbtmp4.0**/7**,Error ellipse: s-maj=46.1km s-min=28.6km az=26.0,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**63.13**	**103**	P	P	18 47 05.8	-2.2
	2.1nm,0.8s,baz=260,slow=5.9,SNR=15						
MKAR	**Makanchi Array**	**67.72**	**11**	P	P	18 47 35.2	-2.0
	0.9nm,0.8s,baz=194,slow=5.0,SNR=7.9						
TORD	**Torodi Ar. Bea**	**71.90**	**292**	P	P	18 48 02.7	-0.6
	1.3nm,1.1s,baz=137,slow=2.5,SNR=4.7						
BVAR	**Borovoye Array**	**72.55**	**2**	P	P	18 48 04.2	-2.4
	1.1nm,0.7s,baz=158,slow=8.0,SNR=7.1						
ZAL	**Zalesovo**	**75.03**	**11**	P	P	18 48 19.5	-1.4
	1.3nm,0.8s,baz=274,slow=6.2,SNR=6.7						
SONM	**Songino Array**	**76.10**	**26**	P	P	18 48 26.8	-0.4
	0.7nm,0.8s,baz=220,slow=11,SNR=4.2						
AKASG	**Malin Array Be**	**77.56**	**337**	P	P	18 48 32.1	-3.1
	0.9nm,0.6s,baz=146,slow=5.1,SNR=10.0						
ULM	**Lac du Bonnet**	**146.60**	**340**	PKPbc	PKPbc	18 56 16.8	-2.2
	2.6nm,0.7s,baz=315,slow=4.5,SNR=5.1						

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*IDC **29** 18:38:06.4±1.2,57.36N×120.67E,mb3.6/9,mb1 3.8/9, mb1mx3.7/21,mbtmp3.6/9,Error ellipse: s-maj=30.2km s-min=25.2km az=6.0*

*MOS **29** 18:38:07.9±1.0,57.40N×120.55E,h20^{km},mb4.0/2,Error ellipse: s-maj=15.1km s-min=11.6km az=73.2*

*BYKL **29** 18:38:07.6±0.5,57.35N×120.65E,h6^{km}±14^{km}*

*NEIC **29** 18:38:08.0±0.8,57.36N×120.62E,h10^{km},mb4.0/1,Error ellipse: s-maj=20.6km s-min=11.0km az=156.0*

ISC 29 18:38:05.8±0.4**,57.19N**±0.04×**120.39E**±0.04**,h6**^{km}**,n44,** σ**1**^{s}**40**/65**,mb3.6**/9**,8C-1D,Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	**Chara**	**1.20**	**257**	⇑*i*Pg	**Pg**	**18 38 32.6**	**+2.9**
CRS				*i* Sg	**Sg**	**18 38 50.5**	**+4.8**
CRS				Pmax			
	317nm,1.0s						
CRS				Smax			
	645nm,1.2s						
CRS	**Chara**	**1.20**	**257**	*e*P	**Pb**	**18 38 32.8**	**+4.3**
CRS				*e*		18 38 50.6	
CRS				pmax	pmax		
	comp=Z,223nm,0.4s						
CRS				smax			
	comp=E,511nm,0.5s						
NRGR	**Nerungri**	**2.43**	**101**	*e*P	**Pn**	**18 38 47.8**	**+1.0**
NRGR				S	**Sn**	**18 39 17.3**	**+0.1**
CLNS	**Chul'man**	**2.49**	**96**	*e*Pn	**Pn**	**18 38 48.2**	**+0.7**
CLNS				*e*Pg	**Pg**	**18 38 50.3**	**-5.2**
CLNS				*e*Sg	**Sg**	**18 39 20.9**	**-7.8**
CLNS	**Chul'man**	**2.49**	**96**	*e*P	**Pn**	**18 38 48.3**	**+0.8**
CLNS				*e*S	**Sn**	**18 39 17.9**	**-0.7**
CLNS				pmax	pmax		
	comp=Z,49nm,0.3s						
CLNS				pmax	pmax		
	comp=N,61nm,0.4s						
CLNS				pmax	pmax		
	comp=E,27nm,0.3s						
CLNS				smax			
	comp=E,80nm,0.3s						
CLNS				smax			
	comp=Z,19nm,0.2s						
CLNS				smax			
	comp=N,52nm,0.3s						
CLNS				smax			
	comp=N,100nm,0.3s						
CLNS				smax			
	comp=E,262nm,0.3s						
CLNS				smax			
	comp=Z,83nm,0.3s						
NLYR	**Nelyaty**	**2.67**	**257**	⇑*i*Pn	**Pn**	**18 38 54.5**	**+4.3**
NLYR				⇑*i*Pg	**Pg**	**18 38 58.9**	**-0.2**
NLYR				*e*Sg	**Sg**	**18 39 35.0**	**+0.3**
NLYR				Pmax			
	comp=Z,119nm,0.4s						
NLYR				Smax			
	comp=Z,683nm,1.2s						
NLYR	**Nelyaty**	**2.67**	**257**	*e*P	**Pn**	**18 38 54.4**	**+4.2**
NLYR				*e*		18 39 33.2	
NLYR				pmax	pmax		
	comp=Z,174nm,0.9s						
NLYR				smax			
	comp=N,682nm,1.2s						
TUP	**Tupik**	**2.78**	**185**	*e*Pn	**Pn**	**18 38 55.8**	**+4.1**
TUP				⇑*i*Pg	**Pg**	**18 38 59.9**	**-1.5**
TUP				*e*Sg	**Sg**	**18 39 38.7**	**+0.3**
TUP				Pmax			
	comp=N,246nm,0.7s						
TUP				Smax			
	comp=N,1μm,0.8s						
TUP	**Tupik**	**2.78**	**185**	*e*P	**Pn**	**18 38 55.2**	**+3.5**
TUP				*e*		18 39 38.9	
TUP				pmax	pmax		
	comp=Z,205nm,0.5s						
TUP				smax			
	comp=E,1μm,0.8s						
TNDR	**Tynda**	**3.17**	**128**	*e*Pn	**Pn**	**18 38 58.8**	**+1.5**
TNDR				*e*Pg	**Pg**	**18 39 04.7**	**-4.4**
TNDR				*e*Sn	**Sn**	**18 39 35.2**	**-0.7**
TNDR				*e*Sg	**Sg**	**18 39 45.5**	**-5.9**
BOD	**Bodaibo**	**3.50**	**283**	⇓*i*Pn	**Pn**	**18 39 04.1**	**+2.1**
BOD				*e*		18 39 14.1	
BOD				*e*Sg	**Sg**	**18 39 57.4**	**-5.1**
BOD				Smax			
	comp=E,343nm,1.1s						
BOD	**Bodaibo**	**3.50**	**283**	*e*P	**Pn**	**18 39 03.7**	**+1.7**
BOD				pmax	pmax		
	comp=Z,31nm,0.6s						
SVKR	**Severomuysk**	**3.92**	**257**	*e*	**Pn**	**18 39 22.8**	**+15**
SVKR				*e*Sg	**Sg**	**18 40 14.2**	**-2.2**
SVKR				Smax			
	comp=Z,348nm,1.4s						
UKT	**Uakit**	**4.13**	**249**	⇑*i*Pg	**Pg**	**18 39 25.3**	**-3.0**
UKT				*e*		18 39 29.4	
UKT				*e*Sg	**Sg**	**18 40 20.8**	**-2.6**
UKT				max			
	comp=Z,24nm,0.7s						
UKT				Smax			
	comp=Z,135nm,1.6s						
UKT	**Uakit**	**4.13**	**249**	*e*P	**Pn**	**18 39 25.2**	**+14**
UKT				pmax	pmax		
	comp=Z,21nm,0.5s						
KROS	**Kirovskiy**	**4.62**	**124**	*e*Pn	**Pn**	**18 39 16.1**	**-1.8**
KROS				⇑*i*Pg	**Pg**	**18 39 28.7**	**-9.5**
KROS				*i* Sg	**Sg**	**18 40 27.4**	**-12**
KROS				Pmax			
	comp=Z,66nm,0.6s						
KROS				Smax			
	comp=Z,350nm,0.6s						
YOA	**Uoyan**	**4.90**	**261**	*e*P	**Pn**	**18 39 40.4**	**+19**
YOA				pmax	pmax		
	comp=Z,113nm,0.6s						
KMO	**Kumora**	**5.25**	**259**	*e*	**Pn**	**18 39 46.6**	**+20**
KMO				*e*		18 39 59.6	
KMO				*e*Sg	**Sg**	**18 40 54.8**	**-5.9**
KMO				Smax			
	comp=Z,216nm,1.8s						
KMO	**Kumora**	**5.25**	**259**	*e*P	**Pn**	**18 39 46.4**	**+20**
KMO				pmax	pmax		
	comp=Z,16nm,0.6s						
YLYR	**Ulyunkhan**	**5.67**	**250**	*e*Pn	**Pn**	**18 39 34.8**	**+2.1**
YLYR				*e*		18 39 54.8	
YLYR				*e*Sg	**Sg**	**18 41 08.5**	**-6.1**
YLYR				Smax			
	comp=Z,133nm,1.5s						
YLYR	**Ulyunkhan**	**5.67**	**250**	*e*P	**Pg**	**18 39 53.9**	**-5.1**
NIZ	**Nizh Angarsk**	**6.18**	**261**	*e*	Pn	18 40 03.9	+24
NIZ				*e*Sg	**Sg**	**18 41 23.5**	**-8.0**
NIZ				Smax			
	comp=Z,77nm,1.8s						
CIT	**Chita**	**6.52**	**220**	*e*Pg	**Pg**	**18 40 08.6**	**-7.5**
CIT				*e*Sg	**Sg**	**18 41 36.1**	**-7.0**
CIT				Pmax			
	comp=Z,6.0nm,0.8s						
CIT				Smax			
	comp=Z,246nm,1.4s						
YAK	**Yakutsk**	**6.76**	**40**	*e*Pn	**Pn**	**18 39 44.7**	**-3.5**
	comp=Z,19nm,0.5s						
SYVR	**Suvo**	**6.89**	**244**	*e*Pg	**Pg**	**18 40 16.3**	**-7.1**
SYVR				*e*Sg	**Sg**	**18 41 48.3**	**-7.0**
SYVR				Pmax			
	comp=Z,6.0nm,0.8s						
SYVR				Smax			
	comp=Z,131nm,1.7s						
OGRR	**Ongureny**	**8.10**	**249**	Sg	**Sg**	**18 42 24.7**	**-11**
OGRR				Smax			
	comp=Z,70nm,2.1s						
KPC	**Khapcheranga**	**8.89**	**216**	*e*Pn	**P**	**18 40 19.8**	**+2.0**
KPC				*e*Sg	**Sg**	**18 42 49.3**	**-12**
KPC				Smax			
	comp=Z,77nm,1.2s						
KPC	**Khapcheranga**	**8.89**	**216**	*e*P	**P**	**18 40 20.1**	**+2.3**
KPC				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SONM	**Songino Array**	**12.64**	**228**	Lg		18 44 49.4	
	comp=Z,0.5nm,0.3s,baz=49,slow=31,SNR=11						
ZAL	**Zalesovo**	**20.24**	**276**	P	**P**	**18 42 46.0**	**+1.8**
	comp=Z,0.7nm,0.4s,baz=25,slow=8.3,SNR=3.5						
BILL	**Bilibino**	**23.11**	**43**	⇑*e*P	**P**	**18 43 12.6**	**-0.2**
KURK	**Kurchatov**	**25.09**	**273**	*e*P	**P**	**18 43 32.6**	**+0.4**
	comp=Z,3.6nm,1.1s,mb3.8						
KURK	**Kurchatov**	**25.09**	**273**	*e*P	**P**	**18 43 32.6**	**+0.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb3.9						
MKAR	**Makanchi Array**	**25.34**	**262**	P	**P**	**18 43 36.6**	**+2.1**
	comp=Z,0.8nm,0.7s,mb3.4,baz=60,slow=9.4,SNR=6.4						
BVAR	**Borovoye Array**	**28.38**	**283**	P	**P**	**18 44 02.6**	**+0.2**
	comp=Z,0.4nm,0.5s,mb3.3,baz=53,slow=7.2,SNR=4.2						
ILAR	**Eielson Array**	**41.69**	**40**	P	**P**	**18 45 54.9**	**-1.3**
	comp=Z,0.6nm,0.7s,mb3.3,baz=291,slow=4.4,SNR=6.5						
FINES	**FINESS Array B**	**44.28**	**317**	P	**P**	**18 46 16.2**	**-1.1**
	comp=Z,2.2nm,0.8s,mb4.0,baz=68,slow=10,SNR=6.3						
VSU	**Vasula**	**45.95**	**313**	⇑*e*P	**P**	**18 46 21.9**	**-8.7**
NOA	**NORSAR Array B**	**49.78**	**323**	P	**P**	**18 46 59.7**	**-0.9**
	comp=Z,0.6nm,0.6s,mb3.8,baz=45,slow=7.9,SNR=3.2						
AKASG	**Malin Array Be**	**50.19**	**304**	P	**P**	**18 47 02.7**	**-1.1**
	comp=Z,0.2nm,0.3s,mb3.6,baz=44,slow=9.8,SNR=5.3						
AKASG	**Malin Array Be**	**50.19**	**304**	P	**P**	**18 47 02.7**	**-1.1**
AKASG	**Malin Array Be**	**50.19**	**304**	*i* P	**P**	**18 47 03.7**	**-0.1**
GERES	**GERESS Array B**	**58.24**	**312**	P	**P**	**18 48 02.1**	**-0.8**
	comp=Z,0.3nm,0.5s,mb3.6,baz=45,slow=9.4,SNR=3.7						
WRA	**Warramunga Arr**	**77.72**	**167**	P	**P**	**18 50 05.2**	**+0.2**
	comp=Z,0.3nm,0.8s,mb3.3,baz=353,slow=6.7,SNR=5.7						

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*NEIC **29** 18:47:17.7,32.93S×71.48W,h43^{km},MD3.5(GUC),After GUC.*

GUC 29 18:47:17.7±0.7**,32.93S**×**71.48W,h43**^{km}±1^{km}**,MD3.5, ML3.6,8C-6D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.17**	**236**	⇑*i*P	P	18 47 25.1	+0.2
IHA				*i* S	S	18 47 30.6	+0.6
ROCH	**El Roble**	**0.39**	**96**	⇓*i*P	P	18 47 27.8	+0.6
ROCH				*i* S	S	18 47 35.3	+1.5
PACH	**Papudo**	**0.39**	**5**	⇑*i*P	P	18 47 27.4	+0.1
PACH				*i* S	S	18 47 34.8	+0.9
LCCH	**Las Cruces**	**0.55**	**188**	⇑*i*P	P	18 47 29.5	+0.3
LCCH				*i* S	S	18 47 37.8	+0.3
PEL	**Peldehue**	**0.70**	**108**	⇑*i*P	P	18 47 31.8	+0.7
PEL				*i* S	S	18 47 42.0	+1.0
PEL				AMP		18 47 42.9	
	comp=E,15μm,0.3s						
RCDM	**Rinconada Maip**	**0.79**	**135**	⇑*i*P	P	18 47 32.8	+0.3
RCDM				*i* S	S	18 47 44.0	+0.7
RCDM				AMP		18 47 45.4	
	comp=E,5μm,0.2s						
TACH	**Talagante**	**0.85**	**148**	*i* P	P	18 47 33.6	+0.3
TACH				*i* S	S	18 47 45.6	+0.9
SAN	**Santiago**	**0.86**	**128**	*i* P	P	18 47 34.1	+0.7
SAN				*i* S	S	18 47 46.1	+1.1
CLCH	**Cerro Calan**	**0.91**	**121**	⇓*i*P	P	18 47 34.8	+0.5
CLCH				*i* S	S	18 47 47.3	+0.9
ANTU	**Antumapu**	**0.95**	**132**	*i* P	P	18 47 35.4	+0.7
ANTU				*i* S	S	18 47 48.7	+1.4
ANTU				AMP		18 47 50.3	
	comp=E,2μm,0.2s						
FSR	**Penalolen**	**0.96**	**125**	⇑*i*P	P	18 47 35.8	+0.9
FSR				*i* S	S	18 47 49.4	+1.7
FSR				AMP		18 47 52.5	
	comp=N,1μm,0.4s						
CHNG	**Los Chungos**	**1.04**	**359**	⇑*i*P	P	18 47 36.1	0.0
CHNG				*i* S	S	18 47 50.8	+1.0
PCH	**Pirque**	**1.06**	**131**	⇑*i*P	P	18 47 36.8	+0.5
PCH				*i* S	S	18 47 51.5	+1.4
FCH	**Farellones**	**1.07**	**112**	AMP		18 47 52.9	
	comp=E,2μm,0.2s						
SJCH	**San Jose de Ma**	**1.18**	**127**	*i* P	P	18 47 37.7	-0.2
SJCH				*i* S	S	18 47 53.6	+0.6
SJCH				AMP		18 47 55.3	
	comp=E,803nm,0.5s						
CHCH	**Chadas Angostu**	**1.21**	**146**	⇓*i*P	P	18 47 39.0	+0.5
CHCH				*i* S	S	18 47 55.1	+1.1
ILCH	**Illapel**	**1.32**	**11**	AMP		18 47 59.6	
	comp=E,923nm,0.2s						
CACH	**El Canelo**	**1.39**	**149**	*i* P	P	18 47 42.3	+1.2
CACH				*i* S	S	18 48 01.2	+2.7
LMEL	**Las Melosas**	**1.40**	**131**	⇓*i*P	P	18 47 42.1	+0.9
LMEL				*i* S	S	18 48 00.7	+1.9
LMEL				AMP		18 48 02.9	
	comp=N,2μm,0.2s						
CICH	**Cipreses**	**1.64**	**148**	⇓*i*P	P	18 47 45.4	+0.8
CICH				*i* S	S	18 48 06.4	+1.7
SFDO	**San Fernando**	**1.72**	**167**	⇓*i*P	P	18 47 45.7	0.0
SFDO				*i* S	S	18 48 07.9	+1.2
CMCH	**Combarbala**	**1.80**	**13**	*i* P	P	18 47 47.3	+0.5
CMCH				*i* S	S	18 48 09.7	+1.1
CMCH				AMP		18 48 13.1	
	comp=N,2μm,0.4s						
ZON	**Zonda**	**2.74**	**61**	*e*P	P	18 48 06.4	+6.1
ZON				*e*S	S	18 48 45.4	+13

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*NEIC **29** 18:53:20.0,18.48N×68.65W,h180^{km},MD4.1(RSPR), After RSPR.*

RSPR 29 18:53:20.0,18.48N×**68.65W,h180**^{km}±3^{km}**,MD4.1**/9**, MD4.1**/9**,10C-1D,Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSP	**Las Mesas**	**1.52**	**101**	⇑*e*P	P	18 53 51.9	-0.6
LSP				*e*S	S	18 54 18.1	+0.7
CRPR	**Cabo Rojo, PR**	**1.54**	**108**	⇑*e*P	P	18 53 51.4	-1.2
CRPR				*e*S	S	18 54 17.6	-0.2
MGP	**Maguayo**	**1.56**	**107**	⇓*e*P	P	18 53 51.8	-1.0
MGP				*e*S	S	18 54 17.2	-1.0
LRS	**Lares**	**1.72**	**96**	⇑*e*P	P	18 53 54.6	+0.2
LRS				*e*S	S	18 54 21.1	0.0
AOPR	**Arecibo Observ**	**1.81**	**94**	⇑*e*P	P	18 53 55.4	+0.1

AOPR				eS	S	18 54 22.0	-0.6
ICM	**Isla Caja Muer**	2.11	106	⇑eP	P	18 53 58.1	-0.4
ICM				eS	S	18 54 28.9	+0.6
SJG	**San Juan**	2.40	98	⇑eP	P	18 54 02.7	+0.7
SJG				eS	S	18 54 34.9	+0.6
SJG	**San Juan**	2.40	98	⇑eP	P	18 54 02.8	+0.8
SJG				eS	S	18 54 34.6	+0.2
CBYP	**Canovanas**	2.66	94	eS	S	18 54 40.0	+0.2
HUMP	**Col San Antoni**	2.68	97	⇑eP	P	18 54 05.7	+0.4
HUMP				eS	S	18 54 40.3	+0.1
MTP	**Monte Pirata**	2.96	97	⇑eP	P	18 54 08.2	-0.5
MTP				eS	S	18 54 47.1	+0.9
CULB	**Culebra**	3.16	93	⇑eP	P	18 54 11.3	+0.2
CULB	**Culebra**	3.16	93	eS	S	18 54 50.9	+0.4
SDV	**Santo Domingo**	9.73	192	P	P	18 55 35.8	-1.0
JTS	**JuntasAbangare**	17.76	245	P	P	18 57 14.7	-2.5
SAML	**Samuel**	27.78	168	P	P	18 58 52.1	-2.4

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*THR **29** 18:56:54.5±0.7, 26.78N×55.88E, h16^{km}±11^{km}, ML3.0*
*KISR **29** 18:56:55.7±1.2, 26.85N×55.53E, h33^{km}, ML3.1*
*CSEM **29** 18:56:55.6±0.9, 27.07N×55.57E, h5^{km}, ML3.1, Error ellipse: s-maj=33.2km s-min=5.5km az=167.0*
ISC 29 18:56:55.6±2.4, **27.0N**±0.2×**55.57E**±0.06, **h10**^{km}, **n9, σ1^{s}19**/15, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	**Bandar-Abbas**	0.66	54	ePg	Pg	18 57 07.4	-1.5
BNDS				eSg	Sg	18 57 17.1	-0.7
BNDS				AML	AML	18 57 24.1	
	comp=N,810nm,0.6s						
BNDS	**Bandar-Abbas**	0.66	54	ePg	Pg	18 57 07.4	-1.5
	SNR=93						
BNDS				eSg	Sg	18 57 17.1	-0.7
	comp=N,810nm,0.6s,SNR=93						
GHIR	**Ghir-Karzin**	2.62	300	ePn	Pn	18 57 43.3	+4.5
GHIR				AML	AML	18 58 35.8	
	comp=N,46nm,0.4s						
KRBR	**Kerman**	3.14	19	ePn	Pn	18 57 47.7	+1.5
NASN	**Na'in**	6.25	338	ePn	Pn	18 58 32.3	+2.1
RDF	**Al-Radifah**	7.35	287	eP	Pn	18 58 46.1	+0.5
RDF				eS	Sn	19 00 09.4	-0.5
NAY	**Al-Naaiem**	7.69	289	eP	Pn	18 58 50.9	+0.5
NAY				AML	AML	19 00 14.3	
	comp=Z,1.1nm,0.3s						
NAY				eS	Sn	19 00 16.4	-2.0
MIB	**Mutribah**	7.77	293	eP	Pn	18 58 52.1	+0.7
MIB				AML	AML	19 00 18.3	
	comp=Z,3.5nm,0.5s						
MIB				eS	Sn	19 00 19.9	-0.5
MIB	**Mutribah**	7.77	293	eP	Pn	18 58 52.2	+0.7
MIB				eS	Sn	19 00 19.9	-0.5

IDC 29 19:21:31.4±7.9, **0.31S**×**97.70E, mb3.8**/3, **mb1 3.8**/4, **mb1mx3.5**/17, **mbtmp3.7**/4, **ML3.0**/1, **Error ellipse: s-maj=199.8km s-min=51.2km az=132.0, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	3.33	22	Pn	Pn	19 22 23.6	-2.2
	1.6nm,0.3s,baz=215,slow=12,SNR=5.3						
PSI				Sn	Sn	19 23 03.9	-2.7
	3.4nm,0.3s,baz=100,slow=23,SNR=6.7						
SONM	**Songino Array**	48.55	8	P	P	19 30 16.4	-2.0
	0.5nm,0.8s,baz=189,slow=9.3,SNR=5.7						
MKAR	**Makanchi Array**	48.82	346	P	P	19 30 18.3	-2.2
	0.6nm,0.7s,baz=160,slow=6.9,SNR=6.4						
ZAL	**Zalesovo**	55.11	351	P	P	19 31 05.4	-2.2
	0.4nm,0.3s,baz=202,slow=4.8,SNR=3.3						

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*IDC **29** 19:28:50.1±1.0, 33.21N×70.85E, mb3.9/11, mb1 4.1/14, mb1mx4.0/22, mbtmp3.9/14, ML4.2/3, Error ellipse: s-maj=24.5km s-min=20.1km az=9.0*
*NDI **29** 19:28:51.4±2.0, 33.12N×70.56E, h10^{km}, ML3.9, mb4.2(NEIC)*
*MOS **29** 19:28:51.4±1.2, 33.33N×70.96E, h19^{km}, mb4.4/5, Error ellipse: s-maj=14.2km s-min=6.7km az=95.7*
*NEIC **29** 19:28:52.1±0.5, 33.29N×70.97E, h10^{km}, mb4.2/6, ML4.6(DMN), Error ellipse: s-maj=10.9km s-min=4.8km az=223.0*
*NNC **29** 19:28:54.1±3.3, 33.60N×70.58E, Error ellipse: s-maj=44.3km s-min=29.2km az=127.0*
*BJI **29** 19:28:57.1, 33.94N×71.06E, h10^{km}, mb4.2, ML4.3, Ms4.5*
ISC 29 19:28:49.5±2.2, **33.22N**±0.04×**70.85E**±0.06, **h10**^{km}±14^{km}, **n81, σ1^{s}18**/93, **mb4.0**/17, **4C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMU	**Jammu**	3.44	97	ex	x	19 30 49.0	
THN	**Thein Dam**	4.17	100	eP	Pn	19 29 57.5	+2.8
THN				ex	x	19 30 48.3	
DLH	**Dalhousie**	4.36	98	eP	Pn	19 30 02.0	+4.6
DLH				ex	x	19 31 12.0	
BHK	**Bhakra**	5.04	109	ex	x	19 30 32.8	
SDNR	**Sundarnagar**	5.45	107	eP	Pn	19 30 15.3	+2.4
SDNR				ex	x	19 31 48.1	
SMLA	**Simla**	5.75	110	eP	Pn	19 30 18.6	+1.6
SMLA				eS	Sn	19 31 23.7	-0.1
	618nm,0.4s						
DDI	**Dehra Dun**	6.78	113	ex	x	10 31 58.8	
DDI				eP		19 30 33.0	
NDI	**New Delhi**	7.09	128	eP	Pn	19 30 36.5	+0.5
NDI				eS	Sn	19 31 53.5	-4.0
AJM	**Ajmer**	7.48	153	eP	Pn	19 30 40.7	-0.7
AJM				AML	AML	19 33 04.1	
	comp=N,34nm,0.4s						
AJM				AML	AML	19 33 05.2	
	comp=E,50nm,0.7s						
AML	**Almayashu**	9.18	13	P	P	19 31 05.8	+0.8
	SNR=28						
UCH	**Uchtor**	9.45	17	P	P	19 31 09.1	+0.4
	SNR=24						
KZA	**Kyzart**	9.51	20	P	P	19 31 10.2	+0.7
	SNR=6.8						
EKS2	**Erkin-Say**	9.71	13	P	P	19 31 13.8	+1.5
	SNR=7.7						
AAK	**Ala-Archa**	9.83	16	P	P	19 31 14.7	+0.7
	SNR=19						
AAK	**Ala-Archa**	9.83	16	⇑P	P	19 31 14.4	+0.5
	comp=E,14nm,0.8s						
AAK				⇓S	Sn	19 32 59.7	-5.8
	comp=E,14nm,0.9s						
AAK	**Ala-Archa**	9.83	16	ePn	P	19 31 13.5	-0.5
	comp=E,8.9nm,0.5s						
AAK				eSn	Sn	19 33 02.1	-3.4
AAK	**Ala-Archa**	9.83	16	eP	P	19 31 13.5	-0.5
AAK				e		19 33 02.1	
AAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KK31	**Karatay Array**	9.87	359	P	P	19 31 13.8	-0.7
	comp=Z,5.3nm,0.5s,baz=181,slow=13,SNR=132						
KK31				⇑S	Sn	19 33 02.1	-4.5
	comp=Z,2.7nm,0.3s,baz=181,slow=28						
KKAR	**Karatay Array**	9.87	359	eP	P	19 31 13.8	-0.8
KKAR						19 33 02.1	
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KKAR				smax			
	comp=Z,1.0nm,0.3s						
KBK	**Karagaybulak**	9.96	18	P	P	19 31 17.9	+2.1
	SNR=7.5						
CHMS	**Chumysh**	10.23	16	P	P	19 31 19.6	+0.1
	SNR=6.3						
TKM2	**Tokmak 2**	10.38	20	P	P	19 31 23.6	+2.0
	SNR=14						
USP	**Ospenovka**	10.43	15	P	P	19 31 22.4	+0.2
	SNR=7.8						
BHPL	**Bhopal**	11.50	148	eP	P	19 31 35.6	-1.3
BHPL				ex	x	19 33 42.0	
BHPL				AML	AML	19 35 00.3	
	comp=E,32nm,0.4s						
BHPL				AML	AML	19 35 14.8	
	comp=N,19nm,0.2s						
KOLN	**Koldanda**	12.26	113	ePn	P	19 31 46.2	-0.9
KOLN				eSn	S	19 33 54.8	-10
	comp=N,32nm,0.9s						
KOLN	**Koldanda**	12.26	113	ePn	P	19 31 46.2	-0.9
	comp=N,16nm,0.9s						
KOLN				eSn	S	19 33 54.8	-10
GKN	**Gorkha**	12.96	110	ePn	P	19 31 55.6	-0.9
GKN				eSn	S	19 34 12.2	-10
	comp=N,33nm,0.6s						
GKN	**Gorkha**	12.96	110	ePn	P	19 31 55.6	-0.9
	comp=N,17nm,0.6s						
GKN				eSn	S	19 34 12.2	-10
DMN	**Daman**	13.51	111	ePn	P	19 32 03.4	-0.4
DMN				eSn	S	19 34 24.9	-10
	comp=N,40nm,1.0s						
DMN	**Daman**	13.51	111	ePn	P	19 32 03.4	-0.4
	comp=N,20nm,1.0s						
DMN				eSn	S	19 34 24.9	-10
KKN	**Kakani**	13.56	110	ePn	P	19 32 03.1	-1.4
KKN				eSn	S	19 34 27.1	-9.2
	comp=N,21nm,0.7s						
KKN	**Kakani**	13.56	110	ePn	P	19 32 03.1	-1.4
	comp=N,11nm,0.7s						
KKN				eSn	S	19 34 27.1	-9.2
KKN	**Kakani**	13.56	110	eP	P	19 32 03.1	-1.4
KKN				e		19 34 27.1	
KKN				pmax	pmax		
	comp=Z,11nm,0.7s						
PKI	**Pulchoki**	13.76	110	ePn	P	19 32 06.1	-1.0
PKI				eSn	S	19 34 31.3	-10
GUN	**Gumba**	13.98	108	ePn	P	19 32 09.5	-0.5
JIRN	**Jiri**	14.34	109	ePn	P	19 32 14.3	-0.4
JIRN				eSn	S	19 34 45.6	-9.2
	comp=Z,19nm,0.6s						
JIRN	**Jiri**	14.34	109	ePn	P	19 32 14.3	-0.4
	comp=Z,9.4nm,0.6s						
JIRN				eSn	S	19 34 45.6	-9.2
MK31	**Makanchi Array**	16.12	29	P	P	19 32 36.1	-1.6
	comp=Z,4.2nm,0.6s,baz=215,slow=15,SNR=64						
MKAR	**Makanchi Array**	16.12	29	Pn	P	19 32 37.1	-0.6
	comp=Z,0.6nm,0.3s,baz=193,slow=7.6,SNR=27						
WMQ	**Urumqi**	16.87	46	eP	P	19 32 47.5	+0.2
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.0s						
AB31	**Akbulak array**	17.97	336	⇑P	P	19 32 58.8	-2.2
	comp=Z,2.2nm,0.7s,baz=143,slow=10,SNR=27						
AB31	**Akbulak array**	17.97	336	i P	P	19 32 58.7	-2.2
KURK	**Kurchatov**	18.39	16	eP	P	19 33 04.0	-2.2
VOSK	**Vostochnaya**	19.50	0	⇓P	P	19 33 18.4	-1.0
	comp=Z,7.1nm,1.0s						
VOSK	**Vostochnaya**	19.50	0	P	P	19 33 18.4	-1.0
VOSK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AKTO	**Aktyubinsk**	19.63	335	⇑P	P	19 33 19.7	-1.2
	comp=Z,0.6nm,0.6s						
AKTO	**Aktyubinsk**	19.63	335	P	P	19 33 20.3	-0.7
	comp=Z,0.5nm,0.3s,baz=155,slow=9.8,SNR=15						
AKTO	**Aktyubinsk**	19.63	335	P	P	19 33 19.7	-1.3
AKTO				pmax	pmax		
	comp=Z,4.0nm,2.0s						
BVA0	**Borovoye Array**	19.80	359	P	P	19 33 21.6	-1.2
	comp=Z,0.3nm,0.5s,baz=262,slow=4.6,SNR=32						
BVA0	**Borovoye Array**	19.80	359	i P	P	19 33 21.6	-1.2
BVAR	**Borovoye Array**	19.80	359	P	P	19 33 22.0	-0.8
	comp=Z,1.2nm,0.3s,baz=161,slow=9.7,SNR=27						
BRVK	**Borovoye**	19.84	359	eP	P	19 33 22.1	-1.1
	comp=Z,3.4nm,0.4s						
BRVK	**Borovoye**	19.84	359	eP	P	19 33 22.1	-1.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
CHKZ	**Chkalovo**	20.45	360	⇓P	P	19 33 28.8	-0.9
	comp=Z,3.8nm,0.8s						
CHKZ	**Chkalovo**	20.45	360	eP	P	19 33 28.8	-0.9
	comp=Z,4.8nm,0.6s						
CHKZ	**Chkalovo**	20.45	360	eP	P	19 33 28.8	-0.9
CHKZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZAL	**Zalesovo**	22.96	21	P	P	19 33 55.2	+0.3
	comp=Z,3.9nm,0.5s,mb4.1,baz=269,slow=7.8,SNR=8.2						
ZAL	**Zalesovo**	22.96	21	P	P	19 33 55.2	+0.3
GTA	**Gaotai**	24.08	67	eP	P	19 34 09.5	+3.6
GTA				AP		19 34 18.0	
GTA				XP		19 34 22.8	
ARU	**Arti**	24.71	344	eP	P	19 34 13.8	+1.9
	comp=Z,3.2nm,0.7s,mb4.0						
ARU	**Arti**	24.71	344	eP	P	19 34 13.8	+1.9
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb3.9						
SONM	**Songino Array**	30.41	51	P	P	19 35 05.9	+2.0
	comp=Z,0.7nm,0.5s,mb3.7,baz=250,slow=9.2,SNR=8.0						
BRTR	**Keskin Array B**	30.46	293	P	P	19 35 06.0	+1.5
	comp=Z,1.1nm,0.6s,mb3.8,baz=113,slow=9.4,SNR=7.0						
AKASG	**Malin Array Be**	34.99	313	P	P	19 35 44.7	+0.8
	comp=Z,0.2nm,0.3s,mb3.5,baz=89,slow=8.1,SNR=5.5						
JOF	**Joensuu**	38.68	332	ep	P	19 36 14.9	+0.1
	comp=Z,4.6nm,0.8s,mb4.3						
FINES	**FINESS Array B**	40.17	328	P	P	19 36 28.1	+0.9
	comp=Z,2.6nm,0.9s,mb4.0,baz=112,slow=10,SNR=5.6						
ARCES	**ARCESS Array B**	44.14	339	P	P	19 37 00.5	+1.0
	comp=Z,3.7nm,0.9s,mb4.1,baz=106,slow=8.8,SNR=4.0						
ARCES	**ARCESS Array B**	44.14	339	P	P	19 37 00.5	+1.0
NOA	**NORSAR Array B**	46.96	325	P	P	19 37 22.3	+0.3
	comp=Z,0.7nm,0.6s,mb3.8,baz=98,slow=7.8,SNR=3.2						
TIXI	**Tiksi**	48.87	21	eP	P	19 37 34.7	-2.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.4						
SUMG	**Summit**	64.12	342	eP	P	19 39 25.6	-0.1
	comp=Z,27nm,1.7s,mb5.0						
TORD	**Torodi Ar. Bea**	65.56	270	P	P	19 39 35.0	-0.9
	comp=Z,0.2nm,0.4s,mb3.5,baz=45,slow=4.1,SNR=4.7						
INK	**Inuvik**	77.16	9	eP	P	19 40 44.6	+0.2
	comp=Z,1.6nm,0.6s,mb4.1						
INK	**Inuvik**	77.16	9	eP	P	19 40 44.6	+0.2
INK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ILAR	**Eielson Array**	77.97	16	P	P	19 40 48.6	-0.3
	comp=Z,0.4nm,0.5s,mb3.6,baz=306,slow=5.3,SNR=8.2						
WRA	**Warramunga Arr**	80.38	121	P	P	19 41 04.0	+1.1
	comp=Z,0.5nm,0.5s,mb3.8,baz=323,slow=5.0,SNR=20						
WRAB	**Tennant Creek**	80.38	121	eP	P	19 41 04.2	+1.2
	comp=Z,2.6nm,0.5s,mb4.4						
WRAB	**Tennant Creek**	80.38	121	eP	P	19 41 04.2	+1.3
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.5s,mb4.5						
YKA	**Yellowknife Ar**	84.52	3	P	P	19 41 24.3	+1.0
	comp=Z,1.3nm,0.6s,mb4.3,baz=351,slow=5.3,SNR=15						
YKA	**Yellowknife Ar**	84.52	3	P	P	19 41 24.3	+1.0
BAR	**Barrett**	114.07	7	ePKPdf	PKPdf	19 47 32.6	+0.5

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*NEIC **29** 19:32:52.8, 19.43N×68.29W, h32^{km}, MD3.9(RSPR), After RSPR.*
RSPR 29 19:32:52.8, 19.43N×**68.29W, h33**^{km}±36^{km}, **MD3.9**/13, **MD3.9**/13, **14C-1D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	1.47	130	⇑eP	Pn	19 33 14.0	-3.5
AGPR				eS	Sn	19 33 32.6	-3.2
MPR	**Mayaguez**	1.63	138	⇑eP	Pn	19 33 18.3	-1.4
MPR				eS	Sn	19 33 37.8	-2.0
LSP	**Las Mesas**	1.69	137	⇑eP	Pn	19 33 18.3	-2.3
LSP				eS	Sn	19 33 39.3	-2.0
LRS	**Lares**	1.77	129	eS	Sn	19 33 40.8	-2.7
CRPR	**Cabo Rojo, PR**	1.80	141	⇑eP	Pn	19 33 18.4	-3.8
CRPR				eS	Sn	19 33 41.6	-2.6
AOPR	**Arecibo Observ**	1.81	126	⇑eP	Pn	19 33 20.1	-2.3
AOPR				eS	Sn	19 33 42.5	-2.0
MGP	**Maguayo**	1.81	141	⇑eP	Pn	19 33 19.3	-3.1
MGP				eS	Sn	19 33 42.6	-1.9
CELP	**Cerrillos**	2.11	129	⇑eP	Pn	19 33 25.4	-1.3
CELP				eS	Sn	19 33 50.2	-1.8
ICM	**Isla Caja Muer**	2.27	132	⇑eP	Pn	19 33 27.6	-1.3
ICM				eS	Sn	19 33 54.1	-1.9
SJG	**San Juan**	2.42	122	eS	Sn	19 33 57.7	-2.1
SJG	**San Juan**	2.42	122	⇓eP	Pn	19 33 29.1	-1.9
SJG				eS	Sn	19 33 56.7	-3.1
SJG	**San Juan**	2.42	122	⇑eP	Pn	19 33 28.9	-2.1
SJG				eS	Sn	19 33 57.7	-2.1
CBYP	**Canovanas**	2.58	116	⇑eP	Pn	19 33 31.3	-2.1
CPD	**Cerro la Pandu**	2.64	121	⇑eP	Pn	19 33 32.3	-1.9
CPD				eS	Sn	19 34 02.9	-2.7
HUMP	**Col San Antoni**	2.64	118	⇑eP	Pn	19 33 32.5	-1.8
HUMP				eS	Sn	19 34 02.2	-3.4
MTP	**Monte Pirata**	2.91	117	⇑eP	Pn	19 33 36.0	-2.1
MTP				eS	Sn	19 34 09.4	-3.0
TBVI	**Tortola**	3.63	106	⇑eP	Pn	19 33 46.6	-1.6
TBVI				eS	Sn	19 34 24.6	-6.0
SDV	**Santo Domingo**	10.72	193	eP	P	19 35 23.6	-3.8

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*NEIC **29** 19:34:59.6±0.9, 22.90S×68.96W, h91^{km}±10^{km}, mb4.0/2, Error ellipse: s-maj=14.1km s-min=8.0km az=81.0*
*IDC **29** 19:34:59.9±0.8, 23.00S×68.97W, h97^{km}±6^{km}, mb3.7/5, mb1 3.8/8, mb1mx3.7/16, mbtmp4.0/8, MS2.9/2, Ms1 3.0/2, ms1mx2.8/18, Error ellipse: s-maj=25.2km s-min=17.8km az=87.0*
ISC 29 19:34:58.2±1.2, **22.91S**±0.06×**69.0W**±0.1, **h92**^{km}±14^{km}, **n18, σ0^{s}83**/18, **mb3.8**/5, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	6.63	7	P	P	19 36 35.5	+0.7
	1.2nm,0.3s,baz=214,slow=5.0,SNR=23						
LPAZ				LR	LR	19 39 10.8	
	comp=Z,64nm,19.2s,baz=111,slow=37						
LPAZ	**La Paz**	6.63	7	ePn	P	19 36 35.2	+0.5
ARE	**Arequipa**	6.83	339	P	P	19 36 38.0	+0.5
ARE				eS	S	19 37 41.0	-13
CFAA	**Coronel Fontan**	8.69	176	P	P	19 37 01.1	-1.7
	0.2nm,0.3s,baz=351,slow=14,SNR=13						
CFAA				S	S	19 38 34.7	-5.2
	0.1nm,0.3s,baz=254,slow=12,SNR=2.2						
CFAA	**Coronel Fontan**	8.69	176	P	P	19 37 01.1	-1.7
CFAA				S	S	19 38 34.7	-5.2
SIV	**San Ignacio**	10.14	49	P	P	19 37 21.5	-1.0
	3.9nm,0.3s,baz=258,slow=7.0,SNR=66						
SIV				S	S	19 39 05.9	-9.2
	baz=236,slow=19,SNR=2.9						
CPUP	**Villa Florida**	11.13	110	ePn	P	19 37 35.9	+0.1
	36nm,0.8s						
TRQA	**Tornquist**	16.25	160	eP	P	19 38 42.9	+0.8
	13nm,1.0s						
TRQA				epP		19 39 04.4	
PLCA	**Paso Flores**	17.82	184	eP	P	19 39 02.6	+1.1
	18nm,1.9s						
BDFB	**Brasilia**	21.05	74	P	P	19 39 37.0	+0.4
	4.2nm,0.5s,mb4.0,baz=245,slow=14,SNR=7.2						
JTS	**JuntasAbangare**	36.51	333	LR	LR	19 58 20.9	
	comp=Z,27nm,18.5s,baz=5.1,slow=38						
TXAR	**Lajitas Array**	61.74	326	P	P	19 45 08.8	-0.5
	0.3nm,0.6s,mb3.5,baz=145,slow=8.1,SNR=4.3						
ULM	**Lac du Bonnet**	76.63	343	P	P	19 46 39.1	-1.2
	0.5nm,0.4s,mb3.6,baz=171,slow=2.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	77.89	70	P	P	19 46 48.3	+0.4
	1.5nm,0.7s,mb3.8,baz=253,slow=5.0,SNR=8.2						
TORD				pP	pP	19 47 12.4	+0.2
	2.6nm,0.6s,baz=253,slow=5.2,SNR=6.9						
YKA	**Yellowknife Ar**	92.48	341	P	P	19 48 00.0	+0.4
	0.9nm,0.8s,mb4.1,baz=142,slow=4.7,SNR=6.0						
YKA				pP	pP	19 48 25.3	+0.7
	0.5nm,0.6s,baz=136,slow=3.7,SNR=2.5						
WRA	**Warramunga Arr**	131.71	210	PKP	PKPdf	19 54 03.4	+2.1
	0.4nm,0.5s,baz=147,slow=2.1,SNR=6.2						
MKAR	**Makanchi Array**	146.80	37	PKPbc	PKPbc	19 54 29.9	+0.8
	0.4nm,0.5s,baz=328,slow=2.7,SNR=9.8						
MKAR				pPKPbc		19 54 57.4	
	2.2nm,0.8s,baz=318,slow=2.9,SNR=12						
MKAR	**Makanchi Array**	146.80	37	PKPbc	PKPbc	19 54 29.9	+0.8
MKAR				pPKPbc		19 54 57.4	

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*NEIC **29** 19:37:02.2, 19.44N×68.38W, h14^{km}, MD3.4(RSPR), After RSPR.*
RSPR 29 19:37:02.2, 19.44N×**68.38W, h14**^{km}±48^{km}, **MD3.4**/8, **MD3.4**/8, **9C, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGPR	**Aguadilla, PR**	1.54	129	⇑eP	Pn	19 37 25.5	-4.0
AGPR				eS	Sb	19 37 45.4	-3.9
LSP	**Las Mesas**	1.75	135	⇑eP	Pn	19 37 30.2	-2.3
LSP				eS	Sn	19 37 51.4	-3.4
LRS	**Lares**	1.85	128	⇑eP	Pn	19 37 30.0	-3.9
LRS				eS	Sn	19 37 51.9	-5.2
CRPR	**Cabo Rojo, PR**	1.87	140	⇑eP	Pn	19 37 29.7	-4.4
CRPR				eS	Sn	19 37 52.5	-5.0
MGP	**Maguayo**	1.88	139	⇑eP	Pn	19 37 30.7	-3.5
MGP				eS	Sn	19 37 54.2	-3.7
AOPR	**Arecibo Observ**	1.89	125	⇑eP	Pn	19 37 31.0	-3.4
AOPR				eS	Sn	19 37 54.4	-3.8
ICM	**Isla Caja Muer**	2.34	131	⇑eP	Pn	19 37 38.2	-2.6
ICM				eS	Sn	19 38 05.6	-4.0
SJG	**San Juan**	2.49	122	⇑eP	Pn	19 37 40.6	-2.4
SJG				eS	Sn	19 38 08.5	-5.0
SJG	**San Juan**	2.49	122	⇑eP	Pn	19 37 40.4	-2.7
SJG				eS	Sn	19 38 08.5	-4.9
SDV	**Santo Domingo**	10.71	192	eP	P	19 39 26.5	-12

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*SOF **29** 19:40:10.5, 39.97N×23.36E, h16^{km}, MD2.7*
*SKO **29** 19:40:12.6, 40.25N×22.74E, h2^{km}, M2.3, ML2.5*
*ATH **29** 19:40:16.5, 40.33N×22.72E, h2^{km}, MD3.4/4*
*CSEM **29** 19:40:16.6±0.1, 40.37N×22.72E, h30^{km}, ML2.9, Error ellipse: s-maj=3.8km s-min=3.1km az=88.0*
*NEIC **29** 19:40:16.5, 40.33N×22.72E, h2^{km}, MD3.4(ATH), After ATH.*
*THE **29** 19:40:17.0, 40.36N×22.76E, h10^{km}, ML2.9*
ISC 29 19:40:17.1±0.4, **40.36N**±0.03×**22.72E**±0.04, **h18**^{km}±6^{km}, **n27, σ0^{s}89**/41, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LIT	**Litokhoron**	0.31	215	ePg	Pb	19 40 23.4	-0.5
LIT				eSg	Sb	19 40 28.5	0.0
THE	**Thessaloniki**	0.33	34	ePg	Pb	19 40 23.4	-0.9
THE				eSg	Sb	19 40 28.6	-0.4
PLG	**Polygyros**	0.55	88	ePG	Pb	19 40 27.3	-0.6
GRG	**Griva**	0.65	338	ePg	Pb	19 40 29.6	0.0
GRG				eSg	Sb	19 40 39.0	+0.9
SOH	**Sokhos**	0.67	46	ePg	Pb	19 40 29.6	-0.3
SOH				eSg	Sb	19 40 39.1	+0.4
KZN	**Kozani**	0.73	266	ePB	Pb	19 40 30.6	-0.4
KNT	**Kendrikon**	0.82	9	ePg	Pb	19 40 32.4	-0.1
KNT				eSg	Sb	19 40 44.2	+1.2
PAIG	**Paliouri**	0.85	120	ePg	Pb	19 40 32.6	-0.3
PAIG				eSg	Sb	19 40 45.0	+1.1
OUR	**Ouranopolis**	0.96	91	ePg	Pb	19 40 34.8	-0.1
VAY	**Valandovo**	0.97	353	i Pn	Pn	19 40 34.7	-1.1
VAY				i Sn	Sn	19 40 48.9	-0.2
VAY				eLg		19 40 49.8	
	comp=E,128nm,0.3s						
VAY				eLg		19 40 49.8	
	comp=N,135nm,0.4s						
VAY	**Valandovo**	0.97	353	i Pn	Pn	19 40 34.7	-1.1
VAY				i Sn	Sn	19 40 48.9	-0.2
VAY				Lg		19 40 49.8	
XOR	**Xorichti**	1.05	160	ePg	Pb	19 40 36.3	-0.1
FNA	**Florina**	1.11	293	ePg	Pb	19 40 37.9	+0.5
FNA				eSg	Sb	19 40 55.2	+3.7
NEO	**Neokhori**	1.12	160	ePG	Pb	19 40 37.0	-0.5
BIA	**Bitola**	1.25	302	ePn	Pn	19 40 37.2	-2.6
BIA				eSn	Sn	19 40 57.3	+1.0
BIA				eLg		19 41 02.0	
	comp=E,42nm,0.6s						
BIA				eLg		19 41 02.3	
	comp=N,42nm,0.3s						
BIA	**Bitola**	1.25	302	ePn	Pn	19 40 37.2	-2.6
BIA				eSn	Sn	19 40 57.3	+1.0
BIA				Lg		19 41 02.3	
NVR	**Nevrokopi**	1.32	41	ePG	Pn	19 40 41.3	+0.6
AGG	**Agios Georgios**	1.37	193	ePg	Pn	19 40 42.0	+0.5
AGG				eSg	Sb	19 41 02.7	+3.9
MMB	**Musomiste**	1.45	31	i Pg	Pn	19 40 42.5	-0.1
KKB	**Krupnik**	1.53	10	i P	Pn	19 40 43.5	-0.3
OHR	**Ohrid**	1.65	298	ePn	Pn	19 40 42.7	-2.8
OHR				eSn	Sn	19 41 05.8	-0.5
OHR				eLg		19 41 17.2	
	comp=E,53nm,0.6s						
OHR	**Ohrid**	1.65	298	ePn	Pn	19 40 42.7	-2.7
OHR				eSn	Sn	19 41 05.8	-0.5
OHR				Lg		19 41 17.2	
RZN	**Rozhen**	2.01	48	i Pg	Pn	19 40 51.2	+0.5
IGT	**Igoumenitsa**	2.01	247	ePn	Pn	19 40 52.5	+1.8
VTS	**Vitosha**	2.26	9	i P	Pn	19 40 58.5	+4.2
RDO	**Rodhopi**	2.28	69	ePG	Pn	19 41 00.2	+5.7
ALN	**Alexandroupoli**	2.58	77	ePn	Pn	19 40 59.2	+0.3

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*NEIC **29** 19:43:09.0, 39.14N×27.94E, h16^{km}, MD3.5(ATH), MD3.1(ISK), After ISK.*

*CSEM **29** 19:43:09.7±0.0, 39.14N×27.97E, h12km, MD3.1, Error ellipse: s-maj=1.6km s-min=0.9km az=110.0*
*ISK **29** 19:43:10.0, 39.14N×27.95E, h16km, MD3.1*
*ATH **29** 19:43:11.1, 39.16N×27.86E, h22km, MD3.5/3*
ISC 29 19:43:10.1±0.5**, 39.14N**±0.02×**27.98E**±0.03**, h13**km±4km**, n46, σ0ˢ69**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKS	Akhisar	0.29	207	i PG	Pg	19 43 16.0	-0.4
AKS				i SG	Sg	19 43 21.0	+0.5
BALB	Balikesir	0.51	351	i PG	Pg	19 43 20.8	+0.3
BALB				i SG	Sg	19 43 28.4	+1.0
BTOK	Tokmak	0.62	3	i P	Pb	19 43 22.2	-0.2
BTOK				i S	Sb	19 43 31.4	+0.7
DST	Dursunbey	0.68	47	i PG	Pg	19 43 23.6	-0.3
MANT	Manisa	0.79	145	i P	Pb	19 43 25.5	+0.3
MANT				i S	Sb	19 43 35.5	-0.1
KDAG	Bornova	0.92	218	i P	Pb	19 43 26.1	-1.5
KDAG				i S	Sb	19 43 39.1	-0.4
IZM	Izmir	0.93	217	i PG	Pg	19 43 27.8	-1.0
AYVA	Ayvalik	1.02	280	i P	Pb	19 43 29.8	+0.7
AYVA				i S	Sb	19 43 43.5	+1.3
ORLT	Orhaneli	1.15	38	i PN	Pn	19 43 32.3	+0.4
GDZ	Gediz	1.17	92	i P	Pb	19 43 31.0	-0.7
GDZ				i S	Sb	19 43 46.3	-0.2
EDC	Edincik	1.21	356	i PN	Pn	19 43 32.8	0.0
BNT	Bandirma	1.22	358	i PN	Pn	19 43 33.3	+0.4
PRK	Paraskevi	1.33	275	ePN	Pn	19 43 34.7	+0.1
URLA	Izmir	1.33	235	i P	Pb	19 43 34.2	-0.3
URLA				i S	Sb	19 43 52.2	+0.8
ULDT	Uludag	1.34	41	i P	Pb	19 43 33.8	-0.8
ULDT				i S	Sb	19 43 51.5	0.0
AYDN	Tasoluk	1.48	183	i P	Pn	19 43 36.2	-0.5
AYDN	Tasoluk	1.48	183	i P	Pn	19 43 55.7	+19
MRMT	Marmara Adasi	1.49	349	i PN	Pn	19 43 36.3	-0.5
DENT	Denizli	1.61	149	i PN	Pn	19 43 38.8	+0.3
ALT	Altintas	1.66	92	i PN	Pn	19 43 39.8	+0.6
SART	Tekirdag	1.67	339	i P	Pn	19 43 38.9	-0.4
SART				i S	Sn	19 43 59.6	-1.1
DNZL	Cakiroluk	1.67	150	i P	Pn	19 43 39.1	-0.3
SMG	Samos	1.69	213	ePN	Pn	19 43 41.0	+1.4
MFT	Murefte	1.73	342	i PN	Pn	19 43 39.8	-0.4
YLV	Yalova	1.78	36	PN	Pn	19 43 40.7	-0.3
MLSB	Milas	1.85	185	PN	Pn	19 43 42.2	+0.3
BADT	Buyukada	1.92	27	PN	Pn	19 43 43.1	+0.2
YER	Yerkesik	2.02	173	PN	Pn	19 43 44.6	+0.3
CTT	Catalca	2.04	10	PN	Pn	19 43 44.5	-0.1
ELBA	Catalca	2.04	10	i P	Pn	19 43 44.0	-0.6
BORA	Eskisehir	2.05	68	i P	Pn	19 43 45.0	+0.2
ISK	Istanbul-Kandi	2.09	23	PN	Pn	19 43 45.0	-0.4
BDRM	Kayabasi	2.11	192	i P	Pn	19 43 50.0	+4.3
HRT	Hereke	2.12	37	PN	Pn	19 43 45.5	-0.3
GPA	Golpazari	2.13	57	PN	Pn	19 43 46.5	+0.5
TKTP	Tekketepe	2.13	120	i P	Pn	19 43 45.3	-0.7
BODT	Bodrum	2.14	195	ePN	Pn	19 43 46.5	+0.4
ESKT	Eskisehir	2.26	79	ePN	Pn	19 43 48.4	+0.7
ESKT	Eskisehir	2.26	79	i P	Pn	19 43 50.9	+3.1
ESKT				i S	Sn	19 44 20.6	+5.0
LIA	Limnos Island	2.29	290	ePB	Pb	19 43 48.8	-2.2
DAT	Datca	2.43	188	ePN	Pn	19 43 50.3	+0.1
FETY	Fethiye	2.65	160	ePN	Pn	19 43 52.7	-0.6
RDO	Rodhopi	2.74	318	ePN	Pn	19 43 55.1	+0.4
MDU	Mudurnu	2.82	61	ePN	Pn	19 43 56.5	+0.7
EDRB	Edirne	2.87	341	ePN	Pn	19 43 56.0	-0.4
KIZT	Kizilcal	3.05	94	ePN	Pn	19 44 00.3	+1.3

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*IDC **29** 19:49:41.2±0.7, 18.88N×81.07W, mb4.1/14, mb1 4.3/16, mb1mx4.1/27, mbtmp4.1/16, ML3.4/2, MS3.6/11, Ms1 3.6/11, ms1mx3.4/20, Error ellipse: s-maj=21.8km s-min=15.1km az=60.0*
*NEIC **29** 19:49:42.6±0.5, 18.90N×80.99W, h10km, mb4.4/7, Error ellipse: s-maj=15.4km s-min=7.1km az=66.0*
*JSN **29** 19:49:44.0±1.2, 19.21N×80.68W, MD4.4*
*SSNC **29** 19:49:45.5±3.0, 18.78N×81.02W, h34km±112km, MD4.2, ML3.5*
ISC 29 19:49:43.4±1.7**, 18.97N**±0.05×**80.85W**±0.03**, h29**km±14km**, n50, σ1ˢ31**/53**, mb4.1**/18**, MS3.6**/11**, 4C-1D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBJ	Montego Bay	2.88	101	⇓eP	Pn	19 50 28.0	-0.6
MBJ				eS	Sn	19 51 01.3	-1.4
MCJ	Malvern	3.17	109	eS	Sn	19 51 10.8	+0.8
BBJ	Bamboo Saint A	3.44	99	⇑eP	Pn	19 50 36.5	-0.1
BNJ	Bonny Gate	3.75	99	⇑eP	Pn	19 50 40.5	-0.4
BNJ				eS	Sn	19 51 23.6	-1.0
LMGC	Las Mercedes	3.78	73	i P	Pn	19 50 43.8	+2.5
LMGC				i S	Sn	19 51 25.6	+0.2
	comp=N,336nm,0.3s						
	comp=E,297nm,0.2s						
STH	Stony Hill	3.93	102	⇑eP	Pn	19 50 43.3	-0.1
STH				eS	Sn	19 51 27.9	-1.3
GWJ	Greenwich	4.01	102	⇑eP	Pn	19 50 44.9	+0.3
SOR	Soroa	4.30	332	eP	Pn	19 50 48.5	-0.2
SOR				eS	Sn	19 51 36.6	-2.0
	comp=N,4.7nm,0.4s						
	comp=E,7.3nm,0.2s						
HLGC	Holguin	4.89	66	eP	Pn	19 50 57.2	+0.1
HLGC				eS	Sn	19 51 50.4	-3.0
	comp=N,27nm,0.4s						
	comp=E,27nm,0.4s						
RCC	Rio Carpintero	4.96	77	eP	Pn	19 50 59.7	+1.6
RCC				eS	Sn	19 51 52.7	-2.6
	comp=N,135nm,0.2s						
	comp=E,180nm,0.4s						
PINC	Pinares de May	5.00	72	eP	Pn	19 50 59.8	+1.3
PINC				eS	Sn	19 51 56.6	+0.5
	comp=N,2.7nm,0.2s						
	comp=E,3.0nm,0.2s						
SABC	Sabc	5.51	74	eP	Pn	19 51 06.9	+1.1
SABC				eS	Sn	19 52 08.5	-0.5
	comp=N,2.0nm,0.6s						
	comp=E,4.4nm,0.3s						
MASC	Masc	6.35	78	eP	Pn	19 51 20.9	+3.2
MASC				eS	Sn	19 52 29.3	-0.7
	comp=N,0.7nm,0.6s						
	comp=E,1.6nm,0.1s						
JTS	JuntasAbangare	9.50	205	Pn	P	19 51 58.1	-3.6
	comp=E,1.7nm,0.3s,baz=62,slow=15,SNR=7.6						
SDV	Santo Domingo	14.09	134	Pn	P	19 53 00.7	-2.8
	comp=E,2.5nm,0.3s,baz=358,slow=8.9,SNR=11						
GOGA	Godfrey	14.57	351	ePn	P	19 53 07.6	-2.1
	comp=E,24nm,0.8s						
ROSC	El Rosal	15.40	155	Pn	P	19 53 21.3	+0.6
	comp=E,0.9nm,0.3s,baz=116,slow=21,SNR=5.4						
WVT	Waverly	18.17	342	eP	P	19 53 56.6	+1.1
	comp=E,7.3nm,0.6s						
OTAV	Otavalo	18.77	173	eP	P	19 54 02.1	-0.7
	comp=E,29nm,1.3s						
FVM	French Village	20.70	338	eP	P	19 54 22.1	-1.9
	comp=E,12nm,0.8s						
CCM	Cathedral Cave	21.07	337	eP	P	19 54 27.2	-0.5
	comp=E,4.5nm,0.6s,mb4.0						
TXAR	Lajitas Array	23.20	301	P	P	19 54 47.5	-1.5
	comp=E,2.3nm,0.9s,mb3.6,baz=117,slow=8.4,SNR=12						
TXAR	Lajitas Array	23.20	301	P	P	19 54 47.5	-1.5
CPRX	Cap Rock	24.91	309	eP	P	19 55 05.0	-0.5
SADO	Sadowa	25.76	3	P	P	19 55 16.2	+2.8
	comp=E,8.0nm,0.8s,mb4.3,baz=193,slow=9.8,SNR=2.6						
SADO				LR	LR	20 05 36.6	
	comp=E,167nm,20.8s,MS3.5,baz=139,slow=37						
SADO	Sadowa	25.76	3	P	P	19 55 16.2	+2.7
SADO				LR	LR	20 05 36.6	
WUAZ	Wupatki	31.58	308	eP	P	19 56 04.2	-1.6
	comp=E,9.0nm,1.1s,mb4.5						
SRU	San Rafael	32.57	314	eP	P	19 56 15.2	+0.7
	comp=E,6.5nm,0.8s,mb4.6						
ULM	Lac du Bonnet	33.43	342	LR	LR	20 09 18.8	
	comp=E,111nm,20.0s,MS3.6,baz=63,slow=35						
PDAR	Pinedale Array	33.92	321	P	P	19 56 25.6	-0.5
	comp=E,1.3nm,0.9s,mb3.8,baz=124,slow=6.0,SNR=8.6						
ELK	Elko	36.54	314	P	P	19 56 48.9	+0.4
	comp=E,0.4nm,0.5s,mb3.5,baz=182,slow=13,SNR=2.8						
LPAZ	La Paz	37.20	160	P	P	19 56 56.0	+1.7
	comp=E,0.3nm,0.2s,mb3.7,baz=329,slow=9.4,SNR=3.0						
LPAZ				LR	LR	20 10 43.7	
	comp=E,52nm,20.4s,MS3.3,baz=265,slow=34						
LPAZ	La Paz	37.20	160	P	P	19 56 56.0	+1.7
LPAZ				LR	LR	20 10 43.7	
SCHQ	Schefferville	37.36	13	LR	LR	20 14 24.3	
	comp=E,78nm,18.8s,MS3.5,baz=172,slow=40						
NVAR	Mina Array Bea	37.81	309	P	P	19 57 00.1	+0.9
	comp=E,0.2nm,0.2s,mb3.4,baz=111,slow=10,SNR=5.6						
WVOR	Wild Horse Val	39.56	315	eP	P	19 57 14.9	+1.1
	comp=E,38nm,1.8s,mb4.8						
SIV	San Ignacio	39.82	149	P	P	19 57 15.6	-0.6
	comp=E,4.0nm,0.9s,mb4.2,baz=331,slow=8.7,SNR=7.4						
BDFB	Brasilia	47.19	135	LR	LR	20 17 47.0	
	comp=E,42nm,18.7s,MS3.4,baz=225,slow=36						
YKA	Yellowknife Ar	49.34	340	LR	LR	20 22 07.0	
	comp=E,73nm,18.9s,MS3.7,baz=120,slow=39						
INK	Inuvik	59.11	340	P	P	19 59 43.0	-0.4
	comp=E,4.3nm,1.0s,mb4.4,baz=109,slow=11,SNR=8.4						
INK	Inuvik	59.11	340	P	P	19 59 43.0	-0.4
PLCA	Paso Flores	60.16	171	LR	LR	20 24 12.3	
	comp=E,40nm,21.6s,MS3.5,baz=1.4,slow=34						
ILAR	Eielson Array	62.83	334	P	P	20 00 07.7	-0.9
	comp=E,3.6nm,1.0s,mb4.4,baz=106,slow=4.3,SNR=14						
ILAR				LR	LR	20 29 30.3	
	comp=E,54nm,21.1s,MS3.7,baz=177,slow=38						
EKA	Eskdalemuir Ar	67.63	37	P	P	20 00 40.9	+1.1
	comp=E,2.5nm,1.0s,mb4.2,baz=38,slow=27,SNR=4.6						
ESDC	Sonseca Array	68.21	54	P	P	20 00 46.0	+2.4
	comp=E,1.8nm,0.8s,mb4.1,baz=283,slow=6.2,SNR=9.1						
NOA	NORSAR Array B	74.59	30	LR	LR	20 33 04.4	
	comp=E,45nm,18.4s,MS3.8,baz=340,slow=35						
ARCES	ARCESS Array B	77.95	20	P	P	20 01 41.1	+1.0
	comp=E,2.2nm,0.7s,mb4.2,baz=304,slow=4.4,SNR=7.5						
ARCES				LR	LR	20 36 26.7	
	comp=E,64nm,18.4s,MS4.0,baz=58,slow=36						
GERES	GERESS Array B	78.87	42	P	P	20 01 47.5	+1.9
	comp=E,0.9nm,0.9s,mb3.7,baz=270,slow=5.3,SNR=5.6						
FINES	FINESS Array B	81.31	28	P	P	20 02 00.1	+1.8
	comp=E,4.6nm,1.0s,mb4.4,baz=342,slow=6.0,SNR=5.7						
FINES				LR	LR	20 35 30.1	
	comp=E,53nm,18.9s,MS3.9,baz=286,slow=34						
WRA	Warramunga Arr	146.84	262	PKPbc	PKPbc	20 09 24.5	+1.0
	comp=E,1.9nm,0.6s,baz=84,slow=3.4,SNR=22						

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*NEIC **29** 19:54:49.5, 35.13N×32.27E, h20km, ML2.8(NIC), After NIC.*
*CSEM **29** 19:54:49.5±0.4, 35.13N×32.27E, h20km, Mw3.0, Error ellipse: s-maj=15.4km s-min=7.5km az=148.0, After NIC*
NIC 29 19:54:49.5±0.4**, 35.13N×32.27E, h20**km**, ML2.8, MW3.0, 4D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMC	Akamas	0.11	155	P	Pb	19 54 53.9	+0.4
PPCY	Paphos	0.25	166	⇓P	Pb	19 54 55.4	0.0
PPCY	Paphos	0.25	166	⇓iP	Pb	19 54 55.4	0.0
ALFC	Alevga	0.27	84	⇓P	Pb	19 54 55.8	+0.2
	44nm,0.2s						
ALFC				S	Sb	19 54 59.9	+0.1
ALFC	Alevga	0.27	84	⇓eP	Pb	19 54 55.8	+0.2
ALFC				S	Sb	19 54 59.9	+0.1
ALFC	Alevga	0.27	84	S	Sb	19 54 59.9	+0.1
SZAC	Souni-Zanaja	0.62	126	P	Pb	19 55 01.8	+0.3
SZAC				S	Sb	19 55 10.4	+0.6
MAMC	Mammari	0.78	87	P	Pb	19 55 04.7	+0.6
CSS	Prodhromos	0.88	101	P	Pb	19 55 05.5	-0.4
	1.1nm,0.2s						
CSS				S	Sb	19 55 15.8	-1.5

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*LDG **29** 20:11:33.9±0.1, 50.30N×7.45E, h4km, Md2.7/1, Ml2.4/11, Error ellipse: s-maj=1.6km s-min=0.9km az=69.0*
*STR **29** 20:11:33.7±1.0, 50.31N×7.52E, h5km±1km, Ml1.8, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*
*BNS **29** 20:11:34.5±0.6, 50.32N×7.42E, h4km±16km, ML1.4*
BGR 29 20:11:32.5±0.6**, 50.35N×7.45E, h10**km**, ML1.6**/2**, 1C-2D, Error ellipse: s-maj=10.0km s-min=5.6km az=147.0, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGG	Burgeitz	0.16	206	⇑iPg	Pg	20 11 37.3	+1.1
BGG				eSg	Sg	20 11 38.9	+0.3
	349nm,0.2s						
STB	Steinbach	0.46	302	⇓ePg	Pg	20 11 43.5	+1.6
STB				i Sg	Sg	20 11 49.2	+1.2
	23nm,0.7s						
HILG	Hillesheim	0.50	263	ePg	Pg	20 11 43.4	+0.8
HILG				eSg	Sg	20 11 49.9	+0.6
	36nm,0.3s						
HOBG	Hohbusch	0.64	353	⇓iPg	Pg	20 11 46.8	+1.5
TNS	Taunus Mts	0.65	101	ePg	Pg	20 11 46.1	+0.4
	SNR=2.9						
TNS				eSg	Sg	20 11 54.0	-0.5
KLL	Kalltalsperre	0.79	293	ePg	Pg	20 11 49.0	+0.8
KLL				eSg	Sg	20 11 59.6	+0.8
	5.8nm,0.3s						
LAUG	Laupendahl	1.05	342	eSg	Sg	20 12 08.4	+0.8
WLF	Walferdange	1.08	231	ePg	Pg	20 11 53.9	-0.2
	SNR=1.6						
WLF				eSg	Sg	20 12 06.4	-2.2
LANF	Langenberg	1.39	170	Pn	Pn	20 11 58.0	0.0
GIVF	Givet	1.71	263	ePn	Pn	20 12 02.6	+0.1
GIVF	Givet	1.71	263	ePg	Pg	20 12 05.5	-1.0
GIVF				eSn	Sn	20 12 23.2	-1.3
GIVF				eSg	Sg	20 12 27.3	-2.0
	9.0nm,0.3s						
CDF	Champ du Feu	1.94	183	ePn	Pn	20 12 05.6	-0.3
CDF	Champ du Feu	1.94	183	eP	Pn	20 12 07.7	+1.8
CDF	Champ du Feu	1.94	183	ePg	Pg	20 12 09.1	-2.2
CDF				eSn	Sn	20 12 28.4	-2.2
CDF				eSg	Sg	20 12 34.0	-3.3
	2.4nm,0.2s						
BAIF	Baives	2.10	263	ePn	Pn	20 12 08.2	0.0
BAIF	Baives	2.10	263	ePg	Pg	20 12 12.5	-2.0
BAIF				eSn	Sn	20 12 33.0	-1.7
BAIF				eSg	Sg	20 12 39.8	-2.7
	5.9nm,0.3s						
BFO	Black Forest	2.10	164	eSg	Sg	20 12 38.2	-4.4
RFYF	Reffroy	2.15	218	ePn	Pn	20 12 08.5	-0.4
	baz=50						
RFYF	Reffroy	2.15	218	ePg	Pg	20 12 13.2	-2.3
RFYF				eSn	Sn	20 12 33.5	-2.4
	baz=31						
RFYF				eSg	Sg	20 12 40.6	-3.6
	2.9nm,0.2s						
CLZ	Clausthal	2.37	50	eSg	Sg	20 12 46.6	-4.9
MEZF	Maizieres J’vi	2.42	221	ePg	Pg	20 12 17.9	-3.0
MEZF				eSn	Sn	20 12 40.0	-2.8
MEZF				eSg	Sg	20 12 48.7	-4.5
	4.2nm,0.4s						
HAU	Haudompre	2.46	198	ePn	Pn	20 12 12.1	-1.2
HAU	Haudompre	2.46	198	ePg	Pg	20 12 18.7	-2.8
HAU				eSn	Sn	20 12 40.5	-3.1
HAU				eSg	Sg	20 12 49.7	-4.6
	2.6nm,0.3s						
HINF	Hinteralfeld	2.57	189	ePg	Pg	20 12 20.6	-3.1
HINF				eSn	Sn	20 12 43.3	-3.1
HINF				eSg	Sg	20 12 52.7	-5.3
	2.9nm,0.3s						
SFTF	Sexfontaines	2.67	217	ePn	Pn	20 12 15.2	-1.1
SFTF	Sexfontaines	2.67	217	ePg	Pg	20 12 22.4	-3.3
SFTF				eSn	Sn	20 12 45.8	-3.1
SFTF				eSg	Sg	20 12 56.7	-4.6
	2.0nm,0.3s						
CABF	La Chapelle	3.85	194	ePn	Pn	20 12 31.4	-1.7
LOR	Lormes	3.89	219	ePn	Pn	20 12 31.9	-1.8
LOR				eSn	Sn	20 13 13.9	-6.1
	baz=32						
LOR				eSg	Sg	20 13 34.0	-8.1
	1.2nm,0.3s						
SSF	Saint Saulge	4.20	220	ePn	Pn	20 12 35.8	-2.3
SMF	Signal de Mont	4.42	214	ePn	Pn	20 12 39.2	-2.0
AVF	Avril sur Loir	4.48	219	ePn	Pn	20 12 39.9	-2.2
FLN	La Foliniere	5.40	256	ePn	Pn	20 12 52.9	-2.2

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*BYKL **29** 20:22:14.8±0.4, 57.38N×120.69E*
MOS 29 20:22:15.6±1.5**, 57.34N×120.59E, h11**km**, mb4.2**/1**, 2C-2D, Error ellipse: s-maj=20.4km s-min=13.5km az=58.3, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRS	Chara	1.34	252	ePg	Pg	20 22 41.0	-1.4
CRS				e		20 22 43.7	
CRS				eSg	Sg	20 22 58.9	-1.5
CRS				max			
	184nm,1.0s						
CRS				Smax			
	401nm,1.3s						
CRS	Chara	1.34	252	eP	Pb	20 22 40.9	+0.6
CRS				e		20 22 58.7	
CRS				pmax	pmax		
	comp=Z,183nm,0.8s						
CRS				smax			
	comp=E,384nm,0.5s						
NRGR	Nerungri	2.36	105	eP	Pn	20 22 56.0	+1.0
NRGR				S	Sn	20 23 25.0	+0.8
CLNS	Chul’man	2.40	100	ePg	Pg	20 22 56.5	-7.1
CLNS				eSg	Sg	20 23 28.3	-7.3
CLNS	Chul’man	2.40	100	eP	Pn	20 22 56.6	+1.1
CLNS				eS	Sn	20 23 26.1	+0.9
CLNS				pmax	pmax		
	comp=N,1.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,1.0nm,0.2s						
CLNS				pmax	pmax		
	comp=Z,1.0nm,0.2s						
CLNS				pmax	pmax		
	comp=N,5.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,12nm,0.3s						
CLNS				smax			
	comp=N,50nm,0.3s						
CLNS				smax			
	comp=E,40nm,0.3s						
CLNS				smax			
	comp=Z,28nm,0.3s						
CLNS				smax			
	comp=N,149nm,0.3s						
CLNS				smax			
	comp=Z,58nm,0.3s						
CLNS				smax			
	comp=E,97nm,0.2s						
CLNS				MLR	MLR		
	comp=Z,40nm,10.0s						
NLYR	Nelyaty	2.81	254	ePn	Pn	20 23 02.4	+1.0
NLYR				⇑iPg	Pg	20 23 06.8	-5.0
NLYR				i Sg	Sg	20 23 43.3	-6.0
NLYR				e		20 23 46.7	
NLYR				Pmax			
	comp=Z,62nm,0.4s						
NLYR				max			
	comp=Z,389nm,1.1s						
NLYR	Nelyaty	2.81	254	eP	Pn	20 23 05.1	+3.7
NLYR				e		20 23 42.4	
NLYR				pmax	pmax		
	comp=Z,8.0nm,0.3s						
NLYR				smax			
	comp=N,388nm,1.1s						
TUP	Tupik	2.94	187	ePn	Pn	20 23 03.3	0.0
TUP				⇑iPg	Pg	20 23 08.0	-6.4
TUP				eSg	Sg	20 23 47.2	-6.5
TUP				Pmax			
	comp=N,134nm,0.5s						
TUP				Smax			
	comp=N,518nm,0.9s						
TUP	Tupik	2.94	187	eP	Pn	20 23 03.2	-0.1
TUP				e		20 23 46.9	
TUP				pmax	pmax		
	comp=Z,127nm,0.6s						
TUP				smax			
	comp=E,422nm,0.9s						
TNDR	Tynda	3.19	132	ePn	Pn	20 23 06.6	-0.1
TNDR				ePg	Pg	20 23 12.0	-7.2
TNDR				e		20 23 44.2	
TNDR				eSg	Sg	20 23 53.3	-8.4
BOD	Bodaibo	3.58	280	⇓iPn	Pn	20 23 12.2	-0.1
BOD				e		20 23 21.3	
BOD				eSg	Sg	20 24 05.4	-9.4
BOD				Smax			
	comp=E,168nm,0.8s						
BOD	Bodaibo	3.58	280	eP	Pn	20 23 11.5	-0.8
BOD				pmax	pmax		
	comp=Z,18nm,0.4s						
SVKR	Severomuysk	4.06	255	Sg	Sg	20 24 22.0	-8.9
SVKR				Smax			
	comp=Z,263nm,0.6s						
UKT	Uakit	4.29	247	⇓iPg	Pg	20 23 33.4	-7.8
UKT				eSg	Sg	20 24 29.1	-9.3
UKT				Pmax			
	comp=Z,12nm,0.7s						
UKT				Smax			
	comp=Z,64nm,1.7s						
KROS	Kirovskiy	4.62	126	i Pg	Pg	20 23 35.1	-13
KROS				eSn	Sn	20 24 15.6	-5.9
YOA	Uoyan	5.03	260	e	Pn	20 24 25.6	+53
YOA				eSg	Sg	20 24 51.9	-11
YOA				Smax			
	comp=Z,254nm,0.7s						
KMO	Kumora	5.39	258	ePn	Pn	20 23 36.4	-1.5
KMO				e		20 23 48.9	
KMO				eSg	Sg	20 25 02.9	-12
KMO				Smax			
	comp=Z,128nm,1.5s						
KMO	Kumora	5.39	258	eP	Pn	20 23 37.2	-0.7
KMO				pmax	pmax		
	comp=Z,5.0nm,0.5s						
YLYR	Ulyunkhan	5.82	249	ePn	Pn	20 23 44.5	+0.4
YLYR				ePg	Pg	20 24 00.6	-11
YLYR				e		20 24 05.1	
YLYR				eSg	Sg	20 25 17.1	-12
YLYR				max			
	comp=Z,4.0nm,0.6s						
YLYR				Smax			
	comp=Z,71nm,1.6s						
YLYR	Ulyunkhan	5.82	249	eP	Pn	20 24 00.4	+16
NIZ	Nizh Angarsk	6.31	260	eSg	Sg	20 25 30.6	-15
NIZ				Smax			
	comp=Z,38nm,1.0s						
NIZ	Nizh Angarsk	6.31	260	eP	Pn	20 23 48.5	-2.4
YAK	Yakutsk	6.58	41	eP	Pn	20 24 13.4	+19
YAK				eS	Sn	20 25 16.8	+6.3
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YAK				smax			
	comp=N,10.0nm,0.4s						
YAK				smax			
	comp=N,74nm,0.6s						
YAK				MLR	MLR		
	comp=Z,10.0nm,6.0s						
CIT	Chita	6.71	220	eSg	Sg	20 25 44.5	-15
CIT				e		20 25 49.7	
CIT				e		20 25 54.7	
CIT				max			
	comp=Z,151nm,1.5s						
SYVR	Suvo	7.05	243	e	Pn	20 24 27.7	+26
SYVR				eSg	Sg	20 25 55.0	-16
SYVR				Smax			
	comp=Z,79nm,1.4s						
KPC	Khapcheranga	9.07	216	eSg	Sg	20 26 57.1	-21
KPC				Smax			
	comp=Z,52nm,1.5s						
KPC	Khapcheranga	9.07	216	eP	P	20 24 27.9	-1.6
KPC				pmax	pmax		
	comp=Z,4.0nm,1.8s						
TIXI	Tiksi	14.78	10	eP	P	20 25 37.8	-8.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.6s						

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*IDC **29** 20:29:31.3±0.9, 34.70N×73.30E, mb3.9/6, mb1 3.9/9, mb1mx3.7/22, mbtmp3.7/9, ML3.4/3, Error ellipse: s-maj=23.4km s-min=20.2km az=111.0*
*BJI **29** 20:29:32.0, 34.70N×73.30E, h10km, mb3.9, ML4.2, Ms4.4*
*MOS **29** 20:29:32.8±0.8, 34.71N×73.21E, h24km, mb3.8/1, Error ellipse: s-maj=27.8km s-min=10.0km az=92.0*
*NEIC **29** 20:29:33.1±0.8, 34.69N×73.34E, h10km, Error ellipse: s-maj=18.7km s-min=11.8km az=105.0*
*NDI **29** 20:29:34.1±3.7, 34.79N×73.26E, h10km, ML3.8*
*NNC **29** 20:29:43.4±15.0, 34.98N×72.96E, h96km±262km, mpv3.8, Error ellipse: s-maj=157.2km s-min=122.2km az=101.0*
ISC 29 20:29:30.0±0.5**, 34.61N**±0.03×**73.34E**±0.07**, h10**km**, n44, σ1ˢ32**/61**, mb3.7**/5**, 3C-2D, Pakistan**

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

THN	Thein Dam	2.95	137	eP	Pb	20 30 23.7	+1.4
THN				ex	Sg	20 31 07.9	-0.3
DLH	Dalhousie	3.02	133	eP	Pb	20 30 26.0	+2.5
DLH				ex	Sg	20 31 12.0	+1.5
BHK	Bhakra	4.11	140	eP	Pg	20 30 57.6	+5.6
BHK				eS	Sg	20 31 45.9	-0.9
SDNR	Sundarnagar	4.35	134	eP	Pn	20 30 42.0	+4.2
SDNR				eS	Sn	20 31 33.5	+4.2
SMLA	Simla	4.74	136	eP	Pn	20 30 46.3	+3.0
SMLA				eS	Sn	20 31 42.8	+3.8
	1µm,0.2s						
KLP	Kalpa	5.14	125	AML	AML	20 32 22.7	
	comp=N,335nm,0.3s						
KLP				AML	AML	20 32 33.0	
	comp=E,388nm,0.6s						
KSH	Kashi	5.33	23	ePG	Pb	20 31 01.5	-1.5
KSH				S	Sn	20 32 00.0	+6.2
KSH				Smax			
	comp=N,830nm,1.9s						
KSH				Smax			
	comp=E,90nm,0.8s						
DDI	Dehra Dun	5.85	136	eP	Pn	20 31 02.5	+3.5
DDI				eS	Sn	20 32 08.4	+1.5
NDI	New Delhi	6.77	150	eP	Pn	20 31 17.0	+5.0
NDI				ex	x	20 31 43.0	
NDI				eS	Sn	20 32 28.5	-1.5
NDI				ex	x	20 33 15.0	
KHET	Khetri	6.85	161	eS	Sn	20 32 30.5	-1.5
KHET				AML	AML	20 33 09.8	
	comp=N,30nm,0.4s						
KHET				AML	AML	20 33 21.0	
	comp=E,36nm,0.3s						
KUDL	Kundal	6.99	156	eS	Sn	20 32 33.9	-1.5
KUDL				AML	AML	20 33 32.5	
	comp=Z,33nm,0.5s						
AAK	Ala-Archa	8.06	6	⇓P	P	20 31 34.4	+4.4
	comp=Z,3.4nm,0.8s						
AAK				⇓S	Sn	20 32 59.2	-2.9
	comp=Z,7.0nm,0.9s						
AAK	Ala-Archa	8.06	6	eP	P	20 31 30.8	+0.8
	comp=Z,4.0nm,0.8s						
AAK	Ala-Archa	8.06	6	eP	P	20 31 30.8	+0.8
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AJM	Ajmer	8.19	172	eP	P	20 31 34.6	+2.8
AJM				eS	Sn	20 33 02.5	-2.7
AJM				AML	AML	20 33 07.9	
	comp=N,70nm,0.3s						
AJM				AML	AML	20 33 59.6	
	comp=E,59nm,0.6s						
KK31	Karatay Array	8.76	346	⇑P	P	20 31 40.3	+0.5
	comp=E,1.9nm,0.3s,baz=157,slow=12,SNR=77						
KK31				⇑S	Sn	20 33 15.3	-4.3
	comp=E,3.1nm,0.5s,baz=169,slow=21						
KKAR	Karatay Array	8.76	346	eP	P	20 31 40.2	+0.5
KKAR				S	Sn	20 33 15.2	-4.3
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KOLN	Koldanda	11.12	125	ePn	P	20 32 11.9	-0.3
KOLN				eSn	S	20 34 12.6	-5.1
	comp=Z,25nm,0.6s						
GKN	Gorkha	11.69	121	ePn	P	20 32 19.3	-0.7
GKN				eSn	S	20 34 25.1	-6.5
	comp=Z,42nm,0.4s						
BHJ	Bhuj	11.77	197	eS	S	20 34 27.3	-6.1
BHPL	Bhopal	11.88	161	eS	S	20 34 31.6	-4.7
DMN	Daman	12.26	122	ePn	P	20 32 27.3	-0.4
DMN				eSn	S	20 34 38.9	-6.5
	comp=Z,40nm,0.7s						
KKN	Kakani	12.27	120	ePn	P	20 32 26.6	-1.3
KKN				eSn	S	20 34 38.9	-6.9
	comp=Z,46nm,0.7s						
PKI	Pulchoki	12.50	121	ePn	P	20 32 30.4	-0.4
PKI				eSn	S	20 34 44.2	-7.0
	comp=Z,19nm,0.6s						
GUN	Gumba	12.63	119	ePn	P	20 32 31.9	-0.8
GUN				eSn	S	20 34 48.1	-6.4
	comp=Z,46nm,0.8s						
JIRN	Jiri	13.00	119	ePn	P	20 32 36.8	-0.8
JIRN				eSn	S	20 34 56.9	-6.5
	comp=Z,72nm,0.8s						
MKAR	Makanchi Array	13.92	26	Pn	P	20 32 49.5	-0.1
	comp=Z,0.0nm,0.3s,baz=213,slow=11,SNR=2.6						
MKAR	Makanchi Array	13.92	26	Pn	P	20 32 49.5	-0.1
LSA	Lhasa	15.86	103	P	P	20 33 18.5	+3.5
POO	Poona	16.03	178	ex	x	20 37 55.0	
KURK	Kurchatov	16.55	12	Pn	P	20 33 23.4	-0.2
AB31	Akbulak array	17.66	330	⇑P	P	20 33 37.2	-0.4
	comp=Z,1.6nm,0.8s,baz=154,slow=10,SNR=11						
AB31	Akbulak array	17.66	330	P	P	20 33 37.2	-0.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BVAR	Borovoye Array	18.52	354	P	P	20 33 47.7	-0.7
	comp=Z,0.3nm,0.3s,baz=153,slow=9.1,SNR=7.6						
AKTO	Aktyubinsk	19.37	329	P	P	20 33 56.5	-2.0
	comp=Z,0.2nm,0.3s,baz=152,slow=9.3,SNR=6.3						
ZAL	Zalesovo	20.94	19	P	P	20 34 14.7	-0.5
	comp=Z,3.3nm,0.5s,baz=253,slow=13,SNR=8.2						
GTA	Gaotai	21.64	69	eP	P	20 34 23.5	+1.0
GTA				AP		20 34 28.0	
GTA				XP		20 34 31.0	
SONM	Songino Array	27.92	52	P	P	20 35 23.3	+1.1
	comp=Z,0.3nm,0.8s,mb3.0,baz=257,slow=8.5,SNR=3.0						
ARCES	ARCESS Array B	43.61	338	P	P	20 37 36.6	+1.0
	comp=Z,2.6nm,0.8s,mb4.0,baz=117,slow=8.1,SNR=5.5						
NOA	NORSAR Array B	47.03	324	P	P	20 38 04.1	+1.1
	comp=Z,0.8nm,0.7s,mb3.8,baz=96,slow=7.6,SNR=3.0						
TORD	Torodi Ar. Bea	67.61	271	P	P	20 40 29.6	+0.2
	comp=Z,1.0nm,0.6s,mb4.1,baz=44,slow=5.8,SNR=13						
MATP	Matopo	69.37	225	P	P	20 40 41.7	+1.5
	baz=16,slow=5.8						
MATP	Matopo	69.37	225	P	P	20 40 41.7	+1.5
WRA	Warramunga Arr	79.37	123	P	P	20 41 39.6	+1.6
	comp=Z,0.5nm,0.5s,mb3.7,baz=321,slow=4.8,SNR=23						

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*IDC **29** 21:05:19.5±2.4, 57.34N×121.10E, mb3.7/8, mb1 3.8/9, mb1mx3.7/22, mbtmp3.6/9, ML2.9/1, Error ellipse: s-maj=53.7km s-min=24.8km az=149.0*
*MOS **29** 21:05:22.2±1.9, 57.61N×120.49E, h12^{km}, mb3.9/3, Error ellipse: s-maj=14.2km s-min=10.0km az=71.8*
*BYKL **29** 21:05:22.1±0.3, 57.41N×120.68E, h4^{km}±14^{km}*
*NEIC **29** 21:05:25.1±0.9, 57.72N×120.78E, h20^{km}, mb4.7/1, Error ellipse: s-maj=20.1km s-min=18.5km az=94.0*
ISC 29 21:05:21.0±0.3, **57.31N**±0.03×**120.77E**±0.03, **h4^{km}, n50,** σ**1^{s}62**/77, **mb3.8**/9, **9C-4D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CRS	Chara	1.43	254	⇓iPg	Pg	21 05 48.2	-1.4
CRS				eSg	Sg	21 06 05.9	-2.7
CRS				Smax		21 06 07.2	
	1µm,0.6s						
CRS				Pmax		21 06 51.4	
	375nm,0.8s						
CRS	Chara	1.43	254	eP	Pn	21 05 48.3	+0.5
CRS				e		21 06 06.1	
CRS				pmax	pmax		
	comp=Z,380nm,0.8s						
CRS				smax			
	comp=E,1µm,0.5s						
NRGR	Nerungri	2.26	105	eP	Pb	21 06 02.6	+0.5
NRGR				S	Sb	21 06 32.3	+1.9
CLNS	Chul'man	2.30	100	e	Pb	21 06 03.6	+0.8
CLNS				ePg	Pg	21 06 05.4	-1.5
CLNS				e		21 06 08.3	
CLNS				max		21 06 08.4	
	comp=E,272nm,0.1s						
CLNS				eSg	Sg	21 06 35.6	-2.0
CLNS				Smax		21 06 40.7	
	comp=E,880nm,0.2s						
CLNS	Chul'man	2.30	100	eP	Pb	21 06 03.5	+0.7
CLNS				eS	Sb	21 06 33.4	+1.8
CLNS				pmax	pmax		
	comp=N,15nm,0.3s						
CLNS				pmax	pmax		
	comp=E,21nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,32nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,52nm,0.3s						
CLNS				pmax	pmax		
	comp=N,18nm,0.2s						
CLNS				pmax	pmax		
	comp=E,25nm,0.3s						
CLNS				smax			
	comp=E,42nm,0.2s						
CLNS				smax			
	comp=Z,41nm,0.2s						
CLNS				smax			
	comp=N,86nm,0.3s						
CLNS				smax			
	comp=E,767nm,0.4s						
CLNS				smax			
	comp=N,297nm,0.3s						
CLNS				smax			
	comp=Z,146nm,0.3s						
ALDR	Aldan	2.79	60	ePn	Pn	21 06 07.7	+0.4
ALDR				ePg	Pb	21 06 11.3	+0.1
ALDR				e		21 06 16.0	
ALDR				max		21 06 21.9	
	comp=Z,150nm,0.1s						
ALDR				eSg	Sb	21 06 47.8	+1.9
ALDR				Smax		21 06 50.3	
	comp=Z,3µm,0.1s						
NLYR	Nelyaty	2.90	256	ePn	Pn	21 06 09.6	+0.7
NLYR				⇑iPg	Pb	21 06 14.1	+1.0
NLYR				Pmax		21 06 14.4	
	comp=Z,224nm,0.5s						
NLYR				eSn	Sn	21 06 41.8	-2.9
NLYR				eSg	Sb	21 06 50.4	+1.3
NLYR				e		21 06 53.9	
NLYR				max		21 06 54.9	
	comp=Z,878nm,1.0s						
NLYR	Nelyaty	2.90	256	eP	Pn	21 06 09.5	+0.6
NLYR				e		21 06 49.5	
NLYR				pmax	pmax		
	comp=Z,225nm,0.3s						
NLYR				smax			
	comp=N,838nm,1.0s						
TUP	Tupik	2.93	189	ePn	Pn	21 06 10.5	+1.2
TUP				⇓iPg	Pg	21 06 15.3	-4.3
TUP				Pmax		21 06 16.3	
	comp=N,117nm,0.6s						
TUP				e		21 06 17.9	
TUP				eSn	Sn	21 06 45.7	+0.3
TUP				eSg	Sg	21 06 54.5	-4.2
TUP				Smax		21 06 55.3	
	comp=N,1µm,0.9s						
TUP	Tupik	2.93	189	eP	Pb	21 06 16.2	+2.6
TUP				eS	Sn	21 06 45.8	+0.4
TUP				pmax	pmax		
	comp=Z,287nm,0.6s						
TUP				smax			
	comp=E,1µm,0.8s						
TNDR	Tynda	3.09	133	⇑iPn	Pn	21 06 13.8	+2.2
TNDR				ePg	Pg	21 06 20.1	-2.7
TNDR				Pmax		21 06 22.6	
	comp=E,271nm,0.1s						
TNDR				e		21 06 25.6	
TNDR				e		21 06 43.6	
TNDR				eSn	Sn	21 06 49.4	-0.1
TNDR				eSg	Sg	21 07 00.8	-3.2
TNDR				Smax		21 07 05.8	
	comp=E,857nm,0.1s						
BOD	Bodaibo	3.68	281	⇓iPn	Pn	21 06 19.4	-0.6
BOD				ePg	Pb	21 06 27.0	+0.6
BOD				Pmax		21 06 29.5	
	comp=E,30nm,0.5s						
BOD				eSg	Sb	21 07 13.3	+1.5
BOD				Smax		21 07 20.2	
	comp=E,416nm,0.9s						
BOD	Bodaibo	3.68	281	eP	Pb	21 06 28.0	+1.6
BOD				pmax	pmax		
	comp=Z,34nm,0.5s						
SVKR	Severomuysk	4.15	256	ePn	Pn	21 06 26.2	-0.5
SVKR				ePg	Pb	21 06 36.9	+2.4
SVKR				Pmax		21 06 47.2	
	comp=Z,50nm,0.3s						
SVKR				eSg	Sb	21 07 29.9	+4.5
SVKR				Smax		21 07 44.1	
	comp=Z,531nm,1.1s						
UKT	Uakit	4.37	248	ePn	Pn	21 06 30.1	+0.3
UKT				⇑iPg	Pb	21 06 40.4	+2.2
UKT				Pmax		21 06 43.3	
	comp=Z,31nm,0.8s						
UKT				eSg	Sb	21 07 36.8	+5.0
UKT				Smax		21 07 54.1	
	comp=Z,133nm,1.4s						
UKT	Uakit	4.37	248	eP	Pb	21 06 40.4	+2.2
UKT				pmax	pmax		
	comp=Z,22nm,0.5s						
KROS	Kirovskiy	4.53	127	ePn	Pn	21 06 30.4	-1.6
KROS				⇑iPg	Pb	21 06 42.7	+1.8
KROS				Pmax		21 06 46.9	
	comp=Z,100nm,0.6s						
KROS				eSn	Sn	21 07 23.1	-2.8
KROS				i Sg	Sb	21 07 43.7	+7.4
KROS				Smax		21 07 48.0	
	comp=Z,350nm,0.5s						
YOA	Uoyan	5.12	260	Pg	Pb	21 06 53.7	+2.6
YOA				Pmax		21 06 57.4	
	comp=Z,50nm,0.6s						
YOA				eSg	Sb	21 07 58.0	+4.4
YOA				Smax		21 08 19.3	
	comp=Z,957nm,1.4s						
YOA	Uoyan	5.12	260	eP	Pb	21 06 54.1	+3.0
YOA				pmax	pmax		
	comp=Z,126nm,0.4s						
KMO	Kumora	5.48	259	e	Pb	21 07 02.6	+5.4
KMO				max		21 07 04.4	
	comp=Z,19nm,0.4s						
KMO				eSg	Sb	21 08 10.0	+6.1
KMO				Smax		21 08 19.4	
	comp=Z,223nm,1.3s						
KMO	Kumora	5.48	259	eP	Pb	21 06 59.8	+2.6
KMO				eS	Sn	21 07 45.4	-4.4
KMO				pmax	pmax		
	comp=Z,31nm,0.7s						
KMO				smax			
	comp=N,224nm,1.3s						
YLYR	Ulyunkhan	5.91	250	ePn	Pn	21 06 51.2	-0.3
YLYR				Pg	Pb	21 07 07.7	+3.2
YLYR				Pmax		21 07 19.6	
	comp=N,8.0nm,0.8s						
YLYR				eSg	Sb	21 08 24.6	+8.2
YLYR				Smax		21 08 36.7	
	comp=N,139nm,1.5s						
YLYR	Ulyunkhan	5.91	250	eP	Pn	21 06 51.6	+0.1
NIZ	Nizh Angarsk	6.40	261	e	Pn	21 06 59.2	+0.7
NIZ				e		21 07 18.5	
NIZ				max		21 07 24.5	
	comp=N,8.0nm,0.5s						
NIZ				eSg	Sx	21 08 37.8	
NIZ				Smax		21 08 52.2	
	comp=N,105nm,0.9s						
YAK	Yakutsk	6.53	40	⇑eP	Pn	21 07 01.3	+1.0
CIT	Chita	6.75	221	ePg	Px	21 07 24.4	
CIT				Pmax		21 07 27.3	
	comp=N,14nm,0.7s						
CIT				eSg	Sx	21 08 51.1	
CIT				e		21 08 56.9	
CIT				e		21 09 02.1	
CIT				max		21 09 02.5	
	comp=N,335nm,1.8s						
SYVR	Suvo	7.13	244	ePn	Pn	21 07 08.3	-0.4
SYVR				ePg	Px	21 07 31.4	
SYVR				Pmax		21 07 35.4	
	comp=N,7.0nm,0.9s						
SYVR				eSg	Sx	21 09 03.0	
SYVR				Smax		21 09 10.7	
	comp=N,156nm,1.3s						
OGRR	Ongureny	8.34	249	eSg	Sx	21 09 40.2	
OGRR				Smax		21 09 54.8	
	comp=N,87nm,2.0s						
KPC	Khapcheranga	9.11	217	ePn	P	21 07 34.7	-1.6
KPC				Pg	Px	21 08 07.7	
KPC				Pmax		21 08 13.3	
	comp=N,2.0nm,0.4s						
KPC				eSg	Sx	21 10 04.5	
KPC				Smax		21 10 14.1	
	comp=N,122nm,1.5s						
TRG	Tyrgan	9.45	247	Sg	Sx	21 10 14.3	
TRG				Smax		21 10 30.4	
	comp=N,58nm,1.9s						
ARS	Arshan	11.91	251	eSg	Sx	21 11 30.6	
ARS				Smax		21 11 57.9	
	comp=N,57nm,1.4s						
SONM	Songino Array	12.88	229	Pn	P	21 08 25.6	-1.9
	comp=N,0.1nm,0.3s,baz=31,slow=17,SNR=1.8						
SONM				Lg		21 12 06.7	
	comp=N,0.5nm,0.3s,baz=51,slow=28,SNR=5.2						
TIXI	Tiksi	14.79	10	eP	P	21 08 45.6	-6.7
TIXI				pmax	pmax		
	comp=Z,11nm,0.6s						
KRAR	Krasnoyarsk	15.35	277	⇑iP	P	21 08 56.5	-3.4
SEY	Seymchan	16.60	57	⇑eP	P	21 09 18.5	+2.7
ZAL	Zalesovo	20.44	276	P	P	21 10 00.3	-1.5
	comp=Z,0.8nm,0.6s,baz=50,slow=12,SNR=5.8						
KURK	Kurchatov	25.30	273	⇑eP	P	21 10 48.6	-1.0
MKAR	Makanchi Array	25.56	262	P	P	21 10 51.6	-0.5
	comp=Z,0.8nm,0.6s,mb3.4,baz=60,slow=9.0,SNR=9.7						
MKAR	Makanchi Array	25.56	262	i P	P	21 10 53.5	+1.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SSE	Sheshan	26.21	179	eP	P	21 11 02.8	+4.4
	comp=Z,17nm,1.0s,mb4.5						
AAK	Ala-Archa	32.48	263	⇓iP	P	21 11 51.9	-2.5
AAK				pmax	pmax		
	comp=Z,3.0nm,1.3s,mb4.0						
ARCES	ARCESS Array B	39.76	327	P	P	21 12 53.8	-2.1
	comp=Z,4.7nm,1.0s,mb4.2,baz=51,slow=12,SNR=3.2						
ILAR	Eielson Array	41.46	40	P	P	21 13 06.2	-3.7
	comp=Z,0.3nm,0.6s,mb3.1,baz=293,slow=4.3,SNR=8.3						
OBN	Obninsk	44.03	305	⇑eP	P	21 13 30.1	-0.8
FINES	FINESS Array B	44.33	317	P	P	21 13 31.6	-1.6
	comp=Z,3.1nm,1.0s,mb4.0,baz=51,slow=12,SNR=7.7						
NOA	NORSAR Array B	49.81	323	P	P	21 14 14.6	-1.6
	comp=Z,0.5nm,0.5s,mb3.8,baz=40,slow=7.5,SNR=3.4						
AKASG	Malin Array Be	50.29	304	P	P	21 14 16.9	-3.1
	comp=Z,0.2nm,0.2s,mb3.7,baz=42,slow=8.5,SNR=4.2						
AKASG	Malin Array Be	50.29	304	P	P	21 14 16.9	-3.2
AKASG	Malin Array Be	50.29	304	i P	P	21 14 19.2	-0.9
GERES	GERESS Array B	58.31	312	P	P	21 15 16.8	-2.1
	comp=Z,0.6nm,0.7s,mb3.7,baz=34,slow=4.8,SNR=5.3						

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*NEIC **29** 21:06:20.1±1.3, 17.37S×174.75W, h161^{km}±13^{km}, Error ellipse: s-maj=28.6km s-min=11.9km az=124.0*
*IDC **29** 21:06:20.1±2.5, 17.38S×174.74W, h160^{km}±24^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.9/15, mbtmp4.4/7, Error ellipse: s-maj=37.9km s-min=15.6km az=131.0*
ISC 29 21:06:19.1±2.0, **17.3S**±0.2×**174.9W**±0.2, **h161**^{km}±23^{km}, **n13,** σ**0^{s}59**/9, **mb4.0**/6, **2D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.47	42	P	P	21 07 26.9	+0.2
	42nm,0.3s,baz=200,slow=3.1,SNR=20						
AFI				S	S	21 08 13.9	-4.9
	134nm,0.3s,baz=32,slow=22,SNR=23						
URZ	Urewera	22.06	197	P	P	21 11 01.4	+0.1
	3.7nm,0.3s,mb4.3,baz=279,slow=5.6,SNR=8.4						
STKA	Stephens Creek	41.90	241	P	P	21 13 55.6	+0.3
	12nm,0.9s,mb4.6,baz=82,slow=6.6,SNR=22						
STKA	Stephens Creek	41.90	241	eP	P	21 13 55.6	+0.3
WRA	Warramunga Arr	48.08	258	P	P	21 14 43.8	-0.7
	2.5nm,0.9s,mb3.8,baz=97,slow=6.5,SNR=33						
MJAR	Matsushiro Arr	69.49	321	P	P	21 17 12.8	+0.6
	1.5nm,0.7s,mb3.9,baz=161,slow=5.9,SNR=4.4						
NVAR	Mina Array Bea	76.65	42	P	P	21 17 53.9	0.0
	1.7nm,1.0s,mb3.6,baz=212,slow=8.6,SNR=5.0						
ILAR	Eielson Array	84.55	12	P	P	21 18 34.6	-0.3
	1.5nm,0.5s,mb4.0,baz=227,slow=5.7,SNR=48						
BVAR	Borovoye Array	118.49	321	PKP	PKPdf	21 24 47.9	+0.4
	0.6nm,0.4s,baz=109,slow=0.5,SNR=10						
CLL	Collm	145.48	351	⇓P	PKPdf	21 25 39.7	+2.0
	logA/T=1.1						
CLL				i		21 25 48.1	
CLL	Collm	145.48	351	⇓iP	PKPdf	21 25 39.7	+2.0
CLL				i		21 25 48.1	
BRTR	Keskin Array B	146.67	318	PKPbc	PKPbc	21 25 43.4	+1.8
	2.3nm,1.0s,baz=117,slow=2.8,SNR=9.7						
GERES	GERESS Array B	147.76	349	PKPbc	PKPdf	21 25 46.2	+4.7
	1.1nm,0.8s,baz=45,slow=1.9,SNR=6.8						

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*CSEM **29** 21:16:21.5±0.3, 26.81N×55.69E, h10^{km}, ML3.1, Error ellipse: s-maj=9.5km s-min=6.8km az=49.0*
*KISR **29** 21:16:23.7±0.9, 27.55N×55.80E, h33^{km}, ML3.5*
*OMAN **29** 21:16:27.5, 26.66N×56.01E, h18^{km}, Error ellipse: s-maj=37.9km s-min=10.2km az=247.0*
*THR **29** 21:16:30.4±0.6, 27.50N×55.88E, h14^{km}±9^{km}, ML3.1*
ISC 29 21:16:22.2±1.1, **26.82N**±0.04×**55.68E**±0.06, **h22**^{km}±13^{km}, **n13,** σ**1^{s}06**/18, **4C-2D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.73	37	ePG	Pb	21 16 36.5	+0.4
BNDS				AML	AML	21 16 55.3	
	comp=N,2µm,0.4s						
BANOM	Banah	1.05	148	⇓P	Pb	21 16 40.7	-0.9
	SNR=138						
BANOM				⇑S	Sb	21 16 53.5	-1.4
GHIR	Ghir-Karzin	2.80	302	ePN	Pn	21 17 15.1	+8.2
GHIR				AML	AML	21 18 21.0	
	comp=N,102nm,0.5s						
KRBR	Kerman	3.29	17	ePN	Pn	21 17 14.5	+0.7
KRBR				eSG	Sn	21 17 51.6	-1.2
ARQ	Araqi	3.55	167	⇑P	Pn	21 17 18.9	+1.4
BIDO	Bidbid	3.96	145	⇓P	Pn	21 17 23.0	-0.3
BSY	Bisya	4.28	161	⇑P	Pn	21 17 27.8	-0.1
BSYO	Bisya	4.31	160	P	Pn	21 17 27.8	-0.4
SMDO	Samad	4.32	150	⇑P	Pn	21 17 29.5	+1.1
	SNR=9.7						
RDF	Al-Radifah	7.50	288	eP	Pn	21 18 14.5	+1.3
RDF				eS	Sn	21 19 38.3	0.0
RDF				AML	AML	21 19 39.9	
	comp=Z,4.8nm,0.3s						
UMR	Umm Al-Rimmam	7.54	293	eP	Pn	21 18 14.1	+0.4
UMR				AML	AML	21 19 42.2	
	comp=Z,6.6nm,0.3s						
NAY	Al-Naaiem	7.84	290	eP	Pn	21 18 19.1	+1.1
NAY				eS	Sn	21 19 45.5	-1.5
NAY				AML	AML	21 19 46.9	
	comp=Z,2.7nm,0.4s						
MIB	Mutribah	7.93	294	eP	Pn	21 18 20.3	+1.0
MIB				eS	Sn	21 19 46.7	-2.5
MIB				AML	AML	21 19 49.9	
	comp=Z,11nm,0.5s						

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*IDC **29** 21:27:44.8±2.6, 4.59S×103.01E, mb3.7/6, mb1 3.8/6, mb1mx3.6/15, mbtmp3.7/6, Error ellipse: s-maj=127.7km s-min=21.8km az=54.0*
*NEIC **29** 21:27:48.1±1.8, 4.84S×102.70E, h30^{km}, Error ellipse: s-maj=89.7km s-min=14.4km az=54.0*
ISC 29 21:27:45.8±2.4, **4.8S**±0.5×**102.7E**±0.6, **h30^{km}, n8,** σ**0^{s}31**/8, **mb3.7**/6, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	34.29	119	P	P	21 34 31.6	-0.2
	0.2nm,0.4s,mb3.4,baz=301,slow=9.6,SNR=6.8						
STKA	Stephens Creek	45.29	131	P	P	21 36 03.2	+0.3
	1.4nm,0.5s,mb4.1,baz=314,slow=8.8,SNR=4.0						
STKA	Stephens Creek	45.29	131	P	P	21 36 03.2	+0.3
SONM	Songino Array	52.54	3	P	P	21 36 58.8	0.0
	0.5nm,0.8s,mb3.5,baz=180,slow=8.6,SNR=4.9						
MKAR	Makanchi Array	54.48	343	P	P	21 37 13.3	+0.3
	0.7nm,0.4s,mb3.9,baz=152,slow=9.0,SNR=14						
ZAL	Zalesovo	60.44	348	P	P	21 37 55.2	+0.2
	0.6nm,0.7s,mb3.8,baz=337,slow=5.4,SNR=4.9						
ZAL	Zalesovo	60.44	348	P	P	21 37 55.2	+0.2
BVAR	Borovoye Array	63.75	339	P	P	21 38 16.6	-0.6
	0.2nm,0.4s,mb3.5,baz=135,slow=8.4,SNR=3.5						

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*CSEM **29** 22:06:21.1±0.1, 29.64N×52.03E, h2^{km}, ML3.4, Error ellipse: s-maj=1.8km s-min=1.4km az=119.0*
*KISR **29** 22:06:22.3±0.3, 29.52N×51.75E, h3^{km}±105^{km}, ML2.8*
*TEH **29** 22:06:23.3, 29.52N×51.92E, h10^{km}, Mn3.4*
ISC 29 22:06:21.6±1.3, **29.62N**±0.05×**52.01E**±0.06, **h9**^{km}±12^{km}, **n24,** σ**1^{s}22**/29, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOK	Mook	0.84	133	Pg	Pg	22 06 38.0	-0.5
IPAR	Pars	0.93	76	Pg	Pg	22 06 38.4	-1.9
ISRV	Sarvestan	0.99	104	Pn	Pn	22 06 40.8	-0.8
ISAD	Sadrabad	2.70	32	Pn	Pn	22 07 08.6	+2.5
IMEH	Mehriz	2.86	51	Pn	Pn	22 07 10.4	+2.2
ICHK	Chekchek	3.33	38	Pn	Pn	22 07 17.0	+2.0

IBAF	Bafgh	3.64	56	Pn	Pn	22 07 20.4	+1.0
QRN	Al-Qurain	3.68	257	eP	Pn	22 07 20.5	+0.5
QRN				eS	Sn	22 08 04.0	-0.1
QRN				AML	AML	22 08 04.7	
	comp=Z,18nm,0.2s						
UMR	Umm Al-Rimmam	3.74	270	eP	Pn	22 07 21.5	+0.7
UMR				AML	AML	22 08 09.1	
	comp=Z,30nm,0.3s						
RDF	Al-Radifah	3.96	261	eP	Pn	22 07 24.4	+0.5
RDF				eS	Sn	22 08 11.1	+0.1
RDF				AML	AML	22 08 13.2	
	comp=Z,19nm,0.3s						
MIB	Mutribah	4.07	274	eP	Pn	22 07 26.2	+0.8
MIB	Mutribah	4.07	274	eP	Pn	22 07 26.2	+0.7
NAY	Al-Naaiem	4.17	266	eP	Pn	22 07 27.5	+0.5
NAY				AML	AML	22 08 13.5	
	comp=Z,5.4nm,0.4s						
ISFB	Sefidab	4.72	2	Pn	Pn	22 07 35.0	+0.2
ISFB				Sn	Sn	22 08 29.2	-1.2
HASS	Wahat al Ahsa’	4.87	206	P	Pn	22 07 37.4	+0.6
IQOM	Qom	5.27	352	Pn	Pn	22 07 42.3	-0.1
IVRN	Varamin	5.37	358	Pn	Pn	22 07 44.0	+0.2
IVRN				Sn	Sn	22 08 44.4	-2.1
IDMV	Damavand	5.94	0	Pn	Pn	22 07 52.2	+0.3
IDMV				Sn	Sn	22 08 56.7	-4.2
IFIR	Firoozkooh	6.04	6	Pn	Pn	22 07 53.2	-0.1
IAFJ	Afjeh	6.22	358	Pn	Pn	22 07 55.5	-0.4
MZLS	Mizel	8.24	229	P	P	22 08 21.4	-2.9
HILS	Ha’il	9.26	259	P	P	22 08 34.7	-3.7
AFFS	‘Afif	9.85	237	P	P	22 08 42.2	-4.2
TATS	Tathlith	12.68	220	P	P	22 09 22.0	-3.1

*NNC **29** 22:06:17.8±6.8, 37.56N×70.47E, h104^{km}±85^{km}, mpv4.3, Error ellipse: s-maj=58.2km s-min=32.8km az=26.0*
*IDC **29** 22:06:26.4±1.1, 38.59N×70.99E, mb3.7/6, mb1 3.9/10, mb1mx3.7/24, mbtmp3.8/10, ML3.5/4, MS3.3/1, Ms1 3.3/1, ms1mx2.6/25, Error ellipse: s-maj=22.3km s-min=18.4km az=152.0*
*MOS **29** 22:06:28.2±2.1, 38.67N×70.85E, h33^{km}, mb4.1/1, Error ellipse: s-maj=14.7km s-min=6.5km az=89.8*
*NEIC **29** 22:06:30.2±0.8, 38.54N×70.93E, h45^{km}, mb3.8/5, Error ellipse: s-maj=17.1km s-min=7.2km az=60.0*
ISC 29 22:06:29.6±1.2, **38.57N**±0.05×**70.81E**±0.09, **h71**^{km}±15^{km}, **n55**, σ1^{s}**26**/62, **mb3.6**/7, **7C-9D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	4.18	31	P	P	22 07 32.1	-0.3
	SNR=19						
KK31	Karatay Array	4.53	357	⇓P	P	22 07 37.3	0.0
	22nm,0.5s,baz=175,slow=12,SNR=439						
KK31				⇓S	S	22 08 42.2	+13
	558nm,1.0s,baz=181,slow=28						
KKAR	Karatay Array	4.53	357	PN	P	22 07 37.4	+0.1
KKAR						22 08 42.2	
KKAR				pmax	pmax		
	comp=Z,16nm,0.5s						
KKAR				smax			
	comp=Z,2μm,1.3s						
UCH	Uchtor	4.61	37	P	P	22 07 38.4	0.0
	SNR=13						
EKS2	Erkin-Say	4.66	28	P	P	22 07 39.9	+0.7
	SNR=13						
KZA	Kyzart	4.87	43	P	P	22 07 43.8	+1.7
	SNR=15						
AAK	Ala-Archa	4.93	33	P	P	22 07 43.3	+0.5
	SNR=6.7						
AAK	Ala-Archa	4.93	33	⇓P	P	22 07 42.4	-0.4
	comp=Z,17nm,0.6s						
AAK	Ala-Archa	4.93	33	ePn	P	22 07 41.6	-1.2
AAK				eS	S	22 08 42.1	+3.1
FRU	Bishkek	5.14	33	ePN	P	22 07 46.9	+1.2
FRU				eS	S	22 08 44.0	-0.4
FRU				i		22 09 04.5	
FRU				pmax	pmax		
	comp=Z,60nm,1.8s						
FRU				pmax	pmax		
	comp=E,360nm,2.1s						
KBK	Karagaybulak	5.15	36	P	P	22 07 46.8	+0.9
	SNR=5.7						
CHMS	Chumysh	5.33	33	P	P	22 07 48.2	-0.2
	SNR=33						
USP	Ospenovka	5.46	30	P	P	22 07 49.8	-0.3
	SNR=5.7						
TKM2	Tokmak 2	5.66	38	P	P	22 07 53.7	+0.8
	SNR=17						
THN	Thein Dam	7.31	145	eP	P	22 08 20.7	+4.8
KLP	Kalpa	9.30	137	eP	P	22 08 45.2	+2.2
KLP				eS	S	22 10 18.2	-8.7
KLP				AML	AML	22 10 42.8	
	comp=N,62nm,0.9s						
KLP				AML	AML	22 10 44.8	
	comp=E,66nm,1.0s						
DDI	Dehra Dun	10.17	142	ex	x	22 10 56.3	
KUDL	Kundal	11.43	154	eP	P	22 09 14.9	+3.1
KUDL				eS	S	22 11 07.9	-11
KUDL				AML	AML	22 11 22.9	
	comp=Z,2.6nm,0.6s						
MK02	Makanchi Array	11.77	42	P	P	22 09 15.8	-0.5
MK02				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK31	Makanchi Array	11.77	42	P	P	22 09 15.8	-0.6
	comp=Z,2.6nm,0.9s,baz=231,slow=12,SNR=10						
MKAR	Makanchi Array	11.77	42	Pn	P	22 09 15.8	-0.6
	comp=Z,0.1nm,0.3s,baz=229,slow=13,SNR=9.1						
AB31	Akbulak array	13.23	327	⇑P	P	22 09 33.4	-2.3
	comp=Z,4.1nm,0.7s,baz=143,slow=12,SNR=37						
AB31				S	S	22 11 58.4	-3.1
	comp=Z,5.8nm,0.7s,baz=138,slow=23,SNR=6.1						
AB31	Akbulak array	13.23	327	⇑P	P	22 09 33.4	-2.3
AB31				S	S	22 11 58.4	-3.1
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
VOSK	Vostochnaya	14.15	0	⇑P	P	22 09 44.2	-3.4
	comp=Z,4.2nm,1.8s						
VOSK	Vostochnaya	14.15	0	⇑P	P	22 09 44.2	-3.4
	comp=Z,4.2nm,1.8s						
VOSK	Vostochnaya	14.15	0	⇑P	P	22 09 44.2	-3.4
VOSK				pmax	pmax		
	comp=Z,4.0nm,1.8s						
BVA0	Borovoye Array	14.46	359	⇓P	P	22 09 50.0	-1.5
	baz=169,slow=13,SNR=10						
BVA0	Borovoye Array	14.46	359	⇓P	P	22 09 50.0	-1.5
	comp=Z,10nm,0.3s						
BVA0	Borovoye Array	14.46	359	⇓P	P	22 09 50.0	-1.6
BVA0				pmax	pmax		
	comp=Z,10.0nm,0.3s						
BVAR	Borovoye Array	14.46	359	Pn	P	22 09 48.6	-3.0
	comp=Z,0.3nm,0.3s,baz=169,slow=12,SNR=13						
BRVK	Borovoye	14.49	359	ePn	P	22 09 49.7	-2.4
	comp=Z,1.8nm,0.6s						
BRVK	Borovoye	14.49	359	eP	P	22 09 49.7	-2.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTK	Aktyubinsk	14.94	327	⇑P	P	22 09 57.6	-0.2
AKTK				S	S	22 12 42.8	+0.9
AKTO	Aktyubinsk	14.94	327	⇑P	P	22 09 57.6	-0.2
	comp=Z,0.8nm,0.8s						
AKTO				⇓S	S	22 12 42.8	+1.0
	comp=Z,0.7nm,0.8s						
AKTO	Aktyubinsk	14.94	327	Pn	P	22 09 58.3	+0.5
	comp=Z,0.3nm,0.3s,baz=136,slow=14,SNR=7.1						
AKTO	Aktyubinsk	14.94	327	P	P	22 09 57.5	-0.3
AKTO						22 12 37.5	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKTO				smax			
	comp=Z,1.0nm,0.8s						
CHKZ	Chkalovo	15.11	360	⇓P	P	22 09 56.0	-3.9
	comp=Z,2.2nm,1.0s						
CHKZ	Chkalovo	15.11	360	⇓P	P	22 09 56.0	-3.9
KOLN	Koldanda	15.17	131	eP	P	22 10 01.6	+0.6
	comp=Z,5.2nm,0.5s						
GKN	Gorkha	15.62	128	eP	P	22 10 06.5	-0.2
	comp=Z,10nm,0.5s						
KKN	Kakani	16.17	127	eP	P	22 10 13.2	-0.5
	comp=Z,7.8nm,0.6s						
KKN	Kakani	16.17	127	eP	P	22 10 13.2	-0.5
KKN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
DMN	Daman	16.20	128	eP	P	22 10 13.2	-0.7
PKI	Pulchoki	16.41	128	eP	P	22 10 16.2	-0.4
GUN	Gumba	16.47	126	eP	P	22 10 15.9	-1.4
	comp=Z,6.7nm,0.4s						
JIRN	Jiri	16.84	126	eP	P	22 10 21.3	-0.7
	comp=Z,7.3nm,0.4s						
ZAL	Zalesovo	18.10	27	P	P	22 10 36.4	-1.1
	comp=Z,0.4nm,0.3s,baz=242,slow=6.8,SNR=3.9						
BRTR	Keskin Array B	28.72	284	P	P	22 12 27.9	+5.8
	comp=Z,0.6nm,0.7s,mb3.3,baz=76,slow=5.1,SNR=3.7						
FINES	FINESS Array B	35.70	325	P	P	22 13 26.0	+3.4
	comp=Z,2.6nm,1.0s,mb4.1,baz=117,slow=13,SNR=5.2						
ARCES	ARCESS Array B	39.18	337	LR	LR	22 30 34.5	
	comp=Z,46nm,20.7s,baz=251,slow=37						
NOA	NORSAR Array B	42.65	322	P	P	22 14 23.5	+3.2
	comp=Z,2.7nm,1.0s,mb3.9,baz=82,slow=9.1,SNR=2.6						
TIXI	Tiksi	43.92	23	eP	P	22 14 31.2	+0.8
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.6						
TORD	Torodi Ar. Bea	65.64	268	P	P	22 17 13.6	+4.9
	comp=Z,0.5nm,0.6s,mb3.5,baz=49,slow=5.6,SNR=9.6						
INK	Inuvik	71.89	9	P	P	22 17 50.1	+3.8
	comp=Z,0.8nm,0.8s,mb3.6,baz=348,slow=7.9,SNR=3.0						
WRA	Warramunga Arr	83.21	122	P	P	22 18 54.6	+4.9
	comp=Z,0.3nm,0.5s,mb3.4,baz=324,slow=4.9,SNR=8.4						

*NEIC **29** 22:13:31.6, 29.37S×71.24W, h62^{km}, After GUC.*
GUC 29 22:13:31.6±0.6, **29.37S**×**71.24W**, **h62**^{km}±7^{km}, **ML3.5**, **2C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSCH	La Serena	0.54	181	⇓iP	P	22 13 44.4	+0.2
LSCH				i S	S	22 13 53.6	+0.2
LSCH				AMP		22 13 54.2	
	comp=E,2μm,0.3s						
TLL	Tololo Astrono	0.88	155	⇑iP	P	22 13 49.4	+1.1
TLL				i S	S	22 14 02.4	+1.6
TLL				AMP		22 14 07.6	
	comp=N,601nm,0.4s						
CMCH	Combarbala	1.81	174	⇑iP	P	22 14 01.0	-0.1
CMCH				i S	S	22 14 23.4	+0.5
CMCH				AMP		22 14 37.4	
	comp=E,615nm,0.5s						
CPCH	Copiapo	2.15	21	eP	P	22 14 05.7	-0.2
CPCH				i S	S	22 14 31.5	+0.1
CPCH				AMP		22 14 40.5	
	comp=E,3μm,0.1s						

*KISR **29** 22:13:40.0±0.5, 27.23N×55.35E, h9^{km}±999^{km}, ML2.9*
*CSEM **29** 22:13:40.7, 26.63N×55.23E, h20^{km}, ML2.9, After KISR*
*THR **29** 22:13:41.2±0.3, 27.17N×55.80E, h18^{km}±5^{km}, ML2.7*
ISC 29 22:13:39.7±2.2, **27.1N**±0.3×**55.61E**±0.07, **h18**^{km}, **n10**, σ1^{s}**06**/15, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.58	61	ePG	Pb	22 13 49.5	-1.4
BNDS				AML	AML	22 14 08.0	
	comp=N,720nm,0.4s						
GHIR	Ghir-Karzin	2.60	297	ePN	Pn	22 14 26.4	+4.7
GHIR				AML	AML	22 15 46.1	
	comp=N,32nm,0.7s						
KRBR	Kerman	3.03	19	ePN	Pn	22 14 29.1	+1.2
KRBR				eSG	Sn	22 15 12.8	+8.7
RDF	Al-Radifah	7.34	286	eP	Pn	22 15 29.0	+0.1
UMR	Umm Al-Rimmam	7.36	291	eP	Pn	22 15 29.5	+0.4
UMR	Umm Al-Rimmam	7.36	291	eP	Pn	22 15 32.4	+3.3
NAY	Al-Naaiem	7.68	288	eP	Pn	22 15 33.9	+0.3
NAY				eS	Sn	22 16 59.5	-1.4
NAY	Al-Naaiem	7.68	288	eP	Pn	22 15 33.9	+0.4
NAY				eS	Sn	22 17 00.6	-0.3
MIB	Mutribah	7.75	292	eP	Pn	22 15 35.0	+0.5
MIB				eS	Sn	22 17 00.8	-1.9
MIB				AML	AML	22 17 04.5	
	comp=Z,1.4nm,0.3s						
MIB	Mutribah	7.75	292	eP	Pn	22 15 35.4	+0.9
MIB				eS	Sn	22 17 02.8	+0.1

*ATH **29** 22:24:00.8, 38.29N×22.14E, h5^{km}, MD3.4/8, ML3.2*
*NEIC **29** 22:24:00.8, 38.29N×22.14E, h5^{km}, ML3.2(ATH), After ATH.*
*THE **29** 22:24:02.4, 38.36N×22.27E, h10^{km}, ML2.9*
*CSEM **29** 22:24:02.2±0.1, 38.33N×22.23E, h2^{km}, ML3.2, Error ellipse: s-maj=2.3km s-min=2.1km az=25.0*
ISC 29 22:24:01.4±0.5, **38.33N**±0.03×**22.19E**±0.04, **h10**^{km}, **n24**, σ1^{s}**24**/28, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.63	245	ePB	Pb	22 24 12.4	-1.7
EVR	Evrytania	0.66	333	ePB	Pb	22 24 13.3	-1.2
EVR				eSB	Sb	22 24 24.0	+0.5
AGG	Agios Georgios	0.70	9	ePg	Pg	22 24 14.5	-1.0
AGG				eSg	Sg	22 24 24.8	-0.1
LKR	Lokris	0.71	63	ePB	Pb	22 24 15.6	+0.2
ITM	Ithomi	1.17	191	ePB	Pb	22 24 22.5	-0.7
ATH	Athens Observa	1.25	106	ePB	Pb	22 24 27.0	+2.3
NEO	Neokhori	1.27	39	ePB	Pb	22 24 25.9	+1.0
LKD	Levkas	1.27	288	ePg	Pg	22 24 26.6	-0.2
VLS	Valsamata	1.27	264	ePN	Pn	22 24 23.3	-1.9
VLS				eSB	Sb	22 24 42.3	+1.1
XOR	Xorichti	1.30	37	ePg	Pg	22 24 26.0	-1.3
AOS	Alonnisos	1.56	57	ePg	Pg	22 24 29.8	-2.9
JAN	Janina	1.69	322	ePN	Pn	22 24 33.5	+2.3
VLI	Veliai	1.71	160	ePG	Pg	22 24 32.3	-3.3
LIT	Litokhoron	1.78	7	ePb	Pb	22 24 33.0	-0.8
IGT	Igoumenitsa	1.89	310	ePb	Pb	22 24 36.2	+0.7
PAIG	Paliouri	1.97	35	ePb	Pb	22 24 35.1	-1.9
KYTH	Kithira	2.15	162	ePN	Pn	22 24 40.0	+2.2
OUR	Ouranopolis	2.44	34	ePn	Pn	22 24 41.6	-0.3
FNA	Florina	2.53	346	ePn	Pn	22 24 44.0	+0.8
GRG	Griva	2.63	3	ePn	Pn	22 24 45.2	+0.5
SOH	Sokhos	2.65	19	ePn	Pn	22 24 45.1	+0.2
KNT	Kendrikon	2.88	11	ePn	Pn	22 24 48.6	+0.3
KNT				eSn	Sn	22 25 24.6	+1.3
APE	Apeiranthos	2.93	114	ePn	Pn	22 24 49.4	+0.5
LAST	Lasithi	4.12	139	ePn	Pn	22 25 06.3	+0.4

*MOS **29** 22:41:03.5±1.1, 49.75N×155.80E, h66^{km}, mb4.7/1, Error ellipse: s-maj=23.2km s-min=7.9km az=75.3*
*IDC **29** 22:41:06.8±6.0, 50.00N×155.86E, h69^{km}±46^{km}, mb3.7/13, mb1 3.9/14, mb1mx3.8/24, mbtmp4.0/14, ML3.4/1, Error ellipse: s-maj=67.0km s-min=18.9km az=4.0*
*KRSC **29** 22:41:07.8±1.1, 49.77N×156.66E, h32^{km}±9^{km}, ML4.6*
*NEIC **29** 22:41:08.3±3.3, 49.94N×155.79E, h84^{km}±19^{km}, mb4.3/4, Error ellipse: s-maj=36.8km s-min=11.9km az=180.0*
ISC 29 22:41:06.2±0.5, **49.77N**±0.05×**156.1E**±0.1, **h84**^{km}, **n82**, σ1^{s}**06**/103, **mb4.1**/27, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	0.91	2	i P	P	22 41 24.3	-0.4
SKR				i S	S	22 41 37.6	-1.0
ALID	Alaid	1.15	343	i P	P	22 41 31.8	+4.2
ALID				i S	S	22 41 48.3	+4.7
PAU	Pauzhetka	1.76	15	i P	P	22 41 37.6	+2.0
PAU				eS	S	22 41 58.4	+1.1
PAU				Smax			
	4μm,0.2s						
MIPR	Malaya Ipel’ka	2.54	10	eS	S	22 42 17.8	+1.4
GRL	Gorelyy	3.06	24	i P	P	22 41 54.9	+1.3
GRL				i S	S	22 42 29.1	0.0
RUS	Russkaya	3.08	29	P	P	22 41 53.4	-0.5
RUS				S	S	22 42 26.1	-3.6
RUS	Russkaya	3.08	29	eP	P	22 41 53.4	-0.5
RUS				eS	S	22 42 25.9	-3.8
APC	Apacha	3.23	12	eP	P	22 41 57.8	+1.8
APC				eS	S	22 42 34.1	+0.7
APC				Smax			
	100nm,1.2s						
PET	Petropavlovsk	3.64	25	P	P	22 42 01.9	+0.3
PET				S	S	22 42 41.3	-2.2
PET	Petropavlovsk	3.64	25	eP	P	22 42 01.9	+0.3
PET				i S	S	22 42 41.5	-2.0
PET	Petropavlovsk	3.64	25	ePn	P	22 42 01.6	0.0
PET				eSn	S	22 42 41.1	-2.4
UGLR	Uglovaya	3.85	26	eP	P	22 42 05.4	+0.9
UGLR				eS	S	22 42 47.2	-1.6
KOK	Koryaka	3.87	24	i P	P	22 42 06.4	+1.6
KOK				eS	S	22 42 48.3	-1.1
AVH	Avacha	3.88	24	eP	P	22 42 06.2	+1.3
AVH				eS	S	22 42 49.2	-0.2
SMAR	Somma	3.89	25	eP	P	22 42 06.0	+0.9
SMAR				eS	S	22 42 49.2	-0.6
SDLR	Sedlovina	3.93	26	P	P	22 42 05.9	+0.3
NLC	Nalytchevo	3.97	30	P	P	22 42 04.8	-1.4
NLC				S	S	22 42 46.2	-5.7
NLC	Nalytchevo	3.97	30	i P	P	22 42 04.7	-1.5
NLC				i S	S	22 42 47.0	-4.9
GNL	Ganaly	4.10	16	eP	P	22 42 09.2	+1.3
SPN	Mys Shipunski	4.15	35	eP	P	22 42 07.7	-1.0
SPN				eS	S	22 42 51.0	-5.3
MKZ	Mys Kozlova	5.92	34	P	P	22 42 31.0	-2.0
MKZ				S	S	22 43 31.9	-8.3
MKZ	Mys Kozlova	5.92	34	eP	P	22 42 31.1	-1.9
MKZ				eS	S	22 43 31.9	-8.3
TUMR	Tumrok	6.05	23	eP	P	22 42 35.4	+0.6
KMNR	Kamenistaya	6.50	21	eP	P	22 42 43.2	+2.0
KPT	Kopyto	6.69	20	P	P	22 42 43.1	-0.7
ZLN	Zelenaya	6.88	23	eP	P	22 42 47.3	+0.9
LGNR	Loginova	6.91	22	eP	P	22 42 47.4	+0.6
SRDR	Sredinnyy	6.92	17	eP	P	22 42 48.0	+1.1
KRSR	Krestovskiy	7.00	21	eP	P	22 42 48.4	+0.3
SRKR	Sorokina	7.54	22	eP	P	22 42 54.7	-0.7
KBTR	Krutoberegovo	7.62	30	P	P	22 42 56.2	-0.4
KBTR	Krutoberegovo	7.62	30	eP	P	22 42 54.4	-2.2
KBTR				eS	S	22 44 13.6	-8.5
BKI	Bering	8.13	44	eS	S	22 44 19.9	-15
BKI				Smax			
	60nm,0.3s						
FX1	Attu Island--F	11.14	67	P	P	22 43 43.1	-0.9
	0.9nm,0.3s,baz=270,slow=20,SNR=3.7						
FX1				S	S	22 45 36.9	-11
	2.7nm,0.3s,slow=20,SNR=7.3						
BILL	Bilibino	19.01	12	eP	P	22 45 21.5	-2.0
	4.8nm,0.3s						
BILL	Bilibino	19.01	12	eP	P	22 45 21.5	-2.0
BILL				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ILAR	Eielson Array	32.96	41	P	P	22 47 34.0	-0.5
	comp=Z,0.6nm,0.5s,mb3.6,baz=262,slow=6.2,SNR=12						
INK	Inuvik	38.04	35	P	P	22 48 17.6	+0.2
	comp=Z,1.0nm,0.5s,mb3.9,baz=262,slow=7.8,SNR=5.0						
ZAL	Zalesovo	42.51	304	P	P	22 48 52.5	-1.9
	comp=Z,0.7nm,0.5s,mb3.7,baz=67,slow=6.7,SNR=3.7						
ZAL	Zalesovo	42.51	304	P	P	22 48 52.5	-1.9
BVAR	Borovoye Array	50.49	309	P	P	22 49 56.4	-0.8
	comp=Z,2.4nm,0.5s,mb4.4,baz=61,slow=8.0,SNR=26						
BRVK	Borovoye	50.52	309	eP	P	22 49 55.3	-2.1
	comp=Z,2.3nm,0.6s,mb4.4						
ARU	Arti	54.12	317	eP	P	22 50 20.9	-3.3
ARU	Arti	54.12	317	eP	P	22 50 20.9	-3.4
ARCES	ARCESS Array B	55.64	341	P	P	22 50 32.0	-3.1
	comp=Z,3.1nm,0.9s,mb4.3,baz=39,slow=7.8,SNR=14						
AKTO	Aktyubinsk	58.18	312	P	P	22 50 51.2	-2.1
	comp=Z,1.1nm,0.4s,mb4.2,baz=63,slow=9.3,SNR=7.3						
PDAR	Pinedale Array	61.40	57	P	P	22 51 15.8	+0.3
	comp=Z,0.8nm,0.8s,mb3.8,baz=297,slow=3.3,SNR=5.1						
FINES	FINESS Array B	62.13	335	P	P	22 51 18.5	-1.6
	comp=Z,3.6nm,1.0s,mb4.3,baz=45,slow=8.6,SNR=9.5						
FINES	FINESS Array B	62.13	335	P	P	22 51 18.5	-1.6
NOA	NORSAR Array B	65.98	342	P	P	22 51 43.6	-1.4
	comp=Z,1.3nm,0.8s,mb3.8,baz=24,slow=6.3,SNR=3.7						
AKASG	Malin Array Be	70.10	327	P	P	22 52 08.7	-2.1
	comp=Z,0.4nm,0.4s,mb3.6,baz=32,slow=6.6,SNR=4.9						
TXAR	Lajitas Array	74.33	63	P	P	22 52 36.6	+0.5
	comp=Z,1.5nm,0.6s,mb3.9,baz=311,slow=5.5,SNR=8.3						
GERES	GERESS Array B	76.56	335	P	P	22 52 48.1	-0.3
	comp=Z,0.5nm,0.5s,mb3.5,baz=43,slow=5.5,SNR=6.6						
BRTR	Keskin Array B	77.50	318	P	P	22 52 54.2	+0.4
	comp=Z,0.8nm,0.5s,mb3.7,baz=45,slow=1.7,SNR=4.9						
BAIF	Baives	77.67	342	eP	P	22 52 54.2	-0.3
CDF	Champ du Feu	78.56	339	eP	P	22 52 59.4	-0.1
	comp=Z,6.4nm,0.7s,mb4.2						
CDF	Champ du Feu	78.56	339	eP	P	22 52 59.4	-0.1
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.2						
HAU	Haudompre	79.16	340	eP	P	22 53 02.5	-0.2
	comp=Z,3.6nm,0.5s,mb4.1						
FLN	La Foliniere	79.79	344	eP	P	22 53 06.5	+0.4
LDF	La Druitiere	79.89	344	eP	P	22 53 06.4	-0.3
GRR	Gorron	80.22	345	eP	P	22 53 08.6	+0.2
	comp=Z,16nm,0.8s,mb4.6						
LOR	Lormes	80.39	341	eP	P	22 53 09.4	0.0
	comp=Z,2.1nm,0.4s,mb4.0						
CABF	La Chapelle	80.53	340	eP	P	22 53 10.4	+0.3
SGMF	Saint Gilles	80.63	346	eP	P	22 53 10.9	+0.3
ROSF	Rostrenen	80.66	346	eP	P	22 53 11.3	+0.5
SSF	Saint Saulge	80.66	341	eP	P	22 53 10.9	+0.1
	comp=Z,2.9nm,0.6s,mb4.0						
AVF	Avril sur Loir	80.95	341	eP	P	22 53 12.5	+0.1
	comp=Z,3.6nm,0.6s,mb4.1						
LPL	La Plagne	81.42	339	eP	P	22 53 15.5	+0.7
	comp=Z,7.0nm,0.6s,mb4.4						
LPG	La Plagne	81.43	339	eP	P	22 53 15.6	+0.7
	comp=Z,11nm,0.7s,mb4.5						
TCF	Toulx Ste Croi	81.67	342	eP	P	22 53 16.6	+0.5
MFF	Saint Martin d	81.81	344	eP	P	22 53 17.3	+0.4
	comp=Z,10.0nm,0.7s,mb4.4						
MBDF	Montbardon	82.15	338	eP	P	22 53 19.1	+0.5
	comp=Z,10nm,0.8s,mb4.4						
ORIF	Oris-en-Rattie	82.18	339	eP	P	22 53 18.9	+0.1
CAF	Calviac	83.00	342	eP	P	22 53 23.7	+0.7
SMRF	Simiane la Rot	83.14	339	eP	P	22 53 24.0	+0.3
LFF	La Frestale	83.25	343	eP	P	22 53 24.0	-0.2
	comp=Z,28nm,1.1s,mb4.7						
FRF	La Foret Royal	83.28	338	eP	P	22 53 24.5	+0.1
LMR	La Mourre	83.53	338	eP	P	22 53 26.1	+0.5
	comp=Z,33nm,1.1s,mb4.8						
PGF	Pioggiola	83.64	336	eP	P	22 53 26.5	+0.4
EPF	Esparros	85.17	342	eP	P	22 53 34.2	+0.5
	comp=Z,5.4nm,0.7s,mb4.3						
SJPF	Ste Jean	85.38	344	eP	P	22 53 35.6	+0.8
ETSF	Etsaut	85.47	343	eP	P	22 53 36.7	+1.5

*NIED **29** 22:41:00, 24.70N×122.00E, h80^{km}, Mw4.9 Best double couple: $M_0$2.25×10^{16} NP1:ϕ_s156°, δ88°, λ24°. NP2:ϕ_s65°, δ66°, λ178°.*
*BJI **29** 22:41:48.6, 24.85N×122.00E, h63^{km}, mB4.9, mb4.8, ML5.1, Ms4.4, Msz4.0*
*NEIC **29** 22:41:50.0±0.2, 24.74N×122.03E, mb4.8/36, Error ellipse: s-maj=6.1km s-min=5.3km az=176.0*
NEIC Felt at Taipei.
*JMA **29** 22:41:49.6±0.3, 24.65N×122.03E, h70^{km}, M4.9*
*MOS **29** 22:41:50.3±1.0, 24.94N×122.22E, h97^{km}, mb5.1/34, Error ellipse: s-maj=10.4km s-min=5.1km az=119.2*
*IDC **29** 22:41:50.4±0.8, 24.76N×122.11E, h85^{km}±5^{km}, mb4.4/21, mb1 4.5/25, mb1mx4.5/29, mbtmp4.8/25, MS4.0/18, Ms1 4.0/18, ms1mx3.8/30, Error ellipse: s-maj=12.5km s-min=10.3km az=32.0*
*MAN **29** 22:42:54.6, 19.87N×121.73E, h13^{km}, mb5.0, ML4.0, MS4.1*
ISC 29 22:41:48.8±0.3, **24.77N**±0.02×**122.06E**±0.02, **h84**^{km}±3^{km}, **h82**^{km}±2.1^{km}**:pP-P**, **n272**, σ1^{s}**12**/287, **mb4.8**/83, **24C-15D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TATO	Taipei	0.56	292	eP	P	22 42 01.9	-1.7
YOJ	Yonaguni jima	0.92	109	P	P	22 42 07.1	-0.2
YOJ				S	S	22 42 19.9	-1.4
IRIF	Iriomote-Funau	1.58	105	P	P	22 42 15.8	0.0
IRIF				S	S	22 42 35.9	+0.2
HATJ	Hateruma jima	1.74	114	P	P	22 42 18.1	+0.2
HATJ				eS	S	22 42 39.2	-0.1
JKRS	Kuro-shima	1.85	106	P	P	22 42 19.8	+0.4
JKRS				S	S	22 42 43.0	+1.1
JIJ	Ishigaki jima	1.94	101	P	P	22 42 20.1	-0.4
JIJ				S	S	22 42 43.8	-0.1
JTJ	Tarama	2.41	92	P	P	22 42 28.0	+0.9
JMJ	Miyako jima 2	2.94	88	P	P	22 42 36.1	+1.6
JOGS	Gusukube	3.04	89	P	P	22 42 37.4	+1.5
QZH	Quanzhou	3.16	274	⇓iP	P	22 42 36.0	-1.5
QZH				S	S	22 43 10.5	-3.7
QZH				Smax			
	comp=N,10μm,0.9s						
QZH				Smax			
	comp=E,5μm,0.9s						
JKE	Kume jima 2	4.54	69	P	P	22 42 58.5	+1.8
JKE				S	S	22 43 51.6	+3.0

JAGN	**Aguni-jima**	5.01	68	P	P	22 43 04.1	+0.9
JJT2	**Tamagusuku 2**	5.32	74	P	P	22 43 09.0	+1.7
JIH	**Iheya**	5.78	66	P	P	22 43 14.8	+1.2
JIH				S	S	22 44 19.3	+0.1
JOW	**Kunigami**	5.97	68	P	P	22 43 16.4	+0.2
	comp=E,24nm,0.3s,baz=249,slow=9.2,SNR=54						
JOW				S	S	22 44 22.5	-1.4
	comp=E,6.7nm,0.3s,baz=121,slow=19,SNR=2.4						
JOW	**Kunigami**	5.97	68	P	P	22 43 16.2	0.0
JOW				S	S	22 44 23.9	0.0
SSE	**Sheshan**	6.35	353	⇑P	P	22 43 20.3	-1.3
SSE				S	S	22 44 33.5	+0.1
SSE				Smax			
	comp=N,200nm,1.2s						
SSE				Smax			
	comp=E,320nm,1.2s						
SSE	**Sheshan**	6.35	353	⇑Pn	P	22 43 20.3	-1.3
	comp=E,116nm,0.7s						
SSE				Sn	S	22 44 33.4	0.0
SGCP	**Mt. Cagua**	6.49	180	*e*P	P	22 43 22.5	-1.1
SGCP				*e*S	S	22 44 30.4	-6.4
JTK	**Tokunoshima**	6.88	63	P	P	22 43 29.1	+0.2
JTK				S	S	22 44 44.6	-1.7
APYP	**Conner**	6.91	186	*e*P	P	22 43 28.6	-0.8
APYP				*e*S	S	22 44 42.9	-4.2
CVP	**Callao Caves**	7.03	182	*e*P	P	22 43 30.0	-1.1
JAM	**Amami Oshima**	7.67	60	P	P	22 43 39.0	-0.7
JAM				S	S	22 45 04.2	-1.5
CAUP	**Cauayan**	7.79	182	*e*P	P	22 43 43.0	+1.6
CAUP				*e*S	S	22 45 08.1	-0.5
NJ2	**Nanjing**	7.79	339	*e*P	P	22 43 39.3	-2.1
NJ2				S	S	22 45 04.0	-4.7
NJ2				AMB	AMB		
	comp=Z,210nm,0.6s						
NJ2				Smax			
	comp=N,2µm,1.0s						
NJ2				LR	LR		
	comp=N,2µm,14.6s						
NJ2				LR	LR		
	comp=E,2µm,10.0s						
NJ2				LR	LR		
	comp=Z,710nm,6.1s						
JMZ	**Minamidaito 2**	8.36	81	P	P	22 43 45.7	-3.4
JMZ				*e*S	S	22 45 14.6	-8.1
BCPH	**Baguio City Da**	8.46	190	*i* P	P	22 43 51.0	+0.5
WHN	**Wuhan**	8.94	312	P	P	22 43 55.0	-2.0
WHN				S	S	22 45 35.5	-1.3
WHN				Smax			
	comp=N,660nm,1.2s						
WHN				Smax			
	comp=E,440nm,1.3s						
BALP	**Baler**	8.99	183	*e*P	P	22 43 58.8	+1.1
BALP				*e*S	S	22 45 37.0	-1.2
SCZP	**Santa Cruz**	9.17	193	*e*P	P	22 44 00.5	+0.4
PVCP	**Virac**	11.29	170	*e*P	P	22 44 28.5	-0.3
PVCP				*e*S	S	22 46 23.2	-10
JNU	**Nakatsue**	11.35	41	P	P	22 44 32.1	+2.5
	comp=E,1.0nm,0.3s,baz=216,slow=12,SNR=19						
JNU				LR	LR	22 49 24.7	
	comp=E,315nm,18.1s,baz=224,slow=40						
TIA	**Tai'an**	12.17	341	*e*P	P	22 44 39.3	-1.3
OTRP	**Odiongan**	12.34	180	*e*P	P	22 44 51.9	+9.1
ENH	**Enshi**	12.43	299	*e*P	P	22 44 44.2	+0.2
	comp=E,41nm,0.9s						
QIZ	**Qiongzhong**	12.69	246	*e*P	P	22 44 48.5	+1.0
QIZ				*e*S	S	22 47 10.3	+3.0
QIZ				LR	LR		
	comp=E,620nm,17.7s						
QIZ				LR	LR		
	comp=Z,650nm,19.8s						
INCN	**Inchon**	13.27	16	P	P	22 44 55.7	+0.8
	comp=Z,664nm,1.7s						
KS15	**Wonju Array Si**	13.58	20	P	P	22 45 01.7	+2.6
OCLP	**Ormoc**	13.85	169	*e*P	P	22 45 00.5	-2.3
GYA	**Guiyang**	13.99	280	⇑*i*P	P	22 45 05.3	+0.8
GYA				AP		22 45 17.8	
GYA				S	S	22 47 32.0	-6.1
GYA				AMB	AMB		
	comp=Z,160nm,2.4s						
GYA				LR	LR		
	comp=N,1µm,5.6s						
GYA				LR	LR		
	comp=E,720nm,5.8s						
GYA				LR	LR		
	comp=Z,840nm,5.6s						
MSLP	**Maasin**	14.79	169	*e*P	P	22 45 16.1	+1.2
SNY	**Shenyang**	17.06	4	⇓P	P	22 45 47.3	+4.0
SNY				S	S	22 48 56.8	+8.1
SNY				AMB	AMB		
	comp=Z,50nm,1.0s						
SNY				LR	LR		
	comp=N,970nm,6.1s						
SNY				LR	LR		
	comp=Z,600nm,7.3s						
CD2	**Chengdu**	17.30	295	P	P	22 45 46.8	+0.5
CD2				AP		22 45 59.5	
CD2				PP	PP	22 46 03.5	+1.7
CD2				S	S	22 48 54.5	+0.5
CD2				SS	SS	22 49 17.8	-0.9
CD2				AMB	AMB		
	comp=Z,60nm,0.8s						
CD2				AMB	AMB		
	comp=Z,170nm,7.2s						
CD2				LR	LR		
	comp=N,440nm,6.0s						
CD2				LR	LR		
	comp=Z,280nm,14.4s						
KMI	**Kunming**	17.53	275	P	P	22 45 53.8	+4.6
KMI				PP	PP	22 46 10.0	+5.2
KMI				S	S	22 48 57.3	-1.9
KMI				XS		22 49 19.5	
KMI				SS	SS	22 49 22.0	-2.4
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s						
KMI				LR	LR		
	comp=N,590nm,5.7s						
KMI				LR	LR		
	comp=E,680nm,8.4s						
KMI				LR	LR		
	comp=Z,650nm,9.0s						
KMI	**Kunming**	17.53	275	P	P	22 45 53.7	+4.5
	comp=Z,17nm,1.0s						
KMI				pP		22 46 07.5	
KMI				PP	PP	22 46 10.1	+5.3
KMI				PPP	PPP	22 46 19.1	+4.3
KMI				sP		22 46 21.3	
KMI				S	S	22 48 57.2	-2.0
KMI				sS		22 49 19.4	
KMI				SS	SS	22 49 22.0	-2.4
KMI				SSS	SSS	22 49 36.3	-4.3
KMI	**Kunming**	17.53	275	P	P	22 45 53.7	+4.5
KMI				S	S	22 48 57.2	-2.0
KMI				pmax	pmax		
	comp=Z,17nm,1.0s						
JHJ	**Hachijo jima 2**	17.59	58	P	P	22 45 51.1	+1.2
	comp=Z,17nm,0.3s,baz=211,slow=6.1,SNR=7.5						
MAT	**Matsushiro**	18.16	46	P	P	22 46 00.4	+3.6
MAT	**Matsushiro**	18.16	46	*e*P	P	22 46 00.0	+3.2
MJAR	**Matsushiro Arr**	18.16	46	P	P	22 45 55.2	-1.5
	comp=Z,0.7nm,0.3s,baz=242,slow=10,SNR=10.0						
CBIJ	**Chichi jima**	18.25	78	P	P	22 45 57.9	0.0
	comp=Z,13nm,0.3s,baz=270,slow=20,SNR=4.3						
HHC	**Hu-ho-hao-te**	18.28	334	⇑P	P	22 46 00.8	+2.6
HHC				AP		22 46 15.8	
HHC				SCP		22 53 53.8	
HHC				AMB	AMB		
	comp=Z,360nm,5.6s						
HHC				LR	LR		
	comp=N,420nm,7.2s						
HHC				LR	LR		
	comp=E,450nm,8.0s						
HHC				LR	LR		
	comp=Z,490nm,10.4s						
BTO	**Baotou**	18.74	330	*e*P	P	22 46 05.0	+1.6
CN2	**Changchun**	19.19	7	⇑P	P	22 46 08.5	+0.1
CN2				*e*S	S	22 49 37.8	+2.1
CN2				AMB	AMB		
	comp=Z,20nm,0.9s						
CN2				LR	LR		
	comp=N,400nm,14.0s						
CN2				LR	LR		
	comp=E,300nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
LZH	**Lanzhou**	19.31	310	*e*P	P	22 46 11.3	+1.6
LZH				AP		22 46 27.5	
LZH				PP	PP	22 46 32.0	+3.1
LZH				XP		22 46 35.8	
LZH				*e*S	S	22 49 42.0	+3.8
LZH				AMB	AMB		
	comp=Z,210nm,1.1s						
LZH				AMB	AMB		
	comp=Z,540nm,4.0s						
LZH				LR	LR		
	comp=E,2µm,10.3s						
LZH				LR	LR		
	comp=Z,3µm,14.4s						
LZH	**Lanzhou**	19.31	310	*e*P	P	22 46 11.3	+1.6
	comp=Z,210nm,1.1s						
LZH				pP		22 46 27.5	
LZH				PP	PP	22 46 32.0	+3.1
LZH				sP		22 46 35.8	
LZH				*e*S	S	22 49 42.0	+3.8
LZH				sS		22 50 06.0	
LZH				*e*SS	SS	22 50 17.0	+8.6
LZH	**Lanzhou**	19.31	310	*e*P	P	22 46 11.3	+1.6
LZH				*e*S	S	22 49 42.0	+3.8
LZH				pmax	pmax		
	comp=Z,210nm,1.1s						
MDJ	**Mudanjiang**	20.73	15	*e*P	P	22 46 25.1	+0.6
	comp=Z,52nm,0.8s						
GTA	**Gaotai**	23.76	313	*e*P	P	22 46 55.8	+1.6
GTA				AP		22 47 05.8	
GTA				PP	PP	22 47 34.3	+4.2
GTA				PCP	PcP	22 50 37.3	-0.2
GTA				S	S	22 51 06.0	+5.7
GTA				SCP		22 54 07.5	
GTA				PCS		22 54 15.5	
GTA				AMB	AMB		
	comp=Z,50nm,1.1s,mb4.8						
GTA				AMB	AMB		
	comp=Z,240nm,4.9s						
GTA				LR	LR		
	comp=N,270nm,8.4s						
GTA				LR	LR		
	comp=E,180nm,12.9s						
GTA				LR	LR		
	comp=Z,220nm,12.9s						
GUMO	**Guam**	24.20	113	LR	LR	22 56 22.3	
	comp=Z,142nm,19.4s,baz=72,slow=36						
HIA	**Hailar**	24.52	356	*e*P	P	22 47 02.1	+0.5
	comp=Z,79nm,0.8s,mb5.2						
HIA	**Hailar**	24.52	356	*e*P	P	22 47 02.1	+0.5
HIA				pmax	pmax		
	comp=Z,79nm,0.8s						
ASAJ	**Asahikawa**	25.56	36	P	P	22 47 11.2	-0.3
	comp=Z,8.0nm,0.6s,mb4.3,baz=245,slow=32,SNR=10						
ASAJ				LR	LR	22 57 44.1	
	comp=Z,311nm,21.2s,baz=285,slow=37						
KLR	**Kul'dur**	25.57	15	*e*P	P	22 47 09.0	-2.5
SONM	**Songino Array**	26.16	336	P	P	22 47 17.7	+0.7
	comp=Z,36nm,0.9s,mb4.8,baz=152,slow=8.0,SNR=99						
SONM				LR	LR	22 58 30.4	
	comp=Z,269nm,19.8s,baz=306,slow=38						
SHL	**Shillong**	27.30	278	*e*P	P	22 47 29.0	+1.3
SHL				*e*x	x	22 54 06.0	
YSS	**Yuzh-Sakhalins**	27.62	31	⇑*e*P	P	22 47 28.8	-1.5
YSS				pmax	pmax		
	comp=Z,150nm,1.7s,mb5.2						
LSA	**Lhasa**	27.87	287	P	P	22 47 34.5	+1.6
LSA	**Lhasa**	27.87	287	P	P	22 47 30.6	-2.3
	comp=Z,8.4nm,0.6s,mb4.5						
LSA	**Lhasa**	27.87	287	P	P	22 47 30.6	-2.3
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.4						
ZAK	**Zakamensk**	29.42	335	*e*P	P	22 47 38.3	-8.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.1						
MOY	**Mondy**	31.32	334	*e*P	P	22 48 03.0	-0.2
JIRN	**Jiri**	32.24	283	*e*P	P	22 48 12.2	+0.7
	comp=Z,16nm,0.8s,mb4.8						
GUN	**Gumba**	32.51	284	*e*P	P	22 48 14.6	+0.9
	comp=Z,32nm,0.8s,mb5.2						
PKI	**Pulchoki**	32.94	283	*e*P	P	22 48 17.8	+0.3
KKN	**Kakani**	33.04	283	*e*P	P	22 48 18.7	+0.3
	comp=Z,13nm,0.5s,mb5.0						
KKN	**Kakani**	33.04	283	*e*P	P	22 48 18.7	+0.3
KKN				pmax	pmax		
	comp=Z,6.0nm,0.5s,mb4.7						
DMN	**Daman**	33.21	283	*e*P	P	22 48 20.4	+0.6
BOD	**Bodaibo**	33.53	352	*e*P	P	22 48 19.3	-3.0
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.4						
GKN	**Gorkha**	33.60	284	*e*P	P	22 48 23.4	+0.2
	comp=Z,41nm,1.1s,mb5.2						
WMQ	**Urumqi**	33.84	313	⇓*i*P	P	22 48 26.0	+0.9
WMQ				AP	pP	22 48 45.0	+0.1
WMQ				*e*S	S	22 53 43.0	+1.0
WMQ				AMB	AMB		
	comp=Z,10.0nm,1.2s,mb4.5						
WMQ				AMB	AMB		
	comp=Z,200nm,5.0s						
WMQ				LR	LR		
	comp=N,310nm,27.8s						
WMQ				LR	LR		
	comp=E,120nm,23.4s						
WMQ				LR	LR		
	comp=Z,180nm,28.6s						
KOLN	**Koldanda**	34.53	283	*e*P	P	22 48 31.8	+0.7
	comp=Z,28nm,1.0s,mb5.0						
YAK	**Yakutsk**	37.61	6	*e*P	P	22 48 55.1	-1.7
YAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb4.9						
YAK				pmax	pmax		
	comp=N,16nm,1.2s						
KRAR	**Krasnoyarsk**	37.78	333	⇑*i*P	P	22 48 58.1	-0.1
MKAR	**Makanchi Array**	38.48	315	P	P	22 49 04.7	+0.5
	comp=N,10nm,0.6s,mb4.9,baz=100,slow=9.9,SNR=208						
MKAR				PcP	PcP	22 51 16.0	-0.3
	comp=N,2.2nm,0.7s,baz=77,slow=4.5,SNR=4.3						
MKAR				ScP		22 54 55.8	
	comp=N,0.9nm,0.6s,baz=101,slow=6.2,SNR=5.2						
MKAR				LR	LR	23 06 29.8	
	comp=N,98nm,18.3s,baz=93,slow=38						
KLP	**Kalpa**	39.02	290	*e*P	P	22 49 09.1	+0.3
KLP				AMb	AMB	22 49 12.8	
	comp=Z,19nm,1.4s,mb4.7						
DDI	**Dehra Dun**	39.23	288	*e*P	P	22 49 11.0	+0.5
MA2	**Magadan**	40.15	22	*e*P	P	22 49 15.5	-2.3
MA2				*e*S	S	22 55 16.1	-1.8
MA2				pmax	pmax		
	comp=Z,80nm,1.8s,mb5.2						
MA2				MLR	MLR		
	comp=Z,50nm,20.0s						
ZAL	**Zalesovo**	40.20	326	P	P	22 49 18.4	0.0
	comp=Z,6.8nm,0.8s,mb4.5,baz=0.7,slow=9.0,SNR=44						
ZAL				pP	pP	22 49 37.4	-1.2
	comp=Z,3.1nm,0.7s,baz=355,slow=10.0,SNR=3.6						
ZAL				LR	LR	23 07 52.4	
	comp=Z,248nm,18.4s,baz=345,slow=39						
KUDL	**Kundal**	40.76	285	*e*P	P	22 49 22.8	-0.4
KUDL				AMb	AMB	22 49 25.9	
	comp=Z,8.4nm,1.2s,mb4.5						
KSH	**Kashi**	41.26	302	*e*P	P	22 49 31.0	+3.8
KSH				*e*AP	pP	22 49 49.3	+1.9
KSH				*e*PP	PP	22 51 11.8	+5.1
KSH				*e*PCP	PcP	22 51 27.0	+1.8
KSH				*e*SCP		22 55 09.0	
KSH				*e*PCS		22 55 17.3	
KSH				*e*S	S	22 55 40.5	+5.9
KSH				*e*SS	SS	22 58 43.3	+7.2
KSH				*e*SCS	ScS	22 59 24.0	+3.4
KSH				AMB	AMB		
	comp=Z,340nm,4.2s						
KSH				LR	LR		
	comp=N,670nm,4.6s						
KSH				LR	LR		
	comp=E,720nm,6.3s						
KHET	**Khetri**	41.37	285	*e*P	P	22 49 27.3	-0.9
KHET				AMb	AMB	22 49 29.2	
	comp=Z,3.7nm,0.7s,mb4.3						
NVS	**Novosibirsk**	41.45	327	⇑*i*P	P	22 49 27.6	-1.0
NVS				*i*		22 51 14.9	
NVS				*i*		22 55 43.4	
NVS				pmax	pmax		
	comp=N,19nm,1.8s						
NVS				pmax	pmax		
	comp=E,31nm,1.9s						
ULHL	**Ulahol**	41.45	306	P	P	22 49 31.2	+2.4
	SNR=5.2						
PMG	**Port Moresby**	41.87	141	*e*P	P	22 49 33.0	+0.5
	comp=E,16nm,0.9s,mb4.7						
PMG	**Port Moresby**	41.87	141	*c* *i*P	P	22 49 32.7	+0.2
TKM2	**Tokmak 2**	42.04	307	P	P	22 49 35.5	+1.9
	SNR=25						
KZA	**Kyzart**	42.16	306	P	P	22 49 37.6	+3.1
	SNR=5.2						
KURK	**Kurchatov**	42.17	319	*e*P	P	22 49 32.5	-2.0
	comp=E,15nm,0.8s,mb4.8						
KURK	**Kurchatov**	42.17	319	P	P	22 49 32.7	-1.8
KURK				pmax	pmax		
	comp=Z,25nm,1.4s,mb4.8						
KBK	**Karagaybulak**	42.47	307	P	P	22 49 28.5	-8.6
	SNR=17						
CHMS	**Chumysh**	42.67	307	P	P	22 49 40.2	+1.4
	SNR=9.4						
UCH	**Uchtor**	42.72	306	P	P	22 49 42.0	+2.8
	SNR=27						
FRU	**Bishkek**	42.74	307	*e*P	P	22 49 40.6	+1.3
FITZ	**Fitzroy Crossi**	42.75	175	PcP	PcP	22 51 29.6	-0.8
	comp=Z,5.0nm,0.6s,baz=40,slow=4.4,SNR=4.2						
AAK	**Ala-Archa**	42.80	307	P	P	22 49 41.5	+1.7
	SNR=6.3						
AAK	**Ala-Archa**	42.80	307	*e*P	P	22 49 38.4	-1.4
	comp=Z,7.5nm,0.8s,mb4.5						
AAK	**Ala-Archa**	42.80	307	*c* *i*P	P	22 49 40.3	+0.5
AAK				pmax	pmax		
	comp=Z,15nm,1.7s,mb4.5						
USP	**Ospenovka**	42.89	308	P	P	22 49 41.8	+1.2
	SNR=6.2						
SEY	**Seymchan**	43.16	20	⇑*e*P	P	22 49 38.6	-3.9
AML	**Almayashu**	43.31	306	P	P	22 49 46.3	+2.4
	SNR=9.1						
KKAR	**Karatay Array**	45.76	307	*i* P	P	22 50 04.2	+0.6
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s,mb3.9						
WRAB	**Tennant Creek**	46.01	164	*e*P	P	22 50 04.6	-1.2
	comp=Z,26nm,0.8s,mb5.0						
WRAB	**Tennant Creek**	46.01	164	*e*P	P	22 50 04.6	-1.2
WRAB				pmax	pmax		
	comp=Z,26nm,0.8s,mb5.0						
WRA	**Warramunga Arr**	46.02	164	P	P	22 50 05.4	-0.5
	comp=Z,8.4nm,0.4s,mb4.9,baz=347,slow=8.8,SNR=186						
WRA				S	S	22 56 42.7	-1.2
	comp=Z,1.2nm,0.9s,baz=350,slow=13,SNR=3.6						
WB2	**Warramunga Arr**	46.02	164	*e*P	P	22 50 05.4	-0.5
TIXI	**Tiksi**	47.07	3	⇑*i*P	P	22 50 11.2	-2.4
TIXI				pmax	pmax		
	comp=Z,81nm,1.3s,mb5.3						
VOSK	**Vostochnaya**	47.31	320	P	P	22 50 14.5	-1.1
VOSK				pmax	pmax		
	comp=Z,21nm,1.2s,mb4.7						
BVA0	**Borovoye Array**	47.74	320	*i* P	P	22 50 18.8	-0.2
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.8s,mb3.7						
BVAR	**Borovoye Array**	47.74	320	P	P	22 50 18.5	-0.5
	comp=Z,5.2nm,0.5s,mb4.6,baz=99,slow=8.3,SNR=34						
BVAR				pP	pP	22 50 40.2	+0.7
	comp=Z,4.5nm,0.6s,baz=99,slow=7.5,SNR=5.0						
BVAR				PcP	PcP	22 51 46.0	-1.2
	comp=Z,1.9nm,0.5s,baz=120,slow=2.9,SNR=6.2						
BVAR				ScP		22 55 33.3	
	comp=Z,1.7nm,0.9s,baz=112,slow=3.7,SNR=6.9						
CHKZ	**Chkalovo**	47.78	321	P	P	22 50 18.4	-0.9
CHKZ				pmax	pmax		
	comp=Z,43nm,1.2s,mb5.2						
BRVK	**Borovoye**	47.81	320	*e*P	P	22 50 19.1	-0.4
	comp=Z,26nm,1.1s,mb5.0						
BRVK	**Borovoye**	47.81	320	*e*P	P	22 50 19.1	-0.4
BRVK				pmax	pmax		
	comp=Z,26nm,1.1s,mb5.0						
BILL	**Bilibino**	50.87	20	*e*P	P	22 50 41.8	-1.0
	comp=Z,9.5nm,0.8s,mb4.9						
BILL	**Bilibino**	50.87	20	⇑*i*P	P	22 50 41.9	-0.9
BILL				*e*		22 51 58.1	
BILL				pmax	pmax		
	comp=Z,20nm,1.2s,mb5.0						
BILL				MLR	MLR		
	comp=Z,200nm,20.0s						
AB31	**Akbulak array**	53.61	314	*i* P	P	22 51 03.5	-0.1
AB31				pmax	pmax		
	comp=Z,10.0nm,0.5s,mb5.1						
SVE	**Sverdlovsk**	54.05	323	*e*P	P	22 51 06.5	-0.2
SVE				pmax	pmax		
	comp=Z,80nm,1.7s,mb5.5						
AKTO	**Aktyubinsk**	54.92	315	P	P	22 51 12.8	-0.3
	comp=Z,14nm,1.0s,mb5.0,baz=96,slow=7.4,SNR=26						
AKTO	**Aktyubinsk**	54.92	315	P	P	22 51 12.7	-0.4
AKTO				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.5						
ARU	**Arti**	55.13	323	*e*P	P	22 51 13.1	-1.5
	comp=Z,50nm,1.1s,mb5.5						
ARU	**Arti**	55.13	323	⇑*i*P	P	22 51 13.5	-1.0
ARU				*e*		22 52 10.2	
ARU				*e*S	S	22 58 53.6	+4.5
ARU				*e*SS	SS	23 02 39.0	+5.1
ARU				pmax	pmax		
	comp=Z,29nm,0.9s,mb5.3						
STKA	**Stephens Creek**	59.34	161	*e*P	P	22 51 44.1	-0.4
	comp=Z,5.6nm,0.7s,mb4.7						
STKA	**Stephens Creek**	59.34	161	P	P	22 51 44.1	-0.4
	comp=Z,5.0nm,0.7s,mb4.7,baz=335,slow=6.0,SNR=13						
STKA				LR	LR	23 18 50.5	
	comp=Z,85nm,19.0s,baz=25,slow=37						
TTA	**Tatalina**	64.61	30	*e*P	P	22 52 18.8	-0.4
	comp=Z,12nm,0.8s,mb4.8						
TTA	**Tatalina**	64.61	30	*e*P	P	22 52 18.8	-0.4
TTA				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.8						
KLMR	**Klimovskoe**	65.10	328	*c* *i*P	P	22 52 20.6	-1.9
KLMR				pmax	pmax		
	comp=Z,80nm,1.5s,mb5.3						
GNI	**Garni**	65.13	304	*e*P	P	22 52 22.1	-1.0
	comp=Z,20nm,1.1s,mb4.9						
GNI	**Garni**	65.13	304	*d* *i*P	P	22 52 24.6	+1.5
GNI				pmax	pmax		
	comp=Z,34nm,1.7s						
UMR	**Umm Al-Rimmam**	65.28	293	*e*P	P	22 52 23.8	-0.4
UMR				AMb	AMB	22 52 24.7	
	comp=Z,44nm,0.5s,mb5.5						
IMA2	**Indian Mountai**	65.32	27	*e*P	P	22 52 22.6	-1.2
QRN	**Al-Qurain**	65.33	292	*e*P	P	22 52 23.9	-0.6
QRN				AMb	AMB	22 52 25.0	
	comp=Z,49nm,0.7s,mb5.5						
GOF	**Gofitskoye**	65.39	310	*e*P	P	22 52 23.7	-0.9
GOF				pmax	pmax		
	comp=Z,40nm,1.3s,mb5.1						
KBD	**Kabd**	65.40	292	*e*P	P	22 52 24.5	-0.5
MIB	**Mutribah**	65.53	293	*e*P	P	22 52 25.4	-0.4
MIB				AMb	AMB	22 52 26.3	
	comp=Z,69nm,0.5s,mb5.8						
RDF	**Al-Radifah**	65.59	292	*e*P	P	22 52 25.6	-0.5
RDF				AMb	AMB	22 52 26.8	
	comp=Z,96nm,0.6s,mb5.8						
NAY	**Al-Naaiem**	65.76	292	*e*P	P	22 52 26.6	-0.7
NAY				AMb	AMB	22 52 27.7	
	comp=Z,34nm,0.6s,mb5.4						
KIV	**Kislovodsk**	65.85	309	*c* *i*P	P	22 52 27.7	+0.2
KIV				pmax	pmax		
	comp=Z,65nm,1.3s,mb5.3						
KIV				MLR	MLR		
	comp=Z,100nm,19.0s						
LVZ	**Lovozero**	66.35	336	⇑*i*P	P	22 52 26.9	-3.4
LVZ				pmax	pmax		
	comp=Z,137nm,2.3s,mb5.4						
VOR	**Voronezh**	66.64	318	*e*P	P	22 52 31.5	-0.9
VOR				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.4						
MOS	**Moscow**	66.83	322	*e*P	P	22 52 30.6	-3.0
MOS				pmax	pmax		
	comp=Z,75nm,1.2s,mb5.4						
KDAK	**Kodiak Island**	66.97	35	P	P	22 52 34.1	-0.3
	comp=Z,12nm,0.9s,mb4.7,baz=255,slow=4.5,SNR=7.1						
OBN	**Obninsk**	67.54	322	⇓*i*P	P	22 52 37.0	-1.0
OBN				pmax	pmax		
	comp=Z,38nm,1.2s,mb5.1						
OBN				MLR	MLR		
	comp=Z,100nm,21.0s						
MCK	**McKinley**	67.66	29	*e*P	P	22 52 37.6	-1.0
	comp=Z,1.8nm,0.5s,mb4.2						
MCK	**McKinley**	67.66	29	*e*P	P	22 52 37.6	-1.0
MCK				pmax	pmax		
	comp=Z,2.0nm,0.5s,mb4.2						
ILAR	**Eielson Array**	68.33	27	P	P	22 52 41.5	-1.2
	comp=Z,1.3nm,0.5s,mb4.0,baz=269,slow=4.5,SNR=28						

ILAR				pP	pP	22 53 04.0	-0.6
	comp=Z,1.1nm,0.6s,baz=297,slow=4.3,SNR=4.8						
JOF	Joensuu	68.60	331	ep	P	22 52 42.9	-1.5
	comp=Z,7.1nm,0.5s,mb4.8						
KEV	Kevo	68.74	338	ep	P	22 52 41.6	-3.6
ARCES	ARCESS Array B	69.30	338	P	P	22 52 48.2	-0.5
	comp=Z,4.0nm,0.7s,mb4.3,baz=63,slow=4.3,SNR=23						
ARCES				LR	LR	23 26 51.1	
	comp=Z,79nm,18.8s,baz=333,slow=39						
ARCES	ARCESS Array B	69.30	338	P	P	22 52 48.2	-0.5
ARCES				LR	LR	23 26 51.1	
ANN	Anapa	69.32	311	eP	P	22 52 42.0	-7.2
ANN				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.1						
PUL	Pulkovo	69.80	327	⇓eP	P	22 52 49.8	-2.1
PUL				pmax	pmax		
	comp=E,83nm,0.9s						
PUL				pmax	pmax		
	comp=Z,78nm,0.9s,mb5.5						
KAMS	Al Khamasin	70.81	284	P	P	22 52 58.0	-0.6
AFFS	‘Afif	70.98	288	P	P	22 53 00.1	+0.5
KAF	Kangasniemi	71.05	330	ep	P	22 52 57.9	-1.4
FINES	FINESS Array B	71.35	330	P	P	22 53 01.0	-0.1
	comp=Z,6.2nm,0.5s,mb4.7,baz=59,slow=6.5,SNR=64						
FINES				LR	LR	23 25 26.5	
	comp=Z,127nm,19.3s,baz=74,slow=37						
FINES	FINESS Array B	71.35	330	P	P	22 53 01.0	-0.1
FINES				LR	LR	23 25 26.5	
SIM	Simferopol’	71.55	312	⇓iP	P	22 53 04.1	+1.5
SIM				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.9						
DAWY	Dawson	71.66	27	eP	P	22 53 02.6	-0.3
VSU	Vasula	71.94	327	⇑iP	P	22 53 05.1	+0.4
TATS	Tathlith	72.05	284	P	P	22 53 06.6	+0.6
INK	Inuvik	72.39	22	P	P	22 53 06.5	-0.8
	comp=Z,4.7nm,0.5s,mb4.6,baz=306,slow=7.4,SNR=33						
INK				LR	LR	23 26 12.0	
	comp=Z,62nm,20.8s,baz=332,slow=37						
INK	Inuvik	72.39	22	eP	P	22 53 06.0	-1.2
	comp=Z,9.3nm,0.8s,mb4.7						
INK	Inuvik	72.39	22	eP	P	22 53 06.0	-1.2
INK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AKASG	Malin Array Be	72.97	318	P	P	22 53 10.3	-0.5
	comp=Z,5.4nm,0.7s,mb4.5,baz=60,slow=5.8,SNR=30						
BR131	Keskin Array S	73.47	306	eP	P	22 53 13.6	-0.4
	comp=Z,4.7nm,0.5s,mb4.6						
BRTR	Keskin Array B	73.47	306	P	P	22 53 14.1	0.0
	comp=Z,9.4nm,0.8s,mb4.7,baz=104,slow=5.1,SNR=40						
BRTR				pP	pP	22 53 35.9	-0.4
	comp=Z,3.4nm,0.8s,baz=104,slow=6.2,SNR=3.4						
BLJS	Baljurashi	73.58	285	P	P	22 53 16.1	+1.0
ANTO	Ankara	74.04	307	eP	P	22 53 17.1	-0.4
	comp=Z,9.1nm,0.5s,mb4.8						
ANTO	Ankara	74.04	307	eP	P	22 53 17.1	-0.3
ANTO				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb4.8						
YNBS	Yanbu‘ al Bahr	75.14	290	P	P	22 53 25.6	+1.6
CSS	Prodhromos	75.28	302	eP	P	22 53 23.9	-0.7
	comp=Z,19nm,0.6s,mb5.0						
SUW	Suwalki	75.32	323	eP	P	22 53 24.6	+0.2
SUW	Suwalki	75.32	323	eP	P	22 53 24.6	+0.2
UMJS	Umm Lajj	75.41	291	P	P	22 53 27.5	+2.0
CFR	Carcaliu	75.50	313	⇑P	P	22 53 24.7	-0.9
CFR	Carcaliu	75.50	313	⇑P	P	22 53 24.7	-0.9
TIRR	Tirgusor	75.56	312	⇓P	P	22 53 25.1	-0.9
TIRR	Tirgusor	75.56	312	⇓P	P	22 53 25.1	-0.9
JMOS	Jabal al Moall	75.86	296	P	P	22 53 28.6	+0.6
HAQS	Haql	76.05	296	P	P	22 53 29.8	+0.7
AYUS	‘Aynunah	76.08	295	P	P	22 53 29.8	+0.5
BDAS	Al Bad‘	76.13	295	P	P	22 53 30.0	+0.5
VRI	Vrincioaia	76.17	314	⇓P	P	22 53 30.6	+1.2
VRI	Vrincioaia	76.17	314	⇓P	P	22 53 30.6	+1.2
BURAR	Bucovina Array	76.50	316	⇑P	P	22 53 31.4	+0.2
BURAR	Bucovina Array	76.50	316	⇑P	P	22 53 31.4	+0.2
MLR	Muntele Rosu	76.82	314	LR	LR	23 28 52.0	
	comp=Z,128nm,18.9s,baz=85,slow=37						
MLR	Muntele Rosu	76.82	314	⇓P	P	22 53 29.5	-3.6
MLR	Muntele Rosu	76.82	314	⇓P	P	22 53 29.5	-3.6
KWP	Kalwaria	77.27	319	eP	P	22 53 36.1	+0.7
KWP	Kalwaria	77.27	319	eP	P	22 53 36.1	+0.6
HFS	Hagfors	77.45	331	LR	LR	23 31 23.4	
	comp=Z,295nm,18.0s,baz=68,slow=38						
KOLS	Kolonicke sedl	77.81	318	eP	P	22 53 38.1	-0.3
DLBC	Dease Lake	78.04	31	LR	LR	23 26 13.1	
	comp=Z,73nm,20.6s,baz=91,slow=34						
NB2	NORSAR Subarra	78.09	332	P	P	22 53 40.3	+0.6
	comp=Z,4.4nm,0.8s,mb4.2,baz=55,slow=5.6						
NOA	NORSAR Array B	78.09	332	P	P	22 53 39.8	+0.1
	comp=Z,5.0nm,0.8s,mb4.3,baz=58,slow=5.5,SNR=18						
NOA				LR	LR	23 31 25.2	
	comp=Z,93nm,20.4s,baz=85,slow=38						
STHS	Stebnicka Huta	78.23	319	eP	P	22 53 41.7	+1.0
CRVS	Cervenica-Dubn	78.31	319	e	P	22 53 44.5	+3.3
NAO	NORSAR Subarra	78.36	332	P	P	22 53 40.3	-0.9
	comp=Z,4.4nm,0.8s,mb4.2						
NAO	NORSAR Subarra	78.36	332	P	P	22 53 40.3	-0.9
NAO				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.2						
OJC	Ojcow	78.74	320	eP	P	22 53 44.0	+0.5
NIE	Niedzica	78.78	319	⇓eP	P	22 53 45.0	+1.2
KECS	Kecovo	79.07	318	eP	P	22 53 45.6	+0.2
VYHS	Vyhne	80.06	319	eP	P	22 53 51.0	+0.3
KSP	Ksiaz	80.47	322	eP	P	22 53 53.7	+0.8
YKA	Yellowknife Ar	82.13	23	P	P	22 54 00.8	-0.4
	comp=Z,4.6nm,0.4s,mb4.6,baz=308,slow=5.0,SNR=48						
YKA				LR	LR	23 33 38.6	
	comp=Z,64nm,21.4s,baz=260,slow=38						
GERES	GERESS Array B	82.90	321	P	P	22 54 05.9	+0.4
	comp=Z,2.3nm,0.8s,mb4.0,baz=65,slow=4.4,SNR=14						
GRA1	Grafenberg Arr	83.87	322	eP	P	22 54 10.5	+0.2
	comp=Z,8.0nm,1.3s,mb4.4						
GRF	Grafenberg Arr	83.87	322	eP	P	22 54 10.5	+0.2
	comp=Z,8.0nm,1.3s,mb4.4						
GRF	Grafenberg Arr	83.87	322	eP	P	22 54 10.5	+0.2
GRF				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
GRF	Grafenberg Arr	83.87	322	eP	P	22 54 10.5	+0.2
GRF				pmax	pmax		
	comp=Z,8.0nm,1.3s,mb4.4						
KMBO	Kilima Mbogo	85.75	267	P	P	22 54 22.0	+1.4
	comp=Z,4.8nm,0.8s,mb4.5,baz=42,slow=6.9,SNR=24						
DAVOX	Davos	86.17	320	LR	LR	23 37 11.6	
	comp=Z,65nm,21.7s,baz=170,slow=38						
BORG	Borgarnes	86.37	345	P	P	22 54 22.9	+0.6
CDF	Champ du Feu	86.75	323	eP	P	22 54 24.2	-0.4
HINF	Hinteralfeld	87.32	322	eP	P	22 54 27.6	+0.2
HAU	Haudompre	87.49	323	eP	P	22 54 28.4	+0.2
HAU				eR			
	comp=Z,97nm,17.2s						
MEZF	Maizieres J’vi	87.91	324	eP	P	22 54 29.6	-0.6
CABF	La Chapelle	88.44	322	eP	P	22 54 32.6	-0.1
LPG	La Plagne	88.69	321	eP	P	22 54 34.2	+0.2
	comp=Z,10nm,0.7s,mb4.7						
LPG	La Plagne	88.69	321	eP	P	22 54 34.2	+0.2
LPG				pmax	pmax		
	comp=Z,5.0nm,0.7s,mb4.7						
LPL	La Plagne	88.70	321	eP	P	22 54 34.1	+0.1
	comp=Z,7.3nm,0.6s,mb4.6						
LPL	La Plagne	88.70	321	eP	P	22 54 34.1	+0.1
LPL				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.6						
EDM	Edmonton	88.71	30	eP	P	22 54 34.9	+1.0
PGF	Pioggiola	89.00	317	eP	P	22 54 35.3	-0.2
	comp=Z,56nm,1.1s,mb5.2						
PGF	Pioggiola	89.00	317	eP	P	22 54 35.3	-0.2
PGF				pmax	pmax		
	comp=Z,28nm,1.1s,mb5.2						
MBDF	Montbardon	89.12	320	eP	P	22 54 35.8	-0.2
LOR	Lormes	89.29	323	eP	P	22 54 36.5	-0.2
ORIF	Oris-en-Rattie	89.53	320	eP	P	22 54 37.6	-0.3
	comp=Z,14nm,1.0s,mb4.7						
ORIF				eR			
	comp=Z,115nm,20.9s						
SMF	Signal de Mont	89.67	323	eP	P	22 54 38.2	-0.3
	comp=Z,8.9nm,0.8s,mb4.6						
SMF	Signal de Mont	89.67	323	eP	P	22 54 38.2	-0.3
SMF				pmax	pmax		
	comp=Z,4.0nm,0.8s,mb4.6						
AVF	Avril sur Loir	89.85	323	eP	P	22 54 39.0	-0.4
	comp=Z,11nm,1.1s,mb4.6						
AVF	Avril sur Loir	89.85	323	eP	P	22 54 39.0	-0.4
AVF				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.6						
FRF	La Foret Royal	89.86	319	eP	P	22 54 38.9	-0.6
NEW	Newport	90.07	35	P	P	22 54 41.5	+1.2
	comp=Z,3.5nm,0.5s,mb4.8,baz=330,slow=7.1,SNR=5.8						
VIVF	Saint-Julien-l	90.27	321	eP	P	22 54 40.9	-0.5
BGF	Bois d’Agland	90.27	323	eP	P	22 54 41.0	-0.3
LDF	La Druitiere	90.57	326	eP	P	22 54 42.2	-0.5
TCF	Toulx Ste Croi	90.78	323	eP	P	22 54 43.2	-0.6
RJF	Les Rejaudoux	91.77	323	eP	P	22 54 47.9	-0.5
	comp=Z,10.0nm,0.7s,mb4.9						
RJF				eR			
	comp=Z,97nm,17.2s						
RJF	Les Rejaudoux	91.77	323	eP	P	22 54 47.9	-0.5
RJF				pmax	pmax		
	comp=Z,5.0nm,0.6s,mb4.9						
RJF				MLR	MLR		
	comp=Z,100nm,17.3s						
CHMT	Chamberlain Mo	92.95	34	eP	P	22 54 54.5	+0.8
HLID	Hailey	94.53	37	eP	P	22 55 02.3	+1.3
	comp=Z,3.7nm,1.0s,mb4.8						
NVAR	Mina Array Bea	95.46	43	P	P	22 55 07.1	+1.7
	comp=Z,2.9nm,0.7s,mb4.8,baz=300,slow=4.2,SNR=22						
PPT	Papeete	95.75	107	LR	LR	23 37 08.6	
	comp=Z,91nm,18.1s,baz=11,slow=35						
PDAR	Pinedale Array	97.69	36	LR	LR	23 36 25.0	
	comp=Z,62nm,21.9s,baz=171,slow=34						
TXAR	Lajitas Array	110.55	42	PKiKP		23 00 13.4	
	comp=Z,0.4nm,0.3s,SNR=5.7						
TORD	Torodi Ar. Bea	110.70	296	PKiKP		23 00 13.1	
	comp=Z,0.4nm,0.6s,baz=18,slow=3.2,SNR=8.1						
TORD				PP	PP	23 00 42.1	-13
	comp=Z,0.6nm,0.7s,baz=62,slow=8.5,SNR=4.4						
TORD				PKKPab		23 11 22.9	
	comp=Z,1.3nm,0.8s,baz=247,slow=3.8,SNR=5.5						
DBIC	Dimbokro	119.63	294	PKP	PKPdf	23 00 30.6	+0.9
	comp=Z,2.3nm,0.6s,baz=55,slow=3.4,SNR=4.5						
SNAA	Sanae	124.04	198	P	PKPdf	23 00 37.6	+0.6
VNA2	Neumayer--Watz	125.69	198	⇓iP	PKPdf	23 00 42.0	+2.0
VNA2	Neumayer--Watz	125.69	198	⇑i	PKPdf	23 00 43.3	+3.3
VNA3	Neumayer Olymp	126.15	197	⇑iP	PKPdf	23 00 42.2	+1.3
SDV	Santo Domingo	144.34	22	PKP	PKPdf	23 01 15.9	0.0
	comp=Z,22nm,0.6s,baz=73,slow=0.9,SNR=27						
SDV	Santo Domingo	144.34	22	ePKP	PKPdf	23 01 15.6	-0.4
ROSC	El Rosal	146.51	31	PKPbc	PKPbc	23 01 22.6	+1.4
	comp=Z,17nm,0.6s,baz=98,slow=17,SNR=11						
OTAV	Otavalo	148.18	42	ePKPdf	PKPdf	23 01 24.6	+2.1
BDFB	Brasilia	167.00	312	PKP	PKPdf	23 01 46.9	+1.7
	comp=Z,3.3nm,0.9s,baz=349,slow=5.2,SNR=3.1						
LPAZ	La Paz	167.27	50	PKP	PKPdf	23 01 49.0	+3.7
	comp=Z,2.7nm,0.9s,baz=8.2,slow=4.1,SNR=9.5						
LPAZ				PKPab	PKPab	23 02 51.5	-1.1
	comp=Z,2.4nm,0.8s,baz=345,slow=6.7,SNR=4.7						
LPAZ	La Paz	167.27	50	ePKPdf	PKPdf	23 01 47.9	+2.6
CFAA	Coronel Fontan	168.65	129	PKPab	PKPab	23 02 58.3	+0.1
	comp=Z,0.4nm,0.8s,baz=232,slow=10,SNR=4.7						
SIV	San Ignacio	170.79	19	PKP	PKPdf	23 01 50.0	+2.6
	comp=Z,5.9nm,0.9s,baz=120,slow=2.3,SNR=25						
SIV				PKPab	PKPab	23 03 06.4	-1.7
	comp=Z,1.5nm,0.8s,baz=305,slow=3.8,SNR=5.5						

NNC ***29*** *23:34:23.8±113.0, 34.93N×73.14E, mpv4.2, Error ellipse: s-maj=1158.2km s-min=1025.0km az=76.0*
NDI ***29*** *23:34:24.9±1.8, 33.98N×73.18E, h10^{km}, MD3.3, ML3.1*
ISC 29 23:34:16.2±1.5**, 34.6N**±0.1×**73.3E**±0.3**, h10**^{km}**, n6, σ1^{s}56**/11**, 2D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.00	136	eP	Pn	23 35 07.6	+2.8
THN				eSB	Sb	23 35 45.4	-0.9
SDNR	Sundarnagar	4.41	134	eP	Pn	23 35 26.5	+1.7
SDNR				eSB	Sb	23 36 28.1	+1.0
KLP	Kalpa	5.20	125	eP	Pn	23 35 33.5	-2.5
KLP				eS	Sn	23 36 27.9	-8.9
KLP				AML	AML	23 37 01.1	
	comp=N,44nm,0.6s						
KLP				AML	AML	23 37 02.2	
	comp=E,35nm,0.4s						
KHET	Khetri	6.89	161	eS	Sn	23 37 04.2	-15
KUDL	Kundal	7.03	156	eP	Pn	23 36 00.6	-1.2
KUDL				eS	Sn	23 37 10.0	-13
KK31	Karatay Array	8.72	347	⇓P	P	23 36 27.0	+1.6
	comp=E,4.3nm,0.4s,baz=158,slow=12,SNR=87						
KK31				⇓S	Sn	23 38 03.9	-1.0
	comp=E,1.2nm,0.6s,baz=167,slow=24,SNR=4.6						

IDC 29 23:38:03.5±4.3**, 0.28S**×**100.84E, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.5**/16**, mbtmp3.8**/3**, MS4.0**/2**, Ms1 4.0**/2**, ms1mx3.1**/21**, Error ellipse: s-maj=244.5km s-min=28.3km az=55.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	Kunigami	37.73	42	LR	LR	23 58 37.7	
	comp=Z,303nm,19.4s,baz=220,slow=33						
WRA	Warramunga Arr	38.17	123	P	P	23 45 25.6	-1.1
	0.7nm,0.4s,baz=303,slow=8.9,SNR=5.7						
JNU	Nakatsue	43.62	38	LR	LR	00 04 00.0	
	comp=Z,139nm,18.3s,baz=229,slow=36						
MKAR	Makanchi Array	49.62	343	P	P	23 46 56.7	-2.0
	0.3nm,0.4s,baz=161,slow=8.4,SNR=8.6						
STKA	Stephens Creek	49.68	133	P	P	23 46 56.5	-2.9
	0.8nm,0.5s,baz=319,slow=9.3,SNR=3.7						

MAN ***29*** *23:46:56.6, 5.97N×123.74E, h10^{km}, mb5.5, ML4.5, MS4.8*
MOS ***29*** *23:46:56.9±1.2, 6.41N×124.19E, h10^{km}, mb5.0/24, Error ellipse: s-maj=14.2km s-min=6.9km az=116.4*
IDC ***29*** *23:46:56.8±0.5, 6.34N×124.19E, mb4.5/19, mb1 4.6/19, mb1mx4.6/23, mbtmp4.5/19, MS4.0/13, Ms1 4.0/13, ms1mx3.8/21, Error ellipse: s-maj=22.8km s-min=12.7km az=73.0*
BJI ***29*** *23:46:58.5, 6.26N×124.15E, h12^{km}, mB5.0, mb4.6, Ms4.7, Msz4.4*
HRVD ***29*** *23:46:58.8±0.3, 6.29N×123.97E, h16^{km}±1^{km}, MW5.1/76, Centroid moment Tensor Solution. LP body waves: s45,c56;Mantle waves: s76,c103; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.17±.22; M$_{\theta\theta}$-0.15±.12; M$_{\phi\phi}$-3.01±.16; M$_{r\theta}$1.07±.39; M$_{\theta\phi}$1.32±.09; M$_{\phi r}$-5.34±.66; Best double couple: M$_0$6.396×10^{16} NP1: φ$_s$328°,δ16°,λ72°. NP2:φ$_s$167°,δ74°,λ95°. Principal axes: T 6.261, Plg60°, Azm85°; N .276, Plg5°, Azm346°; P -6.531, Plg29°, Azm253°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***29*** *23:46:58.8±0.3, 6.33N×124.16E, h10^{km}, mb4.8/26, MS4.9/1 Error ellipse: s-maj=11.2km s-min=6.1km az=65.0*
ISC 29 23:47:00.9±0.3**, 6.20N**±0.03×**123.89E**±0.03**, h33**^{km}**, (h34**^{km}±8.6^{km}**:pP-P), n132, σ1^{s}42**/142**, mb4.6**/57**, MS4.2**/24**, 12C-10D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	1.07	19	⇓iP	P	23 47 18.5	-1.1
CTBH				i S	S	23 47 31.9	-1.5
KCP	Kidapawan	1.44	56	⇑iP	P	23 47 31.1	+6.3
KCP				i S	S	23 47 49.6	+7.0
PAGZ	Pagadian	1.71	343	eP	P	23 47 27.8	-1.0
PAGZ				eS	S	23 47 49.0	-0.7
DAV	Davao City (W)	1.88	63	eP	P	23 47 33.2	+1.9
BUKP	Musuan	2.03	35	eP	P	23 47 34.4	+1.1
BUKP				eS	S	23 48 00.5	+2.8
IPIL	Ipil	2.05	320	eP	P	23 47 32.7	-0.9
IPIL				eS	S	23 47 56.5	-1.7
CGP	Cagayan de Oro	2.38	20	⇓iP	P	23 47 40.5	+2.2
CGP				eS	S	23 48 14.7	+8.2
DCPH	Dipolog City	2.42	347	⇓eP	P	23 47 38.8	-0.2
MATI	Mati	2.46	72	eP	P	23 47 39.8	+0.3
MATI				eS	S	23 48 07.8	-0.9
BIPH	Bislig	3.14	51	⇓iP	P	23 47 50.0	+0.8
BIPH				i S	S	23 48 27.0	+1.0
SNPH	Sibulan	3.19	348	eP	P	23 47 55.0	+5.2
BUTP	Butuan	3.24	32	eP	P	23 47 57.0	+6.4
TBP	Tagbilaran	3.47	360	eP	P	23 47 57.5	+3.7
SCPH	Surigao	3.89	24	⇓eP	P	23 48 08.5	+8.6
MSLP	Maasin	4.02	14	eP	P	23 48 06.0	+4.3
LLP	Lapu-Lapu	4.09	1	eP	P	23 47 51.0	-12
GUIM	Jordan	4.58	344	eP	P	23 48 11.6	+1.9
OCLP	Ormoc	4.87	8	eP	P	23 48 17.2	+3.5
RCP	Roxas	5.44	348	⇓eP	P	23 48 25.9	+4.2
BESP	Borongan	5.58	16	eP	P	23 48 27.4	+3.7
CNP	Catarman	6.31	7	eP	P	23 48 45.8	+12
OTRP	Odiongan	6.39	343	eP	P	23 48 33.0	-2.2
BATP	Bataraza	6.57	293	eP	P	23 48 39.0	+1.4
ENPP	El Nido	6.65	319	eP	P	23 48 36.5	-2.3
QIZ	Qiongzhong	18.70	314	eP	P	23 51 21.0	+1.9
QIZ				S	S	23 54 41.3	-1.6
QIZ				LR	LR		
	comp=N,500nm,15.7s						
QIZ				LR	LR		
	comp=E,580nm,12.9s						
QIZ				LR	LR		
	comp=Z,820nm,16.7s						
JOW	Kunigami	20.94	11	P	P	23 51 39.6	-3.7
	comp=Z,6.9nm,0.3s,baz=194,slow=8.3,SNR=2.0						
GUMO	Guam	21.91	69	LR	LR	00 00 16.9	
	comp=Z,45nm,18.0s,MS2.9,baz=259,slow=37						
FITZ	Fitzroy Crossi	24.21	176	P	P	23 52 16.3	+0.5
	comp=Z,6.1nm,0.5s,mb4.3,baz=354,slow=10,SNR=14						
SSE	Sheshan	24.89	354	eP	P	23 52 23.8	+1.5
SSE				S	S	23 56 44.5	+3.8
SSE				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.5						
SSE				AMB	AMB		
	comp=Z,280nm,5.6s						
SSE				LR	LR		
	comp=N,130nm,23.3s,MS3.7						
SSE				LR	LR		
	comp=E,230nm,23.3s,MS3.7						
SSE				LR	LR		
	comp=Z,210nm,22.7s,MS3.6						
SSE	Sheshan	24.89	354	eP	P	23 52 23.7	+1.4
	comp=Z,17nm,0.7s,mb4.7						
SSE				pP		23 52 40.0	
SSE				sP		23 52 48.7	
SSE				S	S	23 56 44.5	+3.8
SSE				sS		23 57 13.0	
SSE				ScS	ScS	00 03 18.3	-2.2
SSE				LR	LR		
	comp=Z,210nm,22.7s,MS3.6						
PSI	Prapat	25.12	263	P	P	23 52 26.8	+2.1
	comp=Z,17nm,1.0s,mb4.5,baz=33,slow=4.8,SNR=7.2						
PSI				LR	LR	00 04 22.8	
	comp=Z,490nm,19.1s,MS4.0,baz=106,slow=41						
WHN	Wuhan	25.82	341	⇓P	P	23 52 33.3	+2.2
NJ2	Nanjing	26.14	350	eP	P	23 52 33.0	-1.1
NJ2				AP	pP	23 52 42.5	-1.0
NJ2				XP	sP	23 52 47.0	-0.4
NJ2				PP	PP	23 53 13.5	-2.7
NJ2				S	S	23 57 01.0	-0.3
NJ2				XS		23 57 13.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.6						
NJ2				AMB	AMB		
	comp=Z,270nm,6.4s						
NJ2				LR	LR		
	comp=N,710nm,15.0s,MS4.6						
NJ2				LR	LR		
	comp=E,1μm,16.2s,MS4.6						
NJ2				LR	LR		
	comp=Z,420nm,17.3s,MS4.0						
ENH	Enshi	27.51	332	eP	P	23 52 46.4	-0.2
	comp=Z,9.3nm,0.8s,mb4.5						
KMI	Kunming	27.64	315	P	P	23 52 49.3	+1.4
KMI				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.4						
KMI	Kunming	27.64	315	P	P	23 52 49.3	+1.4
	comp=Z,11nm,1.0s,mb4.4						
PMG	Port Moresby	27.89	124	P	P	23 52 46.7	-3.5
	comp=Z,21nm,0.9s,mb4.8,baz=313,slow=5.1,SNR=11						
PMG	Port Moresby	27.89	124	eP	P	23 52 48.1	-2.1
	comp=Z,36nm,1.1s,mb4.9						
PMG	Port Moresby	27.89	124	eP	P	23 52 48.2	-2.0
PMG				pmax	pmax		
	comp=Z,36nm,1.1s						
WRAB	Tennant Creek	27.93	159	eP	P	23 52 48.5	-2.0
	comp=Z,25nm,0.9s,mb4.8						
WRAB	Tennant Creek	27.93	159	c iP	P	23 52 49.6	-0.9
WRA	Warramunga Arr	27.94	159	P	P	23 52 49.4	-1.2
	comp=Z,6.6nm,0.7s,mb4.4,baz=338,slow=9.5,SNR=44						
WB2	Warramunga Arr	27.94	159	⇑iP	P	23 52 49.2	-1.4
CD2	Chengdu	31.00	325	eP	P	23 53 17.5	-0.2
CD2				PP	PP	23 54 23.0	+2.9
CD2				S	S	23 58 17.0	-2.0
CD2				AMB	AMB		
	comp=Z,10.0nm,1.3s,mb4.5						
CD2				AMB	AMB		
	comp=Z,170nm,7.2s						
CD2				LR	LR		
	comp=E,340nm,14.4s						
CD2				LR	LR		
	comp=Z,300nm,16.8s,MS4.0						
MAJO	Matsushiro	32.92	21	P	P	23 53 32.5	-2.0
MJAR	Matsushiro Arr	32.92	21	P	P	23 53 30.5	-4.0
	comp=Z,2.6nm,0.7s,mb4.3,baz=201,slow=7.8,SNR=5.0						
MJAR				LR	LR	00 05 51.1	
	comp=Z,365nm,18.8s,MS4.1,baz=200,slow=35						
CTA	Charters Tower	34.15	140	eP	P	23 53 44.8	-0.4
	comp=Z,7.5nm,1.1s,mb4.5						
CTA	Charters Tower	34.15	140	eP	P	23 53 44.8	-0.4
CTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LZH	Lanzhou	34.97	331	eP	P	23 53 54.0	+1.9
LZH				eS	S	23 59 25.0	+4.2
LZH				AMB	AMB		
	comp=Z,40nm,1.4s,mb5.2						
LZH				AMB	AMB		
	comp=Z,330nm,5.5s						
LZH				LR	LR		
	comp=E,1μm,15.0s						
LZH				LR	LR		
	comp=Z,2μm,18.0s,MS4.9						
LZH	Lanzhou	34.97	331	eP	P	23 53 54.0	+1.9
	comp=Z,45nm,1.4s,mb5.2						
LZH				pP	pP	23 54 09.5	+7.7
LZH				sP	sP	23 54 21.0	+15
LZH				PP	PP	23 55 18.0	+7.3
LZH				eS	S	23 59 25.0	+4.2
LZH				sS		23 59 57.0	
LZH				eSS	SS	00 01 50.0	+14
LZH				LR	LR		
	comp=Z,2μm,18.0s,MS4.9						
SHL	Shillong	36.15	306	eP	P	23 54 04.5	+2.3
HHC	Hu-ho-hao-te	36.22	344	eP	P	23 54 09.0	+6.3
HHC				PCP	PcP	23 56 28.5	+0.6
HHC				S	S	23 59 48.5	+8.5
HHC				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.7						
HHC				AMB	AMB		
	comp=Z,280nm,7.2s						
HHC				LR	LR		
	comp=N,600nm,14.4s,MS4.6						
HHC				LR	LR		
	comp=E,360nm,15.6s,MS4.6						
HHC				LR	LR		
	comp=Z,500nm,14.4s,MS4.4						
CN2	Changchun	37.47	2	eP	P	23 54 14.0	+0.8
LSA	Lhasa	38.69	311	P	P	23 54 27.3	+3.8
LSA	Lhasa	38.69	311	eP	P	23 54 24.1	+0.6
	comp=Z,3.4nm,0.6s,mb4.2						
LSA	Lhasa	38.69	311	eP	P	23 54 24.1	+0.6
LSA				pmax	pmax		
	comp=Z,3.0nm,0.6s,mb4.2						
NWAO	Narrogin (SRO)	39.42	189	P	P	23 54 30.6	+1.0
	comp=Z,13nm,1.0s,mb4.6,baz=346,slow=11,SNR=3.2						
GTA	Gaotai	39.55	330	eP	P	23 54 32.0	+1.5
GTA				AP	pP	23 54 40.0	-0.3
GTA				XP	sP	23 54 42.5	-2.0
GTA				AMB	AMB		
	comp=Z,160nm,6.5s						
GTA				LR	LR		
	comp=N,230nm,11.4s,MS4.5						
GTA				LR	LR		
	comp=E,450nm,16.0s,MS4.5						
GTA				LR	LR		
	comp=Z,390nm,15.6s,MS4.3						
STKA	Stephens Creek	41.46	157	⇑iP	P	23 54 47.0	+0.6
	comp=Z,40nm,0.9s,mb5.0						
STKA	Stephens Creek	41.46	157	P	P	23 54 47.0	+0.6
	comp=Z,51nm,0.9s,mb5.2,baz=333,slow=7.3,SNR=76						
JIRN	Jiri	41.64	305	eP	P	23 54 49.6	+1.6
	comp=Z,36nm,0.9s,mb5.0						
GUN	Gumba	42.00	305	eP	P	23 54 52.4	+1.5
	comp=Z,41nm,0.8s,mb5.1						
PKI	Pulchoki	42.24	305	eP	P	23 54 54.0	+1.0
	comp=Z,33nm,1.2s,mb4.8						
PKI	Pulchoki	42.24	305	eP	P	23 54 54.0	+1.0

PKI				pmax	pmax		
	comp=Z,17nm,1.2s,mb4.5						
KKN	Kakani	42.44	305	eP	P	23 54 55.6	+1.1
	comp=Z,25nm,0.9s,mb4.8						
KKN	Kakani	42.44	305	eP	P	23 54 55.6	+1.1
KKN				pmax	pmax		
	comp=Z,13nm,0.9s,mb4.6						
GKN	Gorkha	43.04	305	eP	P	23 55 00.4	+0.9
	comp=Z,23nm,1.0s,mb4.8						
ADE	Adelaide	43.27	162	⇑iP	P	23 55 02.9	+1.7
KOLN	Koldanda	43.80	304	eP	P	23 55 06.6	+0.9
	comp=Z,25nm,0.9s,mb5.0						
SONM	Songino Array	44.10	343	P	P	23 55 07.5	-0.2
	comp=Z,4.7nm,1.0s,mb4.2,baz=151,slow=8.0,SNR=20						
SONM				LR	LR	00 15 18.8	
	comp=Z,222nm,19.5s,MS4.1,baz=148,slow=39						
ARMA	Armidale	45.08	145	eP	P	23 55 16.7	+0.8
ZAK	Zakamensk	47.30	342	eP	P	23 55 33.8	+0.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb4.0						
TOO	Toolangi	47.98	157	⇑iP	P	23 55 40.1	+1.4
	comp=Z,14nm,1.0s,mb4.9						
TOO	Toolangi	47.98	157	⇑iP	P	23 55 40.1	+1.4
TOO				pmax	pmax		
	comp=Z,14nm,1.0s,mb5.0						
WMQ	Urumqi	49.10	326	eP	P	23 55 48.3	+1.1
WMQ				AMB	AMB		
	comp=Z,130nm,5.8s						
WMQ				LR	LR		
	comp=N,560nm,18.3s,MS4.7						
WMQ				LR	LR		
	comp=E,310nm,18.3s,MS4.7						
WMQ				LR	LR		
	comp=Z,230nm,17.6s,MS4.2						
MKAR	Makanchi Array	53.93	326	P	P	23 56 23.9	+0.4
	comp=Z,4.3nm,0.8s,mb4.4,baz=129,slow=7.8,SNR=29						
MKAR				LR	LR	00 19 50.4	
	comp=Z,251nm,20.1s,MS4.3,baz=104,slow=37						
MKAR	Makanchi Array	53.93	326	i P	P	23 56 23.8	+0.2
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KRAR	Krasnoyarsk	55.44	339	⇓iP	P	23 56 30.6	-3.8
YAK	Yakutsk	55.88	3	⇑eP	P	23 56 34.9	-2.6
YAK				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
YAK				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.0						
AAK	Ala-Archa	56.64	318	⇑eP	P	23 56 44.3	+1.0
AAK				pmax	pmax		
	comp=Z,6.0nm,1.3s,mb4.5						
MA2	Magadan	57.06	16	eP	P	23 56 54.0	+8.0
MA2				eS	S	00 04 50.2	+13
MA2				MLR	MLR		
	comp=Z,200nm,21.0s,MS4.2						
ZAL	Zalesovo	57.13	334	P	P	23 56 45.8	-0.8
	comp=Z,0.7nm,0.5s,mb4.0,baz=344,slow=7.0,SNR=6.4						
KURK	Kurchatov	58.15	328	eP	P	23 56 53.3	-0.5
	comp=Z,11nm,0.8s,mb5.0						
KURK	Kurchatov	58.15	328	c iP	P	23 56 52.9	-0.9
NVS	Novosibirsk	58.41	334	i P	P	23 57 03.2	+7.7
KKAR	Karatay Array	59.51	317	i P	P	23 57 03.4	0.0
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.0						
VOSK	Vostochnaya	63.27	327	P	P	23 57 27.0	-1.6
VOSK				pmax	pmax		
	comp=Z,10.0nm,1.2s,mb4.8						
BVA0	Borovoye Array	63.72	327	i P	P	23 57 31.0	-0.5
BVA0				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb4.0						
BRVK	Borovoye	63.79	327	eP	P	23 57 30.5	-1.5
	comp=Z,8.6nm,1.0s,mb4.7						
BRVK	Borovoye	63.79	327	eP	P	23 57 30.5	-1.5
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.8						
CHKZ	Chkalovo	63.90	328	P	P	23 57 30.0	-2.6
CHKZ				pmax	pmax		
	comp=Z,16nm,1.5s,mb4.8						
TIXI	Tiksi	65.45	2	eP	P	23 57 38.6	-3.8
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s,mb4.4						
BILL	Bilibino	67.93	16	P	P	23 57 55.5	-2.7
	comp=Z,7.6nm,0.7s,mb4.8						
BILL	Bilibino	67.93	16	⇑eP	P	23 57 53.7	-4.4
BILL				pmax	pmax		
	comp=Z,7.0nm,1.4s,mb4.5						
AB31	Akbulak array	68.46	321	i P	P	23 58 01.2	-0.5
AB31				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
AKTO	Aktyubinsk	69.98	322	P	P	23 58 10.6	-0.4
	comp=Z,3.1nm,0.9s,mb4.2,baz=91,slow=7.8,SNR=5.2						
AKTO	Aktyubinsk	69.98	322	P	P	23 58 10.4	-0.6
AKTO				pmax	pmax		
	comp=Z,9.0nm,2.3s,mb4.3						
SVE	Sverdlovsk	70.39	329	eP	P	23 58 11.5	-1.9
SVE				e		23 58 34.6	
ARU	Arti	71.35	328	eP	P	23 58 18.2	-1.0
	comp=Z,4.8nm,0.8s,mb4.5						
ARU	Arti	71.35	328	⇓iP	P	23 58 18.4	-0.8
ARU				eS	S	00 07 34.2	+0.7
ARU				eSS	SS	00 12 10.0	-0.1
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.5						
KIV	Kislovodsk	79.40	313	eP	P	23 59 06.3	+0.8
KIV				eS	S	00 09 05.2	+2.6
KIV				eSS	SS	00 14 17.0	+3.9
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.3						
KIV				MLR	MLR		
	comp=Z,212nm,18.0s,MS4.5						
TTA	Tatalina	80.00	27	eP	P	23 59 06.2	-2.1
	comp=Z,16nm,1.3s,mb4.8						
TTA	Tatalina	80.00	27	eP	P	23 59 06.3	-2.0
TTA				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
KLMR	Klimovskoe	81.88	331	eP	P	23 59 16.7	-1.5
KLMR				pmax	pmax		
	comp=Z,50nm,2.5s,mb5.0						
MCK	McKinley	83.23	27	eP	P	23 59 23.6	-1.4
	comp=Z,14nm,0.9s,mb5.0						
MCK	McKinley	83.23	27	eP	P	23 59 23.6	-1.5
MCK				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
OBN	Obninsk	83.42	325	⇑eP	P	23 59 26.5	+0.3
OBN				pmax	pmax		
	comp=Z,19nm,1.5s,mb4.9						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s,MS4.3						
COLA	College	83.69	25	eP	P	23 59 26.2	-1.1
	comp=Z,12nm,0.8s,mb5.1						
COLA	College	83.69	25	eP	P	23 59 26.2	-1.1
COLA				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
ILAR	Eielson Array	84.10	26	P	P	23 59 27.1	-2.3
	comp=Z,6.7nm,0.9s,mb4.8,baz=247,slow=4.1,SNR=39						
ILAR				LR	LR	00 36 25.2	
	comp=Z,54nm,19.4s,MS3.9,baz=359,slow=35						
VNDA	Vanda	86.23	172	eP	P	23 59 38.8	-0.9
	comp=Z,7.7nm,1.4s,mb4.7						
VNDA	Vanda	86.23	172	eP	P	23 59 38.8	-1.0
VNDA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BRTR	Keskin Array B	86.28	309	P	P	23 59 41.0	+0.2
	comp=Z,0.7nm,0.9s,mb3.9,baz=135,slow=4.1,SNR=3.5						
KMBO	Kilima Mbogo	86.78	269	P	P	23 59 44.7	+0.8
	comp=Z,2.0nm,1.1s,mb4.3,baz=51,slow=19,SNR=3.3						
KMBO				LR	LR	00 32 07.4	
	comp=Z,90nm,21.1s,MS4.2,baz=94,slow=31						
KMBO	Kilima Mbogo	86.78	269	P	P	23 59 44.7	+0.8
KMBO				LR	LR	00 32 07.4	
SBA	Scott Base	87.16	172	P	P	23 59 41.0	-3.3
	comp=Z,14nm,1.6s,mb4.9						
SBA	Scott Base	87.16	172	P	P	23 59 41.0	-3.3
SBA				pmax	pmax		
	comp=Z,14nm,1.6s,mb4.9						
ARCES	ARCESS Array B	87.17	340	LR	LR	00 43 26.6	
	comp=Z,152nm,18.4s,MS4.4,baz=247,slow=39						
DAWY	Dawson	87.41	26	eP	P	23 59 45.2	-0.5
AKASG	Malin Array Be	88.20	321	P	P	23 59 48.4	-1.4
	comp=Z,0.2nm,0.2s,mb3.9,baz=72,slow=4.5,SNR=4.5						
FINES	FINESS Array B	88.33	332	P	P	23 59 49.8	-0.4
	comp=Z,4.6nm,0.9s,mb4.7,baz=162,slow=26,SNR=3.8						
FINES				LR	LR	00 42 59.0	
	comp=Z,95nm,19.5s,MS4.2,baz=345,slow=38						
PPT	Papeete	88.56	108	LR	LR	00 37 16.2	
	comp=Z,70nm,18.4s,MS4.1,baz=176,slow=34						
INK	Inuvik	88.91	21	eP	P	23 59 51.2	-1.6
	comp=Z,7.1nm,1.0s,mb5.0						
INK	Inuvik	88.91	21	eP	P	23 59 51.2	-1.6
INK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NOA	NORSAR Array B	95.33	333	P	P	00 00 24.6	+2.0
	comp=Z,1.1nm,0.8s,mb4.3,baz=9.9,slow=2.7,SNR=3.2						
NOA				LR	LR	00 47 27.7	
	comp=Z,81nm,18.0s,MS4.2,baz=85,slow=38						
GERES	GERESS Array B	98.40	321	LR	LR	00 52 02.5	
	comp=Z,100nm,18.1s,MS4.3,baz=289,slow=40						
YKA	Yellowknife Ar	98.41	24	P	P	00 00 35.7	-0.8
	comp=Z,2.2nm,1.0s,mb4.6,baz=300,slow=4.6,SNR=5.3						
YKA				LR	LR	00 48 42.9	
	comp=Z,53nm,20.8s,MS4.0,baz=280,slow=38						
YKA	Yellowknife Ar	98.41	24	P	P	00 00 35.7	-0.8
YKA				LR	LR	00 48 42.9	
YKA	Yellowknife Ar	98.41	24	i P	P	00 00 35.7	-0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TORD	Torodi Ar. Bea	119.46	289	PKP	PKPdf	00 05 47.8	-0.3
	comp=Z,1.5nm,0.9s,baz=58,slow=1.9,SNR=6.6						
DBIC	Dimbokro	127.28	283	PKP	PKPdf	00 06 04.5	+1.1
	comp=Z,2.5nm,0.9s,baz=149,slow=5.9,SNR=2.6						
JTS	JuntasAbangare	146.93	60	⇓iPKP2	PKPab	00 06 41.0	-3.6

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*NEIC **29** 23:47:08.1±0.9, 51.52N×16.15E, h5^{km}, ML2.9(SZGRF), Error ellipse: s-maj=10.5km s-min=4.7km az=16.0*
*PRU **29** 23:47:09.4, 51.47N×16.10E, Felt In Harrachov*
*IPEC **29** 23:47:09.5±0.3, 51.45N×16.35E, ML2.1/4, Error ellipse: s-maj=3.7km s-min=2.1km az=85.0*
*CSEM **29** 23:47:09.2±0.2, 51.49N×16.14E, h2^{km}, ML3.3/4, Error ellipse: s-maj=3.7km s-min=1.7km az=14.0*
*VIE **29** 23:47:11.0±0.7, 51.27N×16.35E, mb2.4/3, ML2.8/3, Error ellipse: s-maj=8.9km s-min=2.8km az=133.0, Suspected Mining induced.*
WAR 29 23:47:08.8, 51.54N×16.13E, h1^{km}, ML2.8, 2C-1D, Mining Induced, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	172	ePG	Pg	23 47 22.0	-1.0
KSP				eSG	Sg	23 47 31.0	-1.4
KSP	Ksiaz	0.71	172	⇓iPg	Pg	23 47 21.7	-1.3
KSP				eSg	Sg	23 47 31.0	-1.4
KSP	Ksiaz	0.71	172	ePg	Pg	23 47 21.7	-1.3
KSP				eSg	Sg	23 47 31.0	-1.4
UPC	Upice	1.04	184	ePG	Pg	23 47 27.8	-1.8
DPC	Dobruska-Polom	1.20	174	ePG	Pg	23 47 30.4	-2.4
DPC				eSG	Sg	23 47 46.0	-2.8
	22nm,0.2s						
DPC	Dobruska-Polom	1.20	174	ePg	Pg	23 47 30.5	-2.3
DPC				eSg	Sg	23 47 46.0	-2.8
PVCC	Panska Ves	1.42	225	ePG	Pg	23 47 34.8	-2.3
BRG	Berggiesshubel	1.53	245	Pn	Pn	23 47 36.4	-1.0
BRG				Pg	Pg	23 47 36.8	-2.6
BRG				Sg	Sg	23 47 57.5	-2.3
BRG	Berggiesshubel	1.53	245	Pn	Pn	23 47 36.3	-1.1
BRG	Berggiesshubel	1.53	245	Pg	Pg	23 47 36.8	-2.6
PRU	Pruhonice	1.86	214	ePN	Pn	23 47 40.2	-1.8
PRU				ePG	Pg	23 47 42.3	-3.6
PRU				eSG	Sg	23 48 06.4	-4.2
CLL	Collm	1.97	264	i PN	Pn	23 47 41.4	-2.3
CLL				i PG	Pg	23 47 44.7	-3.5
CLL				i		23 47 46.1	
CLL				e		23 47 49.0	
CLL				i SG	Sg	23 48 11.0	-3.5
CLL				i		23 48 17.0	
CLL	Collm	1.97	264	i Pn	Pn	23 47 41.4	-2.3
CLL				i Pg	Pg	23 47 44.7	-3.5
CLL				i Sg	Sg	23 48 11.0	-3.5
MORC	Moravsky Berou	1.98	153	ePn	Pn	23 47 41.8	-2.1
MORC				eSg	Sg	23 48 07.5	-7.4
OKC	Ostrava-Krasne	2.14	142	ePG	Pg	23 47 47.9	-3.5
OKC				eSG	Sg	23 48 15.0	-4.9
VRAC	Vranov	2.26	172	ePn	Pn	23 47 46.7	-1.1
VRAC				eSg	Sg	23 48 16.5	-7.5
	15nm,0.3s						
TREC	Trest	2.29	191	ePG	Pg	23 47 50.4	-4.1
KRUC	Moravsky	2.49	176	ePn	Pn	23 47 50.1	-1.0
KRUC				eSg	Sg	23 48 24.2	-7.5
	5.6nm,0.2s						
OJC	Ojcow	2.67	118	ePG	Pg	23 47 58.0	-4.2
OJC				eSG	Sg	23 48 33.0	-4.8
NKC	Novy Kostel	2.68	242	ePN	Pn	23 47 52.5	-1.3
NKC				ePG	Pg	23 47 58.6	-3.6
NKC				eSG	Sg	23 48 33.4	-4.5
	52nm,0.4s						
KHC	Kasperske Hory	2.92	215	ePN	Pn	23 47 55.1	-2.1
KHC				ePG	Pg	23 48 01.0	-6.0
KHC				eSG	Sg	23 48 39.4	-6.5
MOX	Moxa	2.99	254	i P	Pn	23 47 55.7	-2.5
MOX				Pg	Pg	23 48 05.0	-3.4
MOX				Sg	Sg	23 48 44.0	-4.2
SMOL	Smolenice	3.15	164	ePG	Pg	23 48 07.3	-4.3
SMOL				eSG	Sg	23 48 49.8	-3.8
WET	Wettzell	3.18	222	ePn	Pn	23 47 59.0	-2.0
NIE	Niedzica	3.41	127	e(P)	Pg	23 48 13.0	-4.0
NIE				eS	Sg	23 48 56.0	-6.5
MOA	Molln	3.89	199	⇑iPn	Pn	23 48 09.0	-2.1
MOA				⇑iSg	Sg	23 49 12.6	-5.7
	comp=E,10nm,0.5s						
STHS	Stebnicka Huta	3.90	121	ePN	Pn	23 48 09.5	-1.6
STHS				ePG	Pg	23 48 21.1	-5.5
STHS				eSG	Sg	23 49 14.9	-3.7

JMA 30 00:37:24.1±0.1, 40.06N×141.99E, h59^{km}±1^{km}, M3.6, 8C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.15	219	⇑P	P	00 37 33.4	+0.2
JTH				S	S	00 37 40.0	+0.1
JANG	Nango	0.48	311	⇑P	P	00 37 35.7	-0.1
MIYJ	Miyakonagasawa	0.50	195	⇑P	P	00 37 35.9	-0.2
MIYJ				S	S	00 37 44.3	-0.5
JKZ	Kuzumaki	0.51	262	⇑P	P	00 37 36.3	+0.1
JKZ				eS	S	00 37 44.8	-0.2
JOM	Ohasama	0.80	223	⇑P	P	00 37 39.4	-0.2
JOM				S	S	00 37 50.7	-0.4
JTM	Tenmabayashi	1.01	316	⇑P	P	00 37 42.2	-0.3
JTM				eS	S	00 37 55.6	-0.5
JAH	Hinai	1.05	277	⇑P	P	00 37 42.8	-0.2
JAH				S	S	00 37 57.0	0.0
JMK	Ichinoseki	1.26	209	⇑P	P	00 37 45.6	-0.3
JMK				S	S	00 38 01.7	-0.4
JOT	Ohata	1.50	332	P	P	00 37 48.8	-0.5

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*NEIC **30** 00:48:38.1±0.3, 45.36N×112.60W, h5^{km}, ML3.5, Error ellipse: s-maj=4.2km s-min=3.5km az=50.0*
NEIC Felt [III] at Dillon and Twin Bridges.
*IDC **30** 00:48:40.0±1.2, 45.38N×112.48W, mb1 3.8/4, mb1mx3.5/24, mbtmp3.5/4, ML3.2/4, Error ellipse: s-maj=12.9km s-min=11.7km az=58.0*
ISC 30 00:48:37.4±0.7**, 45.35N**±0.03×**112.66W**±0.05**, h11**^{km}±6^{km}**, n48,** σ**1§04**/50**, 1C, Montana**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DLMT	Dillon	0.05	77	eP	Pg	00 48 39.6	+0.1
MCMT	McKenzie Canyo	0.54	194	eP	Pg	00 48 48.2	-0.2
BOZ	Bozeman (W)	0.78	68	⇑eP	Pb	00 48 52.0	-0.5
QLMT	Earthquake Lak	1.02	120	eP	Pb	00 48 55.9	-0.6
YMR	Madison River	1.38	119	eP	Pn	00 49 03.0	+0.2
HRY	Holter Researc	1.48	23	eP	Pn	00 49 05.0	+0.9
YFT	Old Faithful	1.58	124	eP	Pn	00 49 06.7	+1.1
CHMT	Chamberlain Mo	1.62	345	eP	Pn	00 49 07.6	+1.6
MSO	Missoula	1.73	329	eP	Pn	00 49 09.1	+1.5
LKWY	Lake	1.79	115	Pn	Pn	00 49 09.2	+0.7
IMW	Indian Meadow	1.91	139	ePn	Pn	00 49 10.7	+0.5
MOOW	Moose Ponds	2.11	139	ePn	Pn	00 49 14.5	+1.4
GCMT	Greycliff	2.15	77	ePn	Pn	00 49 14.3	+0.7
HLID	Hailey	2.19	216	ePn	Pn	00 49 15.7	+1.5
TPAW	Teton Pass	2.23	146	ePn	Pn	00 49 16.8	+1.9
LOHW	Long Hollow	2.28	139	ePn	Pn	00 49 17.1	+1.6
SNOW	Snow King Moun	2.33	143	Pn	Pn	00 49 17.2	+0.9
REDW	Red Top Meadow	2.38	146	ePn	Pn	00 49 18.1	+1.2
BMO	Blue Mountains	3.33	263	ePn	Pn	00 49 31.0	+0.5
EGMT	Eagleton	3.34	36	ePn	Pn	00 49 31.0	+0.3
PDAR	Pinedale Array	3.42	138	Pn	Pn	00 49 36.5	+4.7
	1.1nm,0.3s,baz=336,slow=14,SNR=31						
PDAR				Pg	Pg	00 49 41.4	-4.3
	2.9nm,0.3s,baz=328,slow=14,SNR=21						
PDAR				Lg		00 50 24.2	
	2.2nm,0.3s,baz=306,slow=26,SNR=5.6						
PDAR	Pinedale Array	3.42	138	Pn	Pn	00 49 36.5	+4.7
PDAR				Pg	Pg	00 49 41.4	-4.3
PDAR				Lg		00 50 24.2	
HVU	Hansel Valley	3.57	181	ePn	Pn	00 49 34.4	+0.5
HWUT	Hardware Ranch	3.83	168	Pn	Pn	00 49 38.2	+0.6
SPUT	South Promonto	4.04	178	Pn	Pn	00 49 40.3	-0.3
NEW	Newport	4.23	315	ePn	Pn	00 49 43.5	+0.2
TCUT	Toone Canyon	4.33	167	ePn	Pn	00 49 44.7	-0.1
BGU	Big Grassy Mou	4.43	184	ePn	Pn	00 49 45.9	-0.3
LAO	LASA Array	4.68	71	ePn	Pn	00 49 48.6	-1.1
CTU	Camp Tracy	4.71	172	ePn	Pn	00 49 49.1	-1.0
NOQ	North Oquirrh	4.71	175	Pn	Pn	00 49 49.8	-0.3
HAWA	Hanford	4.91	285	ePn	Pn	00 49 53.1	+0.1
DAU	Daniels Canyon	5.04	168	Pn	Pn	00 49 54.2	-0.6
DUG	Dugway	5.16	181	ePn	Pn	00 49 56.3	-0.1
WVOR	Wild Horse Val	5.21	238	Pn	Pn	00 49 56.3	-0.9
NLU	North Lily Min	5.41	175	Pn	Pn	00 49 59.6	-0.5
TMUT	Trail Mountain	6.15	169	Pn	Pn	00 50 09.1	-1.3
RSSD	Black Hills	6.27	98	Pn	Pn	00 50 10.7	-1.3
SRU	San Rafael	6.43	165	ePn	Pn	00 50 13.3	-1.2
MOD	Modoc	6.53	241	Pn	Pn	00 50 14.6	-1.2
DGMT	Dagmar	6.58	59	ePn	Pn	00 50 14.9	-1.7
MSU	Marysvale	6.84	177	Pn	Pn	00 50 20.1	-0.1
SMCO	Snowmass	7.47	144	Pn	Pn	00 50 27.4	-1.6
EDM	Edmonton	7.89	357	ePn	Pn	00 50 32.6	-2.3
NVAR	Mina Array Bea	8.10	213	Pn	P	00 50 41.9	+4.2
	0.1nm,0.3s,baz=23,slow=11,SNR=10						
NVAR				Pg	P	00 51 02.2	+24
	0.3nm,0.3s,baz=27,slow=14,SNR=4.5						
NVAR				Lg		00 52 55.5	
	0.4nm,0.3s,baz=45,slow=14,SNR=5.0						
NVAR	Mina Array Bea	8.10	213	Pn	P	00 50 41.9	+4.2
NVAR				Pg	P	00 51 02.2	+24
NVAR				Lg		00 52 55.5	
ULM	Lac du Bonnet	12.30	61	Pn	P	00 51 31.1	-4.2
	0.4nm,0.3s,baz=237,slow=8.9,SNR=4.9						
ULM				Pg	P	00 52 20.4	+45
	0.4nm,0.3s,baz=256,slow=16,SNR=2.9						
ULM				Lg		00 54 59.4	
	0.3nm,0.3s,baz=254,slow=12,SNR=3.2						
YKA	Yellowknife Ar	17.21	357	Pn	P	00 52 35.8	-3.2
	0.1nm,0.3s,baz=173,slow=13,SNR=5.3						

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*HLW **30** 01:24:02.6, 36.55N×23.99E, h33^{km}, Mb3.5*
*CSEM **30** 01:24:03.7±0.1, 36.45N×24.12E, h100^{km}, ML3.5, Error ellipse: s-maj=3.2km s-min=2.3km az=44.0*
*ATH **30** 01:24:04.7, 36.61N×24.11E, h84^{km}±5^{km}*
ISC 30 01:24:03.2±0.8**, 36.53N**±0.05×**24.11E**±0.06**, h111**^{km}±10^{km}**, n15,** σ**0§96**/21**, 1D, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KYTH	Kithira	0.90	254	eP	P	01 24 24.4	+0.6
VLI	Veliai	0.96	282	⇑iP	P	01 24 24.2	-0.2
VLI				eS	S	01 24 37.8	-2.5
VAM	Vamos	1.12	176	eP	P	01 24 27.4	+1.3
VAM				eS	S	01 24 43.1	-0.2
APE	Apeiranthos	1.26	64	eP	P	01 24 28.2	+0.5
APE				eS	S	01 24 44.9	-1.2
GVD	Gavdhos	1.69	181	eP	P	01 24 36.1	+3.3
NPS	Neapolis	1.75	136	eP	P	01 24 34.8	+1.2
ITM	Ithomi	1.87	291	eP	P	01 24 36.0	+1.0
ITM				eS	S	01 24 58.8	-0.1
LKR	Lokris	2.30	338	eP	P	01 24 40.1	-0.6
SMG	Samos	2.48	61	eP	P	01 24 43.7	+0.6
RLS	Riolos of Patr	2.60	307	eP	P	01 24 45.8	+1.0
SLUM		5.11	169	P	P	01 25 18.6	-0.1
SLUM				S	S	01 26 12.5	-4.4
HMAT	Matruh	5.96	155	P	P	01 25 29.8	-0.5
SWA2		7.35	171	P	P	01 25 48.7	-0.7
SWA1		7.37	169	P	P	01 25 49.2	-0.4
SWA1				S	S	01 27 06.1	-6.1
HFRF	Wahat Farafira	10.01	158	⇓P	P	01 26 24.1	-1.0

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*MAN **30** 01:27:23.8, 6.17N×123.79E, mb4.4, ML3.3, MS3.1*
*IDC **30** 01:27:24.9±1.2, 6.32N×124.11E, mb3.9/5, mb1 4.1/5, mb1mx3.8/17, mbtmp3.9/5, Error ellipse: s-maj=72.9km s-min=23.2km az=75.0*
ISC 30 01:27:28.1±0.7**, 6.26N**±0.05×**123.78E**±0.06**, h33**^{km}**, n14,** σ**1§11**/19**, mb3.8**/5**, 2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	1.06	26	⇓iP	P	01 27 45.5	-1.1
CTBH				i S	S	01 27 58.7	-1.7
GSPH	General Santos	1.18	99	⇑iP	P	01 27 50.0	+1.7
PAGZ	Pagadian	1.62	346	eP	P	01 27 54.8	+0.1
PAGZ				eS	S	01 28 14.5	-0.1
IPIL	Ipil	1.93	322	eP	P	01 27 59.7	+0.6
IPIL				eS	S	01 28 22.9	+0.5
BUKP	Musuan	2.05	38	eP	P	01 28 01.1	+0.3
BUKP				eS	S	01 28 27.4	+2.0
DCPH	Dipolog City	2.34	350	⇑eP	P	01 28 04.1	-0.9
CGP	Cagayan de Oro	2.36	23	⇓eP	P	01 28 06.9	+1.6
CGP				eS	S	01 28 41.1	+7.8
MATI	Mati	2.56	74	eP	P	01 28 07.3	-0.7
MSLP	Maasin	3.99	16	eP	P	01 28 27.5	-1.0
FITZ	Fitzroy Crossi	24.28	176	P	P	01 32 44.7	+1.0
	4.2nm,0.9s,mb3.9,baz=354,slow=9.2,SNR=3.6						
WRA	Warramunga Arr	28.04	158	P	P	01 33 16.9	-1.8
	0.6nm,0.4s,mb3.6,baz=330,slow=11,SNR=4.7						
STKA	Stephens Creek	41.56	157	P	P	01 35 14.3	-0.3
	3.3nm,0.8s,mb4.0,baz=330,slow=5.6,SNR=4.8						
MKAR	Makanchi Array	53.81	326	P	P	01 36 51.0	+1.1
	0.5nm,0.7s,mb3.5,baz=135,slow=8.6,SNR=4.9						
ILAR	Eielson Array	84.10	26	P	P	01 39 55.6	-1.0
	0.8nm,1.0s,mb3.8,baz=248,slow=4.1,SNR=5.2						

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*NIED **30** 01:28:00, 38.30N×144.80E, h35^{km}, Mw3.8 Best double couple: $M_0$5.48×10^{14} NP1:ϕ_s176°, δ67°, λ-104°. NP2: ϕ_s28°, δ26°, λ-61°.*
*IDC **30** 01:28:45.4±1.2, 38.21N×145.12E, mb3.6/4, mb1 4.0/5, mb1mx3.6/21, mbtmp3.6/5, ML3.7/1, Error ellipse: s-maj=51.2km s-min=23.7km az=139.0*
*JMA **30** 01:28:49.9±0.2, 38.30N×144.82E, h55^{km}, M4.3*
ISC 30 01:28:50.2±1.8**, 38.39N**±0.08×**144.8E**±0.1**, h47**^{km}±19^{km}**, n12,** σ**0§83**/19**, mb3.6**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.58	287	P	P	01 29 30.6	+0.2
OFUJ				eS	S	01 30 01.2	+0.5
MIYJ	Miyakonagasawa	2.64	298	P	P	01 29 31.3	0.0
MIYJ				eS	S	01 30 02.2	0.0
JMK	Ichinoseki	2.89	282	P	P	01 29 35.1	+0.2
JMK				eS	S	01 30 08.9	+0.3
JOM	Ohasama	2.97	293	P	P	01 29 36.4	+0.3
JOM				eS	S	01 30 10.6	-0.1
JOT	Ohata	4.18	317	P	P	01 29 53.7	+0.6
JOT				eS	S	01 30 39.5	-1.7
JCH	Churui	4.37	346	eS	S	01 30 41.5	-4.6
JRY	Ryogami san	5.30	245	P	P	01 30 07.2	-1.6
JRY				eS	S	01 31 04.1	-5.2
MJAR	Matsushiro Arr	5.59	253	Pn	P	01 30 12.9	+0.1
	1.9nm,0.3s,baz=80,slow=14,SNR=9.0						
MJAR				Sn	S	01 31 17.5	+0.9
	1.1nm,0.3s,baz=71,slow=24,SNR=3.1						
ILAR	Eielson Array	46.89	33	P	P	01 37 16.8	-0.4
	0.5nm,0.8s,mb3.5,baz=262,slow=6.2,SNR=4.5						
WRA	Warramunga Arr	58.85	192	P	P	01 38 44.8	-1.6
	0.6nm,0.6s,mb3.8,baz=10,slow=7.3,SNR=4.8						
PDAR	Pinedale Array	74.77	47	P	P	01 40 27.6	+0.9
	0.6nm,0.5s,mb3.8,baz=295,slow=4.0,SNR=4.6						
TXAR	Lajitas Array	87.14	54	P	P	01 41 33.3	+1.1
	0.1nm,0.5s,mb3.3,baz=307,slow=4.5,SNR=3.2						

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*MAN **30** 01:33:51.3, 6.02N×123.74E, h11^{km}, mb4.8, ML3.8, MS3.8*
*NEIC **30** 01:33:53.9±0.5, 6.24N×123.97E, h10^{km}, mb4.5/5, Error ellipse: s-maj=14.8km s-min=10.1km az=70.0*
*IDC **30** 01:34:02.3±7.2, 6.28N×124.14E, h81^{km}±69^{km}, mb4.0/12, mb1 4.1/12, mb1mx4.0/19, mbtmp4.3/12, MS3.7/3,*

Ms1 3.7/3, ms1mx3.1/19, Error ellipse: s-maj=25.9km s-min=14.8km az=66.0

ISC 30 01:33:56.2±0.8, **6.22N**±0.05×**123.81E**±0.04, **h41**^{km}±8^{km}, **n45**, σ**1**^{s}**44**/50, **mb4.3**/16, **MS3.7**/3, **2C-6D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	1.09	23	⇑iP	P	01 34 13.4	-1.7
CTBH				iS	S	01 34 28.1	-1.2
GSPH	General Santos	1.14	96	⇓iP	P	01 34 18.0	+2.2
GSPH						01 34 35.0	
KCP	Kidapawan	1.49	58	⇓eP	P	01 34 20.0	-0.9
KCP				iS	S	01 34 38.4	-1.0
PAGZ	Pagadian	1.68	345	eP	P	01 34 22.7	-0.9
PAGZ				eS	S	01 34 42.1	-1.9
DMPH	Davao City--Mi	1.89	63	⇓iP	P	01 34 31.5	+4.9
DMPH				iS	S	01 34 59.9	+11
DAV	Davao City (W)	1.95	64	eP	P	01 34 28.8	+1.4
DAV	Davao City (W)	1.95	64	eP	P	01 34 27.9	+0.5
IPIL	Ipil	1.99	322	eP	P	01 34 27.9	-0.1
IPIL				eS	S	01 34 50.4	-1.5
BUKP	Musuan	2.07	37	eP	P	01 34 29.0	-0.1
BUKP				eS	S	01 34 55.1	+1.4
CGP	Cagayan de Oro	2.39	21	⇓eP	P	01 34 35.3	+1.5
CGP				eS	S	01 35 08.1	+6.1
DCPH	Dipolog City	2.40	349	⇓eP	P	01 34 33.6	-0.2
MATI	Mati	2.53	73	eP	P	01 34 34.6	-1.2
SNPH	Sibulan	3.16	350	eP	P	01 34 47.5	+2.8
BIPH	Bislig	3.20	52	⇓iP	P	01 34 44.7	-0.5
BIPH				iS	S	01 35 24.8	+2.3
BUTP	Butuan	3.27	33	eP	P	01 34 43.4	-2.8
TBP	Tagbilaran	3.45	1	eP	P	01 34 51.3	+2.4
TBP				eS	S	01 35 29.1	+0.1
SCPH	Surigao	3.91	25	⇑eP	P	01 35 03.3	+7.9
MSLP	Maasin	4.03	15	eP	P	01 35 01.4	+4.4
GUIM	Jordan	4.55	345	eP	P	01 35 06.4	+2.0
BATP	Bataraza	6.49	294	eP	P	01 35 28.6	-3.0
ENPP	El Nido	6.59	319	eP	P	01 35 34.9	+1.9
FITZ	Fitzroy Crossi	24.23	176	eP	P	01 39 11.9	+1.4
	6.2nm,0.7s,mb4.2						
FITZ	Fitzroy Crossi	24.23	176	P	P	01 39 12.0	+1.5
	3.9nm,0.5s,mb4.1,baz=354,slow=7.4,SNR=13						
PSI	Prapat	25.04	263	P	P	01 39 21.5	+3.1
	8.4nm,0.9s,mb4.3,baz=69,slow=8.6,SNR=5.1						
PSI				LR	LR	01 49 03.1	
	comp=Z,150nm,21.0s,MS3.5,baz=54,slow=36						
PMG	Port Moresby	27.96	124	P	P	01 39 42.9	-2.5
	5.8nm,0.7s,mb4.3,baz=339,slow=8.6,SNR=4.6						
WRAB	Tennant Creek	27.98	158	eP	P	01 39 44.1	-1.3
	18nm,1.2s,mb4.6						
WRA	Warramunga Arr	27.98	159	P	P	01 39 44.6	-0.8
	3.9nm,0.7s,mb4.2,baz=337,slow=9.6,SNR=17						
WB2	Warramunga Arr	27.98	158	eP	P	01 39 44.4	-1.1
MJAR	Matsushiro Arr	32.94	22	P	P	01 40 26.8	-2.3
	1.3nm,0.6s,mb4.0,baz=193,slow=11,SNR=4.1						
MJAR				LR	LR	01 52 14.8	
	comp=Z,136nm,19.5s,MS3.7,baz=210,slow=33						
STKA	Stephens Creek	41.50	157	P	P	01 41 42.2	+1.0
	21nm,0.8s,mb4.8,baz=329,slow=8.5,SNR=33						
STKA	Stephens Creek	41.50	157	eP	P	01 41 41.9	+0.6
SONM	Songino Array	44.06	343	P	P	01 42 02.9	+1.1
	2.3nm,1.0s,mb3.9,baz=157,slow=7.1,SNR=9.8						
MKAR	Makanchi Array	53.87	326	P	P	01 43 18.6	+1.1
	3.6nm,1.0s,mb4.3,baz=127,slow=8.6,SNR=16						
ZAL	Zalesovo	57.08	334	P	P	01 43 41.0	+0.3
	0.8nm,0.5s,mb4.0,baz=14,slow=9.4,SNR=3.8						
KURK	Kurchatov	58.10	328	eP	P	01 43 48.1	+0.3
	3.3nm,0.6s,mb4.5						
BRVK	Borovoye	63.74	327	eP	P	01 44 25.0	-1.0
	2.4nm,0.9s,mb4.2						
IMA2	Indian Mountai	81.31	24	eP	P	01 46 09.1	-0.4
MCK	McKinley	83.25	27	eP	P	01 46 18.8	-0.7
	7.5nm,1.0s,mb4.7						
ILAR	Eielson Array	84.12	26	P	P	01 46 23.0	-0.9
	2.2nm,0.8s,mb4.3,baz=243,slow=4.7,SNR=29						
BRTR	Keskin Array B	86.21	309	P	P	01 46 37.6	+2.8
	0.4nm,0.8s,mb3.7,baz=90,slow=4.3,SNR=3.4						
KMBO	Kilima Mbogo	86.70	269	LR	LR	02 21 36.9	
	comp=Z,49nm,20.8s,MS3.9,baz=86,slow=33						
FINES	FINESS Array B	88.28	332	P	P	01 46 44.8	+0.5
	3.7nm,1.0s,mb4.6,baz=90,slow=5.7,SNR=6.9						
TORD	Torodi Ar. Bea	119.38	289	PKP	PKPdf	01 52 42.4	+0.2
	1.0nm,1.1s,baz=45,slow=1.7,SNR=3.5						
PLCA	Paso Flores	143.30	162	PKP	PKPdf	01 53 26.4	+0.1
	1.3nm,0.9s,baz=163,slow=3.4,SNR=3.1						
PLCA	Paso Flores	143.30	162	PKP	PKPdf	01 53 26.4	+0.1

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*NEIC **30** 01:37:30.1±0.9, 17.96S×178.45W, h566^{km}±10^{km}, mb4.8/11, Error ellipse: s-maj=14.3km s-min=8.3km az=148.0*

*IDC **30** 01:37:30.3±1.6, 18.02S×178.35W, h573^{km}±18^{km}, mb4.0/15, mb1 4.1/17, mb1mx4.1/20, mbtmp4.9/17, Error ellipse: s-maj=18.2km s-min=11.5km az=148.0*

ISC 30 01:37:28.1±0.8, **17.96S**±0.10×**178.48W**±0.08, **h551**^{km}±11^{km}, **n58**, σ**1**^{s}**12**/42, **mb4.5**/24, **8C-8D**, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.60	59	P	P	01 39 23.7	+1.0
	11nm,0.3s,baz=151,slow=13,SNR=6.9						
AFI				S	S	01 40 52.2	-1.8
	4.9nm,0.3s,baz=38,slow=19,SNR=2.5						
AFI	Afiamalu	7.60	59	P	P	01 39 23.7	+1.0
AFI				S	S	01 40 52.2	-1.8
DZM	Mont Dzumac	14.75	251	P	P	01 40 37.9	+3.2
	3.7nm,0.3s,baz=83,slow=18,SNR=18						
URZ	Urewera	20.59	190	P	P	01 41 29.4	-1.0
	19nm,0.7s,baz=190,slow=3.7,SNR=8.7						
HNR	Honiara	22.59	289	P	P	01 41 51.1	+2.2
	41nm,0.4s,mb5.4,baz=169,slow=5.2,SNR=4.2						
CNB	Canberra Magne	33.34	232	eP	P	01 43 23.5	+1.4
	36nm,0.5s,mb5.2						
CTA	Charters Tower	33.37	261	⇓iP	P	01 43 22.8	+0.4
	16nm,0.6s,mb4.7						
CTA	Charters Tower	33.37	261	P	P	01 43 22.8	+0.4
	26nm,0.6s,mb4.9,baz=88,slow=10,SNR=34						
PMG	Port Moresby	34.40	280	P	P	01 43 32.4	+1.4
	78nm,0.8s,mb5.3,baz=79,slow=5.5,SNR=42						
TOO	Toolangi	37.09	231	eP	P	01 43 54.4	+1.4
	21nm,0.8s,mb4.7						
STKA	Stephens Creek	38.55	241	⇓iP	P	01 44 06.2	+1.3
	27nm,0.6s,mb5.0						
STKA	Stephens Creek	38.55	241	P	P	01 44 06.3	+1.3
	32nm,0.5s,mb5.1,baz=92,slow=9.7,SNR=54						
STKA				PcP	PcP	01 46 03.5	-0.6
	2.0nm,0.4s,baz=14,slow=4.2,SNR=2.9						
WB2	Warramunga Arr	44.55	260	⇓iP	P	01 44 51.9	-0.9
WRAB	Tennant Creek	44.55	260	eP	P	01 44 51.6	-1.2
	43nm,0.6s,mb5.2						
WRA	Warramunga Arr	44.56	260	P	P	01 44 52.0	-0.9
	18nm,0.3s,mb5.0,baz=93,slow=7.3,SNR=144						
WRA				PcP	PcP	01 46 22.7	-1.7
	0.8nm,0.3s,baz=91,slow=3.6,SNR=5.1						
FORT	Forrest	49.93	245	⇓iP	P	01 45 32.3	-1.1
	62nm,0.6s,mb5.2						
FITZ	Fitzroy Crossi	52.95	261	⇓iP	P	01 45 54.7	-0.7
	7.2nm,0.2s,mb4.7						
FITZ	Fitzroy Crossi	52.95	261	P	P	01 45 54.8	-0.6
	10nm,0.3s,mb4.7,baz=121,slow=5.2,SNR=94						
MBWA	Marble Bar	58.00	256	eP	P	01 46 29.0	-1.3
	18nm,0.7s,mb4.4						
KLBR	Kellerberrin	58.75	244	eP	P	01 46 33.8	-1.5
	21nm,0.4s,mb4.7						
NWAO	Narrogin (SRO)	59.13	242	P	P	01 46 37.0	-0.8
	10nm,0.6s,mb4.2,baz=118,slow=5.5,SNR=12						
MUN	Mundaring	60.04	243	eP	P	01 46 43.0	-0.8
MJAR	Matsushiro Arr	67.91	323	P	P	01 47 32.5	-1.1
	4.5nm,0.5s,mb4.2,baz=152,slow=5.3,SNR=6.4						
QSPA	South Pole Qui	72.10	180	eP	P	01 47 58.3	+0.7
	7.6nm,0.9s,mb4.1						
NVAR	Mina Array Bea	79.50	44	P	P	01 48 39.6	+0.7
	3.7nm,0.7s,mb3.8,baz=215,slow=7.7,SNR=14						
MOD	Modoc	80.16	40	eP	P	01 48 42.7	+0.4
	6.3nm,0.6s,mb4.1						
PSI	Prapat	83.82	275	P	P	01 49 00.8	-0.6
	12nm,0.8s,mb4.5,baz=76,slow=12,SNR=7.4						
ENH	Enshi	84.24	304	eP	P	01 49 03.8	+0.7
	6.7nm,0.7s,mb4.3						
TMUT	Trail Mountain	84.72	46	eP	P	01 49 06.3	+1.1
ILAR	Eielson Array	85.95	13	P	P	01 49 08.9	-1.5
	1.5nm,0.4s,mb3.9,baz=222,slow=5.0,SNR=53						
TXAR	Lajitas Array	86.08	58	P	P	01 49 13.3	+1.4
	5.2nm,0.8s,mb4.2,baz=220,slow=6.2,SNR=63						
MCMT	McKenzie Canyo	86.32	41	eP	P	01 49 13.3	+0.6
CHMT	Chamberlain Mo	87.11	39	eP	P	01 49 16.0	-0.4
QLMT	Earthquake Lak	87.20	41	eP	P	01 49 18.2	+1.3
PDAR	Pinedale Array	87.43	43	P	P	01 49 17.9	-0.1
	3.3nm,0.6s,mb4.2,baz=221,slow=2.9,SNR=35						
SNAA	Sanae	90.55	179	⇑iP	P	01 49 31.6	-0.2
VNA3	Neumayer Olymp	90.69	176	⇑iP	P	01 49 32.7	+0.2
VNA3				e		01 49 55.8	
VNA2	Neumayer--Watz	91.13	177	⇑iP	P	01 49 34.9	+0.4
VNA2				e		01 49 57.5	
SONM	Songino Array	93.55	319	P	P	01 49 46.6	+0.5
	0.5nm,0.7s,mb3.7,baz=133,slow=3.5,SNR=4.2						
YKA	Yellowknife Ar	94.40	25	P	P	01 49 47.0	-2.6
	0.9nm,0.7s,mb4.0,baz=233,slow=4.5,SNR=12						
MKAR	Makanchi Array	109.12	314	PKiKP		01 54 54.4	
	0.6nm,0.5s,baz=125,slow=0.6,SNR=19						
BVAR	Borovoye Array	116.84	321	PKP	PKPdf	01 55 09.0	-0.8
	1.4nm,0.4s,baz=132,slow=1.5,SNR=10						
ARCES	ARCESS Array B	126.35	350	PKP	PKPdf	01 55 27.5	-0.2
	2.8nm,0.9s,baz=59,slow=2.1,SNR=6.3						
BURAR	Bucovina Array	144.63	332	⇓P	PKPdf	01 56 03.3	+1.7
BURAR	Bucovina Array	144.63	332	⇓P	PKPdf	01 56 03.3	+1.7
BR131	Keskin Array S	144.77	315	eP	PKPdf	01 56 03.4	+1.2
BRTR	Keskin Array B	144.77	315	PKP	PKPdf	01 56 03.0	+0.8
	2.5nm,0.4s,baz=117,slow=3.7,SNR=25						
ANTO	Ankara	145.27	315	eP	PKPdf	01 56 04.8	+1.7
TIRR	Tirgusor	145.27	325	⇓P	PKPdf	01 56 04.5	+1.6
MLR	Muntele Rosu	145.84	329	PKPbc	PKPbc	01 56 06.7	+1.4
	2.1nm,0.6s,baz=14,slow=8.3,SNR=4.2						
MLR	Muntele Rosu	145.84	329	⇑P	PKPdf	01 56 07.5	+3.7
MLR	Muntele Rosu	145.84	329	⇑P	PKPdf	01 56 07.5	+3.7
DRGR		146.35	333	⇑P	PKPdf	01 56 06.9	+2.3
DRGR		146.35	333	⇑P	PKPdf	01 56 07.0	+2.3
KHC	Kasperske Hory	147.41	345	ePKPbc	PKPdf	01 56 10.5	+4.3
GERES	GERESS Array B	147.64	345	PKPbc	PKPdf	01 56 11.0	+4.4
	2.1nm,0.6s,baz=34,slow=3.2,SNR=24						
VTS	Vitosha	149.30	328	⇑P	PKPdf	01 56 15.3	+5.9
TORD	Torodi Ar. Bea	175.22	182	PKP	PKPdf	01 56 34.7	-0.3
	0.8nm,1.0s,baz=232,slow=3.4,SNR=3.5						
TORD				PKPab	PKPab	01 58 15.7	-1.0
	0.3nm,0.9s,baz=204,slow=5.5,SNR=4.3						

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*BJI **30** 01:56:46.7, 36.67N×71.10E, h237^{km}, mB4.9, mb4.8*

*MOS **30** 01:56:46.6±0.9, 36.49N×71.19E, h239^{km}, mb4.7/68, Error ellipse: s-maj=6.4km s-min=3.4km az=122.9*

*NEIC **30** 01:56:48.2±0.1, 36.46N×71.28E, mb4.7/97, Error ellipse: s-maj=4.3km s-min=2.9km az=25.0*

*IDC **30** 01:56:48.6±0.5, 36.47N×71.24E, h248^{km}±3^{km}, mb4.4/17, mb1 4.7/21, mb1mx4.6/23, mbtmp5.1/21, Error ellipse: s-maj=9.7km s-min=8.7km az=153.0*

*NNC **30** 01:56:53.5±2.2, 36.99N×71.36E, h241^{km}±13^{km}, mpv5.2, Error ellipse: s-maj=18.5km s-min=17.3km az=41.0*

ISC 30 01:56:46.8±0.1, **36.44N**±0.02×**71.26E**±0.02, **h246**^{km}, **h246**^{km}±1.7^{km}**:pP-P**, **n404**, σ**0**^{s}**99**/436, **mb4.7**/133, **50C-39D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.66	168	⇑P	P	01 57 36.4	+0.5
CHCP	Chirah Chowk	3.22	149	⇑P	P	01 57 42.9	+0.9
THW	Thamme Wali	3.66	174	⇓P	P	01 57 47.3	+0.3
SRNI	Srinagar	3.75	127	eP	P	01 57 48.0	-0.1
SRNI				eS	S	01 58 35.0	-0.7
SBDP	Sheikh Budin	4.14	185	P	P	01 57 52.3	-0.4
SARP	Sargodha	4.65	165	⇓P	P	01 57 58.8	0.0
DRP	Derazinda	4.76	191	P	P	01 58 00.3	+0.2
JMU	Jammu	4.78	140	ex	x	01 58 13.0	
JMU				eS	S	01 58 56.5	-1.1
KSH	Kashi	4.83	49	⇑iP	P	01 58 01.8	+0.8
KSH				S	S	01 58 57.5	-1.3
KSH				Smax			
	comp=N,4µm,0.4s						
KSH				Smax			
	comp=E,2µm,0.3s						
TAS	Tashkent	5.12	343	⇓ePN	P	01 58 04.0	-0.5
TAS				eS	S	01 59 00.5	-4.6
TAS				pmax	pmax		
	comp=Z,2µm,1.0s						
THN	Thein Dam	5.43	136	eP	P	01 58 09.0	+0.6
THN				eS	S	01 59 09.4	-2.7
DLH	Dalhousie	5.50	134	eP	P	01 58 10.0	+0.8
DLH				eS	S	01 59 14.0	+0.5
AML	Almayashu	5.99	18	P	P	01 58 14.9	-0.5
	SNR=263						
UCH	Uchtor	6.31	23	P	P	01 58 19.4	0.0
	SNR=416						
KZA	Kyzart	6.43	28	P	P	01 58 20.4	-0.5
	SNR=75						
EKS2	Erkin-Say	6.51	17	P	P	01 58 21.6	-0.4
	SNR=143						
BHK	Bhakra	6.59	138	eP	P	01 58 26.4	+3.4
BHK				eS	S	01 59 31.6	-6.6
AAK	Ala-Archa	6.68	21	P	P	01 58 24.0	0.0
	SNR=164						
AAK	Ala-Archa	6.68	21	⇓P	P	01 58 23.9	-0.1
	comp=Z,81nm,0.5s						
AAK				⇑S	S	01 59 35.1	-5.0
	comp=Z,544nm,0.8s						
AAK	Ala-Archa	6.68	21	⇓P	P	01 58 23.9	-0.1
	comp=Z,81nm,0.5s						
AAK				S	S	01 59 35.1	-5.0
KK31	Karatay Array	6.68	355	⇓P	P	01 58 23.1	-1.0
	comp=Z,171nm,0.5s,baz=172,slow=12,SNR=1870						
KK31				S	S	01 59 35.6	-4.6
	comp=Z,447nm,0.4s,baz=178,slow=23,SNR=15						
KK31	Karatay Array	6.68	355	⇓P	P	01 58 23.1	-1.0
	comp=Z,171nm,0.4s						
KK31				S	S	01 59 35.6	-4.6
KKAR	Karatay Array	6.68	355	ePN	P	01 58 23.1	-1.0
KKAR				pmax	pmax		
	comp=Z,66nm,0.4s						
KBK	Karagaybulak	6.83	24	P	P	01 58 26.3	+0.2
	SNR=90						
SDNR	Sundarnagar	6.84	134	eP	P	01 58 25.5	-0.6
SDNR				eS	S	01 59 41.3	-2.5
ULHL	Ulahol	6.97	32	P	P	01 58 27.8	+0.1
	SNR=16						
CHMS	Chumysh	7.09	21	P	P	01 58 29.1	-0.1
	SNR=42						
SMLA	Simla	7.23	135	eP	P	01 58 31.2	+0.2
SMLA				eS	S	01 59 49.5	-3.1
USP	Ospenovka	7.26	19	P	P	01 58 31.2	-0.3
	SNR=65						
TKM2	Tokmak 2	7.29	26	P	P	01 58 32.2	+0.4
	SNR=33						
KLP	Kalpa	7.59	128	eP	P	01 58 36.8	+1.2
KLP				AMb	AMB	01 58 39.6	
	comp=Z,200nm,0.3s						
KLP				eS	S	02 00 00.2	-0.7
DDI	Dehra Dun	8.34	135	eP	P	01 58 43.6	-1.5
DDI				ex	x	01 59 53.0	
BHGR	Bahadurgarh	9.09	147	eP	P	01 58 53.9	-0.8
KHET	Khetri	9.18	154	eP	P	01 58 55.3	-0.5
KHET				AMb	AMB	01 58 56.9	
	comp=Z,48nm,0.4s						
KHET				eS	S	02 00 33.3	-3.8
NDI	New Delhi	9.22	145	eP	P	01 58 55.0	-1.4
NDI				eS	S	02 00 32.5	-5.5
KALG	Kalgarh	9.35	136	eP	P	01 58 56.2	-1.7
KALG				AMb	AMB	01 58 56.5	
	comp=Z,179nm,0.3s						
KALG				eS	S	02 00 37.0	-3.9
AYAN	Aya Nagar	9.35	146	eP	P	01 58 58.4	+0.3
AYAN				AMb	AMB	01 58 59.8	
	comp=Z,295nm,0.7s						
KUDL	Kundal	9.38	150	eP	P	01 58 58.0	-0.4
KUDL				AMb	AMB	01 58 58.7	
	comp=Z,166nm,0.6s						
KUDL				eS	S	02 00 38.4	-3.1
BISR	Bishrakh	9.42	145	eP	P	01 58 59.5	+0.7
BISR				AMb	AMB	01 59 00.6	
	comp=Z,51nm,1.2s						
BISR				eS	S	02 00 40.4	-2.0
JASL	Jaisalmer	9.49	182	ex	x	01 58 56.3	
JASL				ex	x	02 00 24.5	
PTH	Pithoragarh	10.18	130	eP	P	01 59 08.0	-0.6
PTH				ex	x	02 00 55.0	
PTH				eS	S	02 00 55.0	-4.9
AJM	Ajmer	10.34	163	eP	P	01 59 10.2	-0.3
AJM				AMb	AMB	01 59 12.1	
	comp=Z,61nm,1.3s						
AJM				eS	S	02 01 00.1	-3.4
BHJ	Bhuj	13.21	186	eP	P	01 59 46.8	+0.4
BHJ				AMb	AMB	01 59 50.6	
	comp=Z,171nm,1.1s						
BHJ				eS	S	02 02 06.4	-2.1
MK02	Makanchi Array	13.21	35	⇑P	P	01 59 46.0	-0.4
MK02				pmax	pmax		
	comp=Z,43nm,0.8s						
MK31	Makanchi Array	13.22	35	⇑P	P	01 59 46.0	-0.5
	comp=Z,43nm,0.8s,baz=217,slow=11,SNR=511						
MKAR	Makanchi Array	13.22	35	P	P	01 59 46.5	-0.1
	comp=Z,6.2nm,0.3s,baz=194,slow=9.8,SNR=144						
KOLN	Koldanda	13.56	126	ePn	P	01 59 51.0	+0.3
GKN	Gorkha	14.10	123	ePn	P	01 59 57.5	+0.1
GKN				eSn	S	02 02 26.7	-1.4
	comp=Z,1µm,1.0s						
GKN	Gorkha	14.10	123	ePn	P	01 59 57.5	+0.1
	comp=Z,541nm,1.0s						
GKN				eSn	S	02 02 26.7	-1.4
BHPL	Bhopal	14.19	156	eP	P	01 59 58.9	+0.3
BHPL				AMb	AMB	02 00 03.8	
	comp=Z,478nm,0.8s						
BHPL				ex	x	02 02 30.5	
ALBI	Allahabad	14.31	138	eP	P	01 59 58.5	-1.6
WMQ	Urumqi	14.57	55	⇑iP	P	02 00 04.0	+0.9
WMQ				S	S	02 02 44.5	+6.0
WMQ				AMB	AMB		
	comp=Z,20nm,0.7s						
WMQ				AMB	AMB		
	comp=Z,320nm,5.6s						
WMQ				LR	LR		
	comp=N,340nm,6.0s						
WMQ				LR	LR		
	comp=E,370nm,5.8s						
WMQ				LR	LR		
	comp=Z,260nm,5.8s						
DMN	Daman	14.67	123	ePn	P	02 00 04.7	+0.3
DMN				eSn	S	02 02 41.1	+0.3
	comp=Z,733nm,0.9s						
DMN	Daman	14.67	123	ePn	P	02 00 04.7	+0.3
	comp=Z,366nm,0.9s						
DMN				eSn	S	02 02 41.1	+0.3
KKN	Kakani	14.67	122	ePn	P	02 00 04.4	-0.1
PKI	Pulchoki	14.90	122	ePn	P	02 00 07.4	+0.2
PKI				eSn	S	02 02 46.8	+0.9
GUN	Gumba	15.01	120	ePn	P	02 00 09.0	+0.4
KURK	Kurchatov	15.23	18	⇓S	S	02 02 50.8	-2.4
	comp=Z,33nm,1.6s						
KURK	Kurchatov	15.23	18	eP	P	02 00 09.2	-1.8
	comp=Z,68nm,0.9s						
KURK	Kurchatov	15.23	18	c iP	P	02 00 09.3	-1.7
AB31	Akbulak array	15.24	331	⇑P	P	02 00 09.1	-2.1
	comp=Z,26nm,0.4s,baz=140,slow=14,SNR=936						
AB31				⇓S	S	02 02 55.2	+1.6
	comp=Z,112nm,1.1s,baz=149,slow=21,SNR=12						
AB31	Akbulak array	15.24	331	⇑P	P	02 00 09.1	-2.1
	comp=Z,26nm,0.4s						
AB31				S	S	02 02 55.1	+1.6
AB31	Akbulak array	15.24	331	⇑P	P	02 00 09.1	-2.1
AB31				S	S	02 02 55.2	+1.7
AB31				pmax	pmax		
	comp=Z,26nm,0.4s						
JIRN	Jiri	15.38	120	ePn	P	02 00 13.8	+0.8
VOSK	Vostochnaya	16.29	359	⇑P	P	02 00 22.0	-1.3
	comp=Z,30nm,0.5s						
VOSK				⇑S	S	02 03 13.9	-2.3
	comp=Z,34nm,0.9s						
VOSK	Vostochnaya	16.29	359	⇑P	P	02 00 22.0	-1.3
	comp=Z,30nm,0.5s						
VOSK				S	S	02 03 13.9	-2.3
VOSK	Vostochnaya	16.29	359	P	P	02 00 22.1	-1.2
VOSK				S	S	02 03 13.9	-2.3
VOSK				pmax	pmax		
	comp=Z,15nm,0.5s						
VOSK				smax			
	comp=Z,31nm,0.9s						
AKL	Akola	16.46	161	⇑ix	x	01 59 39.4	
AKL				ix	x	02 02 37.1	
BVA0	Borovoye Array	16.60	358	⇑P	P	02 00 25.8	-1.0
	comp=Z,12nm,0.8s						
BVA0	Borovoye Array	16.60	358	⇑P	P	02 00 25.8	-1.0
	comp=Z,12nm,0.8s						
BVA0	Borovoye Array	16.60	358	⇑P	P	02 00 25.8	-1.0
BVA0				pmax	pmax		
	comp=Z,12nm,0.8s						
BVAR	Borovoye Array	16.60	358	P	P	02 00 25.8	-1.0
	comp=Z,24nm,0.3s,baz=163,slow=11,SNR=354						
BVAR				S	S	02 03 25.0	+2.2
	baz=169,slow=23,SNR=5.4						
BRVK	Borovoye	16.64	358	eP	P	02 00 26.2	-1.0
	comp=Z,113nm,0.8s						
BRVK	Borovoye	16.64	358	eP	P	02 00 26.2	-1.0
BRVK				pmax	pmax		
	comp=Z,113nm,0.8s						
AKTO	Aktyubinsk	16.94	330	P	P	02 00 29.7	-0.8
	comp=Z,73nm,0.3s,baz=137,slow=10,SNR=909						
AKTO				S	S	02 03 29.3	-0.4
	comp=Z,2.5nm,0.3s,baz=11,slow=20,SNR=6.6						
AKTO	Aktyubinsk	16.94	330	P	P	02 00 29.7	-0.8
AKTO				S	S	02 03 29.3	-0.4
AKTO				pmax	pmax		
	comp=Z,73nm,0.3s						
AKTO				smax			
	comp=N,3.0nm,0.3s						
CHKZ	Chkalovo	17.25	359	⇑P	P	02 00 32.4	-1.4
	comp=N,66nm,0.5s						
CHKZ				⇑S	S	02 03 37.1	+1.2
	comp=N,77nm,1.2s						
CHKZ	Chkalovo	17.25	359	⇑P	P	02 00 32.4	-1.4
CHKZ				S	S	02 03 37.0	+1.2
BOK	Bokaro	17.83	131	eP	P	02 00 41.5	+1.4
BOK				AMb	AMB	02 00 43.0	
	comp=Z,245nm,0.4s						
BOK				eS	S	02 03 53.6	+6.1
LSA	Lhasa	17.96	106	P	P	02 00 44.8	+3.4
LSA				AMB	AMB		
	comp=Z,130nm,1.0s						
LSA	Lhasa	17.96	106	eP	P	02 00 44.5	+3.1
	comp=Z,114nm,0.6s						
LSA	Lhasa	17.96	106	eP	P	02 00 44.5	+3.1
LSA				pmax	pmax		
	comp=Z,114nm,0.6s						
POO	Poona	17.98	172	eP	P	02 00 42.0	+0.3
POO				eS	S	02 03 58.0	+7.5
LATR	Latur	18.55	164	eP	P	02 00 50.0	+2.6
LATR				eS	S	02 04 10.0	+8.6
KAD	Karad	19.23	171	eP	P	02 00 56.3	+2.0
KAD				AMb	AMB	02 00 57.7	
	comp=Z,46nm,1.1s						
KAD				ex	x	02 04 34.0	
ZAL	Zalesovo	19.87	24	P	P	02 01 00.5	0.0
	comp=Z,26nm,0.3s,baz=255,slow=6.1,SNR=163						
ZAL				S	S	02 04 28.9	+3.3
	baz=180,slow=20,SNR=6.0						
HYB	Hyderabad	20.02	159	⇓iP	P	02 01 04.0	+1.8
	comp=Z,100nm,1.0s						
HYB				esP		02 02 17.0	
HYB				eS	S	02 04 30.0	+1.5
HYB	Hyderabad	20.02	159	⇓eP	P	02 01 04.0	+1.8
HYB				pmax	pmax		
	comp=Z,100nm,1.0s						
NVS	Novosibirsk	20.17	20	iP	P	02 01 03.4	-0.1
NVS				i		02 02 14.1	
NVS				iS	S	02 04 34.3	+3.3
NVS				pmax	pmax		
	comp=Z,73nm,0.7s						
NVS				pmax	pmax		
	comp=N,91nm,0.9s						
NVS				pmax	pmax		
	comp=E,27nm,0.7s						
NVS				smax			
	comp=N,71nm,1.3s						
NVS				smax			
	comp=E,95nm,1.1s						
SHL	Shillong	20.70	116	eP	P	02 01 12.0	+3.1
SHL				eS	S	02 04 50.0	+9.4
KBD	Kabd	21.06	257	eP	P	02 01 13.4	+1.0
KBD				AMb	AMB	02 01 18.3	
	comp=Z,634nm,0.6s						
MIB	Mutribah	21.07	259	eP	P	02 01 13.4	+0.9
MIB				AMb	AMB	02 01 18.2	
	comp=Z,239nm,0.6s						
QRN	Al-Qurain	21.07	255	eP	P	02 01 13.1	+0.5
GNI	Garni	21.11	288	eP	P	02 01 15.7	+2.9
	comp=Z,113nm,1.0s,mb5.3						
GNI	Garni	21.11	288	eP	P	02 01 15.7	+2.9

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GNI                                pmax   pmax
       comp=Z,113nm,1.0s
TI2    Plekhanov         21.20 293  eP     P      02 01 16.0 +2.2
RDF    Al-Radifah        21.28 256  eP     P      02 01 15.4 +0.8
RDF                                 AMb    AMB    02 01 20.4
       comp=Z,225nm,0.6s
NAY    Al-Naaiem         21.38 257  eP     P      02 01 16.6 +1.0
NAY                                 AMb    AMB    02 01 21.2
       comp=Z,143nm,0.6s,mb5.7
VIS    Vishakhapatnam    21.48 147  eP     P      02 01 19.1 +2.5
VIS                                 AMb    AMB    02 01 21.8
       comp=Z,56nm,0.8s,mb5.2
VIS                                 ex     x      02 04 30.6
SVE    Sverdlovsk        21.61 344⇑ eP     P      02 01 19.0 +1.4
SVE                                 e             02 02 28.0
SVE                                 pmax   pmax
       comp=Z,168nm,1.7s,mb5.3
ARU    Arti              21.76 341  eP     P      02 01 20.1 +1.0
       comp=Z,112nm,0.8s,mb5.5
ARU    Arti              21.76 341⇑ iP     P      02 01 20.2 +1.1
ARU                                 eS     S      02 05 05.4 +6.4
ARU                                 pmax   pmax
       comp=Z,94nm,0.7s,mb5.4
BHD    Baghdad           22.25 270  ex     x      02 01 25.0
MSL    Mosul             22.65 278  ex     x      02 01 29.5
GOF    Gofitskoye        22.96 301⇑ iP     P      02 01 31.9 +1.2
GOF                                 i             02 02 43.6
GOF                                 pmax   pmax
       comp=Z,320nm,0.8s
KIV    Kislovodsk        23.00 298  eP     P      02 01 31.6 +0.6
       comp=Z,48nm,0.8s,mb5.1
KIV    Kislovodsk        23.00 298c iP     P      02 01 31.8 +0.7
KIV                                 e*SP          02 02 46.9
KIV                                 eS     S      02 05 21.2 +1.0
KIV                                 pmax   pmax
       comp=Z,67nm,1.0s,mb5.1
KIV                                 MLR    MLR
       comp=Z,160nm,15.0s
SOKR   Solikamsk         24.98 342d iP     P      02 01 50.6 +1.3
SOKR                                e             02 03 05.6
SOKR                                pmax   pmax
       comp=Z,50nm,0.8s,mb5.2
ANN    Anapa             26.85 299  eP     P      02 02 05.7 -0.8
ZAK    Zakamensk         26.88  49  eP     P      02 02 08.0 +1.3
ZAK                                 pmax   pmax
       comp=Z,6.0nm,0.9s,mb4.2
VRSR   Storozhevoye      27.18 313  eP     P      02 02 08.3 -1.2
VRSR                                eS     S      02 06 25.9 -2.5
VRSR                                pmax   pmax
       comp=Z,8.0nm,1.1s,mb4.3
VRSR                                pmax   pmax
       comp=N,7.0nm,1.4s
VRSR                                pmax   pmax
       comp=E,10.0nm,1.0s
VRSR                                smax
       comp=N,50nm,8.1s
VRSR                                smax
       comp=Z,70nm,5.1s
VRSR                                smax
       comp=E,80nm,4.5s
VOR    Voronezh          27.36 314  eP     P      02 02 10.3 -0.8
VOR                                 pmax   pmax
       comp=N,50nm,1.4s
VOR                                 pmax   pmax
       comp=Z,70nm,1.4s,mb5.1
CD2    Chengdu           27.52  92  P      P      02 02 15.0 +2.2
SONM   Songino Array     28.20  55  P      P      02 02 20.1 +1.4
       comp=Z,13nm,0.8s,mb4.7,baz=259,slow=9.6,SNR=101
SONM                                pP     pP     02 03 09.2 +2.1
       comp=Z,7.0nm,0.9s,baz=260,slow=10,SNR=4.8
SONM                                ScP           02 08 42.5
       comp=Z,1.1nm,1.0s,baz=243,slow=3.3,SNR=3.6
TRD    Trivandrum        28.28 168  ex     x      01 58 54.5
BR131  Keskin Array S    29.65 288  eP     P      02 02 31.6 +0.1
       comp=Z,9.3nm,0.8s,mb4.5
BRTR   Keskin Array B    29.65 288  P      P      02 02 31.6 +0.1
       comp=Z,10nm,0.8s,mb4.5,baz=100,slow=8.5,SNR=82
BRTR                                pP     pP     02 03 15.8 -4.6
       comp=Z,1.5nm,0.6s,baz=91,slow=8.6,SNR=1.9
BRTR                                PcP    PcP    02 05 28.7 -0.8
       comp=Z,1.1nm,0.5s,baz=142,slow=3.3,SNR=5.3
MOS    Moscow            29.84 321  eP     P      02 02 31.2 -1.8
MOS                                 e      pP     02 03 22.7 +0.7
MOS                                 pmax   pmax
       comp=Z,104nm,1.0s,mb5.4
OBN    Obninsk           30.12 319  eP     P      02 02 35.1 -0.4
       comp=Z,60nm,0.5s,mb5.5
OBN    Obninsk           30.12 319α iP     P      02 02 35.1 -0.4
OBN                                 *PP    pP     02 03 23.0 -1.6
OBN                                 e             02 03 49.2
OBN                                 pmax   pmax
       comp=Z,75nm,1.2s,mb5.2
ANTO   Ankara            30.28 288  eP     P      02 02 37.6 +0.5
       comp=Z,10.0nm,0.9s,mb4.5
ANTO   Ankara            30.28 288  eP     P      02 02 37.6 +0.5
ANTO                                pmax   pmax
       comp=Z,10.0nm,0.9s,mb4.5
XAN    Xi’an             30.73  83  P      P      02 02 42.3 +1.2
XAN                                 AMB    AMB
       comp=Z,20nm,1.0s,mb4.7
KLMR   Klimovskoe        31.64 331d iP     P      02 02 47.5 -1.1
KLMR                                pmax   pmax
       comp=Z,140nm,1.3s,mb5.3
GYA    Guiyang           31.65  98⇓ iP     P      02 02 50.8 +1.7
GYA                                 AMB    AMB
       comp=Z,30nm,0.8s,mb4.9
ENH    Enshi             32.37  90  eP     P      02 02 57.0 +1.7
       comp=Z,19nm,0.8s,mb4.7
KIS    Kishinev          33.02 302  eP     P      02 03 00.0 -0.7
KIS                                 e      pP     02 03 51.0 +0.4
KIS                                 e             02 04 14.0
KIS                                 e             02 04 18.0
AKASG  Malin Array Be    33.15 309  P      P      02 03 00.7 -1.0
       comp=Z,36nm,0.6s,mb5.1,baz=81,slow=7.8,SNR=140
AKASG                               pP     pP     02 03 49.6 -2.0
       comp=Z,5.1nm,0.6s,baz=86,slow=7.4,SNR=3.2
AKASG                               PP     PP     02 04 16.0 -6.4
       comp=Z,9.3nm,0.8s,baz=86,slow=10,SNR=6.1
AKASG                               ScP           02 08 56.1
       comp=Z,0.2nm,0.2s,baz=89,slow=3.6,SNR=4.9
AKASG  Malin Array Be    33.15 309  P      P      02 03 00.7 -1.0
AKASG                               pP     pP     02 03 49.6 -2.0
AKASG                               PP     PP     02 04 16.0 -6.4
AKASG                               ScP           02 08 56.1
TIRR   Tirgusor          33.26 297 ⇓P      P      02 03 02.5 -0.3
TIRR   Tirgusor          33.26 297 ⇓P      P      02 03 02.5 -0.3
CFR    Carcaliu          33.45 299 ⇓P      P      02 03 03.6 -0.8
CFR    Carcaliu          33.45 299 ⇓P      P      02 03 03.6 -0.8
CIT    Chita             33.54  49  eP     P      02 03 05.8 +0.8
VRI    Vrincioaia        34.44 300 ⇑P      P      02 03 14.2 +1.5
VRI    Vrincioaia        34.44 300 ⇑P      P      02 03 14.2 +1.5
MLR    Muntele Rosu      34.99 299  P      P      02 03 19.0 +1.6
       comp=Z,43nm,0.8s,mb5.0,baz=97,slow=2.9,SNR=70
MLR                                 pP     pP     02 04 03.5 -4.2
       comp=Z,8.0nm,0.8s,baz=140,slow=10,SNR=1.5
MLR    Muntele Rosu      34.99 299 ⇑P      P      02 03 19.0 +1.6
MLR    Muntele Rosu      34.99 299 ⇑P      P      02 03 19.0 +1.6
PUL    Pulkovo           35.09 325  i P    P      02 03 18.1 +0.1
PUL                                 pmax   pmax
       comp=N,46nm,0.6s
PUL                                 pmax   pmax
       comp=Z,129nm,0.6s,mb5.6
PUL                                 pmax   pmax
       comp=E,292nm,1.3s
PUL                                 pmax   pmax
       comp=Z,127nm,0.6s,mb5.6
PUL                                 pmax   pmax
       comp=E,560nm,1.4s
BOD    Bodaibo           35.27  39  eP     P      02 03 18.8 -0.8
BOD                                 pmax   pmax
       comp=Z,9.0nm,1.0s,mb4.2
BURAR  Bucovina Array    35.49 303 ⇑P      P      02 03 22.1 +0.5
BURAR  Bucovina Array    35.49 303 ⇑P      P      02 03 22.1 +0.5
VOIR                     35.62 299 ⇓P      P      02 03 23.4 +0.7
VOIR                     35.62 299 ⇓P      P      02 03 23.4 +0.7
JOF    Joensuu           36.03 330  ep     P      02 03 25.4 -0.5
       comp=Z,117nm,0.5s,mb5.7
WHN    Wuhan             36.19  87 ⇑P      P      02 03 30.3 +2.6
VSU    Vasula            36.36 322c iP     P      02 03 28.4 -0.4
APE    Apeiranthos       36.37 285 ⇑P      P      02 03 29.3 +0.2
DRGR                     37.20 302 ⇓P      P      02 03 35.9 -0.1
DRGR                     37.20 302 ⇓P      P      02 03 35.9 -0.1
KWP    Kalwaria          37.21 306  eP     P      02 03 37.3 +1.3
KWP    Kalwaria          37.21 306  eP     P      02 03 37.3 +1.3
SUW    Suwalki           37.31 314  eP     P      02 03 36.5 -0.3
SUW    Suwalki           37.31 314  eP     P      02 03 36.5 -0.3
KOLS   Kolonicke sedl    37.48 305  eP     P      02 03 38.5 +0.2
LVZ    Lovozero          37.59 338d iP     P      02 03 39.3 +0.3
LVZ                                 pmax   pmax
       comp=Z,162nm,1.7s,mb5.3
FINES  FINESS Array B    37.65 326  P      P      02 03 39.8 +0.3
       comp=Z,38nm,0.4s,mb5.2,baz=114,slow=10.0,SNR=439
FINES                               pP     pP     02 04 28.9 -1.6
       comp=Z,7.2nm,0.7s,baz=68,slow=7.5,SNR=2.4
APA    Apatity           37.77 337⇑ iP     P      02 03 40.4 -0.1
APA                                 i             02 05 11.0
APA                                 pmax   pmax
       comp=Z,20nm,0.6s,mb4.8
KAF    Kangasniemi       37.79 327  ep     P      02 03 39.4 -1.3
       comp=Z,16nm,0.5s,mb4.8,baz=112,slow=8.3
KAF    Kangasniemi       37.79 327  eP     P      02 03 39.4 -1.3
KAF                                 pmax   pmax
       comp=Z,17nm,0.5s,mb4.8
CRVS   Cervenica-Dubn    38.02 305  eP     P      02 03 42.7  0.0
CRVS                                ePP    PP     02 05 11.1 -5.3
CRVS                                e             02 05 38.5
STHS   Stebnicka Huta    38.16 306  i P    P      02 03 44.1 +0.2
STHS                                e             02 05 48.1
KECS   Kecovo            38.67 304  i P    P      02 03 48.7 +0.6
NIE    Niedzica          38.77 306  eP     P      02 03 50.1 +1.2
OJC    Ojcow             39.11 307  eP     P      02 03 51.9 +0.2
NJ2    Nanjing           39.28  82  eP     P      02 03 55.8 +2.5
NJ2                                 AP     pP     02 04 42.3 -2.2
NJ2                                 PP     PP     02 05 33.3 +2.7
NJ2                                 S      S      02 09 39.0 +3.7
NJ2                                 AMB    AMB
       comp=Z,20nm,0.9s,mb4.7
NJ2                                 AMB    AMB
       comp=Z,240nm,4.3s
NJ2                                 LR     LR
       comp=N,440nm,19.7s
NJ2                                 LR     LR
       comp=E,620nm,29.8s
NJ2                                 LR     LR
       comp=Z,310nm,26.4s
VYHS   Vyhne             39.76 304  eP     P      02 03 57.6 +0.5
SRO    Srobarova         40.15 303  eP     P      02 04 01.8 +1.6
OKC    Ostrava-Krasne    40.17 307  eP     P      02 04 01.1 +0.7
OKC                                 ePP    PP     02 05 38.7 -0.8
MORC   Moravsky Berou    40.57 307  eP     P      02 04 04.2 +0.5
       comp=Z,33nm,1.1s,mb4.7
MORC   Moravsky Berou    40.57 307  eP     P      02 04 04.2 +0.5
MORC                                pmax   pmax
       comp=Z,33nm,1.1s,mb4.7
SMOL   Smolenice         40.70 305  eP     P      02 04 05.6 +0.8
KEV    Kevo              40.94 338  ep     P      02 04 06.4 -0.1
       comp=Z,37nm,0.7s,mb4.9
KEV    Kevo              40.94 338  eP     P      02 04 06.4 -0.1
KEV                                 pmax   pmax
       comp=Z,37nm,0.7s,mb4.9
VRAC   Vranov            41.20 306 ⇑P      P      02 04 10.0 +1.1
ARCES  ARCESS Array B    41.28 338  P      P      02 04 10.0 +0.7
       comp=Z,48nm,0.4s,mb5.2,baz=117,slow=8.5,SNR=480
ARCES                               pP     pP     02 04 60.0 -0.9
       comp=Z,7.4nm,0.7s,baz=124,slow=8.7,SNR=2.3
ARE0   ARCESS Array S    41.28 338  eP     P      02 04 09.9 +0.6
DPC    Dobruska-Polom    41.33 307  eP     P      02 04 10.6 +0.7
KSP    Ksiaz             41.34 308  eP     P      02 04 10.7 +0.7
KSP    Ksiaz             41.34 308  eP     P      02 04 10.4 +0.5
KSP                                 ePP    PP     02 05 48.6 -2.7
SSE    Sheshan           41.48  82  eP     P      02 04 08.5 -2.8
SSE                                 AMB    AMB
       comp=Z,10.0nm,0.8s,mb4.3
SSE                                 AMB    AMB
       comp=Z,50nm,3.5s
SSE    Sheshan           41.48  82  eP     P      02 04 08.6 -2.7
       comp=Z,18nm,0.8s,mb4.5
UPC    Upice             41.53 308  eP     P      02 04 12.4 +1.0
TREC   Trest             41.93 306  eP     P      02 04 15.5 +0.8
PSI    Prapat            42.09 136  P      P      02 04 17.3 +0.8
       comp=Z,13nm,0.7s,mb4.5,baz=322,slow=12,SNR=11
PERS   Pernice           42.43 302  i P    P      02 04 19.2 +0.4
PERS                                epP    pP     02 05 11.3 +0.8
PVCC   Panska Ves        42.45 308  eP     P      02 04 19.5 +0.7
BOJS   Bojanci           42.48 300  eP     P      02 04 19.9 +0.7
BOJS                                epP    pP     02 05 14.6 +3.6
PRU    Pruhonice         42.50 307  eP     P      02 04 19.7 +0.5
BRG    Berggiesshubel    42.83 308⇑ iP     P      02 04 22.4 +0.5
       comp=Z,33nm,0.9s,mb4.8
BRG                                 epP    pP     02 05 13.3 -0.4
BRG                                 e             02 05 38.0
BRG    Berggiesshubel    42.83 308⇑ iP     P      02 04 22.4 +0.5
BRG                                 e*PP   pP     02 05 13.3 -0.4
BRG                                 e             02 05 38.0
BRG                                 pmax   pmax
       comp=Z,33nm,0.9s,mb4.8
MOA    Molln             42.86 304⇑ iP     P      02 04 22.6 +0.3
       comp=Z,23nm,1.1s,mb4.5
GEC2   GERESS Array S    43.13 305  eP     P      02 04 24.6 +0.2
       comp=Z,28nm,1.8s,mb4.4
GEC2   GERESS Array S    43.13 305  eP     P      02 04 24.6 +0.2
GEC2                                pmax   pmax
       comp=Z,28nm,1.8s,mb4.4
GERES  GERESS Array B    43.13 305  P      P      02 04 25.0 +0.6
       comp=Z,3.2nm,0.8s,mb3.8,baz=90,slow=6.7,SNR=21
GERES                               pP     pP     02 05 17.6 +1.3
       comp=Z,1.8nm,0.7s,baz=68,slow=7.2,SNR=5.1
GERES                               PP     PP     02 06 06.5 -3.0
       comp=Z,1.7nm,0.8s,baz=67,slow=7.5,SNR=3.3
KHC    Kasperske Hory    43.19 306  eP     P      02 04 25.3 +0.5
KHC                                 pP     pP     02 05 20.5 +3.8
KHC                                 ePP    PP     02 06 10.6 +0.6
KHC    Kasperske Hory    43.19 306  eP     P      02 04 25.3 +0.5
KHC                                 e      pP     02 05 20.5 +3.8
KHC                                 e             02 06 10.6
CLL    Collm             43.39 309 ⇓P      P      02 04 26.8 +0.4
       comp=Z,logA/T=1.4,mb4.6
CLL                                 i *PP  pP     02 05 21.4 +3.0
CLL                                 ePP    PP     02 06 14.0 +2.0
CLL    Collm             43.39 309⇓ iP     P      02 04 26.8 +0.4
       comp=Z,22nm,0.9s,mb4.6
CLL                                 i pP   pP     02 05 21.4 +3.0
CLL    Collm             43.39 309⇓ iP     P      02 04 26.8 +0.4
CLL                                 i *PP  pP     02 05 21.4 +3.0
CLL                                 pmax   pmax
       comp=Z,22nm,0.9s,mb4.6
TRO    Tromso            43.41 336  eP     P      02 04 25.6 -0.8
ROBS   Robic             43.58 302  eP     P      02 04 28.3 +0.3
ROBS                                epP    pP     02 05 21.1 +1.1
WET    Wettzell          43.65 306  eP     P      02 04 28.3 -0.2
WET                                 pmax   pmax
       comp=Z,8.0nm,0.3s,mb4.5
NKC    Novy Kostel       43.82 307  eP     P      02 04 30.4 +0.5
YAK    Yakutsk           43.90  35  eP     P      02 04 29.4 -0.9
YAK                                 eS     S      02 10 41.7 -0.6
YAK                                 pmax   pmax
       comp=Z,17nm,0.8s,mb4.4
YAK                                 smax
       comp=N,10.0nm,1.1s
YAK                                 smax
       comp=E,8.0nm,1.1s
MOR8   Moi Rana          43.97 331⇑ iP     P      02 04 30.4 -0.5
MOR8                                AMb    AMB    02 04 31.2
       comp=Z,205nm,0.5s
FVI    Forni Avoltri     44.03 302  P      P      02 04 31.7 +0.1
       comp=Z,4.1nm,0.5s,mb4.0
FVI    Forni Avoltri     44.03 302  P      P      02 04 31.7 +0.1
FVI                                 pmax   pmax
       comp=Z,4.0nm,0.5s,mb4.0
MOX    Moxa              44.32 308  i P    P      02 04 34.2 +0.4
       comp=Z,logA/T=1.3,mb4.4
MOX    Moxa              44.32 308  eP     P      02 04 34.2 +0.4
       comp=Z,23nm,1.1s,mb4.4
MOX    Moxa              44.32 308  eP     P      02 04 34.2 +0.4
MOX                                 pmax   pmax
       comp=Z,23nm,1.1s,mb4.4
NB2    NORSAR Subarra    44.56 323  P      P      02 04 35.2 -0.3
       comp=Z,40nm,0.6s,mb4.9,baz=94,slow=7.4
NB2    NORSAR Subarra    44.56 323  P      P      02 04 35.2 -0.3
       baz=94,slow=7.9
NOA    NORSAR Array B    44.56 323  P      P      02 04 35.0 -0.5
       comp=Z,31nm,0.5s,mb4.9,baz=96,slow=7.7,SNR=112
NOA                                 pP     pP     02 05 26.9 -0.8
       comp=Z,5.7nm,0.7s,baz=96,slow=8.1,SNR=3.1
NOA                                 PP     PP     02 06 22.6 -0.7
       comp=Z,7.1nm,0.8s,baz=93,slow=9.3,SNR=3.3
STOK   Stokkvaagen       44.57 331  eP     P      02 04 35.6  0.0
NSS    Namsos            44.66 328  eP     P      02 04 35.0 -1.3
NSS                                 AMb    AMB    02 04 39.8
       comp=Z,109nm,1.7s,mb4.9
GRA1   Grafenberg Arr    44.66 307  eP     P      02 04 37.3 +0.8
       comp=Z,61nm,1.5s,mb4.7
GRA1                                epP    pP     02 05 30.0 +1.2
GRA1                                esP    sP     02 05 56.6 -0.3
GRA1                                ePcP   PcP    02 06 17.7 +2.6
GRF    Grafenberg Arr    44.66 307  eP     P      02 04 37.3 +0.8
       comp=Z,61nm,1.5s,mb4.7
GRF                                 epP    pP     02 05 30.0 +1.2
GRF                                 esP    sP     02 05 56.6 -0.3
GRF                                 ePcP   PcP    02 06 17.7 +2.6
GRF    Grafenberg Arr    44.66 307  eP     P      02 04 37.3 +0.8
GRF                                 e*PP   pP     02 05 30.0 +1.2
GRF                                 e*SP   sP     02 05 56.6 -0.3
GRF                                 e             02 06 17.7
GRF                                 pmax   pmax
       comp=Z,61nm,1.5s,mb4.7
GRF    Grafenberg Arr    44.66 307  eP     P      02 04 37.3 +0.8
GRF                                 e*PP   pP     02 05 30.0 +1.2
GRF                                 e*SP   sP     02 05 56.6 -0.3
GRF                                 e             02 06 17.7
GRF                                 pmax   pmax
       comp=Z,61nm,1.5s,mb4.7
WTTA   Wattenberg        44.70 303⇑ iP     P      02 04 36.4 -0.5
       comp=Z,17nm,1.2s,mb4.3
NAO    NORSAR Subarra    44.72 323  P      P      02 04 35.2 -1.7
       comp=Z,40nm,0.6s,mb4.9
NAO    NORSAR Subarra    44.72 323  P      P      02 04 35.2 -1.7
NAO                                 pmax   pmax
       comp=Z,40nm,0.6s,mb4.9
WATA   Walderalm         44.73 303⇓ iP     P      02 04 36.7 -0.5
       comp=Z,17nm,1.3s,mb4.2
LOF    Lofoten           44.79 333⇓ iP     P      02 04 38.9 +1.6
LOF                                 AMb    AMB    02 04 48.6
       comp=Z,204nm,1.6s,mb5.2
FUR    Furstenfeldbru    44.82 305  eP     P      02 04 38.4 +0.6
       comp=Z,74nm,1.4s,mb4.8
FUR    Furstenfeldbru    44.82 305  eP     P      02 04 38.4 +0.6
FUR                                 pmax   pmax
       comp=Z,74nm,1.4s,mb4.8
BSEG   Bad Segeberg      44.89 313  eP     P      02 04 39.0 +0.8
CLZ    Clausthal         44.99 310  eP     P      02 04 39.7 +0.6
       comp=Z,56nm,1.4s,mb4.7
CLZ                                 epP    pP     02 05 31.1 -0.3
CLZ    Clausthal         44.99 310  eP     P      02 04 39.7 +0.6
CLZ                                 e*PP   pP     02 05 31.1 -0.3
CLZ                                 pmax   pmax
       comp=Z,56nm,1.4s,mb4.7
SQTA   Sankt Quirin      45.00 303⇑ iP     P      02 04 38.7 -0.6
       comp=Z,23nm,1.5s,mb4.3
MOTA   Moosalm           45.05 304⇑ iP     P      02 04 38.8 -0.8
       comp=Z,11nm,1.0s,mb4.2
SFI    Santa Sofia       45.15 299  P      P      02 04 41.0 +0.5
       comp=Z,16nm,0.7s,mb4.5
SFI    Santa Sofia       45.15 299  P      P      02 04 41.0 +0.5
SFI                                 pmax   pmax
       comp=Z,16nm,0.7s,mb4.5
PGD    Poggio Sodo       45.24 299  P      P      02 04 42.4 +1.2
       comp=Z,13nm,0.7s,mb4.4
PGD    Poggio Sodo       45.24 299  P      P      02 04 42.4 +1.2
PGD                                 pmax   pmax
       comp=Z,13nm,0.7s,mb4.4
KONO   Kongsberg         45.27 321  eP     P      02 04 40.9 -0.3
KONO   Kongsberg         45.27 321  eP     P      02 04 40.3 -0.8
       comp=Z,57nm,1.6s,mb4.7
KONO   Kongsberg         45.27 321⇓ iP     P      02 04 40.9 -0.3
VMG    Vicchio           45.35 299  P      P      02 04 43.6 +1.5
TIXI   Tiksi             45.76  22c iP     P      02 04 44.9  0.0
TIXI                                pmax   pmax
       comp=Z,20nm,0.7s,mb4.6
DAVA   Damuels           45.88 304⇑ iP     P      02 04 45.8 -0.4
       comp=Z,54nm,1.1s,mb4.8
TNS    Taunus Mts        46.38 308  eP     P      02 04 50.8 +0.8
       comp=Z,18nm,1.1s,mb4.3
TNS    Taunus Mts        46.38 308  eP     P      02 04 50.8 +0.8
TNS                                 pmax   pmax
       comp=Z,18nm,1.1s,mb4.3
BFO    Black Forest      46.74 305  eP     P      02 04 52.9 +0.1
       comp=Z,6.0nm,0.9s,mb3.9
BFO                                 epP    pP     02 05 45.9 +0.4
BFO    Black Forest      46.74 305  eP     P      02 04 52.9 +0.1
BFO                                 e*PP   pP     02 05 45.9 +0.4
BFO                                 pmax   pmax
       comp=Z,6.0nm,0.9s,mb3.9
ODD1   Odda              46.77 321  eP     P      02 04 52.8 -0.1
BLS5   Blasjo            46.86 321  eP     P      02 04 55.9 +2.3
CDF    Champ du Feu      47.42 306  eP     P      02 04 58.0 -0.1
       comp=Z,13nm,0.9s,mb4.0
CDF    Champ du Feu      47.42 306  eP     P      02 04 58.0 -0.1
CDF                                 pmax   pmax
       comp=Z,6.0nm,0.9s,mb3.9
EGD    Espegrend         47.47 322  eP     P      02 04 58.7 +0.4
PGF    Pioggiola         47.48 297  eP     P      02 04 57.6 -1.1
       comp=Z,51nm,0.9s,mb4.6
PGF    Pioggiola         47.48 297  eP     P      02 04 57.6 -1.1
PGF                                 pmax   pmax
       comp=Z,26nm,0.9s,mb4.6
ASK    Askoy             47.48 322  eP     P      02 04 58.8 +0.4
HINF   Hinteralfeld      47.80 305  eP     P      02 05 00.4 -0.7
       comp=Z,22nm,0.9s,mb4.2
HINF                                epP    pP     02 05 53.4 -0.7
HINF   Hinteralfeld      47.80 305  eP     P      02 05 00.4 -0.7
HINF                                e*PP   pP     02 05 53.4 -0.7
HINF                                pmax   pmax
       comp=Z,11nm,0.9s,mb4.2
HAU    Haudompre         48.10 305  eP     P      02 05 02.8 -0.6
       comp=Z,32nm,0.9s,mb4.3
HAU    Haudompre         48.10 305  eP     P      02 05 02.8 -0.6
HAU                                 pmax   pmax
       comp=Z,16nm,0.9s,mb4.3
SBF    Sospel            48.27 300  eP     P      02 05 03.5 -1.2
       comp=Z,55nm,0.8s,mb4.7
SBF    Sospel            48.27 300  eP     P      02 05 03.5 -1.2
SBF                                 pmax   pmax
       comp=Z,28nm,0.8s,mb4.6
LPG    La Plagne         48.36 302  eP     P      02 05 05.4 +0.1
       comp=Z,36nm,0.8s,mb4.5
LPG                                 epP    pP     02 05 58.4 -0.1
LPG    La Plagne         48.36 302  eP     P      02 05 05.4 +0.1
LPG                                 e*PP   pP     02 05 58.4 -0.1
LPG                                 pmax   pmax
       comp=Z,18nm,0.8s,mb4.5
LPL    La Plagne         48.37 302  eP     P      02 05 05.3 -0.1
       comp=Z,38nm,0.9s,mb4.4
LPL    La Plagne         48.37 302  eP     P      02 05 05.3 -0.1
LPL                                 pmax   pmax
       comp=Z,19nm,0.9s,mb4.4
MBDF   Montbardon        48.52 301  eP     P      02 05 05.8 -0.8
       comp=Z,27nm,0.7s,mb4.4
MBDF   Montbardon        48.52 301  eP     P      02 05 05.8 -0.8
MBDF                                pmax   pmax
       comp=Z,13nm,0.7s,mb4.4
CABF   La Chapelle       48.56 303  eP     P      02 05 06.6 -0.3
       comp=Z,82nm,1.2s,mb4.6
CABF   La Chapelle       48.56 303  eP     P      02 05 06.6 -0.3
CABF                                pmax   pmax
       comp=Z,41nm,1.2s,mb4.6
GIVF   Givet             48.70 308  eP     P      02 05 07.9  0.0
       comp=Z,93nm,1.3s,mb4.7
GIVF   Givet             48.70 308  eP     P      02 05 07.9  0.0
GIVF                                pmax   pmax
       comp=Z,47nm,1.3s,mb4.7
KBS    Kingsbay          48.72 347  eP     P      02 05 08.8 +1.1
KBS    Kingsbay          48.72 347d iP     P      02 05 08.8 +1.1
MEZF   Maizieres J’vi    48.85 306  eP     P      02 05 09.0 -0.1
FRF    La Foret Royal    48.90 299  eP     P      02 05 08.0 -1.5
       comp=Z,36nm,0.9s,mb4.4
FRF    La Foret Royal    48.90 299  eP     P      02 05 08.0 -1.5
FRF                                 pmax   pmax
       comp=Z,18nm,0.9s,mb4.4
KMBO   Kilima Mbogo      48.94 228  P      P      02 05 12.1 +1.9
       comp=Z,8.5nm,0.5s,mb4.3,baz=35,slow=11,SNR=37
KMBO   Kilima Mbogo      48.94 228  P      P      02 05 12.1 +1.9
LMR    La Mourre         49.05 299  eP     P      02 05 10.0 -0.6
ORIF   Oris-en-Rattie    49.09 301  eP     P      02 05 09.6 -1.3
       comp=Z,15nm,0.9s,mb4.0
ORIF   Oris-en-Rattie    49.09 301  eP     P      02 05 09.6 -1.3
ORIF                                pmax   pmax
       comp=Z,7.0nm,0.9s,mb4.0
BAIF   Baives            49.09 308  eP     P      02 05 11.1 +0.2
       comp=Z,109nm,1.2s,mb4.8
BAIF                                epP    pP     02 06 04.5 +0.3
BAIF   Baives            49.09 308  eP     P      02 05 11.1 +0.2
BAIF                                e*PP   pP     02 06 04.5 +0.3
BAIF                                pmax   pmax
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	comp=Z,55nm,1.2s,mb4.8						
SMRF	Simiane la Rot	49.54	300	*e*P	P	02 05 13.3	-1.0
LOR	Lormes	49.90	305	*e*P	P	02 05 15.9	-1.1
	comp=Z,14nm,1.0s,mb4.0						
LOR	Lormes	49.90	305	*e*P	P	02 05 15.9	-1.1
LOR				pmax	pmax		
	comp=Z,7.0nm,1.0s,mb4.0						
VIVF	Saint-Julien-l	49.94	301	*e*P	P	02 05 16.9	-0.4
	comp=Z,21nm,0.7s,mb4.3						
VIVF				*e*pP	pP	02 06 10.7	-0.2
VIVF	Saint-Julien-l	49.94	301	*e*P	P	02 05 16.9	-0.4
VIVF				*e**PP	pP	02 06 10.7	-0.2
VIVF				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.2						
SMF	Signal de Mont	50.06	304	*e*P	P	02 05 17.5	-0.7
	comp=Z,56nm,0.9s,mb4.6						
SMF	Signal de Mont	50.06	304	*e*P	P	02 05 17.5	-0.7
SMF				pmax	pmax		
	comp=Z,28nm,0.9s,mb4.6						
SSF	Saint Saulge	50.19	305	*e*P	P	02 05 18.3	-0.8
	comp=Z,23nm,1.2s,mb4.4						
SSF	Saint Saulge	50.19	305	*e*P	P	02 05 18.3	-0.8
SSF				pmax	pmax		
	comp=Z,23nm,1.2s,mb4.4						
AVF	Avril sur Loir	50.35	304	*e*P	P	02 05 19.7	-0.7
	comp=Z,46nm,0.8s,mb4.5						
AVF	Avril sur Loir	50.35	304	*e*P	P	02 05 19.7	-0.7
AVF				pmax	pmax		
	comp=Z,23nm,0.8s,mb4.6						
LASF	Ste Croix	50.71	301	*e*P	P	02 05 22.8	-0.3
	comp=Z,88nm,1.1s,mb4.8						
HYF	Humbligny	50.71	305	*e*P	P	02 05 22.8	-0.2
BGF	Bois d'Agland	50.75	304	*e*P	P	02 05 22.5	-0.8
	comp=Z,17nm,0.8s,mb4.2						
BGF				*e*pP	pP	02 06 15.8	-1.3
BGF	Bois d'Agland	50.75	304	*e*P	P	02 05 22.5	-0.8
BGF				*e**PP	pP	02 06 15.8	-1.3
BGF				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.2						
TCF	Toulx Ste Croi	51.24	304	*e*P	P	02 05 26.6	-0.4
	comp=Z,81nm,1.1s,mb4.8						
TCF	Toulx Ste Croi	51.24	304	*e*P	P	02 05 26.6	-0.4
TCF				pmax	pmax		
	comp=Z,41nm,1.1s,mb4.8						
CAF	Calviac	51.71	302	*e*P	P	02 05 30.3	-0.2
	comp=Z,39nm,1.0s,mb4.5						
CAF	Calviac	51.71	302	*e*P	P	02 05 30.3	-0.2
CAF				pmax	pmax		
	comp=Z,19nm,1.0s,mb4.5						
RJF	Les Rejaudoux	51.97	303	*e*P	P	02 05 32.3	-0.1
	comp=Z,38nm,1.1s,mb4.4						
RJF	Les Rejaudoux	51.97	303	*e*P	P	02 05 32.3	-0.1
RJF				pmax	pmax		
	comp=Z,19nm,1.1s,mb4.4						
MTLF	Montolieu	52.06	300	*e*P	P	02 05 32.6	-0.5
LDF	La Druitiere	52.18	307	*e*P	P	02 05 32.9	-1.0
LDF				*e*pP	pP	02 06 25.9	-2.1
FLN	La Foliniere	52.37	307	*e*P	P	02 05 34.2	-1.1
	comp=Z,41nm,0.8s,mb4.6						
FLN	La Foliniere	52.37	307	*e*P	P	02 05 34.2	-1.1
FLN				pmax	pmax		
	comp=Z,20nm,0.8s,mb4.6						
LFF	La Frestale	52.60	303	*e*P	P	02 05 36.8	-0.3
	comp=Z,26nm,0.7s,mb4.5						
LFF	La Frestale	52.60	303	*e*P	P	02 05 36.8	-0.3
LFF				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.5						
YSS	Yuzh-Sakhalins	52.69	55	*i* P	P	02 05 37.5	-0.2
GRR	Gorron	52.71	307	*e*P	P	02 05 36.7	-1.1
	comp=Z,49nm,0.9s,mb4.6						
GRR	Gorron	52.71	307	*e*P	P	02 05 36.7	-1.1
GRR				pmax	pmax		
	comp=Z,25nm,0.9s,mb4.6						
MFF	Saint Martin d	52.73	305	*e*P	P	02 05 36.9	-1.1
	comp=Z,31nm,1.0s,mb4.4						
MFF	Saint Martin d	52.73	305	*e*P	P	02 05 36.9	-1.1
MFF				pmax	pmax		
	comp=Z,16nm,1.0s,mb4.4						
MJAR	Matsushiro Arr	52.79	69	pP	pP	02 06 34.0	+1.2
	comp=Z,4.3nm,0.7s,baz=290,slow=10.0,SNR=3.2						
EPF	Esparros	53.46	300	*e*P	P	02 05 42.5	-0.9
	comp=Z,19nm,0.8s,mb4.3						
EPF	Esparros	53.46	300	*e*P	P	02 05 42.5	-0.9
EPF				pmax	pmax		
	comp=Z,10.0nm,0.8s,mb4.3						
EBIE	Bielsa	53.71	300	P	P	02 05 45.0	-0.1
	comp=Z,176nm,2.4s,mb5.2						
EGRA	Graus	53.74	299	P	P	02 05 45.3	-0.1
	comp=Z,16nm,0.8s,mb4.6						
SGMF	Saint Gilles	53.83	307	*e*P	P	02 05 45.2	-0.8
	comp=Z,82nm,1.1s,mb4.9						
SGMF	Saint Gilles	53.83	307	*e*P	P	02 05 45.2	-0.8
SGMF				pmax	pmax		
	comp=Z,41nm,1.1s,mb4.9						
ETSF	Etsaut	54.13	301	*e*P	P	02 05 47.9	-0.3
	comp=Z,36nm,0.7s,mb4.7						
ETSF	Etsaut	54.13	301	*e*P	P	02 05 47.9	-0.3
ETSF				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.7						
ROSF	Rostrenen	54.27	308	*e*P	P	02 05 48.4	-0.7
	comp=Z,43nm,0.9s,mb4.7						
ROSF	Rostrenen	54.27	308	*e*P	P	02 05 48.4	-0.7
ROSF				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.7						
MA2	Magadan	54.29	38	*i* P	P	02 05 49.7	+0.6
QUIF	Quistinic	54.32	307	*e*P	P	02 05 48.4	-1.1
	comp=Z,37nm,0.9s,mb4.6						
QUIF	Quistinic	54.32	307	*e*P	P	02 05 48.4	-1.1
QUIF				pmax	pmax		
	comp=Z,18nm,0.9s,mb4.6						
SEY	Seymchan	54.36	34	⇓*i*P	P	02 05 50.4	+0.8
SJPF	Ste Jean	54.52	301	*e*P	P	02 05 51.4	+0.4
	comp=Z,34nm,1.0s,mb4.5						
SJPF	Ste Jean	54.52	301	*e*P	P	02 05 51.4	+0.4
SJPF				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.5						
DAG	Danmarks Havn	54.85	344	⇓*i*P	P	02 05 53.2	+0.2
	comp=Z,34nm,0.7s,mb5.0						
DAG				*e*	pP	02 06 47.0	-0.7
DAG	Danmarks Havn	54.85	344	⇓*i*P	P	02 05 53.2	+0.2
DAG				*e*	pP	02 06 47.0	-0.7
DAG				pmax	pmax		
	comp=Z,34nm,0.7s,mb5.0						
ELAN	Lanestosa	56.00	302	P	P	02 06 00.5	-1.1
	comp=Z,113nm,1.6s,mb5.2						
ETOB	Tobarra	56.33	296	P	P	02 06 03.6	-0.4
	comp=Z,36nm,1.1s,mb4.8						
EHUE	Huescar	57.41	295	P	P	02 06 11.4	-0.1
	comp=Z,11nm,0.9s,mb4.5						
EHUE	Huescar	57.41	295	P	P	02 06 11.4	-0.2
EHUE				pmax	pmax		
	comp=Z,11nm,0.9s,mb4.5						
GUD	Guadarrama	57.44	299	⇓P	P	02 06 11.6	-0.2
	comp=Z,13nm,0.7s,mb4.7						
GUD	Guadarrama	57.44	299	⇓P	P	02 06 11.6	-0.1
GUD				pmax	pmax		
	comp=Z,13nm,0.7s,mb4.7						
ESDC	Sonseca Array	57.67	298	P	P	02 06 12.6	-0.8
	comp=Z,8.8nm,0.7s,mb4.5,baz=58,slow=7.3,SNR=34						
ESDC				pP	pP	02 07 07.9	-0.8
	comp=Z,2.4nm,0.7s,baz=54,slow=7.2,SNR=3.5						
EQES	Quesada	57.76	296	P	P	02 06 13.9	-0.1
	comp=Z,64nm,1.4s,mb5.1						
EBER	Berja	57.99	295	P	P	02 06 13.7	-1.9
	comp=Z,39nm,1.2s,mb4.9						
EBAN	Banos Encina	58.13	296	⇓P	P	02 06 16.6	-0.1
	comp=Z,11nm,0.6s,mb4.7						
EBAN	Banos Encina	58.13	296	⇓P	P	02 06 16.6	-0.1
EBAN				pmax	pmax		
	comp=Z,11nm,0.6s,mb4.7						
ECOG	Cogollos-Vega	58.33	295	⇑P	P	02 06 16.5	-1.5
	comp=Z,5.1nm,0.8s,mb4.2						
ECOG	Cogollos-Vega	58.33	295	⇑P	P	02 06 16.5	-1.5
ECOG				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.2						
BILL	Bilibino	58.58	26	*e*P	P	02 06 19.8	+0.5
	comp=Z,10nm,0.6s,mb4.6						
BILL	Bilibino	58.58	26	*ce*P	P	02 06 19.9	+0.6
BILL						02 07 08.0	
BILL				*PP	pP	02 07 15.0	+0.2
BILL				*e**SP	sP	02 07 41.9	+0.2
BILL				pmax	pmax		
	comp=Z,30nm,1.2s,mb4.8						
ERON	Agron	58.61	295	P	P	02 06 19.2	-0.8
	comp=Z,5.6nm,0.6s,mb4.4						
EADA	Adamuz	58.70	297	P	P	02 06 19.6	-1.0
	comp=Z,11nm,0.7s,mb4.6						
ELUQ	Luque	58.72	296	⇓P	P	02 06 19.6	-1.1
	comp=Z,16nm,0.8s,mb4.7						
ELUQ	Luque	58.72	296	⇓P	P	02 06 19.6	-1.1
ELUQ				pmax	pmax		
	comp=Z,16nm,0.8s,mb4.7						
ERUA	La Rua	58.84	302	P	P	02 06 21.7	+0.2
	comp=Z,7.6nm,0.6s,mb4.5						
ERUA	La Rua	58.84	302	P	P	02 06 21.7	+0.2
ERUA				pmax	pmax		
	comp=Z,8.0nm,0.6s,mb4.5						
ELOB	Lobios	59.68	302	P	P	02 06 27.4	+0.1
	comp=Z,13nm,0.7s,mb4.7						
MTE	Manteigas	59.91	300	*e*P	P	02 06 28.9	+0.1
	comp=Z,34nm,1.1s,mb4.9						
PVIS	Viseu	60.02	300	*e*P	P	02 06 29.4	-0.2
	comp=Z,29nm,0.9s,mb4.9						
EBAD	Badajoz	60.21	298	P	P	02 06 30.2	-0.6
	comp=Z,62nm,1.0s,mb5.2						
PTOM	Tomar	60.84	300	*e*P	P	02 06 35.2	+0.2
	comp=Z,34nm,0.9s,mb5.0						
EVO	Evora	61.01	298	*e*P	P	02 06 36.0	-0.2
	comp=Z,47nm,1.3s,mb4.6						
LSZ	Lusaka	65.56	226	*e*P	P	02 07 06.2	0.0
	comp=Z,15nm,0.8s,mb4.7						
LSZ	Lusaka	65.56	226	*e*P	P	02 07 06.2	+0.1
LSZ				pmax	pmax		
	comp=Z,15nm,0.8s,mb4.7						
TORD	Torodi Ar. Bea	65.92	269	P	P	02 07 06.5	-2.0
	comp=Z,18nm,0.6s,mb4.9,baz=48,slow=5.7,SNR=326						
TORD				pP	pP	02 08 03.2	-2.3
	comp=Z,3.9nm,0.8s,baz=40,slow=5.6,SNR=2.6						
IMA2	Indian Mountai	72.12	18	*e*P	P	02 07 45.4	-0.1
INK	Inuvik	73.94	9	*e*P	P	02 07 56.7	+0.7
	comp=Z,38nm,0.9s,mb5.0						
INK	Inuvik	73.94	9	*e*P	P	02 07 56.7	+0.7
INK				pmax	pmax		
	comp=Z,38nm,0.9s						
TTA	Tatalina	74.01	20	*e*P	P	02 07 57.2	+0.6
	comp=Z,26nm,1.2s,mb4.7						
TTA	Tatalina	74.01	20	*e*P	P	02 07 57.2	+0.7
TTA				pmax	pmax		
	comp=Z,26nm,1.2s,mb4.7						
COLA	College	74.48	16	*e*P	P	02 07 59.8	+0.6
	comp=Z,38nm,0.8s,mb5.1						
COLA	College	74.48	16	*e*P	P	02 07 59.8	+0.6
COLA				pmax	pmax		
	comp=Z,38nm,0.8s,mb5.1						
LBTB	Lobatse	74.77	222	*e*P	P	02 08 02.1	+0.5
	comp=Z,35nm,1.1s,mb4.9						
LBTB	Lobatse	74.77	222	*e*P	P	02 08 02.1	+0.4
LBTB				pmax	pmax		
	comp=Z,35nm,1.1s,mb4.9						
ILAR	Eielson Array	74.78	16	P	P	02 08 00.8	-0.2
	comp=Z,11nm,0.8s,mb4.5,baz=318,slow=4.8,SNR=84						
ILAR				pP	pP	02 08 58.5	-0.6
	comp=Z,6.1nm,1.1s,baz=311,slow=4.9,SNR=4.2						
ILAR				sP	sP	02 09 26.2	+1.4
	comp=Z,2.8nm,0.9s,baz=318,slow=5.2,SNR=3.5						
DBIC	Dimbokro	74.90	267	P	P	02 08 01.1	-1.6
	comp=Z,6.9nm,0.6s,mb4.5,baz=26,slow=6.8,SNR=26						
DBIC				pP	pP	02 09 01.2	+0.5
	comp=Z,3.6nm,0.8s,baz=349,slow=5.2,SNR=2.2						
DBIC	Dimbokro	74.90	267	*e*P	P	02 08 00.9	-1.7
	comp=Z,6.5nm,0.6s,mb4.4						
DBIC	Dimbokro	74.90	267	P	P	02 08 01.1	-1.5
DBIC				*PP	pP	02 09 01.3	+0.6
DBIC				pmax	pmax		
	comp=Z,7.0nm,0.6s						
DBIC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TSUM	Tsumeb	75.04	232	*e*P	P	02 08 03.5	+0.2
	comp=Z,5.0nm,0.5s,mb4.4						
MCK	McKinley	75.20	17	*e*P	P	02 08 03.9	+0.6
	comp=Z,4.3nm,0.6s,mb4.3						
MCK	McKinley	75.20	17	*e*P	P	02 08 03.9	+0.6
MCK				pmax	pmax		
	comp=Z,4.0nm,0.6s,mb4.2						
LIC	Lamto	75.30	267	*e*P	P	02 08 03.1	-1.8
	comp=Z,16nm,0.6s,mb4.6						
THY	Trims Highway	76.21	16	*e*P	P	02 08 08.4	-0.6
YKA	Yellowknife Ar	81.30	3	P	P	02 08 36.9	+0.6
	comp=Z,11nm,0.6s,mb4.7,baz=351,slow=5.4,SNR=127						
YKA				pP	pP	02 09 35.5	+0.2
	comp=Z,5.6nm,0.8s,baz=348,slow=5.2,SNR=5.1						
YKA				sP	sP	02 10 01.7	+0.9
	comp=Z,4.7nm,0.7s,baz=348,slow=5.4,SNR=4.7						
YKA				PP	PP	02 11 40.8	-6.5
	comp=Z,1.7nm,0.9s,baz=358,slow=8.7,SNR=3.2						
YKA	Yellowknife Ar	81.30	3	P	P	02 08 36.9	+0.6
YKA				pP	pP	02 09 35.5	+0.2
YKA				sP	sP	02 10 01.7	+0.9
YKA				PP	PP	02 11 40.8	-6.5
WRA	Warramunga Arr	81.78	122	P	P	02 08 39.9	+0.3
	comp=Z,8.0nm,0.6s,mb4.5,baz=324,slow=5.0,SNR=38						
WRA				pP	pP	02 09 38.4	-0.3
	comp=Z,6.0nm,0.7s,baz=325,slow=5.1,SNR=7.7						
WRAB	Tennant Creek	81.78	122	*e*P	P	02 08 39.6	0.0
	comp=Z,8.9nm,0.6s,mb4.6						
WRAB	Tennant Creek	81.78	122	*e*P	P	02 08 39.6	0.0
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.6s,mb4.6						
FFC	Flin Flon	89.02	356	*e*P	P	02 09 15.2	+0.9
	comp=Z,22nm,1.1s,mb4.9						
FFC	Flin Flon	89.02	356	*e*P	P	02 09 15.2	+0.9
FFC				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.9						
EDM	Edmonton	90.62	3	*e*P	P	02 09 23.4	+1.6
ULM	Lac du Bonnet	92.94	352	P	P	02 09 33.1	+0.4
	comp=Z,6.1nm,0.9s,mb4.6,baz=340,slow=5.0,SNR=7.8						
CHMT	Chamberlain Mo	96.93	3	*e*P	P	02 09 51.7	+0.8
TXAR	Lajitas Array	114.41	355	PKP	PKPdf	02 14 60.0	+2.7
	comp=Z,0.2nm,0.5s,baz=70,slow=2.8,SNR=4.9						
SNAA	Sanae	119.41	200	*e*		02 16 06.3	
VNA2	Neumayer--Watz	120.42	202	*e*	PKPdf	02 15 09.2	+1.2
VNA2	Neumayer--Watz	120.42	202	*e*		02 16 13.5	
VNA1	Neumayer--Stat	120.57	202	*e*		02 16 15.4	
VNA3	Neumayer Olymp	121.22	202	*e*	PKPdf	02 15 10.5	+1.0
VNA3	Neumayer Olymp	121.22	202	*e*		02 16 14.3	
BDFB	Brasilia	122.57	274	PKP	PKPdf	02 15 14.8	+1.4
	comp=Z,1.1nm,0.4s,baz=72,slow=3.2,SNR=3.8						
LPAZ	La Paz	138.83	288	PKP	PKPdf	02 15 46.4	+2.3
	comp=Z,1.0nm,0.8s,slow=8.1,SNR=4.4						
TRQA	Tornquist	143.04	253	*e*PKPpre		02 15 48.0	
PLCA	Paso Flores	150.00	250	PKPbc	PKPdf	02 16 09.6	+7.3
	comp=Z,15nm,0.7s,baz=102,slow=1.9,SNR=41						
PLCA	Paso Flores	150.00	250	PKPdf	PKPdf	02 16 05.0	+2.7
PLCA				*e*PKPbc	PKPdf	02 16 09.5	+7.2

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*IDC **30** 02:11:41.2±1.2, 6.33N×124.05E, mb3.9/5, mb1 4.1/5, mb1mx3.8/17, mbtmp3.9/5, Error ellipse: s-maj=70.7km s-min=22.4km az=74.0*

*MAN **30** 02:11:43.4, 6.26N×123.81E, h19^{km}, mb4.4, ML3.3, MS3.1*

*NEIC **30** 02:11:43.5±0.7, 6.14N×123.74E, h10^{km}, mb4.0/1, Error ellipse: s-maj=18.7km s-min=14.1km az=83.0*

ISC 30 02:11:43.7±1.8**, 6.25N**±0.05×**123.76E**±0.05**, h26**^{km}±13^{km}**, n16, σ1^{s}03**/21**, mb3.8**/6**, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	1.08	27	⇓*i*P	Pn	02 12 01.9	-1.3
CTBH				*i* S	Sb	02 12 16.9	-0.3
GSPH	General Santos	1.20	98	⇑*i*P	Pn	02 12 07.0	+2.1
KCP	Kidapawan	1.52	60	⇓*e*P	Pn	02 12 09.0	-0.6
KCP				*i* S	Sn	02 12 29.1	+0.5
PAGZ	Pagadian	1.63	347	*e*P	Pn	02 12 10.7	-0.3
PAGZ				*e*S	Sn	02 12 30.9	-0.5
IPIL	Ipil	1.93	322	*e*P	Pn	02 12 16.5	+1.1
IPIL				*e*S	Sn	02 12 39.8	+0.9
DAV	Davao City (W)	1.98	66	*e*P	Pn	02 12 18.2	+2.0
BUKP	Musuan	2.07	39	*e*P	Pn	02 12 17.4	0.0
BUKP				*e*S	Sn	02 12 43.1	+0.5
DCPH	Dipolog City	2.35	350	*e*P	Pn	02 12 20.8	-0.6
MATI	Mati	2.58	74	*e*P	Pn	02 12 23.5	-1.2
FITZ	Fitzroy Crossi	24.27	176	P	P	02 17 00.6	+0.5
	2.3nm,0.8s,mb3.6,slow=3.0,SNR=4.5						
WRA	Warramunga Arr	28.04	158	P	P	02 17 33.4	-1.6
	0.8nm,0.6s,mb3.6,baz=332,slow=10,SNR=4.1						
STKA	Stephens Creek	41.56	157	P	P	02 19 31.3	+0.3
	5.8nm,0.8s,mb4.2,baz=333,slow=8.7,SNR=10						
STKA	Stephens Creek	41.56	157	*e*P	P	02 19 30.9	-0.1
MKAR	Makanchi Array	53.81	326	P	P	02 21 07.5	+1.1
	0.7nm,0.8s,mb3.6,baz=129,slow=7.8,SNR=5.3						
KURK	Kurchatov	58.04	328	P	P	02 21 36.7	-0.1
	0.9nm,0.6s,mb4.0						
ILAR	Eielson Array	84.11	26	P	P	02 24 11.6	-1.8
	0.4nm,0.6s,mb3.7,baz=244,slow=4.5,SNR=5.5						

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*IDC **30** 02:33:08.0±4.1, 12.23N×141.05E, h51^{km}±37^{km}, mb4.0/9, mb1 4.2/10, mb1mx3.9/18, mbtmp4.3/10, ML4.5/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/20, Error ellipse: s-maj=30.2km s-min=18.2km az=95.0*

*NEIC **30** 02:33:08.4±2.2, 12.22N×141.05E, h54^{km}±20^{km}, mb4.4/2, Error ellipse: s-maj=20.5km s-min=11.4km az=90.0*

ISC 30 02:33:05.7±3.3**, 12.2N**±0.1×**141.0E**±0.2**, h46**^{km}±31^{km}**, n17, σ0^{s}67**/14**, mb4.3**/11**, MS3.4**/3**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.04	70	P	P	02 34 06.7	+0.1
	30nm,0.3s,baz=198,slow=20,SNR=11						
JNU	Nakatsue	22.79	338	LR	LR	02 45 10.2	
	comp=Z,77nm,19.7s,MS3.1,baz=234,slow=32						
CTAO	Charters Tower	32.50	171	*e*P	P	02 39 35.0	+0.5
WRA	Warramunga Arr	32.60	192	P	P	02 39 34.8	-0.5
	5.7nm,0.8s,mb4.5,baz=11,slow=9.5,SNR=19						
STKA	Stephens Creek	43.83	179	P	P	02 41 09.0	-0.2
	4.7nm,0.6s,mb4.4,baz=357,slow=8.5,SNR=11						
SONM	Songino Array	45.77	328	LR	LR	03 01 13.2	
	comp=Z,45nm,21.5s,MS3.4,baz=193,slow=37						
MKAR	Makanchi Array	59.89	317	P	P	02 43 09.6	+0.4
	1.1nm,0.7s,mb4.0,baz=90,slow=9.0,SNR=11						
ZAL	Zalesovo	60.59	326	P	P	02 43 13.7	-0.2
	0.7nm,0.4s,mb4.1,baz=9.6,slow=5.6,SNR=4.1						
ZAL				LR	LR	03 10 00.6	
	comp=Z,48nm,21.1s,MS3.6,baz=246,slow=36						
KURK	Kurchatov	63.23	321	*e*P	P	02 43 31.7	+0.1
	3.1nm,0.6s,mb4.6						
BRVK	Borovoye	68.75	322	*e*P	P	02 44 07.3	+0.6
	1.9nm,0.5s,mb4.3						
ILAR	Eielson Array	71.45	25	P	P	02 44 21.2	-1.7
	0.6nm,0.6s,mb3.7,baz=247,slow=6.2,SNR=14						
INK	Inuvik	77.09	22	P	P	02 44 55.5	0.0
	1.0nm,0.9s,mb3.7,baz=255,slow=14,SNR=4.0						
ARCES	ARCESS Array B	87.21	341	P	P	02 45 48.2	+0.3
	2.7nm,0.7s,mb4.6,baz=62,slow=7.1,SNR=13						
ARCES	ARCESS Array B	87.21	341	P	P	02 45 48.2	+0.3
NVAR	Mina Array Bea	90.74	51	P	P	02 46 06.6	+1.3
	0.5nm,0.7s,mb4.0,baz=255,slow=4.4,SNR=3.9						
FINES	FINESS Array B	90.78	334	P	P	02 46 04.3	-0.7
	4.1nm,0.6s,mb4.9,baz=73,slow=5.2,SNR=22						
LPAZ	La Paz	151.51	102	PKPbc	PKPdf	02 52 58.9	+10
	3.4nm,0.7s,baz=298,slow=1.9,SNR=19						

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*GUC **30** 02:41:25.1±0.9, 31.84S×69.48W, h153^{km}±8^{km}, MD4.2, ML4.6*

*NEIC **30** 02:41:25.9±0.3, 31.85S×69.23W, mb4.4/5, MD4.2(GUC), Error ellipse: s-maj=6.8km s-min=5.0km az=112.0*

*IDC **30** 02:41:26.1±0.6, 31.84S×69.03W, h118^{km}±4^{km}, mb3.9/10, mb1 4.0/13, mb1mx3.9/17, mbtmp4.2/13, Error ellipse: s-maj=15.0km s-min=14.5km az=125.0*

ISC 30 02:41:24.9±0.3**, 31.81S**±0.02×**69.21W**±0.04**, h123**^{km}±3^{km}**, h123**^{km}±3.1^{km}**:pP-P, n62, σ0^{s}94**/76**, mb4.1**/14**, 18C-5D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	0.52	60	⇓*i*P	P	02 41 46.3	+2.8
ZON				*e*S	S	02 42 01.2	+3.7
CFAA	Coronel Fontan	0.85	76	P	P	02 41 46.0	0.0
	58nm,0.3s,baz=267,slow=6.0,SNR=2369						
CFAA				S	S	02 42 00.9	-1.1
	157nm,0.3s,baz=64,slow=18,SNR=84						
MDZ	Mendoza	1.11	164	⇑*i*P	P	02 41 48.3	-0.3
MDZ				*i* S	S	02 42 07.3	+0.9
JACH	Jahuel	1.46	233	⇑*i*P	P	02 41 52.9	+0.4
JACH				*i* S	S	02 42 14.3	+0.8
CMCH	Combarbala	1.66	292	⇓*i*P	P	02 41 54.8	0.0
CMCH				*i* S	S	02 42 17.4	0.0
ILCH	Illapel	1.68	275	⇑*i*P	P	02 41 55.1	+0.1
ILCH				*i* S	S	02 42 17.7	-0.3
ILCH				AMP		02 42 19.3	
	comp=N,8µm,0.3s						
FCH	Farellones	1.77	211	*i* P	P	02 41 57.1	+1.0
FCH				*i* S	S	02 42 21.3	+1.6
FCH				AMP		02 42 26.2	
	comp=E,3µm,0.3s						
PEL	Peldehue	1.82	223	⇑*i*P	P	02 41 56.7	-0.1
PEL				*i* S	S	02 42 20.7	-0.3
PEL				AMP		02 42 22.0	
	comp=N,6µm,0.4s						
ROCH	El Roble	1.92	232	⇑*i*P	P	02 41 57.8	-0.1
CLCH	Cerro Calan	1.94	215	⇑*i*P	P	02 41 58.8	+0.6
CLCH				*i* S	S	02 42 24.7	+1.3
CLCH				AMP		02 42 26.6	
	comp=E,5µm,0.6s						
FSR	Penalolen	2.00	213	⇑*i*P	P	02 41 59.6	+0.7
FSR				*i* S	S	02 42 25.5	+0.8
FSR				AMP		02 42 29.7	
	comp=N,4µm,0.2s						
PACH	Papudo	2.02	248	⇑*i*P	P	02 41 58.4	-0.8
PACH				*i* S	S	02 42 23.7	-1.6
SAN	Santiago	2.05	216	⇑*i*P	P	02 41 59.8	+0.3
SAN				*i* S	S	02 42 25.7	-0.1
SAN				AMP		02 42 27.2	
	comp=E,3µm,0.4s						
OVCH	Ovalle	2.09	305	*i* P	P	02 42 00.1	+0.1
OVCH				*i* S	S	02 42 26.3	-0.3
OVCH				AMP		02 42 31.2	
	comp=E,3µm,0.5s						
ANTU	Antumapu	2.13	214	⇑*i*P	P	02 42 00.7	+0.1
ANTU				*i* S	S	02 42 27.7	+0.1
ANTU				AMP		02 42 28.8	
	comp=E,4µm,0.5s						
TLL	Tololo Astrono	2.14	320	⇑*i*P	P	02 42 01.7	+1.0
TLL				*i* S	S	02 42 29.1	+1.3
TLL				AMP		02 42 31.3	
	comp=E,5µm,0.6s						
RCDM	Rinconada Maip	2.15	218	⇑*i*P	P	02 42 00.9	0.0
RCDM				*i* S	S	02 42 27.7	-0.4
RCDM				AMP		02 42 28.8	
	comp=E,5µm,0.7s						
LMEL	Las Melosas	2.20	202	*e*P	P	02 42 01.8	+0.3
LMEL				AMP		02 42 39.3	
	comp=N,2µm,0.2s						
TACH	Talagante	2.35	218	*e*P	P	02 42 02.8	-0.7
TACH				*i* S	S	02 42 31.3	-1.3
IHA	Instituto Hidr	2.39	239	⇑*i*P	P	02 42 02.7	-1.3
IHA				*i* S	S	02 42 31.6	-2.1
CHCH	Chadas Angostu	2.44	209	⇓*i*P	P	02 42 04.5	-0.2
CHCH				*i* S	S	02 42 34.5	-0.4
CACH	El Canelo	2.58	207	⇓*i*P	P	02 42 06.9	+0.3
CACH				*i* S	S	02 42 38.8	+0.6
LSCH	La Serena	2.58	317	⇑*i*P	P	02 42 06.2	-0.3
LSCH				*i* S	S	02 42 37.0	-1.2
LSCH				AMP		02 42 38.1	
	comp=N,4µm,0.4s						
LCCH	Las Cruces	2.59	230	⇑*i*P	P	02 42 05.4	-1.4
CICH	Cipreses	2.70	202	⇓*i*P	P	02 42 08.3	+0.1
CICH				*i* S	S	02 42 41.7	+0.7
TRQA	Tornquist	8.60	138	*e*P	P	02 43 25.2	-2.4
	comp=N,138nm,0.6s						
PLCA	Paso Flores	8.97	187	P	P	02 43 30.8	-1.8
	comp=N,0.9nm,0.3s,baz=0.1,slow=12,SNR=22						
CPUP	Villa Florida	11.73	65	*e*P	P	02 44 07.2	-2.1
	comp=N,30nm,0.4s						
ARE	Arequipa	15.42	352	*e*P	P	02 44 58.0	+1.1
LPAZ	La Paz	15.48	4	P	P	02 44 57.5	-0.2
	comp=N,0.7nm,0.3s,baz=178,slow=9.0,SNR=80						
LPAZ	La Paz	15.48	4	P	P	02 44 57.5	-0.2
SIV	San Ignacio	17.40	27	P	P	02 45 20.1	-1.4
	comp=N,0.5nm,0.3s,baz=217,slow=9.8,SNR=20						
USHA	Ushuaia	23.02	179	P	P	02 46 19.9	+0.5
	comp=N,9.0nm,0.7s,mb4.2,baz=1.3,slow=4.0,SNR=6.1						
SAML	Samuel	23.43	15	*e*P	P	02 46 23.8	+0.1
	comp=N,7.0nm,0.9s,mb4.0						
BDFB	Brasilia	25.13	55	P	P	02 46 39.6	-0.4
	comp=N,6.8nm,0.7s,mb4.2,baz=223,slow=8.6,SNR=12						
VNA3	Neumayer Olymp	50.51	159	*e*	P	02 50 15.7	+3.8
VNA3	Neumayer Olymp	50.51	159	*e*	P	02 50 26.3	+14
VNA3	Neumayer Olymp	50.51	159	*e*	pP	02 50 42.4	+1.6
VNA3	Neumayer Olymp	50.51	159	⇑*i*P	P	02 50 11.4	-0.5
VNA3				*e*	pP	02 50 42.4	+1.6
VNA2	Neumayer--Watz	51.13	158	*e*	P	02 50 20.3	+3.7
VNA2	Neumayer--Watz	51.13	158	*e*	P	02 50 30.3	+14

VNA2	**Neumayer--Watz**	**51.13**	**158**	*e*	pP	02 50 46.7	+1.2
VNA2	**Neumayer--Watz**	**51.13**	**158**	⇑*i*P	**P**	**02 50 16.6**	**0.0**
VNA2				*e*	pP	02 50 46.7	+1.2
SNAA	**Sanae**	**52.73**	**159**	*e*	**P**	**02 50 31.9**	**+3.3**
SNAA	**Sanae**	**52.73**	**159**	*e*	pP	02 50 56.1	-1.6
SNAA	**Sanae**	**52.73**	**159**	P	**P**	**02 50 28.1**	**-0.5**
	comp=N,1.8nm,0.8s,mb4.2,baz=291,slow=7.1,SNR=23						
SNAA	**Sanae**	**52.73**	**159**	⇑*i*P	**P**	**02 50 27.6**	**-1.0**
SNAA				*e*	pP	02 50 56.1	-1.6
QSPA	**South Pole Qui**	**58.42**	**180**	*e*P	**P**	**02 51 09.0**	**-0.3**
	comp=N,8.0nm,0.9s,mb4.8						
VNDA	**Vanda**	**66.70**	**191**	*e*P	**P**	**02 52 04.8**	**+0.7**
	comp=N,1.5nm,0.9s,mb3.8						
TXAR	**Lajitas Array**	**69.06**	**328**	P	**P**	**02 52 19.9**	**+0.4**
	comp=N,1.1nm,0.6s,mb3.9,baz=155,slow=8.4,SNR=18						
DBIC	**Dimbokro**	**72.21**	**70**	P	**P**	**02 52 38.2**	**-0.4**
	comp=N,4.6nm,0.5s,mb4.6,baz=209,slow=8.3,SNR=22						
LBTB	**Lobatse**	**81.03**	**114**	*e*P	**P**	**02 53 27.8**	**+0.1**
	comp=N,4.4nm,0.7s,mb4.4						
TORD	**Torodi Ar. Bea**	**81.21**	**69**	P	**P**	**02 53 28.9**	**+0.1**
	comp=N,5.4nm,0.7s,mb4.5,baz=282,slow=6.5,SNR=71						
TORD				pP	pP	02 53 58.4	-1.9
	comp=N,1.4nm,0.8s,baz=256,slow=4.6,SNR=3.2						
PDAR	**Pinedale Array**	**82.94**	**331**	P	**P**	**02 53 38.2**	**+1.1**
	comp=N,0.6nm,0.7s,mb3.5,baz=131,slow=4.4,SNR=5.9						
PDAR				pP	pP	02 54 09.3	+0.6
	comp=N,0.4nm,0.7s,baz=117,slow=6.6,SNR=2.8						
NVAR	**Mina Array Bea**	**83.50**	**323**	P	**P**	**02 53 42.0**	**+1.9**
	comp=N,0.7nm,0.8s,mb3.5,baz=172,slow=6.4,SNR=3.4						
ELK	**Elko**	**83.80**	**327**	P	**P**	**02 53 42.8**	**+1.3**
	comp=N,0.8nm,0.6s,mb3.7,baz=66,slow=7.2,SNR=4.4						
ULM	**Lac du Bonnet**	**85.05**	**343**	P	**P**	**02 53 47.2**	**-0.3**
	comp=N,1.3nm,0.7s,mb4.0,baz=153,slow=9.0,SNR=2.8						
WRA	**Warramunga Arr**	**123.81**	**207**	PKP	PKPdf	03 00 09.5	+0.8
	comp=N,2.9nm,0.6s,baz=164,slow=1.6,SNR=14						
AAK	**Ala-Archa**	**149.36**	**59**	*e*PKPbc	PKPdf	03 00 59.7	+5.3
ZAL	**Zalesovo**	**151.10**	**32**	PKPbc	PKPdf	03 01 04.8	+8.2
	comp=N,3.0nm,0.5s,baz=165,slow=2.3,SNR=13						
ZAL				pPKPbc		03 01 37.0	
	comp=N,3.5nm,0.7s,baz=152,slow=2.6,SNR=8.0						
MKAR	**Makanchi Array**	**153.53**	**47**	PKPbc	PKPdf	03 01 10.0	+10
	comp=N,0.8nm,0.7s,baz=327,slow=2.7,SNR=7.2						
MKAR				PKPab	PKPab	03 01 23.1	-0.5
	comp=N,1.9nm,0.7s,baz=304,slow=3.7,SNR=9.9						
MKAR				pPKPbc		03 01 42.5	
	comp=N,1.4nm,0.7s,baz=292,slow=1.7,SNR=5.4						
MKAR	**Makanchi Array**	**153.53**	**47**	PKPbc	PKPdf	03 01 10.0	+10
MKAR				PKPab	PKPab	03 01 23.1	-0.5
MKAR				pPKPbc		03 01 42.5	

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*BYKL **30** 03:42:26.3±0.3, 57.42N×120.84E, h1^{km}±13^{km}*

*IDC **30** 03:42:27.5±3.0, 57.53N×120.60E, mb3.7/6, mb1 3.8/6, mb1mx3.6/22, mbtmp3.7/6, Error ellipse: s-maj=76.1km s-min=26.5km az=159.0*

*MOS **30** 03:42:28.1±1.2, 57.36N×120.66E, h17^{km}, mb4.0/2, Error ellipse: s-maj=14.5km s-min=12.8km az=57.4*

ISC 30 03:42:28.7±0.4**, 57.40N**±0.04×**120.74E**±0.04**, h17^{km}, n42, σ1^{s}41**/62**, mb3.6**/6**, 2C-4D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.44**	**250**	⇓*i*Pg	**Pn**	**03 42 54.1**	**0.0**
CRS				*e*Pb	**Pb**	**03 42 55.4**	**+0.8**
CRS				max		03 42 55.9	
	275nm,0.8s						
CRS				*i* Sg	**Sb**	**03 43 13.1**	**+0.6**
CRS				Smax		03 43 13.7	
	1µm,0.8s						
CRS	**Chara**	**1.44**	**250**	*e*P	**Pn**	**03 42 54.2**	**+0.1**
CRS				*e*		03 43 13.1	
CRS				pmax	pmax		
	comp=Z,539nm,0.8s						
CRS				smax			
	comp=E,1µm,0.9s						
NRGR	**Nerungri**	**2.30**	**107**	*e*P	**Pn**	**03 43 07.5**	**+1.0**
NRGR				S	**Sn**	**03 43 35.5**	**+0.8**
CLNS	**Chul'man**	**2.34**	**102**	*e*Pg	**Pn**	**03 43 07.3**	**+0.3**
CLNS				Pmax		03 43 10.3	
	comp=E,142nm,0.1s						
CLNS				*e*Sg	**Sn**	**03 43 37.3**	**+1.8**
CLNS				Smax		03 43 41.5	
	comp=E,836nm,0.2s						
CLNS	**Chul'man**	**2.34**	**102**	*e*P	**Pn**	**03 43 06.9**	**-0.1**
CLNS				*e*S	**Sn**	**03 43 35.0**	**-0.5**
CLNS				pmax	pmax		
	comp=Z,43nm,0.4s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.3s						
CLNS				pmax	pmax		
	comp=E,7.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,30nm,0.3s						
CLNS				pmax	pmax		
	comp=N,7.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,22nm,0.3s						
CLNS				smax			
	comp=E,42nm,0.2s						
CLNS				smax			
	comp=Z,14nm,0.2s						
CLNS				smax			
	comp=N,84nm,0.3s						
CLNS				smax			
	comp=E,420nm,0.4s						
CLNS				smax			
	comp=N,322nm,0.3s						
CLNS				smax			
	comp=Z,114nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,50nm,10.0s						
ALDR	**Aldan**	**2.77**	**62**	*e*Pn	**Pn**	**03 43 11.5**	**-1.6**
ALDR				*e*Pg	**Pn**	**03 43 14.1**	**+1.0**
ALDR				Pmax		03 43 21.6	
	comp=Z,124nm,0.1s						
ALDR				*e*Sg	**Sn**	**03 43 50.1**	**+3.7**
ALDR				Smax		03 43 52.1	
	comp=Z,3µm,0.1s						
NLYR	**Nelyaty**	**2.91**	**254**	*e*Pn	**Pn**	**03 43 15.2**	**+0.1**
NLYR				*e*Pg	**Pb**	**03 43 19.7**	**+0.1**
NLYR				Pmax		03 43 21.7	
	comp=Z,296nm,0.8s						
NLYR				*e*Sg	**Sb**	**03 43 57.1**	**+2.1**
NLYR				Smax		03 44 03.9	
	comp=Z,643nm,1.0s						
NLYR	**Nelyaty**	**2.91**	**254**	*e*P	**Pn**	**03 43 15.4**	**+0.3**
NLYR				*e*		03 43 56.8	
NLYR				pmax	pmax		
	comp=Z,294nm,0.4s						
NLYR				smax			
	comp=E,642nm,1.1s						
TUP	**Tupik**	**3.02**	**189**	*e*Pn	**Pn**	**03 43 15.5**	**-1.2**
TUP				⇓*i*Pg	**Pb**	**03 43 20.9**	**-0.6**
TUP				Pmax		03 43 22.7	
	comp=E,202nm,0.7s						
TUP				*e*Sn	**Sn**	**03 43 49.7**	**-3.1**
TUP				*e*Sg	**Sb**	**03 43 59.0**	**+0.7**
TUP				Smax		03 44 00.3	
	comp=E,1µm,1.0s						
TUP				*e*		03 44 02.1	
TUP				*e*SgSg		03 44 07.0	
TUP	**Tupik**	**3.02**	**189**	*e*P	**Pn**	**03 43 15.2**	**-1.5**
TUP				*e*S	**Sn**	**03 43 50.8**	**-2.0**
TUP				pmax	pmax		
	comp=Z,203nm,0.5s						
TUP				smax			
	comp=E,1µm,0.8s						
TNDR	**Tynda**	**3.17**	**134**	*e*	**Pn**	**03 43 11.9**	**-7.0**
TNDR				*e*		03 43 18.7	
TNDR				max		03 43 20.1	
	comp=E,188nm,0.1s						
TNDR				*e*		03 43 54.3	
TNDR				*e*Sg	**Sb**	**03 44 03.2**	**+0.5**
TNDR				Smax		03 44 10.9	
	comp=E,634nm,0.1s						
BOD	**Bodaibo**	**3.65**	**279**	⇓*i*Pn	**Pn**	**03 43 25.3**	**-0.4**
BOD				*e*Pg	**Pb**	**03 43 32.3**	**0.0**
BOD				Pmax		03 43 36.7	
	comp=E,40nm,0.6s						
BOD				*e*Sg	**Sb**	**03 44 19.5**	**+3.0**
BOD				Smax		03 44 29.4	
	comp=E,255nm,0.8s						
BOD	**Bodaibo**	**3.65**	**279**	*e*P	**Pn**	**03 43 24.7**	**-1.0**
BOD				pmax	pmax		
	comp=Z,61nm,0.5s						
SVKR	**Severomuysk**	**4.16**	**255**	Pg	**Pb**	**03 43 41.8**	**+0.8**
SVKR				Pmax		03 43 47.9	
	comp=Z,64nm,0.7s						
SVKR				*e*Sg	**Sb**	**03 44 36.5**	**+5.3**
SVKR				Smax		03 44 44.1	
	comp=Z,431nm,1.0s						
UKT	**Uakit**	**4.39**	**247**	*e*Pn	**Pn**	**03 43 35.7**	**-0.5**
UKT				⇑*i*Pg	**Pb**	**03 43 46.0**	**+1.1**
UKT				Pmax		03 43 48.7	
	comp=Z,30nm,0.6s						
UKT				*e*Sg	**Sb**	**03 44 43.0**	**+5.1**
UKT				Smax		03 44 46.3	
	comp=Z,136nm,0.9s						
UKT				*e*		03 44 51.3	
UKT	**Uakit**	**4.39**	**247**	*e*P	**Pb**	**03 43 46.6**	**+1.7**
UKT				pmax	pmax		
	comp=Z,24nm,0.5s						
KROS	**Kirovskiy**	**4.60**	**128**	⇑*i*Pg	**Pb**	**03 43 46.0**	**-2.5**
KROS				Pmax		03 43 48.6	
	comp=Z,31nm,0.5s						
KROS				*e*Sn	**Sn**	**03 44 26.3**	**-6.5**
KROS				*i* Sg	**Sb**	**03 44 45.9**	**+1.8**
KROS				Smax		03 44 49.5	
	comp=Z,220nm,0.5s						
YOA	**Uoyan**	**5.12**	**259**	*e*Sg	**Sb**	**03 45 06.2**	**+7.1**
YOA				Smax		03 45 13.2	
	comp=Z,641nm,1.6s						
YOA	**Uoyan**	**5.12**	**259**	*e*P	**Pb**	**03 44 01.0**	**+3.6**
YOA				pmax	pmax		
	comp=Z,81nm,0.5s						
KMO	**Kumora**	**5.48**	**258**	*e*Pg	**Pb**	**03 44 04.7**	**+1.2**
KMO				Pmax		03 44 08.8	
	comp=Z,17nm,0.4s						
KMO				*e*Sg	**Sb**	**03 45 17.3**	**+7.8**
KMO				Smax		03 45 32.6	
	comp=Z,205nm,1.3s						
KMO	**Kumora**	**5.48**	**258**	*e*P	**Pn**	**03 43 48.6**	**-3.0**
KMO				*e*S	**Sn**	**03 44 49.8**	**-5.1**
KMO				pmax	pmax		
	comp=Z,19nm,0.5s						
KMO				smax			
	comp=E,205nm,1.4s						
YLYR	**Ulyunkhan**	**5.92**	**249**	*e*Pn	**Pn**	**03 43 56.5**	**-1.4**
YLYR				*e*		03 44 08.5	
YLYR				*e*Pg	**Pb**	**03 44 14.4**	**+3.3**
YLYR				Pmax		03 44 19.6	
	comp=E,10.0nm,0.6s						
YLYR				*e*Sg	**Sb**	**03 45 30.9**	**+8.5**
YLYR				Smax		03 45 47.1	
	comp=E,123nm,1.0s						
NIZ	**Nizh Angarsk**	**6.40**	**260**	*e*Pg	Px	03 44 23.0	
NIZ				Pmax		03 44 27.4	
	comp=E,6.0nm,0.8s						
NIZ				*e*		03 44 29.8	
NIZ				*e*Sg	Sx	03 45 45.3	
NIZ				Smax		03 46 13.7	
	comp=E,117nm,1.4s						
NIZ	**Nizh Angarsk**	**6.40**	**260**	*e*P	**Pn**	**03 44 02.3**	**-2.3**
NIZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK	**Yakutsk**	**6.48**	**41**	*e*P	Px	03 44 21.7	
YAK				*e*S	**Sn**	**03 45 11.8**	**-8.2**
YAK				pmax	pmax		
	comp=Z,12nm,0.7s						
YAK				smax			
	comp=N,15nm,0.7s						
YAK				smax			
	comp=E,39nm,0.6s						
YAK				MLR	MLR		
	comp=Z,71nm,7.0s						
CIT	**Chita**	**6.81**	**221**	*e*	Px	03 44 31.6	
CIT				max		03 44 32.8	
	comp=Z,17nm,0.9s						
CIT				*e*Sg	Sx	03 45 56.7	
CIT				Smax		03 46 06.0	
	comp=Z,183nm,0.8s						
SYVR	**Suvo**	**7.16**	**243**	*e*Pn	**Pn**	**03 44 12.6**	**-2.6**
SYVR				*e*Pg	Px	03 44 37.2	
SYVR				Pmax		03 44 41.2	
	comp=Z,7.0nm,0.8s						
SYVR				*e*Sg	Sx	03 46 09.8	
SYVR				Smax		03 46 20.4	
	comp=Z,142nm,1.8s						
OGRR	**Ongureny**	**8.35**	**249**	*e*Sg	Sx	03 46 47.3	
OGRR				Smax		03 47 10.1	
	comp=Z,66nm,2.1s						
KPC	**Khapcheranga**	**9.17**	**216**	*e*Pn	**P**	**03 44 40.1**	**-3.2**
KPC				*e*		03 45 14.5	
KPC				*e*Sg	Sx	03 47 09.8	
KPC				Smax		03 47 20.1	
	comp=Z,127nm,1.4s						
TRG	**Tyrgan**	**9.47**	**247**	*e*Sg	Sx	03 47 21.0	
TRG				Smax		03 47 23.0	
	comp=Z,59nm,2.0s						
ARS	**Arshan**	**11.92**	**250**	*e*Sg	Sx	03 48 35.8	
ARS				Smax		03 48 56.7	
	comp=Z,54nm,1.0s						
TIXI	**Tiksi**	**14.70**	**10**	⇓*i*P	**P**	**03 45 58.4**	**+1.1**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KRAR	**Krasnoyarsk**	**15.32**	**277**	*e*P	**P**	**03 46 06.9**	**+1.4**
SEY	**Seymchan**	**16.57**	**57**	*i* P	**P**	**03 46 22.7**	**+1.3**
MKAR	**Makanchi Array**	**25.55**	**262**	P	**P**	**03 47 57.1**	**-0.7**
	comp=Z,0.6nm,0.6s,mb3.3,baz=60,slow=8.1,SNR=5.6						
MKAR	**Makanchi Array**	**25.55**	**262**	*i* P	**P**	**03 47 59.2**	**+1.4**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	**Borovoye Array**	**28.51**	**283**	P	**P**	**03 48 23.4**	**-1.3**
	comp=Z,0.2nm,0.4s,mb3.2,baz=45,slow=6.1,SNR=2.9						
ILAR	**Eielson Array**	**41.40**	**40**	P	**P**	**03 50 14.4**	**-0.7**
	comp=Z,0.4nm,0.5s,mb3.3,baz=296,slow=5.4,SNR=12						
FINES	**FINESS Array B**	**44.25**	**317**	P	**P**	**03 50 36.7**	**-1.5**
	comp=Z,5.9nm,1.1s,mb4.2,baz=34,slow=10.0,SNR=3.3						
HFS	**Hagfors**	**49.57**	**321**	P	**P**	**03 51 18.1**	**-1.9**
	comp=Z,1.0nm,0.4s,mb4.2,baz=63,slow=9.7,SNR=5.4						
HFS	**Hagfors**	**49.57**	**321**	P	**P**	**03 51 18.1**	**-1.9**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**50.22**	**304**	P	**P**	**03 51 24.0**	**-1.2**
	comp=Z,0.2nm,0.3s,mb3.7,baz=41,slow=8.5,SNR=6.1						

IDC 30 04:00:06.9±1.2**, 14.46S**×**175.15W, mb3.8**/5**, mb1 4.2**/6**, mb1mx4.0**/14**, mbtmp3.8**/6**, MS3.8**/11**, Ms1 3.8**/11**, ms1mx3.5**/28**, Error ellipse: s-maj=50.4km s-min=23.7km az=158.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.32**	**81**	Pn	Pn	04 01 00.1	-1.1
	9.6nm,0.3s,baz=71,slow=6.5,SNR=4.5						
AFI				Sn	Sn	04 01 41.1	-0.9
	17nm,0.3s,baz=101,slow=21,SNR=4.0						
AFI				LR	LR	04 02 15.3	
	comp=Z,1µm,19.7s,baz=250,slow=39						
RAO	**Raoul Island**	**14.94**	**189**	Pn	P	04 03 40.1	-1.1
	86nm,0.3s,baz=74,slow=23,SNR=4.3						
DZM	**Mont Dzumac**	**19.03**	**244**	LR	LR	04 10 15.2	
	comp=Z,366nm,19.1s,baz=200,slow=32						
URZ	**Urewera**	**24.67**	**195**	LR	LR	04 14 19.8	
	comp=Z,146nm,18.1s,baz=241,slow=35						
PPT	**Papeete**	**24.77**	**101**	*e*LQ		04 10 04.9	
PPT				*e*LR	LR	04 11 07.7	
	72nm,26.5s						
HNR	**Honiara**	**24.86**	**279**	LR	LR	04 13 15.2	
	comp=Z,152nm,20.5s,baz=131,slow=32						
TBI	**Tubuai**	**25.83**	**114**	*e*LQ		04 10 33.3	
TBI				*e*LR	LR	04 11 37.4	
	87nm,29.5s						
RKT	**Rikitea**	**38.90**	**109**	*e*LR	LR	04 17 41.0	
WRA	**Warramunga Arr**	**48.41**	**256**	P	P	04 08 51.0	-2.1
	2.5nm,0.9s,baz=88,slow=7.0,SNR=6.2						
FITZ	**Fitzroy Crossi**	**56.75**	**258**	LR	LR	04 32 24.5	
	comp=Z,93nm,19.9s,baz=333,slow=34						
NWAO	**Narrogin (SRO)**	**63.60**	**240**	LR	LR	04 34 34.6	
	comp=Z,94nm,20.1s,baz=218,slow=32						
NVAR	**Mina Array Bea**	**74.78**	**43**	P	P	04 11 48.5	-2.4
	0.5nm,0.8s,baz=229,slow=8.3,SNR=3.5						
TXAR	**Lajitas Array**	**81.51**	**57**	P	P	04 12 27.7	-0.3
	1.1nm,1.0s,baz=243,slow=5.6,SNR=5.7						
TXAR				LR	LR	04 40 05.0	
	comp=Z,98nm,19.2s,baz=250,slow=29						
ILAR	**Eielson Array**	**81.87**	**12**	P	P	04 12 28.6	-0.5
	1.1nm,1.1s,baz=238,slow=8.5,SNR=4.7						
PDAR	**Pinedale Array**	**82.71**	**43**	P	P	04 12 32.4	-1.6
	0.8nm,0.9s,baz=180,slow=4.4,SNR=4.1						
PDAR				LR	LR	04 40 23.2	
	comp=Z,51nm,21.7s,baz=352,slow=29						
YKA	**Yellowknife Ar**	**89.92**	**24**	LR	LR	04 46 24.1	
	comp=Z,76nm,21.8s,baz=215,slow=31						
PLCA	**Paso Flores**	**91.39**	**133**	LR	LR	04 43 33.1	
	comp=Z,46nm,19.2s,baz=208,slow=28						
ULM	**Lac du Bonnet**	**94.28**	**39**	LR	LR	04 51 03.3	
	comp=Z,78nm,19.9s,baz=320,slow=32						
BRTR	**Keskin Array B**	**144.36**	**320**	PKP	PKPdf	04 19 43.7	-3.4
	1.8nm,1.1s,SNR=4.7						

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*MAN **30** 04:21:33.0, 13.72N×120.50E, h111^{km}, mb5.0, ML4.0, MS4.1*

*BJI **30** 04:21:32.1, 13.74N×120.94E, h133^{km}, mB5.0, mb4.6*

*MOS **30** 04:21:33.1±1.0, 13.80N×120.93E, h144^{km}, mb4.6/8, Error ellipse: s-maj=25.3km s-min=10.1km az=119.9*

*NEIC **30** 04:21:33.6±0.7, 13.73N×120.78E, h129^{km}±6^{km}, mb4.7/13, Error ellipse: s-maj=11.9km s-min=6.7km az=69.0*

*IDC **30** 04:21:33.1±0.6, 13.76N×120.90E, h125^{km}±5^{km}, mb3.9/13, mb1 4.0/13, mb1mx4.0/18, mbtmp4.3/13, Error ellipse: s-maj=36.7km s-min=12.5km az=69.0*

ISC 30 04:21:32.4±0.2**, 13.69N**±0.02×**120.54E**±0.04**, h126^{km}**±2^{km}**, n78, σ1^{s}09**/94**, mb4.6**/31**, 3C-2D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.29**	**279**	*e*P	**P**	**04 21 50.2**	**+0.1**
LUBP				*e*S	**S**	**04 22 01.7**	**-1.9**
PGP	**Puerto Galera**	**0.44**	**115**	*e*P	**P**	**04 21 50.6**	**-0.3**
PGP				*i* S	**S**	**04 21 51.0**	**-14**
TGY	**Tagaytay City**	**0.56**	**43**	P	**P**	**04 21 51.9**	**+0.4**
	847nm,0.3s,baz=264,slow=1.6,SNR=105						
TGY				S	**S**	**04 22 05.8**	**-0.3**
	3µm,0.3s,baz=161,slow=23,SNR=56						
BOAC	**Boac**	**1.29**	**100**	*e*P	**P**	**04 21 58.3**	**+0.1**
BOAC				*e*S	**S**	**04 22 17.4**	**-0.3**
SJMP	**San Jose**	**1.34**	**155**	*e*P	**P**	**04 21 59.4**	**+0.5**
SJMP				*e*S	**S**	**04 22 17.8**	**-1.3**
POLP	**Polilio Island**	**1.70**	**53**	*e*P	**P**	**04 22 03.8**	**+0.8**
BUSP	**Coron**	**1.71**	**191**	*e*P	**P**	**04 22 03.6**	**+0.5**
BUSP				*e*S	**S**	**04 22 25.7**	**-0.7**
GQP	**Guinayangan**	**1.86**	**83**	⇓*e*P	**P**	**04 22 05.9**	**+1.0**
GQP				*e*S	**S**	**04 22 29.8**	**+0.2**
OTRP	**Odiongan**	**1.95**	**132**	*e*P	**P**	**04 22 06.4**	**+0.4**
OTRP				*e*S	**S**	**04 22 31.6**	**+0.1**
AUQP	**San Andres**	**2.11**	**100**	*e*P	**P**	**04 22 10.6**	**+2.6**
SCZP	**Santa Cruz**	**2.16**	**344**	*e*P	**P**	**04 22 08.3**	**-0.4**
SCZP				*e*S	**S**	**04 22 32.9**	**-3.3**
BALP	**Baler**	**2.27**	**26**	*e*P	**P**	**04 22 10.6**	**+0.4**
BALP				*e*S	**S**	**04 22 38.5**	**-0.3**
BCPH	**Baguio City Da**	**2.67**	**1**	⇑*e*P	**P**	**04 22 15.0**	**-0.4**
BCPH				*e*S	**S**	**04 22 47.5**	**-0.6**
ENPP	**El Nido**	**2.70**	**204**	*e*P	**P**	**04 22 16.8**	**+1.1**
ENPP				*e*S	**S**	**04 22 47.9**	**-0.8**
BOLP	**Bolinao**	**2.74**	**347**	*e*P	**P**	**04 22 16.1**	**-0.3**
BOLP				*e*S	**S**	**04 22 47.2**	**-2.5**
CUYO	**Cuyo Island**	**2.86**	**171**	*e*P	**P**	**04 22 18.2**	**+0.3**
CUYO				*e*S	**S**	**04 22 51.5**	**-0.9**
RCP	**Roxas**	**3.02**	**134**	⇑*e*P	**P**	**04 22 21.0**	**+1.0**
CAUP	**Cauayan**	**3.46**	**21**	*e*P	**P**	**04 22 26.5**	**+0.5**
CAUP				*e*S	**S**	**04 23 20.2**	**+13**
PVCP	**Virac**	**3.51**	**91**	*e*P	**P**	**04 22 27.5**	**+0.9**
GUIM	**Jordan**	**3.64**	**146**	*e*P	**P**	**04 22 30.1**	**+1.7**
ABRA	**Dolores**	**3.94**	**2**	*e*P	**P**	**04 22 30.4**	**-1.9**
ABRA				*e*S	**S**	**04 23 21.2**	**+3.1**
APYP	**Conner**	**4.20**	**9**	*e*P	**P**	**04 22 30.5**	**-5.3**
APYP				*e*S	**S**	**04 23 25.7**	**+1.3**
BATP	**Bataraza**	**5.56**	**209**	*e*P	**P**	**04 22 55.0**	**+1.0**
BATP				*e*S	**S**	**04 23 57.3**	**+0.1**
PAGZ	**Pagadian**	**6.44**	**154**	*e*P	**P**	**04 23 06.5**	**+0.5**
KKM	**Kota Kinabalu**	**8.71**	**210**	*e*Pn	**P**	**04 23 39.8**	**+3.2**
QIZ	**Qiongzhong**	**11.56**	**299**	*e*P	**P**	**04 24 15.6**	**+1.1**
KSM	**Kuching**	**15.81**	**221**	P	**P**	**04 25 15.9**	**+6.7**
ENH	**Enshi**	**19.40**	**330**	*e*P	**P**	**04 25 52.1**	**+1.1**
	8.2nm,0.6s						
XAN	**Xi'an**	**22.84**	**334**	P	**P**	**04 26 26.0**	**+0.6**
XAN				AMB	AMB		
	comp=Z,10.0nm,0.7s,mb4.2						
GTA	**Gaotai**	**31.47**	**328**	*e*P	**P**	**04 27 44.8**	**+0.5**
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.5						
LSA	**Lhasa**	**31.49**	**305**	*e*P	**P**	**04 27 46.8**	**+2.2**
	comp=Z,9.7nm,0.7s,mb4.6						
LSA	**Lhasa**	**31.49**	**305**	*e*P	**P**	**04 27 46.8**	**+2.2**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s,mb4.7						
FITZ	**Fitzroy Crossi**	**31.99**	**171**	P	**P**	**04 27 47.8**	**-1.2**
	comp=Z,7.8nm,1.1s,mb4.3,baz=64,slow=8.1,SNR=4.0						
MBWA	**Marble Bar**	**34.64**	**181**	*e*P	**P**	**04 28 10.7**	**-1.0**
JIRN	**Jiri**	**34.88**	**299**	*e*P	**P**	**04 28 15.2**	**+1.5**
	comp=Z,32nm,0.6s,mb5.3						
GUN	**Gumba**	**35.22**	**299**	*e*P	**P**	**04 28 17.8**	**+1.3**
	comp=Z,24nm,0.4s,mb5.3						
PKI	**Pulchoki**	**35.52**	**298**	*e*P	**P**	**04 28 19.9**	**+0.8**
	comp=Z,18nm,0.5s,mb5.3						
PKI	**Pulchoki**	**35.52**	**298**	*e*P	**P**	**04 28 19.9**	**+0.8**
PKI				pmax	pmax		
	comp=Z,9.0nm,0.5s,mb5.0						
KKN	**Kakani**	**35.69**	**299**	*e*P	**P**	**04 28 21.3**	**+0.8**
DMN	**Daman**	**35.79**	**298**	*e*P	**P**	**04 28 22.0**	**+0.6**
	comp=Z,20nm,0.6s,mb5.2						
SONM	**Songino Array**	**36.02**	**344**	P	**P**	**04 28 23.4**	**+0.3**
	comp=Z,5.6nm,0.9s,mb4.5,baz=160,slow=8.9,SNR=19						
WRA	**Warramunga Arr**	**36.07**	**158**	P	**P**	**04 28 21.9**	**-1.9**
	comp=Z,2.5nm,0.5s,mb4.4,baz=336,slow=9.6,SNR=9.8						
GKN	**Gorkha**	**36.30**	**299**	*e*P	**P**	**04 28 26.1**	**+0.5**
	comp=Z,13nm,0.4s,mb5.2						
KOLN	**Koldanda**	**37.12**	**298**	*e*P	**P**	**04 28 33.5**	**+0.9**
	comp=Z,10nm,0.7s,mb4.9						
ZAK	**Zakamensk**	**39.20**	**343**	*e*P	**P**	**04 28 48.9**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s,mb3.9						
FORT	**Forrest**	**44.80**	**171**	*e*P	**P**	**04 29 35.3**	**-0.2**
	comp=Z,18nm,0.7s,mb4.9						
KLBR	**Kellerberrin**	**45.10**	**183**	*e*P	**P**	**04 29 36.9**	**-1.0**
	comp=Z,17nm,0.8s,mb4.8						
MKAR	**Makanchi Array**	**45.95**	**324**	P	**P**	**04 29 45.4**	**+1.0**
	comp=Z,8.3nm,0.7s,mb4.6,baz=132,slow=9.1,SNR=67						
ZAL	**Zalesovo**	**49.00**	**333**	P	**P**	**04 30 07.8**	**-0.3**
	comp=Z,4.2nm,0.4s,mb4.7,baz=359,slow=5.6,SNR=9.9						
STKA	**Stephens Creek**	**49.60**	**156**	P	**P**	**04 30 11.1**	**-1.9**
	comp=Z,0.8nm,0.4s,mb4.0,baz=268,slow=7.0,SNR=4.6						
STKA	**Stephens Creek**	**49.60**	**156**	*e*P	**P**	**04 30 10.8**	**-2.1**
KURK	**Kurchatov**	**50.11**	**326**	*e*P	**P**	**04 30 16.9**	**+0.3**
	comp=Z,44nm,0.6s,mb5.6						
KURK	**Kurchatov**	**50.11**	**326**	*e*P	**P**	**04 30 16.9**	**+0.3**
KURK				pmax	pmax		
	comp=Z,44nm,0.6s,mb5.6						
BRVK	**Borovoye**	**55.77**	**326**	*e*P	**P**	**04 30 58.3**	**-0.1**
	comp=Z,17nm,1.3s,mb4.9						
BRVK	**Borovoye**	**55.77**	**326**	*e*P	**P**	**04 30 58.3**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,17nm,1.3s,mb4.9						
TIXI	**Tiksi**	**58.15**	**3**	*e*P	**P**	**04 31 11.3**	**-3.6**
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
BILL	**Bilibino**	**61.76**	**18**	*e*P	**P**	**04 31 37.9**	**-1.8**
	comp=Z,4.6nm,0.6s,mb4.7						
BILL	**Bilibino**	**61.76**	**18**	⇓P	**P**	**04 31 38.0**	**-1.7**
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s,mb4.6						
ARU	**Arti**	**63.31**	**327**	*e*P	**P**	**04 31 48.4**	**-1.6**
OBN	**Obninsk**	**75.46**	**324**	⇑*e*P	**P**	**04 33 03.7**	**-0.4**
OBN				pmax	pmax		
	comp=Z,22nm,1.7s,mb4.6						
IMA2	**Indian Mountai**	**75.88**	**25**	*e*P	**P**	**04 33 06.5**	**+0.3**
JOF	**Joensuu**	**77.58**	**332**	*e*p	**P**	**04 33 14.9**	**-0.9**
	comp=Z,1.8nm,0.4s,mb4.2						
KEV	**Kevo**	**78.49**	**339**	*e*p	**P**	**04 33 19.0**	**-1.6**
	comp=Z,7.6nm,0.8s,mb4.5						
KEV	**Kevo**	**78.49**	**339**	*e*P	**P**	**04 33 19.0**	**-1.6**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.8s,mb4.5						
ILAR	**Eielson Array**	**78.83**	**26**	P	**P**	**04 33 21.1**	**-1.5**
	comp=Z,0.3nm,0.7s,baz=279,slow=4.0,SNR=5.4						
BR131	**Keskin Array S**	**79.04**	**308**	*e*P	**P**	**04 33 24.9**	**+0.6**
	comp=Z,0.7nm,0.5s,mb3.8						
BRTR	**Keskin Array B**	**79.04**	**308**	P	**P**	**04 33 24.5**	**+0.3**
	comp=Z,1.3nm,0.7s,mb3.9,baz=117,slow=4.6,SNR=10.0						
ARCES	**ARCESS Array B**	**79.04**	**339**	P	**P**	**04 33 23.6**	**0.0**
	comp=Z,3.0nm,0.6s,mb4.3,baz=80,slow=7.0,SNR=25						
FINES	**FINESS Array B**	**80.22**	**331**	P	**P**	**04 33 29.5**	**-0.7**

	comp=Z,4.4nm,0.9s,mb4.3,baz=56,slow=6.9,SNR=7.1						
AKASG	Malin Array Be	80.37	320	P	P	04 33 30.5	-0.7
	comp=Z,0.2nm,0.4s,baz=66,slow=4.1,SNR=4.9						
KMBO	Kilima Mbogo	83.75	267	P	P	04 33 51.6	+2.2
	comp=Z,0.8nm,0.5s,mb3.8,baz=58,slow=14,SNR=6.1						
NB2	NORSAR Subarra	87.20	333	P	P	04 34 04.4	-0.9
	comp=Z,2.8nm,0.8s,mb4.2,baz=69,slow=4.5						
NB2	NORSAR Subarra	87.20	333	P	P	04 34 04.4	-0.9
	baz=69,slow=4.6						
NOA	NORSAR Array B	87.20	333	P	P	04 34 04.7	-0.6
	comp=Z,1.3nm,0.6s,mb4.0,baz=68,slow=4.6,SNR=4.7						
NAO	NORSAR Subarra	87.46	332	P	P	04 34 04.4	-2.1
	comp=Z,2.8nm,0.8s,mb4.2						
NAO	NORSAR Subarra	87.46	332	P	P	04 34 04.4	-2.1
NAO				pmax	pmax		
	comp=Z,3.0nm,0.8s,mb4.3						
TXAR	Lajitas Array	119.58	44	PKP	PKPdf	04 40 07.4	-0.4
	comp=Z,0.1nm,0.4s,baz=46,slow=0.9,SNR=4.4						
PLCA	Paso Flores	151.36	162	PKPbc	PKPdf	04 41 13.4	+8.4
	comp=Z,2.2nm,0.7s,baz=145,slow=4.7,SNR=7.4						

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*NEIC **30** 04:26:00.6, 16.39N×99.11W, h16^{km}, MD4.2(MEX), After MEX.*

MEX 30 04:26:00.8±1.5**, 16.42N×99.10W, h16**^{km}±133^{km}**, MD4.2, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.90	300	*i* P	Pb	04 26 13.0	-4.5
ACX				*i* S	Sb	04 26 25.0	-4.0
PNIG	Pinotepa	0.94	92	*i* P	Pb	04 26 15.4	-2.8
PNIG				*e*S	Sb	04 26 26.9	-3.3
CAIG	El Cayaco	1.28	299	*i* P	Pb	04 26 21.9	-2.1
CAIG				*e*S	Sb	04 26 35.4	-4.6
CAIG	El Cayaco	1.28	299	⇑*i*P	Pb	04 26 22.0	-2.0
CAIG				*i* S	Sb	04 26 36.5	-3.4
PLIG	Platanillo	2.00	349	*i* P	Pn	04 26 31.3	-3.1
PLIG				*e*S	Sn	04 26 55.1	-4.1
VHO	Vista Hermosa	2.36	74	*e*P	Pn	04 26 36.1	-3.5
VHO				*e*S	Sn	04 27 02.9	-5.6
OXX	Oaxaca	2.37	74	*e*P	Pn	04 26 36.0	-3.8
OXX				*i* S	Sn	04 27 03.5	-5.3
YAIG	Yautepec	2.43	1	*e*P	Pn	04 26 37.9	-2.7
YAIG				*e*S	Sn	04 27 05.7	-4.4
ZIIG	Zihuatanejo	2.55	298	*i* S	Sn	04 27 07.6	-5.6
PPM	Popocatepetl	2.67	10	*e*P	Pn	04 26 40.0	-4.0
PPM				*e*P		04 26 41.9	
PPM				*i* S	Sn	04 27 11.0	-5.3
PPM				*e*S	Sn	04 27 13.7	-2.6
UNM	Universidad Na	2.89	359	*i* P	Pn	04 26 45.4	-1.8
UNM				*e*P		04 26 47.0	
UNM				*i* S	Sn	04 27 18.5	-3.4
UNM				*i* S	Sn	04 27 21.5	-0.4
MOIG	Morelia	3.80	329	*i* P	Pn	04 26 55.6	-4.4
MOIG				*i* S	Sn	04 27 38.6	-6.2
CMIG	Matias Romero	4.10	80	*i* P	Pn	04 27 00.0	-4.3
CMIG				*e*S	Sn	04 27 46.6	-5.8

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*IDC **30** 04:27:10.0±1.2, 34.50N×73.47E, mb3.8/4, mb1 4.1/4, mb1mx3.6/19, mbtmp3.9/4, Error ellipse: s-maj=35.7km s-min=31.8km az=45.0*

*MOS **30** 04:27:10.4±0.7, 34.50N×73.56E, h17^{km}, mb3.7/1, Error ellipse: s-maj=29.6km s-min=12.6km az=107.5*

*NEIC **30** 04:27:11.4±1.0, 34.44N×73.40E, h10^{km}, mb3.1/2, Error ellipse: s-maj=27.1km s-min=5.4km az=53.0*

*NDI **30** 04:27:13.1±2.7, 34.53N×73.34E, h10^{km}, MD3.4, ML3.3, mb3.1(NEIC)*

*NNC **30** 04:27:15.5±24.0, 34.82N×73.24E, mpv4.3, Error ellipse: s-maj=408.3km s-min=215.2km az=90.0*

ISC 30 04:27:10.1±0.7**, 34.62N**±0.07×**73.6E**±0.1**, h10**^{km}**, n29, σ1**^{s}**31**/38**, mb3.7**/3**, 2C-3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	Thein Dam	2.82	140	*e*P	Pn	04 28 00.6	+4.5
THN				*e*SB	Sb	04 28 40.4	+5.4
DLH	Dalhousie	2.88	135	*e*PB	Pb	04 28 04.0	+2.8
DLH				*e*SB	Sb	04 28 45.0	+8.4
BHK	Bhakra	3.99	142	*e*x	x	04 29 06.8	
SDNR	Sundarnagar	4.22	136	*e*P	Pn	04 28 18.6	+2.6
SDNR				*e*S	Sn	04 29 06.6	+0.6
SMLA	Simla	4.61	138	*e*P	Pn	04 28 23.2	+1.6
SMLA				*e*S	Sn	04 29 16.1	+0.3
KLP	Kalpa	4.99	127	*e*P	Pn	04 28 30.2	+3.3
KLP				*e*S	Sn	04 29 24.3	-1.1
KLP				*e*S	Sn	04 29 26.7	+1.3
KLP				AML	AML	04 29 53.7	
	comp=E,122nm,0.3s						
KLP				AML	AML	04 29 55.6	
	comp=N,94nm,0.5s						
DDI	Dehra Dun	5.72	137	*e*x	x	04 30 06.8	
NDI	New Delhi	6.68	151	*e*x	x	04 28 46.0	
NDI				*e*S	Sn	04 30 03.0	-4.8
KHET	Khetri	6.80	163	*e*P	Pn	04 28 51.9	-0.6
KHET				*e*S	Sn	04 30 04.3	-6.3
KHET				AML	AML	04 30 10.9	
	comp=N,17nm,0.2s						
KHET				AML	AML	04 30 43.9	
	comp=E,15nm,0.3s						
AAK	Ala-Archa	8.04	5	*e*Pn	P	04 29 11.7	+1.9
KK31	Karatay Array	8.80	345	⇓P	P	04 29 21.6	+1.2
	comp=E,4.6nm,0.3s,baz=160,slow=13,SNR=195						
KK31				⇑S	Sn	04 30 58.4	-2.4
	comp=E,7.3nm,0.4s,baz=171,slow=24						
KK31	Karatay Array	8.80	345	⇓P	P	04 29 21.6	+1.1
	comp=E,4.6nm,0.3s						
KK31				S	Sn	04 30 58.4	-2.4
KK31	Karatay Array	8.80	345	⇓P	P	04 29 21.6	+1.1
KK31				S	Sn	04 30 58.4	-2.4
KK31				pmax	pmax		
	comp=Z,5.0nm,0.3s						
KOLN	Koldanda	10.96	126	*e*P	P	04 29 49.7	-0.5
	comp=Z,5.8nm,0.4s						
KOLN				*e*S	S	04 31 47.2	-6.8
GKN	Gorkha	11.53	122	*e*P	P	04 29 57.2	-0.7
	comp=Z,17nm,0.4s						
DMN	Daman	12.10	122	*e*P	P	04 30 04.7	-0.9
KKN	Kakani	12.11	121	*e*P	P	04 30 04.0	-1.7
PKI	Pulchoki	12.33	121	*e*P	P	04 30 07.6	-1.1
	comp=Z,5.3nm,0.2s						
PKI	Pulchoki	12.33	121	*e*P	P	04 30 07.6	-1.1
PKI				pmax	pmax		
	comp=Z,3.0nm,0.2s						
GUN	Gumba	12.47	119	*e*P	P	04 30 09.1	-1.4
	comp=Z,5.6nm,0.3s						
JIRN	Jiri	12.84	119	*e*P	P	04 30 14.0	-1.5
	comp=Z,15nm,0.3s						
AB31	Akbulak array	17.75	330	⇑P	P	04 31 18.7	-0.2
	comp=Z,0.3nm,0.3s,baz=145,slow=12,SNR=29						
BRVK	Borovoye	18.59	354	P	P	04 31 30.3	+1.1
	comp=Z,2.5nm,0.9s						
BRVK	Borovoye	18.59	354	P	P	04 31 30.3	+1.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ZAL	Zalesovo	20.87	19	P	P	04 31 54.7	0.0
	comp=Z,3.4nm,0.4s,baz=260,slow=5.6,SNR=6.6						
ZAL	Zalesovo	20.87	19	P	P	04 31 54.7	0.0
ARCES	ARCESS Array B	43.68	338	P	P	04 35 16.9	+0.5
	comp=Z,1.7nm,0.8s,mb3.8,baz=116,slow=8.3,SNR=6.1						
TORD	Torodi Ar. Bea	67.81	271	P	P	04 38 09.6	-1.1
	comp=Z,0.4nm,0.4s,mb3.8,baz=46,slow=5.9,SNR=28						
WRA	Warramunga Arr	79.21	123	P	P	04 39 17.2	0.0
	comp=Z,0.2nm,0.3s,mb3.5,baz=325,slow=5.1,SNR=3.9						

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*NEIC **30** 04:27:38.2±1.9, 13.94N×146.31E, h46^{km}±17^{km}, mb4.4/3, Error ellipse: s-maj=16.9km s-min=9.1km az=96.0*

*IDC **30** 04:27:39.1±3.9, 13.97N×146.38E, h51^{km}±34^{km}, mb3.9/10, mb1 4.2/10, mb1mx4.0/19, mbtmp4.2/10, MS3.4/1, Ms1 3.4/1, ms1mx2.6/23, Error ellipse: s-maj=27.5km s-min=19.9km az=101.0*

ISC 30 04:27:39.0±2.5**, 13.90N**±0.10×**146.3E**±0.2**, h69**^{km}±21^{km}**, n25, σ0**^{s}**81**/23**, mb4.1**/13**, 1C, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	1.44	258	P	P	04 28 03.4	-0.2
	112nm,0.3s,baz=130,slow=4.6,SNR=22						
GUMO				S	S	04 28 22.7	+0.9
	186nm,0.3s,baz=4.4,slow=22,SNR=6.3						
GUMO	Guam	1.44	258	*e*Pn	P	04 28 02.0	-1.6
GUMO				S	S	04 28 22.7	+0.9
JOW	Kunigami	21.21	310	LR	LR	04 39 03.2	
	comp=Z,118nm,21.4s,baz=148,slow=32						
WRAB	Tennant Creek	35.62	200	*e*P	P	04 34 31.9	-0.4
WB2	Warramunga Arr	35.63	200	⇑*i*P	P	04 34 31.9	-0.4
WRA	Warramunga Arr	35.63	200	P	P	04 34 32.1	-0.3
	4.0nm,0.7s,mb4.5,baz=22,slow=9.6,SNR=11						
FITZ	Fitzroy Crossi	37.77	213	P	P	04 34 50.8	+0.5
	3.7nm,0.7s,mb4.3,baz=29,slow=13,SNR=3.3						
SONM	Songino Array	47.30	324	P	P	04 36 07.2	-0.2
	2.0nm,0.9s,mb3.9,baz=137,slow=10,SNR=6.4						
MKAR	Makanchi Array	62.24	316	P	P	04 37 56.1	+0.2
	1.1nm,0.6s,mb4.1,baz=91,slow=9.4,SNR=12						
KURK	Kurchatov	65.25	320	*e*P	P	04 38 14.7	-0.9
	5.3nm,0.9s,mb4.4						
ILAR	Eielson Array	67.69	25	P	P	04 38 29.2	-1.5
	2.1nm,0.7s,mb4.1,baz=250,slow=6.1,SNR=35						
BRVK	Borovoye	70.62	322	*e*P	P	04 38 49.1	+0.2
	2.4nm,0.9s,mb4.0						
DAWY	Dawson	70.73	27	*e*P	P	04 38 49.4	0.0
INK	Inuvik	73.55	22	*e*P	P	04 39 05.5	-0.5
	3.4nm,0.8s,mb4.1						
YKA	Yellowknife Ar	81.94	28	P	P	04 39 52.4	+0.1
	1.1nm,0.8s,mb3.7,baz=288,slow=5.4,SNR=4.9						
YKA	Yellowknife Ar	81.94	28	P	P	04 39 52.4	+0.1
NVAR	Mina Array Bea	85.63	52	P	P	04 40 13.5	+2.0
	1.7nm,0.6s,mb4.1,baz=261,slow=6.4,SNR=15						
NVAR	Mina Array Bea	85.63	52	P	P	04 40 13.5	+2.0
ARCES	ARCESS Array B	87.22	342	P	P	04 40 19.3	+0.8
	2.1nm,0.6s,mb4.2,baz=34,slow=4.4,SNR=5.5						
PDAR	Pinedale Array	90.75	46	P	P	04 40 37.0	+1.2
	0.2nm,0.7s,mb3.4,baz=180,slow=3.0,SNR=3.8						
FINES	FINESS Array B	91.47	335	P	P	04 40 38.2	-0.5
	2.4nm,0.9s,mb4.3,baz=90,slow=1.9,SNR=4.0						
FINES	FINESS Array B	91.47	335	P	P	04 40 38.2	-0.5
TORD	Torodi Ar. Bea	135.83	306	PKP	PKPdf	04 46 55.6	+2.7
	0.3nm,0.5s,baz=74,slow=1.5,SNR=7.7						
DBIC	Dimbokro	144.84	304	PKP	PKPdf	04 47 11.1	+1.9
	5.0nm,0.6s,baz=42,slow=5.6,SNR=14						
LPAZ	La Paz	146.68	99	PKPbc	PKPbc	04 47 17.4	+3.7
	1.9nm,0.7s,baz=279,slow=2.5,SNR=8.8						

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*NEIC **30** 04:49:25.4±0.4, 15.75S×70.87W, h10^{km}, mb4.2/4, Error ellipse: s-maj=8.4km s-min=7.8km az=149.0*

*IDC **30** 04:49:30.5±3.9, 15.80S×70.80W, h48^{km}±42^{km}, mb3.6/6, mb1 4.0/8, mb1mx3.7/19, mbtmp3.8/8, ML3.3/1, MS2.9/1, Ms1 3.0/1, ms1mx2.4/20, Error ellipse: s-maj=39.5km s-min=26.2km az=82.0*

ISC 30 04:49:27.1±0.5**, 15.78S**±0.06×**70.94W**±0.07**, h33**^{km}**, n17, σ0**^{s}**82**/20**, mb4.0**/9**, 1C, Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	Arequipa	0.87	218	⇑*i*P	P	04 49 41.9	-0.9
ARE				*i* S	S	04 49 54.5	0.0
LPAZ	La Paz	2.74	101	P	P	04 50 12.0	+2.2
	5.8nm,0.3s,baz=285,slow=15,SNR=84						
LPAZ				S	S	04 50 48.6	+6.5
	baz=165,slow=25,SNR=1.6						
LPAZ				LR	LR	04 51 30.0	
	comp=Z,212nm,18.9s,baz=109,slow=46						
LPAZ	La Paz	2.74	101	*e*Pn	Pn	04 50 09.4	-0.5
LPAZ				*e*Pg	P	04 50 17.3	+7.6
LPAZ				S	S	04 50 48.6	+6.5
LPAZ				LR	LR	04 51 30.0	
SIV	San Ignacio	9.49	93	P	P	04 51 41.0	-3.5
	0.7nm,0.3s,baz=276,slow=11,SNR=26						
SAML	Samuel	10.16	49	*e*Pn	P	04 51 49.3	-4.6
	9.8nm,0.9s						
CFAA	Coronel Fontan	15.95	172	P	P	04 53 11.6	+0.9
	0.0nm,0.3s,baz=349,slow=8.9,SNR=4.3						
BDFB	Brasilia	22.07	93	P	P	04 54 20.2	-0.6
	2.2nm,1.0s,mb3.5,baz=258,slow=12,SNR=3.3						
PLCA	Paso Flores	24.87	179	P	P	04 54 48.1	0.0
	2.5nm,1.0s,mb3.7,baz=348,slow=9.3,SNR=5.3						
PLCA	Paso Flores	24.87	179	*e*P	P	04 54 48.3	+0.2
	2.7nm,0.9s,mb3.8						
TXAR	Lajitas Array	54.86	325	P	P	04 58 57.0	+0.2
	0.6nm,0.6s,mb3.8,baz=150,slow=9.6,SNR=9.2						
MNTX	Cornudas Mount	57.62	325	*e*P	P	04 59 15.4	-1.1
	2.6nm,1.2s,mb4.1						
ANMO	Albuquerque	60.68	327	*e*P	P	04 59 37.7	0.0
	2.3nm,1.1s,mb4.2						
SDCO	Great Sand Dun	62.37	329	*e*P	P	04 59 49.2	+0.2
	6.5nm,1.2s,mb4.6						
PDAR	Pinedale Array	68.21	330	P	P	05 00 26.4	0.0
	0.6nm,0.9s,mb3.6,baz=135,slow=8.4,SNR=4.8						
NVAR	Mina Array Bea	69.82	322	P	P	05 00 37.8	+1.3
	0.5nm,0.5s,mb3.7,baz=143,slow=7.4,SNR=4.8						
YKA	Yellowknife Ar	85.18	341	P	P	05 02 01.1	+0.1
	2.7nm,0.9s,mb4.4,baz=132,slow=4.8,SNR=13						
SONM	Songino Array	147.96	3	PKPbc	PKPdf	05 09 11.0	+5.1
	1.9nm,0.6s,baz=333,slow=3.5,SNR=5.1						

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*LDG **30** 04:52:52.4±0.1, 51.64N×16.19E, h1^{km}, Ml4.3/18, Error ellipse: s-maj=4.5km s-min=2.8km az=166.0, Suspected Mining induced.*

*MOS **30** 04:52:52.8±0.9, 51.66N×16.16E, h10^{km}, mb4.0/3, Error ellipse: s-maj=8.6km s-min=4.3km az=89.1*

*CSEM **30** 04:52:52.9±0.1, 51.62N×16.17E, h2^{km}, mb3.9/3, ML4.3/22, Ms3.8, Error ellipse: s-maj=2.1km s-min=1.6km az=2.0*

*BJI **30** 04:52:53.7, 51.60N×16.10E, h5^{km}, mb4.9*

*NEIC **30** 04:52:53.7±0.4, 51.63N×16.06E, h5^{km}, ML4.0(SZGRF), ML3.9(FUR), Error ellipse: s-maj=5.1km s-min=3.5km az=200.0*

*IPEC **30** 04:52:53.8±0.2, 51.59N×16.17E, h3^{km}±1^{km}, ML3.3/3, Error ellipse: s-maj=1.6km s-min=0.6km az=29.0*

*BGR **30** 04:52:54.2±0.6, 51.47N×16.17E, h1^{km}, ML4.0/11, Error ellipse: s-maj=7.8km s-min=4.4km az=155.0*

*IDC **30** 04:52:54.7±0.5, 51.53N×16.01E, mb3.7/6, mb1 3.9/14, mb1mx3.8/26, mbtmp3.7/14, ML3.6/7, Error ellipse: s-maj=9.7km s-min=6.3km az=106.0*

*PRU **30** 04:52:55.1, 51.53N×16.10E, Felt In Harrachov*

*WAR **30** 04:52:55.4, 51.55N×16.10E, h1^{km}, ML3.8, Mining Induced*

*VIE **30** 04:52:56.9±0.7, 51.33N×16.07E, mb3.4/7, ML3.5/8, Ms3.8/1, Error ellipse: s-maj=5.3km s-min=3.8km az=135.0, Suspected Mining induced.*

*STR **30** 04:53:15.0±0.0, 50.89N×14.04E, h10^{km}±1^{km}, Ml4.3, Error ellipse: s-maj=0.0km s-min=0.0km az=1.0*

ISC 30 04:52:52.3±0.2**, 51.52N**±0.01×**16.08E**±0.02**, n185, σ1**^{s}**55**/306**, mb3.8**/8**, 12C-13D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	169	⇓*i*PG	Pg	04 53 08.6	+2.6
KSP				⇓*i*SG	Sg	04 53 18.5	+3.2
KSP	Ksiaz	0.69	169	*e*Pg	Pg	04 53 08.8	+2.7
KSP				*e*Sg	Sg	04 53 18.8	+3.6
KSP	Ksiaz	0.69	169	⇓*i*Pg	Pg	04 53 08.6	+2.6
KSP				*i* Sg	Sg	04 53 18.5	+3.2
KSP				*e*		04 53 24.5	
KSP	Ksiaz	0.69	169	⇓*i*P	Pg	04 53 08.6	+2.6
KSP				*e*		04 53 24.5	
KSP	Ksiaz	0.69	169	*e*Pg	Pg	04 53 08.5	+2.5
KSP				*e*Sg	Sg	04 53 18.4	+3.1
KSP				*e*S	Sg	04 53 24.5	+9.2
UPC	Upice	1.01	182	*e*PG	Pg	04 53 14.7	+2.2
DPC	Dobruska-Polom	1.18	172	*e*PG	Pg	04 53 17.4	+1.6
DPC				*e*SG	Sg	04 53 33.0	+1.4
	544nm,0.6s						
DPC	Dobruska-Polom	1.18	172	*e*P	Pg	04 53 17.4	+1.6
DPC				*e*		04 53 33.0	
DPC				smax			
	comp=N,544nm,0.6s						
DPC	Dobruska-Polom	1.18	172	*e*Pg	Pg	04 53 17.3	+1.5
DPC				*e*Sg	Sg	04 53 33.0	+1.4
PVCC	Panska Ves	1.38	224	*e*PG	Pg	04 53 20.8	+1.1
PVCC	Panska Ves	1.38	224	*e*Pn	Pn	04 53 21.0	+2.3
PVCC				*e*Sg	Sg	04 53 40.2	+2.1
BRG	Berggiesshubel	1.49	245	*e*Pn	Pn	04 53 21.8	+1.5
BRG				*e*Sg	Sg	04 53 43.9	+2.0
BRG	Berggiesshubel	1.49	245	Pn	Pn	04 53 21.8	+1.4
BRG				Pg	Pg	04 53 23.6	+1.5
BRG				Sg	Sg	04 53 43.8	+1.9
BRG	Berggiesshubel	1.49	245	P	Pn	04 53 21.8	+1.4
BRG						04 53 43.8	
BRG				smax			
	comp=N,703nm,0.5s						
BRG	Berggiesshubel	1.49	245	Pg	Pg	04 53 23.5	+1.5
BRG				Sg	Sg	04 53 43.9	+2.0
RUE	Ruedersdorf	1.72	305	*e*Pn	Pn	04 53 24.6	+1.0
RUE				*e*Sg	Sg	04 53 45.2	-4.1
RUE	Ruedersdorf	1.72	305	*e*Pn	Pn	04 53 24.6	+1.0
RUE				*e*Sg	Sg	04 53 45.2	-4.2
RUE	Ruedersdorf	1.72	305	*e*Pn	Pn	04 53 24.4	+0.8
RUE				Sg	Sg	04 53 45.2	-4.2
PRA	Prague	1.79	216	PG	Pg	04 53 30.0	+2.1
PRA				SG	Sg	04 53 54.0	+2.2
PRU	Pruhonice	1.82	213	*e*PN	Pn	04 53 26.6	+1.6
PRU				*e*PG	Pg	04 53 28.9	+0.4
PRU				*e*SG	Sg	04 53 52.8	0.0
	comp=N,326nm,0.5s						
PRU	Pruhonice	1.82	213	*e*P	Pn	04 53 26.6	+1.6
PRU				*e*		04 53 52.8	
PRU				smax			
	comp=N,326nm,0.5s						
CLL	Collm	1.94	265	*e*PN	Pn	04 53 28.0	+1.2
	comp=N,logA/T=2.3						
CLL				*i* PG	Pg	04 53 31.0	+0.1
CLL				*e*		04 53 35.0	
CLL				*i* SG	Sg	04 53 56.9	+0.2
CLL				*i*		04 54 03.5	
CLL	Collm	1.94	265	*e*Pn	Pn	04 53 27.7	+1.0
CLL				*e*Sg	Sg	04 53 57.0	+0.3
CLL	Collm	1.94	265	*i* Pg	Pg	04 53 31.0	+0.1
CLL				*i* Sg	Sg	04 53 56.9	+0.2
CLL	Collm	1.94	265	*i* Pg	Pg	04 53 31.0	+0.1
CLL				*i* Sg	Sg	04 53 56.9	+0.2
RAC	Raciborz	1.97	136	*e*PN	Pn	04 53 28.0	+0.8
RAC				*e*PN	Pn	04 53 32.0	+4.8
RAC				*e*S	Sn	04 53 57.0	+4.1
RAC	Raciborz	1.97	136	*e*P	Pn	04 53 28.0	+0.8
RAC				*e*		04 53 57.3	
RAC	Raciborz	1.97	136	*e*Pg	Pg	04 53 32.2	+0.7
RAC				*e*Sg	Sg	04 53 57.3	-0.5
MORC	Moravsky Berou	1.98	151	*e*Pn	Pn	04 53 28.7	+1.4
MORC				*e*Sg	Sg	04 53 56.6	-1.5
	comp=N,220nm,0.5s						
OKC	Ostrava-Krasne	2.14	141	*e*PN	Pn	04 53 30.2	+0.6
OKC				*e*PG	Pg	04 53 34.8	-0.1
OKC				*e*SG	Sg	04 54 01.7	-1.7
	comp=N,429nm,0.6s						
OKC	Ostrava-Krasne	2.14	141	*e*P	Pn	04 53 30.2	+0.6
OKC				*e*		04 54 01.7	
OKC				smax			
	comp=N,429nm,0.6s						
VRAC	Vranov	2.24	171	Pn	Pn	04 53 33.4	+2.3
	comp=N,11nm,0.3s,baz=341,slow=13,SNR=44						
VRAC				Lg		04 54 06.1	
	comp=N,14nm,0.3s,baz=92,slow=23,SNR=4.2						
VRAC	Vranov	2.24	171	*e*Pn	Pn	04 53 33.1	+2.0
VRAC				*e*Sg	Sg	04 54 04.6	-2.2
	comp=N,162nm,0.5s						
TREC	Trest	2.26	190	*e*PN	Pn	04 53 33.5	+2.1
TREC				*e*PG	Pg	04 53 37.2	-0.2
TREC	Trest	2.26	190	*e*Pn	Pn	04 53 33.4	+2.0
KRUC	Moravsky	2.47	175	*e*Pg	Pg	04 53 40.7	-0.8
KRUC				*e*Sg	Sg	04 54 12.6	-1.8
	comp=N,146nm,0.6s						
WERD	Werda	2.61	247	*e*Pn	Pn	04 53 37.7	+1.3
WERD				*e*Sg	Sg	04 54 17.8	-1.5
NKC	Novy Kostel	2.63	242	*e*SG	Sg	04 54 19.9	-0.1
	comp=N,878nm,0.9s						
NKC	Novy Kostel	2.63	242	*e*Pn	Pn	04 53 38.5	+1.8
NKC				*e*Sg	Sg	04 54 19.9	-0.1
GUNZ	Gunzen	2.64	245	*e*Pn	Pn	04 53 38.4	+1.6
GUNZ				*e*Sg	Sg	04 54 19.7	-0.4
OJC	Ojcow	2.69	117	*e*PN	Pn	04 53 37.0	-0.6
OJC				*e*PG	Pg	04 53 45.0	-1.0
OJC				*e*SG	Sg	04 54 21.0	-0.9
OJC	Ojcow	2.69	117	*e*Pg	Pg	04 53 45.3	-0.7
OJC				*e*Sg	Sg	04 54 21.0	-0.9
KHC	Kasperske Hory	2.88	215	*e*PN	Pn	04 53 41.4	+1.2
KHC				*e*PG	Pg	04 53 48.1	-1.6
KHC				*e*SN	Sn	04 54 17.8	+1.7
KHC				*e*SG	Sg	04 54 26.6	-1.5
	comp=N,197nm,0.7s						
KHC	Kasperske Hory	2.88	215	*e*P	Pn	04 53 41.4	+1.2
KHC				*e*		04 54 17.8	
KHC				smax			
	comp=N,197nm,0.7s						
MOX	Moxa	2.95	254	*i* P	Pn	04 53 41.9	+0.7
MOX				Pg	Pg	04 53 51.0	-0.1
MOX				Sg	Sg	04 54 31.0	+0.6
MOX	Moxa	2.95	254	*e*Pn	Pn	04 53 41.9	+0.7
MOX				*e*Sg	Sg	04 54 29.6	-0.7
MOX	Moxa	2.95	254	*e*Pn	Pn	04 53 41.9	+0.7
MOX				*i* Pg	Pg	04 53 50.8	-0.3
MOX				*i* Sg	Sg	04 54 30.8	+0.4
MOX	Moxa	2.95	254	*i* Pg	Pg	04 53 50.8	-0.3
MOX				*e*Sg	Sg	04 54 29.2	-1.2
ROTZ	Rotzenmuhle	3.02	236	*e*Pn	Pn	04 53 43.8	+1.4
ROTZ				*e*Sg	Sg	04 54 30.6	-2.4
NOTT	Nottersdorf	3.04	237	*e*Pn	Pn	04 53 43.9	+1.3
NOTT				*e*Sg	Sg	04 54 31.5	-2.1
GEC2	GERESS Array S	3.08	211	*e*Pn	Pn	04 53 44.6	+1.4
GEC2				*e*Sg	Sg	04 54 31.4	-3.5
GEC2	GERESS Array S	3.08	211	*e*Pn	Pn	04 53 44.6	+1.5
GEC2				*e*Sg	Sg	04 54 31.4	-3.5
GERES	GERESS Array B	3.08	211	Pn	Pn	04 53 44.6	+1.5
	comp=N,7.8nm,0.3s,baz=31,slow=12,SNR=149						
GERES				Pg	Pg	04 53 50.9	-2.9
	comp=N,15nm,0.3s,baz=33,slow=16,SNR=47						
GERES				Lg		04 54 32.0	
	comp=N,22nm,0.3s,baz=30,slow=26,SNR=4.9						
GERES	GERESS Array B	3.08	211	Pn	Pn	04 53 44.6	+1.5
GERES				Pg	Pg	04 53 50.9	-2.9
GERES				Lg		04 54 32.0	
GERES	GERESS Array B	3.08	211	Pg	Pg	04 53 50.9	-2.9
SMOL	Smolenice	3.13	163	*e*PN	Pn	04 53 46.6	+2.8
SMOL				*e*PG	Pg	04 53 54.3	-0.5
SMOL				*e*SG	Sg	04 54 36.8	+0.3
SMOL	Smolenice	3.13	163	*e*Pg	Pg	04 53 54.3	-0.5
SMOL				*e*Sg	Sg	04 54 36.8	+0.3
WET	Wettzell	3.14	222	*e*Pn	Pn	04 53 45.2	+1.2
WET				*e*Sg	Sg	04 54 32.8	-4.0
WET	Wettzell	3.14	222	*e*Pn	Pn	04 53 45.2	+1.3
WET				*e*Sg	Sg	04 54 32.8	-4.0
LIKS	Likavka	3.14	141	*e*Pn	Pn	04 53 47.9	+3.9
LIKS				*e*		04 53 56.2	
LIKS				*e*Sg	Sg	04 54 38.7	+1.8
ZST	Bratislava	3.39	168	*e*Pg	Pg	04 53 57.9	-2.1
ZST				*e*Sg	Sg	04 54 43.0	-2.2
NIE	Niedzica	3.43	126	*e*P	Pg	04 53 59.0	-1.7
NIE				*e*S	Sg	04 54 43.0	-3.3
VYHS	Vyhne	3.51	148	*e*PN	Pn	04 53 49.8	+0.6
VYHS				*e*PG	Pg	04 53 59.1	-3.3
VYHS				*e*SG	Sg	04 54 47.7	-1.5
CLZ	Clausthal	3.57	277	*e*Pn	Pn	04 53 51.4	+1.4
CLZ				*e*Sg	Sg	04 54 46.6	-4.4
GRA1	Grafenberg Arr	3.59	241	*e*Pn	Pn	04 53 51.9	+1.5
GRA1				*e*Sg	Sg	04 54 48.8	-3.1
GRA1	Grafenberg Arr	3.59	241	Pn	Pn	04 53 51.9	+1.5
GRA1				Sg	Sg	04 54 48.8	-3.1
GRF	Grafenberg Arr	3.59	241	*e*Pn	Pn	04 53 51.9	+1.5
GRF				*e*Sg	Sg	04 54 48.8	-3.1
BSD	Bornholm Skovb	3.67	349	*i* P	Pn	04 53 50.6	-0.8
BSD				*i* S	Sn	04 54 30.0	-6.1
SOP	Sopron	3.85	175	⇑*i*Pn	Pn	04 53 55.4	+1.3
SOP				*e*SB	Sb	04 54 55.4	+6.9
MOA	Molln	3.86	198	⇑*i*Pn	Pn	04 53 55.4	+1.2
	SNR=35						
MOA	Molln	3.86	198	Pn	Pn	04 53 55.4	+1.3
	comp=N,35nm,2.0s						
MOA				Sg	Sg	04 54 58.7	-2.0
	comp=N,165nm,0.6s						
HROE	Hohe Rhon--Fla	3.87	258	⇓*i*Pn	Pn	04 53 54.9	+0.7
STHS	Stebnicka Huta	3.91	121	*e*Pn	Pn	04 53 56.1	+1.2
STHS				*e*		04 54 10.1	
STHS				*e*Sg	Sg	04 54 58.7	-3.9
STHS	Stebnicka Huta	3.91	121	*e*Pn	Pn	04 53 56.1	+1.2
STHS				*e*Sg	Sg	04 54 58.7	-3.9
KECS	Kecovo	4.16	135	*e*PN	Pn	04 53 58.4	-0.1
KECS				*e*		04 54 14.9	
PENC	Penc	4.27	150	⇑*e*P	Pn	04 54 01.1	+1.1
ARSA	Arzberg	4.29	185	⇑*i*Pn	Pn	04 54 01.6	+1.4
	SNR=22						
ARSA	Arzberg	4.29	185	Pn	Pn	04 54 01.6	+1.3
	comp=N,21nm,6.0s						

ARSA				Sg	Sg	04 55 10.8	-4.2
	comp=N,108nm,0.6s						
CRVS	**Cervenica-Dubn**	**4.34**	**125**	ePn	**Pn**	**04 54 02.0**	**+1.0**
CRVS				e		04 54 18.8	
CRVS				eSg	**Sg**	**04 55 12.7**	**-4.0**
CRVS	**Cervenica-Dubn**	**4.34**	**125**	ePn	**Pn**	**04 54 02.0**	**+1.0**
CRVS				eSg	**Sg**	**04 55 12.7**	**-4.0**
PSZ	**Piszkesteto**	**4.37**	**144**	⇓iPn	**Pn**	**04 54 02.8**	**+1.3**
PKSG		**4.40**	**159**	⇑iP	**Pn**	**04 54 02.7**	**+0.9**
KWP	**Kalwaria**	**4.63**	**112**	ePN	**Pn**	**04 54 04.0**	**-1.1**
KWP				ePN	**Pg**	**04 54 24.0**	**-0.7**
KWP				eS	**Sg**	**04 55 25.0**	**-1.3**
KWP	**Kalwaria**	**4.63**	**112**	ePn	**Pn**	**04 54 04.4**	**-0.7**
KWP				ePg	**Pg**	**04 54 24.0**	**-0.7**
KWP				eSg	**Sg**	**04 55 25.1**	**-1.2**
KOLS	**Kolonicke sedl**	**4.75**	**121**	ePN	**Pn**	**04 54 06.6**	**-0.1**
KOLS				ePG	**Pg**	**04 54 22.5**	**-4.5**
KBA	**Koelnbreinsper**	**4.79**	**203**	⇑iPn	**Pn**	**04 54 08.9**	**+1.5**
	SNR=13						
KBA	**Koelnbreinsper**	**4.79**	**203**	Pn	**Pn**	**04 54 08.9**	**+1.5**
	comp=N,12nm,6.0s						
KBA				Sg	**Sg**	**04 55 29.6**	**-2.2**
	comp=N,94nm,0.8s						
PERS	**Pernice**	**4.93**	**188**	ePn	**Pn**	**04 54 10.8**	**+1.5**
PERS				eSn	**Sg**	**04 55 30.1**	**-6.3**
SUW	**Suwalki**	**4.98**	**57**	ePn	**Pg**	**04 54 31.3**	**-0.4**
SUW				eSn	**Sb**	**04 55 24.3**	**+2.9**
TOD	**Tromm**	**5.02**	**250**	P	**Pn**	**04 54 11.0**	**+0.4**
KOGS	**Kog**	**5.08**	**179**	i Pn	**Pn**	**04 54 12.8**	**+1.3**
WTTA	**Wattenberg**	**5.15**	**216**	⇑iPn	**Pn**	**04 54 14.0**	**+1.5**
WTTA	**Wattenberg**	**5.15**	**216**	Pn	**Pn**	**04 54 14.0**	**+1.5**
WTTA				Sg	**Sg**	**04 55 40.9**	**-2.9**
	comp=N,75nm,0.7s						
MOTA	**Moosalm**	**5.29**	**220**	⇑iPn	**Pn**	**04 54 15.2**	**+0.8**
	SNR=9.2						
MOTA	**Moosalm**	**5.29**	**220**	Pn	**Pn**	**04 54 15.2**	**+0.8**
	comp=N,9.0nm,2.0s						
MOTA				Sg	**Sg**	**04 55 46.8**	**-1.6**
	comp=N,80nm,0.7s						
SQTA	**Sankt Quirin**	**5.35**	**218**	⇓iPn	**Pn**	**04 54 15.7**	**+0.4**
	SNR=11						
SQTA	**Sankt Quirin**	**5.35**	**218**	Pn	**Pn**	**04 54 15.7**	**+0.4**
	comp=N,10.0nm,8.0s						
SQTA				Sg	**Sg**	**04 55 49.3**	**-1.1**
	comp=N,27nm,0.5s						
FVI	**Forni Avoltri**	**5.38**	**205**	Pn	**Pn**	**04 54 17.1**	**+1.4**
	comp=N,37nm,1.0s						
FVI				Sn	**Sg**	**04 55 46.9**	**-4.5**
SEST	**Monte Rota**	**5.41**	**209**	Pn	**Pn**	**04 54 17.9**	**+1.8**
	comp=N,6μm,0.1s						
SEST				Sn	**Sg**	**04 55 47.3**	**-4.9**
PTCC	**Patocco-Chiusa**	**5.42**	**200**	⇑iPn	**Pn**	**04 54 17.6**	**+1.3**
PTCC				Sn	**Sn**	**04 55 28.2**	**+7.8**
CADS	**Cadrg**	**5.52**	**197**	i Pn	**Pn**	**04 54 18.3**	**+0.7**
GOLS	**Golise**	**5.52**	**183**	i Pn	**Pn**	**04 54 18.9**	**+1.2**
ROBS	**Robic**	**5.54**	**199**	ePn	**Pn**	**04 54 18.8**	**+0.7**
LJU	**Ljubljana**	**5.58**	**191**	ePn	**Pn**	**04 54 20.2**	**+1.8**
LJU	**Ljubljana**	**5.58**	**191**	ePn	**Pn**	**04 54 20.2**	**+1.7**
RHK1	**Bakonya**	**5.59**	**166**	⇑eP	**Pn**	**04 54 19.6**	**+1.0**
BRES	**Bressanone**	**5.60**	**212**	⇑iPn	**Pn**	**04 54 21.1**	**+2.2**
	comp=N,36nm,0.5s						
ABH	**Alteburg**	**5.66**	**257**	P	**Pn**	**04 54 20.1**	**+0.4**
GCIS	**Gornji Cirnik**	**5.67**	**183**	i Pn	**Pn**	**04 54 20.9**	**+1.2**
WTSB	**Winterswijk**	**5.78**	**278**	ePn	**Pn**	**04 54 20.2**	**-1.2**
	comp=N,11nm,0.4s						
WTSB				eSn	**Sg**	**04 55 58.7**	**-6.0**
DAVA	**Damuels**	**5.86**	**226**	⇑iPn	**Pn**	**04 54 22.2**	**-0.2**
DAVA	**Damuels**	**5.86**	**226**	⇓iSg	**Sg**	**04 56 06.3**	**-0.9**
	comp=N,52nm,0.7s						
LANF	**Langenberg**	**5.88**	**248**	P	**Pn**	**04 54 22.3**	**-0.5**
CEY	**Cerknica**	**5.89**	**191**	i Pn	**Pn**	**04 54 23.3**	**+0.4**
RUP	**Ruppelstein**	**6.02**	**256**	P	**Pn**	**04 54 24.8**	**0.0**
BOJS	**Bojanci**	**6.04**	**186**	ePn	**Pn**	**04 54 26.4**	**+1.3**
BOJS				eSn	**Sb**	**04 55 57.2**	**+5.0**
CTI	**Castel Tesino**	**6.21**	**210**	Pn	**Pn**	**04 54 29.2**	**+1.8**
DAVOX	**Davos**	**6.25**	**223**	Pn	**Pn**	**04 54 28.0**	**+0.1**
	comp=N,1.2nm,0.3s,baz=31,slow=17,SNR=16						
DAVOX				Lg		04 56 12.3	
	comp=N,2.9nm,0.3s,baz=173,slow=22,SNR=7.7						
MUD	**Monsted U'grnd**	**6.40**	**323**	i P	**Pn**	**04 54 31.5**	**+1.3**
MUD				i		04 54 59.8	
MUD				eS	**Sn**	**04 55 52.9**	**+8.0**
MUD	**Monsted U'grnd**	**6.40**	**323**	eP	**Pn**	**04 54 31.5**	**+1.3**
MUD				i		04 54 59.8	
MUD				eS	**Sn**	**04 55 52.9**	**+8.0**
MUD	**Monsted U'grnd**	**6.40**	**323**	eP	**Pn**	**04 54 31.5**	**+1.3**
MUD				eS	**Sn**	**04 55 52.9**	**+8.0**
DRGR		**6.43**	**135**	⇓P	**Pn**	**04 54 29.4**	**-1.1**
DRGR		**6.43**	**135**	⇓P	**Pn**	**04 54 29.4**	**-1.1**
WLS	**Welschbruch**	**6.43**	**244**	P	**Pn**	**04 54 30.1**	**-0.4**
HGN	**Heimansgroeve**	**6.43**	**267**	ePn	**Pn**	**04 54 30.4**	**-0.2**
	comp=N,4.4nm,0.5s						
HGN				eSn	Sx	04 56 16.8	
CDF	**Champ du Feu**	**6.47**	**245**	ePn	**Pn**	**04 54 28.6**	**-2.5**
CDF				eSg	**Sg**	**04 56 18.9**	**-8.9**
	comp=N,163nm,0.9s						
BZS	**Buzias**	**6.96**	**146**	⇓P	**Pn**	**04 54 45.8**	**+7.9**
HINF	**Hinteralfeld**	**7.04**	**242**	ePg	**Pg**	**04 55 03.8**	**-9.0**
HINF				eSg	**Sg**	**04 56 36.7**	**-10**
	comp=N,210nm,1.4s						
HINF	**Hinteralfeld**	**7.04**	**242**	ePn	**Pn**	**04 54 36.8**	**-2.3**
HINF				ePg	**Pg**	**04 55 03.8**	**-9.0**
HINF				eSg	**Sg**	**04 56 36.7**	**-10**
BURAR	**Bucovina Array**	**7.11**	**120**	⇓P	**Pn**	**04 54 39.0**	**-1.1**
BURAR	**Bucovina Array**	**7.11**	**120**	⇓P	**Pn**	**04 54 39.0**	**-1.1**
HAU	**Haudompre**	**7.22**	**245**	ePg	**Pg**	**04 55 07.4**	**-8.9**
HAU				eSg	**Sg**	**04 56 41.5**	**-11**
	comp=N,93nm,0.9s						
HAU	**Haudompre**	**7.22**	**245**	ePn	**Pn**	**04 54 39.4**	**-2.2**
HAU				ePg	**Pg**	**04 55 07.4**	**-8.9**
HAU				eSg	**Sg**	**04 56 41.5**	**-11**
GIVF	**Givet**	**7.27**	**263**	ePg	**Pg**	**04 55 08.2**	**-9.2**
GIVF				eSg	**Sg**	**04 56 43.3**	**-11**
	comp=N,46nm,0.9s						
GIVF	**Givet**	**7.27**	**263**	ePn	**Pn**	**04 54 37.9**	**-4.5**
GIVF				ePg	**Pg**	**04 55 08.2**	**-9.2**
GIVF				eSg	**Sg**	**04 56 43.3**	**-11**
RFYF	**Reffroy**	**7.41**	**251**	ePn	**Pn**	**04 54 41.3**	**-3.0**
RFYF				eSg	**Sg**	**04 56 47.7**	**-11**
	comp=N,66nm,1.0s						
BAIF	**Baives**	**7.67**	**264**	eP	**Pn**	**04 54 48.8**	**+0.9**
BAIF				eSg	**Sg**	**04 56 54.7**	**-13**
	comp=N,104nm,1.3s						
BAIF	**Baives**	**7.67**	**264**	ePn	**Pn**	**04 54 43.8**	**-4.1**
BAIF				eP		04 54 48.8	
BAIF				eSg	**Sg**	**04 56 54.7**	**-13**
BAIF	**Baives**	**7.67**	**264**	eP	**Pn**	**04 54 48.8**	**+0.9**
BAIF				eSg	**Sg**	**04 56 54.7**	**-13**
	comp=N,52nm,1.3s						
MEZF	**Maizieres J'vi**	**7.72**	**251**	ePn	**Pn**	**04 54 44.8**	**-3.8**
	baz=74						
MEZF				eSg	**Sg**	**04 56 57.5**	**-12**
	comp=N,153nm,1.3s						
SFTF	**Sexfontaines**	**7.87**	**249**	ePn	**Pn**	**04 54 46.6**	**-4.1**
SFTF				eSg	**Sg**	**04 57 01.7**	**-12**
	comp=N,77nm,0.9s						
CABF	**La Chapelle**	**8.19**	**237**	ePn	**P**	**04 54 52.5**	**-2.7**
CABF				eSg	**Sg**	**04 57 13.3**	**-12**
	comp=N,92nm,0.9s						
AKASG	**Malin Array Be**	**8.32**	**91**	Pn	**P**	**04 54 53.6**	**-3.4**
	comp=N,2.4nm,0.3s,baz=279,slow=12,SNR=28						
AKASG				Sn	**Sn**	**04 56 24.1**	**-8.6**
	comp=N,1.6nm,0.3s,baz=268,slow=25,SNR=5.1						
AKASG				Lg		04 57 20.6	
	comp=N,1.2nm,0.3s,baz=280,slow=27,SNR=4.1						
AKASG	**Malin Array Be**	**8.32**	**91**	P	**P**	**04 54 53.6**	**-3.4**
AKASG						04 56 24.1	
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG				smax			
	comp=N,2.0nm,0.3s						
LPL	**La Plagne**	**8.63**	**230**	eP	**P**	**04 55 03.2**	**+1.9**
LPL				eSg	**Sg**	**04 57 27.5**	**-12**
	comp=N,55nm,1.3s						
LPL	**La Plagne**	**8.63**	**230**	ePn	**P**	**04 54 57.6**	**-3.7**
LPL				eP		04 55 03.2	
LPL				eSg	**Sg**	**04 57 27.5**	**-12**
LPG	**La Plagne**	**8.63**	**229**	eP	**P**	**04 55 03.5**	**+2.1**
LPG				eSg	**Sg**	**04 57 27.5**	**-12**
	comp=N,90nm,1.2s						
LPG	**La Plagne**	**8.63**	**229**	ePn	**P**	**04 54 58.0**	**-3.4**
LPG				eP		04 55 03.5	
LPG				eSg	**Sg**	**04 57 27.5**	**-12**
HFS	**Hagfors**	**8.74**	**352**	Pn	**P**	**04 55 00.1**	**-2.7**
	comp=N,0.0nm,0.3s,baz=174,slow=14,SNR=4.4						
HFS				Sn	**Sn**	**04 56 36.0**	**-7.3**
	comp=N,0.1nm,0.3s,baz=162,slow=27,SNR=3.2						
HFS				Lg		04 57 31.9	
	comp=N,0.1nm,0.3s,baz=150,slow=28,SNR=2.7						
HFS	**Hagfors**	**8.74**	**352**	Pn	**P**	**04 55 00.1**	**-2.7**
HFS				Sn	**Sn**	**04 56 36.0**	**-7.3**
HFS				Lg		04 57 31.9	
LOR	**Lormes**	**9.03**	**247**	ePn	**P**	**04 55 05.0**	**-1.9**
	baz=68						
MBDF	**Montbardon**	**9.21**	**226**	eP	**P**	**04 55 11.5**	**+2.1**
MBDF				eSg	**Sg**	**04 57 44.6**	**-14**
	comp=N,45nm,1.2s						
VSU	**Vasula**	**9.26**	**37**	eP	**P**	**04 55 08.4**	**-1.6**
SSF	**Saint Saulge**	**9.35**	**246**	ePn	**P**	**04 55 08.0**	**-3.2**
SSF				eSg	**Sg**	**04 57 48.0**	**-15**
	comp=N,36nm,1.4s						
ORIF	**Oris-en-Rattie**	**9.48**	**230**	eSg	**Sg**	**04 57 53.6**	**-14**
	comp=N,123nm,1.7s						
AVF	**Avril sur Loir**	**9.58**	**245**	ePn	**P**	**04 55 11.1**	**-3.3**
AVF				eSg	**Sg**	**04 57 56.6**	**-15**
	comp=N,24nm,0.9s						
SBF	**Sospel**	**9.62**	**221**	ePn	**P**	**04 55 11.4**	**-3.5**
NOA	**NORSAR Array B**	**9.92**	**346**	Pn	**P**	**04 55 14.7**	**-4.2**
	comp=N,0.2nm,0.3s,baz=164,slow=12,SNR=2.4						
FRF	**La Foret Royal**	**10.19**	**222**	ePn	**P**	**04 55 19.1**	**-3.7**
FINES	**FINESS Array B**	**11.36**	**25**	Pn	**P**	**04 55 35.3**	**-3.4**
	comp=N,0.4nm,0.3s,baz=194,slow=7.9,SNR=8.8						
PUL	**Pulkovo**	**11.51**	**39**	eP	**P**	**04 55 38.4**	**-2.3**
KAF	**Kangasniemi**	**11.99**	**24**	ep	**P**	**04 55 45.2**	**-2.0**
	comp=N,3.2nm,0.6s						
KAF	**Kangasniemi**	**11.99**	**24**	eP	**P**	**04 55 45.2**	**-2.0**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EKA	**Eskdalemuir Ar**	**12.08**	**296**	Pn	**P**	**04 55 43.4**	**-5.2**
	comp=Z,0.3nm,0.3s,baz=102,slow=14,SNR=6.9						
OBN	**Obninsk**	**12.76**	**66**	P	**P**	**04 55 54.0**	**-3.6**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
JOF	**Joensuu**	**14.04**	**30**	ep	**P**	**04 56 16.2**	**+1.8**
	comp=Z,1.9nm,0.7s						
JOF	**Joensuu**	**14.04**	**30**	eP	**P**	**04 56 16.2**	**+1.8**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SOC	**Sochi**	**17.77**	**107**	eP	**P**	**04 57 02.6**	**+0.2**
SOC				e		05 00 26.5	
SOC				pmax	pmax		
	comp=Z,66nm,1.3s						
SOC	**Sochi**	**17.77**	**107**	eP	**P**	**04 57 02.6**	**+0.2**
	comp=Z,66nm,1.3s						
ARCES	**ARCESS Array B**	**18.62**	**10**	Pn	**P**	**04 57 06.6**	**-6.2**
	comp=Z,0.2nm,0.3s,baz=194,slow=10.0,SNR=6.8						
LVZ	**Lovozero**	**18.77**	**22**	eP	**P**	**04 57 10.4**	**-4.2**
LVZ				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV	**Kislovodsk**	**19.35**	**103**	eP	**P**	**04 57 21.2**	**-0.6**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV	**Kislovodsk**	**19.35**	**103**	eP	**P**	**04 57 21.2**	**-0.6**
	comp=Z,9.0nm,1.0s						
AKTK	**Aktyubinsk**	**26.17**	**76**	P	**P**	**04 58 29.4**	**-0.3**
	comp=Z,2.0nm,0.7s,mb3.9						
AKTO	**Aktyubinsk**	**26.17**	**76**	P	**P**	**04 58 29.4**	**-0.3**
	comp=Z,2.3nm,0.7s,mb3.9,baz=284,slow=8.1,SNR=10						
AKTO	**Aktyubinsk**	**26.17**	**76**	P	**P**	**04 58 29.4**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s,mb3.9						
KBS	**Kingsbay**	**27.56**	**358**	eP	**P**	**04 58 40.4**	**-1.8**
TORD	**Torodi Ar. Bea**	**40.00**	**202**	P	**P**	**05 00 29.9**	**-0.5**
	comp=Z,1.4nm,1.1s,mb3.5,baz=17,slow=8.5,SNR=6.1						
MKAR	**Makanchi Array**	**42.23**	**69**	P	**P**	**05 00 48.8**	**+0.5**
	comp=Z,0.5nm,0.7s,mb3.3,baz=288,slow=7.7,SNR=4.3						
MKAR	**Makanchi Array**	**42.23**	**69**	P	**P**	**05 00 48.8**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**59.84**	**336**	P	**P**	**05 03 00.9**	**-0.3**
	comp=Z,1.1nm,0.7s,mb4.0,baz=29,slow=6.9,SNR=9.0						
YKA	**Yellowknife Ar**	**59.84**	**336**	P	**P**	**05 03 00.9**	**-0.3**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ILAR	**Eielson Array**	**63.30**	**352**	P	**P**	**05 03 24.0**	**-0.5**
	comp=Z,0.2nm,0.8s,mb3.3,baz=27,slow=2.8,SNR=4.2						
NJ2	**Nanjing**	**72.84**	**60**	eP	**P**	**05 04 23.0**	**-1.4**
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.5s,mb5.2						
PDAR	**Pinedale Array**	**74.92**	**322**	P	**P**	**05 04 36.9**	**+0.6**
	comp=Z,0.4nm,0.6s,mb3.6,baz=60,slow=5.4,SNR=5.9						

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*BJI **30** 04:54:26.4, 13.95N×146.82E, h31^{km}, mB5.2, mb5.1, Ms4.7, Msz4.5*

*HRVD **30** 04:54:27.5±0.3, 13.80N×146.64E, h15^{km}, MW5.0/65, Centroid moment Tensor Solution. LP body waves: s52,c67;Mantle waves: s65,c105; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.85±.18; $M_{\theta\theta}$0.94±.13; $M_{\phi\phi}$2.90±.15; $M_{r\theta}$0.19±.30; $M_{\theta\phi}$2.23±.10; $M_{\phi r}$-0.17±.28; Best double couple: $M_0$4.114×10^{16} NP1: ϕ_s218°,δ45°,λ-84°. NP2:ϕ_s29°,δ45°,λ-96°. Principal axes: T 4.358, Plg0°, Azm123°; N -.493, Plg4°, Azm33°; P -3.87, Plg86°, Azm217°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **30** 04:54:27.5±0.1, 13.95N×146.25E, h10^{km}, mb5.5/86 Error ellipse: s-maj=4.5km s-min=3.8km az=136.0*

*MOS **30** 04:54:32.6±0.9, 14.02N×146.17E, h59^{km}, mb5.6/53, MS4.6/9, Error ellipse: s-maj=8.0km s-min=5.8km az=100.8*

*IDC **30** 04:54:32.8±2.8, 13.96N×146.40E, h50^{km}±24^{km}, mb5.0/24, mb1 5.1/24, mb1mx5.1/25, mbtmp5.2/24, MS4.5/15, Ms1 4.5/15, ms1mx4.2/29, Error ellipse: s-maj=18.2km s-min=12.5km az=74.0*

ISC 30 04:54:28.4±1.5**, 13.93N**±0.04×**146.22E**±0.03**, h25**^{km}±10^{km}**, h42**^{km}±2.4^{km}**:pP-P, n338,** σ**0^{s}92**/315**, mb5.4**/139**, MS4.5**/38**, 17C-31D, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.36**	**256**	P	**Pn**	**04 54 56.6**	**+4.5**
	477nm,0.3s,baz=115,slow=5.3,SNR=176						
GUMO				S	**Sn**	**04 55 17.0**	**+7.6**
	1μm,0.3s,baz=308,slow=18,SNR=17						
GUMO	**Guam**	**1.36**	**256**	ePn	**Pn**	**04 54 56.8**	**+4.7**
CBIJ	**Chichi jima**	**13.63**	**345**	LR	LR	05 02 47.1	
	comp=Z,2μm,19.3s,baz=156,slow=36						
JHJ	**Hachijo jima 2**	**19.98**	**344**	LR	LR	05 06 18.0	
	comp=Z,988nm,18.3s,baz=100,slow=35						
JOW	**Kunigami**	**21.13**	**310**	P	**P**	**04 59 16.4**	**+2.6**
	316nm,0.8s,mb5.7,baz=141,slow=11,SNR=46						
JOW				LR	LR	05 06 20.1	
	comp=Z,2μm,19.7s,MS4.5,baz=124,slow=33						
PMG	**Port Moresby**	**23.20**	**178**	P	**P**	**04 59 34.6**	**0.0**
	102nm,1.0s,mb5.2,baz=358,slow=9.0,SNR=21						
PMG	**Port Moresby**	**23.20**	**178**	eP	**P**	**04 59 33.5**	**-1.1**
	16nm,0.6s,mb4.6						
PMG	**Port Moresby**	**23.20**	**178**	⇓iP	**P**	**04 59 32.7**	**-1.9**
MJAR	**Matsushiro Arr**	**23.63**	**344**	P	**P**	**04 59 37.8**	**-0.8**
	12nm,0.9s,mb4.3,baz=166,slow=9.7,SNR=15						
MJAR				LR	LR	05 08 22.2	
	comp=Z,1μm,18.8s,MS4.3,baz=140,slow=35						
MAJO	**Matsushiro**	**23.64**	**344**	eP	**P**	**04 59 37.0**	**-1.6**
	18nm,0.7s,mb4.6						
MAJO	**Matsushiro**	**23.64**	**344**	P	**P**	**04 59 37.2**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,18nm,0.7s,mb4.6						
MAT	**Matsushiro**	**23.64**	**344**	P	**P**	**04 59 37.5**	**-1.1**
MAT	**Matsushiro**	**23.64**	**344**	eP	**P**	**04 59 38.0**	**-0.6**
	comp=Z,22nm,0.7s,mb4.7						
MAT	**Matsushiro**	**23.64**	**344**	eP	**P**	**04 59 38.0**	**-0.6**
MAT				pmax	pmax		
	comp=Z,22nm,0.7s,mb4.7						
JNU	**Nakatsue**	**23.67**	**326**	P	**P**	**04 59 40.4**	**+1.4**
	comp=Z,94nm,0.9s,mb5.2,baz=119,slow=7.6,SNR=38						
JNU				LR	LR	05 08 26.3	
	comp=Z,444nm,19.2s,MS4.0,baz=310,slow=35						
TGY	**Tagaytay City**	**24.53**	**273**	P	**P**	**04 59 48.8**	**+1.3**
	comp=Z,151nm,0.5s,mb5.8,baz=309,slow=22,SNR=9.2						
KS15	**Wonju Array Si**	**28.55**	**328**	eP	**P**	**05 00 24.0**	**-0.4**
SSE	**Sheshan**	**28.64**	**311**	eP	**P**	**05 00 25.3**	**0.0**
SSE				AP	pP	05 00 38.3	+5.7
SSE				XP	sP	05 00 44.3	+8.4
SSE				PCP	PcP	05 03 33.8	-2.3
SSE				S	**S**	**05 05 12.5**	**+1.4**
SSE				XS		05 05 35.0	
SSE				SCS	ScS	05 11 04.0	-2.4
SSE				AMB	AMB		
	comp=Z,40nm,0.9s,mb5.2						
SSE				AMB	AMB		
	comp=Z,100nm,5.6s						
SSE				LR	LR		
	comp=N,270nm,19.6s,MS4.2						
SSE				LR	LR		
	comp=E,510nm,19.6s,MS4.2						
SSE				LR	LR		
	comp=Z,800nm,19.6s,MS4.3						
SSE	**Sheshan**	**28.64**	**311**	eP	**P**	**05 00 25.3**	**0.0**
	comp=Z,49nm,0.9s,mb5.2						
SSE				pP	pP	05 00 38.2	+5.6
SSE				sP	sP	05 00 44.3	+8.4
SSE				PP	PP	05 01 30.5	+13
SSE				PcP	PcP	05 03 33.8	-2.3
SSE				S	**S**	**05 05 12.6**	**+1.5**
SSE				sS		05 05 35.0	
SSE				ScS	ScS	05 11 04.1	-2.3
SSE				LR	LR		
	comp=Z,810nm,19.6s,MS4.3						
GZH	**Guangzhou**	**32.42**	**291**	P	**P**	**05 01 02.5**	**+3.7**
GZH				S	**S**	**05 06 18.8**	**+8.2**
GZH				LR	LR		
	comp=N,510nm,18.3s,MS4.4						
GZH				LR	LR		
	comp=E,480nm,21.1s,MS4.4						
GZH				LR	LR		
	comp=Z,1μm,19.9s,MS4.6						
DL2	**Dalian**	**33.02**	**323**	P	**P**	**05 01 04.8**	**+0.9**
DL2				AP	pP	05 01 17.5	+6.3
DL2				eS	**S**	**05 06 20.5**	**+0.7**
DL2				AMB	AMB		
	comp=Z,350nm,2.1s,mb5.9						
DL2				LR	LR		
	comp=N,290nm,17.6s,MS4.3						
DL2				LR	LR		
	comp=E,500nm,16.5s,MS4.3						
DL2				LR	LR		
	comp=Z,490nm,15.9s,MS4.3						
YSS	**Yuzh-Sakhalins**	**33.05**	**356**	⇓iP	**P**	**05 01 02.1**	**-1.9**
WHN	**Wuhan**	**33.66**	**305**	⇑P	**P**	**05 01 10.8**	**+1.3**
SNY	**Shenyang**	**34.04**	**329**	⇓P	**P**	**05 01 11.8**	**-0.9**
SNY				S	**S**	**05 06 46.0**	**+10**
SNY				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.1						
SNY				AMB	AMB		
	comp=Z,360nm,4.9s						
SNY				LR	LR		
	comp=N,920nm,15.9s						
SNY				LR	LR		
	comp=Z,830nm,18.1s,MS4.5						
TIA	**Tai'an**	**34.23**	**316**	eP	**P**	**05 01 14.5**	**+0.1**
TIA				AMB	AMB		
	comp=Z,20nm,1.0s,mb5.0						
CN2	**Changchun**	**34.68**	**333**	eP	**P**	**05 01 18.8**	**+0.6**
CN2				PCP	PcP	05 03 51.0	-1.1
CN2				eS	**S**	**05 06 45.3**	**-0.2**
CN2				AMB	AMB		
	comp=Z,200nm,1.0s,mb6.0						
CN2				AMB	AMB		
	comp=Z,310nm,4.0s						
CN2				LR	LR		
	comp=N,320nm,13.0s,MS4.3						
CN2				LR	LR		
	comp=E,180nm,13.0s,MS4.3						
CN2				LR	LR		
	comp=Z,270nm,15.0s,MS4.1						
QIZ	**Qiongzhong**	**35.21**	**283**	eP	**P**	**05 01 24.0**	**+1.1**
QIZ				eS	**S**	**05 07 00.3**	**+6.3**
QIZ				LR	LR		
	comp=E,760nm,18.5s						
QIZ				LR	LR		
	comp=Z,760nm,20.0s,MS4.5						
WRAB	**Tennant Creek**	**35.62**	**199**	eP	**P**	**05 01 25.4**	**-1.0**
	comp=Z,112nm,0.8s,mb5.8						
WRAB				ePcP	PcP	05 03 54.5	-0.6
WRAB	**Tennant Creek**	**35.62**	**199**	eP	**P**	**05 01 25.5**	**-0.9**
WRAB				e		05 03 54.5	
WRAB				pmax	pmax		
	comp=Z,112nm,0.8s,mb5.8						
WB2	**Warramunga Arr**	**35.63**	**199**	⇓iP	**P**	**05 01 25.7**	**-0.8**
WRA	**Warramunga Arr**	**35.63**	**199**	P	**P**	**05 01 25.8**	**-0.7**
	comp=Z,53nm,0.7s,mb5.6,baz=22,slow=9.5,SNR=118						
WRA				PcP	PcP	05 03 55.1	0.0
	comp=Z,13nm,0.6s,baz=16,slow=3.3,SNR=17						
KLR	**Kul'dur**	**37.16**	**344**	eP	**P**	**05 01 35.0**	**-4.1**
ENH	**Enshi**	**37.52**	**302**	eP	**P**	**05 01 43.6**	**+1.3**
	comp=Z,42nm,1.0s,mb5.1						
ENH				ePcP	PcP	05 04 00.9	+0.2
KSM	**Kuching**	**37.60**	**254**	eP	**P**	**05 01 43.8**	**+0.6**
FITZ	**Fitzroy Crossi**	**37.75**	**213**	⇓iP	**P**	**05 01 44.5**	**+0.1**
	comp=Z,37nm,0.9s,mb5.1						
GYA	**Guiyang**	**39.01**	**295**	⇑iP	**P**	**05 01 57.0**	**+2.2**
GYA				AP	pP	05 02 09.0	+6.7
GYA				XP	sP	05 02 14.5	+9.1
GYA				PCP	PcP	05 04 06.8	+1.5
GYA				AMB	AMB		
	comp=Z,20nm,1.1s,mb4.8						
GYA				LR	LR		
	comp=N,930nm,14.2s,MS4.8						
GYA				LR	LR		
	comp=E,710nm,16.4s,MS4.8						
GYA				LR	LR		
	comp=Z,1μm,15.2s,MS4.8						
XAN	**Xi'an**	**39.23**	**307**	P	**P**	**05 01 57.0**	**+0.4**
HHC	**Hu-ho-hao-te**	**40.38**	**318**	eP	**P**	**05 02 07.3**	**+1.2**
HHC				PP	PP	05 03 41.5	-1.0
HHC				PCP	PcP	05 04 12.8	+3.2
HHC				SCP		05 07 52.3	
HHC				PCS		05 08 01.8	
HHC				S	**S**	**05 08 07.8**	**-4.6**
HHC				XS		05 08 30.5	
HHC				SCS	ScS	05 12 10.0	+1.5
HHC				AMB	AMB		
	comp=Z,70nm,0.7s,mb5.5						
HHC				AMB	AMB		
	comp=Z,340nm,10.8s						
HHC				LR	LR		
	comp=N,650nm,13.2s,MS4.8						
HHC				LR	LR		
	comp=E,700nm,16.8s,MS4.8						
HHC				LR	LR		
	comp=Z,630nm,16.8s,MS4.5						
NOUC	**Port Laguerre**	**40.86**	**151**	eP	**P**	**05 02 04.2**	**-6.0**
NOUC	**Port Laguerre**	**40.86**	**151**	eP	**P**	**05 02 04.2**	**-6.0**
BTO	**Baotou**	**41.27**	**317**	eP	**P**	**05 02 14.5**	**+1.2**
BTO				AMB	AMB		
	comp=Z,110nm,1.0s,mb5.4						
HIA	**Hailar**	**41.41**	**334**	eP	**P**	**05 02 14.1**	**-0.2**
	comp=Z,24nm,0.8s,mb4.9						
HIA				ePcP	PcP	05 04 12.2	-0.7
HIA	**Hailar**	**41.41**	**334**	eP	**P**	**05 02 14.1**	**-0.2**
HIA				e		05 04 12.2	
HIA				pmax	pmax		
	comp=Z,24nm,0.8s						
KMI	**Kunming**	**42.30**	**292**	P	**P**	**05 02 21.5**	**-0.5**
KMI				AP	pP	05 02 33.5	+4.0
KMI				XP	sP	05 02 38.3	+5.7
KMI				PP	PP	05 04 03.0	+0.1
KMI				S	**S**	**05 08 40.0**	**-1.1**
KMI				XS		05 09 00.3	
KMI				LR	LR		
	comp=N,290nm,16.9s,MS4.4						
KMI				LR	LR		
	comp=E,410nm,21.5s,MS4.4						
KMI				LR	LR		
	comp=Z,530nm,21.8s,MS4.4						
KMI	**Kunming**	**42.30**	**292**	P	**P**	**05 02 21.4**	**-0.6**
KMI				pP	pP	05 02 33.4	+3.9
KMI				sP	sP	05 02 38.3	+5.7
KMI				PP	PP	05 04 02.9	0.0
KMI				PPP	PPP	05 04 36.5	+0.9
KMI				S	**S**	**05 08 40.0**	**-1.1**
KMI				sS		05 09 00.3	
KMI				SS	SS	05 11 43.3	-0.9
KMI				SSS	SSS	05 12 30.6	+1.2
KMI				LR	LR		
	comp=Z,540nm,21.8s,MS4.4						
KMI	**Kunming**	**42.30**	**292**	P	**P**	**05 02 21.4**	**-0.6**
KMI				*SP	sP	05 02 38.3	+5.7
KMI						05 04 02.9	
KMI				PPP	PPP	05 04 36.5	+0.9

KMI				S	**S**	**05 08 40.0**	**-1.1**
KMI				SS	SS	05 11 43.3	-0.9
KMI				SSS	SSS	05 12 30.6	+1.2
KMI				MLR	MLR		
	comp=Z,540nm,21.8s,MS4.4						
CD2	**Chengdu**	**42.45**	**301**	⇑*i*P	**P**	**05 02 24.3**	**+1.1**
CD2				AP	pP	05 02 29.5	-1.1
CD2				PP	PP	05 04 06.3	+2.0
CD2				S	**S**	**05 08 41.0**	**-2.2**
CD2				AMB	AMB		
	comp=Z,20nm,1.2s,mb4.6						
CD2				AMB	AMB		
	comp=Z,170nm,8.4s						
CD2				LR	LR		
	comp=E,470nm,16.8s						
CD2				LR	LR		
	comp=Z,410nm,21.6s,MS4.3						
MBWA	**Marble Bar**	**43.51**	**217**	*e*P	**P**	**05 02 31.6**	**-0.3**
	comp=Z,43nm,1.1s,mb5.1						
LZH	**Lanzhou**	**43.84**	**308**	*e*P	**P**	**05 02 36.5**	**+2.1**
LZH				AP	pP	05 02 49.8	+7.9
LZH				XP	sP	05 02 54.0	+9.0
LZH				PP	PP	05 04 21.0	+2.8
LZH				PPP	PPP	05 04 58.0	+2.5
LZH				*e*S	**S**	**05 09 05.0**	**+1.6**
LZH				XS		05 09 26.0	
LZH				*e*SS	SS	05 12 15.0	+3.0
LZH				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.3						
LZH				AMB	AMB		
	comp=Z,310nm,4.3s						
LZH				LR	LR		
	comp=E,1µm,14.8s						
LZH				LR	LR		
	comp=Z,2µm,15.2s,MS5.1						
LZH	**Lanzhou**	**43.84**	**308**	*e*P	**P**	**05 02 36.4**	**+2.0**
	comp=Z,70nm,1.1s,mb5.3						
LZH				pP	pP	05 02 49.8	+7.9
LZH				sP	sP	05 02 54.1	+9.1
LZH				PP	PP	05 04 21.0	+2.8
LZH				PPP	PPP	05 04 58.0	+2.5
LZH				*e*S	**S**	**05 09 05.0**	**+1.6**
LZH				sS		05 09 26.0	
LZH				*e*SS	SS	05 12 15.0	+3.0
LZH				LR	LR		
	comp=Z,2µm,15.2s,MS5.1						
LZH	**Lanzhou**	**43.84**	**308**	*e*P	**P**	**05 02 36.4**	**+2.0**
LZH				*PP	pP	05 02 49.8	+7.9
LZH				*SP	sP	05 02 54.1	+9.1
LZH						05 04 21.0	
LZH				PPP	PPP	05 04 58.0	+2.5
LZH				*e*S	**S**	**05 09 05.0**	**+1.6**
LZH				*SS		05 09 26.0	
LZH				*e*SS	SS	05 12 15.0	+3.0
LZH				pmax	pmax		
	comp=Z,70nm,1.1s,mb5.3						
LZH				MLR	MLR		
	comp=Z,2µm,15.2s,MS5.1						
ARMA	**Armidale**	**44.40**	**173**	⇓*i*P	**P**	**05 02 38.3**	**-0.7**
KULM	**Kulim**	**45.67**	**264**	*e*P	**P**	**05 02 50.4**	**+1.0**
MA2	**Magadan**	**45.69**	**3**	*e*P	**P**	**05 02 48.3**	**-0.6**
	comp=Z,58nm,0.8s,mb5.6						
MA2	**Magadan**	**45.69**	**3**	*e*P	**P**	**05 02 48.3**	**-0.6**
MA2				pmax	pmax		
	comp=Z,58nm,0.8s,mb5.6						
STKA	**Stephens Creek**	**45.76**	**185**	⇓*i*P	**P**	**05 02 48.6**	**-1.2**
	comp=Z,26nm,0.8s,mb5.2						
STKA	**Stephens Creek**	**45.76**	**185**	P	**P**	**05 02 48.6**	**-1.2**
	comp=Z,28nm,0.7s,mb5.3,baz=345,slow=9.4,SNR=22						
STKA				LR	LR	05 24 41.1	
	comp=Z,534nm,18.5s,MS4.5,baz=13,slow=40						
CIT	**Chita**	**46.12**	**332**	*e*P	**P**	**05 02 52.6**	**+0.2**
CIT				*e*		05 04 27.0	
CIT				pmax	pmax		
	comp=Z,103nm,2.0s,mb5.4						
SONM	**Songino Array**	**47.22**	**324**	P	**P**	**05 03 02.3**	**+1.1**
	comp=Z,29nm,0.7s,mb5.3,baz=137,slow=8.9,SNR=129						
SONM				LR	LR	05 23 12.8	
	comp=Z,522nm,19.8s,MS4.5,baz=276,slow=36						
FORT	**Forrest**	**47.76**	**201**	⇓*i*P	**P**	**05 03 05.5**	**-0.2**
	comp=Z,106nm,0.9s,mb5.9						
FORT				*e*		05 04 34.5	
GTA	**Gaotai**	**47.94**	**311**	⇓*i*P	**P**	**05 03 07.3**	**+0.3**
GTA				AP	pP	05 03 19.8	+5.3
GTA				XP	sP	05 03 25.5	+8.0
GTA				PCP	PcP	05 04 35.8	+0.4
GTA				PP	PP	05 04 59.5	+1.3
GTA				PPP	PPP	05 05 51.3	+2.6
GTA				SCP		05 08 23.3	
GTA				PCS		05 08 29.0	
GTA				S	**S**	**05 10 02.8**	**+0.9**
GTA				XS		05 10 23.3	
GTA				SCS	ScS	05 12 53.5	-2.3
GTA				SS	SS	05 13 27.3	+1.9
GTA				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
GTA				AMB	AMB		
	comp=Z,300nm,8.4s						
GTA				LR	LR		
	comp=N,250nm,14.1s,MS4.6						
GTA				LR	LR		
	comp=E,440nm,19.0s,MS4.6						
GTA				LR	LR		
	comp=Z,390nm,16.0s,MS4.5						
SEY	**Seymchan**	**49.13**	**4**	⇑*i*P	**P**	**05 03 15.5**	**-0.3**
ADE	**Adelaide**	**49.15**	**188**	*e*P	**P**	**05 03 16.6**	**+0.3**
YAK	**Yakutsk**	**49.48**	**350**	P	**P**	**05 03 16.5**	**-2.0**
	comp=Z,41nm,0.6s,mb5.6						
YAK				LR	LR		
	comp=Z,525nm,19.0s,MS4.5						
YAK	**Yakutsk**	**49.48**	**350**	P	**P**	**05 03 17.0**	**-1.5**
YAK				pmax	pmax		
	comp=Z,41nm,0.6s,mb5.6						
ZAK	**Zakamensk**	**50.30**	**325**	*e*P	**P**	**05 03 24.4**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.0						
IRK	**Irkutsk**	**50.75**	**328**	*e*P	**P**	**05 03 27.9**	**-0.4**
IRK				pmax	pmax		
	comp=Z,78nm,1.0s,mb5.6						
TOO	**Toolangi**	**51.23**	**181**	⇓*i*P	**P**	**05 03 32.2**	**0.0**
	comp=Z,16nm,0.8s,mb5.0						
TOO	**Toolangi**	**51.23**	**181**	⇓*i*P	**P**	**05 03 32.2**	**0.0**
TOO				pmax	pmax		
	comp=Z,16nm,0.8s,mb5.0						
SHL	**Shillong**	**52.12**	**292**	*e*P	**P**	**05 03 39.3**	**+0.2**
SHL				*e*x	x	05 06 27.5	
SHL				*e*x	x	05 07 06.0	
MOY	**Mondy**	**52.19**	**326**	*e*P	**P**	**05 03 38.7**	**-0.6**
KLBR	**Kellerberrin**	**52.86**	**211**	⇓*i*P	**P**	**05 03 43.4**	**-1.2**
	comp=Z,34nm,0.7s,mb5.4						
KLBR				*i* S	PcP	05 04 53.7	+0.2
LSA	**Lhasa**	**53.02**	**297**	P	**P**	**05 03 47.8**	**+2.1**
LSA				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.3						
LSA	**Lhasa**	**53.02**	**297**	*e*P	**P**	**05 03 46.6**	**+0.9**
	comp=Z,22nm,0.6s,mb5.3						
LSA	**Lhasa**	**53.02**	**297**	*e*P	**P**	**05 03 46.6**	**+0.9**
LSA				pmax	pmax		
	comp=Z,22nm,0.6s,mb5.3						
MUN	**Mundaring**	**53.95**	**212**	*e*P	**P**	**05 03 51.7**	**-0.8**
UNV	**Unalaska Valle**	**54.34**	**32**	*e*P	**P**	**05 03 52.9**	**-2.2**
	comp=Z,126nm,0.9s,mb5.8						
BILL	**Bilibino**	**55.62**	**9**	*e*P	**P**	**05 04 03.0**	**-1.3**
	comp=Z,62nm,0.9s,mb5.6						
BILL				LR	LR		
	comp=Z,355nm,20.0s,MS4.5						
BILL	**Bilibino**	**55.62**	**9**	⇑*e*P	**P**	**05 04 02.7**	**-1.5**
BILL				*i*		05 04 14.2	
BILL						05 05 01.0	
BILL				pmax	pmax		
	comp=Z,142nm,1.7s,mb5.7						
JIRN	**Jiri**	**57.27**	**294**	*e*P	**P**	**05 04 17.1**	**+0.5**
	comp=Z,40nm,0.6s,mb5.7						
GUN	**Gumba**	**57.55**	**294**	*e*P	**P**	**05 04 19.0**	**+0.4**
	comp=Z,48nm,0.5s,mb5.8						
WMQ	**Urumqi**	**57.86**	**313**	⇓*i*P	**P**	**05 04 21.3**	**+0.8**
WMQ				S	**S**	**05 12 15.5**	**-1.3**
WMQ				SCS	ScS	05 14 03.0	-1.7
WMQ				AMB	AMB		
	comp=Z,50nm,1.1s,mb5.5						
WMQ				AMB	AMB		
	comp=Z,230nm,4.5s						
WMQ				LR	LR		
	comp=N,460nm,21.6s,MS4.8						
WMQ				LR	LR		
	comp=E,600nm,21.2s,MS4.8						
WMQ				LR	LR		
	comp=Z,770nm,20.4s,MS4.8						
PKI	**Pulchoki**	**57.96**	**294**	*e*P	**P**	**05 04 21.2**	**-0.3**
	comp=Z,29nm,0.7s,mb5.4						
PKI	**Pulchoki**	**57.96**	**294**	*e*P	**P**	**05 04 21.2**	**-0.3**
PKI				pmax	pmax		
	comp=Z,14nm,0.7s,mb5.1						
KKN	**Kakani**	**58.08**	**294**	*e*P	**P**	**05 04 22.0**	**-0.3**
	comp=Z,33nm,0.7s,mb5.5						
KKN	**Kakani**	**58.08**	**294**	*e*P	**P**	**05 04 22.0**	**-0.3**
KKN				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2						
SDPT	**Sand Point**	**58.15**	**33**	*e*P	**P**	**05 04 20.4**	**-1.9**
	comp=Z,246nm,1.3s,mb6.1						
DMN	**Daman**	**58.23**	**294**	*e*P	**P**	**05 04 23.2**	**-0.1**
	comp=Z,50nm,0.7s,mb5.6						
TIXI	**Tiksi**	**58.64**	**354**	⇑*i*P	**P**	**05 04 23.0**	**-2.6**
GKN	**Gorkha**	**58.65**	**294**	*e*P	**P**	**05 04 26.2**	**-0.1**
	comp=Z,86nm,0.7s,mb5.9						
KOLN	**Koldanda**	**59.57**	**294**	*e*P	**P**	**05 04 32.4**	**-0.2**
	comp=Z,47nm,0.7s,mb5.6						
TNA	**Tin City**	**60.07**	**20**	*e*P	**P**	**05 04 34.2**	**-1.4**
	comp=Z,42nm,1.2s,mb5.3						
TNA				LR	LR		
	comp=Z,351nm,20.0s,MS4.5						
ZAL	**Zalesovo**	**62.13**	**324**	P	**P**	**05 04 49.1**	**-0.6**
	comp=Z,10nm,0.7s,mb5.1,baz=6.5,slow=6.3,SNR=38						
MKAR	**Makanchi Array**	**62.16**	**316**	P	**P**	**05 04 50.1**	**+0.1**
	comp=Z,30nm,0.6s,mb5.6,baz=91,slow=8.7,SNR=256						
MKAR				PKP2bc		05 34 01.6	
	comp=Z,1.2nm,0.9s,baz=288,slow=3.8,SNR=6.1						
MKAR				LR	LR	05 34 22.6	
	comp=Z,328nm,18.4s,MS4.5,baz=94,slow=38						
MKAR	**Makanchi Array**	**62.16**	**316**	P	**P**	**05 04 50.1**	**+0.1**
MKAR				⇑*e*		05 34 01.6	
MKAR				LR	LR	05 34 22.6	
NVS	**Novosibirsk**	**63.24**	**325**	*i* P	**P**	**05 04 55.7**	**-1.3**
NVS				*i*		05 05 10.9	
NVS				*i*		05 05 27.8	
NVS				*i* S	**S**	**05 13 24.4**	**-1.1**
NVS				pmax	pmax		
NVS				pmax	pmax		
	comp=N,16nm,0.8s						
NVS				pmax	pmax		
	comp=E,54nm,0.8s						
NVS				smax			
	comp=N,47nm,2.2s						
TTA	**Tatalina**	**63.28**	**26**	*e*P	**P**	**05 04 56.0**	**-1.1**
	comp=N,162nm,1.6s,mb5.9						
TTA	**Tatalina**	**63.28**	**26**	*e*P	**P**	**05 04 56.0**	**-1.1**
TTA				pmax	pmax		
	comp=Z,162nm,1.6s,mb5.9						
DDI	**Dehra Dun**	**64.38**	**297**	*e*P	**P**	**05 05 03.0**	**-1.9**
HYB	**Hyderabad**	**64.95**	**283**	*i* P	**P**	**05 05 09.5**	**+0.7**
HYB	**Hyderabad**	**64.95**	**283**	*e*P	**P**	**05 05 09.5**	**+0.7**
SLKM	**Skilak Lake**	**65.05**	**29**	*e*P	**P**	**05 05 07.1**	**-1.6**
SLKM	**Skilak Lake**	**65.05**	**29**	P	**P**	**05 05 07.5**	**-1.2**
NDI	**New Delhi**	**65.17**	**295**	*e*P	**P**	**05 05 08.5**	**-1.5**
KURK	**Kurchatov**	**65.17**	**320**	*e*P	**P**	**05 05 08.9**	**-0.8**
	comp=Z,93nm,0.8s,mb5.9						
KURK				LR	LR		
	comp=Z,184nm,19.0s,MS4.3						
KURK	**Kurchatov**	**65.17**	**320**	*d i*P	**P**	**05 05 09.1**	**-0.6**
IMA2	**Indian Mountai**	**65.42**	**23**	*e*P	**P**	**05 05 10.3**	**-0.7**
PMR	**Palmer**	**65.86**	**28**	*e*P	**P**	**05 05 12.4**	**-1.5**
	comp=Z,77nm,1.2s,mb5.6						
PMR	**Palmer**	**65.86**	**28**	P	**P**	**05 05 14.9**	**+1.0**
PMR				pmax	pmax		
	comp=Z,60nm,1.2s,mb5.5						
TKM2	**Tokmak 2**	**66.49**	**311**	P	**P**	**05 05 18.9**	**+0.7**
	SNR=17						
MCK	**McKinley**	**66.55**	**26**	*e*P	**P**	**05 05 16.6**	**-1.6**
	comp=Z,27nm,1.2s,mb5.2						
MCK	**McKinley**	**66.55**	**26**	P	**P**	**05 05 17.0**	**-1.3**
MCK				pmax	pmax		
	comp=Z,27nm,1.2s,mb5.2						
KZA	**Kyzart**	**66.71**	**310**	P	**P**	**05 05 21.4**	**+1.8**
	SNR=20						
KBK	**Karagaybulak**	**66.96**	**311**	P	**P**	**05 05 21.8**	**+0.6**
	SNR=13						
CHMS	**Chumysh**	**67.11**	**311**	P	**P**	**05 05 22.3**	**+0.1**
	SNR=8.0						
FRU	**Bishkek**	**67.21**	**311**	*e*P	**P**	**05 05 22.8**	**0.0**
FRU				pmax	pmax		
	comp=Z,37nm,1.4s,mb5.2						
UCH	**Uchtor**	**67.26**	**310**	P	**P**	**05 05 24.6**	**+1.5**
	SNR=40						
AAK	**Ala-Archa**	**67.29**	**311**	P	**P**	**05 05 23.7**	**+0.4**
	SNR=8.7						
AAK	**Ala-Archa**	**67.29**	**311**	*e*P	**P**	**05 05 22.4**	**-1.0**
	comp=Z,15nm,0.9s,mb5.0						
AAK	**Ala-Archa**	**67.29**	**311**	P	**P**	**05 05 22.6**	**-0.7**
AAK				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
USP	**Ospenovka**	**67.31**	**311**	P	**P**	**05 05 23.5**	**+0.1**
	SNR=16						
DIV	**Divide**	**67.32**	**29**	*e*P	**P**	**05 05 22.9**	**-0.2**
	comp=Z,183nm,1.1s,mb6.0						
COLA	**College**	**67.33**	**25**	*e*P	**P**	**05 05 21.6**	**-1.6**
	comp=Z,33nm,0.8s,mb5.4						
COLA	**College**	**67.33**	**25**	⇑*i*P	**P**	**05 05 21.8**	**-1.4**
ILAR	**Eielson Array**	**67.70**	**25**	P	**P**	**05 05 23.5**	**-2.0**
	comp=Z,65nm,1.0s,mb5.6,baz=251,slow=5.9,SNR=440						
ILAR				LR	LR	05 33 43.7	
	comp=Z,127nm,21.6s,MS4.1,baz=358,slow=35						
ILAR				PKP2bc		05 33 46.8	
	comp=Z,0.7nm,0.9s,baz=27,slow=2.0,SNR=5.6						
ILAR	**Eielson Array**	**67.70**	**25**	P	**P**	**05 05 23.5**	**-2.0**
ILAR				LR	LR	05 33 43.7	
ILAR				⇑*e*		05 33 46.8	
EKS2	**Erkin-Say**	**67.82**	**311**	P	**P**	**05 05 26.9**	**+0.3**
	SNR=8.7						
THY	**Trims Highway**	**67.85**	**27**	*e*P	**P**	**05 05 26.2**	**-0.2**
AML	**Almayashu**	**67.87**	**310**	P	**P**	**05 05 28.2**	**+1.3**
	SNR=26						
POO	**Poona**	**69.24**	**285**	*e*P	**P**	**05 05 34.0**	**-1.8**
VOSK	**Vostochnaya**	**70.11**	**321**	P	**P**	**05 05 39.5**	**-1.0**
VOSK				pmax	pmax		
	comp=Z,15nm,0.8s,mb5.0						
KKAR	**Karatay Array**	**70.22**	**311**	*i* P	**P**	**05 05 41.4**	**0.0**
KKAR				pmax	pmax		
	comp=Z,14nm,0.6s,mb5.1						
CHKZ	**Chkalovo**	**70.38**	**322**	P	**P**	**05 05 41.0**	**-1.1**
CHKZ				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.2						
BVA0	**Borovoye Array**	**70.48**	**322**	*i* P	**P**	**05 05 42.6**	**-0.2**
BVA0				pmax	pmax		
	comp=Z,12nm,0.8s,mb4.9						
BVAR	**Borovoye Array**	**70.48**	**322**	P	**P**	**05 05 42.6**	**-0.2**
	comp=Z,66nm,0.7s,mb5.7,baz=101,slow=7.6,SNR=250						
BRVK	**Borovoye**	**70.54**	**322**	*e*P	**P**	**05 05 42.9**	**-0.3**
	comp=Z,48nm,0.8s,mb5.5						
BRVK	**Borovoye**	**70.54**	**322**	P	**P**	**05 05 43.0**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,48nm,0.8s,mb5.5						
PPT	**Papeete**	**70.65**	**114**	*e*P	**P**	**05 05 43.8**	**-0.6**
	comp=Z,24nm,0.9s,mb5.1						
PPT	**Papeete**	**70.65**	**114**	*e*S	S	05 14 55.2	-0.3
PPT				*e*LR	LR	05 26 16.4	
	comp=Z,518nm,21.0s,baz=296						
PPT	**Papeete**	**70.65**	**114**	LR	LR	05 30 59.0	
	comp=Z,524nm,18.9s,MS4.8,baz=276,slow=31						
PAE	**Paea**	**70.68**	**115**	*e*P	**P**	**05 05 43.8**	**-0.8**
	comp=Z,38nm,1.0s,mb5.3						
DAWY	**Dawson**	**70.75**	**27**	*e*P	**P**	**05 05 44.0**	**-0.3**
TVO	**Taravao**	**71.02**	**115**	*e*P	**P**	**05 05 46.4**	**-0.2**
	comp=Z,77nm,0.9s,mb5.6						
PMOR	**Pomariorio Ree**	**71.22**	**111**	*e*P	**P**	**05 05 46.9**	**-1.0**
	comp=Z,60nm,1.0s,mb5.5						
TBI	**Tubuai**	**72.99**	**120**	*e*S	S	05 15 21.8	-0.6
TBI				*e*LR	LR	05 27 26.7	
	comp=Z,268nm,32.2s,baz=302						
INK	**Inuvik**	**73.55**	**22**	*e*P	**P**	**05 05 59.9**	**-0.8**
	comp=Z,128nm,1.1s,mb5.8						
INK	**Inuvik**	**73.55**	**22**	*e*P	**P**	**05 05 59.9**	**-0.9**
INK				pmax	pmax		
	comp=Z,128nm,1.1s						
DLBC	**Dease Lake**	**74.99**	**33**	⇓*i*P	**P**	**05 06 09.7**	**+0.4**
SVE	**Sverdlovsk**	**76.06**	**326**	⇓*e*P	**P**	**05 06 15.5**	**+0.1**
SVE				*e*		05 06 40.0	
SVE				pmax	pmax		
	comp=Z,80nm,1.1s,mb5.6						
SVE				MLR	MLR		
	comp=N,300nm,15.0s,MS4.8						
SVE				MLR	MLR		
	comp=E,200nm,15.0s,MS4.8						
SVE				MLR	MLR		
	comp=Z,300nm,15.0s,MS4.7						
TAOE	**Nuku Hiva Isla**	**76.47**	**103**	*e*LR	LR	05 30 00.1	
	comp=Z,956nm,21.8s						
BBB	**Bella Bella**	**76.49**	**39**	LR	LR	05 33 17.8	
	comp=Z,335nm,21.3s,MS4.6,baz=134,slow=30						
AB31	**Akbulak array**	**77.17**	**318**	*i* P	**P**	**05 06 21.0**	**-0.8**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s,mb4.9						
ARU	**Arti**	**77.24**	**325**	⇓*i*P	**P**	**05 06 21.7**	**-0.2**
	comp=Z,38nm,0.7s,mb5.4						
ARU	**Arti**	**77.24**	**325**	⇓*i*P	**P**	**05 06 21.8**	**-0.2**
ARU				*e*		05 09 17.2	
ARU				*e*PPP	PPP	05 11 03.2	-2.6
ARU				*e*S	S	05 16 10.0	+1.3
ARU				*e*SS	SS	05 21 07.9	-1.9
ARU				pmax	pmax		
	comp=Z,44nm,0.7s,mb5.5						
SOKR	**Solikamsk**	**77.83**	**329**	⇑*i*P	**P**	**05 06 25.2**	**+0.1**
SOKR				pmax	pmax		
	comp=Z,20nm,0.8s,mb5.1						
SOKR				MLR	MLR		
	comp=Z,250nm,18.0s,MS4.6						
AKTO	**Aktyubinsk**	**78.27**	**319**	P	**P**	**05 06 27.3**	**-0.4**
	comp=Z,9.5nm,0.6s,mb4.9,baz=93,slow=8.3,SNR=53						
OTR	**Olympics--Tyee**	**79.40**	**43**	P	**P**	**05 06 35.3**	**+1.3**
OOW	**Octopus West**	**79.56**	**43**	P	**P**	**05 06 36.2**	**+1.3**
STW	**Striped Peak**	**79.84**	**43**	P	**P**	**05 06 37.1**	**+0.8**
PGC	**Sidney**	**79.90**	**42**	*e*P	**P**	**05 06 36.7**	**+0.1**
	comp=Z,106nm,1.0s,mb5.7						
MCW	**Mount Constitu**	**80.30**	**42**	P	**P**	**05 06 39.5**	**+0.7**
HDW	**Hoodsport**	**80.33**	**43**	P	**P**	**05 06 40.0**	**+1.0**
MBW	**Mount Baker**	**80.89**	**42**	P	**P**	**05 06 42.4**	**+0.5**
KHMM	**Horse Mountain**	**81.06**	**50**	*e*P	**P**	**05 06 43.5**	**+0.5**
RMW	**Rattlesnake Mo**	**81.20**	**43**	P	**P**	**05 06 44.4**	**+0.8**
HUMO	**Hull Mountain**	**81.31**	**48**	*e*P	**P**	**05 06 44.9**	**+0.6**
	comp=Z,64nm,1.1s,mb5.5						
KCPM	**Cahto Peak**	**81.40**	**51**	*e*P	**P**	**05 06 45.6**	**+0.8**
KIPM	**Iron Peak**	**81.45**	**51**	*e*P	**P**	**05 06 45.7**	**+0.7**
TDH	**Tom, Dick, Har**	**81.62**	**45**	P	**P**	**05 06 46.2**	**+0.4**
YBH	**Yreka Blue Hor**	**81.66**	**49**	*e*P	**P**	**05 06 46.4**	**+0.3**
	comp=Z,49nm,1.0s,mb5.4						
YBH	**Yreka Blue Hor**	**81.66**	**49**	*e*P	**P**	**05 06 46.4**	**+0.3**
YBH				pmax	pmax		
	comp=Z,49nm,1.0s						
YKW3	**Yellowknife Ar**	**81.93**	**28**	*e*P	**P**	**05 06 46.2**	**-0.9**
YKA	**Yellowknife Ar**	**81.95**	**28**	P	**P**	**05 06 46.6**	**-0.5**
	comp=Z,14nm,0.8s,mb4.9,baz=287,slow=5.2,SNR=60						
YKA				LR	LR	05 43 02.2	
	comp=Z,218nm,19.5s,MS4.5,baz=290,slow=36						
WDC	**Whiskeytown Da**	**82.01**	**50**	*e*P	**P**	**05 06 48.1**	**+0.2**
	comp=Z,16nm,0.9s,mb4.9						
WDC	**Whiskeytown Da**	**82.01**	**50**	*e*P	**P**	**05 06 48.1**	**+0.2**
WDC				pmax	pmax		
	comp=Z,16nm,0.9s,mb5.0						
TBM	**Table Mountain**	**82.06**	**43**	P	**P**	**05 06 48.3**	**+0.3**
WBK	**Wadi Bani Khal**	**82.27**	**291**	⇓P	**P**	**05 06 51.0**	**+1.4**
VIPM	**Ingram Point**	**82.60**	**46**	P	**P**	**05 06 51.4**	**+0.5**
HAWA	**Hanford**	**82.94**	**44**	*e*P	**P**	**05 06 52.7**	**+0.1**
	comp=Z,1.2nm,0.9s,mb3.9						
OHCM	**Honcut**	**83.06**	**51**	*e*P	**P**	**05 06 53.2**	**-0.2**
MOD	**Modoc**	**83.38**	**49**	*e*P	**P**	**05 06 55.3**	**+0.3**
	comp=Z,53nm,0.9s,mb5.6						
SAO	**San Andreas Ge**	**83.64**	**54**	*e*P	**P**	**05 06 56.8**	**+0.3**
	comp=Z,22nm,0.9s,mb5.3						
SAO	**San Andreas Ge**	**83.64**	**54**	*e*P	**P**	**05 06 56.8**	**+0.3**
SAO				pmax	pmax		
	comp=Z,22nm,0.9s,mb5.3						
RES	**Resolute Bay**	**83.92**	**14**	*e*P	**P**	**05 06 56.9**	**-0.1**
	comp=Z,20nm,0.7s,mb5.3						
RES	**Resolute Bay**	**83.92**	**14**	P	**P**	**05 06 57.0**	**0.0**
RES				pmax	pmax		
	comp=Z,20nm,0.7s,mb5.4						
LRV	**Little Rabbit**	**84.05**	**54**	*e*P	**P**	**05 06 59.2**	**+0.7**
NEW	**Newport**	**84.10**	**42**	*e*P	**P**	**05 06 58.5**	**0.0**
	comp=Z,34nm,0.9s,mb5.5						
NEW	**Newport**	**84.10**	**42**	*e*P	**P**	**05 06 58.5**	**0.0**
NEW				pmax	pmax		
	comp=Z,34nm,0.9s						
CMB	**Columbia Colle**	**84.18**	**52**	*e*P	**P**	**05 06 59.2**	**0.0**
	comp=Z,53nm,0.9s,mb5.7						
CMB	**Columbia Colle**	**84.18**	**52**	*e*P	**P**	**05 06 59.2**	**0.0**
CMB				pmax	pmax		
	comp=Z,53nm,0.9s,mb5.7						
WVOR	**Wild Horse Val**	**84.47**	**48**	*e*P	**P**	**05 07 00.3**	**-0.2**
	comp=Z,40nm,1.0s,mb5.5						
WVOR	**Wild Horse Val**	**84.47**	**48**	*e*P	**P**	**05 07 00.3**	**-0.2**
WVOR				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
BMO	**Blue Mountains**	**84.82**	**45**	⇓*e*P	**P**	**05 07 02.2**	**0.0**
	comp=Z,40nm,1.0s,mb5.5						
BMO	**Blue Mountains**	**84.82**	**45**	⇓*e*P	**P**	**05 07 02.2**	**0.0**
BMO				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.5						
PTRM	**Twissleman Ran**	**84.86**	**55**	*e*P	**P**	**05 07 03.0**	**+0.4**
EDM	**Edmonton**	**85.10**	**36**	⇓*e*P	**P**	**05 07 03.4**	**0.0**
RKT	**Rikitea**	**85.40**	**115**	*e*LR	LR	05 33 07.4	
	comp=Z,346nm,23.0s,baz=292						
APA	**Apatity**	**85.62**	**339**	⇓*i*P	**P**	**05 07 05.2**	**-0.4**
APA				pmax	pmax		
	comp=Z,42nm,1.0s,mb5.6						
NVAR	**Mina Array Bea**	**85.68**	**52**	P	**P**	**05 07 07.7**	**+1.0**
	comp=Z,26nm,0.7s,mb5.6,baz=264,slow=4.4,SNR=221						
NVAR				PP	PP	05 10 24.0	-3.3
	comp=Z,0.6nm,0.7s,baz=270,slow=7.2,SNR=3.9						
NVAR	**Mina Array Bea**	**85.68**	**52**	P	**P**	**05 07 07.7**	**+1.0**
NVAR				PP	PP	05 10 24.0	-3.3
BSMT	**Bassoo Peak**	**85.72**	**42**	P	**P**	**05 07 07.4**	**+0.8**
MTUM	**Tungsten Hills**	**85.74**	**53**	*e*P	**P**	**05 07 07.5**	**+0.5**
MNV	**Mina**	**85.79**	**52**	⇓*e*P	**P**	**05 07 07.6**	**+0.4**
	comp=Z,29nm,0.8s,mb5.6						
MNV	**Mina**	**85.79**	**52**	⇓*e*P	**P**	**05 07 07.6**	**+0.4**
MNV				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.6						
KLMR	**Klimovskoe**	**85.87**	**332**	*e*P	**P**	**05 07 05.0**	**-2.1**
KLMR				pmax	pmax		
	comp=Z,50nm,1.6s,mb5.5						
KLMR				pmax	pmax		
	comp=Z,330nm,6.7s						
MSO	**Missoula**	**86.56**	**43**	*e*P	**P**	**05 07 10.2**	**-0.6**
	comp=Z,13nm,1.4s,mb5.0						
TPH	**Tonopah**	**86.59**	**52**	*e*P	**P**	**05 07 11.5**	**+0.3**
	comp=Z,17nm,0.8s,mb5.3						
TPH	**Tonopah**	**86.59**	**52**	*e*P	**P**	**05 07 11.5**	**+0.3**
TPH				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.3						
DAC	**Darwin (Calif)**	**86.77**	**54**	*e*P	**P**	**05 07 12.2**	**+0.1**
	comp=Z,55nm,1.3s,mb5.6						
DAC	**Darwin (Calif)**	**86.77**	**54**	*e*P	**P**	**05 07 12.2**	**+0.1**
DAC				pmax	pmax		
	comp=Z,55nm,1.3s,mb5.6						
MWC	**Mount Wilson**	**86.92**	**56**	*e*P	**P**	**05 07 12.1**	**-0.7**
CHMT	**Chamberlain Mo**	**86.99**	**42**	*e*P	**P**	**05 07 12.2**	**-0.6**
ARCES	**ARCESS Array B**	**87.16**	**342**	P	**P**	**05 07 13.0**	**-0.2**
	comp=Z,14nm,0.6s,mb5.4,baz=66,slow=5.7,SNR=65						
ARCES				LR	LR	05 50 30.3	
	comp=Z,274nm,18.7s,MS4.7,baz=212,slow=38						
HLID	**Hailey**	**87.17**	**46**	*e*P	**P**	**05 07 14.3**	**+0.5**
	comp=Z,29nm,1.0s,mb5.5						
ELK	**Elko**	**87.36**	**49**	LR	LR	05 38 24.1	
	comp=Z,274nm,21.8s,MS4.6,baz=96,slow=30						
TPNV	**Topopah Spring**	**87.64**	**53**	*e*P	**P**	**05 07 16.3**	**+0.1**
	comp=Z,44nm,1.1s,mb5.6						
TPNV	**Topopah Spring**	**87.64**	**53**	*e*P	**P**	**05 07 16.3**	**+0.1**
TPNV				pmax	pmax		
	comp=Z,44nm,1.1s,mb5.6						
MCMT	**McKenzie Canyo**	**87.88**	**44**	*e*P	**P**	**05 07 17.7**	**+0.5**
DLMT	**Dillon**	**87.89**	**44**	*e*P	**P**	**05 07 16.8**	**-0.4**
	comp=Z,50nm,1.3s,mb5.6						
HRY	**Holter Researc**	**87.98**	**42**	*e*P	**P**	**05 07 17.8**	**+0.2**
BAR	**Barrett**	**88.44**	**57**	*e*P	**P**	**05 07 19.9**	**-0.3**
BOZ	**Bozeman (W)**	**88.44**	**43**	*e*P	**P**	**05 07 20.1**	**+0.2**
	comp=Z,29nm,0.8s,mb5.6						
BOZ				LR	LR		
	comp=Z,261nm,19.0s,MS4.7						
BOZ	**Bozeman (W)**	**88.44**	**43**	*e*P	**P**	**05 07 20.1**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,29nm,0.8s,mb5.6						
BOZ				MLR	MLR		
	comp=Z,261nm,19.0s,MS4.7						
JOF	**Joensuu**	**88.54**	**335**	*e*p	**P**	**05 07 18.0**	**-1.9**
	comp=Z,11nm,0.6s,mb5.4						
QLMT	**Earthquake Lak**	**88.83**	**44**	*e*P	**P**	**05 07 23.0**	**+1.2**

HVU	**Hansel Valley**	**88.84**	**47**	*e*P	**P**	**05 07 22.6**	**+0.7**
	comp=Z,28nm,0.9s,mb5.6						
HVU	**Hansel Valley**	**88.84**	**47**	*e*P	**P**	**05 07 22.6**	**+0.7**
HVU				pmax	pmax		
	comp=Z,28nm,0.9s,mb5.6						
EGMT	**Eagleton**	**88.89**	**41**	*e*P	**P**	**05 07 21.4**	**-0.5**
	comp=Z,15nm,1.1s,mb5.2						
BGU	**Big Grassy Mou**	**88.92**	**48**	*e*P	**P**	**05 07 21.9**	**-0.4**
DAG	**Danmarks Havn**	**89.03**	**357**	⇑*i*P	**P**	**05 07 21.8**	**-0.2**
	comp=Z,11nm,0.9s,mb5.2						
DAG	**Danmarks Havn**	**89.03**	**357**	⇑*e*P	**P**	**05 07 21.8**	**-0.2**
	comp=Z,11nm,0.9s,mb5.2						
DAG	**Danmarks Havn**	**89.03**	**357**	⇑*e*P	**P**	**05 07 21.8**	**-0.2**
DAG				pmax	pmax		
	comp=Z,11nm,0.9s,mb5.2						
LDFC	**Landfair**	**89.04**	**54**	*e*P	**P**	**05 07 22.8**	**-0.2**
NEN	**Nelson**	**89.08**	**54**	*e*P	**P**	**05 07 23.6**	**+0.4**
YMR	**Madison River**	**89.20**	**44**	*e*P	**P**	**05 07 24.9**	**+1.3**
	comp=Z,62nm,0.8s,mb6.0						
SPUT	**South Promonto**	**89.22**	**48**	*e*P	**P**	**05 07 24.0**	**+0.3**
DUG	**Dugway**	**89.30**	**49**	*e*P	**P**	**05 07 24.5**	**+0.5**
	comp=Z,54nm,0.8s,mb5.9						
DUG				LR	LR		
	comp=Z,268nm,20.0s,MS4.7						
DUG	**Dugway**	**89.30**	**49**	*e*P	**P**	**05 07 24.5**	**+0.4**
DUG				pmax	pmax		
	comp=Z,54nm,0.8s,mb5.9						
DUG				MLR	MLR		
	comp=Z,268nm,20.0s,MS4.7						
GOF	**Gofitskoye**	**89.33**	**316**	*e*P	**P**	**05 07 23.7**	**-0.4**
YFT	**Old Faithful**	**89.36**	**44**	*e*P	**P**	**05 07 27.1**	**+2.8**
IMW	**Indian Meadow**	**89.47**	**45**	*e*P	**P**	**05 07 25.7**	**+0.9**
	comp=Z,26nm,0.8s,mb5.6						
OBN	**Obninsk**	**89.53**	**327**	⇑*i*P	**P**	**05 07 23.9**	**-0.9**
OBN				LR	LR		
	comp=Z,400nm,21.0s,MS4.8						
OBN	**Obninsk**	**89.53**	**327**	⇑*e*P	**P**	**05 07 24.1**	**-0.7**
OBN				*e*		05 07 45.0	
OBN						05 11 04.0	
OBN				pmax	pmax		
	comp=Z,41nm,1.7s,mb5.5						
OBN				MLR	MLR		
	comp=Z,400nm,21.0s,MS4.8						
ARUT	**Antelope Range**	**89.55**	**51**	*e*P	**P**	**05 07 26.3**	**+1.0**
LKWY	**Lake**	**89.62**	**44**	*e*P	**P**	**05 07 27.8**	**+2.4**
	comp=Z,28nm,1.0s,mb5.5						
LKWY	**Lake**	**89.62**	**44**	*e*P	**P**	**05 07 27.8**	**+2.3**
LKWY				pmax	pmax		
	comp=Z,28nm,1.0s,mb5.5						
MOOW	**Moose Ponds**	**89.65**	**45**	*e*P	**P**	**05 07 26.1**	**+0.5**
	comp=Z,29nm,1.3s,mb5.4						
NOQ	**North Oquirrh**	**89.66**	**48**	*e*P	**P**	**05 07 26.0**	**+0.3**
	comp=Z,18nm,0.8s,mb5.5						
GNI	**Garni**	**89.69**	**311**	⇑*i*P	**P**	**05 07 24.9**	**-1.0**
GCMT	**Greycliff**	**89.70**	**43**	*e*P	**P**	**05 07 26.5**	**+0.6**
REDW	**Red Top Meadow**	**89.70**	**45**	*e*P	**P**	**05 07 26.6**	**+0.7**
	comp=Z,23nm,1.1s,mb5.4						
SNOW	**Snow King Moun**	**89.73**	**45**	*e*P	**P**	**05 07 27.0**	**+0.9**
	comp=Z,17nm,1.1s,mb5.3						
HWUT	**Hardware Ranch**	**89.76**	**47**	⇓*i*P	**P**	**05 07 26.4**	**+0.1**
	comp=Z,40nm,0.9s,mb5.8						
HWUT				LR	LR		
	comp=Z,366nm,19.0s,MS4.8						
LOHW	**Long Hollow**	**89.79**	**45**	*e*P	**P**	**05 07 26.8**	**+0.4**
	comp=Z,22nm,1.4s,mb5.3						
NLU	**North Lily Min**	**89.91**	**49**	*e*P	**P**	**05 07 27.7**	**+0.7**
CTU	**Camp Tracy**	**89.91**	**48**	*e*P	**P**	**05 07 27.3**	**+0.4**
	comp=Z,68nm,1.3s,mb5.8						
KIV	**Kislovodsk**	**89.92**	**315**	*e*P	**P**	**05 07 26.8**	**-0.1**
	comp=Z,25nm,0.8s,mb5.6						
KIV	**Kislovodsk**	**89.92**	**315**	*e*P	**P**	**05 07 26.1**	**-0.8**
KIV				*e*		05 10 56.2	
KIV				*e*SS	SS	05 24 15.3	-2.1
KIV				pmax	pmax		
	comp=Z,32nm,1.0s,mb5.6						
KIV				pmax	pmax		
	comp=Z,33nm,5.7s						
KIV				MLR	MLR		
	comp=Z,215nm,19.0s,MS4.6						
TCUT	**Toone Canyon**	**90.03**	**48**	*e*P	**P**	**05 07 27.8**	**+0.3**
MPU	**Maple Canyon**	**90.21**	**49**	*e*P	**P**	**05 07 28.8**	**+0.4**
	comp=Z,69nm,1.5s,mb5.8						
MVU	**Marysvale**	**90.25**	**50**	*e*P	**P**	**05 07 29.9**	**+1.3**
	comp=Z,21nm,0.8s,mb5.5						
MSU	**Marysvale**	**90.28**	**50**	*e*P	**P**	**05 07 29.5**	**+0.8**
DAU	**Daniels Canyon**	**90.36**	**48**	*e*P	**P**	**05 07 29.9**	**+0.8**
MIB	**Mutribah**	**90.69**	**301**	*e*P	**P**	**05 07 31.0**	**+0.2**
MIB				AMb	AMB	05 07 32.1	
	comp=Z,47nm,1.0s,mb5.8						
TMUT	**Trail Mountain**	**90.75**	**49**	*e*P	**P**	**05 07 31.5**	**+0.6**
RDF	**Al-Radifah**	**90.76**	**300**	*e*P	**P**	**05 07 31.2**	**+0.1**
RDF				AMb	AMB	05 07 32.6	
	comp=Z,30nm,0.8s,mb5.7						
PDAR	**Pinedale Array**	**90.79**	**46**	P	**P**	**05 07 30.9**	**-0.1**
	comp=Z,4.6nm,0.8s,mb4.9,baz=238,slow=2.6,SNR=35						
FFC	**Flin Flon**	**90.82**	**33**	*e*P	**P**	**05 07 30.4**	**-0.4**
	comp=Z,35nm,1.4s,mb5.5						
FFC	**Flin Flon**	**90.82**	**33**	*e*P	**P**	**05 07 30.4**	**-0.4**
FFC				pmax	pmax		
	comp=Z,35nm,1.4s,mb5.5						
NAY	**Al-Naaiem**	**90.93**	**300**	*e*P	**P**	**05 07 31.1**	**-0.8**
NAY				AMb	AMB	05 07 33.1	
	comp=Z,37nm,1.1s,mb5.6						
KAF	**Kangasniemi**	**90.95**	**336**	*e*p	**P**	**05 07 29.1**	**-2.1**
	comp=Z,8.8nm,0.8s,mb5.1						
KAF	**Kangasniemi**	**90.95**	**336**	*e*P	**P**	**05 07 29.1**	**-2.1**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.8s,mb5.2						
SRU	**San Rafael**	**91.31**	**49**	*e*P	**P**	**05 07 33.7**	**+0.3**
	comp=Z,34nm,0.9s,mb5.7						
SRU	**San Rafael**	**91.31**	**49**	*e*P	**P**	**05 07 33.7**	**+0.3**
SRU				pmax	pmax		
	comp=Z,34nm,0.9s,mb5.7						
FINES	**FINESS Array B**	**91.41**	**335**	P	**P**	**05 07 32.2**	**-1.1**
	comp=Z,9.9nm,0.6s,mb5.3,baz=65,slow=5.9,SNR=43						
FINES				LR	LR	05 53 41.5	
	comp=Z,255nm,18.2s,MS4.7,baz=70,slow=39						
FINES	**FINESS Array B**	**91.41**	**335**	P	**P**	**05 07 32.2**	**-1.1**
FINES				LR	LR	05 53 41.5	
LAO	**LASA Array**	**91.61**	**41**	*e*P	**P**	**05 07 35.0**	**+0.4**
	comp=Z,69nm,1.1s,mb5.9						
VNDA	**Vanda**	**91.72**	**177**	*e*P	**P**	**05 07 34.0**	**-0.4**
	comp=Z,41nm,1.6s,mb5.5						
VNDA				LR	LR		
	comp=Z,163nm,20.0s,MS4.5						
VNDA	**Vanda**	**91.72**	**177**	*e*P	**P**	**05 07 34.1**	**-0.4**
VNDA				pmax	pmax		
	comp=Z,41nm,1.6s						
VNDA				MLR	MLR		
	comp=Z,163nm,20.0s						
WUAZ	**Wupatki**	**91.82**	**53**	*e*P	**P**	**05 07 36.7**	**+0.8**
	comp=Z,50nm,0.9s,mb5.8						
SBA	**Scott Base**	**92.36**	**176**	*e*P	**P**	**05 07 38.6**	**+1.2**
	comp=Z,56nm,1.8s,mb5.6						
SBA	**Scott Base**	**92.36**	**176**	*e*P	**P**	**05 07 38.6**	**+1.2**
SBA				pmax	pmax		
	comp=Z,56nm,1.8s,mb5.6						
PV10	**Paradox Valley**	**92.65**	**50**	*e*P	**P**	**05 07 40.1**	**+0.5**
PV01	**Paradox Valley**	**93.08**	**50**	*e*P	**P**	**05 07 41.9**	**+0.3**
RSSD	**Black Hills**	**94.03**	**43**	*e*P	**P**	**05 07 45.6**	**-0.2**
	comp=Z,28nm,1.2s,mb5.6						
RSSD	**Black Hills**	**94.03**	**43**	P	**P**	**05 07 45.5**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,28nm,1.2s,mb5.6						
ISCO	**Idaho Springs**	**94.63**	**47**	*e*P	**P**	**05 07 49.5**	**+0.8**
	comp=Z,9.2nm,1.0s,mb5.2						
ISCO	**Idaho Springs**	**94.63**	**47**	*e*P	**P**	**05 07 49.5**	**+0.8**
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb5.2						
LAZ	**Ladron**	**95.47**	**53**	*e*P	**P**	**05 07 53.6**	**+0.9**
AKASG	**Malin Array Be**	**95.49**	**325**	P	**P**	**05 07 51.3**	**-1.1**
	comp=Z,2.0nm,0.7s,mb4.7,baz=51,slow=5.2,SNR=12						
AKASG				PP	PP	05 11 45.9	+0.4
	comp=Z,0.2nm,0.2s,baz=50,slow=7.4,SNR=4.5						
ANMO	**Albuquerque**	**95.80**	**52**	*d i*P	**P**	**05 07 51.9**	**-2.3**
BNM	**Barren Site**	**95.96**	**53**	*e*P	**P**	**05 07 55.6**	**+0.7**
ULM	**Lac du Bonnet**	**96.22**	**35**	P	**P**	**05 07 55.1**	**-0.6**
	comp=Z,6.5nm,0.8s,mb5.1,baz=284,slow=5.1,SNR=11						
HFS	**Hagfors**	**96.97**	**338**	P	**P**	**05 07 57.5**	**-1.4**
	comp=Z,2.0nm,0.6s,mb4.7,baz=90,slow=4.4,SNR=7.7						
TATS	**Tathlith**	**97.04**	**292**	P	**P**	**05 08 01.3**	**+1.2**
NB2	**NORSAR Subarra**	**97.19**	**340**	P	**P**	**05 07 58.6**	**-1.2**
	comp=Z,1.1nm,0.6s,mb4.5,baz=54,slow=4.8						
NOA	**NORSAR Array B**	**97.19**	**340**	P	**P**	**05 07 58.5**	**-1.4**
	comp=Z,1.3nm,0.6s,mb4.5,baz=47,slow=4.5,SNR=5.5						
NOA	**NORSAR Array B**	**97.19**	**340**	P	**P**	**05 07 58.5**	**-1.4**
NAO	**NORSAR Subarra**	**97.48**	**340**	P	**P**	**05 07 58.6**	**-2.5**
	comp=Z,1.1nm,0.6s,mb4.5						
NAO	**NORSAR Subarra**	**97.48**	**340**	P	**P**	**05 07 58.6**	**-2.5**
NAO				pmax	pmax		
	comp=Z,1.0nm,0.6s,mb4.4						
BR131	**Keskin Array S**	**97.78**	**314**	*e*P	**P**	**05 08 02.2**	**-0.7**
	comp=Z,4.0nm,0.9s,mb5.0						
BRTR	**Keskin Array B**	**97.78**	**314**	P	**P**	**05 08 02.5**	**-0.5**
	comp=Z,4.9nm,0.9s,mb5.0,baz=90,slow=3.7,SNR=20						
BRTR				PP	PP	05 11 56.2	-7.9
	comp=Z,0.8nm,0.8s,baz=117,slow=6.4,SNR=3.2						
BRTR				PKKPbc		05 24 37.1	
	comp=Z,0.5nm,0.8s,baz=225,slow=3.5,SNR=3.6						
MNTX	**Cornudas Mount**	**97.82**	**55**	*e*P	**P**	**05 08 03.6**	**+0.3**
	comp=Z,14nm,0.8s,mb5.5						
GDL2	**Guadalupe Moun**	**98.44**	**54**	*e*P	**P**	**05 08 07.0**	**+0.8**
BLJS	**Baljurashi**	**98.62**	**293**	P	**P**	**05 08 08.7**	**+1.5**
TXAR	**Lajitas Array**	**100.07**	**56**	P	P	05 08 14.1	+0.4
	comp=Z,0.9nm,0.7s,baz=271,slow=4.1,SNR=13						
TXAR				PP	PP	05 12 13.8	-7.9
	comp=Z,0.8nm,1.1s,baz=252,slow=2.9,SNR=3.5						
TXAR				PKKPbc		05 24 33.8	
	comp=Z,0.3nm,0.7s,baz=130,slow=9.8,SNR=4.4						
ALWS	**Ilw as Safayha**	**100.93**	**304**	P	P	05 08 18.2	+0.7
JMOS	**Jabal al Moall**	**100.95**	**304**	P	P	05 08 18.2	+0.6
HAQS	**Haql**	**101.14**	**304**	P	P	05 08 17.9	-0.6
AYUS	**‘Aynunah**	**101.19**	**303**	P	P	05 08 19.0	+0.3
KHC	**Kasperske Hory**	**104.58**	**330**	*e*PP	PP	05 12 49.0	-6.3
GERES	**GERESS Array B**	**104.71**	**330**	PKiKP		05 12 48.7	
	comp=Z,0.7nm,0.7s,baz=51,slow=6.3,SNR=2.9						
GERES				PKKPbc		05 24 16.8	
	comp=Z,1.0nm,0.9s,baz=236,slow=4.8,SNR=5.4						
GOGA	**Godfrey**	**113.22**	**44**	PKIKP	PKPdf	05 13 09.1	+0.2
SNAA	**Sanae**	**119.37**	**191**	⇓*i*PKIKP	PKPdf	05 13 15.5	-4.4
SNAA				*e*		05 13 33.3	
ESDC	**Sonseca Array**	**119.88**	**334**	PKP	PKPdf	05 13 19.2	-2.4
	comp=Z,0.7nm,0.5s,baz=8.8,slow=3.1,SNR=5.4						
ESDC				PP	PP	05 14 40.3	-4.8
	comp=Z,1.3nm,0.7s,baz=8.1,slow=9.1,SNR=4.2						
LSZ	**Lusaka**	**120.20**	**260**	*e*PKPdf	PKPdf	05 13 21.1	-1.7
LSZ	**Lusaka**	**120.20**	**260**	PKIKP	PKPdf	05 13 20.9	-1.9
VNA2	**Neumayer--Watz**	**120.79**	**190**	⇓*i*PKPdf	PKPdf	05 13 18.9	-3.8
VNA2				*e*		05 13 35.8	
VNA3	**Neumayer Olymp**	**120.87**	**189**	⇓*i*PKPdf	PKPdf	05 13 18.8	-4.1
VNA3				*e*		05 13 35.3	
VNA1	**Neumayer--Stat**	**121.17**	**190**	⇓*i*PKPdf	PKPdf	05 13 20.5	-3.0
VNA1				*e*		05 13 40.3	
LBTB	**Lobatse**	**123.32**	**249**	*e*PKPdf	PKPdf	05 13 26.3	-2.3
JTS	**JuntasAbangare**	**123.82**	**67**	PKP	PKPdf	05 13 25.9	-3.9
	comp=Z,4.4nm,0.8s,baz=301,slow=17,SNR=3.6						
MDT	**Midelt**	**125.80**	**330**	PKP	PKPdf	05 13 30.9	-2.4
	comp=Z,6.1nm,0.8s,baz=340,slow=1.7,SNR=8.0						
MDT				PP	PP	05 15 23.7	-2.1
	comp=Z,3.0nm,1.0s,baz=58,slow=3.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**135.74**	**306**	PKhKP		05 13 36.2	
	comp=Z,1.1nm,0.9s,baz=51,slow=2.4,SNR=7.3						
TORD				PKP	PKPdf	05 13 49.3	-3.3
	comp=Z,5.8nm,0.6s,baz=27,slow=2.4,SNR=45						
TORD				PP	PP	05 16 28.6	-1.5
	comp=Z,1.9nm,0.8s,baz=50,slow=5.4,SNR=5.6						
TORD				SKPbc		05 17 20.9	
	comp=Z,2.4nm,1.1s,baz=35,slow=6.8,SNR=4.1						
SDV	**Santo Domingo**	**136.97**	**60**	PKhKP		05 13 42.0	
	comp=Z,3.9nm,0.7s,slow=4.7,SNR=5.6						
SDV	**Santo Domingo**	**136.97**	**60**	PKP		05 13 42.0	
PLCA	**Paso Flores**	**138.29**	**137**	PKhKP		05 13 42.6	
	comp=Z,0.9nm,0.7s,baz=325,slow=12,SNR=3.7						
PLCA				PKP	PKPdf	05 13 51.8	-4.8
	comp=Z,6.1nm,1.0s,baz=329,slow=1.1,SNR=10						
PLCA	**Paso Flores**	**138.29**	**137**	PKP		05 13 42.6	
PLCA				*e*PKPdf	PKPdf	05 13 51.6	-5.0
ARE	**Arequipa**	**143.55**	**99**	*e*P	PKPbc	05 14 01.0	+0.5
CEN1	**Los Morros**	**144.32**	**111**	⇑*i*P	PKPbc	05 14 02.7	+0.1
DBIC	**Dimbokro**	**144.75**	**304**	PKP	PKPdf	05 14 05.2	-3.6
	comp=Z,159nm,0.7s,baz=35,slow=3.7,SNR=245						
DBIC	**Dimbokro**	**144.75**	**304**	*e*PKIKP	PKPdf	05 14 05.0	-3.8
TRQA	**Tornquist**	**145.32**	**139**	*e*PKPbc	PKPbc	05 14 04.8	-0.1
LPAZ	**La Paz**	**146.77**	**98**	PKPbc	PKPbc	05 14 11.7	+2.7
	comp=Z,28nm,0.8s,baz=334,slow=1.8,SNR=91						
LPAZ				PP	PP	05 17 34.8	-2.5
	comp=Z,2.0nm,0.4s,baz=270,slow=14,SNR=7.2						
LPAZ	**La Paz**	**146.77**	**98**	*e*PKPdf	PKPdf	05 14 09.3	-2.8
LPAZ				*e*PKPbc	PKPbc	05 14 11.4	+2.5
SAML	**Samuel**	**150.77**	**83**	*e*PKPdf	PKPdf	05 14 15.0	-3.6
SAML				*e*PKPbc	PKPdf	05 14 20.1	+1.6
CPUP	**Villa Florida**	**154.73**	**123**	*e*PKPbc	PKPdf	05 14 28.6	+4.8
BDFB	**Brasilia**	**166.13**	**99**	PKP	PKPdf	05 14 34.0	-2.7
	comp=Z,4.3nm,1.0s,baz=289,slow=3.2,SNR=4.3						
BDFB				PKPab	PKPab	05 15 33.1	-1.6
	comp=Z,5.3nm,0.8s,baz=242,slow=5.6,SNR=6.3						

JMA 30 05:24:30.6±0.2**,38.07N**×**144.51E,h54**^{km}**,M3.6,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.44**	**295**	P	P	05 25 09.0	0.0
JIO	**Ouri**	**2.52**	**280**	P	P	05 25 10.4	+0.4
JIO				*e*S	S	05 25 39.9	+0.3
MIYJ	**Miyakonagasawa**	**2.58**	**306**	P	P	05 25 10.7	-0.3
MIYJ				*e*S	S	05 25 40.8	-0.5
JMK	**Ichinoseki**	**2.73**	**290**	P	P	05 25 13.7	+0.7
JOM	**Ohasama**	**2.88**	**300**	*e*S	S	05 25 49.0	+0.2
JMM	**Marumori**	**2.94**	**267**	P	P	05 25 16.1	0.0
JMM				*e*S	S	05 25 49.8	-0.6
JANG	**Nango**	**3.27**	**316**	*e*S	S	05 25 57.5	-1.2

NEIC ***30*** *05:28:14.7,16.04N×97.14W,h8*^{km}*,MD3.9(MEX),After MEX.*

MEX 30 05:28:14.9±1.0**,16.05N**×**97.16W,h9**^{km}±21^{km}**,MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.05**	**105**	*i* P	Pb	05 28 33.0	-1.8
HUIG				*i* S	Sb	05 28 44.8	-3.6
HUIG	**Huatulco**	**1.05**	**105**	*e*P	Pb	05 28 31.0	-3.7
HUIG				*i* S	Sb	05 28 44.8	-3.6
VHO	**Vista Hermosa**	**1.10**	**22**	*i* P	Pb	05 28 33.5	-2.1
VHO				*i* S	Sb	05 28 47.1	-2.7
OXX	**Oaxaca**	**1.11**	**22**	*i* P	Pb	05 28 32.0	-3.8
OXX				*i* S	Sb	05 28 46.5	-3.7
CMIG	**Matias Romero**	**2.42**	**64**	*i* P	Pn	05 28 51.0	-4.3
CMIG				*i* S	Sn	05 29 20.6	-4.6

IDC ***30*** *05:41:39.5±0.7, 9.68S×79.82W, mb4.7/19, mb1 4.8/21, mb1mx4.8/26, mbtmp4.7/21, ML4.0/1, MS5.0/11, Ms1 5.0/11, ms1mx4.8/19, Error ellipse: s-maj=23.2km s-min=12.5km az=53.0*

MOS ***30*** *05:41:42.9±1.0, 9.63S×79.80W, h33*^{km}*, mb5.3/27, MS4.7/10, Error ellipse: s-maj=14.6km s-min=7.4km az=110.3*

HRVD ***30*** *05:41:43.0±0.2, 9.86S×79.98W, h12*^{km}*, MW5.5/80, Centroid moment Tensor Solution. LP body waves: s62,c104;Mantle waves: s80,c165; Half duration: 1*^{s}*4 Moment tensor: Scale 10*^{17}*Nm;* M_{rr}*1.12±.02;* $M_{\theta\theta}$*-0.14±.02;* $M_{\phi\phi}$*-0.98±.02;* $M_{r\theta}$*0.73±.06;* $M_{\theta\phi}$*0.46±.02;* $M_{\phi r}$*-2.02±.06; Best double couple:* M_0*2.438×10*^{17} *NP1:* ϕ_s*333°,*δ*14°,*λ*83°. NP2:*ϕ_s*160°,*δ*76°,*λ*92°. Principal axes: T 2.408, Plg59°, Azm72°; N .055, Plg2°, Azm339°; P -2.468, Plg31°, Azm248°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***30*** *05:41:43.0±0.3, 9.67S×79.68W, mb5.2/61 Error ellipse: s-maj=9.2km s-min=4.9km az=53.0*

BJI ***30*** *05:41:45.0, 9.70S×79.70W, h23*^{km}*, mB5.7, Ms5.7, Msz5.2*

ISC 30 05:41:41.7±0.3**,9.65S**±0.04×**79.83W**±0.05**,h25**^{km}**, h25**^{km}±1.5^{km}**:pP-P,n217,**σ**1**^{s}**23**/187**,mb5.1**/75**,MS4.9**/29**, 15C-2D,Off coast of northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**3.75**	**129**	*e*P	**Pn**	**05 42 36.0**	**-3.5**
OTAV	**Otavalo**	**9.91**	**8**	*e*P	**P**	**05 44 05.3**	**-0.7**
	401nm,1.1s						
ARE	**Arequipa**	**10.58**	**131**	*e*P	**P**	**05 44 17.0**	**+1.9**
ARE				*e*		05 44 30.0	
ARE				*i*		05 46 45.4	
LPAZ	**La Paz**	**13.17**	**121**	Pn	**P**	**05 44 47.4**	**-2.6**
	0.4nm,0.3s,baz=308,slow=14,SNR=18						
LPAZ				LR	LR	05 49 42.4	
	comp=Z,6µm,18.4s,baz=308,slow=37						
LPAZ	**La Paz**	**13.17**	**121**	*e*P	**P**	**05 44 46.2**	**-3.8**
	1µm,1.2s						
LPAZ	**La Paz**	**13.17**	**121**	*e*P	**P**	**05 44 46.3**	**-3.7**
LPAZ				pmax	pmax		
	comp=Z,1µm,1.2s						
PAYG	**Puerto Ayora**	**13.70**	**310**	*e*P	**P**	**05 44 59.5**	**+2.4**
	comp=Z,47nm,0.6s						
ROSC	**El Rosal**	**15.41**	**21**	Pn	**P**	**05 45 17.6**	**-2.0**
	comp=Z,0.2nm,0.3s,baz=247,slow=23,SNR=3.0						
SAML	**Samuel**	**16.45**	**89**	*e*P	**P**	**05 45 28.2**	**-4.5**
	comp=Z,88nm,1.0s						
SAML				*e*S	**S**	**05 48 37.6**	**+3.6**
SIV	**San Ignacio**	**19.34**	**111**	P	**P**	**05 46 05.7**	**-2.7**
	comp=Z,2.1nm,0.3s,baz=284,slow=12,SNR=194						
JTS	**JuntasAbangare**	**20.45**	**345**	P	**P**	**05 46 19.5**	**-0.8**
	comp=Z,5.0nm,1.0s,baz=90,slow=22,SNR=1.6						
JTS	**JuntasAbangare**	**20.45**	**345**	*e*P	**P**	**05 46 22.5**	**+2.2**
	comp=Z,162nm,1.6s						
JTS	**JuntasAbangare**	**20.45**	**345**	*e*P	**P**	**05 46 22.5**	**+2.2**
JTS				pmax	pmax		
	comp=Z,162nm,1.6s						
SDV	**Santo Domingo**	**20.56**	**27**	P	**P**	**05 46 20.7**	**-0.8**
	comp=Z,36nm,0.9s,baz=236,slow=5.7,SNR=32						
SDV				LR	LR	05 55 21.2	
	comp=Z,14µm,18.1s,MS5.4,baz=222,slow=40						
SDV	**Santo Domingo**	**20.56**	**27**	*e*P	**P**	**05 46 21.2**	**-0.3**
	comp=Z,133nm,1.1s						
CFAA	**Coronel Fontan**	**24.36**	**155**	P	**P**	**05 46 59.4**	**+0.3**
	comp=Z,5.4nm,1.0s,baz=337,slow=7.1,SNR=39						
FCH	**Farellones**	**25.16**	**161**	⇑*i*P	**P**	**05 47 07.7**	**+1.0**
CPUP	**Villa Florida**	**27.01**	**131**	*e*P	**P**	**05 47 22.5**	**-1.4**
	comp=Z,95nm,1.0s,mb5.3						
CPUP				LR	LR		
	comp=Z,887nm,20.0s,MS4.3						
CPUP	**Villa Florida**	**27.01**	**131**	*e*P	**P**	**05 47 22.5**	**-1.4**
CPUP				pmax	pmax		
	comp=Z,95nm,1.0s						
CPUP				MLR	MLR		
	comp=Z,887nm,20.0s						
TRN	**Trinidad (W)**	**27.25**	**43**	*e*	**P**	**05 47 30.7**	**+4.5**
HLGC	**Holguin**	**30.57**	**7**	*e*P	**P**	**05 47 59.9**	**+3.9**
SJG	**San Juan**	**30.71**	**26**	P	**P**	**05 47 56.8**	**-0.4**
	comp=Z,73nm,1.0s,mb5.5,baz=228,slow=4.6,SNR=12						
SJG	**San Juan**	**30.71**	**26**	*e*P	**P**	**05 47 56.7**	**-0.6**
	comp=Z,89nm,1.1s,mb5.5						
SJG	**San Juan**	**30.71**	**26**	*e*P	**P**	**05 47 56.7**	**-0.6**
SJG				pmax	pmax		
	comp=Z,89nm,1.1s						
CPD	**Cerro la Pandu**	**30.75**	**27**	*e*P	**P**	**05 47 57.1**	**-0.5**
MTP	**Monte Pirata**	**30.96**	**27**	*e*P	**P**	**05 47 58.9**	**-0.6**
BDFB	**Brasilia**	**31.59**	**104**	P	**P**	**05 48 03.6**	**-1.4**
	comp=Z,52nm,1.1s,mb5.3,baz=281,slow=11,SNR=29						
BDFB				LR	LR	06 00 57.5	
	comp=Z,3µm,18.6s,MS5.1,baz=98,slow=37						
PLCA	**Paso Flores**	**32.04**	**167**	P	**P**	**05 48 07.9**	**-0.8**
	comp=Z,6.0nm,1.0s,mb4.4,baz=340,slow=10,SNR=10						
PLCA				PcP	PcP	05 50 57.3	-0.9
	comp=Z,3.5nm,0.9s,baz=4.6,slow=5.2,SNR=3.3						
PLCA	**Paso Flores**	**32.04**	**167**	*e*P	**P**	**05 48 07.2**	**-1.4**
	comp=Z,33nm,1.1s,mb5.1						
PLCA				LR	LR		
	comp=Z,2µm,22.0s,MS4.8						
PLCA	**Paso Flores**	**32.04**	**167**	*e*P	**P**	**05 48 07.3**	**-1.4**
PLCA				pmax	pmax		
	comp=Z,33nm,1.1s						
PLCA				MLR	MLR		
	comp=Z,2µm,22.0s						
LPA	**La Plata**	**32.14**	**145**	*de*P	**P**	**05 48 10.0**	**+0.3**
LPA				*e*sP	sP	05 48 18.0	-2.1
LPA				*e*S	**S**	**05 53 18.0**	**-1.6**
TRQA	**Tornquist**	**32.53**	**153**	*e*P	**P**	**05 48 10.7**	**-2.4**
	comp=Z,32nm,1.1s,mb5.2						
TRQA				LR	LR		
	comp=Z,2µm,19.0s,MS4.8						
RPN	**Rapa Nui**	**32.82**	**234**	LR	LR	05 57 39.4	
	comp=Z,3µm,21.2s,MS5.0,baz=67,slow=29						
CAM4	**Nova Friburgo**	**37.87**	**114**	*e*P	**P**	**05 48 57.8**	**-0.9**
CAM4				*i*	pP	05 49 04.9	-1.2
CAM4				*i*		05 49 28.7	
NATX	**Nacogdoches**	**43.55**	**342**	*e*P	**P**	**05 49 48.5**	**+3.0**
	comp=Z,167nm,1.4s,mb5.6						
SWET	**Sewanee**	**44.99**	**353**	*e*P	**P**	**05 49 54.9**	**-2.2**
TXAR	**Lajitas Array**	**45.05**	**330**	P	**P**	**05 49 58.0**	**+0.3**
	comp=Z,2.0nm,0.9s,baz=143,slow=8.9,SNR=7.8						
MIAR	**Mount Ida**	**45.84**	**344**	P	**P**	**05 50 04.1**	**+0.3**
	comp=Z,17nm,1.1s,mb4.9						
MIAR	**Mount Ida**	**45.84**	**344**	P	**P**	**05 50 04.1**	**+0.3**
MIAR				pmax	pmax		
	comp=Z,17nm,1.1s,mb4.9						
HBAR	**Harrisburg**	**46.10**	**348**	*e*P	**P**	**05 50 05.5**	**-0.4**
WVT	**Waverly**	**46.15**	**351**	*e*P	**P**	**05 50 03.9**	**-2.4**
	comp=Z,15nm,0.9s,mb4.9						
WVT	**Waverly**	**46.15**	**351**	*e*P	**P**	**05 50 03.9**	**-2.4**
WVT				pmax	pmax		
	comp=Z,15nm,0.9s,mb4.9						
ELN	**Prospectdale**	**46.63**	**359**	*e*P	**P**	**05 50 09.7**	**-0.4**
PARMO	**Parma**	**47.00**	**349**	*e*P	**P**	**05 50 12.1**	**-0.8**
WMOK	**Wichita Mounta**	**47.65**	**339**	*e*P	**P**	**05 50 17.6**	**-0.5**
	comp=Z,19nm,1.3s,mb5.0						
WMOK				LR	LR		
	comp=Z,557nm,22.0s,MS4.5						
WMOK	**Wichita Mounta**	**47.65**	**339**	*e*P	**P**	**05 50 17.6**	**-0.6**
WMOK				pmax	pmax		
	comp=Z,19nm,1.3s,mb5.0						
WMOK				MLR	MLR		
	comp=Z,557nm,22.0s,MS4.5						
GDL2	**Guadalupe Moun**	**47.76**	**332**	*e*P	**P**	**05 50 19.4**	**+0.3**
MNTX	**Cornudas Mount**	**47.83**	**330**	*e*P	**P**	**05 50 19.6**	**-0.1**
	comp=Z,18nm,1.2s,mb5.0						
MNTX				LR	LR		
	comp=Z,361nm,20.0s,MS4.3						
USIN	**University of**	**47.92**	**352**	P	**P**	**05 50 17.7**	**-2.6**
	comp=Z,587nm,0.6s						
WCI	**Wyandotte Cave**	**48.01**	**353**	*e*P	**P**	**05 50 19.3**	**-1.5**
	comp=Z,15nm,1.0s,mb5.0						
WCI	**Wyandotte Cave**	**48.01**	**353**	*e*P	**P**	**05 50 19.3**	**-1.6**
WCI				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
CPRX	**Cap Rock**	**48.23**	**333**	*e*P	**P**	**05 50 23.8**	**+1.2**
FVM	**French Village**	**48.40**	**349**	*e*P	**P**	**05 50 23.4**	**-0.5**
	comp=Z,46nm,1.4s,mb5.3						
FVM	**French Village**	**48.40**	**349**	*e*P	**P**	**05 50 23.4**	**-0.6**
FVM				pmax	pmax		
	comp=Z,46nm,1.4s,mb5.3						
CCM	**Cathedral Cave**	**48.64**	**348**	*e*P	**P**	**05 50 24.4**	**-1.3**
	comp=Z,118nm,1.6s,mb5.7						
CCM				LR	LR		
	comp=Z,646nm,21.0s,MS4.6						
CCM	**Cathedral Cave**	**48.64**	**348**	*e*P	**P**	**05 50 24.4**	**-1.3**
CCM				pmax	pmax		
	comp=Z,118nm,1.6s,mb5.7						
CCM				MLR	MLR		
	comp=Z,646nm,21.0s,MS4.6						
ACSO	**Alum Creek Sta**	**49.71**	**357**	*e*P	**P**	**05 50 31.7**	**-2.3**
	comp=Z,18nm,0.9s,mb5.1						
BNM	**Barren Site**	**50.44**	**331**	*e*P	**P**	**05 50 40.7**	**+1.1**
LPM	**Los Pinos Moun**	**50.57**	**331**	*e*P	**P**	**05 50 41.1**	**+0.5**
LAZ	**Ladron**	**50.89**	**331**	*e*P	**P**	**05 50 43.6**	**+0.5**
ANMO	**Albuquerque**	**51.01**	**332**	P	**P**	**05 50 44.8**	**+0.9**
	comp=Z,3.2nm,0.7s,mb4.3,baz=157,slow=9.0,SNR=9.4						
ANMO	**Albuquerque**	**51.01**	**332**	*e*P	**P**	**05 50 44.9**	**+0.9**
	comp=Z,14nm,1.1s,mb4.8						
ANMO	**Albuquerque**	**51.01**	**332**	⇑*i*P	**P**	**05 50 45.3**	**+1.3**
TUC	**Tucson**	**51.13**	**326**	*e*P	**P**	**05 50 45.7**	**+0.8**
	comp=Z,8.6nm,1.2s,mb4.6						
TUC				LR	LR		
	comp=Z,644nm,21.0s,MS4.6						
TUC	**Tucson**	**51.13**	**326**	*e*P	**P**	**05 50 45.7**	**+0.8**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.2s,mb4.6						
TUC				MLR	MLR		
	comp=Z,644nm,21.0s,MS4.6						
SDCO	**Great Sand Dun**	**52.91**	**335**	*e*P	**P**	**05 50 58.2**	**-0.1**
	comp=Z,12nm,0.9s,mb4.8						
WUAZ	**Wupatki**	**53.89**	**328**	*e*P	**P**	**05 51 06.0**	**+0.5**
	comp=Z,33nm,1.2s,mb5.1						
WUAZ				LR	LR		
	comp=Z,1µm,22.0s,MS4.9						
RKT	**Rikitea**	**54.28**	**249**	*e*S	**S**	**05 58 41.7**	**-1.2**
RKT				*e*LR	LR	06 06 47.9	
	comp=Z,3µm,27.5s,baz=84						
FRNY	**Flat Rock**	**54.52**	**5**	*e*P	**P**	**05 51 08.7**	**-1.3**
PV01	**Paradox Valley**	**54.59**	**332**	*e*P	**P**	**05 51 10.7**	**+0.1**
NEN	**Nelson**	**55.86**	**326**	*e*P	**P**	**05 51 20.6**	**+0.7**

SRU	**San Rafael**	**56.28**	**331**	*e*P	**P**	**05 51 22.4**	**-0.4**
	comp=Z,9.6nm,0.9s,mb4.8						
SRU	**San Rafael**	**56.28**	**331**	*e*P	**P**	**05 51 22.4**	**-0.4**
SRU				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
MSU	**Marysvale**	**56.61**	**330**	*e*P	**P**	**05 51 25.9**	**+0.7**
ARUT	**Antelope Range**	**56.70**	**328**	*e*P	**P**	**05 51 26.8**	**+1.0**
TPNV	**Topopah Spring**	**57.58**	**326**	*e*P	**P**	**05 51 39.8**	**+7.7**
	comp=Z,5.9nm,0.9s,mb4.6						
TPNV	**Topopah Spring**	**57.58**	**326**	*e*P	**P**	**05 51 39.8**	**+7.7**
TPNV				pmax	pmax		
	comp=Z,6.0nm,0.9s,mb4.6						
DUG	**Dugway**	**58.23**	**331**	*e*P	**P**	**05 51 36.7**	**+0.2**
	comp=Z,42nm,1.6s,mb5.2						
DUG				LR	LR		
	comp=Z,558nm,19.0s,MS4.7						
DUG	**Dugway**	**58.23**	**331**	*e*P	**P**	**05 51 36.7**	**+0.2**
DUG				pmax	pmax		
	comp=Z,42nm,1.6s,mb5.2						
DUG				MLR	MLR		
	comp=Z,558nm,19.0s,MS4.7						
TCUT	**Toone Canyon**	**58.29**	**332**	*e*P	**P**	**05 51 37.2**	**+0.2**
HWUT	**Hardware Ranch**	**58.75**	**333**	*e*P	**P**	**05 51 39.6**	**-0.6**
	comp=Z,31nm,1.0s,mb5.3						
PDAR	**Pinedale Array**	**58.80**	**335**	P	**P**	**05 51 39.9**	**-0.7**
	comp=Z,2.8nm,0.9s,mb4.3,baz=135,slow=6.9,SNR=19						
MTUM	**Tungsten Hills**	**59.18**	**325**	*e*P	**P**	**05 51 44.6**	**+1.4**
HVU	**Hansel Valley**	**59.44**	**332**	*e*P	**P**	**05 51 43.9**	**-1.1**
	comp=Z,14nm,0.9s,mb5.0						
HVU	**Hansel Valley**	**59.44**	**332**	*e*P	**P**	**05 51 43.9**	**-1.1**
HVU				pmax	pmax		
	comp=Z,14nm,0.9s,mb5.0						
TAOE	**Nuku Hiva Isla**	**59.47**	**265**	*e*S	**S**	**05 59 52.8**	**+1.2**
TAOE				*e*LR	LR	06 08 58.3	
	comp=Z,5µm,25.4s,baz=97						
NVAR	**Mina Array Bea**	**59.78**	**326**	P	**P**	**05 51 47.8**	**+0.4**
	comp=Z,0.8nm,0.6s,mb4.0,baz=136,slow=6.0,SNR=9.6						
NVAR				LR	LR	06 13 42.2	
	comp=Z,524nm,18.3s,MS4.7,baz=140,slow=32						
REDW	**Red Top Meadow**	**59.84**	**334**	*e*P	**P**	**05 51 47.4**	**-0.3**
	comp=Z,25nm,1.3s,mb5.1						
ELK	**Elko**	**59.84**	**329**	P	**P**	**05 51 47.7**	**0.0**
	comp=Z,4.0nm,0.8s,mb4.5,baz=110,slow=3.3,SNR=18						
ELK	**Elko**	**59.84**	**329**	P	**P**	**05 51 47.7**	**0.0**
YMR	**Madison River**	**60.95**	**335**	*e*P	**P**	**05 51 54.6**	**-0.5**
	comp=Z,6.8nm,0.8s,mb4.8						
ULM	**Lac du Bonnet**	**61.27**	**348**	P	**P**	**05 51 55.2**	**-2.1**
	comp=Z,4.4nm,0.9s,mb4.6,baz=177,slow=10,SNR=4.8						
ULM	**Lac du Bonnet**	**61.27**	**348**	P	**P**	**05 51 55.2**	**-2.1**
QLMT	**Earthquake Lak**	**61.27**	**335**	P	**P**	**05 52 03.9**	**+6.5**
GCMT	**Greycliff**	**61.34**	**337**	*e*P	**P**	**05 51 56.5**	**-1.4**
HLID	**Hailey**	**61.59**	**332**	*e*P	**P**	**05 51 59.9**	**+0.4**
	comp=Z,8.4nm,1.1s,mb4.8						
DLMT	**Dillon**	**62.19**	**334**	*e*P	**P**	**05 52 02.9**	**-0.7**
	comp=Z,19nm,1.2s,mb5.1						
WVOR	**Wild Horse Val**	**62.81**	**329**	*e*P	**P**	**05 52 08.0**	**+0.3**
	comp=Z,23nm,1.3s,mb5.2						
WVOR	**Wild Horse Val**	**62.81**	**329**	*e*P	**P**	**05 52 08.0**	**+0.3**
WVOR				pmax	pmax		
	comp=Z,23nm,1.3s,mb5.2						
EGMT	**Eagleton**	**63.23**	**338**	*e*P	**P**	**05 52 07.6**	**-2.9**
	comp=Z,8.9nm,1.0s,mb4.8						
MOD	**Modoc**	**63.31**	**327**	*e*P	**P**	**05 52 11.0**	**0.0**
	comp=Z,25nm,1.1s,mb5.2						
MSO	**Missoula**	**63.92**	**335**	*e*P	**P**	**05 52 15.5**	**+0.4**
	comp=Z,15nm,1.3s,mb4.9						
SCHQ	**Schefferville**	**65.16**	**8**	LR	LR	06 22 09.6	
	comp=Z,571nm,18.2s,MS4.8,baz=157,slow=37						
TBI	**Tubuai**	**67.60**	**249**	*e*S	S	06 01 31.2	-1.6
TBI				*e*LR	LR	06 12 56.6	
	comp=Z,2µm,26.5s,baz=84						
PPT	**Papeete**	**67.94**	**255**	*e*S	S	06 01 36.0	-0.9
PPT				*e*LR	LR	06 13 03.7	
	comp=Z,4µm,26.5s,baz=97						
PPT	**Papeete**	**67.94**	**255**	LR	LR	06 14 47.4	
	comp=Z,1µm,19.3s,MS5.2,baz=72,slow=29						
EDM	**Edmonton**	**68.82**	**339**	*e*P	**P**	**05 52 44.5**	**-1.6**
FCC	**Fort Churchill**	**69.14**	**352**	*e*P	**P**	**05 52 46.1**	**-1.8**
	comp=Z,24nm,0.9s,mb5.1						
FCC	**Fort Churchill**	**69.14**	**352**	*e*P	**P**	**05 52 46.1**	**-1.9**
FCC				pmax	pmax		
	comp=Z,24nm,0.9s,mb5.1						
VNA3	**Neumayer Olymp**	**74.59**	**162**	*e*	**P**	**05 53 27.2**	**+7.1**
VNA3	**Neumayer Olymp**	**74.59**	**162**	*e*	**P**	**05 53 28.9**	**+8.8**
VNA3	**Neumayer Olymp**	**74.59**	**162**	*e*	**P**	**05 53 32.5**	**+12**
VNA3	**Neumayer Olymp**	**74.59**	**162**	⇑*i*P	**P**	**05 53 19.6**	**-0.5**
VNA3				*e*	pP	05 53 27.2	-0.7
VNA3				*e*	pP	05 53 28.9	+1.0
VNA3				*e*		05 53 32.5	
VNA1	**Neumayer--Stat**	**74.88**	**161**	*e*	**P**	**05 53 29.1**	**+7.3**
VNA1	**Neumayer--Stat**	**74.88**	**161**	*e*	**P**	**05 53 30.9**	**+9.1**
VNA1	**Neumayer--Stat**	**74.88**	**161**	*e*	**P**	**05 53 35.1**	**+13**
VNA1	**Neumayer--Stat**	**74.88**	**161**	⇑*i*P	**P**	**05 53 22.3**	**+0.5**
VNA1				*e*	pP	05 53 29.1	-0.5
VNA1				*e*	pP	05 53 30.9	+1.3
VNA1				*e*		05 53 35.1	
VNA2	**Neumayer--Watz**	**75.23**	**161**	*e*	**P**	**05 53 30.8**	**+7.0**
VNA2	**Neumayer--Watz**	**75.23**	**161**	*e*	**P**	**05 53 32.3**	**+8.5**
VNA2	**Neumayer--Watz**	**75.23**	**161**	*e*	**P**	**05 53 36.3**	**+12**
VNA2	**Neumayer--Watz**	**75.23**	**161**	⇑*i*P	**P**	**05 53 23.1**	**-0.7**
VNA2				*e*	pP	05 53 30.8	-0.7
VNA2				*e*	pP	05 53 32.3	+0.8
VNA2				*e*		05 53 36.3	
DBIC	**Dimbokro**	**76.43**	**81**	P	**P**	**05 53 31.9**	**+0.1**
	comp=Z,69nm,1.1s,mb5.5,baz=233,slow=5.6,SNR=34						
DBIC				LR	LR	06 27 40.7	
	comp=Z,1µm,18.2s,MS5.2,baz=219,slow=36						
DBIC	**Dimbokro**	**76.43**	**81**	*e*P	**P**	**05 53 31.6**	**-0.1**
	comp=Z,71nm,1.1s,mb5.5						
DBIC	**Dimbokro**	**76.43**	**81**	*e*P	**P**	**05 53 31.6**	**-0.1**
DBIC				pmax	pmax		
	comp=Z,71nm,1.1s						
YKA	**Yellowknife Ar**	**76.78**	**344**	P	**P**	**05 53 31.8**	**-0.9**
	comp=Z,7.1nm,0.8s,mb4.6,baz=144,slow=6.0,SNR=36						
YKA	**Yellowknife Ar**	**76.78**	**344**	P	**P**	**05 53 31.8**	**-0.9**
SNAA	**Sanae**	**76.81**	**162**	*e*	**P**	**05 53 39.3**	**+6.5**
SNAA	**Sanae**	**76.81**	**162**	*e*	**P**	**05 53 40.7**	**+7.9**
SNAA	**Sanae**	**76.81**	**162**	*e*	**P**	**05 53 45.2**	**+12**
SNAA	**Sanae**	**76.81**	**162**	⇑*i*P	**P**	**05 53 32.0**	**-0.8**
SNAA				*e*	pP	05 53 39.3	-1.2
SNAA				*e*	pP	05 53 40.7	+0.2
SNAA				*e*		05 53 45.2	
SNAA	**Sanae**	**76.81**	**162**	⇑*i*P	**P**	**05 53 32.0**	**-0.8**
SNAA				*e*	pP	05 53 40.7	+0.2
SNAA				*e*		05 53 45.2	
YKW3	**Yellowknife Ar**	**76.84**	**344**	*e*P	**P**	**05 53 31.8**	**-1.2**
DLBC	**Dease Lake**	**79.02**	**336**	*e*P	**P**	**05 53 45.7**	**+0.6**
NVL	**N’lazarevskaya**	**81.52**	**160**	*e*P	**P**	**05 53 57.3**	**-0.9**
NVL				e*SP	sP	05 54 06.8	-1.8
NVL				*e*		05 57 06.8	
NVL				*e*S	S	06 03 57.0	-10
NVL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVL				MLR	MLR		
	comp=Z,42nm,17.4s						
PBEJ	**Beja**	**82.01**	**49**	*e*P	**P**	**05 54 03.1**	**+1.7**
	comp=Z,24nm,1.6s,mb4.9						
EGRO	**El Granado**	**82.14**	**50**	P	**P**	**05 54 05.0**	**+2.9**
	comp=Z,20nm,1.0s,mb5.0						
EMIN	**Mina Concepcio**	**82.83**	**50**	P	**P**	**05 54 07.2**	**+1.5**
	comp=Z,8.8nm,0.9s,mb4.8						
PVIS	**Viseu**	**82.86**	**47**	*e*P	**P**	**05 54 07.7**	**+1.9**
	comp=Z,55nm,1.6s,mb5.3						
EBAD	**Badajoz**	**82.88**	**49**	P	**P**	**05 54 08.1**	**+2.2**
	comp=Z,14nm,1.0s,mb5.0						
PCBR	**Castelo Branco**	**82.88**	**48**	*e*P	**P**	**05 54 07.6**	**+1.7**
	comp=Z,50nm,1.6s,mb5.3						
MDT	**Midelt**	**82.99**	**55**	P	**P**	**05 54 08.3**	**+1.7**
	comp=Z,15nm,0.9s,mb5.0,baz=244,slow=3.8,SNR=18						
MTE	**Manteigas**	**83.02**	**47**	*e*P	**P**	**05 54 07.0**	**+0.4**
	comp=Z,42nm,1.7s,mb5.2						
MTE	**Manteigas**	**83.02**	**47**	*e*S	S	06 04 32.3	+9.4
MTE	**Manteigas**	**83.02**	**47**	*e*LR	LR	06 21 30.4	
	comp=Z,670nm,18.6s						
PCAB	**Cabril**	**83.10**	**46**	*e*P	**P**	**05 54 08.6**	**+1.6**
	comp=Z,60nm,1.2s,mb5.5						
ELOB	**Lobios**	**83.13**	**46**	P	**P**	**05 54 05.5**	**-1.6**
	comp=Z,67nm,1.6s,mb5.4						
STS	**Santiago**	**83.13**	**45**	P	**P**	**05 54 05.2**	**-1.9**
	comp=Z,69nm,1.6s,mb5.4						
STS	**Santiago**	**83.13**	**45**	P	**P**	**05 54 05.2**	**-1.9**
STS				pmax	pmax		
	comp=Z,69nm,1.6s,mb5.4						
ESPR	**Espera**	**83.18**	**51**	P	**P**	**05 54 10.4**	**+2.9**
	comp=Z,21nm,1.1s,mb5.1						
PVRL	**Vila Real**	**83.18**	**46**	*e*P	**P**	**05 54 09.3**	**+1.9**
	comp=Z,27nm,1.6s,mb5.0						
EJIF	**Jimena Fronter**	**83.35**	**51**	P	**P**	**05 54 11.1**	**+2.7**
	comp=Z,12nm,0.8s,mb5.0						
EJIF	**Jimena Fronter**	**83.35**	**51**	P	**P**	**05 54 11.1**	**+2.7**
EJIF				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.0						
EMIJ	**Mijas**	**83.92**	**51**	P	**P**	**05 54 16.9**	**+5.6**
	comp=Z,45nm,2.8s,mb5.1						
ERUA	**La Rua**	**83.94**	**45**	P	**P**	**05 54 10.9**	**-0.4**
	comp=Z,98nm,1.5s,mb5.7						
ERUA	**La Rua**	**83.94**	**45**	P	**P**	**05 54 10.9**	**-0.4**
ERUA				pmax	pmax		
	comp=Z,98nm,1.5s,mb5.7						
TORD	**Torodi Ar. Bea**	**84.04**	**76**	P	**P**	**05 54 12.3**	**-0.1**
	comp=Z,18nm,0.8s,mb5.2,baz=279,slow=4.8,SNR=80						
ECAL	**Calabor**	**84.08**	**46**	P	**P**	**05 54 07.6**	**-4.4**
	comp=Z,27nm,1.0s,mb5.3						
EPON	**Pontenova**	**84.24**	**44**	P	**P**	**05 54 02.6**	**-10**
	comp=Z,149nm,1.8s,mb5.8						
EADA	**Adamuz**	**84.53**	**50**	P	**P**	**05 54 03.7**	**-11**
ELOJ	**Sierra Loja**	**84.56**	**51**	P	**P**	**05 54 18.1**	**+3.6**
	comp=Z,12nm,0.8s,mb5.1						
ELOJ	**Sierra Loja**	**84.56**	**51**	P	**P**	**05 54 18.1**	**+3.6**
ELOJ				pmax	pmax		
	comp=Z,12nm,0.8s,mb5.1						
ERON	**Agron**	**84.79**	**51**	P	**P**	**05 54 16.6**	**+0.9**
	comp=Z,12nm,1.2s,mb4.9						
ECOG	**Cogollos-Vega**	**85.05**	**51**	P	**P**	**05 54 17.2**	**+0.3**
	comp=Z,15nm,1.0s,mb5.1						
ECOG	**Cogollos-Vega**	**85.05**	**51**	P	**P**	**05 54 17.2**	**+0.3**
ECOG				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.1						
EBAN	**Banos Encina**	**85.12**	**50**	P	**P**	**05 54 18.0**	**+0.6**
	comp=Z,17nm,1.2s,mb5.0						
EBAN	**Banos Encina**	**85.12**	**50**	P	**P**	**05 54 18.0**	**+0.7**
EBAN				pmax	pmax		
	comp=Z,17nm,1.2s,mb5.0						
ESDC	**Sonseca Array**	**85.42**	**49**	P	**P**	**05 54 20.0**	**+1.3**
	comp=Z,8.9nm,1.1s,mb4.8,baz=258,slow=5.8,SNR=12						
ESLA	**Sonseca Array**	**85.42**	**49**	P	**P**	**05 54 19.5**	**+0.8**
	comp=Z,4.5nm,1.3s,mb4.4						
EBER	**Berja**	**85.47**	**52**	P	**P**	**05 54 22.5**	**+3.5**
	comp=Z,66nm,1.8s,mb5.5						
GUD	**Guadarrama**	**85.55**	**48**	P	**P**	**05 54 20.1**	**+0.7**
	comp=Z,59nm,2.0s,mb5.5						
GUD	**Guadarrama**	**85.55**	**48**	P	**P**	**05 54 20.1**	**+0.7**
GUD				pmax	pmax		
	comp=Z,59nm,2.0s,mb5.5						
EQES	**Quesada**	**85.57**	**51**	P	**P**	**05 54 20.3**	**+0.8**
	comp=Z,38nm,1.7s,mb5.3						
EARI	**Arriondas**	**85.58**	**45**	P	**P**	**05 54 16.3**	**-3.1**
	comp=Z,27nm,3.1s						
EHUE	**Huescar**	**85.94**	**51**	P	**P**	**05 54 21.9**	**+0.5**
	comp=Z,29nm,1.5s,mb5.3						
EHUE	**Huescar**	**85.94**	**51**	P	**P**	**05 54 21.9**	**+0.5**
EHUE				pmax	pmax		
	comp=Z,29nm,1.5s,mb5.3						
BORG	**Borgarnes**	**85.95**	**22**	P	**P**	**05 54 22.6**	**+1.9**
	comp=Z,42nm,0.9s,mb5.7,baz=301,slow=5.5,SNR=4.8						
DAWY	**Dawson**	**85.97**	**338**	*e*P	**P**	**05 54 20.6**	**-0.4**
DAWY				*e*pP	pP	05 54 26.6	-2.2
EVIA	**Vianos**	**86.22**	**50**	P	**P**	**05 54 23.7**	**+0.9**
	comp=Z,17nm,0.8s,mb5.3						
EVIA	**Vianos**	**86.22**	**50**	P	**P**	**05 54 23.7**	**+0.9**
EVIA				pmax	pmax		
	comp=Z,17nm,0.8s,mb5.3						
INK	**Inuvik**	**86.41**	**343**	P	**P**	**05 54 23.1**	**+0.1**
	comp=Z,12nm,1.1s,mb5.1,baz=122,slow=5.4,SNR=24						
INK	**Inuvik**	**86.41**	**343**	*e*P	**P**	**05 54 22.8**	**-0.2**
	comp=Z,64nm,1.7s,mb5.6						
INK				*e*pP	pP	05 54 31.3	+0.4
INK	**Inuvik**	**86.41**	**343**	*e*P	**P**	**05 54 22.8**	**-0.2**
INK				e*PP	pP	05 54 31.3	+0.4
INK				pmax	pmax		
	comp=Z,64nm,1.7s						
ETOB	**Tobarra**	**86.95**	**50**	P	**P**	**05 54 26.6**	**+0.3**
	comp=Z,57nm,1.9s,mb5.5						
ILAR	**Eielson Array**	**89.18**	**337**	P	**P**	**05 54 36.2**	**-0.1**
	comp=Z,2.6nm,0.9s,mb4.5,baz=148,slow=3.3,SNR=19						
COLA	**College**	**89.59**	**337**	*e*P	**P**	**05 54 38.8**	**+0.4**
	comp=Z,13nm,1.1s,mb5.2						
COLA	**College**	**89.59**	**337**	*e*P	**P**	**05 54 38.8**	**+0.5**
COLA				pmax	pmax		
	comp=Z,13nm,1.1s,mb5.2						
SYO	**Syowa Base**	**91.11**	**162**	⇑P	**P**	**05 54 44.9**	**-0.3**
SYO	**Syowa Base**	**91.11**	**162**	⇑pP	pP	05 54 52.4	-0.7
SYO	**Syowa Base**	**91.11**	**162**	⇑*e*P	**P**	**05 54 44.9**	**-0.3**
SYO				⇑*e*pP	pP	05 54 52.4	-0.7
DAG	**Danmarks Havn**	**93.01**	**12**	⇑*i*P	**P**	**05 54 53.7**	**-0.2**
	comp=Z,2.2nm,0.8s,mb4.6						
DAG	**Danmarks Havn**	**93.01**	**12**	⇑*e*P	**P**	**05 54 53.7**	**-0.2**
	comp=Z,2.2nm,0.8s,mb4.6						
DAG	**Danmarks Havn**	**93.01**	**12**	⇑*e*P	**P**	**05 54 53.7**	**-0.2**
DAG				pmax	pmax		
	comp=Z,2.0nm,0.8s,mb4.6						
TSUM	**Tsumeb**	**93.78**	**110**	*e*P	**P**	**05 54 58.8**	**+0.1**
	comp=Z,14nm,1.1s,mb5.3						
MAW	**Mawson**	**98.44**	**166**	LR	LR	06 38 32.2	
	comp=Z,581nm,20.2s,MS5.1,baz=238,slow=35						
NOA	**NORSAR Array B**	**98.87**	**30**	LR	LR	06 40 47.5	
	comp=Z,285nm,19.1s,MS4.8,baz=260,slow=36						
GERES	**GERESS Array B**	**99.50**	**42**	LR	LR	06 40 01.7	
	comp=Z,521nm,18.1s,MS5.1,baz=272,slow=35						
OBN	**Obninsk**	**112.84**	**34**	PKIKP	PKPdf	06 00 20.0	-0.9
OBN						06 01 09.0	
OBN				*e*PS	PS	06 10 46.3	+7.0
OBN				MLR	MLR		
	comp=Z,400nm,17.0s,MS5.1						
ARU	**Arti**	**123.23**	**26**	*i* PKIKP	PKPdf	06 00 35.2	-5.9
ARU				*e*		06 02 15.5	
ARU				*e*		06 07 33.1	
ARU				*e*PS	PS	06 12 12.2	-1.5
ARU				*e*SS	SS	06 18 59.7	-2.7
ARU				MLR	MLR		
	comp=Z,400nm,21.0s,MS5.0						
ARU				MLR	MLR		
	comp=N,200nm,20.0s,MS4.9						
ARU				MLR	MLR		
	comp=E,200nm,20.0s,MS4.9						
WB2	**Warramunga Arr**	**135.31**	**229**	*e*P	PKPdf	06 01 01.4	-3.7
WRAB	**Tennant Creek**	**135.32**	**229**	*e*PKPdf	PKPdf	06 01 01.6	-3.5
WRAB				LR	LR		
	comp=Z,212nm,20.0s,MS4.9						
WRA	**Warramunga Arr**	**135.32**	**229**	PKP	PKPdf	06 01 01.6	-3.5
	comp=Z,5.9nm,0.8s,baz=131,slow=1.4,SNR=36						
KURK	**Kurchatov**	**135.36**	**19**	⇓*i*PKIKP	PKPdf	06 01 00.5	-3.8
MDJ	**Mudanjiang**	**136.88**	**329**	PKP	PKPdf	06 01 03.5	-3.7
MDJ				SS	SS	06 21 52.5	+2.5
MDJ				PP	PP		
	comp=Z,410nm,5.5s						
MDJ				LR	LR		
	comp=N,190nm,21.7s,MS4.9						
MDJ				LR	LR		
	comp=E,190nm,22.4s,MS4.9						
MDJ				LR	LR		
	comp=Z,240nm,23.9s,MS4.8						
MKAR	**Makanchi Array**	**139.97**	**19**	PKP	PKPdf	06 01 08.9	-4.0
	comp=Z,2.4nm,0.9s,slow=1.2,SNR=5.9						
AAK	**Ala-Archa**	**140.19**	**30**	⇑*i*PKIKP	PKPdf	06 01 09.3	-4.1
AAK				MLR	MLR		
	comp=Z,200nm,22.0s,MS4.8						
ULN	**Ulaanbaatar**	**141.47**	**353**	*i* PKIKP	PKPdf	06 01 11.1	-4.4
FITZ	**Fitzroy Crossi**	**142.68**	**222**	*e*P	PKPdf	06 01 17.4	-1.0
	comp=Z,9.6nm,0.9s						
KSH	**Kashi**	**143.25**	**32**	*e*PKP	PKPdf	06 01 12.0	-6.8
KSH				*e*APKP		06 01 22.0	
KSH				*e*XPKP		06 01 26.0	
KSH				*e*PKS	PKS	06 04 46.0	-2.9
KSH				LR	LR		
	comp=N,620nm,7.3s						
KSH				LR	LR		
	comp=E,990nm,6.1s						
WMQ	**Urumqi**	**144.27**	**16**	*e*PKP	PKPdf	06 01 15.5	-4.9
WMQ				APKP		06 01 25.0	
WMQ				XPKP		06 01 29.0	
WMQ				PP	PP	06 04 36.0	+1.1
WMQ				SKS	SKS	06 08 19.0	-10
WMQ				SKKS		06 11 19.0	
WMQ				PP	PP		
	comp=Z,230nm,4.2s						
WMQ				LR	LR		
	comp=N,440nm,29.4s,MS5.3						
WMQ				LR	LR		
	comp=E,670nm,27.5s,MS5.3						
WMQ				LR	LR		
	comp=Z,510nm,27.4s,MS5.2						
GTA	**Gaotai**	**150.36**	**1**	PKP	PKPdf	06 01 28.3	-2.3
GTA				APKP		06 01 33.5	
GTA				XPKP		06 01 38.0	
GTA				PKS	PKS	06 05 01.5	+1.8
GTA				PP	PP	06 05 14.8	+4.2
GTA				SKS	SKS	06 08 30.3	-7.0
GTA				SKKS		06 11 58.5	
GTA				PP	PP		
	comp=Z,200nm,8.7s						
GTA				LR	LR		
	comp=N,170nm,14.8s,MS5.3						
GTA				LR	LR		
	comp=E,320nm,18.2s,MS5.3						
GTA				LR	LR		
	comp=Z,270nm,12.5s						
DDI	**Dehra Dun**	**150.87**	**42**	*e*P	PKPdf	06 01 32.0	+0.3
SSE	**Sheshan**	**151.06**	**321**	*e*PKP	PKPdf	06 01 25.8	-6.1
SSE				PP	PP	06 05 15.5	+0.5
SSE				PP	PP		
	comp=Z,230nm,6.4s						
SSE				LR	LR		
	comp=N,40nm,23.3s,MS4.8						
SSE				LR	LR		
	comp=E,180nm,23.3s,MS4.8						
SSE				LR	LR		
	comp=Z,230nm,36.1s						
NDI	**New Delhi**	**151.32**	**46**	*e*P	PKPdf	06 01 34.0	+1.6
NJ2	**Nanjing**	**151.78**	**325**	*e*PKP	PKPdf	06 01 28.0	-5.0
NJ2				APKP		06 01 38.5	
NJ2				XPKP		06 01 42.5	
NJ2				PKP2	PKPab	06 01 46.5	+0.4
NJ2				PKS	PKS	06 05 03.0	+1.1
NJ2				PP	PP	06 05 19.0	+0.5
NJ2				PP	PP		
	comp=Z,270nm,6.8s						
NJ2				LR	LR		
	comp=N,660nm,17.4s,MS5.6						
NJ2				LR	LR		
	comp=E,590nm,22.2s,MS5.6						
NJ2				LR	LR		
	comp=Z,420nm,23.9s,MS5.2						
LZH	**Lanzhou**	**153.47**	**353**	*e*PKP	PKPab	06 01 52.5	-0.6
LZH				pPKP		06 02 03.5	
LZH				sPKP		06 02 07.0	
LZH				*e*PP	PP	06 05 27.7	-0.6
LZH				SKS	SKS	06 08 54.5	+13
LZH				*e*SKKS		06 12 33.5	
LZH				*e*SS	SS	06 25 19.0	+20
LZH				LR	LR		
	comp=Z,460nm,15.3s,MS5.4						
LZH	**Lanzhou**	**153.47**	**353**	*e*PKP2	PKPab	06 01 52.5	-0.6
LZH				*e*		06 05 27.7	
LZH						06 08 54.5	
LZH				MLR	MLR		
	comp=Z,460nm,15.3s,MS5.4						
CD2	**Chengdu**	**158.58**	**352**	*e*PKP	PKPdf	06 01 35.8	-6.3

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*IDC **30** 05:49:34.5±1.6, 14.00N×146.74E, mb4.0/4, mb1 4.3/4, mb1mx3.9/18, mbtmp4.0/4, Error ellipse: s-maj=38.6km s-min=29.8km az=104.0*

*NEIC **30** 05:49:40.2±1.4, 14.00N×146.56E, h35^{km}, mb4.4/2, Error ellipse: s-maj=31.5km s-min=19.7km az=110.0*

ISC 30 05:49:38.4±4.2, **14.0N**±0.2×**146.6E**±0.2, **h41**^{km}±35^{km}, **n8, σ0^{s}51**/10, **mb4.0**/6, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.76**	**257**	Pn	**P**	**05 50 07.2**	**+0.2**
	19nm,0.3s,baz=122,slow=7.1,SNR=20						
GUMO				Sn	**S**	**05 50 28.5**	**+0.2**
	200nm,0.3s,baz=335,slow=23,SNR=21						
GUMO	**Guam**	**1.76**	**257**	*e*Pn	**P**	**05 50 07.2**	**+0.2**
GUMO				*e*Sn	**S**	**05 50 27.6**	**-0.7**
WRA	**Warramunga Arr**	**35.83**	**200**	P	**P**	**05 56 36.5**	**+0.2**
	0.8nm,0.6s,mb3.8,baz=23,slow=9.7,SNR=12						
MKAR	**Makanchi Array**	**62.39**	**316**	P	**P**	**06 00 00.1**	**+0.7**
	0.5nm,0.5s,mb3.9,baz=90,slow=7.5,SNR=4.1						
CHKZ	**Chkalovo**	**70.56**	**322**	*e*P	**P**	**06 00 50.7**	**-0.5**
	3.7nm,1.0s,mb4.3						
BVAR	**Borovoye Array**	**70.67**	**322**	P	**P**	**06 00 52.6**	**+0.7**
	2.1nm,0.8s,mb4.1,baz=100,slow=8.8,SNR=5.6						
BRVK	**Borovoye**	**70.74**	**322**	*e*P	**P**	**06 00 51.6**	**-0.6**
	3.6nm,1.1s,mb4.2						
TXAR	**Lajitas Array**	**99.71**	**57**	P	**P**	**06 03 19.4**	**-0.4**
	0.5nm,0.8s,mb4.0,baz=243,slow=2.0,SNR=6.0						

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*BJI **30** 05:50:37.7, 57.32N×121.14E, h12^{km}, mB4.7, mb4.5, ML4.9, Ms4.7*

*BYKL **30** 05:50:37.7±0.3, 57.39N×120.85E, h3^{km}±17^{km}, #FAULT_PLANE Typ Strike Dip Rake NP NS Plane Author # FM 128.00 44.00 -48.00 11 0 IEC + 257.00 59.00 -123.00 #PRINAX sc T_val T_azim T_pl B_val B_azim B_pl P_val P_azim P_pl Author + eTv eTa eTp eBv eBa eBp ePv ePa ePp fCLVD # 10.00 8.00 276.00 28.00 115.00 61.00 IEC + 1.15 0.58 1.73 0.58 0.58 0.58*

*IDC **30** 05:50:37.1±0.8, 57.35N×120.77E, mb4.2/21, mb1 4.3/22, mb1mx4.2/28, mbtmp4.1/22, ML3.6/1, MS3.5/4, Ms1 3.5/4, ms1mx3.1/20, Error ellipse: s-maj=20.8km s-min=14.7km az=164.0*

*MOS **30** 05:50:38.1±0.9, 57.47N×120.70E, h15^{km}, mb4.7/22, Error ellipse: s-maj=9.2km s-min=6.4km az=92.1*

*NEIC **30** 05:50:39.5±0.3, 57.49N×120.62E, h10^{km}, mb4.5/34, Error ellipse: s-maj=7.5km s-min=4.1km az=148.0*

ISC 30 05:50:37.6±0.2, **57.45N**±0.03×**120.63E**±0.04, **h10**^{km}, **n167, σ1^{s}04**/190, **mb4.4**/56, **MS4.3**/5, **12C-11D, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	**1.40**	**248**	⇓*i*Pg	**Pg**	**05 51 05.1**	**-0.4**
CRS				*e*Pb	**Pb**	**05 51 06.5**	**+3.2**
CRS				max		05 51 06.8	
	3µm,0.8s						
CRS				*e*		05 51 11.5	
CRS				*i* Sg	**Sg**	**05 51 23.9**	**-0.3**
CRS				Smax		05 51 24.5	
	6µm,0.9s						
CRS	**Chara**	**1.40**	**248**	*e*P	**Pn**	**05 51 05.4**	**+2.2**
CRS				*e*		05 51 24.2	
CRS				pmax	pmax		
	comp=Z,3µm,0.9s						
CRS				smax			
	comp=E,6µm,0.8s						
NRGR	**Nerungri**	**2.37**	**108**	*e*P	**Pn**	**05 51 17.9**	**+0.7**
NRGR				S	**Sn**	**05 51 46.2**	**-0.4**
CLNS	**Chul’man**	**2.40**	**103**	*e*Pn	**Pn**	**05 51 18.1**	**+0.5**
CLNS				⇓*i*Pg	**Pg**	**05 51 19.5**	**-6.1**
CLNS				Pmax		05 51 22.0	
	comp=E,319nm,0.1s						
CLNS				*e*Sg	**Sg**	**05 51 47.9**	**-10**
CLNS				Smax		05 51 50.6	
	comp=E,2µm,0.1s						
CLNS	**Chul’man**	**2.40**	**103**	*e*P	**Pn**	**05 51 18.2**	**+0.6**
CLNS				*e*S	**Sn**	**05 51 47.0**	**-0.4**
CLNS				pmax	pmax		
	comp=N,30nm,0.3s						
CLNS				pmax	pmax		
	comp=E,34nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,84nm,0.3s						
CLNS				smax			
	comp=E,247nm,0.2s						
CLNS				smax			
	comp=N,406nm,0.3s						
CLNS				smax			
	comp=Z,208nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,200nm,10.0s						
ALDR	**Aldan**	**2.80**	**63**	*e*Pn	**Pn**	**05 51 23.3**	**+0.1**
ALDR				*e*Pg	**Pg**	**05 51 26.7**	**-6.7**
ALDR				Pmax		05 51 33.8	
	comp=Z,382nm,0.1s						
ALDR				*e*		05 51 56.5	
ALDR				*e*Sg	**Sg**	**05 52 01.4**	**-9.4**
ALDR				Smax		05 52 03.6	
	comp=Z,6µm,0.1s						
ALDR				*e*SgSg		05 52 09.1	
NLYR	**Nelyaty**	**2.86**	**253**	⇓*i*Pn	**Pn**	**05 51 26.5**	**+2.3**
NLYR				⇑*i*Pg	**Pg**	**05 51 31.2**	**-3.5**

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NLYR                             Pmax               05 51 33.3
       comp=Z,1µm,0.8s
NLYR                             i Sg      Sg       05 52 08.1  -4.8
NLYR                             eSgSg              05 52 17.1
NLYR                             max                05 52 21.4
       comp=Z,4µm,0.9s
NLYR   Nelyaty            2.86 253 eP      Pn       05 51 26.5  +2.3
NLYR                             e                  05 52 07.0
NLYR                             pmax      pmax
       comp=Z,1µm,0.4s
NLYR                             smax
       comp=E,4µm,0.8s
TUP    Tupik              3.05 187 ePn     Pn       05 51 26.4  -0.5
TUP                              ePg       Pg       05 51 30.8  -7.7
TUP                             ⇑i                  05 51 32.7
TUP                              max                05 51 33.3
       comp=E,1µm,0.8s
TUP                             ⇑iPgPg              05 51 37.5
TUP                              eSg       Sg       05 52 10.1  -9.1
TUP                              Smax               05 52 11.5
       comp=E,9µm,0.9s
TUP                              eSgSg              05 52 18.4
TUP    Tupik              3.05 187 eP      Pn       05 51 26.4  -0.5
TUP                              e                  05 52 10.0
TUP                              pmax      pmax
       comp=Z,1µm,0.7s
TUP                              smax
       comp=E,9µm,0.8s
TNDR   Tynda              3.24 134⇑iPn     Pn       05 51 28.7  -0.9
TNDR                             ePg       Pg       05 51 34.1  -8.2
TNDR                             Pmax               05 51 38.9
       comp=E,685nm,0.1s
TNDR                             e                  05 52 06.3
TNDR                             eSg       Sg       05 52 14.9   -11
TNDR                             Smax               05 52 18.2
       comp=E,2µm,0.1s
TNDR                             eSgSg              05 52 20.5
SVKR   Severomuysk        4.11 254 ePn     Pn       05 51 43.6  +1.7
SVKR                             ePg       Pg       05 51 54.0  -5.7
SVKR                             Pmax               05 51 57.2
       comp=E,396nm,0.6s
SVKR                             eSg       Sg       05 52 47.8  -6.7
SVKR                             Smax               05 52 55.2
       comp=E,3µm,1.0s
SVKR   Severomuysk        4.11 254 eP      Pn       05 51 53.5   +12
SVKR                             pmax      pmax
       comp=Z,393nm,0.7s
UKT    Uakit              4.35 246⇑iPn     Pn       05 51 47.0  +1.7
UKT                              ePg       Pg       05 51 57.2  -7.2
UKT                              Pmax               05 52 01.2
       comp=Z,207nm,1.7s
UKT                              eSg       Sg       05 52 54.2  -8.2
UKT                              Smax               05 53 02.1
       comp=Z,876nm,1.0s
UKT    Uakit              4.35 246 eP      Pn       05 51 58.2   +13
UKT                              pmax      pmax
       comp=Z,98nm,0.6s
KROS   Kirovskiy          4.67 128 ePn     Pn       05 51 45.3  -4.6
KROS                            ⇑iPg       Pg       05 51 57.4   -13
YOA    Uoyan              5.07 259 Pg      Pg       05 52 11.5  -7.3
YOA                              Pmax               05 52 31.9
       comp=Z,854nm,1.1s
YOA                              eSg       Sg       05 53 16.8   -10
YOA                              Smax               05 53 24.3
       comp=Z,4µm,1.1s
YOA    Uoyan              5.07 259 eP      Pg       05 52 12.6  -6.2
YOA                              pmax      pmax
       comp=Z,588nm,0.4s
KMO    Kumora             5.43 257 ePn     Pn       05 52 01.9  +1.3
KMO                              ePg       Pg       05 52 17.2  -8.8
KMO                              Pmax               05 52 25.8
       comp=Z,125nm,1.0s
KMO                              eSg       Sg       05 53 28.5   -10
KMO                              Smax               05 53 43.8
       comp=Z,1µm,1.5s
KMO    Kumora             5.43 257 eP      Pg       05 52 17.3  -8.7
KMO                              eS        Sn       05 53 02.5  -1.4
KMO                              pmax      pmax
       comp=Z,96nm,0.6s
KMO                              smax
       comp=N,1µm,1.1s
YLYR   Ulyunkhan          5.88 248⇓iPn     Pn       05 52 07.8  +0.8
YLYR                             ePg       Pg       05 52 26.3  -8.7
YLYR                             Pmax               05 52 33.7
       comp=N,80nm,1.0s
YLYR                             eSg       Sg       05 53 42.7   -11
YLYR                             Smax               05 53 45.9
       comp=N,696nm,1.9s
YLYR   Ulyunkhan          5.88 248 eP      Pn       05 52 07.9  +0.9
YLYR                             pmax      pmax
       comp=Z,99nm,1.2s
NIZ    Nizh Angarsk       6.35 259 ePn     Pn       05 52 13.0  -0.5
NIZ                              e                  05 52 26.6
NIZ                              ePg       Pg       05 52 34.0   -10
NIZ                              Pmax               05 52 46.6
       comp=Z,60nm,0.9s
NIZ                              eSg       Sg       05 53 56.1   -13
NIZ                              Smax               05 54 23.5
       comp=Z,596nm,1.2s
NIZ    Nizh Angarsk       6.35 259 eP      Pn       05 52 14.6  +1.1
NIZ                              pmax      pmax
       comp=Z,46nm,0.9s
YAK    Yakutsk            6.48  41 eP      Pn       05 52 14.4  -1.0
       comp=Z,131nm,0.6s
YAK    Yakutsk            6.48  41 eP      Pn       05 52 13.7  -1.7
YAK                              eS        Sn       05 53 23.5  -6.8
YAK                              pmax      pmax
       comp=Z,26nm,0.6s
YAK                              smax
       comp=N,190nm,0.6s
YAK                              smax
       comp=E,127nm,0.5s
YAK                              smax
       comp=Z,118nm,0.5s
YAK                              MLR       MLR
       comp=Z,300nm,8.0s
CIT    Chita              6.80 220 ePn     Pn       05 52 19.8  -0.2
CIT                              ePg       Pg       05 52 41.4   -12
CIT                              Pmax               05 52 43.9
       comp=Z,254nm,1.2s
CIT                              eSg       Sg       05 54 08.1   -16
CIT                              Smax               05 54 11.8
       comp=Z,1µm,1.4s
CIT    Chita              6.80 220 eP      Pn       05 52 20.3  +0.3
CIT                              pmax      pmax
       comp=Z,252nm,1.1s
SYVR   Suvo               7.12 242⇑iPn     Pn       05 52 24.8  +0.4
SYVR                             e                  05 52 33.2
SYVR                             ePg       Pg       05 52 48.6   -11
SYVR                             Pmax               05 52 51.4
       comp=Z,102nm,1.8s
SYVR                             eSg       Sg       05 54 20.1   -15
SYVR                             Smax               05 54 38.9
       comp=Z,981nm,1.9s
HIA    Hailar             8.21 184 eP      P        05 52 33.9  -5.8
       comp=Z,28nm,0.4s
HIA    Hailar             8.21 184 eP      P        05 52 33.9  -5.8
HIA                              pmax      pmax
       comp=Z,28nm,0.4s
OGRR   Ongureny           8.31 248 ePn     P        05 52 41.4  +0.3
OGRR                             ePg       P        05 53 10.2   +29
OGRR                             Pmax               05 53 38.6
       comp=Z,67nm,1.9s
OGRR                             eSg       Sg       05 54 58.8   -16
OGRR                             Smax               05 55 14.3
       comp=Z,235nm,1.5s
KPC    Khapcheranga       9.17 216 ePn     P        05 52 50.8  -2.2
KPC                              e                  05 53 25.4
KPC                              max                05 53 34.1
       comp=Z,9.0nm,0.9s
KPC                              eSg       Sg       05 55 20.8   -22
KPC                              Smax               05 55 31.4
       comp=Z,930nm,1.4s
TRG    Tyrgan             9.43 246 eSg     Sg       05 55 31.2   -20
TRG                              Smax               05 55 45.3
       comp=Z,254nm,1.6s
KAB    Kabansk            9.71 242 eSg     Sg       05 55 41.9   -19
KAB                              Smax               05 56 09.1
       comp=Z,2µm,1.6s
KLR    Kul'dur           10.57 136 eP      P        05 53 09.8  -2.2
KLR                              e                  05 55 12.2
LSTR   Listvyanka        10.71 245 eSg     rx       05 56 11.6
LSTR                             Smax               05 56 21.7
       comp=Z,192nm,2.0s
TLY    Talaya            11.41 247 eSg     rx       05 56 31.6
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TLY                              Smax               05 56 44.2
       comp=Z,123nm,2.1s
ARS    Arshan            11.88 250 eSg     rx       05 56 46.8
ARS                              Smax               05 57 05.1
       comp=Z,472nm,1.0s
ZAK    Zakamensk         12.41 243 eSg     rx       05 57 04.6
ZAK                              Smax               05 57 36.3
       comp=Z,101nm,1.0s
ZAK    Zakamensk         12.41 243 eP      P        05 53 39.1  +2.1
ZAK                              pmax      pmax
       comp=Z,3.0nm,1.0s
ULN    Ulaanbaatar       12.62 226 Pn      P        05 53 37.2  -2.7
ULN    Ulaanbaatar       12.62 226 eP      P        05 53 42.1  +2.2
ORL    Orlik             12.90 256 ePn     P        05 53 44.0  +0.4
ORL                              eSg       Sx       05 57 20.2
ORL                              Smax               05 57 37.1
       comp=Z,110nm,1.8s
SONM   Songino Array     12.91 228 Pn      P        05 53 42.9  -0.8
       comp=Z,0.3nm,0.3s,baz=33,slow=10,SNR=8.7
SONM                             Sn        S        05 56 07.5  -1.0
       comp=Z,0.6nm,0.3s,baz=44,slow=17,SNR=5.0
SONM                             Lg                 05 57 19.9
       comp=Z,4.2nm,0.3s,baz=45,slow=26,SNR=6.7
SONM                             LR        LR       05 59 19.4
       comp=Z,107nm,18.7s,baz=30,slow=40
TIXI   Tiksi             14.67  10⇑iP      P        05 54 01.6  -5.0
SEY    Seymchan          16.59  57⇑iP      P        05 54 32.6  +1.1
ASAJ   Asahikawa         19.14 125 LR      LR       06 03 09.8
       comp=Z,99nm,21.0s,baz=346,slow=40
NVS    Novosibirsk       20.82 279 i P     P        05 55 23.5  +2.1
NVS                              i S       S        05 59 17.2  +8.4
NVS                              pmax      pmax
       comp=Z,21nm,1.4s
NVS                              pmax      pmax
       comp=N,3.0nm,0.8s
NVS                              pmax      pmax
       comp=E,18nm,1.5s
NVS                              smax
       comp=N,7.0nm,1.0s
NVS                              smax
       comp=E,5.0nm,0.9s
BILL   Bilibino          22.83  44 eP      P        05 55 42.1  +0.8
       comp=E,3.6nm,0.6s,mb4.0
BILL   Bilibino          22.83  44 P       P        05 55 44.0  +2.7
BILL                             e                  05 55 49.1
BILL                             pmax      pmax
       comp=Z,3.0nm,0.6s,mb3.9
MJAR   Matsushiro Arr    23.97 143 LR      LR       06 05 04.6
       comp=Z,251nm,18.7s,MS3.7,baz=60,slow=36
KURK   Kurchatov         25.21 273 eP      P        05 56 05.0  +0.5
       comp=Z,5.3nm,0.8s,mb4.1
KURK   Kurchatov         25.21 273d iP     P        05 56 05.2  +0.7
JNU    Nakatsue          25.31 160 LR      LR       06 05 41.1
       comp=Z,90nm,21.2s,MS3.3,baz=242,slow=36
MKAR   Makanchi Array    25.50 262 P       P        05 56 08.2  +0.9
       comp=Z,3.7nm,0.6s,mb4.1,baz=56,slow=8.0,SNR=24
SSE    Sheshan           26.35 179 eP      P        05 56 18.4  +3.1
       comp=Z,40nm,0.7s,mb5.1
CHKZ   Chkalovo          28.01 284 eP      P        05 56 29.7  -0.5
       comp=Z,4.2nm,0.6s,mb4.2
CHKZ   Chkalovo          28.01 284 eP      P        05 56 29.7  -0.5
CHKZ                             pmax      pmax
       comp=Z,4.0nm,0.6s,mb4.2
BVAR   Borovoye Array    28.44 283 P       P        05 56 34.2  +0.1
       comp=Z,1.7nm,0.6s,mb3.9,baz=67,slow=9.4,SNR=11
BRVK   Borovoye          28.48 283 eP      P        05 56 33.3  -1.2
       comp=Z,1.3nm,0.8s,mb3.6
BRVK                             e                  05 56 53.7
BRVK   Borovoye          28.48 283 eP      P        05 56 33.3  -1.2
BRVK                             pmax      pmax
       comp=Z,1.0nm,0.8s,mb3.5
AAK    Ala-Archa         32.42 263 eP      P        05 57 09.8  +0.3
       comp=Z,3.1nm,0.7s,mb4.2
AAK    Ala-Archa         32.42 263 eP      P        05 57 09.8  +0.4
AAK                              pmax      pmax
       comp=Z,3.0nm,0.7s,mb4.2
ARU    Arti              32.84 295 eP      P        05 57 08.3  -4.7
AKTO   Aktyubinsk        36.31 286 P       P        05 57 42.6  -0.2
       comp=Z,0.5nm,0.3s,mb3.9,baz=70,slow=12,SNR=3.4
AKTO   Aktyubinsk        36.31 286 P       P        05 57 42.7  -0.2
AKTO                             pmax      pmax
       comp=Z,1.0nm,0.3s,mb4.2
GUN    Gumba             38.29 234 eP      P        05 58 01.5  +1.8
       comp=Z,9.9nm,0.4s,mb4.8
IMA2   Indian Mountai    38.31  41 eP      P        05 58 00.1  +0.6
JIRN   Jiri              38.37 234 eP      P        05 58 02.7  +2.3
       comp=Z,5.3nm,0.5s,mb4.5
KKN    Kakani            38.66 235 eP      P        05 58 04.3  +1.5
       comp=Z,17nm,0.6s,mb4.9
KKN    Kakani            38.66 235 eP      P        05 58 04.3  +1.5
KKN                              pmax      pmax
       comp=Z,8.0nm,0.6s,mb4.6
GKN    Gorkha            38.77 236 eP      P        05 58 05.4  +1.7
       comp=Z,38nm,0.8s,mb5.2
DMN    Daman             38.90 235 eP      P        05 58 06.3  +1.5
KOLN   Koldanda          39.43 237 eP      P        05 58 11.0  +1.7
       comp=Z,18nm,0.8s,mb4.8
ARCES  ARCESS Array B    39.60 327 P       P        05 58 09.4  -0.8
       comp=Z,3.4nm,0.8s,mb4.1,baz=54,slow=7.5,SNR=7.4
COLA   College           41.01  41 eP      P        05 58 21.9  +0.1
MCK    McKinley          41.28  42 eP      P        05 58 24.1  +0.1
       comp=Z,2.2nm,0.7s,mb3.9
MCK    McKinley          41.28  42 eP      P        05 58 24.1  +0.1
MCK                              pmax      pmax
       comp=Z,2.0nm,0.7s,mb3.9
JOF    Joensuu           41.33 316 ep      P        05 58 24.1  -0.4
       comp=Z,7.9nm,0.9s,mb4.3
ILAR   Eielson Array     41.41  40 P       P        05 58 25.3  +0.2
       comp=Z,2.5nm,0.5s,mb4.1,baz=295,slow=5.3,SNR=63
INK    Inuvik            43.45  31 P       P        05 58 42.7  +1.1
       comp=Z,0.8nm,0.6s,mb3.6,baz=327,slow=6.9,SNR=6.5
INK    Inuvik            43.45  31 eP      P        05 58 42.3  +0.8
       comp=Z,0.9nm,0.7s,mb3.6
INK    Inuvik            43.45  31 P       P        05 58 42.7  +1.2
INK                              pmax      pmax
       comp=Z,1.0nm,0.6s
DAG    Danmarks Havn     43.59 347⇓iP      P        05 58 42.4  -0.3
       comp=Z,3.9nm,0.3s,mb4.6
DAG    Danmarks Havn     43.59 347⇓eP      P        05 58 42.4  -0.3
       comp=Z,3.9nm,0.3s,mb4.6
DAG    Danmarks Havn     43.59 347⇓eP      P        05 58 42.4  -0.3
DAG                              pmax      pmax
       comp=Z,4.0nm,0.3s,mb4.6
OBN    Obninsk           43.89 304 P       P        05 58 45.0  -0.3
FINES  FINESS Array B    44.18 317 P       P        05 58 48.1  +0.5
       comp=Z,5.8nm,0.7s,mb4.4,baz=47,slow=9.2,SNR=17
KIV    Kislovodsk        48.44 289 i P     P        05 59 26.0  +4.5
KIV                              pmax      pmax
       comp=Z,15nm,0.8s,mb5.1
HFS    Hagfors           49.50 321 P       P        05 59 29.2  -0.3
       comp=Z,4.1nm,0.5s,mb4.7,baz=53,slow=7.4,SNR=22
NB2    NORSAR Subarra    49.65 323 P       P        05 59 30.0  -0.7
       comp=Z,5.0nm,0.8s,mb4.6,baz=40,slow=7.0
NOA    NORSAR Array B    49.65 323 P       P        05 59 29.5  -1.1
       comp=Z,3.9nm,0.8s,mb4.5,baz=41,slow=7.7,SNR=8.7
NOA    NORSAR Array B    49.65 323 P       P        05 59 29.5  -1.1
NAO    NORSAR Subarra    49.94 323 P       P        05 59 30.0  -2.8
       comp=Z,5.0nm,0.8s,mb4.6
NAO    NORSAR Subarra    49.94 323 P       P        05 59 30.0  -2.8
NAO                              pmax      pmax
       comp=Z,5.0nm,0.8s,mb4.6
AKASG  Malin Array Be    50.15 304 P       P        05 59 34.0  -0.6
       comp=Z,1.5nm,0.3s,mb4.5,baz=41,slow=8.7,SNR=23
YKA    Yellowknife Ar    52.99  29 P       P        05 59 54.7  -1.2
       comp=Z,0.9nm,0.7s,mb3.8,baz=325,slow=6.5,SNR=7.6
YKA    Yellowknife Ar    52.99  29 P       P        05 59 54.7  -1.2
KOLS   Kolonicke sedl    54.51 307 e       P        06 00 07.2   0.0
STHS   Stebnicka Huta    54.59 308 e       P        06 00 07.9  +0.1
MLR    Muntele Rosu      55.47 302 P       P        06 00 15.6  +1.3
       comp=Z,2.1nm,0.5s,mb4.4,baz=177,slow=19,SNR=3.6
KECS   Kecovo            55.62 307 e       P        06 00 14.2  -1.2
BRTR   Keskin Array B    56.12 292 P       P        06 00 19.6  +0.5
       comp=Z,1.1nm,0.8s,mb3.9,baz=48,slow=6.7,SNR=5.7
VYHS   Vyhne             56.32 309 e       P        06 00 20.2  -0.1
CLL    Collm             56.49 314 ⇓P      P        06 00 20.7  -0.8
       comp=Z,logA/T=1.0,mb4.8
CLL                              i                  06 00 27.9
CLL    Collm             56.49 314⇓iP      P        06 00 20.7  -0.8
       comp=Z,7.0nm,0.7s,mb4.8
CLL                              i                  06 00 27.9
CLL    Collm             56.49 314⇓iP      P        06 00 20.7  -0.8
CLL                              i                  06 00 27.9
CLL                              pmax      pmax
       comp=Z,7.0nm,0.7s,mb4.8
CLZ    Clausthal         57.07 316 eP      P        06 00 25.8  +0.1
       comp=Z,5.0nm,0.8s,mb4.6
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CLZ    Clausthal         57.07 316 eP      P        06 00 25.8  +0.1
CLZ                              pmax      pmax
       comp=Z,5.0nm,0.8s,mb4.6
MOX    Moxa              57.55 314 i P     P        06 00 29.0  -0.1
MOX                              L                  06 39 24.0
MOX    Moxa              57.55 314 eP      P        06 00 29.0  -0.1
MOX                              LR        LR
       comp=Z,400nm,19.0s,MS4.5
KHC    Kasperske Hory    57.98 312 eP      P        06 00 32.0  -0.1
GEC2   GERESS Array S    58.16 312 eP      P        06 00 33.6  +0.2
       comp=Z,4.0nm,0.8s,mb4.5
GEC2   GERESS Array S    58.16 312 eP      P        06 00 33.6  +0.2
GEC2                             pmax      pmax
       comp=Z,4.0nm,0.8s,mb4.5
GERES  GERESS Array B    58.16 312 P       P        06 00 33.3   0.0
       comp=Z,2.8nm,0.8s,mb4.4,baz=37,slow=6.7,SNR=14
WET    Wettzell          58.25 313 eP      P        06 00 34.5  +0.5
       comp=Z,6.0nm,0.8s,mb4.7
WET    Wettzell          58.25 313 eP      P        06 00 34.5  +0.5
WET                              pmax      pmax
       comp=Z,6.0nm,0.8s,mb4.7
EKA    Eskdalemuir Ar    58.76 326 P       P        06 00 37.2  -0.3
       comp=Z,1.5nm,0.6s,mb4.2,baz=35,slow=7.9,SNR=6.2
CDF    Champ du Feu      61.02 316 eP      P        06 00 53.0  -0.1
       comp=Z,6.4nm,0.7s,mb4.5
CDF    Champ du Feu      61.02 316 eP      P        06 00 53.0  -0.1
CDF                              pmax      pmax
       comp=Z,3.0nm,0.7s,mb4.5
DAVOX  Davos             61.35 313 P       P        06 00 56.1  +0.8
       comp=Z,2.9nm,0.5s,mb4.7,baz=32,slow=5.6,SNR=5.3
LOR    Lormes            63.25 317 eP      P        06 01 07.0  -1.0
SSF    Saint Saulge      63.55 317 eP      P        06 01 09.1  -0.8
LPL    La Plagne         63.63 314 eP      P        06 01 10.4   0.0
       comp=Z,21nm,1.1s,mb4.8
LPL    La Plagne         63.63 314 eP      P        06 01 10.4   0.0
LPL                              pmax      pmax
       comp=Z,10.0nm,1.1s,mb4.8
LPG    La Plagne         63.64 314 eP      P        06 01 10.4  -0.1
       comp=Z,14nm,1.0s,mb4.6
LPG    La Plagne         63.64 314 eP      P        06 01 10.4  -0.1
LPG                              pmax      pmax
       comp=Z,7.0nm,1.0s,mb4.7
SMF    Signal de Mont    63.78 317 eP      P        06 01 10.6  -0.8
MBDF   Montbardon        64.27 314 eP      P        06 01 14.5  -0.2
       comp=Z,14nm,0.8s,mb4.8
MBDF   Montbardon        64.27 314 eP      P        06 01 14.5  -0.2
MBDF                             pmax      pmax
       comp=Z,7.0nm,0.8s,mb4.7
ORIF   Oris-en-Rattie    64.46 314 eP      P        06 01 15.4  -0.5
       comp=Z,7.3nm,0.8s,mb4.5
ORIF   Oris-en-Rattie    64.46 314 eP      P        06 01 15.4  -0.5
ORIF                             pmax      pmax
       comp=Z,4.0nm,0.8s,mb4.5
SBF    Sospel            64.73 313 eP      P        06 01 16.9  -0.8
       comp=Z,65nm,1.2s,mb5.2
SBF    Sospel            64.73 313 eP      P        06 01 16.9  -0.8
SBF                              pmax      pmax
       comp=Z,33nm,1.2s,mb5.2
VIVF   Saint-Julien-l    64.97 315 eP      P        06 01 18.4  -0.8
       comp=Z,21nm,1.1s,mb4.8
VIVF   Saint-Julien-l    64.97 315 eP      P        06 01 18.4  -0.8
VIVF                             pmax      pmax
       comp=Z,11nm,1.0s,mb4.8
MFF    Saint Martin d    65.26 319 eP      P        06 01 20.6  -0.4
SMRF   Simiane la Rot    65.37 314 eP      P        06 01 21.4  -0.4
       comp=Z,38nm,1.3s,mb5.0
LMR    La Mourre         65.54 313 eP      P        06 01 22.5  -0.4
       comp=Z,22nm,0.9s,mb4.9
LMR    La Mourre         65.54 313 eP      P        06 01 22.5  -0.4
LMR                              pmax      pmax
       comp=Z,11nm,0.9s,mb4.9
CAF    Calviac           65.89 317 eP      P        06 01 24.6  -0.5
CHMT   Chamberlain Mo    66.80  37 eP      P        06 01 31.1  +0.2
EPF    Esparros          68.16 317 eP      P        06 01 39.0  -0.5
BOZ    Bozeman (W)       68.45  37 eP      P        06 01 41.6  +0.3
       comp=Z,1.4nm,0.6s,mb4.2
BOZ    Bozeman (W)       68.45  37 eP      P        06 01 41.6  +0.4
BOZ                              pmax      pmax
       comp=Z,1.0nm,0.6s,mb4.0
MCMT   McKenzie Canyo    68.77  38 eP      P        06 01 43.3   0.0
HLID   Hailey            69.36  40 eP      P        06 01 47.3  +0.4
       comp=Z,1.7nm,0.8s,mb4.0
BW06   Boulder Array     71.69  37 eP      P        06 02 00.7  -0.4
       comp=Z,1.4nm,0.7s,mb4.0
PDAR   Pinedale Array    71.69  37 P       P        06 02 00.8  -0.2
       comp=Z,0.9nm,0.6s,mb3.9,baz=18,slow=3.0,SNR=9.5
HWUT   Hardware Ranch    72.06  39 eP      P        06 02 03.9  +0.6
       comp=Z,4.4nm,0.7s,mb4.5
NVAR   Mina Array Bea    72.45  45 P       P        06 02 05.3  -0.3
       comp=Z,0.5nm,0.6s,mb3.6,baz=325,slow=4.3,SNR=5.5
ESDC   Sonseca Array     72.66 318 P       P        06 02 07.0  +0.3
       comp=Z,2.0nm,0.7s,mb4.2,baz=21,slow=7.3,SNR=7.5
DUG    Dugway            72.90  40 eP      P        06 02 08.9  +0.8
       comp=Z,2.5nm,0.9s,mb4.1
DUG    Dugway            72.90  40 eP      P        06 02 08.9  +0.8
DUG                              pmax      pmax
       comp=Z,3.0nm,0.9s,mb4.2
WRAB   Tennant Creek     77.93 167 eP      P        06 02 37.7  +0.5
WRA    Warramunga Arr    77.94 167 P       P        06 02 35.6  -1.6
       comp=Z,2.1nm,0.6s,mb4.3,baz=352,slow=6.7,SNR=19
WMOK   Wichita Mounta    82.35  32 eP      P        06 03 01.2  +0.7
       comp=Z,2.5nm,0.8s,mb4.2
WMOK   Wichita Mounta    82.35  32 eP      P        06 03 01.2  +0.7
WMOK                             pmax      pmax
       comp=Z,3.0nm,0.8s,mb4.3
MNTX   Cornudas Mount    83.12  38 eP      P        06 03 05.6  +1.1
       comp=Z,1.3nm,0.8s,mb4.0
KMBO   Kilima Mbogo      87.37 264 LR      LR       06 47 51.8
       comp=Z,850nm,19.1s,MS5.2,baz=96,slow=39
STKA   Stephens Creek    90.72 162 LR      LR       06 46 32.4
       comp=Z,542nm,18.2s,MS5.0,baz=301,slow=37
TORD   Torodi Ar. Bea    93.71 301 P       P        06 03 55.3  -0.2
       comp=Z,0.3nm,0.4s,mb4.0,baz=17,slow=4.7,SNR=8.7
CPUP   Villa Florida    148.87 356 ePKPbc  PKPdf    06 10 26.0  +2.0
SNAA   Sanae            153.17 216⇑iPKPdf  PKPdf    06 10 17.6   -11
SNAA                             e                  06 10 29.2
VNA2   Neumayer--Watz   154.68 217⇑iPKPdf  PKPdf    06 10 25.5  -5.7
VNA2                             e                  06 10 39.5
VNA3   Neumayer Olymp   155.38 216⇑iPKPdf  PKPdf    06 10 22.6  -9.5
VNA3                             e                  06 10 36.1
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LDG ***30*** *05:50:44.4±0.3, 51.66N×16.19E, h1km, Ml3.7/5, Error ellipse: s-maj=8.4km s-min=6.3km az=140.0, Suspected Mining induced.*

NEIC ***30*** *05:50:46.4±0.5, 51.58N×16.16E, h5km, ML3.2(SZGRF), ML2.9(BRG), Error ellipse: s-maj=6.4km s-min=5.2km az=191.0*

IPEC ***30*** *05:50:46.5±0.3, 51.54N×16.21E, h2km±1km, ML2.6/4, Error ellipse: s-maj=2.2km s-min=0.7km az=26.0*

BGR ***30*** *05:50:47.1±0.5, 51.45N×16.14E, h1km, ML3.2/14, Error ellipse: s-maj=6.7km s-min=4.4km az=162.0*

IDC ***30*** *05:50:47.9±0.8, 51.52N×15.89E, mb1 3.7/7, mb1mx3.5/23, mbtmp3.6/7, ML3.3/6, Error ellipse: s-maj=13.3km s-min=7.7km az=104.0*

WAR ***30*** *05:50:48.4, 51.48N×16.10E, h1km, ML3.1, Mining Induced*

CSEM ***30*** *05:50:48.6±0.1, 51.45N×16.07E, h0km, ML3.6/11*

VIE ***30*** *05:50:49.5±1.1, 51.31N×16.14E, mb2.7/3, ML3.1/3, Error ellipse: s-maj=15.0km s-min=4.8km az=131.0, Suspected Mining induced.*

ISC 30 05:50:45.7±0.5**, 51.41N**±0.03×**16.10E**±0.02**, n78, σ1§45**/136**, 1C-4D, Poland**

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Code   Station Name       Δ°  AZ°    Phase ID             Time       Res
                                    Op      ISC         h  m  s     ISC
KSP    Ksiaz              0.58 168⇓iPG     Pg       05 51 00.3  +3.0
KSP                               ⇓iSG     Sg       05 51 08.9  +3.9
KSP    Ksiaz              0.58 168 ePg     Pg       05 51 00.3  +3.0
KSP                                eSg     Sg       05 51 08.9  +3.9
KSP    Ksiaz              0.58 168⇓iPg     Pg       05 51 00.3  +3.0
KSP                                i Sg    Sg       05 51 08.9  +3.9
KSP                                e                05 51 13.5
UPC    Upice              0.90 184 ePG     Pg       05 51 06.1  +2.3
UPC    Upice              0.90 184 ePg     Pg       05 51 06.2  +2.4
DPC    Dobruska-Polom     1.07 172 ePG     Pg       05 51 09.0  +2.0
DPC                                eSG     Sg       05 51 23.5  +2.2
       133nm,0.7s
PVCC   Panska Ves         1.31 228 ePG     Pg       05 51 12.9  +1.0
PVCC   Panska Ves         1.31 228 ePn     Pn       05 51 13.2  +2.0
PVCC                               eSg     Sg       05 51 32.3  +3.0
BRG    Berggiesshubel     1.46 249 ePn     Pn       05 51 14.2  +0.8
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BRG				*e*Sg	Sg	05 51 35.9	+1.5
BRG	**Berggiesshubel**	1.46	249	Pn	Pn	05 51 14.8	+1.4
BRG				Pg	Pg	05 51 15.8	+1.0
BRG				Sg	Sg	05 51 35.9	+1.5
BRG	**Berggiesshubel**	1.46	249	*e*Pn	Pn	05 51 15.0	+1.6
BRG	**Berggiesshubel**	1.46	249	Pg	Pg	05 51 15.9	+1.0
BRG				*e*Sg	Sg	05 51 35.4	+1.0
PRU	**Pruhonice**	1.73	216	*e*PN	Pn	05 51 18.9	+1.6
PRU				*e*PG	Pg	05 51 20.4	+0.1
PRU				*e*SG	Sg	05 51 44.3	+0.9
	54nm,0.5s						
FBE	**Freiberg**	1.80	255	*e*Pg	Pg	05 51 20.4	-1.2
FBE				*e*Sg	Sg	05 51 45.8	+0.3
MORC	**Moravsky Berou**	1.87	150	*e*Pn	Pn	05 51 20.8	+1.5
MORC				*e*Sg	Sg	05 51 48.0	-0.1
	40nm,0.4s						
RAC	**Raciborz**	1.88	134	*e*P	Pn	05 51 25.0	+5.6
RAC				*e*S	Sn	05 51 49.0	+4.9
CLL	**Collm**	1.95	268	*e*PN	Pn	05 51 20.0	-0.3
CLL				*i* PG	Pg	05 51 23.3	-1.3
CLL				*e*		05 51 28.0	
CLL				*i* SG	Sg	05 51 49.1	-1.4
CLL				*e*		05 51 59.0	
CLL	**Collm**	1.95	268	*e*Pn	Pn	05 51 20.2	-0.1
CLL				*e*Sg	Sg	05 51 49.8	-0.7
CLL	**Collm**	1.95	268	*e*Pn	Pn	05 51 20.0	-0.3
CLL				*i* Pg	Pg	05 51 23.3	-1.3
CLL				*i* Sg	Sg	05 51 49.1	-1.4
CLL	**Collm**	1.95	268	*i* Pg	Pg	05 51 23.3	-1.3
CLL				Sg	Sg	05 51 49.8	-0.7
OKC	**Ostrava-Krasne**	2.04	140	*e*Pg	Pg	05 51 26.6	+0.1
OKC				*e*Sg	Sg	05 51 52.3	-1.4
VRAC	**Vranov**	2.13	171	Pn	Pn	05 51 26.0	+3.1
	4.7nm,0.3s,baz=352,slow=17,SNR=12						
VRAC				Lg		05 51 57.7	
	2.9nm,0.3s,baz=248,slow=21,SNR=4.9						
VRAC	**Vranov**	2.13	171	*e*Pn	Pn	05 51 25.2	+2.3
VRAC				*e*Sg	Sg	05 51 56.9	+0.4
	22nm,0.3s						
TREC	**Trest**	2.15	191	*e*PN	Pn	05 51 26.4	+3.1
TREC				*e*PG	Pg	05 51 28.3	-0.4
TREC	**Trest**	2.15	191	*e*Pn	Pn	05 51 26.3	+3.0
KRUC	**Moravsky**	2.36	175	*e*Pn	Pn	05 51 29.0	+2.8
KRUC				*e*Sg	Sg	05 52 04.5	+0.3
	34nm,0.6s						
TANN	**Tannenbergstha**	2.51	248	*e*Pn	Pn	05 51 29.3	+0.9
TANN				*e*Sg	Sg	05 52 07.3	-1.9
WERD	**Werda**	2.59	250	*e*Pn	Pn	05 51 30.5	+1.0
WERD				*e*Sg	Sg	05 52 09.9	-2.0
NKC	**Novy Kostel**	2.60	245	*e*PN	Pn	05 51 30.9	+1.2
NKC				*e*PG	Pg	05 51 38.2	+0.6
NKC				*e*SG	Sg	05 52 12.5	+0.3
	64nm,0.3s						
GUNZ	**Gunzen**	2.61	248	*e*Pn	Pn	05 51 31.2	+1.4
GUNZ				*e*Sg	Sg	05 52 10.6	-1.9
WERN	**Wernitzgruen**	2.62	246	*e*Pn	Pn	05 51 31.2	+1.3
WERN				*e*Sg	Sg	05 52 12.6	-0.1
OJC	**Ojcow**	2.63	115	*e*PG	Pg	05 51 37.0	-1.2
OJC				*e*SG	Sg	05 52 13.0	-0.2
OJC	**Ojcow**	2.63	115	*e*Pg	Pg	05 51 36.7	-1.5
OJC				*e*Sg	Sg	05 52 13.0	-0.2
NEUB	**Neuenburg**	2.72	267	*e*Sg	Sg	05 52 15.2	-1.2
JAVC	**Velka Javorina**	2.74	158	*e*Sg	Sg	05 52 16.2	-0.9
	36nm,0.7s						
KHC	**Kasperske Hory**	2.80	216	*e*PN	Pn	05 51 34.0	+1.5
KHC				*e*PG	Pg	05 51 39.5	-2.0
KHC				*e*SG	Sg	05 52 18.1	-0.7
KHC	**Kasperske Hory**	2.80	216	*e*Pg	Pg	05 51 40.0	-1.5
KHC				*e*Sg	Sg	05 52 18.1	-0.7
MOX	**Moxa**	2.93	257	*i* P	Pn	05 51 34.8	+0.3
MOX				Pg	Pg	05 51 43.0	-1.3
MOX				Sg	Sg	05 52 23.0	-0.4
MOX	**Moxa**	2.93	257	*e*Pn	Pn	05 51 35.1	+0.7
MOX				*e*Sg	Sg	05 52 21.0	-2.4
MOX	**Moxa**	2.93	257	*e*Pn	Pn	05 51 34.8	+0.3
MOX				*e*Pg	Pg	05 51 43.0	-1.3
MOX				*e*Sg	Sg	05 52 23.0	-0.4
MOX	**Moxa**	2.93	257	*e*Pg	Pg	05 51 43.0	-1.3
MOX				Sg	Sg	05 52 21.0	-2.4
ROTZ	**Rotzenmuhle**	2.98	238	*e*Pn	Pn	05 51 36.5	+1.4
ROTZ				*e*Sg	Sg	05 52 22.6	-2.2
GEC2	**GERESS Array S**	3.00	212	*e*Pn	Pn	05 51 37.1	+1.7
GEC2				*e*Sg	Sg	05 52 24.5	-0.9
GEC2	**GERESS Array S**	3.00	212	*e*Pn	Pn	05 51 37.1	+1.8
GEC2				*e*Sg	Sg	05 52 24.5	-0.9
GERES	**GERESS Array B**	3.00	212	Pn	Pn	05 51 37.1	+1.8
	2.5nm,0.3s,baz=29,slow=12,SNR=60						
GERES				Pg	Pg	05 51 43.7	-1.8
	4.8nm,0.3s,baz=27,slow=17,SNR=31						
GERES				Lg		05 52 22.7	
	5.5nm,0.3s,baz=30,slow=27,SNR=8.9						
GERES	**GERESS Array B**	3.00	212	Pg	Pg	05 51 43.7	-1.8
NOTT	**Nottersdorf**	3.00	239	*e*Pn	Pn	05 51 36.2	+0.9
NOTT				*e*Sg	Sg	05 52 23.2	-2.3
SMOL	**Smolenice**	3.02	163	*e*SG	Sg	05 52 27.6	+1.3
WET	**Wettzell**	3.07	224	*e*Pn	Pn	05 51 37.5	+1.1
WET				*e*Sg	Sg	05 52 24.8	-3.1
WET	**Wettzell**	3.07	224	*e*Pn	Pn	05 51 37.5	+1.1
WET				*e*Sg	Sg	05 52 24.8	-3.1
ZST	**Bratislava**	3.28	168	*e*SG	Sg	05 52 34.1	-0.8
NIE	**Niedzica**	3.35	125	*e*P	Pg	05 51 51.0	-1.6
NIE				*e*S	Sg	05 52 36.0	-1.2
VYHS	**Vyhne**	3.41	148	*e*SG	Sg	05 52 37.8	-1.4
GRA1	**Grafenberg Arr**	3.56	243	*e*Pn	Pn	05 51 44.4	+1.1
GRA1				*e*Sg	Sg	05 52 42.7	-1.4
GRA1	**Grafenberg Arr**	3.56	243	Pn	Pn	05 51 44.4	+1.1
GRA1				Sg	Sg	05 52 42.7	-1.4
GRF	**Grafenberg Arr**	3.56	243	*e*Pn	Pn	05 51 44.4	+1.1
GRF				*e*Sg	Sg	05 52 42.7	-1.4
MOA	**Molln**	3.76	199	⇑*i*Pn	Pn	05 51 47.6	+1.4
MOA				⇓*i*Sg	Sg	05 52 51.0	+0.2
	comp=N,26nm,0.5s						
STHS	**Stebnicka Huta**	3.84	119	*e*Pn	Pn	05 51 48.1	+0.7
STHS				*e*Pg	Pg	05 52 01.3	-1.2
STHS				*e*Sg	Sg	05 52 52.5	-1.2
KECS	**Kecovo**	4.07	134	*e*SG	Sg	05 52 58.8	-2.5
CRVS	**Cervenica-Dubn**	4.26	124	*e*PN	Pn	05 51 56.8	+3.5
CRVS				*e*PG	Pg	05 52 08.1	-2.7
KOLS	**Kolonicke sedl**	4.68	120	*e*Pn	Pn	05 51 59.0	-0.2
KOLS				*e*		05 52 18.8	
CDF	**Champ du Feu**	6.44	246	*e*Pn	Pn	05 52 20.9	-3.2
CDF				*e*Sg	Sg	05 54 11.0	-9.1
	17nm,0.7s						
HINF	**Hinteralfeld**	7.00	243	*e*Pn	Pn	05 52 28.3	-3.7
HINF				*e*Sg	Sg	05 54 28.7	-10
	16nm,0.9s						
HAU	**Haudompre**	7.18	246	*e*Sg	Sg	05 54 33.1	-12
	15nm,0.8s						
GIVF	**Givet**	7.28	264	*e*Pn	Pn	05 52 29.6	-6.3
BAIF	**Baives**	7.67	265	*e*Pn	Pn	05 52 35.4	-6.0
SFTF	**Sexfontaines**	7.84	250	*e*Sg	Sg	05 54 53.4	-13
	12nm,0.4s						
CABF	**La Chapelle**	8.15	238	*e*Sg	Sg	05 55 05.0	-12
	54nm,1.4s						
AKASG	**Malin Array Be**	8.30	90	Pn	P	05 52 48.2	-1.9
	1.3nm,0.3s,baz=279,slow=12,SNR=6.6						
AKASG				Pg	P	05 53 20.3	+30
	0.8nm,0.3s,baz=281,slow=15,SNR=3.8						
AKASG	**Malin Array Be**	8.30	90	Pn	P	05 52 48.2	-2.0
LPL	**La Plagne**	8.57	230	*e*P	P	05 52 54.8	+0.9
HFS	**Hagfors**	8.85	352	Pn	P	05 52 51.8	-6.1
	0.0nm,0.3s,baz=175,slow=17,SNR=3.3						
LOR	**Lormes**	9.00	247	*e*Pn	P	05 52 56.8	-3.1
MBDF	**Montbardon**	9.14	227	*e*P	P	05 53 03.2	+1.3
SBF	**Sospel**	9.54	221	*e*Pn	P	05 53 03.4	-3.9
NOA	**NORSAR Array B**	10.03	346	Pn	P	05 53 07.6	-6.3
	0.1nm,0.3s,baz=168,slow=12,SNR=2.3						
FINES	**FINESS Array B**	11.46	25	Pn	P	05 53 28.4	-5.1
	0.1nm,0.3s,baz=210,slow=10,SNR=4.1						
ARCES	**ARCESS Array B**	18.72	10	Pn	P	05 55 01.5	-6.0
	0.2nm,0.3s,baz=196,slow=13,SNR=7.0						

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*NEIC **30** 06:17:39.8, 16.97N×99.84W, h19^{km}, MD3.6(MEX), After MEX.*

MEX 30 06:17:39.8±0.8**, 16.97N×99.84W, h19**^{km}±18^{km}**, MD3.6, 1C, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	0.13	214	*i* P	Pb	06 17 42.5	-1.4
ACX				*i* S	Sb	06 17 46.0	-0.7
CAIG	**El Cayaco**	0.41	280	⇑*i*P	Pb	06 17 46.9	-1.4
CAIG				*e*S	Sb	06 17 53.0	-1.1
PLIG	**Platanillo**	1.45	13	*e*P	Pn	06 18 02.0	-3.3
PNIG	**Pinotepa**	1.74	109	*e*P	Pn	06 18 06.3	-3.2
PNIG				*i* S	Sn	06 18 26.3	-5.1
PPM	**Popocatepetl**	2.38	29	*e*P	Pn	06 18 16.5	-2.1

JMA 30 06:26:47.4±0.2**, 28.60N×128.68E, h29**^{km}**, M3.7, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAM	**Amami Oshima**	0.84	103	P	Pb	06 27 02.7	-0.6
JAM				S	Sb	06 27 13.5	-0.7
JTK	**Tokunoshima**	0.85	164	P	Pn	06 27 03.1	-0.3
JTK				S	Sb	06 27 14.5	0.0
JZK	**Kikaishima**	1.17	104	P	Pn	06 27 08.3	+0.2
JZK				S	Sn	06 27 24.6	+1.4
JNN	**Nakanoshima**	1.62	40	P	Pn	06 27 14.8	+0.3
JIH	**Iheya**	1.68	202	P	Pn	06 27 15.1	-0.3
JIH				*e*S	Sn	06 27 35.3	-0.8
JOW	**Kunigami**	1.80	192	P	Pn	06 27 16.3	-0.7
JOW				*e*S	Sn	06 27 37.3	-1.8
JKC	**Kuchinoerabu**	2.28	35	P	Pn	06 27 24.4	+0.5
JAGN	**Aguni-jima**	2.38	213	P	Pn	06 27 25.3	0.0
JAGN				*e*S	Sn	06 27 53.7	-0.1
JKE	**Kume jima 2**	2.82	217	P	Pn	06 27 31.2	-0.5
JKE				*e*S	Sn	06 28 04.4	-0.7
JTN	**Tanegashima 3**	2.86	44	P	Pn	06 27 32.2	-0.1
JTN				*e*S	Sn	06 28 06.1	0.0

JMA 30 07:06:44.1±0.2**, 37.07N×135.33E, h368**^{km}**, M3.5, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	1.79	178	P	P	07 07 36.1	0.0
JHS	**Saijyo**	2.74	222	P	P	07 07 42.6	-0.4
JAG	**Ashikaga**	3.37	100	P	P	07 07 49.8	+1.2
JAG				S	S	07 08 39.8	+0.6
JMM	**Marumori**	4.42	78	P	P	07 07 58.6	-0.3
JFK	**Kawauchi**	4.43	85	P	P	07 07 58.4	-0.7
JMK	**Ichinoseki**	5.02	66	P	P	07 08 05.6	+0.3

BJI 30 07:12:48.0, 21.30N×100.63E, h15^{km}**, ML3.8, Myanmar-China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	**Kunming**	4.27	27	PG	Pg	07 14 04.5	-8.8

IDC 30 07:21:35.5±1.5**, 13.87N×146.59E, mb3.5**/3**, mb1 3.8**/3**, mb1mx3.6**/17**, mbtmp3.5**/3**, Error ellipse: s-maj=36.4km s-min=24.3km az=143.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	1.70	261	Pn	Pn	07 22 07.1	+0.6
	14nm,0.3s,baz=108,slow=9.6,SNR=10						
GUMO				Sn	Sn	07 22 28.1	-1.2
	53nm,0.3s,baz=354,slow=19,SNR=6.2						
WRA	**Warramunga Arr**	35.69	200	P	P	07 28 35.7	-2.1
	0.4nm,0.6s,baz=24,slow=9.6,SNR=7.2						
MKAR	**Makanchi Array**	62.46	316	P	P	07 32 00.7	-2.2
	0.3nm,0.5s,baz=86,slow=9.6,SNR=5.3						
ILAR	**Eielson Array**	67.61	25	P	P	07 32 33.7	-2.2
	0.3nm,0.6s,baz=262,slow=5.5,SNR=5.3						

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*IDC **30** 07:57:40.4±0.7, 13.95N×146.50E, mb4.2/9, mb1 4.4/9, mb1mx4.3/18, mbtmp4.2/9, MS3.0/1, Ms1 3.0/1, ms1mx2.5/25, Error ellipse: s-maj=21.5km s-min=17.5km az=124.0*

*NEIC **30** 07:57:47.2±2.4, 13.86N×146.42E, h50^{km}±21^{km}, mb4.3/2, Error ellipse: s-maj=20.4km s-min=11.8km az=82.0*

ISC 30 07:57:47.4±2.6**, 13.8N**±0.1×**146.4E**±0.2**, h68**^{km}±22^{km}**, n23,** σ**0^{s}88**/20**, mb4.2**/12**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	1.50	261	Pn	P	07 58 11.7	-1.0
	104nm,0.3s,baz=123,slow=7.8,SNR=49						
GUMO				Sn	S	07 58 32.3	+0.8
	273nm,0.3s,baz=155,slow=22,SNR=12						
GUMO	**Guam**	1.50	261	*e*P	P	07 58 11.6	-1.2
GUMO				Sn	S	07 58 32.3	+0.8
JOW	**Kunigami**	21.30	310	P	P	08 02 32.0	+1.7
	18nm,0.7s,mb4.5,baz=163,slow=13,SNR=5.2						
HNR	**Honiara**	26.75	149	LR	LR	08 12 22.1	
	comp=Z,35nm,20.2s,baz=298,slow=33						
WB2	**Warramunga Arr**	35.60	200	*e*P	P	08 04 40.5	0.0
WRA	**Warramunga Arr**	35.60	200	P	P	08 04 40.7	+0.2
	2.8nm,0.6s,mb4.3,baz=23,slow=9.5,SNR=30						
WRA				PcP	PcP	08 07 09.6	+1.3
	0.7nm,0.5s,baz=17,slow=3.2,SNR=8.3						
STKA	**Stephens Creek**	45.69	186	P	P	08 06 03.1	-0.3
	1.6nm,0.7s,mb3.9,baz=0.5,slow=9.3,SNR=6.5						
SONM	**Songino Array**	47.39	324	P	P	08 06 16.4	-0.2
	1.7nm,0.5s,mb4.0,baz=134,slow=6.5,SNR=9.6						
MKAR	**Makanchi Array**	62.34	316	P	P	08 08 04.8	-0.1
	0.9nm,0.3s,mb4.2,baz=92,slow=8.2,SNR=23						
KURK	**Kurchatov**	65.34	320	*e*P	P	08 08 23.8	-0.8
	6.5nm,0.9s,mb4.5						
ILAR	**Eielson Array**	67.71	25	P	P	08 08 38.0	-1.4
	2.3nm,0.7s,mb4.1,baz=251,slow=5.8,SNR=46						
CHKZ	**Chkalovo**	70.54	322	*e*P	P	08 08 55.1	-1.8
	0.8nm,0.5s,mb3.8						
BVAR	**Borovoye Array**	70.64	322	P	P	08 08 57.4	-0.1
	2.9nm,0.6s,mb4.3,baz=100,slow=8.0,SNR=18						
DAWY	**Dawson**	70.75	27	*e*P	P	08 08 58.4	+0.5
YKA	**Yellowknife Ar**	81.96	28	P	P	08 10 01.4	+0.5
	1.1nm,0.8s,mb3.8,baz=286,slow=5.4,SNR=5.3						
YKA	**Yellowknife Ar**	81.96	28	P	P	08 10 01.4	+0.5
NVAR	**Mina Array Bea**	85.61	52	P	P	08 10 21.5	+1.7
	1.5nm,0.6s,mb4.1,baz=262,slow=6.4,SNR=14						
CHMT	**Chamberlain Mo**	86.95	42	*e*P	P	08 10 26.5	+0.3
ARCES	**ARCESS Array B**	87.30	342	P	P	08 10 27.4	+0.1
	3.4nm,0.9s,mb4.3,baz=74,slow=8.8,SNR=5.0						
TORD	**Torodi Ar. Bea**	135.92	306	PKP	PKPdf	08 17 05.2	+3.6
	0.3nm,0.5s,baz=25,slow=2.6,SNR=4.8						
DBIC	**Dimbokro**	144.93	304	PKP	PKPdf	08 17 19.9	+2.2
	6.9nm,0.6s,baz=28,slow=3.4,SNR=13						
DBIC	**Dimbokro**	144.93	304	*e*P	PKPdf	08 17 19.4	+1.6
LPAZ	**La Paz**	146.60	99	PKPbc	PKPbc	08 17 25.8	+3.9
	1.0nm,0.4s,baz=233,slow=1.7,SNR=8.0						

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*ISK **30** 08:00:54.8, 39.40N×33.15E, h5^{km}, MD3.5*

*CSEM **30** 08:00:54.8, 39.40N×33.15E, h5^{km}, MD3.5, After ISK*

ISC 30 08:00:55.9±0.7**, 39.46N**±0.03×**33.19E**±0.03**, h5**^{km}±5^{km}**, n24,** σ**1^{s}02**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAMT	**Kaman**	0.41	102	*i* PG	Pg	08 01 04.0	-0.2
KAMT				*i* SG	Sg	08 01 10.2	+0.4
ANTO	**Ankara**	0.51	323	*i* PG	Pg	08 01 05.4	-0.8
ANTO				*i* SG	Sg	08 01 14.2	+1.2
ANTO	**Ankara**	0.51	323	*i* P	Pg	08 01 05.9	-0.3
ANTO				*i* S	Sg	08 01 13.4	+0.4
LOD	**Lodumlu**	0.54	323	*i* PG	Pg	08 01 06.5	-0.3
CDAG	**Cicekdag**	0.93	79	*i* P	Pb	08 01 12.4	-1.6
CDAG				*i* S	Sb	08 01 25.7	-0.7
ELDT	**Eldivan**	1.05	10	*i* P	Pb	08 01 15.2	-0.9
ELDT				*i* S	Sb	08 01 29.5	-0.4
KIZT	**Kizilcal**	1.17	241	*i* PN	Pn	08 01 16.4	-2.4
CANT	**Cankiri**	1.19	16	*i* PN	Pn	08 01 19.8	+0.6
KDHN	**Kadinhani**	1.25	222	*i* P	Pb	08 01 20.8	+1.2
KDHN				*i* S	Sb	08 01 37.8	+1.9
CORM	**Corum**	1.32	57	PN	Pn	08 01 20.4	-0.6
SGKT	**Sivrigoynuk**	1.42	322	*i* P	Pn	08 01 21.1	-1.2
SGKT				*i* S	Sb	08 01 42.5	+2.0
AVNT	**Avonos**	1.46	117	*i* P	Pn	08 01 23.1	+0.1
AVNT				*i* S	Sb	08 01 43.4	+1.4
CTKT	**Corum**	1.69	46	*i* P	Pn	08 01 26.3	0.0
CTKT				*i* S	Sn	08 01 49.1	+0.6
TOS	**Tosya**	1.70	22	*e*PN	Pn	08 01 27.2	+0.8
NIG	**Nigde**	1.74	140	*e*PN	Pn	08 01 26.7	-0.3
ESKT	**Eskisehir**	1.81	273	*i* P	Pn	08 01 26.4	-1.6
ESKT				*i* S	Sn	08 01 48.9	-2.7
ESKT	**Eskisehir**	1.81	273	*e*Pn	Pn	08 01 27.2	-0.8
MDU	**Mudurnu**	1.82	304	*e*PN	Pn	08 01 28.4	+0.3
SAFT	**Safranbolu**	1.82	348	*e*PN	Pn	08 01 28.9	+0.8
BALT	**Daday**	2.08	4	*i* P	Pn	08 01 33.9	+2.0
BALT				*i* S	Sn	08 01 58.3	-0.1
BNN	**Bunyan**	2.15	105	*e*PN	Pn	08 01 32.9	0.0
BYBT	**Boyabat**	2.34	30	*e*PN	Pn	08 01 35.8	+0.2
BOYT	**Boyabat**	2.36	33	*i* P	Pn	08 01 35.5	-0.4
BOYT				*i* S	Sn	08 02 05.3	-0.1
KOZT	**Kozan**	2.86	133	*e*PN	Pn	08 01 42.6	-0.4

CASC 30 08:07:32.9±2.7**, 13.02N×89.10W, h35**^{km}±22^{km}**, MD3.6, ML2.9, 10C-5D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LFRS	**El Faro**	0.60	4	⇑*i*P	P	08 08 04.0	+19
LFRS				*e*S	S	08 08 12.8	+19
SNVI	**San Vicente**	0.65	23	⇓*e*P	P	08 08 04.8	+19
SNVI				*e*S	S	08 08 15.6	+21
LCBS	**La Ceiba**	0.65	11	⇑*i*P	P	08 08 04.5	+19
LCBS				*e*S	S	08 08 14.2	+19
LBRS	**Las Brisas**	0.72	4	⇑*i*P	P	08 08 05.9	+19
LBRS				*e*S	S	08 08 16.0	+19
LFU	**La Fuente**	0.73	359	⇑*e*P	P	08 08 05.8	+19
LFU				*e*S	S	08 08 16.6	+20
BOQS	**Boqueron**	0.74	346	⇑*e*P	P	08 08 05.9	+19
BOQS				*e*S	S	08 08 16.6	+20
VSM	**San Miguel**	0.90	63	⇓*e*P	P	08 08 09.1	+20
VSM				*e*S	S	08 08 22.4	+21
BLLM	**Bellamira**	0.94	63	⇓*e*P	P	08 08 09.2	+20
BLLM				*e*S	S	08 08 22.6	+20
SBLS	**San Blas**	0.96	328	⇑*e*P	P	08 08 08.7	+19
SBLS				*e*S	S	08 08 22.8	+20
SNJE	**San Jose**	0.98	330	⇑*e*P	P	08 08 08.9	+19
SNJE				*e*S	S	08 08 22.1	+19
RTR	**El Retiro**	1.02	329	⇑*e*P	P	08 08 09.7	+19
RTR				*e*S	S	08 08 23.6	+19
CAHU	**Cacacuatique**	1.15	49	⇑*e*P	P	08 08 11.8	+19
CAHU				*e*S	S	08 08 29.4	+22
CNCH	**Conchagua**	1.26	78	*e*P	P	08 08 13.4	+19
CNCH				*e*S	S	08 08 30.8	+20
MTO2	**Montecristo 2**	1.40	350	⇑*e*P	P	08 08 14.7	+18
MTO2				*e*S	S	08 08 30.6	+17
IXG	**Ixpaco**	1.75	311	*e*P	P	08 08 00.9	-0.4
IXG				*e*S	S	08 08 25.7	+3.1
CRIN	**San Cristobal**	2.02	99	*e*P	P	08 08 05.9	+0.7
CRIN				*e*S	S	08 08 31.9	+2.3
MRL	**Marmol**	2.12	344	*e*P	P	08 08 07.2	+0.7
MRL				*e*S	S	08 08 30.9	-1.0
LEON	**Leon**	2.23	105	*e*P	P	08 08 07.4	-0.9
LEON				*e*S	S	08 08 33.6	-1.3
TEL3	**Telica 3**	2.24	101	⇓*e*P	P	08 08 08.3	0.0
TEL3				*e*S	S	08 08 34.6	-0.6
MIRN	**Miramar**	2.40	104	⇓*e*P	P	08 08 10.3	-0.3
MIRN				*e*S	S	08 08 39.5	+0.4
MOMJ	**Momotombo**	2.57	103	*e*S	S	08 08 43.0	-0.4
COPN	**Copaltepe**	2.59	108	*e*P	P	08 08 12.1	-1.2
COPN				*e*S	S	08 08 42.0	-1.9
MGAN	**Managua**	2.92	107	*e*S	S	08 08 49.7	-2.5
	comp=N,54nm,0.2s						
TICN	**Ticuantepe**	2.97	109	*e*P	P	08 08 18.4	-0.3
TICN				*e*S	S	08 08 51.6	-1.9

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*CASC **30** 08:26:08.9±2.5, 12.17N×88.42W, h20^{km}±14^{km}, MD4.5, ML3.3, mb4.1(NEIC)*

*INET **30** 08:26:09.2, 12.57N×88.47W, h25^{km}, MD4.2, ML3.5*

*IDC **30** 08:26:13.2±3.4, 12.46N×88.11W, h63^{km}±32^{km}, mb3.9/9, mb1 4.0/12, mb1mx3.8/24, mbtmp4.1/12, ML3.1/3, MS3.5/7, Ms1 3.5/7, ms1mx3.3/29, Error ellipse: s-maj=39.3km s-min=13.6km az=60.0*

*NEIC **30** 08:26:14.8±1.8, 12.47N×88.01W, h77^{km}±18^{km}, mb4.1/5, Error ellipse: s-maj=24.2km s-min=8.6km az=58.0*

*SSS **30** 08:26:25.4, 12.10N×88.53W, h19^{km}, MD4.4*

ISC 30 08:26:12.7±1.3**, 12.36N**±0.08×**88.2W**±0.1**, h75**^{km}±12^{km}**, n56,** σ**1^{s}23**/44**, mb4.1**/13**, 15C-5D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	0.97	19	⇑*e*P	Px	08 26 49.0	
CNCH				*e*S	Sx	08 27 05.8	
VSM	**San Miguel**	1.07	354	⇑*e*P	Px	08 26 49.6	
VSM				*e*S	Sx	08 27 07.8	
BLLM	**Bellamira**	1.08	356	⇑*e*P	Px	08 26 49.6	
BLLM				*e*S	Sx	08 27 08.4	
CRIN	**San Cristobal**	1.13	72	⇑*e*P	P	08 26 33.8	+0.5
CRIN				*e*S	S	08 26 54.2	+5.5
LEON	**Leon**	1.23	87	⇑*e*P	P	08 26 33.8	-0.8
TEL3	**Telica 3**	1.30	80	⇑*e*P	P	08 26 35.1	-0.4
TELN	**Telica**	1.32	79	⇑*e*P	P	08 26 36.9	+1.1
MIRN	**Miramar**	1.41	86	⇑*e*P	P	08 26 37.1	0.0
SNVI	**San Vicente**	1.42	332	⇓*e*P	Px	08 26 52.4	
SNVI				*e*S	Sx	08 27 13.2	
CNGN	**Cerro Negro**	1.43	84	⇓*e*P	P	08 26 36.9	-0.4
LCBS	**La Ceiba**	1.52	328	⇑*i*P	Px	08 26 53.0	
LCBS				*e*S	Sx	08 27 13.5	
COPN	**Copaltepe**	1.54	96	⇓*e*P	P	08 26 37.9	-0.9
LFRS	**El Faro**	1.54	325	⇑*e*P	Px	08 26 52.8	
LFRS				*e*S	Sx	08 27 12.5	
MOMJ	**Momotombo**	1.58	88	⇓*e*P	P	08 26 38.8	-0.6
LBRS	**Las Brisas**	1.62	328	⇑*e*P	Px	08 26 54.8	
LBRS				*e*S	Sx	08 27 16.5	
LFU	**La Fuente**	1.67	326	*e*P	Px	08 26 55.1	
LFU				*e*S	Sx	08 27 18.9	
BOQS	**Boqueron**	1.76	321	⇑*e*P	Px	08 26 55.9	
BOQS				*e*S	Sx	08 27 18.9	
XAVN	**Gruta Xavier**	1.80	96	*e*P	P	08 26 41.5	-0.8
MGAN	**Managua**	1.88	96	⇓*e*P	P	08 26 42.7	-0.6
MGAN				*e*S	S	08 27 09.4	+3.5
	comp=N,263nm,0.1s						
TICN	**Ticuantepe**	1.91	99	*e*P	P	08 26 44.0	+0.3
TICN				*e*S	S	08 27 10.8	+4.1
WILN	**Americas 2**	1.93	96	*e*S	S	08 27 11.4	+4.1
SBLS	**San Blas**	2.06	316	*e*P	Px	08 26 59.4	
SBLS				*e*S	Sx	08 27 25.8	
SNJE	**San Jose**	2.06	317	⇑*e*P	Px	08 26 59.8	
SNJE				*e*S	Sx	08 27 25.6	
RTR	**El Retiro**	2.11	317	⇑*e*P	Px	08 27 00.9	
RTR				*e*S	Sx	08 27 27.6	
RBDL	**Robledal**	2.30	320	*e*P	Px	08 26 55.8	
RBDL				*e*S	Sx	08 27 24.2	
MTO2	**Montecristo 2**	2.35	330	⇑*e*P	Px	08 27 05.7	
MTO2				*e*S	Sx	08 27 34.8	
SSNN	**San Juan del S**	2.49	115	*e*P	P	08 26 52.1	+0.2
JTS	**JuntasAbangare**	3.75	123	P	P	08 27 09.1	-0.4
	comp=N,4.4nm,0.3s,baz=312,slow=18,SNR=20						
JTS				S	S	08 27 52.9	+0.1
	comp=N,4.1nm,0.3s,baz=266,slow=21,SNR=5.4						
JTS				LR	LR	08 28 26.2	
	comp=N,174nm,18.3s,baz=186,slow=35						
PRS1	**Puriscal**	4.45	122	*e*P	P	08 27 21.0	+1.8
LAJ	**Bijagual**	4.67	122	*e*P	P	08 27 19.3	-3.0
LCR2	**La Lucha 2**	4.83	122	*e*P	P	08 27 24.0	-0.5
BUS	**Buena Vista**	5.14	122	*e*P	P	08 27 28.4	-0.3
BUS				*e*S	S	08 28 27.3	+0.1
ACR	**Cerro Adams**	6.13	126	*e*P	P	08 27 42.1	-0.3
ACR				*e*S	S	08 28 48.9	-3.0
OTAV	**Otavalo**	15.41	141	P	P	08 29 49.0	+1.8
ROSC	**El Rosal**	15.56	117	P	P	08 29 51.4	+2.4
	comp=N,0.3nm,0.3s,baz=76,slow=19,SNR=2.4						
SDV	**Santo Domingo**	17.56	100	P	P	08 30 12.9	-1.2
	comp=N,0.2nm,0.3s,baz=324,slow=7.3,SNR=2.8						
SDV	**Santo Domingo**	17.56	100	*e*P	P	08 30 12.0	-2.2
	comp=N,5.6nm,0.9s						
LTX	**Lajitas**	22.22	322	*e*P	P	08 31 05.3	+1.2
	comp=N,5.3nm,0.9s,mb3.9						
TXAR	**Lajitas Array**	22.22	322	P	P	08 31 04.5	+0.4
	comp=N,3.3nm,0.8s,mb3.7,baz=146,slow=11,SNR=42						
MIAR	**Mount Ida**	22.63	348	*e*P	P	08 31 10.1	+1.9
	comp=N,20nm,1.2s,mb4.3						
CCM	**Cathedral Cave**	25.74	354	*e*P	P	08 31 38.3	+0.3
	comp=N,4.8nm,0.8s,mb4.0						
SAML	**Samuel**	32.62	129	*e*P	P	08 32 38.9	-0.7
	comp=N,3.6nm,0.9s,mb4.2						
SADO	**Sadowa**	33.21	12	P	P	08 32 42.1	-2.4
	comp=N,7.2nm,0.7s,mb4.6,baz=274,slow=9.7,SNR=3.2						
SADO				LR	LR	08 46 20.4	
	comp=N,100nm,18.8s,baz=1.1,slow=36						

LPAZ	**La Paz**	**34.67**	**145**	P	**P**	**08 32 56.2**	**-1.0**
	comp=N,0.8nm,0.9s,mb3.6,baz=257,slow=14,SNR=3.2						
LPAZ				LR	LR	08 46 35.5	
	comp=N,52nm,18.0s,baz=154,slow=35						
LPAZ	**La Paz**	**34.67**	**145**	P	**P**	**08 32 56.2**	**-1.0**
LPAZ				LR	LR	08 46 35.5	
PDAR	**Pinedale Array**	**35.53**	**332**	P	**P**	**08 33 02.2**	**-2.2**
	comp=N,0.4nm,0.8s,mb3.4,baz=96,slow=27,SNR=2.7						
ULM	**Lac du Bonnet**	**38.31**	**352**	P	**P**	**08 33 26.8**	**-0.8**
	comp=N,5.3nm,0.7s,mb4.5,baz=174,slow=10,SNR=10						
ULM				LR	LR	08 53 54.3	
	comp=N,51nm,18.7s,baz=185,slow=44						
MCMT	**McKenzie Canyo**	**38.64**	**332**	*e*P	**P**	**08 33 31.9**	**+1.6**
SIV	**San Ignacio**	**38.87**	**136**	P	**P**	**08 33 33.6**	**+1.1**
	comp=N,4.3nm,0.7s,mb4.4,baz=314,slow=11,SNR=30						
SCHQ	**Schefferville**	**45.57**	**17**	P	**P**	**08 34 26.1**	**-0.6**
	comp=N,2.4nm,0.5s,mb4.2,baz=203,slow=19,SNR=4.0						
BDFB	**Brasilia**	**48.49**	**124**	LR	LR	08 58 38.5	
	comp=N,141nm,20.0s,baz=206,slow=40						
YKA	**Yellowknife Ar**	**53.52**	**345**	LR	LR	08 59 57.8	
	comp=N,55nm,20.9s,baz=245,slow=38						
PLCA	**Paso Flores**	**55.28**	**164**	P	**P**	**08 35 41.0**	**+0.3**
	comp=N,1.9nm,1.0s,mb4.1,baz=324,slow=8.4,SNR=3.2						
INK	**Inuvik**	**63.09**	**343**	P	**P**	**08 36 34.0**	**-0.3**
	comp=N,2.3nm,1.1s,mb4.0,baz=136,slow=8.1						
ILAR	**Eielson Array**	**65.83**	**336**	LR	LR	09 11 16.8	
	comp=N,82nm,21.7s,baz=178,slow=41						
WRA	**Warramunga Arr**	**138.58**	**254**	PKP	PKPdf	08 45 33.7	+2.9
	comp=N,0.2nm,0.9s,baz=139,slow=2.3,SNR=3.4						

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*BJI **30** 08:26:20.1, 19.11N×155.17W, h8^{km}, mB5.3, mb4.6, Ms5.1, Msz4.6*

*NEIC **30** 08:26:22.0, 19.33N×155.11W, h10^{km}, mb4.2/4, MD4.5(HVO), After HVO.*

NEIC Felt [IV] at Hilo, Kea'au and Pepeekeo; [III] at Hakalau, Honomu, Mountain View and Pahoa. Felt at Kamuela, Kurtistown, 'O'okala, Papa'ikou and Volcano.

*IDC **30** 08:26:22.6±2.1, 19.49N×155.14W, mb4.1/9, mb1 4.3/9, mb1mx4.1/21, mbtmp4.1/9, MS3.6/2, Ms1 3.6/2, ms1mx3.0/29, Error ellipse: s-maj=53.0km s-min=29.9km az=13.0*

ISC 30 08:26:20.2±3.3**, 19.43N**±0.09×**155.13W**±0.08**, h0^{km}**±21^{km}**, h15^{km}**±.1^{km}**:pP-P, n41, σ1^{s}10**/36**, mb4.4**/15**, MS4.2**/4**, 2C, Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
POHA	**Pohakuloa**	**0.50**	**311**	*e*P	**Pb**	**08 26 33.4**	**+1.9**
HPO	**Honuapo**	**0.53**	**230**	*e*P	**Pb**	**08 26 31.8**	**-0.2**
KKH	**Kailua Kona**	**0.87**	**285**	*e*P	**Pb**	**08 26 37.8**	**0.0**
HKL	**Haleakala**	**1.66**	**320**	*e*P	**Pn**	**08 26 49.9**	**-0.7**
HON	**Honolulu**	**3.29**	**305**	*e*P	**Pn**	**08 27 11.1**	**-2.8**
KIP	**Kipapa**	**3.35**	**307**	*e*P	**Pn**	**08 27 10.7**	**-4.2**
NVAR	**Mina Array Bea**	**37.06**	**51**	P	**P**	**08 33 34.8**	**+1.1**
	0.6nm,0.7s,mb3.5,baz=233,slow=9.2,SNR=5.8						
TPNV	**Topopah Spring**	**38.14**	**55**	*e*P	**P**	**08 33 42.1**	**-0.8**
	2.6nm,0.8s,mb4.0						
HLID	**Hailey**	**41.66**	**46**	P	**P**	**08 34 11.6**	**-0.3**
HVU	**Hansel Valley**	**42.17**	**49**	*e*P	**P**	**08 34 15.5**	**-0.6**
	5.7nm,0.7s,mb4.4						
TTA	**Tatalina**	**43.47**	**359**	P	**P**	**08 34 26.2**	**-0.2**
BW06	**Boulder Array**	**44.75**	**48**	*e*P	**P**	**08 34 36.5**	**-0.6**
	1.0nm,0.6s,mb3.9						
PDAR	**Pinedale Array**	**44.75**	**48**	P	**P**	**08 34 37.7**	**+0.6**
	1.3nm,0.9s,mb3.9,baz=236,slow=5.3,SNR=9.4						
ANMO	**Albuquerque**	**45.53**	**60**	P	**P**	**08 34 44.0**	**+0.6**
	0.4nm,0.3s,mb4.0,baz=288,slow=9.6,SNR=3.4						
ANMO				LR	LR	08 49 30.0	
	comp=Z,259nm,20.8s,MS4.2,baz=266,slow=30						
ANMO	**Albuquerque**	**45.53**	**60**	P	**P**	**08 34 44.0**	**+0.6**
ANMO				LR	LR	08 49 30.0	
ILAR	**Eielson Array**	**45.65**	**5**	P	**P**	**08 34 44.1**	**+0.2**
	3.0nm,0.9s,mb4.3,baz=197,slow=6.7,SNR=21						
DAWY	**Dawson**	**45.86**	**10**	*e*P	**P**	**08 34 46.1**	**+0.5**
EDM	**Edmonton**	**46.58**	**33**	*e*P	**P**	**08 34 51.4**	**0.0**
TXAR	**Lajitas Array**	**47.58**	**68**	P	**P**	**08 35 01.3**	**+1.6**
	1.9nm,0.7s,mb4.4,baz=254,slow=8.8,SNR=24						
LAO	**LASA Array**	**48.17**	**44**	P	**P**	**08 35 03.0**	**-1.1**
YKA	**Yellowknife Ar**	**51.25**	**23**	P	**P**	**08 35 26.8**	**-0.6**
	1.1nm,0.6s,mb3.9,baz=231,slow=7.5,SNR=9.2						
ULM	**Lac du Bonnet**	**55.72**	**42**	P	**P**	**08 35 59.4**	**-1.3**
	4.0nm,1.0s,mb4.4,baz=252,slow=10.0,SNR=3.9						
ULM	**Lac du Bonnet**	**55.72**	**42**	P	**P**	**08 35 59.4**	**-1.3**
MDJ	**Mudanjiang**	**66.25**	**311**	P	**P**	**08 37 11.8**	**-0.4**
MDJ				AMB	AMB		
	comp=Z,200nm,5.3s						
JNU	**Nakatsue**	**66.53**	**298**	LR	LR	09 03 11.5	
	comp=Z,12nm,20.4s,MS3.1,baz=62,slow=33						
CN2	**Changchun**	**69.30**	**310**	*e*P	**P**	**08 37 33.5**	**+2.2**
SSE	**Sheshan**	**74.99**	**298**	*e*P	**P**	**08 38 05.3**	**-0.1**
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,200nm,7.3s						
SSE	**Sheshan**	**74.99**	**298**	*e*P	**P**	**08 38 05.2**	**-0.2**
	comp=Z,37nm,0.7s,mb5.5						
NJ2	**Nanjing**	**76.69**	**299**	*e*P	**P**	**08 38 15.5**	**+0.5**
NJ2				AP	pP	08 38 20.3	+5.1
NJ2				XP	sP	08 38 22.5	+7.3
NJ2				PP	PP	08 41 09.8	+0.8
NJ2				S	S	08 48 00.0	-1.5
NJ2				XS		08 48 07.0	
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.6s,mb5.1						
NJ2				AMB	AMB		
	comp=Z,270nm,6.3s						
NJ2				LR	LR		
	comp=N,430nm,23.5s,MS4.9						
NJ2				LR	LR		
	comp=E,510nm,24.0s,MS4.9						
NJ2				LR	LR		
	comp=Z,220nm,19.3s,MS4.5						
HHC	**Hu-ho-hao-te**	**79.97**	**310**	*e*P	**P**	**08 38 29.5**	**-3.3**
SONM	**Songino Array**	**81.34**	**318**	P	**P**	**08 38 41.3**	**+1.4**
	comp=Z,1.9nm,0.9s,mb4.1,baz=62,slow=3.0,SNR=12						
SDV	**Santo Domingo**	**81.94**	**83**	P	**P**	**08 38 44.5**	**+0.8**
	comp=Z,6.3nm,0.8s,mb4.8,baz=300,slow=4.1,SNR=10						
SDV	**Santo Domingo**	**81.94**	**83**	*e*P	**P**	**08 38 43.2**	**-0.5**
	comp=Z,6.5nm,0.8s,mb4.8						
LZH	**Lanzhou**	**87.27**	**307**	*e*P	**P**	**08 39 09.0**	**-1.1**
LZH				AP	pP	08 39 14.0	+3.7
LZH				XP	sP	08 39 16.0	+5.7
LZH				PP	PP	08 42 35.5	-1.1
LZH				AMB	AMB		
	comp=Z,20nm,1.6s,mb5.1						
GTA	**Gaotai**	**88.90**	**312**	*e*P	**P**	**08 39 19.5**	**+1.6**
GTA				AP	pP	08 39 24.5	+6.5
GTA				XP	sP	08 39 27.0	+8.9
GTA				PP	PP	08 42 54.8	+5.2
GTA				PPP	PPP	08 44 53.8	+5.3
GTA				SKS	SKS	08 49 47.8	-1.5
GTA				S	S	08 50 09.8	+5.1
GTA				XS		08 50 17.8	
GTA				AMB	AMB		
	comp=Z,160nm,4.8s						
GTA				LR	LR		
	comp=N,170nm,17.1s,MS4.8						
GTA				LR	LR		
	comp=E,270nm,16.4s,MS4.8						
GTA				LR	LR		
	comp=Z,160nm,13.3s,MS4.6						
CD2	**Chengdu**	**89.27**	**302**	*e*P	**P**	**08 39 18.5**	**-1.4**
WMQ	**Urumqi**	**94.81**	**320**	*e*P	**P**	**08 39 46.0**	**+0.9**
VNA3	**Neumayer Olymp**	**124.36**	**167**	PKPdf	PKPdf	08 45 25.6	+3.0
VNA3				*e*		08 45 43.3	
VNA3				*e*		08 45 54.2	
VNA3				*e*		08 46 01.3	
VNA3				*e*		08 46 19.5	
VNA2	**Neumayer--Watz**	**125.08**	**168**	⇑*i*PKPdf	PKPdf	08 45 20.2	-3.7
VNA2				*e*		08 45 37.0	
VNA2				*e*		08 45 47.8	
VNA2				*e*		08 45 55.7	
VNA2				*e*		08 46 13.5	
VNA1	**Neumayer--Stat**	**125.11**	**167**	PKPdf	PKPdf	08 45 22.9	-1.1
VNA1				*e*		08 45 41.3	
VNA1				*e*		08 45 53.1	
VNA1				*e*		08 46 00.3	
VNA1				*e*		08 46 16.0	
SNAA	**Sanae**	**125.31**	**170**	⇑*i*PKPdf	PKPdf	08 45 17.3	-7.1
SNAA				*e*		08 45 43.5	
SNAA				*e*		08 45 52.2	
SNAA				*e*		08 46 11.9	

GUC 30 09:03:11.9±0.8**, 27.93S×66.79W, h150^{km}, ML4.1, 4C, Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**3.21**	**279**	*i* P	P	09 04 02.7	0.0
CPCH				*i* S	S	09 04 41.2	-0.4
CDCH	**Caldera**	**3.69**	**282**	⇑*i*P	P	09 04 08.8	-0.1
CDCH				*i* S	S	09 04 50.3	-2.4
CRCH	**Chaqaral**	**3.76**	**294**	*i* P	P	09 04 10.5	+0.6
CRCH				*i* S	S	09 04 54.0	-0.5
CRCH				AMP		09 04 59.4	
	comp=E,123nm,0.3s						
TLL	**Tololo Astrono**	**4.16**	**237**	⇑*i*P	P	09 04 15.8	+0.7
TLL				*i* S	S	09 05 05.8	+2.1
CPN1	**Cerro Paranal**	**4.62**	**315**	*e*P	P	09 04 21.9	+0.7
CEN1	**Los Morros**	**5.47**	**325**	⇑*i*P	P	09 04 31.4	-1.1
CEN1				*i* S	S	09 05 32.0	-2.9
PACH	**Papudo**	**6.10**	**220**	*i* P	P	09 04 39.0	-1.8
FCH	**Farellones**	**6.17**	**208**	*e*P	P	09 04 42.1	+0.4
RCDM	**Rinconada Maip**	**6.53**	**211**	*i* P	P	09 04 45.0	-1.6
CHCH	**Chadas Angostu**	**6.84**	**208**	⇑*i*P	P	09 04 49.6	-1.2
CHCH				*i* S	S	09 06 01.9	-5.7
CACH	**El Canelo**	**6.98**	**207**	*e*P	P	09 04 51.4	-1.2

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*IDC **30** 09:19:26.0±2.6, 37.84N×144.76E, mb3.5/2, mb1 3.8/3, mb1mx3.4/21, mbtmp3.5/3, ML3.5/1, MS3.8/1, Ms1 3.8/1, ms1mx3.1/26, Error ellipse: s-maj=53.4km s-min=36.9km az=45.0*

*JMA **30** 09:19:30.4±0.2, 38.05N×144.53E, h53^{km}, M3.9*

ISC 30 09:19:29.2±1.4**, 38.16N**±0.06×**144.6E**±0.1**, h67^{km}**±23^{km}**, n15, σ1^{s}15**/23**, mb3.4**/2**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.50**	**293**	P	**P**	**09 20 09.3**	**+0.8**
JIO	**Ouri**	**2.60**	**278**	P	**P**	**09 20 10.2**	**+0.2**
JIO				S	**S**	**09 20 40.1**	**-0.4**
MIYJ	**Miyakonagasawa**	**2.62**	**304**	P	**P**	**09 20 10.9**	**+0.7**
MIYJ				*e*S	**S**	**09 20 41.1**	**+0.3**
JMK	**Ichinoseki**	**2.79**	**288**	P	**P**	**09 20 13.5**	**+0.8**
JOT	**Ohata**	**4.25**	**320**	P	**P**	**09 20 35.4**	**+2.4**
JOT				*e*S	**S**	**09 21 21.0**	**-0.7**
JCH	**Churui**	**4.56**	**348**	P	**P**	**09 20 37.6**	**+0.3**
JCH				*e*S	**S**	**09 21 28.5**	**-1.0**
JKB	**Kayabe**	**4.64**	**325**	P	**P**	**09 20 40.9**	**+2.4**
JRY	**Ryogami san**	**5.06**	**247**	P	**P**	**09 20 43.3**	**-1.0**
JRY				S	**S**	**09 21 37.5**	**-4.5**
NEM2	**Nemuro 2**	**5.27**	**9**	P	**P**	**09 20 45.1**	**-2.1**
NEM2				S	**S**	**09 21 42.3**	**-5.0**
JOD2	**Odawara 2**	**5.31**	**239**	P	**P**	**09 20 46.1**	**-1.6**
JOD2				*e*S	**S**	**09 21 42.6**	**-5.7**
MJAR	**Matsushiro Arr**	**5.37**	**254**	Pn	**P**	**09 20 48.5**	**0.0**
	1.4nm,0.3s,baz=75,slow=15,SNR=12						
MJAR				Sn	**S**	**09 21 49.0**	**-0.7**
	0.8nm,0.3s,baz=20,slow=29,SNR=4.4						
JTKR	**Abashiri--Toko**	**5.83**	**355**	P	**P**	**09 20 55.2**	**+0.2**
JTKR				*e*S	**S**	**09 21 58.0**	**-3.3**
KDAK	**Kodiak Island**	**44.55**	**43**	LR	LR	09 44 30.2	
	comp=Z,113nm,19.5s,baz=259,slow=34						
MKAR	**Makanchi Array**	**45.70**	**302**	P	**P**	**09 27 50.3**	**+5.3**
	0.4nm,0.6s,mb3.3,baz=90,slow=8.5,SNR=5.3						
WRA	**Warramunga Arr**	**58.59**	**191**	P	**P**	**09 29 22.4**	**+0.9**
	0.3nm,0.5s,mb3.5,baz=12,slow=7.0,SNR=5.8						

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*IDC **30** 09:25:20.5±3.5, 12.70N×92.15E, mb3.6/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=128.3km s-min=28.2km az=65.0*

ISC 30 09:25:23.5±1.5**, 12.7N**±0.3×**92.2E**±0.2**, h33^{km}, n4, σ0^{s}02**/5**, mb3.6**/3**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VIS	**Vishakhapatnam**	**9.88**	**301**	*e*P	**P**	**09 27 46.4**	**0.0**
VIS				*e*S	**S**	**09 29 26.4**	**-11**
MKAR	**Makanchi Array**	**34.97**	**348**	P	**P**	**09 32 14.6**	**0.0**
	0.5nm,0.5s,mb3.7,baz=164,slow=8.8,SNR=10.0						
SONM	**Songino Array**	**36.96**	**16**	P	**P**	**09 32 31.4**	**0.0**
	0.7nm,0.6s,mb3.6,baz=204,slow=7.1,SNR=6.9						
WRA	**Warramunga Arr**	**52.68**	**127**	P	**P**	**09 34 37.2**	**0.0**
	0.2nm,0.3s,mb3.5,baz=304,slow=9.8,SNR=9.8						

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*NEIC **30** 09:41:14.2±1.0, 15.49S×175.26W, h10^{km}, mb4.8/2, Error ellipse: s-maj=57.8km s-min=13.3km az=153.0*

*IDC **30** 09:41:14.2±1.4, 14.96S×175.75W, mb4.0/6, mb1 4.4/6, mb1mx4.1/14, mbtmp4.0/6, MS3.8/16, Ms1 3.8/16, ms1mx3.7/24, Error ellipse: s-maj=95.3km s-min=22.2km az=147.0*

ISC 30 09:41:15.7±1.0**, 15.5S**±0.4×**175.2W**±0.2**, h33^{km}, n26, σ1^{s}28**/14**, mb4.2**/8**, MS3.8**/13**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.72**	**65**	Pn	**Pn**	**09 42 10.9**	**-1.5**
	8.8nm,0.3s,baz=340,slow=3.5,SNR=14						
AFI				Sn	**Sn**	**09 42 49.6**	**-5.9**
	39nm,0.3s,baz=59,slow=23,SNR=8.8						
AFI				LR	LR	09 43 29.3	
	comp=Z,2μm,19.7s,baz=97,slow=34						
AFI	**Afiamalu**	**3.72**	**65**	Pn	**Pn**	**09 42 10.9**	**-1.5**
AFI				Sn	**Sn**	**09 42 49.6**	**-5.9**
AFI				LR	LR	09 43 29.3	
RAR	**Rarotonga**	**15.73**	**113**	LR	LR	09 50 14.2	
	comp=Z,188nm,20.1s,baz=344,slow=33						
DZM	**Mont Dzumac**	**18.51**	**247**	LR	LR	09 51 05.8	
	comp=Z,445nm,20.8s,baz=204,slow=32						
URZ	**Urewera**	**23.64**	**195**	LR	LR	09 54 28.5	
	comp=Z,192nm,20.0s,MS3.6,baz=131,slow=33						
PPT	**Papeete**	**24.68**	**98**	LR	LR	09 53 37.0	
	comp=Z,84nm,21.2s,MS3.2,baz=244,slow=29						
HNR	**Honiara**	**24.95**	**281**	LR	LR	09 53 34.6	
	comp=Z,187nm,21.4s,MS3.6,baz=108,slow=30						
STKA	**Stephens Creek**	**42.44**	**240**	P	**P**	**09 49 09.8**	**+0.4**
	3.0nm,1.1s,mb3.8,baz=174,slow=9.2,SNR=2.3						
STKA				LR	LR	10 03 55.7	
	comp=Z,129nm,21.2s,MS3.8,baz=28,slow=32						
STKA	**Stephens Creek**	**42.44**	**240**	P	**P**	**09 49 09.8**	**+0.4**
STKA				LR	LR	10 03 55.7	
WRAB	**Tennant Creek**	**48.08**	**257**	P	**P**	**09 49 54.5**	**+0.1**
	19nm,1.4s,mb4.9						
WRA	**Warramunga Arr**	**48.09**	**257**	P	**P**	**09 49 52.7**	**-1.8**
	1.5nm,1.1s,mb4.0,baz=92,slow=8.1,SNR=3.7						
GUMO	**Guam**	**48.91**	**304**	LR	LR	10 09 23.0	
	comp=Z,13nm,18.3s,MS3.0,baz=64,slow=35						
RPN	**Rapa Nui**	**61.88**	**113**	LR	LR	10 10 57.8	
	comp=Z,77nm,20.0s,MS3.9,baz=246,slow=28						
VNDA	**Vanda**	**63.08**	**185**	LR	LR	10 15 45.4	
	comp=Z,50nm,19.4s,MS3.7,baz=330,slow=33						
MJAR	**Matsushiro Arr**	**67.89**	**321**	LR	LR	10 14 44.9	
	comp=Z,174nm,21.1s,MS4.3,baz=145,slow=30						
NVAR	**Mina Array Bea**	**75.61**	**43**	P	**P**	**09 52 59.5**	**+0.2**
	1.5nm,0.9s,mb3.9,baz=217,slow=9.0,SNR=8.0						
MCK	**McKinley**	**81.58**	**12**	*e*P	**P**	**09 53 30.2**	**-1.1**
	5.6nm,1.1s,mb4.4						
TXAR	**Lajitas Array**	**82.16**	**57**	P	**P**	**09 53 39.3**	**+4.2**
	1.7nm,1.0s,mb3.9,baz=225,slow=4.8,SNR=8.5						
TXAR				LR	LR	10 25 44.2	
	comp=Z,86nm,20.0s,MS4.1,baz=240,slow=32						
MCMT	**McKenzie Canyo**	**82.47**	**40**	*e*P	**P**	**09 53 38.6**	**+2.3**
ILAR	**Eielson Array**	**82.91**	**12**	P	**P**	**09 53 38.3**	**+0.1**
	3.2nm,1.1s,mb4.2,baz=225,slow=6.5,SNR=7.5						
PDAR	**Pinedale Array**	**83.55**	**42**	P	**P**	**09 53 43.7**	**+1.8**
	2.1nm,0.8s,mb4.3,baz=217,slow=3.1,SNR=13						
PDAR				LR	LR	10 26 54.9	
	comp=Z,42nm,20.3s,MS3.8,baz=338,slow=33						
PLCA	**Paso Flores**	**90.75**	**133**	LR	LR	10 25 53.9	
	comp=Z,47nm,18.1s,MS4.0,baz=180,slow=29						
YKA	**Yellowknife Ar**	**90.92**	**24**	LR	LR	10 26 23.1	
	comp=Z,85nm,21.4s,MS4.2,baz=235,slow=30						
ULM	**Lac du Bonnet**	**95.14**	**39**	LR	LR	10 32 08.2	
	comp=Z,89nm,19.6s,MS4.2,baz=70,slow=32						
BRTR	**Keskin Array B**	**145.11**	**319**	PKP	PKPdf	10 00 53.1	+3.0
	2.8nm,1.0s,baz=63,slow=2.8,SNR=11						
GERES	**GERESS Array B**	**145.96**	**349**	PKPbc	PKPbc	10 00 54.9	+2.7
	1.2nm,0.7s,slow=2.7,SNR=6.2						

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*IDC **30** 09:58:43.7±4.1, 64.48N×32.40E, mb1 3.3/4, mb1mx3.1/22, mbtmp3.3/4, ML2.6/4, Error ellipse: s-maj=59.1km s-min=13.9km az=105.0*

*HEL **30** 09:58:47.3±0.1, 64.70N×31.00E, ML1.8, Explosion*

ISC 30 09:58:45.8±0.8**, 64.68N**±0.04×**31.0E**±0.1**, n12, σ1^{s}19**/24**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOF	**Joensuu**	**1.78**	**175**	*e*P	**Pn**	**09 59 19.0**	**+1.0**
JOF				*e*S	**Sn**	**09 59 41.9**	**+0.2**
KU4	**Liikasenvaara**	**1.78**	**342**	*e*P	**Pn**	**09 59 18.3**	**+0.2**
KU4				*e*S	**Sn**	**09 59 41.3**	**-0.5**
OUL	**Oulu**	**2.20**	**283**	*e*P	**Pn**	**09 59 25.3**	**+1.3**
OUL				*e*S	**Sn**	**09 59 53.0**	**+0.7**
SUF	**Sumiainen**	**2.91**	**230**	*e*P	**Pn**	**09 59 36.1**	**+1.9**
SUF				*e*S	**Sn**	**10 00 10.4**	**0.0**
SUF				*e*SG	**Sg**	**10 00 17.1**	**-5.6**
SUF				MSG		10 00 17.6	
	comp=Z,1.7nm,0.2s						
KEF	**Keuruu**	**3.72**	**230**	*e*P	**Pn**	**09 59 46.5**	**+0.7**
KEF				*e*S	**Sn**	**10 00 29.5**	**-1.5**
KEF				*e*SG	**Sg**	**10 00 42.4**	**-7.3**
KEF				MSG		10 00 44.3	
	comp=Z,1.9nm,0.2s						
FIA0	**FINESS Array S**	**3.94**	**217**	*e*P	**Pn**	**09 59 49.7**	**+0.9**
FIA0				*e*SG	**Sg**	**10 00 49.0**	**-7.8**
FIA0				MSG		10 00 50.9	
	comp=Z,2.1nm,0.3s						
FINES	**FINESS Array B**	**3.94**	**217**	Pn	**Pn**	**09 59 48.5**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=38,slow=16,SNR=3.2						
FINES				Pg	**Pg**	**09 59 56.5**	**-7.9**
	comp=Z,0.3nm,0.3s,baz=38,slow=15,SNR=5.9						
FINES				Sn	**Sn**	**10 00 43.7**	**+7.3**
	comp=Z,0.3nm,0.3s,baz=48,slow=23,SNR=3.0						
VAF	**Ylistaro**	**4.02**	**250**	*e*P	**Pn**	**09 59 50.2**	**+0.2**
VAF				*e*SB	**Sb**	**10 00 48.2**	**+1.3**
PVF	**Pernaja**	**4.77**	**212**	*e*P	**Pn**	**10 00 00.9**	**+0.2**
PVF				*e*S	**Sn**	**10 00 55.7**	**-1.8**
ARCES	**ARCESS Array B**	**5.32**	**339**	Pn	**Pn**	**10 00 07.4**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=10						
HFS	**Hagfors**	**9.20**	**248**	Pn	**P**	**10 00 59.7**	**-3.1**
	comp=Z,0.0nm,0.3s,baz=66,slow=14,SNR=3.7						
NOA	**NORSAR Array B**	**9.71**	**257**	Pn	**P**	**10 01 07.4**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=68,slow=14,SNR=2.7						

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*IDC **30** 10:04:49.9±1.9, 23.37S×169.07E, mb3.8/2, mb1 3.9/3, mb1mx3.8/13, mbtmp3.8/3, ML3.6/1, MS2.9/1, Ms1 2.9/1, ms1mx2.0/24, Error ellipse: s-maj=71.8km s-min=37.1km az=17.0*

ISC 30 10:04:53.3±1.9**, 23.7S**±0.3×**168.9E**±0.3**, h33^{km}, n5, σ0^{s}47**/6**, mb3.8**/2**, New Caledonia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.77**	**305**	*e*P	**P**	**10 05 36.5**	**+0.2**
DZM				*e*S	**S**	**10 06 08.3**	**-0.6**
DZM	**Mont Dzumac**	**2.77**	**305**	Pn	**Pn**	**10 05 36.8**	**+0.3**
	9.2nm,0.3s,baz=89,slow=18,SNR=84						
DZM				Sn	**Sn**	**10 06 09.5**	**+0.4**
	10nm,0.3s,baz=130,slow=23,SNR=4.0						
DZM				LR	LR	10 06 10.8	
	comp=Z,194nm,18.6s,baz=18,slow=30						
WRA	**Warramunga Arr**	**32.24**	**270**	P	**P**	**10 11 21.1**	**-0.1**
	0.9nm,0.8s,mb3.6,baz=97,slow=8.5,SNR=11						
WRA				PcP	PcP	10 14 08.9	-0.2
	0.4nm,0.7s,baz=98,slow=2.5,SNR=6.0						
SONM	**Songino Array**	**90.57**	**323**	P	**P**	**10 17 53.2**	**-0.2**
	0.4nm,0.5s,mb4.0,baz=117,slow=3.2,SNR=3.5						
GERES	**GERESS Array B**	**148.16**	**328**	PKPbc	PKPdf	10 24 36.9	+4.6
	0.7nm,0.6s,baz=45,slow=1.9,SNR=4.7						

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*NIED **30** 10:42:00, 26.10N×125.80E, h5^{km}, Mw4.0 Best double couple: $M_0 1.17\times10^{15}$ NP1:ϕ_s255°, δ48°, λ-67°. NP2:ϕ_s43°, δ47°, λ-113°.*

*IDC **30** 10:42:39.0±1.0, 26.05N×125.75E, mb3.9/6, mb1 4.1/7, mb1mx3.8/23, mbtmp3.9/7, ML3.4/1, MS3.6/3, Ms1 3.6/3, ms1mx2.7/33, Error ellipse: s-maj=26.5km s-min=18.5km az=57.0*

*JMA **30** 10:42:39.1±0.2, 26.08N×125.80E, M3.5*

*NEIC **30** 10:42:40.4±0.7, 26.05N×125.78E, h10^{km}, mb4.3/1, Error ellipse: s-maj=18.3km s-min=14.2km az=48.0*

ISC 30 10:42:39.7±0.5**, 26.11N**±0.06×**125.74E**±0.04**, h10^{km}, n22, σ1^{s}05**/25**, mb4.0**/7**, MS3.6**/3**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	**Kume jima 2**	**0.96**	**77**	P	**Pb**	**10 42 57.1**	**-0.9**
JKE				S	**Sb**	**10 43 09.6**	**-0.9**
JMJ	**Miyako jima 2**	**1.36**	**198**	P	**Pb**	**10 43 04.4**	**-0.4**
JOGS	**Gusukube**	**1.38**	**193**	P	**Pn**	**10 43 04.9**	**-0.2**
JAGN	**Aguni-jima**	**1.43**	**70**	P	**Pn**	**10 43 05.2**	**-0.6**
JAGN				*e*S	**Sb**	**10 43 24.4**	**+0.4**
JTJ	**Tarama**	**1.74**	**213**	P	**Pn**	**10 43 10.7**	**+0.4**
NAH1	**Naha**	**1.75**	**87**	P	**Pn**	**10 43 10.5**	**+0.1**
NAH1				*e*S	**Sn**	**10 43 32.8**	**-0.2**
JJT2	**Tamagusuku 2**	**1.80**	**89**	P	**Pn**	**10 43 11.8**	**+0.6**
JIH	**Iheya**	**2.19**	**65**	P	**Pn**	**10 43 17.5**	**+0.8**
JIJ	**Ishigaki jima**	**2.27**	**220**	P	**Pn**	**10 43 17.5**	**-0.3**
JOW	**Kunigami**	**2.38**	**72**	Pn	**Pn**	**10 43 19.2**	**-0.2**
	14nm,0.3s,baz=239,slow=11,SNR=31						
JOW				Sn	**Sn**	**10 43 51.1**	**+2.2**
	15nm,0.3s,baz=109,slow=28,SNR=6.6						
JOW	**Kunigami**	**2.38**	**72**	P	**Pn**	**10 43 20.1**	**+0.7**
JKRS	**Kuro-shima**	**2.44**	**220**	P	**Pn**	**10 43 22.4**	**+2.1**
IRIF	**Iriomote-Funau**	**2.54**	**226**	P	**Pn**	**10 43 23.8**	**+2.0**
LZH	**Lanzhou**	**21.18**	**303**	*e*P	**P**	**10 47 22.0**	**-5.6**
	20nm,1.5s,mb4.2						
LZH				pP		10 47 32.5	
LZH				sP		10 47 36.0	
SONM	**Songino Array**	**26.49**	**330**	P	**P**	**10 48 20.0**	**+1.1**
	2.1nm,0.8s,mb3.7,baz=142,slow=9.6,SNR=8.9						
SONM				LR	LR	11 00 02.2	
	comp=Z,93nm,20.0s,MS3.3,baz=161,slow=39						
MKAR	**Makanchi Array**	**39.96**	**313**	P	**P**	**10 50 14.7**	**-1.2**
	1.5nm,0.5s,mb4.0,baz=106,slow=9.9,SNR=11						
ZAL	**Zalesovo**	**41.01**	**324**	P	**P**	**10 50 23.2**	**-1.3**
	1.7nm,0.6s,mb3.9,baz=104,slow=4.2,SNR=2.6						
ZAL				LR	LR	11 08 43.9	
	comp=Z,68nm,19.9s,MS3.5,baz=318,slow=38						
ZAL	**Zalesovo**	**41.01**	**324**	P	**P**	**10 50 23.2**	**-1.3**
ZAL				LR	LR	11 08 43.9	
FITZ	**Fitzroy Crossi**	**43.95**	**180**	P	**P**	**10 50 47.3**	**-1.5**
	4.3nm,0.7s,mb4.3,baz=7.0,slow=21,SNR=5.7						
WRA	**Warramunga Arr**	**46.53**	**169**	P	**P**	**10 51 07.9**	**-1.6**
	0.9nm,0.6s,mb3.9,baz=351,slow=8.5,SNR=11						
BVAR	**Borovoye Array**	**48.88**	**319**	P	**P**	**10 51 27.4**	**-0.1**
	0.5nm,0.5s,mb3.8,baz=100,slow=8.8,SNR=3.0						
FINES	**FINESS Array B**	**71.86**	**330**	LR	LR	11 30 12.4	
	comp=Z,65nm,18.2s,MS3.9,baz=188,slow=40						

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*NAO **30** 10:42:40.8±2.7, 60.41N×27.29E, ML1.9*

*HEL **30** 10:42:41.9±0.3, 60.35N×27.15E, ML1.7, Explosion*

*IDC **30** 10:42:45.6±2.2, 60.53N×27.06E, mb1 3.4/2, mb1mx3.0/20, mbtmp3.2/2, ML3.0/2, Error ellipse: s-maj=15.8km s-min=11.1km az=128.0*

ISC 30 10:42:41.1±1.1**, 60.45N**±0.05×**27.10E**±0.08**, n13, σ1^{s}17**/24**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVF	**Pernaja**	**0.62**	**279**	*e*P	**Pg**	**10 42 53.9**	**+0.4**
PVF				*e*S	**Sg**	**10 43 02.1**	**+0.4**
FIA0	**FINESS Array S**	**1.11**	**334**	Pn	**Pn**	**10 43 03.3**	**-0.5**
	baz=154,slow=18						
FIA0				Lg		10 43 19.5	
	baz=157,slow=28						
FIA0				Rg		10 43 26.0	
	baz=156,slow=37						
FIA0	**FINESS Array S**	**1.11**	**334**	*e*P	**Pb**	**10 43 03.1**	**+0.2**
FIA0				*e*S	**Sb**	**10 43 19.1**	**+1.2**
FINES	**FINESS Array B**	**1.11**	**334**	Pg	**Pg**	**10 43 03.3**	**-0.1**
	2.4nm,0.3s,baz=152,slow=16,SNR=86						
FINES				Lg		10 43 19.5	
	4.6nm,0.3s,baz=151,slow=29,SNR=30						
KEF	**Keuruu**	**2.03**	**329**	*e*P	**Pn**	**10 43 19.1**	**+2.1**
KEF				*e*SG	**Sg**	**10 43 47.2**	**-1.5**
SUF	**Sumiainen**	**2.32**	**349**	*e*P	**Pn**	**10 43 22.8**	**+1.6**
SUF				*e*SG	**Sg**	**10 43 56.9**	**-1.5**
SUF				MSG		10 43 58.9	
	comp=Z,3.3nm,0.3s						
JOF	**Joensuu**	**3.19**	**37**	*e*P	**Pn**	**10 43 33.6**	**+0.2**

JOF				*e*S	**Sn**	**10 44 12.8**	**0.0**
JOF				*e*SB	**Sb**	**10 44 18.5**	**+0.5**
JOF				MSG		10 44 19.5	
	comp=Z,1.9nm,0.2s						
VAF	**Ylistaro**	**3.34**	**323**	*e*P	**Pn**	**10 43 36.8**	**+1.0**
VAF				*e*SB	**Sb**	**10 44 23.9**	**+1.3**
HFS	**Hagfors**	**6.67**	**273**	Pn	**Pn**	**10 44 21.9**	**-0.9**
	baz=102,slow=14						
HFS				Sn	**Sn**	**10 45 35.0**	**-5.6**
	baz=94,slow=28						
HFS				Lg		10 46 09.3	
	baz=90,slow=37						
NB2	**NORSAR Subarra**	**7.80**	**281**	Pn	**Pn**	**10 44 37.2**	**-1.5**
NOA	**NORSAR Array B**	**7.80**	**281**	Pn	**Pn**	**10 44 36.9**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=82,slow=16,SNR=2.7						
NOA				Sn	**Sn**	**10 46 02.4**	**-6.4**
	comp=Z,0.1nm,0.3s,baz=222,slow=5.4,SNR=2.5						
NOA				Lg		10 46 44.8	
	comp=Z,0.4nm,0.3s,baz=134,slow=22,SNR=2.8						
ARA0	**ARCESS Array S**	**9.15**	**356**	Pn	**P**	**10 44 53.7**	**-3.6**
	baz=179,slow=12						
ARA0				Sn	**Sn**	**10 46 33.2**	**-9.1**
	baz=173,slow=28						
ARCES	**ARCESS Array B**	**9.15**	**356**	Pn	**P**	**10 44 55.5**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=180,slow=13,SNR=9.8						
ARCES				Sn	**Sn**	**10 46 33.2**	**-9.1**
	comp=Z,0.1nm,0.3s,baz=174,slow=27,SNR=2.2						

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*IDC **30** 11:11:51.9±0.9,16.99S×173.72W,mb3.9/6,mb1 4.2/7, mb1mx4.0/17,mbtmp3.9/7,MS3.6/2,Ms1 3.6/2, ms1mx2.9/24,Error ellipse: s-maj=51.4km s-min=20.8km az=133.0*

*NEIC **30** 11:11:52.0±0.5,17.31S×173.55W,h10^{km},mb4.6/1,Error ellipse: s-maj=23.9km s-min=11.4km az=127.0*

ISC 30 11:11:54.1±0.6**,17.1S**±0.1×**173.6W**±0.2**,h33^{km},n18,** $\sigma 1^{s}$**43**/16**,mb4.0**/8**,MS3.3**/1**,2C,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.62**	**30**	Pn	**Pn**	**11 12 48.6**	**-0.7**
	9.8nm,0.3s,baz=178,slow=8.7,SNR=12						
AFI				Sn	**Sn**	**11 13 29.5**	**-2.0**
	51nm,0.3s,baz=48,slow=22,SNR=13						
AFI	**Afiamalu**	**3.62**	**30**	Pn	**Pn**	**11 12 48.6**	**-0.7**
AFI				Sn	**Sn**	**11 13 29.5**	**-2.0**
RAO	**Raoul Island**	**12.74**	**197**	LR	LR	11 18 14.4	
	comp=Z,316nm,19.2s,baz=144,slow=30						
URZ	**Urewera**	**22.61**	**199**	P	**P**	**11 16 50.2**	**-3.0**
	3.9nm,0.3s,mb4.3,baz=334,slow=4.7,SNR=11						
HNR	**Honiara**	**26.78**	**283**	LR	LR	11 26 50.2	
	comp=Z,87nm,19.0s,MS3.3,baz=87,slow=34						
RPZ	**Rata Peaks**	**29.55**	**203**	P	**P**	**11 17 59.1**	**+1.3**
	5.6nm,0.6s,mb4.5,baz=271,slow=3.4,SNR=9.1						
WB2	**Warramunga Arr**	**49.24**	**258**	*e*P	**P**	**11 20 41.8**	**+0.1**
WRAB	**Tennant Creek**	**49.24**	**258**	*e*P	**P**	**11 20 40.9**	**-0.8**
	6.4nm,1.0s,mb4.6						
WRA	**Warramunga Arr**	**49.25**	**258**	P	**P**	**11 20 41.8**	**0.0**
	0.9nm,0.5s,mb4.0,baz=97,slow=7.6,SNR=35						
NVAR	**Mina Array Bea**	**75.72**	**42**	P	**P**	**11 23 40.2**	**+2.0**
	0.5nm,0.6s,mb3.6,baz=229,slow=12,SNR=4.3						
NVAR	**Mina Array Bea**	**75.72**	**42**	P	**P**	**11 23 40.2**	**+2.0**
TXAR	**Lajitas Array**	**81.73**	**56**	P	**P**	**11 24 12.7**	**+1.5**
	0.3nm,0.8s,mb3.3,baz=219,slow=5.8,SNR=3.8						
PDAR	**Pinedale Array**	**83.66**	**42**	P	**P**	**11 24 21.6**	**+0.7**
	0.7nm,0.8s,mb3.9,baz=180,slow=3.0,SNR=5.9						
ILAR	**Eielson Array**	**84.12**	**11**	P	**P**	**11 24 25.2**	**+2.6**
	0.6nm,0.9s,mb3.7,baz=225,slow=5.7,SNR=5.2						
VNA3	**Neumayer Olymp**	**91.22**	**175**	⇑*i*	**P**	**11 24 55.7**	**-1.0**
VNA2	**Neumayer--Watz**	**91.71**	**176**	⇑*i*	**P**	**11 24 57.7**	**-1.3**
KMBO	**Kilima Mbogo**	**144.58**	**242**	PKP	PKPdf	11 31 31.1	+2.8
	1.9nm,0.8s,baz=54,slow=11,SNR=5.6						
BRTR	**Keskin Array B**	**147.28**	**319**	PKPbc	PKPdf	11 31 36.6	+4.6
	1.6nm,0.9s,baz=135,slow=3.5,SNR=6.5						

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*NAO **30** 11:16:31.2±1.9,59.31N×26.91E,ML2.2*

*BER **30** 11:16:31.4±3.9,59.32N×27.05E,ML2.2(NAO), Suspected explosion*

*IDC **30** 11:16:33.4±1.9,59.47N×27.01E,mb1 3.3/4, mb1mx3.1/22,mbtmp3.3/4,ML2.7/4,Error ellipse: s-maj=17.3km s-min=9.5km az=121.0*

HEL 30 11:16:31.2±0.1**,59.33N×27.04E,ML2.2**(NAO)**, Explosion,Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VSU	**Vasula**	**0.88**	**190**	*i* P	Pg	11 16 47.0	-1.8
VSU				*i* S	Sg	11 16 58.2	-2.3
FIA0	**FINESS Array S**	**2.18**	**348**	*e*P	Pn	11 17 08.5	-0.7
FIA0				*e*SG	Sg	11 17 38.0	-5.7
FIA0				*e*RG		11 17 57.1	
FIA0	**FINESS Array S**	**2.18**	**348**	Pn	Pn	11 17 08.7	-0.5
	baz=165,slow=18						
FIA0				Pg	Pg	11 17 09.9	-4.8
	baz=165,slow=16						
FIA0				Lg		11 17 39.3	
	baz=168,slow=28						
FIA0				Rg		11 17 51.9	
	baz=165,slow=56						
FINES	**FINESS Array B**	**2.18**	**348**	Pn	Pn	11 17 08.5	-0.6
	1.6nm,0.3s,baz=162,slow=16,SNR=40						
FINES				Pg	Pg	11 17 09.9	-4.7
	1.6nm,0.3s,baz=165,slow=16,SNR=41						
FINES				Lg		11 17 37.3	
	5.6nm,0.3s,baz=168,slow=26,SNR=28						
HFS	**Hagfors**	**6.80**	**283**	Pn	Pn	11 18 11.9	-2.8
	baz=117,slow=12						
HFS				Sn	Sn	11 19 25.2	-8.5
	baz=90,slow=28						
HFS				Lg		11 19 59.9	
	baz=100,slow=28						
HFS	**Hagfors**	**6.80**	**283**	*e*P	Pn	11 18 11.9	-2.8
HFS				*e*S	Sn	11 19 25.2	-8.5
HFS				*e*SG	Sg	11 19 59.9	-18
HFS	**Hagfors**	**6.80**	**283**	Pn	Pn	11 18 10.9	-3.7
	0.0nm,0.3s,baz=124,slow=10,SNR=2.9						
HFS				Sn	Sn	11 19 26.0	-7.7
	0.1nm,0.3s,baz=90,slow=26,SNR=3.5						
HFS				Lg		11 20 02.9	
	0.1nm,0.3s,baz=93,slow=30,SNR=5.0						
NB2	**NORSAR Subarra**	**8.07**	**289**	Pn	P	11 18 28.3	-4.2
	baz=76,slow=16						
NB2	**NORSAR Subarra**	**8.07**	**289**	*e*P	P	11 18 28.3	-4.2
NOA	**NORSAR Array B**	**8.07**	**289**	Pn	P	11 18 28.2	-4.3
	0.2nm,0.3s,baz=199,slow=8.0,SNR=2.5						
ARA0	**ARCESS Array S**	**10.27**	**357**	Pn	P	11 18 57.1	-5.7
	baz=174,slow=14						
ARA0	**ARCESS Array S**	**10.27**	**357**	*e*P	P	11 18 57.1	-5.7
ARCES	**ARCESS Array B**	**10.27**	**357**	Pn	P	11 18 57.2	-5.6
	0.1nm,0.3s,baz=174,slow=14,SNR=7.4						
ARCES				Sn	S	11 20 45.9	-14
	0.1nm,0.3s,baz=174,slow=24,SNR=2.7						

IDC 30 11:19:07.0±2.0**,0.50N×96.98E,mb3.6**/5**,mb1 3.7**/6**, mb1mx3.6**/19**,mbtmp3.6**/6**,ML3.1**/1**,Error ellipse: s-maj=53.1km s-min=28.1km az=52.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.00**	**40**	Pn	Pn	11 19 55.0	-1.7
	2.7nm,0.3s,baz=256,slow=5.9,SNR=13						
WRA	**Warramunga Arr**	**41.86**	**121**	P	P	11 26 59.0	-1.8
	0.7nm,0.8s,baz=300,slow=9.1,SNR=5.3						
SONM	**Songino Array**	**47.85**	**9**	P	P	11 27 46.9	-1.6
	0.3nm,0.6s,baz=180,slow=8.6,SNR=2.6						
MKAR	**Makanchi Array**	**47.86**	**346**	P	P	11 27 46.9	-1.8
	0.6nm,0.6s,baz=161,slow=7.6,SNR=9.9						
ZAL	**Zalesovo**	**54.20**	**351**	P	P	11 28 34.3	-2.2
	1.2nm,0.7s,baz=2.7,slow=9.9,SNR=3.2						
BVAR	**Borovoye Array**	**56.83**	**341**	P	P	11 28 52.5	-3.1
	0.2nm,0.5s,baz=141,slow=9.2,SNR=2.2						

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*NIED **30** 11:24:00,26.20N×125.80E,h5^{km},Mw4.4 Best double couple: M$_0$5.1×10^{15} NP1:ϕ_s260°,δ63°,λ-69°. NP2:ϕ_s40°, δ33°,λ-125°.*

*IDC **30** 11:24:03.0±0.7,26.10N×125.69E,mb4.2/12,mb1 4.4/13, mb1mx4.2/23,mbtmp4.2/13,ML3.7/1,MS3.9/10,Ms1 3.9/10, ms1mx3.6/20,Error ellipse: s-maj=21.3km s-min=15.3km az=64.0*

*JMA **30** 11:24:03.5±0.2,26.16N×125.75E,h9^{km}±3^{km},M4.5*

*MOS **30** 11:24:06.5±1.8,26.12N×125.81E,h33^{km},mb4.8/9,Error ellipse: s-maj=22.6km s-min=10.0km az=124.0*

*NEIC **30** 11:24:09.6±0.9,26.11N×125.77E,h51^{km}±9^{km},mb4.6/10, Error ellipse: s-maj=9.8km s-min=9.1km az=107.0*

*BJI **30** 11:24:10.1,26.27N×125.85E,h61^{km},mB4.7,mb4.3, ML4.4,Ms4.5,Msz4.2*

ISC 30 11:24:03.4±0.3**,26.11N**±0.04×**125.76E**±0.03**,h9^{km},n67,** $\sigma 1^{s}$**31**/65**,mb4.4**/23**,MS4.0**/14**,1D,Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKE	**Kume jima 2**	**0.95**	**77**	P	**Pb**	**11 24 21.4**	**-0.2**
JKE				S	**Sb**	**11 24 33.8**	**-0.2**
JMJ	**Miyako jima 2**	**1.36**	**198**	P	**Pb**	**11 24 28.9**	**+0.3**
JMJ				*e*S	**Sb**	**11 24 46.8**	**+0.9**
JOGS	**Gusukube**	**1.38**	**193**	P	**Pn**	**11 24 29.3**	**+0.3**
JAGN	**Aguni-jima**	**1.42**	**70**	P	**Pn**	**11 24 29.0**	**-0.4**
NAH1	**Naha**	**1.74**	**87**	P	**Pn**	**11 24 34.8**	**+0.7**
NAH1				*e*S	**Sn**	**11 24 56.0**	**-0.5**
JTJ	**Tarama**	**1.75**	**213**	P	**Pn**	**11 24 34.7**	**+0.5**
JJT2	**Tamagusuku 2**	**1.79**	**89**	P	**Pn**	**11 24 35.3**	**+0.5**
JIH	**Iheya**	**2.18**	**65**	P	**Pn**	**11 24 40.4**	**0.0**
JIJ	**Ishigaki jima**	**2.27**	**220**	P	**Pn**	**11 24 41.8**	**+0.1**
JOW	**Kunigami**	**2.37**	**72**	Pn	**Pn**	**11 24 43.4**	**+0.4**
	27nm,0.3s,baz=248,slow=11,SNR=57						
JOW				Sn	**Sn**	**11 25 16.1**	**+3.6**
	40nm,0.3s,baz=114,slow=30,SNR=9.1						
JOW	**Kunigami**	**2.37**	**72**	P	**Pn**	**11 24 43.5**	**+0.5**
IRIF	**Iriomote-Funau**	**2.55**	**226**	P	**Pn**	**11 24 48.2**	**+2.5**
JTK	**Tokunoshima**	**3.30**	**59**	P	**Pn**	**11 24 56.8**	**+0.5**
TATO	**Taipei**	**4.02**	**255**	*e*P	**Pn**	**11 25 07.4**	**+0.9**
YHNB	**Yeheng**	**4.21**	**251**	*e*P	**Pn**	**11 25 13.6**	**+4.2**
NACB	**Ninganchiao**	**4.24**	**244**	*e*P	**Pn**	**11 25 05.5**	**-4.1**
SSE	**Sheshan**	**6.38**	**322**	*e*P	**Pn**	**11 25 42.8**	**+2.8**
SSE				Smax			
	comp=N,140nm,1.4s						
SSE				Smax			
	comp=E,120nm,1.5s						
SSE				LR	LR		
	comp=N,990nm,12.6s						
SSE				LR	LR		
	comp=E,490nm,12.6s						
SSE				LR	LR		
	comp=Z,1μm,13.7s						
JNU	**Nakatsue**	**8.28**	**31**	Pn	**P**	**11 26 09.5**	**+2.9**
	comp=Z,0.6nm,0.3s,baz=260,slow=17,SNR=10						
JNU				LR	LR	11 29 30.1	
	comp=Z,294nm,18.9s,baz=64,slow=39						
ENH	**Enshi**	**14.93**	**290**	P	**P**	**11 27 33.6**	**-2.8**
CN2	**Changchun**	**17.65**	**359**	*e*P	**P**	**11 28 13.5**	**+2.4**
CN2				AMB	AMB		
	comp=Z,10.0nm,0.6s						
MDJ	**Mudanjiang**	**18.72**	**9**	*e*P	**P**	**11 28 27.9**	**+3.5**
	comp=Z,25nm,1.3s						
CD2	**Chengdu**	**19.91**	**289**	*e*P	**P**	**11 28 38.3**	**+0.1**
KMI	**Kunming**	**20.78**	**272**	P	**P**	**11 28 50.0**	**+2.7**
KMI				AMB	AMB		
	comp=Z,10.0nm,0.9s						
KMI	**Kunming**	**20.78**	**272**	P	**P**	**11 28 50.1**	**+2.8**
	comp=Z,15nm,0.9s						
LZH	**Lanzhou**	**21.19**	**303**	*e*P	**P**	**11 28 54.5**	**+3.0**
LZH				AP		11 29 11.0	
LZH				XP		11 29 18.5	
LZH				AMB	AMB		
	comp=Z,40nm,1.5s,mb4.5						
LZH				AMB	AMB		
	comp=Z,170nm,4.0s						
LZH				LR	LR		
	comp=E,1μm,10.2s						
LZH				LR	LR		
	comp=Z,1μm,12.6s,MS4.5						
LZH	**Lanzhou**	**21.19**	**303**	*e*P	**P**	**11 28 54.6**	**+3.1**
	comp=Z,42nm,1.5s,mb4.5						
LZH				pP		11 29 11.0	
LZH				sP		11 29 18.5	
LZH				PP	PP	11 29 38.0	+23
LZH				*e*S	S	11 33 14.3	+32
LZH				sS		11 33 45.0	
LZH				LR	LR		
	comp=Z,1μm,12.6s,MS4.5						
LZH	**Lanzhou**	**21.19**	**303**	*e*P	**P**	**11 28 54.6**	**+3.1**
LZH				*PP		11 29 11.0	
LZH				*SP		11 29 18.5	
LZH				*e*S	S	11 33 14.3	+32
LZH				pmax	pmax		
	comp=Z,42nm,1.5s,mb4.5						
LZH				MLR	MLR		
	comp=Z,1μm,12.6s,MS4.5						
GUMO	**Guam**	**21.84**	**121**	LR	LR	11 35 42.2	
	comp=Z,133nm,21.3s,MS3.3,baz=232,slow=32						
ASAJ	**Asahikawa**	**22.56**	**33**	LR	LR	11 38 38.9	
	comp=Z,127nm,20.4s,MS3.3,baz=169,slow=39						
KLR	**Kul'dur**	**23.55**	**10**	*e*P	**P**	**11 29 22.7**	**+8.0**
HIA	**Hailar**	**23.58**	**350**	*e*P	**P**	**11 29 16.3**	**+1.2**
	comp=Z,23nm,1.3s,mb4.5						
HIA	**Hailar**	**23.58**	**350**	*e*P	**P**	**11 29 16.3**	**+1.2**
HIA				pmax	pmax		
	comp=Z,23nm,1.3s						
GTA	**Gaotai**	**25.43**	**308**	*e*P	**P**	**11 29 32.0**	**-0.9**
GTA				S	**S**	**11 33 54.0**	**-3.1**
GTA				AMB	AMB		
	comp=Z,10.0nm,1.0s,mb4.3						
GTA				AMB	AMB		
	comp=Z,90nm,4.9s						
GTA				LR	LR		
	comp=N,520nm,13.7s,MS4.3						
GTA				LR	LR		
	comp=E,400nm,15.2s,MS4.3						
GTA				LR	LR		
	comp=Z,560nm,14.1s,MS4.2						
ULN	**Ulaanbaatar**	**26.22**	**331**	*e*P	**P**	**11 29 39.3**	**-0.9**
	comp=Z,24nm,1.1s,mb4.6						
ULN	**Ulaanbaatar**	**26.22**	**331**	*e*P	**P**	**11 29 39.3**	**-1.0**
ULN				pmax	pmax		
	comp=Z,24nm,1.1s,mb4.6						
SONM	**Songino Array**	**26.49**	**330**	P	**P**	**11 29 42.8**	**0.0**
	comp=Z,10nm,0.8s,mb4.4,baz=143,slow=10,SNR=42						
SONM				LR	LR	11 41 47.6	
	comp=Z,418nm,18.1s,MS4.0,baz=341,slow=40						
MKAR	**Makanchi Array**	**39.97**	**313**	P	**P**	**11 31 38.7**	**-1.1**
	comp=Z,2.9nm,0.7s,mb4.1,baz=99,slow=10,SNR=29						
MKAR				LR	LR	11 49 42.2	
	comp=Z,108nm,19.2s,MS3.7,baz=119,slow=38						
ZAL	**Zalesovo**	**41.02**	**324**	P	**P**	**11 31 47.3**	**-1.0**
	comp=Z,2.6nm,0.7s,mb4.0,baz=1.7,slow=7.7,SNR=12						
ZAL				LR	LR	11 50 44.4	
	comp=Z,248nm,18.0s,MS4.1,baz=360,slow=39						
KURK	**Kurchatov**	**43.39**	**317**	*e*P	**P**	**11 32 06.1**	**-1.7**
	comp=Z,24nm,1.1s,mb4.8						
KURK	**Kurchatov**	**43.39**	**317**	*e*P	**P**	**11 32 06.2**	**-1.5**
FITZ	**Fitzroy Crossi**	**43.95**	**180**	*e*P	**P**	**11 32 11.7**	**-1.0**
	comp=Z,18nm,0.7s,mb4.9						
FITZ				*i*		11 32 17.0	
FITZ	**Fitzroy Crossi**	**43.95**	**180**	P	**P**	**11 32 11.9**	**-0.8**
	comp=Z,26nm,0.7s,mb5.0,baz=10,slow=7.5,SNR=32						
AAK	**Ala-Archa**	**44.72**	**305**	*i* P	**P**	**11 32 15.0**	**-3.6**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
AAK				MLR	MLR		
	comp=Z,200nm,15.0s,MS4.2						
WRAB	**Tennant Creek**	**46.52**	**169**	*e*P	**P**	**11 32 32.2**	**-1.0**
	comp=Z,20nm,1.1s,mb5.0						
WRAB	**Tennant Creek**	**46.52**	**169**	*e*P	**P**	**11 32 32.2**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,20nm,1.1s,mb5.0						
WRA	**Warramunga Arr**	**46.53**	**169**	P	**P**	**11 32 32.1**	**-1.2**
	comp=Z,6.6nm,0.7s,mb4.7,baz=351,slow=8.4,SNR=62						
WB2	**Warramunga Arr**	**46.53**	**169**	⇓*i*P	**P**	**11 32 32.4**	**-0.9**
CHKZ	**Chkalovo**	**48.88**	**320**	*e*P	**P**	**11 32 49.5**	**-1.7**
	comp=Z,6.2nm,1.1s,mb4.5						
CHKZ	**Chkalovo**	**48.88**	**320**	*e*P	**P**	**11 32 49.5**	**-1.7**
CHKZ				pmax	pmax		
	comp=Z,6.0nm,1.1s,mb4.5						
BVAR	**Borovoye Array**	**48.89**	**319**	P	**P**	**11 32 49.4**	**-1.9**
	comp=Z,0.9nm,0.6s,mb4.0,baz=90,slow=10,SNR=4.1						
BRVK	**Borovoye**	**48.96**	**319**	*e*P	**P**	**11 32 50.5**	**-1.3**
	comp=Z,5.4nm,1.1s,mb4.5						
BRVK	**Borovoye**	**48.96**	**319**	*e*P	**P**	**11 32 50.5**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.1s,mb4.5						
STKA	**Stephens Creek**	**59.61**	**164**	P	**P**	**11 34 08.9**	**-1.3**
	comp=Z,4.2nm,1.0s,mb4.4,baz=4.1,slow=5.6,SNR=5.3						
ILAR	**Eielson Array**	**65.59**	**28**	P	**P**	**11 34 49.0**	**-0.4**
	comp=Z,0.3nm,0.6s,mb3.5,baz=257,slow=5.3,SNR=7.1						
KIV	**Kislovodsk**	**67.60**	**309**	*i* P	**P**	**11 35 03.4**	**+0.9**
KIV				pmax	pmax		
	comp=Z,24nm,1.5s,mb5.0						
KIV				MLR	MLR		
	comp=Z,100nm,18.0s,MS4.1						
OBN	**Obninsk**	**68.56**	**322**	P	**P**	**11 35 11.0**	**+2.7**
OBN				*e*		11 35 35.1	
OBN				MLR	MLR		
	comp=Z,100nm,17.0s,MS4.1						
ARCES	**ARCESS Array B**	**69.30**	**338**	LR	LR	12 12 44.5	
	comp=Z,146nm,18.4s,MS4.3,baz=209,slow=42						
ANN	**Anapa**	**70.97**	**311**	*e*P	**P**	**11 35 25.7**	**+2.5**
ANN				pmax	pmax		
	comp=Z,25nm,1.3s,mb5.0						
FINES	**FINESS Array B**	**71.86**	**330**	P	**P**	**11 35 26.7**	**-1.6**
	comp=Z,3.8nm,0.9s,mb4.3,baz=63,slow=6.2,SNR=3.4						
BRTR	**Keskin Array B**	**75.34**	**307**	P	**P**	**11 35 48.7**	**-0.3**
	comp=Z,0.2nm,0.3s,mb3.5,baz=23,slow=11,SNR=2.7						
NOA	**NORSAR Array B**	**78.42**	**333**	LR	LR	12 13 14.9	
	comp=Z,113nm,18.1s,MS4.2,baz=25,slow=38						
YKA	**Yellowknife Ar**	**79.56**	**24**	P	**P**	**11 36 11.6**	**-0.2**
	comp=Z,1.5nm,0.8s,mb4.0,baz=305,slow=4.9,SNR=5.7						
GERES	**GERESS Array B**	**83.94**	**322**	LR	LR	12 16 02.0	
	comp=Z,88nm,18.4s,MS4.2,baz=314,slow=37						
EDM	**Edmonton**	**85.86**	**31**	*e*P	**P**	**11 36 44.8**	**+0.3**
KMBO	**Kilima Mbogo**	**89.15**	**268**	P	**P**	**11 37 01.0**	**-0.3**
	comp=Z,1.8nm,0.8s,mb4.4,baz=34,slow=9.7,SNR=5.1						
PPT	**Papeete**	**92.96**	**108**	LR	LR	12 13 43.3	
	comp=Z,53nm,19.6s,MS4.0,baz=20,slow=32						
SDV	**Santo Domingo**	**141.74**	**27**	*e*P	PKPdf	11 43 35.5	-3.7

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*IDC **30** 11:29:49.9±2.0,6.76N×126.46E,mb3.8/4,mb1 3.9/4, mb1mx3.7/18,mbtmp3.8/4,Error ellipse: s-maj=121.5km s-min=26.2km az=67.0*

*MAN **30** 11:29:50.5,6.71N×126.73E,h33^{km},mb4.9,ML3.8,MS3.8*

ISC 30 11:29:52.7±0.8**,6.78N**±0.07×**126.66E**±0.10**,h33^{km},n10,** $\sigma 1^{s}$**21**/13**,mb3.7**/4**,2C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	**Bislig**	**1.43**	**348**	⇑*i*P	**P**	**11 30 16.9**	**+0.4**
BIPH				*i* S	**S**	**11 30 35.3**	**+1.1**
KCP	**Kidapawan**	**1.57**	**278**	⇓*i*P	**P**	**11 30 20.0**	**+1.4**
BUKP	**Musuan**	**1.92**	**305**	*e*P	**P**	**11 30 23.0**	**-0.7**
BUKP				*e*S	**S**	**11 30 47.4**	**+0.5**
BUTP	**Butuan**	**2.41**	**335**	*e*P	**P**	**11 30 27.9**	**-2.6**
BUTP				*e*S	**S**	**11 31 07.1**	**+8.0**
SCPH	**Surigao**	**3.20**	**339**	⇑*e*P	**P**	**11 30 46.0**	**+4.2**
PAGZ	**Pagadian**	**3.42**	**288**	*e*P	**P**	**11 30 43.5**	**-1.5**
FITZ	**Fitzroy Crossi**	**24.74**	**182**	P	**P**	**11 35 14.6**	**+1.8**
	4.3nm,0.6s,mb4.2,baz=2.8,slow=11,SNR=7.5						
WRA	**Warramunga Arr**	**27.61**	**164**	P	**P**	**11 35 38.5**	**-1.0**
	0.4nm,0.5s,mb3.4,baz=339,slow=11,SNR=7.4						
STKA	**Stephens Creek**	**41.00**	**160**	P	**P**	**11 37 34.7**	**+0.3**
	1.9nm,0.9s,mb3.7,baz=339,slow=8.6,SNR=3.2						
MKAR	**Makanchi Array**	**55.04**	**324**	P	**P**	**11 39 22.6**	**-0.9**
	0.3nm,0.4s,mb3.6,baz=116,slow=6.5,SNR=4.9						

MAN 30 12:38:43.5,12.71N×124.93E,h20^{km},mb4.1,ML2.9, MS2.6,Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.33**	**233**	*e*P	Pb	12 38 51.8	+1.2
CNP				*e*S	Sb	12 38 58.7	+3.3
PVCP	**Virac**	**1.16**	**319**	*e*P	Pb	12 39 03.6	-1.1
PVCP				*e*S	Sb	12 39 20.0	+0.7
BESP	**Borongan**	**1.21**	**156**	*e*P	Pn	12 39 04.3	-1.2
BESP				*e*S	Sb	12 39 21.6	+0.8
PLP	**Palo**	**1.54**	**178**	*e*P	Pn	12 39 09.5	-0.6
PLP				*e*S	Sn	12 39 29.4	-0.3
MSLP	**Maasin**	**2.56**	**182**	*e*P	Pn	12 39 26.2	+1.4
MSLP				*e*S	Sn	12 40 04.1	+8.4
GUIM	**Jordan**	**3.09**	**228**	*e*P	Pn	12 39 31.9	-0.4

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*MOS **30** 12:50:04.5±0.5,54.99N×162.37E,h42^{km},mb4.2/1,Error ellipse: s-maj=30.0km s-min=13.5km az=74.2*

KRSC 30 12:50:03.4±1.0**,55.02N×162.42E,h73^{km}**±11^{km}**,ML4.2, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.21**	**11**	P	P	12 50 26.3	+1.3
KBTR				S	S	12 50 42.7	+1.5
KBTR	**Krutoberegovo**	**1.21**	**11**	*e*P	P	12 50 26.0	+1.0
KBTR				*e*S	S	12 50 42.8	+1.6
TUMR	**Tumrok**	**1.33**	**282**	*e*P	P	12 50 26.8	0.0
TUMR				*i* S	S	12 50 43.4	-0.7
ZLN	**Zelenaya**	**1.36**	**318**	*e*P	P	12 50 27.6	+0.5
KMNR	**Kamenistaya**	**1.45**	**302**	*e*P	P	12 50 28.4	+0.1
KMNR				*i* S	S	12 50 45.5	-1.2
LGNR	**Loginova**	**1.45**	**318**	*i* P	P	12 50 29.5	+1.2
CIRR	**Tsirk**	**1.45**	**320**	*e*P	P	12 50 29.3	+0.9
KPT	**Kopyto**	**1.57**	**308**	*e*P	P	12 50 30.9	+1.0
KRSR	**Krestovskiy**	**1.60**	**320**	*e*P	P	12 50 30.6	+0.3
KLY	**Klyuchi**	**1.64**	**323**	P	P	12 50 30.6	-0.2
KLY				S	S	12 50 50.1	-0.9
KLY	**Klyuchi**	**1.64**	**323**	*e*P	P	12 50 30.1	-0.7
KLY				*e*S	S	12 50 50.4	-0.6
KOZR	**Kozyr**	**1.78**	**307**	PN	P	12 50 33.3	+0.6
KOZR				S	S	12 50 54.3	0.0
KOZ	**Kozyrevsk**	**1.78**	**307**	P	P	12 50 33.3	+0.5
KOZ				S	S	12 50 54.3	-0.1
KOZ	**Kozyrevsk**	**1.78**	**307**	*e*P	P	12 50 33.2	+0.4
KOZ				*e*S	S	12 50 56.0	+1.6
SRKR	**Sorokina**	**1.78**	**337**	*e*P	P	12 50 34.2	+1.4
KII	**Karymskiy**	**1.99**	**242**	P	P	12 50 36.2	+0.6
KII				S	S	12 50 59.9	+0.5
KII	**Karymskiy**	**1.99**	**242**	*e*P	P	12 50 35.9	+0.3
KII				*e*S	S	12 50 59.9	+0.5
SRDR	**Sredinnyy**	**2.01**	**311**	*i* P	P	12 50 36.5	+0.7
BKI	**Bering**	**2.05**	**83**	*e*S	S	12 50 58.0	-2.8
BKI				Smax			
	130nm,0.2s						
ESO	**Esso**	**2.30**	**295**	*e*P	P	12 50 39.4	-0.6
ESO				*e*S	S	12 51 06.3	-0.9
ESO				Smax			
	130nm,0.3s						
SPN	**Mys Shipunski**	**2.39**	**217**	P	P	12 50 40.7	-0.5
SPN				S	S	12 51 07.3	-2.0
SPN	**Mys Shipunski**	**2.39**	**217**	*e*P	P	12 50 40.6	-0.6
SPN				*e*S	S	12 51 07.7	-1.6
NLC	**Nalytchevo**	**2.59**	**226**	P	P	12 50 44.4	+0.3
NLC				S	S	12 51 14.4	0.0
NLC	**Nalytchevo**	**2.59**	**226**	*e*P	P	12 50 44.3	+0.2
NLC				*e*S	S	12 51 14.2	-0.2
SMAR	**Somma**	**2.76**	**232**	*e*P	P	12 50 47.3	+0.8
SMAR				*e*S	S	12 51 20.4	+1.7
UGLR	**Uglovaya**	**2.79**	**231**	*e*P	P	12 50 47.8	+1.0
UGLR				*i* S	S	12 51 20.9	+1.5
AVH	**Avacha**	**2.79**	**232**	*e*P	P	12 50 47.5	+0.6
AVH				*e*S	S	12 51 20.1	+0.7
KOK	**Koryaka**	**2.82**	**234**	*e*P	P	12 50 48.3	+1.0
KOK				*e*S	S	12 51 21.3	+1.1
GNL	**Ganaly**	**2.94**	**245**	*e*P	P	12 50 49.8	+0.9
GNL				*e*S	S	12 51 23.1	0.0
PET	**Petropavlovsk**	**2.99**	**230**	P	P	12 50 50.4	+0.7
PET				S	S	12 51 24.0	-0.4
PET	**Petropavlovsk**	**2.99**	**230**	*e*P	P	12 50 50.4	+0.7
PET				*e*S	S	12 51 24.2	-0.2
PET	**Petropavlovsk**	**2.99**	**230**	*e*PN	P	12 50 50.7	+1.0
PET				*e*S	S	12 51 25.1	+0.7
PET				pmax	pmax		
	comp=Z,159nm,0.3s						
PET				smax			
	comp=E,234nm,0.5s						
PET				smax			
	comp=N,269nm,0.5s						
PET				smax			
	comp=N,81nm,0.6s						
PET				smax			
	comp=N,88nm,0.6s						
KRMR	**Karymshinskiy**	**3.35**	**231**	*e*P	P	12 50 56.3	+1.6
KRMR				*i* S	S	12 51 35.0	+1.5
RUS	**Russkaya**	**3.48**	**223**	P	P	12 50 57.0	+0.5
RUS				S	S	12 51 34.9	-1.8
RUS	**Russkaya**	**3.48**	**223**	*e*P	P	12 50 57.3	+0.8
RUS				*e*S	S	12 51 35.2	-1.5
GRL	**Gorelyy**	**3.57**	**228**	*e*P	P	12 50 59.4	+1.6
GRL				*e*S	S	12 51 40.7	+1.7

APC	**Apacha**	3.75	238	*e*P	P	12 51 01.0	+0.8

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*NAO **30** 13:13:50.1±1.6, 59.62N×22.30E, ML2.1*
*BER **30** 13:13:52.3±5.1, 59.71N×22.30E, ML2.1(NAO), Suspected explosion*
HEL 30 13:13:49.2±0.2**, 59.46N×22.31E, ML1.7, ML2.6**(UPP)**, ML2.1**(NAO)**, Explosion, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAL	**Aland**	1.37	302	*e*P	Pb	13 14 13.0	-2.5
NRTU	**Norrtaelje**	1.88	278	*e*P	Pn	13 14 22.3	-0.6
NRTU				*e*S	Sn	13 14 47.6	-0.1
PVF	**Pernaja**	2.09	57	*e*P	Pn	13 14 24.6	-1.3
PVF				*e*S	Sn	13 14 51.6	-1.4
NYNU	**Nynaeshamn**	2.26	260	*e*P	Pn	13 14 28.4	0.0
NYNU				*e*S	Sn	13 14 59.2	+1.9
FLYU	**Flymyra**	2.33	288	*e*P	Pn	13 14 28.4	-1.0
FLYU				*e*S	Sn	13 15 00.1	+1.0
VSU	**Vasula**	2.50	112	*e*P	Pn	13 14 31.2	-0.6
VSU				*e*SG	Sg	13 15 06.7	-5.9
OSTU	**Oestervaala**	2.72	289	*e*P	Pn	13 14 33.6	-1.3
FIA0	**FINESS Array S**	2.73	42	Pn	Pn	13 14 33.8	-1.2
	baz=216,slow=16						
FIA0				Lg		13 15 11.0	
	baz=234,slow=28						
FIA0	**FINESS Array S**	2.73	42	*e*P	Pn	13 14 34.1	-0.9
FIA0				*e*S	Sn	13 15 07.2	-2.0
KEF	**Keuruu**	2.99	24	*e*P	Pn	13 14 38.1	-0.7
KEF				*e*S	Sn	13 15 15.0	-0.9
SUF	**Sumiainen**	3.76	28	*e*P	Pn	13 14 48.9	-0.8
SUF				*e*S	Sn	13 15 32.0	-3.4
SUF				*e*SG	Sg	13 15 45.5	-9.0
SUF				MSG		13 15 46.7	
	comp=Z,1.2nm,0.2s						
HFS	**Hagfors**	4.40	282	*e*P	Pn	13 14 58.0	-0.8
HFS				*e*SG		13 16 04.3	
HFS	**Hagfors**	4.40	282	Pn	Pn	13 14 58.0	-0.8
	baz=105,slow=10						
HFS				Lg		13 16 04.3	
	baz=104,slow=37						
NB2	**NORSAR Subarra**	5.75	291	Pn	Pn	13 15 14.9	-2.9
	baz=78,slow=16						
NB2				Sn	Sn	13 16 21.9	-3.5
NB2				Lg		13 16 47.2	
NB2	**NORSAR Subarra**	5.75	291	*e*P	Pn	13 15 14.9	-2.9
NB2				*e*S	Sn	13 16 21.9	-3.5
NB2				*e*SG		13 16 47.2	
ARA0	**ARCESS Array S**	10.20	6	Pn	P	13 16 13.3	-6.5
	baz=183,slow=16						
ARA0	**ARCESS Array S**	10.20	6	*e*P	P	13 16 13.3	-6.5

MAN 30 13:41:26.8, 12.35N×123.63E, h18^{km}, mb4.0, ML2.8, MS2.4, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMPH	**Masbate**	0.01	346	*i* P	Pb	13 41 29.8	-0.2
MMPH				*i* S	Sb	13 41 31.8	-0.3
CNP	**Catarman**	1.02	81	*e*P	Pb	13 41 45.7	+0.1
CNP				*e*S	Sb	13 42 00.2	+1.5
RCP	**Roxas**	1.16	228	⇓*e*P	Sb	13 42 07.0	+4.3
AUQP	**San Andres**	1.34	316	*e*P	Pn	13 41 49.9	-1.0
AUQP				*e*S	Sb	13 42 13.8	+5.8
PVCP	**Virac**	1.34	22	*e*P	Pn	13 41 49.8	-1.1
PVCP				*e*S	Sb	13 42 05.7	-2.3
OTRP	**Odiongan**	1.57	271	*e*P	Pn	13 41 55.8	+1.7
GUIM	**Jordan**	1.99	211	*e*P	Pn	13 41 59.5	-0.6
BOAC	**Boac**	2.06	303	*e*P	Pn	13 41 54.1	-7.0
BOAC				*e*S	Sn	13 42 31.7	+5.2

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*IDC **30** 13:42:22.5±1.0, 8.06S×108.81E, mb4.3/7, mb1 4.4/8, mb1mx4.3/15, mbtmp4.3/8, ML4.1/1, MS3.3/3, Ms1 3.3/3, ms1mx2.9/16, Error ellipse: s-maj=65.1km s-min=16.7km az=49.0*
*NEIC **30** 13:42:24.1±0.6, 8.04S×108.84E, h10^{km}, mb4.6/3, Error ellipse: s-maj=30.2km s-min=7.2km az=48.0*
ISC 30 13:42:25.8±0.8**, 8.0S**±0.2×**109.0E**±0.2**, h33^{km}, n22, σ0^{s}58**/19**, mb4.3**/9**, MS3.4**/1**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	14.65	316	LR	LR	13 52 23.8	
	comp=Z,91nm,19.9s,baz=263,slow=41						
MBWA	**Marble Bar**	16.73	143	*e*P	**P**	**13 46 18.5**	**-0.9**
FITZ	**Fitzroy Crossi**	19.09	123	P	**P**	**13 46 49.2**	**+0.6**
	0.5nm,0.3s,baz=291,slow=8.6,SNR=6.8						
FITZ				LR	LR	13 54 14.1	
	comp=Z,79nm,20.6s,baz=64,slow=37						
WRA	**Warramunga Arr**	27.30	118	P	**P**	**13 48 09.7**	**0.0**
	3.8nm,0.7s,mb4.0,baz=290,slow=11,SNR=54						
WRA				PcP	PcP	13 51 28.2	-0.8
	0.8nm,0.5s,baz=294,slow=2.0,SNR=11						
WRAB	**Tennant Creek**	27.31	118	*e*P	**P**	**13 48 09.3**	**-0.5**
	6.6nm,0.6s,mb4.3						
WB2	**Warramunga Arr**	27.31	118	*e*P	**P**	**13 48 09.6**	**-0.2**
CTAO	**Charters Tower**	38.03	112	*e*P	**P**	**13 49 44.2**	**+1.2**
STKA	**Stephens Creek**	38.55	133	*e*P	**P**	**13 49 47.5**	**+0.2**
	3.8nm,0.5s,mb4.4						
STKA	**Stephens Creek**	38.55	133	P	**P**	**13 49 47.6**	**+0.3**
	4.6nm,0.5s,mb4.4,baz=307,slow=9.3,SNR=21						
STKA				PcP	PcP	13 51 59.6	-0.5
	3.4nm,0.6s,baz=329,slow=5.4,SNR=6.4						
STKA				LR	LR	14 06 37.0	
	comp=Z,60nm,19.6s,MS3.4,baz=204,slow=38						
STKA	**Stephens Creek**	38.55	133	*e*P	**P**	**13 49 47.2**	**-0.1**
SONM	**Songino Array**	55.60	358	P	**P**	**13 52 00.5**	**-0.1**
	0.8nm,0.6s,mb3.9,baz=182,slow=7.7,SNR=7.6						
SONM				PcP	PcP	13 52 59.8	-0.2
	0.7nm,0.6s,baz=172,slow=3.6,SNR=4.6						
MKAR	**Makanchi Array**	59.47	339	P	**P**	**13 52 27.1**	**-0.9**
	1.0nm,0.4s,mb4.2,baz=148,slow=7.1,SNR=12						
MKAR				PcP	PcP	13 53 15.4	+0.3
	1.5nm,0.6s,baz=140,slow=6.6,SNR=6.6						
ZAL	**Zalesovo**	64.96	345	P	**P**	**13 53 04.7**	**+0.3**
	1.2nm,0.3s,mb4.4,baz=301,slow=5.8,SNR=4.5						
ZAL	**Zalesovo**	64.96	345	P	**P**	**13 53 04.7**	**+0.2**
BRVK	**Borovoye**	69.09	336	*e*P	**P**	**13 53 30.8**	**+0.3**
CHKZ	**Chkalovo**	69.42	337	*e*P	**P**	**13 53 32.6**	**0.0**
	2.4nm,0.8s,mb4.2						
YAK	**Yakutsk**	71.62	10	*e*P	**P**	**13 53 45.1**	**-0.5**
BR131	**Keskin Array S**	83.92	311	*e*P	**P**	**13 54 55.0**	**+0.9**
	6.9nm,1.1s,mb4.7						
BRTR	**Keskin Array B**	83.92	311	P	**P**	**13 54 55.1**	**+1.0**
	4.8nm,0.9s,mb4.6,baz=135,slow=7.0,SNR=20						
AKASG	**Malin Array Be**	89.66	321	P	**P**	**13 55 21.6**	**-0.2**
	1.3nm,0.6s,mb4.5,baz=86,slow=5.6,SNR=6.2						
CCM	**Cathedral Cave**	144.91	28	*e*PKPdf	PKPdf	14 02 00.6	+0.6
MIAR	**Mount Ida**	146.39	35	*e*PKPbc	PKPbc	14 02 06.8	+2.9

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*NEIC **30** 13:58:38.0, 40.43S×173.57E, h168^{km}, MG4.1(WEL), After WEL.*
WEL 30 13:58:39.0±0.2**, 40.43S×173.60E, h156^{km}**±2^{km}**, ML4.0**/16**, 17C-10D, Error ellipse: s-maj=1.4km s-min=0.8km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	0.45	146	PN	P	13 59 01.2	-0.1
DUWZ				SN	S	13 59 17.7	-0.7
NNZ	**Nelson**	0.80	192	P	P	13 59 02.8	-0.4
NNZ				S	S	13 59 20.7	-1.0
NNZ	**Nelson**	0.80	192	PN	P	13 59 02.8	-0.4
NNZ				SN	S	13 59 20.7	-1.1
QRZ	**Quartz Range**	0.90	244	P	P	13 59 03.2	-0.6
QRZ	**Quartz Range**	0.90	244	PN	P	13 59 03.2	-0.6
QRZ				SN	S	13 59 20.9	-2.0
TCW	**Tory Channel**	0.94	147	P	P	13 59 04.3	+0.3
TCW				S	S	13 59 22.8	-0.5
TCW	**Tory Channel**	0.94	147	PN	P	13 59 04.3	+0.3
TCW				SN	S	13 59 22.8	-0.5
TUWZ	**Tuamarina**	1.03	165	PN	P	13 59 04.6	-0.2
KIW	**Kapiti Island**	1.09	114	P	P	13 59 05.2	-0.1
KIW	**Kapiti Island**	1.09	114	⇑PN	P	13 59 05.2	-0.1
KIW				SN	S	13 59 23.8	-1.8
NRZ	**Ngariki Road**	1.12	13	P	P	13 59 05.5	-0.2
NRZ	**Ngariki Road**	1.12	13	⇑PN	P	13 59 05.6	-0.1
MRW	**Makara Radio**	1.16	134	P	P	13 59 05.9	-0.1
MRW	**Makara Radio**	1.16	134	⇑PN	P	13 59 05.9	-0.1
MRW				SN	S	13 59 25.2	-1.6
NWEZ	**Newall Road**	1.18	10	P	P	13 59 06.1	-0.1
NWEZ	**Newall Road**	1.18	10	⇓PN	P	13 59 06.0	-0.1
SNZO	**South Karori**	1.22	137	P	P	13 59 06.3	-0.3
SNZO	**South Karori**	1.22	137	⇑PN	P	13 59 06.3	-0.3
SNZO				SN	S	13 59 26.5	-1.3
WEL	**Wellington**	1.23	134	P	P	13 59 06.5	-0.2
WEL	**Wellington**	1.23	134	⇑PN	P	13 59 06.5	-0.2
WAZ	**Wanganui**	1.26	58	P	P	13 59 07.5	+0.5
WAZ	**Wanganui**	1.26	58	PN	P	13 59 07.3	+0.3
WAZ				SN	S	13 59 28.5	-0.1
PKE	**Pukeiti**	1.27	14	P	P	13 59 06.8	-0.3
PKE	**Pukeiti**	1.27	14	PN	P	13 59 06.8	-0.3
RAEZ	**Rainy Point**	1.30	29	P	P	13 59 07.1	-0.2
RAEZ	**Rainy Point**	1.30	29	PN	P	13 59 07.1	-0.3
BSWZ	**Blackbirch Sta**	1.30	171	P	P	13 59 07.1	-0.3
BSWZ	**Blackbirch Sta**	1.30	171	PN	P	13 59 07.1	-0.3
CAW	**Cannon Point**	1.31	122	⇑PN	P	13 59 07.2	-0.2
BHW	**Baring Head**	1.37	136	P	P	13 59 07.6	-0.5
BHW	**Baring Head**	1.37	136	⇑PN	P	13 59 07.6	-0.5
CMWZ	**Cape Campbell**	1.40	161	P	P	13 59 08.5	+0.2
CMWZ	**Cape Campbell**	1.40	161	PN	P	13 59 08.5	+0.1
THZ	**Tophouse**	1.43	201	P	P	13 59 07.9	-0.8
THZ	**Tophouse**	1.43	201	⇑PN	P	13 59 07.9	-0.8
THZ				SN	S	13 59 29.4	-2.1
MRZ	**Mangatainoka R**	1.53	99	P	P	13 59 09.3	-0.4
MRZ	**Mangatainoka R**	1.53	99	⇑PN	P	13 59 09.3	-0.4
MRZ				SN	S	13 59 31.1	-2.2
VRZ	**Vera Road**	1.58	35	P	P	13 59 09.4	-0.9
VRZ				S	S	13 59 33.3	-1.1
VRZ	**Vera Road**	1.58	35	⇓PN	P	13 59 09.3	-0.9
VRZ				SN	S	13 59 32.2	-2.1
MSWZ	**Moikau Station**	1.59	129	P	P	13 59 09.8	-0.6
MSWZ	**Moikau Station**	1.59	129	⇑PN	P	13 59 09.8	-0.5
MTW	**Mount Morrison**	1.62	117	⇑PN	P	13 59 10.2	-0.5
PAWZ	**Paruwai Farm**	1.68	125	P	P	13 59 10.7	-0.6
PAWZ	**Paruwai Farm**	1.68	125	⇑PN	P	13 59 10.7	-0.6
PKVZ	**Pokaka**	1.77	50	⇓PN	P	13 59 11.6	-0.6
MTVZ	**Mangateitei**	1.78	55	PN	P	13 59 11.1	-1.3
TSZ	**Takapari Road**	1.85	79	P	P	13 59 12.5	-0.6
TSZ	**Takapari Road**	1.85	79	PN	P	13 59 12.4	-0.7
TSZ				SN	S	13 59 36.8	-2.6
TRWZ	**Traveller**	1.86	122	⇑PN	P	13 59 12.7	-0.6
TRVZ	**Turoa**	1.88	54	PN	P	13 59 12.7	-0.8
DSZ	**Denniston Nort**	1.89	225	P	P	13 59 12.3	-1.2
DSZ	**Denniston Nort**	1.89	225	⇑PN	P	13 59 12.3	-1.2
WNVZ	**Wahianoa**	1.90	55	P	P	13 59 12.9	-0.7
WNVZ	**Wahianoa**	1.90	55	⇓PN	P	13 59 12.9	-0.8
DRZ	**Dome Shelter**	1.91	53	P	P	13 59 13.7	-0.1
DRZ	**Dome Shelter**	1.91	53	PN	P	13 59 13.3	-0.4
FWVZ	**Far West T-bar**	1.91	53	P	P	13 59 12.9	-0.9
FWVZ	**Far West T-bar**	1.91	53	PN	P	13 59 12.9	-0.9
WPVZ	**Whakapapa**	1.94	51	P	P	13 59 13.2	-0.9
WPVZ	**Whakapapa**	1.94	51	⇓PN	P	13 59 13.2	-0.9
CNZ	**Chateau**	1.94	51	P	P	13 59 13.2	-1.0
CNZ	**Chateau**	1.94	51	⇑PN	P	13 59 13.2	-0.9
MOVZ	**Moawhango**	1.95	59	P	P	13 59 13.1	-1.1
MOVZ	**Moawhango**	1.95	59	⇓PN	P	13 59 13.0	-1.2
TUVZ	**Tukino**	1.96	54	P	P	13 59 13.7	-0.7
TUVZ	**Tukino**	1.96	54	PN	P	13 59 13.6	-0.8
TWVZ	**Taurewa**	1.96	47	PN	P	13 59 13.3	-1.1
KHZ	**Kahutara**	1.98	181	P	P	13 59 13.8	-0.8
KHZ	**Kahutara**	1.98	181	⇓PN	P	13 59 13.8	-0.9
KHZ				SN	S	13 59 38.8	-3.3
NGZ	**Ngauruhoe**	1.99	52	P	P	13 59 13.7	-1.0
NGZ	**Ngauruhoe**	1.99	52	⇓PN	P	13 59 13.7	-1.0
WTVZ	**West Tongariro**	2.02	50	P	P	13 59 14.0	-1.1
WTVZ	**West Tongariro**	2.02	50	PN	P	13 59 14.0	-1.1
BFZ	**Birch Farm**	2.04	98	P	P	13 59 14.7	-0.6
BFZ	**Birch Farm**	2.04	98	⇑PN	P	13 59 14.7	-0.6
BFZ				SN	S	13 59 40.5	-2.6
OTVZ	**Oturere**	2.04	52	⇓PN	P	13 59 14.4	-0.9
KRVZ	**Karewarewa**	2.07	50	PN	P	13 59 14.4	-1.3
HIZ	**Hauiti**	2.15	27	P	P	13 59 15.2	-1.5
HIZ	**Hauiti**	2.15	27	⇓PN	P	13 59 15.2	-1.4
HIZ				SN	S	13 59 43.6	-2.0
KATZ	**Kakaramea**	2.18	49	P	P	13 59 15.9	-1.1
KATZ	**Kakaramea**	2.18	49	PN	P	13 59 15.8	-1.2
RITZ	**Rihia Road**	2.27	51	P	P	13 59 17.2	-1.0
RITZ	**Rihia Road**	2.27	51	PN	P	13 59 17.0	-1.1
RATZ	**Rangitukua**	2.29	48	P	P	13 59 17.5	-0.9
RATZ	**Rangitukua**	2.29	48	PN	P	13 59 17.4	-1.0
WATZ	**Wairara**	2.38	45	P	P	13 59 18.5	-1.1
WATZ	**Wairara**	2.38	45	PN	P	13 59 18.5	-1.1
HATZ	**Hinemaiaia**	2.47	52	PN	P	13 59 18.6	-2.0
PXZ	**Pawanui**	2.53	82	⇑PN	P	13 59 20.4	-1.1
WHTZ	**Whakaora**	2.54	47	P	P	13 59 20.5	-1.0
WHTZ	**Whakaora**	2.54	47	PN	P	13 59 20.5	-0.9
LTZ	**Lake Taylor**	2.55	203	P	P	13 59 19.8	-1.8
LTZ	**Lake Taylor**	2.55	203	PN	P	13 59 19.7	-1.9
BKZ	**Black Stump Fm**	2.56	61	PN	P	13 59 19.9	-1.9
TOZ	**Tahuroa Road**	3.08	29	*e*P	P	13 59 26.0	-2.3
TOZ	**Tahuroa Road**	3.08	29	PN	P	13 59 26.0	-2.3
CRLZ	**Canterbury Las**	3.23	193	*e*P	P	13 59 26.9	-3.3
MQZ	**McQueen's Vall**	3.35	192	*e*P	P	13 59 28.0	-3.8
WVZ	**Waitaha Valley**	3.40	218	*e*P	P	13 59 29.4	-3.1
KNZ	**Kokohu**	3.45	67	P	P	13 59 30.5	-2.6
URZ	**Urewera**	3.48	53	P	P	13 59 30.0	-3.5
MWZ	**Matawai**	3.70	57	P	P	13 59 33.2	-3.1
RPZ	**Rata Peaks**	3.79	209	*e*P	P	13 59 34.4	-3.1
KUZ	**Kuaotunu**	4.04	25	*e*P	P	13 59 38.5	-2.3
FOZ	**Fox Glacier**	4.27	222	*e*P	P	13 59 39.1	-4.8
PUZ	**Puketiti**	4.32	58	*e*P	P	13 59 41.0	-3.4
WCZ	**Waipu Caves**	4.52	8	*e*P	P	13 59 45.7	-1.4
MXZ	**Matakaoa Point**	4.66	54	P	P	13 59 45.3	-3.6
LBZ	**Lake Benmore**	4.69	211	*e*P	P	13 59 45.2	-4.1
ODZ	**Otahua Downs**	5.10	204	*e*P	P	13 59 51.2	-3.5
JCZ	**Jackson Bay**	5.11	223	*e*P	P	13 59 50.5	-4.4
WKZ	**Wanaka**	5.54	216	*e*P	P	13 59 55.5	-5.0
EAZ	**Earnscleugh**	5.74	212	*e*P	P	13 59 57.9	-5.3
MSZ	**Milford Sound**	5.96	223	*e*P	P	14 00 01.0	-5.0
TUZ	**Tuapeka**	6.23	206	*e*P	P	14 00 05.8	-4.0
MLZ	**Mavora Lakes**	6.32	217	*e*P	P	14 00 06.9	-4.1
WHZ	**Wether Hill Ro**	6.84	215	*e*P	P	14 00 12.5	-5.5

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*BYKL **30** 14:18:23.6±0.3, 57.42N×120.81E, h5^{km}±21^{km}*
*MOS **30** 14:18:24.4±1.2, 57.33N×120.75E, h12^{km}, mb4.1/2, Error ellipse: s-maj=17.8km s-min=11.7km az=52.3*
*IDC **30** 14:18:25.8±2.4, 57.49N×120.64E, mb3.6/4, mb1 3.7/5, mb1mx3.5/21, mbtmp3.5/5, ML2.8/1, Error ellipse: s-maj=62.4km s-min=26.8km az=149.0*
ISC 30 14:18:24.4±1.5**, 57.41N**±0.04×**120.85E**±0.04**, h1^{km}**±11^{km}**, n36, σ1^{s}56**/70**, mb3.5**/4**, 2C, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	**Chara**	1.50	251	*e*Pg	**Pn**	**14 18 50.7**	**-1.7**
CRS				*e*		14 18 53.9	
CRS				*e*Sg	**Sn**	**14 19 09.2**	**-3.7**
CRS				*e*		14 19 13.2	
CRS				max			
	309nm,0.9s						
CRS				max			
	552nm,1.1s						
CRS	**Chara**	1.50	251	*e*P	**Pn**	**14 18 51.0**	**-1.4**
CRS				*e*		14 19 09.2	
CRS				pmax	pmax		
	comp=Z,309nm,0.5s						
CRS				smax			
	comp=E,341nm,0.5s						
NRGR	**Nerungri**	2.25	108	*e*P	**Pn**	**14 19 03.9**	**+0.7**
NRGR				S	**Sn**	**14 19 32.6**	**+0.7**
CLNS	**Chul'man**	2.28	103	*e*Pn	**Pn**	**14 19 03.7**	**+0.1**
CLNS				*e*Pg	**Pg**	**14 19 05.4**	**-4.4**
CLNS				*e*Sn	**Sn**	**14 19 31.6**	**-1.1**
CLNS				*e*Sg	**Sg**	**14 19 35.4**	**-4.8**
CLNS				Pmax			
	comp=E,100nm,0.1s						
CLNS				Smax			
	comp=E,511nm,0.1s						
CLNS	**Chul'man**	2.28	103	*e*P	**Pn**	**14 19 03.7**	**+0.1**
CLNS				*e*S	**Sn**	**14 19 33.9**	**+1.2**
CLNS				pmax	pmax		
	comp=Z,21nm,0.3s						
CLNS				pmax	pmax		
	comp=N,3.0nm,0.2s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.2s						
CLNS				pmax	pmax		
	comp=N,17nm,0.3s						
CLNS				pmax	pmax		
	comp=E,20nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,34nm,0.3s						
CLNS				smax			
	comp=N,91nm,0.3s						
CLNS				smax			
	comp=Z,38nm,0.3s						
CLNS				smax			
	comp=E,53nm,0.2s						
CLNS				smax			
	comp=E,1μm,0.7s						
CLNS				smax			
	comp=Z,381nm,0.6s						
CLNS				smax			
	comp=N,404nm,0.4s						
CLNS				MLR	MLR		
	comp=Z,70nm,10.0s						
ALDR	**Aldan**	2.71	62	*e*	**Pn**	**14 19 11.4**	**+1.6**
ALDR				*e*Pg	**Pb**	**14 19 14.3**	**+0.9**
ALDR				*e*PgPg		14 19 18.2	
ALDR				*e*Sg	**Sb**	**14 19 46.8**	**-0.4**
ALDR				max			
	comp=Z,109nm,0.1s						
ALDR				Smax			
	comp=Z,2μm,0.1s						
NLYR	**Nelyaty**	2.97	254	⇑*i*Pn	**Pn**	**14 19 11.7**	**-1.8**
NLYR				*e*Pg	**Pb**	**14 19 16.4**	**-1.4**
NLYR				*e*		14 19 19.2	
NLYR				*e*Sg	**Sb**	**14 19 54.0**	**-0.7**
NLYR				*e*		14 19 57.0	
NLYR				max			
	comp=Z,116nm,0.5s						
NLYR				max			
	comp=Z,482nm,1.2s						
NLYR	**Nelyaty**	2.97	254	*e*P	**Pn**	**14 19 11.4**	**-2.1**
NLYR				*e*		14 19 52.6	
NLYR				pmax	pmax		
	comp=Z,114nm,0.6s						
NLYR				smax			
	comp=N,513nm,1.4s						
TUP	**Tupik**	3.03	190	⇑*i*Pn	**Pn**	**14 19 12.1**	**-2.3**
TUP				*e*Pg	**Pb**	**14 19 18.4**	**-0.5**
TUP				*e*		14 19 25.0	
TUP				*e*Sn	**Sn**	**14 19 48.1**	**-3.8**
TUP				*e*Sg	**Sb**	**14 19 56.3**	**-0.4**
TUP				*e*SgSg		14 20 03.6	
TUP				Pmax			
	comp=N,150nm,0.4s						
TUP				max			
	comp=N,701nm,1.0s						
TUP	**Tupik**	3.03	190	*e*P	**Pn**	**14 19 12.1**	**-2.3**
TUP				*e*S	**Sn**	**14 19 47.4**	**-4.5**
TUP				pmax	pmax		
	comp=Z,164nm,0.4s						
TUP				smax			
	comp=E,519nm,0.7s						
TNDR	**Tynda**	3.13	135	*e*Pn	**Pn**	**14 19 14.5**	**-1.3**
TNDR				*e*		14 19 16.7	
TNDR				*e*		14 19 53.6	
TNDR				*e*Sg	**Sb**	**14 20 01.3**	**+1.9**
TNDR				Smax			
	comp=E,1μm,0.1s						
BOD	**Bodaibo**	3.71	279	*e*Pn	**Pn**	**14 19 21.3**	**-2.7**
BOD				*e*Pg	**Pb**	**14 19 30.7**	**+0.2**
BOD				*e*Sg	**Sb**	**14 20 16.9**	**+0.7**
BOD				Pmax			
	comp=E,20nm,0.5s						
BOD				Smax			
	comp=E,261nm,1.3s						
BOD	**Bodaibo**	3.71	279	*e*P	**Pn**	**14 19 21.4**	**-2.6**
BOD				pmax	pmax		
	comp=Z,19nm,0.3s						
SVKR	**Severomuysk**	4.22	255	*e*	**Pb**	**14 19 42.2**	**+3.0**
SVKR				*e*Sg	**Sb**	**14 20 32.8**	**+1.8**
SVKR				Smax			
	comp=Z,296nm,0.9s						
SVKR	**Severomuysk**	4.22	255	*e*P	**Pb**	**14 19 38.3**	**-0.9**
SVKR				pmax	pmax		
	comp=Z,73nm,1.7s						
UKT	**Uakit**	4.45	247	*e*Pn	**Pn**	**14 19 32.7**	**-1.8**
UKT				*e*Pg	**Pb**	**14 19 44.1**	**+1.0**
UKT				*e*Sg	**Sb**	**14 20 39.7**	**+2.0**
UKT				Pmax			
	comp=Z,23nm,0.5s						
UKT				Smax			
	comp=Z,126nm,1.5s						
UKT	**Uakit**	4.45	247	*e*P	**Pb**	**14 19 44.3**	**+1.2**
UKT				pmax	pmax		
	comp=Z,17nm,0.5s						
KROS	**Kirovskiy**	4.55	128	*e*Pn	**Pn**	**14 19 31.0**	**-5.0**
KROS				*e*Pg	**Pb**	**14 19 43.5**	**-1.4**
KROS				*e*Sn	**Sn**	**14 20 22.1**	**-8.3**
KROS				*i* Sg	**Sb**	**14 20 42.5**	**+1.7**
KROS				Pmax			
	comp=Z,20nm,0.5s						
KROS				Smax			
	comp=Z,200nm,0.6s						
YOA	**Uoyan**	5.18	260	Sg	**Sb**	**14 21 02.1**	**+3.1**
YOA				Smax			
	comp=Z,832nm,1.4s						
KMO	**Kumora**	5.54	258	*e*Pn	**Pn**	**14 19 47.0**	**-2.9**
KMO				*e*Pg	**Pb**	**14 20 03.7**	**+1.9**
KMO				*e*Sg	**Sb**	**14 21 13.6**	**+4.2**
KMO				Pmax			
	comp=Z,11nm,0.5s						
KMO				Smax			
	comp=Z,242nm,1.3s						
KMO	**Kumora**	5.54	258	*e*P	**Pn**	**14 19 45.6**	**-4.3**
KMO				*e*S	**Sn**	**14 20 47.9**	**-7.3**
KMO				pmax	pmax		
	comp=Z,8.0nm,0.4s						
KMO				smax			
	comp=N,244nm,1.1s						
YLYR	**Ulyunkhan**	5.98	249	*e*Pn	**Pn**	**14 19 53.7**	**-2.5**
YLYR				*e*Pg	**Pb**	**14 20 12.0**	**+2.6**
YLYR				*e*Sg	**Sb**	**14 21 27.8**	**+5.5**
YLYR				Pmax			
	comp=N,7.0nm,0.8s						
YLYR				Smax			
	comp=N,102nm,1.7s						
YAK	**Yakutsk**	6.43	40	*e*P	**Pb**	**14 20 17.9**	**+0.8**
YAK				*e*S	**Sn**	**14 21 08.7**	**-8.8**
YAK				pmax	pmax		
	comp=Z,16nm,0.7s						
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
YAK				smax			
	comp=N,10.0nm,0.5s						
YAK				smax			
	comp=E,164nm,1.3s						
YAK				MLR	MLR		
	comp=Z,63nm,6.0s						
NIZ	**Nizh Angarsk**	6.46	260	*e*	**Pn**	**14 20 03.0**	**+0.1**
NIZ				Pg	**Pb**	**14 20 20.2**	**+2.7**
NIZ				*e*Sg	**Sb**	**14 21 42.4**	**+6.3**
NIZ				Pmax			
	comp=Z,5.0nm,1.0s						
NIZ				Smax			
	comp=Z,60nm,1.7s						
CIT	**Chita**	6.86	221	*e*Pg	**Pb**	**14 20 27.7**	**+3.4**
CIT				*e*Sg	**Sb**	**14 21 54.3**	**+6.7**
CIT				Pmax			
	comp=Z,37nm,1.1s						
CIT				Smax			
	comp=Z,149nm,1.9s						
CIT	**Chita**	6.86	221	*e*P	**Pn**	**14 20 04.4**	**-4.1**
CIT				pmax	pmax		
	comp=Z,36nm,1.2s						
SYVR	**Suvo**	7.21	243	*e*Pg	**Pb**	**14 20 33.8**	**+3.4**
SYVR				*e*Sg	**Sb**	**14 22 06.1**	**+8.1**
SYVR				Pmax			
	comp=Z,5.0nm,1.1s						
SYVR				Smax			
	comp=Z,125nm,1.4s						
KPC	**Khapcheranga**	9.21	217	*e*Pn	**P**	**14 20 39.0**	**-2.4**
KPC				*e*Pg	P	14 21 10.7	+29
KPC				*e*Sg	**Sb**	**14 23 06.7**	**+11**
KPC				*e*		14 23 11.7	
KPC				Pmax			
	comp=Z,1.0nm,0.3s						
KPC				max			
	comp=Z,73nm,0.9s						

TRG	Tyrgan	9.53	247	eSg	Sb	14 23 17.6	+13
TRG				Smax			
	comp=Z,54nm,1.8s						
SONM	Songino Array	12.97	229	Pn	P	14 21 32.0	-0.4
	comp=Z,0.1nm,0.3s,baz=36,slow=13,SNR=3.8						
MKAR	Makanchi Array	25.61	262	P	P	14 23 55.0	-1.4
	comp=Z,0.3nm,0.7s,mb3.0,baz=50,slow=9.5,SNR=4.2						
ILAR	Eielson Array	41.36	40	P	P	14 26 12.8	0.0
	comp=Z,0.4nm,0.6s,mb3.2,baz=290,slow=4.5,SNR=11						
NOA	NORSAR Array B	49.76	323	P	P	14 27 18.5	-1.1
	comp=Z,0.9nm,0.8s,mb3.9,baz=39,slow=7.5,SNR=2.7						
NOA	NORSAR Array B	49.76	323	P	P	14 27 18.5	-1.1
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	50.27	304	P	P	14 27 22.4	-1.3
	comp=Z,1.1nm,0.5s,mb4.1,baz=38,slow=8.4,SNR=7.2						
AKASG	Malin Array Be	50.27	304	P	P	14 27 22.4	-1.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						

IDC 30 14:59:14.6±1.1**,12.27N**×**141.22E,mb3.9**/6**,mb1 4.1**/6**, mb1mx3.9**/18**,mbtmp3.9**/6**,Error ellipse: s-maj=62.8km s-min=23.4km az=90.0,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	32.72	192	P	P	15 05 49.0	-2.2
	1.3nm,0.8s,baz=15,slow=9.5,SNR=8.6						
STKA	Stephens Creek	43.90	180	P	P	15 07 23.1	-1.8
	0.6nm,0.4s,baz=7.1,slow=8.1,SNR=5.0						
MKAR	Makanchi Array	60.00	317	P	P	15 09 23.7	-1.7
	0.1nm,0.2s,baz=90,slow=8.5,SNR=3.6						
ILAR	Eielson Array	71.28	25	P	P	15 10 36.0	-1.6
	0.1nm,0.3s,baz=259,slow=4.6,SNR=5.3						
ARCES	ARCESS Array B	87.22	342	P	P	15 12 02.4	-1.3
	3.0nm,0.9s,baz=63,slow=8.1,SNR=3.9						
FINES	FINESS Array B	90.83	334	P	P	15 12 18.9	-2.0
	1.4nm,0.6s,baz=72,slow=6.0,SNR=5.5						

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*CSEM **30** 15:19:53.4±0.1,26.65N×55.63E,h2^{km},mb5.0/35,Error ellipse: s-maj=3.1km s-min=1.9km az=68.0*

*BJI **30** 15:19:56.3,26.70N×55.80E,h10^{km},mB5.1,mb4.7,Ms4.8, Msz4.3*

*HRVD **30** 15:19:56.3±1.0,26.81N×55.58E,h22^{km}±2^{km},MW4.7/34, Centroid moment Tensor Solution. LP body waves: s6,c6; Mantle waves: s34,c44; Half duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.97±.19; $M_{\theta\theta}$-0.83±.11; $M_{\phi\phi}$-0.14±.11; $M_{r\theta}$-0.54±.15; $M_{\theta\phi}$0.27±.06; $M_{\phi r}$-0.62±.19; Best double couple: $M_0$1.203×10^{16} NP1:ϕ_s127°,δ39°,λ132°. NP2: ϕ_s258°,δ62°,λ62°. Principal axes: T 1.413, Plg62°, Azm123°; N -.42, Plg25°, Azm273°; P -.993, Plg13°, Azm9°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **30** 15:19:56.4±0.3,26.72N×55.80E,h10^{km},mb5.0/87, MN4.7(TEH) Error ellipse: s-maj=5.9km s-min=4.2km az=193.0*

*THR **30** 15:19:57.5±1.1,26.84N×55.91E,h18^{km}±17^{km},ML4.5*

*TEH **30** 15:19:58.2,26.67N×55.61E,h10^{km},Mn4.7*

*MOS **30** 15:19:58.3±1.1,26.82N×55.82E,h33^{km},mb5.2/63,Error ellipse: s-maj=7.4km s-min=3.6km az=127.2*

*IDC **30** 15:19:58.7±2.1,26.83N×55.82E,h24^{km}±13^{km},mb4.4/19, mb1 4.5/20,mb1mx4.5/23,mbtmp4.6/20,ML3.9/1,MS3.7/14, Ms1 3.7/14,ms1mx3.6/27,Error ellipse: s-maj=14.3km s-min=11.5km az=154.0*

ISC 30 15:19:55.1±0.7**,26.76N**±0.02×**55.79E**±0.02**,h13**^{km}±4^{km}**, h13**^{km}±1.5^{km}**:pP-P,n380,**σ**1§17**/391**,mb4.9**/125**,MS3.9**/30**, 24C-12D,Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDS	Bandar-Abbas	0.72	28	ePg	Pg	15 20 08.9	-0.8
BNDS				eSg	Sg	15 20 18.2	-1.2
BNDS				AML	AML	15 20 26.9	
	comp=N,27μm,0.7s						
BANOM	Banah	0.95	151	⇓P	Pb	15 20 14.7	+1.7
	SNR=1732						
BANOM				⇑S	Sb	15 20 30.0	+4.8
ASHO	Ashiyiah	2.08	173	⇑P	Pn	15 20 32.7	+2.4
	SNR=139						
GHIR	Ghir-Karzin	2.92	302	ePn	Pn	15 20 45.3	+3.1
GHIR				eSg	Sg	15 21 28.2	-4.0
GHIR				AML	AML	15 21 51.4	
	comp=N,1μm,0.5s						
KRBR	Kerman	3.32	15	ePN	Pn	15 20 49.9	+1.9
KRBR				eSG	Sb	15 21 35.4	+1.3
KRBR				AML	AML	15 21 55.1	
	comp=N,2μm,0.8s						
KRBR	Kerman	3.32	15	ePn	Pn	15 20 49.8	+1.8
	SNR=54						
HOQ	Hoqain	3.45	156	⇓P	Pn	15 20 48.8	-1.0
	SNR=8.4						
ARQ	Araqi	3.47	169	⇑P	Pn	15 20 51.5	+1.4
	SNR=49						
ISRV	Sarvestan	3.52	318	Pn	Pn	15 20 53.5	+2.7
IMOK	Mook	3.55	311	Pn	Pn	15 20 53.8	+2.6
BIDO	Bidbid	3.86	146	⇑P	Pn	15 20 54.9	-0.6
	SNR=19						
IPAR	Pars	3.91	322	Pn	Pn	15 20 58.8	+2.5
BSY	Bisya	4.20	162	⇓P	Pn	15 21 01.1	+0.7
	SNR=43						
SMDO	Samad	4.22	150	⇓P	Pn	15 21 01.0	+0.4
	SNR=70						
BSYO	Bisya	4.22	162	P	Pn	15 21 01.1	+0.3
	SNR=43						
IMEH	Mehriz	4.73	348	Pn	Pg	15 21 21.4	-8.1
IMEH	Mehriz	4.73	348	Pn	Pn	15 21 09.6	+1.7
IBAF	Bafgh	4.82	358	Pn	Pn	15 21 09.7	+0.5
JMDO	Jabal Madar	4.85	154	⇑P	Pn	15 21 10.1	+0.5
	SNR=17						
WBK	Wadi Bani Khal	5.04	144	⇓P	Pn	15 21 11.7	-0.6
	SNR=75						
ZHSF	Zahedan	5.24	56	ePn	Pn	15 21 16.0	+0.9
ISAD	Sadrabad	5.45	341	Pn	Pn	15 21 18.4	+0.2
ISAD	Sadrabad	5.45	341	Pn	Pn	15 21 20.3	+2.1
ICHK	Chekchek	5.60	348	Pn	Pn	15 21 21.4	+1.2
IZEF	Zefreh	6.81	335	Pn	Pn	15 21 35.7	-1.6
QRN	Al-Qurain	7.25	288	eP	Pn	15 21 43.5	0.0
QRN				AML	AML	15 23 02.8	
	comp=Z,73nm,0.4s						
IPIR	Pirpir	7.28	325	Pn	Pn	15 21 43.0	-0.9
IKLH	Kalahroud	7.49	332	Pn	Pn	15 21 45.1	-1.7
KBD	Kabd	7.55	290	eP	Pn	15 21 48.2	+0.5
KBD				AML	AML	15 23 11.7	
	comp=Z,209nm,0.4s						
RDF	Al-Radifah	7.61	288	eP	Pn	15 21 47.8	-0.7
UMR	Umm Al-Rimmam	7.65	293	eP	Pn	15 21 48.9	-0.1
UMR				AML	AML	15 23 14.2	
	comp=Z,50nm,0.3s						
NAY	Al-Naaiem	7.95	290	eP	Pn	15 21 52.7	-0.6
MIB	Mutribah	8.04	294	eP	P	15 21 54.3	-0.3
MIB				AML	AML	15 23 17.8	
	comp=Z,76nm,0.5s						
ISFB	Sefidab	8.16	339	Pn	P	15 21 55.1	-1.1
SHAO	Shalim	8.70	181	⇑P	P	15 22 04.2	+0.6
	SNR=8.2						
WHFO	Wadi Hawf	8.99	192	P	P	15 22 06.2	-1.6
	SNR=23						
IQOM	Qom	9.02	334	Pn	P	15 22 07.3	-0.8
IFIR	Firoozkooh	9.23	344	Pn	P	15 22 10.8	-0.2
RBK	Rabkut	9.33	189	⇑P	P	15 22 11.3	-1.1
	SNR=22						
IDMV	Damavand	9.36	341	Pn	P	15 22 12.3	-0.5
ABTO	Aybut	9.64	194	⇑P	P	15 22 14.7	-2.0
	SNR=23						
IAFJ	Afjeh	9.71	340	Pn	P	15 22 17.4	-0.3
IMOG	Moghan	9.80	17	Pn	P	15 22 19.5	+0.6
IPAY	Payeh	10.04	15	Pn	P	15 22 22.7	+0.5
IMYA	Miamay	10.23	20	Pn	P	15 22 25.5	+0.6
IEMG	Emamqoli	10.89	12	Pn	P	15 22 35.4	+1.6
IGHG	Ghaleghazi	10.95	316	Pn	P	15 22 32.7	-2.0
IDHR	Dehrash	11.31	317	Pn	P	15 22 37.5	-2.1
VAN	Vannovskaya	11.33	9	eP	P	15 22 43.7	+3.9
BHD	Baghdad	11.82	306	ex	x	15 22 44.0	
BHD				ex	x	15 24 44.0	
BHJ	Bhuj	13.05	103	eP	P	15 22 57.4	-5.6
BHJ				AMb	AMB	15 23 00.7	
	comp=Z,37nm,0.6s						
MSL	Mosul	14.39	314	ex	x	15 23 17.5	
MSL				ex	x	15 25 54.5	
MSL				ex	x	15 28 11.5	
MSL				ex	x	15 29 10.5	
TVAN	Van	15.68	322	iP	P	15 23 34.7	-2.8
VANB	Van	15.74	322	eP	P	15 23 37.3	-0.9
CLDR	Caldiran	15.85	324	eP	P	15 23 40.7	+1.1
LBOS		16.18	220	⇑eP	P	15 23 42.6	-1.4
GNI	Garni	16.21	328	eP	P	15 23 44.2	+0.1
GNI	Garni	16.21	328	eP	P	15 23 46.1	+1.9
	comp=Z,64nm,1.0s						
GNI	Garni	16.21	328	eP	P	15 23 46.1	+1.9
GNI				pmax	pmax		
	comp=Z,64nm,1.0s						
GNI	Garni	16.21	328	eP	P	15 23 46.1	+1.9
	comp=Z,64nm,1.0s						
MARD	Mardin	16.49	313	iP	P	15 23 40.5	-7.4
AJM	Ajmer	16.86	87	eP	P	15 23 52.8	+0.2
AJM				AMb	AMB	15 23 57.3	
	comp=Z,48nm,1.0s						
AJM				ex	x	15 27 04.9	
TI2	Plekhanov	17.48	331	eP	P	15 24 01.0	+0.8
TI2				pmax	pmax		
	comp=Z,20nm,0.8s						
TI2	Plekhanov	17.48	331	eP	P	15 24 01.0	+0.8
	comp=Z,20nm,0.8s						
ERZM	Erzurum	17.78	321	iP	P	15 24 00.6	-3.4
EZM	Erzurum	17.78	321	eP	P	15 24 05.9	+1.9
URFA	Urfa	17.86	311	eP	P	15 24 04.7	-0.3
THN	Thein Dam	18.22	67	ex	x	15 23 32.3	
PTK	Pertek	18.30	315	eP	P	15 24 09.3	-1.2
POO	Poona	18.56	112	ex	x	15 24 18.8	
POO				AMb	AMB	15 24 23.4	
	comp=Z,38nm,0.7s						
ONI	Oni	18.73	331	P	P	15 24 16.0	+0.3
NDI	New Delhi	19.07	79	eP	P	15 24 18.0	-1.8
COBT	Iskenderun	19.24	305	iP	P	15 24 15.9	-5.9
ATD	Arta Tunnel	19.44	221	P	P	15 24 23.3	-1.0
	comp=Z,0.4nm,0.3s,baz=133,slow=20,SNR=7.5						
ATD				LR	LR	15 32 25.6	
	comp=Z,281nm,19.6s,baz=20,slow=38						
CEYT	Ceyhan	19.82	306	eP	P	15 24 30.1	+1.7
DDI	Dehra Dun	19.88	75	eP	P	15 24 29.5	+0.4
BHPL	Bhopal	19.91	95	eP	P	15 24 29.4	-0.2
BHPL				AMb	AMB	15 24 32.4	
	comp=Z,33nm,1.1s						
KOZT	Kozan	19.96	307	eP	P	15 24 28.7	-1.3
KIV	Kislovodsk	20.17	332	eP	P	15 24 32.8	+0.7
	comp=Z,335nm,1.3s						
KIV	Kislovodsk	20.17	332	eP	P	15 24 32.3	+0.2
KIV				eS	S	15 28 18.7	+5.9
KIV				pmax	pmax		
	comp=Z,250nm,1.2s						
KIV				MLR	MLR		
	comp=Z,284nm,15.0s,MS3.7						
KIV	Kislovodsk	20.17	332	eP	P	15 24 32.8	+0.7
	comp=Z,335nm,1.3s						
GRSN	GIRESUNGRSN	20.23	319	iP	P	15 24 31.2	-1.5
KARA	Karaisali	20.42	306	eP	P	15 24 35.2	+0.5
BNN	Bunyan	20.60	311	eP	P	15 24 35.2	-1.4
MERS	Mersin	20.65	304	eP	P	15 24 37.0	-0.2
CSS	Prodhromos	20.91	298	eP	P	15 24 42.9	+3.1
	comp=Z,65nm,1.2s						
GOF	Gofitskoye	20.93	334	⇑iP	P	15 24 39.4	-0.6
GOF				pmax	pmax		
	comp=Z,130nm,0.8s						
GOF	Gofitskoye	20.93	334	iP	P	15 24 39.4	-0.6
	comp=Z,130nm,0.8s						
AVNT	Avonos	21.24	310	iP	P	15 24 41.8	-1.4
SOC	Sochi	21.25	326	eP	P	15 24 43.5	+0.2
SOC				e*PP		15 24 53.2	
SOC				e		15 25 00.7	
SOC				eS	S	15 28 39.8	+5.6
SOC				pmax	pmax		
	comp=Z,49nm,1.0s,mb4.8						
SOC				MLR	MLR		
	comp=Z,235nm,11.0s,MS3.8						
SOC	Sochi	21.25	326	eP	P	15 24 43.5	+0.2
	comp=Z,49nm,1.0s,mb4.8						
CDAG	Cicekdag	21.98	311	iP	P	15 24 47.5	-3.0
CORM	Corum	22.08	313	eP	P	15 24 50.8	-0.8
CTKT	Corum	22.21	314	iP	P	15 24 49.5	-3.4
KAMT	Kaman	22.30	310	eP	P	15 24 55.1	+1.3
BR131	Keskin Array S	22.52	311	eP	P	15 24 57.1	+1.1
	comp=Z,30nm,1.0s,mb4.7						
BRTR	Keskin Array B	22.52	311	P	P	15 24 57.0	+1.0
	comp=Z,14nm,0.9s,mb4.4,baz=127,slow=12,SNR=32						
BRTR				PcP	PcP	15 28 51.1	+0.2
	comp=Z,1.5nm,0.8s,baz=124,slow=5.2,SNR=4.9						
BRTR				S	S	15 29 03.6	+5.9
	comp=Z,0.3nm,0.5s,baz=132,slow=19,SNR=2.1						
BRTR				ScP		15 32 27.1	
	comp=Z,1.3nm,1.0s,baz=207,slow=2.8,SNR=4.3						
BOYT	Boyabat	22.57	316	iP	P	15 24 56.2	-0.3
HYB	Hyderabad	23.02	109	eP	P	15 25 01.5	+0.4
KDHN	Kadinhani	23.06	306	iP	P	15 25 02.9	+1.6
ANTO	Ankara	23.16	310	eP	P	15 25 03.3	+1.0
ANTO	Ankara	23.16	310	eP	P	15 25 04.2	+2.0
	comp=Z,56nm,1.2s,mb4.9						
ANTO	Ankara	23.16	310	eP	P	15 25 04.2	+1.9
ANTO				pmax	pmax		
	comp=Z,56nm,1.2s,mb4.9						
ANN	Anapa	23.27	325	eP	P	15 25 06.2	+2.9
ANN				pmax	pmax		
	comp=Z,50nm,1.3s,mb4.8						
ANN				MLR	MLR		
	comp=Z,188nm,14.0s,MS3.7						
KIZT	Kizilcal	23.37	307	eP	P	15 25 06.4	+2.0
BALT	Daday	23.59	314	iP	P	15 25 04.8	-1.6
AKTO	Aktyubinsk	23.70	4	P	P	15 25 08.2	+0.8
	comp=Z,9.5nm,0.6s,mb4.4,baz=181,slow=10,SNR=40						
AKTO				S	S	15 29 21.7	+3.1
	comp=Z,3.1nm,1.0s,baz=47,slow=19,SNR=2.7						
AKTO				LR	LR	15 35 58.1	
	comp=Z,265nm,18.2s,MS3.8,slow=41						
AAA	Alma-Ata	23.80	41	iP	P	15 25 07.6	-0.9
AAA				pmax	pmax		
	comp=Z,539nm,8.9s						
AAA				pmax	pmax		
	comp=Z,556nm,12.2s						
AAA				MLR	MLR		
	comp=Z,719nm,13.9s,MS4.3						
ISP	Isparta	23.98	304	eP	P	15 25 12.4	+2.2
ISP	Isparta	23.98	304	eP	P	15 25 11.8	+1.5
SGKT	Sivrigoynuk	23.99	311	iP	P	15 25 07.7	-2.6
ELL	Elmali	24.09	301	eP	P	15 25 12.4	+1.1
TKTP	Tekketepe	24.19	304	iP	P	15 25 11.5	-0.8
ESKT	Eskisehir	24.36	308	eP	P	15 25 15.0	+1.1
ESKT	Eskisehir	24.36	308	iP	P	15 25 09.6	-4.4
GOLH	Golhisar	24.50	302	iP	P	15 25 11.5	-3.8
FETY	Fethiye	24.70	300	eP	P	15 25 20.2	+3.0
KOLN	Koldanda	24.72	81	eP	P	15 25 18.8	+1.2
	comp=Z,48nm,1.0s,mb5.0						
HENT	Hendek	24.89	311	iP	P	15 25 16.3	-2.7
SIM	Simferopol'	25.13	322	eP	P	15 25 24.3	+3.0
SIM				pmax	pmax		
	comp=Z,35nm,1.0s,mb4.8						
GKN	Gorkha	25.62	81	eP	P	15 25 26.3	+0.2
	comp=Z,111nm,1.7s,mb5.1						
DMN	Daman	26.07	81	eP	P	15 25 31.3	+1.1
BODT	Bodrum	26.18	300	eP	P	15 25 29.7	-1.4
KKN	Kakani	26.21	81	eP	P	15 25 32.4	+0.9
	comp=Z,60nm,1.1s,mb5.0						
KKN	Kakani	26.21	81	eP	P	15 25 32.4	+0.9
KKN				pmax	pmax		
	comp=Z,30nm,1.1s,mb4.7						
PKI	Pulchoki	26.34	81	eP	P	15 25 33.1	+0.4
	comp=Z,64nm,1.3s,mb5.0						
PKI	Pulchoki	26.34	81	eP	P	15 25 33.1	+0.4
PKI				pmax	pmax		
	comp=Z,32nm,1.3s,mb4.7						
GUN	Gumba	26.73	81	eP	P	15 25 36.9	+0.6
	comp=Z,71nm,1.2s,mb5.1						
JIRN	Jiri	27.02	81	eP	P	15 25 39.3	+0.3
	comp=Z,43nm,1.1s,mb4.9						
BOK	Bokaro	27.34	90	eP	P	15 25 41.6	-0.4
BOK				AMb	AMB	15 25 45.0	
	comp=Z,30nm,1.1s,mb4.7						
IDI	Anoyia	27.73	295	P	P	15 25 46.1	+0.8
	comp=Z,16nm,0.8s,mb4.7,baz=94,slow=8.6,SNR=11						
BRVK	Borovoye	28.41	19	eP	P	15 25 50.3	-1.0
	comp=Z,5.9nm,0.8s,mb4.3						
BRVK	Borovoye	28.41	19	eP	P	15 25 50.3	-1.0
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.3						
BVAR	Borovoye Array	28.41	19	P	P	15 25 50.0	-1.3
	comp=Z,13nm,0.8s,mb4.6,baz=202,slow=8.0,SNR=42						
BVAR				PcP	PcP	15 29 02.6	-1.3
	comp=Z,2.6nm,0.9s,baz=225,slow=2.0,SNR=3.3						
BVAR				ScP		15 32 42.2	
	comp=Z,0.5nm,0.7s,baz=180,slow=1.5,SNR=4.0						
MKAR	Makanchi Array	28.93	39	P	P	15 25 56.1	0.0
	comp=Z,2.7nm,0.7s,mb4.1,baz=224,slow=8.4,SNR=15						
MKAR				LR	LR	15 37 45.1	
	comp=Z,104nm,21.2s,MS3.4,baz=241,slow=37						
MKAR	Makanchi Array	28.93	39	iP	P	15 25 56.0	-0.1
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CHKZ	Chkalovo	29.05	18	eP	P	15 25 55.7	-1.4
	comp=Z,2.9nm,0.7s,mb4.1						
CHKZ	Chkalovo	29.05	18	eP	P	15 25 55.7	-1.4
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.1						
KURK	Kurchatov	29.59	30	eP	P	15 26 01.3	-0.7
	comp=Z,2.7nm,0.4s,mb4.3						
KURK	Kurchatov	29.59	30	eP	P	15 26 02.1	+0.1
ARU	Arti	29.71	3	eP	P	15 25 53.4	-10
ARU				eS	S	15 30 44.8	-13
ARU				e		15 36 31.5	
ARU				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.6						
ARU				MLR	MLR		
	comp=N,90nm,16.0s						
SVE	Sverdlovsk	30.25	5	eP	P	15 26 06.6	-1.1
SVE				e		15 36 48.0	
SVE				MLR	MLR		
	comp=N,600nm,12.0s,MS4.5						
SVE				MLR	MLR		
	comp=E,300nm,12.0s,MS4.5						
SVE				MLR	MLR		
	comp=Z,700nm,12.0s,MS4.5						
VOIR		30.79	315	⇓P	P	15 26 14.2	+1.6
WMQ	Urumqi	30.86	48	eP	P	15 26 12.8	-0.5
WMQ				AP	pP	15 26 17.0	0.0
WMQ				XP	sP	15 26 19.5	+0.9
WMQ				eS	S	15 31 14.0	-1.6
WMQ				PCS		15 32 51.0	
WMQ				AMB	AMB		
	comp=Z,210nm,4.9s						
WMQ				LR	LR		
	comp=N,380nm,21.6s,MS4.1						
WMQ				LR	LR		
	comp=E,190nm,21.0s,MS4.1						
WMQ				LR	LR		
	comp=Z,200nm,24.4s,MS3.7						
LSA	Lhasa	31.22	76	P	P	15 26 17.0	+0.4
LSA	Lhasa	31.22	76	eP	P	15 26 17.7	+1.1
	comp=Z,6.6nm,0.8s,mb4.5						
LSA	Lhasa	31.22	76	eP	P	15 26 17.7	+1.1
LSA				pmax	pmax		
	comp=Z,7.0nm,0.8s,mb4.5						
AKASG	Malin Array Be	31.33	327	P	P	15 26 16.1	-1.2
	comp=Z,9.8nm,0.6s,mb4.8,baz=134,slow=8.3,SNR=40						
AKASG				PcP	PcP	15 29 11.5	+0.1
	comp=Z,0.3nm,0.3s,baz=99,slow=2.8,SNR=5.3						
OBN	Obninsk	31.61	339	⇑eP	P	15 26 19.5	-0.3
OBN						15 27 25.0	
OBN						15 29 13.0	
OBN				pmax	pmax		
	comp=Z,37nm,1.3s,mb5.0						
OBN				MLR	MLR		
	comp=Z,100nm,15.0s,MS3.6						
BURAR	Bucovina Array	31.72	319	⇓P	P	15 26 21.7	+0.9
BURAR	Bucovina Array	31.72	319	⇓P	P	15 26 21.7	+0.9
DRGR		32.84	316	⇑P	P	15 26 31.1	+0.5
DRGR		32.84	316	⇑P	P	15 26 31.1	+0.5
KMBO	Kilima Mbogo	32.98	216	P	P	15 26 32.8	+0.6
	comp=Z,5.4nm,0.8s,mb4.6,baz=30,slow=12,SNR=9.6						
KMBO				LR	LR	15 39 56.1	
	comp=Z,129nm,20.5s,MS3.6,baz=81,slow=36						
BZS	Buzias	33.05	314	⇓P	P	15 26 33.1	+0.7
BZS	Buzias	33.05	314	⇓P	P	15 26 33.1	+0.7
KOLS	Kolonicke sedl	34.08	319	iP	P	15 26 42.2	+0.9
KWP	Kalwaria	34.17	321	eP	P	15 26 42.1	0.0
NVS	Novosibirsk	34.48	28	eP	P	15 26 42.9	-1.8
NVS				eS	S	15 32 10.9	-0.9
NVS				pmax	pmax		
	comp=N,23nm,1.4s						
NVS				pmax	pmax		
	comp=E,11nm,1.4s						
NVS				pmax	pmax		
	comp=Z,22nm,1.4s,mb4.9						
NVS				smax			
	comp=N,31nm,2.0s						
NVS				smax			
	comp=E,6.0nm,2.0s						
CRVS	Cervenica-Dubn	34.54	319	iP	P	15 26 45.2	-0.1
ZAL	Zalesovo	34.56	30	P	P	15 26 44.8	-0.7
	comp=E,6.5nm,0.7s,mb4.7,baz=219,slow=8.8,SNR=21						
ZAL				S	S	15 32 11.7	-1.4
	comp=E,0.4nm,0.3s,baz=131,slow=19,SNR=5.6						
ZAL				LR	LR	15 41 24.1	
	comp=E,64nm,20.2s,MS3.4,baz=248,slow=37						
KECS	Kecovo	34.93	318	iP	P	15 26 49.1	+0.4
KLMR	Klimovskoe	35.84	346	eP	P	15 26 54.8	-1.4
KLMR				e		15 28 14.0	
KLMR				pmax	pmax		
	comp=Z,30nm,1.4s,mb5.0						
VYHS	Vyhne	35.94	317	eP	P	15 26 57.9	+0.7
SGO	Sicignano	36.08	303	P	P	15 27 01.9	+3.4
OJC	Ojcow	36.10	320	⇑iP	P	15 26 58.5	-0.1
OJC				ipP	pP	15 27 01.1	-1.2
SUW	Suwalki	36.29	327	eP	P	15 27 00.6	+0.5
OKC	Ostrava-Krasne	36.90	319	eP	P	15 27 04.8	-0.5
MORC	Moravsky Berou	37.23	318	eP	P	15 27 07.7	-0.3
	comp=Z,21nm,0.9s,mb5.0						
MORC	Moravsky Berou	37.23	318	eP	P	15 27 07.7	-0.3
MORC				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.0						
ARSA	Arzberg	37.57	314	⇑eP	P	15 27 13.8	+2.8
	comp=Z,10nm,1.2s,mb4.4						
VRAC	Vranov	37.62	317	eP	P	15 27 11.6	+0.3
DPC	Dobruska-Polom	38.18	319	eP	P	15 27 16.1	+0.1
TREC	Trest	38.28	317	eP	P	15 27 17.6	+0.7
KSP	Ksiaz	38.39	320	eP	P	15 27 17.6	-0.3
KSP	Ksiaz	38.39	320	eP	P	15 27 17.8	0.0
UPC	Upice	38.42	319	eP	P	15 27 18.3	+0.2
MOA	Molln	38.57	314	⇑eP	P	15 27 19.4	+0.1
	comp=Z,15nm,0.8s,mb4.8						
GTA	Gaotai	38.62	60	eP	P	15 27 20.8	+0.9
GTA				AP	pP	15 27 25.3	+1.7
GTA				XP	sP	15 27 27.5	+2.3
GTA				PP	PP	15 28 56.5	+4.5
GTA				PPP	PPP	15 29 20.0	+5.2
GTA				PCP	PcP	15 29 29.0	-3.7
GTA				SCP		15 33 16.3	
GTA				S	S	15 33 21.5	+6.0
GTA				XS		15 33 29.5	
GTA				SCS	ScS	15 37 27.0	-1.3
GTA				AMB	AMB		
	comp=Z,10.0nm,1.1s,mb4.5						
GTA				AMB	AMB		
	comp=Z,140nm,4.9s						
GTA				LR	LR		
	comp=N,250nm,10.6s,MS4.4						
GTA				LR	LR		
	comp=E,250nm,13.3s,MS4.4						
GTA				LR	LR		
	comp=Z,220nm,11.4s,MS4.2						
PTCC	Patocco-Chiusa	38.75	312	P	P	15 27 21.9	+1.1
KBA	Koelnbreinsper	38.94	313	⇑eP	P	15 27 23.8	+1.4
	comp=Z,23nm,0.9s,mb4.9						
PRU	Pruhonice	39.11	318	eP	P	15 27 25.5	+1.7
SFI	Santa Sofia	39.21	307	P	P	15 27 27.3	+2.6
	comp=Z,110nm,1.1s,mb5.5						
SFI	Santa Sofia	39.21	307	P	P	15 27 27.3	+2.6
SFI				pmax	pmax		
	comp=Z,110nm,1.1s,mb5.5						
GEC2	GERESS Array S	39.24	316	eP	P	15 27 24.9	0.0
	comp=Z,6.0nm,1.0s,mb4.3						
GEC2	GERESS Array S	39.24	316	eP	P	15 27 24.9	0.0
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.0s,mb4.3						
GERES	GERESS Array B	39.24	316	P	P	15 27 24.5	-0.4
	comp=Z,4.3nm,0.8s,mb4.2,baz=110,slow=7.6,SNR=19						
GERES				LR	LR	15 45 30.7	
	comp=Z,57nm,19.7s,MS3.4,baz=283,slow=39						
PVCC	Panska Ves	39.29	318	eP	P	15 27 25.5	+0.2
PGD	Poggio Sodo	39.30	307	P	P	15 27 28.1	+2.7
	comp=Z,52nm,1.0s,mb5.2						
PGD	Poggio Sodo	39.30	307	P	P	15 27 28.1	+2.7
PGD				pmax	pmax		

	comp=Z,52nm,1.0s,mb5.2						
KHC	**Kasperske Hory**	39.41	316	*e*P	P	15 27 26.0	-0.3
KHC				x	x	15 27 43.5	
KHC	**Kasperske Hory**	39.41	316	*e*P	P	15 27 26.0	-0.3
KHC				*e*		15 27 43.5	
VMG	**Vicchio**	39.44	308	P	P	15 27 29.2	+2.6
JOF	**Joensuu**	39.59	343	*e*p	P	15 27 24.7	-3.0
	comp=Z,7.3nm,0.7s,mb4.5						
SEST	**Monte Rota**	39.59	312	P	P	15 27 30.4	+2.5
	comp=Z,56nm,1.0s,mb5.2						
BRG	**Berggiesshubel**	39.78	319	*e*P	P	15 27 29.7	+0.3
	comp=Z,17nm,1.0s,mb4.7						
BRG	**Berggiesshubel**	39.78	319	*e*P	P	15 27 29.7	+0.3
BRG				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
CTI	**Castel Tesino**	39.80	311	P	P	15 27 30.5	+0.9
WET	**Wettzell**	39.85	316	*e*P	P	15 27 30.0	+0.1
	comp=Z,9.0nm,0.9s,mb4.5						
WET	**Wettzell**	39.85	316	*e*P	P	15 27 30.0	+0.1
WET				pmax	pmax		
	comp=Z,9.0nm,0.9s,mb4.5						
WTTA	**Wattenberg**	40.11	313⇑	*e*P	P	15 27 32.0	-0.1
	comp=Z,51nm,1.0s,mb5.2,SNR=12						
WATA	**Walderalm**	40.17	313⇑	*i*P	P	15 27 32.4	-0.2
	comp=Z,44nm,1.1s,mb5.1						
SQTA	**Sankt Quirin**	40.38	312⇑	*i*P	P	15 27 33.9	-0.4
	comp=Z,20nm,0.8s,mb4.9,SNR=16						
NKC	**Novy Kostel**	40.46	317	*e*P	P	15 27 35.9	+1.0
MOTA	**Moosalm**	40.48	313⇑	*i*P	P	15 27 34.9	-0.3
	comp=Z,30nm,1.0s,mb5.0,SNR=13						
CLL	**Collm**	40.49	319	P	P	15 27 35.4	+0.2
	comp=Z,logA/T=1.1,mb4.6						
CLL				*i* *PP	pP	15 27 37.8	-1.2
CLL	**Collm**	40.49	319	*i* P	P	15 27 35.4	+0.2
	comp=Z,14nm,1.1s,mb4.6						
CLL				*i* pP	pP	15 27 37.8	-1.2
CLL	**Collm**	40.49	319	*i* P	P	15 27 35.4	+0.2
CLL				pmax	pmax		
	comp=Z,14nm,1.1s,mb4.6						
MABI	**Malga Bissina**	40.58	310	P	P	15 27 37.2	+1.2
	comp=Z,30nm,1.1s,mb4.8						
GRA1	**Grafenberg Arr**	41.04	316	*e*P	P	15 27 39.7	0.0
	comp=Z,48nm,1.0s,mb5.1						
GRF	**Grafenberg Arr**	41.04	316	*e*P	P	15 27 39.7	0.0
	comp=Z,48nm,1.0s,mb5.1						
GRF	**Grafenberg Arr**	41.04	316	*e*P	P	15 27 39.7	0.0
GRF				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.1						
GRF	**Grafenberg Arr**	41.04	316	*e*P	P	15 27 39.7	0.0
GRF				pmax	pmax		
	comp=Z,48nm,1.0s,mb5.1						
PGF	**Pioggiola**	41.05	305	*e*P	P	15 27 38.6	-1.3
	comp=Z,169nm,1.6s,mb5.1						
PGF	**Pioggiola**	41.05	305	*e*P	P	15 27 38.6	-1.3
PGF				pmax	pmax		
	comp=Z,85nm,1.6s,mb5.1						
BOB	**Bobbio (Coli)**	41.06	308	P	P	15 27 41.8	+1.8
MOX	**Moxa**	41.09	318	*i* P	P	15 27 40.5	+0.3
MOX	**Moxa**	41.09	318	*e*P	P	15 27 40.5	+0.3
DAVA	**Damuels**	41.27	312⇓	*e*P	P	15 27 41.2	-0.5
	comp=Z,66nm,0.7s,mb5.4,SNR=40						
LZH	**Lanzhou**	41.69	65	*e*P	P	15 27 46.0	+0.8
LZH				AP	pP	15 27 50.5	+1.5
LZH				XP	sP	15 27 53.3	+2.7
LZH				PP	PP	15 29 25.5	+0.6
LZH				*e*S	S	15 34 01.0	-0.5
LZH				*e*SS	SS	15 37 01.0	-0.8
LZH				AMB	AMB		
	comp=Z,30nm,1.5s,mb4.7						
LZH				AMB	AMB		
	comp=Z,100nm,4.6s						
LZH				LR	LR		
	comp=E,500nm,14.0s						
LZH				LR	LR		
	comp=Z,810nm,15.0s,MS4.7						
LZH	**Lanzhou**	41.69	65	*e*P	P	15 27 46.0	+0.8
	comp=Z,30nm,1.5s,mb4.7						
LZH				pP	pP	15 27 50.5	+1.5
LZH				sP	sP	15 27 53.2	+2.6
LZH				PP	PP	15 29 25.5	+0.6
LZH				*e*S	S	15 34 01.0	-0.5
LZH				sS		15 34 08.1	
LZH				*e*SS	SS	15 37 01.0	-0.8
LZH				LR	LR		
	comp=Z,810nm,15.0s,MS4.7						
LZH	**Lanzhou**	41.69	65	*e*P	P	15 27 46.0	+0.8
LZH				*SP	sP	15 27 53.2	+2.6
LZH						15 29 25.5	
LZH				*e*S	S	15 34 01.0	-0.5
LZH				*e*SS	SS	15 37 01.0	-0.8
LZH				pmax	pmax		
	comp=Z,30nm,1.5s,mb4.7						
LZH				MLR	MLR		
	comp=Z,810nm,15.0s,MS4.7						
VAI	**Varese**	41.73	310	P	P	15 27 46.7	+1.3
CD2	**Chengdu**	41.97	73	P	P	15 27 48.0	+0.4
CD2				PP	PP	15 29 28.5	+0.4
CD2				PPP	PPP	15 30 00.0	+0.6
CD2				S	S	15 34 03.3	-2.4
CD2				SS	SS	15 37 04.5	-2.7
CD2				AMB	AMB		
	comp=Z,10.0nm,0.8s,mb4.5						
CD2				LR	LR		
	comp=N,200nm,13.2s						
CD2				LR	LR		
	comp=Z,160nm,9.6s						
KMI	**Kunming**	42.07	81	P	P	15 27 48.8	+0.3
KMI				LR	LR		
	comp=Z,30nm,20.4s,MS3.2						
KMI	**Kunming**	42.07	81	P	P	15 27 48.7	+0.2
	comp=Z,8.0nm,1.2s,mb4.2						
KMI				LR	LR		
	comp=Z,40nm,20.4s,MS3.3						
KMI	**Kunming**	42.07	81	P	P	15 27 48.7	+0.2
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s,mb4.2						
KMI				MLR	MLR		
	comp=Z,40nm,20.4s,MS3.3						
CLZ	**Clausthal**	42.22	319	*e*P	P	15 27 50.0	+0.7
	comp=Z,37nm,0.9s,mb5.0						
CLZ	**Clausthal**	42.22	319	*e*P	P	15 27 50.0	+0.7
CLZ				pmax	pmax		
	comp=Z,37nm,0.9s,mb5.0						
SBF	**Sospel**	42.35	307	*e*P	P	15 27 50.1	-0.5
	comp=Z,81nm,1.0s,mb5.0						
SBF	**Sospel**	42.35	307	*e*P	P	15 27 50.1	-0.5
SBF				pmax	pmax		
	comp=Z,40nm,1.0s,mb5.0						
TOD	**Tromm**	42.53	315	*e*P	P	15 27 53.6	+1.7
FRF	**La Foret Royal**	42.88	306	*e*P	P	15 27 54.0	-0.9
BBS	**Basel-Blauen**	42.89	312	*e*P	P	15 27 56.2	+1.3
TNS	**Taunus Mts**	42.91	316	*e*P	P	15 27 55.6	+0.6
	comp=Z,36nm,1.3s,mb4.9						
TNS	**Taunus Mts**	42.91	316	*e*P	P	15 27 55.6	+0.6
TNS				pmax	pmax		
	comp=Z,36nm,1.3s,mb4.9						
MBDF	**Montbardon**	42.94	308	*e*P	P	15 27 55.3	-0.1
	comp=Z,28nm,0.9s,mb4.7						
MBDF	**Montbardon**	42.94	308	*e*P	P	15 27 55.3	-0.1
MBDF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.7						
BSEG	**Bad Segeberg**	42.95	322	*e*P	P	15 27 55.8	+0.5
LMR	**La Mourre**	42.96	306	*e*P	P	15 27 54.9	-0.6
ZAK	**Zakamensk**	43.04	44	*e*P	P	15 27 56.0	-0.1
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.1s,mb3.5						
BNI	**Bardonecchia**	43.05	308	*e*P	P	15 27 55.5	-0.8
	comp=Z,21nm,0.9s,mb4.9						
BNI	**Bardonecchia**	43.05	308	*e*P	P	15 27 55.5	-0.7
BNI				pmax	pmax		
	comp=Z,21nm,0.9s,mb4.9						
LPG	**La Plagne**	43.06	309	*e*P	P	15 27 56.1	-0.2
	comp=Z,38nm,0.8s,mb4.9						
LPG	**La Plagne**	43.06	309	*e*P	P	15 27 56.1	-0.2
LPG				pmax	pmax		
	comp=Z,19nm,0.8s,mb4.9						
LPL	**La Plagne**	43.08	309	*e*P	P	15 27 55.5	-1.0
	comp=Z,33nm,1.0s,mb4.7						
LPL	**La Plagne**	43.08	309	*e*P	P	15 27 55.5	-1.0
LPL				pmax	pmax		
	comp=Z,17nm,1.0s,mb4.7						
MOF	**Molkenrain**	43.21	312	*e*P	P	15 27 57.9	+0.4
CDF	**Champ du Feu**	43.23	313	*e*P	P	15 27 57.8	+0.1
	comp=Z,24nm,0.9s,mb4.7						
CDF	**Champ du Feu**	43.23	313	*e*P	P	15 27 57.8	+0.1
CDF				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.6						
ECH	**Echery**	43.27	313	*e*P	P	15 27 58.1	+0.1
LOMF	**Lomont**	43.32	312	*e*P	P	15 27 58.8	+0.4
HINF	**Hinteralfeld**	43.39	312	*e*P	P	15 27 57.8	-1.2
	comp=Z,36nm,1.0s,mb4.8						
HINF	**Hinteralfeld**	43.39	312	*e*P	P	15 27 57.8	-1.2
HINF				pmax	pmax		
	comp=Z,18nm,1.0s,mb4.8						
ORIF	**Oris-en-Rattie**	43.59	308	*e*P	P	15 27 59.6	-1.0
CABF	**La Chapelle**	43.69	310	*e*P	P	15 28 01.0	-0.4
	comp=Z,54nm,0.9s,mb5.0						
CABF	**La Chapelle**	43.69	310	*e*P	P	15 28 01.0	-0.4
CABF				pmax	pmax		
	comp=Z,27nm,0.9s,mb5.0						
HAU	**Haudompre**	43.76	312	*e*P	P	15 28 00.6	-1.3
	comp=Z,32nm,0.9s,mb4.7						
HAU	**Haudompre**	43.76	312	*e*P	P	15 28 00.6	-1.3
HAU				pmax	pmax		
	comp=Z,16nm,0.9s,mb4.8						
VIVF	**Saint-Julien-l**	44.44	308	*e*P	P	15 28 06.3	-1.2
	comp=Z,36nm,1.1s,mb4.7						
VIVF	**Saint-Julien-l**	44.44	308	*e*P	P	15 28 06.3	-1.2
VIVF				pmax	pmax		
	comp=Z,18nm,1.1s,mb4.7						
SONM	**Songino Array**	44.50	48	P	P	15 28 08.3	+0.4
	comp=Z,5.8nm,0.9s,mb4.3,baz=262,slow=7.9,SNR=24						
SONM				LR	LR	15 48 49.9	
	comp=Z,147nm,20.0s,MS3.9,baz=318,slow=39						
HGN	**Heimansgroeve**	44.60	316	*e*P	P	15 28 09.6	+0.8
	comp=Z,39nm,1.1s,mb5.2						
MEZF	**Maizieres J'vi**	44.70	313	*e*P	P	15 28 08.8	-0.8
ULN	**Ulaanbaatar**	44.94	48	*e*P	P	15 28 11.0	-0.5
	comp=Z,9.1nm,1.0s,mb4.6						
ULN	**Ulaanbaatar**	44.94	48	*e*P	P	15 28 11.0	-0.5
ULN				pmax	pmax		
	comp=Z,9.0nm,1.0s,mb4.5						
LASF	**Ste Croix**	44.95	307	*e*P	P	15 28 10.8	-0.8
	comp=Z,116nm,1.3s,mb5.2						
GIVF	**Givet**	45.15	315	*e*P	P	15 28 12.7	-0.5
	comp=Z,76nm,1.0s,mb5.2						
GIVF	**Givet**	45.15	315	*e*P	P	15 28 12.7	-0.5
GIVF				pmax	pmax		
	comp=Z,38nm,1.0s,mb5.2						
SMF	**Signal de Mont**	45.23	310	*e*P	P	15 28 12.7	-1.1
	comp=Z,100nm,1.0s,mb5.3						
SMF	**Signal de Mont**	45.23	310	*e*P	P	15 28 12.7	-1.1
SMF				pmax	pmax		
	comp=Z,50nm,1.0s,mb5.3						
PLDF	**La Plantade**	45.30	309	*e*P	P	15 28 16.4	+2.0
LOR	**Lormes**	45.30	311	*e*P	P	15 28 13.3	-1.1
NB2	**NORSAR Subarra**	45.48	331	P	P	15 28 14.8	-0.8
	comp=Z,12nm,0.9s,mb4.7,baz=118,slow=7.9						
NOA	**NORSAR Array B**	45.48	331	P	P	15 28 14.8	-0.7
	comp=Z,6.1nm,0.8s,mb4.5,baz=118,slow=8.1,SNR=16						
NOA				LR	LR	15 49 54.9	
	comp=Z,84nm,18.9s,MS3.7,baz=100,slow=40						
LBL	**Lubilhac**	45.48	308	*e*P	P	15 28 17.1	+1.3
SSF	**Saint Saulge**	45.51	311	*e*P	P	15 28 15.1	-0.9
SSF				pmax	pmax		
	comp=Z,34nm,1.0s,mb5.2						
SSF	**Saint Saulge**	45.51	311	*e*P	P	15 28 15.1	-0.9
	comp=Z,34nm,1.0s,mb5.2						
BAIF	**Baives**	45.53	315	*e*P	P	15 28 16.5	+0.3
	comp=Z,106nm,1.1s,mb5.4						
BAIF	**Baives**	45.53	315	*e*P	P	15 28 16.5	+0.3
BAIF				pmax	pmax		
	comp=Z,53nm,1.1s,mb5.4						
NAO	**NORSAR Subarra**	45.54	331	P	P	15 28 14.8	-1.3
	comp=Z,12nm,0.9s,mb4.8						
NAO	**NORSAR Subarra**	45.54	331	P	P	15 28 14.8	-1.3
NAO				pmax	pmax		
	comp=Z,12nm,0.9s,mb4.8						
AVF	**Avril sur Loir**	45.58	310	*e*P	P	15 28 15.4	-1.2
	comp=Z,27nm,0.9s,mb4.9						
AVF	**Avril sur Loir**	45.58	310	*e*P	P	15 28 15.4	-1.2
AVF				pmax	pmax		
	comp=Z,14nm,0.9s,mb4.9						
BGF	**Bois d'Agland**	45.90	310	*e*P	P	15 28 18.2	-0.9
	comp=Z,36nm,0.8s,mb5.0						
BGF	**Bois d'Agland**	45.90	310	*e*P	P	15 28 18.2	-0.9
BGF				pmax	pmax		
	comp=Z,18nm,0.8s,mb5.0						
MTLF	**Montolieu**	46.08	305	*e*P	P	15 28 20.6	0.0
	comp=Z,100nm,1.2s,mb5.3						
MTLF	**Montolieu**	46.08	305	*e*P	P	15 28 20.6	0.0
MTLF				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.3						
HYF	**Humbligny**	46.12	311	*e*P	P	15 28 20.6	-0.3
KEV	**Kevo**	46.16	347	*e*p	P	15 28 19.9	-1.0
	comp=Z,8.4nm,0.7s,mb4.8						
KEV	**Kevo**	46.16	347	*e*P	P	15 28 19.9	-1.0
KEV				pmax	pmax		
	comp=Z,8.0nm,0.7s,mb4.8						
CAF	**Calviac**	46.29	308	*e*P	P	15 28 21.8	-0.4
	comp=Z,52nm,0.9s,mb5.1						
CAF	**Calviac**	46.29	308	*e*P	P	15 28 21.8	-0.4
CAF				pmax	pmax		
	comp=Z,26nm,0.9s,mb5.2						
ARCES	**ARCESS Array B**	46.31	346	P	P	15 28 21.9	-0.1
	comp=Z,2.3nm,0.6s,mb4.3,baz=140,slow=9.5,SNR=9.5						
ARCES				LR	LR	15 52 19.0	
	comp=Z,100nm,18.3s,MS3.8,baz=283,slow=42						
TCF	**Toulx Ste Croi**	46.31	309	*e*P	P	15 28 21.6	-0.7
	comp=Z,41nm,0.9s,mb5.1						
TCF	**Toulx Ste Croi**	46.31	309	*e*P	P	15 28 21.6	-0.7
TCF				pmax	pmax		
	comp=Z,21nm,0.9s,mb5.1						
EMIR	**Miracle**	46.54	303	P	P	15 28 23.0	-1.2
	comp=Z,27nm,0.9s,mb5.2						
EPOB	**Poblet**	46.87	303	P	P	15 28 26.4	-0.5
	comp=Z,35nm,1.2s,mb5.2						
ENH	**Enshi**	46.95	73	*e*P	P	15 28 27.2	-0.5
	comp=Z,5.4nm,0.4s,mb4.8						
LFF	**La Frestale**	47.23	308	*e*P	P	15 28 29.3	-0.4
	comp=Z,41nm,0.8s,mb5.1						
LFF	**La Frestale**	47.23	308	*e*P	P	15 28 29.3	-0.4
LFF				pmax	pmax		
	comp=Z,21nm,0.8s,mb5.1						
ERTA	**Horta de San J**	47.44	302	P	P	15 28 32.0	+0.7
	comp=Z,84nm,1.8s,mb5.4						
EPF	**Esparros**	47.44	305	*e*P	P	15 28 29.8	-1.6
	comp=Z,14nm,0.9s,mb4.6						
EPF	**Esparros**	47.44	305	*e*P	P	15 28 29.8	-1.6
EPF				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.6						
EGRA	**Graus**	47.45	304	P	P	15 28 30.5	-0.9
	comp=Z,10nm,0.7s,mb4.9						
HHC	**Hu-ho-hao-te**	47.68	58	*e*P	P	15 28 34.0	+0.7
HHC				AP	pP	15 28 39.0	+1.9
HHC				XP	sP	15 28 41.5	+2.9
HHC				PCP	PcP	15 30 03.0	-0.1
HHC				PP	PP	15 30 24.5	+0.2
HHC				SCP		15 33 55.5	
HHC				S	S	15 35 29.0	+1.2
HHC				XS		15 35 36.3	
HHC				SCS	ScS	15 38 25.3	+1.2
HHC				SS	SS	15 38 53.0	+2.7
HHC				AMB	AMB		
	comp=Z,20nm,1.1s,mb5.1						
HHC				AMB	AMB		
	comp=Z,200nm,7.2s						
HHC				LR	LR		
	comp=N,170nm,12.0s,MS4.4						
HHC				LR	LR		
	comp=E,160nm,10.8s,MS4.4						
HHC				LR	LR		
	comp=Z,220nm,13.2s,MS4.3						
MFF	**Saint Martin d**	47.96	310	*e*P	P	15 28 34.1	-1.3
ESAC	**San Caprasio**	48.03	303	P	P	15 28 34.3	-1.7
	comp=Z,25nm,0.5s,mb5.5						
EMOS	**Mosqueruela**	48.06	301	P	P	15 28 36.0	-0.2
	comp=Z,76nm,1.2s,mb5.6						
ETSF	**Etsaut**	48.10	305	*e*P	P	15 28 36.5	0.0
	comp=Z,39nm,0.8s,mb5.2						
ETSF	**Etsaut**	48.10	305	*e*P	P	15 28 36.5	0.0
ETSF				pmax	pmax		
	comp=Z,19nm,0.8s,mb5.2						
LDF	**La Druitiere**	48.12	312	*e*P	P	15 28 35.0	-1.6
	comp=Z,47nm,1.1s,mb5.2						
LDF	**La Druitiere**	48.12	312	*e*P	P	15 28 35.0	-1.6
LDF				pmax	pmax		
	comp=Z,24nm,1.1s,mb5.1						
FLN	**La Foliniere**	48.37	313	*e*P	P	15 28 37.1	-1.4
	comp=Z,100nm,1.2s,mb5.4						
FLN	**La Foliniere**	48.37	313	*e*P	P	15 28 37.1	-1.4
FLN				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.4						
ECHE	**Chera**	48.47	300	P	P	15 28 42.2	+2.8
GRR	**Gorron**	48.59	312	*e*P	P	15 28 39.0	-1.2
ETOB	**Tobarra**	48.98	299	P	P	15 28 47.4	+4.1
	comp=Z,24nm,1.3s,mb5.1						
SGMF	**Saint Gilles**	49.71	312	*e*P	P	15 28 47.6	-1.2
	comp=Z,57nm,1.0s,mb5.3						
SGMF	**Saint Gilles**	49.71	312	*e*P	P	15 28 47.6	-1.2
SGMF				pmax	pmax		
	comp=Z,29nm,1.0s,mb5.3						
EVIA	**Vianos**	49.72	299	P	P	15 28 52.2	+3.1
	comp=Z,17nm,0.7s,mb5.2						
EVIA	**Vianos**	49.72	299	P	P	15 28 52.2	+3.1
EVIA				pmax	pmax		
	comp=Z,17nm,0.7s,mb5.2						
EHUE	**Huescar**	49.86	298	P	P	15 28 53.1	+3.0
	comp=Z,6.3nm,0.8s,mb4.7						
EHUE	**Huescar**	49.86	298	P	P	15 28 53.1	+2.9
EHUE				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
QUIF	**Quistinic**	50.09	311	*e*P	P	15 28 50.3	-1.5
	comp=Z,100nm,1.2s,mb5.4						
QUIF	**Quistinic**	50.09	311	*e*P	P	15 28 50.3	-1.5
QUIF				pmax	pmax		
	comp=Z,50nm,1.2s,mb5.4						
ROSF	**Rostrenen**	50.19	312	*e*P	P	15 28 51.2	-1.3
EQES	**Quesada**	50.24	298	P	P	15 28 56.1	+3.1
	comp=Z,16nm,0.9s,mb5.0						
EBAN	**Banos Encina**	50.77	299	P	P	15 28 59.5	+2.5
	comp=Z,48nm,1.2s,mb5.3						
EBAN	**Banos Encina**	50.77	299	P	P	15 28 59.5	+2.5
EBAN				pmax	pmax		
	comp=Z,48nm,1.2s,mb5.3						
ESDC	**Sonseca Array**	50.77	301	P	P	15 28 56.5	-0.5
	comp=Z,8.8nm,0.9s,mb4.7,baz=74,slow=6.8,SNR=15						
ESDC	**Sonseca Array**	50.77	301	P	P	15 28 57.7	+0.6
	comp=Z,5.8nm,0.8s,mb4.6						
GUD	**Guadarrama**	50.85	302	P	P	15 28 54.7	-2.9
	comp=Z,5.5nm,0.7s,mb4.6						
GUD	**Guadarrama**	50.85	302	P	P	15 28 54.7	-3.0
GUD				pmax	pmax		
	comp=Z,6.0nm,0.7s,mb4.6						
ERON	**Agron**	50.90	297	P	P	15 29 00.2	+2.1
BOD	**Bodaibo**	50.92	36	*e*P	P	15 28 56.5	-1.4
BOD				pmax	pmax		
	comp=Z,16nm,1.3s,mb4.8						
WHN	**Wuhan**	51.04	71	*e*P	P	15 28 58.5	-0.7
EADA	**Adamuz**	51.39	299	P	P	15 29 04.1	+2.3
	comp=Z,22nm,1.0s,mb5.0						
EMIJ	**Mijas**	51.73	297	P	P	15 29 06.0	+1.6
	comp=Z,17nm,1.0s,mb4.9						
ECAB	**El Cabril**	52.06	299	P	P	15 29 06.9	+0.1
	comp=Z,22nm,0.8s,mb5.2						
TORD	**Torodi Ar. Bea**	52.27	266	P	P	15 29 07.8	-0.9
	comp=Z,22nm,1.1s,mb5.0,baz=59,slow=6.8,SNR=39						
ESPR	**Espera**	52.55	297	P	P	15 29 12.5	+1.9
	comp=Z,7.9nm,0.9s,mb4.6						
HIA	**Hailar**	53.45	47	*e*P	P	15 29 16.3	-0.7
	comp=Z,9.5nm,0.8s,mb4.8						
HIA	**Hailar**	53.45	47	*e*P	P	15 29 16.3	-0.7
HIA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2	**Nanjing**	54.52	68	*e*P	P	15 29 28.8	+3.7
NJ2				AP	pP	15 29 33.5	+4.5
NJ2				XP	sP	15 29 35.8	+5.4
NJ2				PP	PP	15 31 32.5	+3.5
NJ2				S	S	15 37 04.0	+1.8
NJ2				XS		15 37 13.0	
NJ2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
NJ2				AMB	AMB		
	comp=Z,200nm,7.3s						
NJ2				LR	LR		
	comp=N,1µm,21.1s						
NJ2				LR	LR		
	comp=E,530nm,10.6s						
NJ2				LR	LR		
	comp=Z,200nm,20.1s,MS4.2						
SSE	**Sheshan**	56.67	69	*e*P	P	15 29 38.0	-2.7
SSE				AMB	AMB		
	comp=Z,30nm,0.7s,mb5.4						
SSE				AMB	AMB		
	comp=Z,130nm,7.5s						
SSE	**Sheshan**	56.67	69	*e*P	P	15 29 38.1	-2.6
	comp=Z,33nm,0.7s,mb5.5						
CN2	**Changchun**	57.73	53	*e*P	P	15 29 47.3	-0.7
CN2				*e*S	S	15 37 43.0	-1.6
CN2				AMB	AMB		
	comp=Z,20nm,1.2s,mb5.0						
CN2				AMB	AMB		
	comp=Z,170nm,6.0s						
CN2				LR	LR		
	comp=N,320nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=E,230nm,17.0s,MS4.6						
CN2				LR	LR		
	comp=Z,210nm,18.0s,MS4.3						
LBTB	**Lobatse**	59.15	212	*e*P	P	15 29 57.9	-0.2
	comp=Z,15nm,1.0s,mb5.0						
LBTB	**Lobatse**	59.15	212	*e*P	P	15 29 57.9	-0.3
LBTB				pmax	pmax		
	comp=Z,15nm,1.0s,mb5.0						
YAK	**Yakutsk**	59.21	32	*e*P	P	15 29 58.5	+0.4
	comp=Z,5.3nm,0.7s,mb4.7						
YAK	**Yakutsk**	59.21	32⇓	*i*P	P	15 29 58.4	+0.3
YAK				pmax	pmax		
	comp=Z,21nm,1.4s,mb5.0						
YAK				MLR	MLR		
	comp=Z,100nm,14.0s,MS4.1						
TIXI	**Tiksi**	59.52	21	*e*P	P	15 30 00.2	+0.1
TIXI				pmax	pmax		
	comp=Z,17nm,1.7s,mb4.8						
TIXI				MLR	MLR		
	comp=Z,400nm,17.0s,MS4.6						
MDJ	**Mudanjiang**	60.55	52	P	P	15 30 06.0	-1.6
MDJ				PCP	PcP	15 30 49.0	-2.9
MDJ				SCP		15 34 51.8	
MDJ				PCS		15 34 53.3	
MDJ				S	S	15 38 21.0	-0.3
MDJ				SCS	ScS	15 39 56.0	+1.4
MDJ				SS	SS	15 42 20.0	-0.9
MDJ				AMB	AMB		
	comp=Z,190nm,4.3s						
MDJ				LR	LR		
	comp=N,90nm,25.6s,MS3.8						
MDJ				LR	LR		
	comp=E,40nm,26.5s,MS3.8						
MDJ				LR	LR		
	comp=Z,40nm,31.1s,MS3.4						
DAG	**Danmarks Havn**	60.59	345⇑	*i*P	P	15 30 07.3	-0.1
	comp=Z,2.0nm,0.6s,mb4.4						
DAG	**Danmarks Havn**	60.59	345⇑	*e*P	P	15 30 07.3	-0.1
	comp=Z,2.0nm,0.6s,mb4.4						
DAG	**Danmarks Havn**	60.59	345⇑	*e*P	P	15 30 07.3	-0.1
DAG				pmax	pmax		
	comp=Z,2.0nm,0.6s,mb4.4						
DBIC	**Dimbokro**	60.85	262	P	P	15 30 09.6	-0.4
	comp=Z,6.5nm,0.8s,mb4.8,baz=60,slow=8.7,SNR=5.7						
DBIC				LR	LR	15 57 29.2	
	comp=Z,60nm,19.2s,MS3.8,baz=53,slow=37						
LIC	**Lamto**	61.21	262	*e*P	P	15 30 10.5	-1.9
	comp=Z,6.8nm,0.8s,mb4.8						
KLR	**Kul'dur**	61.29	46	*e*P	P	15 30 07.8	-4.7
JOW	**Kunigami**	63.80	72	LR	LR	16 01 11.2	
	comp=Z,60nm,19.3s,MS3.8,baz=294,slow=39						
SUMG	**Summit**	65.98	341	*e*P	P	15 30 43.7	+0.9
	comp=Z,32nm,1.2s,mb5.2						
MJAR	**Matsushiro Arr**	68.87	59	P	P	15 31 00.6	-1.1
	comp=Z,1.9nm,0.9s,mb4.0,baz=286,slow=8.2,SNR=4.9						
MJAR				LR	LR	16 03 03.7	
	comp=Z,96nm,18.5s,MS4.1,baz=10.0,slow=38						
NWAO	**Narrogin (SRO)**	83.27	132	LR	LR	16 05 21.5	
	comp=Z,62nm,20.2s,MS4.0,baz=341,slow=33						
IMA2	**Indian Mountai**	84.76	12	*e*P	P	15 32 30.6	+0.9
COLA	**College**	86.83	10	*e*P	P	15 32 40.6	+0.5
ILAR	**Eielson Array**	87.07	10	P	P	15 32 40.8	-0.5
	comp=Z,2.7nm,0.8s,mb4.5,baz=322,slow=4.3,SNR=27						
TTA	**Tatalina**	87.10	14	*e*P	P	15 32 41.6	+0.1
	comp=Z,34nm,1.6s,mb5.3						
TTA	**Tatalina**	87.10	14	*e*P	P	15 32 41.6	+0.2
TTA				pmax	pmax		
	comp=Z,34nm,1.6s,mb5.3						
MCK	**McKinley**	87.73	11	*e*P	P	15 32 44.8	+0.4
	comp=Z,9.5nm,1.1s,mb4.9						
MCK	**McKinley**	87.73	11	*e*P	P	15 32 44.8	+0.4

MCK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb5.0						
DAWY	**Dawson**	**88.70**	**7**	*e*P	**P**	**15 32 49.1**	**+0.1**
WRA	**Warramunga Arr**	**89.13**	**113**	P	**P**	**15 32 51.8**	**-0.3**
	comp=Z,1.3nm,0.7s,mb4.4,baz=312,slow=3.9,SNR=18						
WRAB	**Tennant Creek**	**89.14**	**113**	*e*P	**P**	**15 32 52.4**	**+0.2**
YKA	**Yellowknife Ar**	**90.73**	**356**	P	**P**	**15 32 59.7**	**+1.1**
	comp=Z,3.8nm,1.1s,mb4.6,baz=6.8,slow=4.7,SNR=9.3						
YKA				LR	LR	16 21 48.6	
	comp=Z,56nm,19.2s,MS4.0,baz=90,slow=41						
YKA	**Yellowknife Ar**	**90.73**	**356**	P	**P**	**15 32 59.7**	**+1.1**
YKA				LR	LR	16 21 48.6	
NVAR	**Mina Array Bea**	**114.92**	**355**	PKP	PKPdf	15 38 38.8	-0.5
	comp=Z,0.4nm,0.7s,baz=142,slow=1.9,SNR=3.6						
TXAR	**Lajitas Array**	**120.85**	**339**	PKP	PKPdf	15 38 49.4	-1.6
	comp=Z,0.3nm,0.3s,SNR=4.1						
OTAV	**Otavalo**	**128.46**	**294**	*e*PKPdf	PKPdf	15 39 07.6	+1.4
PLCA	**Paso Flores**	**133.93**	**238**	PKP	PKPdf	15 39 15.1	-0.5
	comp=Z,1.0nm,0.8s,baz=21,slow=11,SNR=2.8						

NNC ***30*** *15:21:18.5±10.0, 36.84N×69.99E, mpv3.8, Error ellipse: s-maj=91.4km s-min=73.7km az=151.0*

ISC 30 15:21:21.6±2.7**, 36.9N**±0.2×**69.8E**±0.2**, h33**^{km}**, n10,** σ**1**^{s}**31**/11**, 2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.07**	**29**	P	**P**	**15 22 48.6**	**-2.6**
	SNR=15						
KK31	**Karatay Array**	**6.26**	**5**	⇓P	**P**	**15 22 51.8**	**-2.3**
	3.2nm,0.4s,baz=182,slow=13,SNR=45						
KK31				⇓S	**S**	**15 24 05.9**	**+0.5**
	8.5nm,0.4s,baz=185,slow=29						
UCH	**Uchtor**	**6.48**	**33**	P	**P**	**15 22 57.4**	**+0.2**
	SNR=9.7						
EKS2	**Erkin-Say**	**6.55**	**27**	P	**P**	**15 22 58.4**	**+0.2**
	SNR=7.9						
KZA	**Kyzart**	**6.70**	**37**	P	**P**	**15 23 03.1**	**+2.9**
	SNR=5.5						
AAK	**Ala-Archa**	**6.81**	**31**	P	**P**	**15 23 01.6**	**-0.1**
	SNR=13						
KBK	**Karagaybulak**	**7.02**	**33**	P	**P**	**15 23 05.6**	**+0.9**
	SNR=21						
USP	**Ospenovka**	**7.34**	**28**	P	**P**	**15 23 07.8**	**-1.4**
	SNR=7.7						
TKM2	**Tokmak 2**	**7.51**	**35**	P	**P**	**15 23 12.4**	**+0.8**
	SNR=11						
AB31	**Akbulak array**	**14.32**	**333**	P	**P**	**15 24 44.8**	**+0.9**
	11nm,0.9s,baz=185,slow=29,SNR=60						

JMA 30 15:23:33.0±0.1**, 38.07N×144.52E, h46**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.45**	**295**	P	P	15 24 11.8	+0.3
OFUJ				*e*S	S	15 24 41.0	+0.6
JIO	**Ouri**	**2.53**	**280**	P	P	15 24 12.8	+0.3
JIO				S	S	15 24 42.4	+0.2
MIYJ	**Miyakonagasawa**	**2.59**	**306**	P	P	15 24 13.3	-0.2
MIYJ				*e*S	S	15 24 44.1	+0.2
JMK	**Ichinoseki**	**2.73**	**290**	P	P	15 24 16.0	+0.5
JMK				*e*S	S	15 24 48.3	+0.8
JOM	**Ohasama**	**2.89**	**300**	P	P	15 24 18.3	+0.6
JOM				*e*S	S	15 24 52.0	+0.6
JCH	**Churui**	**4.62**	**349**	*e*S	S	15 25 30.2	-5.1
JRY	**Ryogami san**	**4.94**	**247**	P	P	15 24 45.8	-0.9
JRY				S	S	15 25 39.8	-3.4
NEM2	**Nemuro 2**	**5.37**	**10**	*e*S	S	15 25 44.6	-9.4
JTKR	**Abashiri--Toko**	**5.91**	**356**	*e*S	S	15 26 00.2	-7.4

GUC ***30*** *15:35:26.4±0.4, 27.34S×70.80W, h34*^{km}*±2*^{km}*, ML4.2*

IDC ***30*** *15:35:26.5±0.8, 27.22S×70.70W, h37*^{km}*±4*^{km}*, mb3.8/5, mb1 3.8/7, mb1mx3.7/17, mbtmp3.9/7, ML3.8/1, MS3.2/3, Ms1 3.2/3, ms1mx2.9/16, Error ellipse: s-maj=30.7km s-min=19.3km az=90.0*

NEIC ***30*** *15:35:27.0±0.7, 27.22S×70.72W, h41*^{km}*±6*^{km}*, mb3.6/1, Error ellipse: s-maj=18.9km s-min=8.6km az=85.0*

NEIC Felt [III] at Copiapo and Tierra Amarilla.

ISC 30 15:35:26.0±0.7**, 27.30S**±0.05×**70.8W**±0.1**, h47**^{km}±4^{km}**, n33,** σ**1**^{s}**12**/29**, mb3.9**/5**, MS3.3**/1**, 8C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDCH	**Caldera**	**0.23**	**343**	⇑*i*P	**P**	**15 35 33.6**	**-0.7**
CDCH				*i* S	**S**	**15 35 38.9**	**-1.1**
CDCH				AMP		15 35 39.6	
	comp=N,13µm,0.4s						
CPCH	**Copiapo**	**0.36**	**100**	⇓*i*P	**P**	**15 35 35.2**	**-0.3**
CPCH				*i* S	**S**	**15 35 42.1**	**0.0**
CRCH	**Chaqaral**	**0.95**	**7**	⇑*i*P	**P**	**15 35 44.4**	**+1.2**
CRCH				*i* S	**S**	**15 35 58.0**	**+2.1**
CRCH				AMP		15 36 00.7	
	comp=E,6µm,0.5s						
LSCH	**La Serena**	**2.64**	**189**	*i* P	**P**	**15 36 02.9**	**-4.3**
LSCH				*i* S	**S**	**15 36 33.7**	**-4.4**
LSCH				AMP		15 36 54.0	
	comp=E,1µm,0.6s						
CPN1	**Cerro Paranal**	**2.68**	**7**	*i* P	**P**	**15 36 07.4**	**-0.3**
CPN1				*i* S	**S**	**15 36 40.4**	**+1.2**
CPN1				AMP		15 36 50.7	
	comp=E,2µm,0.4s						
TLL	**Tololo Astrono**	**2.86**	**181**	⇑*i*P	**P**	**15 36 11.1**	**+0.7**
TLL				AMP		15 37 05.7	
	comp=E,2µm,0.7s						
CFAA	**Coronel Fontan**	**4.82**	**154**	Pn	**P**	**15 36 39.1**	**+1.1**
	comp=E,0.7nm,0.3s,baz=326,slow=13,SNR=31						
CFAA				Sn	**S**	**15 37 38.2**	**+5.0**
	comp=E,1.8nm,0.3s,baz=114,slow=13,SNR=9.6						
LPAZ	**La Paz**	**11.22**	**13**	Pn	**P**	**15 38 03.9**	**-2.8**
	comp=E,0.3nm,0.3s,baz=207,slow=9.6,SNR=7.5						
LPAZ				LR	LR	15 42 28.4	
	comp=E,63nm,21.5s,baz=82,slow=38						
PLCA	**Paso Flores**	**13.40**	**179**	LR	LR	15 43 59.4	
	comp=E,96nm,18.3s,baz=0.9,slow=38						
SIV	**San Ignacio**	**14.40**	**41**	Pn	**P**	**15 38 43.6**	**-5.2**
	comp=E,0.5nm,0.3s,baz=258,slow=8.1,SNR=11						
SAML	**Samuel**	**19.60**	**23**	*e*P	**P**	**15 39 52.0**	**-1.2**
	comp=E,3.3nm,0.9s						
BDFB	**Brasilia**	**24.09**	**66**	P	**P**	**15 40 37.2**	**-1.0**
	comp=E,2.5nm,0.7s,mb3.8,baz=124,slow=2.5,SNR=3.7						
BDFB				LR	LR	15 51 37.9	
	comp=E,86nm,18.2s,MS3.3,baz=25,slow=40						
VNA3	**Neumayer Olymp**	**55.19**	**160**		**P**	**15 44 57.6**	**+1.7**
VNA3	**Neumayer Olymp**	**55.19**	**160**	⇑*i*	**P**	**15 45 00.7**	**+4.8**
VNA3	**Neumayer Olymp**	**55.19**	**160**	⇑*i*	pP	15 45 08.0	-1.0
VNA3	**Neumayer Olymp**	**55.19**	**160**		sP	15 45 12.4	-2.0
VNA2	**Neumayer--Watz**	**55.81**	**159**		**P**	**15 45 00.2**	**-0.2**
VNA2	**Neumayer--Watz**	**55.81**	**159**	⇑*i*	**P**	**15 45 03.5**	**+3.1**
VNA2	**Neumayer--Watz**	**55.81**	**159**	⇑*i*	pP	15 45 12.6	-0.9
VNA2	**Neumayer--Watz**	**55.81**	**159**	⇑*i*	sP	15 45 16.3	-2.6
SNAA	**Sanae**	**57.41**	**160**		**P**	**15 45 11.0**	**-0.8**
SNAA	**Sanae**	**57.41**	**160**		**P**	**15 45 15.8**	**+4.0**
SNAA	**Sanae**	**57.41**	**160**		pP	15 45 22.3	-2.7
SNAA	**Sanae**	**57.41**	**160**	⇓*i*	sP	15 45 27.5	-2.9
SNAA	**Sanae**	**57.41**	**160**	P	**P**	**15 45 11.3**	**-0.6**
	comp=E,0.5nm,0.5s,mb3.8,baz=264,slow=8.0,SNR=16						
SNAA				pP	pP	15 45 22.0	-3.0
	comp=E,1.6nm,0.8s,baz=280,slow=8.0,SNR=7.3						
SNAA				sP	sP	15 45 27.2	-3.2
	comp=E,0.5nm,0.5s,baz=269,slow=12,SNR=2.5						
SNAA	**Sanae**	**57.41**	**160**	P	**P**	**15 45 11.0**	**-0.8**
DBIC	**Dimbokro**	**72.04**	**72**	P	**P**	**15 46 47.0**	**-0.4**
	comp=E,3.2nm,0.8s,mb4.3,baz=237,slow=11,SNR=4.4						
DBIC	**Dimbokro**	**72.04**	**72**	P	**P**	**15 46 47.0**	**-0.4**
PDAR	**Pinedale Array**	**78.34**	**332**	P	**P**	**15 47 23.3**	**+0.3**
	comp=E,0.3nm,0.6s,mb3.4,baz=140,slow=7.0,SNR=3.3						
TORD	**Torodi Ar. Bea**	**80.89**	**70**	P	**P**	**15 47 37.0**	**-0.2**
	comp=E,2.7nm,0.6s,mb4.3,baz=268,slow=5.2,SNR=19						
TORD				pP	pP	15 47 48.7	-2.3
	comp=E,3.3nm,0.6s,baz=266,slow=4.9,SNR=3.7						
TORD				sP	sP	15 47 52.9	-3.2
	comp=E,3.3nm,0.6s,baz=269,slow=5.1,SNR=11						
WRA	**Warramunga Arr**	**127.12**	**210**	PKP	PKPdf	15 54 26.8	+0.8
	comp=E,0.6nm,0.7s,baz=168,slow=1.8,SNR=9.4						
WRA				pPKP		15 54 38.5	
	comp=E,0.4nm,0.6s,baz=176,slow=1.8,SNR=3.4						
ZAL	**Zalesovo**	**147.87**	**27**	PKPbc	PKPdf	15 55 05.2	+2.8
	comp=E,1.5nm,0.7s,baz=153,slow=5.1,SNR=8.1						
MKAR	**Makanchi Array**	**151.22**	**40**	PKPbc	PKPdf	15 55 15.9	+8.0
	comp=E,2.8nm,0.7s,baz=325,slow=2.1,SNR=37						
MKAR				pPKPbc		15 55 27.8	
	comp=E,1.5nm,0.7s,baz=302,slow=2.0,SNR=8.1						

IDC 30 15:57:14.8±1.5**, 1.65N×124.02E, mb3.7**/3**, mb1 3.8**/3**, mb1mx3.5**/15**, mbtmp3.7**/3**, Error ellipse: s-maj=202.6km s-min=23.3km az=62.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.73**	**155**	P	P	16 02 27.9	-1.7
	0.7nm,0.5s,baz=334,slow=11,SNR=11						
STKA	**Stephens Creek**	**37.28**	**155**	P	P	16 04 29.7	-0.7
	0.8nm,0.5s,baz=341,slow=9.8,SNR=2.7						
MKAR	**Makanchi Array**	**57.77**	**327**	P	P	16 07 07.4	-2.7
	0.7nm,0.4s,baz=113,slow=8.0,SNR=27						

NEIC ***30*** *15:59:24.9, 17.60N×101.73W, h20*^{km}*, MD4.0(MEX), After MEX.*

MEX 30 15:59:24.9±1.1**, 17.60N×101.73W, h20**^{km}±24^{km}**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.26**	**89**	*i* P	Pb	15 59 29.6	-1.2
ZIIG				*i* S	Sb	15 59 33.7	-1.2
CAIG	**El Cayaco**	**1.50**	**111**	*i* P	Pn	15 59 46.7	-4.4
CAIG				*i* S	Sn	16 00 06.9	-3.4
ACX	**Acapulco**	**1.88**	**113**	*e*P	Pn	15 59 54.0	-2.5
MOIG	**Morelia**	**2.13**	**14**	*i* P	Pn	15 59 57.4	-2.6
MOIG				*i* S	Sn	16 00 21.9	-4.2
PLIG	**Platanillo**	**2.26**	**69**	*i* P	Pn	15 59 59.2	-2.8
PLIG				*i* S	Sn	16 00 25.1	-4.4
PPM	**Popocatepetl**	**3.29**	**63**	*i* P	Pn	16 00 12.8	-3.7
PPM				*i* P		16 00 14.5	
PPM				*i* S	Sn	16 00 51.0	-4.6

IDC ***30*** *16:03:15.4±9.1, 15.96N×92.97W, mb3.6/3, mb1 4.0/4, mb1mx3.7/20, mbtmp3.5/4, ML4.4/1, Error ellipse: s-maj=200.6km s-min=104.1km az=13.0*

MEX ***30*** *16:03:42.1±1.6, 16.85N×94.10W, h143*^{km}*±15*^{km}*, MD4.2*

NEIC ***30*** *16:03:42.1, 16.85N×94.10W, h143*^{km}*, MD4.2(MEX), After MEX.*

ISC 30 16:03:40.0±0.6**, 16.86N**±0.07×**94.12W**±0.04**, h143**^{km}±5^{km}**, n14,** σ**1**^{s}**24**/23**, mb3.4**/3**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.76**	**288**	*i* P	**P**	**16 04 04.4**	**+1.9**
CMIG				*i* S	**S**	**16 04 19.8**	**0.0**
TUIG	**Tuzandepetl**	**1.21**	**346**	*i* P	**P**	**16 04 06.7**	**+0.4**
TUIG				*i* S	**S**	**16 04 25.7**	**-0.8**
SCX	**San Cristobal**	**1.43**	**95**	*i* P	**P**	**16 04 09.0**	**+0.3**
SCX				*i* S	**S**	**16 04 29.0**	**-1.7**
CCIG	**Comitan**	**1.99**	**106**	*i* P	**P**	**16 04 16.4**	**+1.5**
CCIG				*i* S	**S**	**16 04 41.5**	**-0.2**
HUIG	**Huatulco**	**2.19**	**241**	*i* P	**P**	**16 04 16.7**	**-0.8**
HUIG				*i* S	**S**	**16 04 46.1**	**0.0**
OXX	**Oaxaca**	**2.50**	**276**	*i* P	**P**	**16 04 21.5**	**+0.1**
OXX				*i* S	**S**	**16 04 52.0**	**-0.9**
VHO	**Vista Hermosa**	**2.51**	**275**	*i* P	**P**	**16 04 22.9**	**+1.4**
VHO				*i* S	**S**	**16 04 53.4**	**+0.2**
PPM	**Popocatepetl**	**4.82**	**298**	*i* P	**P**	**16 04 53.5**	**+1.6**
PPM				*e*P		16 04 53.5	
PPM				*i* S	**S**	**16 05 46.0**	**-1.2**
PPM	**Popocatepetl**	**4.82**	**298**	*i* P	**P**	**16 04 53.5**	**+1.6**
PPM				*i* S	**S**	**16 05 46.0**	**-1.2**
ACX	**Acapulco**	**5.55**	**271**	*i* P	**P**	**16 04 59.0**	**-2.5**
TXAR	**Lajitas Array**	**15.20**	**326**	Pn	**P**	**16 07 10.4**	**+2.0**
	0.3nm,0.3s,baz=152,slow=15,SNR=3.4						
NVAR	**Mina Array Bea**	**30.18**	**320**	P	**P**	**16 09 40.4**	**+1.3**
	0.2nm,0.5s,mb3.1,baz=134,slow=12,SNR=4.7						
YKA	**Yellowknife Ar**	**47.80**	**347**	P	**P**	**16 12 02.8**	**-1.7**
	1.0nm,0.6s,mb3.6,baz=154,slow=7.3,SNR=6.7						
ILAR	**Eielson Array**	**59.42**	**337**	P	**P**	**16 13 28.1**	**-1.5**
	0.3nm,0.5s,mb3.3,baz=144,slow=4.9,SNR=13						

SKO ***30*** *16:53:39.6, 6.24N×124.14E, h2*^{km}

MAN ***30*** *16:53:40.6, 5.91N×123.68E, h30*^{km}*, mb6.0, ML5.1, MS5.7*

MAN INTENSITY V - COTABATO CITY PALIMBANG SULTAN KUDARAT INTENSITY IV- PAGADIAN CITY TAKORONG CITY INTENSITY III - GEN SANTOS CITY.

BJI ***30*** *16:53:41.4, 6.11N×124.32E, h28*^{km}*, mB6.4, mb5.5, Ms6.4, Msz6.1*

HRVD ***30*** *16:53:42.5±0.1, 6.32N×123.98E, h15*^{km}*, MW6.4/92, Centroid moment Tensor Solution. LP body waves: s92,c230;Mantle waves: s90,c406; Half duration: 3*^{s}*7 Moment tensor: Scale 10*^{18}*Nm; M*$_{rr}$*2.61±.02; M*$_{\theta\theta}$*-0.15±.01; M*$_{\phi\phi}$*-2.46±.02; M*$_{r\theta}$*0.63±.05; M*$_{\theta\phi}$*1.13±.01; M*$_{\phi r}$*-3.96±.05; Best double couple: M*$_0$*4.876×10*^{18} *NP1:* ϕ_s*325°,δ18°,λ67°. NP2:*ϕ_s*169°,δ73°,λ97°. Principal axes: T 4.777, Plg61°, Azm90°; N .196, Plg7°, Azm347°; P -4.974, Plg28°, Azm253°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***30*** *16:53:42.5±0.1, 6.27N×124.03E, h13*^{km}*, mb5.8/60, ME6.1, MS5.9/34, MW6.2 Error ellipse: s-maj=5.9km s-min=4.3km az=67.0 Broadband fault plane solution: P waves. NP1:* ϕ_s*168°,δ77°,λ90°. NP2:*ϕ_s*348°,δ13°,λ90°. Principal axes: T Plg58°, Azm78°; N Plg0°, Azm0°; P Plg32°, Azm258°; Moment Tensor Solution. s27 Moment tensor: Scale 10*^{18} *Nm; M*$_{rr}$*1.51; M*$_{\theta\theta}$*-0.73; M*$_{\phi\phi}$*-0.78; M*$_{r\theta}$*0.37; M*$_{\theta\phi}$*1.01; M*$_{\phi r}$*-1.72; Best double couple: M*$_0$*2.4×10*^{18} *NP1:* ϕ_s*294°,δ27°,λ49°. NP2:*ϕ_s*158°,δ70°,λ109°. Principal axes: T 2.44, Plg61°, Azm96°; N -.05, Plg17°, Azm332°; P -2.38, Plg22°, Azm234°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [V PIVS] at Cotabato and Palimbang; [IV PIVS] at Pagadian and Tacurong; [III PIVS] at General Santos. Also felt at Koronadal.

MOS ***30*** *16:53:44.4±1.2, 6.34N×124.05E, h36*^{km}*, mb5.9/53, MS6.1/41 Error ellipse: s-maj=9.3km s-min=4.4km az=116.0*

IDC ***30*** *16:53:47.0±0.9, 6.26N×124.09E, h51*^{km}*±6*^{km}*, mb5.2/38, mb1 5.2/39, mb1mx5.2/40, mbtmp5.4/39, MS6.0/25, Ms1 6.0/25, ms1mx5.8/31, Error ellipse: s-maj=8.7km s-min=5.6km az=76.0*

ISC 30 16:53:44.3±0.1**, 6.23N**±0.02×**124.04E**±0.02**, h37**^{km}**, h37**^{km}±2.4^{km}**:pP-P, n603,** σ**1**^{s}**30**/559**, mb5.7**/139**, MS6.0**/97**, 58C-26D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	**0.91**	**99**	⇑*i*P	**P**	**16 54 06.0**	**+5.3**
KCP	**Kidapawan**	**1.30**	**53**	⇓*e*P	**P**	**16 54 10.5**	**+4.2**
KCP				*i* S	**S**	**16 54 31.6**	**+8.8**
DMPH	**Davao City--Mi**	**1.69**	**60**	⇑*i*P	**P**	**16 54 21.3**	**+9.5**
DMPH				*i* S	**S**	**16 54 48.0**	**+16**
PAGZ	**Pagadian**	**1.74**	**338**	*e*P	**P**	**16 54 10.7**	**-1.8**
PAGZ				*e*S	**S**	**16 54 32.8**	**-0.9**
DAV	**Davao City (W)**	**1.74**	**61**	*e*P	**P**	**16 54 15.5**	**+2.9**
DAV	**Davao City (W)**	**1.74**	**61**	*e*P	**P**	**16 54 15.6**	**+2.9**
BUKP	**Musuan**	**1.93**	**32**	*e*P	**P**	**16 54 17.5**	**+2.2**
BUKP				*e*S	**S**	**16 54 43.5**	**+4.9**
IPIL	**Ipil**	**2.13**	**317**	*e*P	**P**	**16 54 16.0**	**-2.1**
IPIL				*e*S	**S**	**16 54 38.9**	**-4.6**
CGP	**Cagayan de Oro**	**2.31**	**16**	⇓*e*P	**P**	**16 54 26.9**	**+6.2**
CGP				*i* S	**S**	**16 54 56.4**	**+8.2**
MATI	**Mati**	**2.32**	**72**	*e*P	**P**	**16 54 24.7**	**+3.9**
DCPH	**Dipolog City**	**2.44**	**344**	⇑*i*P	**P**	**16 54 22.5**	**0.0**
DCPH				*i* S	**S**	**16 54 53.5**	**+2.0**
BIPH	**Bislig**	**3.02**	**50**	⇑*e*P	**P**	**16 54 32.7**	**+1.9**
BIPH				*e*S	**S**	**16 55 02.5**	**-3.5**
BUTP	**Butuan**	**3.14**	**30**	*e*P	**P**	**16 54 36.3**	**+3.7**
BUTP				*e*S	S	16 55 29.9	+21
SNPH	**Sibulan**	**3.20**	**346**	⇓*i*P	**P**	**16 54 37.3**	**+3.9**
SNPH				*i* S	**S**	**16 55 05.0**	**-5.7**
TBP	**Tagbilaran**	**3.45**	**357**	*e*P	**P**	**16 54 35.6**	**-1.3**
TBP				*i* S	**S**	**16 55 21.9**	**+4.9**
SCPH	**Surigao**	**3.81**	**22**	⇑*e*P	**P**	**16 54 44.6**	**+2.5**
MSLP	**Maasin**	**3.97**	**12**	*e*P	**P**	**16 54 47.3**	**+3.0**
LLP	**Lapu-Lapu**	**4.07**	**359**	⇑*e*P	**P**	**16 54 45.8**	**+0.1**
LLP				*e*S	**S**	**16 55 35.7**	**+3.0**
GUIM	**Jordan**	**4.60**	**342**	*e*P	**P**	**16 54 54.2**	**+0.9**
GUIM				*e*S	**S**	**16 55 46.6**	**+0.3**
OCLP	**Ormoc**	**4.83**	**7**	*e*P	**P**	**16 54 57.0**	**+0.5**
PLP	**Palo**	**5.00**	**11**	*e*P	**P**	**16 54 58.1**	**-0.8**
RCP	**Roxas**	**5.45**	**347**	⇑*e*P	**P**	**16 55 07.0**	**+1.8**
CUYO	**Cuyo Island**	**5.48**	**327**	*e*P	**P**	**16 55 03.3**	**-2.3**
CUYO				*e*S	**S**	**16 56 00.7**	**-7.7**
BESP	**Borongan**	**5.52**	**14**	*e*P	**P**	**16 55 11.3**	**+5.2**
KALP	**Kalibo**	**5.67**	**343**	⇑*e*P	**P**	**16 55 06.4**	**-1.9**
CNP	**Catarman**	**6.28**	**6**	*e*P	**P**	**16 55 20.0**	**+3.2**
PPR	**Puerto Princes**	**6.33**	**304**	⇓*i*P	**P**	**16 55 17.0**	**-0.6**
PPR				*i* S	**S**	**16 56 27.0**	**-2.6**
OTRP	**Odiongan**	**6.42**	**342**	*e*P	**P**	**16 55 18.5**	**-0.2**
OTRP				*e*S	**S**	**16 56 26.5**	**-5.1**
TSM	**Tawau**	**6.43**	**253**	P	**P**	**16 55 16.2**	**-2.8**
BATP	**Bataraza**	**6.69**	**293**	*e*P	**P**	**16 55 17.1**	**-5.6**
BATP				*e*S	**S**	**16 56 39.6**	**+1.0**
ENPP	**El Nido**	**6.73**	**318**	*e*P	**P**	**16 55 19.5**	**-3.7**
ENPP				*e*S	**S**	**16 56 31.5**	**-8.0**
SJMP	**San Jose**	**6.83**	**335**	*e*P	**P**	**16 55 22.5**	**-2.2**
BUSP	**Coron**	**6.88**	**327**	*e*P	**P**	**16 55 22.1**	**-3.2**
BUSP				*e*S	**S**	**16 56 37.0**	**-6.2**
AUQP	**San Andres**	**7.18**	**349**	*e*P	**P**	**16 55 38.6**	**+9.1**
PVCP	**Virac**	**7.33**	**1**	*e*P	**P**	**16 55 35.5**	**+4.0**
BOAC	**Boac**	**7.51**	**343**	*e*P	**P**	**16 55 33.5**	**-0.5**
KKM	**Kota Kinabalu**	**7.78**	**269**	*e*P	**P**	**16 55 36.0**	**-1.8**
KKM	**Kota Kinabalu**	**7.78**	**269**	P	**P**	**16 55 36.7**	**-1.1**
GQP	**Guinayangan**	**7.79**	**349**	*e*P	**P**	**16 55 42.5**	**+4.6**
LUBP	**Lubang**	**8.34**	**334**	*e*P	**P**	**16 55 44.2**	**-1.5**
LUBP				*e*S	**S**	**16 57 14.8**	**-4.9**
TGY	**Tagaytay City**	**8.40**	**339**	P	**P**	**16 55 47.7**	**+1.2**
	baz=288,slow=21,SNR=3.2						
POLP	**Polilio Island**	**8.70**	**346**	*e*P	**P**	**16 55 55.9**	**+5.4**
BALP	**Baler**	**9.76**	**346**	*e*P	**P**	**16 56 06.7**	**+1.3**
SCZP	**Santa Cruz**	**10.32**	**337**	*e*P	**P**	**16 56 12.1**	**-0.9**
BCPH	**Baguio City Da**	**10.65**	**342**	*e*P	**P**	**16 56 18.2**	**+0.7**
BOLP	**Bolinao**	**10.87**	**339**	*e*P	**P**	**16 56 30.2**	**+10**
CAUP	**Cauayan**	**10.87**	**349**	*e*P	**P**	**16 56 21.1**	**+0.5**
ABRA	**Dolores**	**11.81**	**344**	*e*P	**P**	**16 56 35.9**	**+2.6**
APYP	**Conner**	**11.88**	**347**	*e*P	**P**	**16 56 37.7**	**+3.5**
SGCP	**Mt. Cagua**	**12.10**	**351**	*e*P	**P**	**16 56 39.2**	**+2.0**
KSM	**Kuching**	**14.49**	**252**	*e*P	**P**	**16 57 08.5**	**-0.3**
NACB	**Ninganchiao**	**18.00**	**353**	P	**P**	**16 57 52.2**	**-1.3**
YHNB	**Yeheng**	**18.52**	**352**	*e*P	**P**	**16 57 59.8**	**-0.2**
HKC	**Hong Kong**	**18.61**	**330**	⇓*i*P	**P**	**16 58 00.0**	**-1.1**
HKC				*i* S	PcP	17 02 30.0	+0.9
QIZ	**Qiongzhong**	**18.79**	**314**	P	**P**	**16 58 02.5**	**-0.7**
QIZ				XP		16 58 17.0	
QIZ				S	**S**	**17 01 27.0**	**-0.9**
QIZ				XS		17 01 45.0	
QIZ				SS	SS	17 01 54.3	+1.1
QIZ				AMB	AMB		
	comp=Z,15µm,10.0s						
QIZ				LR	LR		
	comp=N,34µm,14.5s						
QIZ				LR	LR		
	comp=E,41µm,13.8s						
QIZ				LR	LR		
	comp=Z,75µm,14.8s						
TATO	**Taipei**	**18.80**	**353**	*e*P	**P**	**16 58 03.3**	**-0.1**
QZH	**Quanzhou**	**19.33**	**345**	⇑*i*P	**P**	**16 58 08.8**	**-0.6**
QZH				S	**S**	**17 01 45.0**	**+4.9**
QZH				AMB	AMB		
	comp=Z,750nm,1.2s						
QZH				AMB	AMB		
	comp=Z,18µm,5.1s						
QZH				LR	LR		
	comp=N,91µm,16.8s						
QZH				LR	LR		
	comp=E,75µm,18.6s						
QZH				LR	LR		
	comp=Z,159µm,16.4s						
UBT	**Ubonrachathani**	**20.71**	**297**	P	**P**	**16 58 22.5**	**-1.6**
JOW	**Kunigami**	**20.89**	**11**	P	**P**	**16 58 25.4**	**-0.5**
	comp=Z,322nm,0.9s,baz=223,slow=7.1,SNR=27						
JOW				S	**S**	**17 02 16.3**	**+4.6**
	comp=Z,18nm,1.0s,baz=170,slow=29,SNR=2.1						
KGM	**Kluang**	**21.08**	**259**	P	**P**	**16 58 28.5**	**+0.5**
GUMO	**Guam**	**21.77**	**69**	P	**P**	**16 58 32.8**	**-2.0**
	comp=Z,26nm,0.5s,mb4.9,baz=28,slow=23,SNR=2.2						
GUMO				S	**S**	**17 02 36.1**	**+7.8**
	comp=Z,41nm,0.8s,baz=191,slow=22,SNR=2.4						
GUMO				LR	LR	17 05 18.7	
	comp=Z,35µm,19.9s,MS5.8,baz=69,slow=32						
GUMO	**Guam**	**21.77**	**69**	*e*P	**P**	**16 58 37.8**	**+3.0**
	comp=Z,784nm,1.4s,mb6.0						
GUMO				S	**S**	**17 02 36.1**	**+7.8**
GUMO				LR	LR	17 05 18.7	
GUMO	**Guam**	**21.77**	**69**	*e*P	**P**	**16 58 37.8**	**+3.0**
GUMO				S	**S**	**17 02 36.1**	**+7.7**
GUMO				pmax	pmax		
	comp=Z,784nm,1.4s,mb6.0						
IPM	**Ipoh**	**22.97**	**267**	P	**P**	**16 58 47.0**	**+0.1**
KKTK	**Khon Kaen**	**23.08**	**298**	P	**P**	**16 58 46.0**	**-1.9**
	comp=Z,3µm,0.9s,mb6.7						
FITZ	**Fitzroy Crossi**	**24.22**	**176**	*e*P	**P**	**16 58 58.6**	**-0.3**
	comp=Z,355nm,1.2s,mb5.7						
FITZ				*i* S	**S**	**17 03 13.7**	**+1.6**
FITZ	**Fitzroy Crossi**	**24.22**	**176**	P	**P**	**16 58 59.1**	**+0.2**
	comp=Z,95nm,0.6s,mb5.4,baz=5.9,slow=9.7,SNR=93						
FITZ				S	**S**	**17 03 14.3**	**+2.2**
	comp=Z,21nm,0.7s,baz=135,slow=20,SNR=1.7						
NNT	**Nongplab**	**24.79**	**287**	P	**P**	**16 59 03.5**	**-0.9**
SSE	**Sheshan**	**24.89**	**354**	⇑P	**P**	**16 59 05.5**	**+0.2**
SSE				AP		16 59 15.8	
SSE				XP		16 59 22.0	
SSE				PCP	PcP	17 02 39.5	-1.9
SSE				S	**S**	**17 03 27.8**	**+4.6**
SSE				SCS	ScS	17 10 04.3	+1.3
SSE				AMB	AMB		
	comp=Z,90nm,1.4s,mb5.1						
SSE				AMB	AMB		
	comp=Z,7µm,6.8s						
SSE				LR	LR		
	comp=N,15µm,23.2s,MS5.7						
SSE				LR	LR		
	comp=E,26µm,23.2s,MS5.7						
SSE				LR	LR		
	comp=Z,23µm,20.5s,MS5.7						
SSE	**Sheshan**	**24.89**	**354**	⇑P	**P**	**16 59 05.4**	**+0.1**
	comp=Z,96nm,1.4s,mb5.1						
SSE				pP		16 59 15.8	
SSE				sP		16 59 22.0	
SSE				PcP	PcP	17 02 39.4	-2.0
SSE				S	**S**	**17 03 27.7**	**+4.5**
SSE				sS		17 03 46.7	
SSE				ScS	ScS	17 10 04.3	+1.3
SSE				LR	LR		
	comp=Z,23µm,20.5s,MS5.7						
NST	**Nakhon Sawan**	**25.25**	**294**	⇑P	**P**	**16 59 08.9**	**0.0**
	comp=Z,261nm,1.0s,mb5.7						
PSI	**Prapat**	**25.26**	**263**	P	**P**	**16 59 09.2**	**+0.2**
	comp=Z,201nm,1.1s,mb5.6,baz=70,slow=6.6,SNR=43						
PSI				S	**S**	**17 03 34.4**	**+4.7**
	comp=Z,7.0nm,0.7s,baz=242,slow=12,SNR=2.0						
PSI				LR	LR	17 10 58.9	
	comp=Z,47µm,19.7s,MS6.0,baz=246,slow=41						
WHN	**Wuhan**	**25.85**	**341**	⇑P	**P**	**16 59 14.3**	**0.0**
WHN				S	**S**	**17 03 42.8**	**+3.6**
WHN				AMB	AMB		
	comp=Z,12µm,6.9s						
WHN				LR	LR		
	comp=N,71µm,16.8s,MS6.5						
WHN				LR	LR		
	comp=E,99µm,21.4s,MS6.5						
WHN				LR	LR		
	comp=Z,89µm,15.1s						
NJ2	**Nanjing**	**26.15**	**350**	*e*P	**P**	**16 59 18.5**	**+1.4**
NJ2				AP	pP	16 59 30.0	+2.8
NJ2				PP	PP	17 00 00.5	+1.1
NJ2				S	**S**	**17 03 41.0**	**-3.1**
NJ2				XS		17 04 01.0	
NJ2				AMB	AMB		
	comp=Z,70nm,0.9s,mb5.2						
NJ2				AMB	AMB		
	comp=Z,6µm,6.0s						
NJ2				LR	LR		
	comp=N,58µm,16.7s						
NJ2				LR	LR		
	comp=E,70µm,28.2s						
NJ2				LR	LR		
	comp=Z,26µm,17.4s,MS5.8						

CBIJ	**Chichi jima**	**27.00**	**38**	P	**P**	**16 59 23.6**	**-1.4**
	comp=Z,506nm,1.0s,mb6.0,baz=288,slow=21,SNR=9.3						
CBIJ				S	**S**	**17 03 58.0**	**0.0**
	comp=Z,73nm,0.7s,baz=303,slow=22,SNR=2.9						
CBIJ				LR	LR	17 08 21.9	
	comp=Z,30µm,21.5s,MS5.8,baz=214,slow=32						
CHRT	**Chiangrai**	**27.19**	**302**	⇓P	**P**	**16 59 24.0**	**-2.8**
	comp=Z,658nm,0.8s,mb6.2						
JNU	**Nakatsue**	**27.51**	**12**	P	**P**	**16 59 28.4**	**-1.1**
	comp=Z,68nm,1.0s,mb5.2,baz=180,slow=4.9,SNR=4.6						
JNU				S	**S**	**17 04 06.2**	**-0.1**
	comp=Z,17nm,0.4s,baz=77,slow=4.9,SNR=3.2						
MBWA	**Marble Bar**	**27.54**	**189**	PFAKE		16 59 40.0	+10
MBWA				LR	LR		
	comp=Z,11µm,21.0s,MS5.4						
KMI	**Kunming**	**27.73**	**315**	P	**P**	**16 59 33.0**	**+1.3**
KMI				AP	pP	16 59 40.8	-1.1
KMI				XP	sP	16 59 43.8	-2.7
KMI				PP	PP	17 00 21.0	+0.1
KMI				PPP	PPP	17 00 33.5	+0.6
KMI				S	**S**	**17 04 10.8**	**+0.9**
KMI				SCP		17 06 28.5	
KMI				PCS		17 06 31.5	
KMI				SCS	ScS	17 10 19.0	+3.9
KMI				AMB	AMB		
	comp=Z,90nm,1.6s,mb5.2						
KMI				AMB	AMB		
	comp=Z,4µm,6.8s						
KMI				LR	LR		
	comp=N,23µm,15.8s,MS6.1						
KMI				LR	LR		
	comp=E,29µm,14.1s,MS6.1						
KMI				LR	LR		
	comp=Z,45µm,14.7s,MS6.2						
KMI	**Kunming**	**27.73**	**315**	P	**P**	**16 59 33.0**	**+1.3**
	comp=Z,93nm,1.6s,mb5.2						
KMI				pP	pP	16 59 40.7	-1.2
KMI				sP	sP	16 59 43.8	-2.7
KMI				PP	PP	17 00 21.0	+0.1
KMI				PPP	PPP	17 00 33.5	+0.6
KMI				S	**S**	**17 04 10.7**	**+0.8**
KMI				SS	SS	17 05 28.6	-2.3
KMI				SSS	SSS	17 05 47.2	-2.1
KMI				ScP		17 06 28.5	
KMI				PcS		17 06 31.6	
KMI				ScS	ScS	17 10 18.9	+3.8
KMI				LR	LR		
	comp=Z,45µm,14.7s,MS6.2						
KMI	**Kunming**	**27.73**	**315**	P	**P**	**16 59 33.0**	**+1.3**
KMI				*SP	sP	16 59 43.8	-2.7
KMI						17 00 21.0	
KMI				PPP	PPP	17 00 33.5	+0.6
KMI				S	**S**	**17 04 10.7**	**+0.8**
KMI				SS	SS	17 05 28.6	-2.3
KMI				SSS	SSS	17 05 47.2	-2.1
KMI						17 10 18.9	
KMI				pmax	pmax		
	comp=Z,93nm,1.6s,mb5.2						
KMI				MLR	MLR		
	comp=Z,45µm,14.7s,MS6.2						
PMG	**Port Moresby**	**27.78**	**124**	P	**P**	**16 59 31.2**	**-1.0**
	comp=Z,162nm,1.0s,mb5.6,baz=327,slow=2.6,SNR=41						
PMG				S	**S**	**17 04 09.8**	**-1.0**
	comp=Z,6.6nm,0.9s,baz=96,slow=16,SNR=1.4						
PMG				LR	LR	17 11 29.4	
	comp=Z,19µm,18.6s,MS5.7,baz=120,slow=38						
PMG	**Port Moresby**	**27.78**	**124**	*e*P	**P**	**16 59 31.2**	**-1.1**
	comp=Z,247nm,0.9s,mb5.8						
PMG				LR	LR		
	comp=Z,16µm,20.0s,MS5.6						
PMG	**Port Moresby**	**27.78**	**124**	*c i*P	**P**	**16 59 31.3**	**-0.9**
WRAB	**Tennant Creek**	**27.90**	**159**	*e*P	**P**	**16 59 31.8**	**-1.5**
	comp=Z,410nm,1.0s,mb6.0						
WRAB				LR	LR		
	comp=Z,4µm,22.0s,MS4.9						
WRAB	**Tennant Creek**	**27.90**	**159**	*c i*P	**P**	**16 59 32.5**	**-0.8**
WRA	**Warramunga Arr**	**27.91**	**159**	P	**P**	**16 59 32.0**	**-1.3**
	comp=Z,42nm,0.5s,mb5.3,baz=331,slow=10,SNR=225						
WRA				S	**S**	**17 04 12.7**	**0.0**
	comp=Z,13nm,1.1s,baz=345,slow=30,SNR=3.6						
WB2	**Warramunga Arr**	**27.91**	**159**	⇑*i*P	**P**	**16 59 31.9**	**-1.4**
WB2				*i* S	**S**	**17 04 10.6**	**-2.2**
JHJ	**Hachijo jima 2**	**30.50**	**27**	P	**P**	**16 59 54.0**	**-2.3**
	comp=Z,116nm,0.9s,mb5.7,baz=206,slow=21,SNR=2.8						
JHJ				S	**S**	**17 04 55.0**	**+1.1**
	comp=Z,140nm,0.9s,baz=86,slow=18,SNR=2.3						
JHJ				LR	LR	17 09 45.1	
	comp=Z,35µm,20.9s,MS6.0,baz=50,slow=31						
TIA	**Tai'an**	**30.51**	**349**	⇑P	**P**	**16 59 52.8**	**-3.5**
TIA				AP	pP	17 00 03.0	-3.7
TIA				XP	sP	17 00 09.0	-2.5
TIA				S	**S**	**17 04 56.0**	**+2.0**
TIA				AMB	AMB		
	comp=Z,70nm,1.1s,mb5.4						
TIA				AMB	AMB		
	comp=Z,3µm,8.0s						
TIA				LR	LR		
	comp=N,15µm,14.0s,MS6.0						
TIA				LR	LR		
	comp=E,16µm,14.5s,MS6.0						
XAN	**Xi'an**	**31.02**	**335**	P	**P**	**17 00 00.0**	**-0.9**
XAN				S	**S**	**17 05 00.8**	**-1.2**
XAN				SS	SS	17 06 49.8	+2.2
XAN				AMB	AMB		
	comp=Z,2µm,8.1s						
XAN				LR	LR		
	comp=N,14µm,20.0s,MS5.9						
XAN				LR	LR		
	comp=E,21µm,17.3s,MS5.9						
XAN				LR	LR		
	comp=Z,41µm,16.1s,MS6.2						
CD2	**Chengdu**	**31.07**	**325**	⇓*i*P	**P**	**17 00 01.0**	**-0.3**
CD2				PP	PP	17 01 04.0	-0.2
CD2				S	**S**	**17 05 01.5**	**-1.3**
CD2				AMB	AMB		
	comp=Z,170nm,1.4s,mb5.7						
CD2				AMB	AMB		
	comp=Z,2µm,5.9s						
CD2				LR	LR		
	comp=E,28µm,6.8s						
CD2				LR	LR		
	comp=Z,26µm,15.6s,MS6.0						
INCN	**Inchon**	**31.20**	**4**	*e*P	**P**	**17 00 00.5**	**-1.9**
	comp=Z,31nm,1.0s,mb5.1						
INCN				LR	LR		
	comp=Z,28µm,19.0s,MS6.0						
KS15	**Wonju Array Si**	**31.27**	**6**	*e*P	**P**	**17 00 02.5**	**-0.5**
DL2	**Dalian**	**32.61**	**357**	⇑*i*P	**P**	**17 00 15.0**	**+0.3**
DL2				AP	pP	17 00 27.0	+1.8
DL2				S	**S**	**17 05 28.5**	**+1.7**
DL2				AMB	AMB		
	comp=Z,90nm,1.1s,mb5.6						
DL2				AMB	AMB		
	comp=Z,2µm,6.1s						
DL2				LR	LR		
	comp=N,9µm,15.2s,MS6.0						
DL2				LR	LR		
	comp=E,20µm,16.0s,MS6.0						
DL2				LR	LR		
	comp=Z,14µm,15.7s,MS5.8						
COCO	**West Island**	**32.66**	**236**	*e*P	**P**	**17 00 15.4**	**0.0**
	comp=Z,130nm,1.1s,mb5.8						
COCO				*e*	pP	17 00 24.6	-1.2
COCO				LR	LR		
	comp=Z,4µm,20.0s,MS5.1						
MAJO	**Matsushiro**	**32.84**	**21**	*e*P	**P**	**17 00 15.5**	**-1.4**
	comp=Z,664nm,2.0s,mb6.2						
MAJO				LR	LR		
	comp=Z,39µm,19.0s,MS6.1						
MAJO	**Matsushiro**	**32.84**	**21**	*e*P	**P**	**17 00 15.5**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,664nm,2.0s,mb6.2						
MAJO				MLR	MLR		
	comp=Z,39µm,19.0s,MS6.1						
MAT	**Matsushiro**	**32.84**	**21**	P	**P**	**17 00 15.3**	**-1.5**
MAT				S	**S**	**17 05 26.0**	**-4.5**
MAT	**Matsushiro**	**32.84**	**21**	*e*P	**P**	**17 00 15.0**	**-1.8**
	comp=Z,65nm,1.0s,mb5.5						
MAT				*e*S	**S**	**17 05 27.0**	**-3.5**
MAT	**Matsushiro**	**32.84**	**21**	*e*P	**P**	**17 00 15.0**	**-1.8**
MAT				*e*S	**S**	**17 05 27.0**	**-3.5**
MAT				pmax	pmax		
	comp=Z,65nm,1.0s,mb5.5						
MJAR	**Matsushiro Arr**	**32.84**	**21**	P	**P**	**17 00 14.4**	**-2.4**
	comp=Z,49nm,1.0s,mb5.4,baz=198,slow=7.9,SNR=35						
MJAR				PcP	PcP	17 02 59.5	-1.7
	comp=Z,13nm,1.0s,baz=179,slow=2.8,SNR=5.0						
MJAR				S	**S**	**17 05 29.7**	**-0.9**
	comp=Z,1.8nm,0.9s,baz=132,slow=15,SNR=2.5						
MJAR				LR	LR	17 12 45.7	
	comp=Z,38µm,19.7s,MS6.1,baz=200,slow=35						
TIY	**Taiyuan**	**33.08**	**343**	PR	**P**	**17 00 18.0**	**-0.8**
TIY				S	**S**	**17 05 35.0**	**+0.9**
TIY				LR	LR		
	comp=Z,40µm,17.0s,MS6.2						
CTA	**Charters Tower**	**34.08**	**141**	⇑*i*P	**P**	**17 00 27.7**	**+0.1**
	comp=Z,53nm,0.8s,mb5.5						
CTA				*e*S	**S**	**17 05 36.7**	**-13**
CTA	**Charters Tower**	**34.08**	**141**	P	**P**	**17 00 27.3**	**-0.3**
	comp=Z,103nm,1.0s,mb5.7,baz=319,slow=10,SNR=40						
CTA				S	**S**	**17 05 32.1**	**-18**
	comp=Z,22nm,1.2s,baz=184,slow=15,SNR=2.0						
CTA	**Charters Tower**	**34.08**	**141**	⇑*i*P	**P**	**17 00 27.7**	**+0.1**
CTA				pmax	pmax		
	comp=Z,53nm,0.8s						
CTAO	**Charters Tower**	**34.08**	**141**	*e*P	**P**	**17 00 27.6**	**0.0**
	comp=Z,101nm,0.9s,mb5.8						
CTAO				LR	LR		
	comp=Z,19µm,19.0s,MS5.8						
CTAO	**Charters Tower**	**34.08**	**141**	P	**P**	**17 00 27.8**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,100nm,1.0s,mb5.7						
LZH	**Lanzhou**	**35.02**	**331**	⇑P	**P**	**17 00 37.5**	**+2.0**
LZH				AP	pP	17 00 50.0	+4.0
LZH				PP	PP	17 01 55.0	+0.5
LZH				S	**S**	**17 06 02.0**	**-2.3**
LZH				XS		17 06 23.0	
LZH				AMB	AMB		
	comp=Z,470nm,1.1s,mb6.3						
LZH				AMB	AMB		
	comp=Z,8µm,5.8s						
LZH				LR	LR		
	comp=N,72µm,16.5s						
LZH				LR	LR		
	comp=Z,91µm,21.3s,MS6.5						
LZH	**Lanzhou**	**35.02**	**331**	⇑P	**P**	**17 00 37.6**	**+2.1**
	comp=Z,470nm,1.1s,mb6.3						
LZH				pP	pP	17 00 50.1	+4.1
LZH				sP	sP	17 00 56.0	+5.2
LZH				PP	PP	17 01 55.0	+0.5
LZH				PPP	PPP	17 02 15.0	+2.5
LZH				S	**S**	**17 06 02.0**	**-2.3**
LZH				sS		17 06 23.0	
LZH				*e*SS	SS	17 08 18.0	-2.5
LZH				LR	LR		
	comp=Z,91µm,21.3s,MS6.5						
LZH	**Lanzhou**	**35.02**	**331**	⇑P	**P**	**17 00 37.6**	**+2.1**
LZH				*PP	pP	17 00 50.1	+4.1
LZH				*SP	sP	17 00 56.0	+5.2
LZH						17 01 55.0	
LZH				PPP	PPP	17 02 15.0	+2.5
LZH				S	**S**	**17 06 02.0**	**-2.3**
LZH				*SS		17 06 23.0	
LZH				*e*SS	SS	17 08 18.0	-2.5
LZH				pmax	pmax		
	comp=Z,470nm,1.1s,mb6.3						
LZH				MLR	MLR		
	comp=Z,91µm,21.3s,MS6.5						
SNY	**Shenyang**	**35.45**	**359**	⇑P	**P**	**17 00 38.5**	**-0.7**
SNY				S	**S**	**17 06 14.0**	**+3.1**
SNY				XS		17 06 26.0	
SNY				AMB	AMB		
	comp=Z,140nm,1.9s,mb5.6						
SNY				AMB	AMB		
	comp=Z,4µm,6.5s						
SNY				LR	LR		
	comp=N,33µm,16.5s,MS6.2						
SNY				LR	LR		
	comp=E,21µm,16.9s,MS6.2						
SNY				LR	LR		
	comp=Z,39µm,17.8s,MS6.2						
HHC	**Hu-ho-hao-te**	**36.24**	**344**	P	**P**	**17 00 46.5**	**+0.7**
HHC				AP	pP	17 00 56.3	0.0
HHC				XP	sP	17 01 00.0	-1.1
HHC				PP	PP	17 02 10.8	+1.5
HHC				PCP	PcP	17 03 10.5	-0.4
HHC				S	**S**	**17 06 25.3**	**+2.3**
HHC				XS		17 06 41.0	
HHC				SCP		17 06 52.5	
HHC				PCS		17 06 57.3	
HHC				SS	SS	17 08 50.0	+1.8
HHC				SCS	ScS	17 10 58.0	+0.4
HHC				AMB	AMB		
	comp=Z,180nm,2.5s,mb5.6						
HHC				AMB	AMB		
	comp=Z,6µm,4.8s						
HHC				LR	LR		
	comp=E,22µm,18.6s,MS6.2						
HHC				LR	LR		
	comp=N,27µm,16.2s,MS6.2						
HHC				LR	LR		
	comp=Z,27µm,19.2s,MS6.0						
SHL	**Shillong**	**36.25**	**306**	*e*P	**P**	**17 00 47.0**	**+0.9**
SHL				*e*S	**S**	**17 06 26.0**	**+2.6**
FORT	**Forrest**	**36.99**	**174**	*e*P	**P**	**17 00 52.3**	**0.0**
	comp=Z,109nm,0.7s,mb5.8						
FORT				*i* S	**S**	**17 06 32.8**	**-1.9**
CN2	**Changchun**	**37.45**	**2**	*e*P	**P**	**17 00 50.3**	**-5.6**
CN2				PCS		17 06 59.8	
CN2				AMB	AMB		
	comp=Z,30nm,1.0s,mb5.1						
CAL	**Calcutta**	**38.06**	**299**	*e*P	**P**	**17 01 00.9**	**-0.3**
CAL				*e*x	x	17 02 15.8	
CAL				*e*x	x	17 06 41.4	
CAL				*e*S	**S**	**17 06 51.7**	**+0.7**
KLBR	**Kellerberrin**	**38.08**	**189**	*e*P	**P**	**17 01 01.2**	**-0.2**
	comp=Z,121nm,1.2s,mb5.5						
MDJ	**Mudanjiang**	**38.55**	**6**	P	**P**	**17 01 05.5**	**+0.4**
MDJ				AP	pP	17 01 17.0	+1.3
MDJ				XP	sP	17 01 21.8	+1.5
MDJ				PP	PP	17 02 34.8	-2.5
MDJ				PCP	PcP	17 03 15.5	-2.4
MDJ				SCP		17 07 01.8	
MDJ				PCS		17 07 06.5	
MDJ				XS		17 07 19.3	
MDJ				AMB	AMB		
	comp=Z,60nm,1.1s,mb5.2						
MDJ				AMB	AMB		
	comp=Z,4µm,10.9s						
MDJ				LR	LR		
	comp=N,18µm,25.7s,MS6.0						
MDJ				LR	LR		
	comp=E,20µm,23.1s,MS6.0						
MDJ				LR	LR		
	comp=Z,29µm,18.6s,MS6.1						
MUN	**Mundaring**	**38.72**	**191**	*e*P	**P**	**17 01 06.8**	**+0.1**
MUN				*i* S	**S**	**17 06 59.8**	**-1.1**
LSA	**Lhasa**	**38.79**	**311**	P	**P**	**17 01 09.0**	**+1.7**
LSA				AP	pP	17 01 17.5	-0.4
LSA				XP	sP	17 01 21.0	-1.5
LSA				PP	PP	17 02 39.0	-1.3
LSA				PCP	PcP	17 03 18.0	-0.8
LSA				S	**S**	**17 07 04.0**	**+2.0**
LSA				XS		17 07 22.3	
LSA				AMB	AMB		
	comp=Z,50nm,1.5s,mb5.0						
LSA				AMB	AMB		
	comp=Z,3µm,6.7s						
LSA				LR	LR		
	comp=N,12µm,19.8s,MS5.9						
LSA				LR	LR		
	comp=E,13µm,17.1s,MS5.9						
LSA				LR	LR		
	comp=Z,25µm,19.0s,MS6.0						
HNR	**Honiara**	**39.02**	**113**	P	**P**	**17 01 08.3**	**-1.0**
	comp=Z,139nm,0.6s,mb5.8,baz=206,slow=3.8,SNR=19						
HNR				S	**S**	**17 06 48.0**	**-18**
	comp=Z,12nm,0.8s,baz=226,slow=14,SNR=1.8						
HNR				SS	SS	17 09 57.8	+7.3
	comp=Z,6.8nm,0.4s,baz=198,slow=11,SNR=1.6						
HNR				LR	LR	17 16 11.0	
	comp=Z,20µm,20.7s,MS5.9,baz=295,slow=34						
HNR	**Honiara**	**39.02**	**113**	*e*P	**P**	**17 01 05.8**	**-3.5**
	comp=Z,246nm,0.9s,mb5.9						
HNR				LR	LR		
	comp=Z,20µm,20.0s,MS6.0						
HNR	**Honiara**	**39.02**	**113**	P	**P**	**17 01 08.5**	**-0.8**
HNR				pmax	pmax		
	comp=Z,250nm,1.0s,mb5.9						
NWAO	**Narrogin (SRO)**	**39.47**	**189**	P	**P**	**17 01 13.4**	**+0.6**
	comp=Z,42nm,0.9s,mb5.2,baz=16,slow=9.2,SNR=16						
NWAO				S	**S**	**17 07 11.5**	**-0.7**
	comp=Z,9.2nm,0.9s,baz=176,slow=12,SNR=2.1						
NWAO				SS	SS	17 10 02.9	+2.6
	comp=Z,18nm,1.2s,baz=226,slow=8.9,SNR=1.9						
NWAO	**Narrogin (SRO)**	**39.47**	**189**	P	**P**	**17 01 13.4**	**+0.6**
NWAO				S	**S**	**17 07 11.5**	**-0.7**
NWAO				SS	SS	17 10 02.9	+2.6
GTA	**Gaotai**	**39.60**	**330**	P	**P**	**17 01 15.0**	**+1.1**
GTA				AP	pP	17 01 27.5	+3.0
GTA				XP	sP	17 01 32.3	+3.2
GTA				PP	PP	17 02 51.5	+2.6
GTA				PPP	PPP	17 03 16.5	+2.5
GTA				PCP	PcP	17 03 21.0	-0.3
GTA				SCP		17 07 06.0	
GTA				PCS		17 07 10.5	
GTA				S	**S**	**17 07 16.0**	**+1.8**
GTA				XS		17 07 37.8	
GTA				SS	SS	17 10 07.3	+4.1
GTA				SCS	ScS	17 11 16.0	-0.8
GTA				AMB	AMB		
	comp=Z,50nm,1.2s,mb5.1						
GTA				LR	LR		
	comp=N,17µm,17.5s,MS6.2						
GTA				LR	LR		
	comp=E,29µm,19.8s,MS6.2						
GTA				LR	LR		
	comp=Z,31µm,21.3s,MS6.1						
BOK	**Bokaro**	**40.60**	**300**	*e*P	**P**	**17 01 22.6**	**+0.3**
ASAJ	**Asahikawa**	**41.10**	**20**	P	**P**	**17 01 26.8**	**+0.5**
	comp=Z,48nm,1.0s,mb5.1,baz=258,slow=14,SNR=9.8						
ASAJ				S	**S**	**17 07 33.5**	**-2.9**
	comp=Z,11nm,0.9s,baz=202,slow=24,SNR=3.6						
ASAJ				SS	SS	17 10 47.0	+12
	comp=Z,27nm,1.1s,baz=75,slow=15,SNR=3.0						
ASAJ				LR	LR	17 16 45.2	
	comp=Z,17µm,21.2s,MS5.9,baz=78,slow=34						
VIS	**Vishakhapatnam**	**41.33**	**290**	*e*P	**P**	**17 01 29.2**	**+0.7**
STKA	**Stephens Creek**	**41.42**	**157**	*e*P	**P**	**17 01 29.7**	**+0.6**
	comp=Z,339nm,0.9s,mb6.0						
STKA				*i* S	**S**	**17 07 39.9**	**-1.5**
STKA	**Stephens Creek**	**41.42**	**157**	P	**P**	**17 01 30.0**	**+0.9**
	comp=Z,512nm,1.1s,mb6.1,baz=329,slow=8.0,SNR=155						
STKA				S	**S**	**17 07 37.3**	**-4.1**
	comp=Z,8.6nm,0.9s,baz=90,slow=17,SNR=2.3						
STKA				SS	SS	17 10 46.5	+5.0
	comp=Z,3.1nm,1.0s,baz=27,slow=16,SNR=1.6						
JIRN	**Jiri**	**41.75**	**305**	*e*P	**P**	**17 01 32.6**	**+0.7**
	comp=Z,691nm,1.3s,mb6.1						
GUN	**Gumba**	**42.10**	**305**	*e*P	**P**	**17 01 35.3**	**+0.5**
	comp=Z,1µm,1.5s,mb6.4						
PKI	**Pulchoki**	**42.35**	**305**	*e*P	**P**	**17 01 36.9**	**+0.1**
KKN	**Kakani**	**42.54**	**305**	*e*P	**P**	**17 01 38.3**	**-0.1**
	comp=Z,454nm,1.3s,mb6.0						
KKN	**Kakani**	**42.54**	**305**	*e*P	**P**	**17 01 38.3**	**-0.1**
KKN				pmax	pmax		
	comp=Z,227nm,1.3s,mb5.7						
DMN	**Daman**	**42.62**	**305**	*e*P	**P**	**17 01 39.1**	**+0.1**
	comp=Z,662nm,1.4s,mb6.2						
PALK	**Pallekele**	**43.04**	**274**	*e*P	**P**	**17 01 43.0**	**+0.4**
	comp=Z,172nm,1.6s,mb5.5						
PALK				LR	LR		
	comp=Z,4µm,20.0s,MS5.3						
GKN	**Gorkha**	**43.15**	**305**	*e*P	**P**	**17 01 43.1**	**-0.2**
	comp=Z,569nm,1.4s,mb6.1						
ADE	**Adelaide**	**43.24**	**162**	⇑*i*P	**P**	**17 01 45.6**	**+1.6**
KWAJ	**Kwajalein Atol**	**43.26**	**84**	PFAKE		17 02 00.0	+16
KWAJ				LR	LR		
	comp=Z,6µm,20.0s,MS5.5						
KLR	**Kul'dur**	**43.35**	**7**	*e*P	**P**	**17 01 41.0**	**-3.7**
KLR				*e*S	**S**	**17 08 04.5**	**-4.9**
KLR				pmax	pmax		
	comp=Z,9µm,12.0s						
WAKE	**Wake Island**	**43.41**	**69**	PFAKE		17 02 00.0	+14
WAKE				LR	LR		
	comp=Z,13µm,22.0s,MS5.8						
BLSP	**Bilaspur**	**43.42**	**296**	*e*P	**P**	**17 01 47.0**	**+1.4**
YSS	**Yuzh-Sakhalins**	**43.65**	**19**	⇑*e*P	**P**	**17 01 46.0**	**-1.2**
YSS				LR	LR		
	comp=Z,13µm,20.0s,MS5.8						
YSS	**Yuzh-Sakhalins**	**43.65**	**19**	*ce*P	**P**	**17 01 46.0**	**-1.2**
YSS				*e*S	**S**	**17 08 20.0**	**+6.1**
YSS				MLR	MLR		
	comp=Z,12µm,20.0s,MS5.8						
KOLN	**Koldanda**	**43.91**	**304**	*e*P	**P**	**17 01 49.6**	**+0.1**
	comp=Z,444nm,1.1s,mb6.1						
ULN	**Ulaanbaatar**	**43.96**	**344**	⇑*i*P	**P**	**17 01 49.8**	**+0.2**
ULN				LR	LR		
	comp=Z,22µm,19.0s,MS6.1						
ULN	**Ulaanbaatar**	**43.96**	**344**	*c i*P	**P**	**17 01 49.7**	**+0.1**
SONM	**Songino Array**	**44.12**	**343**	P	**P**	**17 01 51.4**	**+0.5**
	comp=Z,49nm,1.0s,mb5.2,baz=161,slow=5.0,SNR=142						
SONM				S	**S**	**17 08 16.7**	**-3.9**
	comp=Z,1.6nm,1.0s,baz=174,slow=13,SNR=2.4						
SONM				SS	SS	17 11 49.4	+19
	comp=Z,0.2nm,0.4s,baz=291,slow=31,SNR=2.9						
SONM				LR	LR	17 22 04.4	
	comp=Z,20µm,20.6s,MS6.0,baz=153,slow=38						
SONM				PKPPKP		17 33 34.2	
	comp=Z,1.8nm,1.2s,baz=297,slow=3.2,SNR=3.9						
ALBI	**Allahabad**	**44.60**	**300**	*e*P	**P**	**17 01 51.5**	**-3.5**
ARMA	**Armidale**	**45.02**	**146**	*e*P	**P**	**17 01 59.1**	**+0.8**
SALM	**Salem**	**45.56**	**280**	*e*P	**P**	**17 02 05.0**	**+2.1**
HYB	**Hyderabad**	**45.77**	**288**	⇓*i*P	**P**	**17 02 04.0**	**-0.6**
	comp=Z,70nm,1.0s,mb5.5						
HYB				*e*S	**S**	**17 08 48.0**	**+3.2**
HYB				LR	LR	17 24 48.0	
	comp=Z,17nm,16.0s						
HYB	**Hyderabad**	**45.77**	**288**	⇓*e*P	**P**	**17 02 04.0**	**-0.6**
	comp=Z,70nm,1.0s,mb5.5						
HYB				*e*S	**S**	**17 08 48.0**	**+3.2**
HYB	**Hyderabad**	**45.77**	**288**	⇓*e*P	**P**	**17 02 04.0**	**-0.6**
HYB				*e*S	**S**	**17 08 48.0**	**+3.2**
HYB				pmax	pmax		
	comp=Z,70nm,1.0s,mb5.5						
NGP	**Nagpur**	**45.98**	**293**	*e*P	**P**	**17 01 59.4**	**-6.7**
NGP				*e*S	**S**	**17 08 45.8**	**-1.9**
CIT	**Chita**	**46.47**	**351**	*e*P	**P**	**17 02 09.5**	**0.0**
CIT				*e*		17 03 56.5	
CIT				*e*		17 08 49.0	
CIT				pmax	pmax		
	comp=Z,221nm,2.5s,mb5.7						
TRD	**Trivandrum**	**46.73**	**276**	*e*x	x	17 02 19.5	
TRD				*e*x	x	17 09 15.5	
ZAK	**Zakamensk**	**47.32**	**342**	*e*P	**P**	**17 02 16.3**	**0.0**
ZAK				pmax	pmax		
	comp=Z,21nm,1.4s,mb4.9						
ZAK				pmax	pmax		
	comp=Z,6.0nm,2.0s						
PTH	**Pithoragarh**	**47.32**	**305**	*e*P	**P**	**17 02 16.0**	**-0.6**
PTH				*e*x	x	17 05 42.0	
RIV	**Riverview**	**47.40**	**149**	*e*P	**P**	**17 02 19.6**	**+2.5**
CNB	**Canberra Magne**	**47.70**	**152**	*e*P	**P**	**17 02 20.5**	**+1.0**
	comp=Z,319nm,1.2s,mb6.2						
AKL	**Akola**	**47.75**	**292**	*i* x	x	17 01 32.5	
AKL				*i* x	x	17 08 28.0	
LATR	**Latur**	**47.80**	**289**	*e*P	**P**	**17 02 20.5**	**0.0**
BHPL	**Bhopal**	**47.90**	**296**	*e*P	**P**	**17 02 21.1**	**-0.1**
BHPL				AMb	AMB	17 02 32.3	
	comp=Z,174nm,0.8s,mb6.1						
TOO	**Toolangi**	**47.95**	**157**	⇑*i*P	**P**	**17 02 23.0**	**+1.6**
	comp=Z,177nm,1.0s,mb6.0						
TOO	**Toolangi**	**47.95**	**157**	⇑*i*P	**P**	**17 02 23.0**	**+1.6**
TOO				pmax	pmax		
	comp=Z,177nm,1.0s,mb6.0						
IRK	**Irkutsk**	**48.68**	**344**	*e*P	**P**	**17 02 25.9**	**-0.9**
IRK				*e*		17 04 13.9	
IRK				*e*		17 09 32.6	
IRK				pmax	pmax		
	comp=Z,550nm,1.8s,mb6.3						
MNGI	**Mangalore**	**48.92**	**282**	*e*P	**P**	**17 02 29.5**	**+0.3**
MNGI				*e*S	**S**	**17 09 25.0**	**-4.4**
MNGI				*e*S	**S**	**17 09 34.4**	**+5.0**
MOY	**Mondy**	**49.15**	**341**	*e*P	**P**	**17 02 31.4**	**+0.9**
MOY				pmax	pmax		
	comp=Z,875nm,4.1s						
WMQ	**Urumqi**	**49.16**	**325**	⇑*i*P	**P**	**17 02 32.0**	**+1.4**
WMQ				AP	pP	17 02 42.0	+0.6
WMQ				XP	sP	17 02 46.0	+0.1
WMQ				PCP	PcP	17 03 56.0	+2.1
WMQ				PP	PP	17 04 29.5	+4.8
WMQ				PPP	PPP	17 05 20.0	+0.9
WMQ				SCP		17 07 47.0	
WMQ				S	**S**	**17 09 34.0**	**+1.7**

WMQ				XS		17 09 54.0	
WMQ				AMB	AMB		
	comp=Z,120nm,1.3s,mb5.8						
WMQ				AMB	AMB		
	comp=Z,4µm,5.7s						
WMQ				LR	LR		
	comp=N,38µm,17.0s,MS6.5						
WMQ				LR	LR		
	comp=E,22µm,17.5s,MS6.5						
WMQ				LR	LR		
	comp=Z,27µm,18.8s,MS6.3						
DDI	**Dehra Dun**	**49.35**	**305**	*e*P	**P**	**17 02 31.6**	**-0.7**
DDI				*e*x	x	17 09 35.0	
NDI	**New Delhi**	**49.52**	**303**	*e*P	**P**	**17 02 32.0**	**-1.7**
	comp=Z,136nm,0.8s,mb6.0						
NDI				*e*x	x	17 04 29.0	
NDI				*e*x	x	17 09 37.0	
KAD	**Karad**	**49.90**	**287**	*e*P	**P**	**17 02 37.1**	**+0.4**
KAD				AMb	AMB	17 02 46.9	
	comp=Z,108nm,0.8s,mb5.9						
NOUC	**Port Laguerre**	**50.05**	**126**	*e*P	**P**	**17 02 37.3**	**-0.5**
DZM	**Mont Dzumac**	**50.15**	**125**	*e*P	**P**	**17 02 38.0**	**-0.5**
DZM	**Mont Dzumac**	**50.15**	**125**	S	**S**	**17 09 48.0**	**+1.6**
	comp=Z,3.7nm,0.8s,baz=339,slow=23,SNR=2.1						
SMLA	**Simla**	**50.34**	**306**	*e*P	**P**	**17 02 39.4**	**-0.5**
SMLA				*e*S	**S**	**17 09 50.1**	**+1.2**
POO	**Poona**	**50.36**	**289**	*e*P	**P**	**17 02 39.0**	**-1.2**
POO				*e*S	**S**	**17 09 52.0**	**+2.7**
CLNS	**Chul’man**	**50.48**	**1**	*e*P	**P**	**17 02 39.1**	**-1.5**
CLNS				*e**PP	pP	17 02 45.1	-6.2
CLNS				*e*		17 03 57.6	
CLNS				*e*		17 04 32.5	
CLNS				*e*S	**S**	**17 09 47.2**	**-3.2**
CLNS				*e*SS	SS	17 13 13.7	-8.0
CLNS				pmax	pmax		
	comp=N,18nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,39nm,0.9s,mb5.4						
CLNS				pmax	pmax		
	comp=E,12nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,10.0nm,1.0s,mb4.8						
CLNS				pmax	pmax		
	comp=N,11nm,1.1s						
CLNS				pmax	pmax		
	comp=E,19nm,1.1s						
CLNS				smax			
	comp=E,5µm,13.7s						
CLNS				smax			
	comp=Z,2µm,11.8s						
CLNS				smax			
	comp=N,916nm,12.8s						
CLNS				MLR	MLR		
	comp=Z,17µm,18.0s,MS6.1						
CLNS				MLR	MLR		
	comp=N,4µm,16.0s,MS6.0						
CLNS				MLR	MLR		
	comp=E,13µm,17.0s,MS6.0						
BHK	**Bhakra**	**51.04**	**306**	*e*x	x	17 02 48.9	
AJM	**Ajmer**	**51.12**	**299**	*e*P	**P**	**17 02 44.7**	**-1.1**
BOM	**Bombay**	**51.38**	**289**	*e*P	**P**	**17 02 46.7**	**-1.2**
BOM				*e*x	x	17 02 51.8	
	comp=E,1µm,4.4s						
BOM				*e*S	**S**	**17 10 08.4**	**+5.0**
DLH	**Dalhousie**	**51.77**	**307**	*e*P	**P**	**17 02 51.0**	**+0.3**
DLH				*e*x	x	17 02 57.0	
THN	**Thein Dam**	**51.94**	**307**	*e*P	**P**	**17 02 50.6**	**-1.3**
BOD	**Bodaibo**	**52.05**	**353**	*e*P	**P**	**17 02 51.5**	**-0.9**
BOD				pmax	pmax		
	comp=Z,37nm,1.5s,mb5.1						
BOD				pmax	pmax		
	comp=Z,57nm,1.6s,mb5.2						
DGAR	**Diego Garcia**	**53.22**	**256**	PFAKE		17 03 10.0	+8.3
DGAR				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
TAU	**Tasmania Unive**	**53.28**	**159**	*e*P	**P**	**17 03 02.5**	**+0.6**
	comp=Z,309nm,1.7s,mb6.0						
TAU				LR	LR		
	comp=Z,3µm,21.0s,MS5.3						
TAU	**Tasmania Unive**	**53.28**	**159**	P	**P**	**17 03 04.6**	**+2.8**
TAU				pmax	pmax		
	comp=Z,310nm,1.7s,mb6.0						
MKAR	**Makanchi Array**	**53.99**	**326**	P	**P**	**17 03 06.7**	**-0.3**
	comp=Z,53nm,0.9s,mb5.5,baz=129,slow=7.8,SNR=208						
MKAR				S	**S**	**17 10 40.2**	**+1.6**
	comp=Z,1.2nm,1.0s,baz=90,slow=4.9,SNR=2.3						
MKAR				LR	LR	17 27 40.6	
	comp=Z,25µm,18.0s,MS6.3,baz=118,slow=38						
MKAR				PKPPKP		17 33 14.7	
	comp=Z,0.7nm,0.9s,baz=270,slow=3.6,SNR=4.4						
MKAR	**Makanchi Array**	**53.99**	**326**	P	**P**	**17 03 06.7**	**-0.3**
MKAR				S	**S**	**17 10 40.2**	**+1.6**
MKAR				LR	LR	17 27 40.6	
MKAR				P’P’		17 33 14.7	
KSH	**Kashi**	**54.40**	**315**	⇑*i*P	**P**	**17 03 11.0**	**+0.9**
KSH				AP	pP	17 03 24.0	+3.0
KSH				XP	sP	17 03 28.0	+2.7
KSH				PCP	PcP	17 04 13.0	-0.4
KSH				PP	PP	17 05 16.0	+2.3
KSH				PPP	PPP	17 06 29.0	+4.0
KSH				SCP		17 08 06.0	
KSH				PCS		17 08 11.0	
KSH				S	**S**	**17 10 44.0**	**-0.2**
KSH				PS	PS	17 11 04.0	+4.0
KSH				XS		17 11 08.0	
KSH				SCS	ScS	17 12 52.0	-0.8
KSH				SS	SS	17 14 30.5	+4.3
KSH				AMB	AMB		
	comp=Z,7µm,5.3s						
KSH				LR	LR		
	comp=N,27µm,16.5s,MS6.5						
KSH				LR	LR		
	comp=E,19µm,16.1s,MS6.5						
PET	**Petropavlovsk**	**54.54**	**25**	*e*P	**P**	**17 03 11.2**	**+0.3**
	comp=E,276nm,1.3s,mb6.1						
PET				LR	LR		
	comp=Z,15µm,22.0s,MS6.0						
PET	**Petropavlovsk**	**54.54**	**25**	*j* *i*P	**P**	**17 03 11.4**	**+0.5**
PET				*e*		17 05 19.3	
PET				*e*S	**S**	**17 10 45.0**	**-0.9**
PET				*e*SS	SS	17 14 33.1	+4.8
PET				pmax	pmax		
	comp=Z,165nm,1.6s,mb5.8						
PET				pmax	pmax		
	comp=Z,8µm,18.1s						
PET				pmax	pmax		
	comp=Z,6µm,17.6s						
PET				pmax	pmax		
	comp=Z,3µm,23.9s						
PET				smax			
	comp=N,7µm,11.2s						
PET				smax			
	comp=N,14µm,29.0s						
PET				MLR	MLR		
	comp=Z,8µm,17.0s,MS5.8						
PET				MLR	MLR		
	comp=Z,6µm,17.0s						
BHJ	**Bhuj**	**54.92**	**294**	*e*P	**P**	**17 03 13.8**	**-0.3**
BHJ				AMb	AMB	17 03 17.9	
	comp=Z,305nm,1.1s,mb6.2						
ULHL	**Ulahol**	**55.39**	**318**	P	**P**	**17 03 18.5**	**+1.3**
	SNR=23						
AAA	**Alma-Ata**	**55.39**	**319**	*i* P	**P**	**17 03 18.8**	**+1.5**
AAA				*i* S	**S**	**17 11 00.1**	**+2.7**
AAA				pmax	pmax		
	comp=Z,5µm,3.5s						
AAA				MLR	MLR		
	comp=Z,13µm,6.7s						
YAK	**Yakutsk**	**55.84**	**3**	*e*P	**P**	**17 03 18.4**	**-1.9**
	comp=Z,110nm,0.9s,mb5.9						
YAK				LR	LR		
	comp=Z,13µm,19.0s,MS6.0						
YAK	**Yakutsk**	**55.84**	**3**	*e*P	**P**	**17 03 18.9**	**-1.3**
YAK				*e**PP	pP	17 03 28.1	-3.1
YAK				*e*		17 04 11.3	
YAK				*e*		17 05 20.8	
YAK				*e*S	**S**	**17 11 02.2**	**-1.0**
YAK				*e**SS		17 11 24.2	
YAK				*e*		17 13 05.6	
YAK				*e*SS	SS	17 14 52.7	+3.7
YAK				pmax	pmax		
	comp=Z,67nm,1.0s,mb5.6						
YAK				pmax	pmax		
	comp=N,27nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,20nm,1.0s,mb5.1						
YAK				smax			
	comp=E,4µm,15.5s						
YAK				MLR	MLR		
	comp=Z,6µm,18.0s,MS5.7						
YAK				MLR	MLR		
	comp=N,5µm,16.0s,MS5.9						
YAK				MLR	MLR		
	comp=E,7µm,18.0s,MS5.9						
KZA	**Kyzart**	**55.98**	**317**	P	**P**	**17 03 23.5**	**+2.0**
	SNR=43						
TKM2	**Tokmak 2**	**56.11**	**319**	P	**P**	**17 03 23.1**	**+0.7**
	SNR=36						
KBK	**Karagaybulak**	**56.43**	**318**	P	**P**	**17 03 26.1**	**+1.4**
	SNR=51						
UCH	**Uchtor**	**56.53**	**317**	P	**P**	**17 03 26.9**	**+1.4**
	SNR=78						
CHMS	**Chumysh**	**56.71**	**318**	P	**P**	**17 03 27.3**	**+0.6**
	SNR=24						
AAK	**Ala-Archa**	**56.72**	**318**	P	**P**	**17 03 30.1**	**+3.3**
	SNR=31						
AAK	**Ala-Archa**	**56.72**	**318**	*e*P	**P**	**17 03 26.2**	**-0.6**
	comp=E,228nm,1.6s,mb6.0						
AAK				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
AAK	**Ala-Archa**	**56.72**	**318**	*e*P	**P**	**17 03 26.2**	**-0.6**
AAK				pmax	pmax		
	comp=Z,228nm,1.6s,mb6.0						
AAK				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.4						
FRU	**Bishkek**	**56.72**	**318**	*e*P	**P**	**17 03 27.0**	**+0.2**
FRU				*e*		17 11 20.0	
FRU				pmax	pmax		
	comp=Z,100nm,1.8s,mb5.5						
USP	**Ospenovka**	**56.99**	**318**	P	**P**	**17 03 28.9**	**+0.2**
	SNR=49						
MA2	**Magadan**	**57.00**	**16**	PFAKE		17 03 40.0	+11
MA2				LR	LR		
	comp=Z,9µm,22.0s,MS5.8						
MA2	**Magadan**	**57.00**	**16**	*c* *i*P	**P**	**17 03 28.5**	**-0.1**
MA2				*e*		17 05 32.6	
MA2				*i* S	**S**	**17 11 16.8**	**-1.7**
MA2				*e*PS	PS	17 11 34.6	-1.5
MA2				*e*		17 13 15.4	
MA2				*e*SS	SS	17 15 12.9	+4.4
MA2				pmax	pmax		
	comp=Z,60nm,1.3s,mb5.5						
MA2				MLR	MLR		
	comp=Z,28µm,24.0s,MS6.3						
AML	**Almayashu**	**57.05**	**317**	P	**P**	**17 03 30.8**	**+1.6**
	SNR=59						
ZAL	**Zalesovo**	**57.17**	**334**	P	**P**	**17 03 28.9**	**-1.0**
	comp=Z,11nm,0.9s,mb4.9,baz=354,slow=8.0,SNR=48						
ZAL				S	**S**	**17 11 21.1**	**+0.2**
	comp=Z,0.8nm,0.7s,baz=245,slow=10.0,SNR=2.1						
ZAL				LR	LR	17 29 53.7	
	comp=Z,10µm,18.1s,MS6.0,baz=239,slow=38						
ZAL				PKPPKP		17 33 08.3	
	comp=Z,0.6nm,0.3s,baz=186,slow=6.7,SNR=3.5						
EKS2	**Erkin-Say**	**57.21**	**318**	P	**P**	**17 03 31.1**	**+0.8**
	SNR=62						
KURK	**Kurchatov**	**58.21**	**328**	*e*P	**P**	**17 03 36.8**	**-0.4**
	comp=Z,324nm,1.1s,mb6.3						
KURK				LR	LR		
	comp=Z,3µm,19.0s,MS5.4						
KURK	**Kurchatov**	**58.21**	**328**	*e*P	**P**	**17 03 36.8**	**-0.4**
KURK				pmax	pmax		
	comp=Z,324nm,1.1s,mb6.3						
KURK				MLR	MLR		
	comp=Z,3µm,19.0s,MS5.4						
NVS	**Novosibirsk**	**58.45**	**334**	⇑*i*P	**P**	**17 03 36.0**	**-2.8**
NVS				*e*S	**S**	**17 11 32.8**	**-4.9**
NVS				pmax	pmax		
	comp=N,220nm,2.2s						
NVS				pmax	pmax		
	comp=E,128nm,2.2s						
NVS				pmax	pmax		
	comp=Z,342nm,2.2s,mb6.0						
NVS				smax			
	comp=N,84nm,4.4s						
NVS				smax			
	comp=E,182nm,4.4s						
MIDW	**Midway**	**59.48**	**61**	PFAKE		17 04 00.0	+14
MIDW				LR	LR		
	comp=Z,20µm,20.0s,MS6.2						
KKAR	**Karatay Array**	**59.59**	**317**	*i* P	**P**	**17 03 46.6**	**-0.3**
KKAR				pmax	pmax		
	comp=Z,473nm,1.6s,mb6.3						
SEY	**Seymchan**	**60.26**	**14**	*e*P	**P**	**17 03 49.2**	**-2.0**
SEY	**Seymchan**	**60.26**	**14**	*i* P	**P**	**17 03 51.6**	**+0.4**
SEY						17 04 33.4	
SEY						17 06 03.4	
SEY				*e*S	**S**	**17 12 06.3**	**+5.4**
SEY						17 13 41.6	
SEY				SS	SS	17 16 03.4	+3.8
SEY				SSS	SSS	17 18 35.8	+2.4
SEY				pmax	pmax		
	comp=N,20nm,1.1s						
SEY				pmax	pmax		
	comp=E,10.0nm,1.1s						
SEY				pmax	pmax		
	comp=Z,50nm,1.1s,mb5.5						
SEY				smax			
	comp=N,8µm,11.6s						
SEY				smax			
	comp=E,11µm,18.0s						
FX1	**Attu Island--F**	**61.32**	**31**	*e*P	**P**	**17 03 60.0**	**+1.5**
SMY	**Shemya**	**61.73**	**32**	PFAKE		17 04 10.0	+8.8
SMY				LR	LR		
	comp=Z,15µm,19.0s,MS6.2						
VOSK	**Vostochnaya**	**63.33**	**327**	P	**P**	**17 04 10.0**	**-1.9**
VOSK				pmax	pmax		
	comp=Z,238nm,2.2s,mb5.9						
BVA0	**Borovoye Array**	**63.78**	**327**	*i* P	**P**	**17 04 14.4**	**-0.5**
BVA0				pmax	pmax		
	comp=Z,467nm,2.8s,mb6.0						
BVAR	**Borovoye Array**	**63.78**	**327**	P	**P**	**17 04 14.0**	**-0.9**
	comp=Z,55nm,1.0s,mb5.5,baz=127,slow=7.4,SNR=95						
BVAR				S	**S**	**17 12 45.0**	**-0.5**
	comp=Z,1.2nm,0.6s,baz=254,slow=38,SNR=2.0						
BVAR				PKPPKP		17 33 06.2	
	comp=Z,0.6nm,0.6s,baz=270,slow=2.9,SNR=3.7						
BRVK	**Borovoye**	**63.85**	**327**	*e*P	**P**	**17 04 14.4**	**-0.9**
	comp=Z,114nm,1.1s,mb5.8						
BRVK				LR	LR		
	comp=Z,2µm,20.0s,MS5.2						
BRVK	**Borovoye**	**63.85**	**327**	*e*P	**P**	**17 04 14.4**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,114nm,1.1s,mb5.8						
BRVK				MLR	MLR		
	comp=Z,2µm,20.0s,MS5.2						
CHKZ	**Chkalovo**	**63.96**	**328**	*e*P	**P**	**17 04 14.7**	**-1.3**
	comp=Z,191nm,1.5s,mb5.9						
CHKZ	**Chkalovo**	**63.96**	**328**	P	**P**	**17 04 14.3**	**-1.7**
CHKZ				pmax	pmax		
	comp=Z,310nm,1.8s,mb6.0						
JCZ	**Jackson Bay**	**64.25**	**146**	*e*PN	**P**	**17 04 18.1**	**0.0**
WVZ	**Waitaha Valley**	**64.77**	**144**	*e*PN	**P**	**17 04 21.0**	**-0.4**
LBZ	**Lake Benmore**	**65.24**	**145**	PN	**P**	**17 04 24.2**	**-0.3**
THZ	**Tophouse**	**65.30**	**142**	PN	**P**	**17 04 23.8**	**-1.1**
RPZ	**Rata Peaks**	**65.33**	**144**	P	**P**	**17 04 24.8**	**-0.3**
	comp=Z,39nm,0.6s,mb5.6						
RPZ				S	S	17 13 05.6	+0.8
	comp=Z,2.3nm,0.3s,baz=93,slow=17,SNR=3.2						
JMDO	**Jabal Madar**	**65.42**	**292**	P	**P**	**17 04 25.5**	**-0.5**
	SNR=13						
TIXI	**Tiksi**	**65.42**	**2**	⇑*i*P	**P**	**17 04 23.9**	**-1.3**
TIXI	**Tiksi**	**65.42**	**2**	*e*P	**P**	**17 04 19.4**	**-5.8**
TIXI				*e*S	S	17 13 00.2	-5.2
TIXI				pmax	pmax		
	comp=Z,61nm,1.1s,mb5.5						
TIXI				MLR	MLR		
	comp=Z,18µm,18.0s,MS6.3						
TIXI				MLR	MLR		
	comp=N,12µm,19.0s,MS6.2						
TIXI				MLR	MLR		
	comp=E,8µm,18.0s,MS6.2						
BIDO	**Bidbid**	**65.47**	**293**	P	**P**	**17 04 27.1**	**+0.8**
	SNR=10						
RAO	**Raoul Island**	**65.95**	**126**	P	**P**	**17 04 29.4**	**+0.1**
	comp=E,81nm,0.3s,mb6.2,baz=92,slow=22,SNR=2.6						
RAO				S	S	17 13 13.8	+1.3
	comp=E,57nm,0.3s,baz=162,slow=23,SNR=1.5						
RAO				LR	LR	17 29 13.0	
	comp=E,4µm,21.6s,MS5.6,baz=113,slow=32						
SNZO	**South Karori**	**66.18**	**140**	*e*P	**P**	**17 04 28.6**	**-1.9**
	comp=E,192nm,1.3s,mb6.0						
URZ	**Urewera**	**66.18**	**137**	P	**P**	**17 04 29.5**	**-1.1**
	comp=E,21nm,0.8s,mb5.2,baz=310,slow=4.2,SNR=8.8						
URZ				S	S	17 13 17.0	+1.8
	comp=E,3.3nm,0.7s,baz=136,slow=19,SNR=1.7						
HOQ	**Hoqain**	**66.22**	**293**	P	**P**	**17 04 31.7**	**+0.6**
	SNR=8.2						
BSY	**Bisya**	**66.27**	**292**	⇓P	**P**	**17 04 31.0**	**-0.4**
AFI	**Afiamalu**	**66.75**	**108**	P	**P**	**17 04 33.8**	**-0.7**
	comp=E,46nm,1.0s,mb5.5,baz=283,slow=15,SNR=3.7						
AFI				S	S	17 13 27.6	+5.1
	comp=E,14nm,0.8s,baz=304,slow=20,SNR=1.9						
AFI	**Afiamalu**	**66.75**	**108**	P	**P**	**17 04 33.8**	**-0.8**
AFI				S	S	17 13 27.6	+5.1
MCQ	**Macquarie Isla**	**67.17**	**159**	*e*P	**P**	**17 04 38.6**	**+2.1**
MCQ				*e*S	S	17 13 36.4	+10
VAN	**Vannovskaya**	**67.26**	**308**	*e*P	**P**	**17 04 38.5**	**+1.1**
VAN				S	S	17 13 33.0	+4.7
BANOM	**Banah**	**67.30**	**295**	P	**P**	**17 04 40.0**	**+2.2**
	SNR=7.0						
ASHO	**Ashiyiah**	**67.43**	**294**	P	**P**	**17 04 39.9**	**+1.3**
	SNR=16						
SHAO	**Shalim**	**67.60**	**287**	⇑P	**P**	**17 04 40.3**	**+0.5**
AB31	**Akbulak array**	**68.53**	**321**	*i* P	**P**	**17 04 44.1**	**-1.1**
AB31				pmax	pmax		
	comp=Z,478nm,1.8s,mb6.1						
RBK	**Rabkut**	**68.95**	**286**	⇓P	**P**	**17 04 48.0**	**-0.2**
MSEY	**Mahe Island**	**69.30**	**263**	*e*P	**P**	**17 04 50.1**	**-0.4**
	comp=Z,140nm,1.3s,mb5.7						
WHFO	**Wadi Hawf**	**69.36**	**287**	P	**P**	**17 04 50.6**	**-0.2**
	SNR=29						
ABTO	**Aybut**	**69.81**	**286**	P	**P**	**17 04 54.2**	**+0.7**
	SNR=12						
AKTO	**Aktyubinsk**	**70.05**	**322**	P	**P**	**17 04 53.6**	**-0.8**
	comp=Z,36nm,0.9s,mb5.3,baz=102,slow=6.4,SNR=78						
AKTO				S	S	17 14 02.1	+0.9
	comp=Z,0.3nm,0.2s,baz=354,slow=19,SNR=2.9						
AKTO				LR	LR	17 37 28.9	
	comp=Z,23µm,20.4s,MS6.4,baz=291,slow=37						
AKTO	**Aktyubinsk**	**70.05**	**322**	P	**P**	**17 04 52.2**	**-2.2**
AKTO				pmax	pmax		
	comp=Z,185nm,2.3s,mb5.6						
SVE	**Sverdlovsk**	**70.45**	**329**	⇑*e*P	**P**	**17 04 57.0**	**+0.3**
SVE				*e*S	S	17 14 07.0	+1.3
SVE				*e*		17 18 32.0	
SVE				pmax	pmax		
	comp=Z,225nm,2.4s,mb5.7						
SVE				pmax	pmax		
	comp=N,400nm,6.0s						
SVE				pmax	pmax		
	comp=E,2µm,6.0s						
SVE				pmax	pmax		
	comp=Z,4µm,6.0s						
SVE				smax			
	comp=N,2µm,13.0s						
SVE				smax			
	comp=E,2µm,13.0s						
SVE				MLR	MLR		
	comp=N,4µm,17.0s,MS6.1						
SVE				MLR	MLR		
	comp=E,7µm,17.0s,MS6.1						
SVE				MLR	MLR		
	comp=Z,11µm,17.0s,MS6.2						
NIKO	**Nikolski**	**71.36**	**36**	*e*P	**P**	**17 05 02.5**	**+0.2**
ARU	**Arti**	**71.41**	**328**	*e*P	**P**	**17 05 00.6**	**-2.0**
	comp=Z,93nm,1.1s,mb5.6						
ARU				LR	LR		
	comp=Z,3µm,20.0s,MS5.5						
ARU	**Arti**	**71.41**	**328**	⇑*i*P	**P**	**17 05 01.5**	**-1.0**
ARU				*e*		17 05 21.4	
ARU				*e*		17 07 40.4	
ARU				*e*PPP	PPP	17 09 25.3	+0.7
ARU				*e*S	S	17 14 19.3	+2.5
ARU				*e*		17 15 02.0	
ARU				*e*SSS	SSS	17 22 01.8	+0.8
ARU				pmax	pmax		
	comp=Z,62nm,1.2s,mb5.4						
ARU				MLR	MLR		
	comp=Z,10µm,19.0s,MS6.1						
ARU				MLR	MLR		
	comp=N,3µm,17.0s,MS5.9						
ARU				MLR	MLR		
	comp=E,5µm,18.0s,MS5.9						
UNV	**Unalaska Valle**	**72.93**	**35**	*e*P	**P**	**17 05 10.1**	**-1.5**
	comp=E,517nm,1.1s,mb6.4						
HASS	**Wahat al Ahsa’**	**73.22**	**294**	P	**P**	**17 05 15.1**	**+1.1**
SOKR	**Solikamsk**	**73.24**	**331**	*d* *i*P	**P**	**17 05 13.3**	**0.0**
SOKR						17 07 56.1	
SOKR				PPP	PPP	17 09 34.1	-8.1
SOKR				S	S	17 14 36.4	-1.2
SOKR				SS	SS	17 19 26.8	+4.8
SOKR				pmax	pmax		
	comp=Z,90nm,1.4s,mb5.5						
SOKR				MLR	MLR		
	comp=Z,10µm,17.0s,MS6.2						
DRV	**Dumont d’Urvil**	**73.62**	**173**	P	**P**	**17 05 15.0**	**-0.4**
QRN	**Al-Qurain**	**74.88**	**298**	*e*P	**P**	**17 05 23.1**	**-0.3**
QRN				AMb	AMB	17 05 37.3	
	comp=Z,191nm,1.0s,mb6.0						
KBD	**Kabd**	**75.08**	**298**	*e*P	**P**	**17 05 24.7**	**+0.1**
KBD				AMb	AMB	17 05 30.2	
	comp=Z,410nm,1.2s,mb6.2						
RDF	**Al-Radifah**	**75.20**	**298**	*e*P	**P**	**17 05 24.1**	**-1.3**
RDF				AMb	AMB	17 05 45.0	
	comp=Z,200nm,1.0s,mb6.0						
TNA	**Tin City**	**75.36**	**24**	*e*P	**P**	**17 05 24.9**	**-0.6**
MIB	**Mutribah**	**75.40**	**299**	*e*P	**P**	**17 05 25.9**	**-0.6**
MIB				AMb	AMB	17 05 31.7	
	comp=Z,135nm,1.0s,mb5.8						
NAY	**Al-Naaiem**	**75.48**	**298**	*e*P	**P**	**17 05 26.7**	**-0.2**
NAY				AMb	AMB	17 05 46.5	
	comp=Z,114nm,1.0s,mb5.7						
MAK	**Makhachkala**	**75.93**	**313**	*i* P	**P**	**17 05 28.2**	**-1.0**
MAK				*i*		17 08 20.4	
MAK				*e*PPP	PPP	17 10 05.4	-3.1
MAK				*i* S	S	17 15 09.8	+1.8
MAK				*i*		17 15 42.7	
MAK				*i* SS	SS	17 20 03.2	-0.5
MAK				pmax	pmax		
	comp=Z,493nm,2.3s,mb6.0						
MAK				pmax	pmax		
	comp=Z,3µm,3.6s						
MAK				smax			
	comp=N,5µm,5.1s						
MAK				smax			
	comp=Z,1µm,2.7s						
MAK				smax			
	comp=E,4µm,5.2s						
MAK				MLR	MLR		
	comp=Z,7µm,19.0s,MS6.0						
MAK				MLR	MLR		
	comp=N,4µm,20.0s,MS6.1						
MAK				MLR	MLR		
	comp=E,9µm,20.0s,MS6.1						
MIR	**Mirnyy**	**75.98**	**192**	*e*P	**P**	**17 05 32.0**	**+3.0**
MIR				*e*S	S	17 15 12.0	+4.0
MIR				pmax	pmax		
	comp=Z,3µm,13.0s						
MIR				smax			
	comp=N,2µm,16.0s						
MIR				MLR	MLR		
	comp=N,2µm,20.0s,MS5.4						
MIR				MLR	MLR		
	comp=E,1µm,20.0s,MS5.4						
MIR				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.7						
RYDS	**Riyadh**	**76.00**	**293**	P	**P**	**17 05 32.4**	**+2.4**
MZLS	**Mizel**	**77.31**	**293**	P	**P**	**17 05 38.8**	**+1.4**
DGRG	**David-gareji**	**77.41**	**311**	P	**P**	**17 05 40.8**	**+3.2**
LBOS		**77.68**	**283**	*e*P	**P**	**17 05 41.6**	**+2.1**
GNI	**Garni**	**77.84**	**310**	*e*P	**P**	**17 05 34.4**	**-5.5**
GNI	**Garni**	**77.84**	**310**	*i* P	**P**	**17 05 39.0**	**-0.9**
SAMG	**Sameba**	**77.84**	**311**	P	**P**	**17 05 39.4**	**-0.6**
MTA	**Mtatsminda**	**77.86**	**311**	P	**P**	**17 05 40.7**	**+0.6**
TI2	**Plekhanov**	**77.89**	**311**	α *i*P	**P**	**17 05 41.0**	**+0.8**
TI2				*i* S	S	17 15 34.0	+4.7
TI2				pmax	pmax		
	comp=Z,50nm,0.8s,mb5.5						
TI2				pmax	pmax		
	comp=Z,4µm,1.5s						
TI2				smax			
	comp=E,4µm,2.5s						
TBLG	**Delisi**	**77.90**	**311**	P	**P**	**17 05 40.7**	**+0.4**

BHD	**Baghdad**	**77.98**	**303**	*e*x	x	17 05 42.0	
BHD				*e*x	x	17 15 27.0	
BHD				*e*x	x	17 16 00.0	
KAMS	**Al Khamasin**	**78.00**	**289**	P	**P**	**17 05 41.9**	**+0.7**
CLDR	**Caldiran**	**78.44**	**309**	*e*P	**P**	**17 05 38.1**	**-5.2**
HAKT	**HAKKARI**	**78.58**	**307**	*i* P	**P**	**17 05 35.5**	**-8.6**
VANB	**Van**	**78.84**	**308**	*e*P	**P**	**17 05 47.3**	**+1.8**
DIGO	**Kars**	**78.89**	**310**	*i* P	**P**	**17 05 42.2**	**-3.6**
ONI	**Oni**	**78.89**	**312**	P	**P**	**17 05 45.7**	**0.0**
ONI				S	S	17 15 45.4	+5.5
MSL	**Mosul**	**79.06**	**306**	*e*x	x	17 05 48.0	
MSL				*e*x	x	17 06 10.5	
MSL				*e*x	x	17 06 26.5	
MSL				*e*x	x	17 15 42.0	
MSL				*e*x	x	17 16 01.5	
TATS	**Tathlith**	**79.07**	**289**	P	**P**	**17 05 49.0**	**+1.9**
DJNS	**Zahran al Janu**	**79.10**	**287**	P	**P**	**17 05 49.7**	**+2.4**
GOF	**Gofitskoye**	**79.27**	**315**	*e*P	**P**	**17 05 47.9**	**+0.2**
GOF				*i*	pP	17 05 58.4	-0.6
GOF				pmax	pmax		
	comp=Z,20nm,0.6s,mb5.2						
PECR	**Pechory**	**79.28**	**326**	*i* P	**P**	**17 05 47.4**	**-0.1**
PECR				*e*	pP	17 06 01.4	+2.6
PECR				*e*		17 08 53.0	
PECR				*i* S	S	17 15 40.4	-3.2
PECR				*e*		17 16 01.0	
PECR				*e*PS	PS	17 16 32.0	-0.3
PECR				*e*SS	SS	17 20 48.0	-5.7
PECR				pmax	pmax		
	comp=Z,150nm,2.0s,mb5.6						
PECR				pmax	pmax		
	comp=Z,2µm,7.0s						
PECR				smax			
	comp=N,3µm,11.0s						
PECR				smax			
	comp=E,2µm,11.0s						
PECR				MLR	MLR		
	comp=Z,7µm,20.0s,MS6.0						
PECR				MLR	MLR		
	comp=N,4µm,18.0s,MS5.8						
PECR				MLR	MLR		
	comp=E,2µm,16.0s,MS5.8						
PECR				MLR	MLR		
	comp=Z,6µm,18.0s						
PECR				MLR	MLR		
	comp=N,2µm,17.0s						
PECR				MLR	MLR		
	comp=E,4µm,17.0s						
AFFS	**‘Afif**	**79.33**	**293**	P	**P**	**17 05 50.3**	**+1.8**
KIV	**Kislovodsk**	**79.49**	**313**	*e*P	**P**	**17 05 49.3**	**+0.4**
	comp=E,86nm,1.1s,mb5.6						
KIV	**Kislovodsk**	**79.49**	**313**	*c i*P	**P**	**17 05 48.5**	**-0.4**
KIV				*i* S	S	17 15 49.5	+3.4
KIV				pmax	pmax		
	comp=Z,43nm,1.0s,mb5.3						
KIV				pmax	pmax		
	comp=Z,1µm,9.2s						
KIV				MLR	MLR		
	comp=Z,8µm,16.0s,MS6.2						
TTA	**Tatalina**	**79.91**	**27**	*e*P	**P**	**17 05 50.7**	**-0.1**
	comp=Z,201nm,1.4s,mb5.9						
TTA	**Tatalina**	**79.91**	**27**	*e*P	**P**	**17 05 50.7**	**-0.1**
TTA				pmax	pmax		
	comp=Z,201nm,1.4s,mb5.9						
ATD	**Arta Tunnel**	**80.18**	**281**	S	S	17 15 57.0	+3.0
	comp=Z,2.5nm,0.3s,baz=175,slow=20,SNR=2.1						
HILS	**Ha’il**	**80.30**	**297**	P	**P**	**17 05 55.2**	**+1.6**
BTMT	**Batman**	**80.34**	**308**	*e*P	**P**	**17 05 52.9**	**-0.7**
BEST	**Besiri**	**80.51**	**307**	*i* P	**P**	**17 05 50.8**	**-3.7**
FRSS	**Farasan al Kab**	**80.52**	**286**	P	**P**	**17 05 58.0**	**+3.1**
BNGL	**BINGOL**	**80.60**	**308**	*i* P	**P**	**17 05 51.8**	**-3.2**
BLJS	**Baljurashi**	**80.82**	**289**	P	**P**	**17 05 59.4**	**+2.9**
MARD	**Mardin**	**80.91**	**307**	*i* P	**P**	**17 05 48.9**	**-7.7**
IMA2	**Indian Mountai**	**81.21**	**24**	*e*P	**P**	**17 05 58.0**	**+0.4**
KDAK	**Kodiak Island**	**81.23**	**33**	LR	LR	17 37 27.5	
	comp=Z,12µm,21.8s,MS6.2,baz=229,slow=32						
MACK	**Trabzon**	**81.63**	**310**	*i* P	**P**	**17 05 55.6**	**-4.7**
SOC	**Sochi**	**81.64**	**313**	*c i*P	**P**	**17 05 59.6**	**-0.7**
SOC				*e**PP	pP	17 06 14.0	+2.4
SOC				*e*		17 09 04.2	
SOC				*i* S	S	17 16 09.4	+0.9
SOC				*e*SSS	SSS	17 24 55.2	+3.2
SOC				pmax	pmax		
	comp=Z,27nm,1.0s,mb5.1						
SOC				pmax	pmax		
	comp=Z,2µm,6.3s						
SOC				MLR	MLR		
	comp=Z,6µm,21.0s,MS5.9						
LTHS	**Al Lith**	**81.91**	**290**	P	**P**	**17 06 04.4**	**+2.3**
KLMR	**Klimovskoe**	**81.93**	**331**	*c i*P	**P**	**17 06 00.1**	**-1.3**
KLMR				*i* S	S	17 16 07.2	-3.9
KLMR				*e*SS	SS	17 21 35.7	+2.4
KLMR				pmax	pmax		
	comp=Z,140nm,1.1s,mb5.8						
KLMR				pmax	pmax		
	comp=Z,2µm,9.1s						
KLMR				smax			
	comp=E,2µm,7.9s						
KLMR				MLR	MLR		
	comp=Z,8µm,15.0s,MS6.2						
VOR	**Voronezh**	**81.95**	**321**	*e*P	**P**	**17 06 01.0**	**-0.7**
VOR				pmax	pmax		
	comp=Z,150nm,1.5s,mb5.7						
VRSR	**Storozhevoye**	**81.96**	**321**	*c i*P	**P**	**17 06 00.2**	**-1.6**
VRSR				*e*S	S	17 16 09.3	-2.3
VRSR				pmax	pmax		
	comp=Z,10.0nm,0.9s,mb4.8						
VRSR				pmax	pmax		
	comp=N,3.0nm,0.8s						
VRSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
VRSR				smax			
	comp=N,480nm,18.2s						
VRSR				smax			
	comp=Z,180nm,17.8s						
VRSR				smax			
	comp=E,160nm,16.0s						
VRSR				MLR	MLR		
	comp=N,760nm,23.0s,MS5.2						
VRSR				MLR	MLR		
	comp=Z,1µm,23.0s,MS5.2						
VRSR				MLR	MLR		
	comp=E,860nm,22.0s,MS5.2						
PTK	**Pertek**	**81.97**	**308**	*e*P	**P**	**17 05 54.7**	**-7.4**
ELZG	**Elazig**	**82.30**	**308**	*i* P	**P**	**17 06 03.3**	**-0.5**
URFA	**Urfa**	**82.46**	**307**	*e*P	**P**	**17 06 00.3**	**-4.4**
SLKM	**Skilak Lake**	**82.52**	**30**	*e*P	**P**	**17 06 03.6**	**-0.8**
FIB	**Fire Island**	**82.55**	**29**	*e*P	**P**	**17 06 05.6**	**+1.0**
	comp=E,114nm,1.1s,mb5.8						
FIB	**Fire Island**	**82.55**	**29**	*e*P	**P**	**17 06 05.6**	**+1.0**
FIB				pmax	pmax		
	comp=Z,114nm,1.1s,mb5.8						
KBRS	**Khaybar**	**82.64**	**295**	P	**P**	**17 06 08.5**	**+2.7**
MOS	**Moscow**	**82.88**	**325**	*e*P	**P**	**17 06 05.2**	**-1.2**
MOS				*e*		17 06 23.6	
MOS				*e*		17 09 12.1	
MOS				*e*PPP	PPP	17 11 06.1	-5.7
MOS				*e*S	S	17 16 17.4	-3.4
MOS				*e*SS	SS	17 21 40.3	-7.4
MOS				pmax	pmax		
	comp=Z,91nm,1.2s,mb5.7						
MOS				MLR	MLR		
	comp=Z,7µm,19.1s,MS6.1						
ATAB	**Bozova**	**82.88**	**307**	*i* P	**P**	**17 06 03.3**	**-3.5**
PMR	**Palmer**	**83.06**	**29**	*e*P	**P**	**17 06 07.0**	**-0.2**
	comp=Z,240nm,1.2s,mb6.1						
PMR				LR	LR		
	comp=Z,7µm,23.0s,MS6.0						
PMR	**Palmer**	**83.06**	**29**	*e*P	**P**	**17 06 07.0**	**-0.2**
PMR				pmax	pmax		
	comp=Z,240nm,1.2s,mb6.1						
PMR				MLR	MLR		
	comp=Z,7µm,23.0s,MS6.0						
MCK	**McKinley**	**83.14**	**27**	*e*P	**P**	**17 06 06.8**	**-0.8**
	comp=Z,224nm,1.2s,mb6.1						
MCK	**McKinley**	**83.14**	**27**	*e*P	**P**	**17 06 06.8**	**-0.7**
MCK				pmax	pmax		
	comp=Z,224nm,1.2s,mb6.1						
ANN	**Anapa**	**83.25**	**314**	*c i*P	**P**	**17 06 06.3**	**-2.2**
ANN				*i* S	S	17 16 23.5	-1.3
ANN				*e*		17 16 28.7	
ANN				pmax	pmax		
	comp=Z,2µm,6.3s						
ANN				MLR	MLR		
	comp=Z,4µm,20.0s,MS5.8						
OBN	**Obninsk**	**83.49**	**325**	*e*P	**P**	**17 06 08.3**	**-1.2**
	comp=Z,281nm,1.8s,mb6.0						
OBN	**Obninsk**	**83.49**	**325**	⇓*e*P	**P**	**17 06 08.7**	**-0.8**
OBN				*e*	pP	17 06 18.8	-2.1
OBN				*i* S	S	17 16 24.0	-3.0
OBN				*i* PS	PS	17 17 28.7	+3.8
OBN				pmax	pmax		
	comp=Z,2µm,6.0s						
OBN				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.5						
OBN				MLR	MLR		
	comp=Z,10µm,18.0s,MS6.2						
COLA	**College**	**83.60**	**25**	*e*P	**P**	**17 06 09.0**	**-0.8**
	comp=Z,80nm,1.0s,mb5.8						
COLA	**College**	**83.60**	**25**	P	**P**	**17 06 09.3**	**-0.5**
COLA				pmax	pmax		
	comp=Z,81nm,1.0s,mb5.8						
GAZ	**Gaziantep**	**83.76**	**307**	*e*P	**P**	**17 06 05.8**	**-5.5**
QURS	**Qurayyt al Mil**	**84.00**	**301**	P	**P**	**17 06 14.9**	**+2.2**
KAHT	**Ahir Dag**	**84.00**	**307**	*i* P	**P**	**17 06 11.9**	**-0.7**
ILAR	**Eielson Array**	**84.02**	**26**	P	**P**	**17 06 10.9**	**-1.1**
	comp=Z,61nm,1.0s,mb5.7,baz=266,slow=3.9,SNR=104						
ILAR				S	S	17 16 29.4	-2.7
	comp=Z,0.6nm,1.0s,baz=20,slow=42,SNR=2.9						
ILAR				SS	SS	17 21 56.5	-7.1
	comp=Z,0.2nm,0.9s,baz=346,slow=5.9,SNR=2.9						
ILAR				PKKPbc		17 24 26.9	
	comp=Z,1.3nm,0.9s,baz=61,slow=1.4,SNR=6.8						
ILAR				LR	LR	17 41 49.4	
	comp=Z,4µm,20.1s,MS5.8,baz=72,slow=34						
LVZ	**Lovozero**	**84.05**	**338**	*i* P	**P**	**17 06 11.1**	**-0.9**
LVZ				*i*		17 09 25.3	
LVZ				*i* S	S	17 16 30.3	-1.9
LVZ				*i* SS	SS	17 22 01.6	-2.3
LVZ				pmax	pmax		
	comp=Z,42nm,1.4s,mb5.4						
LVZ				pmax	pmax		
	comp=N,13nm,1.3s						
LVZ				pmax	pmax		
	comp=E,9.0nm,1.3s						
LVZ				smax			
	comp=N,7µm,14.5s						
LVZ				smax			
	comp=Z,1µm,17.4s						
LVZ				smax			
	comp=E,4µm,12.9s						
LVZ				MLR	MLR		
	comp=Z,19µm,20.0s,MS6.5						
LVZ				MLR	MLR		
	comp=N,7µm,17.0s,MS6.4						
LVZ				MLR	MLR		
	comp=E,14µm,19.0s,MS6.4						
UMJS	**Umm Lajj**	**84.43**	**295**	P	**P**	**17 06 17.4**	**+2.4**
APA	**Apatity**	**84.53**	**337**	⇑*i*P	**P**	**17 06 15.5**	**+1.0**
APA				*i*	pP	17 06 25.0	-0.9
APA				*i*		17 06 31.0	
APA				*i*		17 09 31.0	
APA				*i*		17 16 33.0	
APA				*i* S	S	17 16 38.0	+0.9
APA				pmax	pmax		
	comp=Z,96nm,1.5s,mb5.7						
APA				pmax	pmax		
	comp=Z,4µm,7.0s						
APA				smax			
	comp=N,8µm,14.0s						
APA				smax			
	comp=E,9µm,14.0s						
APA				MLR	MLR		
	comp=Z,19µm,16.0s,MS6.6						
DIV	**Divide**	**84.69**	**29**	*e*P	**P**	**17 06 16.0**	**+0.6**
	comp=Z,566nm,1.2s,mb6.6						
KOZT	**Kozan**	**84.84**	**307**	*e*P	**P**	**17 06 11.4**	**-5.4**
TBKS	**Tabuk**	**84.89**	**298**	P	**P**	**17 06 19.6**	**+2.3**
CEYT	**Ceyhan**	**84.94**	**307**	*e*P	**P**	**17 06 18.9**	**+1.7**
MAW	**Mawson**	**85.17**	**200**	*e*S	S	17 16 38.6	-4.7
MAW	**Mawson**	**85.17**	**200**	P	**P**	**17 06 17.2**	**-0.5**
	comp=Z,10.0nm,0.9s,mb4.9,baz=47,slow=5.9,SNR=7.1						
MAW				S	S	17 16 37.4	-5.9
	comp=Z,1.4nm,0.6s,baz=291,slow=12,SNR=2.0						
MAW				SS	SS	17 22 22.4	+1.6
	comp=Z,3.6nm,1.0s,baz=137,slow=7.7,SNR=2.5						
MAW				LR	LR	17 39 47.2	
	comp=Z,4µm,20.3s,MS5.8,baz=65,slow=32						
MAW	**Mawson**	**85.17**	**200**	*e*P	**P**	**17 06 18.7**	**+1.1**
	comp=Z,29nm,1.2s,mb5.3						
MAW				*e*S	S	17 16 38.6	-4.7
MAW	**Mawson**	**85.17**	**200**	*e*P	**P**	**17 06 18.7**	**+1.1**
MAW				*e*S	S	17 16 38.6	-4.7
MAW				pmax	pmax		
	comp=Z,29nm,1.2s						
BHL	**Bhannes**	**85.23**	**303**	*e*P	**P**	**17 06 20.0**	**+1.2**
BOYT	**Boyabat**	**85.28**	**311**	*i* P	**P**	**17 06 16.7**	**-2.1**
CTKT	**Corum**	**85.42**	**310**	*i* P	**P**	**17 06 15.7**	**-3.8**
KARA	**Karaisali**	**85.47**	**307**	*e*P	**P**	**17 06 13.2**	**-6.7**
AVNT	**Avonos**	**85.51**	**308**	*i* P	**P**	**17 06 16.7**	**-3.4**
CORM	**Corum**	**85.58**	**310**	*e*P	**P**	**17 06 15.1**	**-5.2**
SIM	**Simferopol’**	**85.60**	**315**	*c e*P	**P**	**17 06 21.7**	**+1.4**
SIM				*i* S	S	17 16 42.1	-5.9
SIM				pmax	pmax		
	comp=Z,49nm,1.0s,mb5.7						
JOF	**Joensuu**	**85.75**	**333**	*e*p	**P**	**17 06 19.3**	**-1.3**
	comp=Z,23nm,0.8s,mb5.5						
CDAG	**Cicekdag**	**85.82**	**309**	*i* P	**P**	**17 06 18.6**	**-2.9**
MERS	**Mersin**	**85.92**	**306**	*e*P	**P**	**17 06 15.1**	**-7.0**
AYUS	**‘Aynunah**	**86.02**	**298**	P	**P**	**17 06 24.9**	**+2.2**
JMOS	**Jabal al Moall**	**86.08**	**299**	P	**P**	**17 06 25.4**	**+2.4**
ALWS	**Ilw as Safayha**	**86.10**	**299**	P	**P**	**17 06 25.6**	**+2.5**
BDAS	**Al Bad‘**	**86.14**	**298**	P	**P**	**17 06 25.5**	**+2.1**
VNDA	**Vanda**	**86.23**	**172**	P	**P**	**17 06 23.1**	**+0.4**
	comp=Z,29nm,0.9s,mb5.5,baz=313,slow=6.4,SNR=29						
VNDA				S	S	17 16 46.9	-6.5
	comp=Z,0.7nm,1.0s,baz=98,slow=20,SNR=3.6						
VNDA				PKKPbc		17 24 22.3	
	comp=Z,3.0nm,1.0s,baz=110,slow=2.7,SNR=7.2						
VNDA				LR	LR	17 45 42.2	
	comp=Z,4µm,19.3s,MS5.8,baz=233,slow=36						
VNDA	**Vanda**	**86.23**	**172**	*e*P	**P**	**17 06 22.7**	**0.0**
	comp=Z,74nm,1.3s,mb5.8						
HAQS	**Haql**	**86.24**	**299**	P	**P**	**17 06 26.0**	**+2.2**
BR131	**Keskin Array S**	**86.38**	**309**	*e*P	**P**	**17 06 24.2**	**-0.1**
	comp=Z,16nm,0.9s,mb5.2						
BRTR	**Keskin Array B**	**86.38**	**309**	P	**P**	**17 06 23.9**	**-0.3**
	comp=Z,6.1nm,0.9s,mb4.8,baz=124,slow=4.5,SNR=22						
BRTR				PP	PP	17 09 50.5	+2.9
	comp=Z,7.2nm,1.2s,baz=124,slow=4.5,SNR=4.7						
BRTR				S	S	17 16 46.8	-8.9
	comp=Z,0.3nm,0.4s,baz=354,slow=14,SNR=2.2						
BALT	**Daday**	**86.41**	**311**	*i* P	**P**	**17 06 19.6**	**-4.8**
ELDT	**Eldivan**	**86.47**	**310**	*i* P	**P**	**17 06 22.4**	**-2.2**
PUL	**Pulkovo**	**86.55**	**330**	*i* P	**P**	**17 06 22.8**	**-1.8**
PUL				*i*		17 16 47.4	
PUL				*i* S	S	17 16 57.5	+0.7
PUL				*i* SS	SS	17 22 37.2	-3.9
PUL				pmax	pmax		
	comp=Z,84nm,0.8s,mb6.0						
PUL				pmax	pmax		
	comp=N,50nm,0.6s						
PUL				pmax	pmax		
	comp=E,63nm,0.9s						
PUL				smax			
	comp=N,5µm,14.6s						
PUL				smax			
	comp=Z,2µm,15.4s						
PUL				smax			
	comp=E,4µm,13.6s						
PUL				MLR	MLR		
	comp=Z,8µm,19.0s,MS6.2						
PUL				MLR	MLR		
	comp=N,4µm,18.0s,MS6.2						
PUL				MLR	MLR		
	comp=E,7µm,18.0s,MS6.2						
KMBO	**Kilima Mbogo**	**86.93**	**269**	P	**P**	**17 06 27.7**	**+0.2**
	comp=E,26nm,1.0s,mb5.4,baz=46,slow=6.9,SNR=46						
KMBO				SS	SS	17 22 52.3	+4.8
	comp=E,0.3nm,0.3s,baz=43,slow=23,SNR=2.5						
KMBO				LR	LR	17 41 38.5	
	comp=E,6µm,22.0s,MS6.0,baz=82,slow=33						
ANTO	**Ankara**	**87.01**	**310**	*e*P	**P**	**17 06 18.8**	**-8.5**
CSS	**Prodhromos**	**87.06**	**305**	*e*P	**P**	**17 06 18.8**	**-8.9**
ARCES	**ARCESS Array B**	**87.19**	**340**	P	**P**	**17 06 26.9**	**-0.7**
	comp=E,11nm,0.8s,mb5.1,baz=79,slow=6.2,SNR=14						
ARCES				S	S	17 16 50.1	-13
	comp=E,2.9nm,1.0s,baz=69,slow=10,SNR=2.3						
ARCES				LR	LR	17 50 01.0	
	comp=E,12µm,19.6s,MS6.3,baz=82,slow=39						
ERMK	**Ermenek**	**87.23**	**306**	*i* P	**P**	**17 06 22.4**	**-6.1**
SGKT	**Sivrigoynuk**	**87.50**	**310**	*i* P	**P**	**17 06 22.4**	**-7.3**
KDHN	**Kadinhani**	**87.67**	**308**	*i* P	**P**	**17 06 30.1**	**-0.5**
KAF	**Kangasniemi**	**88.16**	**332**	*e*p	**P**	**17 06 30.7**	**-1.6**
	comp=E,24nm,0.8s,mb5.5						
KAF	**Kangasniemi**	**88.16**	**332**	*e*P	**P**	**17 06 30.7**	**-1.6**
KAF				pmax	pmax		
	comp=Z,24nm,0.8s,mb5.5						
AKASG	**Malin Array Be**	**88.28**	**321**	P	**P**	**17 06 31.5**	**-1.6**
	comp=Z,7.9nm,0.8s,mb5.0,baz=72,slow=4.7,SNR=25						
AKASG				PP	PP	17 09 59.6	-3.5
	comp=Z,1.4nm,0.8s,baz=63,slow=4.1,SNR=3.1						
AKASG				S	S	17 16 54.4	-19
	comp=Z,0.3nm,0.3s,baz=242,slow=41,SNR=4.9						
FINES	**FINESS Array B**	**88.38**	**332**	P	**P**	**17 06 33.2**	**-0.1**
	comp=Z,13nm,0.6s,mb5.3,baz=57,slow=5.8,SNR=55						
FINES				LR	LR	17 50 57.3	
	comp=Z,9µm,19.9s,MS6.2,baz=256,slow=39						
FINES	**FINESS Array B**	**88.38**	**332**	P	**P**	**17 06 33.2**	**-0.1**
FINES				LR	LR	17 50 57.2	
PPT	**Papeete**	**88.42**	**108**	*e*LQ		17 30 57.1	
PPT	**Papeete**	**88.42**	**108**	*e*PP	PP	17 09 56.6	-8.5
PPT	**Papeete**	**88.42**	**108**	*e*S	S	17 17 13.3	-2.2
PPT				*e*SS	SS	17 23 01.8	-7.5
PPT				*e*LR	LR	17 34 39.3	
	comp=Z,12µm,26.0s						
PPT	**Papeete**	**88.42**	**108**	LR	LR	17 40 21.2	
	comp=Z,3µm,19.0s,MS5.8,baz=273,slow=32						
ESKT	**Eskisehir**	**88.54**	**309**	*i* P	**P**	**17 06 28.2**	**-6.5**
MNK	**Minsk**	**88.58**	**325**	*e*P	**P**	**17 06 32.0**	**-2.5**
MNK				*e*		17 17 00.0	
MNK				*e*S	S	17 17 14.0	-2.0
MNK				*e*PS	PS	17 18 16.0	-11
MNK				MLR	MLR		
	comp=Z,5µm,16.0s,MS6.0						
BORA	**Eskisehir**	**88.80**	**310**	*i* P	**P**	**17 06 27.2**	**-8.7**
INK	**Inuvik**	**88.83**	**21**	P	**P**	**17 06 34.5**	**-0.9**
	comp=Z,79nm,1.1s,mb6.0,baz=277,slow=6.8,SNR=73						
INK				S	S	17 17 00.8	-17
	comp=Z,0.4nm,0.4s,baz=56,slow=29,SNR=4.9						
INK				SS	SS	17 23 14.1	+0.2
	comp=Z,0.6nm,0.7s,baz=262,slow=25,SNR=2.3						
INK				PKKPbc		17 24 13.5	
	comp=Z,2.6nm,0.9s,baz=93,slow=4.7,SNR=6.0						
INK				LR	LR	17 48 53.1	
	comp=Z,5µm,21.9s,MS5.9,baz=286,slow=37						
INK	**Inuvik**	**88.83**	**21**	P	**P**	**17 06 34.5**	**-0.9**
INK				S	S	17 17 00.8	-17
INK				SS	SS	17 23 14.1	+0.2
INK				PKKPbc		17 24 13.5	
INK				LR	LR	17 48 53.1	
KIS	**Kishinev**	**89.05**	**317**	*d i*P	**P**	**17 06 33.0**	**-3.9**
KIS				*e*		17 17 18.0	
KIS				*i* PS	PS	17 18 38.0	+5.3
KIS				pmax	pmax		
	comp=Z,2µm,10.0s						
TBI	**Tubuai**	**89.23**	**113**	*e*LQ		17 31 16.5	
TBI	**Tubuai**	**89.23**	**113**	*e*PP	PP	17 10 05.6	-5.9
TBI	**Tubuai**	**89.23**	**113**	*e*SKSac		17 17 01.6	
TBI				*e*SS	SS	17 23 14.0	-6.8
TBI				*e*LR	LR	17 35 01.4	
	comp=Z,10µm,22.2s,baz=293						
YLV	**Yalova**	**89.53**	**311**	*e*P	**P**	**17 06 31.8**	**-7.6**
ULDT	**Uludag**	**89.77**	**310**	*i* P	**P**	**17 06 34.9**	**-5.6**
AKAS	**Kas**	**89.93**	**306**	*i* P	**P**	**17 06 33.9**	**-7.4**
ELBA	**Catalca**	**90.16**	**311**	*i* P	**P**	**17 06 33.0**	**-9.3**
FETY	**Fethiye**	**90.29**	**307**	*e*P	**P**	**17 06 33.6**	**-9.4**
AYDN	**Tasoluk**	**91.10**	**308**	*i* P	**P**	**17 06 43.5**	**-3.3**
SART	**Tekirdag**	**91.17**	**311**	*i* P	**P**	**17 06 41.6**	**-5.4**
MLSB	**Milas**	**91.23**	**308**	*e*P	**P**	**17 06 41.0**	**-6.4**
MLR	**Muntele Rosu**	**91.26**	**316**	P	**P**	**17 06 46.8**	**-0.5**
	comp=Z,2.9nm,0.5s,mb4.9,baz=133,slow=2.8,SNR=5.3						
MLR				PP	PP	17 10 32.5	+5.3
	comp=Z,4.7nm,0.8s,baz=129,slow=12,SNR=3.2						
MLR				S		17 17 15.2	
	comp=Z,1.5nm,0.8s,baz=158,slow=18,SNR=1.9						
MLR				SS	SS	17 23 53.7	+4.3
	comp=Z,1.1nm,0.3s,baz=146,slow=16,SNR=2.4						
SUW	**Suwalki**	**91.35**	**325**	*e*P	**P**	**17 06 47.1**	**-0.4**
SUW				MLR	MLR	17 48 41.3	
	comp=Z,10µm,23.4s,MS6.2						
SUW	**Suwalki**	**91.35**	**325**	*e*P	**P**	**17 06 47.1**	**-0.4**
DAT	**Datca**	**91.48**	**307**	*e*P	**P**	**17 06 42.9**	**-5.7**
LVV	**L’vov**	**91.71**	**320**	*e*P	**P**	**17 06 51.0**	**+1.7**
LVV				*e*		17 17 17.0	
LVV				*e*S	S	17 17 45.0	+0.6
LVV				MLR	MLR		
	comp=Z,5µm,18.0s,MS6.0						
URLA	**Izmir**	**91.99**	**309**	*i* P	**P**	**17 06 46.4**	**-4.5**
KWP	**Kalwaria**	**92.59**	**320**	*e*P	**P**	**17 06 57.4**	**+4.1**
KWP				MLR	MLR	17 53 53.5	
	comp=Z,8µm,19.2s,MS6.2						
KWP	**Kalwaria**	**92.59**	**320**	*e*P	**P**	**17 06 57.4**	**+4.1**
RZN	**Rozhen**	**92.83**	**312**	*e*P	**P**	**17 06 51.5**	**-3.1**
UZH	**Uzhgorod**	**93.08**	**319**	*e*P	**P**	**17 06 56.0**	**+0.4**
UZH				*e*S	S	17 18 01.0	+4.6
UZH				MLR	MLR		
	comp=Z,5µm,17.0s,MS6.0						
MBAR	**Mbarara**	**93.35**	**270**	*e*P	**P**	**17 07 06.9**	**+9.2**
MBAR				pmax	pmax		
	comp=Z,2.0nm,1.3s						
CRVS	**Cervenica-Dubn**	**93.55**	**320**	*e*P	**P**	**17 06 57.3**	**-0.4**
CRVS				*e*S		17 17 29.4	
STHS	**Stebnicka Huta**	**93.57**	**320**	*e*P	**P**	**17 06 58.4**	**+0.6**
MMB	**Musomiste**	**93.57**	**312**	*e*P	**P**	**17 06 58.0**	**0.0**
SYO	**Syowa Base**	**93.77**	**201**	⇓P	**P**	**17 07 00.1**	**+1.8**
SYO	**Syowa Base**	**93.77**	**201**	⇓PcP	PcP	17 07 02.1	+3.0
SYO	**Syowa Base**	**93.77**	**201**	⇓*e*P	**P**	**17 07 00.1**	**+1.8**
SYO				⇓*i*PcP	PcP	17 07 02.1	+3.0
KKB	**Krupnik**	**93.99**	**313**	*e*P	**P**	**17 06 59.0**	**-0.9**
OJC	**Ojcow**	**94.28**	**321**	⇑*i*P	**P**	**17 07 00.2**	**-0.8**
OJC				*i* PP	PP	17 10 54.1	+3.2
OJC				*e*SKS	SKS	17 17 35.2	+3.6
OJC				*i* S	S	17 18 08.5	+1.8
OJC				*e*SS	SS	17 24 31.2	-1.3
OJC				MLR	MLR	17 51 01.5	
	comp=Z,9µm,21.2s,MS6.2						
KECS	**Kecovo**	**94.28**	**320**	*i* P	**P**	**17 07 00.8**	**-0.2**
DAG	**Danmarks Havn**	**94.43**	**352**	⇑*i*P	**P**	**17 07 00.8**	**-0.3**
	comp=Z,25nm,1.2s,mb5.5						
	comp=Z,6µm,17.0s						
DAG	**Danmarks Havn**	**94.43**	**352**	⇑*e*P	**P**	**17 07 00.8**	**-0.3**
	comp=Z,25nm,1.2s,mb5.5						
DAG				LR	LR		
	comp=Z,6µm,17.0s,MS6.1						
DAG	**Danmarks Havn**	**94.43**	**352**	⇑*e*P	**P**	**17 07 00.8**	**-0.3**
DAG				pmax	pmax		
	comp=Z,25nm,1.2s,mb5.5						
DAG				MLR	MLR		
	comp=Z,6µm,17.0s,MS6.1						
VAY	**Valandovo**	**94.48**	**312**	*e*P	**P**	**17 07 00.5**	**-1.6**
VAY	**Valandovo**	**94.48**	**312**	*e*P	**P**	**17 07 00.5**	**-1.6**
HFS	**Hagfors**	**94.57**	**332**	P	**P**	**17 07 01.1**	**-1.0**
	comp=Z,5.5nm,0.8s,mb5.0,baz=90,slow=3.0,SNR=7.4						
HFS				S		17 17 31.6	
	comp=Z,0.8nm,0.6s,baz=167,slow=33,SNR=1.8						
HFS				PKKPbc		17 24 00.4	
	comp=Z,2.2nm,0.7s,baz=236,slow=5.3,SNR=5.0						
HFS				SS	SS	17 24 39.7	+3.2
	comp=Z,5.7nm,1.1s,baz=213,slow=25,SNR=2.6						
HFS	**Hagfors**	**94.57**	**332**	P	**P**	**17 07 01.1**	**-1.0**
HFS				S		17 17 31.6	
HFS				SS	SS	17 24 39.7	+3.3
SKO	**Skopje**	**95.16**	**313**	*e*P	**P**	**17 07 05.5**	**+0.2**
VYHS	**Vyhne**	**95.34**	**320**	*e*P	**P**	**17 07 03.2**	**-2.7**
VYHS				*i*		17 11 00.6	
VYHS				*e*S		17 17 37.7	
VYHS				*e*SS	SS	17 24 49.1	+1.7
NB2	**NORSAR Subarra**	**95.37**	**333**	P	**P**	**17 07 05.1**	**-0.6**
	comp=Z,16nm,1.1s,mb5.4,baz=67,slow=4.6						
NB2	**NORSAR Subarra**	**95.37**	**333**	P	**P**	**17 07 05.1**	**-0.6**
	baz=67,slow=4.8						
NOA	**NORSAR Array B**	**95.37**	**333**	P	**P**	**17 07 04.9**	**-0.8**
	comp=Z,2.6nm,0.7s,mb4.8,baz=66,slow=4.6,SNR=7.0						
NOA				S		17 17 38.0	
	comp=Z,1.0nm,0.9s,baz=150,slow=3.2,SNR=2.3						
NOA				SS	SS	17 24 47.3	-0.3
	comp=Z,0.8nm,0.8s,baz=211,slow=20,SNR=2.2						
NOA				SSS	SSS	17 28 34.9	+4.5
	comp=Z,0.7nm,0.8s,baz=193,slow=6.9,SNR=2.2						
NOA				LR	LR	17 53 13.9	
	comp=Z,8µm,19.6s,MS6.2,baz=65,slow=37						
OKC	**Ostrava-Krasne**	**95.41**	**321**	*e*x	x	17 07 37.3	
OKC				*e*S	S	17 18 23.4	+7.1

OKC				AMS	AMS	17 53 20.0	
	comp=Z,6µm,16.1s						
NAO	**NORSAR Subarra**	**95.63**	**333**	P	**P**	**17 07 05.1**	**-1.8**
	comp=Z,16nm,1.1s,mb5.4						
NAO	**NORSAR Subarra**	**95.63**	**333**	P	**P**	**17 07 05.1**	**-1.8**
NAO				pmax	pmax		
	comp=Z,16nm,1.1s,mb5.4						
BSD	**Bornholm Skovb**	**95.68**	**327**	⇓*i*P	**P**	**17 07 01.5**	**-5.8**
	comp=Z,47nm,1.2s,mb5.8						
BSD	**Bornholm Skovb**	**95.68**	**327**	*i* S		17 17 39.1	
BSD				*i*		17 18 23.0	
	comp=Z,5µm,21.0s						
BSD	**Bornholm Skovb**	**95.68**	**327**	⇓*e*P	**P**	**17 07 01.5**	**-5.8**
BSD				*i* S		17 17 39.1	
BSD				*i*		17 18 23.0	
BSD				pmax	pmax		
	comp=Z,47nm,1.2s,mb5.8						
BSD				MLR	MLR		
	comp=Z,5µm,21.0s,MS6.0						
OHR	**Ohrid**	**95.83**	**312**	*e*P	**P**	**17 07 06.1**	**-2.2**
OHR	**Ohrid**	**95.83**	**312**	*e*P	**P**	**17 07 06.1**	**-2.2**
QSPA	**South Pole Qui**	**96.12**	**180**	*e*P	**P**	**17 07 03.5**	**-5.2**
	comp=Z,22nm,0.9s,mb5.6						
KSP	**Ksiaz**	**96.25**	**323**	*e*P	**P**	**17 07 10.5**	**+0.6**
KSP				MLR	MLR	17 52 27.1	
	comp=Z,20µm,20.1s,MS6.6						
KSP	**Ksiaz**	**96.25**	**323**	*e*P	**P**	**17 07 12.4**	**+2.5**
KSP				*e*PP	PP	17 11 04.0	-1.9
KSP				*e*SKS	SKS	17 17 30.3	-12
KSP				*e*S	S	17 18 26.0	+2.6
KSP				*e*SP	SP	17 19 43.0	-5.3
KSP				*e*SS	SS	17 24 52.0	-8.1
KSP				LR	LR		
	comp=Z,23µm,20.1s,MS6.7						
KSP	**Ksiaz**	**96.25**	**323**	*e*P	**P**	**17 07 12.4**	**+2.5**
KSP				*e*		17 11 04.0	
KSP				*e*S	S	17 18 26.0	+2.6
KSP				*e*SP	SP	17 19 43.0	-5.3
KSP				*e*SS	SS	17 24 52.0	-8.1
KSP				MLR	MLR		
	comp=Z,23µm,20.1s,MS6.7						
DPC	**Dobruska-Polom**	**96.38**	**322**	*e*x	x	17 07 31.7	
DPC				*e*x	x	17 07 49.7	
DPC				*e*PP	PP	17 11 05.9	-1.1
DPC				*e*SKS	SKS	17 17 44.3	+1.4
DPC				*e*S	S	17 18 32.9	+8.3
DPC				AMS	AMS	17 52 00.0	
	comp=Z,11µm,21.2s						
UPC	**Upice**	**96.52**	**322**	*e*P	sP	17 07 28.3	+1.8
UPC				*e*x	x	17 07 54.7	
TAOE	**Nuku Hiva Isla**	**96.66**	**98**	*e*PP	PP	17 10 59.7	-10
TAOE	**Nuku Hiva Isla**	**96.66**	**98**	*e*LR	LR	17 38 31.2	
	comp=Z,45µm,25.9s						
COP	**Copenhagen**	**96.81**	**328**	*i* P	**P**	**17 07 12.1**	**-0.3**
	comp=Z,52nm,1.1s,mb5.9						
COP				*e*		17 11 11.7	
COP				*i* S		17 17 46.4	
COP				*i*		17 18 36.3	
COP				*i*		17 19 51.0	
	comp=Z,5µm,18.0s						
COP	**Copenhagen**	**96.81**	**328**	*i* P	**P**	**17 07 12.1**	**-0.3**
COP				*e*		17 11 11.7	
COP				*i* S		17 17 46.4	
COP				*i*		17 18 36.3	
COP				*i*		17 19 51.0	
COP				pmax	pmax		
	comp=Z,52nm,1.1s,mb5.9						
COP				MLR	MLR		
	comp=Z,5µm,18.0s,MS6.0						
TREC	**Trest**	**97.22**	**321**	*e*x	x	17 07 34.3	
TREC				*e*PP	PP	17 11 13.4	-0.3
TREC				*e*SKS	SKS	17 17 48.5	+1.1
TREC				*e*S	S	17 18 36.2	+4.5
LSZ	**Lusaka**	**97.24**	**255**	*e*P	**P**	**17 07 15.3**	**0.0**
	comp=Z,20nm,1.3s,mb5.4						
LSZ	**Lusaka**	**97.24**	**255**	P	**P**	**17 07 16.3**	**+1.0**
LSZ				pmax	pmax		
	comp=Z,20nm,1.3s,mb5.4						
PVCC	**Panska Ves**	**97.39**	**323**	*e*P	**P**	**17 07 17.9**	**+2.7**
PVCC				*e*PP	PP	17 11 17.5	+2.5
PVCC				AMS	AMS	17 52 40.0	
	comp=Z,8µm,19.9s						
PRU	**Pruhonice**	**97.58**	**322**	*e*x	x	17 07 33.4	
PRU				*e*x	x	17 07 59.4	
PRU				*e*PP	PP	17 11 19.8	+3.2
PRU				*e*S	S	17 18 45.1	+10
PRU				AMS	AMS	17 52 50.0	
	comp=Z,11µm,20.6s						
PRA	**Prague**	**97.62**	**322**	PP	PP	17 11 20.0	+3.1
PRA				AMS	AMS	17 53 00.0	
BRG	**Berggiesshubel**	**97.65**	**323**	*e*P	**P**	**17 07 16.3**	**0.0**
	comp=Z,10nm,1.5s,mb5.1						
BRG				*e*		17 07 36.1	
BRG				PP	PP	17 11 08.0	-9.1
BRG				SKS	SKS	17 17 53.0	+3.4
BRG				S	S	17 18 34.0	-1.3
BRG				PS	PS	17 19 55.0	-13
BRG				SS	SS	17 25 08.0	-12
BRG				LR	LR		
	comp=Z,7µm,17.8s,MS6.2						
BRG	**Berggiesshubel**	**97.65**	**323**	*e*P	**P**	**17 07 16.3**	**0.0**
BRG				*e*		17 07 36.1	
BRG						17 17 53.0	
BRG				S	S	17 18 34.0	-1.3
BRG				PS	PS	17 19 55.0	-13
BRG				pmax	pmax		
	comp=Z,10.0nm,1.5s,mb5.1						
BRG				MLR	MLR		
	comp=Z,7µm,17.8s,MS6.2						
ARSA	**Arzberg**	**97.83**	**319**	⇑*i*P	**P**	**17 07 08.6**	**-8.6**
	comp=Z,214nm,4.2s						
CLL	**Collm**	**98.06**	**324**	*e*PDIF	**P**	**17 07 19.0**	**+0.9**
CLL				*i* *PP	pP	17 07 48.0	+18
CLL				*e**SP	sP	17 08 03.0	+30
CLL				*e*PP	PP	17 11 25.0	+4.7
CLL				*e*PPP	PPP	17 13 23.0	-4.5
CLL				*e*		17 17 52.0	
CLL				*e*		17 18 42.0	
CLL				*e*SP	SP	17 20 04.0	-3.2
CLL				*e*SS	SS	17 25 29.0	+3.6
CLL				*e*SSS	SSS	17 29 48.0	+35
CLL				*e*		17 32 30.0	
CLL	**Collm**	**98.06**	**324**	*i* Pdif	**P**	**17 07 21.2**	**+3.1**
	comp=Z,178nm,2.9s,mb6.1						
CLL				*i* pP	pP	17 07 48.0	+18
CLL				*e*SKS	SKS	17 17 52.0	+0.3
CLL				*e*Sdif		17 18 42.0	
CLL				LR	LR		
	comp=Z,9µm,18.2s,MS6.3						
CLL	**Collm**	**98.06**	**324**	*i* P	**P**	**17 07 21.2**	**+3.1**
CLL				*e*		17 17 52.0	
CLL				*e*S	S	17 18 42.0	+3.3
CLL				pmax	pmax		
	comp=Z,178nm,2.9s,mb6.1						
CLL				MLR	MLR		
	comp=Z,9µm,18.2s,MS6.3						
MUD	**Monsted U’grnd**	**98.19**	**329**	*i* P	**P**	**17 07 20.9**	**+2.3**
	comp=Z,27nm,1.3s,mb5.6						
MUD	**Monsted U’grnd**	**98.19**	**329**	*i* S		17 17 56.8	
MUD				*i*		17 18 42.6	
MUD				*i*		17 20 06.3	
MUD				*i*		17 25 43.2	
	comp=Z,8µm,17.0s						
MUD	**Monsted U’grnd**	**98.19**	**329**	*e*P	**P**	**17 07 20.9**	**+2.3**
	comp=Z,27nm,1.3s,mb5.6						
MUD				*i* S		17 17 56.8	
MUD				*i*		17 18 42.6	
MUD				*i*		17 20 06.3	
MUD				*i*		17 25 43.2	
MUD	**Monsted U’grnd**	**98.19**	**329**	*e*P	**P**	**17 07 20.9**	**+2.3**
MUD				*i* S		17 17 56.8	
MUD				*i*		17 18 42.6	
MUD				*i*		17 20 06.3	
MUD				*i*		17 25 43.2	
MUD				pmax	pmax		
	comp=Z,27nm,1.3s,mb5.6						
YKA	**Yellowknife Ar**	**98.33**	**24**	P	**P**	**17 07 18.6**	**-0.5**
	comp=Z,17nm,1.1s,mb5.5,baz=299,slow=4.7,SNR=31						
YKA				PP	PP	17 11 18.4	-3.5
	comp=Z,1.8nm,1.1s,baz=282,slow=5.7,SNR=2.9						
YKA				S		17 17 45.0	
	comp=Z,1.0nm,0.9s,baz=171,slow=35,SNR=2.6						
YKA				PKKPbc		17 23 50.0	
	comp=Z,1.5nm,0.8s,baz=127,slow=2.7,SNR=7.0						
YKA				SS	SS	17 25 28.9	0.0
	comp=Z,0.1nm,0.3s,baz=95,slow=36,SNR=3.2						
YKA				LR	LR	17 54 25.3	
	comp=Z,4µm,21.7s,MS5.9,baz=295,slow=37						
YKA	**Yellowknife Ar**	**98.33**	**24**	P	**P**	**17 07 18.6**	**-0.5**
YKA				PP	PP	17 11 18.4	-3.5
YKA				S		17 17 45.0	
YKA				PKKPbc		17 23 50.0	
YKA				SS	SS	17 25 28.9	0.0
YKA				LR	LR	17 54 25.3	
YKA	**Yellowknife Ar**	**98.33**	**24**	P	**P**	**17 07 18.6**	**-0.5**
YKA						17 11 18.4	
YKA				SS	SS	17 25 28.9	0.0
MOA	**Molln**	**98.45**	**320**	⇑*i*P	**P**	**17 07 18.4**	**-1.6**
	comp=Z,592nm,5.3s						
KHC	**Kasperske Hory**	**98.46**	**322**	*e*P	**P**	**17 07 20.0**	**0.0**
KHC				*e*x	x	17 07 29.6	
KHC				*e*x	x	17 07 52.6	
KHC				x	x	17 10 52.0	
KHC				*e*PP	PP	17 11 15.5	-7.7
KHC				*e*SKS	SKS	17 17 54.1	+0.3
KHC				*e*S	S	17 18 45.3	+3.2
KHC				AMS	AMS	17 57 00.0	
	comp=Z,8µm,18.3s						
KHC	**Kasperske Hory**	**98.46**	**322**	*e*P	**P**	**17 07 29.6**	**+10**
KHC				*e*		17 11 15.5	
KHC				*e*		17 17 54.1	
KHC				*e*		17 18 45.3	
KHC				MLR	MLR		
	comp=Z,8µm,18.3s,MS6.3						
GEC2	**GERESS Array S**	**98.48**	**321**	*e*Pdif	**P**	**17 07 20.9**	**+0.8**
GEC2				*e*PP	PP	17 11 23.7	+0.4
GEC2				*e*SKSac		17 17 55.2	
GERES	**GERESS Array B**	**98.48**	**321**	P	**P**	**17 07 19.4**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=53,slow=6.7,SNR=5.4						
GERES				PP	PP	17 11 21.3	-2.0
	comp=Z,2.0nm,1.0s,baz=72,slow=3.1,SNR=2.8						
GERES				S		17 17 52.4	
	comp=Z,0.3nm,0.7s,baz=194,slow=37,SNR=2.2						
GERES				PKKPbc		17 23 50.3	
	comp=Z,0.5nm,0.7s,baz=270,slow=2.7,SNR=4.7						
GERES				SS	SS	17 25 32.6	+1.3
	comp=Z,0.2nm,0.5s,baz=207,slow=6.0,SNR=2.5						
GERES				LR	LR	17 58 57.2	
	comp=Z,9µm,18.1s,MS6.3,baz=66,slow=40						
GERES	**GERESS Array B**	**98.48**	**321**	P	**P**	**17 07 19.4**	**-0.7**
GERES				PP	PP	17 11 21.3	-2.0
GERES				S		17 17 52.4	
GERES				PKKPbc		17 23 50.3	
GERES				SS	SS	17 25 32.6	+1.3
GERES				LR	LR	17 58 57.2	
GERES	**GERESS Array B**	**98.48**	**321**	P	**P**	**17 07 19.4**	**-0.7**
GERES						17 11 21.3	
GERES				S		17 17 52.4	
GERES				SS	SS	17 25 32.7	+1.3
BOJS	**Bojanci**	**98.55**	**318**	*e*P	**P**	**17 07 21.9**	**+1.5**
BSEG	**Bad Segeberg**	**98.61**	**327**	*e*Pdif	**P**	**17 07 20.6**	**+0.1**
OBKA	**Obir**	**98.70**	**319**	⇑*i*P	**P**	**17 07 22.1**	**+0.9**
	comp=Z,631nm,6.1s						
NKC	**Novy Kostel**	**98.77**	**323**	*e*x	x	17 07 42.6	
NKC				*e*x	x	17 07 59.0	
NKC				*e*S	S	17 18 48.2	+3.5
NKC				AMS	AMS	17 55 40.0	
	comp=Z,7µm,16.7s						
LJU	**Ljubljana**	**98.86**	**318**	*e*P	**P**	**17 07 23.0**	**+1.1**
WET	**Wettzell**	**98.89**	**322**	*e*Pdif	**P**	**17 07 22.7**	**+0.8**
WET				*e*PP	PP	17 11 26.9	+0.7
CEY	**Cerknica**	**99.02**	**318**	*e*P	**P**	**17 07 24.9**	**+2.3**
MOX	**Moxa**	**99.11**	**323**	*i* P	**P**	**17 07 24.2**	**+1.3**
	comp=Z,logA/T=1.2,mb5.5						
MOX				PP	PP	17 11 29.0	+1.2
MOX				SKS	SKS	17 18 01.0	+3.9
MOX				L		17 56 33.0	
MOX	**Moxa**	**99.11**	**323**	*e*P	**P**	**17 07 24.2**	**+1.3**
	comp=Z,32nm,2.0s,mb5.5						
MOX				*e*PP	PP	17 11 29.0	+1.2
MOX				*e*SKS	SKS	17 18 01.0	+3.9
MOX				LR	LR		
	comp=Z,6µm,22.0s,MS6.0						
MOX	**Moxa**	**99.11**	**323**	*e*P	**P**	**17 07 24.2**	**+1.3**
MOX				*e*		17 11 29.0	
MOX				*e*		17 18 01.0	
MOX				pmax	pmax		
	comp=Z,32nm,2.0s,mb5.5						
MOX				MLR	MLR		
	comp=Z,6µm,22.0s,MS6.0						
KBA	**Koelnbreinsper**	**99.29**	**320**	⇓*i*P	**P**	**17 07 27.1**	**+3.2**
	comp=Z,385nm,5.7s						
CLZ	**Clausthal**	**99.39**	**325**	*e*P	**P**	**17 07 25.1**	**+1.0**
CLZ				*e*		17 17 59.8	
CLZ				*e*S	S	17 18 54.3	+4.4
ROBS	**Robic**	**99.46**	**319**	*e*P	**P**	**17 07 25.6**	**+1.0**
GRA1	**Grafenberg Arr**	**99.70**	**323**	*e*Pdif	**P**	**17 07 26.1**	**+0.5**
GRA1				*e*PP	PP	17 11 32.2	-0.4
GRA1				*e*SKSac		17 17 59.5	
GRA1				*e*Sdif		17 18 58.9	
GRA1				LR	LR		
	comp=Z,10µm,20.6s,MS6.3						
GRF	**Grafenberg Arr**	**99.70**	**323**	*e*P	**P**	**17 07 26.1**	**+0.5**
GRF				*e*		17 11 32.2	
GRF				*e*		17 17 59.5	
GRF				*e*S	S	17 18 58.9	+6.4
GRF				MLR	MLR		
	comp=Z,10µm,20.6s,MS6.3						
GRF	**Grafenberg Arr**	**99.70**	**323**	*e*P	**P**	**17 07 26.1**	**+0.5**
GRF				*e*		17 11 32.2	
GRF				*e*		17 17 59.5	
GRF				S	S	17 18 58.9	+6.4
GRF				MLR	MLR		
	comp=Z,10µm,20.6s,MS6.3						
FUR	**Furstenfeldbru**	**100.22**	**321**	*e*Pdif	P	17 07 28.5	+0.4
FUR				*e*PP	PP	17 11 37.2	+0.4
FUR				*e*SKSac		17 18 03.3	
WTTA	**Wattenberg**	**100.32**	**320**	⇓*i*P	P	17 07 25.2	-3.3
	comp=Z,387nm,5.0s						
TNS	**Taunus Mts**	**101.15**	**324**	*e*Pdif	P	17 07 32.6	+0.4
DAVA	**Damuels**	**101.43**	**321**	⇑*i*P	P	17 07 33.2	-0.3
	comp=Z,670nm,6.6s						
VAE	**Valguarnera**	**101.56**	**310**	P	P	17 07 36.1	+1.7
	comp=Z,9.3nm,0.7s,baz=327,slow=15,SNR=2.3						
VAE				PP	PP	17 11 33.2	-14
	comp=Z,4.7nm,0.3s,baz=9.9,slow=20,SNR=3.9						
VAE				S		17 18 13.5	
	comp=Z,5.3nm,0.4s,baz=278,slow=17,SNR=1.8						
VAE	**Valguarnera**	**101.56**	**310**	P	P	17 07 36.1	+1.7
VAE				PP	PP	17 11 33.2	-14
VAE				S		17 18 13.5	
DAVOX	**Davos**	**101.62**	**320**	P	P	17 07 36.1	+1.7
	comp=Z,3.4nm,1.0s,baz=149,slow=17,SNR=2.4						
DAVOX				PP	PP	17 11 36.9	-10
	comp=Z,2.0nm,0.8s,baz=2.7,slow=20,SNR=2.4						
DAVOX				S		17 18 04.8	
	comp=Z,1.1nm,0.5s,baz=347,slow=22,SNR=2.6						
BFO	**Black Forest**	**101.98**	**322**	*e*P	P	17 07 35.5	-0.5
BFO				*e*S	S	17 19 15.2	+3.6
RKT	**Rikitea**	**102.50**	**112**	*e*LQ		17 36 50.9	
RKT	**Rikitea**	**102.50**	**112**	*e*PP	PP	17 11 51.4	-3.2
RKT	**Rikitea**	**102.50**	**112**	*e*PS	PS	17 20 55.5	-3.8
RKT	**Rikitea**	**102.50**	**112**	*e*SKSac		17 18 11.9	
RKT				*e*SS	SS	17 26 26.0	-2.3
RKT				*e*LR	LR	17 41 11.4	
	comp=Z,5µm,28.8s						
CDF	**Champ du Feu**	**102.59**	**322**	*e*PP	PP	17 11 50.8	-3.9
	comp=Z,36nm,1.3s						
HINF	**Hinteralfeld**	**103.10**	**322**	*e*PP	PP	17 11 54.6	-4.1
GIVF	**Givet**	**103.30**	**325**	*e*PP	PP	17 11 55.5	-4.6
HAU	**Haudompre**	**103.32**	**322**	*e*PP	PP	17 11 55.7	-4.6
PGF	**Pioggiola**	**103.79**	**316**	*e*PP	PP	17 11 59.5	-4.2
	comp=Z,29nm,0.9s						
MEZF	**Maizieres J’vi**	**103.89**	**323**	*e*PP	PP	17 12 00.2	-4.0
NEW	**Newport**	**103.90**	**37**	*e*P	Pdif	17 07 45.7	+1.3
	comp=Z,11nm,1.1s						
NEW	**Newport**	**103.90**	**37**	*e*P	Pdif	17 07 45.7	+1.3
NEW				pmax	pmax		
	comp=Z,11nm,1.1s						
CABF	**La Chapelle**	**104.08**	**321**	*e*PP	PP	17 11 59.7	-6.0
	comp=Z,83nm,1.4s						
LPG	**La Plagne**	**104.12**	**320**	*e*PP	PP	17 12 00.4	-5.7
	comp=Z,144nm,1.4s						
LPL	**La Plagne**	**104.13**	**320**	*e*PP	PP	17 12 00.6	-5.5
	comp=Z,210nm,1.6s						
SBF	**Sospel**	**104.34**	**318**	*e*PP	PP	17 12 03.4	-4.4
	comp=Z,34nm,0.9s						
LOR	**Lormes**	**105.16**	**322**	*e*PP	PP	17 12 09.8	-4.3
SMF	**Signal de Mont**	**105.45**	**322**	*e*PP	PP	17 12 11.7	-4.5
	comp=Z,113nm,1.7s						
SSF	**Saint Saulge**	**105.47**	**322**	*e*PP	PP	17 12 12.9	-3.4
	comp=Z,53nm,1.5s						
AVF	**Avril sur Loir**	**105.69**	**322**	*e*PP	PP	17 12 13.2	-4.6
	comp=Z,126nm,1.7s						
BGF	**Bois d’Agland**	**106.10**	**322**	*e*PP	PP	17 12 16.5	-4.4
	comp=Z,181nm,1.8s						
TCF	**Toulx Ste Croi**	**106.62**	**322**	*e*PP	PP	17 12 20.4	-4.6
	comp=Z,88nm,1.6s						
SFJD	**Kangerlussuaq**	**106.86**	**358**	*i* P	PP	17 12 26.7	+0.3
SFJD				*i* S		17 19 52.8	
SFJD				*i*		17 27 45.4	
	comp=Z,3µm,21.0s						
SNAA	**Sanae**	**106.92**	**195**	⇑*i*P	PP	17 12 17.0	-10
FLN	**La Foliniere**	**106.98**	**325**	*e*PP	PP	17 12 20.9	-6.9
	comp=Z,153nm,1.5s						
NVAR	**Mina Array Bea**	**107.20**	**47**	Pdiff	Pdif	17 07 60.0	+0.8
	comp=Z,1.0nm,0.8s,baz=277,slow=2.7,SNR=7.8						
NVAR				PP	PP	17 12 19.4	-10
	comp=Z,1.6nm,1.0s,baz=270,slow=5.4,SNR=2.8						
NVAR				PKKPbc		17 23 25.2	
	comp=Z,1.4nm,1.0s,baz=116,slow=4.0,SNR=6.5						
NVAR				PKKP	PKKP	17 23 36.2	+6.4
	comp=Z,0.3nm,0.5s,baz=127,slow=5.5,SNR=4.0						
NVAR	**Mina Array Bea**	**107.20**	**47**	Pdif	Pdif	17 07 60.0	+0.8
NVAR				PP	PP	17 12 19.4	-10
NVAR				PKKPbc		17 23 25.2	
NVAR				PKKP	PKKP	17 23 36.2	+6.4
VNA2	**Neumayer--Watz**	**108.54**	**195**	⇑*i*P	PP	17 12 47.6	+8.8
VNA3	**Neumayer Olymp**	**108.92**	**194**	⇑*i*P	PP	17 12 49.7	+7.9
QUIF	**Quistinic**	**108.95**	**325**	*e*PP	PP	17 12 37.2	-5.4
	comp=Z,236nm,1.6s						
LAO	**LASA Array**	**111.06**	**35**	*e*PKiKP		17 12 17.7	
PDAR	**Pinedale Array**	**111.20**	**39**	Pdiff	Pdif	17 08 17.6	+0.9
	comp=Z,0.8nm,1.0s,baz=326,slow=5.3,SNR=3.9						
PDAR				PKiKP		17 12 17.3	
	comp=Z,0.7nm,0.8s,baz=297,slow=4.0,SNR=3.3						
PDAR				PP	PP	17 12 54.0	-4.5
	comp=Z,1.0nm,0.8s,baz=315,slow=2.1,SNR=3.0						
PDAR				PS	PS	17 22 23.7	-1.3
	comp=Z,0.4nm,0.9s,baz=67,slow=11,SNR=2.4						
PDAR				PKKPbc		17 23 10.8	
	comp=Z,0.9nm,0.8s,baz=135,slow=4.2,SNR=4.8						
PDAR				PKKPab		17 23 21.5	
	comp=Z,3.3nm,1.0s,baz=117,slow=3.3,SNR=9.2						
PDAR				PKKP	PKKP	17 23 30.8	+8.4
	comp=Z,4.2nm,0.9s,baz=135,slow=4.2,SNR=9.3						
PDAR	**Pinedale Array**	**111.20**	**39**	Pdif	Pdif	17 08 17.6	+0.9
PDAR				PKPdf	PKPdf	17 12 17.3	+3.0
PDAR				PP	PP	17 12 54.0	-4.5
PDAR				PS	PS	17 22 23.7	-1.3
PDAR				PKKPbc		17 23 10.8	
PDAR				PKKPab		17 23 21.5	
PDAR				PKKP	PKKP	17 23 30.8	+8.4
RSSD	**Black Hills**	**113.81**	**36**	*e*PKiKP		17 12 21.7	
ESDC	**Sonseca Array**	**113.83**	**318**	PP	PP	17 13 18.5	+0.5
	comp=Z,0.4nm,0.4s,baz=68,slow=6.9,SNR=3.9						
ESDC				PS	PS	17 22 46.0	-3.7
	comp=Z,0.2nm,0.3s,baz=317,slow=28,SNR=2.7						
ULM	**Lac du Bonnet**	**114.01**	**27**	Pdiff	Pdif	17 08 29.9	+1.0
	comp=Z,0.9nm,0.8s,baz=51,slow=9.3,SNR=2.5						
ULM				PKiKP		17 12 19.7	
	comp=Z,5.8nm,1.1s,baz=324,slow=2.5,SNR=5.1						
ULM				PP	PP	17 13 15.8	-3.3
	comp=Z,3.5nm,1.0s,baz=288,slow=0.8,SNR=2.3						
ULM				PS	PS	17 22 47.5	-3.6
	comp=Z,2.0nm,1.1s,baz=282,slow=19,SNR=1.6						
ULM				PKKPab		17 23 08.9	
	comp=Z,3.6nm,1.0s,baz=102,slow=5.1,SNR=3.6						
ULM				SS	SS	17 28 58.4	-4.4
	comp=Z,1.4nm,0.8s,baz=344,slow=20,SNR=1.6						
ULM	**Lac du Bonnet**	**114.01**	**27**	Pdif	Pdif	17 08 29.9	+1.0
ULM				PKPdf	PKPdf	17 12 19.7	+0.1
ULM				PP	PP	17 13 15.8	-3.3
ULM				PS	PS	17 22 47.5	-3.6
ULM				PKKPab		17 23 08.9	
ULM				SS	SS	17 28 58.4	-4.4
ISCO	**Idaho Springs**	**115.29**	**40**	PKPdf	PKPdf	17 12 27.4	+5.0
EVO	**Evora**	**117.09**	**319**	*e*P	PKPdf	17 12 26.4	+0.5
ANMO	**Albuquerque**	**117.26**	**45**	PKP	PKPdf	17 12 27.4	+1.1
	comp=Z,1.3nm,0.6s,baz=80,slow=4.9,SNR=4.5						
ANMO				PP	PP	17 13 41.0	-1.2
	comp=Z,1.6nm,0.7s,baz=329,slow=11,SNR=2.4						
ANMO				PS	PS	17 23 15.4	-6.4
	comp=Z,0.7nm,0.4s,baz=260,slow=16,SNR=2.2						
ANMO	**Albuquerque**	**117.26**	**45**	PKP	PKPdf	17 12 27.4	+1.1
ANMO				PP	PP	17 13 41.0	-1.2
ANMO				PS	PS	17 23 15.4	-6.4
BNM	**Barren Site**	**117.54**	**46**	*e*PKPdf	PKPdf	17 12 32.5	+5.7
SCHQ	**Schefferville**	**118.49**	**7**	PKP	PKPdf	17 12 27.4	-0.8
	comp=Z,7.5nm,0.8s,baz=348,slow=2.9,SNR=9.8						
SCHQ				PP	PP	17 13 39.5	-11
	comp=Z,2.0nm,0.7s,baz=199,slow=17,SNR=1.6						
SCHQ	**Schefferville**	**118.49**	**7**	PKP	PKPdf	17 12 27.4	-0.8
SCHQ				PP	PP	17 13 39.5	-11
TORD	**Torodi Ar. Bea**	**119.59**	**289**	PKP	PKPdf	17 12 31.9	+0.7
	comp=Z,11nm,1.0s,baz=42,slow=1.3,SNR=34						
TORD				PP	PP	17 13 54.9	-3.4
	comp=Z,3.6nm,0.9s,baz=68,slow=7.8,SNR=2.6						
TORD				PKKPab		17 22 45.2	
	comp=Z,2.8nm,1.1s,baz=288,slow=3.3,SNR=8.4						
TORD				PS	PS	17 23 42.6	-0.5
	comp=Z,1.4nm,1.1s,baz=284,slow=4.1,SNR=2.3						
KSU1	**Kansas State U**	**121.28**	**36**	*e*PKPdf	PKPdf	17 12 35.9	+1.9
TXAR	**Lajitas Array**	**122.12**	**50**	PKP	PKPdf	17 12 36.7	+0.8
	comp=Z,0.8nm,0.4s,baz=270,slow=2.5,SNR=8.0						
TXAR				PP	PP	17 14 10.9	-4.4
	comp=Z,1.5nm,0.8s,baz=243,slow=2.8,SNR=3.1						
TXAR				PKKPbc		17 22 33.8	
	comp=Z,2.3nm,0.8s,baz=129,slow=8.0,SNR=7.3						
TXAR				PS	PS	17 24 09.0	+3.4
	comp=Z,0.4nm,0.3s,baz=140,slow=43,SNR=3.2						
TXAR	**Lajitas Array**	**122.12**	**50**	PKIKP	PKPdf	17 12 36.7	+0.9
TXAR						17 14 10.9	
TXAR				PS	PS	17 24 09.0	+3.4
WMOK	**Wichita Mounta**	**122.65**	**42**	*e*PKPdf	PKPdf	17 12 39.0	+2.2
WMOK				*e*		17 12 48.4	
CCM	**Cathedral Cave**	**125.07**	**34**	*e*PKPdf	PKPdf	17 12 42.4	+1.0
CCM				*e*		17 12 52.4	
RPN	**Rapa Nui**	**125.27**	**119**	PP	PP	17 14 30.0	-6.5
	comp=Z,19nm,0.5s,baz=342,slow=8.8,SNR=4.1						
FVM	**French Village**	**125.57**	**33**	*e*PKPdf	PKPdf	17 12 43.9	+1.6
MIAR	**Mount Ida**	**126.11**	**39**	*e*PKPdf	PKPdf	17 12 46.1	+2.6
LOZ	**Lake Ozonia**	**126.69**	**17**	*e*PKPdf	PKPdf	17 12 44.9	+0.5
FRNY	**Flat Rock**	**126.76**	**16**	*e*PKPdf	PKPdf	17 12 46.0	+1.6
NCB	**Newcomb**	**127.38**	**17**	*e*PKPdf	PKPdf	17 12 47.2	+1.5
DBIC	**Dimbokro**	**127.42**	**283**	PKP	PKPdf	17 12 47.8	+1.2
	comp=Z,22nm,1.0s,baz=60,slow=2.9,SNR=14						
DBIC				PP	PP	17 14 44.8	-6.1
	comp=Z,3.3nm,0.8s,baz=212,slow=2.0,SNR=2.2						
DBIC	**Dimbokro**	**127.42**	**283**	*e*PKPdf	PKPdf	17 12 47.9	+1.4
DBIC				*e*		17 12 58.9	
MIV	**Mineville/With**	**127.48**	**16**	*e*PKPdf	PKPdf	17 12 47.9	+2.0
ACSO	**Alum Creek Sta**	**127.50**	**26**	*e*PKPdf	PKPdf	17 12 46.1	+0.1
MDV	**Middlebury**	**127.64**	**16**	*e*PKPdf	PKPdf	17 12 47.6	+1.4
LIC	**Lamto**	**127.69**	**283**	*e*PKIKP	PKPdf	17 12 47.5	+0.4
	comp=Z,141nm,1.2s						
HNH	**Hanover**	**128.15**	**15**	*e*PKPdf	PKPdf	17 12 50.0	+2.8
WVT	**Waverly**	**128.34**	**33**	*e*PKPdf	PKPdf	17 12 49.0	+1.2
OXF	**Oxford**	**128.63**	**36**	*e*PKPdf	PKPdf	17 12 50.3	+1.9
OXF	**Oxford**	**128.63**	**36**	PKIKP	PKPdf	17 12 49.2	+0.9
SWET	**Sewanee**	**130.04**	**32**	*e*PKPdf	PKPdf	17 12 51.7	+0.7
TZTN	**Tazewell**	**130.22**	**29**	*e*PKPdf	PKPdf	17 12 53.9	+2.6
MVL	**Millersville**	**130.31**	**21**	*e*PKPdf	PKPdf	17 12 53.8	+2.4
FWV	**Forest Hill**	**130.64**	**26**	*e*PKPdf	PKPdf	17 12 54.2	+2.1
JSC	**Jenkinsville**	**133.15**	**29**	PKIKP	PKPdf	17 12 59.0	+2.1
PLCA	**Paso Flores**	**143.24**	**161**	PKhKP		17 13 13.6	
	comp=Z,12nm,0.9s,baz=202,slow=5.0,SNR=13						
PLCA				PP	PP	17 16 19.4	-10
	comp=Z,3.5nm,1.0s,baz=214,slow=3.6,SNR=1.5						
PLCA	**Paso Flores**	**143.24**	**161**	*e*PKPpre		17 13 13.2	
PAYG	**Puerto Ayora**	**145.31**	**82**	*e*PKPdf	PKPdf	17 13 23.6	+4.2
CCHI	**Chillan**	**146.36**	**156**	⇑*i*P	PKPdf	17 13 24.1	+3.6
HLGC	**Holguin**	**146.60**	**36**	*e*P	PKPdf	17 13 25.2	+3.9
LMGC	**Las Mercedes**	**146.67**	**38**	*e*P	PKPdf	17 13 26.0	+4.5
JTS	**JuntasAbangare**	**146.79**	**61**	*e*PKPdf	PKPdf	17 13 24.0	+2.1
MOAC	**Moa**	**147.41**	**34**	*e*P	PKPdf	17 13 23.6	+0.9
TRQA	**Tornquist**	**147.84**	**171**	*e*PKPbc	PKPdf	17 13 27.1	+4.2
MASC	**Masc**	**148.20**	**34**	*e*P	PKPdf	17 13 25.6	+1.7
PEL	**Peldehue**	**149.92**	**155**	⇓*i*P	PKPdf	17 13 27.8	+1.4
FCH	**Farellones**	**149.93**	**156**	⇑*i*P	PKPdf	17 13 28.4	+2.0
LPA	**La Plata**	**151.40**	**177**	*de*PKP	PKPdf	17 13 27.0	-1.5

LPA				epPKP		17 13 48.0	
LPA				ePP	PP	17 17 17.0	-0.4
	comp=Z,3μm,20.0s						
MTP	Monte Pirata	154.05	21	ePKPbc	PKPdf	17 13 41.9	+9.2
OTAV	Otavalo	156.65	75	ePKPdf	PKPdf	17 13 39.4	+3.0
NNA	Nana	158.61	107	PKPdf	PKPdf	17 13 41.8	+3.0
ROSC	El Rosal	158.61	59	PKP	PKPdf	17 13 40.3	+1.4
	comp=Z,6.2nm,0.5s,baz=98,slow=21,SNR=11						
ROSC				PP	PP	17 17 55.9	-2.2
	comp=Z,4.6nm,0.3s,baz=277,slow=7.9,SNR=2.6						
SDV	Santo Domingo	159.04	44	ePKPdf	PKPdf	17 13 40.1	+0.8
CAM4	Nova Friburgo	159.40	218	(P)	PKPdf	17 13 42.7	+3.2
CAM4				i		17 14 34.2	
CPUP	Villa Florida	159.96	176	ePKPdf	PKPdf	17 13 42.5	+2.4
ARE	Arequipa	161.70	125	eP	PKPdf	17 13 46.0	+4.0
LPAZ	La Paz	164.44	131	PKP	PKPdf	17 13 47.1	+2.4
	comp=Z,3.9nm,0.9s,baz=21,slow=2.5,SNR=24						
LPAZ				PP	PP	17 18 28.2	-0.8
	comp=Z,1.7nm,0.9s,baz=266,slow=6.9,SNR=1.3						
LPAZ	La Paz	164.44	131	ePKPdf	PKPdf	17 13 47.8	+3.0
BDFB	Brasilia	167.82	219	PKP	PKPdf	17 13 48.9	+1.5
	comp=Z,11nm,1.0s,baz=2.1,slow=5.2,SNR=7.3						
BDFB				PP	PP	17 18 44.3	-1.7
	comp=Z,2.0nm,0.4s,baz=127,slow=7.3,SNR=2.8						
SAML	Samuel	172.35	111	ePKPdf	PKPdf	17 13 51.5	+1.3

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*MAN **30** 17:14:05.4, 5.96N×123.71E, h1^{km}, mb5.0, ML3.9, MS4.0*
MAN INTENSITY II - COTABATO CITY.
*NEIC **30** 17:14:10.3±0.4, 6.24N×124.01E, h10^{km}, mb4.3/5, Error ellipse: s-maj=14.8km s-min=8.1km az=62.0*
NEIC Felt [II PIVS] at Cotabato.
*IDC **30** 17:14:20.0±10.0, 6.29N×124.06E, h94^{km}±98^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.7/20, mbtmp4.1/8, Error ellipse: s-maj=53.7km s-min=15.5km az=67.0*
ISC 30 17:14:11.1±1.8**, 6.22N**±0.04×**123.74E**±0.04**, h29**^{km}±14^{km}**,**
n41, σ1^{s}29/50**, mb4.2**/13**, 6C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	1.12	27	⇓iP	Pn	17 14 28.8	-2.2
CTBH				i S	Sn	17 14 41.0	-4.5
GSPH	General Santos	1.21	96	i P	Pn	17 14 35.0	+2.7
KCP	Kidapawan	1.56	60	⇑eP	Pn	17 14 38.0	+0.8
KCP				i S	Sn	17 14 57.8	+1.2
PAGZ	Pagadian	1.66	348	eP	Pn	17 14 38.2	-0.5
PAGZ				eS	Sn	17 14 58.0	-1.2
IPIL	Ipil	1.94	323	eP	Pn	17 14 43.7	+0.9
IPIL				eS	Sn	17 15 06.7	+0.3
DMPH	Davao City--Mi	1.96	64	⇑iP	Pn	17 14 48.0	+5.0
DMPH				i S	Sn	17 15 15.8	+9.1
DAV	Davao City (W)	2.02	65	eP	Pn	17 14 44.5	+0.7
DAV	Davao City (W)	2.02	65	eP	Pn	17 14 42.1	-1.7
BUKP	Musuan	2.11	38	eP	Pn	17 14 44.6	-0.6
BUKP				eS	Sn	17 15 10.7	0.0
DCPH	Dipolog City	2.38	351	⇑eP	Pn	17 14 49.3	+0.2
CGP	Cagayan de Oro	2.42	23	⇑eP	Pn	17 14 49.1	-0.5
CGP				eS	Sn	17 15 23.3	+4.9
MATI	Mati	2.60	74	eP	Pn	17 14 50.1	-2.1
SNPH	Sibulan	3.15	351	eP	Pn	17 15 04.5	+4.6
BUTP	Butuan	3.31	34	eP	Pn	17 15 03.2	+0.9
SCPH	Surigao	3.94	26	⇑eP	Pn	17 15 15.4	+4.2
MSLP	Maasin	4.05	16	eP	Pn	17 15 13.8	+1.1
GUIM	Jordan	4.53	346	eP	Pn	17 15 21.1	+1.6
GUIM				eS	Sn	17 16 09.1	-2.8
CUYO	Cuyo Island	5.33	330	eP	Pn	17 15 30.9	0.0
BATP	Bataraza	6.42	294	eP	Pn	17 15 44.7	-1.5
ENPP	El Nido	6.54	320	eP	Pn	17 15 47.4	-0.5
ENPP				eS	Sn	17 16 57.5	-4.8
FITZ	Fitzroy Crossi	24.24	176	⇓iP	P	17 19 28.4	+1.5
	7.5nm,1.8s,mb3.8						
FITZ	Fitzroy Crossi	24.24	176	P	P	17 19 28.5	+1.7
	4.1nm,0.5s,mb4.2,baz=5.5,slow=6.8,SNR=16						
WRAB	Tennant Creek	28.00	158	eP	P	17 20 00.1	-1.7
WRA	Warramunga Arr	28.01	158	P	P	17 20 00.7	-1.2
	2.7nm,0.7s,mb4.0,baz=335,slow=10,SNR=35						
WB2	Warramunga Arr	28.01	158	eP	P	17 20 00.8	-1.1
CTAO	Charters Tower	34.26	140	eP	P	17 20 55.4	-1.6
JIRN	Jiri	41.51	305	eP	P	17 22 01.3	+3.6
	3.2nm,0.4s,mb4.3						
STKA	Stephens Creek	41.53	157	⇑iP	P	17 21 58.6	+0.7
	5.0nm,0.9s,mb4.1						
STKA	Stephens Creek	41.53	157	P	P	17 21 58.7	+0.9
	8.8nm,0.7s,mb4.5,baz=321,slow=9.2,SNR=16						
GUN	Gumba	41.86	306	eP	P	17 22 03.7	+3.1
	16nm,0.8s,mb4.7						
GKN	Gorkha	42.91	305	eP	P	17 22 12.9	+3.7
KOLN	Koldanda	43.67	304	eP	P	17 22 18.0	+2.7
	6.7nm,0.7s,mb4.5						
ULN	Ulaanbaatar	43.88	344	eP	P	17 22 17.9	+1.1
	235nm,3.1s						
SONM	Songino Array	44.04	343	P	P	17 22 19.3	+1.2
	1.2nm,0.8s,mb3.7,baz=161,slow=8.4,SNR=8.0						
MKAR	Makanchi Array	53.83	326	P	P	17 23 34.4	+0.7
	1.2nm,0.6s,mb4.0,baz=127,slow=7.6,SNR=24						
KURK	Kurchatov	58.06	328	eP	P	17 24 03.2	-0.8
	5.7nm,0.9s,mb4.6						
BVAR	Borovoye Array	63.63	327	P	P	17 24 41.2	-0.5
	1.4nm,0.8s,mb4.1,baz=117,slow=9.9,SNR=4.1						
BRVK	Borovoye	63.70	327	eP	P	17 24 42.1	0.0
AKTO	Aktyubinsk	69.87	322	P	P	17 25 20.9	-0.4
	1.5nm,0.9s,mb3.9,baz=105,slow=7.9,SNR=4.5						
ILAR	Eielson Array	84.15	26	P	P	17 26 39.1	-1.4
	1.5nm,0.7s,mb4.2,baz=236,slow=4.9,SNR=17						
VNDA	Vanda	86.26	172	P	P	17 26 51.3	+0.5
	1.4nm,1.0s,mb4.2,baz=307,slow=5.5,SNR=4.5						

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*MAN **30** 17:18:53.0, 6.05N×123.77E, h16^{km}, mb5.2, ML4.1, MS4.5*
MAN INTENSITY II - COTABATO CITY.
*BJI **30** 17:18:54.7, 6.30N×124.20E, h10^{km}, mb4.6*
*NEIC **30** 17:18:54.7±0.3, 6.34N×124.22E, h10^{km}, mb4.6/11, Error ellipse: s-maj=10.7km s-min=6.1km az=58.0*
NEIC Felt [II PIVS] at Cotabato.
*MOS **30** 17:18:56.3±0.9, 6.32N×124.20E, h33^{km}, mb4.8/8, Error ellipse: s-maj=19.4km s-min=8.7km az=121.9*
*IDC **30** 17:19:03.2±6.3, 6.32N×124.16E, h81^{km}±59^{km}, mb4.0/16, mb1 4.1/16, mb1mx4.1/23, mbtmp4.3/16, Error ellipse: s-maj=23.7km s-min=12.8km az=68.0*
ISC 30 17:18:57.5±0.7**, 6.29N**±0.04×**123.91E**±0.04**, h37**^{km}±7^{km}**,**
n85, σ1^{s}40/90**, mb4.4**/26**, 6C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTBH	Cotabato--PC H	0.98	20	⇓iP	P	17 19 13.6	-1.3
CTBH				i S	S	17 19 24.9	-2.9
GSPH	General Santos	1.05	101	⇑iP	P	17 19 18.0	+2.1
GSPH						17 19 34.0	
PAGZ	Pagadian	1.63	341	eP	P	17 19 23.5	-0.7
PAGZ				eS	S	17 19 43.7	-0.5
DMPH	Davao City--Mi	1.77	64	⇑iP	P	17 19 33.4	+7.1
DMPH				i S	S	17 20 05.9	+18
DAV	Davao City (W)	1.83	65	eP	P	17 19 28.8	+1.8
DAV	Davao City (W)	1.83	65	eP	P	17 19 28.0	+1.0
BUKP	Musuan	1.94	36	eP	P	17 19 29.3	+0.6
BUKP				eS	S	17 19 53.6	+1.5
IPIL	Ipil	1.99	318	eP	P	17 19 28.7	-0.7
IPIL				eS	S	17 19 51.7	-1.7
CGP	Cagayan de Oro	2.28	20	⇓eP	P	17 19 34.6	+1.0
CGP				eS	S	17 20 06.0	+5.3
DCPH	Dipolog City	2.34	346	eP	P	17 19 34.2	-0.2
MATI	Mati	2.42	74	eP	P	17 19 34.9	-0.6
SNPH	Sibulan	3.10	348	eP	P	17 19 47.0	+1.8
BUTP	Butuan	3.15	32	eP	P	17 19 47.1	+1.2
SCPH	Surigao	3.80	24	⇑eP	P	17 19 56.9	+1.7
MSLP	Maasin	3.93	14	eP	P	17 19 57.1	+0.2
LLP	Lapu-Lapu	4.00	1	eP	P	17 20 02.5	+4.6
GUIM	Jordan	4.50	343	eP	P	17 20 04.2	-0.8
GUIM				eS	S	17 20 55.0	-1.9
OCLP	Ormoc	4.78	8	eP	P	17 20 08.8	-0.2
CUYO	Cuyo Island	5.36	328	eP	P	17 20 16.0	-1.1
CUYO				eS	S	17 21 12.4	-6.0
BESP	Borongan	5.49	16	eP	P	17 20 24.2	+5.3
PPR	Puerto Princes	6.19	304	⇓eP	P	17 20 31.0	+2.2
BATP	Bataraza	6.55	293	eP	P	17 20 30.3	-3.6
ENPP	El Nido	6.59	318	eP	P	17 20 32.3	-2.2
ENPP				eS	S	17 21 42.1	-7.3
SJMP	San Jose	6.72	336	eP	P	17 20 41.2	+4.9
BUSP	Coron	6.75	327	eP	P	17 20 33.3	-3.4
BUSP				eS	S	17 21 49.3	-4.0
KSM	Kuching	14.39	251	eP	P	17 22 23.4	+2.6
FITZ	Fitzroy Crossi	24.30	176	⇑iP	P	17 24 13.0	+0.1
	11nm,1.7s,mb4.0						
FITZ	Fitzroy Crossi	24.30	176	P	P	17 24 13.1	+0.2
	4.7nm,0.4s,mb4.2,baz=8.7,slow=11,SNR=18						
PSI	Prapat	25.14	263	P	P	17 24 22.5	+1.4
	9.9nm,0.9s,mb4.4,baz=17,slow=5.6,SNR=4.8						
PSI	Prapat	25.14	263	P	P	17 24 22.5	+1.4
ENH	Enshi	27.44	332	eP	P	17 24 42.2	0.0
MBWA	Marble Bar	27.59	188	eP	P	17 24 43.1	-0.5
PMG	Port Moresby	27.93	124	P	P	17 24 43.6	-3.2
	8.4nm,1.0s,mb4.3,baz=344,slow=10,SNR=3.5						
WRAB	Tennant Creek	28.01	159	eP	P	17 24 45.2	-2.3
	22nm,1.1s,mb4.7						
WRAB	Tennant Creek	28.01	159	eP	P	17 24 45.2	-2.3
WRAB				pmax	pmax		
	comp=Z,22nm,1.1s,mb4.7						
WRA	Warramunga Arr	28.02	159	P	P	17 24 45.9	-1.6
	comp=Z,4.7nm,0.7s,mb4.2,baz=335,slow=10,SNR=36						
WB2	Warramunga Arr	28.02	159	⇑iP	P	17 24 45.6	-2.0
MJAR	Matsushiro Arr	32.83	22	P	P	17 25 27.5	-2.4
	comp=Z,1.3nm,0.7s,mb4.0,baz=212,slow=12,SNR=3.8						
CTA	Charters Tower	34.21	141	eP	P	17 25 41.0	-1.0
	comp=Z,3.8nm,0.6s,mb4.5						
CTA	Charters Tower	34.21	141	eP	P	17 25 41.0	-1.0
CTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CTAO	Charters Tower	34.21	141	eP	P	17 25 40.0	-2.0
LZH	Lanzhou	34.90	331	eP	P	17 25 50.0	+2.3
LZH				AP	pP	17 25 55.5	-2.7
LZH				XP	sP	17 25 58.5	-4.5
LZH				AMB	AMB		
	comp=Z,30nm,1.3s,mb5.1						
LZH	Lanzhou	34.90	331	eP	P	17 25 49.9	+2.2
	comp=Z,30nm,1.3s,mb5.1						
LZH				pP	pP	17 25 55.4	-2.8
LZH				sP	sP	17 25 58.6	-4.4
LZH	Lanzhou	34.90	331	eP	P	17 25 49.9	+2.2
LZH				*SP	sP	17 25 58.6	-4.4
LZH				pmax	pmax		
	comp=Z,30nm,1.3s,mb5.1						
LSA	Lhasa	38.65	311	eP	P	17 26 21.9	+2.5
GTA	Gaotai	39.48	330	eP	P	17 26 27.8	+1.7
GTA				AP	pP	17 26 32.5	-4.2
GTA				XP	sP	17 26 36.3	-5.1
STKA	Stephens Creek	41.54	157	⇑iP	P	17 26 43.3	0.0
	comp=Z,18nm,0.8s,mb4.8						
STKA	Stephens Creek	41.54	157	P	P	17 26 43.4	+0.1
	comp=Z,25nm,0.8s,mb4.9,baz=333,slow=7.8,SNR=35						
STKA	Stephens Creek	41.54	157	eP	P	17 26 43.1	-0.2
JIRN	Jiri	41.61	305	eP	P	17 26 45.7	+1.8
GUN	Gumba	41.96	305	eP	P	17 26 48.8	+2.0
	comp=Z,24nm,0.7s,mb5.0						
PKI	Pulchoki	42.21	305	eP	P	17 26 50.8	+1.9
KKN	Kakani	42.40	305	eP	P	17 26 51.9	+1.5
	comp=Z,15nm,1.0s,mb4.6						
KKN	Kakani	42.40	305	eP	P	17 26 51.9	+1.5
KKN				pmax	pmax		
	comp=Z,8.0nm,1.0s,mb4.3						
DMN	Daman	42.47	305	eP	P	17 26 53.3	+2.3
GKN	Gorkha	43.01	305	eP	P	17 26 56.3	+0.9
KOLN	Koldanda	43.77	304	eP	P	17 27 03.4	+1.8
	comp=Z,11nm,0.8s,mb4.6						
ULN	Ulaanbaatar	43.85	344	eP	P	17 27 02.5	+0.5
SONM	Songino Array	44.01	343	P	P	17 27 04.1	+0.8
	comp=Z,4.9nm,1.1s,mb4.2,baz=158,slow=7.4,SNR=14						
ZAK	Zakamensk	47.22	342	eP	P	17 27 28.0	-0.7
MKAR	Makanchi Array	53.86	326	P	P	17 28 19.4	+0.2
	comp=Z,4.0nm,0.9s,mb4.4,baz=130,slow=8.0,SNR=17						
ZAL	Zalesovo	57.05	334	P	P	17 28 41.4	-0.9
	comp=Z,1.0nm,0.5s,mb4.1,baz=332,slow=4.0,SNR=4.4						
KURK	Kurchatov	58.09	328	eP	P	17 28 48.9	-0.6
	comp=Z,6.0nm,0.8s,mb4.7						
KURK	Kurchatov	58.09	328	eP	P	17 28 48.9	-0.6
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s,mb4.7						
NVS	Novosibirsk	58.34	334	eP	P	17 28 52.3	+1.1
BVAR	Borovoye Array	63.66	327	P	P	17 29 26.7	-0.6
	comp=Z,3.2nm,1.0s,mb4.3,baz=127,slow=7.4,SNR=7.7						
BRVK	Borovoye	63.73	327	eP	P	17 29 27.0	-0.7
	comp=Z,4.8nm,1.0s,mb4.5						
BRVK	Borovoye	63.73	327	eP	P	17 29 27.0	-0.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s,mb4.5						
CHKZ	Chkalovo	63.83	328	eP	P	17 29 27.1	-1.3
	comp=Z,4.5nm,1.1s,mb4.4						
CHKZ	Chkalovo	63.83	328	eP	P	17 29 27.1	-1.3
CHKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s,mb4.4						
AKTO	Aktyubinsk	69.92	322	P	P	17 30 06.6	-0.2
	comp=Z,2.4nm,0.7s,mb4.2,baz=57,slow=4.7,SNR=9.1						
GNI	Garni	77.69	310	PFAKE		17 31 00.0	+7.6
GNI				LR	LR		
	comp=Z,4μm,21.0s						
POHA	Pohakuloa	79.03	71	PFAKE		17 31 10.0	+10
POHA				LR	LR		
	comp=Z,9μm,21.0s						
KIV	Kislovodsk	79.35	313	P	pP	17 31 10.0	-2.7
KIV				MLR	MLR		
	comp=Z,4μm,19.0s						
IMA2	Indian Mountai	81.20	24	eP	P	17 31 10.4	-0.4
MCK	McKinley	83.14	27	eP	P	17 31 19.8	-1.0
	comp=Z,9.5nm,1.1s,mb4.7						
MCK	McKinley	83.14	27	eP	P	17 31 19.8	-1.0
MCK				pmax	pmax		
	comp=Z,10.0nm,1.1s,mb4.8						
ILAR	Eielson Array	84.01	26	P	P	17 31 23.9	-1.3
	comp=Z,3.1nm,0.7s,mb4.5,baz=236,slow=5.2,SNR=32						
BRTR	Keskin Array B	86.23	309	P	P	17 31 36.6	-0.2
	comp=Z,0.3nm,0.4s,mb3.8,baz=63,slow=3.2,SNR=2.8						
VNDA	Vanda	86.32	172	P	P	17 31 35.9	-0.5
	comp=Z,1.7nm,0.8s,mb4.3,baz=318,slow=6.8,SNR=6.0						
KMBO	Kilima Mbogo	86.80	269	P	P	17 31 42.0	+1.9
	comp=Z,0.4nm,0.4s,mb4.0,baz=50,slow=5.1,SNR=4.6						
AKASG	Malin Array Be	88.14	321	P	P	17 31 44.2	-1.5
	comp=Z,0.1nm,0.3s,mb3.6,baz=73,slow=5.3,SNR=4.1						
INK	Inuvik	88.82	21	eP	P	17 31 46.9	-1.7
TORD	Torodi Ar. Bea	119.45	289	PKP	PKPdf	17 37 44.4	+0.2
	comp=Z,0.4nm,0.7s,baz=58,slow=2.1,SNR=3.7						
PLCA	Paso Flores	143.35	161	PKP	PKPdf	17 38 27.1	-1.2
	comp=Z,0.7nm,0.7s,baz=80,slow=0.7,SNR=3.4						

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*MOS **30** 17:21:02.6±2.7, 57.21N×120.59E, h5^{km}, mb4.3/1, Error ellipse: s-maj=21.2km s-min=14.3km az=138.1*
BYKL 30 17:20:59.3±0.3**, 57.40N×120.79E, h3**^{km}±16^{km}**, 1C-2D,**
Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CRS	Chara	1.46	251	ePg	Pg	17 21 25.6	-2.9
CRS				Pmax		17 21 28.8	
	184nm,1.0s						
CRS				eSg	Sg	17 21 44.2	-3.8
CRS				Smax		17 21 56.6	
	577nm,1.0s						
CRS	Chara	1.46	251	eP	Pn	17 21 26.1	-0.6
CRS				e		17 21 44.3	
CRS				pmax	pmax		
	comp=Z,172nm,0.7s						
CRS				smax			
	comp=E,422nm,0.9s						
NRGR	Nerungri	2.28	107	eP	Pn	17 21 38.9	+0.6
NRGR				S	Sn	17 22 08.4	+1.2
CLNS	Chul'man	2.31	102	ePn	Pn	17 21 39.5	+0.7
CLNS				ePg	Pg	17 21 41.3	-4.1
CLNS				ePgPg		17 21 46.0	
CLNS				max		17 21 46.2	
	comp=E,170nm,0.1s						
CLNS				eSg	Sg	17 22 11.7	-4.4
CLNS				eSgSg		17 22 17.4	
CLNS				max		17 22 18.2	
	comp=E,727nm,0.1s						
CLNS	Chul'man	2.31	102	eP	Pn	17 21 39.8	+1.0
CLNS				eS	Sn	17 22 09.9	+1.9
CLNS				pmax	pmax		
	comp=N,5.0nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,12nm,0.3s						
CLNS				pmax	pmax		
	comp=E,18nm,0.4s						
CLNS				pmax	pmax		
	comp=N,35nm,0.3s						
CLNS				pmax	pmax		
	comp=E,33nm,0.3s						
CLNS				pmax	pmax		
	comp=Z,69nm,0.3s						
CLNS				smax			
	comp=N,166nm,0.4s						
CLNS				smax			
	comp=Z,53nm,0.3s						
CLNS				smax			
	comp=E,43nm,0.2s						
CLNS				smax			
	comp=E,663nm,0.3s						
CLNS				smax			
	comp=Z,379nm,0.4s						
CLNS				smax			
	comp=N,410nm,0.3s						
CLNS				MLR	MLR		
	comp=Z,2μm,13.0s						
ALDR	Aldan	2.74	62	ePn	Pn	17 21 44.4	-0.6
ALDR				ePg	Pg	17 21 47.3	-6.7
ALDR				Pmax		17 21 56.7	
	comp=Z,164nm,0.1s						
ALDR				eSg	Sg	17 22 23.5	-7.1
ALDR				Smax		17 22 33.1	
	comp=Z,2μm,0.1s						
NLYR	Nelyaty	2.93	254	ePn	Pn	17 21 47.4	-0.3
NLYR				ePg	Pg	17 21 51.7	-6.1
NLYR				ePgPg		17 21 58.1	
NLYR				max		17 22 00.2	
	comp=Z,153nm,1.1s						
NLYR				eSg	Sg	17 22 28.8	-8.1
NLYR				e		17 22 35.4	
NLYR				max		17 22 39.9	
	comp=Z,726nm,1.0s						
NLYR	Nelyaty	2.93	254	eP	Pn	17 21 47.8	+0.1
NLYR				e		17 22 27.4	
NLYR				pmax	pmax		
	comp=Z,151nm,0.4s						
NLYR				smax			
	comp=N,725nm,1.0s						
TUP	Tupik	3.02	189	ePn	Pn	17 21 47.5	-1.4
TUP				e		17 21 49.3	
TUP				ePg	Pg	17 21 52.2	-7.4
TUP				⇓i		17 21 54.0	
TUP				max		17 21 54.9	
	comp=N,281nm,0.7s						
TUP				ePgPg		17 21 58.5	
TUP				eSg	Sg	17 22 30.7	-9.1
TUP				eSgSg		17 22 37.7	
TUP				max		17 22 38.3	
	comp=N,1μm,1.6s						
TUP	Tupik	3.02	189	eP	Pn	17 21 53.7	+4.8
TUP				e		17 22 28.7	
TUP				pmax	pmax		
	comp=Z,284nm,0.4s						
TUP				smax			
	comp=E,627nm,0.9s						
TNDR	Tynda	3.15	134	ePn	Pn	17 21 50.2	-0.5
TNDR				ePg	Pg	17 21 56.6	-5.5
TNDR				Pmax		17 21 58.0	
	comp=E,137nm,0.1s						
TNDR				e		17 22 28.5	
TNDR				eSg	Sg	17 22 36.8	-7.3
TNDR				Smax		17 22 46.2	
	comp=E,829nm,0.1s						
BOD	Bodaibo	3.67	279	ePn	Pn	17 21 57.0	-1.2
BOD				e		17 21 58.5	
BOD				ePg	Pg	17 22 06.4	-6.3
BOD				Pmax		17 22 08.8	
	comp=E,54nm,1.0s						
BOD				eSg	Sg	17 22 53.2	-8.5
BOD				Smax		17 23 01.9	
	comp=E,279nm,1.6s						
BOD	Bodaibo	3.67	279	eP	Pn	17 21 57.9	-0.3
BOD				e		17 22 51.3	
BOD				pmax	pmax		
	comp=Z,55nm,0.7s						
BOD				smax			
	comp=E,278nm,1.0s						
SVKR	Severomuysk	4.18	255	Pg	Pg	17 22 14.1	-8.7
SVKR				Pmax		17 22 19.0	
	comp=E,24nm,0.5s						
SVKR				eSg	Sg	17 23 07.3	-11
SVKR				Smax		17 23 20.0	
	comp=E,487nm,1.3s						
UKT	Uakit	4.41	247	⇑iPg	Pg	17 22 19.3	-8.1
UKT				e		17 22 24.3	
UKT				max		17 22 27.3	
	comp=E,21nm,0.8s						
UKT				eSg	Sg	17 23 16.1	-10
UKT				Smax		17 23 32.8	
	comp=E,197nm,1.7s						
UKT	Uakit	4.41	247	eP	Pn	17 22 19.4	+11
UKT				pmax	pmax		
	comp=Z,16nm,0.6s						
KROS	Kirovskiy	4.58	128	ePn	Pn	17 22 06.8	-4.2
KROS				⇓iPg	Pg	17 22 19.2	-11
KROS				Pmax		17 22 22.4	
	comp=Z,69nm,0.5s						
KROS				eSn	Sn	17 22 58.6	-6.9
KROS				i Sg	Sg	17 23 19.2	-12
KROS				Smax		17 23 23.0	
	comp=Z,400nm,0.5s						
YOA	Uoyan	5.15	260	e	Pn	17 22 35.6	+16
YOA				max		17 22 44.5	
	comp=Z,33nm,1.0s						
YOA				eSg	Sg	17 23 36.8	-14
YOA				Smax		17 23 56.8	
	comp=Z,862nm,1.4s						
YOA	Uoyan	5.15	260	eP	Pn	17 22 32.1	+13
YOA				pmax	pmax		
	comp=Z,69nm,0.8s						
KMO	Kumora	5.50	258	ePn	Pn	17 22 23.0	-1.2
KMO				ePg	Pg	17 22 38.7	-11
KMO				Pmax		17 22 51.2	
	comp=Z,13nm,0.7s						
KMO				eSg	Sg	17 23 49.8	-13
KMO				Smax		17 24 04.2	
	comp=Z,293nm,1.4s						
KMO	Kumora	5.50	258	eP	Pn	17 22 24.6	+0.4
KMO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
YLYR	Ulyunkhan	5.95	249	ePn	Pn	17 22 29.4	-1.0
YLYR				ePg	Pg	17 22 47.3	-11
YLYR				Pmax		17 23 01.7	
	comp=Z,6.0nm,0.9s						
YLYR				eSg	Sg	17 24 03.7	-14
YLYR				Smax		17 24 14.5	
	comp=Z,137nm,2.0s						
NIZ	Nizh Angarsk	6.42	260	Pg	Pg	17 22 55.3	-12
NIZ				Pmax		17 23 03.8	
	comp=Z,7.0nm,1.0s						
NIZ				eSg	Sg	17 24 18.6	-15
NIZ				Smax		17 24 29.2	
	comp=Z,128nm,1.7s						
NIZ	Nizh Angarsk	6.42	260	eP	Pn	17 22 37.8	+0.6
NIZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
YAK	Yakutsk	6.46	40	eP	Pn	17 22 54.4	+17
YAK				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YAK				pmax	pmax		
	comp=Z,15nm,0.6s						
YAK				MLR	MLR		
	comp=Z,698nm,13.0s						
CIT	Chita	6.83	221	eSg	Sg	17 24 29.9	-17
CIT				Smax		17 24 45.7	
	comp=Z,370nm,1.9s						
SYVR	Suvo	7.18	243	e	Pn	17 23 10.8	+23
SYVR				max		17 23 20.0	
	comp=Z,5.0nm,0.9s						
SYVR				eSg	Sg	17 24 41.1	-17
SYVR				Smax		17 24 54.4	
	comp=Z,150nm,1.8s						
OGRR	Ongureny	8.38	249	eSg	Sg	17 25 18.0	-20
OGRR				Smax		17 25 18.4	
	comp=Z,80nm,2.0s						
KPC	Khapcheranga	9.19	217	ePn	P	17 23 14.1	-1.6
KPC				eSg	Sg	17 25 43.0	-22
KPC				Smax		17 25 57.2	
	comp=Z,93nm,1.7s						
KPC	Khapcheranga	9.19	217	eP	P	17 23 13.2	-2.5
KPC				pmax	pmax		
	comp=Z,4.0nm,1.4s						

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*MAN **30** 17:25:59.2, 6.31N×123.69E, h55^{km}, mb4.6, ML3.5, MS3.4*

ISC 30 17:25:59.3±1.7, 6.3N±0.1×123.71E±0.06, h38^{km}±27^{km}, n10, σ1^{s}01/16, mb4.1/1, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	1.09	29	*i* P	P	17 26 16.7	-1.6
CTBH				*i* S	S	17 26 31.1	-1.2
PAGZ	Pagadian	1.60	348	*e*P	P	17 26 25.5	-0.2
PAGZ				*e*S	S	17 26 45.8	+0.4
IPIL	Ipil	1.89	323	*e*P	P	17 26 30.4	+0.7
IPIL				*e*S	S	17 26 52.8	+0.4
DMPH	Davao City--Mi	1.96	65	⇓*i*P	P	17 26 37.0	+6.2
DMPH				*i* S	S	17 27 05.2	+11
BUKP	Musuan	2.09	40	*e*P	P	17 26 32.3	-0.3
BUKP				*e*S	S	17 26 57.9	+0.3
CGP	Cagayan de Oro	2.38	24	⇓*e*P	P	17 26 38.0	+1.2
CGP				*e*S	S	17 27 10.2	+5.1
MATI	Mati	2.62	75	*e*P	P	17 26 40.8	+0.6
BUTP	Butuan	3.29	35	*e*P	P	17 26 53.3	+3.6
ENPP	El Nido	6.48	320	*e*P	P	17 27 33.3	-1.4
STKA	Stephens Creek	41.59	157	*e*P	P	17 33 45.3	-0.2
	4.9nm,0.9s,mb4.1						

JMA 30 17:26:37.6±0.1, 24.88N×125.82E, h37^{km}±1^{km}, M4.1, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	Gusukube	0.39	252	P	P	17 26 46.7	-0.1
JOGS				S	S	17 26 53.2	0.0
JMJ	Miyako jima 2	0.48	262	P	P	17 26 47.8	-0.2
JMJ				S	S	17 26 55.3	0.0
JTJ	Tarama	1.04	257	P	P	17 26 55.9	0.0
JTJ				S	S	17 27 09.5	0.0
JIJ	Ishigaki jima	1.61	252	P	P	17 27 04.8	+0.7
JIJ				*e*S	S	17 27 24.6	+0.8
JKE	Kume jima 2	1.68	31	P	P	17 27 06.0	+0.9
JKRS	Kuro-shima	1.77	249	P	P	17 27 07.2	+0.9
JKRS				*e*S	S	17 27 29.1	+1.3
IRIF	Iriomote-Funau	1.98	255	P	P	17 27 09.8	+0.5
IRIF				*e*S	S	17 27 34.1	+1.0
HATJ	Hateruma jima	2.01	246	P	P	17 27 12.5	+2.8
HATJ				*e*S	S	17 27 37.0	+3.1
JAGN	Aguni-jima	2.13	37	P	P	17 27 13.8	+2.3
JAGN				*e*S	S	17 27 39.1	+2.2
NAH1	Naha	2.14	52	P	P	17 27 17.6	+6.0
JJT2	Tamagusuku 2	2.15	54	P	P	17 27 18.0	+6.3
YOJ	Yonaguni jima	2.59	261	P	P	17 27 18.3	+0.3
JIH	Iheya	2.89	42	P	P	17 27 24.6	+2.3
JOW	Kunigami	2.94	48	P	P	17 27 23.9	+0.8
JTK	Tokunoshima	4.03	43	P	P	17 27 37.9	-0.6
JAM	Amami Oshima	4.88	43	P	P	17 27 49.4	-1.2
JMZ	Minamidaito 2	4.97	78	P	P	17 27 48.5	-3.4
JMZ				*e*S	S	17 28 41.6	-7.4

MAN 30 17:32:00.2, 6.79N×123.74E, h1^{km}, mb3.9, ML2.7, MS2.3, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.66	49	*i* P	Pg	17 32 12.8	-0.5
CTBH				*i* S	Sg	17 32 25.4	+3.3
PAGZ	Pagadian	1.11	341	*e*P	Pb	17 32 22.8	+0.9
PAGZ				*e*S	Sb	17 32 45.7	+9.0
IPIL	Ipil	1.53	311	*e*P	Pn	17 32 28.4	-0.3
IPIL				*e*S	Sb	17 32 51.8	+2.9
BUKP	Musuan	1.70	50	*e*P	Pn	17 32 28.6	-2.5
BUKP				*e*S	Sb	17 32 52.9	-0.8
DMPH	Davao City--Mi	1.77	80	⇓*i*P	Pn	17 32 32.5	+0.2
DMPH				*i* S	Sn	17 32 55.9	+0.1

*IDC **30** 17:34:15.7±1.2, 34.61N×72.99E, mb3.7/5, mb1 3.9/7, mb1mx3.6/21, mbtmp3.7/7, Error ellipse: s-maj=37.4km s-min=27.0km az=64.0*
*NDI **30** 17:34:19.0±4.5, 34.59N×72.80E, h10^{km}, ML3.2*
*NNC **30** 17:34:24.8±16.0, 35.11N×74.05E, h94^{km}±162^{km}, mpv3.9, Error ellipse: s-maj=385.1km s-min=147.7km az=73.0*
ISC 30 17:34:20.4±1.5, 34.83N±0.09×73.1E±0.2, h41^{km}±16^{km}, n14, σ1^{s}10/20, mb3.6/4, 4C, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.22	137	*e*P	P	17 35 11.3	+1.5
THN				*e*SB	S	17 35 55.6	+8.3
SDNR	Sundarnagar	4.62	135	*e*P	P	17 35 29.2	-0.5
SDNR				*e*S	S	17 36 23.6	+0.7
KLP	Kalpa	5.41	126	*e*P	P	17 35 39.3	-1.3
KLP				*e*S	S	17 36 41.8	-0.7
KLP				AML	AML	17 36 47.5	
	comp=N,50nm,0.5s						
KLP				AML	AML	17 36 47.9	
	comp=E,51nm,0.7s						
KHET	Khetri	7.11	161	*e*P	P	17 36 00.1	-4.5
KHET				*e*S	S	17 37 15.8	-9.2
KHET				*e*S	S	17 37 16.4	-8.5
KHET				AML	AML	17 37 22.5	
	comp=E,14nm,0.2s						
KHET				AML	AML	17 37 24.0	
	comp=N,9.9nm,0.8s						
KK31	Karatay Array	8.51	347	⇑P	P	17 36 24.2	+0.2
	comp=N,1.9nm,0.3s,baz=160,slow=12,SNR=25						
KK31				⇑S	S	17 37 58.4	-1.3
	comp=N,2.7nm,0.4s,baz=174,slow=23						
AB31	Akbulak array	17.39	330	⇑P	P	17 38 23.3	+1.9
	comp=N,0.2nm,0.4s,baz=146,slow=12,SNR=8.6						
BVAR	Borovoye Array	18.30	355	P	P	17 38 33.3	+0.6
	comp=N,0.3nm,0.3s,baz=158,slow=10.0,SNR=4.4						
AKTO	Aktyubinsk	19.09	329	⇑P	P	17 38 41.3	-0.9
	comp=N,3.3nm,2.4s						
AKTO	Aktyubinsk	19.09	329	P	P	17 38 41.6	-0.7
	comp=N,0.4nm,0.3s,baz=133,slow=10,SNR=15						
ZAL	Zalesovo	20.79	20	P	P	17 39 00.3	-0.1
	comp=N,1.4nm,0.4s,baz=273,slow=8.1,SNR=5.6						
ARCES	ARCESS Array B	43.35	338	P	P	17 42 20.0	+0.2
	comp=N,5.5nm,1.0s,mb4.3,baz=119,slow=9.3,SNR=4.6						
TORD	Torodi Ar. Bea	67.44	271	P	P	17 45 12.6	-1.6
	comp=N,0.4nm,0.5s,mb3.7,baz=52,slow=5.3,SNR=4.6						
WRA	Warramunga Arr	79.63	123	P	P	17 46 25.1	-0.4
	comp=N,0.3nm,0.6s,mb3.4,baz=324,slow=5.2,SNR=3.3						
YKA	Yellowknife Ar	82.82	4	P	P	17 46 43.2	+2.0
	comp=N,0.1nm,0.5s,mb3.1,baz=345,slow=5.6,SNR=2.7						

*NNC **30** 17:43:13.4±11.0, 35.07N×72.45E, mpv3.9, Error ellipse: s-maj=228.4km s-min=87.5km az=95.0*
ISC 30 17:43:14.1±1.4, 35.4N±0.2×74.3E±0.3, h33^{km}, n9, σ0^{s}87/11, 3C, Northwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THN	Thein Dam	3.18	158	*e*P	P	17 44 02.9	0.0
THN				*e*S	S	17 44 46.0	+5.9
KK31	Karatay Array	8.24	340	P	P	17 45 14.2	+0.1
	2.1nm,0.3s,baz=166,slow=12,SNR=50						
KK31				⇑S	S	17 46 47.0	0.0
	1.8nm,0.3s,baz=175,slow=22						
KOLN	Koldanda	10.97	131	*e*P	P	17 45 52.7	+0.9
GKN	Gorkha	11.46	127	*e*P	P	17 45 58.2	-0.2
	5.4nm,0.4s						
KKN	Kakani	12.02	126	*e*P	P	17 46 05.6	-0.4
	4.2nm,0.5s						
PKI	Pulchoki	12.26	127	*e*P	P	17 46 07.5	-1.7
	2.5nm,0.3s						
JIRN	Jiri	12.72	124	*e*P	P	17 46 16.7	+1.3
	8.3nm,0.3s						
AB31	Akbulak array	17.41	327	⇑P	P	17 47 11.2	-4.7
	0.2nm,0.4s,baz=139,slow=13,SNR=6.8						
AKTO	Aktyubinsk	19.13	327	⇑P	P	17 47 31.1	-5.8
	2.1nm,2.6s						

MAN 30 18:00:13, 6.12N×123.99E, h27^{km}, mb4.5, ML3.4, MS3.3, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.96	92	*i* P	Pn	18 00 34.0	+3.2
CTBH	Cotabato--PC H	1.13	13	*i* P	Pn	18 00 33.0	-0.2
CTBH				*i* S	Sn	18 00 47.8	-0.1
PAGZ	Pagadian	1.82	341	*e*P	Pn	18 00 42.6	-0.5
PAGZ				*e*S	Sn	18 01 03.3	-2.2
BUKP	Musuan	2.05	31	*e*P	Pn	18 00 49.0	+2.6
BUKP				*e*S	Sn	18 01 14.0	+2.6
IPIL	Ipil	2.17	320	*e*P	Pn	18 00 48.2	0.0
IPIL				*e*S	Sn	18 01 11.1	-3.4
MATI	Mati	2.40	70	*e*P	Pn	18 00 55.1	+3.7

MAN 30 18:02:54.2, 6.50N×123.85E, h1^{km}, mb3.7, ML2.5, MS2.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	Pagadian	1.41	341	*e*P	Pb	18 03 21.8	+0.8
PAGZ				*e*S	Sb	18 03 42.5	+3.0
IPIL	Ipil	1.80	315	*e*P	Pn	18 03 26.8	+0.2
IPIL				*e*S	Sn	18 03 51.3	+0.9
BUKP	Musuan	1.82	41	*e*P	Pn	18 03 28.2	+1.4
BUKP				*e*S	Sn	18 03 53.8	+2.9

*NIED **30** 18:06:00, 28.90N×142.60E, h5^{km}, Mw4.7 Best double couple: M$_0$1.13×10^{16} NP1:φ$_s$178°, δ81°, λ80°. NP2:φ$_s$45°, δ13°, λ137°.*
*IDC **30** 18:06:49.0±0.6, 28.81N×142.66E, mb4.2/14, mb1 4.4/15, mb1mx4.3/21, mbtmp4.2/15, ML4.1/1, Error ellipse: s-maj=22.2km s-min=16.1km az=92.0*
*JMA **30** 18:06:49.2±0.2, 28.88N×142.62E, h14^{km}, M4.5*
*BJI **30** 18:06:51.1, 28.80N×142.60E, h14^{km}, mB4.9, mb4.5*
*MOS **30** 18:06:51.1±1.3, 28.68N×142.58E, h33^{km}, mb4.6/8, Error ellipse: s-maj=20.5km s-min=8.4km az=113.9*
*NEIC **30** 18:06:51.1±3.8, 28.78N×142.61E, h15^{km}±23^{km}, mb4.7/12, MW4.6(NIED), Error ellipse: s-maj=9.1km s-min=7.3km az=102.0*
ISC 30 18:06:52.1±0.4, 28.90N±0.03×142.57E±0.08, h33^{km}, n77, σ1^{s}21/85, mb4.5/30, 1D, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.83	191	Pn	Pn	18 07 19.9	-2.0
	21nm,0.3s,baz=298,slow=21,SNR=7.1						
CBIJ				Sn	Sn	18 07 40.7	-3.4
	53nm,0.3s,baz=273,slow=23,SNR=5.8						
CBIJ	Chichi jima	1.83	191	P	P	18 07 20.6	-1.1
JHHJ	Haha-jima-NKT	2.29	189	P	P	18 07 27.3	-0.9
JHHJ				*e*S	S	18 07 55.0	-0.5
BSO1	Boso 1	5.89	347	P	P	18 08 18.2	-1.1
BSO3	Boso 3	6.14	344	P	P	18 08 22.4	-0.3
JOD2	Odawara 2	7.00	336	P	P	18 08 35.4	+0.6
JYN	Shimob	7.41	334	P	P	18 08 42.9	+2.4
JHU	Hanno	7.46	339	P	P	18 08 40.8	-0.6
JHU				*e*S	S	18 10 03.8	-2.0
JRY	Ryogami san	7.74	337	P	P	18 08 45.2	0.0
JRY				*e*S	S	18 10 11.3	-1.3
JHO	Hitachi	7.87	348	P	P	18 08 44.4	-2.6
JAG	Ashikaga	7.95	342	P	P	18 08 45.7	-2.4
JAG				*e*S	S	18 10 13.5	-4.3
JGK	Kuni	8.32	338	P	P	18 08 53.5	+0.2
JNG	Nsakai	8.38	334	P	P	18 08 55.0	+1.0
MJAR	Matsushiro Arr	8.46	335	Pn	P	18 08 54.7	-0.4
	2.5nm,0.3s,baz=160,slow=12,SNR=20						
MJAR				Sn	Sn	18 10 28.4	-2.2
	baz=162,slow=18,SNR=2.4						
MAJO	Matsushiro	8.46	335	*e*P	P	18 08 54.9	-0.3
	9.4nm,0.4s						
MAJO	Matsushiro	8.46	335	*e*P	P	18 08 54.9	-0.2
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.4s						
MAT	Matsushiro	8.46	335	P	P	18 08 54.9	-0.3
MAT				S	S	18 10 29.5	-1.0
MAT	Matsushiro	8.46	335	P	P	18 08 55.1	-0.1
MAT	Matsushiro	8.46	335	*e*P	P	18 08 55.0	-0.2
	comp=Z,9.6nm,0.7s						
MAT				*e*S	S	18 10 30.0	-0.5
MAT	Matsushiro	8.46	335	*e*P	P	18 08 55.0	-0.2
MAT				*e*S	S	18 10 30.0	-0.5
MAT				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JFK	Kawauchi	8.56	351	P	P	18 08 53.9	-2.7
JFT	Otama	8.79	348	P	P	18 08 57.5	-2.3
JFT				*e*S	S	18 10 31.1	-7.8
SSE	Sheshan	18.65	282	*e*P	P	18 11 13.8	+4.3
SSE				AMB	AMB		
	comp=Z,50nm,0.7s						
SSE				AMB	AMB		
	comp=Z,490nm,10.7s						
SSE	Sheshan	18.65	282	*e*P	P	18 11 13.8	+4.3
	comp=Z,53nm,0.7s						
NJ2	Nanjing	20.67	285	*e*P	P	18 11 35.3	+3.7
NJ2				AMB	AMB		
	comp=Z,10.0nm,0.9s						
HIA	Hailar	26.79	326	*e*P	P	18 12 33.5	+2.6
	comp=Z,14nm,1.0s,mb4.5						
HIA	Hailar	26.79	326	*e*P	P	18 12 33.5	+2.7
HIA				pmax	pmax		
	comp=Z,14nm,1.0s						
SONM	Songino Array	33.67	314	P	P	18 13 32.5	+0.6
	comp=Z,0.6nm,0.3s,mb3.9,baz=116,slow=8.8,SNR=7.8						
ZAK	Zakamensk	36.50	317	*e*P	P	18 13 57.6	+1.6
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s,mb3.8						
GTA	Gaotai	36.60	298	*e*P	P	18 13 58.0	+1.1
GTA				AP	pP	18 14 06.8	+0.1
GTA				XP	sP	18 14 11.3	+0.4
TIXI	Tiksi	43.46	354	*e*P	P	18 14 56.8	+3.5
ZAL	Zalesovo	48.37	318	P	P	18 15 33.8	+1.3
	comp=Z,1.1nm,0.4s,mb4.2,baz=40,slow=6.1,SNR=5.0						
WRAB	Tennant Creek	49.19	190	*e*P	P	18 15 37.5	-1.7
	comp=Z,13nm,0.8s,mb5.0						
WRAB	Tennant Creek	49.19	190	*i* P	P	18 15 35.4	-3.9
WB2	Warramunga Arr	49.20	190	*e*P	P	18 15 37.6	-1.7
WRA	Warramunga Arr	49.20	190	P	P	18 15 37.9	-1.4
	comp=Z,9.1nm,0.8s,mb4.9,baz=7.8,slow=8.6,SNR=129						
WRA	Warramunga Arr	49.20	190	*i* P	P	18 15 34.7	-4.6
WRA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JIRN	Jiri	49.26	283	*e*P	P	18 15 40.3	+0.6
	comp=Z,35nm,0.8s,mb5.5						
NVS	Novosibirsk	49.39	319	*e*P	P	18 15 39.5	-0.8
NVS				pmax	pmax		
	comp=Z,17nm,2.3s,mb4.7						
NVS				pmax	pmax		
	comp=N,9.0nm,1.8s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.8s						
GUN	Gumba	49.45	283	*e*P	P	18 15 41.8	+0.6
	comp=E,20nm,0.7s,mb5.3						
FITZ	Fitzroy Crossi	49.51	201	*e*P	P	18 15 40.8	-0.9
	comp=E,5.8nm,1.0s,mb4.6						
MKAR	Makanchi Array	49.60	308	P	P	18 15 42.9	+0.8
	comp=E,1.9nm,0.7s,mb4.3,baz=90,slow=9.6,SNR=28						
PKI	Pulchoki	49.95	283	*e*P	P	18 15 44.7	-0.3
KKN	Kakani	50.00	283	*e*P	P	18 15 45.2	-0.2
	comp=E,15nm,0.9s,mb5.0						
KKN	Kakani	50.00	283	*e*P	P	18 15 45.2	-0.2
KKN				pmax	pmax		
	comp=Z,7.0nm,0.9s,mb4.7						
DMN	Daman	50.20	283	*e*P	P	18 15 46.8	-0.1
GKN	Gorkha	50.49	284	*e*P	P	18 15 49.4	+0.3
	comp=Z,6.7nm,0.5s,mb5.0						
KOLN	Koldanda	51.44	284	*e*P	P	18 15 56.4	+0.1
KURK	Kurchatov	51.98	314	*e*P	P	18 16 00.6	+0.6
	comp=Z,15nm,1.0s,mb4.9						
KURK	Kurchatov	51.98	314	*e*P	P	18 16 01.1	+1.1
ILAR	Eielson Array	55.98	29	P	P	18 16 28.4	-0.8
	comp=Z,1.5nm,0.8s,mb4.1,baz=258,slow=5.6,SNR=14						
CHKZ	Chkalovo	56.76	317	*e*P	P	18 16 35.5	+0.5
	comp=Z,3.4nm,0.7s,mb4.5						
CHKZ	Chkalovo	56.76	317	*e*P	P	18 16 35.5	+0.5
CHKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s,mb4.4						
DAWY	Dawson	59.22	30	*e*P	P	18 16 52.5	+0.4
DAWY				*e*	pP	18 17 04.5	+2.3
STKA	Stephens Creek	60.45	181	P	P	18 17 00.5	-0.5
	comp=Z,4.8nm,1.3s,mb4.4,baz=5.6,slow=12,SNR=3.7						
INK	Inuvik	61.26	25	P	P	18 17 06.4	+0.5
	comp=Z,2.9nm,0.6s,mb4.6,baz=279,slow=6.5,SNR=17						
ARU	Arti	63.21	322	⇓*i*P	P	18 17 19.3	+0.1
ARU				*e*		18 17 50.9	
ARU				*e*PPP	PPP	18 21 18.4	+7.4
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s,mb4.6						
YKA	Yellowknife Ar	70.40	29	P	P	18 18 03.9	-0.5
	comp=Z,0.7nm,0.5s,mb3.9,baz=294,slow=6.4,SNR=6.8						
YKA	Yellowknife Ar	70.40	29	*i* P	P	18 18 04.5	+0.1
YKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
COR	Corvallis	73.07	48	P	P	18 18 20.5	-0.1
OBN	Obninsk	75.25	325	P	P	18 18 24.9	-8.1
FINES	FINESS Array B	76.48	334	P	P	18 18 41.1	+1.2
	comp=Z,3.0nm,0.9s,mb4.2,baz=45,slow=3.9,SNR=4.8						
NVAR	Mina Array Bea	79.14	52	P	P	18 18 56.6	+1.5
	comp=Z,1.2nm,0.9s,mb3.8,baz=276,slow=5.2,SNR=7.6						
MIB	Mutribah	80.31	299	*e*P	P	18 19 03.0	+1.4
MIB				AMb	AMB	18 19 03.8	
	comp=Z,24nm,0.6s,mb5.3						
KBD	Kabd	80.33	298	*e*P	P	18 19 03.2	+1.5
RDF	Al-Radifah	80.55	298	*e*P	P	18 19 04.2	+1.4
RDF				AMb	AMB	18 19 05.1	
	comp=Z,18nm,0.6s,mb5.2						
NAY	Al-Naaiem	80.64	298	*e*P	P	18 19 04.8	+1.4
NAY				AMb	AMB	18 19 08.0	
	comp=Z,14nm,0.7s,mb5.0						
AKASG	Malin Array Be	81.36	324	P	P	18 19 07.5	+0.8
	comp=Z,0.7nm,0.5s,mb3.8,baz=51,slow=5.7,SNR=3.6						
NB2	NORSAR Subarra	82.06	338	P	P	18 19 11.0	+0.9
	comp=Z,1.0nm,0.7s,mb3.9,baz=40,slow=5.0						
NOA	NORSAR Array B	82.06	338	P	P	18 19 11.1	+1.0
	comp=Z,1.1nm,0.6s,mb4.0,baz=41,slow=5.1,SNR=4.6						
NAO	NORSAR Subarra	82.35	338	P	P	18 19 11.0	-0.6
	comp=Z,1.0nm,0.7s,mb3.9						
NAO	NORSAR Subarra	82.35	338	P	P	18 19 11.0	-0.6
NAO				pmax	pmax		
	comp=Z,1.0nm,0.7s,mb3.9						
PDAR	Pinedale Array	82.70	45	P	P	18 19 14.6	+0.9
	comp=Z,0.6nm,0.7s,mb3.7,baz=270,slow=0.9,SNR=4.6						
BR131	Keskin Array S	85.03	313	*e*P	P	18 19 27.5	+1.9
	comp=Z,1.5nm,0.6s,mb4.3						
BRTR	Keskin Array B	85.03	313	P	P	18 19 28.2	+2.7
	comp=Z,1.7nm,0.7s,mb4.3,baz=104,slow=3.9,SNR=11						
TORD	Torodi Ar. Bea	123.64	312	PKP	PKPdf	18 25 49.8	+2.7
	comp=Z,0.3nm,0.7s,baz=0.8,slow=2.3,SNR=3.7						
LPAZ	La Paz	149.10	73	PKPbc	PKPdf	18 26 41.1	+7.8
	comp=Z,2.4nm,0.8s,baz=288,slow=4.1,SNR=11						

*IDC **30** 18:21:53.8±0.9, 35.98N×139.26E, h77^{km}±9^{km}, mb3.4/8, mb1 3.6/11, mb1mx3.5/24, mbtmp3.8/11, Error ellipse: s-maj=20.7km s-min=8.0km az=69.0*
*JMA **30** 18:21:53.8±0.1, 36.08N×139.42E, h65^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1:φ$_s$41°, δ65°, λ-13°. NP2:φ$_s$137°, δ78°, λ-155°. Principal axes: T Plg9°, Azm267°; N Plg62°, Azm159°; P Plg26°, Azm1°;*
JMA Felt I J1.
*NEIC **30** 18:21:54.7±1.2, 36.08N×139.21E, h81^{km}±8^{km}, mb3.9/2 Error ellipse: s-maj=18.2km s-min=13.1km az=123.0*
NEIC Recorded [1 JMA] in Saitama and Tochigi Prefectures.
ISC 30 18:21:52.2±0.4, 36.05N±0.03×139.40E±0.07, h78^{km}±3^{km}, n26, σ0^{s}65/37, mb3.6/10, 1C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHU	Hanno	0.22	206	⇓P	P	18 22 04.4	+0.6
JHU				S	S	18 22 11.9	-0.5
JAG	Ashikaga	0.38	6	P	P	18 22 05.2	+0.4
JAG				S	S	18 22 13.1	-1.1
JRY	Ryogami san	0.41	266	⇑P	P	18 22 05.4	+0.4
JRY				S	S	18 22 13.8	-0.8
JKT	Katashina	0.73	350	⇓P	P	18 22 08.6	+0.4
JKT				S	S	18 22 19.6	-0.4
JOD2	Odawara 2	0.82	198	⇓P	P	18 22 09.4	+0.2
JOD2				S	S	18 22 21.4	-0.5
JYN	Shimob	0.89	232	P	P	18 22 11.1	+1.2
JYN				S	S	18 22 23.9	+0.7
MJAR	Matsushiro Arr	1.08	297	P	P	18 22 12.4	+0.1
	76nm,0.3s,baz=89,slow=8.9,SNR=142						
MJAR				S	S	18 22 27.0	-0.5
	58nm,0.3s,baz=130,slow=13,SNR=27						
MAT	Matsushiro	1.08	297	P	P	18 22 13.0	+0.6
MAT				S	S	18 22 27.6	+0.1
MAT	Matsushiro	1.08	297	*e*P	P	18 22 13.0	+0.6
MAT				*e*S	S	18 22 28.0	+0.5
JHK	Hiroka	1.24	346	⇓P	P	18 22 15.0	+0.6
JHK				S	S	18 22 31.5	+0.5
JIM2	Oshima 3	1.33	179	P	P	18 22 15.7	0.0
JHJ	Hachijo jima 2	2.94	174	P	P	18 22 38.5	+0.8
	219nm,0.3s,baz=264,slow=22,SNR=40						
JHJ				S	S	18 23 11.4	-0.5
	137nm,0.3s,baz=96,slow=22,SNR=7.0						
JNU	Nakatsue	7.61	250	P	P	18 23 42.2	-0.2
	0.6nm,0.3s,baz=135,slow=28,SNR=5.4						
ASAJ	Asahikawa	8.42	16	P	P	18 23 52.5	-1.0
	0.6nm,0.3s,baz=228,slow=30,SNR=4.2						
MKAR	Makanchi Array	43.28	303	P	P	18 29 46.8	-0.7
	0.1nm,0.6s,mb2.7,baz=82,slow=12,SNR=3.0						
MKAR	Makanchi Array	43.28	303	P	P	18 29 46.8	-0.8
KURK	Kurchatov	45.27	309	*e*P	P	18 30 03.2	-0.3
	1.7nm,0.8s,mb3.8						
CHKZ	Chkalovo	49.81	313	*e*P	P	18 30 37.6	-1.2
	1.5nm,1.2s,mb3.8						
ILAR	Eielson Array	51.19	32	P	P	18 30 49.8	+0.6
	1.0nm,0.6s,mb4.0,baz=270,slow=5.1,SNR=21						
WRA	Warramunga Arr	55.89	186	P	P	18 31 23.4	-1.0
	0.3nm,0.5s,mb3.5,baz=360,slow=7.5,SNR=9.0						
INK	Inuvik	56.00	27	P	P	18 31 24.9	+0.4
	1.0nm,0.7s,mb4.0,baz=284,slow=4.2,SNR=3.7						
INK	Inuvik	56.00	27	P	P	18 31 24.9	+0.4
YKA	Yellowknife Ar	65.47	29	P	P	18 32 29.9	+1.2
	0.2nm,0.5s,mb3.2,baz=305,slow=4.4,SNR=3.1						
AKASG	Malin Array Be	74.08	322	P	P	18 33 20.8	-0.4
	1.2nm,0.7s,mb3.7,baz=50,slow=5.9,SNR=6.5						
NOA	NORSAR Array B	74.46	337	P	P	18 33 23.1	-0.1
	0.8nm,0.6s,mb3.6,baz=41,slow=5.9,SNR=3.3						
GERES	GERESS Array B	82.68	327	P	P	18 34 08.6	+0.3
	0.3nm,0.5s,mb3.4,baz=14,slow=8.1,SNR=3.1						

MAN 30 18:33:17.7, 6.99N×123.87E, h159^{km}, mb3.6, ML2.3, MS1.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.44	59	⇑*i*P	P	18 33 32.7	-7.5
CTBH				*i* S	S	18 33 45.5	-12
PAGZ	Pagadian	0.98	330	*e*P	P	18 33 43.7	+0.4
PAGZ				*e*S	S	18 34 02.9	0.0
BUKP	Musuan	1.48	53	*e*P	P	18 33 47.7	-0.3
BUKP				*e*S	S	18 34 12.4	+1.0
IPIL	Ipil	1.51	302	*e*P	P	18 33 49.0	+0.7
IPIL				*e*S	S	18 34 13.0	+0.9
MSLP	Maasin	3.27	17	*e*P	P	18 34 09.2	-0.4

MAN 30 18:34:28.1, 6.40N×123.84E, h30^{km}, mb4.3, ML3.2, MS3.0, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.91	26	⇑*i*P	Pn	18 34 44.7	-0.1
CTBH				*i* S	Sb	18 34 57.3	+0.4
PAGZ	Pagadian	1.50	342	*e*P	Pn	18 34 53.3	-0.1
PAGZ				*e*S	Sn	18 35 19.1	+6.9
IPIL	Ipil	1.86	318	*e*P	Pn	18 34 58.5	-0.1
IPIL				*e*S	Sn	18 35 21.6	+0.3
BUKP	Musuan	1.90	40	*e*P	Pn	18 34 58.9	-0.2
BUKP				*e*S	Sn	18 35 23.5	+1.2

*IGQ **30** 19:03:47.1, 3.00S×75.56W, h26^{km}±17^{km}, mb4.7, Error ellipse: s-maj=15.3km s-min=8.2km az=45.2*
*NEIC **30** 19:03:48.4±1.0, 3.06S×75.44W, h151^{km}±11^{km}, mb4.3/1, Error ellipse: s-maj=17.0km s-min=8.8km az=62.0*
*IDC **30** 19:03:48.3±1.0, 2.86S×75.31W, h143^{km}±8^{km}, mb3.6/9, mb1 3.8/13, mb1mx3.7/23, mbtmp4.1/13, Error ellipse: s-maj=33.4km s-min=14.5km az=41.0*
ISC 30 19:03:47.0±0.6, 3.06S±0.07×75.50W±0.08, h154^{km}±8^{km}, n56, σ1^{s}02/47, mb3.8/9, 13C-2D, Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PATA	Patacocha	3.31	298	P	P	19 04 38.9	-0.3
PATA				S	S	19 05 15.3	-4.0
ULBA	Ulba	3.31	299	⇑P	P	19 04 38.4	-0.8
ARRY	Arrayan	3.33	298	⇓P	P	19 04 38.5	-1.0
RUN5	Runtun	3.34	299	⇑P	P	19 04 38.8	-0.9
JUIV	Juive	3.38	299	⇑P	P	19 04 39.2	-0.9
JUIV				S	S	19 05 15.5	-5.3

CUSU	Cusua	3.38	298	⇓P	P	19 04 39.6	-0.6
CUSU				S	S	19 05 17.8	-3.1
PISA	Pisayambo	3.50	305	P	P	19 04 41.2	-0.5
TAMB	Tambo	3.70	309	⇑P	P	19 04 44.2	-0.1
ANTI	Antisana	3.71	314	⇑P	P	19 04 43.9	-0.5
VC1	Cotopaxi 1	3.76	310	⇑P	P	19 04 45.3	+0.2
CAMI	Rancho Maria	3.82	308	⇑P	P	19 04 46.3	+0.4
CAYR	Refugio Cayamb	3.95	321	⇑P	P	19 04 47.3	-0.2
ANGU	Angureal	3.97	321	⇑P	P	19 04 47.5	-0.4
CAYA	Cayambe	3.98	321	⇑P	P	19 04 47.7	-0.3
QIL1	Quilotoa	4.07	303	P	P	19 04 50.4	+1.2
JUA2	San Juan 2	4.19	312	⇑P	P	19 04 52.1	+1.4
GGP	Refugio Guagua	4.21	313	P	P	19 04 52.3	+1.3
TERV	Terraza Guagua	4.22	313	⇑P	P	19 04 52.0	+0.9
PINO	Pino	4.23	313	⇑P	P	19 04 52.0	+0.7
YANA	Yana	4.23	314	P	P	19 04 51.8	+0.5
COTA	Cotacachi	4.40	320	P	P	19 04 55.6	+2.1
OTAV	Otavalo	4.40	318	eP	P	19 04 53.5	0.0
MAG1	Magdalena	5.20	305	P	P	19 05 03.2	-0.7
ROSC	El Rosal	7.95	8	P	P	19 05 44.0	+3.3
	2.3nm,0.3s,baz=108,slow=20,SNR=3.1						
NNA	Nana	8.97	188	eP	P	19 05 55.7	+1.5
	88nm,0.4s						
SDV	Santo Domingo	12.82	22	P	P	19 06 43.9	-0.7
	1.9nm,0.3s,baz=246,slow=9.2,SNR=11						
SAML	Samuel	13.57	116	eP	P	19 06 53.4	-1.1
	8.5nm,0.6s						
ARE	Arequipa	13.89	164	eP	P	19 07 03.0	+4.5
LPAZ	La Paz	15.02	152	P	P	19 07 13.0	+0.4
	0.4nm,0.3s,baz=346,slow=7.2,SNR=11						
LPAZ	La Paz	15.02	152	eP	P	19 07 12.0	-0.6
LPAZ				P		19 07 13.0	
JTS	JuntasAbangare	16.26	325	P	P	19 07 30.0	+1.9
	1.2nm,0.3s,baz=308,slow=21,SNR=5.3						
SIV	San Ignacio	19.15	133	P	P	19 08 01.3	+0.3
	1.1nm,0.3s,baz=298,slow=12,SNR=15						
TXAR	Lajitas Array	42.02	322	P	P	19 11 25.7	+0.6
	0.3nm,0.3s,mb3.5,baz=153,slow=8.4,SNR=3.9						
TXAR				PcP	PcP	19 13 18.2	+0.5
	0.6nm,0.5s,baz=161,slow=7.4,SNR=4.2						
TXAR	Lajitas Array	42.02	322	P	P	19 11 25.7	+0.6
TXAR				PcP	PcP	19 13 18.2	+0.5
ANMO	Albuquerque	47.68	325	P	P	19 12 10.6	+0.7
	3.0nm,0.6s,mb4.1,baz=124,slow=9.5,SNR=6.5						
PDAR	Pinedale Array	55.01	330	P	P	19 13 03.6	-1.2
	0.6nm,0.7s,mb3.4,baz=144,slow=13,SNR=4.8						
PDAR				PcP	PcP	19 14 04.0	-0.2
	0.4nm,0.4s,baz=126,slow=6.8,SNR=4.5						
ULM	Lac du Bonnet	55.92	344	P	P	19 13 09.1	-2.1
	1.5nm,0.5s,mb4.0,baz=322,slow=14,SNR=3.5						
NVAR	Mina Array Bea	57.13	321	P	P	19 13 20.8	+0.8
	2.2nm,0.6s,mb4.1,baz=128,slow=7.5,SNR=19						
NVAR	Mina Array Bea	57.13	321	P	P	19 13 20.8	+0.8
DBIC	Dimbokro	71.18	82	P	P	19 14 50.9	-0.6
	3.1nm,0.9s,mb4.1,baz=249,slow=7.5,SNR=4.2						
YKA	Yellowknife Ar	71.77	342	P	P	19 14 53.2	-1.0
	0.3nm,0.3s,mb3.5,baz=139,slow=6.2,SNR=10						
YKA	Yellowknife Ar	71.77	342	P	P	19 14 53.2	-1.0
TORD	Torodi Ar. Bea	78.25	76	P	P	19 15 31.8	-0.1
	0.4nm,0.4s,mb3.4,baz=280,slow=5.5,SNR=11						
TORD				pP	pP	19 16 06.7	-3.5
	0.4nm,0.3s,baz=278,slow=5.5,SNR=4.0						
INK	Inuvik	81.52	341	P	P	19 15 49.0	+0.7
	3.2nm,0.9s,mb4.0,baz=125,slow=5.3,SNR=12						
ZAL	Zalesovo	126.77	14	PKP	PKPdf	19 22 35.1	+2.8
	1.5nm,0.5s,baz=188,slow=3.3,SNR=7.6						
MKAR	Makanchi Array	132.35	21	PKP	PKPdf	19 22 45.2	+2.0
	0.3nm,0.5s,baz=300,slow=2.7,SNR=12						
MKAR				pPKP		19 23 24.2	
	0.3nm,0.5s,baz=327,slow=2.4,SNR=3.6						
MKAR	Makanchi Array	132.35	21	PKP	PKPdf	19 22 45.2	+2.0
MKAR				pPKP		19 23 24.2	
WB2	Warramunga Arr	142.83	231	eP	PKPdf	19 23 01.8	-1.2
WRA	Warramunga Arr	142.84	231	PKhKP		19 23 01.8	
	2.0nm,0.7s,baz=120,slow=3.1,SNR=38						
WRA				PKP	PKPdf	19 23 07.4	+4.4
	0.8nm,0.4s,baz=116,slow=2.1,SNR=11						
WRA				pPKP		19 23 43.3	
	0.6nm,0.7s,baz=115,slow=3.0,SNR=2.7						
KOLN	Koldanda	148.34	37	eP	PKPdf	19 23 18.0	+5.8
	3.6nm,0.5s						
GKN	Gorkha	148.78	35	eP	PKPdf	19 23 18.7	+5.8
	16nm,0.9s						
KKN	Kakani	149.31	35	eP	PKPdf	19 23 20.5	+6.8
	9.6nm,0.6s						
DMN	Daman	149.35	35	eP	PKPdf	19 23 20.5	+6.8
	5.5nm,0.4s						
PKI	Pulchoki	149.56	35	eP	PKPdf	19 23 21.2	+7.2
GUN	Gumba	149.56	34	eP	PKPdf	19 23 20.9	+6.9
	7.3nm,0.4s						
FITZ	Fitzroy Crossi	150.40	224	eP	PKPdf	19 23 23.5	+8.0
	3.1nm,0.3s						

IDC 30 19:04:00.0±5.6**,4.08N**×**32.17W,mb3.9**/5**,mb1 4.1**/5**, mb1mx3.8**/22**,mbtmp3.9**/5**,Error ellipse: s-maj=127.3km s-min=44.5km az=71.0,Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TORD	Torodi Ar. Bea	34.63	73	P	P	19 10 51.2	-2.2
	1.8nm,0.9s,baz=258,slow=7.0,SNR=6.8						
ESDC	Sonseca Array	43.67	32	P	P	19 12 07.5	-0.8
	1.0nm,0.7s,baz=226,slow=9.1,SNR=6.9						
GERES	GERESS Array B	59.21	34	P	P	19 14 02.2	-3.2
	0.8nm,0.9s,baz=243,slow=6.6,SNR=4.9						
LSZ	Lusaka	62.77	109	P	P	19 14 28.1	-1.8
	2.6nm,1.0s,baz=287,slow=13,SNR=5.2						
BRTR	Keskin Array B	68.89	49	P	P	19 15 07.0	-1.9
	1.1nm,1.0s,baz=239,slow=8.4,SNR=6.7						

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*NEIC **30** 19:14:00.2±0.3,43.84N×105.43W,ML3.1,Error ellipse: s-maj=5.3km s-min=4.1km az=136.0,Suspected Mining explosion.*
NEIC 50 km [30 miles] S of Gillette.
*IDC **30** 19:14:01.3±1.9,43.90N×105.63W,mb4.4/1,mb1 4.1/3, mb1mx3.6/21,mbtmp3.9/3,ML3.2/2,Error ellipse: s-maj=60.1km s-min=9.7km az=150.0*
ISC 30 19:13:58.7±0.5**,43.87N**±0.05×**105.43W**±0.07**,n26,** σ**0**^{s}**.85**/26**,mb4.6**/1**,Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.03	75	eP	Pb	19 14 19.6	+0.4
RWWY	Rawlins	2.54	212	eP	Pn	19 14 43.6	+1.7
PHWY	Pilot Hill	2.56	181	eP	Pn	19 14 42.4	+0.3
LAO	LASA Array	2.88	349	P	Pn	19 14 47.9	+1.2
BW06	Boulder Array	3.21	251	eP	Pn	19 14 51.6	+0.2
PDAR	Pinedale Array	3.21	251	Pn	Pn	19 14 53.9	+2.5
	2.8nm,0.3s,baz=72,slow=15,SNR=55						
PDAR				Lg		19 15 38.6	
	7.5nm,0.3s,baz=68,slow=36,SNR=6.1						
GCMT	Greycliff	3.58	304	P	Pn	19 14 57.5	+0.9
LOHW	Long Hollow	3.76	268	P	Pn	19 14 58.7	-0.5
MOOW	Moose Ponds	3.85	270	P	Pn	19 15 01.0	+0.5
SNOW	Snow King Moun	3.89	266	P	Pn	19 15 02.1	+1.1
REDW	Red Top Meadow	3.97	265	eP	Pn	19 15 01.1	-1.1
IMW	Indian Meadow	3.99	272	P	Pn	19 15 02.2	-0.1
TPAW	Teton Pass	4.03	267	P	Pn	19 15 02.8	-0.2
ISCO	Idaho Springs	4.06	182	eP	Pn	19 15 03.0	-0.5
QLMT	Earthquake Lak	4.41	285	P	Pn	19 15 07.8	-0.7
DGMT	Dagmar	4.69	10	P	Pn	19 15 12.5	+0.2
BOZ	Bozeman (W)	4.76	294	eP	Pn	19 15 12.9	-0.5
HWUT	Hardware Ranch	5.05	246	P	Pn	19 15 17.5	0.0
EGMT	Eagleton	5.14	326	eP	Pn	19 15 17.8	-1.0
TCUT	Toone Canyon	5.21	240	P	Pn	19 15 19.6	-0.1
HRY	Holter Researc	5.34	304	P	Pn	19 15 21.7	+0.1
DAU	Daniels Canyon	5.54	233	P	Pn	19 15 23.9	-0.5
SRU	San Rafael	6.10	221	eP	Pn	19 15 30.8	-1.5
DUG	Dugway	6.61	239	eP	Pn	19 15 39.0	-0.5
ULM	Lac du Bonnet	9.12	42	Pn	P	19 16 13.4	-1.2
	0.6nm,0.3s,baz=236,slow=13,SNR=6.2						
ARCES	ARCESS Array B	61.33	18	P	P	19 24 18.0	+0.2
	4.4nm,0.9s,mb4.6,baz=319,slow=8.3,SNR=3.6						

MAN 30 19:14:12.6,6.47N×**123.84E,h20**^{km}**,mb4.3,ML3.1,MS2.9, 1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.85	29	⇓iP	Pb	19 14 28.7	+0.1
CTBH				iS	Sb	19 14 41.6	+2.2
PAGZ	Pagadian	1.44	342	eP	Pn	19 14 37.8	-0.1
PAGZ				eS	Sn	19 14 58.9	+2.6
IPIL	Ipil	1.81	316	eP	Pn	19 14 42.7	-0.5
IPIL				eS	Sn	19 15 06.2	+0.4
BUKP	Musuan	1.85	41	eP	Pn	19 14 43.1	-0.7
BUKP				eS	Sn	19 15 08.4	+1.6

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*NEIC **30** 19:23:09.0,16.22N×93.93W,h108^{km},MD4.0(MEX),After MEX.*
MEX 30 19:23:09.0±1.0**,16.22N**×**93.93W,h108**^{km}±28^{km}**,MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	1.26	314	iP	P	19 23 31.6	-1.6
CMIG				iS	S	19 23 49.2	-2.2
CCIG	Comitan	1.73	88	iP	P	19 23 38.5	-0.4
CCIG				iS	S	19 23 59.0	-2.3
HUIG	Huatulco	2.14	258	iP	P	19 23 41.7	-2.5
HUIG				iS	S	19 24 09.1	-1.5
OXX	Oaxaca	2.81	288	iP	P	19 23 51.5	-1.8
OXX				iS	S	19 24 16.5	-10
VHO	Vista Hermosa	2.81	288	iP	P	19 23 51.3	-2.1
VHO				iS	S	19 24 23.3	-3.5
PPM	Popocatepetl	5.29	303	iP	P	19 24 25.5	-1.5

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*NEIC **30** 19:40:07.6,26.04S×69.09W,h133^{km},MD3.4(GUC),After GUC.*
GUC 30 19:40:07.6±0.8**,26.04S**×**69.09W,h133**^{km}±26^{km}**,MD3.4, ML3.5,3C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRCH	Chaqaral	1.41	257	⇑iP	P	19 40 36.0	+0.7
CRCH				iS	S	19 40 56.9	+0.4
CRCH				AMP		19 40 58.5	
	comp=E,800nm,0.1s						
CPCH	Copiapo	1.73	220	⇑iP	P	19 40 38.6	-0.3
CPCH				iS	S	19 41 02.6	-0.2
CPN1	Cerro Paranal	1.84	320	⇓iP	P	19 40 41.4	+1.2
CPN1				iS	S	19 41 06.0	+1.0
CPN1				AMP		19 41 10.2	
	comp=N,648nm,0.6s						
CDCH	Caldera	1.86	236	iP	P	19 40 40.5	0.0
CDCH				iS	S	19 41 05.2	-0.4
CDCH				AMP		19 41 09.4	
	comp=N,395nm,0.4s						
ANCH	Antofagasta	2.63	333	⇑iP	P	19 40 49.6	-0.7
ANCH				iS	S	19 41 21.9	-0.9
CEN1	Los Morros	2.82	339	⇓iP	P	19 40 51.0	-1.8
CEN1				iS	S	19 41 24.1	-3.0
CEN1				AMP		19 41 33.5	
	comp=E,92nm,0.9s						

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*IDC **30** 19:57:11.8±1.7,40.24S×175.39E,mb4.0/1,mb1 4.4/1, mb1mx3.8/9,mbtmp4.0/1,Error ellipse: s-maj=83.7km s-min=42.1km az=41.0*
*NEIC **30** 19:57:20.8,40.35S×175.11E,h51^{km},ML4.6(WEL),After WEL.*
NEIC Felt at Palmerston North and Wanganui.
*WEL **30** 19:57:21.3±0.1,40.33S×175.14E,h48^{km}±2^{km},ML4.1/17, Error ellipse: s-maj=1.0km s-min=0.4km az=90.0,4.*
WEL Felt between Wanganui, Wellington and Manawatu, maximum reported intensity MM.
ISC 30 19:57:19.6±0.4**,40.36S**±0.02×**175.14E**±0.05**,h68**^{km}±6^{km}**, n113,**σ**0**^{s}**.81**/123**,mb4.0**/1**,14C-3D,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRZ	Mangatainoka R	0.45	133	P	P	19 57 31.8	-0.1
MRZ				S	S	19 57 40.0	-1.0
MRZ	Mangatainoka R	0.45	133	PN	P	19 57 31.8	-0.1
MRZ				SN	S	19 57 40.0	-1.0
KIW	Kapiti Island	0.54	199	P	P	19 57 32.3	-0.4
KIW	Kapiti Island	0.54	199	PN	P	19 57 32.3	-0.4
KIW				SN	S	19 57 40.8	-1.6
WAZ	Wanganui	0.61	349	P	P	19 57 33.1	-0.5
WAZ				S	S	19 57 42.4	-1.4
WAZ	Wanganui	0.61	349	PN	P	19 57 33.1	-0.4
WAZ				SN	S	19 57 42.4	-1.4
TSZ	Takapari Road	0.69	65	P	P	19 57 34.6	+0.2
TSZ	Takapari Road	0.69	65	PN	P	19 57 34.6	+0.2
CAW	Cannon Point	0.75	184	P	P	19 57 35.7	+0.6
CAW	Cannon Point	0.75	184	⇑PN	P	19 57 35.7	+0.5
CAW				SN	S	19 57 46.7	0.0
MTW	Mount Morrison	0.85	161	P	P	19 57 36.6	+0.3
MTW	Mount Morrison	0.85	161	PN	P	19 57 36.5	+0.2
BFZ	Birch Farm	0.90	111	P	P	19 57 37.2	+0.2
BFZ	Birch Farm	0.90	111	⇑PN	P	19 57 37.2	+0.2
MRW	Makara Radio	0.94	201	P	P	19 57 38.0	+0.6
MRW	Makara Radio	0.94	201	⇑PN	P	19 57 38.0	+0.6
MRW				SN	S	19 57 51.2	+0.6
WEL	Wellington	0.97	197	P	P	19 57 38.6	+0.7
WEL	Wellington	0.97	197	PN	P	19 57 38.6	+0.7
MTVZ	Mangateitei	1.00	15	⇑PN	P	19 57 38.3	0.0
SNZO	South Karori	1.01	199	P	P	19 57 38.9	+0.5
SNZO	South Karori	1.01	199	⇑PN	P	19 57 38.9	+0.5
DUWZ	D'Urville Isla	1.03	244	PN	P	19 57 38.6	-0.1
PAWZ	Paruwai Farm	1.05	168	P	P	19 57 39.9	+1.0
PAWZ	Paruwai Farm	1.05	168	PN	P	19 57 39.7	+0.8
MOVZ	Moawhango	1.06	27	P	P	19 57 38.7	-0.3
MOVZ	Moawhango	1.06	27	⇑PN	P	19 57 38.7	-0.3
MOVZ				SN	S	19 57 53.1	-0.3
MSWZ	Moikau Station	1.06	176	P	P	19 57 39.8	+0.7
MSWZ	Moikau Station	1.06	176	PN	P	19 57 39.4	+0.4
BHW	Baring Head	1.07	191	P	P	19 57 39.6	+0.4
BHW	Baring Head	1.07	191	PN	P	19 57 39.6	+0.4
BHW				SN	S	19 57 54.5	+0.8
PKVZ	Pokaka	1.07	8	⇑PN	P	19 57 39.1	-0.2
TCW	Tory Channel	1.08	217	P	P	19 57 40.0	+0.7
TCW	Tory Channel	1.08	217	PN	P	19 57 40.0	+0.7
WNVZ	Wahianoa	1.08	19	P	P	19 57 39.5	+0.1
WNVZ	Wahianoa	1.08	19	⇑PN	P	19 57 39.5	+0.2
TRVZ	Turoa	1.10	17	⇑PN	P	19 57 39.8	+0.2
TRWZ	Traveller	1.12	159	PN	P	19 57 41.1	+1.3
DRZ	Dome Shelter	1.13	17	P	P	19 57 40.4	+0.5
DRZ	Dome Shelter	1.13	17	PN	P	19 57 40.2	+0.3
FWVZ	Far West T-bar	1.14	16	P	P	19 57 40.4	+0.3
FWVZ	Far West T-bar	1.14	16	⇓PN	P	19 57 40.4	+0.2
FWVZ				SN	S	19 57 55.2	-0.2
TUVZ	Tukino	1.16	20	P	P	19 57 40.7	+0.4
TUVZ	Tukino	1.16	20	⇑PN	P	19 57 40.7	+0.5
WPVZ	Whakapapa	1.19	15	P	P	19 57 41.1	+0.4
WPVZ	Whakapapa	1.19	15	⇑PN	P	19 57 41.1	+0.4
WPVZ				SN	S	19 57 56.3	-0.2
CNZ	Chateau	1.20	15	P	P	19 57 41.2	+0.4
CNZ	Chateau	1.20	15	⇓PN	P	19 57 41.1	+0.3
RAEZ	Rainy Point	1.21	331	P	P	19 57 41.5	+0.5
RAEZ	Rainy Point	1.21	331	⇑PN	P	19 57 41.5	+0.5
NGZ	Ngauruhoe	1.23	17	P	P	19 57 41.6	+0.3
NGZ	Ngauruhoe	1.23	17	⇑PN	P	19 57 41.6	+0.3
OTVZ	Oturere	1.26	19	PN	P	19 57 42.1	+0.5
VRZ	Vera Road	1.26	346	P	P	19 57 41.5	-0.3
VRZ	Vera Road	1.26	346	⇑PN	P	19 57 41.5	-0.2
VRZ				SN	S	19 57 58.8	+0.6
WTVZ	West Tongariro	1.28	16	P	P	19 57 42.3	+0.2
WTVZ	West Tongariro	1.28	16	PN	P	19 57 42.3	+0.2
TWVZ	Taurewa	1.30	10	P	P	19 57 42.1	-0.3
TWVZ	Taurewa	1.30	10	PN	P	19 57 42.0	-0.4
TWVZ				SN	S	19 57 59.0	-0.3
KRVZ	Karewarewa	1.32	17	PN	P	19 57 42.9	+0.3
NRZ	Ngariki Road	1.38	317	P	P	19 57 44.0	+0.6
NRZ	Ngariki Road	1.38	317	⇓PN	P	19 57 44.0	+0.6
TUWZ	Tuamarina	1.41	220	PN	P	19 57 44.0	+0.2
KATZ	Kakaramea	1.44	17	P	P	19 57 44.7	+0.4
KATZ	Kakaramea	1.44	17	PN	P	19 57 44.7	+0.5
NWEZ	Newall Road	1.46	317	P	P	19 57 45.0	+0.5
NWEZ	Newall Road	1.46	317	PN	P	19 57 44.8	+0.3
PKE	Pukeiti	1.46	322	P	P	19 57 45.0	+0.5
PKE	Pukeiti	1.46	322	PN	P	19 57 44.9	+0.4
RITZ	Rihia Road	1.48	22	P	P	19 57 45.8	+1.0
RITZ	Rihia Road	1.48	22	PN	P	19 57 45.6	+0.8
CMWZ	Cape Campbell	1.56	206	P	P	19 57 46.6	+0.8
RATZ	Rangitukua	1.56	18	P	P	19 57 46.9	+1.0
RATZ	Rangitukua	1.56	18	PN	P	19 57 46.8	+0.9
BKZ	Black Stump Fm	1.58	42	P	P	19 57 46.2	+0.1
BKZ	Black Stump Fm	1.58	42	PN	P	19 57 46.2	+0.1
NNZ	Nelson	1.59	237	P	P	19 57 46.3	0.0
NNZ	Nelson	1.59	237	PN	P	19 57 46.3	0.0
HATZ	Hinemaiaia	1.64	27	P	P	19 57 47.0	+0.1
HATZ	Hinemaiaia	1.64	27	PN	P	19 57 46.8	0.0
BSWZ	Blackbirch Sta	1.66	215	P	P	19 57 47.5	+0.3
BSWZ	Blackbirch Sta	1.66	215	PN	P	19 57 47.4	+0.2
WATZ	Wairara	1.71	16	P	P	19 57 48.7	+0.9
WATZ	Wairara	1.71	16	PN	P	19 57 48.6	+0.8
WHTZ	Whakaora	1.80	21	P	P	19 57 50.2	+1.1
WHTZ	Whakaora	1.80	21	ePN	P	19 57 50.2	+1.1
HIZ	Hauiti	1.85	353	P	P	19 57 49.8	0.0
HIZ	Hauiti	1.85	353	PN	P	19 57 49.6	-0.2
QRZ	Quartz Range	2.04	256	PN	P	19 57 52.0	-0.4
PATZ	Paeroa	2.15	24	P	P	19 57 54.2	+0.2
PATZ	Paeroa	2.15	24	PN	P	19 57 54.1	+0.1
THZ	Tophouse	2.20	230	eP	P	19 57 54.3	-0.4
THZ	Tophouse	2.20	230	PN	P	19 57 54.2	-0.4
KNZ	Kokohu	2.37	56	P	P	19 57 55.4	-1.6
TAZ	Tarawera	2.37	27	P	P	19 57 57.6	+0.5
KHZ	Kahutara	2.39	210	eP	P	19 57 56.7	-0.6
TOZ	Tahuroa Road	2.64	6	P	P	19 58 00.7	-0.1
MWZ	Matawai	2.74	43	P	P	19 58 00.6	-1.6
MKAZ	Moumakai	3.24	0	P	P	19 58 08.9	-0.4
LTZ	Lake Taylor	3.24	221	eP	P	19 58 07.6	-1.7
PUZ	Puketiti	3.32	48	eP	P	19 58 07.9	-2.6
WTAZ	Waiatarua	3.45	352	P	P	19 58 13.3	+1.1
MTAZ	Motutapu	3.57	357	P	P	19 58 13.8	-0.1
MXZ	Matakaoa Point	3.72	42	P	P	19 58 13.7	-2.3
MQZ	McQueen's Vall	3.83	208	eP	P	19 58 13.9	-3.6
WVZ	Waitaha Valley	4.27	229	eP	P	19 58 22.8	-0.9
WCZ	Waipu Caves	4.45	352	P	P	19 58 25.4	-0.8
FOZ	Fox Glacier	5.18	230	eP	P	19 58 32.2	-4.1
ODZ	Otahua Downs	5.74	214	eP	P	19 58 41.0	-3.0
JCZ	Jackson Bay	6.02	230	eP	P	19 58 45.1	-2.8
WRA	Warramunga Arr	40.28	288	P	P	20 04 51.8	+0.3
	0.9nm,0.3s,mb4.0,baz=125,slow=8.2,SNR=27						
ARCES	ARCESS Array B	146.69	341	PKPbc	PKPbc	20 16 53.5	+1.4
	1.3nm,0.6s,baz=64,slow=2.0,SNR=7.8						
ARCES	ARCESS Array B	146.69	341	PKPbc	PKPbc	20 16 53.5	+1.4
TORD	Torodi Ar. Bea	152.29	194	PKPbc	PKPdf	20 17 10.0	+9.1
	0.5nm,0.5s,baz=162,slow=4.2,SNR=18						
TORD				PKPab	PKPab	20 17 20.1	-0.2
	0.3nm,0.4s,baz=167,slow=3.5,SNR=11						

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*BUG **30** 20:14:01.3,51.48N×6.77E,h1^{km},ML1.8*
*LDG **30** 20:14:02.3±0.1,51.62N×6.90E,h1^{km},Ml2.9/12,Error ellipse: s-maj=1.7km s-min=1.3km az=39.0,Suspected Mining induced.*
*CSEM **30** 20:14:02.5±0.1,51.61N×6.89E,h2^{km},ML2.9/10,Error ellipse: s-maj=1.8km s-min=1.2km az=92.0*
*BNS **30** 20:14:03.5±1.0,51.55N×6.90E,h1^{km},ML2.1*
*BGR **30** 20:14:03.8±1.2,51.49N×6.90E,h1^{km},ML2.1/4,Error ellipse: s-maj=12.2km s-min=5.6km az=133.0*
ISC 30 20:14:01.0±0.6**,51.51N**±0.03×**6.69E**±0.04**,n43,**σ**1**^{s}**.42**/74**, 1D,Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAUG	Laupendahl	0.23	135	ePg	Pg	20 14 07.2	+1.7
BUG	Bochum--Univer	0.37	101	⇓iPg	Pg	20 14 08.3	-0.1
BUG				Sg	Sg	20 14 13.4	+0.1
WTSB	Winterswijk	0.46	9	ePg	Pg	20 14 10.2	+0.1
	69nm,0.3s						
RODG	Roetgen-Dahlhe	0.49	221	eSg	Sg	20 14 23.4	+6.2
BNS	Bensberg	0.63	151	eSg	Sg	20 14 23.8	+1.8
HOBG	Hohbusch	0.67	142	ePg	Pg	20 14 15.5	+1.2
HOBG				eSg	Sg	20 14 24.2	+1.0
HGN	Heimansgroeve	0.89	213	ePg	Pg	20 14 22.1	+3.3
	12nm,0.2s,baz=30						
HGN				eSg	Sg	20 14 35.8	+5.2
KLL	Kalltalsperre	0.90	195	ePg	Pg	20 14 21.9	+2.9
KLL				eSg	Sg	20 14 35.7	+4.7
	112nm,0.3s						
STB	Steinbach	0.93	174	ePg	Pg	20 14 21.7	+2.2
STB				eSg	Sg	20 14 35.5	+3.7
	58nm,0.2s						
HILG	Hillesheim	1.22	180	ePg	Pg	20 14 27.4	+2.0
HILG				eSg	Sg	20 14 44.0	+2.2
BGG	Burgeitz	1.37	162	ePg	Pg	20 14 28.1	-0.3
BGG				eSg	Sg	20 14 47.5	+0.8
	50nm,0.3s						
TNS	Taunus Mts	1.71	139	ePg	Pg	20 14 33.2	-1.9
TNS				eSg	Sg	20 14 54.5	-3.3
GIVF	Givet	1.84	221	ePn	Pn	20 14 35.5	+1.4
GIVF	Givet	1.84	221	ePg	Pg	20 14 39.8	+2.0
GIVF				eSn	Sn	20 15 00.1	+1.6
GIVF				eSg	Sg	20 15 05.7	+3.4
	28nm,0.3s						
GIVF	Givet	1.84	221	ePg	Pg	20 14 39.8	+2.0
GIVF				eSn	Sn	20 15 00.1	+1.6
GIVF				eSg	Sg	20 15 05.7	+3.4
	14nm,0.3s						
WLF	Walferdange	1.88	191	eSg	Sg	20 15 03.5	-0.2
BAIF	Baives	2.14	228	ePn	Pn	20 14 39.6	+1.1
BAIF	Baives	2.14	228	ePg	Pg	20 14 45.4	+1.6
BAIF				eSn	Sn	20 15 07.3	+1.1
BAIF				eSg	Sg	20 15 15.4	+3.0
	8.4nm,0.2s						
BAIF	Baives	2.14	228	ePg	Pg	20 14 45.4	+1.6
BAIF				eSn	Sn	20 15 07.3	+1.1
BAIF				eSg	Sg	20 15 15.4	+3.0
	4.2nm,0.2s						
CLZ	Clausthal	2.32	80	ePg	Pg	20 14 42.7	-4.6
CLZ				eSg	Sg	20 15 13.3	-4.8
RFYF	Reffroy	2.99	196	ePn	Pn	20 14 50.9	+0.3
RFYF				eSg	Sg	20 15 39.9	-0.7
	6.9nm,0.2s						
CDF	Champ du Feu	3.13	173	ePn	Pn	20 14 52.5	0.0
CDF	Champ du Feu	3.13	173	ePg	Pg	20 15 01.8	-1.6
CDF				eSg	Sg	20 15 43.2	-1.9
	4.8nm,0.4s						
CDF	Champ du Feu	3.13	173	ePg	Pg	20 15 01.8	-1.6
CDF				eSg	Sg	20 15 43.2	-1.9
	2.4nm,0.4s						
MEZF	Maizieres J'vi	3.19	200	ePn	Pn	20 14 53.6	+0.1
	baz=17						
MEZF	Maizieres J'vi	3.19	200	ePg	Pg	20 15 03.9	-0.9
	baz=28						
MEZF				eSg	Sg	20 15 47.3	0.0
	7.9nm,0.4s						
SFTF	Sexfontaines	3.48	198	ePn	Pn	20 14 57.7	+0.2
SFTF	Sexfontaines	3.48	198	ePg	Pg	20 15 09.3	-1.2
SFTF				eSg	Sg	20 15 55.8	-1.0
	5.4nm,0.3s						
HAU	Haudompre	3.52	184	ePn	Pn	20 14 57.9	-0.2
HAU				eSg	Sg	20 15 56.4	-1.7
	5.7nm,0.4s						
HINF	Hinteralfeld	3.70	178	ePn	Pn	20 15 00.5	-0.2
HINF				eSg	Sg	20 16 01.8	-2.5
	4.7nm,0.5s						
LOR	Lormes	4.63	205	ePn	Pn	20 15 13.4	-0.5
	baz=28						
LOR				eSn	Sn	20 16 06.1	-3.1
LOR				eSg	Sg	20 16 32.1	-3.1
	3.0nm,0.3s						
SSF	Saint Saulge	4.92	206	ePn	Pn	20 15 17.1	-0.8
CABF	La Chapelle	4.92	185	ePn	Pn	20 15 17.2	-0.8
AVF	Avril sur Loir	5.21	206	ePn	Pn	20 15 21.1	-0.9
AVF				eSn	Sn	20 16 19.4	-4.3
SMF	Signal de Mont	5.22	202	ePn	Pn	20 15 21.0	-1.2
LDF	La Druitiere	5.27	239	ePn	Pn	20 15 22.3	-0.6
LDF				eSn	Sn	20 16 21.7	-3.6
FLN	La Foliniere	5.37	242	ePn	Pn	20 15 23.3	-1.0
	baz=54						
FLN				eSn	Sn	20 16 24.2	-3.6
BGF	Bois d'Agland	5.57	208	ePn	Pn	20 15 26.0	-1.1
BGF				eSg	Sg	20 17 01.3	-5.0
	7.6nm,0.5s						
GRR	Gorron	5.79	240	ePn	Pn	20 15 29.4	-0.8
GRR				eSn	Sn	20 16 34.2	-4.1
TCF	Toulx Ste Croi	6.00	211	ePn	Pn	20 15 32.4	-0.9
TCF	Toulx Ste Croi	6.00	211	eP	Pn	20 15 36.9	+3.6
TCF	Toulx Ste Croi	6.00	211	eP	Pn	20 15 36.9	+3.6
SGMF	Saint Gilles	6.81	245	ePn	Pn	20 15 42.6	-2.0

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*NEIC **30** 20:22:52.8,17.01N×99.49W,h41^{km},MD3.9(MEX),After MEX.*
MEX 30 20:22:52.9±0.9**,17.00N**×**99.44W,h16**^{km}±8^{km}**,MD3.9,**

Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	**Acapulco**	0.48	254	*i*P	Pb	20 23 00.5	-2.0
ACX				*i*S	Sb	20 23 07.0	-2.0
CAIG	**El Cayaco**	0.80	273	*i*P	Pb	20 23 06.0	-1.9
CAIG				*i*S	Sb	20 23 15.4	-2.8
PLIG	**Platanillo**	1.38	357	*i*P	Pn	20 23 14.4	-3.3
PLIG				*i*S	Sb	20 23 30.7	-4.4
PNIG	**Pinotepa**	1.39	116	*i*P	Pn	20 23 14.2	-3.7
PNIG				*i*S	Sb	20 23 30.6	-4.9
PNIG	**Pinotepa**	1.39	116	*e*P	Pn	20 23 20.5	+2.7
PNIG				*i*S	Sb	20 23 40.2	+4.7
YAIG	**Yautepec**	1.88	11	*i*P	Pn	20 23 21.1	-3.7
YAIG				*i*S	Sn	20 23 43.9	-4.4
PPM	**Popocatepetl**	2.19	20	*e*P	Pn	20 23 26.3	-3.0
PPM				*i*S	Sn	20 23 50.2	-6.0
PPM	**Popocatepetl**	2.19	20	*i*P	Pn	20 23 28.1	-1.2
PPM				*i*S	Sn	20 23 54.5	-1.8
VHO	**Vista Hermosa**	2.59	88	*i*S	Sn	20 23 58.9	-7.3

MAN 30 20:30:09.8, 7.64N×123.84E, h195^{km}, mb3.8, ML2.6, MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	**Pagadian**	0.50	295	*e*P	P	20 30 37.2	+0.5
PAGZ				*e*S	S	20 30 59.1	+1.7
BUKP	**Musuan**	1.23	79	*e*P	P	20 30 41.2	+0.1
BUKP				*e*S	S	20 31 06.0	+0.7
IPIL	**Ipil**	1.27	277	*e*P	P	20 30 42.4	+1.0
IPIL				*e*S	S	20 31 06.5	+0.7
KCP	**Kidapawan**	1.39	117	*e*P	P	20 30 43.0	+0.6

MAN 30 20:58:27.9, 5.60N×123.91E, h21^{km}, mb4.5, ML3.4, MS3.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	**General Santos**	1.15	65	*e*P	Pb	20 58 36.0	-13
CTBH	**Cotabato--PC H**	1.65	12	⇑*i*P	Pn	20 58 55.6	-0.4
CTBH				*i*S	Sn	20 59 08.6	-8.1
PAGZ	**Pagadian**	2.29	347	*e*P	Pn	20 59 04.8	-0.5
PAGZ				*e*S	Sn	20 59 25.3	-8.0
BUKP	**Musuan**	2.54	27	*e*P	Pn	20 59 11.3	+2.4
BUKP				*e*S	Sn	20 59 37.2	-2.2
IPIL	**Ipil**	2.55	329	*e*P	Pn	20 59 09.8	+0.8
IPIL				*e*S	Sn	20 59 33.5	-6.2
MATI	**Mati**	2.69	60	*e*P	Pn	20 59 10.8	-0.2

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*KISR **30** 21:04:42.3±0.3, 27.05N×55.21E, h1^{km}±999^{km}, ML3.4*
*THR **30** 21:04:43.0±0.3, 27.61N×56.51E, h43^{km}±1^{km}, ML3.0*
*CSEM **30** 21:04:43.0±0.2, 27.60N×56.52E, h41^{km}±1^{km}, ML3.0, Error ellipse: s-maj=7.2km s-min=3.9km az=132.0*
ISC 30 21:04:38.4±0.5, **26.93N**±0.04×**55.65E**±0.04, **h10^{km}, n15, σ1^{s}36**/19, **4C-4D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	0.66	45	*e*PG	Pg	21 04 52.7	+1.0
BNDS				*e*SG	Sg	21 04 59.8	-0.7
BNDS				AML	AML	21 05 13.1	
	comp=N,1µm,0.4s						
BANOM	**Banah**	1.17	150	⇑P	Pb	21 05 00.5	+0.3
	SNR=653						
ASHO	**Ashiyiah**	2.27	170	⇓P	Pn	21 05 18.1	+1.5
	SNR=68						
GHIR	**Ghir-Karzin**	2.72	300	*e*PN	Pg	21 05 32.2	-0.4
GHIR				*e*SG	Sg	21 06 20.2	+11
KRBR	**Kerman**	3.19	18	*e*PN	Px	21 05 21.1	
KRBR				*e*SG	Sx	21 05 56.5	
KRBR				AML	AML	21 06 28.1	
	comp=N,71nm,0.5s						
ARQ	**Araqi**	3.67	167	⇑P	Pn	21 05 37.0	+0.5
	SNR=16						
SMDO	**Samad**	4.43	150	⇑P	Pn	21 05 47.1	-0.3
	SNR=11						
JMDO	**Jabal Madar**	5.06	153	⇑P	Pn	21 05 55.7	-0.6
	SNR=6.8						
NASN	**Na'in**	6.34	338	*e*Pn	Pn	21 06 12.6	-1.7
UMR	**Umm Al-Rimmam**	7.46	292	*e*P	Pn	21 06 32.5	+2.4
UMR				*e*S	Sn	21 07 55.0	-0.7
NAY	**Al-Naaiem**	7.77	289	*e*P	Pn	21 06 36.6	+2.3
NAY				*e*S	Sn	21 08 02.6	-0.7
MIB	**Mutribah**	7.86	293	*e*P	Pn	21 06 38.0	+2.5
MIB				AML	AML	21 08 04.3	
	comp=Z,4.9nm,0.4s						
MIB				*e*S	Sn	21 08 04.6	-0.8
SHAO	**Shalim**	8.87	180	⇓P	P	21 06 46.1	-3.5
	SNR=19						
WHFO	**Wadi Hawf**	9.14	191	⇓P	P	21 06 52.4	-1.0
	SNR=8.4						
ABTO	**Aybut**	9.78	193	⇓P	P	21 06 59.4	-2.8
	SNR=9.2						

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*ISK **30** 21:13:55.2, 35.85N×29.77E, h28^{km}, MD3.3*
*CSEM **30** 21:13:55.1±0.1, 35.95N×29.74E, h60^{km}, MD3.5, Error ellipse: s-maj=4.0km s-min=1.9km az=68.0*
*ATH **30** 21:13:57.4, 36.07N×29.64E, h31^{km}, MD3.5/5*
*HLW **30** 21:13:57.9, 35.87N×29.77E, h33^{km}, Mb3.6*
*NEIC **30** 21:13:57.4, 36.07N×29.64E, h31^{km}, MD3.5(ATH), MD3.3(ISK), After ATH.*
ISC 30 21:13:54.5±0.8, **35.84N**±0.03×**29.81E**±0.06, **h17^{km}**±7^{km}, **n30, σ0^{s}80**/36, **6D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	0.36	330	⇓*i*PB	Pb	21 14 03.0	+1.0
AKAS	**Kas**	0.43	338	*i*P	Pb	21 14 03.0	-0.2
AKAS				*i*S	Sb	21 14 08.4	-0.6
ELL	**Elmali**	0.91	5	PG	Pb	21 14 11.5	+0.1
FETY	**Fethiye**	0.99	324	PG	Pb	21 14 12.6	-0.1
FETY				SG	Sb	21 14 25.4	+0.1
DALT	**Dalyan (Mudla)**	1.32	315	*i*PN	Pn	21 14 18.5	+0.1
DALT				*i*SN	Sn	21 14 34.9	-0.8
GOLH	**Golhisar**	1.41	352	*i*P	Pn	21 14 18.8	-0.8
GOLH				*i*S	Sn	21 14 39.9	+2.0
ARG	**Arkhangelos**	1.41	286	*e*PN	Pn	21 14 20.4	+0.7
BCK	**Bucak**	1.74	21	PN	Pn	21 14 24.2	-0.1
YER	**Yerkesik**	1.78	317	PN	Pn	21 14 24.8	-0.2
DNZL	**Cakiroluk**	1.94	342	*i*P	Pn	21 14 28.4	+1.1
DAT	**Datca**	2.01	297	*i*PN	Pn	21 14 27.7	-0.5
DENT	**Denizli**	2.01	342	PN	Pn	21 14 28.4	+0.2
KARP	**Karpathos**	2.17	263	*e*PN	Pn	21 14 32.2	+1.7
KARP				*e*SN	Sn	21 14 58.0	+0.8
MLSB	**Milas**	2.19	312	PN	Pn	21 14 29.9	-0.8
BODT	**Bodrum**	2.35	302	*i*PN	Pn	21 14 32.0	-1.1
AYDN	**Tasoluk**	2.39	320	*i*P	Pn	21 14 31.2	-2.4
MANT	**Manisa**	2.83	340	*i*P	Pn	21 14 39.9	0.0
SMG	**Samos**	3.03	309	*e*PN	Pn	21 14 42.1	-0.6
KIZT	**Kizilcal**	3.46	28	PN	Pn	21 14 49.5	+0.7
NPS	**Neapolis**	3.47	262	*e*PN	Pn	21 14 50.1	+1.1
ESKT	**Eskisehir**	3.77	12	PN	Pn	21 14 53.0	-0.2
HMAT	**Matruh**	5.25	206	⇓P	Pn	21 15 13.9	-0.3
HMAT				S	Sn	21 16 10.4	-4.6
SLUM		5.78	223	⇓*e*P	Pn	21 15 22.2	+0.4
AMAG	**Maghara**	5.91	150	⇓*e*P	Pn	21 15 24.1	+0.5
GLL	**Jalalah**	6.45	165	⇓*e*P	Pn	21 15 31.1	0.0
SWA1		7.41	209	P	Pn	21 15 44.2	-0.5
SWA2		7.53	210	P	Pn	21 15 46.1	-0.3
AWBH		7.54	186	P	Pn	21 15 45.9	-0.5
ASUT		8.55	169	P	P	21 16 00.7	+0.2
HFRF	**Wahat Farafira**	8.76	189	⇓P	P	21 16 03.0	-0.4

GUC 30 21:14:32.1±0.8, **24.52S×67.43W, h204^{km}, ML4.0, 2C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPN1	**Cerro Paranal**	2.71	267	*i*P	P	21 15 21.1	+2.0
CPN1				*i*S	S	21 15 58.1	+2.6
CPN1				AMP		21 15 59.7	
	comp=E,370nm,0.4s						
CEN1	**Los Morros**	2.78	293	⇓*i*P	P	21 15 21.6	+1.8
CEN1				*i*S	S	21 15 58.6	+1.8
CEN1				AMP		21 16 00.7	
	comp=E,217nm,0.7s						
ANCH	**Antofagasta**	2.85	286	⇑*i*P	P	21 15 22.0	+1.3
ANCH				*i*S	S	21 15 59.8	+1.5
CDCH	**Caldera**	3.98	230	⇑*i*P	P	21 15 35.7	+1.3
CDCH				*i*S	S	21 16 24.9	+2.3
CDCH				AMP		21 16 33.3	
	comp=E,55nm,0.3s						

MAN 30 21:28:05.2, 10.35N×125.48E, h97^{km}, mb4.2, ML3.0, MS2.7, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	0.56	179	⇑*e*P	P	21 28 22.8	+1.4
SCPH				*i*S	S	21 28 34.6	+1.2
MSLP	**Maasin**	0.65	251	*e*P	P	21 28 23.5	+1.4
MSLP				*e*S	S	21 28 36.1	+1.4
PLP	**Palo**	0.95	329	*e*P	P	21 28 26.0	+0.9
PLP				*e*S	S	21 28 40.9	+0.8
BESP	**Borongan**	1.25	358	*e*P	P	21 28 29.5	+0.8
BESP				*e*S	S	21 28 47.4	+1.2
BUTP	**Butuan**	1.38	174	*e*P	P	21 28 30.9	+0.7
BUTP				*e*S	S	21 28 53.5	+4.7
TBP	**Tagbilaran**	1.73	248	*e*P	P	21 28 35.1	+0.5
CNP	**Catarman**	2.29	340	*e*P	P	21 28 41.8	-0.4
CNP				*e*S	S	21 29 11.0	+1.3
PAGZ	**Pagadian**	3.24	220	*e*P	P	21 28 55.1	0.0
PVCP	**Virac**	3.48	338	*e*P	P	21 28 56.5	-2.0
PVCP				*e*S	S	21 29 36.9	-1.9

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*ATH **30** 21:38:25.0, 38.26N×26.93E, h44^{km}±3^{km}, MD3.2/3*
*CSEM **30** 21:38:25.9±0.2, 38.18N×26.67E, h25^{km}, MD3.2, Error ellipse: s-maj=6.5km s-min=5.4km az=91.0*
*ISK **30** 21:38:27.2, 38.12N×26.67E, h30^{km}, MD3.2*
ISC 30 21:38:26.7±1.1, **38.17N**±0.05×**26.6E**±0.1, **h49^{km}**±19^{km}, **n9, σ0^{s}67**/12, **Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	0.51	156	*e*P	P	21 38 37.2	-0.7
SMG				*e*S	S	21 38 46.3	+0.3
PRK	**Paraskevi**	1.10	347	*e*P	P	21 38 45.3	-0.6
PRK				*e*S	S	21 39 00.0	-0.2
AKS	**Akhisar**	1.20	54	PN	P	21 38 48.0	+0.7
AKS				SN	S	21 39 03.2	+0.5
BODT	**Bodrum**	1.25	152	PN	P	21 38 48.1	0.0
MLSB	**Milas**	1.29	132	*e*PN	P	21 38 48.6	-0.1
APE	**Apeiranthos**	1.38	217	*e*PN	P	21 38 51.0	+1.0
APE	**Apeiranthos**	1.38	217	*e*P	P	21 38 52.6	+2.6
DAT	**Datca**	1.65	151	*e*PN	P	21 38 53.4	-0.3
YER	**Yerkesik**	1.70	127	*e*PN	P	21 38 53.9	-0.6

IDC 30 22:11:09.1±3.6, **13.60N×146.37E, h70^{km}**±31^{km}, **mb3.4**/5, **mb1 3.7**/5, **mb1mx3.5**/19, **mbtmp3.7**/5, **Error ellipse: s-maj=38.9km s-min=30.4km az=92.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	1.46	270	P	P	22 11 33.8	-0.4
	34nm,0.3s,baz=129,slow=3.9,SNR=9.1						
WRA	**Warramunga Arr**	35.37	200	P	P	22 17 56.9	-3.2
	0.6nm,0.8s,baz=26,slow=9.7,SNR=3.1						
SONM	**Songino Array**	47.58	324	P	P	22 19 36.8	-2.8
	0.7nm,0.6s,baz=136,slow=8.1,SNR=4.2						
MKAR	**Makanchi Array**	62.50	316	P	P	22 21 25.3	-2.3
	0.4nm,0.4s,baz=93,slow=8.2,SNR=15						
ILAR	**Eielson Array**	67.94	25	P	P	22 21 59.1	-3.1
	0.7nm,0.7s,baz=250,slow=5.8,SNR=5.8						
NVAR	**Mina Array Bea**	85.77	52	P	P	22 23 42.8	+0.6
	0.4nm,0.6s,baz=270,slow=8.1,SNR=4.8						
DBIC	**Dimbokro**	145.05	303	PKPbc	PKPbc	22 30 40.1	+0.3
	5.4nm,0.9s,baz=117,slow=4.1,SNR=6.2						

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*THR **30** 22:23:50.1±0.3, 26.74N×55.97E, h14^{km}±5^{km}, ML3.1*
*CSEM **30** 22:23:51.5±2.1, 26.91N×55.73E, h26^{km}±13^{km}, ML3.3, Error ellipse: s-maj=49.8km s-min=18.1km az=171.0*
*KISR **30** 22:23:52.6±0.5, 27.31N×55.38E, h2^{km}±999^{km}, ML3.3*
ISC 30 22:23:51.4±1.4, **26.89N**±0.06×**55.70E**±0.08, **h29^{km}**±17^{km}, **n18, σ1^{s}10**/22, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	0.66	40	*e*Pg	Pb	22 24 03.3	-0.9
BNDS				*e*Sg	Sb	22 24 13.2	0.0
BNDS				AML	AML	22 24 19.5	
	comp=N,964nm,0.3s						
BNDS	**Bandar-Abbas**	0.66	40	*e*Pg	Pb	22 24 03.3	-1.0
	SNR=90						
BNDS				*e*Sg	Sb	22 24 13.2	+0.1
	comp=N,964nm,0.3s,SNR=90						
BANOM	**Banah**	1.10	151	P	Pn	22 24 10.3	-0.8
	SNR=1089						
BANOM				P		22 24 10.5	
	SNR=241						
BANOM	**Banah**	1.10	151	P	Pn	22 24 10.3	-0.8
	SNR=1089						
ASHO	**Ashiyiah**	2.22	172	P	Pn	22 24 28.4	+1.4
	SNR=70						
ASHO				P		22 24 28.5	
	SNR=47						
ASHO	**Ashiyiah**	2.22	172	P	Pn	22 24 28.4	+1.4
	SNR=70						
GHIR	**Ghir-Karzin**	2.78	301	*e*Pn	Pn	22 24 40.3	+5.3
GHIR				AML	AML	22 25 28.1	
	comp=N,54nm,0.5s						
KRBR	**Kerman**	3.22	17	*e*Pn	Pn	22 24 43.8	+2.5
ARQ	**Araqi**	3.62	168	P	Pn	22 24 46.8	-0.1
	SNR=10.0						
ARQ	**Araqi**	3.62	168	P	Pn	22 24 46.8	-0.1
	SNR=10.0						
SMDO	**Samad**	4.37	150	P	Pn	22 24 57.6	0.0
	SNR=10						
SMDO	**Samad**	4.37	150	P	Pn	22 24 57.6	0.0
	SNR=10						
ZHSF	**Zahedan**	5.23	58	*e*Pn	Pn	22 25 08.8	-1.0
UMR	**Umm Al-Rimmam**	7.53	292	*e*P	Pn	22 25 43.2	+1.2
UMR				AML	AML	22 27 08.6	
	comp=Z,6.7nm,0.2s						
NAY	**Al-Naaiem**	7.83	289	*e*P	Pn	22 25 47.5	+1.2
NAY				*e*S	Sn	22 27 13.9	-1.0
NAY				AML	AML	22 27 17.6	
	comp=Z,2.0nm,0.2s						
MIB	**Mutribah**	7.92	293	*e*P	Pn	22 25 48.3	+0.8
MIB				*e*S	Sn	22 27 15.4	-1.6
MIB				AML	AML	22 27 17.4	
	comp=Z,5.6nm,0.3s						
SHAO	**Shalim**	8.83	180	P	P	22 25 59.3	-0.8
	SNR=8.0						
SHAO	**Shalim**	8.83	180	P	P	22 25 59.3	-0.8
	SNR=8.0						

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*NIED **30** 22:33:00, 26.00N×129.60E, h8^{km}, Mw4.0 Best double couple: $M_0$1.26×10^{15} NP1:ϕ_s206°, δ62°, λ-99°. NP2:ϕ_s45°, δ30°, λ-73°.*
*IDC **30** 22:33:28.5±2.3, 25.74N×129.19E, mb4.0/7, mb1 4.1/7, mb1mx3.9/20, mbtmp4.0/7, MS3.0/1, Ms1 3.0/1, ms1mx2.2/36, Error ellipse: s-maj=147.1km s-min=13.7km az=61.0*
*NEIC **30** 22:33:29.2±0.8, 25.96N×129.55E, h10^{km}, mb4.4/7, Error ellipse: s-maj=27.6km s-min=9.9km az=53.0*
*JMA **30** 22:33:29.0±0.1, 25.95N×129.65E, h45^{km}, M4.2*
ISC 30 22:33:30.2±0.5, **25.94N**±0.04×**129.53E**±0.04, **h33^{km}, n35, σ1^{s}20**/50, **mb4.3**/14, **Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOW	**Kunigami**	1.44	308	Pg	P	22 33 54.5	+0.4
	627nm,0.3s,baz=131,slow=16,SNR=1700						
JOW				Lg		22 34 11.6	
	220nm,0.3s,baz=113,slow=29,SNR=4.3						
JOW	**Kunigami**	1.44	308	P	P	22 33 54.4	+0.3
JOW				S	S	22 34 11.1	-0.9
JMZ	**Minamidaito 2**	1.52	94	P	P	22 33 53.1	-2.3
JMZ				*e*S	S	22 34 09.3	-4.9
JJT2	**Tamagusuku 2**	1.62	277	P	P	22 33 57.7	+1.0
JJT2				*e*S	S	22 34 17.5	+0.9
NAH1	**Naha**	1.68	279	P	P	22 33 58.2	+0.6
NAH1				S	S	22 34 18.6	+0.5
JIH	**Iheya**	1.78	308	P	P	22 33 59.2	+0.2
JIH				S	S	22 34 20.7	+0.1
JTK	**Tokunoshima**	1.91	344	P	P	22 34 00.4	-0.5
JTK				S	S	22 34 20.8	-3.2
JAGN	**Aguni-jima**	2.16	288	P	P	22 34 04.8	+0.4
JAGN				S	S	22 34 30.4	+0.2
JZK	**Kikaishima**	2.40	9	P	P	22 34 07.6	-0.2
JZK				S	S	22 34 34.4	-1.9
JAM	**Amami Oshima**	2.46	1	P	P	22 34 07.8	-1.0
JAM				S	S	22 34 33.5	-4.5
JKE	**Kume jima 2**	2.50	279	P	P	22 34 08.8	-0.5
JKE				S	S	22 34 37.4	-1.6
JNN	**Nakanoshima**	3.90	4	P	P	22 34 29.9	+0.7
JNN				S	S	22 35 08.6	-5.9
JOGS	**Gusukube**	3.92	253	P	P	22 34 29.3	-0.2
JOGS				S	S	22 35 12.9	-2.0
JMJ	**Miyako jima 2**	4.00	255	P	P	22 34 30.0	-0.6
JMJ				*e*S	S	22 35 13.1	-3.9
JTJ	**Tarama**	4.56	255	P	P	22 34 37.3	-1.4
JTJ				S	S	22 35 27.0	-4.2
JIJ	**Ishigaki jima**	5.13	253	P	P	22 34 44.9	-1.8
JIJ				*e*S	S	22 35 39.8	-5.8
JKRS	**Kuro-shima**	5.29	252	P	P	22 34 47.3	-1.6
JKRS				*e*S	S	22 35 41.4	-8.1
IRIF	**Iriomote-Funau**	5.50	254	*e*S	S	22 35 50.6	-4.2
ENH	**Enshi**	18.20	288	*e*P	P	22 37 43.0	+0.9
GUMO	**Guam**	18.93	128	LR	LR	22 44 46.5	
	comp=Z,44nm,19.3s,baz=99,slow=36						
SONM	**Songino Array**	28.44	326	P	P	22 39 25.4	+1.4
	0.7nm,0.7s,mb3.4,baz=148,slow=9.6,SNR=7.5						
GUN	**Gumba**	38.82	283	*e*P	P	22 40 55.5	+1.7
	7.8nm,0.5s,mb4.7						
PKI	**Pulchoki**	39.28	283	*e*P	P	22 40 59.2	+1.6
	20nm,0.9s,mb4.8						
KKN	**Kakani**	39.36	283	*e*P	P	22 41 00.2	+1.9
	28nm,1.0s,mb5.0						
GKN	**Gorkha**	39.90	283	*e*P	P	22 41 04.1	+1.4
	31nm,1.0s,mb5.0						
KOLN	**Koldanda**	40.84	283	*e*P	P	22 41 12.4	+1.9
	16nm,1.0s,mb4.6						
MKAR	**Makanchi Array**	42.60	312	P	P	22 41 25.0	+0.2
	0.5nm,0.4s,mb3.6,baz=90,slow=10,SNR=22						
ZAL	**Zalesovo**	43.19	323	P	P	22 41 29.2	-0.2
	0.9nm,0.4s,mb3.9,baz=356,slow=11,SNR=4.8						
WRAB	**Tennant Creek**	45.84	174	*e*P	P	22 41 50.7	-0.5
	3.0nm,0.8s,mb4.3						
WRA	**Warramunga Arr**	45.85	174	P	P	22 41 51.3	0.0
	2.0nm,0.7s,mb4.2,baz=352,slow=8.4,SNR=13						
BVAR	**Borovoye Array**	51.27	318	P	P	22 42 33.8	+1.1
	3.0nm,0.7s,mb4.3,baz=100,slow=9.0,SNR=13						
BRVK	**Borovoye**	51.34	318	P	P	22 42 33.2	-0.1
	3.7nm,1.1s,mb4.2						
STKA	**Stephens Creek**	58.63	168	P	P	22 43 26.3	-0.3
	1.1nm,0.5s,mb4.1,baz=95,slow=22,SNR=3.8						
STKA	**Stephens Creek**	58.63	168	P	P	22 43 26.3	-0.3
BRTR	**Keskin Array B**	78.13	308	P	P	22 45 30.1	+2.4
	1.2nm,1.0s,mb3.8,baz=108,slow=3.9,SNR=4.7						

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*PDG **30** 22:44:28.6±0.4, 38.11N×20.37E, h17^{km}±1^{km}*
*ATH **30** 22:44:29.3, 38.11N×20.52E, h16^{km}±1^{km}, MD3.7/10, ML3.8*
*NEIC **30** 22:44:29.3, 38.11N×20.52E, h16^{km}, MD3.9(PDG), ML3.8(ATH), After ATH.*
*IDC **30** 22:44:29.7±1.7, 38.55N×20.99E, mb3.8/6, mb1 3.8/10, mb1mx3.6/25, mbtmp3.7/10, ML3.4/4, Error ellipse: s-maj=29.9km s-min=21.6km az=41.0*
*CSEM **30** 22:44:31.0±0.1, 38.10N×20.50E, h15^{km}, Ms3.7, Error ellipse: s-maj=3.5km s-min=2.1km az=14.0*
*THE **30** 22:44:32.6, 38.16N×20.43E, h21^{km}, ML3.6*
*SKO **30** 22:44:36.5, 38.60N×20.69E, M2.6, ML3.2*
*VIE **30** 22:44:37.1±0.5, 38.81N×20.51E, h10^{km}, mb3.3/2, Ms3.7/2, Error ellipse: s-maj=15.9km s-min=4.0km az=58.0*
ISC 30 22:44:30.0±0.5, **38.19N**±0.03×**20.45E**±0.03, **h19^{km}**±4^{km}, **n96, σ1^{s}33**/123, **mb3.7**/6, **12C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	**Valsamata**	0.11	97	*e*PB	Pb	22 44 33.0	-0.9
VLS				*e*SB	Sb	22 44 35.5	-1.0
LKD	**Levkas**	0.54	17	*e*Pg	Pb	22 44 41.3	+0.6
RLS	**Riolos of Patr**	0.81	99	*e*PB	Pb	22 44 43.3	-1.9
EVR	**Evrytania**	1.28	55	*e*PN	Pn	22 44 54.1	+0.9
IGT	**Igoumenitsa**	1.34	356	*e*Pg	Pn	22 44 55.6	+1.6
IGT				*e*Sg	Sb	22 45 12.7	+1.5
JAN	**Janina**	1.50	12	*e*PN	Pn	22 44 58.5	+2.3
ITM	**Ithomi**	1.54	130	*e*PN	Pn	22 44 56.8	-0.1
KEK	**Kerkira**	1.60	342	*e*PN	Pn	22 44 59.8	+2.1
AGG	**Agios Georgios**	1.69	60	*e*Pb	Pb	22 45 00.5	+0.3
MEV	**Metsovon**	1.70	21	*e*Pb	Pb	22 45 00.4	-0.1
SRN	**Sarande**	1.72	348	*e*Pn	Pn	22 45 01.7	+2.3
LKR	**Lokris**	2.05	76	*e*PN	Pn	22 45 04.6	+0.5
KZN	**Kozani**	2.35	25	*e*PN	Pn	22 45 10.8	+2.4
NEO	**Neokhori**	2.44	62	*e*PB	Pb	22 45 10.5	-2.5
XOR	**Xorichti**	2.44	60	*e*Pn	Pn	22 45 10.6	+0.9
VLI	**Veliai**	2.46	126	*e*PN	Pn	22 45 10.5	+0.5
LIT	**Litokhoron**	2.48	39	*e*Pn	Pn	22 45 11.5	+1.3
ATH	**Athens Observa**	2.58	94	*e*PB	Pb	22 45 12.2	-3.3
FNA	**Florina**	2.69	15	*e*Pn	Pn	22 45 14.7	+1.5
LCI	**Lecce**	2.81	320	Pn	Pn	22 45 17.3	+2.3
BIA	**Bitola**	2.90	13	*i*Pn	Pn	22 45 18.2	+1.9
BIA				*e*Sg	Sn	22 45 54.1	+3.0
BIA				*e*Lg		22 45 54.2	
	comp=E,28nm,0.3s						
BIA				*e*Lg		22 45 55.6	
	comp=N,36nm,0.4s						
BIA	**Bitola**	2.90	13	*i*Pn	Pn	22 45 18.2	+1.9
BIA				*e*Sg	Sn	22 45 54.1	+3.0
BIA				Lg		22 45 54.2	
BIA				Lg		22 45 55.6	
OHR	**Ohrid**	2.93	5	*e*Pn	Pn	22 45 18.1	+1.4
OHR	**Ohrid**	2.93	5	*e*Pn	Pn	22 45 18.3	+1.6
OHR				*e*Sn	Sn	22 45 50.4	-1.3
OHR				*e*Lg		22 46 14.0	
	comp=E,117nm,0.8s						
OHR	**Ohrid**	2.93	5	*e*Pn	Pn	22 45 18.3	+1.6
OHR				*e*Sn	Sn	22 45 50.4	-1.3
OHR				Lg		22 46 14.0	
PAIG	**Paliouri**	3.05	54	*e*Pn	Pn	22 45 18.4	0.0
THE	**Thessaloniki**	3.12	38	*e*Pn	Pn	22 45 20.4	+1.0
GRG	**Griva**	3.15	28	*e*Pn	Pn	22 45 20.8	+1.1
GRI	**Girifalco**	3.23	283	Pn	Pn	22 45 21.7	+0.8
QSH	**Qafa e Shtames**	3.35	353	*e*Pn	Pn	22 45 20.0	-2.7
SOH	**Sokhos**	3.45	40	*e*Pn	Pn	22 45 24.9	+0.8
SOH				*e*Sn	Sn	22 46 05.4	+0.5
OUR	**Ouranopolis**	3.48	51	*e*Pn	Pn	22 45 24.5	+0.1
KNT	**Kendrikon**	3.52	32	*e*Pn	Pn	22 45 25.9	+0.9
KNT				*e*Sn	Sn	22 46 07.0	+0.5
VAY	**Valandovo**	3.53	27	*e*Pn	Pn	22 45 26.4	+1.3
VAY	**Valandovo**	3.53	27	*i*Pn	Pn	22 45 25.3	+0.1
VAY				*e*Sn	Sn	22 46 04.3	-2.5
VAY				*e*Lg		22 46 08.3	
	comp=N,90nm,1.2s						
VAY				*e*Lg		22 46 20.1	
	comp=E,60nm,0.9s						
VAY	**Valandovo**	3.53	27	*e*Pn	Pn	22 45 26.4	+1.3
VAY				*e*Sn	Sn	22 46 04.3	-2.5
CEL	**Celeste**	3.59	272	Pn	Pn	22 45 25.7	-0.4
BRT	**Bari-Castellan**	3.68	318	Pn	Pn	22 45 28.0	+0.7
SRS	**Serrai**	3.79	39	*e*Pn	Pn	22 45 29.1	+0.2
SKO	**Skopje**	3.85	11	*i*Pn	Pn	22 45 31.4	+1.6
SKO				*e*Lg		22 46 14.7	
	comp=E,33nm,0.5s						
SKO				*e*Lg		22 46 14.8	
	comp=N,31nm,0.4s						
SKO	**Skopje**	3.85	11	*i*Pn	Pn	22 45 31.4	+1.6
SKO				Lg		22 46 14.7	
ULC	**Ulcinj**	3.88	347	⇑*i*Pn	Pn	22 45 29.9	-0.2
ULC				*e*Sn	Sn	22 46 15.4	-0.3
ULC	**Ulcinj**	3.88	347	⇑*i*Pn	Pn	22 45 29.9	-0.3
ULC				*e*Sn	Sn	22 46 15.4	-0.3
SG1	**Sgolgore (BA)**	3.94	313	*e*Pn	Pn	22 45 31.8	+0.8
BAI	**Bari**	4.01	318	*e*Pn	Pn	22 45 32.3	+0.2
APE	**Apeiranthos**	4.18	104	*e*Pn	Pn	22 45 35.2	+0.7
KKB	**Krupnik**	4.19	28	P	Pn	22 45 35.0	+0.4
MMB	**Musomiste**	4.23	36	P	Pn	22 45 36.0	+0.9
BUM	**Brajici-Budva**	4.27	344	⇑*i*Pn	Pn	22 45 34.8	-1.0
BUM				*e*Sn	Sn	22 46 25.2	-0.6
THR3	**Thira Island,**	4.33	113	*e*Pn	Pn	22 45 37.1	+0.6
CDT	**Castel del Mon**	4.33	313	*e*Pn	Pn	22 45 36.6	0.0
TTG	**Podgorica**	4.33	348	⇑*i*Pn	Pn	22 45 36.4	-0.2

TTG				*e*Sn	**Sn**	**22 46 26.8**	**-0.4**
TTG	**Podgorica**	**4.33**	**348**	⇑*i*Pn	**Pn**	**22 45 36.3**	**-0.3**
TTG				*e*Sn	**Sn**	**22 46 26.8**	**-0.4**
SLCN	**Sala Consilina**	**4.34**	**302**	Pn	**Pn**	**22 45 39.7**	**+3.0**
PVY	**Plav**	**4.41**	**355**	⇑*i*Pn	**Pn**	**22 45 37.9**	**+0.1**
PVY				*e*Sn	**Sn**	**22 46 29.6**	**+0.3**
HCY	**Herceg Novi**	**4.51**	**341**	*e*Pn	**Pn**	**22 45 37.9**	**-1.2**
HCY				*e*Sn	**Sn**	**22 46 30.4**	**-1.2**
PZI	**Palazzolo**	**4.52**	**257**	Pn	**Pn**	**22 45 36.2**	**-3.0**
IDI	**Anoyia**	**4.59**	**128**	Pn	**Pn**	**22 45 38.4**	**-1.8**
	comp=N,1.3nm,0.3s,baz=7.4,slow=23,SNR=34						
IDI				Sn	**Sn**	**22 46 29.4**	**-4.4**
	comp=N,2.1nm,0.3s,baz=90,slow=22,SNR=7.2						
SGO	**Sicignano**	**4.64**	**302**	Pn	**Pn**	**22 45 43.4**	**+2.5**
IVA	**Berane**	**4.70**	**355**	*e*Pn	**Pn**	**22 45 41.8**	**0.0**
IVA				*e*Sn	**Sn**	**22 46 36.1**	**-0.3**
SIVA	**Sivas**	**4.72**	**131**	*e*Pn	**Pn**	**22 45 41.6**	**-0.5**
NKY	**Niksic**	**4.75**	**347**	⇑*i*Pn	**Pn**	**22 45 41.9**	**-0.6**
NKY				*e*Sn	**Sn**	**22 46 37.0**	**-0.8**
RZN	**Rozhen**	**4.79**	**42**	P	**Pn**	**22 45 43.0**	**-0.1**
VAE	**Valguarnera**	**4.84**	**263**	Pn	**Pn**	**22 45 51.0**	**+7.2**
	comp=N,1.2nm,0.3s,baz=288,slow=23,SNR=4.3						
VAE				Sn	**Sn**	**22 46 44.5**	**+4.5**
	comp=N,3.4nm,0.3s,baz=299,slow=24,SNR=6.3						
VTS	**Vitosha**	**4.87**	**25**	*e*P	**Pn**	**22 45 45.0**	**+0.7**
ALN	**Alexandroupoli**	**5.10**	**56**	*e*Pn	**Pn**	**22 45 46.9**	**-0.5**
RGNG	**Rignano Grg**	**5.11**	**314**	Pn	**Pn**	**22 45 48.4**	**+0.8**
STON	**Ston**	**5.12**	**337**	*i* Pn	**Pn**	**22 45 46.2**	**-1.6**
STON				*i* Sn	**Sn**	**22 46 44.9**	**-2.3**
UPM	**Unac-Piva**	**5.14**	**347**	⇑*i*Pn	**Pn**	**22 45 47.9**	**-0.2**
UPM				*e*Sn	**Sn**	**22 46 45.8**	**-1.8**
KDZ	**Kurdzhali**	**5.15**	**46**	*e*P	**Pn**	**22 45 47.0**	**-1.1**
PLE	**Pljevlja**	**5.20**	**351**	*e*Pn	**Pn**	**22 45 48.9**	**0.0**
PLE				*e*Sn	**Sn**	**22 46 48.0**	**-0.9**
PLE	**Pljevlja**	**5.20**	**351**	*e*Pn	**Pn**	**22 45 48.9**	**+0.1**
PLE				*e*Sn	**Sn**	**22 46 48.0**	**-1.0**
SGG	**Gregorio Mates**	**5.66**	**306**	Pn	**Pn**	**22 45 58.6**	**+3.2**
DIVS	**Divcibare**	**5.91**	**357**	*e*Pn	**Pn**	**22 45 57.8**	**-1.1**
BZS	**Buzias**	**7.47**	**6**	⇓P	**Pn**	**22 46 21.9**	**+1.1**
BOJS	**Bojanci**	**8.27**	**334**	*e*Pn	**P**	**22 46 30.6**	**-1.5**
BOJS	**Bojanci**	**8.27**	**334**	*e*Pn	**P**	**22 46 30.5**	**-1.5**
MLR	**Muntele Rosu**	**8.36**	**28**	Pn	**P**	**22 46 26.0**	**-7.3**
	comp=N,0.1nm,0.3s,baz=255,slow=9.4,SNR=2.1						
MLR	**Muntele Rosu**	**8.36**	**28**	⇑P	**P**	**22 46 36.2**	**+2.9**
PERS	**Pernice**	**9.31**	**337**	*i* Pn	**P**	**22 46 43.8**	**-2.7**
OBKA	**Obir**	**9.39**	**334**	⇑*i*Pn	**P**	**22 46 45.1**	**-2.4**
OBKA	**Obir**	**9.39**	**334**	⇑*i*Sn	**Sn**	**22 48 26.1**	**-7.5**
OBKA	**Obir**	**9.39**	**334**	Pn	**P**	**22 46 45.1**	**-2.4**
OBKA				Sn	**Sn**	**22 48 26.1**	**-7.5**
CADS	**Cadrg**	**9.45**	**330**	*i* Pn	**P**	**22 46 46.2**	**-2.0**
MOA	**Molln**	**10.66**	**337**	⇓*i*Pn	**P**	**22 47 02.6**	**-2.2**
MOA	**Molln**	**10.66**	**337**	⇑*i*Sn	**S**	**22 48 57.1**	**-7.6**
MOA	**Molln**	**10.66**	**337**	Pn	**P**	**22 47 02.6**	**-2.3**
MOA				Sn	**S**	**22 48 57.1**	**-7.6**
GERES	**GERESS Array B**	**11.72**	**338**	Pn	**P**	**22 47 15.6**	**-3.7**
	comp=N,0.2nm,0.3s,baz=151,slow=14,SNR=6.3						
HFS	**Hagfors**	**22.38**	**351**	P	**P**	**22 49 27.7**	**-0.7**
	comp=N,1.9nm,0.4s,mb3.8,baz=164,slow=11,SNR=13						
FINES	**FINESS Array B**	**23.54**	**7**	P	**P**	**22 49 38.3**	**-1.3**
	comp=N,1.9nm,0.7s,mb3.6,baz=171,slow=9.0,SNR=5.5						
NOA	**NORSAR Array B**	**23.59**	**349**	P	**P**	**22 49 39.3**	**-0.9**
	comp=N,0.5nm,0.5s,mb3.2,baz=161,slow=8.6,SNR=3.2						
ARCES	**ARCESS Array B**	**31.52**	**3**	P	**P**	**22 50 50.5**	**-2.2**
	comp=N,3.7nm,0.9s,mb4.2,baz=186,slow=11,SNR=5.9						
ARCES	**ARCESS Array B**	**31.52**	**3**	P	**P**	**22 50 50.5**	**-2.3**
MKAR	**Makanchi Array**	**45.34**	**58**	P	**P**	**22 52 45.4**	**-3.2**
	comp=N,0.4nm,0.3s,mb3.7,baz=276,slow=7.4,SNR=24						
ZAL	**Zalesovo**	**45.71**	**48**	P	**P**	**22 52 47.2**	**-4.1**
	comp=N,0.7nm,0.5s,mb3.8,baz=195,slow=14,SNR=3.3						
ZAL	**Zalesovo**	**45.71**	**48**	P	**P**	**22 52 47.2**	**-4.2**

JMA 30 22:52:48.3±0.1**, 38.27N×144.79E, h52^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.57**	**289**	P	P	22 53 28.7	+0.2
MIYJ	**Miyakonagasawa**	**2.66**	**300**	P	P	22 53 29.4	-0.3
MIYJ				S	S	22 54 00.2	-0.7
JIO	**Ouri**	**2.71**	**275**	P	P	22 53 30.7	+0.2
JIO				S	S	22 54 02.4	+0.2
JMK	**Ichinoseki**	**2.88**	**285**	P	P	22 53 33.1	+0.2
JMK				*e*S	S	22 54 07.0	+0.5
JOM	**Ohasama**	**2.98**	**295**	P	P	22 53 34.7	+0.4
JOM				S	S	22 54 09.4	+0.3
JMM	**Marumori**	**3.18**	**264**	P	P	22 53 37.2	+0.1
JMM				S	S	22 54 14.2	+0.1

IDC 30 22:56:44.6±11.0**, 14.00N×146.49E, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.6**/18**, mbtmp3.6**/3**, Error ellipse: s-maj=304.7km s-min=52.1km az=177.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**47.32**	**324**	P	P	23 05 20.0	-1.9
	0.3nm,0.5s,baz=125,slow=7.5,SNR=4.7						
MKAR	**Makanchi Array**	**62.30**	**316**	P	P	23 07 08.8	-2.1
	0.4nm,0.4s,baz=90,slow=9.0,SNR=18						
ILAR	**Eielson Array**	**67.53**	**25**	P	P	23 07 42.5	-2.1
	0.5nm,0.6s,baz=248,slow=5.5,SNR=5.6						

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*IDC **30** 22:58:43.2±5.6, 49.43N×154.94E, mb3.9/5, mb1 4.2/5, mb1mx3.7/21, mbtmp3.9/5, Error ellipse: s-maj=130.2km s-min=42.8km az=4.0*

*KRSC **30** 22:59:02.5±1.7, 49.82N×156.26E, h100^{km}±12^{km}, ML4.1*

*MOS **30** 22:59:05.2±0.8, 50.57N×155.16E, h147^{km}, mb3.8/4, Error ellipse: s-maj=79.8km s-min=13.9km az=61.8*

ISC 30 22:59:01.5±1.0**, 49.68N**±0.07×**156.6E**±0.1**, h100^{km}, n34, σ1^{s}.33**/46**, mb3.9**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.04**	**344**	*e*P	**P**	**22 59 21.2**	**-1.5**
SKR				*e*S	**S**	**22 59 37.1**	**-1.6**
ALID	**Alaid**	**1.36**	**332**	P	**P**	**22 59 25.7**	**-0.8**
PAU	**Pauzhetka**	**1.80**	**5**	*i* P	**P**	**22 59 33.5**	**+1.5**
PAU				*e*S	**S**	**22 59 56.3**	**+1.8**
PAU				Smax			
	510nm,0.2s						
RUS	**Russkaya**	**3.02**	**23**	P	**P**	**22 59 51.3**	**+2.7**
RUS				S	**S**	**23 00 24.5**	**+0.5**
RUS	**Russkaya**	**3.02**	**23**	*e*P	**P**	**22 59 49.7**	**+1.1**
RUS				*e*S	**S**	**23 00 24.4**	**+0.4**
GRL	**Gorelyy**	**3.03**	**18**	*e*P	**P**	**22 59 51.2**	**+2.5**
GRL				*e*S	**S**	**23 00 25.5**	**+1.2**
APC	**Apacha**	**3.27**	**6**	*e*P	**P**	**22 59 51.3**	**-0.7**
KRMR	**Karymshinskiy**	**3.31**	**17**	S	**S**	**23 00 30.2**	**-0.8**
PET	**Petropavlovsk**	**3.60**	**21**	P	**P**	**22 59 57.7**	**+1.2**
PET				S	**S**	**23 00 35.8**	**-2.4**
PET	**Petropavlovsk**	**3.60**	**21**	*e*P	**P**	**22 59 58.0**	**+1.5**
PET				*e*S	**S**	**23 00 37.7**	**-0.5**
AVH	**Avacha**	**3.84**	**20**	P	**P**	**23 00 00.9**	**+1.1**
SMAR	**Somma**	**3.85**	**20**	P	**P**	**23 00 01.8**	**+1.8**
SMAR				*e*S	**S**	**23 00 43.4**	**-1.0**
NLC	**Nalytchevo**	**3.91**	**25**	P	**P**	**23 00 01.4**	**+0.7**
NLC				S	**S**	**23 00 42.6**	**-3.2**
NLC	**Nalytchevo**	**3.91**	**25**	*e*S	**S**	**23 00 43.3**	**-2.5**
SPN	**Mys Shipunski**	**4.05**	**31**	P	**P**	**23 00 04.4**	**+1.7**
SPN				S	**S**	**23 00 47.1**	**-2.3**
SPN	**Mys Shipunski**	**4.05**	**31**	P	**P**	**23 00 04.8**	**+2.1**
SPN				*e*S	**S**	**23 00 47.8**	**-1.6**
GNL	**Ganaly**	**4.11**	**12**	*e*P	**P**	**23 00 03.9**	**+0.4**
TUMR	**Tumrok**	**6.03**	**20**	*i* P	**P**	**23 00 30.8**	**+1.2**
KMNR	**Kamenistaya**	**6.49**	**19**	*e*P	**P**	**23 00 36.3**	**+0.3**
ZLN	**Zelenaya**	**6.85**	**20**	*e*P	**P**	**23 00 41.3**	**+0.3**
LGNR	**Loginova**	**6.88**	**20**	*e*P	**P**	**23 00 42.3**	**+0.8**
CIRR	**Tsirk**	**6.93**	**20**	*e*P	**P**	**23 00 42.2**	**+0.1**
SRKR	**Sorokina**	**7.52**	**20**	*e*P	**P**	**23 00 50.1**	**0.0**
KBTR	**Krutoberegovo**	**7.55**	**28**	*e*P	**P**	**23 00 49.6**	**-1.0**
KBTR				*e*S	**S**	**23 02 08.4**	**-6.8**
BKI	**Bering**	**7.98**	**42**	*e*S	**S**	**23 02 18.4**	**-7.2**
ILAR	**Eielson Array**	**32.82**	**41**	P	**P**	**23 05 25.2**	**-1.8**
	1.4nm,0.8s,mb3.9,baz=262,slow=6.0,SNR=14						
ILAR	**Eielson Array**	**32.82**	**41**	P	**P**	**23 05 25.2**	**-1.8**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	**Inuvik**	**37.94**	**35**	P	**P**	**23 06 08.3**	**-1.9**
	comp=Z,1.1nm,0.4s,mb4.1,baz=290,slow=7.8,SNR=14						
INK	**Inuvik**	**37.94**	**35**	P	**P**	**23 06 08.4**	**-1.9**
INK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
YKA	**Yellowknife Ar**	**47.20**	**39**	P	**P**	**23 07 23.4**	**-1.9**
	comp=Z,0.8nm,0.6s,mb3.6,baz=294,slow=7.1,SNR=4.8						
YKA	**Yellowknife Ar**	**47.20**	**39**	P	**P**	**23 07 23.4**	**-1.9**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
PDAR	**Pinedale Array**	**61.19**	**57**	P	**P**	**23 09 07.2**	**-0.4**
	comp=Z,0.7nm,0.8s,mb3.8,baz=315,slow=2.1,SNR=5.3						
FINES	**FINESS Array B**	**62.35**	**336**	P	**P**	**23 09 05.3**	**-10**
	comp=Z,1.5nm,0.8s,mb4.1,baz=45,slow=8.1,SNR=7.2						
FINES	**FINESS Array B**	**62.35**	**336**	P	**P**	**23 09 05.3**	**-10**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						

IDC 30 23:06:23.2±6.8**, 1.76S×99.81E, h70^{km}**±45^{km}**, mb3.4**/5**, mb1 3.6**/6**, mb1mx3.4**/18**, mbtmp3.7**/6**, ML3.3**/1**, Error ellipse: s-maj=132.6km s-min=23.9km az=53.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**4.62**	**349**	P	P	23 07 29.1	-3.0
	1.4nm,0.3s,baz=159,slow=11,SNR=3.7						
WRA	**Warramunga Arr**	**38.28**	**121**	P	P	23 13 36.9	-1.7
	0.7nm,0.5s,baz=302,slow=9.1,SNR=6.4						
SONM	**Songino Array**	**49.72**	**6**	P	P	23 15 09.0	-1.4
	0.6nm,0.7s,baz=192,slow=8.5,SNR=5.3						
MKAR	**Makanchi Array**	**50.75**	**345**	P	P	23 15 16.2	-2.0
	0.6nm,0.5s,baz=156,slow=9.0,SNR=14						
ZAL	**Zalesovo**	**56.89**	**349**	P	P	23 16 00.5	-2.7
	1.1nm,0.3s,baz=282,slow=2.4,SNR=4.0						
BVAR	**Borovoye Array**	**59.89**	**340**	P	P	23 16 20.9	-3.1
	0.4nm,0.6s,baz=130,slow=12,SNR=4.2						

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*NEIC **30** 23:08:55.9±6.1, 15.50S×175.30W, h8^{km}±39^{km}, mb4.6/1, Error ellipse: s-maj=46.1km s-min=11.6km az=152.0*

*IDC **30** 23:08:55.3±1.3, 15.48S×175.36W, mb4.1/6, mb1 4.4/7, mb1mx4.2/14, mbtmp4.1/7, ML2.6/1, MS4.2/18, Ms1 4.2/18, ms1mx4.2/20, Error ellipse: s-maj=62.5km s-min=21.2km az=152.0*

ISC 30 23:08:57.3±0.9**, 15.6S**±0.3×**175.2W**±0.2**, h33^{km}, n36, σ1^{s}.41**/15**, mb4.1**/8**, MS4.3**/14**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.69**	**63**	Pn	**Pn**	**23 09 53.6**	**+0.2**
	23nm,0.3s,baz=42,slow=5.2,SNR=17						
AFI				Sn	**Sn**	**23 10 34.8**	**-1.5**
	42nm,0.3s,baz=148,slow=19,SNR=7.7						
AFI				LR	LR	23 11 12.8	
	comp=Z,5μm,18.9s,baz=260,slow=36						
AFI	**Afiamalu**	**3.69**	**63**	Pn	**Pn**	**23 09 53.6**	**+0.2**
AFI				Sn	**Sn**	**23 10 34.8**	**-1.5**
AFI				LR	LR	23 11 12.8	
RAO	**Raoul Island**	**13.79**	**190**	LR	LR	23 16 15.8	
	comp=Z,571nm,21.9s,baz=180,slow=32						
RAR	**Rarotonga**	**15.60**	**113**	LR	LR	23 17 47.9	
	comp=Z,330nm,19.5s,baz=49,slow=34						
DZM	**Mont Dzumac**	**18.55**	**247**	LR	LR	23 19 08.2	
	comp=Z,2μm,19.1s,baz=7.2,slow=33						
NOUC	**Port Laguerre**	**18.68**	**247**	*e*P	**P**	**23 13 14.6**	**-0.6**
URZ	**Urewera**	**23.54**	**195**	LR	LR	23 21 48.6	
	comp=Z,754nm,20.0s,MS4.2,baz=40,slow=33						
PPT	**Papeete**	**24.57**	**98**	*e*LQ		23 19 20.0	
PPT				*e*LR	LR	23 20 21.3	
	478nm,26.0s						
PPT	**Papeete**	**24.57**	**98**	LR	LR	23 21 12.8	
	comp=Z,350nm,20.1s,MS3.9,baz=287,slow=30						
HNR	**Honiara**	**25.07**	**281**	LR	LR	23 22 39.6	
	comp=Z,417nm,18.1s,MS4.0,baz=120,slow=33						
TBI	**Tubuai**	**25.37**	**112**	*e*LQ		23 19 42.7	
TBI				*e*LR	LR	23 20 46.3	
	440nm,28.8s						
RPZ	**Rata Peaks**	**30.35**	**200**	LR	LR	23 24 59.4	
	comp=Z,335nm,21.7s,MS4.0,baz=57,slow=32						
TAOE	**Nuku Hiva Isla**	**34.82**	**83**	*e*LR	LR	23 24 56.8	
	3μm,26.7s						
RKT	**Rikitea**	**38.52**	**108**	*e*LR	LR	23 26 53.2	
	315nm,26.2s						
STKA	**Stephens Creek**	**42.46**	**240**	P	**P**	**23 16 52.5**	**+1.5**
	3.0nm,0.9s,mb3.9,baz=37,slow=6.2,SNR=3.8						
STKA				LR	LR	23 32 00.7	
	comp=Z,414nm,21.3s,MS4.3,baz=30,slow=33						
STKA	**Stephens Creek**	**42.46**	**240**	P	**P**	**23 16 52.5**	**+1.5**
STKA				LR	LR	23 32 00.7	
WRAB	**Tennant Creek**	**48.14**	**257**	*e*P	**P**	**23 17 35.2**	**-1.3**
	4.4nm,0.9s,mb4.5						
WRA	**Warramunga Arr**	**48.15**	**257**	P	**P**	**23 17 34.9**	**-1.6**
	1.9nm,0.8s,mb4.2,baz=88,slow=7.5,SNR=13						
GUMO	**Guam**	**49.06**	**304**	LR	LR	23 34 17.4	
	comp=Z,189nm,18.6s,MS4.1,baz=242,slow=31						
MJAR	**Matsushiro Arr**	**68.05**	**321**	P	**P**	**23 19 56.0**	**+0.3**
	1.4nm,0.8s,mb4.1,baz=169,slow=6.2,SNR=4.1						
MJAR				LR	LR	23 42 25.5	
	comp=Z,280nm,21.5s,MS4.5,baz=140,slow=30						
NVAR	**Mina Array Bea**	**75.64**	**43**	P	**P**	**23 20 43.5**	**+2.5**
	1.5nm,0.8s,mb4.0,baz=218,slow=7.9,SNR=9.4						
NVAR				LR	LR	23 45 36.6	
	comp=Z,119nm,21.9s,MS4.2,baz=245,slow=29						
TXAR	**Lajitas Array**	**82.15**	**57**	P	**P**	**23 21 22.2**	**+5.7**
	0.3nm,0.3s,mb3.7,baz=219,slow=5.8,SNR=4.4						
ILAR	**Eielson Array**	**83.01**	**12**	P	**P**	**23 21 19.9**	**-0.4**
	1.4nm,1.1s,mb3.9,baz=214,slow=6.5,SNR=4.2						
PDAR	**Pinedale Array**	**83.57**	**42**	P	**P**	**23 21 26.8**	**+3.2**
	1.7nm,0.8s,mb4.2,baz=231,slow=2.5,SNR=11						
PDAR				LR	LR	23 50 53.5	
	comp=Z,94nm,21.3s,MS4.1,baz=254,slow=30						
PDAR	**Pinedale Array**	**83.57**	**42**	P	**P**	**23 21 26.8**	**+3.2**
PDAR				LR	LR	23 50 53.5	
MAW	**Mawson**	**87.02**	**199**	LR	LR	23 55 51.0	
	comp=Z,262nm,21.7s,MS4.6,baz=244,slow=32						
PLCA	**Paso Flores**	**90.59**	**133**	LR	LR	23 53 17.8	
	comp=Z,124nm,21.7s,MS4.3,baz=202,slow=29						
YKA	**Yellowknife Ar**	**90.99**	**24**	LR	LR	23 54 45.9	
	comp=Z,180nm,19.9s,MS4.5,baz=235,slow=30						
SONM	**Songino Array**	**93.91**	**319**	LR	LR	23 59 08.1	
	comp=Z,154nm,19.3s,MS4.5,baz=6.9,slow=32						
ULM	**Lac du Bonnet**	**95.18**	**39**	LR	LR	23 58 39.4	
	comp=Z,224nm,18.9s,MS4.7,baz=272,slow=31						
KMBO	**Kilima Mbogo**	**143.91**	**245**	PKP	PKPdf	23 28 33.0	+2.8
	0.9nm,0.8s,baz=237,slow=23,SNR=4.1						
BRTR	**Keskin Array B**	**145.26**	**319**	PKPbc	PKPbc	23 28 33.4	+1.1
	2.3nm,0.8s,baz=90,slow=2.6,SNR=13						
GRA1	**Grafenberg Arr**	**145.65**	**353**	*e*PKP	PKPdf	23 28 34.2	+2.0
GRF	**Grafenberg Arr**	**145.65**	**353**	*e*PKP	PKPdf	23 28 34.2	+2.0
KHC	**Kasperske Hory**	**145.85**	**350**	*e*PKP	PKPdf	23 28 35.0	+2.5
GERES	**GERESS Array B**	**146.10**	**350**	PKPbc	PKPbc	23 28 35.7	+1.7
	1.3nm,0.9s,slow=1.3,SNR=8.1						

MAN 30 23:10:35.2, 13.70N×122.82E, h12^{km}, mb3.8, ML2.5, MS2.1, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUQP	**San Andres**	**0.40**	**200**	*e*P	Pg	23 10 44.0	+0.5
GQP	**Guinayangan**	**0.41**	**299**	⇑*i*P	Pg	23 10 43.5	-0.3
GQP				*i* S	Sg	23 10 50.4	+1.0
BOAC	**Boac**	**0.97**	**256**	*e*P	Pb	23 10 54.0	+0.4
BOAC				*e*S	Sb	23 11 08.3	+2.1
PVCP	**Virac**	**1.31**	**94**	*e*P	Pb	23 10 58.9	-0.4
PVCP				*e*S	Sb	23 11 16.8	+1.1
POLP	**Polilio Island**	**1.33**	**320**	*e*P	Pb	23 10 59.0	-0.6
POLP				*e*S	Sb	23 11 17.9	+1.5
OTRP	**Odiongan**	**1.54**	**210**	*e*P	Pn	23 11 01.9	-0.8
OTRP				*e*S	Sb	23 11 22.4	-0.2
BALP	**Baler**	**2.35**	**330**	*e*P	Pn	23 11 16.9	+2.5
BALP				*e*S	Sn	23 11 49.3	+5.9

IDC 30 23:17:34.5±4.0**, 52.77N×34.56W, mb3.8**/7**, mb1 4.0**/8**, mb1mx3.7**/27**, mbtmp3.8**/8**, ML3.8**/1**, MS3.0**/3**, Ms1 3.0**/3**, ms1mx2.7**/24**, Error ellipse: s-maj=100.2km s-min=25.2km az=17.0, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**18.53**	**69**	P	P	23 21 53.6	-0.5
	0.2nm,0.3s,baz=266,slow=9.3,SNR=7.7						
NOA	**NORSAR Array B**	**25.83**	**53**	LR	LR	23 31 37.6	
	comp=Z,22nm,20.0s,baz=345,slow=33						
HFS	**Hagfors**	**27.12**	**55**	LR	LR	23 31 42.4	
	comp=Z,35nm,21.0s,baz=258,slow=31						
GERES	**GERESS Array B**	**30.29**	**78**	P	P	23 23 46.8	-2.5
	0.6nm,0.7s,baz=304,slow=9.6,SNR=5.5						
ARCES	**ARCESS Array B**	**31.78**	**35**	P	P	23 23 59.5	-2.7
	1.7nm,0.7s,baz=270,slow=7.3,SNR=5.3						
FINES	**FINESS Array B**	**32.90**	**50**	LR	LR	23 35 50.0	
	comp=Z,38nm,19.2s,baz=17,slow=33						
INK	**Inuvik**	**45.41**	**329**	P	P	23 25 53.8	-2.1
	2.3nm,1.1s,baz=51,slow=5.0,SNR=4.1						
BRTR	**Keskin Array B**	**47.19**	**77**	P	P	23 26 08.9	-1.4
	1.0nm,0.7s,baz=321,slow=7.4,SNR=5.3						
ILAR	**Eielson Array**	**51.78**	**330**	P	P	23 26 43.8	-1.6
	0.6nm,0.8s,baz=49,slow=5.8,SNR=7.8						
AKTO	**Aktyubinsk**	**53.62**	**53**	P	P	23 26 56.9	-2.5
	0.9nm,0.9s,baz=338,slow=5.4,SNR=5.2						
MKAR	**Makanchi Array**	**67.14**	**42**	P	P	23 28 29.8	-1.9
	0.4nm,0.5s,baz=328,slow=5.3,SNR=14						

ISC Computed Locations for November 2005